



Peace Airshed Zone Association

Ambient Air Monitoring Network Summary

**Continuous Ambient Air Quality Monitoring Program
Monthly Report
July 2018**

August 31, 2018

Alberta Environment and Parks

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

RE: Peace Airshed Zone Association (PAZA) – July 2018 Ambient Air Report

Enclosed is the PAZA Ambient Monitoring Network Report for the month of July 2018.

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
	Teepee Creek	SE-2-074-04-W6	00001635-02-00

Company	Facility	LSD	EPEA Approval Number
	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
	Pouce Coupe	16-07-078-11-W6	00000614-01-00

Company	Facility	LSD	EPEA Approval Number
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.
- ◆ 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.
- ◆ 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.
- ◆ 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.
- ◆ All analyzers and meteorological sensors at the Beaverlodge station had an operational uptime greater than 90% for the month of July.

Valleyview Station:

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

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 five duplicate sites sampled in the month of July: Fourth Creek and Eaglesham (SO₂), Crooked Creek (O₃), Spirit River and Wanham (NO₂), and Griouxville 3 (H₂S). The passive sample analyses were performed by MAXXAM Analytics Inc.

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

- Monthly average concentrations for SO₂ passives ranged from 0.1 ppb to 0.6 ppb, with a mean of 0.2 ppb.
- Monthly average concentrations for NO₂ passives ranged from 0.2 ppb to 1.9 ppb, with a mean of 0.6 ppb.
- Monthly average concentrations for O₃ passives ranged from 21.8 ppb to 24.2 ppb, with a mean of 22.8 ppb.
- Monthly average concentrations for H₂S passives ranged from 0.1 to 0.3 ppb, with a mean of 0.2 ppb.

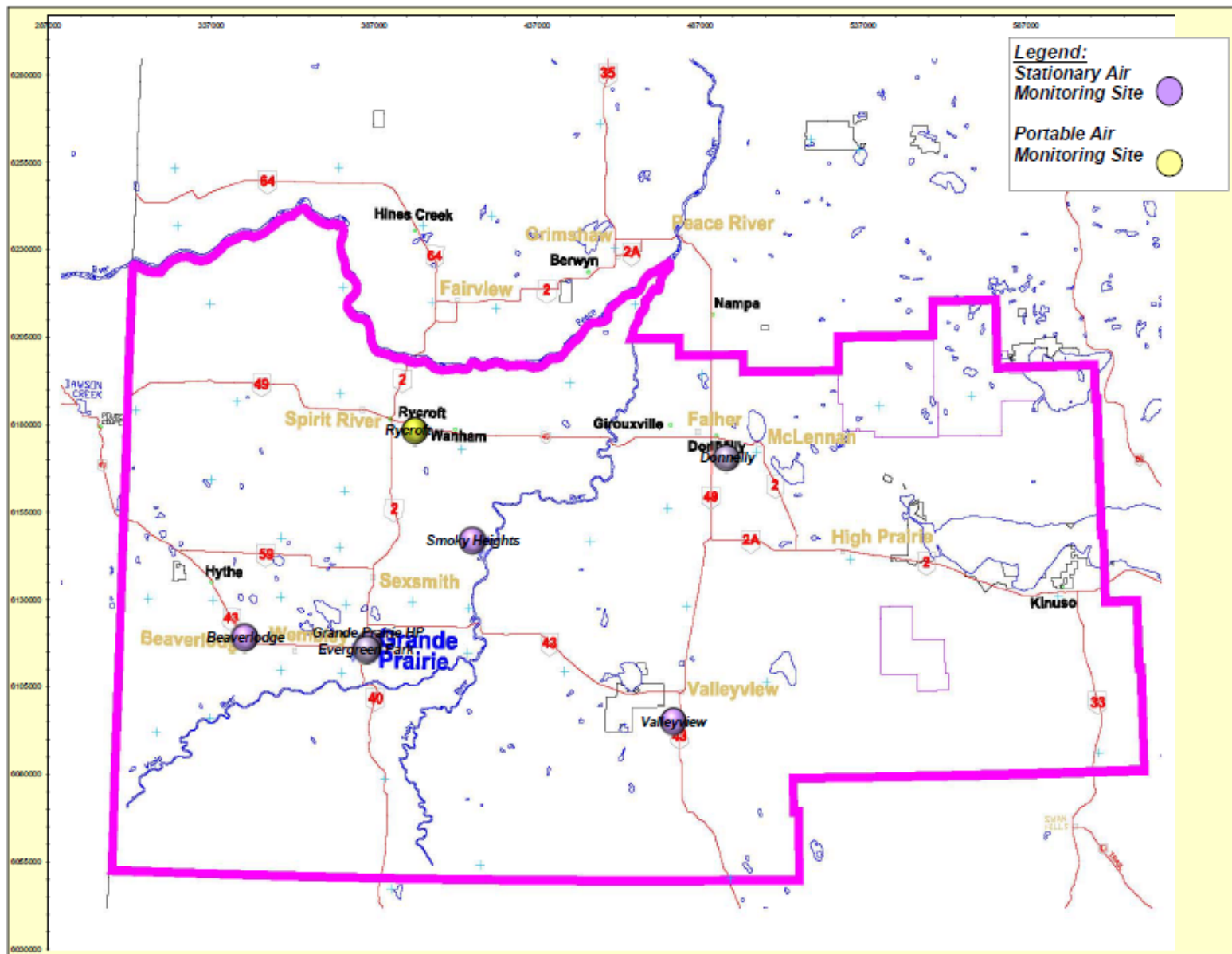
If you have any questions or concerns, please contact Patrick Andersen at 403.505.1041 or the PAZA office at 780.833.4343.

On Behalf of the
Peace Airshed Zone Association



Patrick Andersen, B.Sc.
Program Manager

Location of PAZA Continuous Monitoring Stations



PAZA Monthly Continuous Data Summary

Jul-2018Peace Airshed Zone Association							Maximum Recorded Values					
							1-hr		24-hr / 8-hr			
Pollutant (units)	Objectives		Station	Monthly Average	Exceedence		Conc	Day	Conc	Day	Operational Time (%)	Calibration Date
	1-hr	24-hr			1-hr	24-hr						
SO ₂ (ppb)	172	48	Henry Pirker	0.3	0	0	5.8	Jul-26 14:00	0.7	Jul-06	100.0	Jul-10
SO ₂ (ppb)	172	48	Evergreen Park	0.2	0	0	5.1	Jul-27 10:00	0.4	Jul-26	100.0	Jul-17
SO ₂ (ppb)	172	48	Smoky Heights	0.2	0	0	6.2	Jul-01 02:00	0.8	Jul-01	94.5	Jul-27
SO ₂ (ppb)	172	48	Beaverlodge	0.3	0	0	2.9	Jul-30 15:00	1.0	Jul-29	98.3	Jul-18
SO ₂ (ppb)	172	48	Valleyview	0.2	0	0	8.7	Jul-01 05:00	2.2	Jul-01	98.4	Jul-26
SO ₂ (ppb)	172	48	Donnelly	0.1	0	0	1.7	Jul-26 09:00	0.4	Jul-26	100.0	Jul-18
SO ₂ (ppb)	172	48	Rycroft-Portable	0.3	0	0	6.2	Jul-11 03:00	0.8	Jul-11	100.0	Jul-30
NO (ppb)			Henry Pirker	1.0	0	0	24.9	Jul-26 08:00	3.6	Jul-25	100.0	Jul-10
NO ₂ (ppb)	159	106	Henry Pirker	5.3	0	0	19.3	Jul-10 08:00	10.3	Jul-06	100.0	Jul-10
NO _x (ppb)			Henry Pirker	6.3	0	0	38.7	Jul-26 08:00	12.4	Jul-06	100.0	Jul-10
NO (ppb)			Beaverlodge	0.4	0	0	12.0	Jul-31 07:00	1.3	Jul-25	98.3	Jul-18
NO ₂ (ppb)	159	106	Beaverlodge	2.3	0	0	9.4	Jul-05 06:00	4.4	Jul-05	98.3	Jul-18
NO _x (ppb)			Beaverlodge	2.7	0	0	19.2	Jul-25 07:00	5.1	Jul-05	98.3	Jul-18
NO (ppb)			Rycroft-Portable	0.7	0	0	9.1	Jul-10 21:00	1.8	Jul-04	99.9	Jun-13
NO ₂ (ppb)	159	106	Rycroft-Portable	2.1	0	0	10.2	Jul-18 23:00	3.5	Jul-05	99.9	Jun-13
NO _x (ppb)			Rycroft-Portable	2.8	0	0	15.9	Jul-10 21:00	5.2	Jul-05	99.9	Jun-13
O ₃ (ppb)	82		Henry Pirker	19.2	0	0	55.6	Jul-28 18:00	28.6	Jul-16	100.0	Jul-11
O ₃ (ppb) - 8-hr			Henry Pirker		0				51.3	Jul-28		-
O ₃ (ppb)	82		Beaverlodge	23.2	0	0	49.0	Jul-25 21:00	33.0	Jul-16	98.3	Jul-18
O ₃ (ppb) - 8-hr			Beaverlodge		0				43.6	Jul-25		-
O ₃ (ppb)	82		Rycroft-Portable	25.7	0	0	49.8	Jul-26 15:00	35.3	Jul-16	100.0	Jul-30
O ₃ (ppb) - 8-hr			Rycroft-Portable		0				44.4	Jul-16		-
CO (ppm)	13		Henry Pirker	0.16	0	0	0.5	Jul-28 23:00	0.3	Jul-27	100.0	Jul-11
CO (ppm) - 8-hr	5		Henry Pirker		0				0.3	Jul-29		-

PAZA Monthly Continuous Data Summary – continued

Jul-2018 Peace Airshed Zone Association							Maximum Recorded Values					
							1-hr		24-hr / 8-hr			
THC (ppm)			Henry Pirker	2.1	-	-	3.8	Jul-27 03:00	2.3	Jul-27	100.0	Jul-12
CH ₄ (ppm)			Henry Pirker	2.1	-	-	3.8	Jul-27 03:00	2.3	Jul-27	100.0	Jul-12
NMHC (ppm)			Henry Pirker	0.0	-	-	0.8	Jul-13 09:00	0.0	Jul-13	100.0	Jul-12
THC (ppm)			Rycroft-Portable	1.9	-	-	2.2	Jul-26 07:00	2.0	Jul-31	98.1	Jul-19
CH ₄ (ppm)			Rycroft-Portable	1.9	-	-	2.1	Jul-26 07:00	2.0	Jul-31	98.1	Jul-19
NMHC (ppm)			Rycroft-Portable	0.0	-	-	0.0	Jul-30 19:00	0.0	Jul-23	100.0	Jul-19
TRS (ppb)			Henry Pirker	0.2	-	-	2.3	Jul-10 05:00	0.4	Jul-10	100.0	Jul-11
TRS (ppb)			Evergreen Park	0.2	-	-	2.5	Jul-24 10:00	0.4	Jul-29	100.0	Jul-17
TRS (ppb)			Smoky Heights	0.4	-	-	1.3	Jul-17 04:00	0.6	Jul-28	99.7	Jul-27
TRS (ppb)			Rycroft-Portable	0.1	-	-	0.7	Jul-18 20:00	0.3	Jul-20	99.9	Jul-19
H ₂ S (ppb)	10	3	Valleyview	0.1	0	0	1.5	Jul-02 00:00	0.2	Jul-05	98.4	Jul-26
H ₂ S (ppb)	10	3	Donnelly	0.2	0	0	2.0	Jul-31 07:00	0.6	Jul-31	100.0	Jul-18
PM _{2.5} (µg/m3)	80	30	Henry Pirker	4.8	0	0	21.6	Jul-28 06:00	16.7	Jul-28	100.0	Jun-11
PM _{2.5} (µg/m3)	80	30	Evergreen Park	5.3	0	0	37.1	Jul-28 20:00	15.3	Jul-28	100.0	Jul-17
PM _{2.5} (µg/m3)	80	30	Smoky Heights	6.2	0	0	32.4	Jul-15 23:00	15.5	Jul-28	99.7	May-22
PM _{2.5} (µg/m3)	80	30	Beaverlodge	5.4	0	0	30.7	Jul-30 16:00	16.1	Jul-28	89.5	Jul-31
PM _{2.5} (µg/m3)	80	30	Rycroft-Portable	3.8	0	0	52.1	Jul-29 15:00	25.8	Jul-29	100.0	Jul-30
RH (%)			Henry Pirker	63.3	-	-	90.4	Jul-21 00:00	81.8	Jul-03	100.0	-
RH (%)			Evergreen Park	69.2	-	-	99.1	Jul-08 08:00	90.2	Jul-20	100.0	-
RH (%)			Beaverlodge	73.0	-	-	100.0	Jul-02 04:00	100.0	Jul-22	98.1	-
RH (%)			Valleyview	75.5	-	-	100.0	Jul-02 04:00	96.4	Jul-03	98.4	-
SR (W/m ²)			Henry Pirker	205.6	-	-	812.8	Jul-14 14:00	302.9	Jul-09	100.0	-
Temp (°C)			Henry Pirker	17.8	-	-	31.5	Jul-28 18:00	22.8	Jul-29	100.0	-
Temp (°C)			Evergreen Park	16.8	-	-	30.6	Jul-28 18:00	21.8	Jul-29	100.0	-
Temp (°C)			Smoky Heights	16.4	-	-	28.9	Jul-28 18:00	21.3	Jul-29	99.7	-
Temp (°C)			Beaverlodge	16.6	-	-	29.9	Jul-28 18:00	22.1	Jul-29	98.1	-
Temp (°C)			Valleyview	18.9	-	-	32.6	Jul-29 16:00	22.8	Jul-18	98.4	-
Temp (°C)			Donnelly	16.8	-	-	28.4	Jul-28 17:00	21.9	Jul-28	100.0	-
Temp (°C)			Rycroft-Portable	16.9	-	-	29.5	Jul-28 15:00	21.7	Jul-28	100.0	-

PAZA Monthly Continuous Data Summary – continued

Jul-2018Peace Airshed Zone Association							Maximum Recorded Values					
							1-hr		24-hr / 8-hr			
WSPD s (km/hr)			Henry Pirker	6.9	-	-	23.4	Jul-11 09:00	15.2	Jul-11	100.0	-
WSPD s (km/hr)			Evergreen Park	9.5	-	-	35.0	Jul-11 10:00	27.4	Jul-11	100.0	-
WSPD s (km/hr)			Smoky Heights	10.8	-	-	37.9	Jul-01 16:00	23.1	Jul-11	100.0	-
WSPD s (km/hr)			Beaverlodge	23.1	-	-	38.5	Jul-14 01:00	29.8	Jul-11	98.0	-
WSPD s (km/hr)			Valleyview	3.9	-	-	19.1	Jul-07 10:00	11.1	Jul-02	98.4	-
WSPD s (km/hr)			Donnelly	9.6	-	-	30.2	Jul-14 11:00	19.1	Jul-14	100.0	-
WSPD s (km/hr)			Rycroft-Portable	9.4	-	-	32.7	Jul-01 14:00	19.9	Jul-01	100.0	-
WSPD v (km/hr)			Henry Pirker	4.0	-	-	23.4	Jul-11 09:00	15.0	Jul-11	100.0	-
WSPD v (km/hr)			Evergreen Park	5.7	-	-	35.0	Jul-11 10:00	27.3	Jul-11	100.0	-
WSPD v (km/hr)			Smoky Heights	6.1	-	-	37.9	Jul-01 16:00	22.9	Jul-11	100.0	-
WSPD v (km/hr)			Beaverlodge	6.4	-	-	38.5	Jul-14 01:00	29.1	Jul-11	98.0	-
WSPD v (km/hr)			Valleyview	2.4	-	-	19.1	Jul-07 10:00	9.6	Jul-02	98.4	-
WSPD v (km/hr)			Donnelly	9.6	-	-	30.2	Jul-14 11:00	19.1	Jul-14	100.0	-
WSPD v (km/hr)			Rycroft-Portable	9.4	-	-	32.7	Jul-01 14:00	19.9	Jul-01	100.0	-
WDIR			Henry Pirker	W	-	-	-	-	-	-	100.0	-
WDIR			Evergreen Park	W	-	-	-	-	-	-	100.0	-
WDIR			Smoky Heights	W	-	-	-	-	-	-	100.0	-
WDIR			Beaverlodge	WNW	-	-	-	-	-	-	98.0	-
WDIR			Valleyview	NW	-	-	-	-	-	-	98.4	-
WDIR			Donnelly	SW	-	-	-	-	-	-	100.0	-
WDIR			Rycroft-Portable	#N/A	-	-	-	-	-	-	100.0	-

Continuous Network Equipment Summary

PAZA – Henry Pirker Station

General Station Issues:

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

PAZA – Evergreen Park Station

General Station Issues

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
PM _{2.5}	Sharp	5030	No operational issues observed.
ET	Met One/Gill	083D	No operational issues observed.
RH	Met One/Gill		No operational issues observed.
WS / WD	Met One/ Gill		No operational issues observed.

PAZA – Smoky Heights Station

General Station Issues

Power outage July 17

Parameter	Make	Model	Notes
SO ₂	TEI	43C	Analyzer failure July 30-31
TRS	TEI	43i	No operational issues observed.
PM _{2.5}	Sharp	5030	No operational issues observed.
ET	Met One	083D	No operational issues observed.
WS / WD	Met One	010C/020C	No operational issues observed.

PAZA – Beaverlodge Station

General Station Issues

Power outages July 20 and 21

Parameter	Make	Model	Notes
SO ₂	TEI	43CTL	No operational issues observed.
NOx/NO/NO ₂	TEI	42C	No operational issues observed.
O ₃	TEI	49C	No operational issues observed.
PM _{2.5}	Sharp	5030	Invalid data reported July 26-31
ET	n/a	n/a	No operational issues observed.
RH	n/a	n/a	No operational issues observed.
WS / WD	Met One	50.5H	Invalid readings returned July 24

PAZA – Valleyview Station

General Station Issues

Power outage July 20-21

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
H ₂ S	TEI	43A	No operational issues observed.
ET	Gill	Met Pak 3	No operational issues observed.
RH	Gill	Met Pak 3	No operational issues observed.
WS / WD	Gill	Met Pak 3	No operational issues observed.

PAZA – Donnelly Station

General Station Issues

Power outage July 22-23

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
H ₂ S	Thermo	450i	No operational issues observed.
ET	Gill	RM Young 5103	No operational issues observed.
WS / WD	Gill	RM Young 5103	No operational issues observed.

PAZA – Portable-Rycroft

General Station Issues

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
NOx/NO/NO ₂	TEI	42i	Span check July 27. No calibration performed in July.
O ₃	TEI	49i	No operational issues observed.
TRS	TEI	43i	Span check July 31
THC/CH ₄ /NMHC	TEI	55i	Analyzer instability through July 5. Adjustment and maintenance completed during calibration period. Analyzer recalibrated July 19 after cylinder change.
PM _{2.5}	Sharp	5030	No operational issues observed.
ET	Gill	Met Pak 3	No operational issues observed.
WS / WD	Gill	Met Pak 3	No operational issues observed.

PAZA

Henry Pirker Station

Monthly Summary Tables, Graphs and
Roses

Hourly Averages

Sulphur Dioxide (SO₂) - ppb

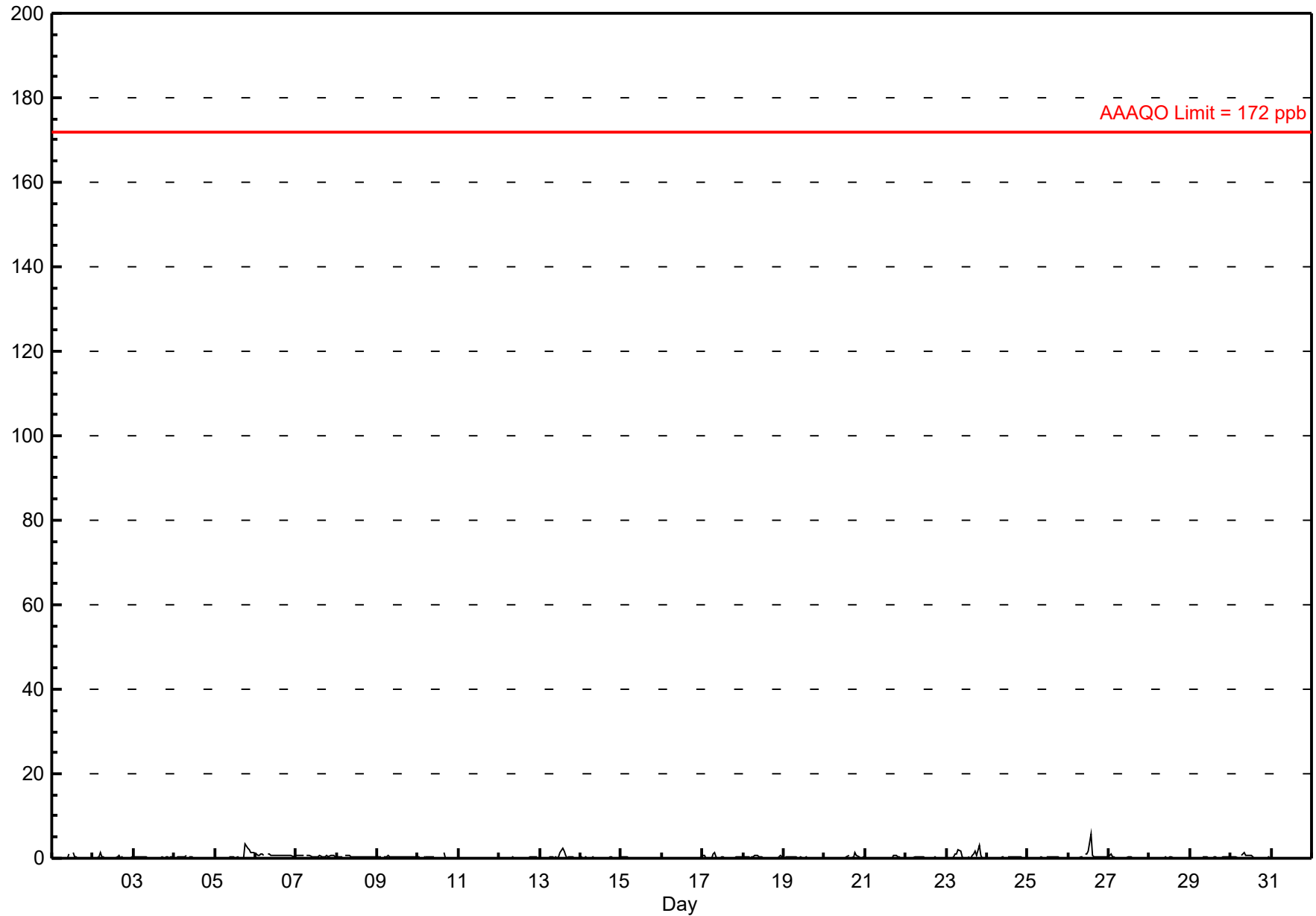
Henry Pirker - July 2018

Number of Exceedences (AAAQO): Maximum Value: 5.8 ppb on Jul 26 14:00																				1-hr: 0 24-hr: 0 Maximum Daily Average: 0.7 ppb on Jul 6		Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 37 Percent Operational Time: 100.0				
Minimum Value: 0 ppb on Jul 11 12:00 Maximum Diurnal Average: 0.5 ppb at hour 14 Monthly Average: 0.27 ppb										Minimum Daily Average: 0.1 ppb on Jul 11 Minimum Diurnal Average: 0.2 ppb at hour 17 Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.6 P ₉₉ = 1.7																
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	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0.2	1.3
2-Jul	0	0	0	0	1	0	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0.2	1.5
3-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	0.2	0.5
4-Jul	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
5-Jul	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	3	2	2	1	1	1	0.6	3.5
6-Jul	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0.7	1.1
7-Jul	1	1	1	1	1	A	1	1	1	0	0	0	0	0	1	0	0	0	1	0	1	1	1	0	0.5	0.7
8-Jul	0	0	0	0	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
9-Jul	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
10-Jul	0	0	A	0	0	0	0	0	0	0	C	C	C	C	C	1	0	0	0	0	0	0	0	0	0.3	1.2
11-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
12-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.5
13-Jul	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	1	0	0	0	0	0	0	A	0	0.4	2.3
14-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
15-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
16-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	0.1	0.4
17-Jul	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	1.3
18-Jul	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	1	0	0.2	0.7
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	0	0	0	1	A	0	0	1	1	0	0	0	0	0.2	1.3
21-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0.2	0.7
22-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	0.2	0.4
23-Jul	0	0	0	0	0	1	1	2	2	0	0	0	A	0	0	1	1	2	1	3	1	0	0	0	0.7	3.0
24-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	0.5
25-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	0.2
26-Jul	0	0	0	0	0	0	0	0	0	A	1	1	2	6	1	0	0	0	0	0	0	0	0	0	0.6	5.8
27-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	0.2	0.9
28-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
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	0.2	0.4
30-Jul	0	0	0	0	0	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.4	1.4
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	0.1	0.2
0.2 0.2 0.2 0.2 0.2 0.2 0.3 0.4 0.3 0.2 0.3 0.2 0.3 0.5 0.3 0.2 0.2 0.3 0.4 0.4 0.3 0.2 0.2 0.2 0.2 Diurnal Average																										
1.1 0.9 0.7 1.0 1.5 1.1 1.0 2.1 1.6 0.8 1.1 0.9 1.6 5.8 1.7 1.2 1.1 1.5 3.5 3.0 2.1 1.5 1.5 1.4 Diurnal Maximum																										
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

Hourly Averages

Sulphur Dioxide (SO₂) - ppb

Henry Pirker - July 2018



Hourly Maximums

Sulphur Dioxide (SO₂) - ppb

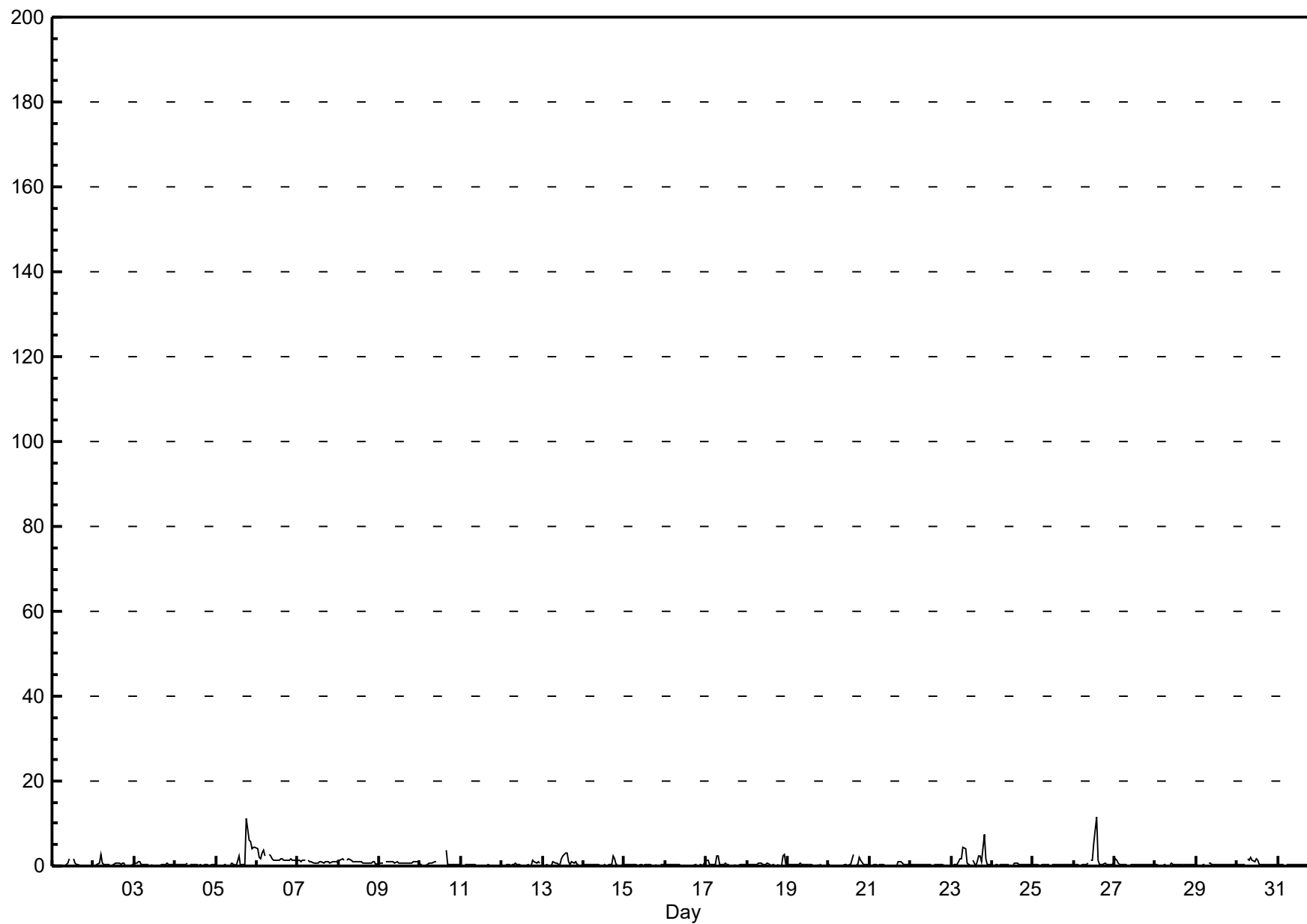
Henry Pirker - July 2018

Maximum Value: 11.6 ppb on Jul 26 14:00																			Maximum Daily Average: 1.9 ppb on Jul 6										Hours in Service: 744	
Minimum Value: 0 ppb on Jul 29 02:00																			Minimum Daily Average: 0.2 ppb on Jul 11										Hours of Data: 707	
Maximum Diurnal Average: 1.0 ppb at hour 14																			Minimum Diurnal Average: 0.4 ppb at hour 17										Hours of Missing Data: 37	
Monthly Average: 0.58 ppb																			Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.3 Q ₃ = 0.6 P ₉₀ = 1.3 P ₉₉ = 4.3										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	0	0	0	0	0	1	2	A	2	1	0	0	0	0	0	0	0	0	0	0	0.3	1.8				
2-Jul	0	0	0	1	3	1	0	0	0	0	A	0	0	1	1	1	0	1	1	0	0	0	0	0	0.5	2.7				
3-Jul	1	1	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.4	1.0				
4-Jul	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8				
5-Jul	0	0	0	0	0	0	0	A	0	1	0	0	0	2	0	0	0	0	0	11	6	6	4	4	1.8	11.0				
6-Jul	4	2	2	3	4	2	A	3	2	2	2	1	1	1	2	2	1	2	1	2	2	2	1	1	1.9	4.1				
7-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	1.0	1.3				
8-Jul	1	1	2	2	A	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1.0	1.6				
9-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	1.1				
10-Jul	0	0	A	0	0	1	1	1	1	1	C	C	C	C	C	4	0	0	0	0	0	0	0	0	0.6	3.6				
11-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				
12-Jul	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	A	0.3	1.2				
13-Jul	0	0	0	0	0	0	1	1	1	0	0	2	2	3	3	1	0	1	1	1	0	0	A	0	0.8	3.0				
14-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	A	0	0	0.4	2.5				
15-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	0.2	0.5				
16-Jul	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	0.9				
17-Jul	1	1	0	0	0	0	3	2	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0.5	2.5				
18-Jul	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	A	0	0	0	0	2	3	0.5	2.6				
19-Jul	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.6				
20-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	A	0	0	0	2	1	0	0	0	0.5	2.9				
21-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	1	1	0	0	0	0	0.3	1.1				
22-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	0.3	0.5				
23-Jul	0	0	0	0	1	2	2	4	4	1	0	0	A	1	0	1	2	2	1	7	2	0	0	0	1.4	7.5				
24-Jul	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	0.3	0.6				
25-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	0.3				
26-Jul	0	0	0	0	0	0	0	0	1	A	1	1	5	12	1	0	0	0	1	0	0	0	0	0	1.2	11.6				
27-Jul	2	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.6				
28-Jul	0	0	0	0	0	0	0	A	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	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6				
30-Jul	0	0	0	0	0	A	2	2	2	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0.7	2.1				
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				
0.5		0.5	0.4	0.4	0.5	0.4	0.6	0.8	0.7	0.5	0.5	0.5	0.7	1.0	0.6	0.5	0.4	0.5	0.9	0.9	0.6	0.6	0.5	0.5	Diurnal Average					
4.1		2.1	1.8	3.1	3.7	2.4	2.5	4.3	4.0	1.8	1.7	1.6	5.4	11.6	2.9	3.6	2.4	2.5	11.0	7.5	5.6	4.1	4.3	4.5	Diurnal Maximum					
C - Calibration		A - Automated Daily Zero Span																												

Hourly Maximums

Sulphur Dioxide (SO₂) - ppb

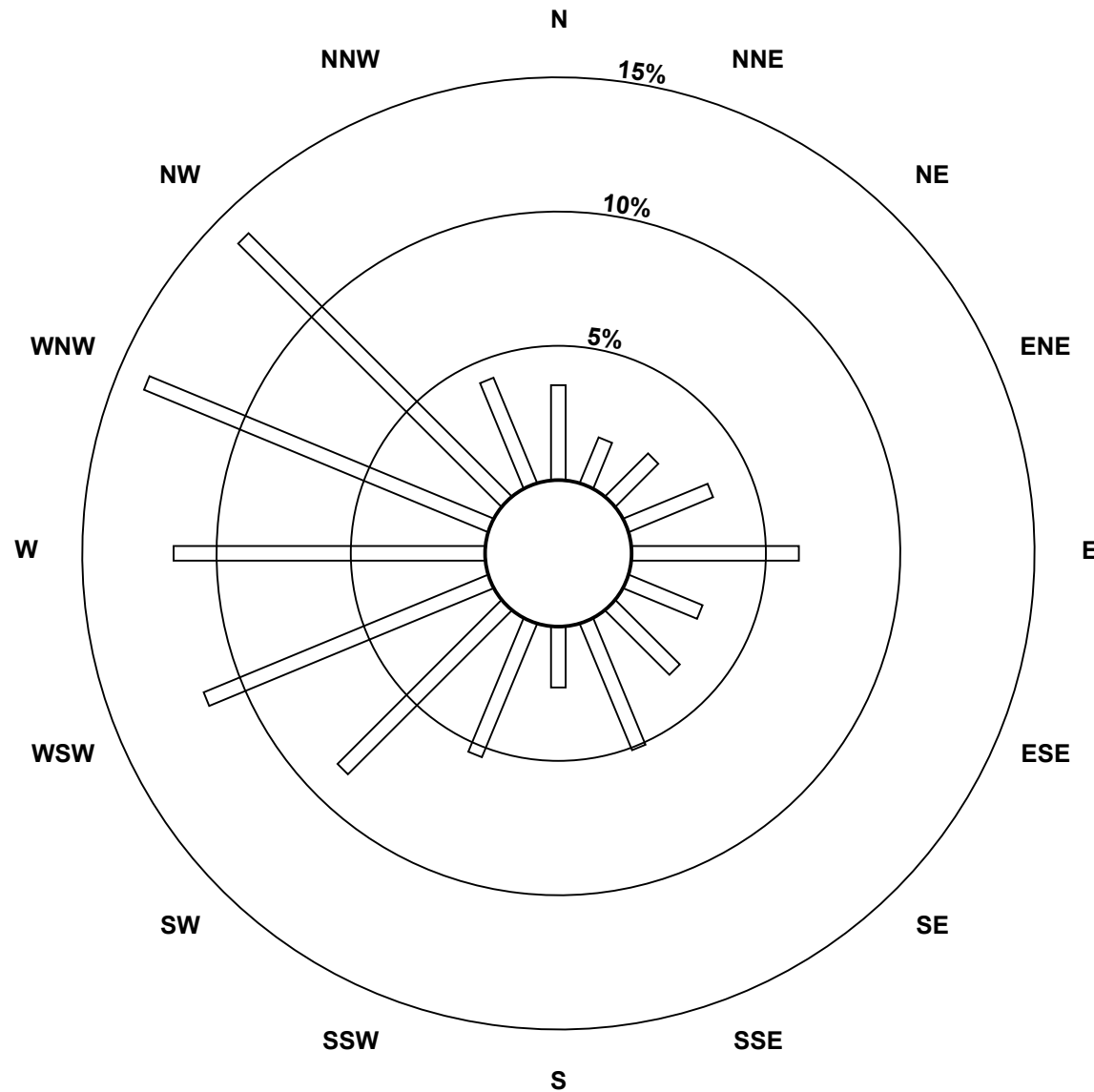
Henry Pirker - July 2018



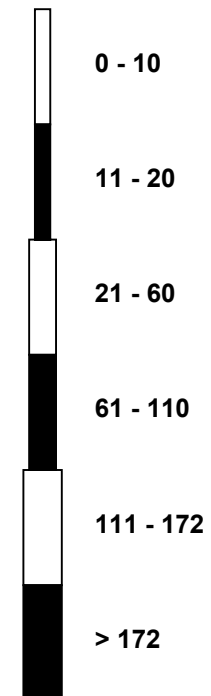
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb

Henry Pirker - July 2018

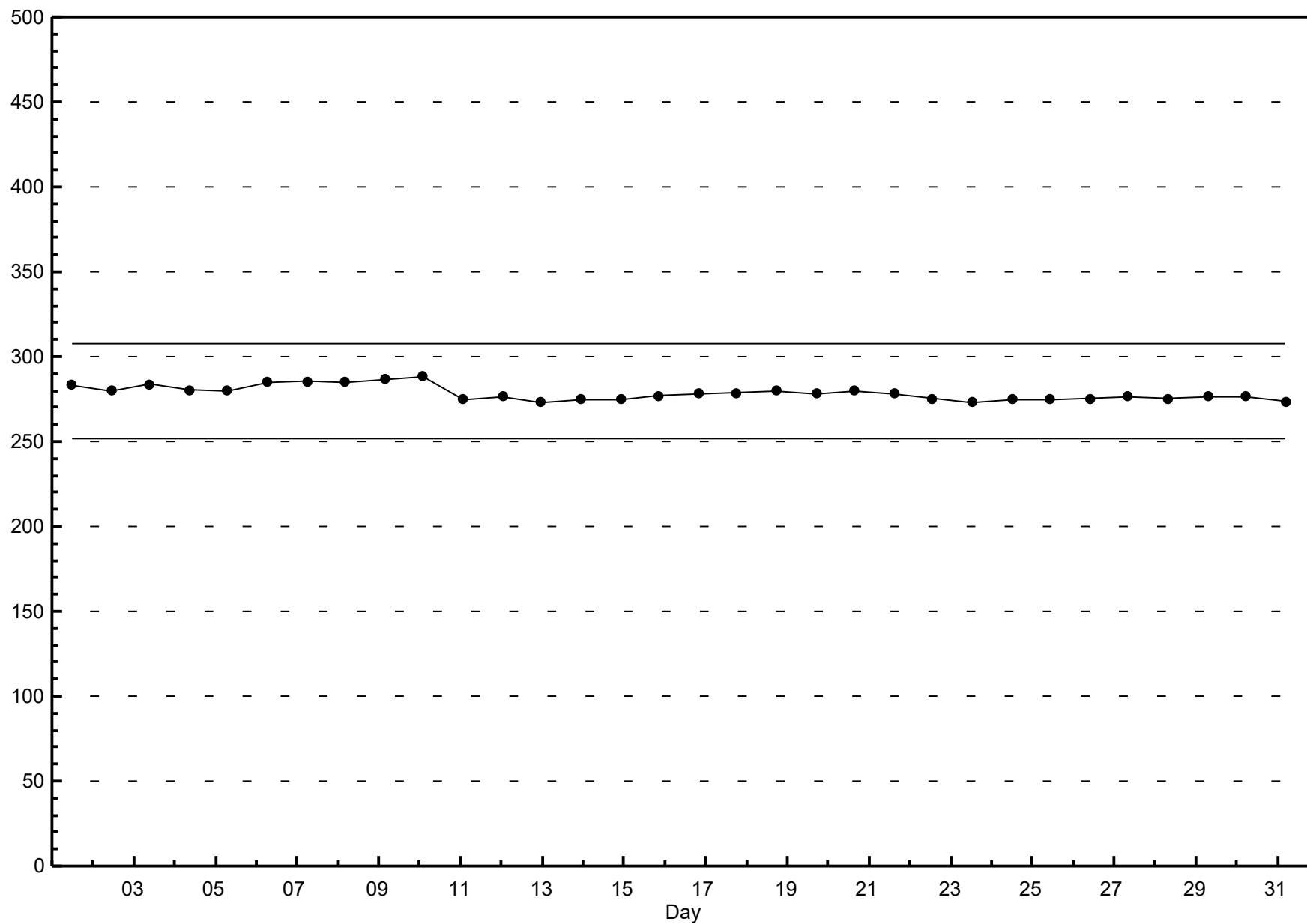


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Henry Pirker - July 2018

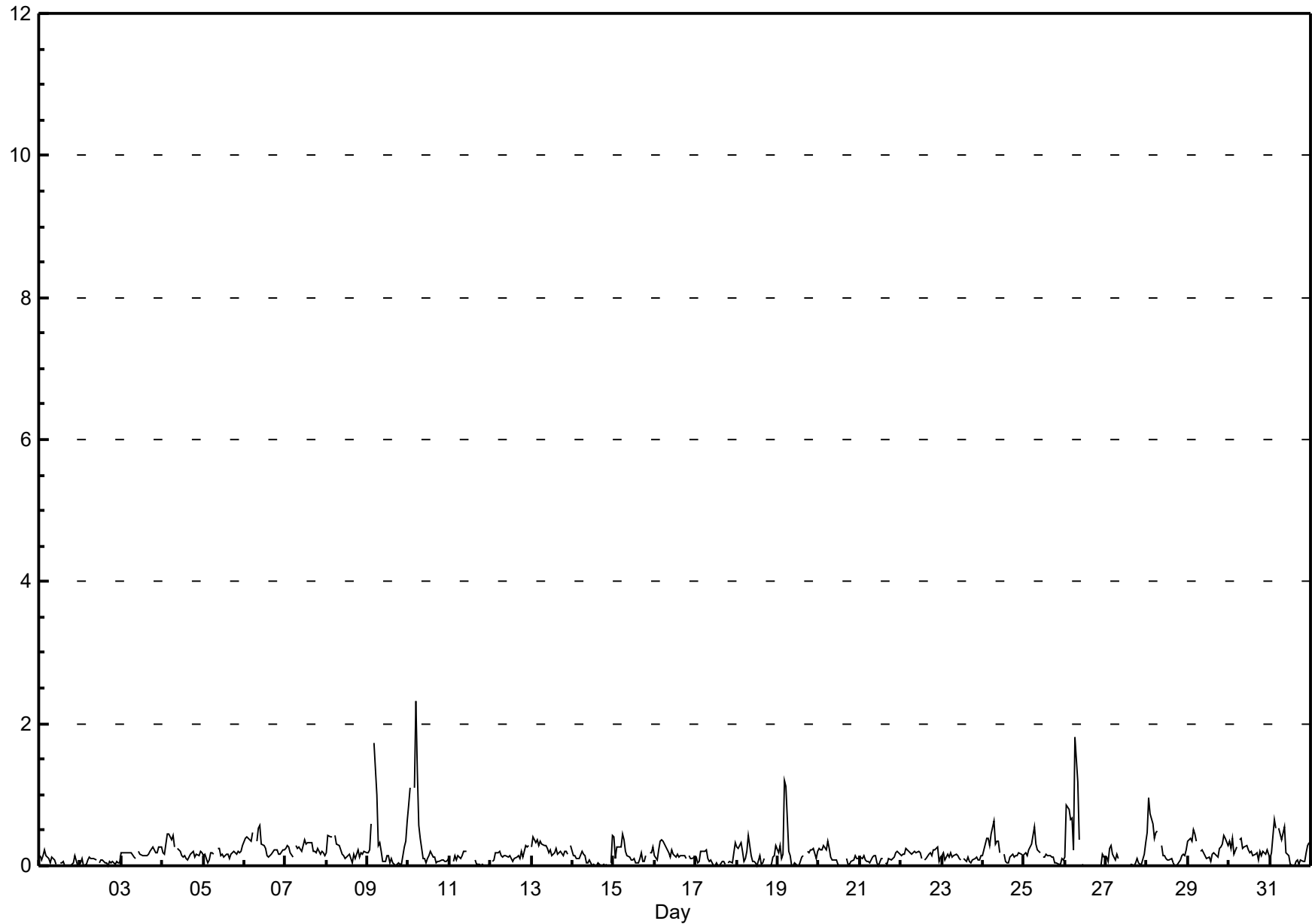


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Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - July 2018



Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

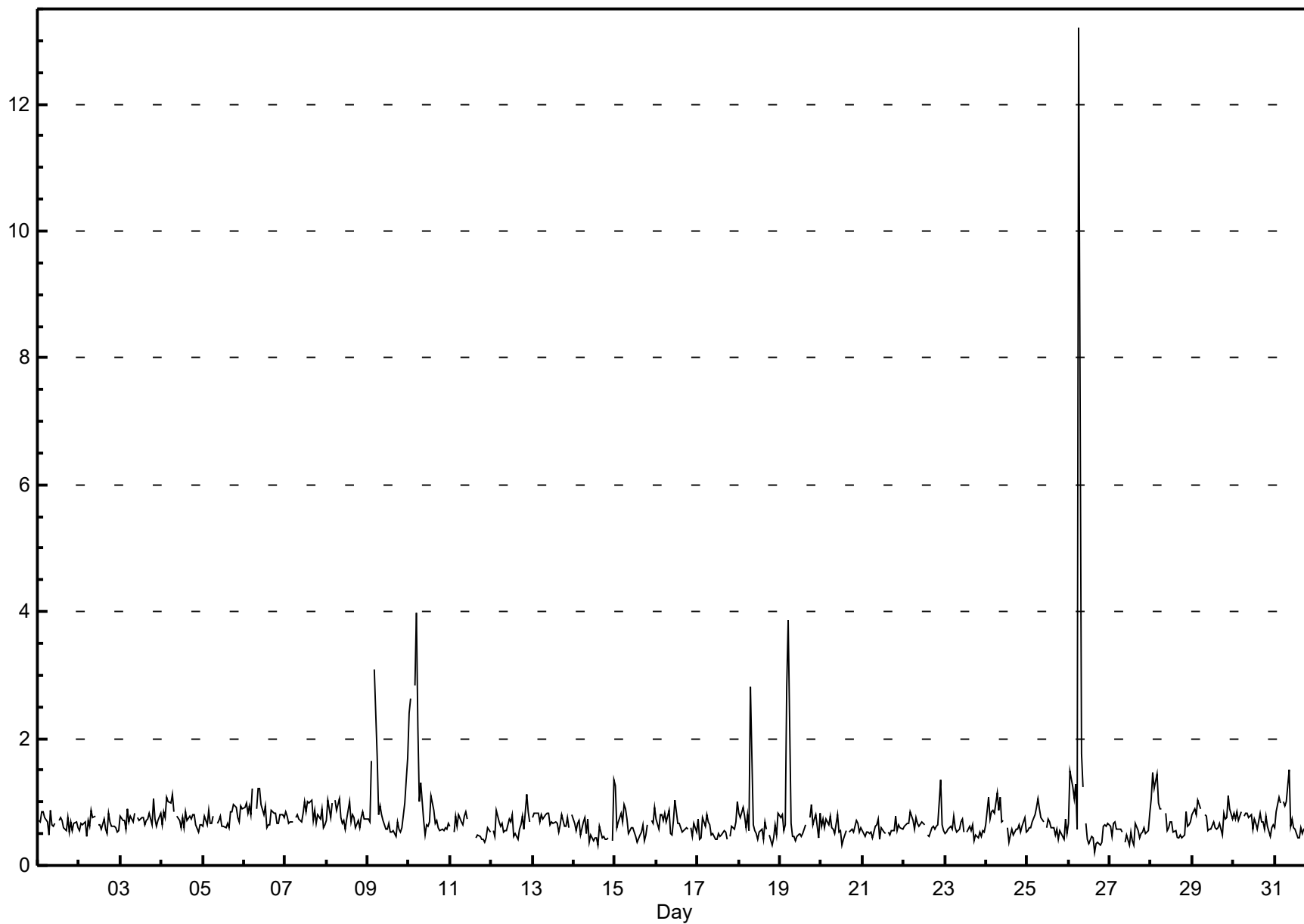
Henry Pirker - July 2018

Maximum Value: 13.2 ppb on Jul 26 07:00																				Maximum Daily Average: 1.3 ppb on Jul 26										Hours in Service: 744	
Minimum Value: 0 ppb on Jul 26 16:00																				Minimum Daily Average: 0.5 ppb on Jul 27										Hours of Data: 708	
Maximum Diurnal Average: 1.2 ppb at hour 7																				Minimum Diurnal Average: 0.6 ppb at hour 15										Hours of Missing Data: 36	
Monthly Average: 0.73 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.7 Q ₃ = 0.8 P ₉₀ = 0.9 P ₉₉ = 2.6										Hours of Calibration: 36	
																				Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Jul	1	1	1	1	1	1	0	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9					
2-Jul	1	1	1	1	0	1	1	1	1	1	A	1	1	1	1	1	0	1	1	1	1	1	1	1	0.6	0.9					
3-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	0.7	1.1					
4-Jul	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1					
5-Jul	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0					
6-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	0.9	1.2					
7-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	1.0					
8-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	0.8	1.0					
9-Jul	1	1	2	A	3	2	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	2	0.9	3.1					
10-Jul	2	3	A	3	4	2	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	4.0					
11-Jul	1	A	1	1	1	1	1	1	1	1	1	C	C	C	C	0	0	0	0	0	0	0	1	1	0.6	0.8					
12-Jul	A	1	0	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	A	0.6	1.1					
13-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	0.8					
14-Jul	1	1	1	1	0	1	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	A	0	1	0.5	1.3					
15-Jul	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	0	0	1	A	1	1	1	0.7	1.3					
16-Jul	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	A	1	0	1	1	0.7	1.0					
17-Jul	1	0	0	1	1	1	1	1	0	0	0	0	0	0	0	1	1	0	A	0	1	1	1	1	0.6	1.0					
18-Jul	1	1	1	1	1	1	1	3	1	1	0	0	1	0	1	0	1	A	A	0	0	1	0	1	0.7	2.8					
19-Jul	1	1	1	1	3	4	1	0	0	0	0	1	0	1	1	1	A	1	1	1	1	1	0	1	0.9	3.9					
20-Jul	1	1	1	1	1	1	1	1	0	1	1	1	0	0	1	A	1	1	1	1	1	1	1	1	0.6	0.8					
21-Jul	1	0	1	1	1	1	0	1	1	1	0	1	1	1	A	1	0	1	1	1	1	1	1	1	0.6	0.8					
22-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0	0	1	1	1	1	1	1	1	1	0.7	1.3					
23-Jul	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	0	0	1	0	1	1	0.6	0.8					
24-Jul	1	1	1	1	1	1	1	1	1	1	1	A	1	0	0	1	0	1	1	1	1	1	1	1	0.7	1.1					
25-Jul	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0	1	0	1	0	0	1	1	0.6	1.1					
26-Jul	1	1	1	1	1	1	13	2	1	A	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1.3	13.2					
27-Jul	1	0	1	1	1	1	1	1	A	0	0	0	1	0	0	1	1	0	0	1	1	1	1	1	0.5	0.8					
28-Jul	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	0	0	0	0	1	1	1	1	0.8	1.5					
29-Jul	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0.7	1.1					
30-Jul	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0.7	0.8					
31-Jul	1	1	1	1	A	1	1	1	2	1	1	1	1	0	0	1	0	1	1	1	1	1	1	1	0.7	1.5					
		0.8	0.8	0.8	0.9	1.0	1.0	1.2	0.9	0.8	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.8	Diurnal Average					
		2.4	2.6	1.6	2.8	4.0	3.9	13.2	2.8	1.5	1.2	1.0	1.0	0.9	1.1	1.0	1.0	0.9	0.9	1.0	1.1	1.1	1.3	1.3	1.7	Diurnal Maximum					
C - Calibration		A - Automated Daily Zero Span																													

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

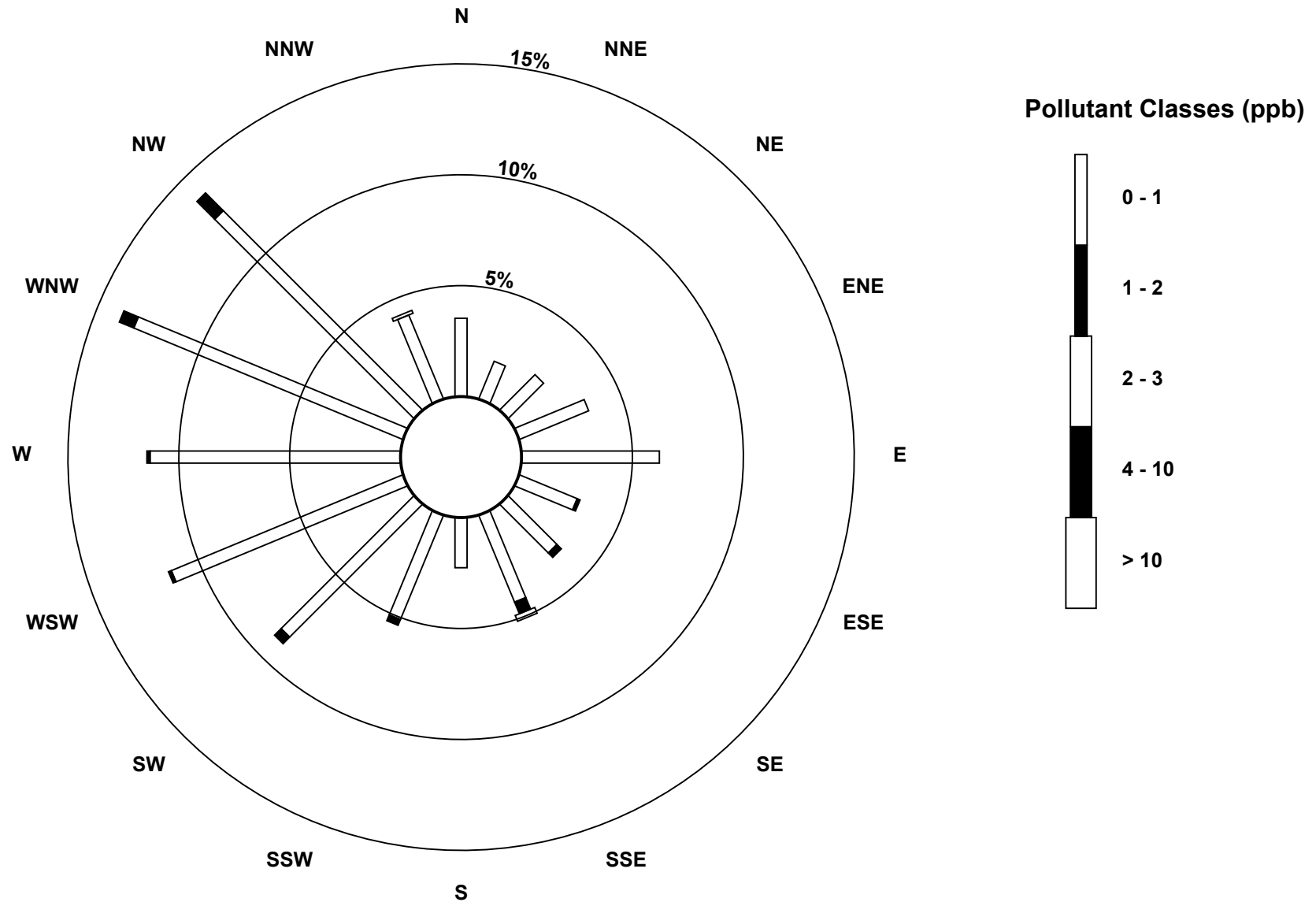
Henry Pirker - July 2018



Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

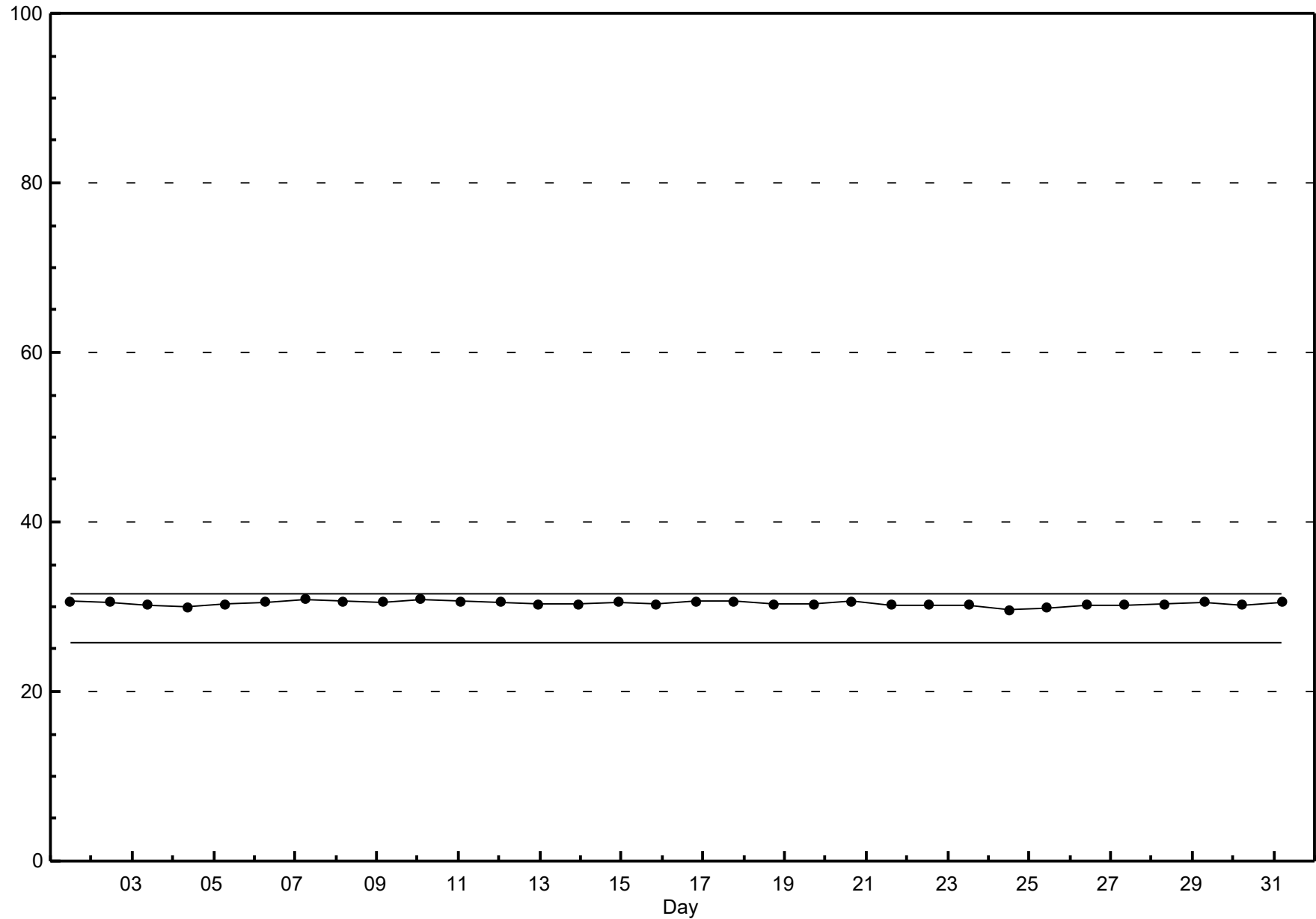
Henry Pirker - July 2018



Span Responses

Total Reduced Sulphur (TRS)

Henry Pirker - July 2018



Hourly Averages

Nitrogen Dioxide (NO₂) - ppb

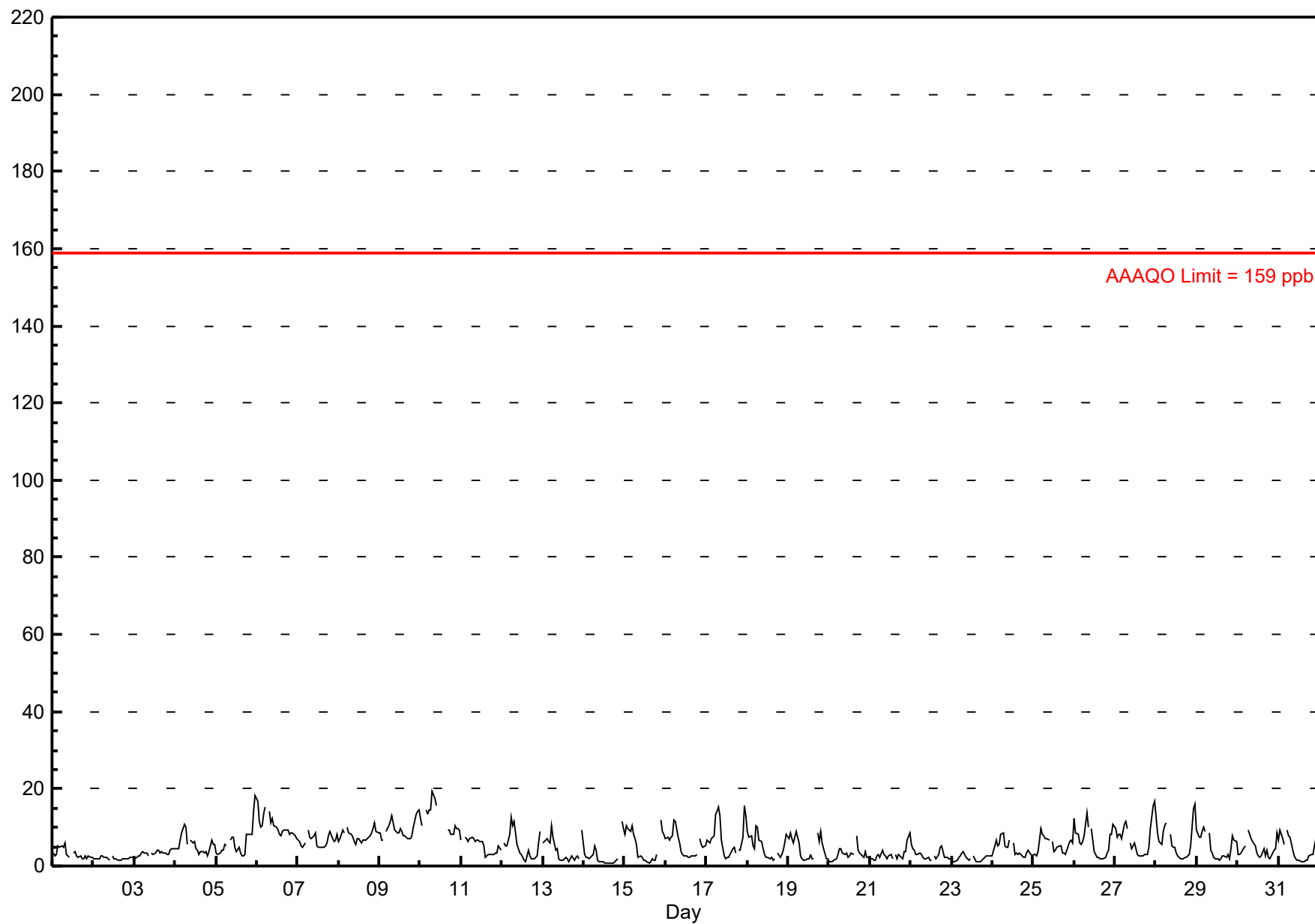
Henry Pirker - July 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 19.3 ppb on Jul 10 08:00 Maximum Daily Average: 10.3 ppb on Jul 6																				Hours in Service: 744 Hours of Data: 706 Hours of Missing Data: 38 Hours of Calibration: 38 Percent Operational Time: 100.0						
Minimum Value: 1 ppb on Jul 14 17:00 Minimum Daily Average: 2.0 ppb on Jul 2 Maximum Diurnal Average: 8.2 ppb at hour 6 Minimum Diurnal Average: 3.0 ppb at hour 15 Monthly Average: 5.25 ppb Percentiles: P ₁ = 0.9 P ₁₀ = 1.7 Q ₁ = 2.5 Median = 4.3 Q ₃ = 7.4 P ₉₀ = 9.7 P ₉₉ = 15.6																										
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	3	5	5	5	5	6	3	2	2	A	3	4	3	2	2	2	2	2	2	3	2	2	3.1	5.9
2-Jul	2	2	2	2	3	3	2	2	2	2	A	3	2	2	2	2	2	2	2	2	2	2	2	2	2.0	2.7
3-Jul	2	2	3	3	3	4	3	3	2	A	3	3	3	4	4	3	4	4	3	3	3	4	4	4	3.3	4.5
4-Jul	4	4	4	7	8	11	10	6	A	7	6	6	5	4	3	4	4	3	4	3	4	7	6	6	5.4	10.8
5-Jul	3	3	3	4	4	6	5	A	7	7	8	5	4	5	3	3	3	3	8	8	8	8	14	18	6.1	18.1
6-Jul	17	12	10	11	13	15	A	14	11	12	11	10	9	8	8	9	9	9	9	8	9	8	8	7	10.3	16.7
7-Jul	7	6	5	5	6	A	9	8	7	8	8	5	5	5	5	5	5	6	8	9	7	7	7	8	6.6	9.4
8-Jul	6	7	9	9	A	10	9	8	7	6	6	7	6	7	7	7	7	7	8	9	10	11	9	9	7.9	11.0
9-Jul	9	7	7	A	9	10	12	13	11	9	9	8	10	9	8	8	7	7	7	8	10	13	14	15	9.5	14.5
10-Jul	12	10	A	15	13	14	15	19	18	16	C	C	C	C	C	C	9	9	8	8	10	10	10	9	--	19.3
11-Jul	7	A	8	7	6	7	7	7	6	7	7	6	6	5	2	3	3	3	3	3	3	3	5	4	5.2	7.6
12-Jul	A	6	5	5	8	13	10	12	9	5	3	3	2	2	1	4	3	2	2	2	3	6	9	A	5.2	12.6
13-Jul	6	6	7	6	6	11	8	4	4	2	2	1	2	2	2	1	2	3	2	2	2	2	A	9	4.0	10.5
14-Jul	3	2	2	2	2	3	5	4	2	1	1	1	1	1	1	1	1	1	1	2	2	A	11	10	2.6	11.5
15-Jul	8	11	10	9	10	8	7	5	2	3	2	2	1	1	1	1	2	1	2	3	A	12	9	8	5.1	12.1
16-Jul	7	7	7	7	8	12	11	7	6	4	3	3	3	2	2	3	3	3	3	A	7	6	5	5	5.3	11.9
17-Jul	7	6	6	7	8	14	14	15	13	7	3	2	2	2	3	4	5	3	A	4	4	7	16	13	7.2	15.6
18-Jul	9	8	8	5	4	10	10	7	6	4	3	2	2	2	2	1	2	A	3	2	3	4	6	8	5.0	10.3
19-Jul	7	9	7	6	8	9	6	3	2	2	2	2	2	3	2	2	A	9	6	9	6	5	2	2	4.7	9.1
20-Jul	1	1	1	2	2	3	4	5	3	3	3	2	2	4	3	A	8	4	3	3	2	4	2	2	3.0	7.9
21-Jul	2	2	1	1	3	3	2	4	3	3	2	2	3	2	A	3	2	3	2	2	4	4	7	9	3.0	8.6
22-Jul	6	4	4	3	3	3	3	2	2	2	2	1	1	A	3	2	3	5	5	4	2	2	2	2	2.9	5.5
23-Jul	2	1	1	2	2	3	3	4	2	2	1	2	A	3	1	1	1	1	2	2	2	3	2	2	2.0	3.7
24-Jul	3	5	7	5	6	8	8	5	5	5	7	A	6	3	3	3	3	3	2	2	3	4	3	3	4.5	8.5
25-Jul	3	3	3	4	10	8	8	7	7	7	A	6	4	4	5	5	5	3	3	3	5	6	7	6	5.3	9.8
26-Jul	12	9	8	6	5	6	8	14	10	A	10	7	4	2	2	2	2	2	2	3	4	8	8	11	6.3	13.7
27-Jul	10	7	8	8	7	11	12	10	A	6	5	6	4	3	3	3	3	3	3	3	5	10	16	17	7.0	16.6
28-Jul	13	8	6	6	9	10	11	A	8	5	5	5	3	3	2	2	2	2	2	3	5	10	15	16	6.6	16.2
29-Jul	9	7	7	9	10	9	A	9	4	3	2	2	2	1	2	3	3	2	3	2	5	8	7	7	5.0	10.0
30-Jul	3	3	3	4	5	A	9	8	7	6	5	3	2	2	3	4	3	4	2	2	2	4	5	9	4.4	9.3
31-Jul	7	9	7	6	A	9	8	7	4	3	2	2	2	1	1	1	1	1	3	3	3	5	7	5	4.2	9.4
6.3 5.7 5.5 5.6 6.4 8.2 7.8 7.5 6.0 5.1 4.4 3.8 3.5 3.3 3.0 3.1 3.5 3.7 3.8 3.9 4.6 6.2 7.3 7.6																									Diurnal Average	
16.7 11.7 9.9 14.5 13.3 15.3 14.5 19.3 17.6 15.5 10.6 9.9 9.6 8.8 8.0 9.0 9.3 9.3 9.1 8.9 10.4 13.4 15.8 18.1																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb																										

Hourly Averages

Nitrogen Dioxide (NO₂) - ppb

Henry Pirker - July 2018



Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb

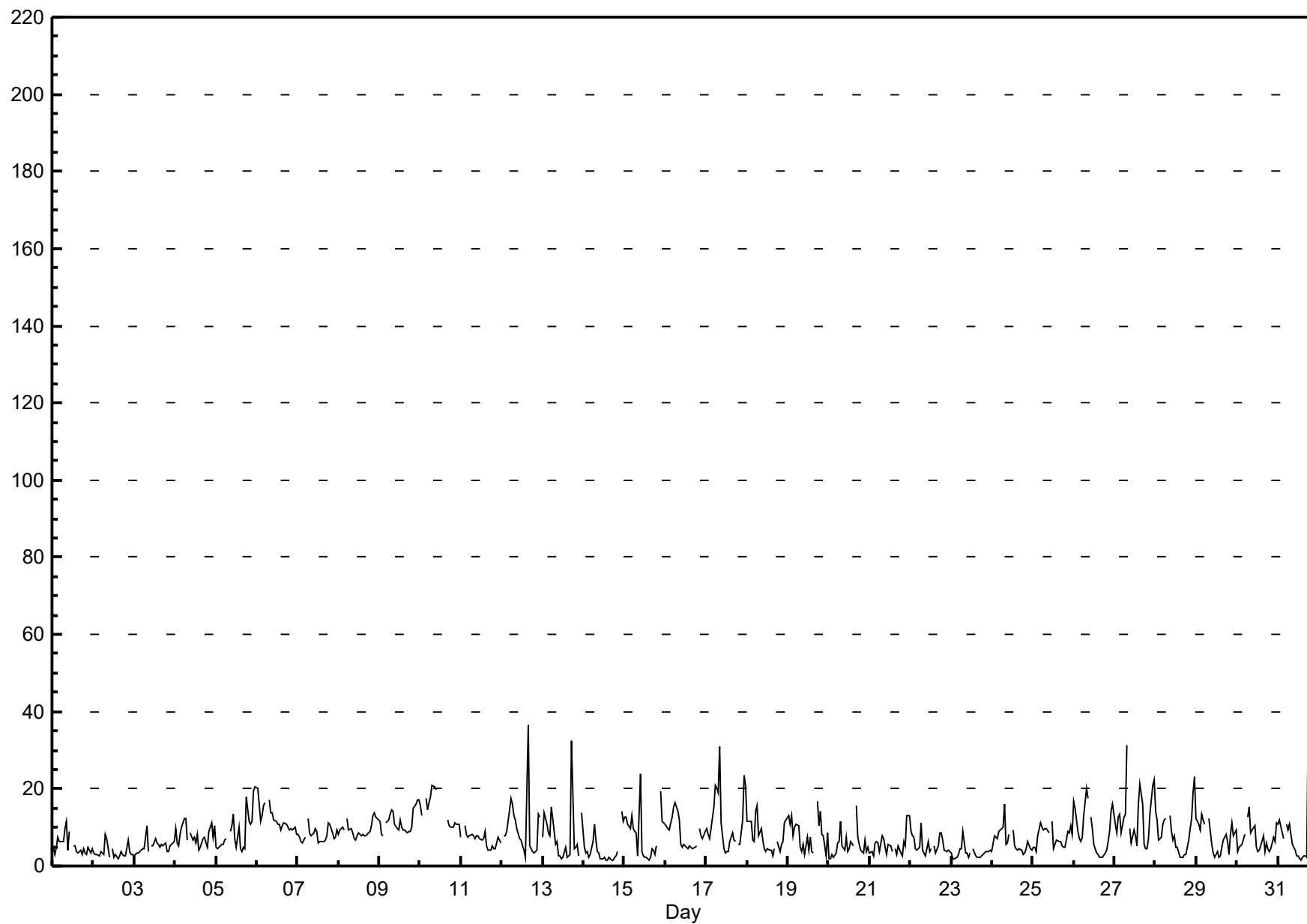
Henry Pirker - July 2018

Maximum Value: 36.6 ppb on Jul 12 16:00																					Maximum Daily Average: 12.2 ppb on Jul 6					Hours in Service: 744	
Minimum Value: 1 ppb on Jul 14 17:00																					Minimum Daily Average: 3.4 ppb on Jul 23					Hours of Data: 706	
Maximum Diurnal Average: 11.7 ppb at hour 8																					Minimum Diurnal Average: 5.0 ppb at hour 15					Hours of Missing Data: 38	
Monthly Average: 7.81 ppb																					Percentiles: P ₁ = 1.8 P ₁₀ = 2.9 Q ₁ = 4.2 Median = 6.8 Q ₃ = 10.3 P ₉₀ = 13.4 P ₉₉ = 23.2					Hours of Calibration: 38	
																					Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jul	5	3	5	7	6	6	6	10	12	4	9	A	5	5	4	4	4	3	5	3	3	5	3	4	5.3	11.5	
2-Jul	3	3	3	3	4	3	3	8	7	2	A	5	2	3	2	2	4	3	3	3	7	4	3	3	3.6	8.1	
3-Jul	3	3	3	4	4	5	4	10	4	A	5	5	7	6	6	5	6	5	6	4	4	5	6	6	5.0	10.4	
4-Jul	10	6	5	8	10	12	12	7	A	9	7	8	6	8	4	5	7	7	6	5	9	11	7	10	7.8	12.5	
5-Jul	5	4	5	6	6	7	7	A	9	10	13	7	5	10	4	4	5	5	18	12	11	12	19	20	8.8	20.4	
6-Jul	20	16	11	13	16	17	A	17	14	14	12	12	11	11	9	10	11	11	10	9	10	9	10	8	12.2	20.0	
7-Jul	8	7	7	6	7	A	12	8	8	9	10	9	6	6	6	6	7	8	11	11	8	7	7	9	8.1	12.3	
8-Jul	8	9	10	9	A	12	9	10	8	7	7	8	9	8	8	8	8	8	9	10	13	14	13	12	9.4	13.7	
9-Jul	11	8	8	A	11	12	13	14	14	11	10	9	12	10	9	9	9	9	9	10	15	16	17	17	11.5	17.2	
10-Jul	16	13	A	18	15	17	18	21	20	20	C	C	C	C	C	C	12	11	10	10	11	11	11	11	--	20.7	
11-Jul	7	A	10	8	7	8	8	8	7	8	8	7	7	7	9	5	4	4	5	4	5	6	7	6	6.8	10.3	
12-Jul	A	8	8	9	15	17	16	13	12	10	7	7	5	4	2	37	5	4	4	3	4	13	13	A	9.9	36.6	
13-Jul	7	14	11	9	8	15	12	6	6	2	3	2	2	5	2	3	3	32	4	5	6	3	A	14	7.5	32.4	
14-Jul	5	3	4	2	3	6	11	7	4	3	2	2	2	2	1	2	1	2	2	3	4	A	14	12	4.2	14.1	
15-Jul	13	13	11	10	13	10	9	9	3	24	4	3	2	2	1	2	5	4	3	5	A	19	11	11	8.1	23.9	
16-Jul	11	10	9	11	13	15	16	14	12	5	5	5	5	4	5	5	4	5	5	A	10	8	7	9	8.5	16.3	
17-Jul	10	8	7	10	15	21	20	19	31	11	5	3	4	4	6	9	7	7	A	6	5	12	23	21	11.4	30.9	
18-Jul	12	12	12	7	7	14	16	8	10	7	5	4	5	4	4	2	5	A	6	4	6	6	11	12	7.6	15.8	
19-Jul	13	11	13	8	10	11	10	5	4	6	3	7	4	8	4	3	A	17	10	14	8	8	3	9	8.2	16.9	
20-Jul	2	2	3	2	3	6	6	11	5	4	8	4	4	6	5	A	16	7	5	4	3	7	4	5	5.4	15.5	
21-Jul	3	4	2	6	6	6	4	8	7	5	3	5	5	4	A	5	3	5	3	3	7	5	13	13	5.4	13.0	
22-Jul	9	8	7	4	4	5	11	4	3	3	6	4	5	A	5	4	5	9	9	7	4	4	4	4	5.5	11.3	
23-Jul	3	2	2	2	3	4	4	9	3	3	2	4	A	4	3	2	2	2	3	3	4	4	4	4	3.4	8.8	
24-Jul	4	8	8	7	9	9	10	16	6	6	8	A	9	5	4	4	4	4	3	3	4	6	4	4	6.4	15.9	
25-Jul	5	5	4	8	11	10	9	10	10	8	A	11	4	6	7	6	6	5	5	5	9	9	10	8	7.5	11.4	
26-Jul	17	15	9	7	7	7	13	20	17	A	13	10	6	3	3	2	2	2	4	4	6	9	14	16	9.0	20.0	
27-Jul	11	9	13	13	8	13	13	31	A	10	6	9	8	5	16	21	16	6	4	5	7	14	21	22	12.2	31.2	
28-Jul	14	12	7	8	11	12	12	A	13	9	7	8	5	5	2	2	2	3	3	7	10	12	19	23	8.9	23.3	
29-Jul	12	11	9	13	12	11	A	12	9	6	3	2	4	2	2	5	7	8	6	3	8	11	8	9	7.6	13.4	
30-Jul	4	5	5	6	8	A	13	15	9	9	11	5	4	4	5	8	4	6	4	4	5	8	7	11	6.8	15.4	
31-Jul	11	12	8	7	A	11	10	11	6	5	4	2	3	2	2	3	2	2	36	8	5	7	10	6	7.5	36.2	
8.7 8.1 7.3 7.7 8.7 10.4 10.7 11.7 9.4 7.9 6.5 6.0 5.4 5.3 5.0 6.3 5.9 6.8 7.1 5.9 7.0 8.8 10.2 10.7																									Diurnal Average		
20.0 15.9 13.0 17.6 15.7 20.9 20.3 31.2 30.9 23.9 13.3 11.6 11.8 10.7 16.0 36.6 16.1 32.4 36.2 14.2 15.0 19.5 23.3 23.3																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											

Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb

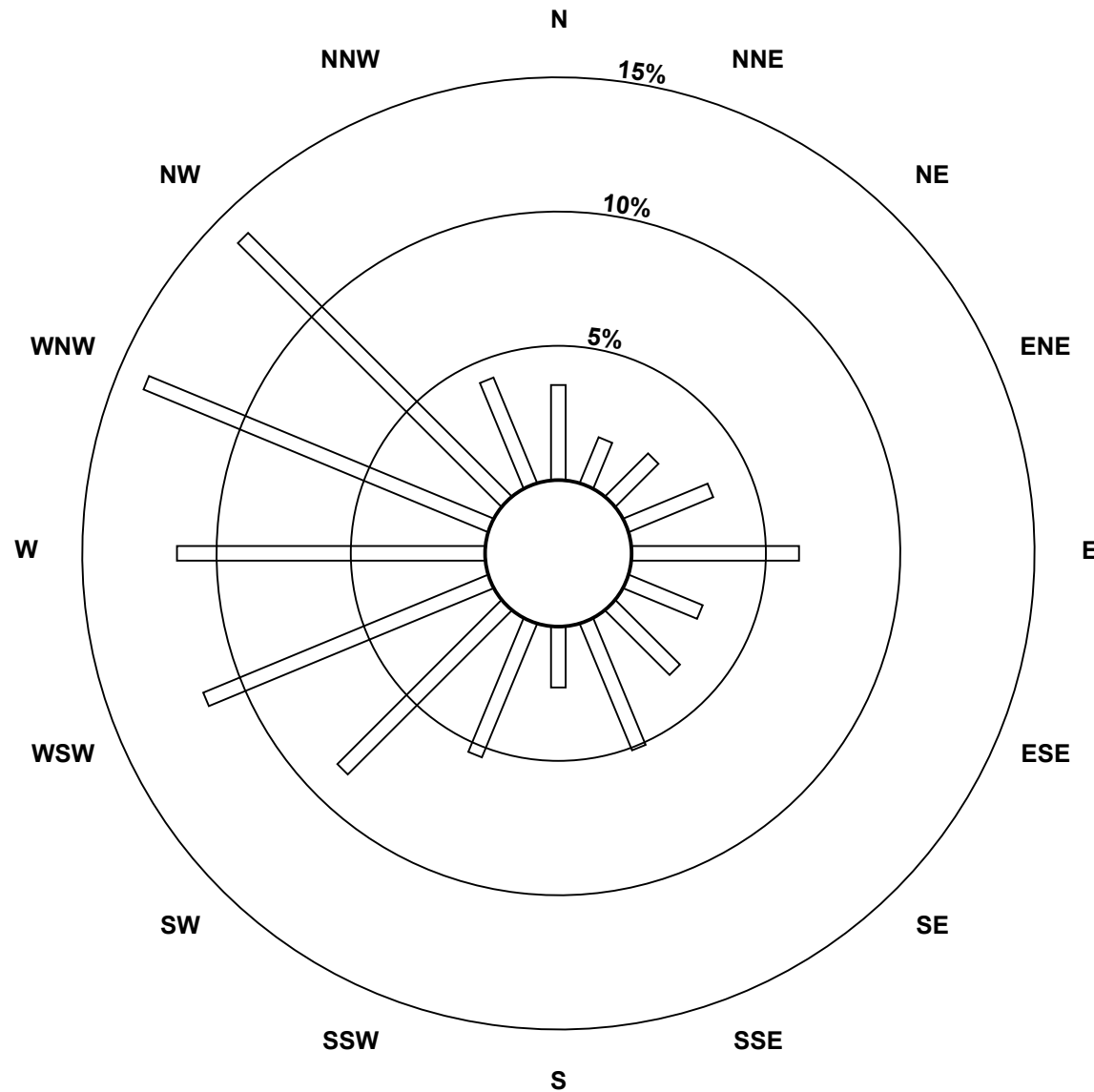
Henry Pirker - July 2018



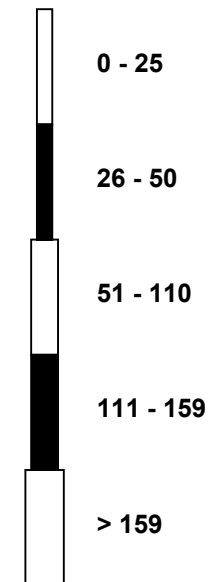
Pollutant Rose

Nitrogen Dioxide (NO₂) - ppb

Henry Pirker - July 2018



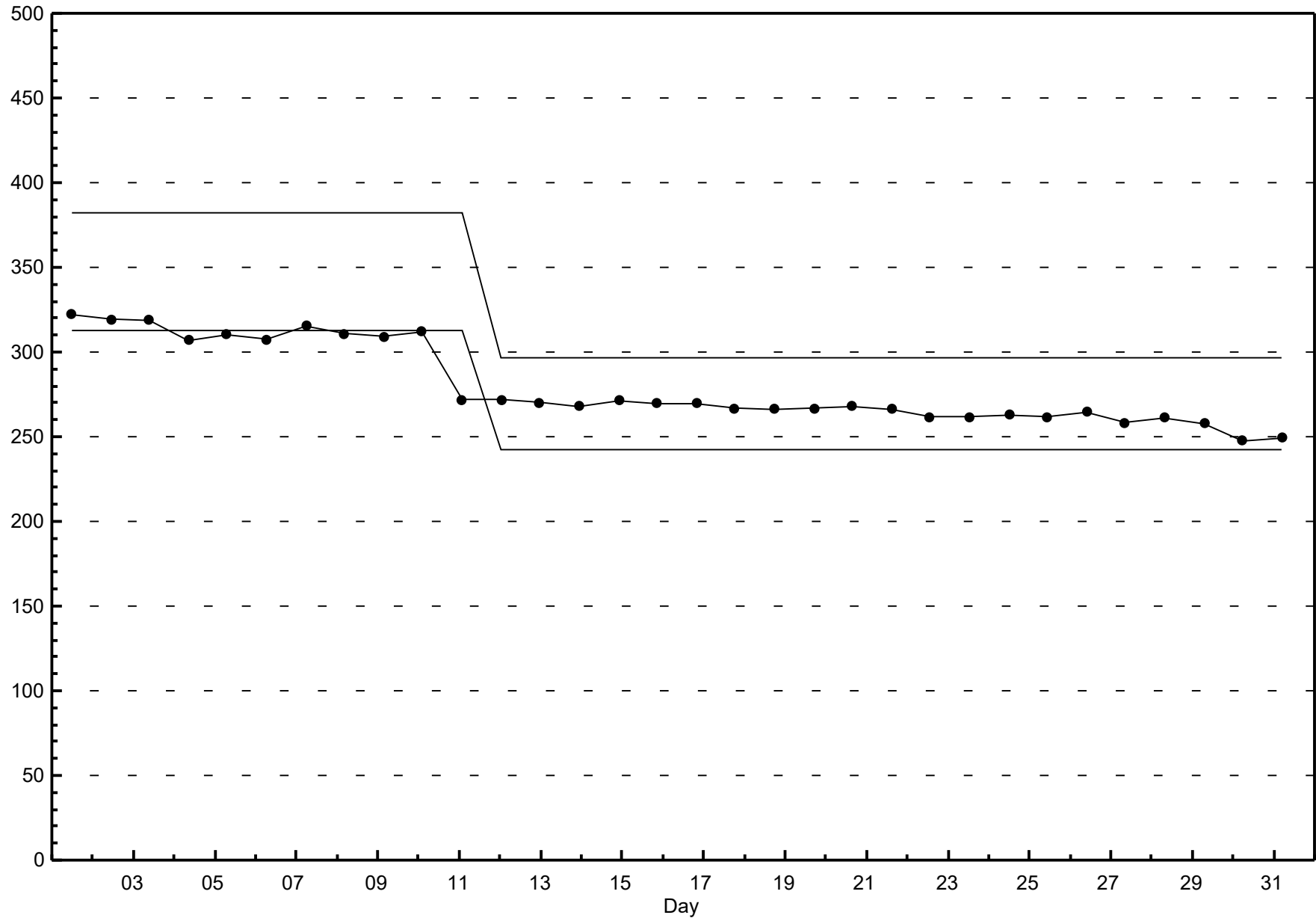
Pollutant Classes (ppb)



Span Responses

Nitrogen Dioxide (NO₂)

Henry Pirker - July 2018



Hourly Averages

Nitrogen Oxide (NO) - ppb

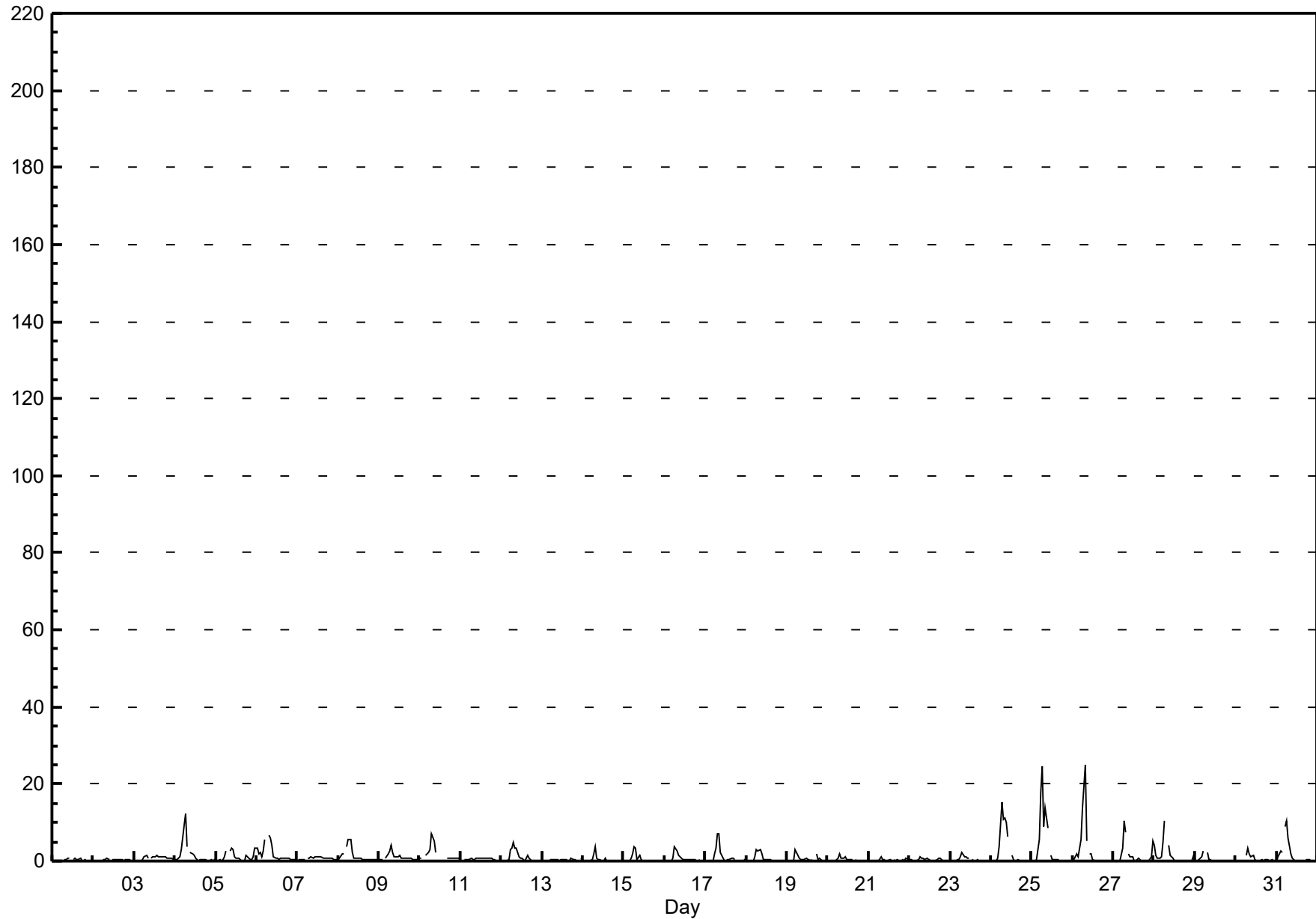
Henry Pirker - July 2018

Maximum Value: 24.9 ppb on Jul 26 08:00																				Maximum Daily Average: 3.6 ppb on Jul 25										Hours in Service: 744									
Minimum Value: 0 ppb on Jul 29 15:00																				Minimum Daily Average: 0.2 ppb on Jul 2										Hours of Data: 706									
Maximum Diurnal Average: 4.8 ppb at hour 7																				Minimum Diurnal Average: 0.2 ppb at hour 22										Hours of Missing Data: 38									
Monthly Average: 1.02 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.3 Q ₃ = 0.8 P ₉₀ = 2.4 P ₉₉ = 11.1										Hours of Calibration: 38									
																				Percent Operational Time: 100.0																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Jul	0	0	0	0	0	0	0	1	0	1	1	A	1	1	0	0	1	0	0	0	0	0	0	0	0.3	0.7													
2-Jul	0	0	0	0	0	0	0	0	1	0	A	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	1	1	1	A	1	1	1	2	1	1	1	1	1	1	1	1	1	1	0.8	1.7													
4-Jul	0	0	1	1	3	9	12	4	A	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	1.7	12.2													
5-Jul	0	0	0	0	0	1	3	A	2	3	3	1	1	1	0	0	0	0	1	1	1	0	1	3	1.0	3.5													
6-Jul	4	2	2	1	3	6	A	7	6	4	1	1	1	0	1	1	1	1	1	1	0	0	0	0	1.8	6.7													
7-Jul	0	0	0	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0.7	1.2													
8-Jul	0	1	2	2	A	4	6	6	2	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	1.3	5.7													
9-Jul	0	0	0	A	1	2	3	4	2	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1.1	4.1													
10-Jul	1	1	A	2	2	2	3	7	5	2	C	C	C	C	C	C	1	1	1	1	1	1	1	1	--	7.0													
11-Jul	0	A	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0.5	0.9													
12-Jul	A	0	0	0	0	3	3	5	3	3	1	1	1	0	0	1	1	0	0	0	0	0	0	A	1.1	5.0													
13-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	A	1	0.2	0.7													
14-Jul	0	0	0	0	0	0	2	4	1	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0.4	3.6													
15-Jul	0	0	0	0	1	2	4	3	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.6	3.8													
16-Jul	0	0	0	0	0	1	4	3	2	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0.6	3.6													
17-Jul	0	0	0	0	0	2	3	7	7	2	1	0	0	0	0	1	1	1	A	0	0	0	0	0	1.1	7.2													
18-Jul	0	0	0	0	0	1	3	3	3	2	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.6	3.2													
19-Jul	0	0	0	0	0	3	1	1	1	0	0	1	0	0	0	0	A	2	1	1	0	0	0	0	0.5	3.1													
20-Jul	0	0	0	0	0	0	1	2	1	1	1	0	0	1	1	A	0	0	0	0	0	0	0	0	0.3	1.8													
21-Jul	0	0	0	0	0	0	0	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0.3	1.1													
22-Jul	0	0	0	0	0	0	1	1	1	0	1	0	0	A	0	0	0	1	1	0	0	0	0	0	0.4	1.2													
23-Jul	0	0	0	0	0	0	1	2	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0.4	2.3													
24-Jul	0	0	0	0	1	4	15	11	11	10	6	A	2	0	0	0	0	0	0	0	0	0	0	0	2.7	15.3													
25-Jul	0	0	0	0	5	18	25	9	14	9	A	2	0	0	0	0	0	0	0	0	0	0	0	0	3.6	24.7													
26-Jul	0	0	2	1	3	5	14	25	5	A	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2.6	24.9													
27-Jul	0	0	0	0	0	3	10	8	A	2	1	1	0	0	0	1	0	0	0	0	0	0	0	1	1.4	10.3													
28-Jul	4	2	1	1	1	5	11	A	4	2	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1.4	10.5													
29-Jul	0	0	0	1	1	2	A	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.5													
30-Jul	0	0	0	0	0	A	2	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	3.4													
31-Jul	0	1	3	2	A	9	10	6	2	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1.6	10.4													
																									Diurnal Average														
																									Diurnal Maximum														
C - Calibration																									A - Automated Daily Zero Span														

Hourly Averages

Nitrogen Oxide (NO) - ppb

Henry Pirker - July 2018



Hourly Maximums

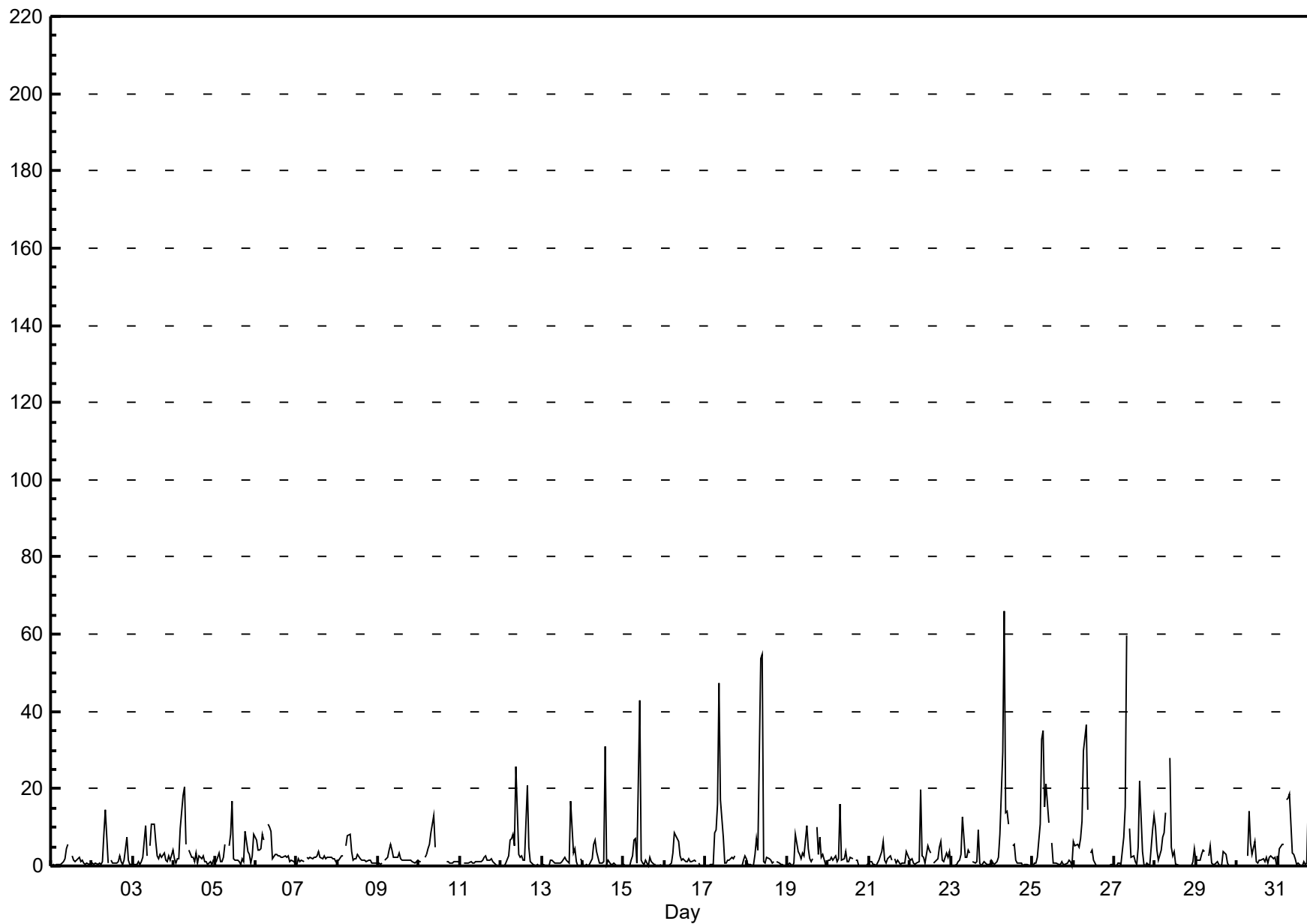
Nitrogen Oxide (NO) - ppb

Henry Pirker - July 2018

Maximum Value: 66.1 ppb on Jul 24 08:00																				Maximum Daily Average: 7.1 ppb on Jul 24					Hours in Service: 744				
Minimum Value: 0 ppb on Jul 29 15:00																				Minimum Daily Average: 1.1 ppb on Jul 11					Hours of Data: 706				
Maximum Diurnal Average: 12.5 ppb at hour 8																				Minimum Diurnal Average: 1.0 ppb at hour 22					Hours of Missing Data: 38				
Monthly Average: 3.35 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.6 Median = 1.3 Q ₃ = 2.9 P ₉₀ = 7.9 P ₉₉ = 34.8					Hours of Calibration: 38				
																				Percent Operational Time: 100.0									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Jul	0	0	0	0	0	0	1	1	2	4	6	A	3	1	1	2	2	1	2	1	0	1	1	1	1.3	5.8			
2-Jul	1	0	1	0	1	1	1	8	15	1	A	2	1	1	1	1	3	1	1	1	7	1	1	0	2.1	14.6			
3-Jul	0	0	0	1	1	1	2	10	3	A	5	11	11	6	3	2	3	2	3	1	1	3	1	4	3.3	11.0			
4-Jul	2	1	2	2	10	18	20	6	A	4	2	2	1	3	1	3	2	3	1	1	1	1	0	1	3.8	20.4			
5-Jul	1	1	3	1	1	2	6	A	5	8	17	2	1	1	1	0	2	1	9	4	3	1	3	8	3.5	16.8			
6-Jul	7	4	4	4	8	7	A	11	10	9	2	3	3	3	3	2	2	3	2	2	1	1	1	0	4.0	11.0			
7-Jul	0	2	1	1	1	A	2	2	2	2	2	2	2	4	2	2	3	2	2	2	2	2	2	1	1.9	3.6			
8-Jul	2	1	3	3	A	5	8	8	4	2	2	2	3	2	1	2	2	1	2	1	1	1	1	1	2.4	8.3			
9-Jul	1	0	1	A	1	2	4	6	4	2	2	2	3	2	1	2	2	1	1	2	1	1	1	1	2.0	5.6			
10-Jul	1	1	A	2	3	5	6	9	13	5	C	C	C	C	C	C	1	1	1	1	1	1	1	1	--	13.1			
11-Jul	1	A	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1	2	1	1	0	0	0	1.1	2.4			
12-Jul	A	0	0	1	3	7	7	8	5	26	3	2	3	1	1	21	5	1	1	1	0	0	0	A	4.4	25.6			
13-Jul	0	1	0	0	0	1	1	1	1	1	1	1	1	2	2	1	1	17	3	4	1	0	A	2	1.8	16.9			
14-Jul	0	0	0	0	0	2	6	7	4	2	1	1	1	31	1	1	0	0	1	1	0	A	0	0	2.5	30.8			
15-Jul	0	0	0	0	2	3	7	7	1	43	1	1	0	1	0	2	1	1	1	0	A	1	0	0	3.1	42.9			
16-Jul	0	0	0	0	1	3	9	7	6	2	2	2	1	1	2	1	1	2	1	A	1	0	0	0	1.9	8.7			
17-Jul	0	0	0	0	0	9	9	16	47	17	7	1	1	1	1	2	2	3	A	0	0	0	1	3	5.3	47.5			
18-Jul	2	0	1	0	0	3	7	4	54	55	1	1	2	2	2	1	1	A	1	1	0	0	0	0	6.0	55.0			
19-Jul	0	1	0	0	1	8	4	3	2	3	3	10	4	2	1	2	A	10	3	7	2	3	0	1	3.1	10.4			
20-Jul	2	1	2	1	3	1	2	16	1	2	4	1	1	2	2	A	2	1	0	0	0	0	0	0	2.0	16.1			
21-Jul	1	1	1	0	0	1	2	4	6	2	1	2	3	2	A	2	1	1	1	1	1	1	4	2	1.6	6.2			
22-Jul	1	2	1	0	1	1	20	3	2	1	5	4	3	A	1	1	2	5	6	2	1	3	2	4	3.1	19.7			
23-Jul	0	0	0	0	1	2	3	13	2	2	4	3	A	1	1	1	9	1	0	1	1	0	0	0	2.0	12.7			
24-Jul	1	0	1	1	2	8	30	66	14	14	11	A	5	5	1	1	1	1	0	0	1	0	0	0	7.1	66.1			
25-Jul	0	1	1	2	11	33	35	15	21	11	A	6	1	1	1	0	0	1	1	0	1	1	1	0	6.3	34.9			
26-Jul	6	5	6	5	7	12	30	37	15	A	3	4	1	0	0	0	0	0	0	0	0	0	1	0	5.8	36.6			
27-Jul	0	0	1	1	0	7	15	60	A	10	2	3	1	0	5	22	4	0	0	1	0	0	9	13	6.7	59.7			
28-Jul	10	4	1	4	7	8	14	A	28	5	3	4	0	0	0	0	0	0	0	0	0	0	1	4	4.1	28.1			
29-Jul	1	1	1	3	4	4	A	3	5	1	0	0	1	0	0	0	4	3	1	0	0	0	0	0	1.5	5.3			
30-Jul	0	0	0	0	0	A	3	14	6	3	6	1	1	1	2	2	1	2	1	2	3	2	2	0	2.3	14.1			
31-Jul	1	5	5	5	A	17	18	19	3	3	2	0	1	0	0	1	0	1	16	2	2	4	1	1	4.7	18.8			
1.4 1.2 1.2 1.4 2.4 5.9 9.3 12.5 9.8 8.3 3.6 2.6 2.1 2.8 1.3 2.7 1.9 2.2 2.1 1.4 1.1 1.0 1.2 1.7																								Diurnal Average					
10.1 5.1 5.7 5.5 10.7 33.0 34.9 66.1 53.5 55.0 16.8 10.7 11.0 30.8 5.0 22.0 9.2 16.9 16.0 7.4 7.4 3.8 9.4 13.2																								Diurnal Maximum					
C - Calibration A - Automated Daily Zero Span																													

Hourly Maximums

Nitrogen Oxide (NO) - ppb
Henry Pirker - July 2018



Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

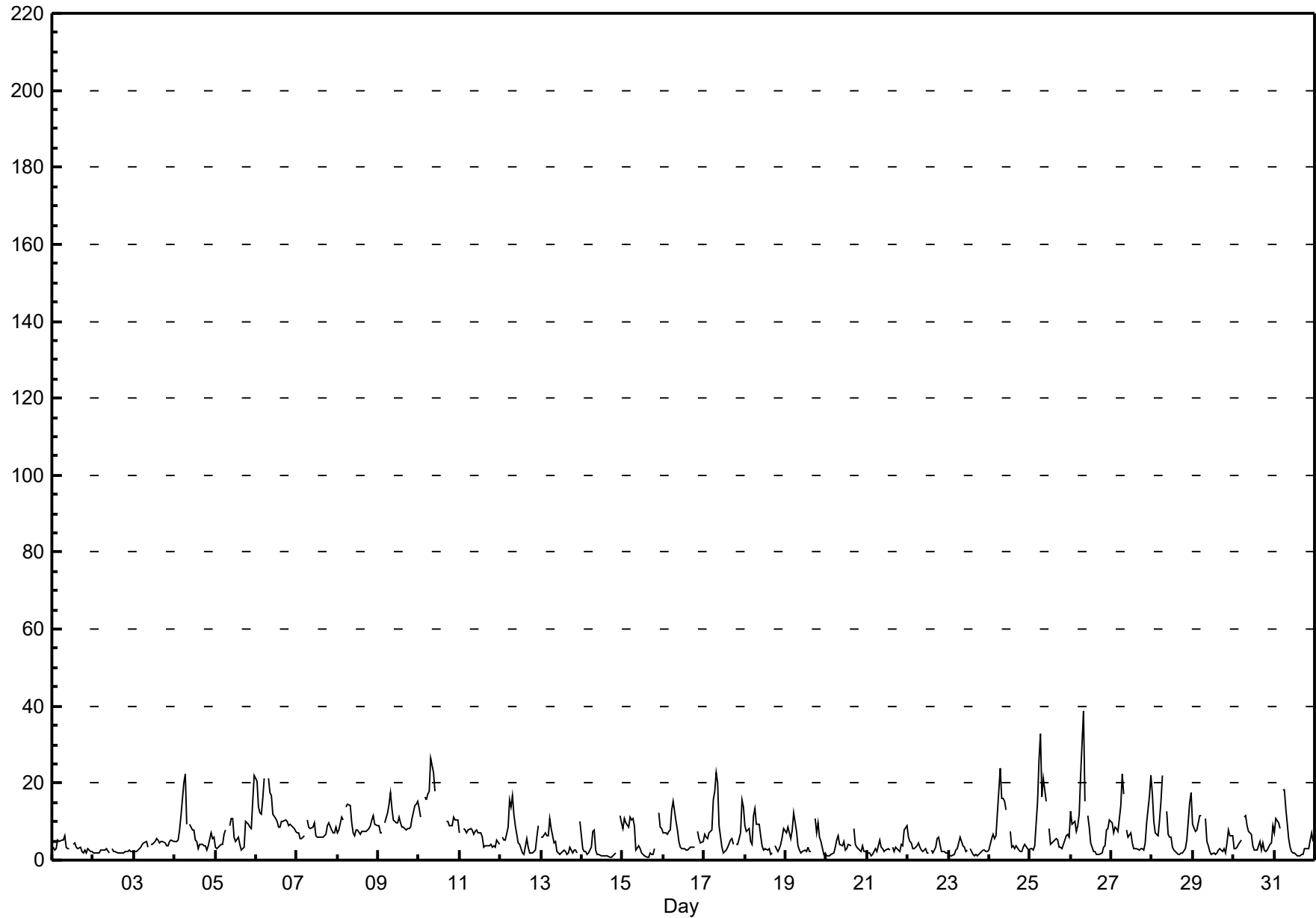
Henry Pirker - July 2018

Maximum Value: 38.7 ppb on Jul 26 08:00																				Maximum Daily Average: 12.4 ppb on Jul 6					Hours in Service: 744	
Minimum Value: 1 ppb on Jul 15 15:00																				Minimum Daily Average: 2.2 ppb on Jul 2					Hours of Data: 706	
Maximum Diurnal Average: 12.8 ppb at hour 7																				Minimum Diurnal Average: 3.3 ppb at hour 15					Hours of Missing Data: 38	
Monthly Average: 6.32 ppb																				Percentiles: P ₁ = 1.0 P ₁₀ = 1.9 Q ₁ = 2.8 Median = 4.8 Q ₃ = 8.6 P ₉₀ = 12.2 P ₉₉ = 22.3					Hours of Calibration: 38	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	3	2	3	5	5	5	5	6	3	3	3	A	4	5	3	3	3	2	2	3	2	3	2	2	3.5	6.5
2-Jul	2	2	2	2	3	3	2	3	3	2	A	3	2	2	2	2	2	2	2	2	2	3	2	2	2.2	3.0
3-Jul	2	2	3	3	3	4	5	5	3	A	4	4	5	6	5	4	5	5	4	4	4	5	5	5	4.2	5.7
4-Jul	5	5	5	8	11	20	22	9	A	9	8	8	5	5	3	4	4	4	4	3	4	7	6	6	7.2	22.3
5-Jul	3	3	4	4	4	7	8	A	9	11	11	6	5	6	4	3	3	3	10	9	9	8	15	22	7.2	21.9
6-Jul	20	14	12	12	16	21	A	21	17	17	12	11	10	9	9	10	10	10	10	9	9	9	8	7	12.4	21.2
7-Jul	7	7	6	5	6	A	10	9	8	9	10	6	6	6	6	6	6	7	9	10	8	7	7	9	7.4	10.4
8-Jul	7	8	11	11	A	14	14	14	10	7	6	8	8	7	7	8	7	8	8	9	10	12	9	9	9.3	14.5
9-Jul	9	7	7	A	10	12	14	17	13	10	10	10	11	10	9	9	8	8	8	9	11	14	15	15	10.7	17.5
10-Jul	13	11	A	16	16	17	18	27	23	18	C	C	C	C	C	C	10	10	9	9	11	10	11	10	--	26.5
11-Jul	7	A	8	8	7	8	8	8	7	8	8	7	7	6	3	4	4	4	4	3	4	4	5	4	5.8	8.1
12-Jul	A	6	5	5	8	16	14	17	12	9	5	4	3	2	1	6	3	2	2	2	3	6	9	A	6.3	16.7
13-Jul	6	6	7	6	6	11	8	4	5	2	2	2	2	3	2	1	2	4	2	3	3	2	A	10	4.2	11.0
14-Jul	3	2	2	2	2	3	7	8	3	1	1	1	1	1	1	1	1	1	1	2	2	A	11	10	2.9	11.5
15-Jul	8	11	10	9	11	10	11	9	3	4	3	2	2	1	1	1	2	1	2	3	A	12	9	8	5.7	12.2
16-Jul	7	7	7	7	8	13	15	10	8	5	4	3	3	3	3	3	3	3	4	A	7	5	5	5	6.0	15.2
17-Jul	7	6	6	7	8	16	18	23	20	9	3	2	2	3	4	5	6	4	A	4	4	7	16	14	8.4	22.9
18-Jul	9	8	8	5	4	11	13	9	9	6	4	2	3	2	3	1	2	A	4	2	3	4	6	8	5.6	13.4
19-Jul	7	9	7	6	8	12	8	4	3	2	2	3	2	3	2	2	A	11	7	10	6	5	2	2	5.3	12.4
20-Jul	1	1	1	2	2	3	5	6	4	4	5	3	3	4	4	A	8	4	3	3	2	4	2	2	3.3	8.2
21-Jul	2	2	1	1	2	3	2	5	3	3	2	3	3	2	A	3	2	3	3	2	4	4	8	9	3.2	9.1
22-Jul	6	5	4	3	3	4	4	3	2	2	3	2	2	A	3	2	3	5	6	4	2	2	2	2	3.3	5.9
23-Jul	2	1	1	2	3	3	5	6	4	3	2	3	A	3	1	1	1	1	1	2	3	3	2	2	2.4	6.1
24-Jul	3	5	7	5	6	12	24	16	16	15	13	A	7	3	4	3	4	3	2	2	3	4	3	2	7.1	24.0
25-Jul	3	3	2	4	15	26	33	16	21	15	A	8	4	4	5	5	5	3	3	3	5	6	7	6	9.0	32.9
26-Jul	13	9	10	7	9	12	22	39	15	A	11	9	4	2	2	2	2	2	2	3	4	8	8	11	8.9	38.7
27-Jul	10	7	9	8	7	14	22	17	A	8	6	7	5	3	3	3	3	3	3	3	5	10	17	22	8.4	22.2
28-Jul	17	10	7	6	10	15	22	A	13	7	6	6	3	2	2	2	2	2	2	3	5	10	15	17	8.0	22.0
29-Jul	9	8	8	10	12	12	A	11	5	4	2	2	2	1	2	3	3	2	3	2	4	8	6	6	5.4	11.6
30-Jul	3	3	3	4	5	A	11	12	9	8	7	4	3	3	3	5	3	4	3	2	3	4	4	9	4.9	11.6
31-Jul	7	11	10	8	A	18	18	14	6	3	2	2	2	1	1	1	1	1	3	3	3	5	7	5	5.8	18.4
6.7 6.0 5.9 6.1 7.3 11.3 12.8 12.0 8.9 7.0 5.5 4.6 4.1 3.7 3.3 3.5 3.9 4.1 4.2 4.2 4.8 6.3 7.5 8.1																									Diurnal Average	
20.4 13.8 12.2 16.3 16.1 26.2 32.9 38.7 22.8 17.9 13.2 10.9 11.1 9.9 8.7 9.9 10.2 10.8 10.0 9.8 11.4 14.0 16.9 22.0																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

Henry Pirker - July 2018



Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

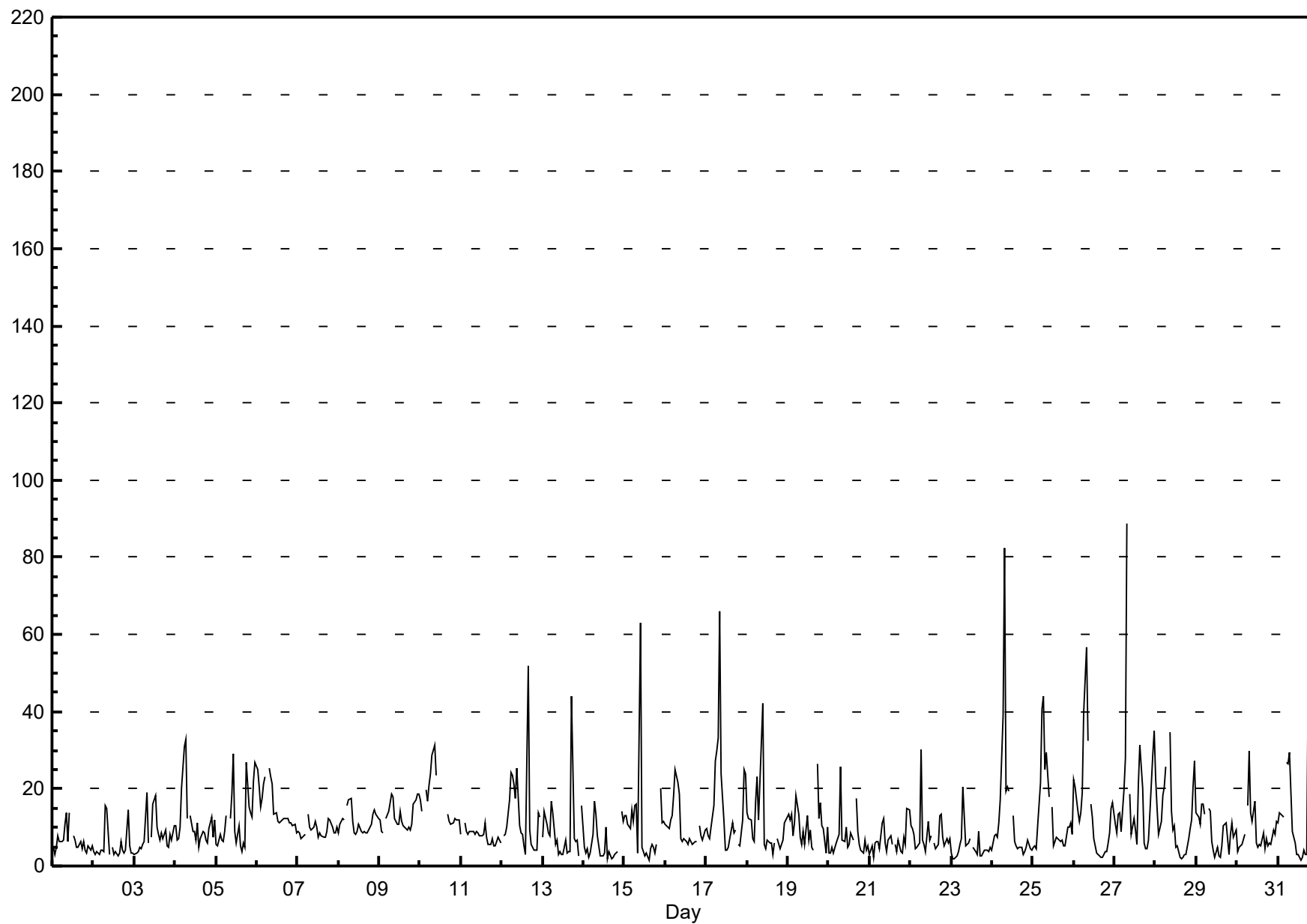
Henry Pirker - July 2018

Maximum Value: 88.7 ppb on Jul 27 08:00																				Maximum Daily Average: 18.2 ppb on Jul 27					Hours in Service: 744				
Minimum Value: 2 ppb on Jul 31 14:00																				Minimum Daily Average: 5.1 ppb on Jul 23					Hours of Data: 706				
Maximum Diurnal Average: 23.8 ppb at hour 8																				Minimum Diurnal Average: 6.1 ppb at hour 15					Hours of Missing Data: 38				
Monthly Average: 10.68 ppb																				Percentiles: P ₁ = 2.1 P ₁₀ = 3.5 Q ₁ = 5.3 Median = 8.3 Q ₃ = 12.8 P ₉₀ = 20.3 P ₉₉ = 44.1					Hours of Calibration: 38				
																									Percent Operational Time: 100.0				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Jul	5	3	5	8	6	6	7	11	14	6	14	A	8	7	5	5	6	4	6	4	3	5	4	5	6.4	13.8			
2-Jul	4	3	4	3	4	4	4	16	15	3	A	5	3	4	3	3	6	4	3	4	14	5	3	3	5.2	15.6			
3-Jul	3	3	4	5	5	6	6	19	6	A	7	16	18	10	8	7	9	7	9	5	5	8	7	10	8.0	19.1			
4-Jul	11	7	7	10	20	31	33	12	A	13	9	9	7	11	5	7	9	9	7	6	10	13	8	12	11.4	32.9			
5-Jul	6	5	8	7	6	9	13	A	12	19	29	9	6	11	5	4	6	5	27	15	14	13	22	27	12.1	29.2			
6-Jul	25	20	15	18	21	23	A	25	23	21	13	14	12	11	12	12	12	12	12	11	11	10	11	9	15.5	25.4			
7-Jul	9	9	7	8	8	A	13	10	9	10	12	10	8	9	8	7	8	9	12	12	10	9	9	10	9.3	13.3			
8-Jul	9	11	12	12	A	16	17	18	12	9	8	9	11	9	9	9	9	9	10	11	14	14	14	12	11.3	17.6			
9-Jul	12	9	8	A	12	14	17	19	18	12	11	11	14	12	10	10	9	10	10	11	16	17	18	19	13.0	18.7			
10-Jul	17	14	A	20	17	21	24	29	31	23	C	C	C	C	C	C	13	12	11	11	12	12	12	12	--	31.2			
11-Jul	8	A	11	9	8	9	9	9	8	9	9	8	8	8	11	8	6	5	7	5	5	6	7	6	7.8	11.3			
12-Jul	A	8	8	10	17	24	23	21	17	25	10	9	8	5	3	52	9	6	5	4	4	14	13	A	13.5	51.7			
13-Jul	7	14	11	9	8	17	14	6	7	3	4	3	3	7	3	4	4	44	7	6	7	3	A	16	8.9	44.1			
14-Jul	5	3	4	2	3	8	17	13	8	5	3	3	3	10	2	4	2	2	3	3	4	A	14	12	5.8	16.8			
15-Jul	13	13	11	10	15	12	16	16	4	63	5	4	3	4	2	4	6	5	3	6	A	20	11	11	11.1	63.1			
16-Jul	11	10	10	12	13	18	25	22	19	7	7	7	6	6	7	6	6	6	6	A	10	8	7	9	10.3	25.0			
17-Jul	10	8	7	10	16	27	30	33	66	24	12	4	4	5	7	11	9	9	A	5	5	12	25	24	15.8	65.9			
18-Jul	14	12	12	7	6	17	23	12	32	42	6	5	7	6	6	3	6	A	7	4	6	7	11	12	11.4	42.0			
19-Jul	13	12	13	8	11	18	13	7	6	9	5	13	7	9	5	4	A	26	12	17	11	10	3	10	10.6	26.3			
20-Jul	3	4	5	3	6	7	8	26	7	6	10	5	6	9	7	A	17	9	6	4	3	7	4	5	7.2	25.6			
21-Jul	3	5	2	6	6	7	4	11	12	6	4	7	8	6	A	6	4	7	4	3	7	6	15	15	6.6	15.0			
22-Jul	10	10	8	4	5	6	30	7	6	4	12	7	8	A	6	5	6	13	13	8	5	7	6	7	8.3	30.4			
23-Jul	3	2	2	3	4	6	7	21	5	5	6	7	A	5	4	3	9	3	3	4	4	4	4	5	5.1	20.6			
24-Jul	4	8	8	7	11	17	39	82	19	20	19	A	13	6	5	4	5	5	3	4	5	7	5	4	13.2	82.3			
25-Jul	5	5	4	10	22	41	44	25	30	18	A	15	5	7	8	7	6	7	5	5	10	10	11	8	13.4	43.9			
26-Jul	22	20	14	12	14	19	40	57	32	A	16	13	7	3	3	2	2	2	4	4	6	9	15	16	14.5	56.8			
27-Jul	11	9	13	14	9	20	28	89	A	19	8	12	9	6	21	31	20	6	4	5	7	14	29	35	18.2	88.7			
28-Jul	23	15	8	11	18	21	26	A	35	14	9	10	5	5	2	2	2	3	3	7	10	12	20	27	12.6	34.8			
29-Jul	14	13	11	16	16	13	A	15	14	6	4	2	5	2	2	5	10	11	7	3	8	11	8	9	9.0	16.1			
30-Jul	4	5	5	5	8	A	16	30	14	11	17	6	5	6	5	9	4	7	5	6	6	9	8	12	8.8	29.7			
31-Jul	11	14	13	13	A	27	27	30	9	8	6	3	3	2	2	4	3	3	47	9	7	9	11	7	11.6	47.5			
9.8 9.1 8.4 9.0 10.9 16.0 19.7 23.8 16.9 14.6 9.8 8.0 7.2 6.8 6.1 8.2 7.5 8.7 8.8 6.7 8.0 9.6 11.1 12.3																									Diurnal Average				
25.0 20.4 15.4 19.9 21.7 40.6 43.9 88.7 65.9 63.1 29.2 15.9 18.4 11.6 21.3 51.7 20.0 44.1 47.5 16.5 16.1 20.2 28.8 34.9																									Diurnal Maximum				
C - Calibration A - Automated Daily Zero Span																													

Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

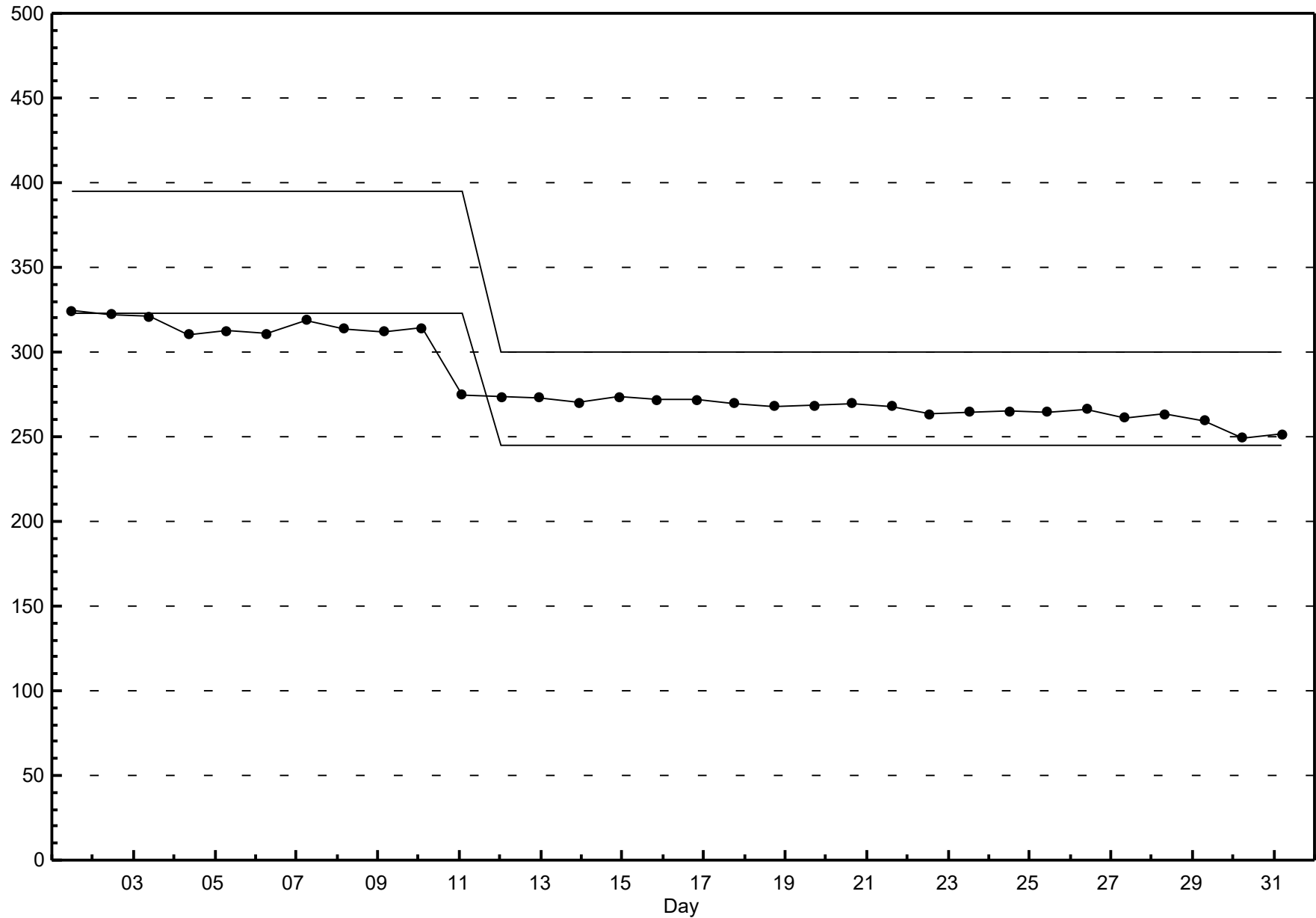
Henry Pirker - July 2018



Span Responses

Oxides of Nitrogen (NO_x)

Henry Pirker - July 2018



Hourly Averages

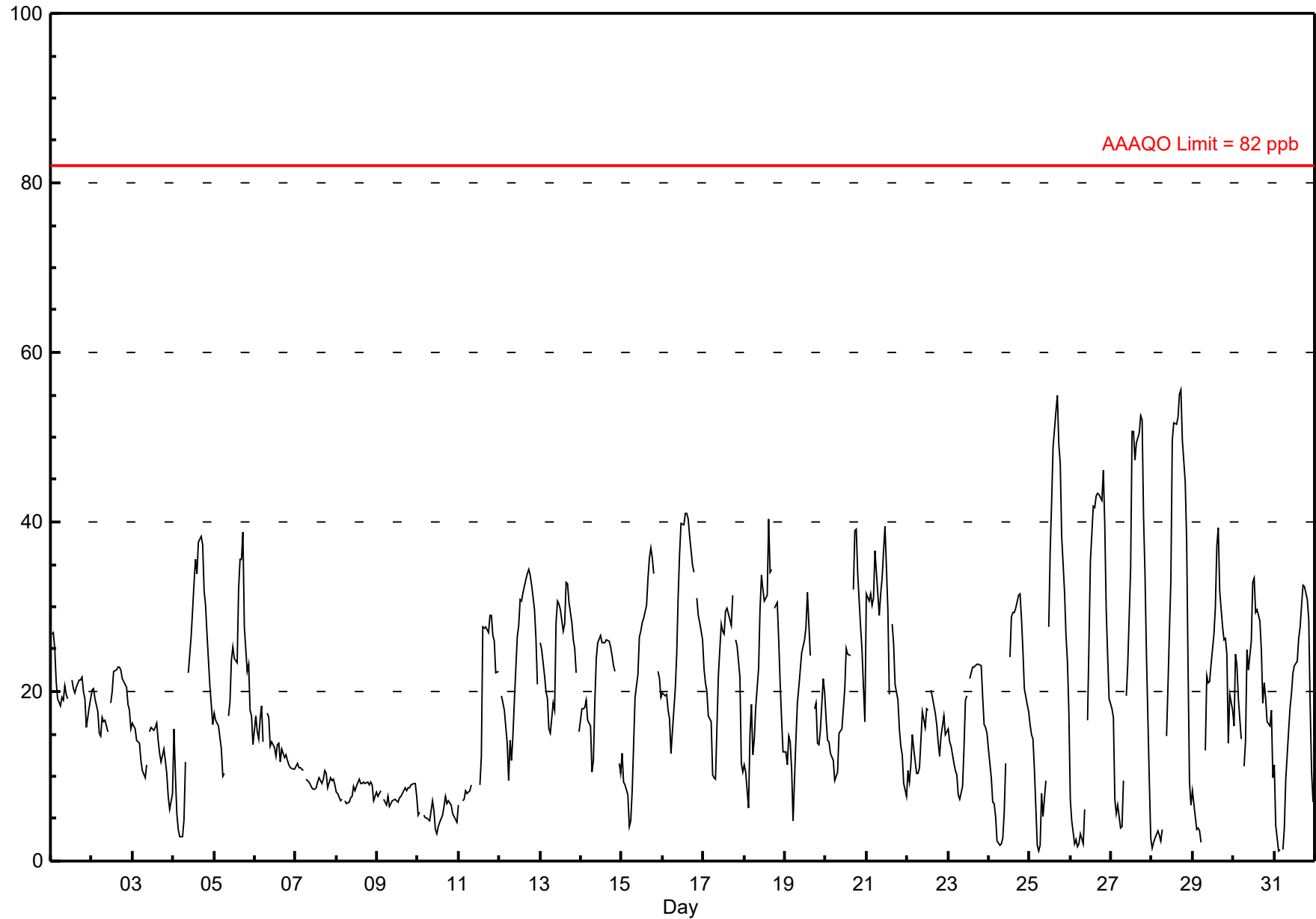
Ozone (O₃) - ppb

Henry Pirker - July 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 55.6 ppb on Jul 28 18:00 Maximum Daily Average: 28.6 ppb on Jul 16																								Hours in Service: 744 Hours of Data: 708 Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0		
Minimum Value: 1 ppb on Jul 31 03:00 Maximum Diurnal Average: 28.5 ppb at hour 17 Monthly Average: 19.16 ppb												Minimum Daily Average: 5.5 ppb on Jul 10 Minimum Diurnal Average: 9.2 ppb at hour 6 Percentiles: P ₁ = 1.9 P ₁₀ = 6.6 Q ₁ = 10.1 Median = 17.8 Q ₃ = 26.3 P ₉₀ = 33.8 P ₉₉ = 51.6														
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	27	27	25	21	19	18	19	19	21	20	19	A	21	20	20	20	21	21	22	20	19	16	18	19	20.6	26.9
2-Jul	20	20	19	18	15	15	17	16	17	15	A	19	20	22	22	23	23	23	21	21	21	19	18	16	19.1	23.0
3-Jul	16	16	14	14	14	12	11	10	11	A	15	16	16	16	16	14	13	12	13	12	10	8	6	8	12.7	16.3
4-Jul	16	10	6	4	3	3	5	12	A	22	27	30	33	36	34	38	38	37	32	30	27	21	18	16	21.5	38.3
5-Jul	17	17	16	15	13	10	10	A	17	19	24	25	24	23	32	36	36	39	28	22	23	18	17	14	21.5	38.7
6-Jul	17	15	14	17	18	14	A	17	17	14	14	13	12	14	14	12	13	12	13	12	11	11	11	11	13.8	18.3
7-Jul	11	12	11	11	11	A	10	9	9	9	8	8	9	9	10	9	10	11	10	9	10	10	10	9	9.7	11.5
8-Jul	8	8	7	7	A	7	7	7	7	8	9	8	9	10	9	9	9	9	9	9	9	9	7	8	8.3	9.6
9-Jul	8	8	8	A	7	7	8	6	7	7	7	7	7	7	8	8	9	8	9	9	9	9	9	8	7.8	9.2
10-Jul	5	6	A	5	5	5	5	5	7	6	4	3	4	5	5	6	8	7	7	7	6	5	5	5	5.5	7.7
11-Jul	7	A	7	7	8	8	8	9	C	C	C	C	9	12	28	27	28	27	29	29	27	26	22	22	17.9	29.0
12-Jul	A	19	19	18	14	9	14	12	15	19	27	28	31	31	32	33	34	34	34	32	30	26	21	A	24.2	34.4
13-Jul	26	25	22	20	19	16	15	19	18	28	31	30	30	27	28	33	33	30	28	26	25	22	A	15	24.6	32.9
14-Jul	18	18	18	19	17	16	11	12	19	24	26	27	26	26	26	26	26	25	24	23	22	A	11	10	20.4	26.5
15-Jul	13	9	9	8	4	5	8	14	19	22	27	27	28	29	30	33	36	37	36	34	A	22	21	19	21.3	37.0
16-Jul	20	19	20	18	17	13	15	20	24	31	36	40	40	41	41	40	38	35	34	A	31	29	28	26	28.6	41.1
17-Jul	23	21	20	17	16	10	10	10	16	22	28	27	27	30	30	28	28	31	A	26	25	22	11	10	21.2	31.3
18-Jul	11	11	6	15	18	12	14	18	23	30	34	32	31	31	40	34	34	A	30	31	26	21	17	13	23.2	40.3
19-Jul	13	11	15	14	11	5	14	19	20	23	25	26	28	32	28	24	A	18	19	14	14	15	22	20	18.6	31.7
20-Jul	17	14	14	13	12	10	10	11	15	16	18	20	25	24	24	A	32	39	39	34	28	25	21	16	20.7	39.1
21-Jul	31	31	31	30	31	37	34	29	32	33	37	39	30	20	A	28	26	21	19	16	14	13	9	8	25.9	39.4
22-Jul	11	9	11	15	13	10	10	11	14	18	16	18	18	A	20	19	17	16	14	12	15	17	15	15	14.6	20.1
23-Jul	16	14	14	12	11	10	8	7	9	13	19	20	A	21	23	23	23	23	23	23	19	16	16	15	16.4	23.2
24-Jul	13	10	7	7	5	2	2	2	3	6	11	A	24	29	29	29	30	31	31	29	25	20	18	18	16.6	31.5
25-Jul	16	15	14	11	2	1	2	8	5	9	A	28	37	42	49	53	55	49	47	38	32	27	24	18	25.2	54.9
26-Jul	7	5	2	3	2	2	3	2	6	A	17	26	35	42	42	43	43	43	43	46	40	30	24	19	22.8	46.1
27-Jul	18	17	7	6	7	4	4	9	A	20	23	35	51	51	47	49	50	53	52	40	34	24	10	3	26.7	52.6
28-Jul	2	2	3	4	3	2	4	A	15	21	27	33	50	52	51	52	55	56	50	45	38	23	9	7	26.1	55.6
29-Jul	8	5	4	4	4	2	A	13	22	21	21	23	27	30	37	39	32	28	26	26	24	14	20	18	19.5	39.4
30-Jul	16	24	23	19	14	A	11	14	25	23	26	33	33	29	30	28	25	19	21	19	16	16	18	10	21.5	33.3
31-Jul	11	4	1	1	A	1	4	10	15	18	20	22	23	23	26	28	30	32	32	31	28	18	10	7	17.3	32.5
14.7 14.1 12.9 12.4 11.5 9.2 10.1 12.1 15.3 18.3 21.2 23.7 25.2 26.1 27.7 28.3 28.5 27.6 26.5 24.2 21.9 18.4 15.5 13.4																								Diurnal Average		
31.5 30.7 31.4 30.1 31.0 36.6 34.0 29.0 31.5 33.3 36.7 39.8 50.7 51.7 51.5 53.0 55.1 55.6 52.1 46.1 39.7 29.7 28.1 26.2																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na																										

Hourly Averages

Ozone (O₃) - ppb
Henry Pirker - July 2018



Hourly Maximums

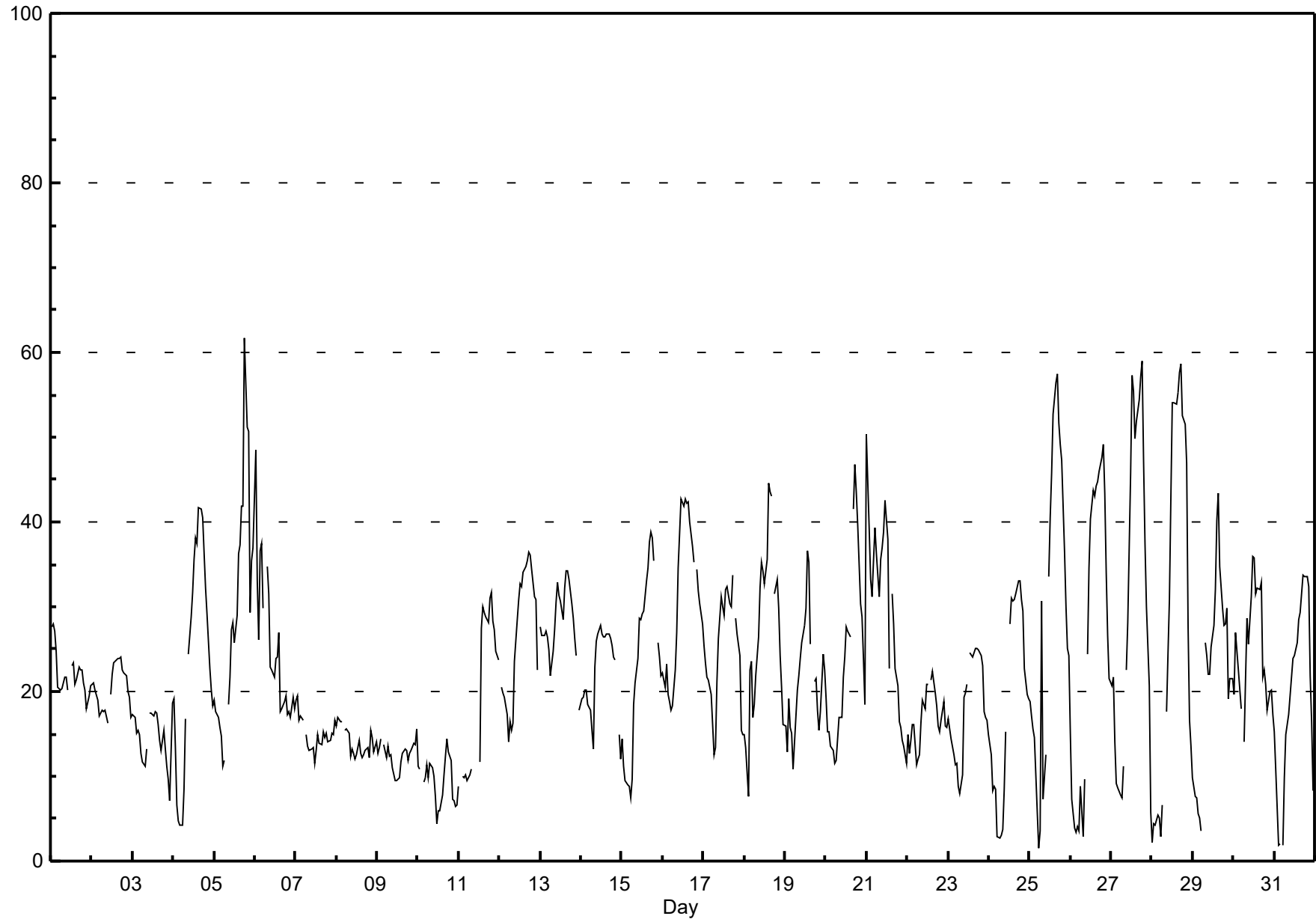
Ozone (O₃) - ppb

Henry Pirker - July 2018

Maximum Value: 61.7 ppb on Jul 5 19:00																								Hours in Service: 744		
Maximum Daily Average: 31.4 ppb on Jul 27																								Hours of Data: 708		
Minimum Value: 2 ppb on Jul 25 06:00																								Hours of Missing Data: 36		
Maximum Diurnal Average: 31.7 ppb at hour 17																								Hours of Calibration: 36		
Monthly Average: 22.68 ppb																								Percent Operational Time: 100.0		
Minimum Daily Average: 9.4 ppb on Jul 10																										
Minimum Diurnal Average: 12.7 ppb at hour 6																										
Percentiles: P ₁ = 2.9 P ₁₀ = 9.7 Q ₁ = 14.4 Median = 20.8 Q ₃ = 29.5 P ₉₀ = 37.6 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	28	28	27	25	20	20	20	21	22	22	20	A	23	23	21	21	23	23	23	21	20	18	19	21	22.1	28.0
2-Jul	21	21	20	19	17	18	18	18	18	16	A	20	22	23	24	24	24	24	23	22	22	20	19	17	20.4	24.1
3-Jul	17	17	15	15	15	13	12	11	13	A	17	17	17	18	17	16	14	13	15	13	11	10	7	19	14.5	18.6
4-Jul	19	13	7	5	4	4	9	17	A	24	29	32	36	38	38	42	41	41	36	32	29	23	20	18	24.2	41.7
5-Jul	19	18	17	16	15	11	12	A	18	22	27	28	26	29	36	37	42	42	62	51	51	29	35	37	29.6	61.7
6-Jul	49	33	26	37	38	30	A	35	32	23	23	22	24	24	27	18	18	19	19	17	18	17	19	18	25.3	48.5
7-Jul	19	20	17	17	17	A	15	14	13	13	13	12	13	15	14	14	15	15	15	14	14	15	15	17	15.0	19.5
8-Jul	16	17	16	16	A	15	16	15	12	13	13	12	12	14	13	12	12	13	13	12	15	15	13	14	14.0	17.0
9-Jul	13	13	14	A	14	12	14	12	13	11	9	9	10	10	12	13	13	13	12	13	13	14	14	16	12.4	15.5
10-Jul	11	11	A	9	10	11	10	11	11	10	8	4	6	6	8	10	12	14	13	12	7	7	6	7	9.4	14.3
11-Jul	9	A	10	10	10	9	10	11	C	C	C	C	12	27	30	29	29	28	31	32	28	27	25	24	20.6	31.7
12-Jul	A	21	20	19	17	14	16	15	16	24	29	31	33	32	34	35	35	36	36	34	31	31	23	A	26.5	36.4
13-Jul	28	27	27	27	26	25	22	25	27	31	33	31	31	28	32	34	34	33	30	29	26	24	A	18	28.2	34.3
14-Jul	19	19	20	20	18	18	15	13	23	26	27	28	27	26	26	27	27	26	25	24	24	A	15	12	22.1	27.9
15-Jul	14	11	9	9	9	7	10	18	21	24	29	28	29	29	33	35	38	39	38	36	A	26	24	22	23.4	38.9
16-Jul	22	21	23	20	19	18	18	22	27	35	39	43	42	43	42	42	40	37	35	A	34	32	30	28	30.9	42.7
17-Jul	25	23	22	21	20	16	13	13	21	26	31	30	29	32	32	30	30	34	A	29	27	24	15	15	24.3	33.7
18-Jul	15	13	8	23	24	17	18	22	26	32	35	34	33	36	45	44	43	A	31	33	30	24	21	16	27.1	44.6
19-Jul	16	13	19	16	15	11	17	20	22	24	26	28	30	37	35	26	A	21	22	18	15	18	24	23	21.5	36.7
20-Jul	19	15	15	14	13	12	12	14	17	17	22	24	28	27	26	A	41	47	44	40	30	29	24	19	23.8	46.8
21-Jul	50	39	33	31	36	39	36	31	36	37	39	42	38	23	A	31	28	23	21	17	16	14	14	11	29.8	50.4
22-Jul	15	13	14	16	16	11	12	13	16	19	18	21	21	A	21	22	20	18	16	15	17	19	16	16	16.7	22.4
23-Jul	17	16	14	12	11	12	9	8	10	19	20	21	A	25	24	25	25	25	25	24	23	18	17	17	18.1	25.2
24-Jul	15	13	8	9	8	3	3	3	4	8	15	A	28	31	31	31	31	33	33	31	29	23	20	19	18.7	33.1
25-Jul	19	17	16	15	6	2	4	31	7	12	A	33	41	46	53	56	57	52	49	47	36	30	25	24	29.5	57.5
26-Jul	15	7	4	3	4	4	9	3	10	A	24	35	40	44	43	44	45	46	48	49	43	34	27	21	26.2	49.1
27-Jul	21	22	14	9	9	8	7	11	A	23	28	46	57	55	50	52	54	57	59	47	37	30	21	6	31.4	58.9
28-Jul	2	4	4	5	5	3	7	A	18	24	31	43	54	54	54	55	58	59	53	52	47	28	17	14	30.0	58.7
29-Jul	10	8	7	6	5	4	A	26	24	22	22	25	28	32	40	43	35	30	28	28	30	19	21	21	22.4	43.4
30-Jul	20	27	25	23	18	A	14	22	29	26	31	36	36	32	32	32	33	22	23	21	18	20	20	17	24.9	35.9
31-Jul	15	11	2	2	A	2	10	15	17	19	22	24	24	26	28	29	31	34	34	34	32	22	16	8	19.9	33.6
19.3 17.7 15.8 15.6 15.1 12.7 13.3 16.9 18.7 21.5 24.2 27.1 28.3 29.5 30.7 31.0 31.7 30.5 30.4 28.2 25.9 21.9 19.4 17.8																								Diurnal Average		
50.4 39.2 33.2 36.6 37.5 39.4 36.3 34.7 35.6 37.0 38.8 45.7 57.3 55.5 53.9 56.4 57.6 58.7 61.7 51.6 50.7 34.1 35.4 37.0																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

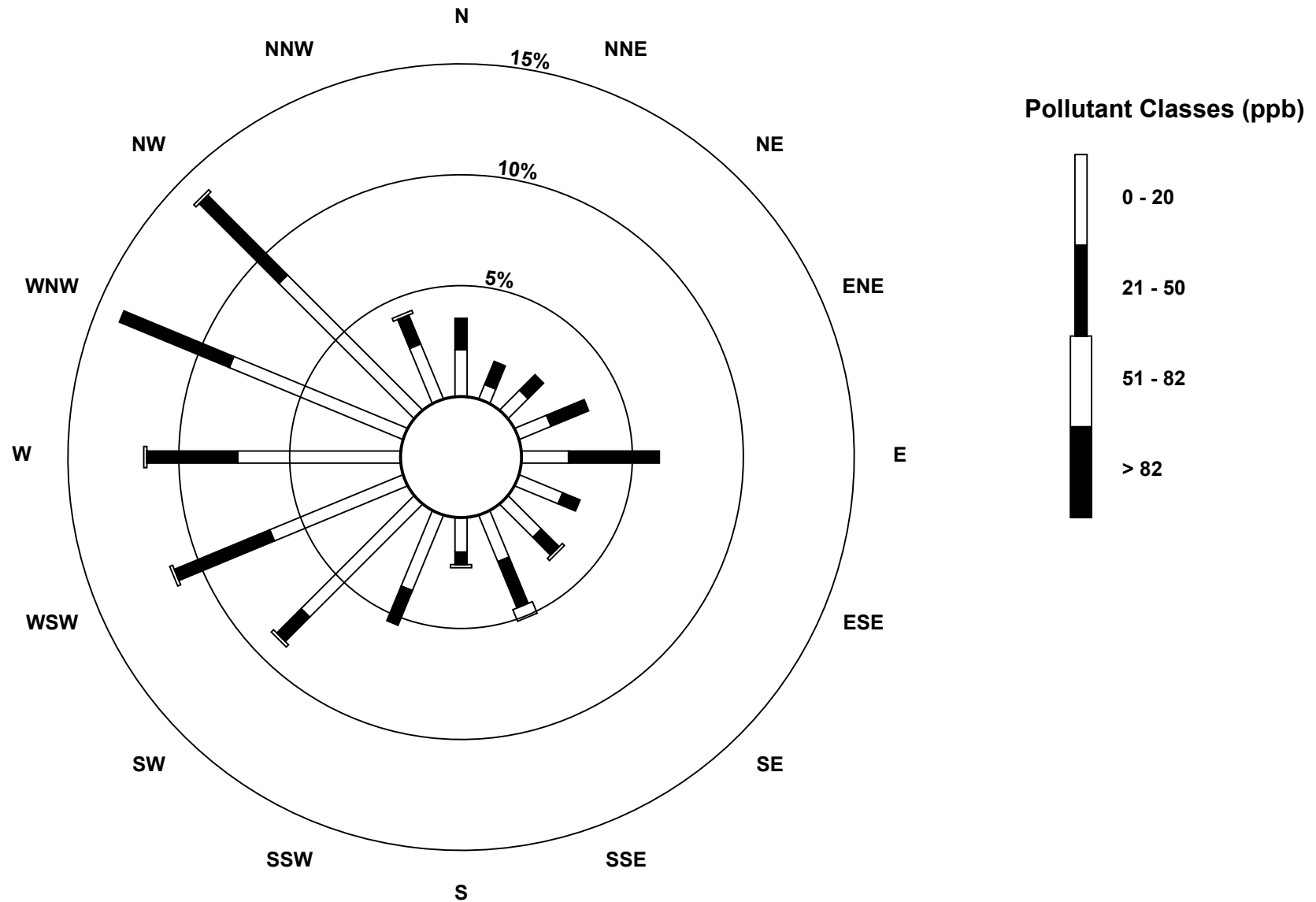
Hourly Maximums

Ozone (O₃) - ppb
Henry Pirker - July 2018



Pollutant Rose

Ozone (O₃) - ppb
Henry Pirker - July 2018



Eight Hour Running Averages

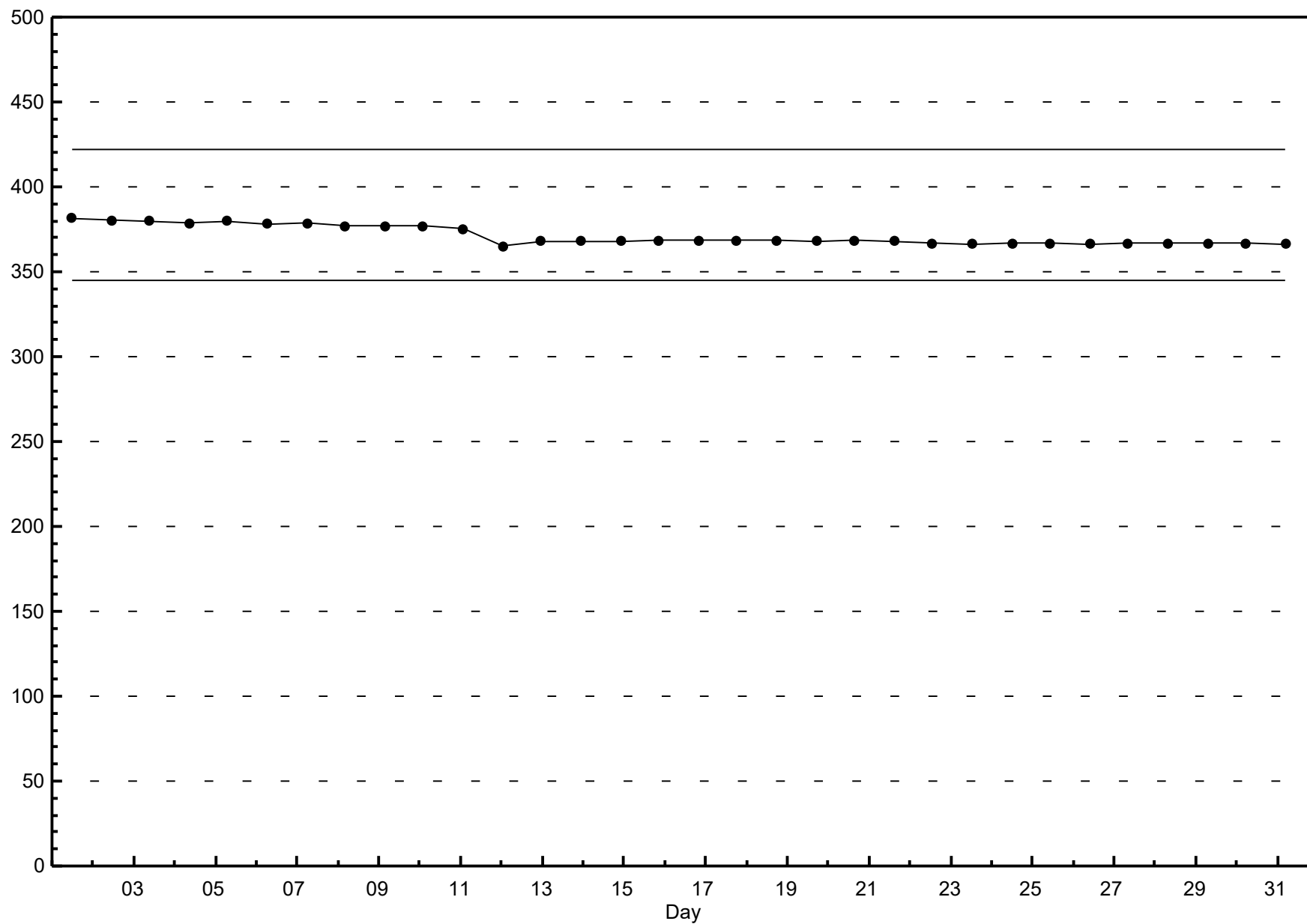
Ozone (O₃) - ppb

Henry Pirker - July 2018

Maximum Value: 51.3 ppb on Jul 28 20:00																								Hours in Service: 744	
Minimum Value: 2.8 ppb on Jul 28 07:00																								Hours of Data: 737	
Percentiles: P ₁ = 4.6 P ₁₀ = 7.5 Q ₁ = 11.4 Median = 18.3 Q ₃ = 25.8 P ₉₀ = 31.7 P ₉₉ = 46.2																								Hours of Missing Data: 7	
																								Hours of Calibration: 7	
																								Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Jul	29	28	27	26	25	23	22	22	21	20	20	19	20	20	20	20	20	21	21	21	21	20	20	20	28.7
2-Jul	19	19	19	19	18	18	18	18	17	16	16	16	17	18	19	20	20	21	22	22	22	22	21	20	22.1
3-Jul	19	18	17	17	16	15	14	13	13	12	12	13	13	13	14	15	15	15	14	14	13	12	11	10	19.2
4-Jul	11	10	9	8	7	7	7	7	6	8	11	14	19	23	28	31	32	34	35	35	34	32	30	27	34.7
5-Jul	25	22	20	18	17	15	14	14	14	14	15	17	18	20	23	25	27	30	30	30	30	29	27	25	30.3
6-Jul	22	19	18	17	16	16	16	16	16	16	16	15	15	15	14	14	13	13	13	13	13	12	12	12	22.2
7-Jul	11	11	11	11	11	11	11	11	10	10	10	9	9	9	9	9	9	9	10	10	10	10	10	10	11.5
8-Jul	9	9	9	9	8	8	8	7	7	7	7	8	8	8	8	9	9	9	9	9	9	9	9	9	9.5
9-Jul	9	8	8	8	8	8	8	7	7	7	7	7	7	7	7	7	8	8	8	8	8	8	9	9	8.7
10-Jul	8	8	8	7	7	6	6	5	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	8.2
11-Jul	6	6	6	6	6	7	7	8	8	8	N	N	N	N	N	N	N	22	23	24	26	28	27	26	27.5
12-Jul	26	25	23	22	20	18	17	15	15	15	16	17	19	22	24	27	29	31	32	33	32	32	31	30	32.6
13-Jul	29	28	26	24	23	21	20	20	19	20	21	22	23	25	26	28	30	30	30	29	29	28	28	26	30.2
14-Jul	24	22	20	19	18	17	16	16	16	17	18	19	20	21	23	25	26	26	26	25	25	25	23	20	25.9
15-Jul	19	16	14	12	9	9	8	9	10	11	13	16	19	22	24	27	29	31	32	33	34	33	31	29	33.5
16-Jul	27	25	22	20	20	18	18	18	18	20	22	25	27	31	34	37	38	39	39	38	37	36	34	32	38.9
17-Jul	29	27	25	24	23	20	18	16	15	15	16	17	19	21	24	26	27	29	29	29	28	27	25	22	29.4
18-Jul	20	17	15	14	13	12	12	13	15	17	21	23	24	27	30	32	33	34	33	33	32	31	28	25	33.8
19-Jul	21	20	18	16	14	12	12	13	14	15	16	18	20	23	25	26	26	26	25	23	21	19	18	17	26.4
20-Jul	17	17	16	16	16	15	14	12	12	12	13	14	16	17	19	20	23	26	29	31	31	32	31	29	31.5
21-Jul	29	28	27	27	27	29	30	32	32	32	33	34	34	32	31	31	30	29	26	23	20	19	18	15	33.9
22-Jul	14	12	11	11	11	11	11	11	12	13	13	14	14	15	16	18	18	18	18	17	16	16	16	15	18.0
23-Jul	15	15	15	15	14	13	12	11	11	10	11	12	12	14	16	18	20	22	22	23	22	22	21	20	22.8
24-Jul	19	17	15	13	11	9	8	6	5	4	5	5	7	11	15	19	23	26	29	29	29	28	27	25	29.2
25-Jul	24	22	19	17	14	12	10	9	7	7	5	8	13	19	25	32	39	45	45	46	46	44	41	36	46.2
26-Jul	30	25	19	15	11	8	5	3	3	3	5	8	13	19	24	30	35	36	40	42	43	41	39	36	42.7
27-Jul	33	30	25	20	16	13	10	9	8	8	10	14	21	27	34	39	41	45	48	49	47	44	39	33	49.2
28-Jul	27	21	15	10	6	3	3	3	5	7	11	15	22	29	35	38	43	47	50	51	50	46	41	35	51.3
29-Jul	29	23	17	12	8	5	5	6	8	10	12	15	18	22	24	28	29	30	30	31	30	28	26	23	30.6
30-Jul	21	21	21	20	19	19	18	18	19	19	19	21	24	24	27	28	28	28	27	26	23	22	20	18	28.4
31-Jul	16	14	12	10	9	7	5	5	5	7	10	13	14	17	20	22	24	26	27	28	29	28	26	24	29.0
Diurnal Maximums																									
N - Not Valid																									

Span Responses

Ozone (O₃)
Henry Pirker - July 2018



Hourly Averages

Carbon Monoxide (CO) - ppm

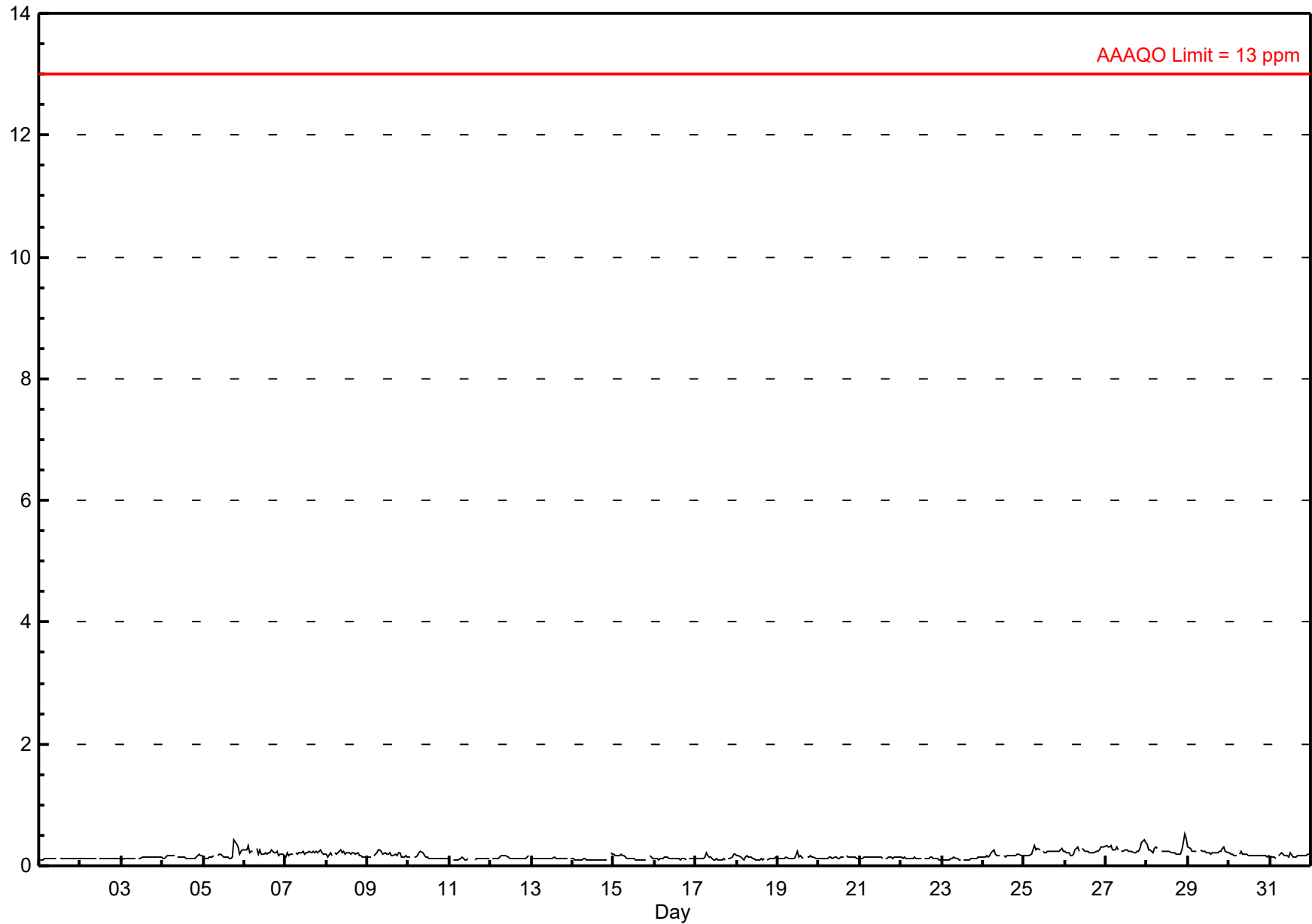
Henry Pirker - July 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 0.51 ppm on Jul 28 23:00 Maximum Daily Average: 0.28 ppm on Jul 27																				Hours in Service: 744 Hours of Data: 709 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0						
Minimum Value: 0.1 ppm on Jul 14 11:00 Minimum Daily Average: 0.11 ppm on Jul 14 Maximum Diurnal Average: 0.18 ppm at hour 23 Minimum Diurnal Average: 0.15 ppm at hour 4 Monthly Average: 0.162 ppm Percentiles: P ₁ = 0.10 P ₁₀ = 0.11 Q ₁ = 0.12 Median = 0.14 Q ₃ = 0.20 P ₉₀ = 0.24 P ₉₉ = 0.36																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.11	0.12
2-Jul	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	0.1	0.1	0.1	0.1	0.11	0.13
3-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	0.13	0.14
4-Jul	0.1	0.1	0.1	0.2	0.2	0.2	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	0.1	0.2	0.2	0.2	0.14	0.19
5-Jul	0.1	0.1	0.1	0.1	0.1	0.2	0.2	A	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.4	0.3	0.2	0.2	0.3	0.18	0.43
6-Jul	0.3	0.3	0.3	0.2	0.2	0.2	A	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22	0.33
7-Jul	0.1	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.21	0.26
8-Jul	0.2	0.1	0.2	0.2	A	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.19	0.26
9-Jul	0.1	0.1	0.1	A	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	0.2	0.1	0.1	0.2	0.2	0.18	0.26
10-Jul	0.1	0.1	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	0.23
11-Jul	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	C	C	C	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.11	0.15
12-Jul	A	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	A	0.14	0.17
13-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	A	0.1	0.12	0.14
14-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	A	0.2	0.2	0.11	0.21
15-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	A	0.2	0.1	0.1	0.13	0.19
16-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	A	0.1	0.1	0.1	0.1	0.12	0.14
17-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.2	0.2	0.13	0.21
18-Jul	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.12	0.16
19-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	A	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.13	0.23
20-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	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.13	0.16
21-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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	0.15
22-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	A	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.12	0.15
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	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.11	0.15
24-Jul	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.17	0.27
25-Jul	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.23	0.33
26-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	A	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.24	0.32
27-Jul	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	A	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.28	0.43
28-Jul	0.4	0.3	0.3	0.2	0.3	0.3	0.3	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	0.3	0.4	0.5	0.4	0.27	0.51
29-Jul	0.3	0.3	0.2	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	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.24	0.31
30-Jul	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	0.1	0.2	0.18	0.25
31-Jul	0.2	0.1	0.1	0.1	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.17	0.22
0.16 0.16 0.16 0.15 0.15 0.17 0.18 0.18 0.17 0.16 0.16 0.16 0.16 0.15 0.15 0.15 0.15 0.15 0.17 0.16 0.17 0.18 0.18 0.17																								Diurnal Average		
0.35 0.31 0.33 0.32 0.29 0.30 0.33 0.32 0.28 0.26 0.28 0.26 0.26 0.25 0.24 0.24 0.25 0.24 0.43 0.36 0.30 0.38 0.51 0.44																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm 24-hr na																										

Hourly Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - July 2018



Hourly Maximums

Carbon Monoxide (CO) - ppm

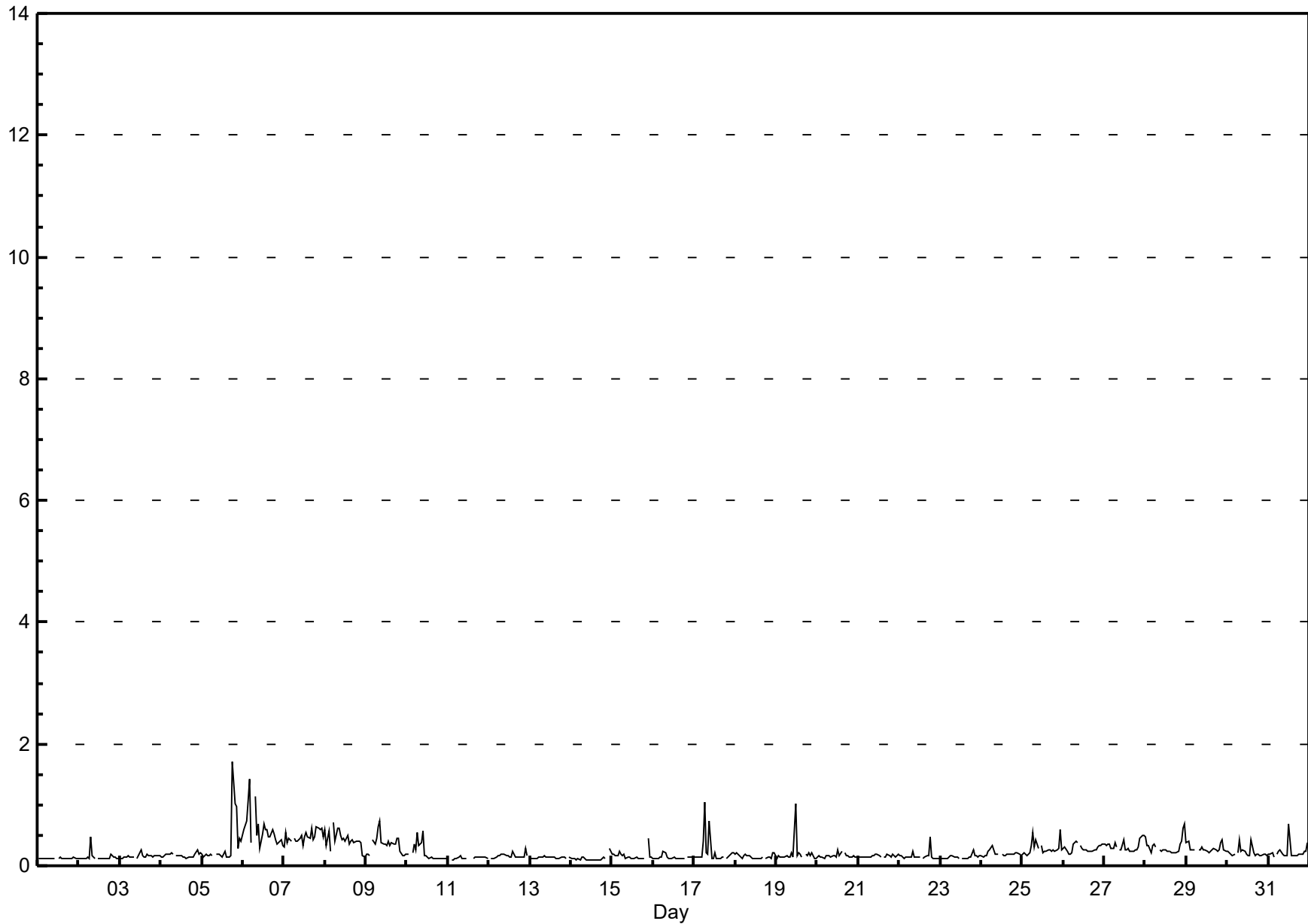
Henry Pirker - July 2018

Maximum Value: 1.72 ppm on Jul 5 19:00																				Maximum Daily Average: 0.60 ppm on Jul 6					Hours in Service: 744				
Minimum Value: 0.1 ppm on Jul 14 15:00																				Minimum Daily Average: 0.12 ppm on Jul 1					Hours of Data: 709				
Maximum Diurnal Average: 0.29 ppm at hour 8																				Minimum Diurnal Average: 0.19 ppm at hour 16					Hours of Missing Data: 35				
Monthly Average: 0.232 ppm																				Percentiles: P ₁ = 0.10 P ₁₀ = 0.12 Q ₁ = 0.13 Median = 0.17 Q ₃ = 0.26 P ₉₀ = 0.42 P ₉₉ = 0.95					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	0.1	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	0.1	0.1	0.1	0.1	0.12	0.14			
2-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	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	0.1	0.1	0.1	0.15	0.47			
3-Jul	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	A	0.1	0.2	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.15	0.26			
4-Jul	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.17	0.26			
5-Jul	0.2	0.1	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	1.7	1.0	1.0	0.3	0.5	0.4	0.34	1.72			
6-Jul	0.6	0.7	0.7	1.1	1.4	0.4	A	1.1	0.5	0.7	0.3	0.5	0.7	0.6	0.6	0.5	0.5	0.6	0.5	0.4	0.4	0.4	0.4	0.3	0.60	1.42			
7-Jul	0.3	0.6	0.4	0.4	0.4	A	0.4	0.4	0.4	0.5	0.5	0.3	0.5	0.5	0.5	0.5	0.6	0.4	0.5	0.6	0.6	0.6	0.6	0.5	0.48	0.64			
8-Jul	0.6	0.3	0.6	0.2	A	0.7	0.4	0.6	0.6	0.5	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.2	0.2	0.43	0.70			
9-Jul	0.2	0.2	0.2	A	0.4	0.3	0.5	0.6	0.7	0.4	0.4	0.4	0.3	0.4	0.3	0.4	0.4	0.3	0.4	0.4	0.2	0.2	0.2	0.2	0.35	0.74			
10-Jul	0.2	0.2	A	0.2	0.4	0.3	0.5	0.3	0.4	0.6	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	0.21	0.58			
11-Jul	0.1	A	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	C	C	C	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	0.16			
12-Jul	A	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	A	0.16	0.29			
13-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.13	0.16			
14-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	A	0.3	0.2	0.12	0.27			
15-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	A	0.4	0.1	0.1	0.16	0.45			
16-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.14	0.24			
17-Jul	0.1	0.1	0.1	0.1	0.1	0.4	1.0	0.2	0.2	0.7	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.2	0.2	0.2	0.23	1.03			
18-Jul	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.2	0.2	0.15	0.22			
19-Jul	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.1	1.0	0.2	0.2	0.2	0.1	A	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.20	1.01			
20-Jul	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.3	0.2	0.2	A	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.16	0.26			
21-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	A	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.16	0.20			
22-Jul	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.1	A	0.1	0.1	0.2	0.2	0.5	0.2	0.1	0.1	0.1	0.1	0.16	0.47			
23-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.2	0.1	0.3	0.2	0.2	0.2	0.2	0.14	0.26			
24-Jul	0.2	0.1	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20	0.34			
25-Jul	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.3	0.4	0.3	A	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.2	0.3	0.3	0.6	0.3	0.29	0.60			
26-Jul	0.3	0.3	0.2	0.2	0.2	0.2	0.4	0.4	0.4	A	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	0.4	0.28	0.41			
27-Jul	0.3	0.3	0.4	0.4	0.3	0.3	0.4	0.3	A	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.5	0.5	0.5	0.32	0.50			
28-Jul	0.5	0.3	0.3	0.2	0.3	0.4	0.3	A	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.6	0.7	0.32	0.69			
29-Jul	0.4	0.4	0.3	0.3	0.3	0.3	A	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.3	0.4	0.4	0.3	0.2	0.28	0.42			
30-Jul	0.2	0.2	0.2	0.2	0.2	A	0.2	0.4	0.2	0.3	0.2	0.2	0.2	0.2	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22	0.42			
31-Jul	0.2	0.2	0.2	0.1	A	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.7	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.22	0.69			
0.22 0.21 0.21 0.20 0.24 0.23 0.28 0.29 0.25 0.26 0.20 0.24 0.24 0.21 0.22 0.19 0.20 0.20 0.27 0.25 0.24 0.25 0.25 0.23																									Diurnal Average				
0.59 0.66 0.75 1.06 1.42 0.70 1.03 1.14 0.74 0.74 0.49 1.01 0.69 0.60 0.60 0.47 0.62 0.59 1.72 1.02 0.97 0.60 0.62 0.69																									Diurnal Maximum				
C - Calibration A - Automated Daily Zero Span																													

Hourly Maximums

Carbon Monoxide (CO) - ppm

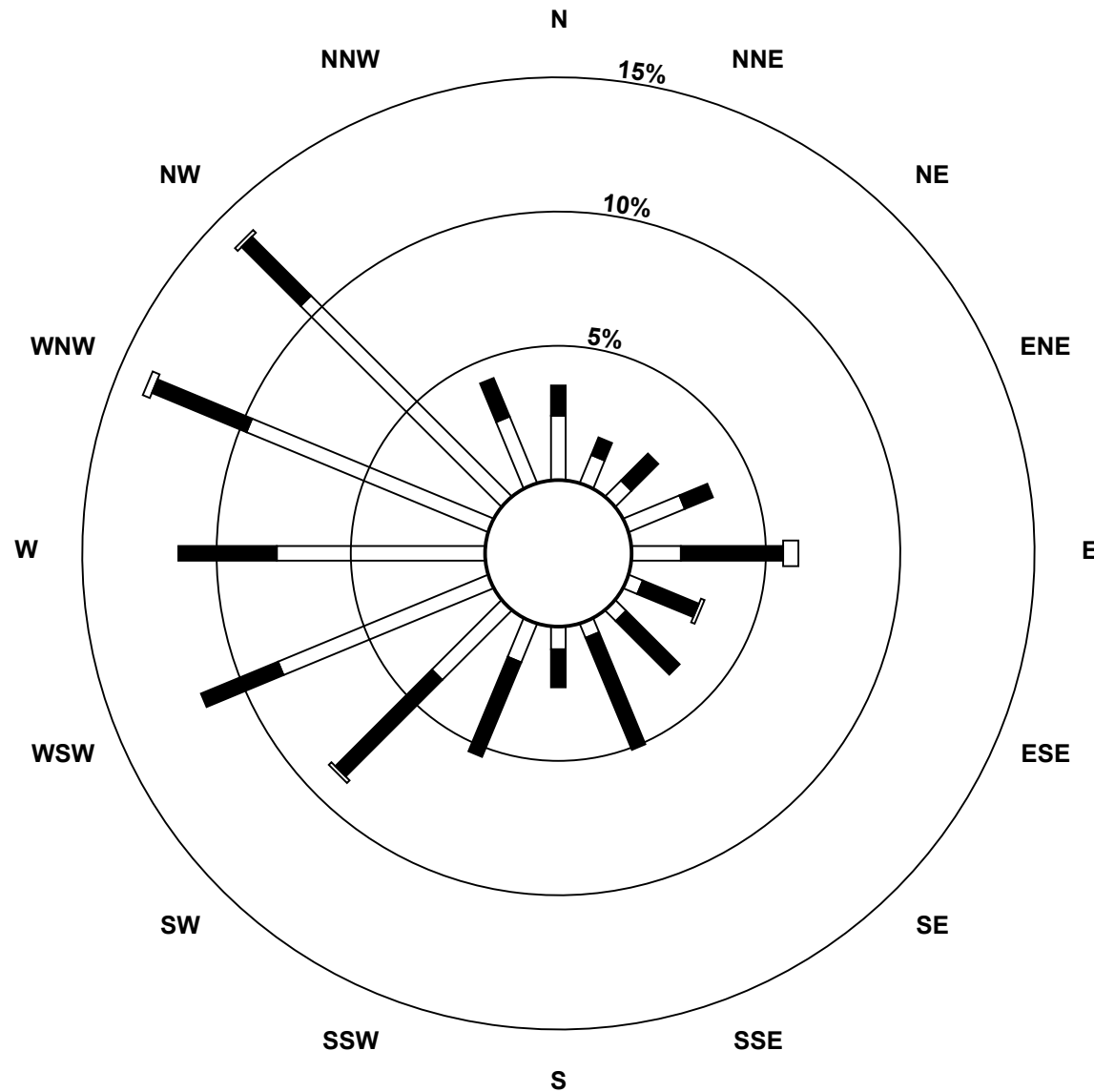
Henry Pirker - July 2018



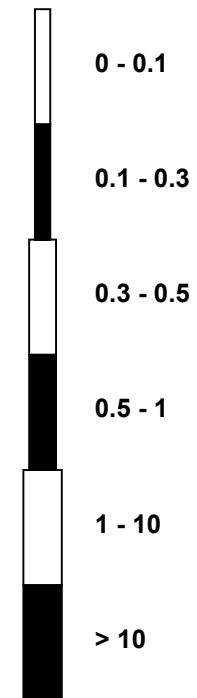
Pollutant Rose

Carbon Monoxide (CO) - ppm

Henry Pirker - July 2018



Pollutant Classes (ppm)



Eight Hour Running Averages

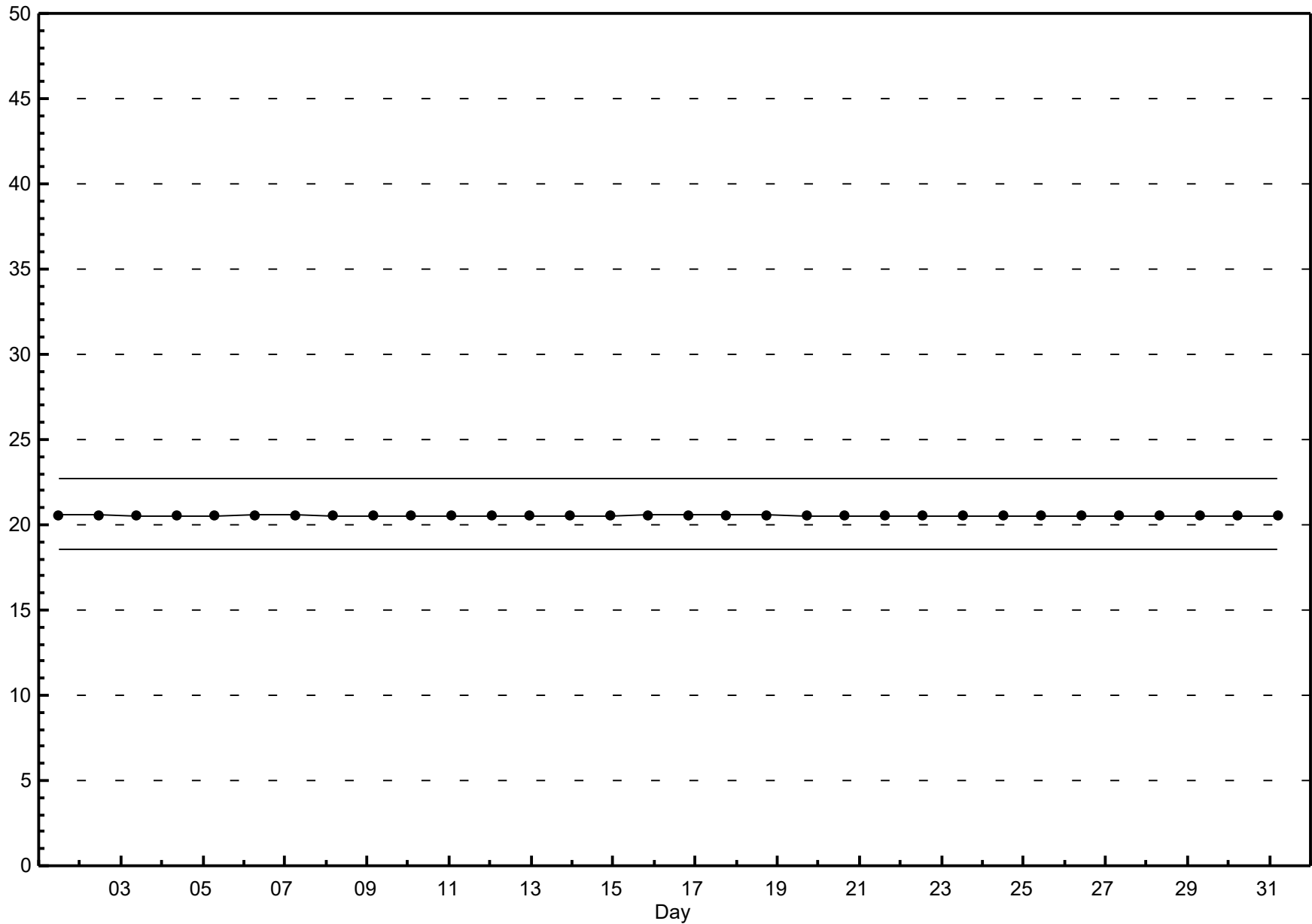
Carbon Monoxide (CO) - ppm

Henry Pirker - July 2018

Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 0.33 ppm on Jul 29 04:00																									Hours in Service: 744 Hours of Data: 738 Hours of Missing Data: 6 Hours of Calibration: 6 Percent Operational Time: 100.0
Minimum Value: 0.09 ppm on Jul 14 17:00 Percentiles: P ₁ = 0.10 P ₁₀ = 0.11 Q ₁ = 0.12 Median = 0.14 Q ₃ = 0.20 P ₉₀ = 0.24 P ₉₉ = 0.32																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
1-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
2-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
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	0.14
4-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.16
5-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.25
6-Jul	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.29
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	0.23
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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22
9-Jul	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22
10-Jul	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.19
11-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	N	N	N	N	N	N	0.1	0.1	0.1	0.1	0.12
12-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
13-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
14-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
15-Jul	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.18
16-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
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	0.15
18-Jul	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.15
19-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	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.16
20-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
21-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	0.14
22-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
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	0.12
24-Jul	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19
25-Jul	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26
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	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.26
27-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	0.3	0.3	0.3	0.31
28-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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.32
29-Jul	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	0.2	0.2	0.2	0.2	0.2	0.2	0.33
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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.25
31-Jul	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.18
0.31 0.32 0.33 0.33 0.33 0.31 0.30 0.30 0.29 0.28 0.27 0.27 0.26 0.26 0.25 0.24 0.24 0.24 0.24 0.24 0.23 0.24 0.25 0.28 0.30 Diurnal Maximums																									
N - Not Valid Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 5 ppm																									

Span Responses

Carbon Monoxide (CO)
Henry Pirker - July 2018



Hourly Averages

Total Hydrocarbons (THC) - ppm

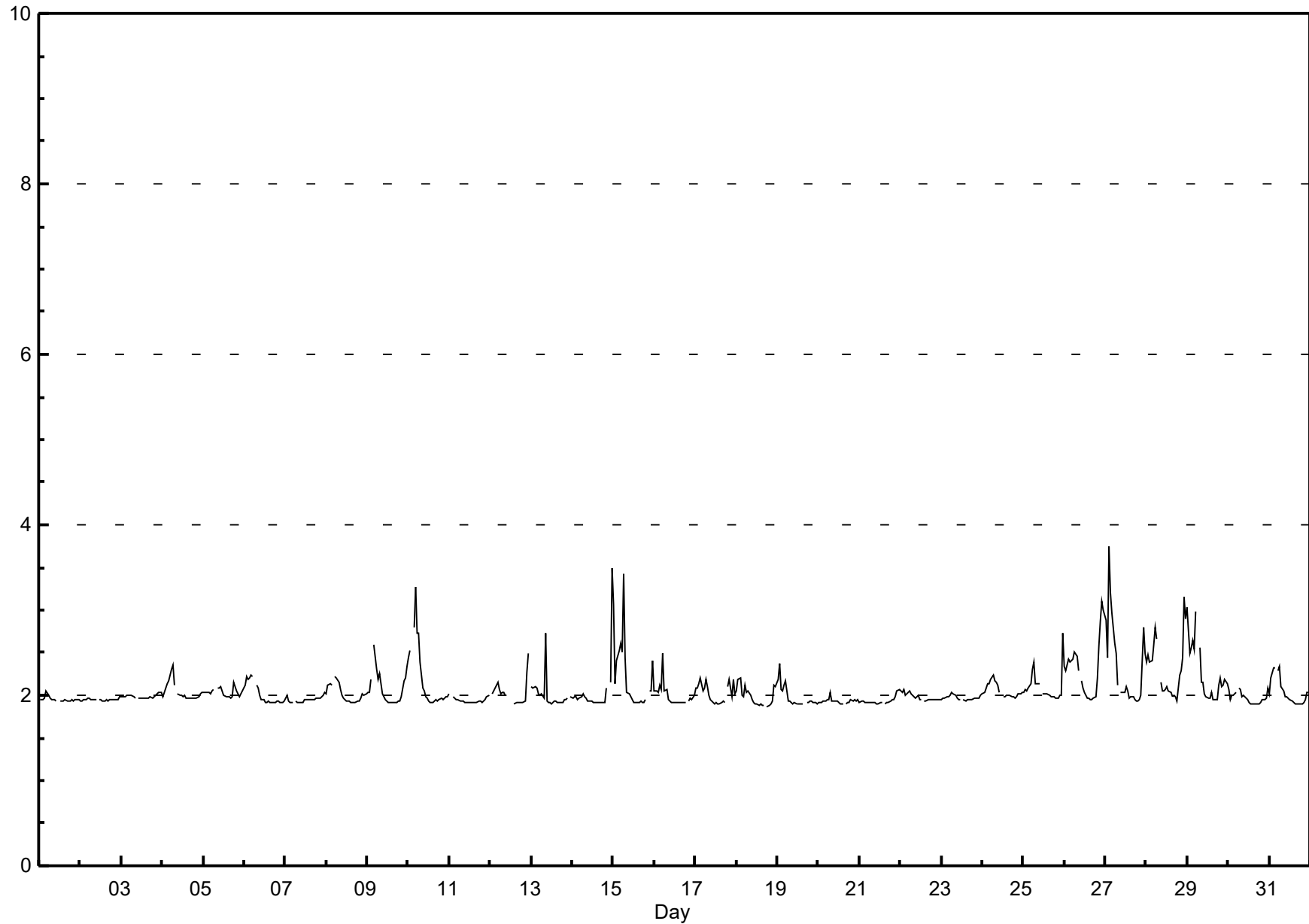
Henry Pirker - July 2018

Maximum Value: 3.75 ppm on Jul 27 03:00																					Maximum Daily Average: 2.34 ppm on Jul 27					Hours in Service: 744	
Minimum Value: 1.9 ppm on Jul 18 19:00																					Minimum Daily Average: 1.93 ppm on Jul 20					Hours of Data: 708	
Maximum Diurnal Average: 2.23 ppm at hour 6																					Minimum Diurnal Average: 1.94 ppm at hour 16					Hours of Missing Data: 36	
Monthly Average: 2.051 ppm																					Percentiles: P ₁ = 1.89 P ₁₀ = 1.91 Q ₁ = 1.93 Median = 1.97 Q ₃ = 2.06 P ₉₀ = 2.29 P ₉₉ = 3.07					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	2.0	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.95	2.05	
2-Jul	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.95	1.98	
3-Jul	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.98	2.04	
4-Jul	2.0	2.0	2.1	2.1	2.2	2.3	2.4	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.04	2.35	
5-Jul	2.0	2.0	2.0	2.0	2.0	2.1	2.1	A	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.0	2.0	2.0	2.0	2.0	2.03	2.16	
6-Jul	2.1	2.2	2.2	2.2	2.2	2.2	A	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.01	2.24	
7-Jul	2.0	2.0	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.95	2.04	
8-Jul	2.0	2.1	2.1	2.1	A	2.2	2.2	2.2	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.01	2.23	
9-Jul	2.0	2.0	2.2	A	2.6	2.3	2.2	2.2	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.2	2.2	2.3	2.07	2.59	
10-Jul	2.4	2.5	A	2.8	3.3	2.7	2.7	2.4	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.19	3.28	
11-Jul	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	2.0	2.0	1.94	2.01		
12-Jul	A	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	C	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.3	2.5	A	2.03	2.49	
13-Jul	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.7	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	A	2.0	2.01	2.73	
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	1.9	2.1	A	2.1	3.5	2.03	3.49	
15-Jul	3.1	2.1	2.4	2.5	2.6	2.5	3.4	2.4	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	2.0	2.1	2.4	2.22	3.43	
16-Jul	2.0	2.0	2.0	2.1	2.1	2.5	2.1	2.1	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	2.0	2.0	2.0	2.00	2.49	
17-Jul	2.1	2.1	2.1	2.2	2.0	2.1	2.2	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.1	2.2	2.0	2.2	2.0	2.03	2.21	
18-Jul	2.0	2.2	2.2	2.0	2.0	2.1	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	2.1	2.1	1.98	2.20	
19-Jul	2.2	2.4	2.1	2.1	2.1	2.2	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	1.98	2.37	
20-Jul	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.0	1.9	2.0	1.9	1.9	1.93	2.04	
21-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	A	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.1	1.93	2.07	
22-Jul	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	A	1.9	1.9	1.9	1.9	2.0	1.9	2.0	1.9	1.9	1.9	1.98	2.06	
23-Jul	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	A	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.97	2.04	
24-Jul	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.05	2.23	
25-Jul	2.0	2.1	2.1	2.1	2.1	2.3	2.4	2.1	2.1	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.7	2.09	2.73	
26-Jul	2.3	2.3	2.4	2.4	2.4	2.4	2.5	2.5	2.3	A	2.2	2.1	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.2	2.6	2.9	3.1	3.0	2.32	3.10	
27-Jul	2.9	2.4	3.8	3.2	3.0	2.6	2.5	2.1	A	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.8	2.5	2.34	3.75	
28-Jul	2.4	2.5	2.4	2.4	2.6	2.8	2.7	A	2.1	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	1.9	2.2	2.3	2.4	3.1	2.9	2.31	3.15	
29-Jul	3.0	2.5	2.6	2.7	2.5	3.0	A	2.6	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.1	2.2	2.1	2.1	2.2	2.1	2.25	3.04	
30-Jul	2.1	2.0	2.0	2.0	2.0	A	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	1.97	2.08	
31-Jul	2.0	2.2	2.3	2.3	A	2.3	2.3	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.03	2.34	
2.15 2.12 2.16 2.17 2.20 2.23 2.19 2.10 2.05 1.99 1.97 1.96 1.95 1.94 1.94 1.94 1.94 1.94 1.95 1.98 2.00 2.04 2.14 2.19																									Diurnal Average		
3.07 2.53 3.75 3.20 3.28 2.98 3.43 2.56 2.73 2.15 2.17 2.08 2.10 2.05 2.04 2.01 2.01 1.99 2.16 2.23 2.57 2.86 3.15 3.49																									Diurnal Maximum		
C - Calibration																									A - Automated Daily Zero Span		

Hourly Averages

Total Hydrocarbons (THC) - ppm

Henry Pirker - July 2018



Hourly Maximums

Total Hydrocarbons (THC) - ppm

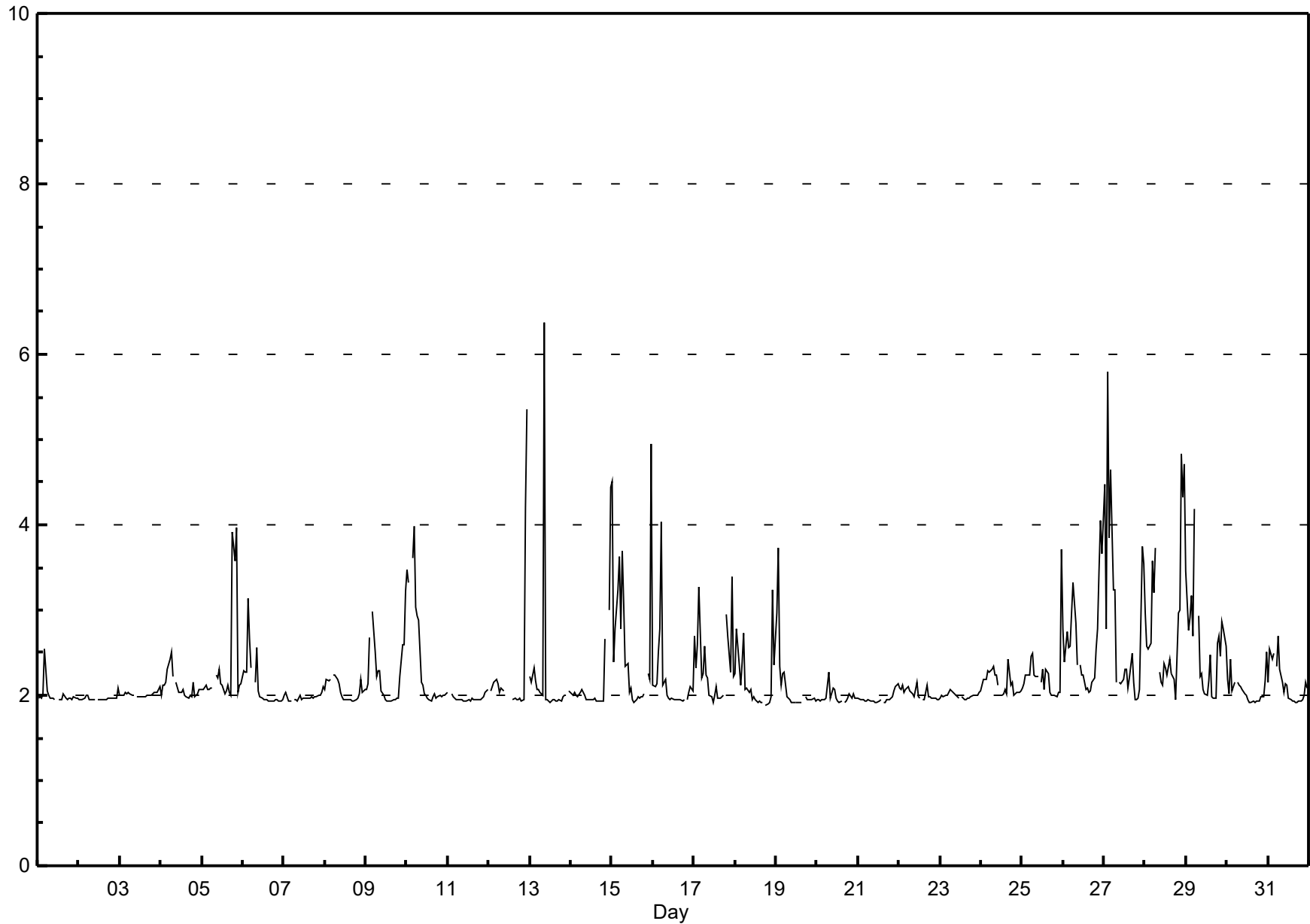
Henry Pirker - July 2018

Maximum Value: 6.38 ppm on Jul 13 09:00																					Maximum Daily Average: 2.85 ppm on Jul 28					Hours in Service: 744	
Minimum Value: 1.9 ppm on Jul 18 19:00																					Minimum Daily Average: 1.96 ppm on Jul 21					Hours of Data: 708	
Maximum Diurnal Average: 2.56 ppm at hour 24																					Minimum Diurnal Average: 1.99 ppm at hour 18					Hours of Missing Data: 36	
Monthly Average: 2.215 ppm																					Percentiles: P ₁ = 1.92 P ₁₀ = 1.93 Q ₁ = 1.96 Median = 2.02 Q ₃ = 2.21 P ₉₀ = 2.73 P ₉₉ = 4.50					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	2.0	2.0	2.0	2.0	2.5	2.1	2.0	2.0	2.0	2.0	2.0	A	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.00	2.55	
2-Jul	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	1.97	2.08	
3-Jul	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.01	2.10	
4-Jul	2.0	2.1	2.1	2.2	2.3	2.4	2.5	2.2	A	2.2	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.10	2.50	
5-Jul	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.2	2.2	2.3	2.1	2.1	2.0	2.1	2.1	2.0	2.0	3.9	3.6	4.0	2.0	2.1	2.1	2.33	3.97	
6-Jul	2.3	2.3	2.3	3.1	2.7	2.3	A	2.2	2.6	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	1.9	2.0	2.13	3.14	
7-Jul	2.0	2.0	2.0	1.9	1.9	A	2.0	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	1.98	2.10	
8-Jul	2.1	2.2	2.2	2.2	A	2.2	2.2	2.2	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.2	2.0	2.1	2.05	2.24	
9-Jul	2.1	2.1	2.7	A	3.0	2.5	2.2	2.3	2.3	2.1	2.0	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.2	2.6	2.6	3.2	2.23	3.22	
10-Jul	3.5	3.3	A	3.6	4.0	3.0	2.9	2.9	2.1	2.1	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.40	3.98	
11-Jul	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	2.0	2.0	1.9	2.0	2.0	2.0	2.1	1.97	2.06	
12-Jul	A	2.1	2.1	2.1	2.2	2.1	2.0	2.1	2.1	2.1	C	C	C	C	1.9	2.0	2.0	2.0	2.0	1.9	2.0	4.2	5.4	A	2.34	5.36	
13-Jul	2.2	2.1	2.3	2.2	2.1	2.1	2.0	2.0	6.4	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	A	2.1	2.21	6.38	
14-Jul	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.7	A	3.0	4.4	2.16	4.44	
15-Jul	4.5	2.4	2.8	3.2	3.6	2.8	3.7	3.1	2.3	2.4	2.0	2.1	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	A	2.3	2.2	4.9	2.61	4.94	
16-Jul	2.1	2.1	2.1	2.5	2.8	4.0	2.1	2.2	2.0	2.0	1.9	2.0	2.0	2.0	1.9	1.9	2.0	1.9	1.9	A	2.0	2.0	2.1	2.1	2.16	4.03	
17-Jul	2.7	2.3	2.6	3.3	2.2	2.3	2.6	2.2	2.2	2.0	2.0	1.9	2.0	2.1	2.0	2.0	2.0	2.0	A	2.9	2.7	2.3	3.4	2.2	2.34	3.39	
18-Jul	2.3	2.8	2.4	2.1	2.4	2.7	2.1	2.1	2.0	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.0	3.2	2.3	2.16	3.23	
19-Jul	3.0	3.7	2.3	2.1	2.3	2.3	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.0	1.9	2.0	1.9	1.9	2.0	1.9	2.12	3.74	
20-Jul	2.0	1.9	1.9	2.0	1.9	2.0	2.1	2.3	2.0	2.1	2.1	2.0	1.9	1.9	1.9	A	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.99	2.28	
21-Jul	2.0	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	A	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.1	2.1	1.96	2.13	
22-Jul	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.0	2.0	A	1.9	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.02	2.15	
23-Jul	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.00	2.06	
24-Jul	2.1	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.2	2.2	2.1	A	2.0	2.0	2.1	2.0	2.4	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.14	2.43	
25-Jul	2.1	2.1	2.2	2.2	2.2	2.5	2.5	2.2	2.2	2.2	A	2.1	2.3	2.1	2.3	2.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.7	2.24	3.71	
26-Jul	2.8	2.4	2.7	2.6	2.6	3.0	3.3	2.9	2.3	A	2.4	2.2	2.2	2.1	2.1	2.0	2.1	2.2	2.2	2.6	2.8	3.5	4.1	3.7	2.63	4.05	
27-Jul	4.5	2.8	5.8	3.9	4.6	3.2	3.2	2.2	A	2.2	2.1	2.2	2.3	2.3	2.1	2.2	2.5	2.2	2.0	2.0	2.0	2.1	3.7	3.5	2.85	5.80	
28-Jul	3.0	2.6	2.5	2.6	3.6	3.2	3.7	A	2.3	2.1	2.1	2.4	2.3	2.2	2.4	2.3	2.2	2.2	2.0	3.0	3.0	4.8	4.3	4.7	2.85	4.83	
29-Jul	3.5	2.8	2.9	3.2	2.7	4.2	A	2.9	2.2	2.3	2.1	2.0	2.0	2.2	2.5	2.0	2.0	2.0	2.6	2.7	2.5	2.9	2.8	2.6	2.58	4.18	
30-Jul	2.2	2.0	2.4	2.1	2.1	A	2.1	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.2	2.5	2.06	2.50	
31-Jul	2.2	2.5	2.4	2.5	A	2.3	2.7	2.3	2.1	2.0	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.2	2.1	2.13	2.70	
2.43 2.30 2.37 2.39 2.49 2.47 2.36 2.22 2.26 2.06 2.03 2.02 2.01 2.00 2.01 1.99 2.01 1.99 2.06 2.14 2.17 2.29 2.51 2.56																									Diurnal Average		
4.51 3.74 5.80 3.85 4.64 4.18 3.73 3.06 6.38 2.37 2.36 2.37 2.32 2.31 2.48 2.25 2.49 2.19 3.91 3.58 3.97 4.83 5.36 4.94																									Diurnal Maximum		
C - Calibration																									A - Automated Daily Zero Span		

Hourly Maximums

Total Hydrocarbons (THC) - ppm

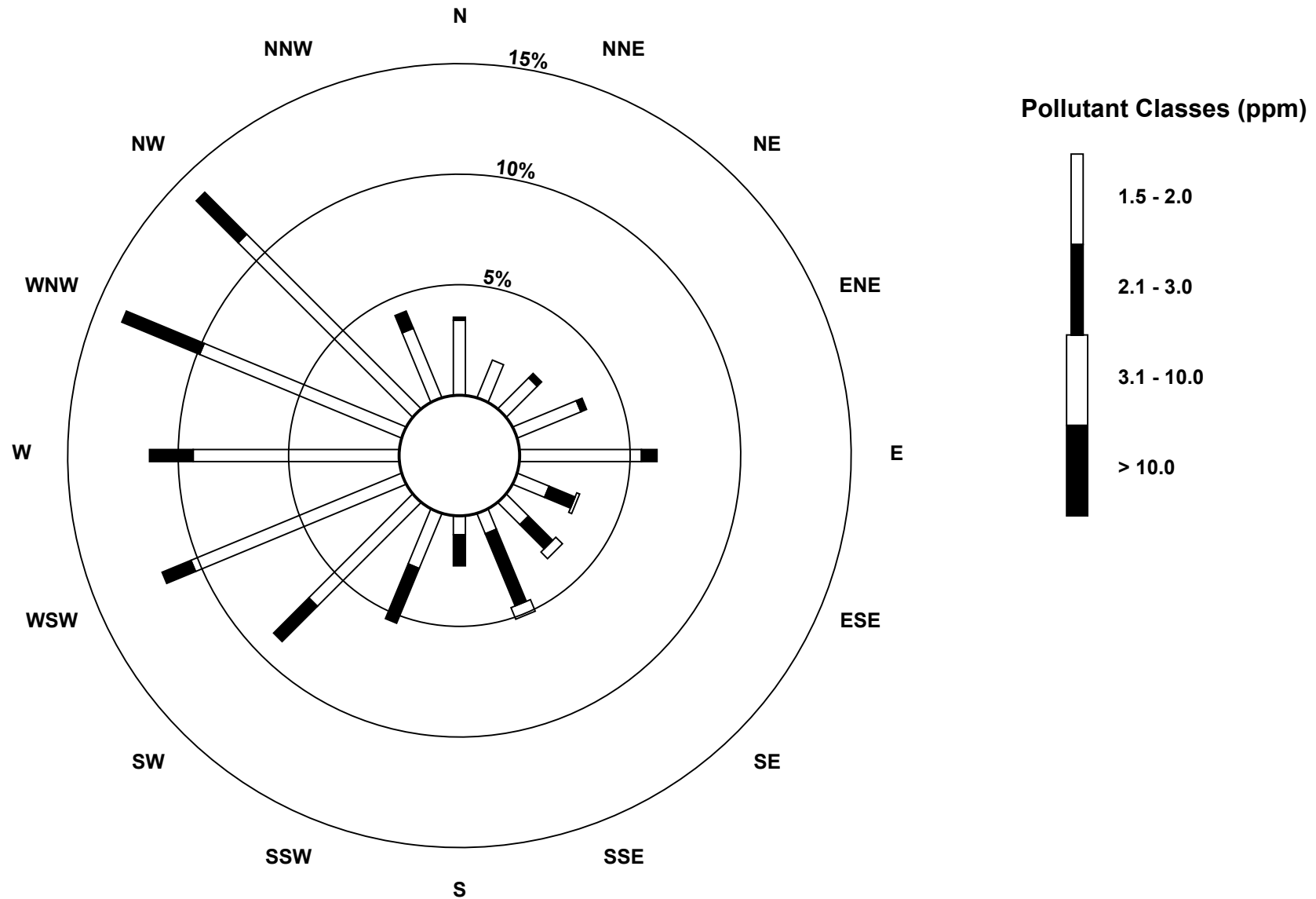
Henry Pirker - July 2018



Pollutant Rose

Total Hydrocarbons (THC) - ppm

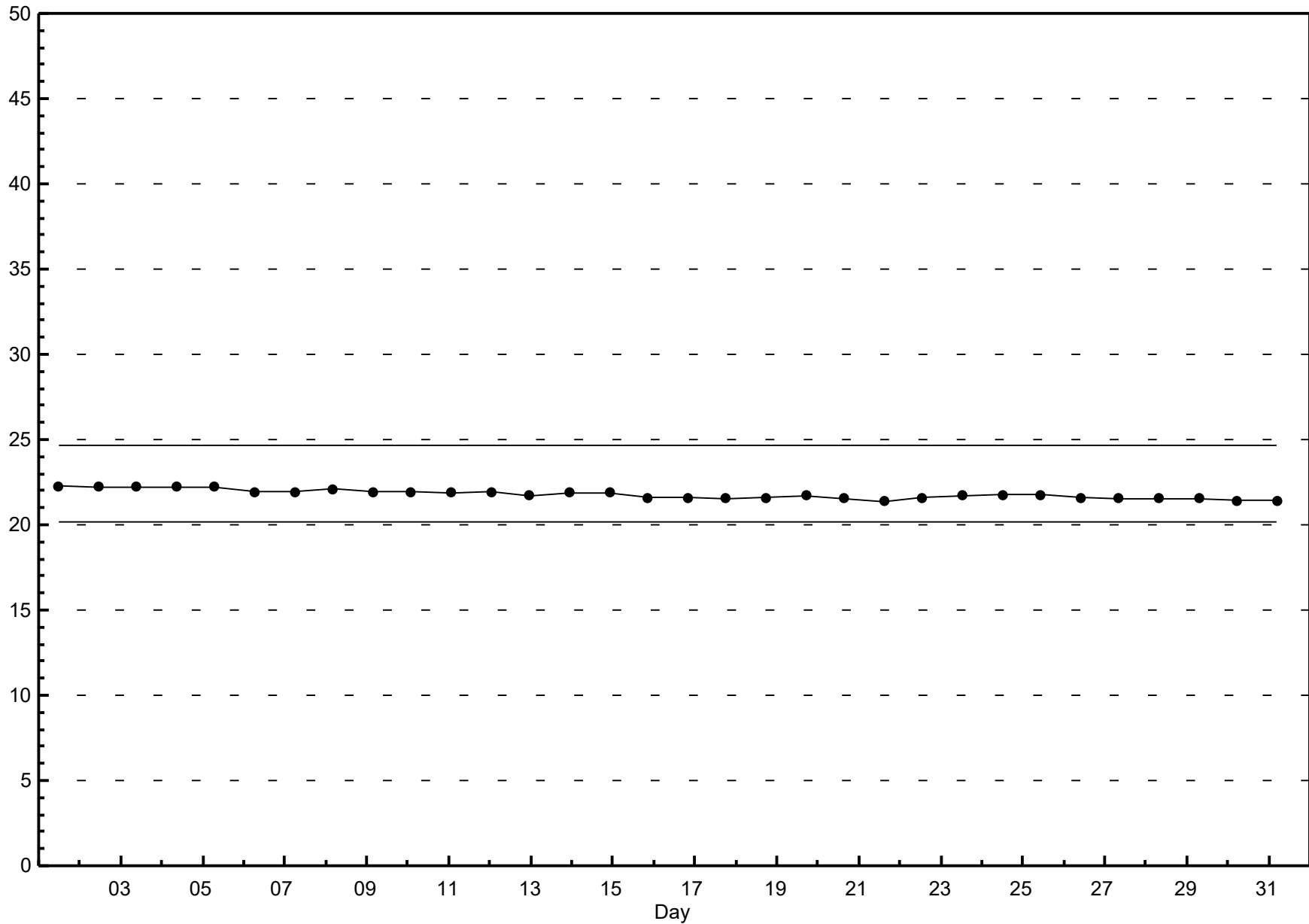
Henry Pirker - July 2018



Span Responses

Total Hydrocarbons (THC)

Henry Pirker - July 2018



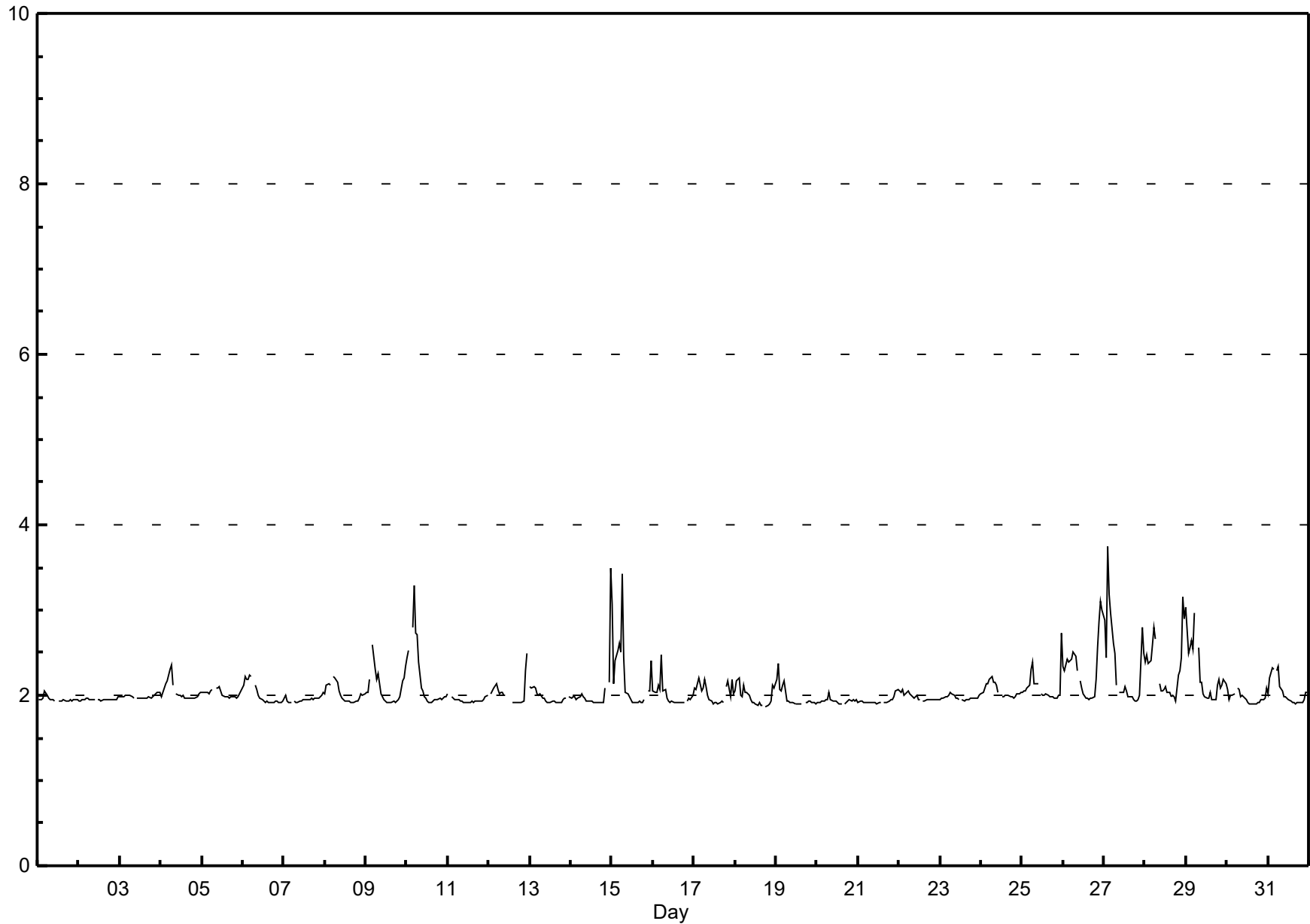
Hourly Averages

Methane (CH₄) - ppm
Henry Pirker - July 2018

Maximum Value: 3.75 ppm on Jul 27 03:00																				Maximum Daily Average: 2.34 ppm on Jul 27					Hours in Service: 744	
Minimum Value: 1.9 ppm on Jul 18 19:00																				Minimum Daily Average: 1.93 ppm on Jul 20					Hours of Data: 708	
Maximum Diurnal Average: 2.23 ppm at hour 6																				Minimum Diurnal Average: 1.94 ppm at hour 16					Hours of Missing Data: 36	
Monthly Average: 2.050 ppm																				Percentiles: P ₁ = 1.89 P ₁₀ = 1.92 Q ₁ = 1.93 Median = 1.97 Q ₃ = 2.05 P ₉₀ = 2.28 P ₉₉ = 3.07					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	2.0	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.95	2.05
2-Jul	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.95	1.98
3-Jul	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.98	2.04
4-Jul	2.0	2.0	2.1	2.1	2.2	2.3	2.4	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.04	2.35
5-Jul	2.0	2.0	2.0	2.0	2.0	2.1	2.1	A	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.02	2.10
6-Jul	2.1	2.2	2.2	2.2	2.2	2.2	A	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.01	2.23
7-Jul	2.0	2.0	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.95	2.04
8-Jul	2.0	2.1	2.1	2.1	A	2.2	2.2	2.2	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.01	2.23
9-Jul	2.0	2.0	2.2	A	2.6	2.3	2.2	2.2	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.2	2.2	2.3	2.07	2.59
10-Jul	2.4	2.5	A	2.8	3.3	2.7	2.7	2.4	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.19	3.28
11-Jul	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	2.0	2.0	2.0	1.94	2.01
12-Jul	A	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	C	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.3	2.5	A	2.03	2.49
13-Jul	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	A	2.0	1.97	2.11
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	1.9	2.1	A	2.1	3.5	2.03	3.49
15-Jul	3.1	2.1	2.4	2.5	2.6	2.5	3.4	2.4	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	2.0	2.1	2.4	2.22	3.43
16-Jul	2.0	2.0	2.0	2.1	2.1	2.5	2.1	2.1	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	2.0	2.0	2.0	2.00	2.48
17-Jul	2.1	2.1	2.1	2.2	2.0	2.1	2.2	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.1	2.2	2.0	2.2	2.0	2.03	2.21
18-Jul	2.0	2.2	2.2	2.0	2.0	2.1	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	2.1	2.1	1.98	2.20
19-Jul	2.2	2.4	2.1	2.0	2.1	2.2	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	1.98	2.37
20-Jul	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.0	1.9	2.0	1.9	1.9	1.93	2.04
21-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	A	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.1	1.94	2.07
22-Jul	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	A	1.9	1.9	1.9	1.9	2.0	1.9	2.0	1.9	1.9	1.9	1.98	2.06
23-Jul	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.97	2.03
24-Jul	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.05	2.23
25-Jul	2.0	2.1	2.1	2.1	2.1	2.3	2.4	2.1	2.1	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.7	2.09	2.73
26-Jul	2.3	2.3	2.4	2.4	2.4	2.4	2.5	2.5	2.3	A	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.6	2.9	3.1	3.0	2.32	3.10
27-Jul	2.9	2.4	3.8	3.2	3.0	2.6	2.5	2.1	A	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.8	2.5	2.34	3.75
28-Jul	2.4	2.5	2.4	2.4	2.6	2.8	2.7	A	2.1	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	1.9	2.2	2.3	2.4	3.1	2.9	2.31	3.15
29-Jul	3.0	2.5	2.6	2.7	2.5	3.0	A	2.6	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.1	2.2	2.1	2.1	2.2	2.1	2.25	3.04
30-Jul	2.1	2.0	2.0	2.0	2.0	A	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	1.97	2.08
31-Jul	2.0	2.2	2.3	2.3	A	2.3	2.3	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.03	2.34
2.15 2.12 2.16 2.17 2.20 2.23 2.19 2.10 2.02 1.99 1.97 1.96 1.95 1.94 1.94 1.94 1.94 1.94 1.94 1.98 2.00 2.04 2.14 2.19																									Diurnal Average	
3.07 2.53 3.75 3.19 3.28 2.97 3.43 2.56 2.29 2.15 2.17 2.08 2.10 2.05 2.04 2.01 2.00 1.99 2.12 2.23 2.57 2.86 3.15 3.49																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Averages

Methane (CH₄) - ppm
Henry Pirker - July 2018



Hourly Maximums

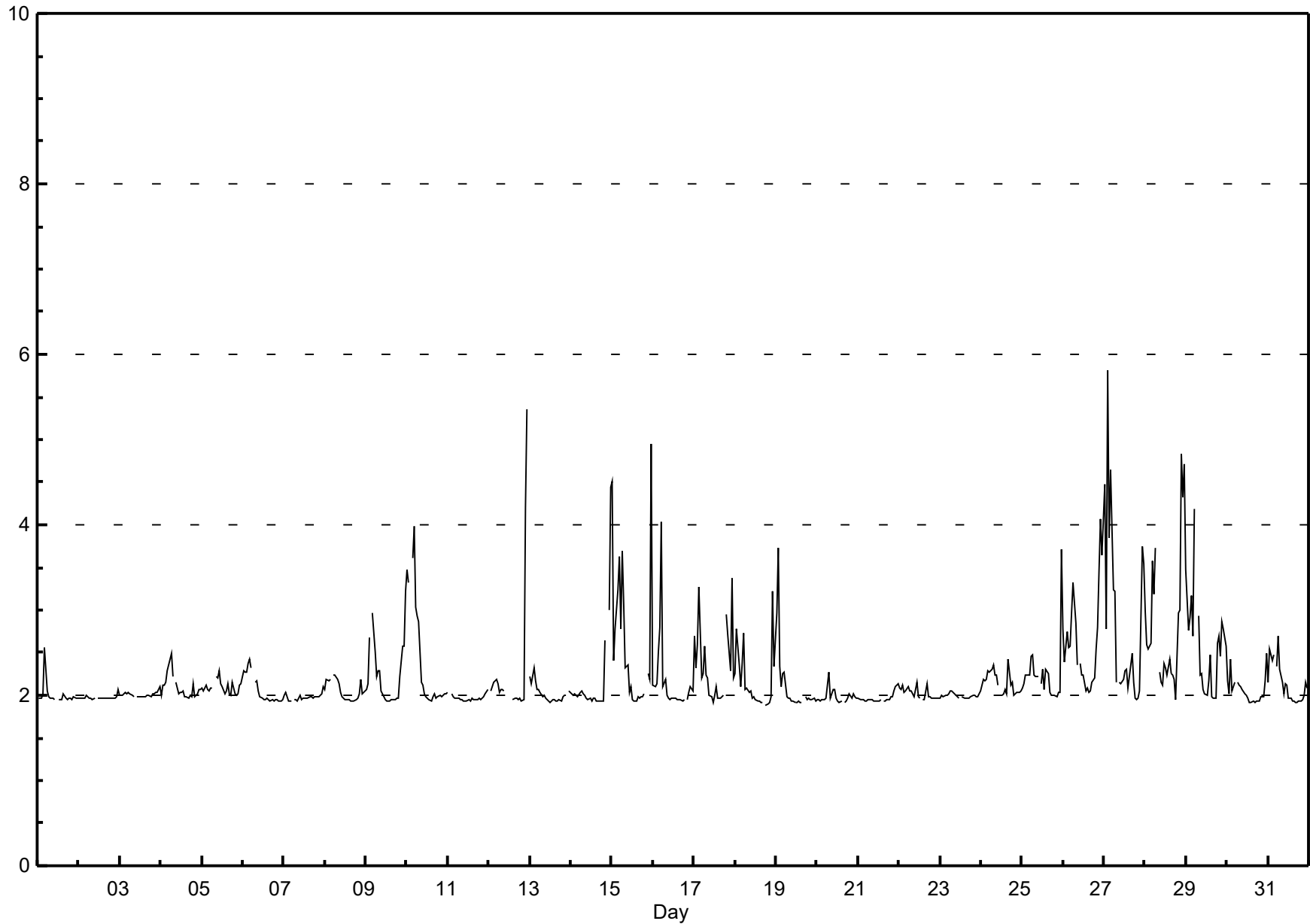
Methane (CH₄) - ppm

Henry Pirker - July 2018

Maximum Value: 5.81 ppm on Jul 27 03:00																					Maximum Daily Average: 2.85 ppm on Jul 28					Hours in Service: 744	
Minimum Value: 1.9 ppm on Jul 18 19:00																					Minimum Daily Average: 1.96 ppm on Jul 21					Hours of Data: 708	
Maximum Diurnal Average: 2.55 ppm at hour 24																					Minimum Diurnal Average: 1.99 ppm at hour 18					Hours of Missing Data: 36	
Monthly Average: 2.199 ppm																					Percentiles: P ₁ = 1.92 P ₁₀ = 1.94 Q ₁ = 1.96 Median = 2.01 Q ₃ = 2.19 P ₉₀ = 2.69 P ₉₉ = 4.47					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	2.0	2.0	2.0	2.0	2.6	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.00	2.55	
2-Jul	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	1.97	2.07	
3-Jul	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.01	2.10	
4-Jul	2.0	2.1	2.1	2.2	2.3	2.4	2.5	2.2	A	2.2	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.10	2.50	
5-Jul	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.2	2.2	2.3	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.2	2.0	2.0	2.0	2.1	2.1	2.09	2.29	
6-Jul	2.3	2.3	2.3	2.4	2.4	2.3	A	2.2	2.2	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	1.9	2.0	2.07	2.42	
7-Jul	2.0	2.0	2.0	1.9	1.9	A	2.0	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	1.98	2.09	
8-Jul	2.1	2.2	2.2	2.2	A	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.2	2.0	2.1	2.05	2.24	
9-Jul	2.1	2.1	2.7	A	3.0	2.5	2.2	2.3	2.3	2.1	2.0	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.2	2.6	2.6	3.2	2.23	3.22	
10-Jul	3.5	3.3	A	3.6	4.0	3.0	2.9	2.9	2.1	2.1	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.40	3.98	
11-Jul	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	2.0	2.0	1.9	2.0	2.0	2.0	2.1	1.97	2.06	
12-Jul	A	2.0	2.1	2.1	2.2	2.1	2.0	2.1	2.1	2.1	C	C	C	C	1.9	2.0	2.0	2.0	2.0	1.9	2.0	4.2	5.4	A	2.34	5.36	
13-Jul	2.2	2.1	2.3	2.2	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	A	2.0	2.02	2.32	
14-Jul	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.6	A	3.0	4.4	2.16	4.43	
15-Jul	4.5	2.4	2.8	3.2	3.6	2.8	3.7	3.1	2.3	2.4	2.0	2.1	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	A	2.2	2.2	5.0	2.61	4.95	
16-Jul	2.1	2.1	2.1	2.5	2.8	4.0	2.1	2.2	2.0	2.0	1.9	2.0	2.0	2.0	1.9	1.9	2.0	1.9	1.9	A	2.0	2.0	2.1	2.1	2.16	4.03	
17-Jul	2.7	2.3	2.6	3.3	2.2	2.2	2.6	2.2	2.2	2.0	2.0	1.9	2.0	2.1	2.0	2.0	2.0	2.0	A	3.0	2.7	2.3	3.4	2.2	2.34	3.38	
18-Jul	2.3	2.8	2.4	2.1	2.4	2.7	2.1	2.1	2.0	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.0	3.2	2.3	2.16	3.23	
19-Jul	3.0	3.7	2.3	2.1	2.2	2.3	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.0	1.9	2.0	1.9	2.0	2.0	1.9	2.12	3.74	
20-Jul	2.0	1.9	1.9	2.0	1.9	2.0	2.1	2.3	2.0	2.1	2.1	2.0	1.9	1.9	1.9	A	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.99	2.27	
21-Jul	2.0	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	A	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.1	2.1	1.96	2.13	
22-Jul	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.0	2.0	A	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.02	2.15	
23-Jul	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.99	2.06	
24-Jul	2.0	2.2	2.2	2.2	2.3	2.3	2.3	2.4	2.2	2.2	2.1	A	2.0	2.0	2.1	2.0	2.4	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.14	2.42	
25-Jul	2.1	2.1	2.2	2.2	2.2	2.5	2.5	2.2	2.2	2.2	A	2.1	2.3	2.1	2.3	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.7	2.24	3.72	
26-Jul	2.8	2.4	2.7	2.6	2.6	3.0	3.3	2.8	2.3	A	2.4	2.2	2.2	2.1	2.1	2.0	2.0	2.2	2.2	2.5	2.8	3.5	4.1	3.6	2.63	4.06	
27-Jul	4.5	2.8	5.8	3.9	4.6	3.2	3.2	2.2	A	2.2	2.1	2.2	2.3	2.3	2.1	2.2	2.5	2.2	2.0	2.0	2.0	2.1	3.7	3.5	2.84	5.81	
28-Jul	3.0	2.6	2.5	2.6	3.6	3.2	3.7	A	2.3	2.1	2.1	2.4	2.3	2.2	2.4	2.3	2.2	2.2	2.0	3.0	3.0	4.8	4.3	4.7	2.85	4.84	
29-Jul	3.5	2.8	2.9	3.2	2.7	4.2	A	2.9	2.2	2.3	2.1	2.0	2.0	2.2	2.5	2.0	2.0	2.0	2.6	2.7	2.5	2.9	2.8	2.6	2.58	4.18	
30-Jul	2.2	2.0	2.4	2.1	2.1	A	2.1	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.2	2.5	2.06	2.49	
31-Jul	2.2	2.5	2.4	2.5	A	2.3	2.7	2.3	2.1	2.0	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.2	2.1	2.13	2.70	
2.43 2.30 2.37 2.36 2.48 2.47 2.36 2.22 2.10 2.06 2.03 2.02 2.01 2.00 2.01 1.99 2.01 1.99 2.00 2.09 2.11 2.29 2.51 2.55																									Diurnal Average		
4.51 3.74 5.81 3.85 4.64 4.18 3.73 3.07 2.35 2.36 2.36 2.37 2.32 2.31 2.47 2.25 2.49 2.19 2.62 2.97 3.00 4.84 5.36 4.95																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											

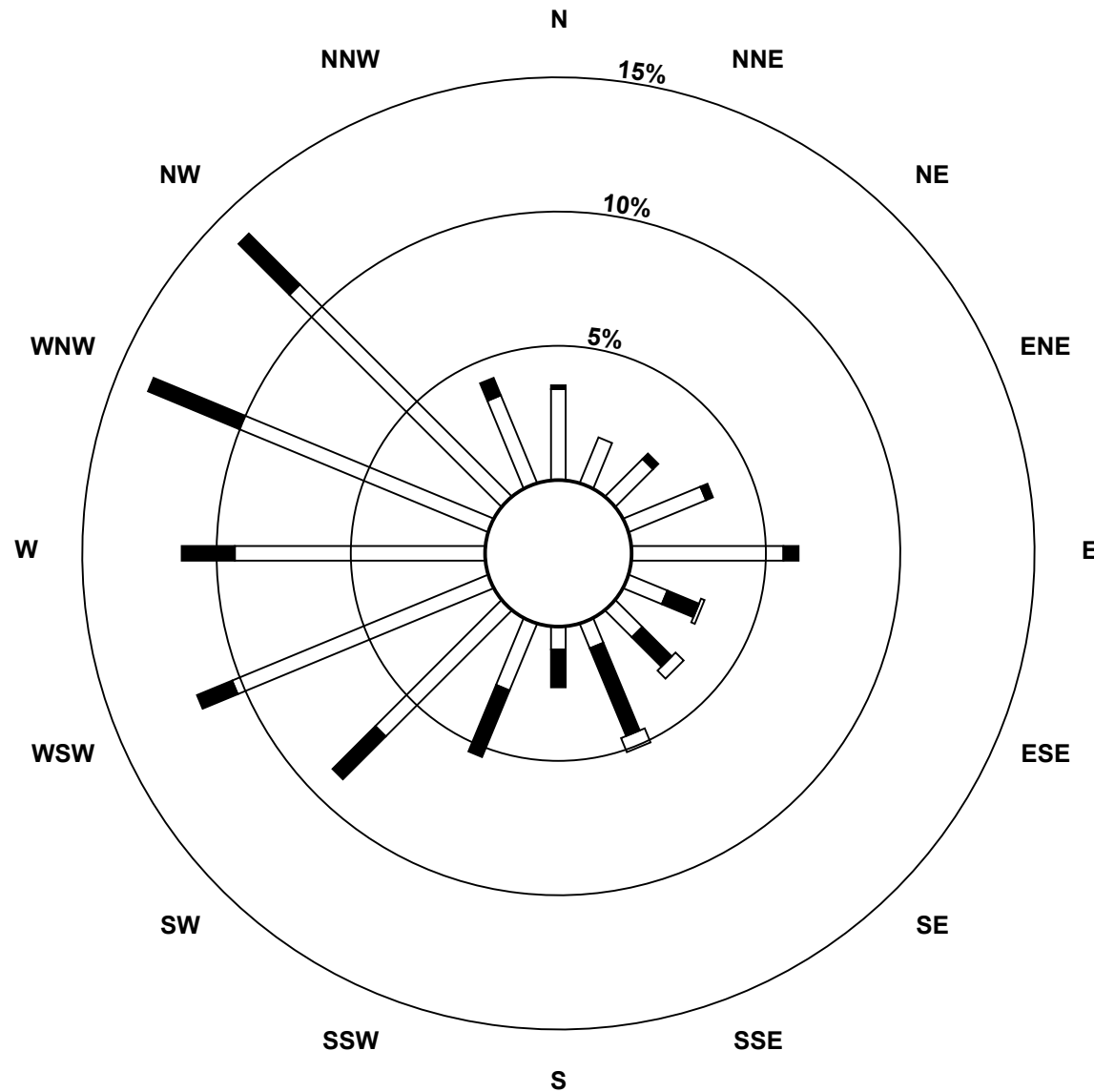
Hourly Maximums

Methane (CH₄) - ppm
Henry Pirker - July 2018



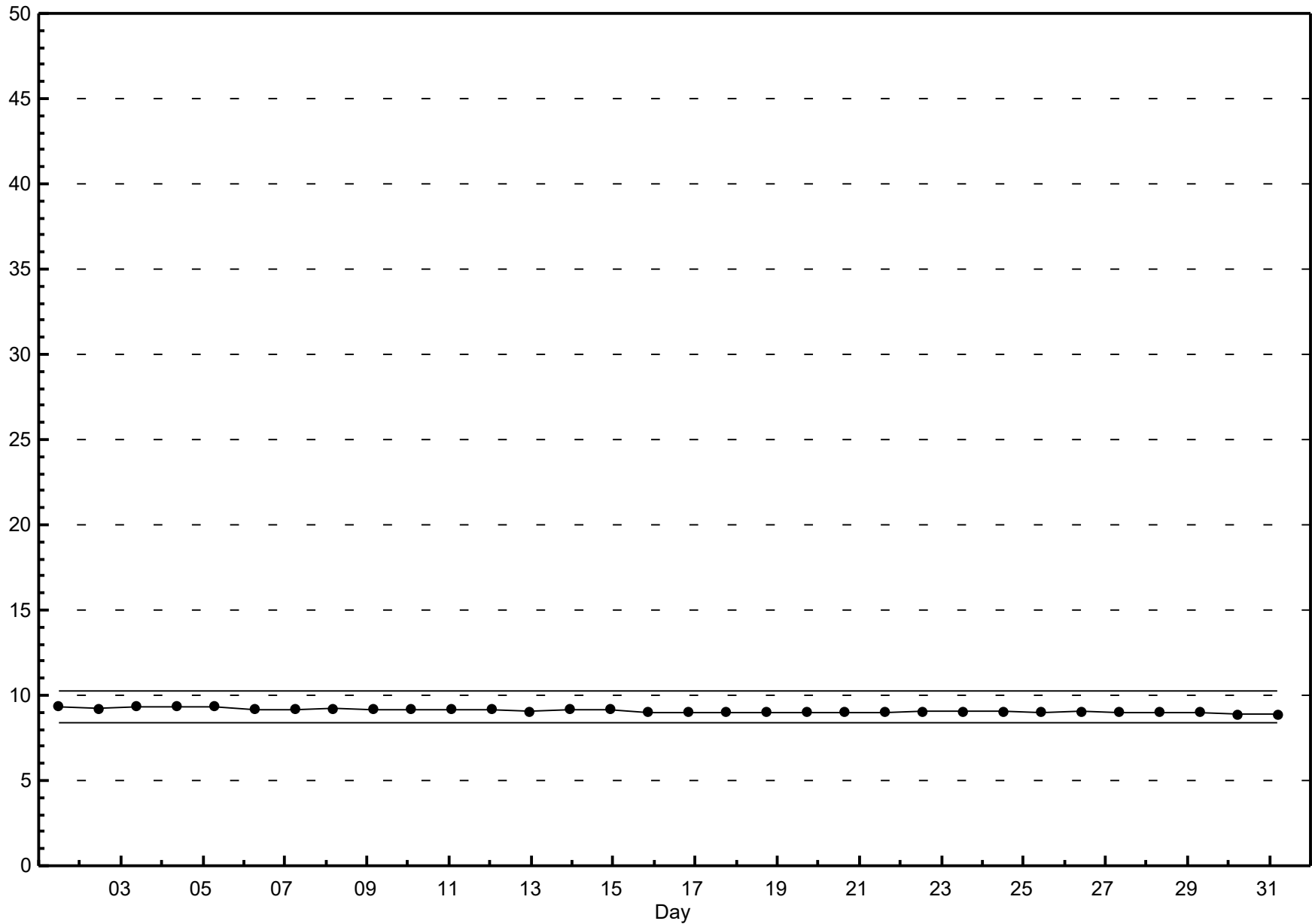
Pollutant Rose

Methane (CH₄) - ppm
Henry Pirker - July 2018



Span Responses

Methane (CH₄)
Henry Pirker - July 2018

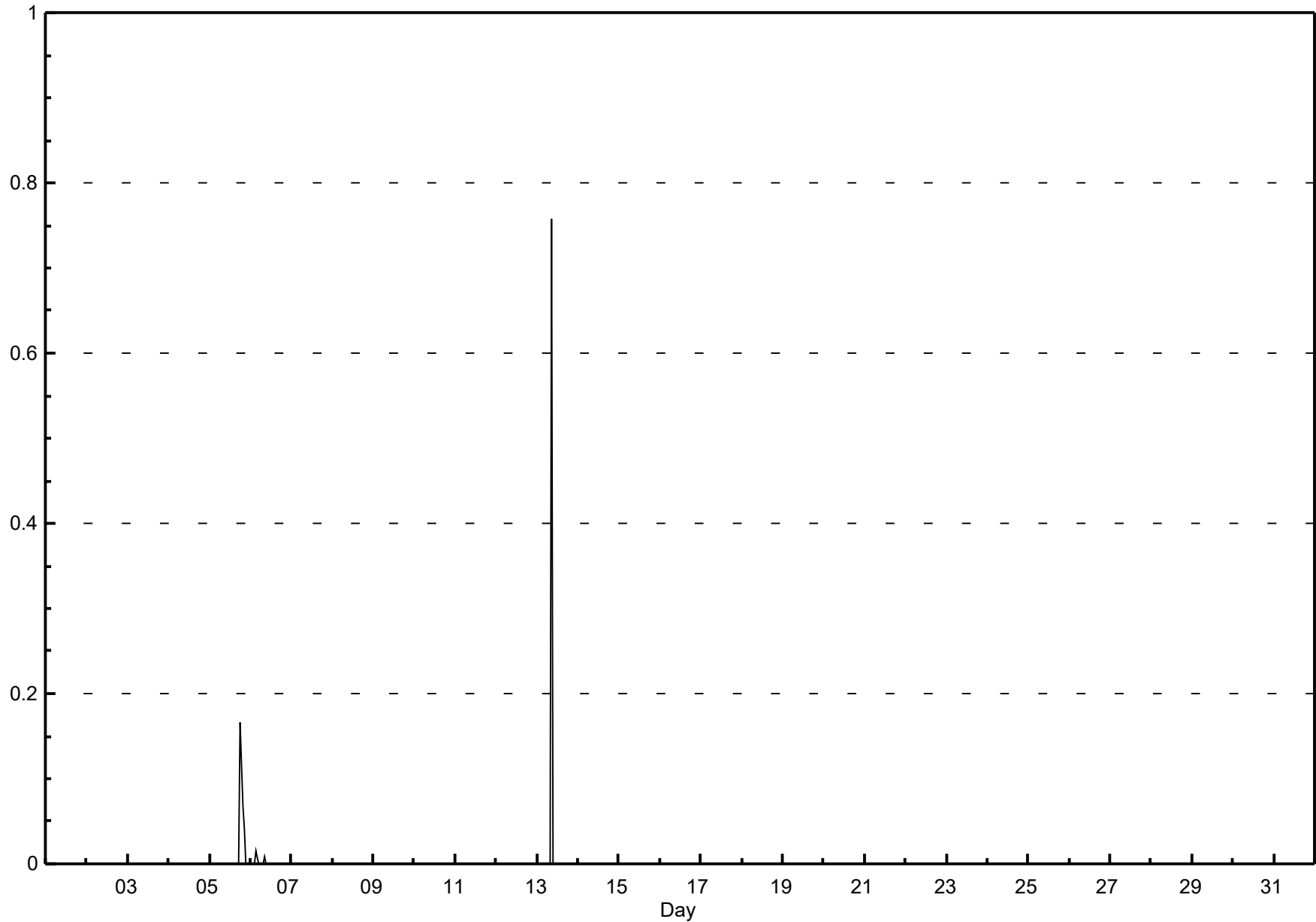


Hourly Averages

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - July 2018

Maximum Value: 0.76 ppm on Jul 13 09:00																					Maximum Daily Average: 0.03 ppm on Jul 13					Hours in Service: 744	
Minimum Value: 0.0 ppm on Jul 1 01:00																					Minimum Daily Average: 0.00 ppm on Jul 1					Hours of Data: 708	
Maximum Diurnal Average: 0.03 ppm at hour 9																					Minimum Diurnal Average: 0.00 ppm at hour 11					Hours of Missing Data: 36	
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 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	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	
2-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	
3-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	
4-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	
5-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	0.2	0.1	0.0	0.0	0.0	0.0	0.01	0.17	
6-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	0.02	
7-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	
8-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	
9-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	
10-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	
11-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	
12-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	A	0.00	0.00	
13-Jul	0.0	0.0	0.0	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	0.0	0.0	0.0	A	0.0	0.03	0.76	
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	0.0	0.0	0.0	A	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	0.0	0.0	0.0	A	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	0.0	0.0	0.0	A	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	0.0	0.0	0.0	A	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	0.0	0.0	0.0	A	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	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	
21-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	
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	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	
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	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	
24-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	
25-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	
26-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	
27-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	
28-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	
29-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	
30-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	
31-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	
0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.03 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.01 0.00 0.00 0.00 0.00 0.00																									Diurnal Average		
0.00 0.00 0.00 0.02 0.01 0.00 0.00 0.00 0.76 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.17 0.07 0.04 0.00 0.00 0.00																									Diurnal Maximum		
C - Calibration																									A - Automated Daily Zero Span		

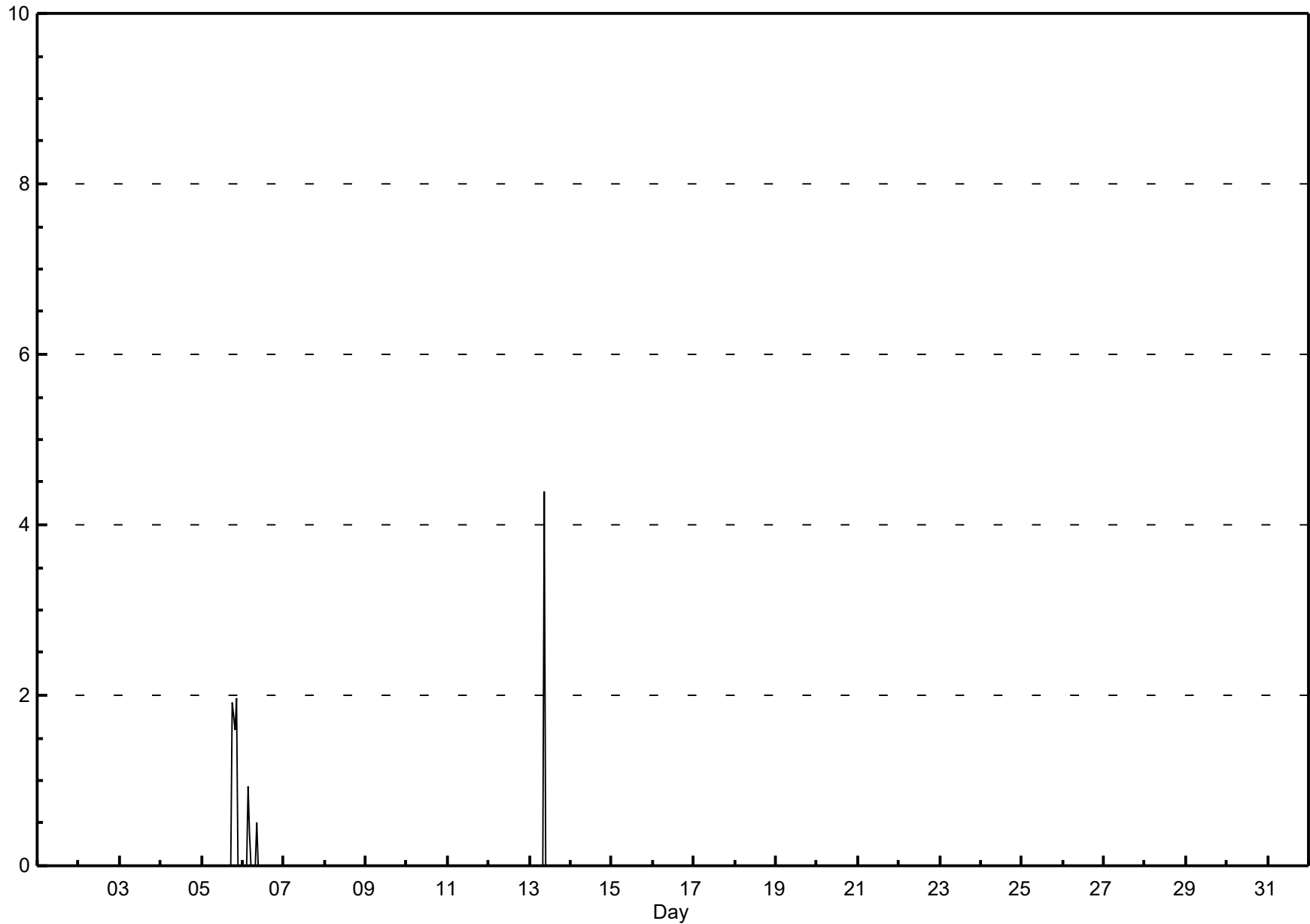


Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - July 2018

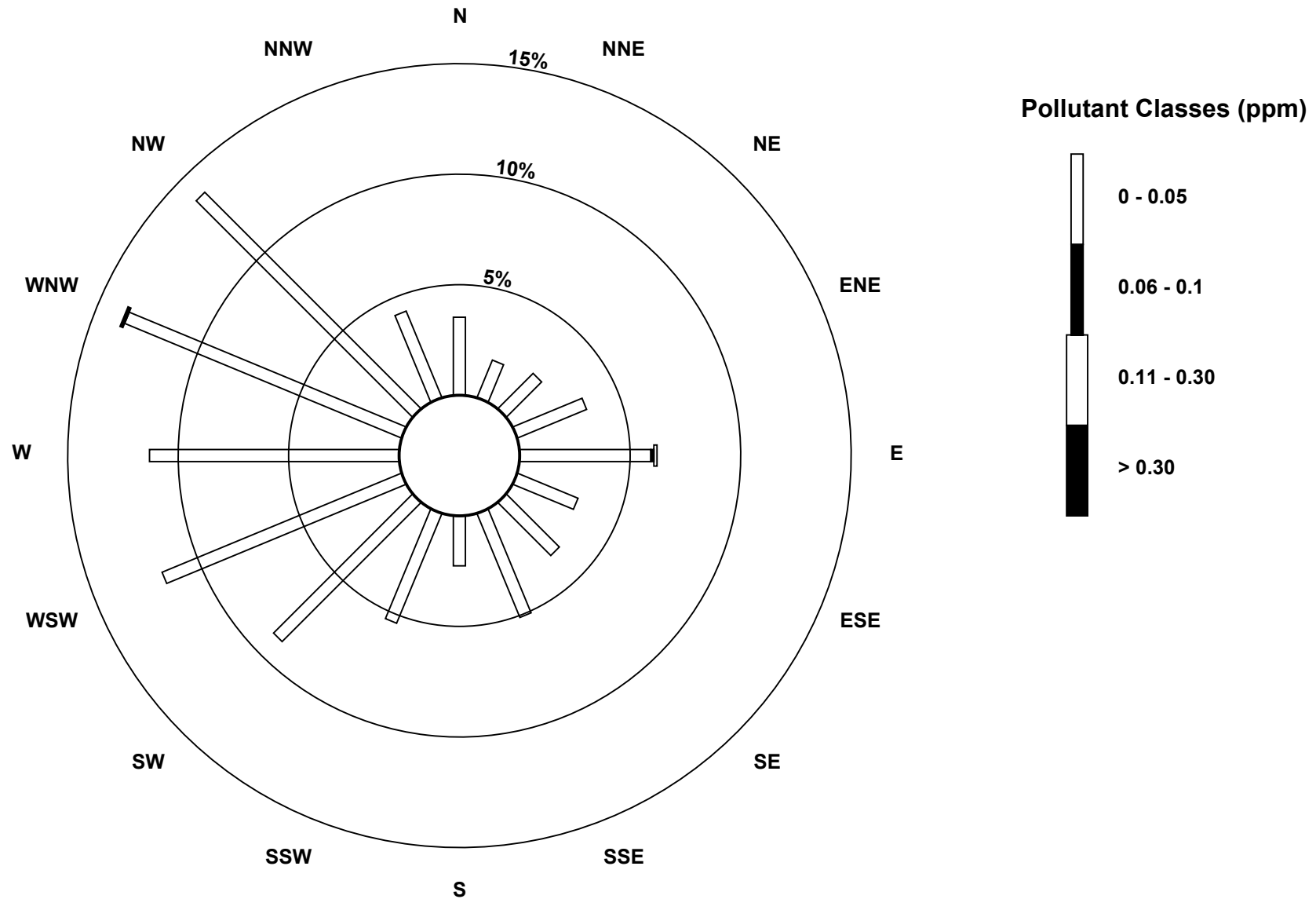
Maximum Value: 4.38 ppm on Jul 13 09:00																					Maximum Daily Average: 0.24 ppm on Jul 5					Hours in Service: 744	
Minimum Value: 0.0 ppm on Jul 1 01:00																					Minimum Daily Average: 0.00 ppm on Jul 26					Hours of Data: 708	
Maximum Diurnal Average: 0.17 ppm at hour 9																					Minimum Diurnal Average: 0.00 ppm at hour 14					Hours of Missing Data: 36	
Monthly Average: 0.017 ppm																					Percentiles: P ₁ = 0.00 P ₁₀ = 0.00 Q ₁ = 0.00 Median = 0.00 Q ₃ = 0.00 P ₉₀ = 0.00 P ₉₉ = 0.00					Hours of Calibration: 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	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	
2-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	
3-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	
4-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	
5-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	1.9	1.6	2.0	0.0	0.0	0.24	1.97	
6-Jul	0.0	0.0	0.0	0.9	0.4	0.0	A	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.92	
7-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	
8-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	
9-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	
10-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	
11-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	
12-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	A	0.00	0.00	
13-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	0.0	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	0.19	4.38	
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	0.0	0.0	0.0	A	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	0.0	0.0	0.0	A	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	0.0	0.0	0.0	A	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	0.0	0.0	0.0	A	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	0.0	0.0	0.0	A	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	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	
21-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	0.00	
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	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	
23-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	
24-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	
25-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	
26-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	
27-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	
28-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	
29-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	
30-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	
31-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	
0.00 0.00 0.00 0.03 0.01 0.00 0.00 0.00 0.17 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.06 0.05 0.07 0.00 0.00 0.00																									Diurnal Average		
0.00 0.00 0.00 0.92 0.37 0.00 0.00 0.00 4.38 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 1.91 1.59 1.97 0.00 0.00 0.00																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											

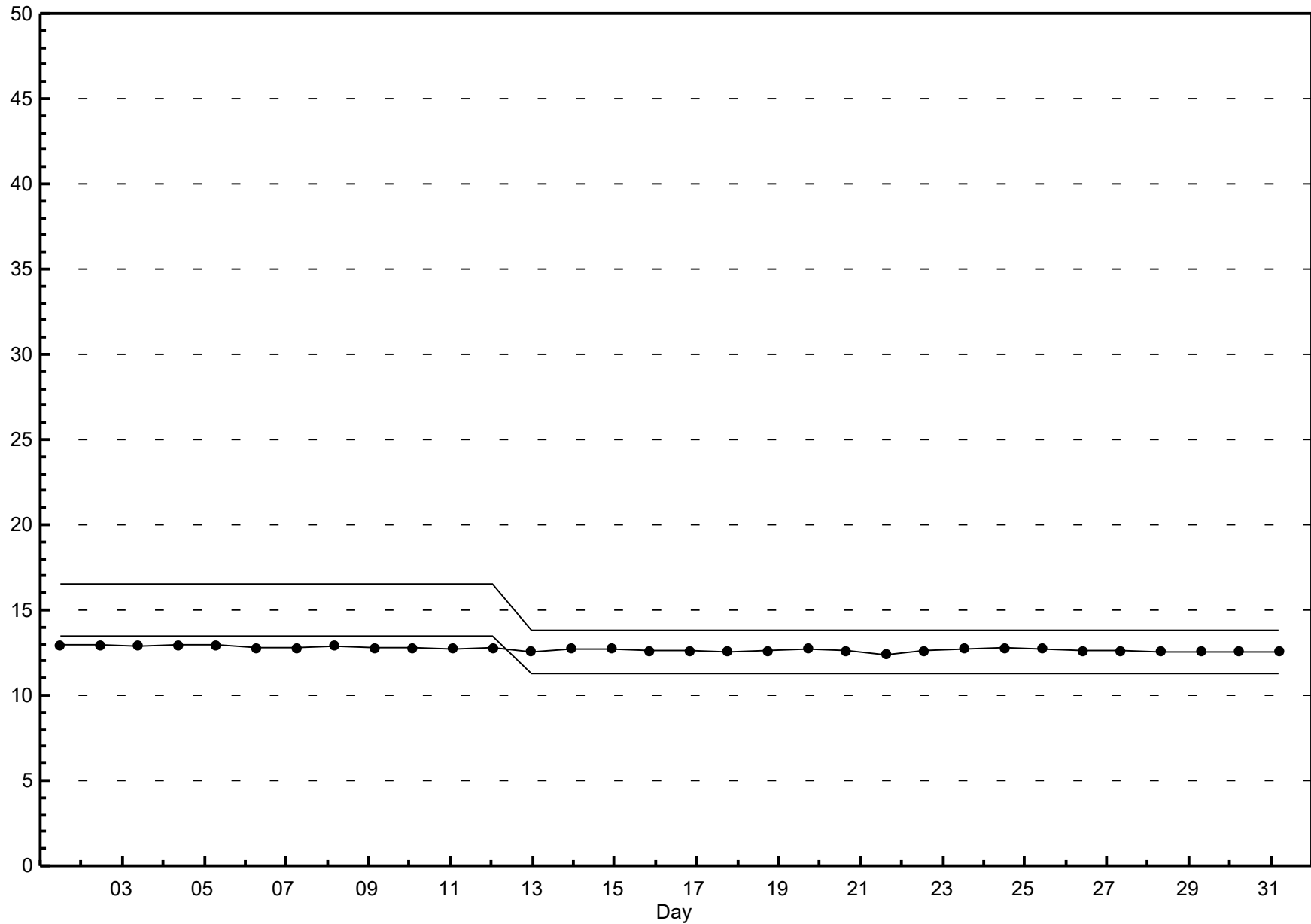


Pollutant Rose

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - July 2018



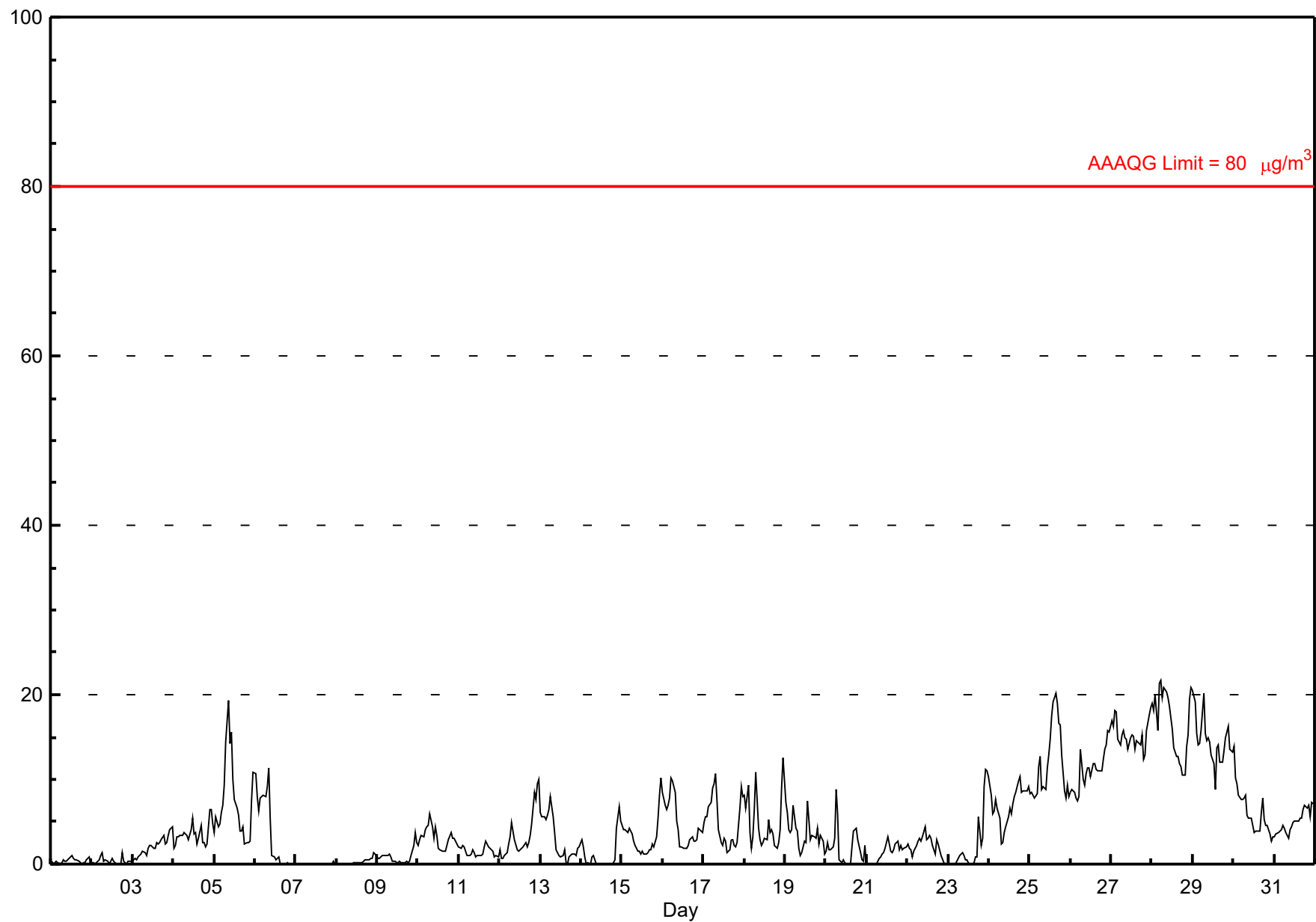


Hourly Averages

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

Henry Pirker - July 2018

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 21.6 µg/m³ on Jul 28 06:00 Maximum Daily Average: 16.7 µg/m³ on Jul 28																								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 1 02:00 Maximum Diurnal Average: 6.2 µg/m³ at hour 24 Monthly Average: 4.75 µg/m³ Minimum Daily Average: 0.0 µg/m³ on Jul 7 Minimum Diurnal Average: 4.0 µg/m³ at hour 13 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.9 Median = 2.9 Q ₃ = 7.4 P ₉₀ = 13.3 P ₉₉ = 20.0																											
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	1	0	0	0	1	1	1	1	0	0	0	0	0	0	1	1	0	0.4	1.0	
2-Jul	0	0	0	0	0	0	1	1	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0.3	1.3	
3-Jul	0	1	1	1	1	1	2	1	1	2	2	2	2	2	2	2	3	3	3	2	3	3	4	4	2.0	4.5	
4-Jul	2	2	3	3	3	3	4	3	3	3	4	5	4	4	2	3	5	3	3	2	2	6	6	5	3.5	6.5	
5-Jul	4	6	4	5	6	7	9	14	19	14	16	10	8	7	6	4	4	4	2	3	3	3	8	11	7.3	19.3	
6-Jul	11	8	6	8	8	8	8	9	11	5	1	1	0	1	1	0	0	0	0	0	0	0	0	0	3.6	11.3	
7-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	0.4	
8-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0.3	1.4	
9-Jul	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	2	4	3	0.9	3.8	
10-Jul	2	3	3	3	4	4	4	6	4	3	4	3	2	2	2	1	1	2	3	4	3	3	3	2	3.1	6.0	
11-Jul	2	2	2	2	2	1	1	1	2	1	1	1	1	1	1	2	3	2	2	2	2	1	1	1	1.5	2.7	
12-Jul	2	1	1	1	1	2	3	5	4	3	2	1	2	2	2	3	2	3	3	5	8	8	9	10	3.4	10.0	
13-Jul	6	6	6	5	6	7	8	6	4	2	1	1	1	1	2	0	0	1	1	1	1	1	2	2	2.9	7.9	
14-Jul	3	2	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4	7	5	1.0	6.7	
15-Jul	5	4	4	4	4	4	4	3	2	1	1	1	1	1	1	1	2	2	2	2	3	5	8	10	3.2	10.2	
16-Jul	9	7	6	7	8	10	10	8	5	4	2	2	2	2	2	2	3	3	3	3	3	4	4	4	4.7	10.1	
17-Jul	5	6	6	7	7	9	10	11	8	4	3	2	3	3	3	1	2	3	3	2	2	7	9	8	5.0	10.7	
18-Jul	8	7	9	4	2	3	6	11	4	3	2	3	3	3	5	4	4	4	2	2	2	4	9	12	4.9	12.5	
19-Jul	7	6	4	4	4	7	4	4	2	1	1	3	3	7	5	3	3	3	3	4	2	3	3	1	3.7	7.4	
20-Jul	2	3	2	2	2	3	9	6	1	0	1	0	0	0	0	2	4	4	4	3	1	0	0	2	2.1	8.9	
21-Jul	0	0	0	0	0	0	0	1	1	1	1	2	3	2	1	1	2	2	3	2	2	2	2	2	1.3	3.2	
22-Jul	2	2	2	1	2	2	3	3	3	3	4	3	3	3	3	2	1	3	2	2	1	0	0	0	2.1	4.3	
23-Jul	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	1	6	2	3	9	11	11	2.1	11.1	
24-Jul	10	8	6	6	8	7	5	2	3	4	4	6	7	6	7	8	9	10	10	9	9	9	9	9	7.0	10.4	
25-Jul	8	9	8	8	8	12	13	9	9	9	11	13	15	17	19	20	19	17	16	13	9	8	9	8	11.9	20.1	
26-Jul	8	9	9	8	7	8	14	10	9	11	11	11	10	12	12	11	11	11	11	12	14	14	16	16	11.0	15.7	
27-Jul	17	16	18	18	15	14	15	16	15	15	14	15	15	15	14	15	14	14	15	12	13	16	18	18	15.3	18.5	
28-Jul	19	18	20	16	21	22	20	21	20	20	19	17	16	14	13	13	12	12	11	10	14	15	20	21	16.7	21.6	
29-Jul	20	19	15	14	14	16	20	15	15	15	14	13	12	9	14	14	12	12	13	15	16	16	14	13	14.6	20.5	
30-Jul	14	10	9	8	8	8	8	8	6	5	6	5	4	4	4	4	6	8	5	5	5	4	3	3	6.2	13.9	
31-Jul	3	4	4	4	4	5	4	4	3	4	4	5	5	5	5	5	5	6	7	7	7	6	7	7	5.0	7.2	
5.5 5.1 4.9 4.5 4.7 5.3 6.0 5.9 5.1 4.4 4.3 4.1 4.0 4.0 4.1 4.0 4.1 4.3 4.4 4.0 4.2 5.0 6.0 6.2																								Diurnal Average	Diurnal Maximum		
20.5 19.1 19.9 18.0 21.4 21.6 20.1 20.9 20.4 19.6 18.7 17.2 15.9 17.4 19.2 20.1 19.0 16.6 16.4 15.0 15.6 16.4 19.6 20.8																											
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

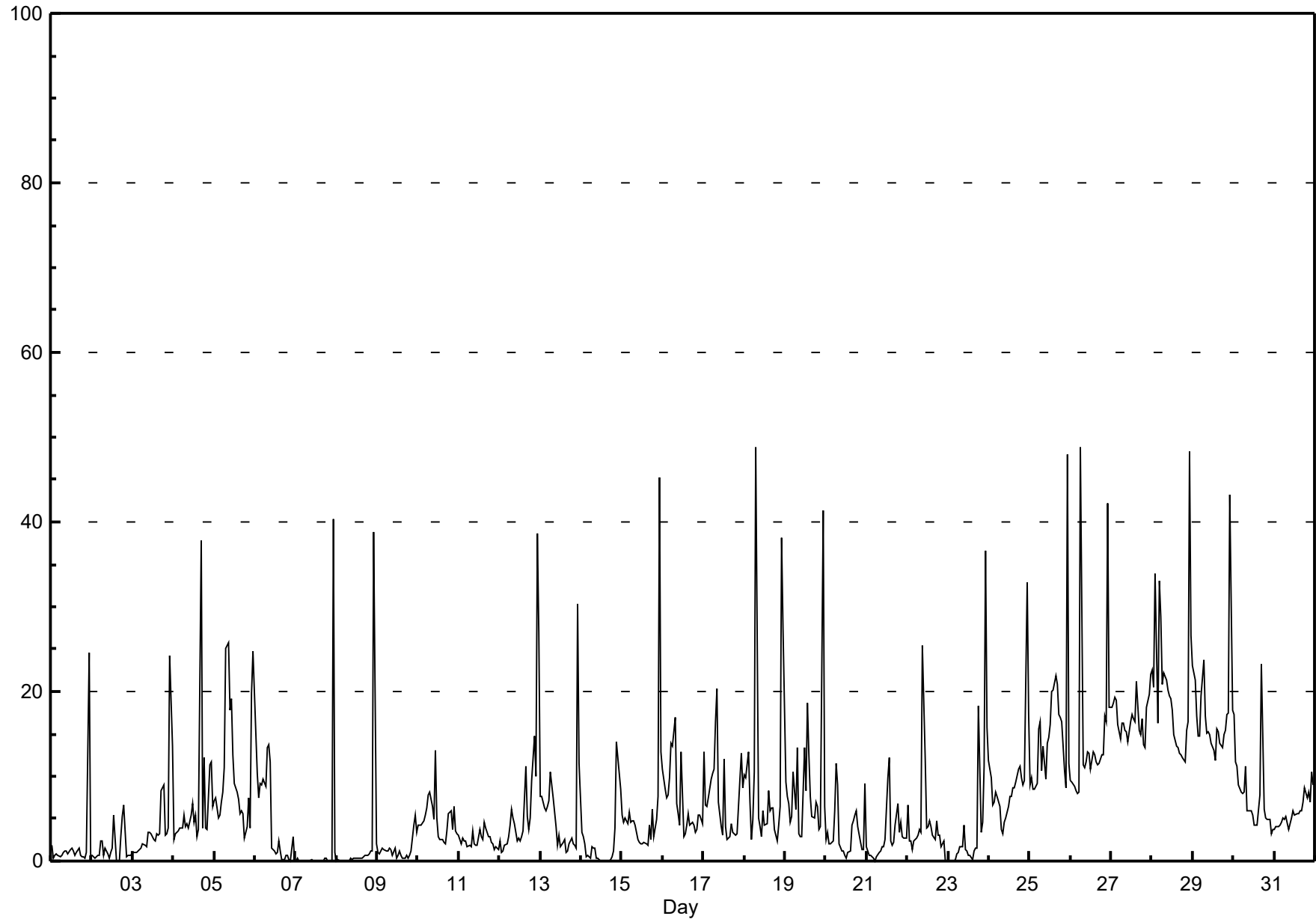
Henry Pirker - July 2018

Maximum Value: 48.9 μg/m ³ on Jul 18 08:00																								Maximum Daily Average: 20.6 μg/m ³ on Jul 28						Hours in Service: 744	
Minimum Value: 0 μg/m ³ on Jul 2 15:00																								Minimum Daily Average: 1.4 μg/m ³ on Jul 9						Hours of Data: 744	
Maximum Diurnal Average: 22.1 μg/m ³ at hour 23																								Minimum Diurnal Average: 5.1 μg/m ³ at hour 4						Hours of Missing Data: 0	
Monthly Average: 7.11 μg/m ³																								Percentiles: P ₁ = 0.0 P ₁₀ = 0.4 Q ₁ = 1.7 Median = 4.4 Q ₃ = 9.9 P ₉₀ = 16.7 P ₉₉ = 40.9						Hours of Calibration: 0	
																								Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
1-Jul	2	0	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	0	1	25	1	1.9	24.6						
2-Jul	1	1	0	1	1	1	2	2	1	1	1	0	1	1	5	0	0	0	3	5	7	1	1	1	1.5	6.6					
3-Jul	1	1	1	1	1	2	2	2	2	3	3	3	3	2	3	3	3	8	9	3	3	4	24	14	4.3	24.3					
4-Jul	3	3	3	4	4	4	5	4	4	4	5	7	5	5	3	4	38	4	12	4	4	11	12	6	6.6	37.8					
5-Jul	7	7	5	5	7	8	11	25	26	18	19	13	9	8	7	6	6	6	3	4	7	4	20	25	10.7	25.8					
6-Jul	15	10	7	9	9	10	9	13	14	12	1	1	1	1	2	1	0	0	1	1	0	0	3	0	5.0	15.2					
7-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	1	1.8	40.3					
8-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	39	2	2.0	38.9					
9-Jul	1	1	1	1	1	1	1	1	1	1	2	0	1	1	1	0	0	1	0	1	1	4	5	3	1.4	5.4					
10-Jul	4	4	4	5	5	6	8	8	6	5	13	5	3	2	2	2	2	4	6	6	4	6	4	3	4.9	13.1					
11-Jul	3	2	3	2	2	2	2	2	4	2	2	2	4	3	3	5	4	3	3	2	2	1	2	1	2.5	4.5					
12-Jul	2	1	1	2	2	3	4	6	5	4	2	3	2	3	4	11	5	4	5	10	15	10	39	27	7.1	38.6					
13-Jul	8	8	6	6	6	7	11	7	6	4	2	3	2	2	3	1	1	2	3	2	2	2	30	12	5.6	30.3					
14-Jul	3	3	2	0	1	0	2	1	1	0	0	0	0	0	0	0	0	0	0	1	4	14	10	8	2.2	14.1					
15-Jul	5	5	5	4	6	5	5	5	4	3	2	2	2	2	2	2	4	2	6	3	5	8	45	13	6.0	45.2					
16-Jul	11	8	7	8	10	14	14	17	7	6	4	13	3	3	4	6	4	5	4	3	4	5	5	4	7.1	16.9					
17-Jul	13	7	6	7	10	10	11	16	20	7	4	3	12	4	3	3	4	3	3	3	3	10	13	9	7.7	20.3					
18-Jul	10	10	13	7	3	5	11	49	5	4	3	6	4	4	8	6	6	6	4	2	4	6	38	27	10.1	48.9					
19-Jul	9	8	7	5	5	11	6	13	3	3	3	13	8	19	13	8	5	5	7	6	4	4	41	6	8.9	41.4					
20-Jul	3	3	2	2	2	6	11	9	2	1	1	1	0	1	1	4	5	5	6	4	2	1	1	9	3.5	11.5					
21-Jul	2	1	1	1	0	0	1	1	1	2	2	2	10	12	2	2	2	4	7	3	5	3	3	3	2.8	12.2					
22-Jul	7	2	2	1	2	3	3	4	3	25	12	4	4	5	4	3	3	5	3	3	2	2	0	0	4.3	25.4					
23-Jul	0	0	0	0	0	1	1	2	2	4	1	1	1	1	0	1	1	1	18	3	5	11	37	16	4.5	36.7					
24-Jul	12	10	7	7	8	8	6	4	3	5	5	6	8	8	9	9	9	11	11	10	9	10	33	17	9.3	32.9					
25-Jul	9	10	8	8	9	16	17	11	14	10	14	15	16	20	20	22	21	17	17	17	11	9	48	11	15.3	48.0					
26-Jul	10	9	9	8	8	8	49	11	11	12	13	13	11	13	13	12	11	11	12	13	17	16	42	18	14.6	48.9					
27-Jul	18	19	19	19	16	14	16	16	15	15	14	16	17	17	16	21	15	15	17	14	13	18	20	22	16.9	22.0					
28-Jul	23	21	34	16	33	29	21	22	21	20	19	19	18	15	14	13	13	12	12	12	15	17	48	27	20.6	48.4					
29-Jul	23	21	17	15	15	19	24	17	15	15	15	14	13	12	16	15	14	13	15	15	17	18	43	18	17.5	43.3					
30-Jul	17	12	11	9	8	8	8	11	6	6	6	5	4	4	4	8	23	15	6	5	5	5	3	4	8.1	23.2					
31-Jul	4	4	4	4	5	5	5	5	4	4	5	6	6	6	6	6	6	7	9	7	8	7	11	9	5.9	10.5					
7.3 6.2 6.1 5.1 5.8 6.7 8.6 9.2 6.8 6.4 5.7 5.8 5.4 5.8 5.3 5.6 6.8 5.7 6.6 5.3 5.6 6.8 22.1 10.2																								Diurnal Average							
23.1 21.4 34.0 19.0 33.1 28.9 48.9 48.9 25.8 25.4 19.4 19.1 17.7 20.1 20.2 21.9 37.8 17.3 18.3 16.5 17.3 18.1 48.4 27.5																								Diurnal Maximum							

Hourly Maximums

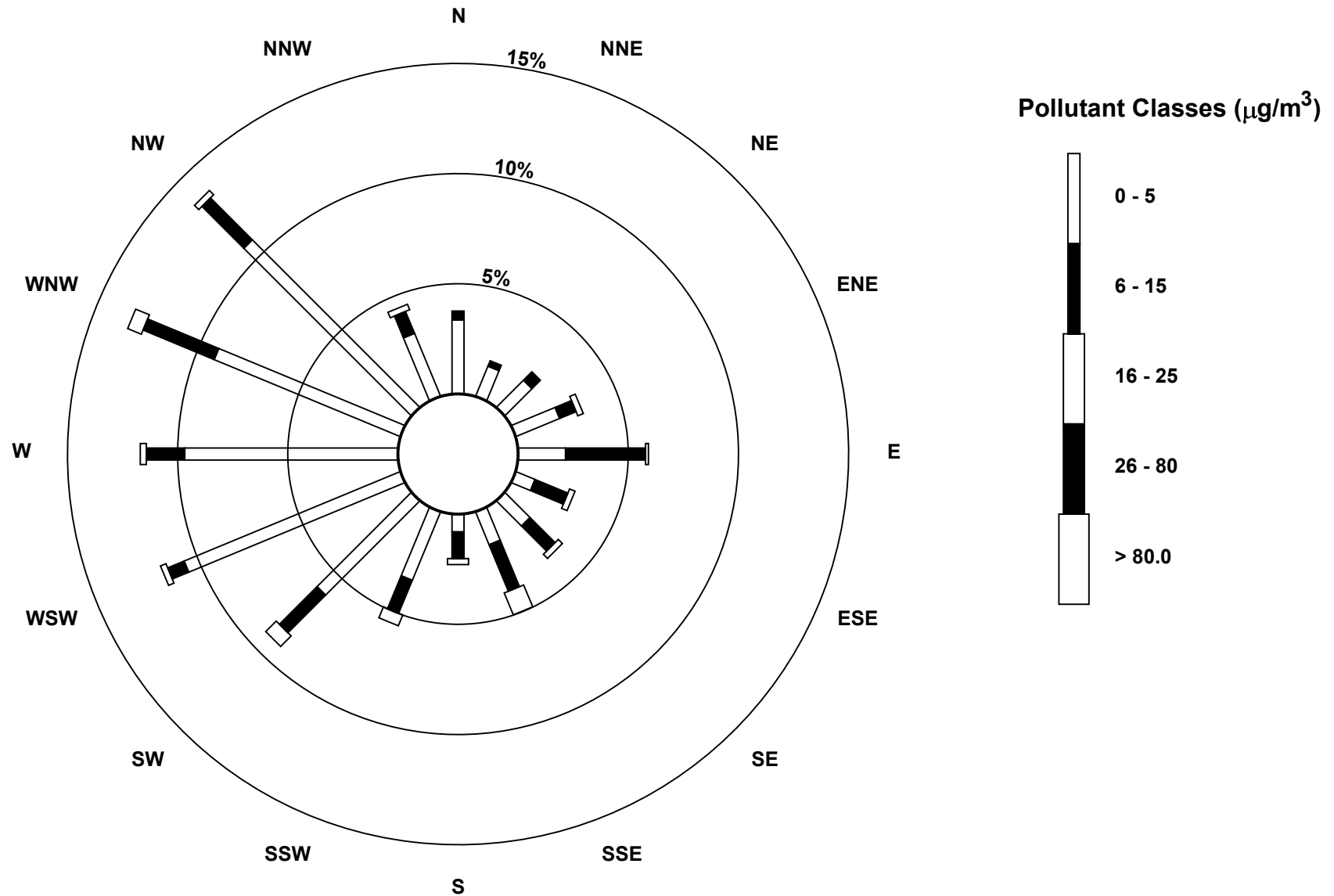
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$

Henry Pirker - July 2018



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Henry Pirker - July 2018



Hourly Averages

External Temperature (ET) - °C

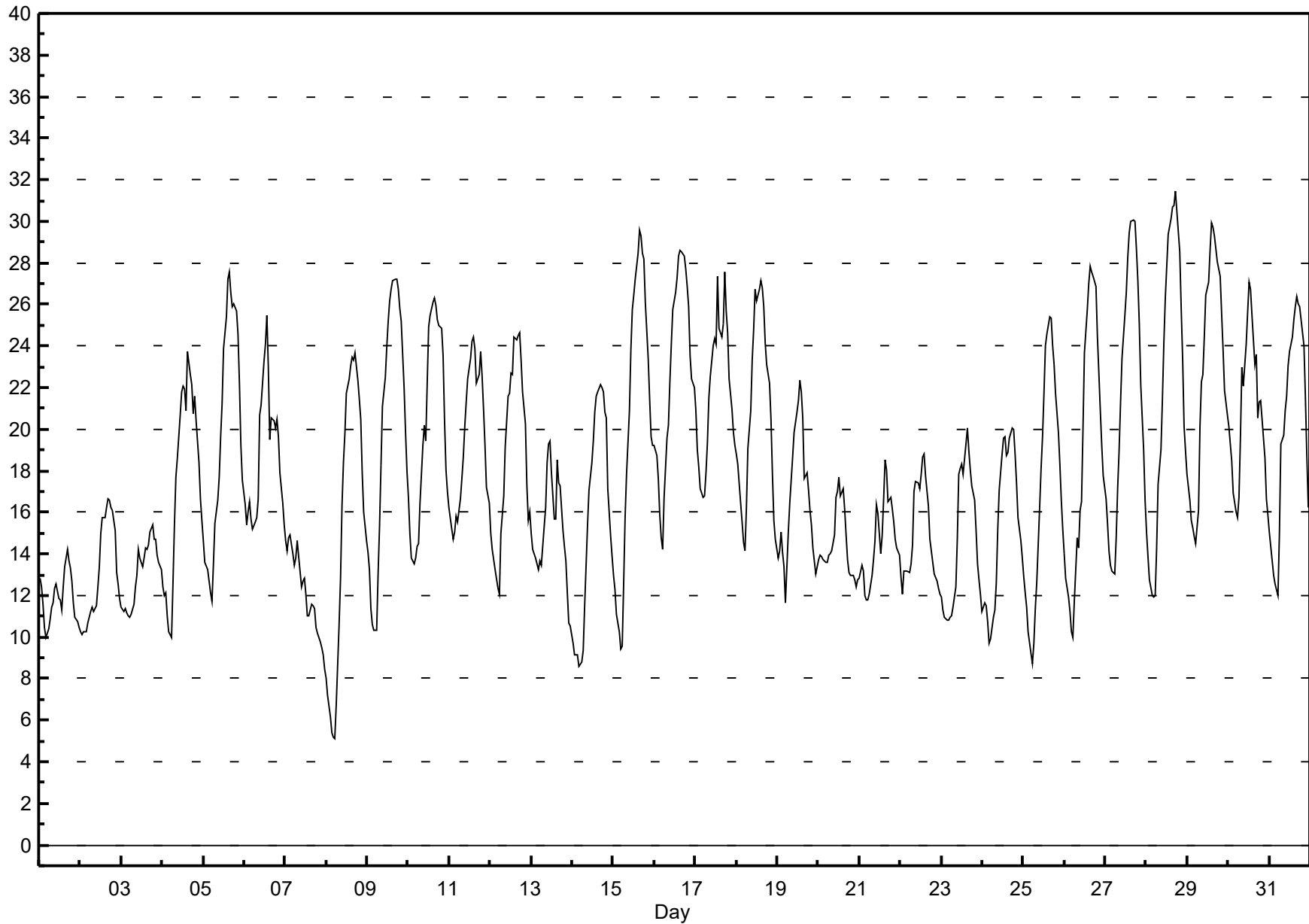
Henry Pirker - July 2018

Maximum Value: 31.5 °C on Jul 28 18:00																					Maximum Daily Average: 22.8 °C on Jul 29										Hours in Service: 744	
Minimum Value: 5 °C on Jul 8 06:00																					Minimum Daily Average: 11.9 °C on Jul 1										Hours of Data: 744	
Maximum Diurnal Average: 22.8 °C at hour 16																					Minimum Diurnal Average: 12.1 °C at hour 6										Hours of Missing Data: 0	
Monthly Average: 17.77 °C																					Percentiles: P ₁ = 8.5 P ₁₀ = 11.3 Q ₁ = 13.5 Median = 16.7 Q ₃ = 22.0 P ₉₀ = 25.9 P ₉₉ = 29.9										Hours of Calibration: 0	
																					Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24								
1-Jul	13	12	12	10	10	10	11	11	12	12	13	12	12	11	12	13	14	14	13	13	12	11	11	10	11.9	14.2						
2-Jul	10	10	10	10	11	11	11	11	11	12	12	13	15	16	16	16	17	17	16	16	15	13	13	12	13.1	16.7						
3-Jul	11	11	11	11	11	11	11	12	12	13	14	14	13	14	14	14	14	15	15	15	15	14	14	13	13.1	15.4						
4-Jul	12	12	12	11	10	10	13	15	18	19	21	22	22	22	21	24	23	22	21	22	20	18	17	16	17.6	23.7						
5-Jul	15	14	13	13	12	12	14	15	17	18	20	21	24	25	27	28	27	26	26	26	25	22	19	18	19.8	27.5						
6-Jul	16	15	16	16	16	15	16	16	17	21	21	23	24	25	23	19	21	20	20	20	20	18	16	15	18.8	25.5						
7-Jul	15	14	15	15	14	13	14	15	14	12	13	13	12	11	11	12	11	11	10	10	10	9	9	8	12.2	14.9						
8-Jul	8	7	6	5	5	5	7	11	13	16	18	20	22	22	23	23	23	24	22	21	20	18	16	15	15.5	23.7						
9-Jul	14	13	11	11	10	10	13	15	18	21	22	24	25	26	27	27	27	27	27	26	25	22	20	18	20.1	27.2						
10-Jul	17	15	14	13	14	14	15	16	19	20	19	22	25	25	26	26	26	25	25	25	24	20	18	17	20.1	26.3						
11-Jul	16	15	15	15	16	16	17	18	19	20	21	22	23	24	24	24	22	23	24	23	21	19	17	16	19.6	24.4						
12-Jul	15	14	14	13	12	12	15	16	17	19	22	22	23	23	24	24	24	25	23	22	20	17	16	16	18.7	24.6						
13-Jul	15	14	14	14	13	14	13	15	16	18	19	19	18	16	16	19	17	17	15	14	14	12	11	11	15.2	19.4						
14-Jul	10	9	9	9	9	9	9	12	13	15	17	18	19	21	22	22	22	22	22	21	21	17	15	14	15.7	22.2						
15-Jul	13	12	11	10	9	10	13	16	18	21	24	26	26	27	28	30	29	28	28	26	23	21	20	19	20.4	29.6						
16-Jul	19	19	18	16	15	14	17	20	20	22	24	26	27	27	28	29	29	28	28	27	26	24	22	22	22.7	28.6						
17-Jul	21	19	18	17	17	17	18	19	22	23	24	24	24	27	25	24	25	28	26	25	22	21	20	19	21.9	27.6						
18-Jul	19	18	16	16	15	14	16	19	21	23	25	27	26	27	27	27	26	24	23	22	20	18	16	15	20.8	27.1						
19-Jul	14	14	15	14	13	12	15	16	18	19	20	21	21	22	22	21	18	18	17	16	15	14	13	13	16.7	22.3						
20-Jul	14	14	14	14	14	14	14	14	14	15	17	17	18	17	17	16	15	14	13	13	13	13	12	13	14.4	17.7						
21-Jul	13	13	13	12	12	12	12	13	14	15	16	16	14	15	17	19	18	17	17	16	16	15	14	14	14.6	18.5						
22-Jul	13	12	13	13	13	13	14	14	17	17	17	17	18	19	19	18	16	15	14	14	13	13	12	12	14.9	18.8						
23-Jul	12	11	11	11	11	11	11	11	12	15	18	18	18	18	19	20	19	18	17	17	15	13	13	12	14.7	20.0						
24-Jul	11	12	12	11	10	10	11	11	13	15	17	19	20	20	19	19	20	20	20	19	17	16	15	14	15.3	20.1						
25-Jul	13	12	11	10	9	9	10	11	13	16	18	20	22	24	25	25	25	24	23	22	20	18	17	15	17.2	25.4						
26-Jul	14	13	12	11	10	10	12	15	14	16	16	20	24	26	27	28	28	27	27	24	23	21	19	18	18.9	27.8						
27-Jul	17	15	14	13	13	13	15	17	19	21	23	26	27	28	29	30	30	30	29	27	25	22	19	17	21.7	30.1						
28-Jul	15	14	13	12	12	12	14	17	19	21	24	26	28	29	30	31	31	31	30	29	26	23	20	19	22.0	31.5						
29-Jul	18	17	16	15	15	14	16	20	22	23	24	26	27	29	30	30	29	28	28	27	26	24	22	21	22.8	29.9						
30-Jul	20	19	18	17	16	16	17	20	23	22	24	26	27	27	25	23	24	21	21	21	20	19	17	16	20.8	27.1						
31-Jul	15	14	13	13	12	12	15	19	20	21	22	23	24	24	25	26	26	26	26	25	24	22	19	16	20.1	26.3						
14.4 13.8 13.2 12.7 12.2 12.1 13.4 15.2 16.6 18.1 19.6 20.7 21.5 22.2 22.6 22.8 22.5 22.1 21.5 20.7 19.5 17.7 16.1 15.3																									Diurnal Average							
20.9 19.3 18.5 17.1 16.8 16.8 17.9 20.1 23.0 23.3 24.8 26.7 27.9 29.4 30.1 30.7 30.8 31.5 30.5 28.6 25.9 23.8 22.4 22.0																									Diurnal Maximum							

Hourly Averages

External Temperature (ET) - °C

Henry Pirker - July 2018



Hourly Averages

Relative Humidity (RH) - %

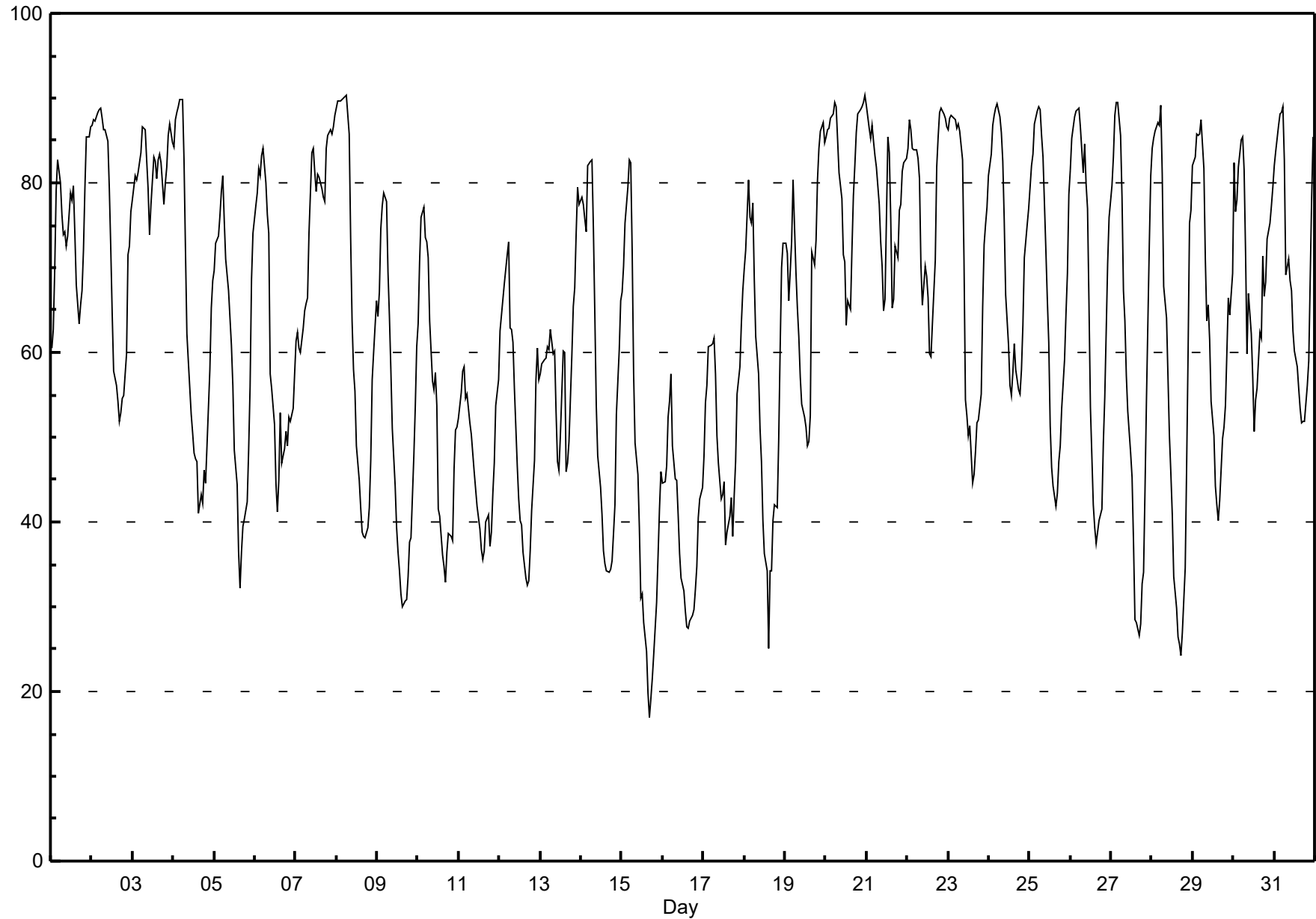
Henry Pirker - July 2018

Maximum Value: 90.4 % on Jul 21 00:00																				Maximum Daily Average: 81.8 % on Jul 3					Hours in Service: 744	
Minimum Value: 17 % on Jul 15 17:00																				Minimum Daily Average: 39.5 % on Jul 16					Hours of Data: 744	
Maximum Diurnal Average: 80.3 % at hour 6																				Minimum Diurnal Average: 46.3 % at hour 16					Hours of Missing Data: 0	
Monthly Average: 63.27 %																				Percentiles: P ₁ = 25.3 P ₁₀ = 38.1 Q ₁ = 48.6 Median = 64.3 Q ₃ = 80.1 P ₉₀ = 86.4 P ₉₉ = 89.6					Hours of Calibration: 0	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	61	63	70	79	83	80	76	74	74	73	74	79	78	80	74	68	63	66	67	72	79	85	86	87	74.6	86.5
2-Jul	87	88	87	88	89	89	88	86	86	85	79	72	65	58	56	54	52	53	55	55	60	72	72	77	73.0	88.7
3-Jul	78	81	80	81	82	84	87	86	83	79	74	78	83	82	80	83	83	82	77	80	82	86	87	85	81.8	86.9
4-Jul	84	88	88	89	90	90	83	72	62	59	53	51	48	47	47	41	43	42	46	45	49	58	65	69	62.9	89.8
5-Jul	70	73	74	76	79	81	76	71	67	64	61	56	48	44	36	32	36	39	40	42	48	56	69	74	58.9	80.8
6-Jul	77	79	82	81	83	84	80	76	74	57	56	52	45	41	45	53	47	49	51	49	52	52	53	58	61.5	84.0
7-Jul	61	62	60	60	63	65	66	67	74	84	84	81	79	81	81	79	78	78	84	86	86	86	87	88	75.8	87.9
8-Jul	89	90	90	90	90	90	90	86	74	64	58	55	49	45	42	39	38	38	39	42	47	57	60	66	63.6	90.3
9-Jul	64	67	75	77	79	78	69	64	58	51	44	39	36	34	32	30	31	31	34	38	38	48	54	61	51.3	78.9
10-Jul	63	71	76	77	74	73	71	64	57	56	58	54	41	41	36	35	33	36	39	38	38	46	51	51	53.2	77.1
11-Jul	52	55	58	58	55	55	52	50	48	46	44	42	39	37	36	37	40	41	37	39	43	47	54	57	46.7	58.3
12-Jul	63	64	66	68	72	73	63	63	61	56	47	43	40	40	36	33	33	33	37	41	47	57	60	57	52.2	73.0
13-Jul	57	59	59	59	61	60	63	60	60	53	47	46	50	60	60	46	47	50	60	65	68	74	79	77	59.2	79.4
14-Jul	78	78	76	74	82	83	83	75	64	54	48	44	41	37	35	34	34	34	35	39	42	53	60	66	56.2	82.7
15-Jul	67	70	75	79	83	82	72	57	49	46	39	31	32	28	25	20	17	19	22	24	31	36	42	46	45.5	82.8
16-Jul	44	45	47	52	54	57	49	45	45	41	36	33	32	30	28	28	28	29	30	32	35	40	43	44	39.5	57.4
17-Jul	48	54	56	61	61	61	62	57	50	47	43	43	45	37	39	41	43	38	43	47	55	58	63	67	50.8	67.2
18-Jul	70	72	80	76	75	78	69	62	57	51	47	40	36	34	25	34	34	40	42	42	50	60	70	73	54.9	80.3
19-Jul	73	72	66	69	73	80	69	65	62	57	54	52	51	49	50	53	72	70	73	80	84	86	87	85	68.1	87.2
20-Jul	85	86	86	88	88	89	89	85	81	78	72	71	63	66	65	72	78	82	86	88	89	89	89	90	81.6	90.4
21-Jul	89	87	85	87	85	83	82	77	73	70	65	66	85	84	76	65	66	73	71	77	78	81	82	83	77.9	89.2
22-Jul	84	87	86	84	84	84	83	81	70	66	70	69	66	60	59	63	71	82	85	88	89	88	88	87	78.1	88.7
23-Jul	86	88	88	88	87	86	87	86	83	71	54	53	50	51	45	46	48	52	52	55	65	73	75	77	68.6	87.9
24-Jul	81	83	87	88	89	89	88	86	82	76	67	61	56	55	58	61	58	56	55	58	63	71	75	77	71.6	89.4
25-Jul	79	82	83	87	88	89	89	86	83	72	66	61	51	46	44	42	43	47	49	53	59	65	69	79	67.3	89.1
26-Jul	82	85	88	88	89	89	87	81	85	80	77	66	54	42	39	37	39	40	41	49	55	62	70	76	66.7	88.8
27-Jul	80	83	88	89	89	86	78	67	64	57	53	48	45	38	29	28	27	28	33	34	44	54	73	81	58.1	89.5
28-Jul	84	85	86	87	87	89	81	68	64	57	50	46	41	34	30	26	26	24	27	35	47	60	75	77	57.7	89.1
29-Jul	82	83	86	86	86	87	82	71	64	66	61	54	50	44	42	40	43	50	51	54	60	66	64	69	64.2	87.5
30-Jul	82	77	78	82	85	85	81	72	60	67	62	57	51	54	56	62	62	71	67	68	73	75	77	79	70.2	85.5
31-Jul	82	84	87	88	88	89	83	69	71	69	67	63	60	58	56	53	52	52	52	56	59	68	78	85	69.5	88.9
73.7 75.4 77.2 78.7 79.7 80.3 76.6 71.3 67.3 62.9 58.4 55.0 52.0 49.6 47.1 46.3 47.3 49.2 51.0 53.9 58.6 64.8 69.7 72.4																									Diurnal Average	
89.2 89.6 89.6 89.9 90.0 90.1 90.3 86.3 86.3 84.8 84.1 81.3 85.4 83.6 80.7 82.6 83.4 82.3 86.0 88.3 88.7 89.0 89.4 90.4																									Diurnal Maximum	

Hourly Averages

Relative Humidity (RH) - %

Henry Pirker - July 2018



Hourly Averages

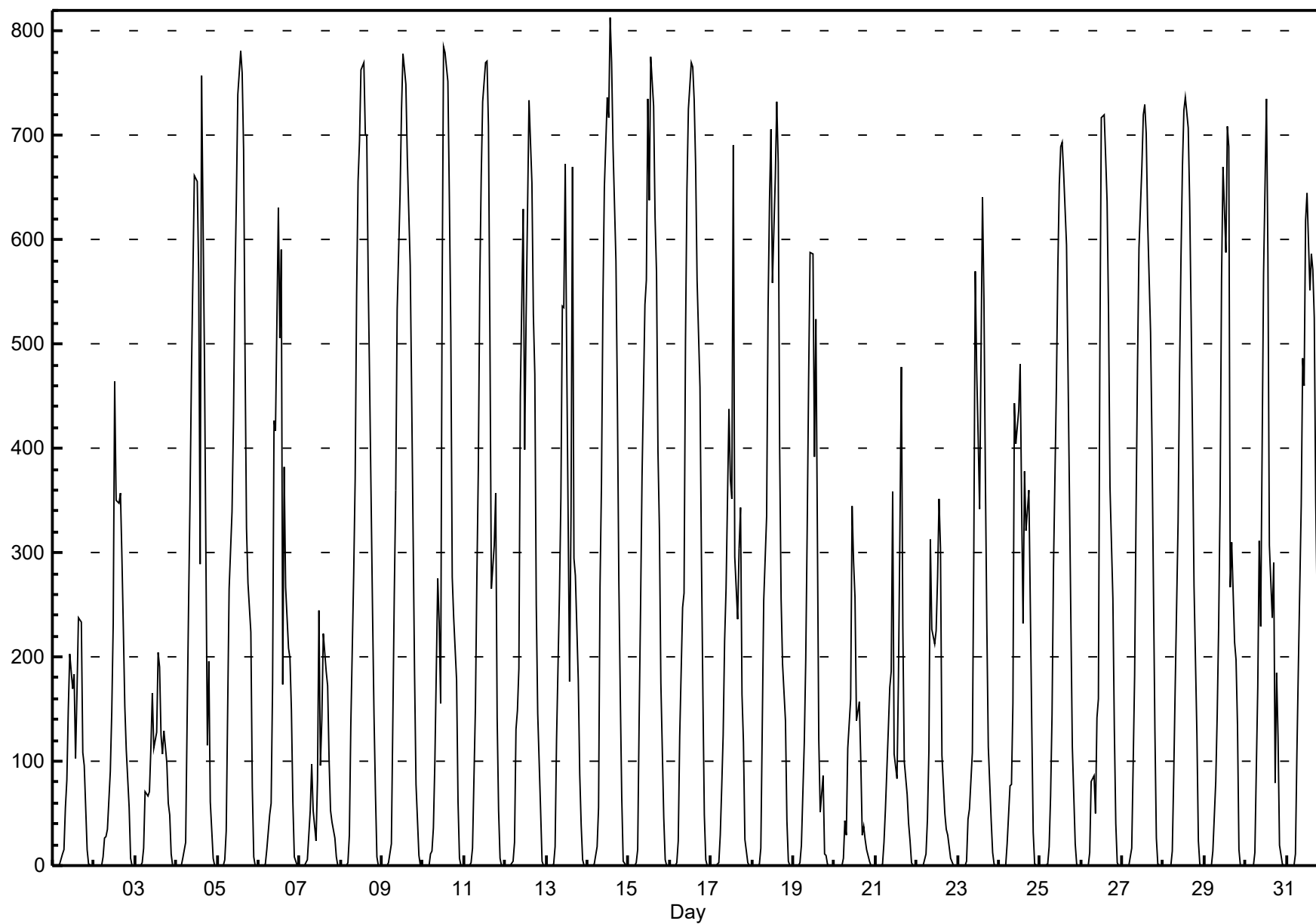
Solar Radiation (SR) - W/m²

Henry Pirker - July 2018

Maximum Value: 812.8 W/m ² on Jul 14 14:00																					Maximum Daily Average: 302.9 W/m ² on Jul 9					Hours in Service: 744	
Minimum Value: 0 W/m ² on Jul 1 01:00																					Minimum Daily Average: 68.2 W/m ² on Jul 7					Hours of Data: 744	
Maximum Diurnal Average: 546.7 W/m ² at hour 14																					Minimum Diurnal Average: 0.0 W/m ² at hour 24					Hours of Missing Data: 0	
Monthly Average: 205.59 W/m ²																					Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.2 Median = 99.1 Q ₃ = 350.9 P ₉₀ = 640.3 P ₉₉ = 770.5					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	2	11	15	56	82	150	204	170	184	103	166	238	233	108	96	56	15	2	0	0	78.7	237.7	
2-Jul	0	0	0	0	1	8	26	28	34	91	148	232	464	351	348	357	296	226	153	112	55	7	0	0	122.4	464.2	
3-Jul	0	0	0	0	2	17	71	66	70	113	165	113	127	204	190	125	107	129	98	60	49	10	0	0	71.6	204.4	
4-Jul	0	0	0	0	6	23	137	248	350	471	661	659	656	567	289	757	482	293	115	196	61	7	0	0	249.2	757.3	
5-Jul	0	0	0	0	6	34	150	265	339	426	555	639	739	782	760	687	487	323	270	224	75	9	0	0	282.2	781.7	
6-Jul	0	0	0	0	1	16	48	59	174	427	417	631	506	591	173	382	266	209	199	148	61	8	0	0	179.8	630.6	
7-Jul	0	0	0	0	5	29	52	98	52	24	82	245	96	140	223	186	172	102	53	42	27	9	0	0	68.2	244.9	
8-Jul	0	0	0	0	3	29	135	281	372	548	656	696	762	770	702	699	563	461	244	144	70	8	0	0	297.6	769.5	
9-Jul	0	0	0	0	3	21	139	259	359	533	644	726	779	764	750	678	576	450	317	183	77	9	0	0	302.9	778.5	
10-Jul	0	0	0	0	11	14	37	98	275	232	156	542	785	779	752	643	516	277	237	178	61	7	0	0	233.3	784.9	
11-Jul	0	0	0	0	3	16	151	276	379	556	660	732	770	771	709	510	266	308	357	141	53	6	0	0	277.8	771.1	
12-Jul	0	0	0	0	4	22	130	148	189	450	629	399	527	631	733	655	528	471	250	146	52	4	0	0	248.7	733.2	
13-Jul	0	0	0	0	1	18	121	260	353	536	536	673	489	177	337	670	295	278	178	87	39	6	0	0	210.6	673.4	
14-Jul	0	0	0	0	1	18	56	266	365	540	651	737	717	813	770	688	580	445	273	163	65	5	0	0	297.9	812.8	
15-Jul	0	0	0	0	3	15	139	249	372	538	562	735	638	775	728	621	569	398	322	175	47	5	0	0	287.2	775.0	
16-Jul	0	0	0	0	2	24	124	247	262	504	648	726	771	765	734	671	562	458	296	165	49	5	0	0	292.2	770.6	
17-Jul	0	0	0	0	3	29	75	126	216	266	437	370	352	691	296	236	305	344	165	118	25	3	0	0	169.0	691.3	
18-Jul	0	0	0	0	1	16	135	255	335	533	639	706	559	661	733	674	397	255	193	139	43	5	0	0	261.6	732.9	
19-Jul	0	0	0	0	2	19	118	198	323	467	588	587	393	524	327	121	52	86	11	9	1	0	0	0	159.4	587.9	
20-Jul	0	0	0	0	0	7	43	29	112	160	344	291	258	139	158	100	29	38	25	16	5	0	0	0	73.1	344.1	
21-Jul	0	0	0	0	1	22	54	130	170	187	359	107	84	182	320	478	229	101	68	40	24	3	0	0	106.6	477.5	
22-Jul	0	0	0	0	1	11	44	110	313	227	213	225	277	352	304	106	50	35	29	18	7	1	0	0	96.7	351.8	
23-Jul	0	0	0	0	0	5	44	54	109	301	570	475	412	341	641	542	371	229	113	42	13	2	0	0	177.6	640.8	
24-Jul	0	0	0	0	0	21	77	78	156	444	405	437	481	347	232	378	321	360	250	135	31	1	0	0	173.1	480.7	
25-Jul	0	0	0	0	1	18	67	144	287	459	573	653	689	693	665	595	478	357	235	113	21	2	0	0	252.1	693.1	
26-Jul	0	0	0	0	1	13	80	86	49	141	159	491	717	720	680	637	530	362	255	130	40	3	0	0	212.3	719.7	
27-Jul	0	0	0	0	0	16	97	182	341	480	592	670	720	730	702	618	512	405	266	130	27	2	0	0	270.4	729.7	
28-Jul	0	0	0	0	0	15	87	171	329	472	582	670	724	736	707	636	527	407	268	125	23	1	0	0	270.0	736.2	
29-Jul	0	0	0	0	0	14	80	145	230	352	563	669	587	709	689	267	310	213	198	135	16	1	0	0	215.8	708.8	
30-Jul	0	0	0	0	0	13	93	171	311	229	567	652	735	585	308	238	291	79	185	122	20	1	0	0	191.6	734.8	
31-Jul	0	0	0	0	0	11	107	189	346	486	461	619	645	551	587	571	525	349	247	108	56	2	0	0	244.1	644.9	
0.0 0.0 0.0 0.0 2.2 17.6 88.1 160.4 246.9 365.8 465.3 525.1 536.8 546.7 506.9 476.2 368.5 276.0 192.4 116.1 39.0 4.3 0.1 0.0 Diurnal Average																											
0.1 0.1 0.2 0.1 10.8 33.5 151.0 281.4 379.3 556.0 661.3 736.8 784.9 812.8 769.9 757.3 579.7 470.7 356.9 224.3 77.5 10.5 0.2 0.1 Diurnal Maximum																											

Hourly Averages

Solar Radiation (SR) - W/m²
Henry Pirker - July 2018



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Henry Pirkner - July 2018

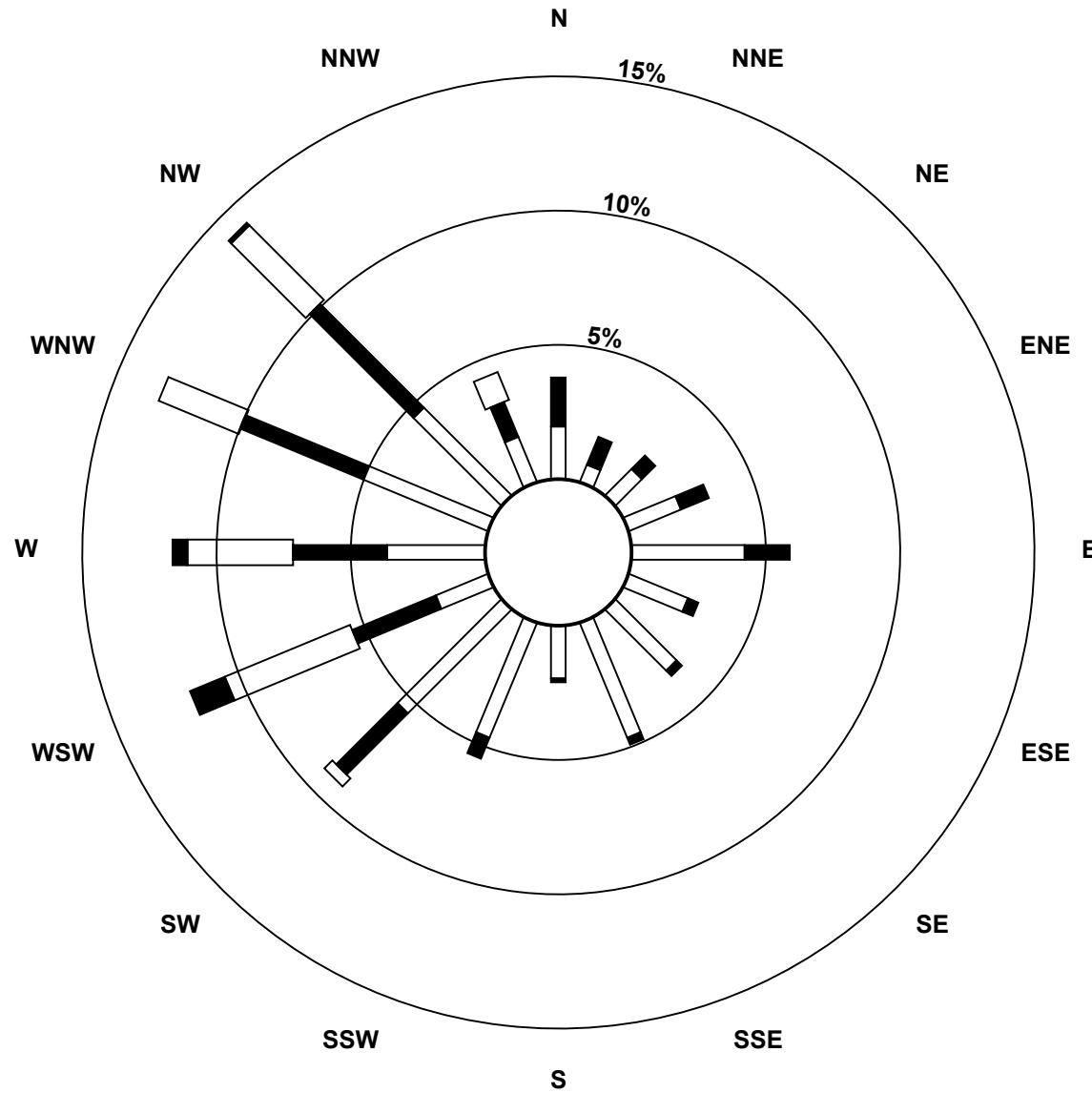
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	14	15	14	8	3	8	10	11	12	13	17	15	18	19	18	20	23	19	18	14	14	12	12	12	13.7	23.3
Dir	240	245	253	244	253	233	247	256	267	277	287	279	266	256	260	261	270	285	280	278	283	277	270	273	266.1	269.5
2 Spd	12	12	13	13	12	10	10	11	13	14	17	19	20	19	19	18	17	15	12	13	12	8	8	7	12.9	20.4
Dir	270	267	278	286	298	315	323	326	325	319	325	323	324	326	321	322	328	317	326	328	334	333	326	310	315.9	324.1
3 Spd	9	9	10	12	13	10	10	10	9	10	13	12	10	11	8	8	9	7	8	9	9	7	6	3	8.9	12.7
Dir	307	303	304	305	304	309	307	305	321	331	335	340	342	344	349	319	305	304	309	301	302	308	311	7	317.0	304.0
4 Spd	1	5	6	3	3	3	2	2	1	1	2	2	0	2	1	3	4	3	4	4	5	4	4	4	0.5	5.5
Dir	322	302	300	308	287	281	276	276	304	170	237	291	64	145	27	341	84	76	101	100	96	91	98	89	38.4	299.6
5 Spd	4	4	5	5	7	5	5	3	4	3	4	3	3	2	1	2	5	5	7	7	6	3	2	2	3.0	7.3
Dir	92	92	78	88	106	106	118	149	168	154	164	206	234	220	185	168	107	82	91	96	92	100	334	342	110.7	90.9
6 Spd	2	4	9	2	3	3	5	4	2	7	7	6	9	4	10	21	13	10	8	10	8	9	8	5	6.3	21.0
Dir	313	310	300	190	270	236	237	214	234	216	239	233	257	226	218	249	234	213	212	198	212	219	227	224	233.2	249.5
7 Spd	6	6	7	8	7	8	10	15	19	16	11	18	13	15	12	10	11	9	8	7	7	7	4	3	8.1	19.0
Dir	238	201	210	219	215	221	225	237	259	264	262	309	315	306	306	286	279	280	263	251	235	231	228	196	260.9	258.8
8 Spd	4	1	2	0	1	2	2	2	4	5	9	11	10	11	10	12	13	10	11	9	5	4	3	3	5.6	13.1
Dir	195	224	333	286	220	207	209	202	212	229	241	250	249	270	256	249	251	242	262	264	260	227	224	218	247.1	251.1
9 Spd	4	3	1	2	2	3	3	3	4	8	14	15	14	13	15	16	15	14	10	6	3	3	3	2	6.0	15.8
Dir	217	201	208	141	147	147	145	155	196	219	230	244	233	244	258	267	273	274	282	280	274	169	190	224	243.7	266.9
10 Spd	2	2	1	0	1	2	3	2	3	6	7	7	14	13	15	15	15	11	7	8	12	8	8	7	6.4	15.4
Dir	210	138	272	247	167	164	159	267	204	216	236	223	242	242	254	273	264	269	275	270	249	235	233	230	246.3	254.2
11 Spd	7	7	5	8	14	14	18	20	23	21	19	17	17	17	22	21	21	15	18	19	14	12	6	6	15.0	23.4
Dir	229	239	266	254	244	244	250	249	255	257	246	246	257	256	268	252	245	236	251	248	244	242	226	232	249.2	254.6
12 Spd	5	5	5	5	3	5	6	5	5	6	14	14	14	15	14	15	15	14	14	12	7	2	1	2	7.8	15.2
Dir	223	222	237	232	250	272	246	226	232	243	256	268	271	283	284	263	268	284	293	301	298	292	160	217	267.0	282.5
13 Spd	4	4	3	6	6	5	9	11	11	13	14	18	16	13	11	17	16	15	16	11	13	10	7	9	10.1	17.9
Dir	232	244	266	245	287	262	307	296	293	300	301	312	310	317	324	319	310	308	311	278	277	286	273	265	297.7	311.8
14 Spd	11	11	11	14	12	10	8	11	15	17	16	16	16	18	16	15	12	12	10	5	2	1	3	3	10.3	17.8
Dir	289	285	284	288	292	280	252	252	281	286	288	288	292	289	291	310	304	304	301	305	283	206	146	159	287.2	288.6
15 Spd	4	5	3	3	2	3	2	3	4	4	5	9	9	11	6	4	8	10	9	8	6	3	1	3	3.0	10.7
Dir	139	138	140	145	120	150	146	170	198	209	227	247	305	314	305	283	250	277	289	279	269	271	311	230	257.8	313.7
16 Spd	4	4	5	4	2	2	3	5	12	18	18	17	19	21	19	22	21	22	18	16	14	6	5	5	11.6	22.0
Dir	223	218	222	238	297	213	253	233	252	251	256	259	250	254	245	252	243	246	249	249	250	226	211	218	246.8	245.5
17 Spd	5	3	4	3	2	2	1	3	7	7	9	9	6	9	11	9	7	4	5	6	5	3	3	3	3.5	10.8
Dir	214	212	213	272	296	312	292	289	265	275	281	302	293	256	278	260	248	260	204	165	156	136	120	101	255.9	278.0
18 Spd	1	1	6	3	3	3	4	2	4	4	5	6	14	14	22	16	15	15	17	12	10	6	2	3	7.1	21.6
Dir	337	107	307	2	317	212	286	314	269	242	237	261	267	274	269	297	300	308	313	308	304	304	299	317	290.3	268.7
19 Spd	1	0	2	1	4	3	5	6	5	5	6	6	6	6	9	8	6	5	4	5	6	8	11	9	4.4	11.0
Dir	250	182	273	332	318	320	33	62	67	61	70	52	57	40	72	69	8	32	35	1	349	11	15	31	34.0	15.1
20 Spd	7	6	7	4	5	4	5	6	5	0	1	8	9	7	10	5	5	6	7	11	11	10	9	7	2.8	11.2
Dir	47	69	78	62	104	112	144	185	261	164	287	290	309	319	332	7	356	317	294	288	290	267	241	294	307.8	289.6
21 Spd	9	9	10	10	8	8	6	8	8	8	8	7	8	12	13	16	14	10	9	9	5	6	5	3	7.3	15.5
Dir	322	355	36	34	19	7	30	6	356	10	8	340	325	317	332	335	317	309	304	289	306	288	277	266	338.3	335.4
22 Spd	5	3	3	5	6	6	8	6	2	1	5	4	5	5	5	6	4	4	3	6	8	9	9	10	3.6	9.6
Dir	299	283	266	297	285	282	285	296	289	281	253	322	46	45	58	72	46	350	333	321	336	358	352	350	329.2	349.8

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							
23 Spd	8	7	7	5	8	9	11	9	7	5	4	5	5	7	7	7	8	5	3	4	3	6	4	3	4.9	11.4					
Dir	340	314	315	308	312	319	318	317	313	329	6	349	352	314	300	302	319	314	303	338	66	92	101	95	325.9	317.5					
24 Spd	2	1	1	2	1	1	2	2	1	2	1	2	1	0	1	4	3	3	4	7	5	5	5	5	1.9	6.5					
Dir	96	264	91	98	136	124	133	186	221	170	241	280	303	88	125	92	106	99	131	99	100	102	102	99	112.8	99.3					
25 Spd	2	2	2	0	0	1	0	2	2	1	3	4	2	1	2	3	2	4	4	5	4	2	1	0	1.2	5.1					
Dir	95	75	75	295	334	267	149	134	167	173	133	140	149	198	195	257	279	60	71	88	90	73	68	224	108.8	87.9					
26 Spd	1	1	1	2	2	1	3	2	1	3	5	4	5	4	3	3	4	3	3	4	4	3	2	2	1.6	5.4					
Dir	282	308	304	295	294	289	339	275	255	190	194	209	212	217	275	279	286	265	292	163	164	161	155	151	229.8	193.9					
27 Spd	1	0	2	2	3	2	2	4	4	4	3	2	4	3	2	2	2	2	5	4	5	2	0	1	1.3	5.1					
Dir	187	169	137	162	201	203	196	224	224	215	211	206	162	162	159	182	179	330	321	79	95	96	227	298	184.1	320.6					
28 Spd	1	2	2	2	1	0	1	1	3	4	3	3	5	5	5	4	4	2	5	2	2	2	0	2	1.2	5.0					
Dir	290	298	315	283	330	241	228	204	220	232	199	167	159	170	168	144	162	223	306	304	105	93	102	315	201.2	306.3					
29 Spd	1	2	1	2	1	2	1	1	3	5	6	5	7	8	6	2	4	6	5	4	3	4	4	5	2.0	8.1					
Dir	275	287	288	312	303	150	330	47	80	103	106	84	101	134	163	351	34	101	153	161	136	122	144	297	117.6	133.7					
30 Spd	7	4	4	6	3	4	4	4	2	2	4	5	5	6	7	7	8	5	4	4	3	3	1	1	3.2	7.9					
Dir	343	25	220	288	295	303	306	325	329	294	309	313	355	12	9	13	31	9	49	52	44	40	11	1	351.5	31.1					
31 Spd	1	1	2	1	2	1	0	1	3	5	4	6	8	8	6	6	7	6	5	5	3	4	4	3	2.4	7.6					
Dir	12	300	317	296	309	308	208	53	115	115	124	126	98	108	91	94	91	91	74	76	49	2	317	315	83.2	108.4					
Spd	2.3	2.2	2.6	2.5	2.6	2.4	2.8	3.4	4.4	4.5	5.2	6.0	5.9	6.2	6.4	6.8	6.5	5.7	5.4	4.1	3.1	1.8	1.6	1.8	Diurnal Average						
Dir	272.5	269.9	280.1	281.3	285.2	267.5	271.7	265.9	267.9	265.0	267.8	281.2	281.7	282.2	283.1	284.9	281.9	286.6	288.0	280.1	279.1	271.9	265.3	276.2	Diurnal Maximum						
Spd	13.5	15.3	13.7	14.0	13.9	14.4	17.6	20.4	23.4	21.1	19.0	19.4	20.4	21.3	22.1	21.5	23.3	22.0	18.3	19.2	14.5	12.0	12.3	12.1	Diurnal Maximum						
Dir	240.3	245.1	252.9	288.0	243.8	243.9	250.5	249.2	254.6	257.2	246.1	322.6	324.1	254.1	267.6	251.9	269.5	245.5	248.7	248.4	283.1	241.7	269.8	273.0							
Maximum Speed Value: 23 km/h on Jul 11 09:00																								Minimum Speed Value: 0 km/h on Jul 27 23:00				Hours in Service: 744			
Maximum Daily Speed Average: 15.0 km/h on Jul 11																								Minimum Daily Speed Average: 0.5 km/h on Jul 25				Hours of Data: 744			
Maximum Diurnal Speed Average: 6.8 km/h at hour 16																								Minimum Diurnal Speed Average: 1.6 km/h at hour 23				Hours of Missing Data: 0			
Monthly Average Velocity: 3.96 km/h 278.16 deg																								Speed Percentiles: P ₁ = 0.3 P ₁₀ = 1.5 Q ₁ = 2.9 Median = 5.3 Q ₃ = 9.7 P ₉₀ = 14.8 P ₉₉ = 21.2				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		25		1		0		0		0		44																		
NorthEast	20		13		0		0		0		0		33																		
East	43		30		0		0		0		0		73																		
SouthEast	42		4		0		0		0		0		46																		
South	49		6		0		0		0		0		55																		
SouthWest	68		46		18		3		0		0		135																		
West	54		51		67		15		0		0		187																		
NorthWest	57		66		44		4		0		0		171																		
Total	351		241		130		22		0		0		744																		

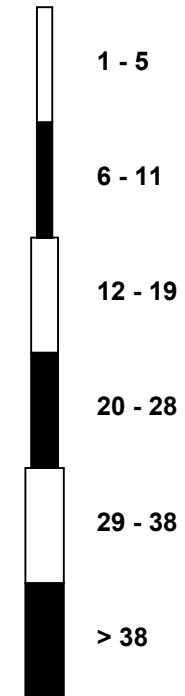
Wind Rose

Wind Speed (WS) (km/h)

Henry Pirker - July 2018



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Henry Pirker - July 2018

Maximum Speed: 24 km/h on Jul 11 09:00																				Maximum Daily Speed Average: 15.4 km/h on Jul 11										Hours in Service: 744	
Minimum Speed: 0 km/h on Jul 28 23:00																				Minimum Daily Speed Average: 2.5 km/h on Jul 25										Hours of Data: 744	
Maximum Diurnal Speed Average: 10.8 km/h at hour 16																				Minimum Diurnal Speed Average: 4.5 km/h at hour 24										Hours of Missing Data: 0	
Monthly Average Speed: 7.20 km/h																				Percentiles: P ₁ = 0.5 P ₁₀ = 1.9 Q ₁ = 3.3 Median = 5.6 Q ₃ = 10.0 P ₉₀ = 15.2 P ₉₉ = 21.5										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Jul	14	15	14	8	4	8	10	12	12	13	17	15	18	19	18	20	23	19	18	14	15	12	12	12	14.3	23.5					
2-Jul	12	12	13	13	12	10	10	12	13	14	17	19	21	19	19	19	17	15	12	13	12	8	8	7	13.7	20.6					
3-Jul	9	9	11	12	13	10	11	10	9	10	13	12	10	11	9	8	9	8	8	9	9	7	6	4	9.4	12.8					
4-Jul	2	5	6	3	3	3	2	2	1	2	2	2	3	4	2	4	5	4	4	5	5	4	4	4	3.4	5.6					
5-Jul	4	4	5	5	7	5	5	3	4	4	5	3	3	3	2	3	6	5	8	7	6	3	2	2	4.4	7.6					
6-Jul	3	4	10	3	4	3	5	4	2	8	7	7	9	5	11	21	13	11	9	10	8	9	8	6	7.4	21.3					
7-Jul	6	6	7	8	7	8	10	15	19	16	11	18	13	15	12	10	11	10	8	7	8	7	4	3	10.0	19.3					
8-Jul	4	1	2	0	1	2	2	2	4	5	9	11	10	11	11	13	13	11	11	9	5	4	3	3	6.2	13.4					
9-Jul	4	3	1	1	2	3	3	3	5	9	15	15	15	14	16	16	15	14	10	7	3	3	3	2	7.6	16.2					
10-Jul	2	2	1	1	2	3	3	2	4	6	7	8	15	14	16	15	15	11	8	8	12	8	8	7	7.4	16.0					
11-Jul	7	7	6	8	14	14	18	21	24	21	19	17	18	18	23	21	21	15	19	19	14	12	6	6	15.4	23.6					
12-Jul	5	5	5	5	4	5	6	5	5	7	15	14	15	16	14	15	16	14	15	12	7	2	1	2	8.8	15.6					
13-Jul	4	5	3	6	6	5	9	11	11	14	14	18	17	13	11	18	17	16	16	11	13	10	7	9	11.1	18.3					
14-Jul	12	12	11	14	12	10	8	11	15	17	16	17	17	18	16	15	13	12	10	5	2	2	3	3	11.3	18.1					
15-Jul	4	5	3	3	2	3	2	3	4	5	6	9	10	11	6	5	9	10	10	9	6	4	2	3	5.5	10.9					
16-Jul	4	4	5	4	3	3	4	5	12	18	19	18	20	22	20	22	22	22	19	17	14	6	5	5	12.1	22.4					
17-Jul	5	3	4	3	2	2	1	3	7	8	10	9	7	10	11	9	7	4	5	6	5	4	3	3	5.4	11.3					
18-Jul	2	2	6	4	4	4	5	3	4	5	6	7	15	15	22	17	15	15	17	12	10	6	3	4	8.4	22.1					
19-Jul	2	1	3	1	4	3	5	7	6	6	6	6	7	7	10	9	6	6	5	5	6	8	11	9	5.8	11.2					
20-Jul	7	6	7	4	5	4	6	6	6	1	2	8	9	7	10	5	6	6	7	11	11	10	9	7	6.7	11.3					
21-Jul	10	9	11	10	8	8	7	8	9	8	9	8	8	12	13	16	15	10	9	9	5	6	5	3	9.0	15.7					
22-Jul	5	3	3	5	6	6	8	6	4	2	6	5	5	5	5	6	4	4	3	6	8	9	9	10	5.6	9.6					
23-Jul	8	7	7	5	8	9	11	9	7	6	5	6	5	8	8	8	8	6	4	4	4	6	4	3	6.4	11.5					
24-Jul	2	4	1	2	2	2	2	2	2	3	2	2	2	2	2	5	4	4	4	7	5	5	5	5	3.1	6.6					
25-Jul	2	3	2	0	1	1	0	2	3	2	4	4	3	2	2	3	4	4	4	5	4	2	1	0	2.5	5.3					
26-Jul	1	1	1	2	2	1	3	3	4	5	5	5	5	5	4	3	4	3	3	4	4	3	2	2	3.2	5.5					
27-Jul	2	0	2	2	3	2	2	4	4	5	4	3	4	4	4	3	3	3	5	5	5	2	0	1	2.9	5.4					
28-Jul	1	2	2	2	1	0	1	2	3	4	3	3	5	5	5	5	5	3	5	2	2	2	0	2	2.7	5.4					
29-Jul	0	2	2	2	1	3	3	1	3	6	6	6	8	9	6	3	5	6	5	5	3	5	4	7	4.2	8.8					
30-Jul	9	7	8	6	3	4	4	4	3	5	5	6	6	7	7	8	8	5	5	4	3	3	2	1	5.1	8.8					
31-Jul	1	1	2	2	2	2	0	1	3	5	5	6	8	8	7	7	8	6	5	5	4	4	4	3	4.2	8.3					
4.9 4.9 5.2 4.7 4.7 4.7 5.4 5.9 6.9 7.6 8.7 9.3 10.0 10.3 10.5 10.8 10.5 9.1 8.7 8.2 7.0 5.7 4.7 4.5																									Diurnal Average						
13.6 15.4 13.7 14.1 14.0 14.5 17.6 20.5 23.6 21.4 19.4 19.5 20.6 21.9 22.6 21.9 23.5 22.4 18.7 19.4 14.5 12.1 12.4 12.3																									Diurnal Maximum						

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

Hourly Standard Deviations

Wind Direction (WD) - deg

Henry Pirker - July 2018

Maximum Value: 96.3 deg on Jul 26 00:00																		Hours in Service: 744							
Minimum Value: 4.3 deg on Jul 1 20:00																		Hours of Data: 744							
																		Hours of Missing Data: 0							
Percentiles: P ₁ = 5.2 P ₁₀ = 7.1 Q ₁ = 9.8 Median = 16.1 Q ₃ = 28.3 P ₉₀ = 49.4 P ₉₉ = 86.8																		Hours of Calibration: 0							
																		Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Jul	7	6	5	11	31	10	9	12	8	9	6	7	7	8	8	7	7	6	5	4	5	7	5	8	31.0
2-Jul	6	7	13	6	8	8	6	6	9	6	8	7	8	8	7	9	8	8	9	9	10	9	7	8	12.9
3-Jul	5	5	6	6	6	5	6	6	10	8	8	9	7	7	13	11	8	10	9	5	6	5	10	39	38.6
4-Jul	55	14	7	7	12	12	18	16	78	90	43	68	93	72	57	64	47	54	35	24	9	8	10	9	92.8
5-Jul	15	11	8	10	10	9	14	25	23	38	39	39	42	57	67	55	30	22	17	13	11	33	30	33	67.2
6-Jul	46	36	30	65	44	19	12	24	48	21	16	21	23	26	26	10	11	18	13	9	11	11	6	12	65.4
7-Jul	18	14	8	7	8	8	8	7	11	7	8	14	11	8	9	9	7	11	20	13	13	12	10	13	20.0
8-Jul	14	52	36	70	44	20	20	31	20	19	15	17	17	15	24	18	14	16	14	9	15	12	8	8	69.7
9-Jul	7	31	37	47	20	6	15	21	22	17	13	14	13	17	16	12	14	10	6	5	16	12	17	12	47.0
10-Jul	28	38	57	65	47	59	21	59	35	16	12	19	14	15	16	12	15	13	14	10	6	9	8	8	64.8
11-Jul	7	10	23	13	6	6	6	7	8	9	12	11	16	16	13	13	8	9	14	7	7	8	8	9	23.4
12-Jul	9	8	18	18	30	19	17	14	12	22	13	17	16	12	13	17	16	13	17	7	8	63	44	24	63.1
13-Jul	12	17	37	16	23	19	14	8	11	11	10	12	10	9	9	14	10	9	12	8	6	6	16	11	37.0
14-Jul	6	5	8	6	6	7	15	11	11	8	10	10	11	9	14	13	16	14	12	15	20	61	12	5	60.9
15-Jul	8	6	6	10	16	10	13	35	16	19	20	20	21	14	35	50	21	22	12	9	17	23	23	24	49.8
16-Jul	9	8	9	19	56	30	25	14	12	9	16	14	12	14	14	12	10	10	12	8	7	10	9	6	56.3
17-Jul	11	9	14	33	29	31	45	14	13	18	10	13	14	30	19	13	17	45	25	20	11	15	20	15	45.0
18-Jul	51	79	17	41	56	37	31	38	20	28	26	26	22	20	14	13	16	9	8	8	5	9	32	24	78.8
19-Jul	48	86	43	19	7	24	18	16	22	21	23	18	33	26	17	13	18	14	27	20	12	15	12	13	85.6
20-Jul	12	12	12	21	18	15	13	21	25	83	87	20	14	10	12	21	26	14	14	8	7	11	17	18	87.5
21-Jul	17	20	10	9	14	18	17	14	15	20	18	28	14	9	10	10	9	6	7	9	10	6	8	15	28.3
22-Jul	15	14	14	10	9	7	9	11	76	69	30	41	36	36	27	17	30	10	27	15	8	9	8	7	75.5
23-Jul	8	5	8	7	5	6	5	7	12	25	24	35	34	24	28	22	21	23	18	17	51	11	11	12	51.1
24-Jul	36	81	40	18	43	33	21	33	26	43	65	53	80	90	79	28	49	38	25	12	10	8	7	7	90.5
25-Jul	13	12	24	52	63	19	61	23	22	70	33	38	58	49	66	34	81	39	21	15	11	16	20	96	96.3
26-Jul	36	45	34	25	25	46	55	69	79	61	15	18	23	24	42	42	29	23	41	12	8	7	14	17	78.8
27-Jul	26	46	20	49	14	14	22	12	16	20	30	55	26	38	64	61	59	81	26	29	10	7	74	26	80.6
28-Jul	62	52	24	20	74	86	42	18	17	19	37	32	22	30	41	42	41	52	12	34	21	49	67	29	86.5
29-Jul	77	24	26	37	35	15	87	92	39	24	18	31	24	22	32	68	37	27	16	10	25	20	10	88	91.8
30-Jul	36	49	63	16	29	16	14	18	52	71	37	40	39	20	23	24	17	36	23	19	18	22	49	60	71.0
31-Jul	52	42	17	38	31	20	83	68	26	27	32	25	24	25	26	34	21	25	26	18	22	15	21	14	83.0
	77.0	85.6	63.3	69.7	74.4	86.5	87.0	91.8	78.8	89.6	87.5	67.5	92.8	90.5	78.6	68.1	81.4	80.6	41.2	33.7	51.1	63.1	73.9	96.3	

PAZA
Evergreen Park Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

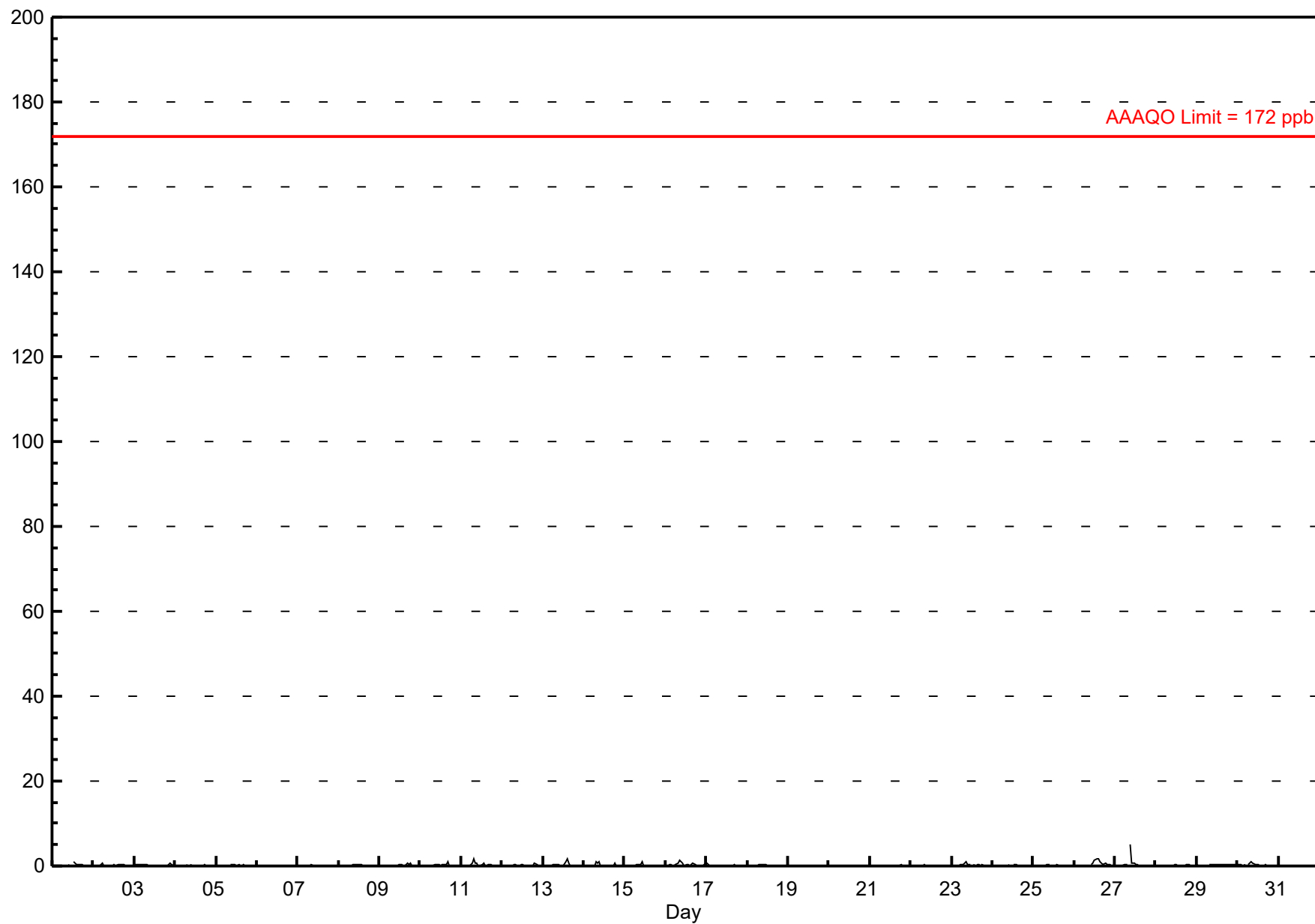
Sulphur Dioxide (SO₂) - ppb

Evergreen Park - July 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 744						
Maximum Value: 5.1 ppb on Jul 27 10:00 Maximum Daily Average: 0.4 ppb on Jul 26																				Hours of Data: 708						
Minimum Value: 0 ppb on Jul 6 14:00 Minimum Daily Average: 0.0 ppb on Jul 6																				Hours of Missing Data: 36						
Maximum Diurnal Average: 0.4 ppb at hour 10 Minimum Diurnal Average: 0.1 ppb at hour 5																				Hours of Calibration: 36						
Monthly Average: 0.15 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 = 1.1																				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	0	0	0	0	0	0	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0.2	0.9
2-Jul	0	0	0	0	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
3-Jul	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.2	0.5
4-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
5-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
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	0.2
7-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
8-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	0.5
9-Jul	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0.1	0.5
10-Jul	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.2	0.9
11-Jul	0	A	0	0	0	0	1	2	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.3	1.6
12-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	A	0.2	0.5
13-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0	A	0	0.2	1.6
14-Jul	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	1	0	0	A	0	0	0.2	1.0
15-Jul	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.9
16-Jul	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	1	0	0	A	0	0	0	1	0.3	1.4
17-Jul	1	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.7
18-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
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	0.1
20-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
21-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	0.1	0.3
22-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	0.0	0.2
23-Jul	0	0	0	0	0	0	0	0	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
24-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
25-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	0.2
26-Jul	0	0	0	0	0	0	0	0	0	A	0	1	1	2	2	1	1	0	1	0	0	0	0	0	0.4	1.9
27-Jul	0	0	0	0	0	0	0	0	A	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	5.1
28-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
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	0.2	0.3
30-Jul	0	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1
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	0.0	0.1
0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.3 0.3 0.4 0.2 0.2 0.2 0.3 0.2 0.2 0.2 0.2 0.1 0.2 0.1 0.1 0.1 0.1 0.1																									Diurnal Average	
0.7 0.4 0.5 0.3 0.2 0.5 0.8 1.6 1.4 5.1 0.9 0.6 1.2 1.9 1.9 0.9 0.9 0.9 0.5 0.8 0.5 0.3 0.5 0.3 0.5																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Evergreen Park - July 2018



Hourly Maximums

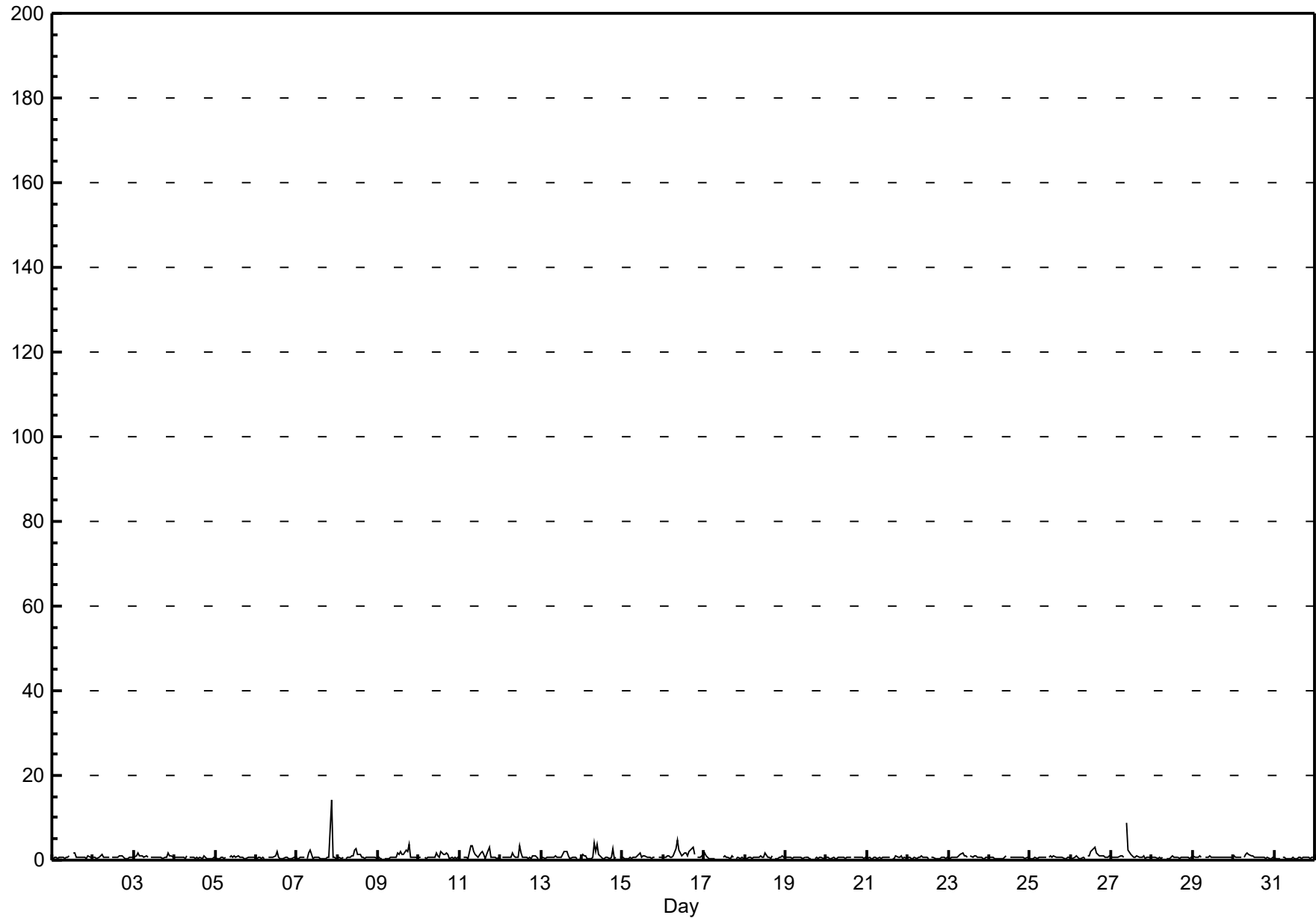
Sulphur Dioxide (SO₂) - ppb

Evergreen Park - July 2018

Maximum Value: 14.2 ppb on Jul 7 21:00																				Maximum Daily Average: 1.5 ppb on Jul 16					Hours in Service: 744	
Minimum Value: 0 ppb on Jul 8 00:00																				Minimum Daily Average: 0.5 ppb on Jul 31					Hours of Data: 708	
Maximum Diurnal Average: 1.2 ppb at hour 10																				Minimum Diurnal Average: 0.6 ppb at hour 4					Hours of Missing Data: 36	
Monthly Average: 0.80 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.5 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.8 P ₉₀ = 1.2 P ₉₉ = 3.4					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	0	1	1	0	1	1	1	0	1	1	1	A	2	2	1	1	1	1	1	1	0	1	1	1	0.8	1.7
2-Jul	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	0	1	1	1	0.7	1.4
3-Jul	1	1	2	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	2	1	1	1	0.9	1.8
4-Jul	1	1	1	1	1	1	0	1	A	1	1	1	0	1	0	1	1	1	1	0	0	0	0	1	0.6	1.1
5-Jul	1	0	0	1	1	0	1	A	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	0.7	1.1
6-Jul	0	1	1	0	1	0	A	1	1	1	1	1	2	1	0	1	0	1	1	0	0	1	1	1	0.6	2.1
7-Jul	0	0	1	1	1	A	0	2	2	0	1	1	1	1	0	0	1	0	1	1	14	1	1	0	1.2	14.2
8-Jul	0	1	0	1	A	0	1	1	1	1	2	3	1	1	1	1	0	1	1	1	1	1	1	0	0.8	2.6
9-Jul	1	0	0	A	1	0	0	1	1	1	1	2	1	2	1	1	3	2	4	1	1	1	1	0	1.0	3.7
10-Jul	1	1	A	1	0	1	1	1	1	1	2	1	1	2	1	1	2	1	0	1	0	1	1	1	0.9	2.2
11-Jul	1	A	1	1	1	0	3	3	2	2	1	1	2	2	1	0	1	3	1	1	1	0	1	1	1.2	3.4
12-Jul	A	1	1	1	1	1	1	2	1	1	1	3	2	1	1	1	0	1	0	1	1	1	0	A	0.9	3.4
13-Jul	1	1	0	1	1	1	1	1	1	1	1	1	1	2	2	2	1	0	1	1	1	0	A	0	0.8	2.2
14-Jul	1	1	1	0	0	0	1	4	2	4	1	1	0	0	1	1	0	1	3	0	1	A	1	1	1.1	4.0
15-Jul	1	0	1	0	1	0	1	1	1	1	2	1	1	1	1	1	1	0	1	1	A	1	1	1	0.7	1.8
16-Jul	1	1	1	1	1	1	1	3	5	2	2	1	2	2	1	2	2	3	1	A	1	1	1	1	1.5	4.9
17-Jul	2	1	1	0	0	0	0	C	C	C	C	1	1	1	1	0	1	1	A	0	1	0	1	0	0.6	1.6
18-Jul	0	0	1	1	0	1	1	1	1	1	1	1	2	1	1	0	1	A	0	1	1	1	1	1	0.7	1.7
19-Jul	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	0	A	0	1	0	1	1	0	1	0.6	0.8
20-Jul	1	1	0	0	1	0	0	1	1	1	1	0	1	1	1	A	1	1	1	1	1	1	0	1	0.6	0.8
21-Jul	0	1	0	0	1	1	0	1	0	1	1	1	1	1	A	0	0	1	1	1	1	0	1	0	0.6	1.0
22-Jul	1	1	0	0	1	0	1	1	1	1	1	1	1	A	1	1	0	0	1	0	1	1	0	1	0.6	0.9
23-Jul	1	0	1	1	1	1	1	1	2	1	1	1	A	1	1	1	1	1	1	1	0	0	1	1	0.8	1.6
24-Jul	1	1	1	0	0	0	0	0	0	1	1	A	1	1	1	1	1	1	1	1	1	0	1	0	0.6	0.9
25-Jul	0	0	0	1	0	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	0	1	1	0.6	0.9
26-Jul	0	0	1	1	1	0	0	1	0	A	1	1	2	3	3	2	1	1	1	1	1	1	1	1	1.0	3.1
27-Jul	1	1	1	1	1	1	1	1	A	9	2	1	1	1	1	1	1	1	1	1	0	1	1	1	1.2	8.8
28-Jul	1	1	1	0	1	0	1	A	0	1	0	1	1	1	1	1	0	1	1	1	1	0	1	0.6	0.9	
29-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	0.9
30-Jul	1	1	1	1	1	A	1	1	2	1	1	1	1	1	1	1	1	1	1	0	1	0	0	1	0.8	1.5
31-Jul	1	0	0	0	A	1	1	0	1	0	0	1	0	0	1	1	0	1	1	1	1	0	1	1	0.5	0.8
0.6 0.6 0.6 0.6 0.6 0.6 0.7 1.1 1.1 1.2 0.9 0.9 1.0 1.0 0.9 0.8 0.8 0.9 0.8 0.6 1.1 0.6 0.6 0.6																									Diurnal Average	
1.6 0.9 1.8 1.0 1.2 1.4 3.3 4.0 4.9 8.8 2.4 3.4 2.1 2.8 3.1 2.2 2.5 3.2 3.7 1.1 14.2 1.1 1.1 1.4																									Diurnal Maximum	
C - Calibration																									A - Automated Daily Zero Span	

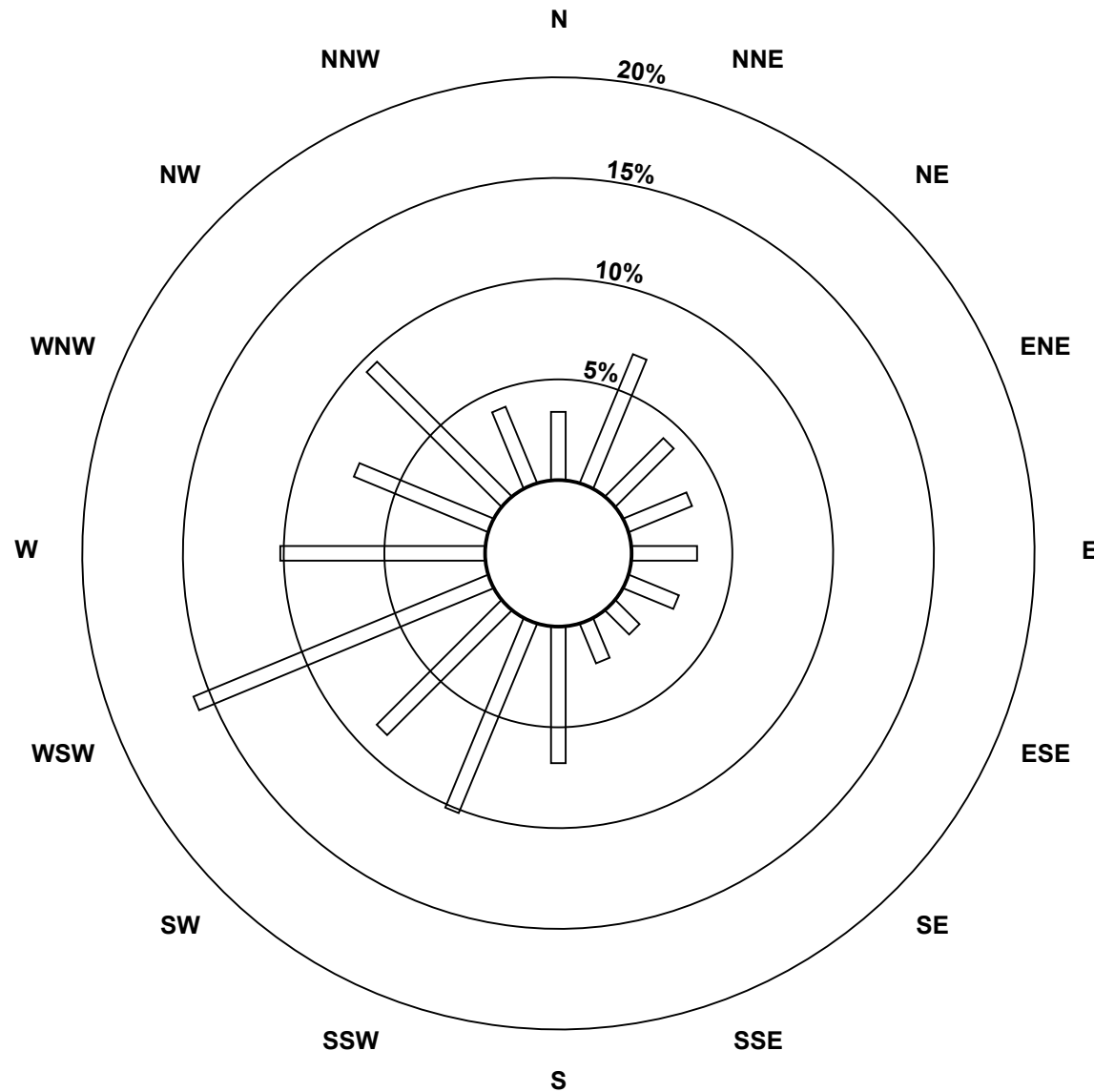
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Evergreen Park - July 2018

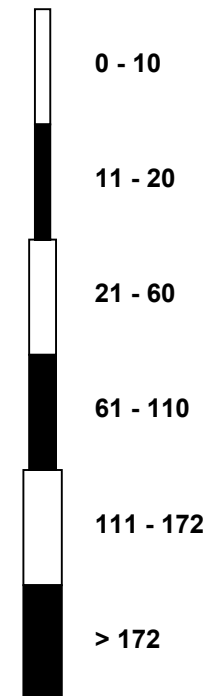


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Evergreen Park - July 2018

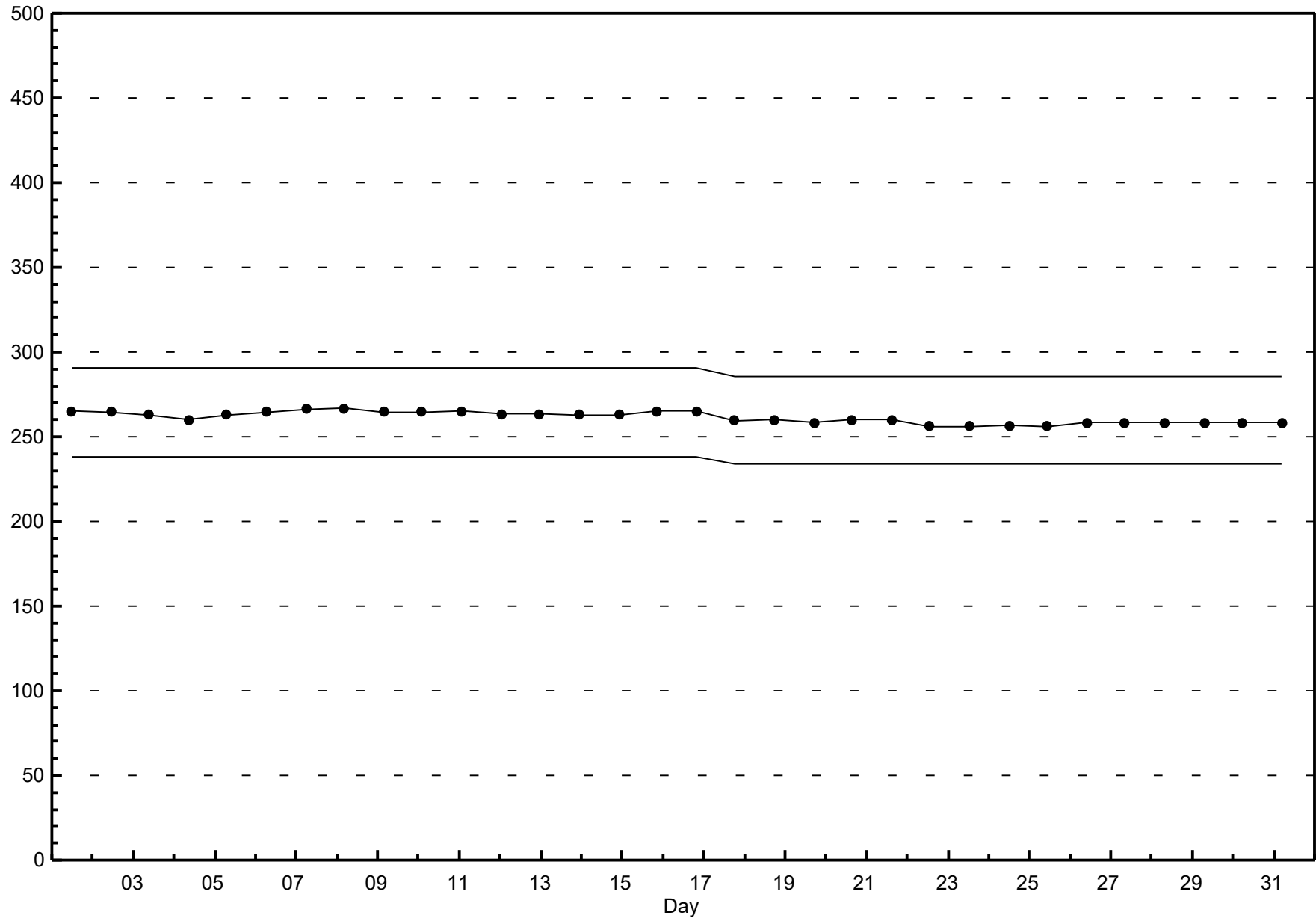


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Evergreen Park - July 2018



Hourly Averages

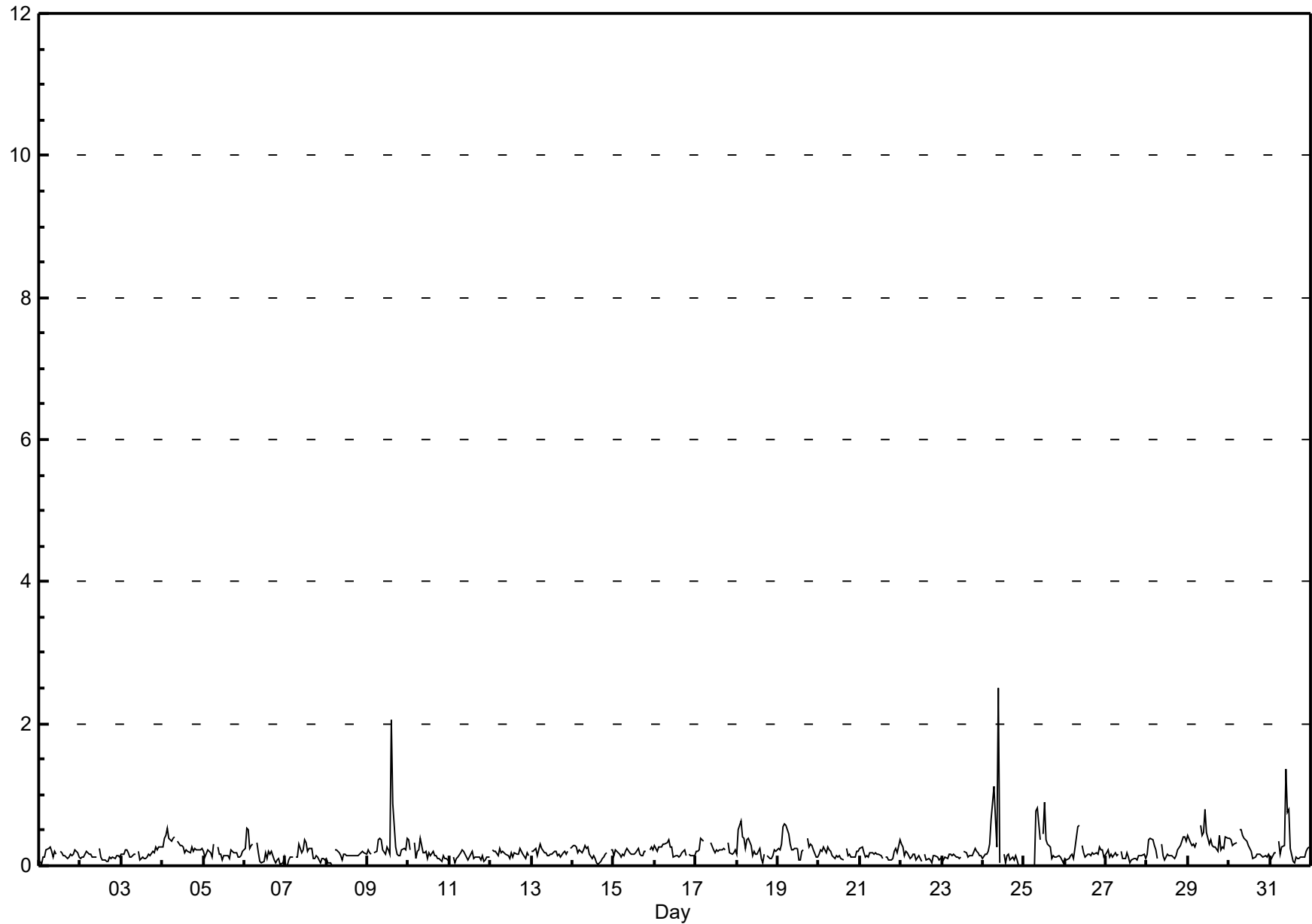
Total Reduced Sulphur (TRS) - ppb

Evergreen Park - July 2018

Maximum Value: 2.5 ppb on Jul 24 10:00																				Maximum Daily Average: 0.4 ppb on Jul 29					Hours in Service: 744	
Minimum Value: 0 ppb on Jul 7 01:00																				Minimum Daily Average: 0.1 ppb on Jul 11					Hours of Data: 708	
Maximum Diurnal Average: 0.3 ppb at hour 10																				Minimum Diurnal Average: 0.2 ppb at hour 17					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 = 0.2 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	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
2-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	0.2
3-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	0.2	0.3
4-Jul	0	0	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
5-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	0.3
6-Jul	0	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
7-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
8-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
9-Jul	0	0	0	A	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0.3	2.1
10-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	0.4
11-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
12-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.2
13-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
14-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	0.3
15-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	0.2	0.3
16-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	0.2	0.4
17-Jul	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.4
18-Jul	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.6
19-Jul	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.6
20-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	0.3
21-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	0.2	0.4
22-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	0.1	0.3
23-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	0.1	0.2
24-Jul	0	0	0	0	0	1	1	1	0	3	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.5
25-Jul	0	0	0	0	0	0	0	1	1	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
26-Jul	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
27-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
28-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
29-Jul	0	0	0	0	0	0	A	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8
30-Jul	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
31-Jul	0	0	0	0	A	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.4
0.2 0.2 0.2 0.2 0.2 0.2 0.3 0.3 0.3 0.3 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2																									Diurnal Average	
0.4 0.5 0.6 0.5 0.6 0.6 1.1 0.8 0.8 2.5 0.8 0.8 0.9 0.4 2.1 0.9 0.3 0.4 0.4 0.3 0.4 0.4 0.4 0.4																									Diurnal Maximum	
C - Calibration																									A - Automated Daily Zero Span	

Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Evergreen Park - July 2018



Hourly Maximums

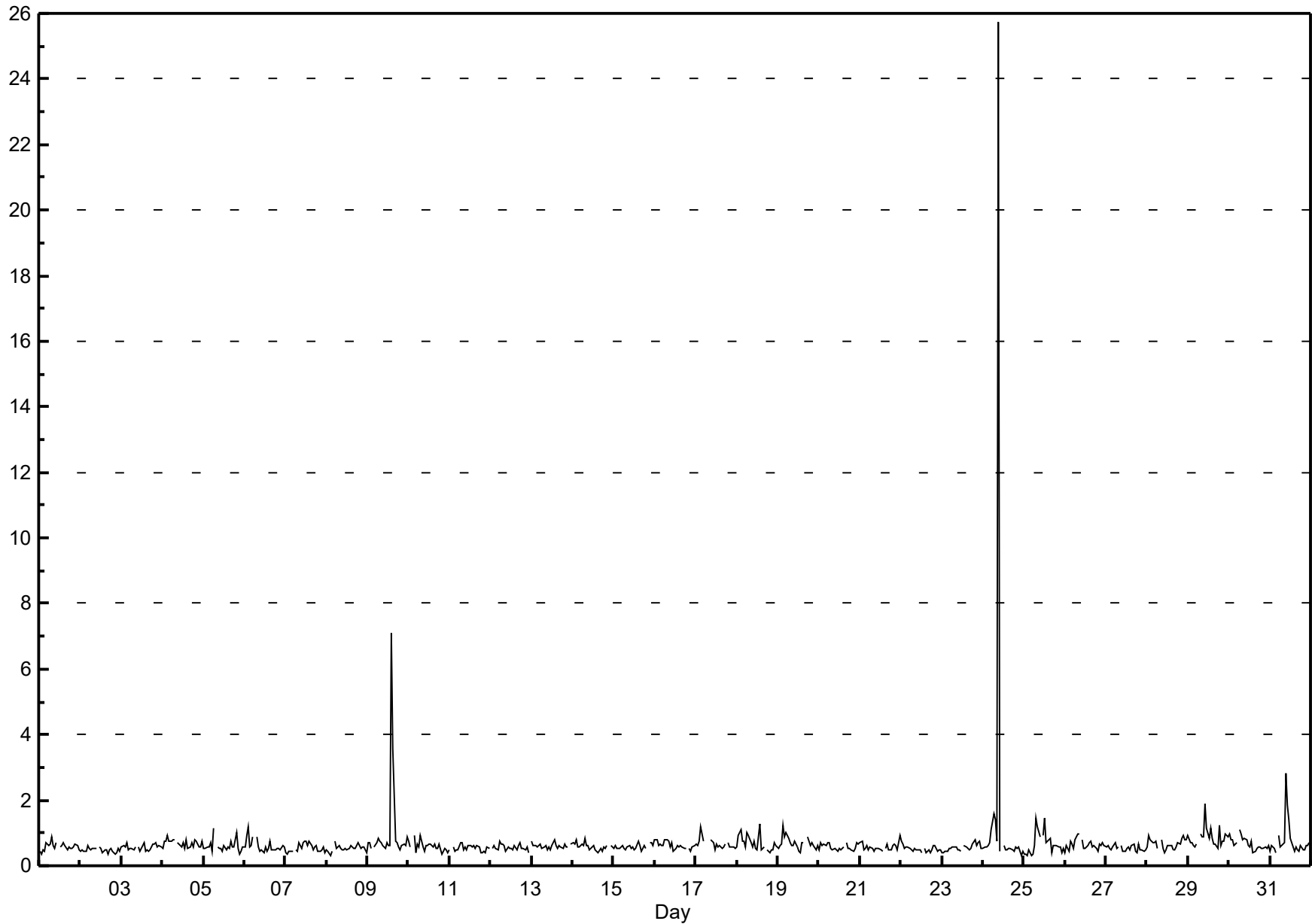
Total Reduced Sulphur (TRS) - ppb

Evergreen Park - July 2018

Maximum Value: 25.7 ppb on Jul 24 10:00																				Maximum Daily Average: 1.7 ppb on Jul 24										Hours in Service: 744	
Minimum Value: 0 ppb on Jul 24 23:00																				Minimum Daily Average: 0.5 ppb on Jul 2										Hours of Data: 708	
Maximum Diurnal Average: 1.5 ppb at hour 10																				Minimum Diurnal Average: 0.6 ppb at hour 18										Hours of Missing Data: 36	
Monthly Average: 0.66 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.7 P ₉₀ = 0.8 P ₉₉ = 1.5										Hours of Calibration: 36	
																				Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Jul	0	0	0	0	1	1	1	1	1	1	1	A	1	1	1	1	0	1	1	1	1	1	0	0.6	0.9						
2-Jul	0	0	0	0	1	1	0	1	1	1	A	1	1	0	0	0	0	0	1	0	0	0	1	0	0.5	0.6					
3-Jul	1	1	1	1	0	1	1	1	1	A	1	0	1	1	0	0	0	1	1	1	1	1	1	1	0.6	0.7					
4-Jul	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9					
5-Jul	1	1	1	1	1	0	1	A	1	1	1	0	1	0	1	1	1	1	1	1	1	0	0	1	0.6	1.1					
6-Jul	1	1	1	1	1	1	A	1	1	0	0	0	1	0	1	1	1	0	0	1	1	0	1	1	0.6	1.2					
7-Jul	0	0	0	0	0	A	0	0	1	1	1	1	1	1	1	1	0	1	1	0	0	0	1	0	0.5	0.8					
8-Jul	1	0	0	0	A	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0.5	0.7					
9-Jul	1	1	1	A	1	1	1	1	1	1	1	1	1	1	7	4	1	1	1	0	1	1	1	1	1.1	7.1					
10-Jul	1	1	A	1	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0.6	0.9					
11-Jul	0	A	1	0	0	0	1	1	0	1	0	1	1	1	1	1	1	1	0	0	0	0	1	1	0.5	0.7					
12-Jul	A	1	1	1	0	1	1	1	1	0	1	1	1	0	1	1	1	1	1	1	0	1	0	A	0.6	0.7					
13-Jul	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1	1	A	1	0.6	0.8					
14-Jul	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0	0	1	0	1	1	1	A	1	1	0.6	0.9					
15-Jul	1	1	1	1	1	1	1	0	1	1	1	1	0	1	1	1	0	1	1	1	A	1	1	1	0.6	0.8					
16-Jul	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	A	1	0	1	1	0.6	0.8					
17-Jul	1	1	1	1	1	C	C	C	C	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.7	1.2					
18-Jul	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	A	1	0	0	0	1	1	0.7	1.3					
19-Jul	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	A	1	1	1	1	1	0	1	0.7	1.2					
20-Jul	0	1	1	1	1	1	1	1	1	1	0	0	1	0	1	A	1	1	1	0	0	1	1	1	0.6	0.7					
21-Jul	1	1	0	1	1	0	1	1	0	1	1	1	1	0	A	1	1	0	0	1	1	1	0	1	0.6	0.9					
22-Jul	1	1	1	1	1	1	0	0	1	1	0	0	0	A	1	0	0	0	0	1	1	0	0	0	0.5	0.7					
23-Jul	0	0	0	0	1	1	1	1	1	0	0	0	A	1	1	1	0	1	1	1	1	1	1	1	0.5	0.8					
24-Jul	1	1	1	1	1	1	2	1	1	26	0	A	1	0	1	1	1	0	0	1	1	1	0	0	1.7	25.7					
25-Jul	0	0	0	0	0	0	1	1	1	1	A	1	1	1	1	1	0	1	1	1	1	1	0	1	0.7	1.5					
26-Jul	0	1	0	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0.6	1.0					
27-Jul	1	1	1	0	1	1	1	1	A	1	0	0	1	1	0	1	1	0	0	1	0	0	0	0	0.5	0.7					
28-Jul	1	1	1	1	1	1	1	A	1	1	0	0	1	1	1	0	0	1	1	1	1	1	1	1	0.7	0.9					
29-Jul	1	1	1	1	1	1	A	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.9					
30-Jul	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	0.7	1.1					
31-Jul	0	1	1	0	A	1	1	1	1	3	2	1	1	1	0	1	0	0	1	0	0	1	1	1	0.8	2.8					
0.6 0.6 0.6 0.6 0.6 0.7 0.7 0.8 0.7 1.5 0.7 0.6 0.6 0.6 0.8 0.7 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6																									Diurnal Average						
1.0 0.9 1.2 1.2 0.9 1.1 1.6 1.5 1.2 25.7 1.9 1.4 1.4 1.3 7.1 3.6 0.8 0.9 1.2 1.0 0.8 0.9 1.0 0.9																									Diurnal Maximum						
C - Calibration A - Automated Daily Zero Span																															

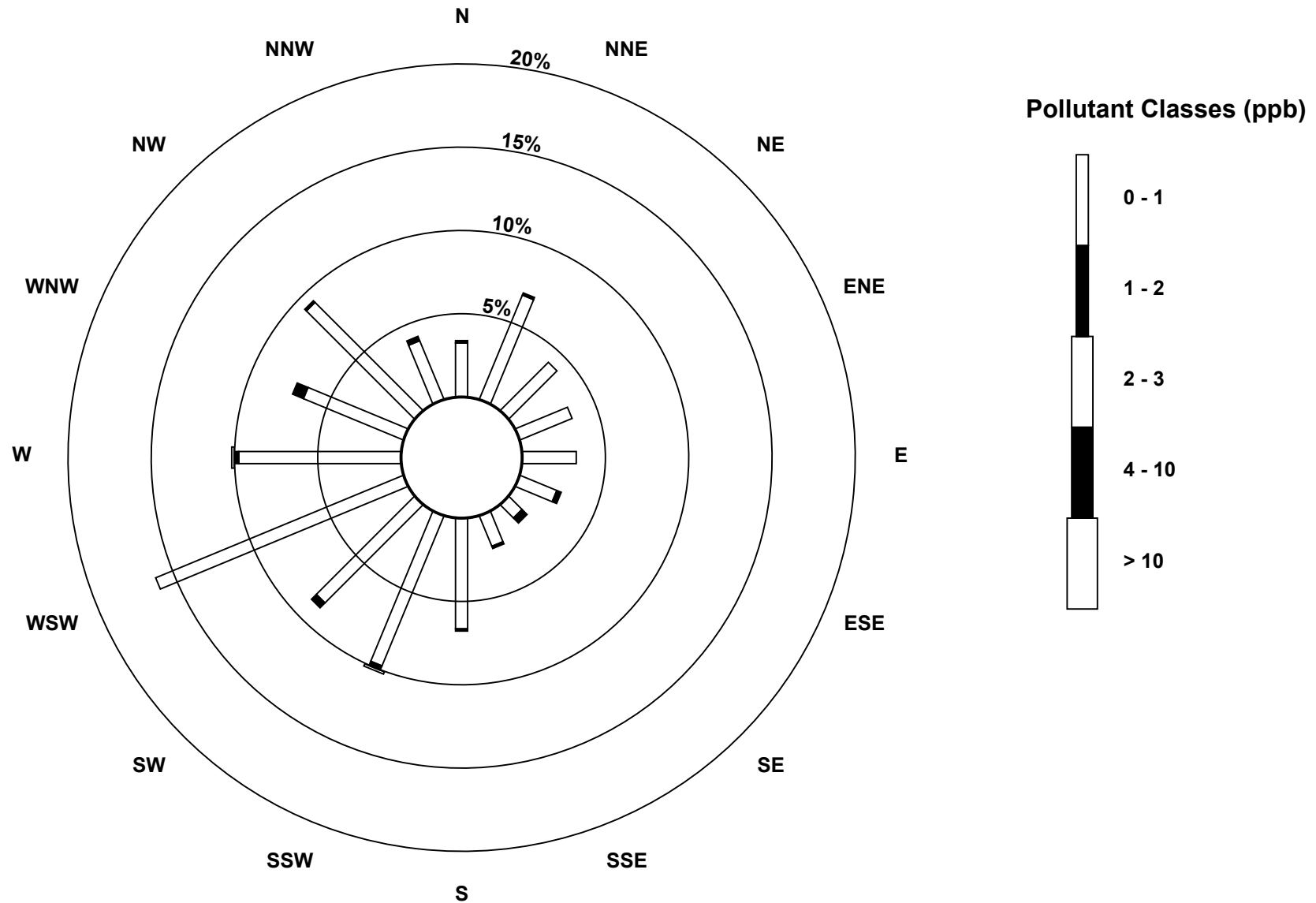
Hourly Maximums

Total Reduced Sulphur (TRS) - ppb
Evergreen Park - July 2018



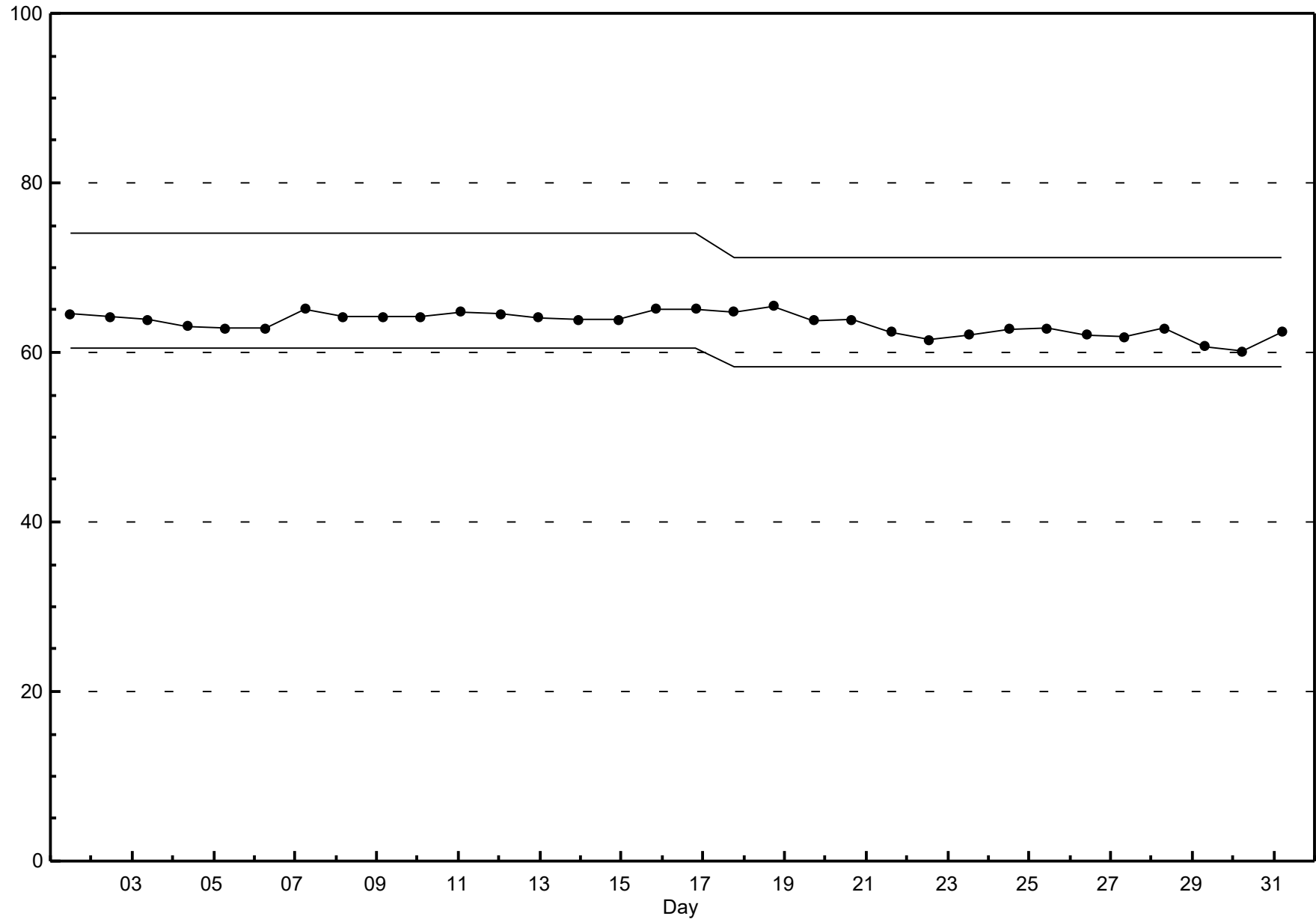
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb
Evergreen Park - July 2018



Span Responses

Total Reduced Sulphur (TRS)
Evergreen Park - July 2018



Hourly Averages

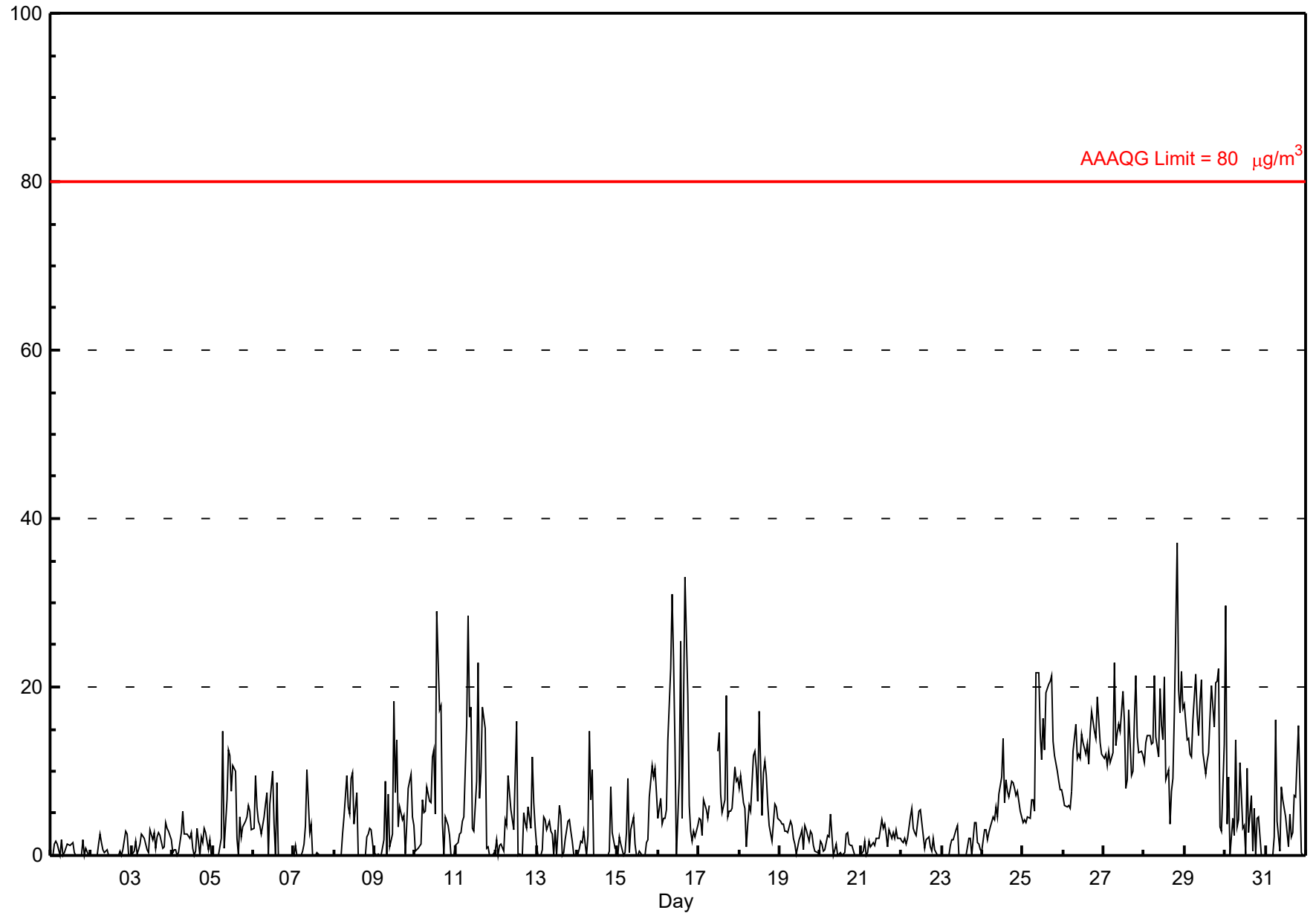
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Evergreen Park - July 2018

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 37.1 µg/m³ on Jul 28 20:00 Maximum Daily Average: 15.3 µg/m³ on Jul 28																								Hours in Service: 744 Hours of Data: 740 Hours of Missing Data: 4 Hours of Calibration: 4 Percent Operational Time: 100.0		
Minimum Value: 0 µg/m³ on Jul 1 01:00 Maximum Diurnal Average: 8.0 µg/m³ at hour 7 Monthly Average: 5.25 µg/m³ Minimum Daily Average: 0.6 µg/m³ on Jul 2 Minimum Diurnal Average: 2.8 µg/m³ at hour 4 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.6 Median = 3.0 Q ₃ = 7.7 P ₉₀ = 14.2 P ₉₉ = 23.0																										
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	1	2	1	0	2	0	0	1	1	1	1	2	0	0	0	0	0	2	0	1	0	0	0.7	1.9
2-Jul	0	0	0	0	1	3	1	1	0	1	0	0	0	0	0	0	0	0	0	1	3	3	0	0	0.6	2.8
3-Jul	0	0	2	0	1	1	3	2	1	1	0	3	2	3	1	2	3	2	1	1	4	3	3	2	1.7	3.9
4-Jul	0	1	1	0	0	3	5	3	2	3	2	3	1	0	1	3	0	2	1	3	3	1	2	0	1.6	5.3
5-Jul	0	0	0	0	1	2	15	1	7	13	12	8	11	10	2	0	5	2	3	4	5	6	5	3	4.7	14.8
6-Jul	3	9	6	4	4	3	5	6	7	0	6	10	4	0	9	0	0	0	0	0	0	0	0	0	3.1	10.0
7-Jul	0	1	0	0	0	0	1	4	10	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	1.0	10.2
8-Jul	0	0	0	0	0	3	5	9	6	5	9	10	4	7	0	0	0	0	2	2	3	3	0	0	2.8	9.9
9-Jul	0	0	0	0	0	2	9	0	7	1	3	18	8	14	3	6	4	5	0	4	8	10	5	4	4.6	18.2
10-Jul	0	1	1	1	7	5	5	8	6	6	12	13	5	29	17	18	4	0	5	4	2	0	0	0	6.2	29.0
11-Jul	1	2	3	3	4	5	16	28	16	18	3	3	9	23	7	10	18	15	1	1	0	0	0	0	7.7	28.4
12-Jul	2	0	1	1	1	4	4	9	7	5	3	10	16	0	0	0	5	4	3	6	3	12	6	3	4.4	16.0
13-Jul	1	0	0	1	5	4	3	4	3	3	0	3	0	6	5	0	0	2	4	4	3	2	0	0	2.2	6.0
14-Jul	0	1	2	1	3	0	2	15	7	10	0	0	0	0	0	0	0	0	0	0	8	3	1	1	2.2	14.8
15-Jul	0	2	1	0	0	3	9	0	3	5	1	0	0	0	0	0	0	2	2	7	11	9	10	8	3.1	10.6
16-Jul	4	7	4	4	4	5	14	22	31	23	13	0	9	25	4	18	33	19	6	3	2	3	2	4	10.9	33.0
17-Jul	4	4	2	7	5	4	6	C	C	C	C	12	15	7	5	7	19	4	5	5	6	10	9	9	7.4	18.9
18-Jul	8	9	6	6	1	4	6	5	12	12	10	6	17	5	10	11	10	6	4	2	4	6	6	4	7.1	17.2
19-Jul	4	4	4	3	3	3	4	4	2	1	0	2	2	3	1	4	3	2	3	3	1	1	0	0	2.3	4.1
20-Jul	2	1	1	1	2	2	5	2	0	1	0	0	0	0	0	3	3	1	1	1	0	0	0	0	1.1	5.0
21-Jul	0	1	2	0	0	2	1	2	1	2	2	2	4	3	4	2	1	3	2	3	2	3	2	2	1.9	4.2
22-Jul	2	2	2	1	2	5	6	3	3	2	5	5	4	2	1	2	2	1	1	2	1	0	0	0	2.2	5.6
23-Jul	0	0	0	0	0	1	2	2	3	4	0	0	0	0	0	1	2	2	0	4	4	2	1	1	1.2	4.0
24-Jul	0	3	3	2	3	3	4	4	6	5	7	9	14	6	9	8	7	9	9	8	7	8	5	5	6.0	13.8
25-Jul	4	4	4	5	4	7	7	5	22	22	15	11	16	13	19	20	21	21	14	12	10	9	8	8	11.6	21.7
26-Jul	7	6	6	6	6	8	12	16	11	12	12	14	13	12	13	11	15	17	15	14	19	16	13	12	11.9	18.8
27-Jul	12	12	11	12	11	12	23	13	15	16	15	20	16	8	9	17	9	10	16	21	14	12	12	12	13.6	22.8
28-Jul	11	13	14	14	13	13	21	14	12	20	15	14	21	9	10	4	8	9	17	37	20	17	22	18	15.3	37.1
29-Jul	18	14	14	12	12	16	21	17	14	18	21	12	10	11	12	16	20	15	21	21	22	3	3	13	14.9	22.3
30-Jul	30	4	9	0	4	2	14	3	4	11	3	4	0	10	3	7	0	6	0	4	5	0	0	0	5.2	29.7
31-Jul	0	0	0	0	0	2	16	4	0	8	7	6	5	1	5	2	3	7	7	15	8	0	0	0	4.0	16.1
3.7 3.3 3.2 2.8 3.2 4.1 8.0 6.9 7.3 7.7 6.0 6.4 6.6 6.8 4.9 5.5 6.2 5.4 4.5 6.3 5.7 4.6 3.8 3.5																								Diurnal Average		
29.7 13.8 14.2 14.2 13.2 16.1 22.8 28.4 31.0 23.1 20.8 19.5 21.3 29.0 19.4 20.3 33.0 21.3 20.6 37.1 22.3 16.9 21.8 17.5																								Diurnal Maximum		
C - Calibration Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																										

Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Evergreen Park - July 2018



Hourly Maximums

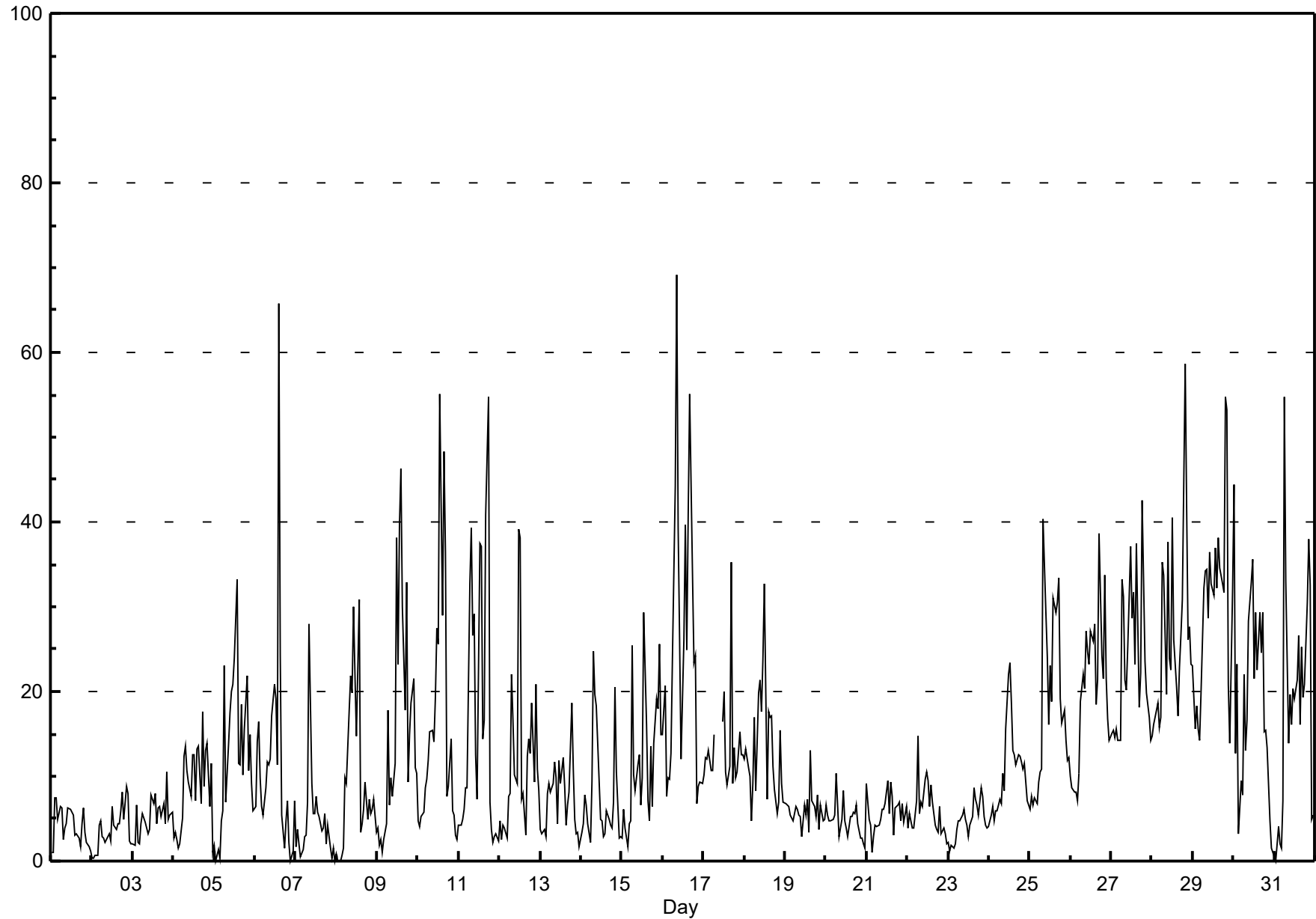
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Evergreen Park - July 2018

Maximum Value: 69.2 μg/m³ on Jul 16 09:00																								Maximum Daily Average: 29.9 μg/m³ on Jul 29						Hours in Service: 744	
Minimum Value: 0 μg/m³ on Jul 6 22:00																								Minimum Daily Average: 3.8 μg/m³ on Jul 2						Hours of Data: 740	
Maximum Diurnal Average: 18.8 μg/m³ at hour 14																								Minimum Diurnal Average: 5.7 μg/m³ at hour 4						Hours of Missing Data: 4	
Monthly Average: 12.70 μg/m³																								Percentiles: P ₁ = 0.3 P ₁₀ = 2.7 Q ₁ = 4.8 Median = 8.6 Q ₃ = 17.9 P ₉₀ = 29.3 P ₉₉ = 54.1						Hours of Calibration: 4	
																								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	7	7	5	6	6	3	4	4	6	6	6	5	3	3	3	2	4	6	3	2	2	1	4.1	7.4					
2-Jul	0	0	1	1	4	5	3	3	2	3	3	2	6	4	4	4	4	6	8	5	9	8	2	2	3.8	8.9					
3-Jul	2	2	7	2	2	4	6	5	4	3	4	8	7	8	4	6	6	5	7	4	11	5	5	6	5.1	10.6					
4-Jul	3	3	3	1	2	5	12	13	11	9	8	13	13	7	13	13	7	18	9	13	14	6	12	1	8.7	17.6					
5-Jul	2	0	1	0	5	6	23	7	14	18	20	21	24	33	12	11	18	10	16	22	11	15	9	6	12.6	33.2					
6-Jul	6	14	16	10	6	5	9	12	11	12	17	21	19	11	66	24	5	1	5	7	2	0	1	7	12.1	65.8					
7-Jul	2	4	2	1	1	3	3	7	28	9	6	6	8	6	5	4	4	6	2	4	1	0	2	0	4.6	27.9					
8-Jul	1	0	0	1	2	10	9	18	22	20	30	22	15	31	3	4	6	9	5	7	6	6	7	3	9.9	30.8					
9-Jul	4	2	2	1	2	4	18	7	10	8	12	38	23	40	46	30	18	33	9	15	19	22	11	10	16.0	46.2					
10-Jul	5	4	5	6	9	10	12	15	15	14	19	27	26	55	29	48	36	8	9	14	6	5	3	2	16.0	55.0					
11-Jul	4	4	5	6	9	9	33	39	27	29	13	7	37	37	14	17	41	55	7	4	2	3	3	2	17.0	54.7					
12-Jul	5	2	4	4	3	8	8	22	17	10	9	39	38	7	8	3	12	14	13	19	9	21	11	8	12.3	39.1					
13-Jul	4	3	4	3	8	9	8	9	12	10	4	12	9	12	9	4	7	8	19	11	5	3	3	2	7.4	18.6					
14-Jul	3	4	8	7	4	2	9	25	20	18	14	5	5	3	3	6	5	4	4	7	21	11	3	3	8.0	24.7					
15-Jul	3	6	4	2	4	5	25	10	8	11	13	7	10	29	16	7	5	13	6	14	19	18	26	15	11.5	29.4					
16-Jul	15	21	8	10	10	13	24	44	69	39	26	12	26	40	25	41	55	34	23	24	7	9	9	9	24.7	69.2					
17-Jul	10	12	12	13	11	11	15	C	C	C	C	16	20	11	9	11	35	9	13	10	11	15	13	13	13.5	35.2					
18-Jul	12	13	11	10	5	9	17	8	20	21	18	24	33	7	18	17	17	11	8	6	7	16	9	7	13.5	32.8					
19-Jul	7	7	6	5	5	5	6	6	5	5	3	7	5	7	3	13	7	6	5	8	4	7	5	5	6.0	13.0					
20-Jul	7	5	5	5	5	5	10	7	3	5	8	5	4	3	5	5	6	6	7	4	3	3	2	1	4.9	10.4					
21-Jul	9	5	4	1	3	4	4	4	5	6	6	7	10	6	9	8	3	6	7	7	5	7	5	6	5.7	9.5					
22-Jul	4	6	5	4	4	7	15	6	7	6	10	11	10	6	9	7	4	4	3	6	3	4	3	2	6.0	14.8					
23-Jul	2	1	2	1	2	4	5	5	5	6	5	4	3	4	5	9	7	7	5	9	8	5	4	4	4.7	8.7					
24-Jul	4	5	6	5	6	6	7	7	10	8	16	22	23	19	13	13	11	13	12	12	11	12	7	7	10.6	23.3					
25-Jul	6	8	7	7	7	9	11	11	40	29	24	16	23	19	31	29	31	33	19	16	18	14	12	12	18.0	40.4					
26-Jul	10	9	8	8	7	10	19	22	20	27	25	23	27	26	28	18	21	39	24	22	34	22	17	14	20.0	38.7					
27-Jul	15	16	15	16	14	14	33	31	21	20	25	37	29	32	23	38	18	22	43	33	23	20	17	14	23.7	42.5					
28-Jul	15	16	17	19	16	17	35	34	20	38	24	23	41	26	21	17	23	27	31	59	42	26	28	23	26.4	58.7					
29-Jul	23	16	18	16	14	20	32	34	34	29	36	33	31	37	32	38	35	33	32	55	53	21	14	32	29.9	54.7					
30-Jul	44	13	23	3	10	8	22	13	17	28	33	36	22	29	23	29	25	29	15	15	13	5	1	1	19.1	44.5					
31-Jul	1	0	4	2	1	7	55	33	14	20	16	20	19	21	27	16	25	19	21	31	38	33	5	5	18.0	54.8					
7.4 6.5 7.1 5.7 6.0 7.8 16.0 15.3 16.5 15.6 15.1 17.1 18.4 18.8 16.7 16.0 16.2 15.8 12.6 15.1 13.4 11.0 8.1 7.3																									Diurnal Average						
44.5 20.6 23.2 18.6 15.8 19.8 54.8 44.3 69.2 39.4 36.4 39.1 40.6 55.0 65.8 48.4 55.1 54.7 42.5 58.7 53.2 32.5 27.6 32.2																									Diurnal Maximum						
C - Calibration																															

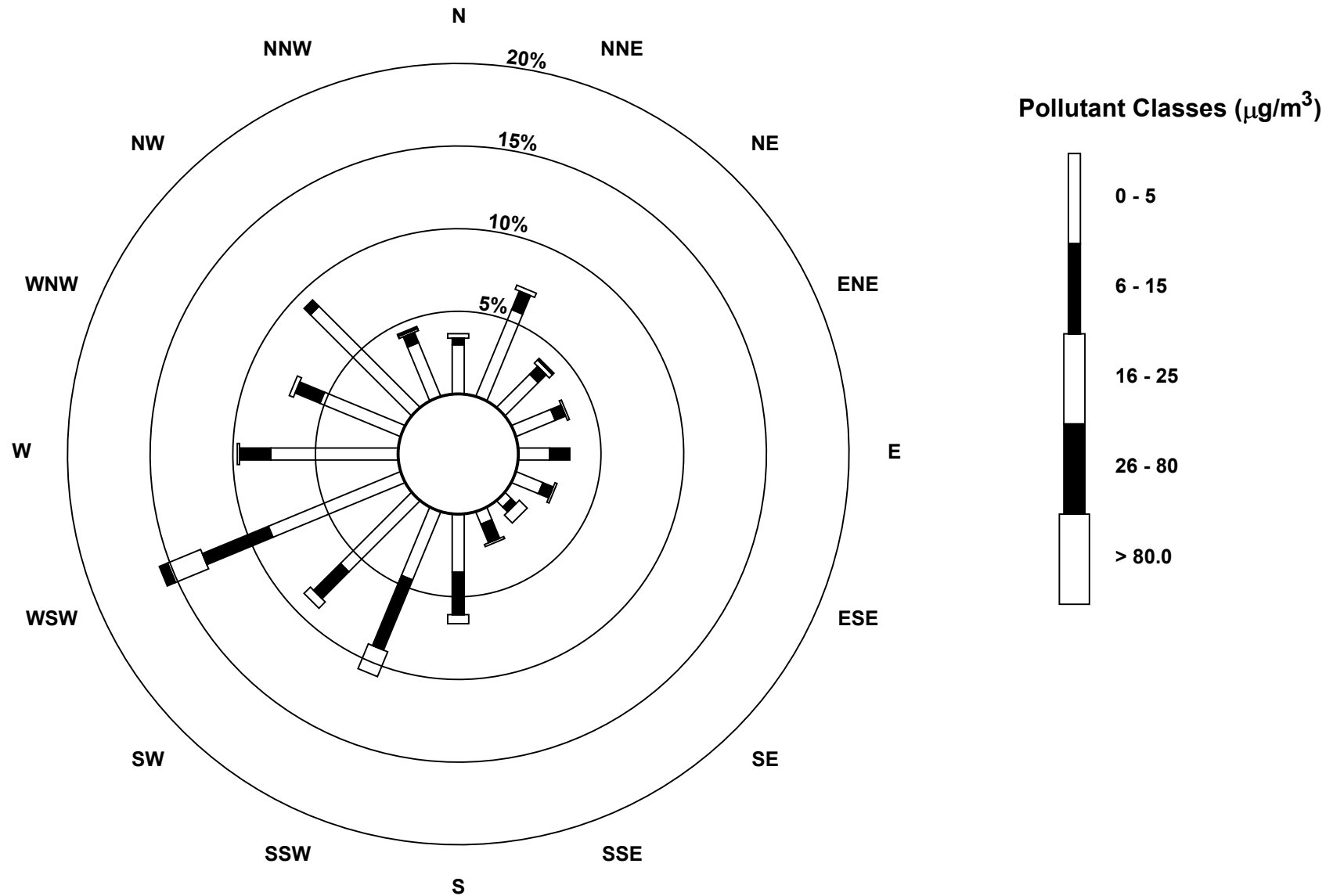
Hourly Maximums

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Evergreen Park - July 2018



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Evergreen Park - July 2018



Hourly Averages

External Temperature (ET) - °C

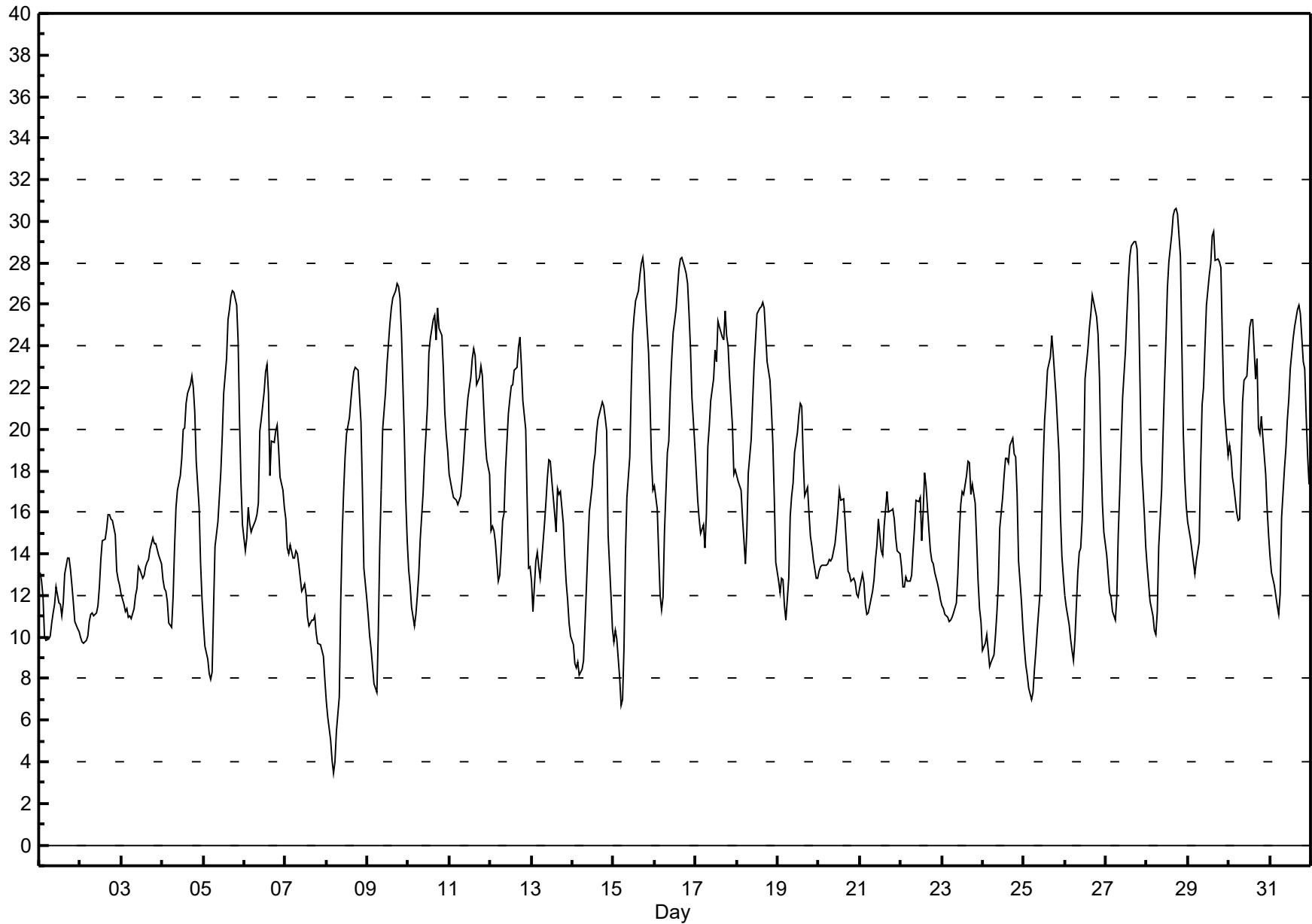
Evergreen Park - July 2018

Maximum Value: 30.6 °C on Jul 28 18:00																								Maximum Daily Average: 21.8 °C on Jul 29								Hours in Service: 744	
Minimum Value: 3 °C on Jul 8 05:00																								Minimum Daily Average: 11.6 °C on Jul 1								Hours of Data: 744	
Maximum Diurnal Average: 21.8 °C at hour 17																								Minimum Diurnal Average: 11.2 °C at hour 6								Hours of Missing Data: 0	
Monthly Average: 16.81 °C																								Percentiles: P ₁ = 7.0 P ₁₀ = 10.4 Q ₁ = 12.5 Median = 15.9 Q ₃ = 21.1 P ₉₀ = 25.0 P ₉₉ = 29.0								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	13	13	12	10	10	10	10	11	11	12	12	12	12	11	12	13	14	14	13	13	12	11	10	10	11.6	13.8							
2-Jul	10	10	10	10	10	10	11	11	11	11	12	12	12	14	15	15	16	16	16	16	15	13	13	12	12.6	15.9							
3-Jul	12	12	11	11	11	11	11	11	12	12	13	13	13	13	13	14	14	14	15	15	14	14	14	14	12.8	14.7							
4-Jul	13	12	12	12	11	10	12	14	16	17	18	19	20	20	21	22	22	23	22	21	18	16	14	12	16.5	22.6							
5-Jul	11	10	9	8	8	8	11	14	16	17	18	20	22	23	25	26	26	27	27	26	24	20	17	15	17.8	26.7							
6-Jul	14	15	16	15	15	15	16	16	16	20	20	22	23	23	22	18	19	19	20	20	19	18	17	16	18.1	23.1							
7-Jul	16	14	14	14	14	14	14	14	13	12	12	13	12	11	11	11	11	11	10	10	10	9	9	8	12.0	15.7							
8-Jul	7	6	5	4	3	4	5	7	12	15	17	19	20	21	21	22	23	23	23	22	20	17	13	12	14.2	23.0							
9-Jul	11	10	9	9	8	7	10	14	17	20	22	23	24	25	26	26	27	27	27	26	25	20	17	15	18.5	27.0							
10-Jul	13	12	11	11	11	12	13	15	17	19	20	21	24	24	25	25	24	26	25	24	23	21	20	19	19.0	25.8							
11-Jul	18	17	17	17	17	16	17	18	19	20	21	22	22	23	24	24	22	23	23	23	21	19	19	18	19.8	23.9							
12-Jul	15	15	15	15	13	13	14	16	16	18	21	21	22	22	23	23	24	24	23	21	20	17	13	13	18.2	24.4							
13-Jul	13	11	14	14	13	13	14	15	17	18	19	18	18	16	15	17	17	17	15	14	13	12	11	10	14.7	18.5							
14-Jul	10	9	9	9	8	8	9	11	12	14	16	17	18	19	20	20	21	21	21	21	20	15	12	10	14.6	21.3							
15-Jul	10	10	10	8	7	7	10	14	17	19	22	25	25	26	27	27	28	28	28	26	24	21	19	17	18.9	28.2							
16-Jul	17	16	14	12	11	12	15	19	19	22	23	25	26	27	28	28	28	28	27	27	26	24	22	19	21.5	28.3							
17-Jul	18	17	16	15	15	14	16	19	20	21	22	24	23	25	25	24	24	26	25	24	23	20	18	18	20.5	25.7							
18-Jul	18	17	17	16	15	14	15	18	20	21	23	24	26	26	26	26	26	25	23	22	21	19	17	14	20.3	26.1							
19-Jul	13	12	13	13	12	11	13	16	17	17	19	20	21	21	21	19	17	17	16	15	14	14	13	13	15.6	21.2							
20-Jul	13	13	13	13	13	14	14	14	14	15	15	16	17	17	17	16	14	13	13	13	13	13	12	12	14.0	17.1							
21-Jul	12	13	13	12	11	11	12	12	13	14	14	16	14	14	15	16	17	16	16	16	16	15	14	14	14.0	17.0							
22-Jul	13	12	12	13	13	13	13	14	15	17	16	17	15	16	18	17	15	14	14	14	13	13	12	12	14.2	17.9							
23-Jul	12	11	11	11	11	11	11	11	12	13	15	16	17	17	18	18	18	17	17	16	15	13	11	11	13.9	18.4							
24-Jul	9	10	10	9	9	9	9	10	11	13	15	17	18	19	19	18	19	20	19	19	17	14	12	10	13.9	19.6							
25-Jul	9	9	8	8	7	7	8	9	10	12	16	18	20	22	23	23	24	24	23	22	19	16	14	13	15.2	24.5							
26-Jul	12	11	11	10	9	9	10	13	14	14	16	18	22	24	25	26	26	26	25	25	22	19	16	15	17.5	26.5							
27-Jul	14	13	12	12	11	11	12	15	17	19	22	24	26	27	28	29	29	29	29	26	22	18	16	14	19.8	29.0							
28-Jul	13	13	12	11	10	10	11	14	17	20	22	24	27	28	29	30	31	31	30	28	24	20	18	16	20.4	30.6							
29-Jul	16	15	14	14	13	14	15	18	21	22	24	26	27	28	29	30	28	28	28	28	24	21	21	19	21.8	29.5							
30-Jul	19	19	18	17	16	16	16	18	21	22	23	24	25	25	25	22	23	20	20	21	20	18	16	15	19.9	25.3							
31-Jul	14	13	12	12	12	11	12	16	18	19	20	21	23	24	25	25	26	26	26	23	23	21	19	17	19.1	26.0							
13.1 12.6 12.3 11.7 11.2 11.2 12.2 14.1 15.5 16.9 18.3 19.6 20.5 21.0 21.6 21.7 21.8 21.7 21.2 20.5 19.0 16.8 15.0 14.0																									Diurnal Average								
19.2 18.7 17.7 17.2 16.6 16.4 16.8 19.2 21.3 22.3 24.0 25.9 27.4 28.1 29.4 30.3 30.5 30.6 30.4 28.3 25.5 23.9 21.5 19.2																									Diurnal Maximum								

Hourly Averages

External Temperature (ET) - °C

Evergreen Park - July 2018



Hourly Averages

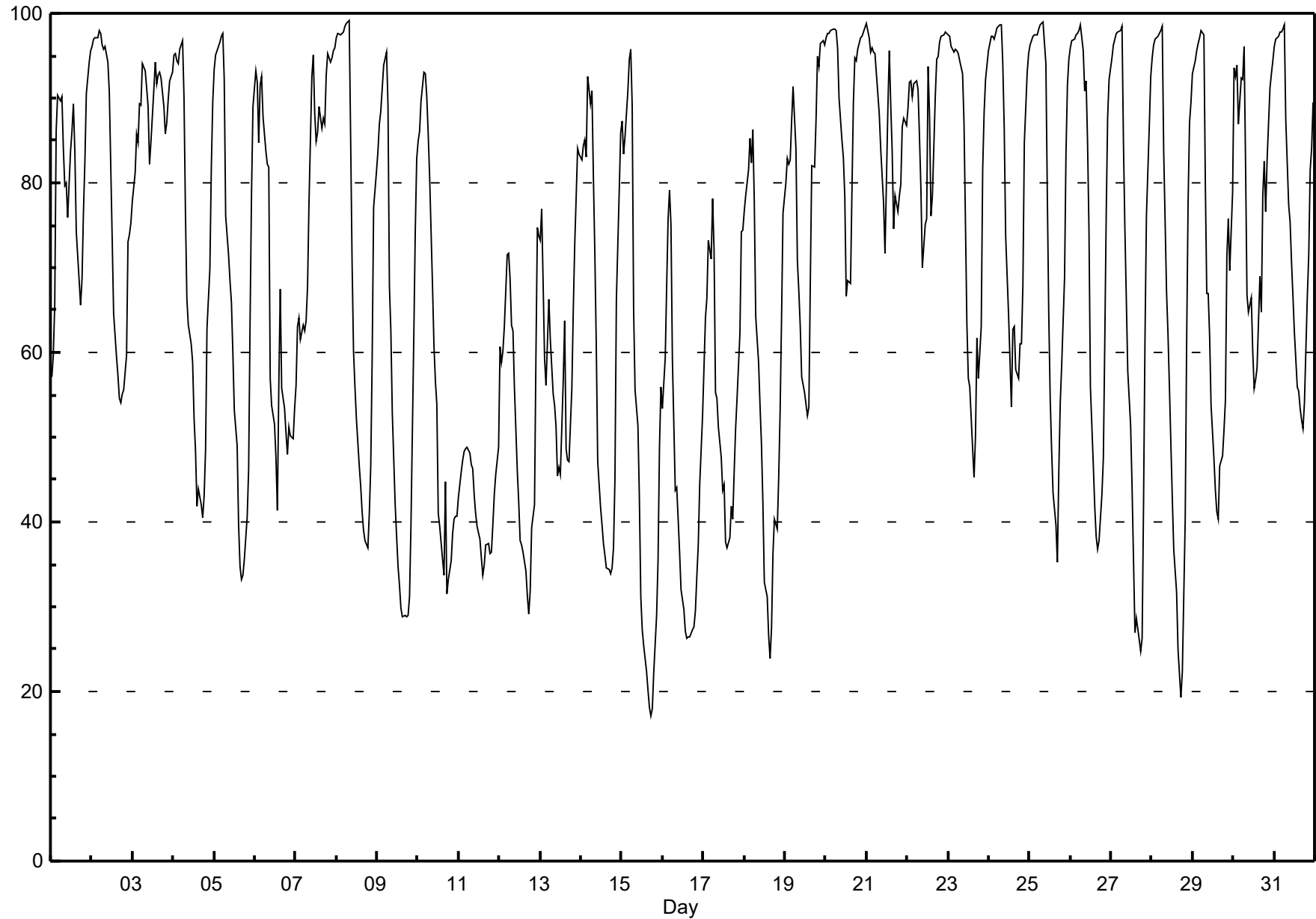
Relative Humidity (RH) - %

Evergreen Park - July 2018

Maximum Value: 99.1 % on Jul 8 08:00																								Maximum Daily Average: 90.2 % on Jul 20								Hours in Service: 744	
Minimum Value: 17 % on Jul 15 18:00																								Minimum Daily Average: 42.3 % on Jul 11								Hours of Data: 744	
Maximum Diurnal Average: 89.3 % at hour 6																								Minimum Diurnal Average: 49.5 % at hour 16								Hours of Missing Data: 0	
Monthly Average: 69.22 %																								Percentiles: P ₁ = 22.4 P ₁₀ = 36.9 Q ₁ = 49.2 Median = 72.4 Q ₃ = 91.1 P ₉₀ = 96.8 P ₉₉ = 98.6								Hours of Calibration: 0	
																								Percent Operational Time: 100.0									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24									
1-Jul	57	60	66	86	90	90	90	84	80	80	76	84	86	89	84	74	69	66	69	77	82	91	94	96	79.9	95.5							
2-Jul	96	97	97	97	98	98	96	96	96	94	91	82	73	65	59	57	54	54	55	56	60	73	74	75	78.9	97.9							
3-Jul	78	81	86	85	89	89	94	93	91	89	82	85	91	94	92	93	93	92	89	86	87	90	92	93	88.9	94.3							
4-Jul	95	95	94	94	96	97	90	77	66	63	61	59	52	48	42	44	42	40	43	49	63	70	82	89	68.8	96.9							
5-Jul	93	95	96	97	97	98	92	76	72	69	66	60	53	49	40	35	33	34	36	41	46	64	79	89	67.0	97.6							
6-Jul	93	92	85	92	93	88	84	82	82	57	54	51	48	41	56	67	56	53	50	48	51	50	50	53	65.7	93.1							
7-Jul	56	63	64	62	63	63	64	68	78	93	95	88	85	86	89	86	88	87	93	95	94	95	96	96	81.0	96.0							
8-Jul	97	98	98	98	98	98	99	99	85	71	60	56	52	47	44	41	39	38	37	41	47	59	77	81	69.1	99.1							
9-Jul	84	87	89	91	94	95	89	68	62	53	42	38	35	33	30	29	29	29	29	31	40	62	74	83	58.1	95.4							
10-Jul	85	86	90	93	93	90	86	81	68	61	57	54	41	40	36	34	45	31	33	35	39	40	41	41	58.2	93.0							
11-Jul	43	46	47	48	49	49	48	47	46	43	41	39	38	36	34	35	37	38	36	37	40	43	46	49	42.3	48.9							
12-Jul	61	59	60	63	72	72	69	63	62	56	46	42	38	37	37	34	31	29	32	39	42	60	75	74	52.2	74.7							
13-Jul	73	77	59	56	61	66	62	55	54	51	45	46	46	57	64	49	47	47	56	65	73	78	84	83	60.6	84.1							
14-Jul	83	84	85	83	93	89	91	81	72	61	47	42	40	38	36	35	34	34	35	37	45	66	79	86	61.4	92.5							
15-Jul	87	83	85	91	95	96	89	65	56	51	43	31	27	25	22	20	18	17	18	22	29	35	49	56	50.5	95.8							
16-Jul	53	59	68	76	79	75	59	44	44	40	36	32	30	27	26	26	27	27	28	29	34	37	44	53	43.9	79.2							
17-Jul	58	64	67	73	71	78	72	55	55	51	48	44	44	38	37	38	42	40	46	51	55	62	74	74	55.7	78.1							
18-Jul	77	78	81	85	82	86	78	64	59	54	49	42	33	31	27	24	28	36	40	39	45	53	64	76	55.5	86.2							
19-Jul	80	83	82	83	87	91	84	71	67	63	57	55	54	53	54	68	82	82	87	95	94	97	97	96	77.6	96.8							
20-Jul	97	98	98	98	98	98	98	96	90	85	83	78	67	68	68	79	90	95	94	96	97	97	98	98	90.2	98.3							
21-Jul	99	97	95	96	95	95	93	88	84	81	78	72	89	96	89	84	75	78	77	78	80	87	88	87	86.6	98.7							
22-Jul	89	92	92	90	92	92	91	85	79	70	75	76	94	88	76	78	90	95	95	97	97	98	98	98	88.6	97.8							
23-Jul	97	97	96	95	96	96	95	94	93	87	75	63	57	56	49	45	50	62	57	63	81	88	92	94	78.4	97.5							
24-Jul	96	97	97	97	98	98	99	99	94	86	74	65	59	54	63	63	58	57	61	61	68	85	93	95	79.8	98.7							
25-Jul	96	97	97	97	97	98	99	99	99	94	79	65	55	49	43	40	35	46	54	58	69	84	92	95	76.5	98.9							
26-Jul	96	97	97	97	98	98	99	96	91	92	85	74	56	47	42	38	37	38	43	47	61	76	88	92	74.4	98.6							
27-Jul	95	96	97	98	98	98	98	85	75	66	58	51	44	36	27	29	26	25	26	42	62	76	87	93	66.1	98.5							
28-Jul	95	96	97	97	98	98	99	84	67	62	56	49	43	37	32	25	22	19	22	40	61	78	87	90	64.7	98.6							
29-Jul	93	94	96	96	97	98	97	80	67	67	62	54	47	44	41	40	47	48	51	54	71	76	70	79	69.5	98.0							
30-Jul	94	92	94	87	92	92	96	82	67	65	66	60	56	57	58	69	65	78	83	77	83	91	93	94	78.8	96.1							
31-Jul	96	97	97	98	98	98	99	87	77	75	71	67	62	56	55	53	52	51	54	67	72	82	84	89	76.6	98.6							
83.6 85.1 85.6 87.1 88.9 89.3 87.0 78.8 73.5 68.7 63.1 58.2 54.7 52.2 50.0 49.5 49.7 50.5 52.5 56.6 63.4 72.3 78.7 82.2																								Diurnal Average									
98.7 97.6 97.7 97.9 98.1 98.5 98.7 99.1 98.9 94.3 95.1 88.1 93.7 95.6 91.7 92.7 93.0 94.8 94.9 96.6 97.2 97.5 97.8 98.3																								Diurnal Maximum									

Hourly Averages

Relative Humidity (RH) - %
Evergreen Park - July 2018



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Evergreen Park - July 2018

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	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	23	24	18	11	3	7	7	13	14	14	18	20	22	24	25	27	28	23	20	18	16	17	15	15	17.0	27.8
Dir	245	246	253	231	238	235	227	244	262	269	292	283	265	251	248	254	259	276	266	269	275	273	258	259	259.6	259.5
2 Spd	17	19	18	15	12	16	16	14	17	22	21	27	27	23	30	29	22	22	20	19	15	10	12	13	17.4	29.5
Dir	261	253	263	275	298	318	327	328	327	321	328	326	329	331	323	323	330	325	327	331	340	344	329	323	317.9	323.2
3 Spd	12	14	13	15	16	17	17	16	15	12	13	12	13	11	13	11	11	11	9	9	10	11	8	1	11.2	17.4
Dir	309	310	305	311	310	316	314	316	319	334	342	359	7	360	5	321	311	304	297	289	298	308	320	59	321.4	316.0
4 Spd	2	3	5	6	4	6	5	4	2	3	5	2	4	3	2	6	6	3	4	6	4	4	2	2	1.0	6.3
Dir	225	255	284	294	261	257	262	293	7	335	274	294	30	329	215	48	35	113	72	94	89	82	88	51	335.5	256.9
5 Spd	1	2	1	1	2	2	3	5	4	4	8	5	4	2	1	3	6	6	6	7	6	1	0	1	1.8	8.0
Dir	54	33	46	70	104	63	148	175	172	194	190	222	273	239	314	158	132	122	114	92	98	63	335	22	141.9	190.0
6 Spd	1	3	8	4	5	6	7	6	3	14	13	11	12	9	14	21	21	19	21	22	22	21	18	16	11.7	22.2
Dir	245	300	286	206	241	259	234	201	282	232	236	237	241	263	241	239	217	221	217	215	215	215	224	227	229.3	215.2
7 Spd	13	10	16	19	16	19	18	29	30	18	10	25	16	23	19	12	12	12	14	12	11	9	7	5	12.6	29.7
Dir	231	209	210	210	214	219	227	235	245	254	250	301	324	313	313	290	271	253	245	241	245	232	214	191	250.3	245.3
8 Spd	5	4	0	1	0	0	2	1	3	6	17	20	16	19	16	16	14	15	13	10	8	6	3	4	7.9	19.9
Dir	198	195	194	200	29	223	310	213	227	219	245	243	235	247	247	246	253	249	256	252	237	210	187	187	240.2	242.9
9 Spd	2	1	2	1	0	1	0	5	8	16	26	25	22	23	24	22	18	15	11	8	4	4	2	1	8.9	25.9
Dir	180	175	188	159	114	33	156	183	182	213	232	248	264	259	267	262	264	268	270	264	224	187	204	202	248.1	232.5
10 Spd	1	1	1	2	2	1	1	1	4	8	16	17	24	25	25	22	20	21	17	13	14	15	17	17	11.2	25.5
Dir	162	172	22	198	192	189	185	177	187	210	238	228	246	248	249	253	201	245	260	258	244	236	236	233	238.4	248.8
11 Spd	17	22	25	28	31	31	30	33	32	35	34	30	28	26	35	34	30	28	27	30	25	19	16	14	27.3	35.0
Dir	231	236	239	240	241	242	241	245	245	251	243	249	249	249	247	245	245	246	241	244	241	238	222	230	242.8	250.6
12 Spd	9	12	8	8	6	4	4	12	11	9	22	21	23	19	17	21	18	19	15	15	8	2	2	3	10.6	23.4
Dir	198	218	233	235	217	264	286	255	236	244	249	238	253	294	279	288	262	262	278	317	302	198	197	193	259.4	253.1
13 Spd	5	3	8	11	7	4	11	11	12	13	16	27	28	21	16	24	22	22	28	16	17	13	12	12	12.8	27.8
Dir	186	220	241	245	245	315	304	296	295	308	300	323	318	317	321	326	316	317	319	266	250	262	256	261	298.2	318.4
14 Spd	13	8	11	13	13	13	13	19	20	24	23	23	22	24	21	23	18	15	13	7	1	1	1	3	12.7	23.8
Dir	274	265	264	271	282	281	234	250	263	257	276	288	291	309	290	305	323	323	316	326	297	193	190	180	283.6	256.8
15 Spd	3	5	4	1	1	1	2	2	2	5	5	17	16	14	9	10	11	15	15	8	8	4	1	2	5.3	16.7
Dir	178	172	179	111	38	199	196	177	201	185	220	237	237	290	305	285	262	270	276	271	239	241	291	181	252.0	237.3
16 Spd	4	2	2	3	1	3	5	13	20	23	28	30	30	33	28	28	32	34	28	20	16	13	10	5	16.5	33.5
Dir	182	182	188	194	8	292	256	248	253	255	252	247	256	253	259	260	247	248	246	248	236	231	209	196	247.9	247.6
17 Spd	4	3	2	3	2	1	3	6	11	10	13	12	13	20	14	11	11	12	8	6	4	4	5	7	6.2	19.8
Dir	186	196	192	287	247	143	323	271	236	249	258	252	246	263	281	276	247	217	200	169	167	165	172	165	240.0	262.7
18 Spd	1	2	7	5	2	4	6	5	11	8	10	14	25	23	27	29	24	26	29	23	15	6	5	1	11.1	28.9
Dir	129	285	292	7	259	207	301	264	248	254	246	266	253	271	268	271	287	317	320	319	316	288	260	166	284.0	271.4
19 Spd	2	0	1	1	1	2	5	6	8	9	10	10	11	11	12	8	7	10	5	7	11	10	17	10	6.6	17.1
Dir	208	68	255	333	316	17	25	62	54	53	60	68	68	55	56	42	7	28	38	30	24	22	14	37	40.7	14.0
20 Spd	7	6	6	2	3	3	5	7	5	1	0	11	14	9	13	8	8	6	8	11	13	15	20	12	4.1	20.0
Dir	48	58	84	48	109	112	159	195	261	178	196	300	315	320	336	21	26	300	295	281	284	263	249	266	298.1	248.7
21 Spd	7	14	19	15	13	11	13	15	14	10	11	9	12	7	15	12	17	16	9	10	6	6	9	9	8.8	18.8
Dir	288	5	31	27	17	9	16	13	13	19	25	20	319	324	333	1	324	314	300	285	288	242	261	264	346.6	31.2
22 Spd	9	9	7	6	5	6	9	9	6	2	8	3	5	4	5	4	3	4	2	5	9	12	10	9	2.5	11.9
Dir	265	270	257	274	261	254	246	288	304	220	230	288	117	74	109	65	116	16	330	294	10	17	12	7	306.8	17.3

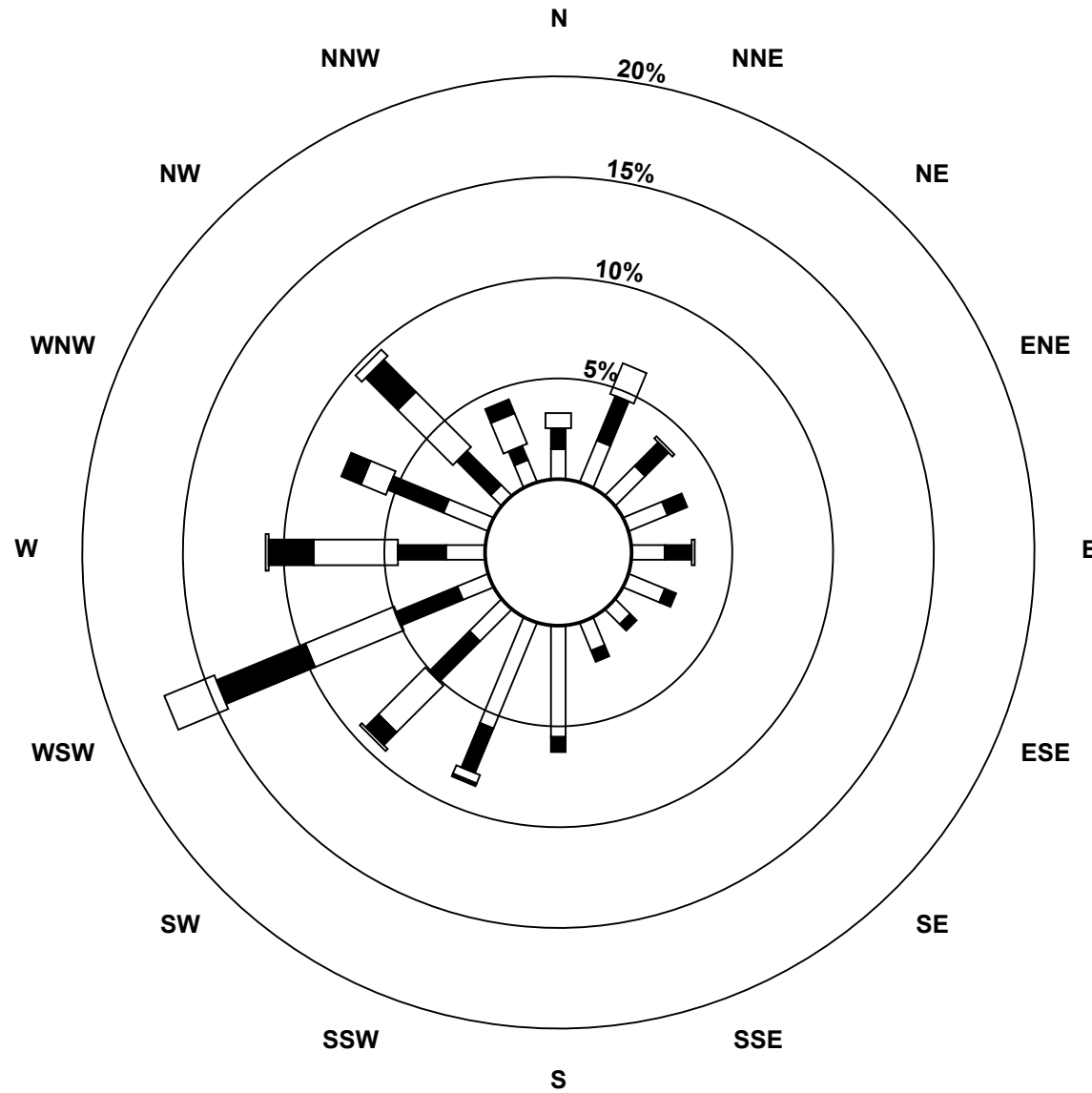
Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Evergreen Park - July 2018

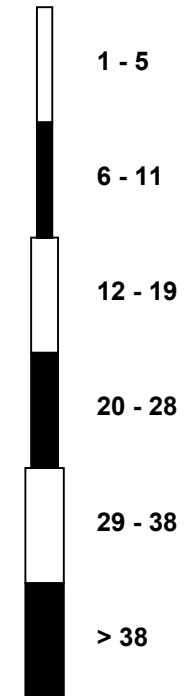
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	9	11	9	9	11	12	14	12	9	6	2	5	8	7	5	8	10	7	2	1	1	4	2	1	5.7	14.4
Dir	6	324	319	323	320	326	330	323	317	317	51	25	15	341	319	298	358	59	352	328	94	80	73	80	339.3	329.5
24 Spd	1	2	2	1	1	1	2	6	6	4	4	2	5	4	4	5	4	7	5	7	5	3	0	1	1.6	7.0
Dir	49	241	85	60	42	120	137	192	217	199	241	334	230	220	60	101	114	111	89	106	96	85	77	33	132.3	110.7
25 Spd	1	1	0	0	0	0	1	1	1	2	5	5	3	2	3	4	3	5	7	4	2	1	0	1	0.5	6.5
Dir	31	31	310	360	213	254	83	193	216	223	206	121	144	23	212	258	286	57	45	55	77	32	353	189	86.8	45.4
26 Spd	0	0	0	0	1	1	1	1	3	7	4	6	7	9	3	2	4	3	5	4	2	2	1	0	2.2	8.8
Dir	16	8	206	193	184	197	44	327	231	202	208	200	227	203	242	326	268	219	182	178	179	182	189	207	210.6	202.9
27 Spd	0	0	2	4	1	1	2	7	5	4	5	4	5	7	5	7	4	7	3	4	2	0	0	0	2.8	7.5
Dir	210	79	183	196	197	203	193	226	192	176	188	194	203	201	204	200	175	214	131	55	74	228	21	16	193.6	214.1
28 Spd	0	1	0	1	1	2	3	7	8	4	4	5	8	9	9	5	6	4	3	1	0	0	1	0	3.0	9.1
Dir	30	201	328	192	188	194	200	229	239	195	192	205	204	203	214	171	164	160	141	48	195	206	213	293	199.5	202.8
29 Spd	0	1	3	1	3	7	1	1	4	6	5	6	9	9	6	2	7	3	5	4	2	3	4	4	2.2	8.8
Dir	194	198	193	192	193	190	351	224	50	44	112	100	91	126	167	8	31	115	157	143	134	143	162	296	124.1	126.3
30 Spd	6	3	5	8	4	2	1	3	1	2	4	6	9	11	13	13	14	11	6	7	3	1	2	1	4.4	13.7
Dir	337	359	221	264	276	296	279	349	308	329	354	342	13	21	26	22	26	24	42	28	43	20	359	20	6.9	25.6
31 Spd	0	0	1	0	1	1	1	2	4	7	6	7	12	8	5	7	9	7	5	3	2	5	3	4	2.9	12.2
Dir	16	15	6	60	217	173	19	51	110	172	153	144	99	90	75	77	81	97	47	61	327	15	10	19	87.6	98.8
Spd	3.4	3.6	3.9	3.9	3.3	3.6	3.8	5.7	6.1	6.3	7.9	8.6	8.7	9.1	9.2	9.1	7.6	7.5	6.9	5.6	4.5	3.6	3.5	2.8	Diurnal Average	
Dir	250.9	257.3	257.8	260.8	265.0	269.8	273.5	260.7	261.8	256.5	257.0	270.1	274.7	279.9	280.8	282.8	277.4	276.0	277.2	274.0	265.5	255.6	252.8	252.0	Diurnal Maximum	
Spd	23.3	23.7	25.5	28.4	30.9	31.2	29.6	32.7	31.9	35.0	33.6	30.5	30.1	32.9	34.9	33.6	32.0	33.5	28.7	29.5	24.7	20.6	20.0	17.0	Diurnal Maximum	
Dir	244.5	245.7	239.1	239.9	240.8	241.8	241.3	245.3	245.5	250.6	243.3	249.3	256.2	252.5	246.6	244.8	246.8	247.6	319.8	243.8	241.2	215.0	248.7	232.9		
Maximum Speed Value: 35 km/h on Jul 11 10:00																								Hours in Service: 744		
Maximum Daily Speed Average: 27.3 km/h on Jul 11																								Hours of Data: 744		
Maximum Diurnal Speed Average: 9.2 km/h at hour 15																								Hours of Missing Data: 0		
Minimum Speed Value: 0 km/h on Jul 9 07:00																								Percent Operational Time: 100.0		
Minimum Daily Speed Average: 0.5 km/h on Jul 25																										
Minimum Diurnal Speed Average: 2.8 km/h at hour 24																										
Monthly Average Velocity: 5.68 km/h 268.92 deg																										
Speed Percentiles: P ₁ = 0.1 P ₁₀ = 1.0 Q ₁ = 2.9 Median = 7.0 Q ₃ = 14.1 P ₉₀ = 22.0 P ₉₉ = 32.0																										
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	27	19	15	0	0	0	61																			
NorthEast	35	25	6	0	0	0	66																			
East	25	18	1	0	0	0	44																			
SouthEast	18	8	0	0	0	0	26																			
South	91	20	0	1	0	0	112																			
SouthWest	44	36	45	18	16	0	159																			
West	23	35	52	39	7	0	156																			
NorthWest	26	27	43	21	3	0	120																			
Total	289	188	162	79	26	0	744																			

Wind Rose

Wind Speed (WS) (km/h)
Evergreen Park - July 2018



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Evergreen Park - July 2018

Maximum Speed: 36 km/h on Jul 11 15:00																					Maximum Daily Speed Average: 27.9 km/h on Jul 11					Hours in Service: 744																							
Minimum Speed: 0 km/h on Jul 25 03:00																					Minimum Daily Speed Average: 3.2 km/h on Jul 25					Hours of Data: 744																							
Maximum Diurnal Speed Average: 15.9 km/h at hour 13																					Minimum Diurnal Speed Average: 6.0 km/h at hour 5					Hours of Missing Data: 0																							
Monthly Average Speed: 10.39 km/h																					Percentiles: P ₁ = 0.4 P ₁₀ = 1.6 Q ₁ = 4.2 Median = 8.2 Q ₃ = 15.1 P ₉₀ = 23.1 P ₉₉ = 32.7					Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Jul	24	24	19	12	4	7	7	14	15	14	19	20	23	25	26	28	29	24	21	19	17	17	15	15	18.1	28.5																							
2-Jul	17	19	19	16	13	17	17	14	17	22	22	27	28	24	30	29	24	22	21	19	16	11	12	13	19.6	30.1																							
3-Jul	13	14	13	16	16	18	17	17	15	12	14	13	14	12	13	11	11	11	9	9	10	11	8	5	12.6	17.8																							
4-Jul	2	4	5	6	4	7	6	5	4	5	6	5	6	5	4	7	9	8	5	6	4	4	3	2	5.1	9.1																							
5-Jul	2	2	1	1	2	3	3	5	5	5	9	7	6	7	6	9	8	8	7	8	6	1	1	2	4.7	9.4																							
6-Jul	1	4	10	6	6	6	7	6	5	15	14	12	14	10	16	22	21	19	21	22	22	21	19	16	13.1	22.5																							
7-Jul	13	11	16	19	16	19	18	29	30	19	10	27	17	24	19	13	12	13	14	13	11	9	7	5	16.0	30.2																							
8-Jul	5	4	1	2	1	0	2	2	4	7	17	21	17	20	17	17	15	16	14	10	8	6	3	4	8.8	20.7																							
9-Jul	2	1	2	2	0	1	1	5	8	17	27	26	24	24	25	23	18	16	12	9	5	4	2	2	10.7	26.5																							
10-Jul	2	1	1	2	2	1	2	1	5	9	16	17	25	26	26	24	21	22	18	13	14	15	17	17	12.4	26.3																							
11-Jul	17	22	26	29	31	31	30	33	33	36	34	31	29	27	36	35	30	28	28	30	25	19	16	14	27.9	36.2																							
12-Jul	9	12	8	8	6	5	5	13	11	10	22	22	25	20	19	22	20	21	16	16	9	2	2	3	12.7	24.7																							
13-Jul	5	4	8	12	8	5	12	12	14	14	18	27	29	22	17	25	23	22	28	17	18	13	12	13	15.7	28.8																							
14-Jul	13	9	11	14	13	13	13	20	21	25	25	25	23	26	23	25	19	16	14	7	1	1	1	3	15.0	25.8																							
15-Jul	3	5	4	1	1	1	2	3	3	6	8	18	17	16	11	12	14	16	15	8	8	4	2	2	7.5	17.5																							
16-Jul	4	2	3	3	3	4	6	14	20	24	29	31	31	34	29	29	33	34	29	20	16	13	10	5	17.8	34.4																							
17-Jul	4	4	2	4	4	2	4	7	12	11	14	13	14	21	15	12	12	13	8	6	5	4	5	7	8.5	21.4																							
18-Jul	4	5	7	6	6	5	7	6	12	9	12	16	26	24	29	30	27	26	29	24	15	7	5	2	14.1	30.1																							
19-Jul	3	3	3	2	1	2	5	7	9	10	11	12	13	13	13	9	7	10	6	7	11	12	18	11	8.3	18.3																							
20-Jul	8	7	6	3	3	3	6	8	7	2	4	12	15	9	14	9	8	6	8	12	14	15	20	13	8.9	20.3																							
21-Jul	12	16	20	16	13	11	14	15	14	11	11	10	13	8	16	13	18	16	10	11	6	6	9	10	12.4	19.5																							
22-Jul	10	9	7	7	5	6	9	10	7	4	9	8	5	5	7	4	5	4	3	6	10	12	10	10	7.2	12.2																							
23-Jul	9	11	9	9	11	12	15	13	9	6	3	6	9	9	8	10	13	8	4	2	2	4	2	1	7.7	14.6																							
24-Jul	2	4	3	2	2	2	3	6	7	4	5	4	6	6	5	6	6	8	5	7	5	3	1	1	4.3	8.4																							
25-Jul	1	1	0	0	0	0	1	2	2	4	6	7	6	6	6	6	4	6	7	5	3	2	1	1	3.2	7.1																							
26-Jul	1	1	1	1	1	1	2	2	6	11	5	7	8	10	8	6	6	4	6	4	2	2	1	0	4.1	10.5																							
27-Jul	1	1	3	4	1	1	2	7	6	5	6	6	7	9	7	9	6	8	4	4	2	1	1	1	4.2	8.7																							
28-Jul	1	1	1	1	2	2	3	7	8	5	5	6	8	11	9	8	8	6	4	2	1	0	1	0	4.1	10.7																							
29-Jul	1	1	3	1	3	7	3	3	5	6	8	8	10	10	8	8	7	4	6	4	3	3	4	7	5.2	10.4																							
30-Jul	10	5	9	8	4	2	2	3	3	6	6	8	11	13	14	14	14	11	6	7	4	2	2	1	6.9	14.5																							
31-Jul	1	0	1	1	1	1	1	3	5	9	9	9	13	10	8	9	11	8	6	3	2	5	4	4	5.2	13.5																							
																									6.4	6.6	7.1	6.8	6.0	6.4	7.2	9.4	10.3	11.0	13.0	14.9	15.9	15.7	15.7	15.6	14.8	14.1	12.4	10.7	8.9	7.5	6.9	6.1	Diurnal Average
																									23.6	23.9	25.6	28.6	31.1	31.3	29.9	33.1	32.5	35.7	34.2	31.4	31.3	34.4	36.2	34.5	32.9	34.3	29.1	29.8	25.0	20.7	20.3	17.2	Diurnal Maximum

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

Hourly Standard Deviations

Wind Direction (WD) - deg

Evergreen Park - July 2018

Maximum Value: 98.7 deg on Jul 18 02:00																		Hours in Service: 744							
Minimum Value: 6.3 deg on Jul 11 06:00																		Hours of Data: 744							
																		Hours of Missing Data: 0							
																		Hours of Calibration: 0							
Percentiles: P ₁ = 7.0 P ₁₀ = 11.5 Q ₁ = 15.6 Median = 24.9 Q ₃ = 51.4 P ₉₀ = 74.1 P ₉₉ = 93.4																		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	9	8	14	18	65	30	14	10	20	17	16	14	13	12	10	13	13	15	15	14	12	13	13	14	65.2
2-Jul	13	11	18	14	28	11	9	13	10	11	13	11	19	19	12	12	21	15	16	18	24	26	17	14	27.8
3-Jul	14	12	14	11	10	11	11	10	10	23	22	21	18	21	17	17	12	17	15	15	13	12	15	73	73.3
4-Jul	52	22	20	15	21	21	23	35	75	65	44	73	51	58	75	44	60	76	48	22	14	11	14	32	76.0
5-Jul	77	35	75	74	61	36	73	37	41	43	35	61	73	87	89	88	51	62	35	24	25	69	50	52	88.9
6-Jul	79	42	52	64	46	30	18	44	64	20	14	20	35	28	38	17	13	13	9	10	7	8	8	9	79.3
7-Jul	12	13	7	7	9	8	8	8	10	14	16	26	20	13	14	24	18	17	14	12	15	20	15	11	26.4
8-Jul	10	35	92	52	77	89	54	75	68	40	18	16	18	21	23	18	19	18	20	15	10	13	19	9	91.7
9-Jul	41	47	73	57	71	52	86	25	25	23	13	18	20	18	19	17	17	27	21	19	34	11	41	81	86.1
10-Jul	82	28	62	41	67	94	88	90	23	29	9	15	16	15	14	23	18	18	17	15	12	6	7	10	93.6
11-Jul	8	7	7	7	7	6	8	9	11	12	11	14	17	17	16	14	10	12	9	8	9	7	9	12	17.3
12-Jul	9	7	13	20	12	37	45	13	11	22	16	16	19	21	26	18	23	21	21	14	22	55	51	37	54.8
13-Jul	13	29	13	10	45	45	20	22	26	27	25	16	16	15	18	22	15	17	14	23	12	13	13	15	45.1
14-Jul	16	17	17	17	12	15	15	16	15	15	24	24	22	24	25	24	23	26	26	28	64	79	72	17	78.6
15-Jul	29	14	11	73	73	32	64	36	67	37	62	18	25	39	45	42	47	23	21	20	14	18	86	56	86.4
16-Jul	11	62	70	29	86	53	27	18	11	14	15	15	16	18	14	17	13	13	13	13	8	12	13	13	85.5
17-Jul	13	48	38	36	73	78	47	23	13	23	21	22	21	23	22	25	25	28	16	24	24	17	14	16	78.3
18-Jul	92	99	26	23	84	59	31	34	21	36	34	31	17	22	20	18	28	14	10	11	13	30	23	61	98.7
19-Jul	64	96	81	70	72	35	25	32	27	32	37	36	36	32	26	33	13	16	22	21	16	54	21	22	95.7
20-Jul	23	34	28	42	45	33	33	23	43	86	97	31	25	21	20	18	20	21	19	16	21	15	10	31	97.3
21-Jul	72	20	18	18	15	16	14	16	17	22	23	26	26	54	25	23	24	12	19	16	20	16	17	18	72.0
22-Jul	18	17	16	24	41	18	11	24	41	76	41	81	27	35	41	30	55	64	67	30	20	15	15	19	80.7
23-Jul	16	11	13	10	10	10	11	15	13	25	46	51	32	45	67	52	42	35	68	79	50	16	22	46	78.7
24-Jul	49	62	59	43	94	64	38	19	25	37	61	80	43	71	39	42	61	39	25	20	14	18	75	56	94.0
25-Jul	40	61	71	67	96	91	65	84	84	62	45	53	78	77	71	72	67	43	26	28	28	24	84	74	96.0
26-Jul	95	85	92	90	67	74	91	92	67	66	39	35	38	37	78	92	58	72	25	22	30	27	89	90	94.8
27-Jul	77	78	74	10	83	72	24	21	39	42	39	52	51	47	63	42	52	30	58	21	43	92	84	69	91.9
28-Jul	69	48	78	55	80	59	35	14	11	47	48	54	29	42	30	54	47	45	53	57	80	87	62	86	86.5
29-Jul	63	34	45	49	41	7	93	77	46	31	63	54	39	36	58	92	34	45	26	19	33	30	20	98	97.7
30-Jul	56	59	62	26	45	52	52	56	92	74	55	48	33	35	24	19	21	18	34	23	23	75	60	41	91.5
31-Jul	72	63	71	93	73	87	82	49	57	53	46	53	27	45	63	41	40	38	29	25	55	16	26	19	93.0
94.8 98.7 92.1 93.0 96.0 93.6 92.9 91.6 91.5 85.9 97.3 80.7 78.3 86.6 88.9 92.2 67.5 76.0 68.0 78.7 79.8 91.9 89.5 97.7																									

PAZA
Smoky Heights Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

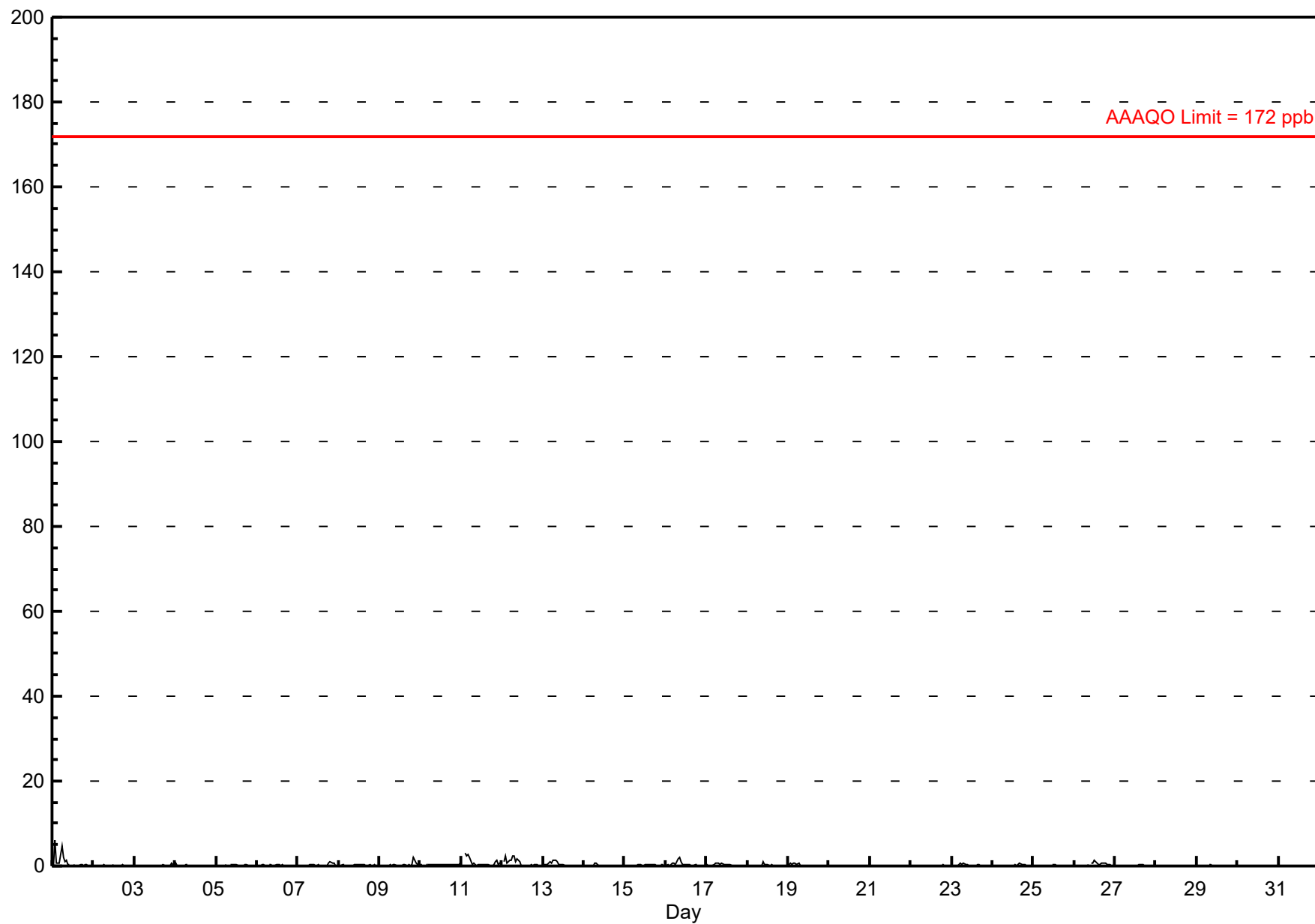
Sulphur Dioxide (SO₂) - ppb

Smoky Heights - July 2018

Number of Exceedences (AAAQO):										1-hr: 0 24-hr: 0										Hours in Service: 744									
Maximum Value: 6.2 ppb on Jul 1 02:00										Maximum Daily Average: 0.8 ppb on Jul 1										Hours of Data: 670									
Minimum Value: 0 ppb on Jul 1 01:00										Minimum Daily Average: 0.0 ppb on Jul 20										Hours of Missing Data: 74									
Maximum Diurnal Average: 0.4 ppb at hour 6										Minimum Diurnal Average: 0.1 ppb at hour 24										Hours of Calibration: 33									
Monthly Average: 0.23 ppb										Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.5 P ₉₉ = 2.2										Percent Operational Time: 94.5									
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	6	1	1	1	5	2	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.8	6.2			
2-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			
3-Jul	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.1	0.8			
4-Jul	1	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	0.6			
5-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			
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	0.1	0.4			
7-Jul	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0.2	1.0			
8-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			
9-Jul	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0.3	2.1			
10-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	0.3	0.5			
11-Jul	1	A	3	3	3	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0.8	3.0			
12-Jul	A	1	2	1	1	1	2	2	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0.8	2.5			
13-Jul	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.4	1.4			
14-Jul	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.8			
15-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	0.2	0.5			
16-Jul	0	0	0	0	1	1	1	2	2	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.4	1.9			
17-Jul	0	0	0	0	0	1	1	1	0	1	0	0	0	0	0	0	P	P	A	0	0	0	0	0	0.3	0.7			
18-Jul	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	1.0			
19-Jul	0	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.8			
20-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			
21-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	0.0	0.2			
22-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			
23-Jul	0	0	0	0	0	1	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6			
24-Jul	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0.1	0.5			
25-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	0.2			
26-Jul	0	0	0	0	0	0	0	0	0	A	1	1	1	1	0	0	1	1	1	1	0	0	0	0	0.3	1.2			
27-Jul	0	0	0	0	0	0	0	0	A	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3			
28-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			
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	0.1	0.2			
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	0	0	0	0	0	0	0	0	0	--	0.0			
0.1 0.4 0.3 0.3 0.3 0.4 0.4 0.4 0.4 0.4 0.3 0.2 0.2 0.2 0.2 0.2 0.1 0.2 0.2 0.1 0.2 0.2 0.2 0.1 0.1																									Diurnal Average				
1.0 6.2 3.0 2.5 2.7 4.7 2.2 2.5 1.9 1.7 1.0 0.6 1.2 0.8 0.5 0.5 0.6 0.6 0.6 0.6 1.0 2.1 1.3 0.8 0.9																									Diurnal Maximum				
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 Averages

Sulphur Dioxide (SO₂) - ppb
Smoky Heights - July 2018



Hourly Maximums

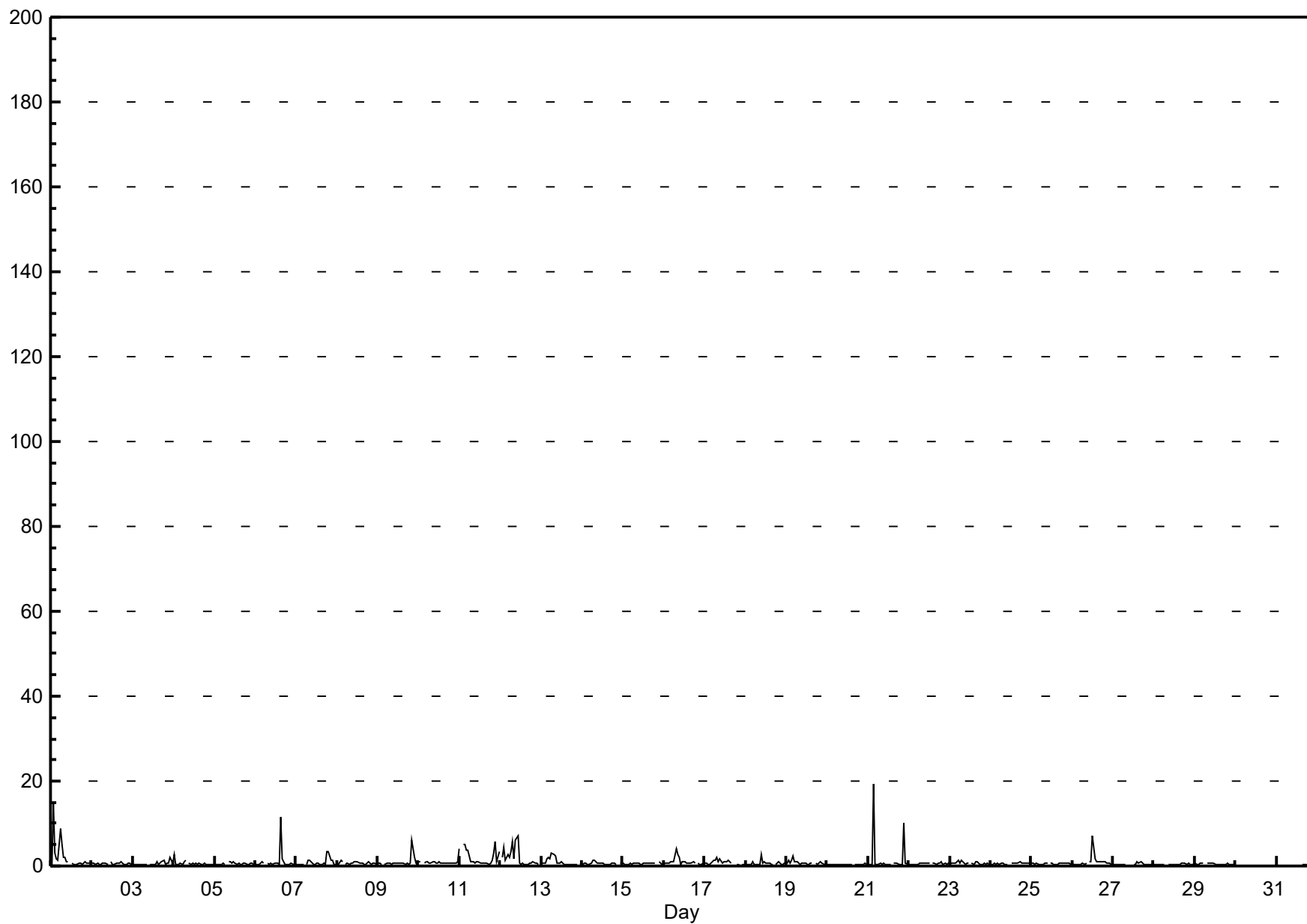
Sulphur Dioxide (SO₂) - ppb

Smoky Heights - July 2018

Maximum Value: 19.2 ppb on Jul 21 04:00																				Maximum Daily Average: 2.1 ppb on Jul 1										Hours in Service: 744									
Minimum Value: 0 ppb on Jul 1 01:00																				Minimum Daily Average: 0.4 ppb on Jul 20										Hours of Data: 670									
Maximum Diurnal Average: 1.5 ppb at hour 4																				Minimum Diurnal Average: 0.6 ppb at hour 23										Hours of Missing Data: 74									
Monthly Average: 0.86 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.5 Q ₃ = 0.7 P ₉₀ = 1.3 P ₉₉ = 6.4										Hours of Calibration: 33									
																				Percent Operational Time: 94.5																			
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	15	3	2	1	9	5	2	2	1	1	A	1	0	0	0	1	1	0	1	1	1	1	1	2.1	14.9													
2-Jul	1	1	0	1	0	1	1	1	1	0	A	1	1	0	1	1	1	1	1	0	0	1	1	1	0	0.6	0.9												
3-Jul	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	0	1	1	1	0	1	1	2	1	0.6	2.0													
4-Jul	3	0	0	0	1	0	1	1	A	1	0	1	0	1	0	1	0	0	1	1	0	0	0	0	0.6	2.6													
5-Jul	0	0	0	0	0	1	0	A	1	1	1	1	1	0	1	0	0	1	1	0	0	1	1	0	0.6	1.0													
6-Jul	0	0	0	1	1	1	A	1	1	1	0	1	1	1	0	11	2	1	1	1	0	1	0	0	1.1	11.4													
7-Jul	0	0	0	1	0	A	0	1	1	1	0	0	1	1	0	0	1	0	3	3	1	1	0	0	0.9	3.3													
8-Jul	0	0	1	1	A	0	1	0	1	1	1	1	1	1	1	1	0	0	1	1	0	1	1	0	0.6	1.3													
9-Jul	1	1	0	A	0	1	1	1	0	1	1	1	1	1	1	1	1	1	0	1	6	2	1	1	0.9	6.0													
10-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	0.8	1.1													
11-Jul	4	A	5	5	4	4	1	1	1	1	1	1	1	1	1	1	1	0	1	1	3	6	1	3	2.0	5.7													
12-Jul	A	2	4	1	3	2	4	6	2	6	7	1	0	1	0	0	0	1	1	1	1	1	0	A	2.0	7.2													
13-Jul	1	1	1	2	2	2	3	3	2	1	1	1	1	0	0	0	0	0	1	1	0	0	A	1	1.0	2.9													
14-Jul	0	1	1	0	0	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	0	A	1	1	0.6	1.4													
15-Jul	1	0	0	0	1	0	1	1	1	1	0	0	1	1	1	1	1	1	1	1	A	1	1	0	0.6	1.0													
16-Jul	1	1	1	1	1	1	1	4	3	2	0	1	1	1	1	1	1	1	A	1	0	0	0	1	1.0	4.1													
17-Jul	1	1	0	0	1	1	1	2	1	2	1	1	1	1	1	1	P	P	A	0	0	0	0	0	0.9	2.1													
18-Jul	0	0	0	0	1	0	0	0	0	3	1	1	1	1	1	0	0	A	0	1	1	0	1	1	0.6	2.7													
19-Jul	1	1	1	1	2	1	1	1	0	1	1	1	0	0	1	1	A	1	1	1	1	1	0	0	0.8	2.3													
20-Jul	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	1	0.4	0.7													
21-Jul	0	0	1	19	0	0	1	1	0	1	0	1	0	0	A	1	1	1	0	0	0	10	1	0	1.7	19.2													
22-Jul	0	0	0	0	0	1	1	1	1	1	1	1	1	A	1	1	0	1	1	1	0	1	0	1	0.5	0.9													
23-Jul	0	1	1	1	1	1	1	2	1	0	1	1	A	1	0	1	1	1	0	0	1	0	1	0	0.7	1.5													
24-Jul	0	1	1	0	1	0	1	1	0	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9													
25-Jul	1	1	0	1	0	0	0	0	1	1	A	1	1	1	0	0	1	1	1	1	1	1	1	0	0.5	0.7													
26-Jul	1	0	0	0	0	0	1	0	1	A	1	1	7	2	1	1	1	1	1	1	1	1	1	0	1.0	7.1													
27-Jul	0	0	0	0	0	0	0	0	A	C	C	C	0	1	1	1	1	1	0	0	0	0	0	0	0.5	0.9													
28-Jul	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	1	0	1	0	0	0	0.4	0.7													
29-Jul	1	0	0	1	1	1	A	1	1	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0.5	0.7													
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	0	0	0	0	0	0	0	1	0	--	0.5													
		0.7	1.1	0.9	1.5	0.9	1.1	1.0	1.2	0.9	1.0	0.9	0.7	0.9	0.6	0.6	0.9	0.6	0.6	0.7	0.7	0.8	1.1	0.6	0.6	Diurnal Average													
		3.9	14.9	5.1	19.2	3.8	8.7	5.2	5.7	2.7	6.0	7.2	1.2	7.1	1.6	1.3	11.4	1.8	1.1	3.3	3.2	6.0	10.1	2.0	3.4	Diurnal Maximum													
C - Calibration		P - Power Failure							N - Not Valid							A - Automated Daily Zero Span																							

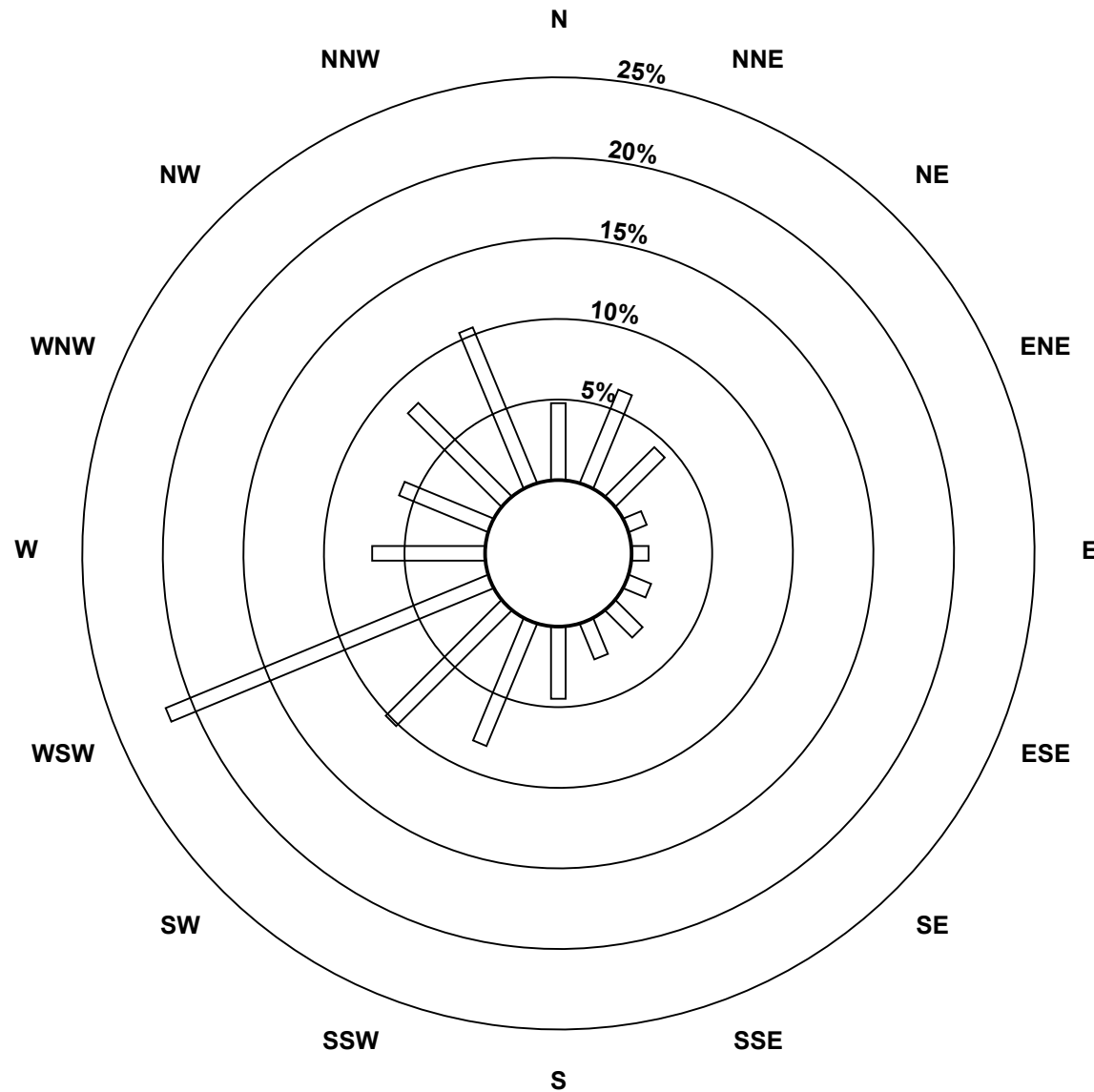
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Smoky Heights - July 2018

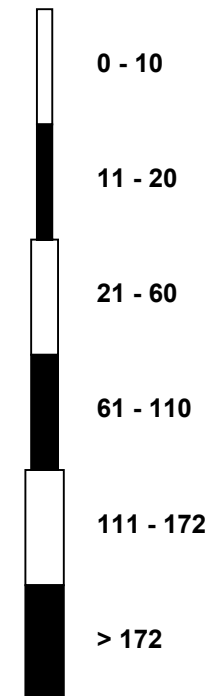


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Smoky Heights - July 2018

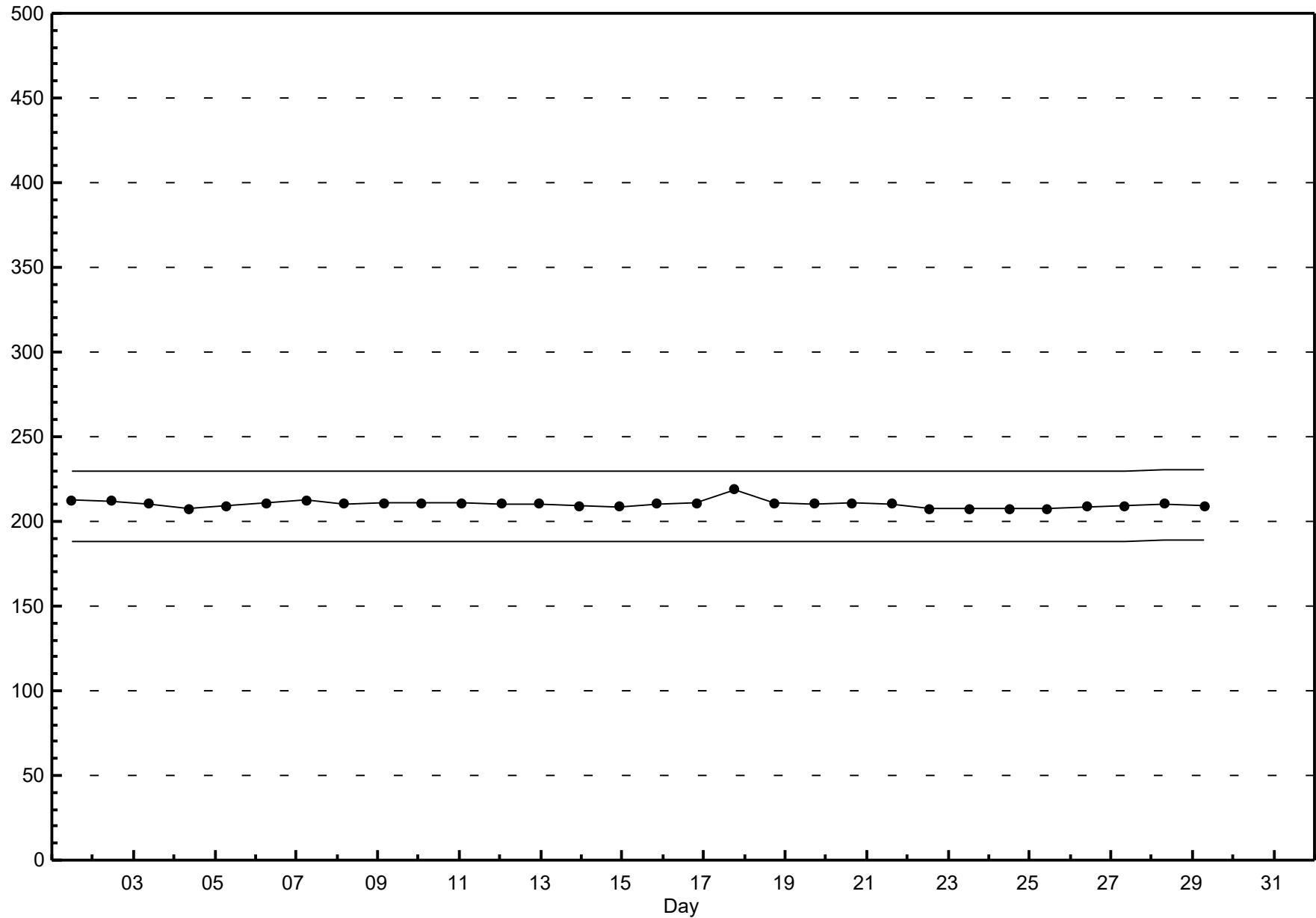


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Smoky Heights - July 2018



Hourly Averages

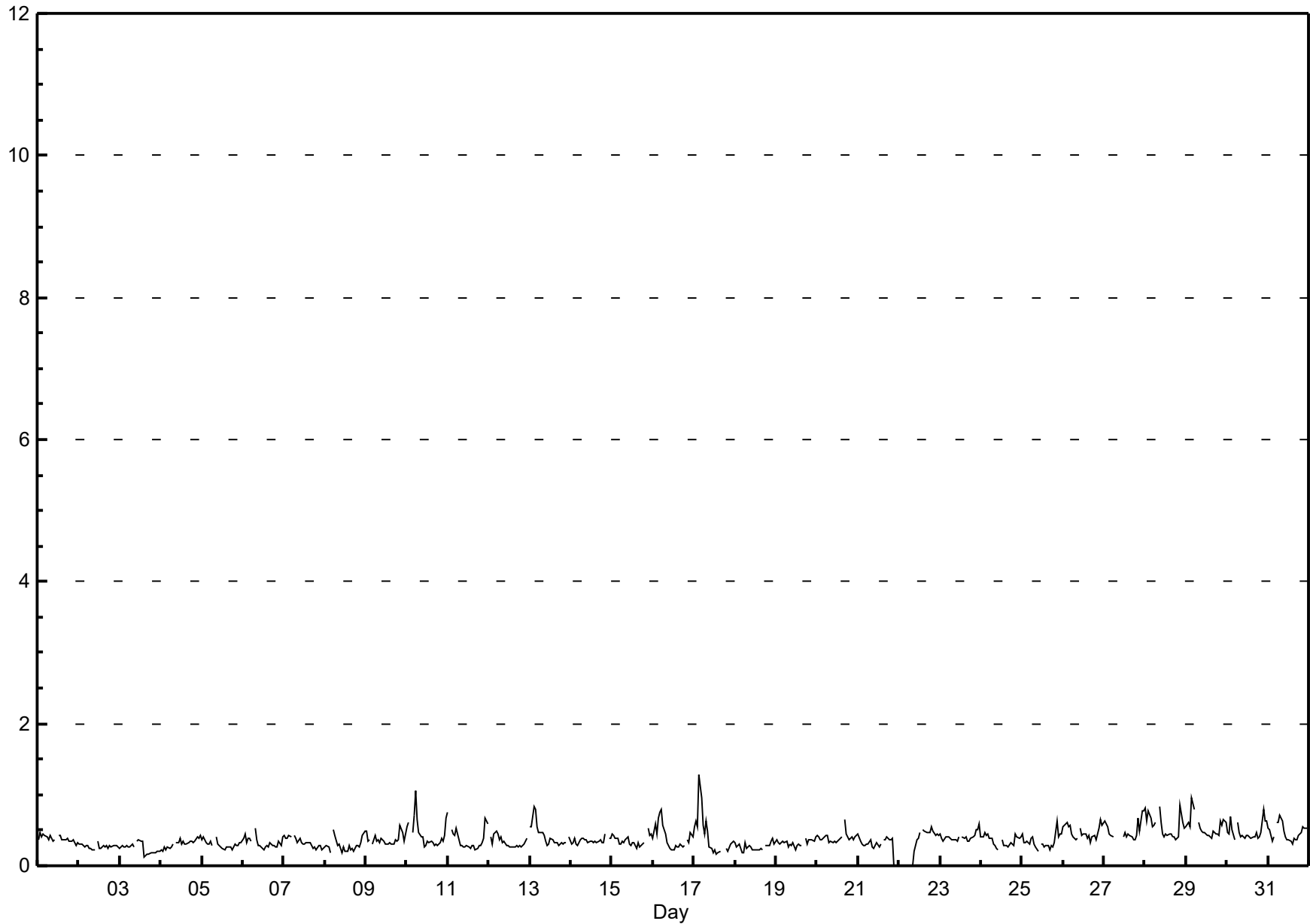
Total Reduced Sulphur (TRS) - ppb

Smoky Heights - July 2018

Maximum Value: 1.3 ppb on Jul 17 04:00																				Maximum Daily Average: 0.6 ppb on Jul 28				Hours in Service: 744			
Minimum Value: 0 ppb on Jul 21 22:00																				Minimum Daily Average: 0.2 ppb on Jul 3				Hours of Data: 706			
Maximum Diurnal Average: 0.4 ppb at hour 4																				Minimum Diurnal Average: 0.3 ppb at hour 15				Hours of Missing Data: 38			
Monthly Average: 0.37 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.4 Q ₃ = 0.4 P ₉₀ = 0.5 P ₉₉ = 0.8				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	A	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5	
2-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	0.3	0.4	
3-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	0.2	0.4	
4-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	0.3	0.4	
5-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	0.3	0.4	
6-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	0.3	0.5	
7-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	
8-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	0.3	0.5	
9-Jul	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.4	0.6	
10-Jul	1	1	A	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	1.1	
11-Jul	1	A	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.4	0.8	
12-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.3	0.5	
13-Jul	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.4	0.8	
14-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	0.4	0.4	
15-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	0.4	0.5	
16-Jul	0	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.4	0.8	
17-Jul	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	P	P	A	0	0	0	0	0	0.4	1.3	
18-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	0.3	0.4	
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	0.3	0.4	
20-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0.4	0.6	
21-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	0.4	
22-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	1	0	0	0	0	0.3	0.5	
23-Jul	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	1	0.4	0.6	
24-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	0.3	0.5	
25-Jul	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0.3	0.6	
26-Jul	1	1	1	1	1	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	1	1	1	0.5	0.7	
27-Jul	1	1	1	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	1	0	1	1	0.5	0.8	
28-Jul	1	1	1	1	1	1	1	A	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.6	0.8	
29-Jul	1	1	1	1	1	1	A	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.6	1.0	
30-Jul	0	0	1	1	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.5	0.8	
31-Jul	1	1	0	0	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.5	0.7	
0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.4 0.4 0.4 0.4																									Diurnal Average		
0.8 0.6 0.8 1.3 1.0 1.1 0.6 0.7 0.8 0.6 0.5 0.5 0.5 0.4 0.5 0.5 0.6 0.5 0.5 0.5 0.8 0.8 0.8 0.8																									Diurnal Maximum		
C - Calibration				P - Power Failure				A - Automated Daily Zero Span																			

Hourly Averages

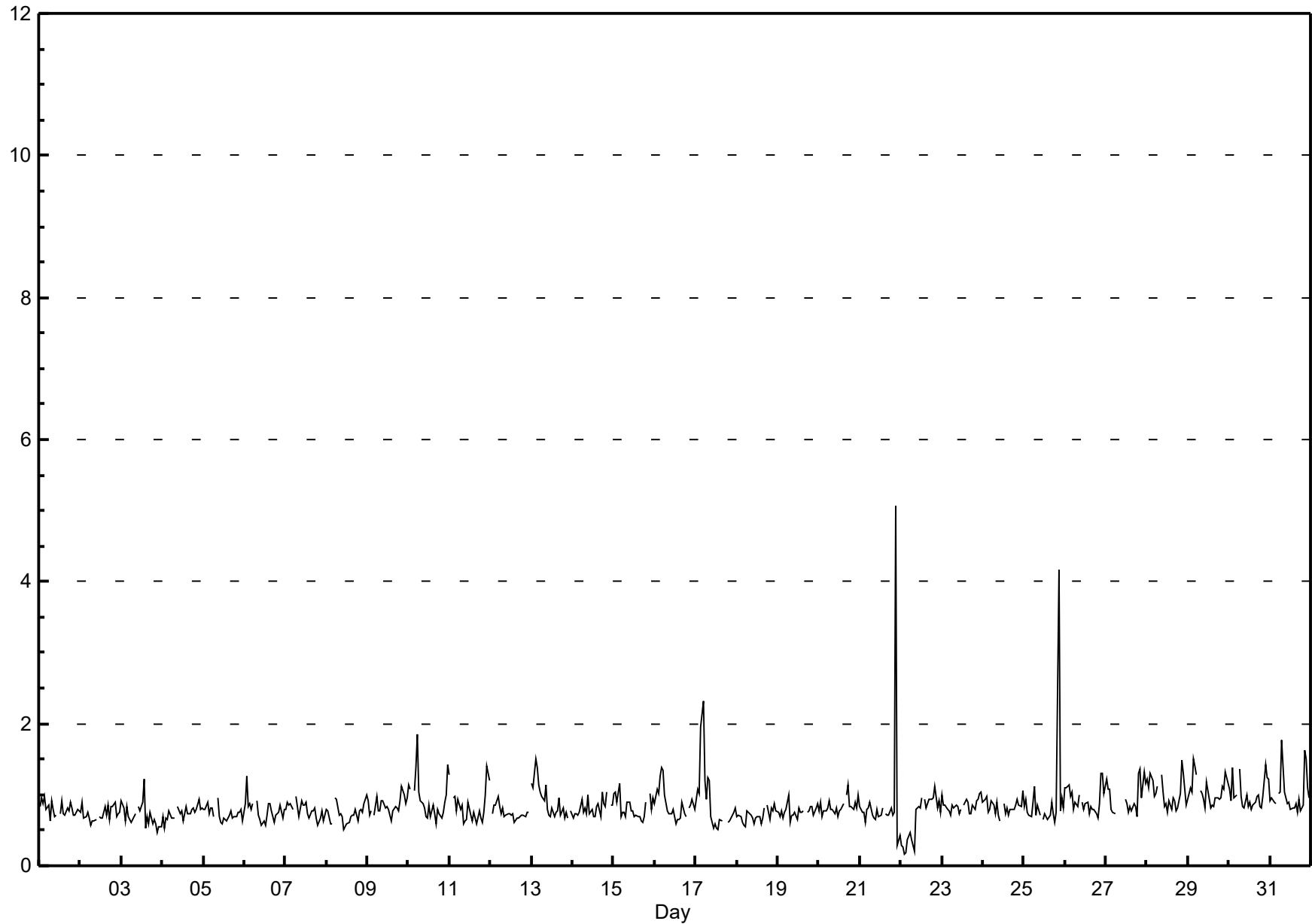
Total Reduced Sulphur (TRS) - ppb
Smoky Heights - July 2018



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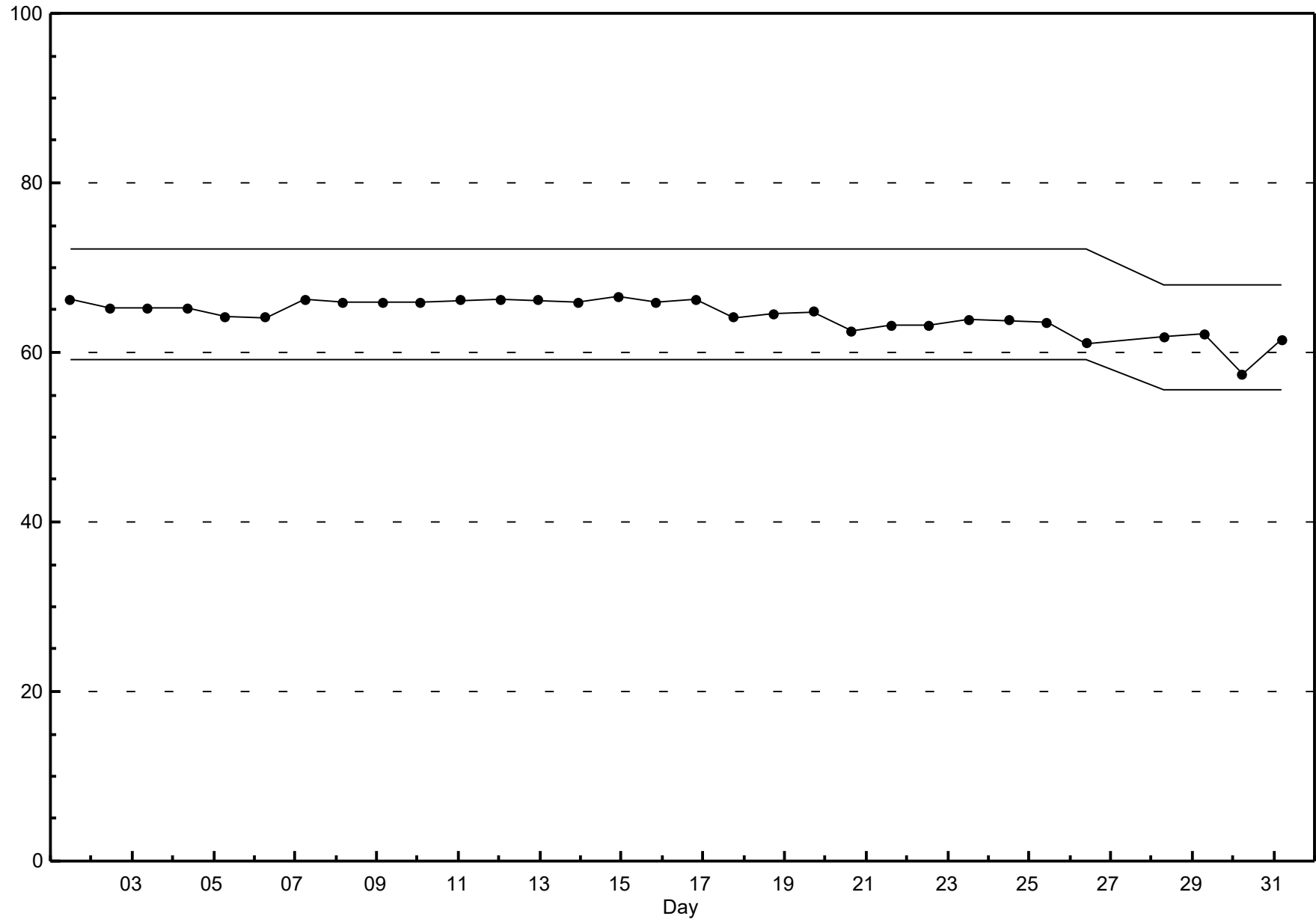
Hourly Maximums

Total Reduced Sulphur (TRS) - ppb
Smoky Heights - July 2018



Span Responses

Total Reduced Sulphur (TRS)
Smoky Heights - July 2018



Hourly Averages

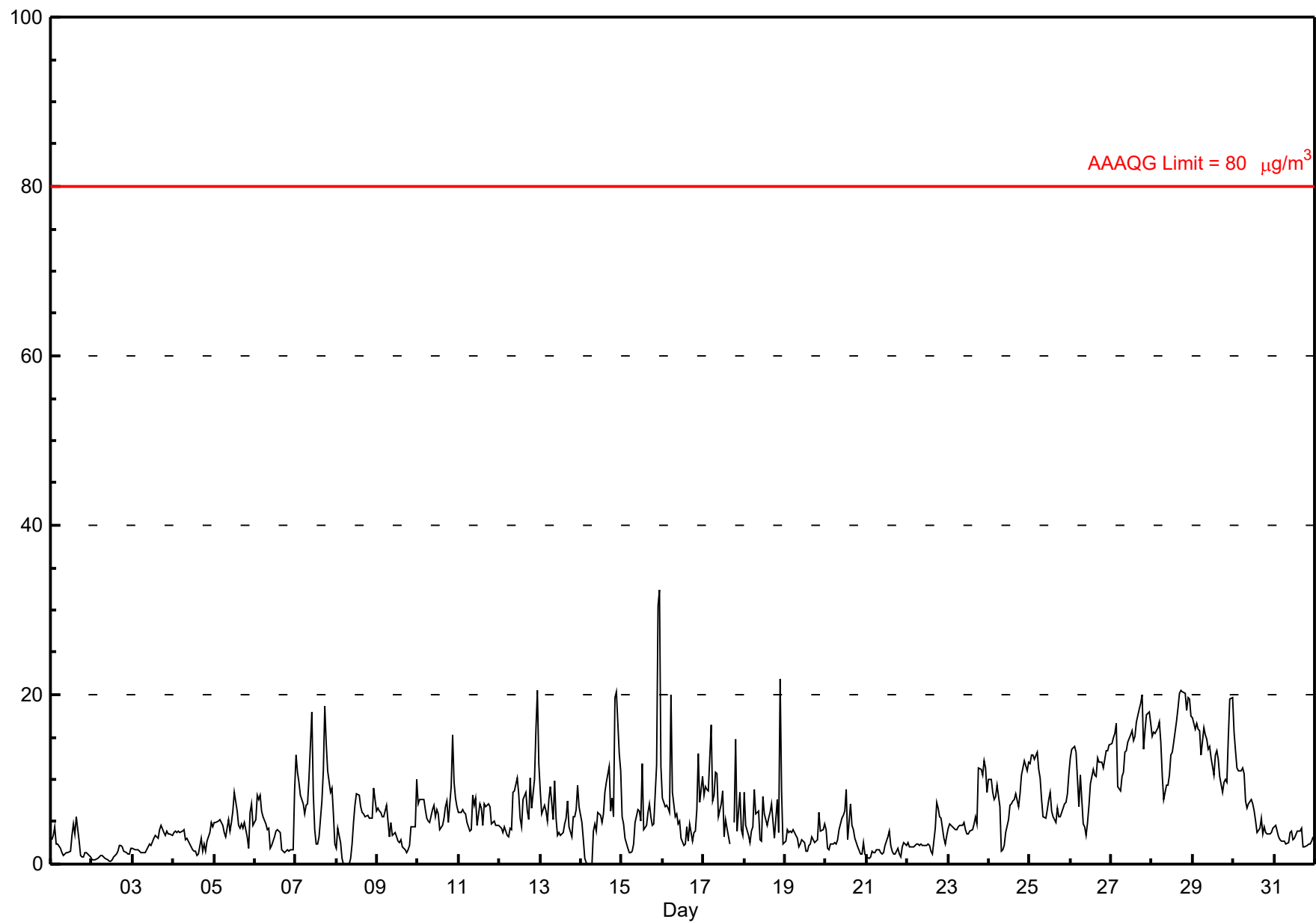
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Smoky Heights - July 2018

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 32.4 µg/m³ on Jul 15 23:00 Maximum Daily Average: 15.5 µg/m³ on Jul 28																								Hours in Service: 744 Hours of Data: 742 Hours of Missing Data: 2 Hours of Calibration: 0 Percent Operational Time: 99.7		
Minimum Value: 0 µg/m³ on Jul 8 05:00 Maximum Diurnal Average: 9.1 µg/m³ at hour 22 Monthly Average: 6.22 µg/m³ Minimum Daily Average: 1.0 µg/m³ on Jul 2 Minimum Diurnal Average: 4.6 µg/m³ at hour 8 Percentiles: P ₁ = 0.2 P ₁₀ = 1.5 Q ₁ = 2.8 Median = 4.9 Q ₃ = 8.2 P ₉₀ = 13.1 P ₉₉ = 20.2																										
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	3	3	4	2	2	2	1	1	1	1	1	1	3	5	4	6	3	1	1	1	1	1	1	1	2.2	5.6
2-Jul	1	0	1	1	1	1	1	1	1	1	0	0	0	1	1	2	2	2	2	2	1	1	1	2	1.0	2.2
3-Jul	2	2	2	2	2	1	1	1	2	2	2	2	3	3	3	3	4	5	4	3	4	4	4	3	2.7	4.5
4-Jul	4	4	4	4	4	4	4	3	3	3	2	2	1	2	1	1	3	2	2	2	3	4	5	4	2.9	4.9
5-Jul	5	5	5	5	5	5	4	3	5	4	5	6	9	6	5	4	5	4	5	3	2	6	7	5	4.9	8.5
6-Jul	5	8	8	8	6	6	5	4	4	2	2	3	4	4	4	4	2	1	2	2	2	2	2	9	4.0	8.8
7-Jul	13	11	10	8	7	6	7	7	10	18	8	4	2	2	3	7	11	19	14	11	8	9	6	2	8.5	18.7
8-Jul	2	4	3	1	0	0	0	0	1	2	5	7	8	8	7	6	6	6	6	5	5	5	9	6	4.3	9.0
9-Jul	7	6	6	6	6	7	5	3	5	3	4	3	3	3	3	2	2	1	2	2	4	4	4	10	4.2	9.9
10-Jul	7	8	8	8	6	5	5	5	6	7	6	6	6	4	5	5	7	7	5	9	15	10	8	7	6.9	15.3
11-Jul	6	6	6	6	6	5	4	4	8	7	8	5	7	7	5	7	7	7	7	5	5	5	5	5	5.9	8.1
12-Jul	4	4	4	4	3	3	4	4	8	9	10	8	5	4	8	8	6	5	10	7	10	16	21	12	7.5	20.6
13-Jul	9	6	7	6	5	8	9	5	10	5	3	4	3	4	5	5	8	4	3	6	6	7	9	7	6.0	9.8
14-Jul	5	3	1	0	0	0	0	4	5	4	6	6	5	6	8	10	12	6	8	6	20	20	13	11	6.5	20.4
15-Jul	6	5	3	2	1	1	1	2	5	7	6	5	12	4	5	6	7	6	5	5	12	30	32	12	7.5	32.4
16-Jul	8	7	7	7	6	20	8	6	6	5	5	3	2	2	4	3	5	3	4	4	6	13	7	10	6.3	20.0
17-Jul	8	9	9	9	16	7	8	11	11	6	7	9	3	5	4	2	P	P	5	15	4	8	4	3	7.4	16.4
18-Jul	8	5	3	3	4	4	9	6	6	3	3	8	6	5	5	6	7	5	3	8	4	22	9	2	6.0	21.8
19-Jul	3	4	4	4	4	4	3	3	2	2	3	3	1	2	2	2	3	2	3	3	6	4	4	5	3.2	6.1
20-Jul	4	2	2	2	2	3	2	3	4	5	6	6	9	3	7	5	4	3	3	2	1	1	3	1	3.5	8.8
21-Jul	1	1	1	2	1	1	2	2	1	1	1	2	3	4	2	2	1	1	2	1	1	2	3	2	1.7	4.0
22-Jul	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	4	7	7	6	5	3	2	3	3.0	7.2
23-Jul	4	5	5	4	4	4	4	5	5	5	4	4	4	4	4	5	6	5	11	11	11	12	11	8	6.0	12.2
24-Jul	10	10	8	8	8	9	7	2	2	2	4	5	7	7	7	8	8	7	8	11	11	12	11	12	7.7	12.2
25-Jul	12	13	13	12	13	11	10	8	6	5	6	8	8	6	6	5	7	6	6	6	7	7	8	11	8.3	13.1
26-Jul	13	14	14	13	10	7	10	5	4	3	5	7	10	11	11	10	12	12	12	11	12	13	13	14	10.3	14.1
27-Jul	14	15	15	17	9	9	10	11	13	13	14	15	16	15	15	17	18	19	20	14	16	18	18	17	14.9	19.9
28-Jul	15	16	15	16	17	14	10	8	9	9	11	13	13	14	17	18	20	21	20	20	18	20	19	17	15.5	20.6
29-Jul	17	16	17	16	16	13	16	15	15	14	14	13	11	13	13	12	10	8	10	10	10	15	20	20	13.8	19.6
30-Jul	16	13	11	11	11	11	11	7	7	7	8	7	6	5	4	4	5	4	4	4	3	4	4	4	7.1	15.5
31-Jul	4	5	3	3	3	3	3	2	3	4	4	3	3	4	4	4	4	2	2	2	2	2	3	3	3.1	4.6
7.0 6.8 6.4 6.2 5.8 5.7 5.5 4.6 5.5 5.2 5.4 5.5 5.7 5.3 5.6 5.8 6.6 6.0 6.3 6.3 7.0 9.1 8.6 7.4																								Diurnal Average		
17.3 16.0 16.6 16.6 16.7 20.0 16.1 15.2 14.7 17.9 14.4 15.3 15.7 14.6 17.0 18.4 20.2 20.6 20.4 20.2 19.6 30.5 32.4 19.6																								Diurnal Maximum		
P - Power Failure																										
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																										

Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Smoky Heights - July 2018



Hourly Maximums

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

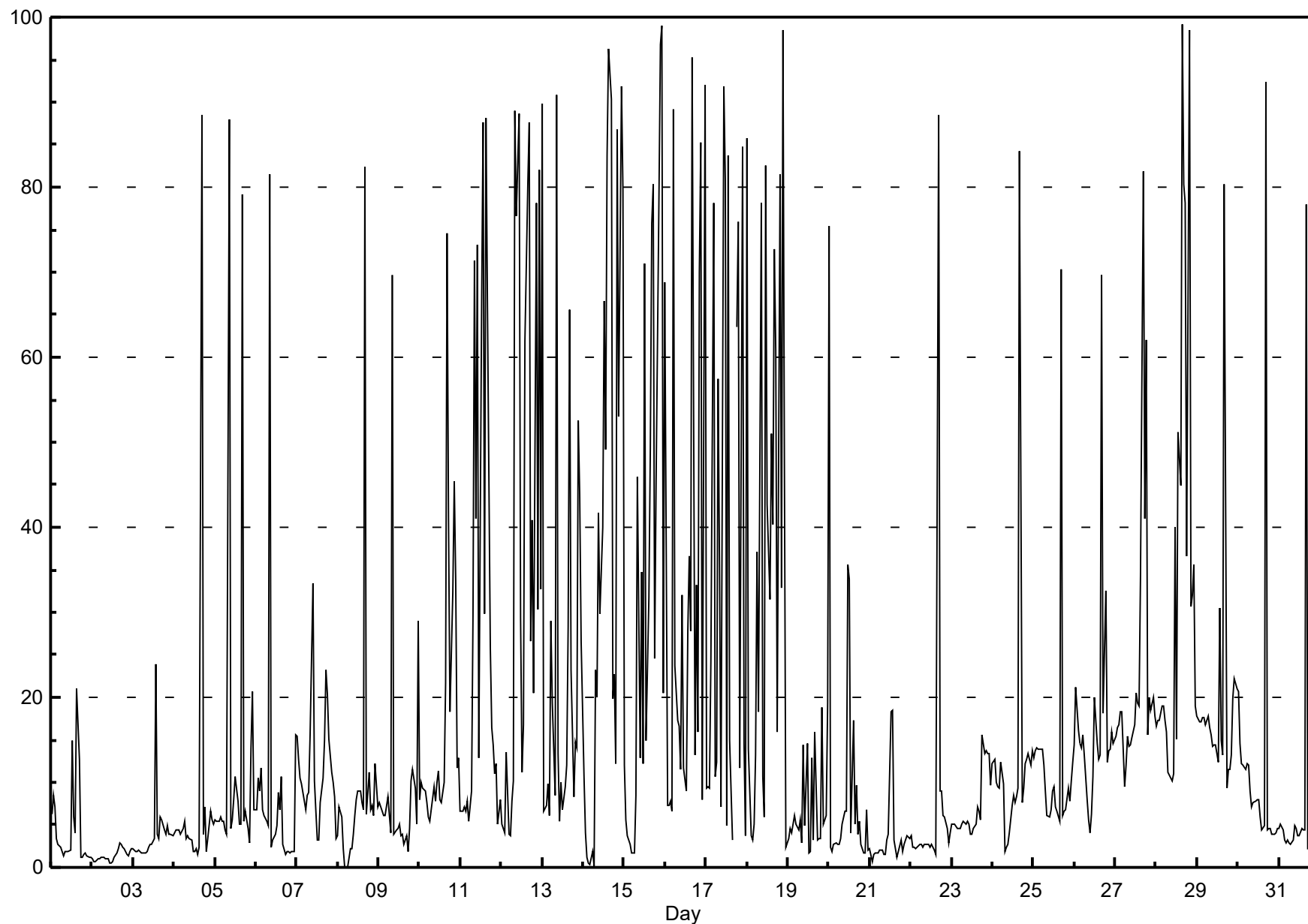
Smoky Heights - July 2018

Maximum Value: 99.2 µg/m ³ on Jul 28 16:00		Maximum Daily Average: 39.0 µg/m ³ on Jul 18		Hours in Service: 744																							
Minimum Value: 0 µg/m ³ on Jul 8 05:00		Minimum Daily Average: 1.4 µg/m ³ on Jul 2		Hours of Data: 742																							
Maximum Diurnal Average: 56.0 µg/m ³ at hour 17		Minimum Diurnal Average: 7.3 µg/m ³ at hour 3		Hours of Missing Data: 2																							
Monthly Average: 17.09 µg/m ³		Percentiles: P ₁ = 0.6 P ₁₀ = 1.9 Q ₁ = 3.9 Median = 7.9 Q ₃ = 16.6 P ₉₀ = 51.2 P ₉₉ = 92.2		Hours of Calibration: 0																							
				Percent Operational Time: 99.7																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Jul	6	9	7	3	3	2	2	1	2	2	2	2	15	6	4	21	13	1	1	1	2	1	1	1	4.6	21.0	
2-Jul	1	1	1	1	1	1	1	1	1	1	0	0	1	1	2	2	3	3	2	2	1	1	2	2	1.4	2.9	
3-Jul	2	2	2	2	2	2	2	2	2	2	3	3	3	24	4	3	6	6	4	4	5	4	4	4	4.0	23.9	
4-Jul	4	4	4	4	4	5	5	3	4	3	3	2	2	2	1	2	88	4	7	2	3	7	6	5	7.4	88.4	
5-Jul	6	5	5	6	5	5	4	4	88	5	6	8	11	8	5	5	79	5	7	5	3	14	21	7	13.2	87.9	
6-Jul	7	10	9	12	7	6	5	5	82	2	3	4	5	9	7	11	3	1	2	2	2	2	2	16	8.9	81.6	
7-Jul	15	13	10	10	8	7	9	9	16	33	10	7	3	3	8	10	15	23	20	15	11	10	8	3	11.5	33.4	
8-Jul	4	7	6	2	0	0	0	2	2	4	6	8	9	9	8	7	82	6	11	7	7	6	12	7	8.9	82.3	
9-Jul	8	7	7	6	6	8	6	4	70	4	4	5	5	4	4	3	4	2	5	10	11	9	5	29	9.4	69.6	
10-Jul	8	10	9	9	8	6	5	7	10	8	10	11	8	8	10	22	75	41	18	32	45	34	12	13	17.4	74.5	
11-Jul	7	7	7	7	8	5	9	30	71	41	73	13	67	88	30	88	66	26	16	14	11	12	5	8	29.5	88.2	
12-Jul	5	5	4	14	4	4	8	10	89	77	89	29	11	17	62	80	88	27	41	21	78	30	82	33	37.7	88.9	
13-Jul	90	7	7	10	6	29	19	9	91	13	5	10	7	10	12	28	66	23	8	15	14	53	44	27	25.1	90.8	
14-Jul	11	4	1	0	0	2	0	23	20	42	30	40	67	49	84	96	90	20	23	12	87	53	92	80	38.6	96.2	
15-Jul	12	6	4	3	2	2	2	9	46	13	35	12	71	15	32	49	76	80	25	45	79	97	99	21	34.6	98.9	
16-Jul	69	7	7	8	7	89	24	17	17	11	32	12	9	28	37	28	95	13	33	16	70	85	8	92	33.9	95.2	
17-Jul	9	10	9	24	78	11	12	57	35	7	92	81	5	84	15	3	P	P	64	76	12	85	15	4	35.7	91.8	
18-Jul	86	14	4	3	5	13	37	18	78	11	6	83	43	31	51	40	73	61	16	82	33	98	47	2	39.0	98.4	
19-Jul	3	5	4	5	6	5	4	6	3	14	5	15	2	2	13	3	16	3	3	3	19	5	6	19	7.1	19.3	
20-Jul	75	2	2	3	3	3	3	3	5	7	7	36	34	4	17	5	10	4	5	3	2	2	7	2	10.1	75.5	
21-Jul	2	1	1	2	2	2	2	2	1	1	3	4	18	19	3	2	1	2	3	2	3	3	4	3	3.6	18.5	
22-Jul	4	2	2	2	2	3	3	2	3	3	3	2	3	2	2	1	88	9	9	6	6	5	3	4	7.1	88.4	
23-Jul	5	5	5	5	5	5	5	5	5	5	5	4	4	5	5	7	7	6	16	13	14	13	13	10	7.1	15.6	
24-Jul	12	13	10	10	9	12	10	2	2	3	4	7	9	8	8	9	84	8	9	12	13	13	12	14	12.2	84.3	
25-Jul	13	14	14	14	14	14	12	9	6	6	7	9	10	7	7	5	70	6	7	7	9	8	10	12	12.1	70.3	
26-Jul	14	21	16	15	14	16	13	8	6	4	6	11	20	15	13	13	70	18	32	12	14	14	16	15	16.5	69.6	
27-Jul	15	16	17	18	18	10	12	15	14	14	15	17	20	19	19	34	82	41	62	16	20	19	20	18	23.0	81.8	
28-Jul	17	17	17	19	19	17	16	11	10	10	11	40	15	51	45	99	80	78	37	98	31	32	36	19	34.5	99.2	
29-Jul	18	17	17	18	18	17	18	16	16	14	14	12	31	15	13	80	80	9	11	11	13	20	22	21	19.0	80.4	
30-Jul	21	15	12	12	11	12	12	9	7	8	8	8	8	6	4	5	92	4	5	5	4	4	4	5	11.7	92.3	
31-Jul	5	5	4	3	3	3	3	3	3	5	5	4	4	5	4	4	78	2	2	3	3	3	3	4	6.7	77.9	
17.9		8.4	7.3	8.0	8.9	10.2	8.5	9.8	25.9	12.1	16.2	16.1	16.1	18.3	17.1	22.7	56.0	17.8	16.3	17.9	20.1	23.9	20.0	16.1	Diurnal Average		
89.9		21.2	17.3	24.2	78.1	89.1	37.1	57.4	90.8	76.7	91.8	82.6	71.0	87.7	83.8	99.2	95.2	80.3	63.5	98.4	86.7	98.4	98.9	92.1	Diurnal Maximum		
P - Power Failure																											

Hourly Maximums

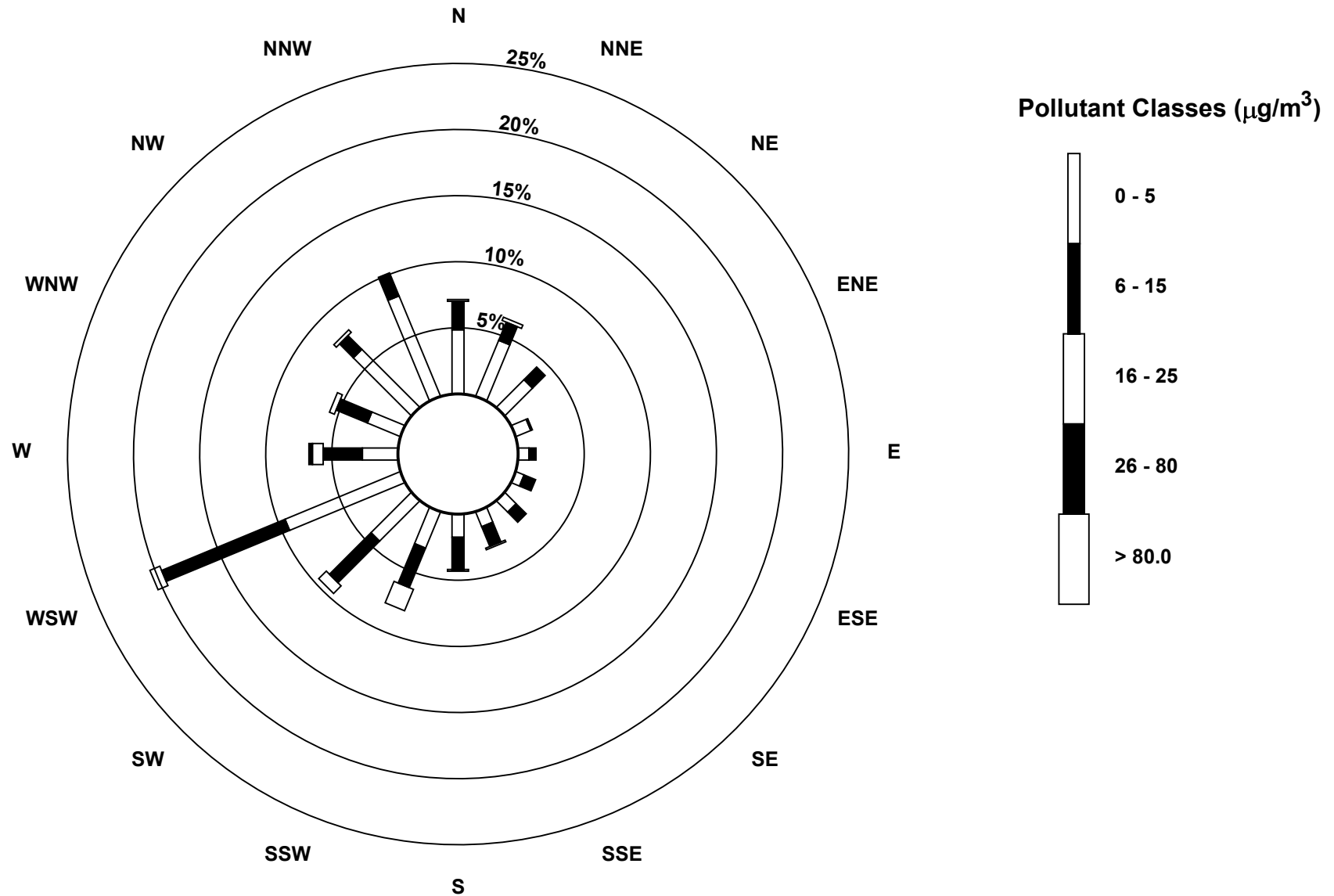
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$

Smoky Heights - July 2018



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Smoky Heights - July 2018



Hourly Averages

External Temperature (ET) - °C

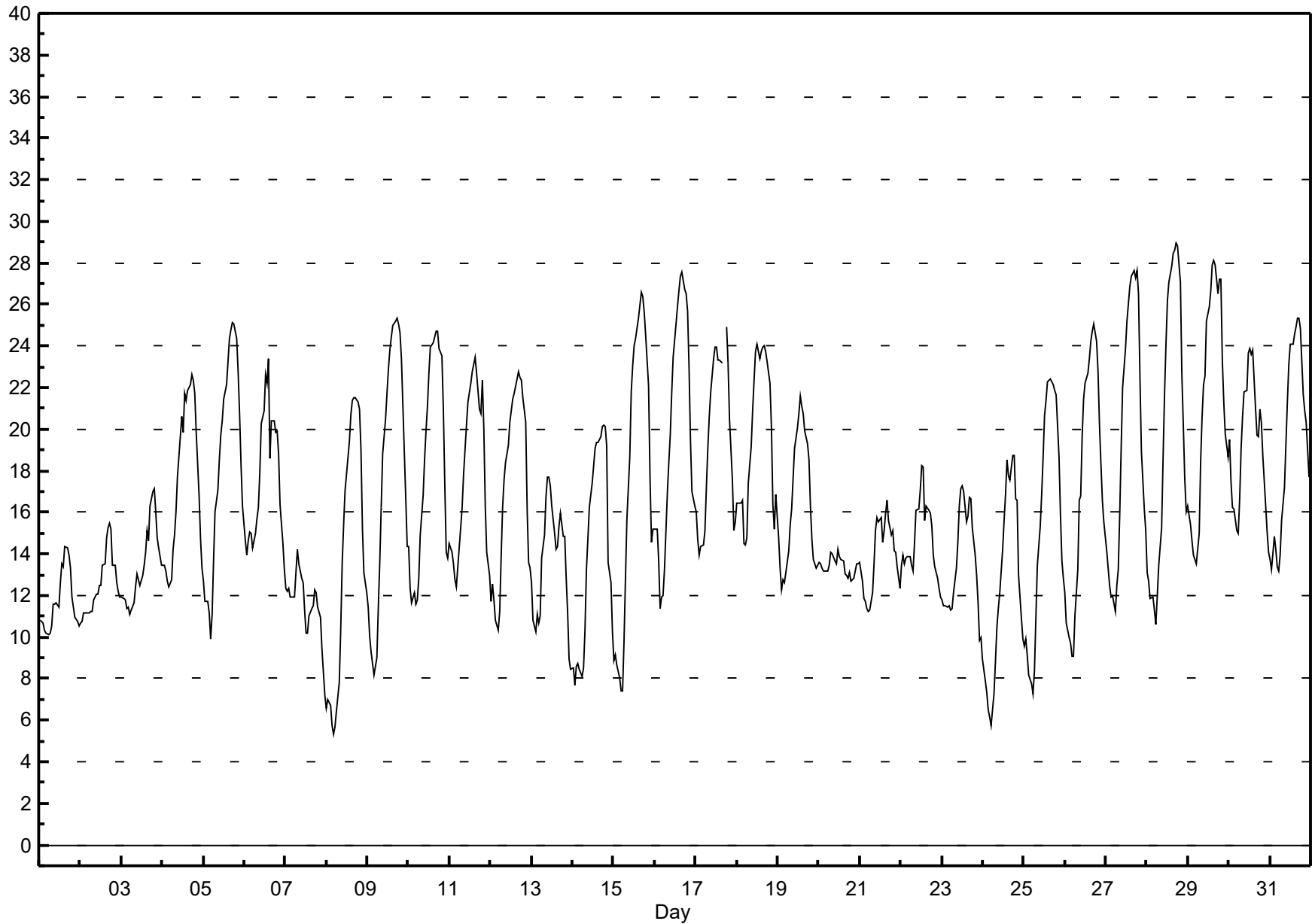
Smoky Heights - July 2018

Maximum Value: 28.9 °C on Jul 28 18:00																				Maximum Daily Average: 21.3 °C on Jul 29										Hours in Service: 744	
Minimum Value: 5 °C on Jul 8 05:00																				Minimum Daily Average: 11.5 °C on Jul 7										Hours of Data: 742	
Maximum Diurnal Average: 21.0 °C at hour 17																				Minimum Diurnal Average: 11.2 °C at hour 5										Hours of Missing Data: 2	
Monthly Average: 16.41 °C																				Percentiles: P ₁ = 6.6 P ₁₀ = 10.8 Q ₁ = 12.6 Median = 15.2 Q ₃ = 20.5 P ₉₀ = 23.9 P ₉₉ = 27.7										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	11	11	11	10	10	10	10	11	12	12	12	11	13	13	13	14	14	14	13	12	11	11	11	11	11	11.7	14.4				
2-Jul	11	11	11	11	11	11	11	11	12	12	12	12	12	13	14	15	15	15	15	13	13	13	12	12	12	12.5	15.5				
3-Jul	12	12	12	11	11	11	11	12	12	13	13	12	13	13	14	15	15	16	17	17	16	15	14	13	13.4	17.1					
4-Jul	13	13	13	13	12	13	14	15	16	18	20	21	20	22	21	22	22	23	22	22	20	17	15	13	17.5	22.6					
5-Jul	13	12	12	11	10	11	14	16	17	19	20	20	21	22	23	24	25	25	25	24	23	21	18	16	18.4	25.1					
6-Jul	15	14	15	15	15	14	15	16	16	18	20	21	23	22	23	19	20	20	20	20	19	16	14	13	17.7	23.4					
7-Jul	12	12	12	12	12	12	13	14	14	13	13	11	10	10	11	11	12	12	12	11	11	9	8	7	11.5	14.2					
8-Jul	7	7	7	6	5	6	6	8	10	13	15	17	18	19	21	21	21	22	21	21	19	15	13	12	13.8	21.5					
9-Jul	11	10	9	9	8	9	11	14	16	19	21	22	23	24	24	25	25	25	25	25	23	19	17	14	17.9	25.3					
10-Jul	14	12	12	12	12	12	13	15	17	19	20	21	23	24	24	24	25	25	24	24	21	17	14	14	18.2	24.7					
11-Jul	14	14	14	13	12	13	15	16	18	19	20	21	22	23	23	23	23	21	21	22	20	16	14	13	18.0	23.4					
12-Jul	12	13	12	11	10	11	14	16	18	18	19	20	21	21	22	22	23	23	22	22	20	16	14	13	17.2	22.8					
13-Jul	13	11	10	11	11	11	14	15	17	18	18	17	16	15	14	14	15	16	15	15	13	11	9	8	13.6	17.7					
14-Jul	9	8	9	9	8	8	9	10	13	15	16	17	18	19	19	19	20	20	20	20	19	14	13	10	14.3	20.2					
15-Jul	9	9	9	8	7	7	10	13	16	19	22	23	24	24	25	26	27	26	26	25	22	18	15	15	17.6	26.6					
16-Jul	15	15	14	11	12	12	13	17	18	20	22	23	25	26	27	27	28	27	27	26	23	19	17	16	20.0	27.6					
17-Jul	16	15	14	14	14	15	17	19	21	22	23	24	24	23	23	23	P	P	25	23	20	18	15	16	19.3	24.9					
18-Jul	16	16	16	17	14	14	15	17	19	21	22	24	24	23	24	24	24	24	23	22	20	16	15	17	19.6	24.1					
19-Jul	15	13	12	13	13	13	14	15	16	18	19	20	21	22	21	21	20	19	19	16	15	14	13	13	16.5	21.6					
20-Jul	14	13	13	13	13	13	13	14	14	14	14	14	14	14	14	13	13	13	13	13	13	13	14	14	13.4	14.2					
21-Jul	14	13	12	12	11	11	11	12	14	15	16	16	16	15	15	16	17	16	15	15	14	14	13	12	13.9	16.6					
22-Jul	13	14	13	14	14	14	13	13	15	16	16	17	18	18	16	16	16	16	15	14	13	13	12	12	14.7	18.2					
23-Jul	12	12	11	11	12	11	11	12	13	15	16	17	17	17	16	16	17	17	15	14	13	12	10	10	13.6	17.3					
24-Jul	9	8	7	7	6	6	7	9	10	11	12	14	16	17	19	18	18	19	19	17	17	13	11	10	12.4	18.8					
25-Jul	10	10	9	8	8	7	8	11	13	15	17	19	21	21	22	22	22	22	22	22	19	16	14	13	15.5	22.4					
26-Jul	12	11	10	10	9	9	11	13	17	17	20	21	22	23	23	24	25	25	24	23	20	18	17	16	17.5	25.1					
27-Jul	14	13	12	12	12	11	13	13	16	19	22	24	25	26	27	27	28	27	28	27	22	19	16	15	19.5	27.6					
28-Jul	13	13	12	12	11	11	12	13	15	19	22	24	26	27	28	28	29	29	29	27	23	20	18	16	19.8	28.9					
29-Jul	16	15	15	14	14	14	15	18	21	22	23	25	26	27	28	28	28	27	27	27	23	21	20	19	21.3	28.1					
30-Jul	20	18	16	16	15	15	17	19	21	22	22	24	24	24	24	21	20	20	21	20	19	16	15	14	19.2	23.9					
31-Jul	14	13	15	14	13	13	14	16	17	19	21	23	24	24	25	25	25	25	25	22	21	20	19	18	19.4	25.3					
12.8 12.3 11.9 11.6 11.2 11.3 12.5 14.0 15.6 17.0 18.3 19.3 20.0 20.4 20.7 20.9 21.0 20.9 20.8 20.0 18.3 15.8 14.2 13.4																									Diurnal Average						
19.5 17.5 16.5 16.6 15.1 15.1 17.2 19.1 20.6 22.1 23.4 25.2 26.2 27.1 27.9 28.4 28.6 28.9 28.8 27.2 23.4 21.3 19.8 18.6																									Diurnal Maximum						
P - Power Failure																															

Hourly Averages

External Temperature (ET) - °C

Smoky Heights - July 2018



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Smoky Heights - July 2018

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	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	15	18	18	20	19	19	16	15	18	24	23	27	30	37	36	38	35	29	25	17	17	19	18	15	22.7	37.9
Dir	246	250	253	245	246	251	252	244	246	257	258	256	251	257	254	257	261	265	267	255	265	262	262	260	255.7	256.5
2 Spd	19	15	16	16	15	18	20	21	23	21	20	17	18	17	13	17	14	14	13	12	10	8	9	15	15.3	23.1
Dir	267	280	313	321	332	329	339	327	327	330	330	332	330	329	331	317	331	323	324	334	341	339	327	309	323.1	326.8
3 Spd	16	15	17	19	18	16	14	15	15	14	13	13	13	13	11	12	9	9	10	12	11	10	6	4	12.4	19.0
Dir	307	314	312	306	314	317	325	321	328	333	342	347	349	350	338	323	335	332	336	325	327	324	2	320	326.5	306.4
4 Spd	7	10	9	10	10	10	6	9	7	3	2	3	4	4	4	5	3	2	3	5	6	4	3	4	2.9	10.2
Dir	323	328	334	336	338	340	349	351	10	22	57	57	357	322	302	282	260	214	126	120	140	145	198	180	340.1	328.1
5 Spd	2	5	7	2	1	4	4	7	10	9	10	9	6	7	9	8	9	8	7	5	6	4	4	5	4.3	10.2
Dir	206	194	166	209	26	31	43	153	145	143	150	174	152	160	157	165	151	146	131	99	106	23	360	338	144.0	149.5
6 Spd	4	4	3	5	3	5	6	9	13	9	16	19	15	16	19	27	25	23	16	17	19	15	14	14	11.8	27.0
Dir	341	16	325	222	322	192	232	172	197	197	221	229	217	220	231	243	239	237	218	220	212	225	238	243	226.8	242.7
7 Spd	13	16	17	15	11	13	15	19	20	17	16	18	16	11	11	12	12	12	12	14	14	10	11	7	11.0	20.4
Dir	241	231	225	227	222	228	220	242	263	287	299	324	340	332	313	289	279	267	247	243	243	232	221	207	258.9	263.1
8 Spd	9	11	11	8	8	8	9	12	13	13	19	19	16	16	21	17	17	18	16	12	11	9	8	12	12.7	20.8
Dir	228	233	236	224	216	201	208	208	208	213	224	238	244	249	242	243	242	235	238	236	226	231	254	255	232.3	241.6
9 Spd	13	7	9	7	7	8	11	11	9	16	23	25	23	20	21	21	22	18	13	7	6	5	5	8	12.0	25.3
Dir	253	234	227	198	193	183	183	188	175	204	225	236	236	237	248	246	249	253	251	242	191	184	215	261	228.9	236.0
10 Spd	5	6	10	11	9	8	8	10	10	10	15	15	17	24	25	23	20	20	17	13	9	10	10	15	12.6	24.7
Dir	246	234	261	258	216	228	202	226	209	187	231	219	228	249	257	250	252	257	252	260	258	254	243	255	242.3	256.6
11 Spd	19	21	24	26	26	28	30	28	22	29	26	26	26	24	25	26	28	25	14	24	22	13	13	12	22.9	30.0
Dir	254	254	252	253	254	256	257	251	246	253	244	239	238	244	251	256	244	239	216	253	248	250	250	245	248.5	256.6
12 Spd	12	14	14	16	15	14	17	17	19	17	23	21	19	17	19	17	23	20	15	12	5	5	7	9	15.1	23.4
Dir	248	255	255	260	257	254	251	246	241	249	258	269	262	258	258	258	258	257	265	290	284	246	255	275	257.7	258.1
13 Spd	8	9	10	13	13	12	12	8	4	9	11	17	18	14	10	20	16	16	20	16	17	11	10	11	10.8	19.9
Dir	257	244	262	258	248	264	256	234	266	311	321	341	336	341	327	321	324	317	299	306	304	289	276	280	297.7	321.3
14 Spd	12	10	16	16	20	18	19	21	18	23	21	28	26	24	20	19	19	17	12	7	3	4	6	7	15.4	27.7
Dir	278	272	286	279	265	258	251	258	274	284	283	289	295	283	296	297	291	290	301	313	326	212	257	255	280.4	289.4
15 Spd	5	3	4	8	8	9	9	11	11	13	14	19	22	20	17	11	9	7	5	6	5	9	9	6	8.8	22.1
Dir	244	247	229	200	190	201	197	196	184	203	222	240	251	264	274	266	246	254	233	227	196	269	259	261	234.7	251.3
16 Spd	8	9	7	11	10	8	10	12	14	20	27	25	28	29	30	31	32	27	29	22	11	4	7	12	17.3	31.9
Dir	234	206	219	242	243	252	256	246	240	245	261	256	251	251	253	248	236	245	248	240	236	227	226	255	245.9	235.8
17 Spd	10	8	9	11	10	6	8	9	12	13	17	10	13	15	14	11	6	6	8	8	7	2	1	0	7.3	17.0
Dir	262	209	243	245	257	231	252	257	258	250	261	286	240	229	248	242	214	185	179	150	122	9	294	23	239.8	260.8
18 Spd	2	4	6	13	6	5	8	5	6	10	13	15	16	18	16	17	17	18	19	14	12	9	12	12	9.4	18.7
Dir	165	216	306	341	14	351	268	272	252	232	237	235	255	300	315	313	306	311	308	296	296	271	290	310	291.0	307.9
19 Spd	8	5	2	3	8	10	10	10	10	9	7	10	9	10	11	12	14	11	11	7	9	13	14	17	8.4	16.9
Dir	306	23	218	17	346	337	357	12	32	31	48	54	46	24	39	50	53	43	37	17	340	353	3	26	20.8	26.1
20 Spd	13	8	6	10	7	3	4	2	5	6	2	4	2	5	8	7	7	7	7	10	10	8	6	3	4.6	12.6
Dir	27	35	57	45	48	37	72	58	70	90	24	342	357	18	17	344	299	311	307	317	316	340	18	357	7.9	27.1
21 Spd	13	20	15	12	13	13	13	13	12	12	11	9	8	3	10	14	13	11	10	12	13	11	11	11	8.9	20.4
Dir	30	42	41	28	22	19	20	32	29	35	2	3	21	3	355	333	332	318	293	295	302	297	289	284	357.5	41.8
22 Spd	14	16	8	18	14	9	10	10	9	8	8	6	5	8	10	7	7	5	6	10	11	14	13	14	8.8	17.7
Dir	306	310	302	308	300	303	336	335	341	355	351	346	39	28	32	19	29	16	346	331	322	323	319	319	331.9	308.1



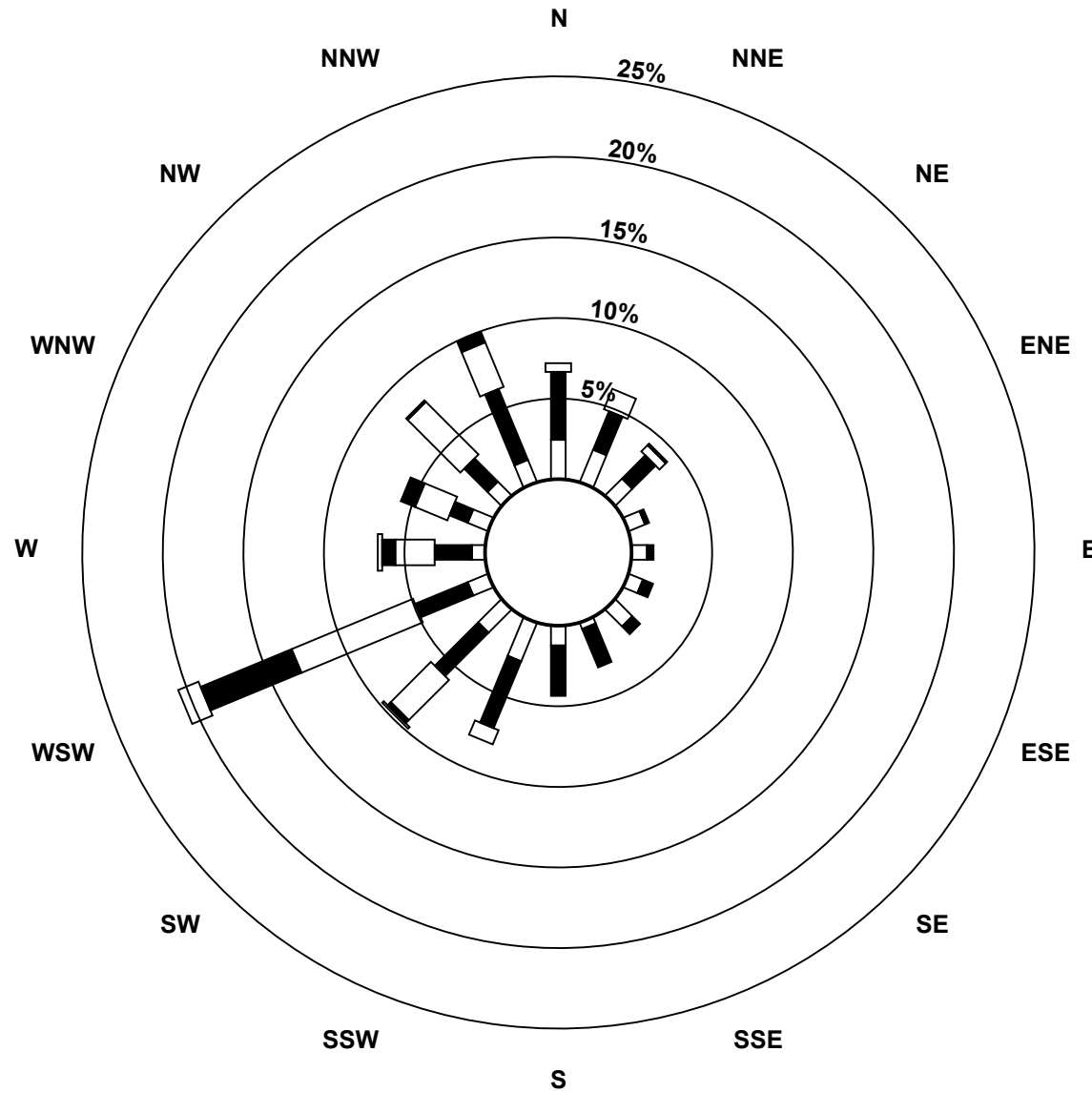
Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Smoky Heights - July 2018

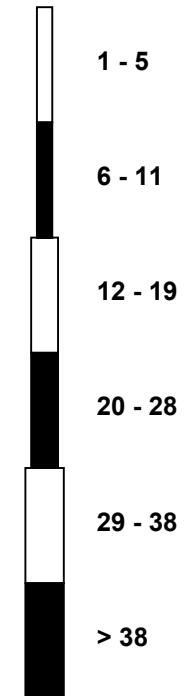
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
23 Spd	12	10	13	14	11	11	11	11	8	9	8	8	8	9	10	6	7	7	7	3	2	2	3	2	7.4	14.3				
Dir	329	329	335	334	341	338	336	344	357	1	359	2	2	338	339	330	349	34	54	298	48	36	306	312	346.0	334.1				
24 Spd	4	2	1	3	3	2	3	3	2	3	4	4	4	4	3	4	3	4	3	3	1	0	1	2	1.0	4.4				
Dir	348	350	335	350	358	17	138	142	177	177	181	209	204	222	192	120	213	141	129	125	191	330	332	263	178.0	347.9				
25 Spd	4	2	2	2	3	3	1	1	2	4	5	7	4	2	0	2	3	5	5	3	3	4	4	4	1.1	6.8				
Dir	243	257	243	325	341	346	27	40	130	136	130	116	122	178	141	61	45	92	98	82	11	351	342	345	72.8	116.1				
26 Spd	2	1	4	2	1	3	2	4	7	10	10	11	13	14	13	11	9	8	7	6	6	5	7	6	5.4	14.3				
Dir	343	2	282	270	213	211	74	150	161	146	172	196	225	232	228	203	203	188	200	175	180	215	245	251	205.0	232.1				
27 Spd	5	5	7	6	7	6	7	9	8	8	8	9	9	8	9	7	6	6	2	2	0	2	4	6	5.2	9.3				
Dir	203	224	213	199	205	188	193	184	166	166	166	162	198	210	189	199	207	231	195	108	275	295	285	278	196.7	184.2				
28 Spd	4	4	3	2	5	4	7	8	8	8	7	9	8	11	9	9	7	5	5	5	4	5	7	7	5.3	10.6				
Dir	270	250	223	218	225	194	210	175	175	161	164	163	175	187	207	200	217	195	181	168	225	253	270	270	201.0	187.1				
29 Spd	5	5	9	8	7	4	3	5	6	5	3	2	9	10	4	4	6	5	1	2	4	3	3	4	1.4	9.7				
Dir	225	202	210	206	198	188	4	29	40	53	91	125	154	180	172	27	46	109	39	108	56	29	12	17	135.1	179.5				
30 Spd	18	8	4	14	3	1	5	7	8	8	9	10	10	10	9	12	7	4	3	6	4	5	6	3	5.8	17.6				
Dir	304	23	283	257	257	103	349	337	359	5	4	7	1	357	359	14	8	336	34	15	318	295	322	360	344.5	304.1				
31 Spd	5	4	7	7	7	7	7	8	5	5	5	5	6	11	8	8	6	6	8	8	7	6	8	8	5.3	10.6				
Dir	10	9	355	6	7	6	11	29	43	87	91	57	75	89	103	116	96	50	30	39	18	349	17	2	39.5	88.6				
Spd	6.4	4.8	6.0	6.7	5.6	5.1	5.0	4.9	4.3	4.8	6.9	7.3	7.4	8.4	8.4	8.8	8.3	7.3	5.9	5.2	4.5	4.7	5.3	5.9	Diurnal Average					
Dir	278.4	273.0	270.2	274.1	273.2	273.0	270.2	259.8	255.3	255.2	258.0	265.1	263.5	266.2	270.4	271.2	267.2	266.3	266.4	272.1	273.2	280.3	280.5	282.4	Diurnal Maximum					
Spd	19.1	20.9	24.3	26.2	25.8	27.9	30.0	27.6	23.1	29.0	26.8	27.7	29.6	37.4	35.6	37.9	34.7	29.2	28.9	24.1	22.2	18.6	17.8	16.9	Diurnal Maximum					
Dir	267.0	253.6	251.9	253.3	253.9	256.4	256.6	251.0	326.8	252.8	261.1	289.4	251.2	257.2	253.9	256.5	261.4	265.2	247.7	253.0	248.0	262.2	262.5	26.1						
Maximum Speed Value: 38 km/h on Jul 1 16:00																					Minimum Speed Value: 0 km/h on Jul 18 00:00				Hours in Service:				744	
Maximum Daily Speed Average: 22.9 km/h on Jul 11																					Minimum Daily Speed Average: 1.0 km/h on Jul 24				Hours of Data:				744	
Maximum Diurnal Speed Average: 8.8 km/h at hour 16																					Minimum Diurnal Speed Average: 4.3 km/h at hour 9				Hours of Missing Data:				0	
Monthly Average Velocity: 6.12 km/h 269.27 deg																					Speed Percentiles: P ₁ = 1.0 P ₁₀ = 3.3 Q ₁ = 5.8 Median = 9.5 Q ₃ = 14.6 P ₉₀ = 19.8 P ₉₉ = 29.6				Percent Operational Time:				100.0	
All monthly, daily, and diurnal averages have been calculated using vector methods																														
Frequency Distribution																														
Speed Range (km/h)																														
Direction	0 to 5		5 to 11		11 to 19		19 to 28		28 to 38		> 38		Total																	
North	32		58		17		1		0		0		108																	
NorthEast	27		24		11		1		0		0		63																	
East	12		8		0		0		0		0		20																	
SouthEast	14		18		0		0		0		0		32																	
South	17		51		6		0		0		0		74																	
SouthWest	27		53		54		26		1		0		161																	
West	13		38		61		39		12		0		163																	
NorthWest	17		37		61		8		0		0		123																	
Total	159		287		210		75		13		0		744																	

Wind Rose

Wind Speed (WS) (km/h)
Smoky Heights - July 2018



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Smoky Heights - July 2018

Maximum Speed: 38 km/h on Jul 1 16:00																				Maximum Daily Speed Average: 23.3 km/h on Jul 11										Hours in Service: 744	
Minimum Speed: 1 km/h on Jul 24 22:00																				Minimum Daily Speed Average: 3.4 km/h on Jul 24										Hours of Data: 744	
Maximum Diurnal Speed Average: 14.6 km/h at hour 14																				Minimum Diurnal Speed Average: 7.6 km/h at hour 22										Hours of Missing Data: 0	
Monthly Average Speed: 11.19 km/h																				Percentiles: P ₁ = 1.8 P ₁₀ = 4.0 Q ₁ = 6.2 Median = 9.8 Q ₃ = 14.9 P ₉₀ = 20.1 P ₉₉ = 29.9										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Jul	15	18	18	20	20	19	16	15	19	24	23	27	30	38	36	38	35	29	26	18	18	19	18	15	22.9	38.1					
2-Jul	19	16	16	16	15	18	20	21	23	22	21	17	18	18	14	18	15	15	13	12	10	8	9	15	16.2	23.4					
3-Jul	17	15	17	19	18	17	14	16	16	14	13	13	13	13	11	12	10	9	10	13	11	10	9	5	13.0	19.1					
4-Jul	7	10	9	10	10	10	6	9	7	4	3	4	5	6	6	6	6	4	4	6	6	4	3	4	6.3	10.2					
5-Jul	2	5	7	2	2	4	5	7	10	10	11	9	7	8	9	8	9	8	8	5	6	5	4	5	6.5	10.6					
6-Jul	4	4	5	9	4	6	7	10	13	10	16	19	16	17	20	28	26	23	16	17	19	15	14	15	13.9	28.0					
7-Jul	13	16	17	15	11	13	15	20	21	17	16	18	17	11	11	12	13	12	13	14	14	10	11	7	14.0	21.0					
8-Jul	9	11	11	9	8	8	9	12	14	14	20	20	17	16	21	18	18	16	12	11	9	8	12	13.4	21.3						
9-Jul	13	7	9	7	7	8	11	11	10	16	24	26	24	20	21	21	23	18	13	8	6	5	6	8	13.4	25.6					
10-Jul	5	7	10	11	11	8	9	11	11	10	15	15	17	24	25	23	20	20	17	13	9	10	10	15	13.6	25.1					
11-Jul	19	21	24	26	26	28	30	28	22	29	26	26	26	25	25	27	28	25	14	25	22	13	13	12	23.3	30.0					
12-Jul	13	14	14	16	15	14	17	17	19	17	24	21	20	18	19	18	23	20	15	12	5	5	7	9	15.5	23.7					
13-Jul	8	10	10	13	13	13	12	8	6	9	12	18	18	14	11	20	17	16	20	17	17	11	10	11	13.1	20.1					
14-Jul	13	10	16	16	20	18	19	21	19	23	22	28	26	25	20	19	19	18	12	7	4	4	6	7	16.4	28.0					
15-Jul	5	3	4	8	8	9	9	12	12	13	15	19	23	20	18	12	9	7	6	6	5	9	9	7	10.4	23.1					
16-Jul	9	9	8	12	10	9	11	13	14	20	27	26	28	29	30	31	32	27	29	22	11	5	8	12	17.9	32.2					
17-Jul	10	9	9	11	10	6	8	9	12	13	17	11	13	16	15	11	7	7	9	8	8	3	2	2	9.3	17.3					
18-Jul	2	6	7	14	6	5	8	6	6	11	14	16	18	19	17	18	17	18	19	14	12	9	12	12	11.9	19.0					
19-Jul	10	5	4	4	8	10	10	10	10	9	7	10	10	11	12	13	14	11	11	8	10	14	14	17	10.1	17.1					
20-Jul	13	8	6	10	7	4	4	3	5	7	3	5	4	6	8	8	7	7	7	11	10	9	8	4	6.8	12.7					
21-Jul	13	21	15	12	13	13	14	13	12	12	12	10	8	4	11	14	13	11	10	13	13	11	11	11	12.0	20.7					
22-Jul	15	16	9	18	14	9	11	10	9	8	8	7	6	9	11	7	7	5	6	10	11	14	14	14	10.4	17.9					
23-Jul	12	11	14	14	12	11	11	11	8	9	9	9	9	10	10	6	8	7	7	4	3	3	4	3	8.5	14.4					
24-Jul	5	3	2	4	3	2	3	3	3	4	5	5	5	5	5	6	4	4	4	4	1	1	2	3	3.4	6.0					
25-Jul	4	2	2	2	3	3	2	2	3	4	6	7	5	5	3	4	4	5	5	3	3	4	4	4	3.7	7.1					
26-Jul	3	2	4	3	2	3	4	5	7	11	10	12	13	15	13	11	9	9	7	6	6	5	7	6	7.2	14.9					
27-Jul	5	5	7	6	7	6	8	9	8	9	9	9	9	9	9	8	7	6	2	3	1	2	4	6	6.4	9.3					
28-Jul	5	5	4	3	6	5	8	8	8	8	8	9	9	11	9	10	8	6	5	5	4	5	7	7	6.7	10.9					
29-Jul	6	6	9	8	7	4	5	5	6	5	4	4	9	10	5	5	6	6	2	3	4	4	4	4	5.4	10.0					
30-Jul	19	10	7	14	5	3	6	7	8	9	9	11	11	11	10	13	7	5	4	7	5	5	6	4	8.1	19.2					
31-Jul	5	4	7	7	7	7	7	8	5	5	6	6	7	11	9	9	7	7	8	8	7	7	8	8	7.1	11.1					
																									Diurnal Average						
																									Diurnal Maximum						

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

Hourly Standard Deviations

Wind Direction (WD) - deg

Smoky Heights - July 2018

Maximum Value: 95.9 deg on Jul 25 15:00																		Hours in Service: 744							
Minimum Value: 1.9 deg on Jul 11 01:00																		Hours of Data: 744							
Percentiles: P ₁ = 2.7 P ₁₀ = 5.9 Q ₁ = 8.7 Median = 12.8 Q ₃ = 22.0 P ₉₀ = 41.1 P ₉₉ = 82.2																		Hours of Missing Data: 0							
																		Hours of Calibration: 0							
																		Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Maximum
1-Jul	6	3	5	7	4	4	3	5	7	5	5	4	5	6	5	6	5	6	6	5	6	5	7	8	8.1
2-Jul	5	11	9	8	7	7	8	8	8	8	7	10	10	10	14	11	13	9	9	17	12	10	13	5	17.1
3-Jul	6	6	6	6	6	6	7	7	9	7	10	10	12	11	9	10	13	11	10	8	7	6	46	31	46.4
4-Jul	8	7	7	7	9	6	13	14	22	47	85	49	46	59	58	46	72	70	49	26	6	17	17	18	85.1
5-Jul	25	22	7	17	75	14	30	19	13	14	16	20	48	31	21	23	19	16	16	10	14	19	18	12	74.6
6-Jul	26	17	79	75	53	41	19	27	16	11	16	8	16	13	16	20	10	7	8	6	5	8	10	14	78.5
7-Jul	9	8	6	13	16	11	10	5	13	10	9	11	9	13	13	14	13	13	10	4	4	10	6	15	15.7
8-Jul	11	7	10	14	13	9	11	10	23	23	9	12	17	15	12	15	15	10	11	6	5	17	8	3	23.0
9-Jul	9	12	10	16	6	7	5	9	10	13	11	9	9	11	10	10	10	8	6	11	18	9	34	14	34.2
10-Jul	30	13	9	9	30	21	24	24	30	12	9	12	12	10	11	12	11	8	7	3	6	4	11	2	30.4
11-Jul	2	2	2	2	2	2	3	5	9	7	9	7	8	11	14	8	9	4	11	13	5	5	4	7	14.1
12-Jul	3	4	3	3	3	7	3	5	5	8	10	10	11	14	12	17	10	11	9	10	15	12	7	12	17.5
13-Jul	13	16	6	6	9	10	5	23	56	16	24	13	12	11	14	9	17	13	9	12	8	9	7	9	56.3
14-Jul	11	9	5	7	8	6	4	6	16	10	12	9	10	15	12	14	11	18	12	11	40	15	9	6	39.7
15-Jul	13	23	11	22	10	5	10	12	11	9	17	12	16	11	16	22	23	15	22	10	18	10	9	11	23.2
16-Jul	19	9	17	6	10	12	13	8	5	7	9	12	10	11	10	9	9	7	6	6	7	30	31	7	31.4
17-Jul	8	18	8	6	11	13	7	8	6	6	11	25	26	9	16	9	21	21	16	19	23	73	69	91	91.5
18-Jul	47	50	26	23	32	55	26	49	25	14	16	16	26	11	19	16	11	10	9	8	6	17	12	8	55.4
19-Jul	40	41	74	50	13	7	12	14	12	19	26	15	19	20	24	13	8	10	9	20	16	20	10	8	74.4
20-Jul	8	13	15	9	14	28	27	25	15	31	64	37	52	28	10	30	11	14	24	14	13	18	42	52	64.1
21-Jul	16	9	9	9	7	8	8	9	12	13	21	14	15	59	36	17	10	13	9	14	6	7	7	12	59.2
22-Jul	5	5	42	15	5	18	25	10	10	23	22	24	35	29	12	14	10	16	11	8	7	8	7	6	42.1
23-Jul	10	16	16	7	7	9	10	9	14	17	23	28	29	30	11	20	24	18	11	59	48	13	32	56	58.7
24-Jul	19	71	78	33	42	46	39	21	39	24	31	24	40	49	55	59	43	35	40	37	52	92	49	76	92.0
25-Jul	12	24	22	43	18	34	83	48	50	36	21	19	47	69	96	74	41	38	8	15	10	14	11	16	95.9
26-Jul	28	38	23	34	56	22	76	51	42	15	18	15	13	17	16	16	19	16	16	9	14	18	6	12	75.6
27-Jul	12	15	21	6	6	7	7	6	10	12	13	19	19	24	18	25	28	17	42	41	93	21	10	8	93.2
28-Jul	21	81	55	33	32	22	18	11	8	13	14	14	22	13	18	16	21	21	21	10	9	12	4	4	81.4
29-Jul	23	19	11	17	10	20	73	17	17	19	35	87	29	13	49	31	25	29	73	51	11	39	60	34	86.8
30-Jul	29	40	73	16	84	76	24	14	18	19	15	22	21	23	24	19	24	31	23	16	38	11	14	21	84.4
31-Jul	10	13	9	9	9	11	9	13	19	34	30	40	30	20	20	30	39	31	10	8	12	29	21	11	40.3
47.3 81.4 78.5 74.9 84.4 76.3 82.8 51.2 56.3 47.1 85.1 86.8 52.1 69.1 95.9 73.7 72.1 70.1 73.1 58.7 93.2 92.0 69.2 91.5																									

PAZA
Beaverlodge Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

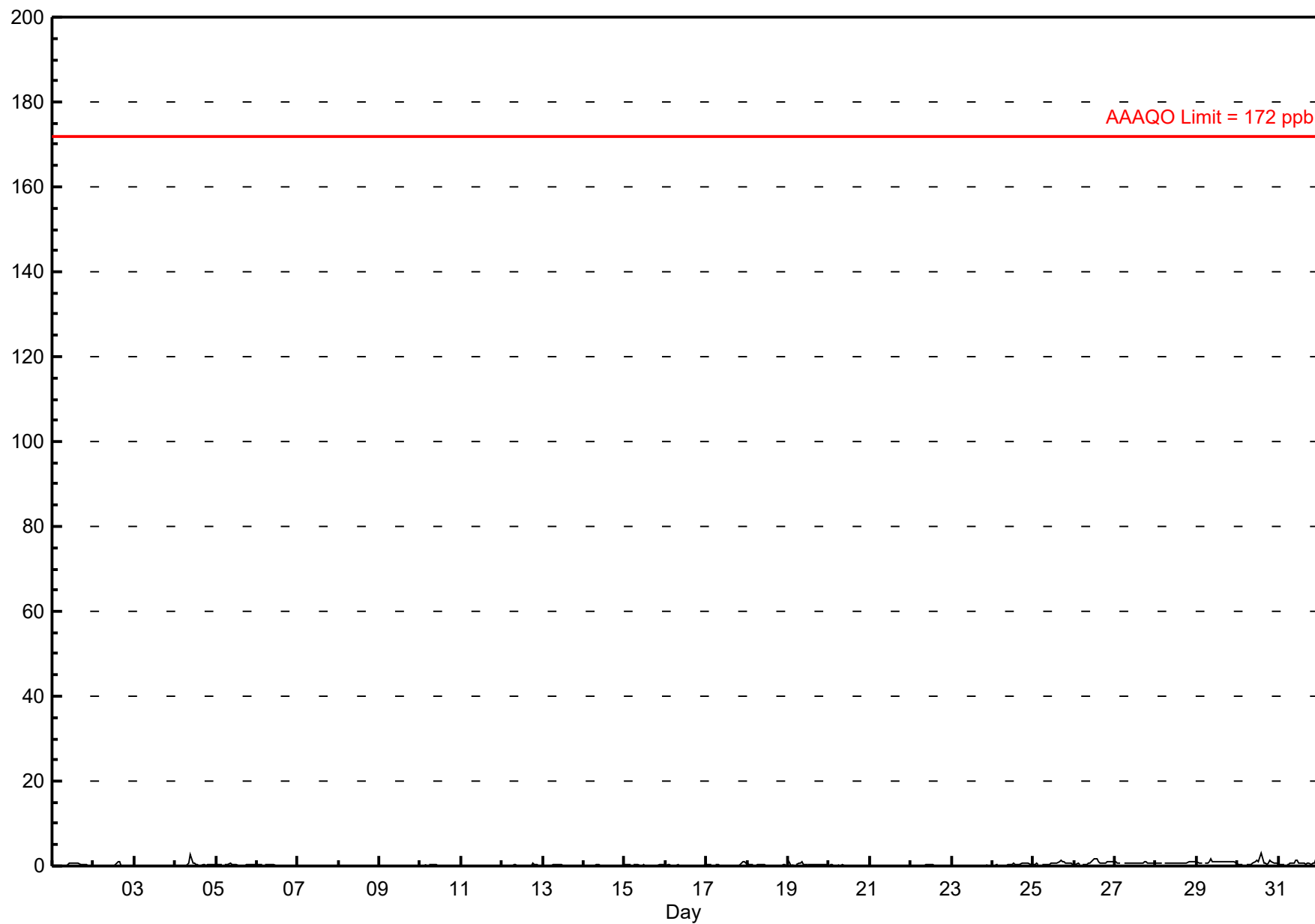
Sulphur Dioxide (SO₂) - ppb

Beaverlodge - July 2018

Number of Exceedences (AAAQO):		1-hr: 0	24-hr: 0	Hours in Service: 744																							
Maximum Value: 2.9 ppb on Jul 30 15:00		Maximum Daily Average: 1.0 ppb on Jul 29																			Hours of Data: 694						
Minimum Value: 0 ppb on Jul 8 04:00		Minimum Daily Average: 0.0 ppb on Jul 7																			Hours of Missing Data: 50						
Maximum Diurnal Average: 0.4 ppb at hour 15		Minimum Diurnal Average: 0.2 ppb at hour 4																			Hours of Calibration: 37						
Monthly Average: 0.31 ppb		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.5 P ₉₀ = 0.8 P ₉₉ = 1.5																			Percent Operational Time: 98.3						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Jul	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.3	0.8	
2-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0.2	1.1	
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	0.1	0.1	
4-Jul	0	0	0	0	A	0	0	0	1	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.7	
5-Jul	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5	
6-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	
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	0.1	
8-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	
9-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	
10-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	
11-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	
12-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.1	0.5	
13-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	
14-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	
15-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	0.5	
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	0.4	
17-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.2	0.9	
18-Jul	1	0	0	0	A	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0.2	0.6	
19-Jul	1	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.1	
20-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	
21-Jul	0	0	0	0	A	R	P	P	P	P	R	0	0	0	0	0	0	0	0	0	0	0	0	0	--	0.1	
22-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	
23-Jul	0	0	0	0	A	0	0	0	0	0	0	P	P	P	P	P	P	P	P	P	0	0	0	0	--	0.2	
24-Jul	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	0	1	1	1	1	1	1	1	0	0.4	0.6	
25-Jul	0	0	1	1	A	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0.7	1.4	
26-Jul	0	0	1	0	A	0	0	0	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	0.8	1.8	
27-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	0.7	0.9	
28-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	0.7	1.1	
29-Jul	1	1	1	1	A	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.8	
30-Jul	0	0	0	0	A	0	0	0	0	1	1	2	1	2	3	1	1	0	1	1	1	1	1	1	0.8	2.9	
31-Jul	0	0	0	0	A	0	0	1	1	1	1	1	1	1	1	1	0	1	1	0	1	1	2	2	0.7	1.7	
0.3		0.2	0.2	0.2	--	0.2	0.3	0.3	0.4	0.4	0.4	0.4	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	Diurnal Average	
1.1		0.8	0.7	0.7	--	0.7	0.7	0.9	1.8	2.7	1.5	1.5	1.6	2.0	2.9	1.1	1.4	1.1	1.1	1.3	1.2	1.1	1.5	1.7	0.3	Diurnal Maximum	
C - Calibration		R - Recovery				P - Power Failure				A - Automated Daily Zero Span																	
Alberta Ambient Air Quality Objectives (AAAQO):		1-hr 172 ppb				24-hr 48 ppb				30-day 11 ppb																	

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - July 2018



Hourly Maximums

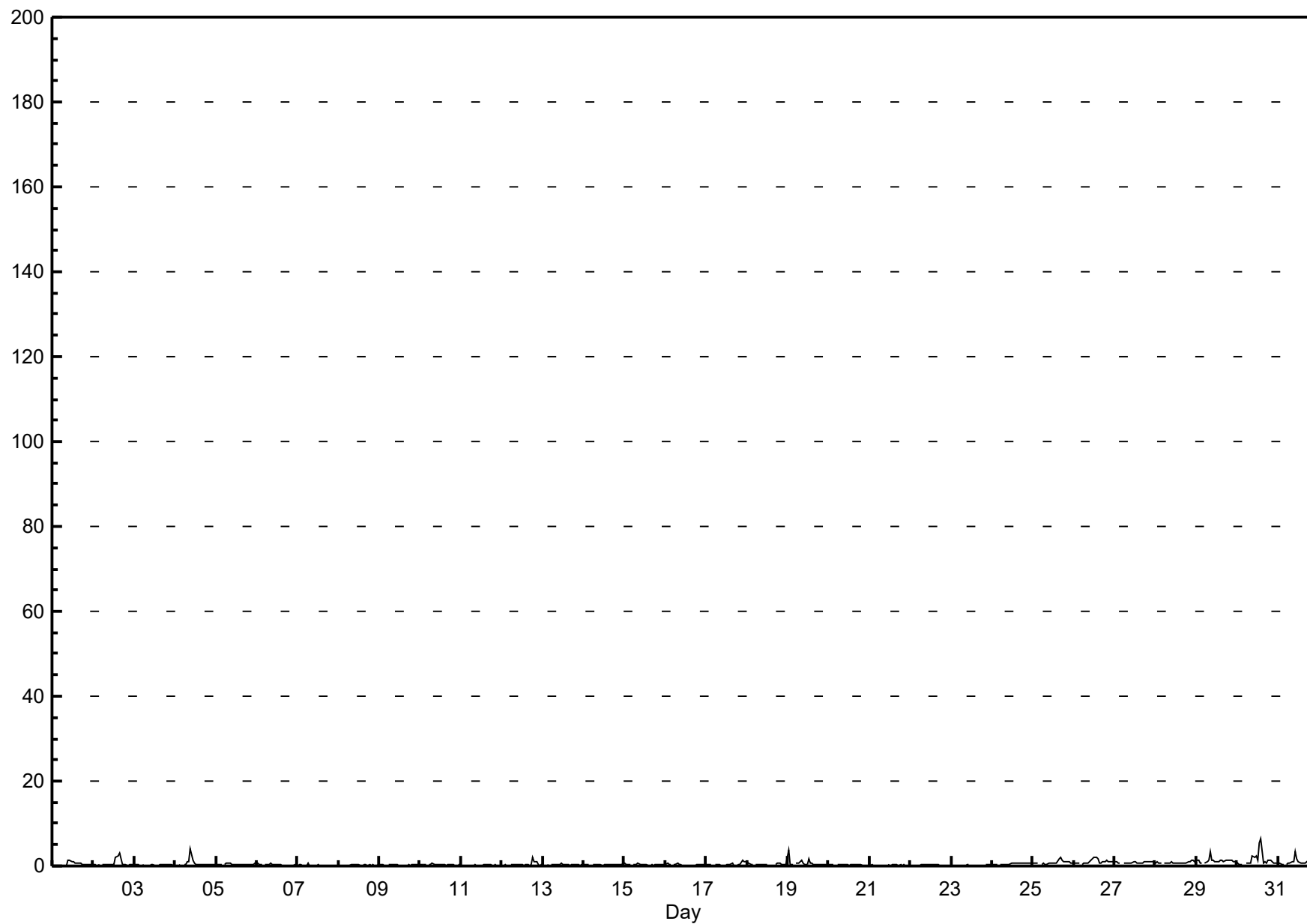
Sulphur Dioxide (SO₂) - ppb

Beaverlodge - July 2018

Maximum Value: 6.3 ppb on Jul 30 15:00																			Maximum Daily Average: 1.4 ppb on Jul 30										Hours in Service: 744	
Minimum Value: 0 ppb on Jul 1 01:00																			Minimum Daily Average: 0.2 ppb on Jul 11										Hours of Data: 694	
Maximum Diurnal Average: 0.7 ppb at hour 15																			Minimum Diurnal Average: 0.3 ppb at hour 4										Hours of Missing Data: 50	
Monthly Average: 0.48 ppb																			Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.3 Q ₃ = 0.6 P ₉₀ = 1.0 P ₉₉ = 3.2										Hours of Calibration: 37	
																													Percent Operational Time: 98.3	
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	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.4	1.3				
2-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	2	3	3	2	0	0	0	0	0	0	0	0.6	3.0				
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	0.2	0.3				
4-Jul	0	0	0	0	A	0	0	1	1	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.6	4.1				
5-Jul	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	0.7				
6-Jul	1	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5				
7-Jul	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6				
8-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				
9-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				
10-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	0.3	0.6				
11-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				
12-Jul	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	2	1	1	0	0	0	0.3	1.9				
13-Jul	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5				
14-Jul	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	0.6				
15-Jul	1	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	0.6				
16-Jul	0	1	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8				
17-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0.4	1.3				
18-Jul	1	1	0	0	A	0	0	0	0	0	0	0	C	C	C	C	0	1	1	0	0	0	0	0	0.4	1.0				
19-Jul	4	0	0	0	A	1	1	1	1	1	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0.7	3.7				
20-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				
21-Jul	0	0	0	0	A	R	P	P	P	P	R	0	0	0	0	0	0	0	0	0	0	0	0	0	--	0.2				
22-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				
23-Jul	0	0	0	0	A	0	0	0	0	0	0	P	P	P	P	P	P	P	P	P	0	0	0	0	--	0.3				
24-Jul	0	0	0	0	A	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.5	0.8				
25-Jul	1	1	1	1	A	0	1	0	0	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	0.8	2.2				
26-Jul	1	1	1	1	A	0	1	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1.0	2.0				
27-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	1.2				
28-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	1.2				
29-Jul	1	1	1	1	A	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	3.5				
30-Jul	1	0	0	0	A	1	1	1	1	2	2	2	1	5	6	1	1	1	1	1	1	1	1	1	1.4	6.3				
31-Jul	1	1	0	0	A	0	1	1	1	1	3	2	1	1	1	1	1	1	1	1	1	1	3	3	1.1	3.4				
																									Diurnal Average					
																									Diurnal Maximum					
C - Calibration					R - Recovery					P - Power Failure					A - Automated Daily Zero Span															

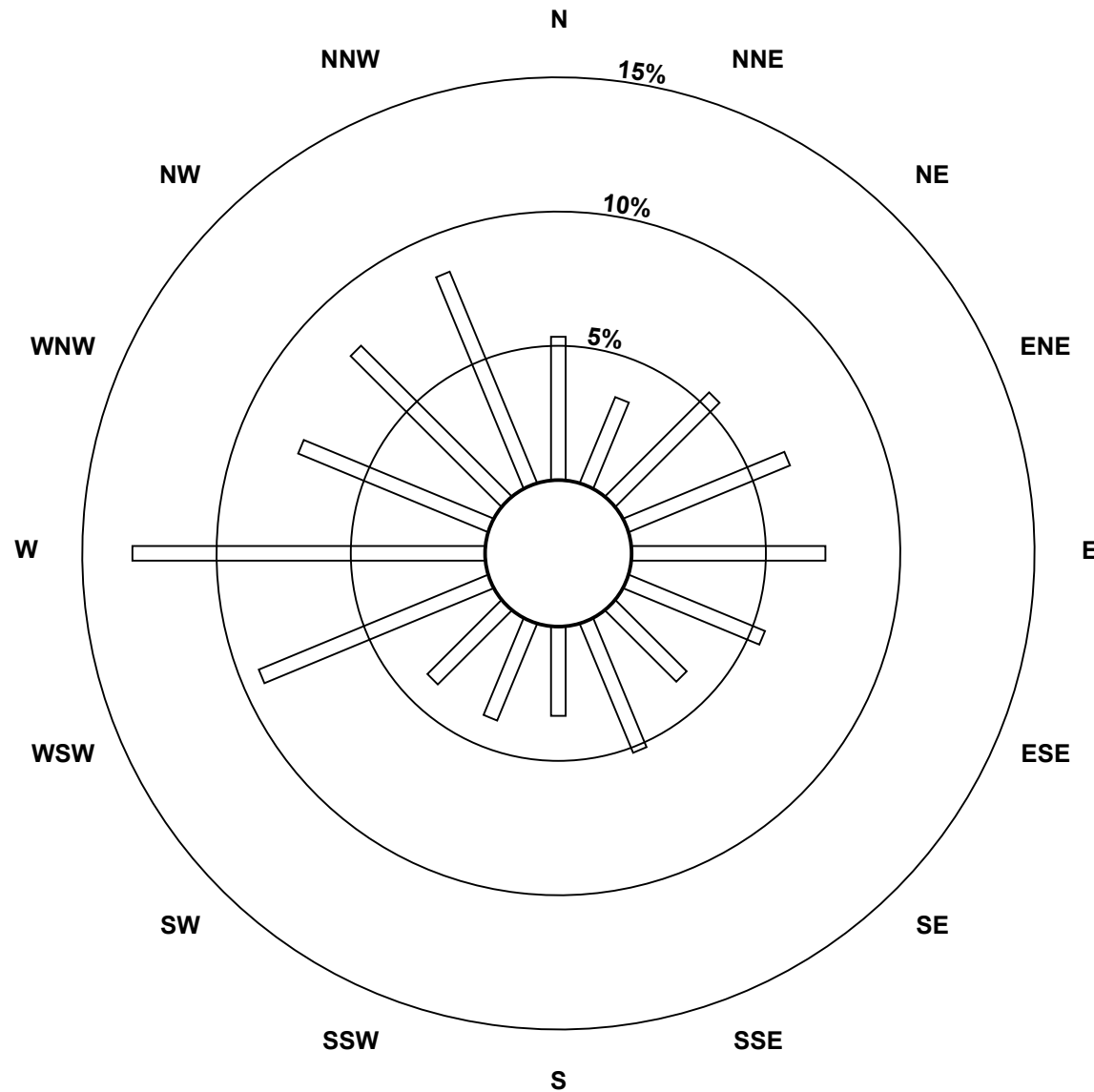
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - July 2018

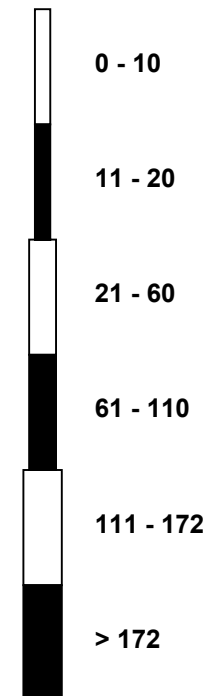


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - July 2018

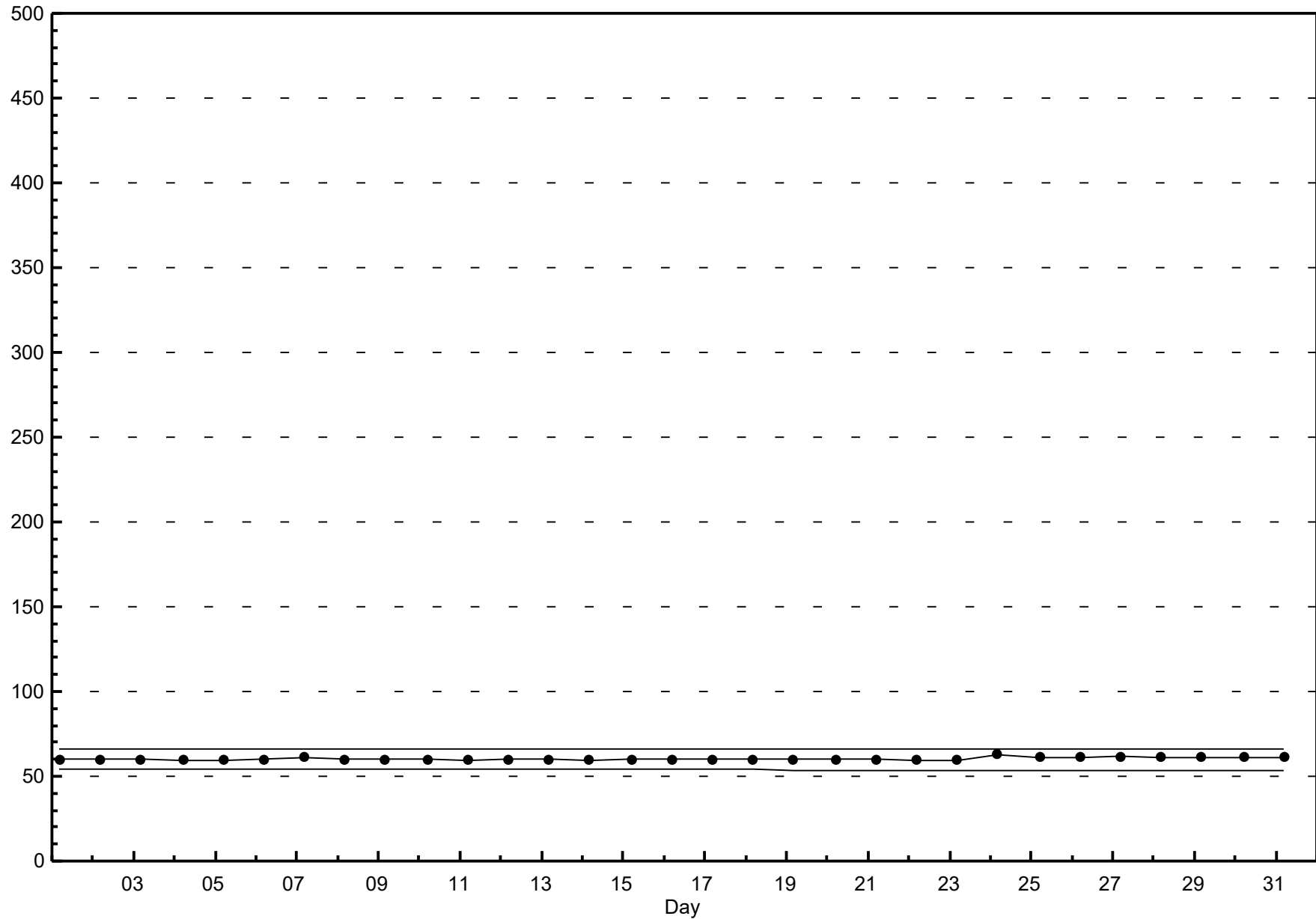


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Beaverlodge - July 2018



Hourly Averages

Nitrogen Dioxide (NO₂) - ppb

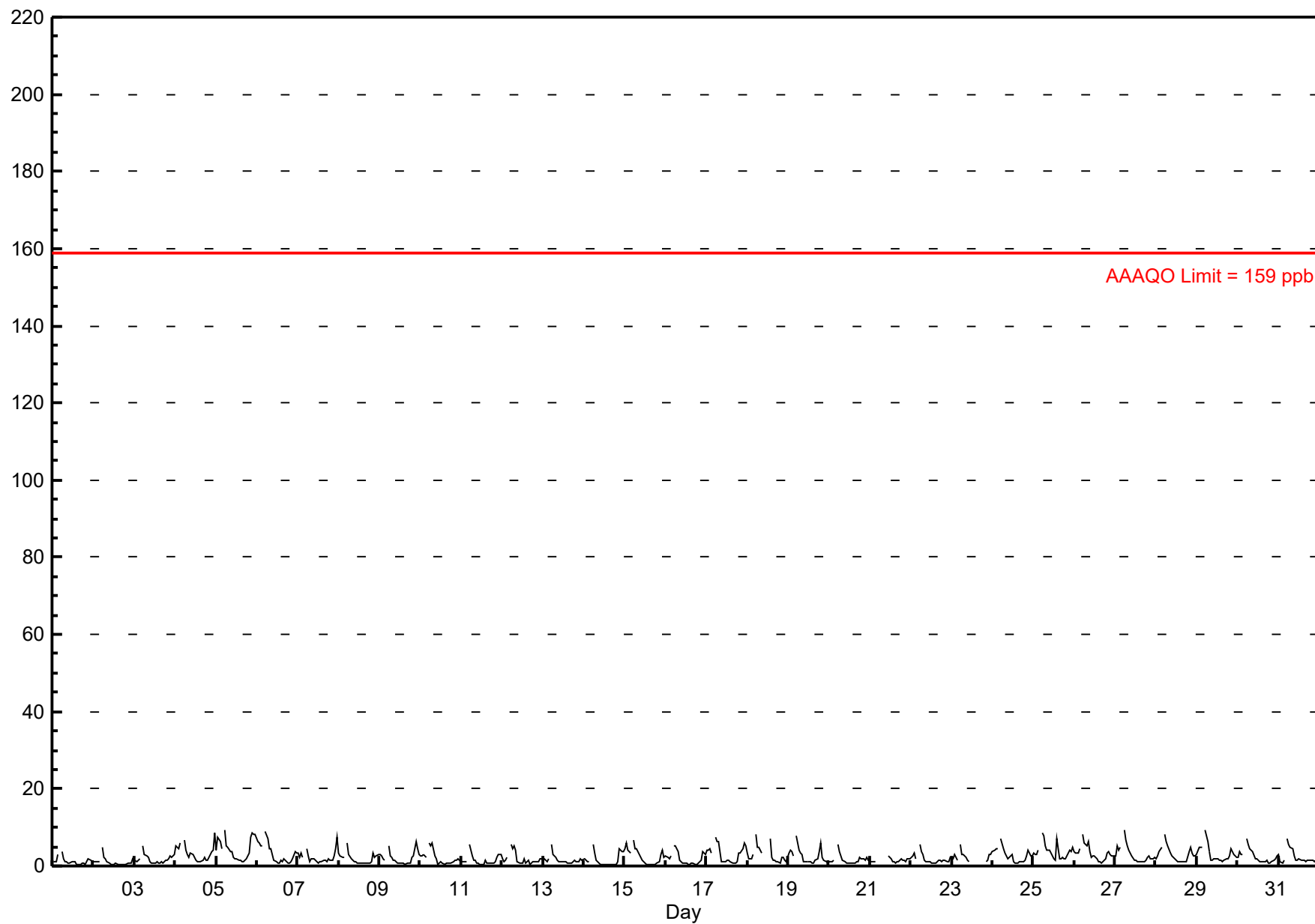
Beaverlodge - July 2018

Number of Exceedences (AAAQO):		1-hr: 0	24-hr: 0	Hours in Service: 744																						
Maximum Value: 9.4 ppb on Jul 5 06:00		Maximum Daily Average: 4.4 ppb on Jul 5																		Hours of Data: 694						
Minimum Value: 0 ppb on Jul 2 17:00		Minimum Daily Average: 1.0 ppb on Jul 2																		Hours of Missing Data: 50						
Maximum Diurnal Average: 6.7 ppb at hour 6		Minimum Diurnal Average: 0.9 ppb at hour 16																		Hours of Calibration: 37						
Monthly Average: 2.34 ppb		Percentiles: P ₁ = 0.4 P ₁₀ = 0.7 Q ₁ = 1.0 Median = 1.7 Q ₃ = 3.2 P ₉₀ = 5.0 P ₉₉ = 8.4																		Percent Operational Time: 98.3						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jul	1	1	1	3	A	4	2	1	1	1	1	1	1	0	0	0	1	1	1	1	2	1	1	1.2	3.9	
2-Jul	1	1	1	1	A	5	2	2	1	1	1	0	0	1	0	0	0	0	0	0	1	1	1	2	1.0	4.9
3-Jul	2	1	2	2	A	5	3	3	2	1	1	1	1	1	1	1	1	1	1	1	2	3	2	3	1.7	5.1
4-Jul	5	5	4	6	A	7	4	3	2	3	3	2	1	1	1	1	2	1	2	2	4	4	9	3.3	8.6	
5-Jul	4	8	6	4	A	9	5	5	4	4	2	2	2	1	1	1	1	2	3	7	8	8	8	4.4	9.4	
6-Jul	6	6	5	5	A	9	7	4	5	3	2	1	1	2	1	2	1	1	1	1	2	4	3	3.1	9.1	
7-Jul	4	2	3	2	A	5	2	1	2	2	1	1	1	1	1	1	1	2	1	1	2	4	8	2.3	7.6	
8-Jul	3	2	2	2	A	6	3	2	2	1	1	1	1	1	1	1	1	1	1	3	2	2	3	1.8	6.0	
9-Jul	3	2	2	1	A	5	2	2	1	1	1	1	1	1	1	1	1	1	2	3	6	4	3	2.0	6.3	
10-Jul	3	2	3	2	A	6	5	6	3	2	0	1	1	1	1	1	1	1	1	2	1	2	1	1.9	6.0	
11-Jul	1	1	1	1	A	5	3	2	1	1	1	1	1	0	2	1	1	1	1	1	2	3	3	1.4	5.4	
12-Jul	2	1	2	2	A	6	5	5	4	1	1	1	1	2	1	2	0	1	1	1	1	2	2	1.9	5.5	
13-Jul	1	2	1	2	A	6	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1.5	5.8	
14-Jul	2	1	1	1	A	6	3	1	1	1	1	0	0	0	0	0	0	0	0	1	1	4	4	1.5	5.7	
15-Jul	4	6	4	3	A	7	4	4	4	2	1	1	1	0	0	0	0	0	0	1	1	3	4	2	2.4	6.7
16-Jul	3	2	2	3	A	5	5	4	2	1	1	1	1	0	1	1	1	0	1	1	1	2	4	3	1.8	5.4
17-Jul	4	4	5	3	A	8	6	6	4	1	1	1	1	2	1	1	1	1	1	3	4	5	6	5	3.2	7.5
18-Jul	3	2	2	3	A	8	5	5	3	C	C	C	C	7	2	2	1	1	1	2	2	1	1	2.8	8.2	
19-Jul	3	4	4	3	A	8	4	4	3	1	1	1	1	1	1	1	2	4	6	2	2	1	1	2.5	7.8	
20-Jul	1	1	1	2	A	6	4	3	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	1.6	5.6	
21-Jul	1	1	1	1	A	R	P	P	P	P	R	3	2	1	1	1	1	2	1	2	1	2	2	--	2.5	
22-Jul	2	3	3	2	A	6	4	3	2	1	1	1	1	1	1	1	2	1	1	1	1	1	2	1.8	5.5	
23-Jul	2	2	3	1	A	5	3	3	2	1	1	P	P	P	P	P	P	P	P	1	2	3	3	--	5.4	
24-Jul	4	4	4	4	A	7	4	3	2	2	2	3	1	1	1	1	1	1	2	3	4	3	2	2.7	6.9	
25-Jul	3	3	3	4	A	9	8	5	4	4	3	2	2	1	7	2	2	2	2	2	3	4	4	5	3.7	8.7
26-Jul	4	3	3	4	A	8	6	5	6	4	2	3	3	2	1	1	1	2	4	4	3	2	3	3.2	8.0	
27-Jul	3	5	4	5	A	9	7	5	4	3	3	1	1	1	1	1	1	1	2	2	2	2	2	2.9	9.3	
28-Jul	2	3	4	5	A	8	6	5	4	3	2	2	2	1	1	1	1	1	4	5	3	2	3	3.0	8.4	
29-Jul	3	5	5	5	A	9	6	4	2	1	2	2	2	1	1	1	2	2	3	5	4	3	2	3.1	9.2	
30-Jul	2	4	3	3	A	7	5	4	4	4	2	2	1	1	1	1	1	1	1	1	2	2	3	2.4	6.9	
31-Jul	3	1	1	2	A	7	6	5	5	3	2	1	2	2	1	1	1	2	1	1	1	1	1	2.3	6.9	
2.8		2.9	2.8	2.9	--	6.7	4.5	3.6	2.7	1.9	1.4	1.3	1.2	1.2	1.2	0.9	1.0	1.1	1.3	1.7	2.2	2.6	2.8	3.0	Diurnal Average	
6.2		7.6	6.4	6.1	--	9.4	7.8	6.3	6.2	4.0	3.4	2.8	2.6	7.1	7.1	1.7	1.8	2.2	3.8	5.9	7.5	8.5	8.3	8.6	Diurnal Maximum	
C - Calibration R - Recovery P - Power Failure 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 2018



Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb

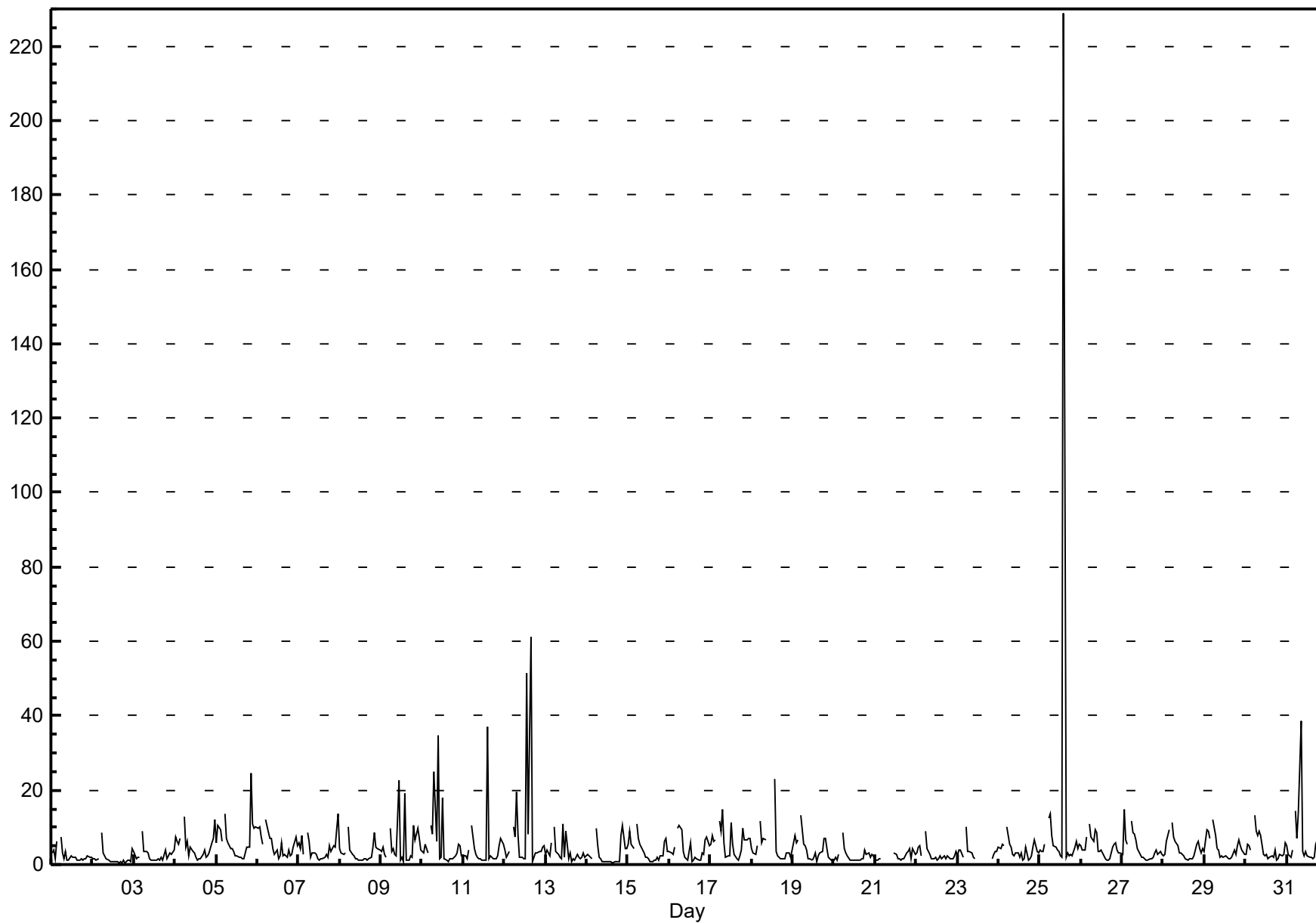
Beaverlodge - July 2018

Maximum Value: 228.7 ppb on Jul 25 15:00																								Hours in Service: 744		
Maximum Daily Average: 14.5 ppb on Jul 25																								Hours of Data: 694		
Minimum Value: 0 ppb on Jul 2 18:00																								Hours of Missing Data: 50		
Maximum Diurnal Average: 11.3 ppb at hour 15																								Hours of Calibration: 37		
Monthly Average: 4.60 ppb																								Percent Operational Time: 98.3		
Percentiles: P ₁ = 0.7 P ₁₀ = 1.3 Q ₁ = 1.7 Median = 2.9 Q ₃ = 5.2 P ₉₀ = 8.8 P ₉₉ = 24.5																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jul	3	4	2	6	A	7	3	2	4	1	1	2	2	2	1	1	2	1	2	1	2	2	2	2	2.4	7.4
2-Jul	2	2	1	1	A	9	3	2	1	1	1	1	1	1	1	1	0	1	1	1	1	1	4	1.6	8.8	
3-Jul	3	1	2	2	A	9	4	3	3	1	1	1	1	1	1	2	1	4	2	2	3	3	4	2.5	8.9	
4-Jul	7	6	5	7	A	13	5	6	2	5	3	3	2	1	2	2	3	4	2	3	3	6	7	12	4.8	13.0
5-Jul	6	10	9	6	A	14	7	6	4	4	4	2	2	2	2	2	3	5	5	24	11	10	10	6.5	24.4	
6-Jul	10	10	8	6	A	12	9	7	7	4	3	4	2	2	6	2	3	2	4	2	3	5	7	5	5.3	12.0
7-Jul	6	4	8	3	A	9	6	2	3	3	3	2	1	2	2	2	3	2	5	4	5	5	9	14	4.4	13.8
8-Jul	4	3	3	3	A	10	4	3	2	1	1	1	1	1	2	1	2	2	5	8	5	4	4	4	3.1	10.0
9-Jul	4	5	3	2	A	10	4	4	3	2	22	1	2	1	19	1	1	2	2	11	7	10	7	4	5.5	22.5
10-Jul	3	3	5	3	A	10	8	25	6	35	2	2	18	1	1	1	1	1	2	3	5	5	2	2	6.4	34.8
11-Jul	2	2	2	4	A	10	4	3	2	2	1	1	1	1	37	2	2	1	1	1	2	5	7	5	4.4	37.2
12-Jul	4	2	3	4	A	10	7	19	8	2	2	1	2	52	8	61	1	2	3	3	4	4	5	5	9.2	61.4
13-Jul	3	4	2	6	A	10	3	3	2	2	11	2	9	2	3	1	2	1	3	2	2	2	3	2	3.4	10.7
14-Jul	3	3	2	2	A	10	5	2	1	1	1	1	1	1	1	1	1	1	1	8	10	4	4	4	2.7	10.4
15-Jul	5	9	5	4	A	11	7	5	5	3	2	2	1	1	1	1	1	2	1	2	2	6	7	3	3.8	10.8
16-Jul	4	3	3	4	A	10	11	9	3	2	1	1	6	1	1	2	1	1	1	3	3	7	7	5	3.9	10.5
17-Jul	6	8	6	7	A	12	9	15	6	2	2	2	11	5	3	1	1	2	4	10	7	7	7	7	6.1	14.9
18-Jul	4	3	3	5	A	12	6	7	7	C	C	C	C	23	3	2	2	2	2	1	3	3	3	2	4.9	22.9
19-Jul	6	8	6	7	A	13	5	5	4	2	1	1	2	3	1	2	3	3	7	7	4	2	1	1	4.1	13.2
20-Jul	1	2	1	3	A	8	4	3	2	1	1	1	1	1	1	1	2	2	4	3	3	2	3	2	2.3	8.4
21-Jul	1	1	1	2	A	R	P	P	P	P	R	3	3	2	2	1	2	2	3	4	4	2	4	3	--	4.5
22-Jul	3	5	5	2	A	9	4	4	3	2	2	2	1	1	2	1	2	2	2	2	2	2	2	3	2.8	9.1
23-Jul	2	4	4	2	A	10	4	4	3	2	1	P	P	P	P	P	P	P	P	P	2	3	4	3	--	10.3
24-Jul	4	4	6	5	A	10	5	5	3	2	3	3	2	3	1	1	5	1	2	2	5	7	3	3	3.8	10.3
25-Jul	4	3	4	5	A	12	14	8	5	5	4	3	2	2	229	2	3	2	3	2	5	6	4	5	14.5	228.7
26-Jul	5	4	4	7	A	11	8	6	10	8	3	3	4	2	2	1	1	1	5	5	6	4	3	3	4.7	10.9
27-Jul	3	15	7	6	A	12	9	8	6	4	4	2	2	1	1	1	1	2	2	3	4	3	4	3	4.4	14.6
28-Jul	2	3	6	9	A	11	7	6	5	3	3	3	2	2	1	2	1	1	2	5	6	4	3	4	4.1	11.2
29-Jul	4	9	9	7	A	12	8	4	4	2	2	2	2	2	2	1	2	4	3	5	7	5	4	3	4.5	12.1
30-Jul	3	6	5	4	A	13	9	8	9	8	3	2	3	2	2	2	2	4	1	2	3	2	3	6	4.3	13.4
31-Jul	5	3	2	4	A	14	7	14	39	4	2	3	2	2	2	2	2	5	7	2	3	2	2	2	5.6	38.6
4.0 4.8 4.2 4.4 -- 10.8 6.3 6.6 5.4 3.9 3.2 2.0 3.1 4.1 11.3 3.5 1.8 2.0 2.8 3.4 4.6 4.5 4.5 4.5																										Diurnal Average
9.8 14.6 9.2 9.2 -- 14.4 13.8 25.0 38.6 34.8 22.5 3.8 17.9 51.6 228.7 61.4 4.7 5.5 7.0 10.6 24.4 10.9 9.7 13.8																										Diurnal Maximum
C - Calibration R - Recovery P - Power Failure A - Automated Daily Zero Span																										

Hourly Maximums

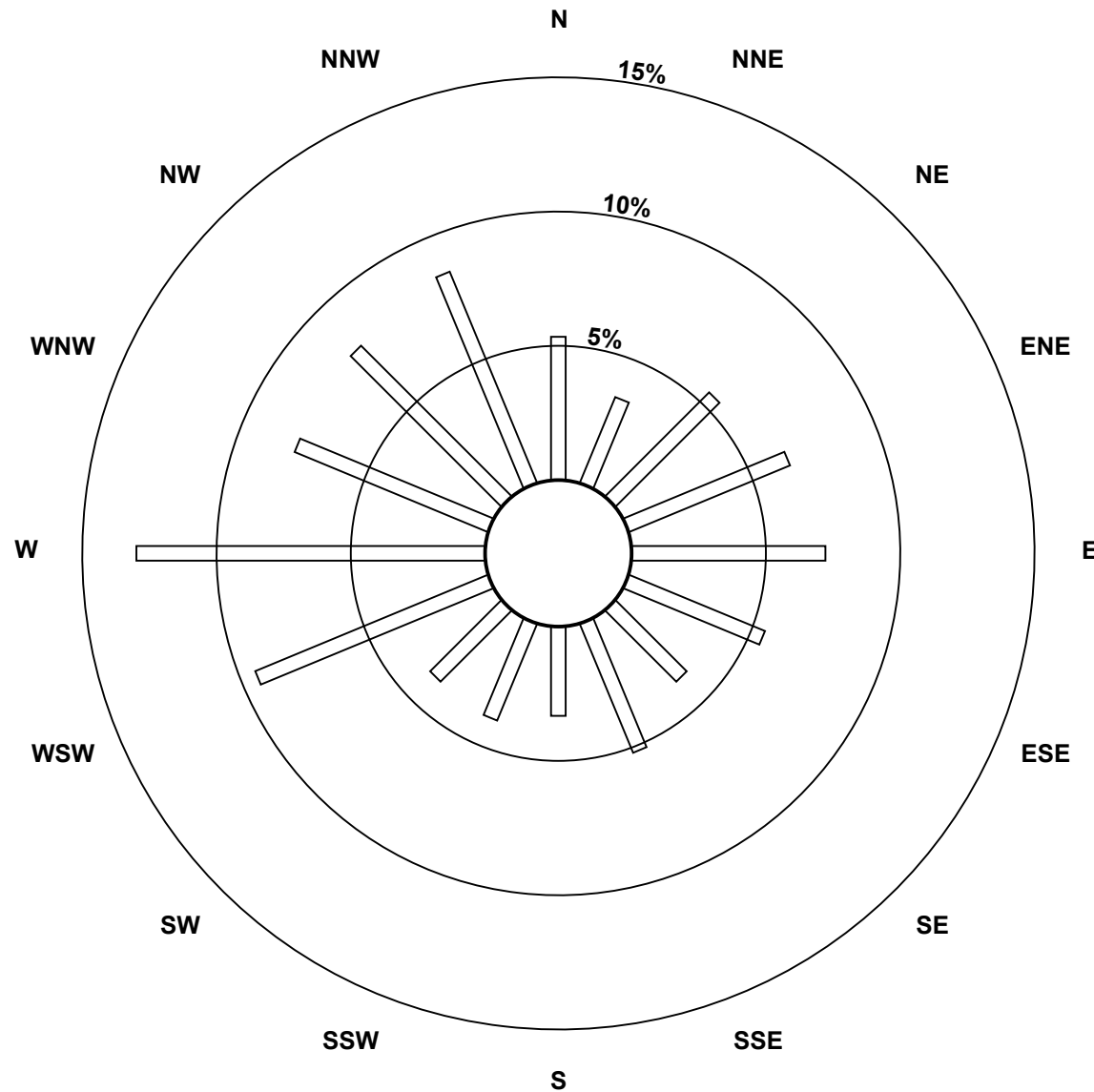
Nitrogen Dioxide (NO₂) - ppb

Beaverlodge - July 2018

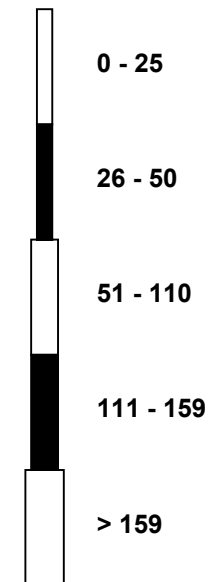


Pollutant Rose

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - July 2018

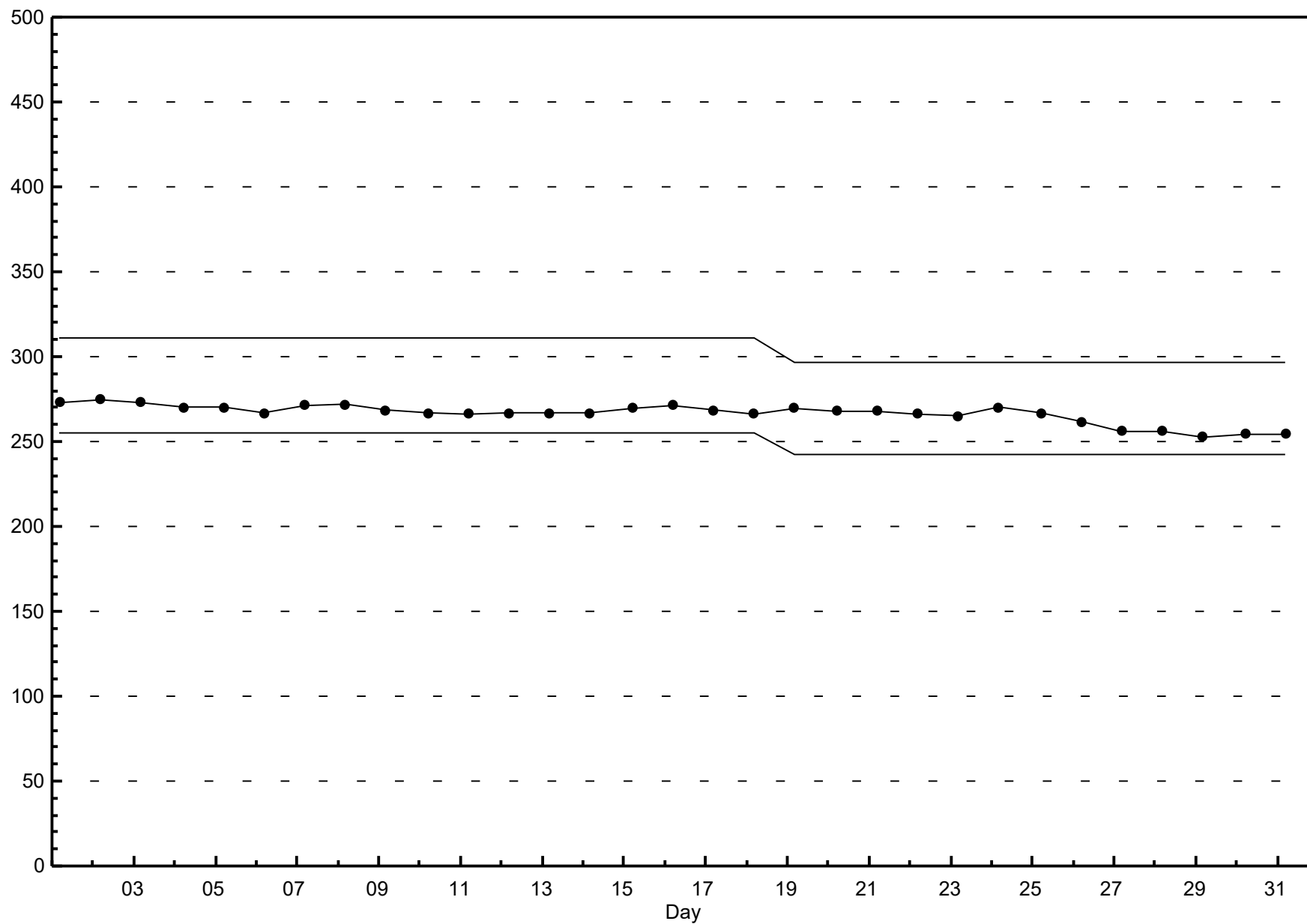


Pollutant Classes (ppb)



Span Responses

Nitrogen Dioxide (NO₂)
Beaverlodge - July 2018



Hourly Averages

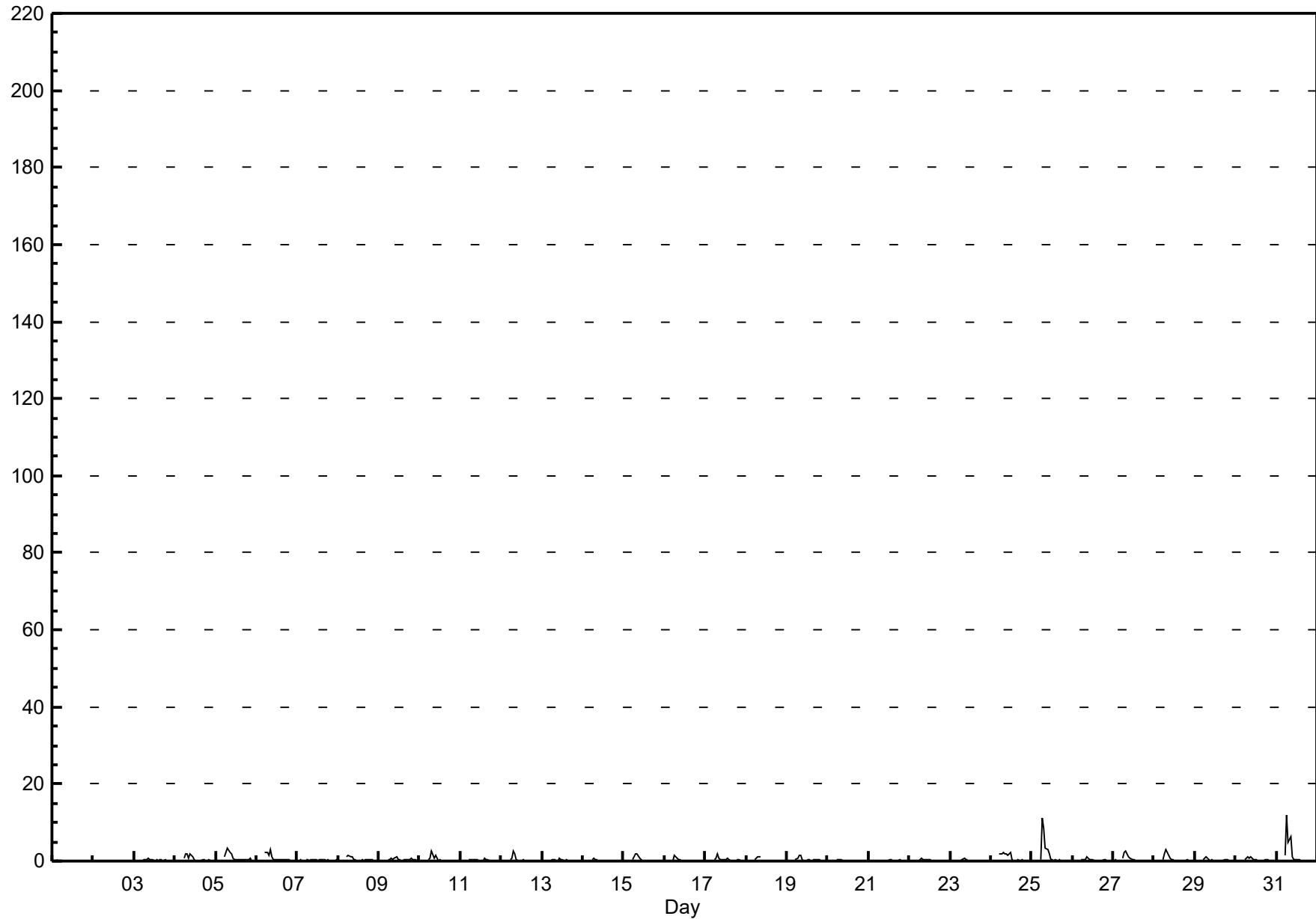
Nitrogen Oxide (NO) - ppb

Beaverlodge - July 2018

Maximum Value: 12.0 ppb on Jul 31 07:00		Maximum Daily Average: 1.3 ppb on Jul 25		Hours in Service: 744																						
Minimum Value: 0 ppb on Jul 13 02:00		Minimum Daily Average: 0.1 ppb on Jul 2		Hours of Data: 694																						
Maximum Diurnal Average: 1.7 ppb at hour 7		Minimum Diurnal Average: 0.1 ppb at hour 23		Hours of Missing Data: 50																						
Monthly Average: 0.36 ppb		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.8 P ₉₉ = 2.9		Hours of Calibration: 37																						
				Percent Operational Time: 98.3																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
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	1	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	A	1	2	2	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.9
5-Jul	0	0	0	0	A	1	2	3	2	2	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0.7	3.3
6-Jul	0	0	0	0	A	2	2	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	2.8
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	0.2	0.3
8-Jul	0	0	0	0	A	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.3
9-Jul	0	0	0	0	A	0	0	1	1	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.3	1.1
10-Jul	0	0	0	0	A	0	1	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.7
11-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.2	0.6
12-Jul	0	0	0	0	A	0	1	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.6
13-Jul	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8
14-Jul	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.9
15-Jul	0	0	0	0	A	0	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.0
16-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	1.4
17-Jul	0	0	0	0	A	0	1	2	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.3	2.0
18-Jul	0	0	0	0	A	1	1	1	1	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1
19-Jul	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.4
20-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
21-Jul	0	0	0	0	A	R	P	P	P	P	R	0	0	0	0	0	0	0	0	0	0	0	0	0	--	0.2
22-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	0.2	0.7
23-Jul	0	0	0	0	A	0	0	0	1	1	1	P	P	P	P	P	P	P	P	P	0	0	0	0	--	0.7
24-Jul	0	0	0	0	A	2	2	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0.7	2.3
25-Jul	0	0	0	0	A	1	11	9	3	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1.3	11.3
26-Jul	0	0	0	0	A	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1
27-Jul	0	0	0	0	A	1	2	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	2.4
28-Jul	0	0	0	0	A	0	2	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.8
29-Jul	0	0	0	0	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.0
30-Jul	0	0	0	0	A	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.1
31-Jul	0	0	0	0	A	1	12	5	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.2	12.0
		0.1	0.1	0.1	0.1	--	0.5	1.7	1.6	1.2	0.7	0.5	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	Diurnal Average
		0.1	0.4	0.3	0.2	--	2.4	12.0	8.7	6.3	2.9	1.8	2.3	0.5	0.6	0.6	0.2	0.5	0.4	0.3	0.6	0.8	0.2	0.2	0.3	Diurnal Maximum
C - Calibration		R - Recovery				P - Power Failure				A - Automated Daily Zero Span																

Hourly Averages

Nitrogen Oxide (NO) - ppb
Beaverlodge - July 2018



Hourly Maximums

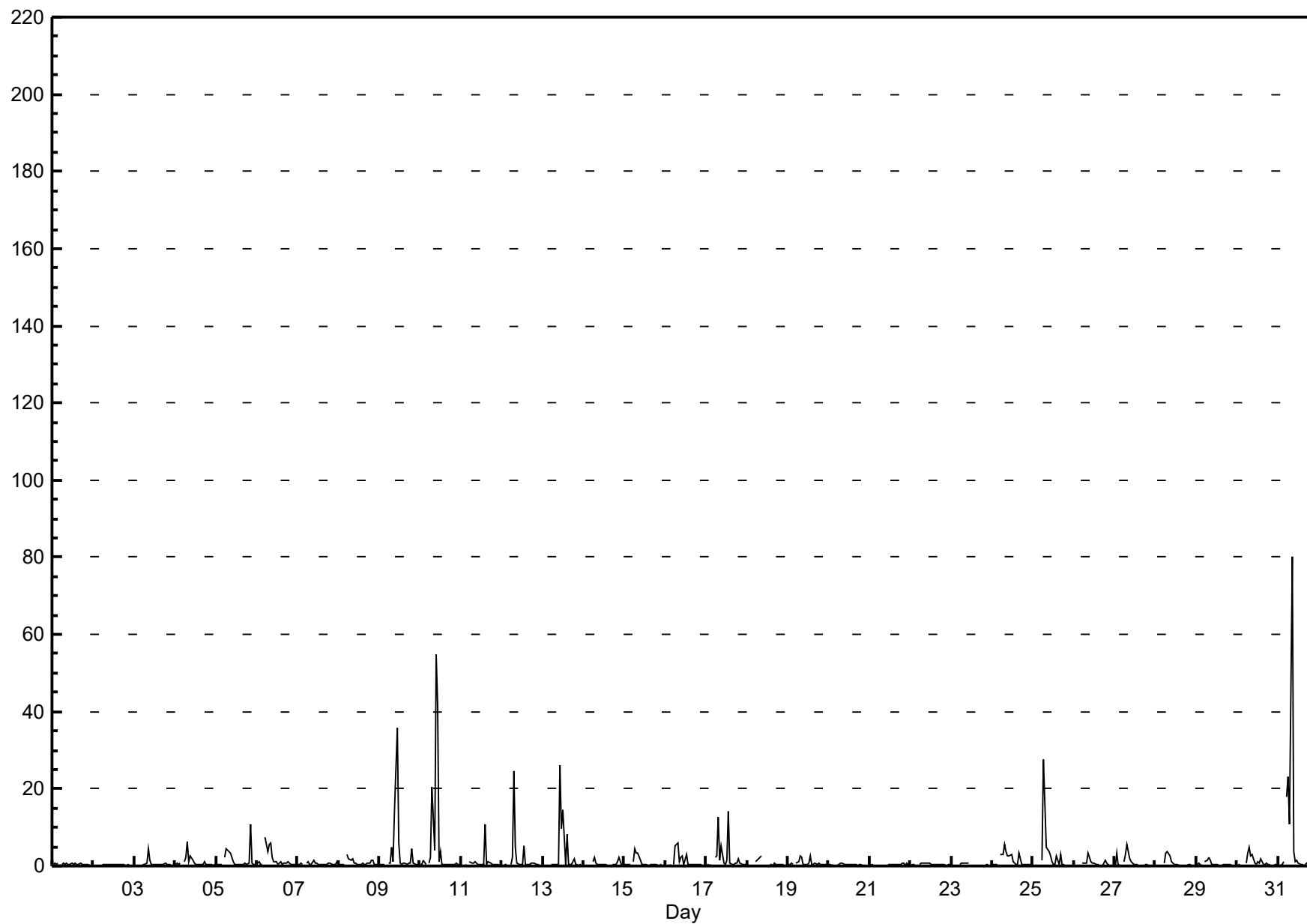
Nitrogen Oxide (NO) - ppb

Beaverlodge - July 2018

Maximum Value: 80.2 ppb on Jul 31 09:00																				Maximum Daily Average: 6.3 ppb on Jul 31					Hours in Service: 744		
Minimum Value: 0 ppb on Jul 11 03:00																				Minimum Daily Average: 0.2 ppb on Jul 2					Hours of Data: 694		
Maximum Diurnal Average: 5.0 ppb at hour 8																				Minimum Diurnal Average: 0.2 ppb at hour 1					Hours of Missing Data: 50		
Monthly Average: 1.42 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.4 Q ₃ = 0.8 P ₉₀ = 2.7 P ₉₉ = 23.3					Hours of Calibration: 37		
																				Percent Operational Time: 98.3							
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	1	0	1	A	0	1	0	1	0	0	1	0	1	1	0	1	0	0	0	0	0	0	0	0.4	0.9	
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	0.4	
3-Jul	0	0	0	0	A	0	0	1	5	2	0	1	0	1	0	0	1	0	1	0	0	0	0	0	0.6	4.6	
4-Jul	0	1	0	1	A	1	2	6	1	3	2	1	0	0	0	0	1	1	0	0	0	0	0	0	1.0	6.4	
5-Jul	0	0	0	0	A	2	5	4	3	2	1	0	0	0	0	0	1	1	1	1	1	1	1	1	1.6	10.8	
6-Jul	1	1	0	1	A	7	4	6	6	2	1	1	1	1	1	0	1	1	1	1	1	0	0	1	0	1.6	7.5
7-Jul	0	0	1	0	A	1	1	0	1	1	1	1	0	1	0	1	1	0	1	1	1	0	0	1	0.6	1.3	
8-Jul	0	0	0	0	A	3	2	2	2	1	1	0	0	0	1	1	1	1	1	1	2	2	0	0	0	0.8	2.9
9-Jul	0	0	0	0	A	1	1	5	1	14	36	6	1	0	1	1	1	1	1	5	1	1	0	0	3.3	35.8	
10-Jul	0	0	2	0	A	1	2	21	4	55	42	1	4	0	0	0	0	0	0	0	0	1	0	0	5.9	54.8	
11-Jul	0	0	0	0	A	1	1	1	1	1	0	0	0	0	11	0	1	1	1	0	0	1	0	0	0.9	10.6	
12-Jul	0	0	0	0	A	1	2	25	5	1	0	0	0	5	0	0	0	1	1	1	0	0	0	0	1.9	24.7	
13-Jul	0	0	0	0	A	0	0	1	0	0	26	10	14	0	8	0	0	0	2	0	0	0	0	0	2.8	25.9	
14-Jul	0	0	0	0	A	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0.5	2.3	
15-Jul	0	0	0	0	A	1	4	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8	4.5	
16-Jul	0	0	0	0	A	0	5	6	1	2	3	0	3	0	0	1	0	0	0	1	0	0	0	0	1.0	6.1	
17-Jul	0	0	0	0	A	2	3	13	2	5	1	1	1	14	1	0	0	1	1	2	1	0	0	0	2.1	14.0	
18-Jul	0	0	0	0	A	1	1	2	3	C	C	C	C	0	0	0	1	0	0	0	0	0	0	0	0.6	2.7	
19-Jul	0	0	1	0	A	1	1	3	2	0	0	0	1	3	0	1	1	0	1	1	1	0	0	0	0.8	2.7	
20-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	0.3	0.7	
21-Jul	0	0	0	0	A	R	P	P	P	P	R	0	0	0	1	0	1	0	1	1	1	0	1	0	--	0.9	
22-Jul	0	0	0	0	A	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.9	
23-Jul	0	0	0	0	A	0	1	1	1	1	1	P	P	P	P	P	P	P	P	P	1	0	0	0	--	0.9	
24-Jul	0	0	1	0	A	3	3	6	4	3	3	3	1	1	0	0	3	0	0	0	0	0	0	0	1.4	5.8	
25-Jul	0	0	0	0	A	2	27	16	5	4	3	1	0	0	3	0	3	0	0	0	0	0	0	0	2.9	27.4	
26-Jul	0	0	0	0	A	1	1	1	3	2	1	1	1	0	0	0	0	0	2	1	0	0	0	0	0.6	3.3	
27-Jul	0	4	0	0	A	1	3	6	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1.0	5.6	
28-Jul	0	0	0	0	A	1	3	4	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	3.7	
29-Jul	0	1	0	0	A	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	2.3	
30-Jul	0	0	0	0	A	1	4	5	3	3	1	1	1	1	2	0	0	1	0	0	0	0	0	0	1.0	4.7	
31-Jul	0	0	0	1	A	18	23	11	80	4	1	1	1	0	0	0	0	1	1	0	0	0	0	0	6.3	80.2	
																									Diurnal Average		
																									Diurnal Maximum		
C - Calibration																											
R - Recovery																											
P - Power Failure																											
A - Automated Daily Zero Span																											

Hourly Maximums

Nitrogen Oxide (NO) - ppb
Beaverlodge - July 2018



Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

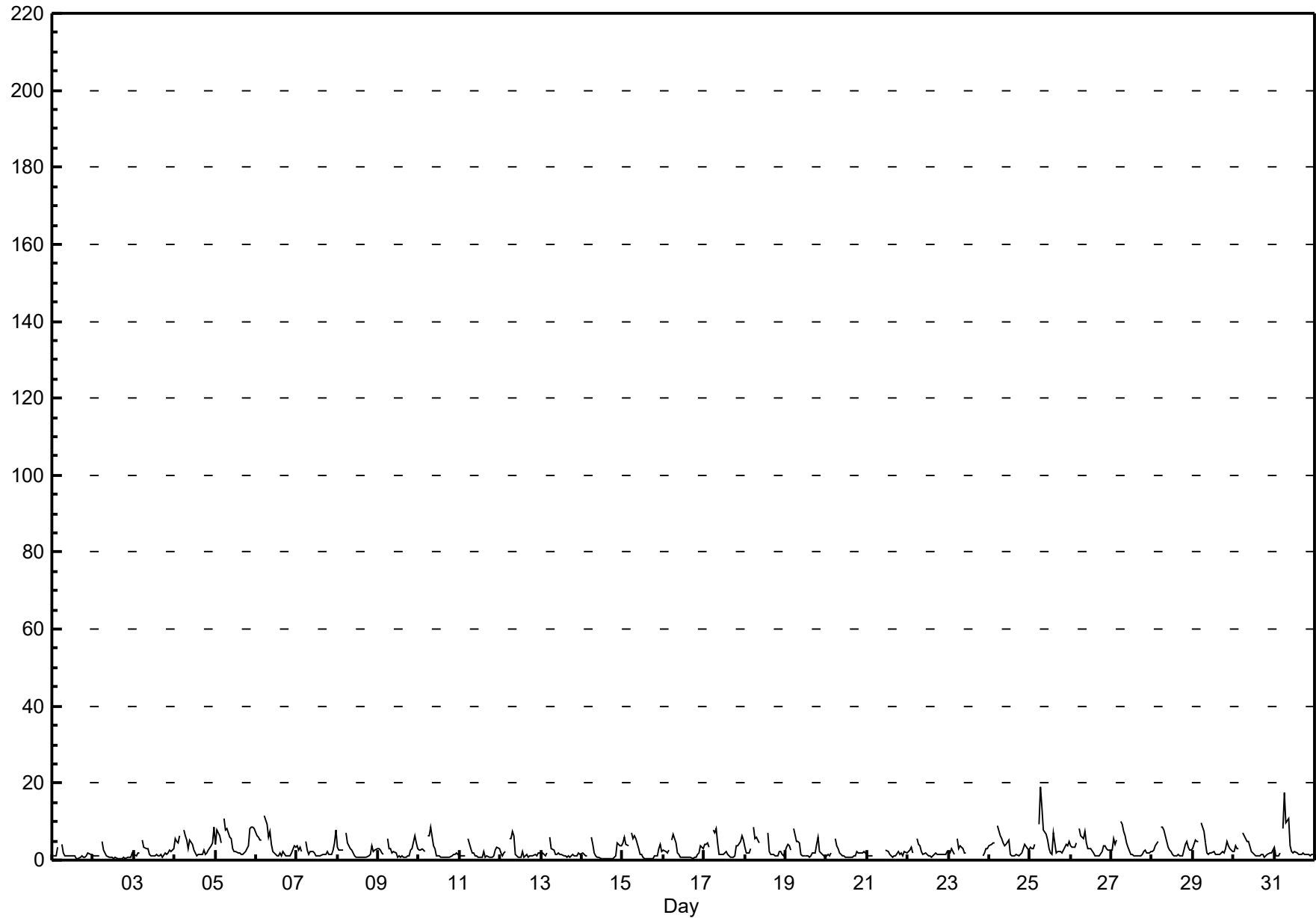
Beaverlodge - July 2018

Maximum Value: 19.2 ppb on Jul 25 07:00																				Maximum Daily Average: 5.1 ppb on Jul 5										Hours in Service: 744	
Minimum Value: 0 ppb on Jul 14 15:00																				Minimum Daily Average: 1.1 ppb on Jul 2										Hours of Data: 694	
Maximum Diurnal Average: 7.2 ppb at hour 6																				Minimum Diurnal Average: 1.0 ppb at hour 16										Hours of Missing Data: 50	
Monthly Average: 2.71 ppb																				Percentiles: P ₁ = 0.5 P ₁₀ = 0.8 Q ₁ = 1.2 Median = 1.9 Q ₃ = 3.6 P ₉₀ = 5.8 P ₉₉ = 9.8										Hours of Calibration: 37	
																				Percent Operational Time: 98.3											
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	1	1	3	A	4	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1.3	4.0					
2-Jul	1	1	1	1	A	5	2	2	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	2	1.1	4.9					
3-Jul	2	1	2	2	A	5	3	3	3	2	1	1	1	1	1	1	2	1	2	2	2	3	2	3	2.0	5.3					
4-Jul	5	5	5	6	A	8	6	5	3	5	4	3	2	1	1	1	2	3	2	2	3	4	4	9	3.8	8.7					
5-Jul	4	8	6	4	A	11	8	8	6	6	3	2	2	2	2	1	1	2	2	4	8	9	8	8	5.1	10.7					
6-Jul	6	6	5	5	A	12	9	6	7	4	2	2	1	1	2	1	2	1	1	1	1	2	4	3	3.8	11.6					
7-Jul	4	2	4	2	A	5	3	1	2	2	2	1	1	1	1	2	1	1	2	2	2	3	5	8	2.5	7.9					
8-Jul	3	3	3	2	A	7	4	3	2	2	1	1	1	1	1	1	1	1	1	1	4	2	2	3	2.2	7.0					
9-Jul	3	3	2	1	A	6	3	3	2	2	2	1	1	1	1	1	1	1	1	3	3	7	4	3	2.3	6.5					
10-Jul	3	3	3	2	A	6	6	9	4	3	1	1	1	1	1	1	1	1	1	1	2	2	2	1	2.3	8.6					
11-Jul	1	1	1	1	A	6	3	2	2	1	1	1	1	1	2	1	1	1	1	1	1	2	3	3	1.6	5.8					
12-Jul	2	1	2	2	A	6	5	8	6	2	1	1	1	2	1	2	1	1	1	1	1	1	2	2	2.2	7.6					
13-Jul	1	2	1	2	A	6	3	2	2	1	2	2	2	1	1	1	1	1	2	1	1	1	2	1	1.7	5.9					
14-Jul	2	1	1	1	A	6	4	2	1	1	1	1	0	0	0	0	0	1	1	1	1	4	4	4	1.6	6.0					
15-Jul	4	6	4	4	A	7	6	6	6	3	2	1	1	1	0	0	1	0	1	1	1	3	4	2	2.8	7.2					
16-Jul	3	2	2	3	A	5	7	5	2	1	1	1	1	1	1	1	1	1	1	1	1	2	4	3	2.0	6.8					
17-Jul	4	4	5	3	A	8	7	8	5	1	1	2	2	2	1	1	1	1	1	4	4	5	6	5	3.5	8.3					
18-Jul	3	2	2	3	A	9	6	6	4	C	C	C	C	7	2	2	1	1	1	1	2	2	2	1	3.1	8.7					
19-Jul	3	4	4	3	A	8	5	5	4	2	1	1	1	1	1	1	2	2	4	6	2	2	1	1	2.8	8.3					
20-Jul	1	1	1	2	A	6	4	3	2	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	1.7	5.8					
21-Jul	1	1	1	1	A	R	P	P	P	P	R	3	2	1	1	1	1	1	2	2	2	1	2	2	--	2.6					
22-Jul	2	3	3	2	A	6	4	4	2	2	2	1	1	1	1	1	2	1	1	2	1	1	1	2	2.1	5.7					
23-Jul	2	2	3	2	A	5	3	4	3	2	2	P	P	P	P	P	P	P	P	P	1	2	3	3	--	5.5					
24-Jul	4	4	5	5	A	9	6	6	4	4	4	5	2	1	1	1	2	1	1	2	3	4	3	3	3.4	8.9					
25-Jul	3	3	3	4	A	9	19	14	8	7	5	3	2	2	7	2	2	2	2	2	3	4	4	5	5.0	19.2					
26-Jul	4	3	3	4	A	8	6	5	7	5	3	3	3	2	1	1	1	1	2	4	4	3	3	3	3.5	8.3					
27-Jul	3	6	4	5	A	10	9	8	6	5	3	2	2	1	1	1	1	1	2	2	3	2	2	2	3.4	10.0					
28-Jul	2	3	4	5	A	9	8	8	5	3	3	2	2	1	1	1	1	1	1	4	5	3	3	3	3.4	8.6					
29-Jul	3	5	5	5	A	10	7	5	2	2	2	2	2	2	1	1	1	2	2	3	5	4	3	2	3.3	9.7					
30-Jul	2	4	3	3	A	7	6	6	5	5	2	2	2	1	1	1	1	2	1	1	1	2	2	3	2.7	7.1					
31-Jul	3	1	1	2	A	8	18	10	11	4	2	2	2	2	2	1	1	2	2	1	2	1	1	1	3.5	17.5					
2.8 3.0 2.9 2.9 -- 7.2 6.2 5.2 4.0 2.7 2.0 1.6 1.4 1.4 1.3 1.0 1.2 1.2 1.4 1.9 2.3 2.7 2.9 3.0																									Diurnal Average						
6.3 7.8 6.5 6.3 -- 11.6 19.2 13.9 10.8 6.9 5.3 5.1 2.9 7.2 7.3 1.9 2.2 2.6 4.0 6.1 8.4 8.7 8.5 8.7																									Diurnal Maximum						
C - Calibration					R - Recovery					P - Power Failure					A - Automated Daily Zero Span																

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

Beaverlodge - July 2018



Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

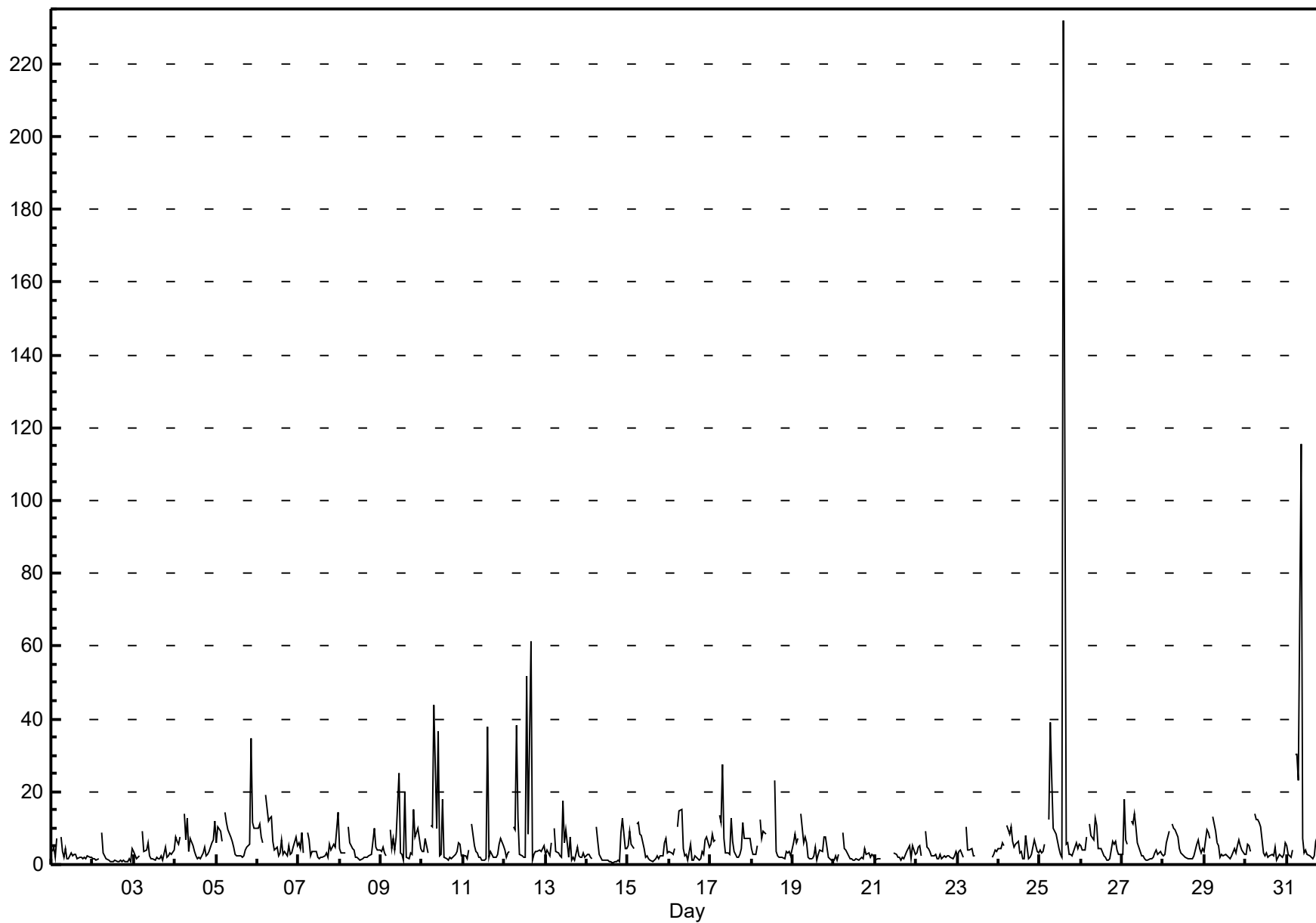
Beaverlodge - July 2018

Maximum Value: 231.9 ppb on Jul 25 15:00																				Maximum Daily Average: 17.3 ppb on Jul 25					Hours in Service: 744	
Minimum Value: 1 ppb on Jul 14 16:00																				Minimum Daily Average: 1.7 ppb on Jul 2					Hours of Data: 694	
Maximum Diurnal Average: 11.9 ppb at hour 6																				Minimum Diurnal Average: 2.4 ppb at hour 17					Hours of Missing Data: 50	
Monthly Average: 5.57 ppb																				Percentiles: P ₁ = 0.8 P ₁₀ = 1.5 Q ₁ = 2.1 Median = 3.4 Q ₃ = 6.1 P ₉₀ = 10.2 P ₉₉ = 37.8					Hours of Calibration: 37	
																									Percent Operational Time: 98.3	
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	5	2	7	A	8	3	2	5	2	2	3	3	3	3	1	2	2	2	2	2	3	2	2	2.9	7.5
2-Jul	2	2	1	2	A	9	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	1.7	8.9
3-Jul	3	1	2	2	A	9	4	4	6	2	2	2	1	2	2	1	2	1	5	2	2	3	3	4	2.9	9.1
4-Jul	7	7	6	7	A	14	7	13	4	7	5	4	2	2	2	2	3	5	3	3	4	6	7	12	5.6	13.8
5-Jul	6	10	9	6	A	14	12	10	7	6	5	3	3	2	2	2	2	4	5	5	35	12	10	10	7.9	34.8
6-Jul	10	11	8	6	A	19	12	13	13	6	4	5	2	3	7	3	3	3	5	3	3	5	8	5	6.8	19.3
7-Jul	6	4	9	3	A	9	7	2	3	4	4	2	1	2	2	2	3	2	6	4	5	5	9	14	4.8	14.4
8-Jul	5	3	3	3	A	10	6	4	4	2	2	1	1	2	2	2	2	2	3	6	10	5	4	4	3.8	10.4
9-Jul	4	5	3	2	A	10	4	7	4	7	25	3	3	1	20	2	2	3	3	15	7	10	7	4	6.6	25.2
10-Jul	4	4	7	3	A	11	10	44	10	37	2	3	18	2	1	1	2	2	2	3	4	6	5	2	8.0	43.8
11-Jul	3	2	2	4	A	11	5	4	3	2	2	1	1	2	38	2	3	2	2	2	3	6	7	5	4.8	37.8
12-Jul	4	2	3	4	A	10	10	38	13	3	2	2	2	52	8	61	1	3	4	4	4	4	5	5	10.6	61.4
13-Jul	3	4	2	6	A	10	3	3	2	2	18	6	9	2	7	1	2	1	5	2	2	2	3	2	4.3	17.5
14-Jul	3	3	2	2	A	10	6	3	2	1	1	1	1	1	1	1	1	1	1	1	9	13	4	4	3.1	12.7
15-Jul	5	9	6	5	A	11	11	8	8	4	2	2	2	1	1	1	2	3	2	3	2	6	7	3	4.5	11.4
16-Jul	4	3	3	4	A	10	15	15	4	2	3	1	6	1	1	3	2	1	2	4	3	7	7	5	4.6	15.2
17-Jul	6	8	6	7	A	13	11	28	7	3	3	3	13	7	3	2	2	3	4	11	7	7	7	7	7.4	27.5
18-Jul	5	3	3	5	A	12	7	9	9	C	C	C	C	23	3	2	2	2	2	2	3	3	3	2	5.3	23.0
19-Jul	6	8	6	7	A	14	6	7	6	2	2	1	2	5	1	3	4	4	8	7	5	2	1	1	4.7	13.9
20-Jul	1	2	1	3	A	9	5	4	3	2	1	1	1	2	1	1	2	2	4	3	3	2	3	3	2.6	8.6
21-Jul	1	1	2	2	A	R	P	P	P	P	R	3	3	2	2	1	2	2	4	4	5	2	5	3	--	5.3
22-Jul	3	5	5	2	A	9	5	4	3	2	2	3	2	2	3	2	3	2	2	2	2	2	2	4	3.1	9.2
23-Jul	3	4	4	2	A	10	4	4	4	3	2	P	P	P	P	P	P	P	P	P	2	3	4	4	--	10.4
24-Jul	5	5	6	5	A	11	8	10	6	5	6	6	3	3	2	2	8	1	2	3	5	7	4	3	5.0	10.9
25-Jul	4	3	4	5	A	13	39	23	10	8	6	5	3	2	232	6	6	3	3	3	5	6	4	5	17.3	231.9
26-Jul	5	4	4	8	A	11	8	7	13	11	5	4	4	3	2	1	1	2	6	6	6	4	3	3	5.2	12.7
27-Jul	3	18	7	6	A	12	11	14	10	6	5	2	2	2	1	1	2	2	2	3	4	3	4	3	5.3	18.1
28-Jul	2	3	6	9	A	11	10	10	7	5	3	3	2	2	1	2	1	2	2	6	7	4	3	4	4.6	11.3
29-Jul	4	10	9	7	A	13	9	6	5	2	3	2	3	2	2	2	2	4	3	5	7	5	4	3	4.9	13.0
30-Jul	3	6	5	4	A	14	12	12	12	10	3	3	3	2	2	3	2	5	1	2	3	2	3	6	5.1	13.8
31-Jul	5	3	2	4	A	30	30	23	115	7	3	4	3	3	2	2	2	6	8	3	4	2	2	2	11.5	115.5
4.1 5.1 4.4 4.6 -- 11.9 9.5 11.1 10.0 5.3 4.3 2.8 3.5 4.5 11.9 3.9 2.4 2.4 3.3 3.9 5.3 4.7 4.6 4.5																									Diurnal Average	
9.9 18.1 9.3 9.2 -- 30.4 39.2 43.8 115.5 36.5 25.2 6.2 18.0 51.8 231.9 61.4 8.0 6.4 7.7 15.1 34.8 12.7 10.0 14.4																									Diurnal Maximum	
C - Calibration					R - Recovery					P - Power Failure					A - Automated Daily Zero Span											

Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

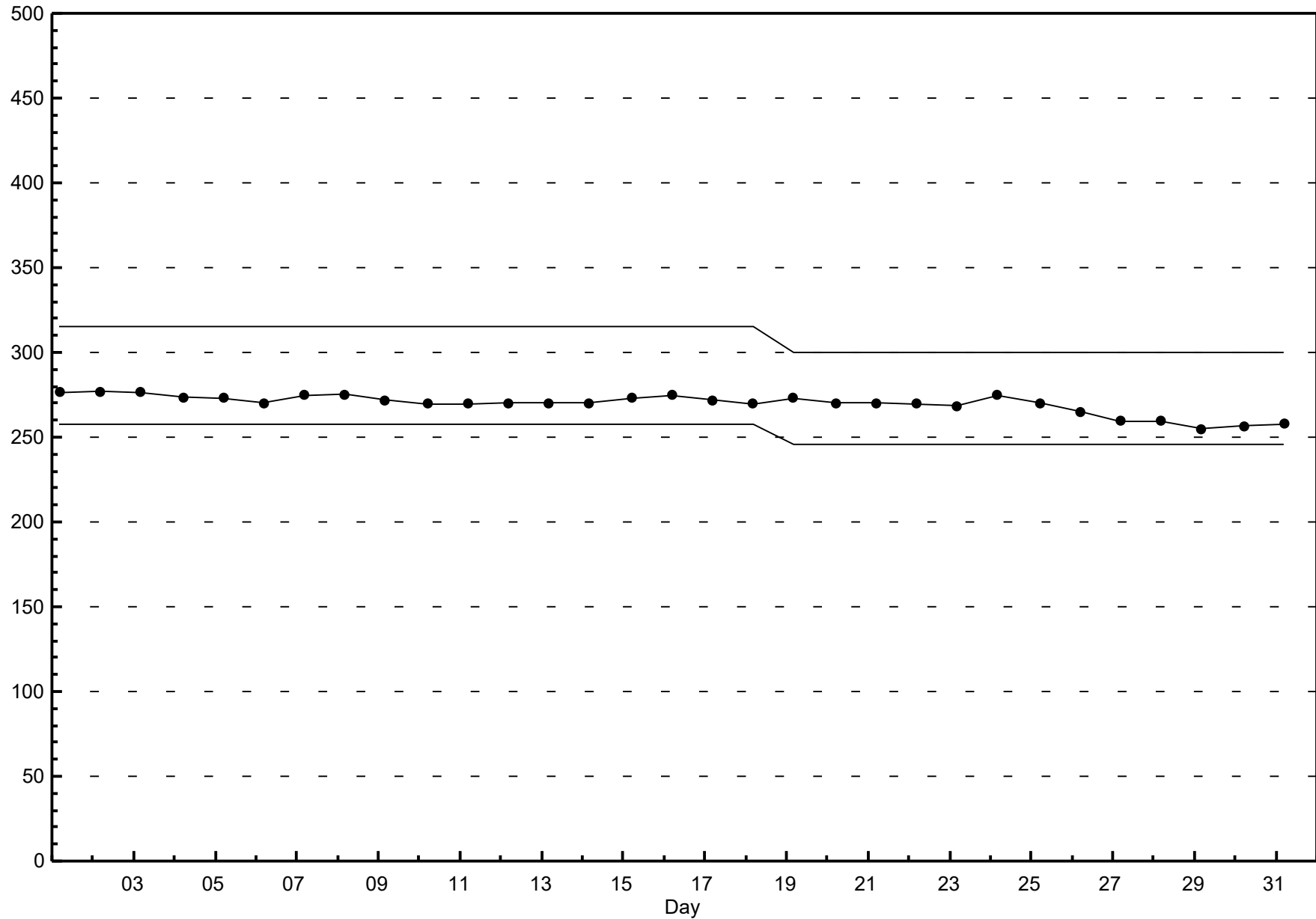
Beaverlodge - July 2018



Span Responses

Oxides of Nitrogen (NO_x)

Beaverlodge - July 2018



Hourly Averages

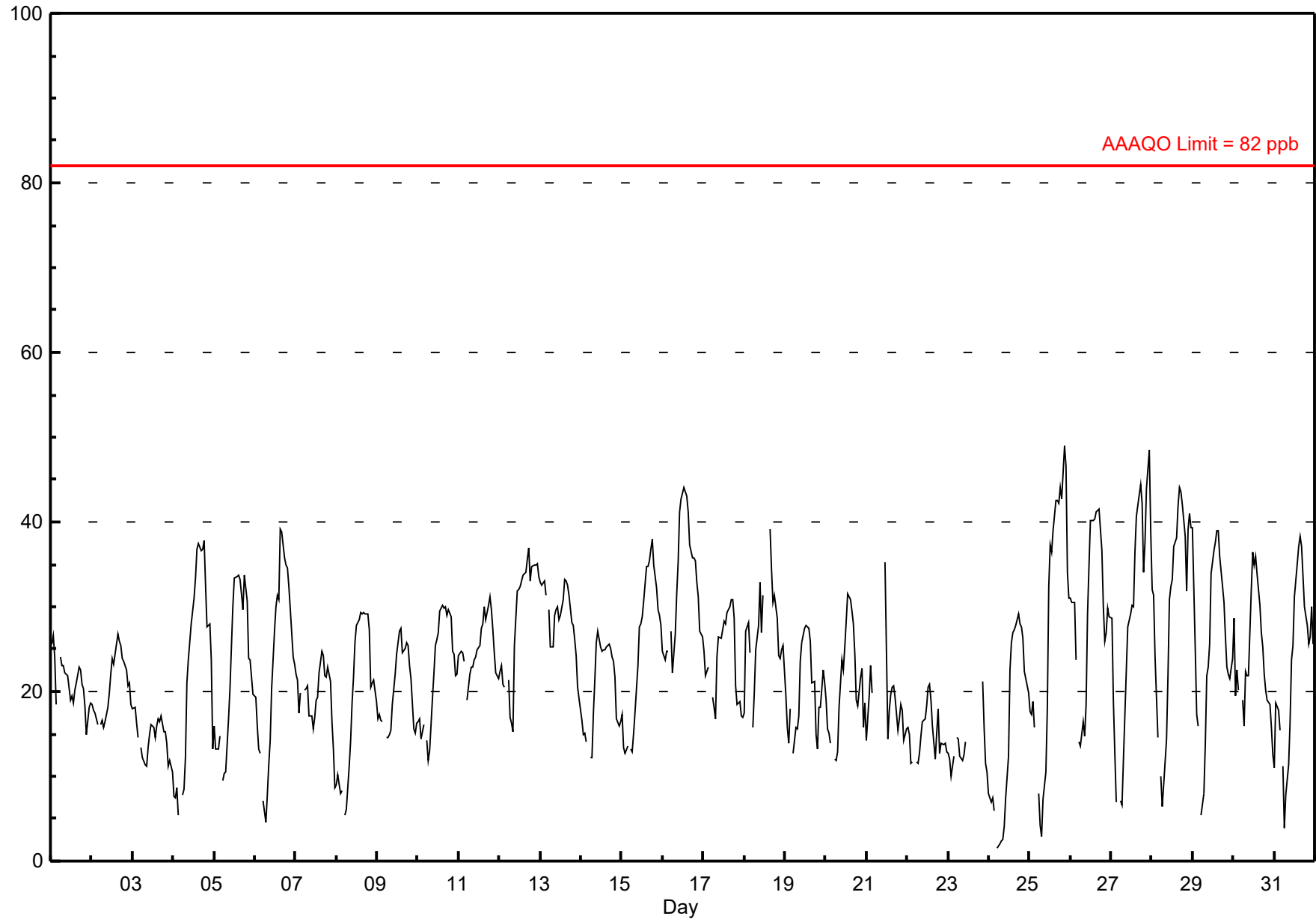
Ozone (O₃) - ppb

Beaverlodge - July 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 49.0 ppb on Jul 25 21:00 Maximum Daily Average: 33.0 ppb on Jul 16																								Hours in Service: 744 Hours of Data: 695 Hours of Missing Data: 49 Hours of Calibration: 36 Percent Operational Time: 98.3		
Minimum Value: 2 ppb on Jul 24 06:00 Maximum Diurnal Average: 31.4 ppb at hour 16 Monthly Average: 23.19 ppb												Minimum Daily Average: 14.5 ppb on Jul 3 Minimum Diurnal Average: 13.1 ppb at hour 7 Percentiles: P ₁ = 4.3 P ₁₀ = 12.3 Q ₁ = 16.4 Median = 22.7 Q ₃ = 29.5 P ₉₀ = 35.4 P ₉₉ = 44.0														
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	26	27	24	18	A	24	23	23	22	22	19	19	19	20	21	23	22	21	20	18	15	18	19	21.1	26.5	
2-Jul	19	18	17	16	A	16	17	16	16	18	20	22	24	23	26	27	26	25	24	24	22	21	21	19	20.7	26.8
3-Jul	18	18	16	15	A	13	12	11	11	13	15	16	16	15	16	17	16	17	15	15	14	11	12	11	14.5	18.1
4-Jul	8	7	9	5	A	8	8	12	21	24	28	30	31	33	37	37	37	37	38	32	28	28	24	13	23.3	37.9
5-Jul	16	13	13	15	A	9	10	10	17	20	25	30	33	34	34	33	32	30	34	31	24	24	22	20	23.0	33.8
6-Jul	19	16	13	13	A	7	5	8	11	14	20	27	30	31	31	39	39	36	35	35	32	30	24	23	23.4	39.1
7-Jul	22	21	17	20	A	20	20	21	17	17	16	17	19	19	22	25	24	22	22	23	21	16	13	9	19.3	24.8
8-Jul	9	10	8	8	A	5	6	11	14	19	22	26	28	28	29	29	29	29	29	27	21	21	21	19	19.6	29.3
9-Jul	17	17	17	16	A	15	15	15	15	18	22	24	26	27	27	25	25	26	25	23	21	16	15	16	20.2	27.4
10-Jul	16	17	14	16	A	14	12	13	19	22	25	26	27	30	30	30	30	29	30	29	25	24	22	22	22.7	30.2
11-Jul	24	25	25	24	A	19	22	23	23	24	24	25	25	27	28	30	28	30	31	30	27	25	22	21	25.3	31.2
12-Jul	22	23	21	21	A	21	17	16	15	25	32	32	32	33	34	34	36	37	33	35	35	35	35	34	28.6	37.0
13-Jul	33	33	33	31	A	30	25	25	29	30	30	28	29	31	33	33	33	31	28	28	26	24	20	19	28.8	33.3
14-Jul	17	15	15	14	A	12	12	17	21	26	27	25	25	25	25	25	26	25	24	24	22	17	16	16	20.5	27.1
15-Jul	17	13	13	14	A	13	13	15	18	23	28	28	29	31	35	35	35	37	38	35	32	30	29	28	25.5	37.9
16-Jul	25	24	25	25	A	27	22	27	31	35	41	43	44	44	43	41	37	36	36	35	33	31	27	27	33.0	44.1
17-Jul	25	22	22	23	A	19	18	17	24	26	26	27	28	28	29	30	31	31	29	21	18	19	17	17	23.8	30.9
18-Jul	18	27	28	25	A	16	20	25	28	33	27	31	C	C	C	39	34	31	31	29	24	24	25	25	27.0	39.2
19-Jul	20	16	14	18	A	13	16	16	17	24	26	27	28	28	27	26	21	21	15	13	18	18	23	21	20.2	27.8
20-Jul	19	16	15	14	A	12	12	13	18	24	23	25	28	32	31	29	28	24	19	18	22	23	16	19	20.8	31.6
21-Jul	14	19	23	20	A	R	P	P	P	P	R	35	14	18	20	21	21	19	15	17	18	18	14	16	--	35.2
22-Jul	16	15	11	12	A	12	12	13	15	16	17	18	21	21	19	16	12	15	18	13	14	14	14	13	15.0	20.9
23-Jul	13	12	10	12	A	15	14	12	12	13	14	P	P	P	P	P	P	P	P	P	21	16	12	11	--	21.2
24-Jul	8	7	7	6	A	2	2	2	2	4	7	12	22	26	27	27	28	29	28	28	26	22	21	20	15.9	29.2
25-Jul	18	17	19	16	A	8	4	3	7	10	18	32	37	37	39	42	43	42	44	43	49	47	34	31	27.9	49.0
26-Jul	31	31	31	24	A	14	14	16	15	19	29	35	40	40	40	41	41	42	37	30	26	27	30	29	29.6	41.6
27-Jul	29	19	13	7	A	7	7	12	17	23	28	29	30	30	36	41	43	44	42	34	38	44	49	39	28.7	48.5
28-Jul	32	31	24	15	A	10	6	9	14	22	31	32	33	37	38	42	44	44	42	38	32	39	41	39	30.3	44.1
29-Jul	39	25	17	16	A	5	8	14	22	23	26	34	37	38	39	39	36	32	31	26	23	22	22	24	25.9	39.4
30-Jul	29	20	23	20	A	19	16	22	22	22	32	36	35	36	34	30	27	25	22	20	19	19	16	12	24.2	36.4
31-Jul	11	19	18	15	A	11	4	8	11	16	24	25	31	35	37	38	37	34	30	28	26	26	30	26	23.5	38.3
20.2 19.1 17.9 16.5 -- 13.9 13.1 14.9 17.6 20.9 24.1 27.3 28.4 29.4 30.6 31.4 30.7 30.1 28.8 26.7 25.0 24.0 22.7 21.1																								Diurnal Average		
39.4 32.6 33.1 31.3 -- 29.7 25.3 26.7 31.4 35.2 41.1 42.7 44.1 43.6 43.0 42.5 44.1 44.3 44.1 42.7 49.0 46.6 48.5 39.3																								Diurnal Maximum		
C - Calibration R - Recovery P - Power Failure A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na																										

Hourly Averages

Ozone (O₃) - ppb
Beaverlodge - July 2018



Hourly Maximums

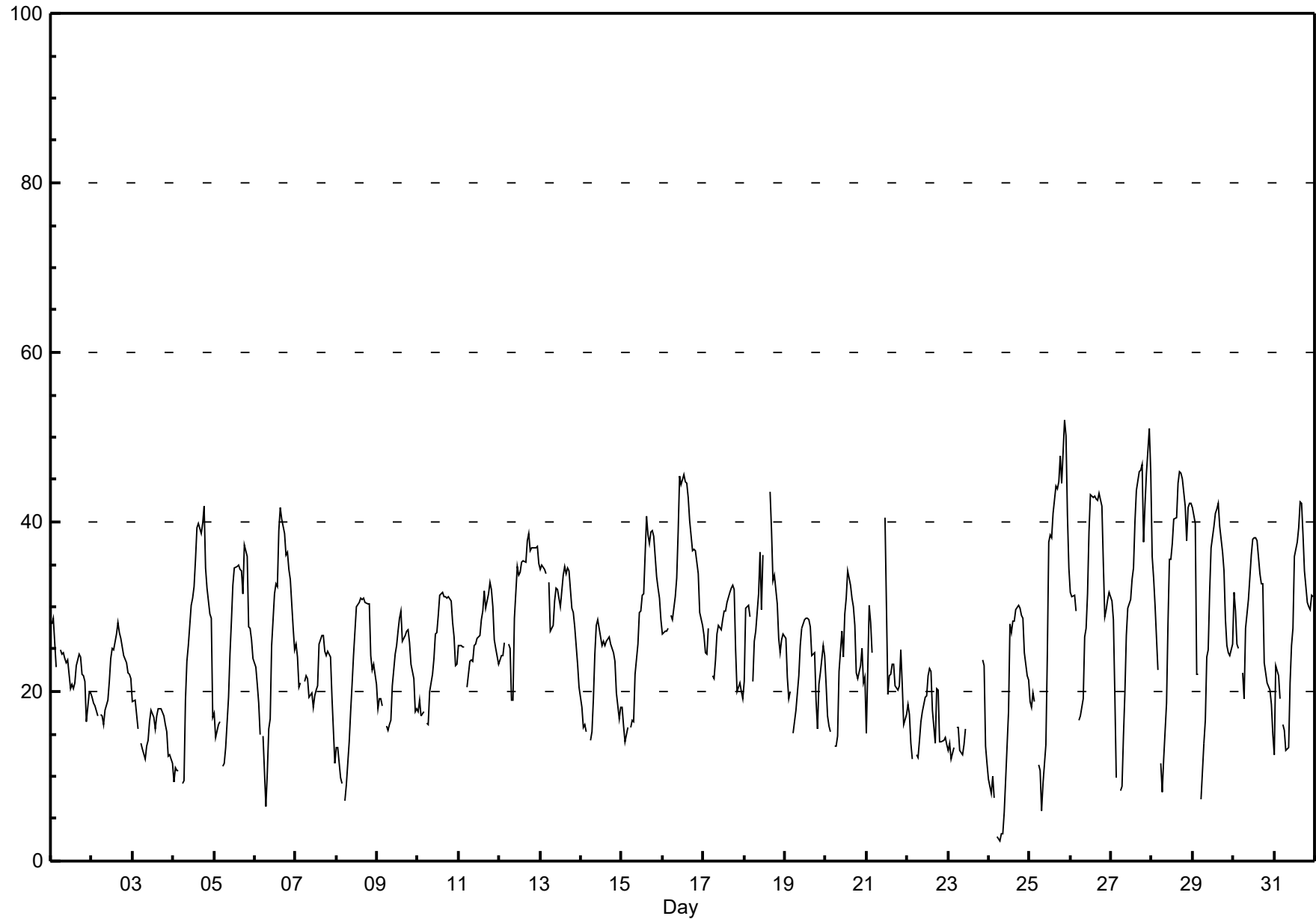
Ozone (O₃) - ppb

Beaverlodge - July 2018

Maximum Value: 52.0 ppb on Jul 25 21:00																								Maximum Daily Average: 35.4 ppb on Jul 16										Hours in Service: 744	
Minimum Value: 2 ppb on Jul 24 07:00																								Minimum Daily Average: 15.7 ppb on Jul 3										Hours of Data: 695	
Maximum Diurnal Average: 33.5 ppb at hour 16																								Minimum Diurnal Average: 16.1 ppb at hour 7										Hours of Missing Data: 49	
Monthly Average: 25.72 ppb																								Percentiles: P ₁ = 7.1 P ₁₀ = 14.1 Q ₁ = 19.0 Median = 25.4 Q ₃ = 31.5 P ₉₀ = 38.6 P ₉₉ = 45.9										Hours of Calibration: 36	
																								Percent Operational Time: 98.3											
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	28	29	26	23	A	25	24	25	24	23	24	20	21	20	21	23	24	24	22	22	21	16	20	20	22.8	28.6									
2-Jul	19	19	18	17	A	17	17	16	18	19	21	24	25	25	27	28	27	26	25	24	23	22	22	22	21.8	28.1									
3-Jul	19	19	17	16	A	14	13	12	14	14	16	18	17	16	17	18	18	18	17	16	15	12	13	11	15.7	19.0									
4-Jul	9	11	11	11	A	9	10	19	24	26	30	31	32	36	39	40	39	40	42	35	32	29	29	17	26.0	41.8									
5-Jul	18	15	16	17	A	11	12	13	19	24	28	32	35	35	35	34	34	32	37	36	28	27	26	24	25.5	37.3									
6-Jul	23	21	19	15	A	15	6	11	16	17	25	32	33	32	39	42	40	39	36	36	34	33	27	25	26.8	41.6									
7-Jul	26	24	21	21	A	21	22	21	19	20	18	19	20	21	26	27	27	25	24	25	24	19	15	12	21.6	26.7									
8-Jul	13	13	10	9	A	7	9	14	18	21	24	27	30	31	31	31	31	31	30	30	24	22	23	21	21.8	31.0									
9-Jul	18	19	19	18	A	16	15	16	17	21	24	25	27	29	30	26	27	27	27	26	23	22	18	18	22.1	29.6									
10-Jul	18	19	17	18	A	16	16	20	22	24	27	27	29	31	32	31	31	31	31	31	28	26	23	23	24.8	31.7									
11-Jul	25	25	25	25	A	21	24	24	24	25	26	26	27	29	29	32	30	32	33	32	30	26	25	23	26.8	32.9									
12-Jul	24	24	24	26	A	26	25	19	19	29	35	34	34	35	35	35	38	39	37	37	37	37	37	35	31.3	38.6									
13-Jul	34	35	34	34	A	33	27	28	31	32	32	31	30	34	35	34	35	34	30	29	28	26	23	20	30.8	34.9									
14-Jul	18	16	16	15	A	14	15	19	24	28	28	27	25	26	25	26	26	26	25	25	24	20	17	18	21.9	28.5									
15-Jul	18	16	14	16	A	16	17	16	22	26	29	30	31	32	41	39	38	39	39	38	34	32	31	29	27.8	40.6									
16-Jul	27	27	27	27	A	29	28	31	33	39	45	44	46	45	45	43	40	37	37	37	35	34	29	28	35.4	45.6									
17-Jul	27	25	24	27	A	22	22	24	27	28	27	28	30	30	31	32	32	32	32	25	20	21	20	19	26.2	32.5									
18-Jul	21	30	30	29	A	21	26	27	31	36	30	36	C	C	C	43	39	33	34	30	26	25	26	27	30.1	43.5									
19-Jul	26	22	19	20	A	15	18	20	22	25	27	29	29	29	28	28	24	25	19	16	21	22	25	24	23.1	28.6									
20-Jul	21	17	16	15	A	14	14	15	22	27	24	29	31	34	32	31	30	28	22	22	23	25	21	22	23.3	34.3									
21-Jul	15	30	28	25	A	R	P	P	P	P	R	40	20	22	22	23	23	21	20	21	25	21	16	17	--	40.5									
22-Jul	19	17	14	12	A	13	12	14	16	18	19	19	22	23	22	18	14	20	20	14	14	14	15	14	16.7	22.7									
23-Jul	13	14	12	13	A	16	16	13	13	14	16	P	P	P	P	P	P	P	P	P	24	23	14	12	--	23.7									
24-Jul	10	8	10	7	A	3	2	3	3	6	10	18	28	27	28	28	30	30	30	29	29	25	22	21	17.7	30.2									
25-Jul	19	18	20	19	A	11	11	6	9	14	24	38	38	38	41	44	44	45	48	45	52	50	41	35	30.8	52.0									
26-Jul	32	31	31	29	A	17	17	19	27	28	31	39	43	43	43	43	43	43	42	35	29	30	31	32	32.9	43.4									
27-Jul	31	29	20	10	A	8	9	15	20	27	30	31	33	35	40	44	46	46	47	38	42	46	51	46	32.2	51.1									
28-Jul	36	33	30	23	A	11	8	12	19	28	36	36	37	40	41	45	46	46	45	42	38	42	42	42	33.8	45.9									
29-Jul	42	40	22	22	A	7	14	17	24	25	32	37	39	41	42	42	40	36	34	28	25	25	24	26	29.7	42.2									
30-Jul	32	30	26	25	A	22	19	27	29	31	36	38	38	38	38	34	33	33	23	22	21	20	18	15	28.2	38.1									
31-Jul	12	23	22	19	A	16	15	13	13	21	25	28	36	38	39	42	42	38	34	30	30	30	31	31	27.5	42.4									
22.3 22.5 20.6 19.5 -- 16.2 16.1 17.6 20.6 23.8 26.7 29.8 30.6 31.4 32.9 33.5 33.0 32.5 31.5 29.2 27.7 26.5 25.0 23.5																									Diurnal Average										
41.8 39.8 34.4 34.0 -- 32.8 28.4 31.2 33.3 38.7 45.5 44.4 45.6 44.8 44.6 44.6 45.9 46.0 47.9 44.5 52.0 50.1 51.1 45.9																									Diurnal Maximum										
C - Calibration R - Recovery P - Power Failure A - Automated Daily Zero Span																																			

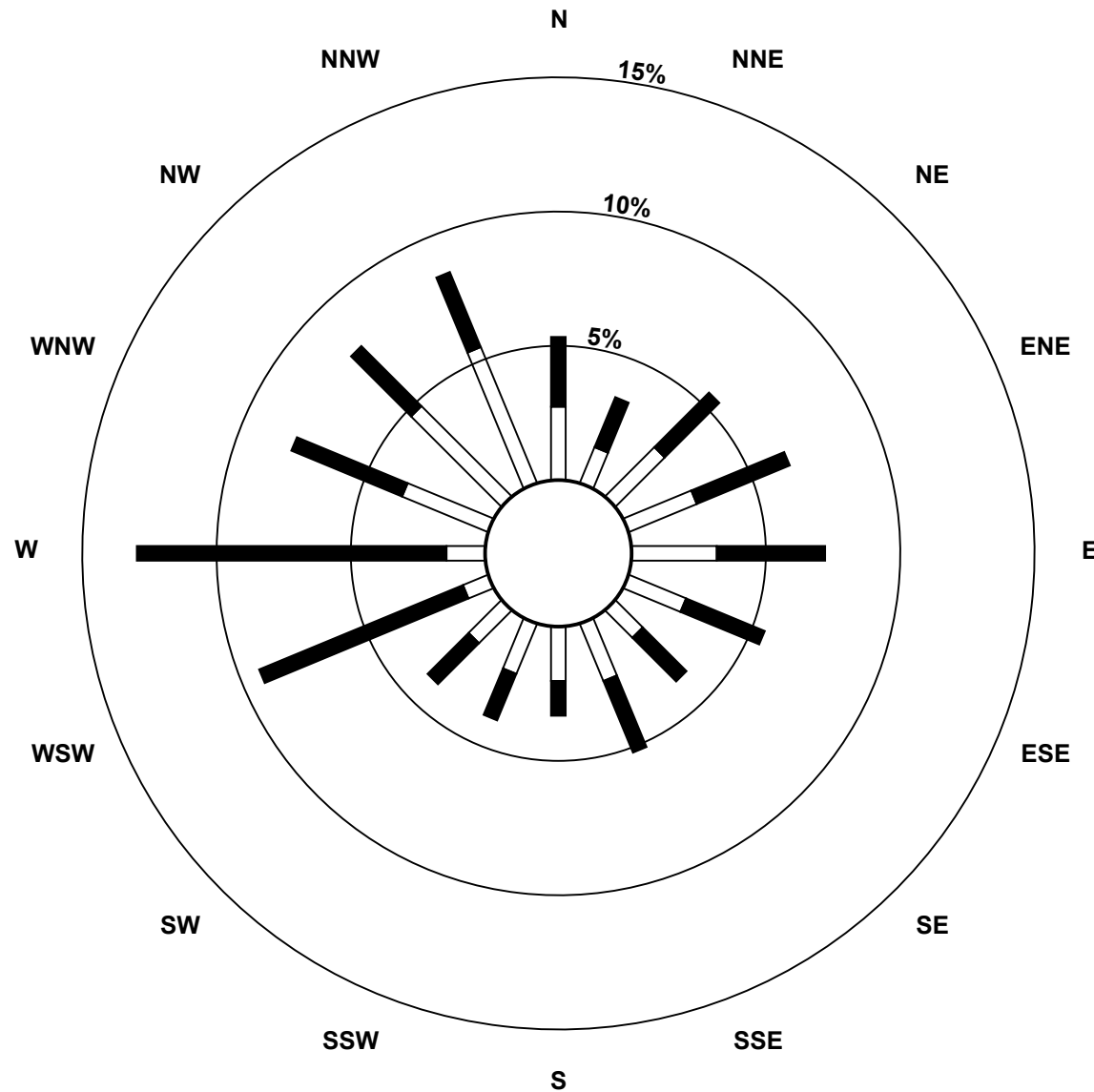
Hourly Maximums

Ozone (O₃) - ppb
Beaverlodge - July 2018

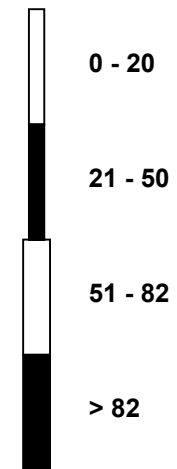


Pollutant Rose

Ozone (O₃) - ppb
Beaverlodge - July 2018



Pollutant Classes (ppb)



Eight Hour Running Averages

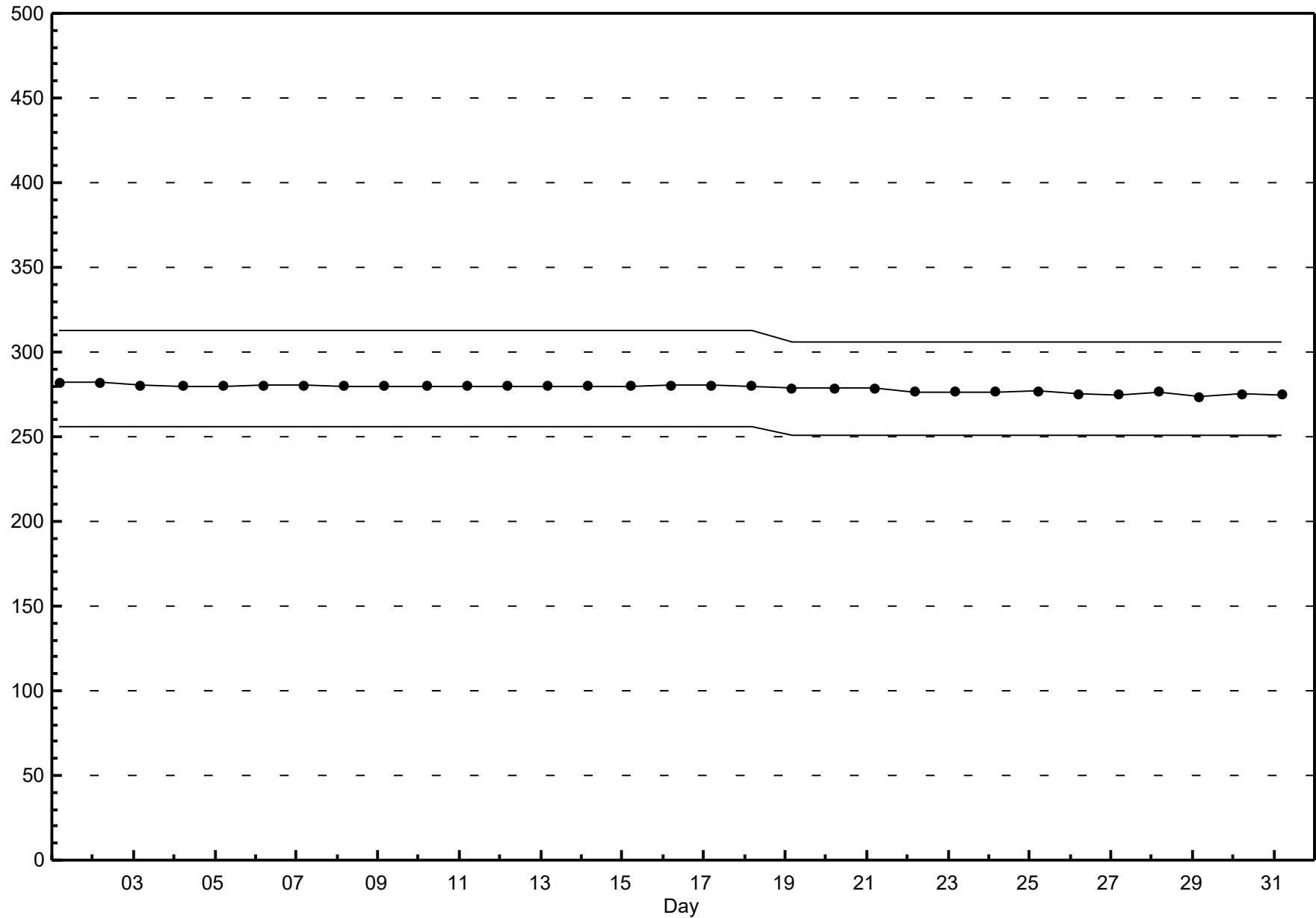
Ozone (O₃) - ppb

Beaverlodge - July 2018

Maximum Value: 43.6 ppb on Jul 25 22:00																								Hours in Service: 744		
Minimum Value: 3.7 ppb on Jul 24 10:00																								Hours of Data: 716		
Percentiles: P ₁ = 7.5 P ₁₀ = 13.4 Q ₁ = 17.4 Median = 22.3 Q ₃ = 28.2 P ₉₀ = 33.9 P ₉₉ = 41.0																								Hours of Missing Data: 28		
																								Hours of Calibration: 13		
																								Percent Operational Time: 98.0		
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	30	29	28	26	26	25	24	24	23	22	22	22	22	21	21	21	21	21	21	21	21	20	20	20	20	29.7
2-Jul	19	18	18	17	17	18	17	17	17	17	17	18	19	20	21	22	23	24	25	25	25	24	24	23	23	24.8
3-Jul	22	21	20	19	18	17	16	15	14	13	13	13	14	14	14	15	15	16	16	16	16	15	15	14	14	21.7
4-Jul	13	12	11	10	9	8	8	8	10	12	15	19	20	23	27	30	32	34	35	35	35	34	33	30	30	35.3
5-Jul	27	24	21	19	17	15	13	12	13	14	15	18	19	23	25	28	30	31	32	32	31	30	29	27	27	32.5
6-Jul	25	24	21	19	18	16	13	12	10	10	11	13	15	18	22	26	29	32	33	34	35	35	34	32	32	34.7
7-Jul	30	28	26	24	23	21	21	20	20	19	19	18	18	18	19	20	20	21	22	22	22	21	19	19	19	29.6
8-Jul	17	15	14	12	11	9	8	8	9	10	12	15	16	19	22	24	26	28	28	29	28	27	26	25	25	28.7
9-Jul	23	22	20	19	18	17	16	16	16	16	17	18	19	20	22	23	24	25	26	26	25	24	22	21	21	25.7
10-Jul	20	19	17	17	16	16	15	15	15	16	17	19	20	22	24	26	28	28	29	29	29	28	27	26	26	29.3
11-Jul	26	25	24	24	24	23	23	23	23	23	23	23	23	24	25	26	26	27	28	29	29	29	28	27	27	29.0
12-Jul	26	25	24	23	22	22	21	20	19	20	21	23	24	25	28	30	32	34	34	34	35	35	35	35	35	34.9
13-Jul	35	34	34	34	33	33	31	30	29	29	29	28	28	28	29	30	31	31	31	31	30	30	28	26	26	34.5
14-Jul	24	22	21	19	18	16	15	15	15	17	19	20	21	22	24	25	25	25	25	25	24	23	22	21	21	25.4
15-Jul	20	19	17	16	15	15	14	14	14	15	18	20	21	23	26	28	30	32	33	34	35	35	34	33	33	34.7
16-Jul	32	30	28	27	26	26	25	25	26	27	30	32	34	36	39	40	41	41	40	40	38	37	35	33	33	41.1
17-Jul	31	29	28	26	25	23	22	21	21	21	22	23	23	24	26	27	28	29	29	28	27	26	24	23	23	31.2
18-Jul	21	21	21	21	21	21	21	23	24	25	25	26	26	27	N	N	N	N	N	N	31	30	30	28	28	31.4
19-Jul	26	24	22	21	20	19	17	16	16	17	18	20	21	23	24	25	26	26	24	22	21	20	19	19	19	26.1
20-Jul	19	18	18	18	18	17	16	14	14	15	16	18	19	22	24	26	27	28	27	26	25	24	22	21	21	27.6
21-Jul	19	19	19	19	19	18	N	N	N	N	N	N	N	N	N	N	21	21	20	18	19	19	18	17	17	21.4
22-Jul	17	16	16	15	14	14	13	13	13	13	14	15	15	17	17	18	17	17	17	17	16	15	14	14	14	17.8
23-Jul	14	14	13	13	13	13	13	13	13	13	13	13	13	N	N	N	N	N	N	N	N	N	N	N	N	14.1
24-Jul	N	12	12	11	9	7	6	5	4	4	4	5	7	10	13	16	19	22	25	27	27	27	26	25	25	27.3
25-Jul	24	22	21	20	19	17	15	12	11	10	10	12	15	19	23	28	32	36	40	41	42	44	43	42	42	43.6
26-Jul	40	39	37	35	33	28	25	23	20	19	19	20	23	26	29	32	36	39	40	39	37	35	34	33	33	40.1
27-Jul	31	28	25	22	22	19	16	13	12	12	14	18	19	22	26	29	32	35	37	38	39	40	42	42	42	41.8
28-Jul	40	39	36	34	33	28	22	18	16	14	15	18	20	23	27	31	35	38	39	40	40	40	40	40	40	40.2
29-Jul	39	37	34	31	31	26	21	18	15	15	16	19	21	25	29	32	34	35	36	35	33	31	29	27	27	39.3
30-Jul	26	24	23	23	23	22	21	21	20	21	22	24	26	28	30	31	32	32	31	29	27	24	22	20	20	32.0
31-Jul	18	17	17	16	16	15	13	12	12	12	13	14	16	19	24	27	31	33	33	34	33	32	31	30	30	33.8
40.2 38.6 36.9 34.6 33.4 32.6 31.2 30.0 29.5 29.0 29.8 32.4 33.9 35.9 38.5 40.3 41.1 41.1 40.5 40.9 42.3 43.6 43.0 41.6																										
Diurnal Maximums																										
N - Not Valid																										

Span Responses

Ozone (O₃)
Beaverlodge - July 2018



Hourly Averages

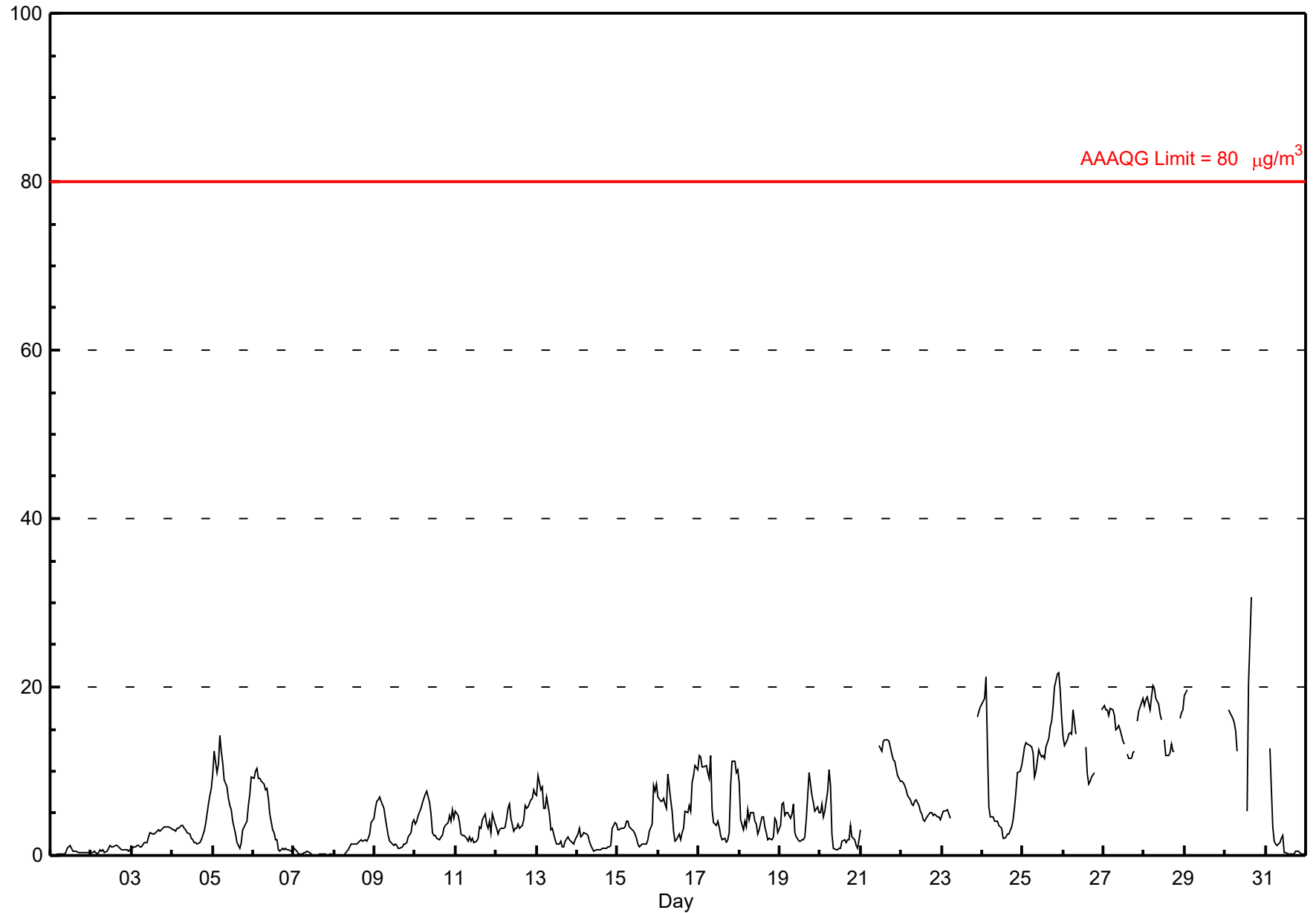
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Beaverlodge - July 2018

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 30.7 µg/m³ on Jul 30 16:00 Maximum Daily Average: 16.1 µg/m³ on Jul 28																								Hours in Service: 744 Hours of Data: 666 Hours of Missing Data: 78 Hours of Calibration: 0 Percent Operational Time: 89.5		
Minimum Value: 0 µg/m³ on Jul 1 03:00 Maximum Diurnal Average: 7.5 µg/m³ at hour 2 Monthly Average: 5.40 µg/m³ Minimum Daily Average: 0.2 µg/m³ on Jul 7 Minimum Diurnal Average: 3.4 µg/m³ at hour 12 Percentiles: P ₁ = 0.0 P ₁₀ = 0.5 Q ₁ = 1.5 Median = 3.4 Q ₃ = 7.9 P ₉₀ = 13.6 P ₉₉ = 19.9																										
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	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.4	1.2
2-Jul	0	0	1	0	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2
3-Jul	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	2.2	3.4
4-Jul	3	3	3	3	3	4	4	3	3	3	2	2	2	2	1	1	1	2	2	3	4	6	7	8	3.2	8.0
5-Jul	10	12	10	11	14	12	11	9	8	7	6	5	4	2	2	1	1	2	3	4	4	6	7	9	6.7	14.2
6-Jul	9	10	10	9	9	9	8	8	8	7	5	3	3	2	2	1	1	1	1	1	1	1	1	0	4.5	10.3
7-Jul	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8
8-Jul	0	0	0	0	0	0	0	0	1	1	1	1	1	1	2	2	2	2	2	2	2	3	4	4	1.3	4.4
9-Jul	6	7	7	7	6	6	4	3	2	2	1	1	1	1	1	1	1	1	1	2	2	3	4	4	3.1	6.9
10-Jul	4	4	5	6	6	7	7	8	6	5	3	2	2	2	2	2	2	3	4	4	5	4	5	4	4.3	7.7
11-Jul	5	5	4	3	2	2	2	2	2	2	2	1	2	2	3	3	4	5	4	3	4	3	5	4	3.1	5.3
12-Jul	3	3	3	3	3	3	4	6	6	4	3	3	3	4	3	4	4	6	6	6	7	7	8	7	4.5	7.9
13-Jul	7	9	8	8	6	6	7	5	3	3	3	2	1	1	2	1	1	2	2	2	2	1	1	2	3.5	9.5
14-Jul	3	3	2	2	3	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	3	4	4	1.7	3.9
15-Jul	3	3	3	3	3	4	4	3	3	3	3	2	1	1	1	1	1	1	2	3	4	8	8	8	3.3	8.5
16-Jul	7	6	6	7	6	6	10	7	5	3	2	2	3	2	3	3	5	5	6	5	9	9	11	10	5.7	10.6
17-Jul	12	12	10	11	11	10	9	12	5	4	4	4	3	2	2	2	2	2	3	8	11	11	10	10	7.1	11.9
18-Jul	9	4	3	4	3	5	4	5	5	4	4	3	3	5	5	3	3	2	2	2	2	4	4	3	3.8	8.7
19-Jul	4	6	6	5	5	5	4	5	6	3	2	2	2	2	2	2	4	10	9	7	6	5	6	5	4.7	9.8
20-Jul	5	6	5	5	8	10	8	2	1	1	1	1	1	2	2	1	2	2	4	2	2	1	1	2	3.1	10.1
21-Jul	3	P	P	P	P	P	P	P	P	P	P	13	12	14	14	14	14	13	12	11	11	10	10	9	--	13.7
22-Jul	9	9	8	8	7	7	6	6	6	7	6	5	5	4	4	4	5	5	5	5	5	5	5	4	5.8	8.9
23-Jul	5	5	5	5	5	4	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	16	17	18	--	17.7
24-Jul	18	19	21	13	6	5	5	4	4	4	4	3	2	2	2	3	3	3	4	6	8	10	10	11	7.0	21.1
25-Jul	12	13	13	13	13	13	12	9	10	13	12	12	12	11	13	14	15	16	18	20	22	22	20	16	14.3	21.6
26-Jul	14	13	14	14	15	14	17	14	N	N	N	N	N	13	10	9	9	9	10	N	N	N	N	17	--	17.4
27-Jul	18	17	17	17	17	17	17	15	15	16	15	14	13	N	12	12	12	12	12	N	16	17	18	19	15.3	18.7
28-Jul	18	19	19	17	19	20	20	19	18	17	16	N	14	12	12	12	13	12	12	N	N	16	17	17	16.1	20.1
29-Jul	19	20	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	19.7
30-Jul	N	N	17	17	16	16	15	12	N	N	N	N	N	5	20	31	N	N	N	N	N	N	N	N	--	30.7
31-Jul	N	N	13	8	3	2	1	1	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1.7	12.7
7.1 7.5 7.4 6.9 6.6 6.6 6.6 5.8 4.8 4.3 3.9 3.4 3.6 3.5 4.3 4.6 3.9 4.4 4.6 4.0 5.0 6.3 6.6 6.9																								Diurnal Average		
19.1 19.7 21.1 17.2 18.8 20.1 19.9 18.7 18.0 16.7 16.0 13.6 13.7 13.6 20.3 30.7 15.3 16.0 17.6 20.0 21.5 21.6 19.6 18.7																								Diurnal Maximum		
P - Power Failure N - Not Valid																										
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																										

Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Beaverlodge - July 2018



Hourly Maximums

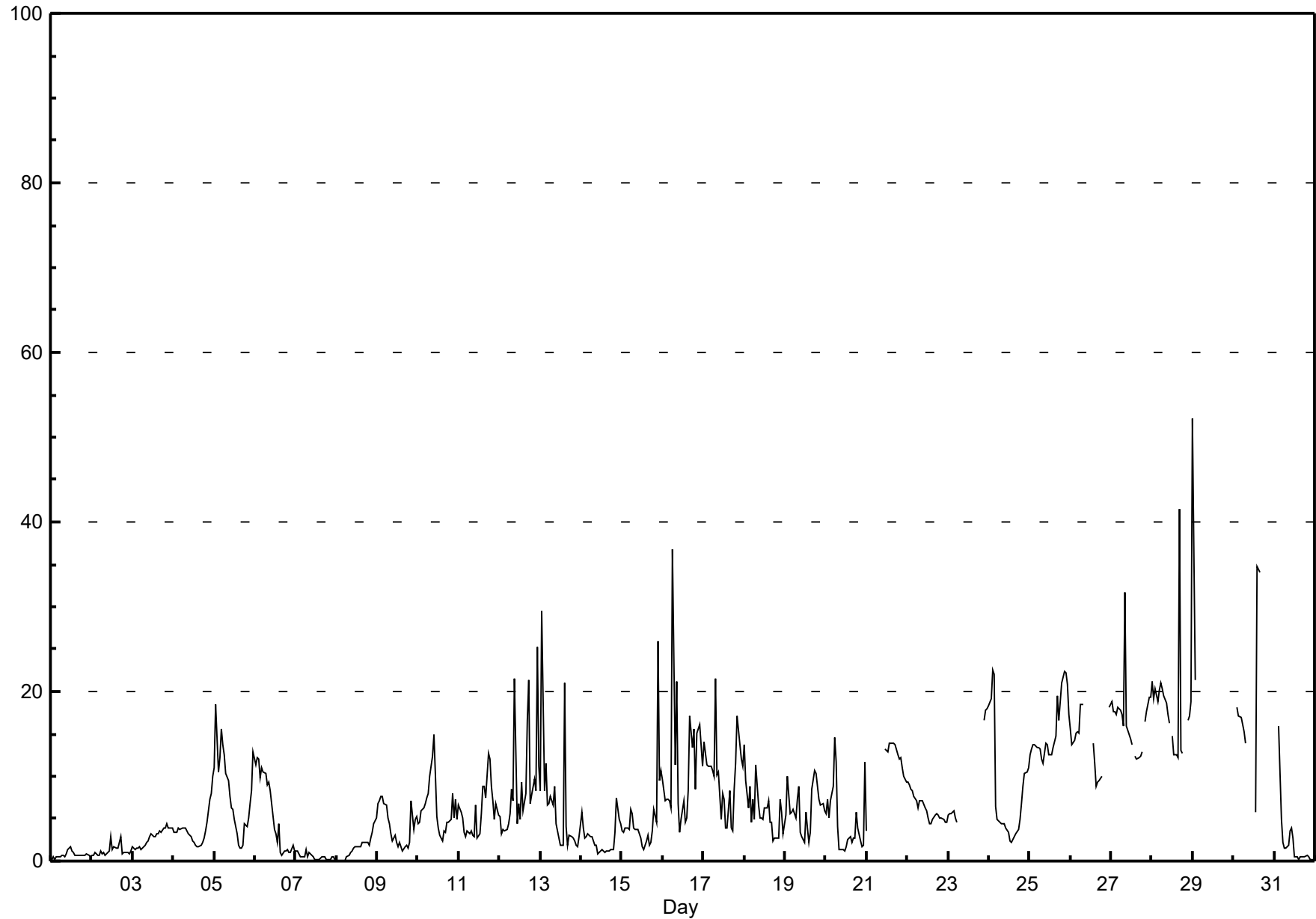
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Beaverlodge - July 2018

Maximum Value: 52.1 μg/m³ on Jul 29 01:00																				Maximum Daily Average: 18.3 μg/m³ on Jul 28										Hours in Service: 744	
Minimum Value: 0 μg/m³ on Jul 8 01:00																				Minimum Daily Average: 0.5 μg/m³ on Jul 7										Hours of Data: 666	
Maximum Diurnal Average: 9.5 μg/m³ at hour 1																				Minimum Diurnal Average: 4.5 μg/m³ at hour 14										Hours of Missing Data: 78	
Monthly Average: 6.97 μg/m³																				Percentiles: P ₁ = 0.2 P ₁₀ = 0.9 Q ₁ = 2.2 Median = 4.9 Q ₃ = 10.3 P ₉₀ = 16.0 P ₉₉ = 27.2										Hours of Calibration: 0	
																				Percent Operational Time: 89.5											
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	1	1	0	1	1	2	1	1	1	1	1	1	1	1	1	1	1	0	0.7	1.6					
2-Jul	1	1	1	1	1	1	1	1	1	1	1	3	1	2	1	1	2	3	1	1	1	1	1	1	1.2	2.9					
3-Jul	2	1	1	1	2	1	1	2	2	2	3	3	3	3	3	3	4	3	4	4	4	4	4	4	2.7	4.4					
4-Jul	3	3	3	4	4	4	4	4	4	3	3	2	2	2	2	2	2	2	3	4	5	7	8	10	3.7	10.0					
5-Jul	11	19	10	12	16	14	12	10	9	8	6	6	5	3	2	1	1	2	4	4	5	7	8	13	7.9	18.6					
6-Jul	11	12	12	10	11	10	10	9	9	8	7	4	3	2	4	1	1	1	1	1	1	1	2	1	5.6	12.2					
7-Jul	1	1	1	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.4					
8-Jul	0	0	0	0	0	0	0	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3	4	5	1.6	5.1					
9-Jul	7	7	8	8	7	7	5	4	3	2	3	2	2	2	2	1	2	2	1	2	7	4	5	5	4.1	7.6					
10-Jul	4	5	6	6	7	8	8	10	12	15	10	5	4	3	2	4	3	5	5	5	8	5	7	5	6.3	14.9					
11-Jul	7	6	5	3	3	4	3	4	3	3	7	3	3	6	9	9	7	13	12	9	7	5	7	5	5.9	12.7					
12-Jul	5	3	4	4	4	4	6	9	7	22	4	7	5	9	6	8	17	21	7	8	10	8	25	11	8.9	25.2					
13-Jul	8	30	8	11	7	7	8	7	9	4	4	3	2	2	21	4	2	3	3	3	2	2	2	3	6.4	29.6					
14-Jul	6	4	3	3	3	3	3	2	2	2	1	1	1	1	1	1	1	1	1	1	3	8	5	4	2.6	7.5					
15-Jul	4	3	4	4	4	6	6	4	4	4	3	3	2	1	2	3	2	2	4	6	5	26	10	11	5.0	26.0					
16-Jul	10	7	7	7	7	6	37	11	21	7	3	5	7	5	5	8	17	13	16	9	15	16	16	11	11.1	36.7					
17-Jul	14	13	11	11	11	11	10	22	10	10	5	8	7	4	4	8	4	4	9	11	17	14	12	11	10.1	21.5					
18-Jul	14	10	6	9	5	7	5	11	7	5	5	5	6	6	7	5	5	2	3	3	3	7	6	3	6.0	13.7					
19-Jul	5	10	8	6	6	6	5	7	9	3	3	2	6	4	2	3	9	11	10	9	7	7	7	6	6.3	10.8					
20-Jul	6	7	5	7	9	15	12	4	1	1	1	1	2	2	3	2	3	3	6	4	2	2	2	12	4.7	14.6					
21-Jul	4	P	P	P	P	P	P	P	P	P	P	13	13	14	14	14	14	14	12	12	12	11	10	9	--	13.9					
22-Jul	9	9	9	8	8	7	6	7	7	7	6	6	5	4	4	5	5	6	5	5	5	5	5	5	6.2	9.3					
23-Jul	5	6	6	6	5	5	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	17	18	18	--	17.9					
24-Jul	18	19	22	22	6	5	5	4	4	4	4	3	2	2	2	3	3	4	5	7	9	10	10	11	7.8	22.5					
25-Jul	12	13	14	14	13	13	13	12	11	14	14	12	12	12	13	15	20	17	19	21	22	22	21	17	15.3	22.3					
26-Jul	16	14	14	15	15	15	19	19	N	N	N	N	N	14	11	9	9	10	10	N	N	N	N	18	--	18.6					
27-Jul	19	18	18	17	18	18	17	16	32	16	15	14	14	N	12	12	12	12	13	N	16	18	19	19	16.7	31.8					
28-Jul	21	19	20	19	20	21	20	20	19	17	16	N	15	12	12	12	42	13	13	N	N	17	17	19	18.3	41.6					
29-Jul	52	21	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	52.1					
30-Jul	N	N	18	17	17	16	15	14	N	N	N	N	N	N	6	35	34	N	N	N	N	N	N	N	--	34.8					
31-Jul	N	N	16	10	5	2	1	1	2	4	4	3	0	0	0	0	0	0	0	1	0	0	0	0	2.4	15.9					
9.5 9.3 8.3 8.2 7.3 7.5 8.4 7.7 7.4 6.4 5.1 4.6 4.7 4.5 6.4 6.0 6.8 6.1 6.1 5.3 6.6 8.1 8.3 8.3																									Diurnal Average						
52.1 29.6 22.5 22.1 20.1 21.0 36.7 21.5 31.8 21.5 16.4 14.4 14.7 13.9 34.8 34.0 41.6 21.3 18.8 21.0 22.3 26.0 25.2 19.3																									Diurnal Maximum						
P - Power Failure N - Not Valid																															

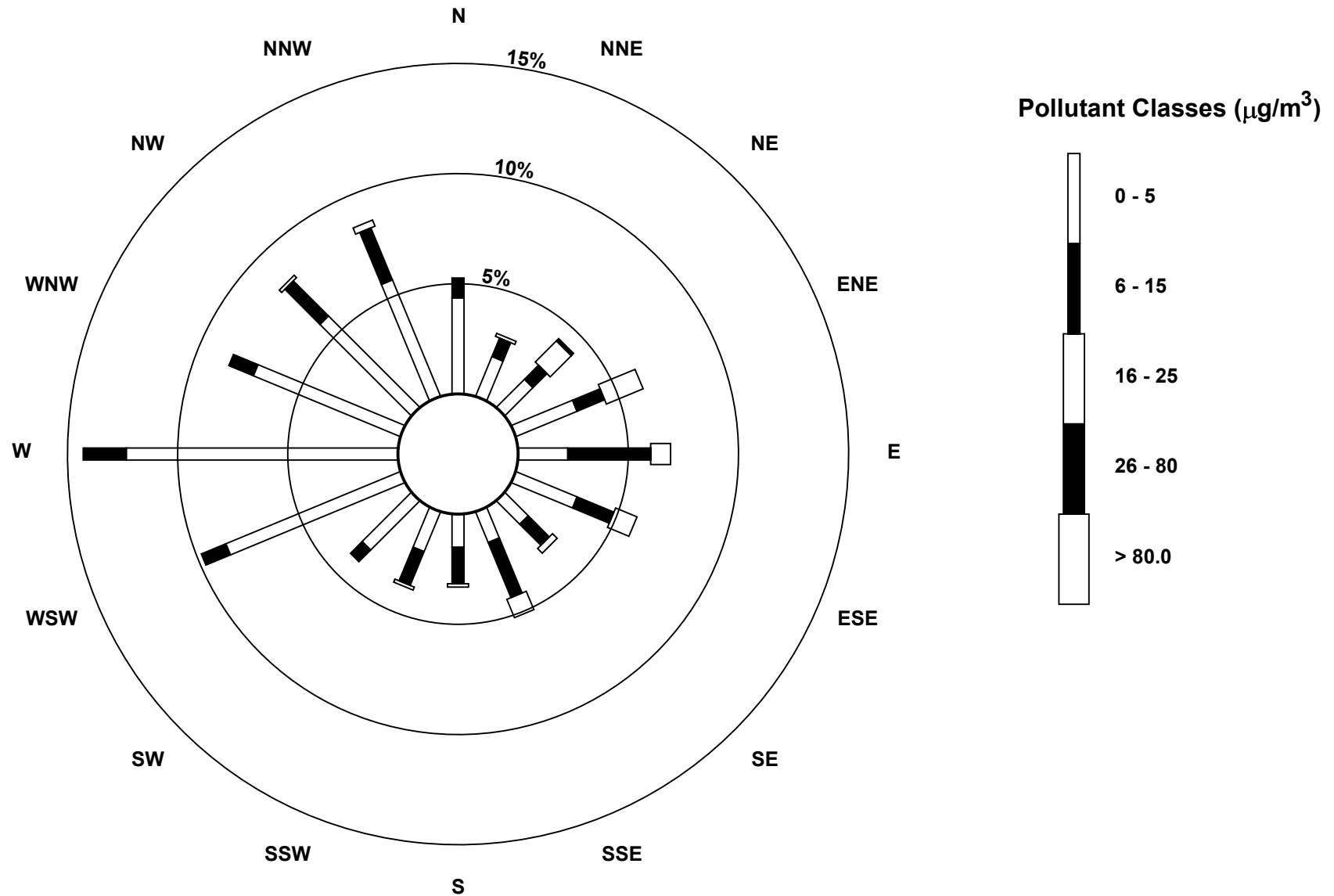
Hourly Maximums

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Beaverlodge - July 2018



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Beaverlodge - July 2018



Hourly Averages

External Temperature (ET) - °C

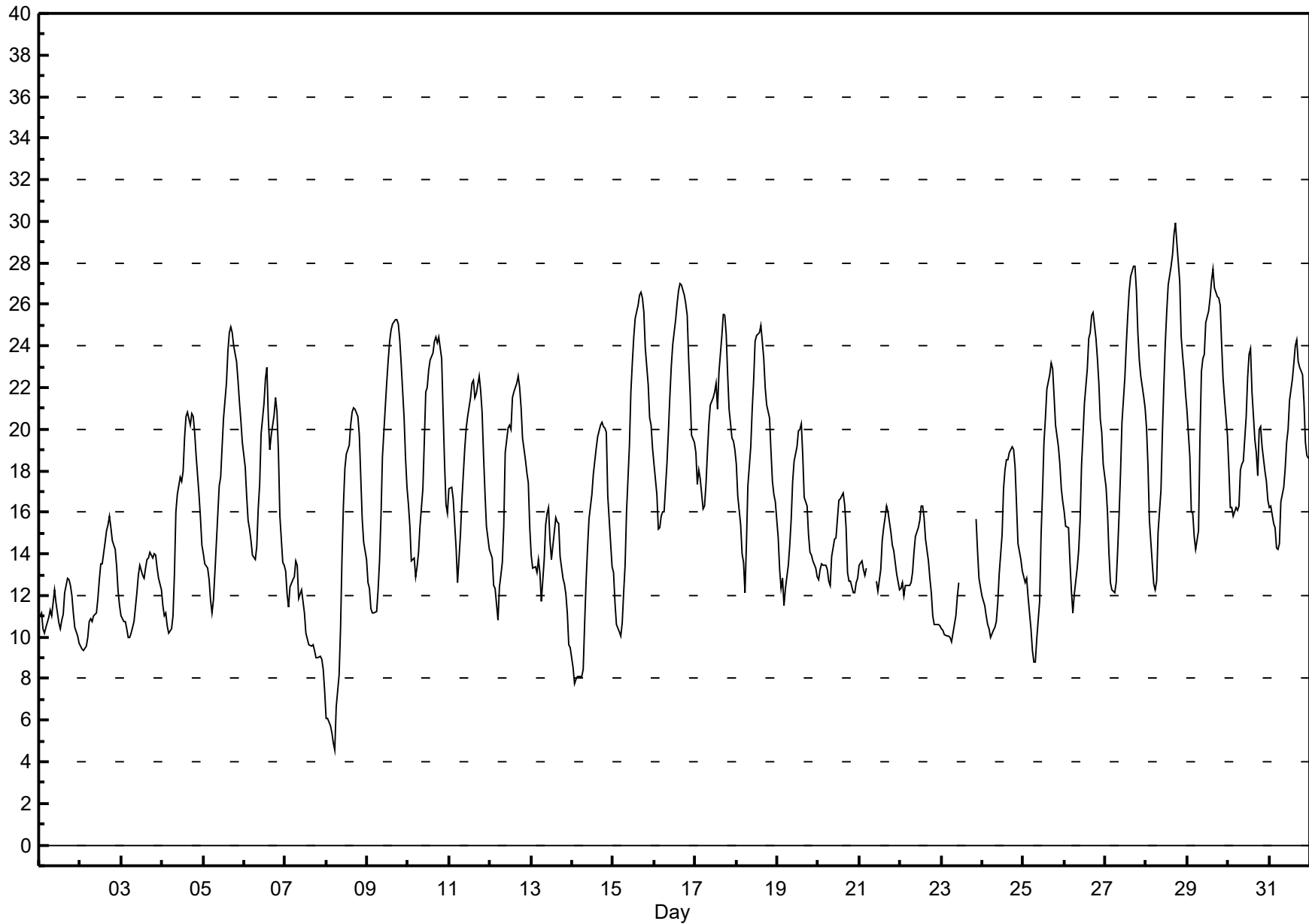
Beaverlodge - July 2018

Maximum Value: 29.9 °C on Jul 28 18:00																				Maximum Daily Average: 22.1 °C on Jul 29					Hours in Service: 744	
Minimum Value: 5 °C on Jul 8 06:00																				Minimum Daily Average: 10.8 °C on Jul 7					Hours of Data: 730	
Maximum Diurnal Average: 20.9 °C at hour 17																				Minimum Diurnal Average: 11.9 °C at hour 6					Hours of Missing Data: 14	
Monthly Average: 16.64 °C																				Percentiles: P ₁ = 7.5 P ₁₀ = 10.6 Q ₁ = 12.7 Median = 15.9 Q ₃ = 20.5 P ₉₀ = 24.0 P ₉₉ = 27.6					Hours of Calibration: 0	
																									Percent Operational Time: 98.1	
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	11	11	10	10	10	11	11	11	12	12	12	11	10	11	11	12	13	13	12	12	11	10	10	10	11.2	12.8
2-Jul	10	9	9	10	10	11	11	11	11	11	12	13	13	14	15	15	15	16	15	15	14	13	12	11	12.3	15.8
3-Jul	11	11	11	10	10	10	10	11	11	12	13	13	13	13	13	14	14	14	14	14	14	13	13	12	12.3	14.1
4-Jul	12	11	11	11	10	10	11	13	16	17	18	17	18	20	21	21	20	21	21	20	19	17	16	14	16.0	20.9
5-Jul	14	14	13	13	12	11	12	13	16	17	18	19	21	22	24	25	25	25	24	23	22	21	20	19	18.5	24.9
6-Jul	18	17	16	15	15	14	14	14	16	17	20	21	22	23	21	19	20	21	21	21	19	16	14	13	17.8	23.0
7-Jul	13	12	11	12	13	13	14	13	12	12	12	11	10	10	10	10	10	9	9	9	9	9	8	7	10.8	13.7
8-Jul	6	6	6	5	5	5	7	8	10	14	16	18	19	19	20	21	21	21	21	20	18	16	15	14	13.7	21.0
9-Jul	13	12	11	11	11	11	12	14	16	19	21	22	23	24	25	25	25	25	25	24	23	21	19	17	18.8	25.3
10-Jul	16	15	14	14	13	13	14	15	17	19	22	22	23	23	24	24	24	24	24	23	21	18	16	16	19.1	24.4
11-Jul	17	17	17	15	14	13	15	17	18	19	20	21	22	22	22	22	22	23	22	21	19	17	15	14	18.4	22.5
12-Jul	14	14	13	12	11	12	13	14	15	19	20	20	20	22	22	22	23	22	21	20	19	18	17	15	17.4	22.6
13-Jul	14	13	13	13	14	13	12	14	15	16	16	15	14	15	16	16	15	14	13	13	12	11	10	10	13.6	16.2
14-Jul	9	8	8	8	8	8	8	11	13	14	16	17	18	18	19	20	20	20	20	20	20	17	14	13	14.5	20.4
15-Jul	13	12	11	10	10	11	12	13	16	19	22	23	24	25	26	26	27	26	26	24	22	21	20	19	19.1	26.6
16-Jul	18	17	15	15	16	16	16	18	20	22	23	24	25	26	27	27	27	26	26	25	23	22	20	19	21.4	27.0
17-Jul	19	17	18	18	16	16	17	19	20	21	22	22	22	21	23	25	26	25	25	23	21	20	19	19	20.5	25.6
18-Jul	18	17	15	14	14	12	15	17	19	21	22	24	24	25	25	24	23	22	21	21	19	18	17	16	19.3	25.0
19-Jul	15	13	12	13	12	12	13	14	16	17	18	19	20	20	20	19	17	16	15	14	14	14	13	13	15.4	20.2
20-Jul	13	13	14	13	13	13	13	12	14	15	15	16	17	17	17	16	15	13	13	13	12	12	13	13	13.9	16.9
21-Jul	13	14	13	13	13	P	P	P	P	P	13	12	13	15	15	16	16	16	15	14	14	14	13	12	14.0	16.3
22-Jul	12	13	12	13	12	12	13	13	14	15	15	16	16	16	16	15	14	13	12	11	11	11	11	11	13.1	16.3
23-Jul	10	10	10	10	10	10	10	10	11	12	13	P	P	P	P	P	P	P	P	P	16	14	13	12	--	15.7
24-Jul	12	11	11	11	10	10	10	10	11	12	13	15	17	18	19	19	19	19	19	18	16	15	14	13	14.2	19.2
25-Jul	13	13	13	12	10	9	9	9	10	12	15	17	19	21	22	23	23	23	22	20	19	18	17	17	16.0	23.2
26-Jul	16	15	15	14	12	11	12	13	14	16	18	20	21	23	24	25	25	26	24	23	22	20	20	18	18.7	25.6
27-Jul	17	16	14	13	12	12	13	14	16	18	20	23	24	25	27	27	28	28	27	25	23	23	22	21	20.3	27.9
28-Jul	20	18	16	14	13	12	13	15	17	20	22	24	26	27	28	28	29	30	29	27	24	24	23	22	21.7	29.9
29-Jul	21	19	16	16	15	14	15	20	23	23	24	25	26	26	27	28	27	26	26	26	24	22	21	20	22.1	27.7
30-Jul	18	16	16	16	16	16	16	18	18	18	21	22	24	24	22	19	19	18	20	20	19	18	17	17	18.7	23.9
31-Jul	16	16	16	15	14	14	14	17	17	18	19	20	21	22	23	24	24	23	23	23	21	19	19	19	19.2	24.3
14.3 13.6 12.9 12.5 12.1 11.9 12.5 13.7 15.2 16.6 17.7 18.7 19.5 20.2 20.7 20.8 20.9 20.6 20.2 19.4 18.1 16.8 15.8 15.1																									Diurnal Average	
20.9 18.6 18.0 17.6 16.2 16.3 17.3 19.6 22.7 23.4 23.6 25.1 25.7 26.9 27.8 28.4 29.4 29.9 28.9 27.1 24.4 23.6 22.8 21.8																									Diurnal Maximum	
P - Power Failure																										

Hourly Averages

External Temperature (ET) - °C

Beaverlodge - July 2018



Hourly Averages

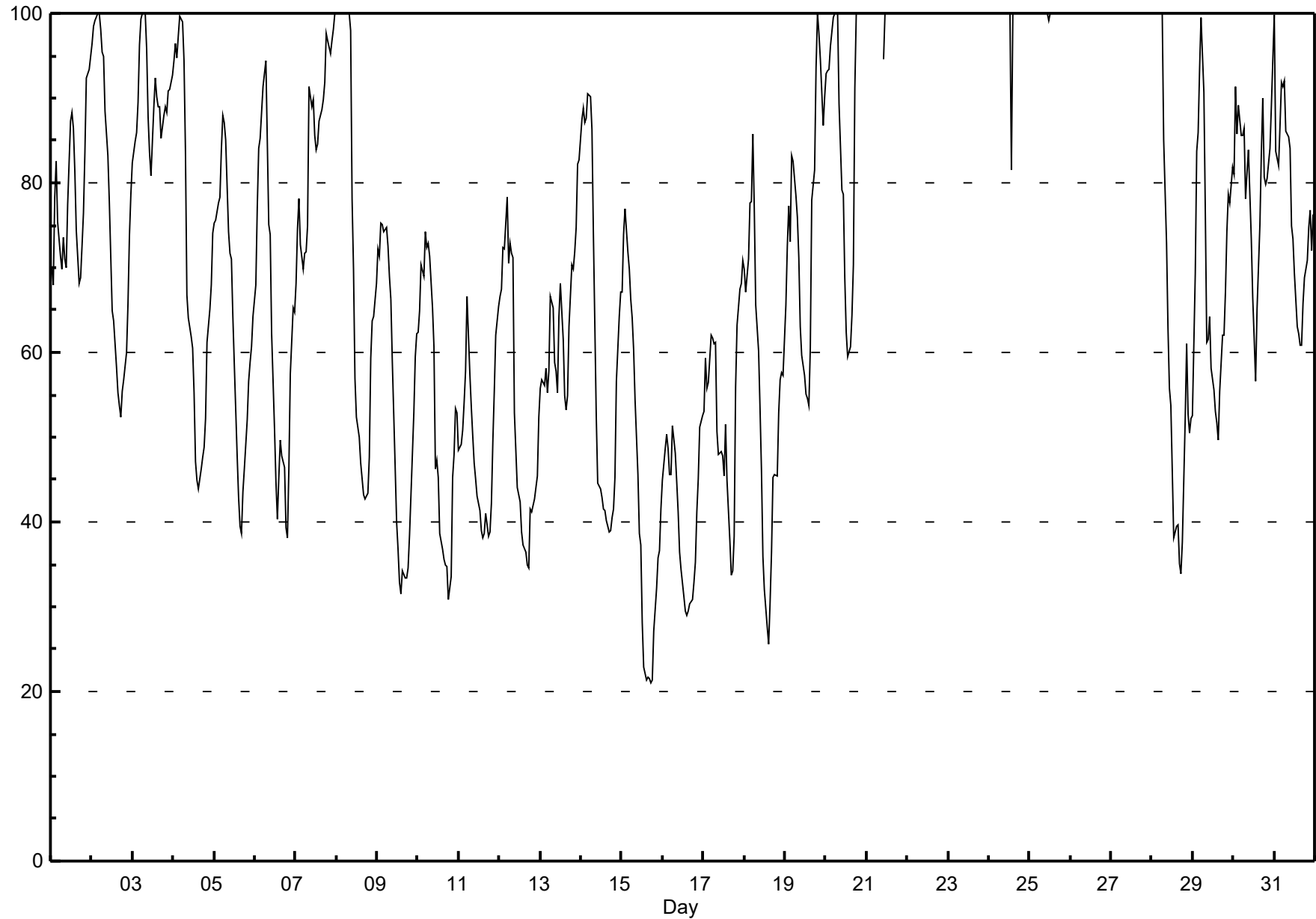
Relative Humidity (RH) - %

Beaverlodge - July 2018

Maximum Value: 100.0 % on Jul 2 04:00																						Maximum Daily Average: 100.0 % on Jul 22										Hours in Service: 744	
Minimum Value: 21 % on Jul 15 18:00																						Minimum Daily Average: 40.8 % on Jul 16										Hours of Data: 730	
Maximum Diurnal Average: 85.6 % at hour 6																						Minimum Diurnal Average: 59.7 % at hour 15										Hours of Missing Data: 14	
Monthly Average: 72.97 %																						Percentiles: P ₁ = 27.3 P ₁₀ = 40.4 Q ₁ = 53.8 Median = 73.8 Q ₃ = 99.7 P ₉₀ = 100.0 P ₉₉ = 100.0										Hours of Calibration: 0	
																						Percent Operational Time: 98.1											
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	70	68	78	82	75	71	70	74	71	70	77	87	88	86	81	74	68	69	72	76	84	92	93	95	78.1	95.0							
2-Jul	96	99	99	100	100	98	95	95	88	83	78	71	65	64	58	55	54	52	55	57	60	66	74	79	76.7	100.0							
3-Jul	82	85	86	89	96	99	100	100	96	88	84	81	89	92	90	89	89	85	88	89	88	91	91	93	90.0	100.0							
4-Jul	94	96	95	97	100	99	94	84	67	64	62	61	55	47	45	44	46	48	49	52	61	65	68	74	69.5	99.7							
5-Jul	75	76	78	78	84	88	87	85	74	72	71	64	59	48	43	40	39	44	46	52	57	59	61	64	64.2	87.9							
6-Jul	68	77	84	85	88	91	94	85	75	74	62	51	45	40	45	50	48	46	39	38	46	57	65	65	63.4	94.3							
7-Jul	68	75	78	73	70	72	72	75	91	89	90	86	84	85	87	89	90	92	98	97	95	97	98	100	85.3	100.0							
8-Jul	100	100	100	100	100	100	100	100	98	78	70	57	52	50	47	45	43	43	43	48	59	64	64	68	72.1	100.0							
9-Jul	72	71	75	75	74	75	73	69	66	59	46	40	37	33	31	34	33	33	35	38	43	53	59	62	53.7	75.3							
10-Jul	62	65	70	69	74	72	73	71	65	61	46	47	45	39	37	36	35	35	31	34	45	48	53	53	52.8	74.2							
11-Jul	49	49	51	54	58	67	57	54	50	47	45	43	41	39	38	39	41	38	39	42	49	55	62	65	48.9	66.6							
12-Jul	67	67	72	72	78	71	73	72	71	53	44	43	42	39	37	36	35	35	42	41	43	44	45	52	53.1	78.4							
13-Jul	56	57	56	58	55	58	67	65	59	58	55	64	68	62	55	53	55	63	70	70	72	75	82	83	63.1	82.7							
14-Jul	87	89	87	88	90	90	86	74	63	52	45	44	43	42	41	40	39	39	40	42	45	57	64	67	60.6	90.5							
15-Jul	67	74	77	72	70	66	64	60	54	46	39	37	28	23	21	22	22	21	21	27	32	36	37	41	44.1	77.0							
16-Jul	45	49	50	49	46	46	51	48	45	41	36	34	31	29	29	30	30	31	33	35	41	45	51	53	40.8	52.6							
17-Jul	53	59	56	57	62	62	61	61	51	48	48	48	45	52	45	38	34	34	38	56	63	67	68	71	53.2	70.9							
18-Jul	70	67	71	78	78	86	77	66	60	53	46	36	32	28	26	30	36	45	46	45	53	57	58	57	54.2	85.8							
19-Jul	66	72	77	73	83	83	78	76	71	63	60	57	55	55	54	60	78	81	94	100	98	95	87	90	75.2	99.9							
20-Jul	93	93	93	96	99	100	100	100	89	79	79	69	62	59	61	64	70	91	100	100	100	100	100	100	100	87.5	100.0						
21-Jul	100	100	100	100	100	P	P	P	P	P	95	100	100	100	100	100	100	100	100	100	100	100	100	100	99.7	100.0							
22-Jul	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100.0	100.0							
23-Jul	100	100	100	100	100	100	100	100	100	100	100	P	P	P	P	P	P	P	P	P	100	100	100	100	--	100.0							
24-Jul	100	100	100	100	100	100	100	100	100	100	100	100	100	82	100	100	100	100	100	100	100	100	100	100	99.2	100.0							
25-Jul	100	100	100	100	100	100	100	100	100	100	100	99	100	100	100	100	100	100	100	100	100	100	100	100	100.0	100.0							
26-Jul	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100.0	100.0							
27-Jul	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100.0	100.0							
28-Jul	100	100	100	100	100	100	100	85	73	63	56	54	46	38	39	40	35	34	38	52	61	53	51	52	65.4	100.0							
29-Jul	53	69	84	86	93	100	91	76	61	62	64	58	56	53	52	50	55	62	62	67	74	79	78	82	69.4	99.6							
30-Jul	81	91	86	89	86	86	86	78	81	84	73	66	62	57	65	75	83	90	81	80	80	84	89	95	80.4	94.6							
31-Jul	100	84	82	87	92	91	92	86	85	84	75	73	69	63	62	61	61	66	69	71	75	77	72	76	77.2	99.8							
79.8 81.7 83.4 84.1 85.6 85.6 84.8 81.3 76.9 72.3 69.2 65.7 63.4 60.1 59.7 59.8 60.7 62.6 64.3 67.0 71.8 74.6 76.5 78.6																									Diurnal Average								
100.0 100.0																									Diurnal Maximum								
P - Power Failure																																	

Hourly Averages

Relative Humidity (RH) - %
Beaverlodge - July 2018



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Beaverlodge - July 2018

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	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	29	28	21	26	29	32	35	31	29	28	29	29	30	30	30	31	32	32	35	29	29	29	30	30	28.6	35.4	
Dir	249	278	299	223	260	269	273	274	279	292	298	275	273	264	269	269	280	292	287	285	303	298	292	289	278	273	
2 Spd	30	30	30	30	30	35	32	29	29	29	28	28	27	27	27	25	25	26	29	25	26	24	28	25	25.1	34.6	
Dir	285	292	299	296	312	344	345	346	353	352	355	343	355	336	344	340	353	1	24	2	353	351	38	332	341	344	
3 Spd	29	29	29	30	30	34	35	29	28	28	26	25	26	27	27	27	29	34	29	27	28	28	26	27.2	35.5		
Dir	319	321	317	322	319	326	321	332	335	358	356	357	10	3	1	347	330	342	316	307	308	318	328	349	333	321	
4 Spd	28	9	27	25	27	30	36	27	9	17	12	18	17	4	11	5	17	15	20	25	29	26	27	28	7.4	35.5	
Dir	39	338	359	294	317	319	323	2	131	165	144	31	267	344	123	100	61	107	119	150	102	76	75	80	44	323	
5 Spd	28	29	29	29	11	27	26	23	13	20	21	16	7	11	14	13	17	19	20	21	15	14	25	17	13.8	28.8	
Dir	82	86	81	96	160	221	187	142	153	165	194	110	148	158	164	141	119	118	120	112	137	163	103	351	129	81	
6 Spd	20	19	19	19	26	17	14	11	20	22	23	26	26	27	35	35	26	25	28	32	24	26	28	28	17.0	35.4	
Dir	360	330	21	327	306	219	115	161	206	192	220	239	266	272	253	239	226	217	246	259	246	240	233	255	249	253	
7 Spd	21	21	33	30	30	29	30	32	29	30	29	29	30	35	34	31	30	31	31	30	31	30	28	32	22.9	35.5	
Dir	223	234	214	225	238	249	256	279	294	290	312	325	330	332	314	306	279	270	240	247	243	257	202	196	266	332	
8 Spd	33	21	22	33	29	18	19	29	29	28	28	31	27	23	24	24	24	23	24	24	25	28	24	28	12.6	33.5	
Dir	75	206	83	67	102	61	131	187	211	227	243	272	273	260	249	242	255	245	242	242	244	253	234	206	227	67	
9 Spd	34	36	29	31	32	31	30	29	25	25	27	29	28	33	30	24	26	24	23	21	21	20	23	27	16.0	36.0	
Dir	149	160	136	168	166	168	197	205	188	225	246	262	259	268	264	247	255	259	267	277	263	202	70	65	214	160	
10 Spd	28	29	24	32	19	30	19	22	24	24	25	26	26	27	29	27	29	25	23	23	23	26	28	29	8.9	31.8	
Dir	63	59	104	84	121	65	139	121	187	217	255	240	239	267	273	262	268	273	292	282	258	251	245	243	241	84	
11 Spd	29	28	28	28	30	35	36	28	29	28	28	29	28	31	35	33	30	32	32	31	31	27	28	23	29.1	35.5	
Dir	249	257	252	234	236	227	243	249	259	264	268	270	268	264	259	254	249	256	259	260	242	240	237	222	251	243	
12 Spd	30	30	11	22	18	19	17	29	30	30	28	29	27	27	26	26	26	27	22	26	27	28	33	32	19.4	32.6	
Dir	252	255	316	226	74	312	170	175	159	242	270	277	283	276	260	261	263	262	314	284	285	281	266	276	262	266	
13 Spd	30	29	31	30	29	27	24	29	27	27	27	32	31	25	25	25	25	25	26	29	30	30	32	36	25.6	35.8	
Dir	291	264	279	273	269	301	328	319	321	315	321	342	340	345	357	320	329	354	299	287	291	295	297	299	309	299	
14 Spd	38	34	33	33	32	31	33	31	29	28	29	31	28	23	22	21	20	21	21	21	10	24	29	29	17.5	38.5	
Dir	299	302	292	286	297	286	279	292	287	287	295	306	303	302	331	339	354	344	13	27	73	148	108	94	309	299	
15 Spd	34	37	32	31	30	31	28	27	25	22	20	19	20	23	24	25	26	26	25	23	24	14	24	24	10.5	37.3	
Dir	98	125	111	141	127	131	142	160	168	209	242	296	286	272	269	268	265	263	256	271	273	264	252	230	209	125	
16 Spd	20	13	11	15	27	25	24	26	25	27	31	31	33	34	35	33	37	35	27	24	22	23	18	26	20.9	36.7	
Dir	194	194	225	309	323	317	290	256	256	262	275	269	261	268	261	250	259	262	254	252	249	236	197	81	261	259	
17 Spd	19	12	13	10	24	4	11	24	23	23	22	22	23	23	24	24	22	21	20	24	28	28	25	12	8.3	27.6	
Dir	211	94	275	349	125	216	241	257	257	268	275	264	264	264	262	280	284	279	267	174	103	78	127	81	248	78	
18 Spd	21	24	27	26	29	25	29	24	24	26	25	28	32	32	29	23	25	23	23	25	24	26	25	32	15.0	32.3	
Dir	343	10	343	306	280	55	54	230	206	216	282	260	268	259	253	290	303	325	326	327	1	353	30	6	311	268	
19 Spd	19	24	16	28	30	29	30	13	19	24	21	22	27	26	24	25	28	19	23	29	27	34	16	30	16.5	33.8	
Dir	328	257	39	337	348	40	53	122	123	95	96	83	78	60	73	81	61	10	356	329	37	57	32	54	45	57	
20 Spd	32	36	33	30	25	29	29	29	28	27	27	27	26	28	32	25	27	28	30	30	30	30	29	29	10.5	36.2	
Dir	59	69	80	75	90	149	183	216	291	254	253	285	299	312	321	348	16	5	318	309	272	289	321	340	324	69	
21 Spd	30	32	33	34	30	P	P	P	P	P	P	32	29	28	27	26	26	26	27	17	7	29	18	35	20.9	35.2	
Dir	31	47	20	358	46	P	P	P	P	P	P	43	36	344	344	339	347	334	337	306	286	297	281	319	296	351	296
22 Spd	29	28	23	31	30	30	29	29	27	23	22	23	30	30	27	26	24	29	29	30	31	31	30	32	23.1	31.7	
Dir	330	322	324	318	311	313	323	331	334	319	338	24	73	65	57	34	330	12	357	343	6	11	353	342	350	342	

Hourly Averages

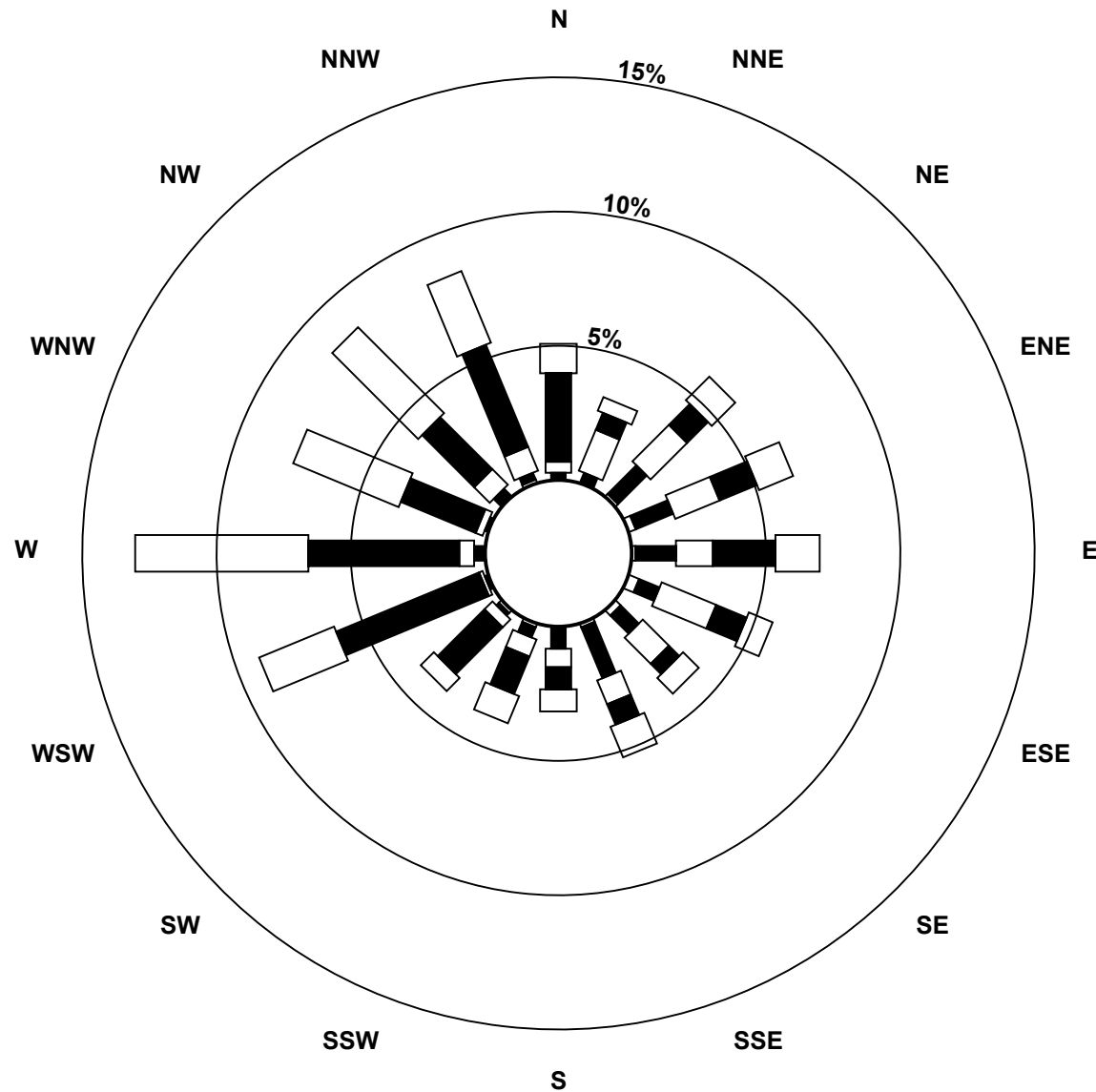
Wind Speed (km/h)
Wind Direction (deg)
Beaverlodge - July 2018

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	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	36	36	32	32	32	32	32	30	31	30	29	P	P	P	P	P	P	P	P	P	29	29	30	30	--	36.4
Dir	348	326	312	318	325	325	325	332	335	341	324	P	P	P	P	P	P	P	P	P	53	79	85	109	--	348
24 Spd	29	28	30	31	30	31	31	35	32	29	27	25	24	30	34	N	21	21	22	23	24	27	28	28	19.0	34.8
Dir	111	108	146	198	209	236	166	172	172	197	195	171	178	183	105	N	84	86	85	87	89	95	94	96	145	172
25 Spd	29	31	37	14	13	25	10	24	13	16	11	8	18	25	29	17	6	8	11	9	10	11	17	13	10.5	36.6
Dir	96	97	98	272	122	118	276	306	335	63	25	50	92	150	129	101	96	113	102	76	53	59	70	95	93	98
26 Spd	12	11	13	8	15	15	10	12	13	14	13	15	14	7	6	6	4	5	8	8	8	11	13	13	3.5	15.3
Dir	99	86	73	100	140	85	48	33	307	234	208	226	202	213	343	7	116	197	184	196	140	69	76	69	117	140
27 Spd	16	9	16	12	18	16	16	14	13	11	9	8	8	6	8	8	5	5	8	8	9	11	12	13	6.8	17.9
Dir	51	95	117	151	60	62	70	169	186	190	187	169	173	166	143	121	146	120	104	93	57	44	51	59	106	60
28 Spd	11	10	8	14	13	17	10	13	12	10	9	8	7	6	6	6	5	6	3	6	8	10	11	8	6.5	16.8
Dir	70	198	147	128	44	80	110	97	153	164	165	162	152	163	154	149	159	74	59	131	81	71	64	52	114	80
29 Spd	12	5	7	11	9	15	20	4	11	13	13	14	13	11	10	5	10	8	11	13	11	11	8	16	7.5	20.5
Dir	52	131	52	40	45	109	53	57	93	126	141	112	127	145	158	51	69	137	172	157	132	78	89	348	99	53
30 Spd	16	14	11	10	15	15	15	15	12	21	14	8	9	12	18	14	20	15	14	12	10	13	20	17	10.6	20.9
Dir	9	257	311	20	347	328	26	12	319	307	326	326	19	36	38	37	37	50	39	25	83	69	46	47	14	307
31 Spd	15	17	17	10	13	11	10	5	14	13	11	15	19	18	15	12	11	10	10	11	12	15	16	16	7.8	18.8
Dir	23	49	55	55	46	270	271	102	175	181	150	117	102	106	114	90	96	84	51	45	33	25	25	25	72	102
Spd	6.2	2.6	4.6	5.2	4.5	5.0	4.3	7.1	8.6	11.1	11.1	10.1	9.9	10.3	8.6	9.9	9.6	9.0	10.0	9.7	5.4	4.8	3.3	5.6	Diurnal Average	
Dir	13	327	14	301	312	304	283	255	250	254	277	292	290	287	290	295	303	307	299	288	308	315	14	357	Diurnal Maximum	
Spd	38.5	37.3	36.6	34.4	32.5	34.6	35.5	34.8	31.5	30.2	31.7	32.3	32.7	35.5	35.4	35.0	36.7	35.4	34.6	32.0	31.4	33.8	32.6	35.8	Diurnal Maximum	
Dir	299	125	98	358	297	227	243	172	172	242	43	342	261	332	253	239	259	262	287	259	242	57	266	299		
Maximum Speed Value: 38 km/h on Jul 14 01:00																								Hours in Service: 744		
Maximum Daily Speed Average: 29.1 km/h on Jul 11																								Hours of Data: 729		
Maximum Diurnal Speed Average: 11.1 km/h at hour 10																								Hours of Missing Data: 15		
Minimum Speed Value: 3 km/h on Jul 28 19:00																										
Minimum Daily Speed Average: 3.5 km/h on Jul 28																										
Minimum Diurnal Speed Average: 2.6 km/h at hour 2																										
Monthly Average Velocity: 6.35 km/h 296.3 deg																								Percent Operational Time: 98.0		
Speed Percentiles: P ₁ = 4.9 P ₁₀ = 10.6 Q ₁ = 16.7 Median = 25.5 Q ₃ = 29.3 P ₉₀ = 31.6 P ₉₉ = 35.9																										
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	1	6	7	37	27	0	78																			
NorthEast	3	12	33	14	19	0	81																			
East	1	17	29	24	27	0	98																			
SouthEast	4	13	24	14	9	0	64																			
South	1	15	14	15	16	0	61																			
SouthWest	1	1	7	37	23	0	69																			
West	0	2	7	67	88	0	164																			
NorthWest	0	2	12	42	57	1	114																			
Total	11	68	133	250	266	1	729																			

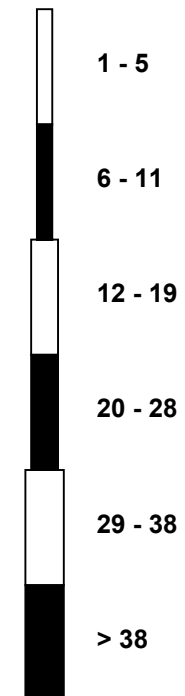
Wind Rose

Wind Speed (WS) (km/h)

Beaverlodge - July 2018



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Beaverlodge - July 2018

Maximum Speed: 43 km/h on Jul 24 14:00																						Maximum Daily Speed Average: 31.6 km/h on Jul 7						Hours in Service: 744	
Minimum Speed: 4 km/h on Jul 28 19:00																						Minimum Daily Speed Average: 11.3 km/h on Jul 28						Hours of Data: 729	
Maximum Diurnal Speed Average: 28.8 km/h at hour 5																						Minimum Diurnal Speed Average: 22.7 km/h at hour 18						Hours of Missing Data: 15	
Monthly Average Speed: 25.75 km/h																						Percentiles: P ₁ = 7.0 P ₁₀ = 13.0 Q ₁ = 22.8 Median = 28.0 Q ₃ = 30.6 P ₉₀ = 32.9 P ₉₉ = 37.1						Percent Operational Time: 98.0	
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	29	29	30	30	30	32	36	31	30	29	29	30	30	30	31	33	32	35	30	29	30	30	30	30	30.6	35.7			
2-Jul	30	30	30	30	31	36	32	30	30	30	29	29	28	28	28	27	26	30	32	27	27	28	29	29	29.4	35.6			
3-Jul	29	29	29	30	30	34	36	29	29	28	28	27	28	28	28	28	30	34	29	27	28	28	29	29.3	35.6				
4-Jul	29	30	30	30	31	32	36	30	26	24	23	23	23	21	19	19	21	21	21	26	30	26	27	28	26.1	35.9			
5-Jul	28	29	29	29	30	30	29	27	31	29	23	22	20	19	17	18	18	20	20	21	22	25	31	30	24.8	30.9			
6-Jul	27	26	27	27	28	28	28	28	26	24	23	27	28	27	36	35	27	26	28	32	25	27	29	30	27.8	36.2			
7-Jul	31	37	34	30	30	30	30	32	30	30	30	30	31	37	34	31	31	31	31	31	31	31	33	34	31.6	36.6			
8-Jul	40	36	34	34	35	35	33	32	30	28	30	32	27	24	24	25	24	24	24	24	25	28	29	30	29.5	39.7			
9-Jul	37	37	32	33	33	32	30	29	27	26	28	30	29	34	31	25	27	25	23	21	22	24	27	28	28.7	36.8			
10-Jul	29	29	34	37	31	30	29	28	26	25	26	26	26	28	30	28	29	26	23	24	23	26	28	29	28.0	37.0			
11-Jul	29	28	28	29	30	35	36	28	29	29	29	30	29	32	36	33	31	32	32	32	32	27	28	30	30.5	35.7			
12-Jul	30	31	31	32	32	32	30	30	34	31	29	29	27	28	27	27	27	27	23	26	27	28	33	33	29.3	33.6			
13-Jul	30	31	31	31	30	30	30	29	28	27	28	33	32	26	27	26	26	28	29	29	30	31	32	36	29.5	35.9			
14-Jul	39	34	33	33	33	33	33	31	30	29	29	32	29	24	24	23	23	23	23	23	24	27	30	31	28.9	38.8			
15-Jul	35	38	33	33	33	33	31	29	27	25	23	21	22	26	26	25	27	26	25	23	24	25	26	26	27.5	38.4			
16-Jul	27	28	32	36	32	29	28	27	25	27	31	32	33	35	36	33	37	36	27	24	22	24	26	27	29.8	37.1			
17-Jul	27	28	28	28	29	31	34	30	25	24	23	23	23	24	25	24	23	22	21	25	31	28	26	26	26.1	34.0			
18-Jul	27	27	29	30	31	31	30	27	26	30	28	29	33	33	30	25	26	24	24	25	25	28	30	35	28.4	35.4			
19-Jul	33	30	31	32	31	31	30	29	27	26	24	24	29	27	25	26	28	28	29	29	30	34	31	30	28.9	33.8			
20-Jul	32	36	33	30	30	30	30	30	30	28	28	28	27	28	33	30	28	30	30	30	31	31	31	31	30.1	36.3			
21-Jul	32	32	36	37	30	P	P	P	P	P	34	37	30	29	28	28	27	28	28	29	29	30	30	36	31.1	37.2			
22-Jul	37	31	31	31	31	31	30	30	29	28	27	28	32	31	28	29	30	30	31	31	32	32	32	32	30.5	36.8			
23-Jul	37	36	32	32	32	32	33	32	32	31	30	P	P	P	P	P	P	P	P	P	30	30	31	31	--	37.4			
24-Jul	32	32	32	32	32	33	34	38	33	31	29	28	36	43	36	N	22	21	22	23	24	27	28	29	30.2	42.8			
25-Jul	29	31	37	30	31	31	31	31	29	27	24	13	26	27	34	21	7	8	11	9	10	11	17	18	22.6	36.7			
26-Jul	13	13	14	14	18	16	16	16	14	16	14	16	15	9	9	9	7	6	8	8	9	11	13	14	12.4	17.9			
27-Jul	16	20	18	16	19	17	16	15	14	12	10	9	8	7	9	8	6	6	8	8	9	11	12	13	12.0	20.5			
28-Jul	13	14	15	22	25	17	16	15	13	10	9	8	8	7	7	7	7	8	4	6	8	10	11	11	11.3	25.4			
29-Jul	12	12	14	14	17	20	23	13	12	13	13	15	13	12	10	9	11	9	11	14	13	12	14	18	13.5	22.6			
30-Jul	17	15	16	16	19	16	16	16	17	22	15	12	11	13	18	15	20	16	14	13	13	15	20	23	16.2	23.0			
31-Jul	17	17	18	18	20	18	18	16	14	14	13	15	19	18	15	13	12	11	10	11	12	15	16	16	15.3	20.3			
28.1 28.3 28.4 28.6 28.8 28.8 28.8 26.9 25.8 25.0 24.4 24.5 25.0 25.1 25.3 23.3 22.9 22.7 22.8 22.8 23.4 24.5 26.1 27.2																									Diurnal Average				
39.7 38.4 36.7 37.2 34.9 35.6 35.9 38.2 33.6 31.3 34.0 36.7 35.8 42.8 36.3 35.2 37.1 35.9 34.8 32.1 32.2 33.8 33.1 35.9																									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 2018

Maximum Value: 92.8 deg on Jul 17 06:00																		Hours in Service: 744							
Minimum Value: 1.4 deg on Jul 19 22:00																		Hours of Data: 730							
																		Hours of Missing Data: 14							
Percentiles: P ₁ = 2.6 P ₁₀ = 6.0 Q ₁ = 9.6 Median = 15.8 Q ₃ = 28.6 P ₉₀ = 52.3 P ₉₉ = 80.5																		Hours of Calibration: 0							
																		Percent Operational Time: 98.1							
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	5	16	47	42	15	4	8	5	5	7	7	9	7	6	5	5	8	6	5	5	8	9	4	4	47.3
2-Jul	4	6	5	4	11	14	12	11	12	14	15	10	18	11	16	18	19	30	26	22	17	29	13	31	30.8
3-Jul	6	5	6	7	6	6	5	10	15	14	17	22	20	17	18	15	13	16	10	5	4	7	4	23	23.2
4-Jul	19	81	25	40	33	23	9	28	76	52	65	38	46	87	61	80	36	47	20	16	14	7	6	5	87.1
5-Jul	6	5	7	14	69	26	26	36	75	51	25	47	80	61	44	49	21	9	7	7	51	57	38	60	80.0
6-Jul	42	48	47	52	19	56	63	68	42	27	15	10	20	10	12	7	9	6	10	5	6	11	10	22	68.2
7-Jul	52	64	12	6	3	6	7	9	7	6	18	13	10	14	7	7	12	11	10	14	8	20	34	19	64.5
8-Jul	43	56	55	9	36	70	56	26	20	12	16	12	8	17	13	13	11	11	5	4	4	4	37	25	69.8
9-Jul	24	11	26	21	8	15	10	7	23	12	11	11	11	10	11	12	12	9	8	10	12	36	32	11	35.9
10-Jul	11	7	46	34	54	9	50	39	23	14	15	9	13	14	10	11	12	21	13	8	9	5	2	8	53.6
11-Jul	8	5	6	13	9	6	6	7	7	11	13	11	12	13	10	10	11	7	6	8	5	6	7	46	46.1
12-Jul	6	10	72	49	68	59	60	14	26	16	13	11	10	20	16	13	11	11	16	5	4	4	10	8	72.1
13-Jul	5	20	7	11	9	24	45	8	15	11	13	15	10	21	21	12	10	23	26	8	6	6	5	5	45.4
14-Jul	7	4	7	8	9	16	8	7	10	10	12	15	15	17	22	26	29	25	28	25	74	25	15	17	74.3
15-Jul	16	14	11	20	23	20	28	18	23	28	28	23	23	28	19	11	12	13	7	8	5	69	19	26	68.6
16-Jul	46	66	81	73	35	34	31	8	7	8	9	12	10	11	10	10	8	10	7	8	4	17	46	14	80.6
17-Jul	52	68	70	73	34	93	84	36	21	10	14	15	11	15	13	10	11	13	15	13	27	11	21	76	92.8
18-Jul	37	27	18	30	29	40	12	30	22	29	26	12	11	12	14	24	16	11	11	12	18	20	33	26	39.7
19-Jul	70	37	68	29	20	22	2	63	47	23	26	26	20	13	16	9	6	48	37	11	26	1	68	7	69.7
20-Jul	4	3	6	7	32	8	17	14	18	16	17	12	13	11	11	34	18	20	10	8	14	12	19	18	33.6
21-Jul	19	12	23	23	13	P	P	P	P	P	22	39	14	12	13	17	20	17	16	66	83	15	57	9	83.4
22-Jul	39	29	46	4	9	12	16	17	23	37	37	37	19	13	12	28	39	19	20	14	15	18	18	8	45.6
23-Jul	13	9	8	8	8	9	8	21	13	14	10	P	P	P	P	P	P	P	P	P	8	18	13	18	20.6
24-Jul	24	28	22	15	22	20	23	25	18	20	20	25	71	48	28	24	8	6	4	3	3	3	3	2	70.9
25-Jul	3	2	3	79	75	47	85	42	66	61	68	46	58	22	46	69	42	16	13	9	9	9	12	47	85.3
26-Jul	22	36	5	59	32	27	60	54	29	32	17	18	16	46	56	46	56	43	6	5	33	8	9	20	59.7
27-Jul	7	70	32	41	17	8	18	21	20	16	30	20	20	31	37	27	35	43	13	12	10	6	5	8	69.6
28-Jul	36	50	60	51	69	13	52	26	24	20	13	13	23	24	34	19	48	40	43	21	8	9	9	43	69.4
29-Jul	7	74	74	50	69	41	27	88	21	12	13	16	14	13	18	66	24	26	6	24	29	17	54	26	88.1
30-Jul	18	28	50	52	36	23	19	19	49	15	27	49	46	23	16	13	13	17	7	18	42	32	9	57	56.7
31-Jul	27	7	11	68	60	63	61	80	18	22	30	14	11	14	16	24	21	17	14	9	12	2	1	2	79.7
69.7 81.2 80.6 79.4 74.7 92.8 85.3 88.1 76.0 61.1 68.4 48.8 80.0 87.1 60.7 79.6 56.3 47.7 43.1 66.1 83.4 68.6 68.4 75.5																									
P - Power Failure																									

PAZA
Valleyview Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

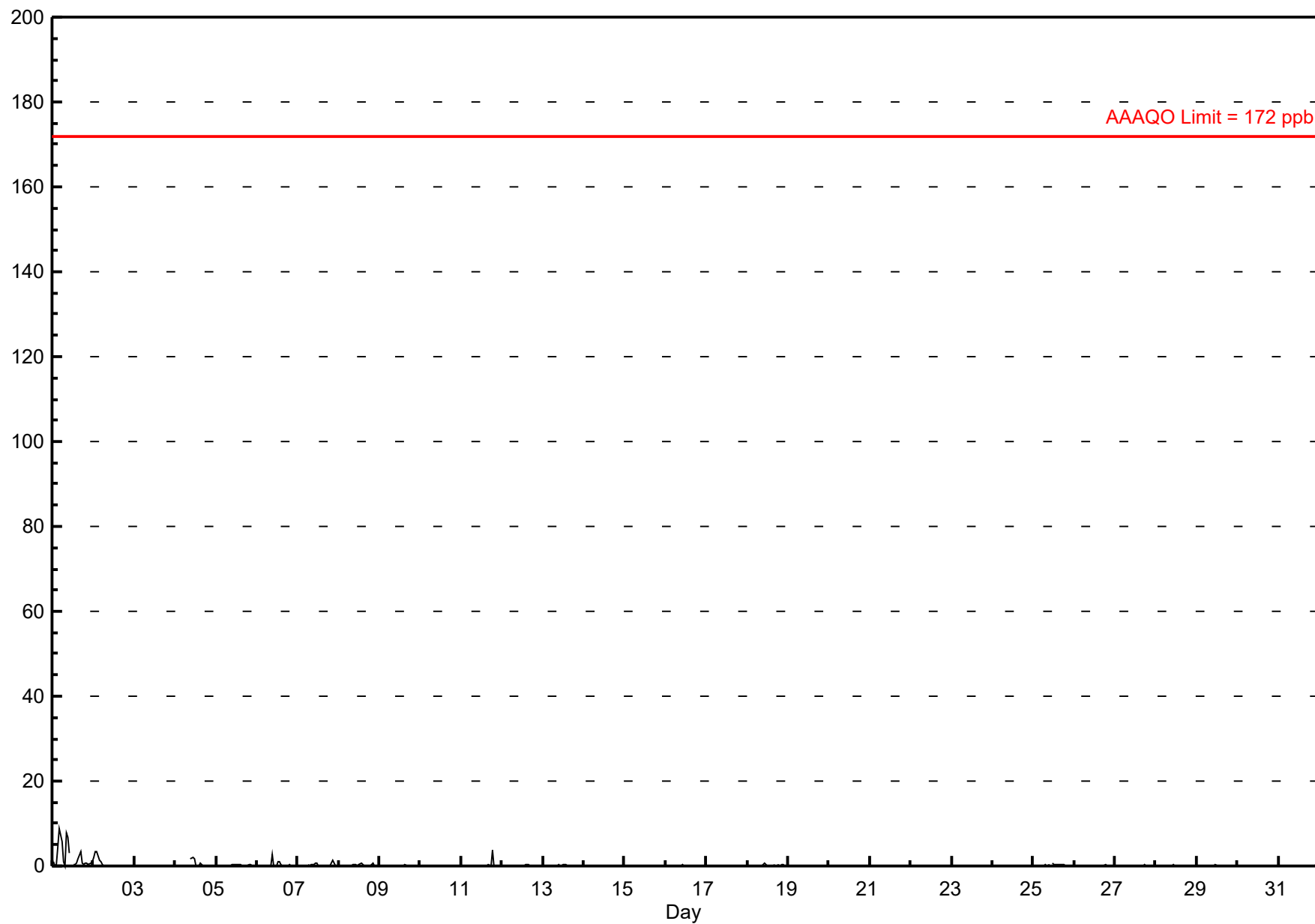
Sulphur Dioxide (SO₂) - ppb

Valleyview - July 2018

Number of Exceedences (AAAQO):										1-hr: 0 24-hr: 0										Hours in Service: 744									
Maximum Value: 8.7 ppb on Jul 1 05:00										Maximum Daily Average: 2.2 ppb on Jul 1										Hours of Data: 696									
Minimum Value: 0 ppb on Jul 2 16:00										Minimum Daily Average: 0.0 ppb on Jul 17										Hours of Missing Data: 48									
Maximum Diurnal Average: 0.5 ppb at hour 10										Minimum Diurnal Average: 0.0 ppb at hour 8										Hours of Calibration: 36									
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 = 0.2 P ₉₉ = 3.4										Percent Operational Time: 98.4									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Jul	1	0	0	5	9	6	1	0	8	7	3	A	0	0	1	2	3	1	0	1	1	0	1	1	2.2	8.7			
2-Jul	2	3	4	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	3.5			
3-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	0.0			
4-Jul	0	0	0	0	0	0	0	0	A	2	2	2	0	0	0	1	0	0	0	0	0	0	0	0	0.3	2.1			
5-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			
6-Jul	0	0	0	0	0	0	A	0	0	3	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0.3	2.7			
7-Jul	0	0	0	0	0	A	0	0	0	1	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0.2	1.4			
8-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0.2	0.8			
9-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			
10-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			
11-Jul	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0.2	3.8			
12-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.2			
13-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	0.2			
14-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			
15-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			
16-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	0.2			
17-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			
18-Jul	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	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	0.1	0.1			
20-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	P	P	P	P	P	P	P	--	0.2			
21-Jul	P	P	P	P	P	0	0	0	0	0	0	0	0	0	A	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	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.0	0.1			
23-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	0.2			
24-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			
25-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	0.5			
26-Jul	0	0	0	0	0	0	0	0	0	A	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0.0	0.2			
27-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			
28-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			
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	0.1	0.2			
30-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			
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	0.0	0.3			
		0.1	0.1	0.2	0.2	0.4	0.2	0.1	0.0	0.3	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1		Diurnal Average			
		2.1	3.4	3.5	4.6	8.7	5.8	0.9	0.2	7.9	6.7	2.9	1.7	1.1	1.2	0.7	1.9	3.4	0.6	3.8	0.7	1.4	0.7	0.6	1.1	Diurnal Maximum			
C - Calibration		P - Power Failure						A - Automated Daily Zero Span																					
Alberta Ambient Air Quality Objectives (AAAQO):		1-hr 172 ppb						24-hr 48 ppb				30-day 11 ppb																	

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Valleyview - July 2018



Hourly Maximums

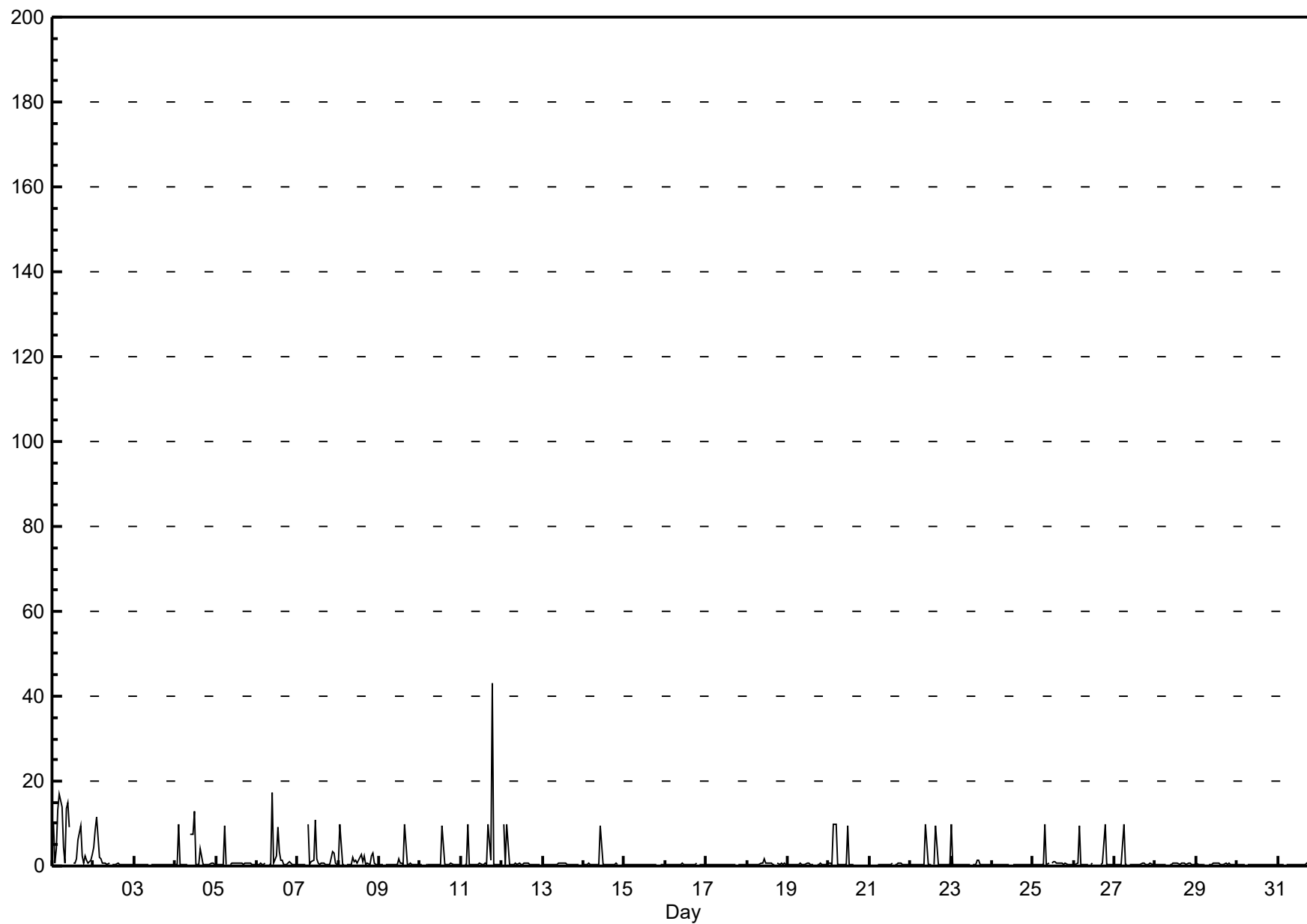
Sulphur Dioxide (SO₂) - ppb

Valleyview - July 2018

Maximum Value: 43.2 ppb on Jul 11 19:00																				Maximum Daily Average: 5.7 ppb on Jul 1										Hours in Service: 744	
Minimum Value: 0 ppb on Jul 15 04:00																				Minimum Daily Average: 0.3 ppb on Jul 17										Hours of Data: 696	
Maximum Diurnal Average: 2.2 ppb at hour 19																				Minimum Diurnal Average: 0.5 ppb at hour 24										Hours of Missing Data: 48	
Monthly Average: 1.13 ppb																				Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.3 Median = 0.4 Q ₃ = 0.5 P ₉₀ = 1.3 P ₉₉ = 12.8										Hours of Calibration: 36	
																														Percent Operational Time: 98.4	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Jul	10	1	4	13	17	14	4	1	14	15	9	A	1	1	2	6	9	2	1	2	1	1	1	3	5.7	16.9					
2-Jul	4	8	11	2	2	1	1	1	0	1	A	0	0	0	1	0	0	0	0	0	0	0	0	0	1.6	11.4					
3-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	0.4	0.5					
4-Jul	0	0	10	0	0	0	0	0	A	8	7	13	0	0	0	4	0	0	0	0	0	1	1	0	2.1	12.8					
5-Jul	0	0	0	0	0	10	0	A	0	1	1	1	1	1	1	1	0	1	1	1	1	0	0	0	0.9	9.5					
6-Jul	0	0	1	0	0	1	A	0	0	17	1	2	9	3	1	1	0	0	1	1	1	0	0	0	1.9	17.3					
7-Jul	0	0	0	0	0	A	10	0	1	1	11	2	1	0	1	1	0	0	0	0	3	3	1	0	1.7	10.8					
8-Jul	0	10	0	0	A	0	0	0	2	1	1	1	1	3	1	2	0	1	0	2	3	1	0	0	1.4	9.8					
9-Jul	0	0	0	A	0	0	0	0	0	0	0	2	1	1	0	10	0	0	1	0	0	0	0	0	0.9	9.7					
10-Jul	0	0	A	0	0	0	0	0	0	0	0	0	0	10	0	0	0	1	1	0	0	0	0	0	0.8	9.6					
11-Jul	0	A	0	0	10	0	0	0	0	0	0	1	0	0	1	0	10	1	43	0	0	0	0	0	3.1	43.2					
12-Jul	A	10	0	10	0	0	0	0	1	0	1	0	0	1	1	1	0	0	0	0	0	0	0	A	1.3	9.9					
13-Jul	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	A	0	0.4	0.6					
14-Jul	0	0	0	1	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	1	0	A	0	0	0.8	9.6					
15-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	0.4					
16-Jul	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	A	0	0	0	0	0.4	0.6					
17-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	0.3	0.4					
18-Jul	0	0	0	0	0	0	0	0	1	1	2	1	1	1	1	0	0	A	1	0	1	0	1	0	0.5	1.8					
19-Jul	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	A	0	0	1	0	0	0	1	0.5	0.6					
20-Jul	1	1	0	10	10	0	0	0	0	0	0	10	0	0	0	A	0	P	P	P	P	P	P	P	--	9.9					
21-Jul	P	P	P	P	P	0	0	0	0	0	0	0	0	1	A	0	0	1	1	0	0	0	0	0	0.4	0.6					
22-Jul	0	0	0	0	0	0	0	0	1	10	0	0	0	A	0	9	0	0	0	0	0	0	0	0	1.2	9.7					
23-Jul	10	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0.8	9.7					
24-Jul	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	0	0	0	0	0	1	0	0	0.3	0.5					
25-Jul	0	0	0	0	1	0	0	10	0	1	A	1	1	1	1	1	1	1	0	1	0	0	0	0	1.0	10.0					
26-Jul	0	0	1	10	0	0	0	0	0	A	1	1	C	C	C	C	0	1	10	0	0	0	0	0	1.4	9.7					
27-Jul	0	0	0	0	0	10	0	0	A	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0.8	9.8					
28-Jul	0	0	0	0	0	0	0	A	0	0	1	1	1	1	0	1	1	1	0	1	1	1	0	0	0.5	0.8					
29-Jul	1	0	0	0	0	0	A	0	0	0	1	1	1	1	0	0	1	1	0	1	0	0	0	0	0.5	0.7					
30-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					
31-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	10	0	0.8	9.9					
																								Diurnal Average							
																								Diurnal Maximum							
C - Calibration																															
P - Power Failure																															
A - Automated Daily Zero Span																															

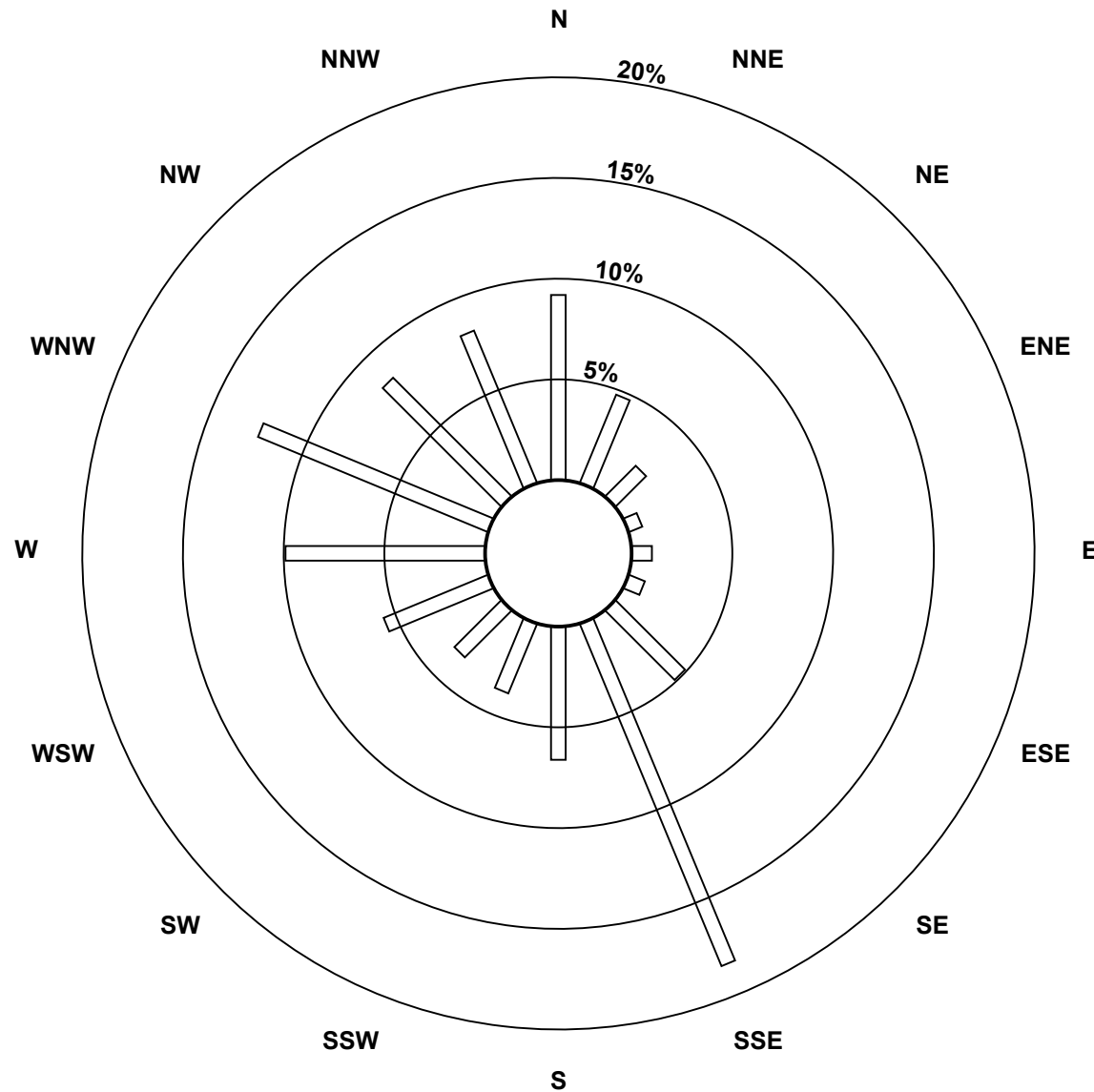
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Valleyview - July 2018

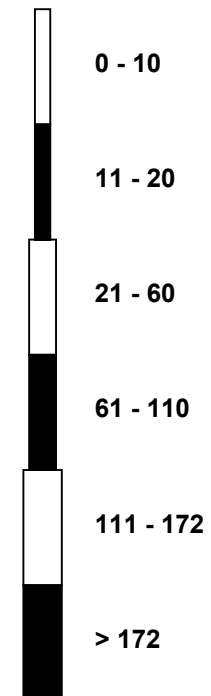


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Valleyview - July 2018

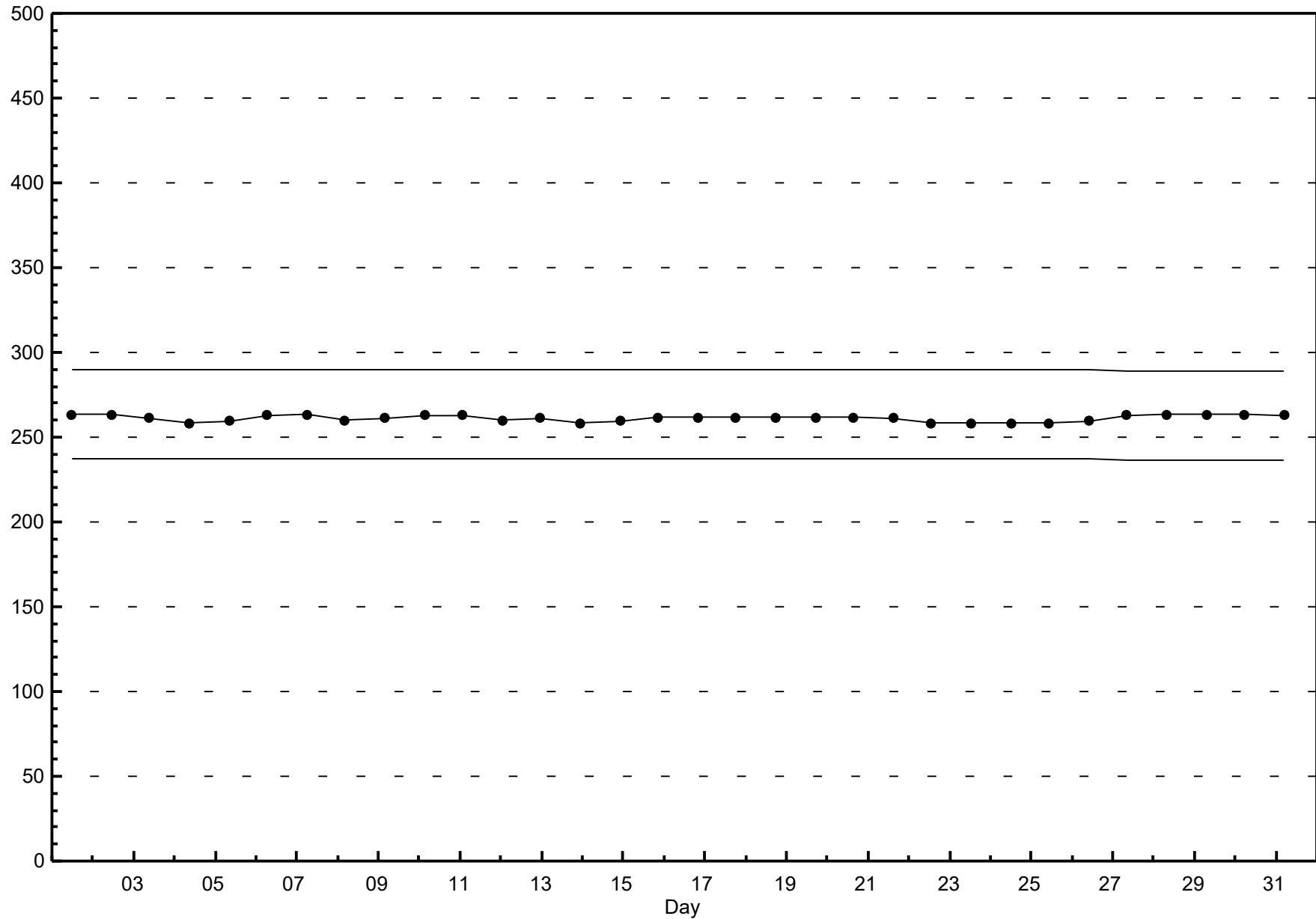


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Valleyview - July 2018



Hourly Averages

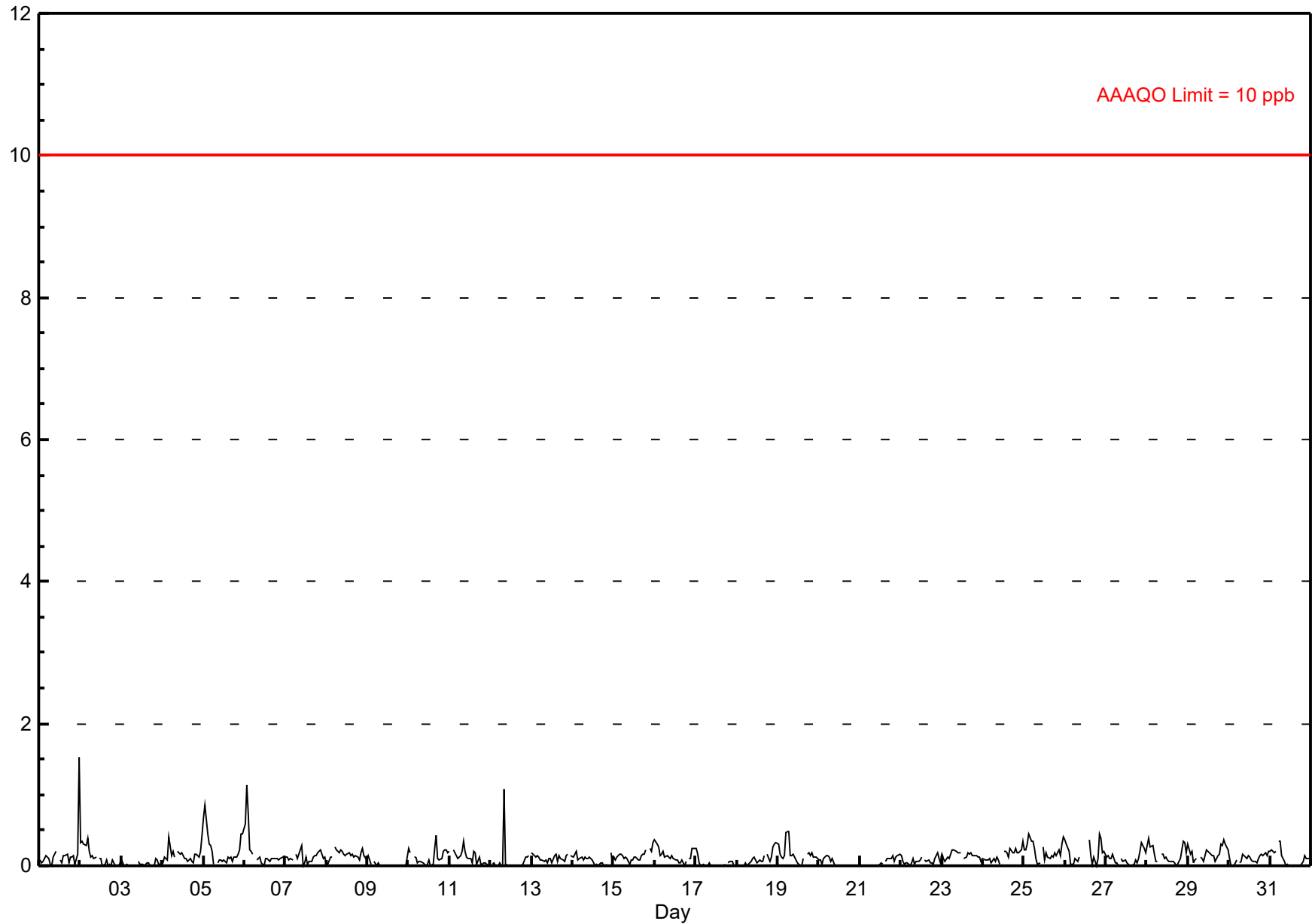
Hydrogen Sulphide (H₂S) - ppb

Valleyview - July 2018

Number of Exceedences (AAAQO): Maximum Value: 1.5 ppb on Jul 2 00:00																			1-hr: 0 24-hr: 0 Maximum Daily Average: 0.2 ppb on Jul 5					Hours in Service: 744 Hours of Data: 696 Hours of Missing Data: 48 Hours of Calibration: 36 Percent Operational Time: 98.4				
Minimum Value: 0 ppb on Jul 1 08:00 Maximum Diurnal Average: 0.2 ppb at hour 24 Monthly Average: 0.12 ppb																			Minimum Daily Average: 0.0 ppb on Jul 9 Minimum Diurnal Average: 0.1 ppb at hour 14 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									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	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	A	A	0	0	0	0	0	0	0	0	0	0	2	0.2	1.5		
2-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	0.4		
3-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	0.1		
4-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		
5-Jul	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9		
6-Jul	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1		
7-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		
8-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		
9-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		
10-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		
11-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	0.3		
12-Jul	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	1.1		
13-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	0.2		
14-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		
15-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		
16-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	0.1	0.4		
17-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	0.3		
18-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		
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	0.5		
20-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	P	P	P	P	P	P	P	--	0.2		
21-Jul	P	P	P	P	P	0	0	0	0	0	0	0	0	0	A	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	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.2		
23-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	0.1	0.2		
24-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		
25-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		
26-Jul	0	0	0	0	0	0	0	0	0	A	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0.2	0.4		
27-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		
28-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		
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	0.2	0.4		
30-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		
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	0.1	0.3		
0.2 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.2 0.2																									Diurnal Average			
0.7 1.1 0.7 0.4 0.4 0.5 0.5 0.2 1.1 0.3 0.2 0.3 0.2 0.2 0.4 0.2 0.4 0.2 0.2 0.3 0.4 0.4 0.4 1.5																									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 2018



Hourly Maximums

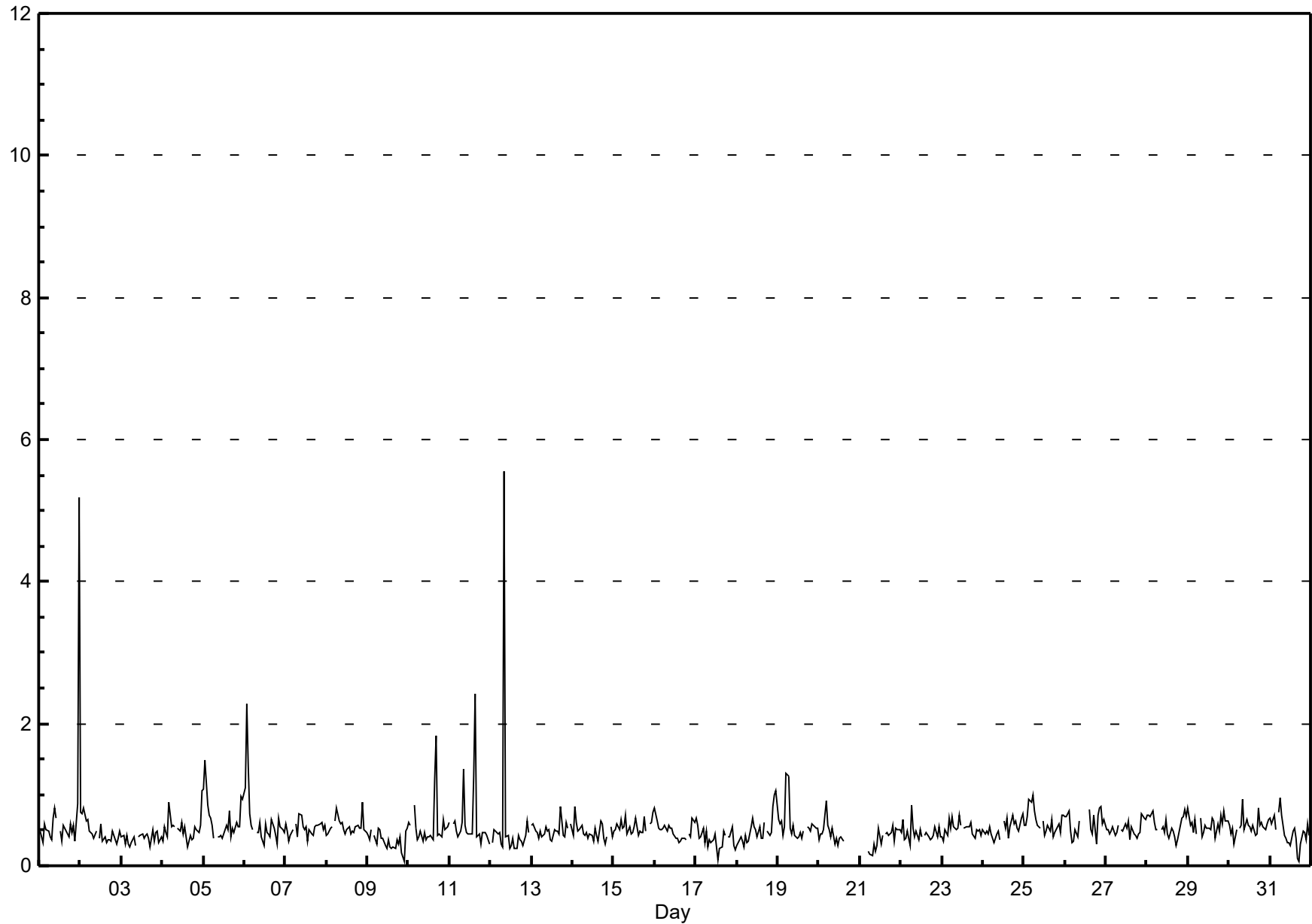
Hydrogen Sulphide (H₂S) - ppb

Valleyview - July 2018

Maximum Value: 5.6 ppb on Jul 12 09:00																			Maximum Daily Average: 0.7 ppb on Jul 1																			Hours in Service: 744	
Minimum Value: 0 ppb on Jul 31 18:00																			Minimum Daily Average: 0.4 ppb on Jul 9																			Hours of Data: 696	
Maximum Diurnal Average: 0.7 ppb at hour 24																			Minimum Diurnal Average: 0.4 ppb at hour 13																			Hours of Missing Data: 48	
Monthly Average: 0.53 ppb																			Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.6 P ₉₀ = 0.7 P ₉₉ = 1.4																			Hours of Calibration: 36	
																																						Percent Operational Time: 98.4	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Jul	0	0	0	1	1	0	0	0	1	1	1	A	0	0	1	1	0	0	1	0	1	0	1	5	0.7	5.2													
2-Jul	1	1	1	1	1	0	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0.5	0.8													
3-Jul	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0.4	0.5													
4-Jul	0	1	0	0	1	1	1	1	A	1	0	1	0	1	0	0	0	0	0	0	1	1	0	1	1	0.5	1.0												
5-Jul	1	1	1	1	1	1	0	A	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	1	1	0.6	1.5												
6-Jul	1	2	1	1	1	1	A	0	0	1	0	0	1	0	0	0	1	1	0	0	1	1	0	0	0.6	2.3													
7-Jul	1	0	0	0	1	A	1	0	1	1	1	1	1	0	1	0	0	1	1	1	1	1	1	1	1	0.5	0.7												
8-Jul	0	0	1	1	A	1	1	1	1	1	1	0	1	1	0	0	0	1	1	1	1	1	1	0	0.6	0.9													
9-Jul	0	0	1	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	0.5													
10-Jul	1	1	A	1	1	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	1	1	1	0.6	1.8													
11-Jul	1	A	1	1	0	0	0	1	1	1	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0.6	2.4													
12-Jul	A	0	1	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	A	0.6	5.6												
13-Jul	1	1	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	1	0	0	1	1	A	1	0.5	0.8													
14-Jul	0	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	A	1	0	0.5	0.8													
15-Jul	0	1	1	1	1	1	1	1	0	1	0	0	1	1	0	0	0	0	1	0	A	1	1	1	0.6	0.8													
16-Jul	1	1	1	1	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	A	0	0	1	1	0.5	0.8													
17-Jul	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0	0.4	0.7													
18-Jul	0	0	0	0	0	0	0	0	1	1	1	1	0	1	0	0	1	A	0	0	0	1	1	1	0.5	1.0													
19-Jul	1	1	1	0	1	1	1	1	0	1	0	0	0	0	0	0	A	1	1	0	1	1	1	1	0.6	1.3													
20-Jul	0	0	0	1	1	1	1	0	1	0	0	0	0	0	0	A	0	P	P	P	P	P	P	P	--	0.9													
21-Jul	P	P	P	P	P	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0	1	0	1	1	1	0.4	0.6												
22-Jul	0	1	0	0	0	0	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0	1	0	1	0	0.5	0.8												
23-Jul	0	0	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0	0	1	0	1	0	0.5	0.7													
24-Jul	0	0	0	0	1	0	0	0	0	0	0	0	A	1	1	1	0	1	1	1	1	1	0	1	0.5	0.7													
25-Jul	1	1	1	1	1	1	1	1	1	1	A	1	0	0	1	0	1	0	0	1	1	0	1	1	1	0.6	1.0												
26-Jul	1	1	1	0	0	0	1	0	1	A	C	C	C	C	1	1	0	1	0	1	0	1	1	1	0.6	0.8													
27-Jul	1	1	0	0	1	0	0	1	A	1	0	1	1	1	0	1	0	0	0	0	0	1	1	1	0.5	0.7													
28-Jul	1	1	1	1	1	1	1	A	1	1	0	1	0	0	1	0	0	0	0	1	1	1	1	1	0.6	0.8													
29-Jul	1	1	1	0	1	0	A	1	0	0	1	1	1	1	1	1	0	1	0	1	1	1	1	1	0.6	0.8													
30-Jul	1	0	1	0	1	A	1	1	1	1	1	1	1	0	1	0	0	1	1	1	1	1	1	1	0.6	0.9													
31-Jul	1	1	1	1	A	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0.5	0.9													
0.6 0.6 0.6 0.5 0.6 0.5 0.5 0.5 0.7 0.5 0.5 0.5 0.4 0.5 0.5 0.5 0.5 0.5 0.4 0.5 0.5 0.5 0.6 0.7																								Diurnal Average															
1.1 2.3 1.4 0.9 0.9 1.3 1.3 0.7 5.6 0.8 0.7 0.6 0.6 0.7 1.3 2.4 1.8 0.8 0.7 0.7 0.8 0.9 1.0 5.2																								Diurnal Maximum															
C - Calibration P - Power Failure A - Automated Daily Zero Span																																							

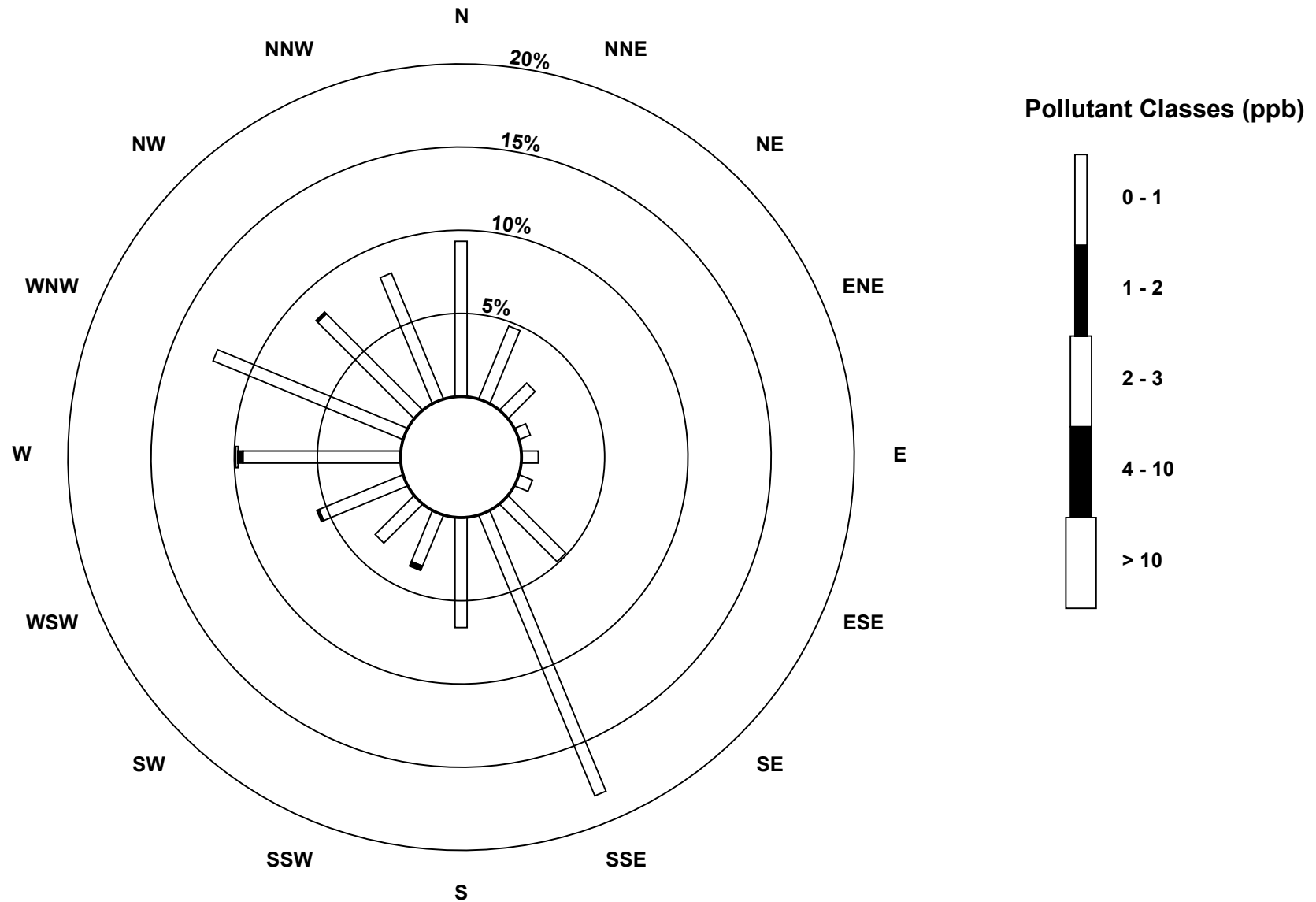
Hourly Maximums

Hydrogen Sulphide (H₂S) - ppb
Valleyview - July 2018



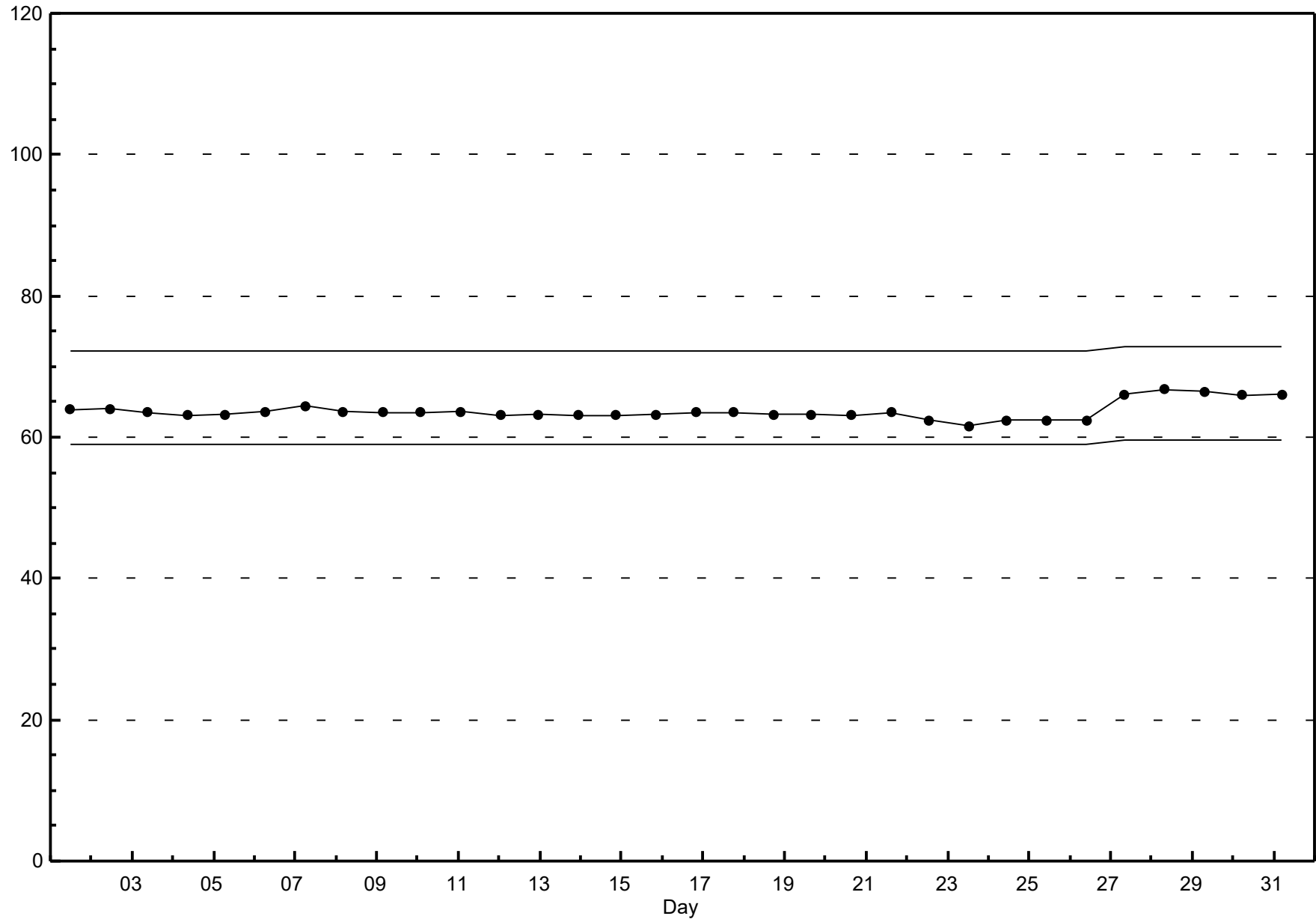
Pollutant Rose

Hydrogen Sulphide (H₂S) - ppb
Valleyview - July 2018



Span Responses

Hydrogen Sulphide (H_2S)
Valleyview - July 2018



Hourly Averages

External Temperature (ET) - °C

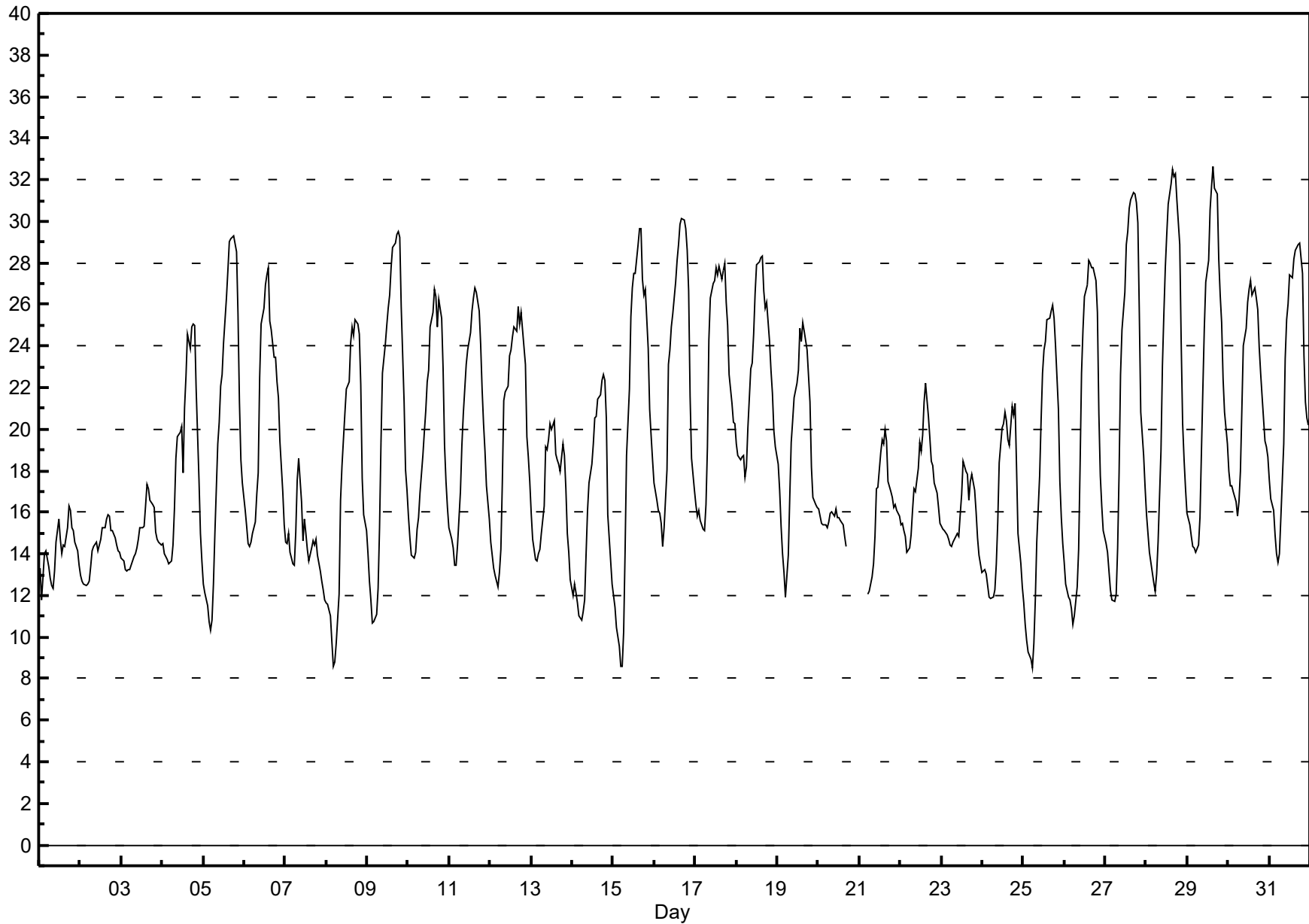
Valleyview - July 2018

Maximum Value: 32.6 °C on Jul 29 16:00																				Maximum Daily Average: 22.8 °C on Jul 18					Hours in Service: 744	
Minimum Value: 9 °C on Jul 25 06:00																				Minimum Daily Average: 14.1 °C on Jul 1					Hours of Data: 732	
Maximum Diurnal Average: 24.3 °C at hour 16																				Minimum Diurnal Average: 13.0 °C at hour 6					Hours of Missing Data: 12	
Monthly Average: 18.89 °C																				Percentiles: P ₁ = 9.6 P ₁₀ = 12.6 Q ₁ = 14.5 Median = 17.5 Q ₃ = 23.5 P ₉₀ = 27.2 P ₉₉ = 31.4					Hours of Calibration: 0	
																				Percent Operational Time: 98.4						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	13	12	13	14	14	13	13	12	12	13	15	16	15	14	14	14	15	16	16	15	15	15	14	13	14.1	16.3
2-Jul	13	13	13	12	13	13	13	14	14	15	14	14	15	15	15	16	16	16	15	15	15	14	14	14	14.2	15.9
3-Jul	14	14	13	13	13	13	13	14	14	14	15	15	15	15	16	17	17	17	16	16	15	15	15	14	14.8	17.4
4-Jul	15	14	14	14	14	14	14	16	19	20	20	20	18	21	23	25	24	25	25	25	22	18	15	14	18.6	25.0
5-Jul	13	12	12	11	10	11	13	15	19	20	22	23	24	26	28	29	29	29	29	29	26	21	19	17	20.3	29.3
6-Jul	16	15	15	14	15	15	16	17	18	22	25	26	27	27	28	25	25	23	23	22	21	19	17	15	20.3	27.8
7-Jul	15	14	15	14	14	13	15	18	19	16	15	16	15	14	14	14	15	14	15	14	13	13	12	12	14.5	18.6
8-Jul	12	12	11	10	9	9	10	12	17	18	19	21	22	22	24	25	25	25	25	25	22	18	16	15	17.6	25.3
9-Jul	14	13	12	11	11	11	12	15	19	23	24	25	26	26	28	29	29	29	30	29	26	21	18	17	20.7	29.5
10-Jul	16	15	14	14	14	15	16	17	19	20	21	22	23	25	26	27	26	25	26	25	23	19	17	16	20.0	26.8
11-Jul	15	15	14	13	13	14	17	19	21	22	23	24	25	26	26	27	27	26	24	22	20	19	17	16	20.2	26.8
12-Jul	15	14	13	13	12	13	14	17	21	22	22	24	24	24	25	25	26	25	26	25	23	20	19	17	20.0	25.9
13-Jul	16	15	14	14	14	14	15	16	19	19	19	20	20	20	19	19	18	18	19	19	17	15	14	13	16.9	20.4
14-Jul	12	13	12	12	11	11	11	12	14	16	17	18	19	21	21	21	22	22	23	22	21	16	14	13	16.4	22.6
15-Jul	12	11	10	10	9	9	10	14	19	22	25	27	27	28	29	30	30	27	26	27	24	21	20	19	20.2	29.6
16-Jul	17	17	16	16	15	14	15	18	23	24	25	26	27	28	29	30	30	30	30	29	27	22	19	17	22.6	30.1
17-Jul	16	16	16	16	15	15	16	19	24	26	27	27	28	27	28	27	28	28	26	25	23	21	20	20	22.3	28.0
18-Jul	19	19	19	19	19	18	18	20	23	23	25	26	28	28	28	28	27	26	26	24	23	22	20	19	22.8	28.3
19-Jul	18	17	15	14	13	12	14	17	19	20	22	22	23	25	24	25	25	24	23	21	18	17	16	16	19.2	25.1
20-Jul	16	16	15	15	15	15	16	16	16	16	16	16	16	16	15	15	14	P	P	P	P	P	P	P	--	16.1
21-Jul	P	P	P	P	P	12	12	13	14	15	17	17	19	20	19	20	19	17	17	17	16	16	16	16	16.5	20.0
22-Jul	15	15	15	15	14	14	15	16	17	17	18	19	19	20	21	22	21	20	18	18	17	17	16	15	17.4	22.2
23-Jul	15	15	15	15	15	14	14	15	15	15	15	16	17	18	18	18	17	17	18	17	16	15	14	14	15.7	18.4
24-Jul	13	13	13	12	12	12	12	12	14	16	18	20	20	21	20	20	19	21	21	21	18	15	14	12	16.2	21.3
25-Jul	12	11	10	9	9	9	10	12	15	18	20	23	24	24	25	25	26	26	25	24	21	17	16	15	17.7	26.0
26-Jul	14	13	12	12	11	11	11	12	14	18	23	25	26	27	28	28	28	28	27	26	21	18	16	15	19.3	28.1
27-Jul	15	14	13	12	12	12	12	14	18	23	25	27	29	29	31	31	31	31	31	30	26	21	19	17	21.7	31.4
28-Jul	16	15	14	13	13	12	13	15	19	23	26	28	29	31	32	32	32	32	31	29	24	20	19	17	22.3	32.5
29-Jul	16	15	15	14	14	14	14	16	19	22	25	27	28	31	32	33	32	31	28	26	25	22	21	19	22.5	32.6
30-Jul	18	17	17	17	17	16	17	18	21	24	25	26	27	27	26	27	26	26	24	23	22	19	19	19	21.5	27.1
31-Jul	18	17	16	15	14	14	14	16	19	23	25	26	27	27	28	29	29	29	29	27	24	21	21	20	22.0	28.9
14.9 14.3 13.9 13.4 13.1 13.0 13.8 15.4 17.9 19.5 20.9 22.0 22.6 23.4 23.9 24.3 24.1 24.2 23.8 22.9 20.8 18.2 16.8 15.9																									Diurnal Average	
19.3 18.8 18.5 18.7 18.7 17.7 18.2 20.1 24.3 26.3 27.0 27.8 29.4 30.8 31.8 32.6 32.2 32.3 31.0 29.9 26.6 22.4 20.8 20.2																									Diurnal Maximum	
P - Power Failure																										

Hourly Averages

External Temperature (ET) - °C

Valleyview - July 2018



Hourly Averages

Relative Humidity (RH) - %

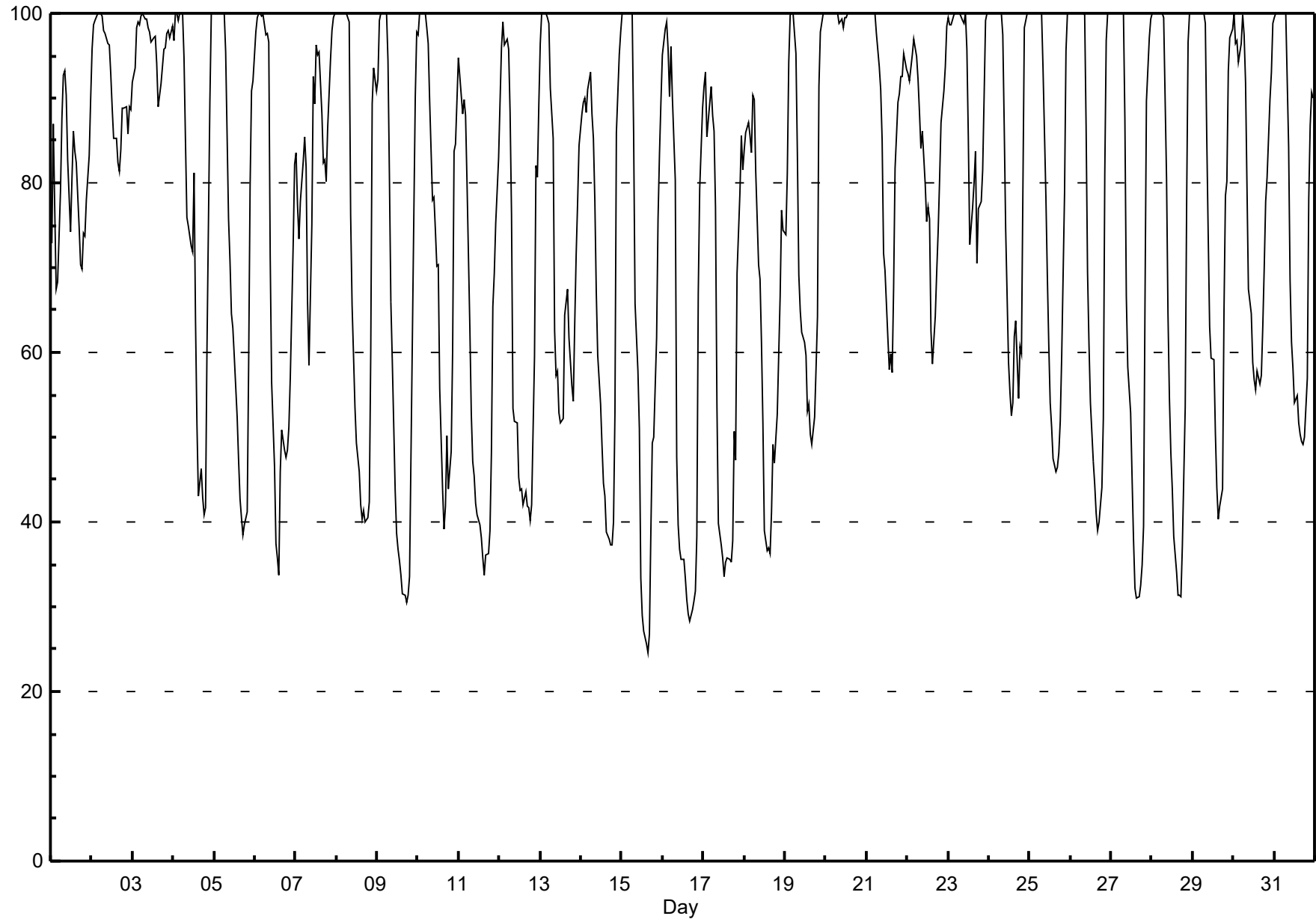
Valleyview - July 2018

Maximum Value: 100.0 % on Jul 2 04:00																				Maximum Daily Average: 96.4 % on Jul 3					Hours in Service: 744	
Minimum Value: 25 % on Jul 15 16:00																				Minimum Daily Average: 59.3 % on Jul 11					Hours of Data: 732	
Maximum Diurnal Average: 96.7 % at hour 6																				Minimum Diurnal Average: 51.5 % at hour 16					Hours of Missing Data: 12	
Monthly Average: 75.50 %																				Percentiles: P ₁ = 29.9 P ₁₀ = 40.0 Q ₁ = 54.5 Median = 82.4 Q ₃ = 97.9 P ₉₀ = 100.0 P ₉₉ = 100.0					Hours of Calibration: 0	
																									Percent Operational Time: 98.4	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	73	87	77	67	68	79	88	93	93	90	83	74	81	86	84	82	75	70	70	74	74	78	83	90	80.0	93.3
2-Jul	96	99	99	100	100	100	100	98	98	97	96	93	89	85	85	82	81	84	89	89	89	86	89	89	92.1	100.0
3-Jul	92	94	98	99	99	100	100	99	99	98	98	97	97	97	94	89	90	92	96	96	98	98	97	98	96.4	100.0
4-Jul	97	100	100	99	100	100	95	85	76	75	73	72	81	64	52	43	46	43	41	42	61	89	100	100	76.4	100.0
5-Jul	100	100	100	100	100	100	100	95	76	71	65	63	59	52	47	43	40	39	40	41	59	79	91	92	73.0	100.0
6-Jul	98	99	100	100	100	100	98	98	97	71	56	47	37	36	34	46	51	48	48	48	51	57	73	82	69.8	100.0
7-Jul	84	77	73	78	83	85	82	66	58	75	93	89	96	95	95	88	82	83	80	86	95	98	100	100	85.1	100.0
8-Jul	100	100	100	100	100	100	100	99	76	66	60	54	49	46	42	40	41	40	41	42	60	89	94	91	72.1	100.0
9-Jul	92	99	100	100	100	100	94	81	66	59	44	39	37	35	34	31	31	31	31	34	48	76	90	98	64.6	100.0
10-Jul	98	100	100	100	100	98	96	90	78	78	74	70	70	56	44	39	42	50	44	48	60	84	85	90	74.8	100.0
11-Jul	95	90	88	90	88	80	63	53	47	45	42	41	40	38	36	34	36	36	39	48	65	69	75	83	59.3	94.8
12-Jul	90	96	99	96	97	96	88	76	53	52	52	45	44	44	42	44	42	42	40	42	60	82	81	89	66.3	99.0
13-Jul	96	100	100	100	99	99	91	85	62	57	58	53	52	52	64	66	68	62	56	54	63	72	78	84	73.8	100.0
14-Jul	88	90	90	88	91	93	88	85	78	67	60	54	49	45	43	39	38	37	37	40	53	86	95	98	68.0	97.9
15-Jul	100	100	100	100	100	100	100	86	66	58	51	33	29	27	26	25	27	39	49	50	62	76	83	89	65.7	100.0
16-Jul	95	98	99	96	90	96	90	80	48	40	37	36	36	33	31	29	28	30	31	32	38	67	79	89	59.5	98.9
17-Jul	91	93	85	87	91	88	86	77	54	40	37	36	34	35	36	36	35	38	51	47	69	79	86	82	62.2	93.1
18-Jul	84	86	87	86	84	90	90	81	70	69	61	52	39	37	37	36	41	49	47	53	60	67	77	74	64.8	90.3
19-Jul	74	81	94	100	100	100	95	83	69	65	62	61	60	53	54	50	49	52	58	64	91	98	100	100	75.6	100.0
20-Jul	100	100	100	100	100	100	100	100	99	99	98	100	99	100	100	100	100	P	P	P	P	P	P	P	--	100.0
21-Jul	P	P	P	P	P	100	98	94	91	85	72	70	62	58	60	58	68	82	89	90	93	93	95	93	81.5	100.0
22-Jul	93	92	94	95	97	95	92	88	84	86	80	75	77	76	63	59	64	70	74	80	87	91	94	98	83.5	98.5
23-Jul	100	99	99	100	100	100	100	100	99	99	100	96	85	73	77	80	84	71	77	78	81	90	99	100	91.1	100.0
24-Jul	100	100	100	100	100	100	100	100	97	87	75	59	55	53	54	62	64	55	61	60	79	98	100	100	81.6	100.0
25-Jul	100	100	100	100	100	100	100	100	93	78	69	61	54	51	47	46	46	48	52	60	79	96	100	100	78.4	100.0
26-Jul	100	100	100	100	100	100	100	100	100	87	70	61	54	47	44	41	39	40	44	52	81	97	100	100	77.4	100.0
27-Jul	100	100	100	100	100	100	100	100	87	67	58	53	45	38	32	31	31	32	35	39	66	90	97	99	70.9	100.0
28-Jul	100	100	100	100	100	100	100	99	81	65	55	48	44	38	34	31	31	31	37	54	78	97	100	100	71.8	100.0
29-Jul	100	100	100	100	100	100	100	99	85	74	63	59	59	51	44	40	42	44	65	78	80	93	97	98	78.0	100.0
30-Jul	100	96	97	94	96	100	97	92	80	67	65	59	57	56	58	56	57	63	70	78	81	90	93	99	79.2	100.0
31-Jul	99	100	100	100	100	100	100	100	84	68	61	58	54	55	52	50	49	49	50	57	78	87	91	90	76.4	100.0
94.4 95.9 96.0 95.9 96.1 96.7 94.5 89.8 78.9 72.1 66.6 61.5 58.9 55.2 53.0 51.5 52.3 51.6 54.7 58.6 71.3 85.0 90.7 93.2																									Diurnal Average	
100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 99.8 99.3 100.0 99.5 99.4 100.0 100.0 100.0 100.0 100.0 91.6 95.7 95.9 97.6 98.3 100.0 100.0																									Diurnal Maximum	
P - Power Failure																										

Hourly Averages

Relative Humidity (RH) - %

Valleyview - July 2018



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Valleyview - July 2018

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	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	4	1	4	6	6	7	8	7	8	8	12	13	13	10	10	13	14	12	14	12	12	11	12	10	9.2	14.2
Dir	244	189	248	260	262	255	248	250	262	265	276	280	289	289	285	277	274	284	289	281	282	284	282	277	275	289
2 Spd	8	8	9	8	7	6	7	9	11	12	15	18	18	18	16	16	13	10	11	8	11	9	8	9	9.6	18.3
Dir	270	267	271	272	280	292	323	357	360	3	358	360	2	358	348	348	344	338	334	325	358	353	332	329	339	358
3 Spd	11	11	11	10	10	9	8	8	10	11	11	11	12	11	11	11	11	11	6	5	4	4	3	2	8.6	11.7
Dir	323	326	325	326	327	329	344	343	347	356	358	358	1	359	2	4	359	3	344	348	323	330	331	353	346	1
4 Spd	2	1	1	1	0	0	2	2	2	2	3	5	7	5	4	2	2	1	1	1	0	0	0	0	1.5	6.7
Dir	352	332	337	346	298	208	339	338	266	280	282	298	307	306	321	318	45	5	42	26	151	128	27	334	317	307
5 Spd	1	0	0	0	0	0	0	1	2	4	5	4	3	3	2	2	2	0	2	2	1	1	1	0	1.2	4.6
Dir	309	205	176	289	225	227	225	205	157	160	159	161	159	154	157	153	137	168	31	129	62	54	160	156	154	159
6 Spd	1	0	0	1	0	0	2	2	1	1	3	8	9	10	8	11	9	6	3	4	4	4	1	1	2.9	11.1
Dir	256	274	207	254	204	142	191	212	101	161	220	252	269	284	253	316	316	321	255	242	237	249	228	167	271	316
7 Spd	1	2	2	1	1	1	2	3	12	19	17	15	8	11	9	8	9	7	6	4	4	2	1	1	4.4	19.1
Dir	159	215	193	161	157	152	154	223	264	272	264	271	290	4	5	339	314	300	309	299	269	245	230	214	287	272
8 Spd	1	0	0	0	0	0	1	1	3	6	6	6	6	6	4	5	7	4	5	3	0	0	2	2	2.3	7.0
Dir	156	160	156	265	160	163	159	159	255	273	275	267	263	277	283	283	315	288	294	290	242	170	163	161	273	315
9 Spd	0	0	0	0	1	2	3	3	2	2	8	8	8	10	6	6	5	4	2	2	1	0	0	1	2.3	10.0
Dir	205	181	172	184	174	160	158	158	157	158	251	258	263	256	246	266	254	260	304	23	19	150	326	156	245	256
10 Spd	0	0	1	1	1	2	1	1	2	2	3	2	3	2	7	8	8	5	6	4	1	1	1	1	1.6	7.9
Dir	271	235	168	218	161	164	158	142	256	151	159	159	155	293	293	285	284	272	265	242	178	165	187	186	251	285
11 Spd	1	3	3	3	2	3	5	11	14	9	9	10	10	9	10	12	12	12	11	4	1	1	2	1	6.0	13.8
Dir	173	229	226	210	215	227	256	270	275	287	294	269	278	270	270	276	291	293	283	268	167	212	231	181	272	275
12 Spd	1	1	1	0	1	1	1	2	8	8	7	9	8	7	7	8	5	6	7	5	0	0	1	1	2.9	8.8
Dir	188	172	158	161	162	161	159	237	279	280	277	297	305	298	299	339	4	339	357	337	329	199	207	164	305	297
13 Spd	0	1	1	1	1	1	1	1	3	2	3	4	5	4	5	5	7	12	11	10	5	4	6	4	3.1	11.7
Dir	177	181	172	162	158	162	168	157	291	271	256	277	295	290	324	252	301	328	331	332	322	283	296	299	303	328
14 Spd	4	6	6	7	9	9	11	10	12	14	15	16	15	14	12	14	11	10	8	4	1	0	0	1	8.4	15.6
Dir	250	277	279	285	270	268	284	270	275	286	294	298	297	287	300	298	308	319	307	294	313	169	173	166	289	298
15 Spd	1	1	1	1	0	0	1	2	2	3	2	3	4	6	3	4	1	1	1	1	0	1	0	0	1.0	6.4
Dir	162	165	166	169	269	178	164	157	155	150	155	253	244	271	277	259	233	118	54	129	68	308	174	225	222	271
16 Spd	0	1	1	2	1	1	1	1	7	9	12	16	11	11	12	9	9	10	10	9	4	0	0	0	5.1	15.7
Dir	168	163	162	166	165	164	168	157	270	288	277	271	265	274	282	285	284	293	293	288	280	205	205	162	277	271
17 Spd	1	1	1	1	1	1	1	1	3	10	10	10	11	10	9	6	6	2	1	1	0	1	2	3	2.9	11.3
Dir	169	165	170	173	169	175	159	150	301	294	284	294	289	298	294	286	280	333	35	316	119	188	157	157	284	289
18 Spd	2	2	4	4	3	3	3	2	1	4	4	2	6	7	6	8	14	9	7	5	2	1	0	1	1.5	14.3
Dir	151	159	156	158	161	159	152	156	168	251	299	309	334	314	290	297	342	23	18	23	8	329	234	222	328	342
19 Spd	1	0	0	0	0	1	4	4	6	6	5	6	6	5	6	8	5	5	6	4	1	3	0	2	3.0	7.7
Dir	314	14	180	153	137	339	357	35	18	14	13	7	17	35	31	31	49	49	34	45	217	264	58	107	26	31
20 Spd	5	3	1	1	2	1	1	1	4	5	4	4	3	3	4	2	3	P	P	P	P	P	P	P	--	5.2
Dir	104	132	42	68	283	354	322	299	278	300	311	34	297	290	342	315	26	P	P	P	P	P	P	P	--	300
21 Spd	P	P	P	P	P	4	5	3	3	2	4	6	6	7	7	4	10	9	8	7	9	7	7	7	3.7	9.7
Dir	P	P	P	P	P	142	137	137	121	74	39	7	20	360	342	337	315	312	298	307	321	313	301	306	331	315
22 Spd	6	5	5	6	4	6	4	5	8	6	5	6	6	6	7	9	7	10	6	4	2	2	4	4	4.9	10.1
Dir	307	298	302	292	288	284	288	312	319	325	353	352	340	4	357	357	2	3	2	358	340	312	324	357	333	3

Hourly Averages

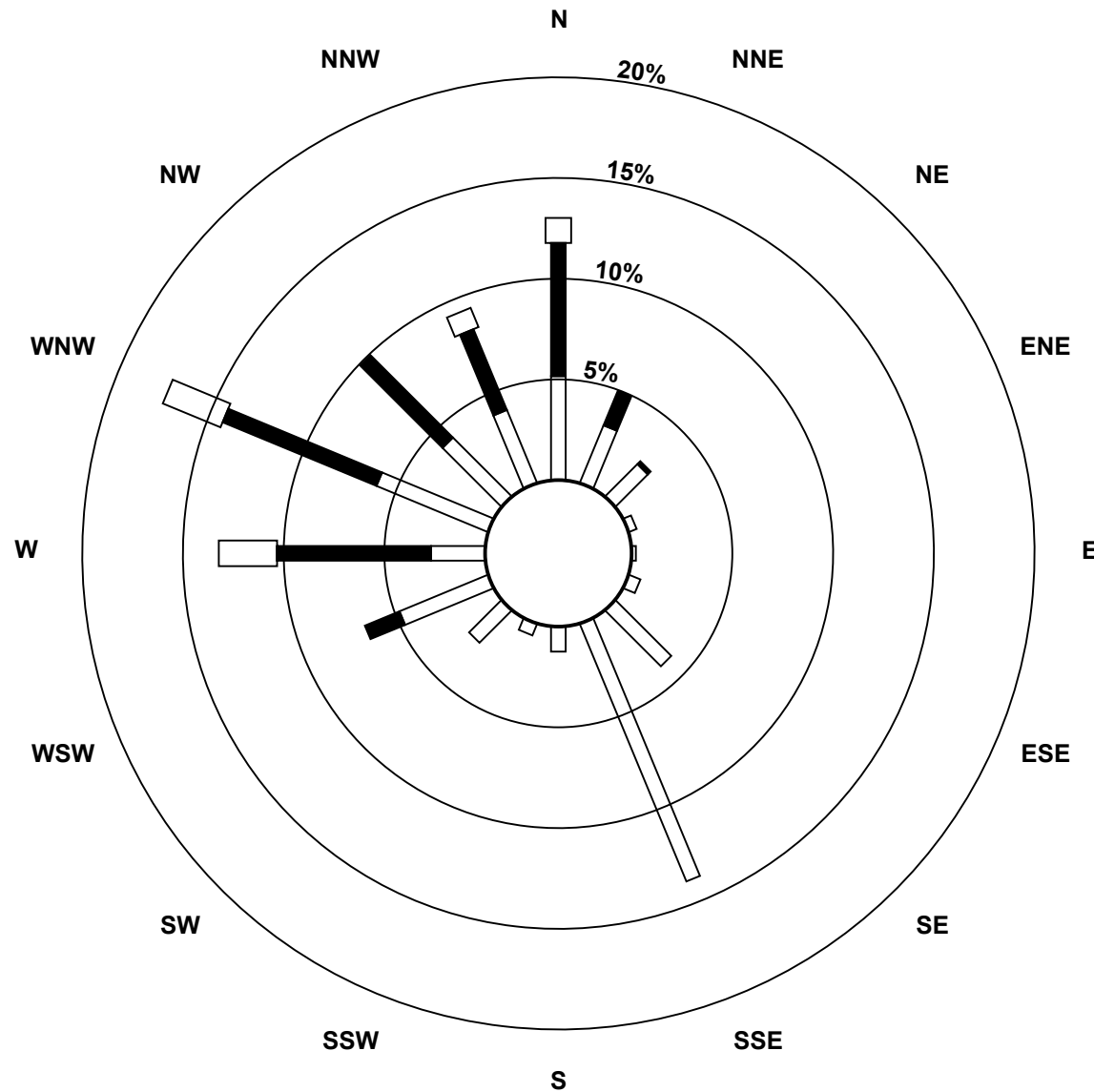
Wind Speed (km/h)
Wind Direction (deg)
Valleyview - July 2018

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
23 Spd	5	4	3	1	4	4	3	3	5	6	6	6	7	8	6	5	4	4	3	2	3	1	0	0	3.5	7.6		
Dir	9	3	8	4	14	17	12	10	13	2	337	322	328	335	304	309	315	341	283	328	320	295	216	144	342	335		
24 Spd	0	0	0	1	1	0	1	1	0	1	0	1	3	3	2	2	2	1	1	0	0	0	0	0	0.5	3.5		
Dir	98	156	156	192	162	197	161	196	182	241	302	0	5	349	341	344	6	8	19	26	156	178	250	183	357	5		
25 Spd	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1	2	2	1	1	1	0	0	0	0	0.1	2.0		
Dir	176	231	304	326	168	312	248	209	209	144	180	191	155	305	263	302	350	63	30	26	22	343	321	346	328	350		
26 Spd	0	0	0	0	0	1	1	1	0	1	1	2	1	2	0	2	5	4	3	2	0	0	0	0	0.3	4.8		
Dir	101	158	330	178	182	160	167	158	190	160	202	154	159	132	37	354	321	310	317	299	196	166	176	171	289	321		
27 Spd	2	1	0	0	0	0	1	1	2	2	2	2	1	2	2	2	1	1	1	0	0	0	0	0	0.5	2.1		
Dir	153	152	169	327	196	166	164	156	154	156	147	143	156	244	250	237	262	359	43	26	99	134	203	180	176	244		
28 Spd	0	0	0	0	0	0	0	1	1	2	2	1	2	2	1	1	1	1	1	0	0	0	0	0	0.6	1.9		
Dir	325	204	195	208	157	160	227	177	161	155	139	147	147	144	140	134	127	55	31	11	166	168	173	181	145	147		
29 Spd	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	2	3	1	0	0	0	0	0	0	0.2	2.6		
Dir	182	171	187	203	171	169	175	256	140	152	279	138	120	131	89	46	18	20	163	160	5	139	177	164	107	18		
30 Spd	0	1	2	2	1	1	0	1	1	1	4	4	7	10	8	11	10	11	8	4	4	3	0	0	3.4	10.8		
Dir	329	322	154	185	270	75	164	164	337	27	12	2	351	360	7	8	15	7	359	358	359	353	334	143	4	7		
31 Spd	3	3	1	1	0	1	1	1	0	1	3	2	3	2	3	2	2	2	2	1	1	1	1	3	0.8	3.5		
Dir	343	355	355	339	357	330	360	138	149	81	139	151	144	144	139	140	140	136	86	132	152	151	157	158	126	355		
Spd	0.8	0.9	0.9	1.1	1.0	0.8	0.9	1.0	2.5	3.0	3.7	4.2	4.3	4.5	4.5	4.8	4.9	4.5	3.9	2.5	1.6	1.3	1.1	0.7	Diurnal Average			
Dir	290	283	270	271	272	266	274	272	290	297	295	299	307	313	312	315	322	328	322	316	314	300	287	288	Diurnal Maximum			
Spd	10.7	10.7	10.6	10.1	10.3	9.2	11.3	11.1	13.8	19.1	16.9	17.7	18.1	18.3	16.3	15.9	14.3	12.3	14.2	12.0	11.6	10.9	11.6	10.0	Diurnal Maximum			
Dir	323	326	325	326	327	329	284	270	275	272	264	360	2	358	348	348	342	284	289	281	282	284	282	277				
Maximum Speed Value: 19 km/h on Jul 7 10:00																			Minimum Speed Value: 0 km/h on Jul 26 00:00					Hours in Service: 744				
Maximum Daily Speed Average: 9.6 km/h on Jul 2																			Minimum Daily Speed Average: 0.1 km/h on Jul 25					Hours of Data: 732				
Maximum Diurnal Speed Average: 4.9 km/h at hour 17																			Minimum Diurnal Speed Average: 0.7 km/h at hour 24					Hours of Missing Data: 12				
Monthly Average Velocity: 2.40 km/h 305.7 deg																			Speed Percentiles: P ₁ = 0.1 P ₁₀ = 0.3 Q ₁ = 0.7 Median = 2.3 Q ₃ = 6.3 P ₉₀ = 10.2 P ₉₉ = 15.7					Percent Operational Time: 98.4				
All monthly, daily, and diurnal averages have been calculated using vector methods																												
P - Power Failure																												
Frequency Distribution																												
Speed Range (km/h)																												
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																					
North	54	47	16	0	0	0	117																					
NorthEast	29	7	0	0	0	0	36																					
East	13	0	0	0	0	0	13																					
SouthEast	92	0	0	0	0	0	92																					
South	144	0	0	0	0	0	144																					
SouthWest	53	1	0	0	0	0	54																					
West	49	68	25	1	0	0	143																					
NorthWest	64	60	9	0	0	0	133																					
Total	498	183	50	1	0	0	732																					

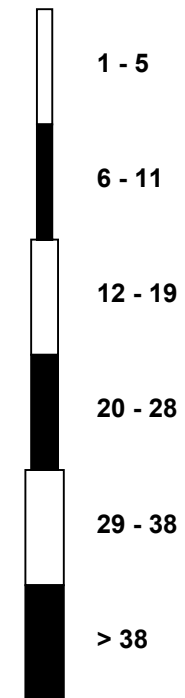
Wind Rose

Wind Speed (WS) (km/h)

Valleyview - July 2018



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Valleyview - July 2018

Maximum Speed: 19 km/h on Jul 7 10:00																				Maximum Daily Speed Average: 11.3 km/h on Jul 2										Hours in Service: 744	
Minimum Speed: 0 km/h on Jul 4 21:00																				Minimum Daily Speed Average: 0.8 km/h on Jul 28										Hours of Data: 732	
Maximum Diurnal Speed Average: 7.2 km/h at hour 14																				Minimum Diurnal Speed Average: 1.9 km/h at hour 24										Hours of Missing Data: 12	
Monthly Average Speed: 4.26 km/h																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.4 Q ₁ = 1.0 Median = 2.7 Q ₃ = 6.7 P ₉₀ = 10.7 P ₉₉ = 16.1										Percent Operational Time: 98.4	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Jul	4	1	5	6	6	7	8	7	8	9	13	14	13	10	10	13	14	13	15	12	12	11	12	10	9.7	14.6					
2-Jul	9	9	9	8	7	6	8	9	11	12	15	18	18	19	17	16	14	10	11	8	11	9	8	9	11.3	18.6					
3-Jul	11	11	11	10	10	9	9	9	10	11	12	11	12	12	11	12	11	11	6	6	4	4	3	2	9.0	11.9					
4-Jul	2	1	1	1	1	0	2	2	3	2	4	6	7	5	5	3	3	2	2	1	0	0	0	0	2.2	7.0					
5-Jul	1	0	0	0	0	0	0	1	2	4	5	4	3	3	2	2	2	1	2	2	1	1	1	1	1.7	4.7					
6-Jul	1	0	1	1	1	1	2	2	2	2	4	8	10	11	9	13	10	7	4	4	4	4	1	1	4.3	12.9					
7-Jul	1	3	2	1	1	1	2	3	12	19	17	15	9	11	9	9	9	7	7	5	4	2	1	1	6.4	19.4					
8-Jul	1	0	1	0	0	0	1	1	4	6	7	7	6	6	4	6	7	5	5	3	1	0	2	2	3.2	7.5					
9-Jul	0	0	0	0	1	2	3	3	2	3	8	9	8	10	7	6	6	5	2	2	1	1	1	1	3.4	10.4					
10-Jul	1	1	1	1	1	2	1	1	3	2	3	2	3	4	8	8	8	5	7	5	1	1	1	1	2.9	8.3					
11-Jul	1	3	3	3	3	3	5	11	14	10	10	11	11	9	11	12	13	12	11	4	1	1	3	1	6.9	14.2					
12-Jul	1	1	1	0	1	1	1	3	8	8	7	9	9	8	8	9	6	6	7	6	1	0	1	1	4.4	9.5					
13-Jul	0	1	1	1	1	1	1	1	4	2	3	5	5	4	6	6	8	12	11	10	5	4	6	4	4.2	11.9					
14-Jul	4	7	6	8	9	9	12	10	12	14	16	16	16	14	13	15	12	11	9	4	1	0	0	1	9.1	16.1					
15-Jul	1	1	1	1	0	0	1	2	3	3	2	5	5	7	5	5	3	1	1	1	0	1	1	1	2.0	6.7					
16-Jul	1	1	1	2	1	1	1	1	7	9	12	16	11	11	13	9	9	10	10	9	4	1	1	0	6.0	16.1					
17-Jul	1	1	1	1	1	1	1	1	4	10	11	11	12	11	10	6	6	3	1	1	1	1	2	3	4.3	12.0					
18-Jul	2	2	4	4	4	3	3	3	2	5	5	3	7	7	7	9	15	9	7	5	2	1	1	1	4.7	15.2					
19-Jul	2	1	0	1	1	1	4	4	6	6	5	7	6	6	7	8	6	6	6	4	1	4	1	3	4.1	8.2					
20-Jul	5	4	2	2	2	2	1	2	4	6	5	4	4	3	5	3	3	P	P	P	P	P	P	P							
	P	P	P	P	P		4	5	4	3	3	5	7	6	7	7	5	10	9	8	7	10	8	7	7	6.4	10.0				
22-Jul	6	6	5	6	4	6	5	5	8	6	6	6	7	7	8	9	7	10	6	5	2	2	4	5	5.9	10.1					
23-Jul	5	5	3	1	4	4	3	3	5	6	6	6	7	8	7	5	5	5	3	2	3	1	0	1	4.2	8.0					
24-Jul	1	0	0	1	1	0	1	1	1	2	2	3	5	4	2	2	2	2	2	0	0	0	0	0	1.4	4.5					
25-Jul	0	0	0	0	0	0	0	1	1	1	1	1	2	3	2	3	3	1	1	1	0	0	0	0	1.0	2.8					
26-Jul	0	0	0	0	0	1	1	1	1	1	2	2	2	2	2	4	5	4	4	2	0	0	0	0	1.5	5.2					
27-Jul	2	1	0	1	0	0	1	1	2	2	2	2	2	3	3	2	1	1	1	1	0	0	0	0	1.1	2.8					
28-Jul	0	0	0	0	0	0	1	1	1	2	2	1	2	2	1	1	1	1	1	0	0	0	0	0	0.8	2.0					
29-Jul	0	0	0	0	0	1	1	2	1	1	2	1	1	2	2	2	3	1	1	1	1	1	0	0	1.0	2.8					
30-Jul	0	2	3	3	2	1	1	1	2	2	5	5	8	10	8	11	11	11	8	4	4	3	0	0	4.4	11.0					
31-Jul	3	4	2	1	0	1	1	1	1	2	3	2	3	3	3	2	2	2	2	1	1	1	1	3	1.8	3.5					
2.2 2.2 2.2 2.2 2.1 2.3 2.7 3.1 4.8 5.6 6.4 7.1 7.1 7.2 6.9 7.0 6.9 6.1 5.3 3.8 2.5 2.1 2.0 1.9																									Diurnal Average						
10.8 10.8 10.7 10.2 10.4 9.3 11.6 11.5 14.2 19.4 17.2 17.9 18.3 18.6 16.5 16.1 15.2 12.6 14.6 12.2 11.8 11.1 11.8 10.3																									Diurnal Maximum						
P - Power Failure																															
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg

Valleyview - July 2018

Maximum Value: 98.6 deg on Jul 24 11:00																		Hours in Service: 744							
Minimum Value: 6.4 deg on Jul 12 06:00																		Hours of Data: 732							
																		Hours of Missing Data: 12							
Percentiles: P ₁ = 7.7 P ₁₀ = 11.4 Q ₁ = 15.8 Median = 27.3 Q ₃ = 50.6 P ₉₀ = 71.2 P ₉₉ = 91.9																		Hours of Calibration: 0							
																		Percent Operational Time: 98.4							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Jul	15	30	36	12	13	12	19	19	13	12	13	15	13	13	13	13	12	14	14	10	13	12	11	12	35.9
2-Jul	11	11	11	13	12	13	20	13	9	9	9	9	7	10	9	9	11	10	9	14	12	10	11	7	19.9
3-Jul	8	8	8	8	9	8	13	11	10	10	9	11	9	9	8	10	9	14	15	15	18	13	14	12	17.6
4-Jul	35	43	46	26	73	74	24	38	42	75	50	49	18	26	39	66	52	81	55	50	66	46	98	86	97.9
5-Jul	67	64	67	85	68	62	52	48	27	12	13	12	15	18	30	59	39	77	44	12	29	76	27	92	92.2
6-Jul	63	72	64	55	81	73	26	61	49	79	44	18	23	16	23	36	58	33	39	40	34	13	52	16	81.2
7-Jul	14	42	35	15	19	8	10	34	25	10	10	11	22	16	11	18	14	17	18	18	13	31	38	34	41.7
8-Jul	22	21	79	73	97	13	34	32	47	26	29	32	30	25	55	36	18	30	29	22	63	27	8	8	97.1
9-Jul	45	37	20	48	13	8	7	10	16	39	18	24	26	18	30	28	37	31	52	28	78	73	87	41	87.2
10-Jul	64	74	65	48	20	27	20	62	62	17	15	14	11	79	23	21	20	16	21	28	27	16	20	17	79.4
11-Jul	18	22	22	20	22	32	29	16	14	43	28	25	24	24	19	17	16	12	13	43	15	29	30	16	43.2
12-Jul	20	22	12	16	20	6	13	52	19	18	21	21	23	40	23	24	32	18	19	20	90	38	43	21	90.0
13-Jul	37	41	37	27	25	32	25	17	62	33	29	36	20	28	30	20	50	9	16	14	12	18	15	20	61.9
14-Jul	14	20	11	13	13	12	12	16	11	14	13	15	16	15	17	15	16	20	19	18	36	42	22	15	42.1
15-Jul	8	10	20	41	50	41	37	11	16	13	21	52	52	20	53	49	58	52	58	39	86	63	74	66	85.5
16-Jul	24	11	20	36	47	38	38	21	38	14	15	13	19	20	17	26	19	18	16	14	32	76	70	49	76.5
17-Jul	16	11	6	26	36	34	47	22	82	16	20	22	20	19	20	24	25	43	70	78	88	45	13	13	88.0
18-Jul	35	16	8	11	12	20	18	14	46	40	41	80	33	27	41	29	20	15	20	16	25	27	68	25	79.7
19-Jul	70	91	61	47	66	64	16	25	25	16	32	24	25	38	31	24	34	24	16	28	61	60	70	29	91.1
20-Jul	19	47	82	61	56	76	75	62	36	28	38	25	50	34	47	54	20	P	P	P	P	P	P	P	82.0
21-Jul	P	P	P	P	P	9	11	20	28	41	46	25	33	21	19	33	15	13	12	15	12	13	15	12	46.2
22-Jul	11	15	16	13	23	13	23	21	17	17	21	26	35	24	22	19	15	8	8	10	25	13	18	17	34.6
23-Jul	10	10	16	20	14	13	13	14	12	11	14	13	13	19	28	36	29	24	28	35	28	59	57	28	59.5
24-Jul	51	15	32	37	19	48	20	63	85	75	99	99	62	48	73	38	28	66	43	71	61	74	85	66	98.6
25-Jul	52	77	63	46	87	52	57	59	76	61	62	71	52	96	82	71	53	59	27	11	56	52	45	85	95.6
26-Jul	87	58	69	43	42	26	28	38	66	40	62	54	56	39	95	70	24	27	13	29	79	75	53	48	95.4
27-Jul	8	45	59	73	38	33	50	22	21	31	19	23	57	50	54	63	74	68	28	32	69	86	54	60	86.4
28-Jul	64	69	47	68	86	58	89	42	27	18	28	70	24	25	23	19	21	58	44	69	67	86	36	53	89.3
29-Jul	82	47	37	45	68	63	71	69	61	36	78	64	67	59	88	42	22	66	87	51	89	87	67	50	89.3
30-Jul	93	82	29	41	74	63	80	27	64	71	40	37	23	20	16	16	12	10	10	17	10	15	87	64	92.7
31-Jul	15	9	86	50	74	32	52	46	86	68	35	43	28	27	37	31	30	17	41	25	35	35	21	19	86.3
92.7 91.1 85.6 85.3 97.1 75.7 89.3 68.7 86.3 79.0 98.6 98.6 67.0 95.6 95.4 70.7 74.1 80.9 87.1 77.5 90.0 86.8 97.9 92.2																									
P - Power Failure																									

PAZA

Donnelly Station

Monthly Summary Tables, Graphs and Roses

Hourly Averages

Sulphur Dioxide (SO₂) - ppb

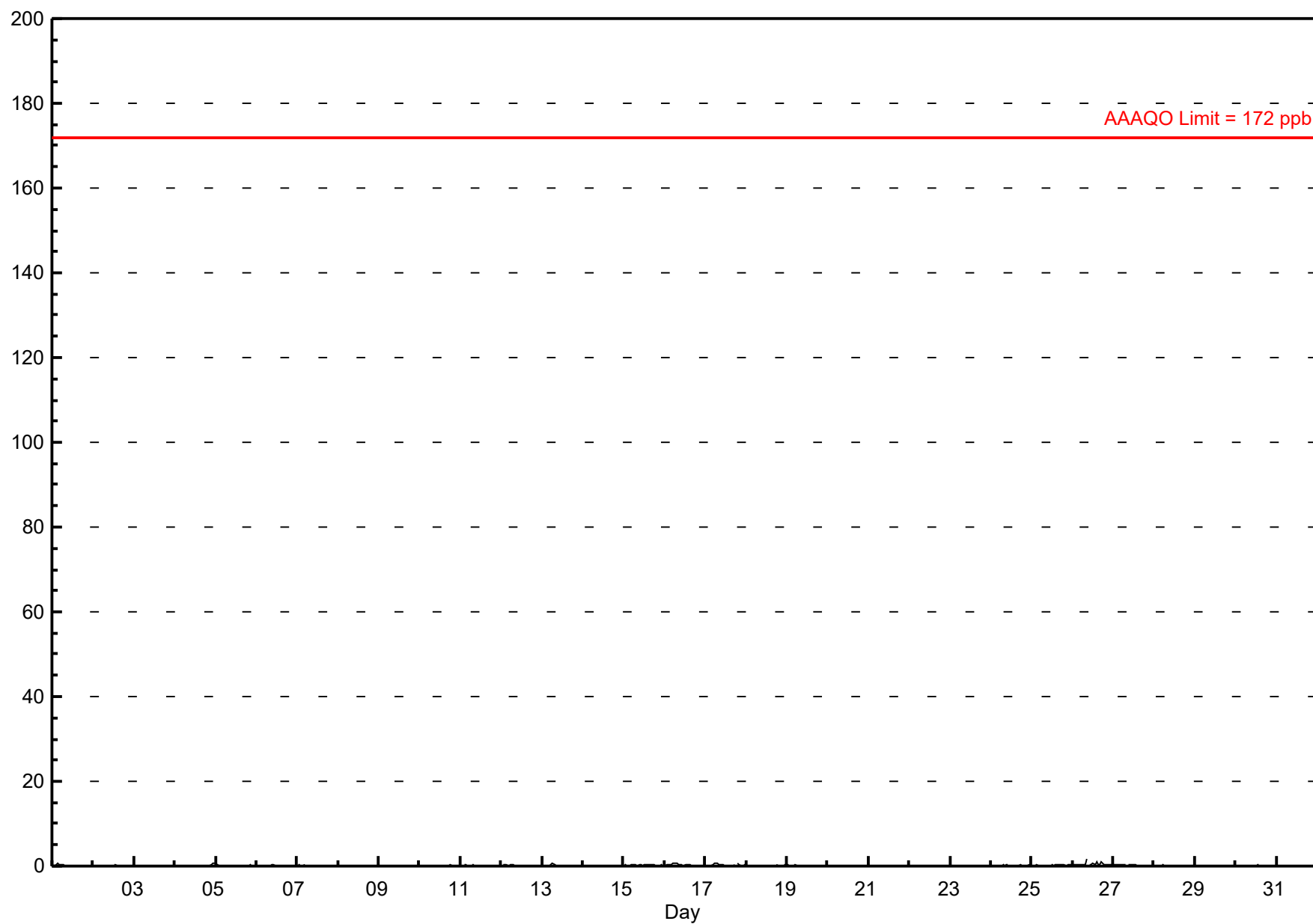
Donnelly - July 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 1.7 ppb on Jul 26 09:00 Maximum Daily Average: 0.4 ppb on Jul 26																			Hours in Service: 744 Hours of Data: 709							
Minimum Value: 0 ppb on Jul 1 01:00 Minimum Daily Average: 0.0 ppb on Jul 3 Maximum Diurnal Average: 0.2 ppb at hour 7 Minimum Diurnal Average: 0.1 ppb at hour 17 Monthly Average: 0.10 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.1 P ₉₀ = 0.2 P ₉₉ = 0.6																			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	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
2-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	0.2
3-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	0.1
4-Jul	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.1	0.8
5-Jul	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
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	0.3
7-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
8-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	0.2
9-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
10-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	0.3
11-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	0.3
12-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.5
13-Jul	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.6
14-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	0.1
15-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	0.2	0.3
16-Jul	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.6
17-Jul	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0.2	0.6
18-Jul	0	0	0	0	0	0	0	0	0	0	0	0	C	C	C	0	A	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	0.2
20-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
21-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	0.1	0.2
22-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	0.1
23-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	0.1	0.2
24-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
25-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	0.3
26-Jul	0	0	0	0	0	0	0	0	2	A	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0.4	1.7
27-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	0.5
28-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	0.2
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	0.1
30-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
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	0.0	0.1
0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1																									Diurnal Average	
0.5 0.3 0.3 0.6 0.4 0.6 0.6 0.5 1.7 0.4 0.4 0.4 0.6 0.5 1.1 0.4 0.3 1.0 0.3 0.6 0.4 0.3 0.5 0.8																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

Hourly Averages

Sulphur Dioxide (SO₂) - ppb

Donnelly - July 2018



Hourly Maximums

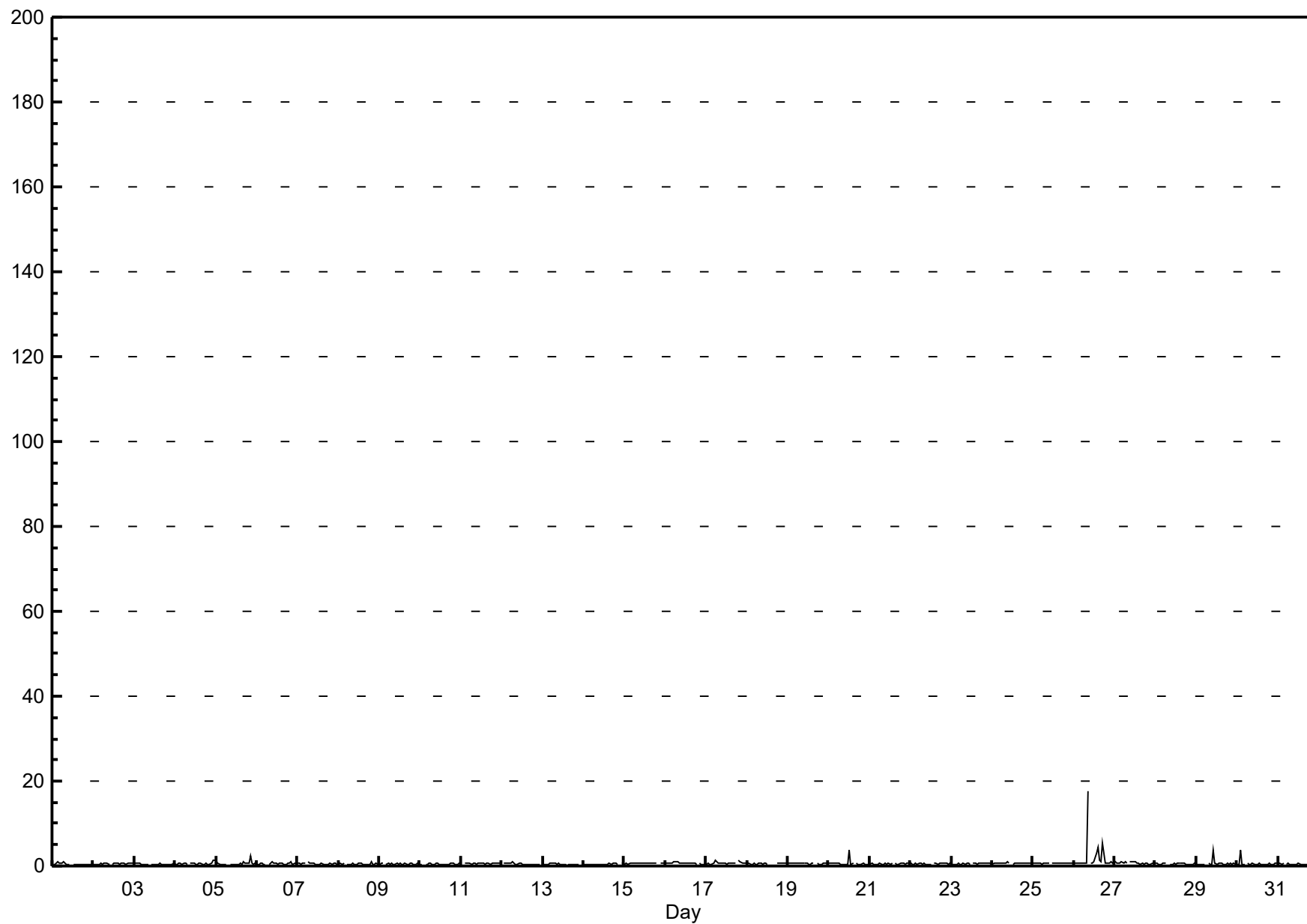
Sulphur Dioxide (SO₂) - ppb

Donnelly - July 2018

Maximum Value: 17.7 ppb on Jul 26 09:00																				Maximum Daily Average: 2.0 ppb on Jul 26										Hours in Service: 744									
Minimum Value: 0 ppb on Jul 13 15:00																				Minimum Daily Average: 0.4 ppb on Jul 13										Hours of Data: 709									
Maximum Diurnal Average: 1.1 ppb at hour 9																				Minimum Diurnal Average: 0.5 ppb at hour 22										Hours of Missing Data: 35									
Monthly Average: 0.62 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.6 P ₉₀ = 0.8 P ₉₉ = 3.6										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	1	1	1	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0.5	1.0													
2-Jul	0	0	0	0	1	0	1	1	1	0	A	0	1	1	1	0	1	1	1	1	1	1	1	1	0.5	0.8													
3-Jul	1	1	1	1	0	0	0	0	0	A	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0.4	0.6													
4-Jul	0	0	1	1	0	1	1	0	A	1	1	1	0	0	1	1	0	0	1	0	0	1	1	1	0.6	1.3													
5-Jul	2	1	0	0	0	0	0	A	0	0	0	0	0	0	1	0	1	1	1	1	2	1	0	1	0.6	2.5													
6-Jul	0	0	1	1	0	0	A	0	1	1	1	1	0	1	1	1	0	0	1	1	1	0	1	1	0.6	0.9													
7-Jul	1	1	0	1	1	A	1	1	1	1	0	0	0	0	1	1	1	0	0	1	0	1	1	0	0.5	0.9													
8-Jul	0	1	0	1	A	0	0	0	1	0	0	0	1	1	0	0	0	0	0	1	0	0	1	0	0.5	1.0													
9-Jul	1	1	1	A	1	1	0	1	0	0	1	0	1	0	1	1	1	1	1	1	0	0	1	0	0.5	0.8													
10-Jul	0	0	A	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	1	0.5	0.7													
11-Jul	1	A	1	1	1	1	1	1	1	0	1	1	1	1	0	1	1	0	1	1	1	1	1	1	0.6	0.8													
12-Jul	A	1	1	1	1	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0.5	0.9													
13-Jul	0	0	0	0	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.4	0.8													
14-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	0	A	1	1	0.4	0.6													
15-Jul	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.6	0.8													
16-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	1	0	0	0	0.7	1.2													
17-Jul	0	1	0	0	1	1	1	1	1	1	1	1	0	1	1	1	1	1	A	1	1	1	1	1	0.7	1.5													
18-Jul	1	1	0	0	1	0	0	1	1	0	1	1	0	C	C	C	1	A	1	1	1	1	1	1	0.6	0.7													
19-Jul	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	A	1	0	0	0	1	1	1	0.6	0.7													
20-Jul	1	1	1	1	1	1	1	0	0	0	0	0	4	0	1	A	1	0	1	0	1	0	0	0	0.6	3.6													
21-Jul	0	1	0	0	1	0	1	0	0	1	0	1	0	1	A	1	0	0	1	1	1	0	1	1	0.5	0.7													
22-Jul	1	0	1	1	0	1	1	0	1	0	0	0	0	A	1	1	0	1	1	1	1	1	0	1	0.6	0.8													
23-Jul	0	0	0	0	1	0	0	1	0	1	1	0	A	1	1	0	1	1	1	1	1	1	1	1	0.5	0.7													
24-Jul	0	1	1	1	1	1	1	1	1	1	1	A	0	1	1	1	1	1	1	1	1	1	1	1	0.6	1.0													
25-Jul	1	1	1	1	1	0	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8													
26-Jul	1	1	1	1	1	1	1	1	18	A	1	1	1	3	4	2	1	5	1	1	1	1	1	1	2.0	17.7													
27-Jul	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	1	0	1	1	0	0	1	1	0.7	0.9													
28-Jul	1	1	0	1	1	1	1	A	0	0	0	1	0	1	1	1	1	1	0	0	0	0	0	1	0.5	0.7													
29-Jul	0	0	0	0	0	0	A	1	0	0	4	1	0	1	1	1	0	0	1	1	1	0	1	0	0.6	3.8													
30-Jul	0	0	4	0	0	A	1	0	0	1	0	0	0	1	0	0	0	0	0	0	1	1	0	1	0.6	3.7													
31-Jul	1	1	1	1	A	1	1	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	5	6	0.9	6.3													
0.6 0.6 0.6 0.5 0.6 0.6 0.6 0.6 1.1 0.5 0.6 0.5 0.6 0.6 0.6 0.6 0.5 0.7 0.6 0.6 0.6 0.5 0.7 0.8																									Diurnal Average														
1.5 0.8 3.7 0.9 0.9 1.2 1.1 1.2 17.7 1.0 3.8 0.9 3.6 3.1 4.3 1.5 0.9 5.3 0.8 1.5 2.5 0.8 5.5 6.3																									Diurnal Maximum														
C - Calibration																									A - Automated Daily Zero Span														

Hourly Maximums

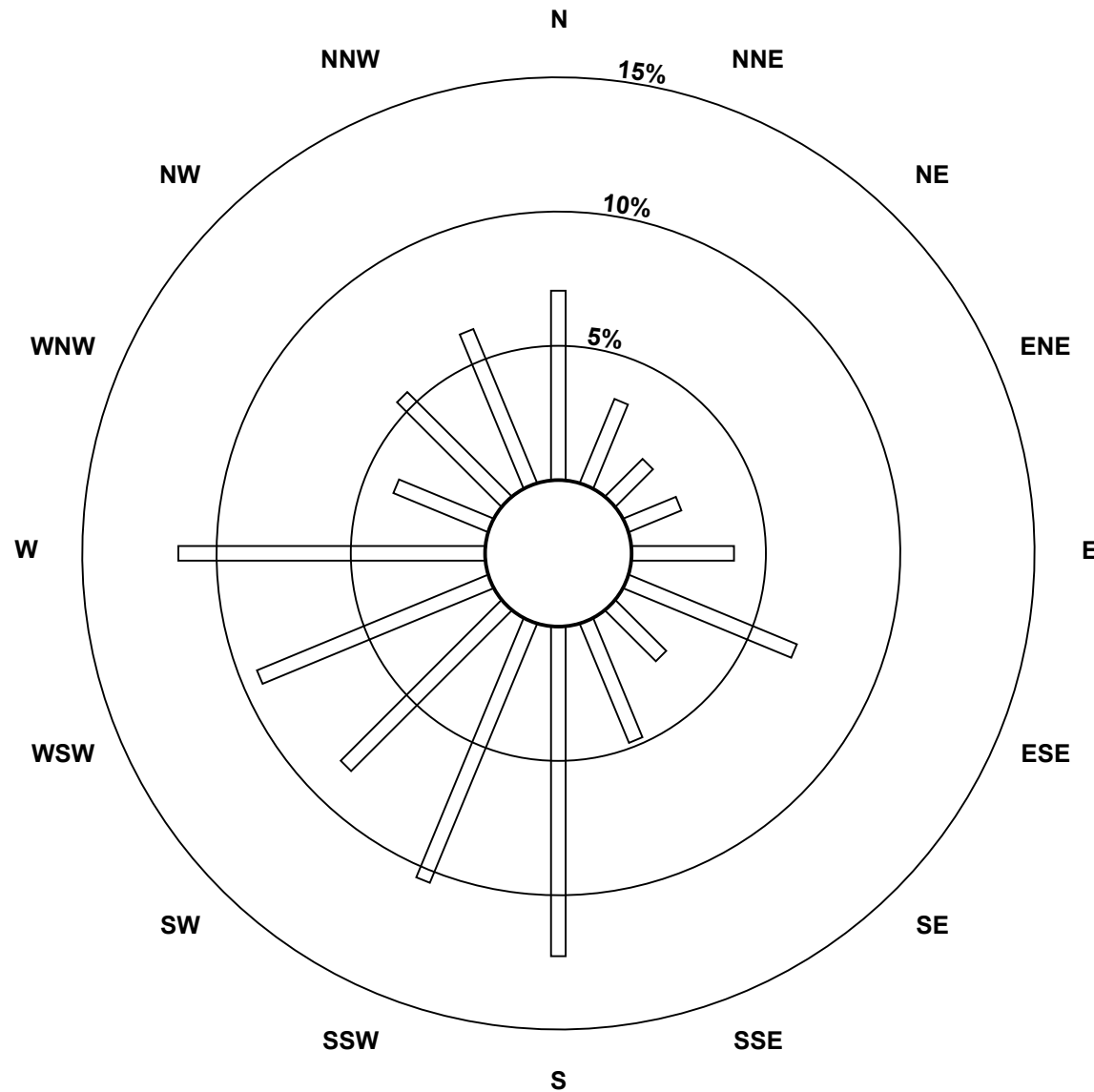
Sulphur Dioxide (SO₂) - ppb
Donnelly - July 2018



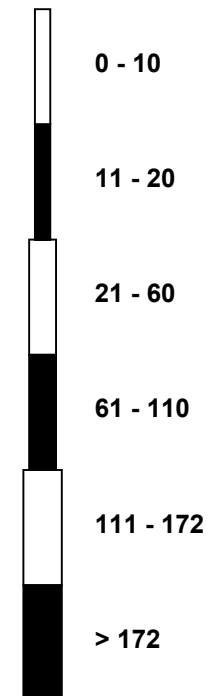
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb

Donnelly - July 2018



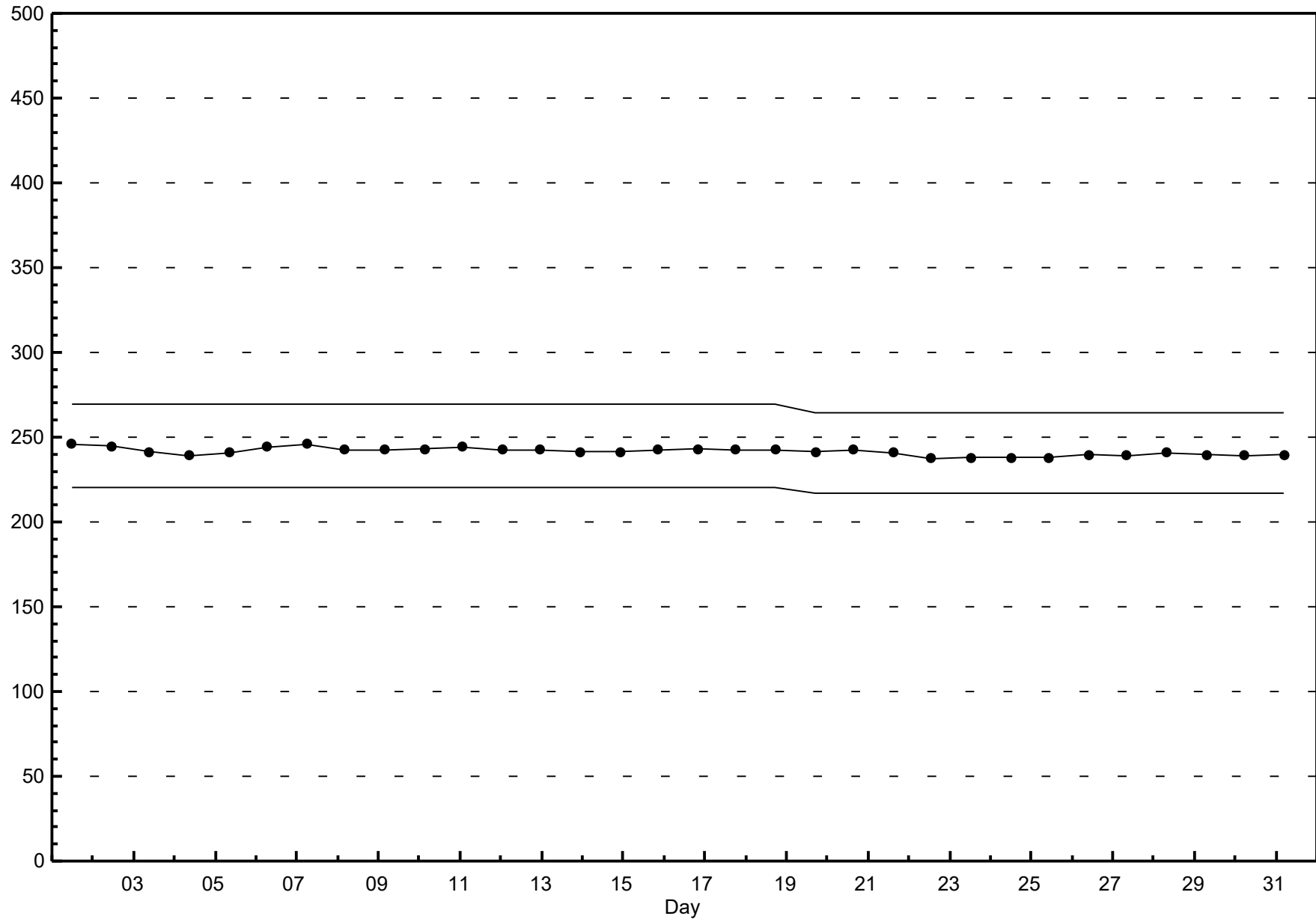
Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)

Donnelly - July 2018



Hourly Averages

Hydrogen Sulphide (H₂S) - ppb

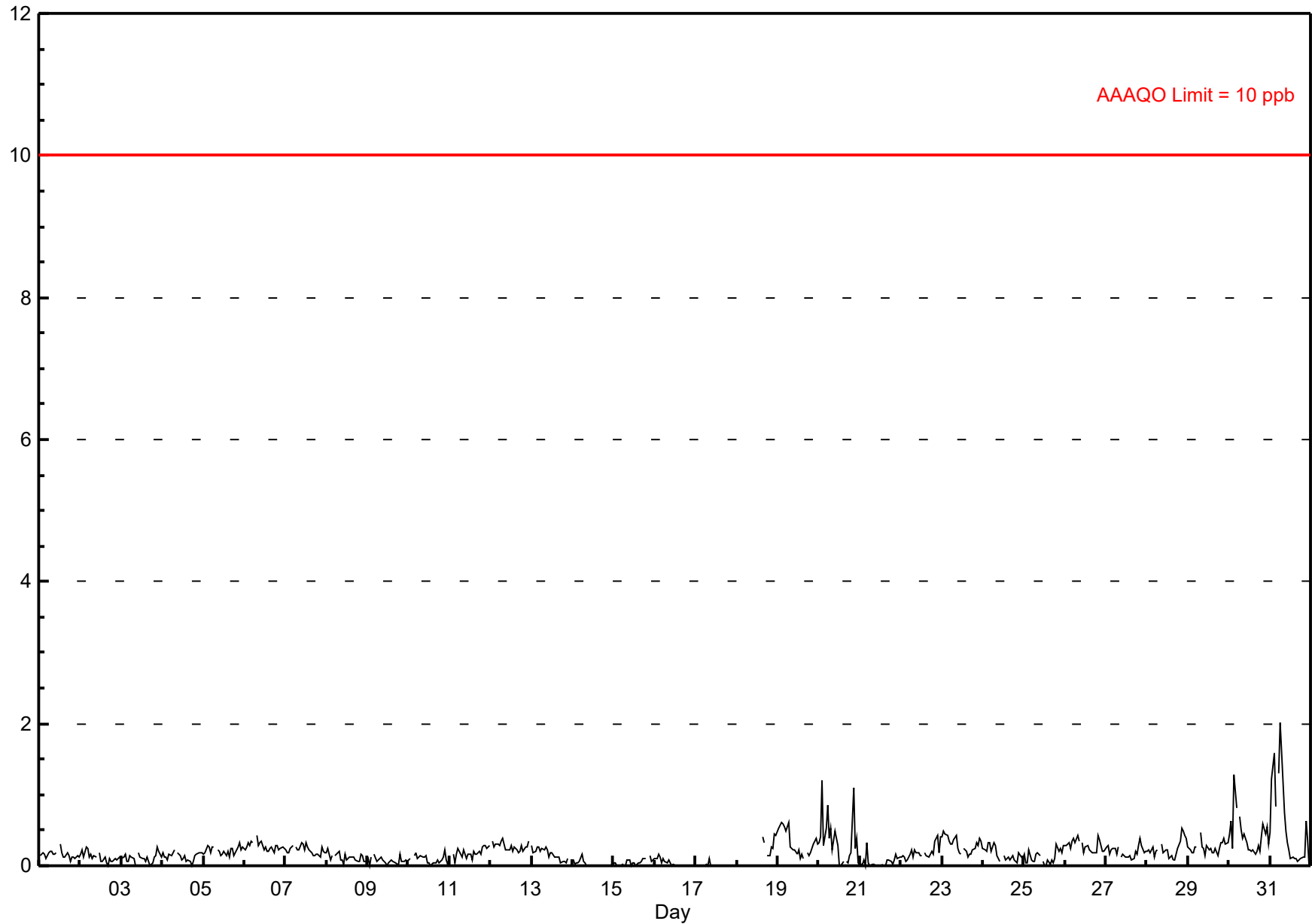
Donnelly - July 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 2.0 ppb on Jul 31 07:00 Maximum Daily Average: 0.6 ppb on Jul 31																				Hours in Service: 744 Hours of Data: 708							
Minimum Value: 0 ppb on Jul 2 17:00 Minimum Daily Average: 0.0 ppb on Jul 17 Maximum Diurnal Average: 0.3 ppb at hour 7 Minimum Diurnal Average: 0.1 ppb at hour 14 Monthly Average: 0.19 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.2 P ₉₀ = 0.3 P ₉₉ = 1.1																				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	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
2-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	
3-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	0.1	0.3	
4-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	
5-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	0.3	
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	0.3	0.4	
7-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	
8-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	
9-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	
10-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	
11-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	
12-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.3	0.4	
13-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	
14-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	
15-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	0.1	
16-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	0.2	
17-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	0.1	
18-Jul	0	0	0	0	0	0	0	0	0	0	0	C	C	C	C	0	0	A	0	0	0	0	0	0	0.1	0.4	
19-Jul	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.6	
20-Jul	0	0	1	0	1	1	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	1	0	0	0.4	1.2	
21-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	0.1	0.3	
22-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	0.2	0.4	
23-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	0.3	0.5	
24-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	
25-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	
26-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	
27-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	
28-Jul	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.2	0.5	
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	0.3	0.5	
30-Jul	0	1	0	1	1	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0.4	1.3	
31-Jul	0	1	2	1	A	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.6	2.0	
0.2 0.2 0.3 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 0.2 0.2 0.2 0.2 0.2																									Diurnal Average		
0.5 1.2 1.6 1.3 0.8 1.3 2.0 1.6 0.8 0.5 0.4 0.3 0.3 0.3 0.3 0.4 0.3 0.3 0.3 0.4 1.1 0.6 0.6 0.4																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																											

Hourly Averages

Hydrogen Sulphide (H₂S) - ppb

Donnelly - July 2018



Hourly Maximums

Hydrogen Sulphide (H₂S) - ppb

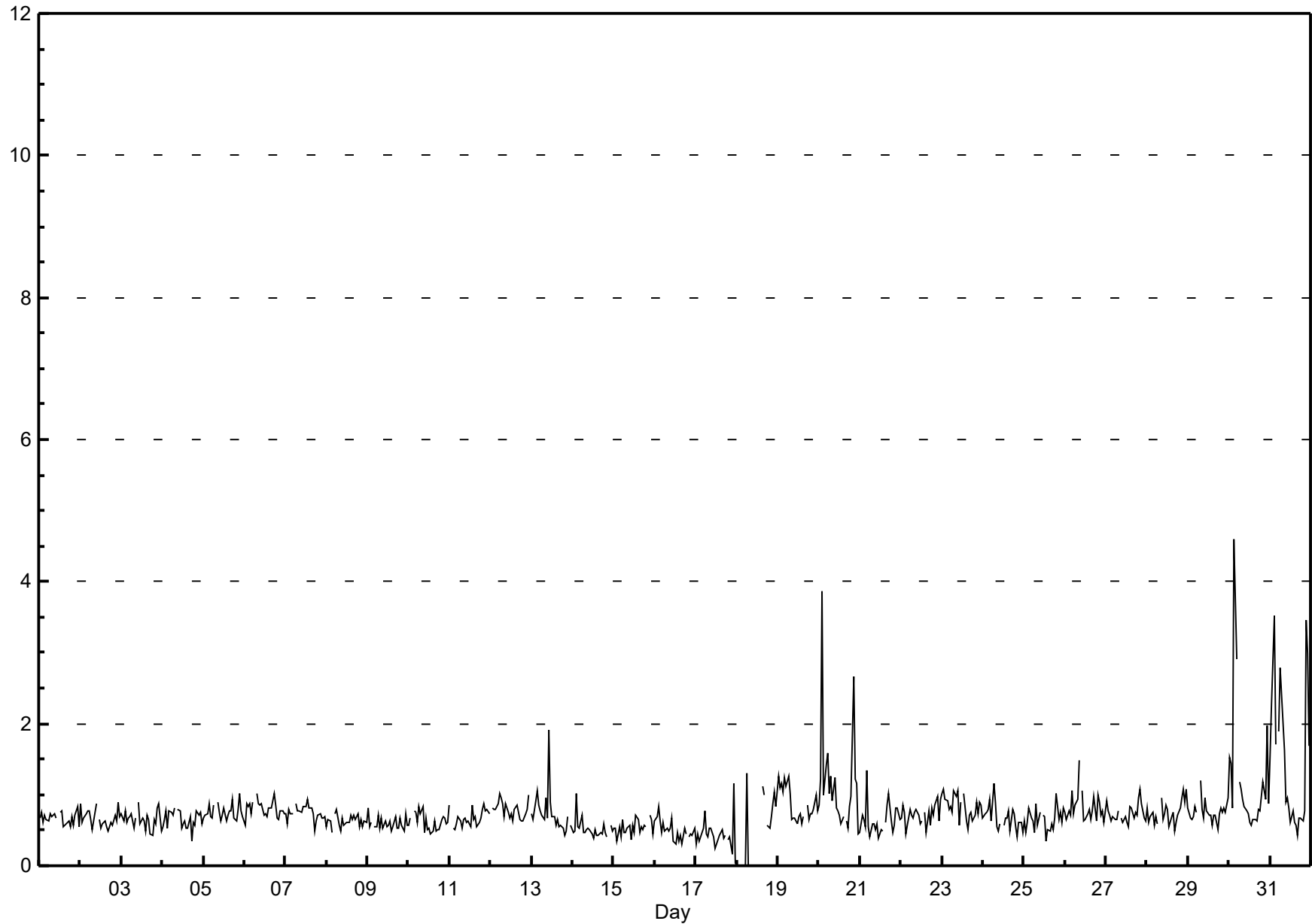
Donnelly - July 2018

Maximum Value: 4.6 ppb on Jul 30 04:00																				Maximum Daily Average: 1.5 ppb on Jul 31					Hours in Service: 744	
Minimum Value: 0 ppb on Jul 18 01:00																				Minimum Daily Average: 0.4 ppb on Jul 18					Hours of Data: 708	
Maximum Diurnal Average: 0.9 ppb at hour 3																				Minimum Diurnal Average: 0.6 ppb at hour 13					Hours of Missing Data: 36	
Monthly Average: 0.73 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.7 Q ₃ = 0.8 P ₉₀ = 1.0 P ₉₉ = 2.6					Hours of Calibration: 36	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-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	0.8
2-Jul	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0	1	1	1	1	1	1	1	0.7	0.9
3-Jul	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	1	1	0	0	1	1	1	1	0	0.7	0.9
4-Jul	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0.7	0.8
5-Jul	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
6-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	1.0
7-Jul	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0.7	0.9
8-Jul	1	1	1	0	A	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8
9-Jul	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	0.6	0.8
10-Jul	1	1	A	1	1	1	1	1	1	0	1	0	1	0	0	1	0	1	1	1	1	1	1	1	0.6	0.8
11-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
12-Jul	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	1.0
13-Jul	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	0	0	1	A	1	0.7	1.9
14-Jul	0	0	1	1	1	1	0	0	1	1	1	0	0	1	0	0	0	0	1	0	0	A	1	0	0.5	1.0
15-Jul	1	1	0	1	0	1	0	0	1	1	0	1	0	1	1	0	1	1	1	1	A	1	1	0	0.5	0.7
16-Jul	1	1	1	1	0	1	0	1	0	1	1	0	0	0	0	0	0	1	0	A	0	0	0	1	0.5	0.8
17-Jul	0	0	0	0	1	1	0	0	1	1	0	0	0	0	0	1	0	0	A	0	0	0	1	0	0.4	1.1
18-Jul	0	0	0	0	0	0	1	0	0	0	0	C	C	C	C	1	1	A	1	1	1	1	1	1	0.4	1.3
19-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	0.9	1.3
20-Jul	1	1	4	1	1	2	1	1	1	1	1	1	1	1	1	A	1	1	1	1	3	1	1	0	1.1	3.9
21-Jul	0	1	1	1	1	1	0	1	1	1	1	0	1	0	A	1	1	1	1	0	1	1	1	1	0.6	1.3
22-Jul	1	1	1	0	1	1	1	1	1	1	1	1	1	A	1	0	1	1	1	1	1	1	1	1	0.7	1.0
23-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	0.8	1.1
24-Jul	1	1	1	1	1	1	1	1	1	0	1	A	1	1	1	1	0	1	1	1	0	1	1	0	0.7	1.2
25-Jul	1	0	1	1	1	1	0	1	1	1	A	1	1	0	1	0	1	0	1	1	1	1	1	1	0.6	1.0
26-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	1.5
27-Jul	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1
28-Jul	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0.8	1.1
29-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	1.2
30-Jul	2	1	1	5	3	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1.2	4.6
31-Jul	2	2	4	2	A	2	3	2	2	1	1	1	1	1	1	1	0	1	1	1	1	3	3	2	1.5	3.5
0.7 0.8 0.9 0.8 0.8 0.8 0.8 0.8 0.7 0.7 0.7 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.7 0.8 0.8 0.9 0.7																								Diurnal Average		
1.5 2.3 3.9 4.6 2.9 1.9 2.8 2.4 1.6 1.2 1.9 0.9 0.8 1.0 0.8 1.1 1.0 1.0 0.9 1.0 2.7 3.5 3.0 1.7																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

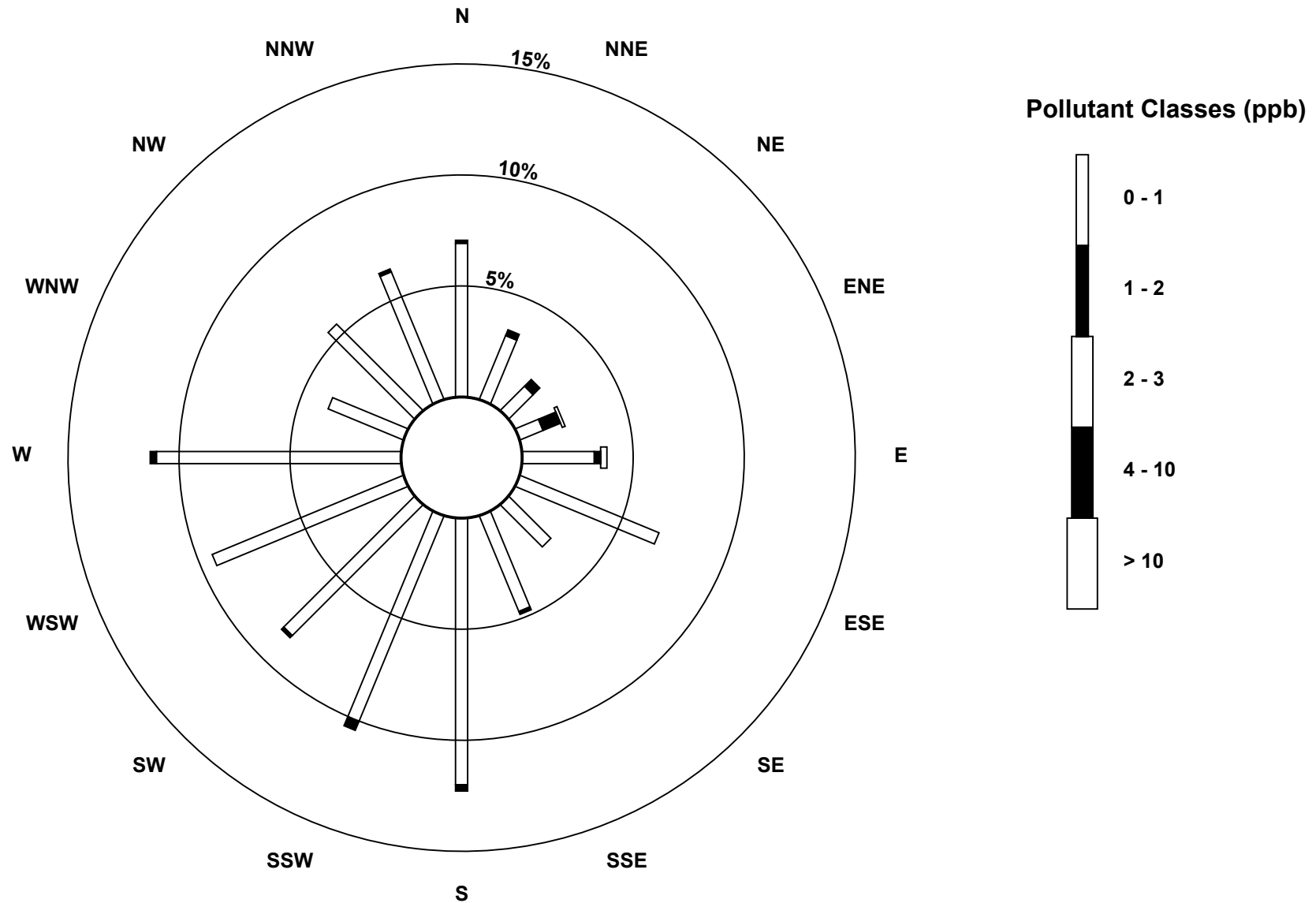
Hydrogen Sulphide (H₂S) - ppb

Donnelly - July 2018



Pollutant Rose

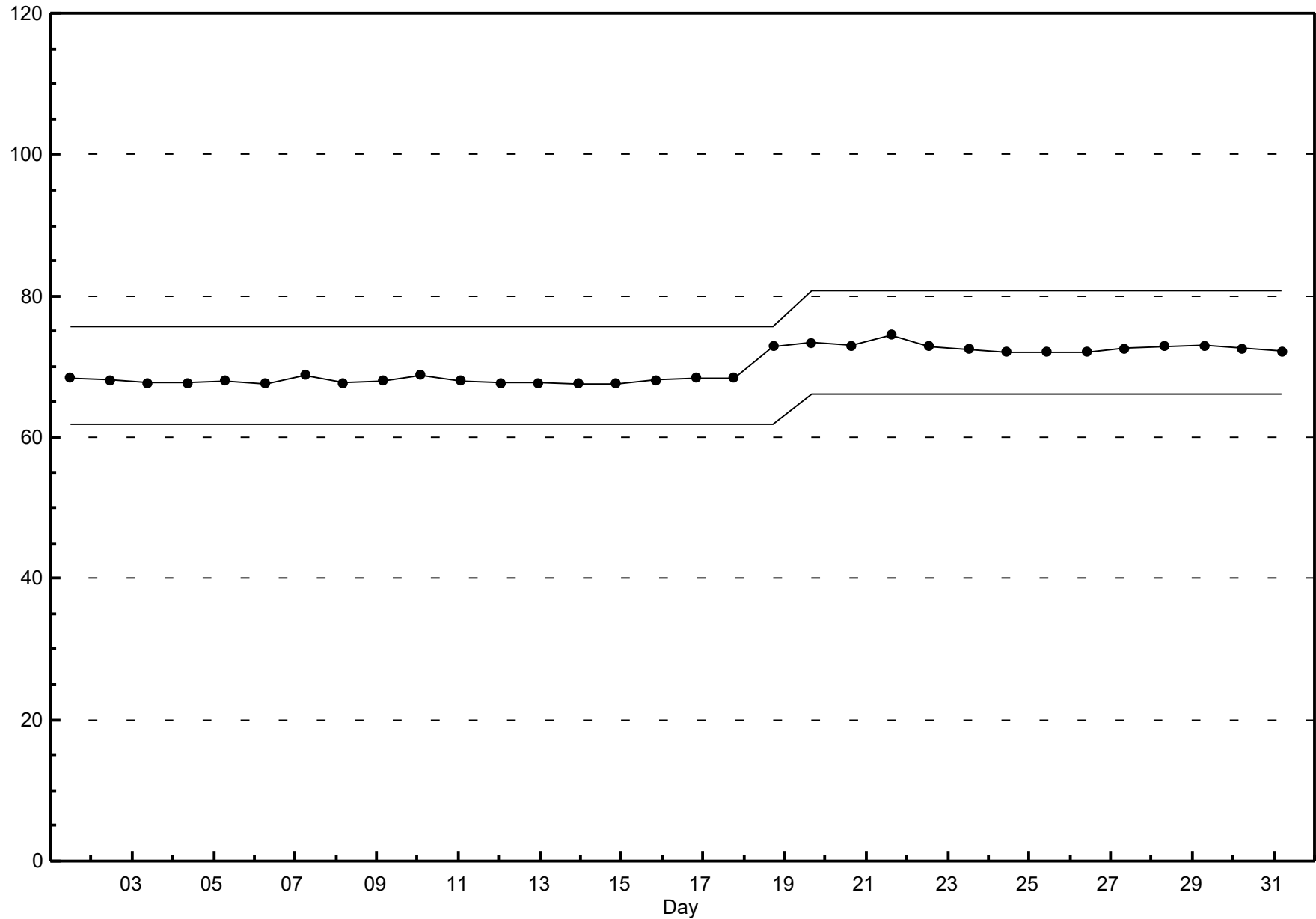
Hydrogen Sulphide (H₂S) - ppb
Donnelly - July 2018



Span Responses

Hydrogen Sulphide (H_2S)

Donnelly - July 2018



Hourly Averages

External Temperature (ET) - °C

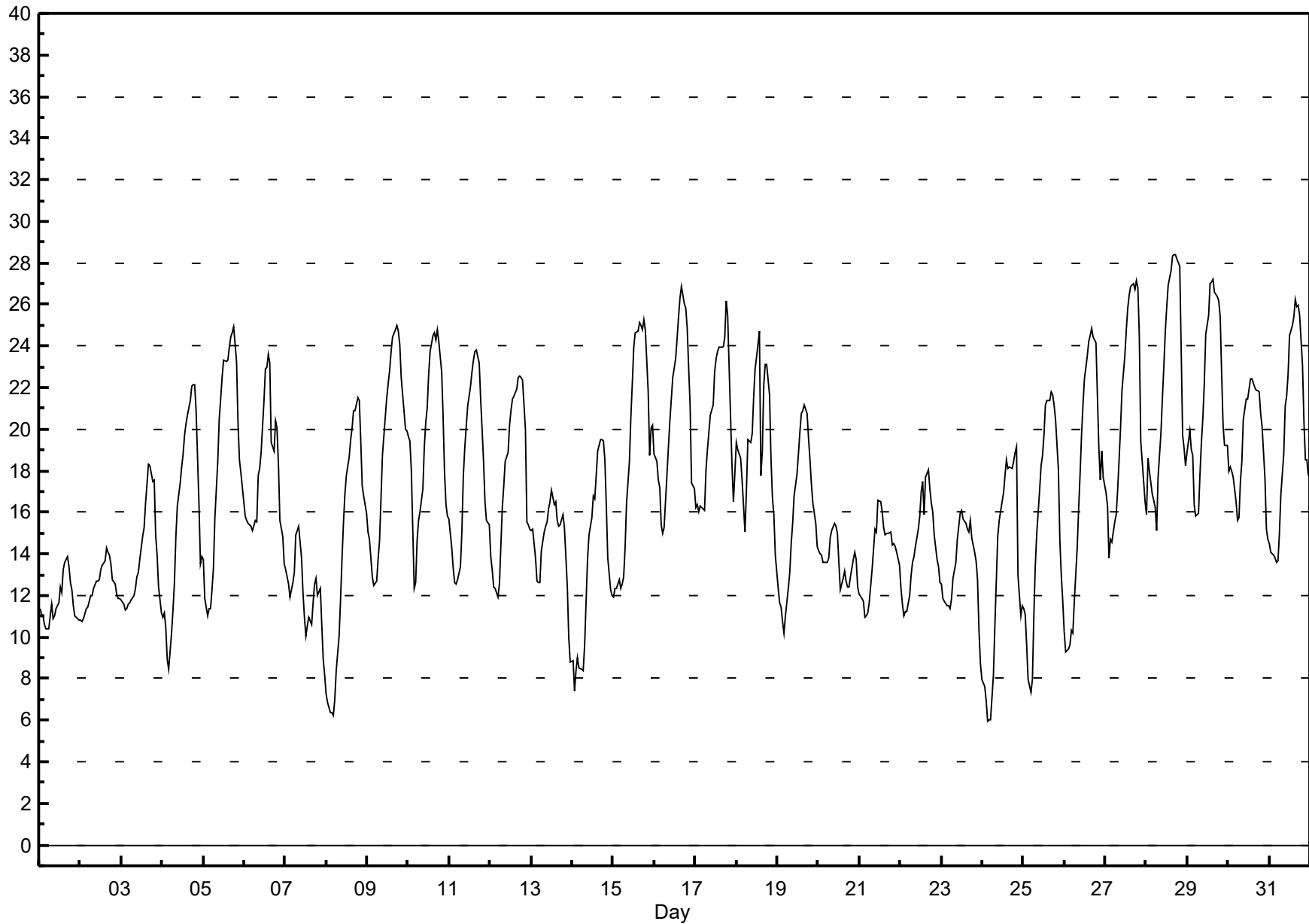
Donnelly - July 2018

Maximum Value: 28.4 °C on Jul 28 17:00																				Maximum Daily Average: 21.9 °C on Jul 28										Hours in Service: 744	
Minimum Value: 6 °C on Jul 24 04:00																				Minimum Daily Average: 11.7 °C on Jul 1										Hours of Data: 744	
Maximum Diurnal Average: 20.9 °C at hour 17																				Minimum Diurnal Average: 12.2 °C at hour 5										Hours of Missing Data: 0	
Monthly Average: 16.80 °C																				Percentiles: P ₁ = 6.9 P ₁₀ = 11.1 Q ₁ = 12.9 Median = 16.2 Q ₃ = 20.4 P ₉₀ = 23.9 P ₉₉ = 27.1										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	11	11	11	11	10	10	11	12	11	11	11	12	12	12	13	14	14	14	13	13	12	12	11	11	11	11.7	13.9				
2-Jul	11	11	11	11	11	12	12	12	12	13	13	13	13	13	14	14	14	14	13	13	13	13	12	12	12	12.5	14.3				
3-Jul	12	12	11	11	12	12	12	12	12	13	13	14	15	15	16	17	18	18	17	18	15	14	12	11	13.9	18.3					
4-Jul	11	11	10	9	8	10	11	13	15	16	17	18	19	20	20	21	21	22	22	22	21	16	13	14	15.9	22.2					
5-Jul	14	12	11	11	11	12	13	16	18	20	21	22	23	23	23	24	24	25	25	23	20	19	18	17	18.7	24.9					
6-Jul	16	16	15	15	15	15	16	16	18	18	19	21	23	23	24	23	19	19	20	20	18	16	15	14	18.1	23.6					
7-Jul	13	13	13	12	13	13	15	15	15	14	12	11	10	11	11	11	12	13	13	12	12	11	9	8	12.1	15.3					
8-Jul	7	7	6	6	6	7	8	10	12	14	15	17	18	19	19	20	21	21	22	21	19	17	17	16	14.4	21.5					
9-Jul	15	15	14	13	12	13	14	15	17	19	21	22	22	23	24	24	25	25	25	24	22	21	20	20	19.3	25.0					
10-Jul	20	19	18	12	13	15	16	16	17	19	20	21	23	24	24	25	24	25	24	23	21	18	16	16	19.5	24.8					
11-Jul	16	14	13	13	13	13	13	15	18	19	20	21	22	23	23	24	24	23	21	20	18	16	16	15	18.1	23.8					
12-Jul	14	13	12	12	12	13	14	16	17	18	19	20	21	21	22	22	23	23	23	22	20	16	15	15	17.7	22.5					
13-Jul	15	15	14	13	13	13	14	15	15	16	16	16	17	16	17	16	15	15	16	15	14	12	10	9	14.5	17.1					
14-Jul	9	7	8	9	9	8	8	10	12	14	15	16	17	17	18	19	19	20	19	18	16	14	12	12	13.6	19.5					
15-Jul	12	12	12	13	12	13	13	14	16	18	21	22	24	25	25	25	25	25	25	25	22	19	20	20	19.1	25.3					
16-Jul	19	18	18	17	15	15	15	18	19	20	21	22	23	24	25	26	27	26	26	25	23	21	17	17	20.9	26.9					
17-Jul	16	16	16	16	16	16	18	19	20	21	21	23	23	24	24	24	24	24	26	26	23	18	17	18	20.4	26.2					
18-Jul	19	19	19	18	16	15	17	19	19	20	21	23	23	25	18	19	22	23	23	22	19	17	16	14	19.4	24.7					
19-Jul	12	12	11	11	10	11	12	13	14	15	17	18	19	20	21	21	21	21	20	19	17	16	15	14	15.9	21.2					
20-Jul	14	14	14	14	14	14	14	15	15	15	15	15	14	12	13	13	13	12	12	13	14	14	14	12	13.7	15.5					
21-Jul	12	12	12	11	11	11	12	13	14	15	15	17	16	16	15	15	15	15	15	14	14	14	14	13	13.9	16.6					
22-Jul	12	12	11	11	11	12	13	14	14	14	15	16	17	17	16	18	18	17	16	16	15	14	13	13	14.4	18.1					
23-Jul	13	12	12	12	12	11	12	13	14	15	15	16	16	16	15	15	15	16	15	14	14	13	10	9	13.4	16.1					
24-Jul	8	8	7	6	6	6	8	11	13	15	16	16	17	18	19	18	18	18	18	19	19	13	11	12	13.3	19.2					
25-Jul	11	11	10	8	7	8	11	13	15	17	18	19	20	21	21	21	22	22	21	20	18	15	13	12	15.6	21.8					
26-Jul	10	9	9	10	10	10	12	14	16	18	20	21	22	24	24	25	25	24	24	22	19	18	19	18	17.6	24.8					
27-Jul	17	16	14	15	15	16	16	17	18	20	22	24	25	26	26	27	27	27	27	27	25	19	17	17	20.8	27.1					
28-Jul	16	19	18	17	17	16	15	18	20	22	23	25	26	27	28	28	28	28	28	28	24	20	19	18	21.9	28.4					
29-Jul	19	20	19	19	16	16	16	18	19	21	22	25	25	27	27	27	27	26	26	25	23	20	19	19	21.7	27.2					
30-Jul	18	18	18	18	16	16	16	17	18	20	21	21	22	22	22	22	22	22	22	21	20	18	15	15	19.2	22.4					
31-Jul	14	14	14	14	14	14	15	17	19	21	22	23	24	25	25	26	26	26	25	23	20	18	19	18	19.8	26.2					
13.8 13.5 13.0 12.5 12.2 12.4 13.3 14.7 16.0 17.2 18.1 19.0 19.8 20.3 20.4 20.8 20.9 20.9 20.8 20.1 18.4 16.1 15.0 14.5																									Diurnal Average						
19.6 19.9 19.0 18.7 16.6 16.3 18.0 19.5 19.9 21.5 23.0 24.7 25.9 27.0 27.6 28.3 28.4 28.4 28.2 27.8 24.5 21.2 20.1 20.2																									Diurnal Maximum						

Hourly Averages

External Temperature (ET) - °C

Donnelly - July 2018



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Donnelly - July 2018

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	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	9	11	14	11	13	13	15	18	18	17	21	26	27	24	26	26	25	22	27	24	20	18	16	16	18.2	27.3
Dir	236	208	215	220	228	225	224	247	248	249	250	257	252	237	239	249	260	266	264	267	265	260	268	271	249	252
2 Spd	13	11	10	9	11	12	12	13	19	21	19	20	19	18	19	18	17	17	21	15	15	11	11	13	14.2	21.2
Dir	281	283	281	320	345	355	355	355	355	354	352	352	344	330	327	334	351	354	353	343	337	326	317	315	338	353
3 Spd	13	13	11	11	11	11	12	15	15	17	15	13	13	16	16	18	17	16	11	6	2	3	1	3	10.8	17.7
Dir	313	315	320	327	335	336	339	351	359	3	5	7	0	3	3	3	14	12	23	23	50	327	353	271	353	3
4 Spd	3	1	1	0	0	2	3	4	3	4	7	10	9	9	7	7	5	4	4	3	4	6	5	8	2.2	10.2
Dir	274	328	322	159	83	100	284	282	291	263	267	275	293	306	307	324	330	306	235	195	156	131	126	138	278	275
5 Spd	6	3	4	5	4	3	6	8	8	9	13	11	9	14	15	14	11	11	10	5	5	3	6	5	6.6	14.5
Dir	132	111	101	111	106	108	104	106	105	110	123	118	121	186	183	178	175	174	174	142	123	112	118	108	140	183
6 Spd	4	5	4	4	4	4	4	9	18	12	8	14	18	17	16	15	18	10	15	14	17	14	15	13	9.5	18.4
Dir	105	98	105	118	176	162	92	211	203	219	230	255	250	238	234	211	202	192	225	225	226	200	191	211	213	250
7 Spd	15	14	16	14	15	14	17	17	18	11	14	19	13	16	15	13	9	12	11	10	12	8	9	10	8.4	18.8
Dir	212	213	199	201	219	219	225	239	250	303	348	342	335	325	310	321	318	247	241	209	234	221	191	195	252	342
8 Spd	8	8	9	10	10	9	10	11	12	12	12	12	13	12	14	12	12	10	6	5	7	9	11	13	9.0	13.9
Dir	186	184	186	182	183	183	184	206	212	203	205	214	223	247	247	249	258	260	256	208	188	173	169	172	208	247
9 Spd	13	14	13	13	14	14	17	17	16	15	17	17	18	19	19	17	15	13	11	7	9	11	12	13	13.0	19.0
Dir	172	170	173	175	175	175	173	180	188	195	217	232	219	218	217	225	230	232	224	196	170	159	168	166	196	217
10 Spd	13	12	6	2	4	4	9	14	14	14	15	10	12	11	10	13	10	9	11	8	7	11	12	12	8.4	14.9
Dir	167	164	166	36	93	166	182	181	189	198	221	195	189	217	237	239	239	253	273	254	210	187	188	186	203	221
11 Spd	12	9	10	11	11	11	11	12	17	19	22	19	17	18	17	13	16	15	11	13	12	11	13	12	12.4	22.4
Dir	197	196	204	205	198	201	204	213	245	254	265	261	251	254	252	265	264	272	255	225	209	198	209	216	235	265
12 Spd	11	12	10	13	11	12	12	11	16	19	19	18	16	13	10	11	9	9	8	5	2	4	7	7	9.3	18.8
Dir	198	203	191	198	194	208	218	236	261	259	261	260	276	265	273	263	261	266	275	284	230	172	195	184	239	259
13 Spd	8	8	9	11	10	12	11	12	12	15	14	10	12	15	14	13	16	16	14	12	9	8	7	8	7.9	16.0
Dir	182	193	204	186	190	186	202	265	247	257	278	291	281	326	313	305	299	321	299	303	305	310	290	280	272	299
14 Spd	6	8	12	18	19	22	22	24	30	29	30	25	27	22	24	26	24	21	19	15	9	6	7	12	18.1	30.2
Dir	274	253	259	272	269	262	259	260	271	276	281	280	282	280	282	275	273	278	278	268	256	218	189	181	269	281
15 Spd	12	11	13	12	13	15	15	10	9	10	11	11	13	17	16	14	8	5	4	2	2	5	12	11	7.8	17.3
Dir	181	176	174	171	168	168	171	165	167	187	193	189	213	234	252	248	278	341	51	97	112	120	137	164	188	234
16 Spd	11	13	13	14	14	11	9	11	12	16	15	16	15	18	19	17	21	19	18	15	14	15	14	12	13.1	20.8
Dir	173	175	184	187	189	203	216	231	232	256	263	253	250	246	252	232	237	249	241	245	233	229	205	198	228	237
17 Spd	11	12	9	7	7	7	7	8	7	10	12	14	14	13	10	9	8	6	1	4	3	3	4	8	6.2	14.0
Dir	198	191	191	191	192	198	215	232	251	248	250	251	262	262	255	256	257	241	234	135	131	131	118	124	225	251
18 Spd	10	12	11	15	7	5	5	7	9	9	9	10	9	7	17	10	7	11	10	11	7	6	7	2	3.9	16.7
Dir	139	170	168	185	184	45	84	111	159	201	216	269	288	282	296	341	324	278	282	275	254	238	260	193	236	296
19 Spd	1	0	1	1	1	2	4	8	9	6	7	7	9	9	9	10	11	11	8	9	9	8	4	10	5.4	11.0
Dir	229	209	191	205	187	104	6	358	10	357	354	346	9	5	349	357	6	1	4	14	30	30	11	275	1	6
20 Spd	7	10	11	5	5	6	3	4	6	6	6	5	16	18	19	15	11	13	8	3	12	11	6	7	2.9	19.1
Dir	22	68	77	85	68	64	314	36	36	21	338	323	265	268	282	288	245	236	295	7	27	25	111	113	331	282
21 Spd	6	6	6	5	6	4	4	4	5	4	5	2	5	10	14	13	9	12	13	13	11	9	8	9	3.4	14.4
Dir	87	100	98	70	61	87	82	88	109	102	25	31	335	297	305	292	277	258	276	313	308	298	295	283	313	305
22 Spd	8	7	6	7	7	6	9	10	11	12	10	14	11	10	8	12	11	11	9	6	4	7	4	1	6.9	13.7
Dir	272	260	255	261	271	286	310	331	338	328	330	351	332	354	348	357	7	3	5	4	330	358	23	295	332	351

Hourly Averages

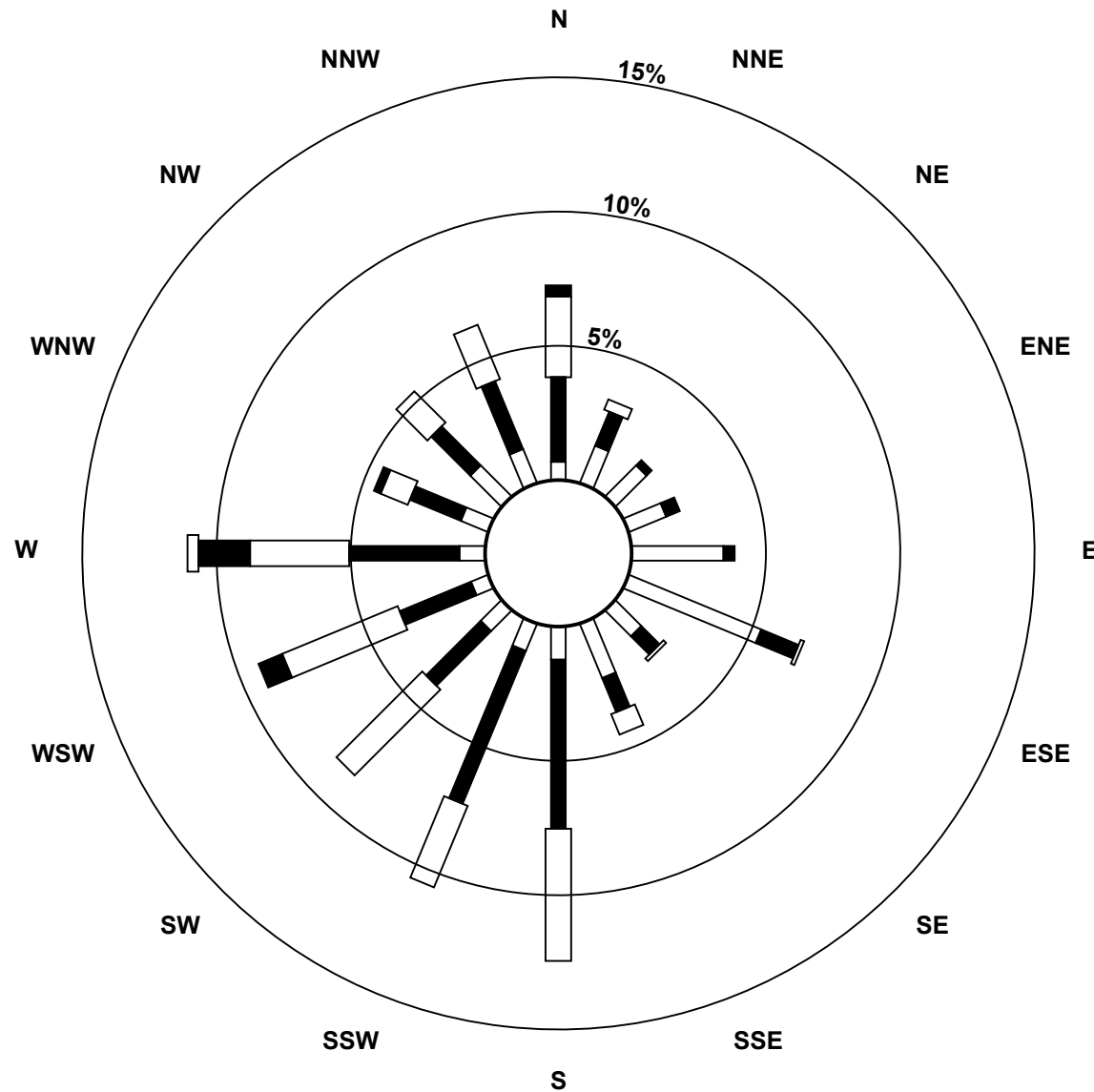
Wind Speed (km/h)
Wind Direction (deg)
Donnelly - July 2018

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	1	4	2	2	4	3	4	7	6	9	13	14	14	13	13	11	11	10	9	5	2	2	2	2	6.0	14.3
Dir	270	288	316	322	20	48	20	28	11	341	359	347	344	335	335	330	347	347	358	357	316	295	190	161	347	344
24 Spd	2	4	2	1	2	2	0	2	2	2	2	4	6	3	5	5	9	6	4	3	2	4	3	4	0.6	8.6
Dir	175	123	151	55	149	105	161	249	251	245	322	290	262	313	273	331	346	354	29	53	102	114	116	117	347	346
25 Spd	5	7	2	1	2	4	3	3	4	2	2	1	2	4	5	6	5	3	3	2	2	4	3	2	1.9	6.7
Dir	118	128	156	60	103	82	103	100	110	130	105	150	190	147	175	212	212	254	306	348	79	119	111	144	136	128
26 Spd	2	4	4	4	4	2	0	1	7	6	9	10	9	7	6	7	7	9	6	6	6	6	8	8	3.9	9.8
Dir	46	76	98	102	107	108	146	215	223	198	191	184	187	197	238	268	267	228	229	200	185	158	166	166	192	184
27 Spd	7	4	3	4	6	10	8	10	9	9	9	9	11	10	10	8	8	7	5	3	3	5	5	6	5.7	11.0
Dir	169	162	157	153	170	174	172	183	179	200	192	205	215	232	241	259	260	264	229	197	165	148	143	133	197	215
28 Spd	5	13	14	13	14	10	2	2	6	6	6	6	6	8	9	10	10	8	5	2	2	4	5	7	6.5	13.7
Dir	136	170	175	176	176	178	43	62	180	193	193	195	208	205	223	212	218	216	207	224	165	166	157	172	188	175
29 Spd	9	11	11	10	5	9	6	6	5	6	8	2	2	2	5	5	5	5	4	3	3	3	2	3	0.8	11.0
Dir	175	174	174	175	251	189	299	21	347	308	316	177	273	216	305	321	323	16	16	18	100	87	103	117	234	174
30 Spd	2	10	4	8	10	6	1	4	1	0	6	11	11	12	17	14	11	12	10	4	3	1	2	3	4.7	16.8
Dir	265	281	293	48	213	208	268	29	208	240	330	344	347	344	352	1	6	0	354	350	333	22	49	53	345	352
31 Spd	5	4	3	3	3	2	2	3	3	2	3	2	5	5	6	5	4	4	4	4	4	3	5	6	3.1	5.7
Dir	60	73	81	87	93	63	57	91	76	130	221	66	96	106	116	118	88	102	77	98	103	95	85	1	88	1
Spd	4.3	4.9	4.9	4.3	4.3	4.1	3.4	3.3	4.6	5.4	6.1	6.4	7.5	8.0	8.9	7.9	6.9	6.4	5.7	3.7	2.5	2.3	3.6	4.3	Diurnal Average	
Dir	190	188	188	191	198	195	215	235	243	257	269	274	270	270	275	278	279	281	281	270	244	204	187	192	Diurnal Maximum	
Spd	15.1	14.2	15.8	18.3	19.5	22.0	22.0	23.7	29.7	29.1	30.2	25.8	27.3	24.4	25.5	26.3	24.8	22.3	26.8	24.2	19.7	17.9	15.9	15.9	Diurnal Maximum	
Dir	212	213	199	272	269	262	259	260	271	276	281	257	252	237	239	275	260	266	264	267	265	260	268	271		
Maximum Speed Value: 30 km/h on Jul 14 11:00																								Minimum Speed Value: 0 km/h on Jul 30 10:00		
Maximum Daily Speed Average: 18.2 km/h on Jul 14																								Minimum Daily Speed Average: 0.6 km/h on Jul 25		
Maximum Diurnal Speed Average: 8.9 km/h at hour 15																								Minimum Diurnal Speed Average: 2.3 km/h at hour 22		
Monthly Average Velocity: 4.13 km/h 246.5 deg																								Speed Percentiles: P ₁ = 0.6 P ₁₀ = 2.8 Q ₁ = 4.9 Median = 9.3 Q ₃ = 13.1 P ₉₀ = 17.0 P ₉₉ = 25.8		
All monthly, daily, and diurnal averages have been calculated using vector methods																								Percent Operational Time: 100.0		
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	35	36	5	0	0	89																			
NorthEast	23	10	1	0	0	0	34																			
East	56	14	0	0	0	0	70																			
SouthEast	28	17	2	0	0	0	47																			
South	21	72	63	0	0	0	156																			
SouthWest	15	42	65	4	0	0	126																			
West	18	49	52	23	3	0	145																			
NorthWest	21	26	30	0	0	0	77																			
Total	195	265	249	32	3	0	744																			

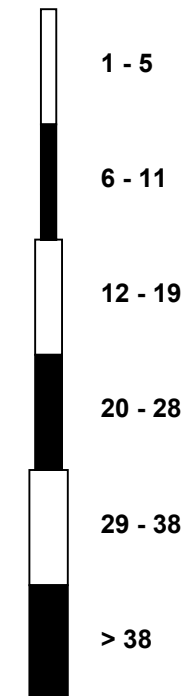
Wind Rose

Wind Speed (WS) (km/h)

Donnelly - July 2018



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Donnelly - July 2018

Maximum Speed: 30 km/h on Jul 14 11:00																			Maximum Daily Speed Average: 19.3 km/h on Jul 14							Hours in Service: 744	
Minimum Speed: 1 km/h on Jul 4 05:00																			Minimum Daily Speed Average: 3.8 km/h on Jul 24							Hours of Data: 744	
Maximum Diurnal Speed Average: 13.6 km/h at hour 15																			Minimum Diurnal Speed Average: 7.2 km/h at hour 22							Hours of Missing Data: 0	
Monthly Average Speed: 9.90 km/h																			Percentiles: P ₁ = 1.6 P ₁₀ = 3.4 Q ₁ = 5.4 Median = 9.7 Q ₃ = 13.2 P ₉₀ = 17.2 P ₉₉ = 26.1							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	9	11	14	11	13	13	15	18	18	17	21	26	27	25	26	26	25	22	27	24	20	18	16	16	19.1	27.5	
2-Jul	13	11	10	10	12	12	12	13	19	21	20	20	19	18	19	18	17	17	21	16	15	11	12	13	15.3	21.4	
3-Jul	13	13	11	11	11	11	12	15	16	17	15	13	14	16	17	18	18	16	11	6	5	3	1	3	11.9	18.2	
4-Jul	3	1	1	1	1	3	4	4	4	5	7	11	9	10	8	8	6	5	5	4	4	6	5	8	5.1	10.6	
5-Jul	6	3	4	5	4	4	6	8	8	9	13	11	10	14	15	14	11	11	10	5	5	3	6	5	7.9	14.7	
6-Jul	4	5	4	4	5	7	5	10	18	12	10	15	19	18	16	17	19	12	15	14	17	14	15	13	12.0	19.2	
7-Jul	15	14	16	14	15	14	17	17	18	12	14	19	14	16	15	14	10	12	11	10	12	8	9	10	13.6	19.3	
8-Jul	8	8	9	10	10	9	10	11	12	12	12	12	13	13	14	13	12	10	6	5	7	9	11	13	10.5	14.3	
9-Jul	13	14	13	13	14	14	17	18	16	15	17	17	18	19	19	17	15	13	11	7	9	11	12	13	14.5	19.3	
10-Jul	13	12	8	4	4	5	9	14	14	14	15	11	12	11	11	14	11	9	11	8	8	11	12	12	10.5	15.1	
11-Jul	12	9	10	11	11	11	11	12	17	19	23	19	18	19	17	14	16	15	11	13	12	11	13	12	14.0	22.5	
12-Jul	11	12	10	13	11	12	12	11	16	19	19	18	16	13	10	11	9	10	8	5	3	4	7	7	11.3	18.9	
13-Jul	8	8	10	11	10	12	11	12	12	15	14	10	14	16	14	14	16	16	14	12	9	8	7	8	11.8	16.3	
14-Jul	6	8	12	18	20	22	22	24	30	29	30	26	27	22	25	26	24	21	19	15	9	6	7	12	19.3	30.4	
15-Jul	12	11	13	12	13	15	15	10	9	10	11	12	14	18	17	14	8	5	4	2	3	5	12	11	10.6	17.8	
16-Jul	12	13	13	14	14	11	9	11	12	16	16	16	16	18	19	17	21	19	18	16	14	15	14	12	14.8	21.0	
17-Jul	11	12	9	8	8	7	8	8	8	11	12	14	14	14	11	9	8	6	2	4	4	3	4	8	8.3	14.3	
18-Jul	11	12	11	15	7	6	6	8	10	10	10	10	10	8	19	11	8	11	10	11	7	6	8	3	9.4	18.9	
19-Jul	3	3	3	2	2	2	4	8	9	7	7	7	10	9	10	11	11	11	8	9	10	8	10	12	7.3	11.7	
20-Jul	7	11	11	6	6	6	5	5	6	7	6	5	17	19	19	15	12	13	9	4	13	11	7	7	9.4	19.4	
21-Jul	6	6	7	5	6	5	4	5	5	5	5	4	6	10	15	13	10	12	13	13	12	9	8	9	8.0	14.6	
22-Jul	8	7	6	7	7	7	9	10	11	13	11	14	12	10	8	12	12	11	9	6	4	7	4	1	8.6	14.0	
23-Jul	2	4	2	2	4	4	4	7	7	9	13	14	15	13	13	11	11	11	9	5	2	2	2	3	7.1	14.7	
24-Jul	2	4	2	2	3	2	2	2	3	3	4	5	6	5	6	7	9	6	4	3	2	4	3	4	3.8	8.8	
25-Jul	5	7	3	2	2	4	3	3	4	2	3	4	4	5	6	6	6	4	4	2	2	4	3	3	3.9	6.8	
26-Jul	2	4	4	4	4	2	1	2	7	6	9	10	9	8	8	8	7	9	6	6	6	6	8	9	6.1	10.3	
27-Jul	7	5	3	4	6	10	8	10	9	9	9	10	12	11	10	8	8	7	5	3	4	5	5	6	7.3	11.6	
28-Jul	6	13	14	13	14	10	4	2	6	6	6	7	7	9	9	10	10	9	5	3	2	4	5	7	7.5	13.7	
29-Jul	9	11	11	10	5	10	7	7	6	7	8	4	6	4	6	6	5	5	4	3	3	4	2	3	6.1	11.0	
30-Jul	3	11	10	10	10	7	6	4	3	2	7	12	11	13	17	14	12	12	10	4	3	2	2	3	7.8	17.1	
31-Jul	5	4	3	4	3	3	2	4	4	3	4	4	5	6	6	6	4	4	4	4	4	3	5	9	4.2	8.7	
8.0 8.6 8.3 8.2 8.1 8.4 8.4 9.5 10.9 11.0 12.0 12.3 13.0 13.2 13.6 13.0 12.0 11.1 9.9 7.9 7.3 7.2 7.6 8.2																											
15.1 14.2 15.9 18.4 19.5 22.0 22.0 23.7 29.8 29.2 30.4 25.9 27.5 24.5 25.8 26.5 24.9 22.4 26.9 24.3 19.7 17.9 15.9 15.9																											
Diurnal Average																											
Diurnal Maximum																											
All monthly, daily, and diurnal averages have been calculated using scalar methods																											

Hourly Standard Deviations

Wind Direction (WD) - deg

Donnelly - July 2018

Maximum Value: 90.2 deg on Jul 29 12:00																			Hours in Service: 744						
Minimum Value: 1.7 deg on Jul 11 07:00																			Hours of Data: 744						
																			Hours of Missing Data: 0						
Percentiles: P ₁ = 2.4 P ₁₀ = 4.3 Q ₁ = 7.3 Median = 12.1 Q ₃ = 20.7 P ₉₀ = 38.2 P ₉₉ = 82.3																			Hours of Calibration: 0						
																			Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Jul	17	11	7	8	3	3	4	11	5	5	5	5	7	5	7	11	5	5	3	4	4	4	4	3	17.1
2-Jul	11	5	6	17	21	6	6	5	5	5	6	6	6	11	5	8	8	6	7	8	7	7	6	4	21.3
3-Jul	4	4	6	6	6	7	7	6	5	6	6	8	10	11	10	12	9	14	7	23	61	46	55	18	60.7
4-Jul	19	41	41	85	46	32	46	23	32	41	28	16	23	20	26	19	32	34	24	27	18	4	5	6	84.9
5-Jul	11	15	14	8	16	21	7	7	7	10	10	10	15	16	10	13	13	11	9	9	4	8	5	9	21.2
6-Jul	14	12	9	17	51	76	51	35	12	10	46	11	11	10	11	22	19	30	8	8	5	11	10	3	75.8
7-Jul	4	3	7	5	4	9	5	5	10	24	14	12	11	8	13	17	20	19	12	12	8	8	5	4	24.3
8-Jul	7	3	3	3	4	3	6	10	13	9	13	16	18	15	14	14	12	14	14	11	8	7	3	3	17.9
9-Jul	5	4	3	4	3	2	4	6	7	9	14	9	11	10	11	10	9	9	6	10	8	5	3	2	13.5
10-Jul	2	5	55	47	18	33	5	3	3	9	9	10	12	20	28	16	14	16	6	9	17	5	3	2	55.1
11-Jul	4	5	2	3	3	3	2	12	7	10	7	11	12	9	12	14	10	5	14	6	5	4	13	9	14.3
12-Jul	5	3	3	3	5	4	5	13	8	8	8	10	11	14	16	14	16	12	15	18	46	14	9	7	45.8
13-Jul	6	12	9	4	9	4	16	13	14	14	13	19	24	15	14	12	11	10	10	12	8	8	8	13	24.5
14-Jul	10	11	10	5	4	4	4	4	5	6	6	8	8	8	10	7	7	9	9	4	10	14	20	3	20.0
15-Jul	4	4	4	3	3	4	4	10	11	11	13	18	14	14	13	14	16	25	22	14	13	6	4	15	25.2
16-Jul	8	4	4	3	4	8	7	11	8	9	12	13	12	12	10	12	8	5	5	5	8	10	4	2	12.6
17-Jul	3	3	5	28	13	7	6	9	12	9	11	12	12	13	12	14	10	20	71	19	20	16	7	6	71.5
18-Jul	15	10	5	8	8	49	16	16	26	19	20	20	29	33	32	14	24	10	7	6	14	16	32	59	59.1
19-Jul	77	74	77	77	84	45	15	9	14	25	23	30	23	20	21	18	14	9	7	7	8	8	64	33	84.3
20-Jul	19	26	9	31	38	12	57	34	27	18	22	18	35	10	10	11	28	9	13	32	11	10	31	24	57.0
21-Jul	16	14	12	14	20	15	16	22	22	31	32	76	38	21	9	9	18	12	13	11	7	7	6	8	76.1
22-Jul	5	8	7	8	9	9	10	16	12	10	21	12	22	17	18	11	12	7	6	9	14	14	17	53	52.9
23-Jul	48	24	46	38	17	23	22	12	16	14	11	16	14	15	12	10	11	17	14	13	36	13	34	19	47.9
24-Jul	53	12	72	56	21	27	88	40	32	64	66	50	34	57	39	40	13	16	22	21	23	15	31	5	87.6
25-Jul	4	6	49	68	24	8	12	17	14	53	55	88	81	53	42	34	39	48	18	20	33	10	21	40	88.2
26-Jul	25	18	9	7	8	46	90	81	20	23	15	18	17	27	34	29	19	9	9	10	15	10	4	8	89.6
27-Jul	14	50	20	32	11	3	6	6	8	13	15	20	17	21	21	17	18	10	17	24	10	15	15	11	50.1
28-Jul	32	5	2	3	3	20	75	46	12	9	16	19	24	20	13	13	8	7	14	27	51	4	3	7	75.4
29-Jul	5	3	2	12	28	12	13	26	33	22	26	90	73	71	38	32	30	17	18	21	25	23	25	21	90.2
30-Jul	76	21	60	34	21	30	83	27	72	83	58	15	15	13	10	10	11	8	8	22	10	71	31	15	83.1
31-Jul	11	10	19	18	25	34	32	32	28	57	41	67	25	32	22	26	27	24	20	14	10	14	24	59	66.9
	76.8	74.4	77.0	84.9	84.3	75.8	89.6	81.4	71.7	83.0	65.6	90.2	80.9	70.6	41.7	39.9	38.5	47.9	71.5	31.7	60.7	71.5	64.2	59.1	

PAZA

Portable – Rycroft Station

Monthly Summary Tables, Graphs and
Roses

Hourly Averages

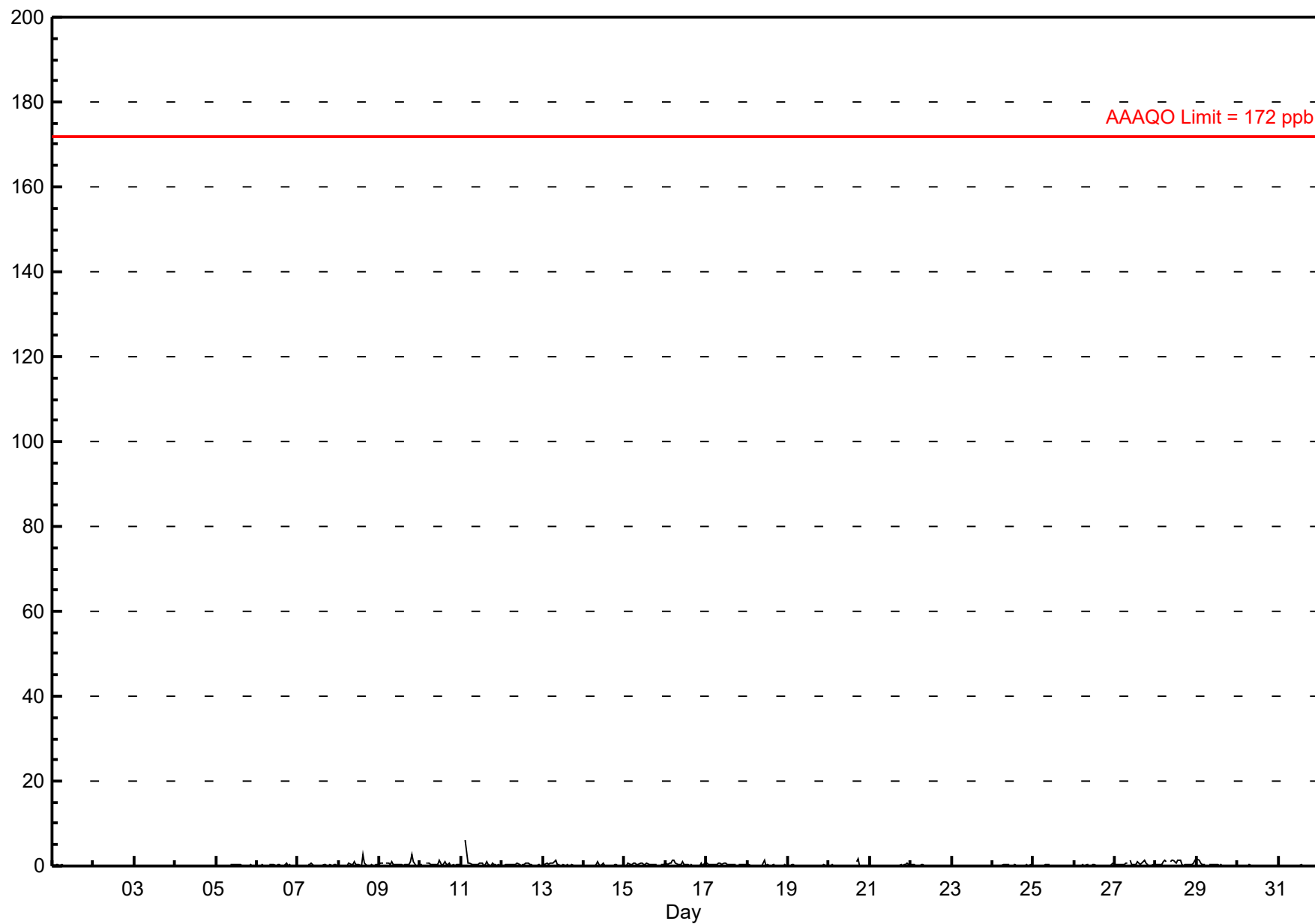
Sulphur Dioxide (SO₂) - ppb

Portable Rycroft - July 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 6.2 ppb on Jul 11 03:00 Maximum Daily Average: 0.8 ppb on Jul 11																			Hours in Service: 744 Hours of Data: 709							
Minimum Value: 0 ppb on Jul 1 02:00 Maximum Diurnal Average: 0.4 ppb at hour 3 Monthly Average: 0.25 ppb																			Minimum Daily Average: 0.0 ppb on Jul 2 Minimum Diurnal Average: 0.1 ppb at hour 21 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.6 P ₉₉ = 1.4		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	A	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	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
3-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	0.1	0.2
4-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	0.1
5-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
6-Jul	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.2	0.6
7-Jul	0	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
8-Jul	0	0	0	0	A	0	1	0	0	1	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0.4	2.6
9-Jul	1	1	1	A	1	1	0	1	0	0	0	0	0	0	0	0	0	0	1	3	1	0	0	0	0.5	2.6
10-Jul	0	0	A	1	1	1	0	0	0	0	0	1	1	0	1	0	0	1	0	0	0	0	0	0	0.4	1.3
11-Jul	0	A	6	3	1	1	0	0	0	0	0	1	1	0	0	1	0	0	1	0	0	0	0	0	0.8	6.2
12-Jul	A	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0	0	A	0.3	0.7
13-Jul	0	0	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.3	1.3
14-Jul	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0.2	1.0
15-Jul	0	0	1	0	0	1	1	0	0	1	1	0	0	1	0	0	0	0	0	0	A	0	0	0	0.4	0.7
16-Jul	1	0	1	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	A	0	1	0	1	0.5	1.4
17-Jul	1	0	0	0	0	0	0	1	1	0	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0.4	0.8
18-Jul	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	1.4
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	0.2
20-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	2	0	0	0	0	0	0	0.2	1.7
21-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0.1	0.6
22-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	0.4
23-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	0.2
24-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
25-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
26-Jul	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	0.6
27-Jul	0	0	0	0	0	0	1	1	A	1	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0.5	1.4
28-Jul	0	0	0	0	1	1	1	A	1	1	1	1	1	1	1	0	0	0	0	0	0	1	1	0.7	1.5	
29-Jul	2	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.7
30-Jul	0	0	0	0	0	A	0	0	0	C	C	C	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	0.0	0.3
																									Diurnal Average	Diurnal Maximum
																									0.2	1.7
																									0.2	6.2
																									3.4	1.2
																									1.4	0.9
																									1.3	1.0
																									1.4	1.4
																									0.8	1.3
																									2.6	1.1
																									1.0	1.0
																									1.7	0.9
																									2.6	1.0
																									0.7	0.7
																									0.2	1.5
																									0.1	0.7
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Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Portable Rycroft - July 2018



Hourly Maximums

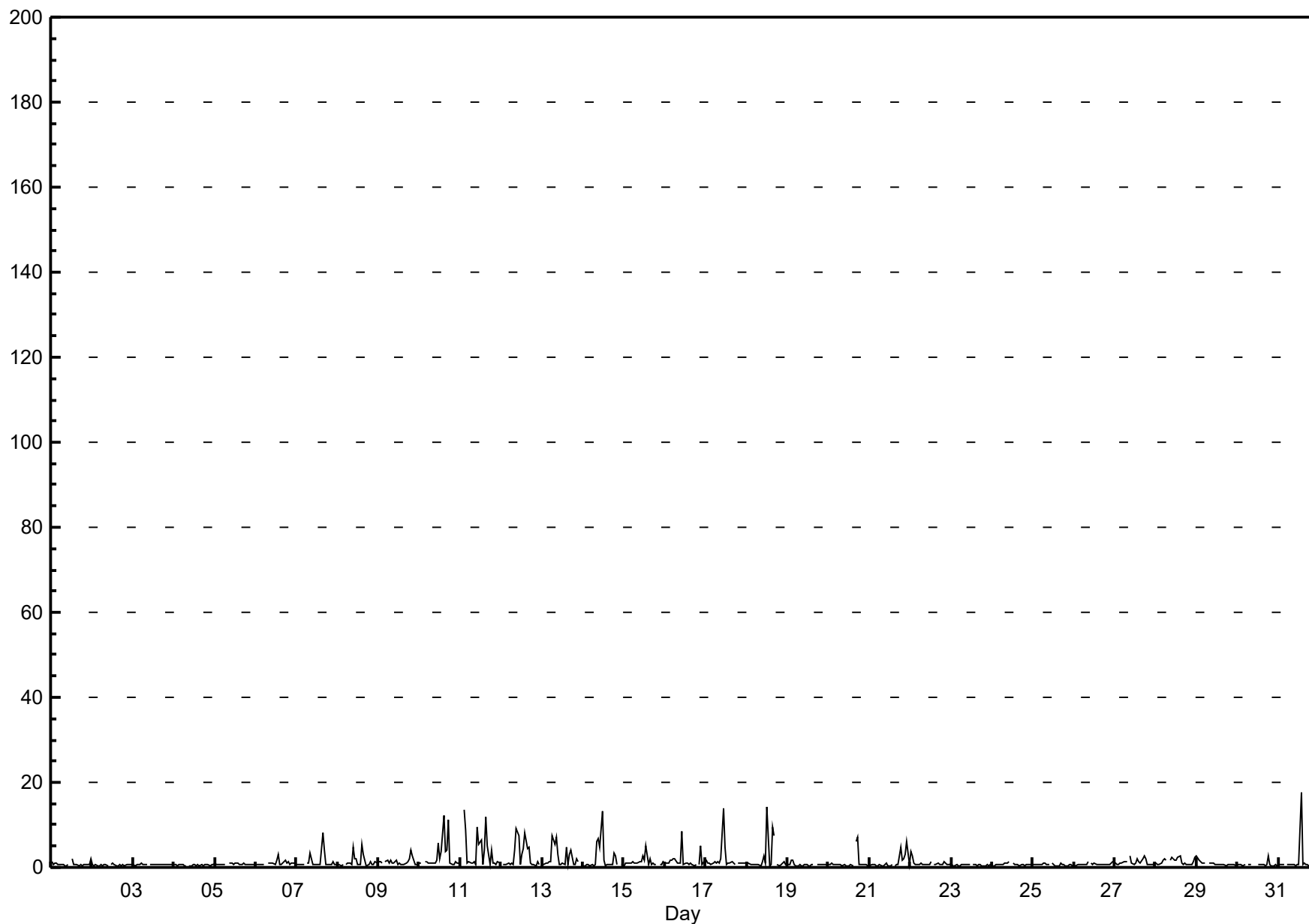
Sulphur Dioxide (SO₂) - ppb

Portable Rycroft - July 2018

Maximum Value: 17.5 ppb on Jul 31 14:00																				Maximum Daily Average: 3.6 ppb on Jul 11										Hours in Service: 744	
Minimum Value: 0 ppb on Jul 25 15:00																				Minimum Daily Average: 0.5 ppb on Jul 4										Hours of Data: 709	
Maximum Diurnal Average: 2.5 ppb at hour 11																				Minimum Diurnal Average: 0.8 ppb at hour 2										Hours of Missing Data: 35	
Monthly Average: 1.30 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.7 Q ₃ = 1.1 P ₉₀ = 2.2 P ₉₉ = 11.2										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	1	1	1	1	1	0	1	1	A	2	1	1	1	0	1	0	1	1	1	1	2	0.8	2.1					
2-Jul	1	0	1	0	1	1	0	1	1	0	A	1	1	1	1	0	1	0	1	0	1	1	1	1	0.5	0.8					
3-Jul	1	0	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9					
4-Jul	1	1	0	1	1	1	0	0	A	0	0	1	1	0	1	0	1	0	1	1	1	0	1	1	0.5	0.8					
5-Jul	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1					
6-Jul	1	1	1	1	1	1	A	1	1	1	1	1	2	3	1	1	1	2	1	1	1	1	1	1	1.0	3.0					
7-Jul	1	1	1	1	1	A	1	1	3	1	1	1	1	1	1	8	4	1	1	1	1	1	1	1	1.3	8.3					
8-Jul	1	1	1	1	A	1	1	1	1	5	2	2	1	1	5	3	2	0	1	1	1	1	1	1	1.4	5.3					
9-Jul	1	1	1	A	1	2	1	2	1	1	2	1	1	1	1	1	1	1	2	4	3	1	1	1	1.3	4.0					
10-Jul	1	1	A	1	1	1	1	1	1	1	2	6	2	4	12	4	4	11	1	1	1	1	1	1	2.6	12.0					
11-Jul	1	A	14	9	1	1	1	1	1	1	9	5	6	1	4	12	5	1	4	1	1	1	1	1	3.6	13.6					
12-Jul	A	1	1	1	1	1	1	1	4	9	7	1	3	5	8	5	5	1	1	1	0	1	1	A	2.6	9.2					
13-Jul	1	1	1	1	1	2	8	5	7	3	1	1	1	1	5	1	3	4	1	1	2	1	A	0	2.2	7.6					
14-Jul	0	0	1	1	0	1	0	1	6	7	5	13	2	0	1	1	1	1	3	3	1	A	1	1	2.1	13.3					
15-Jul	0	1	1	1	1	1	1	1	1	1	1	3	2	5	1	2	1	1	1	1	A	1	1	1	1.3	5.3					
16-Jul	1	1	1	2	2	2	2	1	1	1	8	1	1	1	1	1	1	0	1	A	1	5	1	2	1.6	8.4					
17-Jul	2	1	1	1	1	1	1	1	1	2	14	5	1	1	1	1	1	1	A	1	1	1	1	1	1.8	13.9					
18-Jul	1	1	1	1	1	1	1	1	0	1	3	1	14	0	1	10	7	A	1	0	1	1	1	1	2.1	14.1					
19-Jul	1	1	2	2	1	0	0	1	1	0	1	1	0	0	1	1	A	1	1	1	1	1	1	1	0.7	1.8					
20-Jul	1	1	1	1	1	1	1	1	0	1	0	0	0	1	0	A	6	7	1	1	1	1	1	0	1.1	7.2					
21-Jul	0	1	1	1	0	1	1	0	1	1	1	0	0	1	A	0	1	1	5	2	2	3	6	1	1.2	5.9					
22-Jul	4	3	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1.0	3.6					
23-Jul	1	1	1	1	0	0	1	1	1	1	1	1	A	1	1	0	1	1	0	0	0	1	0	1	0.6	1.2					
24-Jul	0	0	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	1	1	1	1	0.7	1.2					
25-Jul	1	1	1	1	1	1	1	1	1	1	A	1	1	0	0	0	1	1	1	0	0	1	1	0	0.6	0.9					
26-Jul	0	0	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.3					
27-Jul	1	1	1	1	1	1	1	1	A	3	1	1	1	2	1	1	2	3	2	1	1	1	1	1	1.2	2.6					
28-Jul	1	1	1	1	2	2	2	A	2	2	2	2	2	2	3	1	1	1	1	1	1	1	1	2	1.4	2.6					
29-Jul	3	2	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	0.9	2.7					
30-Jul	1	1	1	0	1	A	1	1	1	C	C	C	1	1	1	1	1	1	3	1	0	0	1	1	0.7	2.6					
31-Jul	1	1	1	1	A	1	1	1	1	1	1	1	1	17	1	1	1	1	0	1	1	1	1	1	1.4	17.5					
1.0 0.8 1.2 1.0 0.8 0.9 1.1 1.0 1.4 1.7 2.5 1.8 1.7 1.8 1.8 2.0 1.8 1.4 1.1 0.9 0.8 1.0 1.0 0.8																									Diurnal Average						
3.6 2.6 13.6 8.9 1.8 2.0 7.6 5.5 7.0 9.2 13.9 13.3 14.1 17.5 12.0 11.8 7.4 11.3 4.9 4.0 2.8 4.9 5.9 2.5																									Diurnal Maximum						
C - Calibration A - Automated Daily Zero Span																															

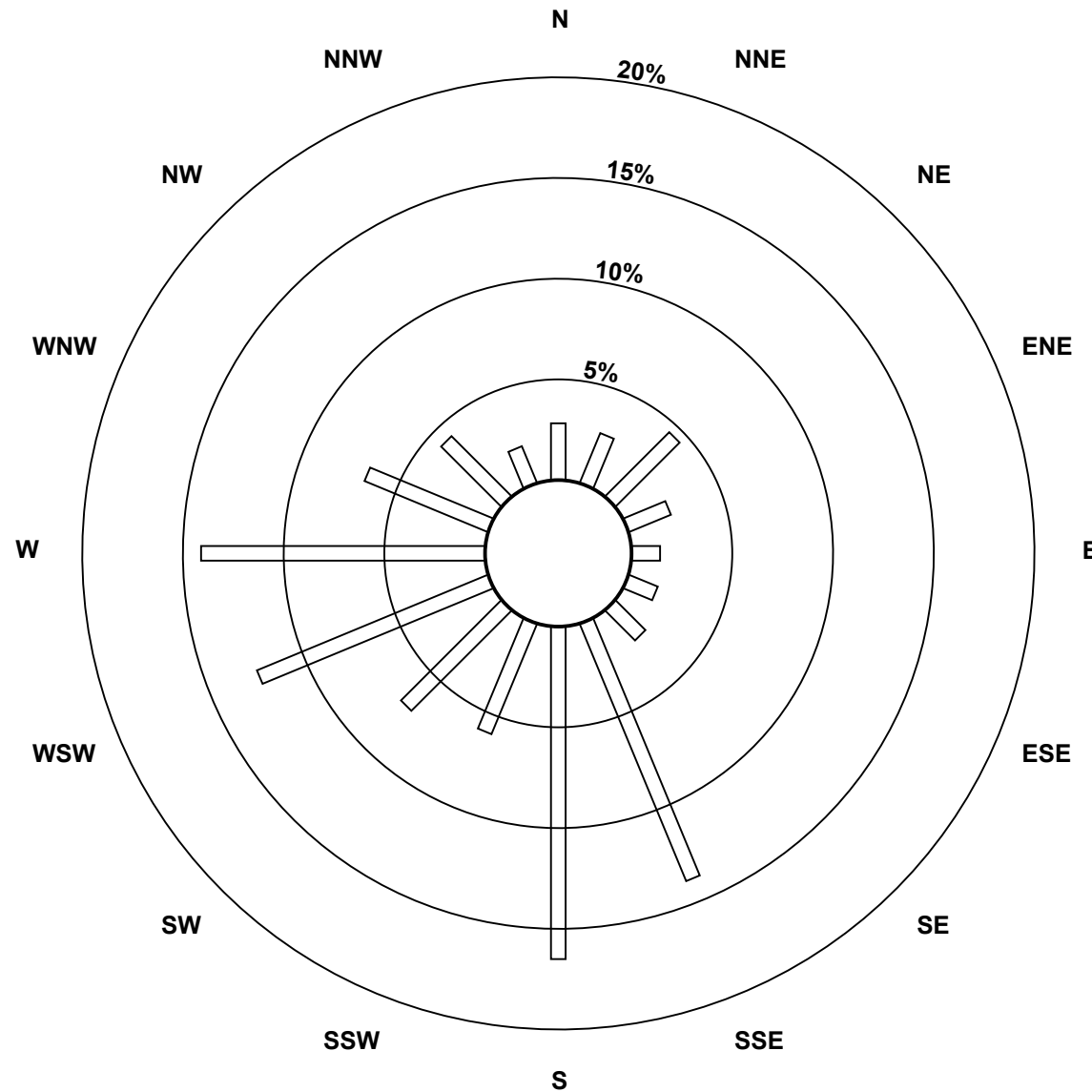
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Portable Rycroft - July 2018

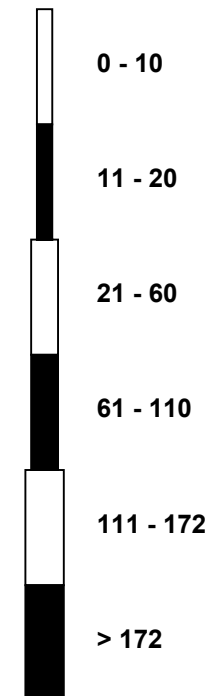


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Portable Rycroft - July 2018

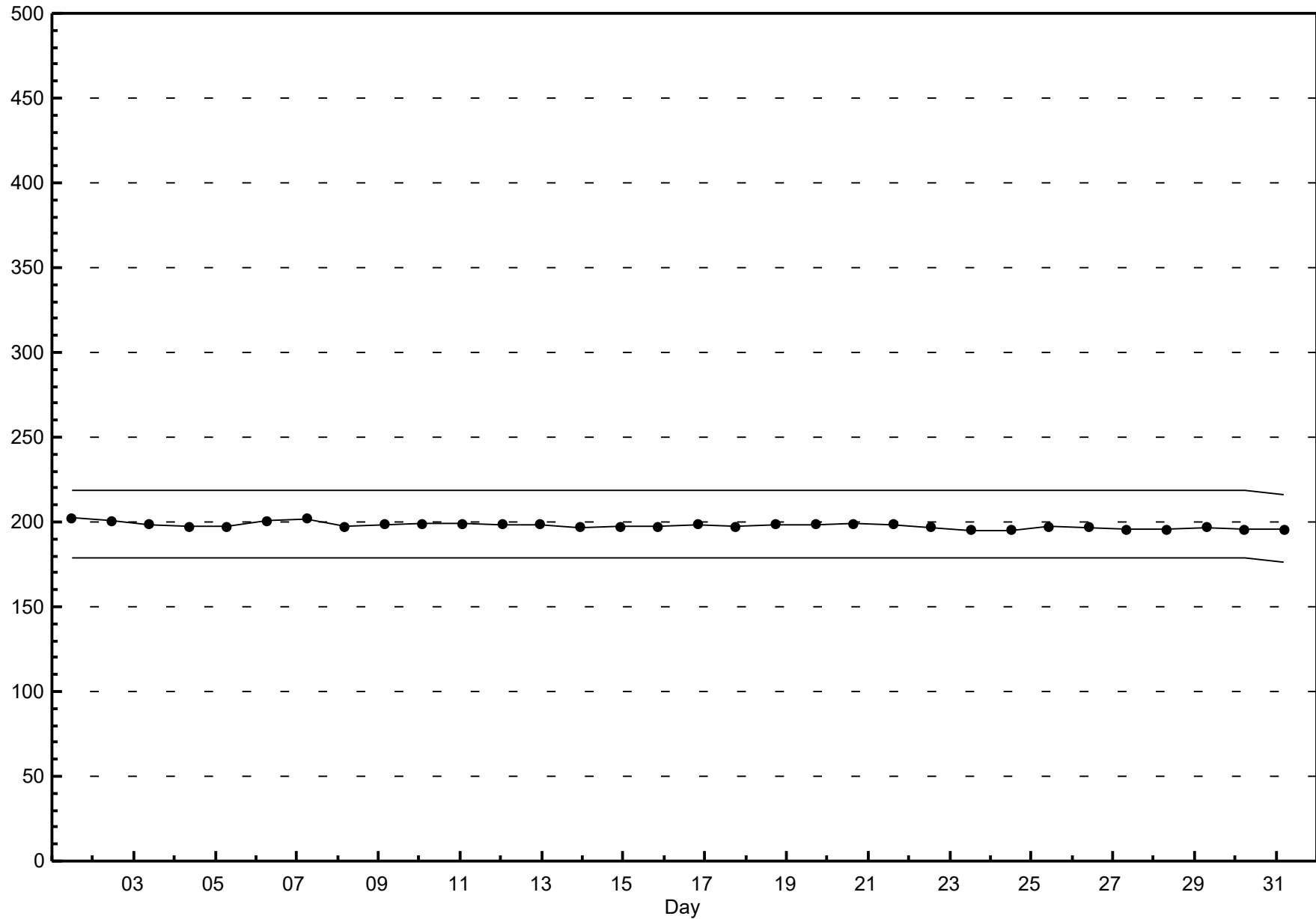


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Portable Rycroft - July 2018



Hourly Averages

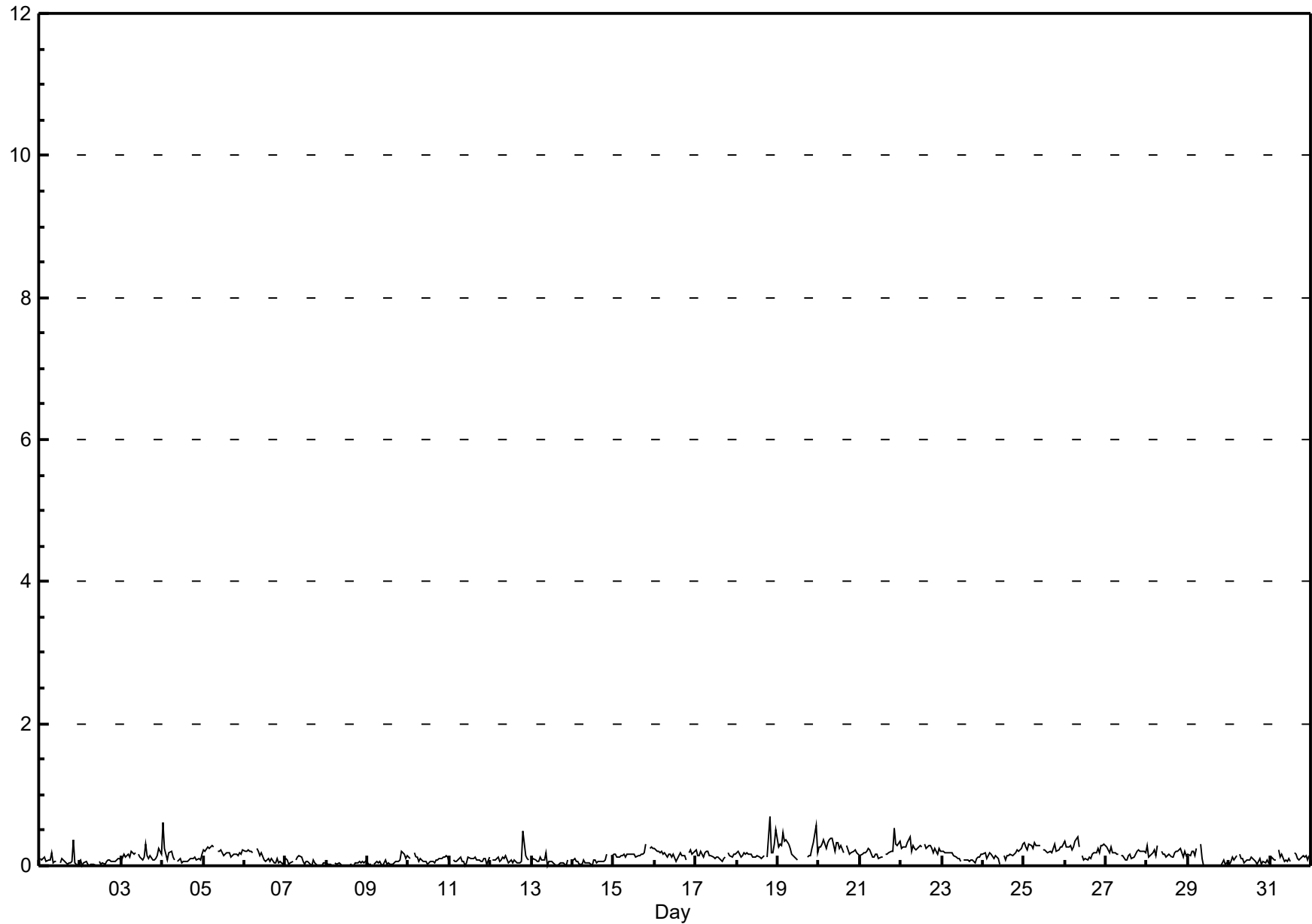
Total Reduced Sulphur (TRS) - ppb

Portable Rycroft - July 2018

Maximum Value: 0.7 ppb on Jul 18 20:00																			Maximum Daily Average: 0.3 ppb on Jul 20						Hours in Service: 744	
Minimum Value: 0 ppb on Jul 2 10:00																			Minimum Daily Average: 0.0 ppb on Jul 8						Hours of Data: 708	
Maximum Diurnal Average: 0.2 ppb at hour 6																			Minimum Diurnal Average: 0.1 ppb at hour 16						Hours of Missing Data: 36	
Monthly Average: 0.14 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.3 P ₉₉ = 0.4						Hours of Calibration: 35	
																			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	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
2-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	0.1
3-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	0.1	0.3
4-Jul	1	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	0.6
5-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	0.3
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	0.1	0.3
7-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	0.1
8-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
9-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
10-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
11-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	0.1
12-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.5
13-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	0.2
14-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
15-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	0.2	0.3
16-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	0.2	0.2
17-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
18-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	0	0	1	0.2	0.7
19-Jul	0	0	0	0	0	0	0	0	0	0	0	0	C	C	C	0	A	0	0	0	0	0	1	0	0.2	0.6
20-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	0.3	0.4
21-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0.2	0.5
22-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	0.3	0.4
23-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	0.1	0.2
24-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
25-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	0.3	0.3
26-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	0.2	0.4
27-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	0.3
28-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	0.3
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	0.1	0.3
30-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
31-Jul	0	0	0	0	A	0	0	0	0	0	0	0	M	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
0.2 0.2 0.1 0.2 0.2 0.2 0.2 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.2 0.1 0.2 0.2																									Diurnal Average	
0.6 0.3 0.3 0.5 0.3 0.4 0.4 0.4 0.4 0.4 0.3 0.3 0.3 0.3 0.3 0.3 0.2 0.3 0.3 0.3 0.7 0.5 0.3 0.6 0.5																									Diurnal Maximum	
C - Calibration M - Maintenance A - Automated Daily Zero Span																										

Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Portable Rycroft - July 2018



Hourly Maximums

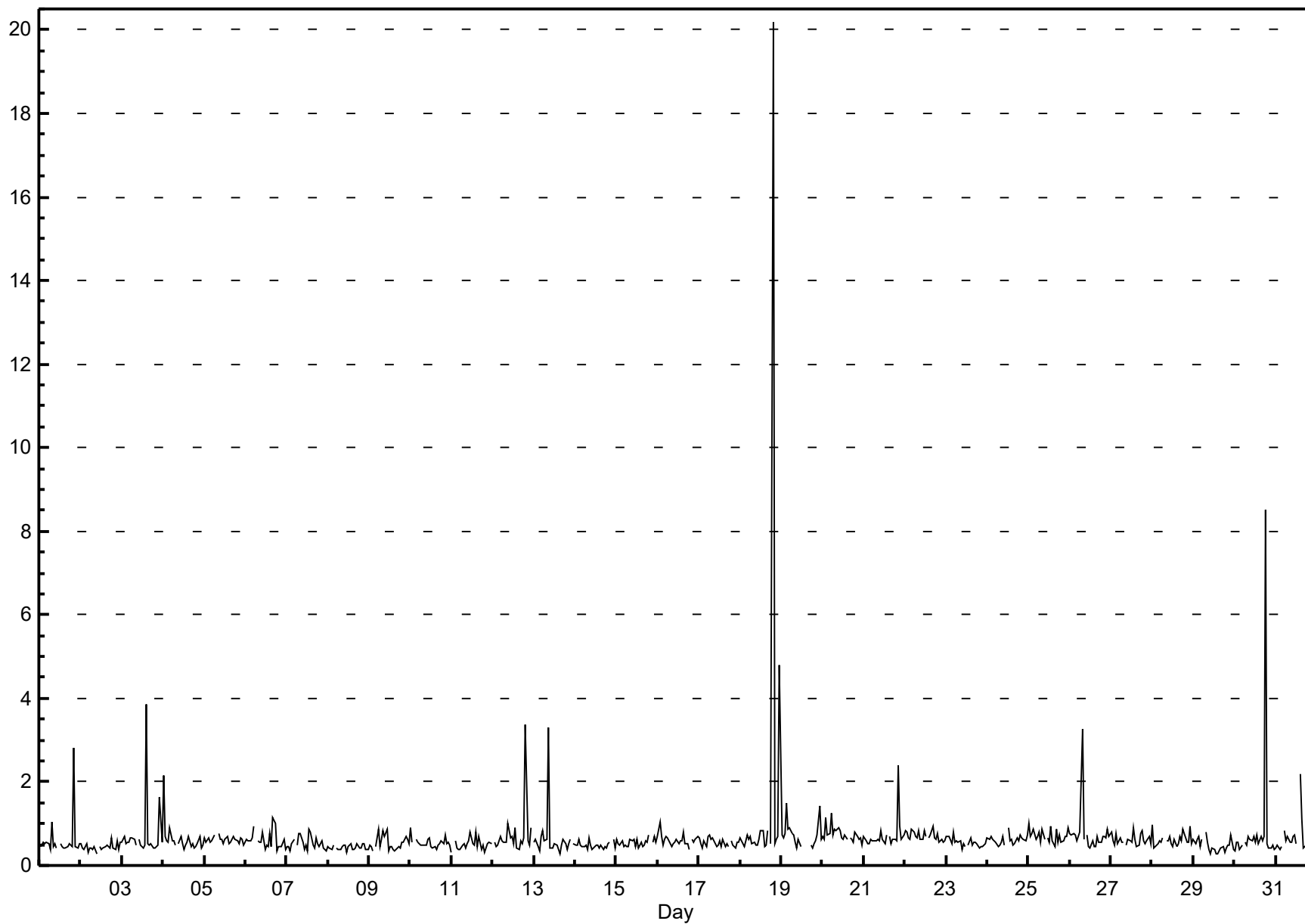
Total Reduced Sulphur (TRS) - ppb

Portable Rycroft - July 2018

Maximum Value: 20.2 ppb on Jul 18 20:00																				Maximum Daily Average: 1.6 ppb on Jul 18										Hours in Service: 744	
Minimum Value: 0 ppb on Jul 29 15:00																				Minimum Daily Average: 0.4 ppb on Jul 8										Hours of Data: 708	
Maximum Diurnal Average: 1.3 ppb at hour 20																				Minimum Diurnal Average: 0.5 ppb at hour 16										Hours of Missing Data: 36	
Monthly Average: 0.65 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 = 2.8										Hours of Calibration: 35	
																				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	0	0	1	1	1	1	0	1	0	1	0	A	1	0	0	0	0	1	0	0	3	0	0	1	0.6	2.8					
2-Jul	1	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	1	0	1	0.4	0.7					
3-Jul	1	1	1	1	1	1	1	1	0	A	1	0	0	0	4	1	0	1	0	0	0	0	2	1	0.7	3.8					
4-Jul	2	1	1	1	1	1	1	0	A	1	1	1	0	0	1	1	0	1	0	0	1	1	0	0	0.6	2.1					
5-Jul	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0.6	0.7					
6-Jul	1	1	1	1	1	1	A	1	1	1	1	0	0	0	1	0	1	1	0	0	0	0	1	0	0.6	1.1					
7-Jul	0	0	0	1	1	A	0	1	1	1	0	0	0	1	1	1	0	1	1	0	1	0	0	0	0.5	0.9					
8-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	1	0	0	0.4	0.5					
9-Jul	0	0	0	A	0	1	0	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1	0.5	0.9					
10-Jul	1	1	A	1	1	1	0	0	0	0	1	1	0	0	0	0	0	1	1	1	1	1	1	0	0.5	0.9					
11-Jul	0	A	1	0	0	0	0	1	0	1	1	1	1	0	1	0	1	0	0	0	0	1	1	1	0.5	0.8					
12-Jul	A	1	0	0	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	3	1	0	1	A	0.7	3.4					
13-Jul	1	1	0	0	1	1	1	1	3	0	0	0	1	0	0	0	0	1	1	0	1	1	A	1	0.6	3.3					
14-Jul	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	A	1	0	0.5	0.7					
15-Jul	1	1	0	1	0	0	0	0	1	1	1	0	1	0	1	0	0	1	1	1	A	1	1	1	0.5	0.7					
16-Jul	1	1	1	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0	A	1	1	1	1	0.6	1.0					
17-Jul	1	1	0	1	0	1	1	1	1	1	0	0	1	0	1	0	1	0	A	1	0	0	1	1	0.5	0.7					
18-Jul	1	1	0	1	1	1	1	1	1	0	0	1	1	1	0	0	1	A	1	20	1	1	1	5	1.6	20.2					
19-Jul	1	1	1	1	1	1	1	1	1	0	1	0	C	C	C	1	A	0	0	1	1	1	1	1	0.7	1.5					
20-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	0.7	1.2					
21-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	2	1	1	1	0.7	2.4					
22-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	0.7	1.0					
23-Jul	1	1	1	1	1	1	1	1	1	0	1	0	A	0	1	0	1	1	1	0	0	0	0	1	0.5	0.8					
24-Jul	1	1	1	1	1	1	0	0	1	1	0	A	1	1	1	0	1	1	1	1	1	1	1	1	0.6	0.9					
25-Jul	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	1	1	1	1	1	1	1	1	0.7	1.0					
26-Jul	1	1	1	1	1	1	1	3	1	A	1	0	0	1	0	0	1	1	1	1	1	1	1	1	0.8	3.3					
27-Jul	1	1	0	1	1	1	1	1	A	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	0.6	0.9					
28-Jul	1	0	0	1	1	1	1	A	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1	0.6	1.0					
29-Jul	1	1	1	1	0	1	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.5	0.8					
30-Jul	0	1	1	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	9	1	0	0	0	0	0.9	8.5					
31-Jul	0	0	0	0	A	1	1	1	1	1	1	1	M	2	1	0	0	0	0	1	0	1	1	1	0.7	2.2					
		0.7	0.6	0.6	0.6	0.6	0.7	0.6	0.7	0.7	0.6	0.6	0.5	0.5	0.6	0.7	0.5	0.6	0.6	0.8	1.3	0.7	0.6	0.7	0.7	Diurnal Average					
		2.1	1.0	1.2	1.5	0.9	1.2	0.8	3.3	3.3	1.0	0.9	0.9	0.9	0.9	3.8	1.1	1.1	1.0	8.5	20.2	2.8	0.9	1.6	4.8	Diurnal Maximum					
C - Calibration				M - Maintenance				A - Automated Daily Zero Span																							

Hourly Maximums

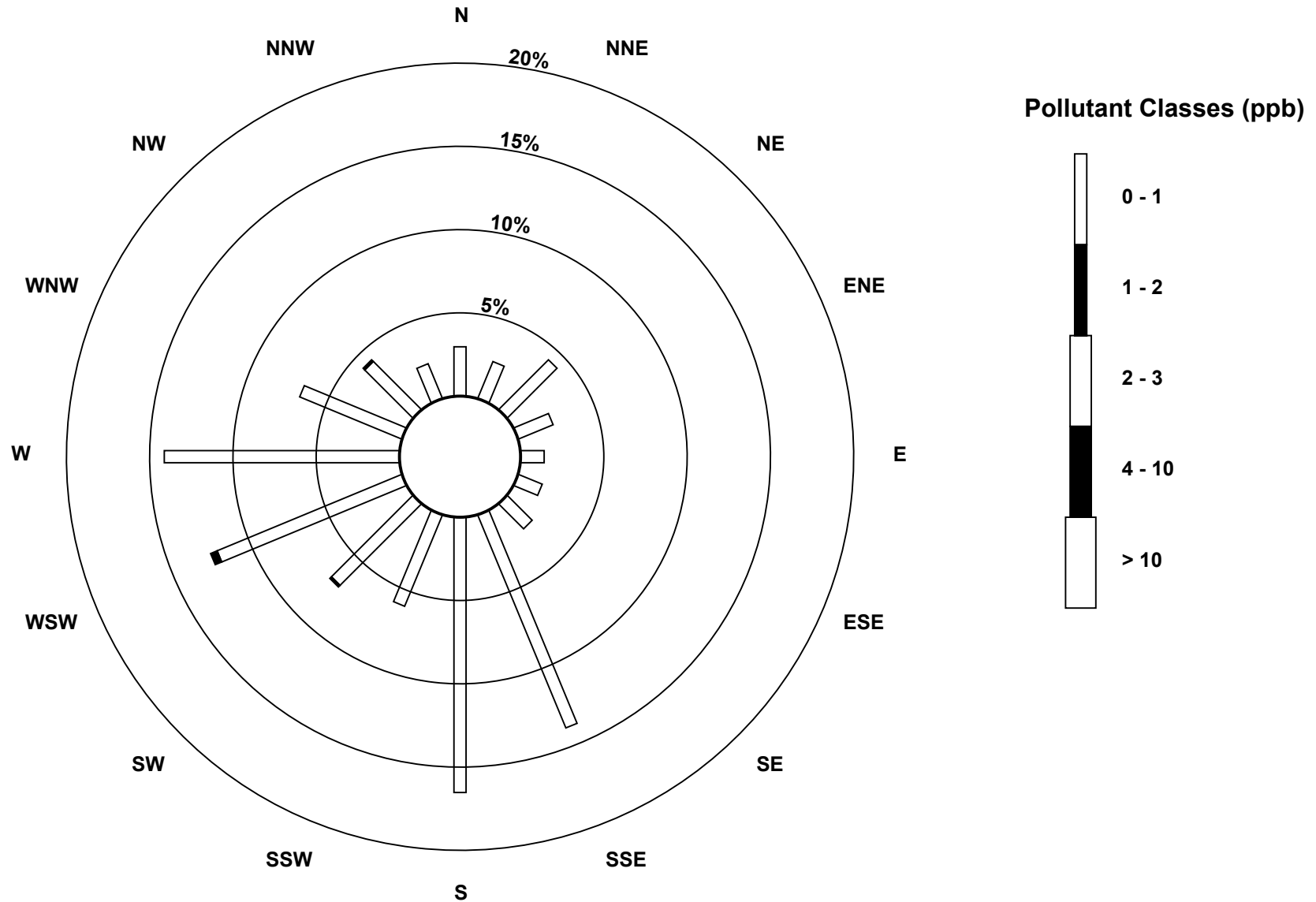
Total Reduced Sulphur (TRS) - ppb
Portable Rycroft - July 2018



Pollutant Rose

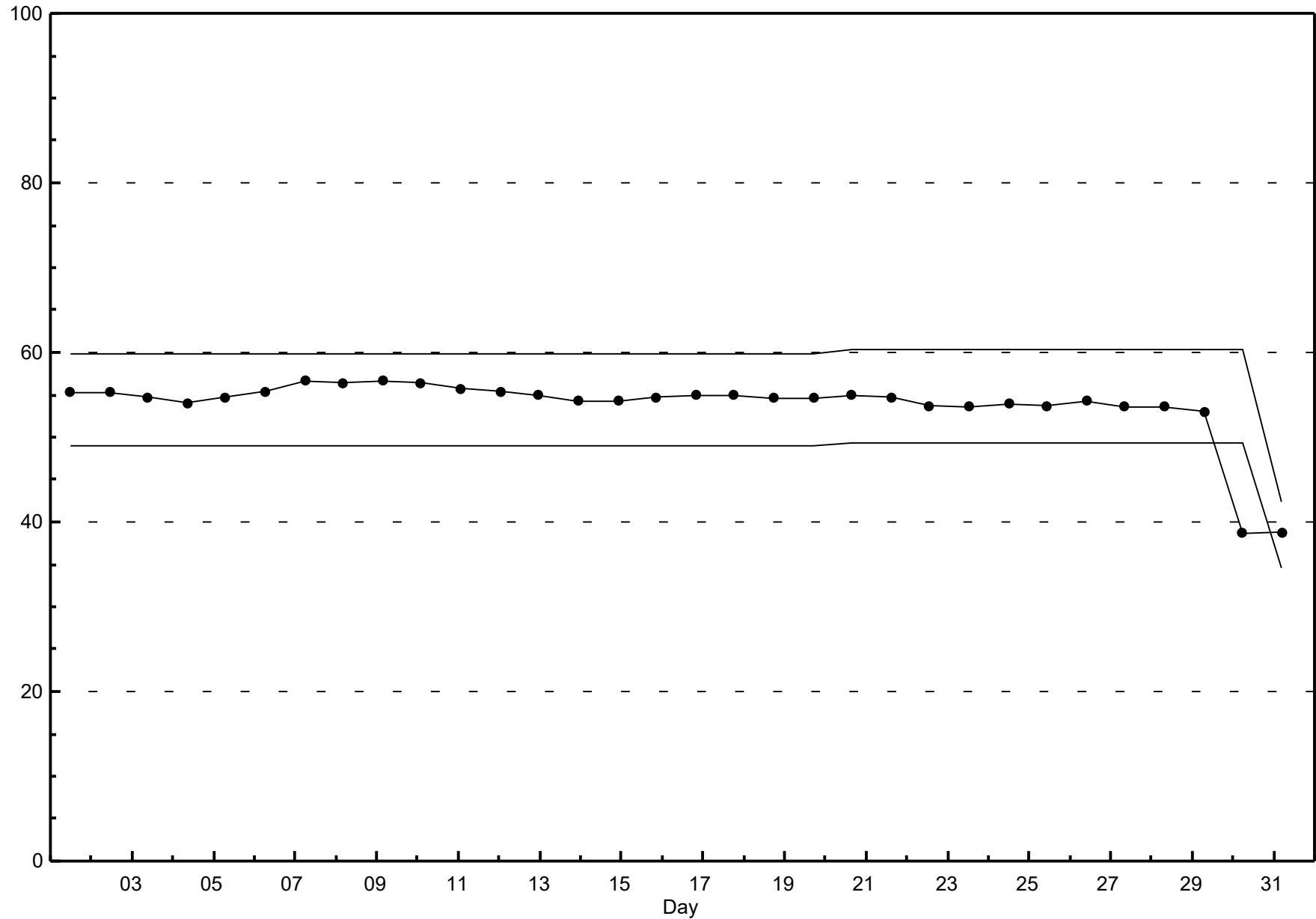
Total Reduced Sulphur (TRS) - ppb

Portable Rycroft - July 2018



Span Responses

Total Reduced Sulphur (TRS)
Portable Rycroft - July 2018



Hourly Averages

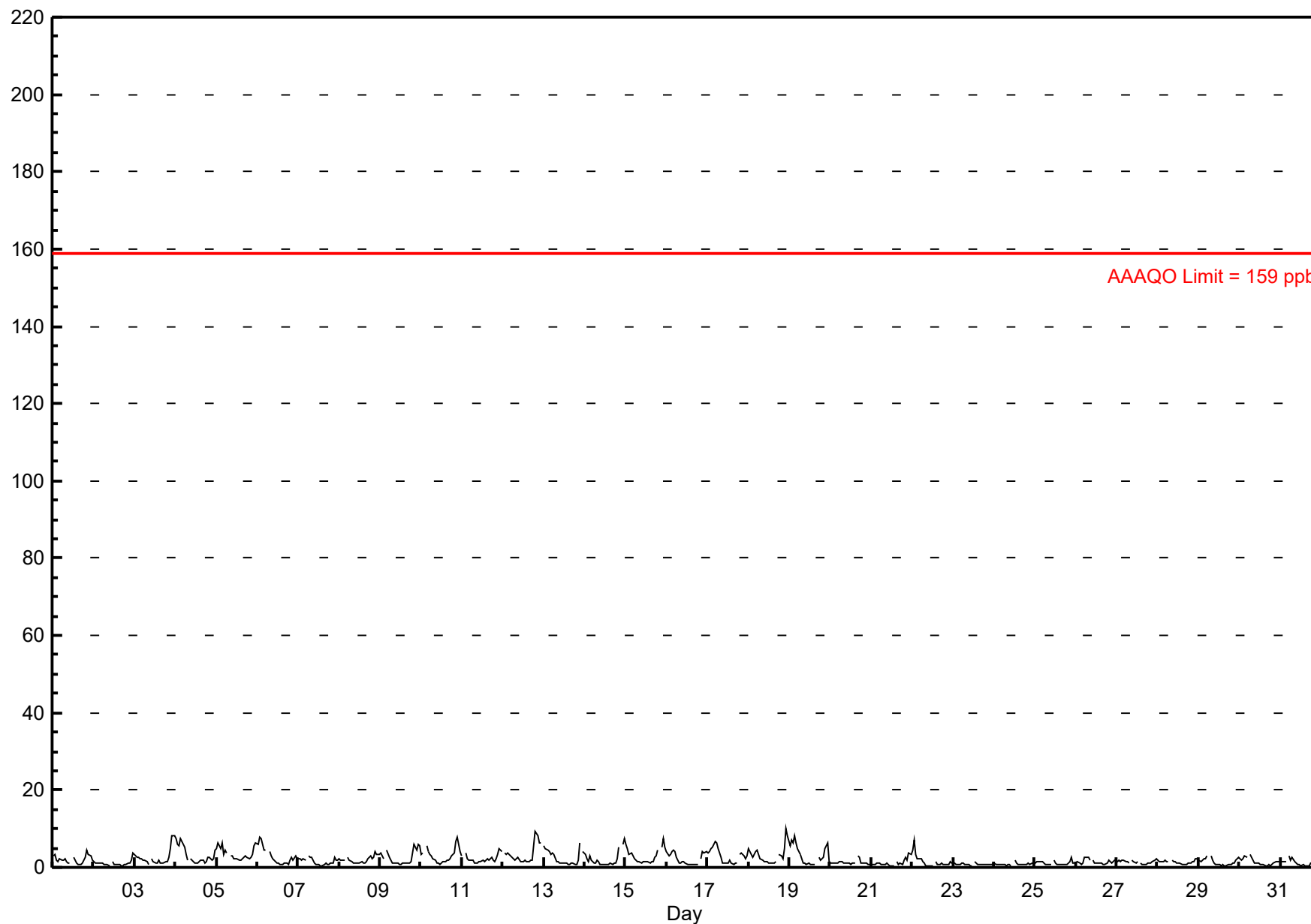
Nitrogen Dioxide (NO₂) - ppb

Portable Rycroft - July 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 744								
Maximum Value: 10.2 ppb on Jul 18 23:00																			Maximum Daily Average: 3.5 ppb on Jul 5		Hours of Data: 711						
Minimum Value: 0 ppb on Jul 22 13:00																			Minimum Daily Average: 0.8 ppb on Jul 23		Hours of Missing Data: 33						
Maximum Diurnal Average: 3.6 ppb at hour 23																			Minimum Diurnal Average: 1.1 ppb at hour 16		Hours of Calibration: 32						
Monthly Average: 2.06 ppb																			Percentiles: P ₁ = 0.4 P ₁₀ = 0.7 Q ₁ = 1.0 Median = 1.5 Q ₃ = 2.5 P ₉₀ = 4.3 P ₉₉ = 7.9		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	3	4	2	2	2	2	2	2	1	1	1	A	3	2	1	1	1	1	2	3	4	3	3	2	2.0	4.4	
2-Jul	1	1	1	1	1	1	1	1	1	0	A	2	1	1	1	1	1	1	1	1	1	1	2	4	1.1	3.6	
3-Jul	3	3	3	2	2	2	2	1	1	A	2	1	1	1	2	1	1	1	1	2	3	5	8	8	2.5	8.3	
4-Jul	7	6	6	7	7	5	3	2	A	2	1	1	1	1	1	2	2	1	1	3	3	2	2	5	3.1	7.5	
5-Jul	5	6	5	7	3	4	4	A	3	3	2	2	2	2	2	2	2	3	3	2	2	3	6	6	3.5	6.5	
6-Jul	6	8	8	6	4	4	A	4	3	2	2	1	1	1	1	1	1	1	1	2	3	2	3	2	2.9	7.8	
7-Jul	2	2	2	2	2	A	3	3	3	1	1	1	1	1	0	1	1	1	1	1	1	3	2	2	1.5	2.8	
8-Jul	2	2	2	2	A	3	2	2	1	1	1	1	1	2	1	1	2	2	3	2	3	4	3	3	2.0	4.0	
9-Jul	4	3	2	A	4	2	2	1	1	1	1	1	1	1	1	1	1	1	2	4	6	5	6	5	2.5	6.1	
10-Jul	4	4	A	5	4	3	3	2	2	1	1	1	1	1	2	2	2	2	3	4	7	8	6	4	3.1	7.9	
11-Jul	3	A	4	2	2	2	2	1	1	1	1	2	2	1	2	2	2	2	2	1	2	3	5	4	2.1	4.7	
12-Jul	A	4	3	4	3	3	2	2	2	3	2	1	2	2	1	1	2	2	5	9	8	6	6	A	3.4	9.2	
13-Jul	5	5	5	4	4	4	4	2	1	1	1	1	1	1	1	1	1	1	1	1	2	6	A	4	2.4	6.4	
14-Jul	3	2	2	3	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	2	5	A	6	8	2.0	7.6	
15-Jul	6	5	3	4	3	2	2	2	1	1	2	1	1	1	1	2	2	3	3	4	A	5	7	5	2.9	7.3	
16-Jul	4	3	4	4	5	4	3	1	1	2	2	1	1	1	1	1	1	1	1	A	2	4	4	4	2.2	4.5	
17-Jul	4	4	5	5	7	6	5	4	2	1	1	1	1	2	1	1	1	1	A	3	4	3	2	3	3.0	6.9	
18-Jul	5	4	3	3	4	4	3	2	2	2	1	1	1	1	1	1	1	A	3	3	2	5	10	8	3.2	10.2	
19-Jul	6	7	6	8	6	5	3	2	1	1	1	1	1	1	1	1	A	2	2	2	3	5	6	1	3.2	8.4	
20-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	3	2	1	1	1	1	1	1	1.2	2.9	
21-Jul	1	1	1	1	1	1	1	1	1	1	1	1	0	0	A	1	1	1	1	2	2	2	4	3	1.2	3.6	
22-Jul	4	7	3	2	2	2	2	1	0	0	0	0	0	A	2	1	1	1	1	1	1	1	1	1	1.5	7.1	
23-Jul	1	1	1	1	1	1	1	1	1	1	1	0	A	2	1	1	1	1	1	1	1	1	1	1	0.8	1.6	
24-Jul	1	1	1	1	1	1	1	1	1	1	0	A	2	1	1	1	1	1	1	1	1	1	1	1	0.8	1.7	
25-Jul	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	2	1	1	1.1	2.5	
26-Jul	1	1	1	1	1	3	2	3	2	A	2	1	1	1	1	1	1	1	1	2	1	1	1	2	1.4	2.6	
27-Jul	2	2	2	2	2	2	1	1	A	2	1	1	2	M	1	1	1	1	1	1	1	1	2	2	1.4	2.1	
28-Jul	2	2	2	2	2	2	2	A	2	2	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1.4	2.2	
29-Jul	2	2	2	2	2	3	A	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	1.4	3.0	
30-Jul	2	2	2	3	3	A	3	3	2	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1.4	3.2	
31-Jul	1	2	1	1	A	3	2	3	1	1	1	1	1	1	0	0	0	0	1	1	1	2	3	2	1.3	3.0	
3.1		3.2	2.7	3.0	2.8	2.7	2.1	1.8	1.5	1.3	1.2	1.1	1.1	1.1	1.1	1.1	1.2	1.3	1.5	2.1	2.5	3.0	3.6	3.3	Diurnal Average		
7.5		7.8	7.6	8.4	6.9	6.2	4.9	4.0	3.0	2.8	2.3	2.1	2.7	2.0	2.0	2.3	2.9	2.9	5.5	9.2	8.1	7.9	10.2	8.3	Diurnal Maximum		
M - Maintenance A - Automated Daily Zero Span																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb																											

Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Portable Rycroft - July 2018



Hourly Maximums

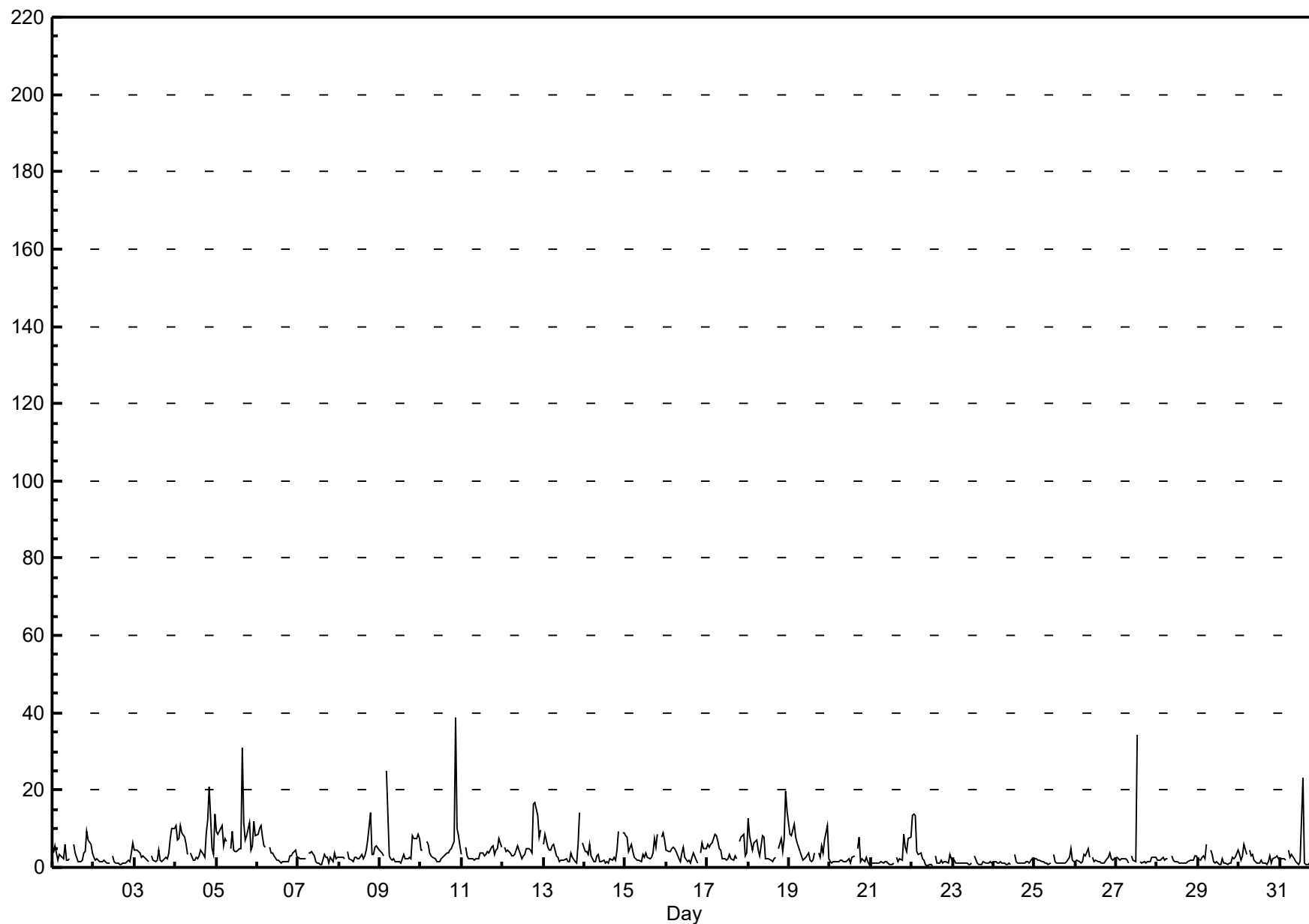
Nitrogen Dioxide (NO₂) - ppb

Portable Rycroft - July 2018

Maximum Value: 38.6 ppb on Jul 10 21:00																				Maximum Daily Average: 8.5 ppb on Jul 5										Hours in Service: 744	
Minimum Value: 0 ppb on Jul 22 10:00																				Minimum Daily Average: 1.2 ppb on Jul 23										Hours of Data: 711	
Maximum Diurnal Average: 5.8 ppb at hour 21																				Minimum Diurnal Average: 2.0 ppb at hour 12										Hours of Missing Data: 33	
Monthly Average: 3.64 ppb																				Percentiles: P ₁ = 0.8 P ₁₀ = 1.2 Q ₁ = 1.5 Median = 2.5 Q ₃ = 4.4 P ₉₀ = 7.7 P ₉₉ = 16.6										Hours of Calibration: 32	
																														Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
1-Jul	4	5	4	2	3	3	2	6	2	2	2	A	6	4	2	2	1	2	4	4	9	7	6	4	3.7	9.2					
2-Jul	2	2	2	2	2	1	2	1	1	1	A	3	1	1	1	1	1	1	1	2	2	4	6	1.8	6.4						
3-Jul	5	4	4	4	3	3	2	2	1	A	3	2	2	2	4	2	2	2	3	2	4	7	10	10	3.6	10.2					
4-Jul	11	7	7	11	9	8	6	3	A	4	2	2	3	2	3	4	3	2	9	12	21	5	3	14	6.6	20.9					
5-Jul	9	9	10	11	6	8	7	A	5	9	5	4	4	5	5	31	12	7	8	12	4	6	12	8	8.5	30.9					
6-Jul	9	10	11	8	6	5	A	5	4	4	3	2	2	1	1	2	1	1	2	3	3	4	4	2	4.0	10.9					
7-Jul	3	2	2	2	2	A	4	4	4	3	1	1	1	1	3	3	3	3	1	3	2	4	2	3	2.4	4.3					
8-Jul	3	3	3	2	A	4	2	2	1	3	3	2	2	3	2	3	5	7	14	4	3	5	6	5	3.8	14.2					
9-Jul	4	4	3	A	25	3	2	2	2	2	1	1	2	1	2	3	2	2	2	8	8	7	9	7	4.5	25.0					
10-Jul	4	5	A	7	6	4	3	3	2	2	1	1	2	3	3	4	4	4	5	7	39	10	8	6	5.8	38.6					
11-Jul	3	A	5	3	2	2	2	2	2	2	2	4	4	3	4	4	4	5	6	3	4	5	7	5	3.7	7.4					
12-Jul	A	5	4	4	4	3	3	3	5	6	3	2	3	3	5	5	4	4	16	17	13	8	10	A	5.9	16.6					
13-Jul	6	8	5	4	5	6	6	3	3	1	2	2	2	2	2	1	4	3	1	1	6	14	A	6	4.1	14.1					
14-Jul	4	4	3	6	3	2	1	3	3	1	1	2	1	1	1	2	2	2	2	4	9	A	9	9	3.4	9.4					
15-Jul	8	8	4	6	4	3	2	2	2	2	3	3	4	2	2	3	4	7	5	9	A	8	9	7	4.6	8.9					
16-Jul	4	4	4	5	5	5	4	2	2	4	5	3	1	2	1	3	4	2	1	A	4	6	5	5	3.5	6.2					
17-Jul	6	5	6	6	9	8	7	5	4	2	2	2	2	3	2	2	3	2	A	7	8	8	3	4	4.6	8.6					
18-Jul	13	8	4	6	7	7	5	3	8	8	2	2	2	2	1	2	3	A	5	7	4	7	20	15	6.2	19.6					
19-Jul	9	8	10	11	8	6	4	3	2	2	3	4	2	2	2	4	A	4	3	6	4	7	11	2	5.0	11.4					
20-Jul	2	1	1	1	1	2	2	2	1	1	2	2	1	3	3	A	5	8	1	2	1	3	1	1	2.1	7.9					
21-Jul	1	1	1	1	1	1	2	1	1	2	1	1	1	1	A	3	1	2	2	9	5	4	7	8	2.5	8.6					
22-Jul	13	14	13	4	3	4	2	2	1	0	1	1	1	A	3	1	1	2	1	1	1	1	3	2	3.4	13.9					
23-Jul	2	2	1	1	1	1	1	1	1	1	1	1	A	3	1	1	1	1	1	1	1	1	2	1	1.2	2.8					
24-Jul	2	1	1	1	1	1	1	1	1	1	1	A	3	1	1	1	1	1	1	1	2	1	2	2	1.3	3.3					
25-Jul	2	2	2	2	2	2	1	1	1	1	A	3	1	1	1	1	1	1	1	1	3	5	2	1	1.7	5.0					
26-Jul	2	2	1	1	1	3	3	5	3	A	3	1	2	1	1	1	1	1	2	3	4	2	2	2	2.1	5.0					
27-Jul	2	2	2	2	2	2	2	1	A	3	2	1	34	M	1	1	1	1	1	1	2	3	2	2	3.4	34.2					
28-Jul	2	2	2	3	2	2	2	A	3	2	2	2	1	1	1	1	1	1	1	2	2	2	3	3	1.9	2.9					
29-Jul	2	2	3	3	2	6	A	5	3	1	1	1	1	1	2	1	1	1	1	1	2	2	2	4	2.2	6.1					
30-Jul	3	2	3	6	3	A	5	3	3	2	1	1	1	2	1	1	1	2	3	1	2	3	3	2	2.4	6.0					
31-Jul	2	2	2	2	A	5	3	3	2	1	1	1	1	23	1	1	1	1	1	2	2	4	4	4	3.0	23.1					
		4.7	4.5	4.2	4.3	4.4	3.8	3.0	2.7	2.6	2.5	2.1	2.0	3.1	2.8	2.2	3.1	2.6	2.8	3.5	4.5	5.8	5.1	5.7	5.1	Diurnal Average					
		13.5	13.9	13.4	11.4	25.0	8.2	6.8	5.9	8.3	9.2	5.1	4.1	34.2	23.1	4.9	30.9	11.6	7.9	16.3	16.6	38.6	14.1	19.6	14.7	Diurnal Maximum					
M - Maintenance		A - Automated Daily Zero Span																													

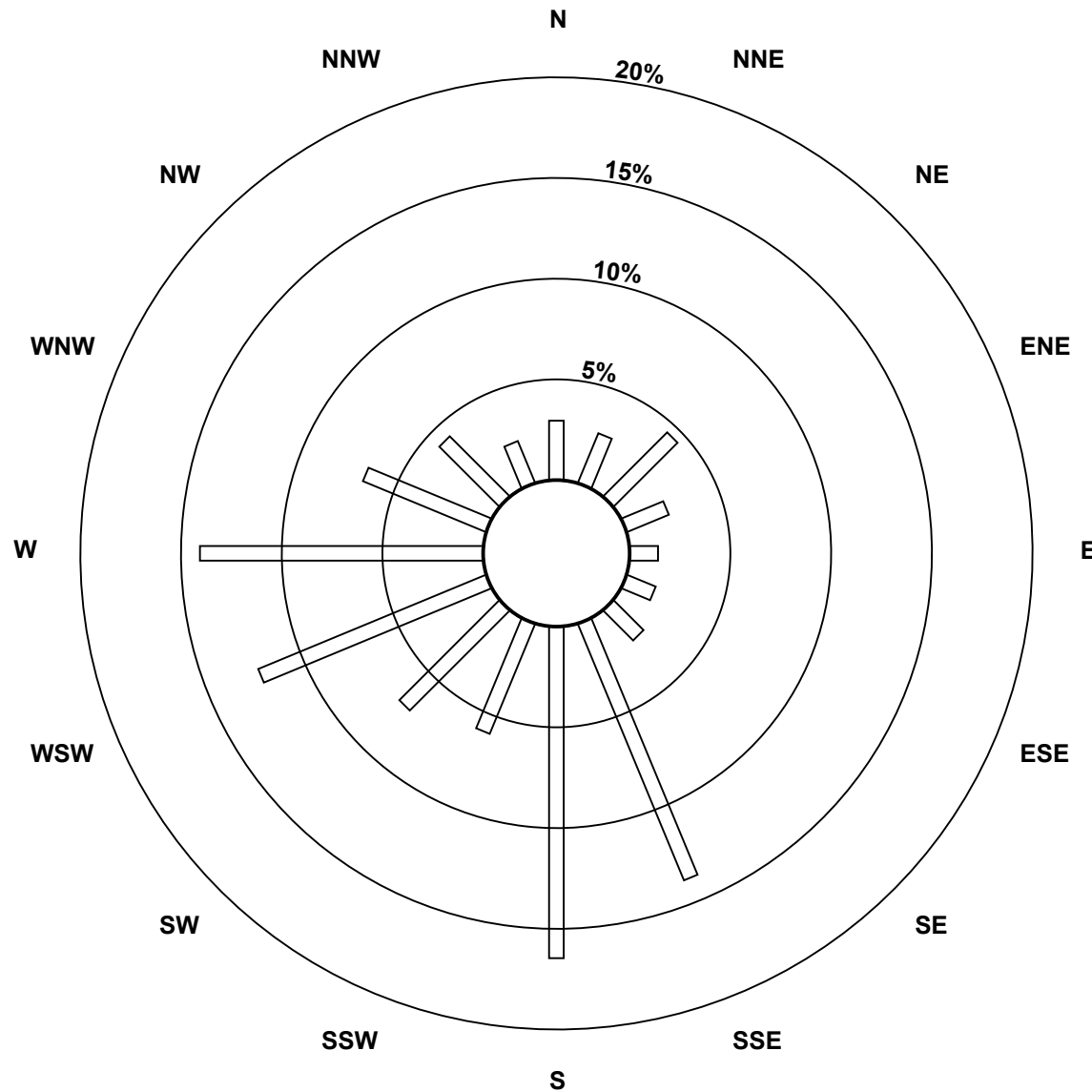
Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb
Portable Rycroft - July 2018

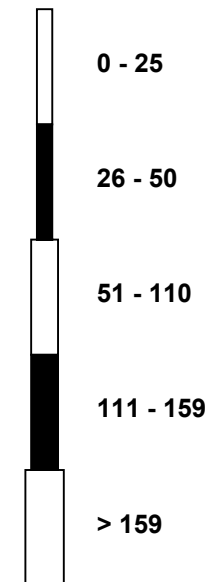


Pollutant Rose

Nitrogen Dioxide (NO₂) - ppb
Portable Rycroft - July 2018

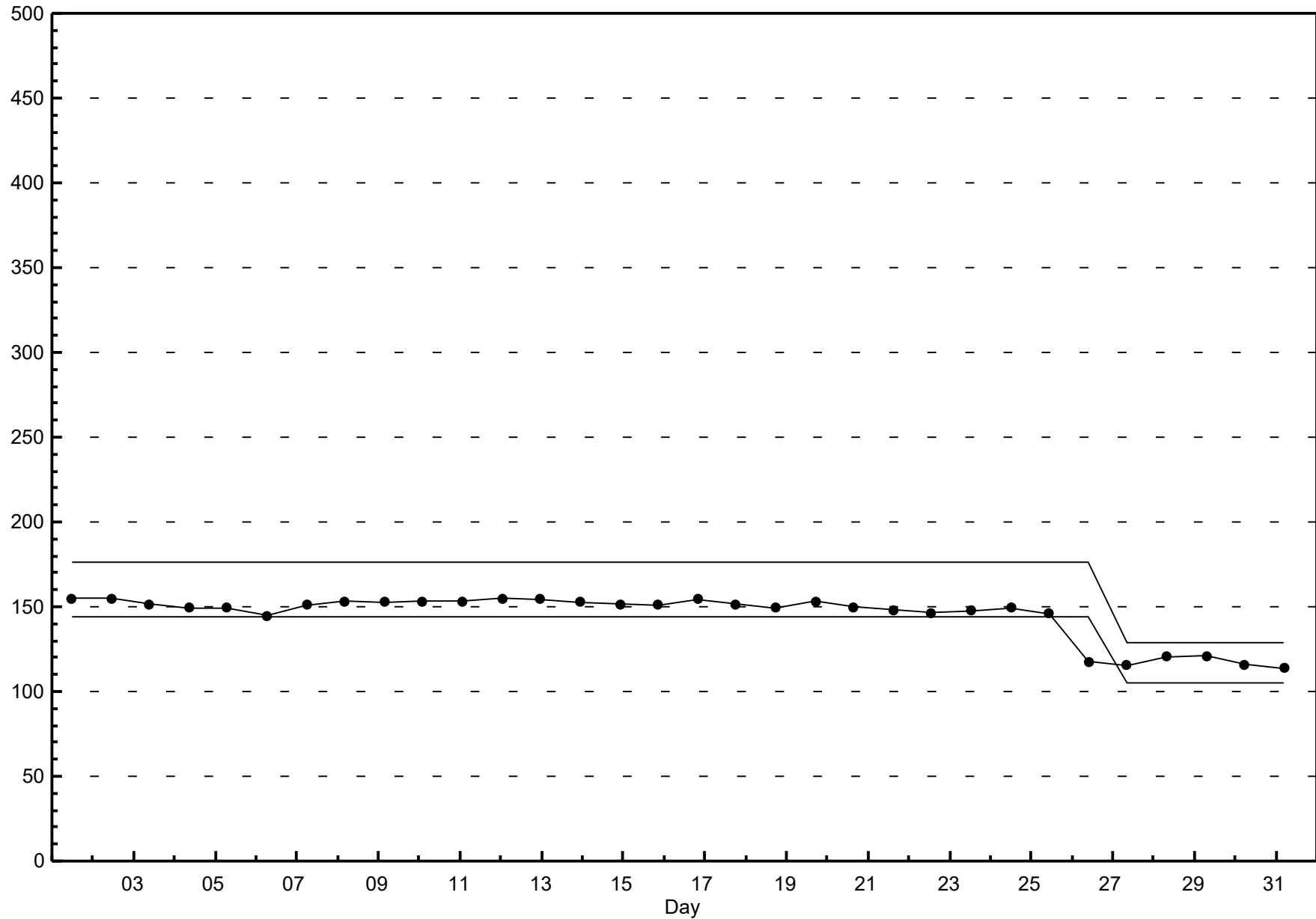


Pollutant Classes (ppb)



Span Responses

Nitrogen Dioxide (NO₂)
Portable Rycroft - July 2018



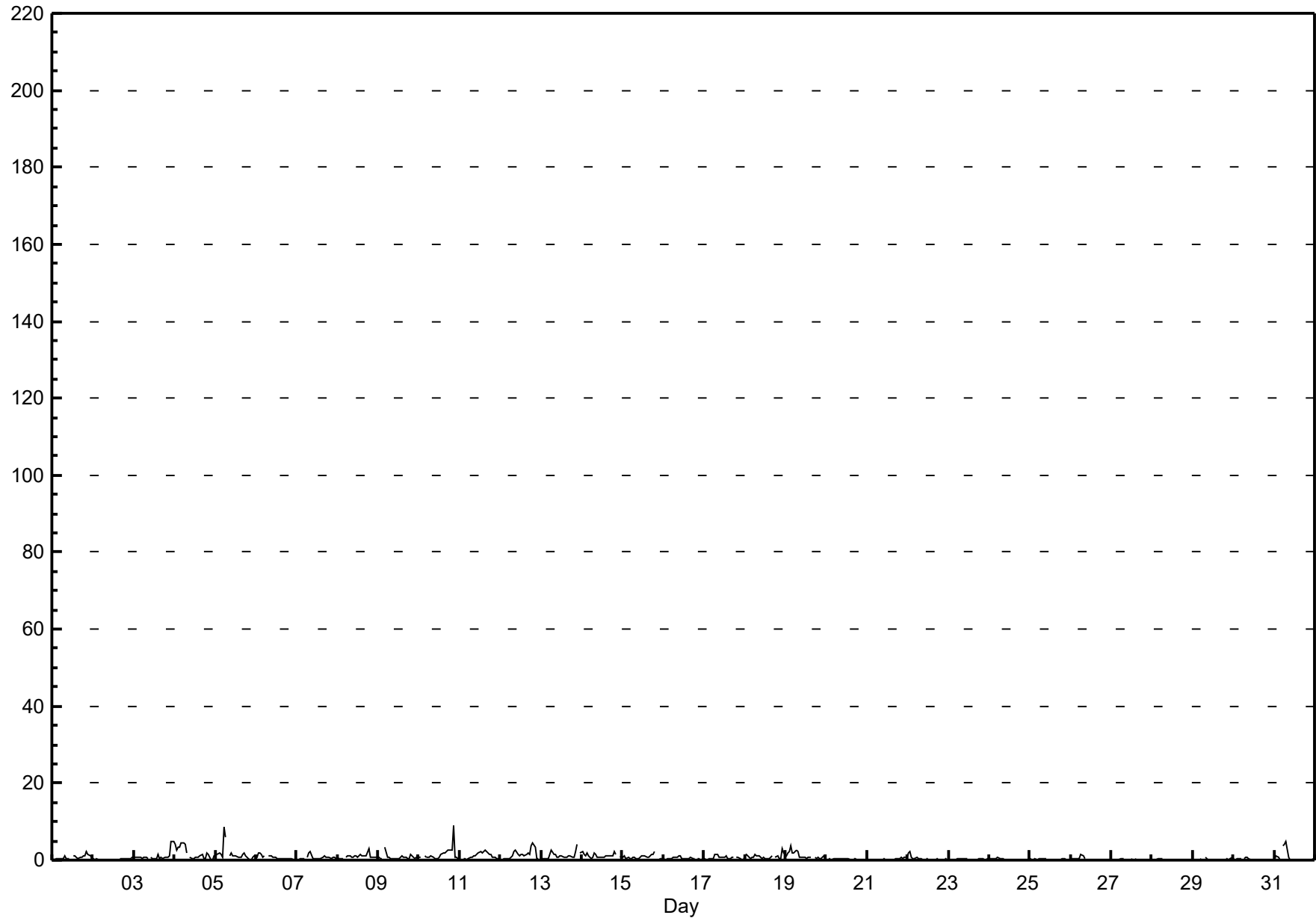
Hourly Averages

Nitrogen Oxide (NO) - ppb
Portable Rycroft - July 2018

Maximum Value: 9.1 ppb on Jul 10 21:00																				Maximum Daily Average: 1.8 ppb on Jul 4										Hours in Service: 744	
Minimum Value: 0 ppb on Jul 26 21:00																				Minimum Daily Average: 0.1 ppb on Jul 28										Hours of Data: 711	
Maximum Diurnal Average: 1.2 ppb at hour 7																				Minimum Diurnal Average: 0.5 ppb at hour 22										Hours of Missing Data: 33	
Monthly Average: 0.70 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.4 Q ₃ = 0.9 P ₉₀ = 1.6 P ₉₉ = 4.6										Hours of Calibration: 32	
																				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	0	0	0	0	0	0	0	1	1	0	0	A	1	1	1	0	1	1	1	1	2	1	1	0	0.7	2.2					
2-Jul	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	0.9					
3-Jul	1	1	1	1	1	1	1	1	1	A	1	0	0	1	1	1	1	1	1	1	1	1	5	5	1.1	4.7					
4-Jul	4	3	4	3	5	5	4	2	A	1	0	1	1	1	1	1	1	1	1	2	1	0	0	1	1.8	4.6					
5-Jul	1	2	2	1	1	9	6	A	1	2	1	1	1	1	1	1	2	2	1	0	0	0	1	1	1.6	8.7					
6-Jul	1	2	2	2	1	1	A	1	1	1	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0.7	1.9					
7-Jul	0	0	0	0	0	A	1	2	2	0	0	0	0	0	0	1	1	1	1	1	0	1	1	0	0.6	2.4					
8-Jul	1	0	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	0.9	3.1					
9-Jul	1	0	0	A	3	1	1	1	0	0	0	0	0	1	1	1	1	0	0	1	1	0	1	1	0.7	3.4					
10-Jul	1	1	A	1	1	1	1	1	1	0	0	0	1	2	2	2	2	2	3	3	9	1	1	0	1.5	9.1					
11-Jul	0	A	0	0	0	0	1	1	1	1	2	2	2	2	2	3	2	2	2	1	1	1	0	0	1.1	2.6					
12-Jul	A	0	0	0	0	1	1	1	2	2	2	1	2	2	1	1	2	2	4	5	3	0	0	A	1.5	4.6					
13-Jul	0	0	0	0	0	1	3	1	2	1	1	1	1	1	1	1	1	1	1	1	2	4	A	2	1.2	4.1					
14-Jul	2	2	1	2	1	0	1	2	1	1	1	1	1	1	1	1	1	1	1	2	1	A	1	1	1.2	2.1					
15-Jul	1	1	0	1	0	0	1	1	0	0	1	1	1	1	1	1	1	1	1	2	A	0	1	0	0.8	2.1					
16-Jul	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	1	0	0	A	0	0	0	0	0.5	1.2					
17-Jul	0	0	0	0	0	1	2	2	1	1	1	1	1	1	1	0	1	1	A	1	1	0	0	0	0.7	1.7					
18-Jul	1	1	1	0	1	1	2	1	1	1	0	1	1	0	1	1	1	A	1	1	1	0	3	2	0.9	2.8					
19-Jul	1	2	2	4	2	2	3	2	1	1	1	1	1	1	1	1	A	1	0	1	0	1	1	0	1.2	3.6					
20-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					
21-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	1	0	1	1	0.2	0.9					
22-Jul	2	2	1	0	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.4	2.1					
23-Jul	0	0	0	0	0	0	0	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5					
24-Jul	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7					
25-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	0.3					
26-Jul	0	0	0	0	0	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.4					
27-Jul	0	0	0	0	0	0	0	0	A	0	0	0	0	M	0	0	0	0	0	0	0	0	0	0	0.1	0.3					
28-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					
29-Jul	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	0.7					
30-Jul	0	0	0	0	0	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7					
31-Jul	0	1	1	0	A	4	4	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	5.0					
Diurnal Average																															
Diurnal Maximum																															
M - Maintenance A - Automated Daily Zero Span																															

Hourly Averages

Nitrogen Oxide (NO) - ppb
Portable Rycroft - July 2018



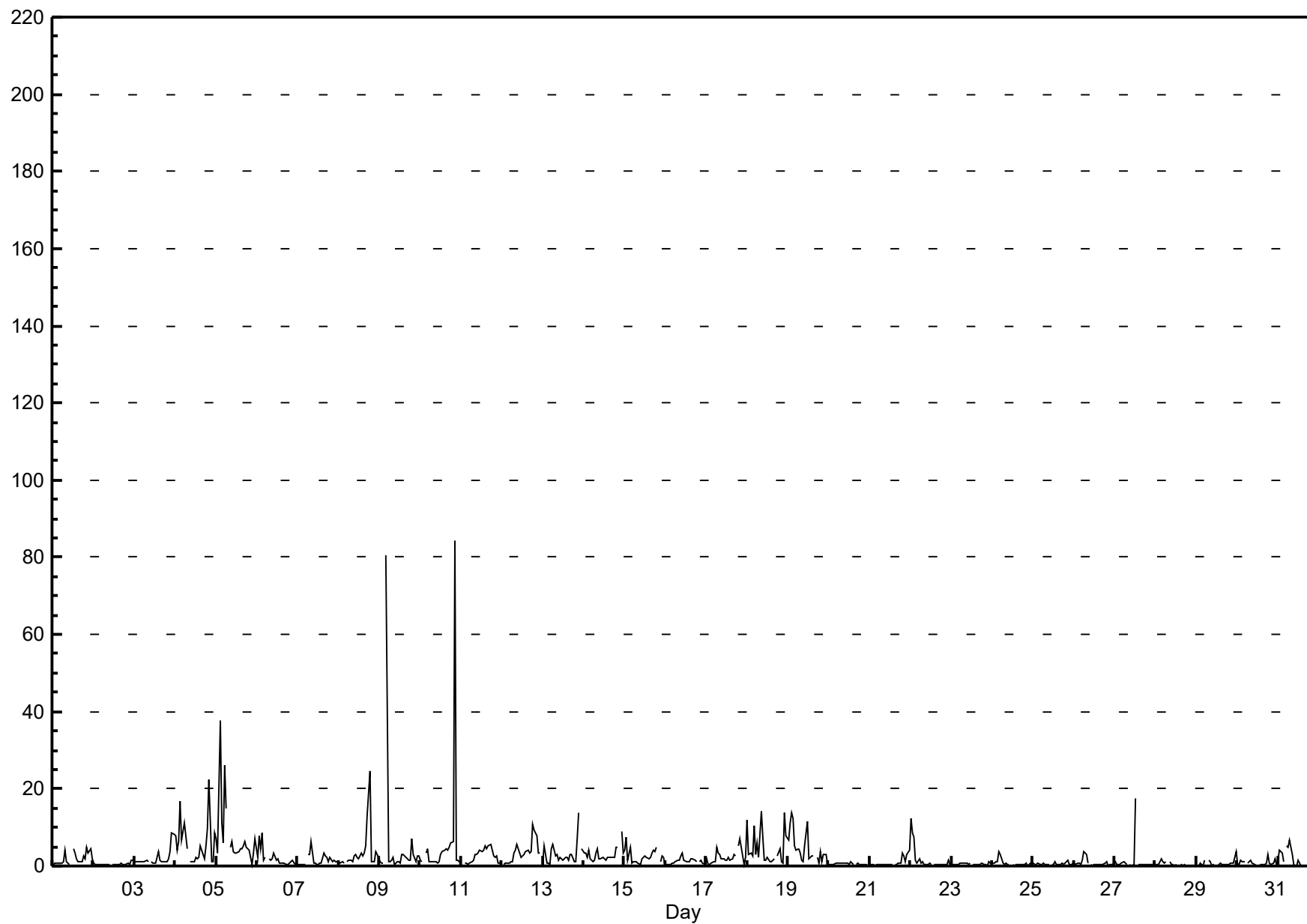
Hourly Maximums

Nitrogen Oxide (NO) - ppb Portable Rycroft - July 2018

Maximum Value: 84.3 ppb on Jul 10 21:00																				Maximum Daily Average: 7.6 ppb on Jul 5										Hours in Service: 744									
Minimum Value: 0 ppb on Jul 28 22:00																				Minimum Daily Average: 0.4 ppb on Jul 28										Hours of Data: 711									
Maximum Diurnal Average: 5.5 ppb at hour 21																				Minimum Diurnal Average: 1.5 ppb at hour 11										Hours of Missing Data: 33									
Monthly Average: 2.39 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.3 Q ₁ = 0.5 Median = 1.1 Q ₃ = 2.8 P ₉₀ = 5.0 P ₉₉ = 16.5										Hours of Calibration: 32									
																				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	0	1	1	1	1	1	1	4	1	1	1	A	5	3	2	1	1	1	2	2	5	3	4	2	1.9	4.7													
2-Jul	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	0	0	0	1	0	1	1	0.5	1.5													
3-Jul	1	1	1	1	1	1	1	1	1	A	1	1	1	2	4	1	1	1	1	1	2	4	9	8	2.1	8.6													
4-Jul	8	4	6	17	7	11	8	4	A	1	1	1	2	2	2	5	3	2	5	10	23	1	1	9	5.8	22.5													
5-Jul	7	3	38	11	6	26	15	A	5	6	4	3	3	4	5	4	5	6	5	4	2	0	3	7	7.6	37.5													
6-Jul	2	8	4	8	2	2	A	2	2	2	4	2	2	1	1	1	1	0	0	1	1	1	0	0	2.0	8.4													
7-Jul	0	0	0	0	0	A	3	3	6	1	1	0	0	1	1	4	2	2	1	2	1	1	1	1	1.5	6.3													
8-Jul	1	1	1	1	A	1	1	2	1	3	3	2	2	3	3	3	5	13	25	1	1	1	4	2	3.5	24.5													
9-Jul	1	1	1	A	81	1	1	2	2	0	1	1	1	3	3	3	2	1	1	7	3	1	3	2	5.3	80.6													
10-Jul	2	1	A	3	4	1	1	1	1	1	1	1	3	4	4	5	4	5	6	7	84	2	2	1	6.2	84.3													
11-Jul	1	A	1	1	0	1	1	2	3	3	3	4	4	4	5	5	5	5	4	3	2	3	1	1	2.6	5.4													
12-Jul	A	0	1	1	1	1	1	3	4	6	3	2	3	3	4	4	3	4	11	9	8	3	3	A	3.6	10.9													
13-Jul	1	5	1	1	1	5	5	3	3	2	2	2	2	2	2	1	3	3	1	1	7	14	A	5	3.1	13.7													
14-Jul	3	3	2	4	2	1	2	3	4	2	2	2	2	2	2	2	2	2	2	5	5	A	9	3	2.9	8.8													
15-Jul	4	8	2	5	1	1	1	1	1	0	2	2	3	2	2	2	3	4	4	5	A	1	3	2	2.5	7.6													
16-Jul	0	0	0	0	1	1	1	1	1	2	4	2	1	1	1	2	2	1	1	A	1	2	1	0	1.3	3.5													
17-Jul	2	0	0	1	1	1	5	4	3	2	2	1	1	2	1	2	3	2	A	5	7	3	0	2	2.3	6.9													
18-Jul	12	3	3	3	11	3	6	2	14	7	1	1	2	1	1	2	2	A	3	5	1	1	14	8	4.6	14.1													
19-Jul	7	11	14	12	5	4	4	3	1	1	5	12	2	2	3	2	A	2	1	4	1	3	3	0	4.5	13.6													
20-Jul	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	A	0	1	0	0	0	0	0	0	0.6	1.1													
21-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	1	3	3	1	3	4	0.9	4.2													
22-Jul	12	8	8	1	1	2	1	1	0	0	0	1	0	A	0	0	0	0	0	0	0	0	1	0	1.8	12.4													
23-Jul	0	0	0	0	0	1	1	1	1	1	1	1	A	0	0	0	0	0	1	1	0	0	1	1	0.5	1.1													
24-Jul	1	1	1	1	4	3	1	0	1	0	0	A	0	0	0	0	0	0	0	1	1	0	1	1	0.7	3.6													
25-Jul	1	0	0	1	0	0	1	1	0	0	A	0	0	1	0	0	0	1	0	1	1	0	0	0	0.5	1.3													
26-Jul	1	1	1	1	1	1	4	3	1	A	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0.7	3.9													
27-Jul	1	0	0	0	1	1	1	0	A	0	0	0	18	M	0	0	0	0	1	0	0	0	0	0	1.2	17.5													
28-Jul	0	0	0	2	1	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.8													
29-Jul	0	0	1	0	0	1	A	1	1	0	0	0	0	0	1	0	0	0	0	0	1	1	1	4	0.6	3.7													
30-Jul	0	0	1	1	1	A	1	1	2	1	0	0	0	0	0	0	0	1	3	1	0	1	2	0	0.7	2.9													
31-Jul	2	4	3	1	A	5	5	7	3	0	0	0	1	0	0	0	0	0	0	1	1	1	1	2	1.6	6.6													
2.4		2.3	3.1	2.6	4.6	2.7	2.5	2.0	2.3	1.6	1.5	1.6	2.0	1.6	1.7	1.8	1.8	2.1	2.7	2.7	5.5	1.6	2.4	2.3	Diurnal Average														
12.4		11.3	37.5	16.7	80.6	26.0	14.9	6.6	14.1	7.5	5.3	11.6	17.5	4.3	5.3	5.1	5.3	13.2	24.5	9.8	84.3	13.7	13.8	8.7	Diurnal Maximum														
M - Maintenance		A - Automated Daily Zero Span																																					

Hourly Maximums

Nitrogen Oxide (NO) - ppb
Portable Rycroft - July 2018



Hourly Averages

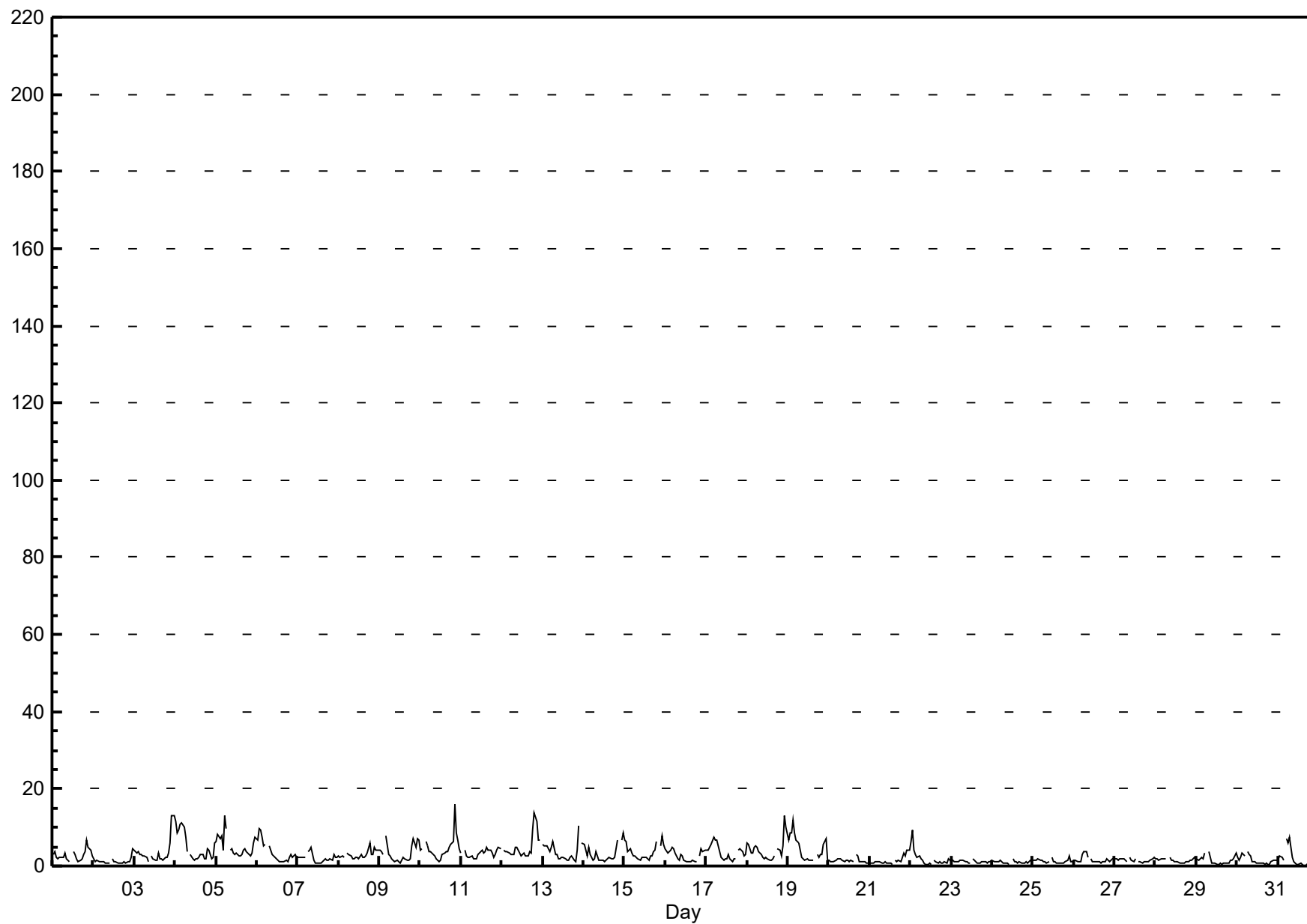
Oxides of Nitrogen (NO_x) - ppb

Portable Rycroft - July 2018

Maximum Value: 15.9 ppb on Jul 10 21:00																				Maximum Daily Average: 5.2 ppb on Jul 5										Hours in Service: 744	
Minimum Value: 0 ppb on Jul 31 17:00																				Minimum Daily Average: 1.0 ppb on Jul 24										Hours of Data: 711	
Maximum Diurnal Average: 4.2 ppb at hour 23																				Minimum Diurnal Average: 1.6 ppb at hour 12										Hours of Missing Data: 33	
Monthly Average: 2.75 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.9 Q ₁ = 1.2 Median = 2.0 Q ₃ = 3.5 P ₉₀ = 5.6 P ₉₉ = 11.7										Hours of Calibration: 32	
																														Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
1-Jul	3	4	2	2	2	2	2	3	2	1	1	A	4	3	2	1	2	3	4	7	5	4	2	2.8	6.7						
2-Jul	2	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	2	5	1.3	4.5						
3-Jul	4	3	4	3	3	2	3	2	1	A	3	2	1	2	4	2	2	2	2	3	6	13	13	3.5	13.1						
4-Jul	12	8	9	11	11	10	7	4	A	3	2	2	2	2	2	3	3	2	2	4	4	2	2	6	4.9	11.7					
5-Jul	6	8	7	8	4	13	10	A	4	5	3	3	3	3	3	3	4	5	4	3	3	4	6	8	5.2	13.1					
6-Jul	7	10	10	8	5	6	A	5	4	3	3	2	1	1	1	1	1	1	2	3	2	3	2	3.6	9.7						
7-Jul	2	2	2	2	2	A	4	4	5	2	1	1	1	1	1	2	2	2	1	2	2	3	2	2	2.1	4.9					
8-Jul	3	2	3	2	A	3	3	3	2	2	2	2	2	3	2	2	3	3	6	3	3	5	4	4	2.9	6.0					
9-Jul	4	4	3	A	8	3	3	2	1	1	1	1	1	1	2	2	2	2	2	5	7	5	7	7	3.2	7.8					
10-Jul	4	5	A	6	5	4	4	3	3	2	1	1	2	3	3	4	4	5	6	6	16	9	7	5	4.6	15.9					
11-Jul	3	A	4	2	2	2	2	2	2	2	3	3	4	3	4	5	4	4	3	2	3	4	5	4	3.2	5.0					
12-Jul	A	4	4	4	3	3	3	3	5	5	3	2	3	3	3	3	4	3	9	14	11	7	7	A	4.8	13.9					
13-Jul	6	5	5	4	4	5	6	3	3	2	2	2	2	2	1	2	2	2	1	1	4	11	A	6	3.6	10.6					
14-Jul	5	4	3	5	3	1	2	4	3	2	1	2	1	2	2	2	2	2	2	4	7	A	7	9	3.2	8.6					
15-Jul	7	6	4	4	4	3	2	2	2	2	2	2	2	2	2	3	2	4	4	6	A	5	8	6	3.7	7.9					
16-Jul	4	3	4	4	5	4	3	2	2	3	3	2	1	1	1	1	2	1	1	A	3	4	4	4	2.7	4.8					
17-Jul	4	4	5	6	7	7	7	5	4	2	2	2	2	3	2	1	2	2	A	4	4	4	2	3	3.6	7.4					
18-Jul	6	6	3	3	5	5	5	4	3	2	2	2	2	1	2	2	2	A	4	4	3	5	13	10	4.1	13.2					
19-Jul	7	9	9	12	8	7	6	4	2	2	2	2	1	1	2	2	A	3	2	3	3	6	7	2	4.4	12.1					
20-Jul	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	A	3	3	1	1	1	1	1	1	1.4	3.1					
21-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	2	3	3	4	4	1.4	4.3					
22-Jul	6	9	4	3	2	3	2	1	1	0	0	1	0	A	2	1	1	1	1	1	1	1	2	1	2.0	9.2					
23-Jul	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1.1	1.8					
24-Jul	1	1	1	1	1	1	1	1	1	1	0	A	2	1	1	1	1	1	1	1	1	1	2	1.0	1.8						
25-Jul	2	2	2	2	2	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	2	3	1	1	1.3	2.6					
26-Jul	1	2	1	1	1	3	4	4	2	A	2	1	1	1	1	1	1	1	1	2	1	1	2	1.6	3.8						
27-Jul	2	2	2	2	2	2	2	1	A	2	1	1	2	M	1	1	1	1	1	1	1	2	2	1.5	2.1						
28-Jul	2	2	2	2	2	2	2	A	2	2	1	1	1	1	1	1	1	1	1	1	1	2	2	1.5	2.1						
29-Jul	2	1	2	2	2	3	A	4	2	1	1	1	0	0	1	1	1	1	1	1	1	2	3	1.5	3.7						
30-Jul	2	2	2	3	3	A	4	3	3	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1.5	3.6						
31-Jul	1	3	2	2	A	7	6	8	2	1	1	0	0	1	0	0	0	0	1	1	1	2	3	3	2.0	7.6					
3.7		3.8	3.4	3.7	3.5	3.8	3.4	2.9	2.2	1.8	1.7	1.6	1.6	1.7	1.6	1.6	1.8	1.9	2.2	2.8	3.4	3.5	4.2	4.0	Diurnal Average						
11.7		9.7	9.5	12.1	11.3	13.1	9.7	7.6	4.9	5.0	3.5	3.3	3.9	3.3	3.8	4.8	4.1	4.8	9.1	13.9	15.9	10.6	13.2	13.1	Diurnal Maximum						
M - Maintenance		A - Automated Daily Zero Span																													

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb
Portable Rycroft - July 2018



Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

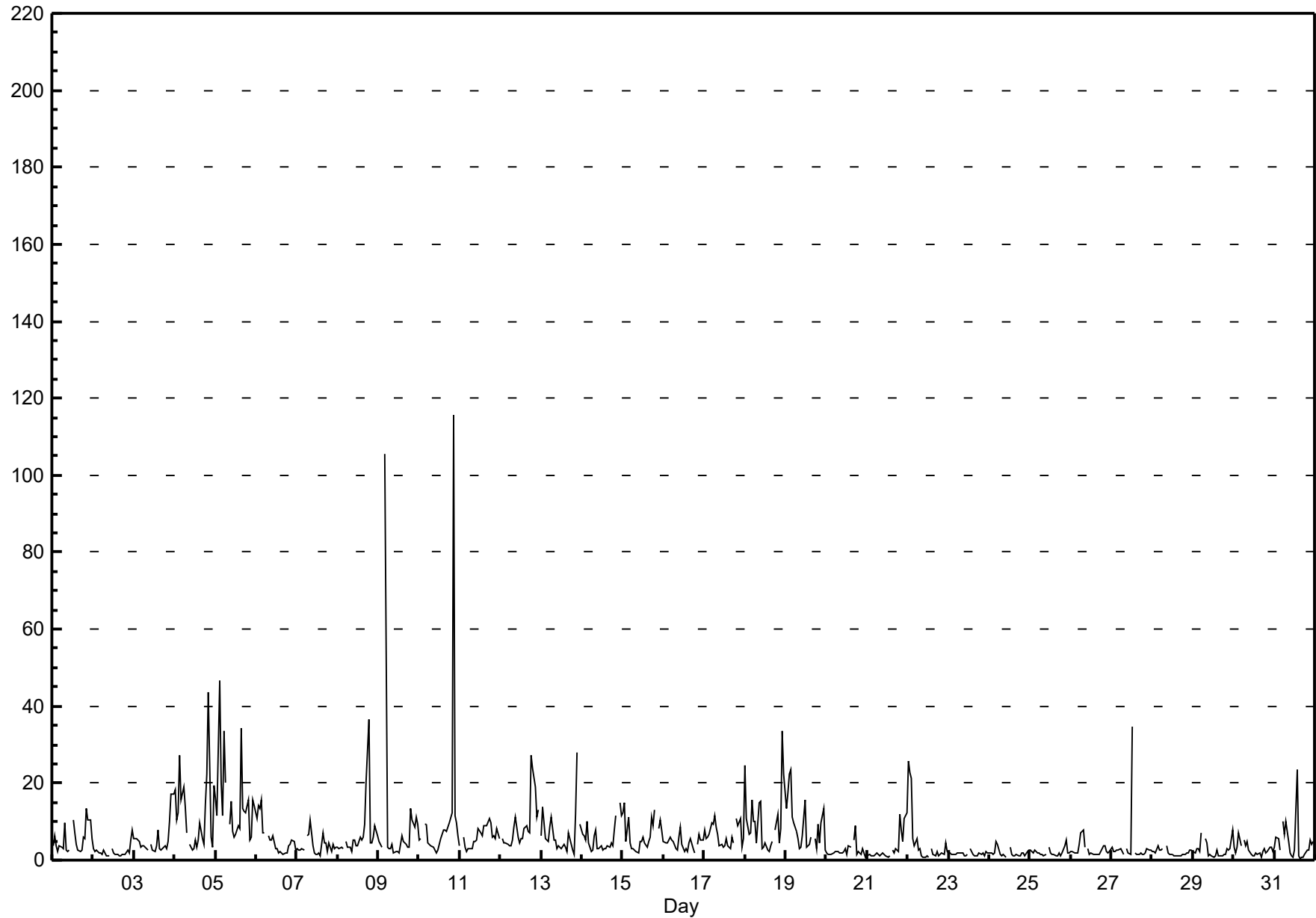
Portable Rycroft - July 2018

Maximum Value: 115.6 ppb on Jul 10 21:00																				Maximum Daily Average: 15.2 ppb on Jul 5					Hours in Service: 744	
Minimum Value: 1 ppb on Jul 31 16:00																				Minimum Daily Average: 1.6 ppb on Jul 23					Hours of Data: 711	
Maximum Diurnal Average: 10.4 ppb at hour 21																				Minimum Diurnal Average: 3.3 ppb at hour 12					Hours of Missing Data: 33	
Monthly Average: 5.67 ppb																				Percentiles: P ₁ = 0.8 P ₁₀ = 1.4 Q ₁ = 1.9 Median = 3.5 Q ₃ = 6.3 P ₉₀ = 11.4 P ₉₉ = 33.6					Hours of Calibration: 32	
																									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	4	6	4	2	4	3	3	10	3	2	3	A	11	7	4	3	2	3	6	6	14	10	11	5	5.4	13.6
2-Jul	3	2	2	2	2	1	2	2	1	1	A	3	2	1	1	1	1	2	2	2	3	2	5	8	2.2	7.8
3-Jul	6	5	5	5	3	4	4	3	3	A	4	3	2	4	8	3	3	3	4	3	5	10	17	17	5.3	17.3
4-Jul	18	11	12	27	16	19	14	7	A	4	3	3	5	3	5	10	5	4	15	22	44	6	3	20	12.0	43.7
5-Jul	16	12	47	20	11	33	20	A	9	15	8	6	7	9	8	34	13	13	12	16	5	6	15	14	15.2	46.6
6-Jul	11	14	13	16	7	7	A	6	5	5	6	3	3	2	2	2	2	2	2	4	4	5	5	3	5.6	15.7
7-Jul	3	3	3	3	3	A	6	7	10	4	2	2	2	2	1	7	5	4	2	4	2	4	3	3	3.7	10.4
8-Jul	3	3	3	3	A	5	3	3	2	5	5	4	4	6	5	6	9	21	36	4	4	6	9	6	6.8	36.5
9-Jul	5	4	3	A	106	3	3	3	4	2	2	2	2	4	6	5	4	4	3	13	10	8	11	9	9.5	105.6
10-Jul	5	6	A	9	10	4	4	4	3	3	2	3	4	5	8	8	8	9	10	12	116	11	10	6	11.3	115.6
11-Jul	4	A	6	3	2	3	3	3	5	5	5	8	7	6	9	9	9	11	10	6	6	5	8	6	6.1	10.7
12-Jul	A	6	4	5	4	4	4	5	8	11	6	4	5	6	8	9	8	7	27	24	19	11	13	A	9.0	27.3
13-Jul	6	14	6	5	5	9	11	5	5	3	4	3	3	4	3	2	7	5	2	2	12	28	A	9	6.7	28.0
14-Jul	7	6	5	10	5	2	3	6	8	3	3	4	3	3	3	4	3	4	4	8	11	A	15	12	5.7	14.8
15-Jul	12	15	5	11	5	3	3	3	2	2	5	5	6	4	3	5	6	11	9	13	A	8	11	8	6.7	14.9
16-Jul	5	4	4	5	6	5	5	3	3	6	9	4	2	3	2	5	6	3	2	A	4	7	5	5	4.5	8.6
17-Jul	8	6	6	7	10	9	11	8	7	4	4	3	4	6	4	3	6	4	A	11	9	11	3	5	6.5	11.5
18-Jul	25	11	7	7	16	10	10	5	15	15	3	3	5	3	2	4	5	A	8	12	5	8	34	22	10.1	33.6
19-Jul	13	18	22	24	11	10	8	6	3	3	6	16	3	4	4	6	A	5	3	9	4	10	13	3	8.9	23.6
20-Jul	2	2	2	2	2	2	2	2	2	2	2	3	2	4	4	A	5	9	2	2	2	3	2	1	2.5	8.8
21-Jul	1	1	1	1	1	1	2	1	2	2	2	1	1	1	A	3	2	3	2	12	8	5	11	12	3.3	12.2
22-Jul	26	23	21	6	4	6	3	3	1	1	1	1	1	A	3	1	1	2	1	2	2	2	5	2	5.0	25.6
23-Jul	2	2	1	2	2	2	2	2	2	1	1	1	A	3	2	1	1	1	2	2	2	1	2	2	1.6	3.1
24-Jul	2	2	2	2	5	4	2	1	1	1	1	A	3	1	1	1	2	1	1	2	2	1	2	3	1.8	4.9
25-Jul	2	2	2	2	2	2	1	1	1	1	A	3	2	1	1	1	1	2	1	2	4	5	2	2	2.0	5.1
26-Jul	2	2	2	2	2	4	7	8	3	A	3	1	2	2	1	1	2	2	3	4	4	2	2	2	2.7	7.9
27-Jul	3	2	2	3	3	3	2	1	A	3	2	2	35	M	2	2	2	2	2	1	2	3	3	3	3.7	34.8
28-Jul	2	2	2	4	3	3	3	A	4	2	2	2	1	1	1	1	1	1	1	2	2	2	3	3	2.0	3.8
29-Jul	2	2	3	3	2	7	A	5	5	1	1	1	1	1	3	1	1	1	1	1	3	3	3	8	2.6	7.9
30-Jul	3	2	3	7	4	A	5	4	5	2	2	1	1	2	1	2	1	2	3	2	2	3	3	2	2.7	7.0
31-Jul	3	6	6	3	A	10	7	10	5	2	1	1	2	23	1	1	1	1	2	3	2	5	4	5	4.4	23.4
6.8 6.4 6.9 6.6 8.7 6.2 5.3 4.4 4.4 3.9 3.4 3.3 4.3 4.2 3.6 4.6 4.0 4.7 5.9 6.8 10.4 6.4 7.8 6.9																									Diurnal Average	
25.6 22.6 46.6 27.2 105.6 33.5 20.0 10.0 15.0 15.5 8.6 15.6 34.8 23.4 8.9 34.3 13.4 20.6 36.5 24.0 115.6 28.0 33.6 22.4																									Diurnal Maximum	
M - Maintenance A - Automated Daily Zero Span																										

Hourly Maximums

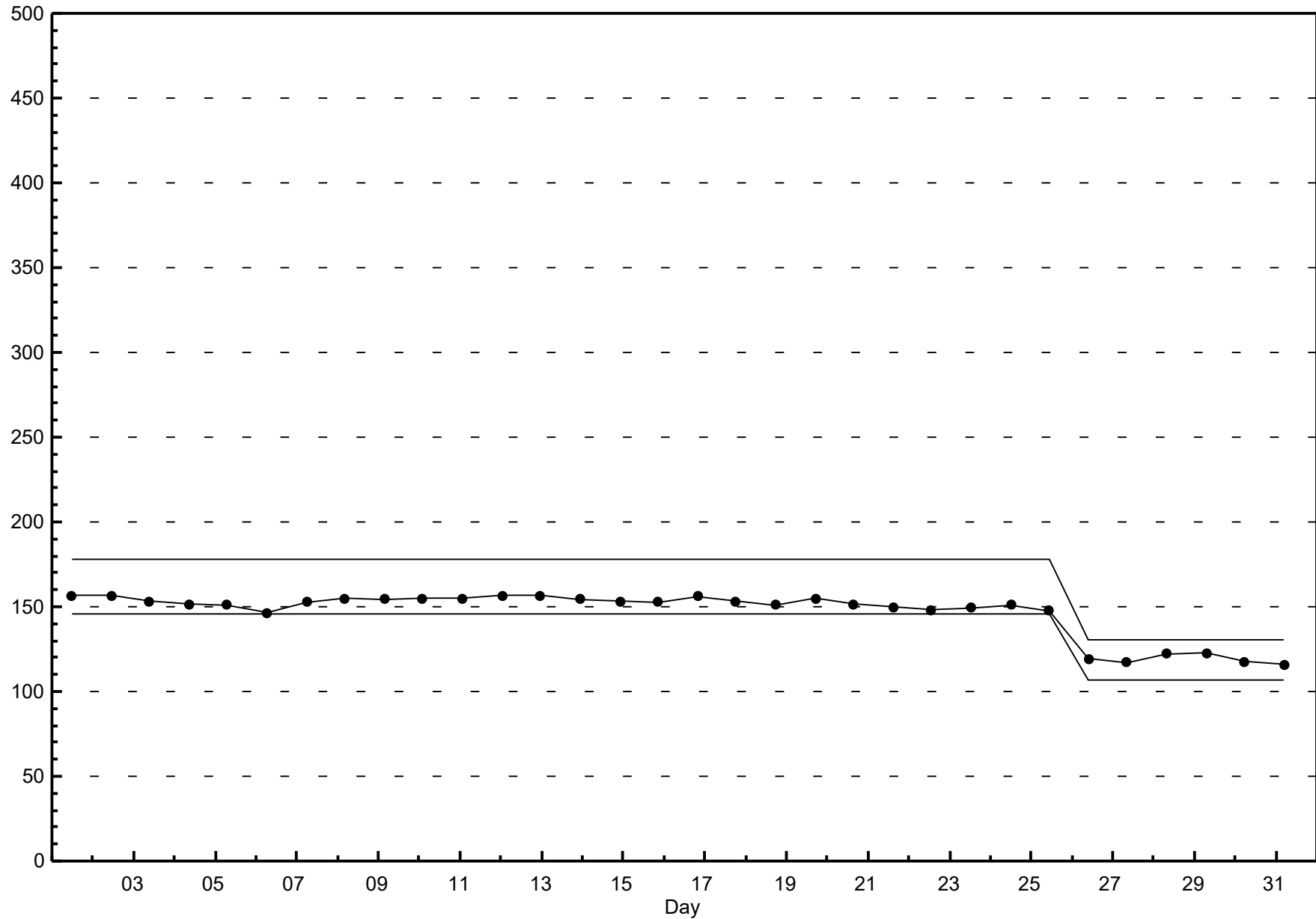
Oxides of Nitrogen (NO_x) - ppb

Portable Rycroft - July 2018



Span Responses

Oxides of Nitrogen (NO_x)
Portable Rycroft - July 2018



Hourly Averages

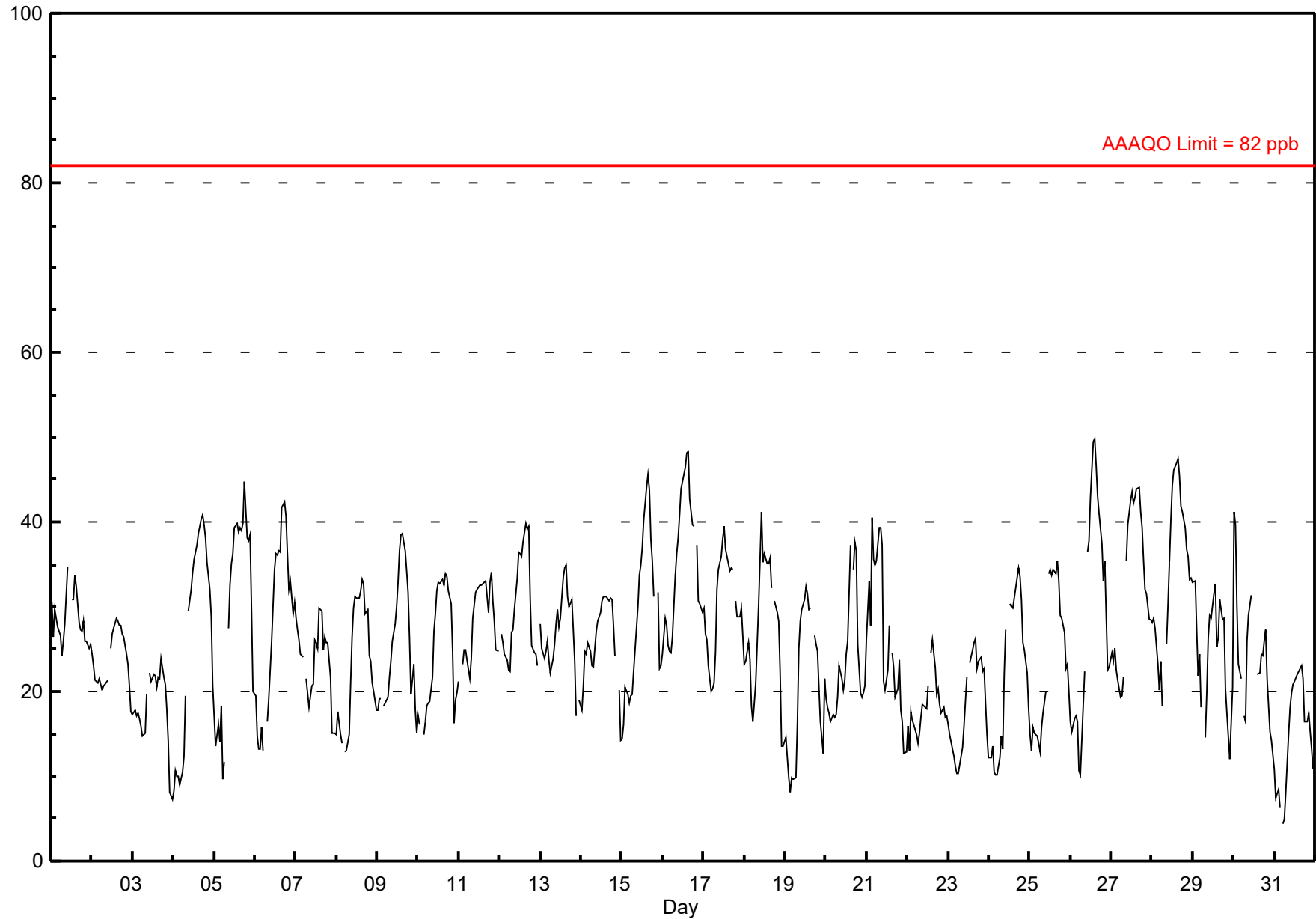
Ozone (O₃) - ppb

Portable Rycroft - July 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 49.8 ppb on Jul 26 15:00 Maximum Daily Average: 35.3 ppb on Jul 16																								Hours in Service: 744 Hours of Data: 709 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0		
Minimum Value: 4 ppb on Jul 31 06:00 Maximum Diurnal Average: 33.9 ppb at hour 15 Monthly Average: 25.68 ppb												Minimum Daily Average: 15.1 ppb on Jul 31 Minimum Diurnal Average: 17.6 ppb at hour 6 Percentiles: P ₁ = 8.2 P ₁₀ = 14.7 Q ₁ = 19.2 Median = 25.0 Q ₃ = 31.9 P ₉₀ = 37.7 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	31	26	30	29	28	27	24	26	28	31	35	A	31	31	34	32	28	27	27	28	26	26	25	26	28.5	34.8
2-Jul	24	23	21	21	21	21	20	21	21	21	A	25	27	27	29	28	28	28	27	26	24	23	21	18	23.7	28.7
3-Jul	17	18	17	17	17	16	15	15	20	A	22	21	22	22	20	22	22	24	22	21	18	14	8	7	18.1	23.9
4-Jul	8	11	10	10	9	10	12	19	A	30	32	34	36	36	37	39	40	41	40	38	35	32	29	21	26.5	40.9
5-Jul	17	14	16	14	18	10	12	A	27	32	35	36	39	40	39	39	39	40	45	38	38	38	30	20	29.4	44.8
6-Jul	19	15	13	13	16	13	A	16	19	23	26	34	36	36	37	36	42	42	41	36	32	33	29	30	27.8	42.3
7-Jul	29	27	26	24	24	A	21	20	18	21	21	26	26	25	30	29	25	26	26	26	22	15	15	15	23.4	29.8
8-Jul	15	18	15	14	A	13	13	15	21	26	30	31	31	31	32	33	33	29	30	24	24	21	20	18	23.3	33.2
9-Jul	18	19	19	A	18	19	19	22	24	26	28	30	33	37	38	39	37	34	32	26	20	23	18	15	25.8	38.6
10-Jul	17	16	A	15	16	18	19	19	22	27	29	32	33	33	33	33	34	34	32	30	25	16	19	20	24.8	33.8
11-Jul	21	A	23	25	25	24	21	24	29	30	32	32	32	32	33	33	33	29	33	34	31	28	25	25	28.5	34.1
12-Jul	A	27	26	24	24	23	22	27	27	30	33	36	36	36	38	40	39	40	31	25	25	24	23	A	29.8	39.9
13-Jul	28	25	24	25	26	24	22	24	26	28	30	28	29	33	35	35	31	30	31	27	23	17	A	19	26.9	35.0
14-Jul	18	21	25	24	26	25	23	23	25	27	28	29	31	31	31	31	31	31	31	28	24	A	20	14	26.0	31.3
15-Jul	14	16	21	20	19	19	20	22	25	30	34	35	37	40	44	46	44	38	35	31	A	32	23	23	29.0	45.6
16-Jul	24	29	28	25	25	25	26	34	36	38	41	44	46	46	48	48	43	40	40	A	37	31	30	29	35.3	48.2
17-Jul	30	27	26	23	20	20	21	25	32	34	36	38	40	37	36	34	35	34	A	31	29	29	30	27	30.1	39.5
18-Jul	23	24	26	24	18	16	19	21	30	36	41	35	36	35	35	36	32	A	31	29	28	22	14	13	27.2	41.2
19-Jul	15	12	10	8	10	10	10	16	25	28	30	31	32	32	30	30	A	27	26	25	20	16	13	22	20.7	32.3
20-Jul	19	18	17	16	17	17	17	19	23	21	20	21	24	26	37	A	34	38	37	26	20	19	20	21	23.0	37.7
21-Jul	26	33	28	41	36	35	35	39	39	37	21	20	23	28	A	24	23	19	20	24	18	16	13	13	26.6	40.5
22-Jul	16	13	18	17	16	15	14	15	17	18	18	18	21	A	25	26	23	20	20	18	17	18	17	17	18.1	26.1
23-Jul	16	15	14	12	11	10	10	11	13	16	19	22	A	23	25	26	26	23	24	24	22	23	19	15	18.3	26.3
24-Jul	12	12	14	10	10	10	12	15	13	22	27	A	30	30	30	31	32	35	34	31	26	25	22	18	21.8	34.6
25-Jul	15	13	16	15	15	14	13	16	17	20	A	34	34	34	34	34	35	33	29	29	27	23	23	20	23.6	35.5
26-Jul	16	15	17	17	16	11	10	18	22	A	36	38	43	49	50	47	43	41	37	33	35	29	23	23	29.2	49.8
27-Jul	25	24	25	23	21	19	19	22	A	35	40	43	43	42	43	44	44	41	39	35	32	32	28	28	32.5	44.0
28-Jul	28	29	27	23	20	24	18	A	26	30	35	40	44	46	47	47	45	42	41	39	37	36	33	33	34.5	47.5
29-Jul	33	33	27	22	24	18	A	14	20	26	29	29	32	33	25	26	31	28	29	20	17	15	12	21	24.6	33.1
30-Jul	41	40	30	23	21	A	17	16	26	29	31	C	C	C	22	22	24	24	26	27	21	15	14	12	24.2	41.1
31-Jul	11	8	8	6	A	4	5	8	15	18	20	21	21	22	22	23	23	22	16	17	18	15	13	11	15.1	23.0
20.9 20.6 20.6 19.4 19.6 17.6 17.7 20.1 23.7 27.3 29.6 30.8 32.7 33.6 33.9 33.8 33.3 32.0 31.0 28.3 25.7 23.6 20.9 19.8																								Diurnal Average		
41.1 39.7 29.9 40.5 35.6 34.9 35.4 39.3 39.3 38.1 41.2 43.8 45.5 49.4 49.8 48.2 45.5 42.3 44.8 39.3 37.7 38.5 33.2 33.3																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na																										

Hourly Averages

Ozone (O₃) - ppb
Portable Rycroft - July 2018



Hourly Maximums

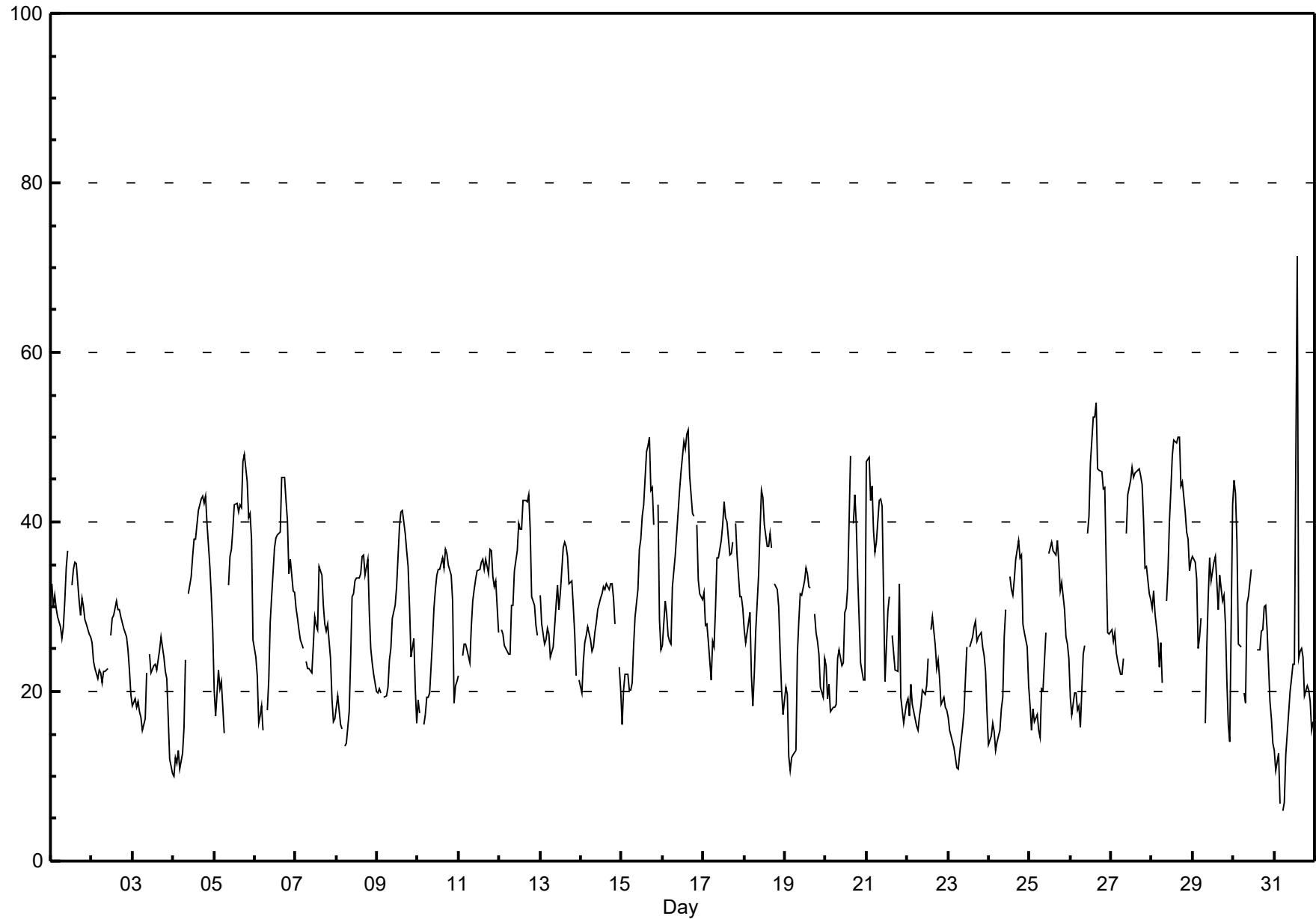
Ozone (O₃) - ppb

Portable Rycroft - July 2018

Maximum Value: 71.3 ppb on Jul 31 14:00																				Maximum Daily Average: 37.5 ppb on Jul 16					Hours in Service: 744	
Minimum Value: 6 ppb on Jul 31 06:00																				Minimum Daily Average: 19.8 ppb on Jul 31					Hours of Data: 709	
Maximum Diurnal Average: 37.9 ppb at hour 14																				Minimum Diurnal Average: 20.0 ppb at hour 7					Hours of Missing Data: 35	
Monthly Average: 28.71 ppb																				Percentiles: P ₁ = 10.8 P ₁₀ = 17.2 Q ₁ = 21.6 Median = 27.9 Q ₃ = 35.2 P ₉₀ = 42.0 P ₉₉ = 50.0					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	33	30	31	30	29	28	26	28	31	35	37	A	33	34	35	35	31	29	31	30	28	28	27	26	30.6	36.6
2-Jul	26	24	23	22	22	22	21	22	22	23	A	27	29	29	31	30	30	29	28	27	26	25	22	20	25.2	30.6
3-Jul	18	19	18	19	18	17	15	17	22	A	24	22	23	23	22	24	25	26	24	22	22	17	12	10	20.1	26.5
4-Jul	10	12	11	13	11	13	16	24	A	32	33	36	38	38	40	41	43	43	42	43	40	35	31	27	29.2	43.1
5-Jul	20	17	22	20	21	18	15	A	33	36	37	39	42	42	41	42	42	47	48	45	41	41	38	26	33.6	48.0
6-Jul	24	22	16	17	18	15	A	18	21	28	31	37	38	38	39	39	45	45	43	40	34	36	32	32	30.8	45.2
7-Jul	30	29	27	26	25	A	24	23	23	22	25	29	28	27	35	34	30	28	27	28	24	19	16	17	25.9	34.7
8-Jul	18	19	16	16	A	14	14	18	24	31	32	33	33	33	34	36	36	34	36	29	25	23	22	20	25.9	36.1
9-Jul	20	20	20	A	19	19	21	24	25	29	30	32	36	40	41	41	39	37	35	30	24	26	20	16	28.0	41.4
10-Jul	19	17	A	16	17	19	19	20	26	30	32	34	34	34	36	35	37	36	35	34	31	19	21	21	27.0	36.7
11-Jul	22	A	24	26	26	25	23	28	31	32	33	34	34	35	36	34	36	34	37	37	34	32	33	27	30.9	36.7
12-Jul	A	27	27	25	25	24	24	30	30	34	37	40	39	39	43	43	42	43	39	31	30	28	27	A	33.1	43.1
13-Jul	31	28	26	26	27	27	24	25	28	30	33	30	32	37	38	37	36	33	33	30	27	22	A	21	29.6	37.6
14-Jul	20	24	26	27	28	26	25	25	27	28	30	31	32	32	32	33	32	33	33	31	28	A	23	20	28.0	32.7
15-Jul	16	20	22	22	20	20	21	25	29	32	37	38	41	42	48	49	50	44	44	40	A	42	29	25	32.8	50.0
16-Jul	25	31	29	27	26	26	32	36	39	41	44	46	49	49	50	51	45	41	41	A	40	33	32	31	37.5	50.9
17-Jul	32	28	28	26	21	26	25	30	36	36	38	40	42	41	40	36	36	38	A	40	36	31	31	30	33.3	42.4
18-Jul	27	26	28	29	22	18	22	27	34	39	44	43	40	37	37	39	37	A	33	32	30	25	20	17	30.7	43.8
19-Jul	20	20	12	11	12	12	13	24	28	32	31	33	35	34	32	32	A	29	27	26	24	20	19	24	24.0	34.6
20-Jul	23	19	21	18	18	18	19	24	25	23	23	29	30	32	48	A	40	43	40	34	23	22	21	21	26.7	47.8
21-Jul	47	48	42	44	39	36	38	43	43	42	31	21	29	31	A	27	25	23	22	33	19	18	16	19	32.0	47.7
22-Jul	19	17	21	18	18	16	15	17	18	20	20	21	24	A	27	29	25	23	24	21	18	19	18	18	20.3	28.8
23-Jul	17	15	15	13	12	11	11	13	16	18	22	25	A	25	26	28	28	26	26	27	25	24	22	18	20.2	28.3
24-Jul	14	15	16	15	13	14	15	18	19	26	30	A	34	32	31	33	36	38	36	36	28	27	25	21	24.9	37.8
25-Jul	18	15	18	16	17	15	15	20	20	27	A	36	37	38	37	36	38	35	32	33	30	26	26	24	26.5	37.8
26-Jul	19	17	20	20	18	18	16	24	25	A	39	41	47	52	52	54	46	46	46	44	44	35	27	27	33.8	54.0
27-Jul	27	26	27	25	24	22	22	24	A	39	43	45	46	45	46	46	46	45	44	40	35	35	32	31	35.4	46.4
28-Jul	30	32	29	26	23	26	21	A	31	34	40	44	48	50	49	50	50	44	45	41	39	38	34	35	37.3	50.0
29-Jul	36	35	33	25	26	29	A	16	25	31	36	33	35	36	33	30	34	31	31	28	21	16	14	42	29.4	42.0
30-Jul	45	43	38	26	25	A	20	19	30	31	34	C	C	C	25	25	27	27	30	30	27	19	17	14	27.6	44.9
31-Jul	13	11	13	7	A	6	7	13	17	20	22	23	23	71	24	25	25	24	20	21	20	19	15	17	19.8	71.3
24.0 23.6 23.4 21.7 21.4 20.1 20.0 23.2 26.8 30.3 32.6 33.6 35.5 37.9 36.9 36.4 36.4 35.1 34.3 32.8 29.1 26.7 24.1 23.2																								Diurnal Average		
47.1 47.7 42.5 44.2 39.0 36.4 37.7 42.5 42.6 41.9 43.8 46.0 49.4 71.3 52.3 54.0 50.0 47.2 48.0 44.8 44.1 42.0 37.9 42.0																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

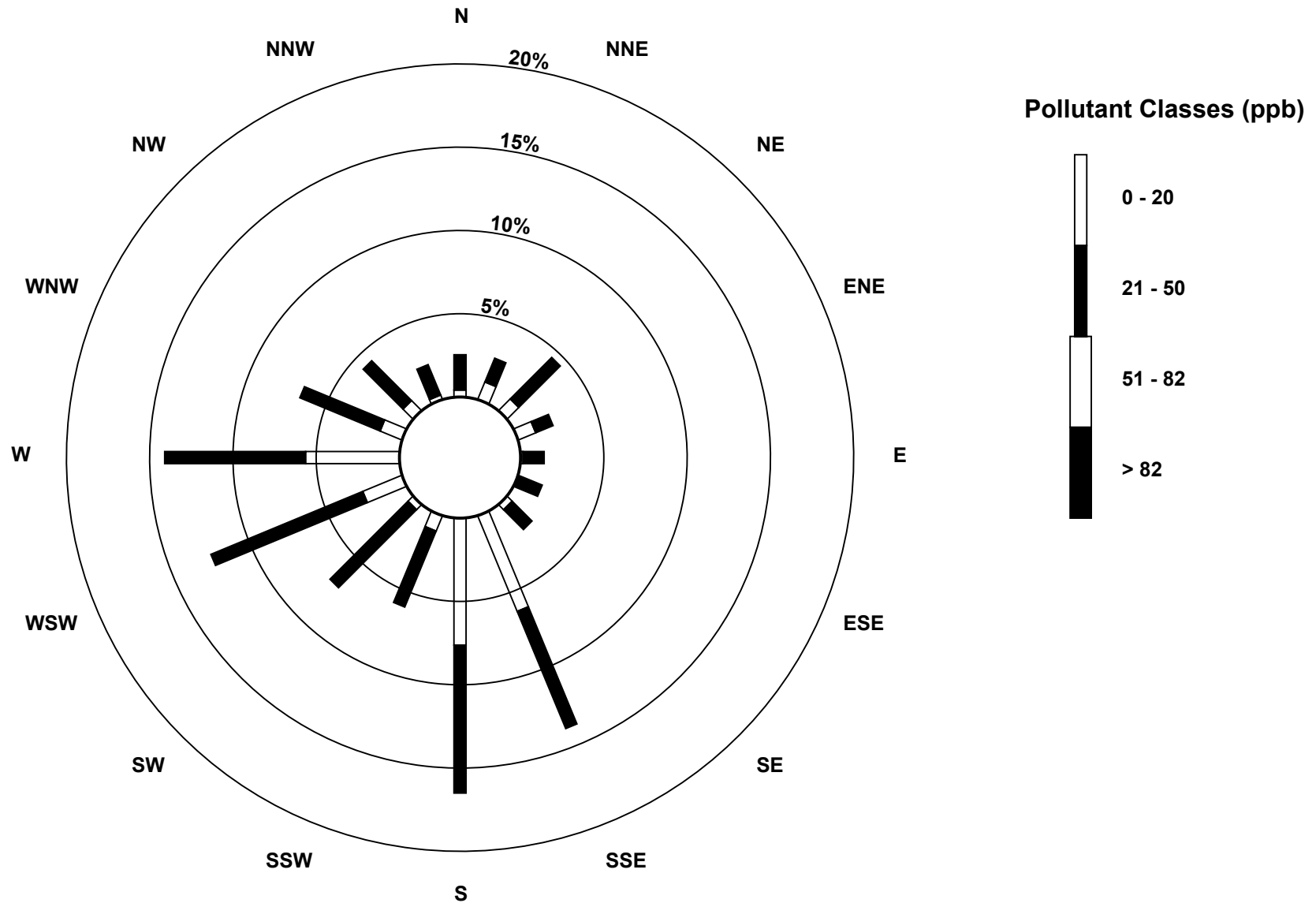
Hourly Maximums

Ozone (O₃) - ppb
Portable Rycroft - July 2018



Pollutant Rose

Ozone (O₃) - ppb
Portable Rycroft - July 2018



Eight Hour Running Averages

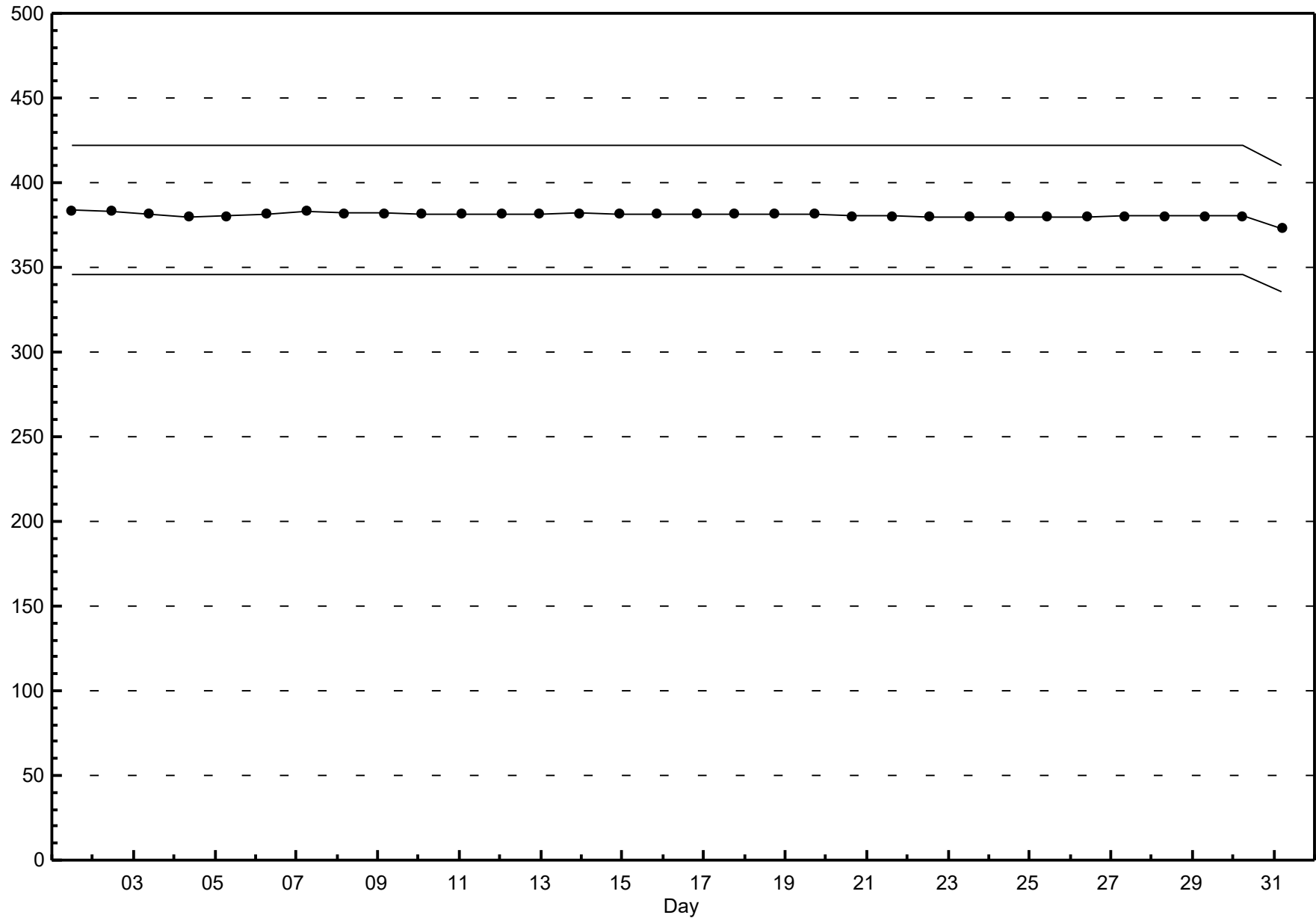
Ozone (O₃) - ppb

Portable Rycroft - July 2018

Maximum Value: 44.4 ppb on Jul 16 18:00																								Hours in Service: 744	
Minimum Value: 7.2 ppb on Jul 31 08:00																								Hours of Data: 737	
																								Hours of Missing Data: 7	
Percentiles: P ₁ = 10.1 P ₁₀ = 16.0 Q ₁ = 20.7 Median = 25.3 Q ₃ = 30.7 P ₉₀ = 36.0 P ₉₉ = 43.5																								Hours of Calibration: 7	
																								Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																							Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Jul	34	32	31	30	29	28	28	27	27	28	28	29	29	31	32	32	31	30	30	29	29	27	27		34.1
2-Jul	26	26	25	24	23	23	22	22	21	21	21	22	22	23	24	25	26	27	27	27	27	26	24		27.5
3-Jul	23	22	21	19	18	18	17	17	17	17	17	18	19	20	20	21	22	22	22	22	21	20	19	17	23.0
4-Jul	15	14	12	11	10	9	10	11	12	14	18	21	25	29	32	35	36	37	38	38	38	38	37	34	38.4
5-Jul	32	28	25	22	20	17	15	14	16	19	21	24	27	32	36	36	37	38	40	40	40	40	38	36	39.9
6-Jul	33	30	26	23	21	17	16	15	15	16	18	21	24	27	28	31	34	36	38	38	38	37	36	36	38.3
7-Jul	34	32	30	29	28	27	26	25	23	22	21	22	22	22	23	24	25	26	27	27	26	25	23	21	34.1
8-Jul	20	19	18	16	15	15	15	15	15	17	19	21	23	25	27	29	31	31	31	30	29	28	27	25	31.3
9-Jul	23	22	20	20	19	19	19	19	20	21	22	23	25	27	30	32	33	34	35	34	33	31	28	26	34.9
10-Jul	23	21	19	18	17	17	17	17	18	19	21	23	25	27	28	30	32	32	33	33	32	30	28	26	32.8
11-Jul	25	23	22	21	21	22	23	23	24	25	26	27	28	29	31	32	32	32	32	33	32	32	31	30	32.5
12-Jul	29	29	28	27	26	25	24	25	25	25	26	28	29	31	33	35	36	37	37	36	34	33	31	30	37.3
13-Jul	28	26	25	25	25	25	25	25	24	25	25	26	26	27	29	30	31	31	31	31	31	29	28	26	31.4
14-Jul	24	22	21	21	21	22	23	23	24	25	25	26	26	27	28	29	30	30	31	31	30	30	28	26	30.8
15-Jul	23	21	20	18	18	18	18	19	20	22	24	25	28	30	33	36	39	40	40	39	40	39	35	32	39.8
16-Jul	30	28	27	26	26	25	26	27	28	30	31	34	36	39	42	43	44	44	44	44	43	41	38	36	44.4
17-Jul	34	32	30	29	27	26	25	24	24	25	26	28	31	33	35	36	36	36	36	35	34	33	32	31	36.2
18-Jul	29	27	27	26	25	23	22	21	22	24	26	27	29	32	34	36	36	36	34	33	32	31	27	24	35.8
19-Jul	22	21	18	15	13	11	11	11	13	15	17	20	23	25	28	30	30	30	29	29	27	25	22	21	30.3
20-Jul	21	20	19	18	17	17	18	18	18	19	19	20	21	22	24	25	26	29	31	32	31	30	28	27	31.7
21-Jul	26	25	24	26	28	30	32	34	36	36	35	33	31	30	30	28	25	23	23	23	22	21	20	18	36.2
22-Jul	17	17	16	15	15	15	15	15	16	16	16	16	17	17	19	20	21	21	22	22	21	21	20	19	21.8
23-Jul	18	17	17	16	15	14	13	13	12	12	13	14	15	16	19	21	22	23	24	24	24	24	23	22	24.4
24-Jul	20	19	18	16	14	13	12	12	12	13	15	16	19	21	24	26	29	31	32	32	31	30	29	28	31.6
25-Jul	26	23	21	19	17	16	15	15	15	16	16	18	21	24	27	30	32	34	33	33	32	30	29	27	34.1
26-Jul	25	23	21	20	19	17	15	15	16	16	19	22	26	31	37	41	44	43	43	43	42	39	36	33	43.7
27-Jul	31	29	27	26	24	23	22	22	22	24	26	28	32	35	38	41	42	42	42	42	40	39	37	35	42.5
28-Jul	33	32	30	28	27	26	25	24	24	24	25	28	31	34	38	39	42	43	44	44	43	42	40	38	44.2
29-Jul	37	36	34	32	30	28	27	25	23	22	22	23	24	26	26	27	29	29	29	28	26	24	22	22	36.8
30-Jul	23	24	24	25	25	27	28	27	25	23	23	24	N	N	N	N	N	N	N	24	24	23	22	21	27.6
31-Jul	19	17	15	12	11	9	8	7	8	9	11	13	14	16	18	20	21	22	21	21	20	19	18	17	21.7
Diurnal Maximums																									
N - Not Valid																									

Span Responses

Ozone (O₃)
Portable Rycroft - July 2018



Hourly Averages

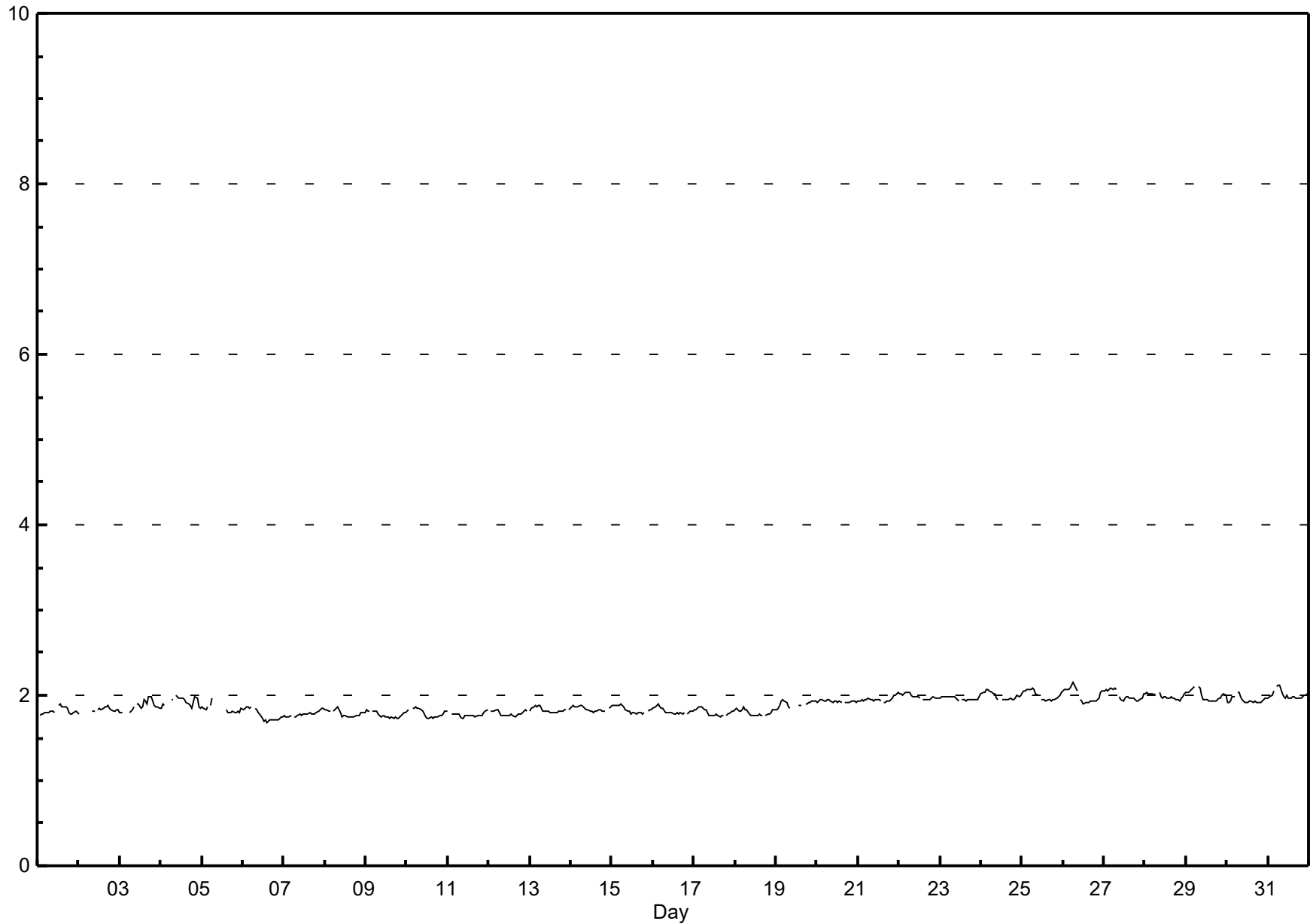
Total Hydrocarbons (THC) - ppm

Portable Rycroft - July 2018

Maximum Value: 2.15 ppm on Jul 26 07:00																					Maximum Daily Average: 2.00 ppm on Jul 31										Hours in Service: 744	
Minimum Value: 1.7 ppm on Jul 6 15:00																					Minimum Daily Average: 1.77 ppm on Jul 6										Hours of Data: 690	
Maximum Diurnal Average: 1.93 ppm at hour 6																					Minimum Diurnal Average: 1.85 ppm at hour 16										Hours of Missing Data: 54	
Monthly Average: 1.882 ppm																					Percentiles: P ₁ = 1.71 P ₁₀ = 1.76 Q ₁ = 1.80 Median = 1.87 Q ₃ = 1.96 P ₉₀ = 2.01 P ₉₉ = 2.09										Hours of Calibration: 40	
																					Percent Operational Time: 98.1											
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	N	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.82	1.90						
2-Jul	1.8	N	N	N	1.8	N	1.8	N	1.8	1.8	A	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.83	1.88						
3-Jul	1.8	1.8	N	N	1.8	N	1.8	1.8	1.9	A	1.9	1.9	1.8	1.9	2.0	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.87	1.98						
4-Jul	1.8	1.9	1.9	N	N	N	1.9	2.0	A	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.9	2.0	2.0	1.9	1.9	1.92	1.99						
5-Jul	1.9	1.8	1.8	1.9	N	1.9	2.0	A	2.0	N	C	C	C	C	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	--	1.98						
6-Jul	1.8	1.8	1.9	1.9	1.8	1.9	A	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.77	1.87						
7-Jul	1.8	1.7	1.7	1.7	1.8	A	1.8	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.78	1.85						
8-Jul	1.8	1.8	1.8	1.8	A	1.8	1.8	1.9	1.8	1.8	1.7	1.8	1.8	1.7	1.8	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.79	1.86						
9-Jul	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.7	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.77	1.83						
10-Jul	1.8	1.8	A	1.9	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.79	1.87						
11-Jul	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.77	1.82						
12-Jul	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.79	1.83						
13-Jul	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.83	1.88						
14-Jul	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.9	1.84	1.88						
15-Jul	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.83	1.91						
16-Jul	1.8	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.82	1.89						
17-Jul	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.80	1.86						
18-Jul	1.8	1.9	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.80	1.86						
19-Jul	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	C	C	C	C	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						
20-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	1.93	1.95						
21-Jul	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	2.0	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.95	2.04						
22-Jul	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.99	2.04						
23-Jul	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	1.96	1.99						
24-Jul	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	1.9	1.9	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	1.99	2.06						
25-Jul	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	A	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.00	2.09						
26-Jul	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.00	2.15						
27-Jul	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.0	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	2.0	2.00	2.09						
28-Jul	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	1.99	2.04						
29-Jul	2.0	2.0	2.1	2.1	2.1	2.1	A	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.00	2.10						
30-Jul	1.9	1.9	1.9	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	2.0	2.0	1.94	2.03						
31-Jul	2.0	2.0	2.0	2.1	A	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.00	2.13						
1.90 1.91 1.91 1.92 1.91 1.93 1.92 1.91 1.89 1.87 1.86 1.86 1.85 1.86 1.86 1.85 1.85 1.86 1.86 1.86 1.87 1.88 1.89 1.90																									Diurnal Average							
2.06 2.07 2.07 2.08 2.08 2.12 2.15 2.13 2.08 2.00 1.98 1.99 1.98 1.98 1.99 1.99 1.97 1.98 1.98 1.97 1.98 2.00 2.03 2.04																									Diurnal Maximum							
C - Calibration N - Not Valid A - Automated Daily Zero Span																																

Hourly Averages

Total Hydrocarbons (THC) - ppm
Portable Rycroft - July 2018



Hourly Maximums

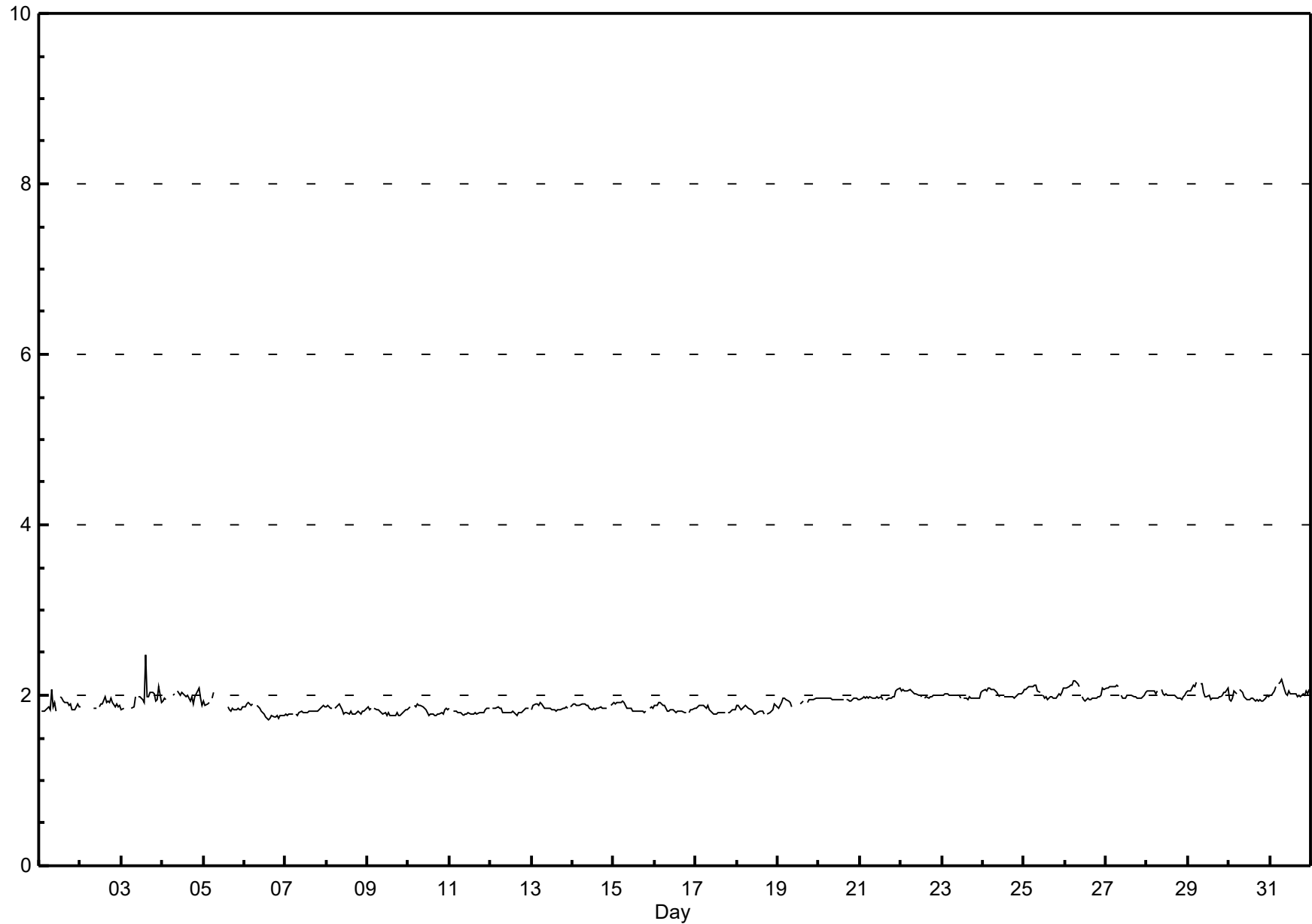
Total Hydrocarbons (THC) - ppm

Portable Rycroft - July 2018

Maximum Value: 2.47 ppm on Jul 3 15:00																					Maximum Daily Average: 2.04 ppm on Jul 31										Hours in Service: 744	
Minimum Value: 1.7 ppm on Jul 6 15:00																					Minimum Daily Average: 1.80 ppm on Jul 11										Hours of Data: 690	
Maximum Diurnal Average: 1.96 ppm at hour 6																					Minimum Diurnal Average: 1.89 ppm at hour 17										Hours of Missing Data: 54	
Monthly Average: 1.917 ppm																					Percentiles: P ₁ = 1.76 P ₁₀ = 1.79 Q ₁ = 1.83 Median = 1.91 Q ₃ = 1.99 P ₉₀ = 2.05 P ₉₉ = 2.14										Hours of Calibration: 40	
																					Percent Operational Time: 98.1											
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	N	1.8	1.8	1.8	1.8	1.9	1.8	2.1	1.9	1.9	1.8	A	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.88	2.07						
2-Jul	1.9	N	N	N	1.8	N	1.9	N	1.8	1.9	A	1.9	1.9	1.9	2.0	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.89	1.98						
3-Jul	1.8	1.8	N	N	1.8	N	1.8	1.9	2.0	A	2.0	2.0	1.9	1.9	2.5	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.1	1.9	1.97	2.47						
4-Jul	1.9	2.0	2.0	N	N	N	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	2.0	2.0	2.1	2.0	1.9	1.98	2.08						
5-Jul	1.9	1.9	1.9	1.9	N	2.0	2.0	A	2.1	N	C	C	C	C	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	--	2.11						
6-Jul	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.8	1.7	1.7	1.8	1.7	1.8	1.8	1.8	1.81	1.92						
7-Jul	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.81	1.88						
8-Jul	1.9	1.9	1.8	1.8	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	1.8	1.8	1.8	1.8	1.8	1.82	1.89						
9-Jul	1.9	1.8	1.9	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.80	1.86						
10-Jul	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.82	1.90						
11-Jul	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.80	1.85						
12-Jul	A	1.9	1.8	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.8	A	1.82	1.86						
13-Jul	1.8	1.9	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	1.8	1.8	1.8	1.8	1.8	1.9	1.9	A	1.9	1.85	1.91						
14-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	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.9	1.9	A	1.9	1.9	1.87	1.90						
15-Jul	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.9	1.9	1.9	1.86	1.93						
16-Jul	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.84	1.91						
17-Jul	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.83	1.89						
18-Jul	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.9	1.9	1.83	1.90						
19-Jul	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	C	C	C	C	1.9	1.9	1.9	A	1.9	2.0	1.9	1.9	1.9	2.0	2.0	1.93	1.97						
20-Jul	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	1.9	A	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.96	1.97						
21-Jul	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	1.98	2.09						
22-Jul	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.01	2.07						
23-Jul	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.99	2.03						
24-Jul	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.02	2.09						
25-Jul	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.03	2.12						
26-Jul	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	A	2.0	2.0	1.9	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.04	2.17						
27-Jul	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.03	2.11						
28-Jul	2.0	2.1	2.0	2.0	2.0	2.0	2.1	A	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.01	2.07						
29-Jul	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.03	2.15						
30-Jul	1.9	1.9	2.0	2.1	2.0	A	2.1	2.1	2.0	2.0	1.9	1.9	1.9	2.0	2.0	1.9	2.0	1.9	2.0	1.9	1.9	2.0	2.0	2.0	1.97	2.07						
31-Jul	2.0	2.0	2.0	2.1	A	2.1	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.04	2.19						
1.93 1.94 1.94 1.96 1.94 1.96 1.95 1.95 1.93 1.91 1.89 1.89 1.89 1.89 1.91 1.89 1.89 1.89 1.89 1.90 1.90 1.92 1.93 1.93																									Diurnal Average							
2.08 2.09 2.10 2.11 2.11 2.17 2.17 2.19 2.14 2.05 2.00 2.05 2.03 2.01 2.47 2.01 2.01 2.03 2.04 2.01 2.02 2.08 2.10 2.09																									Diurnal Maximum							
C - Calibration N - Not Valid A - Automated Daily Zero Span																																

Hourly Maximums

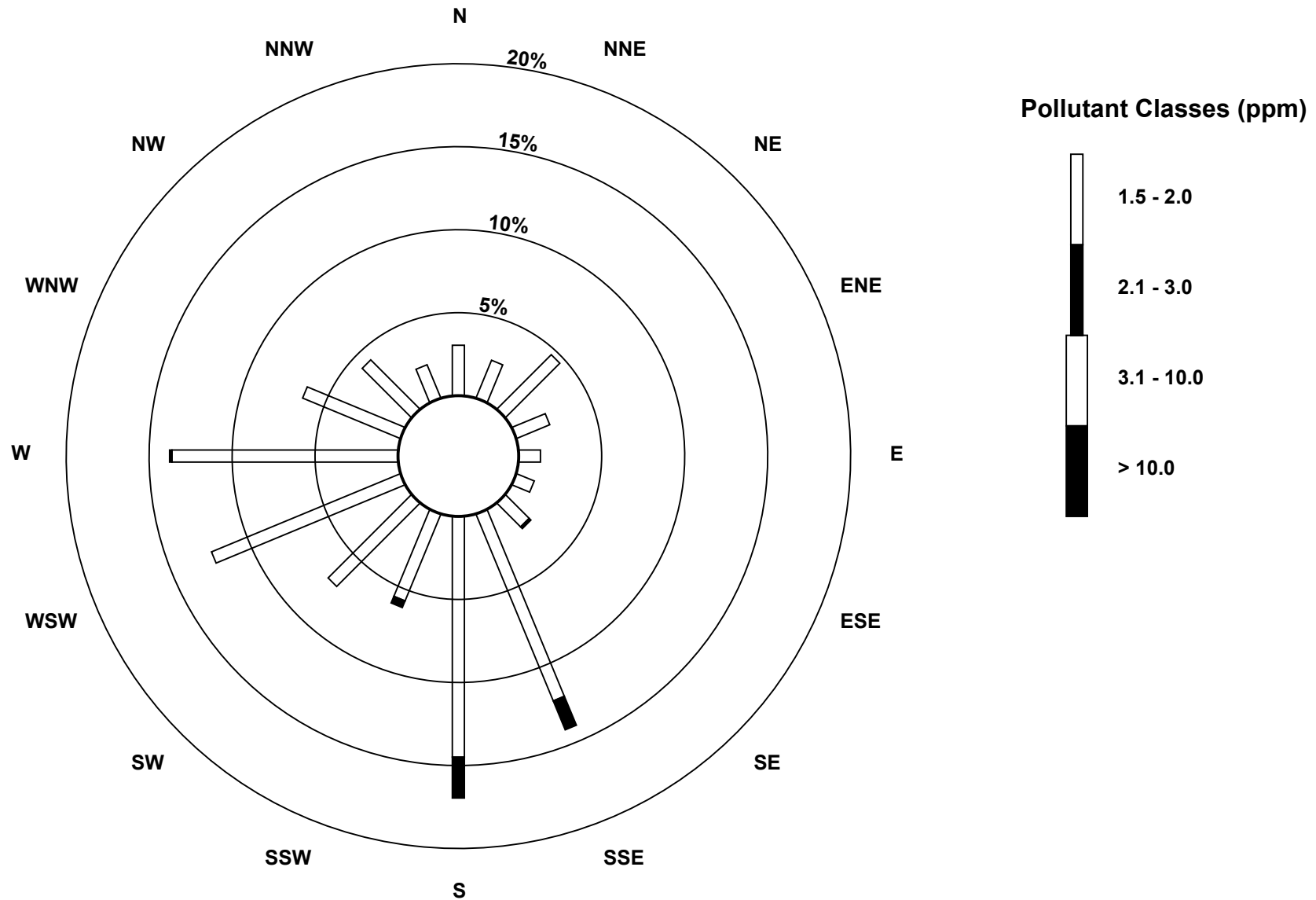
Total Hydrocarbons (THC) - ppm
Portable Rycroft - July 2018



Pollutant Rose

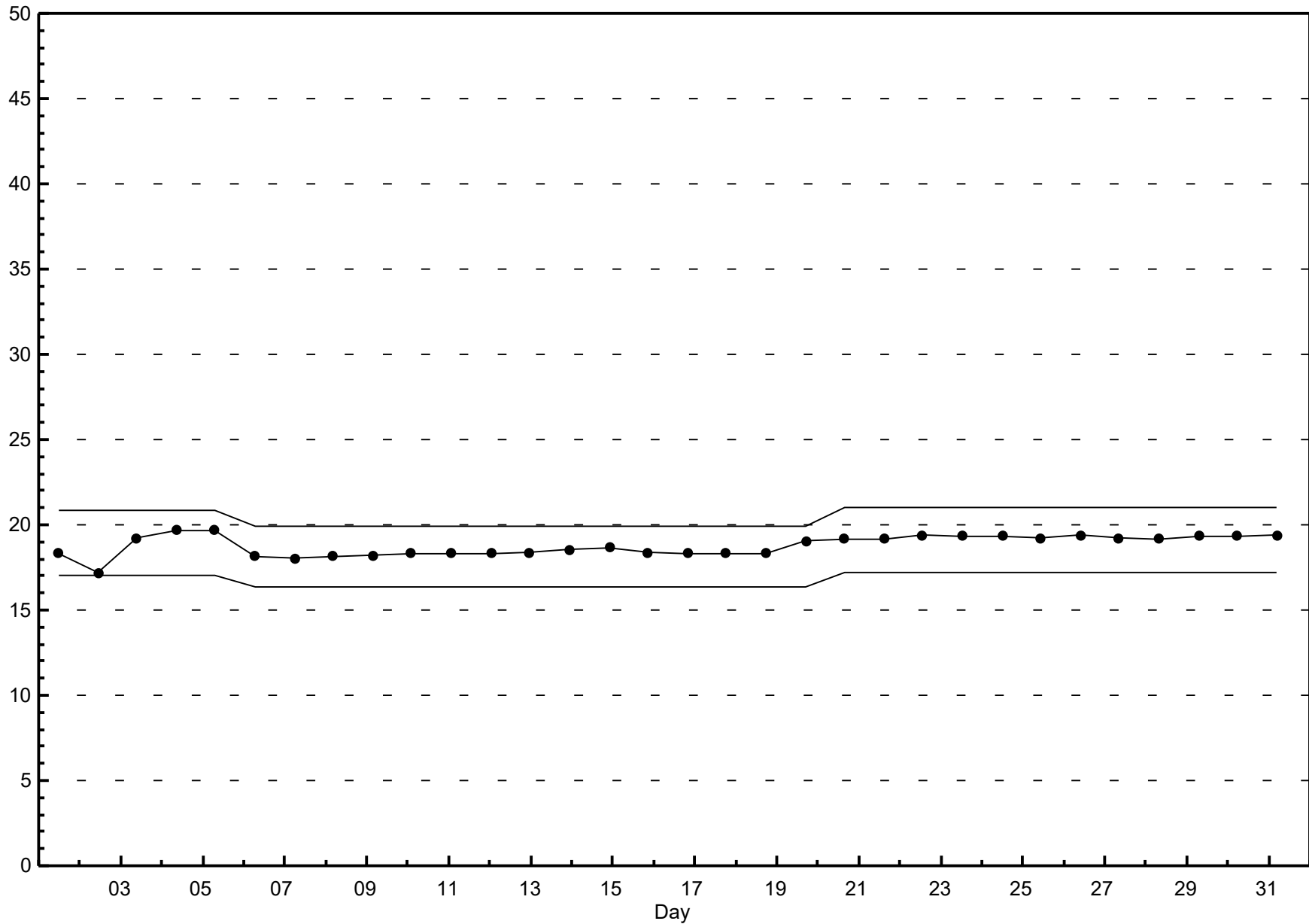
Total Hydrocarbons (THC) - ppm

Portable Rycroft - July 2018



Span Responses

Total Hydrocarbons (THC)
Portable Rycroft - July 2018



Hourly Averages

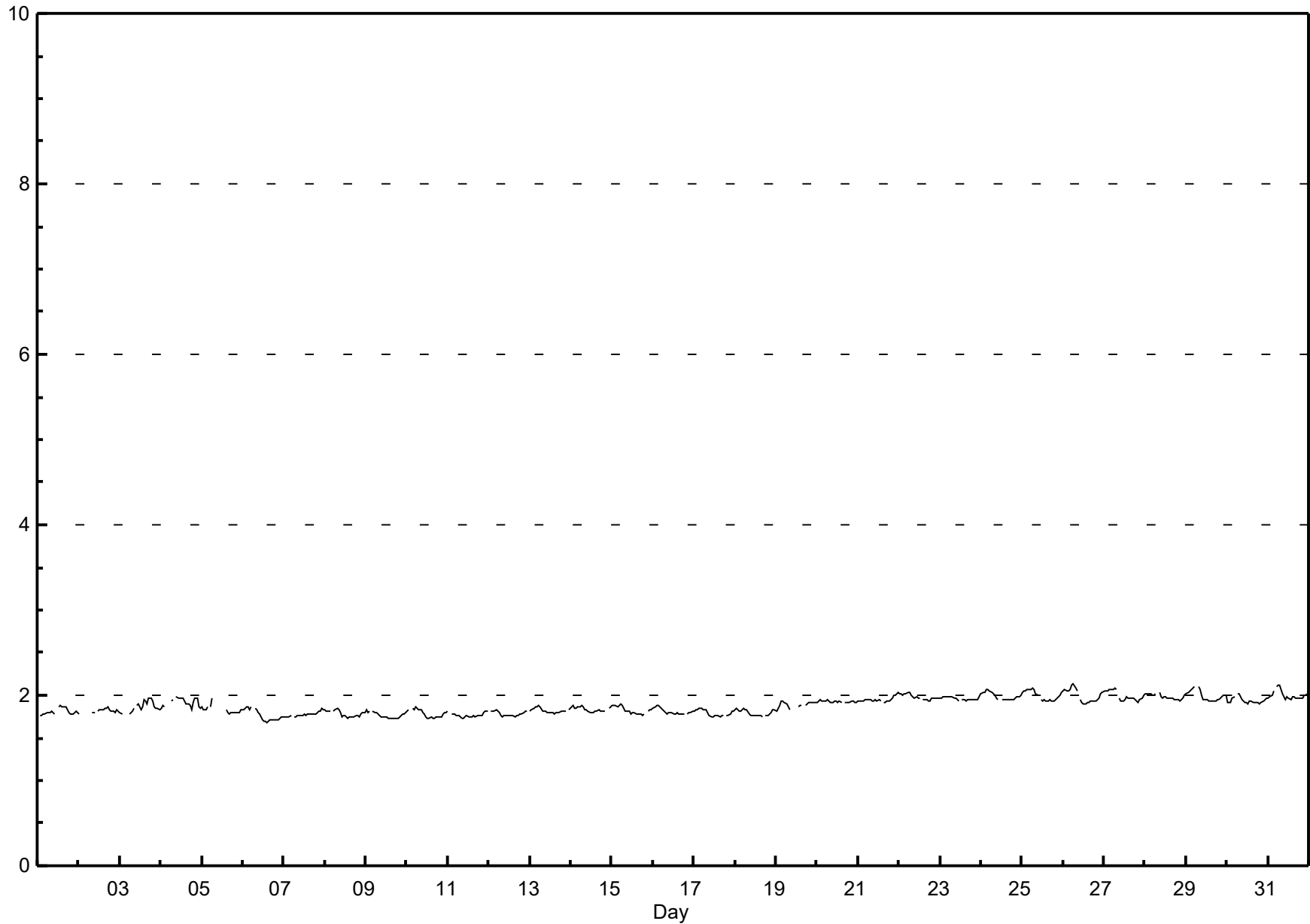
Methane (CH₄) - ppm

Portable Rycroft - July 2018

Maximum Value: 2.14 ppm on Jul 26 07:00																				Maximum Daily Average: 2.00 ppm on Jul 31					Hours in Service: 744	
Minimum Value: 1.7 ppm on Jul 6 15:00																				Minimum Daily Average: 1.76 ppm on Jul 11					Hours of Data: 690	
Maximum Diurnal Average: 1.93 ppm at hour 6																				Minimum Diurnal Average: 1.85 ppm at hour 16					Hours of Missing Data: 54	
Monthly Average: 1.876 ppm																				Percentiles: P ₁ = 1.71 P ₁₀ = 1.76 Q ₁ = 1.79 Median = 1.86 Q ₃ = 1.95 P ₉₀ = 2.00 P ₉₉ = 2.09					Hours of Calibration: 40	
																				Percent Operational Time: 98.1						
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	N	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.81	1.89
2-Jul	1.8	N	N	N	1.8	N	1.8	N	1.8	1.8	A	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.82	1.87
3-Jul	1.8	1.8	N	N	1.8	N	1.8	1.8	1.9	A	1.9	1.9	1.8	1.9	2.0	1.9	1.9	2.0	2.0	1.9	1.9	1.8	1.9	1.8	1.87	1.97
4-Jul	1.8	1.9	1.9	N	N	N	1.9	2.0	A	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.9	2.0	2.0	1.9	1.8	1.92	1.99
5-Jul	1.9	1.8	1.8	1.9	N	1.9	2.0	A	2.0	N	C	C	C	C	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	--	1.97
6-Jul	1.8	1.8	1.9	1.9	1.8	1.9	A	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.76	1.87
7-Jul	1.8	1.7	1.7	1.7	1.8	A	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.77	1.85
8-Jul	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.7	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.78	1.85
9-Jul	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.76	1.82
10-Jul	1.8	1.8	A	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.78	1.86
11-Jul	1.8	A	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.8	1.7	1.8	1.7	1.8	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.76	1.81
12-Jul	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.78	1.83
13-Jul	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.82	1.88
14-Jul	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.9	1.84	1.88
15-Jul	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.83	1.90
16-Jul	1.8	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.81	1.89
17-Jul	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.79	1.85
18-Jul	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.79	1.85
19-Jul	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.8	C	C	C	C	1.9	1.9	1.9	A	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	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.92	1.94
21-Jul	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	2.0	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.95	2.03
22-Jul	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	1.9	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.98	2.03
23-Jul	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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	2.0	1.96	1.99
24-Jul	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	1.9	A	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.0	1.99	2.06
25-Jul	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.00	2.08
26-Jul	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.99	2.14
27-Jul	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	1.99	2.08
28-Jul	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	1.98	2.03
29-Jul	2.0	2.0	2.0	2.1	2.1	2.1	A	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.00	2.10
30-Jul	1.9	1.9	1.9	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	2.0	2.0	1.94	2.02
31-Jul	2.0	2.0	2.0	2.0	A	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.00	2.12
1.89 1.90 1.90 1.92 1.91 1.93 1.91 1.90 1.88 1.87 1.86 1.85 1.85 1.85 1.85 1.85 1.85 1.85 1.86 1.85 1.85 1.86 1.87 1.88 1.89																									Diurnal Average	
2.05 2.07 2.06 2.07 2.08 2.12 2.14 2.12 2.07 2.00 1.98 1.99 1.98 1.98 1.99 1.98 1.97 1.97 1.97 1.97 1.97 2.00 2.02 2.04																									Diurnal Maximum	
C - Calibration N - Not Valid A - Automated Daily Zero Span																										

Hourly Averages

Methane (CH₄) - ppm
Portable Rycroft - July 2018



Hourly Maximums

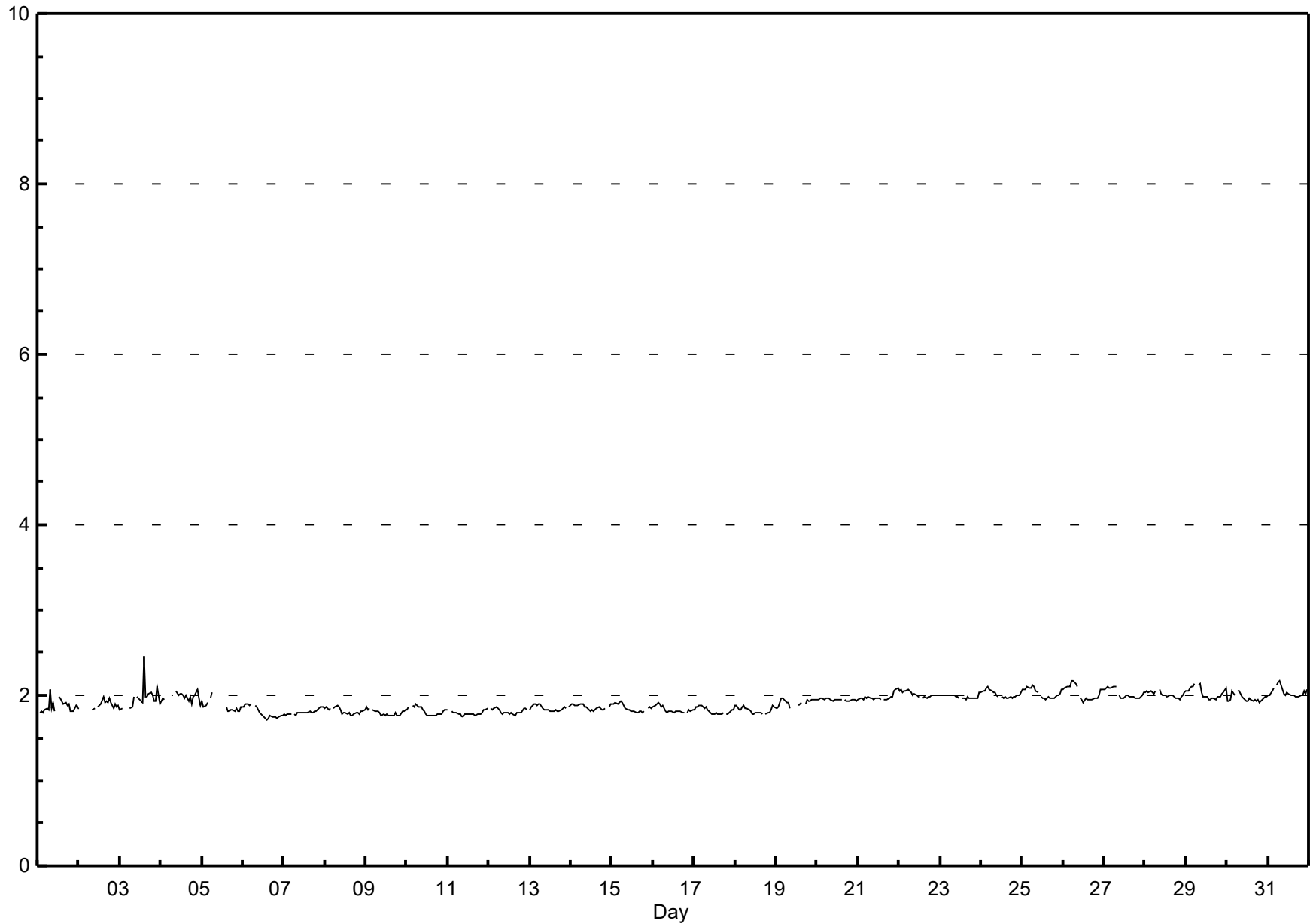
Methane (CH₄) - ppm

Portable Rycroft - July 2018

Maximum Value: 2.46 ppm on Jul 3 15:00																					Maximum Daily Average: 2.03 ppm on Jul 31					Hours in Service: 744	
Minimum Value: 1.7 ppm on Jul 6 15:00																					Minimum Daily Average: 1.79 ppm on Jul 11					Hours of Data: 690	
Maximum Diurnal Average: 1.96 ppm at hour 6																					Minimum Diurnal Average: 1.88 ppm at hour 17					Hours of Missing Data: 54	
Monthly Average: 1.911 ppm																					Percentiles: P ₁ = 1.75 P ₁₀ = 1.79 Q ₁ = 1.82 Median = 1.91 Q ₃ = 1.98 P ₉₀ = 2.05 P ₉₉ = 2.14					Hours of Calibration: 40	
																					Percent Operational Time: 98.1						
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	N	1.8	1.8	1.8	1.8	1.9	1.8	2.1	1.9	1.9	1.8	A	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.87	2.07	
2-Jul	1.9	N	N	N	1.8	N	1.9	N	1.8	1.8	A	1.9	1.9	1.9	2.0	1.9	1.9	1.9	2.0	1.9	1.8	1.9	1.9	1.9	1.89	1.98	
3-Jul	1.8	1.8	N	N	1.8	N	1.8	1.9	2.0	A	2.0	2.0	1.9	1.9	2.5	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.1	1.9	1.97	2.46	
4-Jul	1.9	2.0	1.9	N	N	N	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	2.0	2.0	2.1	2.0	1.9	1.98	2.07	
5-Jul	1.9	1.9	1.9	1.9	N	2.0	2.0	A	2.1	N	C	C	C	C	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	--	2.10	
6-Jul	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.8	1.7	1.7	1.8	1.7	1.8	1.8	1.8	1.80	1.90	
7-Jul	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.80	1.87	
8-Jul	1.9	1.9	1.8	1.8	A	1.8	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.82	1.88	
9-Jul	1.9	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.80	1.86	
10-Jul	1.8	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.82	1.90	
11-Jul	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.79	1.84	
12-Jul	A	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.81	1.86	
13-Jul	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	A	1.9	1.85	1.91	
14-Jul	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	A	1.9	1.9	1.86	1.90	
15-Jul	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.9	1.9	1.9	1.85	1.93	
16-Jul	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.83	1.91	
17-Jul	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.82	1.88	
18-Jul	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.9	1.9	1.83	1.89	
19-Jul	1.8	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	C	C	C	C	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.92	1.97	
20-Jul	1.9	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	1.9	A	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.95	1.97	
21-Jul	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	A	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.1	1.98	2.09	
22-Jul	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.01	2.07	
23-Jul	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.98	2.03	
24-Jul	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.01	2.09	
25-Jul	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.03	2.12	
26-Jul	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	A	2.0	1.9	1.9	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.03	2.17	
27-Jul	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.02	2.11	
28-Jul	2.0	2.1	2.0	2.0	2.0	2.0	2.1	A	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.01	2.06	
29-Jul	2.1	2.0	2.1	2.1	2.1	2.1	A	2.1	2.1	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.03	2.14	
30-Jul	1.9	1.9	2.0	2.0	2.0	A	2.1	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.97	2.06	
31-Jul	2.0	2.0	2.0	2.1	A	2.1	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.03	2.17	
1.93 1.93 1.94 1.95 1.94 1.96 1.95 1.95 1.92 1.90 1.89 1.89 1.89 1.88 1.90 1.88 1.88 1.89 1.89 1.89 1.89 1.91 1.92 1.93																									Diurnal Average		
2.07 2.09 2.10 2.10 2.11 2.17 2.17 2.17 2.14 2.04 2.00 2.03 2.02 2.00 2.46 2.00 2.00 2.02 2.03 2.01 2.01 2.07 2.10 2.09																									Diurnal Maximum		
C - Calibration N - Not Valid A - Automated Daily Zero Span																											

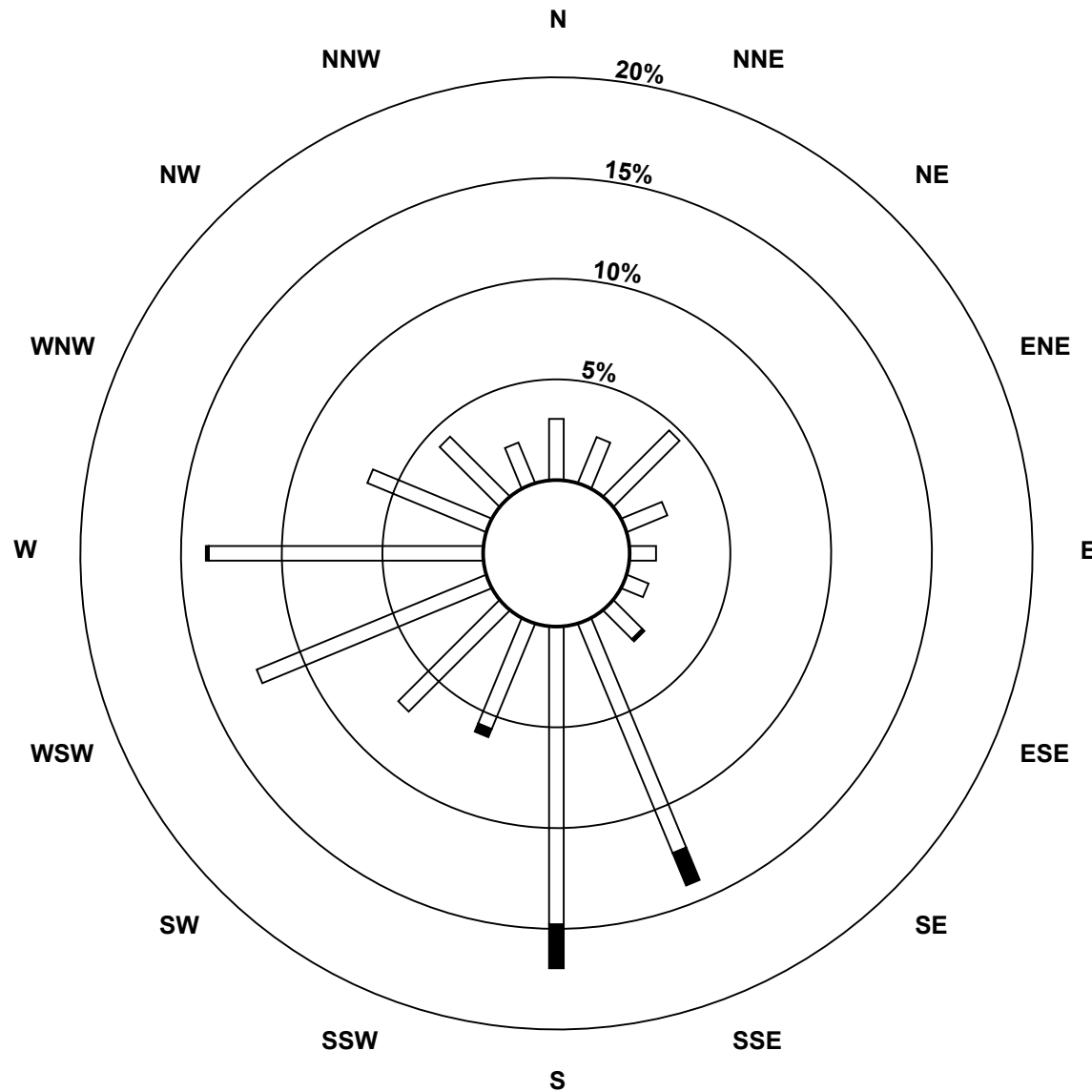
Hourly Maximums

Methane (CH₄) - ppm
Portable Rycroft - July 2018

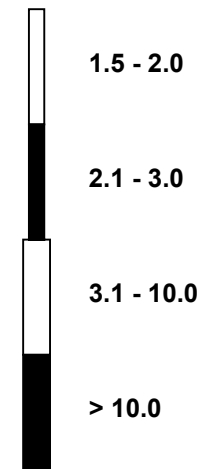


Pollutant Rose

Methane (CH₄) - ppm
Portable Rycroft - July 2018

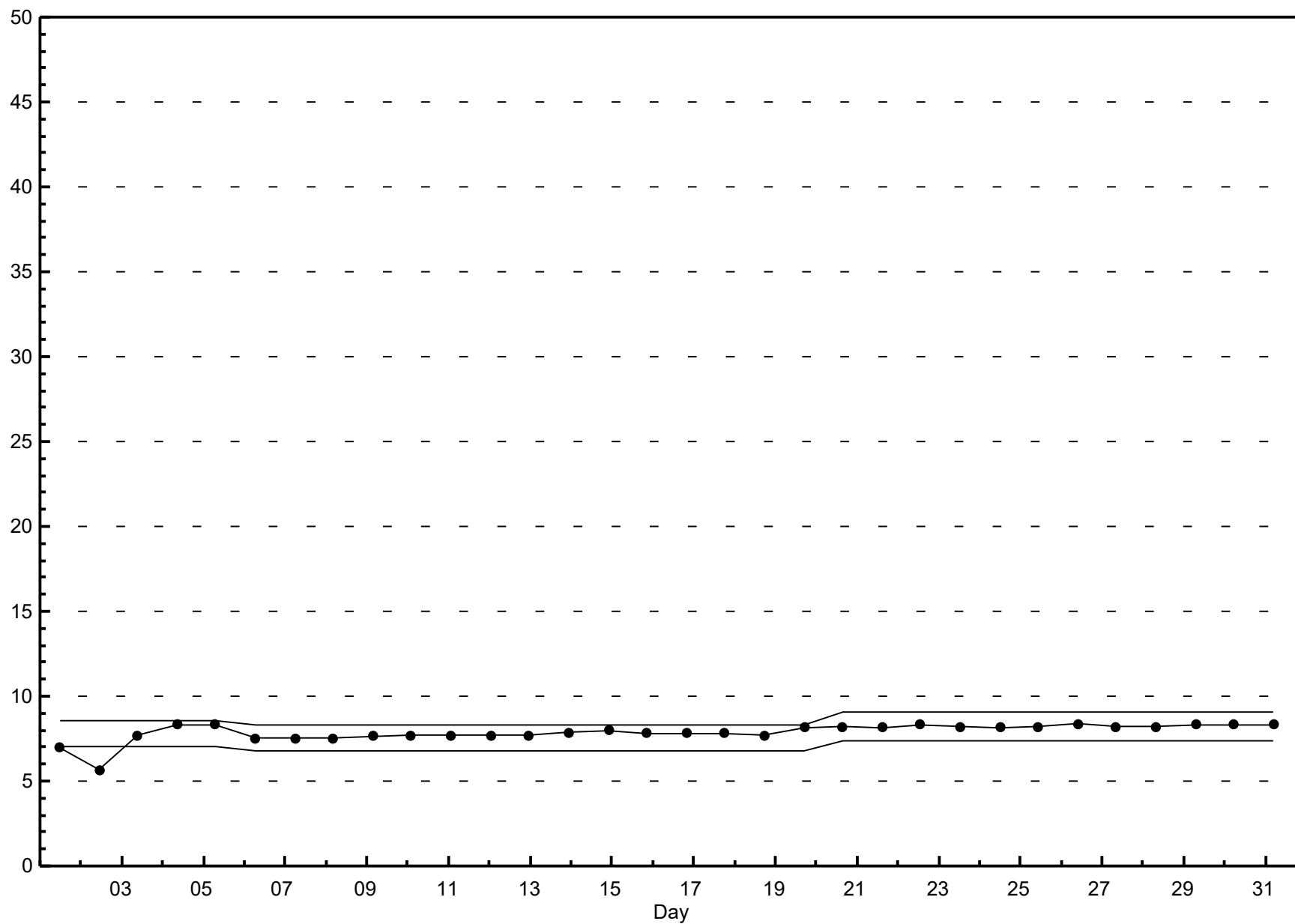


Pollutant Classes (ppm)



Span Responses

Methane (CH₄)
Portable Rycroft - July 2018

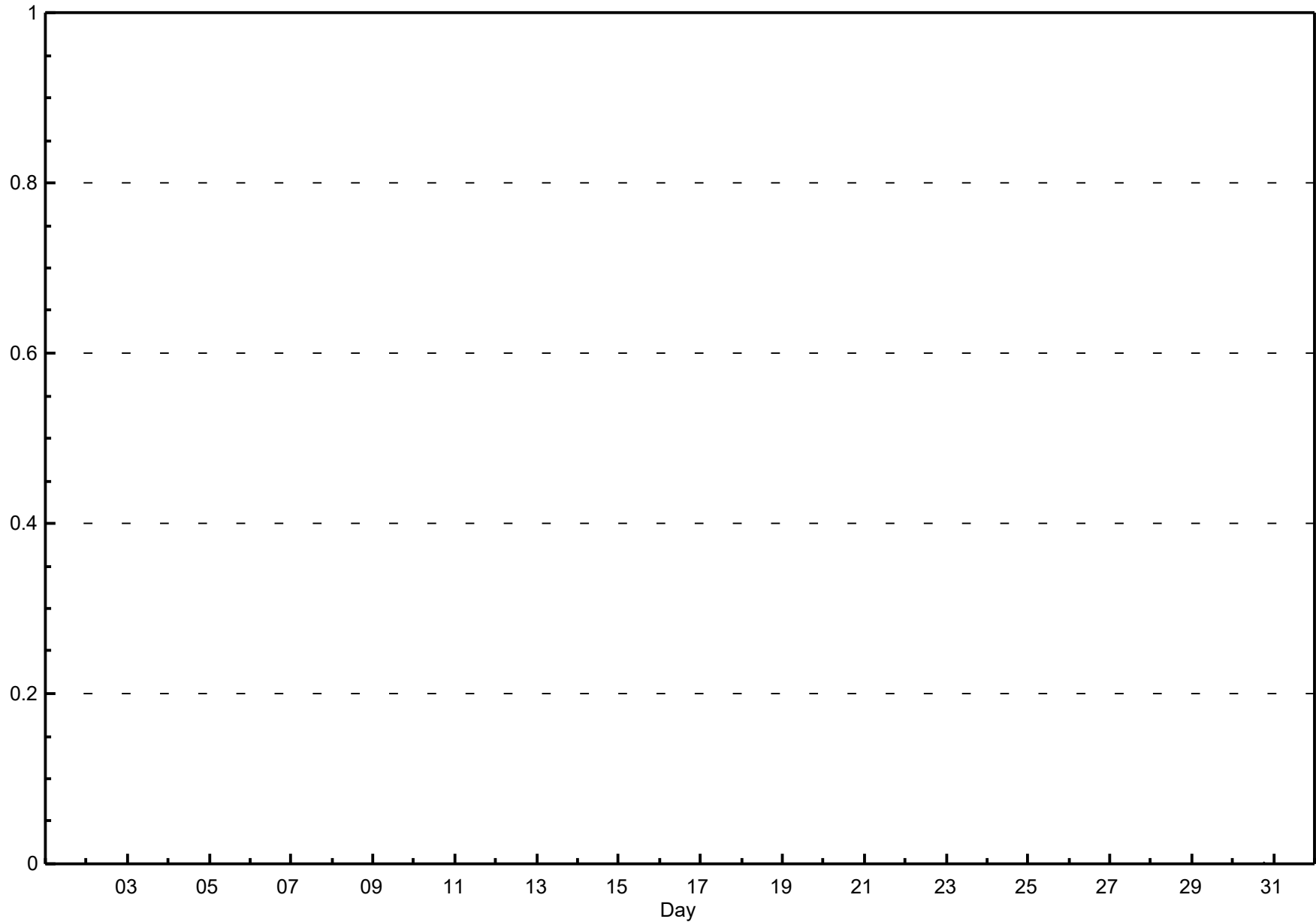


Hourly Averages

Non Methane Hydrocarbon (NMHC) - ppm

Portable Rycroft - July 2018

Maximum Value: 0.00 ppm on Jul 30 19:00																					Maximum Daily Average: 0.00 ppm on Jul 23					Hours in Service: 744	
Minimum Value: 0.0 ppm on Jul 1 01:00																					Minimum Daily Average: 0.00 ppm on Jul 3					Hours of Data: 704	
Maximum Diurnal Average: 0.00 ppm at hour 19																					Minimum Diurnal Average: 0.00 ppm at hour 12					Hours of Missing Data: 40	
Monthly Average: 0.000 ppm																					Percentiles: P ₁ = 0.00 P ₁₀ = 0.00 Q ₁ = 0.00 Median = 0.00 Q ₃ = 0.00 P ₉₀ = 0.00 P ₉₉ = 0.00					Hours of Calibration: 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	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	
2-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	
3-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	
4-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	
5-Jul	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.00	0.00	
6-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	
7-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	
8-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	
9-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	
10-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	
11-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	
12-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	A	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	0.0	0.0	A	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	0.0	0.0	0.0	A	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	0.0	0.0	0.0	A	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	0.0	0.0	0.0	A	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	0.0	0.0	0.0	A	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	0.0	0.0	0.0	A	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	C	C	C	C	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	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	
21-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	0.00	
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	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	
23-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	
24-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	
25-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	
26-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	
27-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	
28-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	
29-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	
30-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	
31-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	
0.00 0.00																								Diurnal Average			
0.00 0.00																								Diurnal Maximum			
C - Calibration A - Automated Daily Zero Span																											



Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

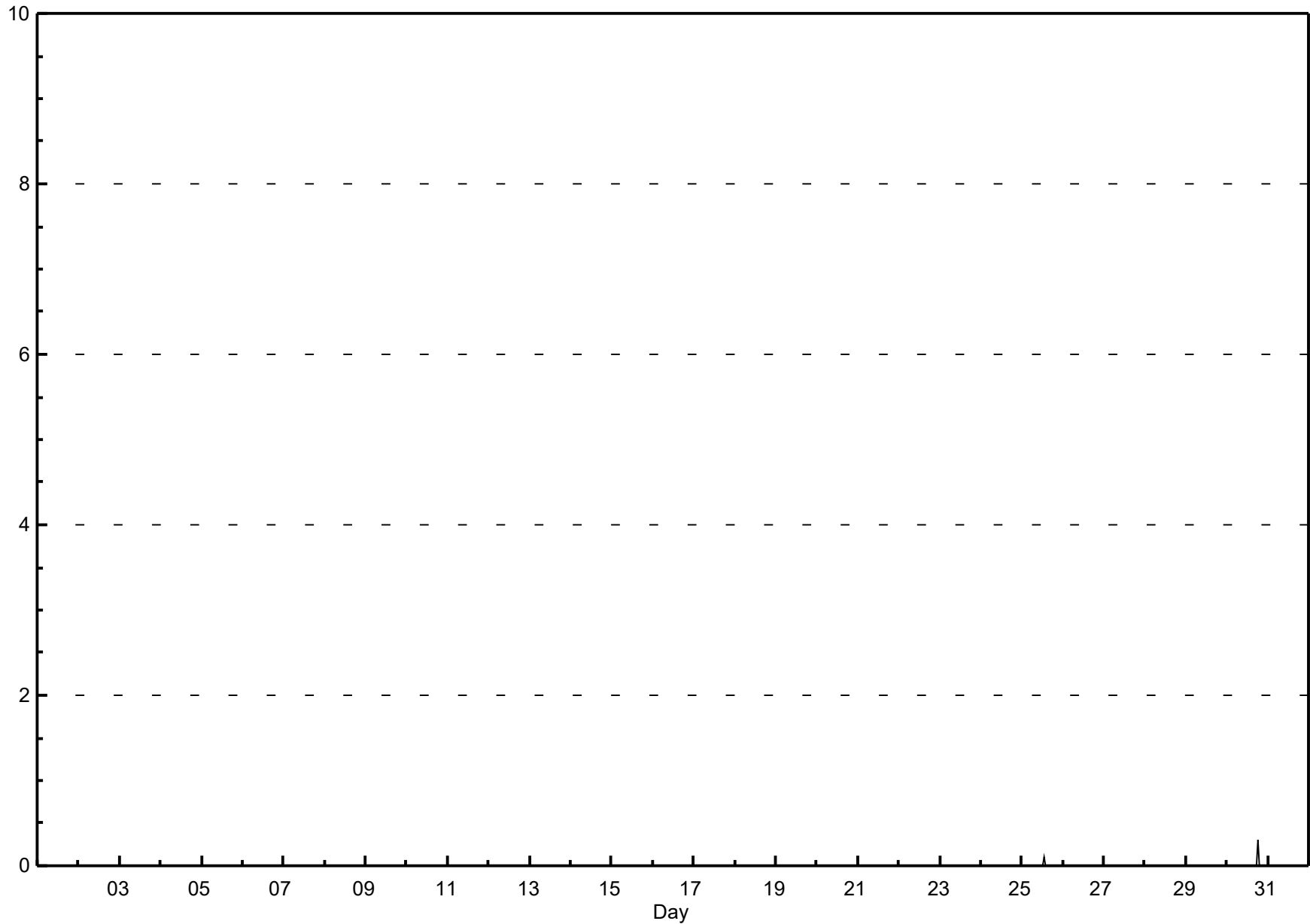
Portable Rycroft - July 2018

Maximum Value: 0.30 ppm on Jul 30 19:00																					Maximum Daily Average: 0.01 ppm on Jul 30					Hours in Service: 744	
Minimum Value: 0.0 ppm on Jul 1 13:00																					Minimum Daily Average: 0.00 ppm on Jul 1					Hours of Data: 704	
Maximum Diurnal Average: 0.01 ppm at hour 19																					Minimum Diurnal Average: 0.00 ppm at hour 13					Hours of Missing Data: 40	
Monthly Average: 0.001 ppm																					Percentiles: P ₁ = 0.00 P ₁₀ = 0.00 Q ₁ = 0.00 Median = 0.00 Q ₃ = 0.00 P ₉₀ = 0.00 P ₉₉ = 0.00					Hours of Calibration: 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	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	
2-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	
3-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	
4-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	
5-Jul	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.00	0.00	
6-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	
7-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	
8-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	
9-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	
10-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	
11-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	
12-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	A	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	0.0	0.0	A	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	0.0	0.0	0.0	A	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	0.0	0.0	0.0	A	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	0.0	0.0	0.0	A	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	0.0	0.0	0.0	A	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	0.0	0.0	0.0	A	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	C	C	C	C	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	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	
21-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	
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	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	
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	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	
24-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	
25-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	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.11	
26-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	
27-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	
28-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	
29-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	
30-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	0.3	0.0	0.0	0.0	0.0	0.0	0.01	0.30	
31-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	
0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.01 0.00 0.00 0.00 0.00 0.00																									Diurnal Average		
0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.11 0.00 0.00 0.00 0.00 0.00 0.30 0.00 0.00 0.00 0.00 0.00																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											

Hourly Maximums

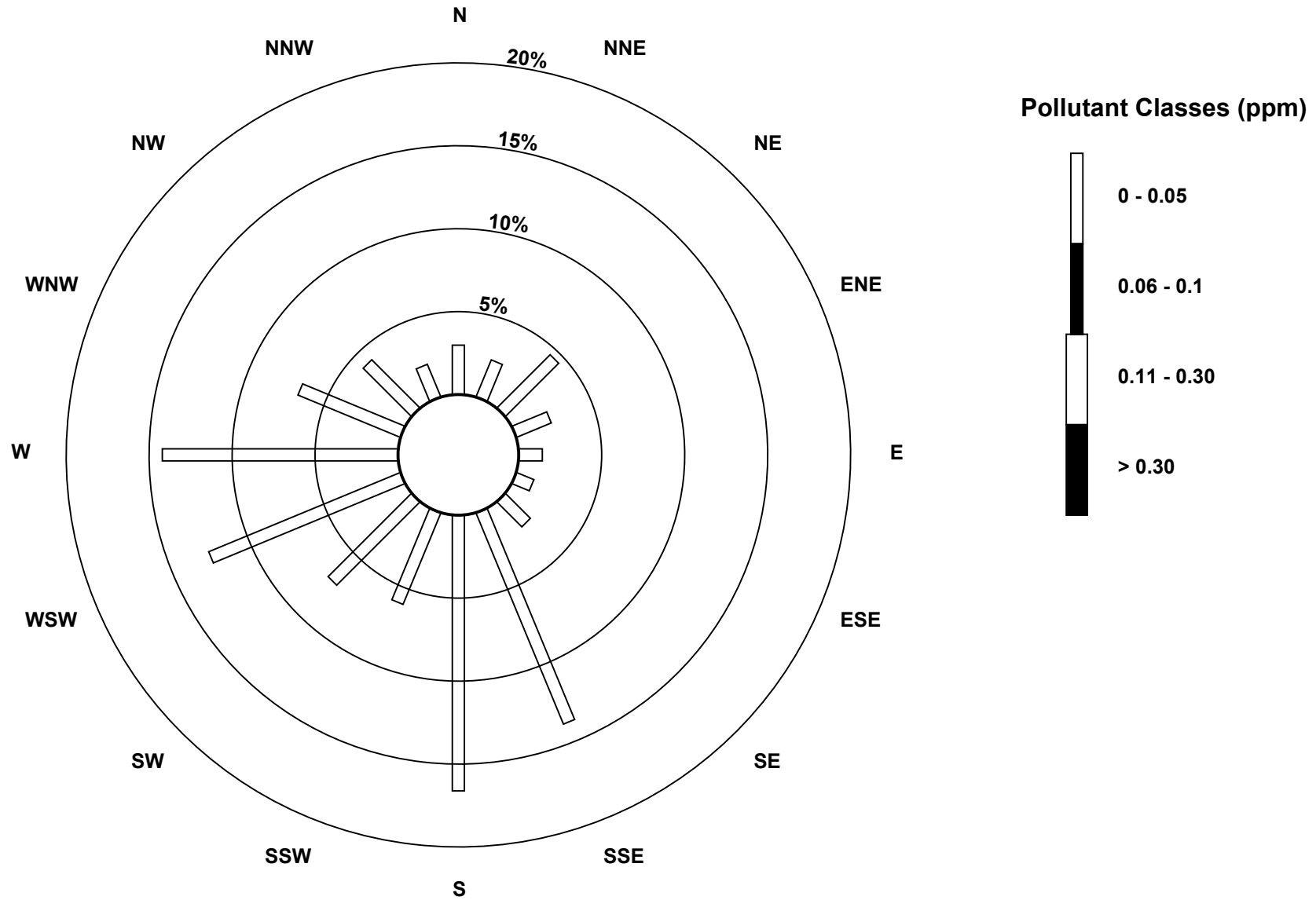
Non Methane Hydrocarbon (NMHC) - ppm

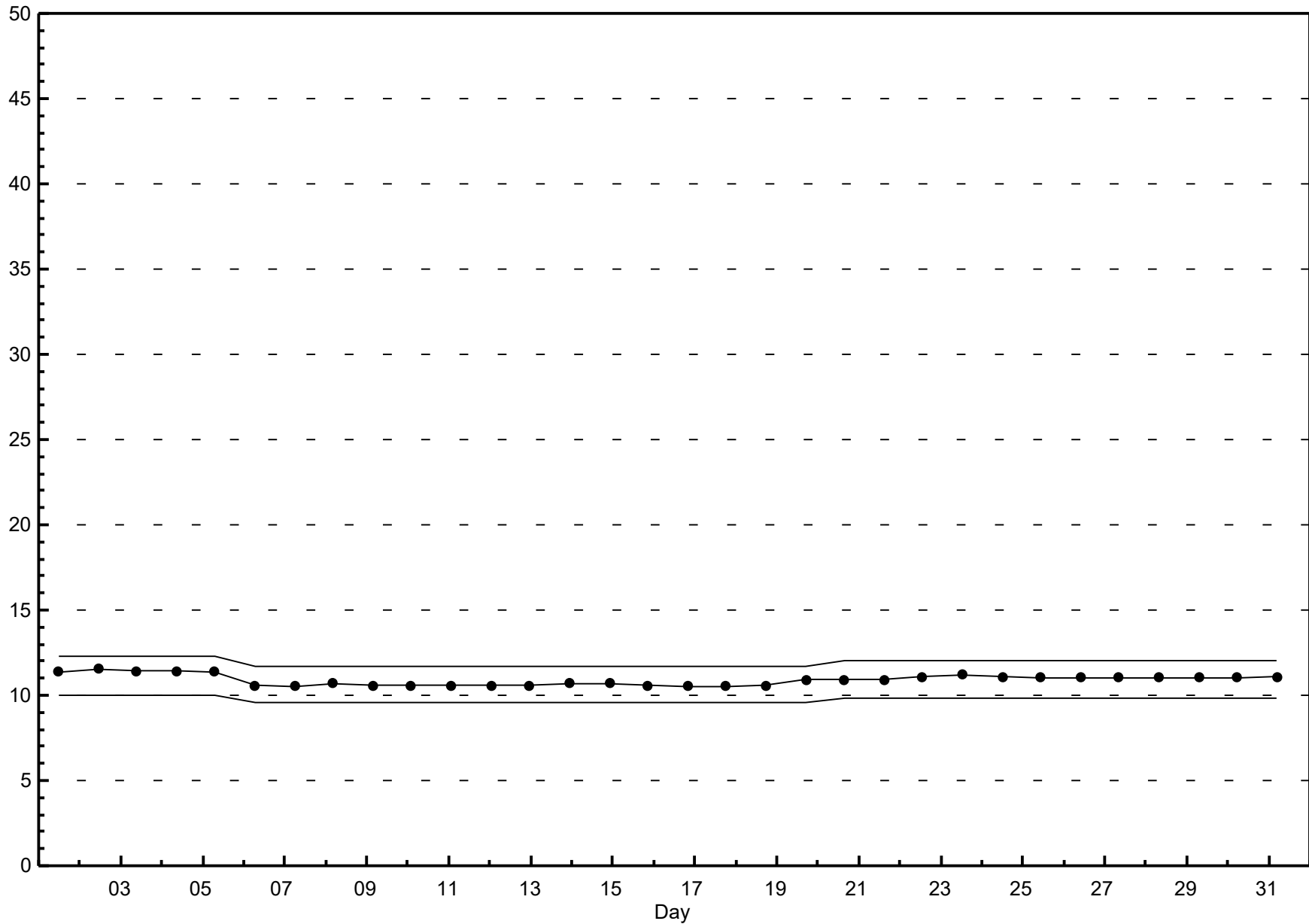
Portable Rycroft - July 2018



Pollutant Rose

Non Methane Hydrocarbon (NMHC) - ppm
Portable Rycroft - July 2018





Hourly Averages

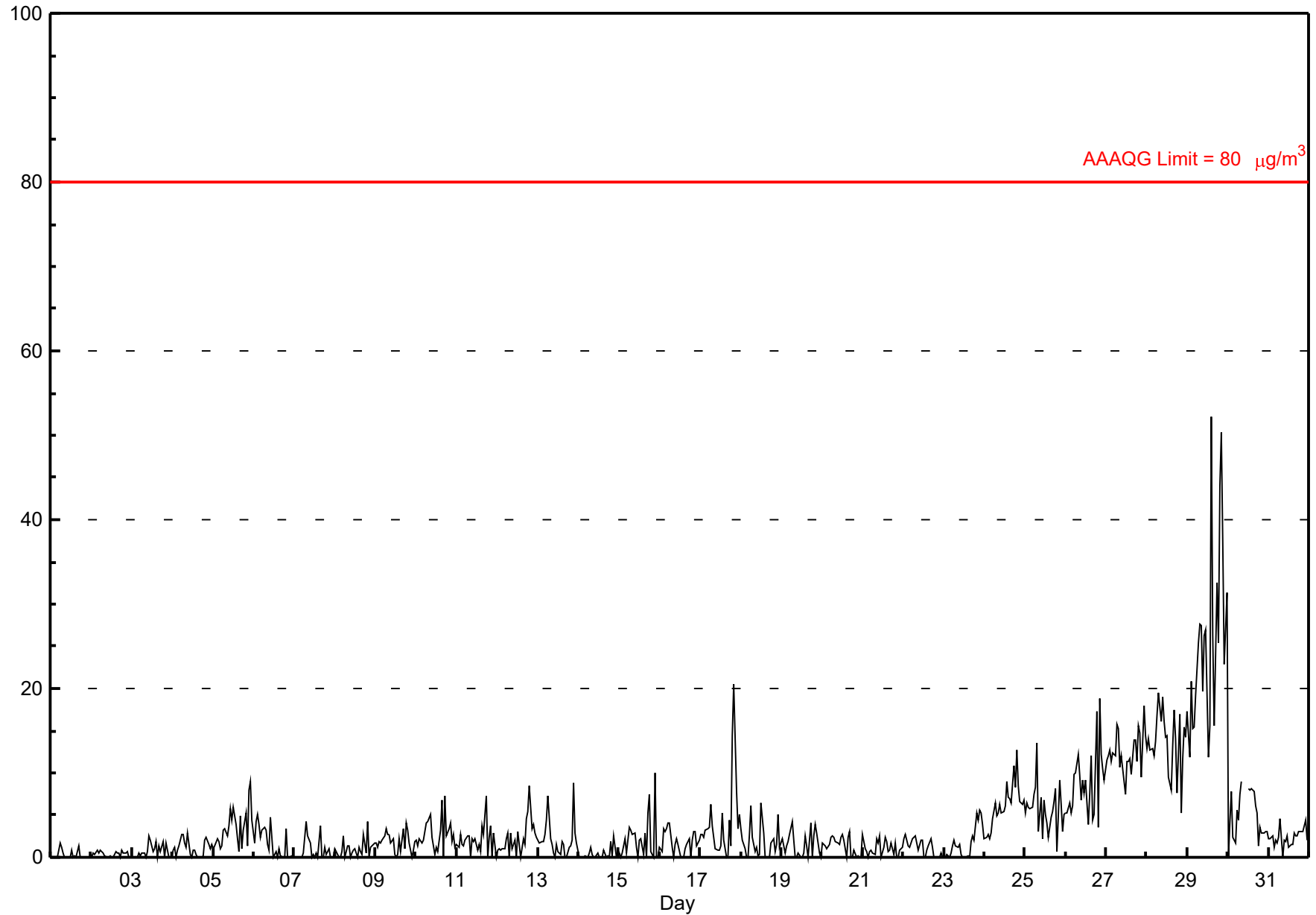
PM2.5 (PM_{2.5}) - µg/m³

Portable Rycroft - July 2018

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 52.1 µg/m³ on Jul 29 15:00 Maximum Daily Average: 25.8 µg/m³ on Jul 29																								Hours in Service: 744 Hours of Data: 741 Hours of Missing Data: 3 Hours of Calibration: 3 Percent Operational Time: 100.0			
Minimum Value: 0 µg/m³ on Jul 1 01:00 Maximum Diurnal Average: 5.4 µg/m³ at hour 21 Monthly Average: 3.76 µg/m³ Minimum Daily Average: 0.2 µg/m³ on Jul 1 Minimum Diurnal Average: 2.7 µg/m³ at hour 4 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.5 Median = 1.9 Q ₃ = 4.2 P ₉₀ = 10.6 P ₉₉ = 27.2																											
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	2	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0.2	1.8
2-Jul	0	1	0	1	1	1	1	0	0	0	0	0	0	0	1	0	0	0	1	1	1	1	0	0	0	0.4	0.9
3-Jul	0	0	0	0	0	0	1	0	0	1	2	2	1	1	2	0	1	1	2	0	2	1	0	0	0	0.7	2.5
4-Jul	1	1	0	1	1	3	3	2	1	3	0	0	1	1	0	0	0	0	0	2	2	2	1	2	2	1.1	2.9
5-Jul	1	1	2	2	1	1	3	3	3	4	6	4	6	4	2	1	5	1	3	5	1	8	9	4	3.4	8.9	
6-Jul	2	4	5	4	2	3	4	3	1	1	5	0	0	1	0	1	0	0	0	3	0	0	0	0	0	1.7	5.2
7-Jul	0	0	0	0	0	0	2	4	3	2	0	0	0	0	0	4	0	0	1	0	1	0	0	0	0	0.8	4.3
8-Jul	1	1	0	0	1	3	0	1	1	0	0	1	1	0	1	1	0	3	1	4	0	1	1	2	2	1.0	4.2
9-Jul	2	1	2	2	2	3	3	3	3	2	2	0	0	0	2	1	3	1	4	3	2	0	1	2	2	1.8	4.0
10-Jul	2	1	2	2	2	3	4	4	5	2	1	0	1	1	3	7	0	7	3	3	4	2	3	1	2.7	7.3	
11-Jul	1	1	3	2	1	2	3	2	0	2	2	2	1	2	1	4	3	7	0	2	4	0	3	0	2.0	7.2	
12-Jul	1	1	1	1	1	2	3	0	3	1	2	0	3	2	0	2	2	5	5	8	3	4	3	2	2.3	8.5	
13-Jul	2	2	2	2	3	4	7	2	1	0	0	2	1	0	2	2	0	0	1	1	2	9	3	2	2.1	8.9	
14-Jul	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	2	0	3	0	0	0.4	2.6	
15-Jul	0	0	1	2	1	2	3	3	3	3	1	0	2	2	0	3	0	5	8	1	0	10	0	0	2.1	10.0	
16-Jul	1	1	3	3	3	4	4	1	0	1	2	2	0	0	0	1	2	2	0	2	3	3	1	2	1.8	4.1	
17-Jul	3	3	2	3	3	4	6	4	2	1	1	1	1	5	2	0	0	4	1	14	20	8	3	5	4.1	20.5	
18-Jul	3	2	1	0	0	3	6	2	1	1	0	0	6	3	0	0	0	0	2	2	1	2	5	1	1.7	6.4	
19-Jul	2	1	1	1	2	3	4	2	0	0	0	0	0	0	2	1	0	4	0	3	4	3	1	0	1.5	4.2	
20-Jul	2	2	1	1	2	2	3	2	2	2	2	2	3	2	0	2	3	0	0	1	0	0	0	0	1.4	3.0	
21-Jul	3	1	1	0	1	1	0	0	2	2	2	0	1	2	2	1	1	2	0	2	0	0	1	1	1.1	2.7	
22-Jul	2	3	2	1	1	2	2	3	2	1	2	2	0	0	1	1	2	1	0	0	0	0	1	0	1.2	2.6	
23-Jul	0	0	0	0	1	1	2	1	1	2	0	0	0	0	0	0	2	3	2	5	4	6	5	4	1.7	5.6	
24-Jul	2	2	3	2	3	5	7	5	5	6	5	5	6	9	7	7	6	11	8	13	8	7	6	7	6.1	12.6	
25-Jul	5	6	6	6	6	7	8	14	3	7	2	7	5	4	2	5	6	7	8	1	9	6	3	5	5.8	13.6	
26-Jul	5	5	6	5	6	10	10	12	10	7	9	8	9	4	8	12	4	5	17	4	19	12	10	9	8.6	18.9	
27-Jul	12	12	13	11	12	12	16	15	11	12	11	7	11	11	12	10	14	14	11	16	15	9	18	14	12.5	18.0	
28-Jul	13	14	13	13	12	14	17	19	16	19	16	14	14	9	8	13	17	14	8	17	5	12	15	14	13.7	19.4	
29-Jul	17	12	21	15	15	19	25	28	27	20	26	27	12	16	52	26	16	32	25	44	50	38	23	31	25.8	52.1	
30-Jul	0	4	8	2	2	6	4	7	9	C	C	C	8	8	8	8	6	5	1	4	3	3	3	3	4.9	9.0	
31-Jul	2	2	2	1	2	2	2	5	0	2	2	3	1	2	1	3	2	3	3	3	3	4	4	2	2.4	4.6	
2.8 2.7 3.3 2.7 2.8 4.0 5.0 4.9 3.7 3.4 3.5 3.0 3.1 2.9 3.9 3.7 3.1 4.4 3.8 5.4 5.4 4.9 4.0 3.7 17.4 14.1 20.9 15.3 15.4 19.2 25.5 27.6 27.5 19.7 26.3 26.9 14.5 15.6 52.1 26.3 17.5 32.5 25.5 44.1 50.4 37.5 22.8 31.4																								Diurnal Average	Diurnal Maximum		
C - Calibration Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																											

Hourly Averages

PM_{2.5} (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Portable Rycroft - July 2018



Hourly Maximums

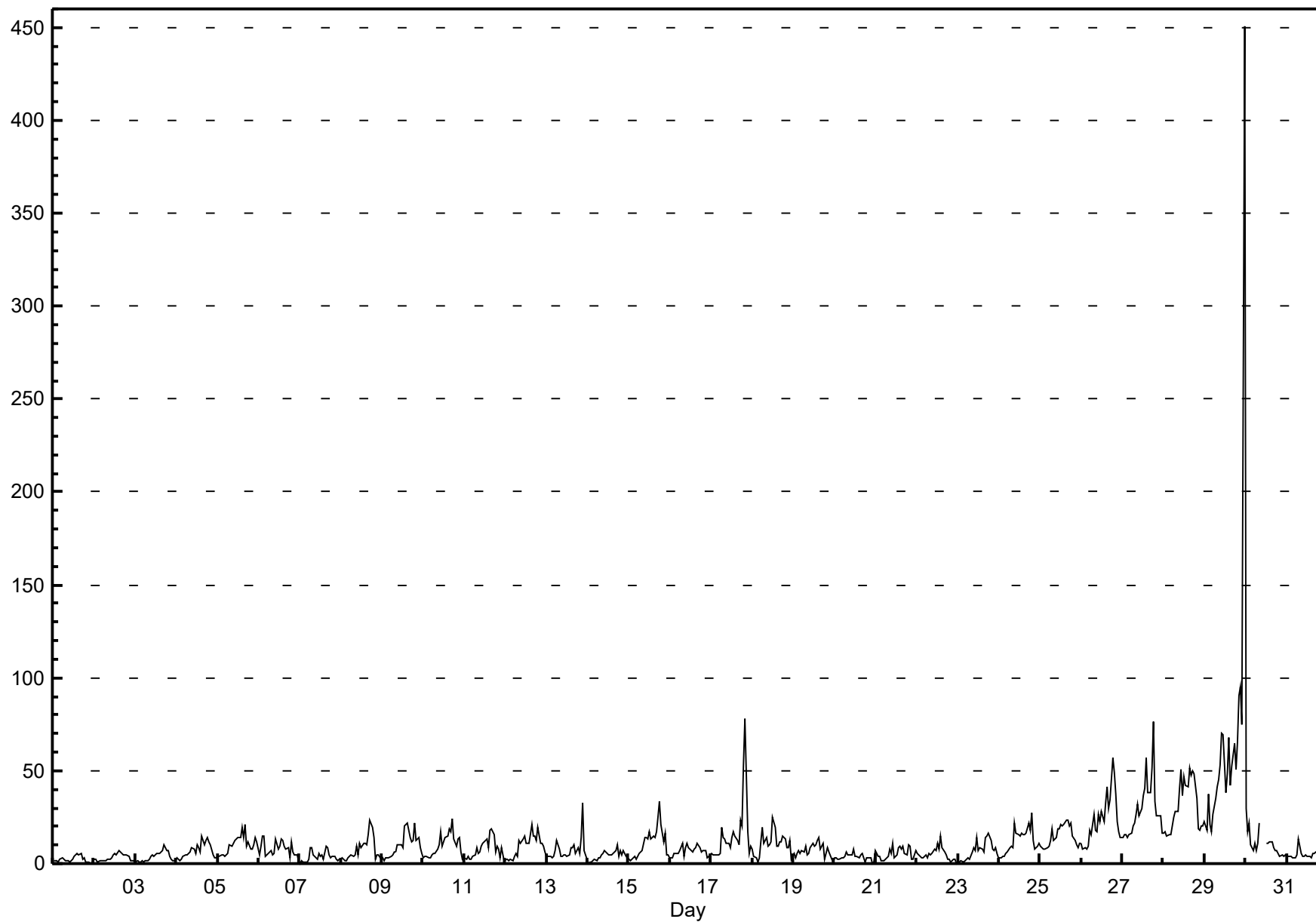
PM2.5 (PM_{2.5}) - µg/m³

Portable Rycroft - July 2018

Maximum Value: 450.4 μg/m ³ on Jul 30 00:00																				Maximum Daily Average: 66.7 μg/m ³ on Jul 29					Hours in Service: 744	
Minimum Value: 0 μg/m ³ on Jul 20 23:00																				Minimum Daily Average: 2.3 μg/m ³ on Jul 1					Hours of Data: 741	
Maximum Diurnal Average: 20.0 μg/m ³ at hour 24																				Minimum Diurnal Average: 4.8 μg/m ³ at hour 5					Hours of Missing Data: 3	
Monthly Average: 11.64 μg/m ³																				Percentiles: P ₁ = 0.5 P ₁₀ = 2.1 Q ₁ = 3.8 Median = 7.1 Q ₃ = 13.7 P ₉₀ = 22.7 P ₉₉ = 68.9					Hours of Calibration: 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	2	2	1	1	2	3	2	2	1	1	1	2	4	5	6	5	6	2	3	1	1	0	0	2	2.3	5.7
2-Jul	2	3	1	2	1	2	2	1	2	2	3	5	5	5	7	7	6	5	5	4	4	2	1	1	3.2	6.8
3-Jul	0	1	1	1	2	1	2	2	2	4	5	4	5	6	5	6	7	10	7	7	4	2	1	2	3.6	9.9
4-Jul	3	2	1	2	4	5	5	6	7	9	8	6	10	9	6	15	10	13	14	12	10	4	3	3	6.9	15.2
5-Jul	4	4	4	5	4	5	5	10	9	11	13	13	14	14	20	14	21	10	12	8	8	10	14	11	10.2	21.0
6-Jul	4	10	15	15	4	5	6	7	5	6	14	8	10	14	12	9	8	9	3	12	6	5	5	2	8.0	15.1
7-Jul	0	1	1	1	1	2	9	9	5	3	2	5	4	5	3	10	9	4	3	4	4	2	2	3	3.8	9.7
8-Jul	2	3	2	2	3	4	5	4	5	9	5	11	8	11	11	10	15	23	20	14	2	4	4	3	7.5	23.1
9-Jul	3	2	3	3	3	4	5	6	6	10	10	10	8	20	21	22	14	12	13	22	13	14	9	5	9.9	21.8
10-Jul	3	4	4	3	3	5	5	6	8	10	17	9	11	14	15	19	17	24	13	9	14	14	6	2	9.8	24.0
11-Jul	3	2	4	3	2	4	5	9	6	6	9	11	12	13	9	18	19	15	6	9	8	3	9	1	7.8	18.6
12-Jul	3	2	2	2	2	4	6	4	12	11	13	15	11	11	11	21	15	15	12	19	11	11	9	7	9.5	21.4
13-Jul	4	4	4	3	4	7	12	8	4	4	4	5	4	5	9	8	10	6	9	5	14	33	7	5	7.3	32.9
14-Jul	0	1	1	2	2	1	3	3	5	6	7	6	5	5	5	6	7	10	4	7	5	7	4	3	4.3	9.9
15-Jul	2	1	2	4	2	4	5	6	7	14	14	13	17	13	15	14	17	25	34	21	12	17	5	5	11.3	33.9
16-Jul	3	3	5	5	5	6	7	11	4	9	11	8	7	6	7	9	11	8	7	7	7	7	3	5	6.8	11.2
17-Jul	5	5	5	4	4	6	20	14	13	11	11	9	14	17	15	12	10	23	21	53	78	17	5	10	15.9	78.2
18-Jul	8	4	3	1	3	12	20	11	14	9	10	11	25	19	9	9	12	11	15	13	9	9	13	3	10.6	25.3
19-Jul	5	3	5	7	6	7	6	9	5	6	9	11	9	10	12	14	8	11	2	6	9	7	3	1	7.1	13.9
20-Jul	3	3	3	2	3	3	4	6	5	5	5	8	4	4	3	5	6	3	1	3	3	3	0	1	3.6	7.9
21-Jul	7	4	4	1	2	2	2	4	8	6	11	3	4	9	9	8	9	5	4	10	9	2	3	7	5.6	10.7
22-Jul	5	4	4	3	3	4	3	5	4	6	8	7	11	8	14	9	6	4	3	2	1	2	2	0	5.0	14.5
23-Jul	1	1	1	1	2	3	3	3	6	8	7	14	7	9	8	7	14	15	16	13	8	7	9	6	6.9	16.0
24-Jul	3	3	4	4	6	6	9	9	9	22	16	15	14	16	15	16	16	22	18	27	13	8	9	11	12.2	27.0
25-Jul	9	8	8	8	9	9	13	19	13	14	18	19	21	20	21	23	23	20	22	15	12	10	9	11	14.8	23.3
26-Jul	11	8	9	8	9	18	16	27	18	17	26	23	28	22	33	41	30	34	57	49	37	23	17	14	23.9	56.8
27-Jul	14	15	16	14	15	16	20	22	27	32	26	30	36	41	57	38	38	52	76	33	26	26	26	17	29.6	76.0
28-Jul	16	17	15	15	16	20	25	28	28	41	51	37	47	42	41	52	47	50	48	35	19	18	20	21	31.1	51.6
29-Jul	23	18	38	21	18	27	35	41	45	53	70	69	38	49	68	42	52	65	51	66	90	95	75	450	66.7	450.4
30-Jul	30	17	22	10	7	11	7	11	22	C	C	C	11	11	12	12	8	7	7	5	4	4	4	5	10.8	29.6
31-Jul	4	4	4	3	3	3	4	13	5	4	4	5	4	4	3	6	6	7	6	6	5	6	7	5	5.1	13.4
5.9 5.1 6.1 5.0 4.8 6.7 8.7 10.2 10.0 11.6 13.6 13.0 13.2 14.0 15.6 15.7 15.4 16.8 16.5 16.1 14.3 12.0 9.1 20.0																									Diurnal Average	
29.6 17.7 37.5 21.2 17.5 26.8 35.4 41.3 45.5 53.2 70.4 69.4 46.5 48.6 68.1 51.6 51.9 65.1 76.0 65.6 90.2 94.8 75.1 450.4																									Diurnal Maximum	
C - Calibration																										

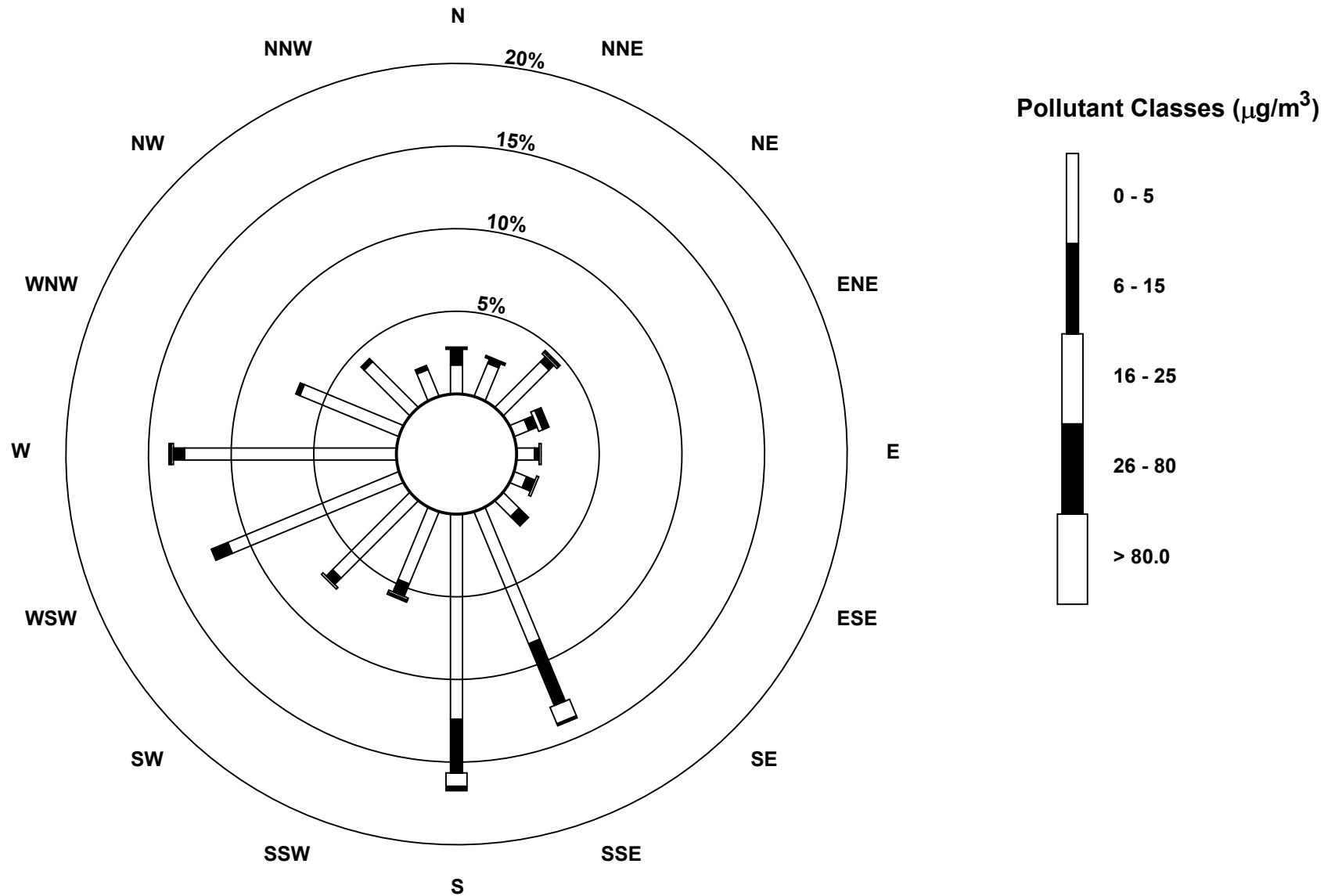
Hourly Maximums

PM2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Portable Rycroft - July 2018



Pollutant Rose

PM_{2.5} (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Portable Rycroft - July 2018



Hourly Averages

External Temperature (ET) - °C

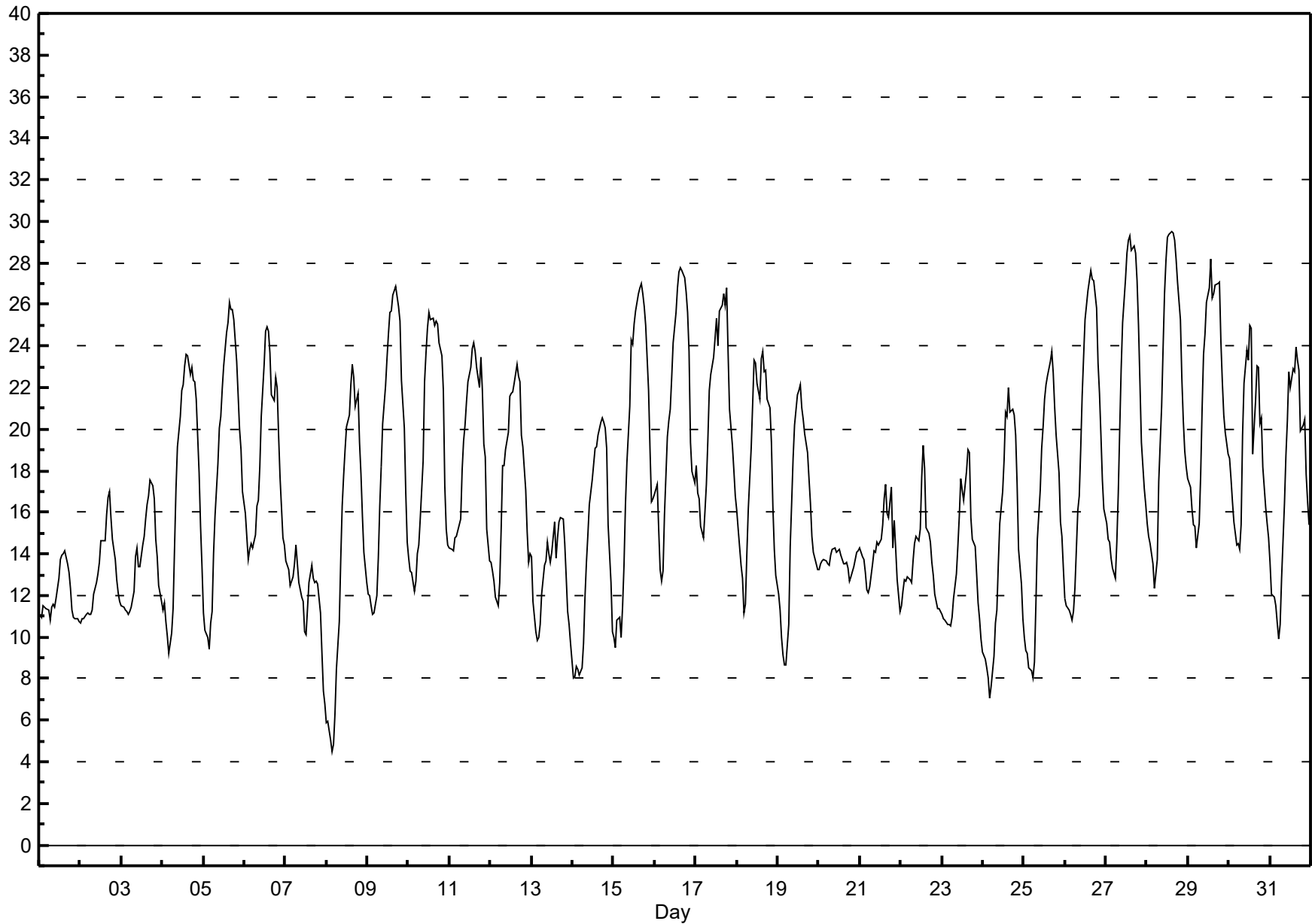
Portable Rycroft - July 2018

Maximum Value: 29.5 °C on Jul 28 15:00																				Maximum Daily Average: 21.7 °C on Jul 28										Hours in Service: 744	
Minimum Value: 4 °C on Jul 8 04:00																				Minimum Daily Average: 11.9 °C on Jul 7										Hours of Data: 744	
Maximum Diurnal Average: 22.0 °C at hour 16																				Minimum Diurnal Average: 11.4 °C at hour 5										Hours of Missing Data: 0	
Monthly Average: 16.92 °C																				Percentiles: P ₁ = 7.2 P ₁₀ = 10.9 Q ₁ = 12.8 Median = 15.6 Q ₃ = 21.4 P ₉₀ = 25.0 P ₉₉ = 28.7										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	11	11	12	11	11	11	11	11	12	11	12	13	14	14	14	14	14	13	12	11	11	11	11	11	12.0	14.2					
2-Jul	11	11	11	11	11	11	11	11	12	13	13	14	15	15	15	16	17	17	16	15	14	13	12	12	13.1	17.0					
3-Jul	11	11	11	11	11	11	11	12	14	14	13	13	14	15	16	16	17	18	17	17	15	14	12	12	13.7	17.6					
4-Jul	11	12	11	10	9	10	11	14	17	19	21	22	22	23	24	24	23	23	22	22	21	18	15	13	17.4	23.6					
5-Jul	11	10	10	9	11	11	14	16	18	20	21	22	23	25	25	26	26	26	25	23	22	20	19	17	18.7	26.1					
6-Jul	16	15	14	14	14	14	15	16	17	18	21	23	25	25	25	24	22	21	22	22	20	18	15	14	18.7	24.9					
7-Jul	14	13	13	13	13	14	14	14	13	12	12	10	10	11	13	13	13	13	13	13	11	9	7	7	11.9	14.4					
8-Jul	6	6	5	4	5	6	8	11	14	16	18	19	20	21	22	23	22	21	22	19	18	16	14	13	14.6	23.1					
9-Jul	12	12	12	11	11	12	14	16	18	20	22	23	25	26	26	26	27	26	26	25	22	20	17	15	19.3	26.9					
10-Jul	14	13	13	12	13	14	14	16	18	22	24	25	26	25	25	25	25	25	24	24	22	17	15	14	19.4	25.6					
11-Jul	14	14	14	15	15	15	16	18	19	20	21	22	23	24	24	24	23	22	23	22	19	19	15	14	19.0	24.2					
12-Jul	14	13	13	12	11	13	15	18	18	19	20	22	22	22	22	23	23	22	20	19	17	15	14	14	17.5	23.1					
13-Jul	14	12	10	10	10	11	12	13	14	15	14	14	14	16	14	15	16	16	16	15	13	11	11	10	13.0	15.8					
14-Jul	8	8	9	8	8	8	10	12	14	15	16	18	18	19	19	20	20	21	20	20	19	15	13	10	14.5	20.5					
15-Jul	10	9	11	11	10	11	13	16	18	21	24	24	25	26	27	27	27	27	26	25	22	19	17	17	19.3	27.0					
16-Jul	17	17	15	13	13	13	16	20	20	21	22	24	26	27	28	28	28	27	27	26	24	19	18	17	21.1	27.8					
17-Jul	18	17	17	15	15	16	17	19	22	23	23	24	25	24	26	26	27	26	27	24	21	19	18	17	21.1	26.8					
18-Jul	16	15	13	13	11	12	14	16	19	21	23	23	22	21	23	24	23	23	21	21	19	16	14	13	18.3	23.7					
19-Jul	12	11	10	9	9	9	11	14	16	19	20	22	22	22	21	20	20	19	18	16	15	14	14	13	15.6	22.1					
20-Jul	13	14	14	14	14	14	13	14	14	14	14	14	14	14	13	14	14	13	13	13	13	14	14	14	13.7	14.3					
21-Jul	14	14	14	13	12	12	12	14	14	14	15	14	15	15	17	17	16	16	17	14	16	14	13	11	14.3	17.3					
22-Jul	11	12	13	13	13	13	13	14	14	15	15	15	18	19	18	15	15	15	14	13	12	11	11	11	13.9	19.2					
23-Jul	11	11	11	11	11	11	11	12	13	14	16	18	17	17	18	19	19	16	15	14	13	12	11	10	13.7	19.0					
24-Jul	9	9	8	8	7	8	9	11	11	14	15	17	19	21	21	22	21	21	21	20	17	14	13	11	14.4	22.0					
25-Jul	10	9	9	8	8	8	9	12	15	17	19	20	21	22	23	23	24	23	21	20	18	16	15	13	16.0	23.7					
26-Jul	12	11	11	11	11	11	12	16	17	19	22	23	25	27	27	28	27	27	26	23	22	20	18	16	19.3	27.6					
27-Jul	15	15	15	14	13	13	15	17	20	23	25	27	28	29	29	29	29	28	27	25	22	19	17	16	21.3	29.3					
28-Jul	15	15	15	14	12	13	14	18	21	24	27	28	29	29	30	29	29	28	27	25	22	20	19	18	21.7	29.5					
29-Jul	18	17	16	15	15	14	15	18	21	24	25	26	27	28	26	27	27	27	27	24	22	21	20	19	21.6	28.2					
30-Jul	19	18	17	16	14	15	14	15	20	22	24	23	25	25	19	21	23	23	20	21	18	16	15	15	19.1	25.0					
31-Jul	14	12	12	11	11	10	11	13	16	19	20	23	22	23	23	24	23	23	20	20	20	18	17	15	17.5	23.9					
13.0 12.5 12.1 11.7 11.4 11.7 12.8 14.7 16.5 18.0 19.2 20.2 21.0 21.6 21.6 22.0 21.8 21.4 20.8 19.7 18.1 16.1 14.6 13.6																									Diurnal Average						
18.6 17.7 16.7 15.6 15.3 16.0 17.4 19.6 21.9 23.9 26.5 28.1 29.2 29.4 29.5 29.4 29.1 28.5 27.1 25.6 23.7 20.7 19.9 18.8																									Diurnal Maximum						

Hourly Averages

External Temperature (ET) - °C

Portable Rycroft - July 2018



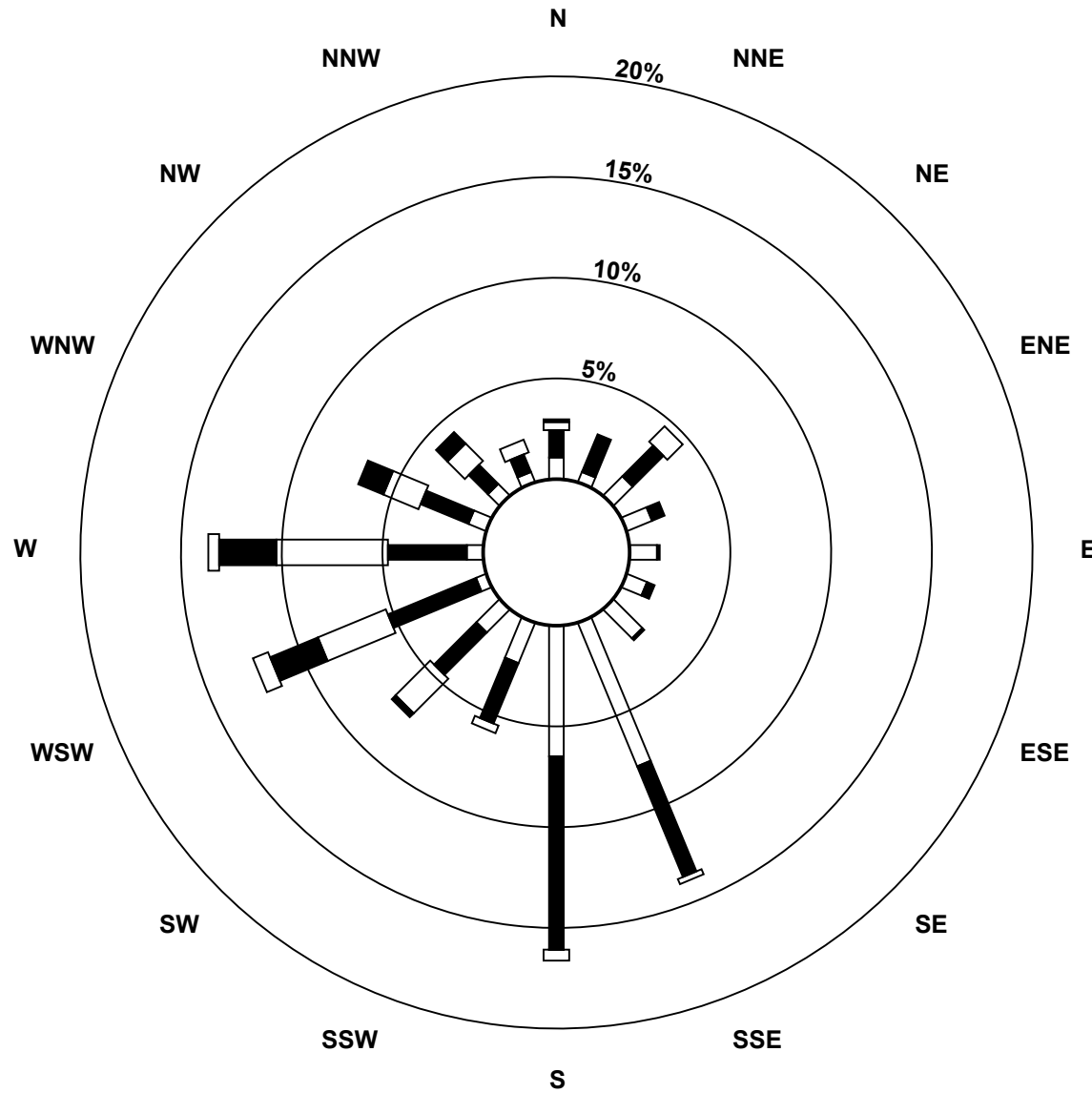
Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Portable Rycroft - July 2018

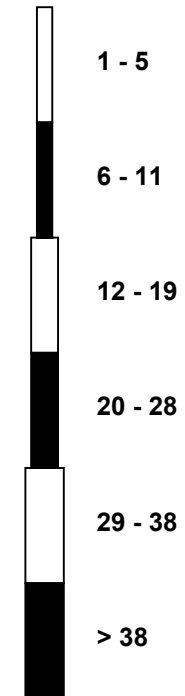
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1 Spd	4	4	10	11	13	17	12	16	16	15	10	19	29	33	29	31	33	31	27	24	25	24	24	23	19.8	32.7	
Dir	217	210	231	232	233	236	232	240	236	234	224	235	244	247	242	238	242	243	248	249	248	252	252	255	242.2	247.5	
2 Spd	25	23	19	17	17	15	16	17	20	25	26	24	24	22	21	22	23	24	22	24	17	15	10	12	19.3	25.9	
Dir	261	274	273	285	294	292	293	292	296	298	297	306	303	302	304	301	297	303	311	325	312	309	289	270	296.0	297.2	
3 Spd	14	16	16	16	15	14	14	14	17	18	16	14	14	8	7	12	11	11	12	8	6	9	8	11.5	17.8		
Dir	268	268	266	271	272	281	279	285	313	333	330	309	307	297	259	285	299	325	308	299	296	283	260	262	291.3	333.4	
4 Spd	8	11	9	9	10	9	8	7	3	3	5	4	6	4	3	3	1	1	3	2	1	2	3	4	3.5	10.7	
Dir	256	256	265	246	253	250	266	262	280	279	317	327	309	301	320	346	55	231	164	103	94	84	136	164	265.2	256.2	
5 Spd	2	3	2	3	4	1	3	6	5	5	6	7	6	3	5	3	4	4	5	2	3	5	4	6	2.9	6.8	
Dir	203	181	180	36	77	332	20	44	112	85	108	119	122	155	165	158	113	115	124	129	135	135	164	182	122.9	119.1	
6 Spd	6	7	7	5	7	7	7	6	8	7	6	14	10	10	14	13	15	15	11	6	9	6	7	8	8.5	15.4	
Dir	182	234	200	177	177	179	173	181	168	160	203	226	211	201	194	205	194	187	205	197	191	218	190	193	195.1	187.3	
7 Spd	7	7	11	10	11	9	11	20	17	20	23	20	18	19	21	18	16	18	15	13	7	4	8	5	10.4	23.0	
Dir	193	192	185	181	184	193	238	266	262	276	308	309	296	276	280	259	254	242	236	237	230	187	166	181	252.8	308.3	
8 Spd	6	5	5	5	6	8	8	8	8	7	13	9	6	8	7	9	4	2	2	5	6	6	7	8	5.0	13.4	
Dir	175	181	159	148	153	164	165	167	181	215	253	247	232	256	246	276	221	166	182	184	177	165	159	166	197.1	252.9	
9 Spd	9	10	11	10	12	13	12	11	11	10	8	8	8	10	14	10	6	6	3	2	3	5	5	7	7.8	13.8	
Dir	164	169	168	172	167	167	174	187	187	194	201	198	195	219	234	227	209	202	201	226	189	166	157	168	187.6	233.5	
10 Spd	8	7	8	7	9	12	12	11	10	8	8	9	8	14	17	21	15	17	17	9	5	4	7	8	8.1	21.2	
Dir	168	165	164	164	164	171	171	173	181	195	193	193	222	241	246	266	247	263	265	245	222	199	181	185	213.0	266.0	
11 Spd	9	8	9	9	10	8	8	6	19	21	24	23	22	19	21	21	20	7	15	12	7	8	4	7	11.7	24.3	
Dir	185	184	173	183	187	188	168	194	237	236	249	257	253	253	249	254	249	233	240	233	228	232	201	181	231.6	248.7	
12 Spd	9	9	8	8	8	7	5	8	14	15	17	15	15	12	8	13	15	16	8	9	6	5	6	8	8.3	17.3	
Dir	186	186	183	180	176	175	185	240	259	257	266	265	260	258	233	250	254	260	265	256	246	165	166	171	235.7	265.8	
13 Spd	8	6	7	8	8	6	12	22	17	18	21	13	9	8	20	11	18	15	23	22	12	10	11	12	11.3	23.3	
Dir	170	178	176	175	181	242	258	262	263	276	272	276	293	283	283	301	275	271	281	281	266	245	250	256	263.8	281.4	
14 Spd	12	15	19	22	21	17	22	23	27	30	32	30	31	27	25	22	21	21	15	9	4	4	5	6	18.3	31.5	
Dir	257	256	252	248	247	234	238	245	260	263	266	266	272	268	264	258	267	266	270	270	269	160	158	183	257.2	265.8	
15 Spd	6	5	6	6	8	7	6	6	7	10	7	15	12	11	8	10	7	5	5	4	1	5	5	7	4.6	15.5	
Dir	180	152	142	169	162	150	148	162	168	186	217	255	257	248	246	262	258	267	312	291	175	168	160	168	209.5	255.2	
16 Spd	9	9	8	7	7	6	5	12	17	18	17	12	13	13	16	21	24	18	22	15	8	5	6	9	11.2	24.5	
Dir	168	182	179	185	185	176	198	233	236	244	244	232	230	229	229	235	238	233	234	232	227	165	151	172	221.9	237.8	
17 Spd	8	6	6	7	6	5	3	3	15	21	21	21	16	10	5	7	10	10	5	3	5	3	5	4	5.7	21.1	
Dir	175	183	182	176	186	190	292	191	268	266	270	267	265	268	252	208	247	272	300	8	52	89	135	137	247.0	265.8	
18 Spd	6	13	6	5	4	5	3	6	8	7	6	15	15	13	18	24	18	19	7	10	9	4	7	6	8.0	24.2	
Dir	228	253	256	163	165	158	128	180	177	183	208	273	275	294	277	265	266	250	233	239	233	226	244	234	246.4	265.1	
19 Spd	2	3	4	4	5	4	4	2	8	5	8	7	7	7	10	12	12	11	12	7	7	2	5	12	3.7	12.4	
Dir	184	214	181	234	237	171	170	356	347	315	337	15	23	30	44	48	54	45	34	11	319	289	325	356	14.6	53.6	
20 Spd	9	9	8	10	12	11	9	9	9	8	6	9	6	5	4	6	10	14	18	7	4	10	18	18	6.4	18.4	
Dir	27	22	8	33	44	59	54	52	52	55	47	21	37	42	344	273	272	286	299	293	10	316	336	339	360.0	298.8	
21 Spd	25	18	19	12	7	8	10	11	10	11	18	17	14	17	17	18	13	10	15	8	9	10	9	10	10.0	24.7	
Dir	4	353	351	39	50	14	12	4	343	314	327	326	318	317	317	294	301	267	265	296	250	258	258	263	322.6	4.1	
22 Spd	12	10	11	11	12	11	12	12	12	11	11	7	9	9	8	7	11	7	8	11	15	21	18	11	14	9.7	20.7
Dir	259	252	263	256	260	257	267	274	288	313	295	275	301	350	357	355	335	274	280	270	265	268	253	265	278.4	265.1	

Wind Rose

Wind Speed (WS) (km/h)
Portable Rycroft - July 2018



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Portable Rycroft - July 2018

Maximum Speed: 33 km/h on Jul 1 14:00																				Maximum Daily Speed Average: 20.0 km/h on Jul 1					Hours in Service: 744	
Minimum Speed: 1 km/h on Jul 15 21:00																				Minimum Daily Speed Average: 3.9 km/h on Jul 24					Hours of Data: 744	
Maximum Diurnal Speed Average: 12.9 km/h at hour 16																				Minimum Diurnal Speed Average: 6.4 km/h at hour 22					Hours of Missing Data: 0	
Monthly Average Speed: 9.80 km/h																				Percentiles: P ₁ = 1.7 P ₁₀ = 3.9 Q ₁ = 5.3 Median = 8.0 Q ₃ = 12.2 P ₉₀ = 18.9 P ₉₉ = 30.0					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	4	4	10	11	13	17	12	17	16	15	10	19	29	33	29	31	33	31	27	24	25	24	24	23	20.0	32.8
2-Jul	26	23	19	17	17	15	16	17	20	25	26	24	24	22	21	22	24	24	22	24	17	15	11	12	20.0	26.1
3-Jul	14	16	16	16	15	14	14	14	17	18	17	14	14	8	7	12	11	12	11	12	8	6	9	8	12.6	18.1
4-Jul	8	11	9	9	10	9	8	8	3	4	6	6	7	6	5	5	6	4	4	2	1	2	3	5	5.8	10.7
5-Jul	3	3	3	3	4	2	3	6	6	6	7	7	6	5	5	4	5	5	5	2	3	5	4	6	4.6	7.5
6-Jul	6	8	8	6	7	7	7	6	9	7	6	14	11	11	14	13	16	15	11	7	9	6	7	8	9.1	15.6
7-Jul	7	7	11	10	11	9	12	20	18	20	23	21	18	19	21	18	16	18	15	13	7	4	8	5	13.8	23.2
8-Jul	6	5	5	5	6	8	8	8	8	9	14	10	7	8	8	9	5	3	3	5	6	6	7	8	7.0	13.8
9-Jul	9	10	11	10	12	13	12	11	11	10	8	8	9	10	14	10	6	6	4	2	3	5	5	7	8.6	14.0
10-Jul	8	7	8	7	9	12	12	11	11	9	8	9	8	14	17	22	15	17	17	10	5	4	7	8	10.6	21.6
11-Jul	9	8	9	9	10	8	9	7	19	21	25	24	22	19	21	22	21	7	16	12	7	9	5	7	13.5	24.6
12-Jul	9	9	8	8	8	7	5	8	15	16	18	16	15	13	9	14	16	16	9	9	7	5	6	8	10.5	17.7
13-Jul	8	7	7	8	8	8	12	22	18	18	21	14	9	8	20	11	19	16	23	22	13	10	11	12	13.5	23.5
14-Jul	12	15	20	22	21	17	22	23	27	30	32	31	31	28	25	22	22	21	16	9	4	5	6	6	19.4	31.7
15-Jul	6	5	6	6	8	7	6	6	7	10	7	16	13	12	9	11	8	6	5	4	1	5	5	7	7.3	16.1
16-Jul	9	9	8	7	7	7	5	12	17	19	17	12	14	13	17	21	25	18	22	15	8	5	7	9	12.6	24.6
17-Jul	8	6	6	8	6	5	4	4	16	21	21	21	16	11	7	8	11	11	5	4	5	4	5	4	9.1	21.4
18-Jul	8	13	7	5	5	5	5	6	8	7	7	16	16	14	19	25	18	20	8	10	9	4	8	6	10.4	24.7
19-Jul	3	3	5	5	5	5	4	5	9	6	8	7	8	8	10	13	13	11	12	7	7	3	6	12	7.3	12.8
20-Jul	9	10	8	10	12	11	9	10	9	8	7	9	6	6	5	6	11	15	18	11	5	11	18	18	10.0	18.4
21-Jul	25	18	19	13	7	9	10	11	11	12	18	17	14	17	17	19	13	10	15	10	9	10	9	10	13.5	25.2
22-Jul	12	10	11	11	12	11	12	12	12	11	8	10	10	9	8	13	8	8	11	15	21	18	11	14	11.4	20.7
23-Jul	11	12	9	9	10	10	10	11	9	8	7	6	7	7	7	7	5	9	6	5	5	2	3	4	7.5	11.6
24-Jul	4	4	4	4	4	3	3	3	3	3	5	4	4	5	5	5	6	5	4	3	1	3	5	4	3.9	5.7
25-Jul	4	3	4	4	5	5	5	5	3	4	6	7	5	5	4	5	4	8	9	7	5	3	5	5	4.9	8.9
26-Jul	5	5	6	4	5	6	7	3	5	6	7	7	7	5	7	11	7	9	1	2	3	5	6	6	5.5	10.8
27-Jul	5	6	6	5	5	5	4	6	6	6	6	5	5	8	8	7	7	5	5	4	5	6	7	5.7	8.4	
28-Jul	7	8	8	6	6	7	5	4	2	3	3	4	6	8	9	9	7	6	6	6	5	5	7	6	6.0	8.8
29-Jul	7	6	5	6	6	5	5	4	3	5	3	6	8	5	8	11	6	7	3	5	5	6	5	23	6.3	22.5
30-Jul	23	13	9	9	5	8	5	4	9	8	9	12	8	9	11	6	7	4	12	3	3	3	3	5	7.8	22.9
31-Jul	4	3	4	5	2	3	2	2	3	4	7	8	13	12	12	10	10	11	7	6	4	3	2	1	5.8	12.8
9.0 8.6 8.6 8.4 8.4 8.2 8.1 9.2 10.5 11.2 11.8 12.4 11.9 11.5 12.4 12.9 12.1 11.5 10.7 8.6 7.0 6.4 7.2 8.5																									Diurnal Average	
25.5 22.7 19.5 22.0 20.9 17.0 22.5 22.9 27.2 30.4 31.7 30.7 31.4 32.8 29.4 30.8 32.7 30.6 27.2 24.1 25.2 24.3 24.1 23.1																									Diurnal Maximum	
All monthly, daily, and diurnal averages have been calculated using scalar methods																										

Hourly Standard Deviations

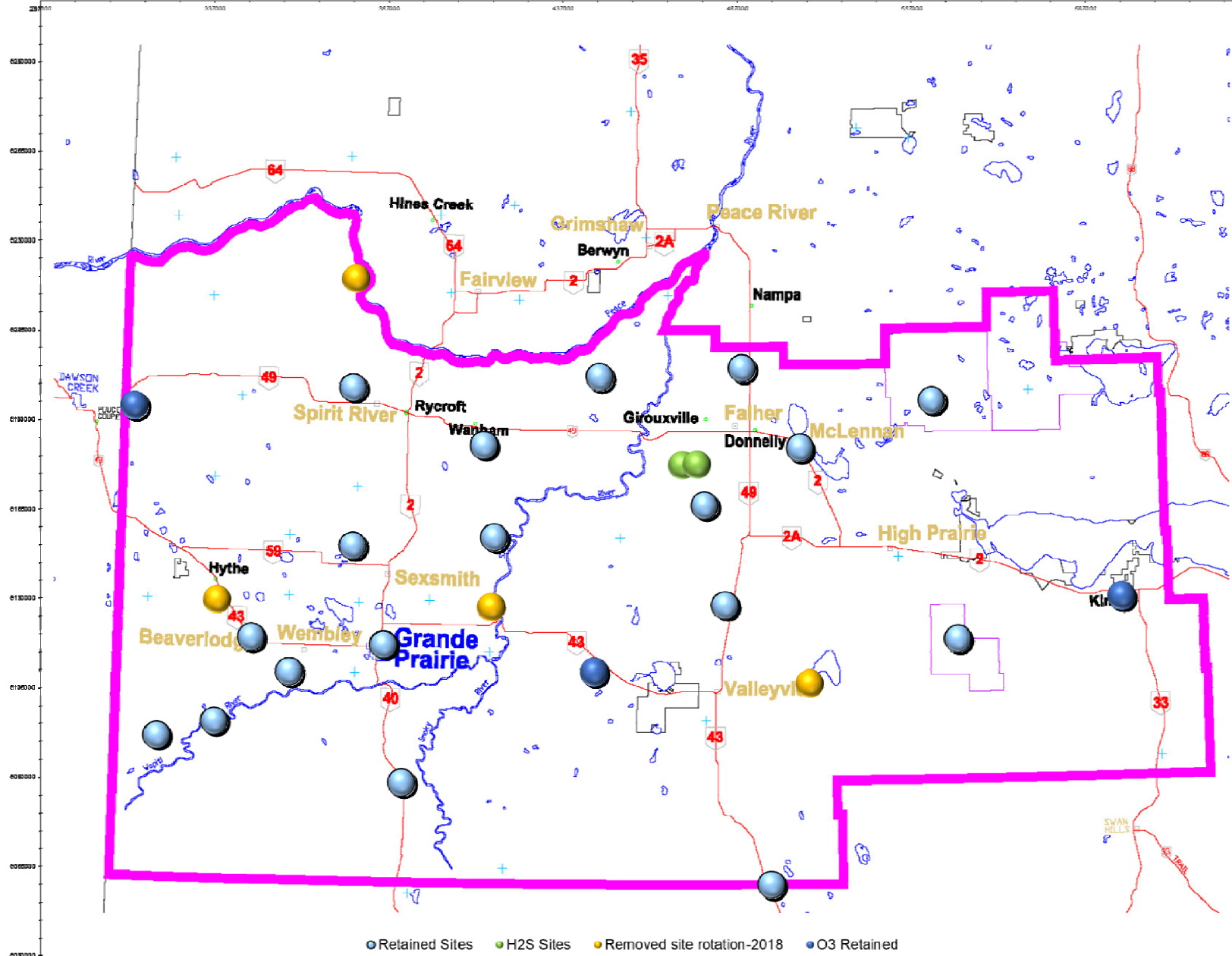
Wind Direction (WD) - deg
Portable Rycroft - July 2018

Maximum Value: 97.2 deg on Jul 31 02:00																		Hours in Service: 744							
Minimum Value: 1.7 deg on Jul 4 02:00																		Hours of Data: 744							
																		Hours of Missing Data: 0							
Percentiles: P ₁ = 2.8 P ₁₀ = 4.8 Q ₁ = 6.9 Median = 11.8 Q ₃ = 23.1 P ₉₀ = 40.0 P ₉₉ = 80.2																		Hours of Calibration: 0							
																		Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Jul	15	16	11	5	4	4	6	6	5	6	9	8	6	5	6	5	4	5	5	4	3	3	4	4	16.2
2-Jul	7	4	5	6	4	4	3	4	5	5	6	6	7	6	5	7	6	9	8	6	7	6	9	3	9.3
3-Jul	2	3	3	3	5	4	3	4	14	10	7	6	6	15	11	8	12	14	9	6	5	9	4	4	15.3
4-Jul	4	2	6	6	3	5	4	14	54	46	36	49	46	53	61	55	89	73	45	39	33	25	11	20	88.6
5-Jul	18	11	26	16	24	87	16	28	25	26	29	25	29	62	38	71	50	38	25	38	30	7	21	12	87.3
6-Jul	12	36	26	40	12	8	8	9	5	19	20	13	14	11	9	9	11	6	7	13	21	14	6	4	40.2
7-Jul	9	7	4	5	6	6	27	8	5	8	8	6	8	8	9	42	11	8	7	7	10	11	4	10	42.3
8-Jul	6	4	11	6	12	7	10	8	9	41	13	23	31	15	36	24	47	55	82	10	6	12	11	7	81.9
9-Jul	4	3	3	3	3	3	5	6	5	9	13	12	13	17	11	16	21	16	21	24	16	16	10	9	23.5
10-Jul	6	12	7	9	6	4	3	5	7	10	10	20	17	15	15	12	15	13	4	13	11	7	5	4	20.4
11-Jul	6	4	4	6	4	6	5	22	10	6	9	11	10	16	12	8	10	18	22	6	7	8	12	6	22.2
12-Jul	4	3	5	5	4	7	20	27	8	8	12	21	16	28	28	22	17	14	10	6	19	20	12	7	28.4
13-Jul	6	9	6	9	4	40	8	6	10	8	8	9	11	19	9	15	15	15	7	6	10	6	17	8	40.0
14-Jul	2	3	5	5	6	4	4	5	8	6	6	8	8	9	9	9	9	9	6	23	15	46	16	6	46.0
15-Jul	8	14	6	16	8	9	10	14	14	8	22	17	21	25	34	29	34	36	7	11	47	11	10	14	47.2
16-Jul	4	6	5	4	5	5	21	11	6	7	12	15	13	13	13	10	8	10	7	6	17	23	10	7	22.7
17-Jul	11	8	8	5	10	19	38	50	13	9	9	10	17	20	53	23	22	25	18	24	16	39	7	13	53.1
18-Jul	57	7	45	27	26	21	54	16	10	14	25	18	19	14	12	11	8	17	20	12	13	13	9	9	56.9
19-Jul	50	23	34	31	11	24	16	92	20	29	27	32	49	36	20	18	14	6	9	10	15	37	43	7	92.1
20-Jul	8	15	8	5	11	5	11	9	9	9	23	23	13	23	40	15	14	27	5	68	33	7	11	8	68.1
21-Jul	12	15	6	20	15	9	11	52	23	11	6	6	6	11	9	11	16	5	6	37	12	4	4	5	52.2
22-Jul	6	5	5	5	4	6	3	8	25	9	12	13	28	21	26	31	37	10	8	6	4	5	12	4	36.7
23-Jul	5	4	5	8	4	8	5	6	11	11	29	44	46	19	34	33	29	18	69	9	30	18	15	12	69.0
24-Jul	6	12	19	41	32	42	18	13	36	28	23	57	65	75	86	41	35	60	23	57	38	21	13	15	85.7
25-Jul	9	33	10	8	7	18	8	7	50	39	26	30	35	57	53	31	68	15	8	10	10	39	7	18	67.5
26-Jul	13	8	16	15	13	91	78	55	35	25	14	15	43	38	59	19	50	22	93	31	55	12	8	6	92.9
27-Jul	15	10	11	28	33	7	10	5	7	10	16	22	29	23	20	18	23	26	12	5	22	8	10	10	33.0
28-Jul	7	5	7	16	8	20	21	10	52	30	55	35	28	23	14	12	9	5	7	6	7	7	9	8	55.0
29-Jul	6	8	39	23	12	47	28	26	37	17	55	42	22	48	12	16	22	18	36	23	14	10	18	70	69.5
30-Jul	54	64	32	29	40	19	17	19	50	24	23	19	26	29	28	23	36	33	55	26	9	21	13	5	63.8
31-Jul	20	97	24	13	21	17	36	77	51	31	17	21	9	15	11	18	14	8	8	19	52	28	49	61	97.2
56.9 97.2 45.5 41.3 40.0 91.2 77.9 92.1 53.5 46.1 55.0 56.6 65.5 75.4 85.7 71.0 88.6 72.6 92.9 68.1 54.9 46.0 48.6 69.5																									

PAZA

Monthly Passive Data Summary

Location of PAZA Passive Monitoring Stations



Station	Station	SO2	O3	NO2	H2S	Site
Number	Name	ppb	ppb	ppb	ppb	Legal
Duplicates						
2a	Bay Tree		21.0			
2b	Bay Tree		22.7			
12a	Hythe			0.8		
12b	Hythe			0.7		
14a	Sylvester	0.1				
14b	Sylvester	0.2				
16a	Beaverlodge	0.2				
16b	Beaverlodge	0.2				
25a	Pinto Creek			0.6		
25b	Pinto Creek			0.5		
64a	Girouxville 4				0.3	
64b	Girouxville 4				0.3	
2	Bay Tree	0.1	21.8	0.4		13-16-078-13 W6M
3	Fourth Creek	0.3		0.3		04-13-082-07 W6M
9	Spirit River	0.3		0.3		08-12-079-07 W6M
12	Hythe	0.2		0.8		14-36-072-11 W6M
14	Sylvester	0.1		0.3		08-06-069-12 W6M
16	Beaverlodge	0.2		0.9		15-36-071-10 W6M
18	Saddle Hills	0.5		0.3		04-25-074-07 W6M
19	Wanham	0.1		0.5		16-22-077-03 W6M
21	Eaglesham	0.2		0.5		16-21-079-25 W5M
24	Wembley	0.2		0.9		12-31-070-08 W6M
25	Pinto Creek	0.1		0.5		04-24-069-11 W6M
27	Grande Prairie I	0.3		1.9		08-15-071-06 W6M
29	Smoky Heights	0.5		0.6		04-06-075-02 W6M
30	Fitzsimmons	0.1		Missing		15-36-072-03 W6M
32	Gold Creek	0.5		1.1		06-33-067-05 W6M
35	Jean Cote	0.2		0.8		12-35-079-21 W5M
36	Guy	0.1		0.9	0.1	03-04-076-22 W5M
37	Crooked Creek	0.2	24.2	0.5		16-01-071-26 W5M
39	Clouston Creek	0.2		0.5		12-01-073-22 W5M
40	McLennan	0.2		0.6		03-29-077-19 W5M
42	Sunset House	0.6		0.3		05-32-070-19 W5M
44	Peavine	0.2		0.2		03-05-079-15 W5M
46	Little Smoky	0.1		0.9		12-01-065-21 W5M
47	Kinuso	0.1	22.3	0.4		12-10-073-10 W5M
49	Grande Prairie HP	0.2		1.6		17-26-071-06 W6M
50	East Prairie	0.1		0.2		13-02-072-15 W5M
63	Girouxville 3				0.3	14-02-077-23 W5M
64	Girouxville 4				0.3	4-08-077-22 W5M

*BDL = Below Detection Level

*N/S - No sample

Passive Summary for July 2018

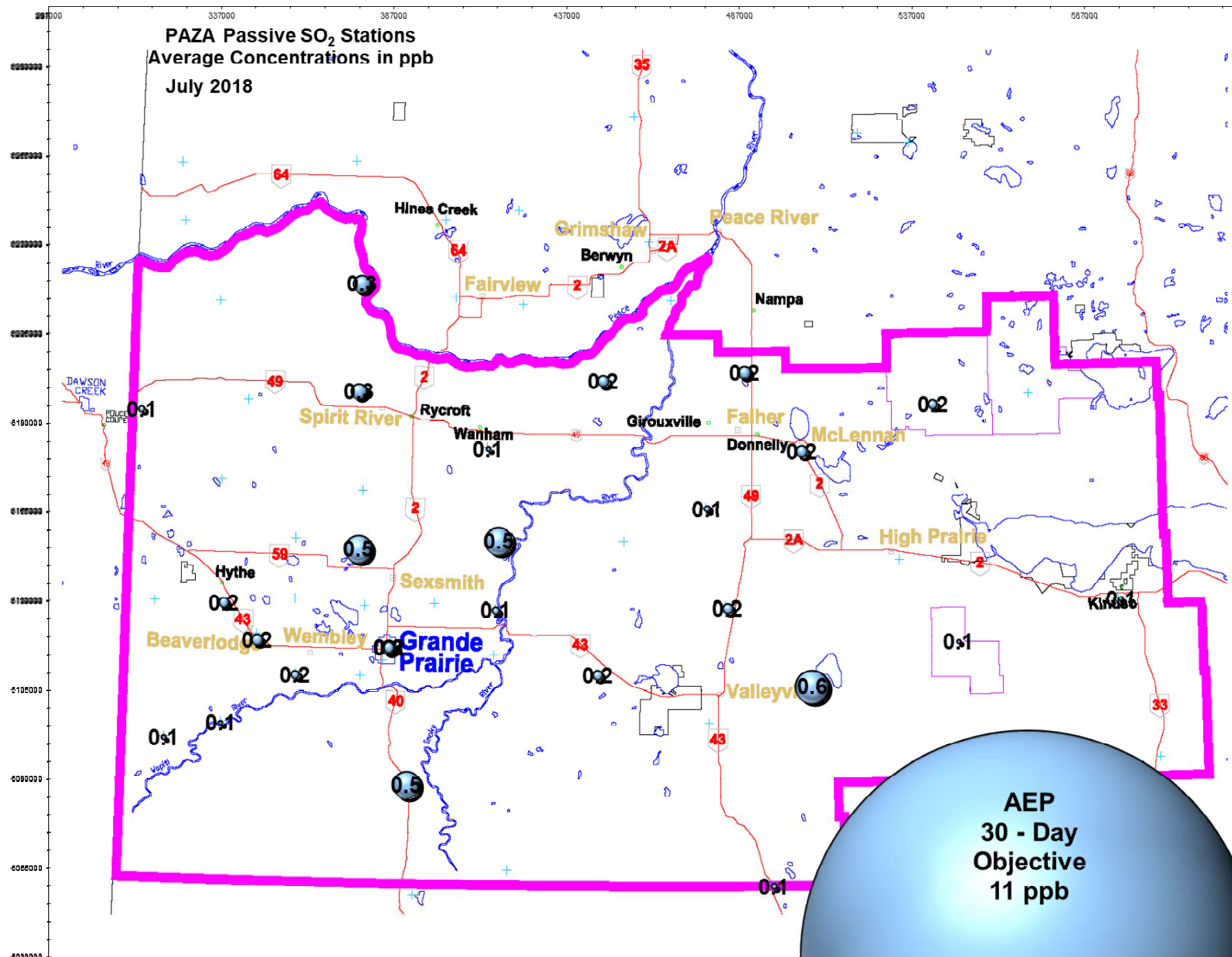
Stats	Sulphur Dioxide SO ₂	Ozone O ₃	Nitrogen Dioxide NO ₂	Hydrogen Sulphide H ₂ S
	ppb	ppb	ppb	ppb
Passive Summary for July 2018 (PAZA Zone)				
Mean	0.2	22.8	0.6	0.2
Standard Deviation	0.1	1.3	0.4	0.1
Minimum	0.1	21.8	0.2	0.1
Minimum At	East Prairie (#50)	Bay Tree (#2)	Peavine (#44)	Guy (#36)
Maximum	0.6	24.2	1.9	0.3
Maximum At	Sunset House (#42)	Crooked Creek (#37)	Grande Prairie I (#27)	Girouxville 4 (#64a)

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

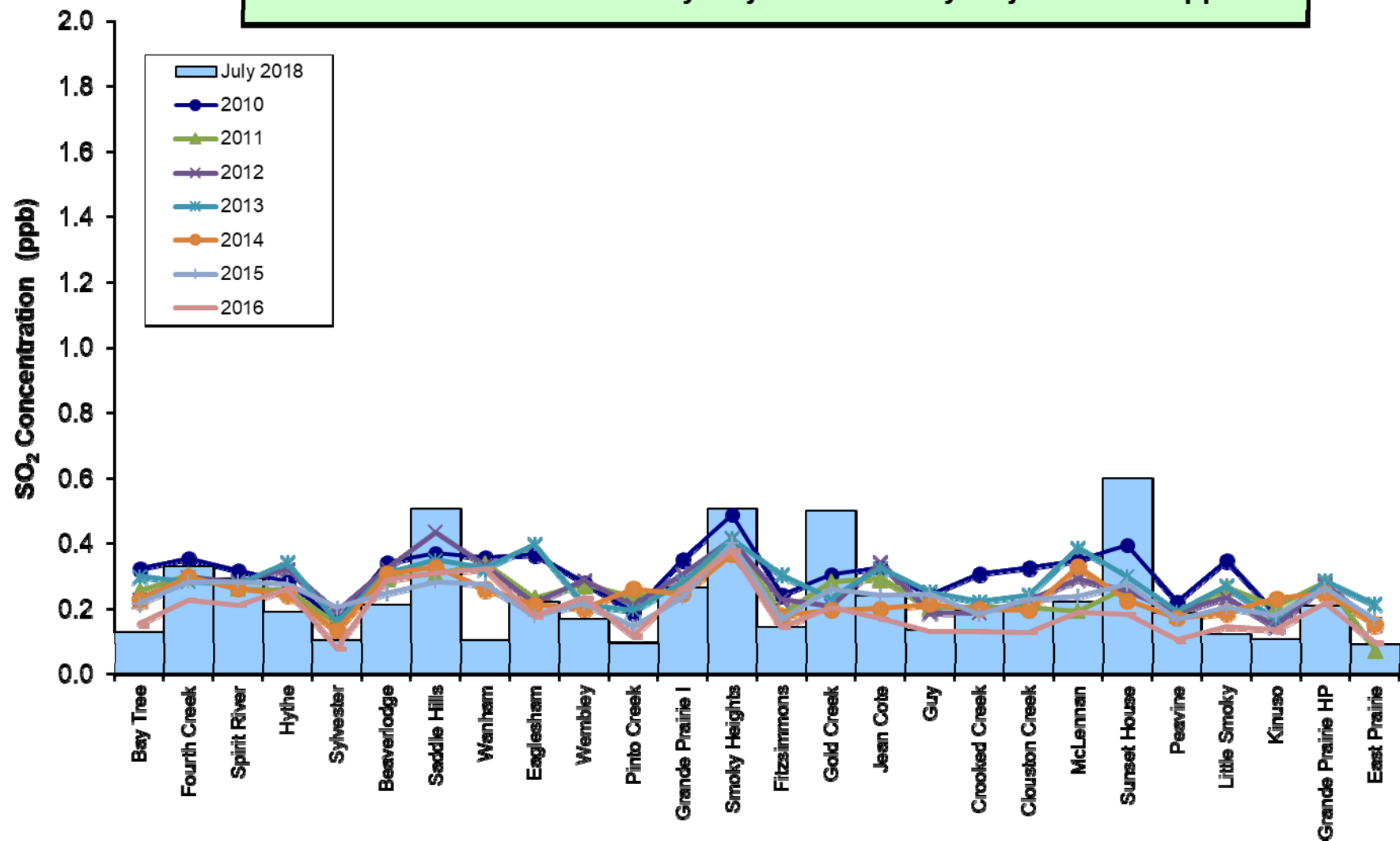
	SO ₂	NO ₂
'A Beaverlodge station	0.3	2.3
A Beaverlodge passive	0.2	0.9

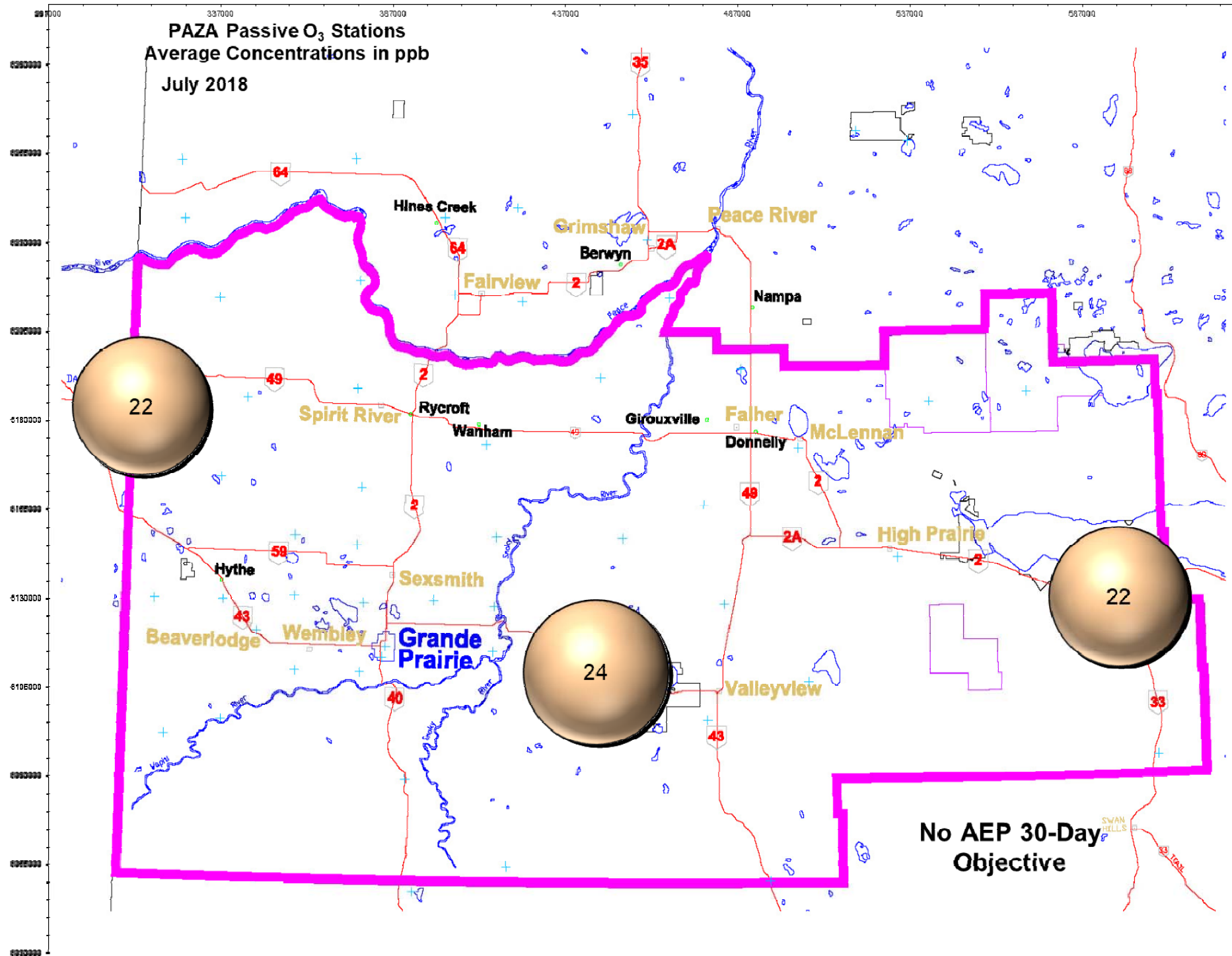
Comparison between Continuous and Passive monitoring at Henry Pirker (passive #49 Grande Prairie HP)

	SO ₂	NO ₂
'A Henry Pirker station	0.3	5.3
Grande Prairie passive	0.3	1.9

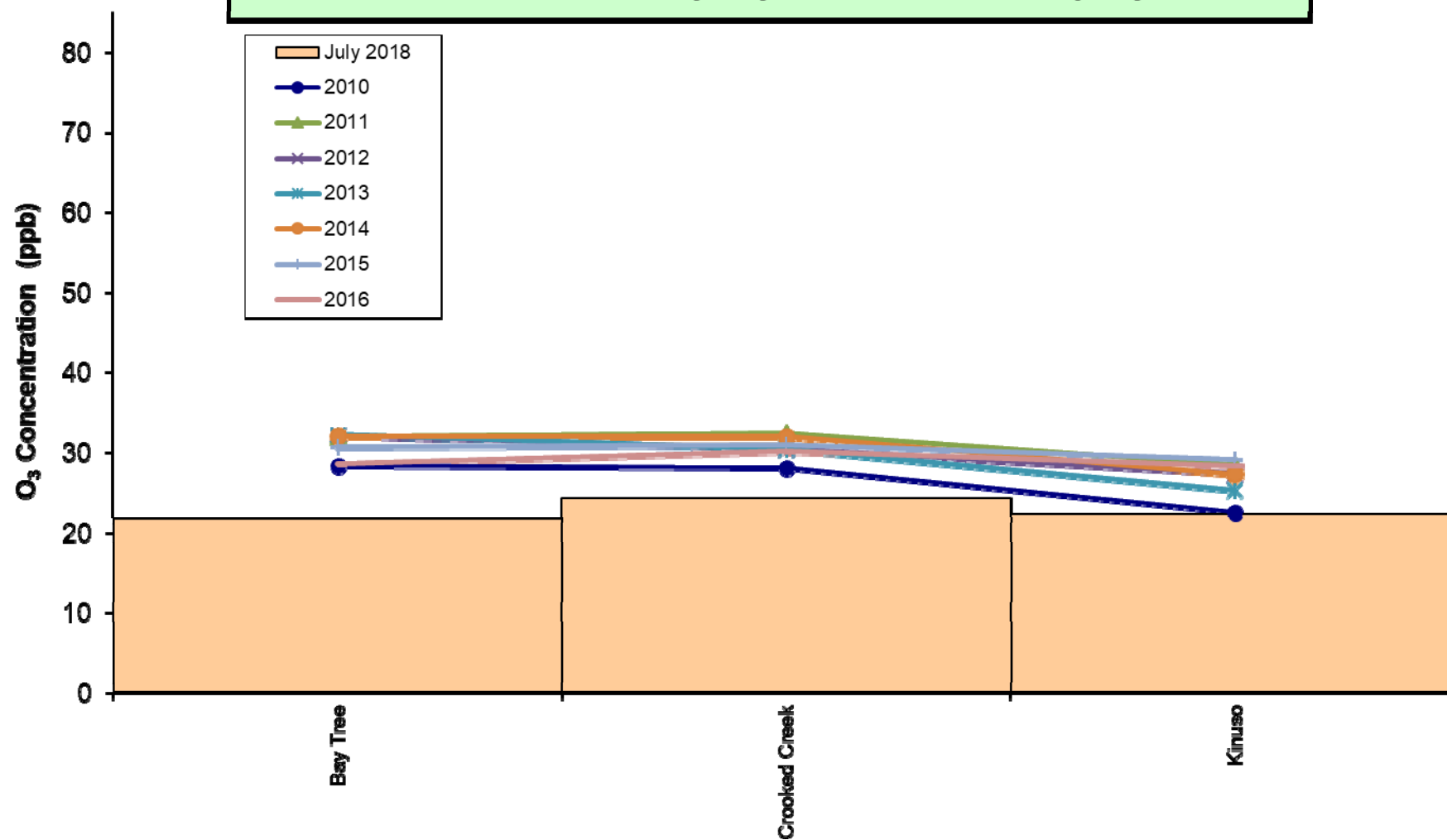


Alberta Ambient Air Quality Objective - 30-day Objective is 11 ppb

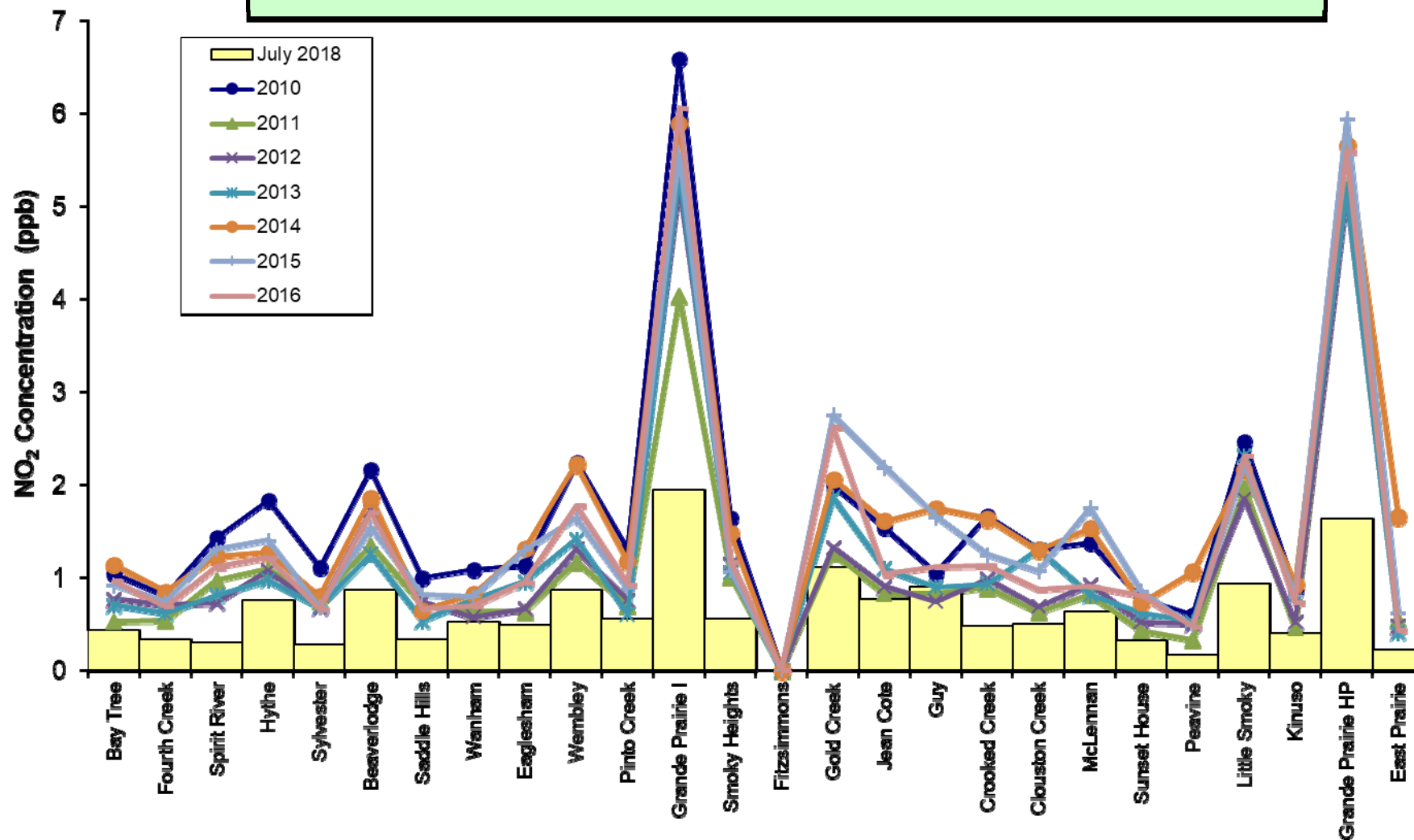


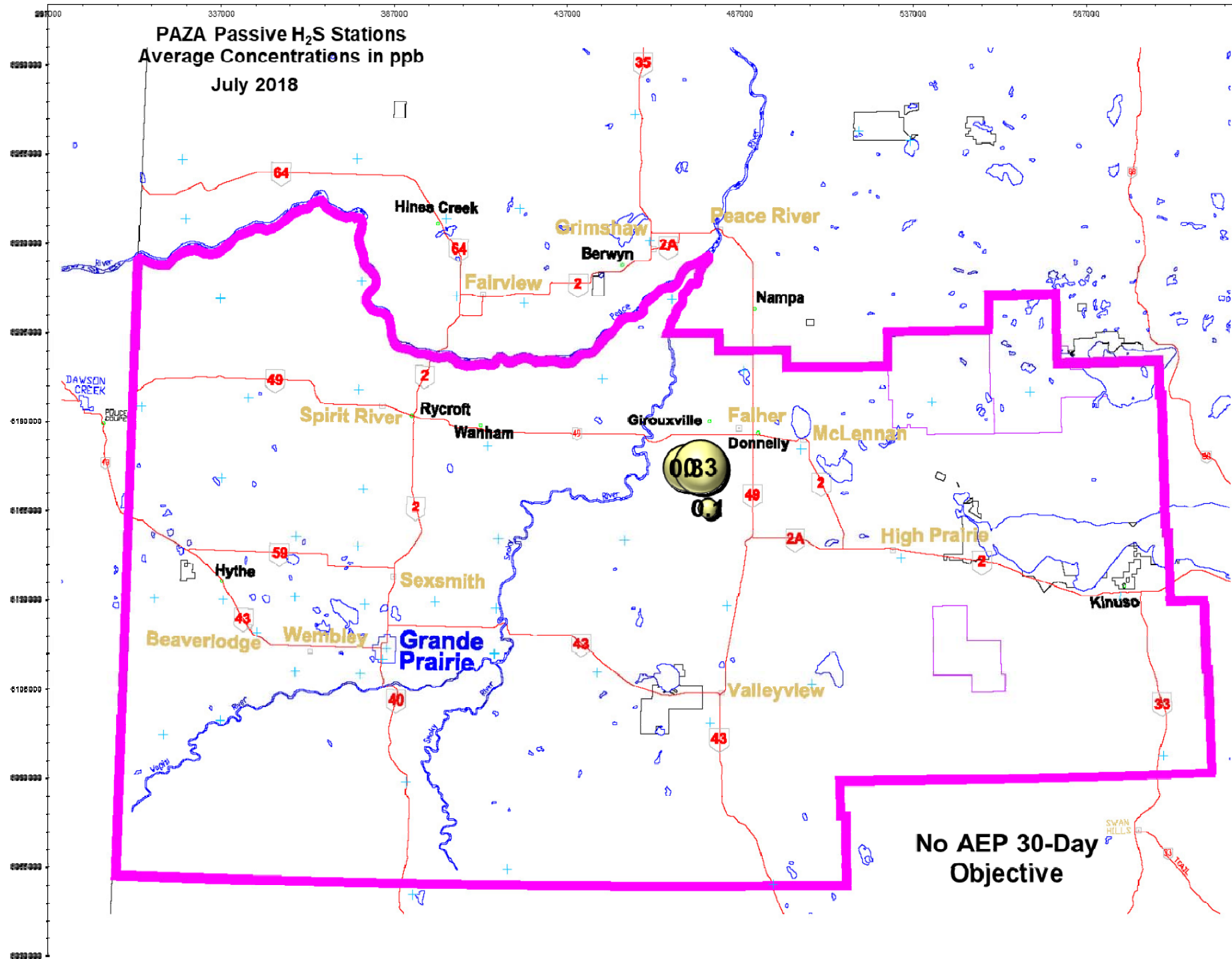


Alberta Ambient Air Quality Objective - No Annual O₃ Objective



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





July 2018 Calibration Reports

Calibration Report



Parameter SO2

Air Monitoring Network PAZA

Station Information

Calibration Date	July 18, 2018	Previous Calibration	June 12, 2018
Station Number	4	Station Location	Beaverlodge
Reason:	Routine	Install	Removal
Start Time (MST)	13:30:00 PM	End Time (MST)	16:25
Barometric Pressure	0.921 atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3016
Cal Gas Concentratio	10.1 ppm	Cal Gas Expiry Date	21/02/2021
Gas Cert Reference	EX0012231		
DACS make	CR3000	DACS serial No.	5237
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.962062	Calculated slope	0.999787
Calculated intercept	-0.511897	Calculated intercept	0.279901
Analyzer make	TEI Model 43i-TLE	Analyzer serial #	713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.89		2.86	
Coefficient	0.975		0.975	
PMT	-768.2	V	-768.2	V
UV Lamp Voltage	1123	V	1115	V
Chamber Temp	45	Deg C	45	Deg C
Pressure	659.5	mm Hg	664.9	mm Hg
Sample Flow	0.505	LPM	0.502	LPM
Lamp Intensity	94	%	94	%

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	0.0	N/A
4995	39.94	80.1	79.9	1.0022
4995	19.97	40.2	39.9	1.0073
4995	9.97	20.1	19.5	1.0310
4995	0.00	0.0	0.0	As found zero
4995	39.94	80.1	80.0	As found span
Average Correction Factor				1.0135

Calculated value of As Found Response: 76.429 ppm Percent Change of As Found: 4.6%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.3	ppb
Auto span	58.7	ppb	60.5	ppb

Notes: No adjustment made

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



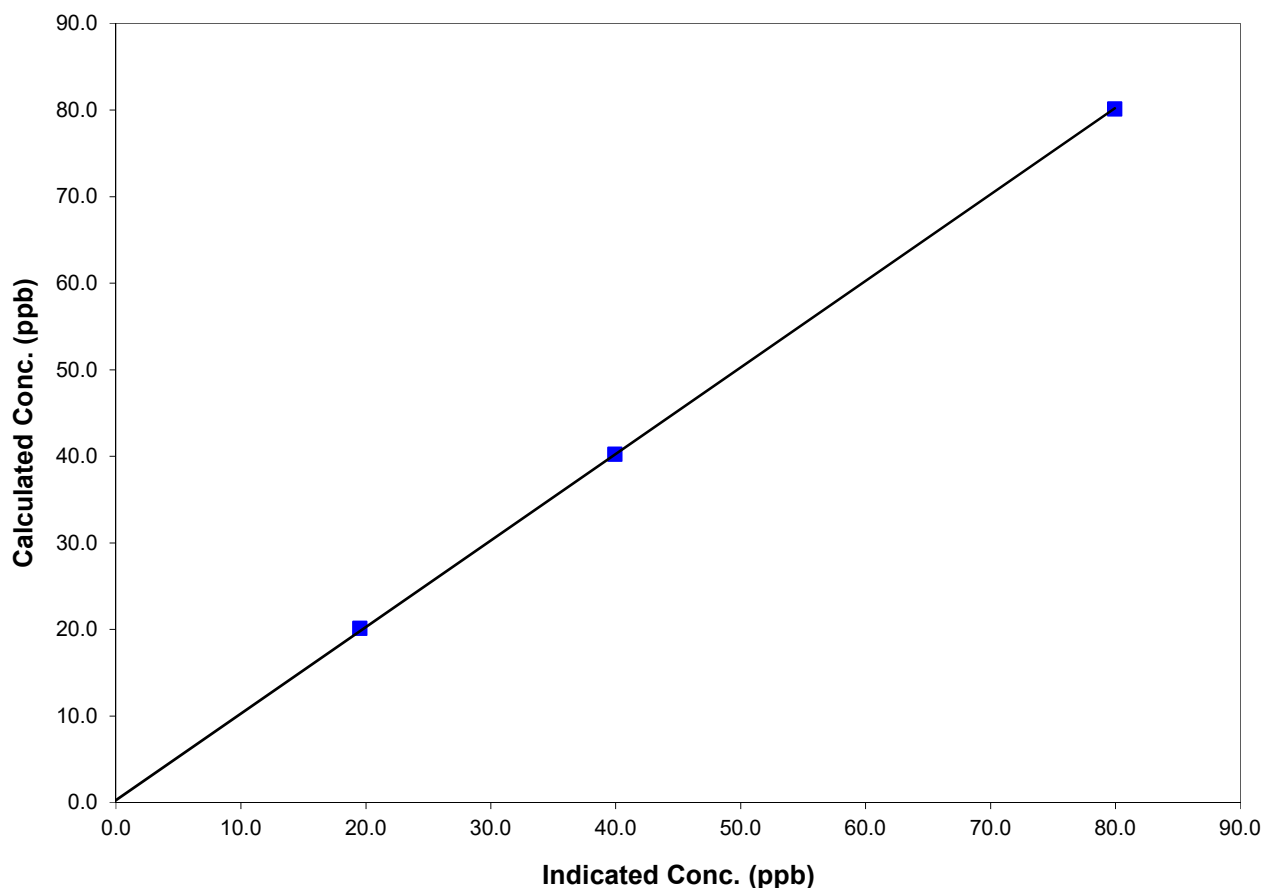
Station Information

Calibration Date	July 18, 2018	Previous Calibration	June 12, 2018
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	13:30:00 PM	End Time (MST)	16:25
Analyzer make/model	TEI Model 43i-TLE	Analyzer serial #	713021137

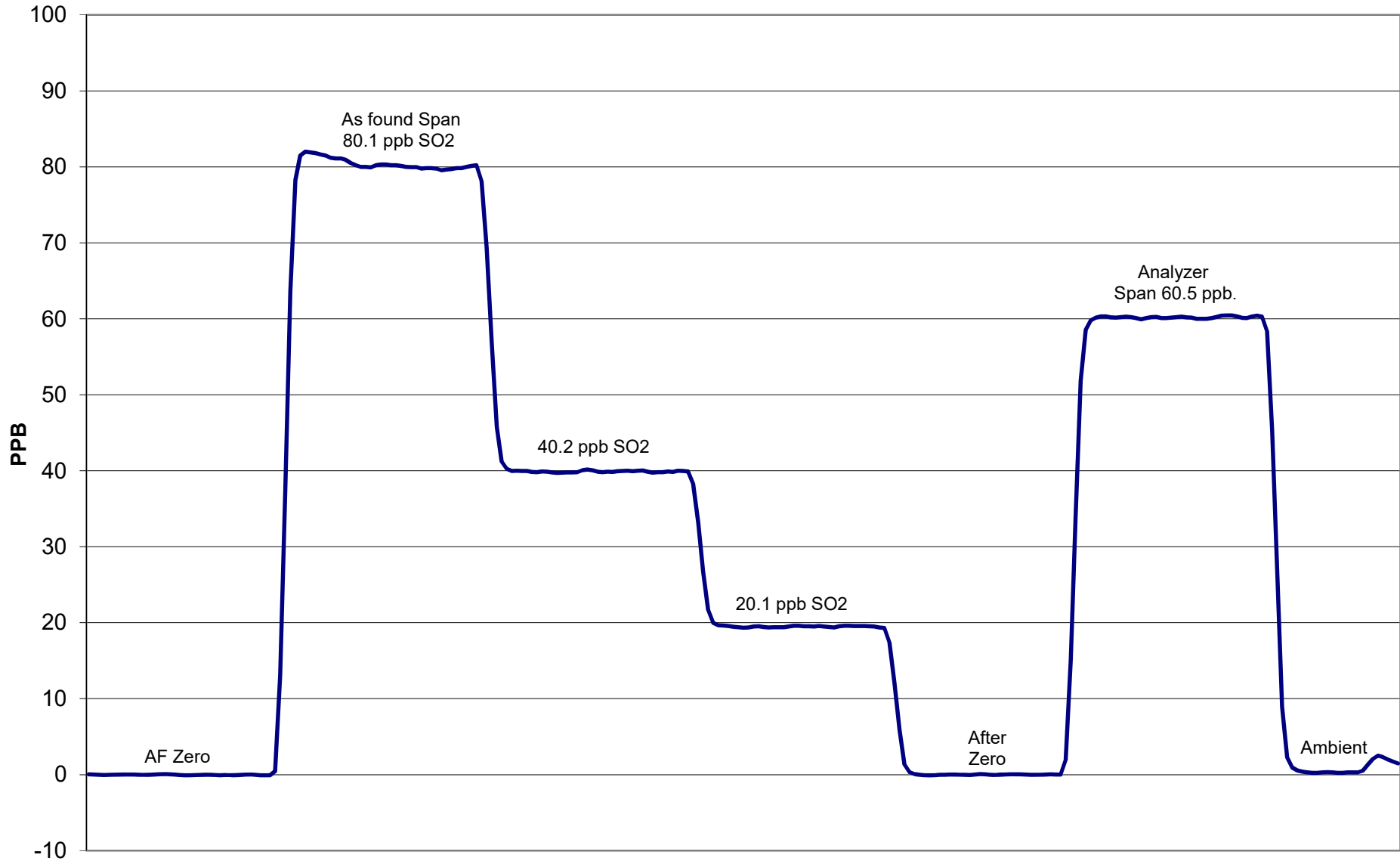
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999948
80.1	79.9	1.0022		
40.2	39.9	1.0073		
20.1	19.5	1.0310		
			Slope	0.999787
			Intercept	0.279901

SO2 Calibration Curve



SO2 Calibration



July 18, 2018

Calibration Report

Parameter
Air Monitoring Network

NO_x-NO-NO₂
PAZA



Station Information

Calibration Date	July 18, 2018	Previous Calibration	June 12, 2018
Station Number	4	Station Location	Beaverlodge
Reason:	Routine	Installation	Removal
Start Time (MST)	8:55	End Time (MST)	13:00
Barometric Pressure	0.921 Atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3016
NO Cal Gas Conc	50.4 ppm	Cal Gas Expiry Date	10/24/2020
NOx Cal Gas Conc	50.5 ppm	Cal Gas Serial #	LL107945

DACS Information

DACS make	CR3000	DACS serial No.	5237
	Parameter	NO2	NOx
Before	Data Slope	1.002208	0.971335
	Data Offset	0.188947	0.754676
After	Data Slope	1.004192	0.992381
	Data Offset	0.515860	2.517663
	Channel #	8	6
	Voltage Range	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model	TEI 42i	Analyzer serial #	906535068
Test Point	before		after
Concentration range	0-500	ppb	0-500
NO offset	2.3	mV	2.3
NOx bkgnd	2.7	mV	2.7
NO coefficient	1.037		1.037
NOx coefficient	0.999		0.999
NO2 conv temp	325.0	Deg C	325.0
PMT Temp	-3.0	Deg C	-3.0
PMT Volt	-728.5	mV	-728.5
R Cell Press	185.5	in Hg	185.5
Sample Flow	0.780	LPM	0.780

Notes: No adjustments made.

Calibration Report

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



Station Information

Calibration Date: July 18, 2018 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	0.2	-0.1	0.1	N/A	N/A
1	4995	39.94	400.6	399.8	0.8	402.4	401.9	-0.2	0.9954	0.9948
2	4995	19.97	201.1	200.7	0.4	198.8	198.3	-0.4	1.0117	1.0123
3	4995	9.97	100.6	100.4	0.2	96.1	96.1	-0.1	1.0469	1.0452
AFZ	4995	0.00	0.0	0.0	0.0	0.3	-0.1	0.1	0.0000	0.0000
AFS	4995	39.94	400.6	399.8	0.8	402.5	402.0	-0.3	0.9954	0.9946
Average Correction Factor									1.0180	1.0174

As Found Concentrations: NO_x= 391.4 NO= 390.9 As Found Percent Change NO_x= -2.3% NO= -2.2%

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	-0.1	-0.1	0.0	0.2	-0.1	0.1	N/A	N/A	N/A	N/A
NO point	402.1	402.1	0.0	402.0	402.1	-0.8	1.0002	1.0000	N/A	N/A
300	402.1	99.5	302.6	401.5	99.5	301.4	1.0015	1.0000	1.0040	99.6%
200	402.1	194.8	207.3	401.1	194.8	205.5	1.0024	1.0000	1.0087	99.1%
100	402.1	289.6	112.5	401.0	289.6	110.7	1.0028	1.0000	1.0159	98.4%
Average Correction Factor							1.0022	1.0000	1.0095	99.1%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.1	0.1	-0.1	ppb	0.0	-0.1	-0.1	ppb
Auto span	301.2	298.0	2.5	ppb	279.4	276.2	2.4	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



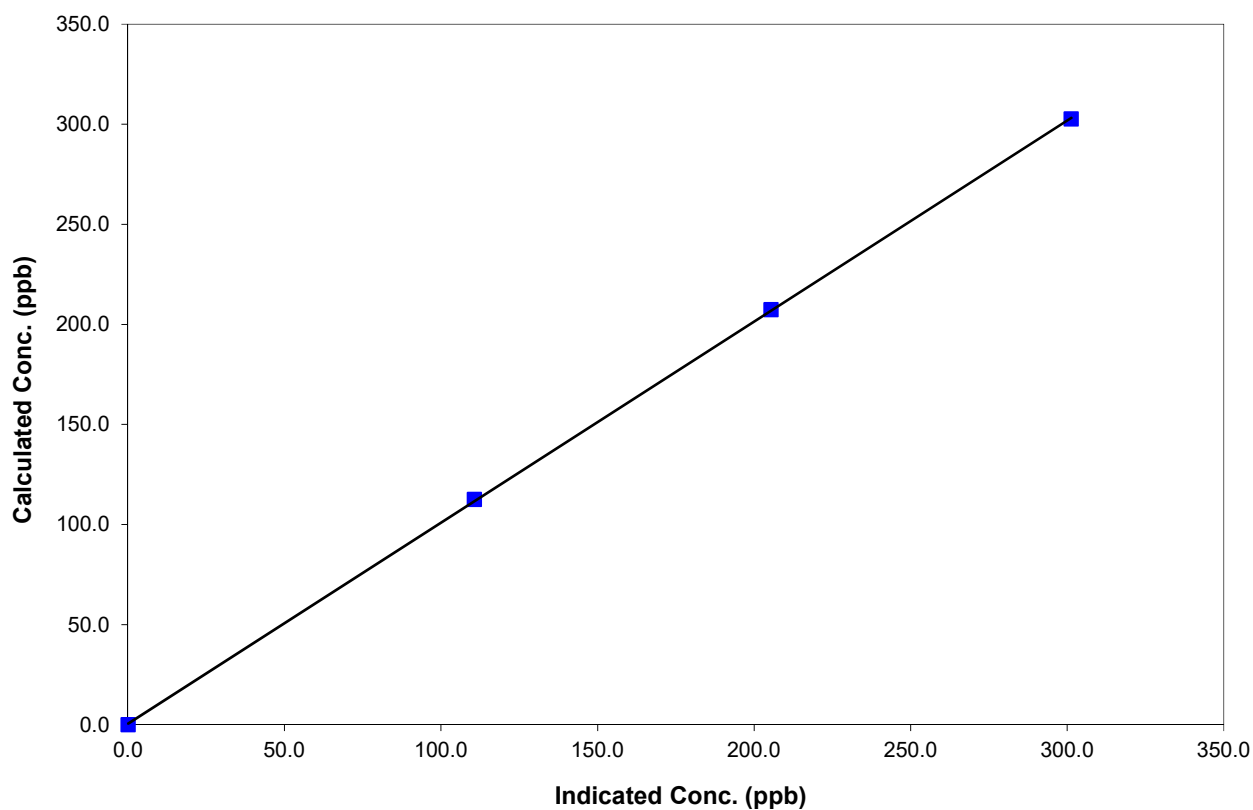
Station Information

Calibration Date	July 18, 2018	Previous Calibration	June 12, 2018
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:55	End Time (MST)	13:00
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	0.999971
302.6	301.4	1.0040		
207.3	205.5	1.0087		
112.5	110.7	1.0159	Slope	1.004192
			Intercept	0.515860

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



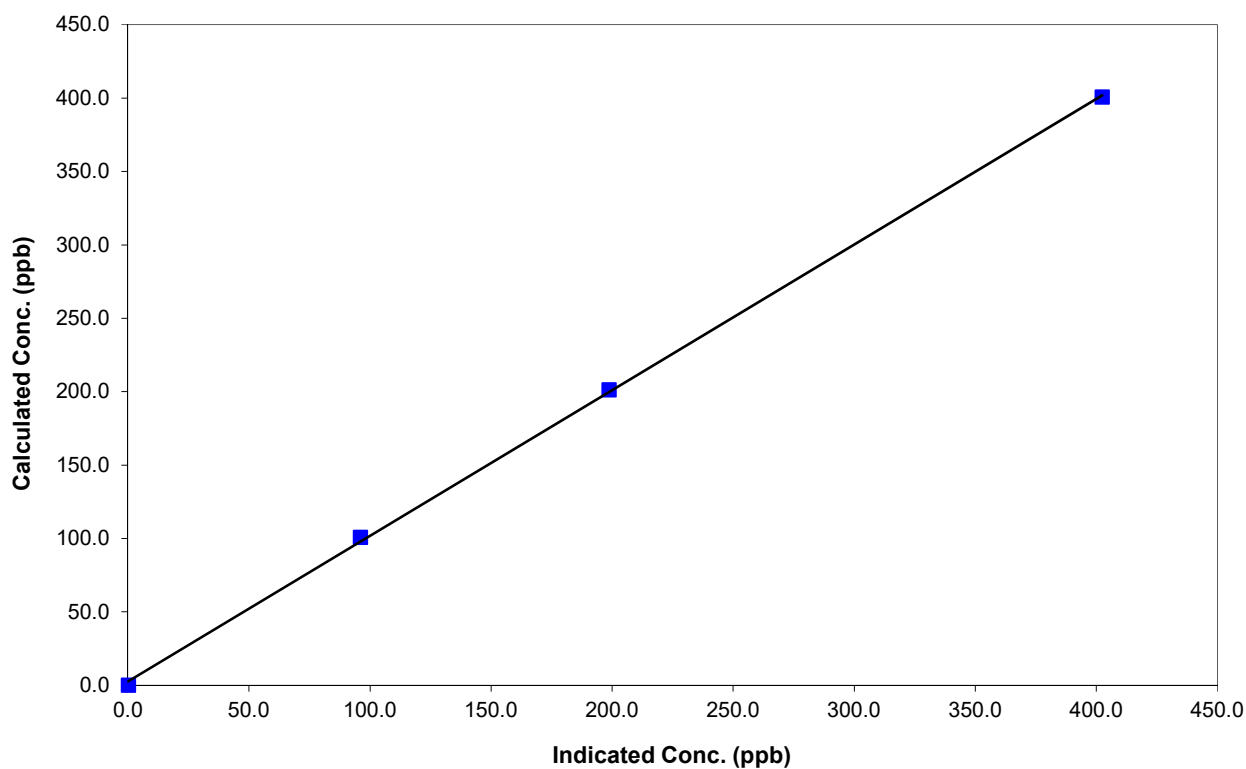
Station Information

Calibration Date	July 18, 2018	Previous Calibration	June 12, 2018
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:55	End Time (MST)	13:00
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999791
400.6	402.4	0.9954		
201.1	198.8	1.0117		
100.6	96.1	1.0469	Slope	0.992381
			Intercept	2.517663

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



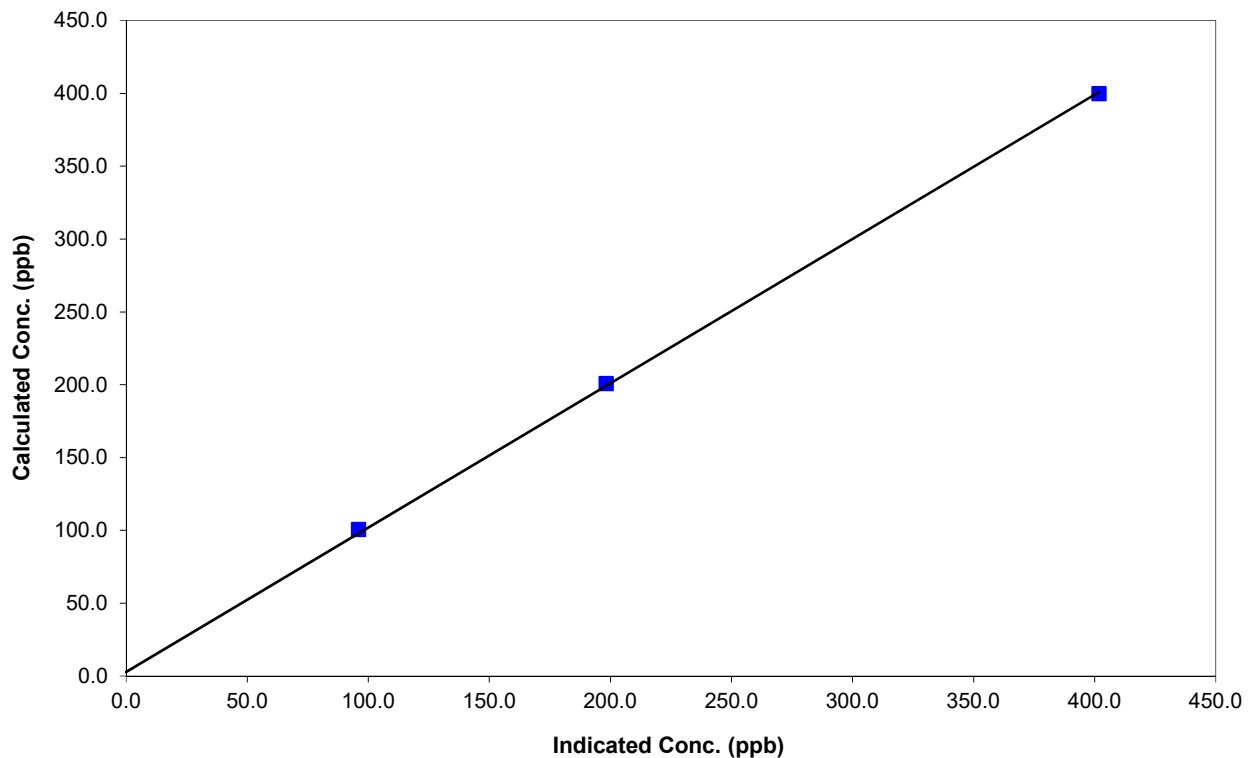
Station Information

Calibration Date	July 18, 2018	Previous Calibration	June 12, 2018
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:55	End Time (MST)	13:00
Analyzer make	TEI 42i	Analyzer serial #	906535068

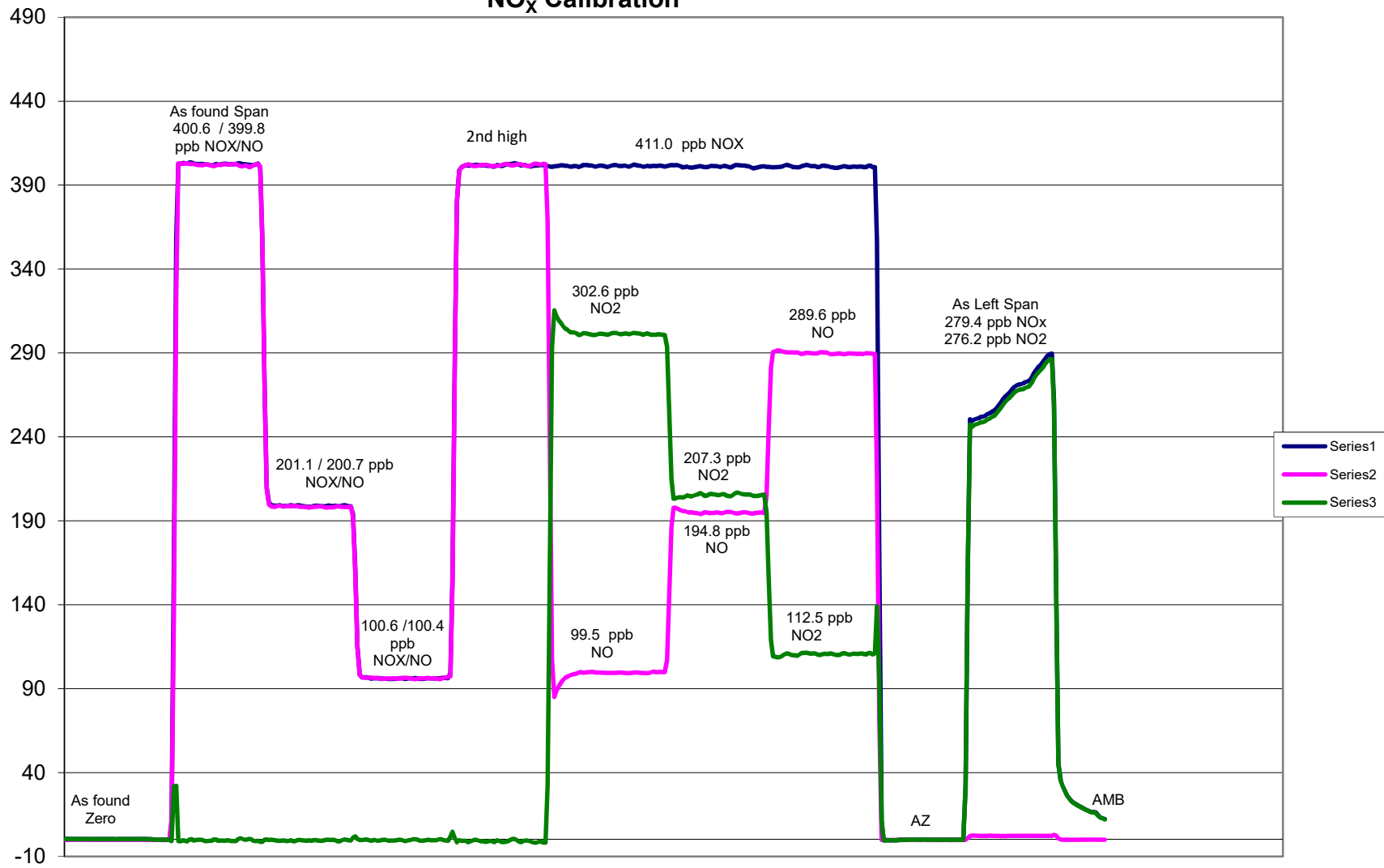
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A		
399.8	401.9	0.9948	Correlation Coefficient	0.999808
200.7	198.3	1.0123		
100.4	96.1	1.0452	Slope	0.991352
			Intercept	2.697370

NO Calibration Curve



NO_x Calibration



July 18, 2018

Calibration Report

Parameter 03

Air Monitoring Network PAZA



Station Information

Calibration Date	July 18, 2018	Previous Calibration	June 12, 2018
Station Number	4	Station Location	Beaverlodge
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	12:10	End Time (MST)	15:00
Barometric Pressure	0.921 atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6103	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	1.001334	Calculated slope	0.995299
Calculated intercept	-0.191343	Calculated intercept	0.669447

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

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-0.50	ppb	-0.50	ppb
slope	1.021		1.021	
Lamp temp	53.9	mV	53.9	mV
Lamp Intensity A/B	65583/76488	mV	65583/76488	mV
Pressure	676	mm Hg	676	mm Hg
Flow A	0.771	LPM	0.771	LPM
Flow B	0.730	LPM	0.730	LPM

Calibration Data

Dilution air flow rate (cc/min)	Calibrator Setting	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5032	0.00	0.0	0.1	N/A
5032	0.30	302.6	304.0	0.9953
5032	0.20	207.3	207.2	1.0007
5032	0.10	112.5	111.3	1.0106
5032				
5032	0.00	0.0	0.1	As found zero
5032	0.30	302.6	304.0	As found span
Average Correction Factor				1.0022

Calculated value of As Found Response: 304.1 ppm Percent Change of As Found: 0.5%

	before calibration		after calibration	
Auto zero	0.5	ppb	0.1	ppb
Auto span	286.7	ppb	280.8	ppb

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter O3

Air Monitoring Network PAZA



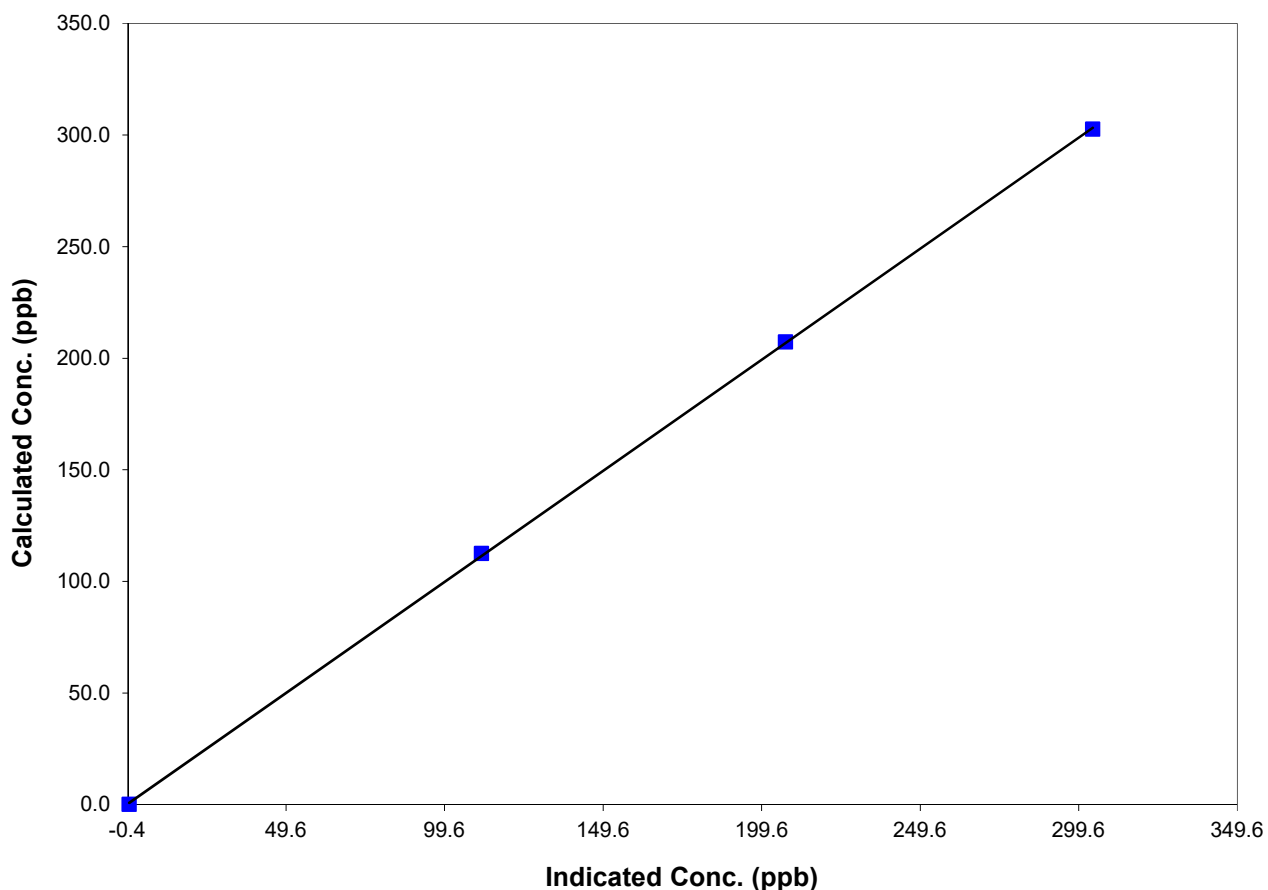
Station Information

Calibration Date	July 18, 2018	Previous Calibration	June 12, 2018
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	12:10	End Time (MST)	15:00
Analyzer make/model	Teco 49i	Analyzer serial #	1136451236,AMU 1879

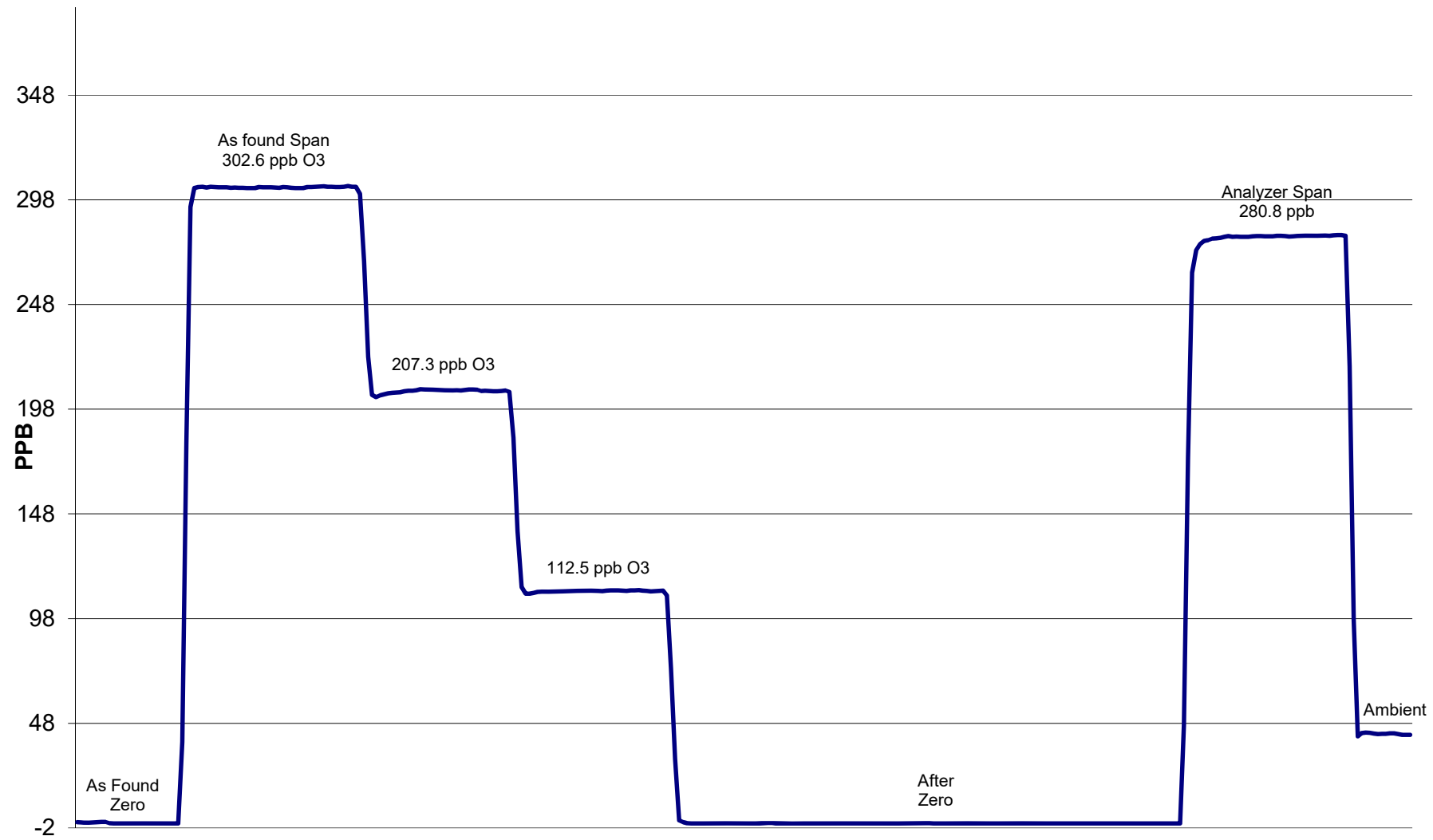
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	NA	Correlation Coefficient	0.999953
302.6	304.0	0.9953		
207.3	207.2	1.0007		
112.5	111.3	1.0106	Slope	0.995299
			Intercept	0.669447

O3 Calibration Curve



O3 Calibration



July 18, 2018

Calibration Report

Parameter SO2

Air Monitoring Network PAZA



Station Information

Calibration Date	July 10, 2018	Previous Calibration	June 6, 2018
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	

Start Time (MST)	10:30	End Time (MST)	14:40:00 PM
Barometric Pressure	923.0 mbar	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Conc	49.6 ppm	Cal Gas Cert Date	10/24/2020
		Cal Gas Cylinder #	LL107945
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	10
	Before		After
Calculated slope	0.993028	Calculated slope	0.997780
Calculated intercept	2.157216	Calculated intercept	-0.161790

Analyzer make TEI 43I-TLE Analyzer serial # 1507864682 (AMU 2006)

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	1.38		1.32	
Coefficient	0.884		0.849	
Pressure	671.0	mm Hg	669.4	mm Hg
Flow	0.442	lpm	0.442	lpm
Lamp intensity	92	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)
4995	0.00	0.0	0.1	N/A
4995	39.99	393.9	394.7	0.9981
4995	19.97	197.5	198.9	0.9931
4995	9.98	98.9	98.8	1.0006
4995	0.00	0.0	0.1	As Found Zero
4995	39.97	393.7	401.4	As Found Span
Average Correction Factor				0.9972

Calculated value of As Found Response: 400.6 ppb Percent Change of As Found: -1.8%

	before calibration		after calibration	
Auto zero	-0.7	ppb	0.1	ppb
Auto span	278.5	ppb	276.2	ppb

Notes: Span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2
Air Monitoring Network PAZA



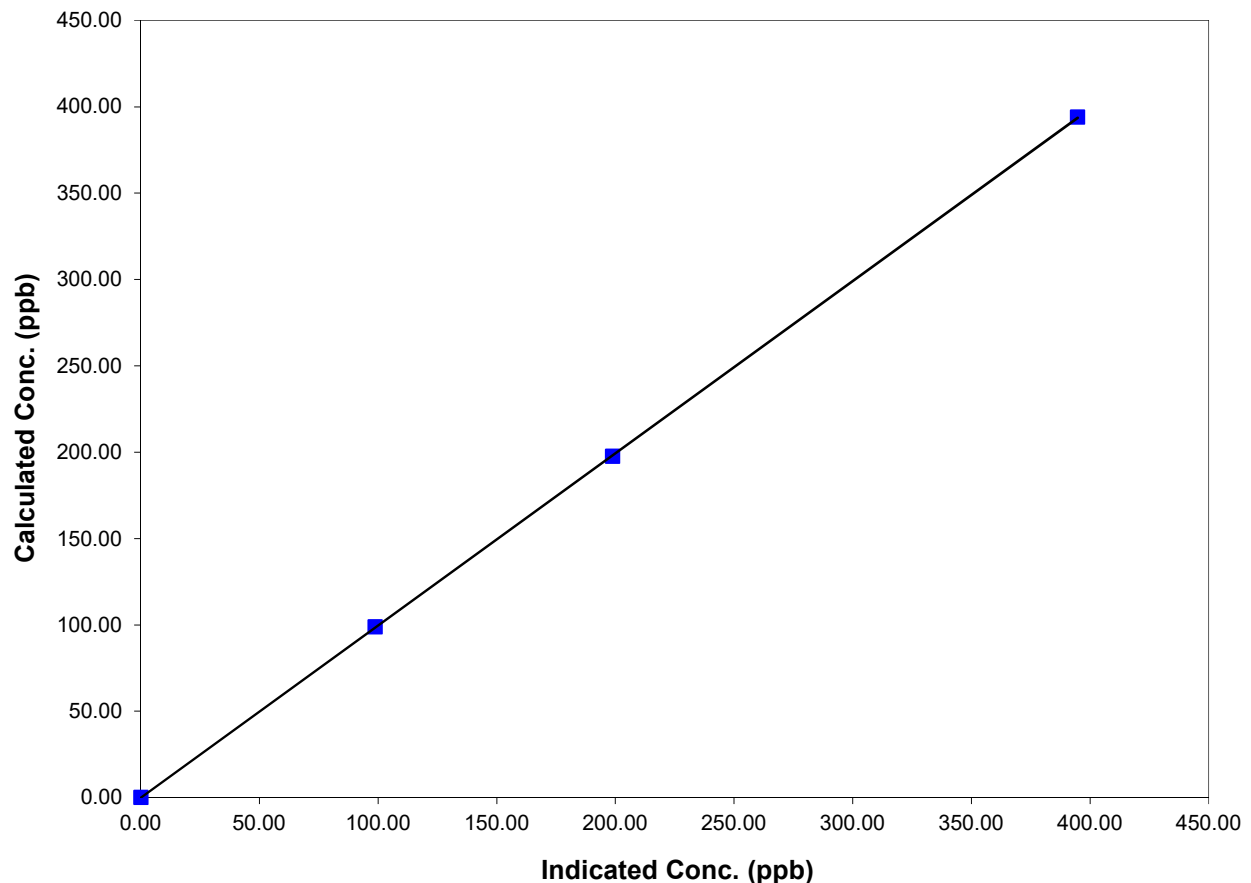
Station Information

Calibration Date	July 10, 2018	Previous Calibration	June 6, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:30	End Time (MST)	14:40:00 PM
Analyzer make/model	TEI 43I-TLE	Analyzer serial #	1507864682 (AMU 2006)

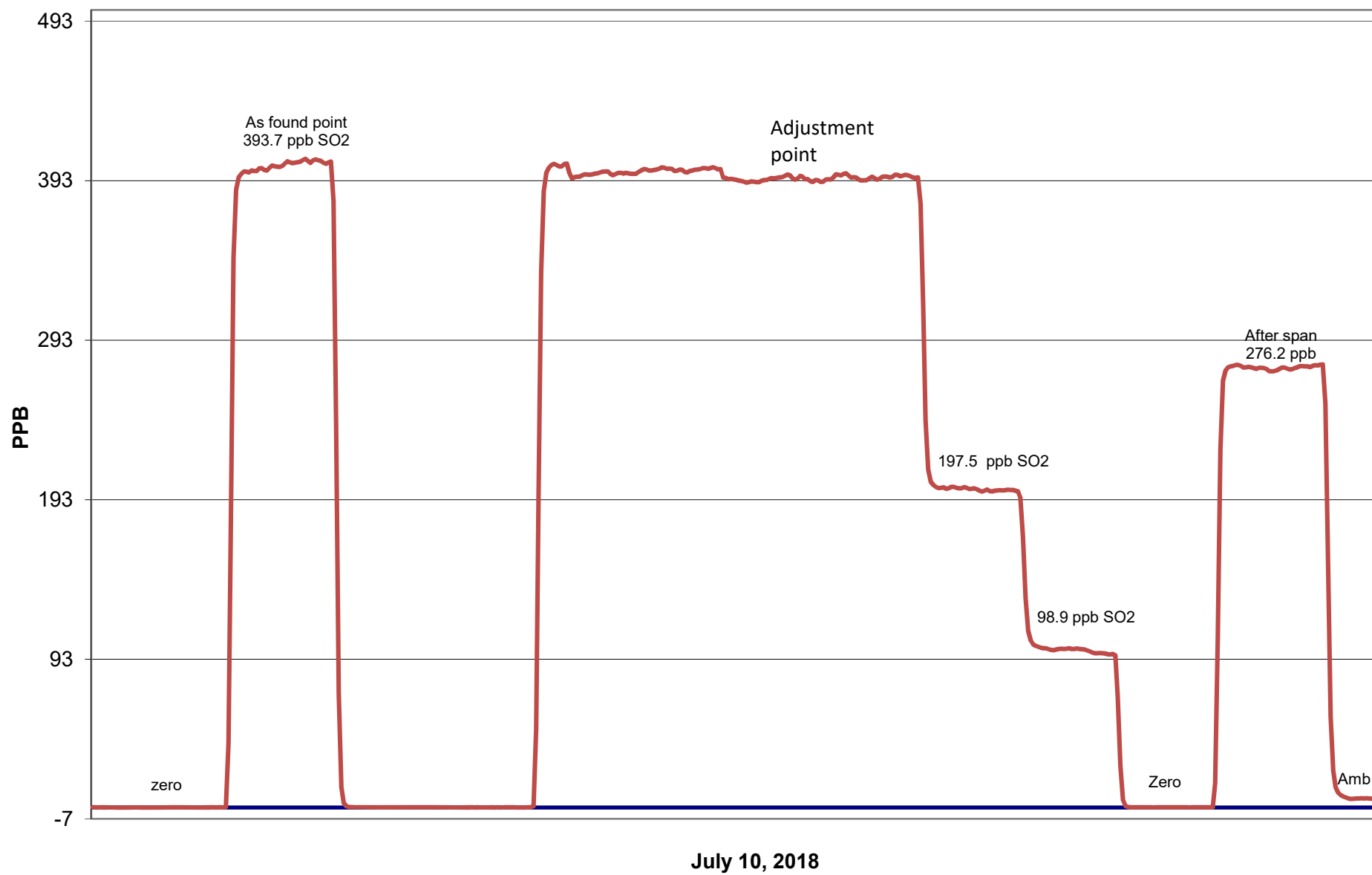
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999990
393.9	394.7	0.9981		
197.5	198.9	0.9931		
98.9	98.8	1.0006	Slope	0.997780
			Intercept	-0.161790

SO2 Calibration Curve



SO2 Calibration



Calibration Report

Parameter H2S
Air Monitoring Network

PAZA



Station Information

Calibration Date	July 11, 2018	Previous Calibration	June 7, 2018
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	11:15	End Time (MST)	15:05:00 PM
Barometric Pressure	0.921 mBar	Station Temperature	22.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Conc	9.78 ppb	Cal Gas Expiry Date	02/28/2020
		Cal Gas Cylinder #	LL119574
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	1.007405	Calculated slope	0.999935
Calculated intercept	-0.204613	Calculated intercept	-0.451233
Analyzer make	TEI 450i	Analyzer serial #	1170050143(AMU 2198)

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Coefficient	0.862		0.862	
Background	12.7		12.7	
Pressure	555.4	mm Hg	555.8	mm Hg
Flow	0.970	ccm	0.970	ccm
Lamp Voltage	782	V	783	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)
4997	0.00	0.00	0.63	N/A
4997	39.98	77.63	78.17	0.9931
4998	19.97	38.92	39.25	0.9916
6997	9.98	13.93	14.24	0.9779
4997	0.00	0.00	0.63	As Found Zero
4997	41.20	79.98	78.17	As Found Span
Average Correction Factor				0.9875

Calculated value of As Found Response: 77.9 ppb Percent Change of As Found: 2.6%

	before calibration		after calibration	
Auto zero	0.55	ppb	0.63	ppb
Auto span	28.62	ppb	30.73	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter H2S

Air Monitoring Network PAZA



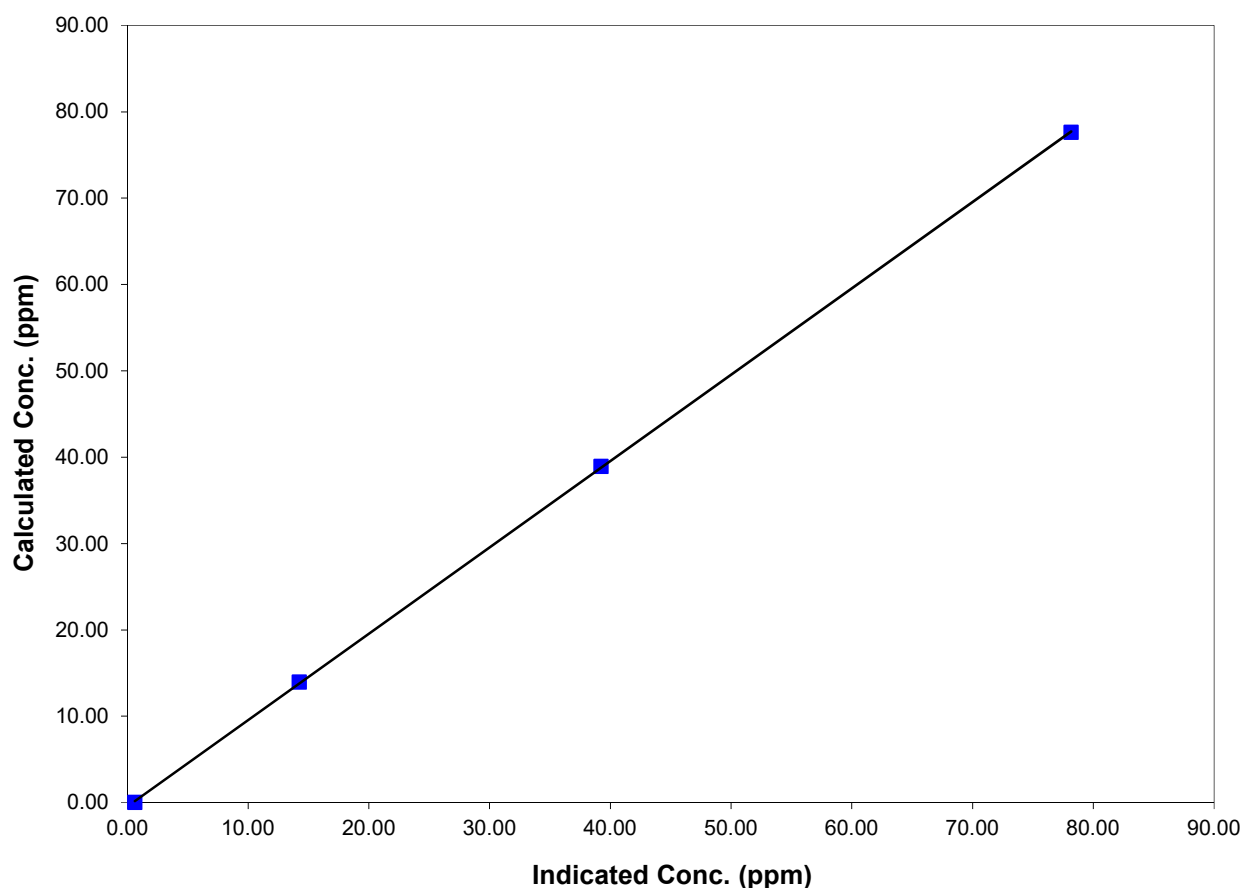
Station Information

Calibration Date	July 11, 2018	Previous Calibration	June 7, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	11:15	End Time (MST)	15:05:00 PM
Analyzer make/model	TEI 450i	Analyzer serial #	1170050143(AMU 2198)

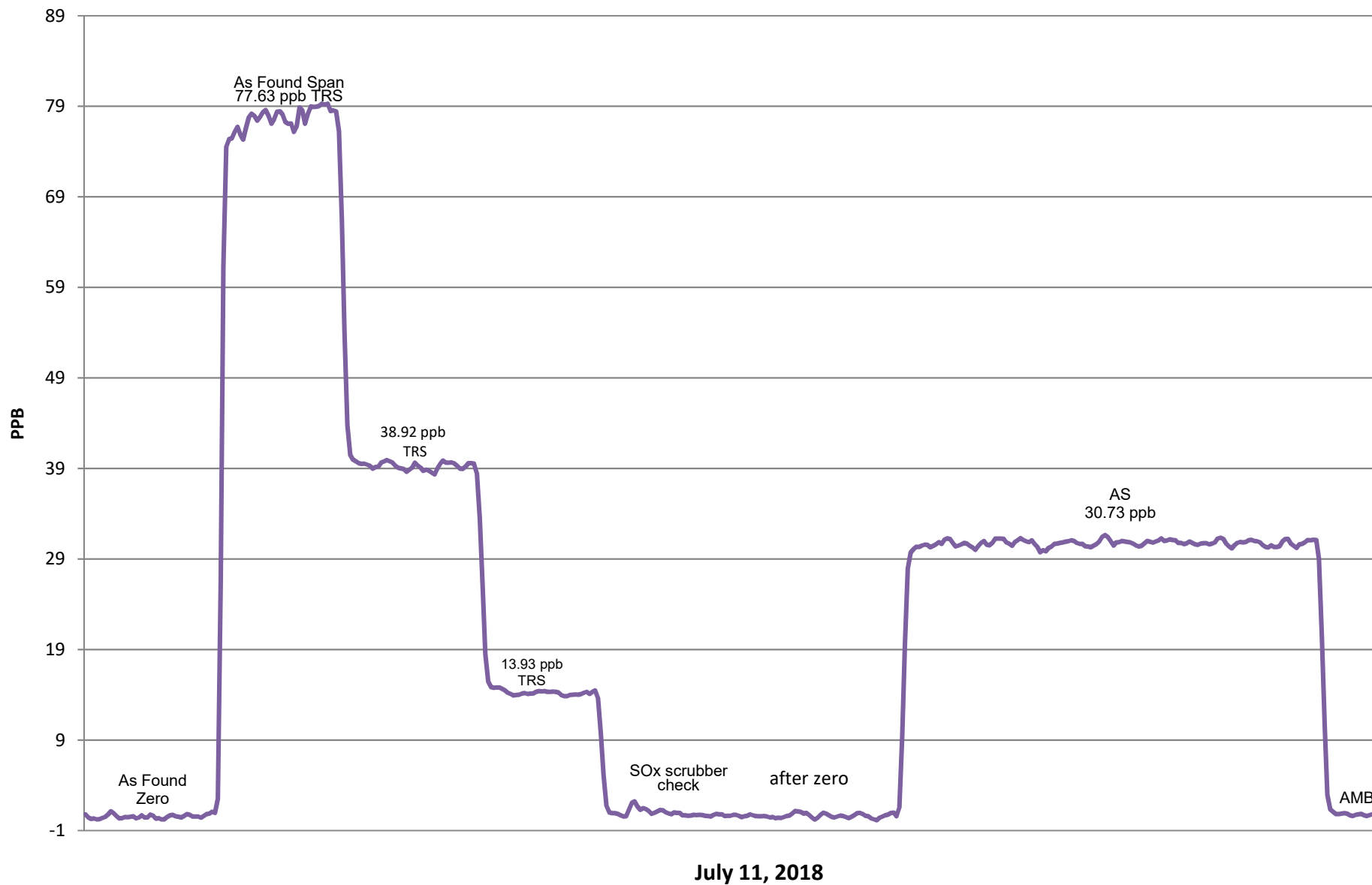
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.626	N/A	Correlation Coefficient	0.999979
77.627	78.168	0.9931		
38.921	39.253	0.9916		
13.930	14.244	0.9779	Slope	0.999935
			Intercept	-0.451233

TRS Calibration Curve



TRS Calibration



Calibration Report

Parameter
Air Monitoring Network

NO_x-NO-NO₂
PAZA



Station Information

Calibration Date	July 10, 2018	Previous Calibration	June 6, 2018
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Installation	Removal
Start Time (MST)	13:30:00 AM	End Time (MST)	15:55:00 PM
Barometric Pressure	0.923 mbar	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
NO Cal Gas Conc	51.9 ppm	Cal Gas Expiry Date	10/24/2020
NO _x Cal Gas Conc	52.0 ppm	Cal Gas Serial #	LL107945

DACS Information

DACS make	CR3000	DACS serial No.	5408
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	Parameter	NO ₂	NO _x	NO
Before	Data Slope	1.004316	1.004383	0.993944
	Data Offset	1.019704	1.345357	1.561691
After	Data Slope	1.006824	1.002613	1.000093
	Data Offset	0.615028	0.986009	0.882028
	Channel #	8	6	7
	Voltage Range	0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model	42i	Analyzer serial #	906535087
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Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	8.6	mV	7.8	mV
NO _x bkgnd	8.7	mV	8.1	mV
NO coefficient	1.135		1.107	
NO _x coefficient	1.000		0.999	
NO ₂ conv temp	327.1	Deg C	321.8	Deg C
Cooler Temp	2.7	Deg C	2.8	Deg C
PMT Volt	-844.3	mV	-834.4	mV
R Cell Press	195.3	in Hg	192.3	in Hg
Sample Flow	0.607	LPM	0.616	LPM

Notes: Replaced silica scrubber canister
PMT, zero & span adjustments made

Calibration Report

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



Station Information

Calibration Date: July 10, 2018 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	4996	0.00	0.0	0.0	0.0	-0.3	0.1	0.0	N/A	N/A
1	4996	39.97	412.7	411.9	0.8	410.9	411.4	0.0	1.0044	1.0012
2	4996	19.98	207.1	206.7	0.4	205.6	205.5	0.0	1.0074	1.0059
3	4996	10.01	104.0	103.8	0.2	101.8	101.7	0.1	1.0219	1.0202
AFZ	4996	0.00	0.0	0.0	0.0	0.0	0.1	0.1	0.0000	0.0000
AFS	4996	39.97	412.7	411.9	0.8	461.1	464.6	-0.3	0.8951	0.8866
Average Correction Factor									1.0112	1.0091

As Found Concentrations: NO_x= 464.5 NO= 463.2 As Found Percent Change NO_x= 12.5% NO= 12.4%

GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.93 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Calculated 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	-0.3	0.1	0.0	N/A	N/A	N/A	N/A
NO point	413.1	413.1	0.0	412.0	413.1	-0.2	1.0028	1.0000	N/A	N/A
300	413.1	113.0	300.1	410.9	113.0	297.8	1.0055	1.0000	1.0078	99.2%
200	413.1	212.3	200.8	411.9	212.3	198.8	1.0029	1.0000	1.0100	99.0%
100	413.1	315.3	97.8	411.7	315.3	95.6	1.0035	1.0000	1.0233	97.7%
Average Correction Factor							1.0039	1.0000	1.0137	98.7%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.0	0.0	0.1	ppb	0.0	0.0	0.2	ppb
Auto span	280.1	278.0	1.9	ppb	264.6	262.0	2.5	ppb

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



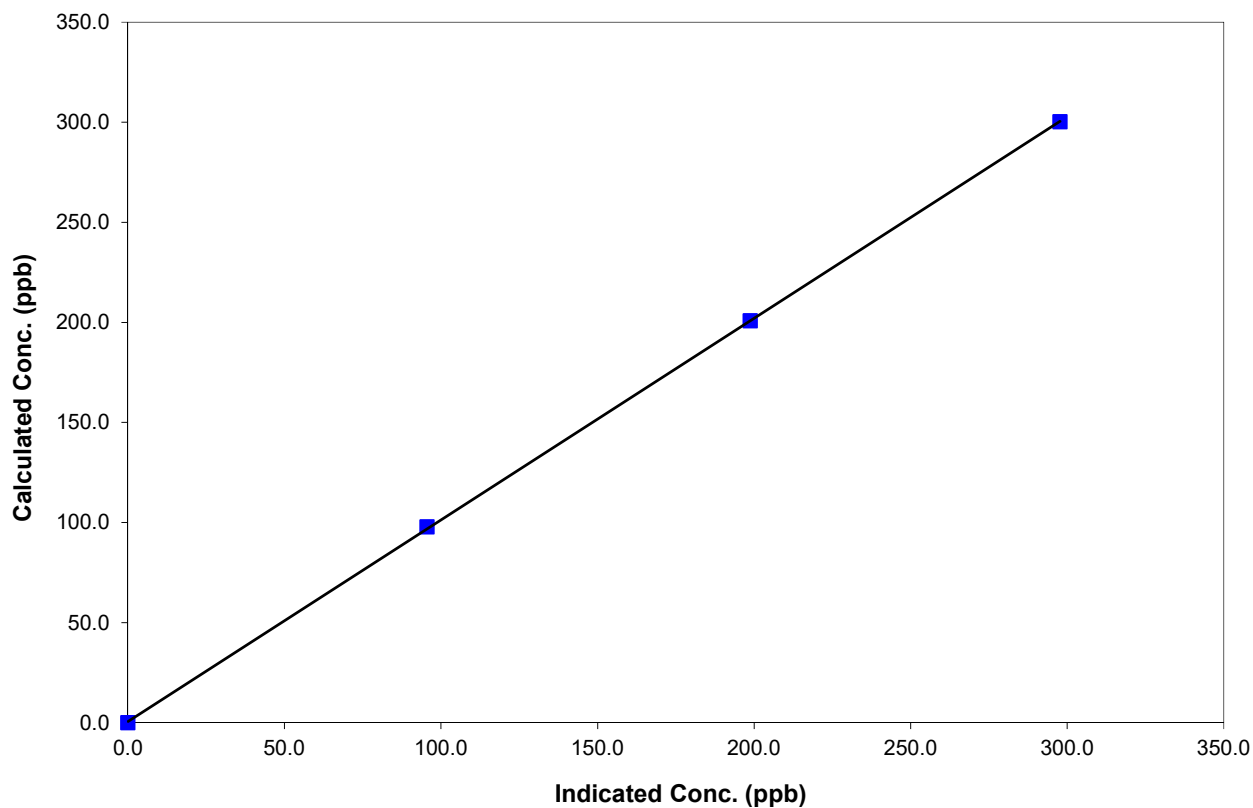
Station Information

Calibration Date	July 10, 2018	Previous Calibration	June 6, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	13:30:00 AM	End Time (MST)	15:55:00 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	0.999971
300.1	297.8	1.0078		
200.8	198.8	1.0100		
97.8	95.6	1.0233	Slope	1.006824
			Intercept	0.615028

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



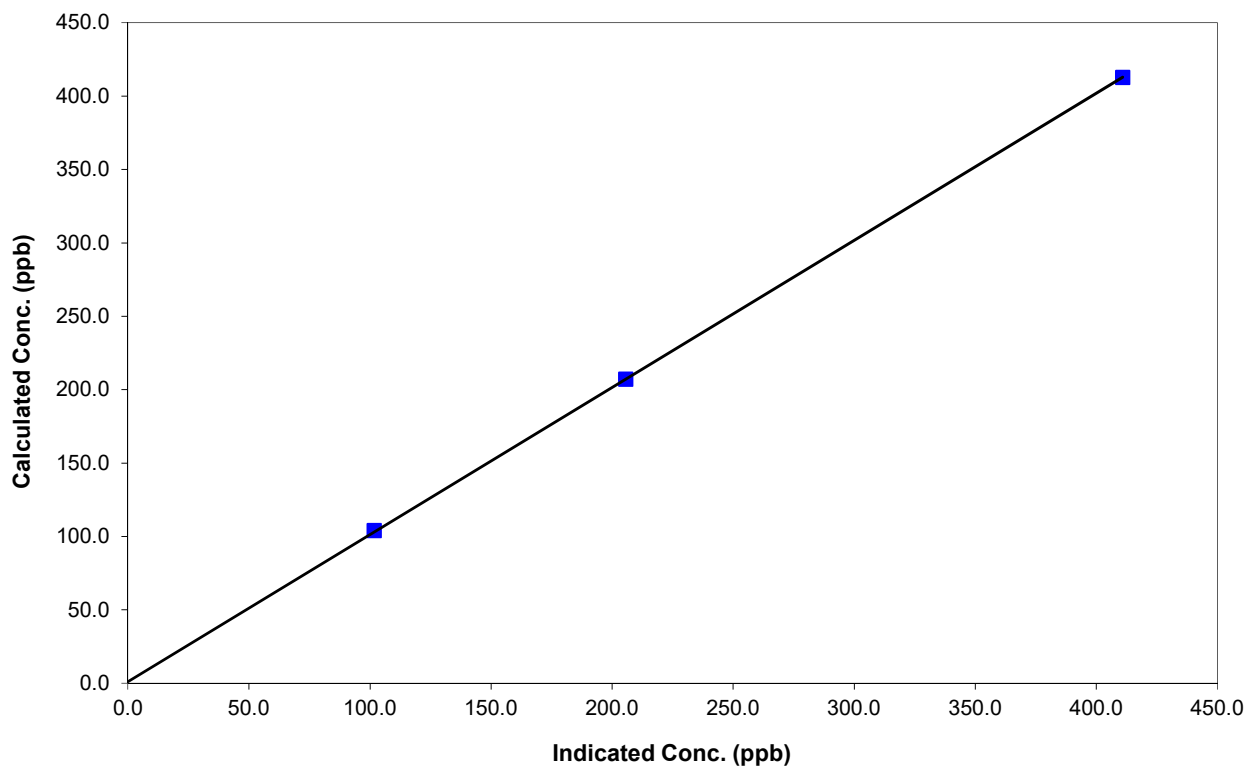
Station Information

Calibration Date	July 10, 2018	Previous Calibration	June 6, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	13:30:00 AM	End Time (MST)	15:55:00 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	-0.3	N/A	Correlation Coefficient	0.999983
412.7	410.9	1.0044		
207.1	205.6	1.0074		
104.0	101.8	1.0219	Slope	1.002613
			Intercept	0.986009

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



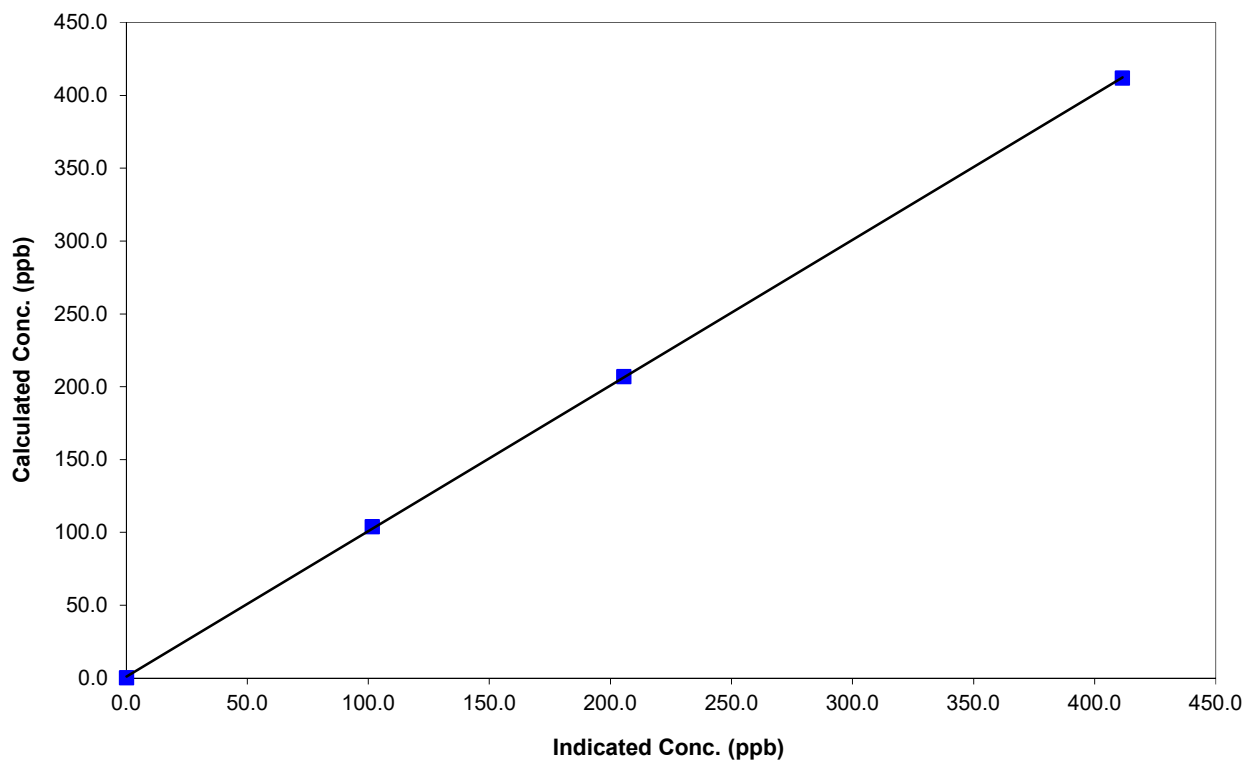
Station Information

Calibration Date	July 10, 2018	Previous Calibration	June 6, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	13:30:00 AM	End Time (MST)	15:55:00 PM
Analyzer make	42i	Analyzer serial #	906535087

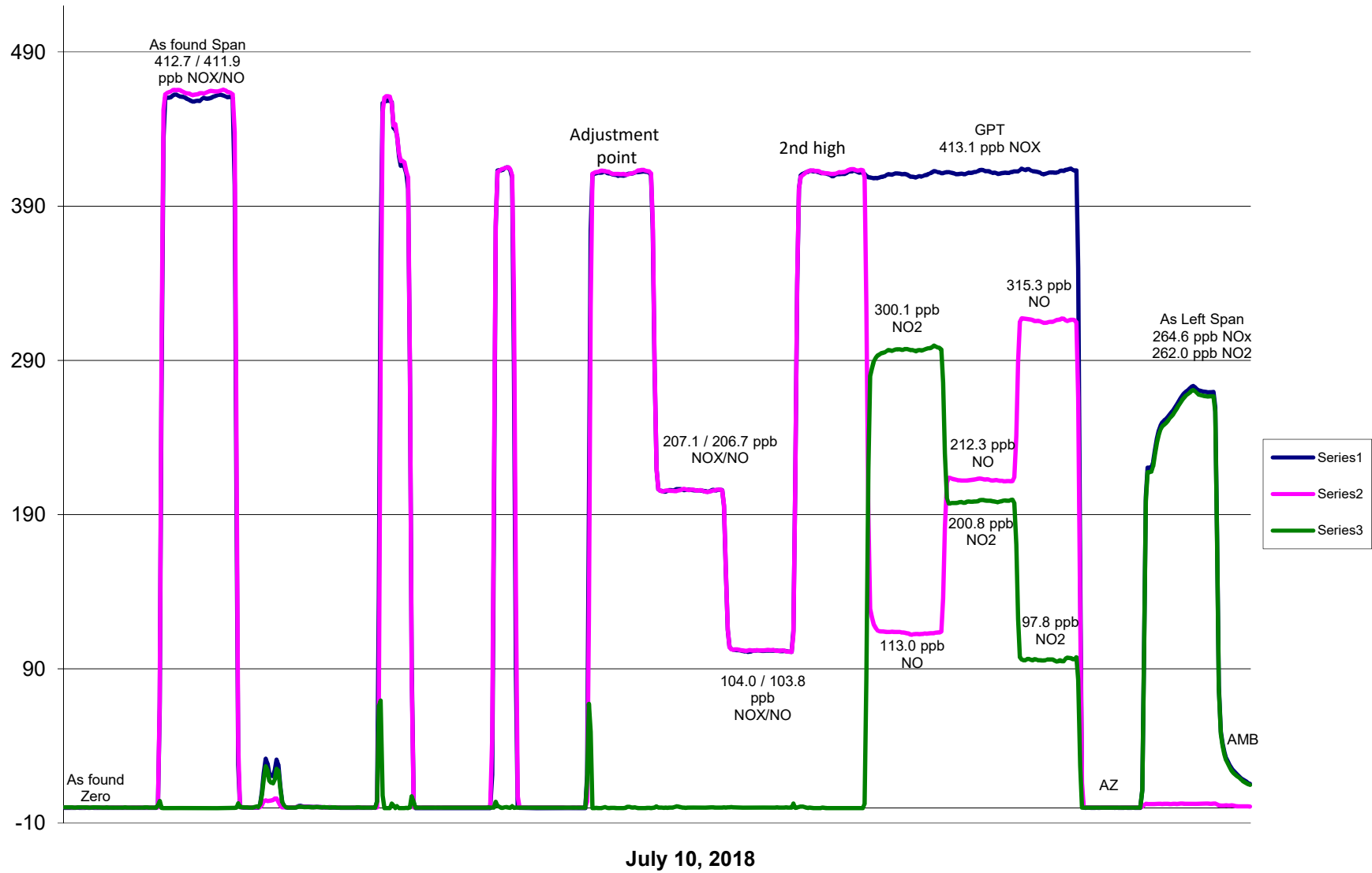
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A		
411.9	411.4	1.0012	Correlation Coefficient	0.999971
206.7	205.5	1.0059		
103.8	101.7	1.0202		
			Slope	1.000093
			Intercept	0.882028

NO Calibration Curve



NO_x Calibration



Calibration Report

Parameter 03

Air Monitoring Network PAZA



Station Information

Calibration Date	July 11, 2018	Previous Calibration	June 7, 2018
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Install	Removal
		Other:	

Start Time (MST)	9:05	End Time (MST)	12:05
Barometric Pressure	920.0 mbar	Station Temperature	20.0 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	0.994704	Calculated slope	1.008860
Calculated intercept	0.369803	Calculated intercept	-1.159282

Analyzer make	Teco 49I	Analyzer serial #	1507964699 (AMU:2015)
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	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-0.60	ppb	-1.80	ppb
slope	1.024		0.994	
Lamp temp	53.6	mV	53.6	mV
Lamp Intensity A/B	64843/69307	mV	64039/6990	mV
Pressure	693.1	mm Hg	693.7	mm Hg
Flow A	0.733	ccm	0.733	ccm
Flow B	0.734	ccm	0.734	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)
4996	0.0	0.0	0.1	N/A
4998	0.3	300.1	298.0	1.0072
4998	0.2	200.8	200.4	1.0019
4998	0.1	97.8	99.6	0.9823
4996	0.0	0.0	-1.4	As found zero
4996	0.3	300.1	302.6	As found span
Average Correction Factor				0.9971

Calculated value of As Found Response: 302.8 ppm Percent Change of As Found: 0.9%

	before calibration		after calibration	
Auto zero	0.0	ppb	0.1	ppb
Auto span	384.6	ppb	367.6	ppb

Notes: Zero & span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter 03
Air Monitoring Network PAZA



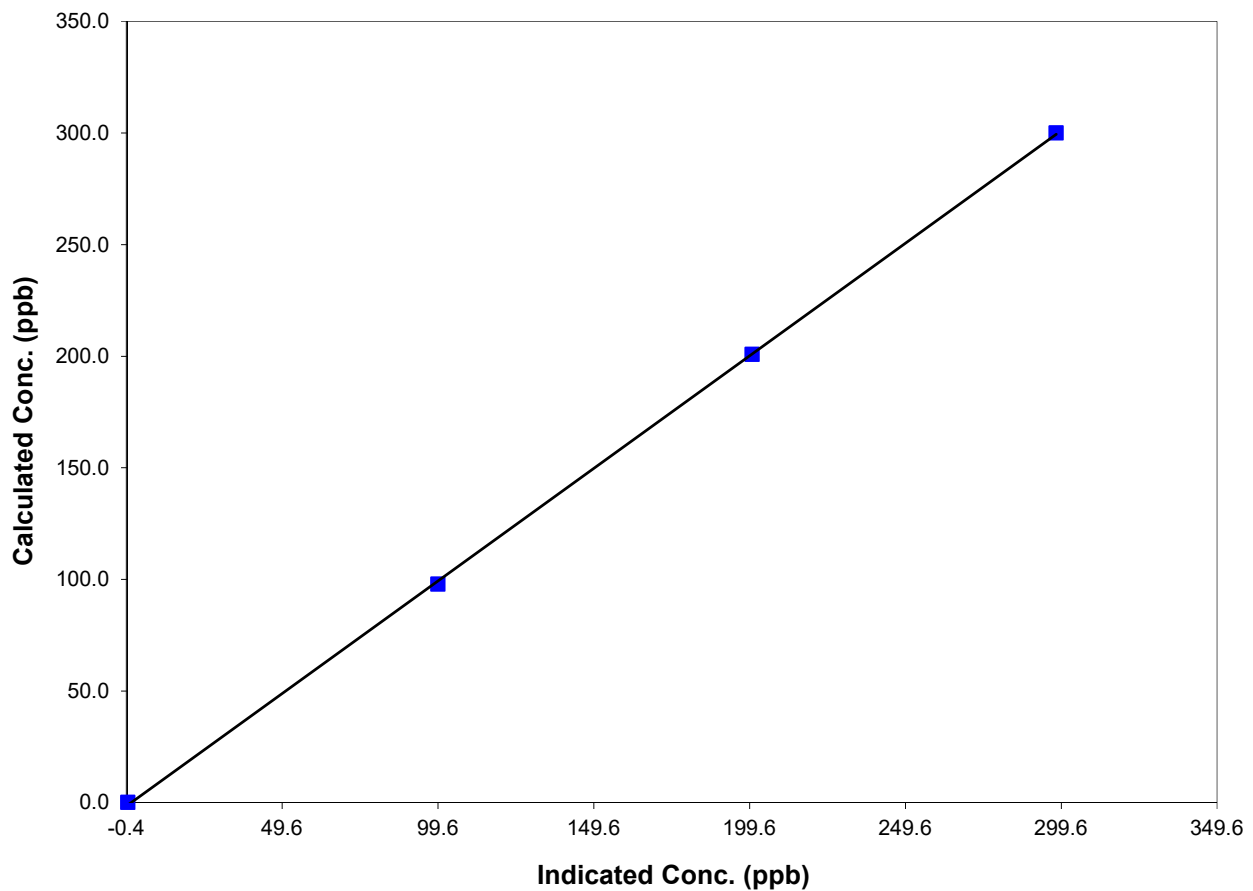
Station Information

Calibration Date	July 11, 2018	Previous Calibration	June 7, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:05	End Time (MST)	12:05
Analyzer make/model	Teco 49I	Analyzer serial #	1507964699 (AMU:2015)

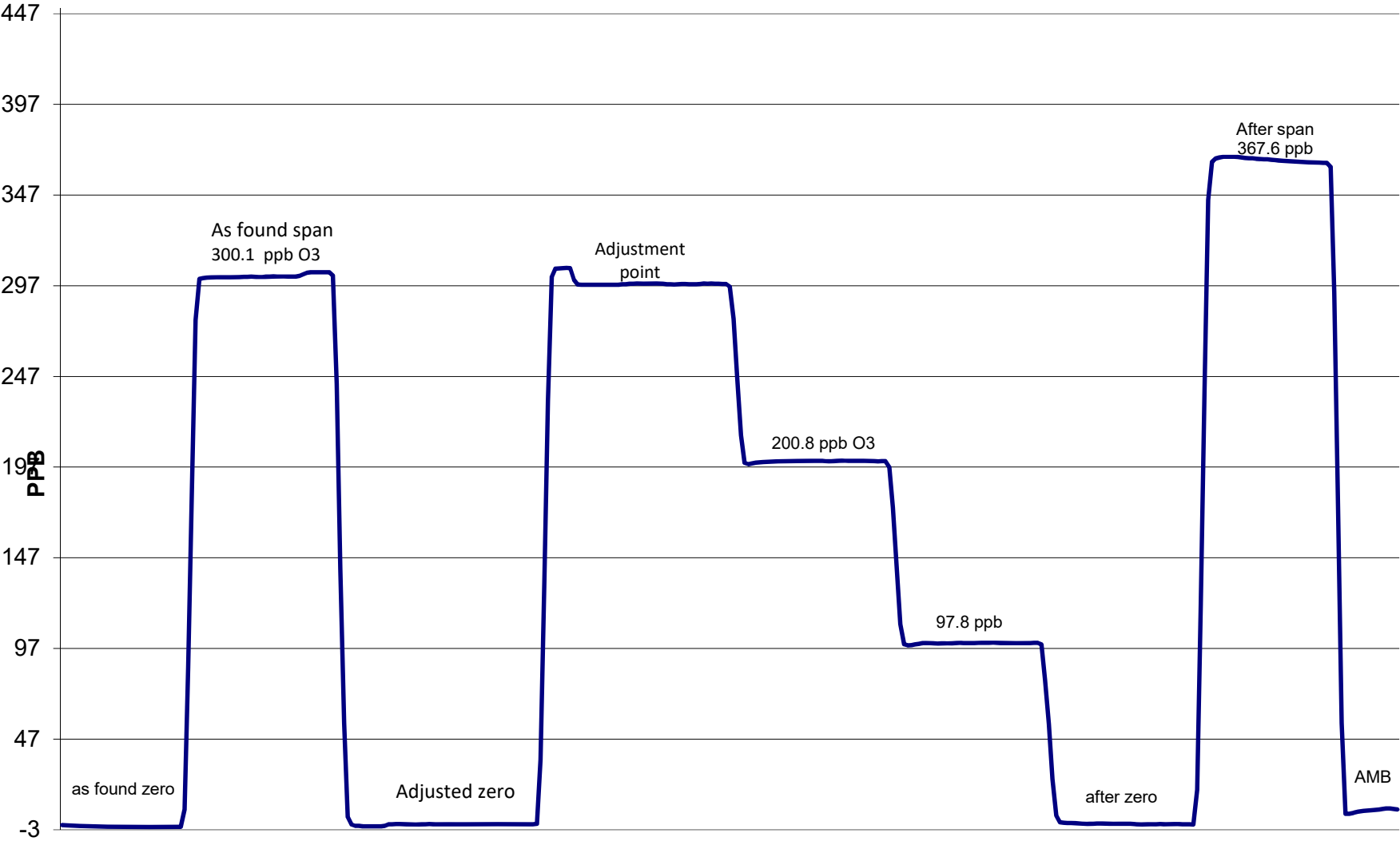
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	NA	Correlation Coefficient	0.999924
300.1	298.0	1.0072		
200.8	200.4	1.0019		
97.8	99.6	0.9823	Slope	1.008860
			Intercept	-1.159282

O3 Calibration Curve



O3 Calibration



July 11, 2018

Calibration Report

Parameter CO
Air Monitoring Network PAZA



Station Information

Calibration Date	July 11, 2018	Previous Calibration	June 7, 2018
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	12:45	End Time (MST)	15:00:00 PM
Barometric Pressure	0.921 mBar	Station Temperature	23.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	6586
Cal Gas Conc	2906 ppm	Cal Gas Expiry Date	07/07/2023
		Cal Gas Cylinder #	LL109096
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 5 volt	DACS channel #	9
	Before		After
Calculated slope	1.001456	Calculated slope	0.998327
Calculated intercept	-0.215324	Calculated intercept	-0.244235
Analyzer make	Model 48I-TLE	Analyzer serial #	1408761378

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO zero setting	10.811		10.811	
CO span setting	1.085		1.085	
Sample pressure	699.5	mm Hg	699.7	mm Hg
Sample Flow	0.451	LPM	0.450	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)
4997	0.00	0.00	-0.04	N/A
4998	69.96	40.12	40.22	0.9974
4998	34.98	20.20	20.77	0.9724
4998	17.99	10.42	10.88	0.9575
4998	0.00	0.00	-0.04	As Found Zero
4998	69.96	40.12	40.22	As Found Span
Average Correction Factor				0.9758

Calculated value of As Found Response: 40.108 ppm Percent Change of As Found: 0.0%

	before calibration		after calibration	
Auto zero	0.00	ppm	-0.04	ppm
Auto span	20.63	ppm	20.56	ppm

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter CO
Air Monitoring Network PAZA



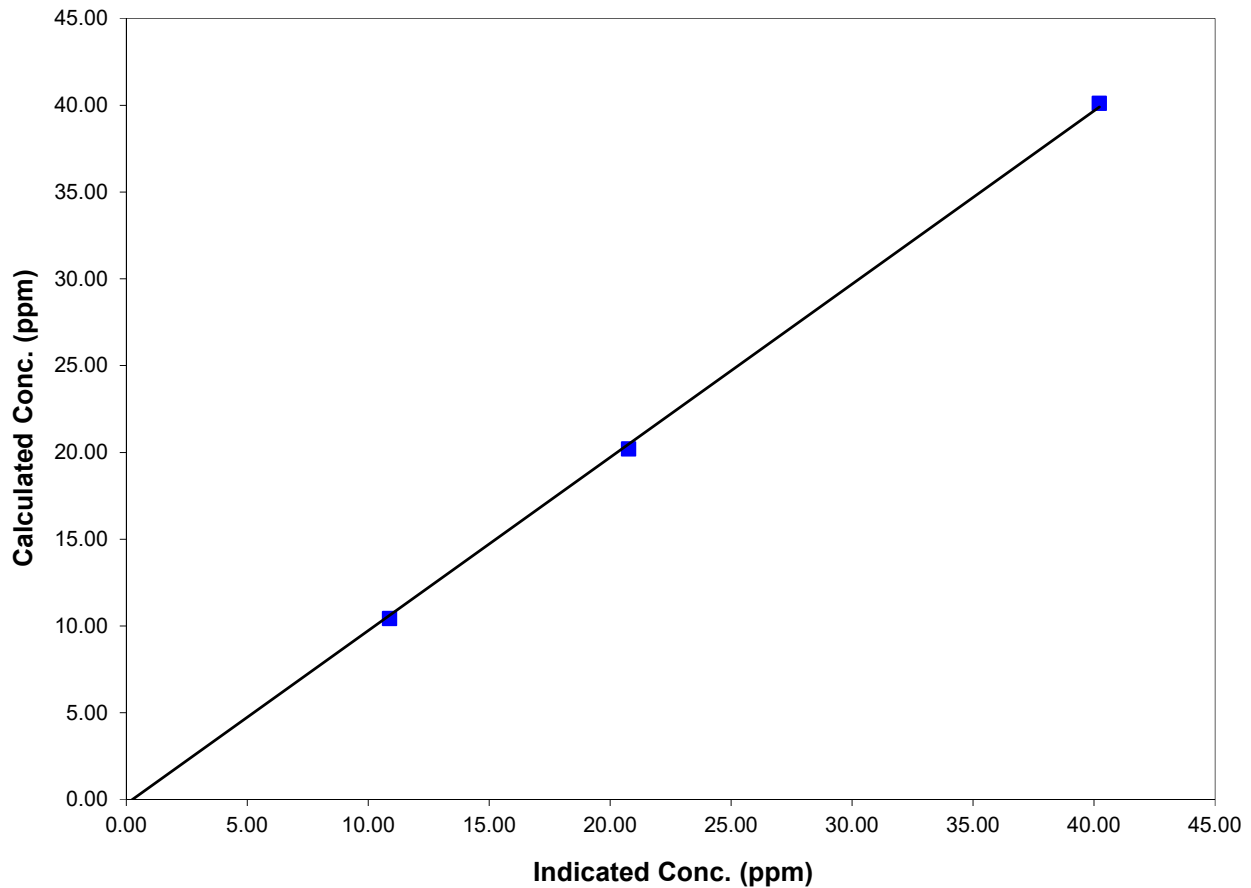
Station Information

Calibration Date	July 11, 2018	Previous Calibration	June 7, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:45	End Time (MST)	15:00:00 PM
Analyzer make/model	Model 48I-TLE	Analyzer serial #	1408761378

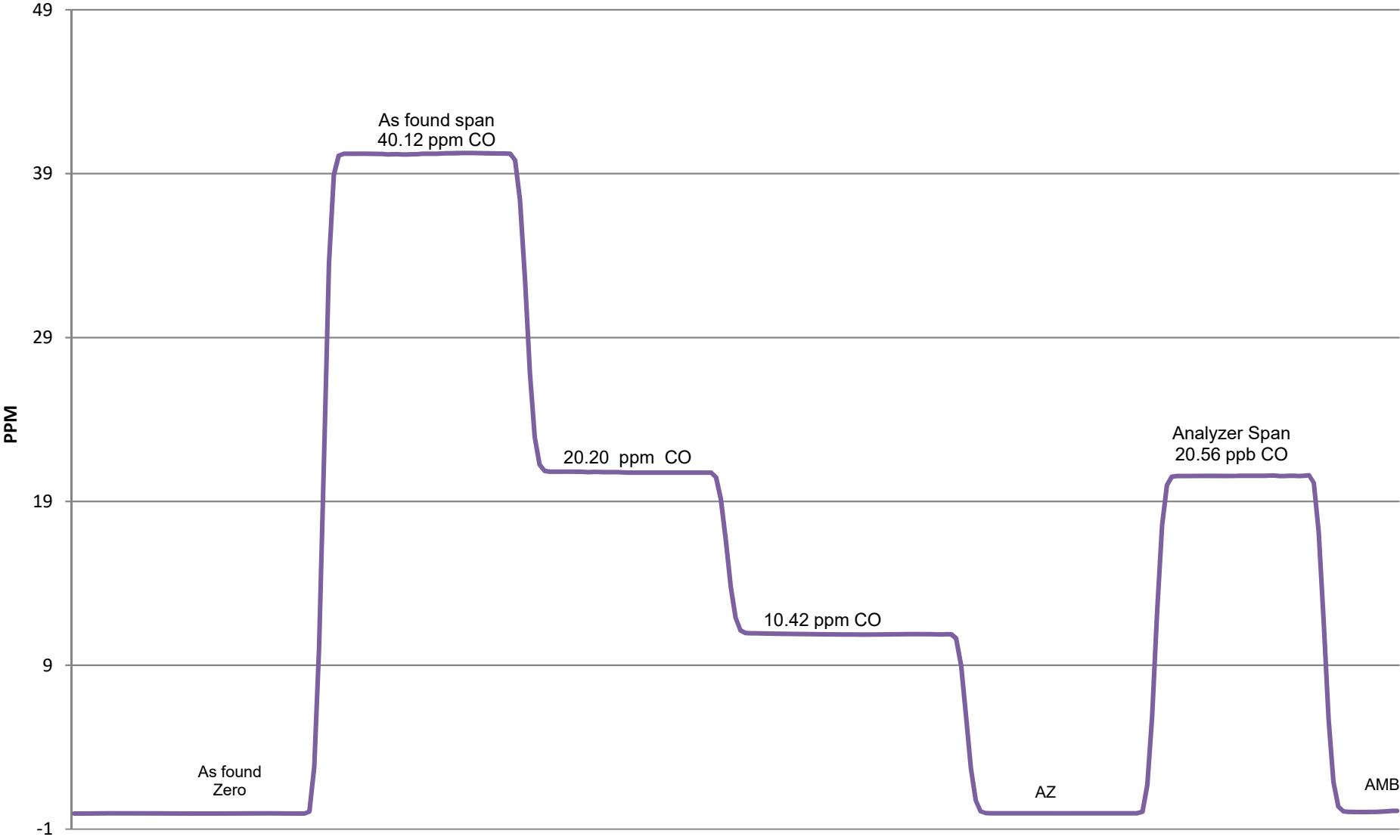
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	-0.044	N/A	Correlation Coefficient	0.999712
40.116	40.221	0.9974		
20.197	20.771	0.9724		
10.422	10.885	0.9575	Slope	0.998327
			Intercept	-0.244235

CO Calibration Curve



CO Calibration



July 11, 2018

Calibration Report



Parameter CH4 / NMHC / THC

Air Monitoring Network PAZA

Station Information

Calibration Date	July 12, 2018	Previous Calibration	June 7, 2018
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Install	Removal
			Other: Mair

Start Time (MST)	10:45	End Time (MST)	14:05:00 PM
Barometric Pressure	0.921 mBar	Station Temperature	23.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas CH4 Conc	995.6 ppm CH4	Cal Gas Expiry Date	05/07/2015
Cal Gas C3H8 Conc	370.5 1018.875 ppm CH4	Cal Gas Cylinder #	LL34318
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 5 volt	DACS channel #	SE 11,12,13

Analyzer make TEI 55I Analyzer serial # 1134650658

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

CH4 Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
3500	0.00	0.00	0.02	N/A
3500	54.98	15.40	15.44	0.9975
3500	34.97	9.85	9.87	0.9977
3500	14.98	4.24	4.26	0.9961
3500	0.00	0.00	0.02	As Found Zero
3500	64.99	18.15	15.57	As Found Span
Average Correction Factor				0.9971

Calculated value of As Found Response: 15.454 ppm Percent Change of As Found: 14.9%

	Before		After
Calculated slope	0.995295	Calculated slope	0.998761
Calculated intercept	-0.018585	Calculated intercept	-0.015062

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	10.81	ppm	9.00	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)
3500	0.00	0.00	0.02	N/A
3500	54.98	15.76	15.75	1.0004
3500	34.97	10.08	10.12	0.9957
3500	14.98	4.34	4.31	1.0079
3500	0.00	0.00	0.02	As Found Zero
3500	64.99	18.57	15.79	As Found Span
Average Correction Factor				1.0014

Calculated value of As Found Response: 15.738 ppm Percent Change of As Found: 15.3%

	Before		After
Calculated slope	0.999734	Calculated slope	0.999872
Calculated intercept	-0.031974	Calculated intercept	-0.004474

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.02	ppm
Auto span	15.17	ppm	12.43	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)
3500	0.00	0.00	0.03	N/A
3500	54.98	31.16	31.16	0.9998
3500	34.97	19.93	19.98	0.9975
3500	14.98	8.59	8.54	1.0051
3500	0.00	0.00	0.03	As Found Zero
3500	64.99	36.72	31.34	As Found Span
Average Correction Factor				1.0008

Calculated value of As Found Response: 31.199 ppm Percent Change of As Found: 15.0%

	Before		After
Calculated slope	0.997916	Calculated slope	0.999732
Calculated intercept	-0.038897	Calculated intercept	-0.007510

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.02	ppm
Auto span	25.96	ppm	21.42	ppm

Notes: Span adjustment made
Hydrogen cylinder replaced

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter CH4

Air Monitoring Network PAZA



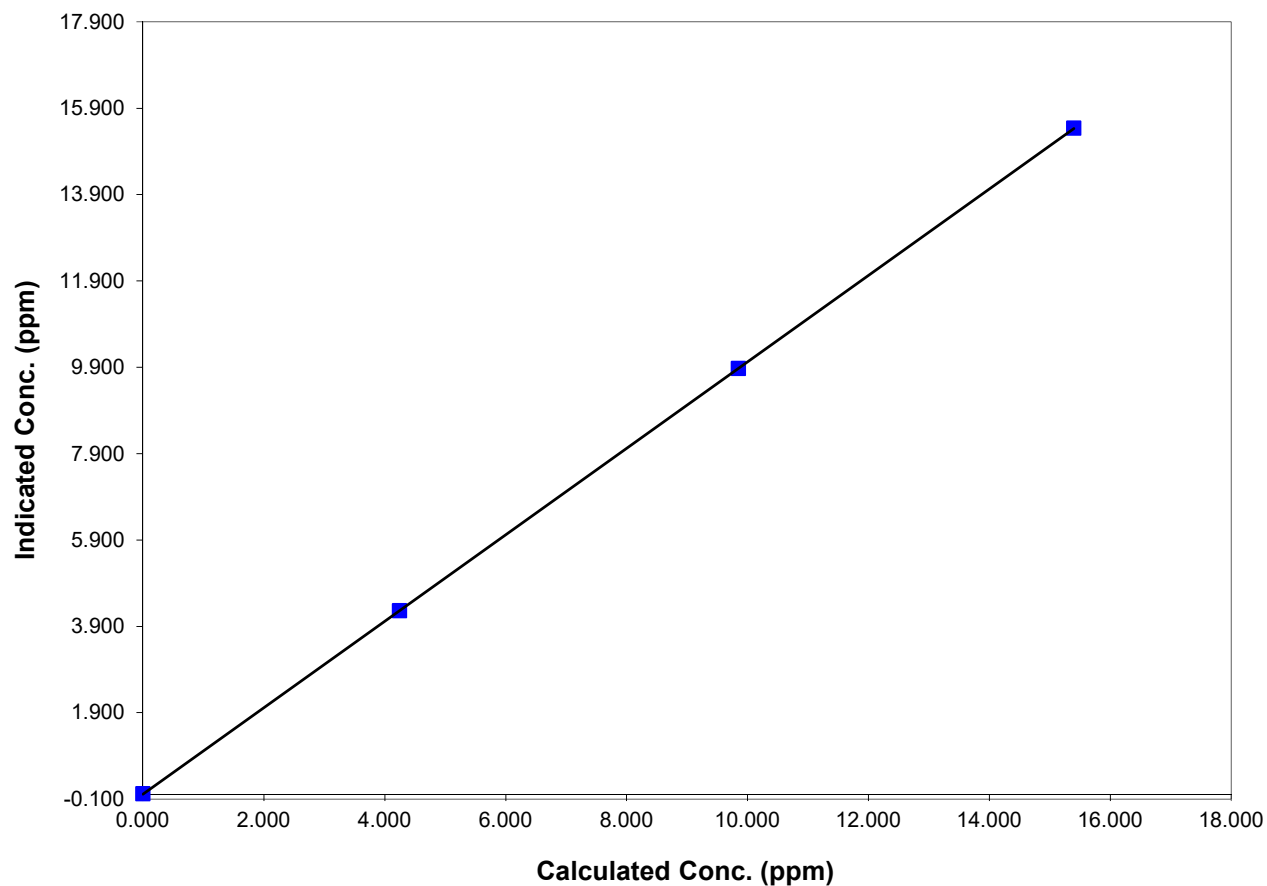
Station Information

Calibration Date	July 12, 2018	Previous Calibration	June 7, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:45	End Time (MST)	14:05:00 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	0.019	N/A	Correlation Coefficient	1.000000
15.398	15.436	0.9975		
9.849	9.872	0.9977	Slope	0.998761
4.243	4.260	0.9961		
			Intercept	-0.015062

CH4 Calibration Data



Calibration Summary

Parameter NMHC

Air Monitoring Network PAZA



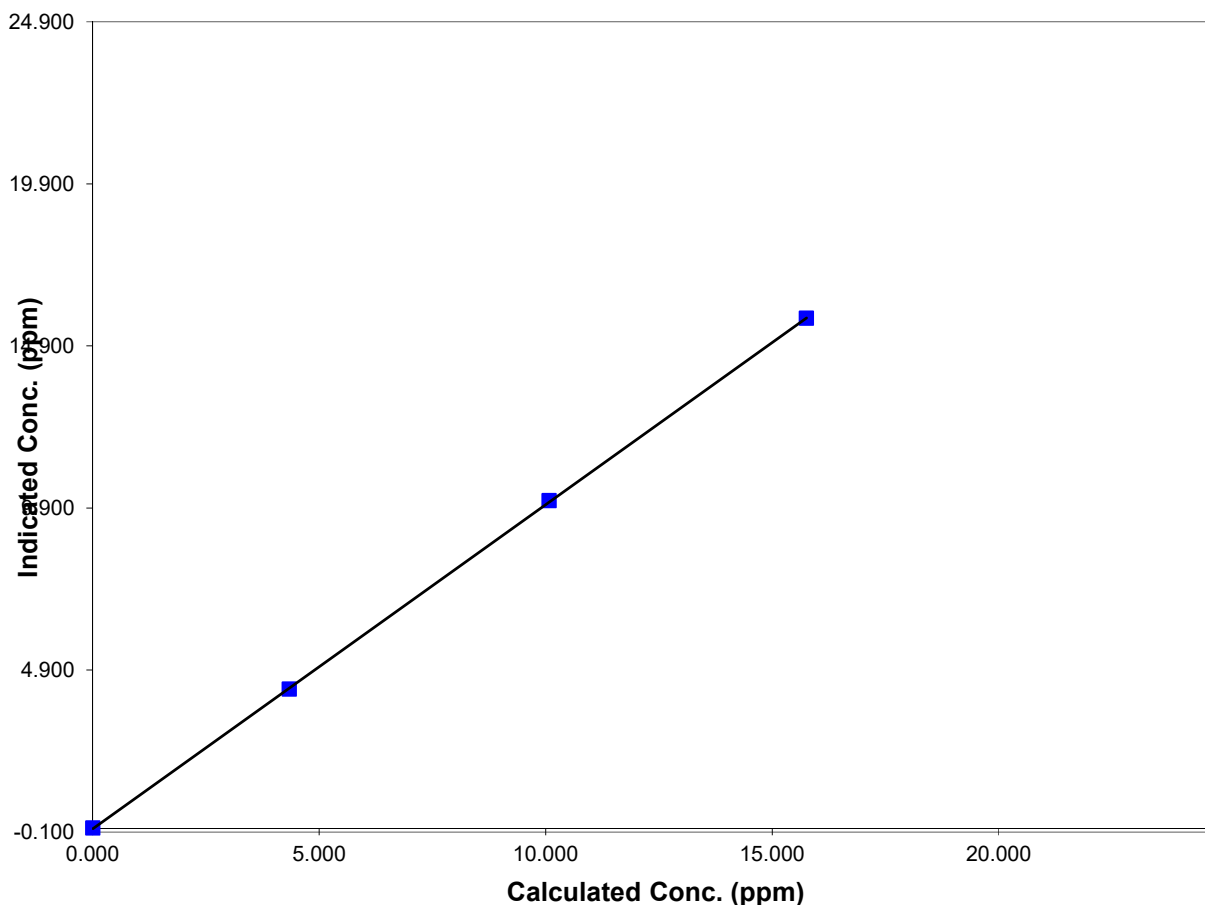
Station Information

Calibration Date	July 12, 2018	Previous Calibration	June 7, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:45	End Time (MST)	14:05:00 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	0.019	N/A	Correlation Coefficient	0.999976
15.758	15.751	1.0004		
10.079	10.123	0.9957	Slope	0.999872
4.342	4.308	1.0079		
			Intercept	-0.004474

NMHC Calibration Data



Calibration Summary



Parameter THC
Air Monitoring Network PAZA

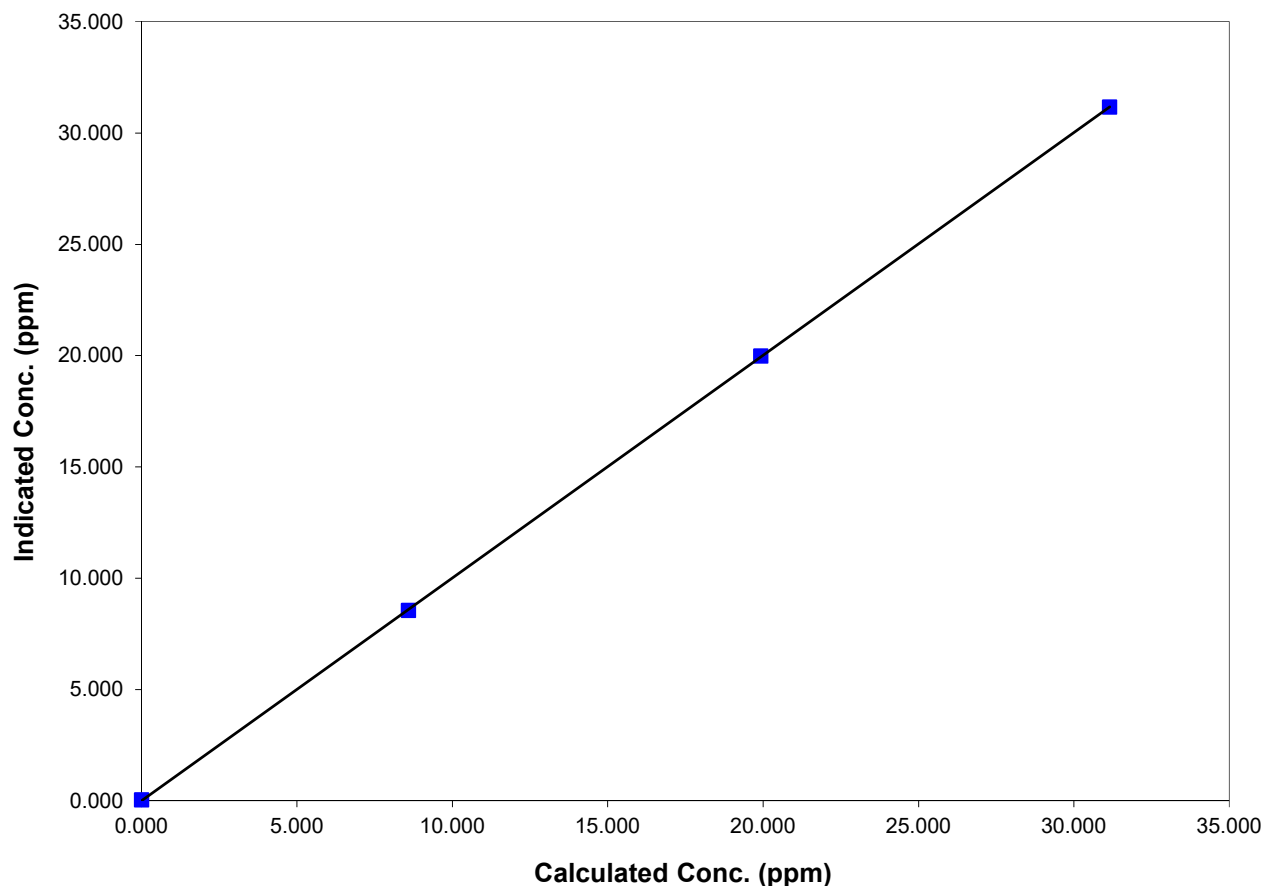
Station Information

Calibration Date	July 12, 2018	Previous Calibration	June 7, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:45	End Time (MST)	14:05:00 PM
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

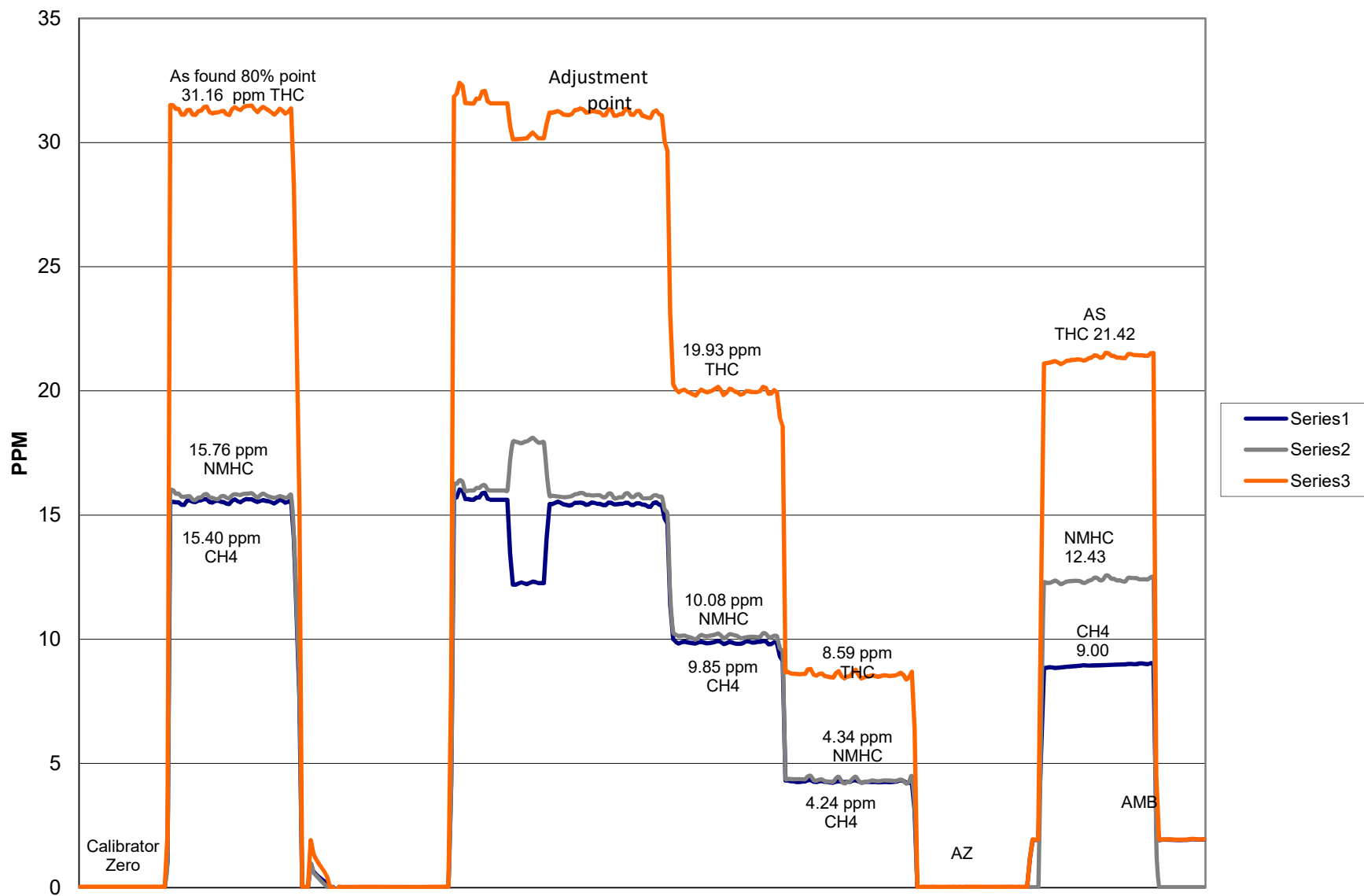
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.033	N/A	Correlation Coefficient	0.999991
31.155	31.162	0.9998		
19.928	19.978	0.9975	Slope	0.999732
8.585	8.542	1.0051		
			Intercept	-0.007510

THC Calibration Data



THC/CH₄/NMHC Calibration



Calibration Report



Parameter SO₂
Air Monitoring Network PAZA

Station Information

Calibration Date	July 17, 2018	Previous Calibration	June 11, 2018
Station Number	2	Station Location	Evergreen Park
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	

Start Time (MST)	9:35	End Time (MST)	11:35
Barometric Pressure	0.936 ATM	Station Temperature	22.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Concentratio	49.6 ppm	Cal Gas Expiry Date	04/05/2019
Correction factor	0.031602	Cal Gas Cylinder #	LL107945
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	0.992926	Calculated slope	1.000813
Calculated intercept	-0.825965	Calculated intercept	0.220358

Analyzer make	Teco 43i	Analyzer serial #	701120008
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	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	12		12	
coefficient	1.095		1.072	
Lamp Voltage	843	volts	842	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	670.4	mm Hg	670.3	mm Hg
Sample Flow	0.439	ccm	0.440	ccm
Lamp Intensity	92	%	92	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4997	0.0	0.00	1.0	N/A
4997	39.97	393.6	393.6	1.0000
4997	19.99	197.6	196.8	1.0041
4997	9.98	98.9	97.3	1.0162
4997	0.0	0.0	1.0	As Found Zero
4997	39.98	393.7	393.6	As Found Span
Average Correction Factor				1.0068

Calculated value of As Found Response: 389.018 ppm Percent Change of As Found: 1.2%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.8	ppm
Auto span	266.8	ppm	208.6	ppm

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2
Air Monitoring Network PAZA



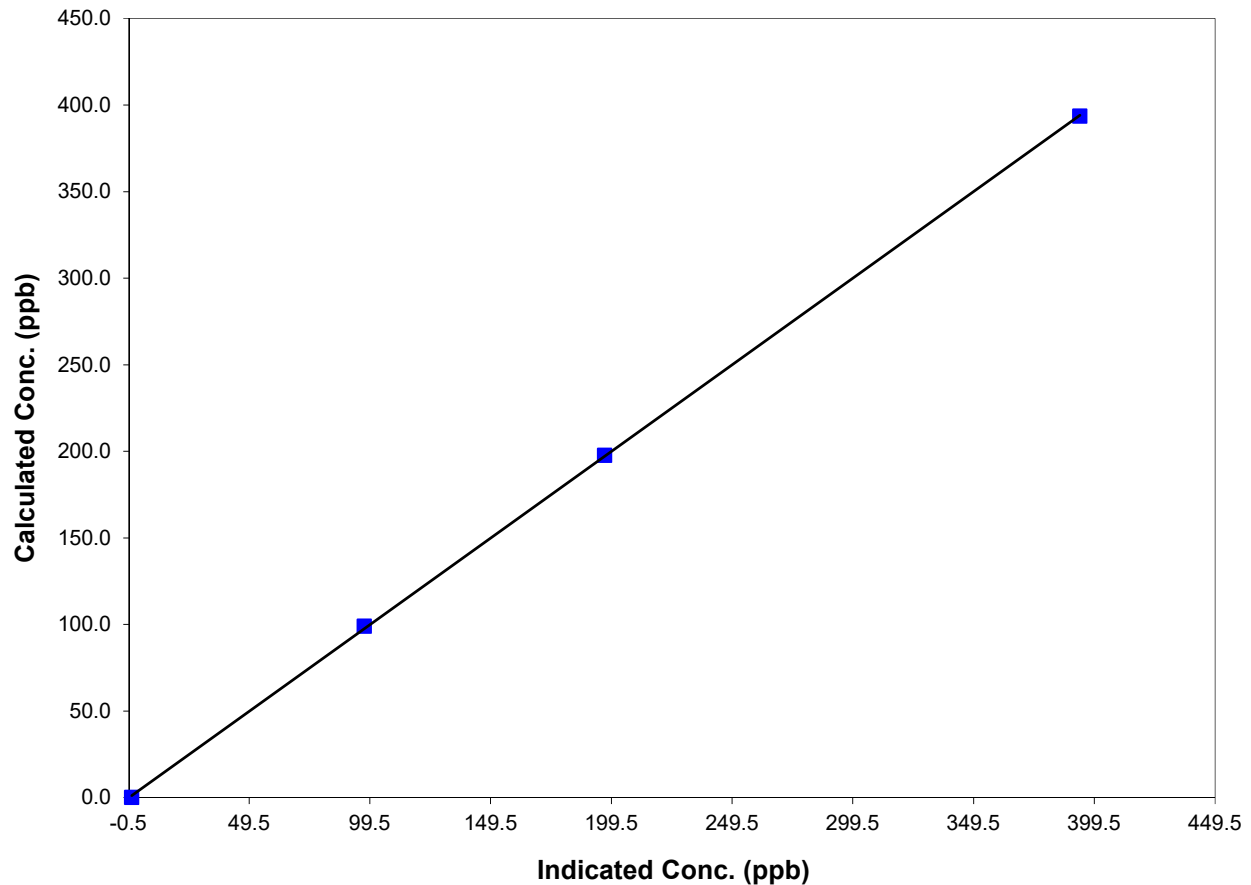
Station Information

Calibration Date	July 17, 2018	Previous Calibration	June 11, 2018
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	9:35	End Time (MST)	11:35
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

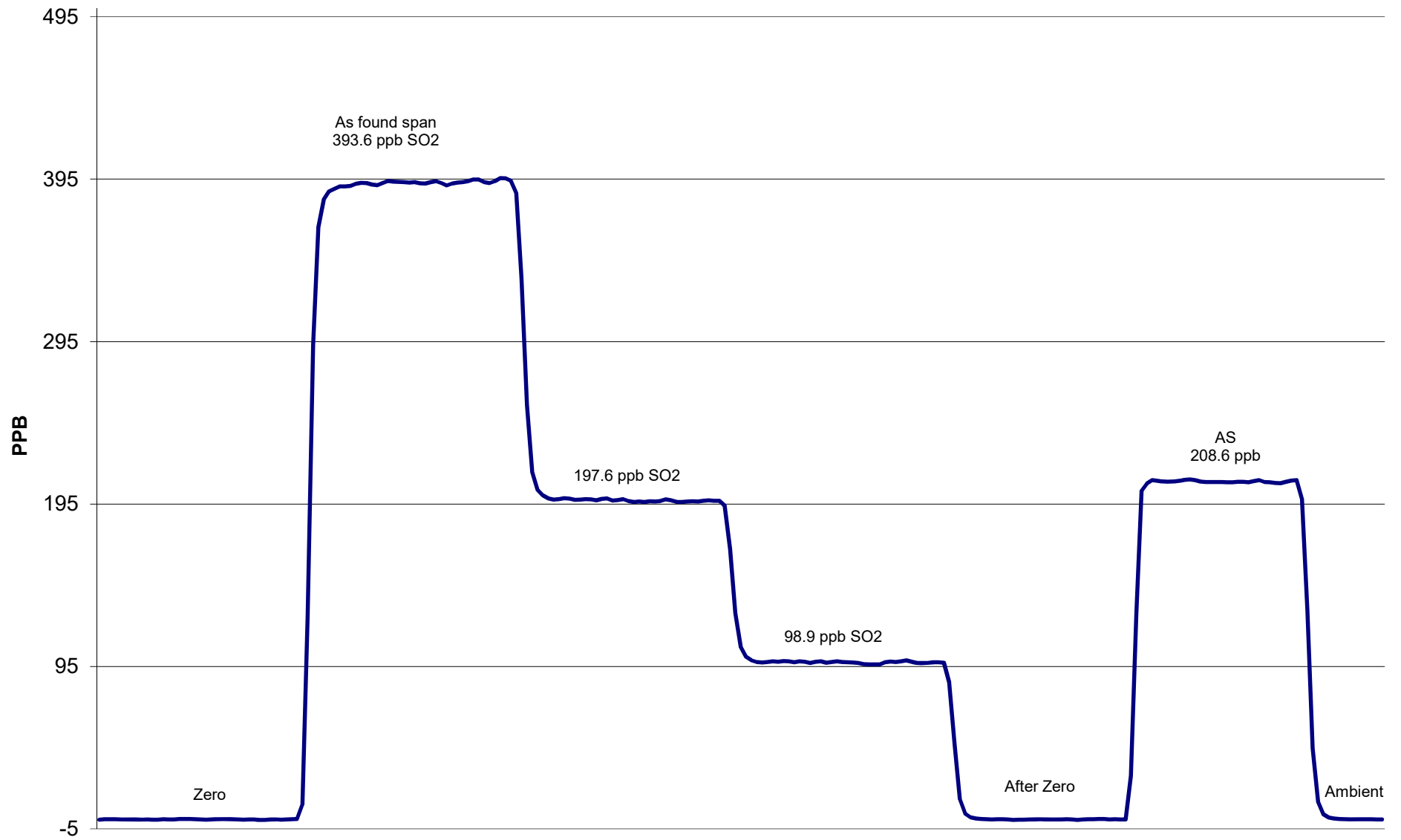
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	1.0	N/A	Correlation Coefficient	0.999959
393.6	393.6	1.0000		
197.6	196.8	1.0041		
98.9	97.3	1.0162	Slope	1.000813
			Intercept	0.220358

SO2 Calibration Curve



SO2 Calibration



July 17, 2018

Calibration Report



Parameter TRS

Air Monitoring Network PAZA

Station Information

Calibration Date	July 17, 2018	Previous Calibration	June 11, 2018
Station Number	2	Station Location	Evergreen Park
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	6:10	End Time (MST)	10:20
Barometric Pressure	0.936 ATM	Station Temperature	22.0 Deg C
Calibrator	Evironics 6103	Serial Number	6586
Cal Gas Conc	9.78 ppm	Cal Gas Expiry Date	23/02/2019
Correction factor	0.031602	Cal Gas Cylinder #	EY0000380
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
Calculated slope	0.998860	Calculated slope	0.978643
Calculated intercept	-0.427804	Calculated intercept	0.448360
Analyzer make	TEI Model 43C	Analyzer serial #	3.199E+13

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	17.6	ppb	17.9	ppb
coefficient	0.970		0.990	
Lamp Voltage	998	volts	992	volts
Chamber Temp	44.5	Deg C	44.4	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	639.9	mm Hg	640.5	mm Hg
Sample Flow	0.605	ccm	0.603	ccm
Lamp Intensity	37,304	mv	37,260	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)
4996	0.00	0.00	-0.1	N/A
4996	39.97	77.62	79.0	0.9828
4996	19.96	38.92	39.2	0.9933
6999	9.97	13.91	13.4	1.0388
4996	10.00	0.00	0.0	Sox Test
4996	0.00	0.00	-0.1	As Found Zero
4996	39.97	77.62	74.8	As Found Span
Average Correction Factor				1.0050

Calculated value of As Found Response: 74.35 ppm Percent Change of As Found: **4.2%**

	before calibration		after calibration	
Auto zero	0.8	ppm	-0.1	ppm
Auto span	68.5	ppm	69.4	ppm

Notes: Slight span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter TRS
Air Monitoring Network PAZA



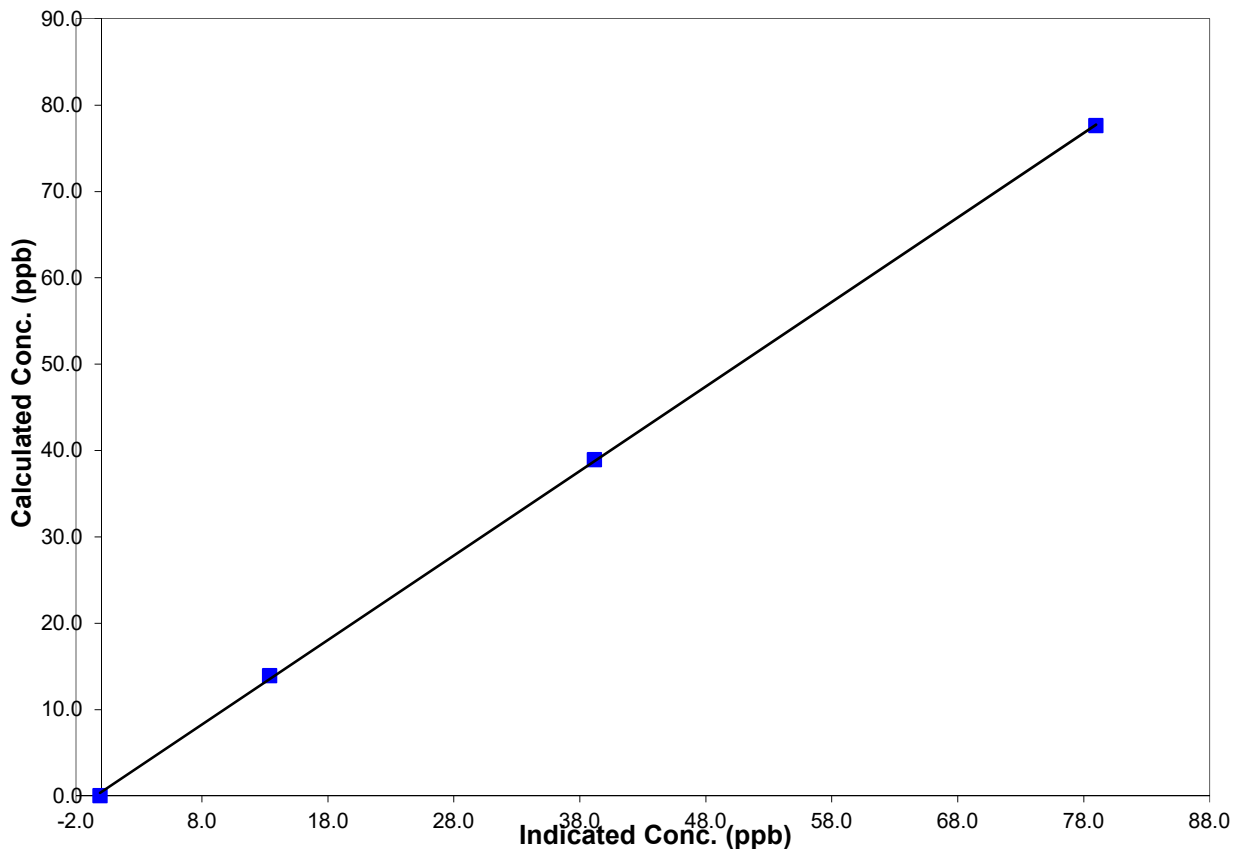
Station Information

Calibration Date	July 17, 2018	Previous Calibration	June 11, 2018
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	6:10	End Time (MST)	10:20
Analyzer make/model	TEI Model 43C	Analyzer serial #	31990000000491

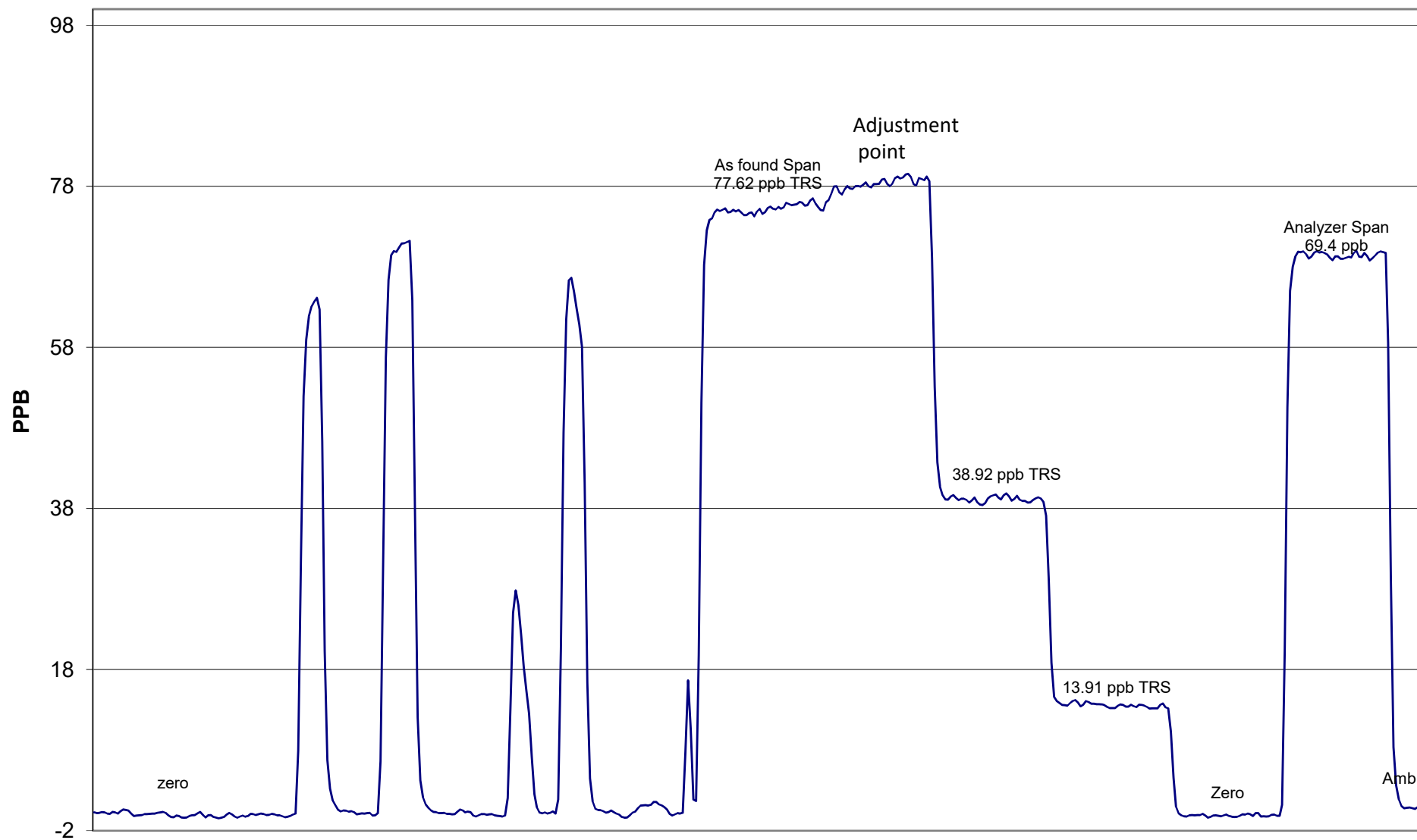
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A	Correlation Coefficient	0.999917
77.6	79.0	0.9828		
38.9	39.2	0.9933		
13.9	13.4	1.0388	Slope	0.978643
			Intercept	0.448360

TRS Calibration Curve



TRS Calibration



July 17, 2018

Calibration Report



Parameter SO₂

Air Monitoring Network PAZA

Station Information

Calibration Date	July 27, 2018	Previous Calibration	June 18, 2018
Station Number	3	Station Location	Smokey Heights
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	9:25	End Time (MST)	11:35
Barometric Pressure	0.924 ATM	Station Temperature	19.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Concentration	49.6 ppm	Cal Gas Cert Date	10/24/2020
Correction factor	0.031517	Cal Gas Cylinder #	LL107945
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	6
	<u>Before</u>		<u>After</u>
Calculated slope	0.998772	Calculated slope	1.002588
Calculated intercept	0.888316	Calculated intercept	0.006665
Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	14.2		14.2	
coefficient	0.951		0.951	
Lamp Voltage	939	volts	938	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	672.3	mm Hg	675.9	mm Hg
Sample Flow	0.452	lpm	0.455	lpm
Lamp Intensity	88	%	88	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
4996	0.0	0.00	1.0	N/A
4996	39.96	393.57	392.8	1.0019
4996	19.97	197.47	197.1	1.0018
4996	9.99	98.98	97.3	1.0170
4996	0.0	0.00	1.0	As Found Zero
4996	39.96	393.57	392.8	As Found Span
Average Correction Factor				1.0069

Calculated value of As Found Response: 392.258 ppb Percent Change of As Found: 0.3%

	before calibration		after calibration	
Auto zero	0.3	ppb	0.8	ppb
Auto span	207.9	ppb	208.9	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2
Air Monitoring Network PAZA



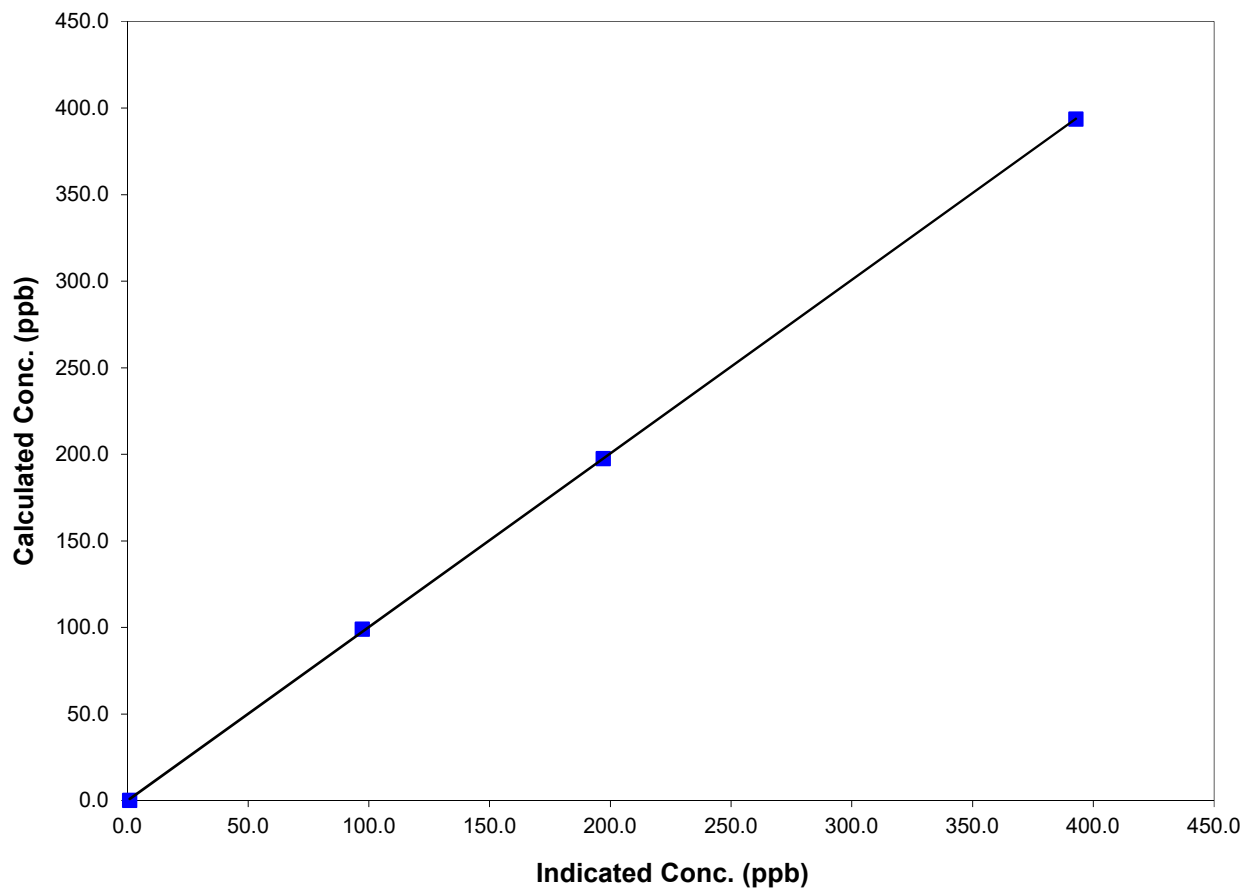
Station Information

Calibration Date	July 27, 2018	Previous Calibration	June 18, 2018
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	9:25	End Time (MST)	11:35
Analyzer make/model	Teco 43i	Analyzer serial #	701120009

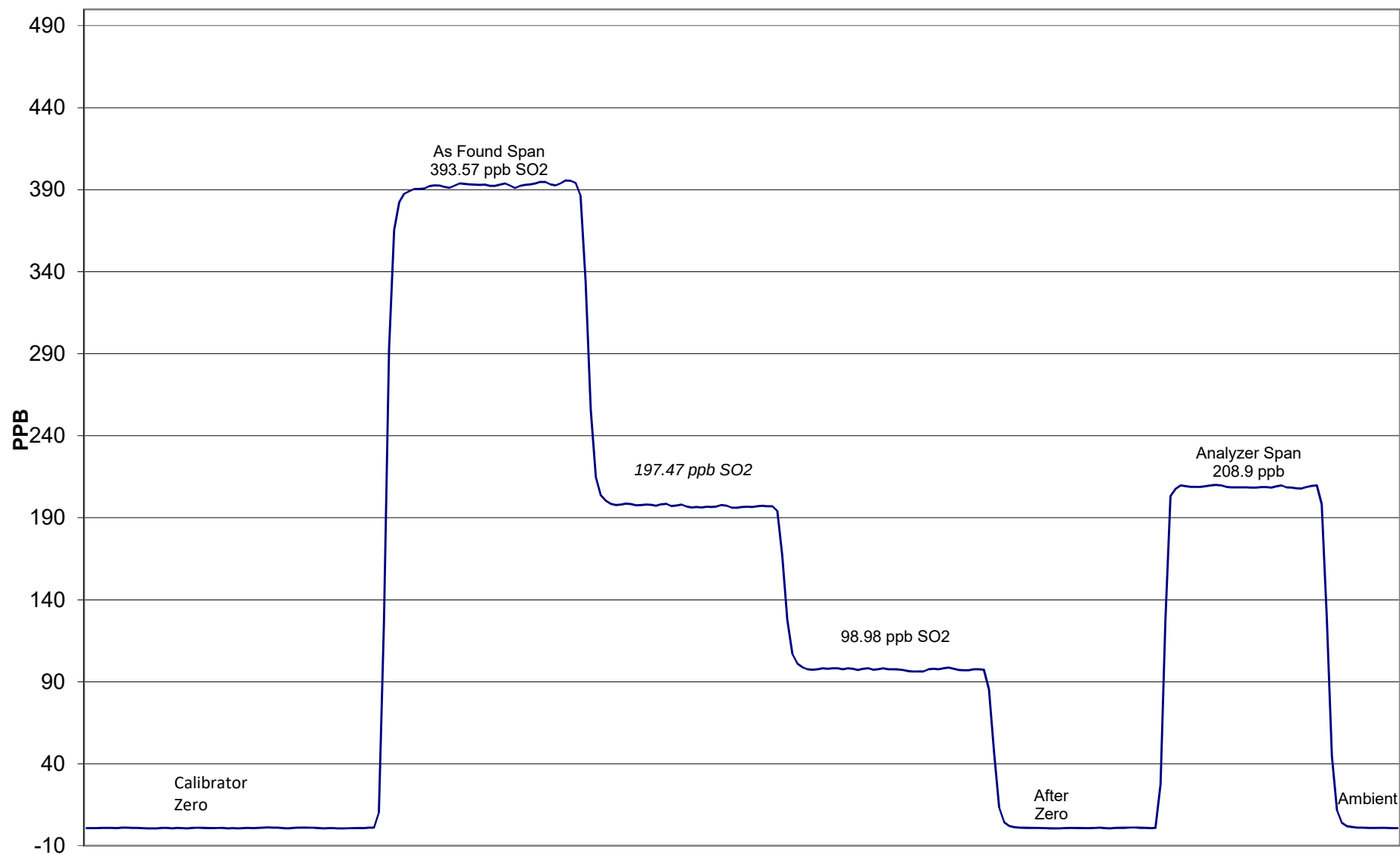
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	1.0	N/A	Correlation Coefficient	0.999965
393.6	392.8	1.0019		
197.5	197.1	1.0018		
99.0	97.3	1.0170	Slope	1.002588
			Intercept	0.006665

SO2 Calibration Curve



Smokey Heights SO₂ Calibration



July 27, 2018

Calibration Report

Parameter TRS

Air Monitoring Network PAZA



Station Information

Calibration Date	July 27, 2018	Previous Calibration	June 18, 2018
Station Number	3	Station Location	Smokey Heights
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	6:30	End Time (MST)	10:25
Barometric Pressure	0.923 ATM	Station Temperature	19.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Conc	9.78 ppm	Cal Gas Expiry Date	02/28/2020
Correction factor	0.031483	Cal Gas Cylinder #	LL119574
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
Calculated slope	0.984769	Calculated slope	0.981456
Calculated intercept	-0.041504	Calculated intercept	0.290414

Analyzer make TEI Model 43I APSAA Analyzer serial # 1153630151

	before		after	
Concentration range	100	ppb	100	ppb
Background	14.8	ppb	15.1	ppb
coefficient	1.079		1.105	
Lamp Voltage	804	volts	806	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	678.3	mm Hg	675	mm Hg
Sample Flow	0.423	lpm	0.420	lpm
Lamp Intensity	90	mv	93	mv

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
4996	0.0	0.00	-0.1	N/A
4996	39.96	77.60	78.8	0.9848
4996	19.97	38.94	39.4	0.9876
6998	9.99	13.94	13.6	1.0242
4996	9.99			Sox test
4996	0.0	0.00	-0.1	As Found Zero
4996	39.96	77.60	75.0	As Found Span
Average Correction Factor				0.9989

Calculated value of As Found Response: 73.88 ppb Percent Change of As Found: 4.8%

	before calibration		after calibration	
Auto zero	0.3	ppb	0.0	ppb
Auto span	66.4	ppb	69.3	ppb

Notes: Slight span adjustment
Sox scrubber replaced

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



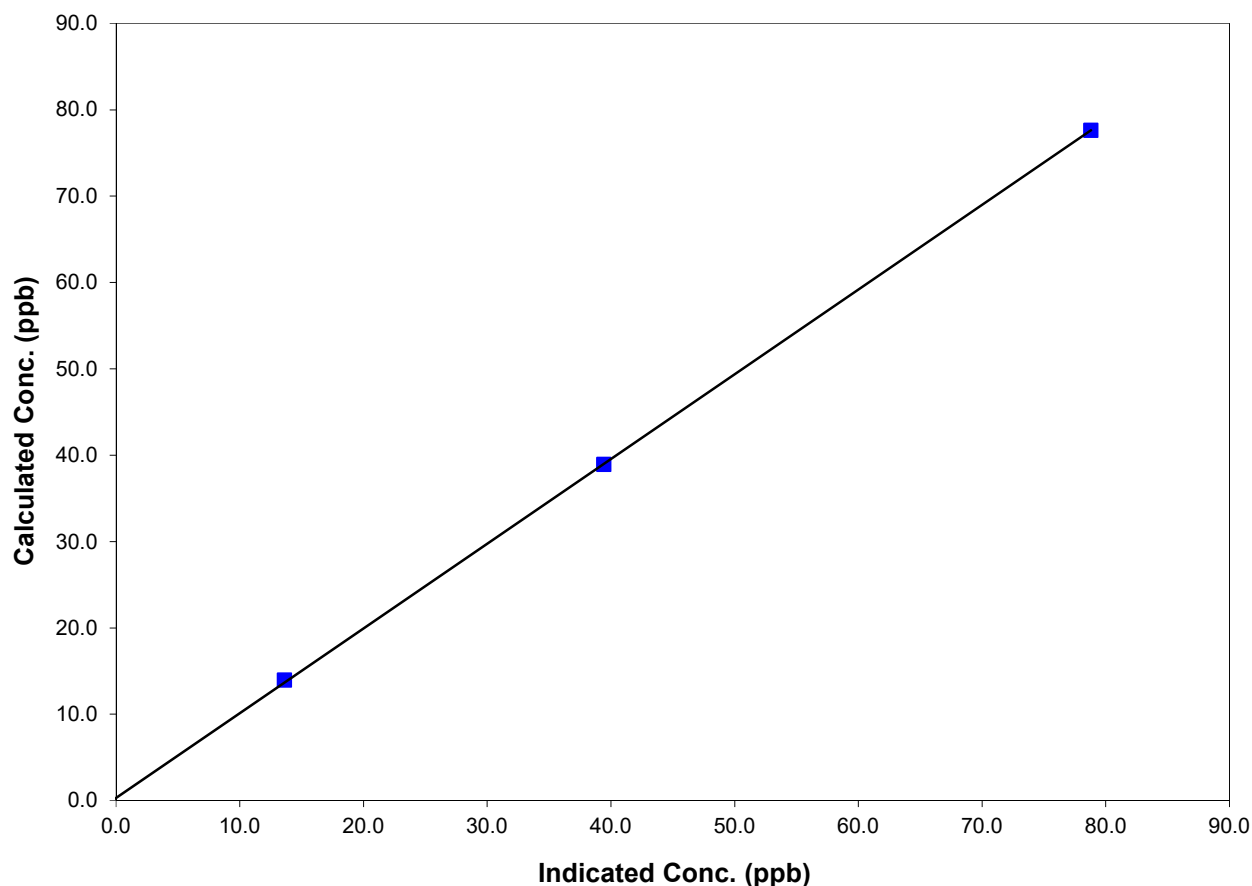
Station Information

Calibration Date	July 27, 2018	Previous Calibration	June 18, 2018
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	6:30	End Time (MST)	10:25
Analyzer make/model	TEI Model 43I APSAA	Analyzer serial #	1153630151

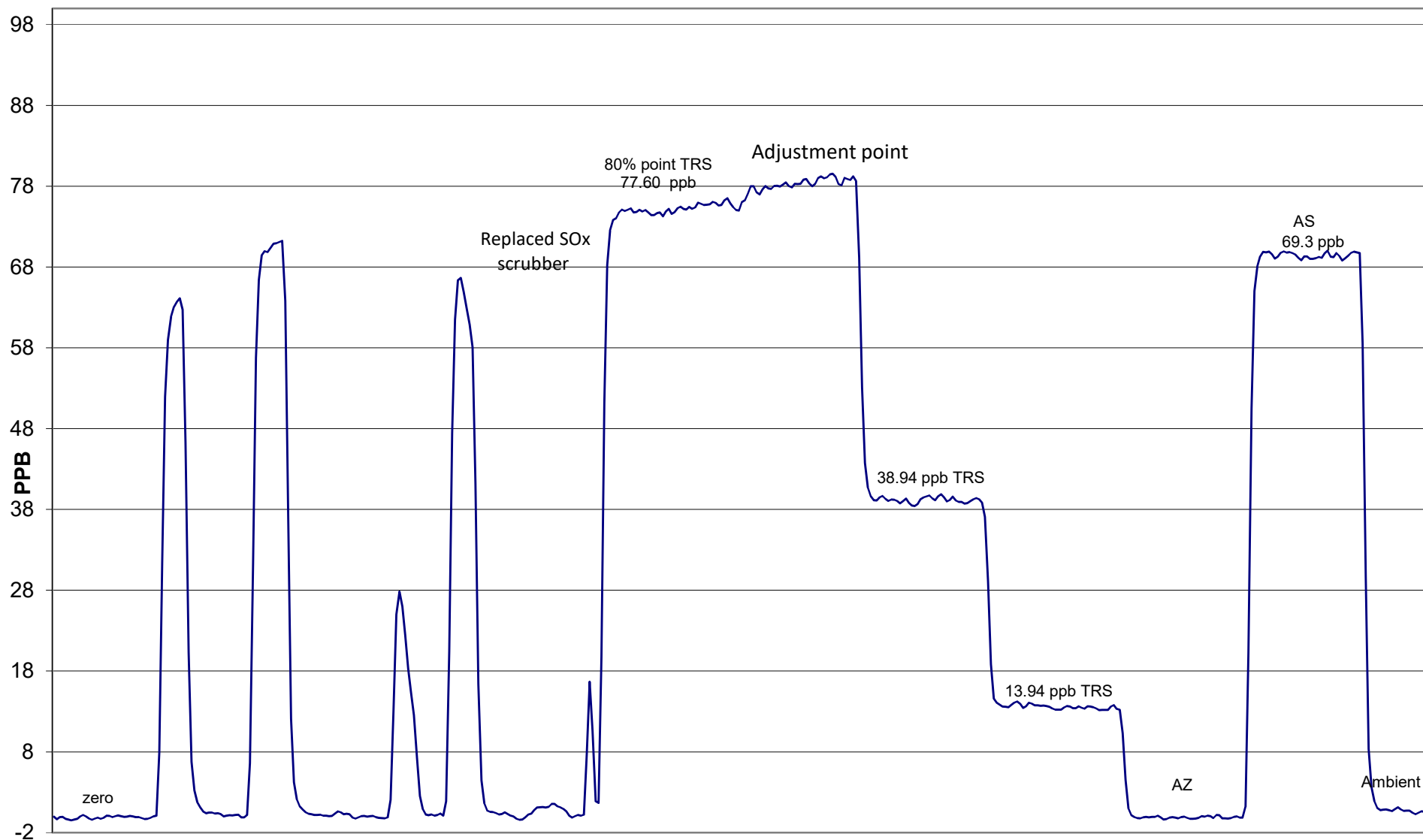
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A	Correlation Coefficient	0.999961
77.6	78.8	0.9848		
38.9	39.4	0.9876		
13.9	13.6	1.0242	Slope	0.981456
			Intercept	0.290414

TRS Calibration Curve



Smokey Heights TRS Calibration



July 27, 2018

Calibration Report

Parameter SO2
Air Monitoring Network PAZA



Station Information

Calibration Date	July 26, 2018	Previous Calibration	June 20, 2018
Station Number	6	Station Location	Valleyview
Reason:	Routine	Install	Removal
Start Time (MST)	12:50	End Time (MST)	15:25:00 PM
Barometric Pressure	0.929 atm	Station Temperature	22.0 Deg C
Calibrator	Envionics	Serial Number	3016
Cal Gas Concentratio	49.4 ppm	Cal Gas Exp Date	February 21, 2020
Gas Cylinder Num.	EY0000751		
DACS make	CR3000	DACS serial No.	5409
DACS voltage range	0 - 5 volt	DACS channel #	4
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.997966	Calculated slope	1.004219
Calculated intercept	1.440049	Calculated intercept	0.630645
Analyzer make	TEI Model 43i - APSCB	Analyzer serial #	701120010

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	6.9		7	
Coefficient	0.821		0.831	
UV Lamp Voltage	792	LPM	792	LPM
Chamber Temp	45	V	45	V
Perm Gas Temp	45	C	45	C
Pressure	683.1	in Hg	685.5	in Hg
Sample Flow	0.461	LPM	0.463	LPM
Lamp Intensity	91	Hz	91	%

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)
4995	0.00	0.0	0.5	N/A
4995	39.94	391.9	390.2	1.0043
4995	19.97	196.7	194.6	1.0111
4995	9.97	98.4	96.3	1.0217
4995	0.00	0.0	0.5	As found zero
4995	39.94	391.9	383.4	As found span
Average Correction Factor				1.0123

Calculated value of As Found Response: 383.6 ppb Percent Change of As Found: 2.1%

	before calibration		after calibration	
Auto zero	0.4	ppb	0.5	ppb
Auto span	263.5	ppb	261.9	ppb

Notes: Slight span adjusmtent made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2
Air Monitoring Network PAZA



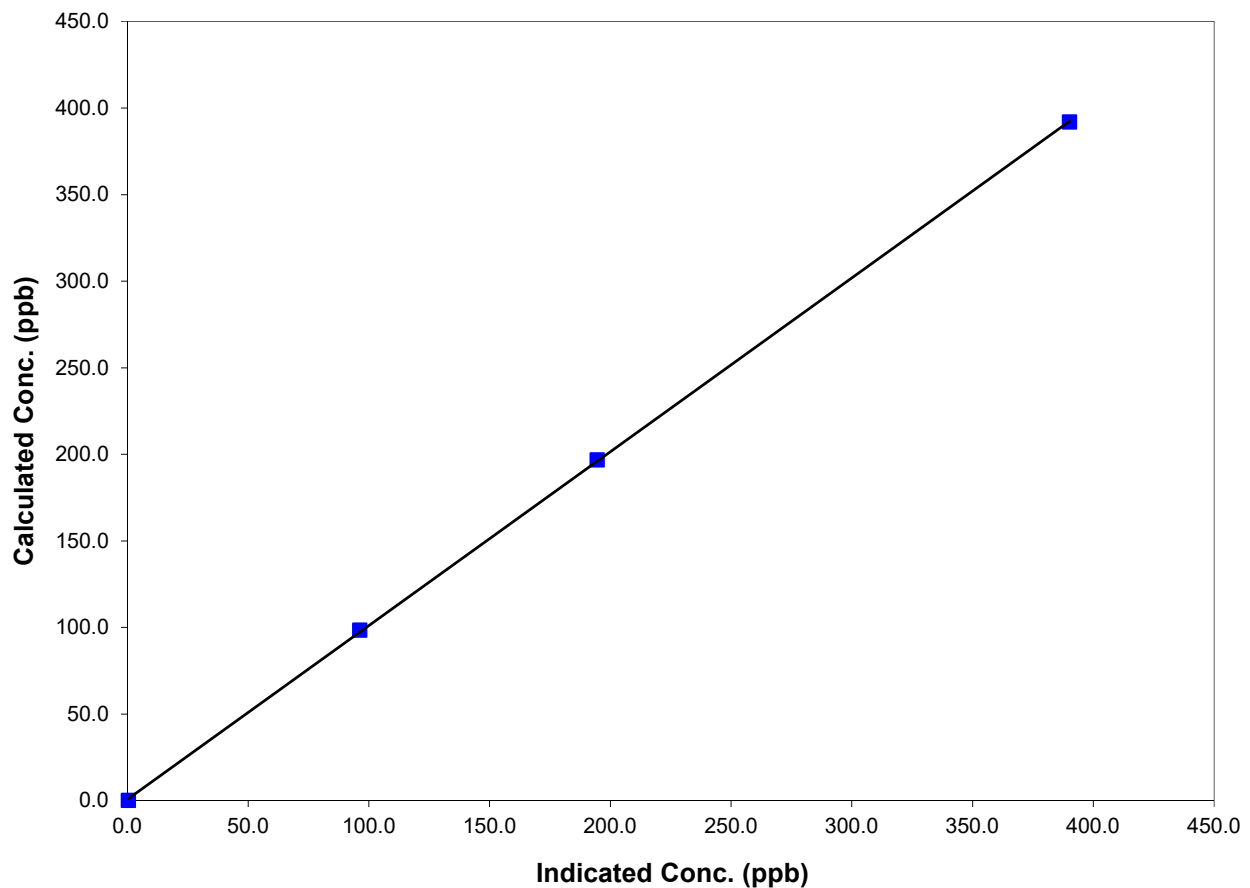
Station Information

Calibration Date	July 26, 2018	Previous Calibration	June 20, 2018
Station Number	6	Station Location	Valleyview
Start Time (MST)	12:50	End Time (MST)	15:25:00 PM
Analyzer make/model	TEI Model 43i - APSCB	Analyzer serial #	701120010

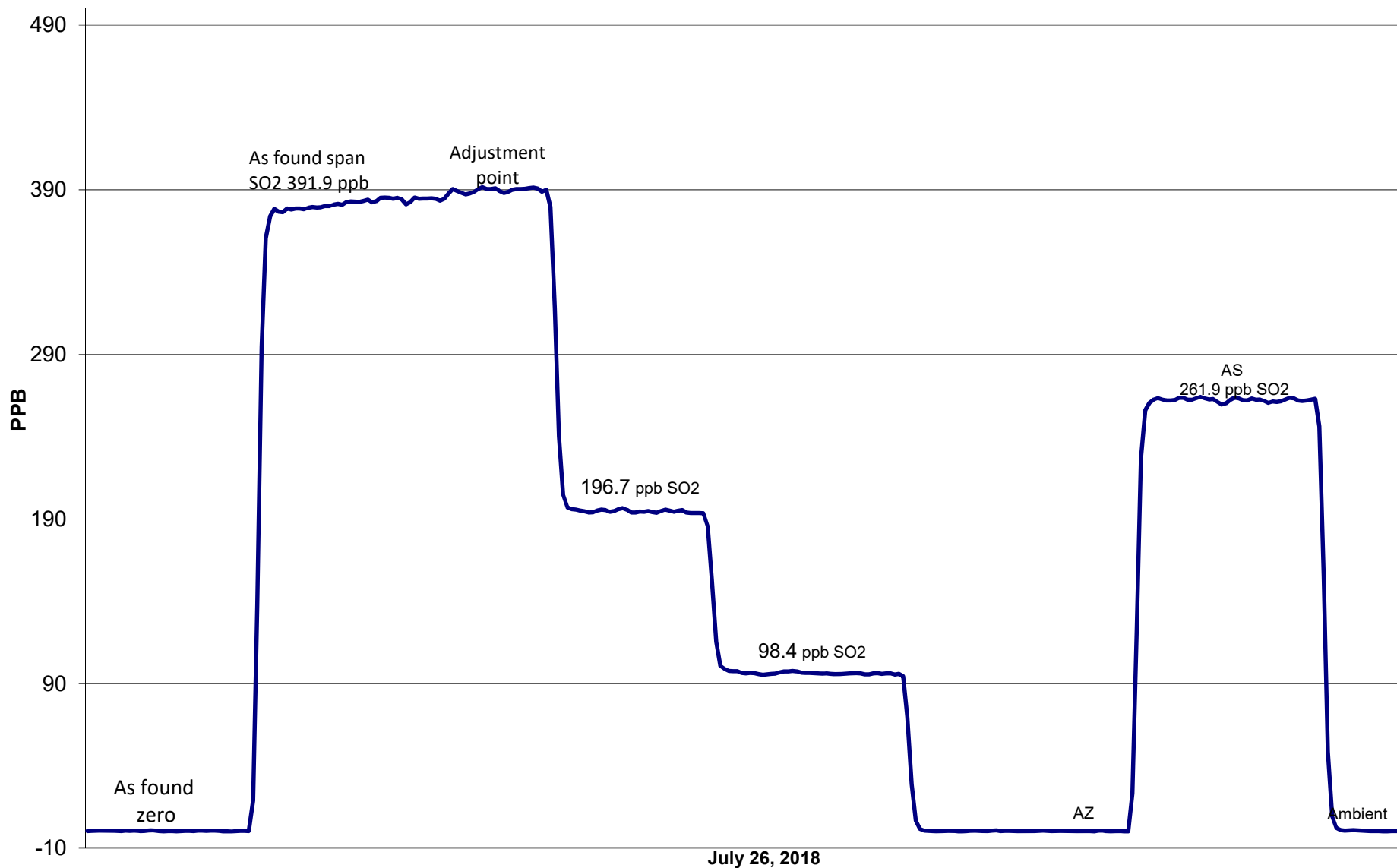
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A	Correlation Coefficient	0.999961
391.9	390.2	1.0043		
196.7	194.6	1.0111		
98.4	96.3	1.0217	Slope	1.004219
			Intercept	0.630645

SO2 Calibration Curve



SO2 Calibration



Calibration Report



Parameter H2S
Air Monitoring Network PAZA

Station Information

Calibration Date	July 22, 2018	Previous Calibration	June 25, 2018
Station Number	6	Station Location	Valleyview
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	22:45	End Time (MST)	13:55:00 PM
Barometric Pressure	0.929 atm	Station Temperature	22.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3016
Cal Gas Concentration	9.78 ppm	Cal Gas Expiry Date	19/03/2021
Gas Cert Reference	EY0000943		
DACS make	CR3000	DACS serial No.	5409
DACS voltage range	0 - 5 volt	DACS channel #	9
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.991556	Calculated slope	1.006270
Calculated intercept	0.222251	Calculated intercept	0.192037
Analyzer make	TEI Model 450i-APHAA	Analyzer serial #	1170050144

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	12.8	ppb	13.6	ppb
Coefficient	0.995		1.052	
Lamp Voltage	752	V	756	V
Chamber Temp	45.1	c	45.1	c
Convertor	327	c	326.6	c
Pressure	569.70	mm Hg	570.60	mm Hg
Sample Flow	0.933	ccm	0.933	lpm
Lamp Intensity	90	%	90	%

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)
4995	0.00	0.0	-0.3	N/A
4995	39.94	77.6	76.8	1.0095
4995	19.97	38.9	38.6	1.0087
6995	9.97	13.9	13.7	1.0172
4995	0.00	0.0	-0.3	As found zero
4995	39.94	77.6	66.2	As found span
Average Correction Factor				1.0118

Calculated value of As Found Response: 66.15 ppb Percent Change of As Found: 14.7%

	before calibration		after calibration	
Auto zero	0.0	ppb	-0.1	ppb
Auto span	65.7	ppb	66.8	ppb

Notes: Span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter H2S

Air Monitoring Network PAZA



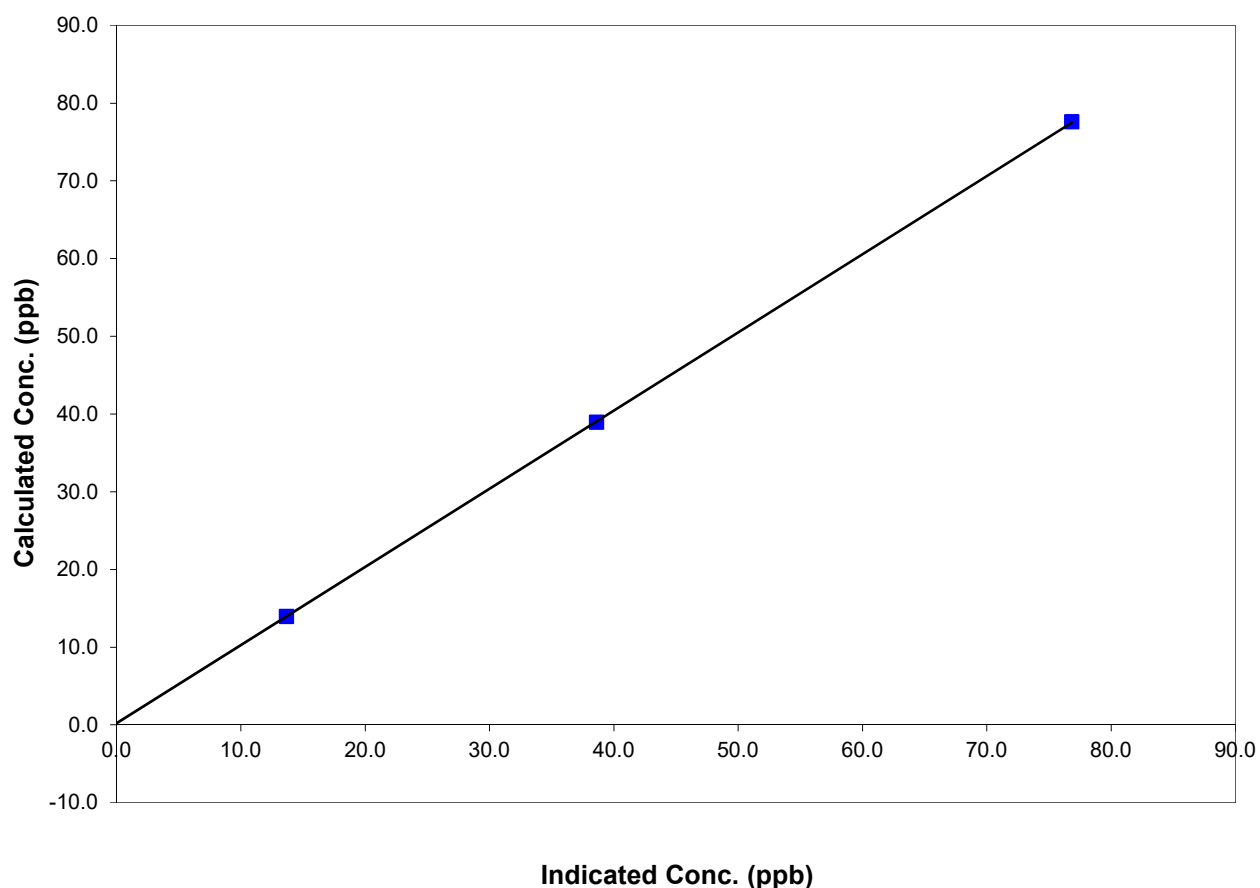
Station Information

Calibration Date	July 22, 2018	Previous Calibration	June 25, 2018
Station Number	6	Station Location	Valleyview
Start Time (MST)	22:45	End Time (MST)	13:55:00 PM
Analyzer make/model	TEI Model 450i-APHAA	Analyzer serial #	1170050144

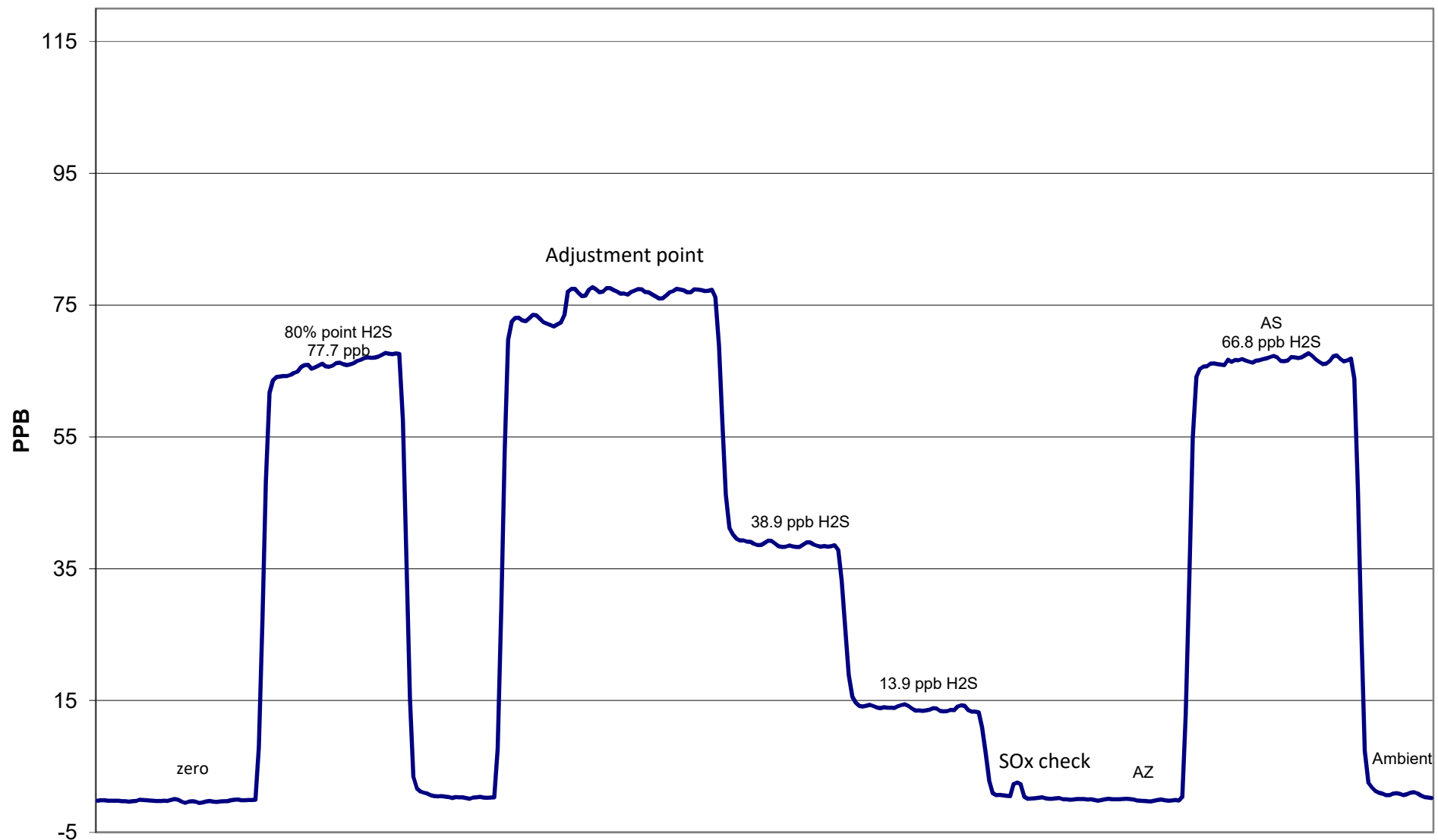
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.3	N/A	Correlation Coefficient	0.999994
77.6	76.8	1.0095		
38.9	38.6	1.0087		
13.9	13.7	1.0172	Slope	1.006270
			Intercept	0.192037

H2S Calibration Curve



H2S Calibration



July 22, 2018

Calibration Report

Parameter SO₂

Air Monitoring Network PAZA



Station Information

Calibration Date	July 18, 2018	Previous Calibration	June 22, 2018
Station Number	1	Station Location	Donnelly
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	13:40:00 AM	End Time (MST)	15:55:00 PM
Barometric Pressure	0.934 atm	Station Temperature	21.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Concentration	49.6 ppm	Cal Gas Expiry Date	October 24, 2020
Correction factor	0.031641	Cal Gas Cylinder #	LL107945
DACS make	CR1000	DACS serial No.	3980
DACS voltage range	0 - 5 volt	DACS channel #	6
	<u>Before</u>		<u>After</u>
Calculated slope	0.996818	Calculated slope	1.001617
Calculated intercept	0.488549	Calculated intercept	0.504955
Analyzer make	Teco 43i	Analyzer serial #	1207452008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	7.3		7.3	
coefficient	1.029		1.029	
Lamp Voltage	831	volts	831	volts
Chamber Temp	45	Deg C	45.2	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	675.8	mm Hg	677.6	mm Hg
Sample Flow	0.426	ccm	0.428	ccm
Lamp Intensity	97	%	98	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.00	-0.1	N/A
4995	39.89	393.0	391.8	1.0029
4995	19.78	195.6	195.3	1.0020
4995	9.90	98.1	96.6	1.0156
4995	0.0	0.0	-0.1	As Found Zero
4995	39.99	393.9	391.8	As Found Span
Average Correction Factor				1.0068

Calculated value of As Found Response: 391.149 ppb Percent Change of As Found: 0.7%

	before calibration		after calibration	
Auto zero	0.0	ppb	-0.1	ppb
Auto span	245.7	ppb	242.3	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2
Air Monitoring Network PAZA



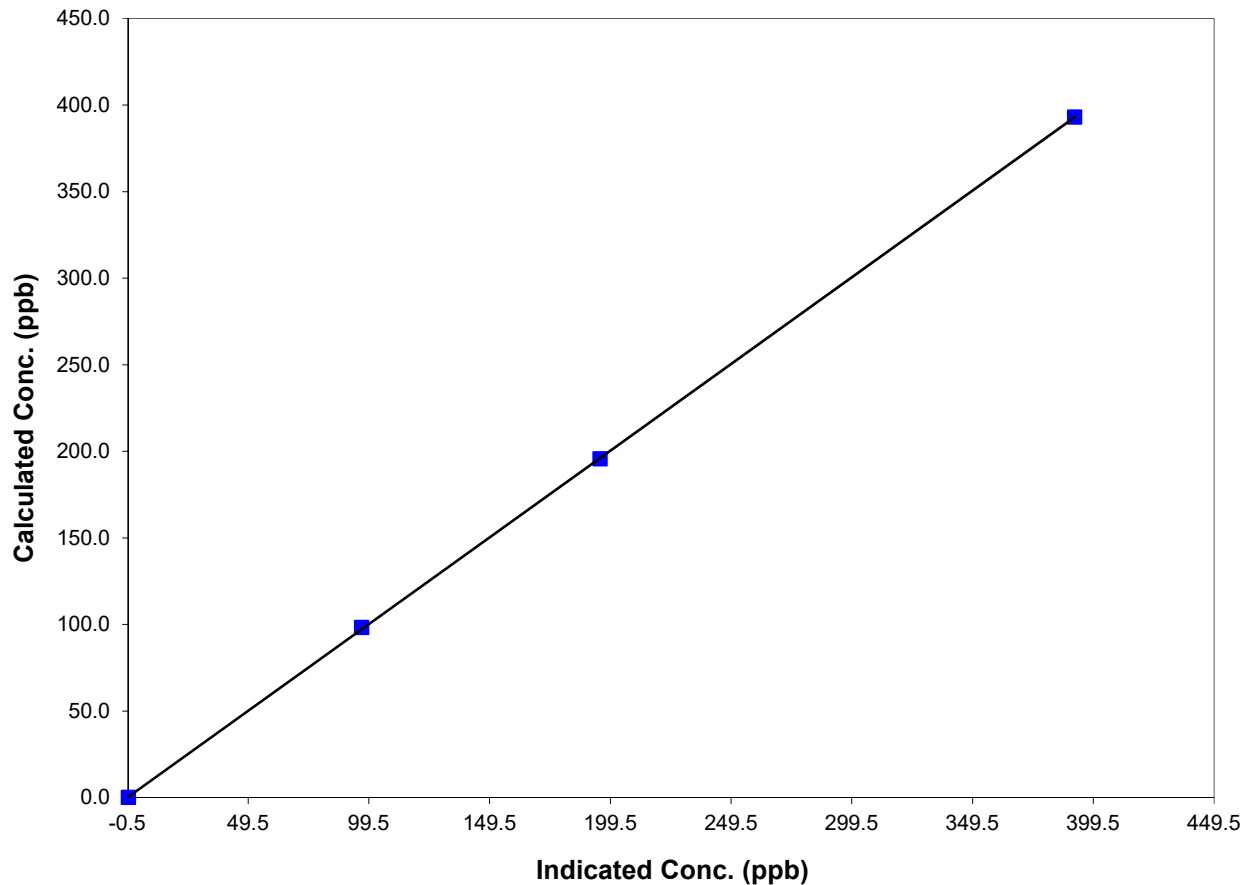
Station Information

Calibration Date	July 18, 2018	Previous Calibration	June 22, 2018
Station Number	1	Station Location	Donnely
Start Time (MST)	13:40:00 AM	End Time (MST)	15:55:00 PM
Analyzer make/model	Teco 43i	Analyzer serial #	1207452008

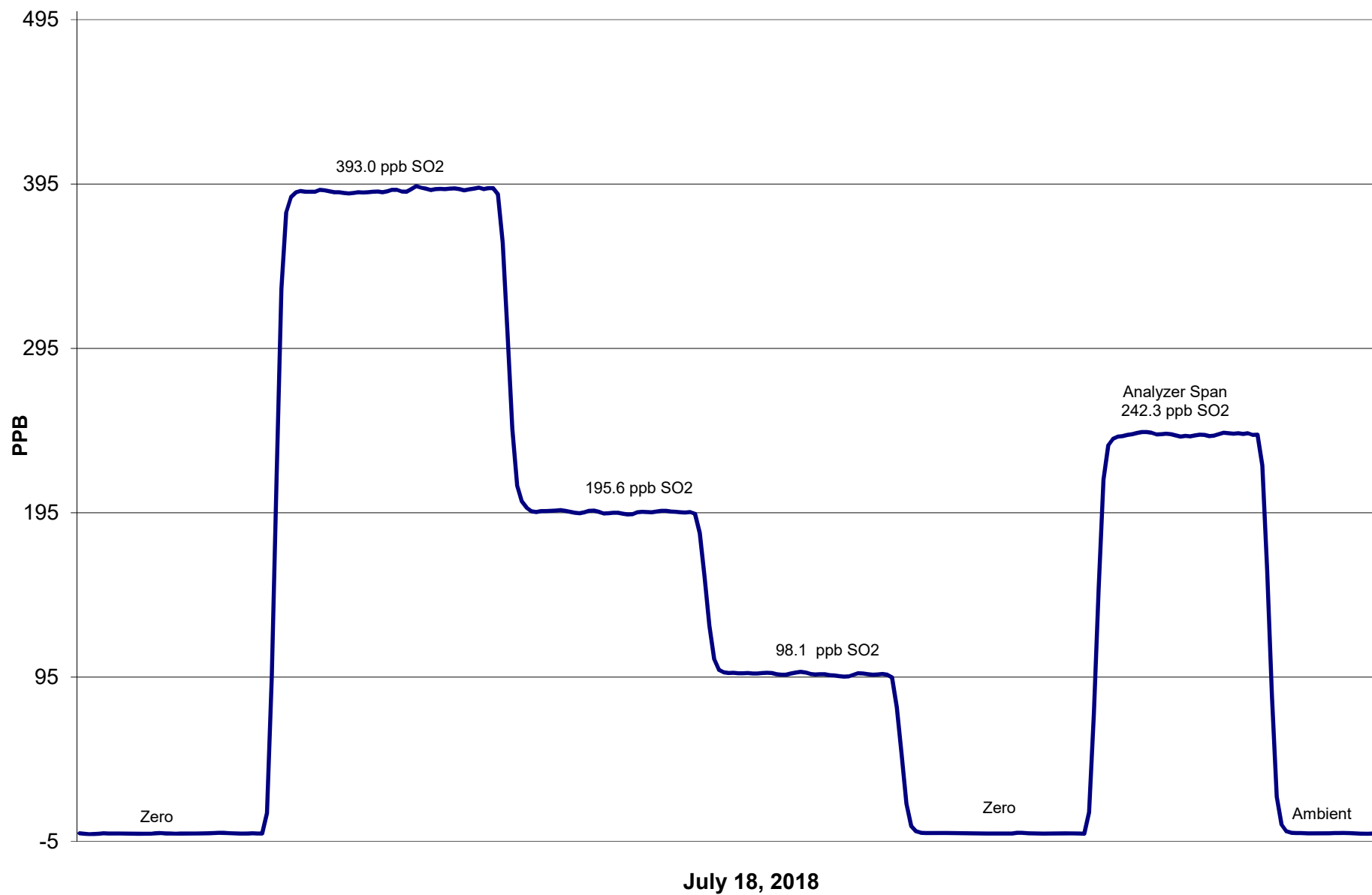
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A	Correlation Coefficient	0.999987
393.0	391.8	1.0029		
195.6	195.3	1.0020		
98.1	96.6	1.0156	Slope	1.001617
			Intercept	0.504955

SO2 Calibration Curve



SO2 Calibration



Calibration Report

Parameter H2S
Air Monitoring Network PAZA



Station Information

Calibration Date	18/07/2018	Previous Calibration	22/06/2018
Station Number	1	Station Location	Donnelly
Reason:	☐ Routine	☒ Install	☐ Removal
		Other:	
Start Time (MST)	11:25	End Time (MST)	15:15:00 PM
Barometric Pressure	0.926 atm	Station Temperature	20.0 Deg C
Calibrator	Envionics 6103	Serial Number	6586
Cal Gas Conc	9.78 ppm	Cal Gas Expiry Date	March 19, 2021
Correction factor	0.031477	Cal Gas Cylinder #	LL119574
DACS make	CR1000	DACS serial No.	3980
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
Calculated slope	0.977834	Calculated slope	0.982818
Calculated intercept	0.270110	Calculated intercept	-0.081746
Analyzer make	Thermo 450i	Analyzer serial #	1207452006

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	11.5	ppb	10	ppb
coefficient	1.031		1.074	
Lamp Voltage	769	volts	768	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	481.7	mm Hg	480.5	mm Hg
Sample Flow	0.674	lpm	0.680	lpm
Lamp Intensity	91	mv	91	mv

Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
4996	0.00	0.00	0.2	N/A
4996	39.95	77.58	79.0	0.9827
4996	19.50	38.02	39.0	0.9745
6997	9.98	13.93	14.0	0.9962
4996	0.00	0.00	-1.9	As Found Zero
4996	39.95	77.58	72.5	As Found Span
Average Correction Factor				0.9845

Calculated value of As Found Response: 73.06 ppb Percent Change of As Found: 5.8%

	before calibration		after calibration	
Auto zero	0.2	ppb	0.2	ppb
Auto span	72.9	ppb	73.8	ppb

Notes: Zero/span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter H2S

Air Monitoring Network PAZA



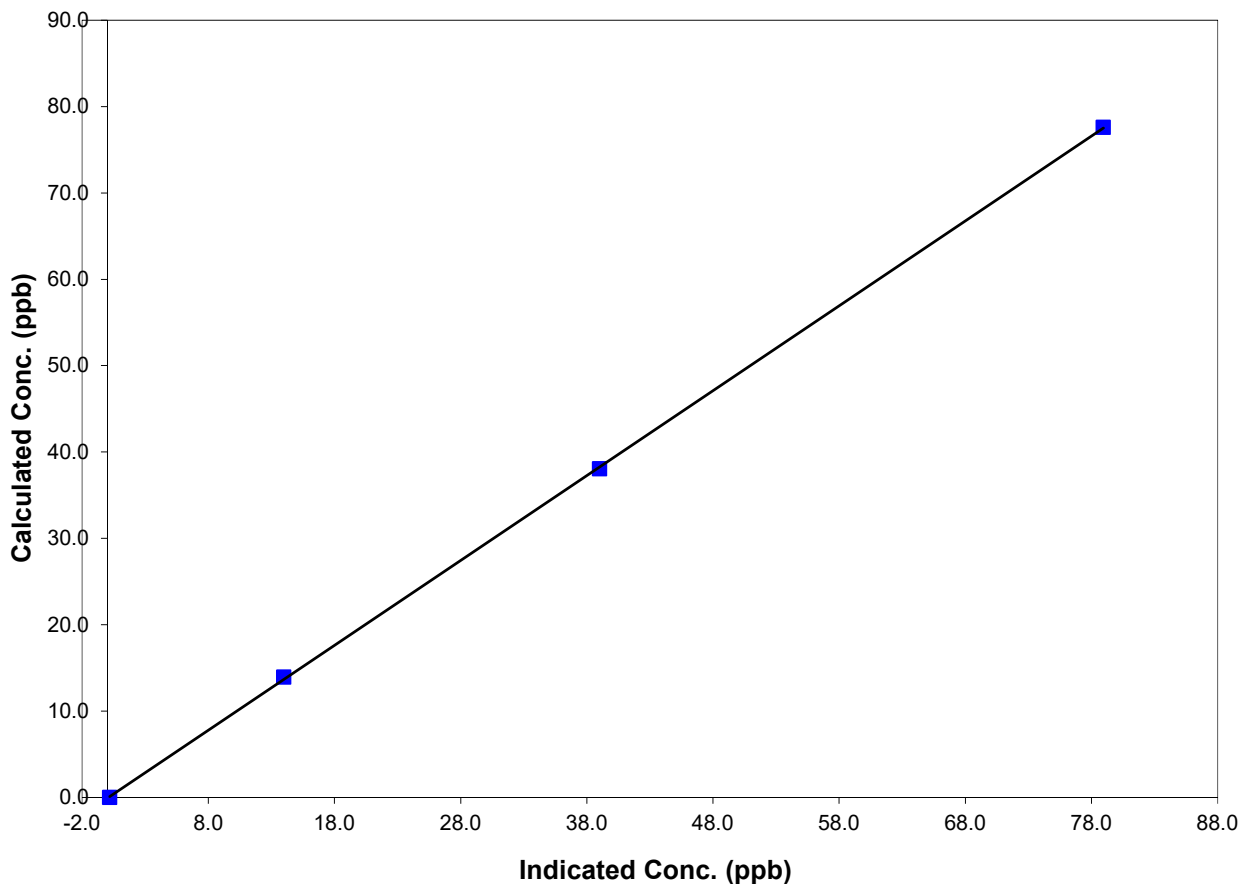
Station Information

Calibration Date	18/07/2018	Previous Calibration	22/06/2018
Station Number	1	Station Location	Donnely
Start Time (MST)	11:25	End Time (MST)	15:15:00 PM
Analyzer make/model	Thermo 450i	Analyzer serial #	1207452006

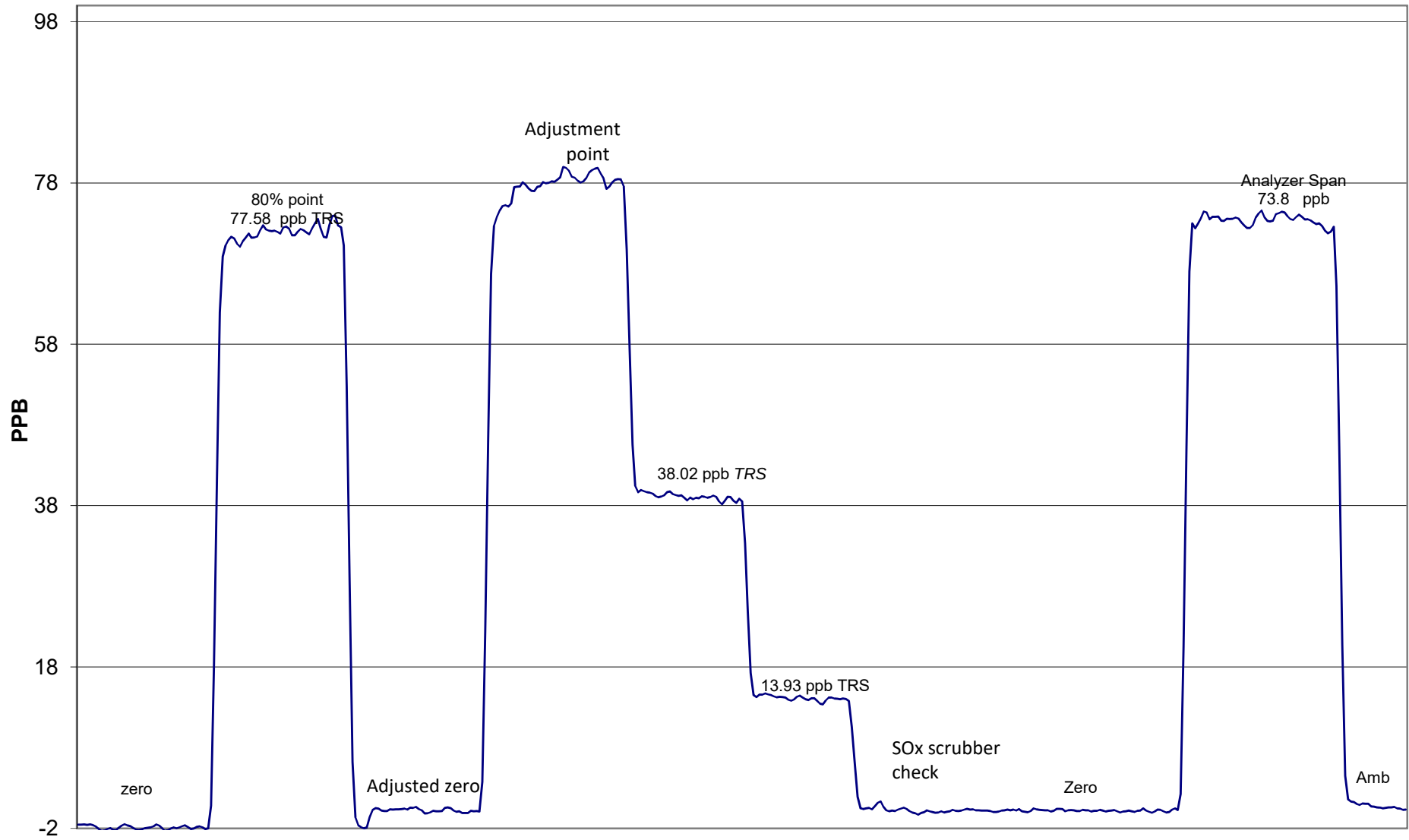
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999958
77.6	79.0	0.9827		
38.0	39.0	0.9745		
13.9	14.0	0.9962	Slope	0.982818
			Intercept	-0.081746

TRS Calibration Curve



H2S Calibration



18/07/2018

Calibration Report

Parameter SO2

Air Monitoring Network PAZA



Station Information

Calibration Date	July 30, 2018	Previous Calibration	June 13, 2018
Station Number	10	Station Location	Rycroft
Reason:	Routine	Install	Removal
Other:			
Start Time (MST)	9:30	End Time (MST)	11:55
Barometric Pressure	0.919 Atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Concentration	49.6 ppm	Cal Gas Expiry Date	10/10/2020
Gas Cert Reference	LL104185		
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	0.992595	Calculated slope	1.001561
Calculated intercept	0.392209	Calculated intercept	0.817506
Analyzer make	TEI 43C	Analyzer serial #	436610005

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	17.3		17.3	
Coefficient	0.993		0.993	
UV Lamp Voltage	758	V	758	V
Chamber Temp	45	C	45	C
Perm Gas Temp	45	C	45	C
Pressure	676.7	mm Hg	676.9	mm Hg
Sample Flow	0.444	LPM	0.444	LPM
Lamp Intesity	95	Hz	95	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)
4996	0.00	0.0	0.0	N/A
4996	39.96	393.6	392.5	1.0028
4996	19.99	197.7	196.3	1.0069
4996	9.98	98.9	97.0	1.0194
4996	0.00	0.0	0.0	As found zero
4996	39.96	393.6	392.5	As found span
Average Correction Factor				1.0097

Calculated value of As Found Response: 390.048 ppb Percent Change of As Found: 0.9%

	before calibration		after calibration	
Auto zero	0.3	ppb	0.3	ppb
Auto span	200.5	ppb	196.0	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2
Air Monitoring Network PAZA



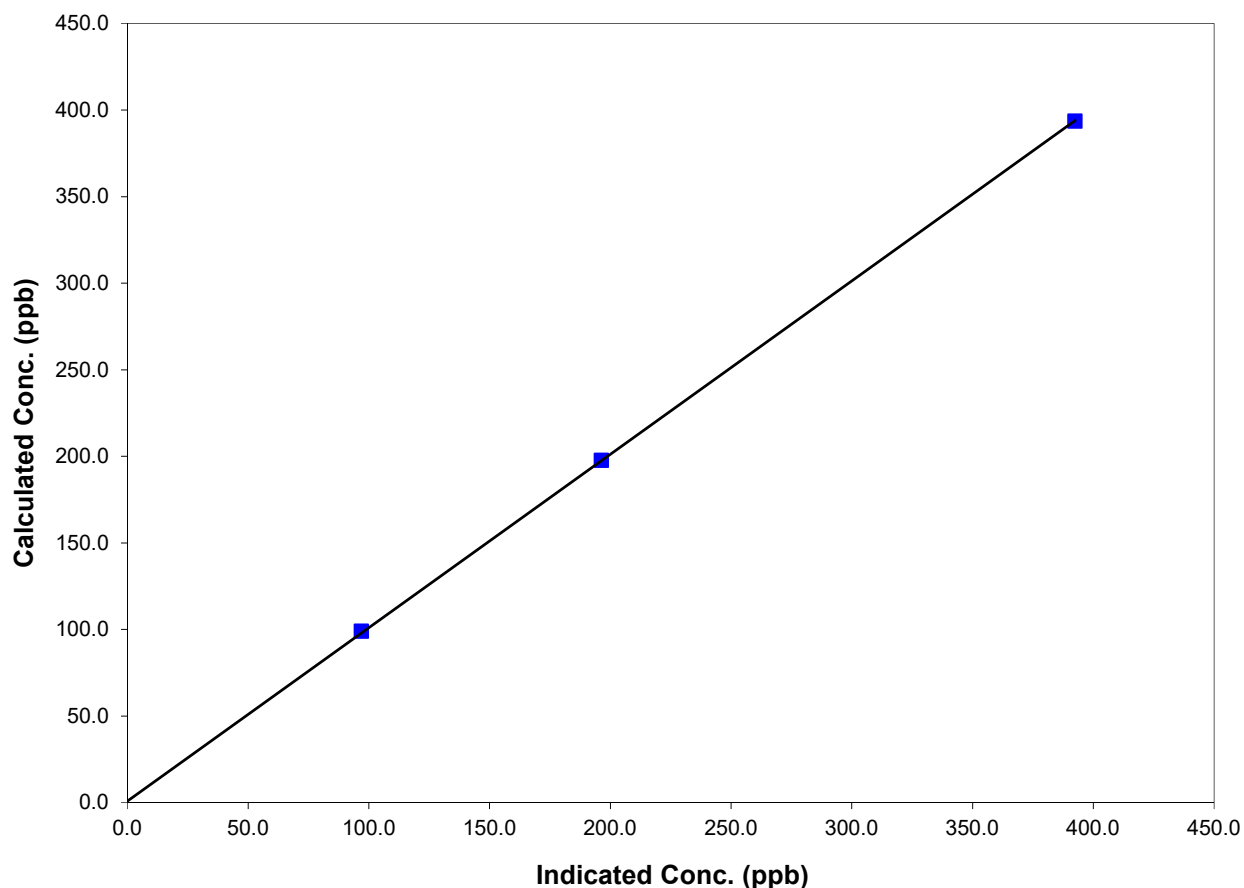
Station Information

Calibration Date	July 30, 2018	Previous Calibration	June 13, 2018
Station Number	10	Station Location	Rycroft
Start Time (MST)	9:30	End Time (MST)	11:55
Analyzer make/model	TEI 43C	Analyzer serial #	436610005

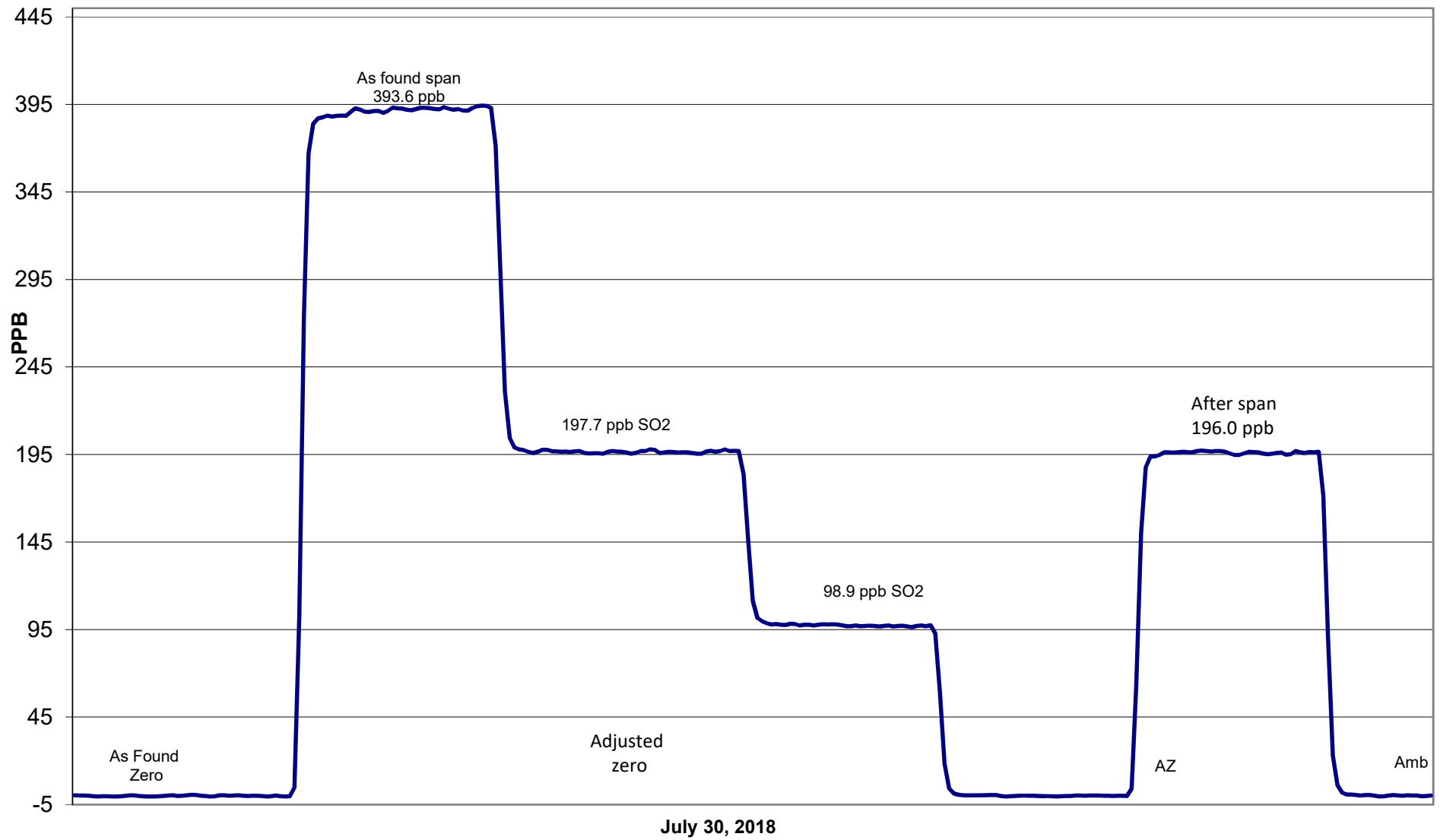
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999981
393.6	392.5	1.0028		
197.7	196.3	1.0069		
98.9	97.0	1.0194	Slope	1.001561
			Intercept	0.817506

SO2 Calibration Curve



SO2 Calibration



Calibration Report



Parameter TR5
Air Monitoring Network PAZA

Station Information

Calibration Date	July 19, 2018	Previous Calibration	June 14, 2018
Station Name	PAZA Rover	Station Location	Rycroft
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	12:20 PM	End Time (MST)	14:35:00 PM
Barometric Pressure	0.919 mbar	Station Temperature	21.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Concentration	9.78 ppm	Cal Gas Expiry Date	02/02/2020
Gas Cert Reference	LL119574		
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	1.001896	Calculated slope	1.010197
Calculated intercept	0.527672	Calculated intercept	0.305872
Analyzer make	TEI 43C	Analyzer serial #	

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	11.3	ppb	11.3	ppb
Coefficient	1.130		1.130	
Lamp Voltage	775	V	775	V
Chamber Temp	45	C	45	C
Perm gas Temp	45	C	45	C
Pressure	670.2	mmHg	670.2	mmHg
Sample Flow	0.384	lpm	0.384	lpm
Lamp Intensity	86	Hz	85	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)
4996	0.0	0.0	0.1	N/A
4996	39.96	77.6	76.8	1.0108
4998	19.98	38.9	37.8	1.0296
6996	9.97	13.9	13.2	1.0543
			0.3	Sox Test
4996	0.00	0.0	0.1	As found zero
4996	39.96	77.6	76.8	As found span
Average Correction Factor				1.0316

Calculated value of As Found Response: 77.31 ppb Percent Change of As Found: 0.4%

	before calibration		after calibration	
Auto zero	0.0	ppb	0.2	ppb
Auto span	54.5	ppb	55.8	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



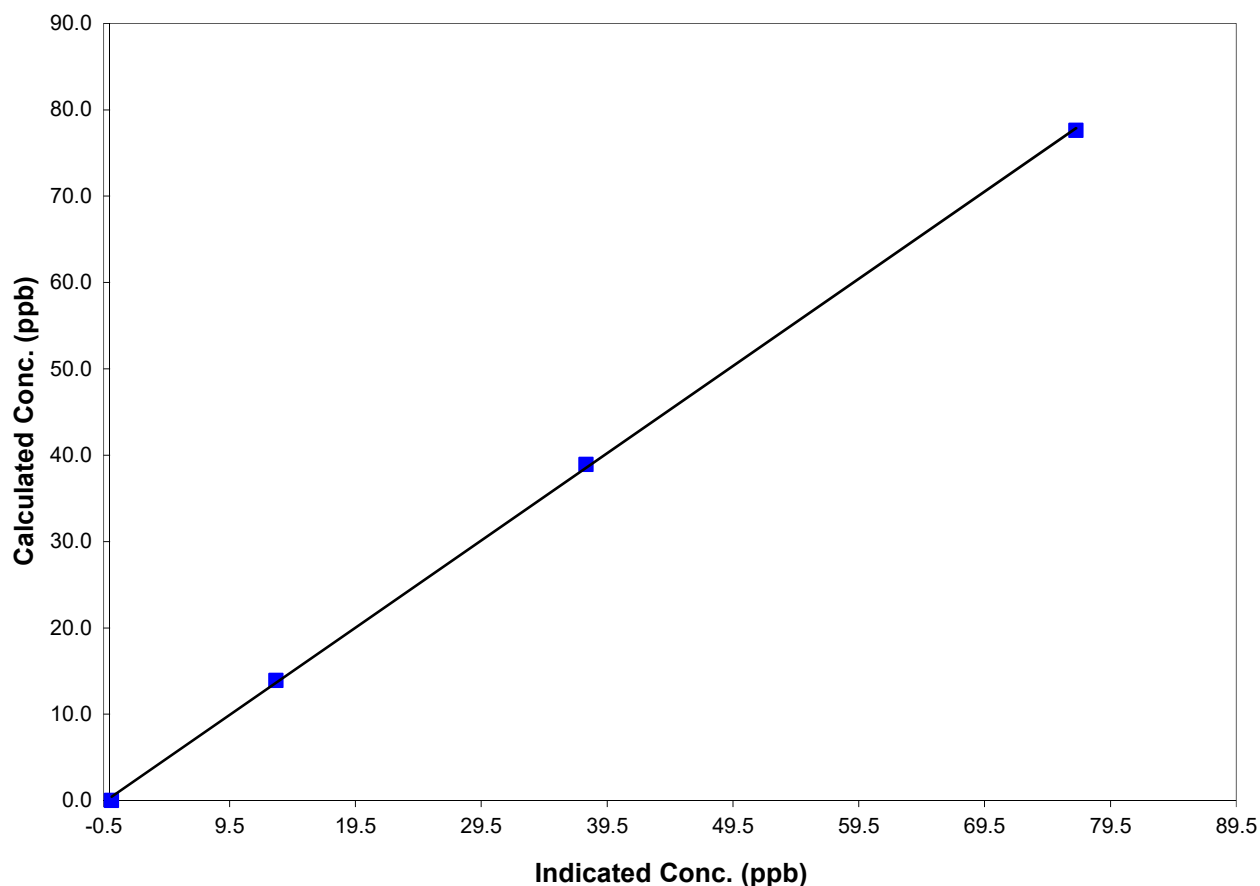
Station Information

Calibration Date	July 19, 2018	Previous Calibration	June 14, 2018
Station Number	PAZA Rover	Station Location	Rycroft
Start Time (MST)	12:20	End Time (MST)	14:35:00 PM
Analyzer make/model	TEI 43C	Analyzer serial #	0

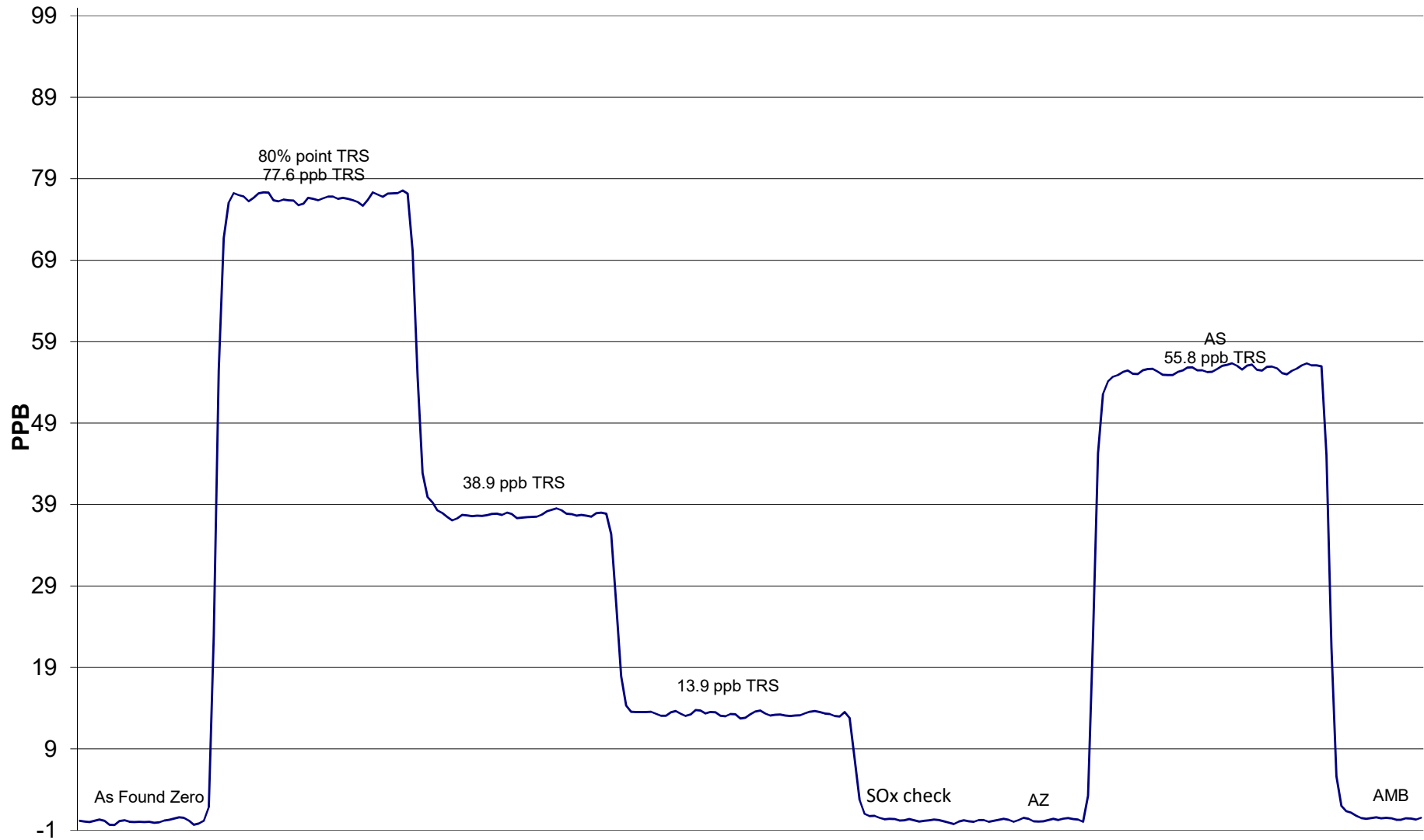
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999850
77.6	76.8	1.0108		
38.9	37.8	1.0296		
13.9	13.2	1.0543	Slope	1.010197
			Intercept	0.305872

TRS Calibration Curve



TRS Calibration



July 19, 2018

Calibration Report



Parameter 03
Air Monitoring Network PAZA

Station Information

Calibration Date	July 30 2018	Previous Calibration	June 14 2018
Station Number	10	Station Location	Rycroft
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	10:52	End Time (MST)	14:20:00 PM
Barometric Pressure	0.919 atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volts	DACS channel #	6
	Before		After
Calculated slope	0.979868	Calculated slope	0.986532
Calculated intercept	-0.456610	Calculated intercept	0.240235
Analyzer make	TEI Model 49C	Analyzer serial #	49I-115363156

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	-0.4	ppb	-0.1	ppb
Span	1.046		1.027	
Cell A intensity	94244	Hz	93990	Hz
Cell B intensity	81342'	Hz	80980	Hz
Pressure	701.70	in Hg	706.20	in Hg
CellA Flow	0.692	ccm	0.691	ccm
Cell B Flow	0.684	cmm	0.690	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)
4996	0.00	0.0	0.1	N/A
4996	0.30	300.0	303.5	0.9885
4996	0.20	200.0	203.5	0.9826
4996	0.10	100.0	100.1	0.9993
4996	0.00	0.0	0.3	As found zero
4996	0.30	300.0	307.1	As found span
Average Correction Factor				0.9901

Calculated value of As Found Response: 300.2 ppm Percent Change of As Found: 0.1%

	before calibration		after calibration	
Auto zero	-0.2	ppb	0.1	ppb
Auto span	380.0	ppb	373.2	ppb

Notes: Zero & span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter 03
Air Monitoring Network PAZA



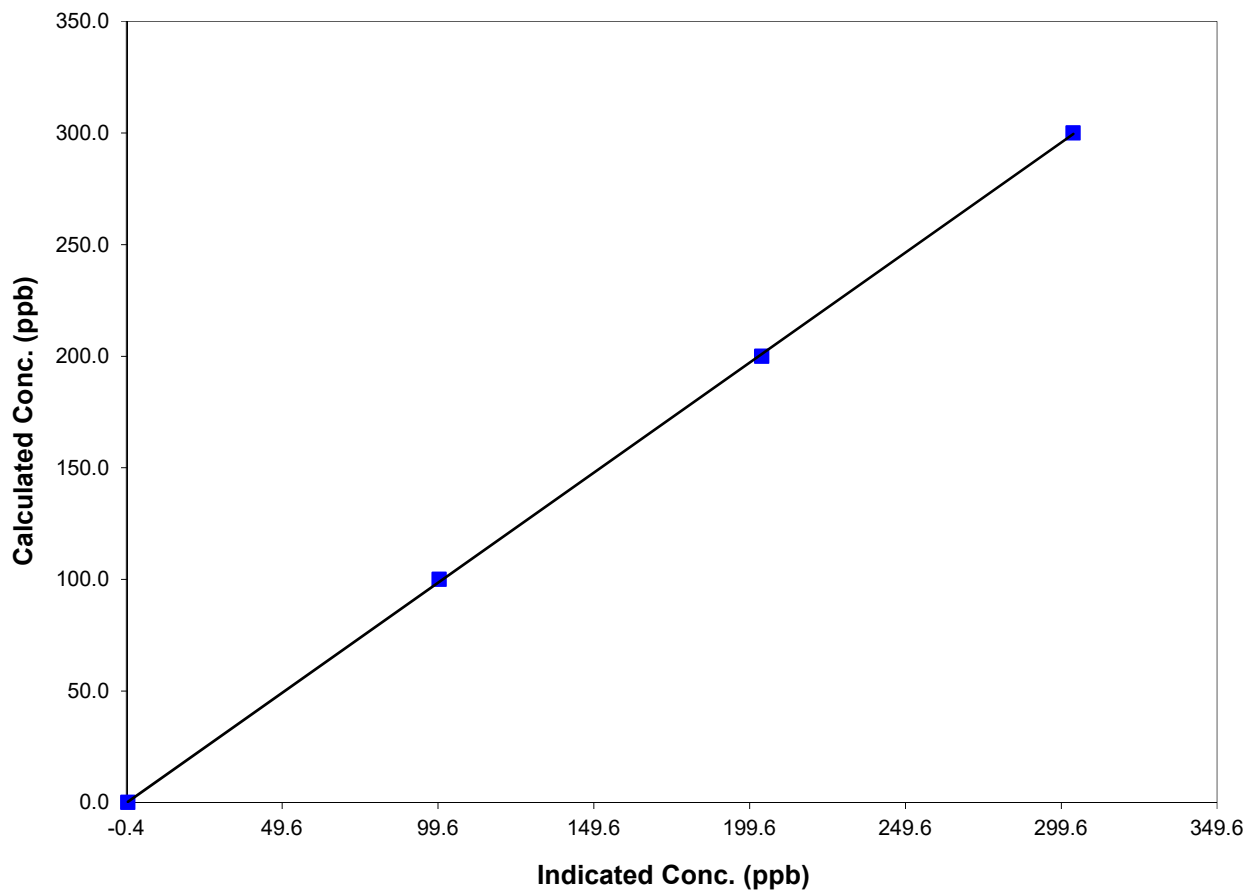
Station Information

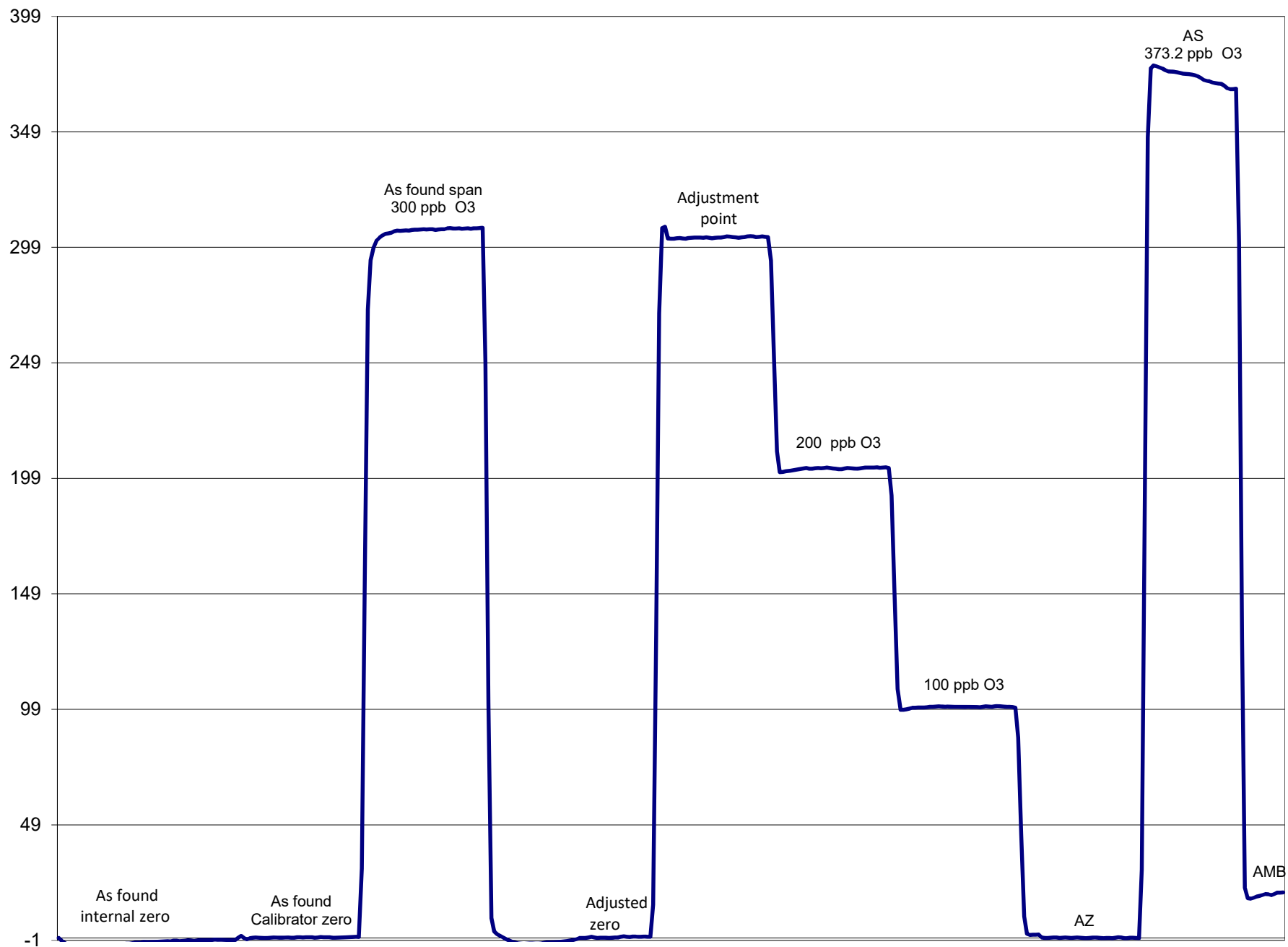
Calibration Date	July 30 2018	Previous Calibration	June 14 2018
Station Number	10	Station Location	Rycroft
Start Time (MST)	10:52	End Time (MST)	14:20:00 PM
Analyzer make/model	TEI Model 49C	Analyzer serial #	49I-115363156

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	NA	Correlation Coefficient	0.999952
300.0	303.5	0.9885		
200.0	203.5	0.9826		
100.0	100.1	0.9993	Slope	0.986532
			Intercept	0.240235

O3 Calibration Curve





July 30 2018

Calibration Report



Parameter CH4 / NMHC / THC

Air Monitoring Network PAZA

Station Information

Calibration Date	July 5, 2018	Previous Calibration	June 27, 2018
Station Number	1	Station Location	Rycroft
Reason:	Routine	Install	Removal
		Other:	

Start Time (MST)	9:50	End Time (MST)	13:55:00 PM
Barometric Pressure	0.930 atm	Station Temperature	21.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas CH4 Conc	404 ppm CH4	Cal Gas Expiry Date	28/03/2014
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)
2000	0.00	0.00	0.00	N/A
2000	64.96	12.71	12.50	1.0171
2000	40.97	8.11	7.78	1.0423
2000	15.96	3.20	3.04	1.0529
2000	0.00	0.00	0.00	As Found Zero
2000	64.93	12.70	12.38	As Found Span
Average Correction Factor				1.0374

Calculated value of As Found Response: 12.333 ppm Percent Change of As Found: 2.9%

	Before		After
Calculated slope	0.996152	Calculated slope	1.018116
Calculated intercept	-0.000612	Calculated intercept	0.069943

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.01	ppm	0.03	ppm
Auto span	7.95	ppm	7.67	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)
2000	0.00	0.00	0.00	N/A
2002	64.96	17.37	17.34	1.0020
2000	40.97	11.10	10.97	1.0119
2000	15.96	4.38	4.19	1.0454
2000	0.00	0.00	0.00	As Found Zero
2000	64.93	17.38	18.28	As Found Span
Average Correction Factor				1.0197

Calculated value of As Found Response: 18.047 ppm Percent Change of As Found: -3.8%

	Before		After
Calculated slope	0.983125	Calculated slope	0.999724
Calculated intercept	0.075353	Calculated intercept	0.090719

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.00	ppm
Auto span	11.18	ppm	10.76	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)
2000	0.00	0.00	0.00	N/A
2000	64.96	30.10	29.87	1.0076
2000	40.97	19.21	18.74	1.0247
2000	15.96	7.57	7.24	1.0455
2000	0.00	0.00	0.00	As Found Zero
2000	64.93	30.08	30.71	As Found Span
Average Correction Factor				1.0259

Calculated value of As Found Response: 30.411 ppm Percent Change of As Found: -1.1%

	Before		After
Calculated slope	0.988129	Calculated slope	1.006995
Calculated intercept	0.069251	Calculated intercept	0.156391

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.01	ppm	0.03	ppm
Auto span	19.13	ppm	18.42	ppm

Notes: Pressure & timing adjusted for the carrier gas
Slight span adjustment

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter CH4
Air Monitoring Network PAZA



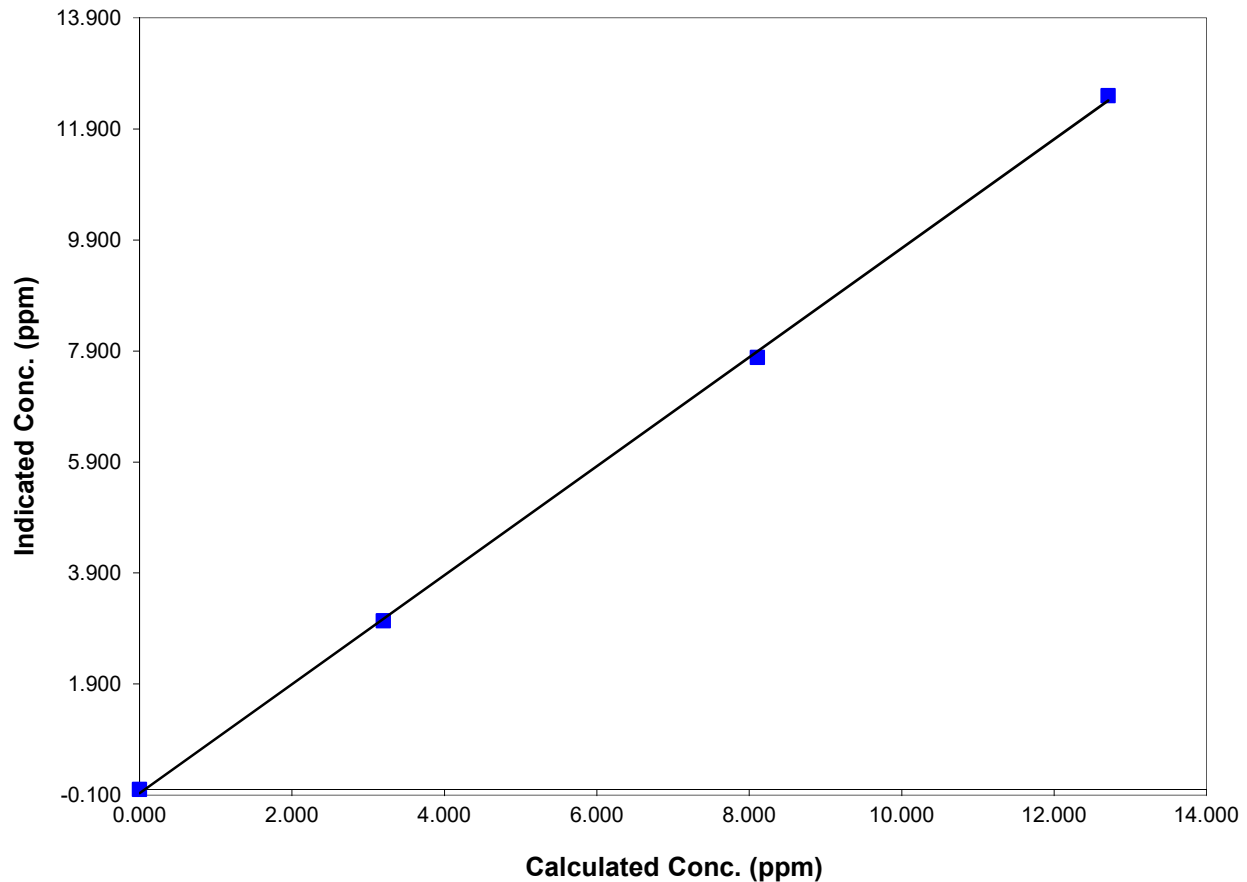
Station Information

Calibration Date	July 5, 2018	Previous Calibration	June 27, 2018
Station Number	1	Station Location	Rycroft
Start Time (MST)	9:50	End Time (MST)	13:55:00 PM
Analyzer make/model	TEI 55I-A3PHAA	Analyzer serial #	1151980005

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.002	N/A	Correlation Coefficient	0.999710
12.709	12.495	1.0171		
8.110	7.781	1.0423		
3.198	3.038	1.0529	Slope	1.018116
			Intercept	0.069943

CH4 Calibration Data



Calibration Summary

Parameter NMHC
Air Monitoring Network PAZA



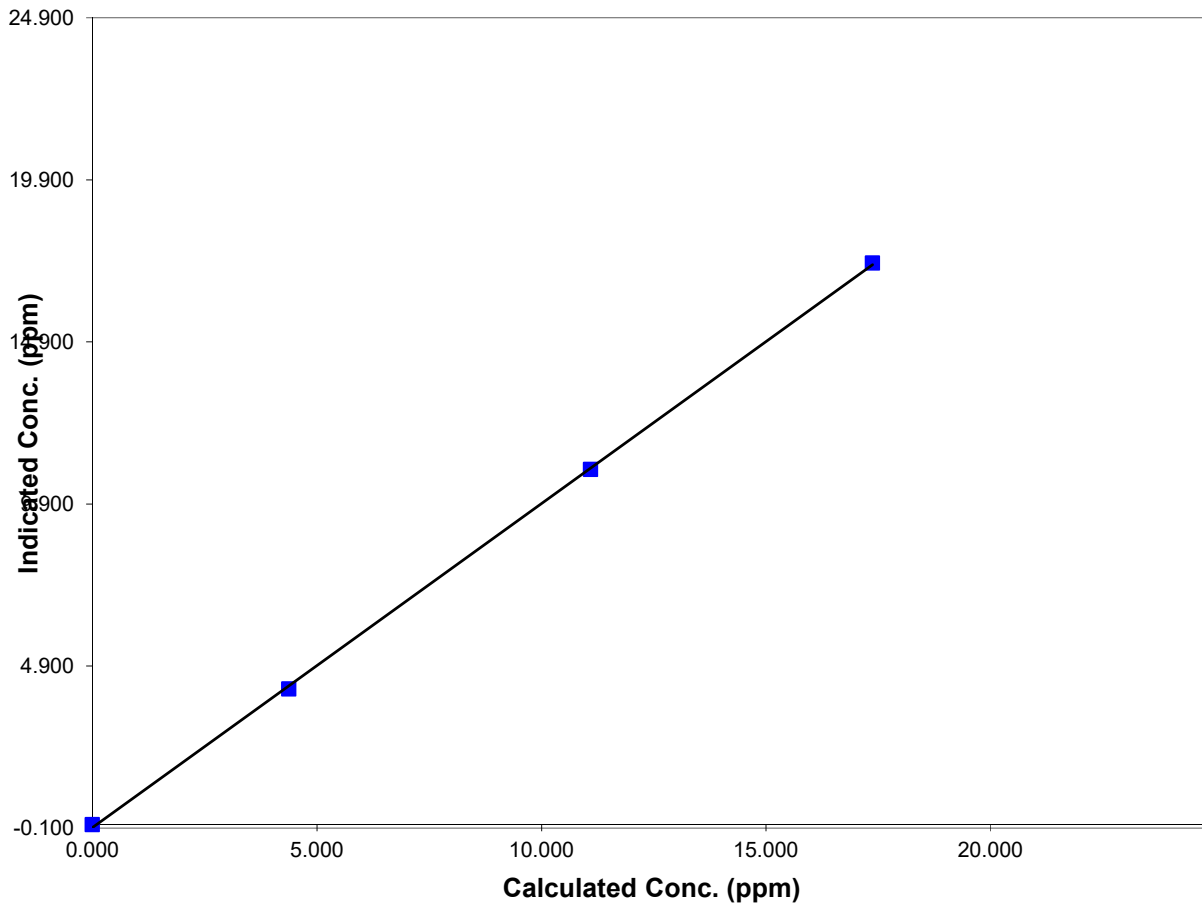
Station Information

Calibration Date	July 5, 2018	Previous Calibration	June 27, 2018
Station Number	1	Station Location	Rycroft
Start Time (MST)	9:50	End Time (MST)	13:55:00 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	0.999869
17.372	17.337	1.0020		
11.096	10.966	1.0119		
4.376	4.186	1.0454	Slope	0.999724
			Intercept	0.090719

NMHC Calibration Data



Calibration Summary

Parameter THC
Air Monitoring Network PAZA



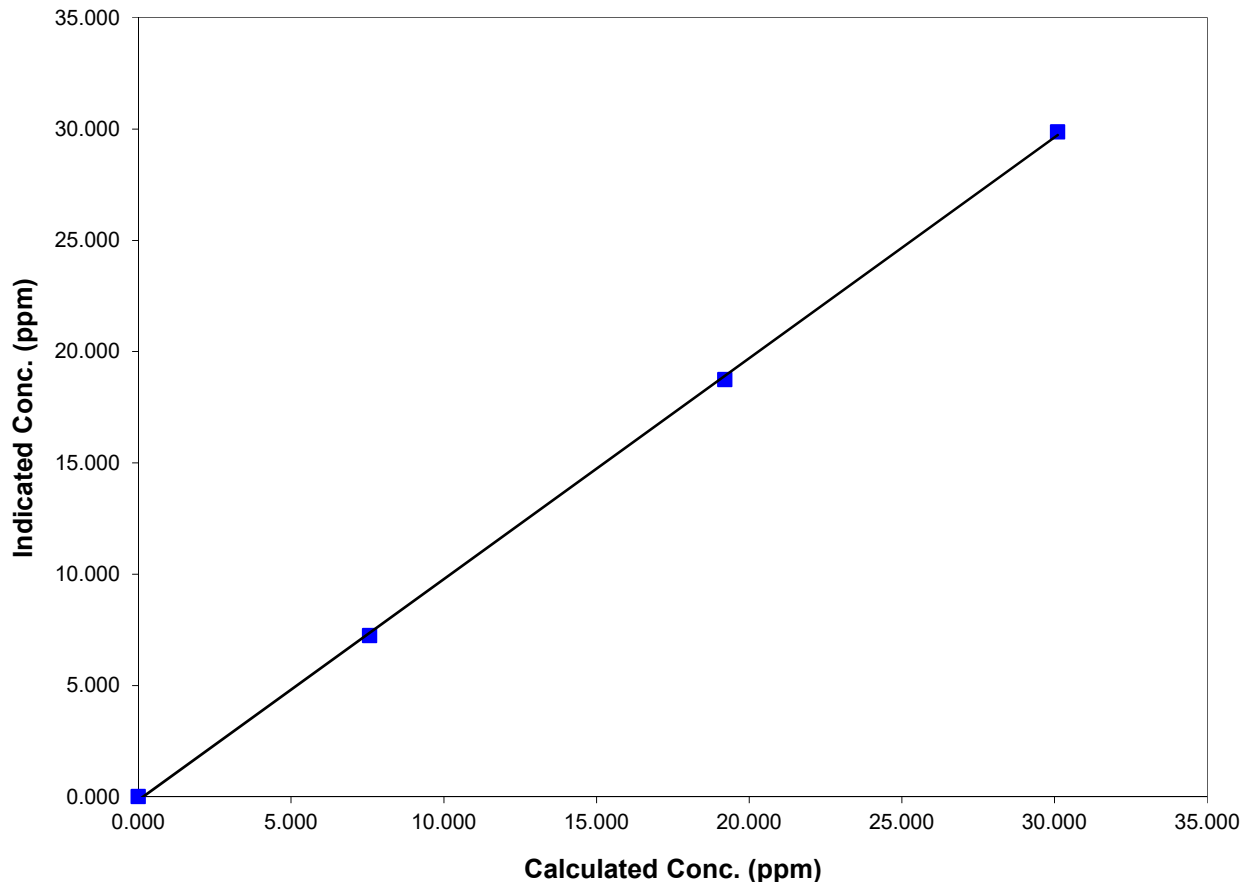
Station Information

Calibration Date	July 5, 2018	Previous Calibration	June 27, 2018
Station Number	1	Station Location	Rycroft
Start Time (MST)	9:50	End Time (MST)	13:55:00 PM
Analyzer make/model	TEI 55I-A3PHAA	Analyzer serial #	1151980005

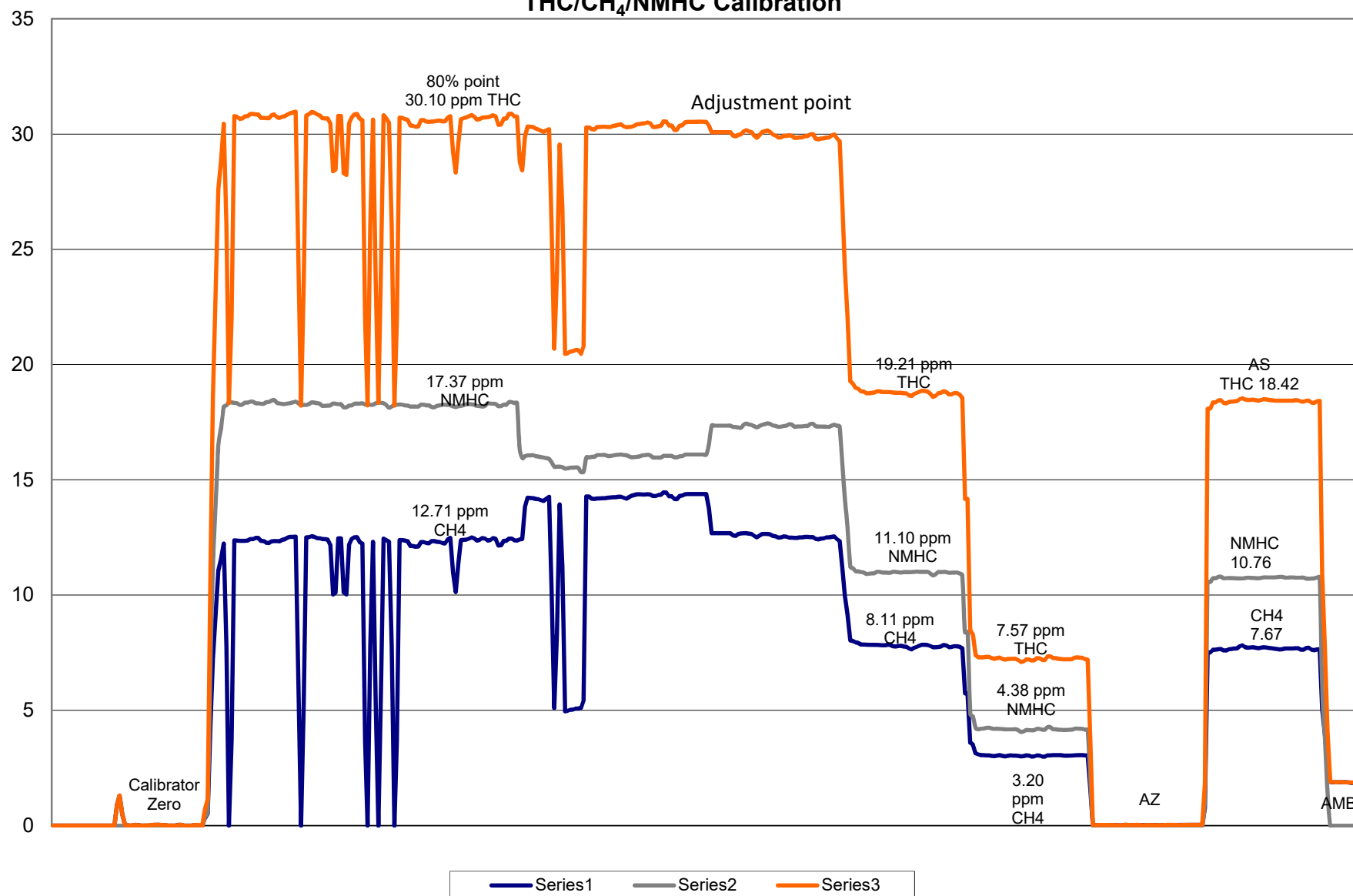
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.002	N/A	Correlation Coefficient	0.999828
30.098	29.872	1.0076		
19.206	18.743	1.0247		
7.574	7.245	1.0455	Slope	1.006995
			Intercept	0.156391

THC Calibration Data



THC/CH₄/NMHC Calibration



Calibration Report



Parameter CH4 / NMHC / THC

Air Monitoring Network PAZA

Station Information

Calibration Date	July 19, 2018	Previous Calibration	July 5, 2018
Station Number	1	Station Location	Rycroft
Reason:	Routine	Install	Removal Other:

Start Time (MST)	9:55	End Time (MST)	13:00:00 PM
Barometric Pressure	0.930 atm	Station Temperature	21.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas CH4 Conc	404 ppm CH4	Cal Gas Expiry Date	28/03/2014
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)
2000	0.00	0.00	0.03	N/A
2000	64.96	12.71	12.72	0.9993
2000	40.97	8.11	8.10	1.0014
2000	15.96	3.20	3.12	1.0243
2000	0.00	0.00	0.03	As Found Zero
2000	64.93	12.70	12.18	As Found Span
Average Correction Factor				1.0083

Calculated value of As Found Response: 12.104 ppm Percent Change of As Found: 4.7%

	Before		After
Calculated slope	0.996152	Calculated slope	0.999361
Calculated intercept	-0.000612	Calculated intercept	0.015447

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.01	ppm	0.00	ppm
Auto span	7.95	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)
2000	0.00	0.00	0.00	N/A
2002	64.96	17.37	17.39	0.9988
2000	40.97	11.10	10.98	1.0108
2000	15.96	4.38	4.18	1.0461
2000	0.00	0.00	0.00	As Found Zero
2000	64.93	17.38	16.87	As Found Span
Average Correction Factor				1.0186

Calculated value of As Found Response: 16.659 ppm Percent Change of As Found: 4.2%

	Before		After
Calculated slope	0.983125	Calculated slope	0.996473
Calculated intercept	0.075353	Calculated intercept	0.101286

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.00	ppm
Auto span	11.18	ppm	10.97	ppm

THC Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
2000	0.00	0.00	0.03	N/A
2000	64.96	30.10	30.15	0.9982
2000	40.97	19.21	19.08	1.0067
2000	15.96	7.57	7.33	1.0333
2000	0.00	0.00	0.03	As Found Zero
2000	64.93	30.08	29.10	As Found Span
Average Correction Factor				1.0127

Calculated value of As Found Response: 28.789 ppm Percent Change of As Found: 4.3%

	Before		After
Calculated slope	0.988129	Calculated slope	0.997220
Calculated intercept	0.069251	Calculated intercept	0.110608

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.01	ppm	0.01	ppm
Auto span	19.13	ppm	19.00	ppm

Notes: Hydrogen, nitrogen & span cylinders replaced
Slight span adjutment

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter CH4
Air Monitoring Network PAZA



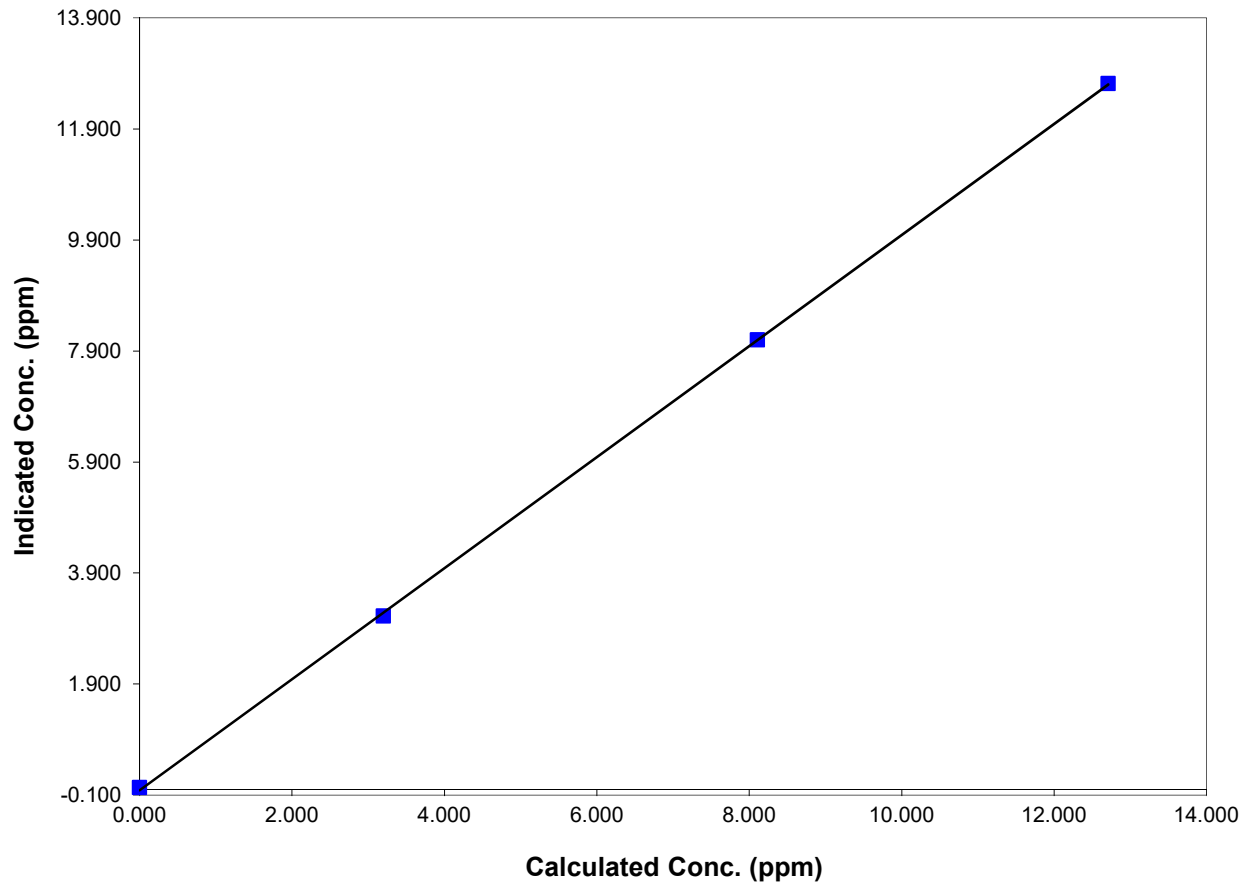
Station Information

Calibration Date	July 19, 2018	Previous Calibration	July 5, 2018
Station Number	1	Station Location	Rycroft
Start Time (MST)	9:55	End Time (MST)	13:00:00 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	0.032	N/A	Correlation Coefficient	0.999932
12.709	12.718	0.9993		
8.110	8.099	1.0014		
3.198	3.123	1.0243	Slope	0.999361
			Intercept	0.015447

CH4 Calibration Data



Calibration Summary

Parameter NMHC
Air Monitoring Network PAZA



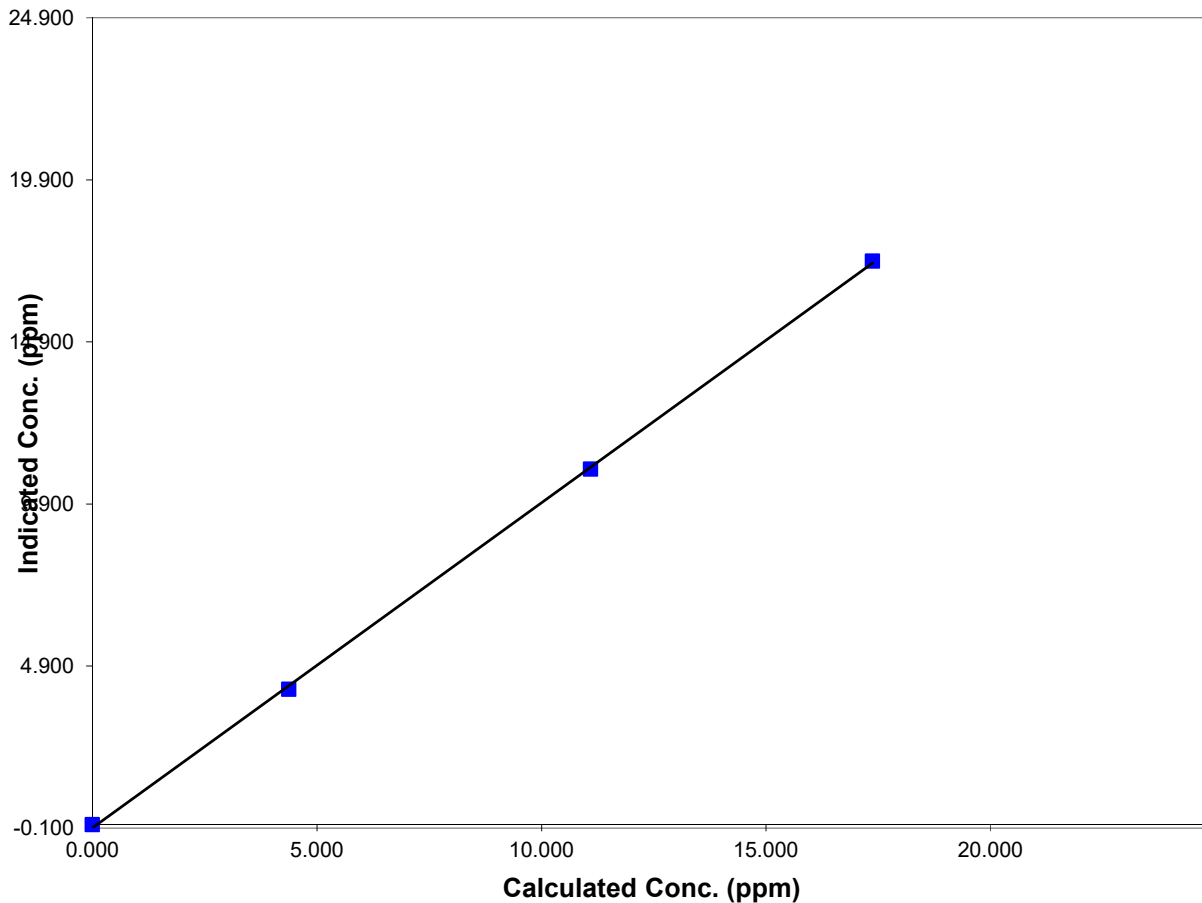
Station Information

Calibration Date	July 19, 2018	Previous Calibration	July 5, 2018
Station Number	1	Station Location	Rycroft
Start Time (MST)	9:55	End Time (MST)	13:00:00 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	0.000	N/A	Correlation Coefficient	0.999837
17.372	17.393	0.9988		
11.096	10.978	1.0108		
4.376	4.183	1.0461	Slope	0.996473
			Intercept	0.101286

NMHC Calibration Data



Calibration Summary

Parameter THC
Air Monitoring Network PAZA



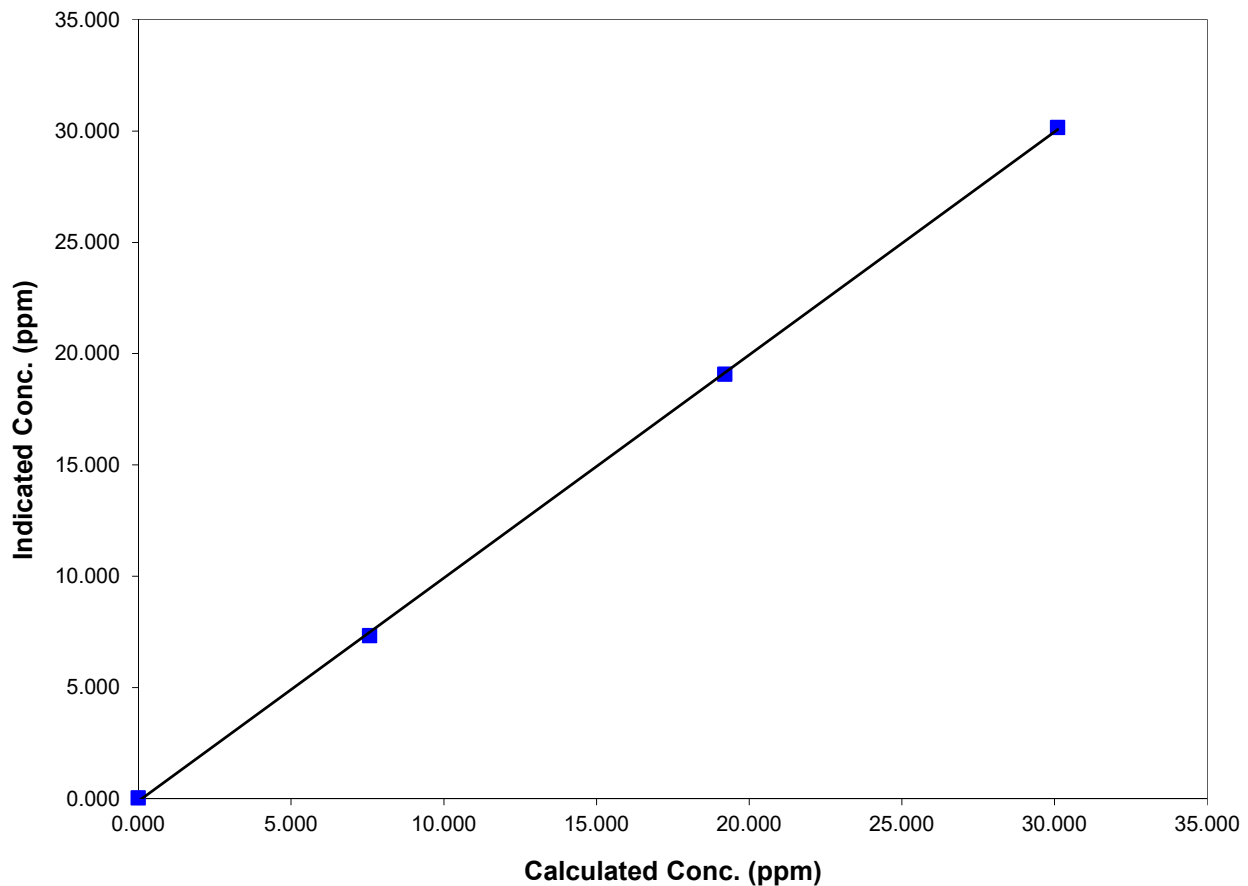
Station Information

Calibration Date	July 19, 2018	Previous Calibration	July 5, 2018
Station Number	1	Station Location	Rycroft
Start Time (MST)	9:55	End Time (MST)	13:00:00 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	0.032	N/A	Correlation Coefficient	0.999893
30.098	30.153	0.9982		
19.206	19.077	1.0067		
7.574	7.330	1.0333	Slope	0.997220
			Intercept	0.110608

THC Calibration Data



THC/CH₄/NMHC Calibration

