



Peace Airshed Zone Association

Ambient Air Monitoring Network Summary

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

August 31, 2017

Alberta Environment

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

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

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

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

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

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

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

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

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

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

Henry Pirker Station:

- ◆ The measured ambient air quality was within the AAAQO for the Henry Pirker station, with the exception of five 1-hour and one 24-hour PM_{2.5} exceedances recorded on July 19, attributed to wildfire smoke in the region. AEP reference number: 327168
- ◆ All analyzers and meteorological sensors at the Henry Pirker station had an operational uptime greater than 90% for the month of July.

Evergreen Park Station:

- ◆ The measured ambient air quality was within the AAAQO for the Evergreen Park station, with the exception of two 1-hour and one 24-hour PM_{2.5} exceedances recorded on July 19, attributed to wildfire smoke in the region. AEP reference number: 327232
- ◆ All analyzers and meteorological sensors at the Evergreen Park station had an operational uptime greater than 90% for the month of July.

Smoky Heights Station:

- ◆ The measured ambient air quality was within the AAAQO for the Smoky Heights station, with the exception of two 1-hour PM_{2.5} exceedances recorded on July 19, attributed to wildfire smoke in the region. AEP reference number: 327233
- ◆ All analyzers and meteorological sensors at the Smoky Heights station had an operational uptime greater than 90% for the month of July.

Beaverlodge Station:

- ◆ The measured ambient air quality was within the AAAQO for the Beaverlodge station, with the exception of three 1-hour and one 24-hour PM_{2.5} exceedances recorded on July 19, attributed to wildfire smoke in the region. AEP reference number: 327170
- ◆ All analyzers and meteorological sensors at the Beaverlodge station had an operational uptime greater than 90% for the month of July, with the exception of the wind instrument which returned an uptime of 39.4% due to malfunctioning in the data acquisition system. AEP reference number: 327559.

Valleyview Station:

- ◆ The measured ambient air quality was within the AAAQO for the Valleyview station, with the exception of a 1-hour H₂S exceedance recorded on July 15 (no cause identified). AEP reference number: 326984
- ◆ All analyzers and meteorological sensors at the Valleyview station had an operational uptime greater than 90% for the month of July, with the exception of the relative humidity sensor which returned an uptime of 64.8% due to instrument malfunctioning.

Donnelly Station:

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

Rycroft-Portable Station:

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

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

There were six duplicate sites sampled in the month of July: Pinto Creek and Sylvester (SO₂), Crooked Creek (O₃), Gold Creek and Sylvester (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 BDL ppb to 0.4 ppb, with a mean of 0.1 ppb.
- Monthly average concentrations for NO₂ passives ranged from 0.2 ppb to 1.8 ppb, with a mean of 0.9 ppb.
- Monthly average concentrations for O₃ passives ranged from 20.4 ppb to 25.7 ppb, with a mean of 23.6 ppb.
- Monthly average concentrations for H₂S passives ranged from 0.1 ppb to 0.3 ppb, with a mean of 0.2 ppb.

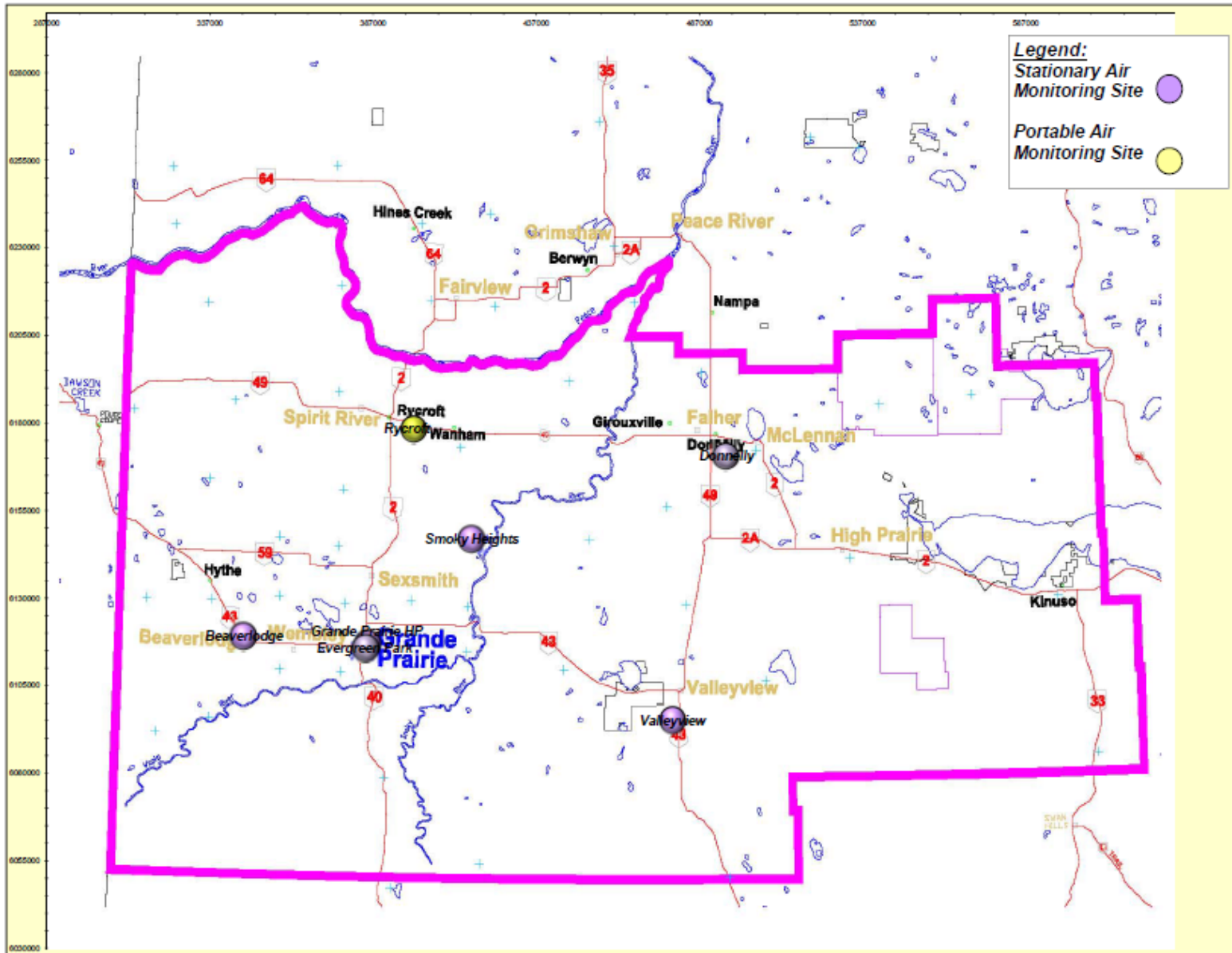
If you have any questions or concerns, please contact Patrick Andersen at 403.505.1041 or the PAZA office at 780.833.4343.

On Behalf of the
Peace Airshed Zone Association



Patrick Andersen, B.Sc.
Program Manager

Location of PAZA Continuous Monitoring Stations



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	Routine analyzer maintenance resulted in an uptime of 99.7%.
TRS	TEI	45C	No operational issues observed.
PM _{2.5}	Sharp	5030	No operational issues observed.
RH	Met One	083D	No operational issues observed.
ET	Met One	083D	No operational issues observed.
SR	Met One	096-1	No operational issues observed.
WS / WD	Met One	010C/020C	The wind instrument was swapped out for factory calibration, resulting in an uptime of 99.9%.

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 99.6%.
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

Parameter	Make	Model	Notes
SO ₂	TEI	43C	No operational issues observed.
TRS	TEI	43i	No operational issues observed.
PM _{2.5}	Sharp	5030	Analyzer malfunctioning resulted in an uptime of 97.2%.
ET	Met One	083D	No operational issues observed.
WS / WD	Met One	010C/020C	Instrument malfunctioning resulted in an uptime of 99.9%.

PAZA – Beaverlodge Station

General Station Issues

Power failure on July 7; Data logger malfunctioning/maintenance on July 8.

Parameter	Make	Model	Notes
SO ₂	TEI	43CTL	A power disruption at the station, maintenance on the data system and analyzer, as well as instrument malfunctioning resulted in an uptime of 99.1%.
NOx/NO/NO ₂	TEI	42C	A power disruption at the station and maintenance on the data system resulted in an uptime of 99.3%.
O ₃	TEI	49C	A power disruption at the station and maintenance on the data system resulted in an uptime of 99.5%.
PM _{2.5}	Sharp	5030	A power disruption at the station and maintenance on the data system resulted in an uptime of 99.5%.
ET	n/a	n/a	A power disruption at the station and maintenance on the data system resulted in an uptime of 99.5%.
RH	n/a	n/a	A power disruption at the station and maintenance on the data system resulted in an uptime of 99.5%.
WS / WD	Met One	50.5H	The wind instrument was malfunctioning for an extended period of time in the data system following the power outage, resulting in an uptime of 39.4%. AEP reference number: 327559

PAZA – Valleyview Station

General Station Issues

Power disruption July 3.

Parameter	Make	Model	Notes
SO ₂	TEI	43i	A power disruption at the station resulted in an uptime of 99.7%.
H ₂ S	TEI	43A	A power disruption at the station resulted in an uptime of 99.7%.
ET	Gill	Met Pak 3	A power disruption at the station resulted in an uptime of 99.7%.
RH	Gill	Met Pak 3	A power disruption at the station and instrument malfunctioning resulted in an uptime of 64.8%.
WS / WD	Gill	Met Pak 3	A power disruption at the station resulted in an uptime of 99.7%.

PAZA – Donnelly Station

General Station Issues

Parameter	Make	Model	Notes
SO ₂	TEI	43i	A power disruption resulted in an uptime of 99.2%.
H ₂ S	Thermo	450i	A power disruption resulted in an uptime of 99.2%.
ET	Gill	RM Young 5103	No operational issues observed.
WS / WD	Gill	RM Young 5103	No operational issues observed.

PAZA – Portable-Rycroft

General Station Issues

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

PAZA Monthly Continuous Data Summary

Jul-2017 Peace Airshed Zone Association							Maximum Recorded Values				Operational Time (%)	Calibration Date
Pollutant (units)	Objectives		Station	Monthly Average	Exceedence		1-hr		24-hr / 8-hr			
	1-hr	24-hr			1-hr	24-hr	Conc	Day	Conc	Day		
SO ₂ (ppb)	172	48	Henry Pirker	0.2	0	0	4.2	Jul-29 12:00	0.6	Jul-01	100.0%	Jul-06
SO ₂ (ppb)	172	48	Evergreen Park	0.2	0	0	12.3	Jul-29 09:00	1.6	Jul-29	100.0%	Jul-27
SO ₂ (ppb)	172	48	Smoky Heights	0.3	0	0	6.3	Jul-28 08:00	0.8	Jul-28	100.0%	Jul-26
SO ₂ (ppb)	172	48	Beaverlodge	0.4	0	0	4.8	Jul-09 06:00	1.7	Jul-09	99.1%	Jul-24
SO ₂ (ppb)	172	48	Valleyview	0.7	0	0	18.6	Jul-21 21:00	3.4	Jul-17	99.7%	Jul-21
SO ₂ (ppb)	172	48	Donnelly	0.1	0	0	6.6	Jul-25 10:00	1.0	Jul-25	99.2%	Jul-25
SO ₂ (ppb)	172	48	Rycroft-Portable	0.3	0	0	5.1	Jul-26 10:00	0.6	Jul-26	100.0%	Jul-05
NO (ppb)			Henry Pirker	0.7	-	-	26.8	Jul-20 07:00	3.9	Jul-20	100.0%	Jul-06
NO ₂ (ppb)	159	106	Henry Pirker	4.6	0	0	18.4	Jul-20 02:00	9.3	Jul-20	100.0%	Jul-06
NO _x (ppb)			Henry Pirker	5.3	-	-	40.1	Jul-20 07:00	13.3	Jul-20	100.0%	Jul-06
NO (ppb)			Beaverlodge	0.3	-	-	5.4	Jul-14 08:00	0.8	Jul-14	99.3%	Jul-25
NO ₂ (ppb)	159	106	Beaverlodge	2.4	0	0	14.7	Jul-13 06:00	4.6	Jul-13	99.3%	Jul-25
NO _x (ppb)			Beaverlodge	2.8	-	-	15.8	Jul-13 06:00	5.0	Jul-13	99.3%	Jul-25
NO (ppb)			Rycroft-Portable	0.6	-	-	16.2	Jul-27 12:00	2.5	Jul-27	100.0%	Jul-05
NO ₂ (ppb)	159	106	Rycroft-Portable	2.7	0	0	17.7	Jul-27 12:00	4.9	Jul-15	100.0%	Jul-05
NO _x (ppb)			Rycroft-Portable	3.3	-	-	34.0	Jul-27 12:00	6.7	Jul-09	100.0%	Jul-05
O ₃ (ppb)	82		Henry Pirker	25.0	0	-	55.0	Jul-07 23:00	37.4	Jul-07	100.0%	Jul-06
O ₃ (ppb) - 8-hr			Henry Pirker		0				47.1	Jul-07		-
O ₃ (ppb)	82		Beaverlodge	25.5	0	-	54.3	Jul-07 14:00	42.5	Jul-07	99.5%	Jul-24
O ₃ (ppb) - 8-hr			Beaverlodge		0				49.9	Jul-07		-
O ₃ (ppb)	82		Rycroft-Portable	24.4	0	-	63.0	Jul-07 13:00	38.6	Jul-07	100.0%	Jul-05
O ₃ (ppb) - 8-hr			Rycroft-Portable		0				58.4	Jul-07		-
CO (ppm)	13		Henry Pirker	0.17	0	-	0.6	Jul-19 10:00	0.4	Jul-19	100.0%	Jul-09
CO (ppm) - 8-hr		5	Henry Pirker		0				0.5	Jul-19		-

PAZA Monthly Continuous Data Summary – continued

Jul-2017 Peace Airshed Zone Association							Maximum Recorded Values					
							1-hr		24-hr / 8-hr			
THC (ppm)			Henry Pirker	2.0	-	-	2.9	Jul-26 04:00	2.2	Jul-01	99.7%	Jul-09
CH ₄ (ppm)			Henry Pirker	2.0	-	-	2.9	Jul-26 04:00	2.2	Jul-01	99.7%	Jul-09
NMHC (ppm)			Henry Pirker	0.0	-	-	0.0	Jul-24 02:00	0.0	Jul-24	99.7%	Jul-09
THC (ppm)			Rycroft-Portable	1.9	-	-	2.1	Jul-09 09:00	2.0	Jul-01	100.0%	Jul-04
CH ₄ (ppm)			Rycroft-Portable	1.9	-	-	2.1	Jul-09 09:00	1.9	Jul-01	100.0%	Jul-04
NMHC (ppm)			Rycroft-Portable	0.0	-	-	0.0	Jul-19 17:00	0.0	Jul-19	100.0%	Jul-04
TRS (ppb)			Henry Pirker	0.1	-	-	1.0	Jul-21 09:00	0.3	Jul-31	100.0%	Jul-07
TRS (ppb)			Evergreen Park	0.2	-	-	2.7	Jul-01 02:00	0.4	Jul-26	100.0%	Jul-27
TRS (ppb)			Smoky Heights	0.2	-	-	1.1	Jul-21 05:00	0.5	Jul-26	100.0%	Jul-26
TRS (ppb)			Rycroft-Portable	0.2	-	-	0.6	Jul-09 08:00	0.3	Jul-09	100.0%	Jul-04
H ₂ S (ppb)	10	3	Valleyview	0.2	1	0	12.9	Jul-15 02:00	0.8	Jul-15	99.7%	Jul-21
H ₂ S (ppb)	10	3	Donnelly	0.2	0	0	1.4	Jul-15 03:00	0.4	Jul-12	99.2%	Jul-25
PM _{2.5} (µg/m ³)	80	30	Henry Pirker	10.8	5	1	100.8	Jul-19 06:00	49.6	Jul-19	100.0%	Jun-05
PM _{2.5} (µg/m ³)	80	30	Evergreen Park	9.2	2	1	89.7	Jul-19 10:00	37.4	Jul-19	99.6%	Mar-13
PM _{2.5} (µg/m ³)	80	30	Smoky Heights	9.1	2	0	93.1	Jul-19 11:00	20.0	Jul-12	97.2%	Jul-26
PM _{2.5} (µg/m ³)	80	30	Beaverlodge	9.7	3	1	95.8	Jul-19 08:00	37.6	Jul-19	99.5%	Jun-15
PM _{2.5} (µg/m ³)	80	30	Rycroft-Portable	5.7	0	0	40.5	Jul-19 22:00	20.3	Jul-19	99.7%	Jun-19
RH (%)			Henry Pirker	57.2	-	-	90.7	Jul-08 06:00	76.2	Jul-17	100.0%	-
RH (%)			Evergreen Park	62.2	-	-	98.6	Jul-13 06:00	82.1	Jul-18	100.0%	-
RH (%)			Beaverlodge	61.7	-	-	100.0	Jul-08 00:00	84.1	Jul-13	99.5%	-
RH (%)			Valleyview	62.4	-	-	100.0	Jul-14 06:00	85.2	Jul-17	64.8%	-
SR (W/m ²)			Henry Pirker	220.2	-	-	775.7	Jul-04 13:00	293.9	Jul-08	100.0%	-
Temp (°C)			Henry Pirker	17.7	-	-	29.2	Jul-25 17:00	221.3	Jul-25	100.0%	-
Temp (°C)			Evergreen Park	17.0	-	-	28.7	Jul-07 15:00	20.4	Jul-26	100.0%	-
Temp (°C)			Smoky Heights	16.6	-	-	28.3	Jul-07 15:00	20.3	Jul-26	100.0%	-
Temp (°C)			Beaverlodge	16.6	-	-	27.8	Jul-26 16:00	20.3	Jul-26	99.5%	-
Temp (°C)			Valleyview	17.1	-	-	29.7	Jul-26 17:00	20.7	Jul-26	99.7%	-
Temp (°C)			Donnelly	16.9	-	-	29.4	Jul-07 16:00	21.7	Jul-26	100.0%	-
Temp (°C)			Rycroft-Portable	17.4	-	-	29.7	Jul-26 14:00	22.0	Jul-26	100.0%	-

PAZA Monthly Continuous Data Summary – continued

Jul-2017		Peace Airshed Zone Association					Maximum Recorded Values						
							1-hr		24-hr / 8-hr				
WSPD s (km/hr)			Henry Pirker	8.7	-	-	36.0	Jul-16 18:00	18.4	Jul-03	99.9%	-	
WSPD s (km/hr)			Evergreen Park	10.9	-	-	48.0	Jul-03 19:00	27.3	Jul-03	100.0%	-	
WSPD s (km/hr)			Smoky Heights	12.3	-	-	47.0	Jul-03 15:00	28.4	Jul-03	99.9%	-	
WSPD s (km/hr)			Beaverlodge	12.4	-	-	45.0	Jul-03 14:00	26.2	Jul-03	39.4%	-	
WSPD s (km/hr)			Valleyview	3.5	-	-	21.0	Jul-07 23:00	8.3	Jul-16	99.7%	-	
WSPD s (km/hr)			Donnelly	10.2	-	-	39.0	Jul-03 18:00	25.5	Jul-03	100.0%	-	
WSPD s (km/hr)			Rycroft-Portable	9.6	-	-	34.0	Jul-16 18:00	16.5	Jul-23	100.0%	-	
WSPD v (km/hr)			Henry Pirker	4.6	-	-	35.0	Jul-16 18:00	17.6	Jul-03	99.9%	-	
WSPD v (km/hr)			Evergreen Park	6.6	-	-	47.0	Jul-03 19:00	26.4	Jul-03	100.0%	-	
WSPD v (km/hr)			Smoky Heights	7.5	-	-	46.0	Jul-03 15:00	27.8	Jul-03	99.9%	-	
WSPD v (km/hr)			Beaverlodge	5.9	-	-	44.0	Jul-03 14:00	25.4	Jul-03	39.4%	-	
WSPD v (km/hr)			Valleyview	1.6	-	-	19.0	Jul-07 23:00	7.5	Jul-16	99.7%	-	
WSPD v (km/hr)			Donnelly	6.2	-	-	39.0	Jul-03 18:00	24.0	Jul-03	100.0%	-	
WSPD v (km/hr)			Rycroft-Portable	5.4	-	-	33.0	Jul-16 18:00	15.4	Jul-04	100.0%	-	
WDIR			Henry Pirker	W	-	-	-	-	-	-	99.9%	-	
WDIR			Evergreen Park	WSW	-	-	-	-	-	-	100.0%	-	
WDIR			Smoky Heights	WSW	-	-	-	-	-	-	99.9%	-	
WDIR			Beaverlodge	W	-	-	-	-	-	-	39.4%	-	
WDIR			Valleyview	WNW	-	-	-	-	-	-	99.7%	-	
WDIR			Donnelly	SW	-	-	-	-	-	-	100.0%	-	
WDIR			Rycroft-Portable	SW	-	-	-	-	-	-	100.0%	-	

PAZA

Henry Pirker Station

Monthly Summary Tables, Graphs and
Roses

Hourly Averages

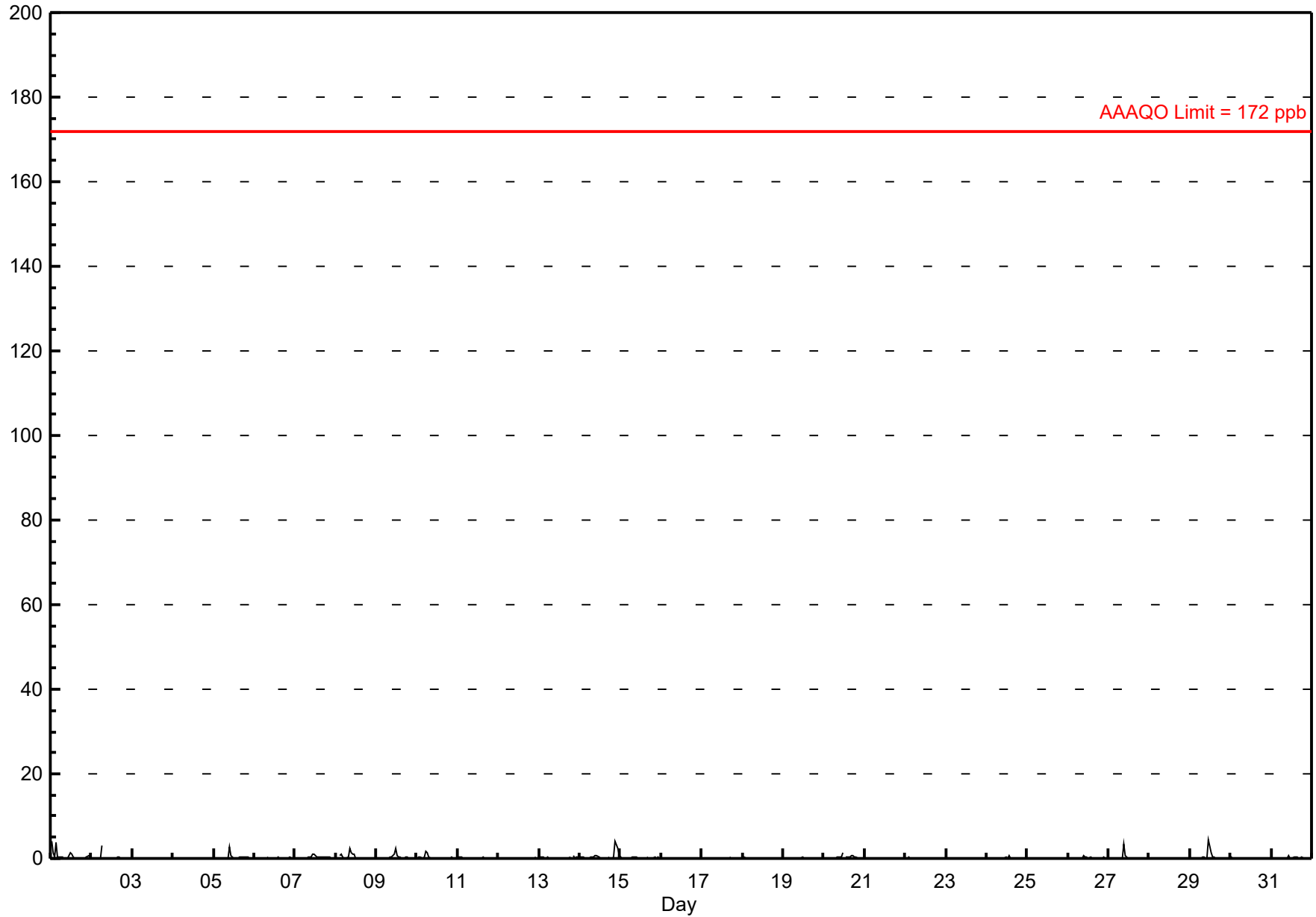
Sulphur Dioxide (SO₂) - ppb

Henry Pirker - July 2017

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 4.2 ppb on Jul 29 12:00	Maximum Daily Average: 0.6 ppb on Jul 1		Hours of Data:	709
Minimum Value: 0 ppb on Jul 2 11:00	Minimum Daily Average: 0.0 ppb on Jul 23		Hours of Missing Data:	35
Maximum Diurnal Average: 0.5 ppb at hour 12	Minimum Diurnal Average: 0.0 ppb at hour 20		Hours of Calibration:	35
Monthly Average: 0.16 ppb	Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.1 P ₉₀ = 0.3 P ₉₉ = 2.8		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jul	4	1	0	4	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0.6	3.9	
2-Jul	0	0	0	0	0	0	3	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	3.0	
3-Jul	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	
4-Jul	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	
5-Jul	0	0	0	0	A	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.9	
6-Jul	0	0	0	A	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
7-Jul	0	0	A	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	1.2	
8-Jul	0	A	1	1	0	0	0	0	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.4	
9-Jul	A	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0.3	2.4	
10-Jul	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	1.8	
11-Jul	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	
12-Jul	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	
13-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0.2	0.6	
14-Jul	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	A	0	0	0	4	2	1	0.5	4.2
15-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.3	
16-Jul	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	
17-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.2	
18-Jul	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	0.4	
19-Jul	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	0.2	
20-Jul	0	0	0	0	0	0	0	0	0	0	0	2	A	0	0	0	1	1	0	0	0	0	0	0	0.2	1.5	
21-Jul	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	
22-Jul	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	
23-Jul	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	
24-Jul	0	0	0	0	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.1	0.8	
25-Jul	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	
26-Jul	0	0	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8	
27-Jul	0	0	0	0	0	A	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	3.3	
28-Jul	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	
29-Jul	0	0	0	A	0	0	0	0	0	0	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0.4	4.2	
30-Jul	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	0.2	
31-Jul	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7	
	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.4	0.3	0.5	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.2	0.1	Diurnal Average		
	3.9	1.2	0.8	3.9	0.4	1.8	3.0	0.5	2.4	3.3	1.1	4.2	1.5	0.8	0.4	0.5	0.5	0.5	0.4	0.2	0.6	4.2	2.4	0.6	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 Maximums

Sulphur Dioxide (SO₂) - ppb

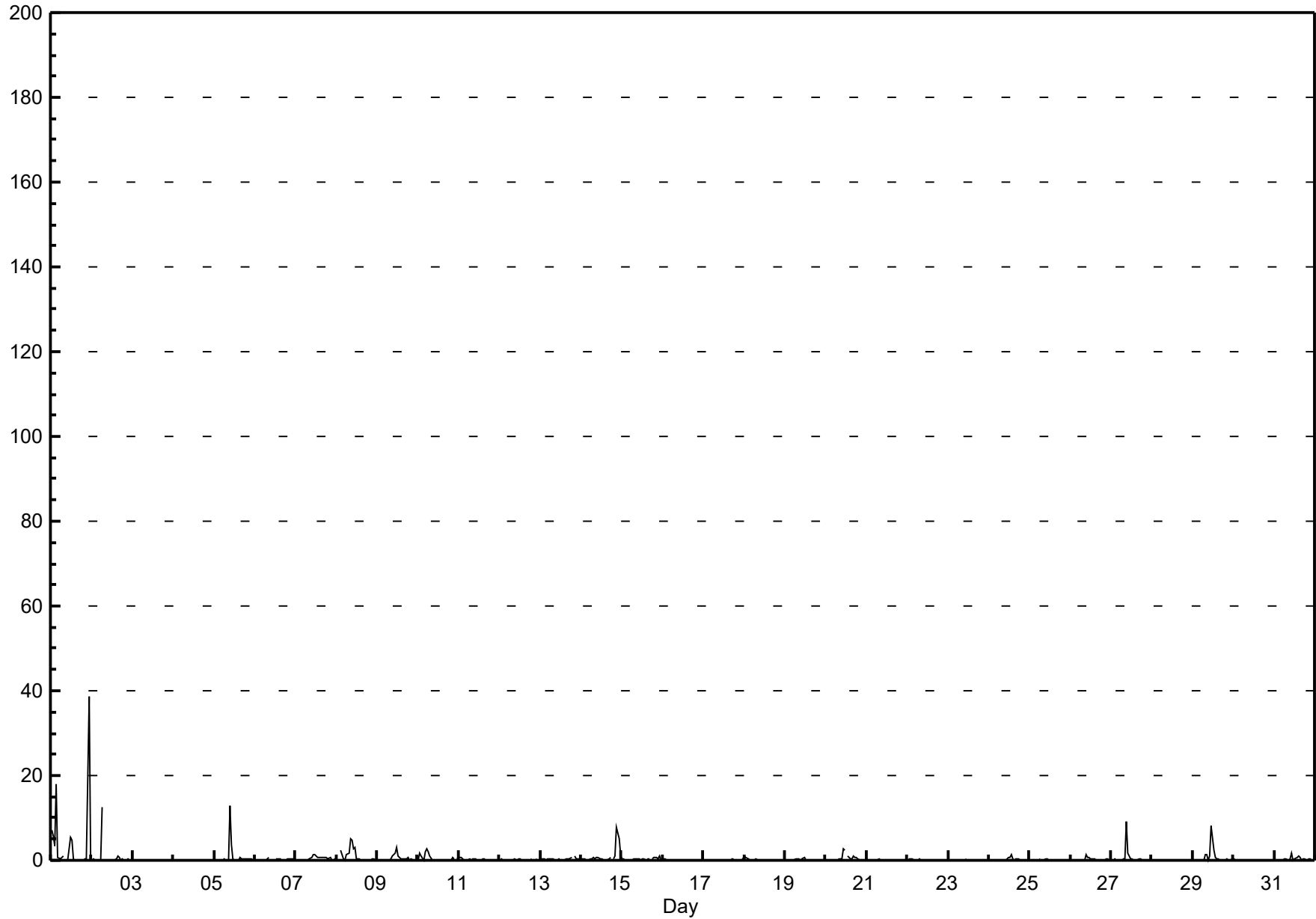
Henry Pirker - July 2017

Maximum Value: 38.7 ppb on Jul 1 23:00		Maximum Daily Average: 3.8 ppb on Jul 1		Hours in Service: 744																							
Minimum Value: 0 ppb on Jul 24 03:00		Minimum Daily Average: 0.0 ppb on Jul 4		Hours of Data: 709																							
Maximum Diurnal Average: 1.6 ppb at hour 23		Minimum Diurnal Average: 0.2 ppb at hour 20		Hours of Missing Data: 35																							
Monthly Average: 0.45 ppb		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.6 P ₉₉ = 7.6		Hours of Calibration: 35																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jul	7	6	3	18	1	0	1	1	A	0	0	5	5	0	0	0	0	0	0	0	0	0	39	0	3.8	38.7	
2-Jul	0	0	0	0	0	0	13	A	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0.8	12.6	
3-Jul	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	
4-Jul	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	
5-Jul	0	0	0	0	A	0	0	0	0	13	4	0	0	0	1	0	0	0	0	0	0	0	0	0	0.9	12.8	
6-Jul	0	0	0	A	0	0	0	0	1	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6	
7-Jul	0	0	A	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0.5	1.4	
8-Jul	0	A	2	1	0	0	1	2	5	5	3	3	0	0	0	0	0	0	0	0	0	0	0	0	1.1	5.1	
9-Jul	A	0	0	0	0	0	0	0	1	2	3	1	1	0	0	0	0	1	0	0	0	0	0	0	0.5	3.2	
10-Jul	0	2	1	0	2	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	A	0	0.6	2.6	
11-Jul	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.6	
12-Jul	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	
13-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	1	0	0	0	0.3	1.0	
14-Jul	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	1	A	1	1	8	5	1	0	0.9	7.8	
15-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	0	1	0	0	0.3	0.9	
16-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.2	
17-Jul	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	
18-Jul	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.9	
19-Jul	0	0	0	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6	
20-Jul	0	0	0	0	0	0	0	0	0	0	3	2	A	1	0	0	1	1	1	0	0	0	0	0	0.5	2.6	
21-Jul	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
22-Jul	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
23-Jul	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	0.3	
24-Jul	0	0	0	0	0	0	0	0	A	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0.2	1.3	
25-Jul	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	
26-Jul	0	0	0	0	0	0	A	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.3	
27-Jul	0	0	0	0	0	A	0	0	0	9	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	9.3	
28-Jul	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	
29-Jul	0	0	0	A	0	0	0	1	1	0	1	8	2	1	0	0	0	0	0	0	0	0	0	0	0.8	8.0	
30-Jul	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	
31-Jul	0	A	0	0	0	0	0	0	0	0	2	0	0	1	1	1	0	0	0	0	0	0	0	0	0.3	1.7	
		0.4	0.4	0.4	0.8	0.2	0.2	0.7	0.3	0.4	1.2	0.7	0.9	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Diurnal Average	
		7.3	5.9	3.2	18.1	1.9	2.6	12.6	1.6	5.1	12.8	3.6	8.0	4.8	1.3	0.9	0.9	0.9	0.7	0.7	0.6	1.1	7.8	38.7	1.0	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

Hourly Maximums

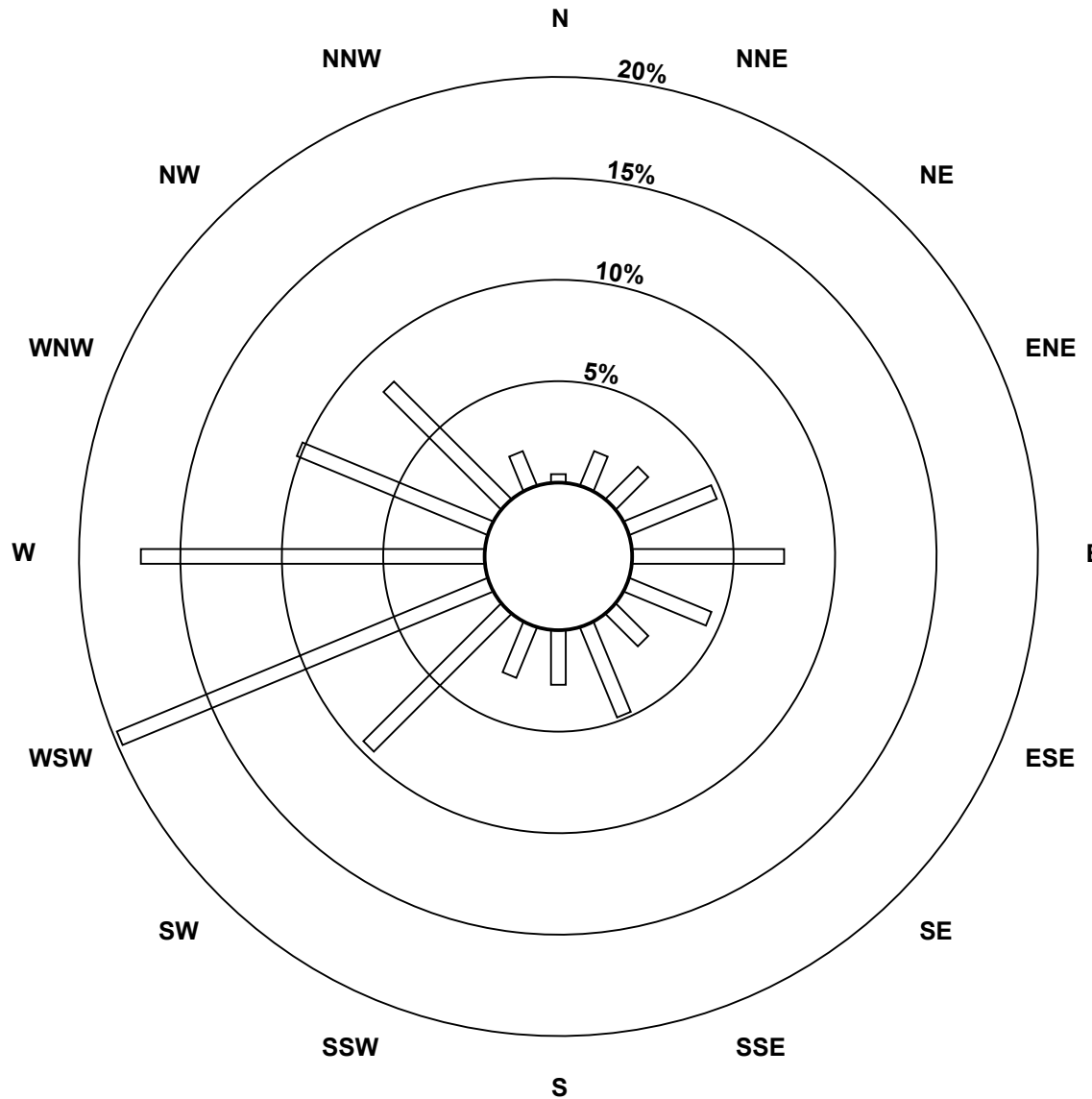
Sulphur Dioxide (SO₂) - ppb

Henry Pirker - July 2017

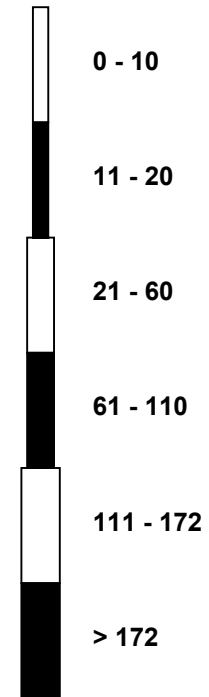


Pollutant Rose

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

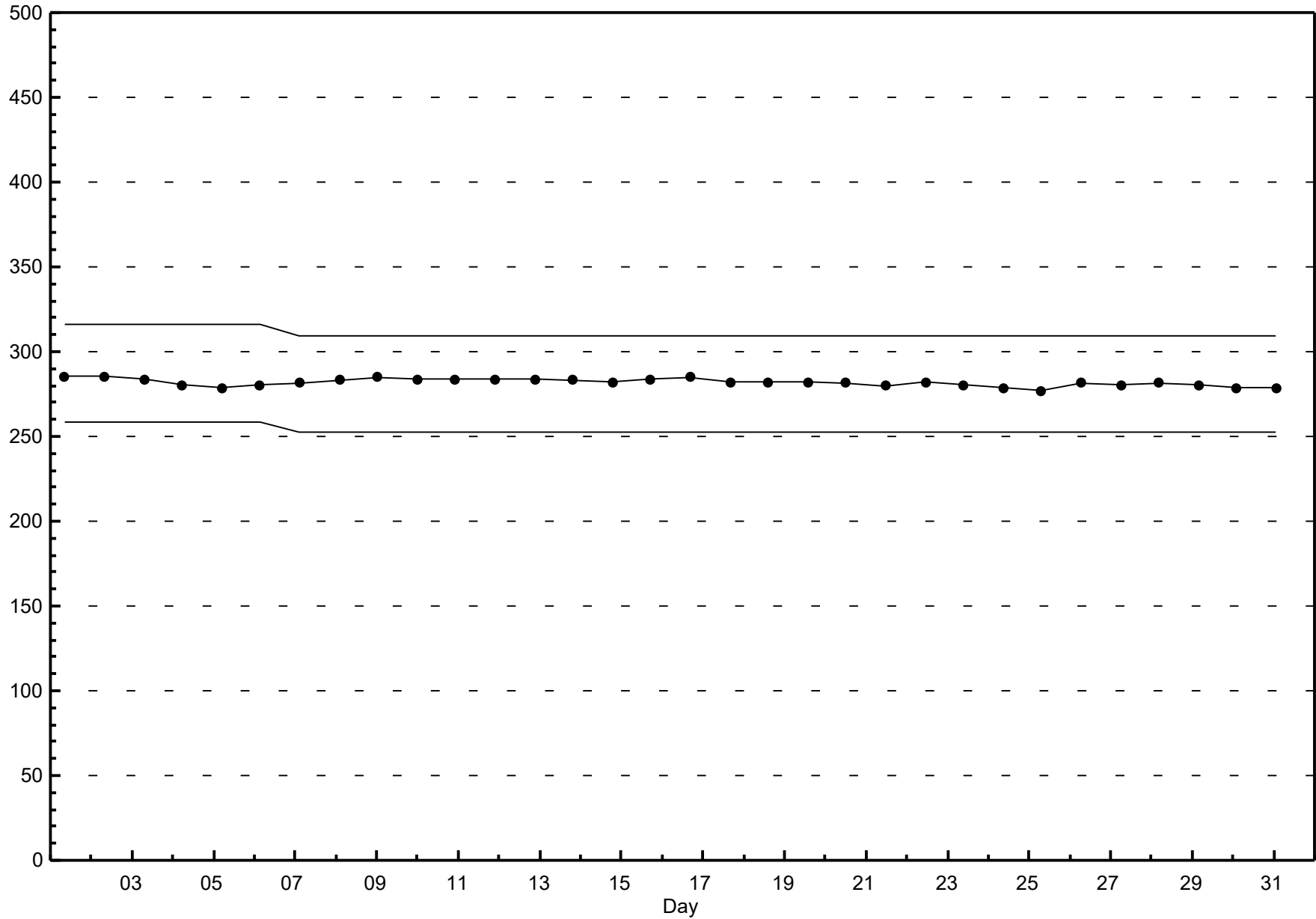


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Henry Pirker - July 2017

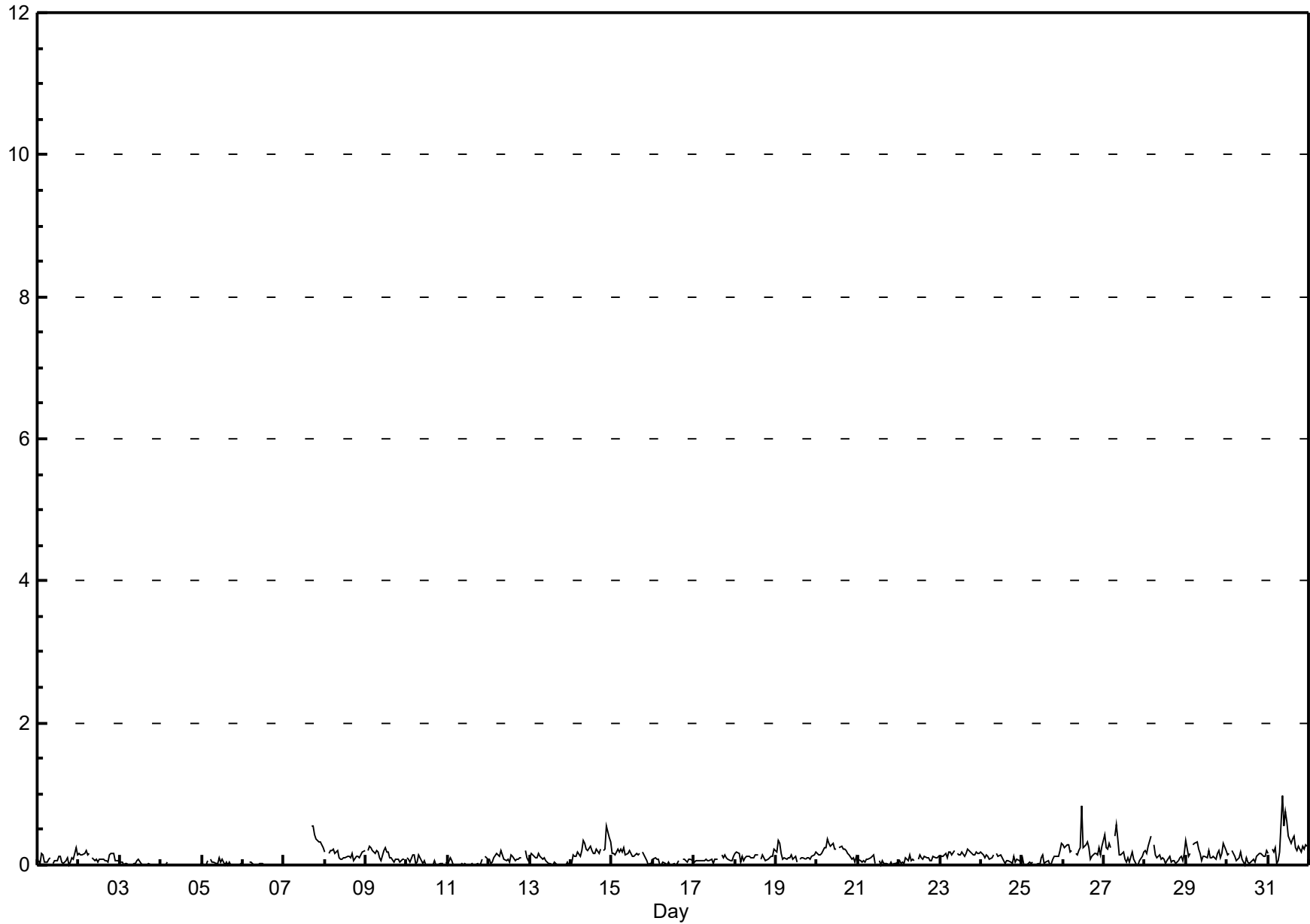


Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - July 2017

Maximum Value: 1.0 ppb on Jul 31 09:00		Maximum Daily Average: 0.3 ppb on Jul 31		Hours in Service: 744																							
Minimum Value: 0 ppb on Jul 3 06:00		Minimum Daily Average: 0.0 ppb on Jul 4		Hours of Data: 704																							
Maximum Diurnal Average: 0.1 ppb at hour 9		Minimum Diurnal Average: 0.1 ppb at hour 16		Hours of Missing Data: 40																							
Monthly Average: 0.11 ppb		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.2 P ₉₉ = 0.5		Hours of Calibration: 40																							
				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-Jul	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
2-Jul	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
3-Jul	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	0.1	
4-Jul	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	
5-Jul	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	
6-Jul	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	
7-Jul	0	0	A	0	0	0	0	0	C	C	C	C	C	C	C	C	1	1	0	0	0	0	0	0	--	0.5	
8-Jul	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	
9-Jul	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	
10-Jul	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	
11-Jul	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	
12-Jul	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	
13-Jul	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	
14-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0.2	0.6	
15-Jul	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	
16-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.1	
17-Jul	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	
18-Jul	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	
19-Jul	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	
20-Jul	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	
21-Jul	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	0.1	
22-Jul	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	0.1	
23-Jul	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	0.2	
24-Jul	0	0	0	0	0	0	0	A	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
25-Jul	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	
26-Jul	0	0	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8	
27-Jul	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6	
28-Jul	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	
29-Jul	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	
30-Jul	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	
31-Jul	0	A	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.0	
		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	Diurnal Average		
		0.4	0.3	0.3	0.4	0.3	0.3	0.4	0.6	1.0	0.5	0.8	0.8	0.4	0.3	0.4	0.4	0.5	0.5	0.4	0.4	0.3	0.6	0.4	0.3	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

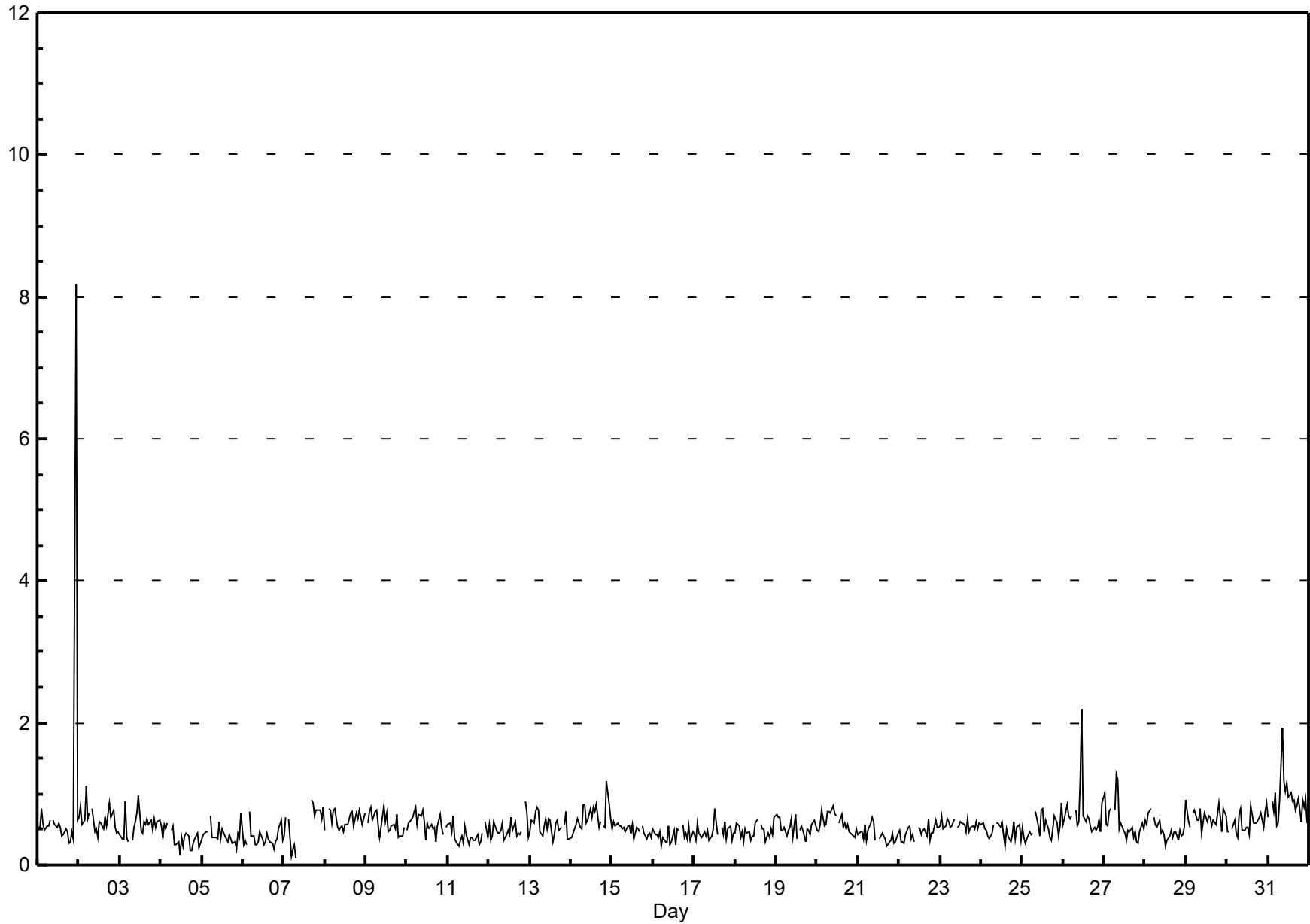


Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

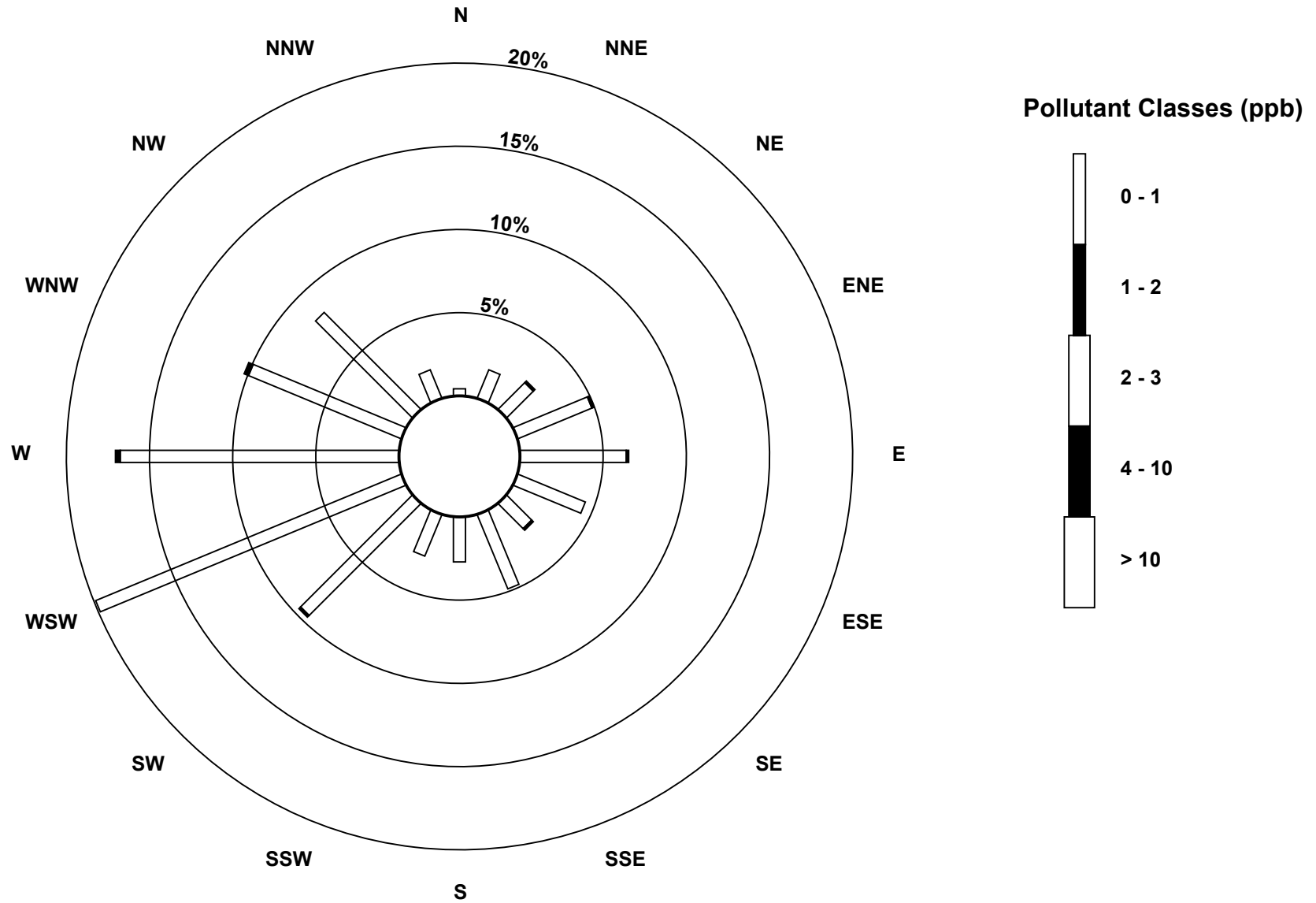
Henry Pirker - July 2017

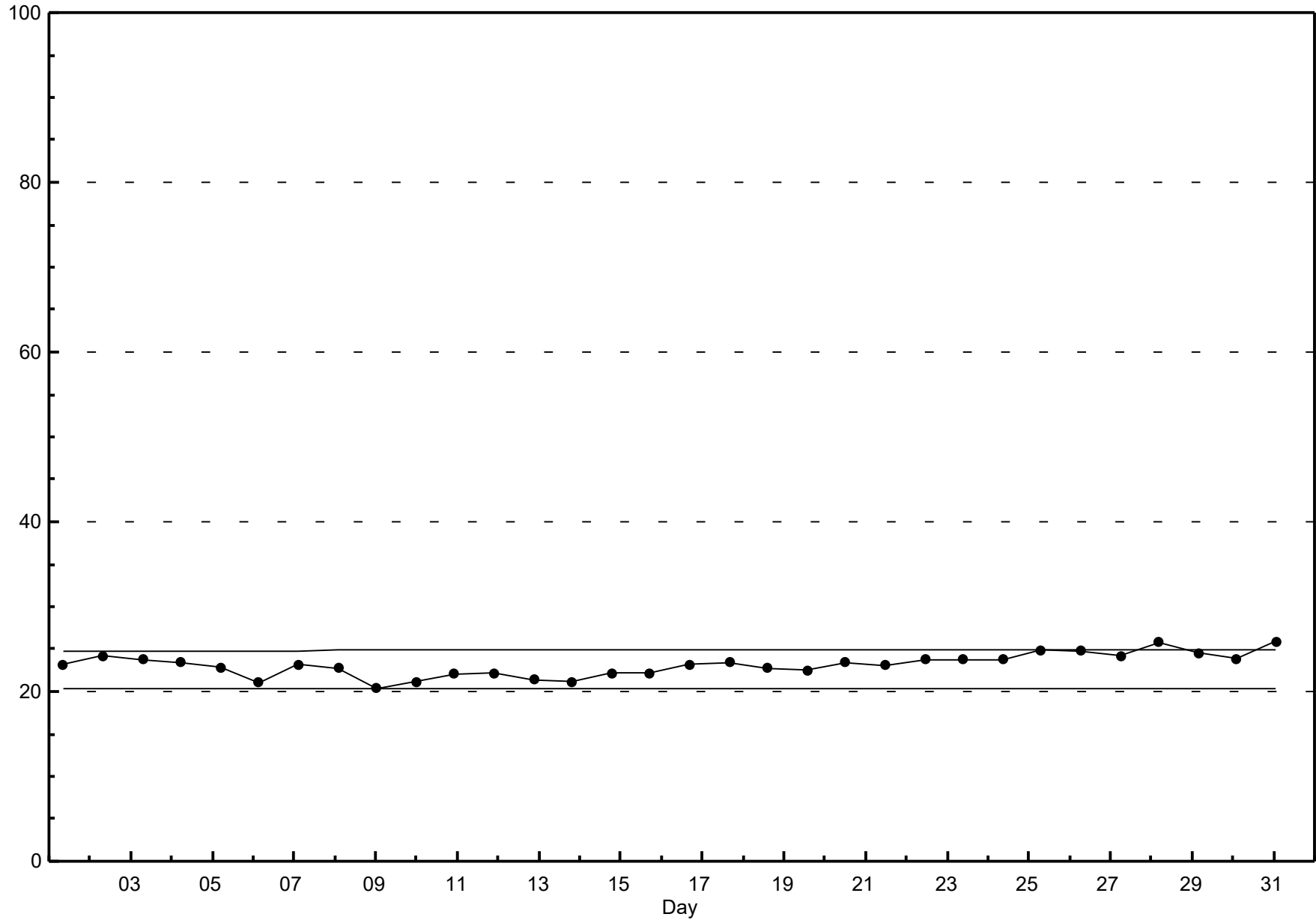
Maximum Value: 8.2 ppb on Jul 1 23:00		Maximum Daily Average: 0.9 ppb on Jul 31		Hours in Service: 744																							
Minimum Value: 0 ppb on Jul 7 08:00		Minimum Daily Average: 0.4 ppb on Jul 4		Hours of Data: 704																							
Maximum Diurnal Average: 0.8 ppb at hour 23		Minimum Diurnal Average: 0.5 ppb at hour 18		Hours of Missing Data: 40																							
Monthly Average: 0.55 ppb		Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.6 P ₉₀ = 0.8 P ₉₉ = 1.2		Hours of Calibration: 40																							
				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-Jul	1	1	1	1	0	1	1	1	A	1	1	1	1	1	0	0	1	0	0	0	0	0	8	1	0.9	8.2	
2-Jul	1	1	1	1	1	1	1	A	1	0	1	0	1	1	1	1	1	1	1	1	1	1	0	0	0.6	1.1	
3-Jul	0	0	0	1	0	0	A	0	1	1	1	1	0	0	1	1	1	1	1	0	1	1	1	1	0.6	1.0	
4-Jul	1	0	1	1	1	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6	
5-Jul	0	0	0	0	A	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0.4	0.7	
6-Jul	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.4	0.8	
7-Jul	0	1	A	1	0	0	0	0	C	C	C	C	C	C	C	C	1	1	1	1	1	1	1	1	--	0.9	
8-Jul	0	A	1	1	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8	
9-Jul	A	1	1	1	1	1	1	1	1	0	1	1	1	1	0	0	1	1	1	1	0	0	0	1	0.6	0.8	
10-Jul	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	1	1	1	0	A	1	0.6	0.8	
11-Jul	1	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	A	1	0.4	0.7	
12-Jul	1	0	0	1	0	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0	0	A	1	0	0.5	0.9	
13-Jul	0	1	1	1	1	1	0	0	1	1	1	1	1	0	0	1	1	0	1	A	1	1	0	0	0.6	0.8	
14-Jul	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.7	1.2	
15-Jul	0	1	1	1	1	1	1	1	0	1	1	0	1	0	1	1	0	A	1	0	0	0	0	0	0.5	0.6	
16-Jul	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	A	1	0	0	0	0	1	0	0.4	0.6	
17-Jul	0	0	1	0	0	0	0	0	0	0	0	1	1	1	0	A	1	0	1	0	1	1	0	0	0.5	0.8	
18-Jul	0	1	1	0	0	0	1	0	0	0	0	0	1	1	A	1	1	1	0	0	0	0	0	1	0.5	0.7	
19-Jul	1	1	1	0	0	1	0	0	1	1	0	1	0	1	A	0	1	0	0	1	0	0	1	1	0.5	0.7	
20-Jul	0	0	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	0	0	1	0.6	0.8	
21-Jul	0	0	0	0	1	0	0	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7	
22-Jul	0	0	0	0	0	1	1	0	0	0	A	1	0	0	0	1	0	1	0	0	0	1	1	1	0.5	0.6	
23-Jul	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	1	0	1	1	1	1	1	1	0.6	0.7	
24-Jul	1	1	1	0	0	0	0	1	A	1	1	1	1	0	0	1	0	0	0	1	0	1	1	0	0.5	0.6	
25-Jul	1	0	0	0	0	0	0	A	1	1	0	1	1	0	1	1	0	0	1	1	1	0	1	1	0.5	0.9	
26-Jul	1	1	1	1	1	1	A	1	1	1	1	2	1	1	1	1	1	0	1	0	1	1	0	1	0.7	2.2	
27-Jul	1	1	1	1	1	A	1	1	1	1	1	0	0	0	0	0	1	0	0	0	0	0	1	1	0.6	1.3	
28-Jul	1	1	1	1	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.5	0.8	
29-Jul	1	1	1	A	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0.7	0.9	
30-Jul	0	0	A	1	1	0	0	1	1	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	0.6	0.9	
31-Jul	1	A	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.9	
		0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.6	0.6	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.8	0.6	Diurnal Average
		1.0	0.8	0.9	0.9	1.1	0.8	0.8	1.3	1.9	1.2	1.2	2.2	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.2	8.2	0.9	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																									



Pollutant Rose

Total Reduced Sulphur (TRS) - ppb
Henry Pirker - July 2017





Hourly Averages

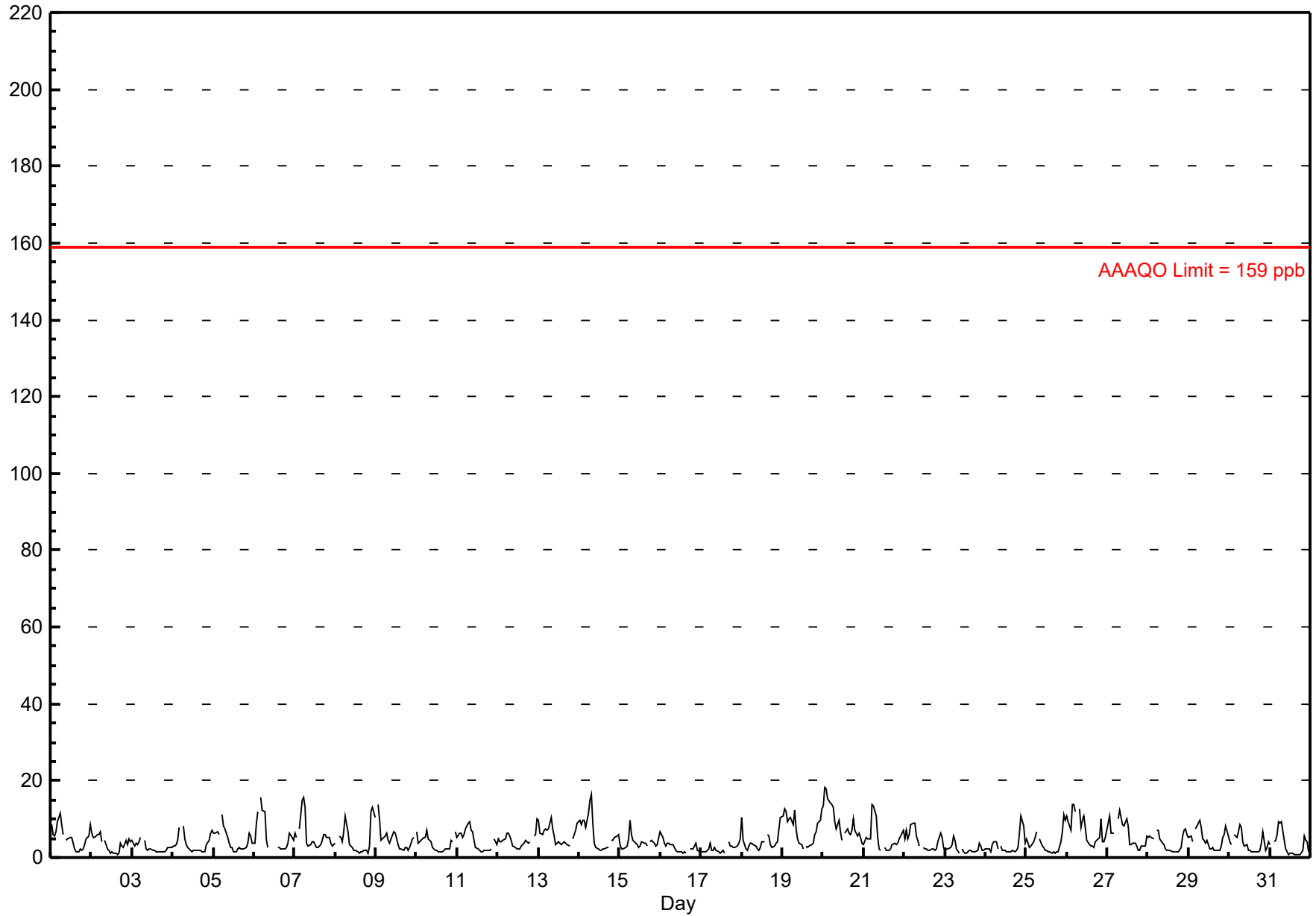
Nitrogen Dioxide (NO₂) - ppb

Henry Pirker - July 2017

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 18.4 ppb on Jul 20 02:00	Maximum Daily Average: 9.3 ppb on Jul 20		Hours of Data:	707
Minimum Value: 1 ppb on Jul 31 19:00	Minimum Daily Average: 2.3 ppb on Jul 23		Hours of Missing Data:	37
Maximum Diurnal Average: 8.2 ppb at hour 7	Minimum Diurnal Average: 2.3 ppb at hour 15		Hours of Calibration:	37
Monthly Average: 4.57 ppb	Percentiles: P ₁ = 1.0 P ₁₀ = 1.6 Q ₁ = 2.2 Median = 3.7 Q ₃ = 6.0 P ₉₀ = 9.2 P ₉₉ = 15.0		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-Jul	9	6	6	7	9	12	8	6	A	4	5	5	5	4	2	1	1	2	2	2	3	5	6	9	5.2	11.5
2-Jul	6	5	5	6	6	7	4	A	4	2	2	1	1	1	1	1	1	4	3	2	5	3	5	4	3.5	6.6
3-Jul	5	3	4	3	4	5	A	5	2	2	2	2	2	2	2	1	2	2	1	2	2	3	3	2	2.6	5.1
4-Jul	3	3	3	4	8	A	8	5	3	2	2	2	2	2	2	2	2	2	2	1	3	4	6	7	3.4	8.3
5-Jul	6	6	7	6	A	11	8	8	5	4	3	2	2	2	2	3	2	2	2	2	4	6	5	4	4.5	11.3
6-Jul	4	9	12	A	15	12	12	5	2	C	C	C	C	C	3	3	2	2	2	2	4	6	5	5	5.8	15.5
7-Jul	6	5	A	7	15	16	13	4	3	4	4	4	3	3	3	3	4	6	6	5	5	4	3	3	5.7	15.6
8-Jul	4	A	6	5	4	7	11	7	3	3	2	2	1	1	1	2	2	2	1	3	12	13	10	4.6	13.2	
9-Jul	A	14	10	5	5	5	6	5	4	5	7	6	5	4	2	2	2	3	3	2	3	5	5	A	4.8	13.8
10-Jul	7	4	4	5	5	5	7	5	4	3	2	2	2	2	2	2	2	2	2	2	5	4	A	7	3.6	7.1
11-Jul	5	6	6	5	6	7	9	9	7	7	4	3	2	2	1	1	2	2	2	2	2	A	5	3	4.4	9.2
12-Jul	5	4	4	4	5	6	6	6	5	3	2	2	2	2	3	4	4	4	4	4	A	6	6	10	4.4	9.9
13-Jul	10	6	6	7	7	7	7	10	7	5	3	4	4	3	4	4	4	3	3	A	5	6	7	9	5.8	10.4
14-Jul	10	8	10	10	8	11	15	17	9	4	3	2	2	2	2	2	3	3	A	5	5	5	6	6	6.3	16.6
15-Jul	3	2	2	3	3	5	10	6	4	4	3	2	3	4	4	4	3	A	4	5	4	3	3	5	3.9	9.8
16-Jul	7	5	4	3	4	4	3	3	2	2	2	2	1	1	1	1	A	2	2	2	3	4	2	1	2.7	6.6
17-Jul	1	2	1	2	2	4	2	2	3	2	2	1	1	2	1	A	4	3	3	3	2	3	4	5	2.3	5.0
18-Jul	10	5	2	2	3	4	4	3	3	2	2	2	4	4	A	6	6	3	3	3	4	4	8	10	4.2	10.4
19-Jul	11	13	12	9	10	10	9	12	7	5	4	3	2	A	3	2	3	3	4	6	7	9	10	13	7.3	12.7
20-Jul	14	18	18	15	14	14	13	9	7	10	7	4	A	6	8	6	6	7	10	7	6	6	5	4	9.3	18.4
21-Jul	3	5	5	5	5	14	13	11	5	2	2	A	3	2	2	2	2	3	4	3	4	5	5	7	4.8	13.9
22-Jul	5	7	5	6	8	9	9	6	5	3	A	3	2	2	2	2	2	2	2	2	4	6	5	3	4.3	9.1
23-Jul	2	2	2	3	3	5	4	2	1	A	2	2	1	1	2	2	1	1	1	2	4	3	2	2	2.3	5.5
24-Jul	2	2	2	1	4	4	4	2	A	3	2	2	2	1	1	1	2	2	2	2	6	11	8	4	3.1	11.0
25-Jul	5	4	3	3	4	5	7	A	5	3	3	2	2	2	1	1	1	1	1	2	4	7	11	10	3.7	11.2
26-Jul	11	9	7	14	14	12	A	13	8	10	11	8	4	3	3	3	3	4	5	5	10	4	4	5	7.4	13.8
27-Jul	9	11	6	6	6	A	10	12	11	9	8	10	8	3	3	4	4	3	2	2	3	3	3	6	6.2	12.5
28-Jul	5	5	5	5	A	7	7	5	4	3	2	2	2	2	2	2	2	1	2	3	6	7	7	6	4.0	7.5
29-Jul	5	5	4	A	7	8	10	8	5	4	4	2	2	3	2	2	2	2	2	3	5	6	8	6	4.7	9.8
30-Jul	4	4	A	6	5	7	9	8	4	3	3	2	2	1	2	2	1	2	2	4	7	2	3	4	3.7	8.5
31-Jul	3	A	4	4	6	9	9	9	5	2	1	1	1	1	1	1	1	1	1	2	6	5	4	1	3.4	9.3
	5.9	6.2	5.7	5.6	6.8	8.0	8.2	6.9	4.8	3.9	3.4	3.1	2.6	2.3	2.3	2.4	2.5	2.6	2.8	3.0	4.4	5.2	5.6	5.7	Diurnal Average	
	13.5	18.4	17.8	15.2	15.5	15.6	15.1	16.6	10.5	9.6	10.7	10.2	8.4	6.3	7.5	6.3	5.9	7.1	10.1	6.9	9.9	11.8	13.2	12.7	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb



Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb

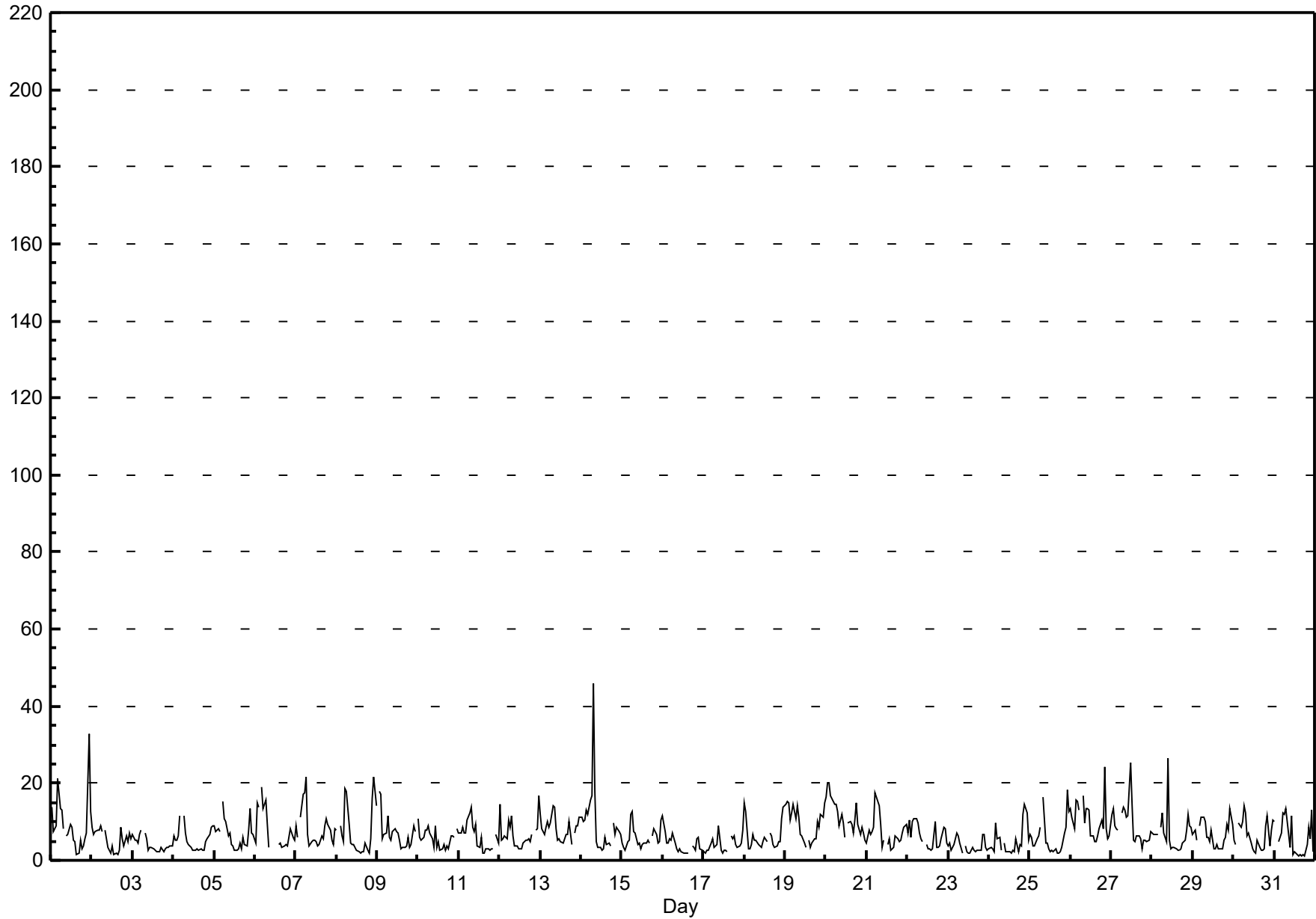
Henry Pirker - July 2017

Maximum Value: 45.8 ppb on Jul 14 08:00		Maximum Daily Average: 11.5 ppb on Jul 20		Hours in Service: 744																							
Minimum Value: 1 ppb on Jul 31 19:00		Minimum Daily Average: 3.7 ppb on Jul 23		Hours of Data: 707																							
Maximum Diurnal Average: 11.3 ppb at hour 7		Minimum Diurnal Average: 3.6 ppb at hour 14		Hours of Missing Data: 37																							
Monthly Average: 6.86 ppb		Percentiles: P ₁ = 1.6 P ₁₀ = 2.6 Q ₁ = 3.6 Median = 5.7 Q ₃ = 8.7 P ₉₀ = 13.1 P ₉₉ = 21.5		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-Jul	14	8	8	9	21	14	13	8	A	6	7	9	9	5	5	2	2	5	3	4	6	7	33	13	9.1	32.7	
2-Jul	8	7	8	8	8	9	7	A	8	3	3	2	4	2	2	1	2	9	5	4	6	5	7	6	5.4	9.0	
3-Jul	7	5	5	5	7	8	A	7	6	3	4	3	3	3	2	2	2	3	2	3	3	3	4	4	4.1	8.0	
4-Jul	6	5	5	6	11	A	12	7	5	4	3	2	3	2	3	3	3	3	3	5	6	7	9	9	5.3	11.6	
5-Jul	9	7	8	7	A	15	11	10	6	7	4	4	3	2	3	4	3	6	4	4	8	13	7	7	6.7	15.4	
6-Jul	4	15	14	A	19	13	16	9	3	C	C	C	C	C	4	4	3	4	4	4	6	8	6	5	8.0	19.0	
7-Jul	9	6	A	11	17	18	22	7	4	5	5	5	5	4	4	6	6	9	11	9	8	5	4	8	8.2	21.6	
8-Jul	8	A	9	6	5	19	18	9	4	4	4	3	3	2	2	2	2	4	3	2	6	16	22	14	7.3	21.6	
9-Jul	A	18	17	6	7	7	12	6	5	7	8	8	7	5	3	3	3	4	6	3	4	9	7	A	7.1	18.0	
10-Jul	11	6	5	6	8	8	9	7	5	4	9	3	5	3	3	4	3	4	3	6	6	6	A	8	5.7	10.7	
11-Jul	7	7	9	7	7	11	12	14	8	8	9	4	3	6	2	2	3	3	2	3	3	A	7	4	6.1	13.6	
12-Jul	15	5	5	6	6	10	9	11	6	4	4	3	3	3	4	5	5	5	5	7	A	8	8	17	6.7	16.7	
13-Jul	12	8	7	8	10	9	10	14	14	8	5	6	5	4	6	7	7	10	4	A	7	9	9	11	8.3	14.1	
14-Jul	11	10	11	13	12	16	17	46	18	5	3	3	3	3	6	4	4	4	A	10	7	8	8	7	9.9	45.8	
15-Jul	4	3	3	5	5	12	13	8	7	4	4	3	4	5	5	5	5	A	6	8	7	5	5	10	5.9	12.7	
16-Jul	12	7	4	4	5	5	7	5	3	2	3	2	2	2	2	2	A	4	3	3	5	6	3	3	4.1	11.7	
17-Jul	2	2	3	3	4	6	3	4	4	9	3	2	3	3	2	A	6	6	6	4	3	4	4	8	4.1	9.1	
18-Jul	15	13	3	3	4	7	5	5	4	4	3	5	6	5	A	7	6	4	3	4	5	5	11	14	6.1	14.9	
19-Jul	15	15	15	10	12	15	11	14	11	7	6	4	3	A	5	3	5	6	6	10	9	12	11	15	9.6	15.1	
20-Jul	16	20	20	17	15	15	15	13	9	12	10	6	A	10	10	9	7	10	15	9	7	9	7	5	11.5	20.3	
21-Jul	5	8	7	7	8	18	16	14	9	3	5	A	4	6	3	3	3	6	5	5	5	7	9	9	7.2	17.6	
22-Jul	7	10	6	10	11	11	10	7	6	5	A	4	3	3	3	3	10	3	3	4	6	9	8	5	6.3	10.8	
23-Jul	4	4	3	4	6	7	6	5	2	A	4	2	2	2	3	3	2	2	3	3	7	7	3	3	3.7	7.0	
24-Jul	3	3	3	2	10	6	6	3	A	5	2	2	2	2	3	2	6	2	4	4	12	15	12	5	4.9	14.7	
25-Jul	7	6	4	4	6	6	9	A	16	4	5	3	2	3	2	3	2	2	2	3	7	9	18	13	5.9	18.2	
26-Jul	13	11	8	16	15	13	A	17	10	14	14	13	6	6	5	5	6	8	10	8	24	8	6	6	10.6	24.1	
27-Jul	12	13	9	8	8	A	12	14	13	11	11	25	15	5	5	6	6	6	3	5	5	5	5	7	9.2	25.5	
28-Jul	7	7	7	7	A	9	12	7	5	26	5	3	3	3	3	3	3	3	4	5	8	12	9	8	6.9	26.4	
29-Jul	7	8	5	A	9	11	11	10	6	6	5	8	3	3	4	3	3	3	3	5	6	9	8	13	9	6.8	13.5
30-Jul	5	4	A	10	9	10	14	12	6	7	5	3	2	2	5	3	3	3	3	9	12	4	8	10	6.5	14.0	
31-Jul	10	A	5	6	7	12	12	14	7	3	12	2	2	1	1	2	1	2	1	4	8	6	13	2	5.8	13.5	
		8.8	8.4	7.4	7.4	9.4	10.9	11.3	10.5	7.3	6.6	5.7	5.0	4.1	3.6	3.6	3.7	4.1	4.8	4.7	5.3	7.1	7.7	9.2	8.2	Diurnal Average	
		16.3	20.3	20.0	16.8	21.3	18.7	21.6	45.8	18.0	26.4	13.6	25.5	14.7	9.8	10.0	9.3	9.9	10.3	14.8	10.1	24.1	16.2	32.7	16.7	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

Hourly Maximums

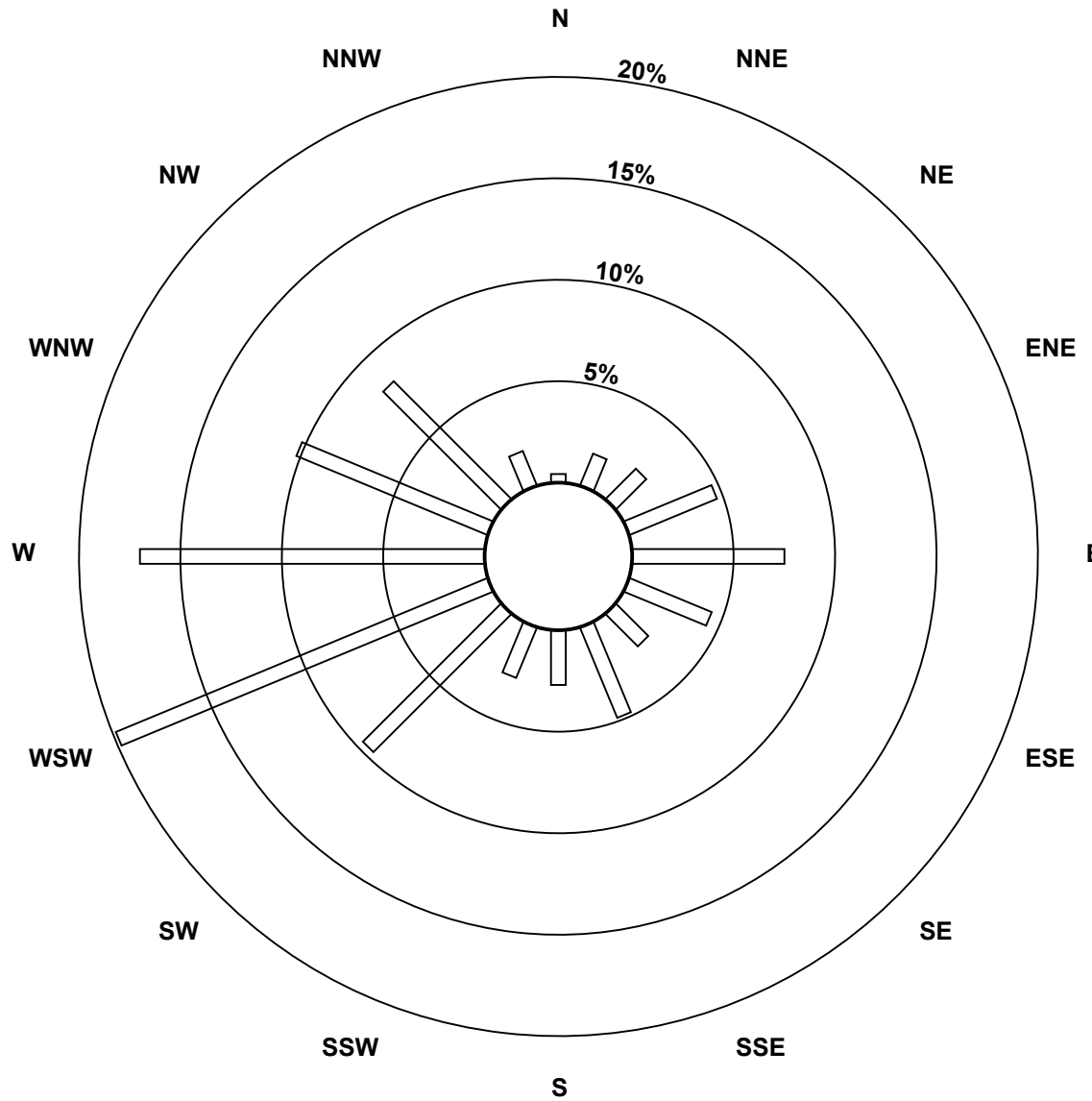
Nitrogen Dioxide (NO₂) - ppb

Henry Pirker - July 2017

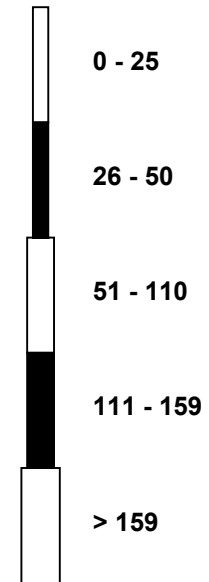


Pollutant Rose

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

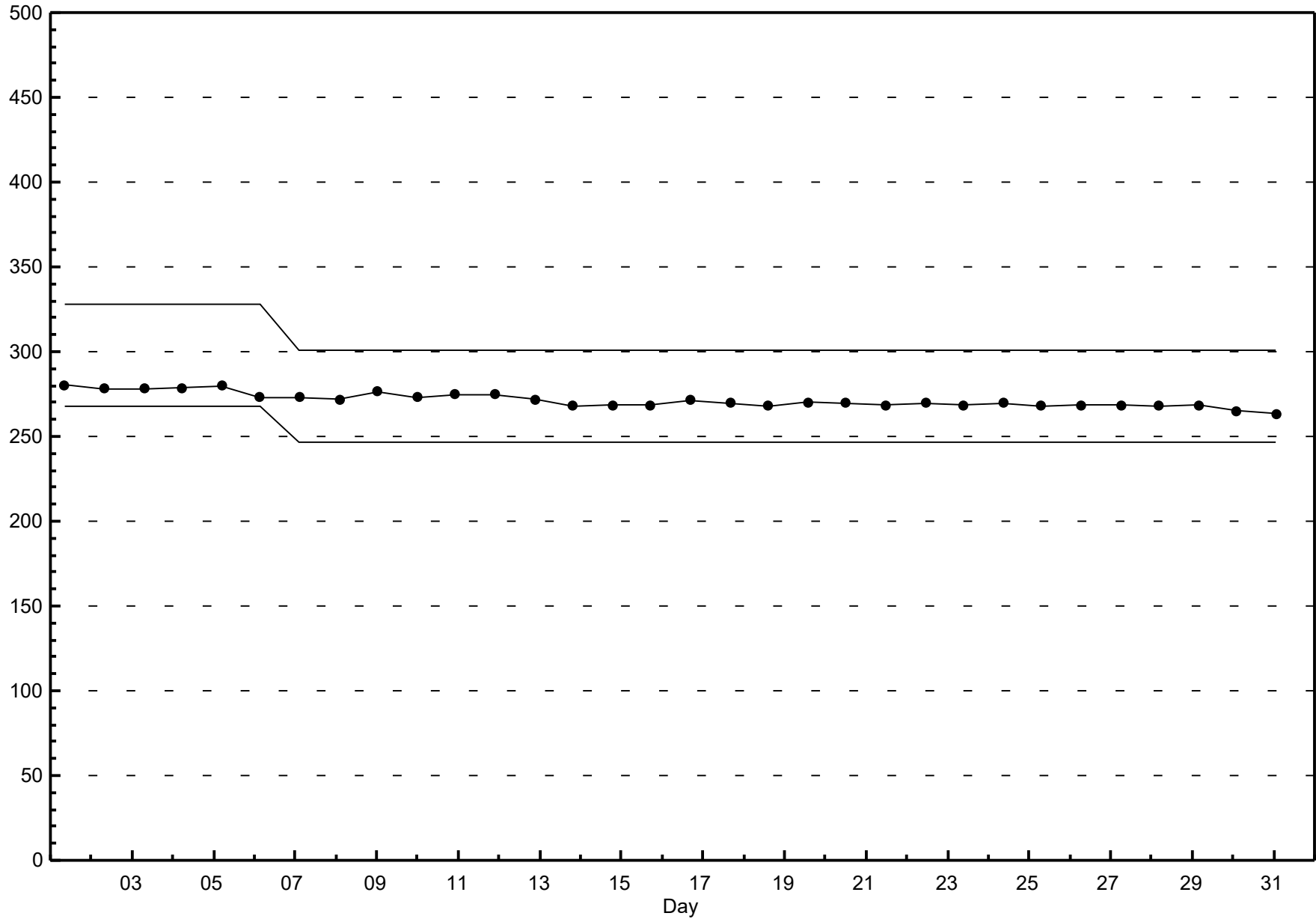


Pollutant Classes (ppb)



Span Responses

Nitrogen Dioxide (NO₂)
Henry Pirker - July 2017

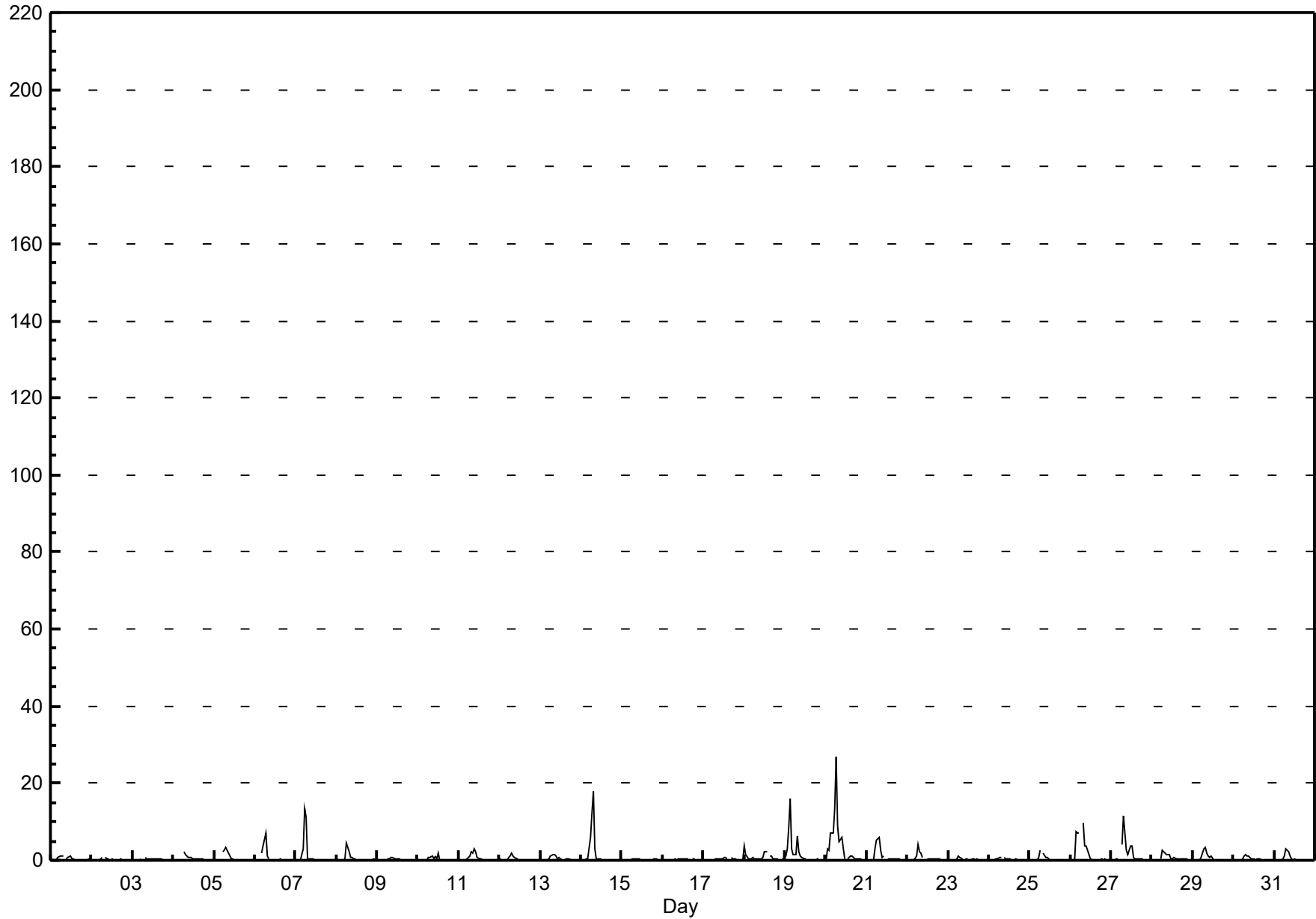


Hourly Averages

Nitrogen Oxide (NO) - ppb

Henry Pirker - July 2017

Maximum Value: 26.8 ppb on Jul 20 07:00		Maximum Daily Average: 3.9 ppb on Jul 20		Hours in Service: 744																							
Minimum Value: 0 ppb on Jul 1 02:00		Minimum Daily Average: 0.1 ppb on Jul 2		Hours of Data: 707																							
Maximum Diurnal Average: 3.5 ppb at hour 7		Minimum Diurnal Average: 0.0 ppb at hour 22		Hours of Missing Data: 37																							
Monthly Average: 0.73 ppb		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.5 P ₉₀ = 1.7 P ₉₉ = 11.0		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-Jul	0	0	0	0	1	1	1	1	A	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	1.2	
2-Jul	0	0	0	0	0	0	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8	
3-Jul	0	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7		
4-Jul	0	0	0	0	0	A	2	2	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0.4	2.3		
5-Jul	0	0	0	0	A	2	3	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	3.2		
6-Jul	0	0	0	A	2	4	7	1	1	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.8	7.2		
7-Jul	0	0	A	0	3	14	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.3	13.5		
8-Jul	0	A	0	0	0	0	5	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	4.6		
9-Jul	A	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6		
10-Jul	0	0	0	0	0	0	1	1	1	0	1	0	2	0	0	0	0	0	0	0	0	0	A	0	0.3	1.9	
11-Jul	0	0	0	0	0	0	1	2	2	3	2	1	0	0	0	0	0	0	0	0	0	0	A	0	0.5	3.0	
12-Jul	0	0	0	0	0	1	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	1.8	
13-Jul	0	0	0	0	0	0	1	1	2	1	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0.4	1.5	
14-Jul	0	0	0	0	1	6	12	18	3	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1.8	18.0	
15-Jul	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.5	
16-Jul	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	
17-Jul	0	0	0	0	0	0	0	0	1	0	0	1	1	1	0	A	1	0	0	0	0	0	0	0	0.3	0.8	
18-Jul	4	2	0	0	0	1	0	0	1	0	1	2	2	A	1	1	0	0	0	0	0	0	0	0	0.7	3.8	
19-Jul	1	3	9	16	3	1	2	6	2	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	2.0	16.2	
20-Jul	0	3	3	7	7	13	27	9	5	6	3	0	A	0	1	1	1	0	0	0	0	0	0	0	3.9	26.8	
21-Jul	0	0	0	0	0	3	5	6	3	1	1	A	0	0	0	0	0	0	0	1	0	0	0	0	1.0	6.1	
22-Jul	0	0	0	0	0	1	4	2	2	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	4.2	
23-Jul	0	0	0	0	0	0	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.0	
24-Jul	0	0	0	0	0	0	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8	
25-Jul	0	0	0	0	0	1	3	A	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.6	
26-Jul	0	0	0	7	7	7	A	10	4	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0	2.0	9.5	
27-Jul	0	0	0	0	0	A	4	11	7	3	1	4	4	1	1	0	0	0	0	0	0	0	0	0	1.7	11.5	
28-Jul	0	0	0	0	0	A	0	3	2	2	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0.5	2.6	
29-Jul	0	0	0	A	0	1	3	3	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	3.4	
30-Jul	0	0	A	0	0	0	1	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.6	
31-Jul	0	A	0	0	0	0	1	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	3.1	
		0.2	0.3	0.4	1.1	0.9	2.0	3.5	3.2	1.6	1.1	0.8	0.5	0.5	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.0	Diurnal Average	
		3.8	3.1	8.7	16.2	7.3	13.5	26.8	18.0	7.1	6.1	3.0	3.9	3.9	2.3	1.0	1.1	1.0	0.5	0.6	0.5	0.4	0.1	0.5	0.3	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									



Hourly Maximums

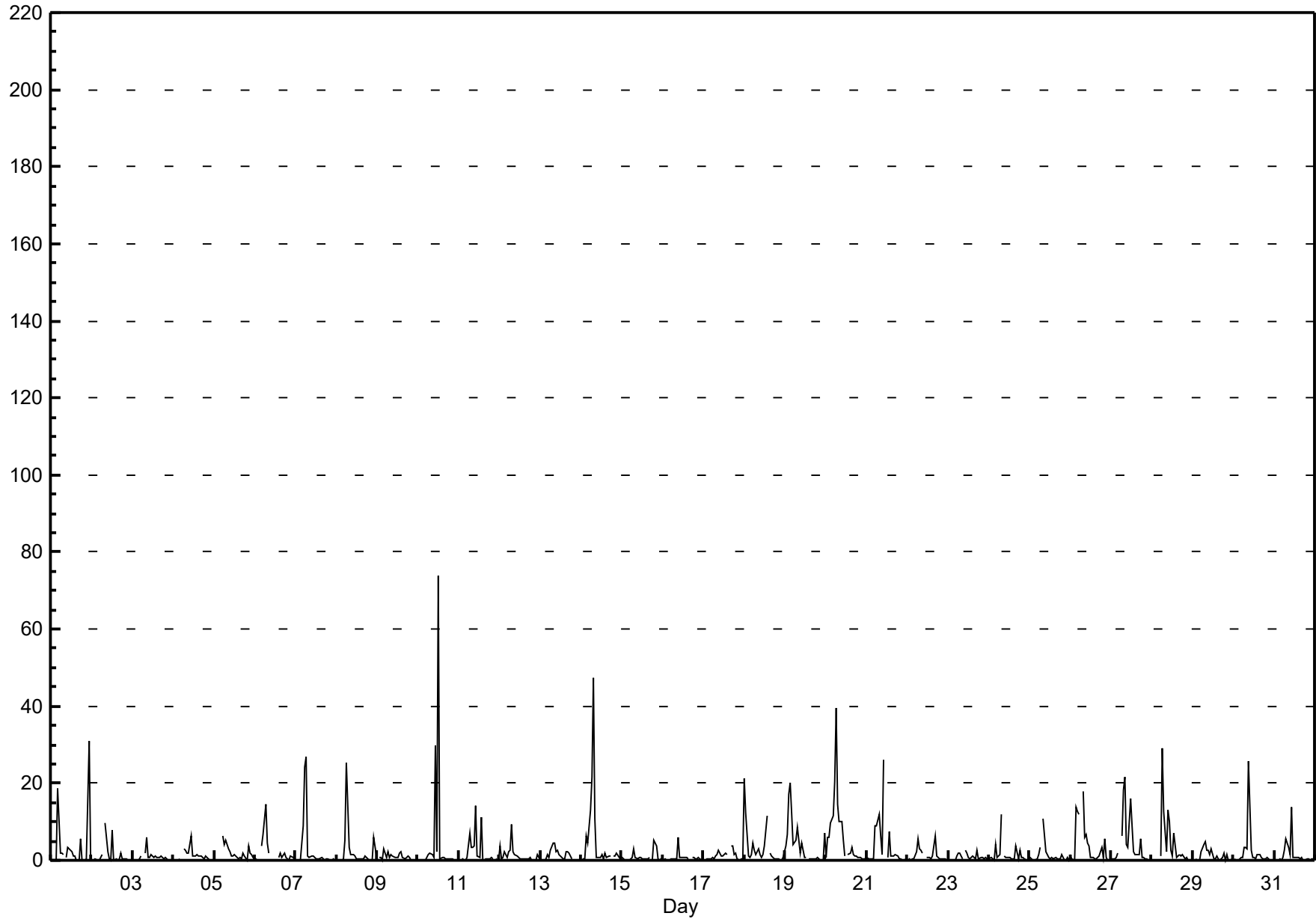
Nitrogen Oxide (NO) - ppb

Henry Pirker - July 2017

Maximum Value: 73.7 ppb on Jul 10 13:00		Maximum Daily Average: 6.4 ppb on Jul 20		Hours in Service: 744																							
Minimum Value: 0 ppb on Jul 28 03:00		Minimum Daily Average: 0.7 ppb on Jul 16		Hours of Data: 707																							
Maximum Diurnal Average: 8.0 ppb at hour 7		Minimum Diurnal Average: 0.3 ppb at hour 22		Hours of Missing Data: 37																							
Monthly Average: 2.37 ppb		Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.3 Median = 0.7 Q ₃ = 1.8 P ₉₀ = 5.9 P ₉₉ = 25.4		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-Jul	0	0	0	0	19	2	2	2	A	1	3	3	2	1	1	0	0	5	0	0	0	0	31	0	3.2	31.1	
2-Jul	0	0	0	0	0	1	1	A	10	2	0	0	8	0	0	0	0	2	1	0	0	0	0	0	1.2	9.8	
3-Jul	0	0	0	0	0	1	A	2	6	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0.8	5.9	
4-Jul	0	0	0	0	0	A	3	3	2	2	6	1	1	1	1	1	1	1	1	1	1	0	0	0	1.2	6.4	
5-Jul	0	0	0	0	A	6	4	5	3	2	1	1	1	1	0	1	0	2	1	0	4	2	2	1	1.6	6.2	
6-Jul	0	0	0	A	4	7	15	4	2	C	C	C	C	C	1	2	1	2	1	1	0	1	1	1	2.3	14.6	
7-Jul	0	0	A	0	9	24	27	1	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	3.0	26.8	
8-Jul	0	A	0	0	0	5	25	3	1	1	1	1	0	0	0	1	0	1	0	0	0	0	6	1	2.2	25.5	
9-Jul	A	1	1	0	3	1	2	1	2	1	1	1	1	2	2	1	0	1	1	1	0	0	0	0	1.0	3.1	
10-Jul	0	0	0	0	0	1	2	2	2	1	30	2	74	0	1	1	0	0	0	1	0	0	A	A	5.1	73.7	
11-Jul	0	0	0	0	0	1	7	3	3	4	14	1	1	11	0	0	0	0	0	1	0	A	0	0	2.2	14.1	
12-Jul	4	0	1	2	1	2	3	9	2	2	1	1	0	0	0	0	0	0	1	0	A	0	1	1	1.4	9.5	
13-Jul	1	0	0	0	2	1	3	4	5	2	2	1	1	0	0	2	2	2	0	A	0	0	0	0	1.3	4.5	
14-Jul	0	0	0	6	4	13	21	47	11	1	1	1	1	0	2	1	1	1	A	1	1	2	1	1	5.1	47.4	
15-Jul	1	0	0	0	0	1	1	3	1	0	1	1	0	0	0	0	1	A	0	5	4	0	0	0	0.9	5.2	
16-Jul	0	0	0	0	0	0	0	0	0	6	1	1	1	1	1	1	A	1	1	1	0	1	0	0	0.7	5.9	
17-Jul	0	0	0	0	0	1	1	1	1	3	1	1	2	2	1	A	4	4	1	2	0	0	0	0	1.2	3.9	
18-Jul	21	12	1	1	1	5	3	1	3	2	1	2	4	11	A	2	1	1	1	0	0	0	0	1	3.2	21.2	
19-Jul	4	7	17	20	12	4	5	9	5	2	4	1	1	A	0	0	0	0	0	1	0	0	0	7	4.4	20.1	
20-Jul	1	6	6	10	11	21	40	15	10	10	5	1	A	1	2	3	2	1	1	1	1	0	0	0	6.4	39.6	
21-Jul	1	0	0	0	0	9	9	12	6	2	26	A	1	7	1	1	1	1	1	0	0	0	0	0	3.5	26.1	
22-Jul	0	0	0	0	0	2	6	3	3	2	A	1	1	1	1	1	6	1	1	1	0	0	0	0	1.3	6.2	
23-Jul	0	0	0	0	0	1	2	2	0	A	3	2	1	0	1	1	0	3	0	1	1	0	1	1	0.9	2.6	
24-Jul	0	1	0	0	4	1	1	12	A	1	1	1	1	1	1	1	4	0	2	1	1	0	0	0	1.4	12.0	
25-Jul	1	0	0	0	0	1	3	A	11	2	1	1	0	1	0	1	0	0	0	1	0	0	1	0	1.2	11.0	
26-Jul	1	0	0	14	13	12	A	18	6	7	4	4	1	1	0	0	1	1	3	1	6	1	0	0	4.1	18.1	
27-Jul	0	0	0	1	2	A	6	18	22	4	3	16	9	2	1	1	1	6	1	1	0	0	0	0	4.2	21.7	
28-Jul	0	0	0	0	A	1	29	13	2	13	10	2	1	7	1	1	2	1	1	0	1	0	0	0	3.8	29.2	
29-Jul	0	0	0	A	0	2	4	5	3	3	1	3	1	0	1	0	0	1	2	0	1	0	0	0	1.3	4.8	
30-Jul	0	0	A	0	1	1	3	3	3	26	2	1	1	1	2	1	1	1	0	1	1	0	0	0	2.1	25.7	
31-Jul	0	A	0	0	0	1	3	6	3	2	14	1	1	1	1	0	1	0	0	0	1	0	0	0	1.5	13.7	
		1.2	1.1	1.0	2.0	3.1	4.4	8.0	7.2	4.5	3.6	4.9	1.8	4.0	1.9	0.8	0.9	1.1	1.4	0.8	0.7	0.8	0.3	1.6	0.5	Diurnal Average	
		21.2	12.4	17.0	20.1	18.5	24.3	39.6	47.4	21.7	25.7	29.7	16.2	73.7	11.5	2.2	3.2	6.2	5.6	3.4	5.2	5.5	1.9	31.1	6.9	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

Hourly Maximums

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

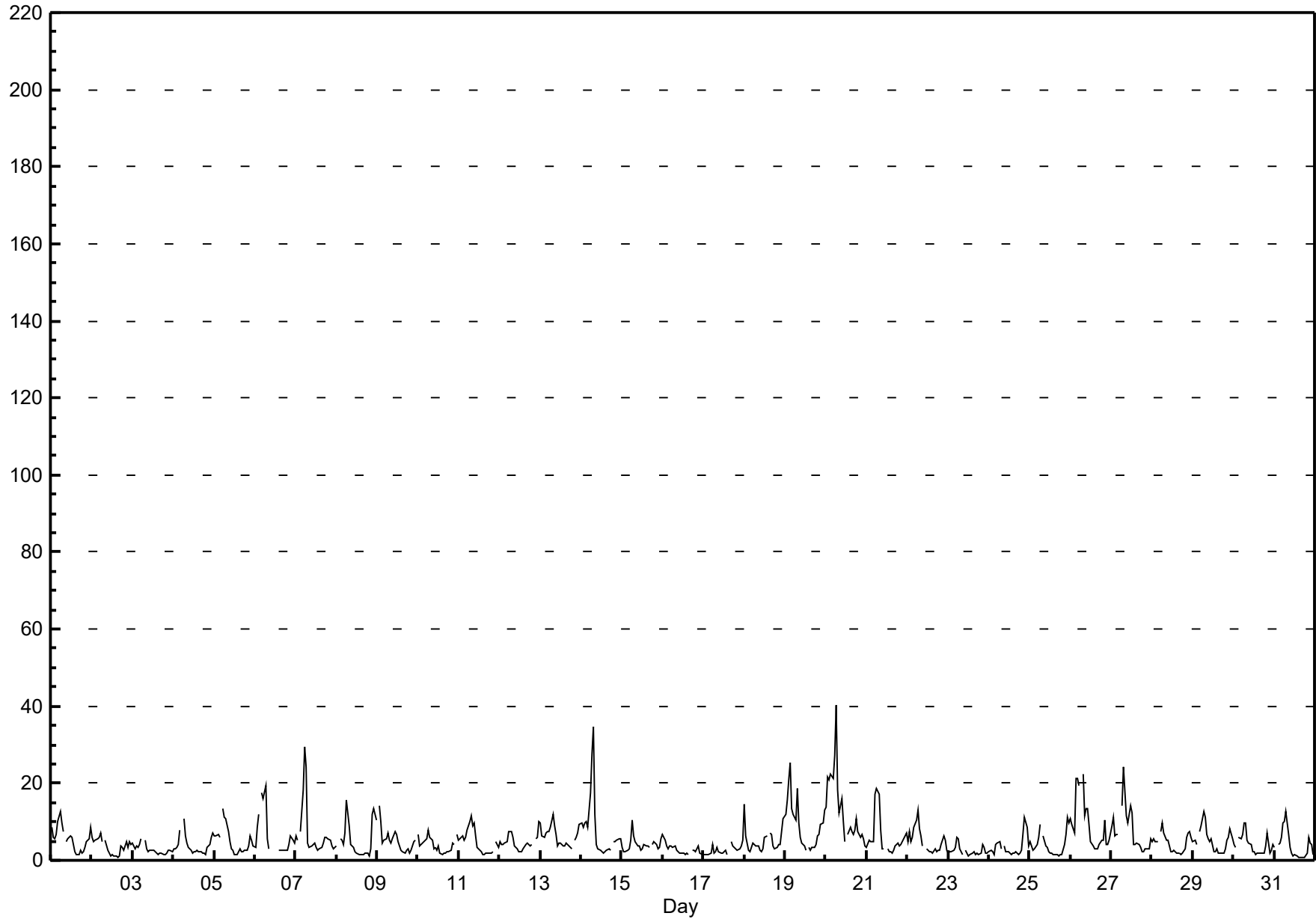


Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

Henry Pirker - July 2017

Maximum Value: 40.1 ppb on Jul 20 07:00		Maximum Daily Average: 13.3 ppb on Jul 20		Hours in Service: 744																							
Minimum Value: 1 ppb on Jul 31 19:00		Minimum Daily Average: 2.5 ppb on Jul 23		Hours of Data: 707																							
Maximum Diurnal Average: 11.8 ppb at hour 7		Minimum Diurnal Average: 2.5 ppb at hour 15		Hours of Missing Data: 37																							
Monthly Average: 5.34 ppb		Percentiles: P ₁ = 1.1 P ₁₀ = 1.8 Q ₁ = 2.5 Median = 4.0 Q ₃ = 6.3 P ₉₀ = 10.4 P ₉₉ = 23.8		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-Jul	9	6	6	7	10	13	10	7	A	5	5	6	6	4	2	1	1	2	2	2	3	5	6	8	5.5	12.7	
2-Jul	6	5	5	6	6	7	5	A	5	3	2	1	2	1	1	1	1	4	3	3	5	3	5	4	3.6	7.0	
3-Jul	5	3	4	3	4	6	A	5	3	2	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2.8	5.6	
4-Jul	3	3	3	4	8	A	11	6	4	3	3	2	2	2	2	2	2	2	2	2	4	4	6	7	3.8	10.7	
5-Jul	6	6	7	6	A	14	11	11	7	5	3	3	2	2	2	3	2	2	2	2	4	7	5	4	5.1	13.6	
6-Jul	3	9	12	A	18	16	19	6	3	C	C	C	C	C	3	3	2	3	3	3	4	6	5	5	6.7	19.3	
7-Jul	6	5	A	7	18	29	24	4	4	4	4	3	3	3	4	4	4	6	6	5	5	4	3	3	7.0	29.4	
8-Jul	4	A	6	5	4	7	16	9	4	4	3	2	2	2	1	2	2	2	2	1	3	12	14	11	5.1	15.6	
9-Jul	A	14	10	5	5	6	7	5	5	6	7	7	5	4	2	2	2	3	3	2	3	5	5	A	5.1	14.1	
10-Jul	7	4	4	5	5	6	8	6	5	3	3	2	4	2	2	2	2	2	2	2	5	4	A	7	3.9	7.9	
11-Jul	5	6	6	5	6	8	10	11	9	10	7	3	3	2	1	1	2	2	2	2	2	A	5	3	4.9	11.4	
12-Jul	5	4	4	4	5	7	7	8	6	4	3	2	2	2	3	4	4	4	4	4	A	6	6	10	4.7	10.0	
13-Jul	10	6	6	7	8	7	9	12	9	7	4	4	4	4	4	4	4	4	3	A	5	6	7	9	6.2	12.0	
14-Jul	10	9	10	10	9	17	27	35	12	4	3	3	2	2	2	2	3	3	A	5	5	5	6	6	8.2	34.8	
15-Jul	3	2	2	3	3	5	10	6	5	4	4	3	3	4	4	4	3	A	4	5	4	3	3	5	4.1	10.4	
16-Jul	7	5	4	3	4	4	3	4	3	2	2	2	2	2	2	2	A	3	3	2	3	4	2	1	2.9	6.6	
17-Jul	1	2	1	2	2	4	2	2	3	2	2	2	2	3	2	A	5	4	3	3	3	3	4	5	2.7	5.2	
18-Jul	14	6	3	2	3	4	4	4	4	3	2	3	6	6	A	7	7	4	3	3	4	4	8	11	5.0	14.4	
19-Jul	12	16	21	26	13	12	10	19	10	6	4	4	3	A	3	3	3	3	4	6	7	9	10	13	9.4	25.5	
20-Jul	14	22	21	23	21	27	40	18	12	16	10	5	A	7	9	8	7	8	11	7	6	7	5	4	13.3	40.1	
21-Jul	3	5	5	5	5	17	19	17	8	3	3	A	3	2	2	2	3	4	4	4	4	5	5	7	5.9	18.7	
22-Jul	5	7	5	6	9	10	13	8	6	4	A	3	3	2	2	2	3	2	2	3	4	6	5	2	5.0	13.1	
23-Jul	2	2	2	3	3	6	6	3	2	A	3	2	1	1	2	2	1	2	2	2	4	3	2	2	2.5	5.9	
24-Jul	2	2	2	1	4	4	5	3	A	4	2	2	2	1	2	2	2	2	2	3	7	11	8	4	3.4	11.2	
25-Jul	5	4	3	3	4	6	9	A	6	4	3	2	2	2	2	1	1	1	1	2	4	7	11	10	4.1	11.4	
26-Jul	11	9	7	21	21	19	A	22	12	14	14	9	5	4	3	3	3	4	5	5	10	4	4	5	9.4	22.3	
27-Jul	9	11	6	7	7	A	14	24	18	11	10	14	12	4	4	4	4	3	2	2	3	3	3	6	7.9	24.1	
28-Jul	5	5	5	5	A	8	10	7	5	5	4	2	2	3	2	2	2	2	2	3	6	7	7	6	4.5	9.6	
29-Jul	5	5	4	A	7	9	13	11	7	6	5	6	2	2	3	2	2	2	2	3	5	6	8	6	5.3	12.8	
30-Jul	4	4	A	6	6	7	10	10	5	4	4	2	2	2	2	2	2	2	2	4	7	2	2	4	4.0	9.8	
31-Jul	3	A	4	4	6	10	10	13	7	3	2	1	1	1	1	1	1	1	1	2	6	5	4	1	3.8	12.6	
		6.1	6.5	6.1	6.7	7.7	10.2	11.8	10.2	6.5	5.1	4.3	3.7	3.1	2.7	2.5	2.6	2.8	2.9	3.0	3.1	4.5	5.2	5.6	5.7	Diurnal Average	
		14.4	21.8	20.9	25.5	21.4	29.4	40.1	34.8	17.8	15.9	13.6	14.2	12.4	6.7	8.7	7.5	6.8	7.7	10.8	7.5	10.4	11.9	13.5	13.1	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									



Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

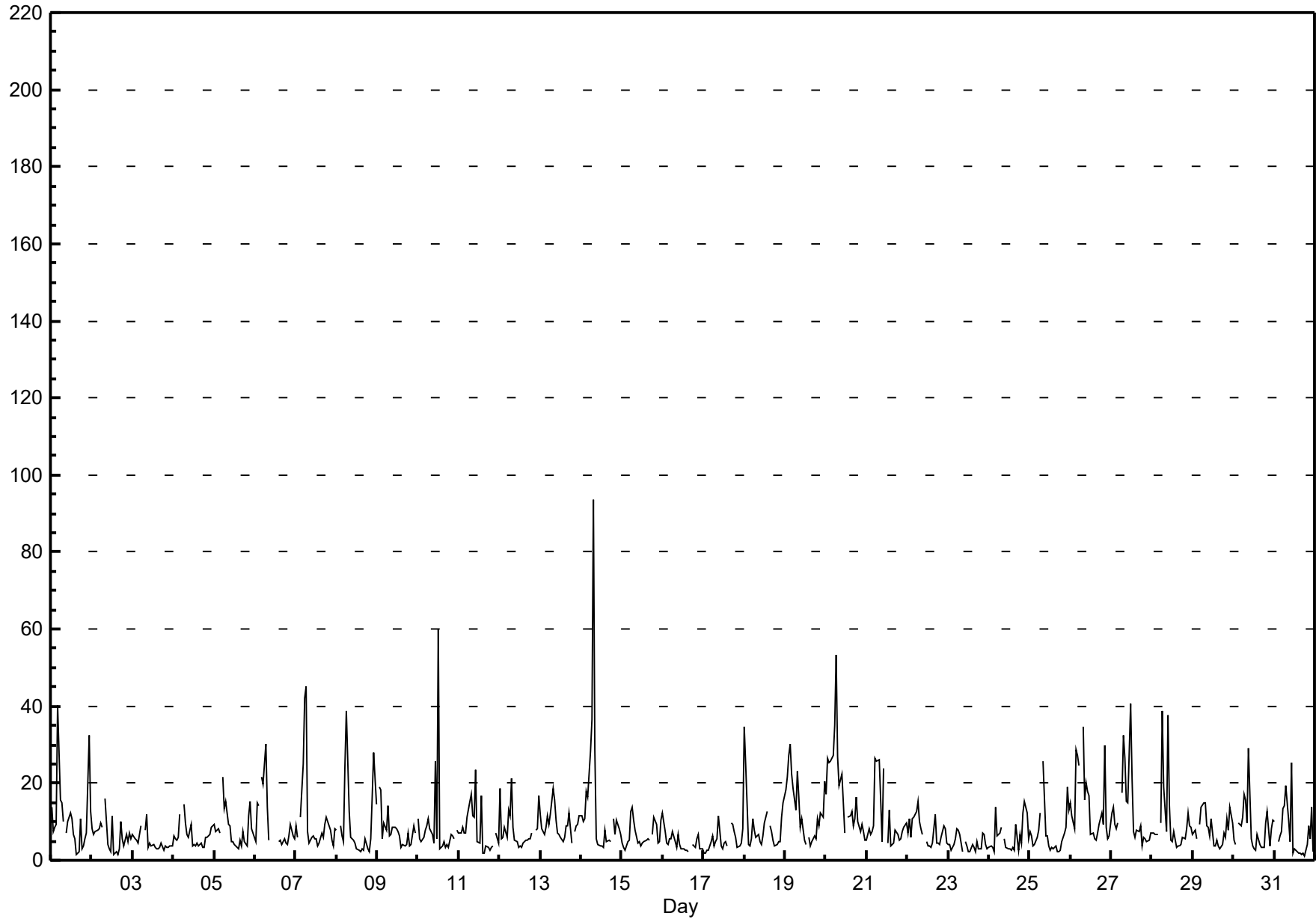
Henry Pirker - July 2017

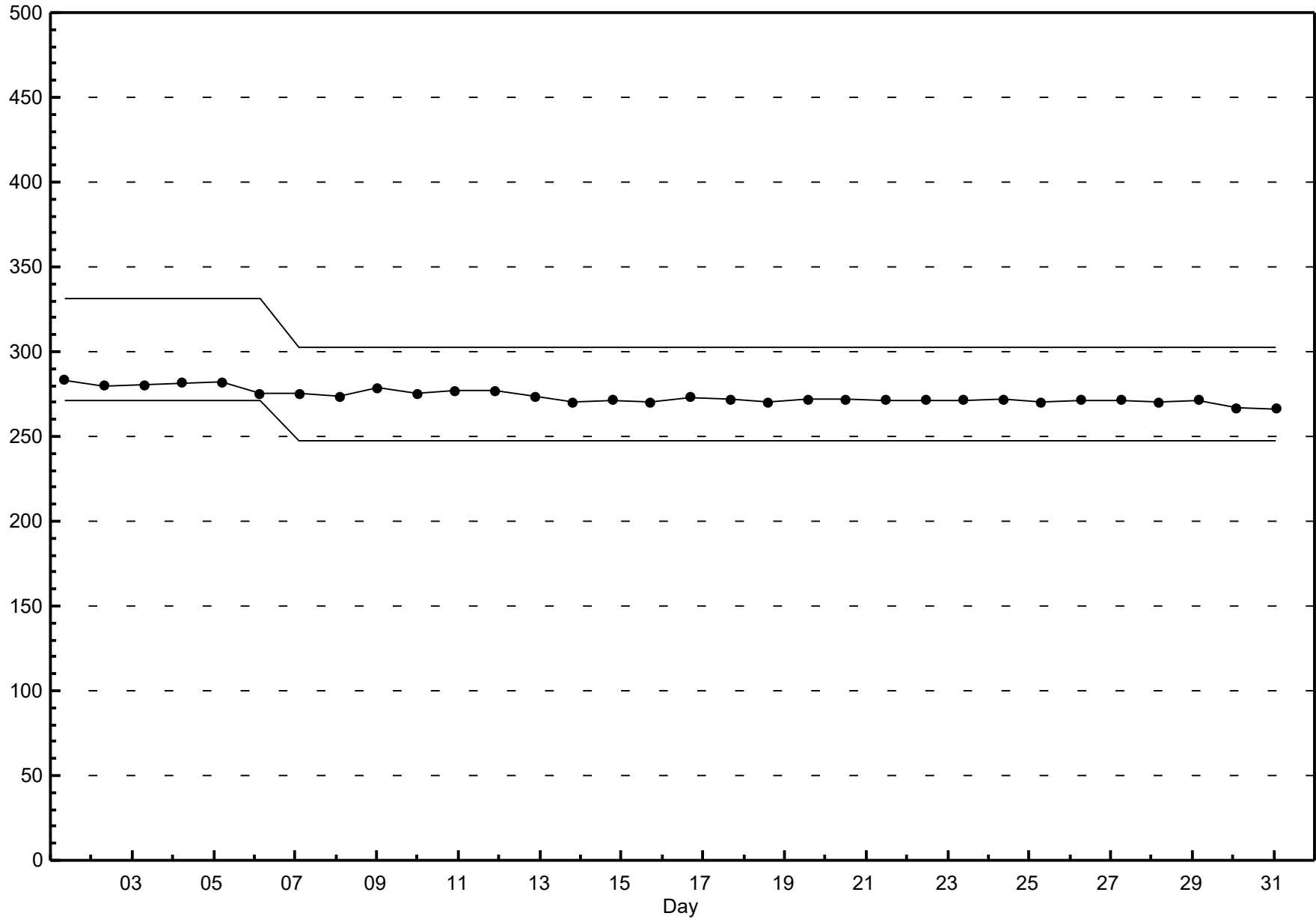
Maximum Value: 93.6 ppb on Jul 14 08:00		Maximum Daily Average: 17.9 ppb on Jul 20		Hours in Service: 744																							
Minimum Value: 1 ppb on Jul 31 19:00		Minimum Daily Average: 4.4 ppb on Jul 23		Hours of Data: 707																							
Maximum Diurnal Average: 18.5 ppb at hour 7		Minimum Diurnal Average: 4.4 ppb at hour 15		Hours of Missing Data: 37																							
Monthly Average: 8.95 ppb		Percentiles: P ₁ = 1.7 P ₁₀ = 3.2 Q ₁ = 4.3 Median = 6.7 Q ₃ = 10.5 P ₉₀ = 17.2 P ₉₉ = 39.9		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-Jul	14	7	8	9	40	16	15	10	A	7	10	12	11	7	6	2	2	11	3	4	6	7	32	13	11.0	40.1	
2-Jul	8	7	7	8	8	10	9	A	16	4	3	2	12	2	2	1	3	10	6	4	7	5	7	6	6.3	15.9	
3-Jul	7	6	5	5	7	9	A	8	12	3	4	4	4	4	3	3	3	4	3	4	3	4	4	4	4.8	11.8	
4-Jul	6	5	5	6	12	A	15	10	7	6	9	4	4	4	4	4	4	3	3	6	6	7	9	9	6.5	14.7	
5-Jul	9	7	8	7	A	22	14	15	9	9	5	5	4	3	3	5	4	7	5	4	12	15	8	7	8.2	21.8	
6-Jul	5	15	14	A	22	20	30	14	5	C	C	C	C	C	5	5	4	5	4	4	6	9	6	5	10.0	30.3	
7-Jul	9	6	A	11	25	42	45	8	4	6	6	6	6	4	4	7	6	9	11	10	8	5	4	8	10.9	45.0	
8-Jul	8	A	9	6	5	24	39	13	6	6	5	4	3	3	2	3	3	6	3	2	6	16	28	15	9.3	38.9	
9-Jul	A	19	18	6	10	8	14	6	7	8	9	8	7	6	3	4	4	4	7	4	4	9	7	A	7.9	18.9	
10-Jul	11	6	5	6	8	9	11	8	7	4	26	6	60	3	4	5	3	4	3	7	6	6	A	8	9.4	60.2	
11-Jul	7	7	9	7	7	11	15	17	12	11	23	5	4	17	2	2	4	3	3	3	4	A	7	4	8.0	23.4	
12-Jul	19	6	6	8	6	13	11	21	9	5	5	3	4	3	4	5	5	6	6	7	A	8	8	17	8.1	21.2	
13-Jul	12	8	7	9	12	9	12	18	16	10	7	7	6	5	6	9	9	12	4	A	7	9	9	11	9.4	18.5	
14-Jul	12	10	11	18	17	28	37	94	29	6	4	4	4	3	8	5	5	5	A	11	7	11	8	7	14.8	93.6	
15-Jul	5	3	3	5	5	13	14	10	8	5	5	4	4	5	5	6	5	A	7	11	9	5	5	11	6.5	13.6	
16-Jul	12	7	4	4	5	5	7	5	3	7	4	3	3	3	3	2	A	4	4	3	6	7	3	3	4.7	12.1	
17-Jul	2	2	3	3	5	6	4	5	6	12	4	3	4	5	4	A	10	9	8	6	3	4	5	8	5.2	11.7	
18-Jul	35	25	4	4	5	11	8	6	7	5	4	6	10	13	A	9	7	5	4	4	5	5	11	15	9.0	34.6	
19-Jul	18	22	27	30	22	19	13	23	16	9	11	5	4	A	6	4	5	6	6	11	9	12	11	20	13.5	30.1	
20-Jul	17	26	25	26	27	35	53	27	19	22	15	7	A	11	12	13	9	11	16	10	7	9	7	5	17.9	53.4	
21-Jul	5	8	7	8	9	26	26	26	16	5	24	A	5	13	4	4	4	8	7	5	6	7	9	10	10.4	26.4	
22-Jul	7	11	6	11	11	13	15	10	8	7	A	5	4	4	3	4	12	5	4	4	6	9	8	4	7.4	15.2	
23-Jul	4	4	3	4	6	8	8	7	2	A	5	4	2	2	4	3	2	5	3	3	7	7	4	3	4.4	8.2	
24-Jul	3	4	3	2	14	6	7	8	A	6	3	3	3	2	3	3	9	3	7	5	12	15	12	5	6.1	15.2	
25-Jul	7	6	4	4	6	8	12	A	26	6	6	4	3	3	3	4	2	2	3	5	7	9	19	13	7.0	25.6	
26-Jul	15	12	8	29	27	25	A	35	16	20	18	17	7	7	5	5	7	9	12	9	30	9	6	6	14.5	34.8	
27-Jul	12	14	9	8	10	A	17	32	26	15	15	41	21	7	6	8	8	9	4	6	6	5	5	7	12.7	40.5	
28-Jul	7	7	7	7	A	10	39	19	7	38	14	5	5	7	4	4	4	4	6	6	8	12	9	9	10.3	39.0	
29-Jul	7	8	5	A	9	14	15	15	9	9	6	11	4	4	5	4	3	4	7	6	11	8	14	10	8.1	15.0	
30-Jul	5	4	A	10	9	11	17	16	10	29	6	4	3	3	7	4	3	3	3	10	13	4	8	11	8.3	29.1	
31-Jul	10	A	5	6	7	14	14	19	10	5	25	2	3	2	2	2	2	2	1	4	9	6	14	2	7.3	25.4	
		10.0	9.4	8.1	9.2	12.3	15.3	18.5	17.4	11.3	9.8	9.7	6.7	7.3	5.3	4.4	4.6	5.1	6.0	5.4	5.9	7.8	8.0	9.6	8.6	Diurnal Average	
		34.6	26.3	27.1	30.1	40.1	42.1	53.4	93.6	28.8	37.7	25.6	40.5	60.2	16.6	11.5	12.6	12.0	12.3	16.4	11.3	29.9	16.3	32.3	20.4	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

Henry Pirker - July 2017







Peace Airshed Zone Association

Hourly Averages

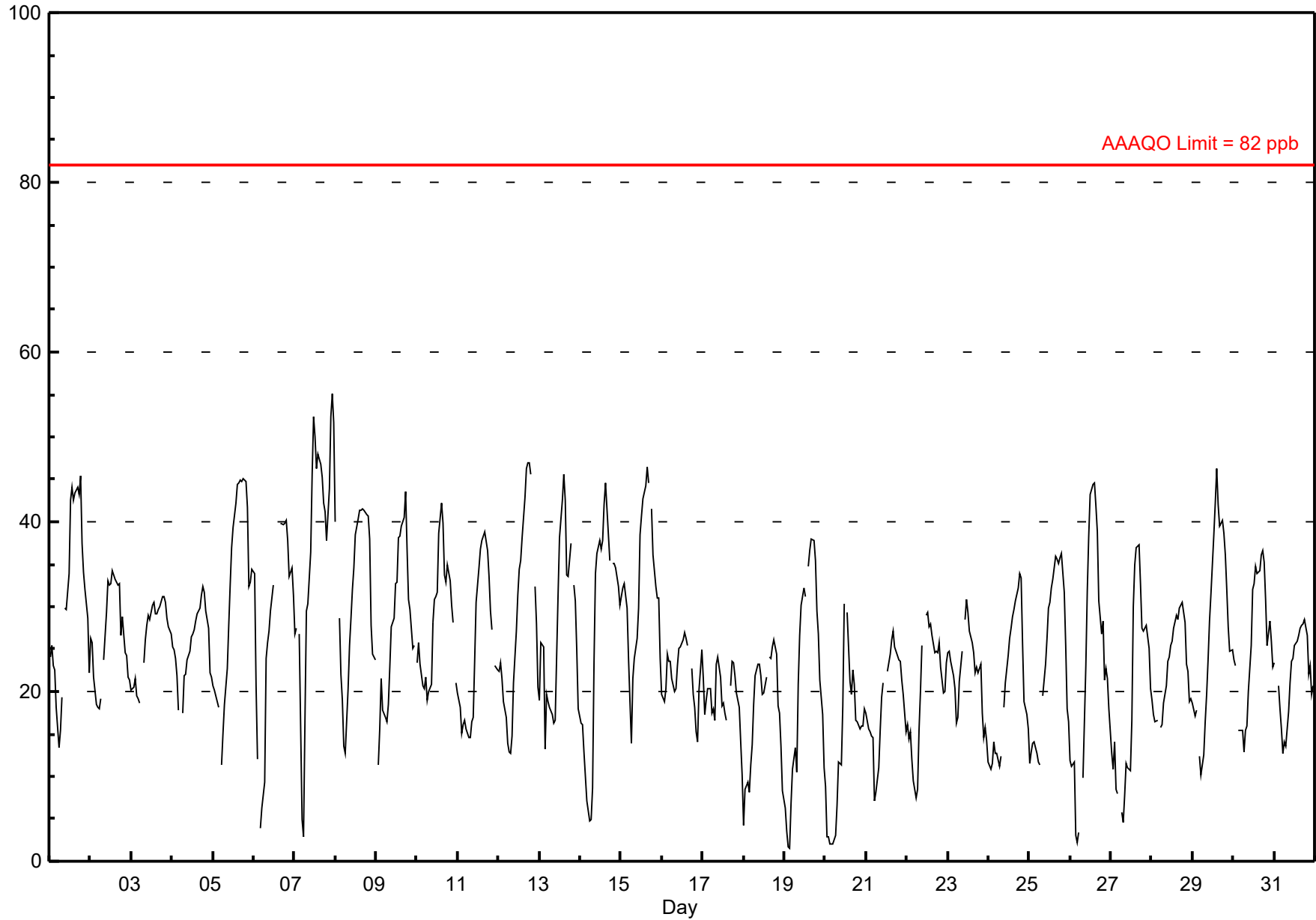
Ozone (O₃) - ppb

Henry Pirker - July 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 55.0 ppb on Jul 7 23:00	Maximum Daily Average: 37.4 ppb on Jul 7
Minimum Value: 2 ppb on Jul 19 04:00	Hours of Data: 708
Maximum Diurnal Average: 35.2 ppb at hour 16	Hours of Missing Data: 36
Monthly Average: 24.98 ppb	Hours of Calibration: 36
Minimum Daily Average: 13.7 ppb on Jul 20	Percent Operational Time: 100.0
Minimum Diurnal Average: 13.0 ppb at hour 6	
Percentiles: P ₁ = 2.9 P ₁₀ = 12.5 Q ₁ = 17.9 Median = 24.1 Q ₃ = 31.9 P ₉₀ = 39.3 P ₉₉ = 46.4	

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-Jul	24	25	23	23	18	13	15	19	A	30	30	34	43	44	42	43	44	43	45	38	34	32	29	22	31.1	45.5
2-Jul	26	26	22	18	18	18	19	A	24	29	33	33	33	34	33	33	33	33	27	29	25	24	22	21	26.6	34.2
3-Jul	20	21	21	19	19	19	A	23	26	28	29	28	30	30	29	29	30	30	31	31	31	29	28	27	26.5	31.3
4-Jul	25	25	24	22	18	A	18	22	22	24	25	26	27	27	28	29	30	31	32	32	29	27	22	22	25.6	32.4
5-Jul	21	20	19	18	A	11	15	19	23	28	33	37	39	42	44	45	45	45	45	45	42	32	33	34	31.9	45.0
6-Jul	34	21	12	A	4	6	9	24	26	27	30	33	C	C	C	C	40	40	40	40	38	34	34	31	27.5	40.2
7-Jul	27	27	A	27	5	3	17	29	30	36	46	52	50	46	48	47	45	42	41	38	44	52	55	52	37.4	55.0
8-Jul	40	A	29	22	19	14	13	20	25	29	32	35	38	40	41	41	42	41	41	41	38	28	24	24	31.2	41.5
9-Jul	A	11	16	22	18	17	16	18	23	28	29	33	33	38	38	39	41	44	37	31	30	25	25	A	27.8	43.6
10-Jul	23	26	23	21	20	22	19	20	21	28	31	31	32	39	42	40	34	33	35	33	30	28	A	21	28.3	42.2
11-Jul	20	18	15	16	17	16	15	15	17	17	24	31	35	37	38	38	39	37	34	29	27	A	23	22	25.1	38.9
12-Jul	22	23	22	19	17	14	13	13	15	21	27	31	34	35	38	43	46	47	47	46	A	32	28	21	28.5	47.0
13-Jul	19	26	25	13	20	19	18	17	16	17	24	31	38	43	46	42	34	33	37	A	33	31	25	18	27.2	45.5
14-Jul	16	16	13	10	7	5	5	9	23	34	36	38	37	38	42	45	39	35	A	35	35	35	32	30	26.7	44.6
15-Jul	31	32	33	30	24	19	14	22	24	26	30	39	41	43	44	46	45	A	41	36	32	31	31	24	32.0	46.5
16-Jul	20	19	20	24	24	24	21	20	20	23	25	25	26	27	26	25	A	23	20	18	15	14	20	25	22.0	26.9
17-Jul	22	17	19	20	20	18	18	17	23	24	22	18	19	17	17	A	21	23	23	22	20	18	14	10	19.2	24.1
18-Jul	4	8	9	8	11	14	18	22	23	22	20	20	22	A	24	24	25	26	24	18	17	14	8	17.7	26.2	
19-Jul	6	4	2	2	7	11	13	11	21	27	30	32	31	A	35	37	38	38	35	29	27	21	17	11	21.0	38.0
20-Jul	9	3	3	2	2	3	3	7	12	11	18	30	A	29	25	20	23	21	17	16	16	16	16	18	13.7	30.4
21-Jul	18	16	15	15	15	7	8	11	15	19	21	A	22	23	24	26	27	25	24	24	24	21	20	15	19.0	27.2
22-Jul	16	14	15	12	9	7	8	15	20	25	A	29	29	28	28	27	25	25	25	26	23	20	20	23	20.4	29.3
23-Jul	25	25	24	22	20	16	17	21	25	A	28	31	29	27	26	25	22	23	22	23	17	15	16	14	22.3	30.9
24-Jul	12	11	11	14	13	13	11	12	A	18	21	24	26	27	29	30	31	32	34	33	26	19	17	16	20.9	33.9
25-Jul	12	13	14	14	13	12	11	A	20	23	26	30	30	32	33	36	36	35	36	36	32	25	18	17	24.0	36.3
26-Jul	12	11	12	3	2	3	A	10	16	23	32	38	43	44	45	42	39	31	27	28	21	23	22	18	23.7	44.6
27-Jul	13	11	14	8	8	A	6	5	8	12	11	11	17	30	35	37	37	33	27	27	27	28	25	20	19.5	37.3
28-Jul	19	17	16	17	A	16	16	19	21	23	24	25	26	27	29	28	30	30	30	28	23	22	19	19	22.9	30.4
29-Jul	19	17	18	A	12	10	13	16	20	24	28	31	38	42	46	42	39	40	39	36	32	28	25	25	27.8	46.2
30-Jul	24	23	A	15	15	15	13	15	16	20	25	32	33	35	34	34	36	37	35	31	25	28	26	23	25.7	36.7
31-Jul	23	A	21	18	16	13	14	14	18	21	23	24	25	26	27	27	28	28	28	27	22	23	20	21	22.0	28.5
	20.0	18.2	17.6	16.4	14.2	13.0	13.7	16.7	20.4	23.9	27.2	30.4	31.9	33.6	34.8	35.2	34.6	33.4	32.7	31.1	27.8	26.0	24.0	21.7	Diurnal Average	
	40.1	32.3	32.7	29.8	23.9	23.6	21.5	29.4	30.3	36.5	45.6	52.4	50.0	46.3	47.9	46.8	46.2	46.9	47.0	45.7	43.8	52.3	55.0	51.6	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na



Hourly Maximums

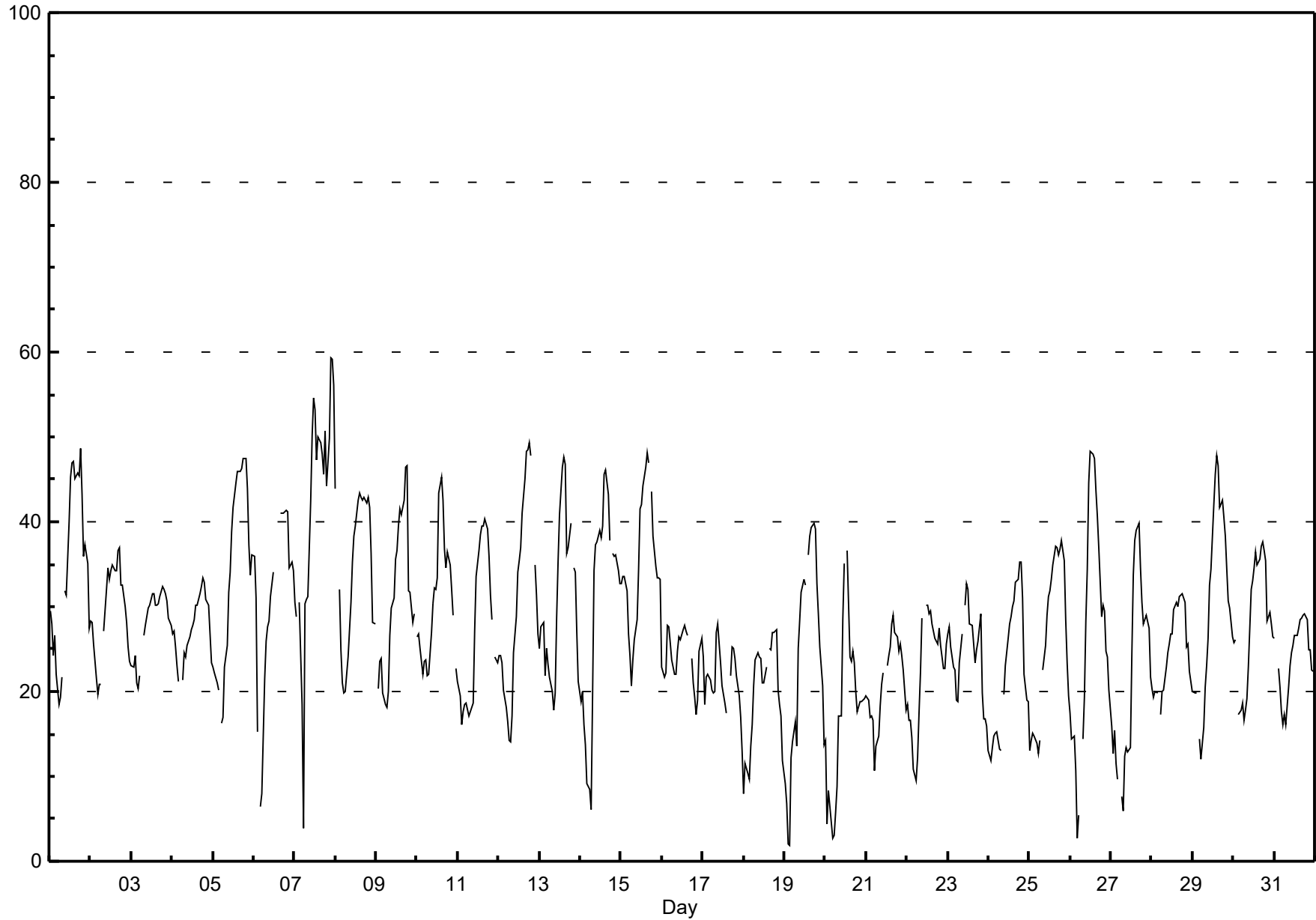
Ozone (O₃) - ppb

Henry Pirker - July 2017

Maximum Value: 59.3 ppb on Jul 7 22:00		Maximum Daily Average: 41.9 ppb on Jul 7		Hours in Service: 744																																												
Minimum Value: 2 ppb on Jul 19 04:00		Minimum Daily Average: 17.3 ppb on Jul 20		Hours of Data: 708																																												
Maximum Diurnal Average: 37.0 ppb at hour 16		Minimum Diurnal Average: 15.8 ppb at hour 6		Hours of Missing Data: 36																																												
Monthly Average: 27.54 ppb		Percentiles: P ₁ = 5.3 P ₁₀ = 15.1 Q ₁ = 20.3 Median = 26.7 Q ₃ = 34.2 P ₉₀ = 42.1 P ₉₉ = 49.8		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-Jul	30	28	24	27	22	18	19	22	A	32	31	40	45	47	47	45	46	45	49	43	36	37	35	28	34.6	48.6																						
2-Jul	28	28	26	21	20	21	21	A	27	32	35	33	34	35	34	34	37	37	32	33	30	28	25	24	29.4	36.9																						
3-Jul	23	23	24	21	20	22	A	27	28	29	30	30	32	31	30	30	30	31	32	32	32	31	29	28	28.0	32.4																						
4-Jul	27	27	25	23	21	A	21	25	24	25	26	27	28	28	30	30	31	32	33	33	31	30	27	23	27.4	33.3																						
5-Jul	23	22	21	20	A	16	17	23	25	32	34	39	42	44	46	46	46	46	47	47	44	37	34	36	34.3	47.4																						
6-Jul	36	31	15	A	6	8	22	26	28	28	31	34	C	C	C	C	41	41	41	41	41	35	35	34	30.3	41.4																						
7-Jul	30	29	A	31	18	4	30	31	31	43	50	55	53	47	50	49	48	46	51	44	50	59	59	56	41.9	59.3																						
8-Jul	44	A	32	25	21	20	20	24	27	30	35	38	40	43	43	43	43	43	42	43	42	36	28	28	34.4	43.9																						
9-Jul	A	20	24	24	20	19	18	20	27	30	31	36	37	40	41	41	42	46	47	32	32	28	29	A	31.0	46.7																						
10-Jul	26	27	25	22	24	24	22	22	27	30	32	32	33	43	45	43	37	35	36	35	32	29	A	23	30.6	45.2																						
11-Jul	21	19	16	18	18	19	17	18	18	19	27	34	37	38	39	40	40	39	36	31	28	A	24	23	27.0	40.4																						
12-Jul	24	24	23	20	18	16	14	14	17	25	29	34	35	37	41	45	48	49	49	48	A	35	31	27	30.6	49.4																						
13-Jul	25	28	28	22	25	23	22	20	18	20	29	35	41	46	48	47	36	37	40	A	35	34	27	21	30.7	47.5																						
14-Jul	19	20	16	14	9	8	6	19	34	37	38	39	38	39	46	46	43	38	A	36	36	36	34	33	29.8	46.1																						
15-Jul	33	34	34	32	27	24	21	24	26	29	34	41	42	44	46	48	47	A	44	38	35	33	33	33	34.9	48.1																						
16-Jul	23	22	22	28	28	26	24	22	22	25	26	26	27	28	27	27	A	24	21	19	17	19	25	26	24.1	27.9																						
17-Jul	24	18	22	22	21	20	20	20	27	28	23	21	20	19	18	A	22	25	25	24	22	19	17	13	21.3	28.0																						
18-Jul	8	11	10	10	13	16	21	24	25	24	24	21	21	23	A	25	25	27	27	27	20	18	17	12	19.5	27.2																						
19-Jul	9	7	2	2	12	14	16	14	25	28	32	33	33	A	36	38	39	40	39	33	29	25	21	14	23.5	39.8																						
20-Jul	14	4	8	6	3	3	6	9	17	17	28	35	A	37	24	24	25	23	20	18	19	19	19	19	17.3	36.7																						
21-Jul	19	19	17	17	17	11	14	15	18	21	22	A	23	24	25	28	29	27	26	25	26	24	22	18	21.2	28.9																						
22-Jul	18	17	17	15	11	10	12	17	22	29	A	30	30	29	29	28	26	26	26	27	25	23	23	26	22.4	30.2																						
23-Jul	27	28	25	23	23	19	19	23	27	A	30	33	32	28	28	26	23	25	26	29	20	17	17	16	24.4	32.8																						
24-Jul	13	12	13	15	15	15	13	13	A	20	23	26	28	29	30	31	33	33	35	35	31	22	19	19	22.8	35.3																						
25-Jul	13	14	15	15	14	13	14	A	22	25	29	31	32	33	35	37	37	36	37	38	35	29	23	20	26.0	37.8																						
26-Jul	17	14	15	11	3	5	A	14	19	28	34	45	48	48	47	44	41	37	29	30	29	25	24	20	27.3	48.3																						
27-Jul	16	13	15	12	10	A	8	6	12	13	13	13	24	34	38	39	40	35	30	28	28	29	28	22	22.0	39.8																						
28-Jul	20	19	20	20	A	17	20	20	23	25	26	27	27	30	30	30	31	31	32	30	25	26	22	21	24.9	31.5																						
29-Jul	20	20	20	A	14	12	16	21	23	26	33	34	42	46	48	47	42	43	41	38	34	31	30	26	30.7	47.8																						
30-Jul	26	26	A	17	18	19	17	18	19	23	32	33	35	36	35	36	37	38	37	35	28	29	28	26	28.2	37.7																						
31-Jul	26	A	23	21	18	16	17	16	21	23	25	25	27	27	27	28	29	29	29	28	25	25	23	22	23.9	29.1																						
																								22.8	20.8	19.9	19.0	16.9	15.8	17.4	19.5	23.5	26.5	29.8	32.7	33.9	35.6	36.7	37.0	36.5	35.5	35.3	33.4	30.6	28.9	26.9	24.6	Diurnal Average
																								43.9	33.6	33.6	31.8	27.6	25.7	30.3	30.8	34.2	42.5	50.2	54.6	53.2	47.9	50.0	49.3	48.3	48.5	50.8	47.7	49.9	59.3	59.1	56.1	Diurnal Maximum
C - Calibration																								A - Automated Daily Zero Span																								

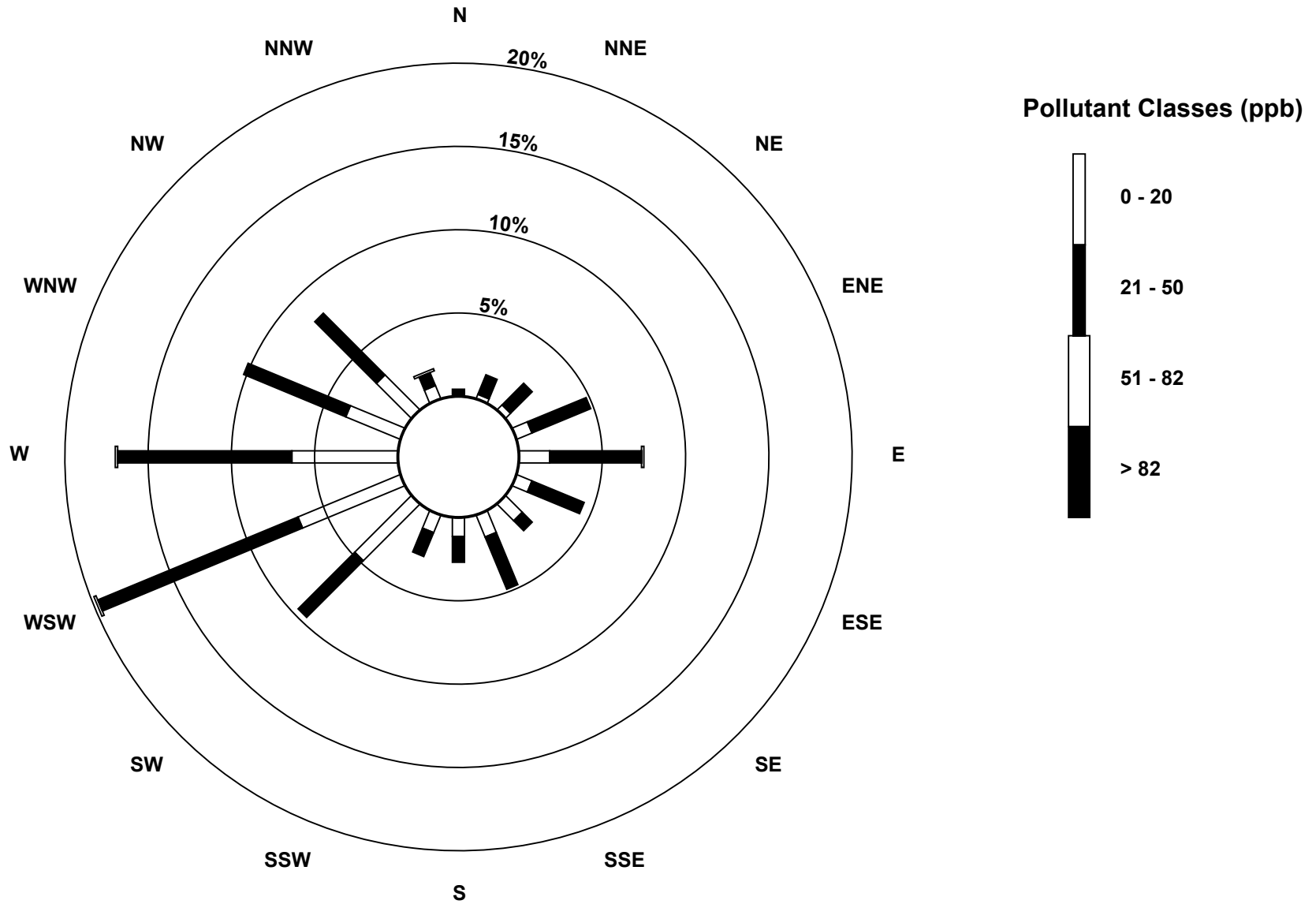
Hourly Maximums

Ozone (O₃) - ppb
Henry Pirker - July 2017



Pollutant Rose

Ozone (O₃) - ppb
Henry Pirker - July 2017



Eight Hour Running Averages

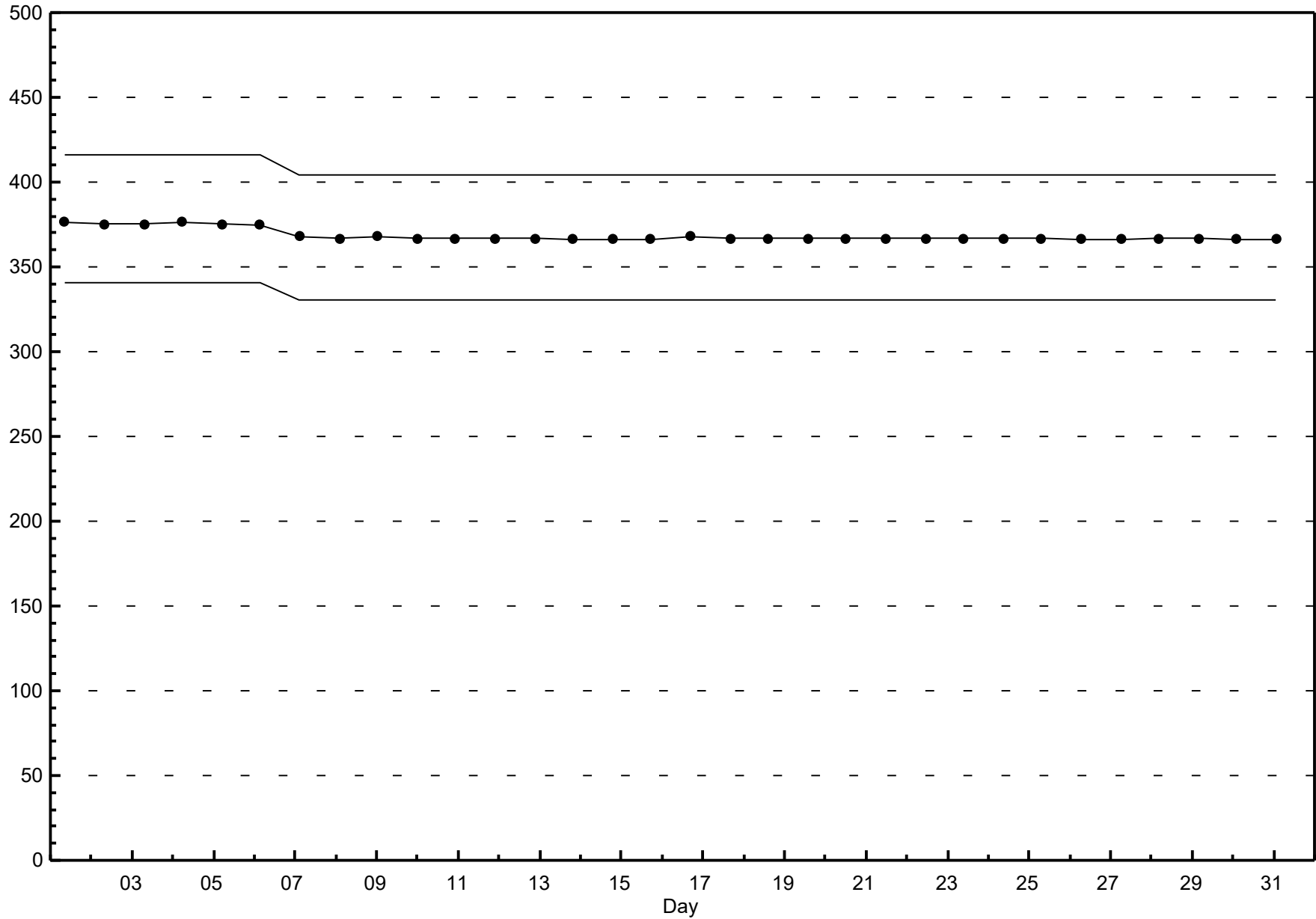
Ozone (O₃) - ppb

Henry Pirker - July 2017

Maximum Value: 47.1 ppb on Jul 7 18:00																					Hours in Service: 744 Hours of Data: 737 Hours of Missing Data: 7 Hours of Calibration: 7 Percent Operational Time: 100.0				
Minimum Value: 3.9 ppb on Jul 20 08:00																									
Percentiles: P ₁ = 6.8 P ₁₀ = 14.7 Q ₁ = 19.3 Median = 23.6 Q ₃ = 30.4 P ₉₀ = 37.3 P ₉₉ = 45.5																									
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-Jul	35	33	30	27	25	22	21	20	20	20	21	23	26	31	35	38	39	40	42	43	42	40	39	36	42.8
2-Jul	34	31	29	26	24	22	21	21	21	21	23	25	27	29	31	31	33	33	32	32	31	29	28	27	33.7
3-Jul	25	23	23	22	21	20	20	20	21	22	23	25	26	28	28	29	29	29	30	30	30	30	30	29	30.2
4-Jul	29	28	27	26	25	24	23	22	21	21	21	22	23	24	25	26	27	28	29	30	30	30	29	28	30.0
5-Jul	27	26	24	22	21	19	18	18	18	19	21	24	26	29	33	36	39	41	43	44	44	43	41	40	44.1
6-Jul	39	36	32	30	24	21	17	16	15	15	18	20	22	25	N	N	N	N	N	N	N	38	38	37	38.8
7-Jul	35	34	33	31	26	22	20	19	20	21	24	27	33	38	42	44	46	47	47	45	44	45	46	46	47.1
8-Jul	46	46	44	42	38	33	27	22	20	21	22	23	26	29	33	35	37	39	40	41	41	39	37	35	46.0
9-Jul	34	30	26	23	20	19	18	17	18	20	21	23	25	27	30	33	35	37	38	38	37	36	34	33	37.8
10-Jul	31	28	26	25	23	23	22	22	21	22	23	24	25	28	30	33	35	35	36	36	36	34	33	31	35.8
11-Jul	29	26	24	21	19	17	17	16	16	16	17	19	21	24	26	29	32	35	36	36	35	35	32	30	35.9
12-Jul	28	26	24	23	21	20	19	18	17	17	17	19	21	24	27	31	35	38	40	42	43	43	41	38	43.2
13-Jul	34	31	28	23	23	21	20	20	19	18	18	20	23	26	29	32	34	36	38	39	38	37	34	30	39.0
14-Jul	28	25	22	20	17	14	11	10	11	13	16	20	23	27	32	37	38	39	39	39	38	38	37	34	39.0
15-Jul	33	33	33	32	31	29	27	26	25	24	23	25	27	30	33	37	39	41	43	42	41	39	38	34	42.7
16-Jul	31	29	27	25	24	23	22	22	22	22	23	23	23	24	24	25	25	25	25	24	22	20	19	19	30.7
17-Jul	20	19	19	19	20	20	20	19	19	20	20	20	20	20	20	20	20	20	20	20	20	21	20	19	20.6
18-Jul	17	15	13	12	10	10	10	12	14	16	18	19	20	21	22	22	22	22	23	24	23	23	22	20	23.6
19-Jul	17	15	12	9	7	7	7	7	9	12	15	19	22	24	27	30	33	34	35	35	34	32	30	27	35.1
20-Jul	23	19	15	12	9	6	4	4	4	5	7	11	12	16	18	20	22	23	23	21	20	19	18	18	23.5
21-Jul	17	16	16	16	16	15	14	13	13	13	14	14	15	17	20	22	23	24	25	25	25	24	24	22	24.7
22-Jul	21	20	19	17	15	14	12	12	13	14	14	16	19	22	25	27	27	27	27	26	26	25	24	23	27.2
23-Jul	23	23	23	23	22	22	21	21	21	21	21	23	24	26	27	27	27	26	26	25	23	22	20	19	27.2
24-Jul	18	16	15	14	13	13	12	12	12	13	15	16	18	20	23	25	26	28	29	30	30	29	28	26	30.3
25-Jul	24	21	19	16	15	14	13	13	14	15	17	19	22	25	28	29	31	32	34	34	34	34	32	29	34.5
26-Jul	26	23	20	16	12	10	9	8	8	10	13	18	24	30	31	35	38	39	39	37	35	32	29	26	39.2
27-Jul	23	20	19	16	15	13	11	9	9	9	8	8	10	12	16	20	24	26	28	30	32	31	30	28	31.7
28-Jul	26	24	23	21	20	19	17	17	17	18	19	21	23	24	26	27	28	28	29	28	28	26	25	25	28.7
29-Jul	24	22	21	20	18	16	15	15	15	16	18	19	23	27	31	34	36	39	40	40	40	38	35	33	40.4
30-Jul	31	29	27	24	22	20	19	17	16	16	17	19	21	24	26	29	31	33	34	34	33	33	32	30	34.5
31-Jul	29	27	25	23	22	20	18	17	16	17	17	18	19	21	22	24	25	26	27	27	27	26	25	25	28.6
45.5 46.0 44.2 42.0 38.4 32.9 26.8 25.5 24.6 23.9 24.1 27.3 33.0 38.4 42.3 44.5 46.3 47.1 46.5 44.7 44.1 44.7 45.6 46.2																								Diurnal Maximums	
N - Not Valid																									

Span Responses

Ozone (O₃)
Henry Pirker - July 2017



Hourly Averages

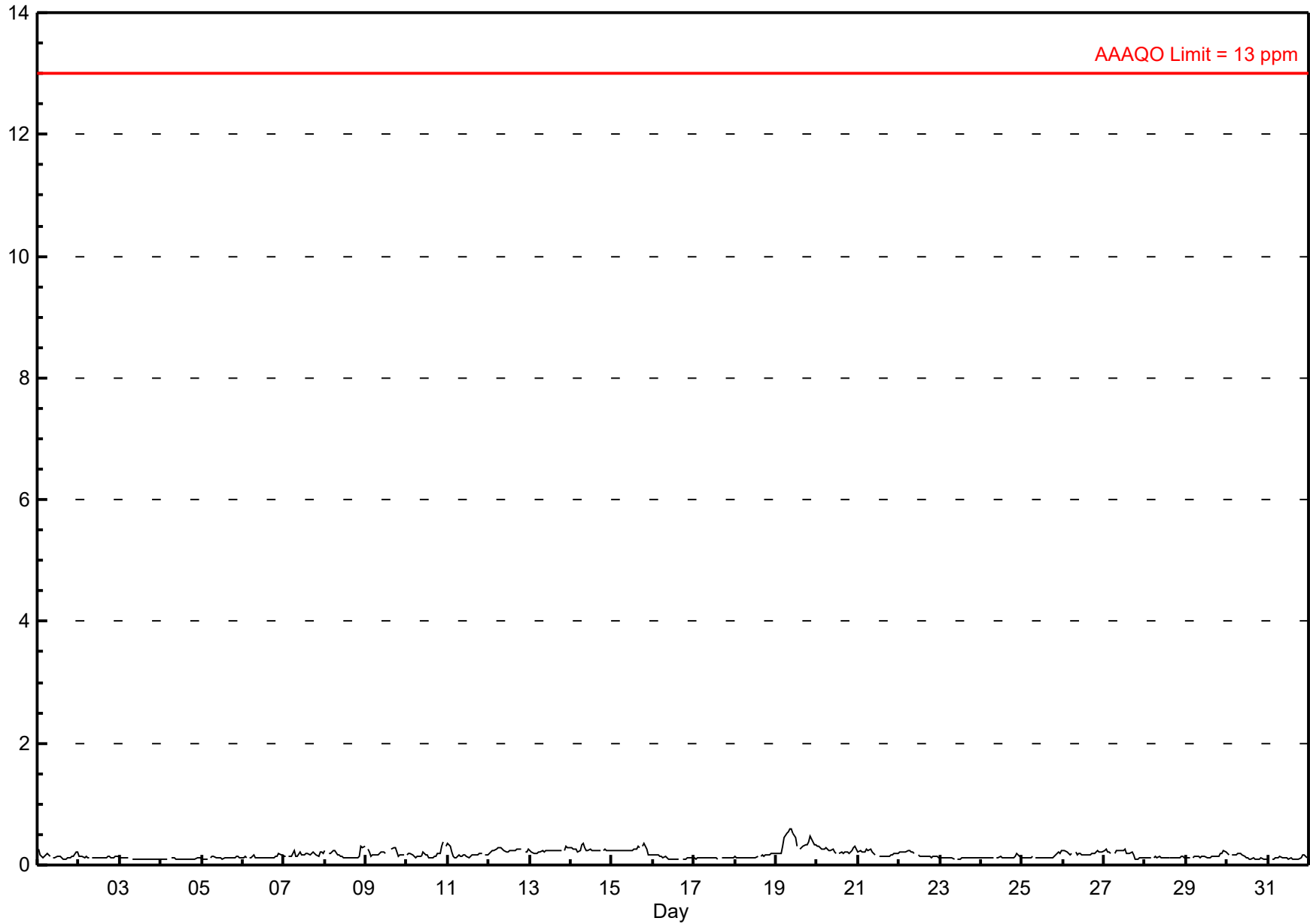
Carbon Monoxide (CO) - ppm

Henry Pirker - July 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 0.60 ppm on Jul 19 10:00	Maximum Daily Average: 0.37 ppm on Jul 19
Minimum Value: 0.1 ppm on Jul 4 01:00	Hours of Data: 709
Maximum Diurnal Average: 0.19 ppm at hour 7	Hours of Missing Data: 35
Monthly Average: 0.169 ppm	Hours of Calibration: 35
Minimum Daily Average: 0.10 ppm on Jul 4	Percent Operational Time: 100.0
Minimum Diurnal Average: 0.15 ppm at hour 14	
Percentiles: P ₁ = 0.09 P ₁₀ = 0.11 Q ₁ = 0.12 Median = 0.14 Q ₃ = 0.21 P ₉₀ = 0.25 P ₉₉ = 0.44	

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-Jul	0.3	0.2	0.1	0.1	0.1	0.2	0.2	0.1	A	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.15	0.25																							
2-Jul	0.2	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12	0.15																						
3-Jul	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.10	0.13																						
4-Jul	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.10	0.12																						
5-Jul	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12	0.15																						
6-Jul	0.1	0.1	0.1	A	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.13	0.18																						
7-Jul	0.1	0.1	A	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.18	0.23																						
8-Jul	0.2	A	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	0.3	0.3	0.3	0.17	0.30																						
9-Jul	A	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	C	C	C	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	A	0.20	0.28																						
10-Jul	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	C	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4	A	0.3	0.18	0.38																							
11-Jul	0.3	0.3	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.17	0.34																							
12-Jul	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	A	0.2	0.2	0.3	0.24	0.29																							
13-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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	0.3	0.3	0.3	0.23	0.30																							
14-Jul	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.3	0.2	0.2	0.2	0.26	0.35																							
15-Jul	0.2	0.2	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	0.3	0.3	A	0.3	0.3	0.3	0.2	0.2	0.2	0.24	0.35																							
16-Jul	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12	0.17																							
17-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12	0.13																							
18-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.14	0.20																							
19-Jul	0.2	0.2	0.2	0.2	0.3	0.5	0.5	0.5	0.6	0.6	0.5	0.4	0.3	A	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.4	0.3	0.3	0.37	0.60																							
20-Jul	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	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	0.3	0.24	0.30																							
21-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.19	0.26																							
22-Jul	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.17	0.24																							
23-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.11	0.12																							
24-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.12	0.18																							
25-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.14	0.24																							
26-Jul	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	0.20	0.25																							
27-Jul	0.2	0.3	0.2	0.2	0.2	A	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	0.1	0.1	0.1	0.1	0.1	0.19	0.25																							
28-Jul	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12	0.14																							
29-Jul	0.1	0.1	0.1	A	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.15	0.25																							
30-Jul	0.2	0.2	A	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	0.1	0.14	0.20																							
31-Jul	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	0.2	0.2	0.1	0.1	0.12	0.17																							
																								0.18	0.18	0.17	0.16	0.16	0.18	0.19	0.19	0.18	0.18	0.17	0.16	0.15	0.15	0.15	0.16	0.16	0.16	0.16	0.16	0.18	0.19	0.18	0.18	Diurnal Average	
																								0.34	0.30	0.27	0.26	0.30	0.46	0.51	0.54	0.58	0.60	0.53	0.44	0.31	0.25	0.26	0.30	0.31	0.33	0.33	0.39	0.48	0.43	0.34	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 Maximums

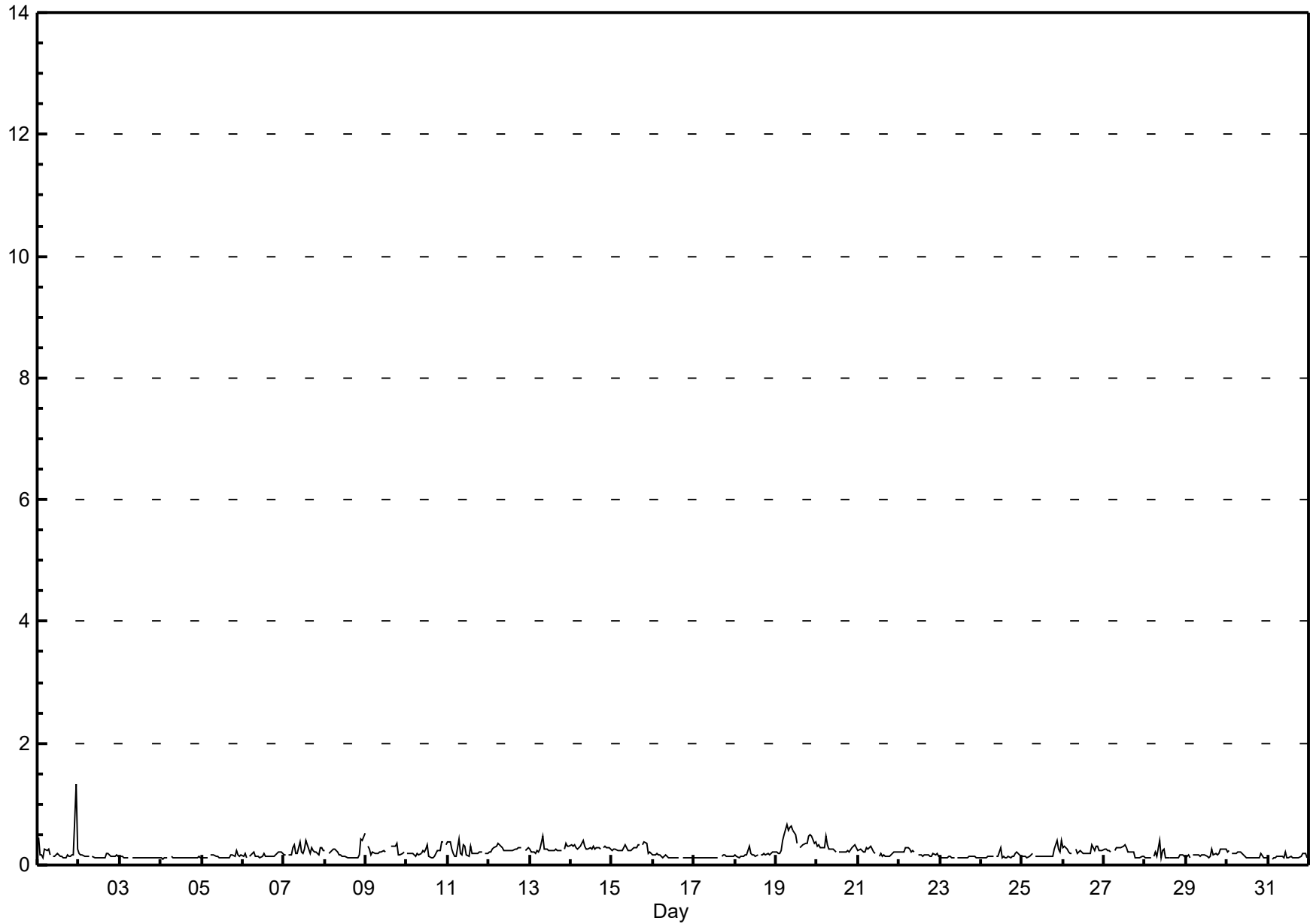
Carbon Monoxide (CO) - ppm

Henry Pirker - July 2017

Maximum Value: 1.33 ppm on Jul 1 23:00 Maximum Daily Average: 0.41 ppm on Jul 19 Minimum Value: 0.1 ppm on Jul 31 03:00 Minimum Daily Average: 0.12 ppm on Jul 4 Maximum Diurnal Average: 0.25 ppm at hour 23 Minimum Diurnal Average: 0.17 ppm at hour 15 Monthly Average: 0.199 ppm Percentiles: P ₁ = 0.11 P ₁₀ = 0.12 Q ₁ = 0.13 Median = 0.17 Q ₃ = 0.25 P ₉₀ = 0.30 P ₉₉ = 0.50																								Hours in Service:	744																							
																								Hours of Data:	709																							
																								Hours of Missing Data:	35																							
																								Hours of Calibration:	35																							
																								Percent Operational Time:	100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Jul	0.4	0.2	0.2	0.1	0.2	0.2	0.3	0.2	A	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	1.3	0.3	0.23	1.33																						
2-Jul	0.2	0.2	0.2	0.1	0.1	0.2	0.1	A	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	0.2	0.1	0.14	0.18																						
3-Jul	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12	0.14																						
4-Jul	0.1	0.1	0.1	0.1	0.1	A	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12	0.15																						
5-Jul	0.1	0.1	0.1	0.1	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	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.14	0.23																						
6-Jul	0.1	0.2	0.1	A	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.16	0.21																						
7-Jul	0.2	0.2	A	0.2	0.2	0.3	0.3	0.2	0.2	0.4	0.2	0.2	0.3	0.4	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.24	0.40																						
8-Jul	0.2	A	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.4	0.5	0.21	0.53																						
9-Jul	A	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	C	C	C	0.3	0.3	0.3	0.4	0.2	0.2	0.2	0.2	A	0.23	0.35																						
10-Jul	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.4	0.4	A	0.3	0.21	0.39																						
11-Jul	0.4	0.4	0.3	0.2	0.1	0.1	0.4	0.2	0.2	0.3	0.3	0.2	0.1	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.23	0.42																						
12-Jul	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	A	0.2	0.3	0.3	0.27	0.34																						
13-Jul	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	A	0.3	0.4	0.3	0.3	0.26	0.47																						
14-Jul	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	A	0.3	0.3	0.3	0.3	0.3	0.29	0.41																						
15-Jul	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	A	0.3	0.4	0.3	0.2	0.2	0.2	0.27	0.38																						
16-Jul	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	0.18																						
17-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.13	0.17																						
18-Jul	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	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	0.2	0.17	0.30																						
19-Jul	0.2	0.2	0.2	0.2	0.4	0.5	0.7	0.6	0.6	0.6	0.6	0.5	0.4	A	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.5	0.4	0.4	0.41	0.66																						
20-Jul	0.3	0.3	0.3	0.3	0.3	0.5	0.3	0.3	0.3	0.3	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.27	0.48																						
21-Jul	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	A	0.1	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.21	0.30																						
22-Jul	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	A	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.19	0.29																						
23-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.13	0.15																						
24-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.14	0.29																						
25-Jul	0.1	0.1	0.1	0.1	0.1	0.2	0.2	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.4	0.3	0.2	0.4	0.18	0.40																						
26-Jul	0.3	0.3	0.3	0.2	0.2	0.2	A	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.23	0.33																						
27-Jul	0.3	0.3	0.2	0.2	0.2	A	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.22	0.33																						
28-Jul	0.1	0.1	0.1	0.1	A	0.1	0.2	0.1	0.4	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.16	0.40																						
29-Jul	0.1	0.2	0.1	A	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.18	0.27																						
30-Jul	0.2	0.2	A	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	0.1	0.1	0.1	0.16	0.23																						
31-Jul	0.1	A	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.14	0.21																						
																								0.20	0.20	0.19	0.18	0.19	0.21	0.24	0.22	0.22	0.21	0.20	0.19	0.18	0.18	0.17	0.18	0.18	0.18	0.18	0.19	0.22	0.22	0.25	0.22	Diurnal Average
																								0.45	0.38	0.34	0.28	0.41	0.49	0.66	0.58	0.61	0.63	0.58	0.49	0.36	0.40	0.33	0.33	0.33	0.35	0.35	0.48	0.50	0.48	1.33	0.53	Diurnal Maximum
C - Calibration																								A - Automated Daily Zero Span																								

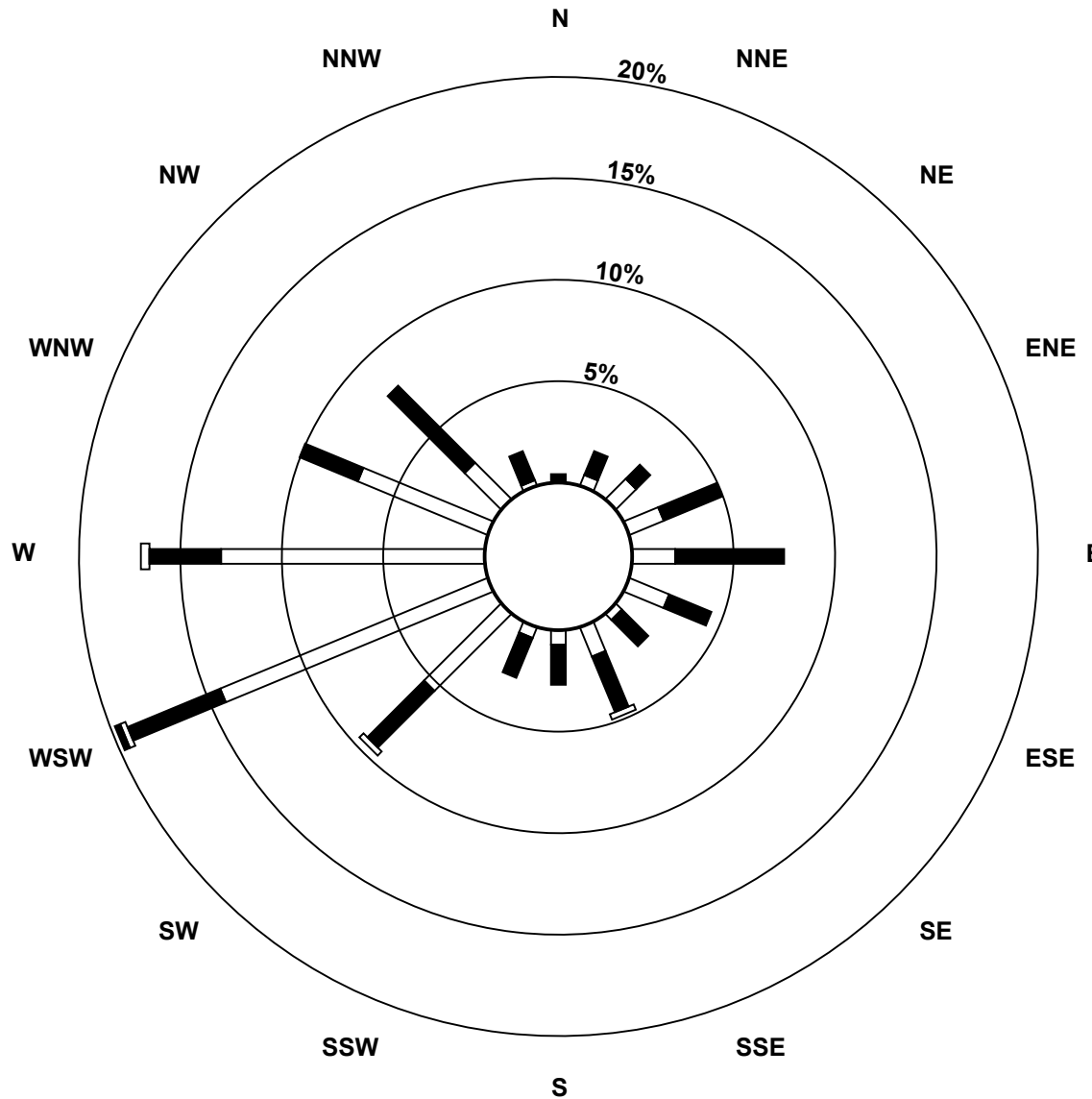
Hourly Maximums

Carbon Monoxide (CO) - ppm
Henry Pirker - July 2017

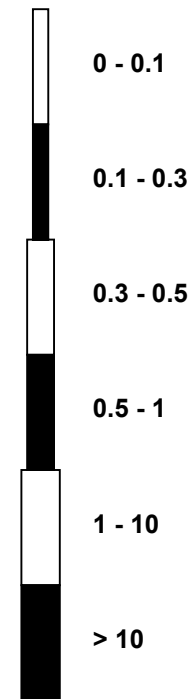


Pollutant Rose

Carbon Monoxide (CO) - ppm
Henry Pirker - July 2017



Pollutant Classes (ppm)



Eight Hour Running Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - July 2017

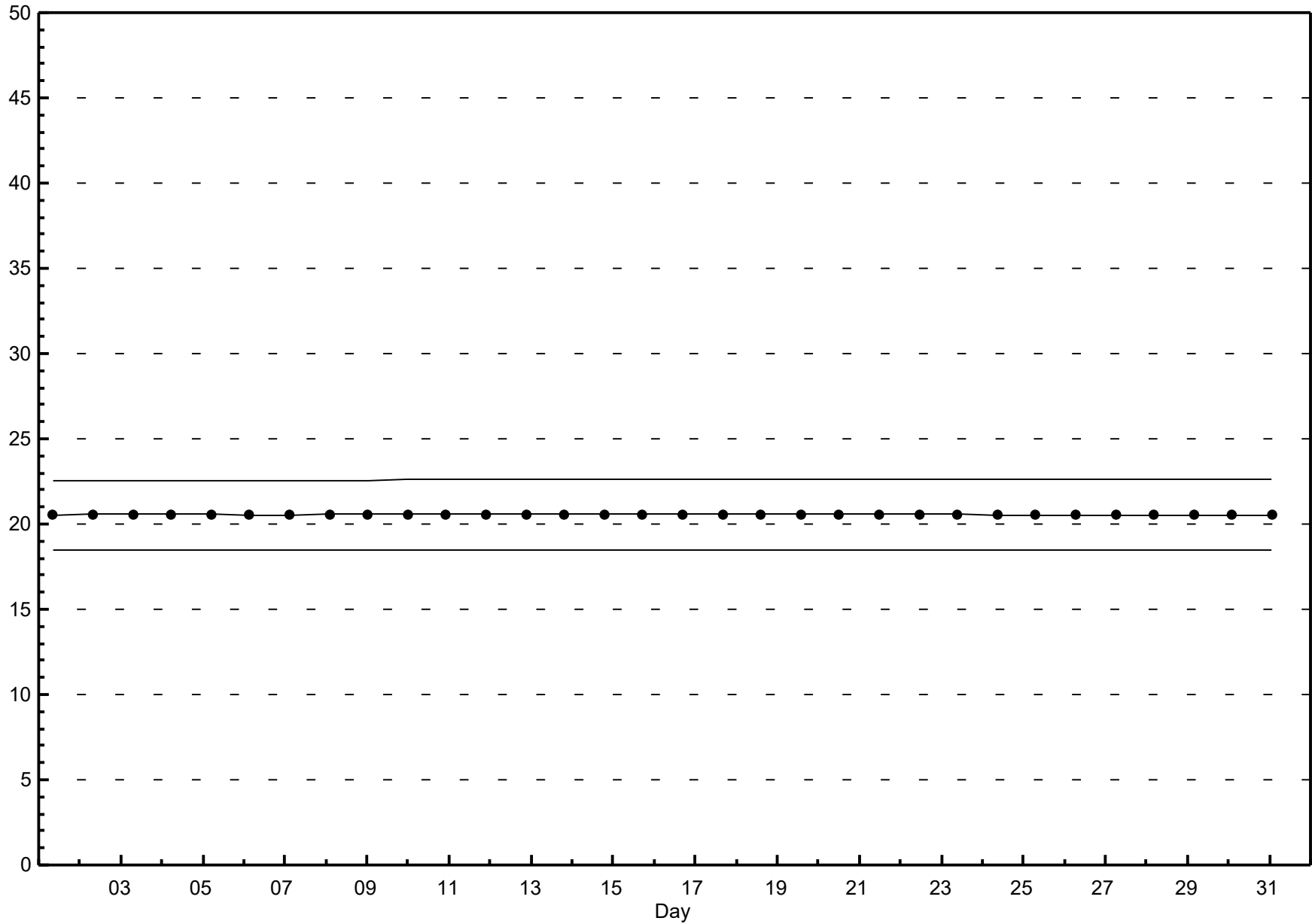
Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 0.50 ppm on Jul 19 14:00	Hours in Service: 744 Hours of Data: 738 Hours of Missing Data: 6 Hours of Calibration: 6 Percent Operational Time: 100.0
Minimum Value: 0.10 ppm on Jul 4 06:00	
Percentiles: P ₁ = 0.10 P ₁₀ = 0.11 Q ₁ = 0.12 Median = 0.15 Q ₃ = 0.21 P ₉₀ = 0.25 P ₉₉ = 0.41	

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-Jul	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	0.1	0.1	0.1	0.22	
2-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.16	
3-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	
4-Jul	0.1	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	0.11	
5-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	
6-Jul	0.1	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	
7-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19	
8-Jul	0.2	0.2	0.2	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	0.21	
9-Jul	0.2	0.2	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	0.2	0.2	0.2	0.2	0.23	
10-Jul	0.2	0.2	0.2	0.2	0.2	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	0.2	0.2	0.2	0.24	
11-Jul	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.29	
12-Jul	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	0.3	0.3	0.2	0.3	0.26
13-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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	0.26	
14-Jul	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.28	
15-Jul	0.2	0.2	0.2	0.2	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	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.29	
16-Jul	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	0.1	0.1	0.1	0.1	0.23	
17-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	
18-Jul	0.1	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	0.2	0.2	0.17	
19-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.50	
20-Jul	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.37	
21-Jul	0.2	0.2	0.2	0.2	0.2	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	0.2	0.2	0.2	0.24	
22-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.22	
23-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	
24-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	
25-Jul	0.1	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	0.2	0.17	
26-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22	
27-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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	0.24	
28-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12	
29-Jul	0.1	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	0.2	0.2	0.18	
30-Jul	0.2	0.2	0.2	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	0.20	
31-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12	
0.37 0.36 0.36 0.34 0.31 0.29 0.28 0.32 0.37 0.42 0.46 0.50 0.50 0.50 0.47 0.43 0.39 0.35 0.32 0.32 0.34 0.35 0.36 0.37																										
Diurnal Maximums																										

N - Not Valid
 Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 5 ppm

Span Responses

Carbon Monoxide (CO)
Henry Pirker - July 2017

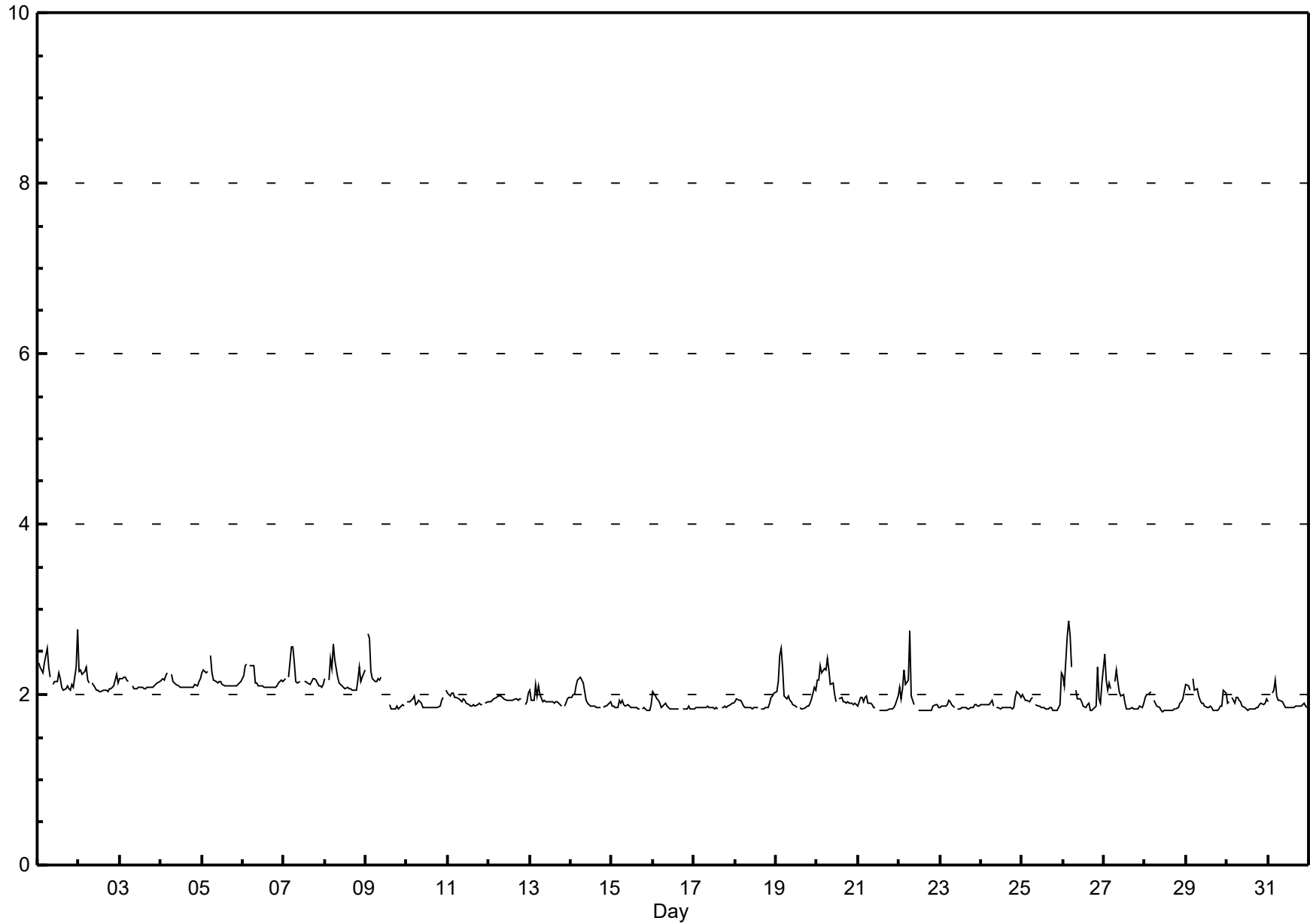


Hourly Averages

Total Hydrocarbons (THC) - ppm

Henry Pirker - July 2017

Maximum Value: 2.86 ppm on Jul 26 04:00		Maximum Daily Average: 2.23 ppm on Jul 1		Hours in Service: 744																							
Minimum Value: 1.8 ppm on Jul 28 11:00		Minimum Daily Average: 1.85 ppm on Jul 17		Hours of Data: 706																							
Maximum Diurnal Average: 2.12 ppm at hour 5		Minimum Diurnal Average: 1.91 ppm at hour 17		Hours of Missing Data: 38																							
Monthly Average: 1.990 ppm		Percentiles: P ₁ = 1.81 P ₁₀ = 1.84 Q ₁ = 1.85 Median = 1.93 Q ₃ = 2.09 P ₉₀ = 2.20 P ₉₉ = 2.66		Hours of Calibration: 36																							
				Percent Operational Time: 99.7																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jul	2.4	2.3	2.3	2.2	2.4	2.5	2.3	2.2	A	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.8	2.23	2.76	
2-Jul	2.3	2.3	2.2	2.3	2.3	2.2	2.1	A	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.2	2.2	2.1	2.13	2.32	
3-Jul	2.2	2.2	2.2	2.2	2.2	2.2	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.12	2.21	
4-Jul	2.2	2.2	2.2	2.2	2.3	A	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.14	2.26	
5-Jul	2.2	2.3	2.2	2.3	A	2.5	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.17	2.45	
6-Jul	2.2	2.3	2.4	A	2.3	2.3	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.16	2.36	
7-Jul	2.2	2.2	A	2.2	2.6	2.6	2.4	2.2	2.1	2.2	M	M	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.20	2.56	
8-Jul	2.2	A	2.2	2.4	2.3	2.6	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.1	2.2	2.3	2.19	2.60	
9-Jul	A	2.7	2.7	2.3	2.2	2.2	2.2	2.2	2.2	2.2	C	C	C	C	1.9	1.8	1.8	1.8	1.9	1.8	1.9	1.9	1.9	A	2.08	2.71	
10-Jul	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.9	1.9	1.9	2.0	A	2.1	1.89	2.05	
11-Jul	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.92	2.02	
12-Jul	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	1.9	1.9	2.0	1.95	2.02	
13-Jul	2.1	1.9	1.9	2.1	2.0	2.1	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	A	1.9	1.9	2.0	2.0	1.94	2.12	
14-Jul	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	A	1.8	1.9	1.9	1.9	1.9	1.96	2.20	
15-Jul	1.9	1.9	1.8	1.8	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	A	1.8	1.8	1.8	1.8	1.8	1.9	1.86	1.93	
16-Jul	2.0	2.0	2.0	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	A	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.87	2.03	
17-Jul	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.85	1.90	
18-Jul	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.0	2.0	2.0	1.88	2.03	
19-Jul	2.0	2.1	2.5	2.5	2.3	2.0	2.0	2.0	1.9	1.9	1.9	1.8	A	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.1	2.0	2.0	2.00	2.54	
20-Jul	2.2	2.2	2.3	2.2	2.3	2.3	2.4	2.3	2.1	2.1	2.0	1.9	A	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.06	2.42	
21-Jul	1.9	2.0	2.0	1.9	2.0	2.0	1.9	1.9	1.9	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.0	1.87	1.98	
22-Jul	2.1	2.0	2.1	2.3	2.1	2.2	2.7	2.0	1.9	1.9	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.96	2.75	
23-Jul	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.86	1.93	
24-Jul	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.0	2.0	2.0	2.0	1.88	2.03	
25-Jul	2.0	2.0	1.9	1.9	1.9	1.9	2.0	A	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.2	1.90	2.25	
26-Jul	2.2	2.1	2.7	2.9	2.7	2.3	A	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.9	2.3	1.9	1.9	2.1	2.08	2.86	
27-Jul	2.5	2.2	2.0	2.1	2.1	A	2.2	2.3	2.1	2.0	2.0	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.98	2.47	
28-Jul	2.0	2.0	2.0	2.0	A	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	1.9	1.9	2.0	2.0	1.88	2.04	
29-Jul	2.1	2.1	2.0	A	2.2	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.0	2.0	1.94	2.19	
30-Jul	1.9	1.9	A	2.0	1.9	2.0	2.0	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	1.9	1.9	1.9	1.9	1.88	1.97	
31-Jul	1.9	A	2.0	2.1	2.2	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.91	2.17	
		2.06	2.07	2.10	2.12	2.12	2.10	2.09	2.02	1.98	1.97	1.94	1.92	1.92	1.92	1.92	1.91	1.91	1.91	1.92	1.92	1.96	1.96	1.99	2.04	Diurnal Average	
		2.47	2.71	2.68	2.86	2.70	2.60	2.75	2.29	2.17	2.20	2.14	2.15	2.25	2.18	2.13	2.12	2.15	2.19	2.19	2.17	2.32	2.18	2.33	2.76	Diurnal Maximum	
C - Calibration		M - Maintenance						A - Automated Daily Zero Span																			



Hourly Maximums

Total Hydrocarbons (THC) - ppm

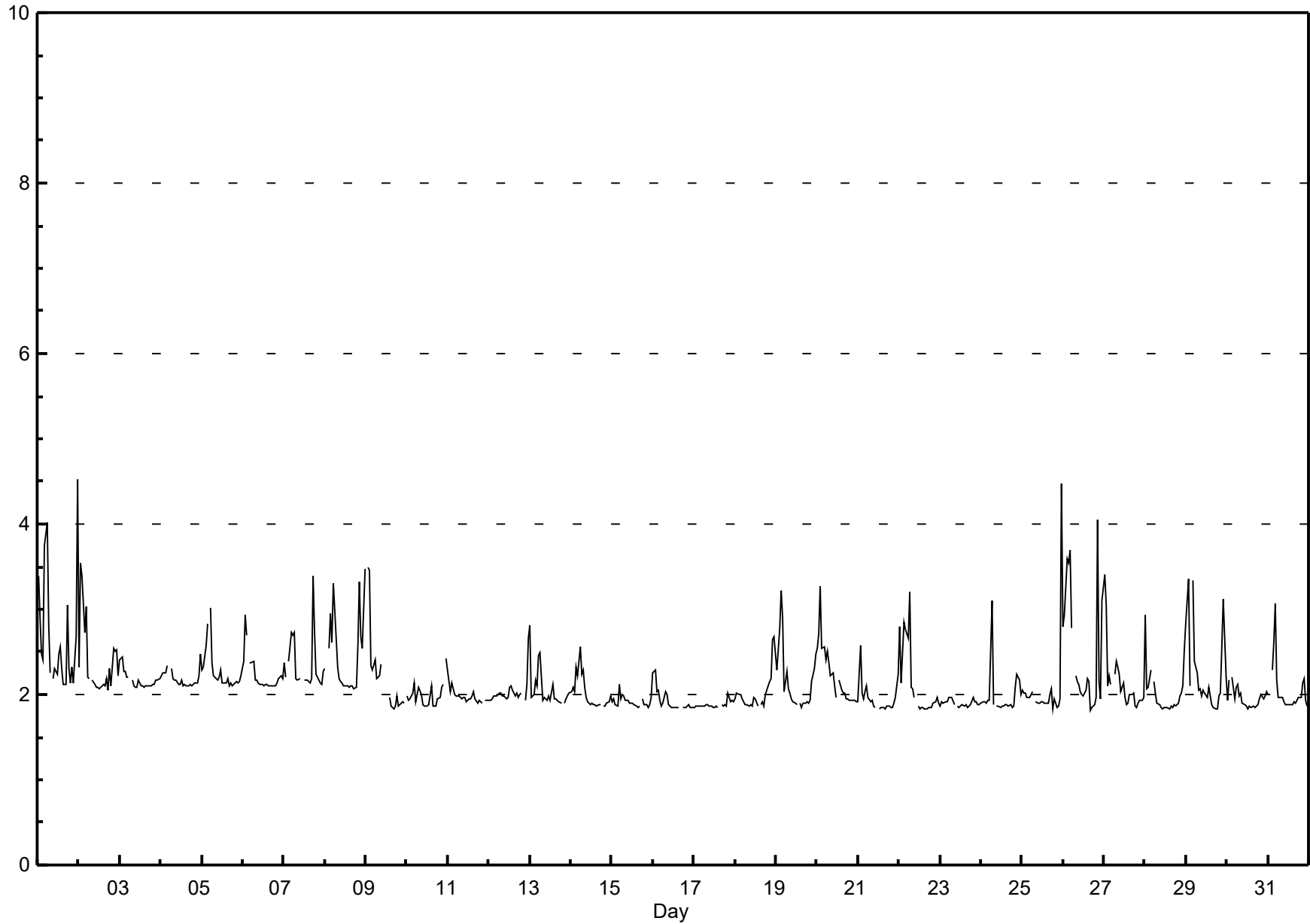
Henry Pirker - July 2017

Maximum Value: 4.53 ppm on Jul 2 00:00		Maximum Daily Average: 2.67 ppm on Jul 1		Hours in Service: 744																																												
Minimum Value: 1.8 ppm on Jul 26 17:00		Minimum Daily Average: 1.88 ppm on Jul 17		Hours of Data: 706																																												
Maximum Diurnal Average: 2.41 ppm at hour 5		Minimum Diurnal Average: 1.96 ppm at hour 17		Hours of Missing Data: 38																																												
Monthly Average: 2.131 ppm		Percentiles: P ₁ = 1.84 P ₁₀ = 1.86 Q ₁ = 1.90 Median = 2.01 Q ₃ = 2.18 P ₉₀ = 2.55 P ₉₉ = 3.53		Hours of Calibration: 36																																												
		Percent Operational Time: 99.7																																														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Jul	3.4	2.9	2.5	2.4	3.7	4.0	2.8	2.3	A	2.2	2.3	2.2	2.5	2.6	2.3	2.1	2.1	3.1	2.3	2.1	2.3	2.1	2.7	4.5	2.67	4.53																						
2-Jul	2.3	3.5	3.4	2.7	3.0	2.2	2.2	A	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.3	2.1	2.5	2.5	2.5	2.2	2.38	3.54																						
3-Jul	2.4	2.4	2.3	2.3	2.2	2.2	A	2.2	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.17	2.44																						
4-Jul	2.2	2.2	2.2	2.3	2.3	A	2.3	2.2	2.2	2.2	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.5	2.19	2.47																						
5-Jul	2.3	2.3	2.6	2.8	A	3.0	2.4	2.2	2.2	2.2	2.2	2.3	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.27	3.02																						
6-Jul	2.4	2.9	2.7	A	2.4	2.4	2.4	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.24	2.93																						
7-Jul	2.4	2.2	A	2.4	2.7	2.7	2.7	2.2	2.2	2.2	M	M	2.2	2.2	2.2	2.1	2.2	3.4	2.7	2.2	2.2	2.1	2.1	2.3	2.36	3.39																						
8-Jul	2.3	A	2.5	3.0	2.6	3.3	3.0	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.6	3.3	2.7	2.5	3.5	2.47	3.48																						
9-Jul	A	3.5	3.5	2.3	2.3	2.4	2.2	2.2	2.2	2.4	C	C	C	C	2.0	1.9	1.8	1.9	2.0	1.9	1.9	1.9	1.9	A	2.22	3.50																						
10-Jul	2.0	1.9	2.0	2.0	2.1	1.9	2.0	2.1	2.0	1.9	1.9	1.9	1.9	1.9	2.1	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.1	A	1.98	2.42																						
11-Jul	2.3	2.0	2.1	2.1	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	1.9	1.9	1.9	1.9	1.9	A	1.9	1.98	2.29																						
12-Jul	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	A	1.9	2.1	2.03	2.66																						
13-Jul	2.8	2.0	2.0	2.2	2.1	2.5	2.5	1.9	2.0	1.9	1.9	2.0	1.9	2.1	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.0	2.0	2.06	2.82																						
14-Jul	2.0	2.1	2.0	2.3	2.2	2.6	2.2	2.3	2.1	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	2.0	2.02	2.56																						
15-Jul	1.9	2.0	1.9	1.9	2.1	1.9	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	2.0	1.92	2.11																						
16-Jul	2.3	2.3	2.0	2.0	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	A	1.8	1.8	1.9	1.9	1.9	1.8	1.9	1.93	2.29																						
17-Jul	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	A	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.88	2.02																						
18-Jul	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	2.0	2.1	2.2	2.2	2.6	2.7	2.02	2.68																						
19-Jul	2.3	2.5	2.8	3.2	2.9	2.0	2.3	2.1	2.0	2.0	1.9	1.9	1.9	A	1.9	1.8	1.9	1.9	1.9	1.9	1.9	2.2	2.3	2.5	2.17	3.22																						
20-Jul	2.5	2.7	3.3	2.5	2.6	2.4	2.5	2.4	2.2	2.3	2.1	2.0	A	2.2	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.23	3.27																						
21-Jul	1.9	2.6	2.0	1.9	2.0	2.1	2.0	1.9	1.9	1.9	1.9	A	1.8	1.8	1.8	1.9	1.8	1.9	1.9	1.8	1.8	1.9	2.0	2.2	1.95	2.57																						
22-Jul	2.8	2.1	2.5	2.8	2.8	2.7	3.2	2.1	2.1	2.0	A	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.0	1.9	2.14	3.20																						
23-Jul	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.90	1.97																						
24-Jul	1.9	1.9	1.9	1.9	1.9	1.9	3.1	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	2.1	2.2	2.2	2.0	1.98	3.10																						
25-Jul	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	2.0	2.1	1.8	1.9	1.8	1.9	2.0	4.5	2.05	4.48																						
26-Jul	2.8	2.9	3.6	3.5	3.7	2.8	A	2.2	2.2	2.1	2.0	2.0	2.0	2.1	2.2	2.2	1.8	1.8	1.9	2.0	4.1	2.1	1.9	3.1	2.48	4.06																						
27-Jul	3.4	3.0	2.1	2.2	2.1	A	2.2	2.4	2.3	2.2	2.0	2.1	2.0	1.9	1.9	2.0	2.0	2.0	1.9	1.8	1.9	1.9	2.0	2.0	2.15	3.40																						
28-Jul	2.9	2.1	2.1	2.3	A	2.2	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.8	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.5	2.01	2.94																						
29-Jul	2.8	3.4	2.1	A	3.3	2.4	2.3	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.0	1.9	1.8	1.8	1.8	2.0	2.0	2.6	3.1	2.2	2.25	3.36																						
30-Jul	1.9	2.2	A	2.2	2.0	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.96	2.21																						
31-Jul	2.0	A	2.3	2.6	3.1	2.2	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	2.1	2.2	1.9	1.9	2.05	3.06																						
																								2.33	2.40	2.35	2.33	2.41	2.33	2.27	2.09	2.05	2.02	1.98	1.98	1.97	1.99	1.99	1.97	1.96	2.03	1.99	1.99	2.13	2.08	2.13	2.38	Diurnal Average
																								3.40	3.54	3.59	3.55	3.74	4.02	3.20	2.38	2.32	2.35	2.31	2.28	2.47	2.56	2.31	2.19	2.19	3.39	2.74	2.58	4.06	2.67	3.11	4.53	Diurnal Maximum
C - Calibration																								M - Maintenance				A - Automated Daily Zero Span																				

Hourly Maximums

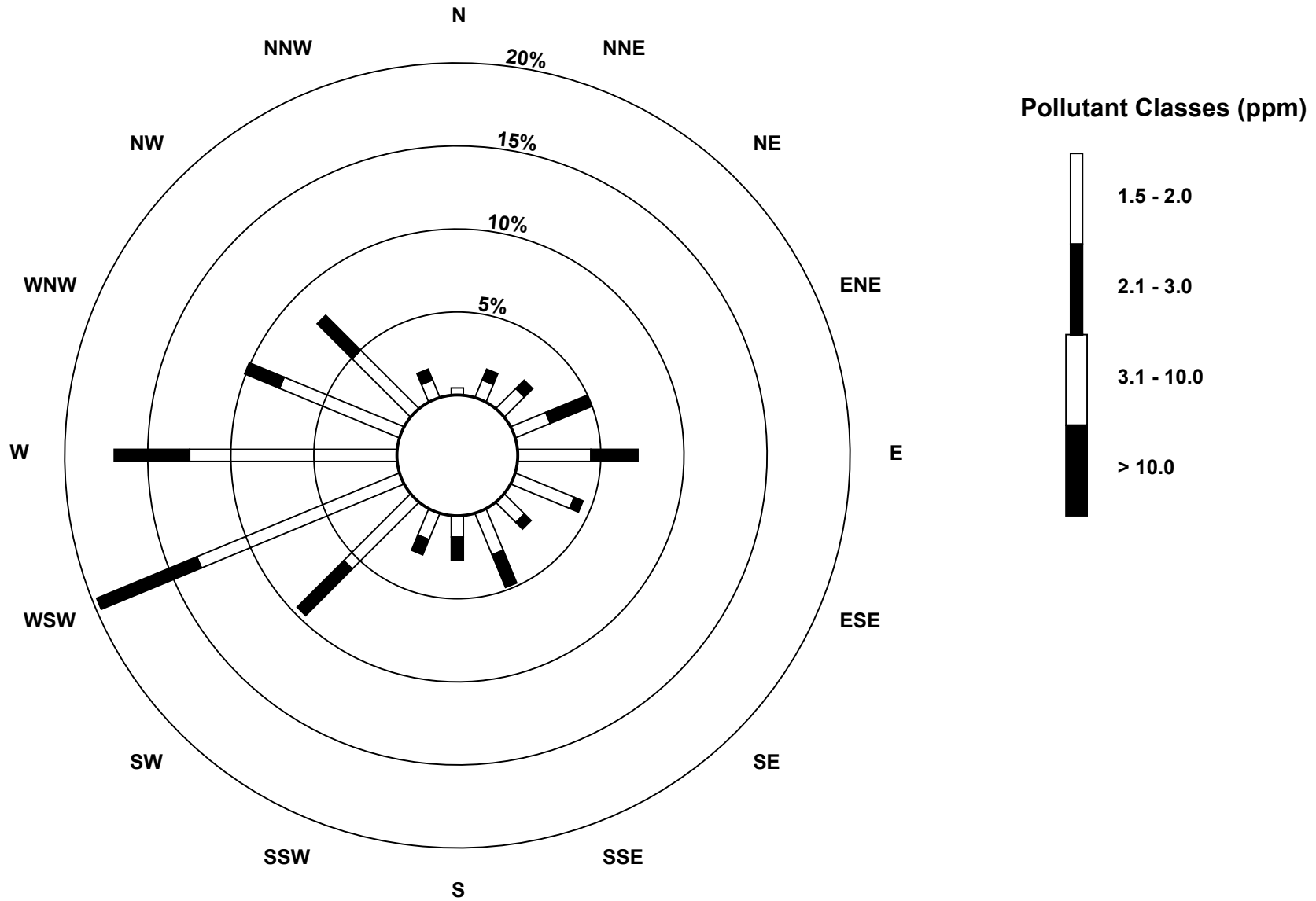
Total Hydrocarbons (THC) - ppm

Henry Pirker - July 2017



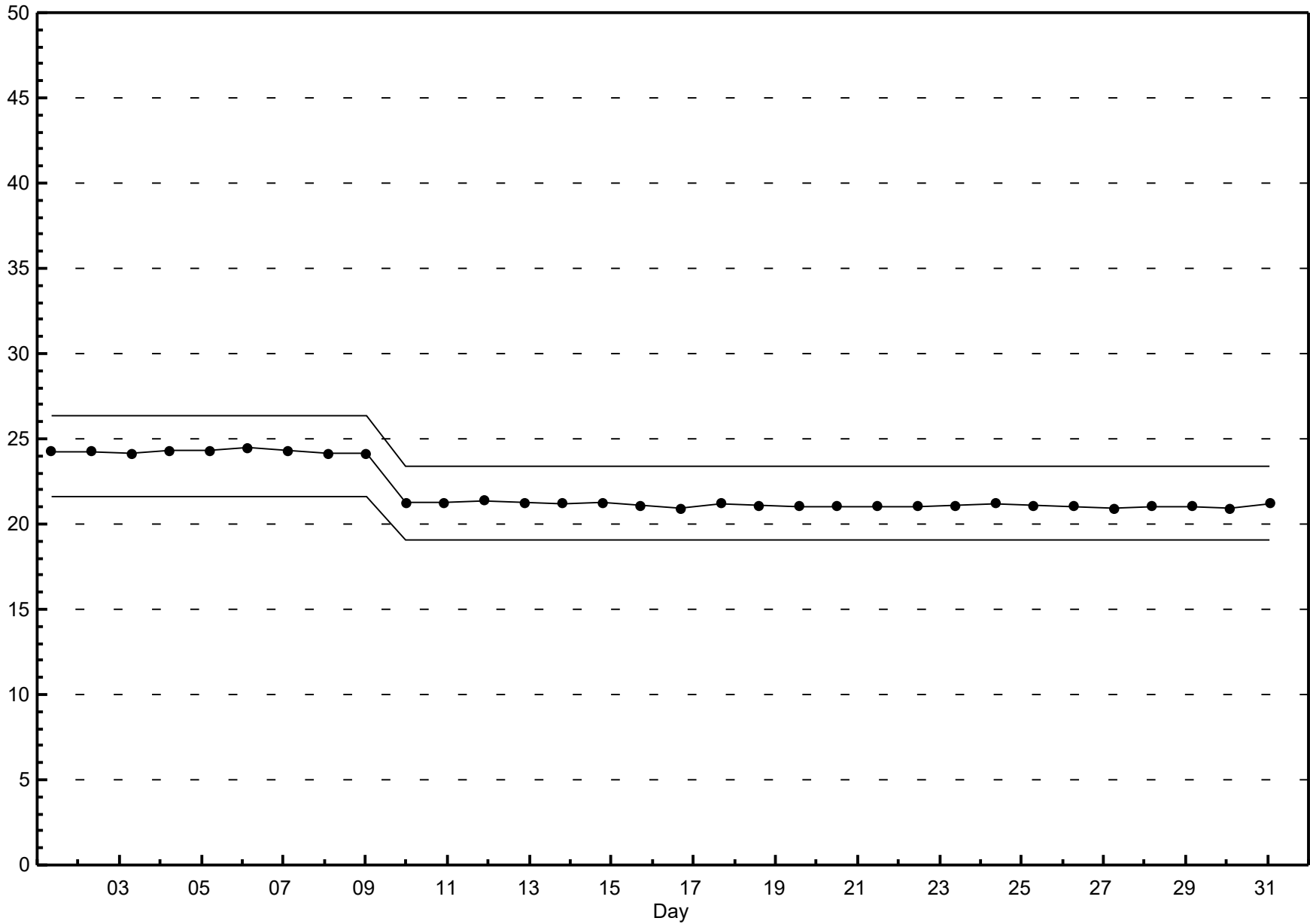
Pollutant Rose

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



Span Responses

Total Hydrocarbons (THC)
Henry Pirker - July 2017



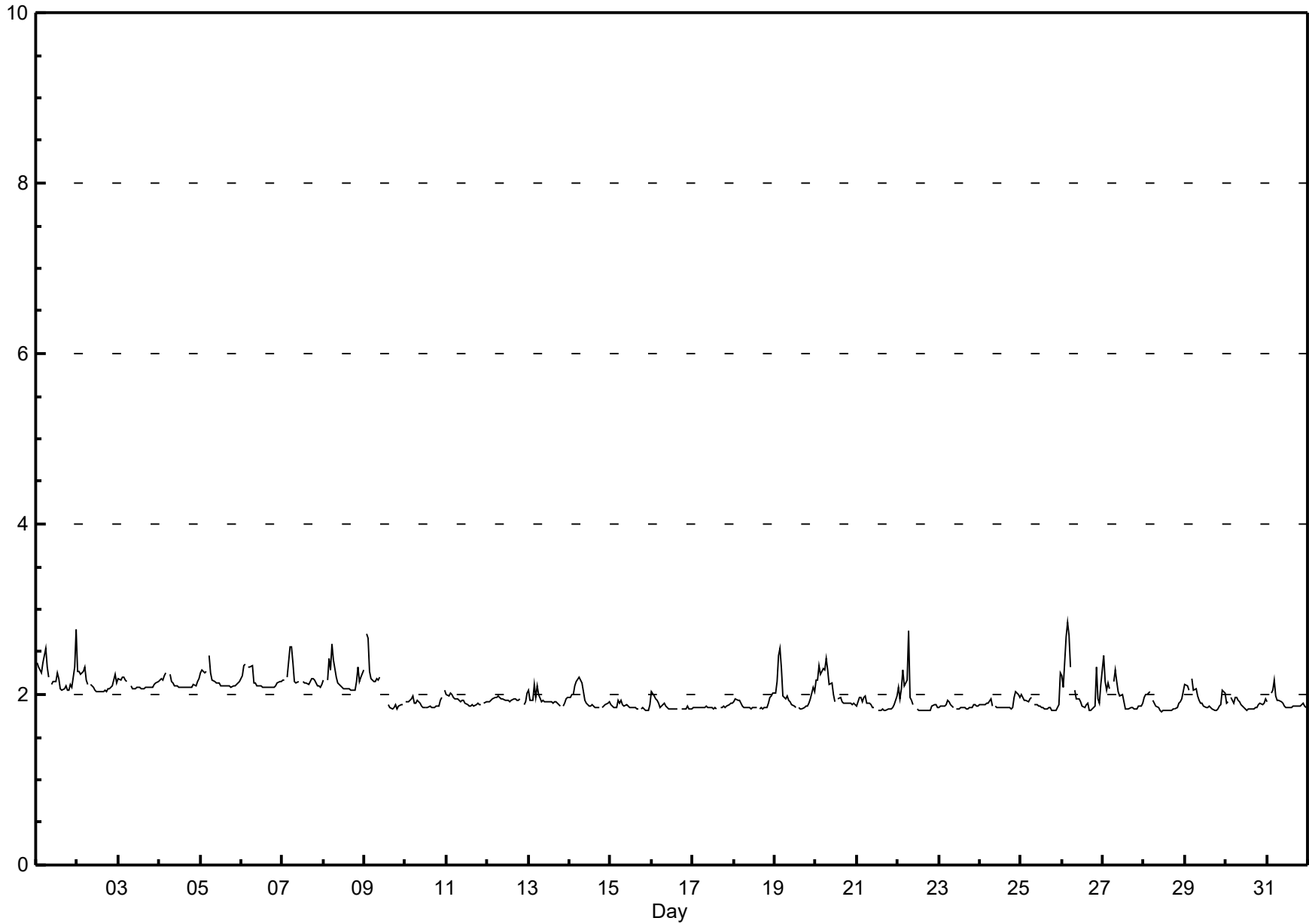
Hourly Averages

Methane (CH₄) - ppm
Henry Pirker - July 2017

Maximum Value: 2.86 ppm on Jul 26 04:00		Maximum Daily Average: 2.23 ppm on Jul 1		Hours in Service: 744																																												
Minimum Value: 1.8 ppm on Jul 28 11:00		Minimum Daily Average: 1.85 ppm on Jul 17		Hours of Data: 706																																												
Maximum Diurnal Average: 2.12 ppm at hour 4		Minimum Diurnal Average: 1.91 ppm at hour 17		Hours of Missing Data: 38																																												
Monthly Average: 1.990 ppm		Percentiles: P ₁ = 1.81 P ₁₀ = 1.84 Q ₁ = 1.86 Median = 1.93 Q ₃ = 2.09 P ₉₀ = 2.20 P ₉₉ = 2.66		Hours of Calibration: 36																																												
Percent Operational Time: 99.7																																																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Jul	2.4	2.3	2.3	2.2	2.4	2.5	2.3	2.2	A	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.8	2.23	2.76																						
2-Jul	2.3	2.3	2.2	2.3	2.3	2.2	2.1	A	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.1	2.13	2.32																						
3-Jul	2.2	2.2	2.2	2.2	2.2	2.2	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.11	2.20																						
4-Jul	2.2	2.2	2.2	2.2	2.3	A	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.13	2.26																						
5-Jul	2.2	2.3	2.2	2.3	A	2.4	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.16	2.45																						
6-Jul	2.2	2.3	2.4	A	2.3	2.3	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.16	2.36																						
7-Jul	2.2	2.2	A	2.2	2.6	2.6	2.4	2.1	2.1	2.2	M	M	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.20	2.56																						
8-Jul	2.2	A	2.2	2.4	2.3	2.6	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.1	2.2	2.3	2.19	2.60																						
9-Jul	A	2.7	2.7	2.3	2.2	2.2	2.2	2.2	2.2	2.2	C	C	C	C	1.9	1.8	1.8	1.8	1.9	1.8	1.9	1.9	1.9	A	2.08	2.71																						
10-Jul	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.8	1.8	1.8	1.9	1.9	1.9	2.0	A	2.1	1.90	2.05																						
11-Jul	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.92	2.02																						
12-Jul	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	1.9	1.9	2.0	1.94	2.02																						
13-Jul	2.1	1.9	1.9	2.1	2.0	2.1	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	A	1.9	1.9	1.9	2.0	1.94	2.11																						
14-Jul	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	A	1.8	1.9	1.9	1.9	1.9	1.96	2.20																						
15-Jul	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.9	1.86	1.93																						
16-Jul	2.0	2.0	2.0	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	A	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.87	2.03																						
17-Jul	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.85	1.90																						
18-Jul	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.0	2.0	2.0	1.88	2.02																						
19-Jul	2.0	2.1	2.5	2.5	2.3	2.0	2.0	2.0	1.9	1.9	1.9	1.8	A	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.1	2.0	2.0	2.00	2.54																						
20-Jul	2.2	2.2	2.3	2.2	2.3	2.3	2.4	2.3	2.1	2.1	2.0	1.9	A	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.06	2.42																						
21-Jul	1.9	2.0	2.0	1.9	2.0	2.0	1.9	1.9	1.9	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.0	1.87	1.98																						
22-Jul	2.1	2.0	2.1	2.3	2.1	2.2	2.7	2.0	1.9	1.9	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.96	2.74																						
23-Jul	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.86	1.93																						
24-Jul	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.0	2.0	2.0	2.0	1.89	2.03																						
25-Jul	2.0	2.0	1.9	1.9	1.9	1.9	2.0	A	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.2	1.90	2.25																						
26-Jul	2.2	2.1	2.7	2.9	2.7	2.3	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.9	2.3	1.9	1.9	2.1	2.08	2.86																						
27-Jul	2.5	2.2	2.0	2.1	2.1	A	2.2	2.3	2.1	2.0	2.0	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.98	2.47																						
28-Jul	2.0	2.0	2.0	2.0	A	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	1.9	1.9	2.0	2.0	1.88	2.04																						
29-Jul	2.1	2.1	2.0	A	2.2	2.0	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.0	2.0	1.94	2.18																						
30-Jul	1.9	1.9	A	2.0	1.9	2.0	2.0	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	1.9	1.9	1.9	1.9	1.88	1.97																						
31-Jul	1.9	A	2.0	2.1	2.2	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.91	2.17																						
																								2.06	2.07	2.10	2.12	2.12	2.10	2.09	2.02	1.98	1.97	1.94	1.92	1.92	1.92	1.92	1.91	1.91	1.91	1.92	1.92	1.96	1.96	1.98	2.04	Diurnal Average
																								2.47	2.71	2.68	2.86	2.70	2.60	2.74	2.29	2.17	2.20	2.14	2.15	2.25	2.18	2.13	2.12	2.15	2.19	2.19	2.17	2.32	2.17	2.33	2.76	Diurnal Maximum
C - Calibration																								M - Maintenance				A - Automated Daily Zero Span																				

Hourly Averages

Methane (CH₄) - ppm
Henry Pirker - July 2017



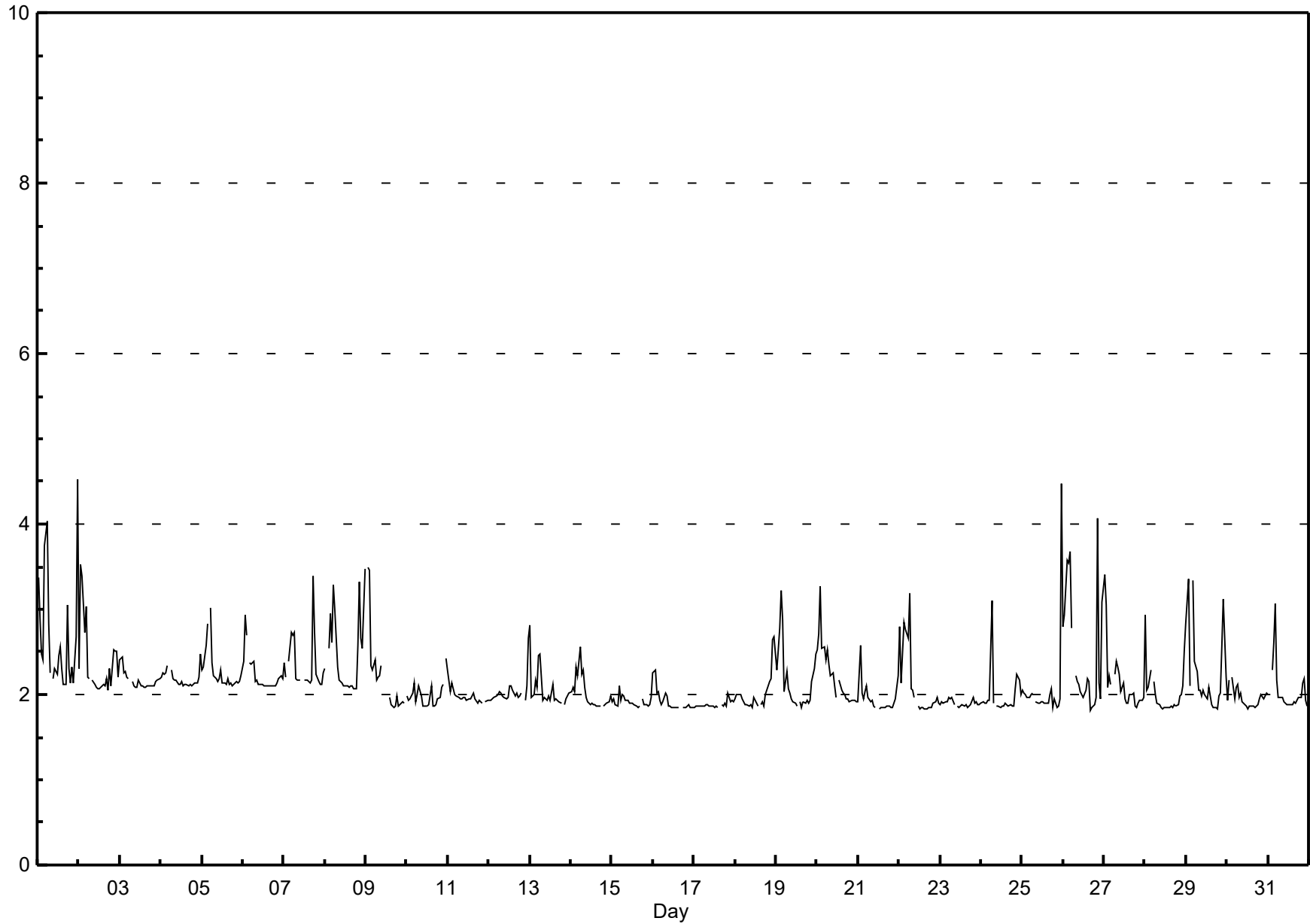
Hourly Maximums

Methane (CH₄) - ppm
Henry Pirker - July 2017

Maximum Value: 4.53 ppm on Jul 2 00:00		Maximum Daily Average: 2.67 ppm on Jul 1		Hours in Service: 744																																													
Minimum Value: 1.8 ppm on Jul 26 17:00		Minimum Daily Average: 1.88 ppm on Jul 17		Hours of Data: 706																																													
Maximum Diurnal Average: 2.41 ppm at hour 5		Minimum Diurnal Average: 1.96 ppm at hour 17		Hours of Missing Data: 38																																													
Monthly Average: 2.130 ppm		Percentiles: P ₁ = 1.84 P ₁₀ = 1.86 Q ₁ = 1.90 Median = 2.01 Q ₃ = 2.18 P ₉₀ = 2.54 P ₉₉ = 3.52		Hours of Calibration: 36																																													
Percent Operational Time: 99.7																																																	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Jul	3.4	2.9	2.5	2.4	3.7	4.0	2.8	2.3	A	2.2	2.3	2.2	2.5	2.6	2.3	2.1	2.1	3.0	2.3	2.1	2.3	2.1	2.7	4.5	2.67	4.53																							
2-Jul	2.3	3.5	3.4	2.7	3.0	2.2	2.2	A	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.3	2.1	2.5	2.5	2.5	2.2	2.37	3.53																							
3-Jul	2.4	2.4	2.3	2.3	2.2	2.2	A	2.2	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.16	2.43																							
4-Jul	2.2	2.2	2.2	2.2	2.3	A	2.3	2.2	2.2	2.2	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.5	2.18	2.47																							
5-Jul	2.3	2.3	2.6	2.8	A	3.0	2.4	2.2	2.2	2.2	2.2	2.3	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.2	2.27	3.02																							
6-Jul	2.4	2.9	2.7	A	2.4	2.4	2.4	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.23	2.93																							
7-Jul	2.4	2.2	A	2.4	2.7	2.7	2.7	2.2	2.2	2.2	M	M	2.2	2.2	2.2	2.1	2.2	3.4	2.7	2.2	2.2	2.1	2.1	2.3	2.36	3.40																							
8-Jul	2.3	A	2.5	2.9	2.6	3.3	3.0	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.6	3.3	2.7	2.5	3.5	2.47	3.48																							
9-Jul	A	3.5	3.5	2.3	2.3	2.4	2.2	2.2	2.2	2.3	C	C	C	C	2.0	1.9	1.8	1.9	2.0	1.9	1.9	1.9	1.9	A	2.22	3.50																							
10-Jul	2.0	1.9	1.9	2.0	2.1	1.9	2.0	2.1	2.0	1.9	1.9	1.9	1.9	1.9	2.1	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.1	A	1.98	2.42																							
11-Jul	2.3	2.0	2.1	2.1	2.0	2.0	2.0	2.0	1.9	2.0	2.0	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.98	2.29																							
12-Jul	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	A	1.9	2.1	2.7	2.03	2.65																							
13-Jul	2.8	2.0	2.0	2.2	2.1	2.5	2.5	1.9	2.0	1.9	1.9	2.0	1.9	2.1	1.9	1.9	1.9	1.9	1.9	A	1.9	2.0	2.0	2.0	2.05	2.81																							
14-Jul	2.0	2.1	2.0	2.3	2.2	2.6	2.2	2.3	2.1	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	2.0	2.02	2.56																							
15-Jul	1.9	2.0	1.9	1.9	2.1	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.0	1.9	1.9	1.9	1.9	2.0	1.92	2.11																							
16-Jul	2.3	2.3	2.0	2.0	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.9	A	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.93	2.29																							
17-Jul	1.9	1.9	1.9	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	2.0	1.9	1.9	1.9	1.88	2.02																							
18-Jul	1.9	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	A	1.9	1.9	1.9	2.0	2.1	2.2	2.2	2.6	2.7	2.02	2.68																							
19-Jul	2.3	2.5	2.8	3.2	2.9	2.0	2.3	2.1	2.0	1.9	1.9	1.9	1.9	A	1.9	1.8	1.9	1.9	1.9	1.9	1.9	2.2	2.3	2.5	2.17	3.22																							
20-Jul	2.5	2.7	3.3	2.5	2.6	2.4	2.5	2.4	2.2	2.3	2.1	2.0	A	2.2	2.1	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	2.23	3.27																							
21-Jul	1.9	2.6	2.0	1.9	2.0	2.1	2.0	1.9	1.9	1.9	1.9	A	1.8	1.8	1.8	1.9	1.8	1.9	1.9	1.8	1.9	1.9	2.0	2.2	1.95	2.58																							
22-Jul	2.8	2.1	2.5	2.8	2.8	2.7	3.2	2.1	2.1	2.0	A	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.14	3.19																							
23-Jul	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.90	1.97																							
24-Jul	1.9	1.9	1.9	1.9	1.9	1.9	3.1	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	2.1	2.2	2.2	2.0	1.98	3.10																							
25-Jul	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	2.0	2.1	1.8	1.9	1.8	1.9	1.9	4.5	2.06	4.47																							
26-Jul	2.8	2.9	3.6	3.5	3.7	2.8	A	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.2	2.2	1.8	1.8	1.9	2.0	4.1	2.1	1.9	3.1	2.48	4.06																							
27-Jul	3.4	3.0	2.1	2.2	2.1	A	2.2	2.4	2.3	2.2	2.0	2.1	2.0	1.9	1.9	2.0	2.0	2.0	1.9	1.8	1.9	1.9	2.0	2.0	2.15	3.40																							
28-Jul	2.9	2.1	2.1	2.3	A	2.2	2.0	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.5	2.01	2.93																							
29-Jul	2.8	3.4	2.1	A	3.3	2.4	2.3	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.0	1.9	1.8	1.8	1.8	2.0	2.0	2.6	3.1	2.2	2.25	3.35																							
30-Jul	1.9	2.2	A	2.2	2.0	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.96	2.21																							
31-Jul	2.0	A	2.3	2.6	3.1	2.2	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	2.1	2.2	1.9	1.9	2.05	3.07																							
																								2.33	2.39	2.34	2.33	2.41	2.32	2.27	2.09	2.05	2.02	1.98	1.98	1.97	1.99	1.99	1.97	1.96	2.03	1.99	1.99	2.13	2.08	2.13	2.38	Diurnal Average	
																								3.40	3.53	3.58	3.54	3.75	4.03	3.19	2.38	2.32	2.35	2.31	2.28	2.47	2.56	2.31	2.19	2.19	3.40	2.74	2.58	4.06	2.66	3.11	4.53	Diurnal Maximum	
C - Calibration																								M - Maintenance				A - Automated Daily Zero Span																					

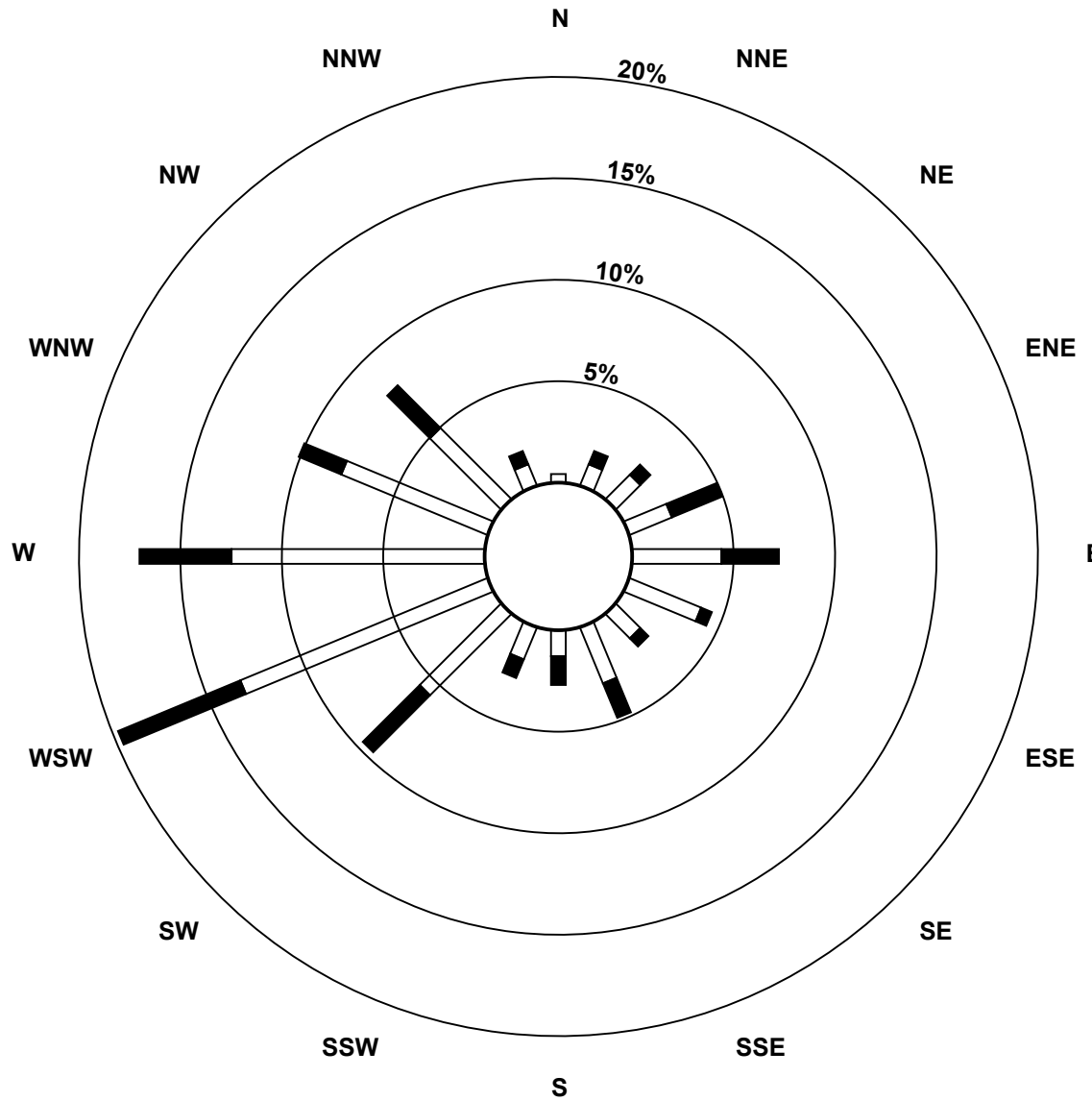
Hourly Maximums

Methane (CH₄) - ppm
Henry Pirker - July 2017

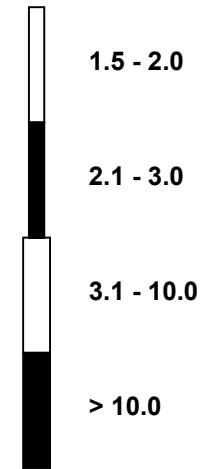


Pollutant Rose

Methane (CH₄) - ppm
Henry Pirker - July 2017

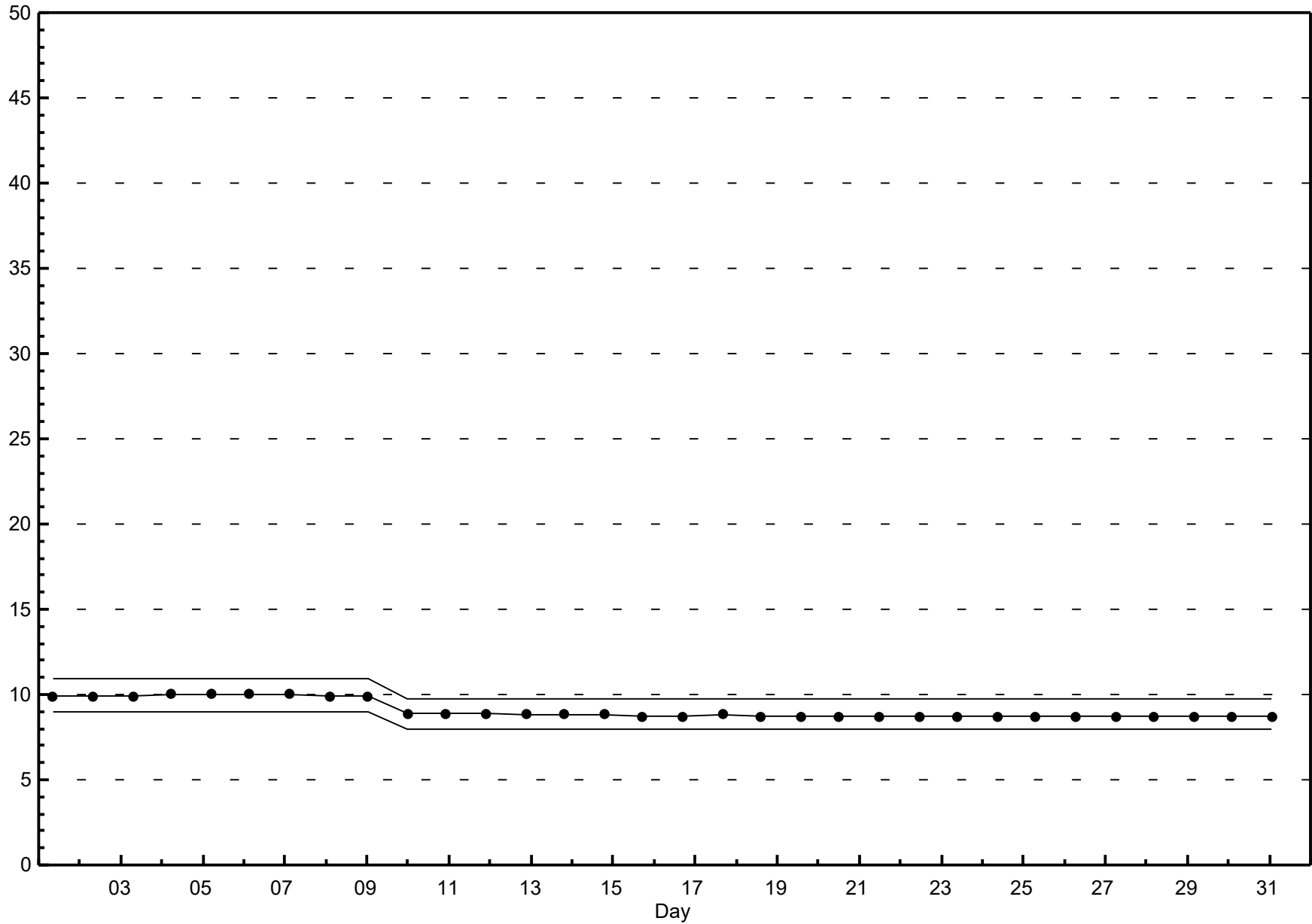


Pollutant Classes (ppm)



Span Responses

Methane (CH₄)
Henry Pirker - July 2017

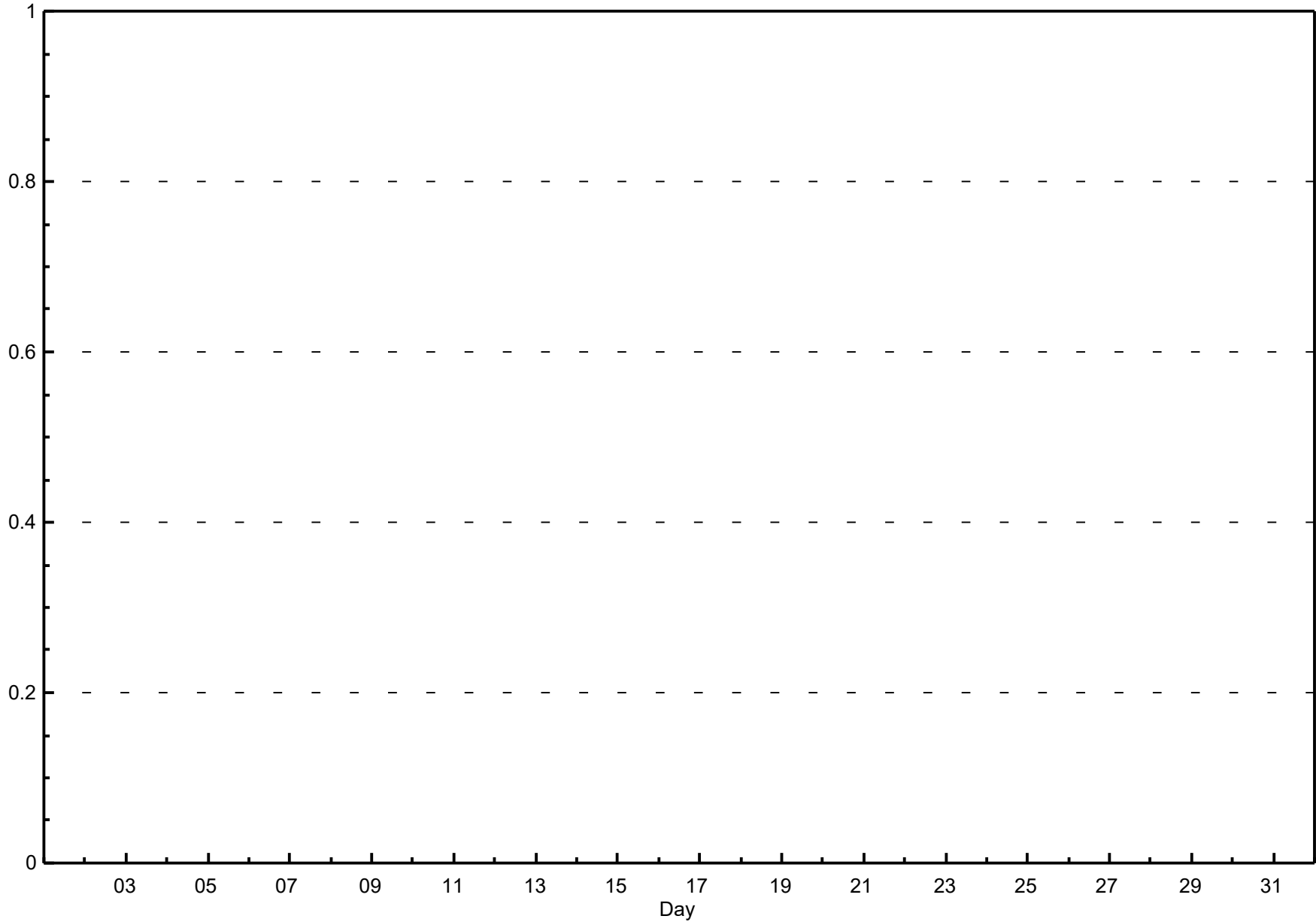


Hourly Averages

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - July 2017

Maximum Value: 0.00 ppm on Jul 24 02:00 Maximum Daily Average: 0.00 ppm on Jul 24 Minimum Value: 0.0 ppm on Jul 1 02:00 Minimum Daily Average: 0.00 ppm on Jul 5 Maximum Diurnal Average: 0.00 ppm at hour 1 Minimum Diurnal Average: 0.00 ppm at hour 16 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 in Service: 744 Hours of Data: 706 Hours of Missing Data: 38 Hours of Calibration: 36 Percent Operational Time: 99.7			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jul	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	0.0	0.00	0.00
2-Jul	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	0.0	0.00	0.00
3-Jul	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	0.0	0.00	0.00
4-Jul	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	0.0	0.00	0.00
5-Jul	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	0.0	0.00	0.00
6-Jul	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	0.0	0.00	0.00
7-Jul	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	M	M	0.0	0.0	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
8-Jul	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	0.0	0.00	0.00
9-Jul	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	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
10-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
11-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
12-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
13-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
14-Jul	0.0	0.0	0.0	0.0	0.0	0.0	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
15-Jul	0.0	0.0	0.0	0.0	0.0	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
16-Jul	0.0	0.0	0.0	0.0	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
17-Jul	0.0	0.0	0.0	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
18-Jul	0.0	0.0	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
19-Jul	0.0	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
20-Jul	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	0.0	0.00	0.00
21-Jul	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	0.0	0.00	0.00
22-Jul	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	0.0	0.00	0.00
23-Jul	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	0.0	0.00	0.00
24-Jul	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	0.0	0.00	0.00
25-Jul	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	0.0	0.00	0.00
26-Jul	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	0.0	0.00	0.00
27-Jul	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	0.0	0.00	0.00
28-Jul	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	0.0	0.00	0.00
29-Jul	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	0.0	0.00	0.00
30-Jul	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	0.0	0.00	0.00
31-Jul	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	0.0	0.00	0.00
																								0.00	0.00		
																								0.00	0.00		
C - Calibration																								M - Maintenance		A - Automated Daily Zero Span	

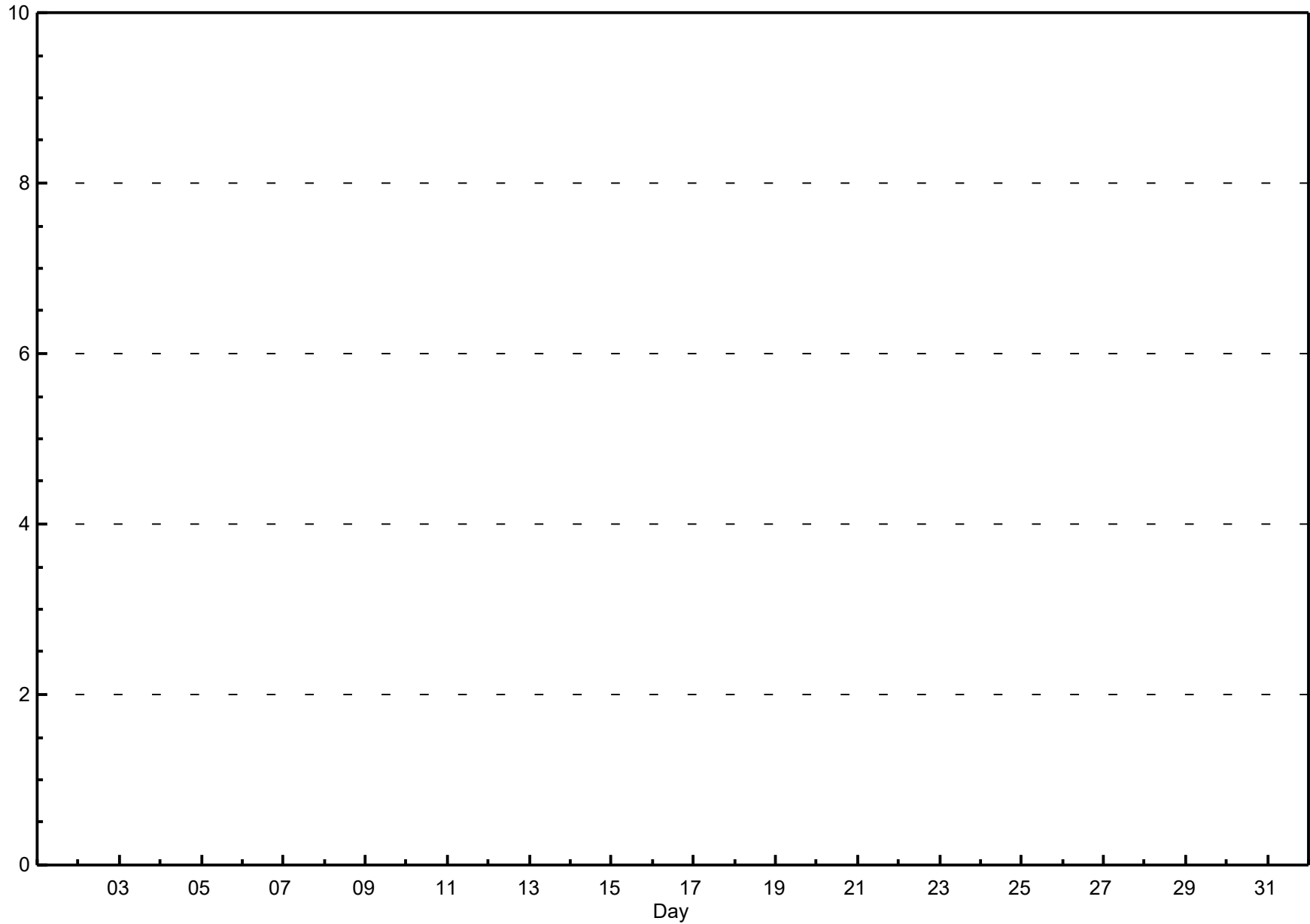


Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - July 2017

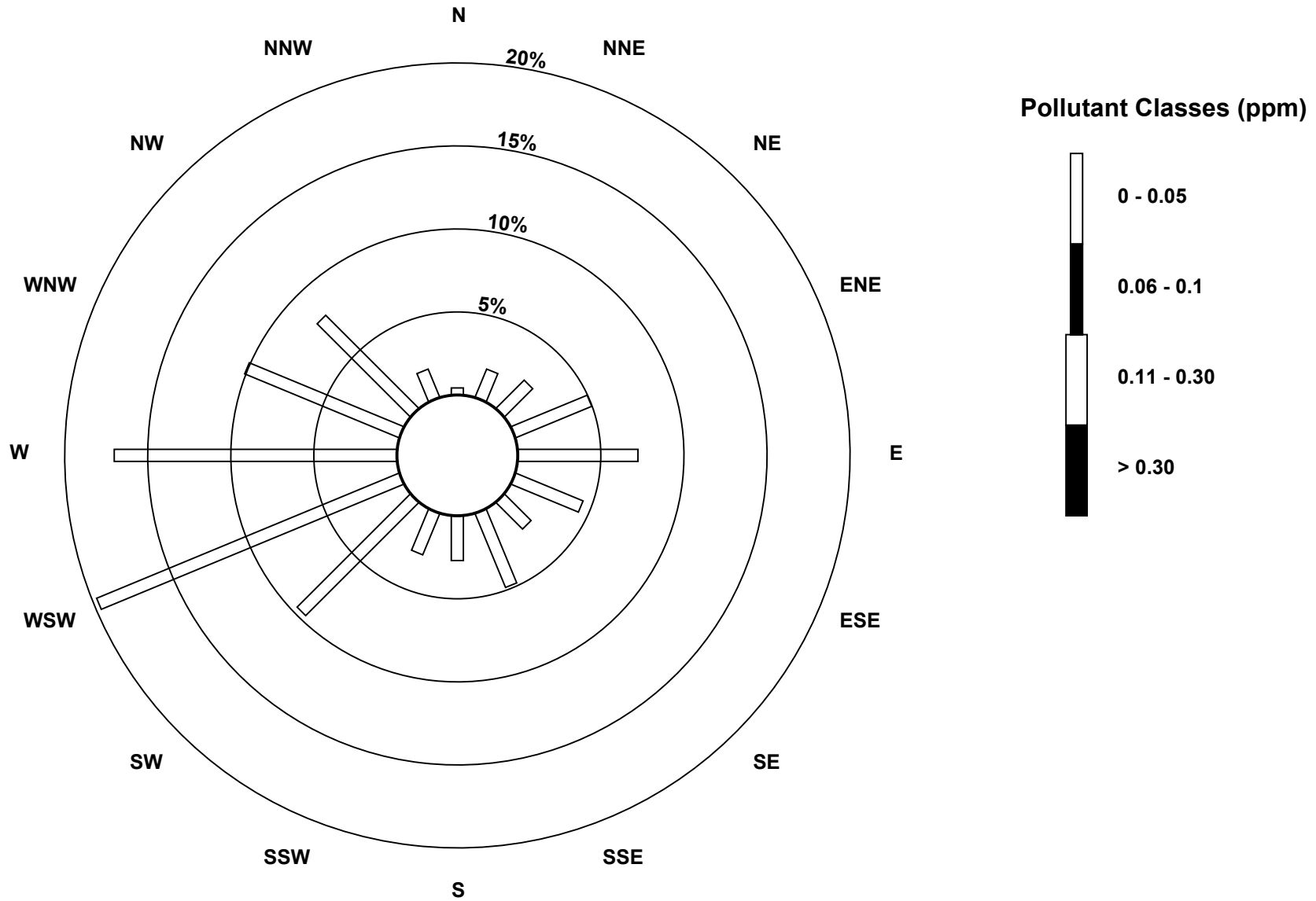
Maximum Value: 0.00 ppm on Jul 21 00:00 Maximum Daily Average: 0.00 ppm on Jul 12 Minimum Value: 0.0 ppm on Jul 5 11:00 Minimum Daily Average: 0.00 ppm on Jul 8 Maximum Diurnal Average: 0.00 ppm at hour 10 Minimum Diurnal Average: 0.00 ppm at hour 15 Monthly Average: 0.001 ppm Percentiles: P ₁ = 0.00 P ₁₀ = 0.00 Q ₁ = 0.00 Median = 0.00 Q ₃ = 0.00 P ₉₀ = 0.00 P ₉₉ = 0.00																								Hours in Service: 744 Hours of Data: 706 Hours of Missing Data: 38 Hours of Calibration: 36 Percent Operational Time: 99.7		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	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
2-Jul	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
3-Jul	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
4-Jul	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
5-Jul	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
6-Jul	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
7-Jul	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	M	M	0.0	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
8-Jul	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
9-Jul	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	0.0	0.0	0.0	0.0	0.0	0.00	0.00
10-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
11-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
12-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
13-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
14-Jul	0.0	0.0	0.0	0.0	0.0	0.0	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
15-Jul	0.0	0.0	0.0	0.0	0.0	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
16-Jul	0.0	0.0	0.0	0.0	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
17-Jul	0.0	0.0	0.0	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
18-Jul	0.0	0.0	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
19-Jul	0.0	0.0	0.0	0.0	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
20-Jul	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
21-Jul	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
22-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Jul	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
25-Jul	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
26-Jul	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
27-Jul	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
28-Jul	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
29-Jul	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
30-Jul	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
31-Jul	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
0.00 0.00																								Diurnal Average		
0.00 0.00																								Diurnal Maximum		
C - Calibration M - Maintenance A - Automated Daily Zero Span																										

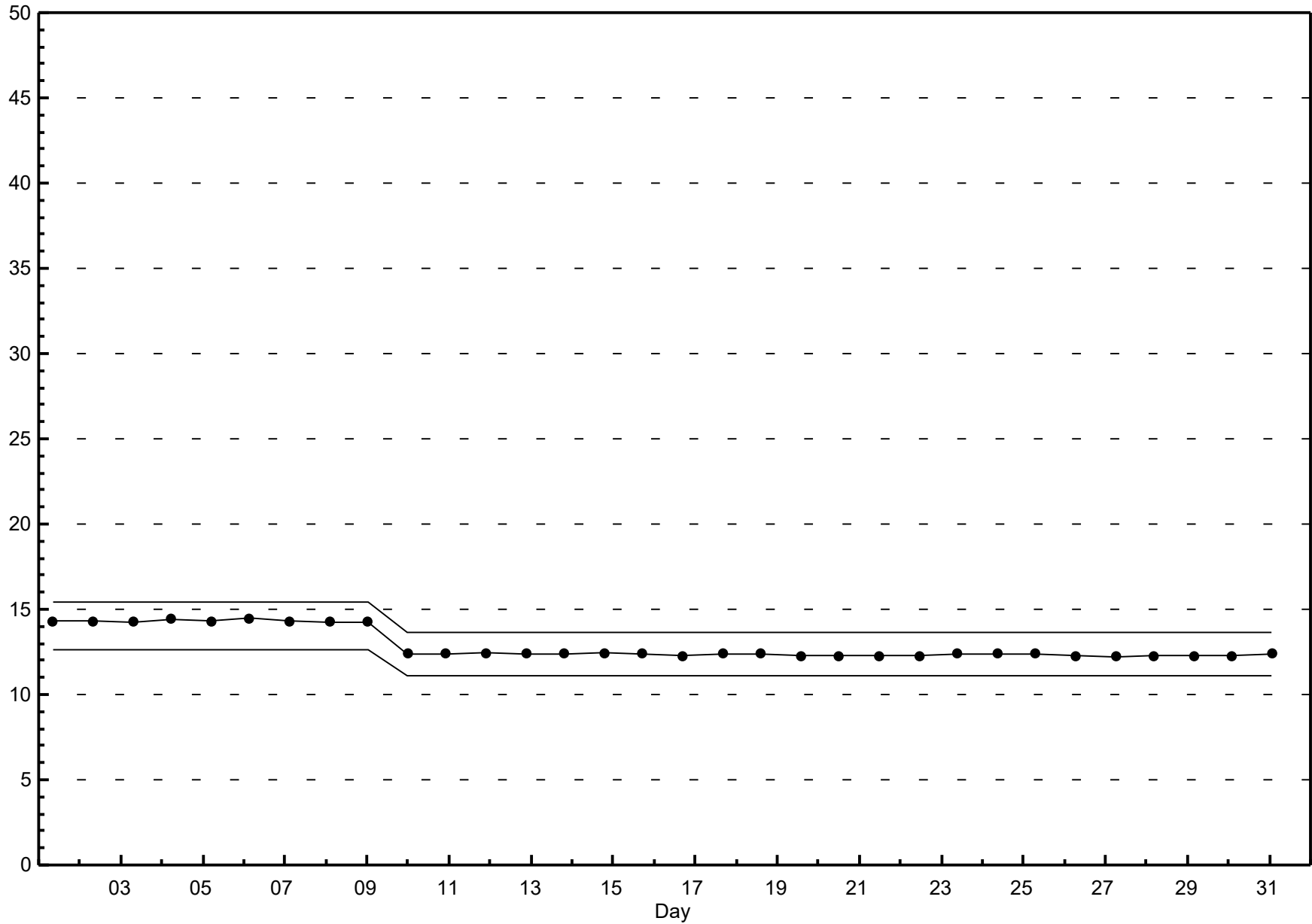


Pollutant Rose

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - July 2017





Hourly Averages

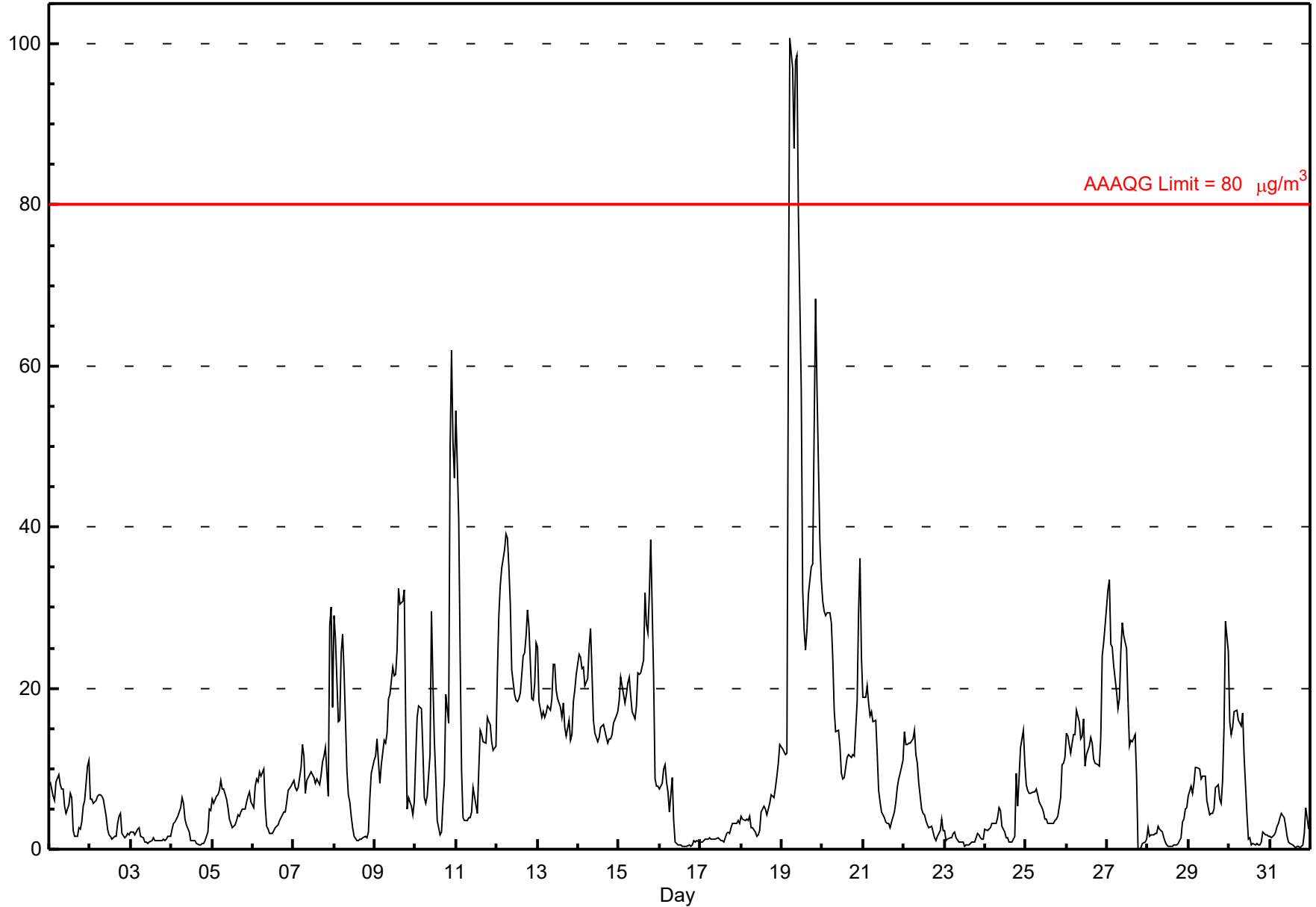
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Henry Pirker - July 2017

Number of Exceedences: 1-hr: 5 24-hr: 1	Hours in Service: 744
Maximum Value: 100.8 µg/m ³ on Jul 19 06:00	Maximum Daily Average: 49.6 µg/m ³ on Jul 19
Minimum Value: 0 µg/m ³ on Jul 27 19:00	Hours of Data: 744
Maximum Diurnal Average: 14.6 µg/m ³ at hour 6	Hours of Missing Data: 0
Monthly Average: 10.83 µg/m ³	Hours of Calibration: 0
Minimum Daily Average: 1.2 µg/m ³ on Jul 23	Percent Operational Time: 100.0
Minimum Diurnal Average: 7.2 µg/m ³ at hour 14	
Percentiles: P ₁ = 0.4 P ₁₀ = 1.0 Q ₁ = 2.3 Median = 6.7 Q ₃ = 15.3 P ₉₀ = 24.5 P ₉₉ = 58.3	

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-Jul	8	7	7	6	8	9	8	7	7	5	4	6	7	6	2	2	2	3	3	3	5	6	10	11	6.0	11.1
2-Jul	6	6	6	6	7	7	7	7	6	4	2	2	2	1	2	2	3	4	4	2	1	2	2	2	3.8	6.8
3-Jul	2	2	2	2	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1.4	2.6
4-Jul	2	3	3	4	4	5	6	6	4	3	2	1	1	1	1	1	1	1	1	1	1	2	5	5	2.7	6.4
5-Jul	6	6	7	7	7	8	8	7	6	5	4	3	3	3	3	4	4	5	5	5	6	7	7	6	5.5	8.5
6-Jul	5	8	9	8	10	9	10	5	3	3	2	2	2	3	3	3	3	4	5	5	6	7	8	8	5.4	10.0
7-Jul	8	8	7	8	10	13	12	7	9	9	10	9	9	8	9	8	9	11	12	13	7	28	30	18	11.2	30.1
8-Jul	29	26	16	16	24	27	22	10	7	6	4	3	2	1	1	1	1	1	2	1	2	6	9	11	9.5	29.1
9-Jul	12	14	11	8	10	14	13	15	19	19	23	22	25	32	30	31	32	16	5	6	5	4	6	6	16.4	32.4
10-Jul	11	16	18	17	12	6	6	7	12	30	21	14	9	4	2	2	6	8	19	16	50	62	51	46	18.5	61.9
11-Jul	55	41	24	10	4	4	4	4	4	5	8	7	4	10	15	14	13	13	16	16	16	13	12	13	13.5	54.5
12-Jul	22	29	33	35	37	39	39	35	30	22	19	18	18	19	19	24	24	26	30	28	19	19	20	26	26.3	39.2
13-Jul	25	18	16	17	16	17	18	17	19	23	23	20	19	18	16	18	15	14	16	13	14	18	20	22	18.1	25.1
14-Jul	24	24	22	23	20	21	25	27	22	16	14	13	14	15	15	16	14	13	14	14	14	16	17	17	17.9	27.4
15-Jul	19	21	20	18	19	21	21	19	17	16	18	22	22	22	23	32	28	27	32	38	21	9	8	8	20.9	38.4
16-Jul	7	8	10	10	8	7	5	9	3	1	1	1	1	0	0	0	0	0	0	0	1	1	1	1	3.3	10.4
17-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	3	3	3	3	4	3	1.8	3.6
18-Jul	4	4	3	4	4	4	3	3	2	2	2	5	5	5	4	5	6	7	6	8	9	11	13	5.0	12.9	
19-Jul	12	12	12	12	62	101	97	87	98	99	79	57	32	27	25	27	32	35	35	52	68	57	38	34	49.6	100.8
20-Jul	31	30	29	29	29	28	24	17	15	15	13	9	9	9	11	12	12	11	12	12	18	29	36	24	19.3	36.1
21-Jul	19	19	20	18	17	17	16	16	12	7	6	5	4	3	3	3	3	3	5	6	8	9	10	11	9.9	20.3
22-Jul	15	13	13	13	13	14	15	12	11	8	5	4	4	4	3	3	3	2	1	1	2	2	4	2	6.9	14.7
23-Jul	2	1	1	1	1	2	2	1	1	1	1	1	0	0	1	1	1	1	1	2	2	1	1	1	1.2	2.3
24-Jul	2	2	2	3	3	3	3	4	5	5	3	2	1	1	1	1	1	2	10	5	9	13	15	11	4.5	14.7
25-Jul	8	7	7	7	7	7	7	7	6	5	5	4	4	3	3	3	3	4	4	4	6	10	11	11	6.0	11.4
26-Jul	14	14	12	13	14	14	17	16	14	14	16	10	12	13	14	13	11	11	11	10	14	24	26	28	14.8	27.8
27-Jul	32	33	26	25	23	20	17	19	25	28	27	25	18	13	14	13	14	9	0	0	0	1	1	1	16.0	33.5
28-Jul	3	2	2	2	2	2	3	2	2	1	1	0	0	0	0	1	1	1	1	1	3	4	5	5	1.9	5.2
29-Jul	7	8	7	8	10	10	10	10	9	9	9	6	4	4	5	5	8	8	6	6	9	15	28	25	9.3	28.3
30-Jul	16	14	15	17	17	16	16	15	17	11	4	1	1	1	1	1	1	0	1	1	2	2	2	2	7.2	17.2
31-Jul	2	1	2	2	3	3	4	4	4	3	2	1	1	1	0	0	0	0	0	0	2	5	4	2	2.0	5.2
	13.2	12.9	11.7	11.3	13.2	14.6	14.1	12.8	12.6	12.2	10.6	8.8	7.5	7.2	7.5	8.0	8.1	8.4	8.7	8.8	10.5	12.5	12.9	12.0	Diurnal Average	
	54.5	41.1	32.7	35.0	61.9	100.8	97.1	86.9	97.9	98.7	79.2	57.1	32.2	27.3	32.4	31.8	31.6	35.0	35.4	51.8	68.4	61.9	50.6	46.1	Diurnal Maximum	

Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³



Hourly Maximums

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

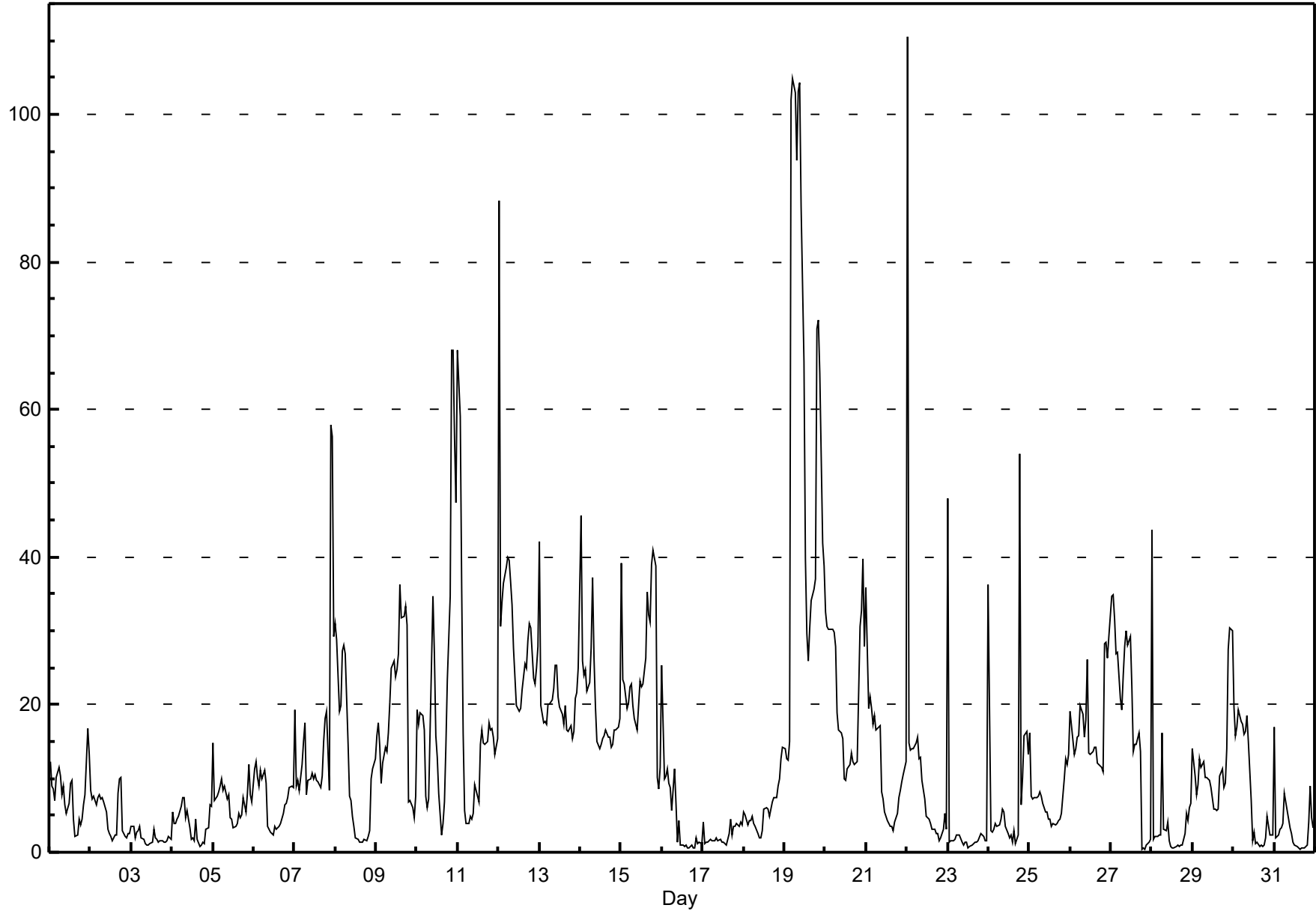
Henry Pirker - July 2017

Maximum Value: 110.6 µg/m³ on Jul 22 01:00		Maximum Daily Average: 55.8 µg/m³ on Jul 19		Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0																							
Minimum Value: 0 µg/m³ on Jul 27 19:00		Minimum Daily Average: 2.0 µg/m³ on Jul 3																									
Maximum Diurnal Average: 29.0 µg/m³ at hour 1		Minimum Diurnal Average: 8.4 µg/m³ at hour 14																									
Monthly Average: 13.35 µg/m³		Percentiles: P ₁ = 0.7 P ₁₀ = 1.4 Q ₁ = 3.3 Median = 8.8 Q ₃ = 17.4 P ₉₀ = 30.1 P ₉₉ = 86.1																									
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-Jul	12	9	9	7	10	12	10	8	9	6	5	7	9	10	5	2	2	5	4	4	6	8	17	13	7.9	16.7	
2-Jul	8	7	8	6	7	8	7	7	7	6	3	2	2	2	2	2	8	10	10	3	2	2	3	2	5.2	10.0	
3-Jul	3	4	2	3	3	3	2	2	1	1	1	1	1	3	2	2	1	2	2	1	1	2	2	2	2.0	3.6	
4-Jul	5	4	4	4	5	6	7	7	5	6	3	2	2	2	5	2	1	1	1	1	3	3	7	6	3.8	7.5	
5-Jul	15	7	8	8	9	10	8	9	7	8	5	4	3	3	4	5	5	5	7	6	8	12	8	7	7.1	14.8	
6-Jul	11	12	10	9	11	10	11	9	3	3	3	2	3	3	3	4	4	5	6	7	7	9	9	9	6.9	12.4	
7-Jul	19	9	10	8	12	15	18	8	10	10	11	10	11	10	10	9	10	15	18	19	8	58	56	29	16.4	57.9	
8-Jul	31	29	19	20	27	28	27	15	8	7	5	4	2	2	1	1	1	2	2	2	3	10	11	13	11.2	31.0	
9-Jul	16	18	14	9	12	14	14	16	20	25	26	24	25	27	36	32	32	33	31	7	7	6	5	8	19.0	36.2	
10-Jul	19	17	19	19	17	8	6	7	26	35	27	16	13	8	2	4	7	14	23	35	68	68	56	47	23.3	68.1	
11-Jul	68	59	36	16	6	4	4	5	4	5	9	8	7	15	17	15	15	15	17	17	17	16	13	15	16.7	68.0	
12-Jul	88	31	34	36	39	40	40	37	33	28	20	19	19	20	22	26	25	29	31	30	24	23	25	28	31.0	88.2	
13-Jul	42	20	18	18	17	20	20	21	22	25	25	21	20	19	17	20	16	16	17	15	16	21	22	25	20.6	42.1	
14-Jul	46	26	24	25	22	23	28	37	26	20	15	14	15	15	16	17	16	16	14	15	16	17	17	18	20.7	45.6	
15-Jul	39	23	23	19	20	22	23	20	18	17	20	23	22	23	26	35	32	31	39	41	39	10	9	11	24.4	40.9	
16-Jul	25	10	10	11	9	9	6	11	7	1	4	1	1	1	1	1	1	1	1	1	2	1	1	1	4.9	25.3	
17-Jul	4	1	1	1	2	2	2	2	2	2	2	1	1	1	1	3	4	2	4	3	4	4	4	4	2.4	4.4	
18-Jul	6	5	4	4	4	5	4	4	4	2	2	3	6	6	6	5	6	7	7	7	9	10	13	14	5.8	14.2	
19-Jul	14	13	12	15	102	105	103	94	103	104	88	67	40	30	26	30	34	36	37	71	72	65	42	39	55.8	104.9	
20-Jul	32	31	30	30	30	30	28	19	17	16	15	10	10	11	12	13	12	12	12	12	31	33	40	28	21.4	39.9	
21-Jul	36	19	21	19	17	18	16	17	17	8	7	6	4	4	4	4	3	4	5	7	8	10	11	12	11.6	35.8	
22-Jul	111	15	14	14	14	15	16	13	13	10	7	5	5	5	4	3	3	3	2	2	2	3	5	3	11.9	110.6	
23-Jul	48	1	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	2	3	2	2	2	2	3.5	47.9	
24-Jul	36	3	3	3	4	4	4	4	6	6	3	2	2	2	1	3	1	2	54	7	10	16	16	13	8.6	54.0	
25-Jul	16	8	7	7	7	8	8	8	7	6	5	4	4	4	4	4	4	4	5	5	10	13	12	13	7.2	16.1	
26-Jul	19	17	13	14	16	16	20	19	16	18	26	13	13	14	14	14	12	12	11	11	28	29	26	29	17.5	29.2	
27-Jul	35	35	31	27	27	21	19	24	28	30	28	29	22	14	15	15	16	14	0	1	0	1	1	2	18.1	34.9	
28-Jul	44	2	2	2	2	2	16	3	3	4	2	1	1	1	1	1	1	1	2	5	4	6	7	4.7	43.8		
29-Jul	14	10	8	9	13	12	12	10	10	10	10	9	6	6	6	6	10	11	9	9	14	28	30	30	12.1	30.5	
30-Jul	20	16	17	19	18	17	16	16	18	15	7	2	3	1	1	1	1	1	1	2	5	2	2	2	8.5	19.7	
31-Jul	17	2	2	3	3	4	8	7	5	3	3	1	1	1	1	0	1	1	1	1	4	9	5	3	3.5	17.0	
		29.0	14.9	13.4	12.6	15.7	15.9	16.3	14.8	14.6	14.1	12.5	10.1	8.8	8.4	8.5	9.0	9.2	10.0	12.1	11.2	14.0	15.8	15.3	14.1	Diurnal Average	
		110.6	59.0	35.5	36.5	102.0	104.9	102.9	93.8	103.1	104.3	87.5	66.5	39.8	29.7	36.2	35.3	34.0	35.6	54.0	70.9	72.1	68.1	56.3	47.3	Diurnal Maximum	

Hourly Maximums

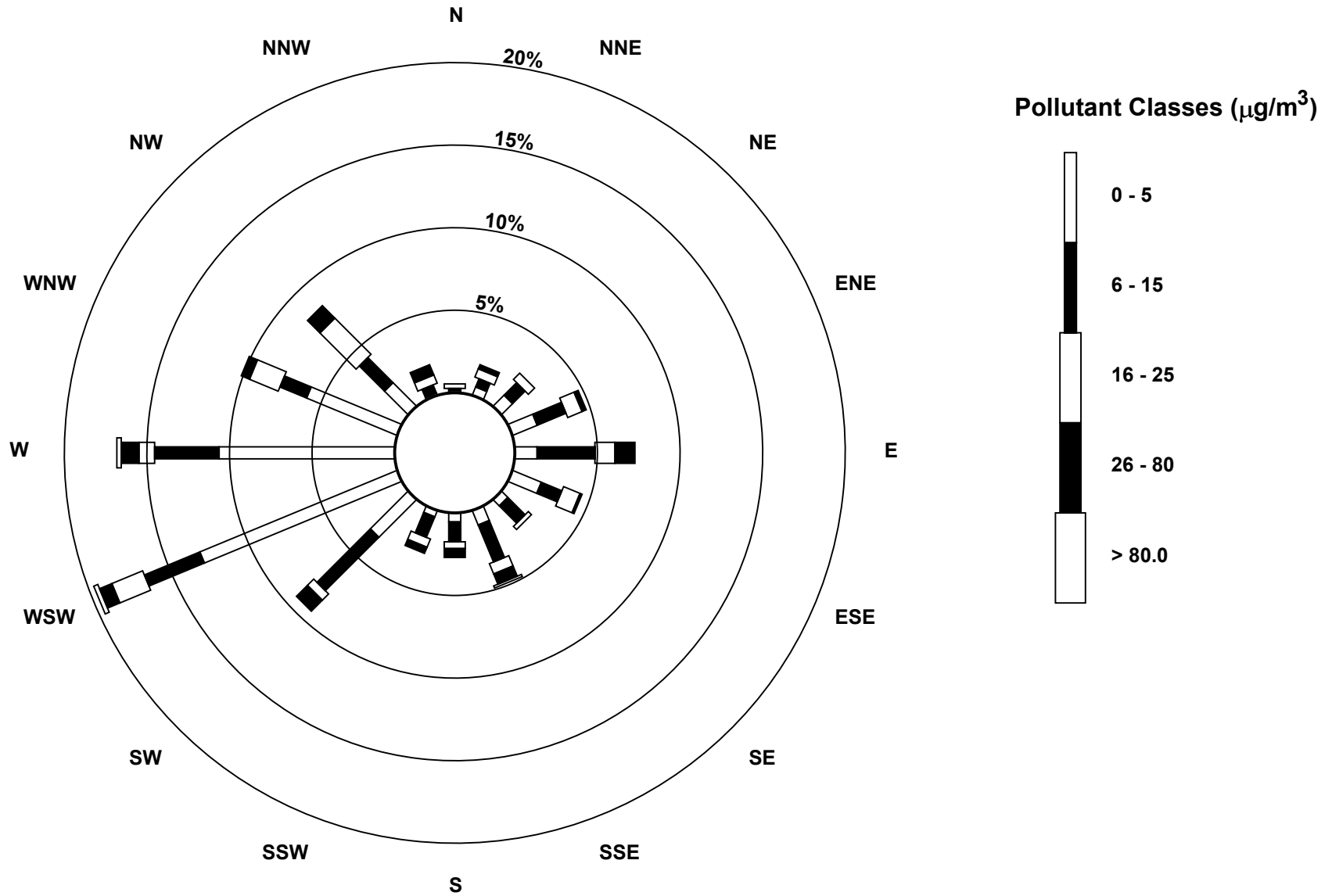
Particulate Matter 2.5 (PM_{2.5}) - μg/m³

Henry Pirker - July 2017



Pollutant Rose

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



Hourly Averages

External Temperature (ET) - °C

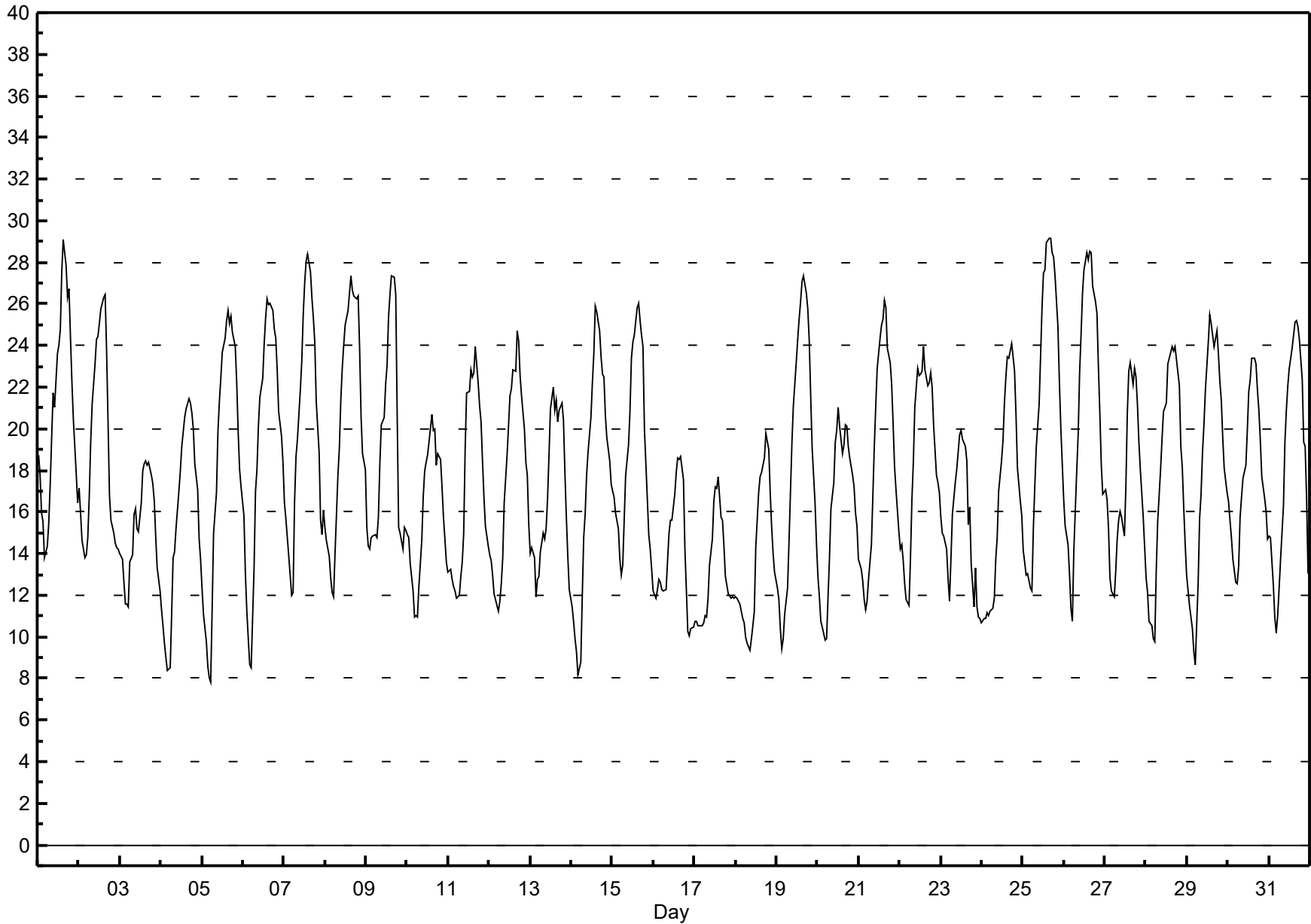
Henry Pirker - July 2017

Maximum Value: 29.2 °C on Jul 25 17:00		Maximum Daily Average: 21.3 °C on Jul 25		Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0																							
Minimum Value: 8 °C on Jul 5 06:00 Maximum Diurnal Average: 23.7 °C at hour 16 Monthly Average: 17.72 °C		Minimum Daily Average: 13.0 °C on Jul 17 Minimum Diurnal Average: 11.3 °C at hour 6 Percentiles: P ₁ = 8.6 P ₁₀ = 11.3 Q ₁ = 13.7 Median = 17.2 Q ₃ = 21.8 P ₉₀ = 25.0 P ₉₉ = 28.5																									
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-Jul	19	18	16	16	14	14	15	17	20	22	21	24	24	25	28	29	28	26	27	24	22	20	18	16	20.9	29.1	
2-Jul	17	16	15	14	14	15	17	19	21	23	24	24	25	26	26	26	24	20	17	16	15	15	14	14	19.1	26.4	
3-Jul	14	14	13	12	12	11	14	14	16	16	15	15	16	18	18	18	18	18	18	17	17	15	13	12	15.2	18.5	
4-Jul	11	11	10	9	8	9	11	14	14	15	17	18	19	20	21	21	21	21	21	20	18	17	15	14	15.6	21.4	
5-Jul	12	11	10	9	8	8	11	15	17	20	21	22	24	24	25	26	25	25	25	24	22	20	18	17	18.3	25.7	
6-Jul	16	13	11	10	9	9	13	17	18	20	22	22	24	25	26	26	26	26	25	24	23	21	20	18	19.3	26.3	
7-Jul	16	16	15	14	12	12	16	19	20	22	23	26	27	28	28	28	26	25	24	21	19	16	15	16	20.2	28.4	
8-Jul	15	15	14	13	12	12	14	18	19	21	23	24	25	26	27	27	27	26	26	26	24	21	19	18	20.5	27.4	
9-Jul	15	14	14	15	15	15	15	16	18	20	21	22	23	25	26	27	27	26	21	15	15	14	15	15	18.8	27.4	
10-Jul	15	15	14	12	11	11	11	12	15	17	18	18	19	19	21	20	20	18	19	19	17	16	15	14	16.0	20.6	
11-Jul	13	13	13	12	12	12	12	13	14	15	19	22	22	23	23	23	24	22	21	20	18	17	15	14	17.2	23.9	
12-Jul	14	14	13	12	12	11	12	13	14	16	19	20	22	22	23	23	25	24	23	22	20	18	18	15	17.6	24.7	
13-Jul	14	14	14	12	13	13	14	15	15	15	17	19	21	22	21	21	20	21	21	20	18	16	14	12	16.7	22.0	
14-Jul	11	11	10	9	8	9	12	15	16	18	19	21	22	24	26	26	25	23	23	22	21	20	18	17	17.7	25.9	
15-Jul	17	17	16	15	14	13	13	16	18	19	21	23	24	25	26	26	25	24	24	20	17	15	14	13	19.0	26.0	
16-Jul	12	12	12	13	13	12	12	12	14	15	16	16	17	18	19	19	19	18	14	12	10	10	10	10	13.9	18.7	
17-Jul	11	11	11	11	11	11	11	11	12	13	15	17	17	17	18	16	16	14	13	12	12	12	12	12	13.0	17.7	
18-Jul	12	12	12	11	11	11	10	10	9	10	11	11	14	17	18	18	18	19	20	19	17	15	14	13	13.8	19.8	
19-Jul	12	12	10	9	10	11	12	15	17	19	21	23	24	25	26	27	27	26	26	24	22	19	16	14	18.8	27.4	
20-Jul	13	12	11	10	10	10	12	14	16	17	19	20	21	20	19	19	20	20	19	19	18	17	16	15	16.2	21.0	
21-Jul	14	13	13	12	11	12	13	14	17	19	21	23	24	25	25	26	26	24	23	22	20	18	17	15	18.7	26.2	
22-Jul	14	14	14	13	12	12	14	17	18	21	23	23	23	23	24	23	22	22	23	22	20	18	17	17	18.6	24.0	
23-Jul	16	15	15	14	13	12	14	16	17	18	19	20	20	19	18	15	16	14	11	13	11	11	11	11	15.3	19.9	
24-Jul	11	11	11	11	11	11	11	12	14	15	17	18	19	21	22	23	23	24	23	23	21	18	17	16	16.8	24.1	
25-Jul	14	14	13	13	12	12	15	17	19	21	23	26	27	28	29	29	29	28	28	27	25	22	20	18	21.3	29.2	
26-Jul	17	15	14	13	11	11	14	18	20	23	25	27	28	28	28	29	28	27	26	26	23	21	18	17	21.1	28.5	
27-Jul	17	17	15	13	12	12	13	15	16	16	16	15	17	21	23	23	22	23	22	21	19	18	16	14	17.3	23.1	
28-Jul	13	12	11	11	10	10	13	16	18	20	21	21	21	23	24	24	24	24	23	22	19	18	16	14	17.8	24.0	
29-Jul	13	11	11	10	9	9	13	16	17	19	20	22	24	25	25	24	24	25	24	22	21	20	18	17	18.3	25.5	
30-Jul	17	16	15	14	13	13	13	16	17	18	18	20	22	22	23	23	23	23	22	21	19	18	17	16	15	17.9	23.4
31-Jul	15	15	12	11	10	11	12	14	16	19	21	22	23	24	24	25	25	25	24	22	19	19	17	13	18.4	25.2	
		14.2	13.6	12.7	12.0	11.3	11.3	13.0	14.9	16.4	18.2	19.5	20.7	21.9	22.9	23.6	23.7	23.4	22.8	21.8	20.6	18.8	17.2	15.9	14.8	Diurnal Average	
		18.7	17.8	16.0	15.6	14.8	14.9	16.7	19.3	21.2	23.1	24.5	26.5	27.6	28.5	28.9	29.2	29.2	28.5	28.2	27.4	24.9	22.3	20.0	18.4	Diurnal Maximum	

Hourly Averages

External Temperature (ET) - °C

Henry Pirker - July 2017



Hourly Averages

Relative Humidity (RH) - %

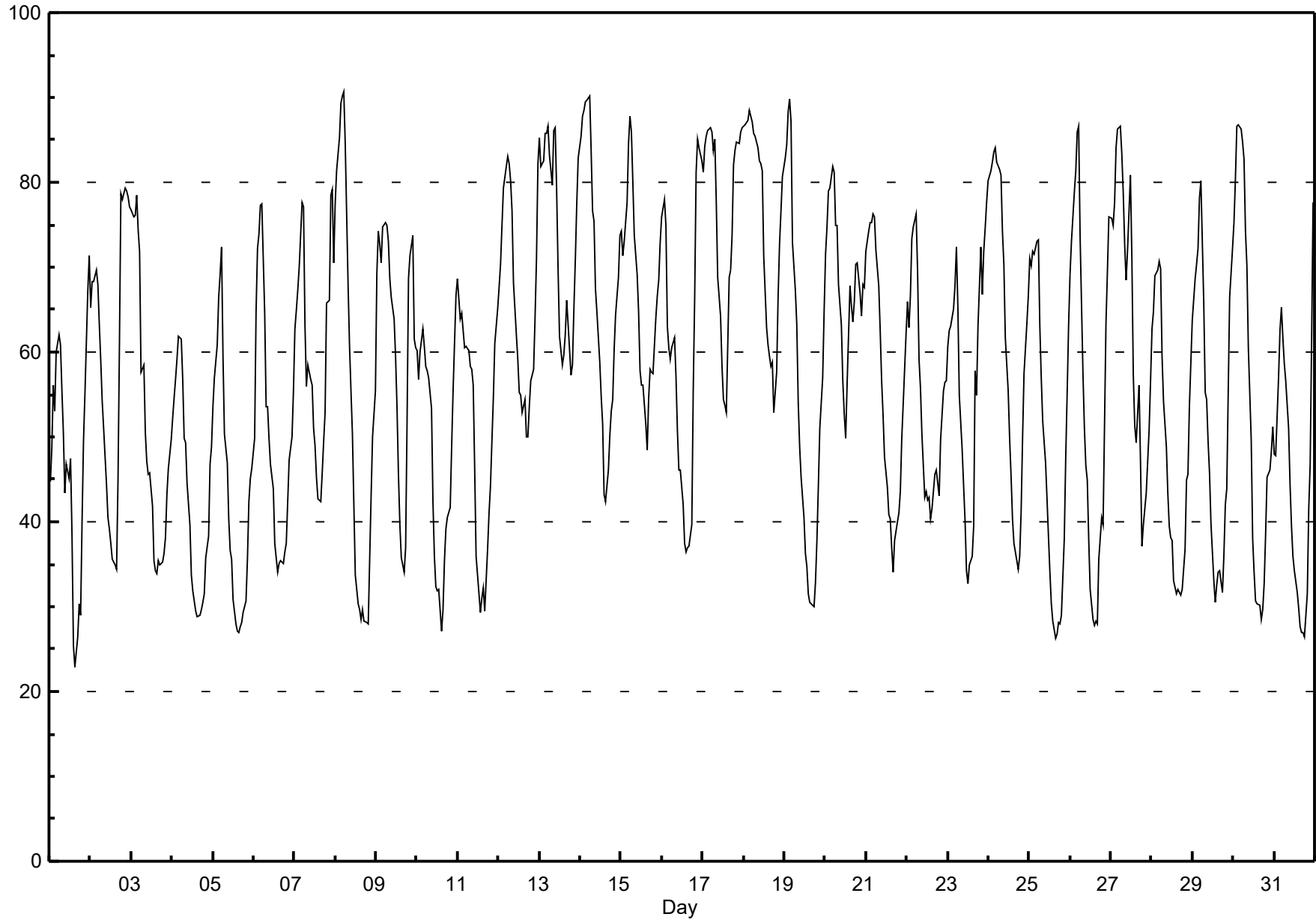
Henry Pirker - July 2017

Maximum Value: 90.7 % on Jul 8 06:00		Maximum Daily Average: 76.2 % on Jul 17		Hours in Service: 744																							
Minimum Value: 23 % on Jul 1 16:00		Minimum Daily Average: 43.0 % on Jul 4		Hours of Data: 744																							
Maximum Diurnal Average: 76.4 % at hour 5		Minimum Diurnal Average: 38.7 % at hour 15		Hours of Missing Data: 0																							
Monthly Average: 57.16 %		Percentiles: P ₁ = 27.0 P ₁₀ = 32.6 Q ₁ = 42.4 Median = 57.2 Q ₃ = 71.4 P ₉₀ = 82.0 P ₉₉ = 89.1		Hours of Calibration: 0																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jul	45	49	56	53	60	62	61	55	51	43	47	45	47	38	25	23	26	30	29	40	49	55	67	71	47.1	71.3	
2-Jul	65	68	68	70	68	63	59	54	51	44	41	39	38	36	35	34	45	61	79	78	79	79	78	77	58.7	79.3	
3-Jul	77	76	76	78	74	72	58	59	51	47	46	46	42	35	34	34	35	35	35	36	38	43	46	50	51.0	78.4	
4-Jul	52	55	57	59	62	62	57	50	49	45	40	34	32	31	30	29	29	30	30	32	36	38	47	49	43.0	61.9	
5-Jul	54	57	61	66	69	72	60	50	47	40	37	36	31	28	27	27	28	28	29	31	36	42	45	46	43.6	72.3	
6-Jul	50	65	72	74	77	78	65	54	54	50	47	44	37	36	34	35	35	35	36	37	42	47	50	55	50.4	77.5	
7-Jul	63	65	67	70	78	77	63	56	59	57	56	51	49	45	43	42	46	49	53	66	66	78	79	71	60.4	79.2	
8-Jul	77	81	85	89	90	91	85	68	61	55	50	42	34	30	30	28	30	28	28	28	36	43	50	55	54.0	90.7	
9-Jul	69	74	73	70	75	75	75	73	69	66	64	59	54	46	40	36	34	37	52	69	71	74	62	60	61.5	75.3	
10-Jul	60	57	60	63	61	58	58	57	53	42	36	32	32	32	27	30	35	39	40	42	49	55	61	67	47.8	66.6	
11-Jul	69	64	65	63	60	61	60	58	58	56	46	36	32	29	31	32	29	37	41	44	49	55	61	65	50.1	68.6	
12-Jul	68	70	75	79	82	83	82	80	77	68	62	59	55	55	53	54	50	50	54	57	58	64	71	82	66.2	83.1	
13-Jul	85	82	83	86	86	87	83	80	86	86	79	70	62	59	60	62	66	63	57	58	65	71	77	83	74.0	86.6	
14-Jul	85	88	88	90	90	90	84	77	75	67	65	59	55	51	43	42	46	50	53	54	60	64	69	74	67.5	90.2	
15-Jul	74	71	73	78	85	88	86	80	74	69	65	58	56	56	52	49	54	58	58	58	64	67	68	73	67.2	87.8	
16-Jul	76	78	75	63	60	59	60	62	57	51	46	46	42	37	36	37	37	40	56	66	81	85	84	83	59.1	85.0	
17-Jul	81	84	85	86	86	86	84	85	78	69	64	58	54	54	53	69	70	74	82	84	85	85	86	86	76.2	86.5	
18-Jul	87	87	87	88	88	87	86	85	84	82	81	71	63	61	60	58	59	53	58	66	73	77	81	81	75.2	88.5	
19-Jul	83	84	88	90	87	73	67	63	54	49	45	41	36	35	32	31	30	30	33	38	44	51	57	65	54.4	89.8	
20-Jul	71	75	79	79	82	81	75	75	68	63	57	53	50	56	68	65	63	66	70	71	67	64	68	68	68.1	81.9	
21-Jul	72	74	75	75	76	76	72	68	63	57	52	48	44	41	40	37	34	38	40	41	44	50	54	62	55.5	76.3	
22-Jul	66	63	67	73	75	76	70	59	56	50	43	44	43	43	40	41	46	46	45	43	50	55	56	57	54.4	76.2	
23-Jul	61	63	63	65	68	72	65	55	49	44	40	34	33	35	36	40	58	55	63	72	67	72	75	78	56.7	77.6	
24-Jul	80	81	82	84	84	82	82	81	74	70	62	55	50	45	40	37	36	34	36	41	50	58	63	67	61.5	84.0	
25-Jul	71	70	72	72	73	73	63	57	52	47	43	38	34	30	28	26	27	28	28	29	38	47	55	63	48.5	73.2	
26-Jul	69	73	79	81	86	87	74	57	51	47	45	38	32	28	28	28	28	36	41	40	51	63	69	76	54.5	86.6	
27-Jul	76	75	78	84	86	87	83	79	73	69	72	81	71	57	51	49	56	47	37	40	41	43	51	57	64.3	86.6	
28-Jul	63	65	69	70	71	70	59	54	49	43	39	38	38	33	32	32	32	31	32	37	45	46	53	59	48.3	70.7	
29-Jul	64	69	70	72	78	80	66	55	54	50	46	40	33	31	32	34	34	32	36	42	44	55	66	72	52.3	80.2	
30-Jul	75	80	87	87	86	85	83	74	70	60	50	38	34	31	30	30	28	30	33	38	45	46	48	51	55.0	86.7	
31-Jul	48	48	57	63	65	62	59	57	51	44	39	36	34	32	30	28	27	27	26	31	41	47	61	78	45.5	77.6	
		68.9	70.7	73.3	74.9	76.4	76.0	70.4	65.1	61.2	55.9	51.8	47.7	43.7	40.6	38.7	38.8	40.5	42.0	44.7	48.4	53.5	58.6	63.1	67.1	Diurnal Average	
		86.6	87.7	88.4	89.8	90.2	90.7	85.9	85.4	86.1	86.4	82.2	81.4	71.3	62.9	67.7	68.9	69.6	73.7	82.1	83.7	84.8	85.0	85.9	86.5	Diurnal Maximum	

Hourly Averages

Relative Humidity (RH) - %

Henry Pirker - July 2017

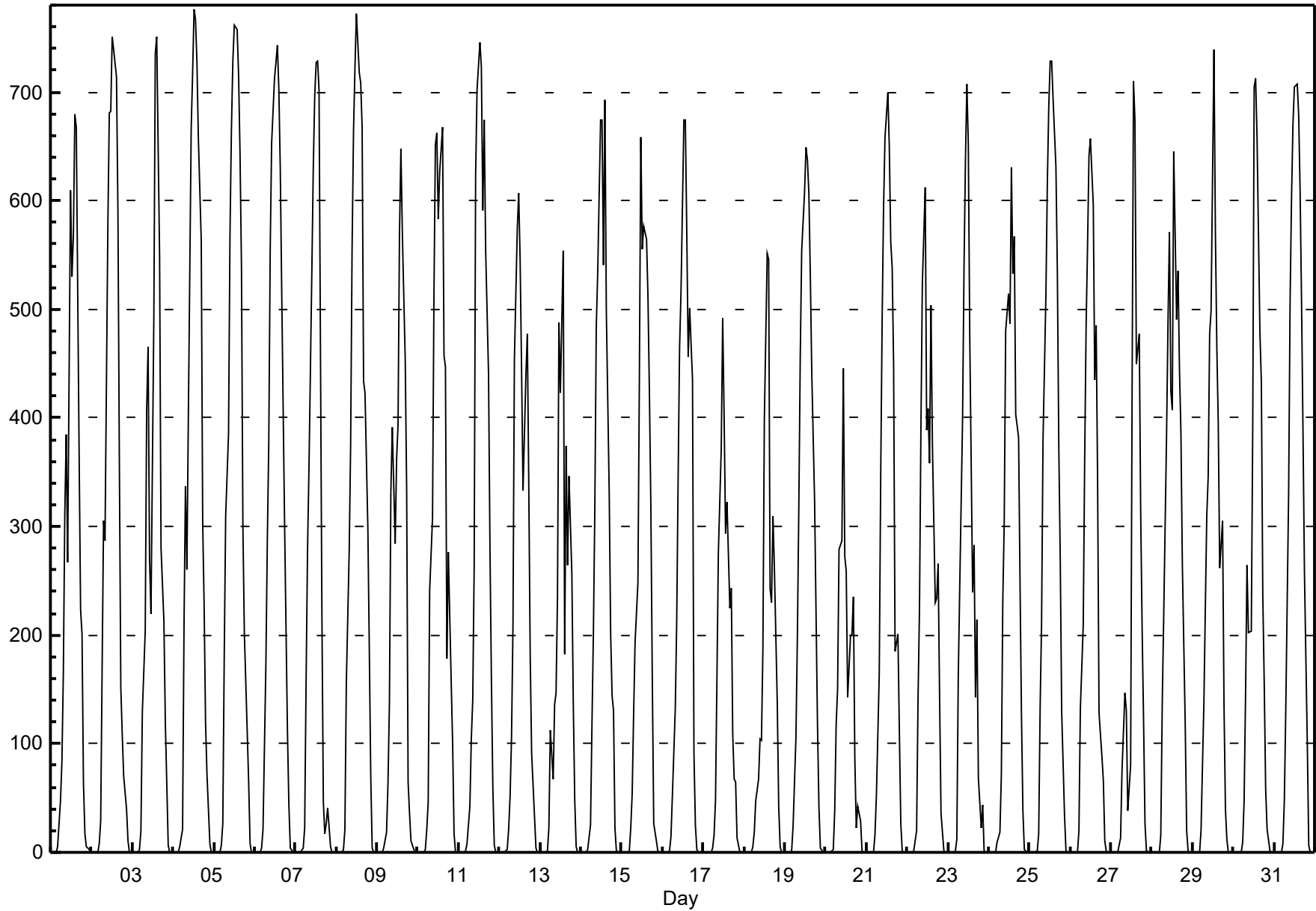


Hourly Averages

Solar Radiation (SR) - W/m²

Henry Pirker - July 2017

Maximum Value: 775.7 W/m² on Jul 4 13:00 Maximum Daily Average: 293.9 W/m² on Jul 8																				Hours in Service: 744 Hours of Data: 744						
Minimum Value: 0 W/m² on Jul 1 01:00 Minimum Daily Average: 117.1 W/m² on Jul 20 Maximum Diurnal Average: 608.9 W/m² at hour 14 Minimum Diurnal Average: 0.0 W/m² at hour 24 Monthly Average: 220.21 W/m² Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 118.5 Q ₃ = 422.1 P ₉₀ = 641.2 P ₉₉ = 750.3																				Hours of Missing Data: 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-Jul	0	0	0	0	5	48	83	166	311	384	267	609	530	569	679	667	364	223	201	63	17	6	2	0	216.4	679.2
2-Jul	0	0	0	0	8	29	171	306	287	579	681	682	752	739	714	590	358	153	108	70	40	11	0	0	261.5	751.5
3-Jul	0	0	0	0	3	20	129	203	407	465	271	220	493	735	751	649	549	281	213	119	64	7	0	0	232.5	750.9
4-Jul	0	0	0	0	6	21	208	337	260	397	666	718	776	767	727	657	563	304	228	119	71	8	0	0	284.7	775.7
5-Jul	0	0	0	0	6	26	180	309	386	568	666	728	762	758	715	642	539	299	202	112	65	7	0	0	290.5	761.7
6-Jul	0	0	0	0	4	21	173	287	375	553	652	713	727	742	703	630	518	304	208	112	43	4	0	0	282.2	742.4
7-Jul	0	0	0	0	5	23	158	280	355	536	630	697	727	729	702	219	46	18	27	40	6	0	0	0	216.5	728.6
8-Jul	0	0	0	0	3	22	156	277	376	555	664	722	771	718	708	668	434	422	298	187	70	4	0	0	293.9	771.5
9-Jul	0	0	0	0	4	18	64	138	332	391	285	363	395	570	647	569	454	333	65	35	11	3	0	0	194.8	647.3
10-Jul	0	0	0	0	2	21	46	240	308	513	652	662	583	626	668	458	447	178	277	157	100	17	0	0	248.2	667.6
11-Jul	0	0	0	0	1	8	42	105	140	263	623	702	745	723	591	674	554	440	279	158	60	7	0	0	254.8	745.0
12-Jul	0	0	0	0	2	21	52	106	208	453	573	606	544	444	333	438	477	340	181	91	33	4	0	0	204.4	606.3
13-Jul	0	0	0	0	2	23	112	68	136	147	235	488	423	554	182	374	265	347	257	138	50	6	0	0	158.5	553.9
14-Jul	0	0	0	0	2	25	118	202	318	484	534	674	674	540	693	499	332	202	145	130	23	2	0	0	233.1	692.7
15-Jul	0	0	0	0	1	22	54	126	193	249	435	659	555	576	565	510	422	318	160	26	9	0	0	0	203.5	658.9
16-Jul	0	0	0	0	1	15	53	132	213	346	466	517	674	675	571	456	501	435	92	25	2	0	0	0	215.6	674.7
17-Jul	0	0	0	0	0	4	15	48	160	277	372	492	402	293	323	225	243	109	67	65	13	1	0	0	129.5	491.7
18-Jul	0	0	0	0	0	6	19	48	68	105	103	187	399	552	546	243	230	310	262	137	42	5	0	0	135.9	551.9
19-Jul	0	0	0	0	1	24	106	198	318	457	553	609	649	637	606	533	443	323	219	118	42	4	0	0	243.3	648.6
20-Jul	0	0	0	0	2	38	118	150	279	286	446	272	259	142	200	201	236	86	22	42	29	1	0	0	117.1	445.5
21-Jul	0	0	0	0	1	16	52	164	345	489	594	658	700	649	562	537	448	185	200	112	27	2	0	0	239.2	699.8
22-Jul	0	0	0	0	1	19	141	224	388	524	612	389	409	358	504	375	230	234	266	143	35	2	0	0	202.3	611.8
23-Jul	0	0	0	0	1	11	161	241	399	536	637	707	652	476	239	283	143	214	69	22	44	2	0	0	201.6	706.8
24-Jul	0	0	0	0	0	10	19	72	231	303	480	515	487	630	532	567	404	382	248	127	39	3	0	0	210.4	630.3
25-Jul	0	0	0	0	1	17	134	212	380	511	614	686	728	728	694	631	533	373	270	130	34	2	0	0	278.2	728.5
26-Jul	0	0	0	0	0	20	132	209	361	484	559	642	657	596	435	485	342	128	89	66	11	1	0	0	217.4	657.2
27-Jul	0	0	0	0	0	14	76	111	147	131	38	80	419	710	674	449	477	313	207	121	26	2	0	0	166.5	709.5
28-Jul	0	0	0	0	1	15	136	215	383	487	571	425	407	645	491	536	444	388	266	117	20	2	0	0	231.2	644.8
29-Jul	0	0	0	0	1	19	138	225	309	346	477	498	738	573	466	395	261	305	136	40	12	0	0	0	205.9	738.4
30-Jul	0	0	0	0	0	10	47	144	264	203	203	391	705	713	659	478	433	237	157	58	22	2	0	0	196.9	713.1
31-Jul	0	0	0	0	0	8	47	131	332	506	601	670	705	707	678	607	506	386	258	100	7	0	0	0	260.5	707.5
																								Diurnal Average		
																								Diurnal Maximum		





Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - July 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	6	4	5	7	1	1	3	4	5	7	5	4	8	5	3	3	5	2	7	11	7	5	2	3	3.0	11.0
Dir	191	200	230	261	221	216	216	277	245	239	226	217	156	155	188	246	239	242	110	135	194	321	260	196	206.3	134.7
2 Spd	6	3	3	4	3	7	9	5	4	10	13	13	13	11	9	6	5	7	9	7	2	6	5	8	4.9	13.1
Dir	227	284	274	267	235	264	277	280	272	259	265	271	276	278	246	233	154	116	283	311	266	162	162	152	255.4	276.3
3 Spd	6	6	5	7	10	10	15	12	19	23	21	17	20	28	29	33	31	28	31	28	20	14	11	10	17.6	33.2
Dir	169	207	265	274	251	258	253	234	247	252	251	221	234	245	246	253	248	247	246	245	244	234	227	227	244.1	252.9
4 Spd	9	8	7	8	6	6	8	12	15	15	19	26	22	22	22	21	21	22	20	19	12	11	7	7	13.7	25.8
Dir	222	222	220	230	226	232	234	230	229	236	244	254	244	241	252	253	268	277	276	281	276	252	249	244	250.3	254.3
5 Spd	6	4	3	2	3	3	6	5	5	5	4	3	5	5	1	2	4	4	5	7	7	5	5	6	0.8	6.8
Dir	236	245	299	297	311	239	261	256	252	263	264	272	299	299	285	113	85	68	67	77	84	53	51	62	312.5	77.3
6 Spd	3	2	3	4	3	3	2	5	5	4	4	5	5	4	4	5	6	8	8	8	8	6	6	6	3.4	7.9
Dir	88	291	321	322	304	299	319	31	54	47	61	62	34	36	33	69	72	89	89	100	79	75	70	75	57.0	88.9
7 Spd	4	4	2	1	2	2	3	9	10	9	12	14	14	16	M	14	11	6	0	15	16	25	20	3	3.4	25.3
Dir	108	98	52	342	325	336	67	76	82	88	79	79	83	90	M	86	71	88	263	315	281	269	334	247	50.3	268.7
8 Spd	11	8	3	3	3	2	3	6	6	6	9	14	15	14	11	10	9	11	7	2	1	3	3	3	4.6	15.5
Dir	182	199	258	174	163	180	217	274	258	279	249	250	256	268	281	278	309	314	306	293	24	95	95	79	260.4	255.7
9 Spd	2	1	2	3	5	5	5	4	6	5	5	8	6	7	8	7	6	6	17	19	11	9	8	8	3.4	19.0
Dir	116	15	100	104	70	95	95	88	88	185	255	314	318	295	313	320	333	59	308	312	287	284	264	278	311.5	311.9
10 Spd	6	11	8	7	6	8	8	7	7	18	20	18	18	14	14	14	10	10	10	9	9	6	5	4	9.1	19.9
Dir	254	254	254	239	217	237	216	190	227	253	268	256	270	272	273	265	268	238	206	204	192	167	160	166	244.2	268.0
11 Spd	4	4	4	6	7	6	7	7	5	3	3	4	6	4	4	6	3	10	12	10	10	9	8	9	2.0	11.7
Dir	203	261	228	250	255	275	274	267	258	244	234	246	158	214	189	172	205	109	100	110	105	94	87	83	165.0	100.3
12 Spd	9	9	8	6	6	6	6	7	8	8	7	6	4	3	3	6	2	6	7	4	6	6	3	2	3.4	9.2
Dir	86	88	86	83	85	85	81	82	94	96	108	124	138	124	165	240	224	274	260	280	29	92	89	61	95.2	86.0
13 Spd	2	3	3	3	4	3	3	3	9	8	3	3	3	4	3	10	12	11	10	11	8	7	4	4	3.1	12.4
Dir	339	52	20	321	24	154	60	42	64	108	77	186	267	261	251	295	305	311	305	304	306	308	322	309	320.5	304.6
14 Spd	3	3	3	3	3	1	2	1	6	8	11	12	7	3	3	4	7	8	7	7	6	5	5	5	3.7	11.5
Dir	321	322	319	302	316	259	316	175	108	87	81	85	80	74	344	5	35	41	37	30	33	41	32	64	46.8	84.7
15 Spd	6	7	7	8	3	3	6	5	2	3	3	5	3	3	4	4	7	9	1	12	16	8	5	5	3.0	16.3
Dir	60	72	78	85	151	339	337	348	308	273	289	313	322	44	358	21	92	108	30	335	319	326	5	305	5.1	319.0
16 Spd	4	5	6	8	11	16	9	6	8	13	21	23	28	28	25	26	30	35	27	17	10	8	15	15	16.2	35.5
Dir	256	220	231	242	256	260	257	222	239	243	249	251	251	251	248	249	248	257	260	245	268	250	267	267	251.8	256.8
17 Spd	13	16	15	13	17	16	17	16	13	15	16	15	15	17	16	5	5	6	6	6	6	6	5	5	7.6	16.9
Dir	266	256	262	263	260	260	277	287	276	284	278	277	273	276	294	8	61	84	102	100	109	111	116	130	272.3	277.2
18 Spd	2	5	4	4	4	4	6	7	6	6	6	5	1	2	3	1	1	3	1	4	6	5	4	3	3.0	7.3
Dir	98	105	115	101	69	36	34	35	52	75	100	143	179	184	141	108	110	113	161	133	141	153	141	133	100.6	35.4
19 Spd	4	3	1	1	5	5	4	1	8	9	13	15	17	16	12	8	5	9	7	8	6	6	2	2	5.8	17.3
Dir	133	145	210	251	254	268	269	163	241	254	259	255	285	288	287	313	299	272	232	229	232	242	234	323	263.2	285.2
20 Spd	2	2	2	2	2	2	4	3	4	3	4	7	3	4	7	8	7	6	5	7	8	7	8	10	3.8	9.6
Dir	258	324	157	326	321	298	312	283	279	250	255	297	266	174	175	204	231	233	227	229	237	236	242	254	243.1	253.7
21 Spd	7	3	6	8	6	5	7	6	10	13	12	12	13	15	13	11	14	16	15	15	15	10	9	3	9.7	16.1
Dir	300	257	262	286	284	276	263	251	258	276	284	292	297	294	290	270	263	258	257	255	259	256	246	210	270.6	257.7
22 Spd	4	4	2	2	1	4	3	5	6	8	11	12	14	12	12	14	11	11	13	14	8	7	9	14	7.6	14.4
Dir	177	190	163	204	230	157	167	214	200	211	240	240	246	251	251	260	272	262	247	258	234	240	257	261	242.5	261.2

Hourly Averages

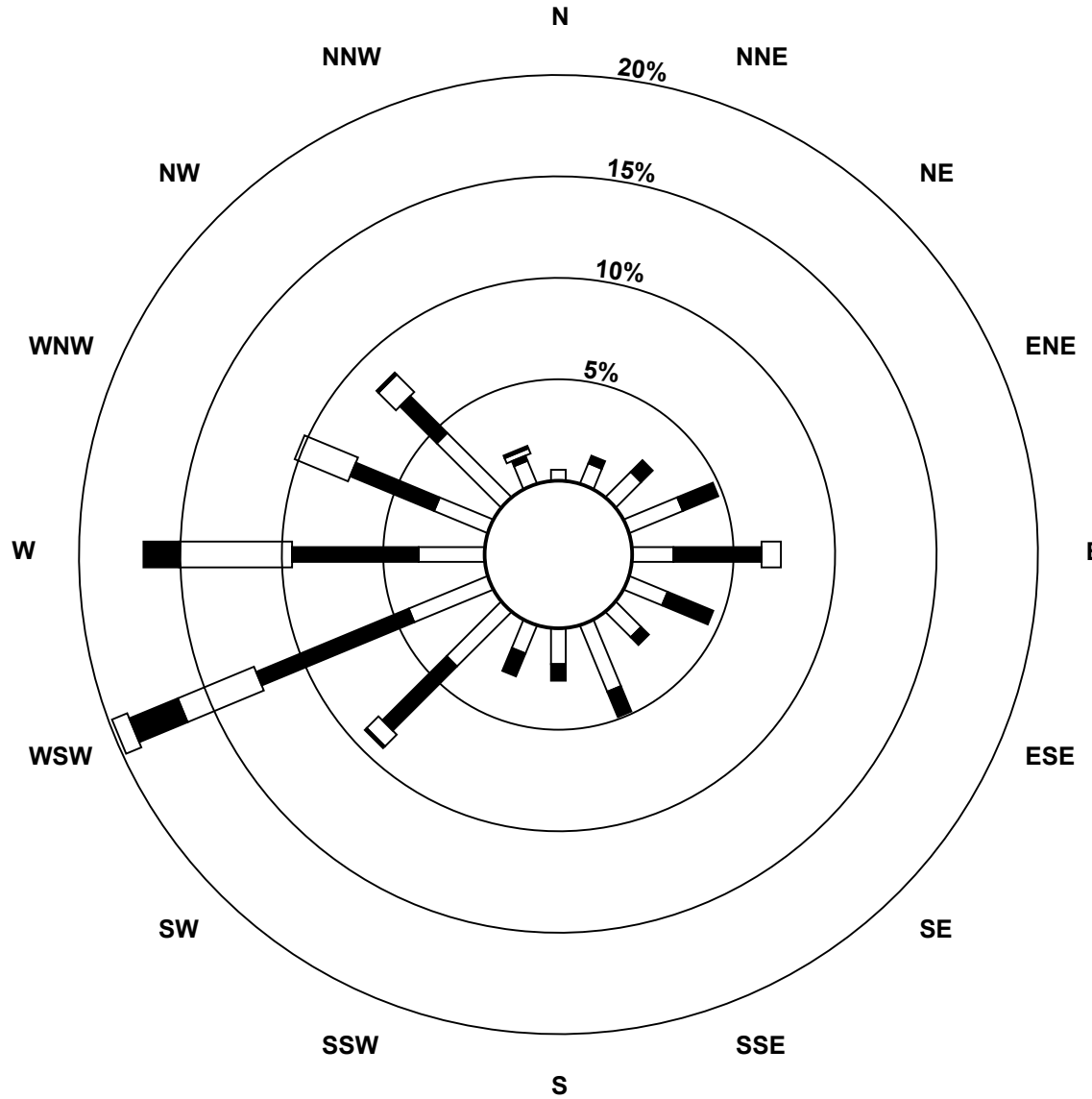
Wind Speed (km/h)
Wind Direction (deg)
Henry Pirkner - July 2017

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	10	11	10	8	7	8	13	14	18	19	20	20	14	15	15	16	5	20	5	8	12	9	10	11.3	20.2	
Dir	224	245	254	261	263	242	249	241	248	271	254	252	269	241	248	254	311	318	305	324	238	285	276	266	263.0	252.3	
24 Spd	10	10	10	11	11	11	10	14	15	15	14	13	13	12	11	11	11	11	11	8	6	4	6	7	10.0	15.2	
Dir	253	253	273	288	279	279	281	292	302	301	304	298	300	291	287	286	294	288	299	298	271	232	227	231	285.0	302.3	
25 Spd	6	6	6	7	6	6	6	9	9	11	10	9	7	10	7	6	6	3	4	2	6	6	4	2	4.6	10.9	
Dir	231	252	279	270	285	285	276	263	250	249	254	278	247	238	253	253	230	231	318	72	110	108	116	140	253.3	249.1	
26 Spd	1	2	1	1	3	2	2	2	4	2	5	8	9	9	8	7	9	6	3	3	3	12	8	2	1.5	12.2	
Dir	61	63	131	307	282	292	162	210	232	154	115	134	151	148	163	151	120	95	55	88	319	315	314	280	142.0	315.4	
27 Spd	1	5	4	4	5	4	3	3	4	4	4	6	4	4	5	3	5	11	8	18	15	11	12	8	7	3.5	17.6
Dir	175	325	343	318	322	318	293	236	248	220	217	142	96	129	164	154	152	214	283	290	284	271	278	273	263.1	283.3	
28 Spd	5	6	4	5	4	3	7	7	9	17	16	14	12	11	13	15	16	15	15	11	7	7	5	5	9.2	17.2	
Dir	241	241	267	230	252	312	258	264	250	262	257	256	258	234	261	268	270	273	280	285	278	254	230	238	260.9	261.6	
29 Spd	4	3	2	1	2	4	3	4	4	4	4	4	4	3	4	6	6	4	6	4	4	7	4	5	2.2	6.9	
Dir	238	245	277	339	148	163	225	230	215	224	203	157	168	168	121	105	95	54	102	96	76	132	151	192	152.9	132.0	
30 Spd	6	1	3	5	6	5	4	6	8	9	13	23	25	26	21	20	23	22	19	11	7	11	11	10	11.7	25.9	
Dir	308	16	173	287	297	297	282	233	242	263	252	263	256	261	260	264	267	270	269	276	298	298	291	288	268.8	261.3	
31 Spd	9	8	4	2	3	4	7	7	8	7	9	12	11	10	8	7	6	6	5	6	2	5	12	15	5.9	14.7	
Dir	285	256	248	240	208	224	257	244	265	268	298	296	297	315	308	285	283	296	287	300	59	108	325	330	289.7	330.0	
Spd	2.6	2.6	2.5	3.1	3.0	3.4	3.9	3.5	4.2	5.9	6.8	7.1	7.3	7.3	7.5	6.4	5.4	4.8	6.2	4.9	3.6	3.3	2.6	2.6	Diurnal Average		
Dir	229.1	239.6	255.9	267.4	264.8	261.9	265.9	257.5	249.8	254.6	257.1	257.5	259.6	256.7	260.1	260.4	266.8	265.7	273.2	276.9	265.8	260.7	276.5	256.1	Diurnal Maximum		
Spd	12.9	15.9	15.3	13.4	16.6	16.0	16.9	15.9	18.6	23.1	21.1	25.8	27.9	28.4	29.2	33.2	31.2	35.5	31.3	28.0	20.4	25.3	20.4	15.1	Diurnal Maximum		
Dir	266.3	255.8	261.6	263.1	259.7	259.9	277.2	287.1	247.2	252.4	251.1	254.3	251.4	251.0	246.1	252.9	248.4	256.8	245.5	245.4	243.6	268.7	334.1	266.8	Diurnal Maximum		
Maximum Speed Value: 35 km/h on Jul 16 18:00		Minimum Speed Value: 0 km/h on Jul 7 19:00										Hours in Service: 744															
Maximum Daily Speed Average: 17.6 km/h on Jul 3		Minimum Daily Speed Average: 0.8 km/h on Jul 29										Hours of Data: 743															
Maximum Diurnal Speed Average: 7.5 km/h at hour 15		Minimum Diurnal Speed Average: 2.5 km/h at hour 3										Hours of Missing Data: 1															
Monthly Average Velocity: 4.55 km/h 260.56 deg		Speed Percentiles: P ₁ = 1.0 P ₁₀ = 2.5 Q ₁ = 4.0 Median = 6.4 Q ₃ = 10.7 P ₉₀ = 15.4 P ₉₉ = 27.8										Percent Operational Time: 99.9															
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	13	2	0	0	0	0	15																				
NorthEast	24	20	0	0	0	0	44																				
East	31	56	8	0	0	0	95																				
SouthEast	32	15	0	0	0	0	47																				
South	30	15	0	0	0	0	45																				
SouthWest	48	64	16	5	5	0	138																				
West	44	98	85	25	5	0	257																				
NorthWest	38	41	20	3	0	0	102																				
Total	260	311	129	33	10	0	743																				

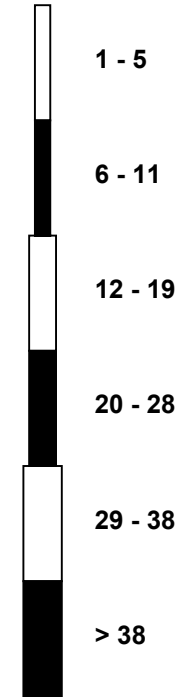
Wind Rose

Wind Speed (WS) (km/h)

Henry Pirker - July 2017



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Henry Pirker - July 2017

Maximum Speed: 36 km/h on Jul 16 18:00	Maximum Daily Speed Average: 18.4 km/h on Jul 3	Hours in Service: 744
Minimum Speed: 2 km/h on Jul 1 06:00	Minimum Daily Speed Average: 4.7 km/h on Jul 18	Hours of Data: 743
Maximum Diurnal Speed Average: 11.9 km/h at hour 13	Minimum Diurnal Speed Average: 5.2 km/h at hour 3	Hours of Missing Data: 1
Monthly Average Speed: 8.68 km/h	Percentiles: P ₁ = 1.8 P ₁₀ = 3.3 Q ₁ = 4.8 Median = 7.0 Q ₃ = 11.1 P ₉₀ = 15.7 P ₉₉ = 28.1	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-Jul	6	4	5	7	2	2	4	4	5	7	5	4	8	6	5	5	6	3	8	11	10	6	2	4	5.3	11.4
2-Jul	6	3	3	5	4	7	9	6	5	10	14	14	14	12	10	7	8	8	15	7	4	7	6	8	8.0	14.9
3-Jul	6	6	6	8	10	10	15	12	19	23	21	17	20	29	30	34	32	29	32	28	21	14	11	10	18.4	34.0
4-Jul	9	8	8	8	6	7	8	13	15	16	20	26	23	23	23	22	21	22	21	19	13	11	7	7	14.7	26.3
5-Jul	6	5	4	3	4	3	6	6	5	5	5	6	7	6	4	5	6	5	6	7	7	5	6	6	5.3	7.1
6-Jul	4	3	4	4	3	3	3	6	6	5	5	6	6	5	5	6	6	7	8	8	6	6	7	6	5.3	8.3
7-Jul	5	4	2	2	2	2	4	9	10	9	13	14	15	17	M	14	11	7	11	15	20	27	21	15	10.7	26.6
8-Jul	11	8	4	3	3	2	4	6	6	7	10	15	16	15	11	11	10	11	7	3	3	3	3	3	7.3	16.2
9-Jul	3	2	2	3	5	5	5	4	6	7	6	8	7	8	9	8	7	7	21	19	11	9	8	8	7.4	20.6
10-Jul	7	11	8	7	6	8	8	8	9	18	20	19	18	15	14	15	15	11	11	9	9	6	5	4	10.9	20.4
11-Jul	4	4	5	6	7	7	7	7	6	3	3	4	7	6	6	7	5	11	12	11	10	9	9	10	6.9	12.1
12-Jul	9	9	8	6	6	6	7	8	8	9	8	7	6	5	4	6	4	7	7	5	7	7	4	3	6.5	9.3
13-Jul	3	4	3	4	4	4	4	6	9	9	4	5	5	5	5	11	13	11	11	11	9	7	4	4	6.4	12.8
14-Jul	3	3	3	3	3	2	2	3	6	9	11	12	8	5	5	6	8	8	8	8	6	5	5	6	5.8	12.0
15-Jul	6	7	8	8	3	3	6	5	3	3	4	6	4	5	5	6	8	10	6	12	17	9	5	6	6.5	17.3
16-Jul	5	5	6	8	11	16	10	6	9	14	22	24	28	29	25	26	30	36	27	17	11	9	15	15	16.9	35.9
17-Jul	13	16	15	14	17	16	17	16	13	15	17	15	16	17	16	7	6	7	7	7	6	6	5	5	12.0	17.2
18-Jul	3	5	4	4	4	5	7	8	7	7	7	5	3	3	5	3	3	4	3	4	6	5	4	3	4.7	7.5
19-Jul	4	3	2	2	5	6	4	2	8	10	14	15	18	16	12	8	6	9	7	8	6	6	2	2	7.3	17.7
20-Jul	2	2	2	2	2	2	4	4	4	4	5	8	3	5	8	8	8	7	5	7	8	8	8	10	5.2	10.4
21-Jul	7	4	6	8	6	5	7	6	10	13	13	12	13	16	13	11	15	16	15	15	15	10	9	3	10.4	16.4
22-Jul	4	4	2	2	3	4	3	5	6	8	12	13	14	13	13	14	12	12	14	14	8	8	9	15	8.8	14.5
23-Jul	10	10	12	11	8	7	8	13	14	19	19	21	20	15	16	16	16	7	20	7	8	12	10	10	12.9	20.9
24-Jul	10	10	10	11	11	11	11	14	15	15	15	13	14	13	12	11	11	12	11	8	6	4	6	7	10.9	15.3
25-Jul	6	6	6	7	6	6	6	9	10	11	10	9	8	11	8	8	7	6	5	4	6	6	4	3	7.1	11.3
26-Jul	2	2	3	2	3	2	2	3	4	3	6	8	10	10	9	8	9	7	4	3	4	12	8	2	5.3	12.4
27-Jul	3	6	4	4	5	4	4	3	4	5	6	5	4	6	5	6	11	12	18	15	11	12	8	7	6.9	17.9
28-Jul	5	6	5	5	5	4	7	8	10	18	16	15	13	12	14	15	16	15	15	11	7	7	5	6	10.0	17.6
29-Jul	4	4	3	2	3	4	3	5	4	4	4	4	5	5	5	7	6	5	7	5	4	7	6	7	4.7	7.2
30-Jul	6	2	4	5	6	5	4	6	8	10	13	24	25	26	21	21	24	22	19	12	8	11	12	11	12.8	26.4
31-Jul	10	8	4	4	3	4	8	7	8	7	10	12	12	11	9	8	7	7	6	6	4	5	15	15	7.9	14.9
	5.9	5.6	5.2	5.4	5.3	5.6	6.4	6.9	8.2	9.8	10.9	11.8	11.9	11.9	10.9	11.0	11.1	11.0	11.8	10.2	8.7	8.2	7.4	7.1	Diurnal Average	
	13.1	16.0	15.4	13.6	16.7	16.5	17.2	16.1	18.8	23.5	21.5	26.3	28.3	28.9	29.9	34.0	31.6	35.9	31.6	28.3	20.6	26.6	20.7	15.4	Diurnal Maximum	

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

Hourly Standard Deviations

Wind Direction (WD) - deg

Henry Pirker - July 2017

Maximum Value: 96.1 deg on Jul 7 19:00																								Hours in Service: 744	
Minimum Value: 5.6 deg on Jul 21 04:00																								Hours of Data: 743	
Percentiles: P ₁ = 6.4 P ₁₀ = 9.6 Q ₁ = 12.7 Median = 18.2 Q ₃ = 32.8 P ₉₀ = 52.9 P ₉₉ = 84.7																								Hours of Missing Data: 1	
																								Hours of Calibration: 0	
																								Percent Operational Time: 99.9	
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-Jul	18	15	14	17	60	63	38	15	25	15	24	42	18	21	61	64	33	64	21	16	43	22	40	24	63.9
2-Jul	10	51	50	36	38	16	14	28	47	16	19	18	24	23	30	32	53	18	86	13	56	20	28	10	86.3
3-Jul	18	16	30	29	10	11	9	16	9	10	11	12	12	10	12	13	9	10	9	8	8	10	8	9	30.3
4-Jul	11	10	9	11	12	17	12	15	11	11	17	12	16	13	14	13	15	11	8	7	11	8	27	15	27.2
5-Jul	14	41	49	46	36	39	18	26	25	27	47	60	51	48	85	85	59	49	34	20	17	13	13	11	85.3
6-Jul	36	48	44	19	19	12	37	18	27	30	43	34	39	53	50	53	48	33	20	18	13	8	9	8	53.0
7-Jul	18	13	31	62	36	20	76	12	15	19	13	13	17	15	M	10	10	20	96	13	39	19	9	85	96.1
8-Jul	13	15	40	35	14	19	41	16	29	24	23	18	18	18	21	25	18	13	11	33	77	13	20	22	76.7
9-Jul	53	57	17	55	12	29	17	17	22	43	32	20	38	34	29	32	34	45	59	7	7	9	12	10	59.1
10-Jul	29	9	14	14	15	12	16	17	28	12	12	16	15	18	18	14	15	18	15	19	13	12	10	13	28.7
11-Jul	36	24	17	13	11	13	16	12	18	41	38	29	51	54	61	42	69	26	13	12	10	10	10	6	69.2
12-Jul	7	10	8	10	13	13	11	12	16	18	32	36	61	58	65	32	56	30	25	25	37	22	57	51	65.5
13-Jul	56	40	29	34	28	38	49	50	23	26	66	63	47	52	77	35	13	14	12	8	6	6	11	18	77.5
14-Jul	25	18	19	25	29	68	48	78	24	17	15	17	28	77	63	43	24	21	16	17	15	16	14	32	77.6
15-Jul	16	13	13	9	36	27	10	16	62	42	42	38	59	54	48	45	33	16	87	13	24	33	22	21	86.5
16-Jul	42	16	11	11	9	15	26	20	20	15	13	11	10	11	10	13	11	9	10	10	23	18	8	11	42.2
17-Jul	9	8	7	10	8	8	10	9	9	8	10	12	14	11	10	37	21	25	22	14	16	11	12	11	37.3
18-Jul	46	13	19	14	17	19	15	15	19	18	17	30	71	65	63	85	92	46	76	28	14	6	9	18	92.2
19-Jul	9	14	44	42	18	34	38	63	24	19	16	14	13	10	16	19	36	18	20	12	10	18	50	56	63.0
20-Jul	29	57	32	58	46	31	21	24	27	38	42	16	27	57	21	12	22	22	14	10	12	14	14	29	58.0
21-Jul	15	45	21	6	10	8	11	18	12	13	14	14	14	14	16	19	19	11	11	9	9	10	11	33	45.0
22-Jul	30	23	54	35	72	20	34	16	14	16	17	14	16	21	17	14	20	19	20	13	12	14	12	9	72.0
23-Jul	13	14	11	15	20	16	19	14	16	13	13	15	16	15	19	21	18	55	17	57	21	6	9	9	57.5
24-Jul	10	10	11	7	10	12	13	7	8	10	14	12	15	19	17	13	16	13	9	9	14	14	11	10	19.1
25-Jul	15	26	12	9	8	6	15	11	12	16	19	21	32	22	37	45	34	67	52	70	13	11	10	46	69.5
26-Jul	56	23	72	56	26	34	38	30	26	57	27	21	22	28	21	26	18	18	16	27	64	10	15	54	71.6
27-Jul	67	25	24	20	13	29	32	30	34	25	14	44	25	38	58	50	17	49	10	6	8	8	9	14	67.5
28-Jul	19	14	41	31	47	60	25	22	21	12	13	22	18	20	18	19	14	16	11	7	8	11	14	19	59.9
29-Jul	34	53	52	60	32	18	32	21	23	26	37	35	47	61	56	32	29	27	29	20	22	19	61	42	61.5
30-Jul	29	64	51	17	18	23	20	18	18	17	10	12	13	13	13	14	14	11	12	12	12	8	10	9	64.3
31-Jul	8	22	38	76	41	31	16	18	20	21	30	16	24	26	24	36	35	36	27	15	66	16	65	8	75.7
67.5	64.3	71.6	75.7	72.0	67.6	75.5	77.6	62.4	56.6	66.2	62.5	70.9	76.8	85.3	84.8	92.2	66.7	96.1	69.5	76.7	33.0	65.3	84.7		
M - Maintenance																									

PAZA

Evergreen Park Station

Monthly Summary Tables, Graphs and
Roses

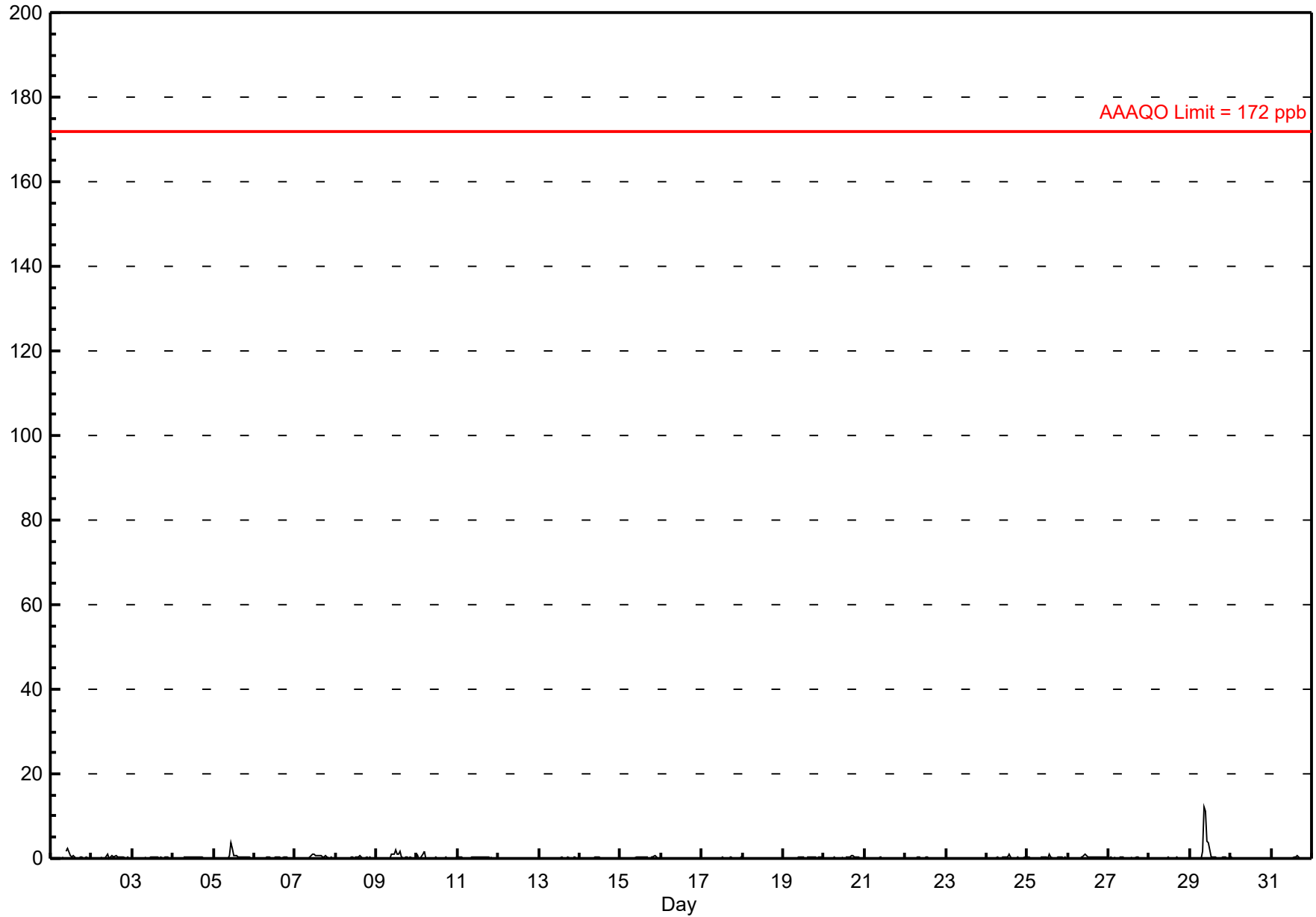
Hourly Averages

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 12.3 ppb on Jul 29 09:00	Maximum Daily Average: 1.6 ppb on Jul 29
Minimum Value: 0 ppb on Jul 1 05:00	Hours of Data: 709
Maximum Diurnal Average: 0.7 ppb at hour 10	Hours of Missing Data: 35
Monthly Average: 0.22 ppb	Hours of Calibration: 35
Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.4 P ₉₉ = 2.2	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-Jul	0	0	0	0	0	0	0	0	A	2	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0.4	2.4																						
2-Jul	0	0	0	0	0	0	0	A	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0.3	0.9																						
3-Jul	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	0.2																							
4-Jul	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	0.4																							
5-Jul	0	0	0	0	A	0	0	0	0	1	4	2	1	1	0	0	0	0	0	0	0	0	0	0.5	3.8																							
6-Jul	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																							
7-Jul	0	0	A	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0.3	0.9																							
8-Jul	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.2	0.7																							
9-Jul	A	0	0	0	0	0	0	0	0	1	1	2	1	1	2	0	0	0	0	0	0	0	0	0.4	1.9																							
10-Jul	1	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	1.5																							
11-Jul	0	1	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																							
12-Jul	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																							
13-Jul	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	0.5																							
14-Jul	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	0.3																							
15-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0	0.2	0.5																							
16-Jul	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																							
17-Jul	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																							
18-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.1																							
19-Jul	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	0.3																							
20-Jul	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	1	0	0	0	0	0	0	0.2	0.7																							
21-Jul	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																							
22-Jul	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	0.5																							
23-Jul	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																							
24-Jul	0	0	0	0	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.2	1.0																							
25-Jul	0	0	0	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.2	0.9																							
26-Jul	0	0	0	0	0	0	A	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	1.0																							
27-Jul	0	0	0	0	0	A	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0.2	0.3																							
28-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2																							
29-Jul	0	0	0	A	0	0	0	0	2	12	11	4	4	0	0	0	0	0	0	0	0	0	0	1.6	12.3																							
30-Jul	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	0.2																							
31-Jul	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.1	0.5																							
																								0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.2	0.5	0.7	0.6	0.5	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	Diurnal Average
																								1.2	0.5	0.2	1.0	1.5	0.2	0.4	1.7	12.3	11.2	4.2	3.7	1.1	1.0	1.8	0.6	0.6	0.7	0.5	0.4	0.5	0.4	0.3	0.3	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 Maximums

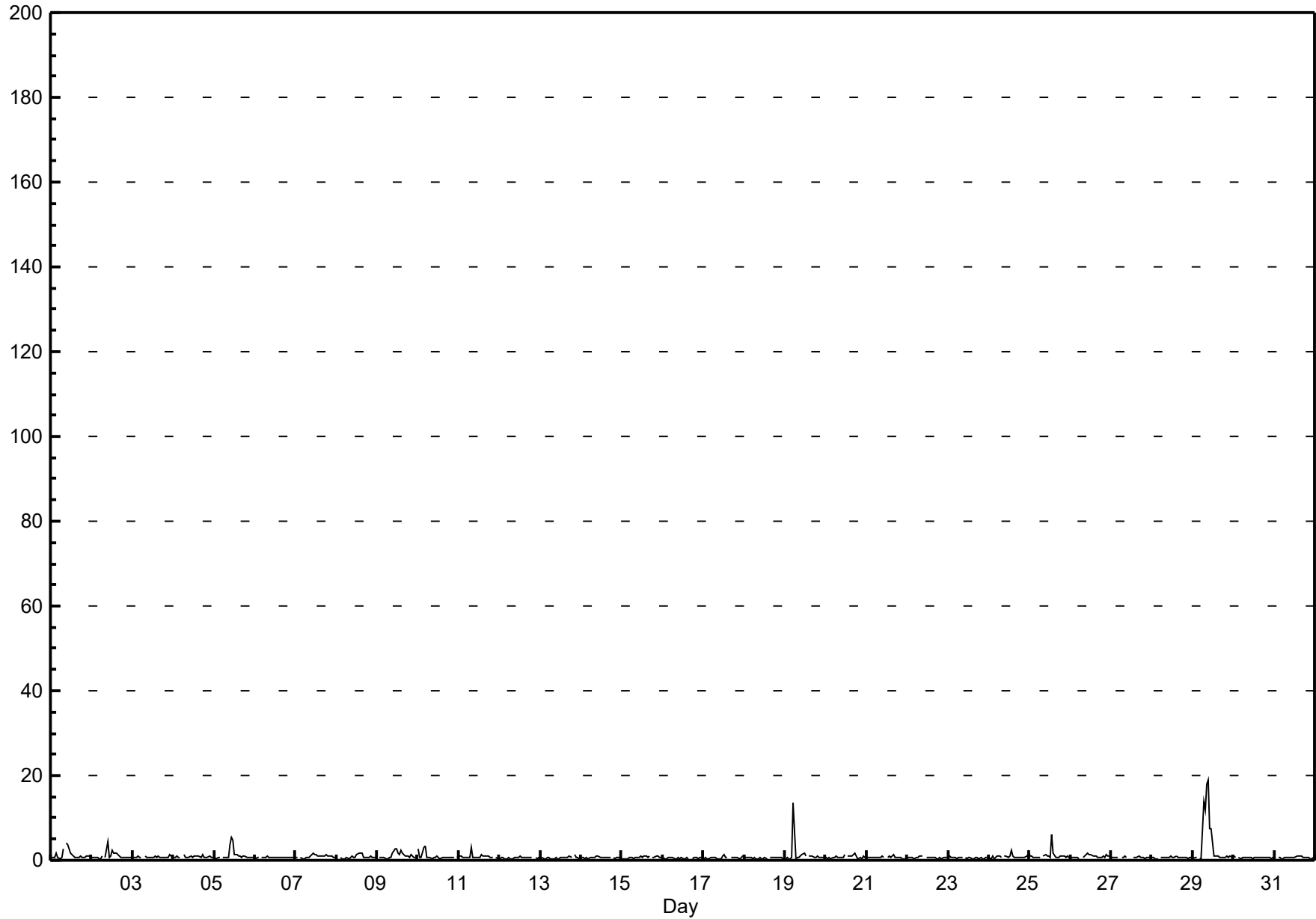
Sulphur Dioxide (SO₂) - ppb

Evergreen Park - July 2017

Maximum Value: 19.1 ppb on Jul 29 10:00		Maximum Daily Average: 4.0 ppb on Jul 29		Hours in Service: 744																							
Minimum Value: 0 ppb on Jul 13 04:00		Minimum Daily Average: 0.5 ppb on Jul 16		Hours of Data: 709																							
Maximum Diurnal Average: 1.8 ppb at hour 10		Minimum Diurnal Average: 0.6 ppb at hour 3		Hours of Missing Data: 35																							
Monthly Average: 0.92 ppb		Percentiles: P ₁ = 0.4 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.7 Q ₃ = 0.9 P ₉₀ = 1.1 P ₉₉ = 7.5		Hours of Calibration: 35																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jul	1	1	1	2	1	0	1	3	A	4	4	2	1	1	1	1	1	1	1	1	1	1	1	1	1.2	4.2	
2-Jul	1	1	1	1	0	0	1	A	1	4	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1.1	4.5	
3-Jul	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.3	
4-Jul	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.4	
5-Jul	1	0	1	1	A	1	1	1	1	4	6	5	1	1	1	1	1	1	1	1	1	1	1	1	1.3	5.6	
6-Jul	0	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	1.1	
7-Jul	1	1	A	1	0	0	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.6	
8-Jul	1	A	1	1	1	0	1	0	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	0.8	1.7	
9-Jul	A	1	1	1	1	0	0	1	1	2	3	3	2	1	2	2	1	1	1	1	1	1	1	1	1.1	2.7	
10-Jul	3	1	1	3	3	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	A	1.0	3.3	
11-Jul	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.9	3.0	
12-Jul	0	1	1	0	0	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.6	0.9	
13-Jul	0	1	0	0	1	1	0	1	0	1	0	0	1	1	1	1	1	1	1	A	1	1	1	0	0.6	1.3	
14-Jul	1	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	1	1	0	0.6	1.1	
15-Jul	0	0	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.7	1.2	
16-Jul	1	0	0	1	1	1	1	0	0	1	0	1	0	1	1	0	A	0	1	1	1	0	1	1	0.5	0.8	
17-Jul	0	1	0	0	1	1	1	1	1	0	0	1	1	1	1	A	1	1	1	1	1	0	1	1	0.6	1.2	
18-Jul	1	1	1	1	1	0	1	0	0	1	0	1	0	1	A	1	1	1	1	1	1	1	1	0	0.6	0.8	
19-Jul	0	1	0	0	1	14	1	1	1	1	2	1	1	A	1	1	1	1	1	1	1	1	1	1	1.3	13.6	
20-Jul	1	0	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	2	1	0	1	0	1	1	0.8	1.6	
21-Jul	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	0	0	0.7	1.2	
22-Jul	1	1	1	1	0	1	1	1	1	1	A	1	1	1	1	1	1	0	0	1	0	1	1	1	0.7	1.1	
23-Jul	1	1	1	1	1	0	1	1	1	1	A	1	0	1	1	0	1	1	0	1	0	1	1	1	0.6	0.9	
24-Jul	1	0	1	0	1	1	1	1	A	1	1	1	1	2	1	1	1	1	1	1	1	1	2	1	0.9	2.3	
25-Jul	1	1	1	1	1	1	1	A	1	1	1	1	1	6	2	1	1	1	1	1	1	1	1	1	1.1	6.0	
26-Jul	1	1	1	1	1	0	A	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.6	
27-Jul	1	1	1	1	1	A	1	1	1	1	C	C	C	1	1	1	1	1	1	1	0	1	1	1	0.7	1.1	
28-Jul	1	1	1	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0.6	1.0	
29-Jul	0	1	1	A	1	0	14	12	18	19	8	8	1	1	1	1	1	1	1	1	1	1	1	1	4.0	19.1	
30-Jul	1	1	A	1	0	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	1	0.6	1.0	
31-Jul	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0.7	1.1	
		0.7	0.6	0.6	0.7	0.7	1.0	1.1	1.2	1.3	1.8	1.3	1.3	0.9	1.1	0.9	0.9	0.8	0.8	0.7	0.7	0.8	0.7	0.7	0.7	Diurnal Average	
		2.8	1.1	1.0	2.9	3.3	13.6	14.0	11.7	18.0	19.1	7.5	7.6	2.3	6.0	2.3	1.6	1.4	1.6	1.4	1.0	1.4	1.3	1.3	1.9	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

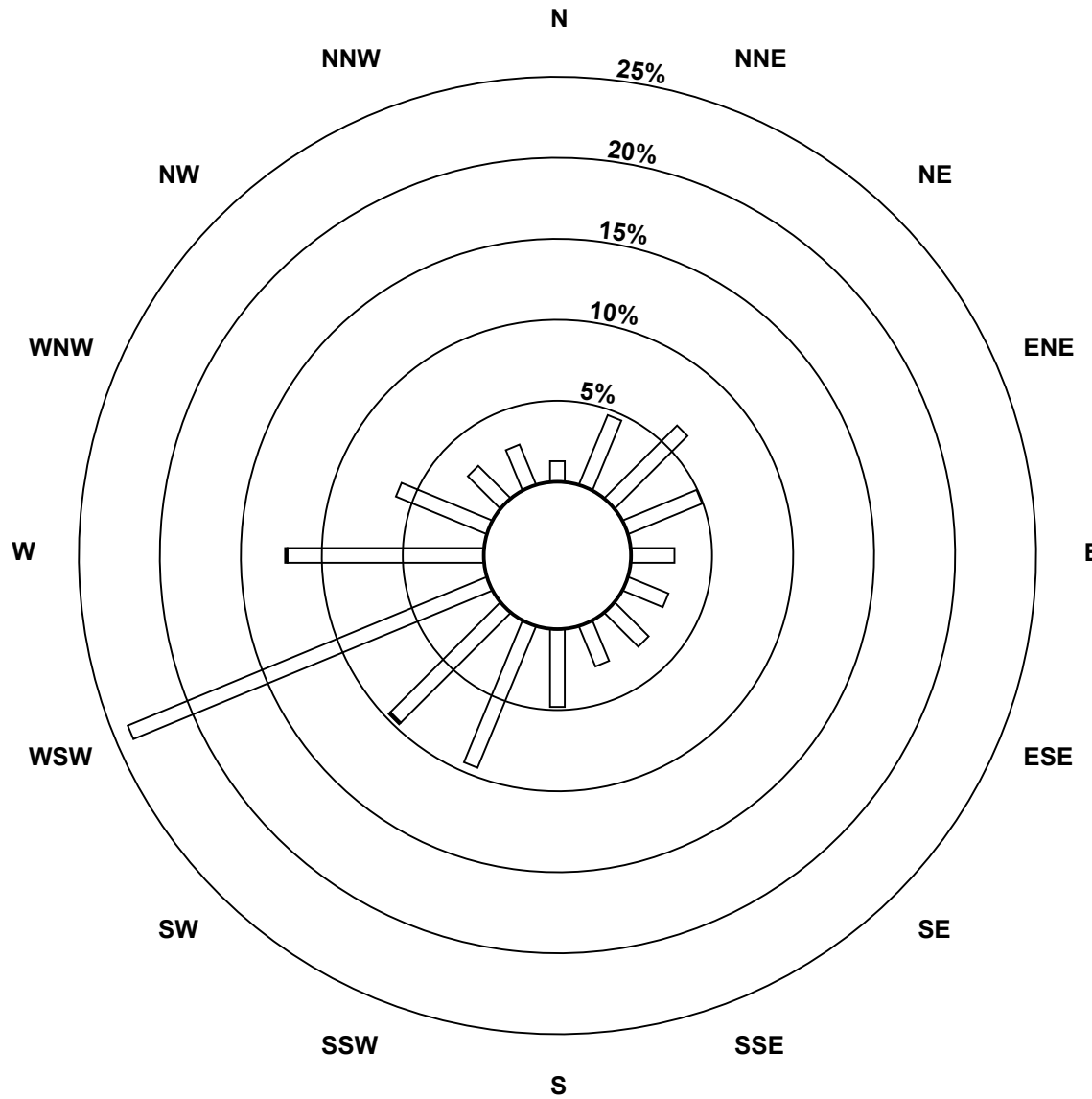
Hourly Maximums

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

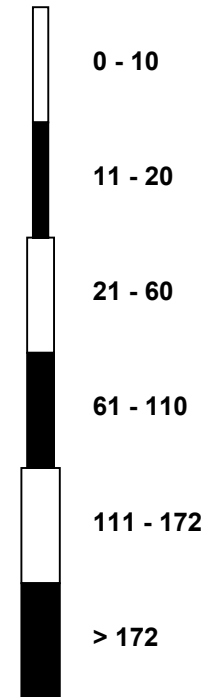


Pollutant Rose

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

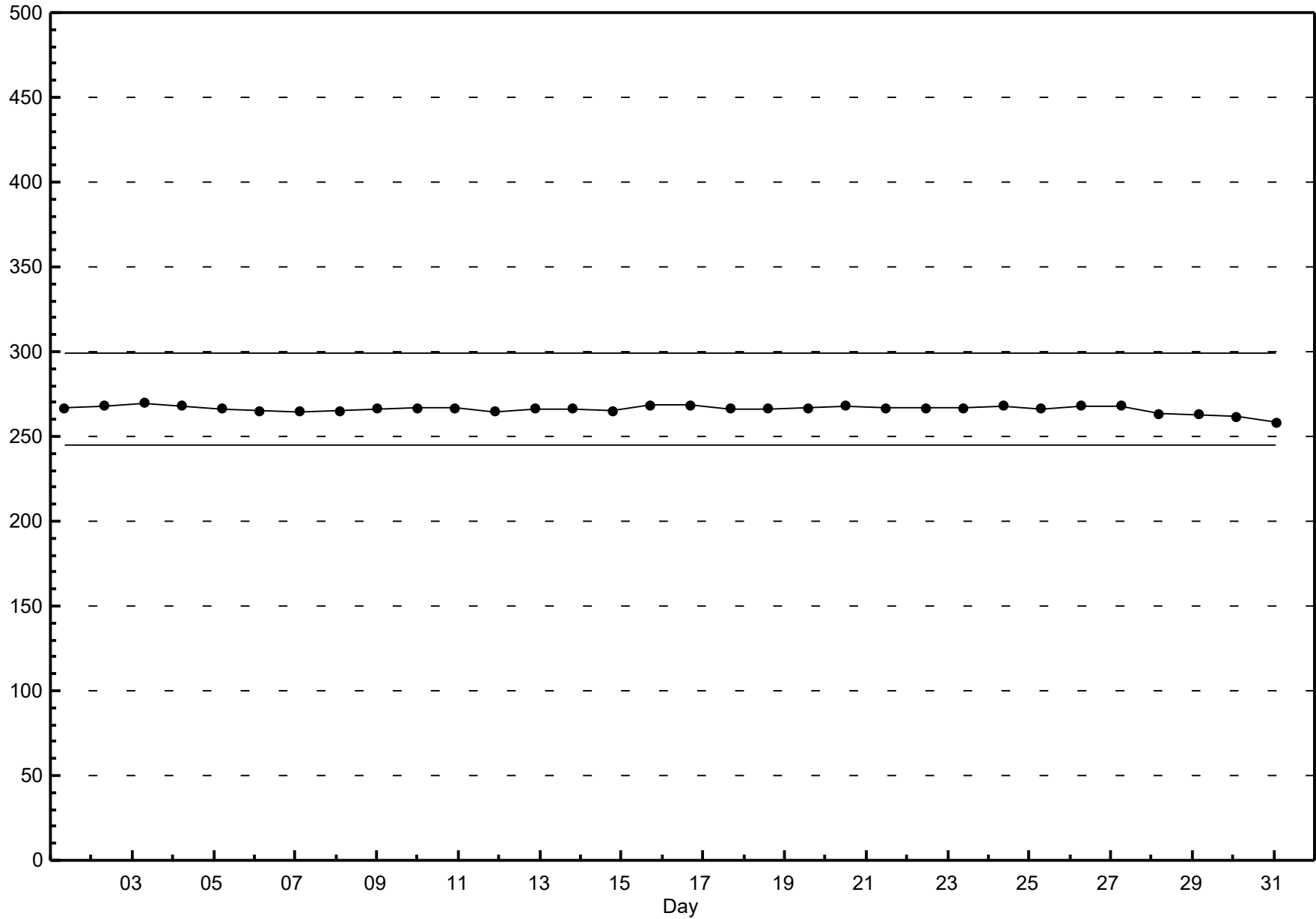


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Evergreen Park - July 2017

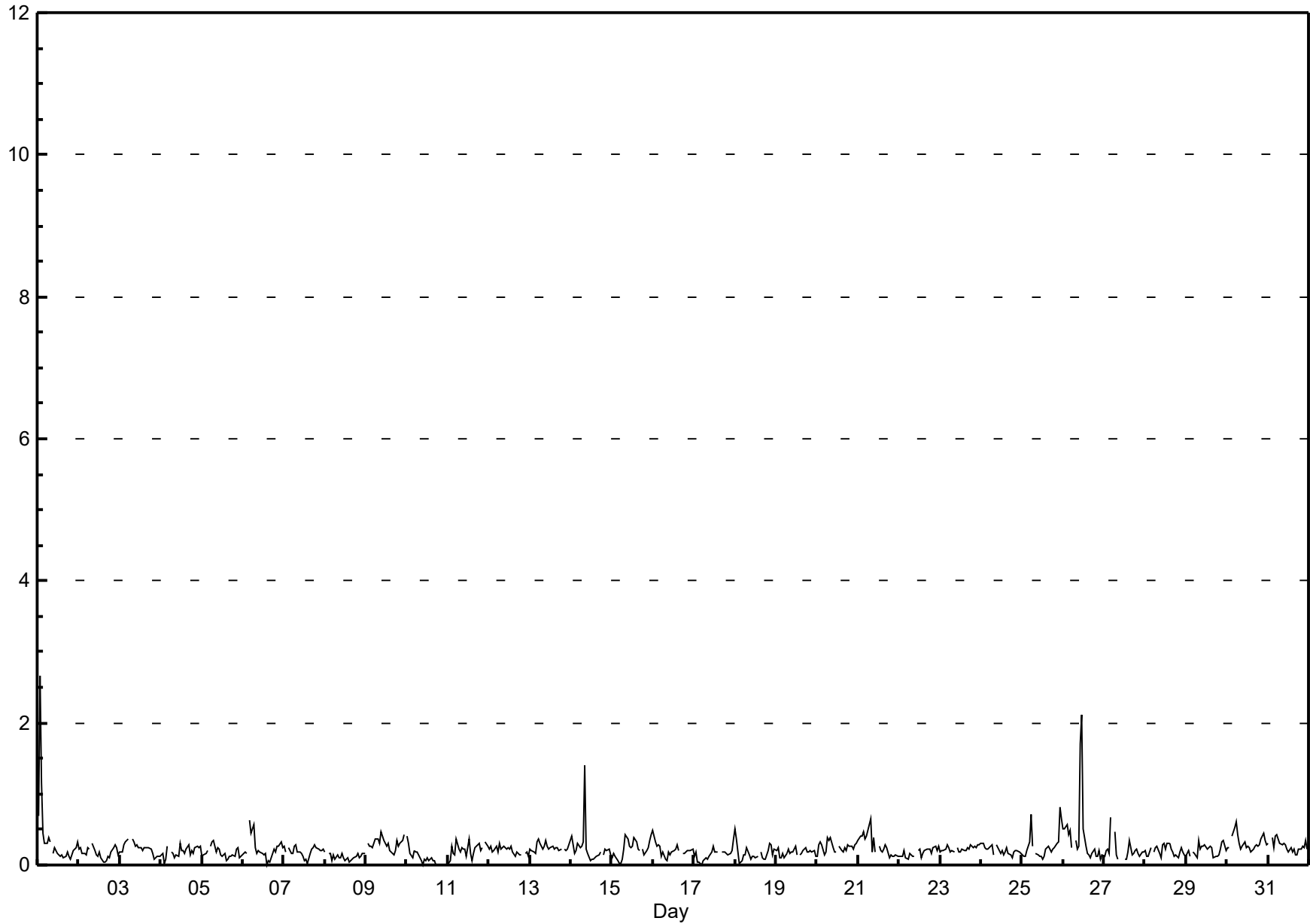


Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - July 2017

Maximum Value: 2.7 ppb on Jul 1 02:00 Minimum Value: 0 ppb on Jul 6 15:00 Maximum Diurnal Average: 0.3 ppb at hour 2 Monthly Average: 0.22 ppb		Maximum Daily Average: 0.4 ppb on Jul 26 Minimum Daily Average: 0.1 ppb on Jul 10 Minimum Diurnal Average: 0.2 ppb at hour 15 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 in Service: 744 Hours of Data: 709 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jul	1	3	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.7
2-Jul	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	0.3
3-Jul	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	0.4
4-Jul	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	0.2	0.3
5-Jul	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	0.2	0.3
6-Jul	0	0	0	A	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
7-Jul	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	0.2	0.3
8-Jul	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	0.1	0.2
9-Jul	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	0.3	0.5
10-Jul	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	0.4
11-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.4
12-Jul	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	0.3
13-Jul	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	0.2	0.4
14-Jul	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	1.4
15-Jul	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	0.4
16-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.5
17-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.4
18-Jul	1	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	0.5
19-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.3
20-Jul	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	0.3	0.4
21-Jul	0	0	0	0	0	0	0	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
22-Jul	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	0.3
23-Jul	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	0.3
24-Jul	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	0.2	0.3
25-Jul	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.3	0.8
26-Jul	1	1	1	0	0	0	A	0	0	0	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.1
27-Jul	0	0	0	0	1	A	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
28-Jul	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	0.2	0.3
29-Jul	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
30-Jul	0	0	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
31-Jul	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	0.3	0.4
	0.2	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	Diurnal Average	
	0.7	2.7	1.1	0.5	0.7	0.7	0.6	0.7	1.4	0.5	1.7	2.1	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.8	0.6	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

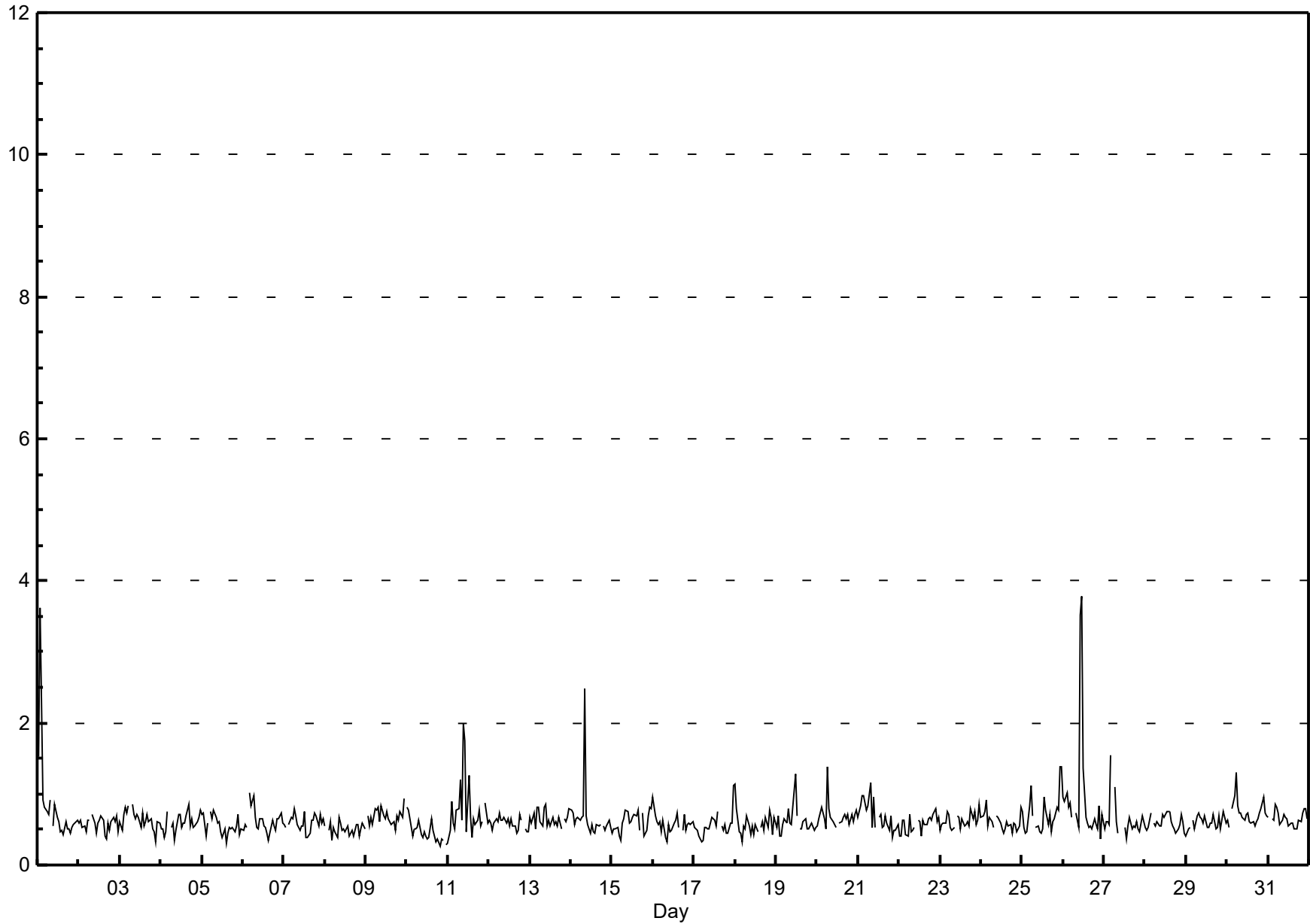


Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

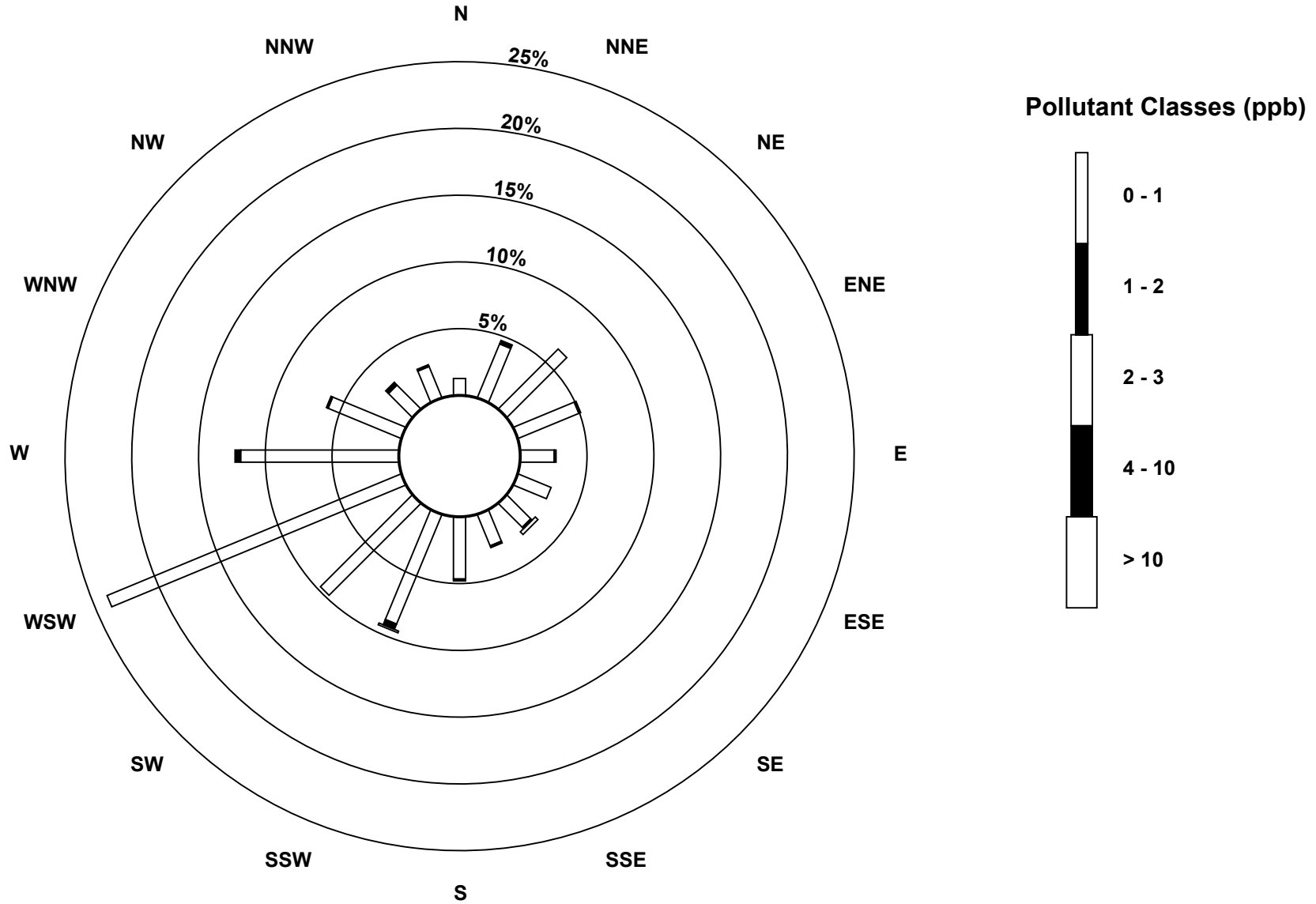
Evergreen Park - July 2017

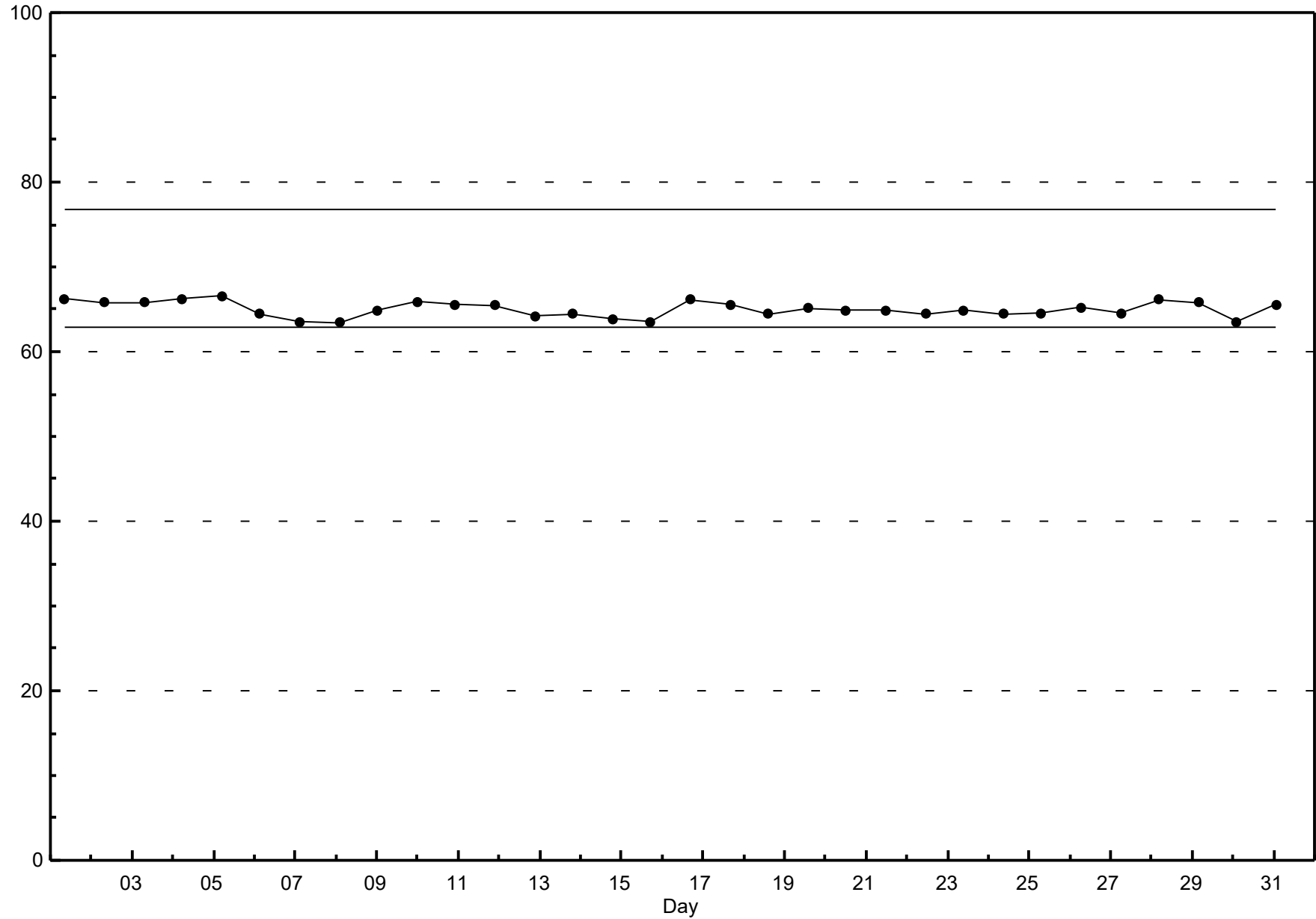
Maximum Value: 3.8 ppb on Jul 26 12:00		Maximum Daily Average: 1.0 ppb on Jul 26		Hours in Service: 744																							
Minimum Value: 0 ppb on Jul 10 20:00		Minimum Daily Average: 0.5 ppb on Jul 10		Hours of Data: 709																							
Maximum Diurnal Average: 0.8 ppb at hour 11		Minimum Diurnal Average: 0.5 ppb at hour 18		Hours of Missing Data: 35																							
Monthly Average: 0.64 ppb		Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.7 P ₉₀ = 0.8 P ₉₉ = 1.6		Hours of Calibration: 35																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jul	2	4	2	1	1	1	1	1	A	1	1	1	1	0	0	0	1	1	1	0	1	1	1	1	0.9	3.6	
2-Jul	1	1	1	1	0	1	1	A	1	1	0	1	1	1	0	0	1	0	1	1	1	1	1	0	0.6	0.7	
3-Jul	1	0	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0.6	0.9	
4-Jul	1	1	0	0	1	A	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9	
5-Jul	1	1	0	1	A	1	1	1	1	1	1	0	0	1	0	0	1	1	1	0	1	1	0	1	0.6	0.8	
6-Jul	0	1	1	A	1	1	1	1	1	1	1	1	1	0	0	0	1	1	0	1	1	1	1	1	0.6	1.0	
7-Jul	1	1	A	1	1	1	1	1	1	0	1	1	1	0	0	0	1	1	1	1	1	1	1	1	0.6	0.8	
8-Jul	1	A	0	1	0	1	0	0	1	1	0	1	0	1	0	0	0	1	1	0	1	1	1	1	0.5	0.7	
9-Jul	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0.7	0.9	
10-Jul	1	1	1	0	1	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0.5	0.8
11-Jul	0	0	1	1	0	1	1	1	1	2	2	0	1	1	0	1	1	1	1	1	1	1	A	1	0.8	2.0	
12-Jul	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	A	0	0	0	0.6	0.7	
13-Jul	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	0.8	
14-Jul	1	1	1	1	1	1	1	1	2	1	1	0	1	0	0	1	1	1	A	1	0	1	1	1	0.7	2.5	
15-Jul	0	1	1	1	0	0	1	1	1	1	1	1	1	1	1	0	A	1	0	0	1	1	1	1	0.6	0.8	
16-Jul	1	1	1	1	1	0	1	0	0	1	0	0	1	1	1	1	A	0	1	0	1	1	1	1	0.6	0.9	
17-Jul	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1	A	1	0	1	0	0	1	1	1	0.6	1.1	
18-Jul	1	1	0	0	0	1	1	1	1	0	1	0	1	0	1	1	1	0	1	1	1	1	0	1	0.6	1.1	
19-Jul	1	1	0	0	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	1	0.6	1.3	
20-Jul	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	1.4	
21-Jul	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	1	0	0	0	1	0.7	1.2	
22-Jul	0	0	1	1	0	0	1	0	0	1	A	1	1	0	1	1	1	1	1	1	1	1	1	1	0.6	0.8	
23-Jul	0	1	1	1	1	1	1	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9	
24-Jul	1	1	1	1	1	1	1	1	A	1	1	1	1	0	1	1	1	1	0	1	1	0	1	1	0.6	0.9	
25-Jul	1	1	0	0	1	1	1	A	1	1	0	0	1	1	1	1	1	0	1	1	1	1	1	1	0.7	1.4	
26-Jul	1	1	1	1	1	1	A	1	1	1	4	4	1	1	1	1	1	1	1	1	1	1	0	1	1.0	3.8	
27-Jul	1	1	1	1	2	A	1	1	0	C	C	C	1	0	1	1	0	1	1	1	1	0	1	1	0.6	1.6	
28-Jul	1	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	0.6	0.8	
29-Jul	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8	
30-Jul	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	1.3	
31-Jul	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9	
		0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.6	0.6	0.7	0.7	Diurnal Average	
		1.5	3.6	2.3	1.0	1.6	1.3	1.4	1.2	2.5	2.0	3.5	3.8	1.4	0.9	0.8	0.8	0.9	0.7	0.8	0.7	0.8	1.0	1.4	1.4	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									



Pollutant Rose

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





Hourly Averages

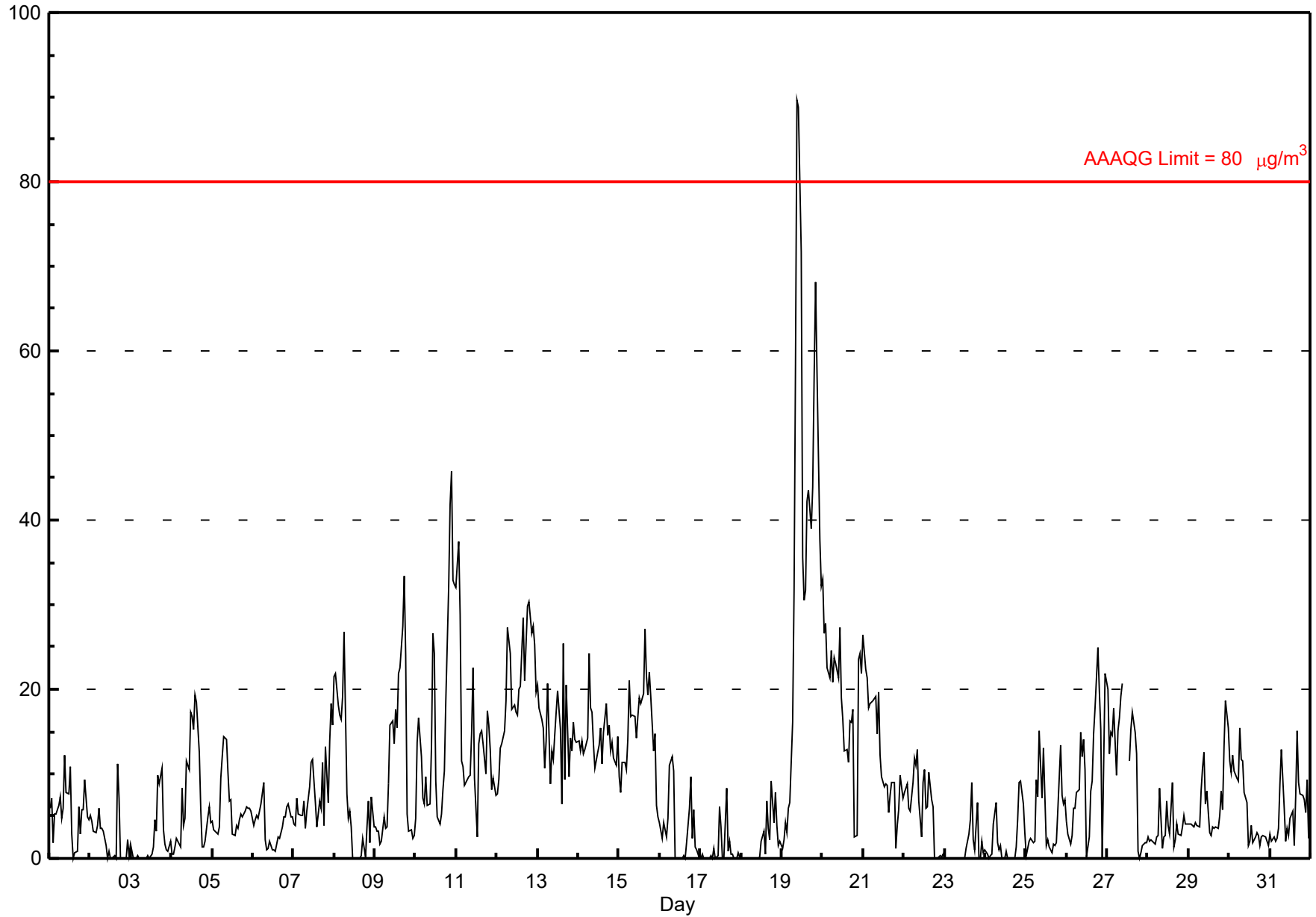
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Evergreen Park - July 2017

Number of Exceedences: 1-hr: 2 24-hr: 1	Hours in Service: 744
Maximum Value: 89.7 µg/m ³ on Jul 19 10:00	Maximum Daily Average: 37.4 µg/m ³ on Jul 19
Minimum Value: 0 µg/m ³ on Jul 1 15:00	Hours of Data: 741
Maximum Diurnal Average: 11.5 µg/m ³ at hour 10	Hours of Missing Data: 3
Monthly Average: 9.15 µg/m ³	Hours of Calibration: 0
Minimum Daily Average: 1.0 µg/m ³ on Jul 17	Percent Operational Time: 99.6
Minimum Diurnal Average: 6.7 µg/m ³ at hour 4	
Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 2.1 Median = 6.0 Q ₃ = 13.5 P ₉₀ = 20.6 P ₉₉ = 56.4	

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-Jul	6	7	2	5	5	6	7	5	6	12	8	8	11	3	0	1	1	6	3	6	6	9	5	5	5.5	12.2
2-Jul	5	4	3	3	4	6	4	3	3	1	0	1	0	0	0	0	11	7	0	0	0	0	2	0	2.5	11.2
3-Jul	2	0	0	0	0	0	0	0	0	0	0	0	1	1	5	3	10	9	11	3	2	1	1	2	2.1	10.6
4-Jul	1	1	1	2	2	1	8	4	5	12	11	17	17	15	19	18	13	6	1	1	2	5	6	4	7.2	19.4
5-Jul	4	3	3	3	4	9	12	14	14	10	7	7	3	3	4	3	5	5	5	6	6	6	6	6	6.2	14.4
6-Jul	4	5	5	5	6	6	9	2	1	1	2	1	1	1	2	3	2	4	5	5	6	6	5	5	3.8	9.0
7-Jul	4	4	7	5	5	5	7	3	6	8	11	12	9	7	4	7	6	11	4	13	7	14	18	16	8.1	18.2
8-Jul	22	22	18	17	16	19	27	8	5	6	4	0	0	0	0	0	0	2	0	4	7	2	7	4	7.9	26.8
9-Jul	4	3	3	2	2	5	4	4	9	16	16	14	18	15	22	23	27	33	24	5	3	3	2	3	10.8	33.3
10-Jul	5	14	17	12	7	6	10	6	6	13	27	24	9	5	4	5	8	10	19	32	42	46	33	32	16.4	45.8
11-Jul	32	37	29	11	11	9	9	10	10	15	23	10	3	14	15	14	10	18	16	13	8	10	7	7	14.4	37.5
12-Jul	8	9	13	14	15	19	27	26	24	18	18	17	17	20	20	29	21	25	30	30	27	28	25	20	20.8	30.4
13-Jul	21	18	17	15	11	14	21	9	13	12	15	17	20	15	6	25	9	21	10	14	13	16	14	14	14.9	25.5
14-Jul	14	13	14	12	13	14	24	18	17	14	11	13	13	16	11	15	18	15	16	13	14	12	11	14	14.3	24.2
15-Jul	10	8	11	11	11	14	21	17	17	17	14	17	19	18	19	27	22	19	22	19	13	15	6	5	15.5	27.1
16-Jul	4	2	4	3	3	5	11	12	10	0	0	0	0	0	0	0	2	6	10	2	6	1	1	0	3.5	12.1
17-Jul	0	0	0	0	0	0	0	0	1	0	0	6	4	0	0	8	1	2	0	0	0	0	1	0	1.0	8.2
18-Jul	0	0	0	0	0	0	0	0	0	0	0	0	2	3	1	7	4	2	9	4	8	4	1	2	2.0	9.2
19-Jul	1	2	4	3	6	7	16	32	58	90	89	72	36	30	32	42	44	39	44	57	68	57	38	32	37.4	89.7
20-Jul	33	27	28	23	21	25	21	24	23	21	27	19	16	13	13	11	16	16	18	3	3	24	24	22	19.6	33.1
21-Jul	26	22	21	18	18	18	19	19	15	20	12	10	9	9	9	5	7	9	9	1	4	6	10	7	12.7	26.5
22-Jul	8	8	9	6	6	9	12	11	13	7	3	9	11	6	6	10	7	6	0	0	0	0	0	1	6.1	13.0
23-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	5	9	2	1	7	0	0	2	1	1.3	9.0
24-Jul	1	0	0	0	0	4	7	2	1	2	0	0	1	0	0	0	0	0	1	5	9	9	6	3	2.2	9.1
25-Jul	0	1	2	2	2	2	9	7	15	7	13	7	2	2	1	1	2	2	2	6	13	8	6	7	5.0	15.0
26-Jul	4	3	2	3	6	6	8	8	15	12	14	11	0	3	8	9	15	18	25	20	15	0	11	22	9.8	24.9
27-Jul	20	12	15	15	18	10	15	17	19	21	M	M	M	12	15	17	15	12	1	0	1	1	2	2	11.4	20.7
28-Jul	2	2	2	2	2	3	3	8	1	3	3	7	4	3	9	1	2	4	3	3	4	5	4	4	3.5	9.0
29-Jul	4	4	4	4	4	4	4	8	11	12	6	8	3	3	4	3	4	4	5	8	6	13	19	15	6.6	18.7
30-Jul	12	10	12	10	9	9	15	12	12	8	7	1	2	4	2	3	3	3	1	3	3	3	2	2	6.1	15.4
31-Jul	3	2	2	2	2	4	9	13	6	2	4	3	5	6	2	7	15	9	8	7	7	5	9	2	5.6	15.1
	8.4	7.9	8.0	6.7	6.8	7.7	10.9	9.7	10.8	11.5	11.4	10.3	7.8	7.3	7.6	9.8	10.1	10.3	9.8	9.4	9.8	9.9	9.3	8.3		Diurnal Average
	33.1	37.5	28.8	22.5	21.4	24.7	27.2	31.7	58.5	89.7	88.8	71.7	35.6	30.5	31.7	42.2	43.6	39.0	43.8	56.9	68.2	57.5	37.7	32.4		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

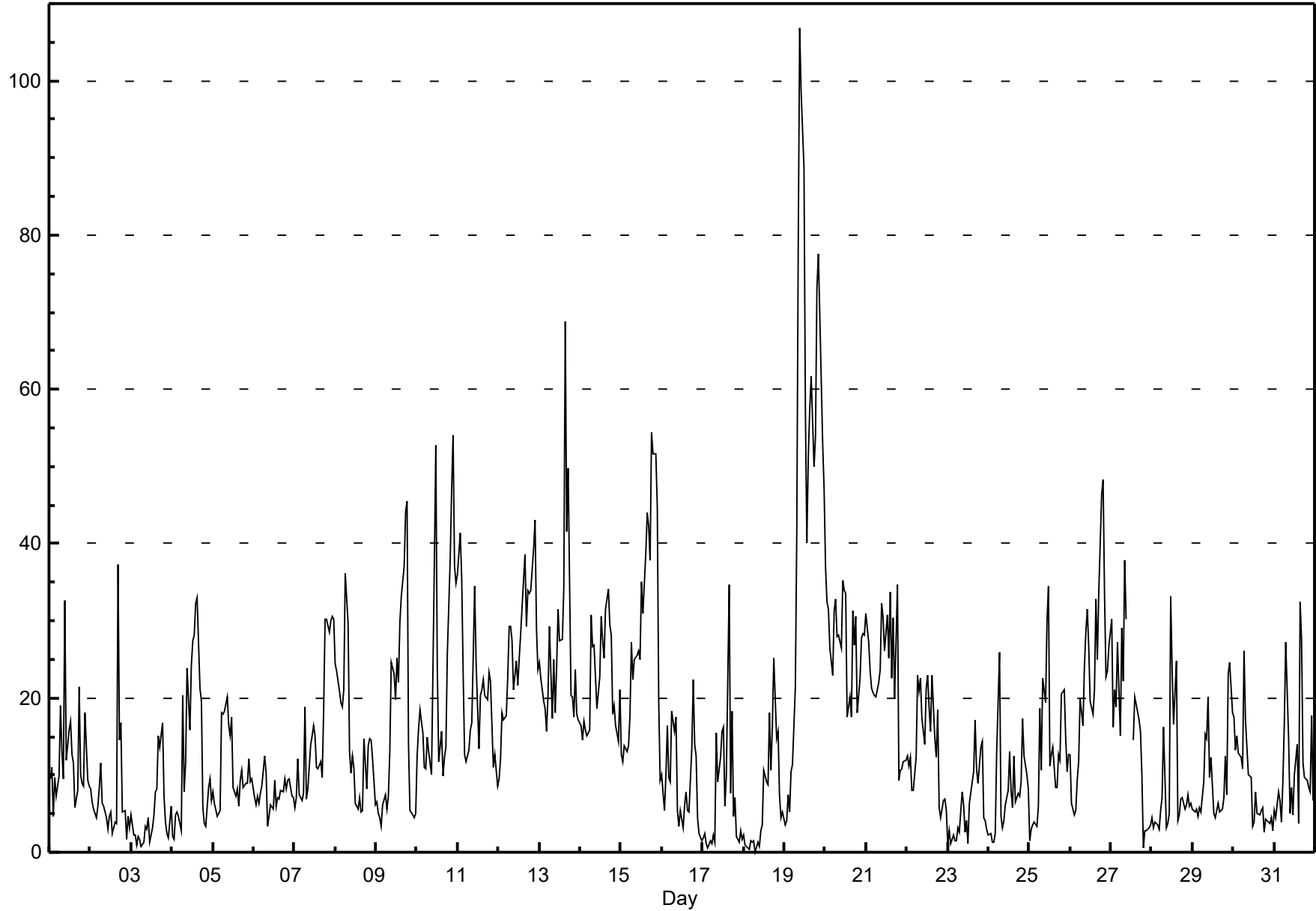


Hourly Maximums

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

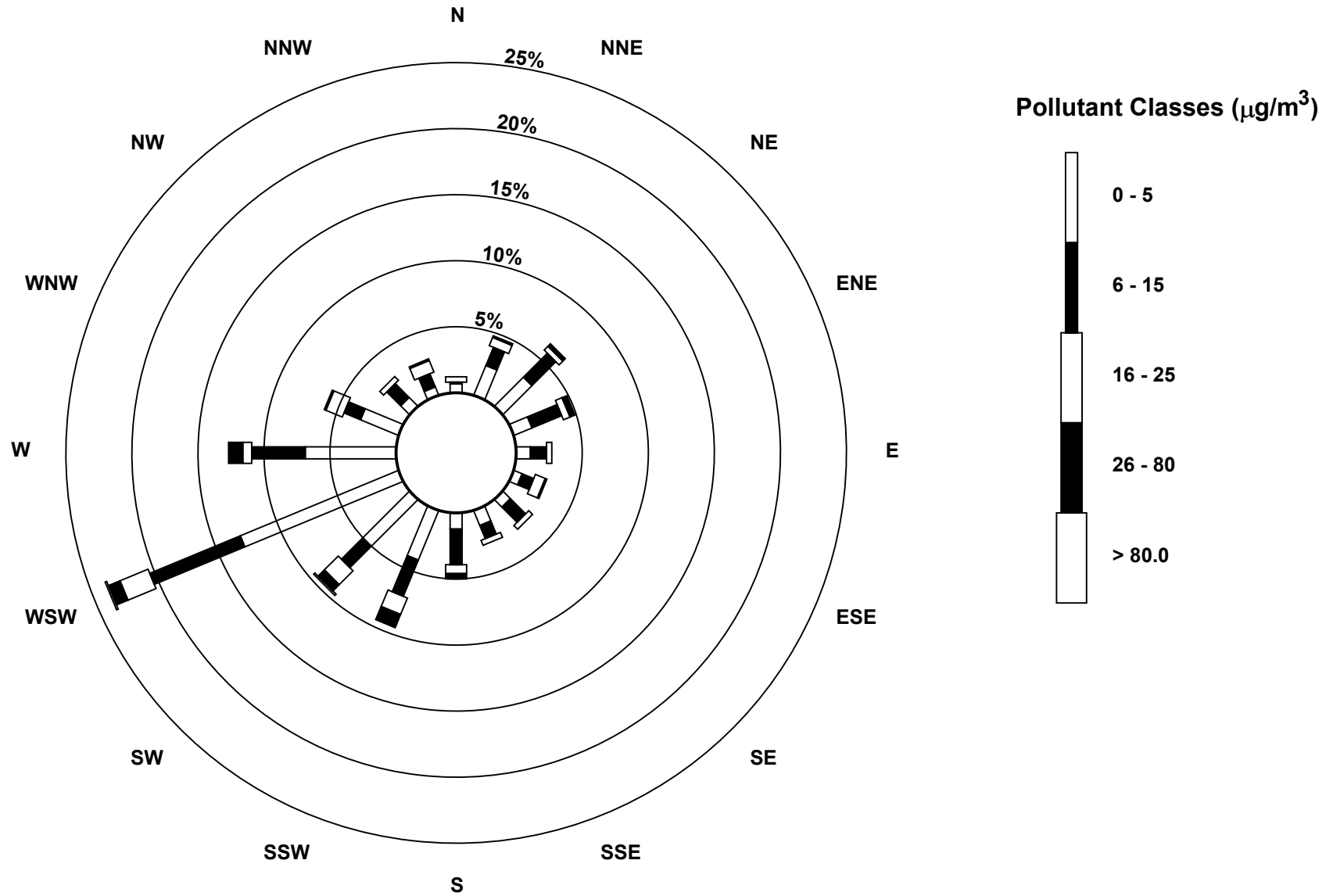
Evergreen Park - July 2017

Maximum Value: 106.8 µg/m ³ on Jul 19 10:00		Maximum Daily Average: 48.7 µg/m ³ on Jul 19		Hours in Service: 744																							
Minimum Value: 0 µg/m ³ on Jul 18 08:00		Minimum Daily Average: 5.0 µg/m ³ on Jul 3		Hours of Data: 741																							
Maximum Diurnal Average: 20.6 µg/m ³ at hour 16		Minimum Diurnal Average: 9.5 µg/m ³ at hour 5		Hours of Missing Data: 3																							
Monthly Average: 15.99 µg/m ³		Percentiles: P ₁ = 1.0 P ₁₀ = 3.3 Q ₁ = 5.9 Median = 12.5 Q ₃ = 22.5 P ₉₀ = 32.5 P ₉₉ = 66.1		Hours of Calibration: 0																							
				Percent Operational Time: 99.6																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jul	10	11	5	10	7	10	19	13	10	33	12	16	17	13	12	6	8	22	10	9	9	18	9	9	12.3	32.7	
2-Jul	8	7	6	5	6	8	12	6	6	5	3	5	5	2	4	4	37	14	17	5	5	2	5	3	7.5	37.3	
3-Jul	5	2	2	1	2	2	1	1	3	3	4	1	3	5	8	8	15	14	17	7	4	2	2	6	5.0	16.7	
4-Jul	2	2	5	5	5	3	20	8	11	24	16	24	27	28	32	33	21	20	6	4	3	8	10	7	13.5	33.0	
5-Jul	8	6	5	5	5	18	18	18	20	16	15	18	8	7	8	6	9	11	8	9	9	12	9	10	10.8	20.1	
6-Jul	7	6	7	6	8	9	13	10	3	5	6	6	9	6	7	7	8	8	10	8	9	10	7	7	7.6	12.5	
7-Jul	6	7	12	7	7	8	19	7	8	14	15	16	15	11	11	12	10	18	30	30	29	30	31	30	15.9	30.6	
8-Jul	24	24	21	19	19	21	36	30	13	10	13	11	6	6	7	5	15	8	14	15	15	12	6	6	14.8	36.2	
9-Jul	6	5	4	3	6	7	6	7	13	25	23	20	25	22	30	33	37	44	46	14	5	5	4	5	16.6	45.5	
10-Jul	13	16	18	15	11	11	15	13	10	24	38	53	24	12	16	10	12	14	26	38	47	54	37	35	23.4	54.1	
11-Jul	36	41	35	23	13	12	13	16	17	25	34	25	13	20	21	22	20	20	23	22	17	11	13	9	20.9	41.4	
12-Jul	10	12	18	17	18	23	29	29	27	21	25	22	25	28	32	39	29	34	33	34	39	43	29	24	26.7	43.1	
13-Jul	25	23	20	19	16	20	29	17	25	18	24	32	27	28	34	69	42	50	20	20	17	24	18	17	26.4	68.9	
14-Jul	16	14	17	16	15	16	31	27	27	23	19	23	30	27	25	32	34	29	28	18	19	16	14	21	22.4	34.2	
15-Jul	13	12	14	13	14	18	27	22	25	25	26	25	35	31	39	44	42	38	55	52	52	45	19	9	28.9	54.5	
16-Jul	10	5	10	16	10	9	18	16	17	5	3	5	3	6	8	5	5	13	22	14	13	4	3	1	9.4	22.3	
17-Jul	2	2	1	1	1	1	2	1	15	9	12	16	16	6	10	35	8	18	5	7	2	1	3	2	7.4	34.8	
18-Jul	2	1	1	0	2	1	1	0	1	1	3	4	11	9	9	18	11	16	25	15	16	7	5	5	6.8	25.2	
19-Jul	3	4	7	5	10	11	22	42	78	107	99	89	57	40	51	57	62	50	54	73	77	69	53	47	48.7	106.8	
20-Jul	37	32	32	26	23	31	33	28	28	26	35	34	34	18	20	18	31	27	31	18	22	28	28	28	27.8	37.0	
21-Jul	31	27	23	21	21	20	20	22	24	32	30	26	31	25	34	23	30	20	35	9	11	11	12	12	22.9	34.8	
22-Jul	13	11	12	8	8	12	23	21	23	17	14	21	23	19	16	23	15	12	18	6	4	7	7	5	14.1	23.0	
23-Jul	1	3	1	2	1	1	3	3	8	6	3	4	1	6	9	11	17	11	9	14	14	4	4	3	5.8	17.2	
24-Jul	2	2	1	1	2	13	26	5	3	4	6	8	13	8	6	13	7	8	7	9	17	13	10	8	8.0	25.9	
25-Jul	2	3	4	4	3	6	19	11	23	19	30	35	11	13	14	8	8	13	12	21	21	15	11	13	13.1	34.5	
26-Jul	13	6	5	5	9	12	20	16	24	29	32	27	20	18	21	33	25	34	46	48	33	23	23	27	22.9	48.2	
27-Jul	30	16	21	19	27	15	29	22	38	30	M	M	M	14	20	19	17	16	10	1	3	3	3	4	17.0	37.8	
28-Jul	4	3	4	4	3	5	7	16	3	4	5	33	24	17	25	4	5	7	7	6	6	7	6	6	8.8	33.2	
29-Jul	6	5	6	5	6	5	9	15	15	20	10	12	5	4	5	6	5	6	7	12	7	23	25	18	9.9	24.7	
30-Jul	18	13	15	13	12	11	26	17	14	10	10	3	4	8	5	5	5	6	3	4	4	4	4	3	9.0	26.2	
31-Jul	5	5	8	7	4	9	17	27	15	5	8	5	10	14	4	33	28	12	10	9	8	8	18	7	11.4	32.5	
		11.8	10.6	11.0	9.8	9.5	11.3	18.2	15.7	17.7	19.2	19.1	20.6	17.8	15.2	17.5	20.6	19.7	19.9	20.6	17.7	17.4	16.8	14.0	12.4	Diurnal Average	
		37.0	41.4	35.4	26.4	27.1	31.3	36.2	41.6	78.5	106.8	98.7	88.7	57.0	40.1	51.3	68.9	61.7	50.0	54.5	73.1	77.5	69.5	53.0	46.9	Diurnal Maximum	
M - Maintenance																											



Pollutant Rose

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



Hourly Averages

External Temperature (ET) - °C

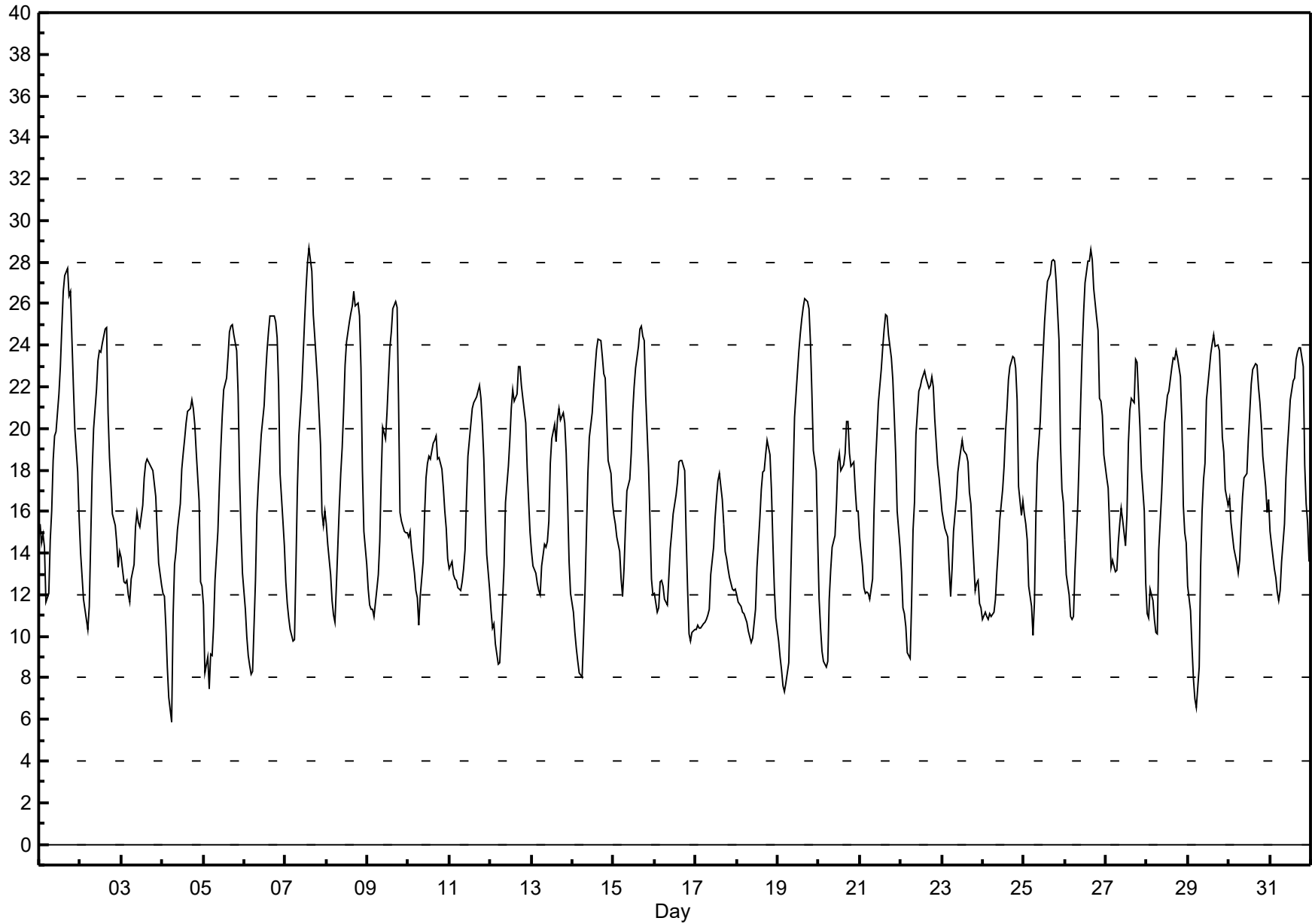
Evergreen Park - July 2017

Maximum Value: 28.7 °C on Jul 7 15:00		Maximum Daily Average: 20.4 °C on Jul 26																				Hours in Service: 744					
Minimum Value: 6 °C on Jul 4 06:00		Minimum Daily Average: 13.1 °C on Jul 17																				Hours of Data: 744					
Maximum Diurnal Average: 22.9 °C at hour 16		Minimum Diurnal Average: 10.5 °C at hour 6																				Hours of Missing Data: 0					
Monthly Average: 17.01 °C		Percentiles: P₁ = 7.7 P₁₀ = 10.8 Q₁ = 12.7 Median = 16.5 Q₃ = 21.2 P₉₀ = 24.1 P₉₉ = 28.0																				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-Jul	15	15	15	14	12	12	15	16	18	20	20	22	23	25	27	27	28	26	27	24	22	20	18	16	19.8	27.7	
2-Jul	14	13	12	11	10	11	15	18	20	22	23	24	24	24	25	25	21	19	17	16	15	14	13	14	17.5	24.9	
3-Jul	14	13	13	13	12	12	13	13	15	16	15	15	16	18	18	19	18	18	18	17	17	15	13	12	15.2	18.5	
4-Jul	12	12	10	9	7	6	11	13	14	15	16	18	19	19	20	21	21	21	21	20	19	17	13	12	15.3	21.4	
5-Jul	12	8	9	7	9	9	10	13	15	17	19	21	22	22	23	25	25	25	25	24	22	18	15	13	17.0	25.0	
6-Jul	11	10	9	9	8	8	13	16	17	19	20	21	23	24	25	25	25	25	25	24	22	18	16	14	17.8	25.4	
7-Jul	13	12	11	10	10	10	13	17	20	22	23	25	27	28	29	28	25	24	23	22	19	16	15	16	19.1	28.7	
8-Jul	15	14	13	12	11	11	13	16	18	19	21	23	24	25	26	26	27	26	26	25	23	18	15	13	19.2	26.6	
9-Jul	12	12	11	11	11	12	13	15	18	20	20	21	22	24	25	26	26	26	26	21	16	16	15	15	15	17.6	26.1
10-Jul	15	15	14	13	12	12	11	12	14	16	18	18	19	18	19	19	20	18	19	18	17	16	15	14	15.9	19.6	
11-Jul	13	14	13	13	13	12	12	13	13	14	17	19	20	21	21	21	22	22	21	20	19	16	14	12	16.5	22.1	
12-Jul	11	10	11	10	9	9	10	12	13	16	18	19	21	22	21	22	23	23	22	21	20	18	17	15	16.4	23.0	
13-Jul	14	13	13	13	12	12	13	14	14	15	16	18	20	20	19	20	21	20	21	20	19	16	14	12	16.3	20.9	
14-Jul	11	10	9	9	8	8	10	12	15	18	20	21	22	23	24	24	24	23	23	22	20	18	18	16	17.1	24.3	
15-Jul	16	15	15	14	13	12	13	15	17	18	19	21	22	23	24	25	25	24	24	22	18	15	13	12	18.1	24.9	
16-Jul	12	11	11	13	13	12	12	11	13	14	15	16	17	17	18	18	18	18	15	12	10	10	10	10	13.7	18.5	
17-Jul	10	11	10	10	11	11	11	11	11	13	14	16	17	17	18	17	15	14	14	13	13	12	12	12	13.1	17.8	
18-Jul	12	12	11	11	11	11	11	10	10	10	11	11	13	16	17	18	18	19	19	19	17	15	12	11	13.5	19.5	
19-Jul	10	9	8	8	7	8	9	12	15	18	21	23	24	25	25	26	26	26	26	24	22	19	18	15	17.5	26.2	
20-Jul	12	10	9	9	9	9	12	13	14	15	16	18	19	18	18	19	20	20	19	18	18	17	16	16	15.2	20.4	
21-Jul	15	13	12	12	12	12	12	13	16	18	20	21	23	24	25	25	25	24	23	22	21	19	16	14	18.3	25.4	
22-Jul	13	11	11	10	9	9	12	15	16	20	22	22	22	23	23	22	22	22	23	22	20	18	18	17	17.6	22.8	
23-Jul	16	16	15	15	13	12	13	15	17	18	18	19	19	19	19	18	17	16	15	12	13	13	12	11	15.5	19.4	
24-Jul	11	11	11	11	11	11	11	12	13	14	16	17	18	20	21	22	23	23	23	23	21	17	16	16	16.4	23.5	
25-Jul	16	15	15	12	11	10	12	16	18	20	22	24	25	26	27	27	28	28	28	27	24	19	17	16	20.2	28.1	
26-Jul	15	13	12	11	11	11	13	16	19	21	24	26	27	28	28	29	28	27	25	25	21	21	21	19	20.4	28.6	
27-Jul	18	17	15	13	14	13	13	15	15	16	16	14	16	19	21	21	21	23	23	22	20	18	16	13	17.2	23.3	
28-Jul	11	11	12	12	11	10	10	14	17	19	20	21	22	22	23	23	23	24	23	22	20	16	15	14	17.4	23.7	
29-Jul	12	11	9	8	7	7	9	13	16	18	18	21	23	24	24	25	24	24	24	22	20	19	17	16	17.1	24.5	
30-Jul	17	15	15	14	14	13	14	15	17	18	18	20	21	22	23	23	23	23	22	21	20	19	17	16	18.0	23.1	
31-Jul	15	14	13	13	12	12	12	14	15	18	19	20	21	22	22	23	24	24	24	23	18	16	15	14	17.7	23.9	
		13.3	12.5	11.9	11.3	10.7	10.5	11.9	13.9	15.6	17.2	18.5	19.8	20.9	21.9	22.5	22.9	22.8	22.5	21.9	20.7	18.9	16.7	15.2	14.2	Diurnal Average	
		17.6	17.2	15.3	14.8	13.7	13.1	14.6	17.9	20.0	21.9	23.8	25.6	27.0	28.1	28.7	28.6	28.1	28.1	28.0	27.0	24.3	21.3	20.6	18.7	Diurnal Maximum	

Hourly Averages

External Temperature (ET) - °C

Evergreen Park - July 2017



Hourly Averages

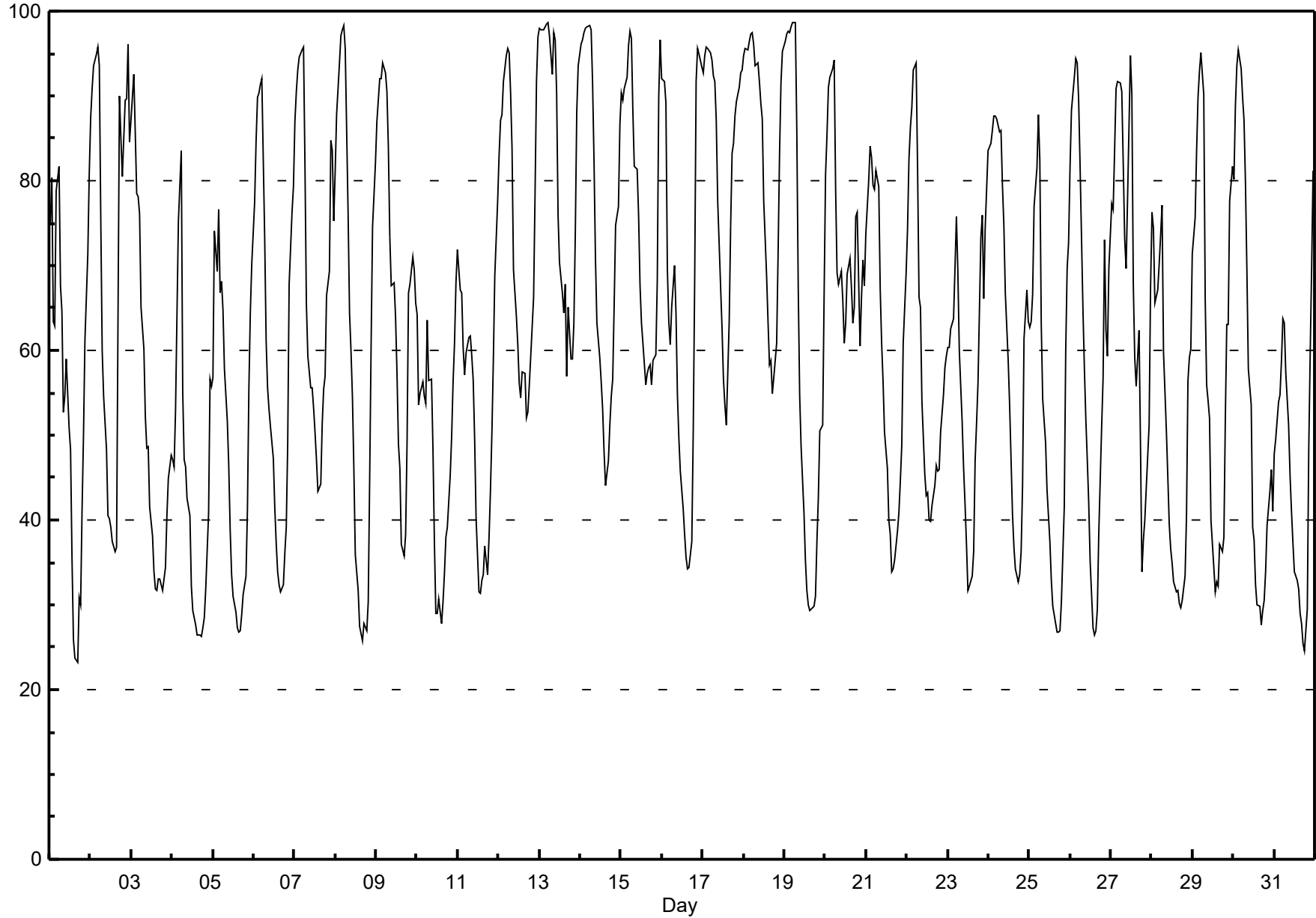
Relative Humidity (RH) - %

Evergreen Park - July 2017

Maximum Value: 98.6 % on Jul 13 06:00		Maximum Daily Average: 82.1 % on Jul 18																		Hours in Service: 744						
Minimum Value: 23 % on Jul 1 17:00		Minimum Daily Average: 43.3 % on Jul 4																		Hours of Data: 744						
Maximum Diurnal Average: 85.7 % at hour 6		Minimum Diurnal Average: 39.1 % at hour 16																		Hours of Missing Data: 0						
Monthly Average: 62.17 %		Percentiles: P ₁ = 26.4 P ₁₀ = 32.2 Q ₁ = 43.6 Median = 60.8 Q ₃ = 81.5 P ₉₀ = 93.2 P ₉₉ = 97.9																		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-Jul	75	80	63	63	79	82	68	65	53	55	59	51	48	36	26	24	23	31	30	41	50	61	71	81	54.7	81.8
2-Jul	87	91	94	95	96	94	76	60	55	48	41	40	39	37	36	37	64	90	85	81	89	90	96	85	71.0	96.1
3-Jul	87	93	86	78	78	76	65	60	52	49	49	42	38	34	32	32	33	33	32	33	34	41	45	48	52.0	92.6
4-Jul	47	46	53	64	75	84	55	47	46	42	40	32	29	28	28	26	26	26	27	29	32	41	57	56	43.3	83.6
5-Jul	57	74	69	77	67	68	65	58	52	46	39	34	31	29	27	27	27	29	31	33	41	55	64	70	48.8	76.6
6-Jul	77	85	90	90	91	92	73	61	56	53	51	47	42	37	34	32	32	32	36	39	49	68	76	79	59.3	92.0
7-Jul	87	91	93	95	95	96	82	65	59	56	56	53	50	47	43	44	51	55	57	66	69	85	84	75	69.0	95.8
8-Jul	81	88	94	97	98	98	96	76	64	60	55	46	36	32	28	27	26	28	27	30	45	61	75	82	60.3	98.4
9-Jul	87	90	92	92	94	93	90	84	73	68	68	64	57	49	46	37	36	38	49	67	68	71	69	66	68.7	93.9
10-Jul	64	54	55	56	55	54	64	56	57	48	38	29	29	31	28	30	34	38	39	45	50	56	61	68	47.4	68.0
11-Jul	72	67	67	60	57	60	62	62	59	56	49	40	31	31	33	34	37	34	38	44	50	59	69	78	52.0	77.7
12-Jul	83	87	88	92	95	96	95	90	84	69	64	61	56	54	57	57	52	53	56	59	66	78	92	97	74.3	97.0
13-Jul	98	98	98	98	98	99	97	93	97	97	90	76	70	67	64	68	57	65	59	59	63	74	88	94	82.0	98.6
14-Jul	96	97	98	98	98	98	98	92	82	71	63	59	56	53	48	44	47	51	55	57	65	75	77	87	73.5	98.4
15-Jul	90	89	91	92	96	98	97	88	82	81	76	68	63	61	56	57	58	58	56	59	59	68	90	97	76.3	97.7
16-Jul	92	92	89	70	63	61	65	70	64	55	50	46	41	38	36	34	34	37	51	68	92	96	95	93	63.8	95.7
17-Jul	93	95	96	96	95	94	92	92	87	78	68	63	57	54	51	63	75	83	84	88	89	91	93	93	82.0	95.8
18-Jul	95	96	95	96	97	97	96	94	94	92	89	87	78	69	63	58	59	55	57	61	71	83	92	95	82.1	97.5
19-Jul	96	97	98	98	98	99	99	86	68	55	49	41	35	32	30	29	30	30	31	38	43	50	51	66	60.3	98.6
20-Jul	81	85	91	92	93	94	79	69	68	69	66	61	63	69	71	67	63	65	76	76	60	66	71	68	73.5	94.2
21-Jul	74	80	84	83	80	79	81	79	67	61	56	50	46	40	38	34	34	35	39	41	44	49	61	69	58.5	84.0
22-Jul	74	83	86	89	93	94	81	66	65	54	45	43	43	40	40	42	44	47	46	46	50	55	58	59	60.1	94.0
23-Jul	60	60	63	64	70	76	69	60	52	46	42	37	32	32	33	36	47	51	56	73	76	66	74	79	56.5	79.0
24-Jul	83	84	86	88	88	87	86	86	79	75	67	59	54	47	41	37	34	33	34	36	44	61	67	63	63.3	87.7
25-Jul	63	63	67	77	82	88	82	63	54	49	44	41	37	33	30	28	27	27	30	42	60	70	73	73	52.3	87.8
26-Jul	82	88	92	94	94	90	82	65	58	52	47	42	35	27	26	27	30	38	51	57	73	62	59	70	60.0	94.5
27-Jul	77	77	84	91	92	91	91	82	73	70	78	95	90	68	59	56	62	49	34	38	40	44	51	67	69.1	94.8
28-Jul	76	74	66	67	70	74	77	60	50	45	39	37	35	33	32	32	30	30	30	33	41	56	59	60	50.3	77.1
29-Jul	71	76	83	90	93	95	90	66	56	54	52	40	34	32	33	32	37	36	38	52	63	63	78	82	60.2	95.0
30-Jul	80	89	94	95	93	90	87	80	69	58	54	39	38	32	30	30	28	29	30	34	39	43	46	41	56.2	95.4
31-Jul	48	49	54	55	59	64	63	58	51	45	41	37	34	33	32	29	28	25	25	30	48	59	70	81	46.6	81.2
		78.6	81.2	82.5	83.6	84.9	85.7	80.7	72.0	65.4	59.9	55.6	50.3	46.1	42.1	39.7	39.1	40.8	43.0	44.7	49.8	56.4	64.1	71.2	74.9	Diurnal Average
		97.9	97.8	97.8	98.1	98.4	98.6	98.6	93.5	97.5	96.6	90.3	94.8	90.2	69.0	70.8	67.8	74.6	90.0	85.1	87.6	91.7	95.7	96.1	97.0	Diurnal Maximum

Hourly Averages

**Relative Humidity (RH) - %
Evergreen Park - July 2017**



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Evergreen Park - July 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	5	8	8	4	4	3	4	3	10	7	5	4	9	6	4	6	5	2	5	11	10	1	2	2	4.4	10.5
Dir	196	192	203	208	194	206	242	239	234	184	171	191	191	199	247	288	198	170	111	144	202	326	190	189	198.7	143.5
2 Spd	1	1	1	1	1	2	3	9	8	12	17	18	16	15	11	9	6	3	14	7	4	4	4	8	5.5	17.6
Dir	194	204	195	139	253	227	256	239	246	245	247	264	282	282	244	272	139	127	277	291	178	172	165	174	248.5	264.1
3 Spd	3	8	12	13	12	15	19	22	28	29	28	33	37	41	40	41	45	39	47	40	34	18	21	20	26.4	47.1
Dir	169	211	226	238	237	247	253	246	247	247	242	232	237	239	248	241	247	240	246	243	242	222	214	212	239.6	246.2
4 Spd	18	16	11	5	1	1	16	21	23	27	28	33	35	36	32	32	30	28	24	23	14	8	4	6	18.9	35.7
Dir	217	222	218	238	200	171	237	234	234	240	237	244	255	254	251	256	260	260	272	275	272	255	217	236	248.2	254.1
5 Spd	6	4	5	5	7	6	4	9	9	9	8	7	6	11	4	4	3	5	8	7	4	4	2	2	2.3	10.7
Dir	208	195	229	274	275	256	236	238	247	236	262	275	246	317	329	16	66	48	50	52	55	53	38	29	275.3	317.0
6 Spd	1	1	0	1	2	0	1	7	9	7	7	7	7	7	8	8	7	9	8	7	3	2	3	1	4.3	8.6
Dir	150	4	349	346	324	301	331	32	60	55	43	15	70	74	34	45	40	24	43	47	52	55	52	89	43.4	59.5
7 Spd	0	2	1	0	0	2	3	6	6	8	12	13	14	15	18	14	7	3	2	12	19	30	22	12	2.4	30.0
Dir	132	32	30	27	208	28	52	57	63	79	49	61	74	76	85	84	53	131	222	277	268	264	338	226	32.8	264.1
8 Spd	11	8	1	2	1	2	1	5	12	13	9	17	19	16	17	14	13	10	6	4	2	0	1	1	5.9	19.2
Dir	197	205	129	149	44	189	204	246	237	236	246	248	248	249	260	281	280	318	337	31	56	6	86	147	253.1	248.1
9 Spd	1	1	1	1	3	1	1	3	5	6	10	12	2	8	4	8	6	7	19	28	14	9	5	7	4.8	27.9
Dir	38	35	28	17	50	98	46	47	57	203	246	316	237	285	287	327	329	36	299	313	295	266	269	267	303.0	312.7
10 Spd	8	13	11	10	14	11	5	13	8	12	21	29	24	22	17	12	16	18	18	14	11	7	6	3	12.4	28.6
Dir	253	246	256	248	244	243	216	212	206	244	261	255	268	256	262	276	247	248	218	200	199	184	192	190	242.5	254.9
11 Spd	5	6	6	8	9	5	9	8	10	8	4	2	7	7	4	5	9	3	11	12	9	5	5	4	1.4	12.5
Dir	203	257	271	264	260	294	287	270	253	248	228	292	162	169	206	155	16	103	111	104	101	77	69	61	211.4	103.5
12 Spd	3	3	4	2	1	2	3	6	5	9	8	3	4	0	6	9	6	9	12	7	1	4	2	2	0.1	12.4
Dir	59	54	66	49	53	42	60	57	77	105	126	106	109	124	290	261	301	280	247	243	263	115	187	357	88.7	247.1
13 Spd	1	1	0	1	1	2	4	2	6	4	3	4	3	6	10	10	18	15	16	14	11	2	1	0	3.9	17.8
Dir	74	111	288	22	36	175	30	59	46	112	293	220	244	290	241	297	294	307	308	315	308	307	253	256	302.1	293.9
14 Spd	1	1	1	1	0	1	1	3	4	9	11	11	9	3	6	6	11	12	11	8	6	5	3	4	3.8	11.7
Dir	212	190	181	39	207	114	74	196	97	79	75	65	101	295	331	333	21	34	26	37	28	33	14	47	44.4	34.0
15 Spd	7	8	7	5	1	2	2	3	1	5	5	7	3	5	5	5	7	9	2	7	29	14	3	2	3.4	28.8
Dir	61	59	63	86	179	355	346	332	197	152	237	337	355	6	327	39	76	81	38	340	326	328	13	254	5.2	326.3
16 Spd	7	5	6	9	10	13	8	9	11	21	25	28	38	40	33	37	40	44	43	26	10	9	17	21	20.9	44.3
Dir	229	206	220	236	231	242	225	193	224	238	235	243	242	240	244	246	248	251	247	237	214	237	246	248	240.5	250.8
17 Spd	17	19	19	20	23	23	20	16	17	17	21	18	24	23	20	9	7	5	4	6	3	2	2	1	11.1	24.0
Dir	252	249	248	247	252	250	260	278	268	277	265	264	250	262	286	334	67	68	65	113	108	72	131	141	261.0	249.7
18 Spd	2	2	2	1	2	4	8	10	8	7	6	4	5	2	2	3	4	2	4	5	3	2	1	1	2.1	10.1
Dir	70	82	95	34	39	30	25	24	29	53	71	161	228	140	166	326	30	93	120	117	138	172	97	26	63.5	24.3
19 Spd	3	0	0	0	4	3	2	4	7	12	15	18	22	22	15	11	12	11	12	11	12	6	6	1	7.9	21.8
Dir	39	356	205	194	185	181	183	203	231	238	235	251	264	262	275	266	248	248	235	212	208	226	243	216	243.4	263.9
20 Spd	2	1	1	2	3	3	7	9	7	6	5	6	7	7	9	11	13	8	4	9	13	8	11	12	6.1	13.3
Dir	31	179	58	194	198	198	239	242	239	221	231	238	187	167	188	223	248	235	204	208	237	211	227	236	222.2	236.9
21 Spd	5	4	4	5	6	7	5	5	13	15	16	19	18	20	19	20	19	21	22	18	16	11	6	7	11.9	21.8
Dir	293	223	288	289	272	270	298	308	262	252	271	260	254	260	255	252	257	245	250	249	248	248	204	185	255.5	249.8
22 Spd	3	2	1	1	0	1	5	6	6	10	13	16	19	23	22	20	16	13	18	17	13	10	8	17	10.2	23.0
Dir	186	183	25	46	134	175	193	209	210	197	231	243	243	235	248	249	252	246	237	242	231	231	237	245	236.4	234.5

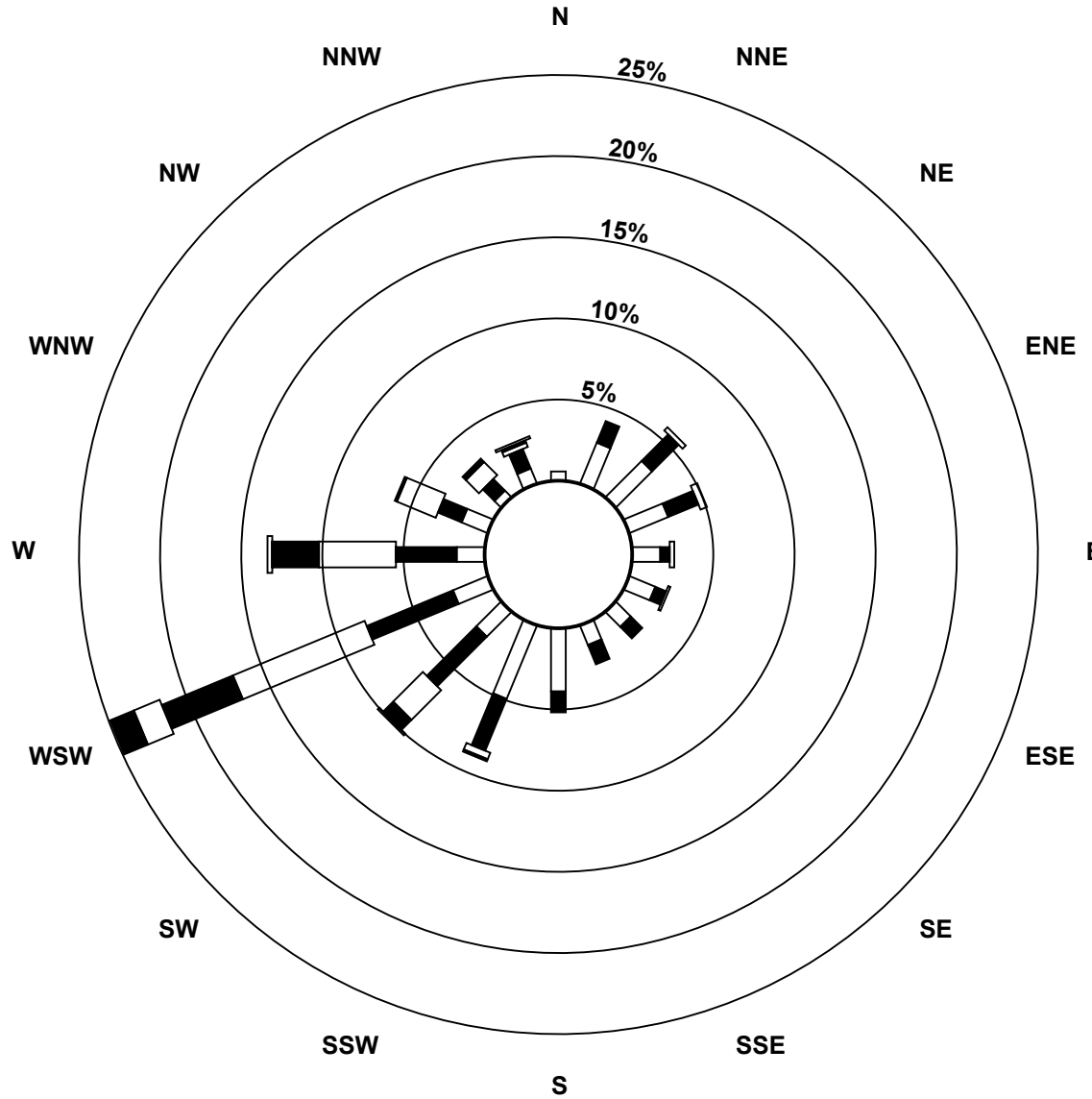
Hourly Averages

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

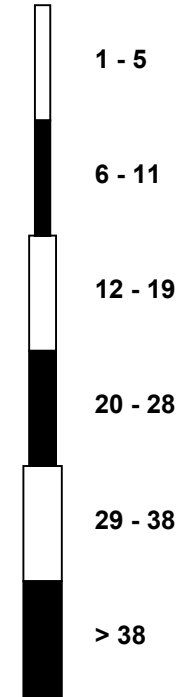
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	18	18	17	13	10	7	13	18	22	19	20	24	28	23	24	26	19	8	23	9	11	15	14	13	15.6	28.2
Dir	229	240	240	250	243	225	230	241	235	252	270	259	268	257	245	238	302	328	306	317	218	264	258	251	255.6	267.6
24 Spd	14	18	15	13	13	15	12	12	16	17	19	17	15	17	15	15	18	18	15	10	5	3	6	12	12.6	18.6
Dir	251	250	267	261	259	260	257	284	298	298	304	309	303	284	278	287	295	297	303	302	260	210	219	234	279.7	303.6
25 Spd	13	13	8	6	5	2	1	9	15	15	16	12	10	15	14	10	6	6	2	4	3	1	3	3	6.9	15.5
Dir	235	237	247	309	301	280	246	267	253	244	255	264	248	231	226	233	246	295	200	131	143	129	160	173	244.3	254.6
26 Spd	2	1	1	2	5	8	8	5	3	4	6	8	11	10	10	7	9	4	2	1	0	15	12	1	2.1	14.8
Dir	17	15	192	196	202	193	201	214	203	111	139	130	144	147	165	134	106	83	13	18	228	317	314	229	162.0	316.8
27 Spd	3	7	2	2	5	2	3	6	9	5	9	2	3	5	7	6	9	15	19	16	11	11	7	3	4.4	19.0
Dir	216	315	13	246	270	263	248	261	252	245	216	120	78	83	164	162	146	216	263	289	274	264	231	200	243.0	263.2
28 Spd	4	9	10	9	7	5	3	11	20	24	25	20	18	21	22	20	24	19	13	7	4	8	6	6	13.4	24.8
Dir	212	205	236	234	246	259	299	250	240	244	251	260	261	262	246	269	249	247	258	267	258	200	203	220	248.7	250.8
29 Spd	3	5	3	0	1	2	2	6	3	2	4	4	5	6	4	5	7	7	5	1	4	3	6	7	1.8	7.5
Dir	247	197	153	48	197	201	212	235	281	221	205	188	170	164	110	88	51	45	56	57	97	150	184	178	158.2	45.2
30 Spd	4	1	3	3	5	5	5	12	15	17	19	23	25	28	24	23	28	24	21	14	10	6	6	10	13.4	28.4
Dir	232	83	183	244	283	265	264	246	249	255	250	253	242	251	260	251	260	265	261	269	277	291	267	255	256.2	250.9
31 Spd	7	10	8	10	6	3	5	8	12	13	16	15	13	13	8	7	7	8	7	5	1	0	16	19	7.9	18.5
Dir	236	240	238	235	273	276	272	271	262	280	255	265	275	276	267	256	264	279	308	326	28	352	312	339	274.8	338.7
Spd	4.0	4.5	3.8	3.9	4.3	3.9	4.1	5.8	7.4	8.1	9.6	10.3	10.7	11.4	10.7	9.3	8.3	7.5	8.9	6.4	5.5	4.2	3.7	4.5	Diurnal Average	
Dir	228.1	231.0	238.4	248.3	249.8	245.6	251.8	250.1	247.2	242.3	248.9	255.6	248.2	251.2	252.3	258.5	265.1	263.6	265.6	265.4	253.6	254.0	249.1	234.4	Diurnal Maximum	
Spd	17.9	19.2	18.7	20.3	23.1	23.0	19.9	22.5	28.4	29.5	27.7	33.1	37.9	40.9	39.8	40.8	45.2	44.3	47.1	40.4	34.1	30.0	22.0	21.0	Diurnal Maximum	
Dir	229.4	249.4	247.8	247.3	252.1	250.2	260.1	246.1	247.2	247.0	242.2	232.0	242.1	239.5	248.2	241.2	246.7	250.8	246.2	243.5	241.6	264.1	337.6	247.8	Diurnal Maximum	
Maximum Speed Value: 47 km/h on Jul 3 19:00																		Minimum Speed Value: 0 km/h on Jul 7 05:00						Hours in Service:		744
Maximum Daily Speed Average: 26.4 km/h on Jul 3																		Minimum Daily Speed Average: 0.1 km/h on Jul 18						Hours of Data:		744
Maximum Diurnal Speed Average: 11.4 km/h at hour 14																		Minimum Diurnal Speed Average: 3.7 km/h at hour 23						Hours of Missing Data:		0
Monthly Average Velocity: 6.62 km/h 251.61 deg																		Speed Percentiles: P ₁ = 0.2 P ₁₀ = 1.4 Q ₁ = 3.6 Median = 7.4 Q ₃ = 14.1 P ₉₀ = 20.8 P ₉₉ = 40.0						Percent Operational Time:		100.0
All monthly, daily, and diurnal averages have been calculated using vector methods																										
Frequency Distribution																										
		Speed Range (km/h)																								
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																			
North	21	4	1	1	0	0	27																			
NorthEast	53	34	3	0	0	0	90																			
East	28	16	6	0	0	0	50																			
SouthEast	23	13	0	0	0	0	36																			
South	50	30	2	0	0	0	82																			
SouthWest	45	67	53	23	10	8	206																			
West	17	55	67	41	10	3	193																			
NorthWest	13	24	18	4	1	0	60																			
Total	250	243	150	69	21	11	744																			

Wind Rose

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



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Evergreen Park - July 2017

Maximum Speed: 48 km/h on Jul 3 19:00	Maximum Daily Speed Average: 27.3 km/h on Jul 3	Hours in Service: 744
Minimum Speed: 0 km/h on Jul 19 02:00	Minimum Daily Speed Average: 4.8 km/h on Jul 18	Hours of Data: 744
Maximum Diurnal Speed Average: 17.3 km/h at hour 14	Minimum Diurnal Speed Average: 5.4 km/h at hour 4	Hours of Missing Data: 0
Monthly Average Speed: 10.92 km/h	Percentiles: P ₁ = 0.7 P ₁₀ = 2.2 Q ₁ = 4.8 Median = 8.6 Q ₃ = 15.2 P ₉₀ = 22.3 P ₉₉ = 40.1	Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	6	8	8	4	4	3	5	4	11	8	5	6	10	7	8	9	7	3	6	11	11	2	5	2	6.4	11.3
2-Jul	2	1	2	2	1	2	3	10	8	13	19	19	18	17	13	12	10	4	20	7	5	5	5	8	8.7	20.5
3-Jul	3	8	12	13	12	15	20	23	29	30	28	34	37	42	41	42	46	39	48	41	34	19	21	20	27.3	47.7
4-Jul	18	16	11	6	2	3	16	21	24	27	28	34	36	37	34	33	31	29	26	24	15	8	4	6	20.4	36.8
5-Jul	6	4	5	7	8	7	5	9	10	11	10	11	10	12	7	7	7	9	8	7	4	4	2	2	7.2	11.9
6-Jul	1	1	2	1	2	0	2	8	10	9	9	9	9	10	10	10	9	10	9	7	4	2	3	2	5.8	9.8
7-Jul	1	2	1	1	0	2	3	7	7	9	13	14	16	16	19	14	8	5	12	16	26	32	23	26	11.4	31.9
8-Jul	11	8	2	2	1	3	2	6	12	13	11	17	20	18	19	17	15	12	7	4	2	1	1	3	8.6	20.2
9-Jul	2	2	1	1	3	2	2	3	6	10	11	13	8	12	7	9	8	8	24	29	15	10	6	7	8.2	28.6
10-Jul	8	14	11	10	14	12	5	14	9	14	22	30	26	24	19	14	17	19	19	14	12	7	6	3	14.3	29.6
11-Jul	5	7	6	8	9	6	9	8	10	9	6	6	10	11	10	9	10	8	12	13	10	5	5	4	8.1	12.9
12-Jul	3	4	4	2	1	2	3	6	6	10	11	8	8	7	9	11	9	11	13	7	5	5	4	3	6.3	13.1
13-Jul	2	3	1	3	3	3	4	6	8	9	5	6	6	8	13	12	19	16	16	15	11	3	1	1	7.3	19.0
14-Jul	1	2	2	1	1	2	2	3	6	10	12	12	11	7	9	8	12	12	11	9	7	5	3	7	6.5	12.5
15-Jul	7	9	8	5	2	2	3	3	4	6	9	9	6	8	7	8	9	10	6	10	30	17	4	3	7.7	29.5
16-Jul	8	5	7	9	10	13	9	9	11	22	26	29	38	41	34	38	41	45	43	27	11	10	18	21	21.9	45.2
17-Jul	17	20	19	21	24	23	20	17	18	18	22	19	25	24	21	13	8	6	5	6	3	3	3	2	14.9	24.7
18-Jul	3	3	2	1	3	4	8	10	8	8	7	5	6	6	6	5	5	5	6	4	3	1	1	1	4.8	10.4
19-Jul	3	0	0	0	4	3	2	5	7	12	16	20	23	23	16	14	13	11	13	11	12	6	6	1	9.3	22.8
20-Jul	2	2	2	2	3	3	7	10	8	7	5	7	7	7	9	12	13	9	4	9	13	9	12	12	7.3	13.5
21-Jul	7	5	4	5	7	7	5	5	14	16	18	21	19	22	20	21	20	22	22	19	16	11	7	7	13.3	22.4
22-Jul	4	2	1	1	1	2	5	7	6	11	14	17	20	24	22	21	17	14	19	17	13	10	9	17	11.4	24.1
23-Jul	18	18	17	13	10	8	13	18	22	21	22	26	30	24	25	26	21	10	25	11	11	16	15	13	18.0	29.5
24-Jul	14	19	15	14	13	15	13	13	17	18	20	19	16	19	17	17	19	19	16	11	6	3	6	12	14.6	19.8
25-Jul	13	14	9	6	5	2	2	10	15	15	16	14	12	17	16	13	10	8	5	5	4	1	3	4	9.2	16.7
26-Jul	3	1	1	2	5	8	8	5	4	5	7	9	12	12	11	9	9	4	2	2	1	15	14	4	6.4	15.2
27-Jul	6	7	3	3	5	3	4	7	9	7	10	5	4	7	9	7	11	17	20	17	11	11	7	3	8.0	19.9
28-Jul	5	9	11	9	8	6	5	12	20	25	26	21	20	22	23	22	25	25	20	14	7	5	8	7	14.7	25.8
29-Jul	4	6	5	1	1	2	2	6	4	4	5	6	8	8	7	7	7	8	5	2	5	4	7	9	5.1	8.9
30-Jul	7	3	4	4	6	5	6	13	16	17	19	24	26	30	26	25	29	24	21	15	11	7	8	11	14.8	29.6
31-Jul	7	11	8	11	7	4	6	8	13	15	18	17	16	16	12	13	12	11	9	6	2	1	18	19	10.8	19.2
	6.3	6.8	6.0	5.4	5.7	5.6	6.4	9.2	11.3	13.1	14.5	15.7	16.6	17.3	16.1	15.4	15.5	14.0	15.2	12.6	10.2	7.8	7.6	7.7	Diurnal Average	
	18.1	19.5	19.0	20.6	23.6	23.4	20.5	22.7	29.0	29.9	28.4	33.7	38.5	41.7	40.7	41.8	46.0	45.2	47.7	40.9	34.5	31.9	22.9	25.7	Diurnal Maximum	

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

Hourly Standard Deviations

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

Maximum Value: 96.9 deg on Jul 22 05:00																								Hours in Service: 744	
Minimum Value: 5.5 deg on Jul 19 21:00																								Hours of Data: 744	
Percentiles: P ₁ = 7.6 P ₁₀ = 11.7 Q ₁ = 16.9 Median = 27.0 Q ₃ = 50.1 P ₉₀ = 72.0 P ₉₉ = 89.0																								Hours of Missing Data: 0	
																								Hours of Calibration: 0	
																								Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Jul	43	9	6	47	11	44	67	78	15	28	21	67	23	42	81	65	58	66	42	23	19	80	89	44	89.2
2-Jul	79	96	89	71	89	46	56	23	27	28	20	25	26	33	40	43	63	52	91	56	46	35	37	15	95.9
3-Jul	65	14	13	10	7	11	9	9	11	10	11	10	10	11	13	13	11	10	9	9	9	13	6	6	65.2
4-Jul	8	10	15	20	71	68	9	10	9	12	14	15	15	14	16	17	15	16	18	15	14	25	18	11	71.2
5-Jul	28	22	37	48	22	18	30	13	23	36	43	57	65	31	67	68	82	67	31	26	25	18	10	22	81.8
6-Jul	67	78	89	64	50	49	32	30	27	41	39	52	51	55	43	44	43	38	29	31	16	9	12	56	89.2
7-Jul	94	40	45	89	89	26	30	30	35	33	25	30	34	28	29	22	21	57	91	44	47	22	17	72	94.0
8-Jul	23	11	89	87	68	45	57	24	23	17	34	19	22	25	28	31	29	33	44	21	52	82	88	74	88.9
9-Jul	90	50	32	52	30	71	37	32	34	54	32	23	82	51	77	44	44	39	61	13	15	20	24	20	89.6
10-Jul	27	10	11	18	13	19	59	23	26	32	19	15	18	19	27	32	24	17	14	13	15	17	14	19	59.0
11-Jul	20	26	20	16	18	31	17	22	17	28	56	85	65	64	89	57	31	72	39	16	15	14	15	12	89.0
12-Jul	22	14	19	28	42	36	22	32	36	30	40	77	79	96	46	41	64	38	22	27	82	46	77	63	96.4
13-Jul	76	70	83	80	80	86	31	81	46	73	59	57	86	52	47	53	21	22	17	17	13	64	87	88	87.9
14-Jul	75	94	88	77	83	94	65	64	50	36	34	32	46	76	57	49	36	23	15	27	14	13	47	75	94.4
15-Jul	21	18	26	29	81	26	38	45	91	35	66	45	77	64	60	54	46	33	62	54	15	35	63	52	90.8
16-Jul	29	28	23	14	12	17	36	20	20	14	14	13	10	11	14	12	12	12	10	11	29	24	10	10	35.6
17-Jul	12	12	9	10	11	11	14	15	15	19	17	19	14	20	19	54	35	31	36	31	41	44	65	50	65.2
18-Jul	58	35	43	43	42	18	22	17	29	26	39	52	42	85	87	75	47	78	56	27	16	71	75	61	86.7
19-Jul	25	59	77	89	36	22	53	29	19	16	14	22	18	18	22	35	23	25	14	13	6	23	11	58	89.0
20-Jul	61	68	78	40	23	55	17	24	20	27	31	43	22	15	17	19	17	22	30	15	8	20	14	11	77.7
21-Jul	41	24	21	17	23	16	18	16	18	18	24	24	23	27	18	21	23	15	10	9	10	13	12	8	41.1
22-Jul	43	52	72	82	97	48	19	20	30	20	32	20	15	17	16	19	19	19	17	11	12	9	11	9	96.9
23-Jul	9	13	12	12	10	17	14	12	11	23	25	18	18	20	16	10	27	55	26	37	14	19	19	12	54.7
24-Jul	12	12	17	16	16	15	16	20	18	17	22	25	24	29	28	24	21	22	18	18	26	16	12	9	28.9
25-Jul	9	7	31	19	9	69	67	17	16	19	19	34	37	32	30	52	64	63	81	66	28	52	22	46	81.0
26-Jul	49	52	57	72	21	8	10	25	47	47	43	33	29	42	22	42	24	20	18	32	71	17	42	89	88.5
27-Jul	73	12	75	70	20	70	67	21	28	53	24	62	51	45	46	56	30	28	18	16	19	19	21	44	74.7
28-Jul	38	58	11	13	17	50	63	31	11	11	16	22	25	19	21	23	15	14	19	16	22	21	8	15	62.7
29-Jul	26	57	51	83	75	41	70	25	60	57	55	67	64	54	70	46	30	23	37	73	43	62	47	34	83.3
30-Jul	83	77	45	40	37	28	29	12	13	17	14	15	16	17	20	18	17	15	15	16	14	28	45	21	83.5
31-Jul	23	17	20	9	34	41	23	29	24	28	25	30	39	48	59	67	67	50	44	34	62	81	70	17	80.6
94.0	95.9	89.2	89.5	96.9	93.8	69.5	80.7	90.8	72.7	65.5	85.2	86.2	96.4	89.0	75.1	81.8	78.0	91.3	73.3	82.4	81.8	89.2	88.5		

PAZA

Smoky Heights Station

Monthly Summary Tables, Graphs and
Roses

Hourly Averages

Sulphur Dioxide (SO₂) - ppb

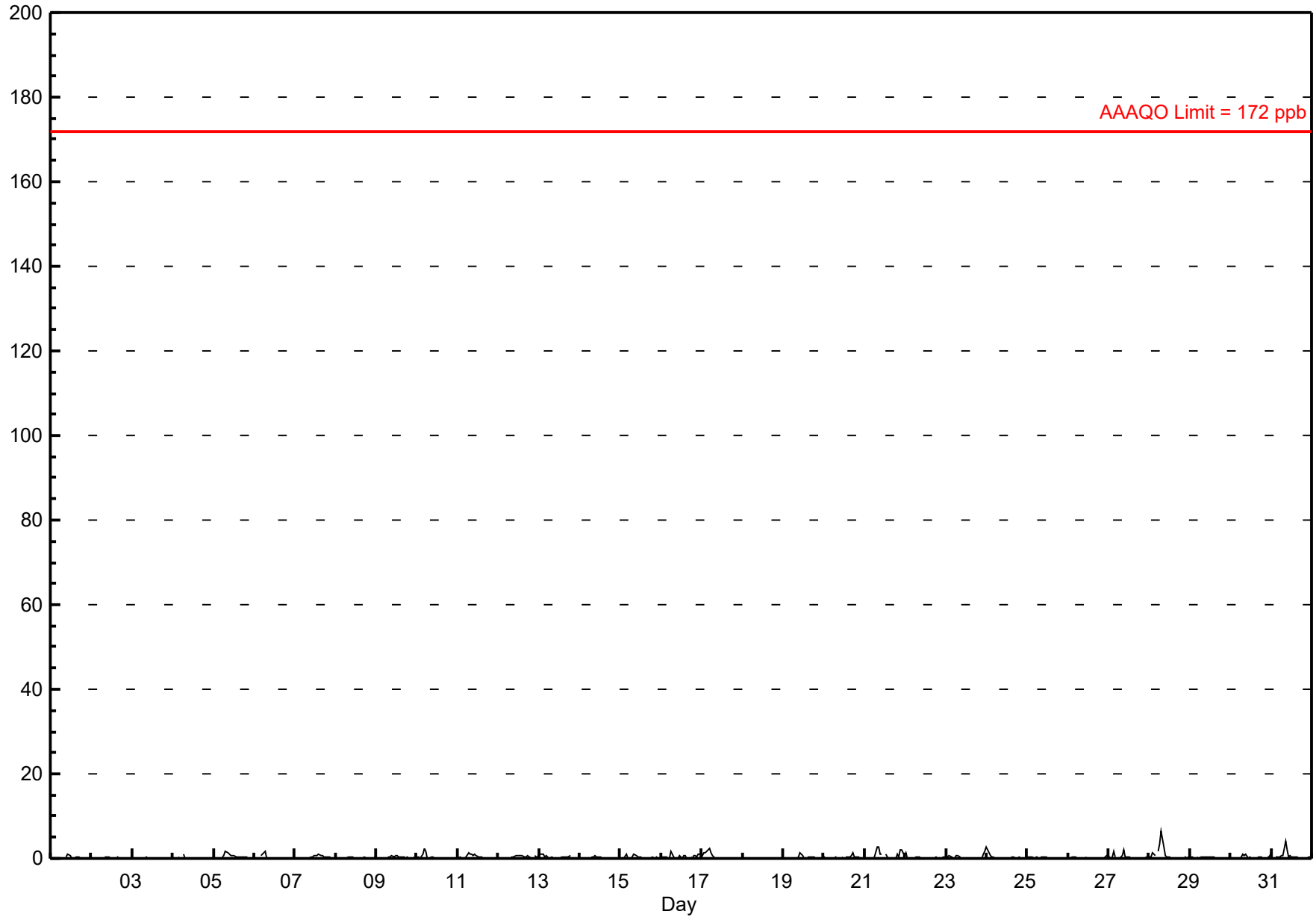
Smoky Heights - July 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 6.3 ppb on Jul 28 08:00 Maximum Daily Average: 0.8 ppb on Jul 28		Hours in Service: 744 Hours of Data: 709 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0																									
Minimum Value: 0 ppb on Jul 2 19:00 Maximum Diurnal Average: 0.6 ppb at hour 9 Monthly Average: 0.29 ppb		Minimum Daily Average: 0.0 ppb on Jul 18 Minimum Diurnal Average: 0.1 ppb at hour 21 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.7 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-Jul	0	0	0	0	0	0	0	0	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9	
2-Jul	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4	
3-Jul	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	
4-Jul	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.0	
5-Jul	0	0	0	0	A	0	1	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.6	
6-Jul	0	0	0	A	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.8	
7-Jul	0	0	A	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0.3	0.9	
8-Jul	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	0.5	
9-Jul	A	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8	
10-Jul	1	0	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.3	2.5	
11-Jul	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0.4	1.4	
12-Jul	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	1	0	0	A	1	0	0	0.3	0.8	
13-Jul	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0.3	1.1	
14-Jul	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.8	
15-Jul	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	1.0	
16-Jul	0	0	0	0	0	0	2	0	0	0	0	1	0	1	1	0	A	0	0	1	1	0	1	1	0.4	1.8	
17-Jul	1	2	1	2	3	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.5	2.5	
18-Jul	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	0.1	
19-Jul	0	0	0	0	0	0	0	0	0	0	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0.2	1.2	
20-Jul	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	1	0	0	0	0	0	0	0	0.2	1.3	
21-Jul	0	0	0	0	0	0	0	3	3	1	1	A	1	0	0	0	0	0	0	0	1	0	2	2	1	0.7	2.8
22-Jul	1	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	1.2	
23-Jul	0	0	1	0	0	0	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0.3	1.6	
24-Jul	3	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.6	
25-Jul	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	0.5	
26-Jul	0	0	0	0	0	0	A	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	1	0.2	0.8	
27-Jul	0	0	0	2	0	A	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.0	
28-Jul	0	0	1	1	A	2	3	6	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8	6.3	
29-Jul	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	
30-Jul	0	0	A	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	1.1	
31-Jul	2	A	0	0	0	0	1	1	4	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.6	4.2	
																								Diurnal Average	Diurnal Maximum		
																								0.4	2.6		
																								0.2	1.5		
																								0.3	1.4		
																								0.3	1.8		
																								0.3	2.5		
																								0.3	1.7		
																								0.5	3.4		
																								0.6	6.3		
																								0.6	4.2		
																								0.5	2.0		
																								0.3	1.2		
																								0.3	0.8		
																								0.2	0.8		
																								0.2	0.8		
																								0.2	0.9		
																								0.2	0.8		
																								0.2	0.6		
																								0.2	1.3		
																								0.2	0.6		
																								0.1	1.0		
																								0.1	0.6		
																								0.2	1.9		
																								0.2	1.9		
																								0.2	1.6		

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
Smoky Heights - July 2017



Hourly Maximums

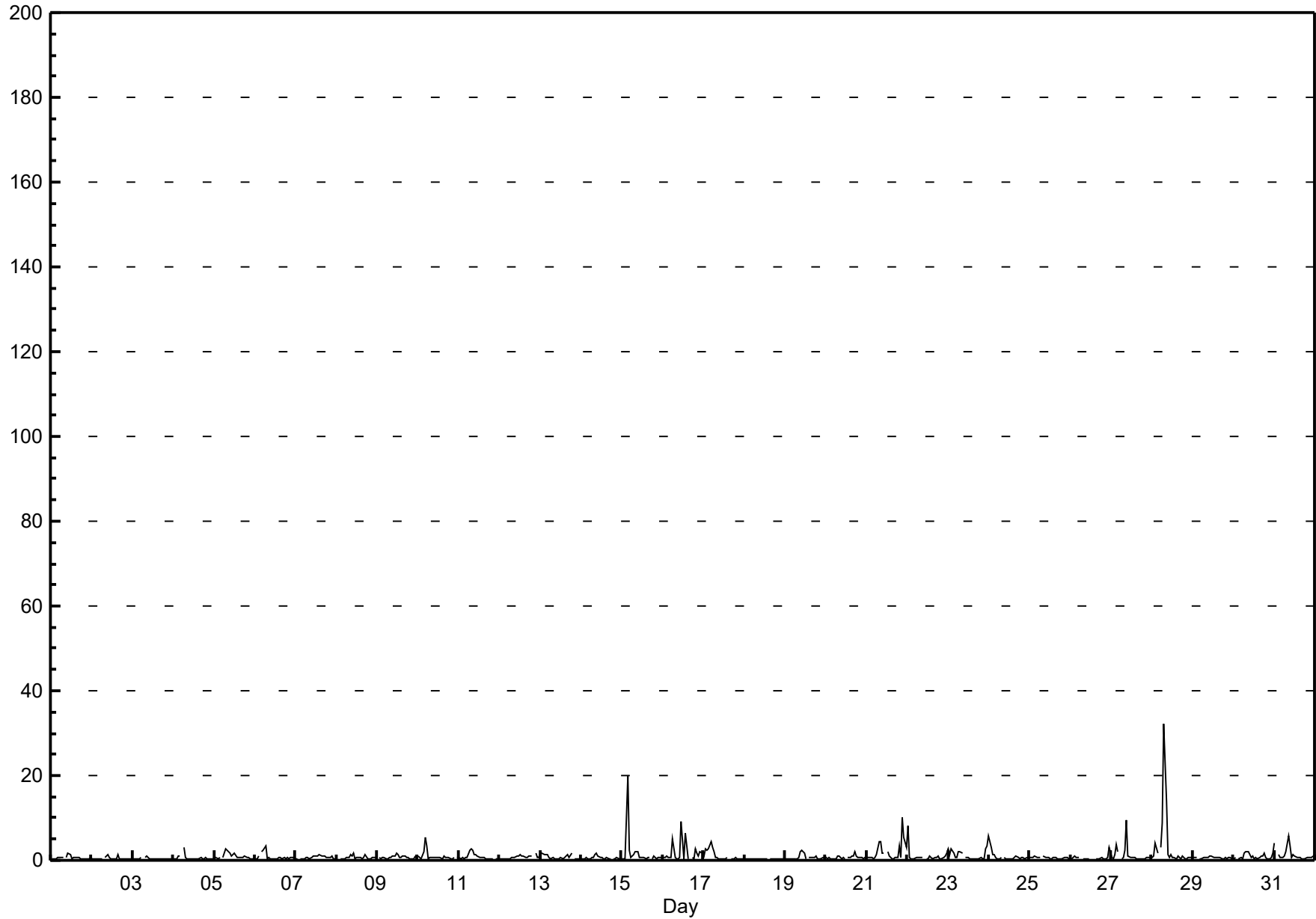
Sulphur Dioxide (SO₂) - ppb

Smoky Heights - July 2017

Maximum Value: 32.3 ppb on Jul 28 08:00		Maximum Daily Average: 3.3 ppb on Jul 28		Hours in Service: 744																						
Minimum Value: 0 ppb on Jul 19 01:00		Minimum Daily Average: 0.3 ppb on Jul 18		Hours of Data: 709																						
Maximum Diurnal Average: 2.1 ppb at hour 8		Minimum Diurnal Average: 0.5 ppb at hour 21		Hours of Missing Data: 35																						
Monthly Average: 0.97 ppb		Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.8 P ₉₀ = 1.7 P ₉₉ = 8.6		Hours of Calibration: 35																						
				Percent Operational Time: 100.0																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	0	0	0	0	1	1	1	1	A	1	2	1	0	1	1	1	1	0	0	0	0	0	0	1	0.6	1.8
2-Jul	0	0	0	0	0	0	0	A	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0.5	1.3
3-Jul	0	0	0	0	0	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.0
4-Jul	0	0	0	1	1	A	3	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0.6	3.2
5-Jul	0	1	0	1	A	1	2	3	2	2	1	1	2	1	1	1	1	1	1	1	1	0	0	0	0.9	2.6
6-Jul	0	0	1	A	2	2	3	0	1	0	0	0	0	1	1	1	1	0	1	0	1	1	0	0.8	3.4	
7-Jul	0	0	A	0	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0.7	1.3	
8-Jul	0	A	0	0	0	0	1	1	1	1	2	0	1	1	0	1	1	0	0	0	1	1	1	0.6	1.5	
9-Jul	A	1	0	1	1	0	0	1	1	1	1	2	1	1	1	1	1	1	1	0	0	0	1	0.7	1.7	
10-Jul	1	1	0	2	5	3	0	1	1	1	1	1	1	0	1	1	1	1	1	0	0	1	A	1	1.0	5.3
11-Jul	1	0	1	0	1	1	2	3	2	1	1	1	1	1	1	0	0	0	0	0	0	A	0	0.9	2.6	
12-Jul	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	0.8	1.6	
13-Jul	2	2	1	1	1	1	0	1	0	0	0	0	1	0	1	1	1	2	A	0	0	0	0	0.8	1.7	
14-Jul	0	0	1	1	1	0	1	1	1	2	1	1	1	0	1	1	0	0	A	0	0	1	0	0.6	1.6	
15-Jul	0	0	0	20	2	1	1	1	2	2	1	1	1	0	1	1	A	0	1	0	1	1	1	1.7	19.9	
16-Jul	1	1	1	1	1	1	5	1	0	0	1	9	0	6	3	0	A	1	0	3	2	1	2	1.8	9.1	
17-Jul	1	3	3	3	4	3	2	1	1	0	0	0	0	0	1	A	0	0	0	1	0	0	0	1.1	4.4	
18-Jul	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	0.5	
19-Jul	0	0	0	0	0	0	0	0	1	2	2	2	0	A	1	1	1	1	1	0	0	1	0	0.7	2.3	
20-Jul	1	0	1	0	0	0	0	1	1	0	1	0	A	1	1	1	1	2	1	1	1	1	0	0.7	2.2	
21-Jul	1	1	1	1	0	1	1	4	4	2	2	A	2	1	1	0	0	1	1	4	1	10	6	2.0	10.3	
22-Jul	8	1	0	0	0	1	1	1	1	1	A	0	0	1	1	1	1	1	1	0	0	1	1	1.0	8.0	
23-Jul	3	1	3	2	1	1	2	2	2	2	A	1	1	0	0	0	0	0	0	1	0	0	3	1.2	3.3	
24-Jul	6	3	1	1	1	0	0	1	A	1	1	0	0	0	0	1	1	1	0	1	1	0	1	0.9	5.7	
25-Jul	1	1	1	1	1	1	1	A	1	1	1	1	0	0	1	1	0	0	0	0	1	1	1	0.6	1.0	
26-Jul	0	1	1	1	1	1	A	1	0	0	0	0	C	C	C	0	0	0	1	0	0	0	1	0.7	3.1	
27-Jul	1	0	1	4	2	A	0	1	3	9	1	1	1	1	1	0	0	0	0	0	0	1	1	1.2	9.5	
28-Jul	1	1	4	2	A	3	9	32	14	1	1	1	1	1	0	1	1	0	1	0	0	1	1	3.3	32.3	
29-Jul	1	1	1	A	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	1	1	0.6	0.9	
30-Jul	0	1	A	0	1	0	2	2	2	2	1	1	0	1	0	1	1	1	2	1	0	1	1	0.9	2.1	
31-Jul	4	A	1	1	1	1	1	2	6	3	1	1	1	1	1	1	0	0	0	1	1	1	1	1.3	5.9	
		1.2	0.7	0.9	1.6	1.0	0.9	1.5	2.1	1.7	1.3	0.9	1.1	0.7	0.8	0.7	0.6	0.6	0.6	0.6	0.7	0.5	0.9	0.9	0.9	Diurnal Average
		8.0	3.1	4.2	19.9	5.3	3.4	8.7	32.3	13.8	9.5	2.3	9.1	2.1	6.5	3.4	1.2	1.4	2.2	1.8	3.5	1.9	10.3	5.6	3.3	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																								

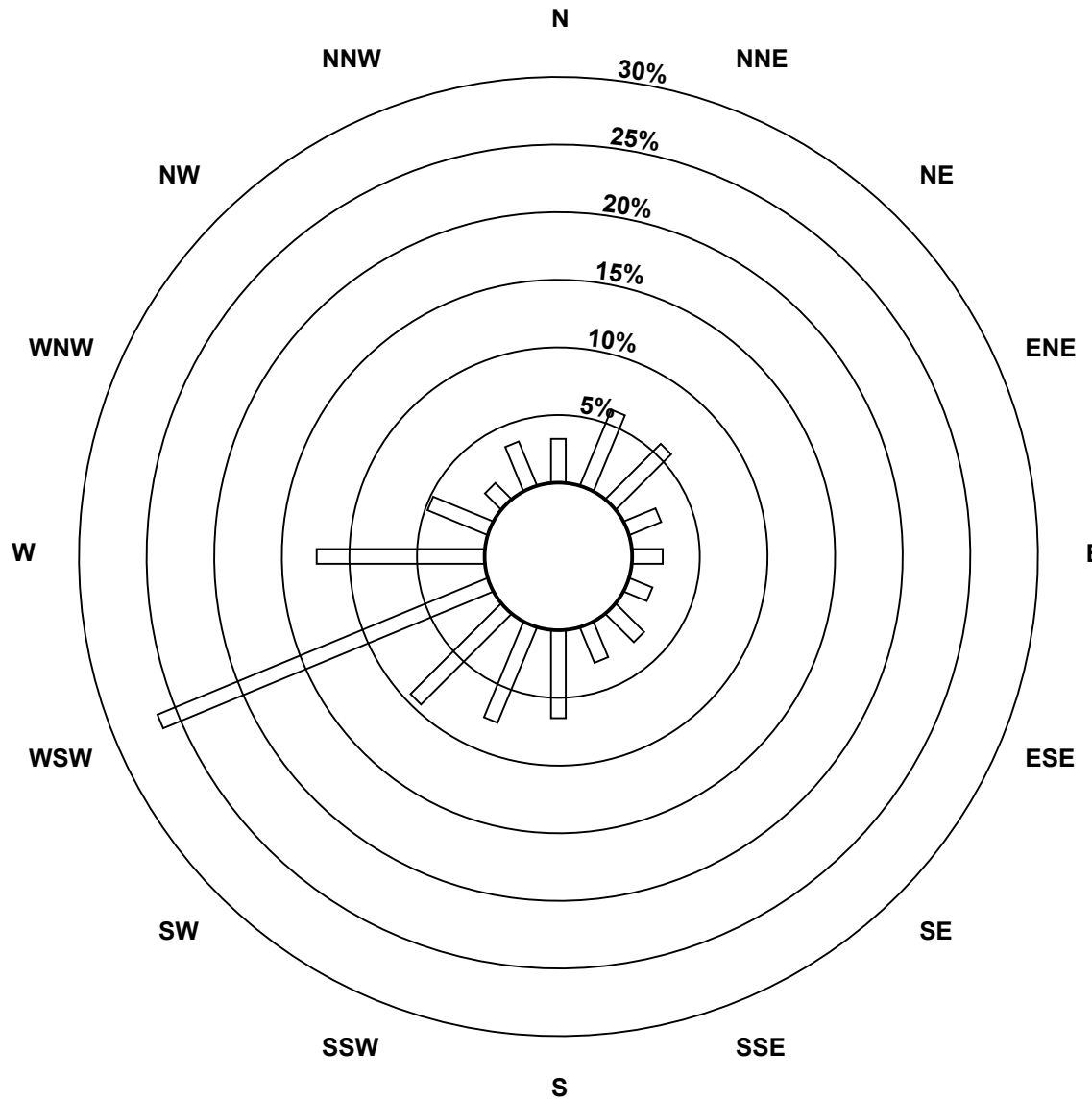
Hourly Maximums

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

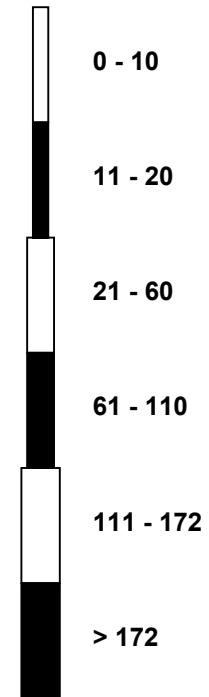


Pollutant Rose

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

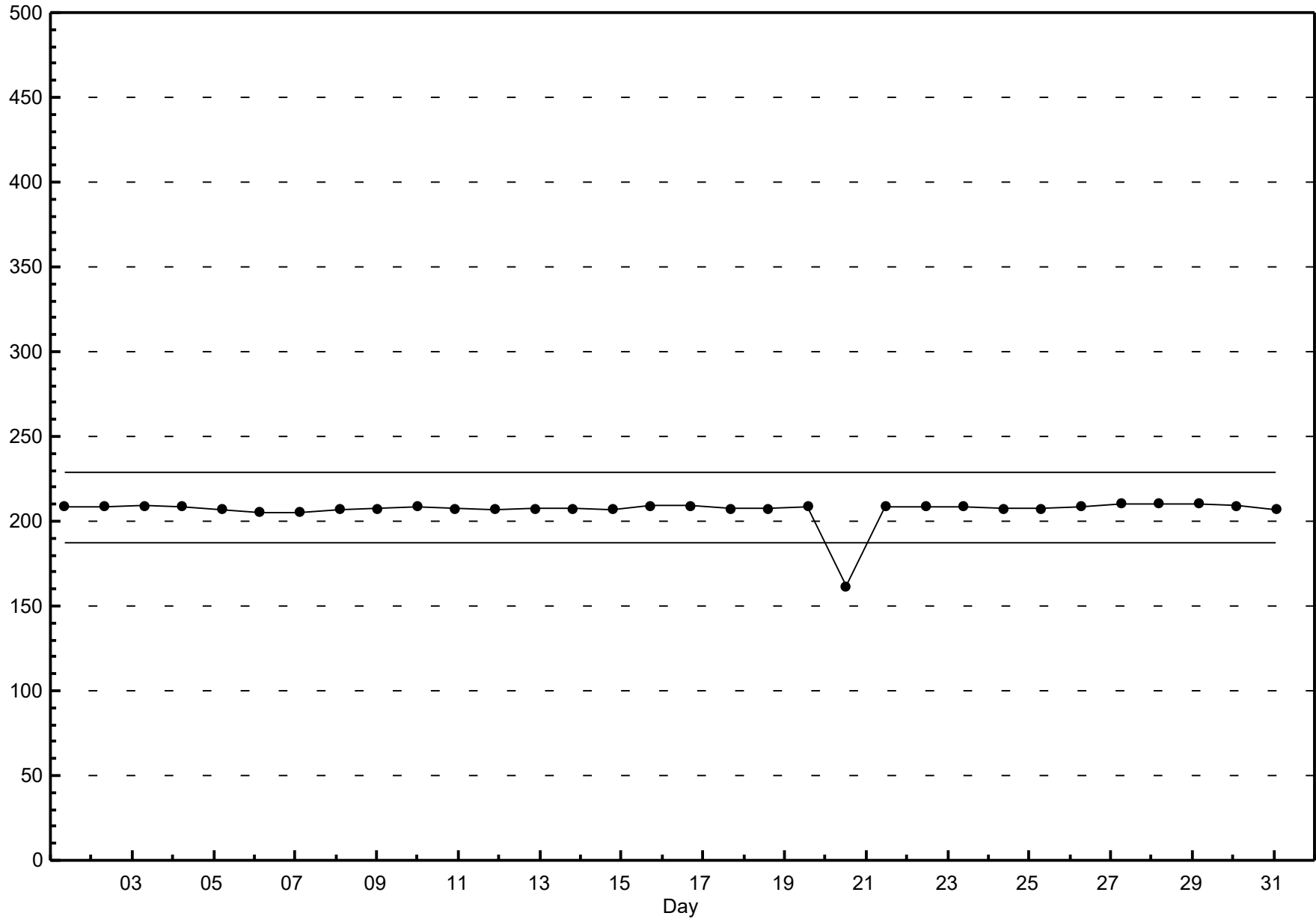


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Smoky Heights - July 2017

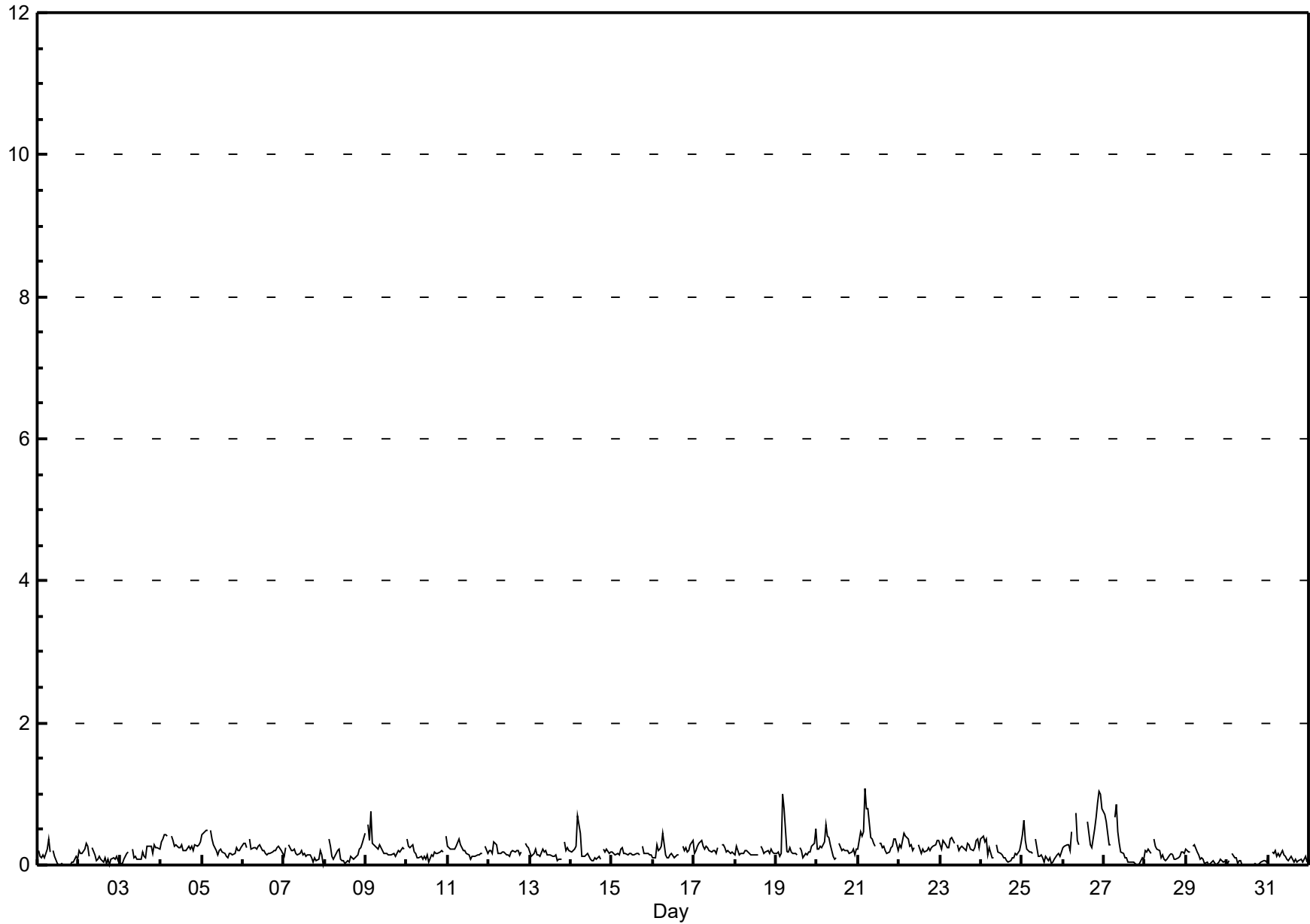


Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - July 2017

Maximum Value: 1.1 ppb on Jul 21 05:00		Maximum Daily Average: 0.5 ppb on Jul 26		Hours in Service: 744																						
Minimum Value: 0 ppb on Jul 1 13:00		Minimum Daily Average: 0.0 ppb on Jul 30		Hours of Data: 708																						
Maximum Diurnal Average: 0.3 ppb at hour 5		Minimum Diurnal Average: 0.1 ppb at hour 14		Hours of Missing Data: 36																						
Monthly Average: 0.20 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 = 0.8		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-Jul	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
2-Jul	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
3-Jul	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
4-Jul	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
5-Jul	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-Jul	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
7-Jul	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
8-Jul	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
9-Jul	A	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
10-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0.2	0.4
11-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0.2	0.4
12-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0	0.2	0.3
13-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0	0	0.2	0.3
14-Jul	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0	0	0	0	0.2	0.7
15-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0	0	0	0	0	0.2	0.3
16-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0	0	0	0	0	0	0.2	0.5
17-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0	0	0	0	0	0	0	0.2	0.3
18-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0	0	0	0	0	0	0	0.2	0.3
19-Jul	0	0	0	0	1	1	0	0	0	0	0	0	A	A	0	0	0	0	0	0	0	0	0	0	0.3	1.0
20-Jul	0	0	0	0	0	1	0	0	0	0	0	A	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
21-Jul	0	0	0	0	1	1	1	0	0	0	A	A	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.1
22-Jul	0	0	0	0	0	0	0	0	0	0	A	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
23-Jul	0	0	0	0	0	0	0	0	0	0	A	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
24-Jul	0	0	0	0	0	0	0	0	A	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
25-Jul	0	1	0	0	0	0	0	A	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
26-Jul	0	0	0	0	0	0	A	1	0	0	C	C	C	C	1	0	0	0	1	1	1	1	1	1	0.5	1.0
27-Jul	1	1	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8
28-Jul	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
29-Jul	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
30-Jul	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	0.2
31-Jul	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
		0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	Diurnal Average
		0.7	0.6	0.5	0.7	1.1	0.8	0.8	0.8	0.8	0.5	0.3	0.3	0.3	0.3	0.6	0.4	0.3	0.3	0.5	0.7	0.9	1.0	1.0	0.8	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																								

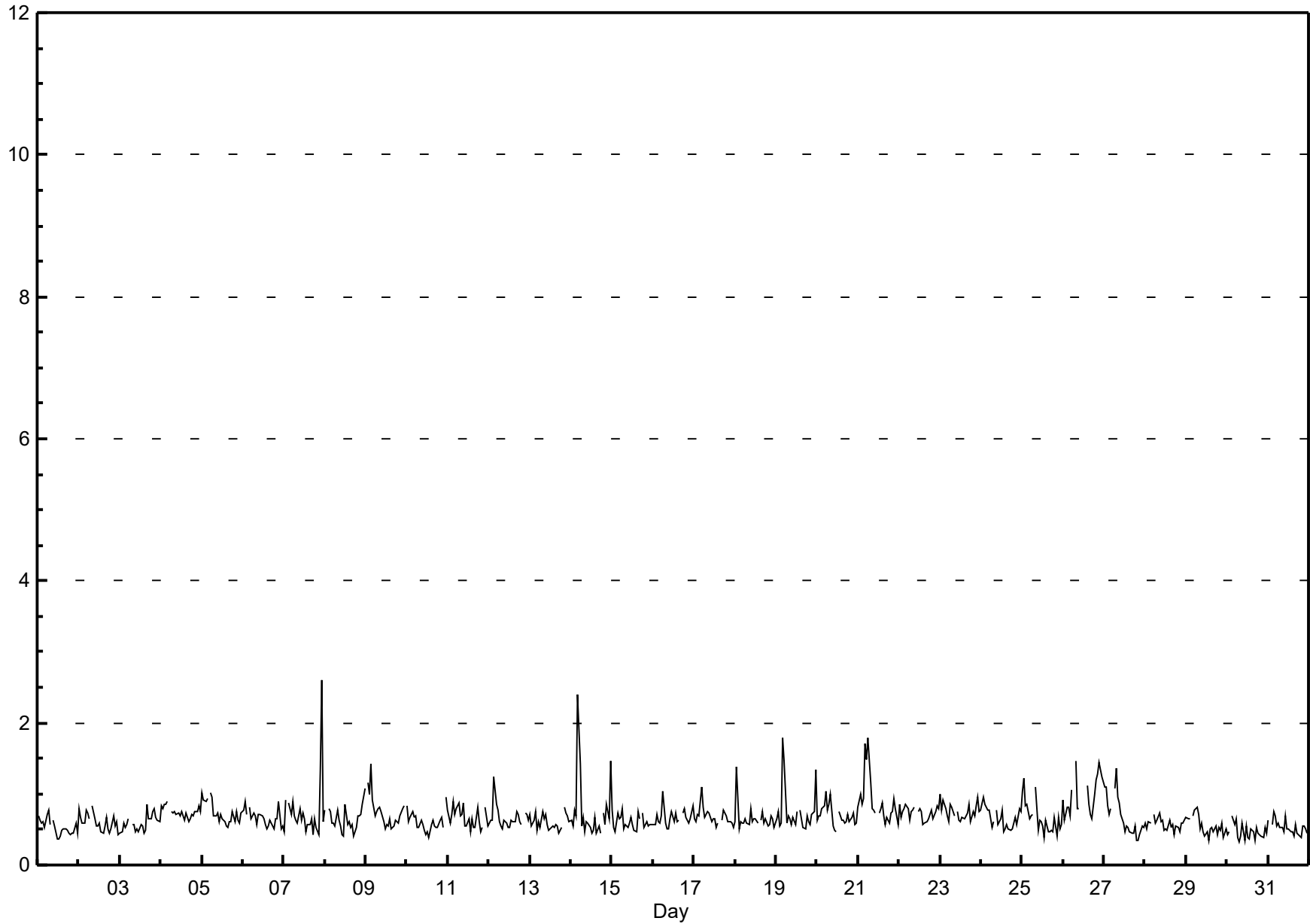


Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

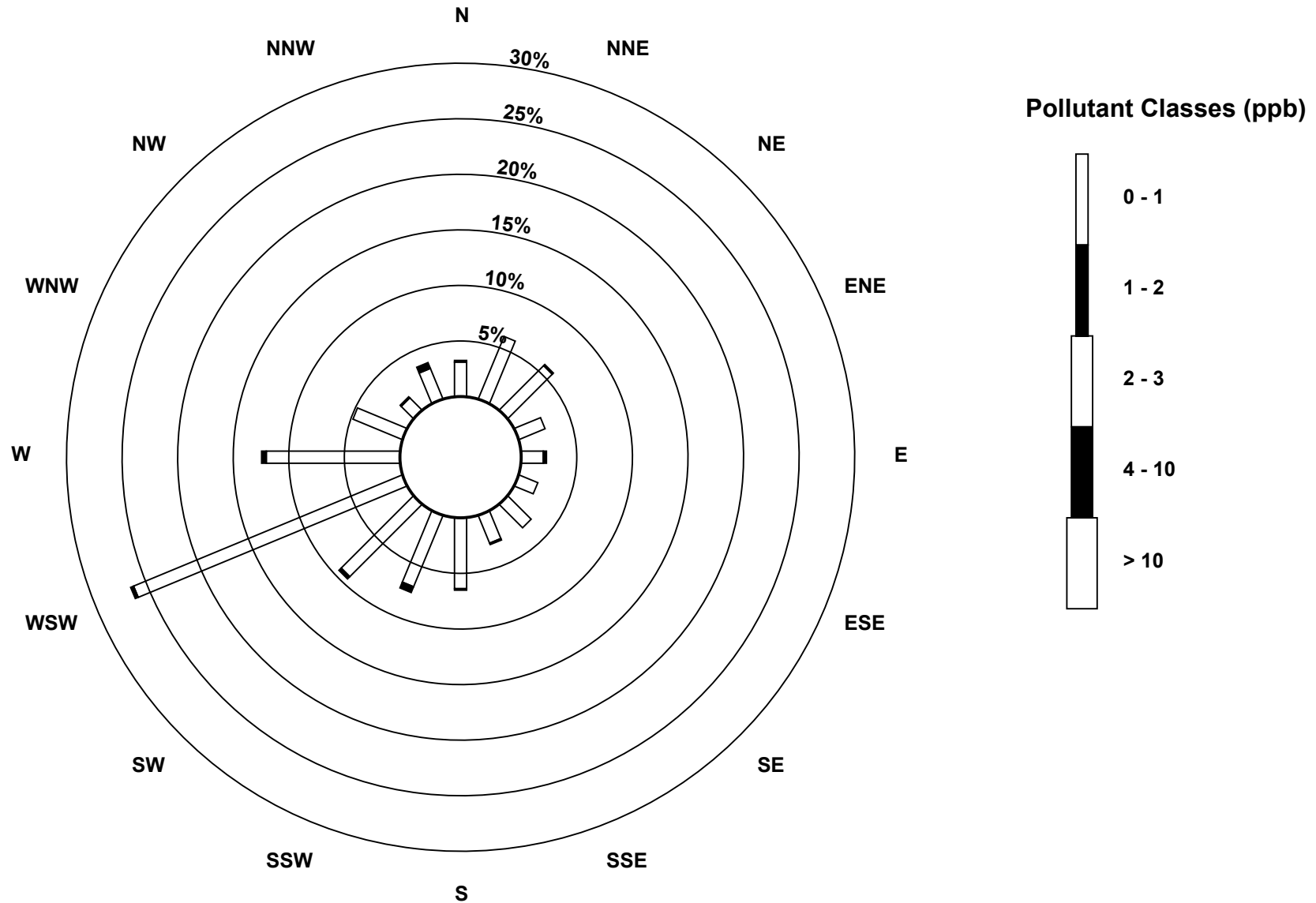
Smoky Heights - July 2017

Maximum Value: 2.6 ppb on Jul 7 23:00		Maximum Daily Average: 1.0 ppb on Jul 26		Hours in Service: 744																							
Minimum Value: 0 ppb on Jul 30 08:00		Minimum Daily Average: 0.5 ppb on Jul 30		Hours of Data: 708																							
Maximum Diurnal Average: 0.8 ppb at hour 5		Minimum Diurnal Average: 0.5 ppb at hour 14		Hours of Missing Data: 36																							
Monthly Average: 0.67 ppb		Percentiles: P ₁ = 0.4 P ₁₀ = 0.5 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.7 P ₉₀ = 0.9 P ₉₉ = 1.4		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-Jul	1	1	1	1	1	1	1	1	A	1	1	0	0	0	0	1	1	0	0	0	0	0	1	0	0.5	0.8	
2-Jul	1	1	1	1	1	1	1	1	A	1	1	1	1	0	0	1	1	1	0	1	1	1	1	0	0.6	0.8	
3-Jul	0	0	1	1	1	1	1	A	1	1	0	1	0	1	0	0	1	1	1	1	1	1	1	1	0.6	0.9	
4-Jul	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9	
5-Jul	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0	
6-Jul	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0.7	0.9	
7-Jul	0	1	1	A	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	0	1	3	1	0.8	2.6	
8-Jul	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0	1	1	1	1	1	1	1	0.6	1.1	
9-Jul	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0.7	1.4	
10-Jul	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1	A	0.6	1.0	
11-Jul	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	A	1	0.7	0.9	
12-Jul	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	1.2	
13-Jul	1	1	1	1	0	1	1	1	1	1	1	0	1	1	1	1	0	1	1	A	1	1	1	1	0.6	0.8	
14-Jul	1	1	1	1	2	1	1	1	0	1	1	1	0	0	1	0	1	0	A	1	1	1	1	1	0.7	2.4	
15-Jul	1	1	0	1	1	1	1	1	1	1	1	1	1	0	0	1	1	A	1	1	1	1	1	1	0.6	0.8	
16-Jul	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.7	1.0	
17-Jul	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	
18-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.4	
19-Jul	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.8	
20-Jul	1	1	1	1	1	1	1	1	1	1	0	0	A	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0	
21-Jul	1	1	1	1	2	1	2	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.8	
22-Jul	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	0.9	
23-Jul	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	
24-Jul	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	0	1	1	0	1	1	1	1	1	0.7	0.9	
25-Jul	1	1	1	1	1	1	1	1	A	1	0	1	1	1	0	1	0	0	0	0	0	1	0	1	0.7	1.2	
26-Jul	1	1	1	1	1	1	A	1	1	1	C	C	C	C	1	1	1	1	1	1	1	1	1	1	1.0	1.5	
27-Jul	1	1	1	1	1	1	A	1	1	1	1	1	0	1	1	0	0	0	1	0	0	0	1	1	0.7	1.4	
28-Jul	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	0	1	1	0	1	1	1	0.6	0.7	
29-Jul	1	1	1	1	A	1	1	1	1	1	0	0	0	0	1	1	0	1	0	1	0	1	0	1	0.6	0.8	
30-Jul	0	0	A	1	1	1	0	0	0	1	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0.5	0.7	
31-Jul	1	A	1	1	1	1	1	1	1	0	1	1	1	0	0	0	1	0	0	0	0	1	1	0	0.5	0.8	
		0.7	0.8	0.7	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	Diurnal Average
		1.1	1.4	1.0	1.4	2.4	1.5	1.8	1.5	1.1	0.9	0.8	0.8	0.9	0.8	1.1	0.9	0.9	0.9	0.9	1.0	1.2	1.3	1.4	2.6	1.5	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																									



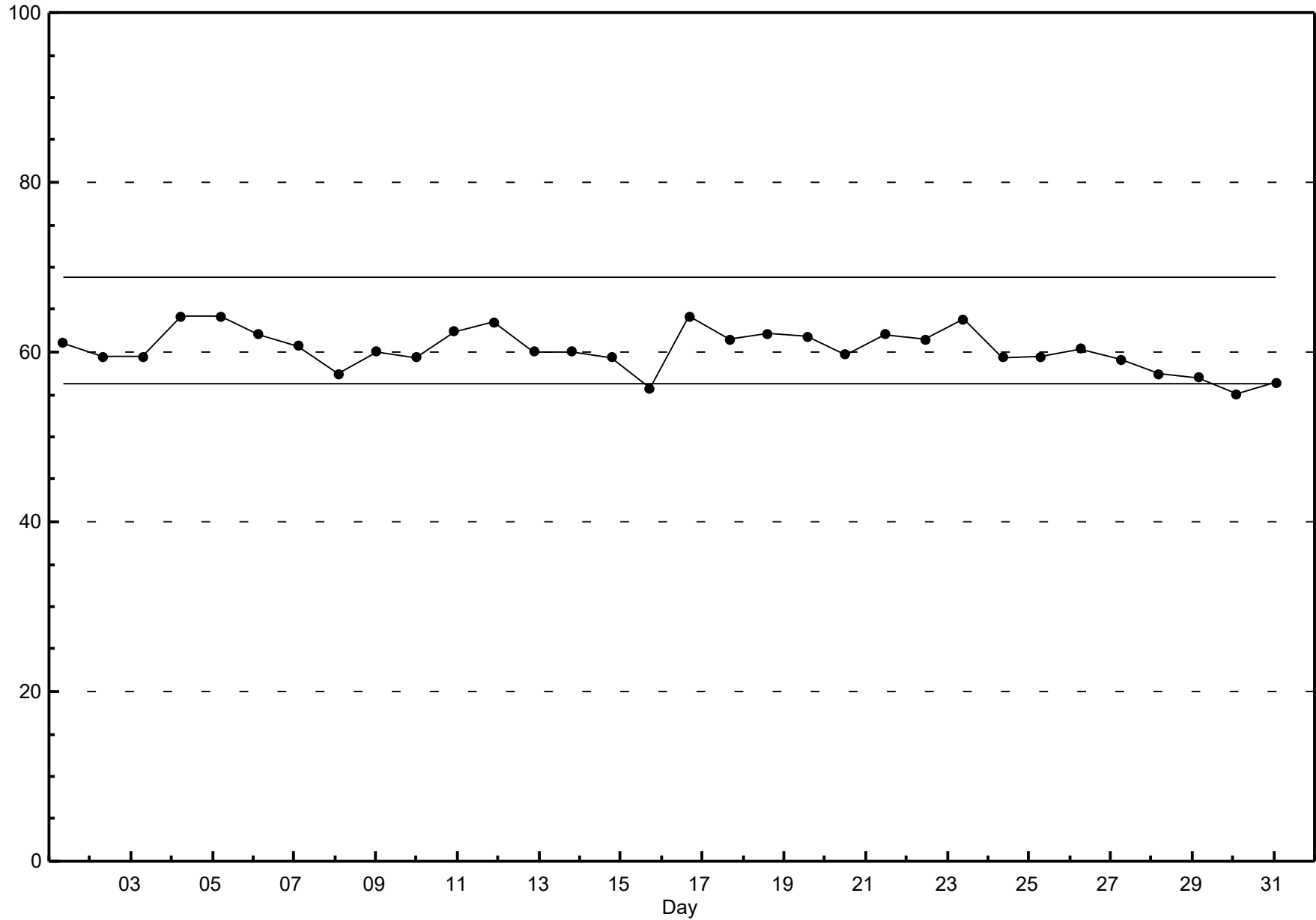
Pollutant Rose

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



Span Responses

**Total Reduced Sulphur (TRS)
Smoky Heights - July 2017**



Hourly Averages

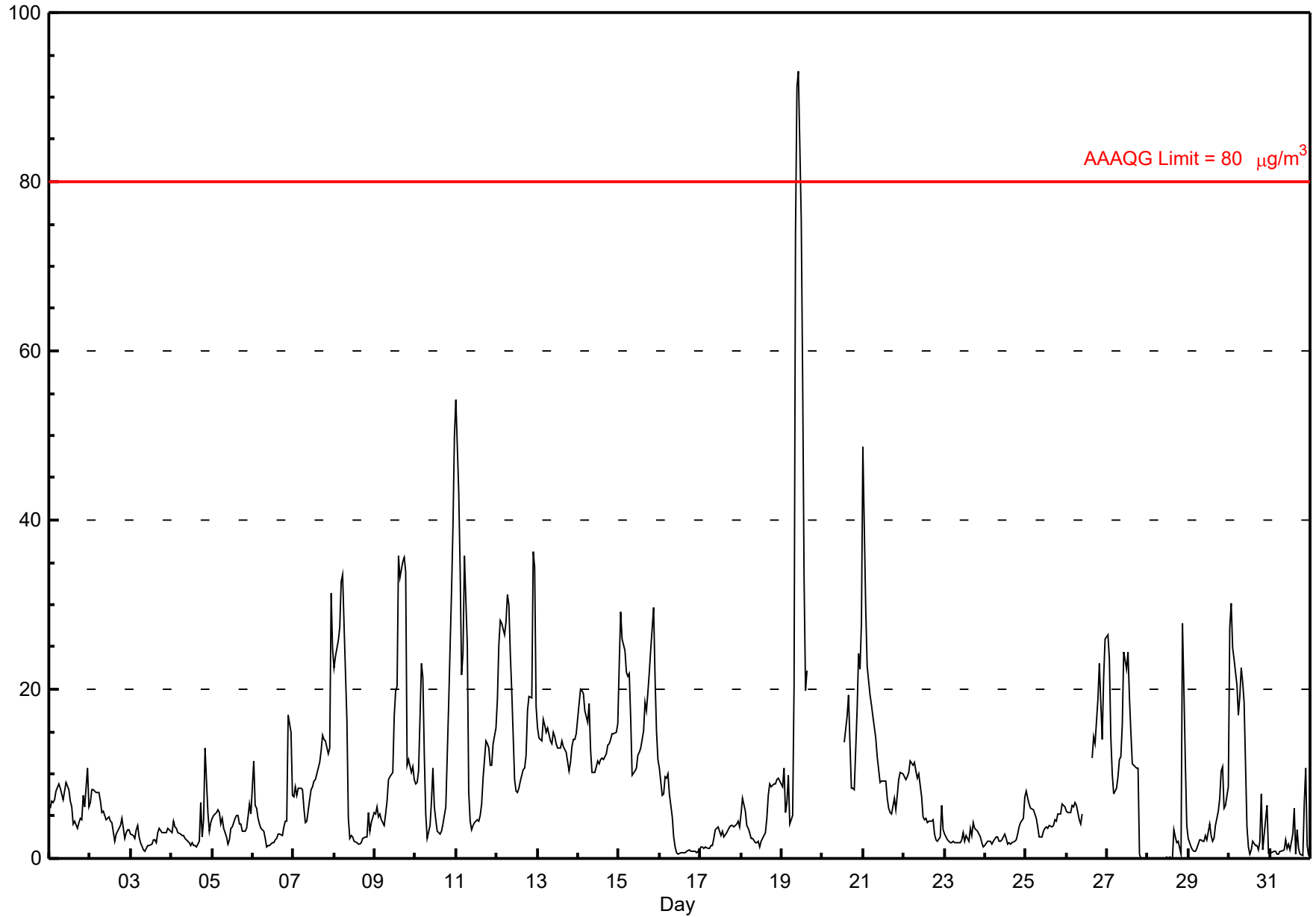
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Smoky Heights - July 2017

Number of Exceedences: 1-hr: 2 24-hr: 0	Hours in Service: 744
Maximum Value: 93.1 µg/m ³ on Jul 19 11:00	Maximum Daily Average: 20.0 µg/m ³ on Jul 12
Minimum Value: 0 µg/m ³ on Jul 27 21:00	Hours of Data: 718
Maximum Diurnal Average: 12.2 µg/m ³ at hour 1	Hours of Missing Data: 26
Monthly Average: 9.05 µg/m ³	Hours of Calibration: 5
Minimum Daily Average: 2.0 µg/m ³ on Jul 31	Percent Operational Time: 97.2
Minimum Diurnal Average: 6.9 µg/m ³ at hour 14	
Percentiles: P ₁ = 0.0 P ₁₀ = 1.4 Q ₁ = 2.6 Median = 5.4 Q ₃ = 11.8 P ₉₀ = 21.6 P ₉₉ = 47.0	

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-Jul	6	7	7	7	8	9	8	8	7	8	9	8	7	6	4	4	4	4	5	5	7	6	11	6	6.6	10.6																						
2-Jul	7	8	8	8	8	8	7	5	6	5	5	5	4	4	2	3	3	4	4	5	2	3	3	3	5.0	8.2																						
3-Jul	3	3	2	3	4	3	2	1	1	1	2	2	2	2	2	2	3	4	3	3	3	3	4	3	2.5	3.9																						
4-Jul	3	4	4	4	3	3	3	3	2	2	2	2	2	2	1	1	2	7	2	5	13	5	3	4	3.4	13.0																						
5-Jul	5	5	5	6	5	4	5	4	3	2	2	4	4	5	5	5	4	4	3	3	4	5	6	5	4.3	6.4																						
6-Jul	11	6	6	5	4	4	3	2	1	2	2	2	2	2	3	3	3	4	4	4	4	17	15	8	4.8	17.0																						
7-Jul	7	9	7	8	8	8	6	4	4	7	8	8	9	9	10	11	13	14	14	14	12	13	31	25	10.9	31.3																						
8-Jul	22	24	26	27	33	34	28	16	5	2	3	2	2	2	2	2	2	3	3	5	3	4	5	5	10.7	33.6																						
9-Jul	5	6	5	5	5	4	5	7	9	10	10	17	20	20	36	33	35	36	34	11	12	10	11	9	14.8	35.8																						
10-Jul	9	9	10	23	21	12	5	2	4	7	11	6	5	3	3	3	4	5	6	18	25	32	39	50	13.1	49.9																						
11-Jul	54	43	34	22	24	36	25	8	4	3	4	4	5	4	5	6	10	14	13	13	11	11	14	15	16.0	54.2																						
12-Jul	19	25	28	28	26	28	31	30	24	20	9	8	8	8	9	11	11	12	17	19	19	36	34	18	20.0	36.2																						
13-Jul	15	14	14	16	16	15	15	14	14	15	14	13	13	13	14	13	13	13	10	11	13	14	14	15	13.9	16.4																						
14-Jul	18	20	20	19	17	16	18	13	10	10	10	12	11	12	12	12	12	13	14	14	15	15	15	16	14.4	20.0																						
15-Jul	23	29	26	25	22	22	22	17	10	10	11	12	13	13	15	18	17	20	22	25	30	21	15	12	18.7	29.7																						
16-Jul	11	7	8	10	10	10	8	5	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3.4	10.6																						
17-Jul	1	1	1	1	1	1	2	2	2	3	4	3	3	3	3	3	3	4	4	4	4	4	4	4	2.8	4.3																						
18-Jul	5	7	6	4	4	3	2	2	2	2	2	1	2	3	3	5	8	9	8	9	9	9	10	9	5.1	9.5																						
19-Jul	8	11	5	7	10	4	5	21	74	91	93	76	56	33	20	22	N	N	N	N	N	N	N	N	--	93.1																						
20-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	14	17	19	14	8	8	8	18	24	22	28	--	27.8																						
21-Jul	49	29	23	21	19	18	17	14	12	11	9	9	9	9	7	6	5	5	7	6	7	9	10	10	13.5	48.7																						
22-Jul	10	9	10	10	11	11	11	10	9	10	7	5	5	5	4	4	4	5	3	2	2	3	6	3	6.7	11.5																						
23-Jul	3	2	2	2	2	2	2	2	2	2	2	3	2	3	2	3	3	4	4	3	3	3	2	1	2.4	4.2																						
24-Jul	1	2	2	2	2	2	3	2	2	2	2	3	2	2	2	2	2	2	2	3	4	4	5	7	2.6	7.3																						
25-Jul	8	7	6	6	6	5	5	4	3	3	3	4	4	4	4	4	4	5	4	5	5	7	6	6	4.8	7.9																						
26-Jul	6	5	5	6	6	7	6	5	4	5	C	C	C	C	C	12	14	14	19	23	18	14	21	26	11.4	25.9																						
27-Jul	26	24	14	10	8	8	10	12	12	16	24	22	24	19	15	11	11	11	11	0	0	0	0	0	0	12.0	26.4																					
28-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	2	2	0	28	20	11	4	3.1	27.7																						
29-Jul	2	1	1	1	1	1	2	2	2	2	3	2	4	3	2	2	4	6	7	10	11	6	6	9	3.8	10.9																						
30-Jul	27	30	25	24	21	17	19	23	21	18	4	1	1	1	2	2	1	1	2	8	1	5	6	1	10.8	30.2																						
31-Jul	1	1	1	1	1	1	1	1	1	2	1	2	1	3	6	1	3	1	0	0	7	11	1	0	2.0	10.7																						
																								12.2	11.7	10.4	10.4	10.2	9.8	9.2	7.9	8.4	9.1	8.8	8.2	7.6	6.9	7.0	7.4	7.2	7.7	7.9	7.9	9.8	10.5	11.1	10.1	Diurnal Average
																								54.2	43.4	34.3	27.8	32.8	35.7	31.2	30.0	73.9	91.1	93.1	75.5	56.3	32.7	35.8	33.2	35.1	35.6	33.9	24.8	29.7	36.2	39.3	49.9	Diurnal Maximum

C - Calibration N - Not Valid
 Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³

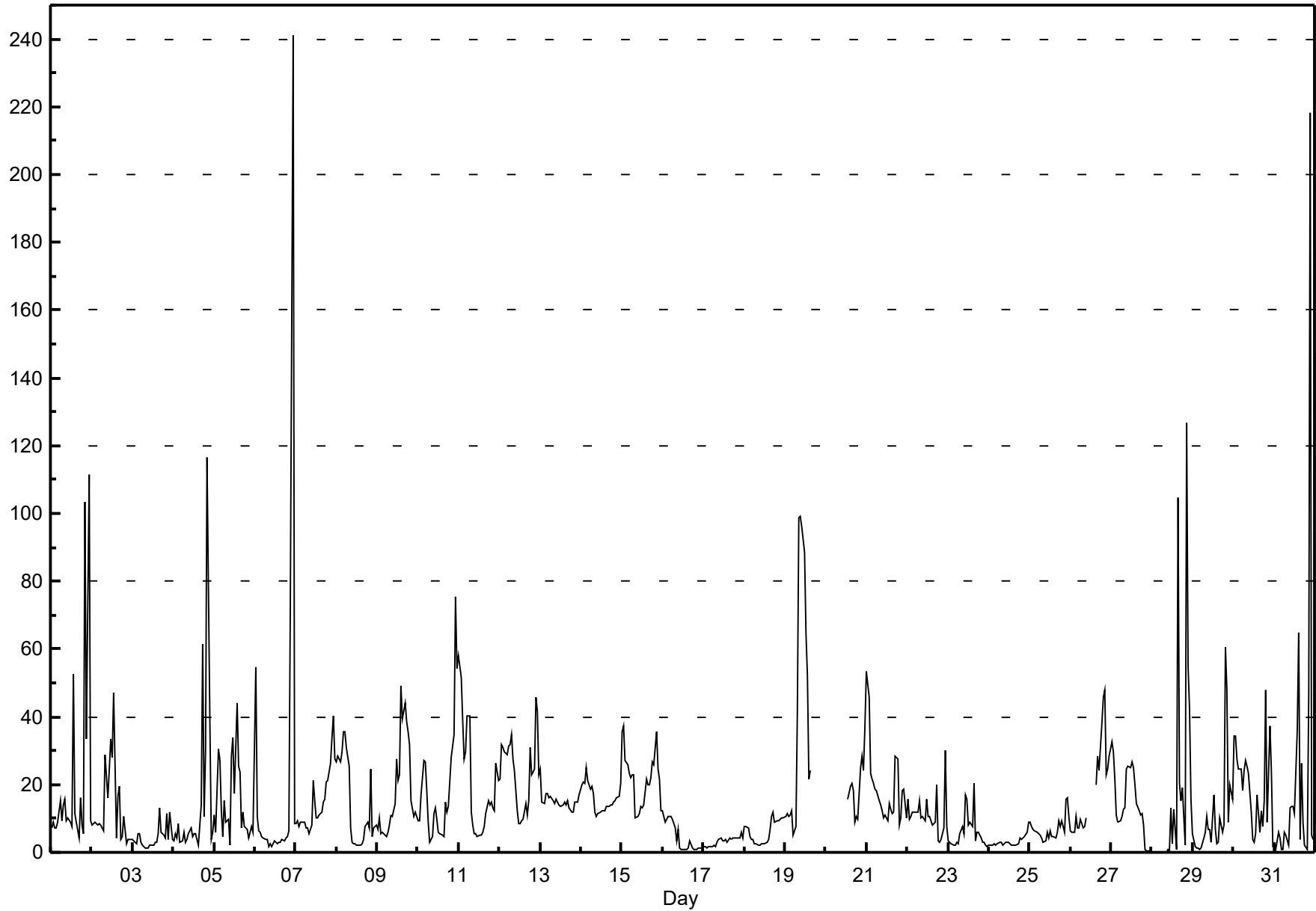


Hourly Maximums

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

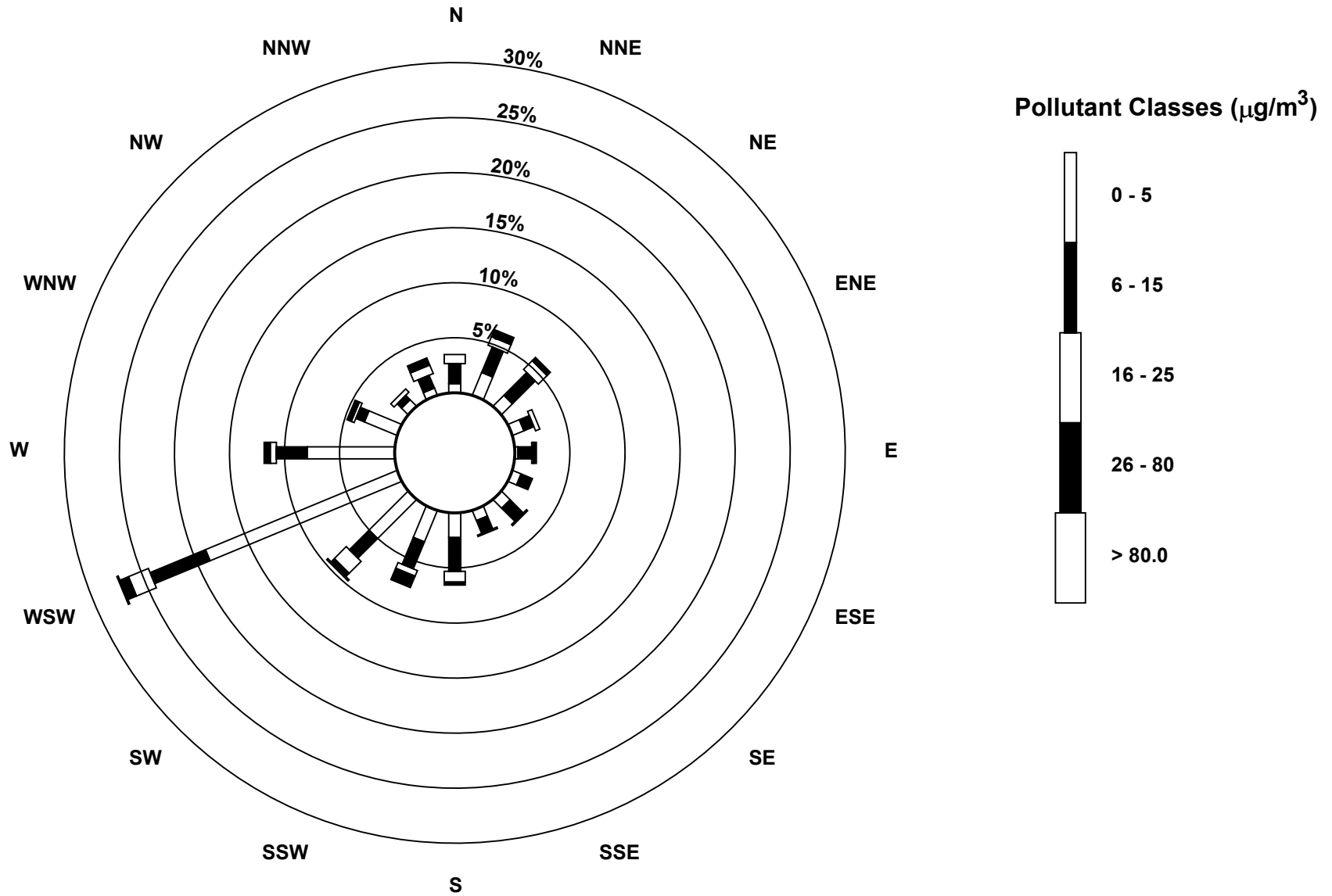
Smoky Heights - July 2017

Maximum Value: 241.3 µg/m ³ on Jul 6 23:00 Minimum Value: 0 µg/m ³ on Jul 28 02:00 Maximum Diurnal Average: 28.8 µg/m ³ at hour 23 Monthly Average: 14.84 µg/m ³		Maximum Daily Average: 23.8 µg/m ³ on Jul 12 Minimum Daily Average: 3.1 µg/m ³ on Jul 24 Minimum Diurnal Average: 11.1 µg/m ³ at hour 6 Percentiles: P ₁ = 0.0 P ₁₀ = 2.2 Q ₁ = 4.4 Median = 9.7 Q ₃ = 18.3 P ₉₀ = 31.0 P ₉₉ = 102.8		Hours in Service: 744 Hours of Data: 718 Hours of Missing Data: 26 Hours of Calibration: 5 Percent Operational Time: 97.2																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	7	9	7	7	9	15	9	14	16	9	10	9	8	53	11	9	4	16	8	5	104	33	112	9	20.6	111.6
2-Jul	8	9	9	8	9	8	7	6	29	16	25	34	28	47	4	16	19	4	5	11	3	4	4	4	13.1	47.1
3-Jul	4	3	3	5	5	3	2	1	1	1	2	2	2	3	3	6	13	6	5	4	11	4	12	4	4.4	13.2
4-Jul	3	5	4	9	3	3	6	3	4	6	7	5	6	6	4	2	14	62	10	30	117	39	4	6	14.9	116.7
5-Jul	11	6	31	27	12	5	15	9	10	2	29	34	17	44	26	24	7	12	8	7	4	6	8	6	14.9	43.9
6-Jul	54	11	6	6	5	4	4	4	2	2	2	3	3	3	3	3	4	3	4	5	6	73	241	8	19.2	241.3
7-Jul	8	9	8	9	9	9	7	7	6	8	21	15	10	10	11	12	15	16	21	21	26	34	40	28	15.0	40.3
8-Jul	27	28	27	30	35	35	31	26	7	3	3	2	2	2	2	4	8	9	7	25	5	7	8	8	14.0	35.4
9-Jul	7	10	6	6	6	5	6	8	11	11	14	27	21	23	49	40	44	39	35	32	15	11	12	11	18.6	49.3
10-Jul	10	10	17	27	27	18	9	3	5	11	13	10	6	5	5	5	15	12	14	28	31	35	75	54	18.5	75.3
11-Jul	58	52	39	28	30	40	40	12	8	6	5	5	5	5	6	8	11	15	14	15	13	12	26	21	19.7	58.1
12-Jul	21	32	31	30	29	32	32	35	28	24	12	9	8	9	10	14	11	15	31	23	25	46	42	23	23.8	45.9
13-Jul	25	15	14	18	17	16	16	15	14	16	15	14	13	14	15	14	15	13	12	12	15	15	15	17	15.2	24.7
14-Jul	20	21	21	25	21	19	20	17	12	11	11	12	12	12	12	13	13	14	14	15	15	16	16	20	15.9	25.1
15-Jul	36	37	27	26	23	22	23	23	10	11	11	14	13	14	21	20	20	22	27	26	35	25	21	12	21.7	37.1
16-Jul	12	9	10	11	11	10	10	7	3	7	1	1	1	1	1	1	3	1	1	1	1	1	1	1	4.5	12.2
17-Jul	2	2	1	2	2	2	2	2	3	4	4	3	3	4	3	4	4	4	4	4	4	4	6	4	3.2	6.1
18-Jul	8	8	7	5	4	4	3	3	2	2	2	2	2	3	4	7	11	12	9	10	9	10	10	10	6.1	12.0
19-Jul	11	11	11	11	12	5	8	42	99	99	96	89	64	52	22	24	N	N	N	N	N	N	N	N	--	99.1
20-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	16	20	20	18	9	10	10	25	28	24	37	--	36.9
21-Jul	53	46	23	22	21	19	18	15	14	12	10	11	10	14	13	11	12	28	27	8	10	18	19	10	18.5	53.5
22-Jul	16	10	11	12	12	12	12	15	10	11	9	16	10	11	9	8	9	20	3	3	4	7	30	8	11.1	30.0
23-Jul	3	3	3	2	2	3	3	5	8	6	17	16	8	9	8	20	3	6	6	4	3	3	2	2	6.0	20.5
24-Jul	2	2	2	2	2	2	3	3	2	2	3	3	3	2	2	2	2	2	4	4	4	5	6	9	3.1	9.0
25-Jul	9	8	7	6	6	6	5	4	3	3	6	4	6	5	5	4	6	9	8	9	6	16	16	11	7.0	16.1
26-Jul	6	6	6	10	7	7	10	7	8	10	C	C	C	C	C	20	29	24	38	46	48	23	24	29	18.9	47.9
27-Jul	33	30	21	11	9	9	11	13	13	25	26	25	27	25	20	14	12	11	11	8	1	0	0	0	14.8	32.7
28-Jul	0	0	0	0	0	0	0	0	0	1	0	13	3	13	1	105	20	15	19	2	127	54	42	16	18.0	126.5
29-Jul	6	2	1	1	1	1	4	6	11	7	7	3	17	7	2	3	10	6	8	61	48	9	20	16	10.7	60.8
30-Jul	34	34	28	24	24	18	24	27	25	23	12	4	3	5	17	6	12	8	15	48	9	37	24	2	19.4	47.9
31-Jul	2	1	6	4	1	1	6	5	2	13	14	13	12	36	65	4	26	9	2	1	47	218	5	4	20.7	218.4
		16.5	14.2	12.9	12.8	11.8	11.1	11.5	11.3	12.2	12.1	13.4	13.7	11.2	15.1	12.4	14.3	13.0	14.1	12.7	15.3	26.4	26.4	28.8	13.0	Diurnal Average
		58.1	51.8	38.8	29.8	35.4	40.3	40.3	42.0	98.7	99.1	96.0	88.7	64.5	52.5	64.7	104.8	44.0	61.5	38.1	60.8	126.5	218.4	241.3	54.2	Diurnal Maximum
C - Calibration		N - Not Valid																								



Pollutant Rose

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



Hourly Averages

External Temperature (ET) - °C

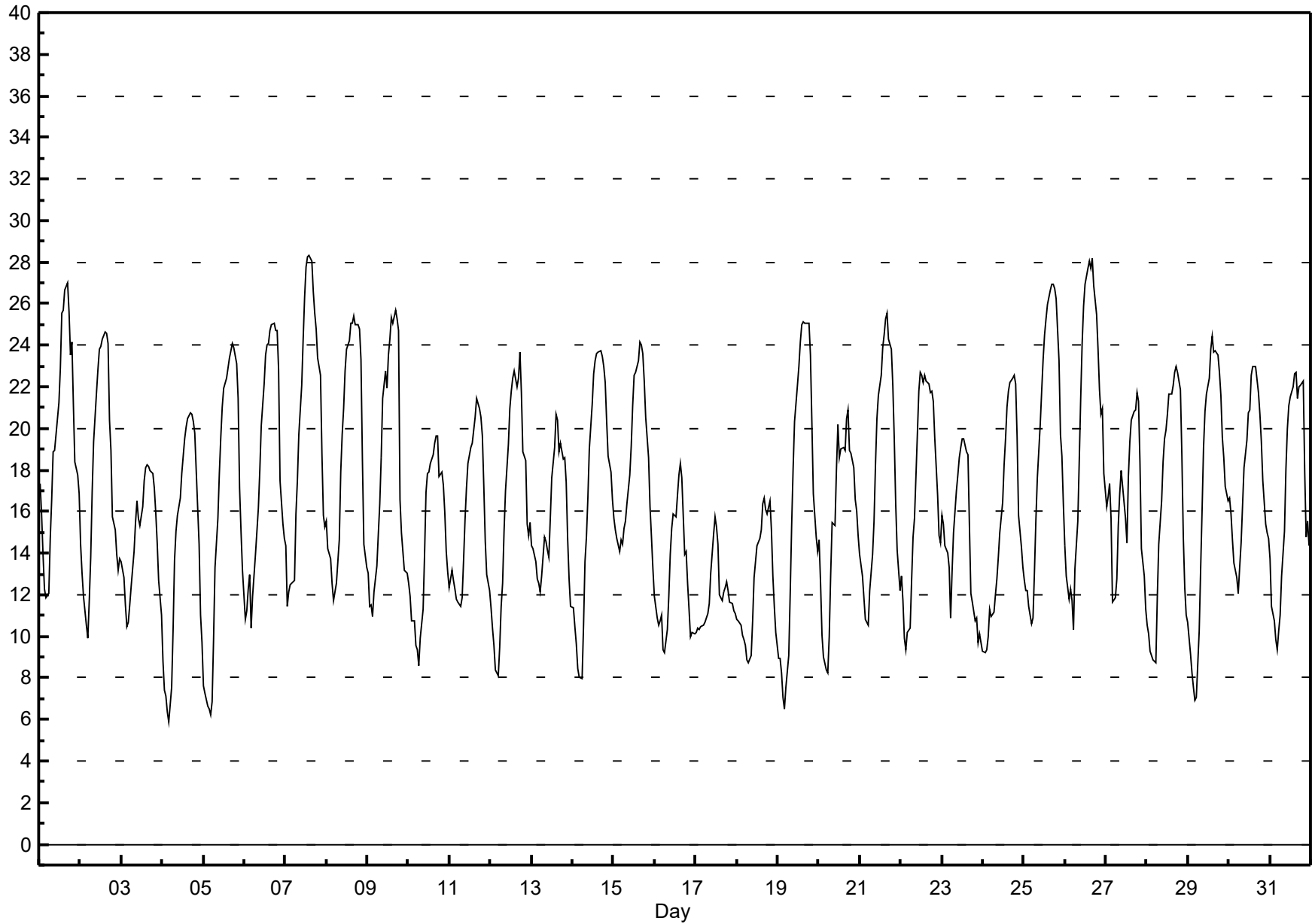
Smoky Heights - July 2017

Maximum Value: 28.3 °C on Jul 7 15:00 Minimum Value: 6 °C on Jul 4 05:00 Maximum Diurnal Average: 22.3 °C at hour 16 Monthly Average: 16.64 °C		Maximum Daily Average: 20.3 °C on Jul 26 Minimum Daily Average: 12.0 °C on Jul 17 Minimum Diurnal Average: 10.3 °C at hour 5 Percentiles: P ₁ = 6.9 P ₁₀ = 10.2 Q ₁ = 12.3 Median = 15.9 Q ₃ = 21.0 P ₉₀ = 23.8 P ₉₉ = 27.7		Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0																																												
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
1-Jul	17	16	14	12	12	12	15	17	19	19	20	21	23	26	27	27	26	24	24	21	18	18	17	19.5	27.0																							
2-Jul	14	13	12	11	10	12	14	17	19	22	23	24	24	24	25	25	24	20	19	16	15	14	13	14	17.6	24.6																						
3-Jul	14	13	12	10	11	11	12	14	15	17	16	15	16	17	18	18	18	18	18	17	16	15	13	11	14.8	18.2																						
4-Jul	9	7	7	6	6	8	10	14	15	16	17	18	19	20	20	21	21	21	20	20	18	14	11	10	14.4	20.8																						
5-Jul	8	7	7	7	6	7	10	13	16	18	20	21	22	22	23	23	24	24	24	23	21	17	15	13	16.3	24.1																						
6-Jul	11	11	12	13	10	12	14	15	16	18	20	22	24	24	24	25	25	25	25	25	23	17	15	15	18.4	25.0																						
7-Jul	14	11	12	12	13	13	16	18	20	22	24	26	28	28	28	28	27	26	25	23	23	19	16	15	20.3	28.3																						
8-Jul	16	14	14	13	12	12	13	15	18	20	21	23	24	24	25	25	25	25	25	25	23	18	14	13	19.0	25.4																						
9-Jul	13	11	11	11	12	13	15	16	19	21	23	22	24	24	25	25	26	25	25	17	15	13	13	13	18.0	25.7																						
10-Jul	13	12	11	11	10	9	9	10	11	14	17	18	18	18	19	19	20	20	18	18	17	16	14	13	14.7	19.7																						
11-Jul	12	13	13	12	12	12	11	12	14	16	17	18	19	19	20	21	21	21	21	20	17	15	13	12	15.8	21.4																						
12-Jul	11	10	10	8	8	10	11	13	15	17	19	21	22	22	23	22	22	24	22	19	18	15	15	15	16.4	23.7																						
13-Jul	14	14	14	13	13	12	13	15	15	14	14	16	18	19	21	20	19	19	19	19	17	15	13	11	15.6	20.7																						
14-Jul	11	10	10	8	8	8	11	14	15	17	19	21	23	23	24	24	24	23	23	22	20	19	18	17	17.1	23.7																						
15-Jul	16	15	15	14	15	14	15	16	16	18	19	21	23	23	23	24	24	24	22	21	19	16	15	13	18.3	24.2																						
16-Jul	12	11	11	11	11	9	9	10	12	14	15	16	16	17	18	18	18	14	14	13	11	10	10	10	12.9	18.3																						
17-Jul	10	10	10	10	11	11	11	11	12	13	15	16	15	14	12	12	12	12	13	12	12	12	11	11	12.0	15.8																						
18-Jul	11	11	11	10	10	10	9	9	9	11	13	14	14	15	16	17	16	16	17	15	13	11	10	10	12.5	16.7																						
19-Jul	9	9	8	7	7	8	9	12	15	18	20	22	23	24	25	25	25	25	25	24	20	17	15	14	16.9	25.1																						
20-Jul	15	13	10	9	8	8	10	13	15	15	18	20	19	19	19	19	20	21	19	19	18	17	16	15	15.6	20.9																						
21-Jul	14	13	12	11	11	11	12	14	16	18	20	22	23	24	24	25	26	24	24	22	20	16	14	12	17.8	25.5																						
22-Jul	13	12	10	9	10	10	13	15	16	18	22	23	23	22	23	22	22	22	22	21	20	17	15	15	17.2	22.7																						
23-Jul	16	15	14	14	13	11	13	15	17	18	19	19	20	19	19	19	15	12	12	11	11	10	10	10	14.6	19.5																						
24-Jul	9	9	9	10	11	11	11	12	13	14	15	16	18	19	21	22	22	22	23	22	20	16	14	13	15.6	22.6																						
25-Jul	13	12	12	11	11	11	13	16	18	20	22	23	24	25	26	27	27	27	27	26	23	20	19	16	19.5	26.9																						
26-Jul	14	13	12	12	12	10	13	16	18	21	24	26	27	28	28	28	28	27	25	24	22	21	21	18	20.3	28.2																						
27-Jul	16	17	17	16	12	12	13	15	17	18	17	16	15	18	19	20	21	21	22	21	18	14	13	11	16.6	21.7																						
28-Jul	11	10	9	9	9	9	12	14	16	18	19	20	21	22	22	22	23	23	23	22	19	15	12	11	16.3	23.0																						
29-Jul	11	9	8	8	7	7	10	13	16	19	21	22	22	24	24	24	24	24	23	22	20	19	17	16	17.0	24.4																						
30-Jul	17	16	15	14	13	12	13	15	16	18	19	21	21	23	23	23	22	22	21	19	17	15	15	15	17.7	23.0																						
31-Jul	14	11	11	10	9	10	11	13	15	18	20	21	22	22	23	23	21	22	22	22	18	15	16	14	16.8	22.7																						
																								12.8	12.0	11.3	10.7	10.3	10.5	12.0	13.8	15.6	17.4	19.0	20.1	20.8	21.6	22.1	22.3	22.3	21.7	21.2	20.1	18.3	15.7	14.4	13.4	Diurnal Average
																								17.3	16.7	17.4	15.7	14.6	14.4	15.9	17.5	19.7	22.0	24.3	26.3	27.8	28.3	28.3	28.1	28.2	26.9	26.7	26.3	23.3	20.7	21.0	17.8	Diurnal Maximum

Hourly Averages

External Temperature (ET) - °C

Smoky Heights - July 2017





Peace Airshed Zone Association

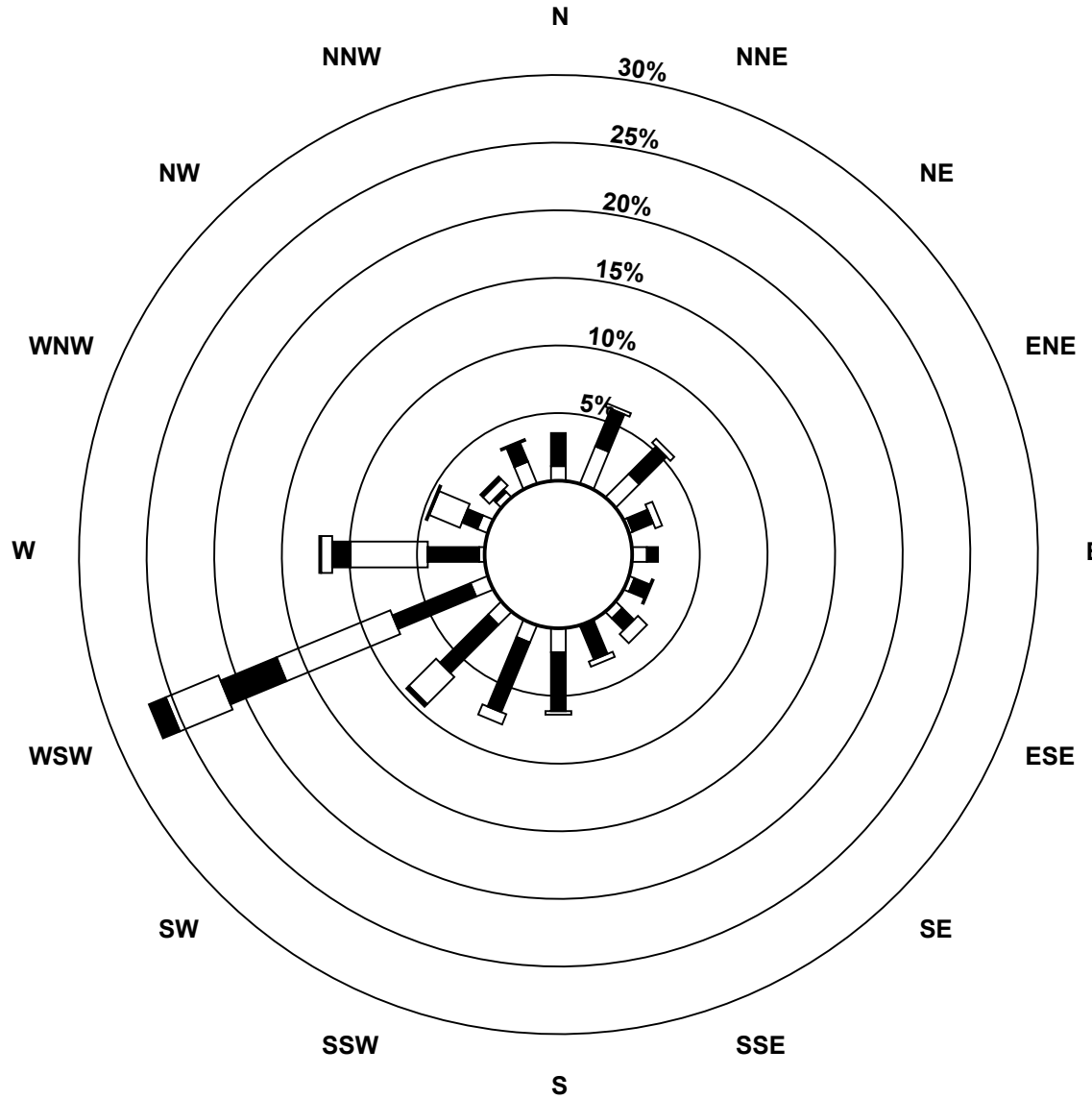
Hourly Averages

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

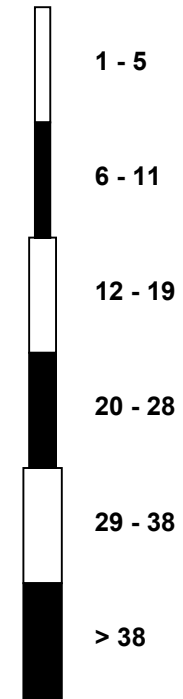
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	18	18	17	13	14	11	15	18	29	34	34	30	23	21	18	18	13	15	7	22	14	9	13	16	17.6	34.4
Dir	252	249	256	252	244	256	240	243	256	258	256	255	259	265	240	268	304	257	178	229	212	267	255	251	252.2	255.7
24 Spd	14	12	7	10	11	8	10	13	14	12	14	13	10	12	15	16	15	14	12	10	8	11	12	13	11.3	16.3
Dir	250	256	252	269	285	262	283	289	309	302	285	288	300	315	291	291	293	297	287	274	260	261	269	266	282.2	291.0
25 Spd	13	14	15	10	8	9	10	10	15	15	14	13	14	17	15	12	12	11	10	6	8	9	11	5	10.2	17.0
Dir	261	260	262	245	198	193	186	206	230	227	222	229	228	232	236	230	220	216	220	170	156	174	177	239	222.4	232.0
26 Spd	6	6	4	4	6	8	6	9	9	12	9	9	11	11	11	9	9	7	2	2	2	8	12	2	4.1	12.3
Dir	261	252	241	204	216	240	198	198	195	217	199	162	161	145	155	165	157	137	43	1	344	327	328	95	195.2	328.1
27 Spd	5	7	9	4	4	5	5	6	6	10	8	11	4	3	5	14	16	12	11	15	13	10	12	13	4.6	16.1
Dir	87	338	337	343	246	240	203	215	204	209	217	196	186	82	118	145	151	170	182	266	272	260	268	260	219.8	151.3
28 Spd	12	11	10	11	12	12	18	19	23	24	21	21	21	19	22	19	25	24	20	15	9	8	9	11	16.2	24.5
Dir	262	259	251	247	258	250	254	249	245	250	252	251	251	251	237	256	259	257	263	260	259	255	260	259	252.6	258.6
29 Spd	12	10	8	7	8	8	7	9	10	8	9	10	10	9	7	9	8	8	5	3	3	8	4	8	5.0	11.6
Dir	272	224	226	255	250	208	207	206	204	209	188	188	179	176	169	113	128	113	88	55	46	91	184	189	189.3	271.8
30 Spd	15	4	4	5	11	11	11	12	17	23	30	33	32	36	40	36	36	34	30	17	11	8	13	12	19.5	40.4
Dir	225	186	233	237	252	253	240	236	238	250	256	254	245	245	256	255	257	252	260	271	288	251	277	267	252.6	256.4
31 Spd	13	14	15	16	15	15	11	10	11	4	5	10	9	6	8	6	5	3	6	3	2	3	11	20	7.0	20.0
Dir	243	239	242	245	250	259	261	249	249	268	275	248	267	293	320	327	299	209	131	104	291	319	351	324	266.7	324.1
Spd	6.4	6.1	5.6	5.7	6.3	6.3	5.7	6.3	7.6	8.7	9.9	11.7	11.1	10.6	9.7	8.3	8.3	7.4	6.2	7.8	5.3	6.3	6.7	6.0	Diurnal Average	
Dir	252.6	252.5	256.1	253.1	254.4	245.3	242.0	239.2	239.7	237.2	239.5	244.0	244.2	247.3	249.1	252.2	256.0	252.7	247.0	256.1	251.3	252.8	258.7	260.5	Diurnal Maximum	
Spd	18.2	17.8	17.7	20.0	21.0	18.1	18.5	25.6	32.7	37.2	37.7	39.3	39.9	44.8	46.3	44.7	43.7	42.0	39.9	36.5	30.1	42.1	38.2	20.0	Diurnal Maximum	
Dir	252.3	253.3	253.4	248.7	254.7	260.9	252.3	238.0	248.6	247.7	244.8	251.8	252.4	243.2	244.5	244.4	242.0	243.4	244.6	238.7	248.9	264.3	268.3	324.1	Diurnal Maximum	
Maximum Speed Value: 46 km/h on Jul 3 15:00																				Minimum Speed Value: 0 km/h on Jul 17 19:00				Hours in Service:		744
Maximum Daily Speed Average: 27.8 km/h on Jul 3										Minimum Daily Speed Average: 2.2 km/h on Jul 18										Hours of Data:		743				
Maximum Diurnal Speed Average: 11.7 km/h at hour 12										Minimum Diurnal Speed Average: 5.3 km/h at hour 21										Hours of Missing Data:		1				
Monthly Average Velocity: 7.46 km/h 248.69 deg										Speed Percentiles: P ₁ = 1.2 P ₁₀ = 4.1 Q ₁ = 6.2 Median = 9.5 Q ₃ = 14.2 P ₉₀ = 22.6 P ₉₉ = 38.8										Percent Operational Time:		99.9				
All monthly, daily, and diurnal averages have been calculated using vector methods																										
N - Not Valid																										
Frequency Distribution																										
		Speed Range (km/h)																								
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																			
North	25	31	2	0	0	0	58																			
NorthEast	25	46	7	0	0	0	78																			
East	13	15	3	0	0	0	31																			
SouthEast	8	18	12	0	0	0	38																			
South	17	61	4	0	0	0	82																			
SouthWest	22	78	62	11	13	7	193																			
West	7	52	92	38	24	5	218																			
NorthWest	12	13	18	2	0	0	45																			
Total	129	314	200	51	37	12	743																			

Wind Rose

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



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Smoky Heights - July 2017

Maximum Speed: 47 km/h on Jul 3 15:00	Maximum Daily Speed Average: 28.4 km/h on Jul 3	Hours in Service: 744
Minimum Speed: 1 km/h on Jul 6 23:00	Minimum Daily Speed Average: 6.1 km/h on Jul 18	Hours of Data: 743
Maximum Diurnal Speed Average: 17.3 km/h at hour 13	Minimum Diurnal Speed Average: 8.4 km/h at hour 4	Hours of Missing Data: 1
Monthly Average Speed: 12.25 km/h	Percentiles: P ₁ = 2.2 P ₁₀ = 4.7 Q ₁ = 6.7 Median = 10.0 Q ₃ = 14.8 P ₉₀ = 22.9 P ₉₉ = 39.6	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-Jul	6	9	8	8	7	10	9	9	7	11	11	10	10	11	11	9	8	9	8	14	10	9	4	5	8.8	13.8
2-Jul	10	10	7	8	10	7	7	9	12	15	16	20	27	23	18	15	12	9	6	25	6	10	8	15	12.6	27.4
3-Jul	12	11	8	10	16	18	19	24	33	37	38	33	36	45	47	45	44	42	40	37	29	24	18	17	28.4	46.7
4-Jul	14	13	15	13	10	13	17	26	32	37	34	40	40	37	34	32	33	32	30	26	13	10	10	11	23.8	40.3
5-Jul	12	12	12	13	13	12	9	8	9	8	9	15	19	18	19	15	12	7	8	8	6	5	4	4	10.7	19.1
6-Jul	3	4	8	8	4	5	8	9	10	8	7	6	8	9	10	10	8	8	6	5	4	2	1	2	6.5	10.3
7-Jul	5	4	4	5	6	5	7	8	8	8	9	11	14	15	16	17	14	13	9	10	8	43	39	13	12.1	43.4
8-Jul	14	10	11	7	7	7	10	11	13	19	19	22	24	23	18	15	16	13	9	5	3	4	2	3	11.8	24.2
9-Jul	3	4	3	2	6	6	4	5	4	6	13	11	5	9	13	11	10	8	5	35	14	6	8	6	8.2	35.5
10-Jul	6	2	7	8	10	11	9	13	12	13	23	28	26	24	18	18	15	17	13	11	6	9	7	7	13.1	27.9
11-Jul	7	6	4	6	6	5	4	5	7	6	6	8	11	15	15	13	8	11	13	12	10	10	7	3	8.4	15.3
12-Jul	4	5	4	4	5	5	6	6	5	6	11	18	16	12	9	8	8	5	9	11	7	7	7	6	7.6	17.9
13-Jul	6	8	4	4	5	8	4	9	5	11	16	7	5	6	5	7	12	9	10	6	4	6	8	10	7.3	15.9
14-Jul	8	7	5	2	2	5	3	3	5	6	6	7	8	9	10	12	12	11	10	9	6	7	6	6	6.9	12.1
15-Jul	9	9	9	7	11	6	5	7	5	5	5	5	6	7	8	8	10	9	7	14	19	23	16	11	9.1	23.1
16-Jul	12	13	11	13	16	14	14	15	12	22	33	38	40	36	33	32	29	27	33	30	30	21	21	19	23.6	40.2
17-Jul	17	18	18	20	21	18	17	18	14	14	19	19	17	12	9	7	5	4	2	3	4	4	3	3	11.9	21.0
18-Jul	4	4	6	6	6	N	11	9	7	6	4	4	6	7	9	6	4	7	9	8	4	5	6	6	6.1	10.9
19-Jul	8	7	7	8	9	9	8	9	14	17	22	23	23	21	19	18	18	9	5	6	6	7	10	13	12.3	23.4
20-Jul	7	5	6	8	6	4	4	3	5	5	3	6	12	6	7	10	10	10	6	10	10	7	11	6	6.9	12.1
21-Jul	8	11	6	10	8	10	12	13	14	11	10	12	14	19	18	18	20	17	20	15	14	12	10	11	13.0	19.7
22-Jul	12	9	10	9	9	6	6	10	8	8	16	26	24	25	25	21	20	24	19	22	17	13	9	10	14.9	26.1
23-Jul	18	18	17	13	14	11	15	19	30	34	35	31	24	21	18	19	15	18	10	23	15	10	13	16	19.0	35.0
24-Jul	14	12	7	10	11	8	10	13	14	12	14	14	10	12	17	17	16	14	12	10	8	11	12	13	12.2	17.3
25-Jul	13	14	15	10	8	9	10	11	15	15	14	14	14	18	16	12	12	12	10	7	8	9	11	6	11.8	17.6
26-Jul	6	7	4	5	6	8	7	9	9	12	10	9	12	11	12	9	9	7	2	3	3	8	13	7	7.9	12.6
27-Jul	7	7	9	5	6	6	5	6	6	10	8	13	6	4	6	15	16	13	11	16	14	10	12	13	9.3	16.3
28-Jul	12	11	10	11	12	12	18	19	23	24	22	22	22	20	22	19	25	24	21	15	9	8	9	11	16.6	24.8
29-Jul	12	10	8	7	9	9	7	9	10	9	10	10	11	10	9	10	9	8	5	3	3	8	5	8	8.3	11.8
30-Jul	15	6	4	6	11	11	12	12	18	23	30	33	32	37	41	36	37	34	30	18	11	8	13	12	20.4	40.9
31-Jul	13	14	15	16	15	15	11	10	11	5	7	11	10	8	9	7	6	5	6	3	3	3	12	21	9.8	20.6
	9.6	9.0	8.5	8.4	9.2	9.1	9.3	10.9	12.1	13.7	15.4	16.9	17.3	17.1	16.8	15.9	15.1	14.0	12.4	13.5	9.8	10.3	10.1	9.5	Diurnal Average	
	18.3	17.9	17.7	20.1	21.0	18.1	18.6	25.8	33.0	37.5	37.9	39.9	40.3	45.1	46.7	45.2	44.1	42.2	40.1	36.6	30.2	43.4	39.1	20.6	Diurnal Maximum	

N - Not Valid
 All monthly, daily, and diurnal averages have been calculated using scalar methods

Hourly Standard Deviations

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

Maximum Value: 94.4 deg on Jul 14 05:00																	Hours in Service: 744								
Minimum Value: 2.2 deg on Jul 3 05:00																	Hours of Data: 743								
Percentiles: P ₁ = 3.2 P ₁₀ = 6.3 Q ₁ = 9.1 Median = 14.4 Q ₃ = 23.6 P ₉₀ = 39.1 P ₉₉ = 78.1																	Hours of Missing Data: 1								
																	Hours of Calibration: 0								
																	Percent Operational Time: 99.9								
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-Jul	13	10	12	15	20	13	11	14	17	10	8	21	25	25	20	49	30	22	11	8	8	13	38	36	49.4
2-Jul	11	12	17	10	8	29	18	19	17	20	20	19	12	14	24	20	46	41	67	26	57	15	11	7	67.1
3-Jul	16	12	14	24	2	5	6	7	7	7	6	6	8	7	8	8	7	6	6	5	4	4	4	3	23.5
4-Jul	5	6	11	8	11	11	7	6	6	9	7	10	9	9	9	8	11	10	8	6	7	6	13	7	12.8
5-Jul	4	5	5	4	5	4	37	19	25	22	38	24	17	20	19	20	23	38	29	9	6	8	8	40	40.4
6-Jul	19	16	11	14	21	16	11	14	10	18	27	32	35	24	24	24	29	15	26	20	9	25	78	67	77.6
7-Jul	25	66	11	10	9	10	10	11	13	13	15	13	26	25	12	14	8	9	39	72	69	17	15	28	72.0
8-Jul	63	20	15	18	9	16	6	6	11	10	10	14	11	13	16	18	22	15	16	18	14	10	82	43	81.5
9-Jul	32	68	28	64	5	15	19	11	16	43	40	50	84	32	23	19	20	18	32	18	13	58	37	57	83.7
10-Jul	32	63	10	27	5	8	18	5	8	12	23	10	12	11	19	22	15	14	7	7	14	10	11	23	62.9
11-Jul	18	53	27	15	13	19	21	28	16	27	42	22	22	20	18	20	33	22	12	8	7	8	29	61	61.2
12-Jul	17	8	19	22	12	8	10	8	18	24	22	13	19	26	25	12	20	74	92	19	30	41	43	58	92.2
13-Jul	11	9	47	43	28	51	80	11	49	36	28	68	49	39	73	30	36	13	17	16	14	23	15	12	79.6
14-Jul	9	16	77	53	94	42	30	72	33	19	28	29	22	38	22	16	13	15	12	10	12	11	10	24	94.4
15-Jul	26	14	9	13	12	44	18	9	21	26	25	38	34	31	22	20	33	10	29	12	22	10	28	29	44.1
16-Jul	15	9	8	7	5	10	18	11	13	18	6	8	8	8	10	9	22	14	6	5	5	5	4	4	21.7
17-Jul	3	4	5	3	4	4	12	6	9	12	13	18	13	17	17	17	23	58	83	38	34	13	33	15	83.0
18-Jul	18	12	14	13	12	N	14	21	25	25	51	58	47	35	26	34	62	35	16	9	10	12	22	10	62.0
19-Jul	3	9	16	9	10	12	9	8	12	8	8	12	10	15	15	15	13	20	21	7	28	22	12	38	38.1
20-Jul	13	65	18	7	17	15	68	36	30	26	94	80	8	18	19	15	26	31	7	6	39	25	20	20	93.8
21-Jul	27	9	60	12	19	11	11	7	8	14	39	23	25	19	16	15	13	10	10	5	4	8	9	7	60.3
22-Jul	8	8	16	17	22	15	10	10	16	17	26	12	10	8	11	10	11	8	11	10	4	8	18	20	26.5
23-Jul	7	7	7	10	6	5	7	10	8	8	12	12	18	15	11	21	30	34	68	37	31	16	8	4	68.5
24-Jul	4	6	10	11	5	10	9	8	9	12	10	10	27	19	33	18	15	10	12	6	10	7	4	4	32.5
25-Jul	5	3	4	23	6	6	4	13	9	9	14	14	16	14	25	22	18	24	12	9	8	3	3	39	38.9
26-Jul	6	12	25	17	10	10	14	8	15	13	25	25	16	19	19	17	15	21	45	9	45	5	14	74	74.3
27-Jul	52	18	5	38	61	36	20	20	22	10	14	35	54	55	38	18	10	11	19	9	15	12	6	6	61.4
28-Jul	8	16	10	14	9	6	5	6	6	7	11	12	11	20	10	12	9	9	10	6	4	5	13	9	20.5
29-Jul	11	11	15	8	19	16	12	8	9	18	31	21	23	32	49	20	19	17	14	19	21	20	53	27	52.6
30-Jul	19	61	27	32	6	18	14	16	22	5	7	8	7	9	9	10	7	7	7	14	7	13	5	15	61.4
31-Jul	16	7	6	3	3	6	7	10	10	40	50	37	35	48	28	43	31	42	14	31	67	18	17	15	67.3
62.7	67.8	77.1	63.7	94.4	50.6	79.6	72.0	48.8	42.7	93.8	79.8	83.7	55.4	72.6	49.4	62.0	73.7	92.2	72.0	69.2	58.2	81.5	74.3		
N - Not Valid																									

PAZA

Beaverlodge Station

Monthly Summary Tables, Graphs and
Roses

Hourly Averages

Sulphur Dioxide (SO₂) - ppb

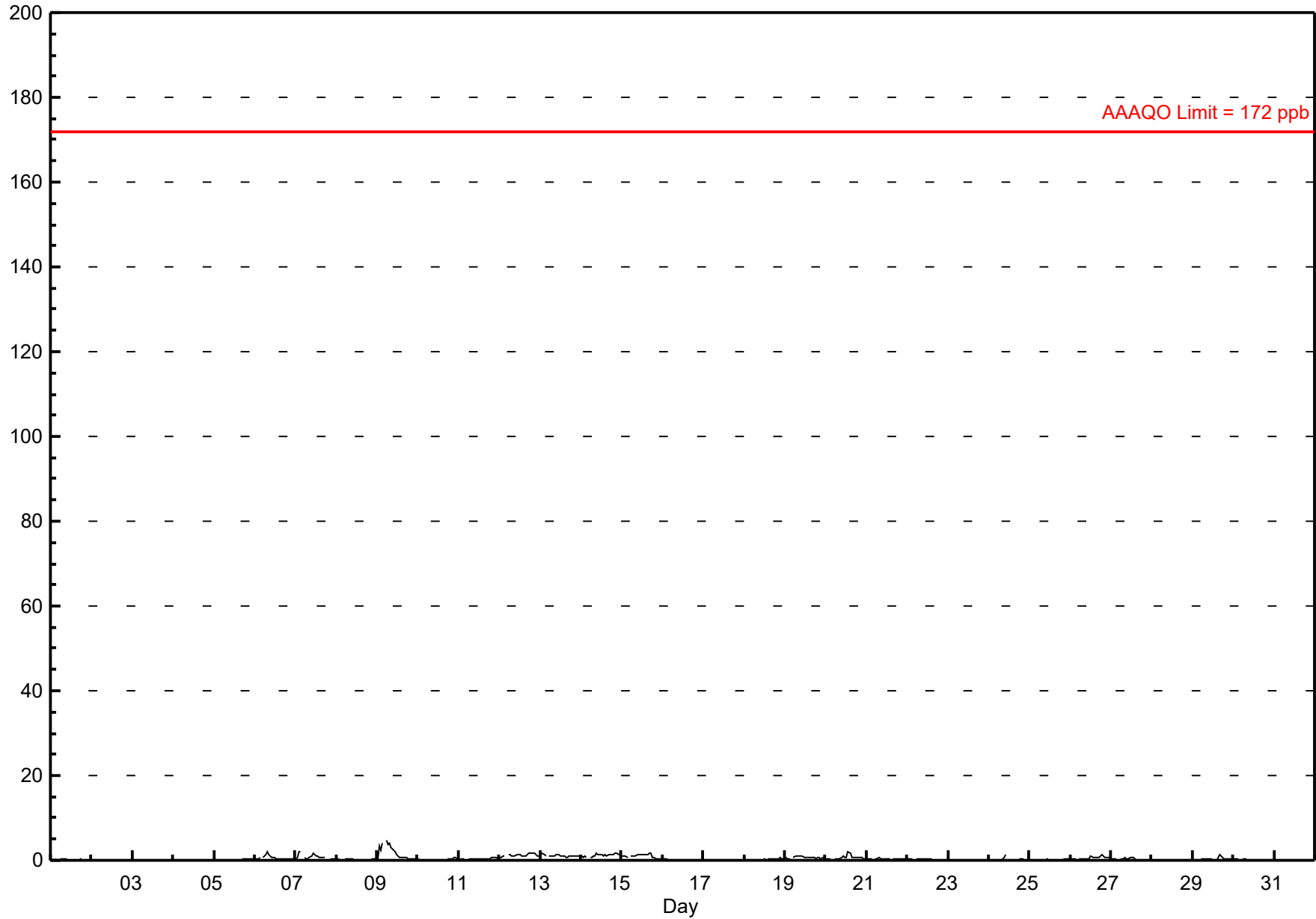
Beaverlodge - July 2017

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 4.8 ppb on Jul 9 06:00	Maximum Daily Average: 1.7 ppb on Jul 9		Hours of Data:	704
Minimum Value: 0 ppb on Jul 3 08:00	Minimum Daily Average: 0.0 ppb on Jul 3		Hours of Missing Data:	40
Maximum Diurnal Average: 0.5 ppb at hour 8	Minimum Diurnal Average: 0.3 ppb at hour 24		Hours of Calibration:	33
Monthly Average: 0.41 ppb	Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.5 P ₉₀ = 1.1 P ₉₉ = 2.6		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-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
2-Jul	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
3-Jul	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
4-Jul	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
5-Jul	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
6-Jul	0	0	0	1	A	1	1	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.6	1.9
7-Jul	0	1	2	2	A	1	0	0	1	1	2	1	1	1	1	1	1	1	P	P	0	0	0	0	0.8	2.0
8-Jul	0	0	0	0	A	0	0	0	0	0	0	M	0	M	0	0	0	0	0	0	0	0	0	0	0.2	0.4
9-Jul	0	3	2	4	A	5	4	4	3	3	2	1	1	1	1	1	1	1	0	0	0	0	0	0	1.7	4.8
10-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.2	0.6
11-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.3	0.7
12-Jul	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	1	1	1.2	1.7
13-Jul	1	2	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.8
14-Jul	1	1	1	1	A	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	2	2	1	1	1.2	1.9
15-Jul	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	2	2	1	1	0	0	0	0	1.0	1.6	
16-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
17-Jul	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	
18-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.2	0.6	
19-Jul	1	0	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	0.7	1.2	
20-Jul	0	0	0	0	A	0	1	0	0	1	1	1	2	2	1	1	1	1	1	1	1	1	0	0.7	1.9	
21-Jul	0	0	0	1	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5	
22-Jul	0	0	0	0	N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5	
23-Jul	0	0	0	0	N	0	0	0	0	0	0	M	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	
24-Jul	0	0	0	0	A	0	0	0	0	1	1	C	C	C	C	0	0	0	0	0	0	0	0	0.2	1.4	
25-Jul	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	
26-Jul	0	0	0	0	A	0	0	0	0	0	0	1	1	1	1	1	1	2	1	1	1	1	1	0.5	1.5	
27-Jul	0	0	1	0	A	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0.3	0.6	
28-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	
29-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0.3	1.2	
30-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
31-Jul	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	
	0.3	0.4	0.4	0.5	--	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	Diurnal Average	
	1.1	3.2	2.3	4.2	--	4.8	3.8	4.1	3.2	2.8	2.0	1.5	1.3	1.9	1.5	1.4	1.6	1.6	1.7	1.6	1.9	1.6	1.2	1.1	Diurnal Maximum	

C - Calibration P - Power Failure M - Maintenance N - Not Valid A - Automated Daily Zero Span

Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb



Hourly Maximums

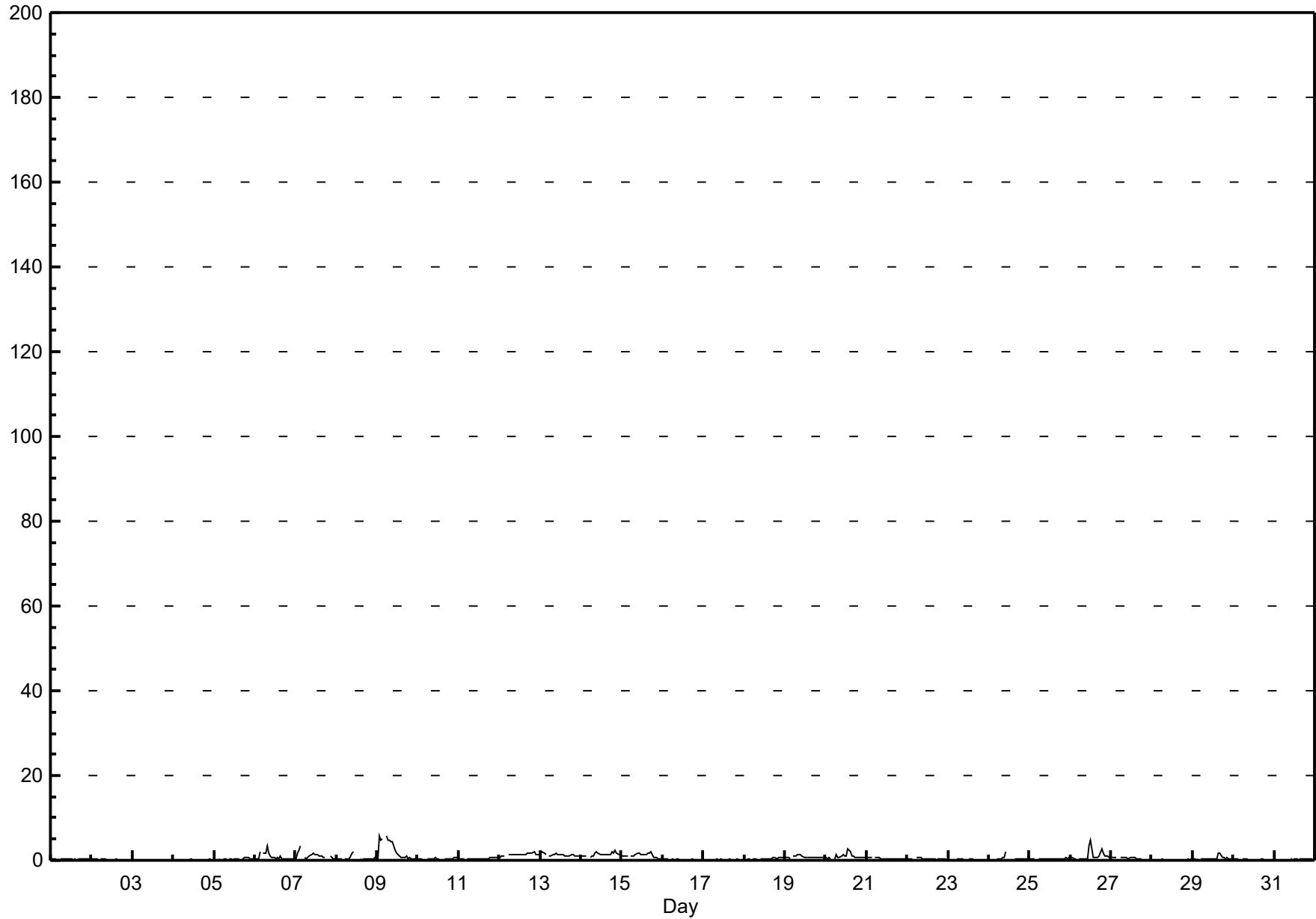
Sulphur Dioxide (SO₂) - ppb

Beaverlodge - July 2017

Maximum Value: 5.9 ppb on Jul 9 06:00		Maximum Daily Average: 2.3 ppb on Jul 9		Hours in Service: 744																							
Minimum Value: 0 ppb on Jul 3 21:00		Minimum Daily Average: 0.1 ppb on Jul 3		Hours of Data: 704																							
Maximum Diurnal Average: 0.7 ppb at hour 10		Minimum Diurnal Average: 0.4 ppb at hour 1		Hours of Missing Data: 40																							
Monthly Average: 0.58 ppb		Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.3 Q ₃ = 0.7 P ₉₀ = 1.3 P ₉₉ = 4.6		Hours of Calibration: 33																							
				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-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
2-Jul	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	
3-Jul	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	
4-Jul	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-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0.3	0.7	
6-Jul	0	0	0	2	A	2	2	4	2	1	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0.9	3.5	
7-Jul	0	2	2	3	A	1	0	1	1	1	2	1	1	1	1	1	1	1	P	P	1	1	0	0	1.1	3.4	
8-Jul	0	0	0	0	A	0	0	0	1	2	2	M	0	M	0	0	0	0	0	0	0	0	0	1	0.5	1.9	
9-Jul	0	6	5	5	A	6	5	5	4	4	2	2	1	1	1	1	1	1	0	1	0	0	0	0	2.3	5.9	
10-Jul	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	0.3	0.7	
11-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0.4	0.8	
12-Jul	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	1	1	1.3	1.9
13-Jul	1	2	2	1	A	1	1	1	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.3	2.0
14-Jul	1	1	1	1	A	1	1	1	2	2	2	1	1	1	1	1	1	1	2	2	2	2	1	1	1.4	2.2	
15-Jul	1	1	1	1	A	1	1	1	1	2	2	1	1	1	2	2	2	2	1	1	1	0	0	0	1.2	1.9	
16-Jul	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	
17-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
18-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	0.3	0.8	
19-Jul	1	1	1	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.3	
20-Jul	1	0	1	0	A	0	1	1	1	1	1	1	1	3	2	1	1	1	1	1	1	1	1	1	0.9	2.8	
21-Jul	1	1	1	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6	
22-Jul	0	0	0	0	N	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6	
23-Jul	0	0	0	0	N	0	0	0	0	0	0	M	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5	
24-Jul	0	0	0	0	A	0	0	0	1	1	2	C	C	C	C	0	0	0	0	0	0	0	0	0	0.4	2.0	
25-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.3	0.6	
26-Jul	1	1	0	0	A	0	0	0	0	0	0	3	5	1	1	1	1	1	3	2	1	1	1	1	1.0	4.6	
27-Jul	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.4	0.8	
28-Jul	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	
29-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	2	2	1	1	1	1	0	0	0	0.5	1.8	
30-Jul	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	
31-Jul	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	
		0.4	0.6	0.6	0.7	--	0.6	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.4	0.4	Diurnal Average		
		1.3	5.7	4.7	5.2	--	5.9	4.7	4.8	4.3	4.3	2.4	3.5	4.6	2.8	2.2	1.6	1.8	1.9	2.7	1.8	2.2	1.8	1.4	1.2	Diurnal Maximum	
C - Calibration					P - Power Failure					M - Maintenance					N - Not Valid					A - Automated Daily Zero Span							

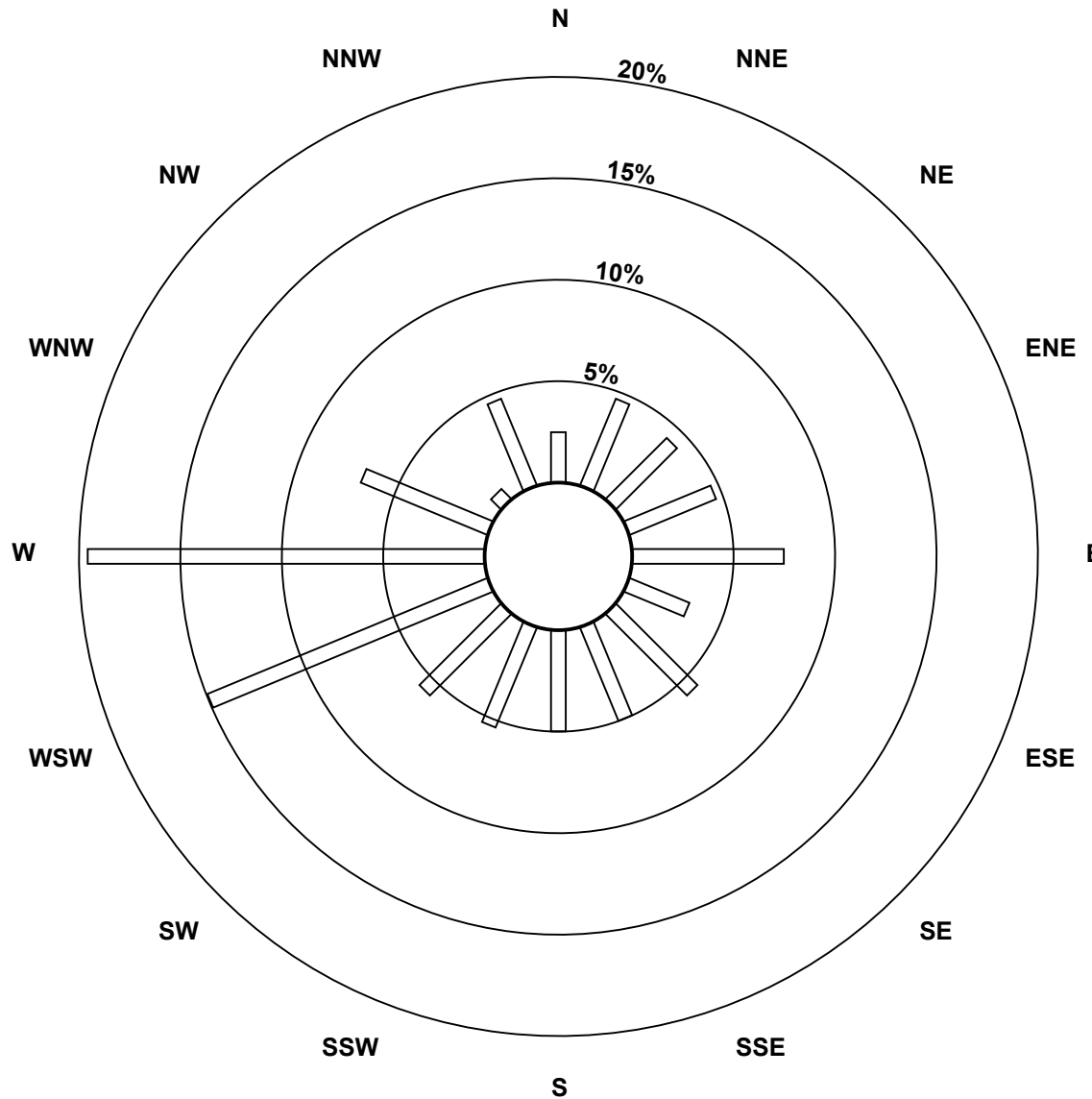
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - July 2017

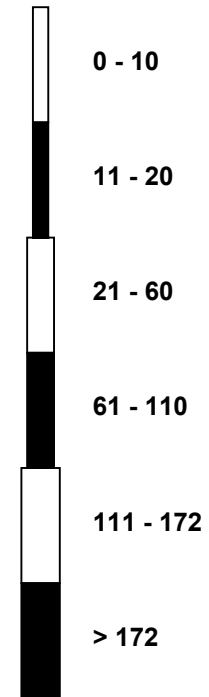


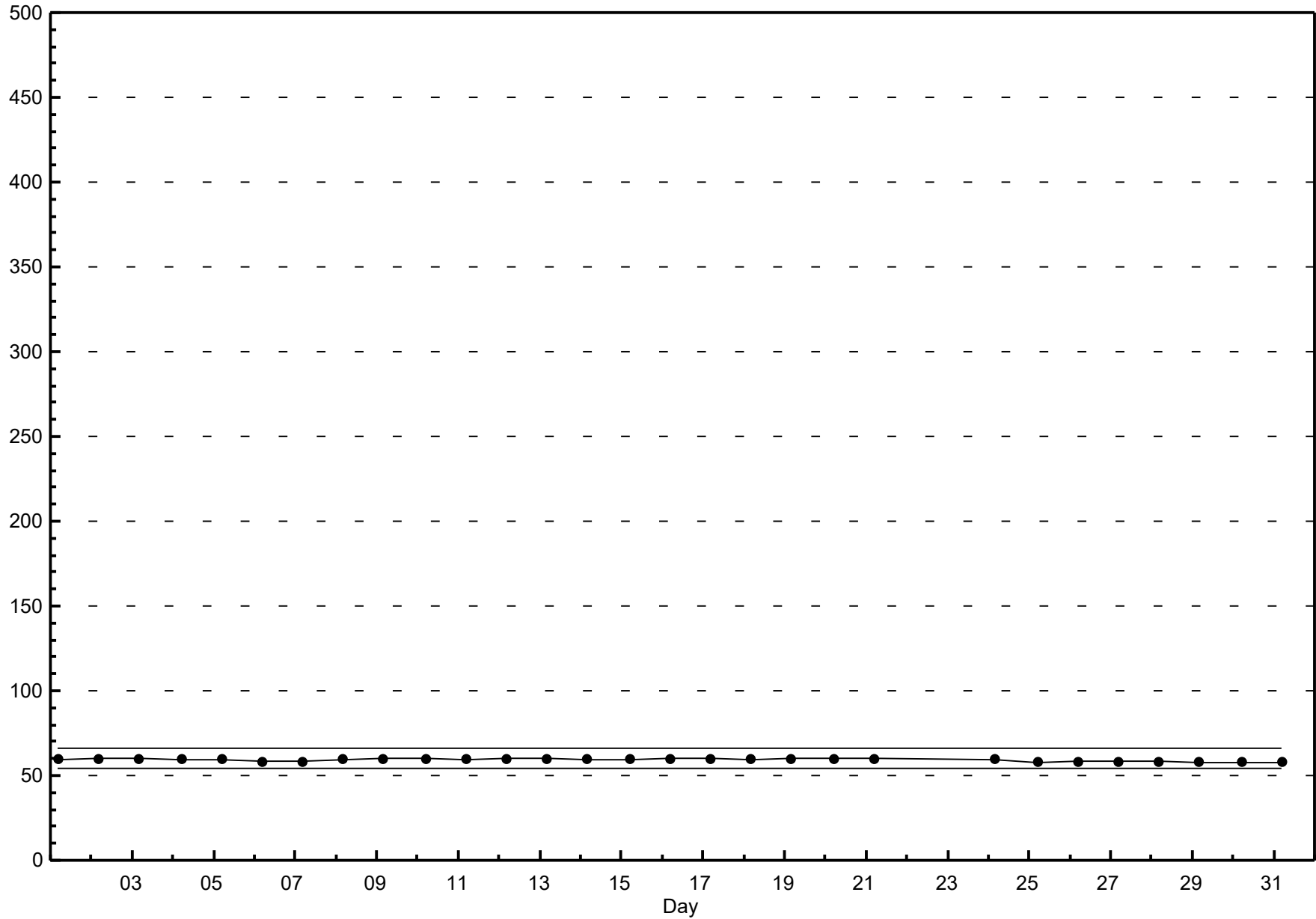
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - July 2017



Pollutant Classes (ppb)





Hourly Averages

Nitrogen Dioxide (NO₂) - ppb

Beaverlodge - July 2017

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 14.7 ppb on Jul 13 06:00	Maximum Daily Average: 4.6 ppb on Jul 13		Hours of Data:	703
Minimum Value: 0 ppb on Jul 25 12:00	Minimum Daily Average: 1.0 ppb on Jul 23		Hours of Missing Data:	41
Maximum Diurnal Average: 6.8 ppb at hour 6	Minimum Diurnal Average: 1.0 ppb at hour 15		Hours of Calibration:	36
Monthly Average: 2.44 ppb	Percentiles: P ₁ = 0.3 P ₁₀ = 0.5 Q ₁ = 0.9 Median = 1.9 Q ₃ = 3.4 P ₉₀ = 5.0 P ₉₉ = 8.7		Percent Operational Time:	99.3

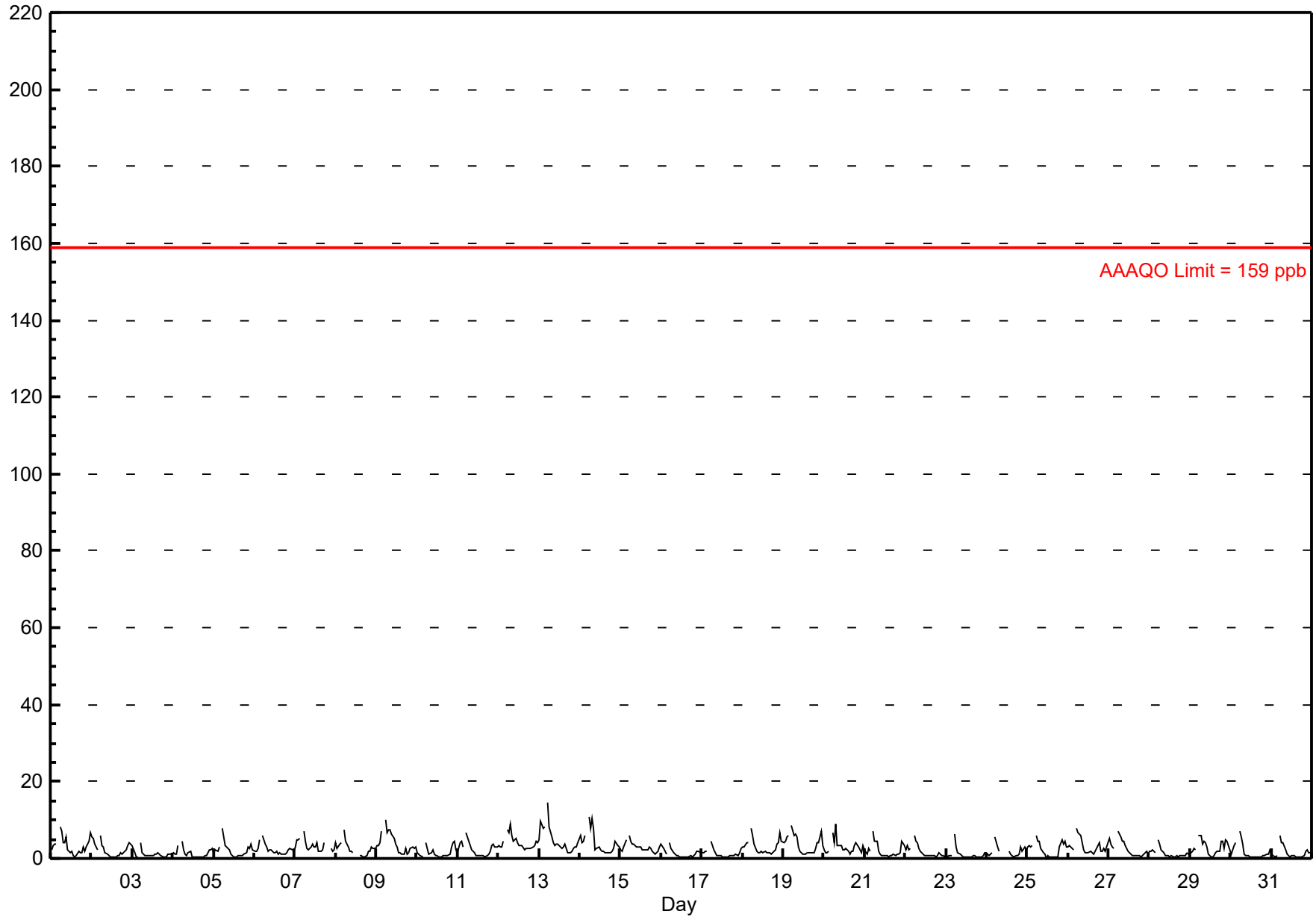
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	2	3	4	4	A	8	7	4	4	5	2	2	2	1	1	1	2	2	1	3	2	3	5	7	3.2	8.3
2-Jul	6	5	4	2	A	6	4	3	1	1	1	1	0	0	0	1	1	1	1	2	2	4	4	4	2.3	5.9
3-Jul	4	1	1	0	A	4	1	1	1	1	1	1	1	1	2	1	1	0	0	0	0	1	1	1	1.1	4.2
4-Jul	1	1	1	3	A	4	2	1	1	2	2	0	0	0	0	0	0	0	0	1	1	2	2	3	1.3	4.3
5-Jul	1	2	2	3	A	8	5	3	3	2	1	1	0	0	1	1	1	1	1	2	3	3	4	2	2.2	7.8
6-Jul	2	2	3	5	A	6	4	3	2	2	2	1	2	2	1	2	1	1	1	1	2	2	2	2	2.2	5.9
7-Jul	3	5	5	5	A	7	4	3	2	3	4	3	3	4	2	2	2	4	P	P	N	3	2	2	3.4	7.1
8-Jul	4	3	4	4	A	8	5	3	2	2	2	M	1	M	1	1	0	0	1	2	2	3	3	2	2.4	7.5
9-Jul	3	3	4	7	A	10	7	8	7	6	5	4	3	2	1	1	1	3	1	1	3	3	3	3	3.9	10.1
10-Jul	1	1	1	1	A	4	3	1	2	2	1	1	1	0	0	1	1	1	1	1	3	4	4	2	1.6	4.4
11-Jul	2	4	4	3	A	7	4	3	2	2	1	1	1	1	1	1	0	1	1	2	3	4	3	3	2.3	6.7
12-Jul	3	3	3	4	A	7	7	9	6	4	5	4	3	3	3	2	3	2	3	3	3	3	5	4	4.1	8.8
13-Jul	5	10	8	8	A	15	8	6	4	3	4	4	3	3	3	4	3	2	2	2	3	3	3	4	4.6	14.7
14-Jul	6	4	4	6	A	11	8	10	8	2	3	3	2	2	2	2	2	1	2	2	3	4	3	3	4.0	10.8
15-Jul	2	2	3	5	A	6	5	4	4	3	3	3	3	2	2	2	2	3	3	2	1	2	2	3	2.9	5.8
16-Jul	4	3	2	1	A	4	3	1	1	1	1	1	1	0	0	1	1	0	1	1	1	2	2	2	1.4	4.2
17-Jul	2	2	2	2	A	4	3	2	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	3	1.4	4.4
18-Jul	3	3	4	4	A	8	6	4	2	1	1	2	2	2	2	2	1	1	2	4	4	7	4	4	3.1	7.7
19-Jul	4	5	6	6	A	9	6	6	5	3	2	1	1	1	1	2	2	1	2	3	4	4	7	3	3.6	8.6
20-Jul	2	2	2	2	A	7	4	9	3	3	4	2	2	3	2	1	2	2	3	4	3	2	2	3	3.0	8.9
21-Jul	2	1	3	2	A	7	5	4	2	1	1	1	1	1	1	1	1	1	1	1	1	2	5	3	1.9	7.0
22-Jul	2	3	2	3	A	6	5	4	3	2	1	1	1	1	1	1	1	1	0	1	1	1	1	0	1.7	6.1
23-Jul	1	1	1	1	A	6	3	1	1	1	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1.0	6.5
24-Jul	1	1	1	1	A	6	3	2	C	C	C	C	C	2	1	1	1	1	1	1	3	2	3	2	1.8	5.6
25-Jul	3	3	3	3	A	6	5	4	3	1	1	0	1	0	0	0	0	0	1	3	5	4	4	3	2.4	5.8
26-Jul	3	3	2	2	A	8	7	6	4	2	2	2	2	1	1	2	3	4	2	2	3	2	3	3	2.9	7.7
27-Jul	5	4	3	3	A	7	7	6	5	4	3	2	1	1	1	1	1	1	1	1	1	2	1	1	2.6	7.0
28-Jul	2	2	2	1	A	5	4	2	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1.3	4.9
29-Jul	1	2	3	2	A	6	6	4	4	4	3	1	1	0	1	2	2	2	5	4	3	5	4	2	2.8	5.8
30-Jul	1	2	3	4	A	7	5	4	1	1	1	1	0	0	0	0	0	0	0	1	1	1	1	2	1.7	7.0
31-Jul	2	1	0	1	A	6	4	4	2	1	1	0	1	1	0	0	0	0	0	1	2	2	2	2	1.4	6.1

2.7	2.8	2.9	3.2	--	6.8	4.8	4.0	2.9	2.3	1.9	1.5	1.3	1.3	1.0	1.1	1.1	1.3	1.3	1.6	2.1	2.5	2.9	2.6	Diurnal Average	
5.9	9.8	7.9	8.2	--	14.7	8.0	10.3	7.7	6.4	5.3	4.2	3.5	4.3	3.2	3.9	2.6	3.9	4.6	4.3	4.8	5.0	7.2	6.6	Diurnal Maximum	

C - Calibration P - Power Failure M - Maintenance 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 - July 2017



Hourly Maximums

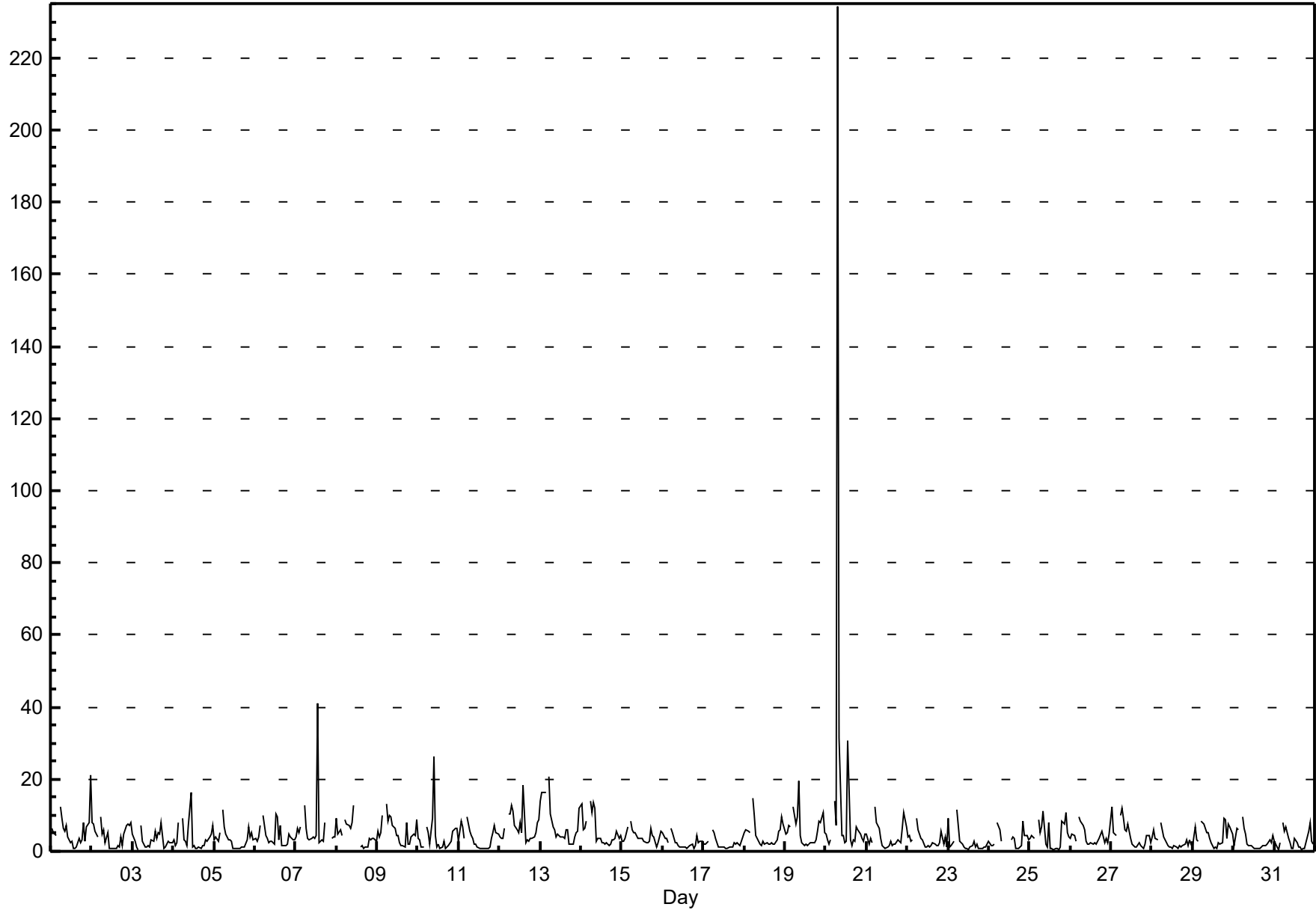
Nitrogen Dioxide (NO₂) - ppb

Beaverlodge - July 2017

Maximum Value: 234.2 ppb on Jul 20 08:00		Maximum Daily Average: 16.7 ppb on Jul 20		Hours in Service: 744																							
Minimum Value: 0 ppb on Jul 31 03:00		Minimum Daily Average: 2.2 ppb on Jul 17		Hours of Data: 703																							
Maximum Diurnal Average: 13.1 ppb at hour 8		Minimum Diurnal Average: 2.0 ppb at hour 17		Hours of Missing Data: 41																							
Monthly Average: 4.63 ppb		Percentiles: P ₁ = 0.6 P ₁₀ = 1.0 Q ₁ = 1.8 Median = 3.3 Q ₃ = 5.7 P ₉₀ = 8.4 P ₉₉ = 20.4		Hours of Calibration: 36																							
				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-Jul	7	5	5	5	A	12	9	6	5	7	4	2	3	1	1	1	4	2	3	8	3	7	8	21	5.6	21.3	
2-Jul	8	8	6	4	A	10	5	6	2	5	1	1	1	1	1	2	1	4	2	5	7	7	7	8	4.4	9.7	
3-Jul	5	3	1	1	A	7	3	1	1	2	1	3	3	5	4	5	5	8	1	1	2	3	2	2	3.0	7.9	
4-Jul	3	2	2	8	A	9	3	3	2	7	16	1	2	1	1	1	1	1	1	3	3	4	5	7	3.8	16.4	
5-Jul	3	4	3	5	A	11	7	5	3	3	3	1	1	1	1	1	1	1	1	3	7	4	5	3	3.3	11.4	
6-Jul	3	3	4	7	A	10	4	3	2	3	3	2	10	10	3	7	1	2	2	2	5	4	3	3	4.2	10.2	
7-Jul	4	6	5	7	A	13	7	4	3	4	4	4	5	41	2	3	3	8	P	P	N	4	4	4	6.7	40.8	
8-Jul	9	5	6	4	A	9	7	7	6	8	13	M	1	M	1	2	1	1	1	4	3	4	4	3	4.7	12.9	
9-Jul	6	4	5	10	A	13	8	10	10	7	6	4	2	2	2	1	8	2	2	4	5	4	9	5.6	13.2		
10-Jul	4	3	1	1	A	7	5	2	9	26	4	1	2	1	1	3	1	1	2	3	6	6	6	6	4.4	26.2	
11-Jul	3	8	7	4	A	10	5	5	4	2	2	1	1	1	1	1	1	1	1	4	5	7	5	5	3.6	9.6	
12-Jul	4	3	4	6	A	10	11	13	11	7	6	5	8	5	18	3	3	3	3	3	4	5	8	9	6.7	18.5	
13-Jul	14	16	16	16	A	21	10	7	6	4	5	4	4	4	3	6	6	2	2	2	4	5	6	12	7.7	20.7	
14-Jul	13	6	6	8	A	14	11	13	12	3	4	3	3	2	2	2	2	2	3	3	4	6	4	4	5.7	14.0	
15-Jul	3	3	4	7	A	8	6	5	5	4	3	4	3	3	3	2	3	6	4	4	1	2	4	6	4.0	8.4	
16-Jul	5	4	4	2	A	6	5	2	2	2	1	1	1	1	1	1	2	2	1	2	4	2	3	3	2.5	6.4	
17-Jul	2	2	2	3	A	6	5	3	3	1	1	1	1	1	1	1	1	1	2	2	2	1	3	4	2.2	5.8	
18-Jul	5	6	6	5	A	15	10	4	3	2	2	3	2	2	2	2	2	2	2	3	6	6	9	8	4.6	14.6	
19-Jul	5	5	7	7	A	12	8	10	20	4	3	2	2	2	2	3	3	2	3	6	8	8	11	5	5.9	19.6	
20-Jul	5	3	2	3	A	14	7	234	32	4	4	3	3	31	3	1	3	3	7	6	5	3	3	5	16.7	234.2	
21-Jul	5	2	4	2	A	12	8	6	3	2	1	1	1	1	3	2	2	2	3	3	2	6	11	7	3.9	12.5	
22-Jul	4	4	3	3	A	9	6	5	3	3	1	1	1	1	2	2	2	2	2	2	6	2	4	1	3.0	9.0	
23-Jul	9	1	2	3	A	12	7	3	2	1	1	1	1	1	1	3	1	2	1	1	1	1	1	2	2.5	11.7	
24-Jul	3	1	2	2	A	8	6	3	C	C	C	C	C	3	4	4	1	1	1	2	8	4	5	3	3.3	8.4	
25-Jul	4	5	4	4	A	9	5	7	11	2	1	8	1	1	1	1	1	1	1	8	8	11	5	4	4.3	11.0	
26-Jul	4	5	5	3	A	10	8	7	6	3	2	2	2	2	2	2	3	4	6	4	2	3	2	5	4.0	9.7	
27-Jul	12	5	5	4	A	10	12	9	6	6	8	3	2	2	1	1	2	2	1	1	2	5	4	2	4.6	12.2	
28-Jul	4	6	4	3	A	8	6	4	2	1	1	1	1	1	1	1	1	1	2	2	3	2	3	2	2.7	7.8	
29-Jul	1	7	3	3	A	8	7	6	5	5	4	2	1	1	1	2	2	2	9	9	4	7	7	5	4.4	9.0	
30-Jul	1	4	6	6	A	10	6	5	2	2	2	1	1	1	1	1	1	1	2	2	2	3	2	4	2.9	9.7	
31-Jul	3	2	0	2	A	8	6	7	4	3	1	1	4	3	1	1	0	1	1	4	6	8	3	2	2.9	8.0	
		5.1	4.5	4.3	4.8	--	10.3	6.9	13.1	6.2	4.4	3.6	2.4	2.5	4.4	2.3	2.2	2.0	2.5	2.4	3.4	4.2	4.7	4.9	5.3	Diurnal Average	
		13.9	16.5	16.4	16.3	--	20.7	11.9	234.2	31.5	26.2	16.4	8.0	10.2	40.8	18.5	7.1	6.1	8.0	9.0	8.7	8.4	10.9	10.9	21.3	Diurnal Maximum	
C - Calibration					P - Power Failure					M - Maintenance					N - Not Valid					A - Automated Daily Zero Span							

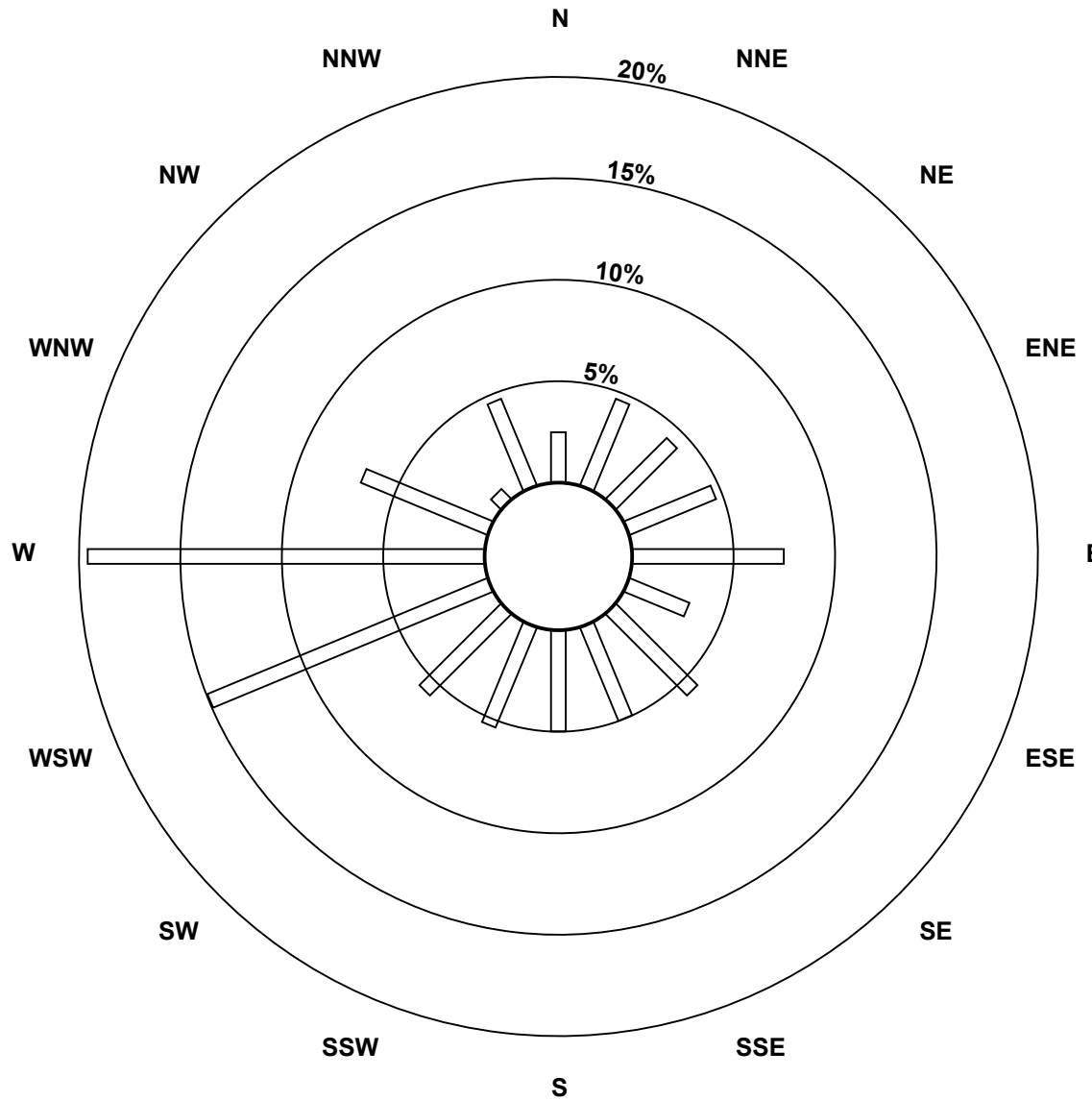
Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - July 2017

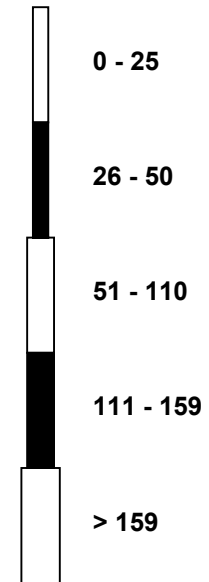


Pollutant Rose

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - July 2017

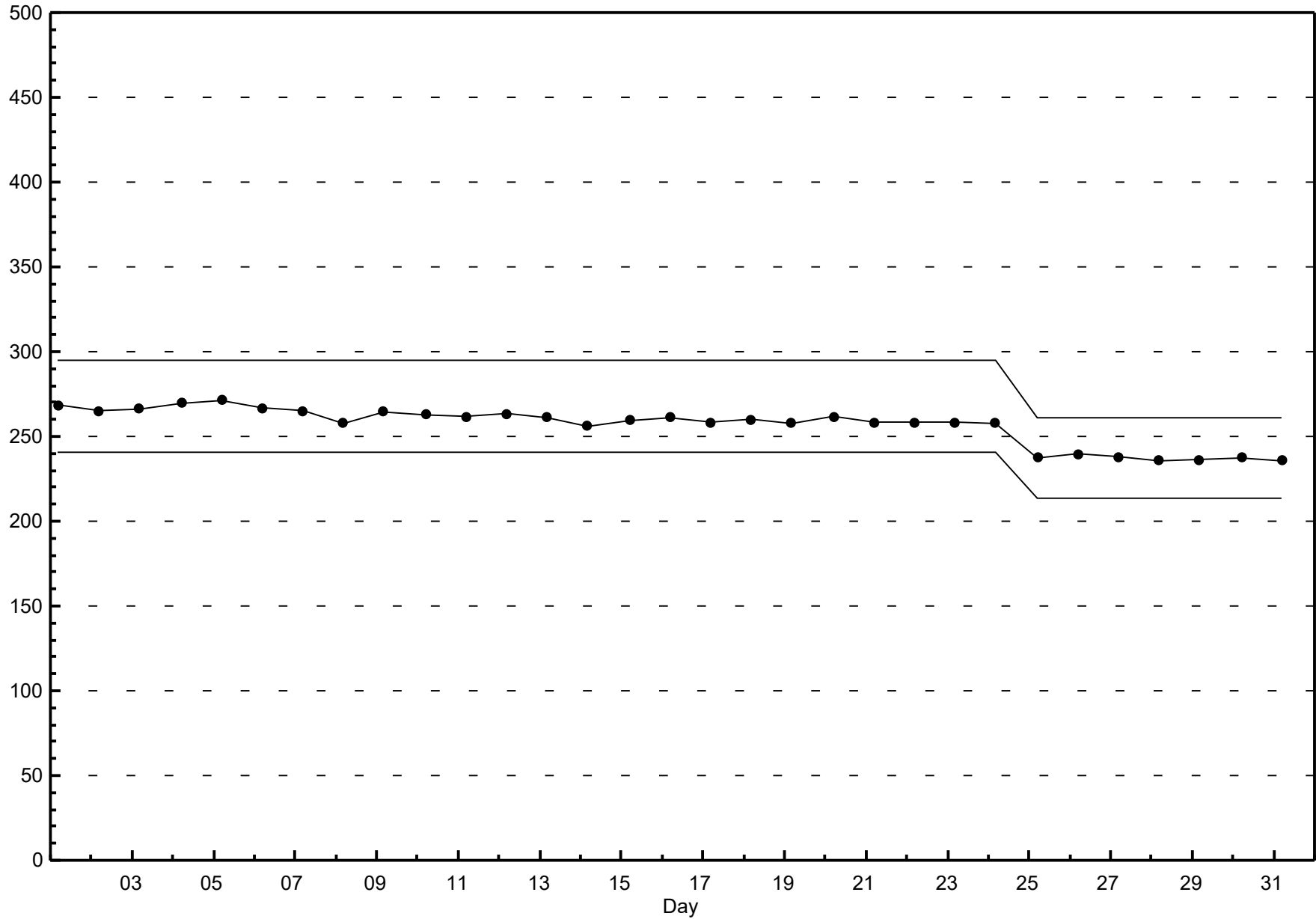


Pollutant Classes (ppb)



Span Responses

Nitrogen Dioxide (NO₂)
Beaverlodge - July 2017



Hourly Averages

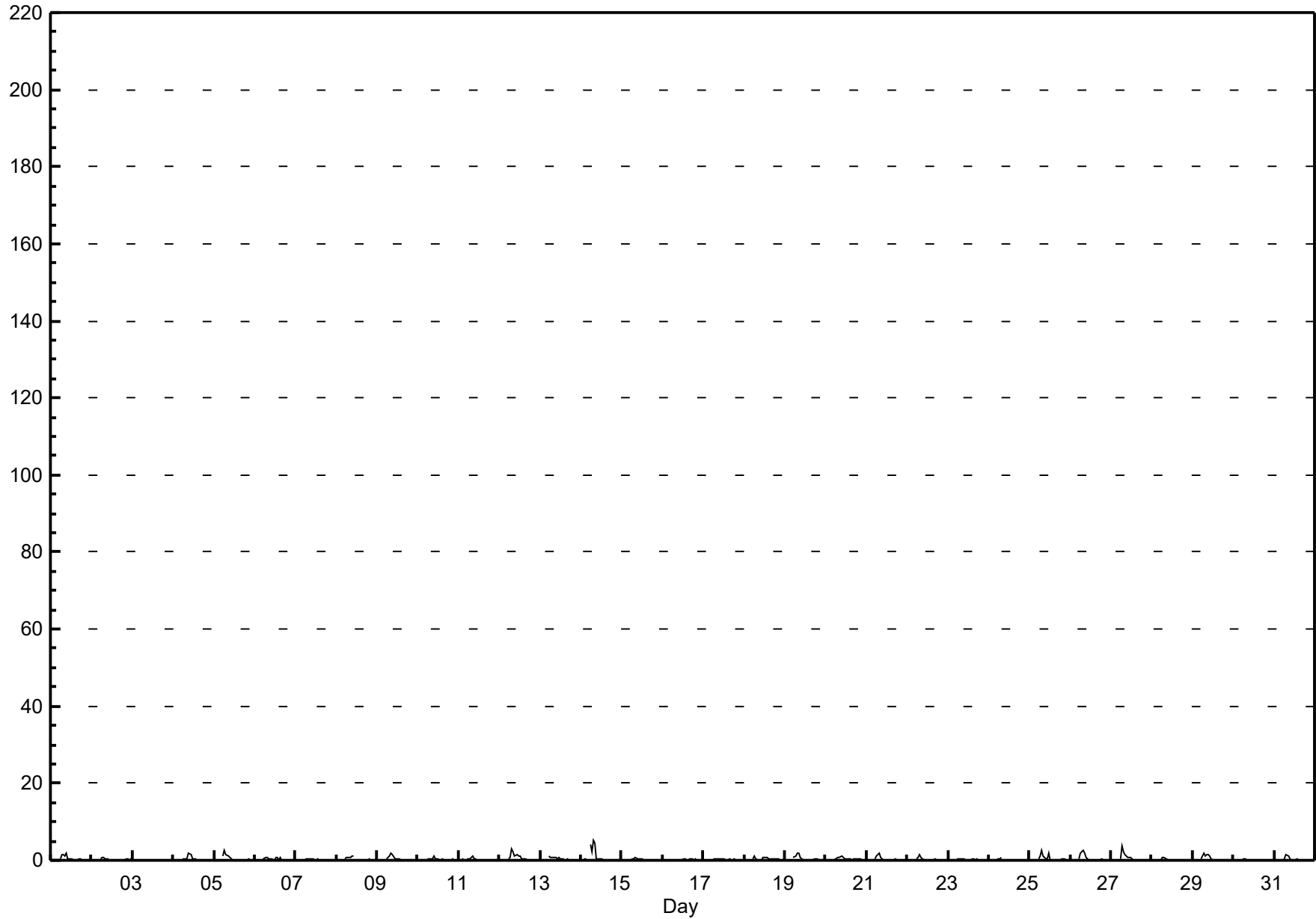
Nitrogen Oxide (NO) - ppb

Beaverlodge - July 2017

Maximum Value: 5.4 ppb on Jul 14 08:00 Maximum Daily Average: 0.8 ppb on Jul 14 Minimum Value: 0 ppb on Jul 22 00:00 Minimum Daily Average: 0.1 ppb on Jul 30 Maximum Diurnal Average: 1.1 ppb at hour 8 Minimum Diurnal Average: 0.1 ppb at hour 23 Monthly Average: 0.29 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.7 P ₉₉ = 2.4																								Hours in Service: 744 Hours of Data: 703 Hours of Missing Data: 41 Hours of Calibration: 36 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-Jul	0	0	0	0	A	0	1	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.9																							
2-Jul	0	0	0	0	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7																							
3-Jul	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																							
4-Jul	0	0	0	0	A	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.7																							
5-Jul	0	0	0	0	A	1	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.4																							
6-Jul	0	0	0	0	A	0	1	1	0	1	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0.3	0.9																							
7-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	P	P	N	0	0	0	0.2	0.5																							
8-Jul	0	0	0	0	A	0	1	1	1	1	1	M	0	M	0	0	0	0	0	0	0	0	0	0	0.3	1.1																							
9-Jul	0	0	0	0	A	0	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.7																							
10-Jul	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.3																							
11-Jul	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	1.0																							
12-Jul	0	0	0	0	A	0	1	3	2	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0.5	3.0																							
13-Jul	0	0	0	0	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.1																							
14-Jul	0	0	0	0	A	4	2	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8	5.4																							
15-Jul	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	0.6																							
16-Jul	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-Jul	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-Jul	0	0	0	0	A	0	1	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0.3	1.1																							
19-Jul	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	1.9																							
20-Jul	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	1.0																							
21-Jul	0	0	0	0	A	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.9																							
22-Jul	0	0	0	0	A	0	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.5																							
23-Jul	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																							
24-Jul	0	0	0	0	A	0	1	1	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7																							
25-Jul	0	0	0	0	A	0	1	2	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.5																							
26-Jul	0	0	0	0	A	0	2	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.5																							
27-Jul	0	0	0	0	A	0	4	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	3.7																							
28-Jul	0	0	0	0	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8																							
29-Jul	0	0	0	0	A	0	2	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.7																							
30-Jul	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																							
31-Jul	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	1.4																							
																								0.1	0.1	0.1	0.1	--	0.5	0.9	1.1	0.9	0.7	0.4	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
																								0.2	0.2	0.2	0.2	--	4.2	3.7	5.4	4.4	1.9	1.5	2.0	1.0	0.7	0.5	0.9	0.4	0.3	0.3	0.4	0.3	0.2	0.1	0.3	0.1	Diurnal Maximum
C - Calibration					P - Power Failure					M - Maintenance					N - Not Valid					A - Automated Daily Zero Span																													

Hourly Averages

Nitrogen Oxide (NO) - ppb
Beaverlodge - July 2017



Hourly Maximums

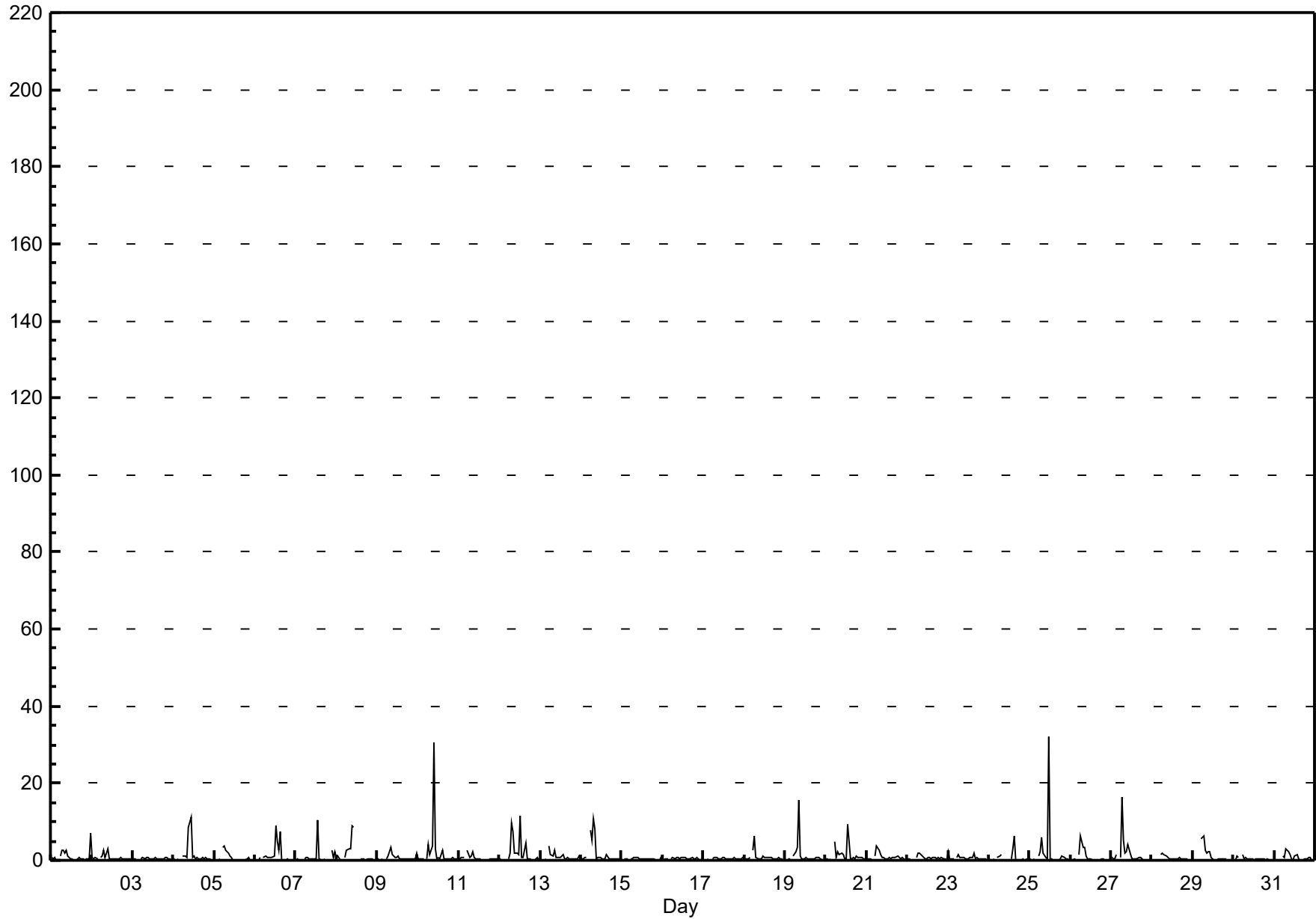
Nitrogen Oxide (NO) - ppb

Beaverlodge - July 2017

Maximum Value: 32.2 ppb on Jul 25 12:00		Maximum Daily Average: 2.2 ppb on Jul 10		Hours in Service: 744																						
Minimum Value: 0 ppb on Jul 27 22:00		Minimum Daily Average: 0.3 ppb on Jul 15		Hours of Data: 703																						
Maximum Diurnal Average: 2.6 ppb at hour 10		Minimum Diurnal Average: 0.2 ppb at hour 23		Hours of Missing Data: 41																						
Monthly Average: 1.00 ppb		Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.4 Q ₃ = 0.7 P ₉₀ = 2.1 P ₉₉ = 10.6		Hours of Calibration: 36																						
				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-Jul	1	0	1	0	A	1	3	3	2	3	1	0	1	0	0	0	1	0	0	0	0	0	0	7	1.1	7.2
2-Jul	1	0	1	0	A	1	1	3	1	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.7	2.9
3-Jul	0	0	0	0	A	0	1	0	1	1	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0.4	0.8
4-Jul	0	0	0	0	A	1	1	1	1	9	11	1	1	0	1	0	1	1	0	1	0	0	0	0	1.4	11.3
5-Jul	0	0	0	1	A	3	4	3	2	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0.8	3.7
6-Jul	0	0	0	1	A	1	1	1	1	1	1	1	9	5	3	7	0	0	0	0	0	0	0	0	1.4	8.8
7-Jul	0	0	0	0	A	0	1	1	0	0	0	0	0	10	0	0	0	0	P	P	N	3	1	2	1.1	10.3
8-Jul	1	1	0	0	A	1	3	3	3	9	9	M	0	M	0	0	0	0	0	1	0	0	0	0	1.5	9.1
9-Jul	0	0	0	0	A	1	1	2	3	2	1	1	0	0	0	0	0	1	0	0	0	0	0	2	0.7	3.4
10-Jul	0	0	0	0	A	0	4	1	4	31	3	0	1	0	2	0	0	0	0	0	1	0	0	0	2.2	30.8
11-Jul	0	1	1	1	A	3	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	2.7
12-Jul	0	0	0	0	A	0	2	10	7	2	2	1	12	1	1	4	0	0	0	0	0	0	1	0	2.0	11.6
13-Jul	0	0	0	0	A	4	1	1	3	1	1	1	1	1	0	0	1	0	0	0	0	0	0	1	0.8	3.8
14-Jul	0	1	1	1	A	8	5	11	8	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	1.8	10.8
15-Jul	0	0	0	0	A	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	0.9
16-Jul	0	0	0	0	A	0	1	0	1	1	1	1	1	1	0	0	1	1	0	1	1	0	0	0	0.5	0.8
17-Jul	0	0	0	0	A	0	1	1	1	1	1	1	1	0	0	1	0	0	1	0	0	0	0	1	0.5	0.9
18-Jul	0	0	0	1	A	3	6	1	0	0	0	1	1	1	1	1	0	0	1	1	1	0	0	0	0.9	6.4
19-Jul	0	0	0	0	A	1	2	3	16	1	1	0	1	0	0	0	0	0	1	1	1	0	0	0	1.3	15.5
20-Jul	0	0	0	0	A	5	1	2	2	2	1	0	0	9	1	0	1	0	1	1	1	1	0	0	1.3	9.2
21-Jul	0	0	0	0	A	1	4	3	1	1	1	0	0	1	0	1	1	1	1	1	1	0	1	0	0.8	3.6
22-Jul	0	0	0	0	A	1	2	2	1	1	0	0	1	1	0	1	1	0	1	0	1	0	0	0	0.6	2.0
23-Jul	2	0	0	0	A	1	1	1	1	1	0	0	0	1	1	2	0	1	0	0	0	1	0	0	0.6	2.2
24-Jul	0	0	0	0	A	1	1	1	C	C	C	C	C	0	3	7	0	0	0	0	0	0	0	0	0.8	6.5
25-Jul	0	0	0	0	A	1	2	6	2	1	0	32	0	0	0	0	0	0	0	0	1	1	0	0	2.1	32.2
26-Jul	0	0	0	0	A	1	6	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8	6.3
27-Jul	1	0	0	1	A	1	16	5	2	2	4	1	0	0	0	0	1	1	0	0	0	0	0	0	1.7	16.3
28-Jul	0	0	0	0	A	1	2	2	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.5	1.8
29-Jul	0	0	0	0	A	5	6	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1.1	6.4
30-Jul	0	0	1	1	A	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.6
31-Jul	0	0	0	0	A	1	1	3	2	1	0	0	1	2	0	0	0	0	0	1	1	1	0	0	0.6	2.8
		0.3	0.3	0.3	0.3	--	1.6	2.6	2.5	2.5	2.6	1.5	1.6	1.1	1.2	0.6	1.0	0.4	0.4	0.4	0.4	0.4	0.4	0.2	0.6	Diurnal Average
		2.2	1.1	1.2	1.4	--	7.8	16.3	10.8	15.5	30.8	11.3	32.2	11.6	10.3	2.8	7.5	0.9	0.8	1.0	1.1	0.9	2.6	0.8	7.2	Diurnal Maximum
C - Calibration					P - Power Failure					M - Maintenance					N - Not Valid					A - Automated Daily Zero Span						

Hourly Maximums

Nitrogen Oxide (NO) - ppb
Beaverlodge - July 2017

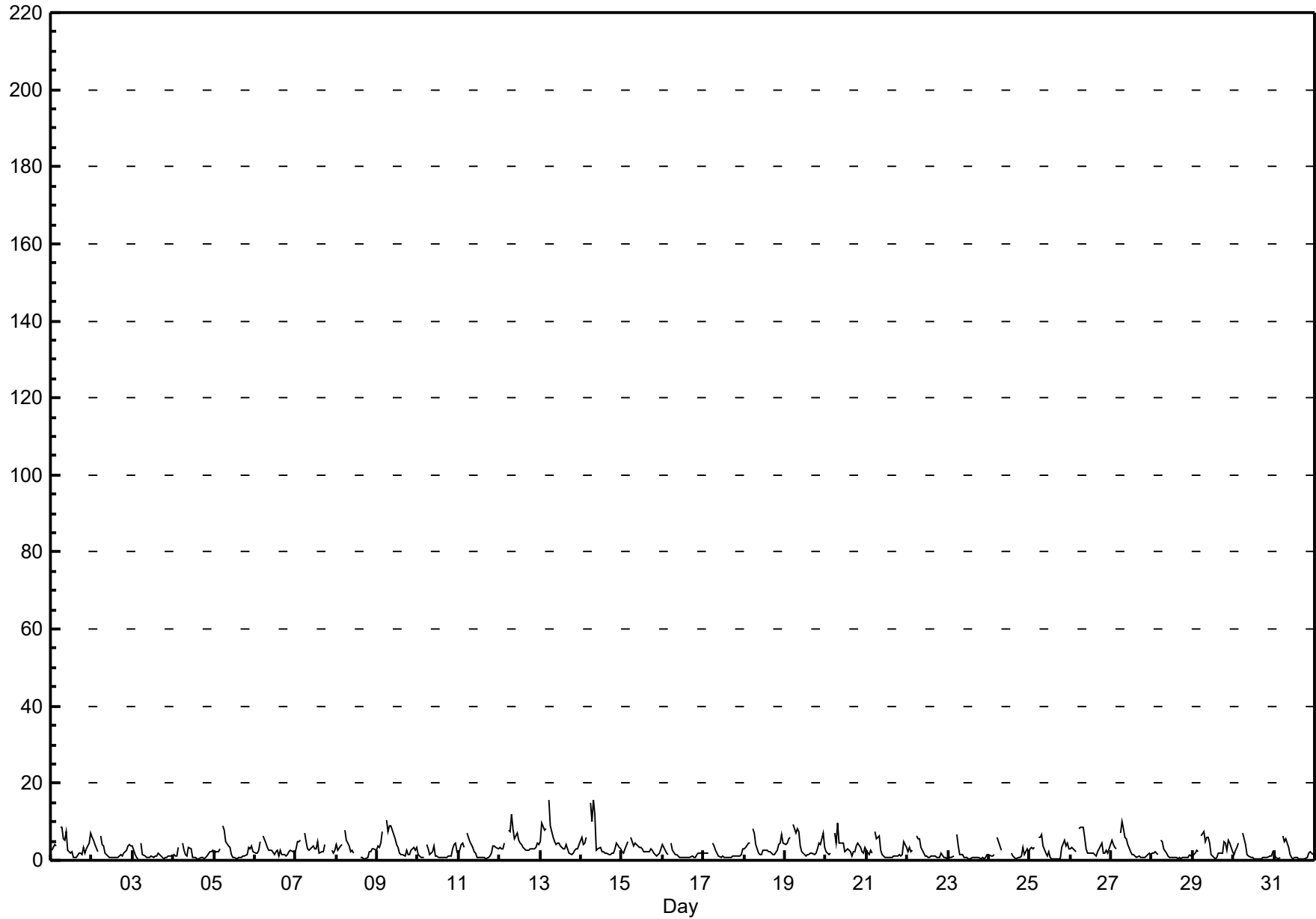


Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

Beaverlodge - July 2017

Maximum Value: 15.8 ppb on Jul 13 06:00		Maximum Daily Average: 5.0 ppb on Jul 13		Hours in Service: 744																							
Minimum Value: 0 ppb on Jul 31 03:00		Minimum Daily Average: 1.2 ppb on Jul 23		Hours of Data: 703																							
Maximum Diurnal Average: 7.3 ppb at hour 6		Minimum Diurnal Average: 1.2 ppb at hour 15		Hours of Missing Data: 41																							
Monthly Average: 2.75 ppb		Percentiles: P ₁ = 0.4 P ₁₀ = 0.7 Q ₁ = 1.0 Median = 2.1 Q ₃ = 3.7 P ₉₀ = 5.7 P ₉₉ = 10.1		Hours of Calibration: 36																							
				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-Jul	3	3	4	4	A	9	9	5	5	7	3	2	2	1	1	1	2	2	2	3	2	3	5	7	3.6	8.7	
2-Jul	6	5	4	2	A	6	4	4	2	1	1	1	1	1	1	1	1	2	1	2	3	4	4	4	2.6	6.2	
3-Jul	4	2	1	0	A	4	2	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1.3	4.4	
4-Jul	1	1	1	3	A	5	3	2	1	3	3	1	1	1	1	1	1	1	1	1	1	2	2	3	1.6	4.6	
5-Jul	2	2	2	3	A	9	8	5	4	3	2	1	1	0	1	1	1	1	1	2	3	3	4	2	2.6	8.9	
6-Jul	2	2	3	5	A	6	4	4	2	3	3	1	2	2	1	3	1	1	1	1	2	2	2	2	2.5	6.2	
7-Jul	3	5	5	5	A	7	5	3	3	3	4	3	3	5	2	2	2	4	P	P	N	3	2	2	3.5	7.2	
8-Jul	4	3	4	4	A	8	5	4	2	3	2	M	1	M	1	1	1	0	1	2	2	3	3	3	2.6	7.8	
9-Jul	4	3	4	7	A	11	7	9	9	8	6	4	3	2	2	1	1	3	1	1	3	3	3	3	4.3	10.5	
10-Jul	2	1	1	1	A	4	3	1	2	4	1	1	1	1	1	1	1	1	1	1	3	4	4	2	1.8	4.4	
11-Jul	2	4	5	3	A	7	5	4	3	2	2	1	1	1	1	1	1	1	1	2	4	4	3	3	2.6	7.2	
12-Jul	4	3	3	4	A	8	7	12	8	6	7	5	5	4	4	2	3	3	3	3	3	4	5	4	4.7	11.9	
13-Jul	5	10	8	8	A	16	9	6	5	4	4	4	4	3	3	4	3	2	2	2	3	3	3	4	5.0	15.8	
14-Jul	6	4	5	6	A	15	10	16	12	3	3	3	2	2	2	2	2	2	2	2	3	5	3	3	4.8	15.6	
15-Jul	2	2	3	5	A	6	5	4	4	4	3	3	3	2	2	2	2	3	3	2	1	2	2	3	3.0	5.9	
16-Jul	4	3	2	1	A	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1.5	4.3	
17-Jul	2	2	2	2	A	5	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	1.6	4.5	
18-Jul	3	3	4	4	A	8	7	4	2	2	2	3	2	3	2	2	2	2	2	3	4	4	7	5	3.4	8.2	
19-Jul	4	5	6	6	A	9	7	8	7	4	2	1	1	1	2	2	2	2	2	3	4	4	7	3	4.0	9.3	
20-Jul	2	2	2	2	A	7	5	10	4	4	4	2	3	3	2	1	2	2	4	5	3	2	2	3	3.3	9.6	
21-Jul	2	1	3	2	A	7	6	6	2	2	1	1	1	1	1	1	1	1	1	1	1	2	5	3	2.2	7.3	
22-Jul	2	3	2	3	A	6	6	6	3	3	1	1	1	1	1	1	1	1	1	1	2	1	1	0	2.1	6.3	
23-Jul	1	1	1	1	A	7	4	2	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1.2	6.8	
24-Jul	2	1	1	2	A	6	4	3	C	C	C	C	C	2	1	1	0	1	1	1	3	2	3	2	1.9	6.0	
25-Jul	3	3	3	3	A	6	6	7	4	2	1	2	1	1	0	0	0	0	1	3	5	4	4	3	2.8	6.8	
26-Jul	3	3	3	2	A	8	9	8	6	3	2	2	2	2	1	2	3	4	2	2	3	2	3	3	3.3	8.7	
27-Jul	5	4	3	3	A	7	10	8	6	6	4	2	2	1	1	1	1	1	1	1	1	2	1	1	3.1	10.2	
28-Jul	2	2	2	1	A	5	5	3	2	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1.5	5.1	
29-Jul	1	2	3	2	A	6	8	5	6	6	4	2	1	0	1	2	2	2	5	5	3	5	4	2	3.2	7.6	
30-Jul	1	2	3	4	A	7	6	4	1	1	1	1	0	0	0	0	0	1	1	1	1	1	1	2	1.8	7.3	
31-Jul	2	1	0	1	A	6	5	6	3	1	1	1	1	1	1	1	0	0	0	1	2	2	2	2	1.7	6.3	
		2.8	2.9	3.0	3.3	--	7.3	5.7	5.2	3.9	3.0	2.3	1.8	1.5	1.5	1.2	1.2	1.3	1.4	1.4	1.8	2.2	2.6	3.0	2.7	Diurnal Average	
		5.9	9.9	8.0	8.2	--	15.8	10.2	15.6	12.1	7.8	6.9	5.3	4.6	4.7	3.5	4.1	2.9	4.0	4.8	4.5	5.1	5.0	7.2	6.9	Diurnal Maximum	
C - Calibration					P - Power Failure					M - Maintenance					N - Not Valid					A - Automated Daily Zero Span							



Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

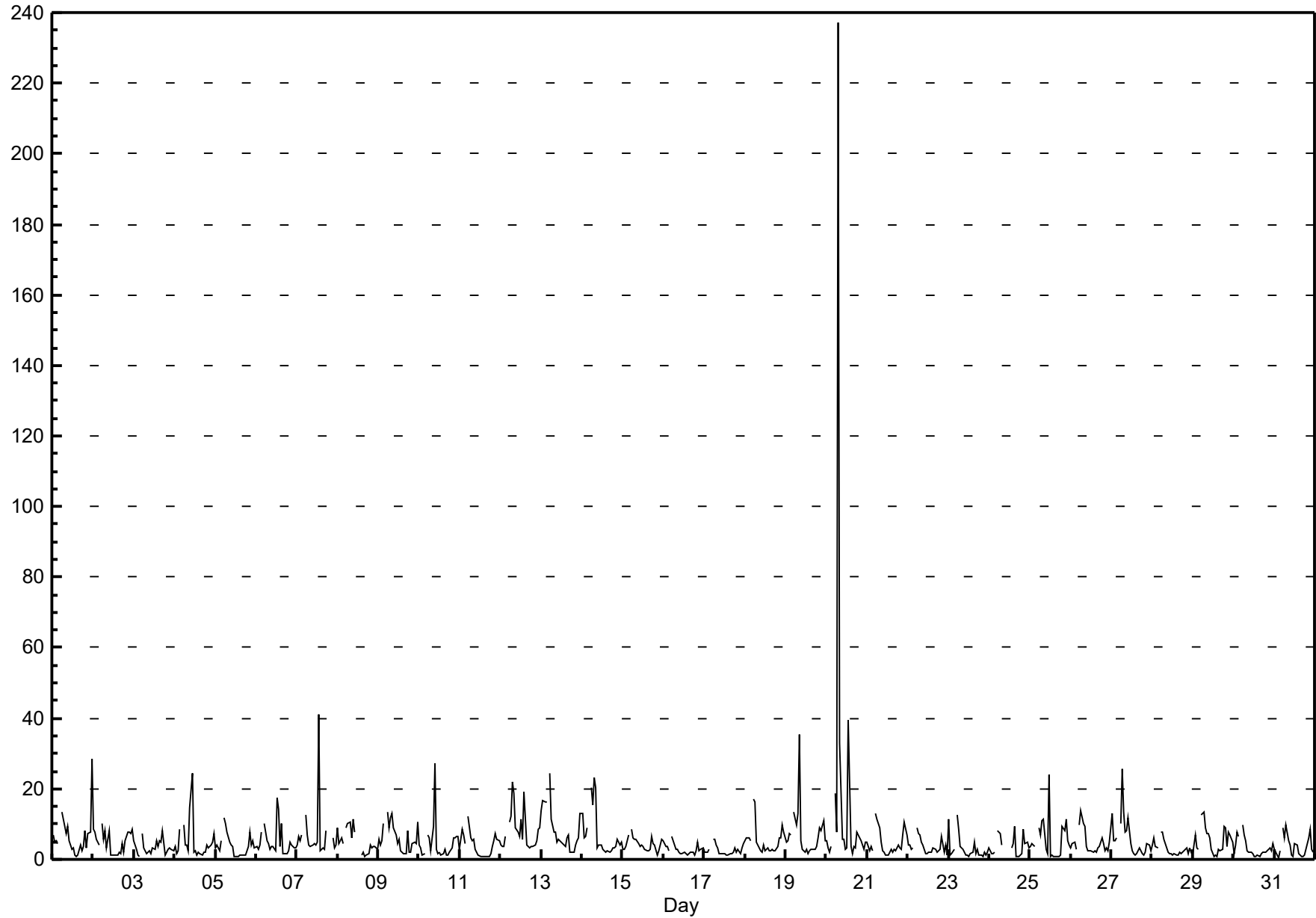
Beaverlodge - July 2017

Maximum Value: 237.3 ppb on Jul 20 08:00		Maximum Daily Average: 17.9 ppb on Jul 20		Hours in Service: 744																							
Minimum Value: 0 ppb on Jul 31 03:00		Minimum Daily Average: 2.6 ppb on Jul 17		Hours of Data: 703																							
Maximum Diurnal Average: 15.4 ppb at hour 8		Minimum Diurnal Average: 2.3 ppb at hour 17		Hours of Missing Data: 41																							
Monthly Average: 5.37 ppb		Percentiles: P ₁ = 0.7 P ₁₀ = 1.3 Q ₁ = 2.2 Median = 3.7 Q ₃ = 6.2 P ₉₀ = 10.0 P ₉₉ = 26.9		Hours of Calibration: 36																							
				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-Jul	7	5	5	5	A	14	11	9	7	9	5	3	3	1	1	1	4	3	4	8	3	7	8	28	6.6	28.5	
2-Jul	9	8	6	4	A	10	6	8	3	8	1	1	1	1	1	2	1	5	2	5	8	8	7	9	5.0	10.1	
3-Jul	5	3	1	1	A	8	3	1	2	2	1	3	3	5	4	5	5	8	1	2	3	3	3	2	3.3	7.9	
4-Jul	4	2	2	9	A	10	4	4	2	14	24	2	3	1	2	2	1	2	2	4	3	4	5	7	4.9	24.3	
5-Jul	3	4	3	5	A	12	10	8	5	4	4	1	1	1	1	1	1	1	1	3	8	4	5	3	3.9	11.9	
6-Jul	4	3	4	8	A	10	5	4	3	3	3	2	18	14	3	10	2	1	2	2	5	4	3	3	5.1	17.6	
7-Jul	4	7	5	7	A	13	7	4	4	4	4	4	5	41	2	3	3	8	P	P	N	6	3	4	6.9	41.2	
8-Jul	9	5	6	4	A	9	10	10	6	12	8	M	2	M	1	2	1	1	1	4	3	4	4	3	5.0	11.6	
9-Jul	6	4	5	10	A	14	9	12	13	9	7	5	6	3	2	2	1	8	2	2	4	5	5	10	6.2	13.5	
10-Jul	4	3	1	1	A	7	6	3	9	27	3	1	2	1	2	3	1	1	2	3	6	6	6	7	4.6	27.5	
11-Jul	3	9	7	4	A	12	6	5	6	3	2	1	1	1	1	1	1	1	1	4	5	7	6	5	4.1	12.3	
12-Jul	4	4	4	6	A	10	12	22	19	9	8	7	12	6	19	4	4	3	4	4	4	5	8	9	8.1	22.1	
13-Jul	14	17	16	16	A	24	11	8	8	5	6	5	5	4	4	6	7	2	2	2	4	5	6	13	8.3	24.5	
14-Jul	13	6	6	9	A	20	16	23	20	3	4	4	3	3	2	2	2	2	3	3	4	6	4	5	7.1	23.3	
15-Jul	3	3	4	7	A	8	6	6	6	5	4	4	3	3	2	3	7	4	4	1	2	4	6	4.2	8.4		
16-Jul	5	4	4	2	A	7	5	3	3	2	2	2	2	2	1	1	2	2	1	2	5	3	3	3	2.9	6.6	
17-Jul	2	2	2	3	A	6	6	4	3	2	2	2	2	1	1	1	1	2	3	2	3	2	3	5	2.6	5.9	
18-Jul	5	6	6	5	A	17	16	5	3	2	2	4	3	3	3	3	3	2	2	4	6	6	10	8	5.4	16.9	
19-Jul	5	5	7	7	A	13	10	13	35	5	3	2	3	2	2	3	3	3	4	6	9	8	11	5	7.1	35.2	
20-Jul	5	3	2	4	A	19	8	237	33	6	6	3	3	40	4	1	4	3	8	7	5	4	3	5	17.9	237.3	
21-Jul	5	2	4	2	A	13	11	9	5	2	2	1	1	2	3	2	3	3	4	3	3	7	11	7	4.6	12.9	
22-Jul	4	4	3	3	A	9	7	7	5	4	2	2	2	2	2	3	3	2	2	3	7	2	4	1	3.7	9.1	
23-Jul	11	1	2	3	A	12	8	4	3	2	1	1	1	2	2	5	2	3	1	1	1	2	1	2	3.1	12.4	
24-Jul	3	2	2	2	A	8	7	4	C	C	C	C	C	3	4	9	1	1	1	2	9	4	5	3	3.9	9.3	
25-Jul	4	5	4	4	A	9	7	11	12	3	2	24	1	1	1	1	1	1	1	9	8	11	5	4	5.5	24.1	
26-Jul	3	5	5	3	A	10	14	10	9	4	3	2	3	2	3	2	3	4	6	4	3	3	2	5	4.7	13.9	
27-Jul	13	5	5	6	A	10	26	13	8	8	12	4	2	2	1	1	3	2	2	1	2	5	4	2	6.0	25.5	
28-Jul	4	6	4	3	A	8	8	6	3	2	1	1	1	2	1	1	2	1	2	3	3	2	3	2	3.1	7.9	
29-Jul	1	7	3	3	A	13	14	9	7	7	6	3	1	1	1	3	2	3	9	9	4	8	7	5	5.4	13.6	
30-Jul	2	4	8	6	A	10	7	5	3	2	2	2	1	1	1	1	2	2	2	2	3	3	2	4	3.2	9.6	
31-Jul	3	2	0	2	A	9	6	10	5	4	1	1	4	4	2	1	1	1	1	4	6	8	3	2	3.5	9.7	
		5.4	4.6	4.4	5.0	--	11.4	9.2	15.4	8.3	5.8	4.4	3.4	3.2	5.1	2.6	2.8	2.3	2.9	2.8	3.8	4.6	5.0	5.0	5.7	Diurnal Average	
		13.8	16.5	16.4	16.4	--	24.5	25.5	237.3	35.2	27.5	24.3	24.1	17.6	41.2	19.1	10.0	6.9	8.3	9.5	9.5	8.9	11.2	11.0	28.5	Diurnal Maximum	
C - Calibration					P - Power Failure					M - Maintenance					N - Not Valid					A - Automated Daily Zero Span							

Hourly Maximums

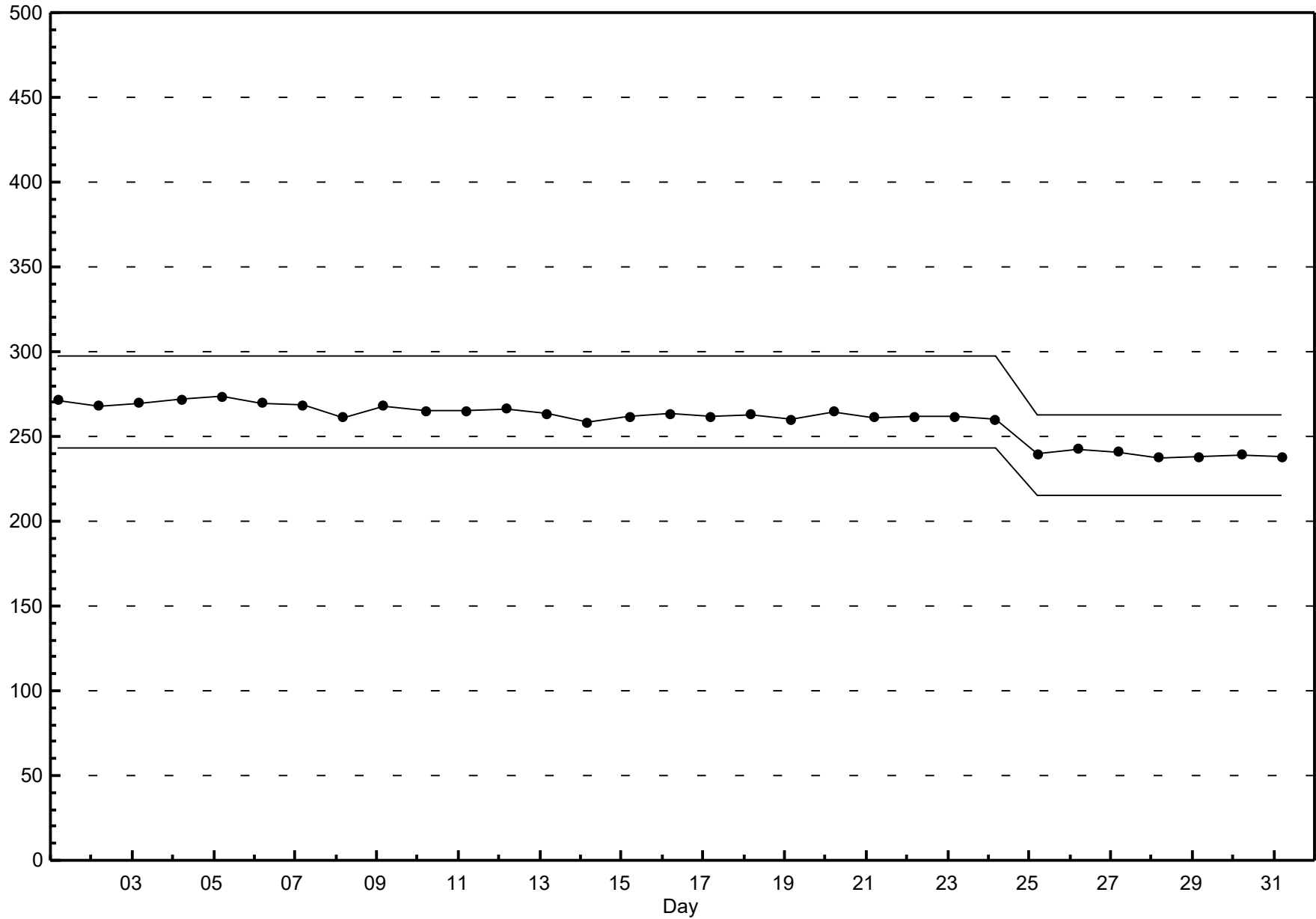
Oxides of Nitrogen (NO_x) - ppb

Beaverlodge - July 2017



Span Responses

**Oxides of Nitrogen (NO_x)
Beaverlodge - July 2017**



Hourly Averages

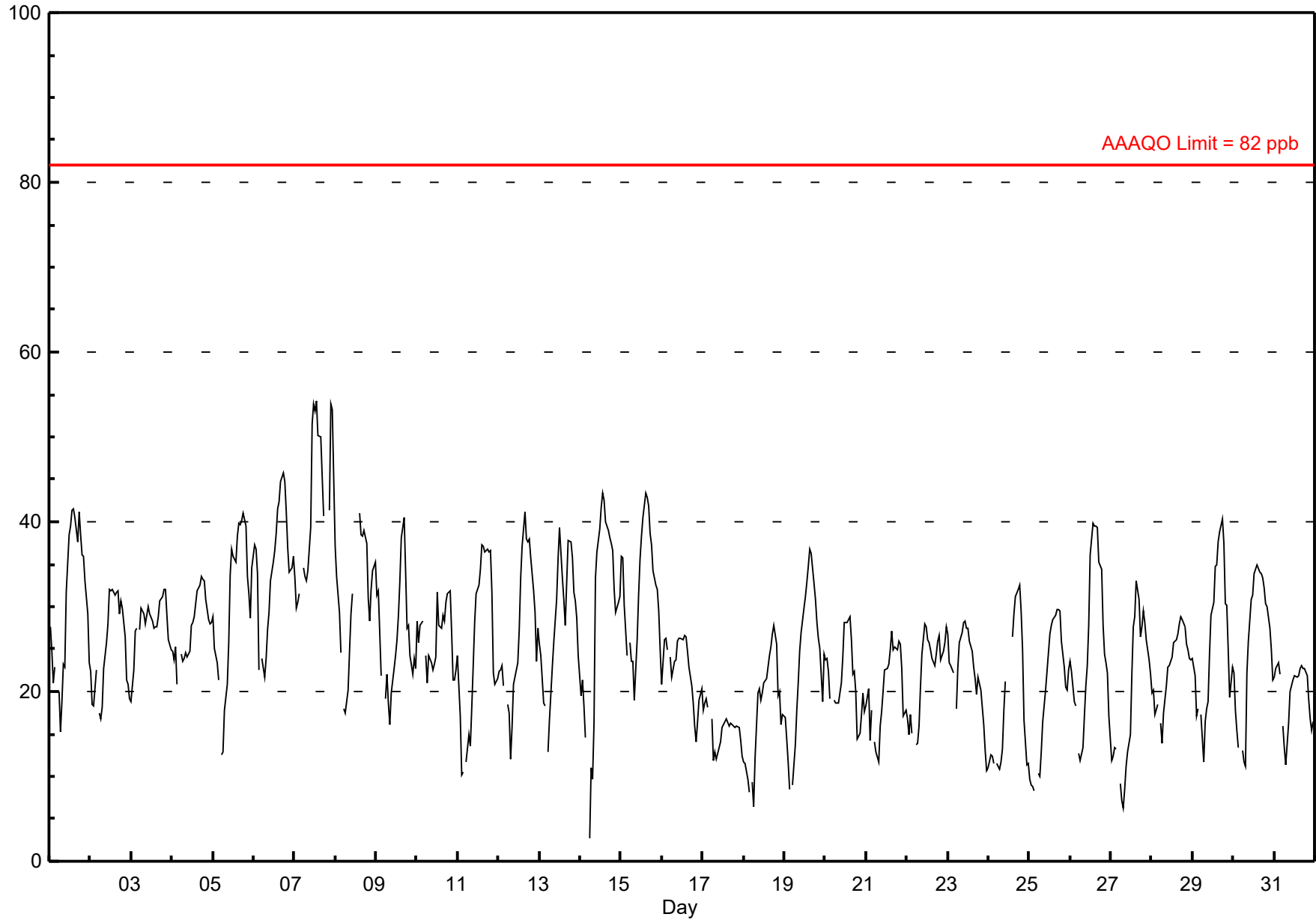
Ozone (O₃) - ppb

Beaverlodge - July 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0		Hours in Service: 744																									
Maximum Value: 54.3 ppb on Jul 7 14:00		Maximum Daily Average: 42.5 ppb on Jul 7																									
Minimum Value: 3 ppb on Jul 14 06:00		Hours of Data: 706																									
Maximum Diurnal Average: 32.6 ppb at hour 16		Hours of Missing Data: 38																									
Monthly Average: 25.46 ppb		Hours of Calibration: 34																									
Minimum Daily Average: 15.6 ppb on Jul 17		Percent Operational Time: 99.5																									
Minimum Diurnal Average: 16.5 ppb at hour 7																											
Percentiles: P ₁ = 8.4 P ₁₀ = 14.1 Q ₁ = 19.1 Median = 24.8 Q ₃ = 31.3 P ₉₀ = 37.4 P ₉₉ = 49.4																											
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-Jul	28	25	21	23	A	20	15	19	23	23	32	39	40	41	42	41	38	41	39	36	36	33	29	23	30.6	41.5	
2-Jul	22	18	18	23	A	18	17	18	23	26	28	32	32	31	32	32	29	31	30	26	21	21	19	19	25.1	32.1	
3-Jul	19	23	27	27	A	27	30	29	28	29	30	29	28	27	28	28	29	31	31	32	32	29	26	25	28.0	32.1	
4-Jul	25	24	25	21	A	24	24	24	25	24	25	28	28	29	30	32	33	34	33	33	31	29	28	28	27.6	33.6	
5-Jul	29	25	23	21	A	13	13	18	21	26	34	37	36	35	38	40	40	40	41	39	33	31	29	35	30.3	41.0	
6-Jul	37	37	34	22	A	24	22	24	27	29	33	35	37	39	42	42	45	46	45	41	37	34	35	36	34.9	45.8	
7-Jul	33	30	30	31	A	35	34	33	34	39	51	54	53	54	50	50	45	41	P	P	41	54	53	45	42.5	54.3	
8-Jul	37	34	29	25	A	18	18	20	25	29	32	M	39	M	41	38	38	39	37	31	28	32	34	35	31.4	41.0	
9-Jul	31	32	27	22	A	19	22	19	16	20	23	24	26	29	33	38	41	34	27	28	24	22	24	23	26.2	40.5	
10-Jul	28	26	28	28	A	24	21	24	23	23	23	24	32	28	27	29	28	30	31	32	27	21	21	23	26.2	31.9	
11-Jul	24	17	10	11	A	12	15	14	18	23	28	32	33	34	37	37	36	37	36	37	32	22	21	22	25.5	37.3	
12-Jul	22	23	23	21	A	18	17	12	16	21	23	23	27	33	37	41	38	38	38	36	32	29	24	27	26.9	41.2	
13-Jul	26	24	19	18	A	13	17	23	26	28	31	36	39	33	31	28	33	38	38	36	32	31	29	24	28.3	39.3	
14-Jul	20	21	18	15	A	3	11	10	16	33	36	39	42	43	43	40	39	38	38	37	32	29	31	31	28.9	43.4	
15-Jul	36	36	30	24	A	26	24	24	19	26	31	36	38	41	43	43	42	39	37	34	33	32	29	25	32.5	43.4	
16-Jul	21	26	26	25	A	24	22	24	24	26	26	26	26	27	26	25	23	21	19	16	14	16	19	20	22.7	26.7	
17-Jul	18	19	19	18	A	17	12	13	12	13	14	16	16	17	17	16	16	16	16	16	16	14	12	12	15.6	19.1	
18-Jul	12	11	10	8	A	9	6	12	20	20	19	20	21	22	23	24	25	27	28	26	20	20	16	17	18.1	27.8	
19-Jul	17	14	12	9	A	9	14	18	21	25	27	30	31	33	35	37	36	33	31	28	26	25	19	24	24.0	36.7	
20-Jul	24	24	22	19	A	19	19	19	19	21	24	28	28	28	29	26	22	22	20	14	15	17	20	18	21.6	28.8	
21-Jul	18	20	14	18	A	14	13	12	16	18	20	22	23	23	25	27	25	25	25	26	26	23	17	18	20.3	27.1	
22-Jul	17	15	17	15	A	14	14	16	20	24	28	28	26	26	25	24	23	24	26	27	24	25	26	28	22.2	28.0	
23-Jul	27	23	23	22	A	18	23	26	27	28	28	27	28	26	25	23	22	20	22	20	18	16	13	11	22.4	28.3	
24-Jul	11	13	12	11	A	11	11	12	13	18	21	C	C	C	26	29	31	32	33	30	25	17	11	12	18.9	32.6	
25-Jul	10	9	9	8	A	10	10	13	17	20	22	25	27	28	29	29	30	30	29	26	23	21	20	22	20.2	29.7	
26-Jul	24	22	19	18	A	13	12	13	17	21	23	28	36	40	40	39	39	35	34	28	24	23	22	17	25.6	39.8	
27-Jul	12	12	13	13	A	9	7	6	9	11	13	15	22	28	29	33	31	26	28	30	28	26	24	22	19.4	33.0	
28-Jul	20	20	17	19	A	16	14	17	21	23	24	24	26	26	27	28	29	29	28	26	25	24	24	24	22.9	28.7	
29-Jul	24	22	17	18	A	17	12	16	18	19	24	29	30	35	35	38	39	40	37	30	30	25	19	23	26.0	40.4	
30-Jul	22	18	15	13	A	13	12	11	22	26	31	31	34	34	35	34	34	34	33	32	30	30	28	25	21	25.5	35.0
31-Jul	22	23	23	22	A	16	13	11	16	20	21	21	22	22	22	23	23	23	23	22	19	17	15	16	19.8	23.3	
23.0		22.1	20.4	19.0	--	16.9	16.5	17.7	20.4	23.6	26.6	28.9	30.8	31.5	32.2	32.6	32.4	31.9	31.1	29.2	27.1	25.5	23.8	23.4	Diurnal Average		
37.2		36.7	33.9	31.5	--	34.6	33.6	33.0	34.2	39.2	51.4	54.0	53.1	54.3	50.1	49.9	45.3	45.8	44.8	41.1	41.3	53.9	53.2	45.0	Diurnal Maximum		
C - Calibration				P - Power Failure				M - Maintenance				A - Automated Daily Zero Span															
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb				24-hr na																							

Hourly Averages

Ozone (O₃) - ppb
Beaverlodge - July 2017



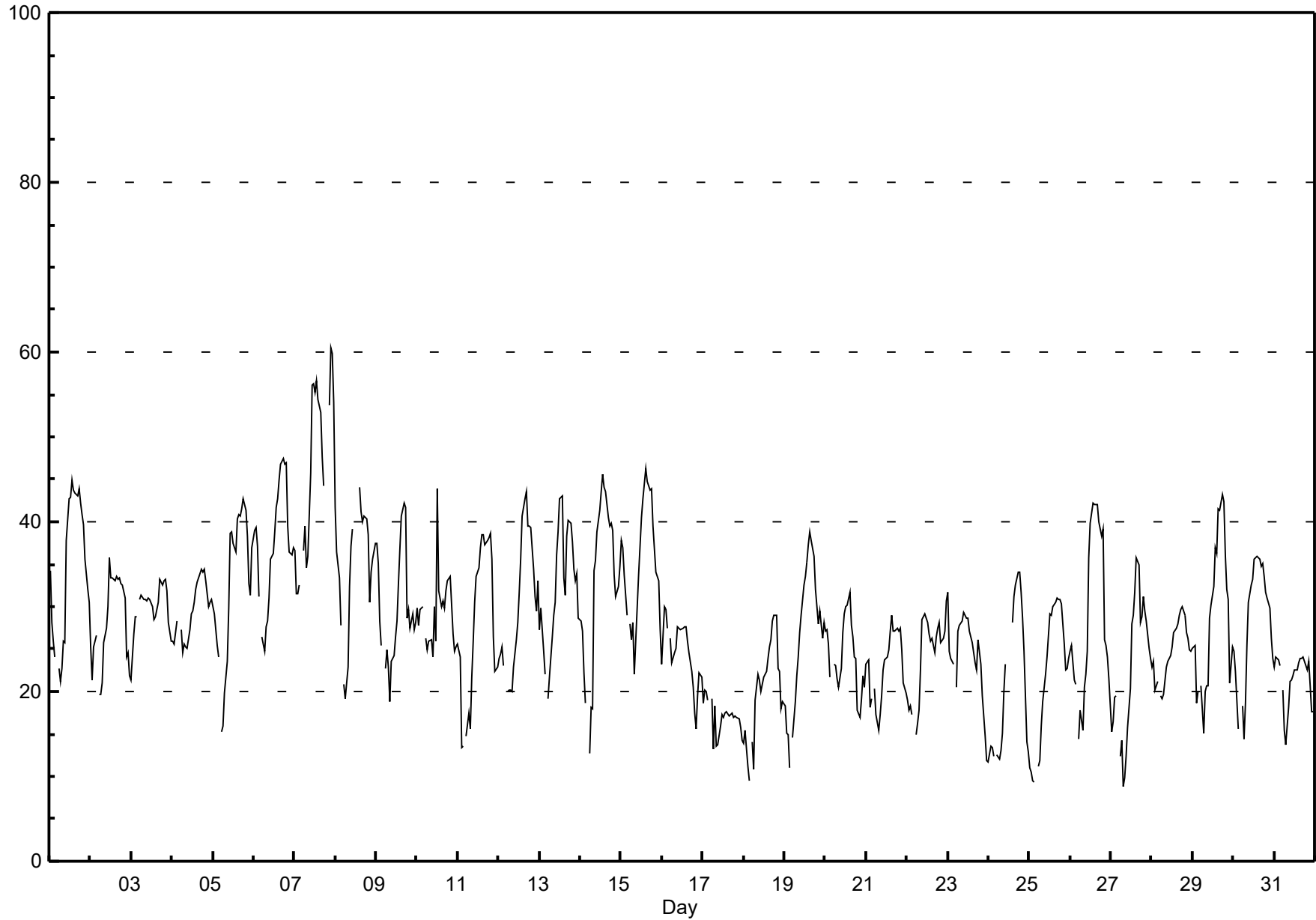
Hourly Maximums

Ozone (O₃) - ppb
Beaverlodge - July 2017

Maximum Value: 60.5 ppb on Jul 7 22:00		Maximum Daily Average: 46.5 ppb on Jul 7		Hours in Service: 744																						
Minimum Value: 9 ppb on Jul 27 08:00		Minimum Daily Average: 17.0 ppb on Jul 17		Hours of Data: 706																						
Maximum Diurnal Average: 34.7 ppb at hour 16		Minimum Diurnal Average: 20.0 ppb at hour 7		Hours of Missing Data: 38																						
Monthly Average: 28.13 ppb		Percentiles: P ₁ = 10.9 P ₁₀ = 17.3 Q ₁ = 22.1 Median = 27.5 Q ₃ = 33.5 P ₉₀ = 40.3 P ₉₉ = 53.9		Hours of Calibration: 34																						
				Percent Operational Time: 99.5																						
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-Jul	34	28	26	24	A	23	21	23	26	26	38	43	43	45	44	43	43	44	42	41	40	36	32	30	34.5	44.9
2-Jul	25	21	25	27	A	20	20	21	26	27	30	36	33	33	33	34	33	33	33	33	31	24	25	22	28.0	35.8
3-Jul	21	27	29	29	A	31	31	31	31	31	31	31	30	29	29	30	31	33	33	33	33	32	28	26	29.9	33.3
4-Jul	26	26	27	28	A	27	25	26	25	25	27	29	29	31	32	33	34	34	34	34	33	30	31	31	29.4	34.4
5-Jul	30	29	25	24	A	15	16	20	24	30	39	39	37	37	40	41	41	42	43	41	38	33	31	37	32.7	42.7
6-Jul	39	39	37	31	A	26	25	28	28	31	36	36	39	42	43	45	47	47	47	47	39	36	36	37	37.5	47.4
7-Jul	37	32	32	33	A	37	40	35	36	46	56	56	55	57	54	53	48	44	P	P	54	61	60	54	46.5	60.5
8-Jul	42	36	33	28	A	21	19	23	32	37	M	40	M	44	41	40	41	40	40	39	31	34	36	37	34.9	44.1
9-Jul	37	35	28	25	A	23	25	23	19	24	24	26	28	33	37	41	42	42	29	30	28	29	27	28	29.7	42.3
10-Jul	30	28	30	30	A	26	25	26	26	24	30	26	44	32	30	31	30	32	33	34	30	27	25	25	29.2	43.9
11-Jul	26	24	13	14	A	15	17	16	22	26	30	34	35	37	38	39	37	38	38	39	36	26	22	23	28.0	38.6
12-Jul	24	24	25	23	A	20	20	20	20	23	26	28	32	36	41	43	44	40	39	39	34	31	30	33	30.2	43.6
13-Jul	27	30	25	22	A	19	22	26	29	30	36	39	43	43	33	31	38	40	40	38	34	33	34	29	32.3	43.1
14-Jul	28	27	22	19	A	13	18	18	34	35	39	41	43	46	44	43	41	39	40	39	34	31	32	35	33.1	45.6
15-Jul	38	37	34	29	A	28	26	28	22	30	34	37	40	43	46	45	44	44	44	39	34	34	33	27	35.5	46.3
16-Jul	23	30	30	28	A	26	23	25	25	28	27	27	27	28	28	26	24	22	20	18	16	20	22	22	24.6	30.0
17-Jul	19	20	20	19	A	19	13	18	14	14	16	17	17	17	18	17	17	18	17	17	17	17	16	14	17.0	20.2
18-Jul	14	15	11	9	A	14	11	19	22	21	20	21	22	22	24	25	26	28	29	29	23	22	18	19	20.3	29.0
19-Jul	18	15	15	11	A	15	19	22	24	27	29	33	34	35	37	39	38	36	32	30	28	29	26	28	26.9	38.8
20-Jul	27	27	26	22	A	23	23	21	21	23	27	29	30	30	32	28	26	24	24	18	17	19	22	21	24.3	31.7
21-Jul	23	24	18	19	A	20	17	15	17	19	22	24	24	25	27	29	27	27	27	27	27	25	21	20	22.9	28.9
22-Jul	19	18	18	17	A	15	16	18	23	29	29	29	28	27	26	26	25	26	28	28	26	26	27	31	24.1	30.7
23-Jul	32	25	24	23	A	20	27	28	28	29	29	29	29	27	26	25	23	23	26	23	20	17	15	12	24.3	31.7
24-Jul	12	14	13	12	A	13	12	13	15	20	23	C	C	C	28	31	32	34	34	32	29	25	14	13	20.9	34.1
25-Jul	11	11	9	9	A	11	12	16	19	22	24	27	29	29	30	30	31	31	31	30	26	23	23	24	22.1	31.0
26-Jul	25	25	21	21	A	14	18	15	20	22	25	36	40	42	42	42	42	40	38	39	26	25	24	21	28.9	42.2
27-Jul	15	16	19	20	A	12	14	9	10	12	16	20	28	29	32	36	35	28	29	31	30	28	25	24	22.5	35.7
28-Jul	23	24	20	21	A	20	19	20	23	23	24	24	25	27	27	28	29	30	30	29	27	26	25	25	24.7	30.0
29-Jul	25	25	19	20	A	21	15	20	21	21	29	30	32	37	36	42	41	43	42	36	32	31	21	25	28.9	43.2
30-Jul	25	22	19	16	A	18	14	19	25	30	33	33	36	36	36	36	35	35	33	32	31	30	26	24	28.0	35.9
31-Jul	23	24	24	23	A	20	15	14	18	21	21	22	23	23	23	24	24	24	24	23	23	21	18	18	21.4	24.1
25.7		25.1	23.2	21.8	--	20.2	20.0	21.1	23.4	26.0	29.3	31.1	33.2	33.6	34.2	34.7	34.5	34.3	33.3	32.2	29.8	28.4	26.6	26.3	Diurnal Average	
41.7		39.3	37.2	32.5	--	36.6	39.5	34.5	36.0	45.8	56.1	56.3	55.3	56.5	54.4	52.9	47.6	47.4	46.8	47.0	53.7	60.5	59.9	54.1	Diurnal Maximum	
C - Calibration					P - Power Failure					M - Maintenance					A - Automated Daily Zero Span											

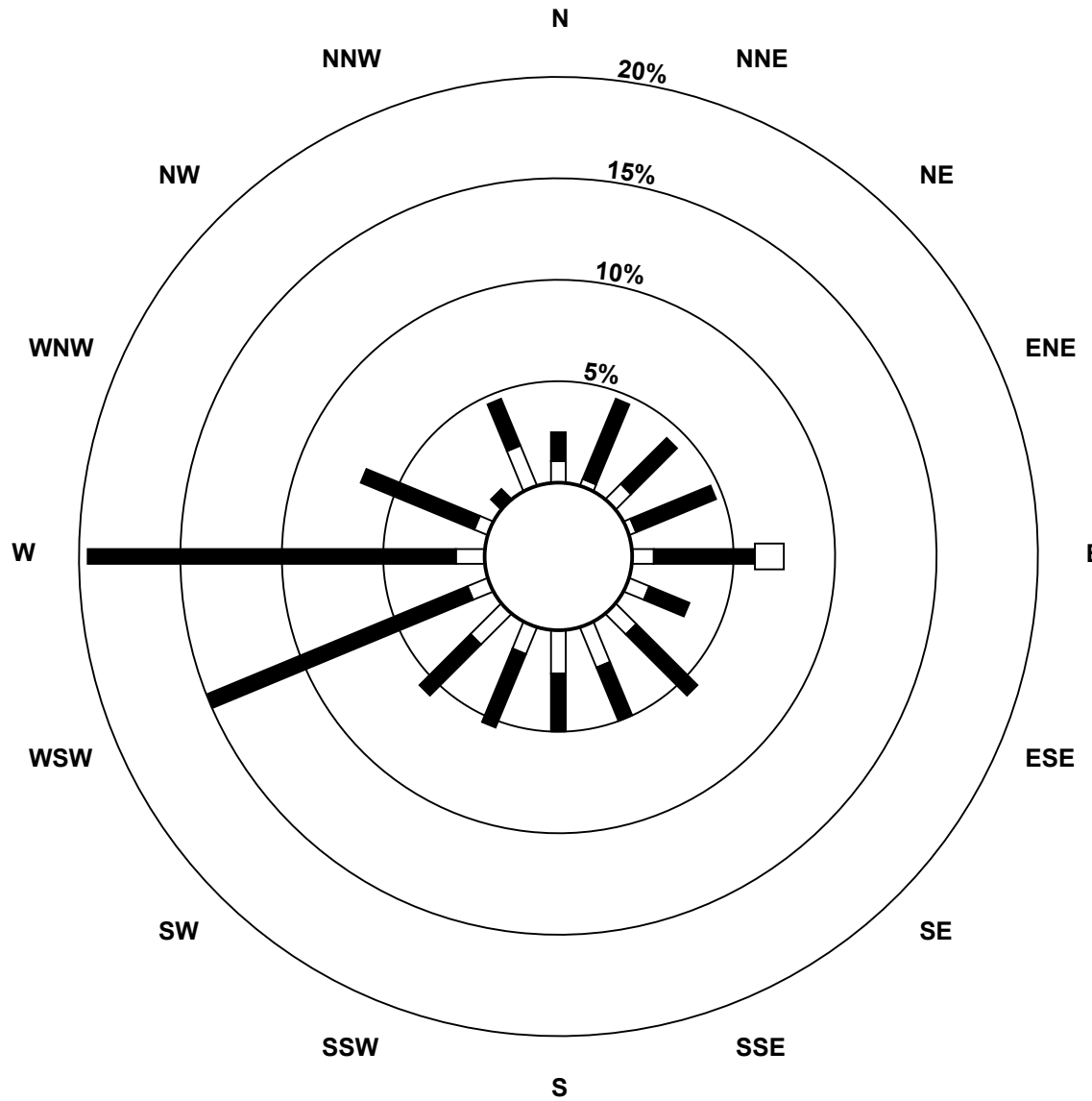
Hourly Maximums

Ozone (O₃) - ppb
Beaverlodge - July 2017

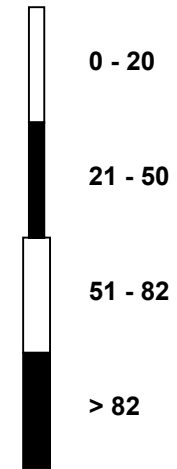


Pollutant Rose

Ozone (O₃) - ppb
Beaverlodge - July 2017



Pollutant Classes (ppb)





Peace Airshed Zone Association

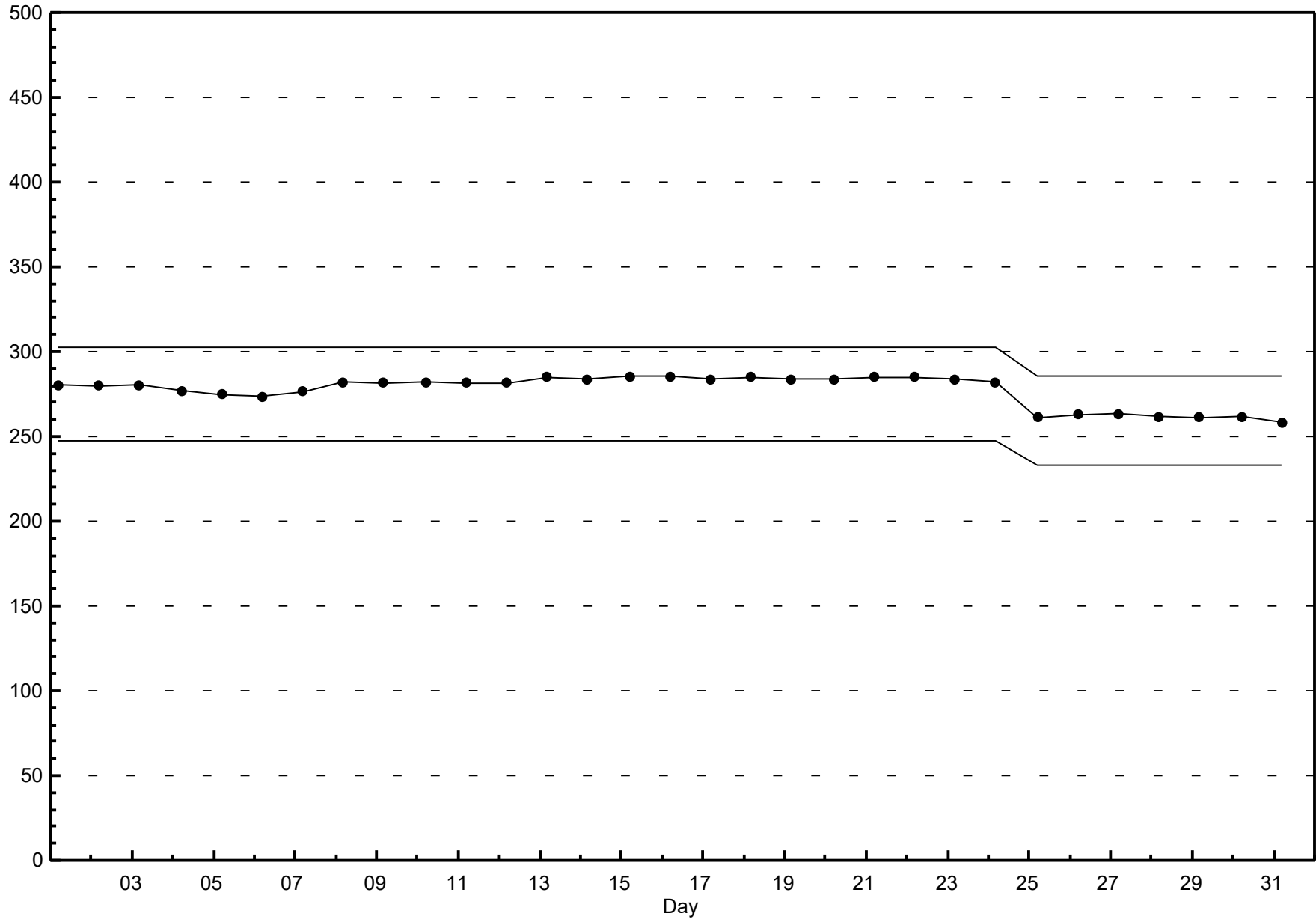
Eight Hour Running Averages

Ozone (O₃) - ppb
Beaverlodge - July 2017

Maximum Value: 49.9 ppb on Jul 7 18:00																				Hours in Service: 744					
Minimum Value: 9.6 ppb on Jul 25 07:00																				Hours of Data: 738					
Percentiles: P ₁ = 10.0 P ₁₀ = 15.8 Q ₁ = 20.0 Median = 24.9 Q ₃ = 30.3 P ₉₀ = 35.6 P ₉₉ = 46.5																				Hours of Missing Data: 6					
																				Hours of Calibration: 6					
																				Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Jul	34	32	30	29	28	26	23	21	21	21	22	24	26	29	32	35	37	39	40	40	39	38	37	34	39.9
2-Jul	32	30	27	25	24	22	20	19	19	20	22	23	24	26	28	29	31	31	31	31	30	29	28	26	32.5
3-Jul	25	24	23	23	22	23	25	26	27	28	29	29	29	29	29	28	29	29	29	29	30	30	30	29	29.9
4-Jul	29	28	27	26	25	24	24	24	24	24	24	25	25	26	27	28	29	30	31	31	32	32	31	31	31.8
5-Jul	31	29	28	27	26	24	22	20	19	19	21	23	25	27	31	33	36	37	38	39	38	38	37	36	38.7
6-Jul	36	35	34	32	32	31	30	29	27	26	26	28	29	31	33	36	38	40	41	42	42	41	41	40	42.0
7-Jul	38	36	35	33	33	33	33	32	32	34	37	40	42	44	46	48	50	50	50	49	47	47	47	47	49.9
8-Jul	45	44	42	40	40	34	29	26	24	23	24	24	26	27	31	34	36	38	39	38	36	36	35	34	45.2
9-Jul	34	33	31	30	30	29	27	25	22	21	20	20	21	22	24	26	29	31	32	32	32	31	30	28	33.6
10-Jul	26	25	25	25	26	26	25	26	25	25	24	23	24	25	26	26	27	28	29	30	29	28	28	27	29.8
11-Jul	26	25	22	19	18	17	16	15	14	15	17	20	22	25	27	30	33	34	35	36	36	34	32	30	36.0
12-Jul	29	27	25	23	22	21	21	19	19	18	18	19	20	22	24	28	30	33	34	36	37	36	34	33	36.6
13-Jul	31	29	27	25	24	22	21	20	20	20	22	25	27	29	31	31	32	34	34	34	33	33	33	32	34.4
14-Jul	31	29	26	24	22	18	16	14	13	15	18	21	24	29	33	37	39	40	40	40	39	37	35	34	40.2
15-Jul	34	34	33	31	31	31	30	28	26	25	25	26	28	30	32	35	38	39	40	40	39	38	36	34	39.8
16-Jul	31	30	28	27	26	25	24	24	24	24	24	25	25	25	26	26	26	25	24	23	21	20	19	19	31.2
17-Jul	18	18	18	18	18	19	18	16	16	15	14	14	14	14	15	15	16	16	16	16	16	16	16	15	18.5
18-Jul	15	14	13	12	12	11	10	10	10	11	12	14	15	16	17	20	21	22	23	24	24	24	23	22	24.4
19-Jul	21	20	18	16	15	13	13	13	13	14	15	17	20	22	25	27	30	32	33	33	32	31	29	28	33.2
20-Jul	26	25	24	23	23	22	22	21	20	20	20	21	22	23	24	25	26	26	25	24	22	21	20	19	26.3
21-Jul	18	18	17	18	18	17	16	16	15	15	16	16	17	18	20	22	23	24	24	25	25	25	24	23	25.2
22-Jul	22	21	20	18	17	16	16	15	16	17	19	21	21	23	24	25	25	25	25	25	25	25	25	25	25.5
23-Jul	26	26	25	25	25	24	23	23	23	24	25	25	26	27	27	26	26	25	24	23	22	21	19	18	26.8
24-Jul	16	15	14	13	12	12	12	12	12	13	14	14	14	N	N	N	N	N	N	30	29	28	26	24	30.2
25-Jul	21	18	15	12	11	10	10	10	11	12	14	17	18	20	22	24	26	27	28	28	28	27	26	25	28.4
26-Jul	24	23	22	21	21	20	19	17	16	16	17	18	20	24	27	30	33	35	36	36	35	33	31	28	36.5
27-Jul	25	22	19	17	16	14	12	11	10	10	10	10	12	14	17	20	23	25	26	28	29	29	28	27	29.0
28-Jul	25	25	23	22	21	20	18	18	18	18	19	20	20	21	23	24	25	26	26	27	27	27	27	26	27.1
29-Jul	26	25	24	22	22	21	19	18	17	17	18	19	21	23	26	29	31	34	35	36	36	34	32	31	35.6
30-Jul	28	26	23	21	19	18	17	15	15	16	18	21	23	25	28	31	32	33	34	33	33	32	31	29	33.6
31-Jul	28	26	25	24	23	22	20	19	18	17	17	18	18	19	21	22	22	22	22	22	22	21	21	20	27.7
45.2	44.0	41.9	39.7	39.5	34.4	32.8	32.3	32.5	33.8	36.8	40.0	41.6	44.1	46.2	48.3	49.7	49.9	49.6	48.9	46.9	46.9	47.4	46.6		
Diurnal Maximums																									
N - Not Valid																									

Span Responses

Ozone (O₃)
Beaverlodge - July 2017



Hourly Averages

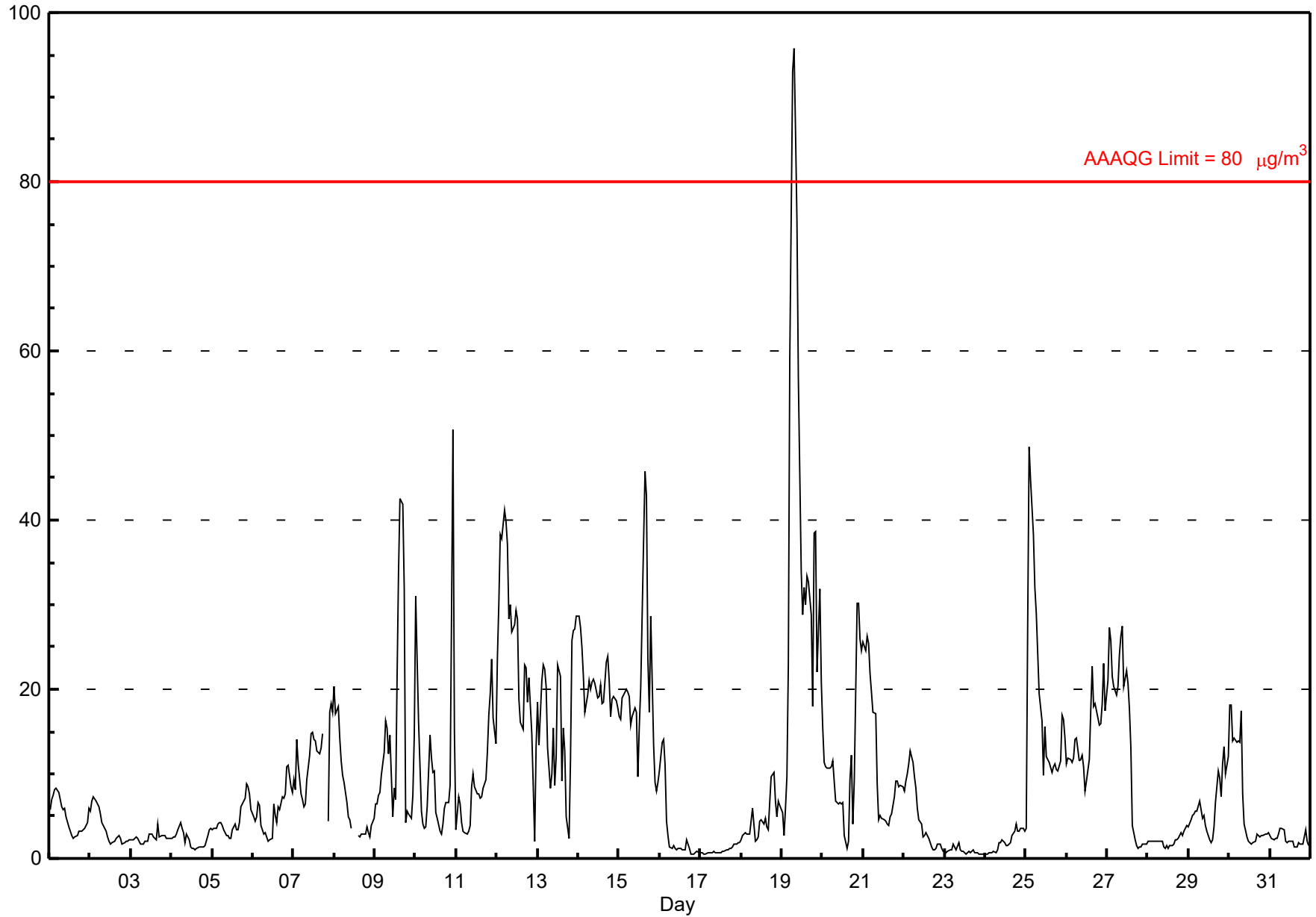
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Beaverlodge - July 2017

Number of Exceedences: 1-hr: 3 24-hr: 1	Hours in Service: 744
Maximum Value: 95.8 µg/m ³ on Jul 19 08:00	Maximum Daily Average: 37.6 µg/m ³ on Jul 19
Minimum Value: 0 µg/m ³ on Jul 24 02:00	Hours of Data: 740
Maximum Diurnal Average: 12.3 µg/m ³ at hour 7	Hours of Missing Data: 4
Monthly Average: 9.73 µg/m ³	Hours of Calibration: 0
Minimum Daily Average: 0.9 µg/m ³ on Jul 23	Percent Operational Time: 99.5
Minimum Diurnal Average: 6.6 µg/m ³ at hour 19	
Percentiles: P ₁ = 0.5 P ₁₀ = 1.2 Q ₁ = 2.4 Median = 5.5 Q ₃ = 14.0 P ₉₀ = 22.9 P ₉₉ = 45.3	

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-Jul	6	7	8	8	8	8	7	6	6	6	5	4	3	3	2	3	3	3	3	3	3	4	4	6	4.9	8.3
2-Jul	6	7	7	7	7	6	5	4	4	3	3	2	2	2	2	3	3	2	2	2	2	2	2	2	3.6	7.3
3-Jul	2	2	2	2	2	2	2	2	2	2	2	3	3	2	2	2	4	3	3	3	3	2	2	2	2.4	4.1
4-Jul	2	3	2	3	3	4	4	3	2	3	2	1	1	1	1	1	1	1	1	1	1	3	3	4	2.2	4.2
5-Jul	3	4	4	4	4	4	4	3	3	3	2	2	3	4	3	3	4	6	6	7	9	8	8	6	4.6	8.9
6-Jul	5	4	5	7	6	4	3	3	3	2	2	2	6	5	4	6	6	7	7	8	11	11	8	8	5.6	10.9
7-Jul	9	8	14	11	8	7	6	7	9	12	15	15	14	14	13	12	13	15	P	P	4	17	18	17	11.8	18.3
8-Jul	20	17	18	14	11	10	9	7	5	5	4	M	3	M	3	3	3	3	3	4	3	3	4	5	7.0	20.3
9-Jul	7	6	7	8	10	13	16	15	12	15	5	8	7	21	34	43	42	32	4	6	5	5	7	15	14.3	42.6
10-Jul	31	23	16	6	4	4	4	6	15	12	10	10	5	5	3	3	4	6	7	7	9	29	51	15	11.8	50.6
11-Jul	3	7	6	4	3	3	3	3	4	8	10	8	8	8	7	7	8	9	12	17	20	24	17	14	8.9	23.5
12-Jul	24	30	38	38	41	40	37	28	30	27	28	29	28	19	16	15	23	23	19	21	15	9	2	13	24.7	41.2
13-Jul	18	13	21	23	22	20	13	8	10	15	9	12	23	22	9	15	13	5	2	12	26	27	27	29	16.5	28.7
14-Jul	29	27	25	22	17	19	21	20	21	21	21	19	19	20	18	18	23	24	21	17	19	19	19	18	20.7	28.7
15-Jul	17	16	19	20	20	20	19	16	17	18	17	10	16	20	37	46	43	24	17	29	13	9	8	9	20.0	45.7
16-Jul	10	14	14	11	4	3	1	1	2	1	1	1	1	1	1	1	2	1	1	0	1	1	1	1	3.1	14.0
17-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1.0	1.9
18-Jul	2	3	3	3	3	3	4	6	2	2	3	4	5	4	5	4	3	7	10	10	7	5	7	6	4.6	10.1
19-Jul	5	3	6	10	23	59	93	96	86	75	57	34	29	32	30	33	33	29	18	39	39	22	32	21	37.6	95.8
20-Jul	15	11	11	11	11	11	12	9	7	6	7	6	7	3	1	2	9	12	4	9	30	30	26	25	11.5	30.3
21-Jul	26	25	26	25	22	20	17	17	9	5	5	5	5	4	4	4	5	5	7	9	9	9	9	9	11.6	26.2
22-Jul	8	9	10	11	13	11	10	8	6	5	4	2	3	3	3	2	1	1	1	1	2	2	1	1	4.9	12.8
23-Jul	1	1	1	1	1	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0.9	1.9
24-Jul	0	0	1	1	1	1	1	1	2	2	2	2	1	2	2	2	3	3	4	3	3	4	4	3	1.9	4.1
25-Jul	4	28	49	45	38	32	29	24	19	16	10	16	12	12	11	10	11	11	10	10	12	17	16	14	19.0	48.6
26-Jul	11	12	12	11	12	14	14	12	12	12	11	8	9	12	17	23	18	18	17	16	16	18	23	18	14.4	23.0
27-Jul	21	27	26	22	20	19	20	24	26	28	20	22	21	18	13	4	2	2	1	1	1	2	2	2	14.3	27.5
28-Jul	2	2	2	2	2	2	2	2	2	1	1	1	1	2	2	2	2	2	2	3	3	3	4	4	2.2	3.8
29-Jul	4	5	5	5	6	6	7	6	5	5	4	3	2	2	2	4	7	10	9	7	11	13	10	12	6.2	13.3
30-Jul	18	18	14	14	14	14	14	17	8	4	3	2	2	2	2	2	3	3	3	3	3	3	3	3	7.1	18.1
31-Jul	3	2	2	2	2	3	3	4	3	2	2	2	2	2	1	1	1	2	2	2	2	3	2	1	2.3	3.5
	10.1	10.8	12.1	11.3	11.0	11.7	12.3	11.6	10.7	10.3	8.5	7.9	7.8	8.1	8.1	8.9	9.5	8.8	6.6	8.4	9.1	9.8	10.4	9.1	Diurnal Average	
	31.1	30.2	48.6	44.7	41.2	59.1	93.1	95.8	86.1	75.5	56.6	33.9	28.8	32.0	37.4	45.7	43.0	31.9	21.1	38.5	38.6	30.2	50.6	28.7	Diurnal Maximum	

P - Power Failure 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

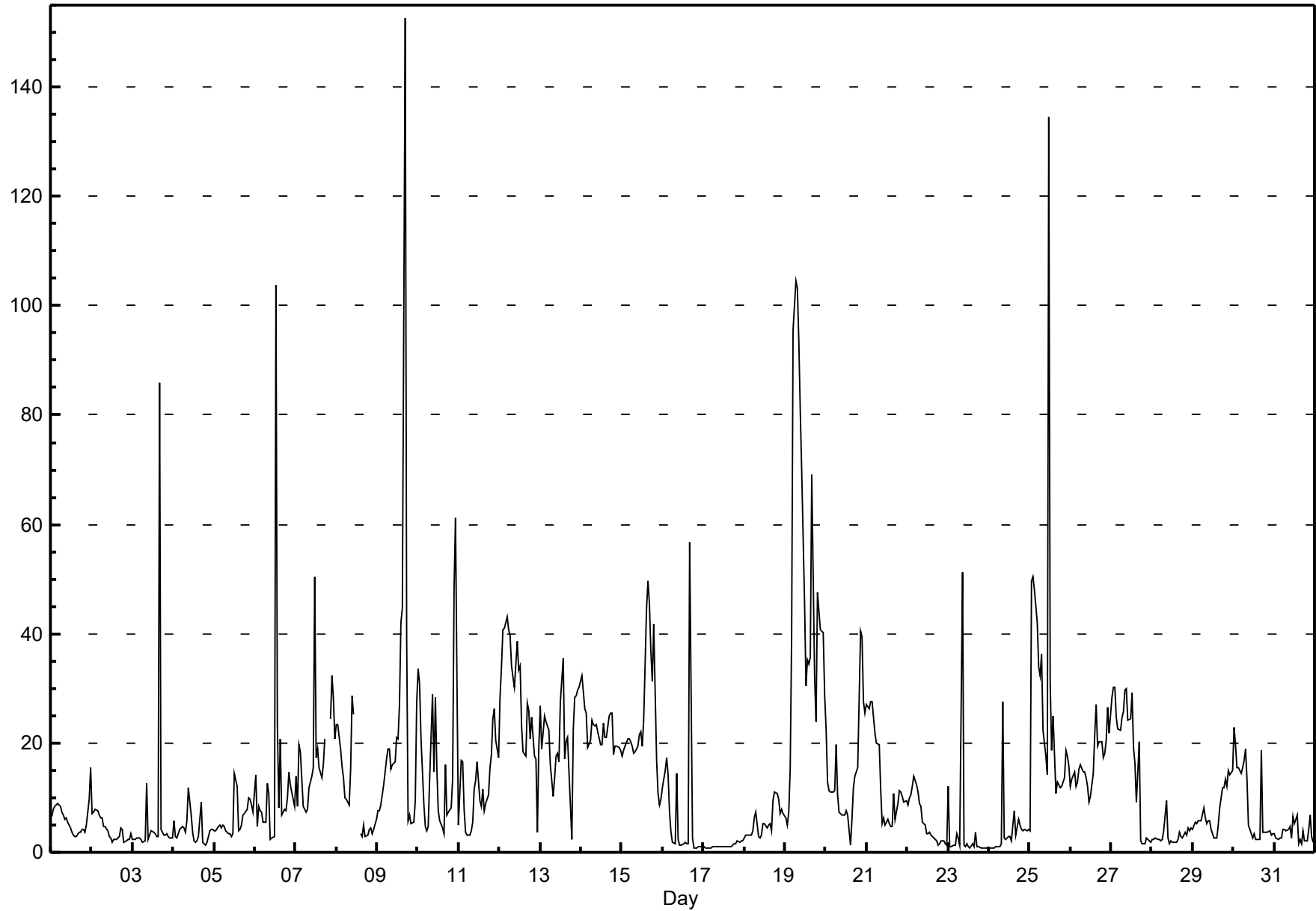
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Beaverlodge - July 2017

Maximum Value: 152.6 µg/m ³ on Jul 9 17:00	Maximum Daily Average: 47.0 µg/m ³ on Jul 19	Hours in Service: 744
Minimum Value: 1 µg/m ³ on Jul 16 20:00	Minimum Daily Average: 1.2 µg/m ³ on Jul 17	Hours of Data: 740
Maximum Diurnal Average: 21.9 µg/m ³ at hour 17	Minimum Diurnal Average: 8.7 µg/m ³ at hour 19	Hours of Missing Data: 4
Monthly Average: 13.10 µg/m ³	Percentiles: P ₁ = 0.7 P ₁₀ = 1.9 Q ₁ = 3.2 Median = 7.6 Q ₃ = 18.8 P ₉₀ = 28.5 P ₉₉ = 91.7	Hours of Calibration: 0
		Percent Operational Time: 99.5

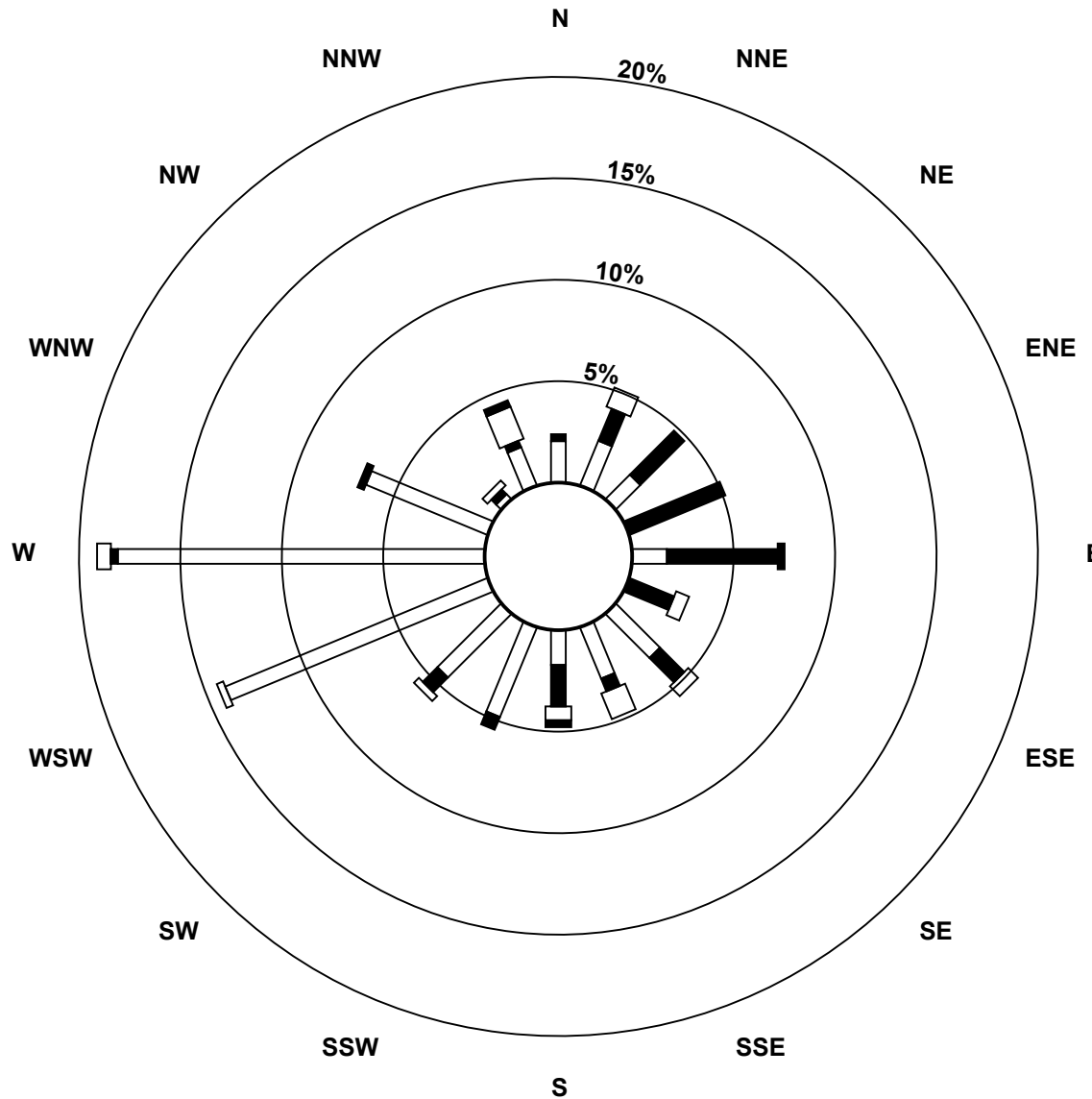
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	7	8	8	9	9	8	7	7	6	6	5	4	4	3	3	3	4	4	4	4	4	5	10	16	6.1	15.6
2-Jul	7	7	8	8	7	6	6	5	5	4	3	3	2	2	2	3	3	4	4	2	2	2	2	3	4.2	7.8
3-Jul	2	2	3	3	3	2	2	2	13	2	3	4	4	3	3	3	86	4	3	3	3	3	3	3	6.8	86.0
4-Jul	6	3	3	3	4	5	4	4	6	12	7	4	2	2	2	3	9	2	2	1	2	4	4	4	4.0	11.7
5-Jul	4	4	5	5	4	5	5	4	3	3	3	3	14	12	4	4	5	7	7	8	10	10	9	7	6.1	14.4
6-Jul	14	5	9	8	7	6	6	13	11	2	3	3	104	23	8	21	7	8	8	10	15	12	10	8	13.3	103.8
7-Jul	14	9	20	18	8	8	7	8	12	14	15	50	17	19	15	14	16	21	P	P	24	32	28	21	17.8	50.4
8-Jul	23	23	19	16	14	10	10	9	15	29	25	M	3	M	3	3	5	3	3	4	4	3	4	6	10.7	28.5
9-Jul	8	8	9	10	12	17	19	19	15	16	17	21	21	27	42	45	153	39	6	7	5	6	10	28	23.2	152.6
10-Jul	34	31	21	9	5	4	5	13	29	15	28	15	8	6	4	3	16	7	7	8	13	48	61	32	17.6	61.2
11-Jul	5	17	17	8	4	3	3	4	6	11	13	17	10	8	11	8	9	10	15	18	24	26	21	17	11.9	26.2
12-Jul	28	34	41	41	43	41	40	34	32	30	39	33	34	23	18	18	27	26	21	25	18	17	4	19	28.6	43.1
13-Jul	27	19	25	24	23	22	16	10	14	18	18	17	28	35	17	20	21	15	2	23	28	29	30	30	21.3	35.5
14-Jul	32	29	26	25	19	21	24	24	23	23	22	20	20	24	21	21	25	25	25	18	19	20	19	19	22.7	32.3
15-Jul	18	19	20	21	21	20	20	18	18	20	22	22	19	24	45	50	46	37	31	42	17	11	9	10	24.0	49.7
16-Jul	12	15	17	14	7	4	2	2	14	2	1	1	2	2	2	2	57	3	1	1	1	1	1	1	6.8	56.8
17-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1.2	2.2
18-Jul	3	3	3	3	3	4	6	7	3	3	3	5	5	4	5	5	4	10	11	11	10	7	8	7	5.6	11.0
19-Jul	6	5	7	15	39	96	105	103	94	81	70	46	31	35	35	36	69	32	24	47	44	41	40	29	47.0	104.5
20-Jul	23	13	11	11	11	11	20	11	7	7	7	7	8	7	1	6	12	14	15	15	40	39	28	25	14.5	40.4
21-Jul	27	26	27	28	25	22	20	20	11	5	6	5	6	5	5	5	11	6	9	11	11	10	9	9	13.3	27.7
22-Jul	9	10	11	12	14	12	11	9	8	6	5	3	3	4	3	3	2	2	1	1	2	2	1	1	5.7	14.0
23-Jul	12	1	1	1	1	3	3	1	51	1	1	2	1	1	2	1	4	1	1	1	1	1	1	1	3.9	51.1
24-Jul	1	1	1	1	1	1	1	2	28	3	2	3	3	2	5	8	3	6	5	4	4	4	4	4	3.9	27.6
25-Jul	4	50	50	48	42	34	32	36	22	18	14	134	31	19	25	11	13	12	12	12	14	19	18	16	28.6	134.4
26-Jul	12	13	15	12	13	15	16	15	15	14	12	9	10	14	22	27	20	20	20	17	18	21	27	22	16.6	27.2
27-Jul	28	30	30	25	23	22	25	26	30	30	24	24	29	19	16	9	20	2	1	2	1	3	2	2	17.7	30.3
28-Jul	2	2	3	2	2	2	2	4	10	3	1	2	2	2	2	2	4	3	3	4	3	4	4	4	3.1	9.5
29-Jul	4	6	5	6	6	6	8	6	5	6	6	4	3	3	3	5	8	12	12	13	12	15	14	15	7.6	14.9
30-Jul	23	20	15	15	14	16	17	19	13	5	3	3	3	2	2	2	19	4	4	4	4	4	3	3	9.1	22.8
31-Jul	3	3	2	3	3	4	4	4	4	5	3	7	5	7	2	2	2	4	2	2	4	7	3	2	3.6	6.8
																								Diurnal Average		
																								Diurnal Maximum		

P - Power Failure M - Maintenance

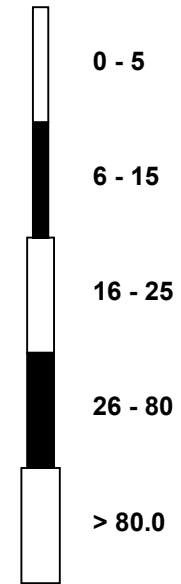


Pollutant Rose

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



Pollutant Classes (μg/m³)





Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - °C

Beaverlodge - July 2017

Maximum Value: 27.8 °C on Jul 26 16:00 Minimum Value: 7 °C on Jul 5 06:00 Maximum Diurnal Average: 21.5 °C at hour 16 Monthly Average: 16.58 °C	Maximum Daily Average: 20.3 °C on Jul 26 Minimum Daily Average: 12.9 °C on Jul 16 Minimum Diurnal Average: 11.5 °C at hour 6 Percentiles: P ₁ = 8.4 P ₁₀ = 11.0 Q ₁ = 13.1 Median = 16.1 Q ₃ = 19.9 P ₉₀ = 22.7 P ₉₉ = 26.6	Hours in Service: 744 Hours of Data: 740 Hours of Missing Data: 4 Hours of Calibration: 0 Percent Operational Time: 99.5
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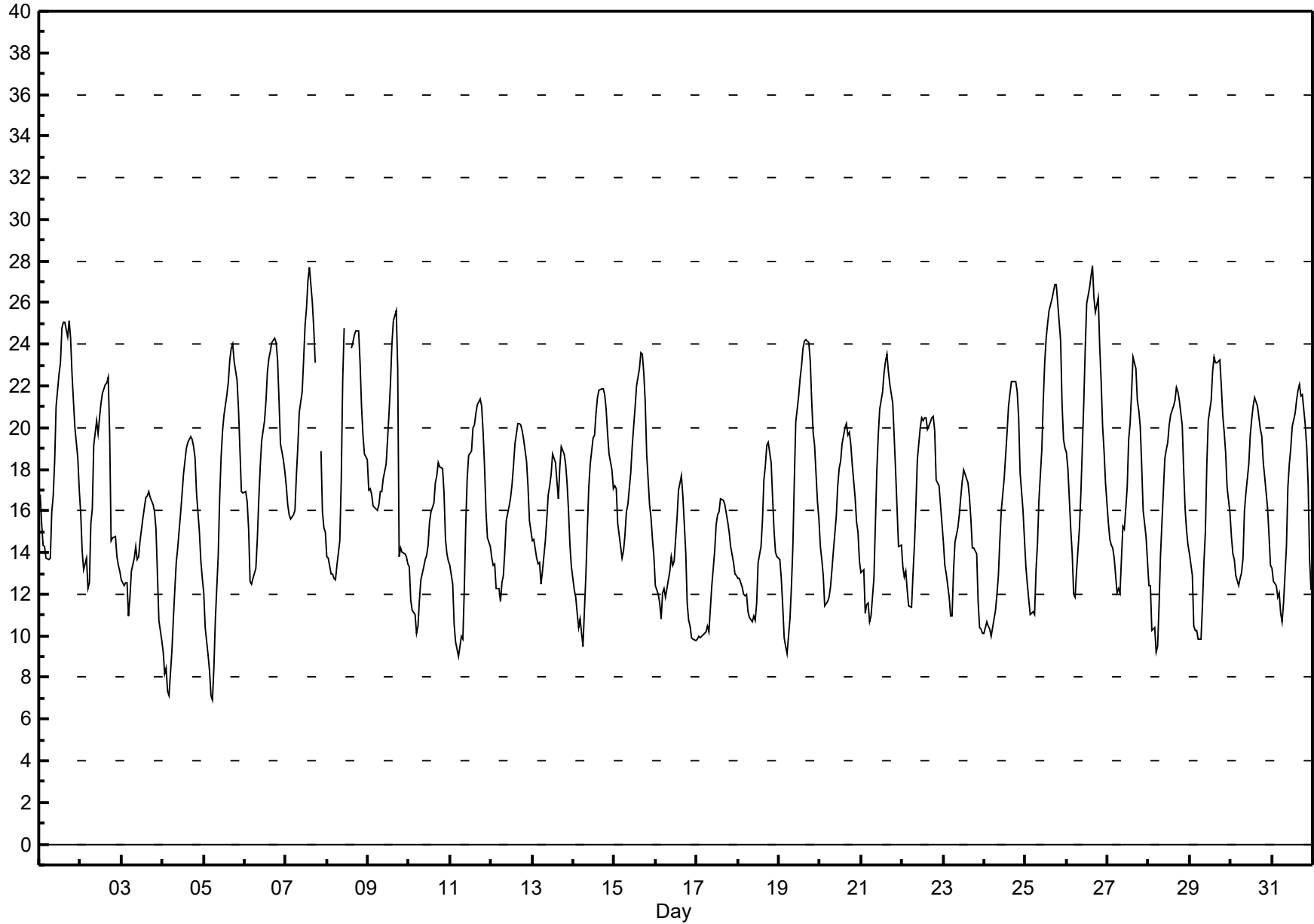
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	17	15	14	14	14	14	14	16	17	18	21	23	23	25	25	25	24	25	24	23	21	20	19	17	19.5	25.1
2-Jul	16	14	13	14	12	13	15	16	19	20	20	20	21	22	22	22	22	20	15	15	15	14	13	13	16.9	22.4
3-Jul	13	12	13	13	11	12	13	14	14	14	14	15	16	16	17	17	17	17	16	16	15	13	11	10	14.0	17.0
4-Jul	9	8	8	7	7	9	11	12	14	14	16	17	18	18	19	19	20	19	19	18	17	15	14	13	14.3	19.5
5-Jul	12	10	9	8	7	7	8	11	14	17	19	20	21	22	22	23	24	24	23	22	21	19	17	17	16.5	24.0
6-Jul	17	16	15	13	12	13	13	15	17	18	19	20	21	23	23	24	24	24	24	23	21	19	18	18	18.8	24.3
7-Jul	17	16	16	16	16	16	18	19	21	22	23	25	26	27	28	26	25	23	P	P	19	16	15	15	20.2	27.7
8-Jul	14	14	13	13	13	13	13	15	18	22	25	M	21	M	24	24	24	25	25	23	21	20	19	18	18.9	24.8
9-Jul	17	17	17	16	16	16	16	17	17	18	18	19	21	22	24	25	26	23	14	14	14	14	14	13	17.8	25.6
10-Jul	13	12	11	11	10	10	12	13	13	14	14	14	16	16	16	17	18	18	18	18	17	15	14	14	14.3	18.3
11-Jul	13	12	11	10	9	9	10	10	12	15	18	19	19	20	20	21	21	21	21	20	18	16	15	14	15.6	21.4
12-Jul	14	13	13	12	12	12	13	13	14	16	16	17	17	18	19	20	20	20	20	19	18	17	16	15	16.1	20.2
13-Jul	15	15	14	13	14	12	13	15	16	17	17	18	19	18	17	17	18	19	19	18	17	16	14	13	16.0	19.1
14-Jul	12	12	11	10	11	9	11	13	15	17	18	20	20	21	21	22	22	22	22	21	20	19	18	17	16.8	21.9
15-Jul	17	17	15	14	14	14	15	16	16	18	19	20	21	22	23	24	24	23	21	19	16	16	15	14	18.0	23.6
16-Jul	12	12	12	11	12	12	12	13	13	14	13	14	16	17	17	18	17	14	12	11	10	10	10	10	12.9	17.7
17-Jul	10	10	10	10	10	10	10	10	11	12	14	15	16	16	17	17	16	16	15	15	14	13	13	13	13.1	16.6
18-Jul	13	13	12	12	12	12	11	11	11	11	11	12	14	14	16	17	18	19	19	18	17	15	14	14	14.0	19.3
19-Jul	14	13	11	10	10	9	11	12	14	17	20	22	22	23	24	24	24	24	23	21	20	19	16	16	17.5	24.2
20-Jul	14	14	13	11	12	12	12	13	14	16	17	18	18	19	20	20	20	20	19	18	17	15	15	14	15.9	20.2
21-Jul	13	13	11	11	12	11	11	13	15	18	20	21	22	23	23	24	23	22	21	20	18	16	14	14	17.0	23.5
22-Jul	13	13	13	12	11	11	13	14	16	18	20	20	20	20	20	20	20	20	21	20	17	17	16	15	16.9	20.5
23-Jul	14	13	13	12	11	11	13	14	15	16	17	17	18	18	17	17	16	14	14	14	12	10	10	10	14.1	18.0
24-Jul	10	11	10	10	10	10	11	12	13	15	16	18	19	20	21	22	22	22	22	22	20	18	16	15	16.0	22.2
25-Jul	13	13	12	11	11	11	13	14	17	19	21	23	24	25	26	26	27	27	27	26	24	21	19	19	19.6	26.9
26-Jul	19	18	15	14	12	12	13	15	17	19	21	24	26	27	27	28	26	26	26	24	22	20	19	17	20.3	27.8
27-Jul	15	15	14	14	14	12	12	12	14	15	15	17	19	20	22	23	23	21	21	20	18	16	15	14	16.8	23.4
28-Jul	12	12	10	10	9	10	11	14	17	19	19	20	21	21	21	22	22	22	21	20	18	16	15	14	16.5	21.9
29-Jul	14	13	10	10	10	10	10	12	14	15	18	20	21	23	23	23	23	23	22	21	20	19	17	16	17.0	23.4
30-Jul	15	14	14	13	12	13	13	14	16	17	18	20	20	21	21	21	20	20	20	18	18	16	15	13	16.7	21.4
31-Jul	13	13	12	12	12	11	11	12	14	17	18	19	20	21	21	22	22	21	22	20	19	17	14	12	16.5	22.0
	13.9	13.3	12.5	11.9	11.6	11.5	12.4	13.5	15.1	16.7	17.9	18.8	19.9	20.6	21.2	21.5	21.5	21.1	20.2	19.3	17.9	16.4	15.1	14.4	Diurnal Average	
	18.8	18.0	16.8	16.3	16.2	16.0	17.7	19.1	20.8	22.3	24.8	24.9	25.9	27.1	27.7	27.8	26.5	26.9	26.9	26.0	24.2	21.1	19.5	19.0	Diurnal Maximum	

P - Power Failure M - Maintenance

Hourly Averages

External Temperature (ET) - °C

Beaverlodge - July 2017



Hourly Averages

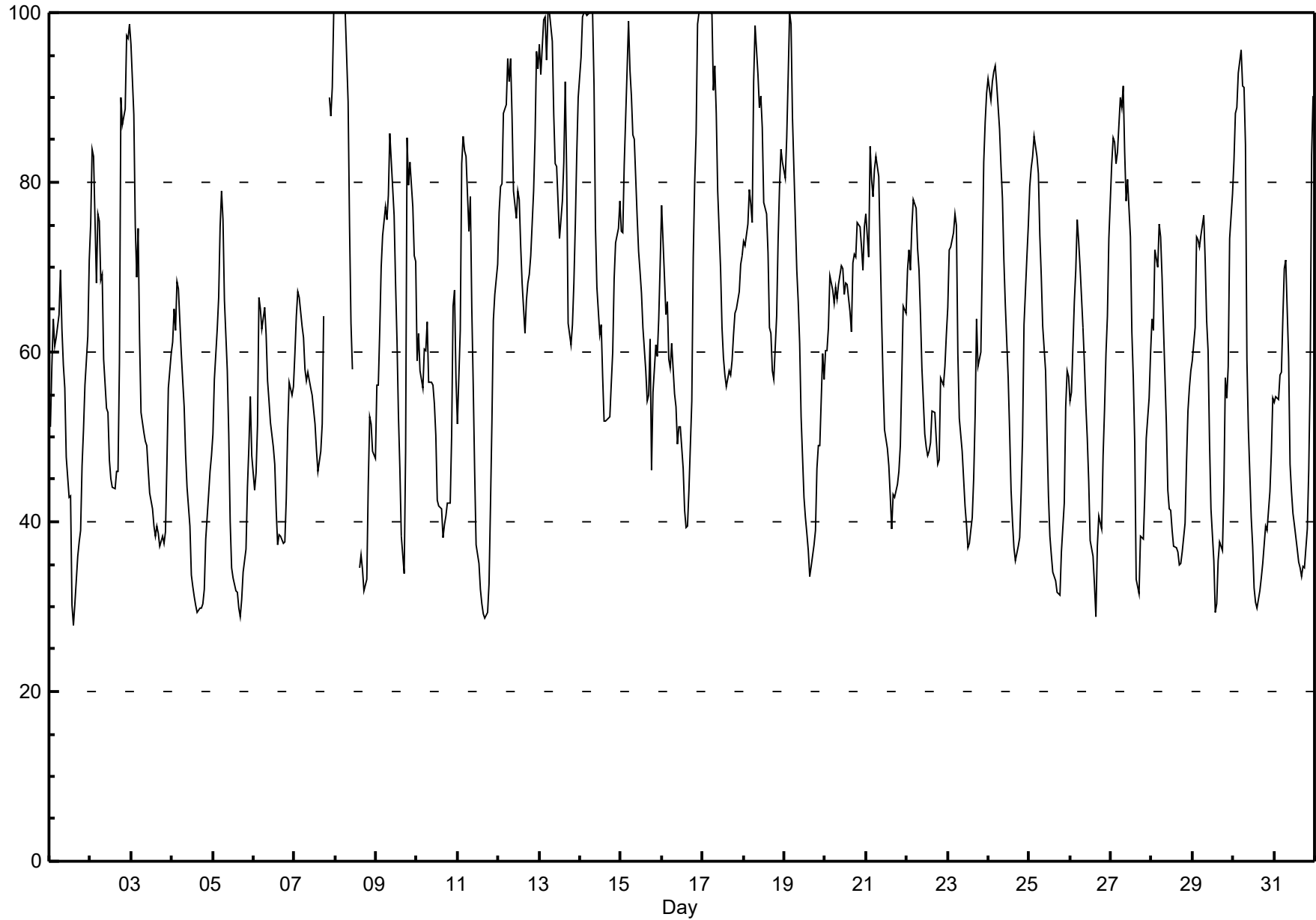
Relative Humidity (RH) - %

Beaverlodge - July 2017

Maximum Value: 100.0 % on Jul 8 00:00		Maximum Daily Average: 84.1 % on Jul 13		Hours in Service: 744 Hours of Data: 740 Hours of Missing Data: 4 Hours of Calibration: 0 Percent Operational Time: 99.5																						
Minimum Value: 28 % on Jul 1 15:00 Maximum Diurnal Average: 79.2 % at hour 5 Monthly Average: 61.70 %		Minimum Daily Average: 45.0 % on Jul 4 Minimum Diurnal Average: 42.8 % at hour 16		Percentiles: $P_1 = 29.4$ $P_{10} = 37.0$ $Q_1 = 46.1$ Median = 60.7 $Q_3 = 75.0$ $P_{90} = 89.9$ $P_{99} = 100.0$																						
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-Jul	51	58	64	61	62	64	70	63	59	56	48	43	43	30	28	30	36	38	39	47	51	56	62	71	51.1	70.9
2-Jul	75	84	83	68	76	76	68	69	59	53	53	47	45	44	44	46	46	59	90	87	89	97	97	99	68.9	98.7
3-Jul	96	88	75	69	75	62	53	50	50	49	46	43	41	39	38	39	39	37	38	37	39	47	56	60	52.8	96.2
4-Jul	61	65	63	68	67	60	57	54	48	44	39	34	32	31	30	29	30	30	30	32	38	43	46	48	45.0	68.3
5-Jul	50	57	63	66	75	79	76	66	58	50	40	35	33	32	32	30	29	31	34	37	44	49	55	48	48.6	78.9
6-Jul	44	46	51	66	65	63	65	62	57	54	52	49	47	41	37	38	38	37	38	43	51	56	55	56	50.5	66.4
7-Jul	60	64	67	66	63	62	58	57	58	56	55	53	51	49	46	48	51	64	P	P	90	88	91	100	63.5	100.0
8-Jul	100	100	100	100	100	100	100	89	75	63	58	M	39	M	35	36	34	32	33	44	52	52	48	48	65.4	100.0
9-Jul	56	56	63	70	74	77	76	79	86	83	76	68	61	52	46	38	34	48	85	80	82	77	71	71	67.0	85.8
10-Jul	59	62	58	56	60	60	64	56	57	56	54	50	43	42	42	38	40	41	42	42	50	65	67	57	52.5	67.4
11-Jul	51	63	82	86	84	83	74	78	65	56	46	37	35	32	30	29	29	29	33	42	52	64	67	70	54.9	85.5
12-Jul	76	80	80	88	89	95	92	95	88	79	76	79	78	73	68	62	66	68	69	71	79	85	95	93	80.2	95.4
13-Jul	96	93	99	100	94	100	100	97	88	82	82	78	73	78	82	92	81	63	61	63	68	75	83	90	84.1	100.0
14-Jul	95	99	100	100	100	100	100	100	92	75	68	62	63	57	52	52	52	52	56	60	69	73	75	78	76.2	100.0
15-Jul	74	74	82	93	99	93	90	86	85	76	72	69	67	63	58	54	55	62	46	55	61	59	64	70	71.2	99.0
16-Jul	77	69	64	66	59	58	61	55	54	49	51	51	46	41	39	40	44	54	71	80	86	99	100	100	63.1	100.0
17-Jul	100	100	100	100	100	100	91	94	88	79	70	63	59	57	56	58	57	59	62	65	65	67	70	71	76.3	100.0
18-Jul	73	73	75	79	77	75	92	98	93	89	90	86	78	76	72	63	62	58	57	64	73	80	84	82	77.1	98.4
19-Jul	81	85	92	100	99	88	76	70	66	61	52	43	41	39	37	34	35	37	39	46	49	49	60	57	59.7	100.0
20-Jul	60	60	63	69	67	66	68	66	68	70	70	67	68	68	65	62	71	72	71	75	75	72	70	75	68.2	75.3
21-Jul	76	71	84	80	78	81	83	81	72	64	57	51	49	47	43	39	43	43	44	46	49	57	65	65	61.2	84.2
22-Jul	70	72	70	75	78	77	72	70	64	58	50	49	48	48	49	53	53	50	47	47	57	56	58	62	59.7	78.0
23-Jul	65	72	72	74	76	75	60	52	48	45	42	40	37	37	41	45	52	64	58	60	71	82	87	91	60.3	90.6
24-Jul	92	90	92	93	94	92	86	82	78	71	66	57	51	44	40	37	35	37	38	43	50	63	71	75	65.7	93.7
25-Jul	79	82	83	85	83	81	74	69	63	58	50	43	38	36	34	33	32	32	31	36	42	53	58	57	55.6	85.4
26-Jul	54	55	66	70	76	73	70	63	59	54	50	45	38	36	33	29	37	41	39	48	53	60	64	73	53.5	75.6
27-Jul	82	85	85	82	84	90	89	91	84	78	80	74	62	57	49	33	31	38	38	38	43	50	55	60	64.9	91.4
28-Jul	64	63	72	70	75	73	69	63	52	44	41	41	39	37	37	36	35	35	36	40	47	53	56	58	51.5	75.1
29-Jul	59	63	74	73	72	74	76	71	64	60	49	42	35	29	30	35	38	37	44	57	55	58	73	79	56.1	78.7
30-Jul	83	88	89	93	96	91	91	84	59	51	40	37	32	30	30	32	33	35	37	40	39	44	48	55	56.6	95.5
31-Jul	54	55	54	57	58	64	70	71	59	47	44	41	40	37	35	35	34	35	35	39	46	57	83	90	51.6	90.2
71.5 73.3 76.3 78.2 79.2 78.4 76.4 73.5 67.5 61.6 57.0 52.5 48.8 46.1 43.8 42.8 43.6 45.7 48.1 52.2 58.5 64.1 68.9 71.2																								Diurnal Average		
100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 92.7 88.8 90.2 86.4 77.9 77.8 82.4 91.9 80.9 71.5 90.1 86.7 90.0 98.6 100.0 100.0																								Diurnal Maximum		
P - Power Failure M - Maintenance																										

Hourly Averages

Relative Humidity (RH) - %
Beaverlodge - July 2017





Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Beaverlodge - July 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	3	3	1	3	3	5	2	1	6	3	5	10	5	4	6	2	8	12	14	11	7	4	4	2	2.7	13.5
Dir	22	67	105	61	64	49	103	173	211	216	226	225	216	218	264	197	137	124	155	210	255	235	194	130	185	155
2 Spd	5	2	2	3	5	4	3	5	10	17	17	20	16	12	10	10	9	13	14	4	3	7	5	10	6.1	19.6
Dir	190	184	42	231	61	76	144	227	244	251	264	268	261	240	251	194	178	246	299	215	205	168	192	169	238	268
3 Spd	4	4	14	17	12	16	16	10	22	31	32	42	41	44	42	44	41	40	38	32	28	20	15	15	25.4	44.2
Dir	163	243	272	273	272	277	263	253	238	249	239	245	251	248	249	244	251	250	252	255	259	249	252	248	251	248
4 Spd	12	3	12	8	11	16	20	19	28	33	29	34	31	31	26	28	28	20	14	5	1	7	4	8	17.3	33.8
Dir	250	228	252	211	229	254	248	271	249	247	265	267	260	256	270	266	267	269	282	300	181	260	259	247	259	267
5 Spd	4	0	6	6	6	3	3	5	4	4	7	3	7	5	6	4	2	8	13	10	8	9	12	10	2.4	13.5
Dir	275	203	48	50	47	146	151	327	212	300	306	297	225	245	203	152	52	90	65	46	43	36	33	43	41	65
6 Spd	8	5	3	11	15	13	8	9	4	2	1	4	4	7	7	8	9	8	10	9	5	8	9	9	5.9	15.0
Dir	51	95	30	352	20	12	349	360	20	171	143	33	32	83	94	88	77	92	68	64	74	55	61	69	49	20
7 Spd	8	8	8	6	4	3	3	8	12	16	17	19	21	23	26	20	7	6	P	P	N	N	N	N	11.3	25.6
Dir	81	97	82	93	91	90	83	103	112	103	101	82	79	88	89	93	74	333	P	P	N	N	N	N	89	89
8 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
9 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
10 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
11 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
12 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
13 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
14 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
15 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
16 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
17 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
18 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
19 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
20 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
21 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
22 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--



Peace Airshed Zone Association

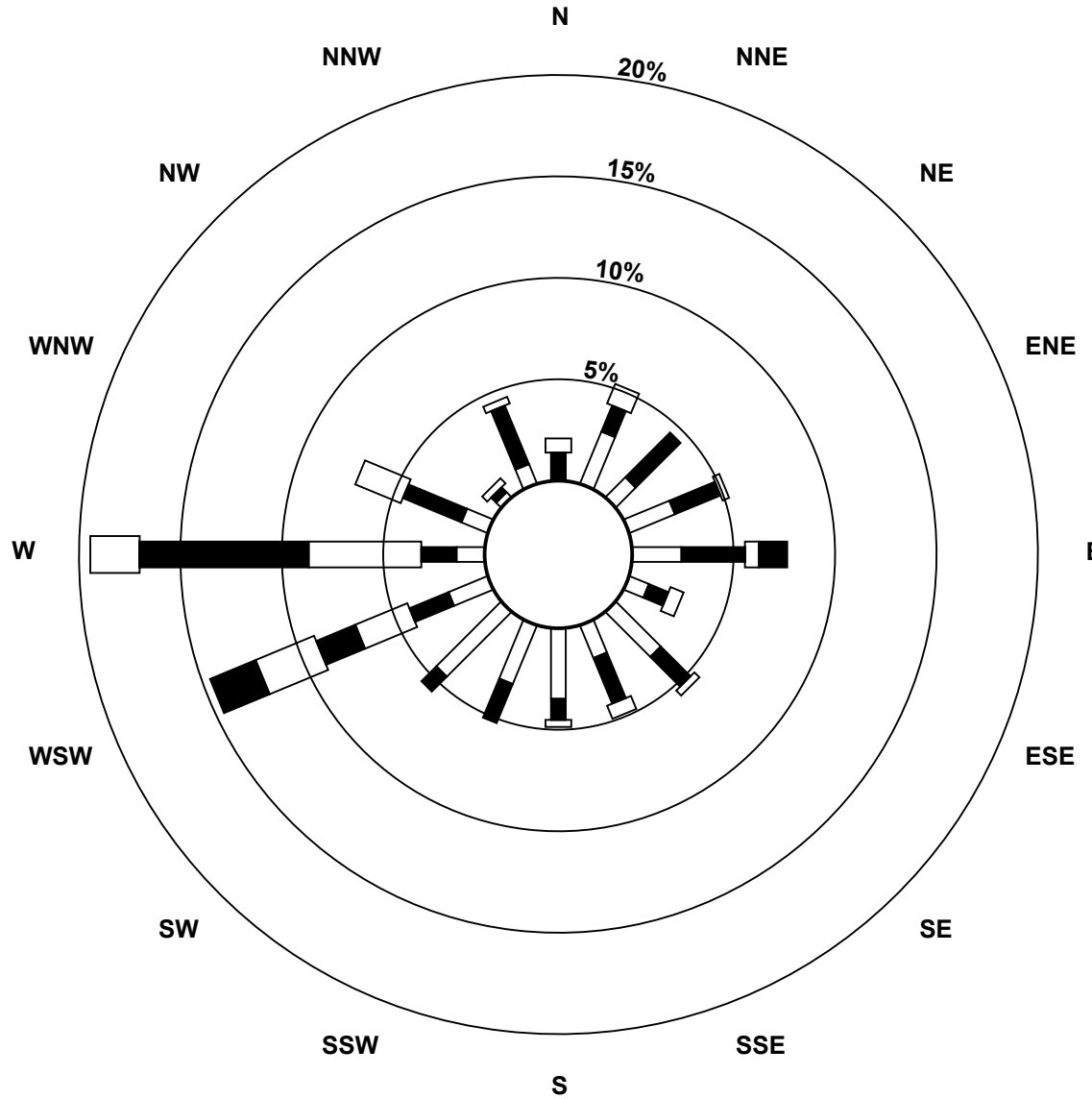
Hourly Averages

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

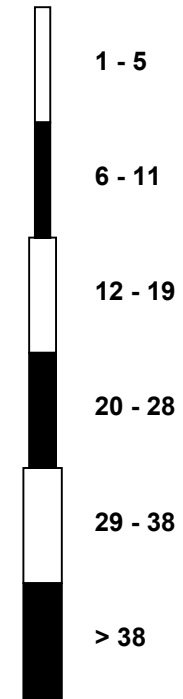
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
24 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
25 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
26 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	11	8	8	10	8	6	11	8	9	11	9	11.1
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	149	147	156	130	112	110	328	344	20	20	149	
27 Spd	2	3	3	9	4	3	3	2	3	2	8	7	13	13	10	23	29	28	24	24	19	12	10	7	7.7	29.3
Dir	271	296	345	334	308	332	276	139	100	174	181	150	173	169	190	259	262	274	280	272	268	278	278	276	259	262
28 Spd	1	4	3	3	1	2	1	10	20	28	25	22	19	20	26	27	27	27	23	22	17	12	10	11	14.6	27.6
Dir	354	210	236	248	201	260	220	205	256	264	273	266	267	268	273	267	264	269	274	276	275	275	294	291	268	264
29 Spd	10	3	3	3	5	3	4	4	2	3	4	5	6	4	4	8	9	8	5	5	7	7	2	14	2.3	14.4
Dir	291	248	94	86	54	102	114	185	154	196	176	143	158	181	132	127	125	131	146	72	59	127	174	318	129	318
30 Spd	11	8	1	4	2	0	1	4	16	22	28	32	35	35	36	34	33	28	20	19	20	12	12	8	16.3	36.4
Dir	27	252	230	208	14	51	148	222	263	265	263	258	264	258	263	257	262	255	263	271	265	291	286	282	264	263
31 Spd	6	6	8	10	6	1	1	3	7	13	13	14	12	9	6	7	6	6	7	5	4	16	19	17	6.5	19.0
Dir	290	286	285	288	291	216	216	145	275	293	295	270	285	329	334	344	348	356	13	17	23	343	351	11	320	351
Spd	1.5	1.2	1.7	2.6	1.9	1.9	2.4	2.9	8.0	11.2	11.1	12.1	11.6	9.7	9.1	9.8	9.7	9.3	7.6	7.7	6.4	4.3	4.2	4.0	Diurnal Average	
Dir	320	228	293	298	348	304	248	244	243	252	256	255	252	241	250	244	251	256	269	277	278	294	315	314		
Spd	12.4	8.1	14.4	17.0	15.0	16.3	19.5	19.3	27.6	33.0	32.4	42.3	40.7	44.2	41.9	43.9	41.1	40.3	37.9	31.5	28.2	20.4	19.0	17.3	Diurnal Maximum	
Dir	250	252	272	273	20	277	248	271	249	247	239	245	251	248	249	244	251	250	252	255	259	249	351	11		
Maximum Speed Value: 44 km/h on Jul 3 14:00																			Minimum Speed Value: 0 km/h on Jul 30 06:00					Hours in Service:		744
Maximum Daily Speed Average: 25.4 km/h on Jul 3																			Minimum Daily Speed Average: 2.3 km/h on Jul 1					Hours of Data:		293
Maximum Diurnal Speed Average: 12.1 km/h at hour 12																			Minimum Diurnal Speed Average: 1.2 km/h at hour 2					Hours of Missing Data:		451
Monthly Average Velocity: 5.93 km/h 260.7 deg																			Speed Percentiles: P ₁ = 0.7 P ₁₀ = 2.6 Q ₁ = 4.1 Median = 8.3 Q ₃ = 15.8 P ₉₀ = 27.8 P ₉₉ = 41.6					Percent Operational Time:		39.4
All monthly, daily, and diurnal averages have been calculated using vector methods																										
P - Power Failure N - Not Valid																										
Frequency Distribution																										
		Speed Range (km/h)																								
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																			
North	6	10	5	1	0	0	22																			
NorthEast	13	13	2	0	0	0	28																			
East	10	19	4	4	0	0	37																			
SouthEast	14	9	3	0	0	0	26																			
South	15	8	2	0	0	0	25																			
SouthWest	19	12	4	1	2	2	40																			
West	6	17	22	29	18	5	97																			
NorthWest	6	8	4	0	0	0	18																			
Total	89	96	46	35	20	7	293																			

Wind Rose

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



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Beaverlodge - July 2017

Maximum Speed: 45 km/h on Jul 3 14:00	Maximum Daily Speed Average: 26.2 km/h on Jul 3	Hours in Service: 744
Minimum Speed: 2 km/h on Jul 30 07:00	Minimum Daily Speed Average: 6.3 km/h on Jul 29	Hours of Data: 293
Maximum Diurnal Speed Average: 18.7 km/h at hour 13	Minimum Diurnal Speed Average: 5.3 km/h at hour 2	Hours of Missing Data: 451
Monthly Average Speed: 12.44 km/h	Percentiles: P ₁ = 2.7 P ₁₀ = 3.8 Q ₁ = 5.6 Median = 8.7 Q ₃ = 16.6 P ₉₀ = 28.1 P ₉₉ = 41.7	Percent Operational Time: 39.4

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-Jul	5	4	4	3	4	5	3	3	6	7	6	10	8	6	7	5	8	12	14	12	8	4	4	3	6.3	14.1																						
2-Jul	5	6	6	5	5	4	3	6	11	17	17	20	17	13	11	11	9	19	14	6	7	8	6	10	9.8	19.8																						
3-Jul	4	5	14	17	12	17	16	10	23	32	33	42	41	45	42	44	41	41	38	32	29	20	15	15	26.2	44.6																						
4-Jul	12	3	12	8	11	16	20	22	28	33	29	34	31	31	27	29	29	21	14	6	3	9	6	8	18.5	34.2																						
5-Jul	5	3	6	6	6	3	4	8	4	5	8	7	9	8	8	6	5	9	14	10	8	9	12	11	7.2	13.7																						
6-Jul	9	6	5	11	15	13	8	9	5	4	5	6	7	8	9	10	10	8	10	9	5	8	9	9	8.2	15.0																						
7-Jul	8	8	8	6	4	3	4	9	13	16	18	20	22	24	26	20	10	11	P	P	N	N	N	N	12.8	26.4																						
8-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--																						
9-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--																						
10-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--																						
11-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--																						
12-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--																						
13-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--																						
14-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--																						
15-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--																						
16-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--																						
17-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--																						
18-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--																						
19-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--																						
20-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--																						
21-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--																						
22-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--																						
23-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--																						
24-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--																						
25-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--																						
26-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	12	9	9	10	8	6	11	8	9	11	11	--	11.6																						
27-Jul	4	3	5	10	6	5	6	3	3	3	8	8	13	14	12	24	30	28	24	24	19	12	10	7	11.7	29.6																						
28-Jul	6	5	6	6	3	6	3	11	20	28	26	23	20	21	27	27	27	27	23	22	17	13	10	11	16.2	27.9																						
29-Jul	10	6	4	4	5	5	4	4	3	4	5	5	7	5	5	9	10	8	5	5	7	7	8	16	6.3	15.7																						
30-Jul	12	9	3	5	5	3	2	4	16	22	28	32	36	35	37	34	33	29	20	19	20	12	12	9	18.2	36.8																						
31-Jul	7	7	8	10	7	3	3	3	7	14	14	15	13	11	9	8	8	7	7	5	5	18	20	18	9.3	19.8																						
																								7.2	5.3	6.8	7.6	6.9	6.9	6.3	7.8	11.7	15.4	16.4	18.5	18.7	17.8	17.5	18.1	17.7	17.5	16.0	13.4	11.3	10.7	10.3	10.6	Diurnal Average
																								12.4	8.5	14.4	17.1	15.0	16.7	19.6	22.4	27.8	33.2	32.6	42.4	41.0	44.6	42.3	44.3	41.4	40.5	38.2	31.6	28.8	20.4	19.8	17.7	Diurnal Maximum

P - Power Failure N - Not Valid
 All monthly, daily, and diurnal averages have been calculated using scalar methods

Hourly Standard Deviations

Wind Direction (WD) - deg

Beaverlodge - July 2017

Maximum Value: 96.4 deg on Jul 6 11:00		Hours in Service: 744																									
Minimum Value: 2.4 deg on Jul 3 23:00		Hours of Data: 293																									
Percentiles: P ₁ = 4.1 P ₁₀ = 6.3 Q ₁ = 9.1 Median = 17.7 Q ₃ = 40.3 P ₉₀ = 69.2 P ₉₉ = 89.2		Hours of Missing Data: 451																									
		Hours of Calibration: 0																									
		Percent Operational Time: 39.4																									
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-Jul	44	35	90	28	40	7	42	74	11	48	27	20	54	51	49	75	20	11	16	24	32	38	13	44	89.9		
2-Jul	37	78	86	79	15	19	32	25	11	7	9	7	14	21	17	36	17	44	11	52	84	23	39	19	85.8		
3-Jul	42	37	6	5	9	14	8	13	15	5	7	5	6	7	8	7	7	6	7	5	12	5	2	4	42.1		
4-Jul	7	66	14	17	9	10	5	28	8	6	11	9	11	8	11	13	12	20	20	50	65	60	52	12	66.4		
5-Jul	53	90	9	13	21	38	25	69	33	45	34	76	39	71	49	69	77	37	11	7	6	7	6	8	90.3		
6-Jul	10	26	79	18	3	7	11	16	47	74	96	59	60	44	49	31	25	25	16	6	8	5	5	5	96.4		
7-Jul	4	16	7	15	18	30	64	22	20	9	10	14	13	11	14	16	59	61	P	P	N	N	N	N	64.5		
8-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	
9-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	
10-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	
11-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	
12-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	
13-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	
14-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	
15-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	
16-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	
17-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	
18-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	
19-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	
20-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	
21-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	
22-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	
23-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	
24-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	
25-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	
26-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	16	34	20	9	6	7	26	11	11	6	58	57.5		
27-Jul	62	40	51	32	68	80	74	39	35	50	14	21	17	14	31	16	7	9	7	5	4	7	11	32	80.0		
28-Jul	76	54	75	81	83	91	82	25	14	8	11	15	16	15	10	12	11	8	7	5	5	7	7	7	90.7		
29-Jul	7	62	38	40	10	55	21	22	41	40	43	28	25	60	58	19	19	16	15	13	9	17	80	23	80.3		
30-Jul	38	18	82	39	70	94	58	29	12	6	7	9	11	9	8	7	7	7	5	4	15	7	34	7	94.2		
31-Jul	29	18	10	6	37	78	88	25	32	17	19	24	24	40	53	29	50	40	21	10	24	34	16	15	87.6		
	76.5	90.3	89.9	80.6	83.2	94.2	87.6	74.1	46.6	74.0	96.4	75.7	60.3	71.4	57.7	74.6	76.6	61.0	20.6	52.3	84.2	60.2	80.3	57.5			
P - Power Failure N - Not Valid																											

PAZA
Valleyview Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

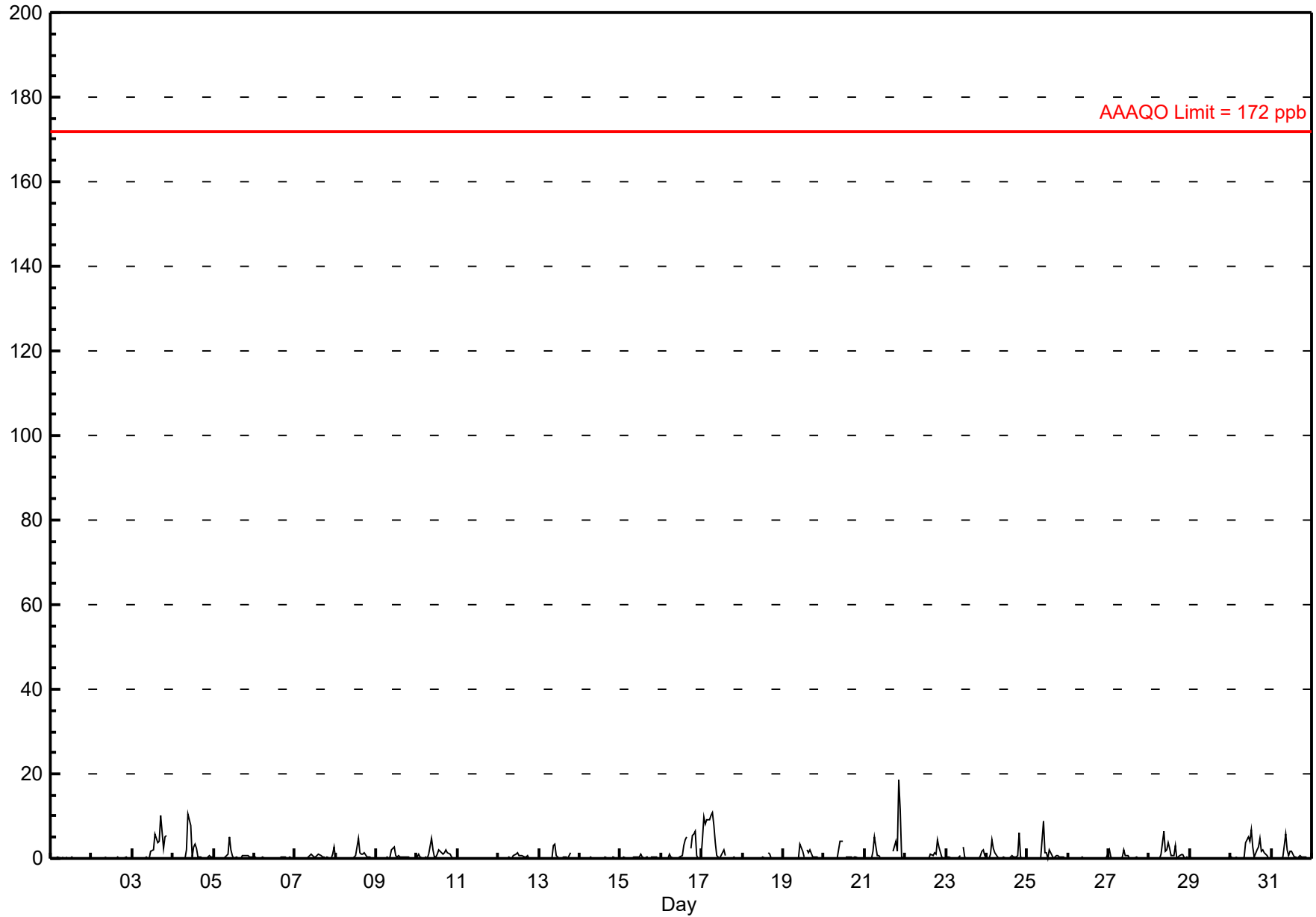
Sulphur Dioxide (SO₂) - ppb

Valleyview - July 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 18.6 ppb on Jul 21 21:00	Maximum Daily Average: 3.4 ppb on Jul 17
Minimum Value: 0 ppb on Jul 3 03:00	Hours of Data: 704
Maximum Diurnal Average: 1.7 ppb at hour 10	Hours of Missing Data: 40
Monthly Average: 0.74 ppb	Hours of Calibration: 38
Minimum Daily Average: 0.0 ppb on Jul 11	Percent Operational Time: 99.7
Minimum Diurnal Average: 0.2 ppb at hour 23	
Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.4 P ₉₀ = 2.0 P ₉₉ = 9.4	

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-Jul	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
2-Jul	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	0.5
3-Jul	0	0	0	0	0	0	A	0	0	0	2	2	6	5	4	4	10	2	5	6	P	P	0	0	2.2	10.1
4-Jul	0	0	0	0	0	A	0	0	2	11	8	0	3	3	2	0	0	0	0	0	1	0	0	0	1.4	10.6
5-Jul	0	0	0	0	A	0	0	0	1	5	2	1	0	0	0	0	1	1	1	1	0	0	0	0	0.6	5.1
6-Jul	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
7-Jul	0	0	A	0	0	0	0	0	0	1	1	0	0	1	1	1	0	0	0	0	0	0	1	3	0.4	2.9
8-Jul	0	A	0	0	0	0	0	0	0	0	0	1	5	1	1	1	1	0	0	0	0	0	0	0	0.5	4.7
9-Jul	A	0	0	0	0	0	0	0	0	2	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0.4	2.6
10-Jul	0	1	0	0	0	0	0	1	5	2	0	0	1	2	1	1	1	2	1	1	0	0	A	0	0.9	4.7
11-Jul	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	0.2
12-Jul	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	1	0	0	A	0	0	0	0.3	1.3
13-Jul	0	0	0	0	0	0	0	0	3	3	1	0	0	0	0	0	0	0	1	A	0	0	0	0	0.5	3.4
14-Jul	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
15-Jul	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.9
16-Jul	0	0	0	0	0	1	0	0	0	0	0	1	3	4	5	A	2	6	6	6	1	0	0	0	1.6	6.5
17-Jul	4	10	8	9	9	10	11	8	4	1	0	1	1	2	1	A	0	0	0	0	0	0	0	0	3.4	10.7
18-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0.1	1.5
19-Jul	0	0	0	0	0	0	0	0	0	0	3	2	0	0	A	2	1	2	0	0	0	0	0	0	0.5	3.5
20-Jul	0	0	0	0	0	0	0	0	0	4	4	4	A	0	0	0	0	0	0	0	0	0	0	0	0.6	4.1
21-Jul	0	0	0	0	0	2	5	1	1	0	C	C	C	C	C	C	C	2	4	2	19	11	0	0	--	18.6
22-Jul	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	1	1	1	4	3	0	0	0	0.5	4.4
23-Jul	0	0	0	0	0	0	0	0	1	A	3	0	0	0	0	0	0	0	0	1	2	2	1	0	0.4	2.6
24-Jul	0	0	1	4	2	1	0	0	A	0	0	0	0	0	1	0	0	1	6	0	0	0	0	0	0.8	6.0
25-Jul	0	0	0	0	0	0	0	A	0	9	2	1	0	2	1	0	0	1	1	0	0	0	0	0	0.8	8.9
26-Jul	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
27-Jul	2	0	0	0	0	A	0	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.1
28-Jul	0	0	0	0	0	A	0	0	1	7	2	2	4	3	1	1	3	0	0	1	1	0	0	0	1.1	6.6
29-Jul	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
30-Jul	0	0	A	0	0	0	0	0	0	4	5	4	7	3	0	2	3	5	2	2	1	1	0	0	1.7	6.6
31-Jul	0	A	0	0	0	0	0	0	6	2	1	2	2	0	0	0	0	1	0	0	0	0	0	0	0.7	5.9
	0.3	0.4	0.4	0.5	0.4	0.5	0.6	0.4	1.1	1.7	1.3	0.8	0.8	1.1	0.8	0.8	0.6	1.0	0.7	1.0	1.3	0.6	0.2	0.2	Diurnal Average	
	4.3	9.7	8.2	9.2	9.2	10.3	10.7	7.7	6.6	10.6	7.6	4.1	6.6	5.9	4.8	5.1	4.2	10.1	5.6	6.0	18.6	11.5	2.0	2.9	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

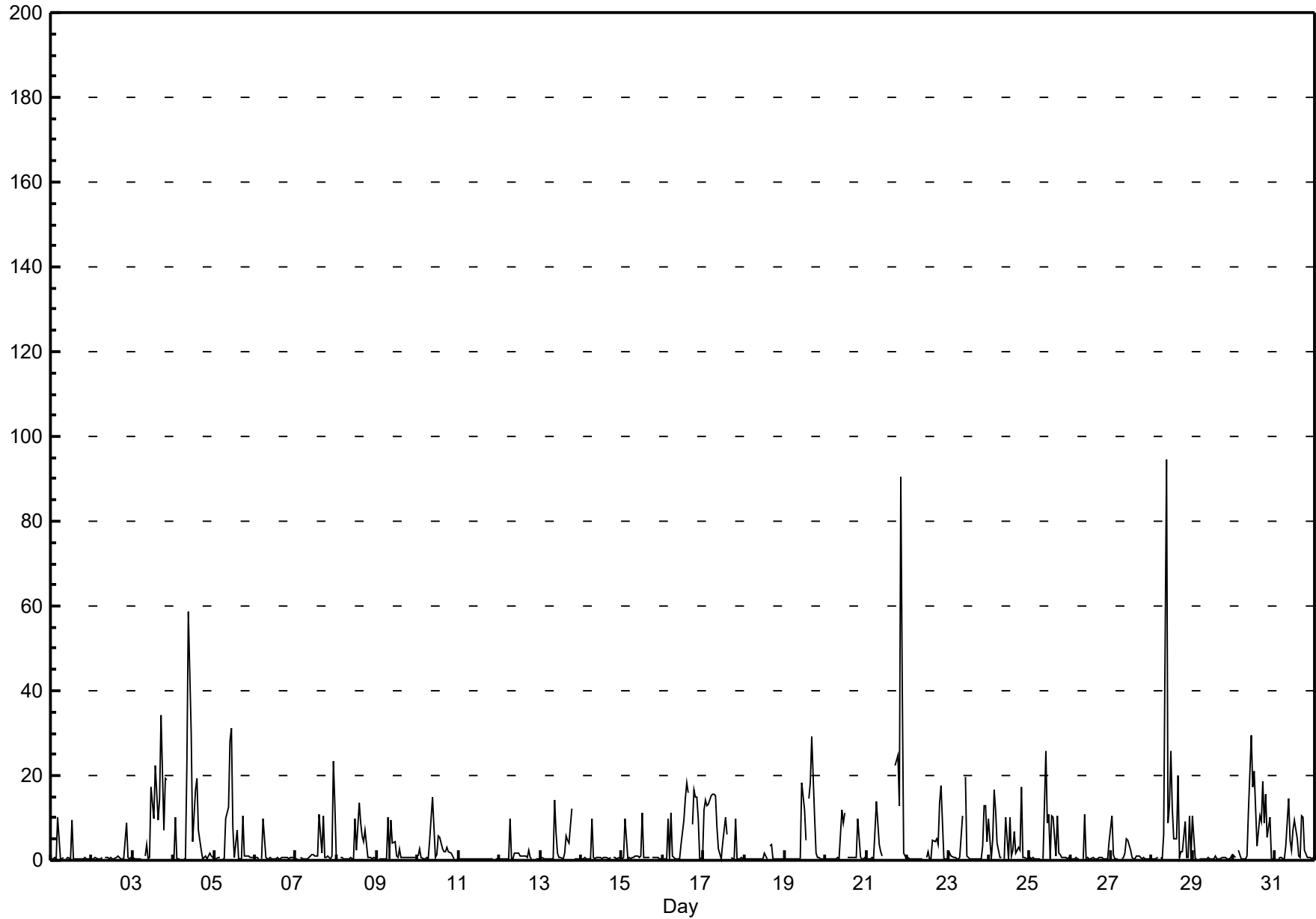


Hourly Maximums

Sulphur Dioxide (SO₂) - ppb

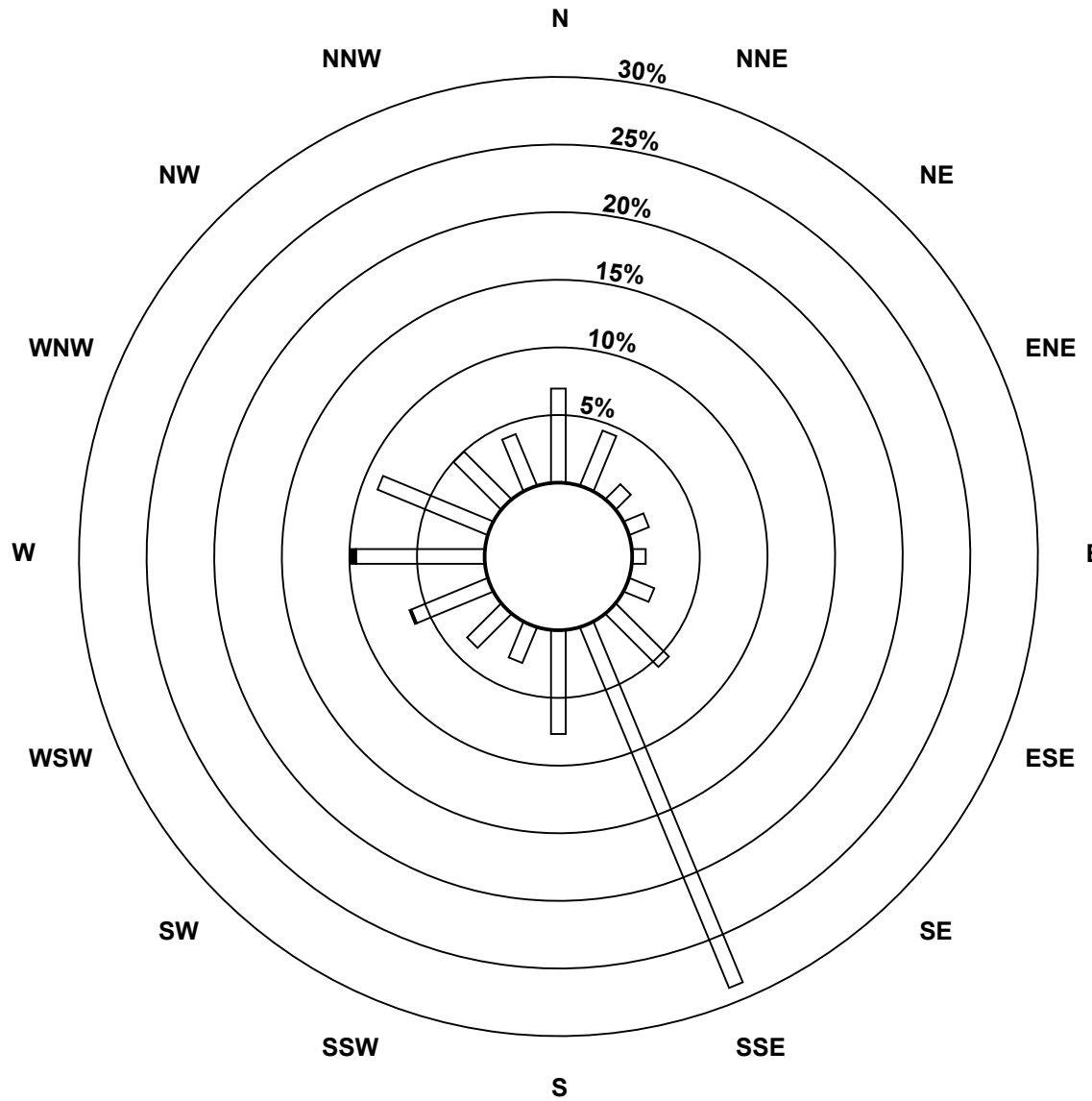
Valleyview - July 2017

Maximum Value: 94.7 ppb on Jul 28 09:00		Maximum Daily Average: 9.6 ppb on Jul 28		Hours in Service: 744																						
Minimum Value: 0 ppb on Jul 19 00:00		Minimum Daily Average: 0.3 ppb on Jul 11		Hours of Data: 704																						
Maximum Diurnal Average: 7.9 ppb at hour 9		Minimum Diurnal Average: 1.2 ppb at hour 24		Hours of Missing Data: 40																						
Monthly Average: 3.62 ppb		Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.4 Median = 0.5 Q ₃ = 2.7 P ₉₀ = 11.1 P ₉₉ = 29.6		Hours of Calibration: 38																						
				Percent Operational Time: 99.7																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	0	0	1	0	10	0	0	1	A	0	1	0	10	0	0	0	0	1	0	1	1	0	0	0	1.3	10.1
2-Jul	0	0	1	0	0	0	1	A	1	1	0	1	0	0	1	1	1	0	0	0	9	1	0	1	0.9	8.7
3-Jul	1	0	0	0	0	0	A	1	4	0	1	17	10	22	16	9	15	34	7	19	19	P	P	0	8.5	34.2
4-Jul	0	10	0	0	0	A	0	0	23	59	30	4	10	17	19	7	3	0	1	1	0	2	1	1	8.3	58.7
5-Jul	0	0	1	1	A	1	0	10	13	28	31	8	1	7	0	0	0	10	1	1	1	1	1	1	5.1	31.3
6-Jul	1	1	1	A	0	10	1	0	0	1	0	0	1	0	0	1	1	1	1	1	0	1	1	0	0.9	9.8
7-Jul	0	0	A	1	0	0	0	0	1	1	1	1	1	1	11	2	10	1	1	1	0	1	23	13	3.1	23.4
8-Jul	1	A	1	1	0	0	0	0	1	0	0	10	2	13	9	6	5	7	1	1	1	0	1	0	2.6	13.4
9-Jul	A	0	0	0	0	0	10	0	10	4	4	1	1	3	1	1	1	1	1	1	1	1	1	A	1.8	10.0
10-Jul	1	3	1	1	0	1	1	5	15	8	1	1	6	5	3	2	2	3	2	2	1	0	A	0	2.7	14.8
11-Jul	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	0.5
12-Jul	0	0	0	0	0	0	10	0	0	2	2	2	1	1	1	1	1	2	1	0	A	0	1	1	1.2	9.7
13-Jul	0	1	0	0	0	0	0	0	14	6	2	1	1	0	2	6	5	4	12	A	0	0	0	0	2.5	14.1
14-Jul	0	0	1	0	0	0	10	1	0	1	1	1	0	1	1	1	1	1	A	1	1	0	1	1	0.9	10.0
15-Jul	0	1	10	0	1	0	1	1	1	1	1	1	11	1	1	1	1	A	1	1	1	1	0	0	1.5	11.1
16-Jul	0	0	0	10	0	11	1	0	0	0	4	10	15	18	16	A	9	17	15	15	10	0	1	6.7	18.3	
17-Jul	12	14	13	13	15	16	16	15	8	3	1	4	7	10	6	A	1	0	0	10	0	0	1	0	7.2	15.6
18-Jul	0	0	0	0	0	0	0	0	0	0	0	2	0	2	A	3	4	0	0	0	0	0	0	0	0.7	3.7
19-Jul	0	0	0	0	0	0	0	0	0	0	18	12	5	A	15	18	29	10	2	1	1	0	0	0	5.0	29.3
20-Jul	0	0	0	0	0	0	0	1	0	12	9	11	A	1	1	1	1	1	1	10	1	0	0	1	2.2	11.8
21-Jul	0	0	0	1	0	7	14	4	2	1	C	C	C	C	C	C	C	22	25	13	90	42	2	0	--	90.3
22-Jul	1	0	0	0	0	0	0	0	0	0	A	1	2	0	0	5	5	5	4	13	18	0	0	0	2.5	17.5
23-Jul	1	2	1	1	1	0	0	1	11	A	20	1	1	0	1	0	0	0	0	0	3	13	13	4	3.2	19.6
24-Jul	10	0	5	17	12	4	1	1	A	1	10	0	10	1	2	7	2	3	2	17	1	1	0	0	4.7	17.4
25-Jul	1	0	1	0	0	1	0	A	0	26	9	11	0	11	10	1	10	2	1	1	1	1	0	1	3.8	25.6
26-Jul	0	0	0	1	0	1	A	0	11	0	1	0	0	1	0	0	1	1	1	0	0	0	0	4	1.1	10.7
27-Jul	11	1	0	0	0	A	0	1	2	5	5	2	1	0	0	1	1	1	0	1	0	0	0	0	1.5	10.6
28-Jul	0	0	0	1	A	1	1	6	95	9	13	26	12	5	5	20	1	2	2	9	1	1	10	0	9.6	94.7
29-Jul	10	0	0	A	0	0	0	0	0	1	0	0	0	1	0	0	0	1	1	1	1	0	0	1	0.9	10.5
30-Jul	1	1	A	2	0	0	0	0	1	11	29	17	21	12	3	11	9	19	9	16	5	10	0	0	7.8	29.3
31-Jul	0	A	0	1	1	1	0	3	15	5	2	7	10	5	1	1	11	10	2	1	1	1	0	1	3.4	14.7
1.8		1.4	1.4	1.8	1.7	2.0	2.4	1.9	7.9	6.2	6.6	4.8	4.7	4.7	4.4	4.2	4.0	5.0	3.2	4.6	5.7	3.1	2.1	1.2	Diurnal Average	
11.9		14.3	12.8	16.6	15.2	15.6	15.6	15.1	94.7	58.7	31.3	25.9	20.9	22.2	19.2	20.0	29.3	34.2	24.9	19.4	90.3	41.8	23.4	13.1	Diurnal Maximum	
C - Calibration		P - Power Failure					A - Automated Daily Zero Span																			

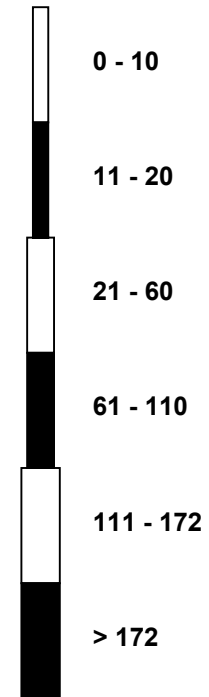


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Valleyview - July 2017

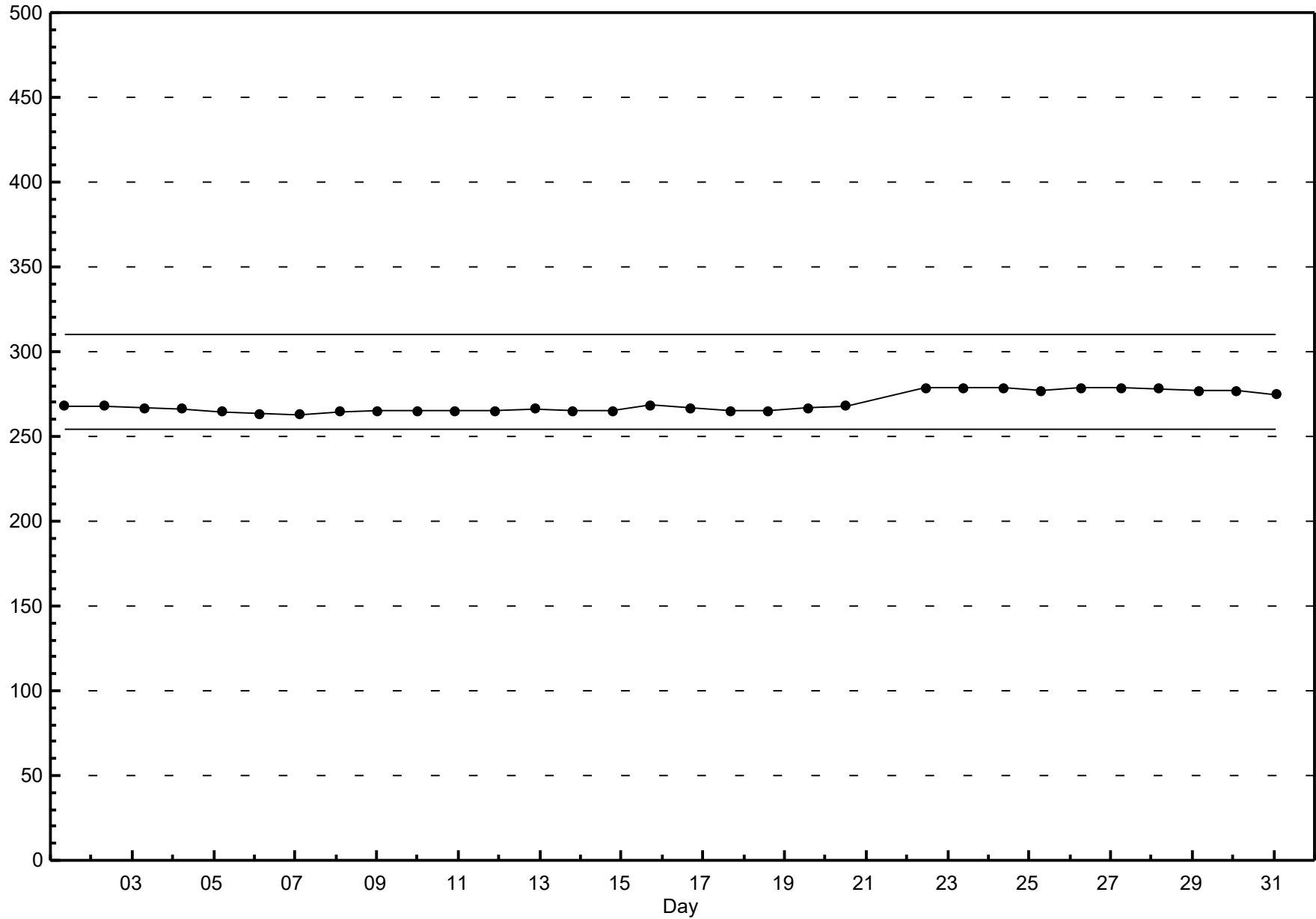


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Valleyview - July 2017



Hourly Averages

Hydrogen Sulphide (H₂S) - ppb

Valleyview - July 2017

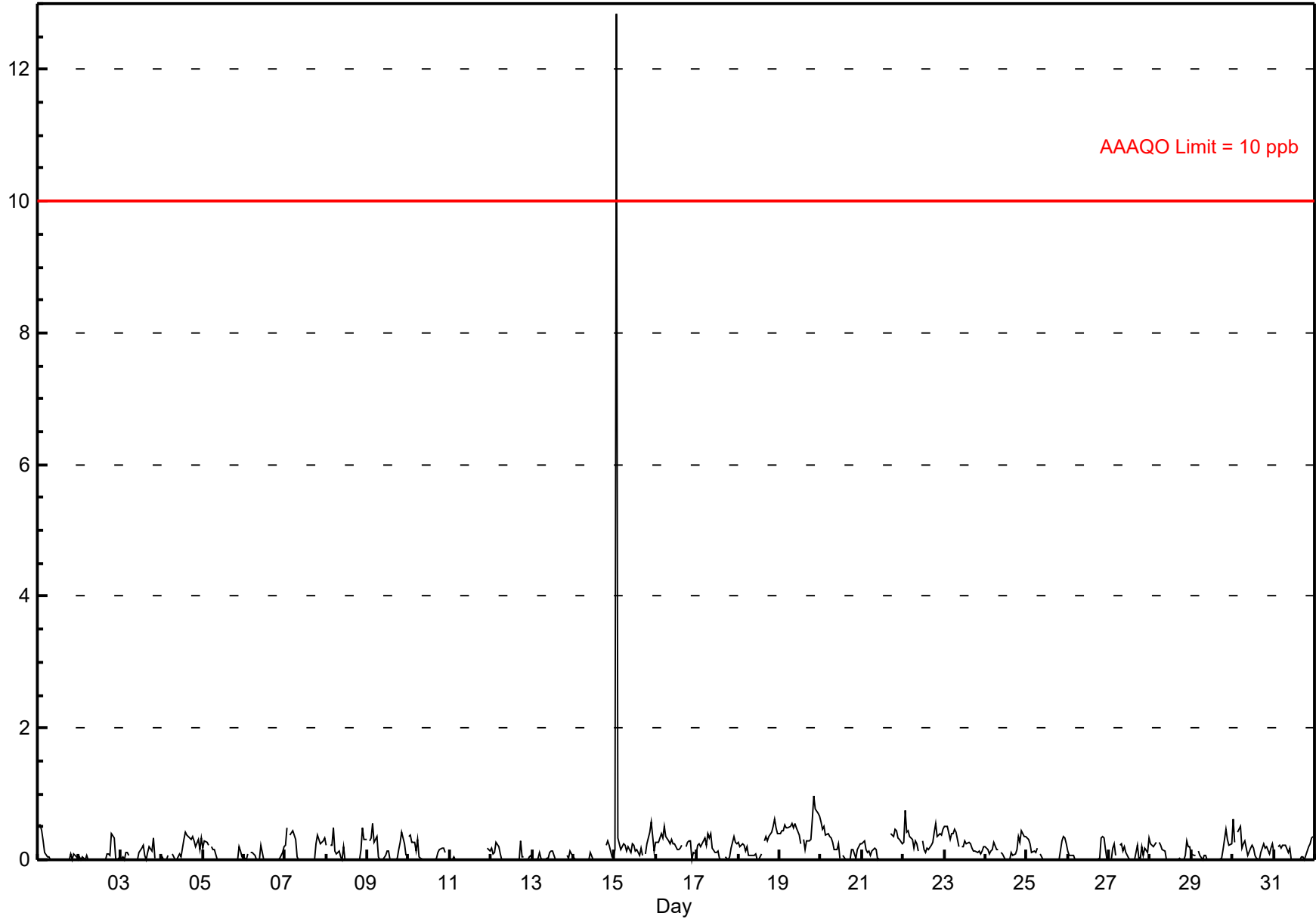
Number of Exceedences (AAAQO):	1-hr: 1	24-hr: 0	Hours in Service:	744
Maximum Value: 12.9 ppb on Jul 15 02:00	Maximum Daily Average: 0.8 ppb on Jul 15		Hours of Data:	705
Minimum Value: 0 ppb on Jul 1 08:00	Minimum Daily Average: 0.0 ppb on Jul 11		Hours of Missing Data:	39
Maximum Diurnal Average: 0.7 ppb at hour 2	Minimum Diurnal Average: 0.0 ppb at hour 14		Hours of Calibration:	37
Monthly Average: 0.17 ppb	Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.4 P ₉₉ = 0.6		Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Jul	1	1	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	0.5																						
2-Jul	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	0.4																						
3-Jul	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	P	0	0.1	0.3																							
4-Jul	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																							
5-Jul	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																							
6-Jul	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	0.2																							
7-Jul	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	0.5																							
8-Jul	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	0.5																							
9-Jul	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6																							
10-Jul	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																							
11-Jul	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	0.2																							
12-Jul	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																							
13-Jul	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																							
14-Jul	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																							
15-Jul	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	0	0	0.8	12.9																							
16-Jul	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.5																							
17-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.4																							
18-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0.2	0.6																							
19-Jul	0	0	0	1	0	0	1	1	0	1	0	0	A	0	0	0	0	0	0	1	1	1	1	1	0.5	1.0																							
20-Jul	1	0	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6																							
21-Jul	0	0	0	0	0	0	0	0	0	0	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0.2	0.5																							
22-Jul	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.3	0.7																							
23-Jul	0	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5																							
24-Jul	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																							
25-Jul	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																							
26-Jul	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																							
27-Jul	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3																							
28-Jul	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3																							
29-Jul	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5																							
30-Jul	1	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6																							
31-Jul	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																							
																								0.2	0.7	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.2	Diurnal Average	
																								0.6	12.9	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.3	0.3	0.4	0.4	0.3	0.4	0.4	0.6	1.0	0.8	0.7	0.7	Diurnal Maximum	

C - Calibration P - Power Failure 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 - July 2017



Hourly Maximums

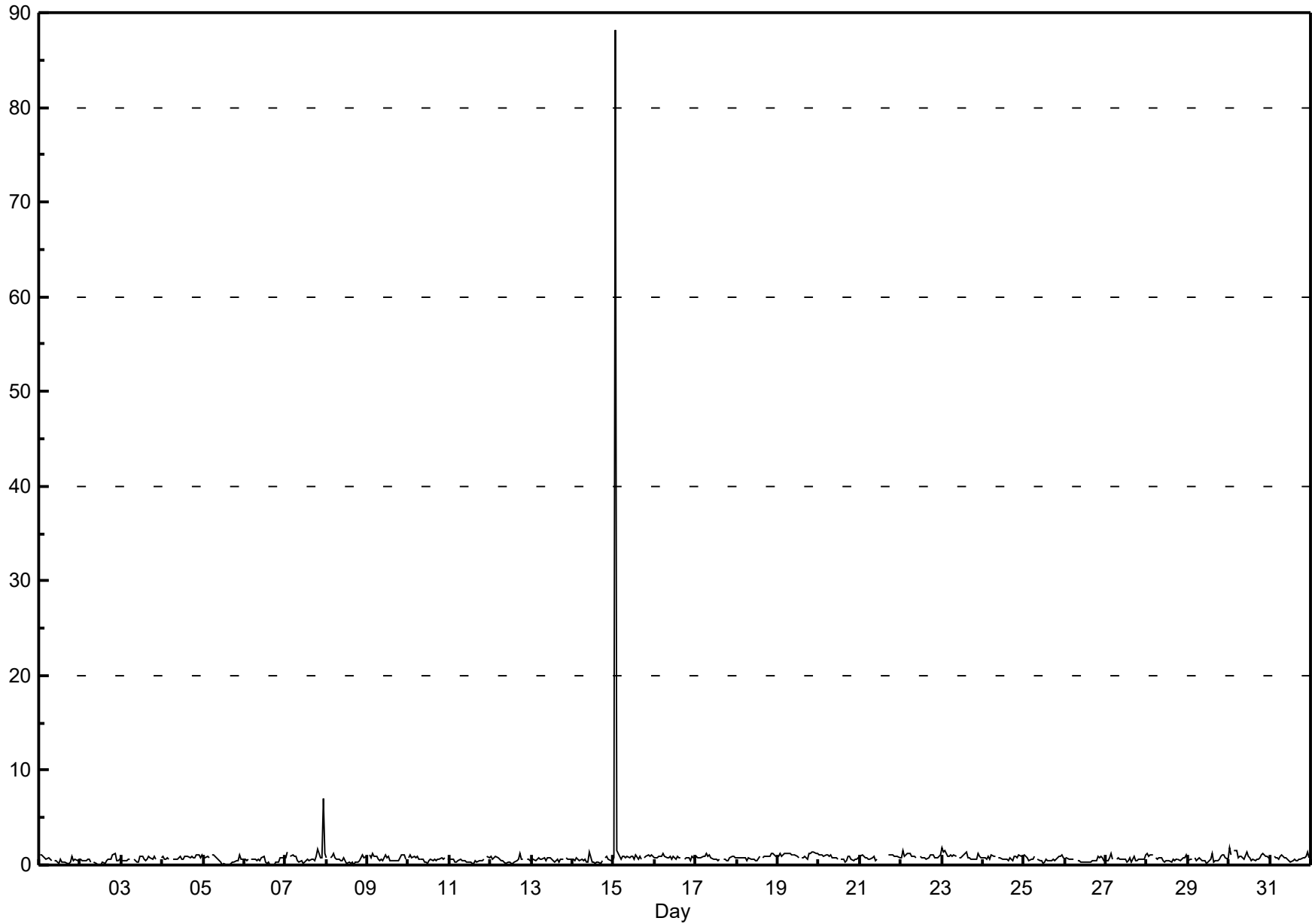
Hydrogen Sulphide (H₂S) - ppb

Valleyview - July 2017

Maximum Value: 88.1 ppb on Jul 15 02:00		Maximum Daily Average: 4.7 ppb on Jul 15		Hours in Service: 744																																													
Minimum Value: 0 ppb on Jul 2 12:00		Minimum Daily Average: 0.5 ppb on Jul 11		Hours of Data: 705																																													
Maximum Diurnal Average: 3.9 ppb at hour 2		Minimum Diurnal Average: 0.5 ppb at hour 13		Hours of Missing Data: 39																																													
Monthly Average: 0.83 ppb		Percentiles: P ₁ = 0.0 P ₁₀ = 0.3 Q ₁ = 0.5 Median = 0.7 Q ₃ = 0.9 P ₉₀ = 1.1 P ₉₉ = 1.5		Hours of Calibration: 37																																													
				Percent Operational Time: 99.7																																													
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Jul	1	1	1	1	1	1	1	0	A	0	0	0	1	0	0	0	0	0	0	1	0	1	0	1	0.5	1.1																							
2-Jul	1	1	0	0	1	1	0	A	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	1	0.5	1.2																							
3-Jul	1	0	0	1	1	1	A	1	0	0	0	1	1	1	0	1	1	1	1	1	1	P	P	1	0.6	0.9																							
4-Jul	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	1.1																							
5-Jul	1	1	1	1	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.5	1.1																							
6-Jul	1	0	1	A	1	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	1	1	1	0.5	0.9																							
7-Jul	1	1	A	1	1	1	1	1	0	1	0	0	0	1	0	1	1	0	1	2	1	1	7	1	1.0	7.0																							
8-Jul	1	A	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.6	1.3																							
9-Jul	A	1	1	1	1	1	1	0	1	0	1	1	1	0	0	0	0	0	1	1	1	1	1	A	0.7	1.3																							
10-Jul	1	1	1	1	1	1	1	1	1	0	0	0	1	1	0	1	0	1	1	1	1	1	A	1	0.6	1.1																							
11-Jul	1	1	1	0	0	0	1	0	0	0	0	0	0	0	1	0	1	1	0	1	A	1	1	1	0.5	1.0																							
12-Jul	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1	A	1	1	1	0.5	1.2																							
13-Jul	0	1	0	1	1	1	1	1	1	1	1	1	0	0	1	0	1	1	1	A	1	1	1	1	0.6	0.8																							
14-Jul	1	0	1	1	0	1	1	1	0	0	1	0	0	0	0	0	0	0	A	1	1	1	0	1	0.5	1.4																							
15-Jul	1	88	2	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	4.7	88.1																							
16-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0	1	1	0.8	1.2																							
17-Jul	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	1	1	0	1	1	1	1	1	1	0.8	1.2																							
18-Jul	1	1	1	1	1	1	1	1	1	1	0	0	1	A	1	1	1	1	1	1	1	1	1	1	0.8	1.3																							
19-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1.1	1.4																							
20-Jul	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	1	1	1	1	1	1	1	1	1	0.8	1.1																							
21-Jul	1	1	1	1	1	1	1	1	1	0	1	C	C	C	C	C	C	1	1	1	1	1	1	1	0.8	1.1																							
22-Jul	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.5																							
23-Jul	2	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.8																							
24-Jul	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0.8	1.1																							
25-Jul	1	1	1	1	1	1	1	A	1	1	0	0	0	1	0	1	0	1	1	1	1	1	1	1	0.6	1.0																							
26-Jul	1	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0.5	0.9																							
27-Jul	0	0	1	1	1	A	1	1	1	1	1	0	0	1	0	1	1	1	0	1	1	1	1	1	0.6	1.2																							
28-Jul	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	0	1	0	1	1	0	1	1	1	0.7	1.2																							
29-Jul	1	1	1	A	1	1	1	1	0	1	0	0	1	1	0	0	0	1	1	1	1	1	1	1	0.6	1.3																							
30-Jul	2	1	A	1	2	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0.9	1.8																							
31-Jul	1	A	1	1	1	1	1	1	1	1	1	0	0	0	1	0	0	1	1	1	1	1	1	1	0.7	1.4																							
																								0.8	3.9	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.8	0.8	0.9	1.0	0.8	Diurnal Average
																								1.8	88.1	1.5	1.5	1.6	1.3	1.2	1.3	1.1	1.1	1.4	1.0	0.9	1.0	1.4	0.9	0.9	1.2	1.2	1.8	1.4	1.3	7.0	1.2	Diurnal Maximum	
C - Calibration																								P - Power Failure						A - Automated Daily Zero Span																			

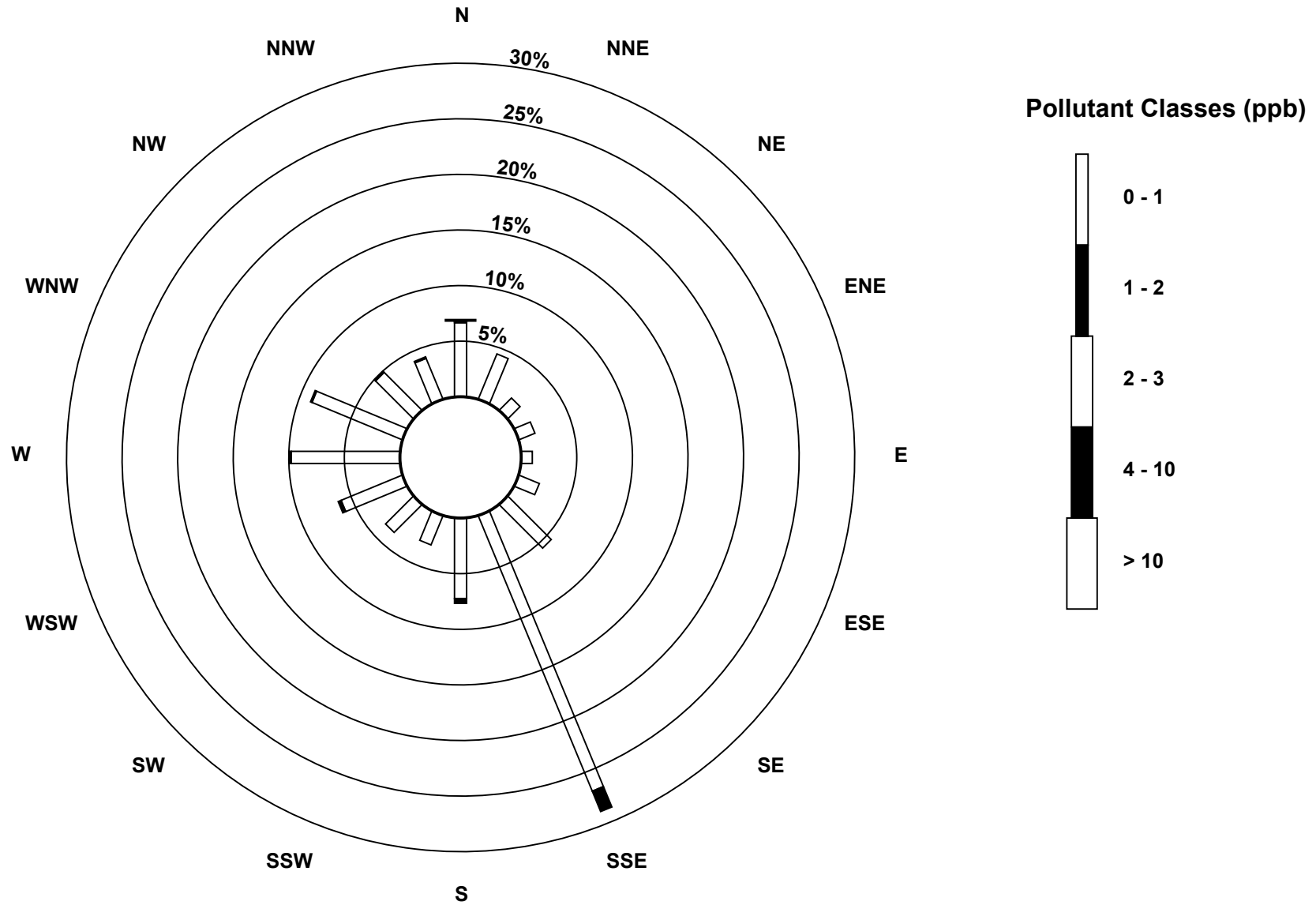
Hourly Maximums

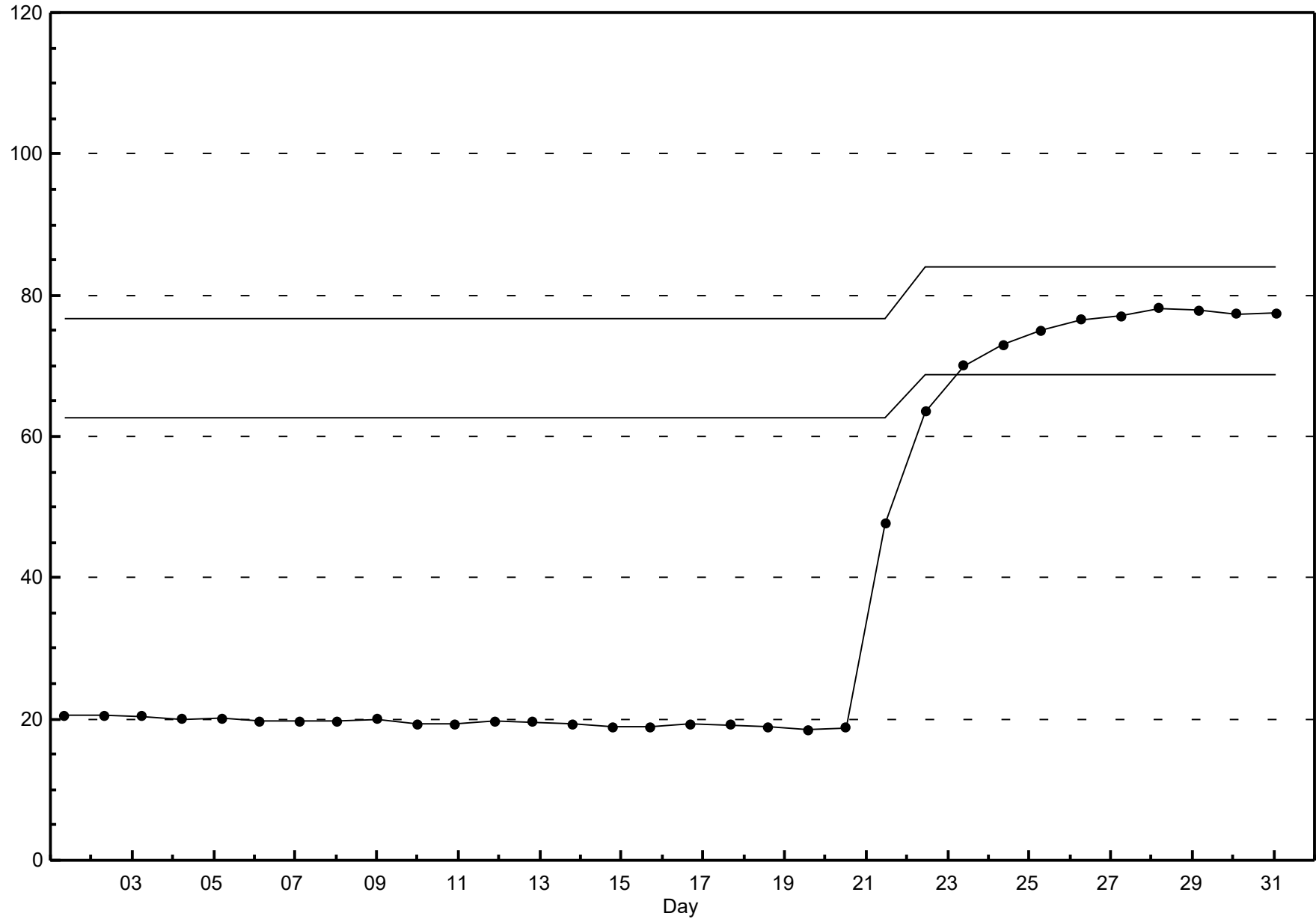
Hydrogen Sulphide (H₂S) - ppb
Valleyview - July 2017



Pollutant Rose

Hydrogen Sulphide (H₂S) - ppb
Valleyview - July 2017





Hourly Averages

External Temperature (ET) - °C

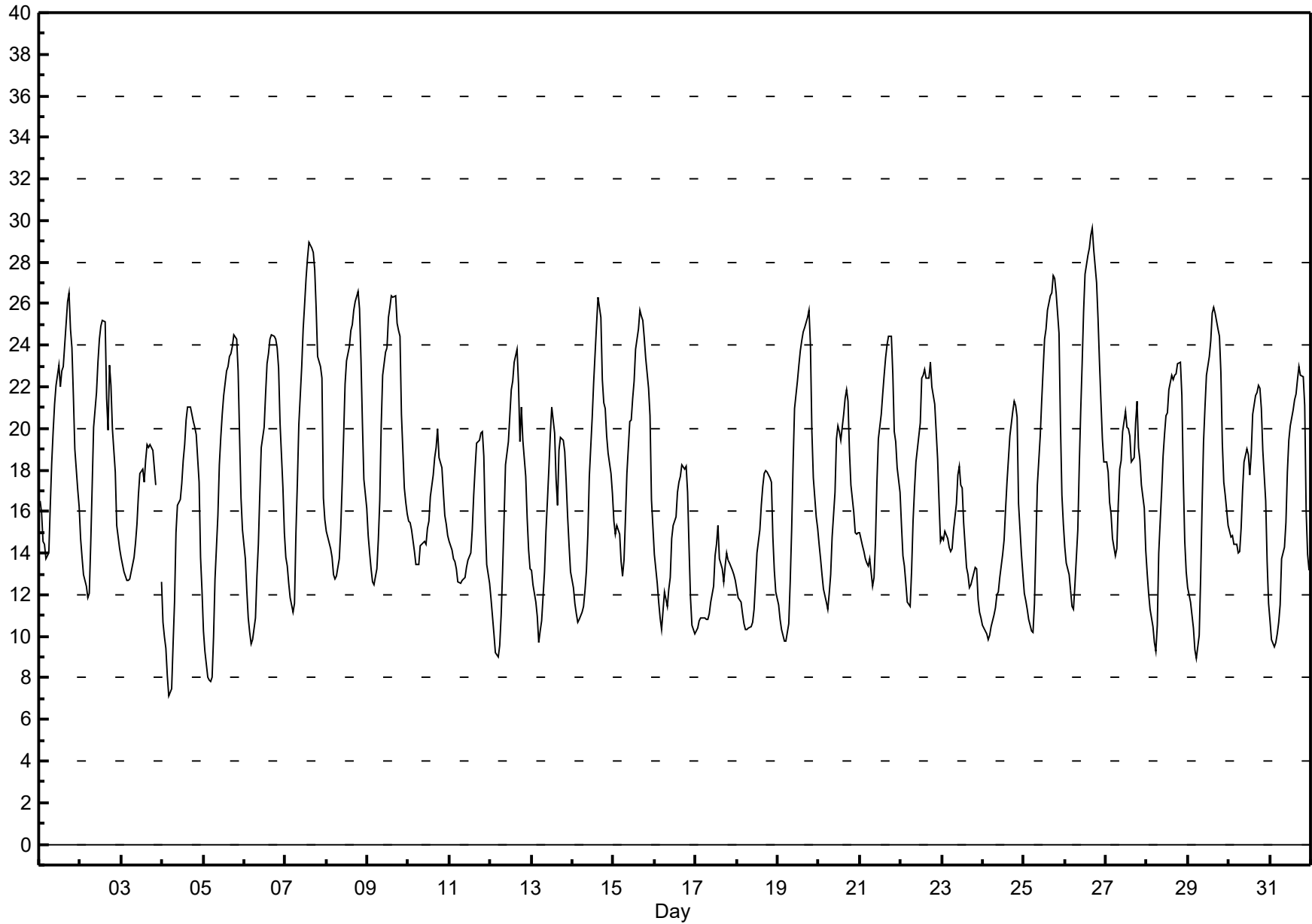
Valleyview - July 2017

Maximum Value: 29.7 °C on Jul 26 17:00		Maximum Daily Average: 20.7 °C on Jul 26		Hours in Service: 744 Hours of Data: 742 Hours of Missing Data: 2 Hours of Calibration: 0 Percent Operational Time: 99.7																							
Minimum Value: 7 °C on Jul 4 05:00 Maximum Diurnal Average: 22.2 °C at hour 18 Monthly Average: 17.07 °C		Minimum Daily Average: 12.4 °C on Jul 17 Minimum Diurnal Average: 11.4 °C at hour 5 Percentiles: P ₁ = 9.0 P ₁₀ = 10.9 Q ₁ = 13.1 Median = 16.4 Q ₃ = 20.9 P ₉₀ = 24.3 P ₉₉ = 28.3																									
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-Jul	17	16	15	14	14	14	16	18	20	21	22	23	22	23	23	24	26	27	25	24	22	19	17	16	19.9	26.5	
2-Jul	15	14	13	12	12	12	14	17	20	22	23	24	25	25	25	21	20	23	22	20	18	15	15	14	18.5	25.2	
3-Jul	14	13	13	13	13	13	13	14	15	15	17	18	18	17	18	19	19	19	19	18	17	P	P	13	15.8	19.2	
4-Jul	11	10	9	8	7	7	10	12	15	16	17	17	18	19	20	21	21	21	20	20	20	17	14	12	15.2	21.0	
5-Jul	10	9	8	8	8	8	10	13	16	18	20	21	22	23	23	23	24	24	24	24	23	20	17	15	17.1	24.5	
6-Jul	14	12	11	10	10	10	11	13	14	17	19	20	22	23	24	24	24	24	24	24	23	20	17	15	17.7	24.5	
7-Jul	14	13	13	12	11	12	15	17	20	23	25	26	27	28	29	29	28	28	26	23	23	22	17	16	20.7	28.9	
8-Jul	15	15	14	14	13	13	13	14	15	17	20	22	23	24	25	25	26	26	27	26	23	20	18	16	19.3	26.6	
9-Jul	15	14	13	13	12	13	15	17	20	23	24	24	25	26	26	26	26	25	25	24	21	17	16	16	19.9	26.4	
10-Jul	16	15	15	14	13	13	13	14	15	15	14	15	16	17	18	19	19	20	19	18	17	16	15	15	15.9	20.0	
11-Jul	15	14	14	14	13	13	13	13	13	13	13	14	14	15	17	18	19	19	20	20	19	15	13	13	15.1	19.8	
12-Jul	12	11	10	9	9	10	11	13	16	18	19	21	22	22	23	24	22	19	21	19	18	16	14	13	16.4	23.8	
13-Jul	13	12	12	11	10	10	11	13	15	17	18	20	21	20	18	16	19	20	19	19	17	16	14	13	15.6	21.0	
14-Jul	12	12	11	11	11	11	11	12	13	15	18	21	22	24	25	26	25	22	21	21	20	19	18	17	17.4	26.3	
15-Jul	16	15	15	15	14	13	14	16	18	20	20	21	22	24	25	26	25	25	24	23	22	21	17	15	19.4	25.7	
16-Jul	14	13	12	11	10	11	12	11	12	13	15	15	16	17	17	18	18	18	18	17	14	12	11	10	14.0	18.3	
17-Jul	10	10	11	11	11	11	11	11	11	12	12	14	14	15	14	13	13	13	14	14	14	13	13	13	12.4	15.4	
18-Jul	12	12	12	11	11	10	10	10	10	11	11	13	14	15	16	17	18	18	18	18	17	15	13	12	13.5	18.0	
19-Jul	12	11	10	10	10	10	11	13	15	18	21	22	23	24	24	25	25	25	26	24	20	18	16	15	17.7	25.7	
20-Jul	14	14	13	12	12	11	12	13	15	17	19	20	20	19	21	21	22	21	19	17	16	15	15	15	16.4	21.9	
21-Jul	15	14	14	14	13	13	14	12	13	15	17	20	21	22	23	23	24	24	24	23	20	19	18	17	18.0	24.4	
22-Jul	15	14	13	13	12	11	13	16	17	18	20	20	22	23	23	22	22	23	22	22	21	19	16	15	18.0	23.2	
23-Jul	15	15	15	15	14	14	14	15	16	18	18	17	17	15	13	13	12	13	13	13	13	12	11	11	14.3	18.2	
24-Jul	11	10	10	10	10	10	11	11	12	12	13	14	15	16	17	19	20	21	21	21	21	16	14	13	14.5	21.3	
25-Jul	12	12	11	11	10	10	12	14	17	20	21	23	24	25	26	26	27	27	26	25	20	17	15	15	19.1	27.4	
26-Jul	14	14	13	12	11	11	12	15	18	21	23	26	27	28	29	29	30	29	27	25	23	21	19	18	20.7	29.7	
27-Jul	18	18	16	16	15	14	14	16	18	18	20	21	20	20	20	18	19	20	21	19	18	17	16	14	17.8	21.3	
28-Jul	13	12	11	10	10	9	11	14	17	19	20	21	21	22	23	22	23	23	23	23	22	18	15	13	17.2	23.2	
29-Jul	12	12	11	10	9	9	10	13	16	19	21	23	23	24	26	26	26	25	24	23	19	17	17	15	18.0	25.8	
30-Jul	15	15	15	14	14	14	14	15	17	18	19	19	18	19	21	22	22	22	22	21	19	16	14	12	17.3	22.1	
31-Jul	11	10	9	10	10	11	11	14	14	15	18	19	20	21	21	22	22	23	23	22	21	16	14	13	16.3	23.0	
		13.6	12.9	12.4	11.8	11.4	11.4	12.3	13.9	15.6	17.2	18.6	19.7	20.5	21.1	21.7	21.9	22.1	22.2	21.9	21.1	19.5	17.3	15.3	14.2	Diurnal Average	
		18.4	17.9	16.4	15.9	14.7	14.1	16.2	18.3	20.2	23.0	24.8	26.0	27.4	28.3	28.9	29.3	29.7	28.6	27.2	26.5	24.6	22.4	19.5	18.4	Diurnal Maximum	
P - Power Failure																											

Hourly Averages

External Temperature (ET) - °C

Valleyview - July 2017



Hourly Averages

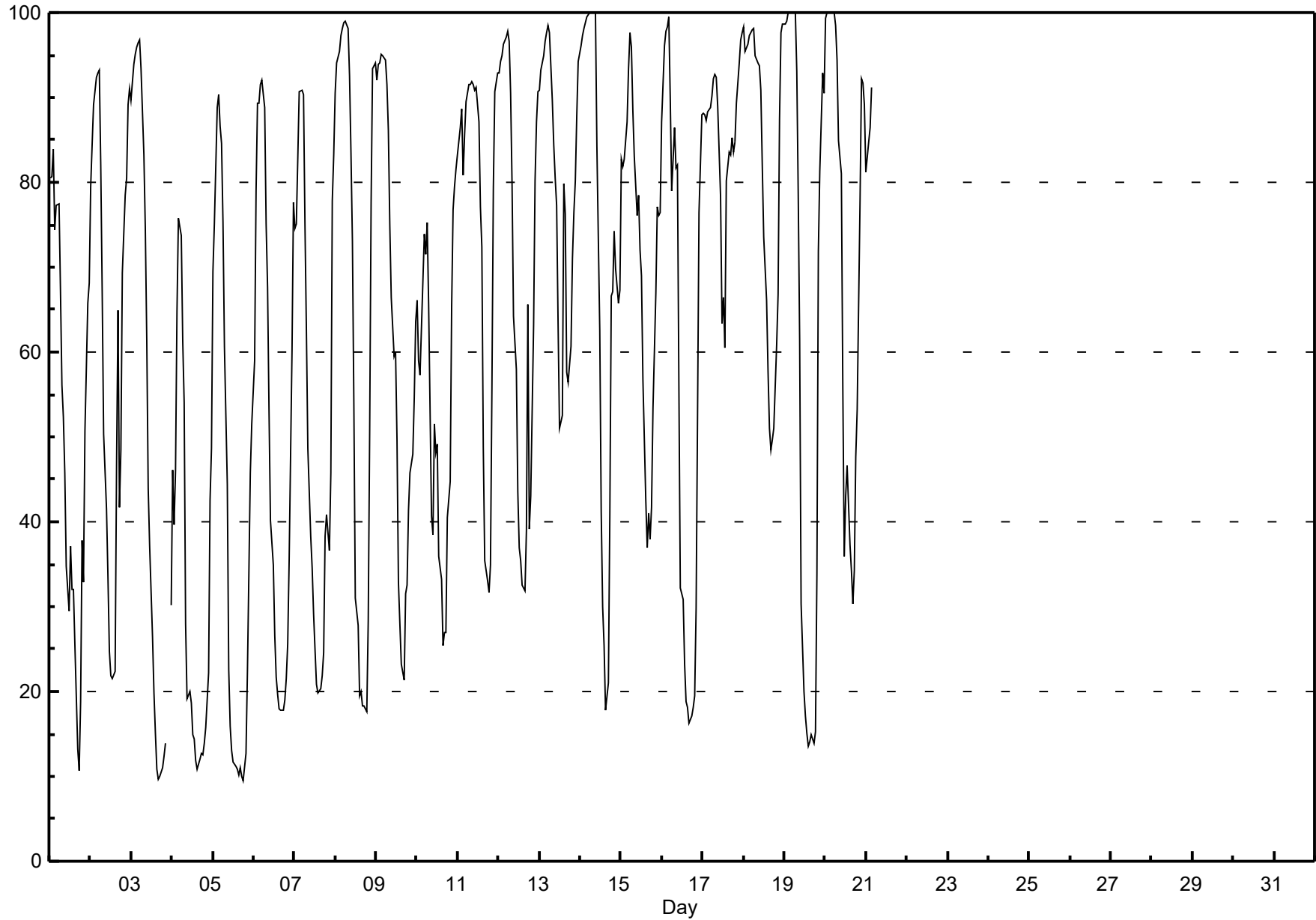
Relative Humidity (RH) - %

Valleyview - July 2017

Maximum Value: 100.0 % on Jul 14 06:00		Maximum Daily Average: 85.2 % on Jul 17		Hours in Service: 744																							
Minimum Value: 9 % on Jul 5 19:00		Minimum Daily Average: 32.5 % on Jul 4		Hours of Data: 482																							
Maximum Diurnal Average: 91.9 % at hour 5		Minimum Diurnal Average: 30.2 % at hour 17		Hours of Missing Data: 262																							
Monthly Average: 62.38 %		Percentiles: P ₁ = 10.7 P ₁₀ = 18.8 Q ₁ = 35.5 Median = 68.0 Q ₃ = 89.5 P ₉₀ = 96.6 P ₉₉ = 100.0		Hours of Calibration: 0																							
				Percent Operational Time: 64.8																							
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-Jul	80	81	84	74	77	77	67	56	52	46	35	29	37	32	32	26	13	11	19	38	33	51	66	68	49.4	83.8	
2-Jul	79	84	89	92	93	93	82	67	50	42	34	25	22	22	22	47	65	42	48	69	79	81	89	91	62.8	93.2	
3-Jul	90	94	95	96	96	97	93	83	74	61	44	37	26	20	15	11	10	10	11	12	14	P	P	30	50.9	96.8	
4-Jul	46	40	46	65	76	74	61	54	28	19	20	19	15	14	12	11	12	13	13	14	16	22	43	49	32.5	75.8	
5-Jul	69	75	89	90	87	85	75	61	44	23	16	13	12	11	11	10	11	10	9	13	22	34	46	52	40.3	90.3	
6-Jul	59	79	89	89	92	92	89	75	68	53	40	35	27	22	20	18	18	18	19	21	26	35	60	78	50.9	92.0	
7-Jul	75	75	83	91	91	90	75	63	49	38	35	29	25	21	20	20	22	25	38	41	37	46	78	83	52.0	90.8	
8-Jul	90	94	95	97	98	99	99	98	93	83	73	54	31	28	19	20	18	18	18	28	51	78	93	94	65.4	99.1	
9-Jul	92	94	94	95	95	94	91	86	75	66	59	60	50	33	28	23	21	32	33	41	46	48	55	64	61.5	95.1	
10-Jul	66	59	57	68	74	72	75	66	41	38	52	48	49	36	33	25	27	27	41	45	65	77	80	82	54.2	81.6	
11-Jul	83	86	89	81	86	89	91	92	92	92	91	91	87	77	72	49	35	33	32	35	56	79	91	93	75.1	92.9	
12-Jul	93	94	95	96	97	98	97	90	80	64	58	44	37	35	33	32	39	66	39	43	63	80	87	91	68.8	97.8	
13-Jul	91	93	95	97	98	98	98	90	84	81	77	64	51	53	80	76	58	56	61	71	76	80	88	94	79.5	98.5	
14-Jul	96	97	98	99	100	100	100	100	100	100	84	62	41	30	25	18	21	41	67	67	74	70	66	67	71.8	100.0	
15-Jul	83	82	83	87	93	98	96	89	83	76	79	72	69	57	42	37	41	38	42	53	67	77	76	76	70.7	97.6	
16-Jul	87	96	98	98	99	90	79	86	82	82	56	32	31	23	19	18	16	17	18	20	30	53	76	88	58.1	99.4	
17-Jul	88	88	87	88	89	90	92	93	92	89	78	63	66	60	80	84	83	85	84	85	89	94	97	98	85.2	97.7	
18-Jul	98	95	96	97	98	98	98	95	94	94	91	82	74	66	58	51	49	50	51	61	67	87	98	99	81.1	98.7	
19-Jul	99	99	100	100	100	100	100	93	79	61	30	20	17	15	14	14	15	14	15	34	72	81	93	90	60.6	100.0	
20-Jul	99	100	100	100	100	100	98	94	85	81	56	36	43	47	37	34	30	34	48	53	78	92	92	89	72.0	100.0	
21-Jul	81	85	86	91	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	91.3	
22-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
23-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
24-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
25-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
26-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
27-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
28-Jul	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-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
30-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
31-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
		83.1	85.3	88.0	90.1	91.9	91.7	87.9	81.5	72.2	64.5	55.4	45.8	40.5	35.1	33.6	31.2	30.2	31.9	35.2	42.2	53.0	66.6	77.5	78.7	Diurnal Average	
		99.3	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	90.9	91.3	87.1	77.1	80.2	83.6	83.2	85.2	83.6	84.7	89.3	94.0	97.6	98.7	Diurnal Maximum	
P - Power Failure		N - Not Valid																									

Hourly Averages

Relative Humidity (RH) - %
Valleyview - July 2017





Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Valleyview - July 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	0	0	0	2	1	1	2	3	2	1	1	1	2	2	2	2	1	1	0	1	3	1	1	1	1.3	2.6
Dir	340	166	183	168	184	167	158	157	157	165	172	166	161	156	154	152	131	144	180	163	171	160	161	162	161	171
2 Spd	2	1	1	1	0	1	1	1	1	2	2	2	2	3	2	1	1	2	1	1	6	7	1	3	0.2	7.0
Dir	161	163	174	171	188	163	156	160	150	144	131	144	130	58	29	345	73	119	16	158	286	324	358	219	145	324
3 Spd	2	2	2	2	2	2	1	1	2	3	5	6	12	13	15	16	19	17	17	15	13	P	P	1	6.7	18.6
Dir	231	155	158	155	156	153	171	204	193	229	230	251	272	282	266	275	278	277	278	275	262	P	P	196	265	278
4 Spd	1	3	2	1	2	2	2	3	7	11	9	9	11	12	11	12	10	9	9	6	3	1	1	1	4.6	12.4
Dir	167	232	202	169	160	159	161	156	251	264	266	247	264	266	281	294	308	306	311	300	302	271	203	199	273	294
5 Spd	1	0	1	1	1	2	2	2	1	4	6	6	5	3	7	5	4	4	3	2	1	1	2	3	1.5	6.7
Dir	167	147	161	168	160	156	154	159	173	280	302	293	298	304	327	337	354	352	329	19	23	354	345	343	317	327
6 Spd	2	0	0	0	0	1	2	4	6	6	7	8	7	7	9	8	8	8	7	5	3	2	0	1	4.1	8.6
Dir	334	177	164	148	150	8	23	15	18	13	8	7	12	16	4	8	8	9	7	7	10	349	241	329	9	4
7 Spd	2	2	0	0	0	0	0	0	1	2	3	5	5	4	4	4	2	2	2	5	4	5	19	4	0.3	18.9
Dir	344	340	165	181	226	274	285	79	351	132	133	140	138	113	132	141	118	94	326	320	109	322	308	352	20	308
8 Spd	3	1	1	1	0	0	1	1	2	1	2	1	1	1	4	4	4	3	0	0	0	0	0	0	0.7	4.2
Dir	158	184	154	185	187	190	160	156	160	154	153	170	291	279	286	274	281	294	265	195	157	47	194	340	237	286
9 Spd	0	0	0	0	0	0	1	0	0	3	4	3	3	4	3	7	6	3	6	2	12	9	5	1	1.7	11.6
Dir	259	290	173	294	224	357	235	167	170	149	153	157	181	279	326	325	319	354	9	354	304	328	316	269	316	304
10 Spd	1	1	2	1	1	1	1	0	2	1	1	0	1	0	1	1	1	0	0	0	0	0	0	1	0.4	2.3
Dir	219	293	275	214	298	240	161	249	264	250	153	150	138	245	139	349	103	128	201	205	162	165	162	158	220	275
11 Spd	0	0	1	1	1	2	1	1	1	1	1	1	1	1	1	2	1	2	1	0	0	0	1	0	0.8	2.0
Dir	172	167	156	161	163	155	153	151	150	146	154	172	200	162	164	142	149	147	134	129	95	52	338	305	153	155
12 Spd	0	0	1	1	0	0	0	1	2	4	4	5	4	5	4	2	5	2	4	1	0	1	1	1	1.3	5.2
Dir	325	99	356	347	342	239	268	108	137	144	139	148	145	146	136	151	283	188	161	252	240	154	243	152	156	148
13 Spd	1	0	0	0	1	1	0	0	2	2	4	7	5	6	3	7	5	3	8	3	2	2	0	0	2.0	7.9
Dir	189	27	151	163	305	224	168	19	289	336	9	19	38	19	249	18	311	355	339	22	330	291	213	133	355	339
14 Spd	0	0	1	0	0	1	2	1	1	1	0	2	3	3	1	1	4	6	4	2	2	4	2	2	1.0	6.3
Dir	190	138	161	172	171	164	156	156	153	156	78	78	124	131	124	115	6	11	32	61	64	11	2	360	62	11
15 Spd	0	4	2	0	0	0	1	2	2	2	1	0	1	4	4	4	3	8	6	4	7	10	14	7	2.6	14.4
Dir	324	354	27	25	217	162	152	156	157	156	156	64	70	44	30	23	25	19	18	356	343	353	326	354	4	326
16 Spd	1	1	1	1	1	3	2	1	2	1	6	12	11	16	17	14	14	12	13	16	16	13	8	8	7.5	16.8
Dir	167	168	221	159	160	250	241	190	219	174	245	251	255	258	268	264	286	285	278	277	267	248	243	244	261	268
17 Spd	12	11	14	12	11	11	11	12	12	12	10	9	8	9	7	4	3	2	1	1	0	0	0	0	6.4	14.1
Dir	261	262	263	264	265	268	268	272	277	301	313	298	278	281	315	321	17	40	52	10	204	144	2	64	281	263
18 Spd	1	1	1	2	2	3	4	5	5	6	6	2	2	1	1	1	2	1	1	0	0	0	0	1	1.7	6.2
Dir	73	71	22	7	21	10	7	10	9	7	11	344	336	351	121	262	3	47	112	128	156	149	172	161	11	7
19 Spd	0	1	1	1	1	1	2	1	2	3	9	10	10	11	9	7	3	3	1	0	0	0	1	1	2.3	11.2
Dir	162	165	162	159	157	157	156	157	161	153	264	287	286	282	286	291	300	309	315	162	169	181	161	160	277	286
20 Spd	0	0	0	1	0	1	0	0	0	0	0	1	2	5	6	7	5	2	4	1	0	1	1	1	0.6	6.9
Dir	166	183	165	167	193	163	171	168	252	39	211	291	338	352	336	341	322	306	152	148	116	164	184	158	327	341
21 Spd	1	1	1	1	1	2	5	8	5	7	11	7	6	8	8	8	5	6	4	7	10	5	1	1	4.3	10.7
Dir	189	157	163	161	162	245	276	280	285	289	299	301	318	281	293	298	289	289	289	252	267	254	187	155	282	299
22 Spd	1	1	1	0	1	1	1	2	2	2	1	2	3	5	5	5	3	3	5	5	3	1	1	0	1.5	5.3
Dir	164	156	152	150	162	164	158	154	158	158	154	149	230	243	253	251	290	294	285	267	253	236	219	162	237	267

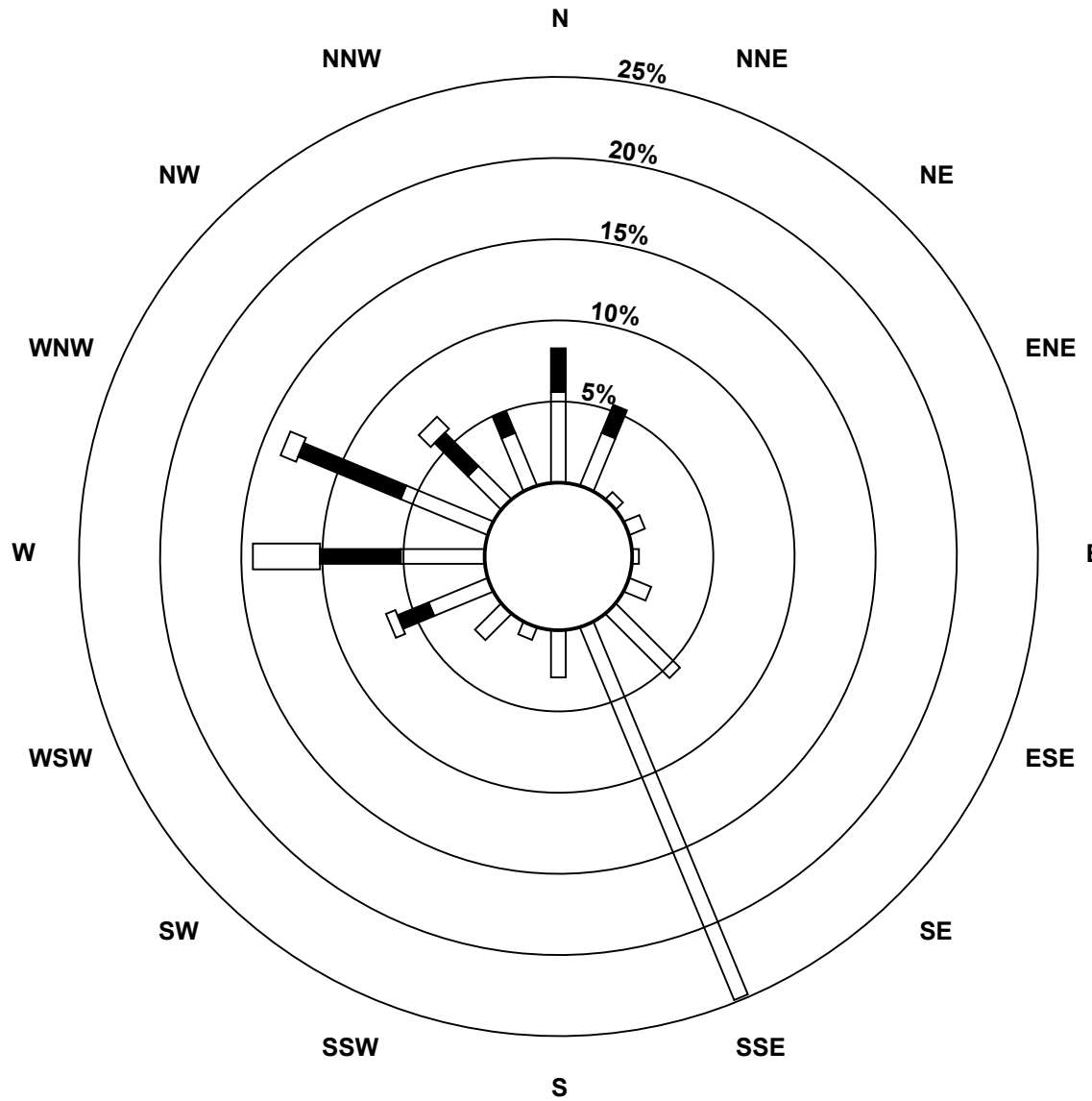
Hourly Averages

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

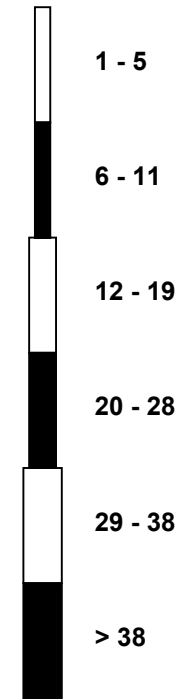
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	0	0	1	2	1	1	1	1	1	2	5	2	4	5	4	3	4	3	3	1	6	8	3	1	1.5	7.8
Dir	160	250	164	221	172	152	151	147	157	285	265	172	156	160	160	168	155	159	156	163	303	247	285	195	200	247
24 Spd	1	2	5	4	7	5	7	8	9	10	8	9	9	9	9	10	9	7	7	4	1	0	0	0	5.5	10.0
Dir	187	240	251	254	284	282	294	294	297	296	307	308	305	306	300	286	286	296	288	271	216	166	165	162	291	296
25 Spd	1	1	1	0	1	1	1	2	2	5	4	4	3	5	5	3	1	1	1	0	0	0	0	0	0.9	5.3
Dir	160	159	162	159	160	156	150	151	148	270	273	256	239	273	304	329	6	95	108	115	160	145	172	226	253	273
26 Spd	0	0	0	0	0	0	0	2	2	2	2	2	1	2	3	1	0	1	1	0	0	1	0	3	0.7	2.7
Dir	191	185	173	175	156	170	159	158	155	152	146	149	148	143	146	165	127	39	42	100	285	153	255	255	155	146
27 Spd	10	3	1	1	0	0	0	0	1	1	5	12	13	11	5	1	1	2	2	3	2	1	1	1	1.9	13.0
Dir	284	300	164	245	42	168	196	171	157	243	314	316	314	335	345	281	151	157	157	156	174	208	162	304	314	314
28 Spd	1	1	1	2	1	2	1	1	9	10	12	9	9	5	7	7	6	4	3	2	0	0	0	0	3.2	12.0
Dir	162	169	160	155	154	154	149	219	280	284	280	274	269	265	298	260	248	292	250	247	185	215	167	164	267	280
29 Spd	1	1	1	0	0	1	2	2	2	2	2	2	2	1	1	3	2	1	1	1	3	1	2	0.6	3.4	
Dir	166	166	167	169	174	163	155	146	155	154	145	151	148	116	142	89	14	20	14	26	351	23	127	316	109	14
30 Spd	3	1	0	2	1	1	0	1	1	6	8	7	6	4	8	9	6	4	5	6	2	1	1	1	3.1	8.8
Dir	320	24	197	257	176	191	166	159	214	261	276	277	260	281	289	274	268	259	273	287	263	221	176	167	271	274
31 Spd	1	1	1	1	1	1	1	1	4	5	5	4	7	6	5	5	5	3	5	2	0	0	0	0	1.9	6.8
Dir	176	182	162	156	159	149	154	200	263	285	294	270	281	315	298	301	299	301	357	16	104	216	171	38	291	281
Spd	0.8	0.5	0.7	0.8	0.6	0.7	0.7	0.7	1.3	1.8	2.4	2.5	2.8	2.9	3.4	3.4	3.3	2.4	2.2	1.9	2.0	1.5	1.5	0.5	Diurnal Average	
Dir	250	245	224	219	229	221	220	231	259	273	284	280	278	290	292	295	303	313	308	292	283	298	298	266	Diurnal Maximum	
Spd	12.2	10.9	14.1	11.7	11.5	11.2	10.8	11.8	12.1	11.9	12.0	12.2	13.0	15.9	16.8	15.9	18.6	17.1	16.5	16.1	16.3	13.1	18.9	8.5	Diurnal Maximum	
Dir	261	262	263	264	265	268	268	272	277	301	280	251	314	258	268	275	278	277	278	277	267	248	308	244	Diurnal Maximum	
Maximum Speed Value: 19 km/h on Jul 7 23:00		Minimum Speed Value: 0 km/h on Jul 27 05:00										Hours in Service: 744														
Maximum Daily Speed Average: 7.5 km/h on Jul 16		Minimum Daily Speed Average: 0.2 km/h on Jul 10										Hours of Data: 742														
Maximum Diurnal Speed Average: 3.4 km/h at hour 15		Minimum Diurnal Speed Average: 0.5 km/h at hour 24										Hours of Missing Data: 2														
Monthly Average Velocity: 1.58 km/h 283.2 deg										Speed Percentiles: P ₁ = 0.1 P ₁₀ = 0.3 Q ₁ = 0.7 Median = 1.7 Q ₃ = 4.5 P ₉₀ = 8.6 P ₉₉ = 15.9										Percent Operational Time: 99.7						
All monthly, daily, and diurnal averages have been calculated using vector methods																										
P - Power Failure																										
Frequency Distribution																										
		Speed Range (km/h)																								
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																			
North	60	26	0	0	0	0	86																			
NorthEast	29	1	0	0	0	0	30																			
East	19	0	0	0	0	0	19																			
SouthEast	149	1	0	0	0	0	150																			
South	185	0	0	0	0	0	185																			
SouthWest	46	5	0	0	0	0	51																			
West	56	51	31	0	0	0	138																			
NorthWest	33	43	7	0	0	0	83																			
Total	577	127	38	0	0	0	742																			

Wind Rose

Wind Speed (WS) (km/h)
Valleyview - July 2017



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Valleyview - July 2017

Maximum Speed: 21 km/h on Jul 7 23:00	Maximum Daily Speed Average: 8.3 km/h on Jul 16	Hours in Service: 744
Minimum Speed: 0 km/h on Jul 19 20:00	Minimum Daily Speed Average: 1.0 km/h on Jul 11	Hours of Data: 742
Maximum Diurnal Speed Average: 6.1 km/h at hour 15	Minimum Diurnal Speed Average: 1.5 km/h at hour 5	Hours of Missing Data: 2
Monthly Average Speed: 3.49 km/h	Percentiles: P ₁ = 0.1 P ₁₀ = 0.5 Q ₁ = 0.9 Median = 2.0 Q ₃ = 5.1 P ₉₀ = 9.0 P ₉₉ = 16.3	Percent Operational Time: 99.7

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	0	0	0	3	1	1	2	3	2	2	2	1	2	2	2	2	2	1	0	1	3	1	1	1	1.5	2.9
2-Jul	2	1	1	1	0	1	1	1	1	2	2	3	3	4	3	5	2	2	1	2	7	7	3	4	2.5	7.2
3-Jul	3	2	2	2	2	2	2	2	2	4	6	7	13	13	16	16	19	18	17	15	14	F	F	1	8.0	19.1
4-Jul	1	3	2	1	2	2	2	3	7	11	10	9	12	12	12	13	10	10	9	7	3	2	1	1	6.0	12.9
5-Jul	1	1	1	1	1	2	2	2	1	5	6	6	6	4	7	6	5	4	3	2	1	1	2	3	3.1	7.2
6-Jul	2	1	1	0	1	1	2	4	6	6	8	8	7	8	9	9	9	9	7	5	3	2	0	1	4.5	9.0
7-Jul	2	2	0	0	0	0	0	1	1	3	3	5	5	5	5	4	2	2	3	7	4	6	21	8	3.7	21.1
8-Jul	3	1	1	2	1	1	1	1	2	1	2	1	2	2	5	5	4	4	1	0	0	0	1	1	1.8	4.9
9-Jul	0	1	0	0	0	0	1	0	1	3	4	4	4	5	4	7	7	4	6	2	12	9	5	1	3.4	11.8
10-Jul	1	2	3	1	1	1	1	1	2	1	1	1	1	1	2	2	2	1	1	1	0	0	0	1	1.1	2.9
11-Jul	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	2	1	2	1	0	0	0	1	0	1.0	2.0
12-Jul	0	0	1	1	0	0	1	1	2	4	4	5	5	5	4	2	5	4	4	2	1	1	1	1	2.3	5.4
13-Jul	1	1	0	1	1	1	1	1	3	2	4	7	6	7	5	7	6	5	9	3	2	2	1	0	3.2	9.1
14-Jul	0	0	1	1	0	1	2	1	1	1	2	3	4	4	2	1	4	6	4	3	2	4	3	2	2.3	6.4
15-Jul	1	4	2	0	0	0	1	2	2	2	1	2	2	4	4	4	4	8	6	4	7	11	15	7	3.9	14.9
16-Jul	1	1	1	1	1	3	2	2	3	2	7	12	11	16	18	14	15	13	14	16	17	13	9	9	8.3	17.5
17-Jul	12	11	14	12	12	11	11	12	12	12	11	9	9	9	8	5	4	2	1	1	0	0	1	0	7.5	14.2
18-Jul	1	1	1	3	3	3	4	5	6	6	6	3	3	3	2	2	3	1	1	0	0	0	0	1	2.3	6.4
19-Jul	0	1	1	1	1	1	1	2	1	2	2	4	9	11	10	12	10	7	3	1	0	0	0	1	3.4	11.6
20-Jul	1	1	0	1	0	1	1	1	1	1	1	2	2	5	6	7	5	3	4	1	2	1	2	1	2.1	7.2
21-Jul	1	1	1	1	1	2	5	8	6	7	11	8	7	8	9	9	6	6	5	7	10	5	2	1	5.3	11.1
22-Jul	1	1	1	1	1	1	1	2	2	3	2	2	4	6	6	5	4	4	5	5	3	1	1	1	2.5	5.7
23-Jul	0	1	2	2	2	1	1	1	1	2	6	2	4	5	4	4	4	3	3	1	6	8	5	1	2.9	8.1
24-Jul	1	2	5	5	8	6	7	8	10	10	9	10	10	10	9	10	9	7	7	4	1	0	0	0	6.1	10.3
25-Jul	1	1	1	0	1	1	1	2	2	5	5	4	4	6	6	4	2	1	1	1	0	0	0	0	2.1	6.1
26-Jul	0	0	0	0	0	0	0	2	2	2	2	2	2	2	3	1	1	1	1	0	0	1	0	3	1.1	2.9
27-Jul	12	6	1	1	0	0	1	1	1	1	6	12	13	11	5	2	1	2	2	3	2	2	1	1	3.7	13.5
28-Jul	1	1	1	2	1	2	1	3	9	10	13	10	9	6	7	7	6	5	3	2	0	0	0	0	4.2	12.5
29-Jul	1	1	1	0	0	1	2	2	2	2	2	2	2	3	2	2	4	2	1	2	2	3	1	3	1.8	3.7
30-Jul	3	2	1	2	1	1	1	1	2	7	8	8	7	4	8	9	7	4	5	6	3	1	1	1	3.9	9.4
31-Jul	1	1	1	2	1	1	1	1	4	6	6	5	8	7	6	6	6	4	5	2	0	0	1	0	3.1	7.7
	1.8	1.6	1.5	1.6	1.5	1.6	1.9	2.3	3.2	4.1	5.0	5.3	5.8	6.1	6.1	5.9	5.2	4.6	4.3	3.5	3.4	2.8	2.7	1.9	Diurnal Average	
	12.3	11.1	14.2	11.8	11.7	11.3	11.0	11.9	12.3	12.4	12.5	12.5	13.5	16.2	17.5	16.5	19.1	17.6	17.0	16.4	16.7	13.3	21.1	8.9	Diurnal Maximum	

P - Power Failure
 All monthly, daily, and diurnal averages have been calculated using scalar methods

Hourly Standard Deviations

Wind Direction (WD) - deg

Valleyview - July 2017

Maximum Value: 99.1 deg on Jul 20 10:00																								Hours in Service: 744	
Minimum Value: 5.7 deg on Jul 5 06:00																								Hours of Data: 742	
Percentiles: P ₁ = 7.4 P ₁₀ = 12.9 Q ₁ = 17.3 Median = 31.1 Q ₃ = 52.3 P ₉₀ = 73.6 P ₉₉ = 91.7																								Hours of Missing Data: 2	
																								Hours of Calibration: 0	
																								Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Jul	60	48	64	39	16	13	7	10	12	27	34	32	18	14	16	14	68	57	63	57	23	19	15	20	68.4
2-Jul	11	15	32	17	56	20	30	23	43	31	43	58	59	52	58	92	64	45	88	78	60	14	94	35	93.6
3-Jul	74	10	16	12	14	45	41	39	43	44	39	36	25	12	16	15	13	14	14	13	11	P	P	36	74.1
4-Jul	18	26	34	26	7	7	11	10	35	14	17	28	18	22	23	17	19	18	14	17	19	47	21	24	46.9
5-Jul	15	83	57	10	8	6	7	14	51	34	30	31	46	78	24	53	54	38	55	14	48	74	42	7	82.9
6-Jul	18	66	64	82	65	91	20	16	14	23	17	16	19	20	17	17	17	15	11	10	8	22	74	50	91.2
7-Jul	14	35	80	79	82	70	80	82	84	29	26	16	21	27	26	13	25	46	46	53	43	32	31	68	83.9
8-Jul	22	38	30	64	64	38	68	14	27	33	16	39	77	83	29	38	28	39	89	81	38	88	67	83	89.1
9-Jul	67	70	81	39	56	56	62	40	60	28	15	17	34	46	41	24	12	32	10	20	13	16	29	78	80.6
10-Jul	41	32	39	60	53	47	22	77	21	48	11	35	40	82	56	88	73	64	44	66	55	26	49	13	87.6
11-Jul	69	69	21	41	43	12	14	13	21	15	14	52	66	43	55	43	47	43	31	62	49	70	55	84	84.1
12-Jul	90	48	48	32	74	84	48	49	19	20	22	17	18	18	18	50	21	52	13	61	79	47	56	30	90.1
13-Jul	41	68	67	72	77	76	65	83	88	48	23	16	28	21	77	17	51	85	31	30	20	19	68	67	88.4
14-Jul	24	62	15	30	31	26	13	41	24	51	98	52	37	28	65	76	56	12	44	42	44	12	21	59	97.8
15-Jul	88	18	48	66	72	83	43	17	20	23	34	78	50	35	37	31	43	16	14	18	17	25	14	23	88.4
16-Jul	58	24	39	16	24	44	37	33	38	29	42	12	15	13	17	13	14	14	12	10	12	18	25	31	57.7
17-Jul	10	9	8	9	11	9	11	10	10	17	12	25	19	17	20	27	31	32	66	85	88	53	92	87	92.1
18-Jul	47	35	29	34	23	15	14	13	12	15	17	52	73	75	59	66	77	42	38	41	16	77	62	23	77.1
19-Jul	55	47	19	9	8	9	8	15	16	35	46	18	17	16	16	22	25	36	48	80	23	36	12	13	80.2
20-Jul	58	62	29	37	79	49	66	62	86	99	79	52	78	14	17	18	21	47	17	38	96	36	78	38	99.1
21-Jul	48	21	30	21	16	45	35	16	22	23	17	28	25	26	26	24	33	20	22	14	13	23	39	16	48.0
22-Jul	17	15	46	46	32	22	20	25	11	14	22	13	52	41	39	27	20	40	13	13	40	39	36	68	68.3
23-Jul	70	83	73	39	31	31	19	29	40	67	31	37	11	11	12	26	13	18	14	52	26	20	74	35	83.1
24-Jul	33	43	17	24	15	19	13	13	13	14	18	14	18	17	22	18	16	24	17	26	37	19	23	19	43.0
25-Jul	13	17	17	19	12	18	7	9	26	35	40	51	54	42	44	53	61	66	30	19	45	71	49	80	80.0
26-Jul	49	33	45	60	61	80	42	14	15	21	26	31	52	53	31	37	77	53	27	41	72	55	61	57	79.9
27-Jul	32	87	45	84	94	63	52	66	65	76	29	13	15	19	22	61	27	14	27	8	8	71	32	20	93.8
28-Jul	25	36	10	26	14	7	22	55	14	16	16	19	19	48	30	19	17	30	32	43	50	34	45	59	58.9
29-Jul	16	10	36	27	23	10	9	13	18	19	17	38	55	79	55	60	24	20	43	80	86	49	67	82	86.3
30-Jul	61	69	74	59	35	33	84	43	60	22	15	16	41	59	19	22	20	25	20	14	33	33	34	9	83.7
31-Jul	17	20	31	37	13	17	27	51	23	21	27	41	32	30	37	29	30	59	27	48	44	64	39	69	68.7
90.1	86.8	80.6	83.8	93.8	91.2	83.7	83.4	88.4	99.1	97.8	77.7	77.8	82.6	76.7	92.4	76.7	85.1	89.1	85.1	96.1	87.7	93.6	86.9		
P - Power Failure																									

PAZA

Donnelly Station

Monthly Summary Tables, Graphs and
Roses

Hourly Averages

Sulphur Dioxide (SO₂) - ppb

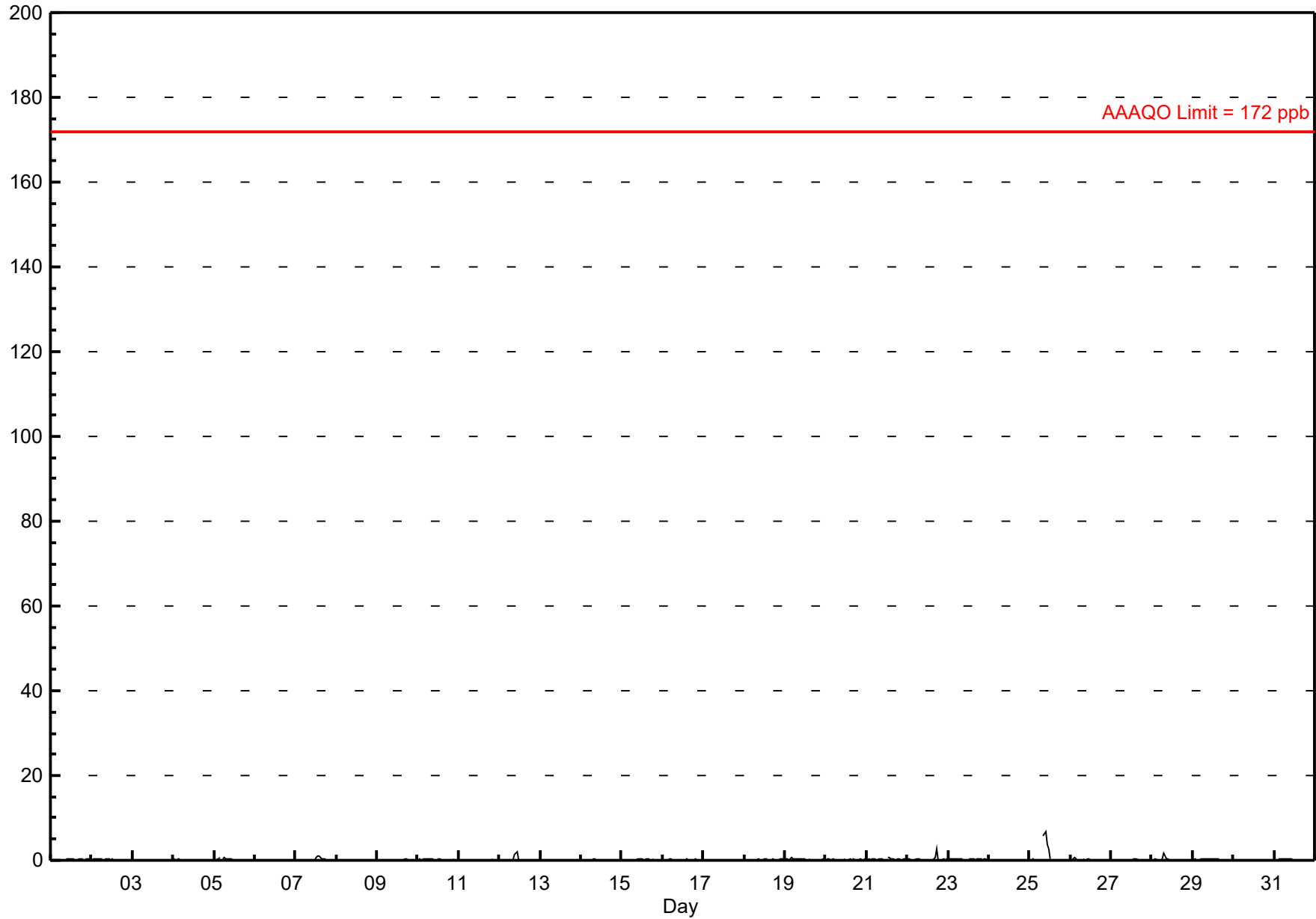
Donnelly - July 2017

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 6.6 ppb on Jul 25 10:00	Maximum Daily Average: 1.0 ppb on Jul 25		Hours of Data:	703
Minimum Value: 0 ppb on Jul 2 20:00	Minimum Daily Average: 0.0 ppb on Jul 8		Hours of Missing Data:	41
Maximum Diurnal Average: 0.4 ppb at hour 10	Minimum Diurnal Average: 0.1 ppb at hour 20		Hours of Calibration:	35
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 = 1.6		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-Jul	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
2-Jul	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
3-Jul	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	0.1
4-Jul	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	0.2
5-Jul	0	0	0	1	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
6-Jul	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	0.2
7-Jul	0	0	A	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0.2	1.1
8-Jul	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
9-Jul	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	0.3
10-Jul	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
11-Jul	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
12-Jul	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	1.9
13-Jul	0	0	0	0	0	0	0	0	0	0	0	0	P	P	P	P	P	P	N	A	0	0	0	0	--	0.1
14-Jul	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
15-Jul	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	0.4
16-Jul	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
17-Jul	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
18-Jul	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
19-Jul	0	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.6
20-Jul	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	0.2
21-Jul	0	0	0	0	0	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
22-Jul	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	3	0	0	0	0	0	0	0	0.3	2.6
23-Jul	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
24-Jul	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
25-Jul	0	0	0	0	0	0	0	A	6	7	4	3	0	C	C	C	0	0	0	0	0	0	0	0	1.0	6.6
26-Jul	0	0	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
27-Jul	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	0.3
28-Jul	0	0	0	0	A	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.7
29-Jul	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	0.5
30-Jul	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	0.1
31-Jul	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

C - Calibration P - Power Failure N - Not Valid A - Automated Daily Zero Span

Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

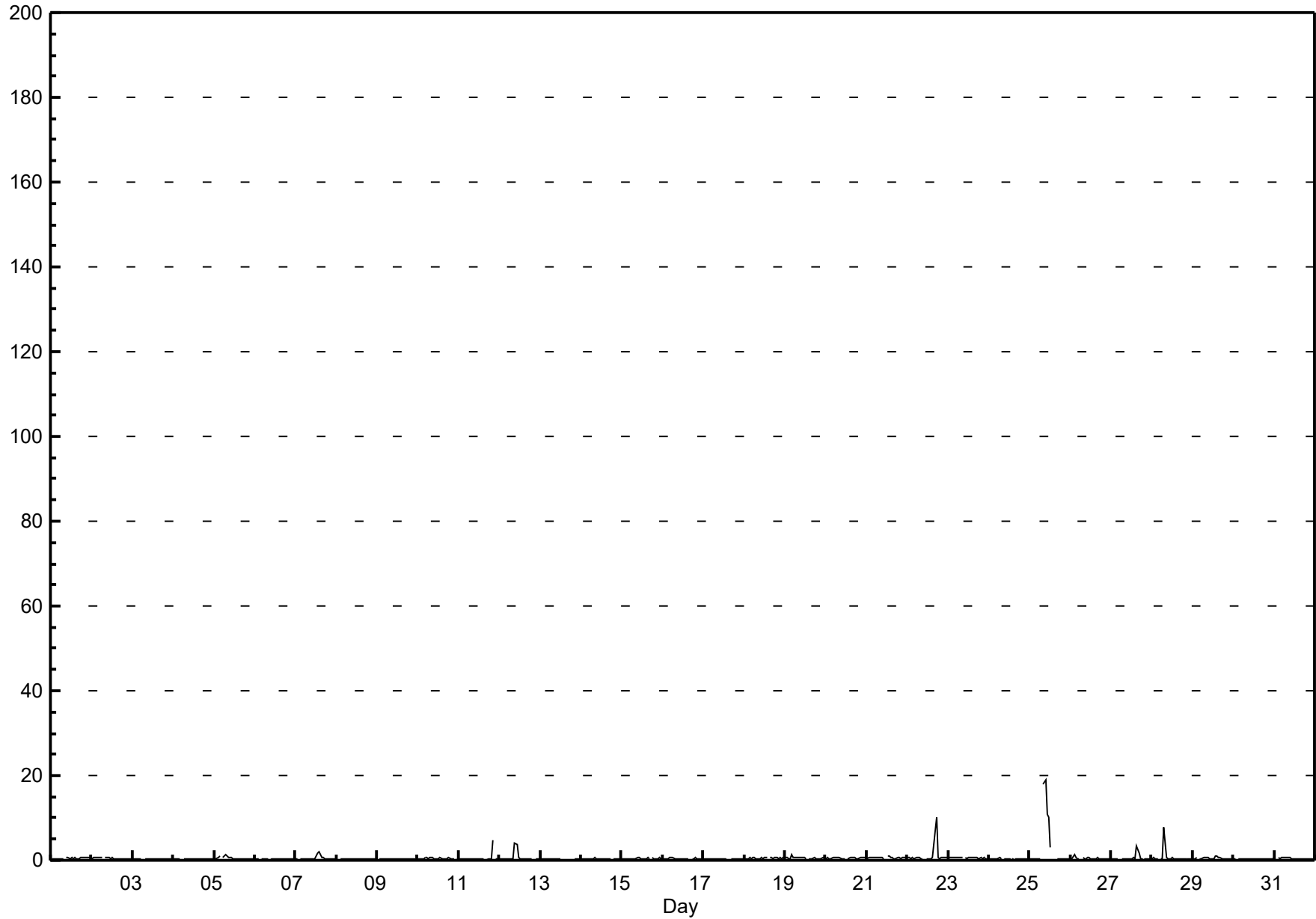


Hourly Maximums

Sulphur Dioxide (SO₂) - ppb

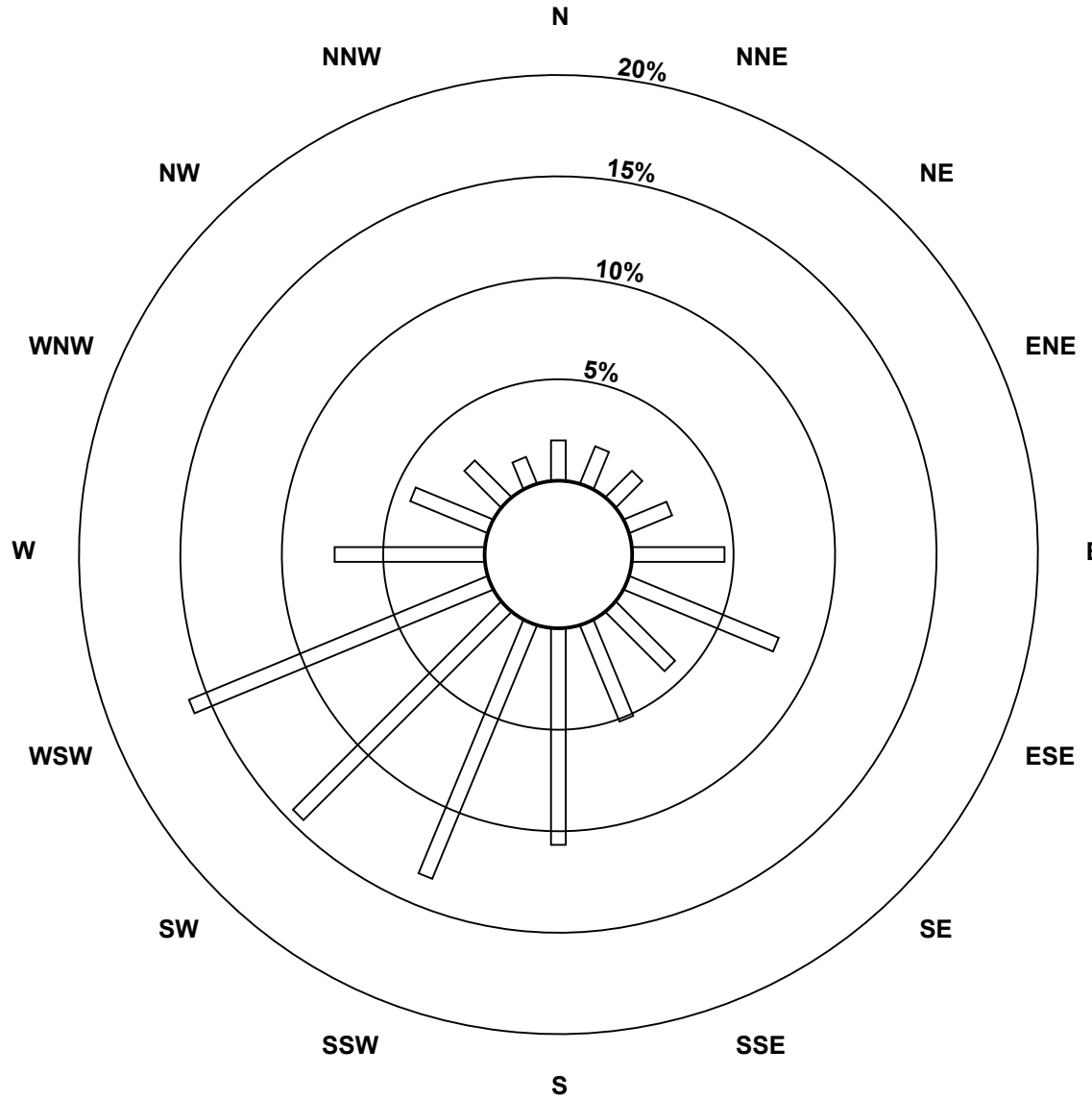
Donnelly - July 2017

Maximum Value: 18.9 ppb on Jul 25 10:00		Maximum Daily Average: 3.4 ppb on Jul 25		Hours in Service: 744																						
Minimum Value: 0 ppb on Jul 6 09:00		Minimum Daily Average: 0.2 ppb on Jul 6		Hours of Data: 703																						
Maximum Diurnal Average: 1.2 ppb at hour 10		Minimum Diurnal Average: 0.4 ppb at hour 22		Hours of Missing Data: 41																						
Monthly Average: 0.57 ppb		Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.3 Median = 0.4 Q ₃ = 0.5 P ₉₀ = 0.6 P ₉₉ = 6.6		Hours of Calibration: 35																						
				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-Jul	0	1	0	0	0	0	0	0	A	1	1	0	1	0	1	0	1	1	1	1	1	1	1	1	0.5	0.7
2-Jul	0	1	1	1	1	1	1	A	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0.5	0.7
3-Jul	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
4-Jul	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
5-Jul	0	0	1	1	A	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.2
6-Jul	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
7-Jul	0	0	A	0	0	0	0	0	0	0	0	0	1	2	2	1	1	0	0	0	0	0	0	0	0.5	2.1
8-Jul	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
9-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
10-Jul	0	0	0	0	1	1	0	1	1	0	0	1	1	0	0	0	0	0	1	0	0	0	A	0	0.5	0.6
11-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	A	0	0	0.5	4.6
12-Jul	0	0	0	0	0	0	0	0	0	4	4	1	0	0	0	0	0	0	0	0	A	0	0	0	0.7	4.0
13-Jul	0	0	0	0	0	0	0	0	0	0	0	0	P	P	P	P	P	P	N	A	0	0	0	0	--	0.5
14-Jul	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.4	0.5
15-Jul	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	A	1	0	0	0	0	1	0	0.5	0.7
16-Jul	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	A	0	0	0	1	0	0	0	0	0.5	0.8
17-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	0.5
18-Jul	0	0	0	1	0	1	1	1	1	1	1	0	1	1	A	1	1	0	1	1	0	1	0	1	0.5	0.7
19-Jul	1	1	0	1	1	1	1	1	1	1	1	1	0	A	0	0	0	1	0	0	0	0	1	1	0.6	1.4
20-Jul	1	1	0	1	1	1	1	1	1	1	0	0	A	0	1	1	1	1	0	0	1	1	1	1	0.5	0.8
21-Jul	0	1	1	1	1	1	1	1	1	1	0	A	1	1	1	1	0	0	1	1	0	1	1	1	0.6	1.1
22-Jul	1	1	0	1	0	1	1	1	1	0	0	A	0	0	0	1	7	10	1	0	1	1	1	1	1.2	10.3
23-Jul	1	1	1	1	1	1	1	1	1	1	A	1	0	1	1	1	1	1	0	1	1	1	0	0	0.6	0.7
24-Jul	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
25-Jul	0	0	0	0	0	0	0	A	18	19	11	10	3	C	C	C	0	0	0	0	0	0	0	0	3.4	18.9
26-Jul	0	0	1	1	0	0	A	1	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0.5	1.3
27-Jul	0	0	0	0	0	A	0	0	0	0	0	0	0	1	0	3	2	0	0	0	0	0	0	0	0.5	3.3
28-Jul	0	1	0	0	A	0	0	8	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.8	7.8
29-Jul	0	0	1	A	0	0	1	1	1	1	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0.5	1.1
30-Jul	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
31-Jul	1	A	1	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7
		0.4	0.4	0.5	0.5	0.4	0.4	0.5	0.7	1.1	1.2	0.9	0.7	0.5	0.5	0.5	0.5	0.7	0.7	0.4	0.4	0.5	0.4	0.4	0.4	Diurnal Average
		0.6	0.6	1.3	1.0	1.4	0.8	1.1	7.8	17.9	18.9	11.0	10.3	3.0	1.7	2.1	3.3	7.0	10.3	0.7	0.8	4.6	0.6	0.8	0.8	Diurnal Maximum
C - Calibration		P - Power Failure						N - Not Valid						A - Automated Daily Zero Span												

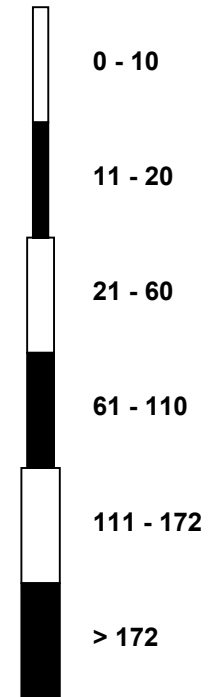


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Donnelly - July 2017

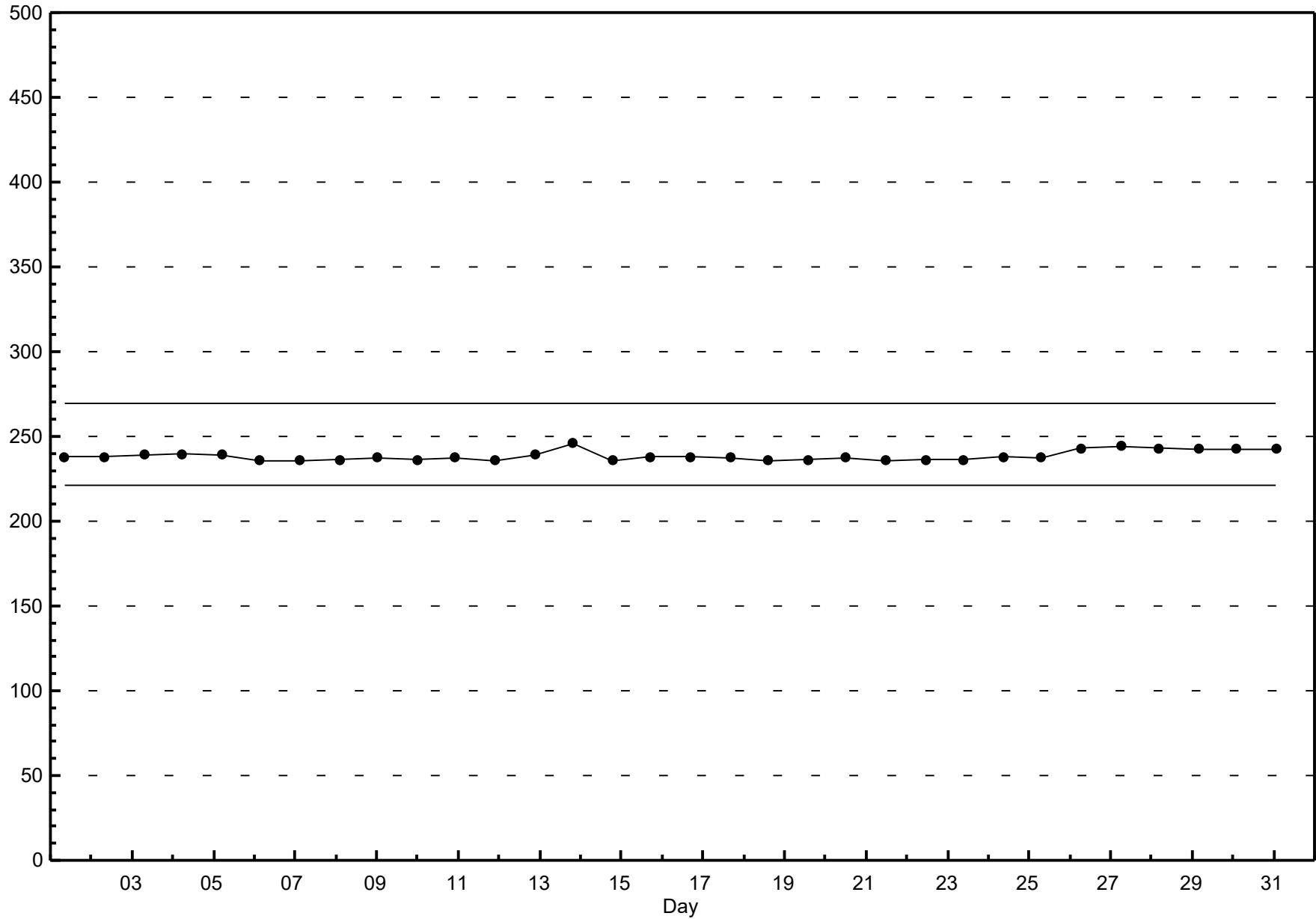


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Donnelly - July 2017



Hourly Averages

Hydrogen Sulphide (H₂S) - ppb

Donnelly - July 2017

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 1.4 ppb on Jul 15 03:00	Maximum Daily Average: 0.4 ppb on Jul 12		Hours of Data:	702
Minimum Value: 0 ppb on Jul 1 08:00	Minimum Daily Average: 0.0 ppb on Jul 19		Hours of Missing Data:	42
Maximum Diurnal Average: 0.3 ppb at hour 8	Minimum Diurnal Average: 0.1 ppb at hour 13		Hours of Calibration:	36
Monthly Average: 0.16 ppb	Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.4 P ₉₉ = 0.9		Percent Operational Time:	99.2

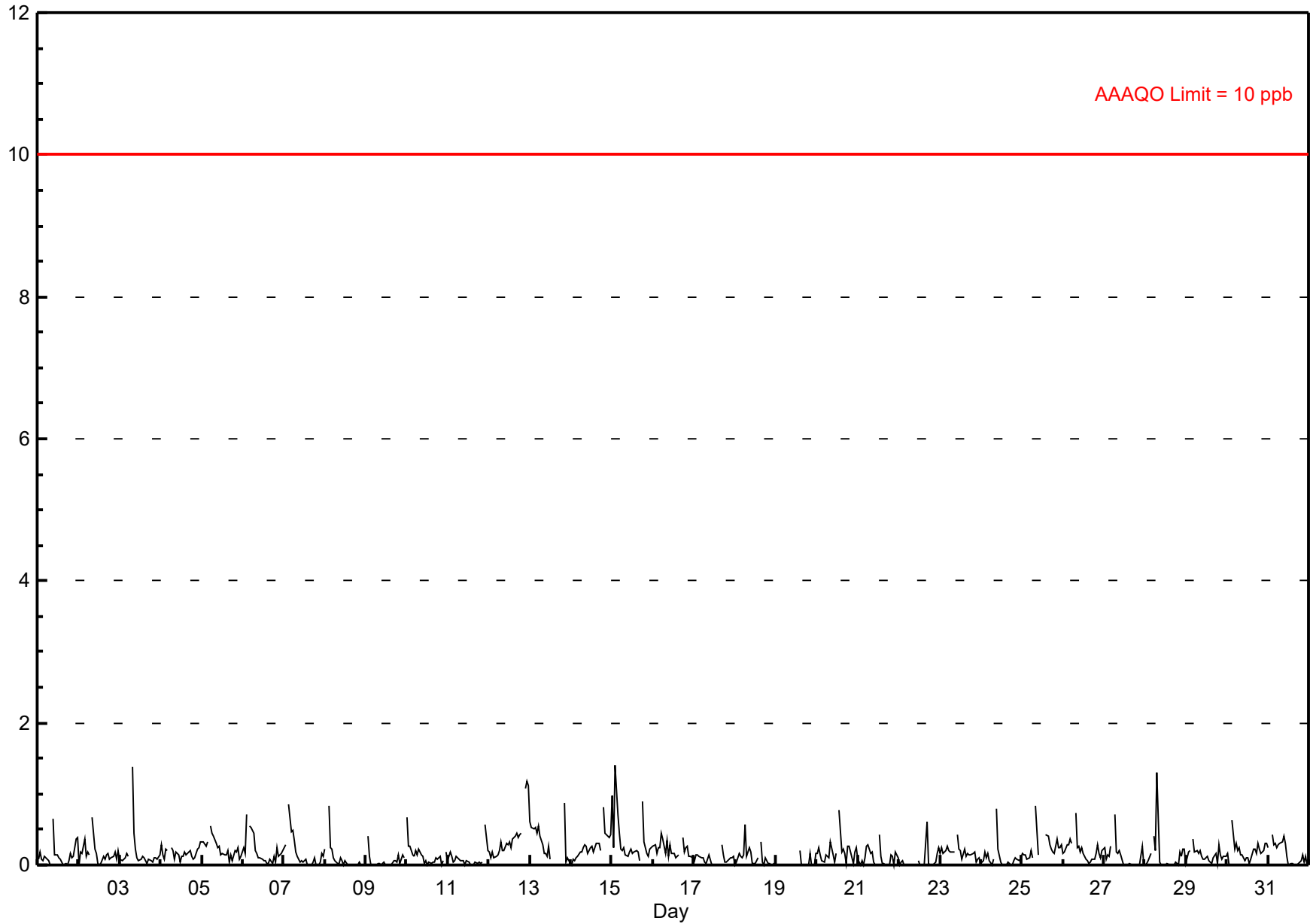
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7
2-Jul	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
3-Jul	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.4
4-Jul	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
5-Jul	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
6-Jul	0	0	1	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
7-Jul	0	0	A	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
8-Jul	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8
9-Jul	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	0.4
10-Jul	1	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	0.7
11-Jul	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	0.6
12-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	0.4	1.2
13-Jul	1	1	1	1	0	1	0	0	0	0	0	0	P	P	P	P	P	N	A	1	0	0	0	--	0.9	
14-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0.3	0.8
15-Jul	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0.3	1.4
16-Jul	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
17-Jul	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	0.3
18-Jul	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.6
19-Jul	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
20-Jul	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8
21-Jul	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
22-Jul	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0.1	0.6
23-Jul	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
24-Jul	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8
25-Jul	0	0	0	0	0	0	0	A	1	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0.2	0.8
26-Jul	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
27-Jul	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7
28-Jul	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.3
29-Jul	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	0.4
30-Jul	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
31-Jul	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

C - Calibration P - Power Failure N - Not Valid A - Automated Daily Zero Span

Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Donnelly - July 2017



Hourly Maximums

Hydrogen Sulphide (H₂S) - ppb

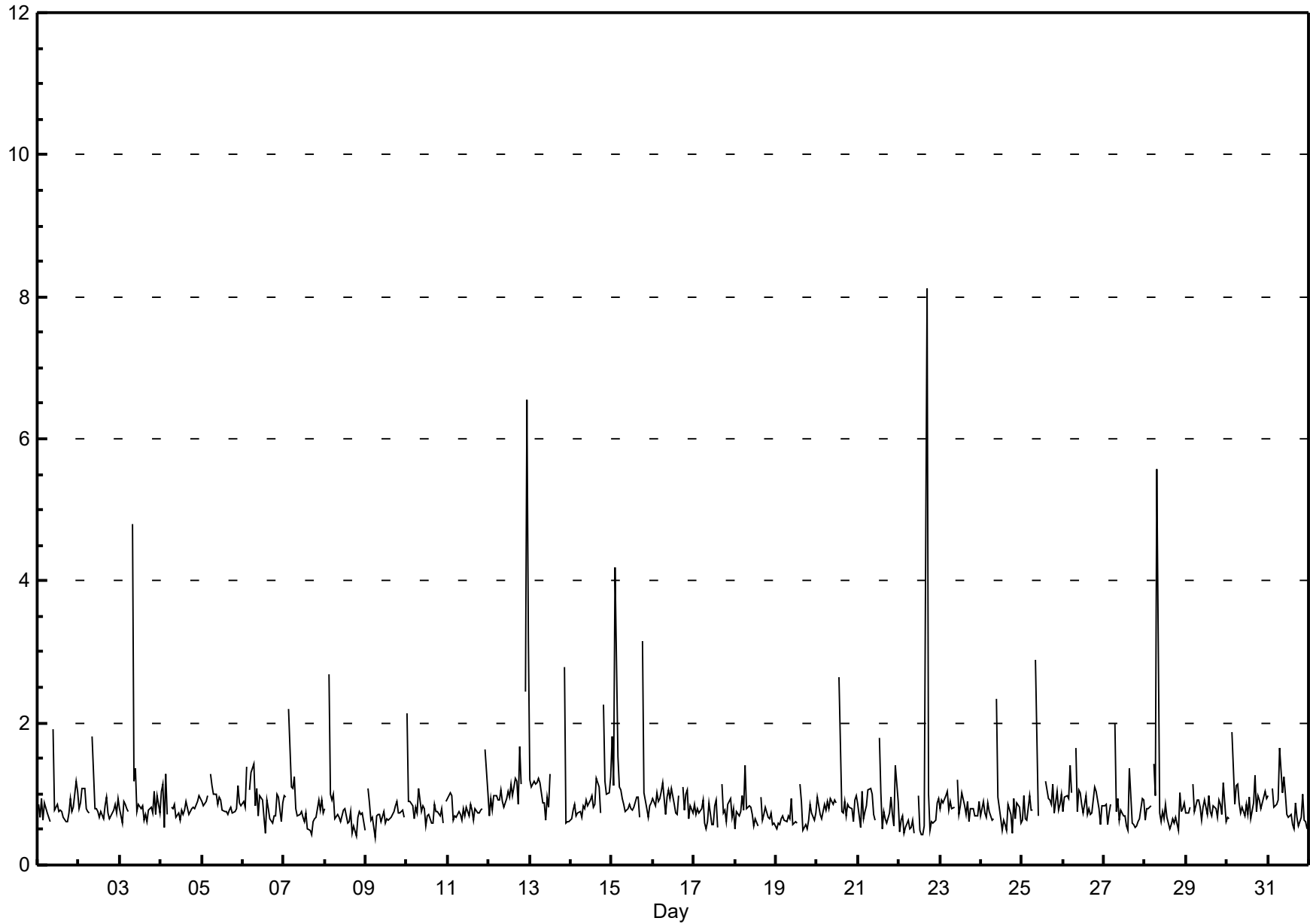
Donnelly - July 2017

Maximum Value: 8.1 ppb on Jul 22 17:00		Maximum Daily Average: 1.4 ppb on Jul 12		Hours in Service: 744																						
Minimum Value: 0 ppb on Jul 9 06:00		Minimum Daily Average: 0.7 ppb on Jul 19		Hours of Data: 702																						
Maximum Diurnal Average: 1.2 ppb at hour 8		Minimum Diurnal Average: 0.7 ppb at hour 15		Hours of Missing Data: 42																						
Monthly Average: 0.88 ppb		Percentiles: P ₁ = 0.4 P ₁₀ = 0.6 Q ₁ = 0.7 Median = 0.8 Q ₃ = 0.9 P ₉₀ = 1.1 P ₉₉ = 3.1		Hours of Calibration: 36																						
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-Jul	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.9
2-Jul	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.8
3-Jul	1	1	1	1	1	1	A	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	4.8
4-Jul	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	1.3
5-Jul	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	1.3
6-Jul	1	1	1	A	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0.9	1.4
7-Jul	1	1	A	2	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	0.8	2.2
8-Jul	1	A	3	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	0	0.8	2.7
9-Jul	A	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1
10-Jul	2	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	2.1
11-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	0.8	1.6
12-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	A	2	7	3	1.4	6.5	
13-Jul	1	1	1	1	1	1	1	1	1	1	1	1	P	P	P	P	P	N	A	3	1	1	1	--	2.8	
14-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	0.9	2.3
15-Jul	2	1	4	2	1	1	1	1	1	1	1	1	1	1	1	1	A	3	1	1	1	1	1	1	1.2	4.2
16-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.9	1.2
17-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.8	1.1
18-Jul	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	1.4
19-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	1	1	1	1	1	1	1	1	0.7	1.1
20-Jul	1	1	1	1	1	1	1	1	1	1	1	A	3	1	1	1	1	1	1	1	1	1	1	1	0.9	2.6
21-Jul	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.8
22-Jul	0	1	1	0	1	1	1	1	1	0	A	1	0	0	0	1	8	1	0	1	1	1	1	1	0.9	8.1
23-Jul	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
24-Jul	1	1	1	1	1	1	1	1	A	2	1	1	0	1	1	0	1	1	0	1	1	1	1	1	0.8	2.3
25-Jul	1	1	1	1	1	1	1	A	3	1	C	C	C	C	1	1	1	1	1	1	1	1	1	1	1.0	2.9
26-Jul	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.6
27-Jul	1	1	1	1	1	A	2	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0.8	2.0
28-Jul	1	1	1	1	A	1	1	6	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1.0	5.6
29-Jul	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
30-Jul	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.9
31-Jul	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
		0.9	0.8	1.0	0.9	0.9	0.9	0.9	1.2	0.9	0.9	0.8	0.8	0.8	0.8	0.7	0.8	1.0	0.7	0.8	0.8	0.9	0.8	1.1	0.9	Diurnal Average
		2.1	1.1	4.2	2.2	1.4	1.4	2.0	5.6	2.9	2.3	1.2	1.1	1.8	2.6	1.2	1.4	8.1	1.1	3.1	2.3	2.8	2.4	6.5	3.2	Diurnal Maximum
C - Calibration		P - Power Failure						N - Not Valid				A - Automated Daily Zero Span														

Hourly Maximums

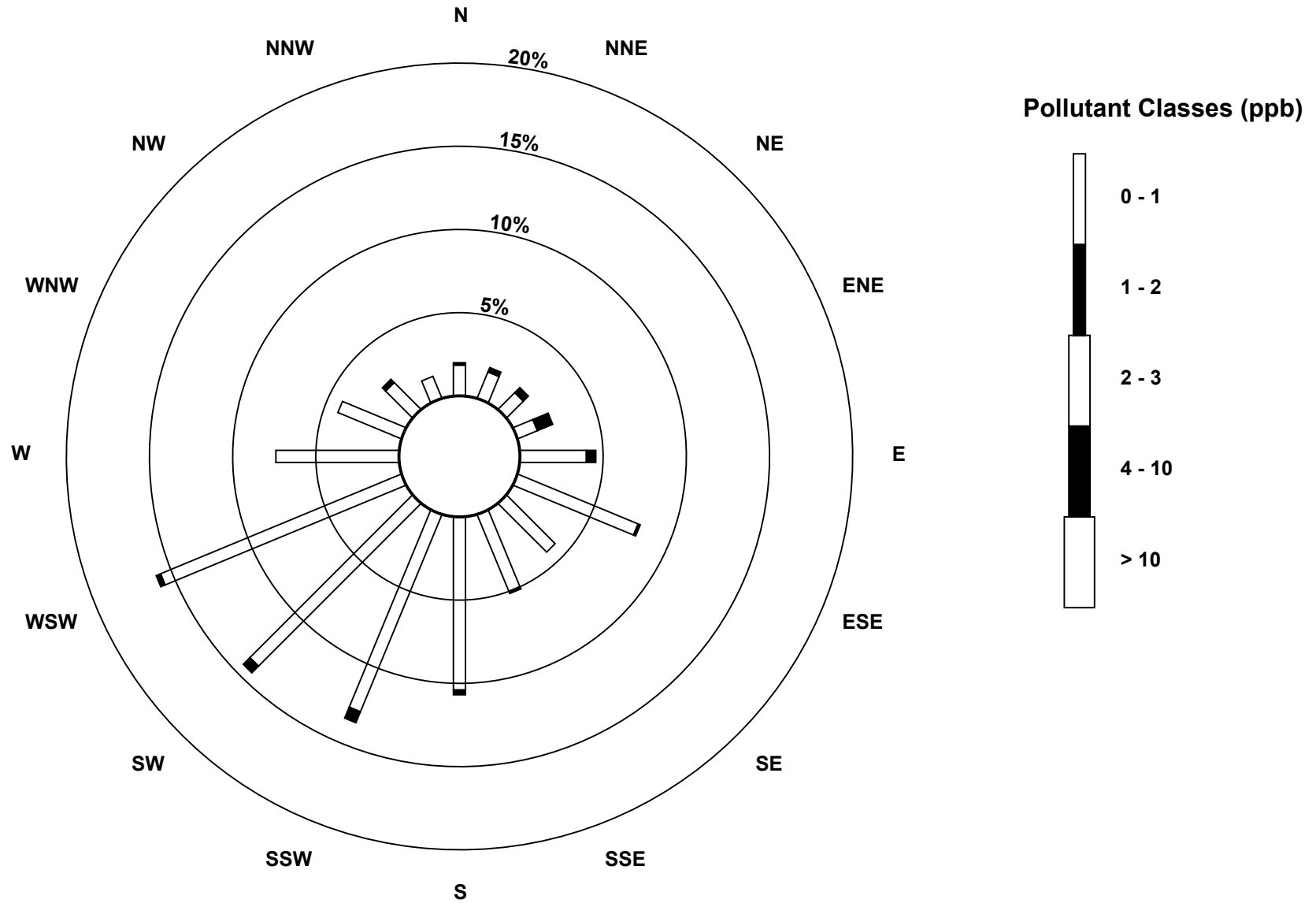
Hydrogen Sulphide (H₂S) - ppb

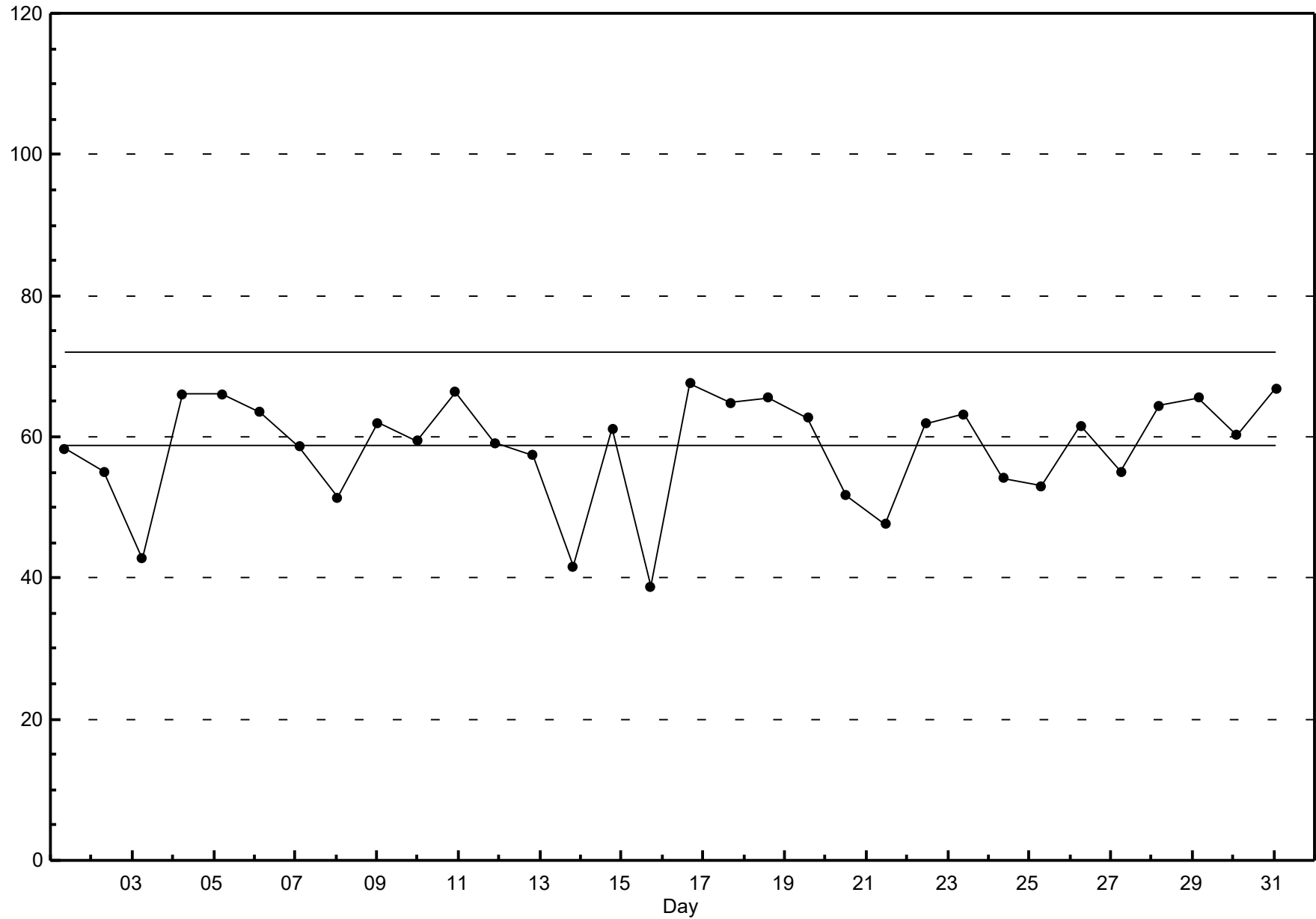
Donnelly - July 2017



Pollutant Rose

Hydrogen Sulphide (H₂S) - ppb
Donnelly - July 2017





Hourly Averages

External Temperature (ET) - °C

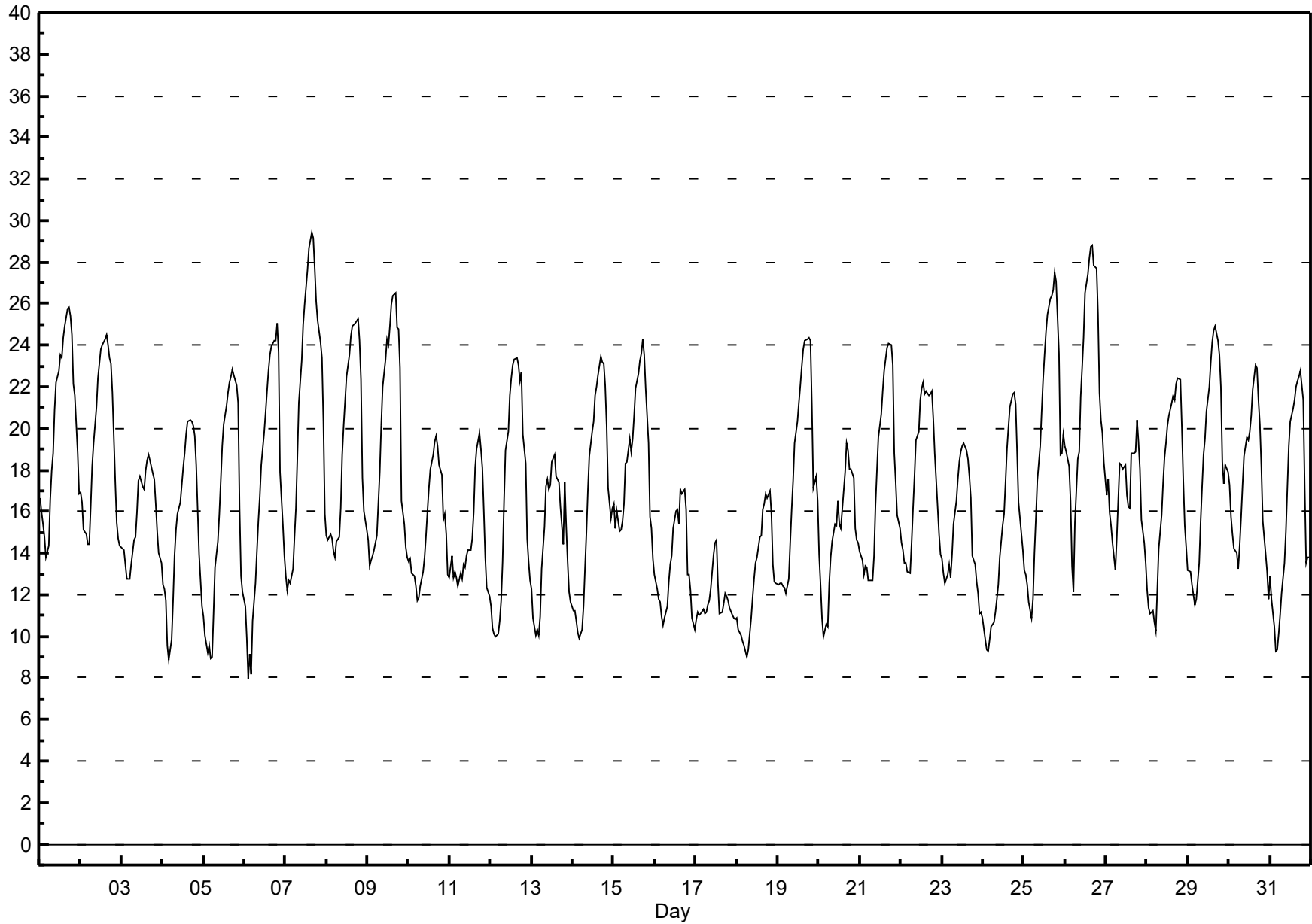
Donnelly - July 2017

Maximum Value: 29.4 °C on Jul 7 16:00		Maximum Daily Average: 21.7 °C on Jul 26		Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0																							
Minimum Value: 8 °C on Jul 6 03:00		Minimum Daily Average: 11.8 °C on Jul 17																									
Maximum Diurnal Average: 21.9 °C at hour 17		Minimum Diurnal Average: 11.9 °C at hour 5																									
Monthly Average: 16.92 °C		Percentiles: P ₁ = 9.2 P ₁₀ = 11.1 Q ₁ = 13.2 Median = 16.2 Q ₃ = 20.3 P ₉₀ = 23.6 P ₉₉ = 27.6																									
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-Jul	17	16	15	15	14	14	17	18	19	21	22	23	24	23	24	25	26	26	25	25	22	22	19	17	20.3	25.9	
2-Jul	17	16	15	15	14	14	16	18	19	21	22	23	24	24	24	25	24	23	23	22	17	16	15	14	19.3	24.5	
3-Jul	14	14	13	13	13	13	13	15	15	16	17	18	17	17	18	18	19	18	18	18	16	15	14	14	15.7	18.7	
4-Jul	12	12	12	10	9	10	12	14	15	16	16	17	18	19	20	20	20	20	20	20	18	14	13	11	15.4	20.4	
5-Jul	11	10	9	10	9	9	11	13	15	16	18	19	20	21	22	22	22	23	23	22	21	16	13	12	16.1	22.8	
6-Jul	11	10	8	9	8	11	13	14	16	17	18	20	21	22	23	24	24	24	24	25	24	18	15	14	17.1	25.0	
7-Jul	13	12	13	13	13	15	16	19	21	23	25	26	27	28	29	29	29	28	26	25	24	23	20	16	21.4	29.4	
8-Jul	15	15	15	15	14	14	15	15	16	19	20	21	22	24	24	25	25	25	25	24	22	18	16	15	19.1	25.3	
9-Jul	15	13	14	14	14	15	16	18	20	22	23	24	24	25	26	26	26	25	25	23	16	15	14	14	19.5	26.5	
10-Jul	14	14	13	13	12	12	12	12	13	14	15	16	17	18	19	19	20	19	18	18	16	16	15	13	15.3	19.6	
11-Jul	13	14	13	13	13	12	13	13	13	13	14	14	14	15	16	18	19	20	19	18	16	14	12	12	14.6	19.8	
12-Jul	11	10	10	10	10	11	12	14	17	19	20	22	22	23	23	23	23	22	23	20	18	15	14	13	16.8	23.4	
13-Jul	12	11	10	10	10	11	13	15	17	18	17	17	18	19	18	18	17	16	14	17	15	14	12	12	14.7	18.7	
14-Jul	11	11	11	10	10	10	11	13	15	17	19	20	20	22	22	23	23	23	23	22	20	17	16	16	16.9	23.5	
15-Jul	16	15	16	15	15	16	16	18	18	19	19	20	21	22	23	23	24	24	24	22	19	16	15	14	18.8	24.3	
16-Jul	13	12	12	12	11	11	11	11	13	13	14	15	16	16	15	17	17	17	16	13	13	12	11	10	13.4	17.1	
17-Jul	11	11	11	11	11	11	11	12	12	12	14	14	15	13	11	11	12	12	12	12	11	11	11	11	11.8	14.7	
18-Jul	11	10	10	10	10	9	9	9	11	12	13	14	14	15	15	16	16	17	17	17	16	13	13	13	12.8	17.0	
19-Jul	12	13	13	12	12	12	13	14	16	17	19	20	21	22	23	24	24	24	24	24	21	17	18	17	18.1	24.4	
20-Jul	14	12	11	10	11	10	13	14	15	15	15	17	15	15	17	18	19	19	18	18	18	15	15	14	14.9	19.3	
21-Jul	14	14	13	13	13	13	13	13	14	16	18	20	21	22	23	23	24	24	24	23	19	17	16	15	17.7	24.1	
22-Jul	14	14	14	14	13	13	14	16	18	19	20	21	22	22	22	22	22	22	22	20	19	16	15	14	17.8	22.2	
23-Jul	14	13	13	13	13	13	14	15	17	18	18	19	19	19	19	19	18	17	14	13	13	12	11	11	15.2	19.3	
24-Jul	11	10	9	9	10	10	11	11	12	12	14	15	16	17	19	20	21	22	22	21	19	16	15	14	14.9	21.8	
25-Jul	13	13	12	12	11	12	14	16	17	19	21	22	24	25	25	26	26	27	28	27	24	19	19	20	19.6	27.5	
26-Jul	19	19	18	17	13	12	15	19	19	22	23	24	27	27	28	29	29	28	28	25	22	20	20	18	21.7	28.8	
27-Jul	17	18	16	15	15	13	15	17	18	18	18	18	17	16	16	19	19	19	20	19	18	16	15	14	16.9	20.4	
28-Jul	12	11	11	11	11	10	12	14	16	17	19	19	20	21	21	22	21	22	22	22	20	17	15	14	16.8	22.4	
29-Jul	13	13	13	12	12	12	14	16	17	19	20	21	22	23	24	25	25	24	24	22	18	17	18	18	18.3	24.9	
30-Jul	17	16	15	14	14	13	14	16	17	19	20	19	20	21	22	23	23	21	20	18	16	14	13	12	17.4	23.1	
31-Jul	13	12	10	9	9	10	11	12	14	15	17	19	20	21	21	22	22	22	23	21	17	14	14	14	16.0	22.8	
		13.6	13.1	12.5	12.2	11.9	12.0	13.2	14.6	15.9	17.3	18.3	19.3	19.9	20.5	21.0	21.7	21.9	21.8	21.4	20.6	18.4	16.0	14.8	14.0	Diurnal Average	
		19.2	18.9	18.2	16.5	15.2	15.6	16.6	18.6	21.2	23.3	25.0	26.0	26.8	27.6	28.7	29.4	29.2	27.9	27.7	27.1	24.2	23.4	20.3	19.7	Diurnal Maximum	

Hourly Averages

External Temperature (ET) - °C

Donnelly - July 2017



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Donnelly - July 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	5	5	5	7	5	4	9	12	11	10	8	9	8	11	11	11	10	9	11	9	8	9	12	11	7.5	12.1
Dir	111	111	110	122	118	100	137	174	183	205	209	189	212	208	204	205	194	190	190	178	163	171	184	182	179	184
2 Spd	11	15	14	13	13	12	11	10	10	8	8	14	15	18	14	10	10	8	7	8	18	4	8	9	9.4	18.3
Dir	167	180	183	184	188	189	194	197	211	231	226	245	230	240	244	238	206	184	189	232	290	169	144	186	210	240
3 Spd	15	12	15	13	12	12	14	12	16	25	32	36	38	38	37	38	38	39	33	32	29	27	24	24	24.0	38.7
Dir	200	197	184	192	198	193	191	207	216	241	242	247	251	249	249	242	246	247	246	240	234	229	230	233	234	247
4 Spd	21	23	21	17	16	17	21	27	35	33	32	29	28	31	30	31	28	29	27	21	13	10	12	13	22.4	34.8
Dir	225	234	235	218	218	215	216	230	239	237	236	237	243	247	250	258	263	268	269	276	283	252	236	218	243	239
5 Spd	14	11	11	12	8	7	8	9	9	8	10	12	16	16	15	17	15	9	7	5	2	2	4	4	7.3	17.0
Dir	203	203	197	201	209	208	236	260	250	237	232	249	259	261	275	273	274	304	335	357	6	148	163	161	245	273
6 Spd	4	1	2	4	3	5	8	10	9	7	7	6	7	7	7	6	7	6	5	1	2	5	5	4	3.0	9.7
Dir	156	159	77	217	69	40	22	9	354	328	323	313	329	336	359	358	3	345	356	309	150	133	139	125	1	9
7 Spd	4	3	2	2	2	4	5	6	6	6	7	7	8	8	7	7	6	6	5	5	8	6	23	22	3.3	22.5
Dir	98	113	102	95	112	107	105	102	106	103	105	87	85	92	100	99	92	99	97	105	103	92	252	282	106	252
8 Spd	2	13	9	13	16	13	12	10	14	14	14	12	9	8	7	10	9	9	7	4	3	6	6	7	6.6	16.1
Dir	89	39	193	181	187	190	185	183	191	219	246	259	242	243	229	245	260	235	229	221	136	131	137	135	206	187
9 Spd	8	3	3	5	4	6	8	8	7	9	8	7	7	7	6	5	4	4	4	4	28	9	3	10	2.4	27.8
Dir	134	101	108	122	110	111	111	108	106	107	100	102	109	111	91	78	62	43	153	249	299	301	265	239	108	299
10 Spd	8	7	4	13	10	11	10	12	9	10	10	12	11	11	8	6	5	4	5	3	5	8	6	4	7.1	12.7
Dir	232	236	205	235	247	228	231	224	216	200	207	206	235	242	219	230	239	301	268	200	154	168	183	153	222	235
11 Spd	4	7	6	6	3	6	9	10	9	8	7	7	7	7	7	7	5	8	7	5	6	6	6	6	5.9	9.8
Dir	167	180	186	198	136	183	187	188	187	180	165	147	152	171	148	136	127	134	144	136	111	109	107	109	157	188
12 Spd	6	5	4	4	4	4	6	6	5	11	8	7	7	8	7	6	5	5	6	4	6	7	3	3	5.0	10.8
Dir	108	106	114	108	100	105	109	107	127	137	135	110	98	92	88	97	97	104	108	112	322	69	29	63	103	137
13 Spd	3	3	6	4	3	3	4	5	4	5	6	6	13	15	13	9	7	16	7	2	8	9	8	2	1.7	16.5
Dir	79	70	75	98	95	95	109	122	200	306	312	325	20	34	67	58	250	303	36	92	239	237	210	209	22	303
14 Spd	5	8	8	8	8	9	5	4	1	3	1	1	4	6	7	7	4	6	5	5	4	3	3	6	0.4	8.9
Dir	203	206	207	203	199	208	204	228	344	49	230	354	45	53	40	24	33	26	11	1	37	79	46	62	86	208
15 Spd	8	6	11	10	7	7	7	6	4	9	10	6	2	2	4	5	3	3	7	10	12	5	8	5	1.9	12.4
Dir	16	68	47	74	101	106	110	127	298	208	246	262	300	320	1	18	343	2	325	320	315	332	334	201	357	315
16 Spd	2	10	10	10	10	8	11	10	15	18	19	24	30	30	24	23	20	18	20	15	16	18	19	15	15.4	29.8
Dir	110	221	196	203	214	204	215	218	221	234	234	237	241	244	248	256	268	280	253	251	256	235	242	223	239	244
17 Spd	17	19	17	16	18	19	19	18	13	14	19	17	15	19	12	10	13	14	12	8	8	8	6	4	12.7	19.3
Dir	246	260	261	255	260	265	270	292	325	302	293	298	287	310	312	281	267	269	258	241	231	220	231	234	274	265
18 Spd	6	4	3	3	2	3	5	3	3	2	3	1	3	3	7	9	8	4	4	4	5	5	8	8	1.8	8.5
Dir	229	292	25	90	109	66	45	74	115	118	176	163	228	229	257	259	267	251	224	156	164	164	176	177	201	259
19 Spd	11	11	10	10	12	10	9	9	12	13	12	11	11	12	12	10	7	3	1	4	5	7	1	6.8	13.0	
Dir	177	177	174	174	177	178	182	204	223	225	239	269	259	261	256	253	252	257	240	125	133	129	150	141	215	225
20 Spd	4	3	1	1	3	3	5	5	4	6	2	2	1	5	1	4	4	0	3	6	10	6	1	5	1.6	10.1
Dir	112	56	5	167	200	172	210	231	224	200	248	290	219	239	94	325	360	54	4	152	175	214	156	105	193	175
21 Spd	4	3	0	6	7	6	10	11	9	9	14	12	12	10	11	12	10	7	5	8	8	12	11	7.8	14.3	
Dir	148	147	32	196	201	220	259	263	270	262	275	271	259	240	251	246	260	260	243	230	260	218	215	216	245	275
22 Spd	10	12	10	12	12	13	13	12	14	14	14	15	15	15	17	16	13	12	15	12	8	11	9	10	11.8	16.8
Dir	201	202	194	190	180	186	186	192	202	212	215	210	224	234	224	230	234	233	252	255	231	211	196	203	213	224



Peace Airshed Zone Association

Hourly Averages

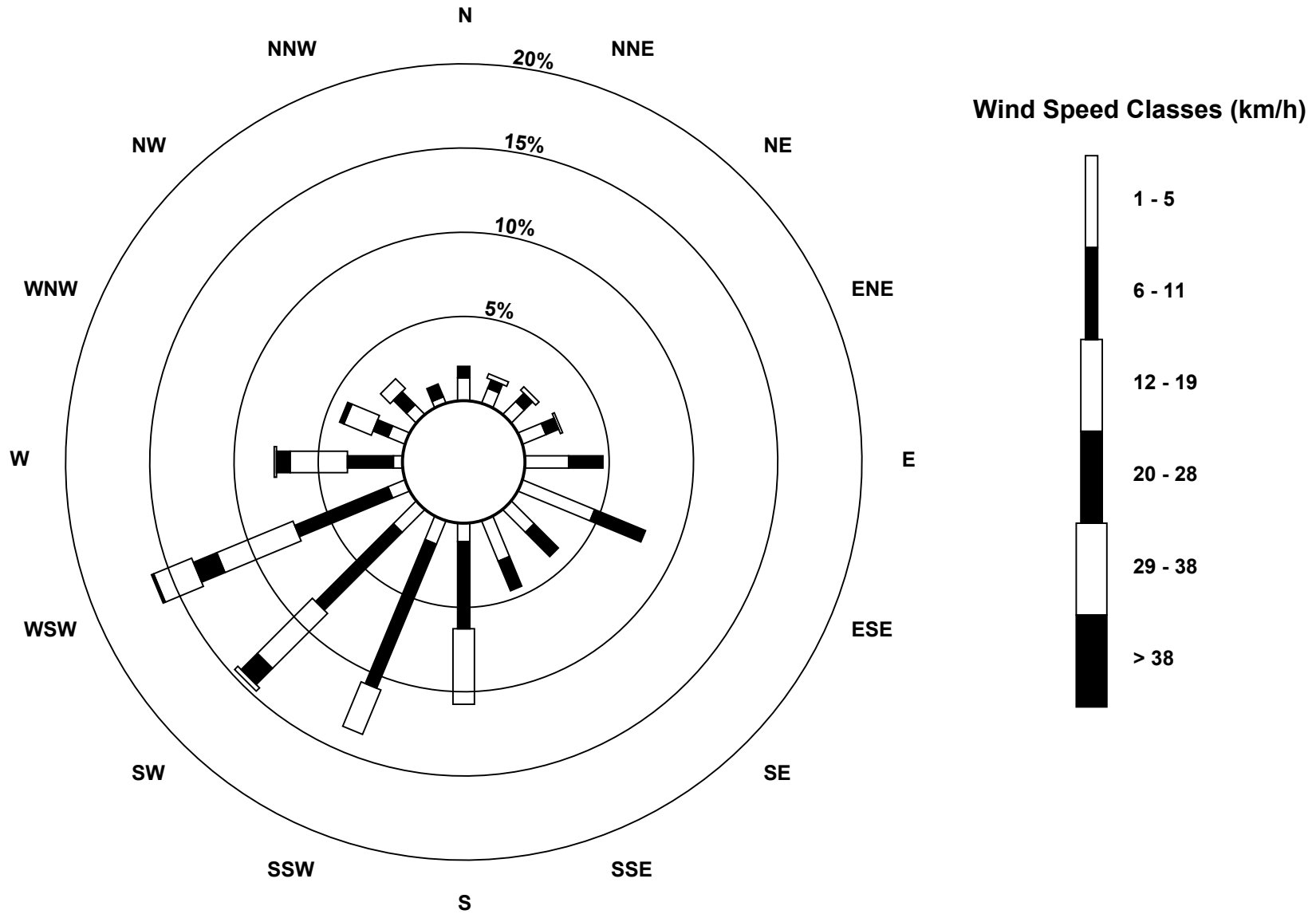
Wind Speed (km/h)
Wind Direction (deg)
Donnelly - July 2017

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	12	11	10	13	13	11	8	11	16	17	24	26	20	14	11	9	5	11	17	20	18	17	12	13	13.2	26.3
Dir	213	216	223	224	225	209	237	249	254	246	246	254	263	287	263	290	279	232	208	228	236	246	248	258	243	254
24 Spd	11	10	8	7	11	10	11	13	13	13	15	15	15	16	16	16	14	11	7	8	12	14	9	10.2	16.4	
Dir	251	249	246	245	264	272	271	284	309	308	294	290	277	276	282	281	280	276	275	244	207	190	189	196	267	276
25 Spd	7	8	9	8	7	8	10	12	11	11	10	10	10	9	6	7	8	5	3	3	5	8	8	11	7.1	11.6
Dir	197	200	191	192	201	205	204	209	221	223	225	218	233	230	233	227	237	231	191	139	134	142	151	168	205	209
26 Spd	12	12	13	7	3	4	3	7	9	3	7	7	5	7	5	4	7	5	3	1	3	4	4	1	4.8	12.5
Dir	171	172	173	149	103	81	98	150	184	177	199	193	189	199	190	203	176	165	157	120	118	120	122	348	167	173
27 Spd	4	17	5	5	4	7	9	10	7	6	8	10	17	13	1	7	11	10	14	10	9	7	10	11	6.8	17.1
Dir	211	265	21	58	140	203	190	193	213	249	251	256	258	261	286	250	215	187	187	189	186	195	202	213	220	265
28 Spd	10	10	11	14	13	11	12	12	14	14	14	11	15	16	16	17	17	13	8	4	5	9	13	12	11.1	17.3
Dir	216	200	198	196	205	205	208	225	247	258	251	249	237	230	232	229	236	245	257	234	177	175	187	183	222	229
29 Spd	12	12	13	11	12	11	10	11	10	9	7	7	9	7	4	4	3	4	4	1	3	3	9	7	5.3	12.6
Dir	190	190	187	185	189	187	192	206	231	257	272	256	234	235	216	325	277	321	28	61	109	128	134	152	204	187
30 Spd	16	12	3	2	4	9	9	13	13	13	14	15	14	20	25	27	30	22	15	12	9	10	10	11	12.2	29.6
Dir	173	185	244	179	166	195	200	212	232	251	256	265	245	230	240	249	259	259	253	257	268	257	238	218	239	259
31 Spd	13	10	6	10	9	10	8	8	9	9	7	4	4	6	8	8	10	7	5	5	3	3	6	14	4.4	14.2
Dir	241	252	231	211	205	209	213	226	246	263	258	254	296	295	291	283	304	285	282	31	84	70	41	25	260	25
Spd	6.2	5.9	5.2	6.4	6.1	6.0	6.1	6.7	7.3	7.9	9.0	8.7	8.9	8.8	7.4	8.0	8.1	7.0	5.6	4.5	4.5	4.8	5.8	5.4	Diurnal Average	
Dir	196	207	196	193	197	198	201	214	228	235	242	247	248	249	248	253	254	257	245	236	241	203	204	206		
Spd	21.0	23.0	20.6	16.9	18.3	19.3	21.5	27.1	34.8	33.2	32.1	36.0	37.6	37.9	36.7	38.4	37.8	38.7	33.0	32.0	29.0	27.0	23.9	23.5	Diurnal Maximum	
Dir	225	234	235	218	260	265	216	230	239	237	236	247	251	249	249	242	246	247	246	240	234	229	230	233		
Maximum Speed Value: 39 km/h on Jul 3 18:00																		Minimum Speed Value: 0 km/h on Jul 21 03:00						Hours in Service:		744
Maximum Daily Speed Average: 24.0 km/h on Jul 3																		Minimum Daily Speed Average: 0.4 km/h on Jul 20						Hours of Data:		744
Maximum Diurnal Speed Average: 9.0 km/h at hour 11																		Minimum Diurnal Speed Average: 4.5 km/h at hour 20						Hours of Missing Data:		0
Monthly Average Velocity: 6.15 km/h 227.9 deg																		Speed Percentiles: P ₁ = 0.8 P ₁₀ = 3.2 Q ₁ = 5.3 Median = 8.5 Q ₃ = 12.2 P ₉₀ = 16.7 P ₉₉ = 35.3						Percent Operational Time:		100.0
All monthly, daily, and diurnal averages have been calculated using vector methods																										
Frequency Distribution																										
		Speed Range (km/h)																								
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																			
North	11	13	1	0	0	0	25																			
NorthEast	17	11	5	0	0	0	33																			
East	42	48	0	0	0	0	90																			
SouthEast	33	29	0	0	0	0	62																			
South	22	72	47	0	0	0	141																			
SouthWest	22	97	72	15	13	2	221																			
West	11	40	59	16	7	0	133																			
NorthWest	9	18	11	1	0	0	39																			
Total	167	328	195	32	20	2	744																			

Wind Rose

Wind Speed (WS) (km/h)

Donnelly - July 2017



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Donnelly - July 2017

Maximum Speed: 39 km/h on Jul 3 18:00	Maximum Daily Speed Average: 25.5 km/h on Jul 3	Hours in Service: 744
Minimum Speed: 1 km/h on Jul 26 20:00	Minimum Daily Speed Average: 4.4 km/h on Jul 20	Hours of Data: 744
Maximum Diurnal Speed Average: 13.2 km/h at hour 14	Minimum Diurnal Speed Average: 7.9 km/h at hour 20	Hours of Missing Data: 0
Monthly Average Speed: 10.20 km/h	Percentiles: P ₁ = 2.0 P ₁₀ = 3.9 Q ₁ = 5.8 Median = 8.9 Q ₃ = 12.6 P ₉₀ = 17.0 P ₉₉ = 35.3	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-Jul	5	5	5	8	5	4	9	12	11	11	8	9	9	12	11	11	10	9	11	9	8	10	12	11	8.9	12.1
2-Jul	11	15	14	13	13	12	11	10	10	8	8	14	16	19	15	10	11	8	7	9	18	6	8	10	11.6	18.8
3-Jul	15	12	15	13	12	12	14	12	16	25	32	36	38	38	37	39	38	39	33	32	29	27	24	24	25.5	39.0
4-Jul	21	23	21	17	16	17	22	27	35	34	33	29	28	32	30	32	28	29	27	22	13	10	12	13	23.8	34.9
5-Jul	14	12	11	12	8	7	8	10	9	8	10	13	17	17	16	17	16	9	7	5	3	2	4	4	10.0	17.5
6-Jul	4	2	4	4	4	5	8	10	9	8	8	7	8	8	7	7	8	6	5	2	2	5	5	4	5.9	9.9
7-Jul	5	4	2	2	2	4	5	6	7	6	7	7	8	8	7	7	7	6	5	5	8	8	26	23	7.3	26.2
8-Jul	5	19	10	13	16	13	12	10	14	14	15	12	10	8	7	10	10	10	7	4	3	6	6	7	10.1	18.6
9-Jul	8	3	3	5	5	6	8	8	7	9	8	7	8	7	6	5	4	4	5	5	28	10	5	10	7.3	28.3
10-Jul	8	7	5	13	10	11	11	12	9	10	10	12	12	12	8	7	5	5	5	3	5	8	6	4	8.3	12.8
11-Jul	4	7	6	6	3	7	9	10	9	9	8	7	7	8	7	8	7	5	8	7	5	6	6	6	6.8	9.9
12-Jul	6	5	4	4	4	4	6	6	6	11	9	7	8	8	7	7	5	5	6	4	9	7	4	3	6.2	11.0
13-Jul	4	3	6	4	3	3	4	5	6	6	7	7	14	16	14	10	9	17	8	3	8	9	8	2	7.3	16.8
14-Jul	5	8	8	8	8	9	5	4	2	4	2	3	4	6	8	7	5	6	5	5	4	3	3	6	5.4	8.9
15-Jul	8	16	16	10	7	7	7	6	6	9	11	6	5	4	5	5	5	4	7	10	13	7	11	10	8.0	16.0
16-Jul	2	10	10	10	10	9	12	10	15	18	19	24	30	30	24	24	20	18	21	16	16	18	19	15	16.6	30.0
17-Jul	17	19	17	16	18	19	19	18	14	14	19	17	16	19	12	11	14	14	12	9	8	8	6	4	14.2	19.4
18-Jul	6	6	4	3	3	3	5	3	3	3	2	4	3	8	9	9	4	4	4	5	5	8	8	8	4.8	8.9
19-Jul	11	11	10	10	12	10	10	9	12	13	13	12	12	12	13	13	11	8	4	2	4	5	7	6	9.4	13.2
20-Jul	4	3	2	1	3	3	5	6	5	6	2	2	5	6	2	5	5	3	4	7	11	7	5	6	4.4	10.7
21-Jul	4	4	3	6	7	6	10	11	9	9	15	13	12	11	11	12	13	10	7	5	9	9	12	11	9.1	14.5
22-Jul	10	12	10	12	12	13	13	12	14	14	14	16	15	15	17	16	14	12	15	12	9	11	9	10	12.7	16.9
23-Jul	13	11	10	13	13	11	9	11	16	17	25	27	21	15	12	9	5	12	17	20	18	17	12	13	14.3	26.6
24-Jul	11	10	8	8	11	10	11	13	13	13	15	15	15	17	16	16	16	14	11	7	8	12	14	9	12.3	16.8
25-Jul	7	8	9	8	7	8	10	12	12	12	10	10	10	9	7	7	8	6	3	4	5	8	8	11	8.3	11.9
26-Jul	12	12	13	8	3	4	4	7	9	4	7	7	5	7	6	6	7	5	3	1	3	4	4	5	6.1	12.6
27-Jul	7	18	6	5	4	7	9	10	8	7	9	11	17	13	3	8	11	10	14	10	9	7	10	11	9.4	18.2
28-Jul	10	10	12	14	13	11	12	12	14	15	14	12	15	16	16	18	17	13	8	5	5	9	13	12	12.3	17.5
29-Jul	12	12	13	11	12	11	10	11	11	10	7	7	10	8	6	4	4	4	4	2	4	4	9	8	8.0	12.6
30-Jul	16	16	4	4	4	9	9	13	13	14	14	15	14	20	25	27	30	22	15	12	9	10	10	11	14.0	29.9
31-Jul	14	10	6	10	9	10	8	8	9	9	7	6	6	7	9	9	10	8	5	6	3	3	7	15	8.0	14.6
	8.9	10.1	8.6	8.8	8.4	8.5	9.5	10.3	10.7	11.2	11.9	12.0	12.8	13.2	12.1	12.2	11.6	10.6	9.5	7.9	9.1	8.3	9.4	9.4	Diurnal Average	
	21.1	23.1	20.6	17.0	18.4	19.4	21.5	27.3	34.9	33.5	32.5	36.2	37.8	38.3	37.2	38.8	38.4	39.0	33.2	32.2	29.1	27.1	26.2	23.6	Diurnal Maximum	

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

Hourly Standard Deviations

Wind Direction (WD) - deg

Donnelly - July 2017

Maximum Value: 95.9 deg on Jul 20 13:00																		Hours in Service: 744							
Minimum Value: 1.7 deg on Jul 28 23:00																		Hours of Data: 744							
Percentiles: P ₁ = 2.9 P ₁₀ = 4.7 Q ₁ = 7.4 Median = 12.2 Q ₃ = 22.9 P ₉₀ = 41.5 P ₉₉ = 81.2																		Hours of Missing Data: 0							
																		Hours of Calibration: 0							
																		Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Jul	12	9	7	8	11	15	14	8	9	14	23	16	14	6	14	11	13	11	6	11	10	10	4	5	22.7
2-Jul	11	7	3	3	7	4	5	10	8	27	22	16	12	13	16	17	23	9	18	37	9	52	12	20	51.9
3-Jul	6	9	5	4	6	4	5	10	6	10	9	7	6	8	9	7	10	7	6	5	4	4	3	4	10.1
4-Jul	4	5	4	4	4	4	2	7	5	7	9	10	12	9	10	10	10	8	7	6	6	4	10	16	16.3
5-Jul	4	7	4	3	9	20	12	14	15	23	19	17	17	20	17	13	23	17	22	14	41	29	13	12	41.0
6-Jul	35	84	76	35	45	15	10	12	18	24	24	33	37	33	28	45	25	21	17	48	27	7	14	6	83.9
7-Jul	26	13	19	35	33	18	15	13	12	12	13	17	14	15	19	14	16	12	13	11	9	61	34	11	60.9
8-Jul	76	55	23	10	3	6	5	5	10	14	16	16	26	25	28	19	26	15	10	31	40	8	7	7	76.2
9-Jul	4	25	29	7	13	8	8	9	12	10	11	12	10	11	17	23	43	31	34	54	10	33	71	10	70.5
10-Jul	6	32	48	8	10	10	12	4	10	8	9	9	23	15	17	42	34	30	12	38	6	12	5	13	48.4
11-Jul	14	8	18	27	51	28	6	8	7	11	10	7	8	21	17	19	21	20	17	8	10	8	9	7	51.4
12-Jul	7	10	15	13	13	12	9	12	23	9	26	17	21	20	16	17	18	14	14	13	78	25	45	51	77.9
13-Jul	21	27	8	20	16	41	20	11	58	36	12	23	14	12	17	39	48	11	26	54	11	7	5	65	65.0
14-Jul	12	4	7	9	15	6	13	31	64	31	76	72	48	26	31	19	38	16	19	7	23	13	23	11	76.4
15-Jul	21	82	59	11	10	7	7	27	48	25	18	34	60	81	43	37	48	61	16	7	12	42	46	77	82.1
16-Jul	36	18	8	10	5	6	5	7	7	9	7	8	7	6	5	9	6	8	16	19	6	4	9	5	36.2
17-Jul	8	3	3	3	4	4	5	14	9	15	8	10	12	12	10	11	10	11	8	17	13	8	13	16	17.4
18-Jul	6	38	43	21	23	16	14	25	32	59	46	91	46	57	28	18	23	42	28	27	15	12	8	4	91.3
19-Jul	4	4	7	7	4	6	8	9	11	8	17	13	17	13	11	17	12	10	54	43	5	6	89	89.0	
20-Jul	21	35	87	82	52	52	27	22	24	32	42	39	96	55	54	49	27	77	37	25	22	20	82	29	95.9
21-Jul	38	77	90	33	9	13	9	10	12	12	11	13	12	21	15	15	13	11	10	6	18	13	12	5	90.1
22-Jul	5	5	5	4	3	3	7	5	11	8	7	14	13	10	8	8	8	10	10	5	13	5	5	4	13.6
23-Jul	7	7	6	12	4	6	34	8	7	11	9	8	13	22	14	14	23	23	7	5	7	4	4	6	34.2
24-Jul	4	5	7	6	7	8	6	8	10	13	10	9	11	12	14	11	10	8	9	11	8	4	2	4	13.8
25-Jul	4	4	5	3	3	4	6	11	8	11	17	17	18	18	33	24	24	25	27	16	41	6	5	6	41.4
26-Jul	5	3	4	43	30	30	23	24	13	62	26	19	34	20	45	40	16	17	34	43	10	5	7	78	78.0
27-Jul	65	30	42	15	30	7	5	5	21	33	21	19	7	8	88	20	14	7	7	3	3	10	8	4	87.6
28-Jul	7	3	8	4	4	2	3	9	10	11	14	11	11	11	9	8	12	11	19	17	4	2	5	5	18.7
29-Jul	7	6	2	3	3	3	8	8	12	13	15	23	22	23	71	50	52	29	15	31	31	19	7	18	70.5
30-Jul	15	48	70	83	30	10	7	7	8	12	10	9	12	9	11	9	7	5	3	8	6	7	17	6	82.8
31-Jul	11	4	16	7	6	5	6	18	8	13	20	54	48	38	28	32	18	24	19	29	10	22	32	14	54.4
76.2	83.9	90.1	82.8	52.4	52.1	34.2	31.0	63.6	61.7	76.4	91.3	95.9	81.1	87.6	49.8	51.5	76.9	37.0	54.3	77.9	60.9	81.6	89.0		

PAZA

Portable – Rycroft Station

Monthly Summary Tables, Graphs and
Roses

Hourly Averages

Sulphur Dioxide (SO₂) - ppb

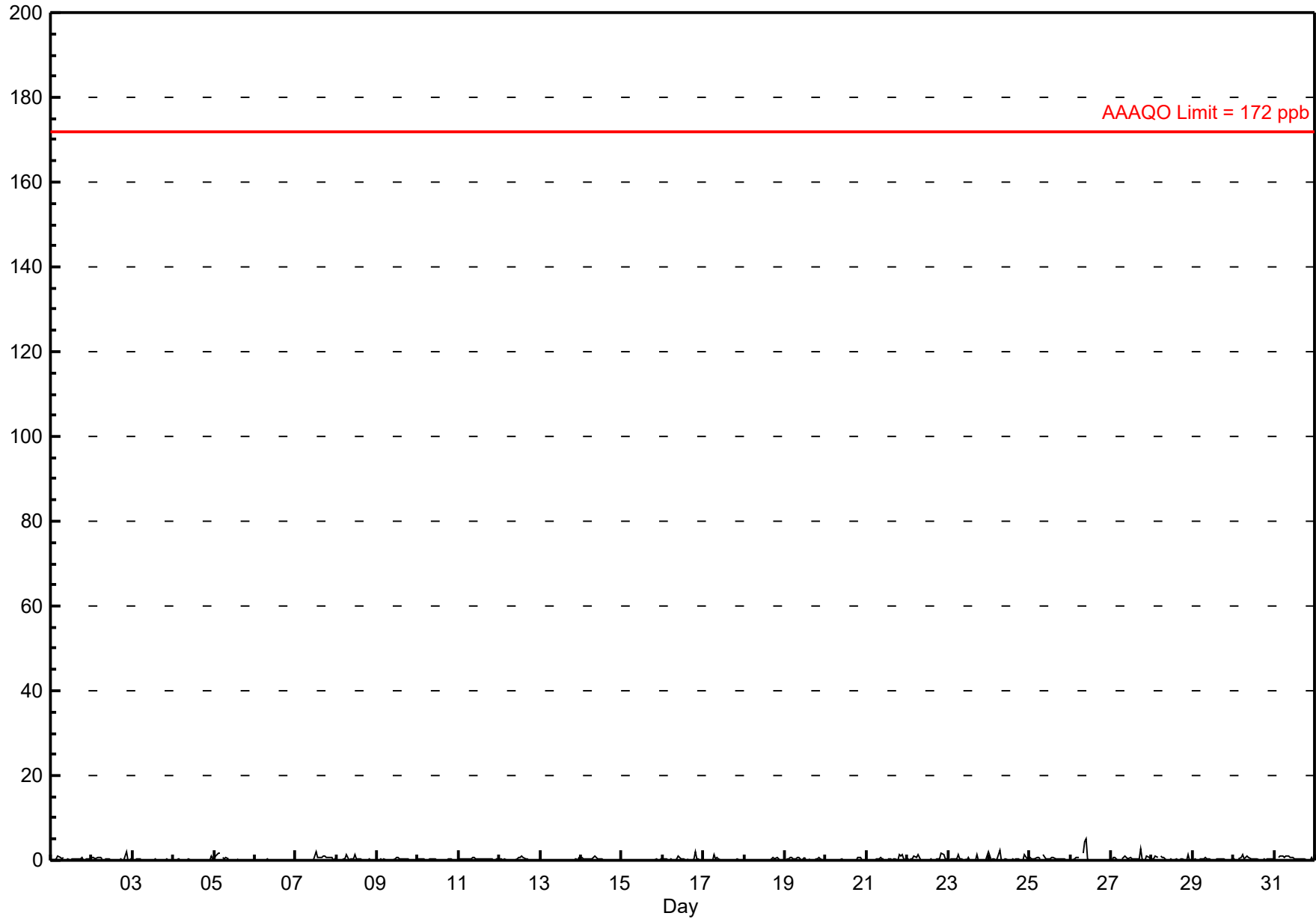
Portable Rycroft - July 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 5.1 ppb on Jul 26 10:00 Maximum Daily Average: 0.6 ppb on Jul 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 Jul 3 02:00 Maximum Diurnal Average: 0.5 ppb at hour 9 Monthly Average: 0.29 ppb		Minimum Daily Average: 0.1 ppb on Jul 15 Minimum Diurnal Average: 0.2 ppb at hour 23 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.4 P ₉₀ = 0.7 P ₉₉ = 1.9																								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	0	0	0	0	1	1	1	1	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.3	0.8
2-Jul	1	1	0	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0.4	1.9
3-Jul	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4	
4-Jul	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.1	1.0	
5-Jul	0	1	2	2	A	1	0	1	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0.4	1.6	
6-Jul	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-Jul	0	0	A	0	0	0	0	0	0	0	1	2	1	1	1	1	1	1	1	1	1	1	0	0.5	2.0	
8-Jul	0	A	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.4	
9-Jul	A	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7	
10-Jul	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
11-Jul	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0.4	0.6	
12-Jul	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	A	0	0	0.2	1.0	
13-Jul	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	0.7	
14-Jul	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0.3	1.1	
15-Jul	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	
16-Jul	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	A	0	0	2	0	0	0	0.4	2.1	
17-Jul	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	1.3	
18-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	1	0	0	0	0.1	0.7	
19-Jul	0	0	0	1	1	0	0	1	1	0	1	0	A	0	0	0	0	0	0	0	1	0	0	0.3	0.8	
20-Jul	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	1	0	0	0.1	0.7	
21-Jul	0	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0	1	1	1	0	0.3	1.4	
22-Jul	0	0	0	0	1	1	1	1	0	0	A	0	0	0	0	0	0	0	0	0	2	1	0	0.4	1.8	
23-Jul	0	0	0	0	0	0	1	0	0	A	0	1	0	0	0	0	0	1	0	0	0	0	1	0.3	1.3	
24-Jul	2	0	0	0	0	0	2	0	A	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.4	2.3	
25-Jul	1	0	0	0	1	1	0	A	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0.4	1.4	
26-Jul	0	0	0	1	1	1	A	2	4	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	5.1	
27-Jul	0	1	1	0	0	A	0	1	1	1	0	1	0	0	0	0	0	3	0	0	1	1	0	0.5	2.6	
28-Jul	0	0	1	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.3	1.5	
29-Jul	0	0	0	A	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5	
30-Jul	0	0	A	0	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.2	
31-Jul	0	A	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0.5	1.1	
																								Diurnal Average	Diurnal Maximum	
																								0.3	1.9	
																								0.2	1.0	
																								0.3	1.5	
																								0.3	1.6	
																								0.3	1.0	
																								0.4	1.2	
																								0.5	2.3	
																								0.4	1.7	
																								0.5	4.5	
																								0.5	5.1	
																								0.3	0.8	
																								0.3	1.4	
																								0.3	2.0	
																								0.2	1.0	
																								0.2	0.8	
																								0.2	0.8	
																								0.2	0.9	
																								0.3	2.6	
																								0.2	0.7	
																								0.3	2.1	
																								0.3	1.9	
																								0.3	1.5	
																								0.2	1.0	
																								0.2	0.9	

C - Calibration A - Automated Daily Zero Span
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Hourly Averages

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



Hourly Maximums

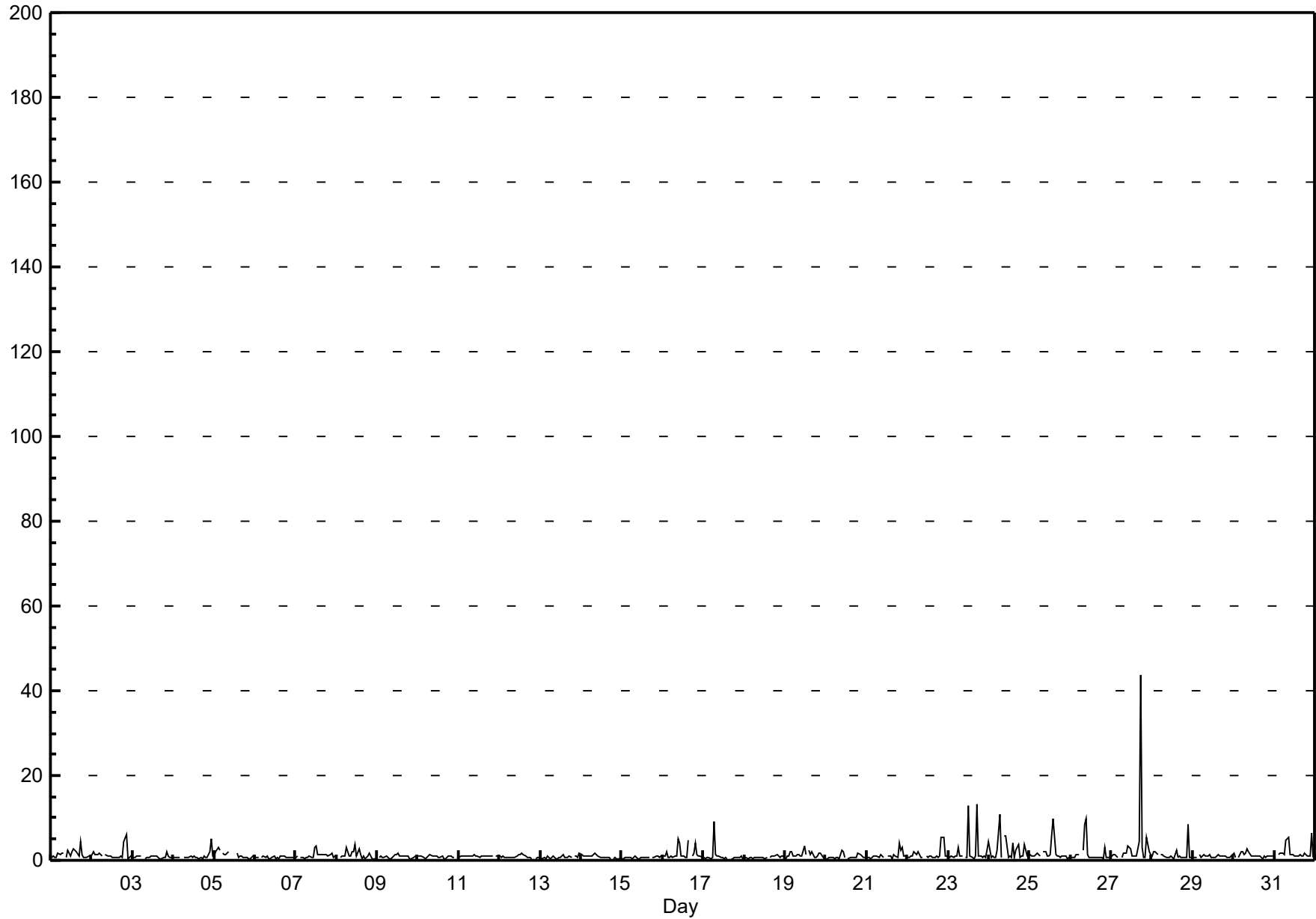
Sulphur Dioxide (SO₂) - ppb

Portable Rycroft - July 2017

Maximum Value: 43.7 ppb on Jul 27 18:00		Maximum Daily Average: 3.6 ppb on Jul 27		Hours in Service: 744																							
Minimum Value: 0 ppb on Jul 17 13:00		Minimum Daily Average: 0.7 ppb on Jul 15		Hours of Data: 708																							
Maximum Diurnal Average: 2.9 ppb at hour 18		Minimum Diurnal Average: 0.9 ppb at hour 2		Hours of Missing Data: 36																							
Monthly Average: 1.28 ppb		Percentiles: P ₁ = 0.4 P ₁₀ = 0.5 Q ₁ = 0.7 Median = 0.9 Q ₃ = 1.2 P ₉₀ = 1.9 P ₉₉ = 8.8		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-Jul	1	1	1	1	2	1	2	2	A	1	2	1	2	3	2	2	1	4	1	1	1	1	1	1	1.4	4.5	
2-Jul	2	2	1	1	2	1	1	A	1	1	1	1	1	1	1	1	1	1	1	4	6	0	1	1	1.4	6.0	
3-Jul	1	1	1	1	1	1	A	0	1	1	1	1	1	1	1	1	0	0	1	1	2	1	1	1	0.8	2.0	
4-Jul	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	2	5	1	0.9	4.9	
5-Jul	1	2	3	2	A	2	1	1	2	C	C	C	C	2	1	1	1	1	1	1	0	0	1	1	1.2	2.9	
6-Jul	1	1	1	A	1	1	1	1	0	0	1	1	0	1	0	1	1	1	1	1	1	1	1	1	0.7	1.0	
7-Jul	1	1	A	1	1	0	1	1	1	1	1	3	3	1	1	1	1	1	1	1	1	2	1	1	1.2	3.4	
8-Jul	1	A	1	1	1	1	3	1	1	2	2	4	1	3	1	0	1	0	1	2	1	0	0	0	1.3	3.7	
9-Jul	A	1	1	1	1	1	1	0	0	1	1	1	2	1	1	1	1	1	1	0	0	1	1	A	0.9	1.7	
10-Jul	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	A	1	0.8	1.4	
11-Jul	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	1.3	
12-Jul	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	0	A	0	1	1	0.8	1.8	
13-Jul	1	0	1	0	1	1	0	1	1	0	0	1	1	1	1	1	1	1	1	A	1	1	1	2	0.7	1.8	
14-Jul	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	0	A	0	1	0	0	1	0.9	1.9	
15-Jul	1	0	1	1	1	1	0	1	1	0	0	1	1	1	1	1	1	A	1	1	1	1	1	1	0.7	0.9	
16-Jul	1	1	2	1	1	1	1	1	1	5	4	1	1	1	1	5	A	1	2	4	1	1	1	1	1.6	5.1	
17-Jul	1	0	1	1	0	1	9	1	1	1	1	0	1	0	A	0	0	1	1	1	1	1	0	1.1	9.2		
18-Jul	1	1	0	1	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.8	1.5	
19-Jul	0	1	1	2	2	1	1	1	1	1	1	3	1	A	2	1	2	1	1	1	2	2	1	0	1.3	3.3	
20-Jul	0	0	1	1	1	0	1	1	1	2	2	1	A	0	1	1	1	1	1	2	1	1	1	1	0.8	2.2	
21-Jul	1	1	0	1	1	1	1	1	1	1	1	A	1	1	1	0	1	1	1	4	2	3	1	1	1.2	4.1	
22-Jul	1	1	1	1	2	1	2	1	1	1	A	1	1	1	1	1	1	1	1	1	5	5	1	1	1.4	5.4	
23-Jul	1	1	1	1	1	1	3	1	1	A	1	1	13	1	1	0	1	13	1	1	1	1	3	1	2.0	13.2	
24-Jul	4	1	1	1	1	2	11	1	A	6	6	1	1	1	4	1	3	4	1	1	1	4	1	1	2.4	11.0	
25-Jul	1	1	1	1	2	1	1	A	2	2	1	1	1	6	10	1	1	1	1	1	1	1	0	1	1.7	9.9	
26-Jul	1	1	1	1	1	1	A	2	9	10	1	1	1	1	1	1	1	1	1	0	3	1	1	1	1.7	9.9	
27-Jul	1	1	1	1	1	A	1	2	2	2	3	3	1	1	1	4	44	3	1	1	5	2	1	1	3.6	43.7	
28-Jul	1	2	2	1	A	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	8	1	1	1.3	8.4	
29-Jul	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	1.4	
30-Jul	2	1	A	1	2	2	1	2	3	2	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1.1	2.6	
31-Jul	1	A	1	2	2	2	1	5	5	1	1	1	1	1	1	1	1	1	2	1	1	1	7	1	1.8	6.6	
		0.9	0.9	1.0	1.0	1.0	1.1	1.7	1.2	1.5	1.7	1.4	1.2	1.4	1.2	1.4	1.0	1.0	2.9	1.0	1.2	1.4	1.6	1.1	0.9	Diurnal Average	
		4.4	2.0	2.9	2.4	2.0	2.3	11.0	4.8	8.6	9.9	5.8	3.7	12.8	5.8	9.9	4.8	4.4	43.7	3.2	4.5	6.0	8.4	6.6	2.5	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

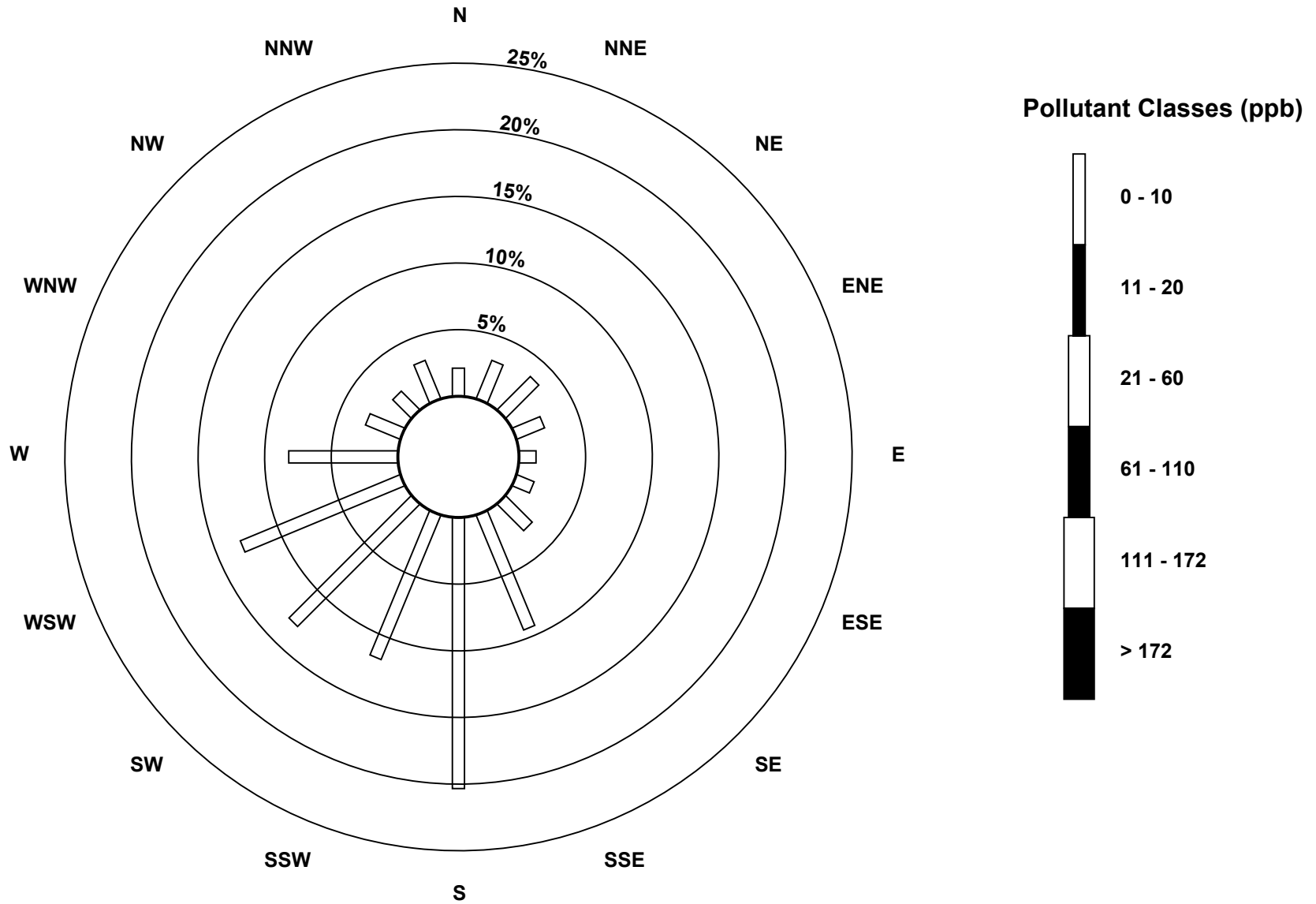
Hourly Maximums

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



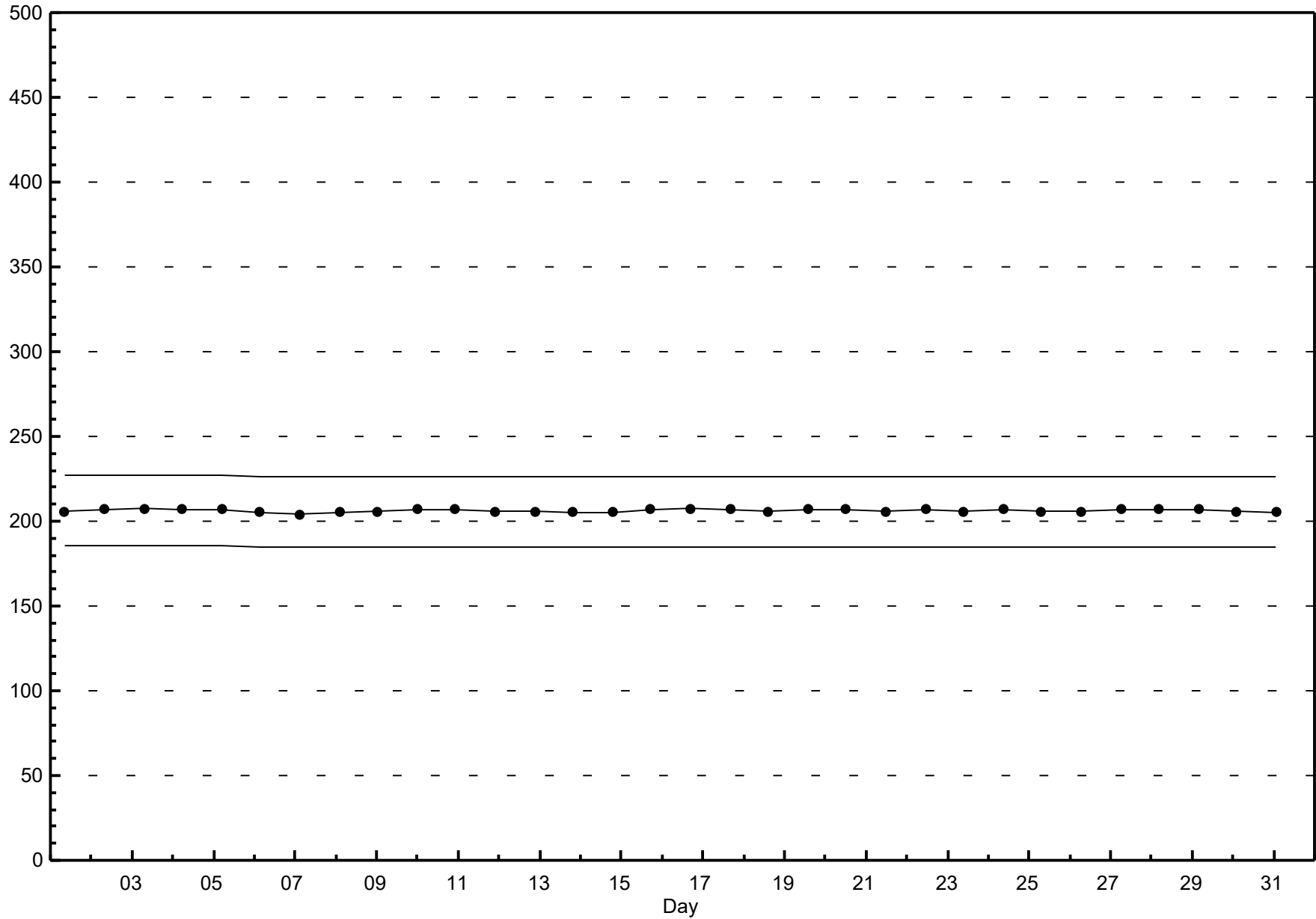
Pollutant Rose

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



Span Responses

Sulphur Dioxide (SO₂)
Portable Rycroft - July 2017

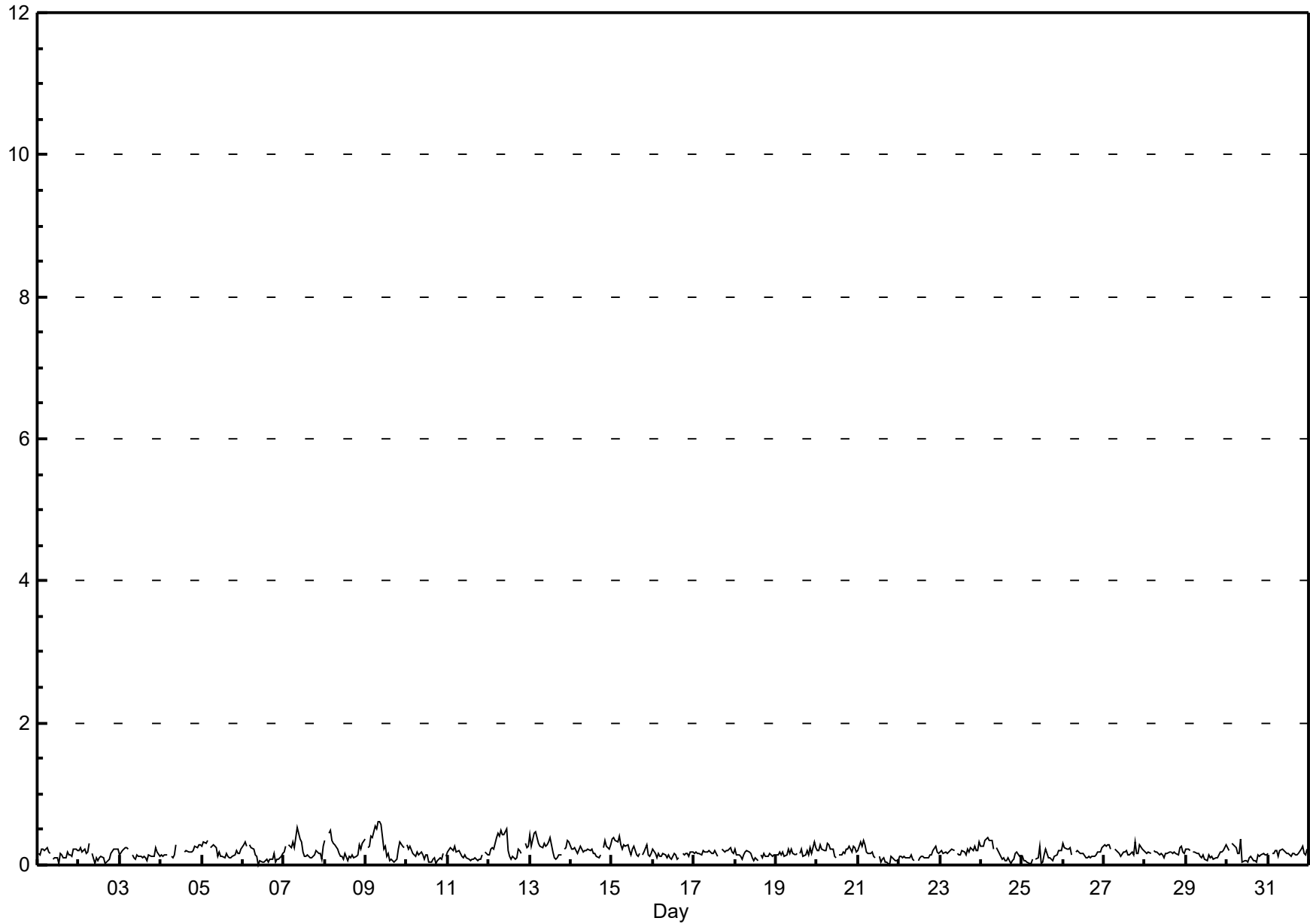


Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Portable Rycroft - July 2017

Maximum Value: 0.6 ppb on Jul 9 08:00 Minimum Value: 0 ppb on Jul 6 10:00 Maximum Diurnal Average: 0.2 ppb at hour 4 Monthly Average: 0.18 ppb		Maximum Daily Average: 0.3 ppb on Jul 9 Minimum Daily Average: 0.1 ppb on Jul 25 Minimum Diurnal Average: 0.1 ppb at hour 16 Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.2 P ₉₀ = 0.3 P ₉₉ = 0.5		Hours in Service: 744 Hours of Data: 708 Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jul	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	0.2	0.2
2-Jul	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	0.3
3-Jul	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	0.3
4-Jul	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	0.2	0.3
5-Jul	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	0.2	0.3
6-Jul	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	0.3
7-Jul	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	0.2	0.5
8-Jul	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	0.2	0.5
9-Jul	A	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.3	0.6
10-Jul	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	
11-Jul	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	
12-Jul	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.5	
13-Jul	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	
14-Jul	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	0.4	
15-Jul	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	
16-Jul	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	
17-Jul	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	0.2	
18-Jul	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	
19-Jul	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	
20-Jul	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	0.3	
21-Jul	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
22-Jul	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	
23-Jul	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	0.3	
24-Jul	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	
25-Jul	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	
26-Jul	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	
27-Jul	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
28-Jul	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
29-Jul	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	
30-Jul	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	
31-Jul	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
	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	0.2	0.2	Diurnal Average	
	0.4	0.4	0.4	0.5	0.4	0.6	0.5	0.6	0.6	0.6	0.5	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.3	0.4	Diurnal Maximum	
C - Calibration																								A - Automated Daily Zero Span			

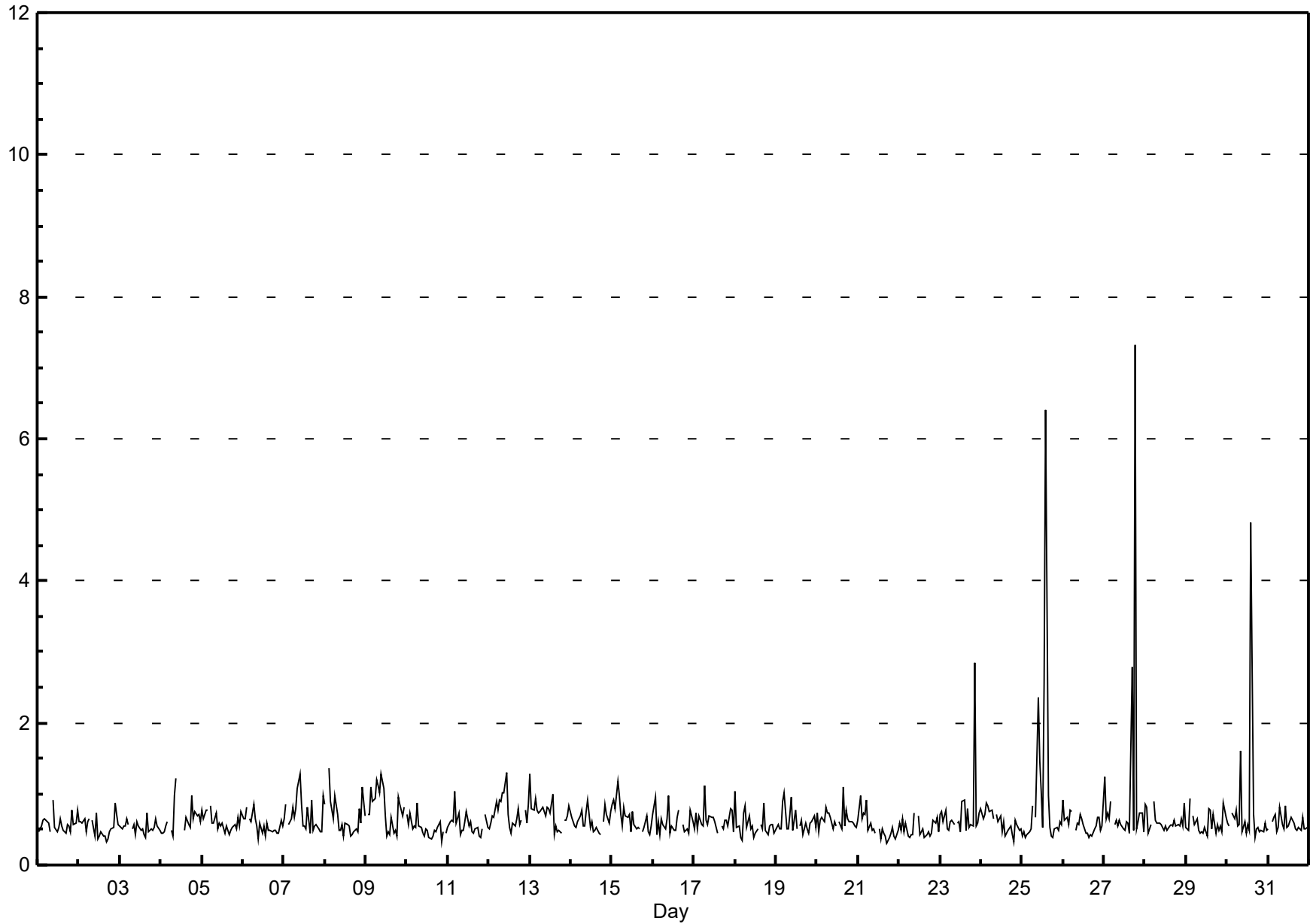


Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

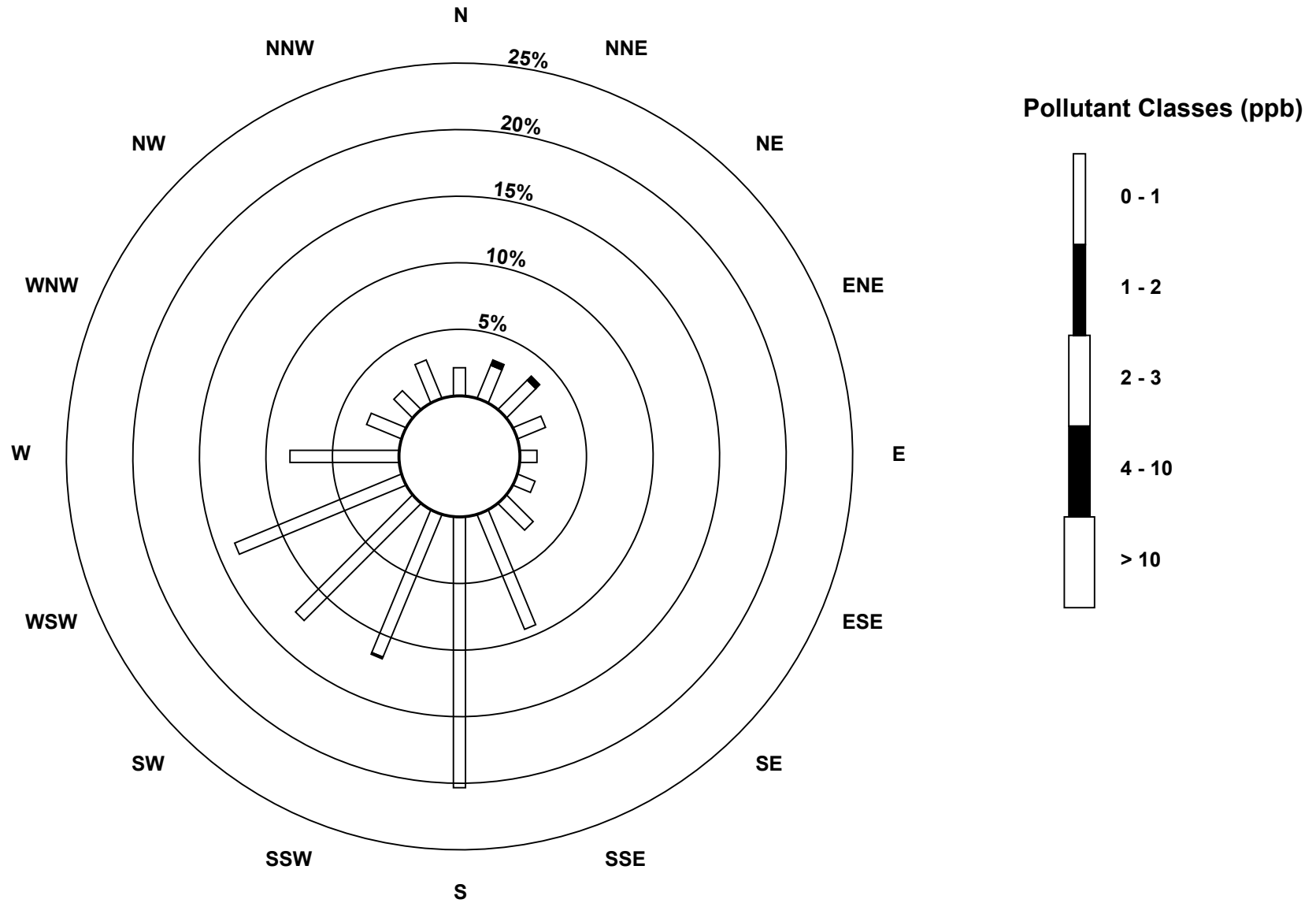
Portable Rycroft - July 2017

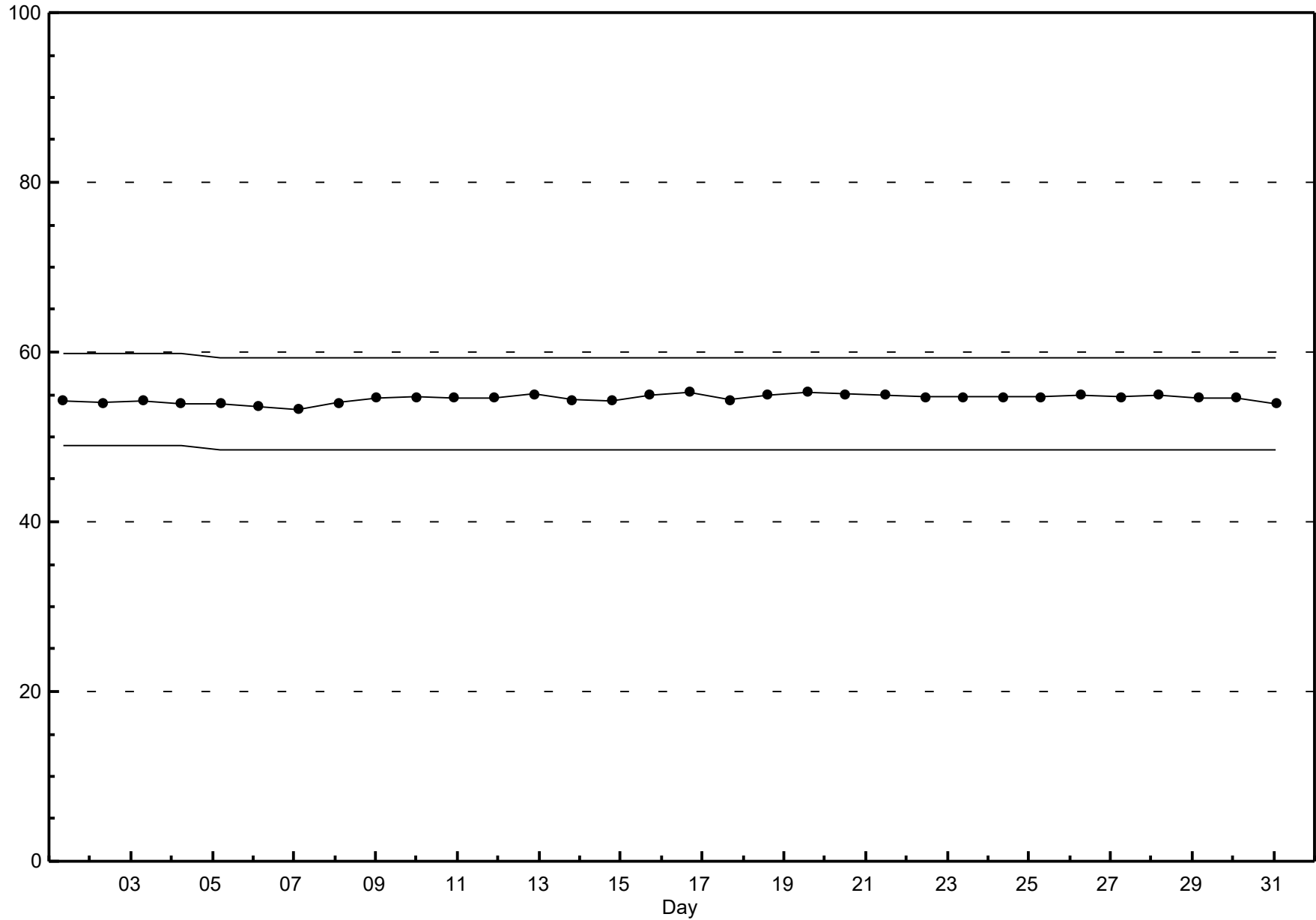
Maximum Value: 7.3 ppb on Jul 27 19:00		Maximum Daily Average: 1.0 ppb on Jul 25		Hours in Service: 744																							
Minimum Value: 0 ppb on Jul 21 18:00		Minimum Daily Average: 0.5 ppb on Jul 22		Hours of Data: 708																							
Maximum Diurnal Average: 0.9 ppb at hour 15		Minimum Diurnal Average: 0.5 ppb at hour 18		Hours of Missing Data: 36																							
Monthly Average: 0.65 ppb		Percentiles: P ₁ = 0.4 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.7 P ₉₀ = 0.9 P ₉₉ = 2.3		Hours of Calibration: 36																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jul	0	1	1	1	1	1	1	0	A	1	1	0	1	1	0	0	1	1	0	1	1	1	1	1	0.6	0.9	
2-Jul	1	1	1	1	0	1	1	A	1	0	1	0	0	0	0	0	0	0	0	1	1	1	1	1	0.5	0.9	
3-Jul	1	1	1	1	1	1	A	1	1	0	1	1	0	1	0	0	1	0	1	0	1	1	1	0	0.5	0.7	
4-Jul	0	0	0	1	1	A	0	0	1	1	C	C	C	C	0	1	1	1	1	1	1	1	1	1	0.6	1.2	
5-Jul	1	1	1	1	A	1	1	1	1	1	1	1	1	0	1	0	0	0	1	1	1	1	1	1	0.6	0.8	
6-Jul	1	1	1	A	1	1	1	1	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	1	1	0.6	0.9
7-Jul	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	0	0	1	0.7	1.3	
8-Jul	1	A	1	1	1	1	1	1	1	0	1	0	1	1	1	0	0	0	1	0	1	1	1	1	0.7	1.4	
9-Jul	A	1	1	1	1	1	1	1	1	1	1	0	0	0	1	0	0	0	0	1	1	1	1	A	0.8	1.3	
10-Jul	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0	0	1	1	0	0	A	0	0.5	0.9	
11-Jul	1	1	1	1	1	1	1	0	0	0	1	1	1	1	0	0	1	1	0	0	1	A	1	1	0.6	1.0	
12-Jul	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	A	1	1	1	0.7	1.3	
13-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0	A	1	1	1	1	0.7	1.3	
14-Jul	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0	A	1	1	1	1	1	0.6	0.9	
15-Jul	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	A	0	1	1	0	0	1	1	0.7	1.2	
16-Jul	1	1	0	1	0	1	1	1	1	1	0	1	0	0	1	1	A	1	0	0	1	0	1	1	0.6	1.0	
17-Jul	0	1	1	1	1	1	1	1	1	1	1	1	1	0	A	1	1	1	1	1	1	1	1	0	0.6	1.1	
18-Jul	1	1	1	0	0	1	1	1	1	1	1	0	0	1	A	1	1	1	0	0	1	1	1	0	0.6	1.0	
19-Jul	1	1	1	1	1	1	1	1	1	1	0	1	1	A	1	1	0	1	1	0	1	1	1	1	0.6	1.0	
20-Jul	1	0	1	1	1	1	1	1	1	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.6	1.1	
21-Jul	1	1	1	1	1	1	0	1	0	1	0	A	1	0	1	0	0	0	0	0	0	1	0	0	0.5	1.0	
22-Jul	1	0	1	0	1	0	0	0	0	1	A	1	0	0	0	0	0	0	0	0	0	1	1	1	0	0.5	0.7
23-Jul	1	1	1	1	1	0	1	1	1	1	A	1	1	0	1	1	0	1	1	1	3	1	1	1	0.7	2.9	
24-Jul	1	1	1	1	1	1	1	1	A	1	1	1	0	1	0	0	0	1	0	0	1	1	0	1	0.6	0.9	
25-Jul	0	0	0	0	0	1	1	A	1	2	1	1	1	3	6	1	1	0	0	1	1	0	1	1	1.0	6.4	
26-Jul	1	1	1	1	1	1	A	0	1	1	1	1	1	0	0	0	0	0	0	1	1	1	0	1	0.6	0.9	
27-Jul	1	1	1	1	1	A	1	1	1	1	1	1	0	1	1	0	3	0	7	1	1	1	1	0	1.0	7.3	
28-Jul	1	1	0	1	A	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9	
29-Jul	1	0	1	A	1	1	1	0	0	0	0	1	0	1	1	1	1	0	1	0	1	0	1	1	0.6	0.9	
30-Jul	1	1	A	1	1	1	1	1	2	0	1	0	1	0	5	1	0	1	1	0	0	0	1	0	0.8	4.8	
31-Jul	1	A	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	0	1	0.6	0.8	
		0.7	0.6	0.7	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.6	0.5	0.6	0.9	0.5	0.6	0.5	0.7	0.5	0.7	0.6	0.6	0.6	Diurnal Average		
		1.3	1.0	1.4	1.2	1.0	1.0	1.2	1.1	1.6	2.4	1.5	1.0	0.8	2.6	6.4	1.1	2.8	0.9	7.3	0.9	2.9	0.9	1.1	1.0	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									



Pollutant Rose

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





Hourly Averages

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

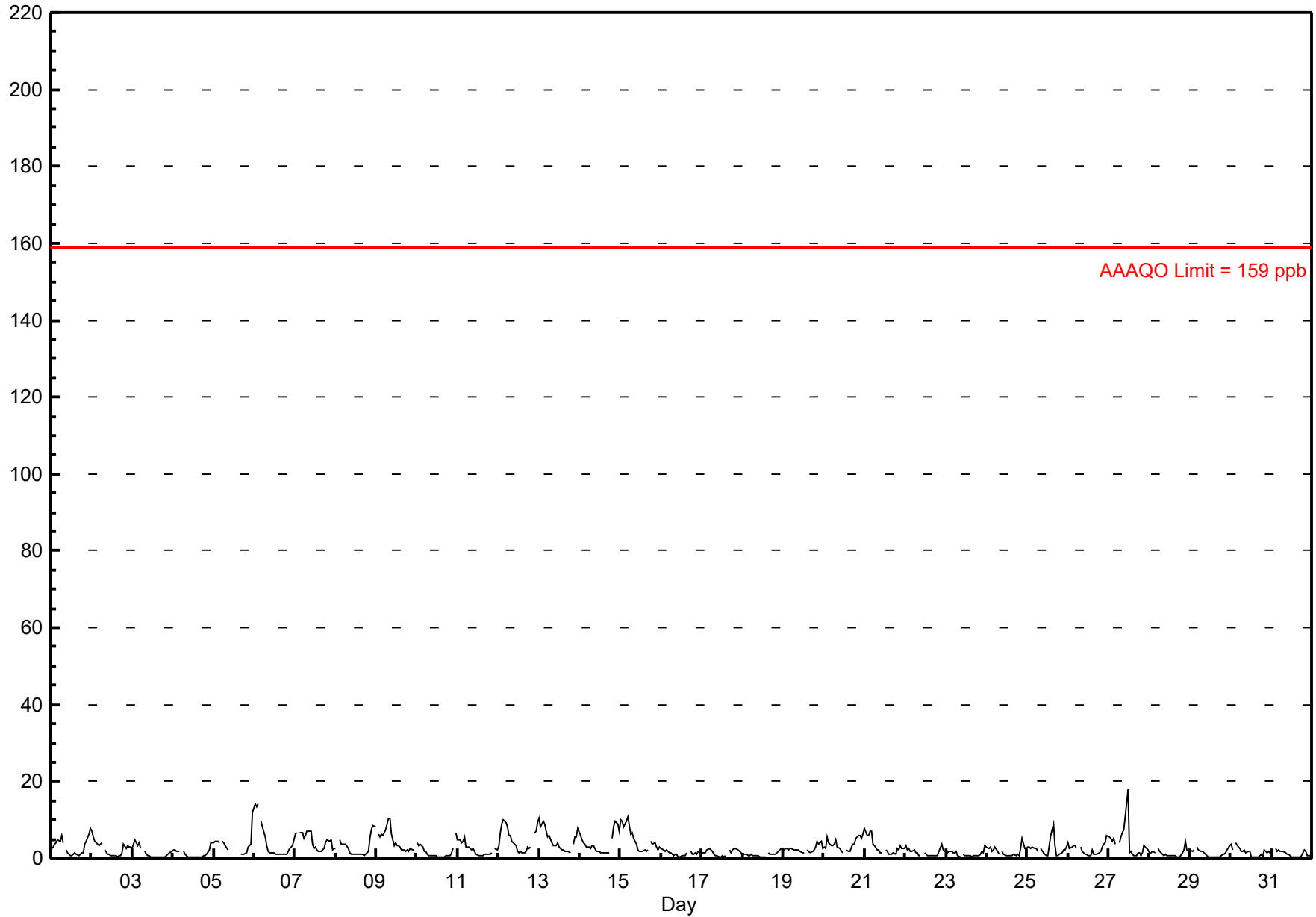
Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 17.7 ppb on Jul 27 12:00	Maximum Daily Average: 4.9 ppb on Jul 15
Minimum Value: 0 ppb on Jul 30 15:00	Hours of Data: 705
Maximum Diurnal Average: 4.3 ppb at hour 1	Hours of Missing Data: 39
Monthly Average: 2.68 ppb	Hours of Calibration: 39
Minimum Daily Average: 1.1 ppb on Jul 18	Percent Operational Time: 100.0
Minimum Diurnal Average: 1.1 ppb at hour 13	
Percentiles: P ₁ = 0.3 P ₁₀ = 0.6 Q ₁ = 1.0 Median = 2.0 Q ₃ = 3.5 P ₉₀ = 5.9 P ₉₉ = 10.6	

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-Jul	3	3	4	4	5	4	6	4	A	2	1	1	1	1	1	1	1	1	2	2	4	4	6	8	3.0	7.7	
2-Jul	7	6	5	4	3	4	4	A	2	1	1	1	1	1	1	1	1	1	1	4	3	4	3	3	2.5	7.1	
3-Jul	3	5	4	3	4	3	A	2	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	2	1.5	5.0	
4-Jul	2	2	2	2	2	A	2	1	1	1	0	0	0	0	0	0	0	0	1	1	1	2	4	4	1.3	4.2	
5-Jul	4	4	4	4	A	5	4	3	2	C	C	C	C	C	C	C	1	1	1	1	3	4	4	12	--	11.8	
6-Jul	14	13	14	A	10	8	6	3	2	1	2	2	1	1	1	1	1	1	1	1	2	2	3	5	4.2	14.2	
7-Jul	6	7	A	7	7	5	6	7	7	7	4	3	3	2	2	2	2	3	4	5	5	5	2	3	4.5	7.3	
8-Jul	3	A	5	4	4	4	4	3	2	1	1	1	1	1	1	1	1	1	1	2	5	8	8	8	3.0	8.4	
9-Jul	A	6	5	6	6	8	9	11	10	7	3	4	3	3	3	2	2	2	2	2	3	2	2	A	4.6	10.6	
10-Jul	4	3	4	3	2	2	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	3	A	7	1.6	6.6	
11-Jul	5	5	4	5	6	3	3	3	2	2	2	1	1	1	1	1	1	1	1	1	1	A	3	2	2.4	5.8	
12-Jul	3	7	9	10	9	8	6	6	4	4	3	2	2	2	1	2	3	3	3	3	A	7	7	9	4.9	10.2	
13-Jul	10	8	10	9	7	6	6	4	3	3	3	4	3	2	2	2	2	2	2	A	4	6	6	8	4.8	10.5	
14-Jul	6	5	4	4	3	3	3	3	3	3	2	2	2	2	1	1	1	2	A	5	8	10	9	7	3.8	9.7	
15-Jul	10	10	8	10	11	9	6	7	5	4	2	2	2	2	2	2	2	A	4	4	4	3	2	3	4.9	10.7	
16-Jul	3	2	2	2	2	2	1	1	1	1	1	0	1	1	1	1	A	2	1	1	1	1	2	1	1.4	2.8	
17-Jul	1	1	2	2	2	2	2	1	1	1	1	1	1	0	1	A	2	1	2	3	3	2	2	1	1.5	2.8	
18-Jul	1	1	1	1	1	1	1	1	1	1	0	0	0	0	A	2	1	1	1	1	2	2	2	3	1.1	2.6	
19-Jul	2	3	2	2	3	2	2	2	2	2	2	2	1	A	2	2	2	2	2	3	4	4	4	3	2.5	4.5	
20-Jul	3	2	6	4	3	3	4	5	3	3	2	1	A	2	2	2	3	4	4	4	5	6	6	5	6	3.7	6.5
21-Jul	8	6	6	7	7	4	3	2	2	2	1	A	2	2	1	1	1	1	1	3	2	3	3	3	3.1	7.9	
22-Jul	3	2	2	2	2	2	2	1	1	1	A	1	1	1	1	1	1	1	1	1	2	4	2	2	1.6	3.6	
23-Jul	2	2	2	2	2	2	2	1	0	A	1	1	1	1	1	1	1	1	1	1	1	2	1	3	1.2	3.3	
24-Jul	3	3	3	2	2	3	2	1	A	2	1	1	1	1	1	1	1	1	1	1	2	5	3	3	1.8	5.2	
25-Jul	3	3	3	3	3	3	2	A	3	2	1	1	1	3	6	9	3	1	1	1	1	2	2	3	2.6	9.1	
26-Jul	4	3	3	3	3	3	A	3	2	1	1	1	1	1	2	1	1	1	1	2	3	4	4	6	2.4	6.1	
27-Jul	5	5	4	5	4	A	4	6	7	7	11	18	1	2	1	1	1	2	2	1	1	3	3	2	4.1	17.7	
28-Jul	2	1	2	1	A	3	2	2	1	1	1	1	1	1	1	1	0	0	0	2	2	4	2	2	1.4	4.3	
29-Jul	2	2	2	A	3	2	2	2	1	1	1	0	0	0	0	1	1	0	1	1	1	1	2	3	1.3	3.3	
30-Jul	4	2	A	4	3	3	2	2	2	2	1	2	2	0	0	0	0	0	1	1	0	2	2	2	1.7	4.1	
31-Jul	2	A	3	2	2	2	2	2	2	1	1	1	1	0	0	1	0	1	1	2	2	1	1	1	1.2	2.6	
	4.3	4.2	4.3	4.1	4.1	3.7	3.3	3.1	2.6	2.2	1.8	1.9	1.1	1.2	1.3	1.4	1.2	1.2	1.5	1.9	2.7	3.5	3.4	4.1	Diurnal Average		
	14.1	13.5	14.2	10.2	10.7	8.5	8.8	10.6	10.4	7.4	10.7	17.7	3.2	3.5	5.9	9.1	3.4	3.8	4.4	5.2	8.3	9.7	9.0	11.8	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
Portable Rycroft - July 2017



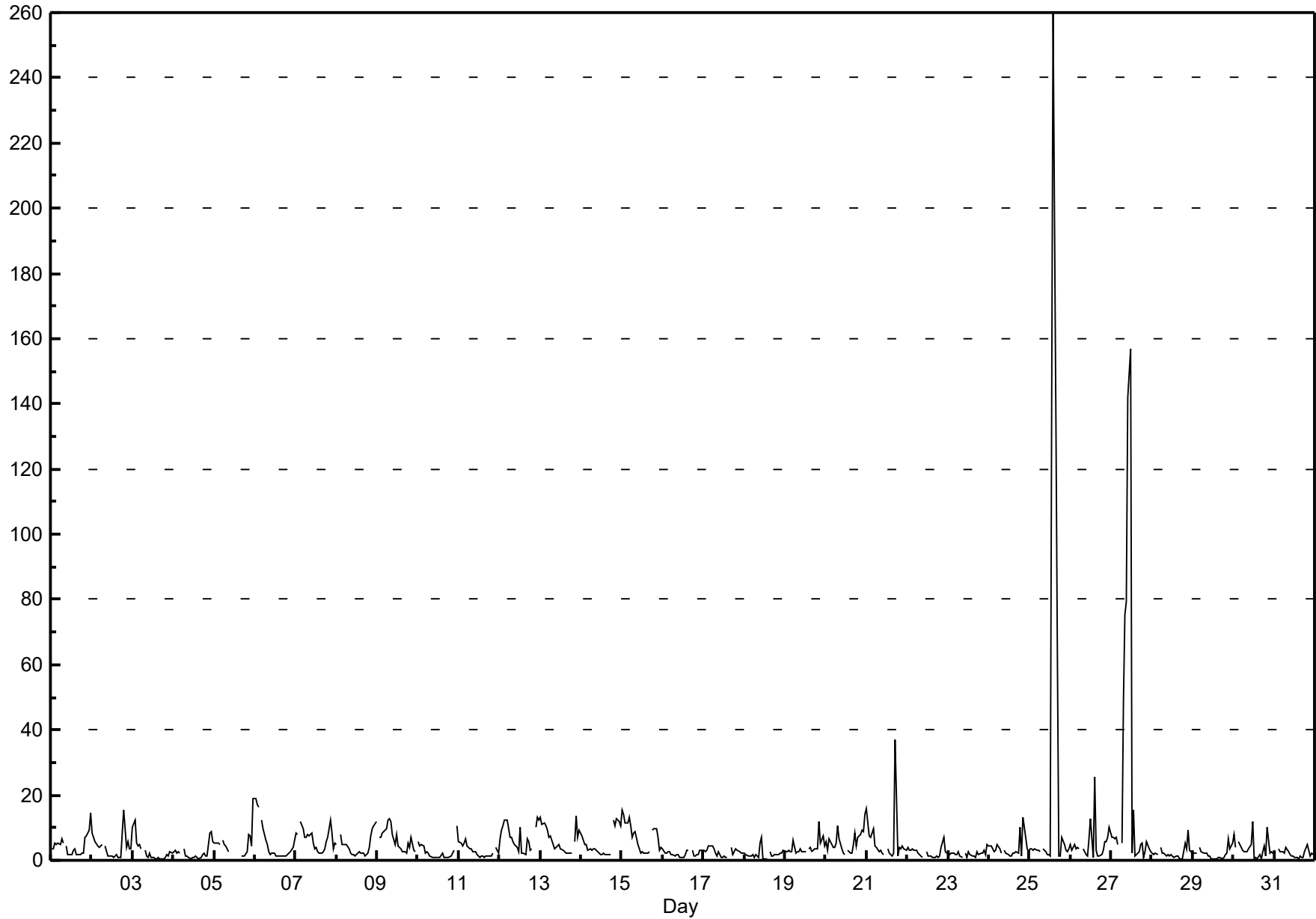
Hourly Maximums

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

Maximum Value: 259.9 ppb on Jul 25 15:00		Maximum Daily Average: 28.2 ppb on Jul 25		Hours in Service: 744																																													
Minimum Value: 0 ppb on Jul 3 18:00		Minimum Daily Average: 2.0 ppb on Jul 18		Hours of Data: 705																																													
Maximum Diurnal Average: 11.5 ppb at hour 15		Minimum Diurnal Average: 2.4 ppb at hour 13		Hours of Missing Data: 39																																													
Monthly Average: 5.53 ppb		Percentiles: P ₁ = 0.5 P ₁₀ = 1.1 Q ₁ = 1.7 Median = 2.9 Q ₃ = 5.1 P ₉₀ = 9.5 P ₉₉ = 73.1		Hours of Calibration: 39																																													
				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-Jul	3	4	5	5	5	5	7	5	A	4	2	2	2	3	4	2	2	2	2	2	7	8	9	14	4.5	14.4																							
2-Jul	8	7	6	4	4	4	5	A	4	1	1	1	1	1	2	1	1	1	9	16	4	6	3	3	4.1	15.6																							
3-Jul	10	13	5	4	5	4	A	3	1	1	2	1	1	1	1	1	1	0	0	1	2	1	3	2	2.7	12.5																							
4-Jul	3	3	2	2	2	A	3	1	1	1	1	1	1	2	1	1	1	2	2	1	1	9	9	6	2.4	9.0																							
5-Jul	5	5	5	5	A	6	5	5	3	C	C	C	C	C	C	C	1	1	1	3	8	7	4	19	--	19.2																							
6-Jul	19	17	17	A	13	10	6	5	3	2	2	2	1	1	1	2	1	1	2	2	2	3	4	6	5.3	19.1																							
7-Jul	8	8	A	12	10	7	7	8	8	9	5	4	4	3	2	2	2	3	6	7	12	8	3	5	6.3	12.4																							
8-Jul	5	A	8	5	5	5	5	4	2	2	1	2	3	2	2	2	1	2	4	7	9	10	12	4.3	11.7																								
9-Jul	A	7	7	8	9	10	12	13	12	8	5	8	4	4	4	3	3	2	5	4	7	3	3	A	6.3	12.8																							
10-Jul	6	4	5	4	2	3	2	1	1	1	1	1	1	1	2	1	1	1	1	1	2	3	A	11	2.4	10.7																							
11-Jul	6	5	5	5	7	4	4	3	3	3	3	2	1	1	1	1	1	1	1	1	2	A	4	2	2.9	6.6																							
12-Jul	6	9	10	12	12	10	7	7	6	5	4	3	10	2	2	2	7	6	3	4	A	10	13	12	7.1	13.0																							
13-Jul	13	11	11	11	9	7	7	5	4	4	4	5	4	3	3	2	2	2	2	A	6	14	7	9	6.3	13.7																							
14-Jul	8	6	5	5	3	3	3	4	4	3	2	2	2	2	2	2	2	2	A	12	11	13	12	11	5.1	12.6																							
15-Jul	15	14	11	12	13	11	7	8	9	5	3	2	2	2	2	2	2	A	9	9	10	7	3	4	7.2	15.3																							
16-Jul	4	2	2	3	3	2	2	1	2	2	1	1	1	2	3	3	A	3	1	2	2	2	3	3	2.1	3.6																							
17-Jul	3	3	3	4	5	4	4	2	1	3	1	1	2	1	1	A	4	2	3	4	3	3	2	2	2.6	4.5																							
18-Jul	2	2	1	1	1	2	1	2	1	5	7	1	1	1	A	3	1	1	2	2	2	2	3	3	2.0	7.0																							
19-Jul	3	3	3	3	3	6	2	3	3	3	3	3	3	A	3	4	3	4	4	4	12	5	8	4	3.9	11.9																							
20-Jul	6	3	7	6	4	4	5	10	7	4	2	2	A	3	2	2	5	8	4	7	8	9	9	14	5.7	13.9																							
21-Jul	16	7	7	8	10	5	4	3	3	2	2	A	4	2	2	1	2	37	1	4	4	5	3	3	5.9	37.2																							
22-Jul	4	3	3	3	3	3	2	2	1	1	A	2	1	1	1	1	1	1	1	1	4	7	3	2	2.3	7.0																							
23-Jul	2	2	2	2	2	2	3	1	1	A	2	1	3	2	1	1	1	3	2	2	2	3	2	5	2.0	4.7																							
24-Jul	4	4	3	3	3	5	3	2	A	3	2	2	1	1	2	2	3	2	10	1	13	10	4	3	3.8	13.3																							
25-Jul	3	4	3	3	3	3	3	A	4	3	2	2	1	136	260	134	63	1	1	7	5	3	3	3	28.2	259.9																							
26-Jul	5	3	5	4	4	3	A	4	3	2	2	7	13	1	25	3	1	1	2	3	6	6	7	10	5.1	25.4																							
27-Jul	7	7	7	7	5	A	5	49	75	79	142	157	2	16	1	2	3	5	5	1	3	6	4	3	25.7	157.1																							
28-Jul	2	2	2	2	A	4	2	2	1	2	1	2	1	1	1	1	1	1	1	5	3	9	3	3	2.3	9.3																							
29-Jul	2	2	2	A	4	3	2	2	2	1	1	1	0	0	1	1	1	1	1	2	2	7	3	5	2.1	6.5																							
30-Jul	8	4	A	6	4	3	2	3	3	3	3	5	12	1	1	1	2	0	3	4	1	10	2	3	2	3.6	11.7																						
31-Jul	2	A	4	2	3	2	2	4	2	2	2	1	1	1	1	1	1	1	3	5	3	1	2	2	2.0	4.8																							
6.3		5.7		5.4		5.2		5.4		4.8		4.3		5.6		5.8		5.6		7.3		7.8		2.4		6.8		11.5		6.3		4.0		3.3		3.0		3.9		5.5		6.0		5.0		6.2		Diurnal Average	
19.1		17.3		16.5		12.5		13.0		10.8		12.2		49.1		75.3		79.3		142.1		157.1		12.6		135.6		259.9		133.9		63.4		37.2		10.2		15.6		13.3		13.7		13.0		19.2		Diurnal Maximum	
C - Calibration																								A - Automated Daily Zero Span																									

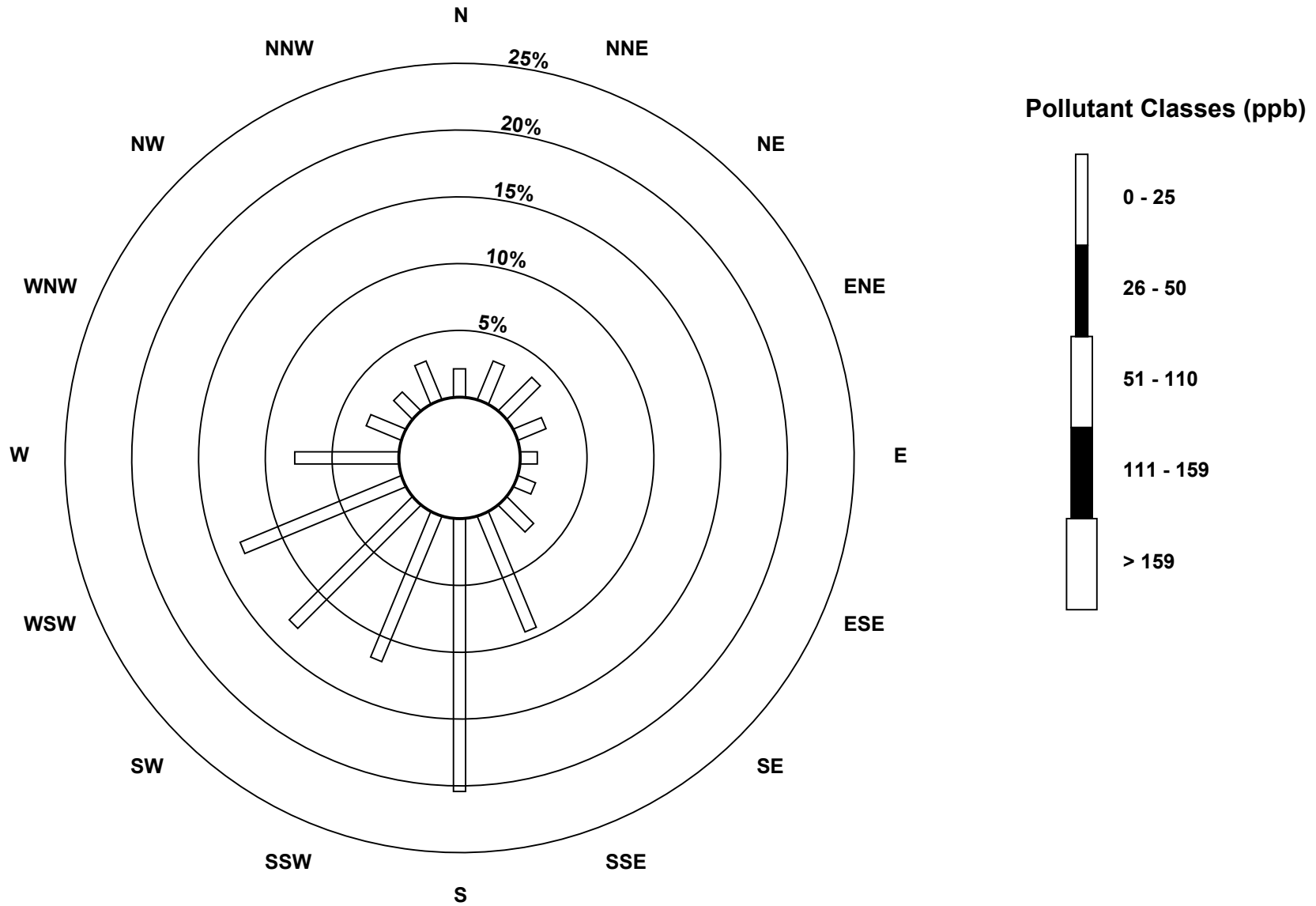
Hourly Maximums

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



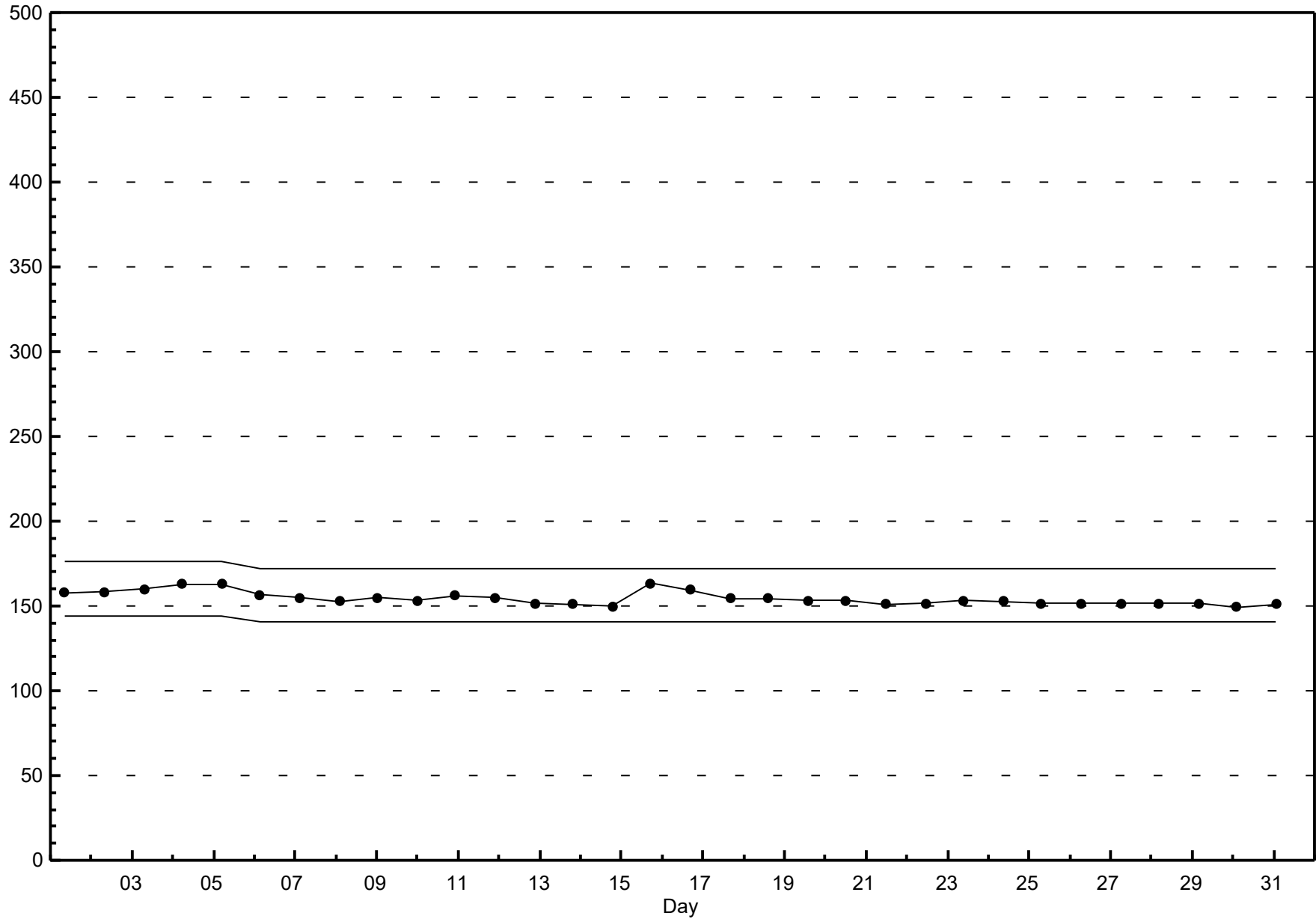
Pollutant Rose

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



Span Responses

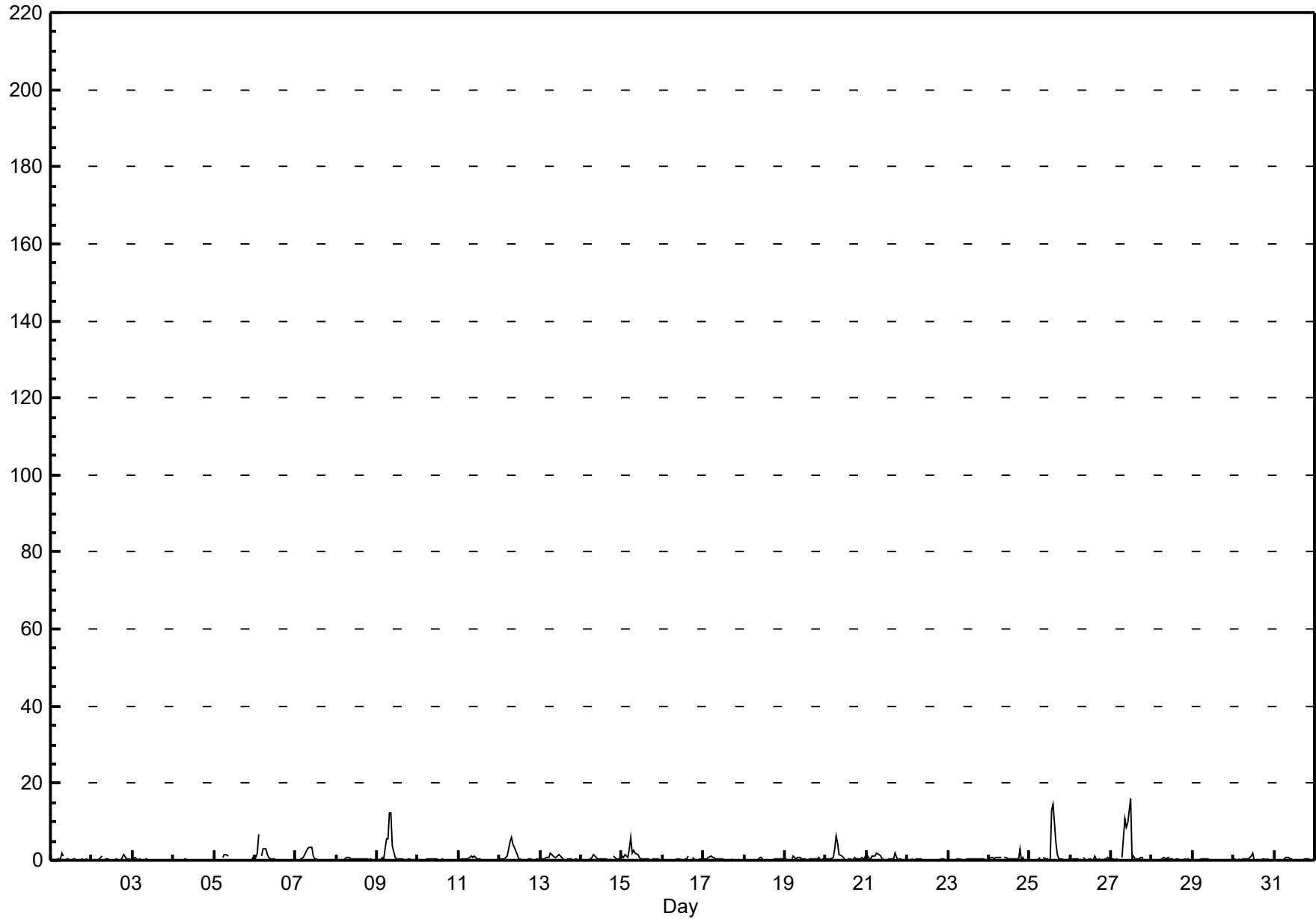
Nitrogen Dioxide (NO₂)
Portable Rycroft - July 2017



Hourly Averages

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

Maximum Value: 16.2 ppb on Jul 27 12:00		Maximum Daily Average: 2.5 ppb on Jul 27		Hours in Service: 744																						
Minimum Value: 0 ppb on Jul 4 00:00		Minimum Daily Average: 0.1 ppb on Jul 4		Hours of Data: 705																						
Maximum Diurnal Average: 1.8 ppb at hour 8		Minimum Diurnal Average: 0.2 ppb at hour 23		Hours of Missing Data: 39																						
Monthly Average: 0.59 ppb		Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.4 P ₉₀ = 1.0 P ₉₉ = 9.0		Hours of Calibration: 39																						
				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-Jul	0	0	0	0	0	1	2	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	1.8
2-Jul	0	0	0	0	0	1	1	A	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0.3	1.4
3-Jul	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
4-Jul	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
5-Jul	0	0	0	0	A	1	1	2	1	C	C	C	C	C	C	C	0	0	0	0	0	0	0	1	--	1.5
6-Jul	1	2	7	A	1	3	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.9	6.7
7-Jul	0	0	A	0	1	1	2	3	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	3.4
8-Jul	0	A	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
9-Jul	A	0	0	1	1	5	5	12	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	2.0	12.4
10-Jul	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
11-Jul	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	1.0
12-Jul	0	0	0	0	1	3	5	6	4	3	2	0	0	0	0	0	0	0	0	0	A	0	0	0	1.2	5.8
13-Jul	0	0	0	1	1	1	2	1	1	1	2	1	1	0	0	0	0	0	0	A	0	0	0	0	0.6	1.9
14-Jul	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	A	1	1	0	0	0	0.4	1.4
15-Jul	1	1	2	1	3	6	2	3	2	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	1.1	5.9
16-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	1	0	0	0	0	0	1	0.2	1.1
17-Jul	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	1.1
18-Jul	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.9
19-Jul	0	0	0	0	0	1	1	1	1	1	0	1	0	A	0	0	0	0	0	0	1	0	0	1	0.4	1.1
20-Jul	0	0	0	0	1	3	6	4	1	1	1	0	A	0	0	0	0	1	0	1	0	1	1	1	1.1	6.4
21-Jul	2	0	0	1	1	1	2	2	1	1	0	A	0	0	0	0	0	2	0	0	0	0	0	0	0.7	1.8
22-Jul	0	0	0	0	0	0	0	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
23-Jul	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
24-Jul	0	1	1	1	1	1	1	1	A	1	1	0	0	0	0	0	0	0	0	3	0	1	0	0	0.5	2.9
25-Jul	0	0	0	0	0	0	1	A	1	0	0	0	0	13	14	5	1	0	0	0	0	0	0	0	1.7	14.4
26-Jul	0	0	0	0	0	0	A	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0.3	1.2
27-Jul	0	0	0	1	0	A	1	6	11	9	10	16	1	1	0	0	0	1	1	0	0	0	0	0	2.5	16.2
28-Jul	0	0	0	0	A	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
29-Jul	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	0.5
30-Jul	1	0	A	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0.3	1.7
31-Jul	0	A	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
		0.3	0.3	0.5	0.3	0.5	1.1	1.4	1.8	1.6	1.1	0.8	0.9	0.2	0.7	0.7	0.4	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	Diurnal Average
		1.8	2.0	6.7	1.0	2.9	5.9	6.4	12.3	12.4	8.8	9.7	16.2	1.1	13.0	14.4	4.6	1.4	1.7	2.9	1.4	0.7	0.8	0.6	0.8	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																								



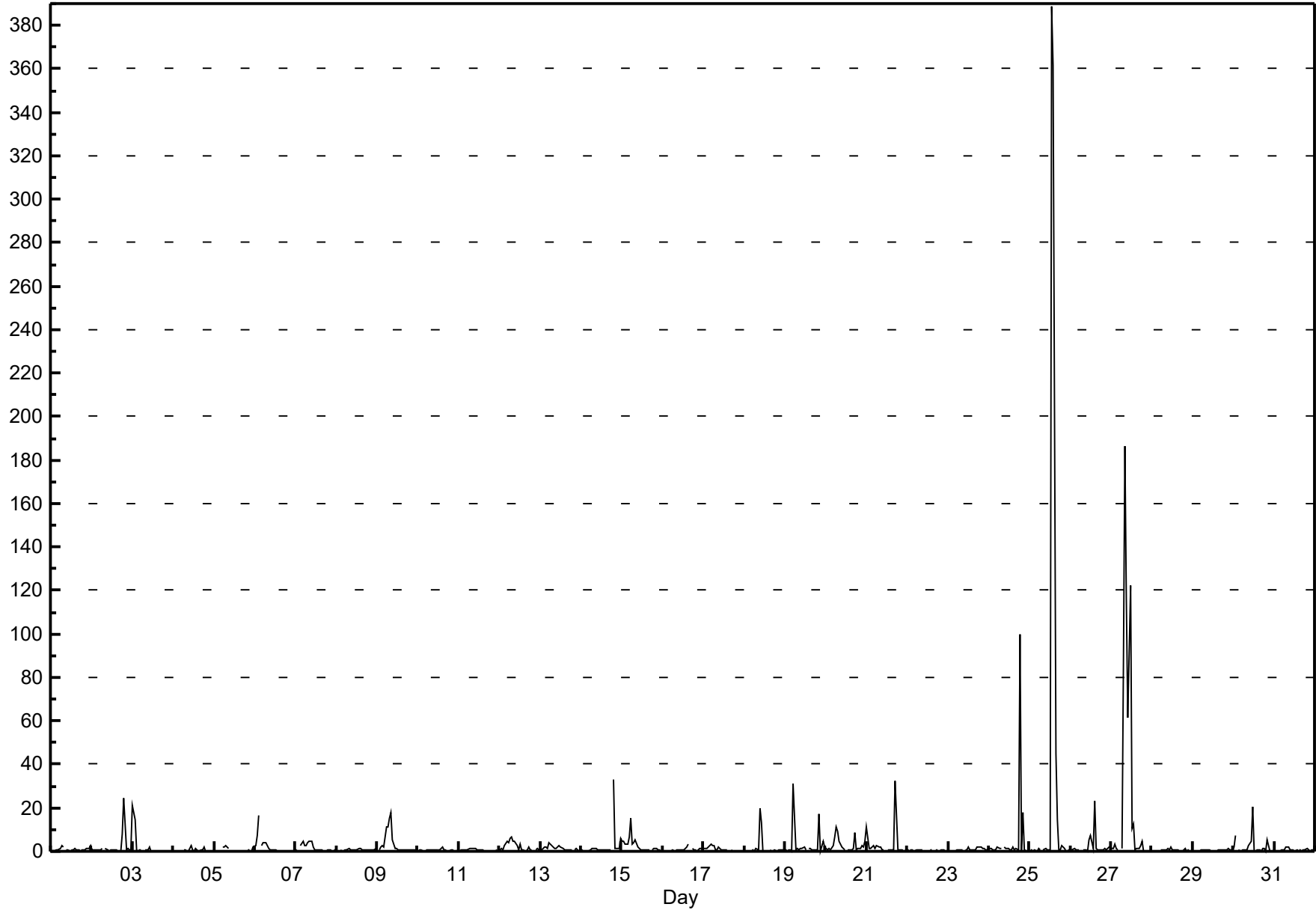
Hourly Maximums

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

Maximum Value: 388.9 ppb on Jul 25 14:00		Maximum Daily Average: 35.8 ppb on Jul 25		Hours in Service: 744																							
Minimum Value: 0 ppb on Jul 5 23:00		Minimum Daily Average: 0.4 ppb on Jul 22		Hours of Data: 705																							
Maximum Diurnal Average: 14.4 ppb at hour 14		Minimum Diurnal Average: 0.6 ppb at hour 22		Hours of Missing Data: 39																							
Monthly Average: 3.61 ppb		Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.5 Q ₃ = 1.2 P ₉₀ = 3.3 P ₉₉ = 80.9		Hours of Calibration: 39																							
				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-Jul	0	0	0	0	1	1	3	2	A	1	1	0	1	1	1	1	0	0	0	0	0	1	1	3	0.8	2.9	
2-Jul	1	1	0	0	1	1	1	A	1	1	0	0	0	1	0	0	0	0	8	25	1	1	0	0	2.0	24.8	
3-Jul	21	15	0	0	1	1	A	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2.0	21.3	
4-Jul	0	0	0	0	0	A	0	0	0	0	3	0	0	1	1	0	1	1	2	0	0	0	0	0	0.5	2.9	
5-Jul	0	0	0	0	A	2	2	2	1	C	C	C	C	C	C	C	0	0	0	0	0	0	0	2	--	2.4	
6-Jul	3	7	17	A	3	4	4	3	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1.9	16.5	
7-Jul	0	0	A	3	4	3	3	4	4	5	2	1	1	1	0	0	0	0	0	0	1	0	0	0	1.4	4.8	
8-Jul	1	A	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	0.6	1.4	
9-Jul	A	0	2	2	2	11	11	15	18	5	2	1	1	1	0	0	0	1	1	1	1	0	1	0	3.5	17.6	
10-Jul	0	0	0	0	0	1	1	1	1	1	0	0	0	0	2	0	0	0	0	1	1	0	A	1	0.5	1.9	
11-Jul	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0.5	1.3	
12-Jul	1	1	1	3	5	4	6	7	5	5	3	1	3	0	1	0	1	2	1	1	A	1	2	0	2.3	6.8	
13-Jul	1	0	2	2	1	4	4	2	1	1	2	2	2	1	1	0	1	0	0	A	1	1	0	0	1.3	3.7	
14-Jul	0	0	0	0	0	1	1	2	2	1	1	1	0	0	1	0	0	0	A	33	1	1	1	6	2.4	33.3	
15-Jul	4	5	3	3	7	15	4	4	5	2	1	1	1	0	0	0	1	A	1	1	1	1	0	0	2.7	15.0	
16-Jul	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	3	A	1	1	0	0	0	1	1	0.7	3.3	
17-Jul	2	1	1	2	3	3	2	1	1	2	1	1	1	0	1	A	0	0	0	0	0	0	0	0	1.0	3.0	
18-Jul	0	0	0	0	0	0	0	1	0	20	13	0	0	0	A	0	0	0	0	0	0	0	0	0	1.7	19.6	
19-Jul	0	0	0	0	0	31	1	1	1	1	1	2	1	A	1	1	1	1	1	1	17	0	5	2	3.1	31.0	
20-Jul	1	1	1	1	3	6	11	9	4	2	1	1	A	0	0	0	2	8	1	1	1	3	2	4	2.8	11.0	
21-Jul	11	1	1	2	2	1	2	2	2	1	1	A	1	1	0	0	1	33	0	1	0	0	0	0	2.9	32.5	
22-Jul	0	0	0	1	0	1	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0.4	0.9	
23-Jul	0	0	0	0	0	0	1	1	0	A	0	1	2	1	1	0	0	2	2	2	1	2	0	0	0.8	2.2	
24-Jul	2	1	1	1	1	2	1	1	A	2	2	1	1	0	2	1	2	1	100	0	18	1	0	0	6.1	99.5	
25-Jul	0	0	0	0	0	1	1	A	1	1	1	1	0	389	362	45	14	0	0	2	1	0	0	1	35.8	388.9	
26-Jul	1	0	1	1	0	0	A	1	1	0	0	6	7	1	23	1	0	0	0	0	1	1	1	2	2.2	23.0	
27-Jul	1	1	3	1	1	A	1	88	187	116	61	122	11	13	0	1	2	2	5	0	0	0	0	0	26.8	186.7	
28-Jul	0	0	0	0	A	0	1	1	1	1	1	2	1	0	1	1	0	0	0	1	0	0	0	0	0.6	1.7	
29-Jul	0	0	0	A	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	0	0.4	1.2	
30-Jul	2	7	A	1	0	0	0	1	1	2	5	21	0	0	0	1	0	1	1	0	5	0	0	0	2.2	20.6	
31-Jul	0	A	0	0	0	0	1	2	2	1	1	0	0	0	0	0	0	0	1	1	1	0	0	1	0.6	2.2	
1.8		1.6	1.3	0.9	1.3	3.3	2.3	5.3	8.4	6.1	3.7	5.7	1.2	14.4	13.9	2.1	1.0	2.0	4.3	2.5	1.9	0.6	0.7	1.0	Diurnal Average		
21.3		14.8	16.5	3.4	6.8	31.0	11.0	87.5	186.7	116.3	61.5	122.1	10.7	388.9	361.7	44.7	14.5	32.5	99.5	33.3	17.9	2.7	4.7	6.1	Diurnal Maximum		
C - Calibration		A - Automated Daily Zero Span																									

Hourly Maximums

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

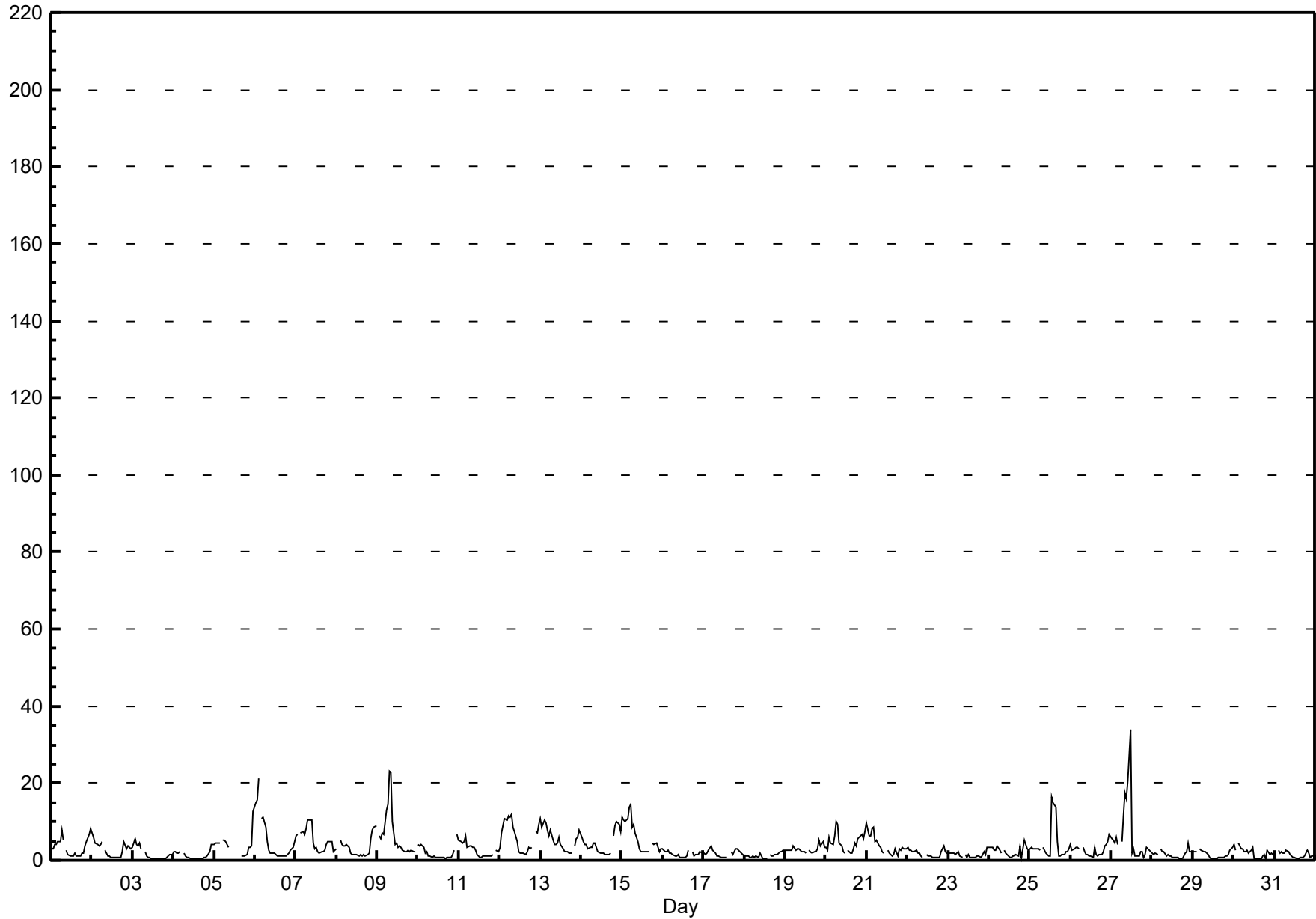


Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

Portable Rycroft - July 2017

Maximum Value: 34.0 ppb on Jul 27 12:00		Maximum Daily Average: 6.7 ppb on Jul 9		Hours in Service: 744																							
Minimum Value: 0 ppb on Jul 4 12:00		Minimum Daily Average: 1.2 ppb on Jul 18		Hours of Data: 705																							
Maximum Diurnal Average: 4.8 ppb at hour 8		Minimum Diurnal Average: 1.3 ppb at hour 13		Hours of Missing Data: 39																							
Monthly Average: 3.25 ppb		Percentiles: P ₁ = 0.3 P ₁₀ = 0.7 Q ₁ = 1.2 Median = 2.3 Q ₃ = 3.9 P ₉₀ = 6.9 P ₉₉ = 15.6		Hours of Calibration: 39																							
				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-Jul	3	3	4	4	5	5	8	5	A	3	2	1	1	1	2	1	1	1	2	2	4	5	7	8	3.3	8.3	
2-Jul	7	6	5	4	4	4	5	A	3	1	1	1	1	1	1	1	1	1	2	5	3	4	3	3	2.8	7.2	
3-Jul	3	6	4	4	4	3	A	2	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	2	1.6	5.6	
4-Jul	2	2	2	2	2	A	2	1	1	1	0	0	0	0	0	0	0	0	1	1	1	2	4	4	1.4	4.2	
5-Jul	4	4	4	4	A	5	5	5	3	C	C	C	C	C	C	C	1	1	1	1	3	4	4	13	--	12.5	
6-Jul	15	16	21	A	11	11	9	5	3	2	2	2	1	1	1	1	1	1	1	1	2	2	3	5	5.1	21.1	
7-Jul	6	7	A	7	7	7	8	10	11	10	5	3	3	2	2	2	2	3	4	5	5	5	2	3	5.2	10.6	
8-Jul	3	A	5	4	4	4	4	3	2	2	1	1	1	1	2	1	1	1	2	2	6	8	9	9	3.3	8.8	
9-Jul	A	7	6	7	7	13	14	23	10	4	4	3	4	3	2	2	2	2	2	2	3	2	2	A	6.7	22.9	
10-Jul	4	4	4	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	A	7	1.8	6.8	
11-Jul	5	5	4	5	6	3	4	4	3	3	3	2	1	1	1	1	1	1	1	1	2	A	3	2	2.7	6.2	
12-Jul	3	7	9	11	10	12	11	12	9	7	5	2	2	2	2	2	2	3	3	3	A	7	7	9	6.2	12.0	
13-Jul	11	8	10	10	8	6	8	5	4	4	4	6	4	3	2	2	2	2	2	A	4	6	6	8	5.5	10.8	
14-Jul	6	5	4	4	3	3	3	5	4	3	2	2	2	2	2	2	2	2	A	6	9	10	9	8	4.2	10.0	
15-Jul	11	11	10	11	14	15	8	9	7	5	3	2	2	2	2	2	2	A	5	4	5	3	2	3	6.0	14.5	
16-Jul	3	2	2	2	2	2	2	1	1	1	1	1	1	1	1	2	A	2	1	1	1	1	2	2	1.6	2.8	
17-Jul	2	2	2	3	4	3	2	2	1	1	1	1	1	1	1	A	2	2	2	2	3	3	2	2	1.8	3.6	
18-Jul	1	1	1	1	1	1	1	1	1	2	1	0	0	0	A	2	1	1	1	1	2	2	2	3	1.2	2.8	
19-Jul	3	3	3	3	3	4	3	3	3	3	2	2	2	A	3	2	2	2	2	3	5	4	5	3	2.9	5.1	
20-Jul	3	3	6	4	4	6	10	9	4	4	2	2	A	2	2	2	3	5	4	6	6	7	6	7	4.7	10.0	
21-Jul	10	6	7	8	8	5	5	4	3	2	2	A	3	2	1	1	1	3	1	3	3	3	3	3	3.8	9.8	
22-Jul	3	3	3	2	2	2	2	2	1	1	A	2	1	1	1	1	1	1	1	1	2	4	2	2	1.8	3.9	
23-Jul	2	2	2	2	2	2	2	1	1	A	1	1	1	1	1	1	1	1	1	1	1	2	2	3	1.5	3.4	
24-Jul	3	3	3	2	3	4	3	2	A	3	2	1	1	1	1	1	1	1	4	1	3	5	3	3	2.3	5.3	
25-Jul	3	3	3	3	3	3	2	A	3	2	2	1	1	16	15	14	5	1	1	2	2	2	2	3	4.0	16.3	
26-Jul	4	3	3	3	4	3	A	3	2	2	1	1	1	1	3	2	1	1	1	2	4	4	5	7	2.7	6.6	
27-Jul	6	5	5	6	4	A	5	12	18	16	20	34	2	3	1	1	1	2	2	1	1	4	3	2	6.7	34.0	
28-Jul	2	2	2	2	A	3	2	2	1	1	1	1	1	1	1	1	0	0	0	2	2	5	2	2	1.6	4.6	
29-Jul	2	2	2	A	3	3	2	2	2	1	1	0	0	0	0	1	1	1	1	1	1	1	2	3	1.5	3.5	
30-Jul	4	2	A	4	3	3	2	2	3	2	3	3	0	0	0	0	0	0	1	1	0	3	2	2	1.9	4.4	
31-Jul	2	A	3	2	2	2	2	3	2	2	1	1	1	1	0	1	1	1	1	2	2	1	1	1	1.4	2.7	
		4.6	4.5	4.8	4.4	4.6	4.7	4.7	4.8	4.2	3.3	2.6	2.7	1.3	1.8	1.8	1.7	1.4	1.5	1.8	2.2	3.0	3.7	3.6	4.4	Diurnal Average	
		15.0	15.6	21.1	10.7	13.6	14.5	14.4	22.9	22.8	16.0	20.4	34.0	4.1	16.3	14.9	13.7	4.8	4.5	4.6	6.3	9.1	10.0	9.3	12.5	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									



Hourly Maximums

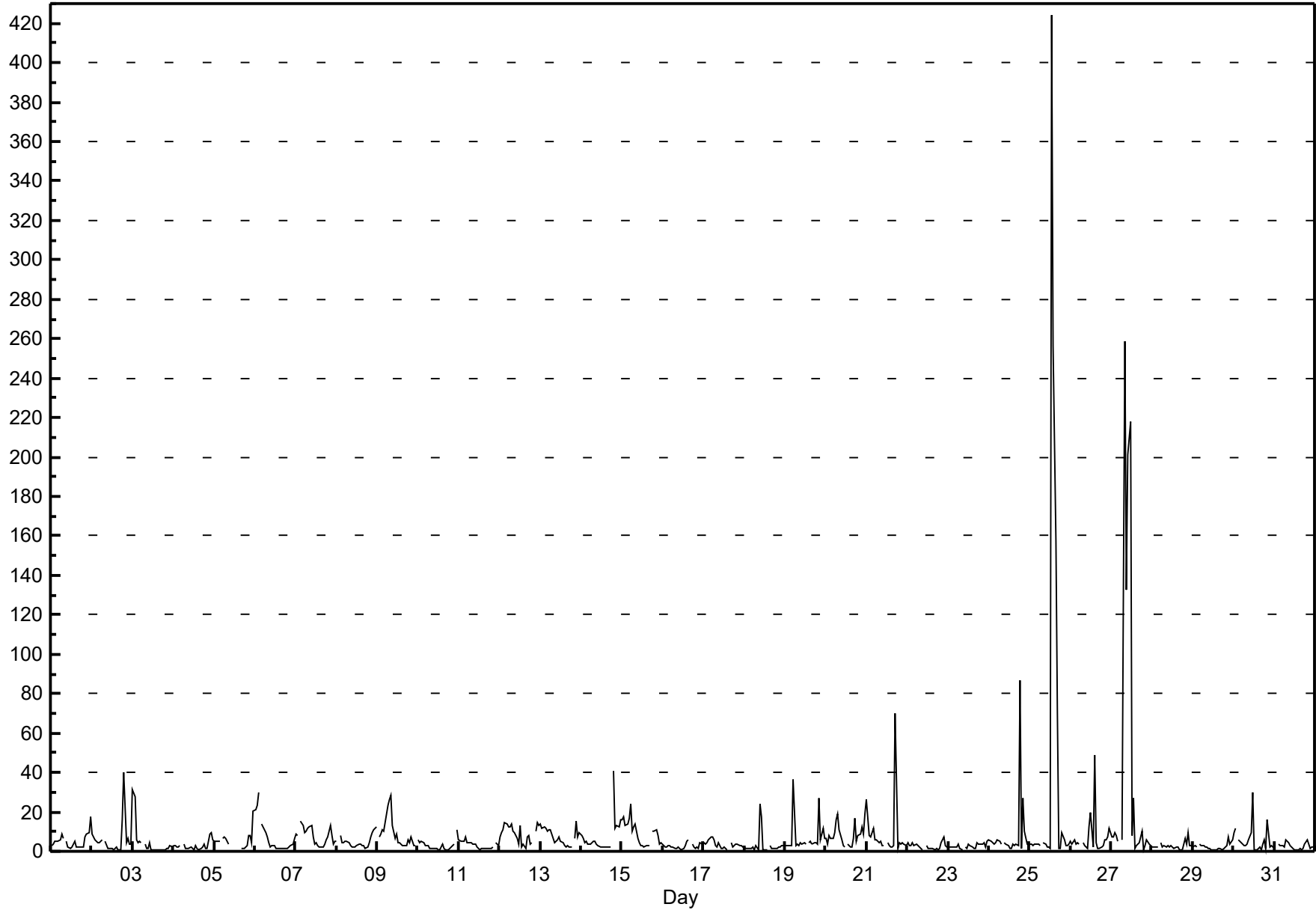
Oxides of Nitrogen (NO_x) - ppb

Portable Rycroft - July 2017

Maximum Value: 424.3 ppb on Jul 25 14:00		Maximum Daily Average: 46.5 ppb on Jul 27		Hours in Service: 744																							
Minimum Value: 0 ppb on Jul 3 19:00		Minimum Daily Average: 2.3 ppb on Jul 29		Hours of Data: 705																							
Maximum Diurnal Average: 17.5 ppb at hour 14		Minimum Diurnal Average: 3.3 ppb at hour 13		Hours of Missing Data: 39																							
Monthly Average: 7.99 ppb		Percentiles: P ₁ = 0.5 P ₁₀ = 1.3 Q ₁ = 2.1 Median = 3.5 Q ₃ = 6.2 P ₉₀ = 12.3 P ₉₉ = 125.8		Hours of Calibration: 39																							
				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-Jul	3	4	5	5	5	6	9	7	A	5	2	2	2	4	5	2	2	2	2	2	7	9	9	18	5.2	17.6	
2-Jul	9	7	6	5	4	5	6	A	5	2	1	2	2	1	2	1	1	1	16	40	4	7	4	4	5.9	40.3	
3-Jul	31	27	6	4	5	4	A	3	2	1	4	1	1	1	1	1	1	0	0	1	2	1	3	2	4.5	31.5	
4-Jul	3	3	2	2	3	A	4	2	1	1	2	1	1	3	1	1	1	3	4	1	2	9	9	6	2.8	9.1	
5-Jul	5	5	5	5	A	7	7	7	4	C	C	C	C	C	C	C	1	1	1	3	8	8	4	21	--	20.5	
6-Jul	21	23	30	A	14	13	10	7	4	2	3	3	2	2	2	1	2	1	1	2	2	3	4	6	6.8	29.8	
7-Jul	8	8	A	15	13	9	10	12	12	13	7	4	4	3	2	2	3	3	6	7	13	8	3	5	7.5	15.1	
8-Jul	5	A	8	5	5	5	4	3	2	2	2	3	4	4	3	3	2	2	4	8	10	11	12	4.8	12.3		
9-Jul	A	7	8	11	10	19	23	26	28	13	6	9	4	4	4	3	3	3	6	5	7	3	3	A	9.4	28.1	
10-Jul	6	5	5	4	3	3	3	2	1	1	1	1	1	1	4	1	1	1	1	2	3	3	A	11	2.8	10.9	
11-Jul	6	5	5	5	7	4	4	5	4	4	4	2	1	1	1	1	1	1	1	2	2	A	4	3	3.3	7.2	
12-Jul	7	9	11	15	14	12	13	14	10	10	7	4	13	3	3	2	7	8	3	4	A	11	15	13	8.9	14.9	
13-Jul	14	11	12	12	10	11	11	6	5	5	6	7	5	4	3	3	3	2	2	A	6	15	7	9	7.4	15.1	
14-Jul	8	6	5	5	3	4	4	5	5	4	3	2	2	2	2	2	2	2	A	41	11	13	13	16	7.1	40.7	
15-Jul	16	17	13	14	17	24	10	12	14	7	4	3	3	3	3	3	A	10	10	11	11	8	4	4	9.2	24.2	
16-Jul	4	2	2	3	3	2	2	2	2	2	1	1	1	3	5	6	A	4	2	2	2	2	4	4	2.6	6.0	
17-Jul	5	4	4	6	7	7	6	3	2	4	1	1	2	1	1	A	4	2	3	4	3	3	3	2	3.4	7.4	
18-Jul	2	2	1	1	1	2	1	3	1	24	18	1	1	1	A	3	2	2	2	2	2	2	3	3	3.4	24.0	
19-Jul	3	3	3	3	3	36	3	3	3	4	3	4	4	A	4	5	3	4	4	4	27	6	12	6	6.6	36.2	
20-Jul	7	3	8	6	7	10	16	19	11	6	3	2	A	4	2	2	6	17	5	8	9	12	9	19	8.3	19.1	
21-Jul	27	8	8	10	11	6	6	4	5	3	3	A	4	3	2	2	3	70	2	4	4	5	3	3	8.5	69.9	
22-Jul	4	3	3	4	3	4	3	2	2	1	A	3	1	1	2	1	1	1	1	1	4	8	3	2	2.6	7.5	
23-Jul	2	2	2	2	2	2	3	2	1	A	2	1	4	3	2	1	1	4	4	4	3	4	2	5	2.6	4.9	
24-Jul	6	5	4	3	4	6	5	3	A	5	4	3	2	2	4	3	4	3	87	1	27	11	4	3	8.6	86.9	
25-Jul	3	4	3	4	3	4	3	A	4	4	2	2	1	424	257	158	71	1	2	10	6	3	3	4	42.4	424.3	
26-Jul	5	4	6	4	4	3	A	4	3	2	2	12	20	2	49	4	2	2	2	3	6	6	8	12	7.1	48.7	
27-Jul	7	7	10	8	5	A	6	137	259	132	201	218	8	27	2	3	4	7	10	1	3	6	4	3	46.5	258.9	
28-Jul	2	2	2	2	A	4	2	3	2	3	2	3	2	1	2	2	1	1	1	6	4	10	3	3	2.7	9.8	
29-Jul	3	3	3	A	4	3	3	2	2	2	1	1	1	1	1	1	1	1	1	2	3	7	4	6	2.3	7.3	
30-Jul	10	11	A	6	4	3	3	3	3	6	9	30	1	1	1	2	1	4	6	1	16	2	3	2	5.5	29.7	
31-Jul	2	A	4	3	3	3	2	6	4	3	2	1	1	1	1	2	1	1	3	6	4	2	2	2	2.5	6.2	
		7.8	7.0	6.4	5.9	6.2	7.7	6.3	10.7	13.9	9.3	10.6	11.2	3.3	17.5	12.8	7.6	4.6	5.2	6.4	6.1	7.0	6.5	5.4	6.9	Diurnal Average	
		31.5	27.3	29.8	15.1	16.9	36.2	23.0	137.1	258.9	132.4	200.9	217.8	19.7	424.3	256.8	157.6	70.7	69.9	86.9	40.7	27.0	15.1	14.9	20.5	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

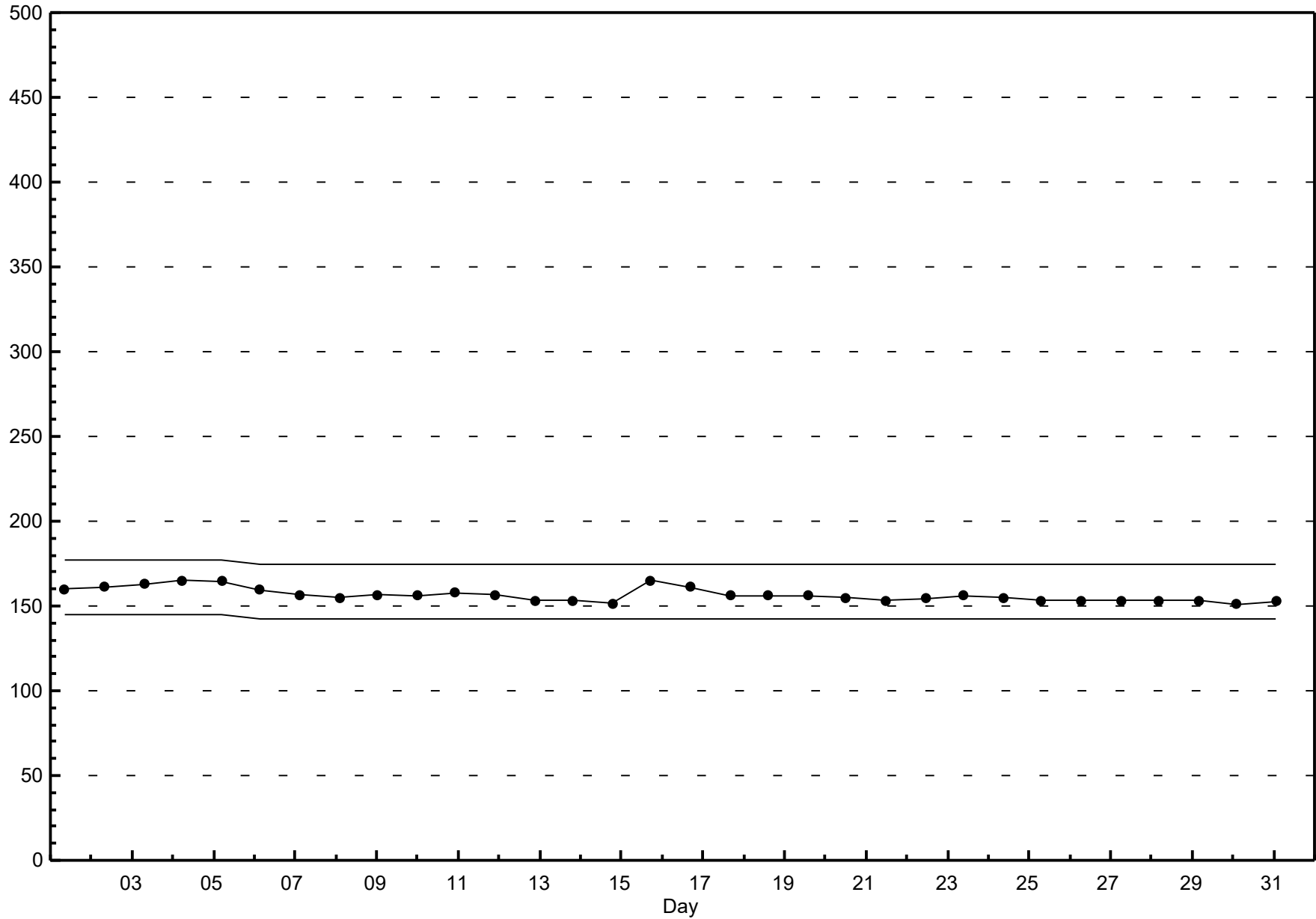
Hourly Maximums

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



Span Responses

Oxides of Nitrogen (NO_x)
Portable Rycroft - July 2017



Hourly Averages

Ozone (O₃) - ppb

Portable Rycroft - July 2017

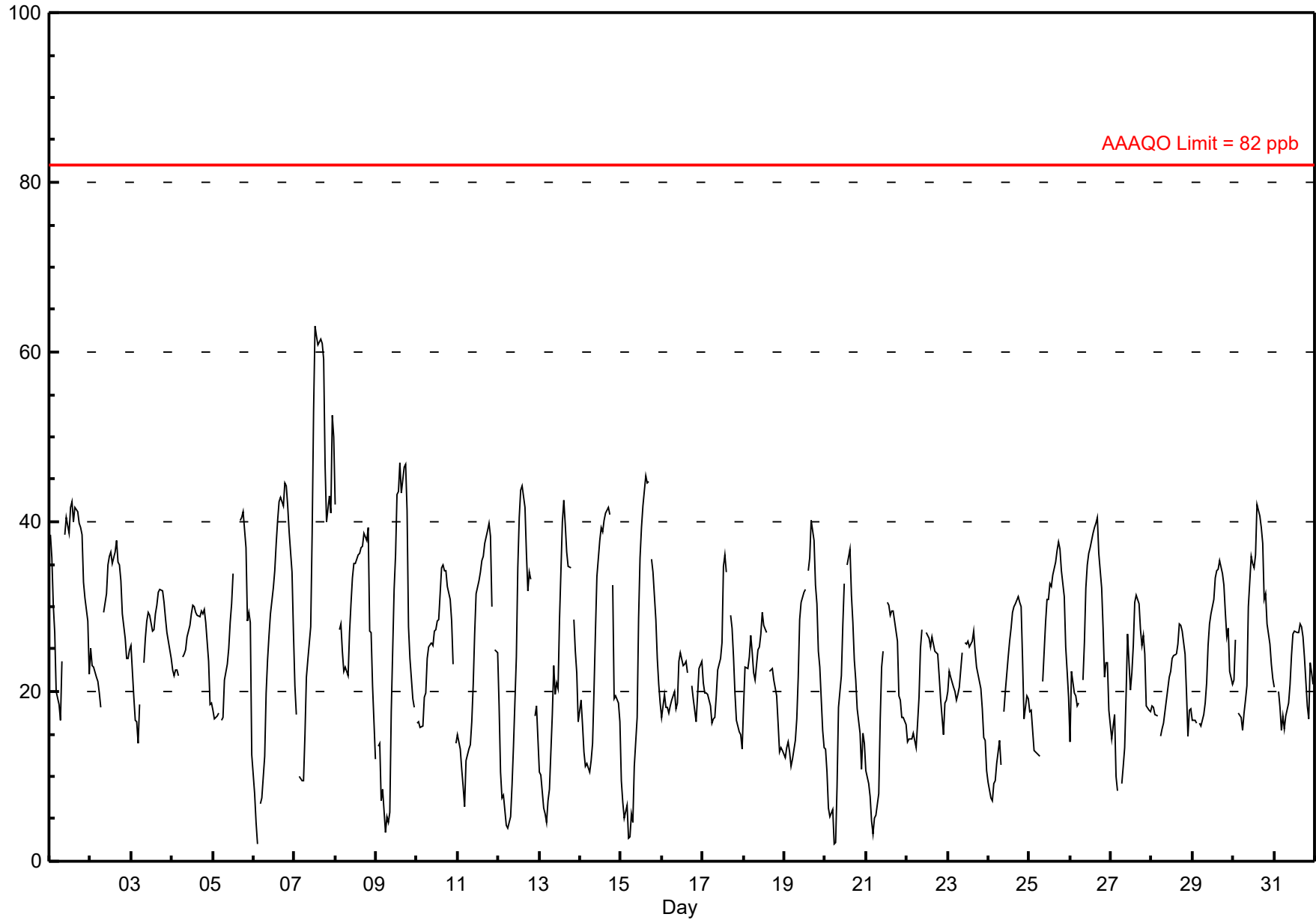
Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 63.0 ppb on Jul 7 13:00	Maximum Daily Average: 38.6 ppb on Jul 7
Minimum Value: 2 ppb on Jul 20 06:00	Hours of Data: 709
Maximum Diurnal Average: 35.5 ppb at hour 15	Hours of Missing Data: 35
Monthly Average: 24.39 ppb	Hours of Calibration: 35
Minimum Daily Average: 17.6 ppb on Jul 20	Percent Operational Time: 100.0
Minimum Diurnal Average: 13.4 ppb at hour 6	
Percentiles: P ₁ = 3.7 P ₁₀ = 11.4 Q ₁ = 17.2 Median = 23.7 Q ₃ = 30.9 P ₉₀ = 38.6 P ₉₉ = 49.5	

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-Jul	38	36	30	27	20	19	17	24	A	38	40	39	42	42	40	42	41	40	39	38	33	31	28	22	33.3	42.4																							
2-Jul	25	23	23	22	21	20	18	A	29	32	35	36	35	36	38	35	35	33	29	26	24	24	25	28.7	37.7																								
3-Jul	25	19	17	17	14	18	A	23	26	28	29	29	27	27	29	30	32	32	32	30	29	27	26	24	25.7	32.0																							
4-Jul	23	22	23	23	22	A	24	24	25	26	28	29	30	30	29	29	29	30	29	30	28	24	19	19	25.8	30.2																							
5-Jul	18	17	17	17	A	17	17	21	23	25	28	30	34	C	C	C	40	41	41	37	28	29	28	13	26.1	41.2																							
6-Jul	8	5	2	A	7	7	12	20	24	27	29	32	34	37	40	42	43	42	45	44	42	39	34	27	27.9	44.5																							
7-Jul	21	17	A	10	10	10	15	22	24	28	39	53	63	62	61	62	61	59	47	40	43	41	53	50	38.6	63.0																							
8-Jul	42	A	A	27	28	25	22	23	22	27	30	33	35	35	36	36	37	37	39	38	39	27	27	21	12	30.4	42.0																						
9-Jul	A	14	14	7	8	3	5	5	6	18	32	36	43	44	47	43	46	47	41	28	24	19	18	A	24.9	46.9																							
10-Jul	16	16	16	16	19	20	24	25	26	25	27	27	28	28	35	35	34	34	32	31	28	23	A	14	25.3	35.0																							
11-Jul	15	13	11	9	6	12	13	14	17	21	27	32	33	34	35	36	37	39	40	38	30	A	25	25	24.4	39.8																							
12-Jul	18	11	7	8	4	4	5	5	9	14	24	35	40	44	44	42	36	32	34	33	A	17	18	14	21.7	44.2																							
13-Jul	10	10	6	6	5	7	8	17	23	20	21	20	28	40	43	40	36	35	35	A	29	25	22	16	21.8	42.5																							
14-Jul	19	16	13	11	11	11	12	14	20	27	34	38	39	39	40	41	42	41	A	33	19	20	19	16	25.0	41.6																							
15-Jul	10	7	5	7	3	3	6	5	11	17	29	36	39	42	45	45	45	A	36	34	28	24	21	19	22.3	45.4																							
16-Jul	17	20	18	18	17	18	19	20	18	19	23	25	23	23	24	22	A	21	19	18	16	20	23	24	20.2	24.5																							
17-Jul	21	20	20	20	18	16	17	17	19	23	24	26	35	36	34	A	29	28	24	20	17	15	15	13	22.0	36.1																							
18-Jul	18	23	23	24	27	25	22	21	25	27	29	28	27	A	22	23	23	21	19	16	13	13	13	13	22.1	29.3																							
19-Jul	12	13	14	13	11	12	14	17	22	29	31	32	32	A	34	36	40	38	33	30	25	23	15	13	23.4	40.2																							
20-Jul	13	10	6	5	6	2	2	9	18	22	28	33	A	35	37	31	28	24	21	18	15	11	15	14	17.6	36.7																							
21-Jul	11	9	8	5	3	5	5	8	17	23	25	A	30	30	29	30	30	28	26	19	19	17	17	16	17.8	30.5																							
22-Jul	14	14	14	14	15	13	16	19	25	27	A	27	27	26	25	27	25	25	24	22	19	15	19	19	20.5	27.2																							
23-Jul	20	22	22	21	20	19	20	21	25	A	26	26	26	25	26	27	25	23	22	20	18	15	14	11	21.4	27.1																							
24-Jul	9	8	7	9	9	12	14	11	A	18	20	24	26	27	29	30	30	31	30	30	24	17	19	19	19.8	31.2																							
25-Jul	18	18	15	13	13	13	12	A	21	28	31	31	33	32	34	35	37	38	37	34	31	25	22	19	25.7	37.6																							
26-Jul	14	22	20	20	18	19	A	21	26	32	35	36	37	39	39	40	40	36	32	27	22	23	23	18	27.9	40.5																							
27-Jul	14	16	17	10	8	A	9	11	13	20	27	20	22	25	31	31	30	27	25	27	24	18	18	18	20.2	31.4																							
28-Jul	18	18	17	17	A	15	16	16	19	20	22	22	24	24	26	28	28	27	24	20	15	18	18	18	20.7	27.9																							
29-Jul	17	17	16	A	16	16	17	19	21	25	28	29	31	33	34	34	35	34	33	29	26	27	22	21	25.3	35.5																							
30-Jul	21	26	A	17	17	15	17	19	21	30	36	35	35	36	42	41	39	38	31	32	28	26	23	21	28.1	42.0																							
31-Jul	20	A	20	18	15	17	16	17	19	21	24	27	27	27	27	28	28	26	24	18	17	23	22	21	21.9	27.9																							
																								18.2	16.6	15.5	14.8	13.5	13.4	14.3	16.8	20.6	24.6	28.7	30.9	33.0	34.1	35.5	35.2	35.4	33.7	31.7	29.1	25.1	22.4	21.8	19.1	Diurnal Average	
																								42.0	35.7	30.2	28.0	26.7	24.6	24.1	25.3	29.4	38.4	40.5	53.0	63.0	61.9	60.8	61.6	61.0	59.1	46.7	44.2	43.1	41.1	52.5	49.9	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na

Hourly Averages

Ozone (O₃) - ppb
Portable Rycroft - July 2017



Hourly Maximums

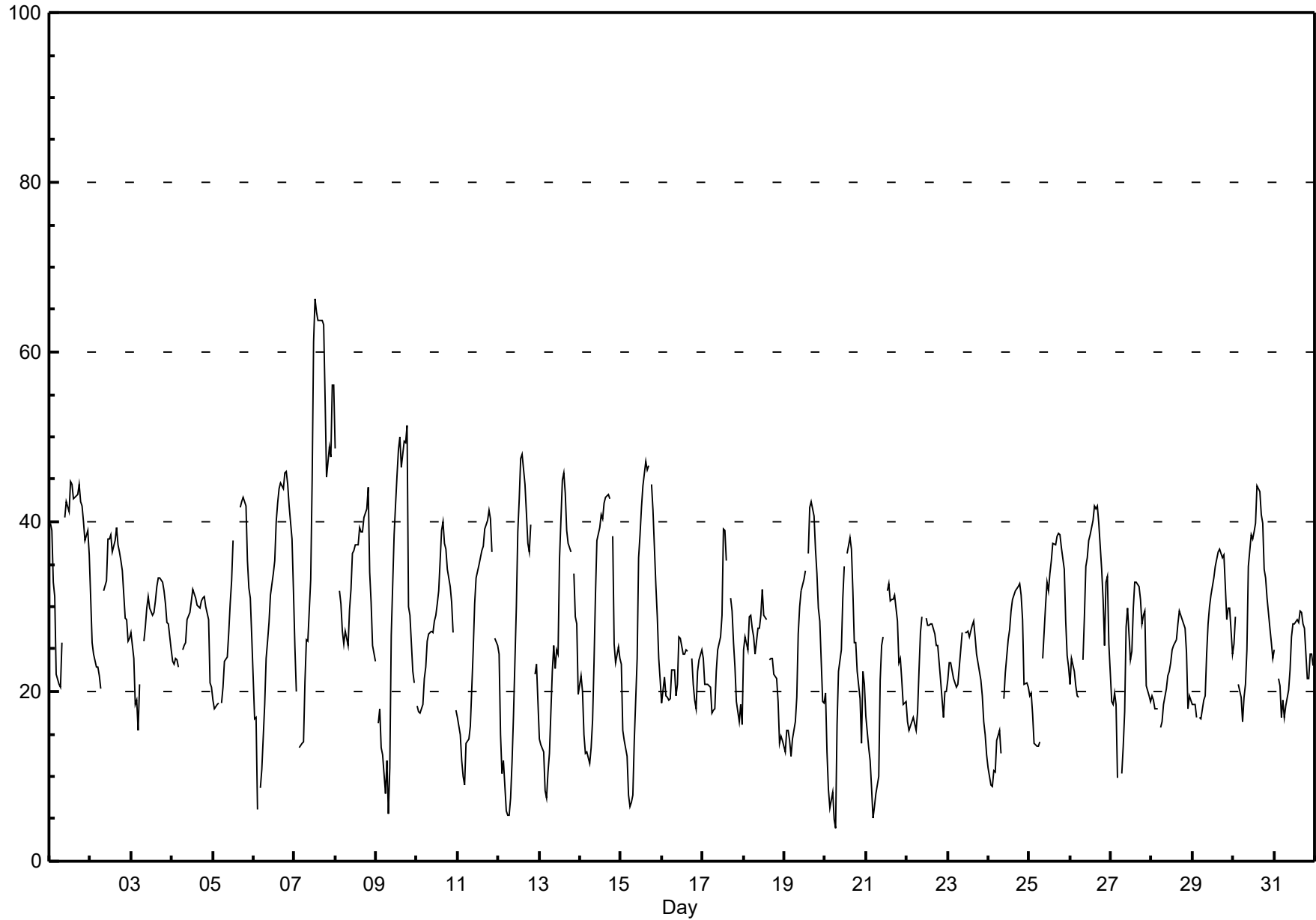
Ozone (O₃) - ppb

Portable Rycroft - July 2017

Maximum Value: 66.3 ppb on Jul 7 13:00		Maximum Daily Average: 43.2 ppb on Jul 7		Hours in Service: 744																						
Minimum Value: 4 ppb on Jul 20 07:00		Minimum Daily Average: 20.7 ppb on Jul 21		Hours of Data: 709																						
Maximum Diurnal Average: 37.7 ppb at hour 15		Minimum Diurnal Average: 15.5 ppb at hour 5		Hours of Missing Data: 35																						
Monthly Average: 27.18 ppb		Percentiles: P ₁ = 5.9 P ₁₀ = 14.3 Q ₁ = 19.5 Median = 26.2 Q ₃ = 33.9 P ₉₀ = 41.3 P ₉₉ = 60.0		Hours of Calibration: 35																						
				Percent Operational Time: 100.0																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	40	39	33	31	22	21	20	26	A	41	42	41	45	44	43	43	43	44	42	42	40	38	39	36	37.2	44.8
2-Jul	31	26	24	23	23	22	20	A	32	33	38	38	38	36	38	39	37	36	35	34	29	28	26	26	31.1	39.4
3-Jul	27	24	18	19	15	21	A	26	28	30	31	30	29	29	31	32	33	33	33	32	30	28	28	25	27.5	33.4
4-Jul	24	23	24	24	23	A	25	25	26	28	29	31	32	32	31	30	30	31	31	31	30	28	21	20	27.4	32.0
5-Jul	19	18	18	19	A	19	21	24	24	27	30	33	38	C	C	C	42	42	43	42	35	32	31	27	29.1	42.8
6-Jul	17	17	6	A	9	11	19	24	26	28	31	34	35	40	42	44	45	44	46	46	44	42	38	32	31.3	45.9
7-Jul	25	20	A	13	14	14	21	26	26	33	45	61	66	65	64	64	64	63	55	45	49	48	56	56	43.2	66.3
8-Jul	49	A	A	32	30	27	26	27	25	30	32	36	37	37	39	39	39	41	42	44	34	30	25	23	34.0	48.6
9-Jul	A	16	18	13	13	8	12	6	11	27	38	42	45	48	50	46	49	49	51	30	29	22	21	A	29.4	51.4
10-Jul	18	18	17	18	21	23	26	27	27	27	28	29	30	32	39	40	37	37	34	32	30	27	A	18	27.7	39.9
11-Jul	17	15	12	10	9	14	14	16	20	25	30	33	35	36	37	37	39	40	41	40	36	A	26	25	26.5	41.4
12-Jul	24	15	10	12	6	5	5	7	12	17	30	39	43	48	48	44	41	37	36	40	A	22	23	19	25.4	47.9
13-Jul	14	14	13	8	7	10	13	22	25	23	25	24	36	45	46	43	39	38	36	A	34	29	28	20	25.8	45.8
14-Jul	22	20	15	13	13	12	13	17	23	31	38	39	41	40	42	43	43	43	A	38	26	23	25	24	28.0	43.2
15-Jul	23	15	14	12	8	6	7	8	14	24	36	39	42	44	47	46	47	A	44	41	33	29	24	21	27.2	47.0
16-Jul	19	22	19	19	19	19	22	22	19	21	26	26	24	24	25	25	A	24	21	19	18	22	24	25	22.0	26.4
17-Jul	24	21	21	21	20	17	18	18	22	25	26	29	39	39	35	A	31	29	26	23	19	16	18	16	24.1	39.1
18-Jul	25	26	25	29	29	27	26	24	27	27	29	32	29	28	A	24	24	24	22	21	19	14	15	14	24.5	32.0
19-Jul	13	15	15	14	12	14	16	19	27	30	32	33	34	A	36	42	42	41	37	34	30	28	19	19	26.3	42.3
20-Jul	20	13	8	6	8	5	4	16	22	25	31	35	A	36	38	37	32	26	26	22	19	14	22	21	21.2	38.2
21-Jul	17	13	12	9	5	6	8	10	21	25	26	A	32	33	31	31	31	31	28	23	24	21	18	19	20.7	32.7
22-Jul	16	15	16	16	17	15	18	23	27	29	A	29	28	28	28	28	27	25	25	23	21	17	20	20	22.2	28.8
23-Jul	21	23	23	21	21	20	21	23	27	A	27	27	27	26	28	28	26	24	23	21	19	16	15	13	22.8	28.3
24-Jul	11	9	9	11	10	14	15	13	A	19	22	26	27	29	31	31	32	32	33	31	28	21	21	20	21.6	32.8
25-Jul	19	20	17	14	13	13	14	A	24	30	33	32	34	35	37	37	38	39	38	37	34	28	24	23	27.7	38.6
26-Jul	21	24	22	21	20	19	A	24	29	35	36	38	38	40	42	42	42	40	34	31	25	33	34	26	31.1	41.8
27-Jul	19	18	20	18	10	A	10	14	18	28	30	24	25	30	33	33	32	31	28	29	29	21	19	19	23.3	32.9
28-Jul	19	19	18	18	A	16	16	18	20	22	22	23	25	25	26	28	29	29	28	27	25	18	20	19	22.3	29.5
29-Jul	19	19	17	A	17	17	19	19	24	28	30	31	33	35	36	36	37	36	36	32	28	30	30	24	27.5	36.9
30-Jul	26	29	A	21	19	16	19	21	25	35	38	38	39	40	44	44	41	40	34	33	31	27	26	24	30.9	44.2
31-Jul	25	A	21	21	17	19	17	18	20	23	26	28	28	28	29	29	28	27	21	22	24	24	23		23.9	29.5
		22.1	19.5	18.0	17.4	15.5	15.6	16.9	19.4	23.4	27.6	31.5	33.4	35.2	36.4	37.7	37.5	37.4	35.9	34.6	32.3	29.1	26.0	25.4	23.2	Diurnal Average
		48.6	38.9	32.9	31.1	29.0	27.5	27.2	26.8	31.9	40.6	44.9	61.2	66.3	64.7	63.7	63.7	63.7	63.2	54.5	45.9	48.9	47.6	56.1	56.1	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																								

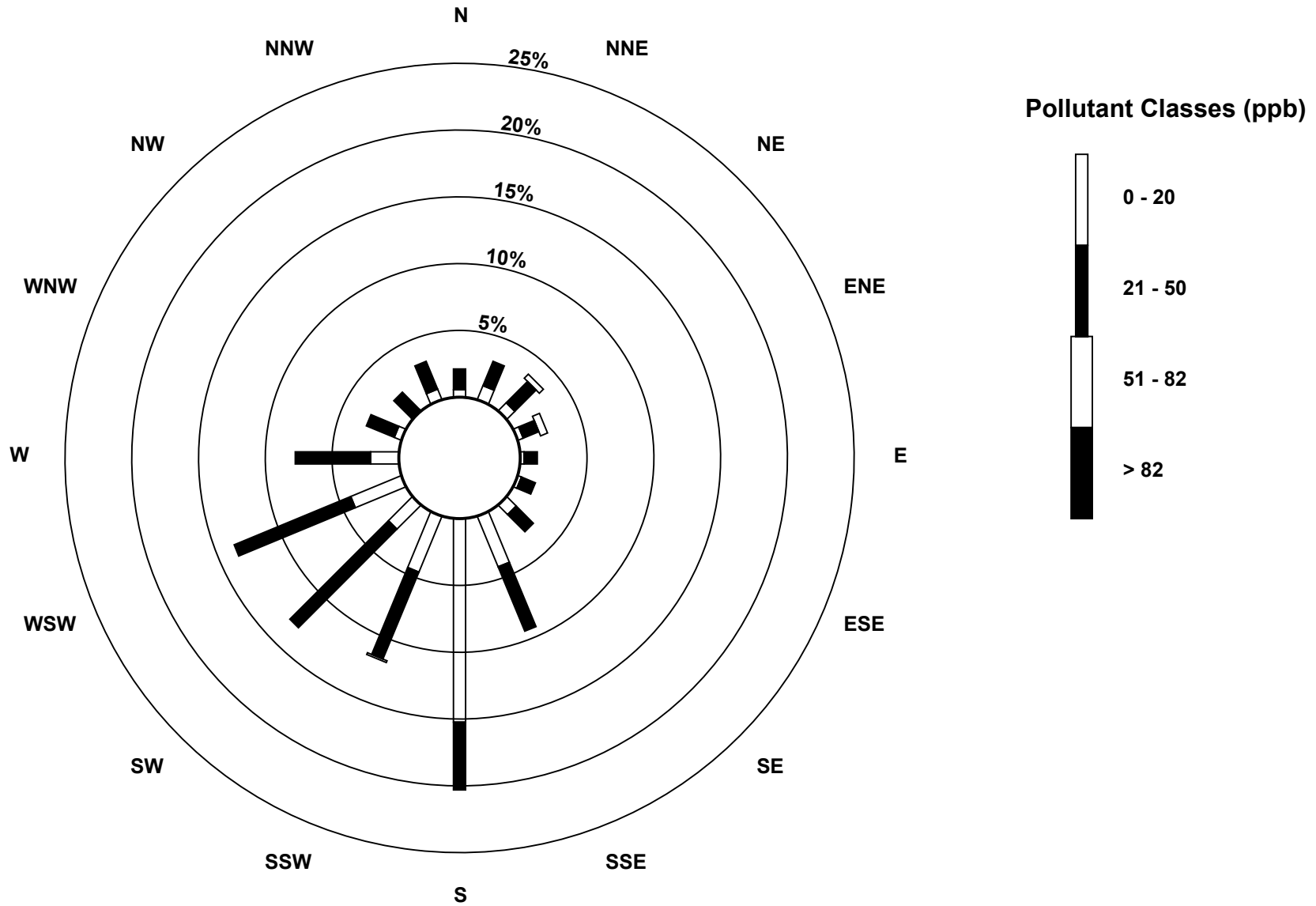
Hourly Maximums

Ozone (O₃) - ppb
Portable Rycroft - July 2017



Pollutant Rose

Ozone (O₃) - ppb
Portable Rycroft - July 2017



Eight Hour Running Averages

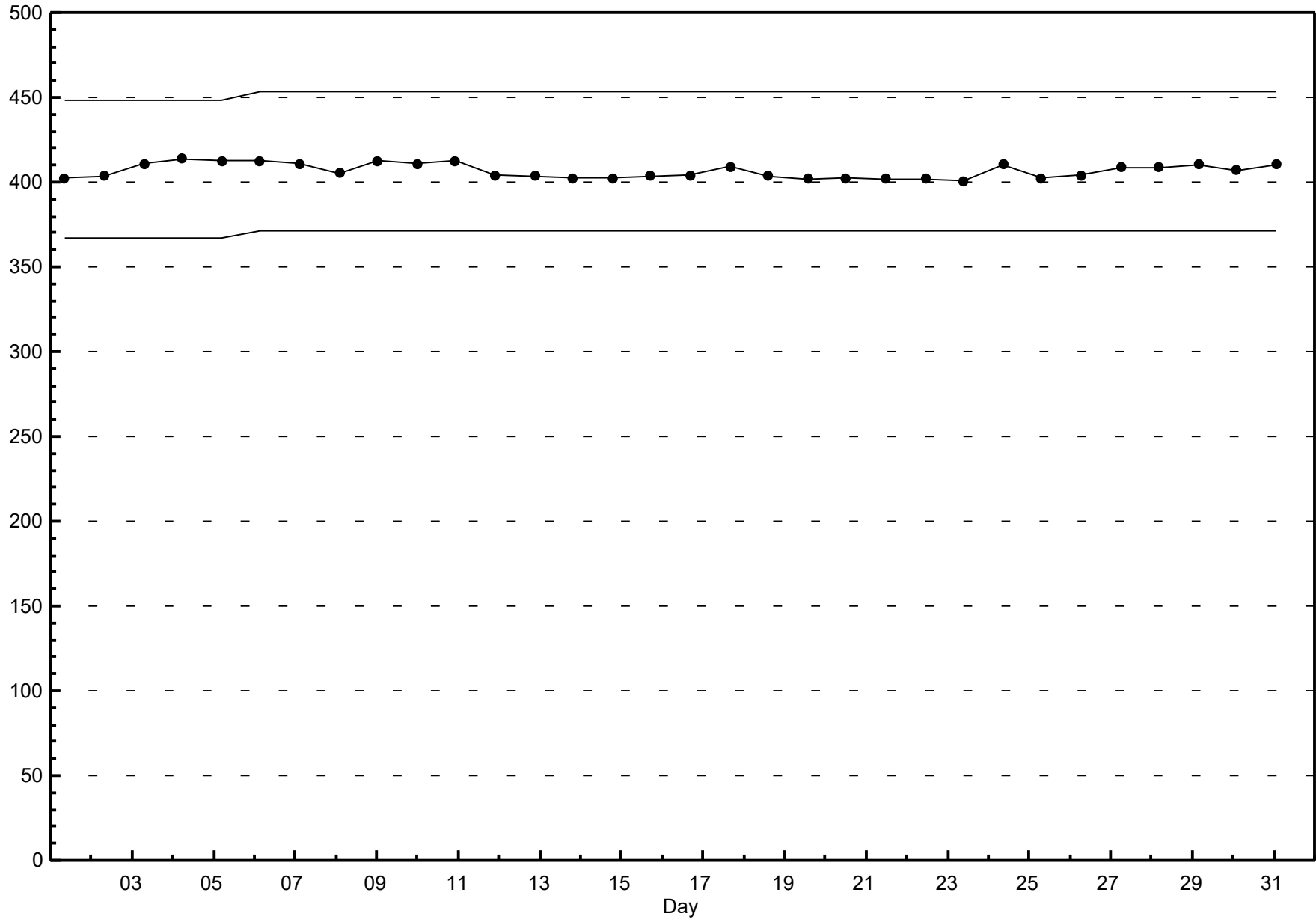
Ozone (O₃) - ppb

Portable Rycroft - July 2017

Maximum Value: 58.4 ppb on Jul 7 19:00																								Hours in Service: 744 Hours of Data: 738 Hours of Missing Data: 6 Hours of Calibration: 6 Percent Operational Time: 100.0	
Minimum Value: 5.5 ppb on Jul 15 08:00																									
Percentiles: P ₁ = 6.9 P ₁₀ = 13.3 Q ₁ = 18.5 Median = 23.8 Q ₃ = 29.9 P ₉₀ = 36.1 P ₉₉ = 49.7																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Jul	41	40	38	36	33	31	28	26	25	25	26	28	31	35	38	40	41	41	41	41	39	38	37	34	41.3
2-Jul	32	30	28	26	24	23	22	22	22	24	25	27	29	32	34	35	35	36	36	35	33	32	31	29	35.8
3-Jul	28	26	24	22	21	20	19	19	19	20	22	24	26	27	27	28	29	29	30	30	30	30	30	29	30.2
4-Jul	28	27	25	24	24	23	23	23	23	24	25	26	27	27	28	28	29	29	29	29	29	28	27	26	29.5
5-Jul	24	23	21	20	19	18	17	18	18	20	21	23	24	26	27	N	N	N	N	N	N	36	35	32	36.1
6-Jul	28	24	19	16	13	10	8	9	11	14	18	20	23	27	30	33	36	38	39	41	42	42	41	39	42.1
7-Jul	37	34	32	27	22	18	16	15	15	17	19	25	32	38	44	49	53	57	58	57	54	52	51	49	58.4
8-Jul	47	45	42	41	38	35	31	27	25	26	26	27	29	30	32	34	35	36	37	37	36	35	33	30	46.8
9-Jul	29	25	22	17	15	11	9	8	8	8	11	14	18	24	29	34	39	42	43	42	40	37	33	32	43.5
10-Jul	28	23	20	18	17	17	18	19	20	21	23	24	25	26	28	29	30	31	32	32	32	32	31	28	32.3
11-Jul	25	22	19	16	13	11	12	12	12	13	15	18	21	24	27	29	32	34	36	37	36	37	35	33	36.7
12-Jul	31	27	22	18	14	13	10	8	7	7	9	12	17	22	27	31	35	37	38	38	38	34	30	26	38.4
13-Jul	23	20	16	12	11	10	8	9	10	12	13	15	18	22	27	29	31	33	35	37	37	34	32	28	36.6
14-Jul	26	23	20	19	17	15	14	13	14	15	18	21	24	28	31	35	37	39	40	39	36	34	30	27	39.9
15-Jul	22	18	16	13	11	9	7	5	6	7	10	14	18	23	28	33	37	40	41	41	39	37	33	29	41.0
16-Jul	26	25	23	21	19	19	18	18	19	18	19	20	21	21	22	22	23	23	22	21	20	20	20	20	25.5
17-Jul	20	20	20	20	20	20	19	19	18	19	19	20	22	25	27	28	29	30	30	29	27	24	21	20	30.2
18-Jul	19	18	18	19	20	21	22	23	24	24	25	25	26	26	26	26	26	26	25	23	22	20	19	18	26.2
19-Jul	16	15	14	13	13	13	13	13	15	16	18	21	23	25	28	31	33	35	35	35	34	32	30	27	34.9
20-Jul	24	20	17	14	12	9	7	7	7	9	12	15	16	21	26	29	31	31	30	28	26	23	20	18	30.8
21-Jul	16	14	13	11	9	9	7	7	7	9	11	12	16	20	23	26	28	29	29	28	26	25	23	22	29.0
22-Jul	20	18	16	16	15	15	15	15	17	18	19	20	22	24	25	26	26	26	26	25	24	23	22	21	26.3
23-Jul	20	20	20	20	20	20	20	20	21	21	21	22	23	24	25	26	26	25	25	24	23	22	20	18	25.8
24-Jul	17	15	13	11	10	10	10	10	10	12	13	15	18	20	22	25	26	27	29	29	29	28	26	25	29.3
25-Jul	24	22	20	18	17	16	15	15	15	17	19	21	24	27	30	31	33	34	34	35	35	34	32	30	34.9
26-Jul	28	26	24	22	20	19	19	19	21	22	24	27	29	32	33	35	37	38	37	36	34	33	31	28	37.8
27-Jul	25	22	20	18	16	15	13	12	12	13	14	16	18	18	21	24	26	27	27	27	28	27	25	23	27.7
28-Jul	22	21	20	19	18	17	17	17	17	17	18	19	19	20	22	23	24	25	25	26	25	24	23	22	25.7
29-Jul	21	19	18	17	17	17	17	17	17	19	20	21	23	25	28	30	31	32	33	33	32	32	30	29	33.0
30-Jul	27	26	25	23	22	20	19	19	19	20	22	24	26	29	32	34	37	38	37	37	36	34	32	30	37.6
31-Jul	27	26	24	22	21	19	18	18	17	18	18	19	21	22	24	25	26	27	27	26	24	24	23	22	27.3
46.8 45.0 42.3 40.6 37.9 35.2 31.0 27.0 24.9 25.5 26.4 28.0 31.5 38.0 43.8 48.8 53.4 57.4 58.4 56.7 54.3 51.7 50.6 49.2																								Diurnal Maximums	
N - Not Valid																									

Span Responses

Ozone (O₃)
Portable Rycroft - July 2017



Hourly Averages

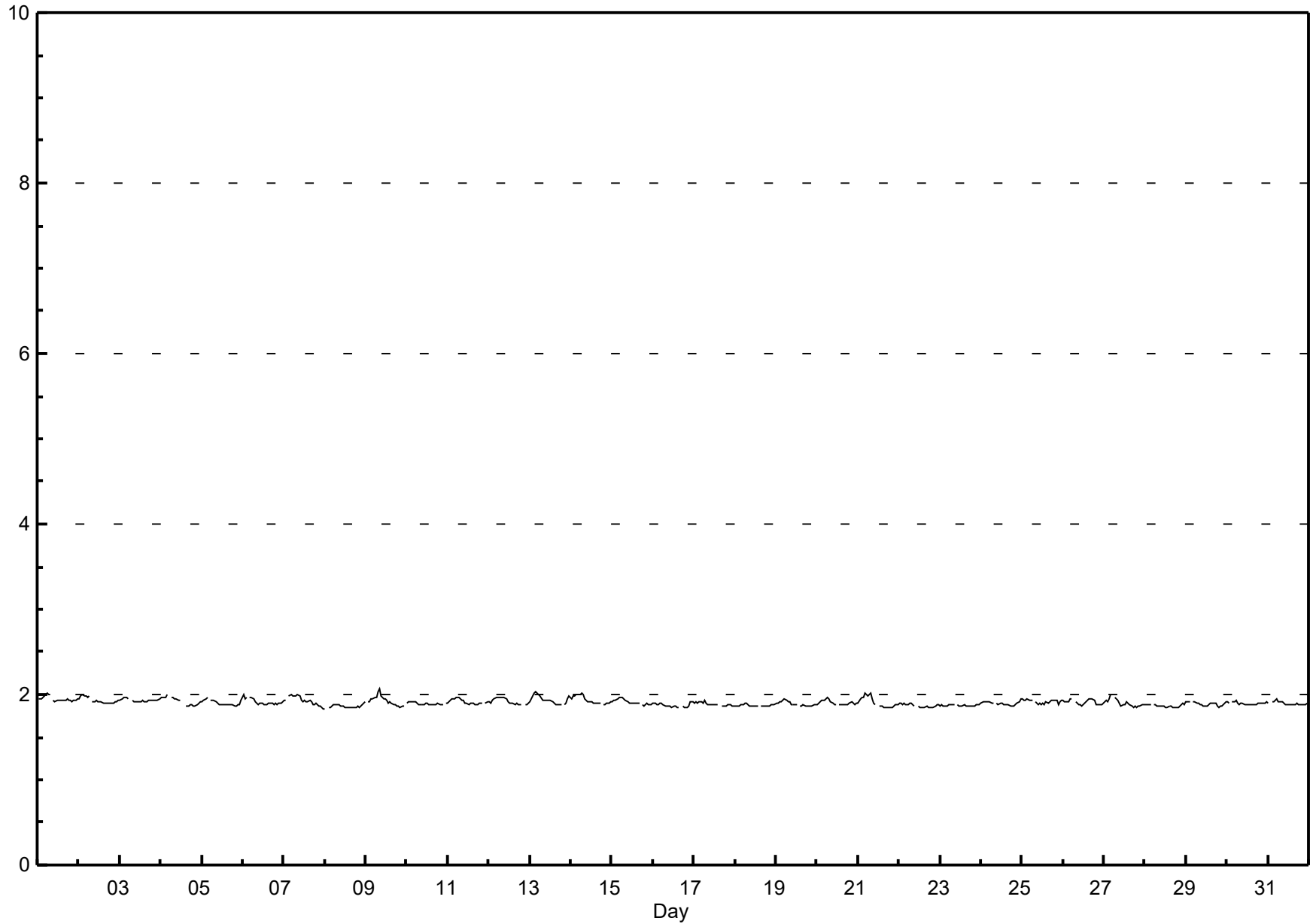
Total Hydrocarbons (THC) - ppm

Portable Rycroft - July 2017

Maximum Value: 2.06 ppm on Jul 9 09:00		Maximum Daily Average: 1.95 ppm on Jul 1		Hours in Service: 744																							
Minimum Value: 1.8 ppm on Jul 8 01:00		Minimum Daily Average: 1.86 ppm on Jul 8		Hours of Data: 709																							
Maximum Diurnal Average: 1.95 ppm at hour 5		Minimum Diurnal Average: 1.88 ppm at hour 20		Hours of Missing Data: 35																							
Monthly Average: 1.904 ppm		Percentiles: P ₁ = 1.85 P ₁₀ = 1.86 Q ₁ = 1.88 Median = 1.89 Q ₃ = 1.93 P ₉₀ = 1.96 P ₉₉ = 2.01		Hours of Calibration: 35																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jul	1.9	1.9	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	1.9	1.9	1.95	2.01
2-Jul	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	1.9	1.9	1.9	1.93	1.99
3-Jul	1.9	1.9	2.0	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	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.93	1.97	
4-Jul	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	1.9	1.9	1.9	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.92	1.99
5-Jul	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	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.90	1.96	
6-Jul	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	1.9	1.9	1.9	1.91	1.99	
7-Jul	1.9	1.9	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	1.8	1.93	1.99	
8-Jul	1.8	A	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.9	1.8	1.9	1.9	1.9	1.9	1.86	1.91	
9-Jul	A	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	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	1.92	2.06	
10-Jul	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	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	1.89	1.92	
11-Jul	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	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.92	1.96	
12-Jul	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	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.92	1.97	
13-Jul	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	1.94	2.03	
14-Jul	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	1.9	A	1.9	1.9	1.9	1.9	1.94	2.02	
15-Jul	1.9	1.9	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	A	1.9	1.9	1.9	1.9	1.9	1.9	1.91	1.97	
16-Jul	1.9	1.9	1.9	1.9	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	1.87	1.92	
17-Jul	1.9	1.9	1.9	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	1.89	1.94	
18-Jul	1.9	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	1.87	1.90	
19-Jul	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	1.89	1.94	
20-Jul	1.9	1.9	1.9	1.9	1.9	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	1.9	1.9	1.9	1.9	1.9	1.9	1.90	1.97	
21-Jul	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	A	1.9	1.9	1.8	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.91	2.02	
22-Jul	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	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.87	1.90	
23-Jul	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	1.87	1.89	
24-Jul	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	2.0	1.90	1.95		
25-Jul	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	1.9	1.9	1.9	1.9	1.92	1.96	
26-Jul	1.9	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	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.91	1.95	
27-Jul	1.9	1.9	1.9	1.9	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	1.9	1.9	1.9	1.9	1.90	1.99	
28-Jul	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.87	1.89	
29-Jul	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.89	1.92	
30-Jul	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.90	1.93	
31-Jul	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.90	1.95	
		1.91	1.92	1.93	1.94	1.95	1.94	1.94	1.93	1.92	1.91	1.90	1.89	1.89	1.89	1.89	1.89	1.89	1.88	1.88	1.88	1.88	1.88	1.89	1.91	Diurnal Average	
		1.99	1.98	2.02	2.03	2.03	2.01	2.02	2.03	2.06	1.99	1.95	1.95	1.93	1.93	1.93	1.95	1.95	1.95	1.94	1.94	1.93	1.94	1.94	1.98	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

Hourly Averages

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



Hourly Maximums

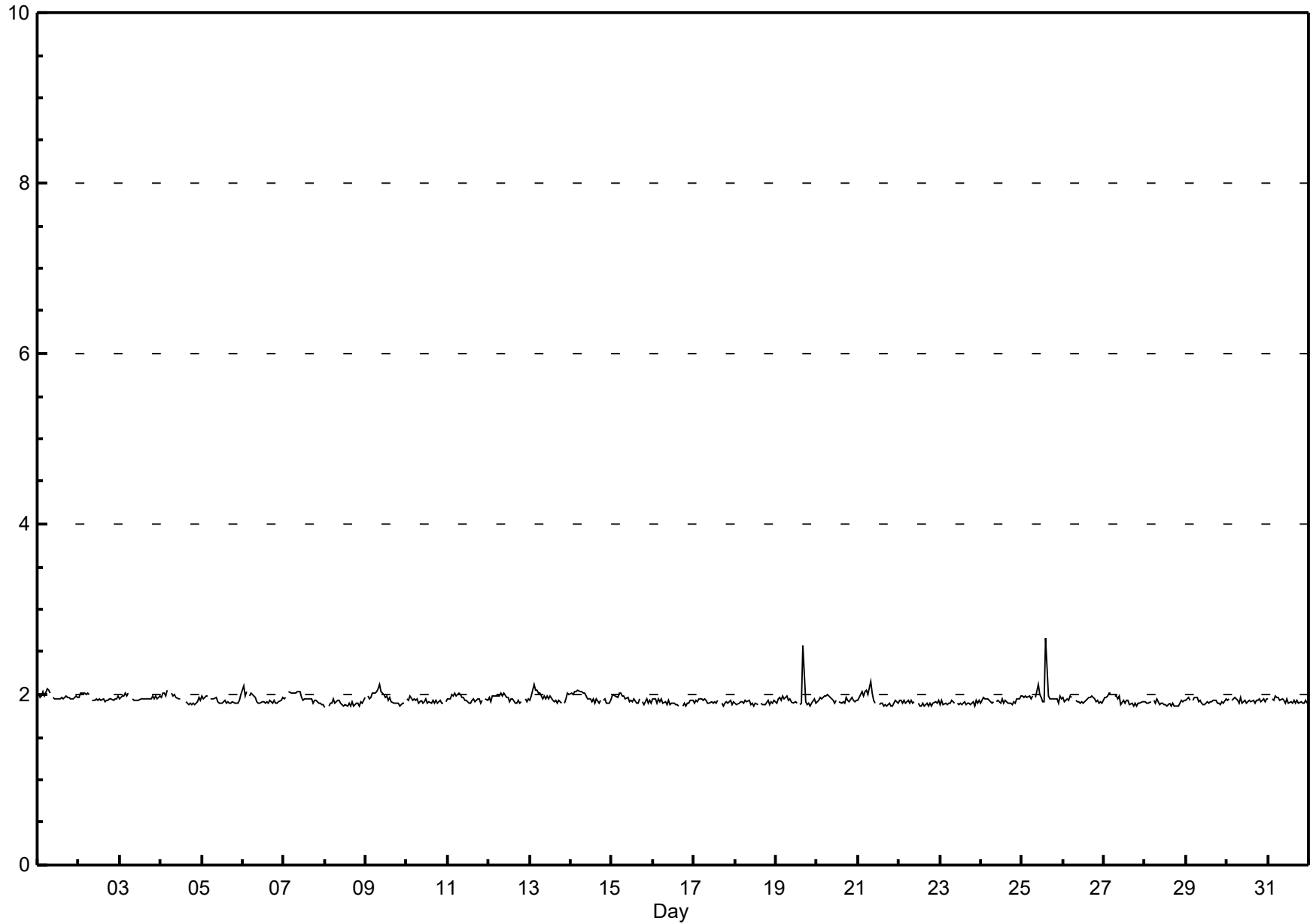
Total Hydrocarbons (THC) - ppm

Portable Rycroft - July 2017

Maximum Value: 2.66 ppm on Jul 25 15:00		Maximum Daily Average: 2.00 ppm on Jul 25		Hours in Service: 744																						
Minimum Value: 1.8 ppm on Jul 8 01:00		Minimum Daily Average: 1.89 ppm on Jul 8		Hours of Data: 709																						
Maximum Diurnal Average: 1.98 ppm at hour 5		Minimum Diurnal Average: 1.91 ppm at hour 21		Hours of Missing Data: 35																						
Monthly Average: 1.938 ppm		Percentiles: P ₁ = 1.86 P ₁₀ = 1.89 Q ₁ = 1.91 Median = 1.93 Q ₃ = 1.96 P ₉₀ = 2.00 P ₉₉ = 2.08		Hours of Calibration: 35																						
				Percent Operational Time: 100.0																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	A	2.0	1.9	1.9	2.0	2.0	1.9	1.9	2.0	2.0	1.9	1.9	2.0	2.0	2.0	1.98	2.07	
2-Jul	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	1.9	1.96	2.02	
3-Jul	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	1.9	1.9	1.9	2.0	1.9	2.0	2.0	1.96	2.02	
4-Jul	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.95	2.05	
5-Jul	2.0	1.9	2.0	2.0	A	2.0	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	2.0	1.93	2.00	
6-Jul	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	2.0	1.94	2.09	
7-Jul	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	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.96	2.04	
8-Jul	1.8	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	1.89	1.96	
9-Jul	A	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.96	2.12	
10-Jul	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.92	1.98	
11-Jul	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	2.0	1.9	1.9	A	1.9	1.95	2.01	
12-Jul	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	1.9	1.9	1.9	1.9	1.9	A	1.9	2.0	1.95	2.02	
13-Jul	1.9	2.0	2.1	2.1	2.1	2.0	2.0	1.9	2.0	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	1.97	2.12	
14-Jul	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	2.0	1.9	2.0	1.9	1.9	A	1.9	1.9	1.9	1.9	1.97	2.05	
15-Jul	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	2.0	A	1.9	1.9	1.9	1.9	1.9	1.95	2.01	
16-Jul	1.9	1.9	1.9	1.9	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	
17-Jul	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.92	1.95	
18-Jul	1.9	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	1.90	1.94	
19-Jul	1.9	1.9	2.0	1.9	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	A	1.9	1.9	2.6	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.95	2.57	
20-Jul	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	1.9	1.9	1.94	2.00	
21-Jul	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	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	1.94	2.15	
22-Jul	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	1.90	1.94	
23-Jul	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	1.94	
24-Jul	1.9	2.0	1.9	2.0	2.0	1.9	1.9	1.9	A	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.93	1.98	
25-Jul	2.0	2.0	2.0	2.0	2.0	1.9	2.0	A	2.0	2.1	2.0	2.0	1.9	1.9	2.7	2.0	1.9	2.0	1.9	2.0	2.0	1.9	2.0	2.00	2.66	
26-Jul	2.0	1.9	1.9	1.9	2.0	2.0	A	1.9	1.9	1.9	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	1.93	1.98	
27-Jul	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	1.9	1.9	1.93	2.01	
28-Jul	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.90	1.94	
29-Jul	1.9	2.0	1.9	A	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	2.0	1.9	1.92	1.96	
30-Jul	1.9	2.0	A	1.9	2.0	2.0	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	2.0	1.9	1.93	1.96	
31-Jul	2.0	A	2.0	1.9	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.93	1.98	
		1.95	1.96	1.97	1.97	1.98	1.97	1.97	1.96	1.95	1.94	1.92	1.92	1.92	1.91	1.94	1.91	1.94	1.91	1.91	1.91	1.91	1.91	1.91	Diurnal Average	
		2.09	2.01	2.12	2.06	2.06	2.07	2.05	2.15	2.12	2.12	2.00	1.96	1.99	1.95	2.66	1.98	2.57	1.98	1.96	1.98	1.96	1.99	2.02	2.00	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																								

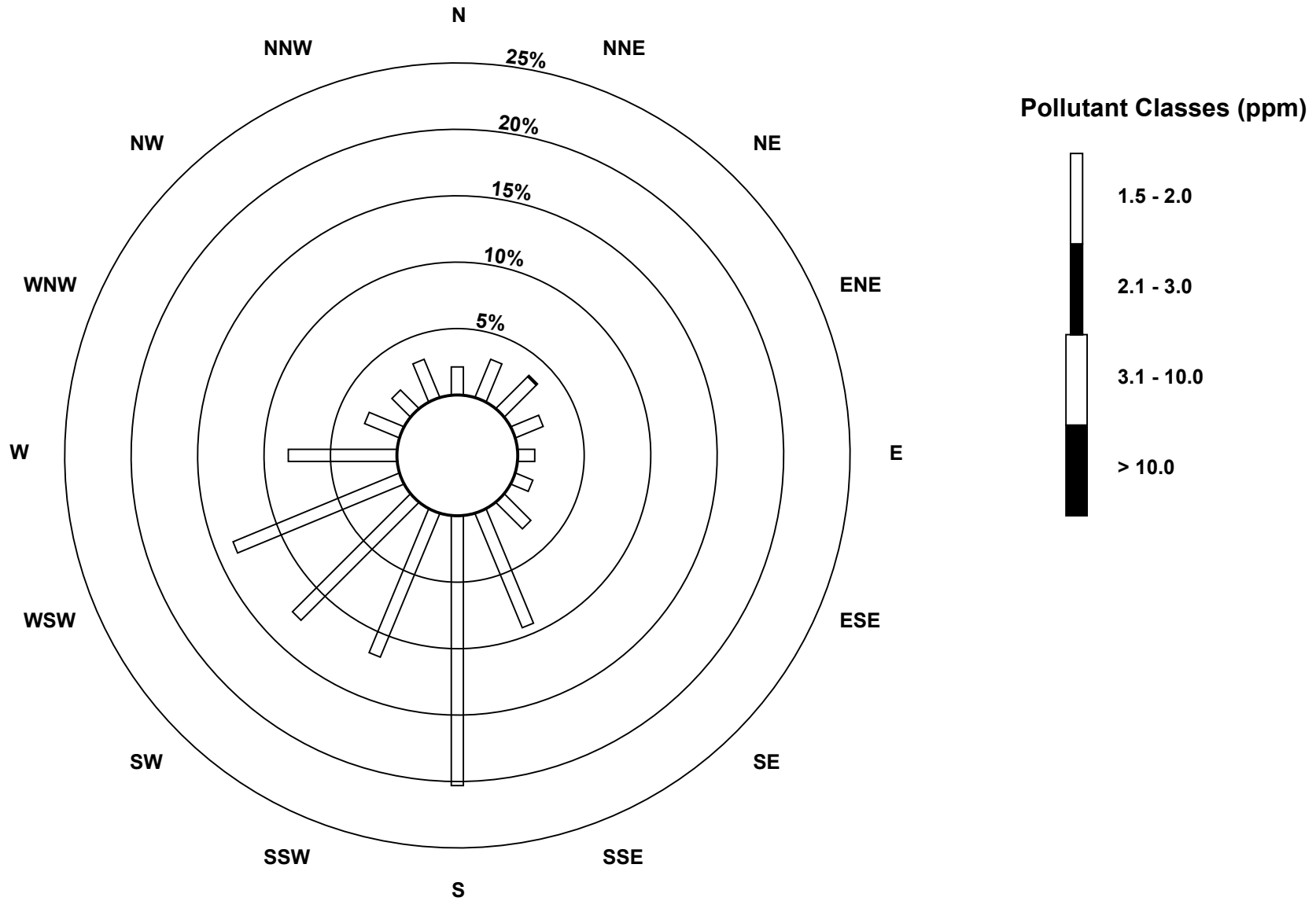
Hourly Maximums

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



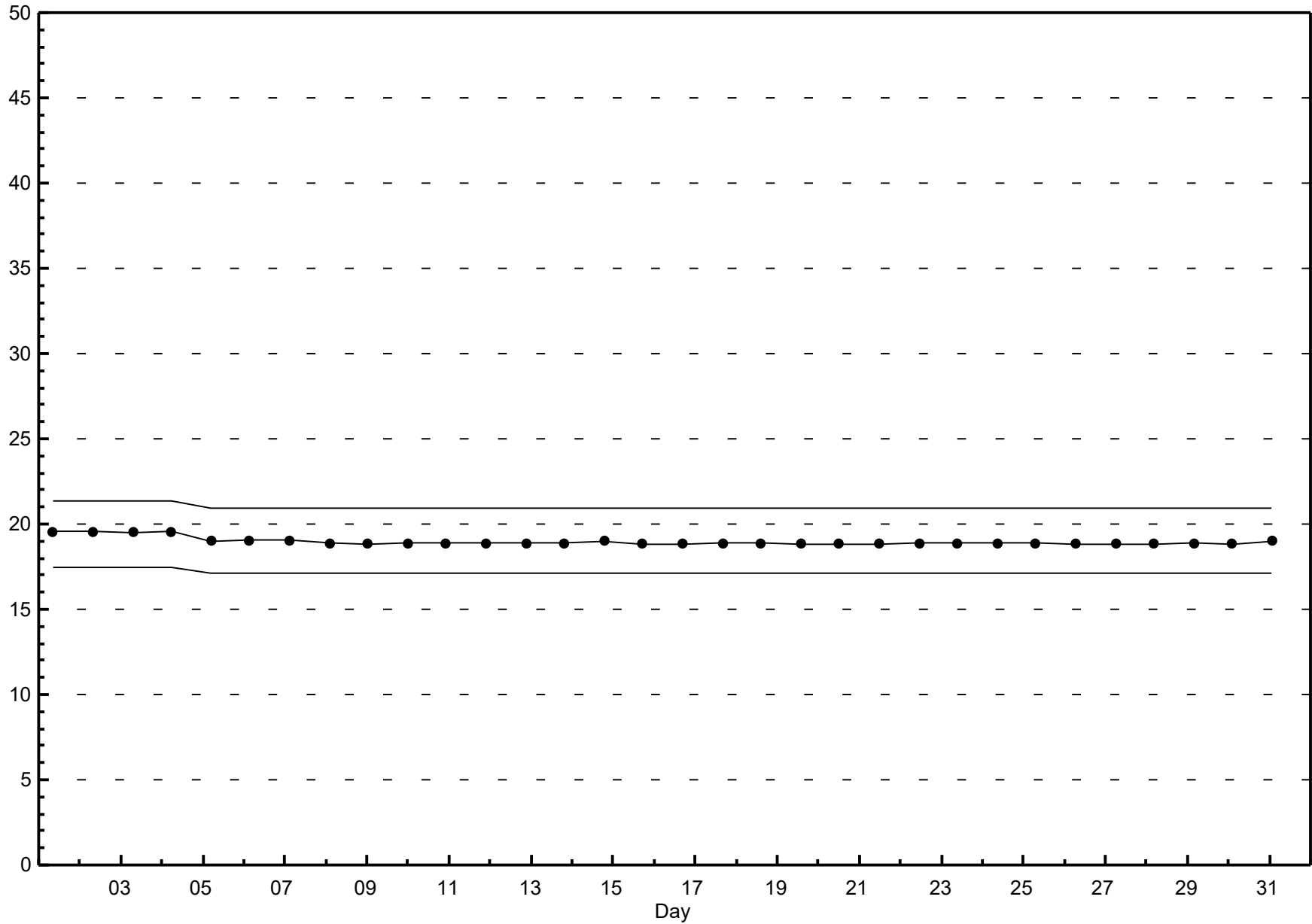
Pollutant Rose

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



Span Responses

**Total Hydrocarbons (THC)
Portable Rycroft - July 2017**



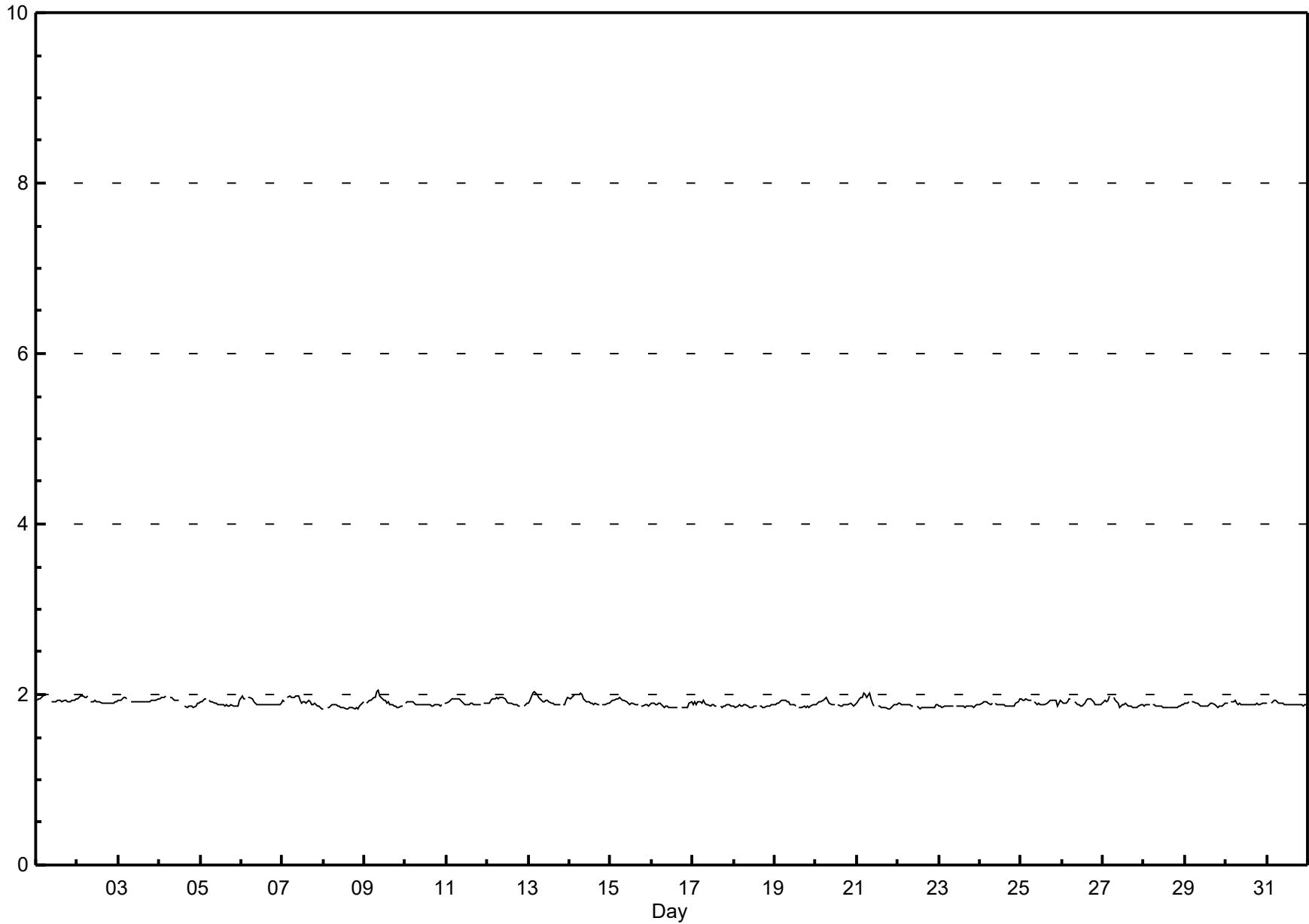
Hourly Averages

Methane (CH₄) - ppm
Portable Rycroft - July 2017

Maximum Value: 2.06 ppm on Jul 9 09:00 Maximum Daily Average: 1.94 ppm on Jul 1 Minimum Value: 1.8 ppm on Jul 8 01:00 Minimum Daily Average: 1.85 ppm on Jul 8 Maximum Diurnal Average: 1.94 ppm at hour 5 Minimum Diurnal Average: 1.87 ppm at hour 20 Monthly Average: 1.898 ppm Percentiles: P ₁ = 1.84 P ₁₀ = 1.85 Q ₁ = 1.87 Median = 1.89 Q ₃ = 1.92 P ₉₀ = 1.95 P ₉₉ = 2.01																								Hours in Service: 744 Hours of Data: 709 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	1.9	1.9	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	1.9	1.94	2.00
2-Jul	1.9	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	1.9	1.9	1.93	1.99
3-Jul	1.9	1.9	2.0	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	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.93	1.97
4-Jul	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	1.9	1.9	1.9	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.92	1.99
5-Jul	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	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.89	1.96
6-Jul	2.0	1.9	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	1.9	1.9	1.9	1.91	1.99
7-Jul	1.9	1.9	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	1.9	1.9	1.9	1.8	1.8	1.92	1.99
8-Jul	1.8	A	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	1.9	1.8	1.9	1.9	1.9	1.85	1.91
9-Jul	A	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	A	1.92	2.06
10-Jul	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	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	1.89	1.91
11-Jul	1.9	1.9	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	A	1.9	1.9	1.91	1.96
12-Jul	1.9	1.9	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	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.91	1.97
13-Jul	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	1.93	2.03
14-Jul	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	A	1.9	1.9	1.9	1.9	1.93	2.01
15-Jul	1.9	1.9	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	A	1.9	1.9	1.9	1.9	1.9	1.9	1.91	1.97
16-Jul	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.8	1.8	A	1.9	1.8	1.8	1.8	1.9	1.9	1.9	1.87	1.91
17-Jul	1.9	1.9	1.9	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	1.88	1.93
18-Jul	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.86	1.89
19-Jul	1.9	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	1.88	1.94
20-Jul	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.90	1.97
21-Jul	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	A	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.90	2.01
22-Jul	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	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.86	1.89
23-Jul	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	1.86	1.88
24-Jul	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	1.89	1.95
25-Jul	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	1.9	1.9	1.9	1.9	1.91	1.95
26-Jul	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	1.9	1.9	1.90	1.94
27-Jul	1.9	1.9	1.9	1.9	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	1.8	1.9	1.8	1.9	1.9	1.9	1.89	1.99
28-Jul	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.86	1.89
29-Jul	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	1.8	1.9	1.9	1.9	1.9	1.88	1.91
30-Jul	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.89	1.92
31-Jul	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.89	1.94
1.91 1.92 1.92 1.93 1.94 1.94 1.93 1.92 1.91 1.90 1.89 1.89 1.88 1.88 1.88 1.88 1.88 1.88 1.87 1.87 1.87 1.88 1.89 1.90 1.99 1.97 2.01 2.03 2.02 2.00 2.01 2.03 2.06 1.98 1.94 1.94 1.93 1.93 1.93 1.94 1.94 1.94 1.93 1.93 1.93 1.93 1.94 1.97																								Diurnal Average	Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Averages

Methane (CH₄) - ppm
Portable Rycroft - July 2017



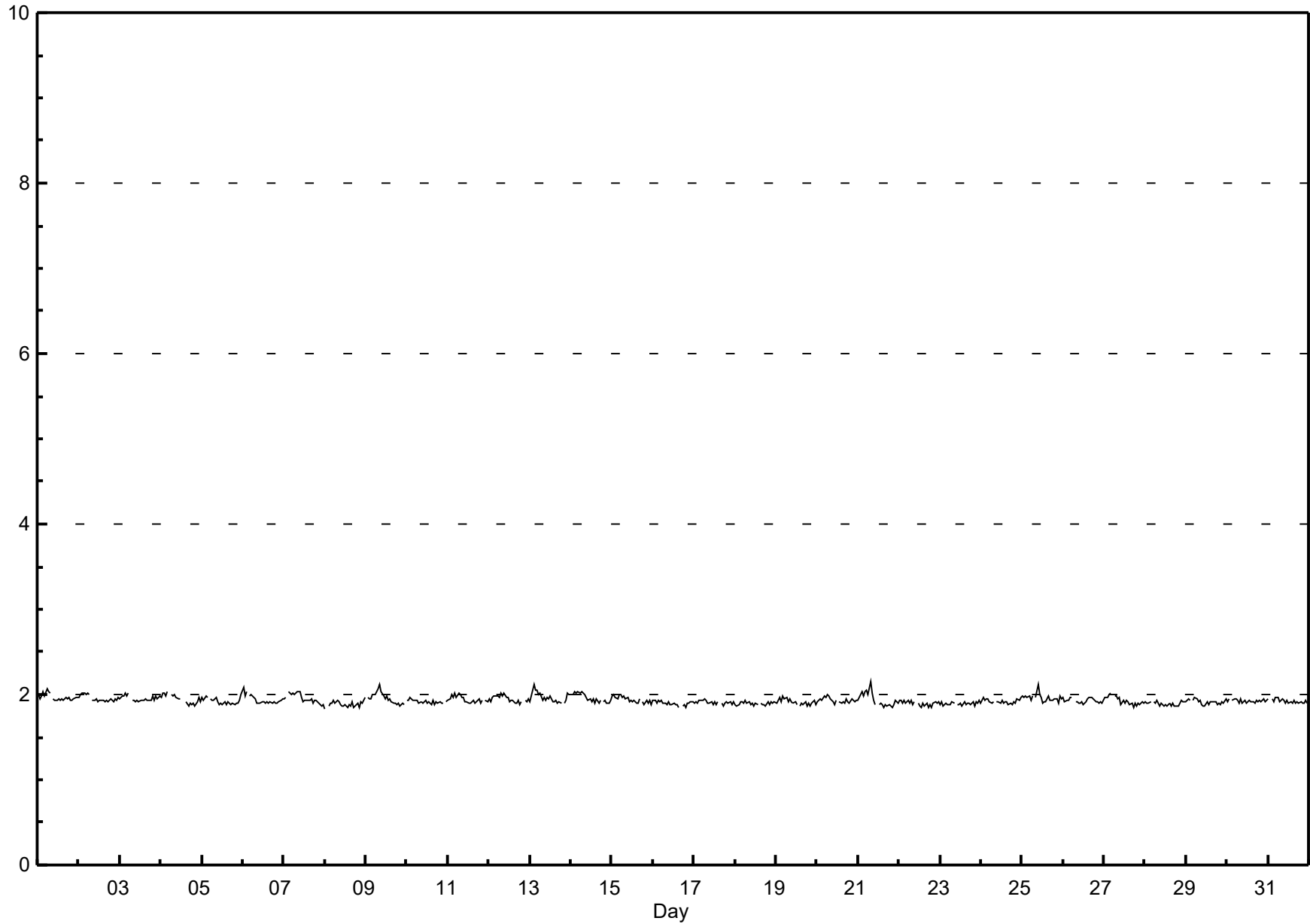
Hourly Maximums

Methane (CH₄) - ppm
Portable Rycroft - July 2017

Maximum Value: 2.15 ppm on Jul 21 08:00		Maximum Daily Average: 1.97 ppm on Jul 1		Hours in Service: 744																						
Minimum Value: 1.8 ppm on Jul 8 01:00		Minimum Daily Average: 1.89 ppm on Jul 8		Hours of Data: 709																						
Maximum Diurnal Average: 1.97 ppm at hour 5		Minimum Diurnal Average: 1.90 ppm at hour 21		Hours of Missing Data: 35																						
Monthly Average: 1.930 ppm		Percentiles: P ₁ = 1.85 P ₁₀ = 1.88 Q ₁ = 1.90 Median = 1.92 Q ₃ = 1.95 P ₉₀ = 1.99 P ₉₉ = 2.06		Hours of Calibration: 35																						
				Percent Operational Time: 100.0																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	A	2.0	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.0	1.97	2.06
2-Jul	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	1.9	2.0	1.95	2.02
3-Jul	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	2.0	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.0	1.96	2.02
4-Jul	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	1.9	1.9	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.95	2.04
5-Jul	2.0	1.9	2.0	2.0	A	2.0	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	2.0	2.0	1.92	2.00
6-Jul	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	2.0	2.0	1.94	2.08
7-Jul	1.9	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	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.95	2.04
8-Jul	1.8	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.89	1.96
9-Jul	A	2.0	1.9	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.96	2.11
10-Jul	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.92	1.96
11-Jul	1.9	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	1.9	A	1.9	1.9	1.94	2.01
12-Jul	2.0	1.9	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	1.9	A	1.9	2.0	1.95	2.02
13-Jul	1.9	2.0	2.1	2.1	2.1	2.0	2.0	1.9	2.0	1.9	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	2.0	1.97	2.12
14-Jul	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	1.9	1.96	2.04
15-Jul	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.94	2.01
16-Jul	1.9	1.9	1.9	1.9	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	1.94
17-Jul	1.9	1.9	1.9	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	1.91	1.95
18-Jul	1.9	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	1.89	1.93
19-Jul	1.9	1.9	2.0	1.9	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.91	1.98
20-Jul	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	1.9	1.9	1.9	1.93	2.00
21-Jul	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	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	1.94	2.15
22-Jul	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	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.90	1.94
23-Jul	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	1.89	1.93
24-Jul	1.9	2.0	1.9	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.92	1.97
25-Jul	2.0	2.0	2.0	2.0	2.0	1.9	2.0	A	2.0	2.1	2.0	2.0	1.9	1.9	2.0	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	2.0	1.96	2.11
26-Jul	2.0	1.9	1.9	1.9	2.0	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.93	1.97
27-Jul	2.0	2.0	2.0	2.0	2.0	A	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	1.93	2.01
28-Jul	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.89	1.93
29-Jul	1.9	2.0	1.9	A	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	2.0	2.0	1.91	1.96
30-Jul	1.9	1.9	A	1.9	2.0	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.92	1.96
31-Jul	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	1.97
		1.94	1.95	1.96	1.96	1.97	1.97	1.96	1.96	1.95	1.94	1.92	1.91	1.91	1.91	1.91	1.91	1.91	1.90	1.91	1.90	1.91	1.92	1.93	Diurnal Average	
		2.08	2.01	2.12	2.06	2.05	2.06	2.04	2.15	2.11	2.11	1.99	1.96	1.98	1.95	1.96	1.98	1.97	1.97	1.96	1.98	1.96	2.02	2.00	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																								

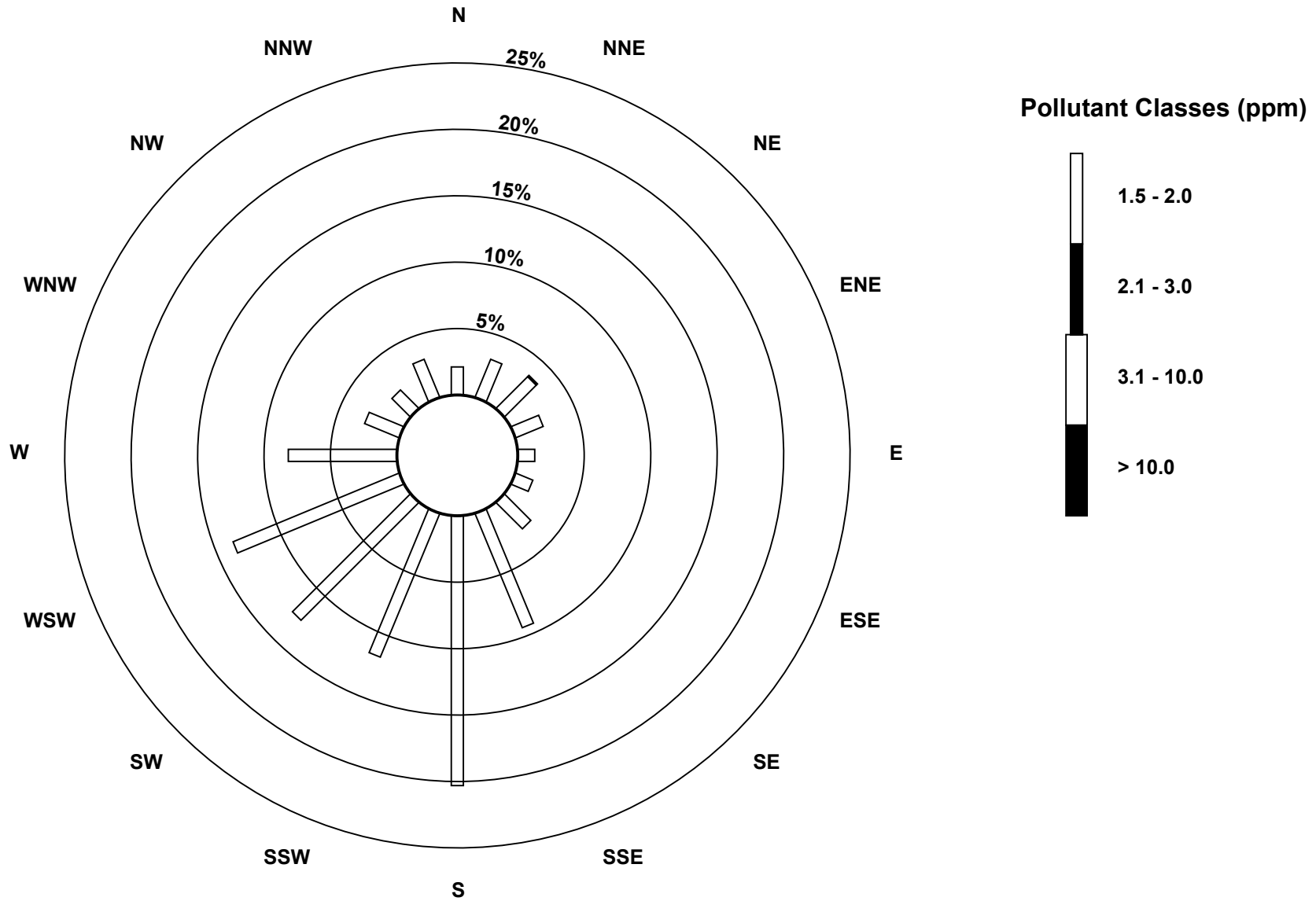
Hourly Maximums

Methane (CH₄) - ppm
Portable Rycroft - July 2017



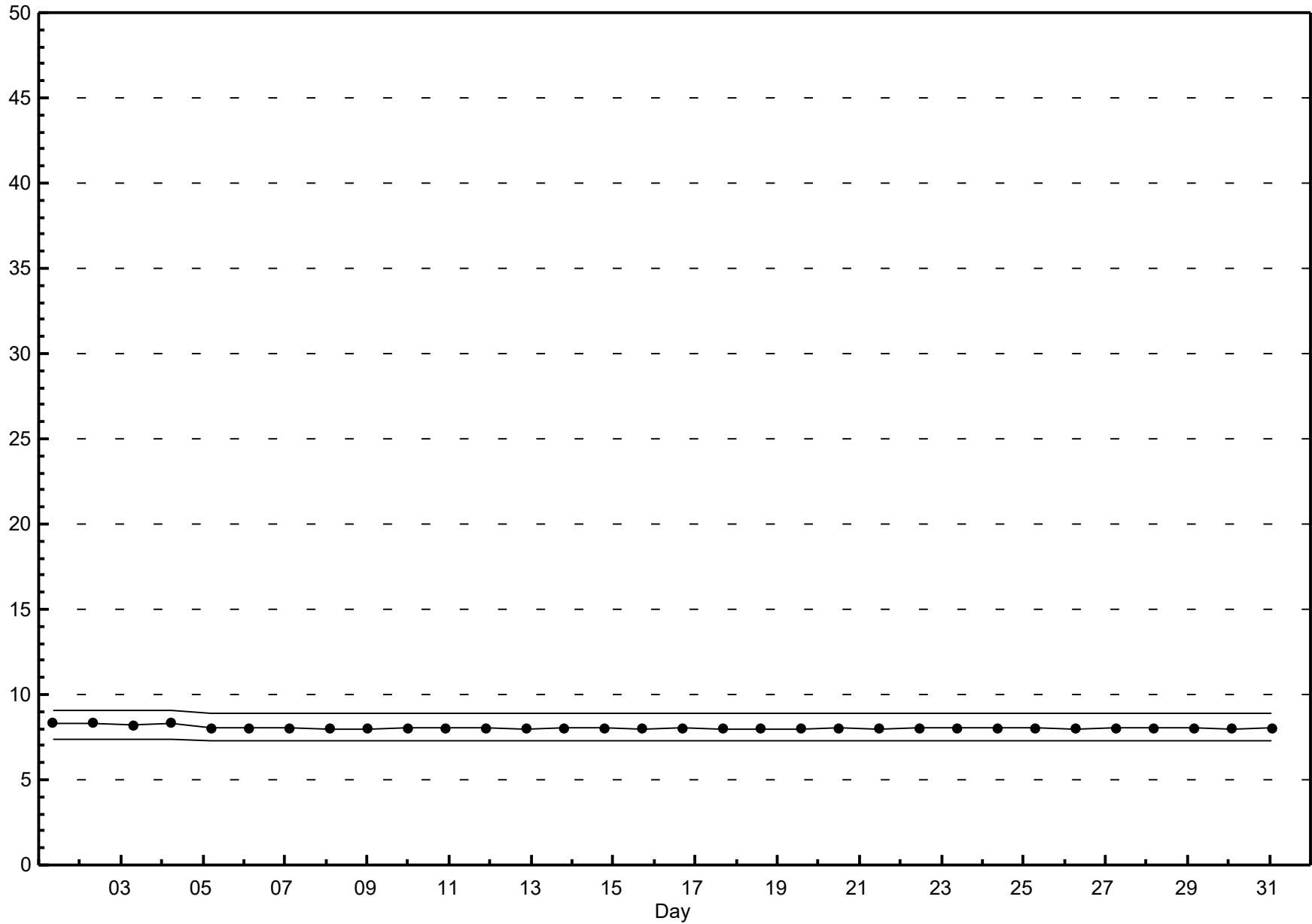
Pollutant Rose

Methane (CH₄) - ppm
Portable Rycroft - July 2017



Span Responses

Methane (CH₄)
Portable Rycroft - July 2017

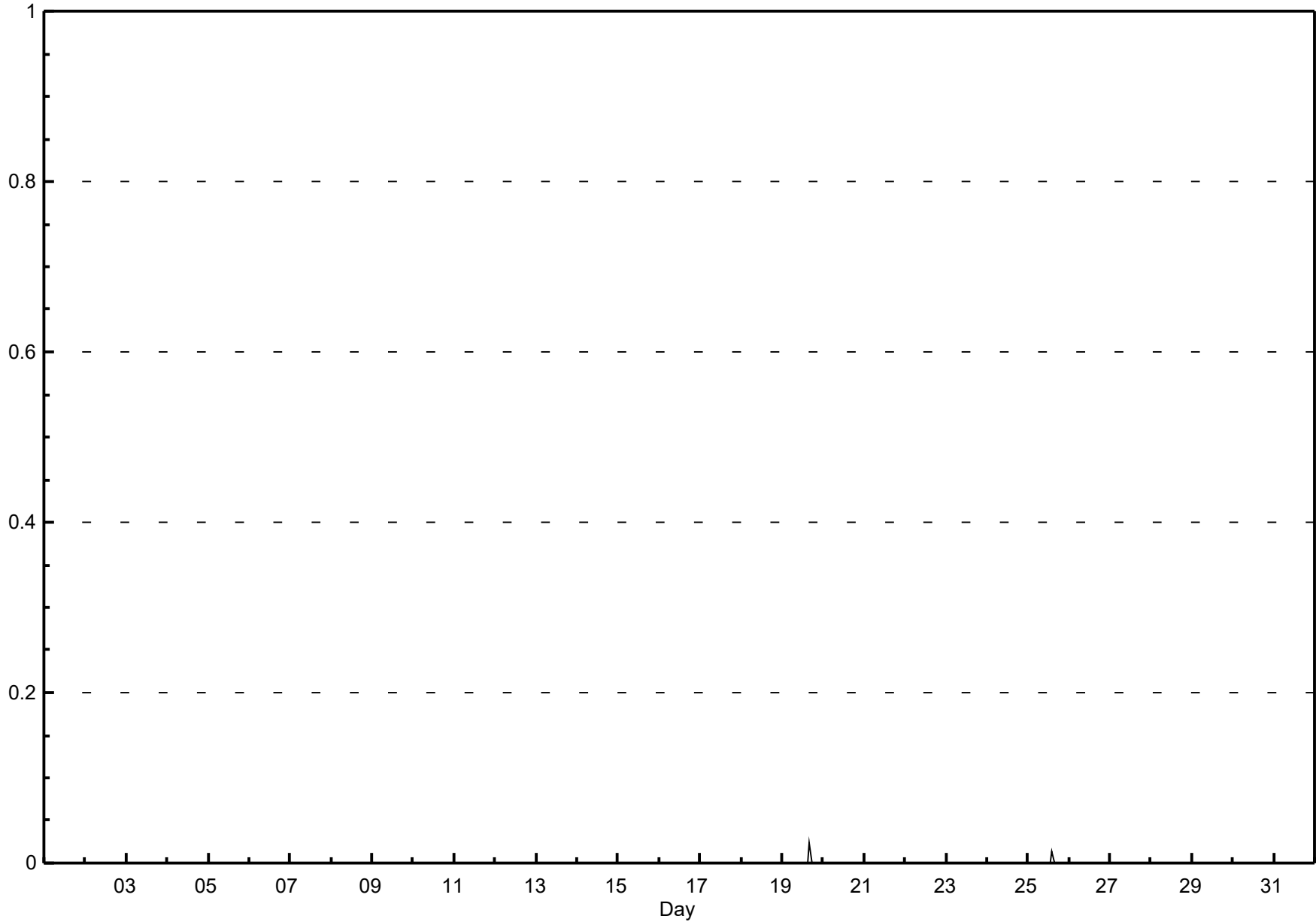


Hourly Averages

Non Methane Hydrocarbon (NMHC) - ppm

Portable Rycroft - July 2017

Maximum Value: 0.02 ppm on Jul 19 17:00 Minimum Value: 0.0 ppm on Jul 1 06:00 Maximum Diurnal Average: 0.00 ppm at hour 17 Monthly Average: 0.000 ppm		Maximum Daily Average: 0.00 ppm on Jul 19 Minimum Daily Average: 0.00 ppm on Jul 4 Minimum Diurnal Average: 0.00 ppm at hour 10 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 in Service: 744 Hours of Data: 709 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jul	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	0.0	0.00	0.00
2-Jul	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	0.0	0.00	0.00
3-Jul	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	0.0	0.00	0.00
4-Jul	0.0	0.0	0.0	0.0	0.0	A	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	0.0	0.0	0.0	0.0	0.00	0.00
5-Jul	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	0.0	0.00	0.00
6-Jul	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	0.0	0.00	0.00
7-Jul	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	0.0	0.00	0.00
8-Jul	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	0.0	0.00	0.00
9-Jul	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	0.0	A	0.00	0.00
10-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	
11-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	
12-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	
13-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	
14-Jul	0.0	0.0	0.0	0.0	0.0	0.0	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	
15-Jul	0.0	0.0	0.0	0.0	0.0	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	
16-Jul	0.0	0.0	0.0	0.0	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	
17-Jul	0.0	0.0	0.0	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	
18-Jul	0.0	0.0	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	
19-Jul	0.0	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	0.02	
20-Jul	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	
21-Jul	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	
22-Jul	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	
23-Jul	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	
24-Jul	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	
25-Jul	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	0.01	
26-Jul	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	
27-Jul	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	
28-Jul	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	
29-Jul	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	
30-Jul	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	
31-Jul	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	
																								0.00	0.00		
																								0.00	0.00		
C - Calibration																								A - Automated Daily Zero Span			

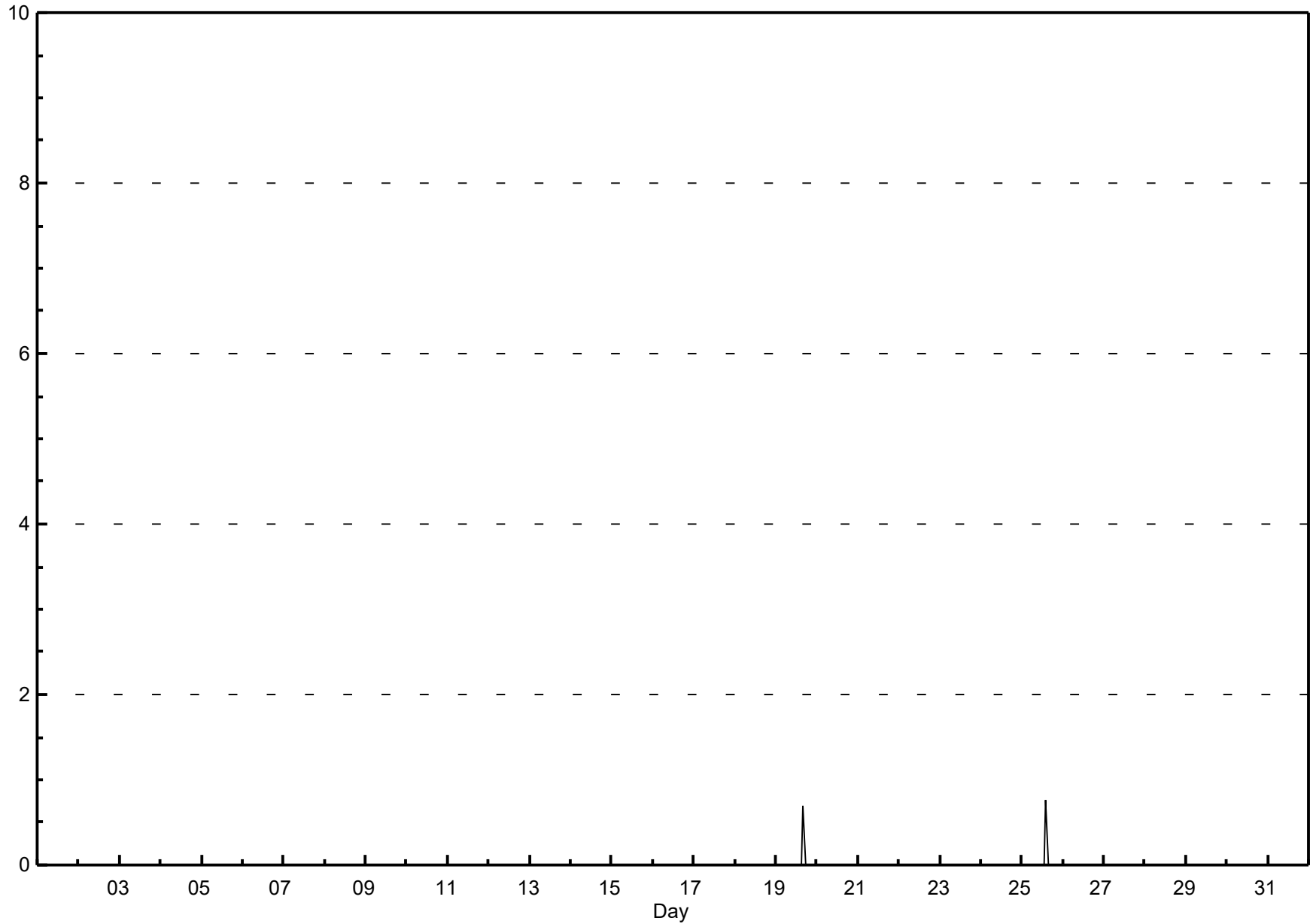


Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

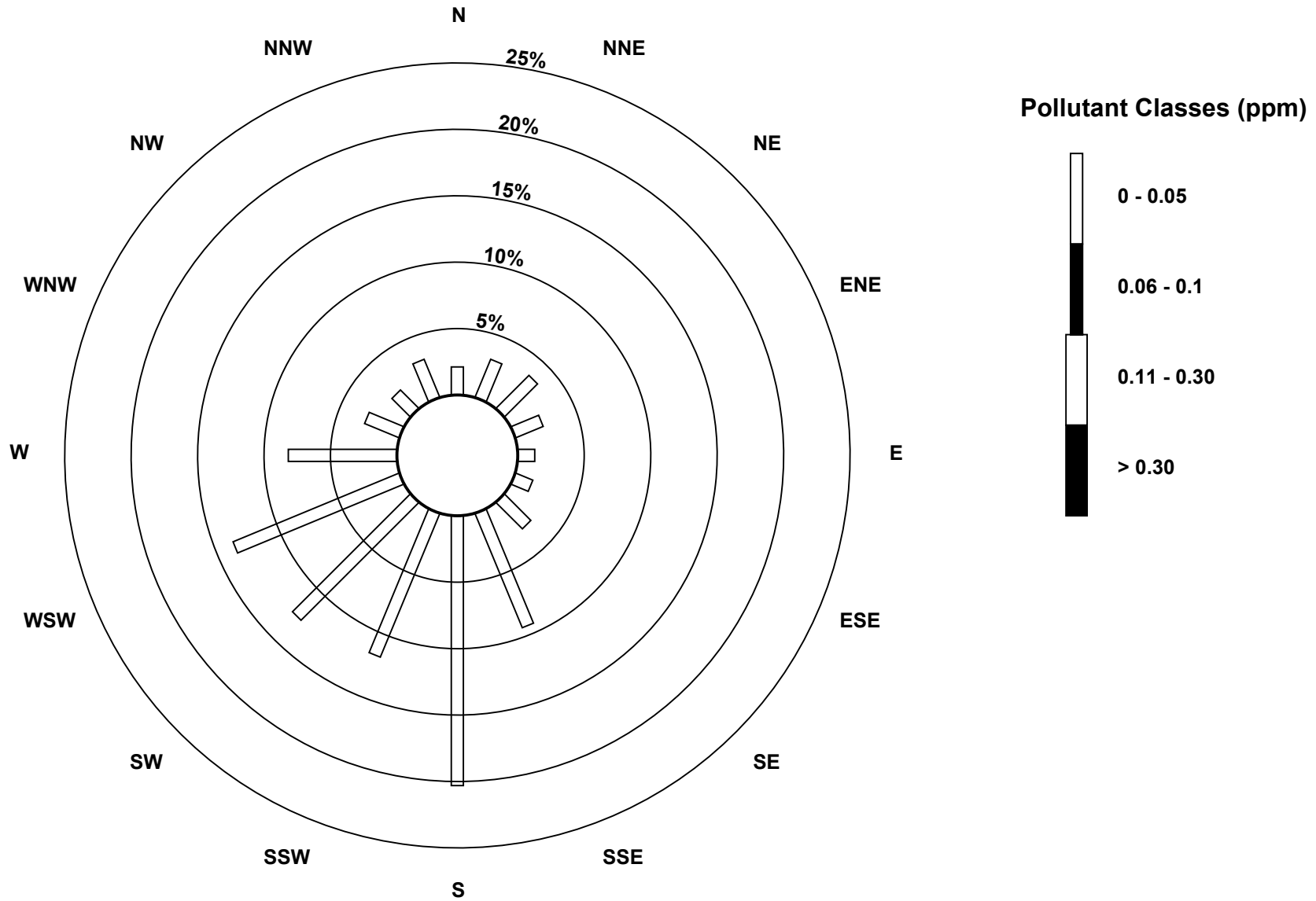
Portable Rycroft - July 2017

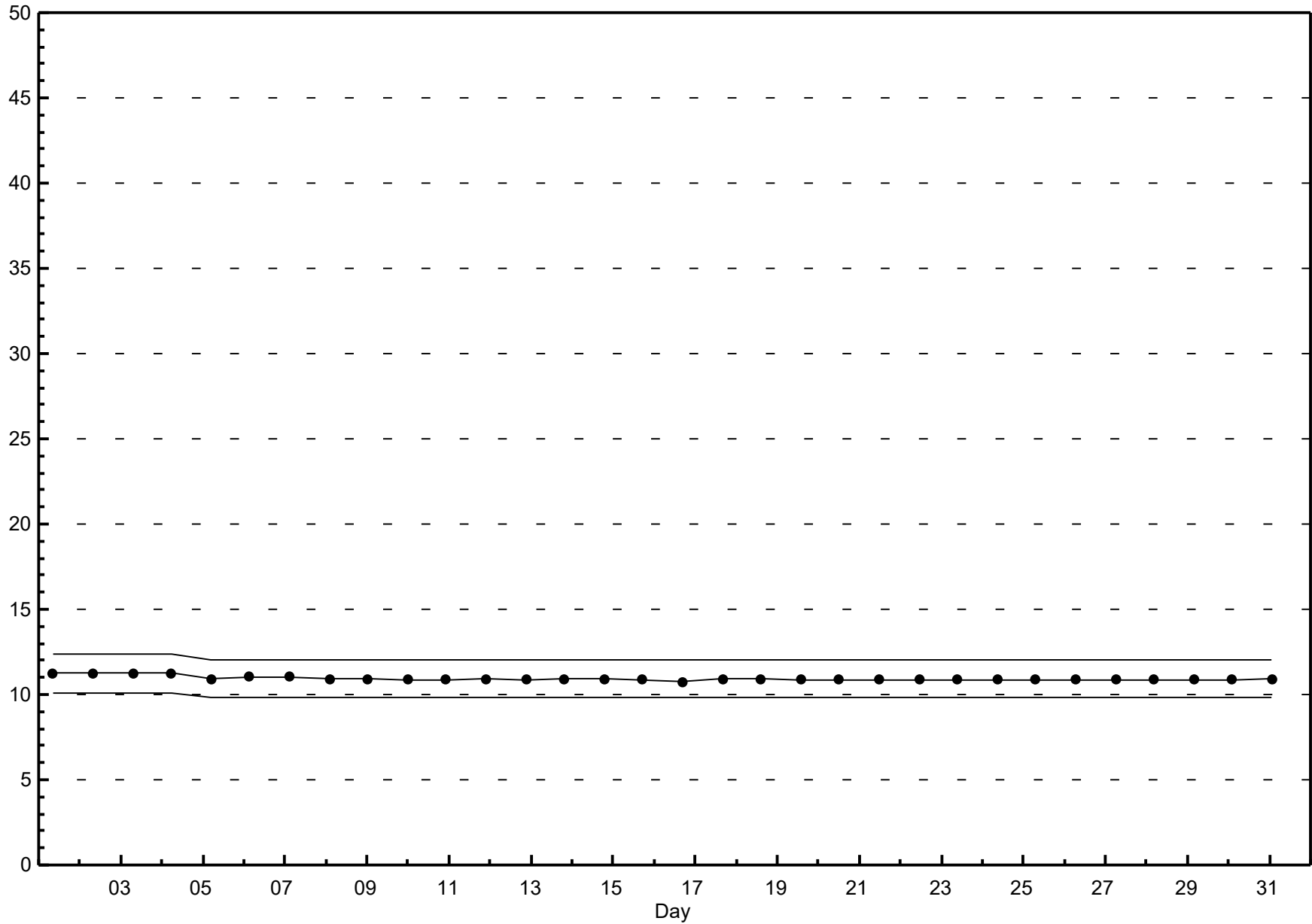
Maximum Value: 0.76 ppm on Jul 25 15:00 Maximum Daily Average: 0.03 ppm on Jul 25 Minimum Value: 0.0 ppm on Jul 5 06:00 Minimum Daily Average: 0.00 ppm on Jul 6 Maximum Diurnal Average: 0.03 ppm at hour 15 Minimum Diurnal Average: 0.00 ppm at hour 9 Monthly Average: 0.002 ppm Percentiles: P ₁ = 0.00 P ₁₀ = 0.00 Q ₁ = 0.00 Median = 0.00 Q ₃ = 0.00 P ₉₀ = 0.00 P ₉₉ = 0.00																								Hours in Service:	744	
																								Hours of Data:	709	
																								Hours of Missing Data:	35	
																								Hours of Calibration:	35	
																								Percent Operational Time:	100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	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
2-Jul	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
3-Jul	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
4-Jul	0.0	0.0	0.0	0.0	0.0	A	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	0.0	0.0	0.0	0.00	0.00
5-Jul	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
6-Jul	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
7-Jul	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
8-Jul	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
9-Jul	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	0.0	0.00	0.00
10-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
11-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
12-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
13-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
14-Jul	0.0	0.0	0.0	0.0	0.0	0.0	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
15-Jul	0.0	0.0	0.0	0.0	0.0	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
16-Jul	0.0	0.0	0.0	0.0	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
17-Jul	0.0	0.0	0.0	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
18-Jul	0.0	0.0	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
19-Jul	0.0	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	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.70
20-Jul	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
21-Jul	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
22-Jul	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
23-Jul	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
24-Jul	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
25-Jul	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	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.76
26-Jul	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
27-Jul	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
28-Jul	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
29-Jul	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
30-Jul	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
31-Jul	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
																								0.00	0.00	
																								0.00	0.00	
																								Diurnal Average		
																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										



Pollutant Rose

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





Hourly Averages

PM2.5 (PM_{2.5}) - µg/m³

Portable Rycroft - July 2017

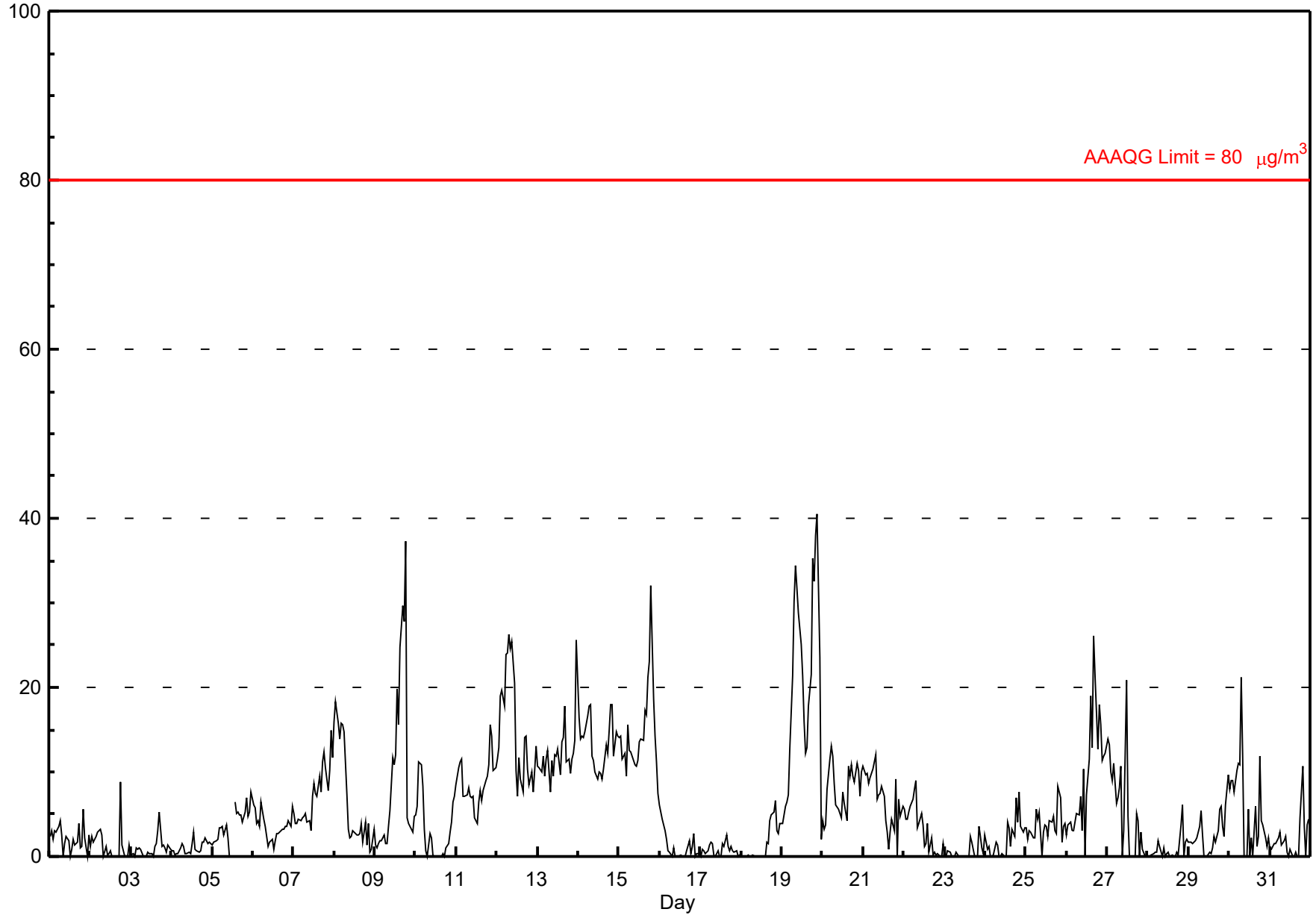
Number of Exceedences: 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 40.5 µg/m ³ on Jul 19 22:00	Maximum Daily Average: 20.3 µg/m ³ on Jul 19
Minimum Value: 0 µg/m ³ on Jul 1 09:00	Hours of Data: 742
Maximum Diurnal Average: 8.0 µg/m ³ at hour 19	Hours of Missing Data: 2
Monthly Average: 5.74 µg/m ³	Hours of Calibration: 0
Minimum Daily Average: 0.6 µg/m ³ on Jul 23	Percent Operational Time: 99.7
Minimum Diurnal Average: 4.3 µg/m ³ at hour 13	
Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.9 Median = 3.5 Q ₃ = 9.1 P ₉₀ = 14.0 P ₉₉ = 31.7	

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-Jul	2	3	2	3	3	4	4	3	0	1	2	2	0	1	2	1	2	4	1	1	6	2	0	2	2.1	5.5
2-Jul	1	2	2	2	3	3	3	3	0	1	0	0	1	0	0	0	0	0	9	1	0	0	0	1	1.4	8.8
3-Jul	0	0	0	1	1	1	1	0	0	0	1	0	0	0	1	1	3	5	1	1	1	1	1	1	1.0	5.3
4-Jul	1	1	0	0	0	1	2	1	0	0	1	0	2	3	1	1	0	1	2	2	2	2	2	2	1.0	2.9
5-Jul	1	2	2	2	3	3	4	3	4	2	0	M	M	7	5	5	5	5	4	5	7	5	5	8	3.9	7.6
6-Jul	6	6	4	4	3	6	4	3	2	1	2	2	1	2	3	3	3	3	3	4	4	4	4	6	3.5	6.4
7-Jul	5	4	4	4	4	5	5	5	4	4	3	7	9	7	7	10	8	11	12	11	8	10	15	12	7.2	14.9
8-Jul	16	18	16	14	16	16	15	7	3	2	2	3	3	3	2	3	4	2	4	1	4	1	1	3	6.6	18.4
9-Jul	1	1	2	2	2	3	1	2	3	5	12	11	12	20	16	25	30	28	37	5	4	3	3	5	9.6	37.2
10-Jul	5	6	11	11	8	3	1	0	3	2	0	0	0	0	0	0	0	0	1	1	3	4	6	7	3.1	11.2
11-Jul	9	11	11	12	7	7	7	8	7	7	7	5	4	7	8	7	8	9	10	11	16	14	10	10	8.8	15.6
12-Jul	11	13	19	20	18	24	24	26	25	25	20	10	7	12	9	8	14	14	10	8	10	8	10	13	15.0	26.3
13-Jul	11	10	10	12	9	12	12	8	11	10	12	12	13	10	13	14	18	11	11	10	11	12	14	26	12.2	25.6
14-Jul	16	14	14	14	15	17	18	18	12	11	10	9	10	10	9	10	13	12	15	18	18	12	15	14	13.5	18.0
15-Jul	14	14	12	12	10	16	13	12	12	11	11	11	14	14	14	17	17	21	23	32	19	14	11	7	14.6	32.1
16-Jul	6	4	4	3	2	1	1	0	1	0	0	0	0	0	0	0	1	2	0	1	3	0	0	0	1.2	6.1
17-Jul	0	1	1	0	1	1	2	2	0	0	1	0	0	1	1	3	1	1	1	1	0	1	0	0	0.8	2.5
18-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	4	5	5	7	3	3	4	1.4	6.6
19-Jul	4	5	6	6	7	13	21	30	34	32	29	25	21	16	12	13	18	22	35	33	38	40	24	2	20.3	40.5
20-Jul	4	3	4	8	11	13	12	9	6	6	5	5	8	6	4	11	9	11	10	9	11	10	7	10	8.0	13.1
21-Jul	11	10	10	9	9	10	10	12	7	7	7	8	7	4	3	1	3	4	3	9	0	7	5	6	6.8	12.0
22-Jul	6	4	4	5	6	7	8	9	3	4	5	4	1	1	4	1	2	0	1	0	0	0	0	1	3.2	8.9
23-Jul	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	2	1	0	0	4	2	1	0	0.6	3.6
24-Jul	3	1	1	0	0	0	2	1	0	0	0	0	0	4	3	1	3	2	7	4	8	4	3	3	2.1	7.6
25-Jul	3	2	3	3	2	2	6	4	5	0	3	4	4	2	4	4	5	3	3	8	7	2	4	4	3.6	8.3
26-Jul	2	4	4	3	3	4	5	5	7	3	10	0	7	12	19	13	26	21	13	18	16	11	12	12	9.6	26.1
27-Jul	14	13	10	9	11	6	7	8	11	0	3	21	5	0	0	0	0	5	4	0	3	1	0	0	5.5	20.8
28-Jul	0	0	0	0	1	1	2	1	0	1	0	0	1	0	0	0	0	0	4	6	0	2	2	2	0.9	6.1
29-Jul	2	2	2	2	2	2	4	5	3	0	0	0	0	0	1	2	2	3	6	6	3	2	6	10	2.7	9.7
30-Jul	8	9	9	8	10	11	11	21	12	0	0	6	0	2	0	6	1	2	12	4	4	2	1	2	5.9	21.1
31-Jul	1	1	1	2	2	2	3	1	2	2	1	0	1	0	0	1	0	0	5	11	4	0	4	4	1.9	10.6
	5.3	5.3	5.4	5.5	5.5	6.2	6.6	6.7	5.7	4.5	4.7	4.8	4.3	4.6	4.6	5.3	6.4	6.7	8.0	7.2	7.2	5.7	5.4	5.8	Diurnal Average	
	16.5	18.4	18.9	19.7	17.9	23.9	24.1	30.1	34.4	31.7	28.7	25.2	21.4	19.8	19.0	24.8	29.7	27.7	37.2	32.6	37.9	40.5	23.5	25.6	Diurnal Maximum	

M - Maintenance
 Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³

Hourly Averages

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



Hourly Maximums

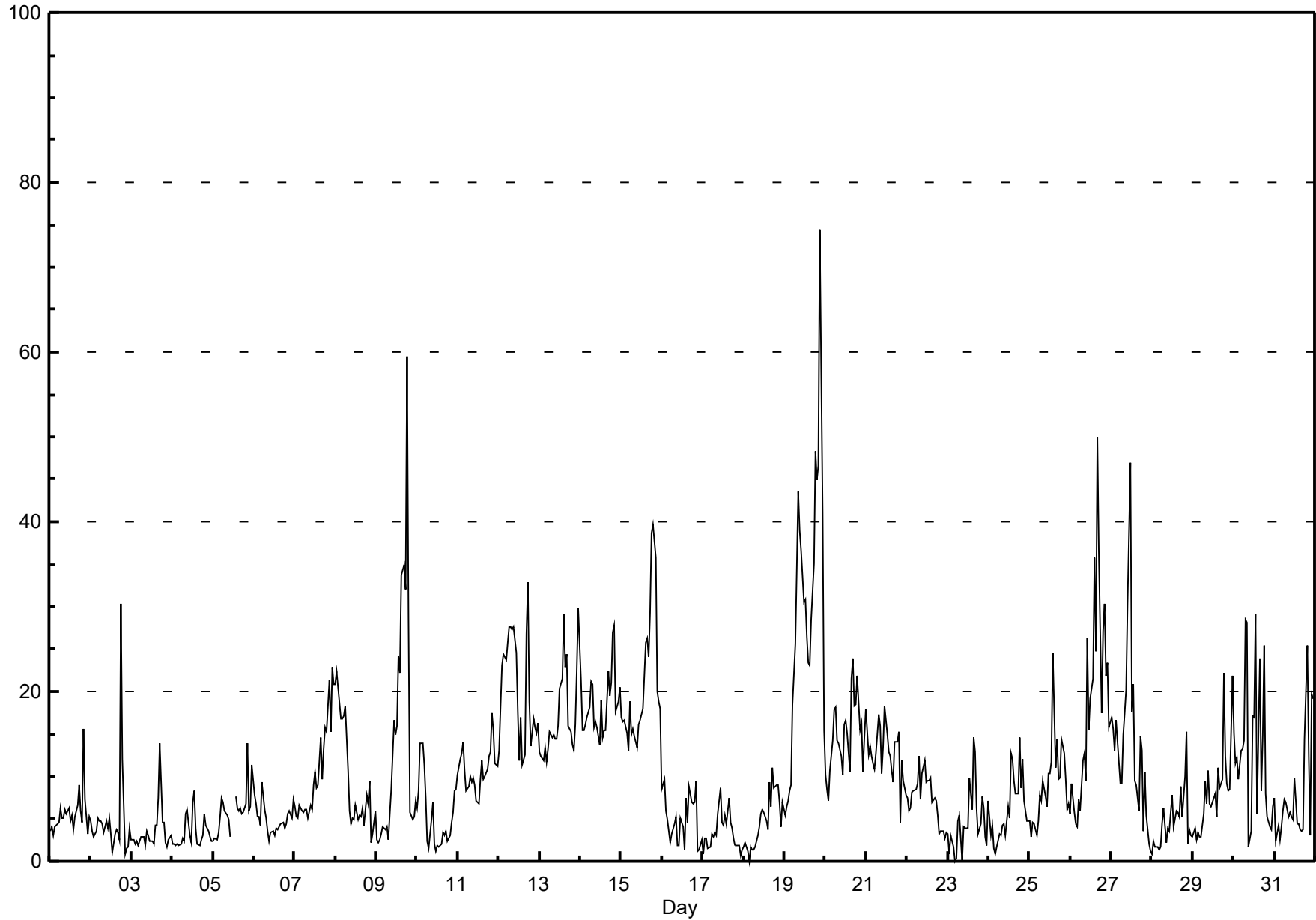
PM2.5 (PM_{2.5}) - µg/m³

Portable Rycroft - July 2017

Maximum Value: 74.4 µg/m ³ on Jul 19 22:00		Maximum Daily Average: 29.3 µg/m ³ on Jul 19		Hours in Service: 744																							
Minimum Value: 0 µg/m ³ on Jul 18 04:00		Minimum Daily Average: 3.4 µg/m ³ on Jul 17		Hours of Data: 742																							
Maximum Diurnal Average: 15.3 µg/m ³ at hour 19		Minimum Diurnal Average: 7.4 µg/m ³ at hour 5		Hours of Missing Data: 2																							
Monthly Average: 10.31 µg/m ³		Percentiles: P ₁ = 0.8 P ₁₀ = 2.3 Q ₁ = 4.1 Median = 7.3 Q ₃ = 14.5 P ₉₀ = 21.9 P ₉₉ = 43.2		Hours of Calibration: 0																							
				Percent Operational Time: 99.7																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jul	4	4	3	4	4	5	6	5	5	6	6	5	5	4	5	7	9	6	5	16	7	3	5	5.6	15.5		
2-Jul	5	4	3	4	5	5	5	4	3	5	4	5	3	1	3	4	3	3	30	12	1	2	2	4	4.9	30.3	
3-Jul	2	3	2	2	2	2	3	3	2	3	3	2	2	2	4	4	7	14	5	5	2	2	3	3	3.5	13.9	
4-Jul	2	2	2	2	2	2	3	2	6	6	3	2	7	8	4	2	2	2	3	6	4	4	3	2	3.4	8.3	
5-Jul	2	3	2	3	5	8	7	6	5	5	3	M	M	8	6	6	6	6	6	7	14	6	6	11	6.0	13.9	
6-Jul	8	7	5	5	4	9	6	5	4	2	3	4	3	4	4	4	4	5	4	4	6	6	5	7	5.0	9.3	
7-Jul	6	5	5	7	6	6	6	6	5	7	6	9	10	9	9	15	10	13	16	15	21	15	23	21	10.5	22.9	
8-Jul	21	22	19	17	17	17	18	11	6	4	5	5	7	5	5	6	4	8	7	9	2	3	6	6	9.6	22.4	
9-Jul	3	2	3	3	4	4	4	3	6	9	17	15	16	24	22	34	35	32	60	29	6	5	5	7	14.4	59.5	
10-Jul	6	8	14	14	11	8	2	2	5	7	2	1	2	2	2	3	3	4	2	3	5	6	8	9	5.3	13.9	
11-Jul	10	12	13	14	11	8	9	10	9	10	9	7	7	10	12	10	10	11	12	13	18	15	11	11	10.9	17.5	
12-Jul	13	18	23	24	24	26	28	28	27	28	25	18	12	17	11	13	27	33	19	14	17	16	15	16	20.4	33.0	
13-Jul	13	12	12	13	12	13	15	15	15	14	14	16	20	21	29	23	24	16	15	14	13	16	22	30	17.1	29.9	
14-Jul	21	15	15	16	17	18	21	21	16	16	16	14	19	15	15	22	19	21	27	28	18	19	20	18.6	27.8		
15-Jul	17	16	17	15	13	19	15	16	15	13	16	17	17	18	26	26	24	29	39	40	36	20	19	18	20.8	39.6	
16-Jul	9	10	6	5	3	2	3	4	5	2	2	5	4	1	7	5	9	7	7	7	9	1	1	3	4.9	9.7	
17-Jul	1	3	3	1	2	3	3	3	3	6	9	5	4	5	4	7	5	4	3	2	2	2	1	1	3.4	8.7	
18-Jul	2	2	1	0	2	1	1	2	3	4	6	6	6	5	4	9	6	11	9	9	7	4	7	4.8	11.1		
19-Jul	5	6	7	8	9	19	26	34	44	39	37	31	31	26	23	23	29	35	48	45	47	74	41	15	29.3	74.4	
20-Jul	10	8	7	11	14	18	18	14	14	12	10	16	17	15	10	22	24	18	19	22	15	16	10	15	14.9	23.9	
21-Jul	18	13	14	12	12	11	13	17	16	10	13	18	15	13	12	11	9	14	14	15	5	12	10	8	12.7	18.4	
22-Jul	7	6	6	8	8	9	9	12	7	10	12	9	9	9	10	7	7	7	5	3	4	4	3	3	7.4	12.3	
23-Jul	3	1	3	2	0	0	5	5	0	4	4	4	4	10	6	15	13	6	3	4	8	6	3	2	4.6	14.6	
24-Jul	7	3	4	1	1	2	3	3	4	4	3	6	5	13	12	10	8	8	15	9	12	7	5	5	6.2	14.6	
25-Jul	5	3	5	4	3	5	8	7	9	8	7	10	10	12	25	11	14	10	10	14	13	10	6	7	9.0	24.7	
26-Jul	6	9	6	4	4	7	6	12	13	9	26	15	19	22	36	25	50	37	17	27	30	22	23	16	18.4	50.0	
27-Jul	17	16	13	17	14	9	9	15	17	20	30	47	18	21	9	9	6	15	13	4	10	5	2	1	14.1	47.0	
28-Jul	1	2	2	2	1	2	4	6	2	4	4	6	8	4	6	6	5	9	5	10	15	2	4	3	4.7	15.3	
29-Jul	3	4	3	3	3	3	6	10	7	11	7	6	7	8	5	11	9	10	22	12	9	8	9	22	8.2	22.2	
30-Jul	15	11	12	10	13	13	14	28	28	2	4	17	17	29	6	24	8	15	25	8	5	4	4	7	13.3	29.2	
31-Jul	8	2	4	3	4	6	7	7	5	6	5	5	10	4	4	4	4	4	14	25	12	3	20	19	7.7	25.4	
		8.0	7.5	7.5	7.6	7.4	8.3	9.1	10.2	9.9	9.3	10.0	10.9	10.5	11.2	10.9	11.8	12.8	13.2	15.3	13.4	12.9	10.4	9.5	9.8	Diurnal Average	
		21.2	22.4	23.1	24.4	23.7	25.8	27.6	34.3	43.5	39.0	36.6	47.0	30.9	29.2	35.8	33.8	50.0	36.6	59.5	44.9	46.7	74.4	41.0	29.9	Diurnal Maximum	
M - Maintenance																											

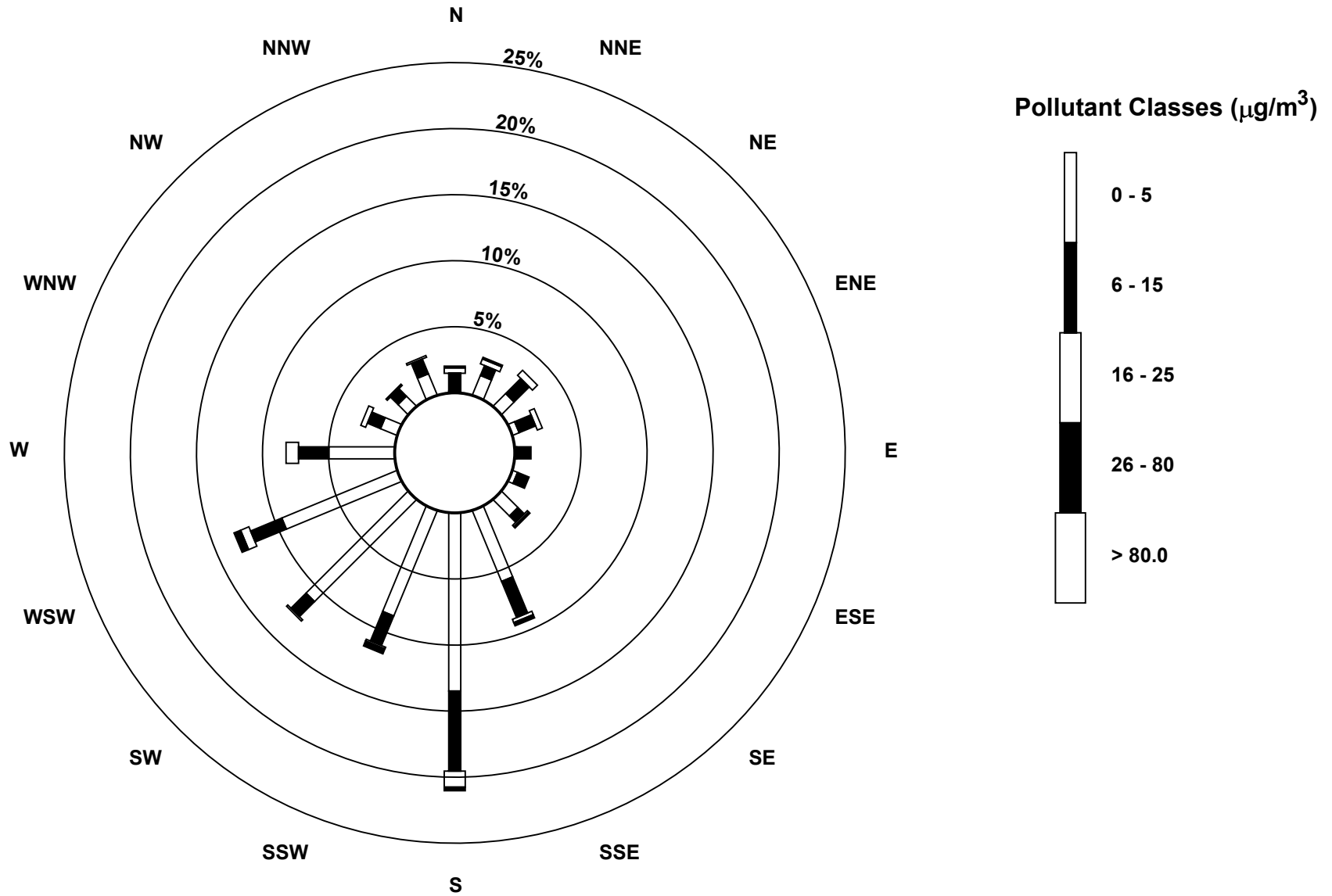
Hourly Maximums

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



Pollutant Rose

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



Hourly Averages

External Temperature (ET) - °C

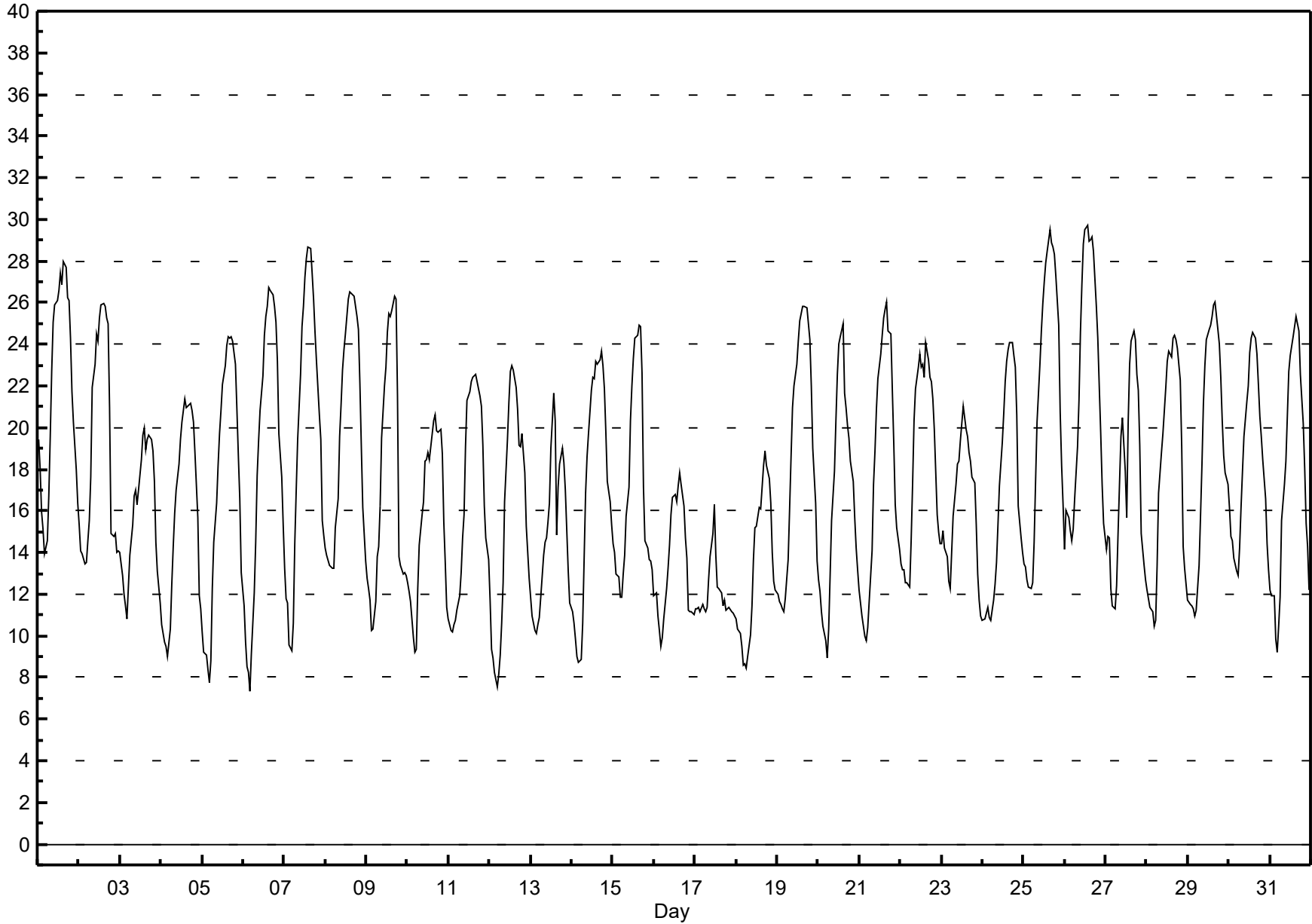
Portable Rycroft - July 2017

Maximum Value: 29.7 °C on Jul 26 14:00		Maximum Daily Average: 22.0 °C on Jul 26		Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0																							
Minimum Value: 7 °C on Jul 6 05:00 Maximum Diurnal Average: 23.3 °C at hour 16 Monthly Average: 17.41 °C		Minimum Daily Average: 12.0 °C on Jul 17 Minimum Diurnal Average: 10.7 °C at hour 5 Percentiles: P ₁ = 8.5 P ₁₀ = 10.8 Q ₁ = 12.7 Median = 16.7 Q ₃ = 22.0 P ₉₀ = 24.9 P ₉₉ = 28.8																									
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-Jul	19	18	16	15	14	15	17	20	23	25	26	26	27	27	27	28	28	26	26	24	22	20	18	16	21.8	28.0	
2-Jul	15	14	14	13	13	15	16	18	22	23	24	24	25	26	26	26	25	25	21	15	15	15	14	14	19.1	25.9	
3-Jul	14	13	12	11	11	12	14	15	17	17	16	17	18	20	20	19	19	20	19	19	17	15	13	12	15.9	20.0	
4-Jul	11	10	10	9	9	10	12	14	16	17	18	19	20	21	21	21	21	21	21	20	19	16	12	11	15.9	21.4	
5-Jul	10	9	9	8	8	9	12	15	16	18	20	21	22	23	24	24	24	24	24	23	21	19	17	13	17.2	24.4	
6-Jul	11	10	8	8	7	9	12	14	18	19	21	23	24	25	26	27	27	26	26	25	23	20	18	15	18.5	26.7	
7-Jul	13	12	12	10	9	11	14	17	19	23	25	26	27	28	29	29	27	26	25	23	21	19	16	15	19.8	28.7	
8-Jul	14	14	13	13	13	13	15	17	20	21	23	24	25	26	26	26	26	26	25	25	22	19	16	14	19.9	26.5	
9-Jul	13	12	12	10	10	12	14	14	16	20	22	23	25	25	25	26	26	26	22	14	13	13	13	13	17.5	26.3	
10-Jul	13	12	12	10	9	9	12	14	16	16	18	18	19	18	20	20	21	20	20	20	19	16	14	11	15.7	20.6	
11-Jul	11	10	10	11	11	11	12	13	15	16	19	21	22	22	22	22	23	22	21	21	19	16	15	14	16.6	22.5	
12-Jul	12	9	9	8	8	8	9	11	13	16	19	21	23	23	23	22	21	19	19	20	18	15	14	13	15.5	23.0	
13-Jul	12	11	10	10	11	11	12	14	15	15	15	16	19	22	20	15	17	18	19	18	17	15	13	12	14.9	21.7	
14-Jul	11	11	10	9	9	9	11	14	17	19	20	22	22	22	23	23	23	24	23	22	20	17	16	15	17.1	23.6	
15-Jul	14	14	13	13	12	12	13	14	16	17	20	22	23	24	24	25	25	23	17	15	14	14	14	13	17.1	24.9	
16-Jul	12	12	11	10	9	10	11	12	13	14	16	17	17	16	17	18	17	16	15	14	11	11	11	11	13.4	17.8	
17-Jul	11	11	11	11	11	11	11	11	13	14	15	16	14	12	12	12	11	12	11	11	11	11	11	11	12.0	16.3	
18-Jul	11	10	10	9	9	9	8	9	10	11	14	15	15	16	16	17	18	19	18	18	16	14	13	12	13.3	18.8	
19-Jul	12	12	12	11	11	12	14	16	19	21	22	23	24	25	25	26	26	26	25	24	22	19	16	14	19.0	25.9	
20-Jul	13	12	11	10	10	9	10	13	16	18	20	23	24	24	25	22	21	20	20	18	17	16	14	13	16.6	25.0	
21-Jul	12	11	10	10	10	10	12	14	17	19	21	22	24	24	25	26	26	25	24	22	19	16	15	14	17.9	26.0	
22-Jul	13	13	13	13	13	12	15	17	20	22	23	24	23	23	22	24	23	22	22	21	20	16	15	14	18.5	24.1	
23-Jul	14	15	14	14	13	12	14	16	17	18	18	19	20	21	20	20	19	18	18	17	15	13	12	11	16.2	21.0	
24-Jul	11	11	11	11	11	11	12	12	13	15	17	19	21	22	23	24	24	24	23	23	21	16	15	14	16.9	24.1	
25-Jul	13	13	13	12	12	13	14	17	20	23	25	26	27	28	29	29	29	28	27	25	21	18	16	16	21.2	29.5	
26-Jul	14	16	16	15	15	15	17	19	21	25	27	29	30	30	29	29	29	28	26	24	22	20	17	15	22.0	29.7	
27-Jul	14	15	15	12	11	11	12	15	17	20	20	18	16	20	23	24	25	24	23	22	19	15	13	13	17.4	24.6	
28-Jul	12	12	11	11	10	11	13	17	19	20	21	22	23	24	23	24	24	24	24	22	19	14	13	12	17.8	24.4	
29-Jul	12	12	11	11	11	11	13	16	18	21	23	24	25	25	25	26	26	25	24	22	20	19	18	17	19.0	26.0	
30-Jul	16	15	15	14	13	13	14	16	18	20	21	22	24	24	25	24	24	24	22	21	20	18	17	14	13	18.4	24.6
31-Jul	12	12	12	10	9	10	12	16	17	18	21	23	23	24	25	25	25	25	23	20	18	15	14	12	17.6	25.3	
		12.8	12.3	11.8	11.2	10.7	11.2	12.8	14.8	17.0	18.7	20.4	21.5	22.2	23.0	23.3	23.3	23.3	22.8	21.7	20.3	18.6	16.2	14.6	13.4	Diurnal Average	
		19.4	18.0	15.9	15.1	14.6	15.1	16.7	19.6	22.7	25.1	26.9	28.8	29.5	29.7	28.9	29.5	29.2	28.7	28.3	27.3	24.9	20.7	18.2	17.3	Diurnal Maximum	

Hourly Averages

External Temperature (ET) - °C

Portable Rycroft - July 2017





Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Portable Rycroft - July 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	10	9	7	8	6	6	5	7	4	7	13	8	13	13	19	11	5	3	8	5	5	6	2	2	5.8	19.1
Dir	155	165	167	161	154	172	185	180	227	246	252	203	240	239	254	256	241	179	164	156	167	230	292	176	209.4	254.0
2 Spd	3	7	7	8	9	7	6	7	8	10	11	20	13	12	11	9	8	18	10	5	4	8	11	8.3	20.4	
Dir	181	176	181	177	170	180	173	180	214	232	217	242	223	206	227	219	195	187	221	227	160	145	151	158	201.6	241.6
3 Spd	12	9	8	7	8	10	12	12	12	16	16	15	15	18	20	22	30	28	21	20	14	8	10	9	14.0	29.9
Dir	166	181	179	169	179	188	193	200	204	207	201	202	209	213	221	226	229	230	224	226	222	202	194	191	209.2	229.2
4 Spd	8	10	9	12	11	13	14	13	12	15	20	19	20	24	26	26	24	29	29	22	16	7	5	7	15.4	29.3
Dir	193	187	191	188	190	188	193	201	209	217	224	227	229	232	234	236	235	240	243	236	235	226	189	187	221.8	239.8
5 Spd	7	7	8	8	5	5	0	12	10	6	12	14	19	16	17	10	10	8	9	9	6	3	5	7	5.9	19.5
Dir	183	180	183	180	194	183	217	269	272	248	248	251	254	263	273	274	263	280	340	341	357	63	147	190	252.9	253.5
6 Spd	4	4	6	6	6	6	4	5	4	4	4	6	5	4	6	5	5	3	7	6	3	2	5	5	2.3	6.9
Dir	218	287	288	239	227	244	214	257	327	309	278	287	332	354	282	325	276	264	25	32	64	129	150	170	280.8	24.9
7 Spd	5	5	2	3	1	3	1	5	8	12	16	18	17	16	17	21	20	13	6	4	4	13	12	6	5.6	20.7
Dir	181	187	174	184	162	169	326	32	22	25	40	59	53	55	60	60	55	58	59	351	255	203	202	24	59.5	60.3
8 Spd	1	2	6	7	8	9	7	6	6	7	8	9	13	7	13	10	9	10	5	3	3	5	6	6	5.9	13.2
Dir	271	172	167	168	174	173	175	194	197	206	212	217	237	213	249	248	240	252	227	215	163	164	163	185	208.7	249.0
9 Spd	6	6	6	1	3	1	3	5	6	9	4	3	3	11	11	15	9	7	16	24	2	2	4	7	2.5	23.7
Dir	166	168	175	128	168	200	16	54	42	33	123	234	210	288	286	286	320	4	248	252	204	127	170	184	258.5	251.6
10 Spd	6	4	5	4	11	8	13	12	13	12	9	11	9	11	8	10	7	8	7	5	5	7	4	4	7.6	13.3
Dir	193	193	183	197	179	206	232	220	220	220	207	209	222	219	228	207	192	207	163	150	144	156	168	178	201.5	220.5
11 Spd	6	7	7	7	6	5	5	4	2	3	4	8	7	8	7	7	8	6	5	5	5	2	2	2	3.7	8.1
Dir	166	159	165	167	180	174	186	157	133	93	28	19	51	88	114	111	103	80	88	95	77	67	110	133	113.8	80.4
12 Spd	2	4	3	2	4	5	3	4	5	10	11	10	13	12	13	14	6	7	9	4	4	7	7	3	3.6	14.2
Dir	267	298	267	3	56	60	52	19	19	38	43	62	57	46	50	60	51	300	291	302	248	270	249	245	24.6	60.0
13 Spd	4	4	3	3	1	1	12	4	7	11	9	14	2	6	7	9	9	9	9	8	7	6	3	5	3.1	14.1
Dir	242	196	220	206	83	4	270	6	41	22	26	34	352	273	254	319	267	305	317	286	272	243	221	192	302.2	33.9
14 Spd	6	7	8	7	6	7	6	3	4	3	4	8	8	7	6	3	6	6	6	5	4	3	2	1	0.9	8.1
Dir	182	171	177	177	164	170	177	189	347	40	5	6	17	336	4	49	336	330	338	349	344	340	354	45	2.7	5.6
15 Spd	2	2	3	1	4	10	2	3	5	6	1	2	4	5	5	7	9	7	15	7	18	7	5	5	2.8	18.0
Dir	255	107	21	119	279	270	270	171	261	256	328	325	352	327	348	2	18	52	262	246	261	261	148	183	282.2	261.3
16 Spd	7	8	8	8	8	11	6	6	8	6	18	15	10	17	24	27	27	33	27	23	10	20	25	24	14.6	33.4
Dir	183	180	178	189	178	186	215	213	190	207	229	220	201	243	239	251	244	248	241	236	226	237	244	241	229.9	247.6
17 Spd	25	23	21	23	26	27	26	22	21	23	26	20	21	15	7	3	5	3	3	3	2	2	1	3	12.4	27.5
Dir	242	242	241	243	246	251	253	255	261	261	271	280	327	334	346	275	271	273	200	183	189	192	87	64	260.6	250.5
18 Spd	6	10	9	15	13	13	8	5	4	3	1	2	2	4	5	3	3	5	6	7	5	5	6	7	2.9	15.0
Dir	26	36	39	41	33	26	29	52	61	155	119	114	126	176	172	157	181	185	174	172	155	148	153	158	82.5	40.6
19 Spd	8	9	9	9	11	10	9	7	7	14	18	19	17	18	19	19	13	10	4	2	2	2	4	6	7.2	18.9
Dir	163	163	162	162	165	173	174	185	179	247	247	250	249	258	254	251	254	246	202	201	134	157	16	348	225.0	249.8
20 Spd	3	5	4	6	3	2	3	3	2	3	6	7	5	7	3	5	5	4	4	3	3	4	5	6	2.3	6.7
Dir	141	177	178	149	171	299	207	230	184	278	284	319	305	303	313	178	182	188	193	208	159	270	276	244	228.5	319.4
21 Spd	8	5	4	4	6	6	5	4	10	15	15	13	9	13	16	17	15	10	11	4	4	4	7	10	7.7	16.6
Dir	232	191	205	203	175	168	184	178	249	254	260	265	255	259	252	246	246	234	231	200	214	193	185	174	232.5	246.5
22 Spd	10	10	10	8	10	8	11	11	11	12	12	12	12	10	9	12	10	10	14	6	4	5	8	6	9.1	14.0
Dir	170	170	175	180	170	178	172	185	197	198	215	199	198	214	217	224	212	219	230	216	212	193	187	194	197.3	229.8



Peace Airshed Zone Association

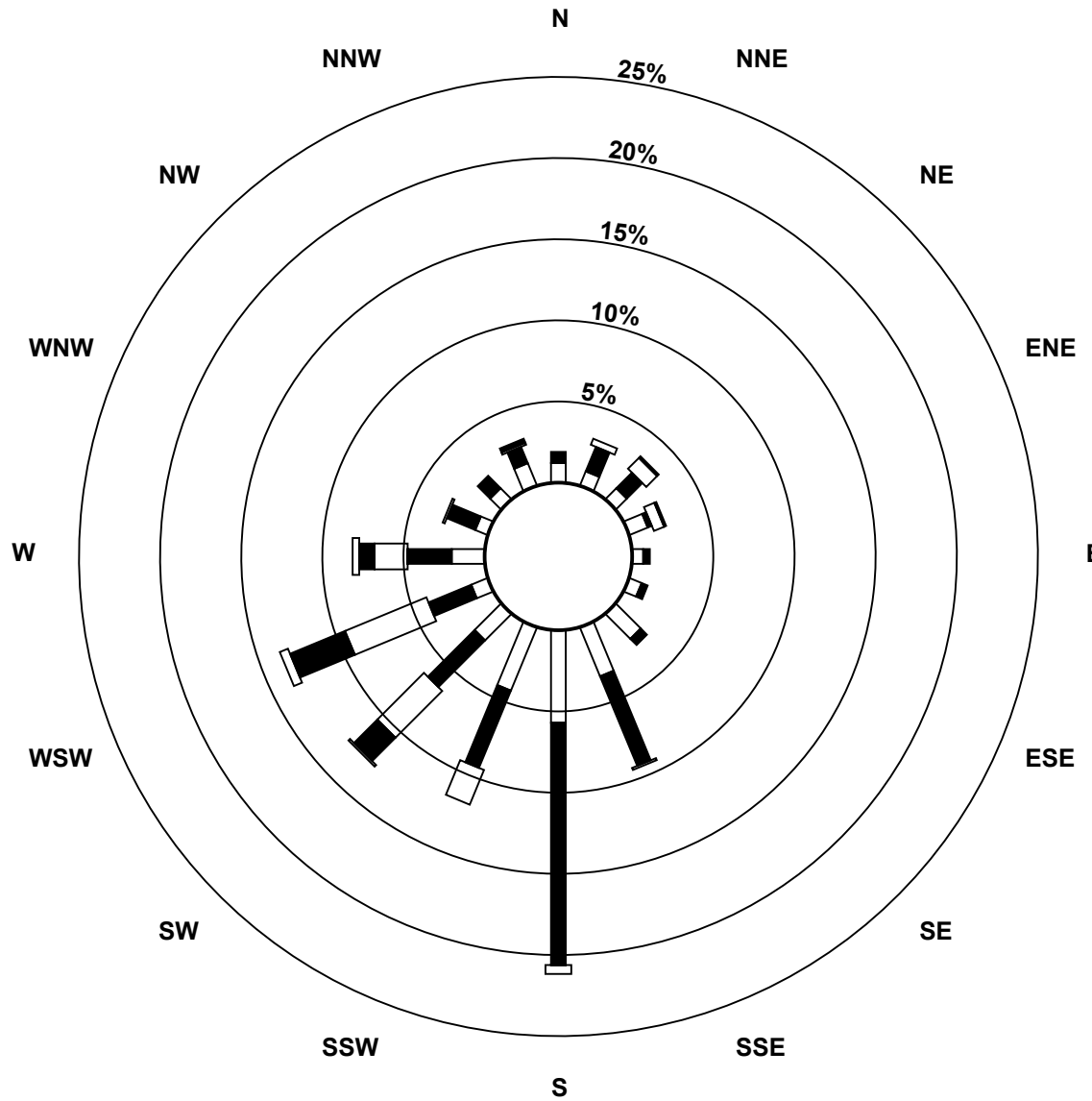
Hourly Averages

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

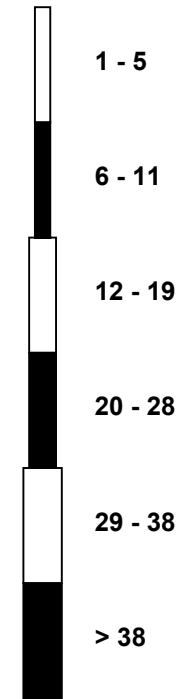
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	8	7	8	9	8	9	8	11	12	11	18	15	18	24	23	30	30	32	28	22	24	18	12	3	14.5	32.2
Dir	193	196	192	187	192	191	196	196	216	212	233	232	250	263	264	268	269	259	254	241	249	250	236	192	241.0	259.2
24 Spd	4	10	12	14	8	9	15	16	17	20	21	18	16	16	17	18	20	16	17	12	4	5	8	9	12.6	21.1
Dir	233	260	255	256	267	253	255	272	262	256	255	263	272	272	263	263	259	251	242	236	223	195	177	170	253.8	254.9
25 Spd	8	7	8	8	7	6	7	7	7	11	13	7	8	7	9	6	4	4	2	3	3	5	7	7	4.3	13.3
Dir	174	170	170	170	171	161	174	173	178	243	258	217	195	221	267	292	318	37	53	90	98	137	166	174	194.9	258.1
26 Spd	5	7	8	6	7	7	8	7	9	10	9	6	7	7	7	5	4	6	5	3	11	9	10	4	5.4	11.3
Dir	174	154	160	146	147	150	150	160	171	168	157	165	162	161	181	184	166	131	137	153	268	261	263	222	173.8	268.0
27 Spd	6	7	3	7	7	7	8	7	6	5	10	6	6	7	9	13	20	19	18	14	8	5	4	7	7.1	20.5
Dir	189	140	162	179	174	181	175	177	179	220	249	193	133	151	181	228	241	249	241	230	232	193	194	188	208.5	241.2
28 Spd	7	9	9	8	8	8	7	5	20	23	18	15	11	12	14	12	11	10	13	13	4	3	7	10	9.4	23.0
Dir	183	180	181	182	175	174	186	196	242	245	243	241	235	239	245	239	220	219	228	243	223	192	174	172	220.4	245.2
29 Spd	10	8	10	12	12	10	9	7	7	7	8	8	8	8	5	3	4	3	3	3	1	1	4	5	5.4	11.9
Dir	172	173	170	172	173	171	171	177	186	189	227	211	193	181	196	253	333	127	56	64	118	140	160	192	179.8	171.9
30 Spd	9	3	3	4	8	9	9	6	6	10	15	21	18	15	24	18	14	29	22	23	15	11	5	5	11.8	29.4
Dir	253	125	177	209	180	175	182	216	212	212	220	227	226	216	231	225	217	243	250	238	235	229	215	191	224.1	242.7
31 Spd	7	6	5	5	7	5	4	4	8	9	8	7	5	6	6	5	6	6	4	4	9	22	9	11	4.1	22.0
Dir	197	189	166	179	185	141	165	219	268	265	270	322	333	299	309	299	288	271	266	325	335	333	308	295	282.7	332.8
Spd	5.5	5.3	5.2	5.4	5.6	5.4	5.4	4.8	5.1	6.2	7.7	6.4	5.6	6.6	8.4	7.6	7.5	7.6	8.0	6.4	4.3	3.8	4.5	4.6	Diurnal Average	
Dir	192.9	184.7	187.3	186.2	184.2	191.1	202.6	208.9	227.2	237.4	241.9	241.6	241.7	247.6	248.5	249.7	246.2	245.2	240.7	236.6	234.2	226.3	202.1	194.3	Diurnal Maximum	
Spd	24.8	23.4	20.6	22.8	25.5	27.5	26.1	21.6	21.4	23.4	26.4	21.0	20.6	23.8	25.7	29.6	30.4	33.4	28.7	23.7	24.1	22.0	24.8	23.8	Diurnal Maximum	
Dir	241.7	241.9	241.1	242.7	245.9	250.5	253.5	254.7	261.5	261.2	270.7	227.2	327.1	231.5	234.1	268.0	269.3	247.6	242.7	251.6	248.5	332.8	244.0	241.1	Diurnal Maximum	
Maximum Speed Value: 33 km/h on Jul 16 18:00		Minimum Speed Value: 0 km/h on Jul 5 07:00										Hours in Service: 744														
Maximum Daily Speed Average: 15.4 km/h on Jul 4		Minimum Daily Speed Average: 0.9 km/h on Jul 20										Hours of Data: 744														
Maximum Diurnal Speed Average: 8.4 km/h at hour 15		Minimum Diurnal Speed Average: 3.8 km/h at hour 22										Hours of Missing Data: 0														
Monthly Average Velocity: 5.43 km/h 224.42 deg		Speed Percentiles: P ₁ = 1.0 P ₁₀ = 3.1 Q ₁ = 4.9 Median = 7.4 Q ₃ = 11.3 P ₉₀ = 18.1 P ₉₉ = 29.1										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	18	16	0	0	0	0	34																			
NorthEast	18	19	15	2	0	0	54																			
East	9	5	0	0	0	0	14																			
SouthEast	26	24	0	0	0	0	50																			
South	58	179	18	0	0	0	255																			
SouthWest	29	52	57	31	5	0	174																			
West	21	41	40	20	4	0	126																			
NorthWest	14	20	1	2	0	0	37																			
Total	193	356	131	55	9	0	744																			

Wind Rose

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



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Portable Rycroft - July 2017

Maximum Speed: 34 km/h on Jul 16 18:00	Maximum Daily Speed Average: 16.5 km/h on Jul 23	Hours in Service: 744
Minimum Speed: 1 km/h on Jul 29 22:00	Minimum Daily Speed Average: 5.1 km/h on Jul 20	Hours of Data: 744
Maximum Diurnal Speed Average: 13.4 km/h at hour 15	Minimum Diurnal Speed Average: 7.0 km/h at hour 22	Hours of Missing Data: 0
Monthly Average Speed: 9.62 km/h	Percentiles: P ₁ = 2.0 P ₁₀ = 3.9 Q ₁ = 5.6 Median = 7.9 Q ₃ = 11.8 P ₉₀ = 18.8 P ₉₉ = 29.3	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-Jul	10	9	7	8	6	6	5	7	5	7	14	8	14	14	19	12	7	3	8	5	6	7	3	3	8.1	19.4
2-Jul	4	7	7	8	9	7	6	8	8	11	12	21	14	13	14	13	9	9	22	13	6	6	8	11	10.1	21.7
3-Jul	12	9	8	7	8	10	12	12	12	17	16	15	16	19	20	22	30	28	21	20	14	8	10	9	14.9	30.1
4-Jul	8	10	9	12	11	13	14	13	12	15	20	19	21	24	26	26	24	29	29	22	17	7	5	7	16.4	29.4
5-Jul	7	7	8	8	7	6	2	13	10	7	12	14	20	17	18	11	11	9	10	10	7	4	5	7	9.6	20.1
6-Jul	7	5	6	7	7	7	5	5	5	5	6	7	8	8	8	7	6	5	7	7	4	3	5	5	5.9	8.0
7-Jul	5	5	6	5	2	3	2	7	8	12	16	19	18	17	17	21	20	13	6	9	11	14	12	11	10.9	21.2
8-Jul	6	5	6	7	8	9	7	6	7	8	8	10	13	8	14	11	10	11	5	3	3	5	6	6	7.5	13.8
9-Jul	6	6	6	3	3	2	3	5	7	10	7	6	6	12	12	15	10	8	22	24	4	2	5	7	7.9	24.2
10-Jul	6	4	5	4	11	8	13	12	13	12	9	9	12	10	11	9	10	8	8	7	5	5	7	5	8.6	13.5
11-Jul	6	7	7	7	6	5	5	4	2	4	5	8	8	9	8	8	8	9	7	5	5	5	3	2	6.0	8.9
12-Jul	3	4	3	3	4	5	3	4	6	10	12	11	13	13	14	14	7	8	10	5	4	8	7	4	7.2	14.4
13-Jul	4	5	4	4	6	4	12	5	7	12	11	14	5	7	9	9	9	10	9	8	8	6	4	5	7.4	14.4
14-Jul	6	7	8	7	6	7	6	3	4	4	5	8	9	9	8	6	6	7	6	5	4	3	3	2	5.8	9.0
15-Jul	3	3	4	2	4	10	3	3	5	6	3	4	5	6	6	7	9	8	18	8	19	10	7	6	6.6	18.9
16-Jul	7	8	8	8	8	11	6	7	8	6	19	17	10	18	25	28	27	34	27	23	10	20	25	24	16.0	33.6
17-Jul	25	23	21	23	26	28	26	22	22	24	27	20	21	16	8	3	5	4	3	3	3	2	2	3	14.9	27.5
18-Jul	7	10	10	15	13	13	9	5	5	3	3	3	5	5	6	4	4	5	7	7	5	6	6	7	6.7	15.2
19-Jul	8	9	9	10	11	10	9	7	7	15	18	19	17	18	19	19	13	11	4	2	3	2	8	9	10.6	19.1
20-Jul	4	6	4	6	6	2	3	3	3	4	6	7	6	8	7	5	5	4	4	4	4	7	5	7	5.1	7.6
21-Jul	9	5	4	5	6	6	5	5	11	15	15	14	10	14	17	17	15	10	11	4	4	4	7	10	9.3	17.0
22-Jul	10	10	10	8	10	8	11	11	11	12	12	12	13	10	9	13	10	11	14	6	4	6	8	6	9.8	14.2
23-Jul	8	8	8	9	8	9	8	11	13	11	18	15	19	25	24	30	31	32	28	22	24	18	12	4	16.5	32.4
24-Jul	5	10	12	14	8	9	16	16	17	20	21	19	17	17	18	19	20	17	17	13	4	5	8	9	13.8	21.4
25-Jul	8	7	8	8	7	6	7	7	7	12	14	9	8	9	11	8	7	5	4	3	3	5	7	7	7.4	13.7
26-Jul	5	7	8	6	7	7	8	7	9	10	10	7	8	8	7	6	5	7	5	3	11	10	11	4	7.4	11.5
27-Jul	6	7	4	7	7	7	8	7	6	6	10	7	6	7	9	14	21	20	18	14	8	5	4	7	8.9	20.7
28-Jul	7	9	9	8	8	8	7	5	20	23	18	15	12	13	15	12	11	11	13	13	4	4	7	10	10.9	23.2
29-Jul	10	9	10	12	12	10	9	7	7	7	9	10	9	9	6	6	6	4	4	3	1	1	4	5	7.0	11.9
30-Jul	9	4	5	5	8	9	9	6	7	10	16	21	18	16	24	19	14	30	22	23	15	11	6	6	13.0	29.6
31-Jul	8	6	5	6	7	5	4	5	8	9	9	8	7	8	8	7	8	6	4	5	10	22	13	12	7.9	22.4
	7.4	7.5	7.4	7.7	8.1	8.1	7.8	7.6	8.8	10.5	12.3	12.2	11.8	12.4	13.4	13.0	12.2	12.1	12.0	9.7	7.5	7.0	7.2	7.1	Diurnal Average	
	24.9	23.5	20.6	22.9	25.6	27.5	26.2	21.6	21.6	23.7	26.7	21.2	20.9	24.6	26.2	29.8	30.8	33.6	28.9	24.2	24.1	22.4	24.9	23.9	Diurnal Maximum	

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

Hourly Standard Deviations

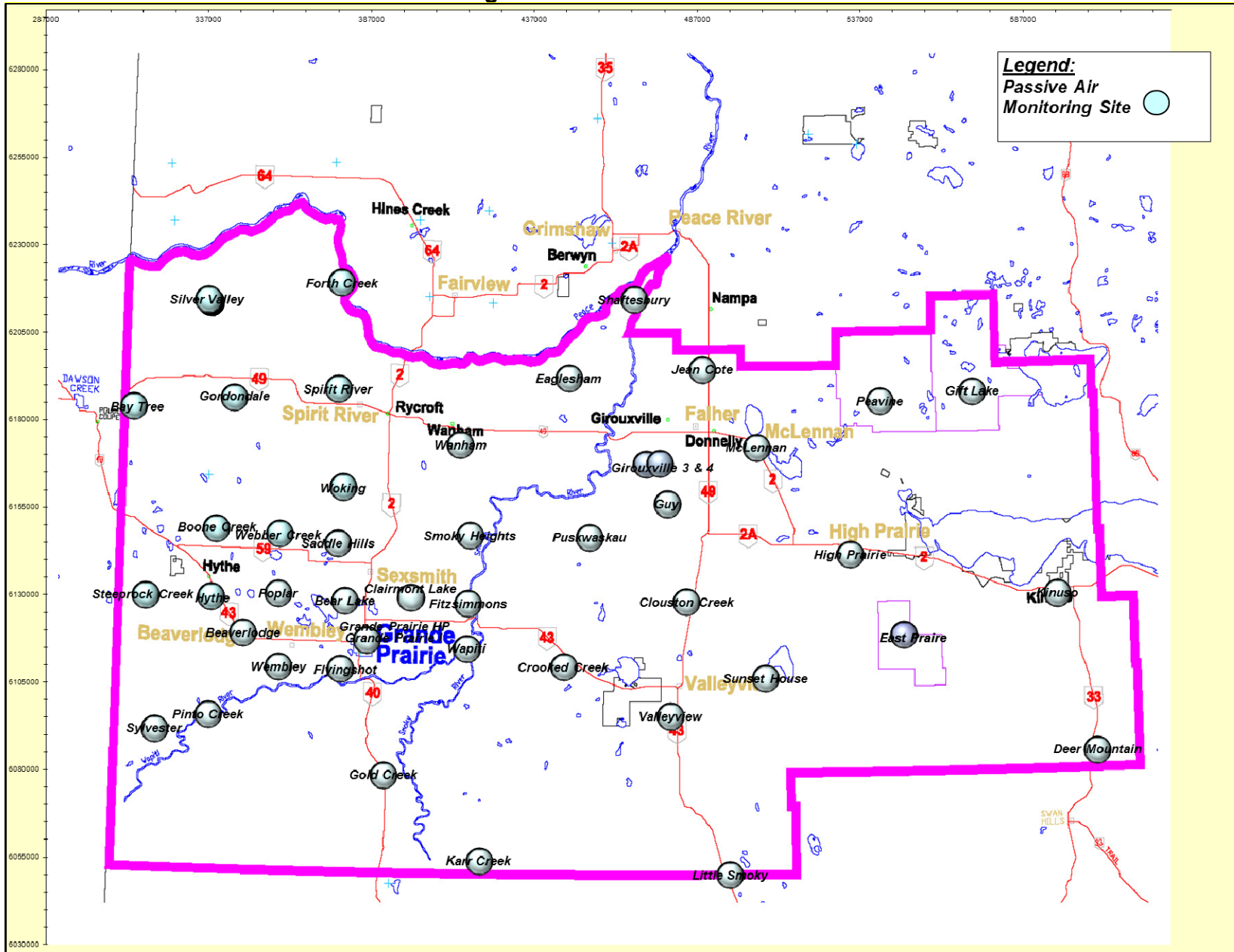
Wind Direction (WD) - deg
Portable Rycroft - July 2017

Maximum Value: 94.2 deg on Jul 8 01:00																								Hours in Service:	744
Minimum Value: 2.6 deg on Jul 29 04:00																								Hours of Data:	744
Percentiles: P ₁ = 2.9 P ₁₀ = 5.8 Q ₁ = 8.7 Median = 15.7 Q ₃ = 27.3 P ₉₀ = 50.1 P ₉₉ = 83.7																								Hours of Missing Data:	0
																								Hours of Calibration:	0
																								Percent Operational Time:	100.0
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Jul	8	9	12	9	8	12	8	7	31	29	19	20	18	19	10	29	67	52	21	13	31	40	61	47	67.3
2-Jul	20	7	11	7	8	7	12	10	19	23	22	10	21	20	28	26	15	21	35	58	18	45	9	6	57.7
3-Jul	10	19	14	12	5	5	5	6	9	8	6	8	8	13	8	10	7	6	6	7	8	7	6	4	18.9
4-Jul	5	5	5	6	4	5	6	8	8	8	8	11	11	11	12	8	9	7	6	5	4	8	10	5	12.4
5-Jul	7	7	4	4	51	58	74	10	22	31	19	16	17	25	22	39	51	39	26	19	14	47	11	9	73.6
6-Jul	53	22	15	23	22	33	28	25	40	41	61	43	53	71	54	48	48	59	14	17	36	24	13	11	71.1
7-Jul	8	5	71	50	54	33	76	40	11	14	16	18	13	15	13	12	9	7	40	80	60	17	9	68	80.4
8-Jul	94	59	18	12	6	6	11	10	16	11	13	19	18	27	19	30	18	20	23	20	23	18	17	6	94.2
9-Jul	15	15	13	68	33	88	58	20	22	12	54	72	57	21	25	19	15	28	89	12	59	32	15	6	89.4
10-Jul	18	14	22	22	10	16	12	8	8	10	10	14	15	18	18	23	20	22	16	12	13	15	8	22	23.2
11-Jul	10	7	8	10	5	9	9	20	36	31	45	29	46	36	32	30	32	24	30	22	20	25	56	55	56.2
12-Jul	78	33	22	27	25	11	26	17	17	15	21	25	22	21	18	8	38	34	13	42	39	17	15	35	78.3
13-Jul	23	25	37	34	86	84	15	31	23	24	36	12	66	45	54	22	13	23	14	9	9	16	13	9	86.2
14-Jul	17	11	7	8	10	7	9	44	33	50	64	18	21	31	39	40	71	23	19	7	9	16	69	81	81.5
15-Jul	73	77	58	84	32	7	43	35	13	17	77	59	54	40	43	26	19	19	78	34	19	48	42	19	84.0
16-Jul	8	10	14	5	7	7	16	17	9	13	24	33	13	25	5	16	10	6	4	6	13	9	3	4	33.1
17-Jul	3	3	4	4	3	3	4	4	7	10	8	10	9	8	25	41	24	45	26	14	27	16	60	13	60.3
18-Jul	15	16	8	11	6	9	12	16	40	42	86	74	64	43	21	55	54	30	18	10	8	7	8	8	85.6
19-Jul	7	6	7	4	4	4	5	6	19	20	12	8	10	17	10	11	18	15	18	21	58	39	84	47	83.9
20-Jul	55	37	30	10	68	61	25	29	52	62	24	27	50	39	64	27	23	17	16	33	22	54	30	26	67.5
21-Jul	30	19	27	20	16	10	5	13	24	9	16	18	38	22	17	14	11	9	19	18	16	19	5	5	37.5
22-Jul	4	6	7	26	8	9	6	7	9	10	12	12	13	21	14	11	13	12	12	13	16	18	7	8	26.1
23-Jul	5	7	6	5	11	5	7	8	12	12	11	19	19	19	14	7	10	6	7	9	4	7	11	22	22.0
24-Jul	32	3	4	5	12	9	6	5	5	9	10	17	17	21	20	18	11	16	8	6	12	11	4	3	31.6
25-Jul	5	7	3	5	4	5	5	6	12	21	16	30	25	38	40	57	71	45	67	27	18	11	11	3	70.9
26-Jul	17	10	11	10	7	7	9	10	7	11	21	30	23	33	15	20	31	14	8	22	9	45	17	19	44.8
27-Jul	26	13	36	12	6	9	6	8	12	35	16	32	17	22	19	21	9	11	11	7	13	8	11	4	36.0
28-Jul	6	7	4	6	5	5	7	13	14	8	12	17	25	18	19	24	16	17	15	7	13	14	6	4	25.4
29-Jul	4	6	3	3	3	3	6	7	14	16	27	28	25	29	30	62	52	28	29	34	54	51	16	31	62.4
30-Jul	18	62	49	28	6	6	9	16	12	10	10	9	14	13	12	16	10	7	11	4	4	6	12	15	61.7
31-Jul	16	13	27	13	11	18	14	47	17	21	23	41	58	47	57	53	35	30	20	39	24	10	43	25	58.3
	94.2	77.0	71.4	84.0	86.2	88.1	76.1	47.0	52.3	62.0	85.6	74.4	65.8	71.1	64.2	62.4	71.5	58.7	89.4	80.4	60.4	54.5	83.9	81.5	

PAZA

Monthly Passive Data Summary

Location of PAZA Passive Monitoring Stations



PAZA Passive Results for July 2017

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	Site Legal
Duplicates						
14a	Sylvester	0.1		0.6		
14b	Sylvester	0.1		0.3		
25a	Pinto Creek	0.1				
25b	Pinto Creek	0.1				
32a	Gold Creek			1.3		
32b	Gold Creek			1.7		
37a	Crooked Creek		25.7			
37b	Crooked Creek		23.6			
64a	Girouxville 4				0.3	
64b	Girouxville 4				0.3	
2	Bay Tree	0.1	25.7	0.7		13-16-078-13 W6M
4	Gordondale	0.2		0.8		04-34-078-10 W6M
5	Boone Creek	0.1		0.6		16-36-074-11 W6M
9	Spirit River	0.2		1.4		08-12-079-07 W6M
14	Sylvester	0.1		0.5		08-06-069-12 W6M
16	Beaverlodge	0.2		0.7		15-36-071-10 W6M
18	Saddle Hills	0.4		0.5		04-25-074-07 W6M
19	Wanham	0.2		0.7		16-22-077-03 W6M
21	Eaglesham	0.1		1.1		16-21-079-25 W5M
24	Wembley	0.1		1.0		12-31-070-08 W6M
25	Pinto Creek	0.1		0.6		04-24-069-11 W6M
27	Grande Prairie I	0.1		1.7		08-15-071-06 W6M
28	Clairmont Lake	0.2		1.2		09-06-073-04 W6M
29	Smoky Heights	0.2		0.8		04-06-075-02 W6M
32	Gold Creek	0.2		1.5		06-33-067-05 W6M
35	Jean Cote	0.1		1.6		12-35-079-21 W5M
36	Guy	0.1		1.8	0.1	03-04-076-22 W5M
37	Crooked Creek	0.1	24.7	1.0		16-01-071-26 W5M
39	Clouston Creek	0.1		0.5		12-01-073-22 W5M
40	McLennan	0.2		1.4		03-29-077-19 W5M
43	High Prairie	0.1		0.5		16-13-074-17 W5M
44	Peavine	0.1		0.2		03-05-079-15 W5M
46	Little Smoky	0.1		0.9		12-01-065-21 W5M
47	Kinuso	0.1	20.4	0.3		12-10-073-10 W5M
50	East Prairie	0.0		0.3		13-02-072-15 W5M
63	Girouxville 3				0.2	14-02-077-23 W5M
64	Girouxville 4				0.3	4-08-077-22 W5M

*BDL = Below Detection Level

*NS - No sample

Passive Summary for July 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 July 2017 (PAZA Zone)				
Mean	0.1	23.6	0.9	0.2
Standard Deviation	0.1	2.8	0.5	0.1
Minimum	0.0	20.4	0.2	0.1
Minimum At	East Prairie (#50)	Kinuso (#47)	Peavine (#44)	Guy (#36)
Maximum	0.4	25.7	1.8	0.3
Maximum At	Saddle Hills (#18)	Bay Tree (#2)	Guy (#36)	Girouxville 4 (#64a)

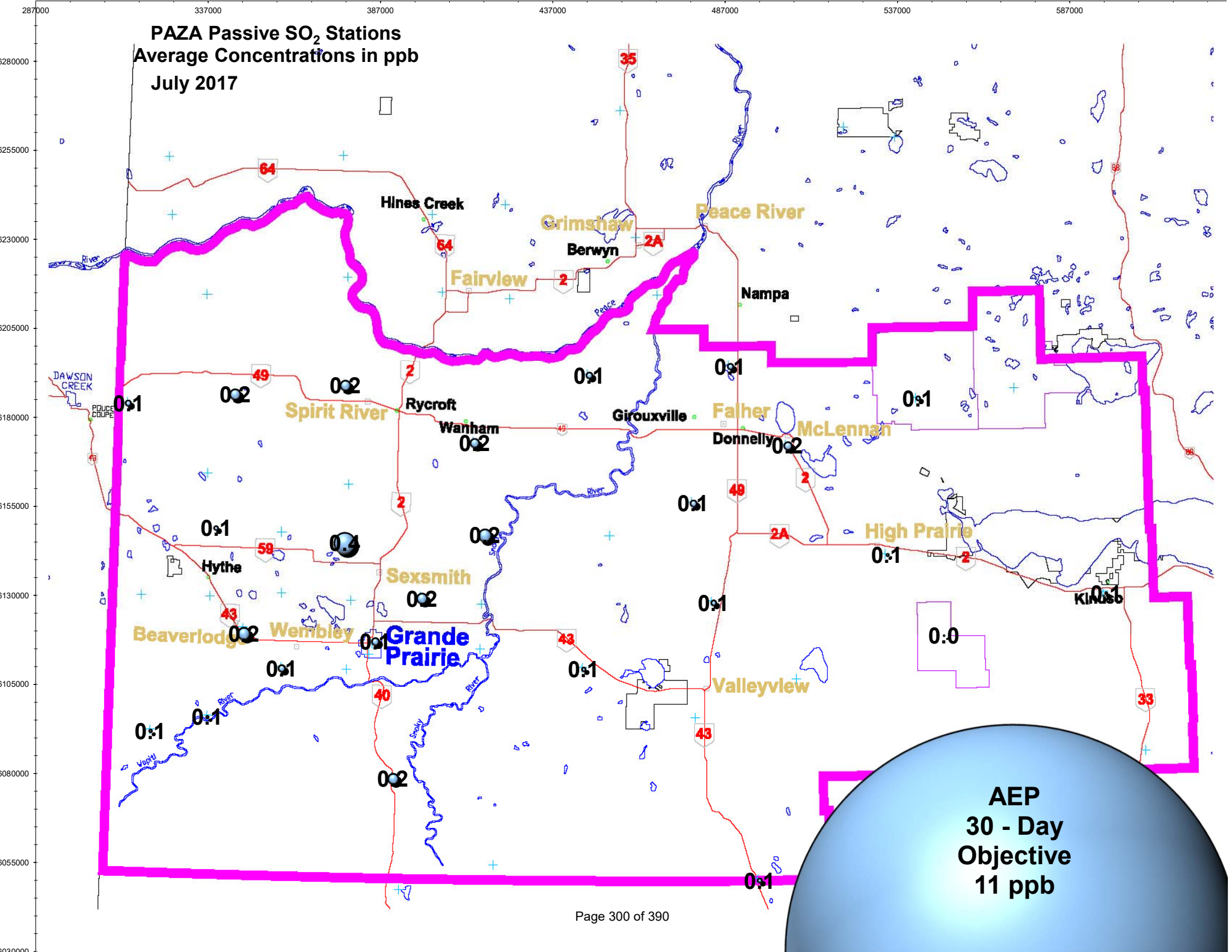
Comparison between Continuous and Passive monitoring at Beaverlodge (passive #16 Beaverlodge)

	SO ₂	NO ₂
PAZA Beaverlodge station	0.4	2.4
PAZA Beaverlodge passive	0.2	0.7

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

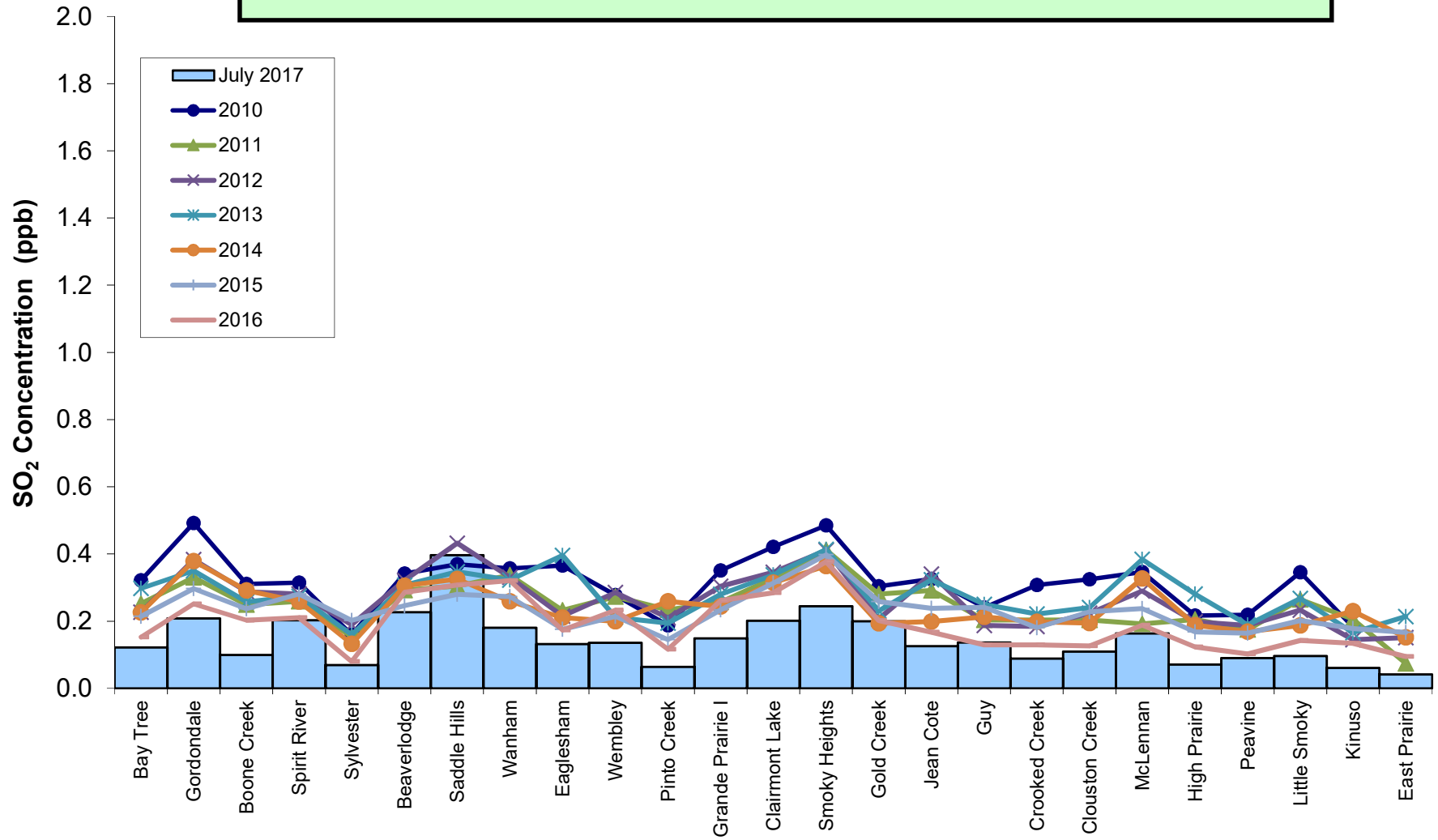
	SO ₂	NO ₂
PAZA Henry Pirker station	0.2	4.6
PAZA Grande Prairie passive	0.1	1.7

PAZA Passive SO₂ Stations
Average Concentrations in ppb
July 2017

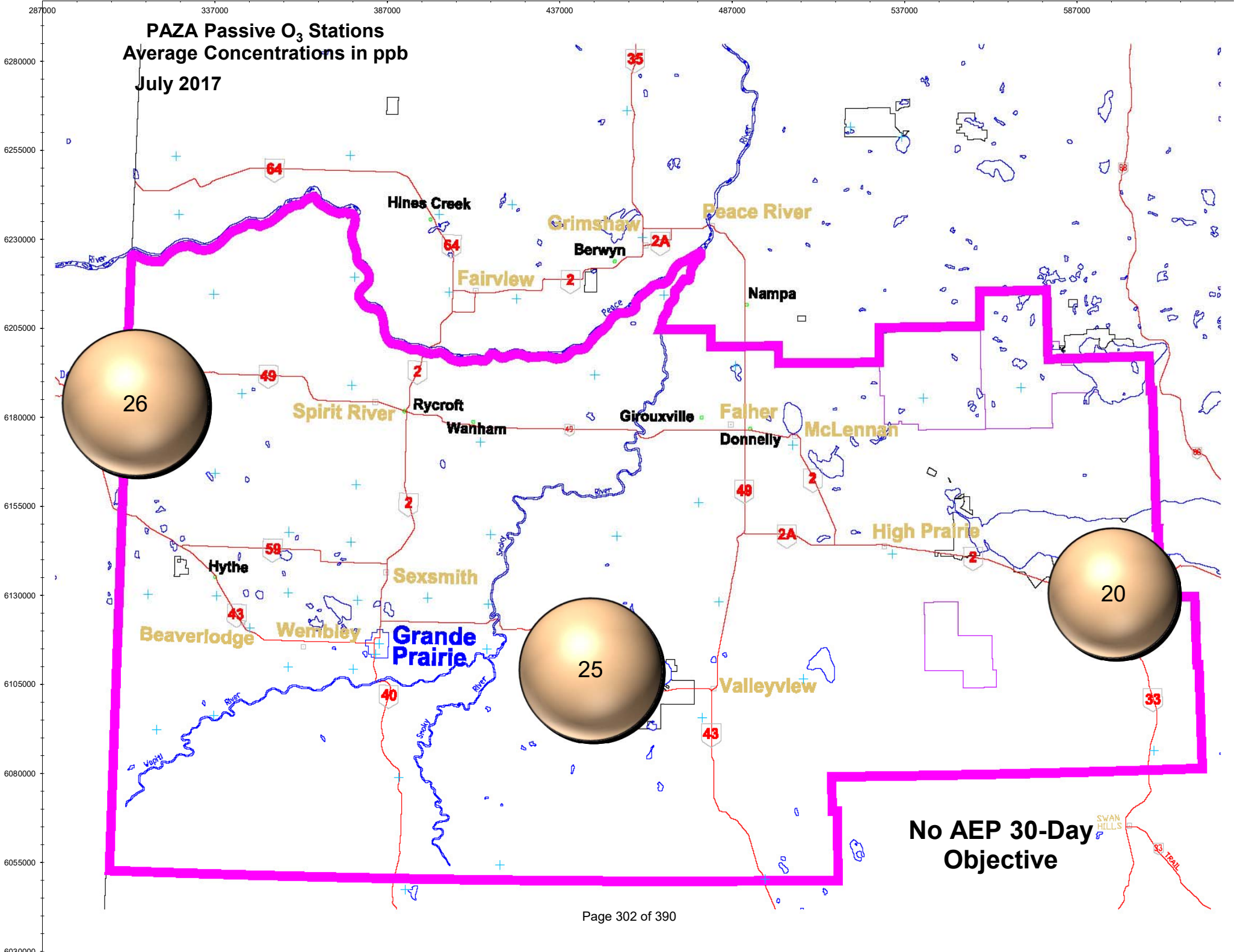


AEP
30 - Day
Objective
11 ppb

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

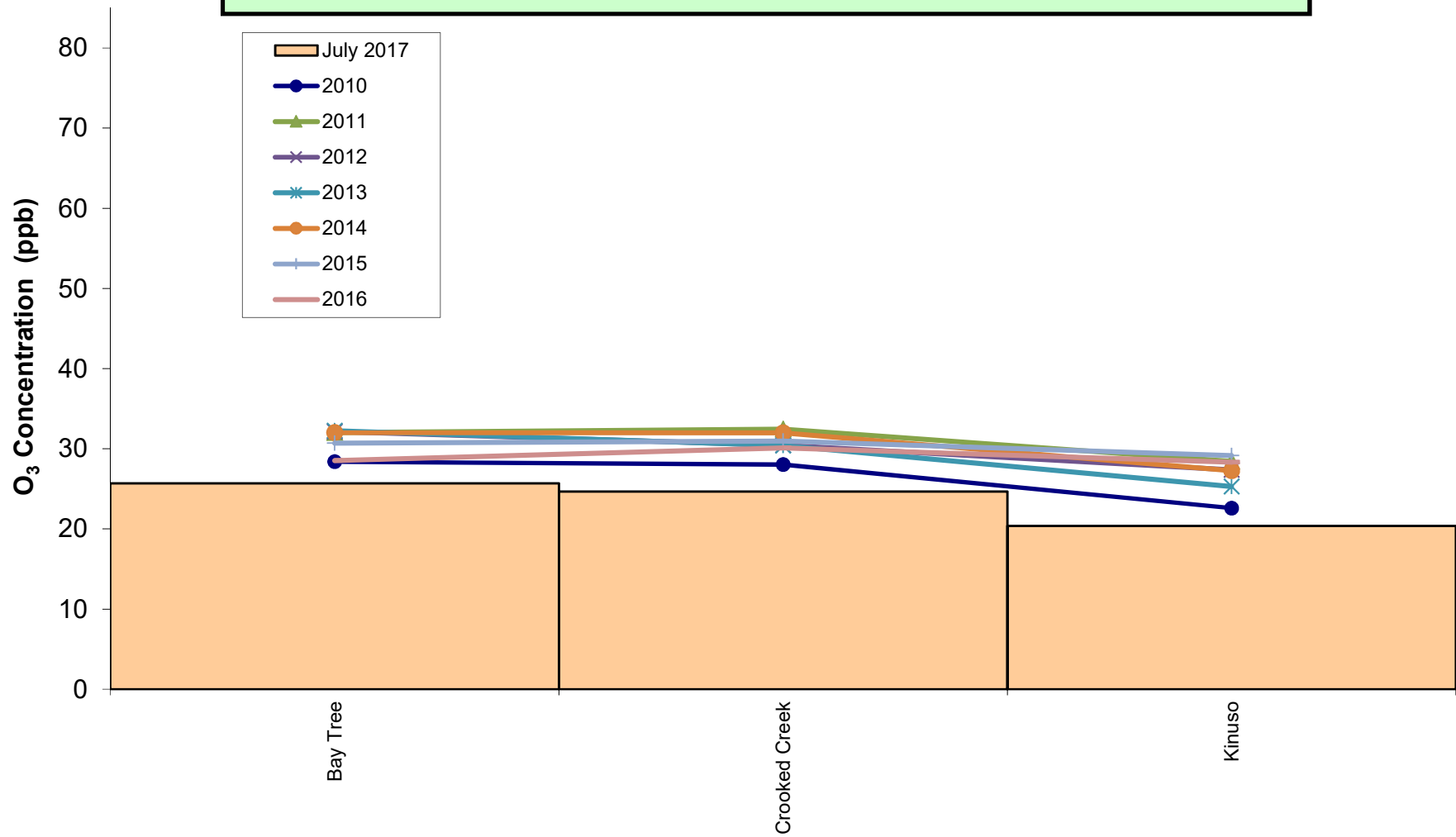


PAZA Passive O₃ Stations Average Concentrations in ppb July 2017

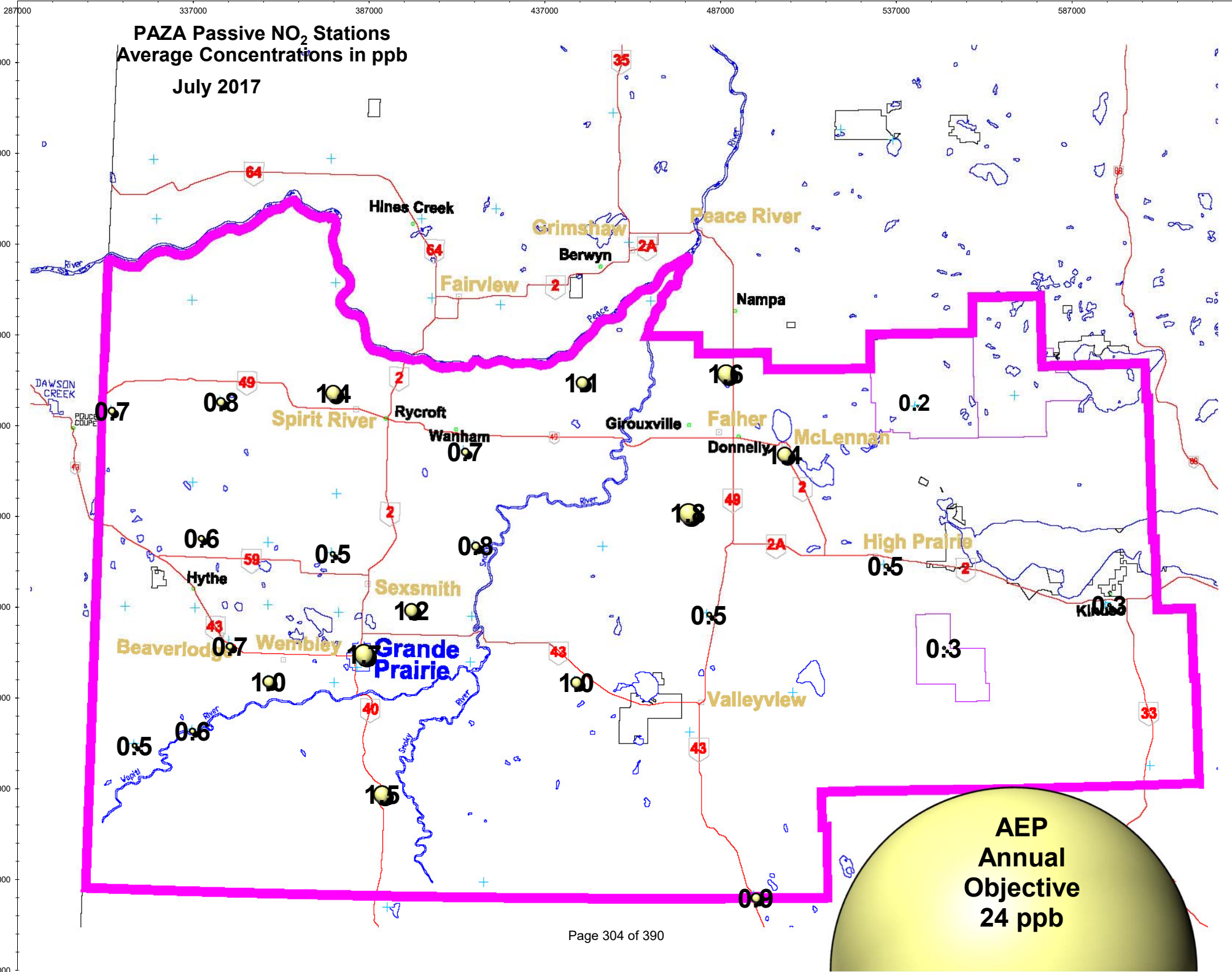


No AEP 30-Day Objective

Alberta Ambient Air Quality Objective - No Annual O₃ Objective

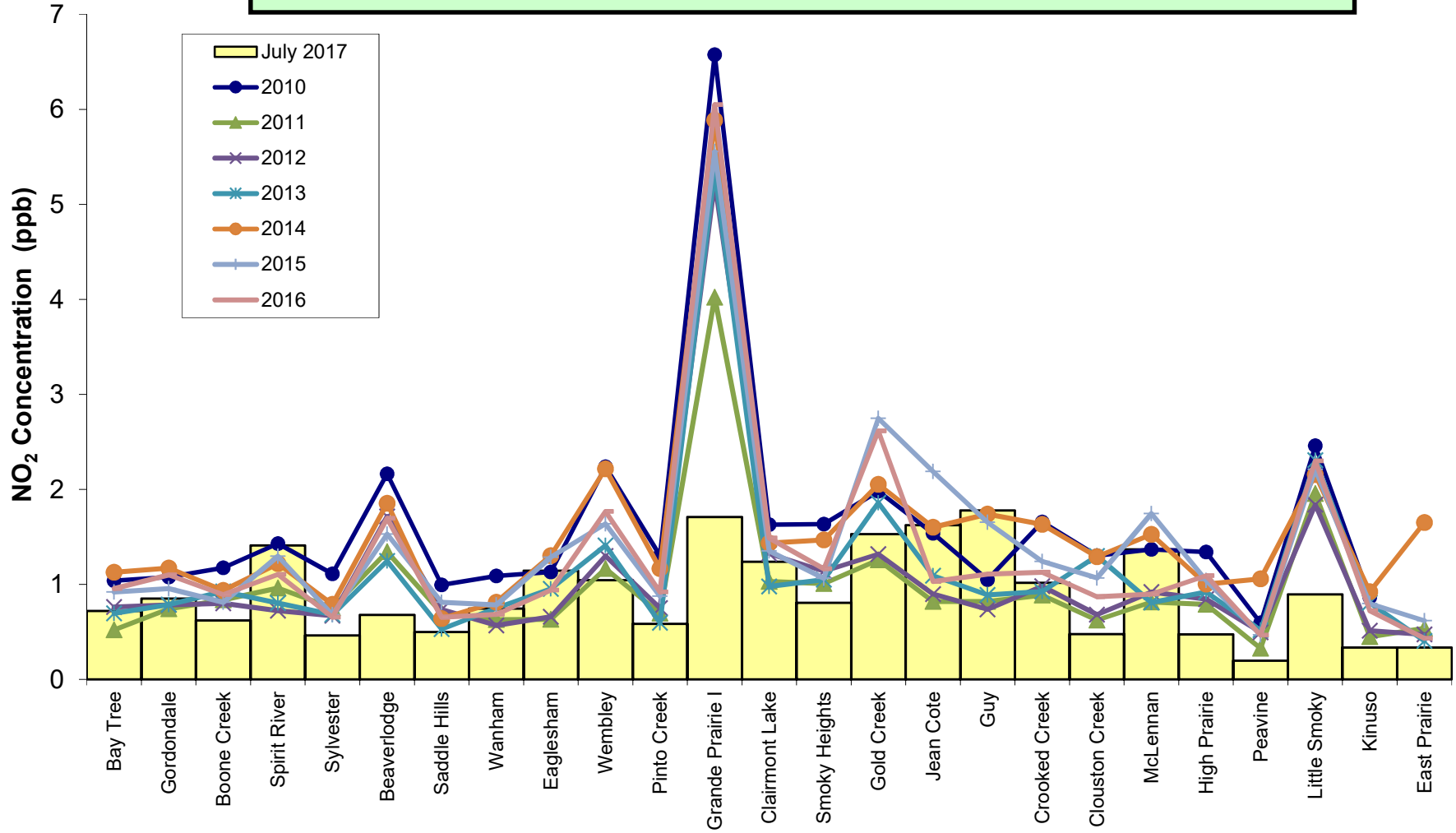


PAZA Passive NO₂ Stations Average Concentrations in ppb July 2017

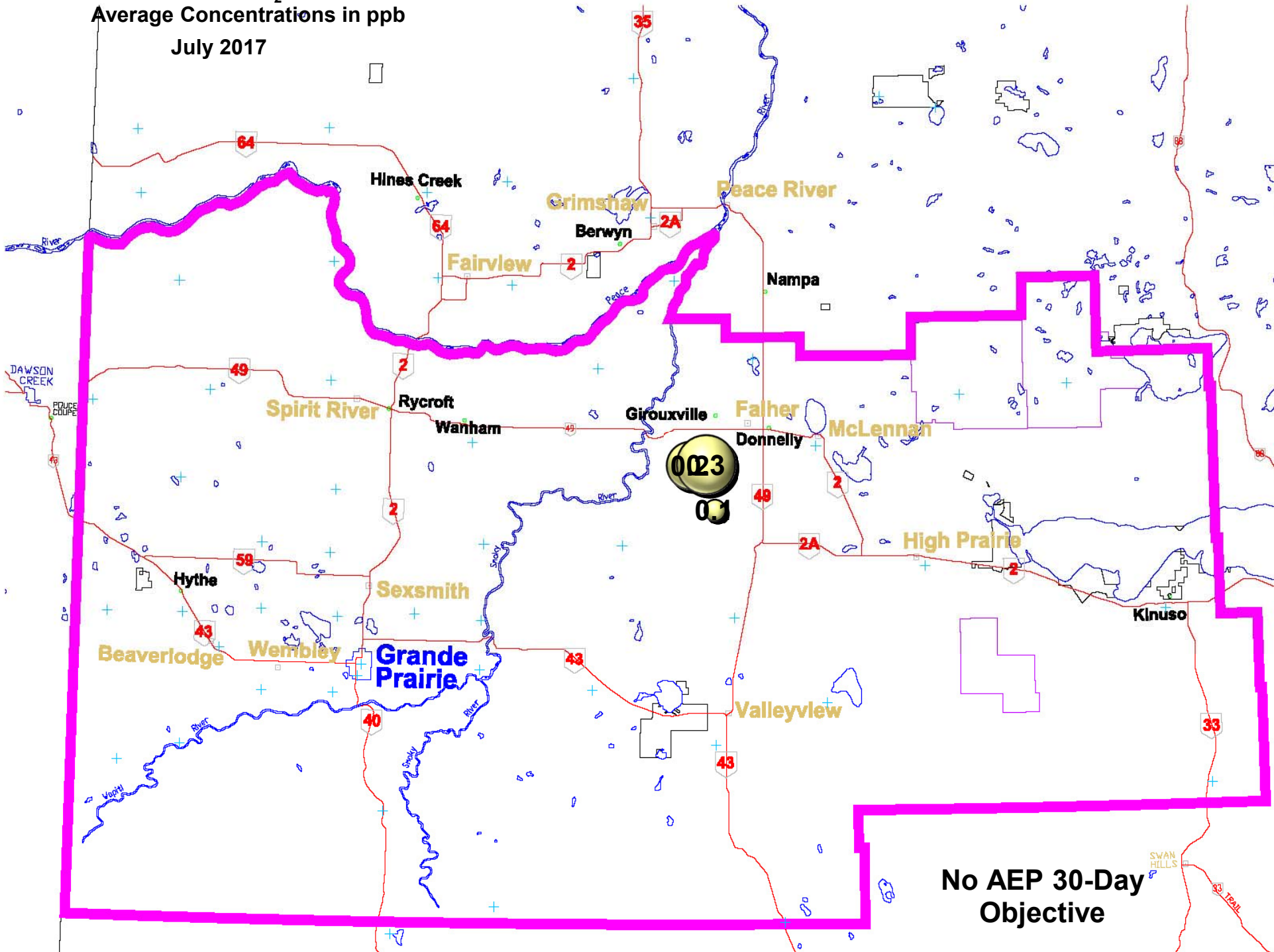


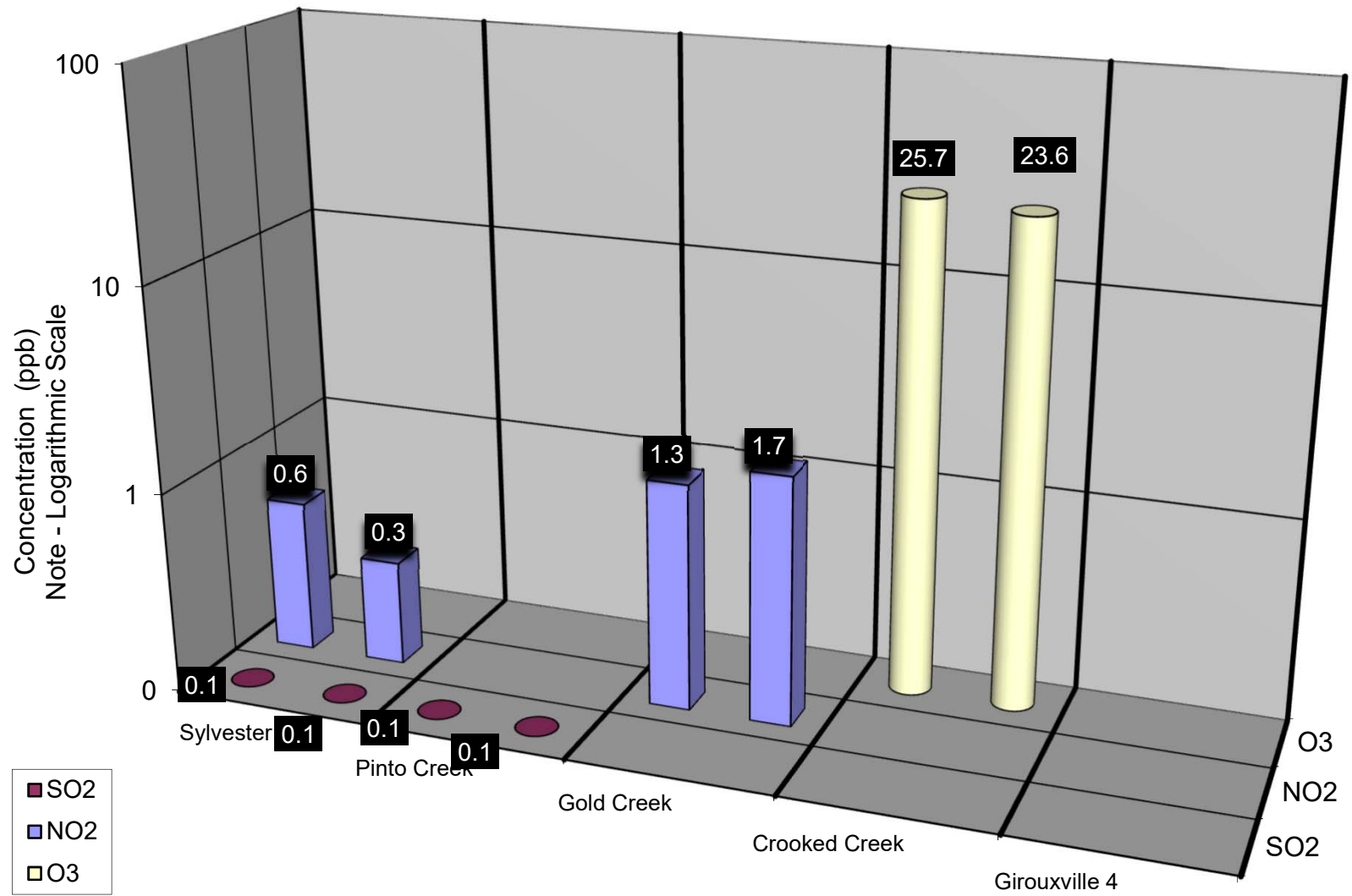
AEP
Annual
Objective
24 ppb

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



PAZA Passive H₂S Stations
Average Concentrations in ppb
July 2017





Duplicate Summary Chart

July 2017 Calibration Reports

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

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

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

**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



AIR QUALITY MONITORING

Parameter SO2

Air Monitoring Network PAZA

Station Information

Calibration Date	July 6, 2017	Previous Calibration	June 1, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	11:35	End Time (MST)	
Barometric Pressure	918.0 mbar	Station Temperature	22.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Conc	50 ppm	Cal Gas Cert Date	02/21/2020
		Cal Gas Cylinder #	EY0000740
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	10
	Before		After
Calculated slope	0.991928	Calculated slope	0.992588
Calculated intercept	-0.366792	Calculated intercept	-0.131089
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	678.2	mm Hg	678.2	mm Hg
Flow	0.447	lpm	0.447	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)
5141	0.00	0.0	0.1	N/A
5141	41.30	398.5	401.2	0.9933
5141	19.93	193.1	195.9	0.9856
5141	9.77	94.8	94.8	1.0001
5141	0.00	0.0	0.1	As Found Zero
5141	40.01	386.1	401.2	As Found Span
Average Correction Factor				0.9930

Calculated value of As Found Response: 397.4 ppb Percent Change of As Found: -2.9%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.1	ppb
Auto span	280.8	ppb	288.1	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary



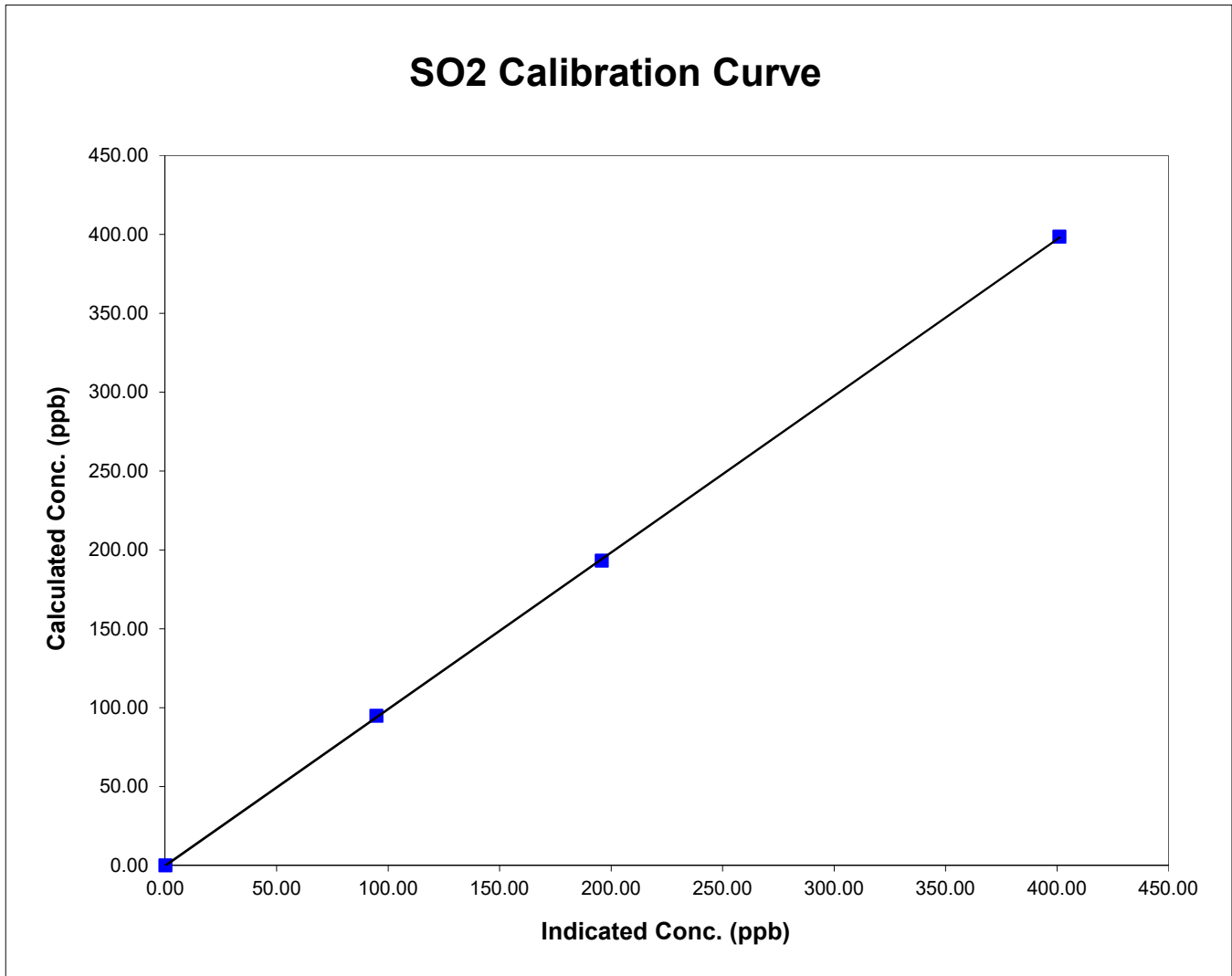
Parameter SO2
 Air Monitoring Network PAZA

Station Information

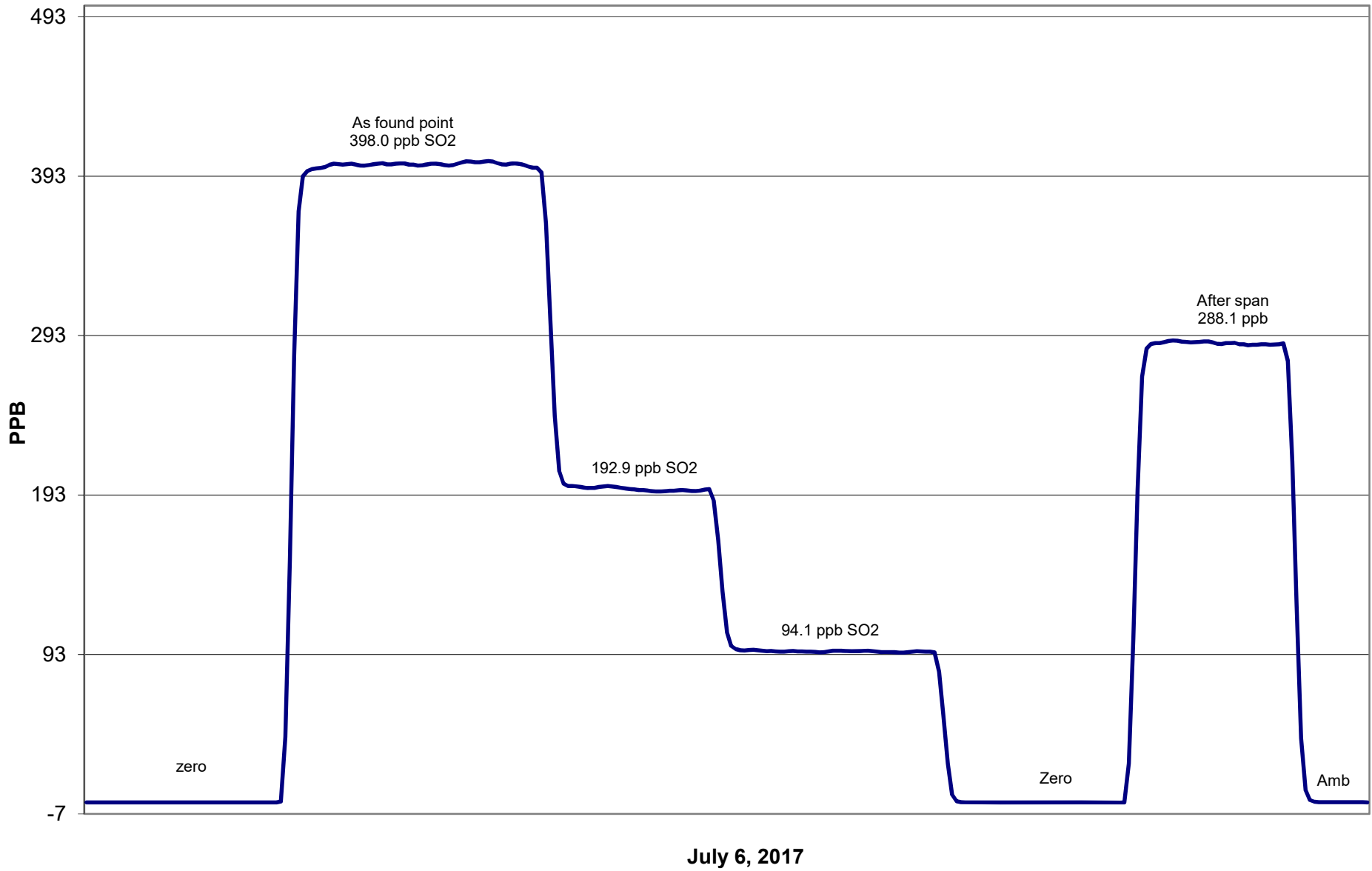
Calibration Date	July 6, 2017	Previous Calibration	June 1, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	11:35	End Time (MST)	0:00
Analyzer make/model	TEI 43I-TLE	Analyzer serial #	1507864682 (AMU 2006)

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999972
398.5	401.2	0.9933		
193.1	195.9	0.9856	Slope	0.992588
94.8	94.8	1.0001		
			Intercept	-0.131089



SO2 Calibration



Calibration Report

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



Station Information

Calibration Date	July 6, 2017	Previous Calibration	June 1, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Installation	Removal
Start Time (MST)	9:40	End Time (MST)	13:20:00 PM
Barometric Pressure	0.917 mbar	Station Temperature	22.0 Deg C
Calibrator	Envionics	Serial Number	906535067(AMU 197)
NO Cal Gas Conc	51.1 ppm	Cal Gas Expiry Date	02/21/2020
NOx Cal Gas Conc	51.3 ppm	Cal Gas Serial #	EY0000740

DACS Information

DACS make	CR3000	DACS serial No.	5408
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Parameter	NO2	NOx	NO	
Before	Data Slope	1.006524	1.001936	0.996309
	Data Offset	-0.428468	-0.454925	-0.360454
After	Data Slope	0.982194	1.000137	0.999574
	Data Offset	-1.393465	-1.081225	-1.038669
Channel #	8	6	7	
Voltage Range	0 - 5 VDC	0 - 5 VDC	0 - 5 VDC	

Analyzer Information

Analyzer make/model	42i	Analyzer serial #	906535087
---------------------	-----	-------------------	-----------

Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	7.7	mV	7.7	mV
NOx bkgnd	7.9	mV	7.9	mV
NO coefficient	1.020		1.020	
NOx coefficient	1.000		1.000	
NO2 conv temp	323.2	Deg C	322.2	Deg C
Cooler Temp	-2.9	Deg C	-2.9	Deg C
PMT Volt	-844.7	mV	-844.4	mV
R Cell Press	199.2	in Hg	199.2	in Hg
Sample Flow	0.604	LPM	0.595	LPM

Notes: No adjustment made
 Converter Efficiency is at 103.2%, almost the same as at Rycroft station calibration. Seem to be a calibrator issue. Will be using indicated NO2 value instead of the calculated for O3 calibration sheet

Calibration Report



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

Station Information

Calibration Date: July 6, 2017 Station Location: Henry Pirker

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	5141	0.00	0.0	0.0	0.0	0.0	0.1	0.1	N/A	N/A
1	5141	41.30	408.8	407.2	1.6	408.5	407.3	1.4	1.0009	0.9999
2	5141	19.91	197.9	197.1	0.8	202.0	201.0	0.7	0.9796	0.9810
3	5141	9.77	97.3	96.9	0.4	97.8	97.4	0.5	0.9947	0.9951
AFZ	5141	0.00	0.0	0.0	0.0	0.0	0.1	0.1	0.0000	0.0000
AFS	5141	42.28	418.5	416.8	0.8	408.5	407.3	1.4	1.0244	1.0235
Average Correction Factor									0.9917	0.9920

As Found Concentrations: NO_x= 408.9 NO= 405.3 As Found Percent Change NO_x= -2.3% NO= -2.8%

GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.93 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	0.1	0.1	0.0	0.0	0.1	0.1	N/A	N/A	N/A	N/A
NO point	405.2	405.2	0.0	406.6	405.2	1.1	0.9966	1.0000	N/A	N/A
300	405.2	104.6	300.6	411.7	104.6	307.0	0.9842	1.0000	0.9793	102.1%
200	405.2	201.2	204.0	410.6	201.2	208.7	0.9869	1.0000	0.9777	102.3%
100	405.2	299.3	105.9	411.8	299.3	111.6	0.9841	1.0000	0.9497	105.3%
Average Correction Factor							0.9851	1.0000	0.9689	103.2%

AIC Data

Parameter	Previous calibration				Current calibration			
	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.0	0.0	0.1	ppb	0.0	0.0	0.1	ppb
Auto span	303.3	301.2	2.1	ppb	276.1	273.8	2.2	ppb

Calibration Performed By: Dmytro Dolotii

Calibration Summary



Parameter NO₂

Air Monitoring Network PAZA

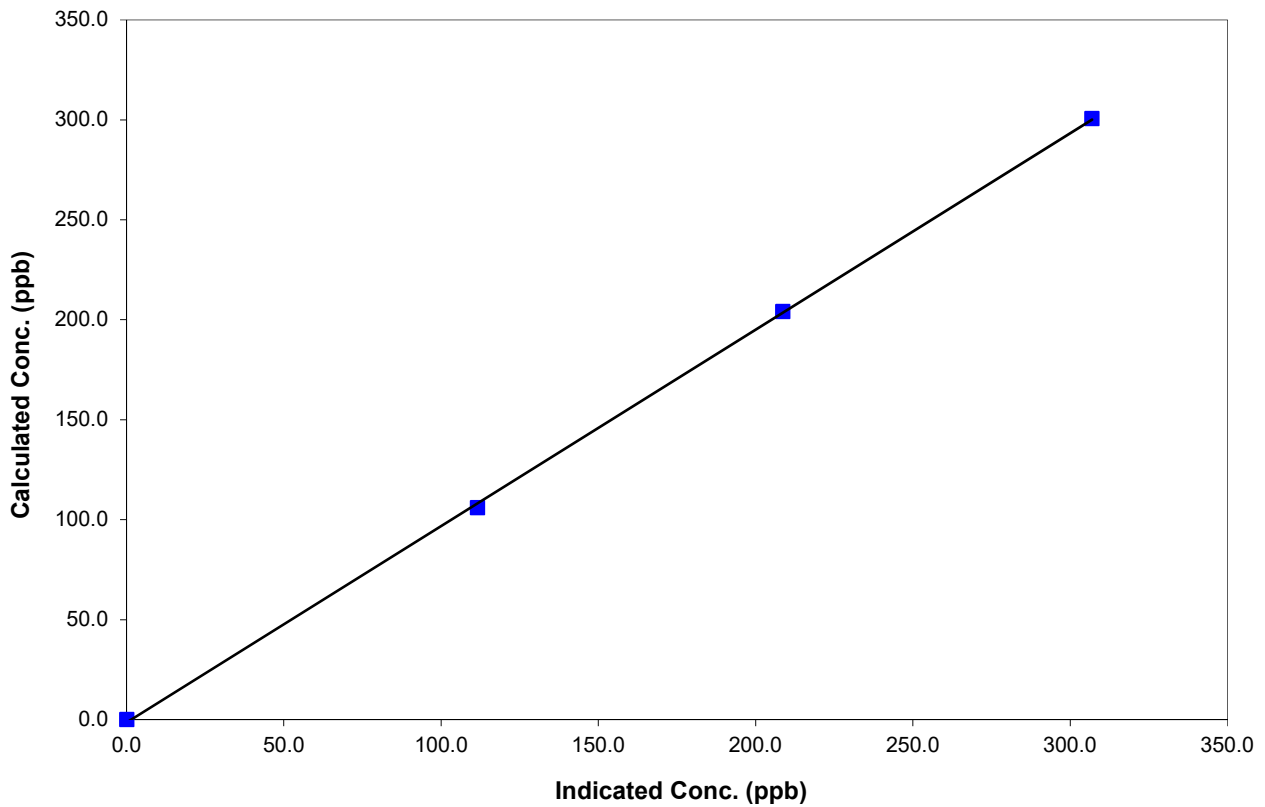
Station Information

Calibration Date	July 6, 2017	Previous Calibration	June 1, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:40	End Time (MST)	13:20:00 PM
Analyzer make	42i	Analyzer serial #	906535087

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999859
300.6	307.0	0.9793		
204.0	208.7	0.9777	Slope	0.982194
105.9	111.6	0.9497		
			Intercept	-1.393465

NO₂ Calibration Curve



Calibration Summary



Parameter NO_x

Air Monitoring Network PAZA

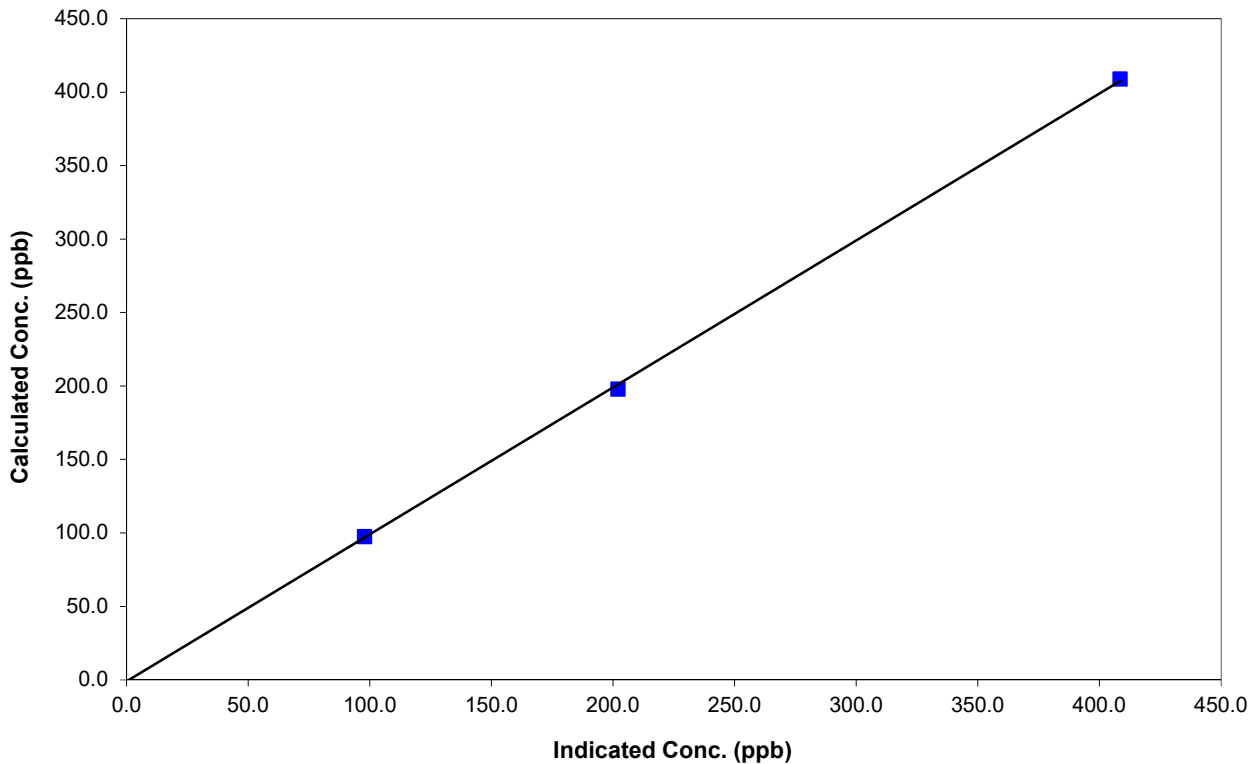
Station Information

Calibration Date	July 6, 2017	Previous Calibration	June 1, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:40	End Time (MST)	13:20:00 PM
Analyzer make	42i	Analyzer serial #	906535087

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999860
408.8	408.5	1.0009		
197.9	202.0	0.9796	Slope	1.000137
97.3	97.8	0.9947		
			Intercept	-1.081225

NO_x Calibration Curve



Calibration Summary



Parameter NO
 Air Monitoring Network PAZA

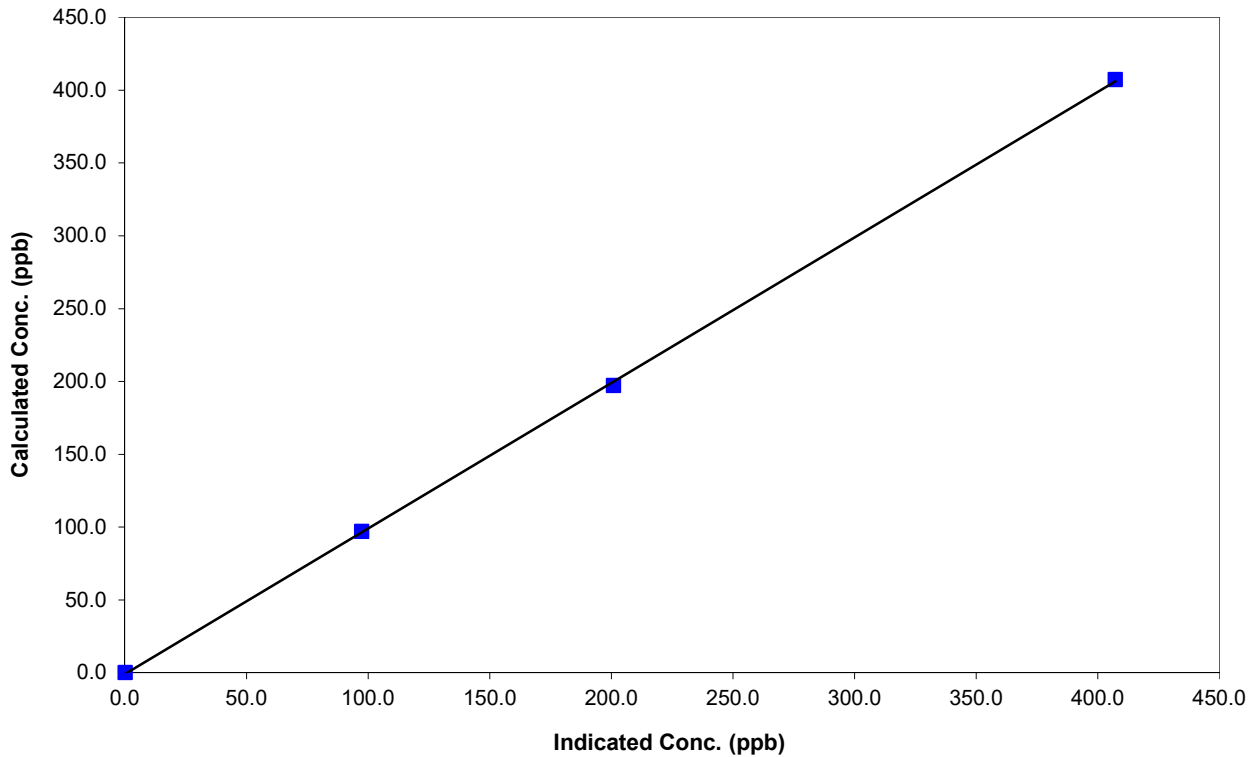
Station Information

Calibration Date	July 6, 2017	Previous Calibration	June 1, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:40	End Time (MST)	13:20:00 PM
Analyzer make	42i	Analyzer serial #	906535087

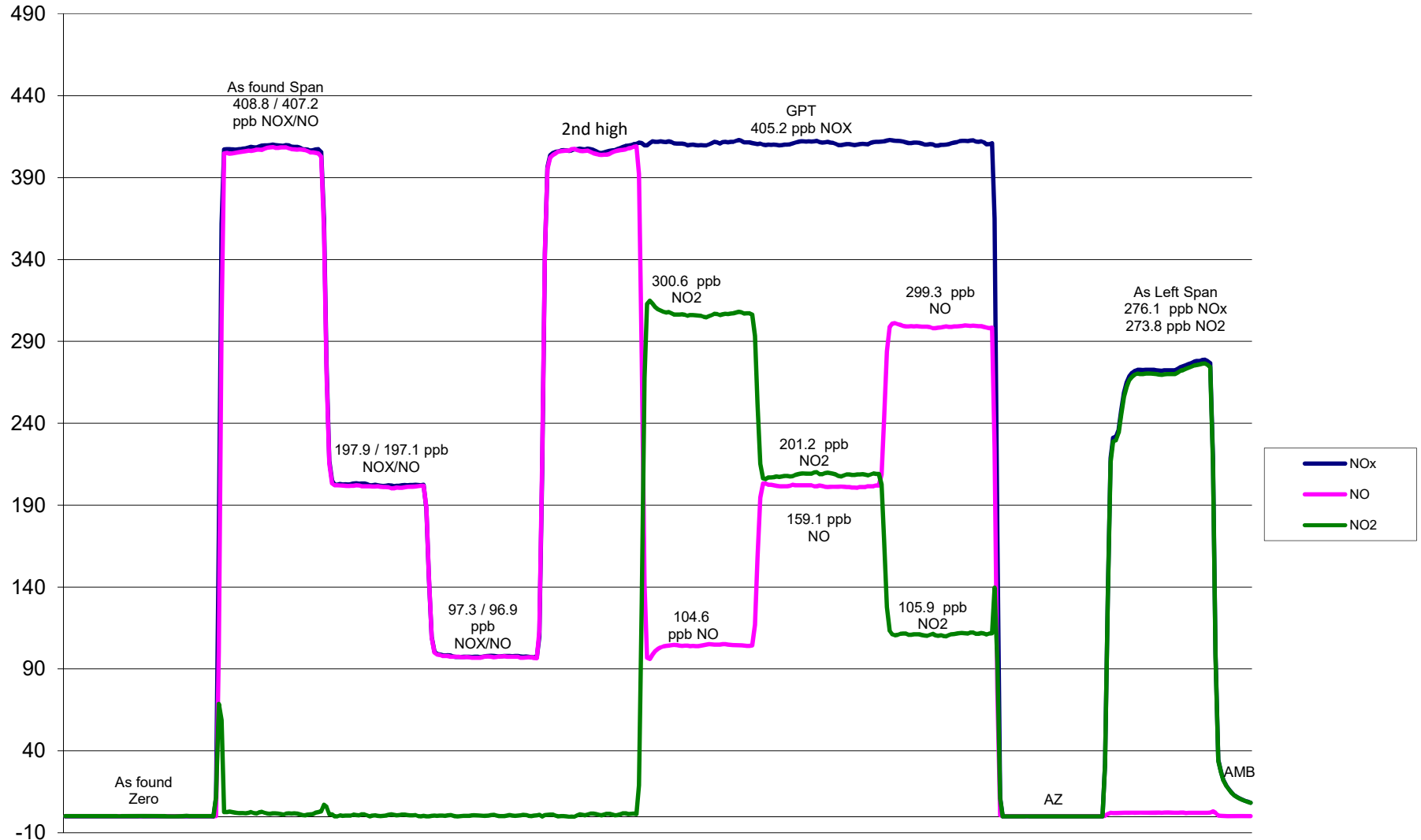
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999892
407.2	407.3	0.9999		
197.1	201.0	0.9810		
96.9	97.4	0.9951	Slope	0.999574
			Intercept	-1.038669

NO Calibration Curve



NO_x Calibration



July 6, 2017

Calibration Report



AIR QUALITY MONITORING

Parameter 03

Air Monitoring Network PAZA

Station Information

Calibration Date	July 6, 2017	Previous Calibration	June 1, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	12:30	End Time (MST)	15:40:00 PM
Barometric Pressure	918.0 mm	Station Temperature	22.0 Deg C
Calibrator	Envionics	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	1.002738	Calculated slope	0.996219
Calculated intercept	1.144140	Calculated intercept	0.186935
Analyzer make	Teco 49I	Analyzer serial #	1507964699 (AMU:2015)

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	0.20	ppb	-0.60	ppb
slope	1.030		1.007	
Lamp temp	53.7	mV	53.7	mV
Lamp Intensity A/B	69494/75572	mV	69123/75876	mV
Pressure	700.9	mm Hg	703.3	mm Hg
Flow A	0.738	ccm	0.738	ccm
Flow B	0.737	ccm	0.740	ccm

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5141	0.0	0.0	-0.1	N/A
5141	0.3	307.0	308.3	0.9959
5141	0.2	208.7	208.9	0.9992
5141	0.1	111.6	111.9	0.9975
5141	0.0	0.0	-1.1	As found zero
5141	0.3	307.0	313.4	As found span
Average Correction Factor				0.9976

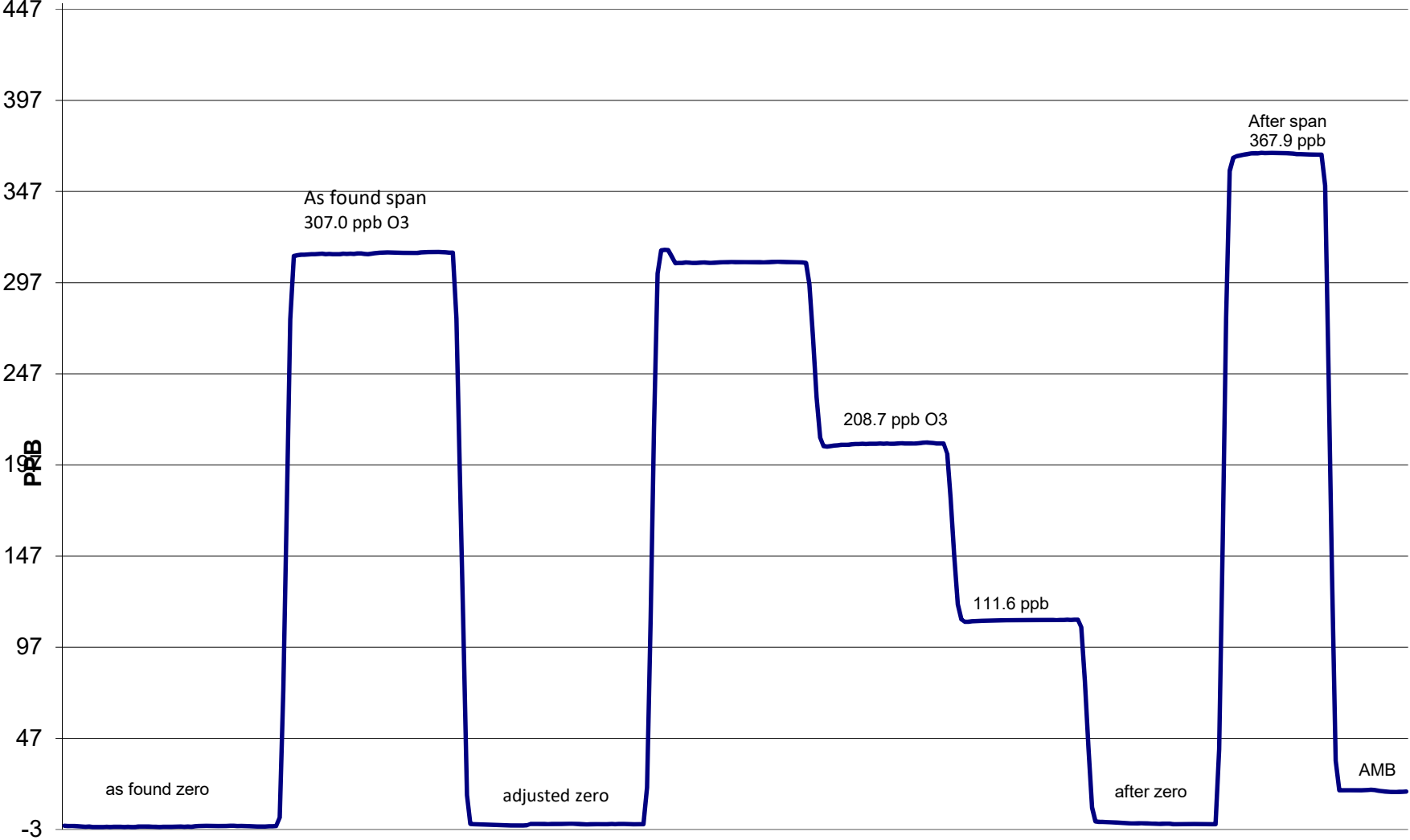
Calculated value of As Found Response: 316.6 ppm Percent Change of As Found: 3.1%

	before calibration		after calibration	
Auto zero	-0.5	ppb	0.1	ppb
Auto span	379.3	ppb	367.9	ppb

Notes: Zero & span adjustments made
Used indicated value of NO2 instead of the calculated due to the calibrator issue

Calibration Performed By: Dmytro Dolotii

O3 Calibration



July 6, 2017

Calibration Report



AIR QUALITY MONITORING

Parameter CO

Air Monitoring Network PAZA

Station Information

Calibration Date	July 9, 2017	Previous Calibration	June 2, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	12:25	End Time (MST)	14:35:00 PM
Barometric Pressure	0.915 mBar	Station Temperature	22.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	6586
Cal Gas Conc	2906 ppm	Cal Gas Expiry Date	7/7/2023
		Cal Gas Cylinder #	LL109096
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 5 volt	DACS channel #	9
	Before		After
Calculated slope	1.011984	Calculated slope	0.997165
Calculated intercept	-0.237768	Calculated intercept	-0.205616
Analyzer make	Model 48I-TLE	Analyzer serial #	1408761378

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO zero setting	8.304		8.304	
CO span setting	1.061		1.061	
Sample pressure	695.6	mm Hg	696.2	mm Hg
Sample Flow	0.439	LPM	0.440	LPM

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5156	0.00	0.00	0.07	N/A
5156	72.61	40.36	40.61	0.9937
5156	36.33	20.33	20.64	0.9849
5156	18.32	10.29	10.68	0.9633
5156	0.00	0.00	0.07	As Found Zero
5156	72.61	40.36	40.61	As Found Span
Average Correction Factor				0.9807

Calculated value of As Found Response: 40.792 ppm Percent Change of As Found: -1.1%

	before calibration		after calibration	
Auto zero	0.04	ppm	0.07	ppm
Auto span	20.50	ppm	20.59	ppm

Notes: No adjustments made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter CO
 Air Monitoring Network PAZA



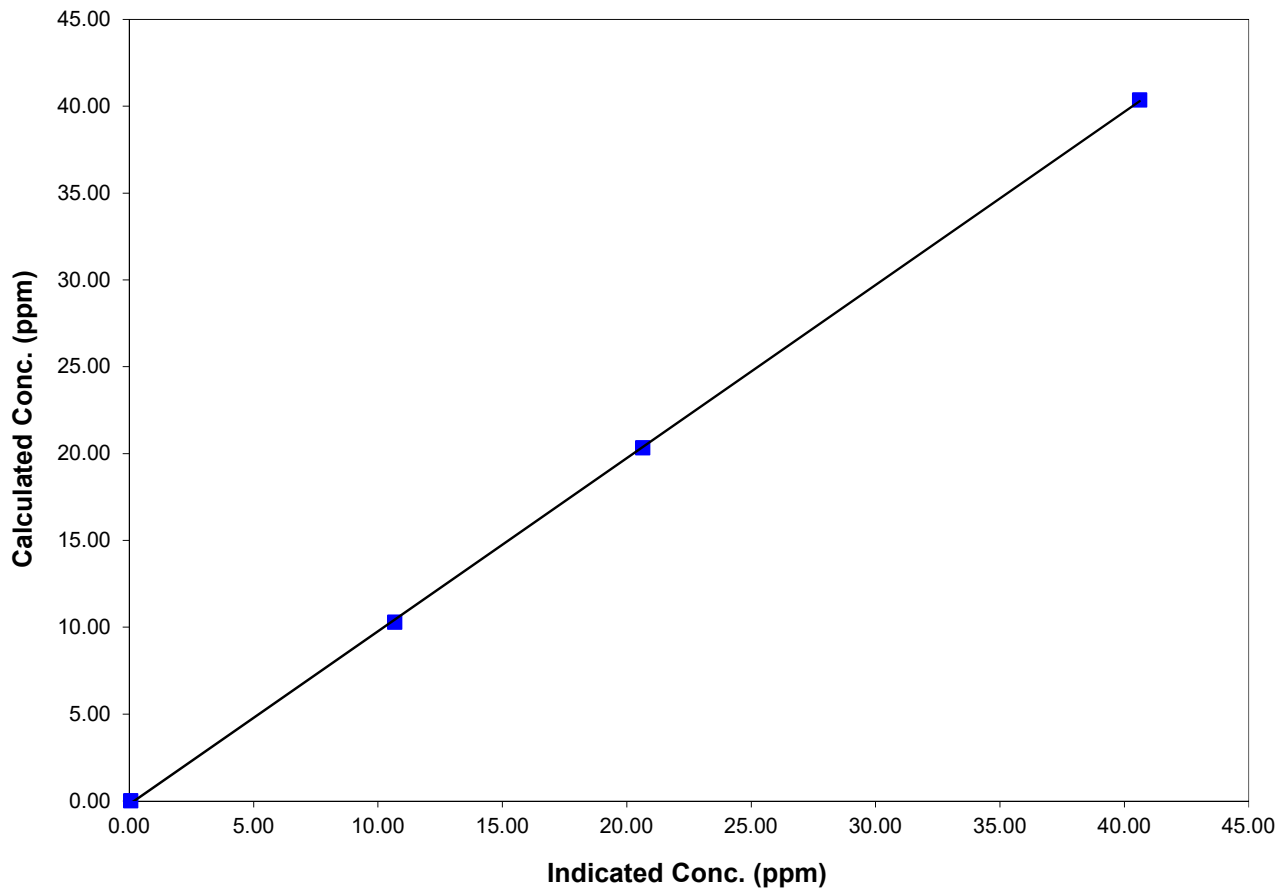
Station Information

Calibration Date	July 9, 2017	Previous Calibration	June 2, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:25	End Time (MST)	14:35:00 PM
Analyzer make/model	Model 48I-TLE	Analyzer serial #	1408761378

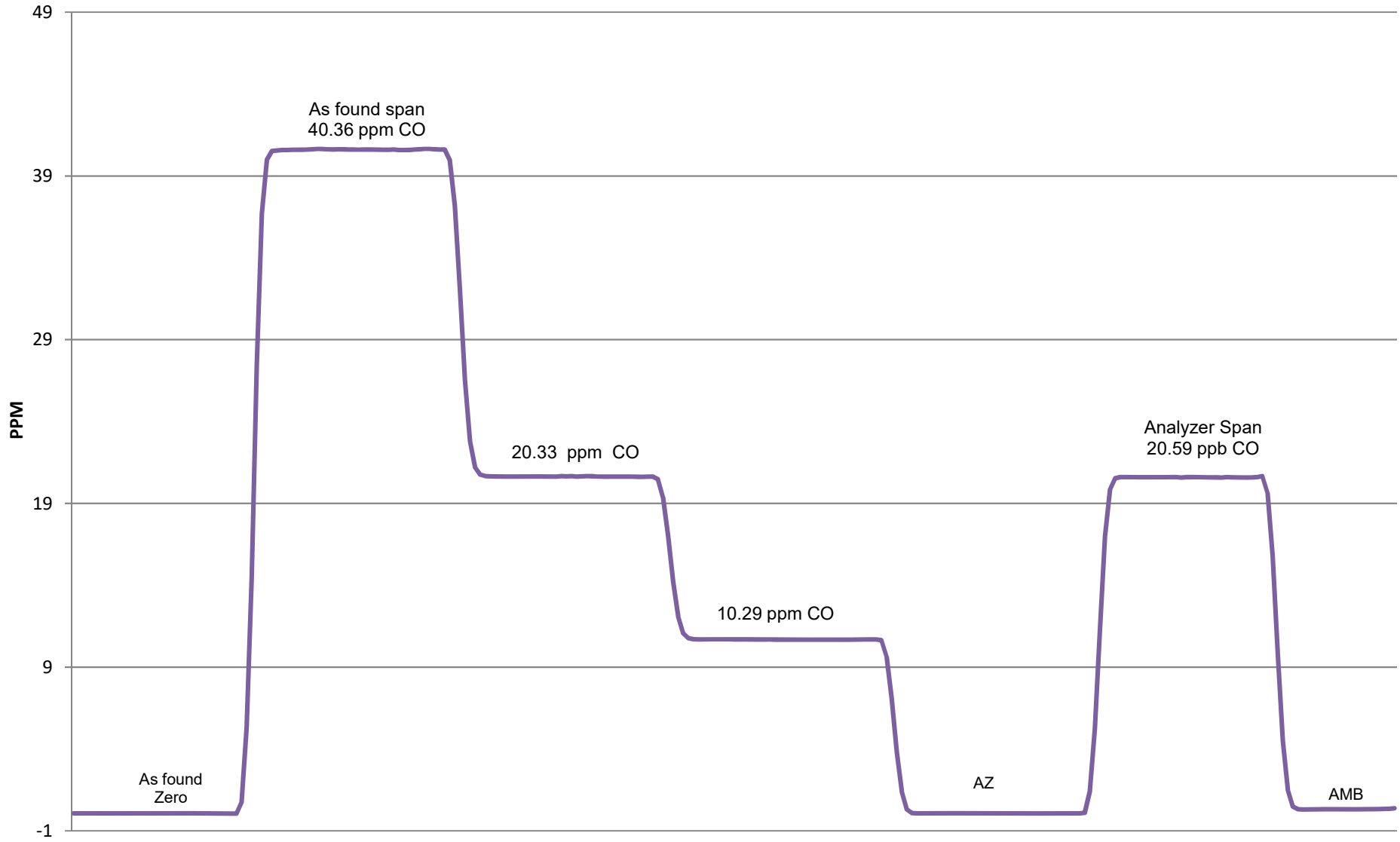
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.068	N/A	Correlation Coefficient	0.999944
40.356	40.612	0.9937		
20.333	20.644	0.9849	Slope	0.997165
10.289	10.681	0.9633		
			Intercept	-0.205616

CO Calibration Curve



CO Calibration



July 9, 2017

Calibration Report



Parameter CH4 / NMHC / THC

Air Monitoring Network PAZA

Station Information

Calibration Date	July 9, 2017	Previous Calibration	June 2, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:Mair

Start Time (MST)	10:05	End Time (MST)	13:10:00 PM
Barometric Pressure	0.917 mBar	Station Temperature	22.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas CH4 Conc	386 ppm CH4	Cal Gas Expiry Date	7/5/2015
Cal Gas C3H8 Conc	207 569.25 ppm CH4	Cal Gas Cylinder #	LL34318
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 5 volt	DACS channel #	SE 11,12,13

Analyzer make TEI 551 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)
2004	0.00	0.00	0.02	N/A
2005	70.65	13.14	13.20	0.9951
2005	42.43	8.00	7.91	1.0115
2005	16.23	3.10	3.07	1.0093
2005	0.00	0.00	0.02	As Found Zero
2005	70.65	13.14	14.66	As Found Span
Average Correction Factor				1.0053

Calculated value of As Found Response: 14.578 ppm Percent Change of As Found: -11.0%

	Before		After
Calculated slope	0.994447	Calculated slope	0.997452
Calculated intercept	0.017764	Calculated intercept	0.024205

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	9.69	ppm	8.82	ppm

NMHC Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
2005	0.00	0.00	0.02	N/A
2005	70.65	19.38	19.47	0.9950
2005	42.43	11.80	11.63	1.0141
2005	16.23	4.57	4.36	1.0476
2005	0.00	0.00	0.02	As Found Zero
2005	70.65	19.38	20.02	As Found Span
Average Correction Factor				1.0189

Calculated value of As Found Response: 19.926 ppm Percent Change of As Found: -2.8%

	<u>Before</u>		<u>After</u>
Calculated slope	0.993604	Calculated slope	0.993865
Calculated intercept	0.053601	Calculated intercept	0.117869

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.02	ppm
Auto span	13.65	ppm	12.34	ppm

THC Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
2004	0.00	0.00	0.03	N/A
2005	70.65	32.51	32.66	0.9956
2005	42.43	19.80	19.52	1.0143
2005	16.23	7.67	7.42	1.0332
2005	0.00	0.00	0.03	As Found Zero
2005	70.65	32.51	36.70	As Found Span
Average Correction Factor				1.0144

Calculated value of As Found Response: 36.484 ppm Percent Change of As Found: -12.2%

	<u>Before</u>		<u>After</u>
Calculated slope	0.992519	Calculated slope	0.995769
Calculated intercept	0.092477	Calculated intercept	0.150487

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.02	ppm
Auto span	23.32	ppm	21.16	ppm

Notes: Hydrogen cylinder changed
Span cylinder changed

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter CH4
 Air Monitoring Network PAZA



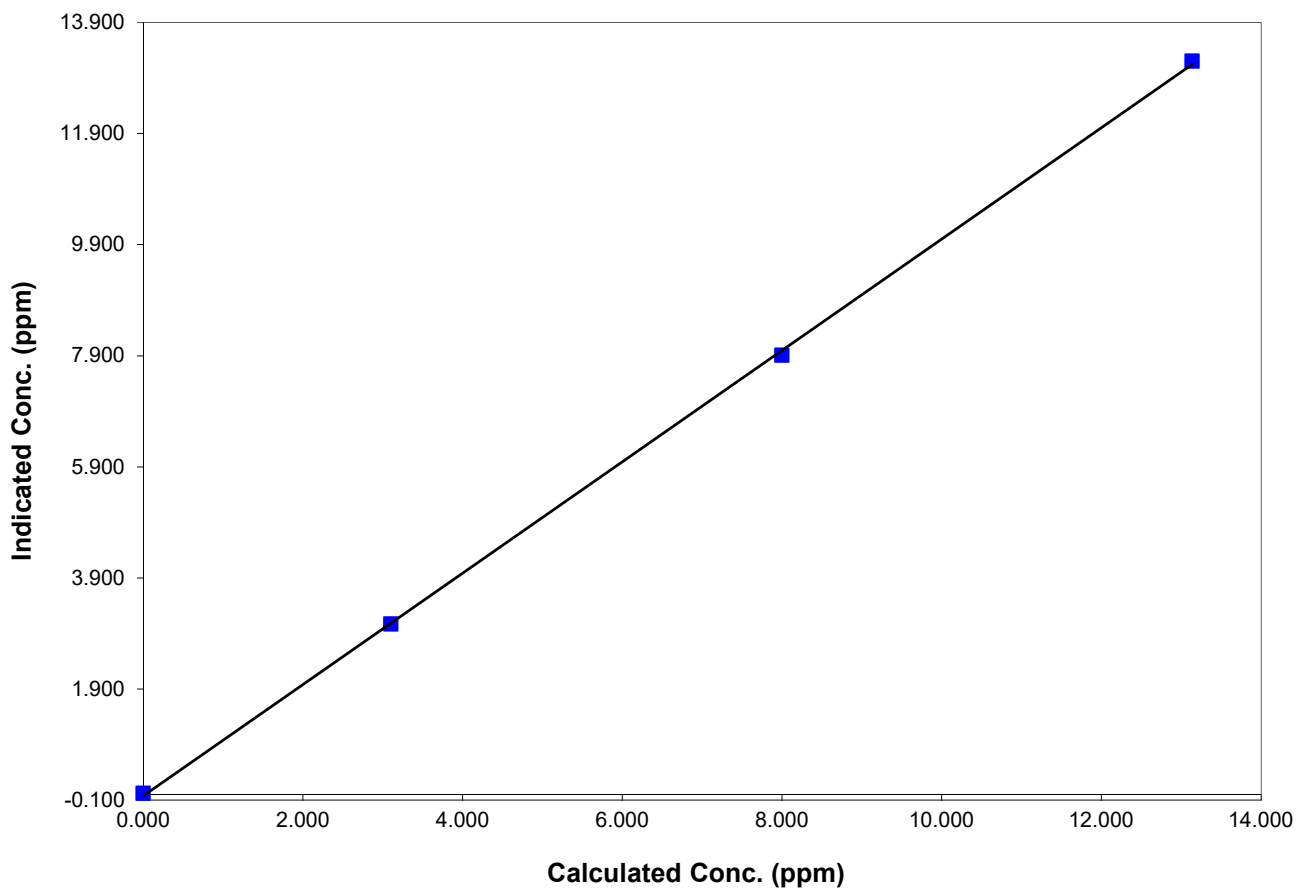
Station Information

Calibration Date	July 9, 2017	Previous Calibration	June 2, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:05	End Time (MST)	13:10:00 PM
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		
13.138	13.203	0.9951	Correlation Coefficient	0.999872
7.999	7.908	1.0115		
3.099	3.071	1.0093	Slope	0.997452
			Intercept	0.024205

CH4 Calibration Data



Calibration Summary



Parameter NMHC
 Air Monitoring Network PAZA

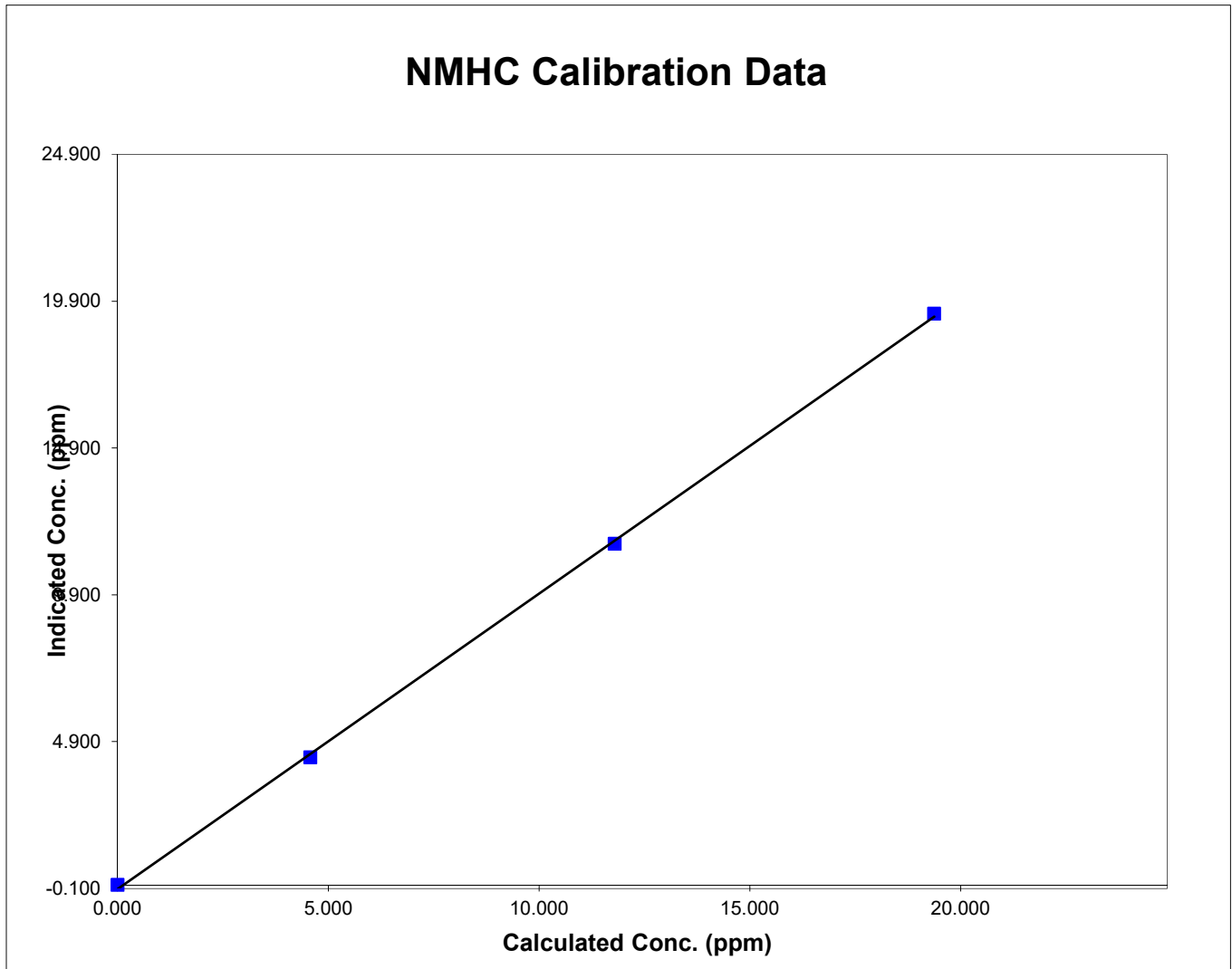
Station Information

Calibration Date	<u> July 9, 2017 </u>	Previous Calibration	<u> June 2, 2017 </u>
Station Number	<u> 1 </u>	Station Location	<u> Henry Pirker </u>
Start Time (MST)	<u> 10:05 </u>	End Time (MST)	<u> 13:10:00 PM </u>
Analyzer make/model	<u> TEI 55I </u>	Analyzer serial #	<u> 1134650658 </u>

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.020	N/A		
19.376	19.473	0.9950	Correlation Coefficient	0.999744
11.797	11.633	1.0141		
4.571	4.363	1.0476	Slope	0.993865
			Intercept	0.117869

NMHC Calibration Data



Calibration Summary



Parameter THC
 Air Monitoring Network PAZA

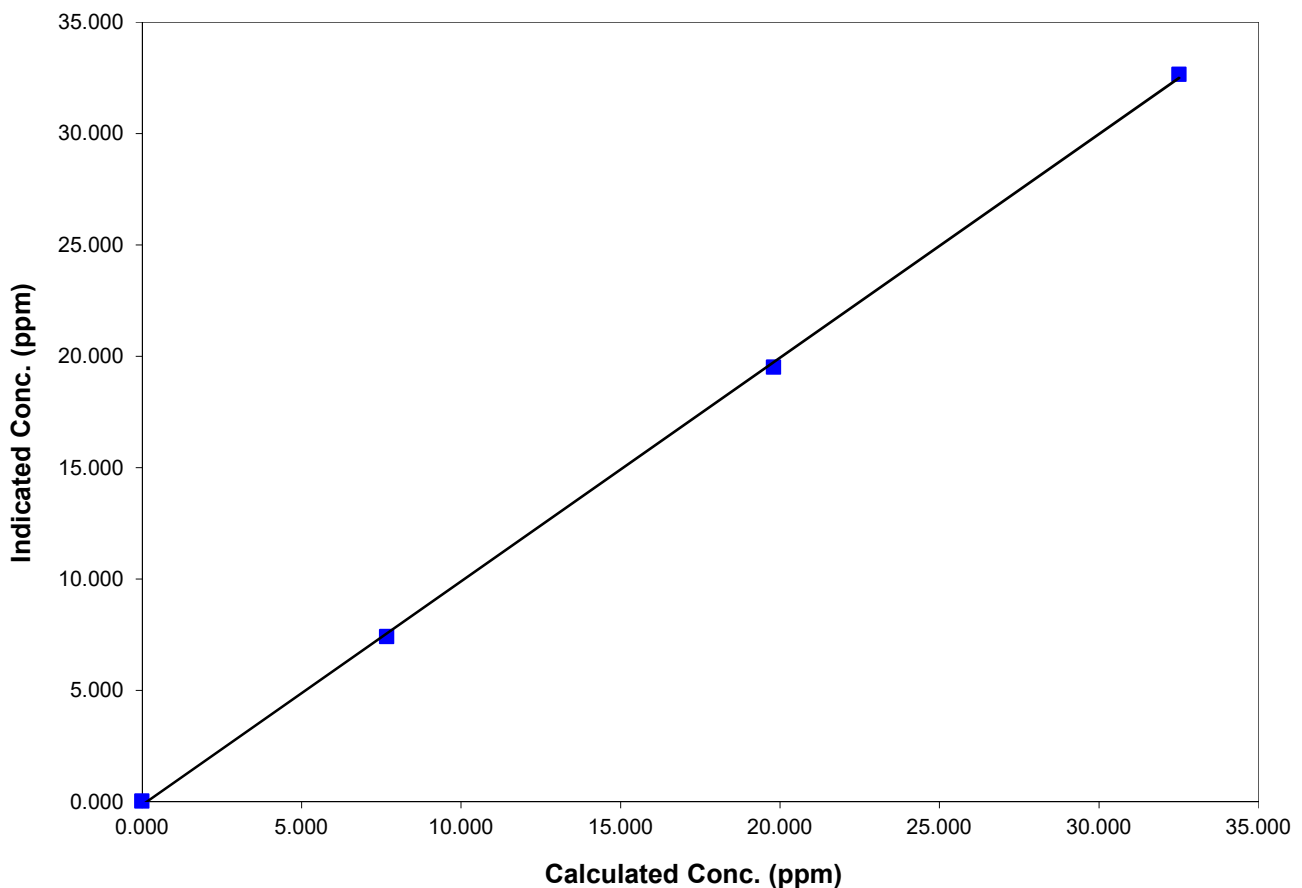
Station Information

Calibration Date	July 9, 2017	Previous Calibration	June 2, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:05	End Time (MST)	13:10:00 PM
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

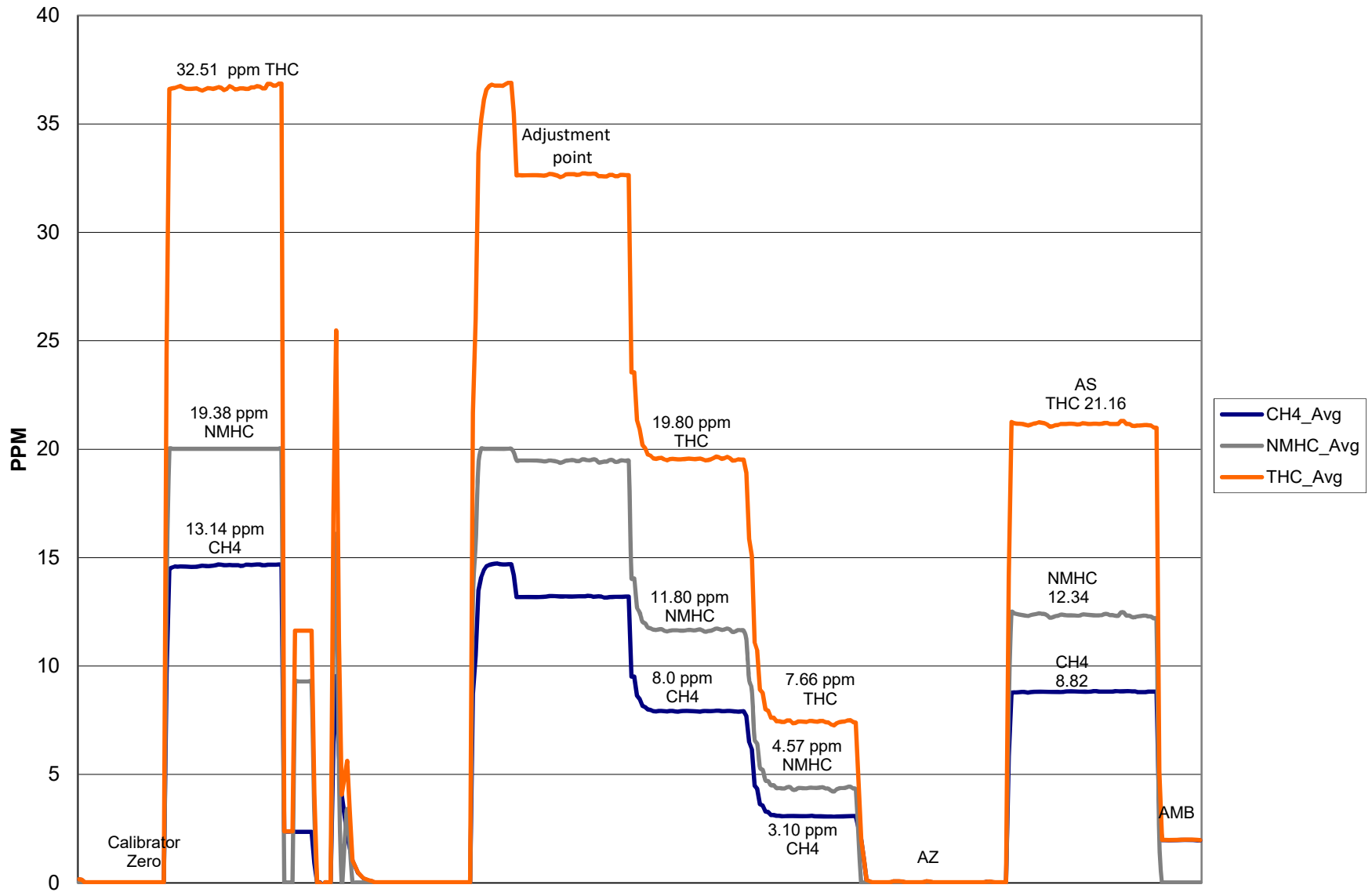
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.033	N/A	Correlation Coefficient	0.999806
32.514	32.657	0.9956		
19.796	19.518	1.0143	Slope	0.995769
7.670	7.424	1.0332		
			Intercept	0.150487

THC Calibration Data



THC/CH₄/NMHC Calibration



Calibration Report



Parameter TR5
 Air Monitoring Network PAZA

Station Information

Calibration Date	July 7, 2017	Previous Calibration	June 2, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Install	Removal
			Other:
Start Time (MST)	8:35	End Time (MST)	16:00:00 PM
Barometric Pressure	0.917 mBar	Station Temperature	22.1 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Conc	10.3 ppb	Cal Gas Expiry Date	02/23/2019
		Cal Gas Cylinder #	EY0000380
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	0.988946	Calculated slope	0.996411
Calculated intercept	1.569893	Calculated intercept	0.785801
Analyzer make	TEI 45C	Analyzer serial #	630718528

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Coefficient	1.151		1.094	
Background	14.4		12.9	
Pressure	669.3	mm Hg	667.2	mm Hg
Flow	0.441	ccm	0.441	ccm
Lamp Voltage	895	V	895	V

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5153	0.00	0.00	0.11	N/A
5153	41.25	81.80	81.81	0.9998
5153	20.23	40.28	38.72	1.0402
7298	9.86	13.90	12.66	1.0977
5153	0.00	0.00	-0.67	As Found Zero
5153	41.25	81.80	83.63	As Found Span
Average Correction Factor				1.0459

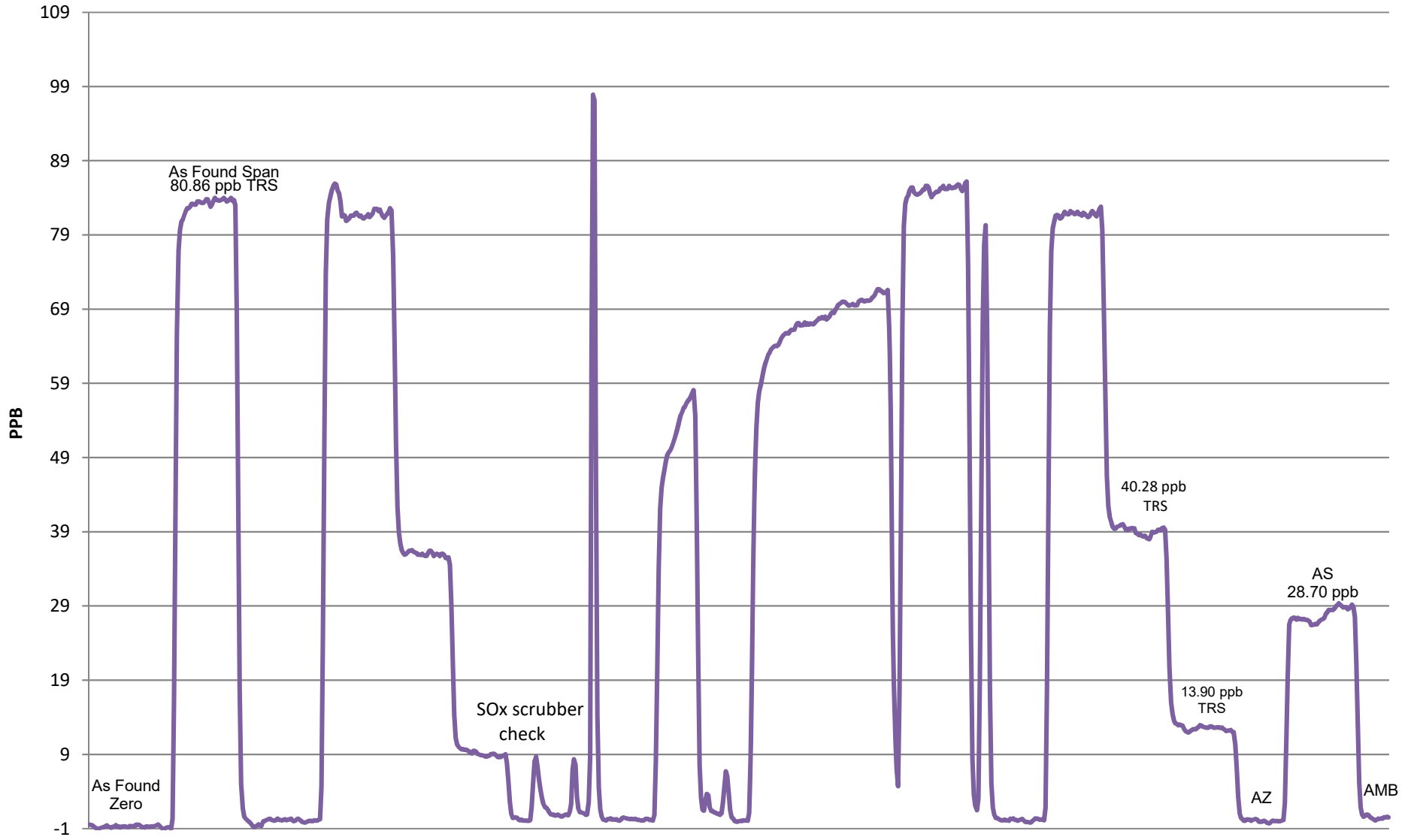
Calculated value of As Found Response: 84.9 ppb Percent Change of As Found: -3.8%

	before calibration		after calibration	
Auto zero	-0.43	ppb	0.03	ppb
Auto span	26.20	ppb	28.70	ppb

Notes: Zero /span adjustments made
Sox scrubber tube with the new bits were installed

Calibration Performed By: Dmytro Dolotii

TRS Calibration



July 7, 2017

Calibration Report



Parameter SO₂
 Air Monitoring Network PAZA

Station Information

Calibration Date	July 27 2017	Previous Calibration	June 9 2017
Station Number	2	Station Location	Evergreen Park
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	14:15:00 PM	End Time (MST)	
Barometric Pressure	0.917 ATM	Station Temperature	23.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Concentration	50 ppm	Cal Gas Expiry Date	02/21/2020
Correction factor	0.030855	Cal Gas Cylinder #	EY0000740
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	6
	<u>Before</u>		<u>After</u>
Calculated slope	0.987975	Calculated slope	0.992409
Calculated intercept	-0.126441	Calculated intercept	-0.087032
Analyzer make	Teco 43i	Analyzer serial #	701120008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	11.7		11.4	
coefficient	1.252		1.23	
Lamp Voltage	832	volts	832	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	669.5	mm Hg	673.1	mm Hg
Sample Flow	0.444	ccm	0.448	ccm
Lamp Intensity	89	%	89	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5152	0.0	0.00	0.9	N/A
5152	41.24	397.1	400.8	0.9908
5152	20.33	196.5	197.2	0.9966
5152	9.81	95.0	95.3	0.9967
5152	0.0	0.0	0.9	As Found Zero
5152	41.24	398.0	404.4	As Found Span
Average Correction Factor				0.9947

Calculated value of As Found Response: 398.461 ppm Percent Change of As Found: -0.1%

	before calibration		after calibration	
Auto zero	0.8	ppm	1.0	ppm
Auto span	271.7	ppm	262.1	ppm

Notes: Span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2
 Air Monitoring Network PAZA



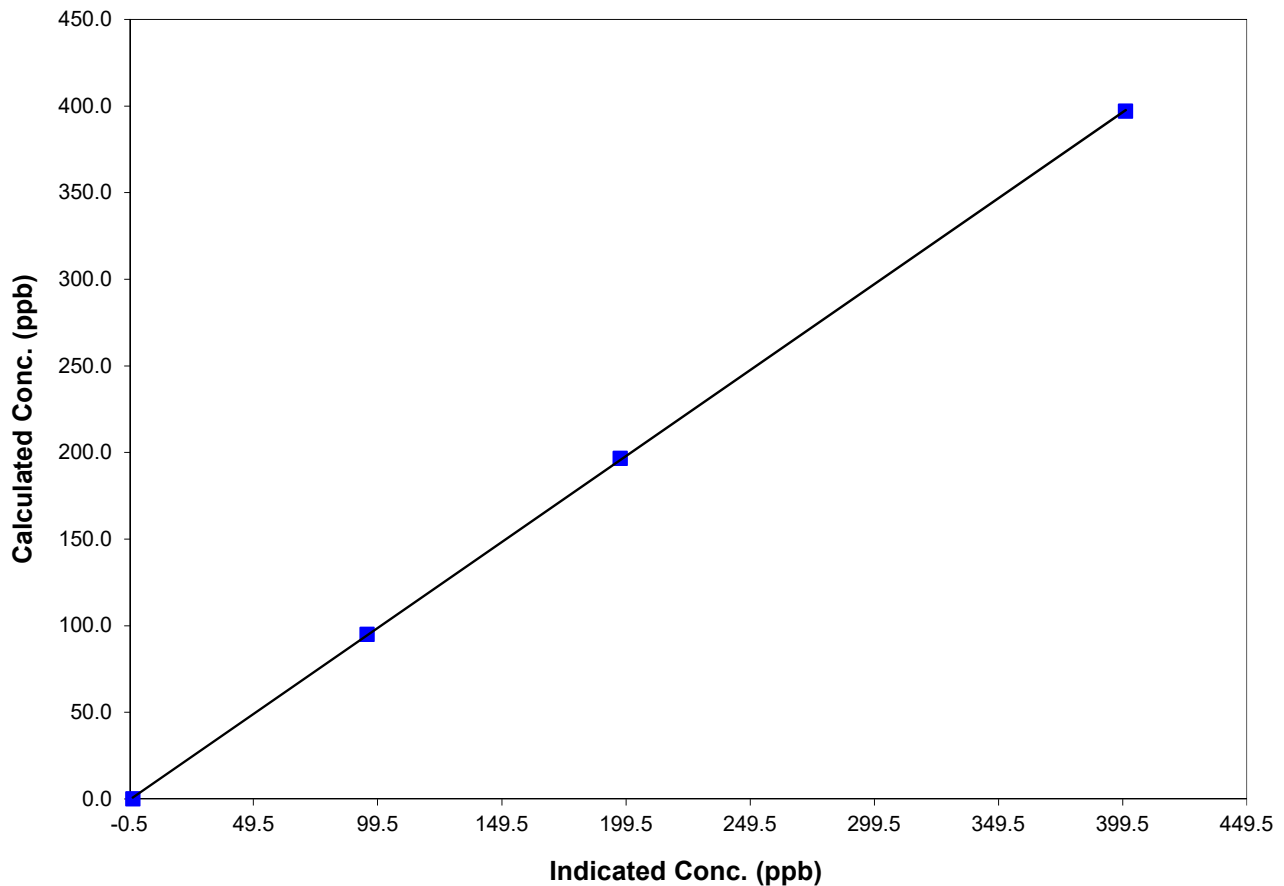
Station Information

Calibration Date	July 27 2017	Previous Calibration	June 9 2017
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	14:15:00 PM	End Time (MST)	0:00
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

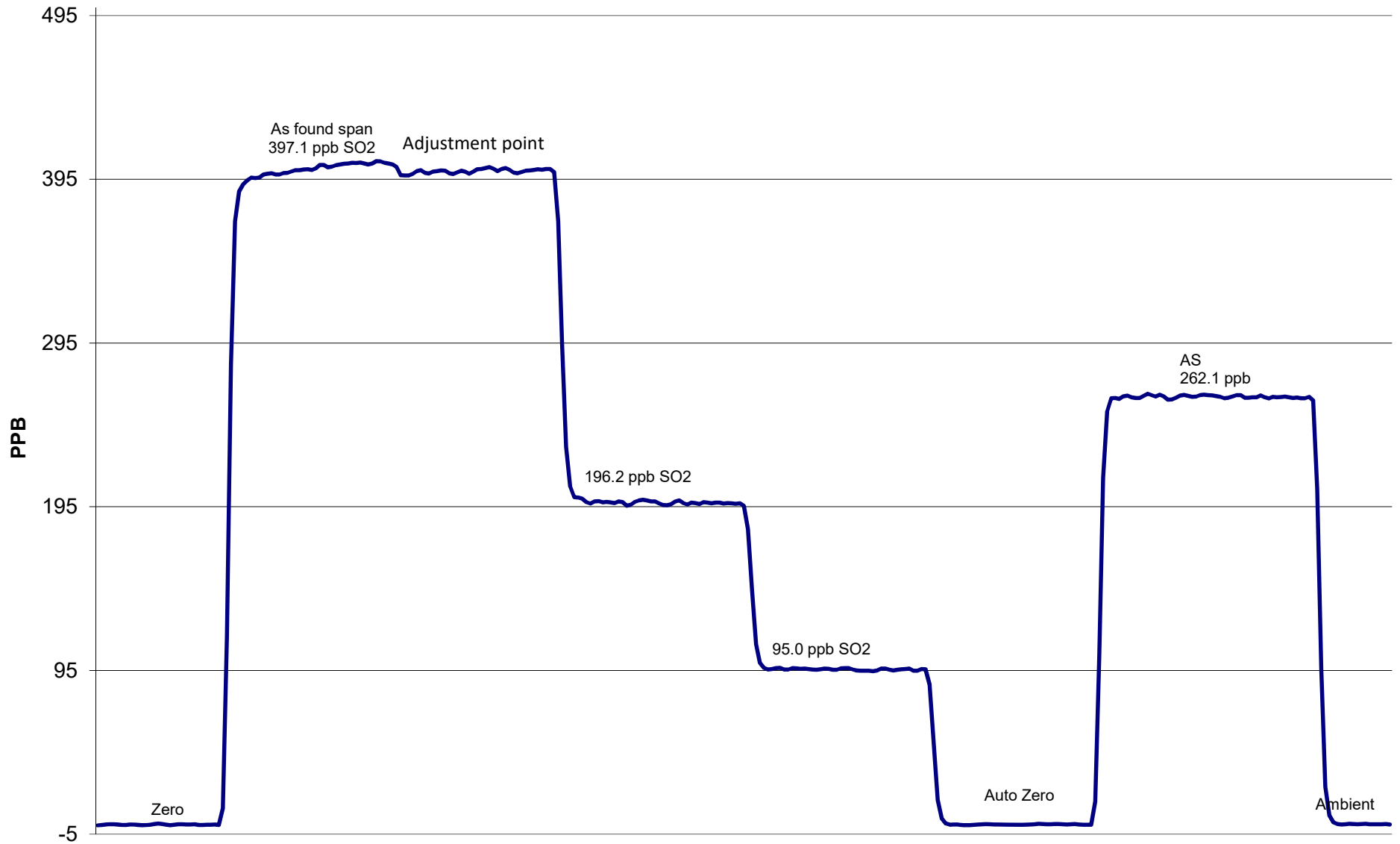
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.9	N/A	Correlation Coefficient	0.999976
397.1	400.8	0.9908		
196.5	197.2	0.9966	Slope	0.992409
95.0	95.3	0.9967		
			Intercept	-0.087032

SO2 Calibration Curve



SO2 Calibration



July 27 2017

Calibration Report

Parameter TRS

Air Monitoring Network PAZA



Station Information

Calibration Date	July 27 2017	Previous Calibration	June 9 2017
Station Number	2	Station Location	Evergreen Park
Reason:	Routine	Install	Removal
			Other:
Start Time (MST)	9:05	End Time (MST)	11:35:00APM
Barometric Pressure	0.918 ATM	Station Temperature	23.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Conc	10.3 ppm	Cal Gas Expiry Date	2/28/2020
Correction factor	0.030889	Cal Gas Cylinder #	EY0000340
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
Calculated slope	0.997298	Calculated slope	1.006657
Calculated intercept	-0.036834	Calculated intercept	0.087003
Analyzer make	TEI Model 43C	Analyzer serial #	3199000000491

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	17.3	ppb	17.4	ppb
coefficient	1.006		1.006	
Lamp Voltage	978	volts	977	volts
Chamber Temp	44.6	Deg C	44.7	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	637.8	mm Hg	634.2	mm Hg
Sample Flow	0.630	ccm	0.632	ccm
Lamp Intensity	37,041	mv	36,792	mv

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5152	0.00	0.00	-0.1	N/A
5152	41.24	81.79	81.1	1.0085
5152	20.33	40.48	40.3	1.0047
7251	9.81	13.92	13.6	1.0197
5152	9.81		0.3	Sox Test
5152	0.00	0.00	-0.1	As Found Zero
5152	41.24	81.79	81.1	As Found Span
Average Correction Factor				1.0110

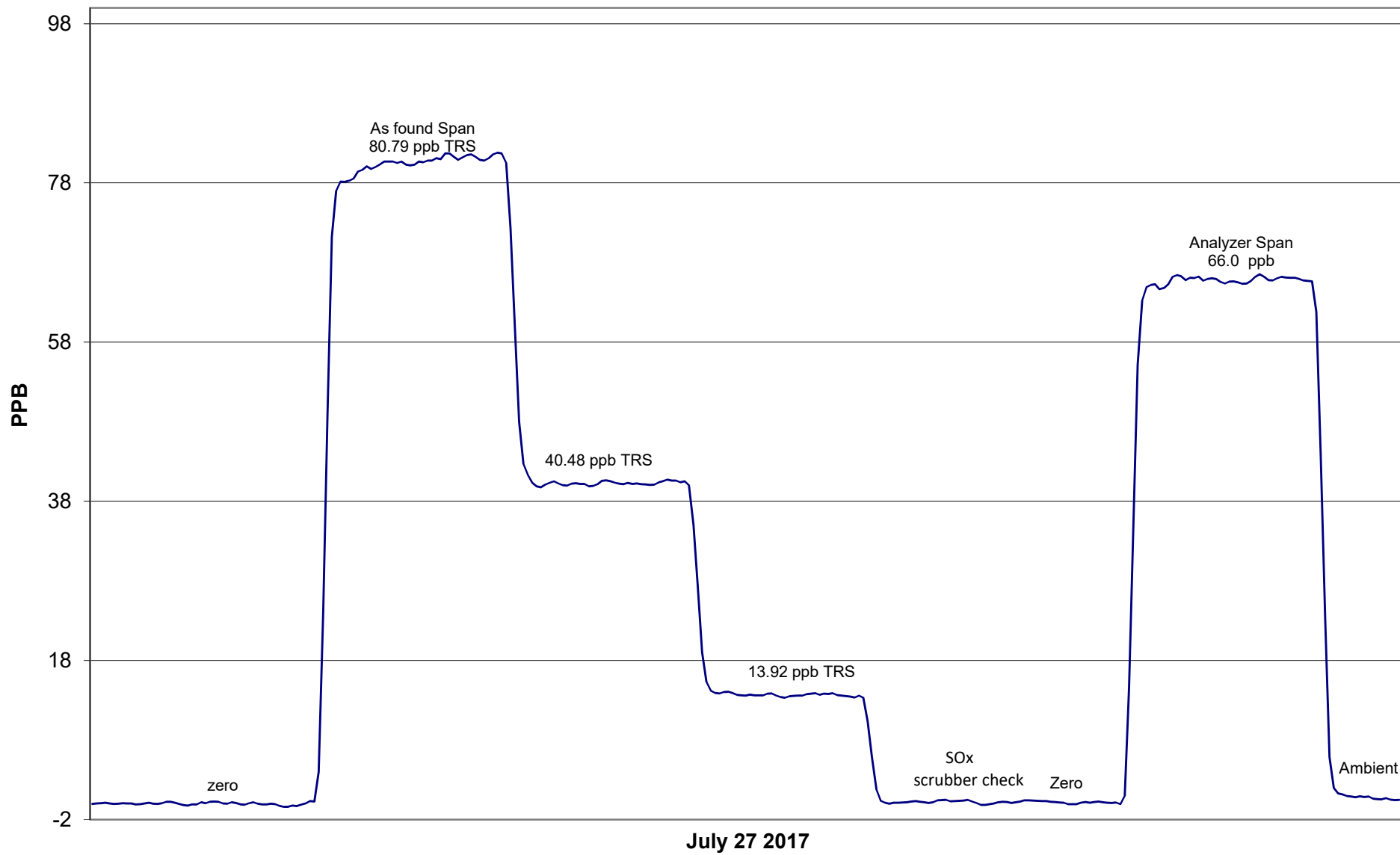
Calculated value of As Found Response: 80.94 ppm Percent Change of As Found: **1.0%**

	before calibration		after calibration	
Auto zero	0.0	ppm	0.1	ppm
Auto span	68.9	ppm	66.0	ppm

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

TRS Calibration



Calibration Report



Parameter SO₂

Air Monitoring Network PAZA

Station Information

Calibration Date	June 26, 2017	Previous Calibration	June 13, 2017
Station Number	3	Station Location	Smokey Heights
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	12:45	End Time (MST)	15:20:00 PM
Barometric Pressure	0.925 ATM	Station Temperature	22.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Concentration	50 ppm	Cal Gas Cert Date	02/21/2020
Correction factor	0.031230	Cal Gas Cylinder #	EY0000740
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	6
	<u>Before</u>		<u>After</u>
Calculated slope	1.016290	Calculated slope	0.991623
Calculated intercept	0.332470	Calculated intercept	0.260448
Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	13.6		13.5	
coefficient	0.926		0.933	
Lamp Voltage	941	volts	942	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	669	mm Hg	670.8	mm Hg
Sample Flow	0.448	lpm	0.450	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)
5154	0.0	0.00	0.2	N/A
5154	41.18	396.33	399.3	0.9925
5154	20.13	194.53	196.7	0.9891
5154	9.82	95.08	94.5	1.0067
5154	0.0	0.00	0.2	As Found Zero
5154	41.18	396.33	392.2	As Found Span
Average Correction Factor				0.9961

Calculated value of As Found Response: 398.647 ppm Percent Change of As Found: -0.6%

	before calibration		after calibration	
Auto zero	0.3	ppb	0.3	ppb
Auto span	207.6	ppb	210.0	ppb

Notes: Span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2
 Air Monitoring Network PAZA

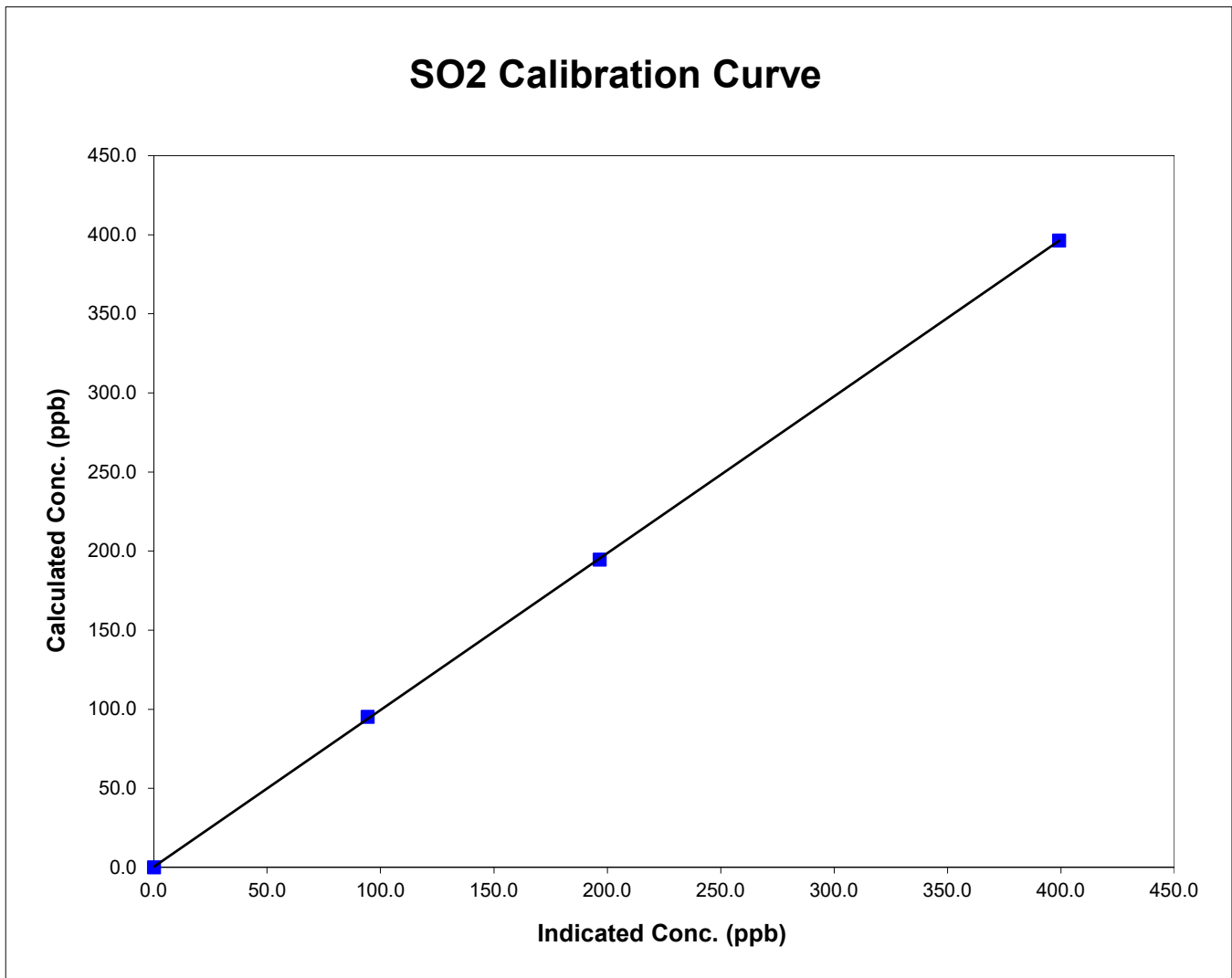


Station Information

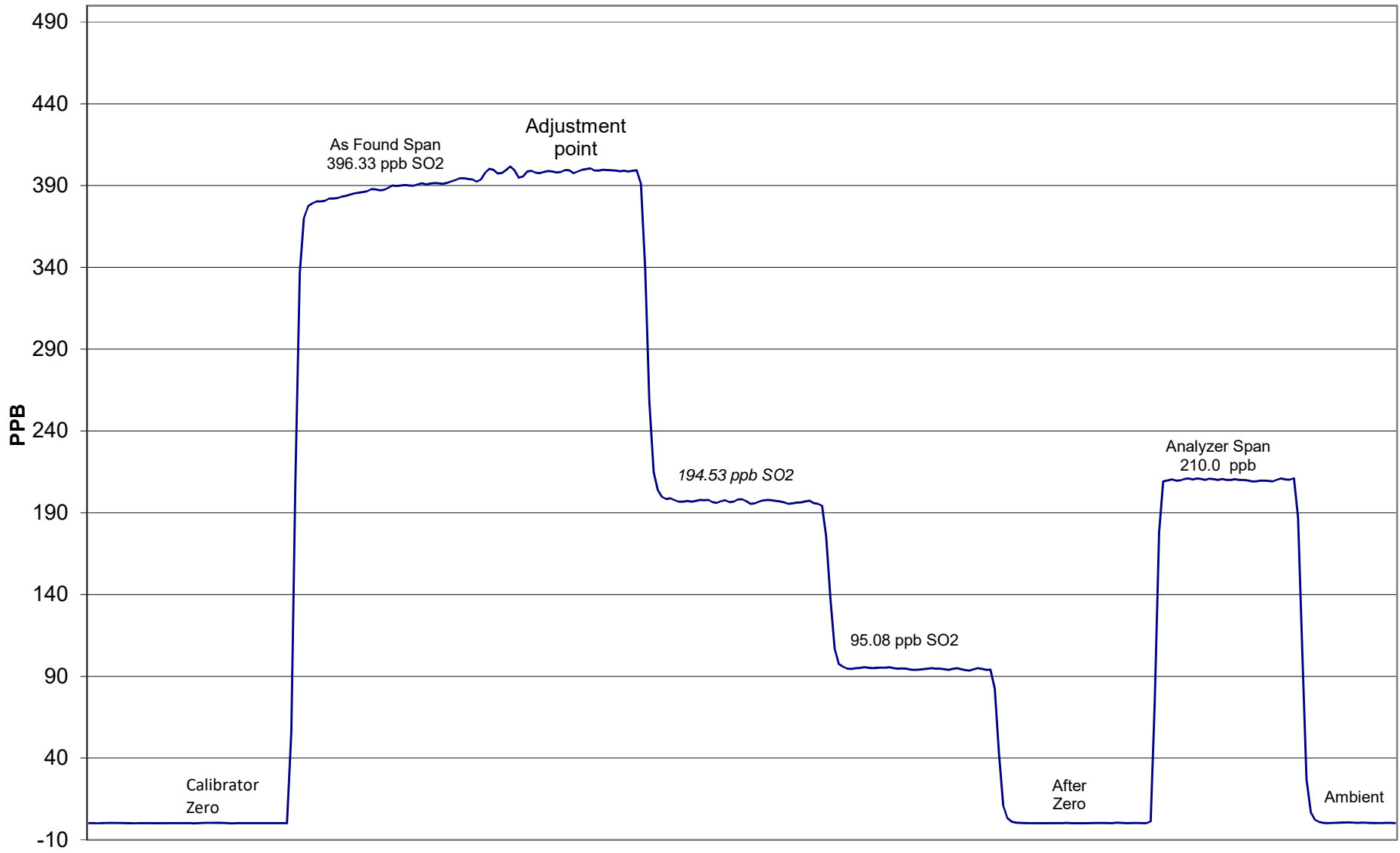
Calibration Date	June 26, 2017	Previous Calibration	June 13, 2017
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	12:45	End Time (MST)	15:20:00 PM
Analyzer make/model	Teco 43i	Analyzer serial #	701120009

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
396.3	399.3	0.9925	Correlation Coefficient	0.999975
194.5	196.7	0.9891		
95.1	94.5	1.0067	Slope	0.991623
			Intercept	0.260448



Smokey Heights SO₂ Calibration



June 26, 2017

Calibration Report



AIR QUALITY MONITORING

Parameter TR3

Air Monitoring Network PAZA

Station Information

Calibration Date	July 26, 2017	Previous Calibration	June 13, 2017
Station Number	3	Station Location	Smokey Heights
Reason:	Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/>	Other: <input type="checkbox"/>
Start Time (MST)	10:15	End Time (MST)	14:00:00 PM
Barometric Pressure	0.925 ATM	Station Temperature	22.0 Deg C
Calibrator	EnviroNics	Serial Number	3016
Cal Gas Conc	10.3 ppm	Cal Gas Expiry Date	2/28/2020
Correction factor	0.031230	Cal Gas Cylinder #	EY0000340
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
Calculated slope	0.975445	Calculated slope	0.982458
Calculated intercept	0.498337	Calculated intercept	0.393763
Analyzer make	TEI Model 43I APSAA	Analyzer serial #	1153630151

	before		after	
Concentration range	100	ppb	100	ppb
Background	15.5	ppb	14.7	ppb
coefficient	1.028		0.981	
Lamp Voltage	803	volts	808	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	675.3	mm Hg	674.3	mm Hg
Sample Flow	0.420	lpm	0.420	lpm
Lamp Intensity	93	mv	92	mv

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5154	0.0	0.00	-0.2	N/A
5154	41.18	81.64	82.8	0.9859
5154	20.13	40.07	40.2	0.9963
7251	9.82	13.93	13.6	1.0254
5154	9.20			Sox test
5154	0.0	0.00	-0.2	As Found Zero
5154	41.18	81.64	77.0	As Found Span
Average Correction Factor				1.0025

Calculated value of As Found Response: **75.80 ppm** Percent Change of As Found: **7.2%**

	before calibration		after calibration	
Auto zero	-0.1	ppm	-0.2	ppm
Auto span	69.5	ppm	66.0	ppm

Notes: Span adjustment made
Replaced Sox scrubber materail.

Calibration Performed By: Dmytro Dolotii.

Calibration Summary

Parameter **TRS**
 Air Monitoring Network **PAZA**



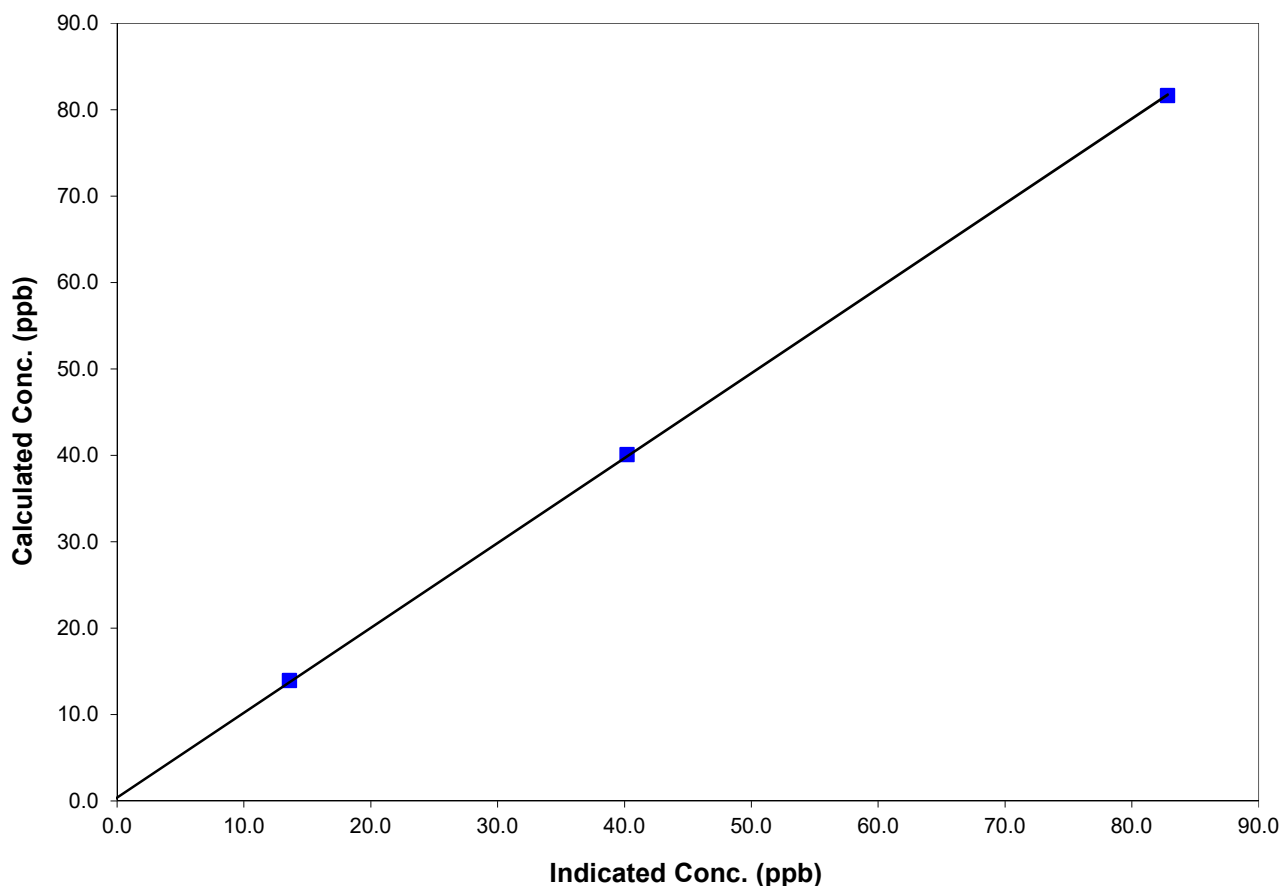
Station Information

Calibration Date	<u> </u> July 26, 2017	Previous Calibration	<u> </u> June 13, 2017
Station Number	<u> </u> 3	Station Location	<u> </u> Smokey Heights
Start Time (MST)	<u> </u> 10:15	End Time (MST)	<u> </u> 14:00:00 PM
Analyzer make/model	<u> </u> TEI Model 43I APSAA	Analyzer serial #	<u> </u> 1153630151

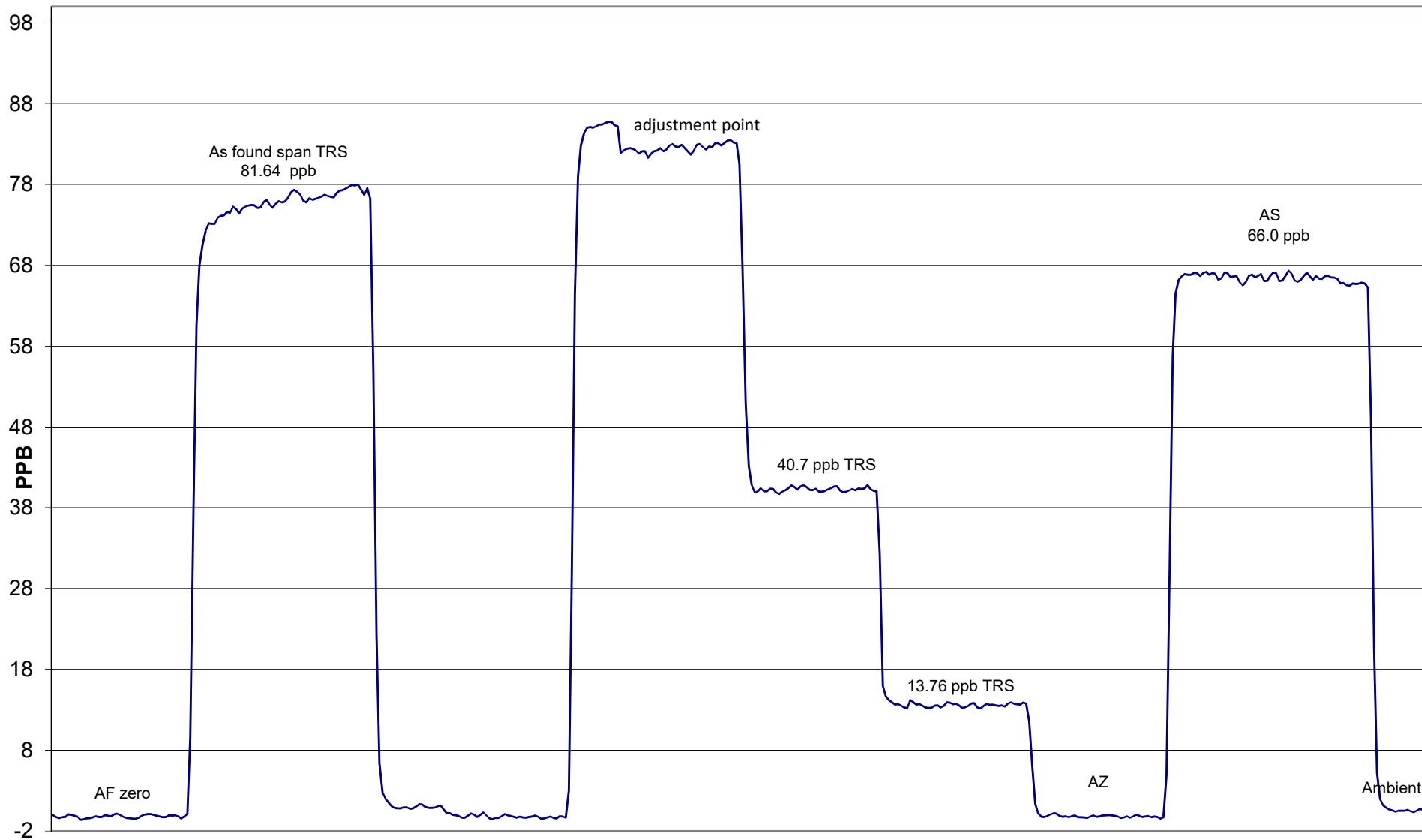
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.2	N/A		
81.6	82.8	0.9859	Correlation Coefficient	0.999966
40.1	40.2	0.9963		
13.9	13.6	1.0254	Slope	0.982458
			Intercept	0.393763

TRS Calibration Curve



Smokey Heights TRS Calibration



July 26, 2017

SHARP 5030 PM2.5 Calibration



Station: Smokey Heights
 Location: Smokey Heights
 Start Time (MST): 13:00:00 PM

Operator: Dmytro Dolotii
 Date: July 25 2017
 End Time (MST): 14:10

MONITOR INFO / PARAMETER VALUES:

Make/Model	SHARP 5030	Audit Device Model	Delta cal
Configuration	PM 2.5	AMU S/N	AMU 1789
AMU Number		Serial Number	1612
Serial Number	CM-0271	Certification Date	01-Oct-15

AUDIT / CALIBRATION RESULTS:

	Ambient Temp. (°C)	Ambient Pres. (mbar)	RH (%)	Leak Check (l/min)	Flow Rate (lpm)	Foil Calibration (ug)	Nephelometer (ug)	Time settings (hh:mm)
Audit values (l)	28.4	938	37.2	16.67	16.67	7094	1.1	13:13
MEASURED (AF)	27.6	938	36.7	16.60	16.63	6999	1.1	13:14
AF Difference (AF-l)	-0.8	0	-0.5	-0.07	-0.04	-95	0.0	0:01
MEASURED (M)	27.6	938	36.7	16.60	16.63	6999	-0.3	13:14
Adj Difference (M-l)	-0.8	0	-0.5	-0.07	-0.04	0	-1.4	0:01
LIMITS	$\pm 4.0^{\circ}C$	13.33 mbar(hPa)	$\pm 2.0\%$	0.8 L/min	$\pm 1.0 L/min$	(+/-5%)	(<+/-2 ug/m3)	$\pm 2 min$

Sample Head Inspect/Cleaning: Heads cleaned

Status of sampling tape: 70% roll

Nozzle Inspection / cleanliness: Clean

RH/Temp standard (make and s/n): _____

COMMENTS: Range 1: 173. Range 2: 30.

Zero'd well, calibration looks good.

Sample pump replaced

Calibration Report



Parameter SO2

Air Monitoring Network PAZA

Station Information

Calibration Date	July 24, 2017	Previous Calibration	June 15, 2017
Station Number	4	Station Location	Beaverlodge
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	13:35:00 PM	End Time (MST)	15:16
Barometric Pressure	0.909 atm	Station Temperature	20.0 Deg C
Calibrator	Envionics	Serial Number	3474
Cal Gas Concentration	10.5 ppm	Cal Gas Expiry Date	1/12/2019
Gas Cert Reference	FF16108		
DACS make	CR3000	DACS serial No.	5237
DACS voltage range	0 - 5 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.012401	Calculated slope	1.001067
Calculated intercept	-0.374692	Calculated intercept	-0.197319
Analyzer make	TEI Model 43i-TLE	Analyzer serial #	713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.54		2.46	
Coefficient	0.969		0.943	
PMT	-768.5	V	-767.5	V
UV Lamp Voltage	1110	V	1114	V
Chamber Temp	45	Deg C	45	Deg C
Pressure	664.3	mm Hg	665.8	mm Hg
Sample Flow	0.467	LPM	0.457	LPM
Lamp Intensity	96	%	96	%

Calibration Data

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

Calculated value of As Found Response: 86.194 ppm Percent Change of As Found: -3.5%

	before calibration		after calibration	
Auto zero	-0.1	ppb	0.1	ppb
Auto span	60.5	ppb	57.7	ppb

Notes: Span adjustment made

Calibration Summary

Parameter SO2
 Air Monitoring Network PAZA



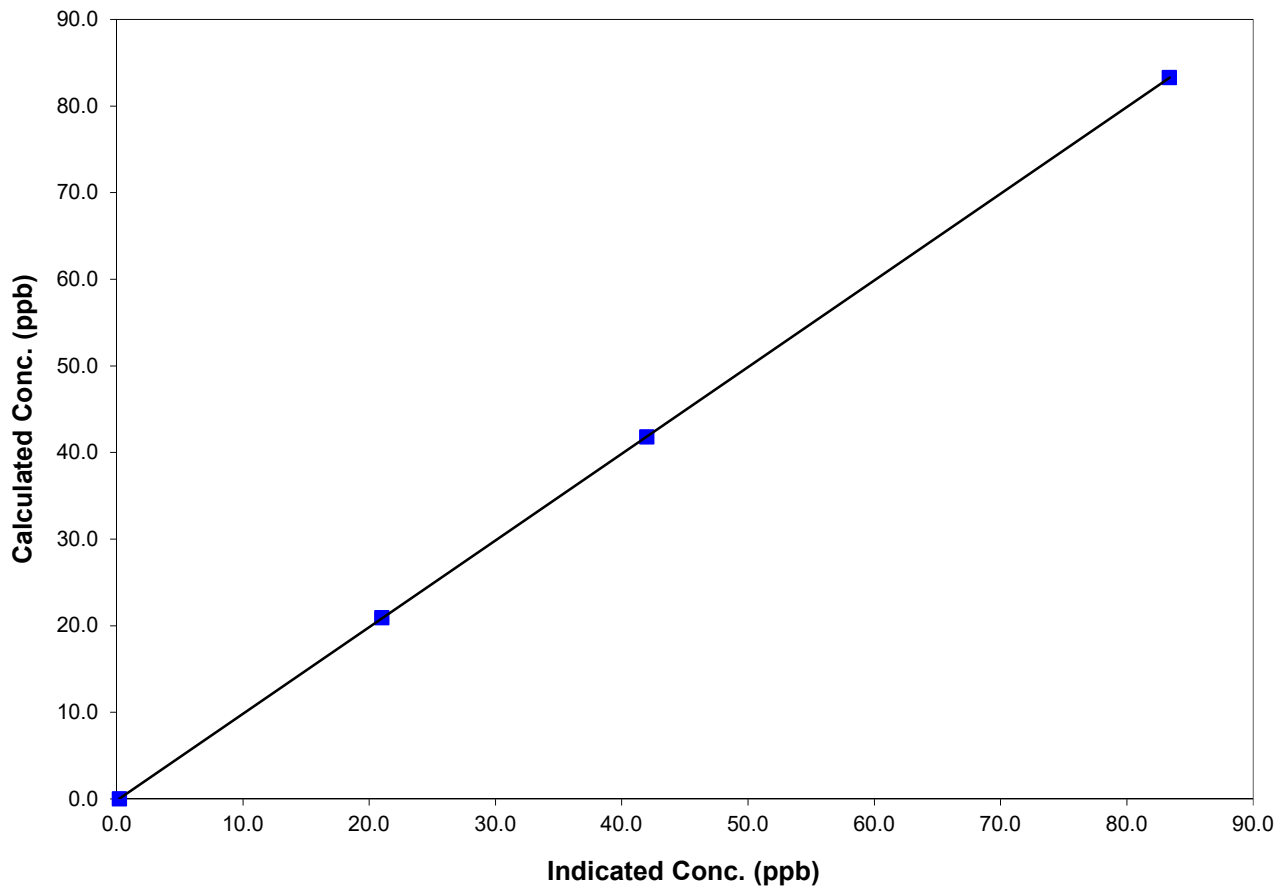
Station Information

Calibration Date	July 24, 2017	Previous Calibration	June 15, 2017
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	13:35:00 PM	End Time (MST)	15:16
Analyzer make/model	TEI Model 43i-TLE	Analyzer serial #	713021137

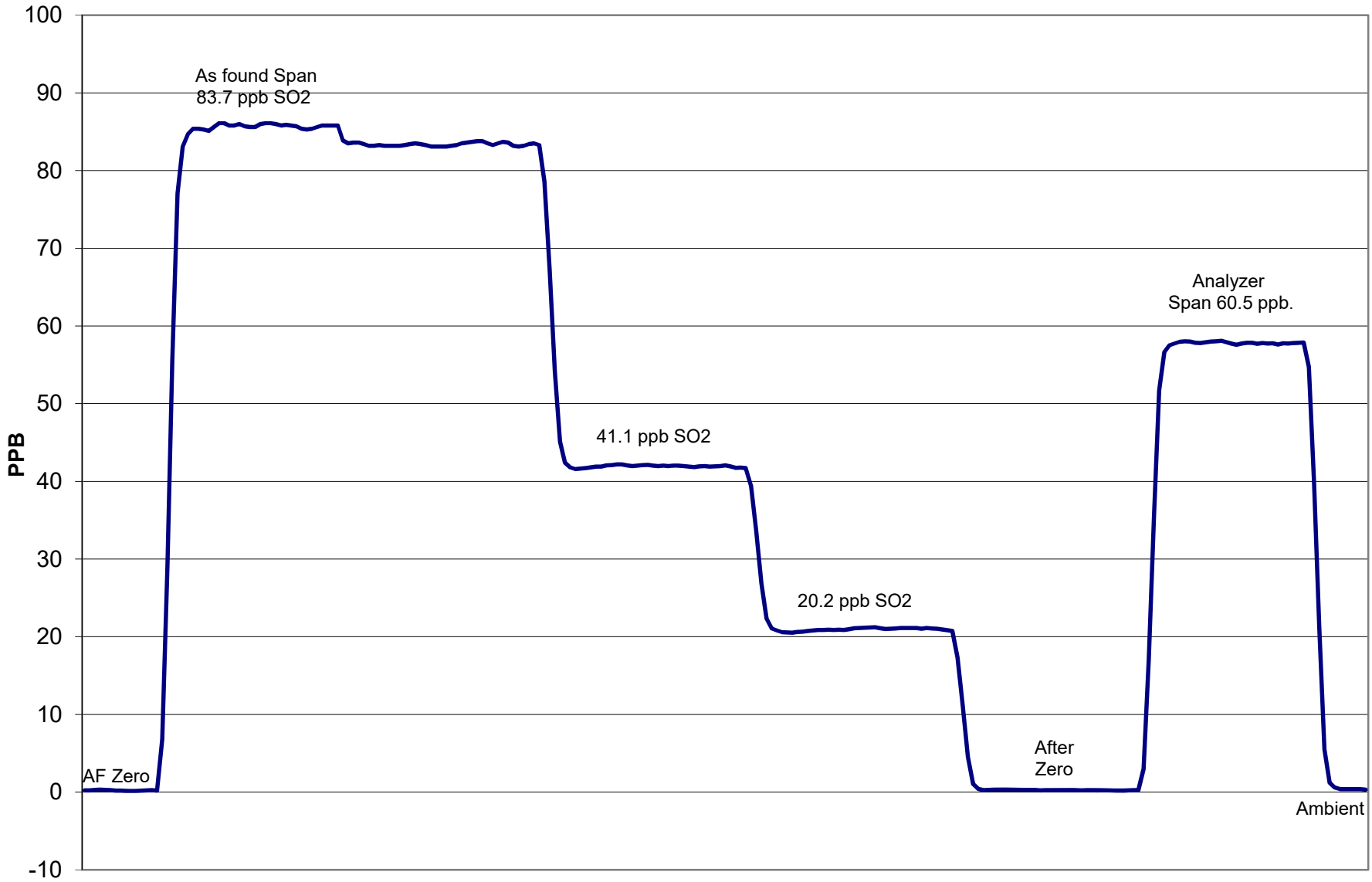
Calibration Data

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

SO2 Calibration Curve



SO2 Calibration



July 24, 2017

Calibration Report

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



Station Information

Calibration Date	<u>July 24, 2017</u>	Previous Calibration	<u>June 15, 2017</u>
Station Number	<u>4</u>	Station Location	<u>Beaverlodge</u>
Reason:	Routine <input type="checkbox"/> Installation <input type="checkbox"/> Removal <input type="checkbox"/> Other: _____		
Start Time (MST)	<u>7:45</u>	End Time (MST)	<u>12:20</u>
Barometric Pressure	<u>0.909</u> Atm	Station Temperature	<u>20.0</u> Deg C
Calibrator	<u>EnviroNics 6100</u>	Serial Number	<u>3016</u>
NO Cal Gas Conc	<u>50.4</u> ppm	Cal Gas Expiry Date	<u>February 2, 2019</u>
NOx Cal Gas Conc	<u>50.5</u> ppm	Cal Gas Serial #	<u>EY0000751</u>

DACS Information

DACS make	<u>CR3000</u>	DACS serial No.	<u>5237</u>																																				
<table border="1"> <thead> <tr> <th>Parameter</th> <th>NO2</th> <th>NOx</th> <th>NO</th> </tr> </thead> <tbody> <tr> <td>Before</td> <td></td> <td></td> <td></td> </tr> <tr> <td> Data Slope</td> <td><u>0.996492</u></td> <td><u>1.025843</u></td> <td><u>1.025071</u></td> </tr> <tr> <td> Data Offset</td> <td><u>-0.479102</u></td> <td><u>0.186056</u></td> <td><u>0.711641</u></td> </tr> <tr> <td>After</td> <td></td> <td></td> <td></td> </tr> <tr> <td> Data Slope</td> <td><u>1.000057</u></td> <td><u>0.998828</u></td> <td><u>0.997105</u></td> </tr> <tr> <td> Data Offset</td> <td><u>0.115753</u></td> <td><u>2.035072</u></td> <td><u>2.094997</u></td> </tr> <tr> <td>Channel #</td> <td><u>8</u></td> <td><u>6</u></td> <td><u>7</u></td> </tr> <tr> <td>Voltage Range</td> <td><u>0 - 5 VDC</u></td> <td><u>0 - 5 VDC</u></td> <td><u>0 - 5 VDC</u></td> </tr> </tbody> </table>				Parameter	NO2	NOx	NO	Before				Data Slope	<u>0.996492</u>	<u>1.025843</u>	<u>1.025071</u>	Data Offset	<u>-0.479102</u>	<u>0.186056</u>	<u>0.711641</u>	After				Data Slope	<u>1.000057</u>	<u>0.998828</u>	<u>0.997105</u>	Data Offset	<u>0.115753</u>	<u>2.035072</u>	<u>2.094997</u>	Channel #	<u>8</u>	<u>6</u>	<u>7</u>	Voltage Range	<u>0 - 5 VDC</u>	<u>0 - 5 VDC</u>	<u>0 - 5 VDC</u>
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Analyzer Information

Analyzer make/model	<u>TEI 42i</u>	Analyzer serial #	<u>906535068</u>																																																							
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Notes: Span adjustments made

Calibration Report



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

Station Information

Calibration Date: July 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	4995	0.00	0.0	0.0	0.0	0.0	0.0	-0.1	N/A	N/A	
1	4995	39.94	400.6	399.8	0.8	399.9	399.9	-0.7	1.0018	0.9998	
2	4995	19.95	200.9	200.5	0.4	198.5	197.9	-0.3	1.0119	1.0130	
3	4995	9.97	100.6	100.4	0.2	96.4	96.5	-0.3	1.0437	1.0401	
AFZ	4995	0.00	0.0	0.0	0.0	0.0	0.0	-0.1	0.0000	0.0000	
AFS	4995	39.94	400.6	399.8	0.8	429.4	428.6	0.0	0.9328	0.9329	
									Average Correction Factor	1.0192	1.0176

As Found Concentrations: NO_x= 440.7 NO= 440.0 As Found Percent Change NO_x= 10.0% NO= 10.1%

GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.94 ccm

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

AIC Data

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

Calibration Performed By: Dmytro Dolotii, Grover Christiansen

Calibration Summary



Parameter NO₂

Air Monitoring Network PAZA

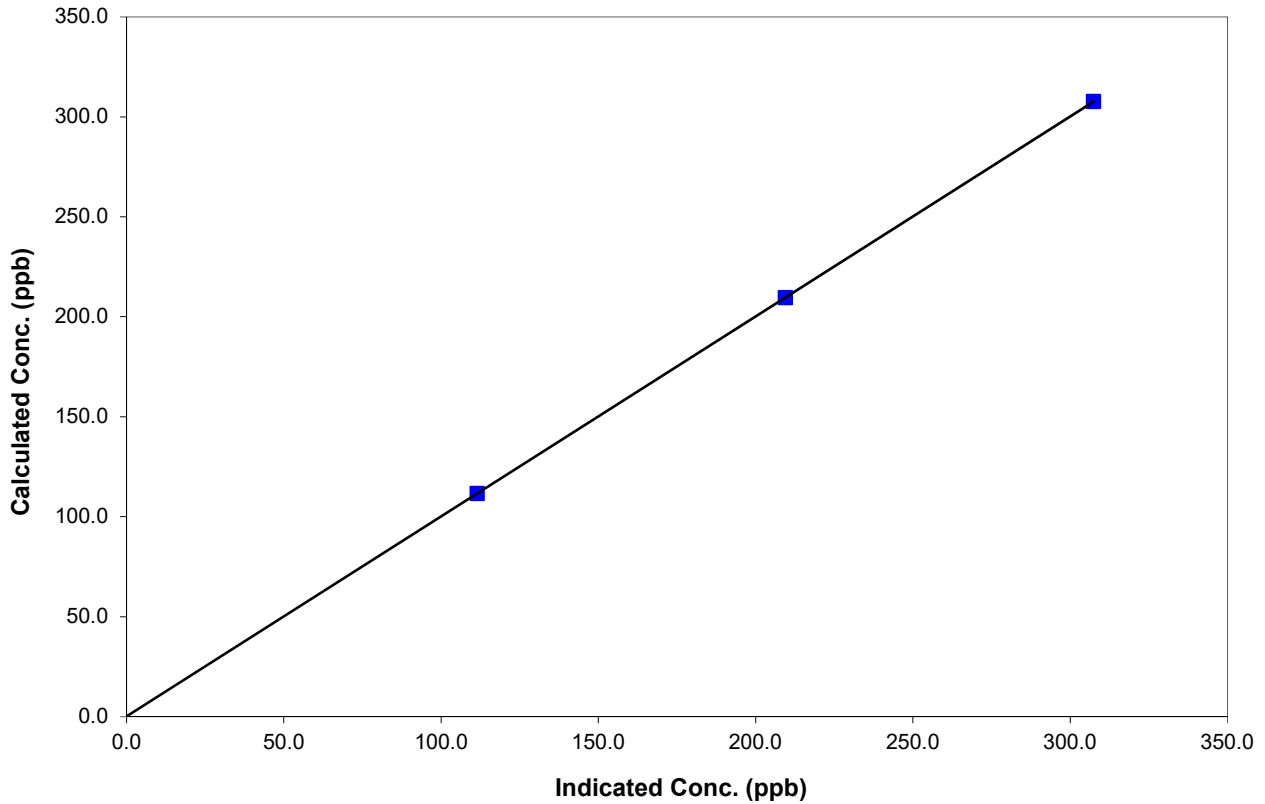
Station Information

Calibration Date	July 24, 2017	Previous Calibration	June 15, 2017
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	7:45	End Time (MST)	12:20
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

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

NO₂ Calibration Curve



Calibration Summary



Parameter NO_x

Air Monitoring Network PAZA

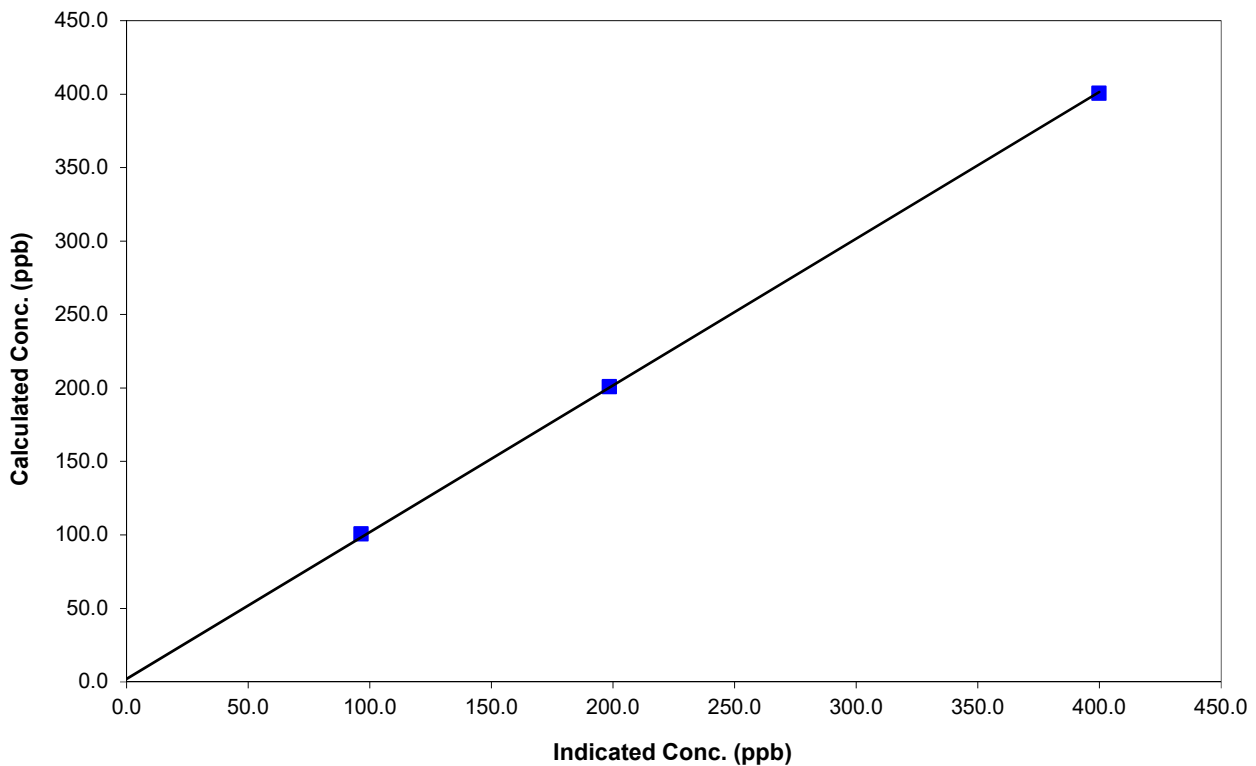
Station Information

Calibration Date	July 24, 2017	Previous Calibration	June 15, 2017
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	7:45	End Time (MST)	12:20
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

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

NO_x Calibration Curve



Calibration Summary



Parameter NO
 Air Monitoring Network PAZA

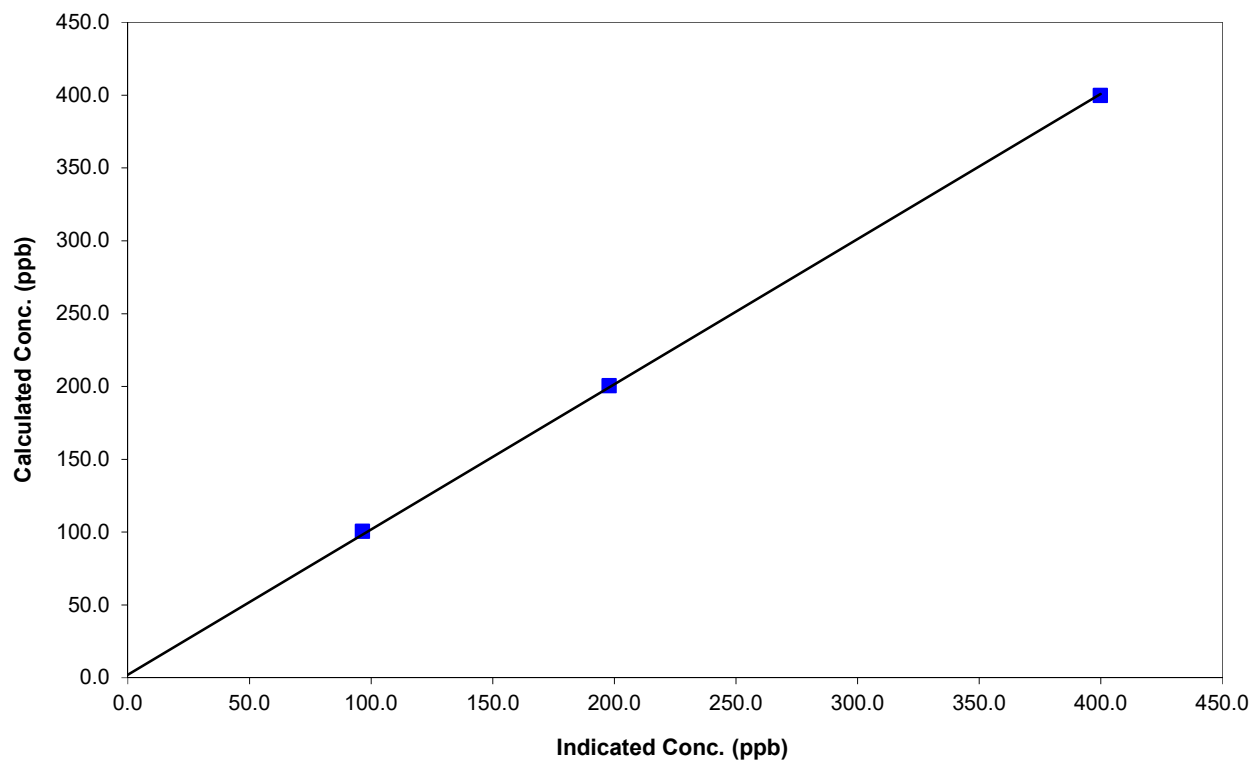
Station Information

Calibration Date	July 24, 2017	Previous Calibration	June 15, 2017
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	7:45	End Time (MST)	12:20
Analyzer make	TEI 42i	Analyzer serial #	906535068

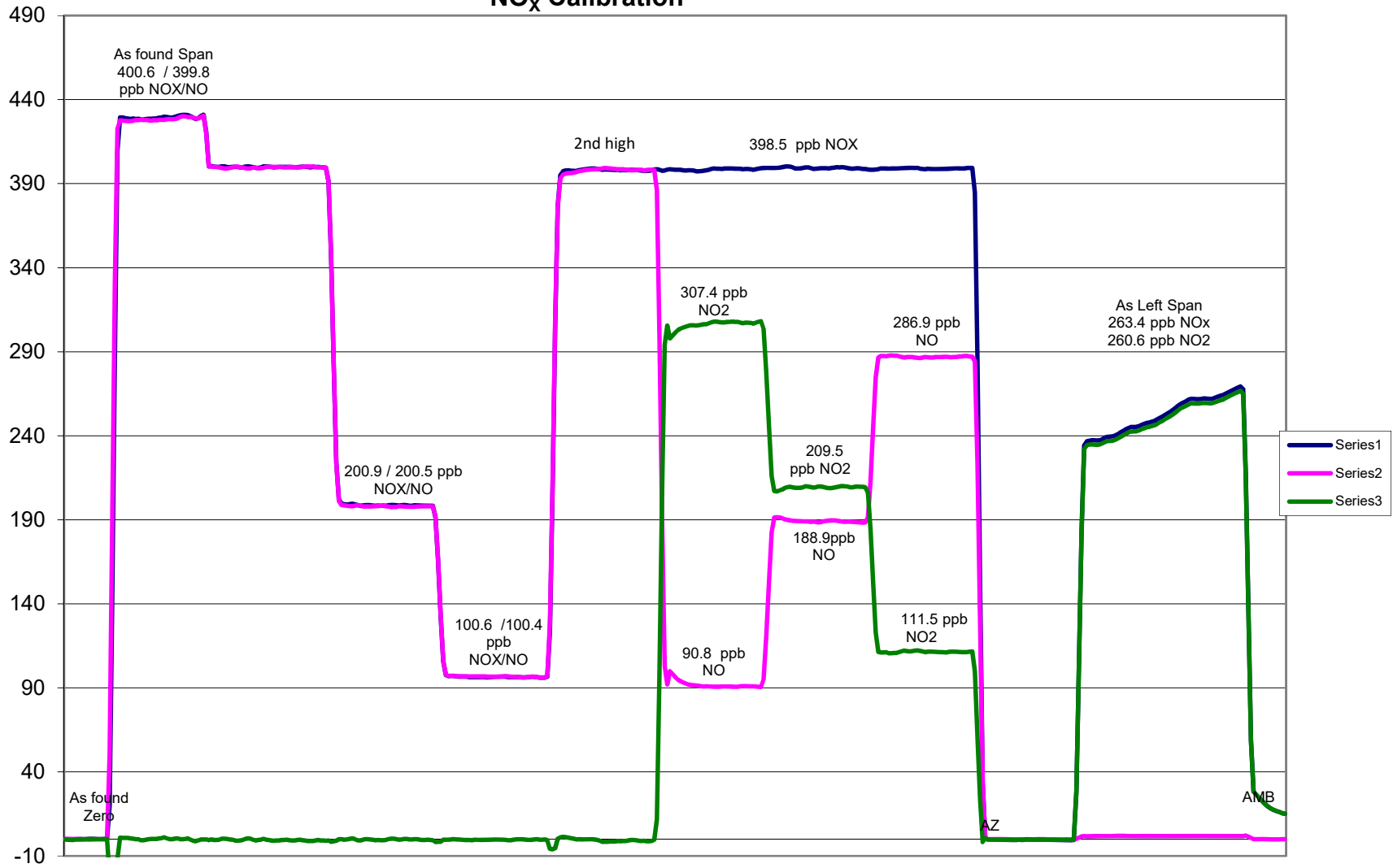
Calibration Data

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

NO Calibration Curve



NO_x Calibration



July 24, 2017

Calibration Report



Parameter 03

Air Monitoring Network PAZA

Station Information

Calibration Date	July 24, 2017	Previous Calibration	June 15, 2017
Station Number	4	Station Location	Beaverlodge
Reason:	Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	12:00	End Time (MST)	14:17
Barometric Pressure	0.909 atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	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	0.997362	Calculated slope	0.999439
Calculated intercept	0.648471	Calculated intercept	-0.142833

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

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-0.30	ppb	-0.20	ppb
slope	1.075		1.004	
Lamp temp	53.8	mV	53.8	mV
Lamp Intensity A/B	59048/67596	mV	59212/67779	mV
Pressure	692.3	mm Hg	685.1	mm Hg
Flow A	0.801	LPM	0.798	LPM
Flow B	0.750	LPM	0.745	LPM

Calibration Data

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

Calculated value of As Found Response: 330.6 ppm Percent Change of As Found: 7.3%

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

Notes: Span adjustment made

Calibration Performed By: Dmytro Dolotii, Grover Christiansen.

Calibration Summary

Parameter O3
 Air Monitoring Network PAZA

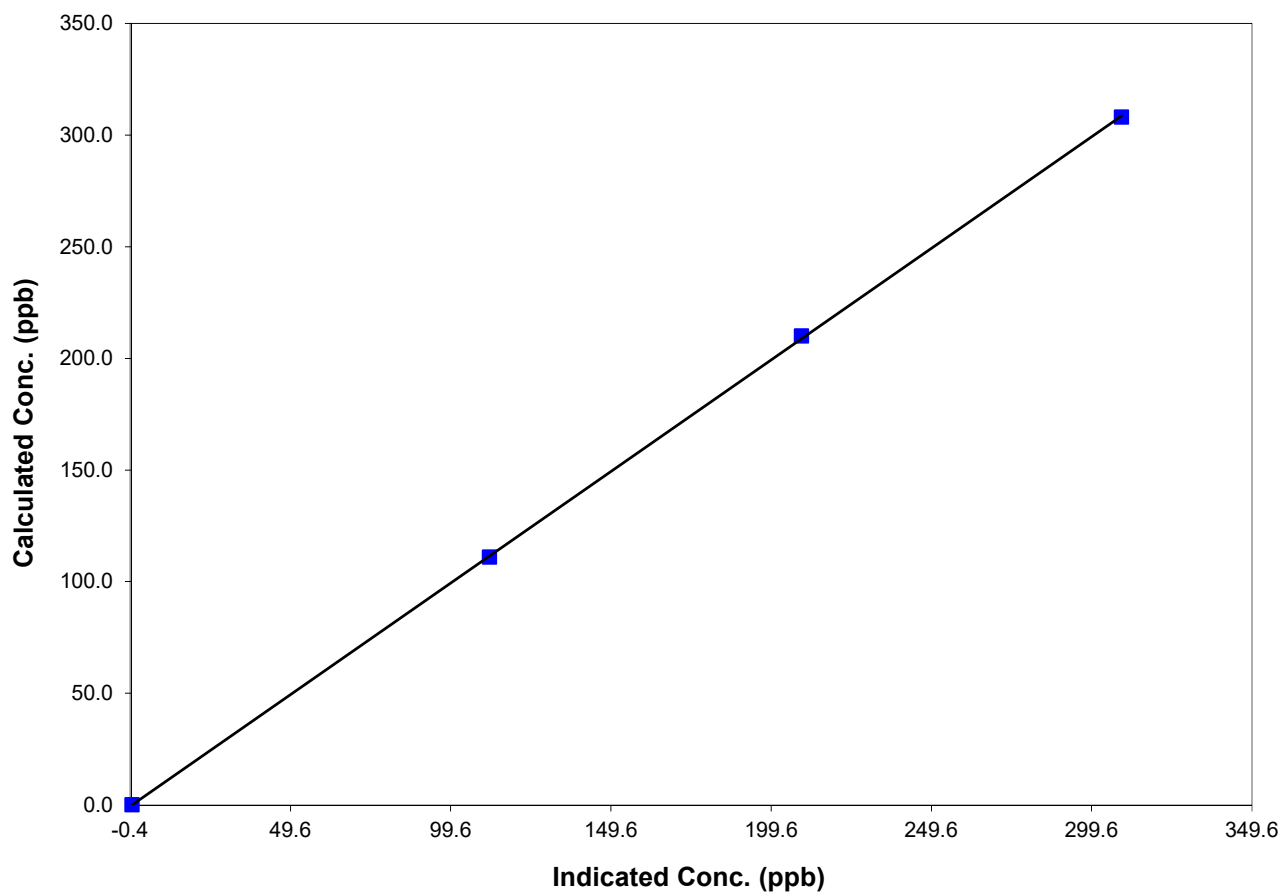
Station Information

Calibration Date	July 24, 2017	Previous Calibration	June 15, 2017
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	12:00	End Time (MST)	14:17
Analyzer make/model	Teco 49i	Analyzer serial #	1136451236,AMU 1879

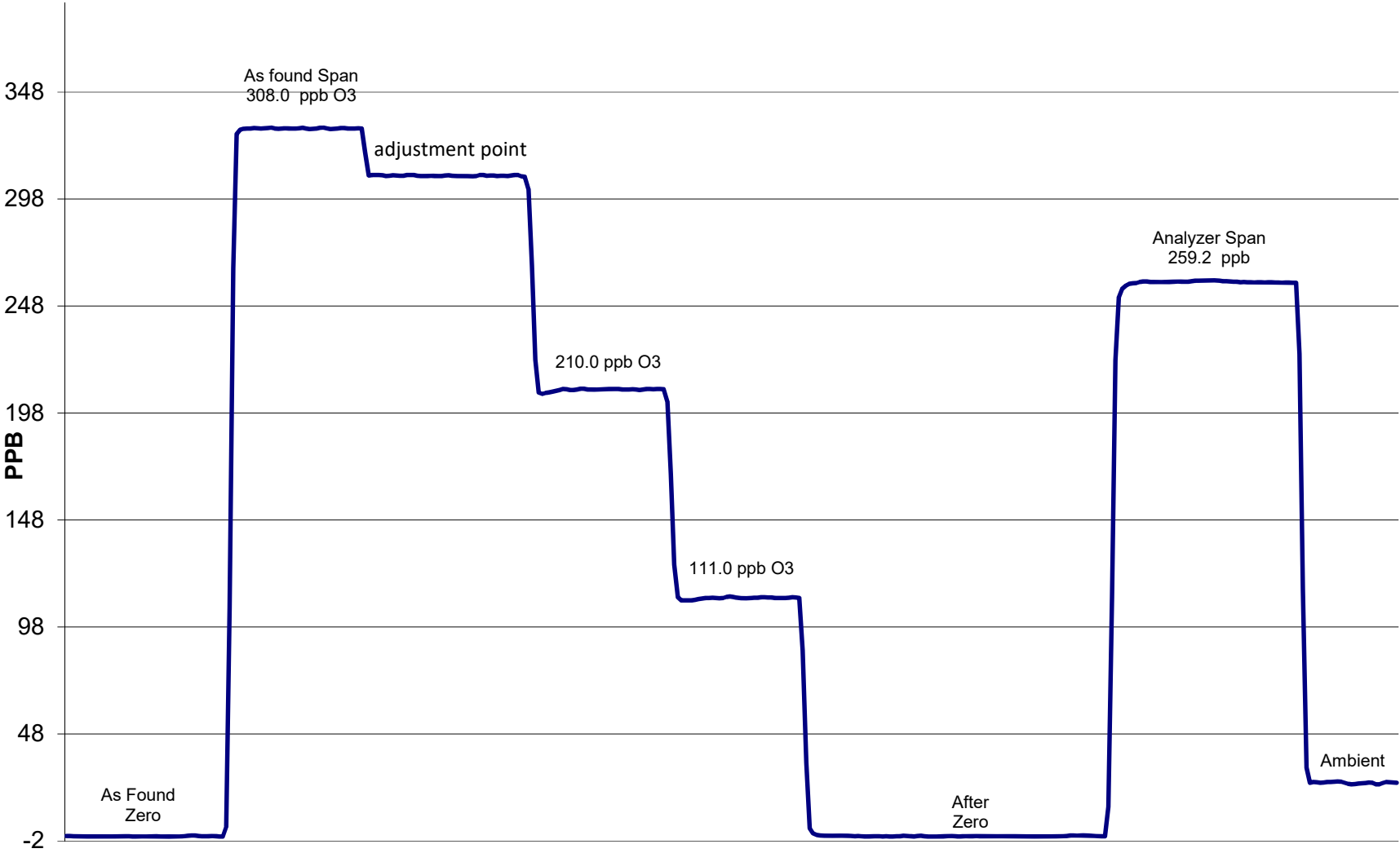
Calibration Data

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

O3 Calibration Curve



O3 Calibration



July 24, 2017

Calibration Report



AIR QUALITY MONITORING

Parameter SO2

Air Monitoring Network PAZA

Station Information

Calibration Date	July 21 2017	Previous Calibration	June 27 2017
Station Number	6	Station Location	Valleyview
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	10:50	End Time (MST)	14:05:00 PM
Barometric Pressure	0.925 atm	Station Temperature	21.5 Deg C
Calibrator	Envionics	Serial Number	6586
Cal Gas Concentration	50 ppm	Cal Gas Exp Date	February 18, 2019
Gas Cylinder Num.	LL105132		
DACS make	CR3000	DACS serial No.	5409
DACS voltage range	0 - 5 volt	DACS channel #	4
	<u>Before</u>		<u>After</u>
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.996703	Calculated slope	1.002481
Calculated intercept	-0.329687	Calculated intercept	2.597389
Analyzer make	TEI Model 43i - APSCB	Analyzer serial #	701120010

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	7		7.4	
Coefficient	0.833		0.872	
UV Lamp Voltage	791	LPM	791	LPM
Chamber Temp	45	V	45	V
Perm Gas Temp	45	C	45	C
Pressure	676.4	in Hg	675.5	in Hg
Sample Flow	0.456	LPM	0.456	LPM
Lamp Intensity	91	Hz	92	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5150	0.00	0.0	0.1	N/A
5150	41.22	397.0	395.1	1.0049
5150	20.30	196.3	190.6	1.0298
5150	9.80	95.0	90.4	1.0502
5150	0.00	0.0	0.1	As found zero
5150	41.22	397.0	380.1	As found span
Average Correction Factor				1.0283

Calculated value of As Found Response: 378.5 ppm Percent Change of As Found: 4.7%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.1	ppm
Auto span	281.1	ppm	279.5	ppm

Notes: Span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2
 Air Monitoring Network PAZA

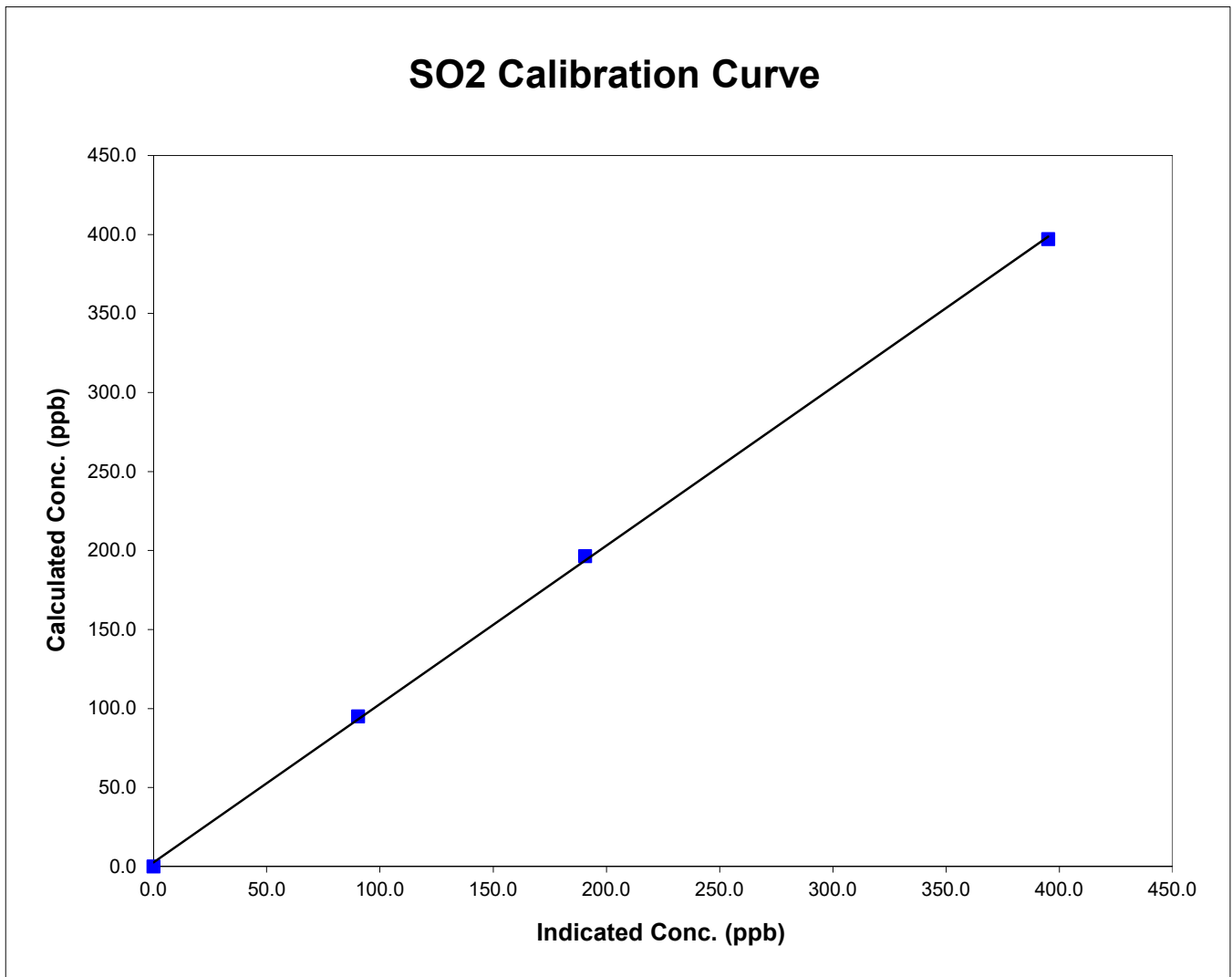


Station Information

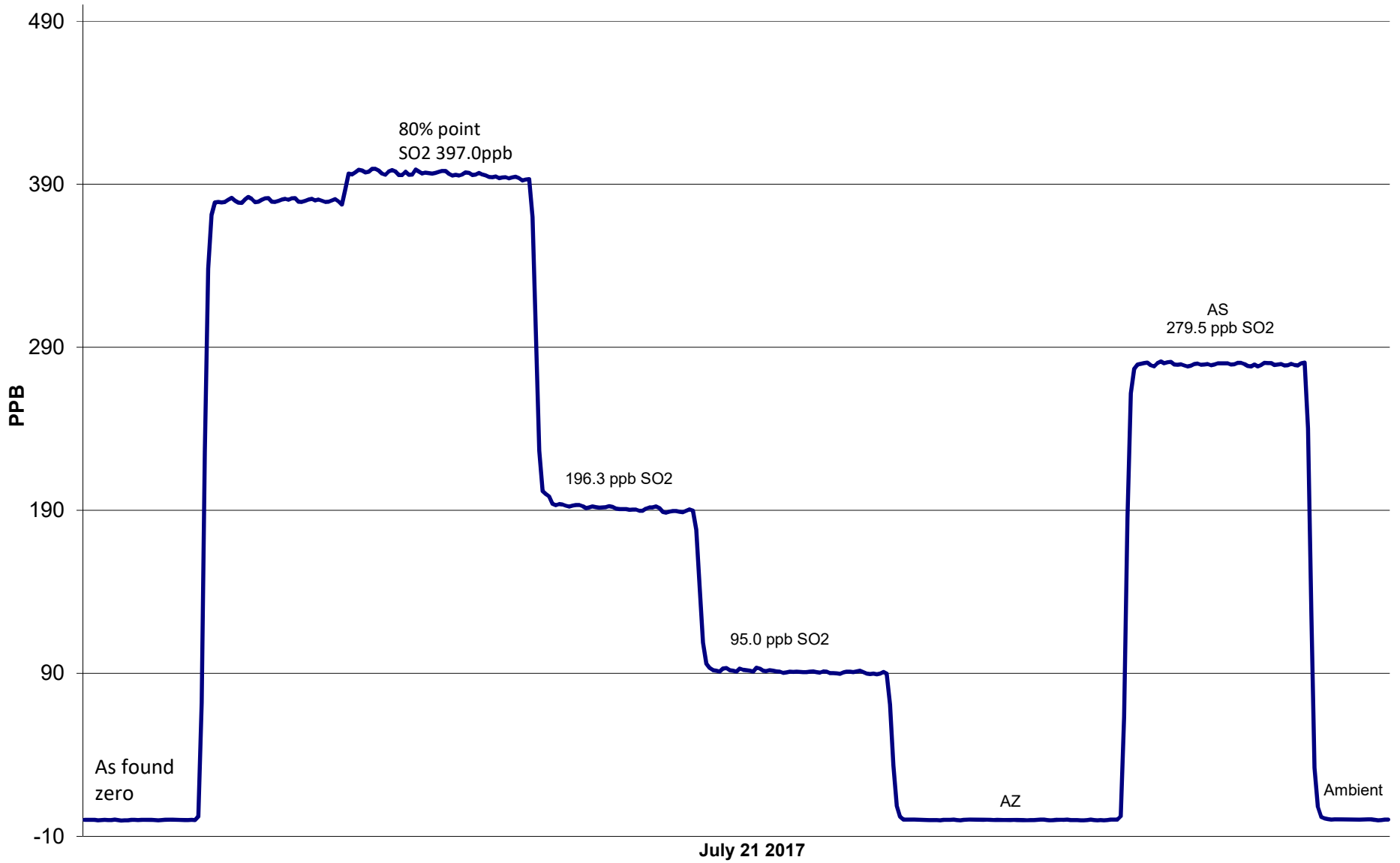
Calibration Date	July 21 2017	Previous Calibration	June 27 2017
Station Number	6	Station Location	Valleyview
Start Time (MST)	10:50	End Time (MST)	14:05:00 PM
Analyzer make/model	TEI Model 43i - APSCB	Analyzer serial #	701120010

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999774
397.0	395.1	1.0049		
196.3	190.6	1.0298		
95.0	90.4	1.0502	Slope	1.002481
			Intercept	2.597389



SO2 Calibration



Calibration Report



AIR QUALITY MONITORING

Parameter H2S

Air Monitoring Network PAZA

Station Information

Calibration Date	July 21 2017	Previous Calibration	June 27 2017
Station Number	6	Station Location	Valleyview
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	12:50	End Time (MST)	16:45:00 PM
Barometric Pressure	0.925 atm	Station Temperature	21.5 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Concentration	10.3 ppm	Cal Gas Expiry Date	July 03 2016
Gas Cert Reference	LL110781		
DACS make	CR3000	DACS serial No.	5409
DACS voltage range	0 - 5 volt	DACS channel #	9
	<u>Before</u>		<u>After</u>
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.987176	Calculated slope	0.992390
Calculated intercept	0.423792	Calculated intercept	-0.020717
Analyzer make	TEI Model 450i-APHAA	Analyzer serial #	1170050144

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	17.5	ppb	14.4	ppb
Coefficient	0.998		1.029	
Lamp Voltage	760	V	760	V
Chamber Temp	45.1	c	45	c
Convertor	327.3	c	327.8	c
Pressure	561.30	mm Hg	561.30	mm Hg
Sample Flow	0.933	ccm	0.935	lpm
Lamp Intensity	90	%	89	%

Calibration Data

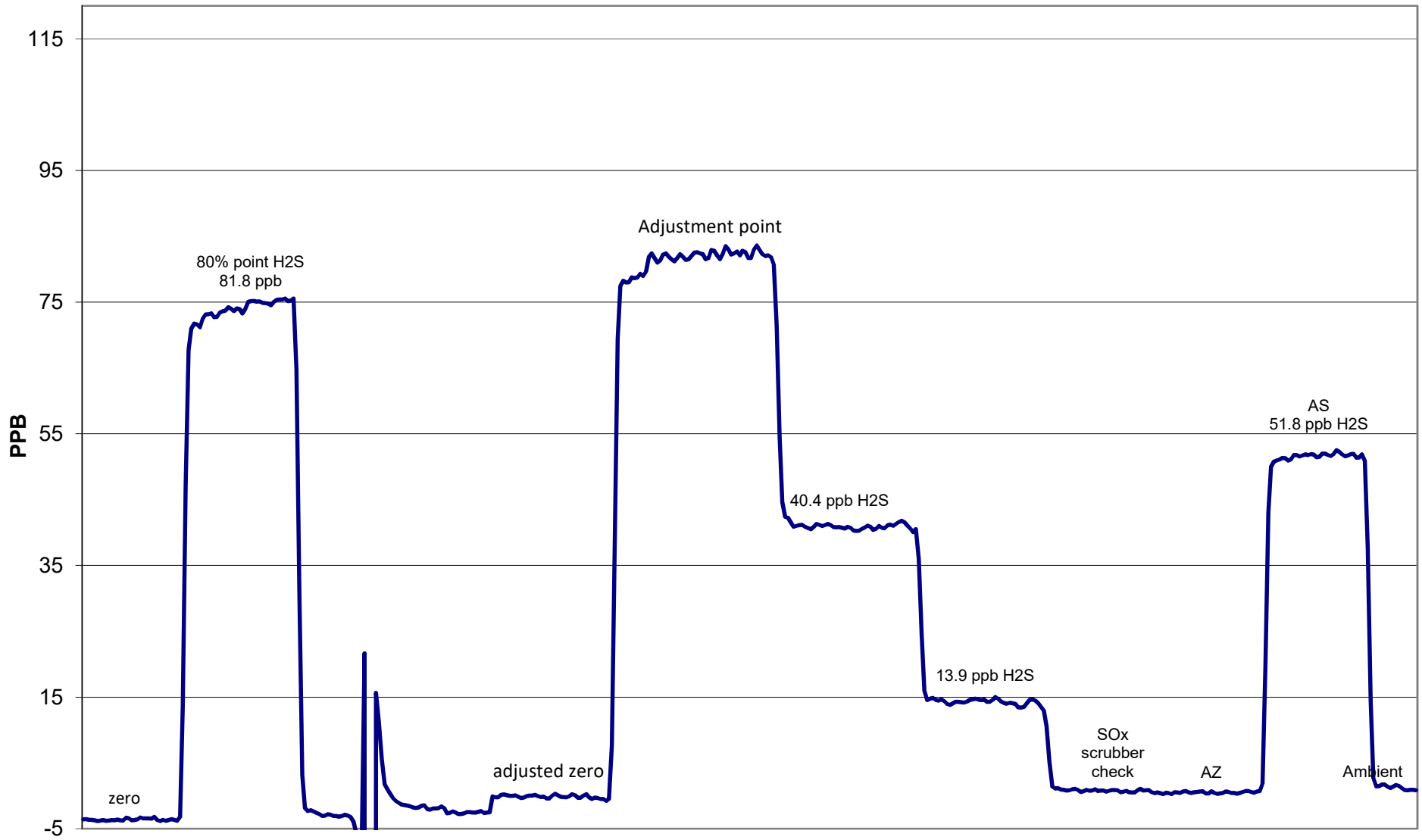
Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5150	0.00	0.0	-0.1	N/A
5150	41.22	81.8	82.4	0.9922
5150	20.30	40.4	40.7	0.9933
7251	9.81	13.9	14.2	0.9784
5150	0.00	0.0	-3.5	As found zero
5150	41.22		75.0	As found span
Average Correction Factor				0.9880

Calculated value of As Found Response: 77.94 ppm Percent Change of As Found: NA

	before calibration		after calibration	
Auto zero	-0.3	ppm	0.5	ppm
Auto span	23.4	ppm	51.8	ppm

Notes: Zero/span adjustments made

H2S Calibration



July 21 2017

Calibration Report



AIR QUALITY MONITORING

Parameter SO₂

Air Monitoring Network PAZA

Station Information

Calibration Date	July 25, 2017	Previous Calibration	June 23, 2017
Station Number	1	Station Location	Donnelly
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	13:20:00 PM	End Time (MST)	16:05:00 PM
Barometric Pressure	0.923 mm	Station Temperature	22.0 Deg C
Calibrator	EnviroNics	Serial Number	3016
Cal Gas Concentration	50 ppm	Cal Gas Expiry Date	02/21/2020
Correction factor	0.031163	Cal Gas Cylinder #	EY0000740
DACS make	CR1000	DACS serial No.	3980
DACS voltage range	0 - 5 volt	DACS channel #	6
	<u>Before</u>		<u>After</u>
Calculated slope	1.001615	Calculated slope	0.995850
Calculated intercept	-0.218821	Calculated intercept	-0.906455
Analyzer make	Teco 43i	Analyzer serial #	1207452008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	6.7		6.9	
coefficient	1.024		1.052	
Lamp Voltage	831	volts	830	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	677.3	mm Hg	682.3	mm Hg
Sample Flow	0.437	ccm	0.442	ccm
Lamp Intensity	97	%	97	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5146	0.0	0.00	0.4	N/A
5146	41.25	397.6	399.3	0.9957
5146	20.10	194.5	198.4	0.9807
5146	9.87	95.7	96.3	0.9943
5146	0.0	0.0	0.4	As Found Zero
5146	41.25	397.6	384.1	As Found Span
Average Correction Factor				0.9902

Calculated value of As Found Response: 384.099 ppm Percent Change of As Found: 3.4%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	235.1	ppm	242.4	ppm

Notes: Span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary



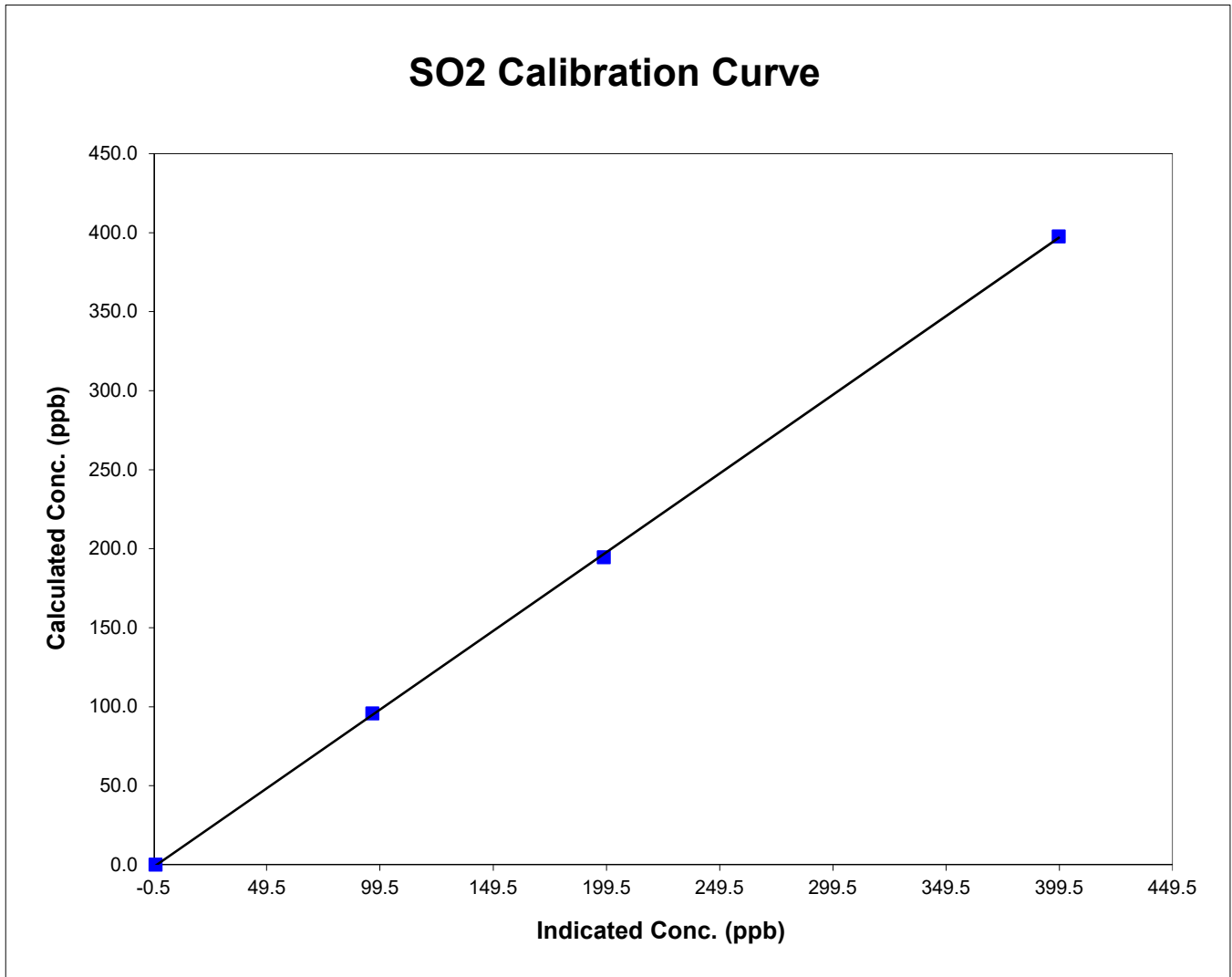
Parameter SO2
 Air Monitoring Network PAZA

Station Information

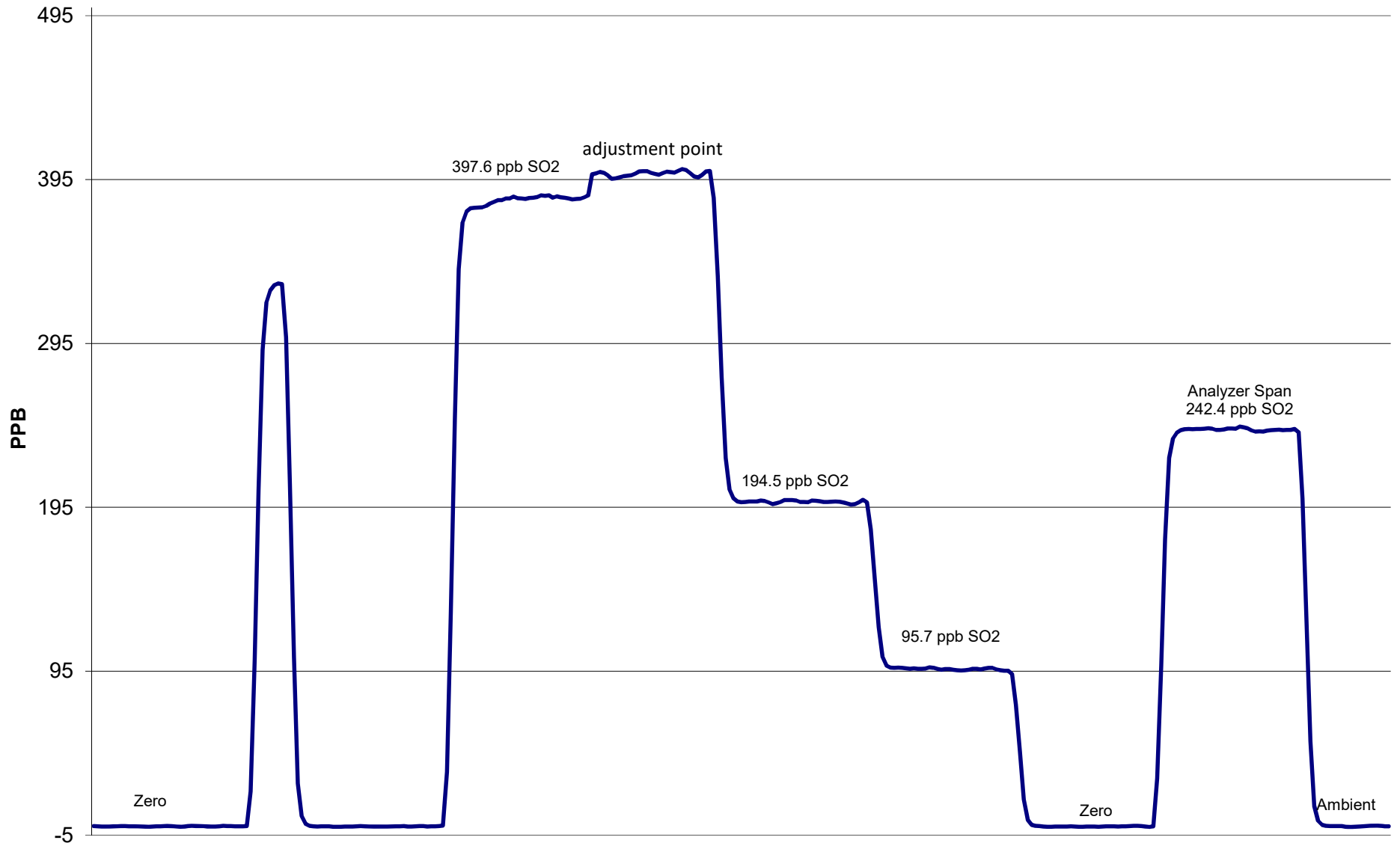
Calibration Date	July 25, 2017	Previous Calibration	June 23, 2017
Station Number	1	Station Location	Donnelly
Start Time (MST)	13:20:00 PM	End Time (MST)	16:05:00 PM
Analyzer make/model	Teco 43i	Analyzer serial #	1207452008

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A	Correlation Coefficient	0.999931
397.6	399.3	0.9957		
194.5	198.4	0.9807		
95.7	96.3	0.9943	Slope	0.995850
			Intercept	-0.906455



SO2 Calibration



July 25, 2017

Calibration Summary

Parameter H2S
 Air Monitoring Network PAZA



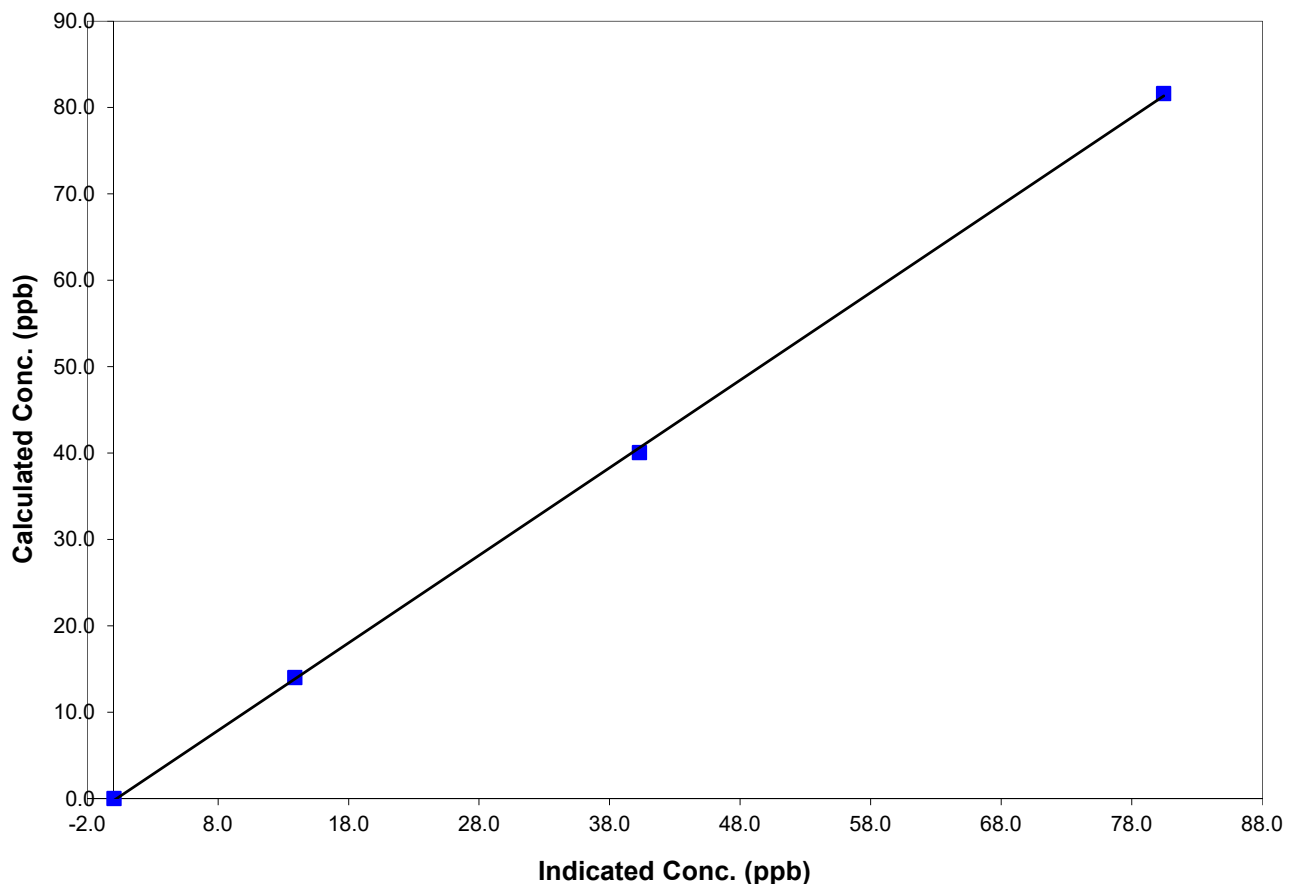
Station Information

Calibration Date	July 25, 2017	Previous Calibration	June 23, 2017
Station Number	1	Station Location	Donnely
Start Time (MST)	11:10	End Time (MST)	14:08:00 PM
Analyzer make/model	Thermo 450i	Analyzer serial #	1207452006

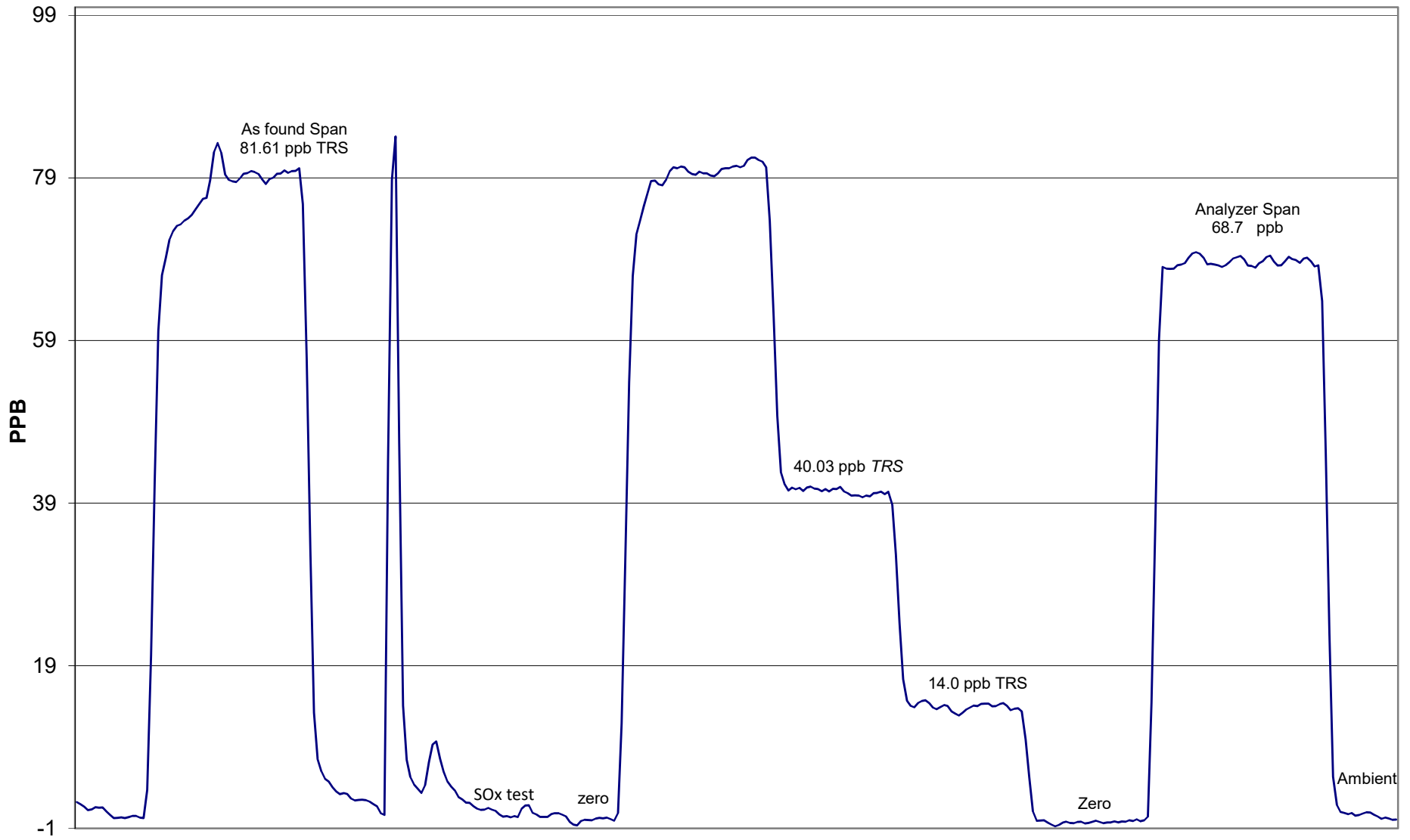
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999879
81.6	80.4	1.0145		
40.0	40.3	0.9937		
14.0	13.9	1.0070		
			Slope	1.014035
			Intercept	-0.233156

TRS Calibration Curve



H2S Calibration



July 25, 2017

Calibration Report



AIR QUALITY MONITORING

Parameter SO2

Air Monitoring Network PAZA

Station Information

Calibration Date	July 5, 2017	Previous Calibration	June 19, 2017
Station Number	10	Station Location	Rycroft
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	9:55	End Time (MST)	12:45
Barometric Pressure	0.933 Atm	Station Temperature	22.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Concentration	50.0 ppm	Cal Gas Expiry Date	02/21/2020
Gas Cert Reference	EY0000740		
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volt	DACS channel #	2
	<u>Before</u>		<u>After</u>
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.004932	Calculated slope	1.001785
Calculated intercept	-0.191065	Calculated intercept	-0.219721
Analyzer make	TEI 43C	Analyzer serial #	436610005

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	23.8		23.9	
Coefficient	1.055		1.056	
UV Lamp Voltage	890	V	890	V
Chamber Temp	44.7	C	44.7	C
Perm Gas Temp	45	C	45	C
Pressure	678.6	mm Hg	678.3	mm Hg
Sample Flow	0.469	LPM	0.469	LPM
Lamp Intesity	30432	Hz	30321	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5144	0.00	0.0	0.5	N/A
5144	41.26	397.9	398.4	0.9985
5144	20.62	199.6	196.6	1.0156
5144	9.73	94.4	96.0	0.9834
5144	0.00	0.0	0.5	As found zero
5144	41.26	397.9	396.6	As found span
Average Correction Factor				0.9992

Calculated value of As Found Response: 397.789 ppm Percent Change of As Found: 0.0%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	205.2	ppm	205.6	ppm

Notes: Slight span adjustment made due to the new cal gas

Calibration Summary

Parameter SO2
 Air Monitoring Network PAZA

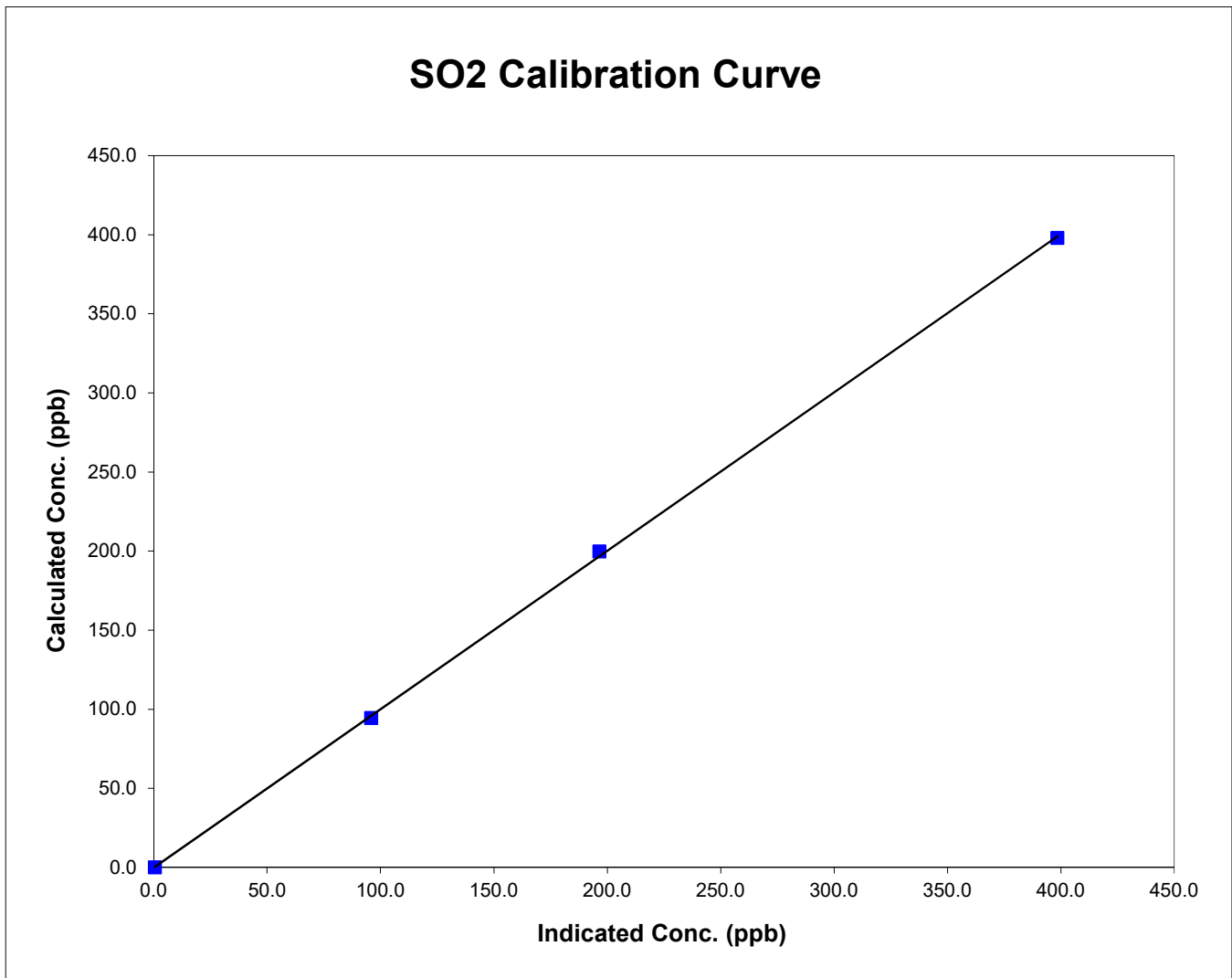


Station Information

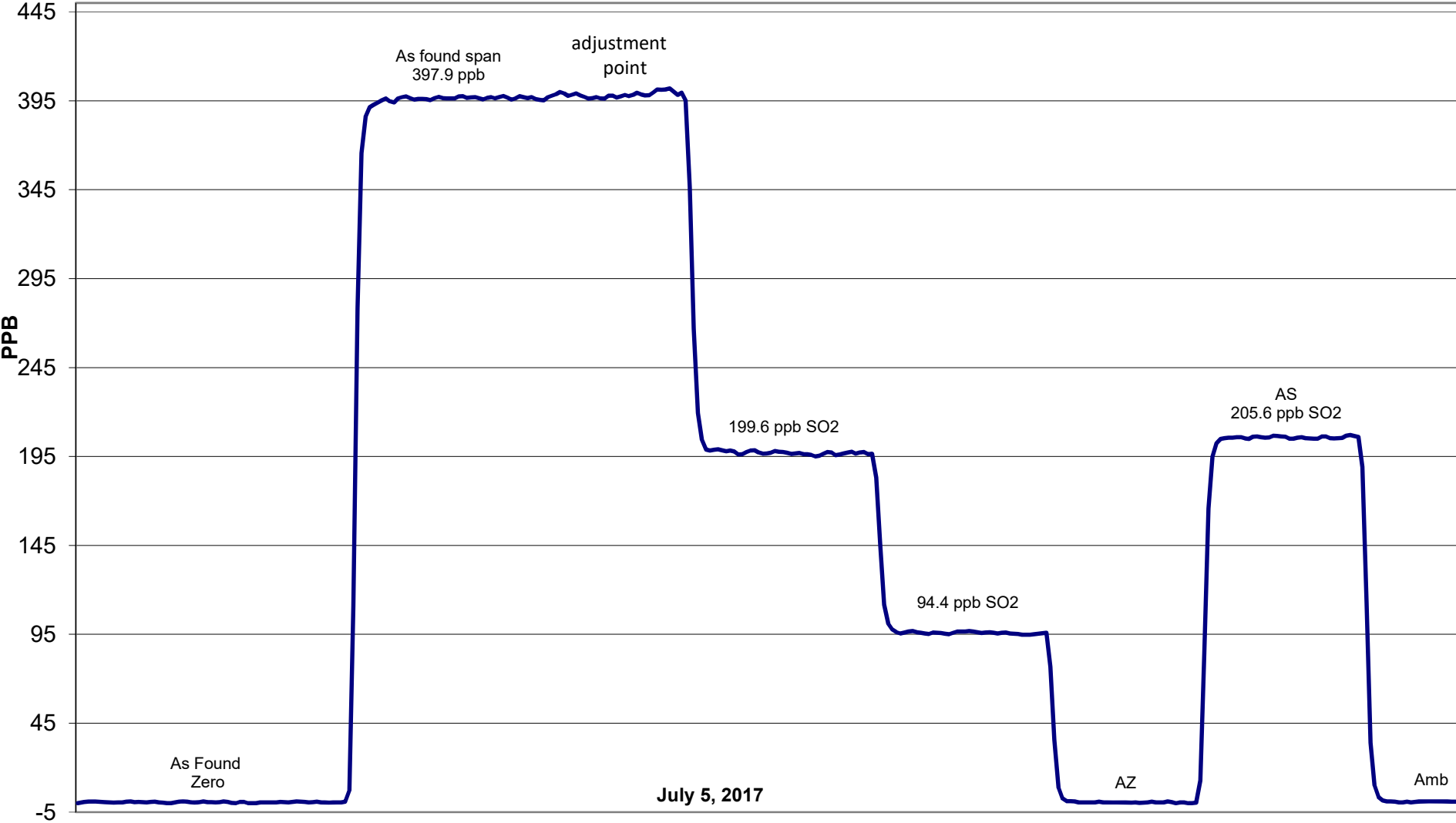
Calibration Date	July 5, 2017	Previous Calibration	June 19, 2017
Station Number	10	Station Location	Rycroft
Start Time (MST)	9:55	End Time (MST)	12:45
Analyzer make/model	TEI 43C	Analyzer serial #	436610005

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A	Correlation Coefficient	0.999859
397.9	398.4	0.9985		
199.6	196.6	1.0156	Slope	1.001785
94.4	96.0	0.9834		
			Intercept	-0.219721



SO2 Calibration



Calibration Report

Parameter

NO_x-NO-NO₂

Air Monitoring Network

PAZA



Station Information

Calibration Date	June 5, 2017	Previous Calibration	June 19, 2017
Station Number	10	Station Location	Rycroft
Reason:	Routine	Installation	Removal
Start Time (MST)	10:05	End Time (MST)	14:15:00 PM
Barometric Pressure	0.933	Atm	Station Temperature
Calibrator	EnviroNics	Serial Number	6586
NO Cal Gas Conc	51.1	ppm	Cal Gas Expiry Date
NO _x Cal Gas Conc	51.3	ppm	Cal Gas Serial #
			EY0000740

DACS Information

DACS make	CR3000	DACS serial No.	5407
	Parameter	NO₂	NO_x
Before	Data Slope	0.996394	1.003505
	Data Offset	-1.125563	-0.167426
After	Data Slope	0.984596	0.994087
	Data Offset	-1.601592	-0.670063
	Channel #	8	6
	Voltage Range	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model	TEI 42i	Analyzer serial #	0701120011
Test Point	before		after
Concentration range	0-500	ppb	0-500
NO offset	5.9	mV	5.8
NO _x bkgnd	6.0	mV	5.9
NO coefficient	0.980		0.962
NO _x coefficient	1.001		1.001
NO ₂ conv temp	325.5	Deg C	323.2
PMT Temp	-3.0	Deg C	-3.0
PMT Volt	-835.1	mV	-835.1
R Cell Press	175.4	in Hg	175.4
Sample Flow	0.829	LPM	0.826

Notes:

Slight span adjustment made due to the new cal gas
 Convertor efficiency is 103.1% which is a bit high. Will be looking into it on the next calibration.

Calibration Report



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

Station Information

Calibration Date: June 5, 2017 Station Location: Rycroft

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	
zero	5144	0.00	0.0	0.0	0.0	0.4	0.3	0.2	N/A	N/A	
1	5144	41.26	408.2	406.6	1.6	411.9	408.6	1.6	0.9911	0.9951	
2	5144	20.62	204.8	204.0	0.8	204.8	203.3	0.7	1.0002	1.0036	
3	5144	9.73	96.9	96.5	0.4	99.7	99.4	0.4	0.9714	0.9704	
AFZ	5144	0.00	0.0	0.0	0.0	0.4	0.3	0.2	0.0000	0.0000	
AFS	5144	41.26	408.2	406.6	0.8	418.3	414.3	2.2	0.9759	0.9815	
									Average Correction Factor	0.9876	0.9897

As Found Concentrations: NO_x= 419.2 NO= 415.0 As Found Percent Change NO_x= 2.7% NO= 2.1%

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	0.3	0.3	0.0	0.4	0.3	0.2	N/A	N/A	N/A	N/A	
NO point	405.9	405.9	0.0	409.9	405.9	1.9	0.9904	1.0000	N/A	N/A	
300	405.9	104.6	301.4	412.9	104.6	306.8	0.9830	1.0000	0.9822	101.8%	
200	405.9	202.4	203.5	413.0	202.4	208.5	0.9827	1.0000	0.9762	102.4%	
100	405.9	300.8	105.2	413.4	300.8	110.6	0.9820	1.0000	0.9507	105.2%	
							Average Correction Factor	0.9826	1.0000	0.9697	103.1%

AIC Data

Parameter	Previous calibration				Current calibration			
	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.1	-0.2	0.0	ppb	0.3	0.1	0.4	ppb
Auto span	162.1	160.2	1.0	ppb	158.1	156.0	1.5	ppb

Calibration Performed By: Dmytro Dolotii

Calibration Summary



Parameter NO₂

Air Monitoring Network PAZA

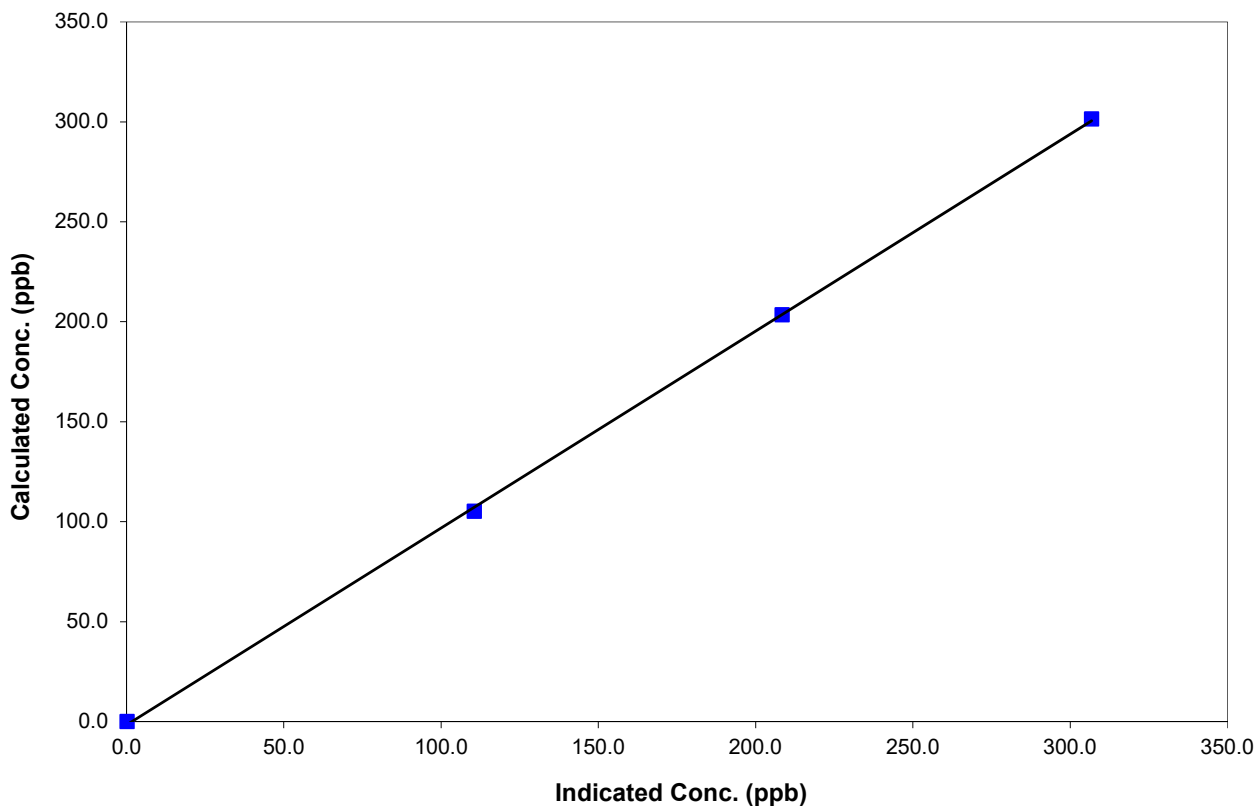
Station Information

Calibration Date	June 5, 2017	Previous Calibration	June 19, 2017
Station Number	10	Station Location	Rycroft
Start Time (MST)	10:05	End Time (MST)	14:15:00 PM
Analyzer make	TEI 42i	Analyzer serial #	0701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999853
301.4	306.8	0.9822		
203.5	208.5	0.9762	Slope	0.984596
105.2	110.6	0.9507		
			Intercept	-1.601592

NO₂ Calibration Curve



Calibration Summary



Parameter NO_x

Air Monitoring Network PAZA

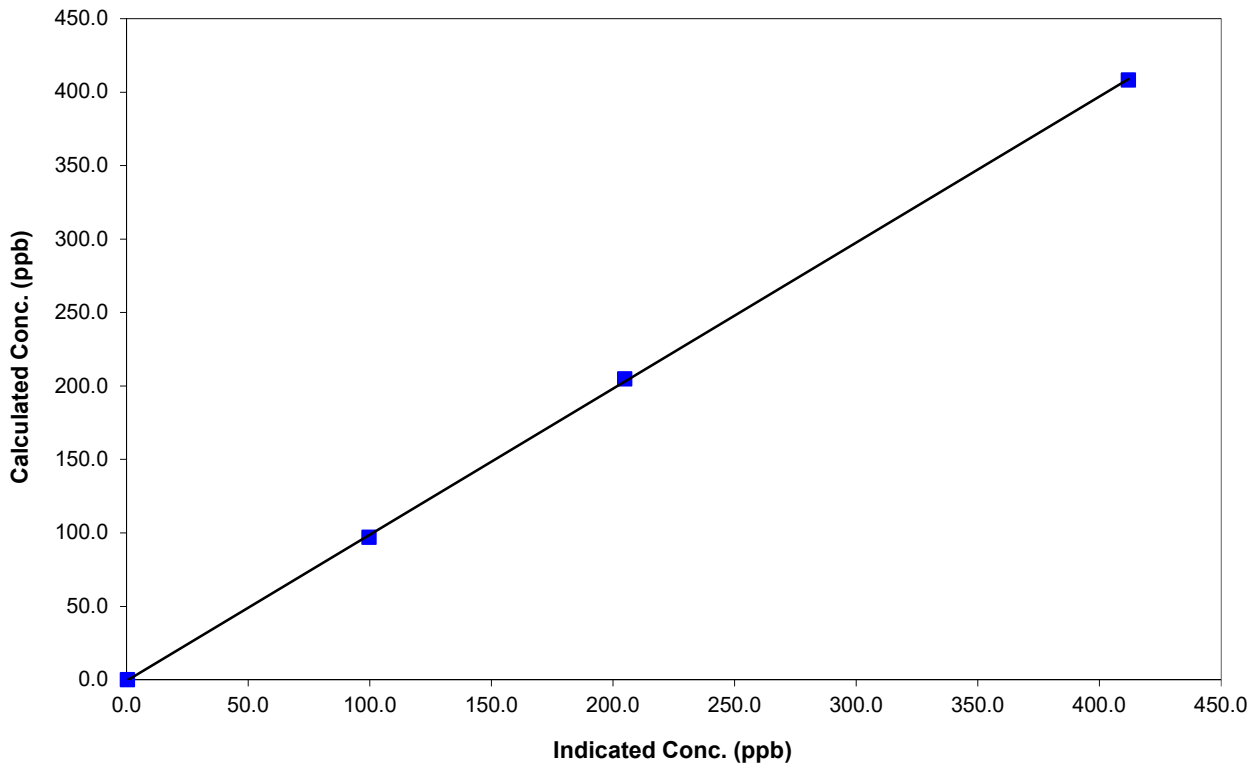
Station Information

Calibration Date	June 5, 2017	Previous Calibration	June 19, 2017
Station Number	10	Station Location	Rycroft
Start Time (MST)	10:05	End Time (MST)	14:15:00 PM
Analyzer make	TEI 42i	Analyzer serial #	0701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A	Correlation Coefficient	0.999928
408.2	411.9	0.9911		
204.8	204.8	1.0002	Slope	0.994087
96.9	99.7	0.9714		
			Intercept	-0.670063

NO_x Calibration Curve



Calibration Summary



Parameter NO
 Air Monitoring Network PAZA

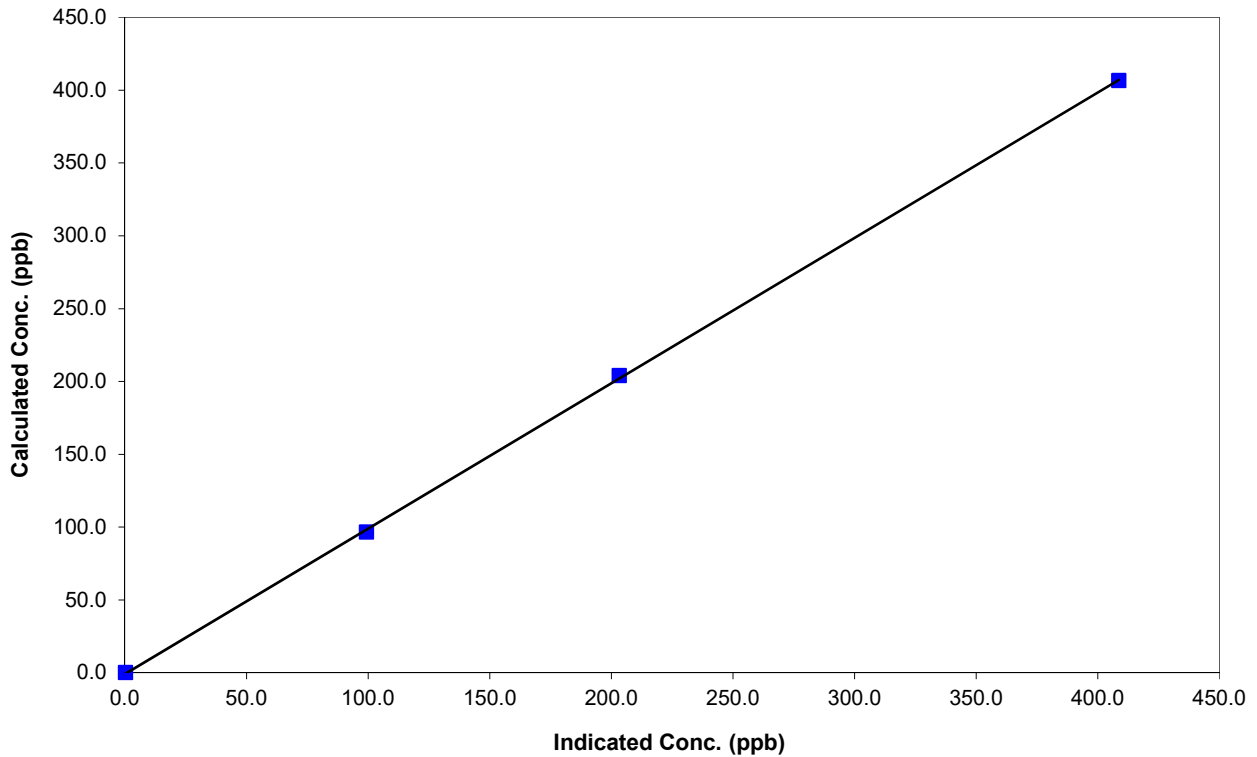
Station Information

Calibration Date	June 5, 2017	Previous Calibration	June 19, 2017
Station Number	10	Station Location	Rycroft
Start Time (MST)	10:05	End Time (MST)	14:15:00 PM
Analyzer make	TEI 42i	Analyzer serial #	0701120011

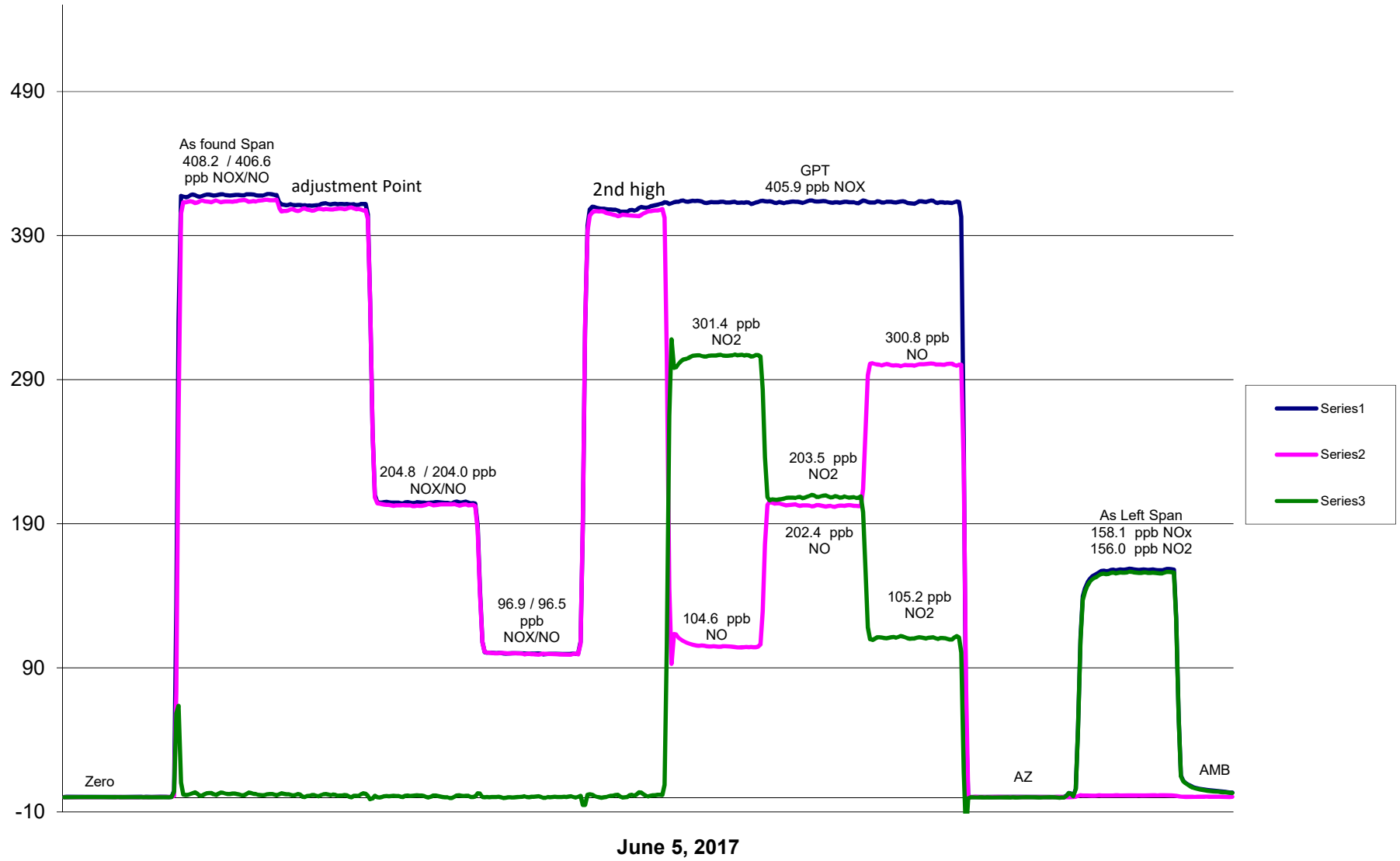
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A	Correlation Coefficient	0.999913
406.6	408.6	0.9951		
204.0	203.3	1.0036		
96.5	99.4	0.9704		
			Slope	0.998309
			Intercept	-0.827602

NO Calibration Curve



NO_x Calibration



Calibration Report



AIR QUALITY MONITORING

Parameter 03

Air Monitoring Network PAZA

Station Information

Calibration Date	July 5 2017	Previous Calibration	June 19 2017
Station Number	10	Station Location	Rycroft
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	13:10:00 PM	End Time (MST)	15:30:00 PM
Barometric Pressure	0.933 atm	Station Temperature	22.0 Deg C
Calibrator	Envionics 6103	Serial Number	6586
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volts	DACS channel #	6
	Before		After
Calculated slope	1.001636	Calculated slope	1.004365
Calculated intercept	0.251997	Calculated intercept	-2.360534
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	67535	Hz	67648	Hz
Cell B intensity	68482	Hz	68584	Hz
Pressure	674.00	in Hg	679.50	in Hg
CellA Flow	0.708	ccm	0.709	ccm
Cell B Flow	0.698	cmm	0.699	cmm

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5144	0.00	0.0	0.5	N/A
5144	0.30	306.8	307.5	0.9977
5144	0.20	208.5	208.5	1.0000
5144	0.10	105.2	110.7	0.9506
5144	0.00	0.0	0.5	As found zero
5144	0.30	306.8	307.5	As found span
Average Correction Factor				0.9828

Calculated value of As Found Response: 307.7 ppm Percent Change of As Found: 0.3%

	before calibration		after calibration	
Auto zero	0.4	ppb	0.4	ppb
Auto span	407.1	ppb	409.3	ppb

Notes: No adjustment made
Used indicated value of NO2 instead of the calculated due to the calibrator issue

Calibration Performed By: Dmytro Dolotii

Calibration Summary



AIR QUALITY MONITORING

Parameter O3

Air Monitoring Network PAZA

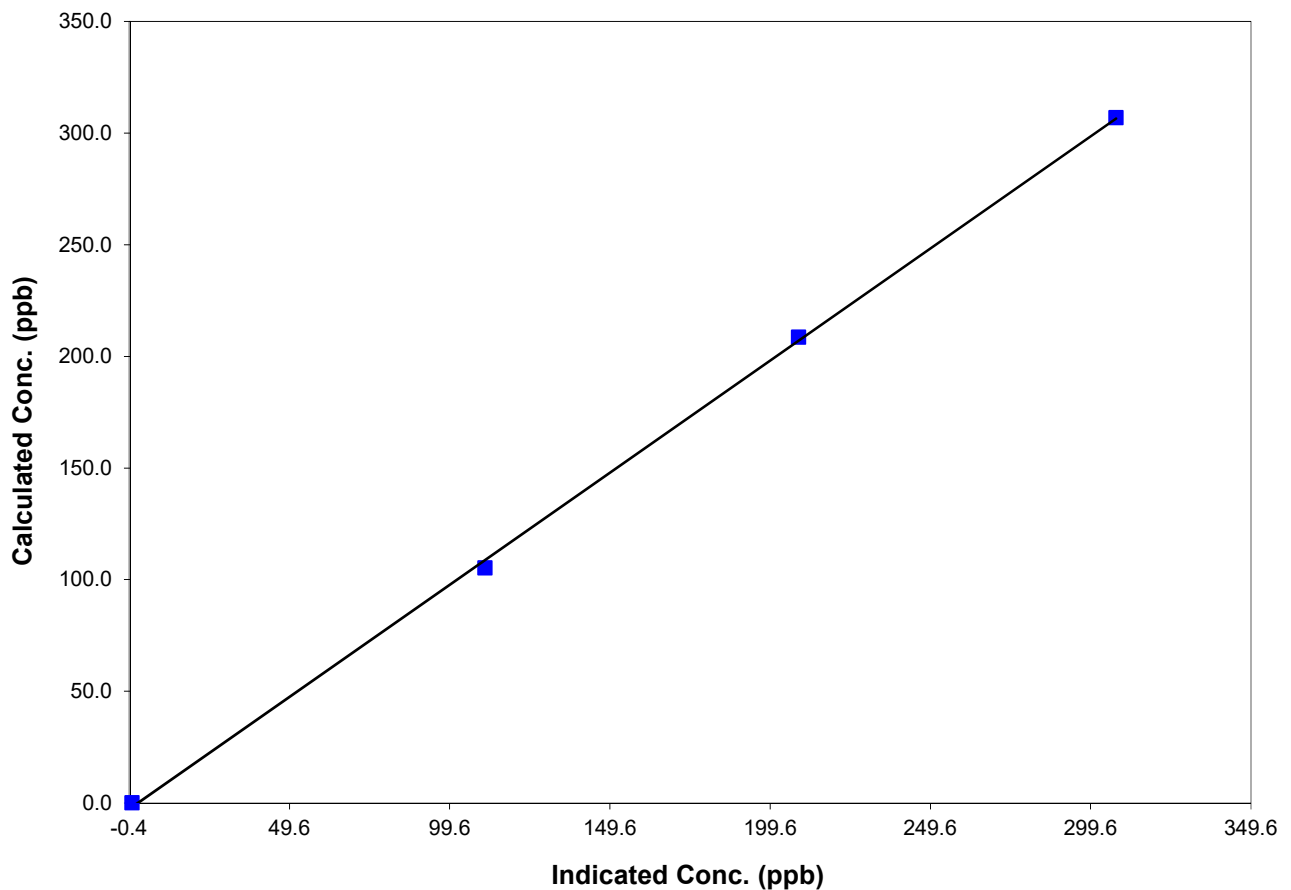
Station Information

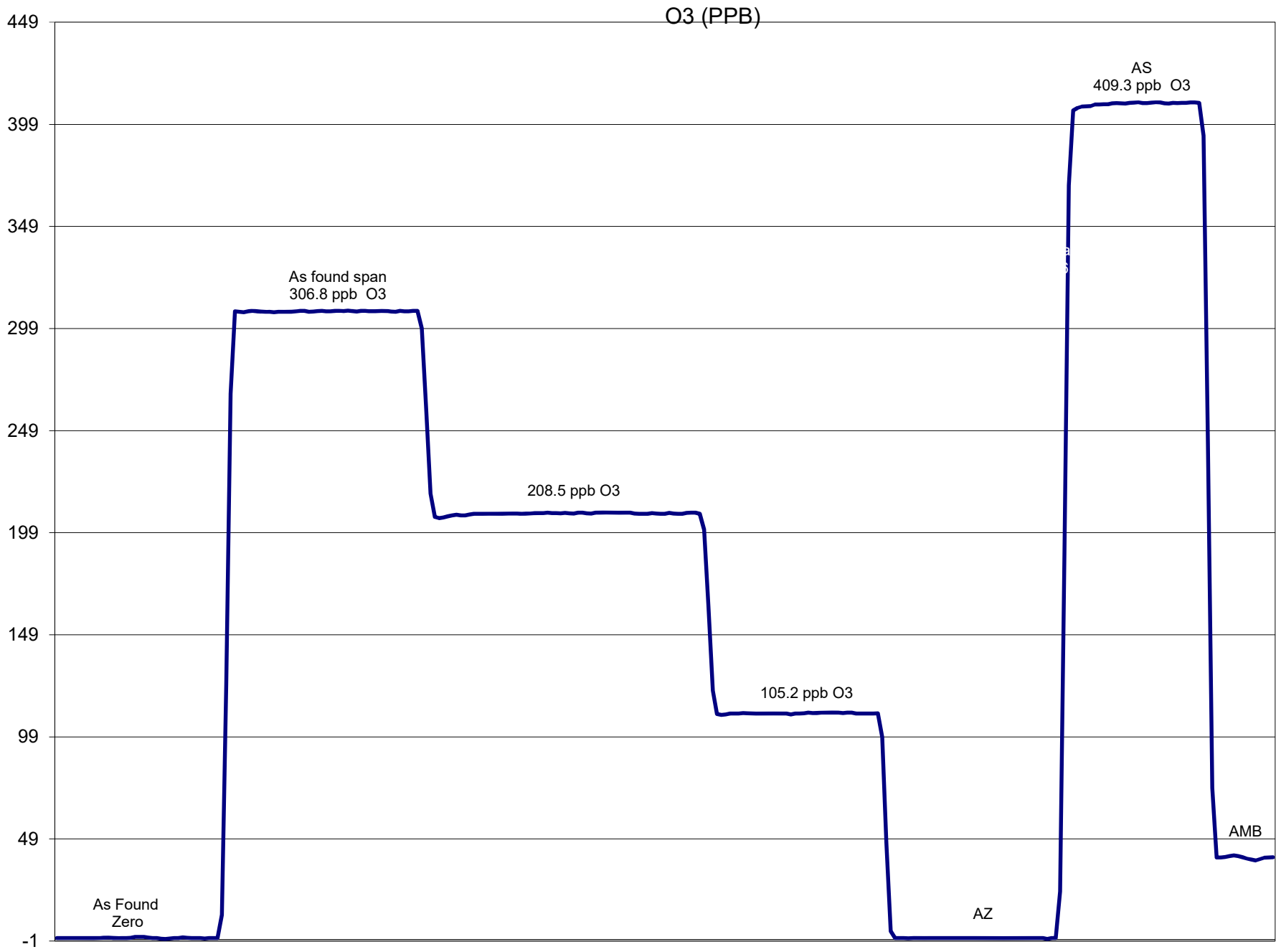
Calibration Date	<u> July 5 2017 </u>	Previous Calibration	<u> June 19 2017 </u>
Station Number	<u> 10 </u>	Station Location	<u> Rycroft </u>
Start Time (MST)	<u> 13:10:00 PM </u>	End Time (MST)	<u> 15:30:00 PM </u>
Analyzer make/model	<u> TEI Model 49C </u>	Analyzer serial #	<u> 49C-0609716240 </u>

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	NA	Correlation Coefficient	0.999647
306.8	307.5	0.9977		
208.5	208.5	1.0000		
105.2	110.7	0.9506	Slope	1.004365
			Intercept	-2.360534

O3 Calibration Curve





July 5 2017

Calibration Report



Parameter CH4 / NMHC / THC

Air Monitoring Network PAZA

Station Information

Calibration Date	July 4, 2017	Previous Calibration	June 16, 2017
Station Number	1	Station Location	Rycroft
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	13:11:00 PM	End Time (MST)	15:15:00 PM
Barometric Pressure	0.928 atm	Station Temperature	22.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas CH4 Conc	404 ppm CH4	Cal Gas Expiry Date	3/28/2014
Cal Gas C3H8 Conc	201 552.75 ppm CH4	Cal Gas Cylinder #	LL34988
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 5 volt	DACS channel #	SE 12,13,14

Analyzer make TEI 55I-A3PHAA Analyzer serial # 1151980005

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

CH4 Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
2002	0.00	0.00	0.00	N/A
2002	66.12	12.92	12.88	1.0028
2002	42.10	8.32	8.16	1.0193
2002	16.30	3.26	3.16	1.0330
2002	0.00	0.00	0.00	As Found Zero
2002	66.12	12.92	13.32	As Found Span
Average Correction Factor				1.0184

Calculated value of As Found Response: 13.451 ppm Percent Change of As Found: -4.1%

	Before		After
Calculated slope	1.003811	Calculated slope	1.002939
Calculated intercept	0.083509	Calculated intercept	0.056413

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.00	ppm
Auto span	8.22	ppm	8.03	ppm

NMHC Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
2002	0.00	0.00	0.00	N/A
1997	66.12	17.71	17.65	1.0035
2002	42.10	11.38	11.17	1.0191
2002	16.30	4.46	4.26	1.0479
2002	0.00	0.00	0.00	As Found Zero
2002	66.12	17.67	18.31	As Found Span
Average Correction Factor				1.0235

Calculated value of As Found Response: 18.438 ppm Percent Change of As Found: -4.3%

	Before		After
Calculated slope	1.000337	Calculated slope	1.002186
Calculated intercept	0.128240	Calculated intercept	0.101639

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.00	ppm
Auto span	11.19	ppm	10.87	ppm

THC Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
2002	0.00	0.00	0.00	N/A
2002	66.12	30.59	30.62	0.9990
2002	42.10	19.71	19.36	1.0178
2002	16.30	7.73	7.44	1.0388
2002	0.00	0.00	0.00	As Found Zero
2002	66.12	30.59	31.67	As Found Span
Average Correction Factor				1.0185

Calculated value of As Found Response: 31.869 ppm Percent Change of As Found: -4.2%

	Before		After
Calculated slope	0.999526	Calculated slope	0.998590
Calculated intercept	0.217078	Calculated intercept	0.170722

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.00	ppm
Auto span	19.40	ppm	18.88	ppm

Notes: Slight span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary



Parameter CH4
 Air Monitoring Network PAZA

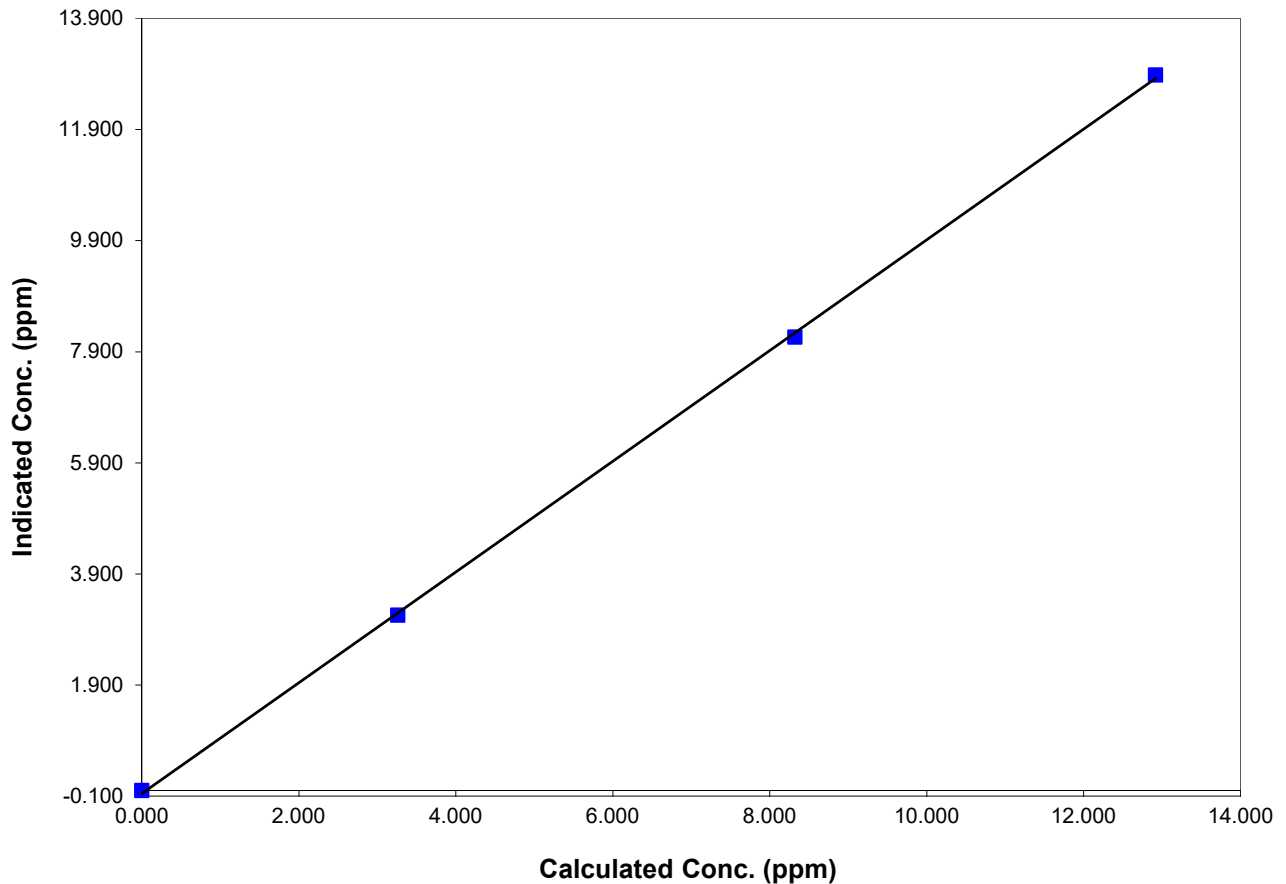
Station Information

Calibration Date	July 4, 2017	Previous Calibration	June 16, 2017
Station Number	1	Station Location	Rycroft
Start Time (MST)	13:11:00 PM	End Time (MST)	15:15:00 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	0.999853
12.916	12.881	1.0028		
8.321	8.163	1.0193	Slope	1.002939
3.263	3.158	1.0330		
			Intercept	0.056413

CH4 Calibration Data



Calibration Summary



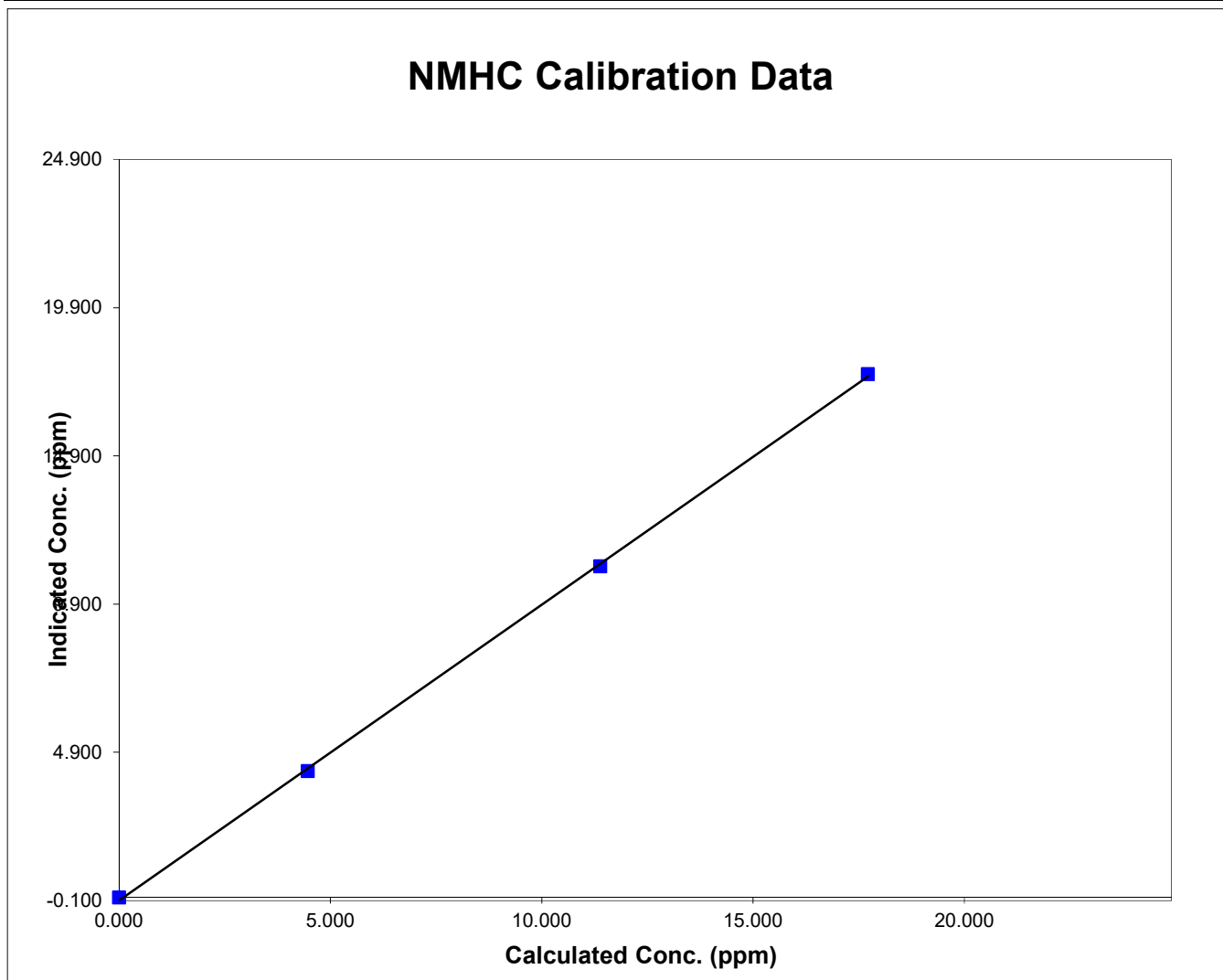
Parameter NMHC
 Air Monitoring Network PAZA

Station Information

Calibration Date	<u> July 4, 2017 </u>	Previous Calibration	<u> June 16, 2017 </u>
Station Number	<u> 1 </u>	Station Location	<u> Rycroft </u>
Start Time (MST)	<u> 13:11:00 PM </u>	End Time (MST)	<u> 15:15:00 PM </u>
Analyzer make/model	<u> TEI 55I-A3PHAA </u>	Analyzer serial #	<u> 1151980005 </u>

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.001	N/A		
17.715	17.652	1.0035	Correlation Coefficient	0.999819
11.384	11.171	1.0191		
4.464	4.260	1.0479		
			Slope	1.002186
			Intercept	0.101639



Calibration Summary

Parameter THC
 Air Monitoring Network PAZA



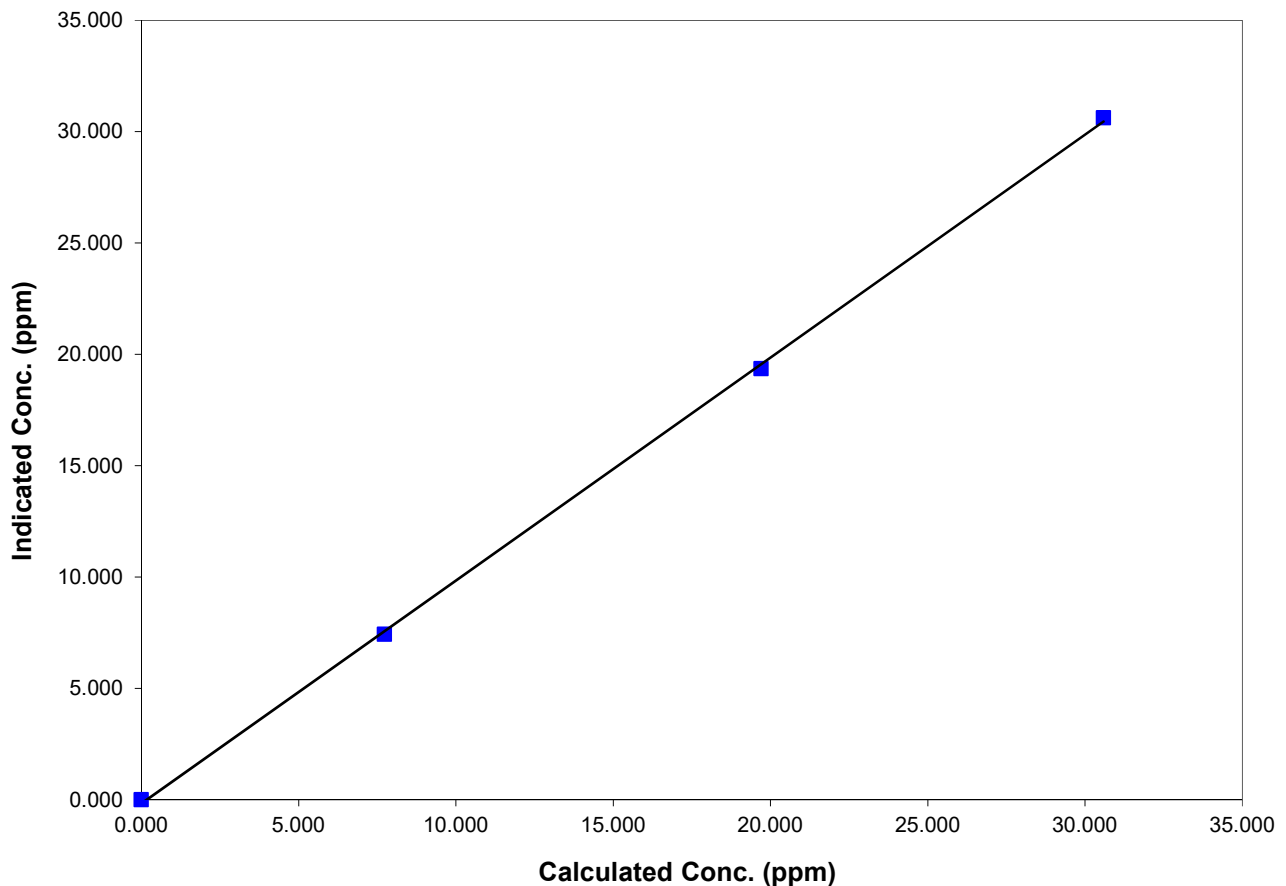
Station Information

Calibration Date	July 4, 2017	Previous Calibration	June 16, 2017
Station Number	1	Station Location	Rycroft
Start Time (MST)	13:11:00 PM	End Time (MST)	15:15:00 PM
Analyzer make/model	TEI 55I-A3PHAA	Analyzer serial #	1151980005

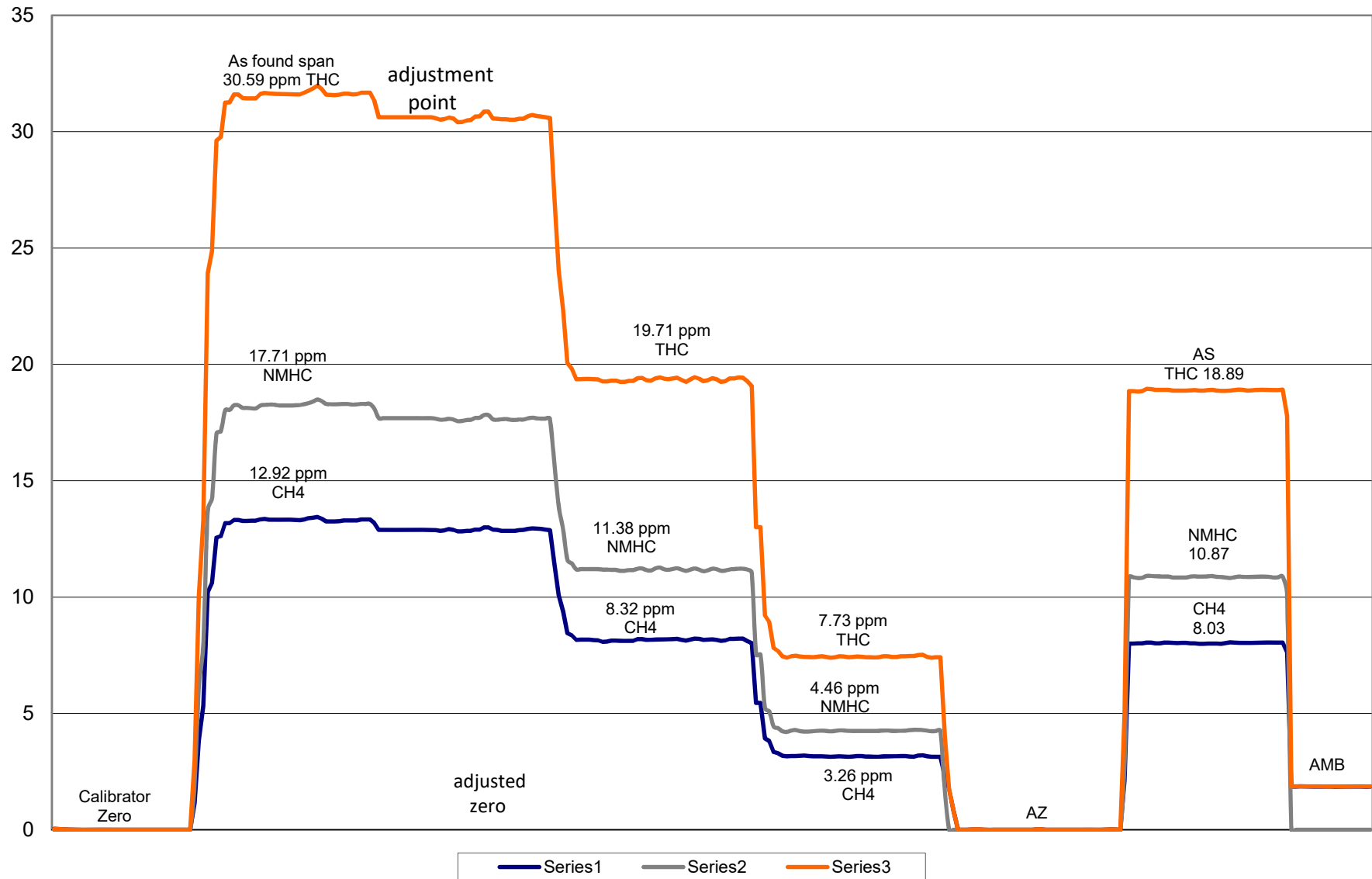
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.001	N/A	Correlation Coefficient	0.999794
30.588	30.619	0.9990		
19.705	19.360	1.0178	Slope	0.998590
7.727	7.438	1.0388		
			Intercept	0.170722

THC Calibration Data



THC/CH₄/NMHC Calibration



Calibration Report



Parameter TRS
Air Monitoring Network _____

PAZA

AIR QUALITY MONITORING

Station Information

Calibration Date	July 4, 2017	Previous Calibration	June 16, 2017
Station Name	PAZA Rover	Station Location	Rycroft
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	10:10 AM	End Time (MST)	13:30:00 PM
Barometric Pressure	0.928 mbar	Station Temperature	22.0 Deg C
Calibrator	Enviroics	Serial Number	3016
Cal Gas Concentration	10.3 ppm	Cal Gas Expiry Date	2/2/2020
Gas Cert Reference	EY0000340		
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volt	DACS channel #	1
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.007305	Calculated slope	1.013802
Calculated intercept	-0.046322	Calculated intercept	0.192884
Analyzer make	TEI 43I	Analyzer serial #	1153630152

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	11.0	ppb	11.1	ppb
Coefficient	1.081		1.084	
Lamp Voltage	777	V	778	V
Chamber Temp	45.4	C	45.3	C
Perm gas Temp	45	C	45	C
Pressure	671.4	mmHg	672.4	mmHg
Sample Flow	0.387	lpm	0.388	lpm
Lamp Intensity	86	Hz	86	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5147	0.0	0.0	-0.1	N/A
5147	41.23	81.9	80.7	1.0144
5147	20.53	40.9	39.9	1.0261
7226	9.82	14.0	13.6	1.0271
			0.2	Sox Test
5147	0.00	0.0	-0.1	As found zero
5147	41.23	81.9	79.3	As found span
Average Correction Factor				1.0225

Calculated value of As Found Response: **79.93 ppm** Percent Change of As Found: **2.4%**

	before calibration		after calibration	
Auto zero	0.4	ppm	0.0	ppm
Auto span	55.6	ppm	55.1	ppm

Notes: Slight span adjustment made due to the new cal gas

Calibration Summary

Parameter TRS
 Air Monitoring Network PAZA



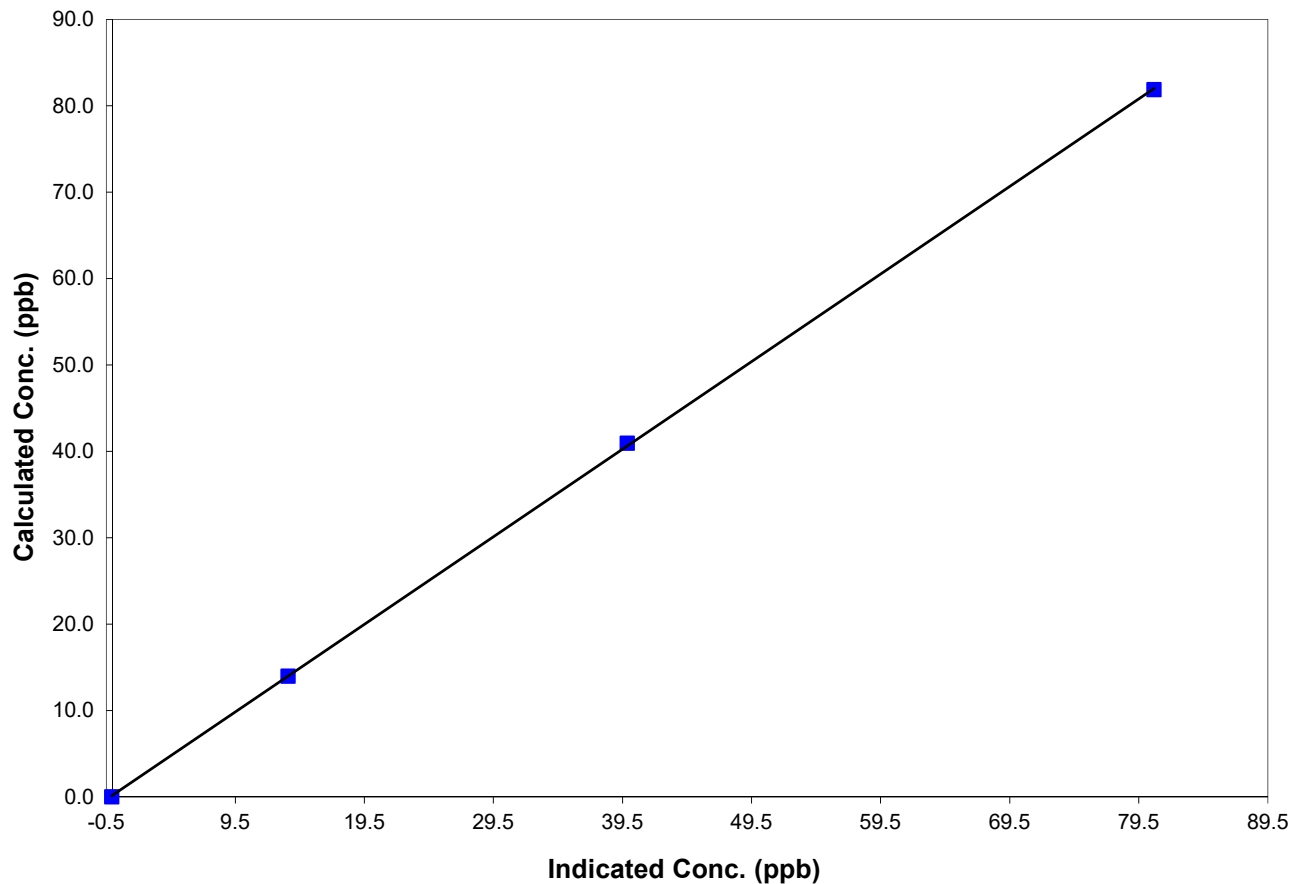
Station Information

Calibration Date	July 4, 2017	Previous Calibration	June 16, 2017
Station Number	PAZA Rover	Station Location	Rycroft
Start Time (MST)	10:10	End Time (MST)	13:30:00 PM
Analyzer make/model	TEI 43I	Analyzer serial #	1153630152

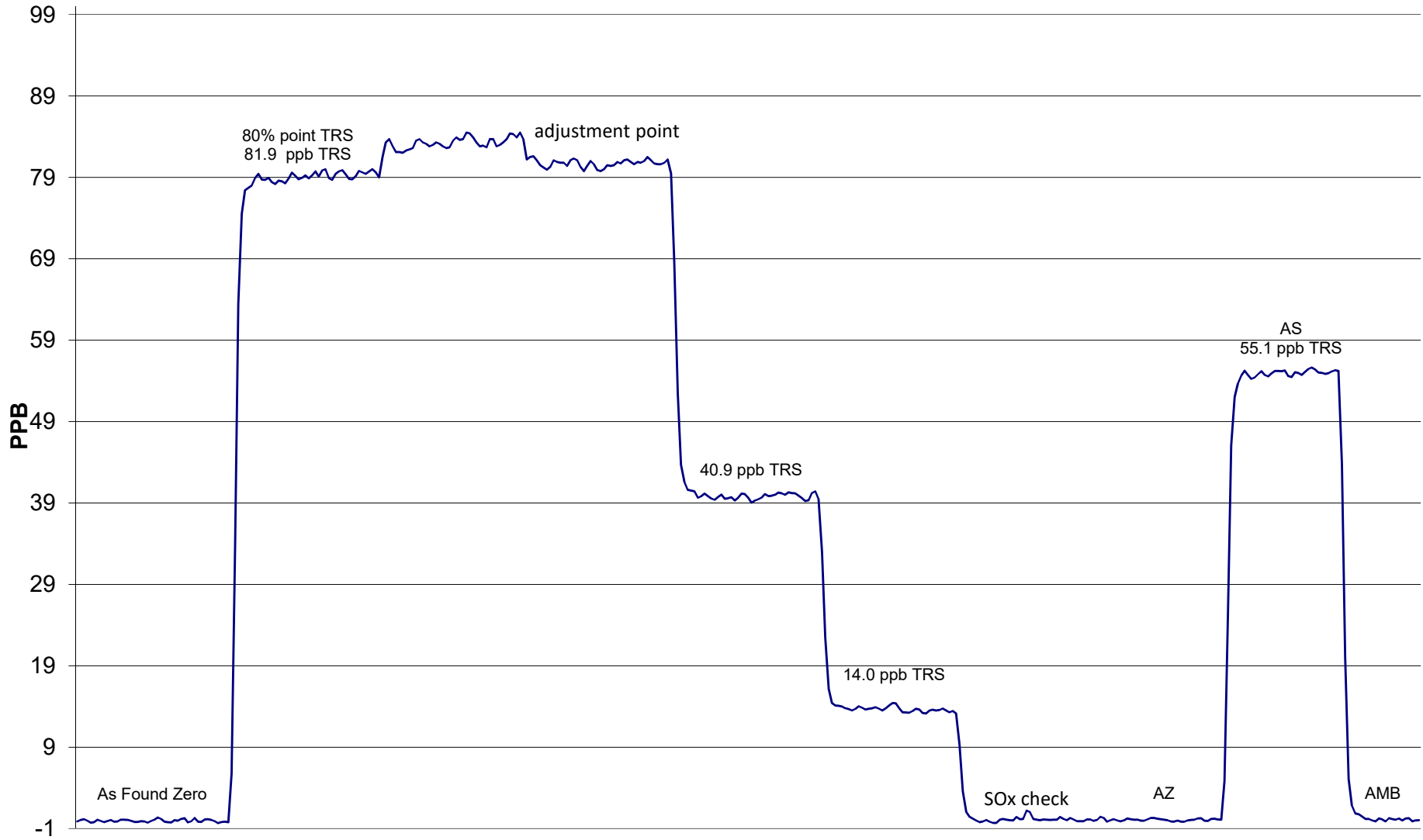
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A	Correlation Coefficient	0.999967
81.9	80.7	1.0144		
40.9	39.9	1.0261	Slope	1.013802
14.0	13.6	1.0271		
			Intercept	0.192884

TRS Calibration Curve



TRS Calibration



July 4, 2017