



Peace Airshed Zone Association

Ambient Air Monitoring Network Summary

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

September 30, 2018

Alberta Environment and Parks

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

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

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

The Person Responsible is Elizabeth Bell, Executive Director.

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

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

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

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

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

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

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

Henry Pirker Station:

- ◆ The measured ambient air quality was within the AAAQO for the Henry Pirker station, with the exception of the PM_{2.5} analyzer, which recorded 116 1-hour and 12 24-hour Exceedances of the AAAQG. All exceedances are attributed to wildfire smoke.
- ◆ All analyzers and meteorological sensors at the Henry Pirker station had an operational uptime greater than 90% for the month of August.

Evergreen Park Station:

- ◆ The measured ambient air quality was within the AAAQO for the Evergreen Park station, with the exception of the PM_{2.5} analyzer, which recorded 110 1-hour and 10 24-hour Exceedances of the AAAQG. All exceedances are attributed to wildfire smoke.
- ◆ All analyzers and meteorological sensors at the Evergreen Park station had an operational uptime greater than 90% for the month of August.

Smoky Heights Station:

- ◆ The measured ambient air quality was within the AAAQO for the Smoky Heights station, with the exception of the PM_{2.5} analyzer, which recorded 91 1-hour and 10 24-hour Exceedances of the AAAQG. All exceedances are attributed to wildfire smoke.
- ◆ All analyzers and meteorological sensors at the Smoky Heights station had an operational uptime greater than 90% for the month of August.

Beaverlodge Station:

- ◆ The measured ambient air quality was within the AAAQO for the Beaverlodge station, with the exception of the PM_{2.5} analyzer, which recorded 123 1-hour and 13 24-hour Exceedances of the AAAQG. All exceedances are attributed to wildfire smoke.
- ◆ All analyzers and meteorological sensors at the Beaverlodge station had an operational uptime greater than 90% for the month of August.

Valleyview Station:

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

Donnelly Station:

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

Rycroft-Portable Station:

- ◆ The measured ambient air quality was within the AAAQO for the Rycroft-Portable station, with the exception of the PM_{2.5} analyzer, which recorded 69 1-hour and 10 24-hour Exceedances of the AAAQG. All exceedances are attributed to wildfire smoke.
- ◆ All analyzers and meteorological sensors at the Rycroft-Portable station had an operational uptime greater than 90% for the month of August.

Station Name	Date	Start Time	End Time	PM _{2.5} Concentration	Reference Number
		(MST)	(MST)	(µg/m ³)	
Rycroft-Portable	07-Aug-18	13:00	14:00	84.3	341902
Smoky Heights	07-Aug-18	13:00	14:00	99.4	341901
Rycroft-Portable	07-Aug-18	14:00	15:00	88.2	341902
Smoky Heights	07-Aug-18	14:00	15:00	107.7	341901
Smoky Heights	08-Aug-18	15:00	16:00	82.6	342041
Smoky Heights	08-Aug-18	16:00	17:00	115.4	342041

Station Name	Date	Start Time	End Time	PM _{2.5} Concentration	Reference Number
Beaverlodge	08-Aug-18	16:00	17:00	118.4	342001
Rycroft-Portable	08-Aug-18	16:00	17:00	87.5	342002
Smoky Heights	08-Aug-18	17:00	18:00	99.7	342041
Beaverlodge	08-Aug-18	17:00	18:00	116.0	342001
Rycroft-Portable	08-Aug-18	17:00	18:00	83.3	342002
Beaverlodge	08-Aug-18	18:00	19:00	112.5	342001
Beaverlodge	08-Aug-18	19:00	20:00	89.4	342001
Evergreen Park	08-Aug-18	19:00	20:00	92.3	342040
Henry Pirker	08-Aug-18	19:00	20:00	120.1	342039
Evergreen Park	08-Aug-18	20:00	21:00	104.1	342040
Henry Pirker	08-Aug-18	20:00	21:00	114.7	342039
Evergreen Park	08-Aug-18	21:00	22:00	99.9	342040
Henry Pirker	08-Aug-18	21:00	22:00	99.9	342039
Evergreen Park	08-Aug-18	22:00	23:00	91.1	342040
Henry Pirker	08-Aug-18	22:00	23:00	89.9	342039
Evergreen Park	08-Aug-18	23:00	00:00	81.8	342040
Henry Pirker	08-Aug-18	23:00	00:00	82.1	342039
Evergreen Park	09-Aug-18	03:00	04:00	82.6	342171
Evergreen Park	09-Aug-18	04:00	05:00	86.8	342171
Henry Pirker	09-Aug-18	04:00	05:00	87.3	342168
Evergreen Park	09-Aug-18	05:00	06:00	88.1	342171
Henry Pirker	09-Aug-18	05:00	06:00	98.2	342168
Evergreen Park	09-Aug-18	06:00	07:00	84.2	342171
Henry Pirker	09-Aug-18	06:00	07:00	89.8	342168
Beaverlodge	09-Aug-18	06:00	07:00	82.4	342166
Evergreen Park	09-Aug-18	07:00	08:00	92.1	342171
Henry Pirker	09-Aug-18	07:00	08:00	83.0	342168
Beaverlodge	09-Aug-18	07:00	08:00	81.5	342166
Evergreen Park	09-Aug-18	08:00	09:00	90.8	342171
Beaverlodge	09-Aug-18	08:00	09:00	81.8	342166
Evergreen Park	09-Aug-18	09:00	10:00	99.7	342171
Rycroft-Portable	09-Aug-18	09:00	10:00	85.4	342172
Rycroft-Portable	09-Aug-18	10:00	11:00	99.7	342172
Beaverlodge	09-Aug-18	11:00	12:00	84.7	342166
Rycroft-Portable	09-Aug-18	11:00	12:00	133.6	342172
Beaverlodge	09-Aug-18	12:00	13:00	111.0	342166

Station Name	Date	Start Time	End Time	PM _{2.5} Concentration	Reference Number
Henry Pirker	09-Aug-18	12:00	13:00	94.4	342168
Rycroft-Portable	09-Aug-18	12:00	13:00	149.6	342172
Beaverlodge	09-Aug-18	13:00	14:00	122.3	342166
Henry Pirker	09-Aug-18	13:00	14:00	107.4	342168
Rycroft-Portable	09-Aug-18	13:00	14:00	145.1	342172
Beaverlodge	09-Aug-18	14:00	15:00	132.4	342166
Henry Pirker	09-Aug-18	14:00	15:00	139.7	342168
Rycroft-Portable	09-Aug-18	14:00	15:00	128.5	342172
Evergreen Park	09-Aug-18	14:00	15:00	157.5	342171
Beaverlodge	09-Aug-18	15:00	16:00	114.5	342166
Henry Pirker	09-Aug-18	15:00	16:00	136.7	342168
Rycroft-Portable	09-Aug-18	15:00	16:00	87.2	342172
Evergreen Park	09-Aug-18	15:00	16:00	149.6	342171
Beaverlodge	09-Aug-18	16:00	17:00	82.2	342166
Henry Pirker	09-Aug-18	16:00	17:00	134.8	342168
Evergreen Park	09-Aug-18	16:00	17:00	145.7	342171
Henry Pirker	09-Aug-18	17:00	18:00	125.2	342168
Evergreen Park	09-Aug-18	17:00	18:00	143.5	342171
Henry Pirker	09-Aug-18	18:00	19:00	113.9	342168
Smoky Heights	09-Aug-18	18:00	19:00	94.0	342176
Evergreen Park	09-Aug-18	18:00	19:00	135.0	342171
Rycroft-Portable	09-Aug-18	18:00	19:00	82.6	342172
Henry Pirker	09-Aug-18	19:00	20:00	113.0	342168
Smoky Heights	09-Aug-18	19:00	20:00	147.6	342176
Evergreen Park	09-Aug-18	19:00	20:00	122.5	342171
Rycroft-Portable	09-Aug-18	19:00	20:00	82.0	342172
Henry Pirker	09-Aug-18	20:00	21:00	106.1	342168
Smoky Heights	09-Aug-18	20:00	21:00	130.8	342176
Evergreen Park	09-Aug-18	20:00	21:00	124.1	342171
Henry Pirker	09-Aug-18	21:00	22:00	108.3	342168
Smoky Heights	09-Aug-18	21:00	22:00	141.9	342176
Evergreen Park	09-Aug-18	21:00	22:00	116.4	342171
Rycroft-Portable	09-Aug-18	21:00	22:00	103.6	342172
Henry Pirker	09-Aug-18	22:00	23:00	112.1	342168
Smoky Heights	09-Aug-18	22:00	23:00	136.5	342176
Evergreen Park	09-Aug-18	22:00	23:00	108.6	342171

Station Name	Date	Start Time	End Time	PM _{2.5} Concentration	Reference Number
Beaverlodge	09-Aug-18	22:00	23:00	86.4	342166
Rycroft-Portable	09-Aug-18	22:00	23:00	106.4	342172
Henry Pirker	09-Aug-18	23:00	00:00	117.8	342168
Smoky Heights	09-Aug-18	23:00	00:00	125.6	342176
Evergreen Park	09-Aug-18	23:00	00:00	105.8	342171
Beaverlodge	09-Aug-18	23:00	00:00	87.9	342166
Rycroft-Portable	09-Aug-18	23:00	00:00	117.3	342172
Smoky Heights	09-Aug-18	00:00	01:00	114.8	342176
Evergreen Park	09-Aug-18	00:00	01:00	84.3	342171
Smoky Heights	09-Aug-18	01:00	02:00	114.2	342176
Evergreen Park	09-Aug-18	01:00	02:00	82.5	342171
Smoky Heights	09-Aug-18	02:00	03:00	125.9	342176
Smoky Heights	09-Aug-18	03:00	04:00	136.8	342176
Smoky Heights	09-Aug-18	04:00	05:00	140.2	342176
Smoky Heights	09-Aug-18	05:00	06:00	140.4	342176
Beaverlodge	10-Aug-18	02:00	03:00	81.9	342263
Beaverlodge	10-Aug-18	03:00	04:00	89.0	342263
Beaverlodge	10-Aug-18	05:00	06:00	109.0	342263
Beaverlodge	10-Aug-18	06:00	07:00	254.1	342263
Beaverlodge	10-Aug-18	07:00	08:00	263.9	342263
Evergreen Park	10-Aug-18	07:00	08:00	84.7	342265
Beaverlodge	10-Aug-18	08:00	09:00	254.5	342263
Evergreen Park	10-Aug-18	08:00	09:00	87.1	342265
Beaverlodge	10-Aug-18	09:00	10:00	239.8	342263
Evergreen Park	10-Aug-18	09:00	10:00	144.5	342265
Beaverlodge	10-Aug-18	10:00	11:00	231.9	342263
Evergreen Park	10-Aug-18	10:00	11:00	174.6	342265
Beaverlodge	10-Aug-18	11:00	12:00	225.0	342263
Evergreen Park	10-Aug-18	11:00	12:00	200.0	342265
Beaverlodge	10-Aug-18	12:00	13:00	210.0	342263
Evergreen Park	10-Aug-18	12:00	13:00	194.0	342265
Beaverlodge	10-Aug-18	13:00	14:00	169.2	342263
Evergreen Park	10-Aug-18	13:00	14:00	179.6	342265
Beaverlodge	10-Aug-18	14:00	15:00	137.9	342263
Evergreen Park	10-Aug-18	14:00	15:00	148.5	342265
Rycroft-Portable	10-Aug-18	14:00	15:00	115.4	342267

Station Name	Date	Start Time	End Time	PM _{2.5} Concentration	Reference Number
Beaverlodge	10-Aug-18	15:00	16:00	110.0	342263
Evergreen Park	10-Aug-18	15:00	16:00	139.9	342265
Rycroft-Portable	10-Aug-18	15:00	16:00	84.4	342267
Beaverlodge	10-Aug-18	16:00	17:00	122.0	342263
Evergreen Park	10-Aug-18	16:00	17:00	125.2	342265
Beaverlodge	10-Aug-18	17:00	18:00	172.1	342263
Evergreen Park	10-Aug-18	17:00	18:00	134.4	342265
Beaverlodge	10-Aug-18	18:00	19:00	164.8	342263
Evergreen Park	10-Aug-18	18:00	19:00	142.2	342265
Beaverlodge	10-Aug-18	19:00	20:00	135.3	342263
Evergreen Park	10-Aug-18	19:00	20:00	155.4	342265
Beaverlodge	10-Aug-18	20:00	21:00	92.5	342263
Evergreen Park	10-Aug-18	20:00	21:00	119.8	342265
Beaverlodge	10-Aug-18	21:00	22:00	82.0	342263
Beaverlodge	10-Aug-18	22:00	23:00	98.4	342263
Beaverlodge	10-Aug-18	23:00	00:00	109.5	342263
Henry Pirker	10-Aug-18	00:00	01:00	114.2	342266
Evergreen Park	10-Aug-18	00:00	01:00	103.7	342265
Rycroft-Portable	10-Aug-18	00:00	01:00	115.2	342267
Evergreen Park	10-Aug-18	01:00	02:00	101.2	342265
Henry Pirker	10-Aug-18	01:00	02:00	112.0	342266
Rycroft-Portable	10-Aug-18	01:00	02:00	90.0	342267
Evergreen Park	10-Aug-18	02:00	03:00	99.8	342265
Henry Pirker	10-Aug-18	02:00	03:00	107.7	342266
Rycroft-Portable	10-Aug-18	02:00	03:00	83.5	342267
Evergreen Park	10-Aug-18	03:00	04:00	99.7	342265
Henry Pirker	10-Aug-18	03:00	04:00	105.5	342266
Rycroft-Portable	10-Aug-18	03:00	04:00	93.4	342267
Evergreen Park	10-Aug-18	04:00	05:00	96.3	342265
Henry Pirker	10-Aug-18	04:00	05:00	95.3	342266
Rycroft-Portable	10-Aug-18	04:00	05:00	95.8	342267
Henry Pirker	10-Aug-18	05:00	06:00	87.4	342266
Rycroft-Portable	10-Aug-18	05:00	06:00	93.5	342267
Henry Pirker	10-Aug-18	06:00	07:00	110.6	342266
Smoky Heights	10-Aug-18	06:00	07:00	134.5	342268
Rycroft-Portable	10-Aug-18	06:00	07:00	112.2	342267

Station Name	Date	Start Time	End Time	PM _{2.5} Concentration	Reference Number
Henry Pirker	10-Aug-18	07:00	08:00	139.9	342266
Smoky Heights	10-Aug-18	07:00	08:00	129.4	342268
Rycroft-Portable	10-Aug-18	07:00	08:00	158.4	342267
Henry Pirker	10-Aug-18	08:00	09:00	153.6	342266
Smoky Heights	10-Aug-18	08:00	09:00	124.8	342268
Rycroft-Portable	10-Aug-18	08:00	09:00	168.2	342267
Henry Pirker	10-Aug-18	09:00	10:00	246.3	342266
Smoky Heights	10-Aug-18	09:00	10:00	126.1	342268
Rycroft-Portable	10-Aug-18	09:00	10:00	218.6	342267
Henry Pirker	10-Aug-18	10:00	11:00	281.4	342266
Smoky Heights	10-Aug-18	10:00	11:00	113.2	342268
Rycroft-Portable	10-Aug-18	10:00	11:00	244.5	342267
Henry Pirker	10-Aug-18	11:00	12:00	271.3	342266
Smoky Heights	10-Aug-18	11:00	12:00	104.8	342268
Rycroft-Portable	10-Aug-18	11:00	12:00	230.8	342267
Henry Pirker	10-Aug-18	12:00	13:00	236.1	342266
Smoky Heights	10-Aug-18	12:00	13:00	162.6	342268
Rycroft-Portable	10-Aug-18	12:00	13:00	167.6	342267
Henry Pirker	10-Aug-18	13:00	14:00	188.1	342266
Smoky Heights	10-Aug-18	13:00	14:00	312.2	342268
Henry Pirker	10-Aug-18	14:00	15:00	167.2	342266
Smoky Heights	10-Aug-18	14:00	15:00	306.4	342268
Henry Pirker	10-Aug-18	15:00	16:00	134.5	342266
Smoky Heights	10-Aug-18	15:00	16:00	331.7	342268
Henry Pirker	10-Aug-18	16:00	17:00	104.4	342266
Smoky Heights	10-Aug-18	16:00	17:00	312.3	342268
Henry Pirker	10-Aug-18	17:00	18:00	94.9	342266
Smoky Heights	10-Aug-18	17:00	18:00	281.2	342268
Henry Pirker	10-Aug-18	18:00	19:00	84.4	342266
Smoky Heights	10-Aug-18	18:00	19:00	230.0	342268
Smoky Heights	10-Aug-18	19:00	20:00	168.8	342268
Smoky Heights	10-Aug-18	20:00	21:00	123.9	342268
Smoky Heights	10-Aug-18	21:00	22:00	81.8	342268
Smoky Heights	10-Aug-18	22:00	23:00	93.4	342268
Smoky Heights	10-Aug-18	23:00	00:00	91.3	342268
Henry Pirker	11-Aug-18	01:00	02:00	94.7	342319

Station Name	Date	Start Time	End Time	PM _{2.5} Concentration	Reference Number
Evergreen Park	11-Aug-18	02:00	03:00	83.6	342318
Henry Pirker	11-Aug-18	02:00	03:00	88.8	342319
Beaverlodge	11-Aug-18	00:00	01:00	115.5	312317
Beaverlodge	11-Aug-18	01:00	02:00	123.4	312317
Beaverlodge	11-Aug-18	02:00	03:00	95.8	312317
Beaverlodge	14-Aug-18	06:00	07:00	83.6	342483
Henry Pirker	14-Aug-18	07:00	08:00	91.1	342481
Evergreen Park	14-Aug-18	08:00	09:00	88.5	342486
Henry Pirker	14-Aug-18	08:00	09:00	109.9	342481
Henry Pirker	14-Aug-18	09:00	10:00	81.1	342481
Beaverlodge	14-Aug-18	14:00	15:00	93.5	342483
Beaverlodge	14-Aug-18	15:00	16:00	109.8	342483
Evergreen Park	14-Aug-18	15:00	16:00	102.1	342486
Henry Pirker	14-Aug-18	15:00	16:00	120.8	342481
Beaverlodge	14-Aug-18	16:00	17:00	145.0	342483
Evergreen Park	14-Aug-18	16:00	17:00	111.2	342486
Henry Pirker	14-Aug-18	16:00	17:00	114.7	342481
Beaverlodge	14-Aug-18	17:00	18:00	160.5	342483
Evergreen Park	14-Aug-18	17:00	18:00	173.4	342486
Henry Pirker	14-Aug-18	17:00	18:00	170.7	342481
Beaverlodge	14-Aug-18	18:00	19:00	197.9	342483
Evergreen Park	14-Aug-18	18:00	19:00	190.8	342486
Henry Pirker	14-Aug-18	18:00	19:00	209.7	342481
Beaverlodge	14-Aug-18	19:00	20:00	166.1	342483
Evergreen Park	14-Aug-18	19:00	20:00	167.7	342486
Henry Pirker	14-Aug-18	19:00	20:00	154.0	342481
Beaverlodge	14-Aug-18	20:00	21:00	165.4	342483
Evergreen Park	14-Aug-18	20:00	21:00	124.8	342486
Henry Pirker	14-Aug-18	20:00	21:00	149.8	342481
Beaverlodge	14-Aug-18	21:00	22:00	172.4	342483
Evergreen Park	14-Aug-18	21:00	22:00	146.7	342486
Henry Pirker	14-Aug-18	21:00	22:00	169.4	342481
Beaverlodge	14-Aug-18	22:00	23:00	152.6	342483
Evergreen Park	14-Aug-18	22:00	23:00	147.1	342486
Henry Pirker	14-Aug-18	22:00	23:00	172.5	342481
Rycroft-Portable	14-Aug-18	22:00	23:00	130.9	342478

Station Name	Date	Start Time	End Time	PM _{2.5} Concentration	Reference Number
Beaverlodge	14-Aug-18	23:00	00:00	164.5	342483
Evergreen Park	14-Aug-18	23:00	00:00	143.4	342486
Henry Pirker	14-Aug-18	23:00	00:00	189.5	342481
Rycroft-Portable	14-Aug-18	23:00	00:00	160.2	342478
Smoky Heights	14-Aug-18	00:00	01:00	99.8	342480
Smoky Heights	14-Aug-18	01:00	02:00	140.1	342480
Smoky Heights	14-Aug-18	02:00	03:00	139.2	342480
Smoky Heights	14-Aug-18	03:00	04:00	203.4	342480
Smoky Heights	14-Aug-18	04:00	05:00	193.3	342480
Smoky Heights	14-Aug-18	05:00	06:00	169.0	342480
Smoky Heights	14-Aug-18	06:00	07:00	170.9	342480
Smoky Heights	14-Aug-18	07:00	08:00	175.9	342480
Beaverlodge	15-Aug-18	00:00	01:00	191.3	342562
Evergreen Park	15-Aug-18	00:00	01:00	154.2	342564
Henry Pirker	15-Aug-18	00:00	01:00	216.4	342565
Rycroft-Portable	15-Aug-18	00:00	01:00	160.9	342566
Beaverlodge	15-Aug-18	01:00	02:00	222.3	342562
Evergreen Park	15-Aug-18	01:00	02:00	166.4	342564
Henry Pirker	15-Aug-18	01:00	02:00	293.0	342565
Rycroft-Portable	15-Aug-18	01:00	02:00	132.5	342566
Beaverlodge	15-Aug-18	02:00	03:00	240.4	342562
Evergreen Park	15-Aug-18	02:00	03:00	214.4	342564
Henry Pirker	15-Aug-18	02:00	03:00	317.2	342565
Rycroft-Portable	15-Aug-18	02:00	03:00	87.0	342566
Beaverlodge	15-Aug-18	03:00	04:00	227.2	342562
Evergreen Park	15-Aug-18	03:00	04:00	239.6	342564
Henry Pirker	15-Aug-18	03:00	04:00	286.7	342565
Beaverlodge	15-Aug-18	04:00	05:00	164.0	342562
Evergreen Park	15-Aug-18	04:00	05:00	246.2	342564
Henry Pirker	15-Aug-18	04:00	05:00	276.4	342565
Beaverlodge	15-Aug-18	05:00	06:00	128.9	342562
Evergreen Park	15-Aug-18	05:00	06:00	213.9	342564
Henry Pirker	15-Aug-18	05:00	06:00	288.3	342565
Beaverlodge	15-Aug-18	06:00	07:00	96.2	342562
Evergreen Park	15-Aug-18	06:00	07:00	187.5	342564
Henry Pirker	15-Aug-18	06:00	07:00	193.3	342565

Station Name	Date	Start Time	End Time	PM _{2.5} Concentration	Reference Number
Evergreen Park	15-Aug-18	07:00	08:00	151.9	342564
Henry Pirker	15-Aug-18	07:00	08:00	87.6	342565
Evergreen Park	15-Aug-18	08:00	09:00	123.5	342564
Smoky Heights	15-Aug-18	08:00	09:00	168.1	342567
Smoky Heights	15-Aug-18	09:00	10:00	155.8	342567
Smoky Heights	15-Aug-18	10:00	11:00	154.2	342567
Smoky Heights	15-Aug-18	11:00	12:00	157.8	342567
Smoky Heights	15-Aug-18	12:00	13:00	140.4	342567
Smoky Heights	15-Aug-18	13:00	14:00	110.5	342567
Henry Pirker	16-Aug-18	10:00	11:00	94.5	342644
Evergreen Park	16-Aug-18	11:00	12:00	94.4	342643
Henry Pirker	16-Aug-18	11:00	12:00	119.7	342644
Evergreen Park	16-Aug-18	12:00	13:00	85.6	342643
Henry Pirker	16-Aug-18	12:00	13:00	111.8	342644
Beaverlodge	16-Aug-18	13:00	14:00	92.5	342642
Henry Pirker	16-Aug-18	13:00	14:00	108.8	342644
Beaverlodge	16-Aug-18	14:00	15:00	101.9	342642
Henry Pirker	16-Aug-18	14:00	15:00	112.2	342644
Beaverlodge	16-Aug-18	15:00	16:00	102.6	342642
Henry Pirker	16-Aug-18	15:00	16:00	111.9	342644
Beaverlodge	16-Aug-18	16:00	17:00	89.1	342642
Henry Pirker	16-Aug-18	16:00	17:00	85.3	342644
Rycroft-Portable	16-Aug-18	18:00	19:00	82.3	342645
Rycroft-Portable	16-Aug-18	19:00	20:00	91.2	342645
Rycroft-Portable	16-Aug-18	20:00	21:00	108.9	342645
Beaverlodge	16-Aug-18	20:00	21:00	119.3	342642
Rycroft-Portable	16-Aug-18	21:00	22:00	96.0	342645
Beaverlodge	16-Aug-18	21:00	22:00	149.3	342642
Beaverlodge	16-Aug-18	22:00	23:00	191.6	342642
Beaverlodge	16-Aug-18	23:00	00:00	184.3	342642
Smoky Heights	16-Aug-18	14:00	15:00	102.6	342646
Smoky Heights	16-Aug-18	15:00	16:00	115.4	342646
Smoky Heights	16-Aug-18	16:00	17:00	96.8	342646
Smoky Heights	16-Aug-18	17:00	18:00	83.8	342646
Henry Pirker	17-Aug-18	00:00	01:00	213.5	342728
Henry Pirker	17-Aug-18	01:00	02:00	227.7	342728

Station Name	Date	Start Time	End Time	PM _{2.5} Concentration	Reference Number
Rycroft-Portable	17-Aug-18	01:00	02:00	97.6	342729
Henry Pirker	17-Aug-18	02:00	03:00	220.7	342728
Rycroft-Portable	17-Aug-18	02:00	03:00	123.7	342729
Evergreen Park	17-Aug-18	03:00	04:00	97.3	342726
Henry Pirker	17-Aug-18	03:00	04:00	206.7	342728
Rycroft-Portable	17-Aug-18	03:00	04:00	144.8	342729
Evergreen Park	17-Aug-18	04:00	05:00	136.7	342726
Henry Pirker	17-Aug-18	04:00	05:00	199.3	342728
Rycroft-Portable	17-Aug-18	04:00	05:00	149.5	342729
Evergreen Park	17-Aug-18	05:00	06:00	122.7	342726
Henry Pirker	17-Aug-18	05:00	06:00	205.4	342728
Rycroft-Portable	17-Aug-18	05:00	06:00	146.6	342729
Evergreen Park	17-Aug-18	06:00	07:00	128.9	342726
Henry Pirker	17-Aug-18	06:00	07:00	213.1	342728
Rycroft-Portable	17-Aug-18	06:00	07:00	144.3	342729
Evergreen Park	17-Aug-18	07:00	08:00	136.5	342726
Henry Pirker	17-Aug-18	07:00	08:00	212.6	342728
Rycroft-Portable	17-Aug-18	07:00	08:00	138.8	342729
Evergreen Park	17-Aug-18	08:00	09:00	141.3	342726
Henry Pirker	17-Aug-18	08:00	09:00	239.3	342728
Rycroft-Portable	17-Aug-18	08:00	09:00	134.0	342729
Evergreen Park	17-Aug-18	09:00	10:00	140.1	342726
Henry Pirker	17-Aug-18	09:00	10:00	247.1	342728
Rycroft-Portable	17-Aug-18	09:00	10:00	126.3	342729
Evergreen Park	17-Aug-18	10:00	11:00	137.8	342726
Henry Pirker	17-Aug-18	10:00	11:00	233.2	342728
Rycroft-Portable	17-Aug-18	10:00	11:00	125.2	342729
Evergreen Park	17-Aug-18	11:00	12:00	157.5	342726
Henry Pirker	17-Aug-18	11:00	12:00	219.0	342728
Rycroft-Portable	17-Aug-18	11:00	12:00	101.4	342729
Evergreen Park	17-Aug-18	12:00	13:00	166.0	342726
Henry Pirker	17-Aug-18	12:00	13:00	232.6	342728
Rycroft-Portable	17-Aug-18	12:00	13:00	89.8	342729
Evergreen Park	17-Aug-18	13:00	14:00	187.7	342726
Henry Pirker	17-Aug-18	13:00	14:00	246.0	342728
Evergreen Park	17-Aug-18	14:00	15:00	196.1	342726

Station Name	Date	Start Time	End Time	PM _{2.5} Concentration	Reference Number
Henry Pirker	17-Aug-18	14:00	15:00	278.2	342728
Evergreen Park	17-Aug-18	15:00	16:00	251.7	342726
Henry Pirker	17-Aug-18	15:00	16:00	315.9	342728
Evergreen Park	17-Aug-18	16:00	17:00	209.5	342726
Henry Pirker	17-Aug-18	16:00	17:00	232.7	342728
Evergreen Park	17-Aug-18	17:00	18:00	97.1	342726
Beaverlodge	17-Aug-18	22:00	23:00	81.5	342725
Beaverlodge	17-Aug-18	23:00	00:00	93.9	342725
Beaverlodge	17-Aug-18	00:00	01:00	161.2	342725
Beaverlodge	17-Aug-18	01:00	02:00	162.2	342725
Beaverlodge	17-Aug-18	02:00	03:00	160.6	342725
Beaverlodge	17-Aug-18	03:00	04:00	157.6	342725
Beaverlodge	17-Aug-18	04:00	05:00	161.1	342725
Beaverlodge	17-Aug-18	05:00	06:00	166.1	342725
Beaverlodge	17-Aug-18	06:00	07:00	170.4	342725
Beaverlodge	17-Aug-18	07:00	08:00	170.3	342725
Beaverlodge	17-Aug-18	08:00	09:00	176.8	342725
Beaverlodge	17-Aug-18	09:00	10:00	188.1	342725
Beaverlodge	17-Aug-18	10:00	11:00	204.6	342725
Beaverlodge	17-Aug-18	11:00	12:00	210.4	342725
Beaverlodge	17-Aug-18	12:00	13:00	219.7	342725
Beaverlodge	17-Aug-18	13:00	14:00	183.3	342725
Beaverlodge	17-Aug-18	14:00	15:00	96.8	342725
Smoky Heights	17-Aug-18	18:00	19:00	121.4	342730
Smoky Heights	17-Aug-18	19:00	20:00	168.9	342730
Smoky Heights	17-Aug-18	20:00	21:00	178.0	342730
Smoky Heights	17-Aug-18	21:00	22:00	173.2	342730
Smoky Heights	17-Aug-18	22:00	23:00	166.9	342730
Smoky Heights	17-Aug-18	23:00	00:00	161.1	342730
Smoky Heights	17-Aug-18	00:00	01:00	150.0	342730
Smoky Heights	17-Aug-18	01:00	02:00	147.3	342730
Smoky Heights	17-Aug-18	02:00	03:00	147.7	342730
Smoky Heights	17-Aug-18	03:00	04:00	145.4	342730
Smoky Heights	17-Aug-18	04:00	05:00	159.3	342730
Smoky Heights	17-Aug-18	05:00	06:00	193.4	342730
Smoky Heights	17-Aug-18	06:00	07:00	196.5	342730

Station Name	Date	Start Time	End Time	PM _{2.5} Concentration	Reference Number
Smoky Heights	17-Aug-18	07:00	08:00	168.4	342730
Smoky Heights	17-Aug-18	08:00	09:00	178.9	342730
Evergreen Park	18-Aug-18	00:00	01:00	93.6	342805
Henry Pirker	18-Aug-18	00:00	01:00	84.4	342806
Evergreen Park	18-Aug-18	01:00	02:00	106.0	342805
Henry Pirker	18-Aug-18	01:00	02:00	109.5	342806
Evergreen Park	18-Aug-18	02:00	03:00	110.9	342805
Henry Pirker	18-Aug-18	02:00	03:00	145.7	342806
Evergreen Park	18-Aug-18	03:00	04:00	144.6	342805
Henry Pirker	18-Aug-18	03:00	04:00	169.5	342806
Evergreen Park	18-Aug-18	04:00	05:00	123.3	342805
Henry Pirker	18-Aug-18	04:00	05:00	134.4	342806
Evergreen Park	18-Aug-18	05:00	06:00	103.0	342805
Henry Pirker	18-Aug-18	05:00	06:00	89.8	342806
Evergreen Park	18-Aug-18	06:00	07:00	91.3	342805
Evergreen Park	18-Aug-18	07:00	08:00	84.3	342805
Evergreen Park	18-Aug-18	08:00	09:00	85.3	342805
Evergreen Park	18-Aug-18	09:00	10:00	81.2	342805
Beaverlodge	18-Aug-18	00:00	01:00	116.9	342804
Beaverlodge	18-Aug-18	01:00	02:00	160.9	342804
Beaverlodge	18-Aug-18	02:00	03:00	192.3	342804
Beaverlodge	18-Aug-18	03:00	04:00	159.6	342804
Beaverlodge	18-Aug-18	04:00	05:00	95.9	342804
Smoky Heights	18-Aug-18	09:00	10:00	89.4	342808
Smoky Heights	18-Aug-18	10:00	11:00	98.3	342808
Smoky Heights	21-Aug-18	11:00	12:00	89.8	342999
Smoky Heights	21-Aug-18	12:00	13:00	86.5	342999
Beaverlodge	22-Aug-18	02:00	03:00	88.2	343100
Beaverlodge	22-Aug-18	03:00	04:00	87.5	343100
Rycroft-Portable	22-Aug-18	03:00	04:00	122.4	343103
Beaverlodge	22-Aug-18	04:00	05:00	97.7	343100
Rycroft-Portable	22-Aug-18	04:00	05:00	176.5	343103
Beaverlodge	22-Aug-18	05:00	06:00	104.0	343100
Rycroft-Portable	22-Aug-18	05:00	06:00	180.0	343103
Henry Pirker	22-Aug-18	05:00	06:00	95.8	343102
Beaverlodge	22-Aug-18	06:00	07:00	111.1	343100

Station Name	Date	Start Time	End Time	PM _{2.5} Concentration	Reference Number
Rycroft-Portable	22-Aug-18	06:00	07:00	165.5	343103
Henry Pirker	22-Aug-18	06:00	07:00	107.8	343102
Beaverlodge	22-Aug-18	07:00	08:00	106.0	343100
Rycroft-Portable	22-Aug-18	07:00	08:00	177.0	343103
Henry Pirker	22-Aug-18	07:00	08:00	122.8	343102
Beaverlodge	22-Aug-18	08:00	09:00	113.3	343100
Rycroft-Portable	22-Aug-18	08:00	09:00	215.0	343103
Henry Pirker	22-Aug-18	08:00	09:00	102.8	343102
Beaverlodge	22-Aug-18	09:00	10:00	170.2	343100
Rycroft-Portable	22-Aug-18	09:00	10:00	225.6	343103
Henry Pirker	22-Aug-18	09:00	10:00	126.0	343102
Beaverlodge	22-Aug-18	10:00	11:00	270.0	343100
Evergreen Park	22-Aug-18	10:00	11:00	125.9	343101
Rycroft-Portable	22-Aug-18	10:00	11:00	200.1	343103
Henry Pirker	22-Aug-18	10:00	11:00	220.9	343102
Beaverlodge	22-Aug-18	11:00	12:00	323.4	343100
Evergreen Park	22-Aug-18	11:00	12:00	246.4	343101
Rycroft-Portable	22-Aug-18	11:00	12:00	144.8	343103
Henry Pirker	22-Aug-18	11:00	12:00	345.0	343102
Beaverlodge	22-Aug-18	12:00	13:00	201.5	343100
Evergreen Park	22-Aug-18	12:00	13:00	292.3	343101
Evergreen Park	22-Aug-18	12:00	13:00	95.5	343101
Rycroft-Portable	22-Aug-18	12:00	13:00	149.1	343103
Henry Pirker	22-Aug-18	12:00	13:00	334.2	343102
Beaverlodge	22-Aug-18	13:00	14:00	138.2	343100
Evergreen Park	22-Aug-18	13:00	14:00	293.7	343101
Rycroft-Portable	22-Aug-18	13:00	14:00	146.6	343103
Henry Pirker	22-Aug-18	13:00	14:00	303.6	343102
Beaverlodge	22-Aug-18	14:00	15:00	132.0	343100
Evergreen Park	22-Aug-18	14:00	15:00	252.3	343101
Rycroft-Portable	22-Aug-18	14:00	15:00	126.1	343103
Henry Pirker	22-Aug-18	14:00	15:00	157.3	343102
Beaverlodge	22-Aug-18	15:00	16:00	130.3	343100
Evergreen Park	22-Aug-18	15:00	16:00	217.1	343101
Rycroft-Portable	22-Aug-18	15:00	16:00	91.9	343103
Henry Pirker	22-Aug-18	15:00	16:00	135.2	343102

Station Name	Date	Start Time	End Time	PM _{2.5} Concentration	Reference Number
Beaverlodge	22-Aug-18	16:00	17:00	126.0	343100
Evergreen Park	22-Aug-18	16:00	17:00	145.0	343101
Henry Pirker	22-Aug-18	16:00	17:00	137.9	343102
Beaverlodge	22-Aug-18	17:00	18:00	155.9	343100
Evergreen Park	22-Aug-18	17:00	18:00	118.9	343101
Henry Pirker	22-Aug-18	17:00	18:00	140.7	343102
Beaverlodge	22-Aug-18	18:00	19:00	184.3	343100
Evergreen Park	22-Aug-18	18:00	19:00	152.1	343101
Henry Pirker	22-Aug-18	18:00	19:00	169.3	343102
Beaverlodge	22-Aug-18	19:00	20:00	173.7	343100
Evergreen Park	22-Aug-18	19:00	20:00	184.5	343101
Henry Pirker	22-Aug-18	19:00	20:00	210.4	343102
Beaverlodge	22-Aug-18	20:00	21:00	159.3	343100
Evergreen Park	22-Aug-18	20:00	21:00	183.8	343101
Henry Pirker	22-Aug-18	20:00	21:00	213.4	343102
Rycroft-Portable	22-Aug-18	20:00	21:00	107.9	343103
Beaverlodge	22-Aug-18	21:00	22:00	157.0	343100
Evergreen Park	22-Aug-18	21:00	22:00	171.7	343101
Henry Pirker	22-Aug-18	21:00	22:00	190.5	343102
Rycroft-Portable	22-Aug-18	21:00	22:00	136.2	343103
Beaverlodge	22-Aug-18	22:00	23:00	171.8	343100
Evergreen Park	22-Aug-18	22:00	23:00	167.5	343101
Henry Pirker	22-Aug-18	22:00	23:00	171.5	343102
Rycroft-Portable	22-Aug-18	22:00	23:00	128.3	343103
Beaverlodge	22-Aug-18	23:00	00:00	205.6	343100
Evergreen Park	22-Aug-18	23:00	00:00	159.6	343101
Henry Pirker	22-Aug-18	23:00	00:00	173.3	343102
Rycroft-Portable	22-Aug-18	23:00	00:00	125.6	343103
Evergreen Park	22-Aug-18	00:00	01:00	164.0	343101
Evergreen Park	22-Aug-18	01:00	02:00	156.1	343101
Evergreen Park	22-Aug-18	02:00	03:00	152.6	343101
Evergreen Park	22-Aug-18	03:00	04:00	125.8	343101
Smoky Heights	22-Aug-18	13:00	14:00	164.9	343104
Smoky Heights	22-Aug-18	14:00	15:00	160.4	343104
Smoky Heights	22-Aug-18	15:00	16:00	158.5	343104
Smoky Heights	22-Aug-18	16:00	17:00	149.0	343104

Station Name	Date	Start Time	End Time	PM _{2.5} Concentration	Reference Number
Smoky Heights	22-Aug-18	17:00	18:00	127.0	343104
Smoky Heights	22-Aug-18	18:00	19:00	186.8	343104
Smoky Heights	22-Aug-18	19:00	20:00	290.6	343104
Smoky Heights	22-Aug-18	20:00	21:00	337.5	343104
Smoky Heights	22-Aug-18	21:00	22:00	266.3	343104
Smoky Heights	22-Aug-18	22:00	23:00	175.3	343104
Smoky Heights	22-Aug-18	23:00	00:00	82.1	343104
Smoky Heights	22-Aug-18	00:00	01:00	97.3	343104
Smoky Heights	22-Aug-18	01:00	02:00	136.1	343104
Smoky Heights	22-Aug-18	02:00	03:00	143.3	343104
Smoky Heights	22-Aug-18	03:00	04:00	163.7	343104
Smoky Heights	22-Aug-18	04:00	05:00	165.7	343104
Smoky Heights	22-Aug-18	05:00	06:00	169.6	343104
Evergreen Park	23-Aug-18	13:00	14:00	83.2	343101
Beaverlodge	23-Aug-18	00:00	01:00	217.1	343100
Henry Pirker	23-Aug-18	00:00	01:00	199.2	343102
Beaverlodge	23-Aug-18	01:00	02:00	236.8	343100
Henry Pirker	23-Aug-18	01:00	02:00	201.0	343102
Beaverlodge	23-Aug-18	02:00	03:00	244.2	343100
Henry Pirker	23-Aug-18	02:00	03:00	200.8	343102
Beaverlodge	23-Aug-18	03:00	04:00	244.2	343100
Beaverlodge	23-Aug-18	04:00	05:00	151.7	343100
Smoky Heights	23-Aug-18	06:00	07:00	151.9	343104
Beaverlodge	25-Aug-18	03:00	04:00	82.0	343100
Beaverlodge	25-Aug-18	04:00	05:00	95.1	343100
Beaverlodge	25-Aug-18	05:00	06:00	97.1	343100
Beaverlodge	25-Aug-18	06:00	07:00	97.6	343100
Beaverlodge	25-Aug-18	07:00	08:00	95.4	343100
Beaverlodge	25-Aug-18	08:00	09:00	94.5	343100
Beaverlodge	25-Aug-18	09:00	10:00	94.0	343100
Beaverlodge	25-Aug-18	10:00	11:00	105.3	343100
Henry Pirker	25-Aug-18	11:00	12:00	107.0	343102
Beaverlodge	25-Aug-18	11:00	12:00	100.3	343100
Henry Pirker	25-Aug-18	12:00	13:00	97.9	343102
Smoky Heights	25-Aug-18	07:00	08:00	92.6	343104

Station Name	Date	24 hour PM _{2.5} Concentration	Reference Number
		(µg/m ³)	
Beaverlodge	08-Aug-18	64.3	342001
Evergreen Park	08-Aug-18	53.0	342040
Henry Pirker	08-Aug-18	60.4	342039
Rycroft-Portable	08-Aug-18	62.1	342002
Smoky Heights	08-Aug-18	45.7	342041
Beaverlodge	09-Aug-18	79.8	342166
Evergreen Park	10-Aug-18	109.9	342171
Henry Pirker	11-Aug-18	100.2	342168
Rycroft-Portable	12-Aug-18	89.7	342172
Smoky Heights	13-Aug-18	104.8	342176
Beaverlodge	14-Aug-18	150.1	342263
Evergreen Park	15-Aug-18	116.1	342265
Henry Pirker	16-Aug-18	126.8	342266
Rycroft-Portable	17-Aug-18	96.8	342267
Smoky Heights	18-Aug-18	143.2	342268
Beaverlodge	19-Aug-18	100.7	312317
Evergreen Park	14-Aug-18	93.0	342486
Henry Pirker	14-Aug-18	105.8	342481
Rycroft-Portable	14-Aug-18	62.4	342478
Smoky Heights	14-Aug-18	95.8	342480
Beaverlodge	15-Aug-18	67.1	342562
Evergreen Park	15-Aug-18	83.7	342564
Henry Pirker	15-Aug-18	94.2	342565
Rycroft-Portable	16-Aug-18	39.5	342566
Beaverlodge	17-Aug-18	79.4	342642
Evergreen Park	18-Aug-18	50.6	342643
Henry Pirker	19-Aug-18	71.0	342644
Rycroft-Portable	20-Aug-18	52.8	342645
Smoky Heights	16-Aug-18	49.9	342646
Beaverlodge	17-Aug-18	128.5	342725
Evergreen Park	18-Aug-18	118.6	342726
Henry Pirker	19-Aug-18	176.4	342728
Rycroft-Portable	20-Aug-18	82.3	342729
Beaverlodge	21-Aug-18	59.8	342804

Station Name	Date	24 hour PM _{2.5} Concentration	Reference Number
Evergreen Park	22-Aug-18	57.1	342805
Henry Pirker	23-Aug-18	58.1	342806
Rycroft-Portable	24-Aug-18	31.6	342807
Smoky Heights	18-Aug-18	37.0	342808
Henry Pirker	19-Aug-18	33.0	342854
Smoky Heights	20-Aug-18	34.0	342855
Beaverlodge	21-Aug-18	34.5	342995
Evergreen Park	21-Aug-18	30.6	342996
Henry Pirker	21-Aug-18	37.3	342997
Rycroft-Portable	21-Aug-18	32.1	342998
Smoky Heights	21-Aug-18	41.1	342999
Beaverlodge	22-Aug-18	153.1	343100
Evergreen Park	23-Aug-18	133.4	343101
Henry Pirker	24-Aug-18	160.5	343102
Rycroft-Portable	22-Aug-18	123.6	343103
Smoky Heights	22-Aug-18	145.5	343104
Beaverlodge	23-Aug-18	57.6	343100
Beaverlodge	24-Aug-18	39.6	343100
Beaverlodge	25-Aug-18	54.2	343100
Henry Pirker	25-Aug-18	34.1	343102
Smoky Heights	25-Aug-18	32.7	343104

Passive Monitoring - 27 Stations throughout the PAZA zone:

There were five duplicate sites sampled in the month of August: Spirit River and Eaglesham (SO₂), Kinuso (O₃), Forth Creek 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 0.3 ppb, with a mean of 0.2 ppb.
- Monthly average concentrations for NO₂ passives ranged from 0.2 ppb to 2.8 ppb, with a mean of 0.2 ppb.
- Monthly average concentrations for O₃ passives ranged from 21.6 ppb to 26.8 ppb, with a mean of 25.0 ppb.
- Monthly average concentrations for H₂S passives ranged from 0.2 to 0.3 ppb, with a mean of 0.3 ppb.

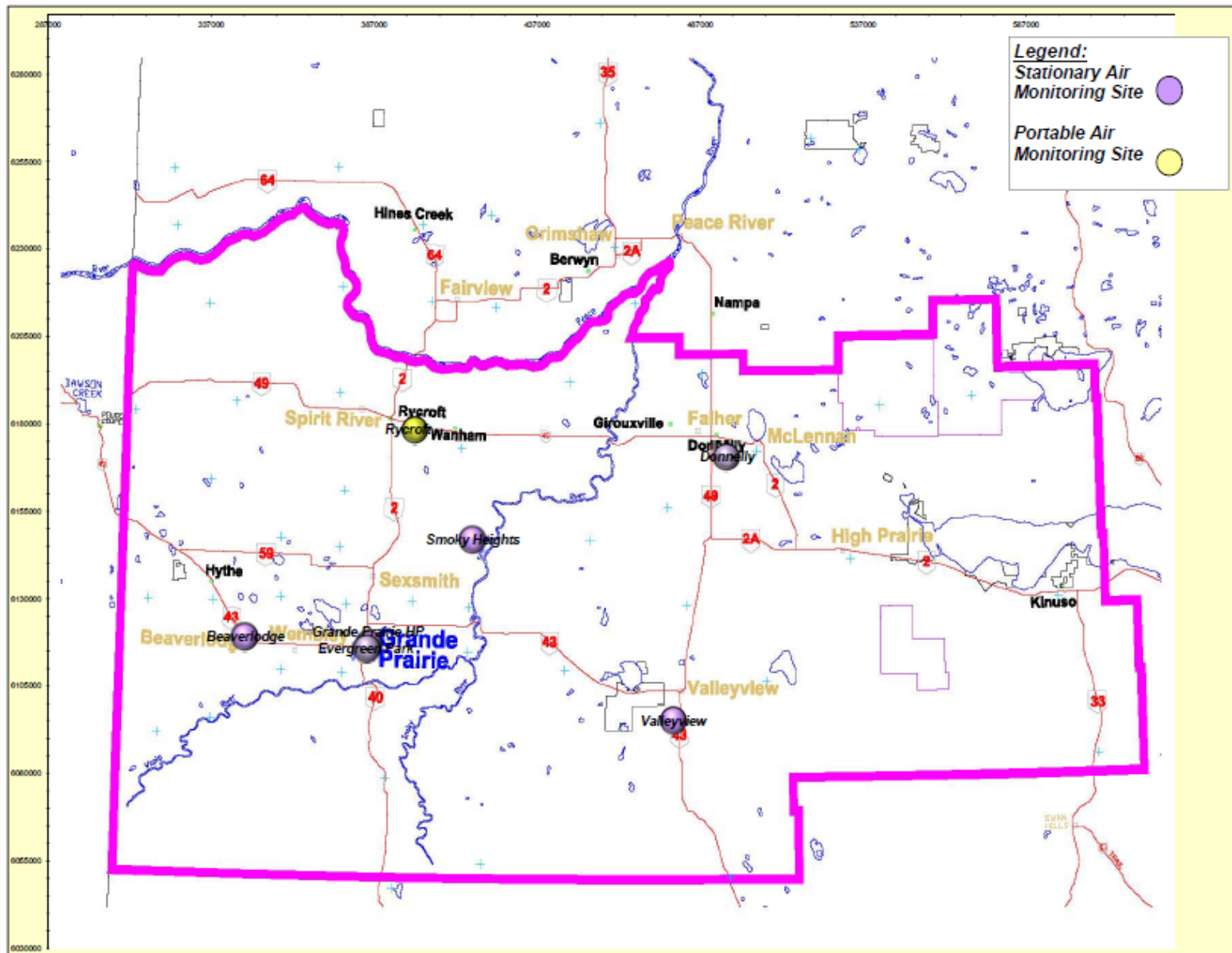
If you have any questions or concerns, please contact Elizabeth Bell at 780.882.4589 or the PAZA office at 780.833.4343.

On Behalf of the Executive Director of
The Peace Airshed Zone Association



Patrick Andersen, B.Sc.
Data Analyst

Location of PAZA Continuous Monitoring Stations



PAZA Monthly Continuous Data Summary

Aug-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	0.2	0	0	2.8	Aug-01 19:00	0.5	Aug-09	100.0	Aug-17
SO ₂ (ppb)	172	48	Evergreen Park	0.2	0	0	7.4	Aug-14 18:00	1.1	Aug-14	100.0	Aug-03
SO ₂ (ppb)	172	48	Smoky Heights	0.3	0	0	5.5	Aug-03 08:00	0.9	Aug-03	100.0	Aug-29
SO ₂ (ppb)	172	48	Beaverlodge	0.4	0	0	2.7	Aug-10 08:00	1.2	Aug-10	100.0	Aug-07
SO ₂ (ppb)	172	48	Valleyview	0.5	0	0	12.3	Aug-02 16:00	2.6	Aug-14	100.0	Aug-15
SO ₂ (ppb)	172	48	Donnelly	0.2	0	0	0.9	Aug-08 11:00	0.4	Aug-17	99.3	Aug-24
SO ₂ (ppb)	172	48	Rycroft-Portable	0.3	0	0	5.2	Aug-07 14:00	0.8	Aug-22	99.1	Aug-02
NO (ppb)			Henry Pirker	1.3	0	0	37.1	Aug-20 07:00	4.3	Aug-20	100.0	Aug-17
NO ₂ (ppb)	159	106	Henry Pirker	5.8	0	0	27.0	Aug-17 07:00	10.4	Aug-09	100.0	Aug-17
NO _x (ppb)			Henry Pirker	7.2	0	0	51.2	Aug-20 07:00	13.8	Aug-20	100.0	Aug-17
NO (ppb)			Beaverlodge	0.3	0	0	5.7	Aug-01 07:00	0.7	Aug-01	100.0	Aug-07
NO ₂ (ppb)	159	106	Beaverlodge	2.9	0	0	11.6	Aug-10 06:00	5.5	Aug-10	100.0	Aug-07
NO _x (ppb)			Beaverlodge	3.2	0	0	14.4	Aug-01 07:00	5.9	Aug-10	100.0	Aug-07
NO (ppb)			Rycroft-Portable	0.3	0	0	9.4	Aug-16 00:00	0.6	Aug-15	99.1	Aug-02
NO ₂ (ppb)	159	106	Rycroft-Portable	1.9	0	0	8.5	Aug-11 03:00	4.0	Aug-10	99.1	Aug-02
NO _x (ppb)			Rycroft-Portable	2.1	0	0	14.2	Aug-16 00:00	4.4	Aug-10	99.1	Aug-02
O ₃ (ppb)	82		Henry Pirker	19.5	0	0	53.5	Aug-21 17:00	31.8	Aug-22	100.0	Aug-17
O ₃ (ppb) - 8-hr			Henry Pirker		0				48.1	Aug-21		-
O ₃ (ppb)	82		Beaverlodge	20.9	0	0	45.1	Aug-21 18:00	35.8	Aug-22	100.0	Aug-07
O ₃ (ppb) - 8-hr			Beaverlodge		0				39.9	Aug-21		-
O ₃ (ppb)	82		Rycroft-Portable	25.2	0	0	56.0	Aug-17 16:00	41.2	Aug-22	99.1	Aug-02
O ₃ (ppb) - 8-hr			Rycroft-Portable		0				53.0	Aug-17		-
CO (ppm)	13		Henry Pirker	0.38	0	0	1.9	Aug-15 02:00	1.2	Aug-17	100.0	Aug-20
CO (ppm) - 8-hr	5		Henry Pirker		0				1.7	Aug-15		-

PAZA Monthly Continuous Data Summary – continued

Aug-2018 Peace Airshed Zone Association							Maximum Recorded Values					
							1-hr		24-hr / 8-hr			
THC (ppm)			Henry Pirker	2.1	-	-	3.5	Aug-09 05:00	2.4	Aug-09	100.0	Aug-20
CH ₄ (ppm)			Henry Pirker	2.1	-	-	3.5	Aug-09 05:00	2.4	Aug-09	100.0	Aug-20
NMHC (ppm)			Henry Pirker	0.0	-	-	0.0	Aug-22 20:00	0.0	Aug-22	100.0	Aug-20
THC (ppm)			Rycroft-Portable	2.0	-	-	2.2	Aug-01 06:00	2.0	Aug-01	99.1	Aug-14
CH ₄ (ppm)			Rycroft-Portable	2.0	-	-	2.1	Aug-01 06:00	2.0	Aug-01	99.1	Aug-14
NMHC (ppm)			Rycroft-Portable	0.0	-	-	0.0	Aug-09 06:00	0.0	Aug-09	99.1	Aug-14
TRS (ppb)			Henry Pirker	0.2	-	-	2.5	Aug-10 02:00	0.5	Aug-10	100.0	Aug-20
TRS (ppb)			Evergreen Park	0.5	-	-	3.3	Aug-10 00:00	1.0	Aug-10	97.3	Aug-04
TRS (ppb)			Smoky Heights	0.6	-	-	1.9	Aug-15 03:00	1.2	Aug-30	100.0	Aug-29
TRS (ppb)			Rycroft-Portable	0.2	-	-	1.1	Aug-26 07:00	0.5	Aug-26	99.1	Aug-14
H ₂ S (ppb)	10	3	Valleyview	0.2	0	0	1.7	Aug-11 04:00	0.4	Aug-21	99.7	Aug-15
H ₂ S (ppb)	10	3	Donnelly	0.3	0	0	5.2	Aug-12 08:00	1.3	Aug-12	99.3	Aug-24
PM _{2.5} (µg/m3)	80	30	Henry Pirker	43.3	116	12	345.0	Aug-22 11:00	176.4	Aug-17	100.0	Jun-11
PM _{2.5} (µg/m3)	80	30	Evergreen Park	36.6	110	10	293.7	Aug-22 13:00	133.4	Aug-22	100.0	Aug-09
PM _{2.5} (µg/m3)	80	30	Smoky Heights	37.1	91	10	337.5	Aug-22 12:00	145.5	Aug-22	97.9	Aug-29
PM _{2.5} (µg/m3)	80	30	Beaverlodge	44.9	123	13	323.4	Aug-22 11:00	153.1	Aug-22	93.4	Aug-08
PM _{2.5} (µg/m3)	80	30	Rycroft-Portable	29.6	69	10	244.5	Aug-10 10:00	123.6	Aug-22	98.9	Aug-14
RH (%)			Henry Pirker	63.2	-	-	90.8	Aug-13 03:00	82.6	Aug-12	100.0	-
RH (%)			Evergreen Park	69.3	-	-	99.5	Aug-13 08:00	91.9	Aug-12	100.0	-
RH (%)			Beaverlodge	70.4	-	-	100.0	Aug-01 03:00	99.9	Aug-05	100.0	-
RH (%)			Valleyview	80.5	-	-	100.0	Aug-01 04:00	100.0	Aug-23	100.0	-
SR (W/m ²)			Henry Pirker	154.4	-	-	726.3	Aug-05 14:00	264.4	Aug-05	100.0	-
Temp (°C)			Henry Pirker	16.5	-	-	30.9	Aug-09 16:00	22.1	Aug-09	100.0	-
Temp (°C)			Evergreen Park	15.6	-	-	29.7	Aug-09 17:00	21.1	Aug-14	100.0	-
Temp (°C)			Smoky Heights	14.9	-	-	28.4	Aug-09 16:00	19.9	Aug-09	100.0	-
Temp (°C)			Beaverlodge	15.7	-	-	28.5	Aug-09 16:00	20.9	Aug-09	100.0	-
Temp (°C)			Valleyview	17.2	-	-	32.4	Aug-09 16:00	22.8	Aug-09	100.0	-
Temp (°C)			Donnelly	15.6	-	-	28.6	Aug-09 17:00	22.6	Aug-09	99.3	-
Temp (°C)			Rycroft-Portable	15.8	-	-	29.7	Aug-09 15:00	21.9	Aug-09	99.1	-

PAZA Monthly Continuous Data Summary – continued

Aug-2018 Peace Airshed Zone Association							Maximum Recorded Values					
							1-hr		24-hr / 8-hr			
WSPD s (km/hr)			Henry Pirker	6.4	-	-	31.2	Aug-31 15:00	12.8	Aug-03	100.0	-
WSPD s (km/hr)			Evergreen Park	9.2	-	-	42.8	Aug-06 12:00	19.7	Aug-06	100.0	-
WSPD s (km/hr)			Smoky Heights	11.1	-	-	40.4	Aug-31 16:00	20.2	Aug-31	100.0	-
WSPD s (km/hr)			Beaverlodge	11.0	-	-	39.7	Aug-31 14:00	19.8	Aug-31	99.9	-
WSPD s (km/hr)			Valleyview	3.0	-	-	17.3	Aug-03 17:00	7.6	Aug-03	100.0	-
WSPD s (km/hr)			Donnelly	10.1	-	-	28.7	Aug-31 13:00	19.6	Aug-31	99.3	-
WSPD s (km/hr)			Rycroft-Portable	8.0	-	-	29.5	Aug-03 16:00	16.4	Aug-30	99.1	-
WSPD v (km/hr)			Henry Pirker	4.1	-	-	31.2	Aug-31 15:00	12.5	Aug-03	100.0	-
WSPD v (km/hr)			Evergreen Park	6.5	-	-	42.8	Aug-06 12:00	19.4	Aug-06	100.0	-
WSPD v (km/hr)			Smoky Heights	8.0	-	-	40.4	Aug-31 16:00	19.7	Aug-31	100.0	-
WSPD v (km/hr)			Beaverlodge	5.4	-	-	39.7	Aug-31 14:00	18.7	Aug-31	99.9	-
WSPD v (km/hr)			Valleyview	1.5	-	-	17.3	Aug-03 17:00	6.9	Aug-30	100.0	-
WSPD v (km/hr)			Donnelly	10.1	-	-	28.7	Aug-31 13:00	19.6	Aug-31	99.3	-
WSPD v (km/hr)			Rycroft-Portable	8.0	-	-	29.5	Aug-03 16:00	16.4	Aug-30	99.1	-
WDIR			Henry Pirker	WSW	-	-	-	-	-	-	100.0	-
WDIR			Evergreen Park	WSW	-	-	-	-	-	-	100.0	-
WDIR			Smoky Heights	WSW	-	-	-	-	-	-	100.0	-
WDIR			Beaverlodge	WSW	-	-	-	-	-	-	99.9	-
WDIR			Valleyview	W	-	-	-	-	-	-	100.0	-
WDIR			Donnelly	SSW	-	-	-	-	-	-	99.3	-
WDIR			Rycroft-Portable	SSW	-	-	-	-	-	-	99.1	-

Continuous Network Equipment Summary

PAZA – Henry Pirker Station

General Station Issues:

Station was audited August 22

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

Station was audited Aug 21

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
TRS	TEI	43C	Analyzer scrubber replaced Aug 3, allowed to stabilize and calibrated Aug 4.
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

Station was audited Aug 20

Parameter	Make	Model	Notes
SO ₂	TEI	43C	No operational issues observed.
TRS	TEI	43i	No operational issues observed.
PM _{2.5}	Sharp	5030	Analyzer returned invalid reading Aug 15 and 17
ET	Met One	083D	No operational issues observed.
WS / WD	Met One	010C/020C	No operational issues observed.

PAZA – Beaverlodge Station

General Station Issues

Station audited Aug 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-Aug 2 due to suspected water infiltration. Repaired Aug 2.
ET	n/a	n/a	No operational issues observed.
RH	n/a	n/a	No operational issues observed.
WS / WD	Met One	50.5H	Work on electrical connections to wind head done on Aug 8

PAZA – Valleyview Station

General Station Issues

Station audited Aug 20

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
H ₂ S	TEI	43A	Span failed to trigger after Aug 15 calibration. System adjustmend Aug 16 to rectify.
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 Aug 30

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

Power outage Aug 7-8. Station audited Aug 23.

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
NOx/NO/NO ₂	TEI	42i	Irregular spans post-audit self corrected. No action taken.
O ₃	TEI	49i	No operational issues observed.
TRS	TEI	43i	No operational issues observed.
THC/CH ₄ /NMHC	TEI	55i	No operational issues observed.
PM _{2.5}	Sharp	5030	Analyzer maintenance Aug 10 due to clogged tape
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

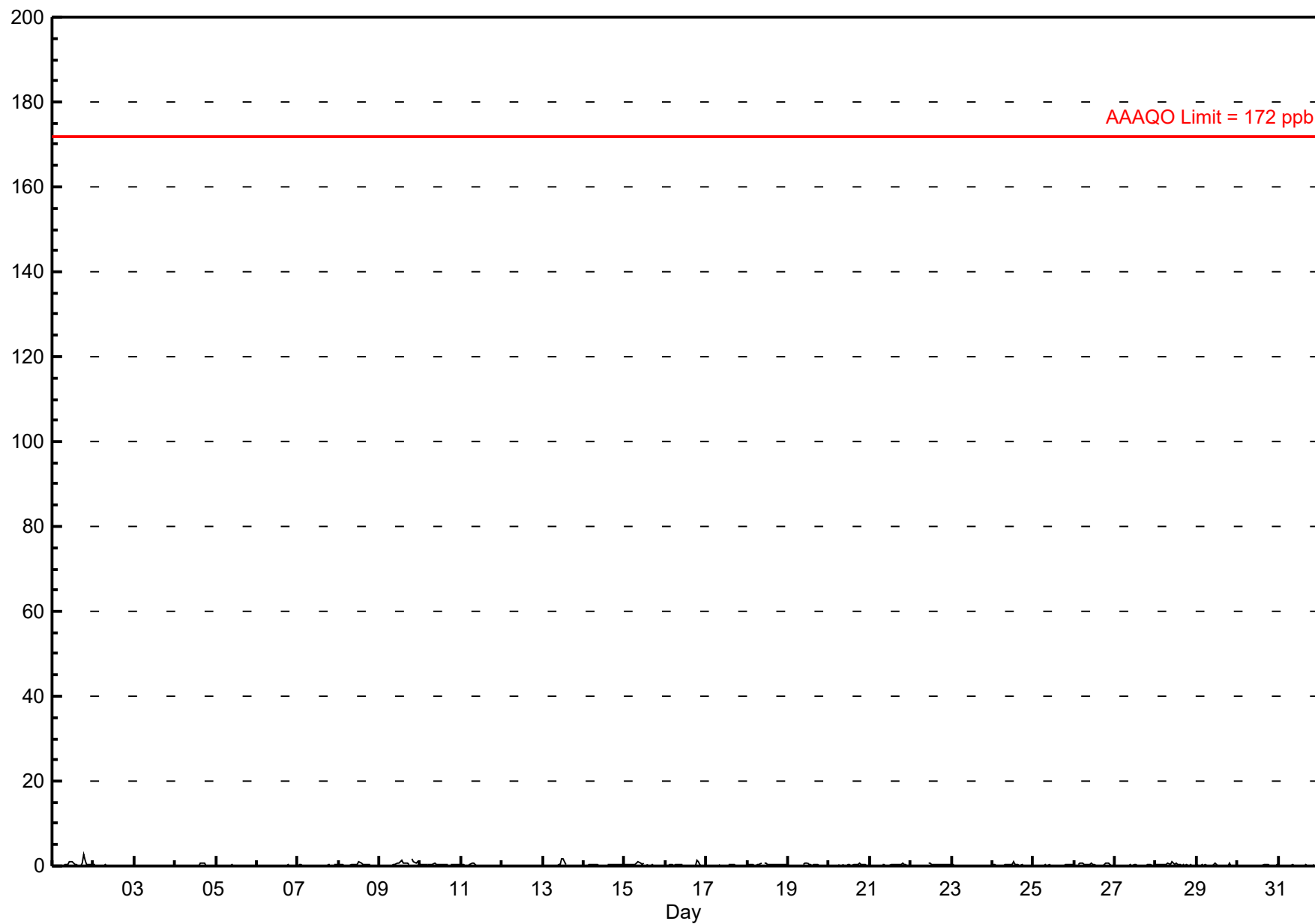
Henry Pirker - August 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 744							
Maximum Value: 2.8 ppb on Aug 1 19:00																				Maximum Daily Average: 0.5 ppb on Aug 9		Hours of Data: 705					
Minimum Value: 0 ppb on Aug 16 17:00																				Minimum Daily Average: 0.0 ppb on Aug 23		Hours of Missing Data: 39					
Maximum Diurnal Average: 0.4 ppb at hour 12																				Minimum Diurnal Average: 0.1 ppb at hour 3		Hours of Calibration: 39					
Monthly Average: 0.21 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.5 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-Aug	0	0	0	A	0	0	0	0	0	0	1	1	1	0	0	0	0	1	3	2	0	0	0	0	0.5	2.8	
2-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
3-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	
4-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	A	0.2	0.8	
5-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.2	
6-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.2	
7-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.2	
8-Aug	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	A	0	0	0	0	0.3	1.1	
9-Aug	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	A	2	1	1	1	1	0.5	1.6	
10-Aug	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.5	
11-Aug	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.6	
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.0	0.1	
13-Aug	0	0	0	0	0	0	0	0	0	0	0	2	2	0	A	0	0	0	0	0	0	0	0	0	0.3	1.9	
14-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
15-Aug	0	0	0	0	0	0	0	1	1	1	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9	
16-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	1	0	0	0	0	0.2	1.3	
17-Aug	0	0	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0.1	0.4	
18-Aug	0	0	0	0	0	0	0	0	1	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
19-Aug	0	0	0	0	0	0	0	0	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8
20-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.2	0.5	
21-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.2	0.5	
22-Aug	0	0	0	0	0	A	0	C	C	C	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7	
23-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.3	
24-Aug	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1	
25-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
26-Aug	0	A	0	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1	1	0	0	0	0.3	0.8	
27-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.4	
28-Aug	0	0	0	0	0	0	0	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	A	0	0.3	1.0	
29-Aug	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	A	0	0	0.2	0.8	
30-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.5	
31-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.3	
0.2 0.1 0.1 0.1 0.1 0.1 0.2 0.2 0.2 0.2 0.3 0.4 0.3 0.2 0.2 0.2 0.2 0.2 0.3 0.3 0.2 0.2 0.2 0.2																									Diurnal Average		
0.5 0.4 0.4 0.6 0.6 0.8 0.6 0.5 0.9 1.0 0.9 1.9 1.6 1.2 0.7 0.7 0.6 0.8 2.8 1.6 1.0 0.8 1.1 0.6																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																											

Hourly Averages

Sulphur Dioxide (SO₂) - ppb

Henry Pirker - August 2018



Hourly Maximums

Sulphur Dioxide (SO₂) - ppb

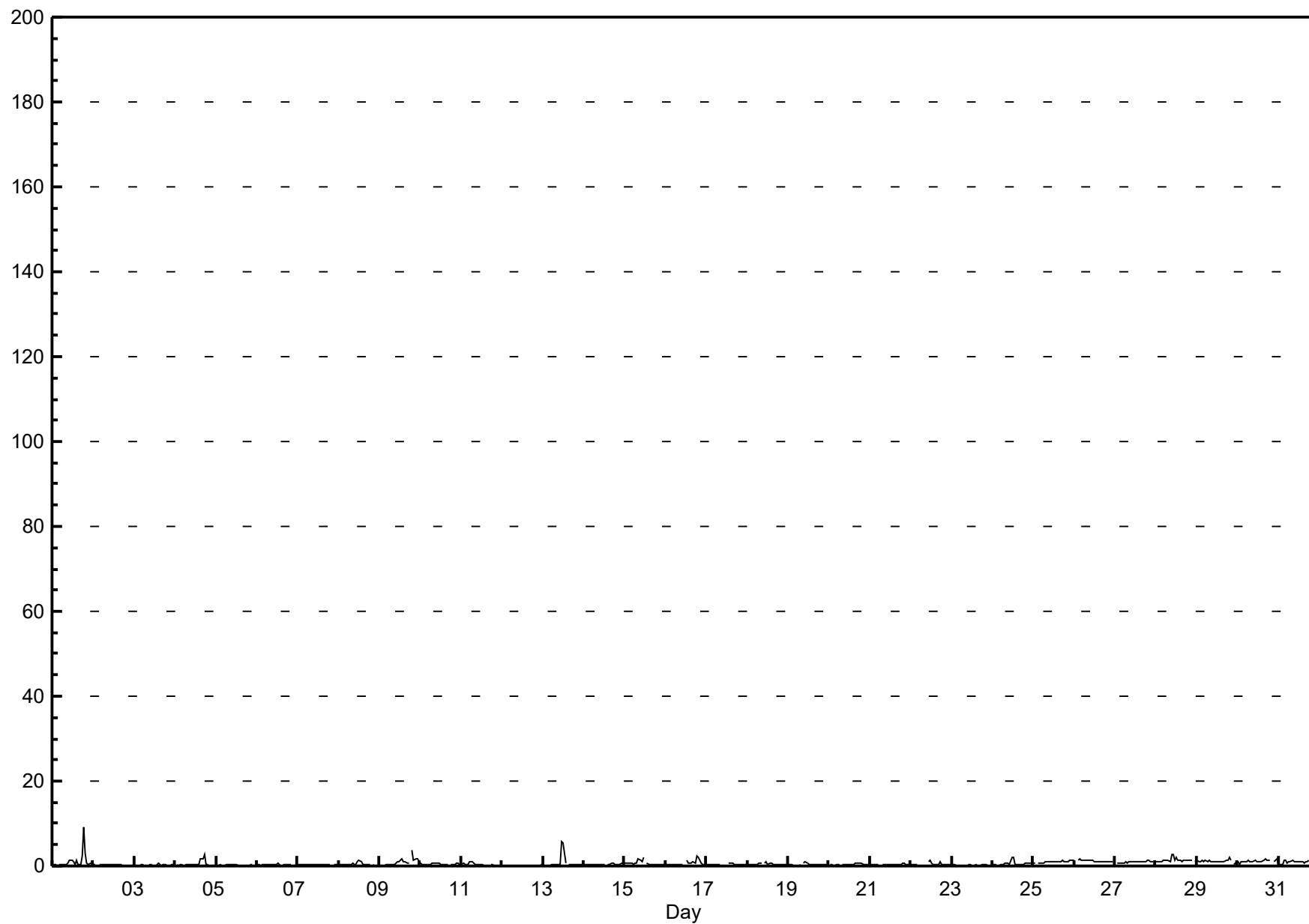
Henry Pirker - August 2018

Maximum Value: 9.2 ppb on Aug 1 19:00																			Maximum Daily Average: 1.4 ppb on Aug 28						Hours in Service: 744	
Minimum Value: 0 ppb on Aug 19 07:00																			Minimum Daily Average: 0.1 ppb on Aug 12						Hours of Data: 705	
Maximum Diurnal Average: 0.9 ppb at hour 12																			Minimum Diurnal Average: 0.4 ppb at hour 2						Hours of Missing Data: 39	
Monthly Average: 0.58 ppb																			Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.3 Q ₃ = 0.9 P ₉₀ = 1.2 P ₉₉ = 2.6						Hours of Calibration: 39	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	0	A	0	0	0	0	0	1	1	1	1	0	1	0	0	3	9	3	1	0	1	1	1.1	9.2
2-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
3-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.2	0.6
4-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	3	0	0	0	0	0	A	0.5	2.6
5-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.2
6-Aug	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0.2	0.8
7-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.3
8-Aug	0	0	0	0	0	0	0	0	1	0	0	1	1	1	0	0	0	0	0	A	0	0	0	0	0.4	1.4
9-Aug	0	0	0	0	0	0	0	0	0	0	1	1	1	2	1	1	1	1	A	4	1	2	2	1	0.9	3.6
10-Aug	1	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	A	0	0	0	1	1	0	0.5	0.7
11-Aug	0	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	1.1
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.2
13-Aug	0	0	0	0	0	0	0	0	0	0	1	6	6	1	A	0	0	0	0	0	0	0	0	0	0.7	5.6
14-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	1	0	0	0	1	1	0.4	0.6
15-Aug	1	1	1	1	1	0	1	1	2	1	1	2	A	1	0	0	0	0	0	0	0	0	0	0	0.6	2.0
16-Aug	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	1	1	2	2	1	1	0	0	0.7	2.5
17-Aug	0	0	0	0	0	0	0	0	0	C	C	C	C	1	1	1	0	0	0	0	0	0	0	0	0.3	0.7
18-Aug	0	0	0	0	0	0	0	1	1	A	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0.4	1.0
19-Aug	0	0	0	0	0	0	0	0	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.0
20-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0.3	0.6
21-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0.3	0.7
22-Aug	0	0	0	0	0	A	0	C	C	C	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0.5	1.3
23-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
24-Aug	0	0	0	A	0	0	0	1	1	1	0	2	2	0	0	0	0	0	0	1	1	1	1	1	0.6	2.2
25-Aug	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.3
26-Aug	1	A	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	1.8
27-Aug	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1.0	1.4
28-Aug	1	1	1	1	1	1	1	1	1	3	3	1	2	1	1	1	1	1	1	1	1	1	A	1	1.4	2.6
29-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	A	0	1	1.2	2.0
30-Aug	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	A	1	1	2	1.2	1.8
31-Aug	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1.0	1.3
0.4 0.4 0.4 0.4 0.4 0.4 0.5 0.5 0.6 0.6 0.7 0.9 0.9 0.6 0.6 0.6 0.6 0.7 0.9 0.8 0.6 0.5 0.5 0.5																								Diurnal Average		
1.3 1.2 1.3 1.8 1.4 1.4 1.3 1.4 1.7 2.6 2.6 5.6 5.5 1.7 1.2 1.7 1.8 2.6 9.2 3.6 1.4 1.6 1.8 1.6																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

Sulphur Dioxide (SO₂) - ppb

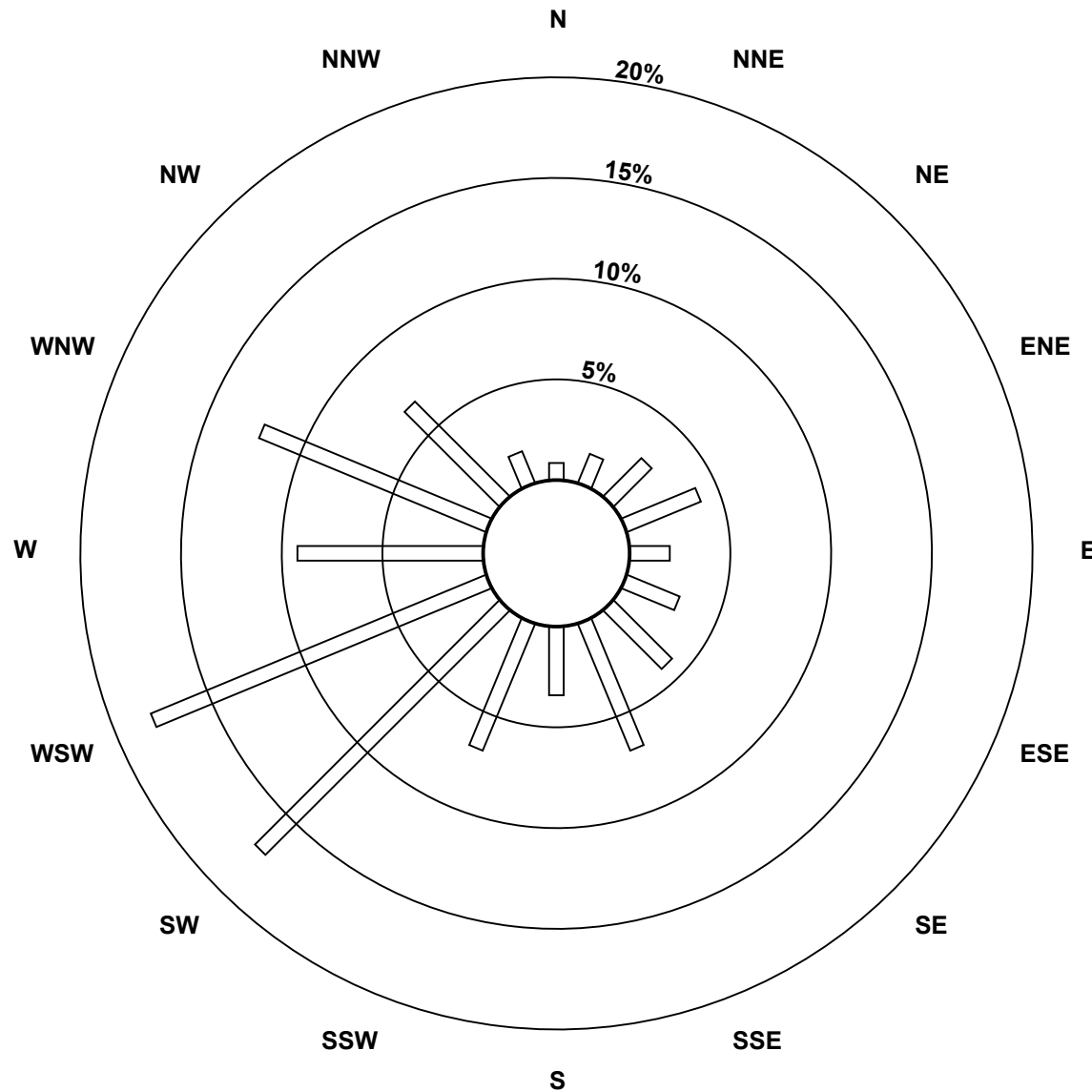
Henry Pirker - August 2018



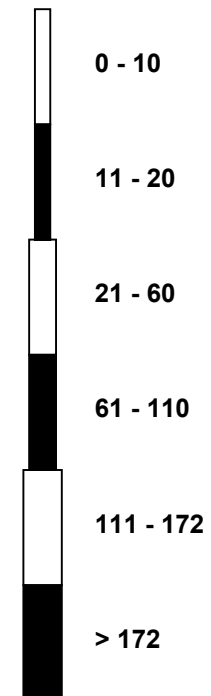
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb

Henry Pirker - August 2018

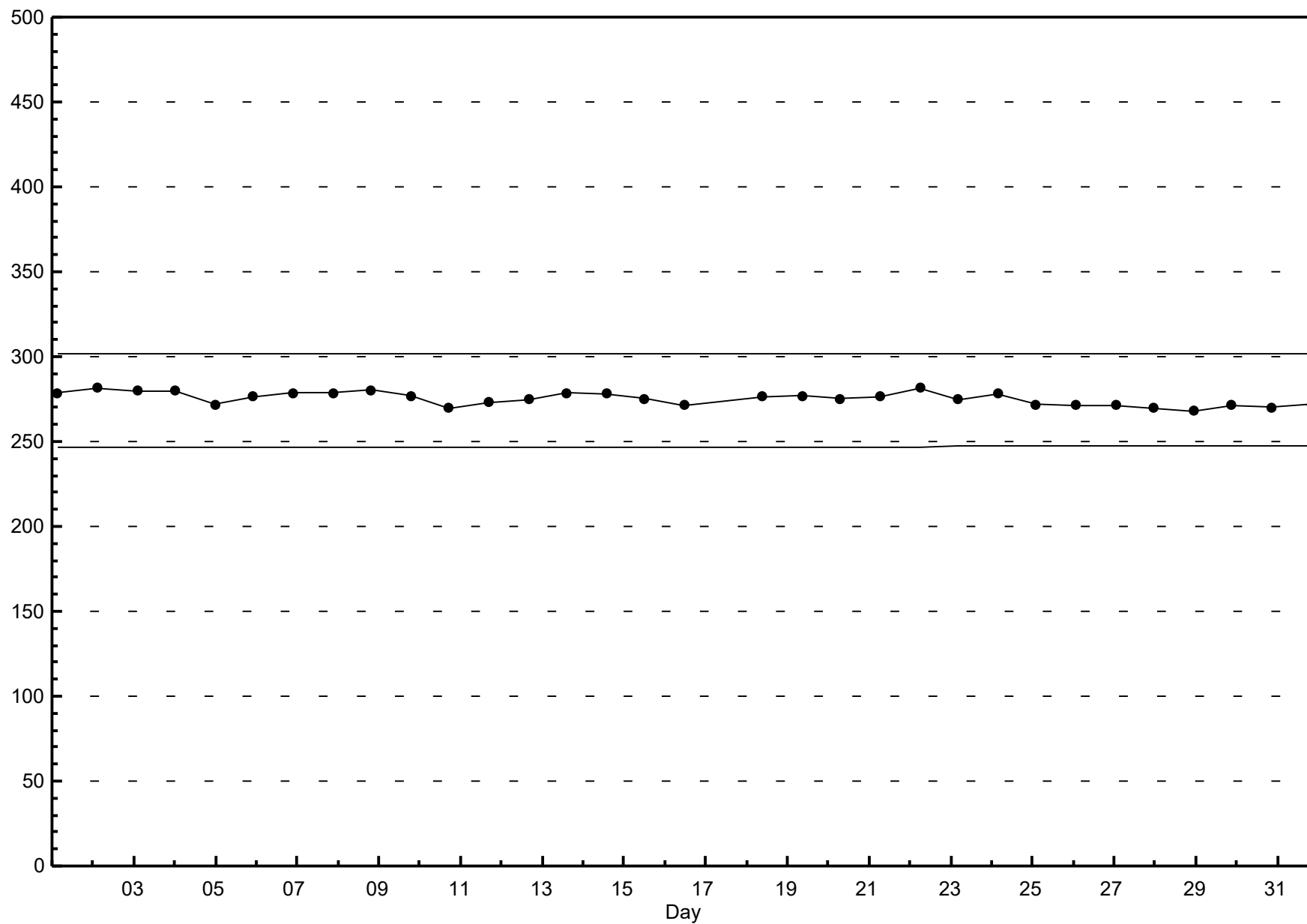


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Henry Pirker - August 2018



Hourly Averages

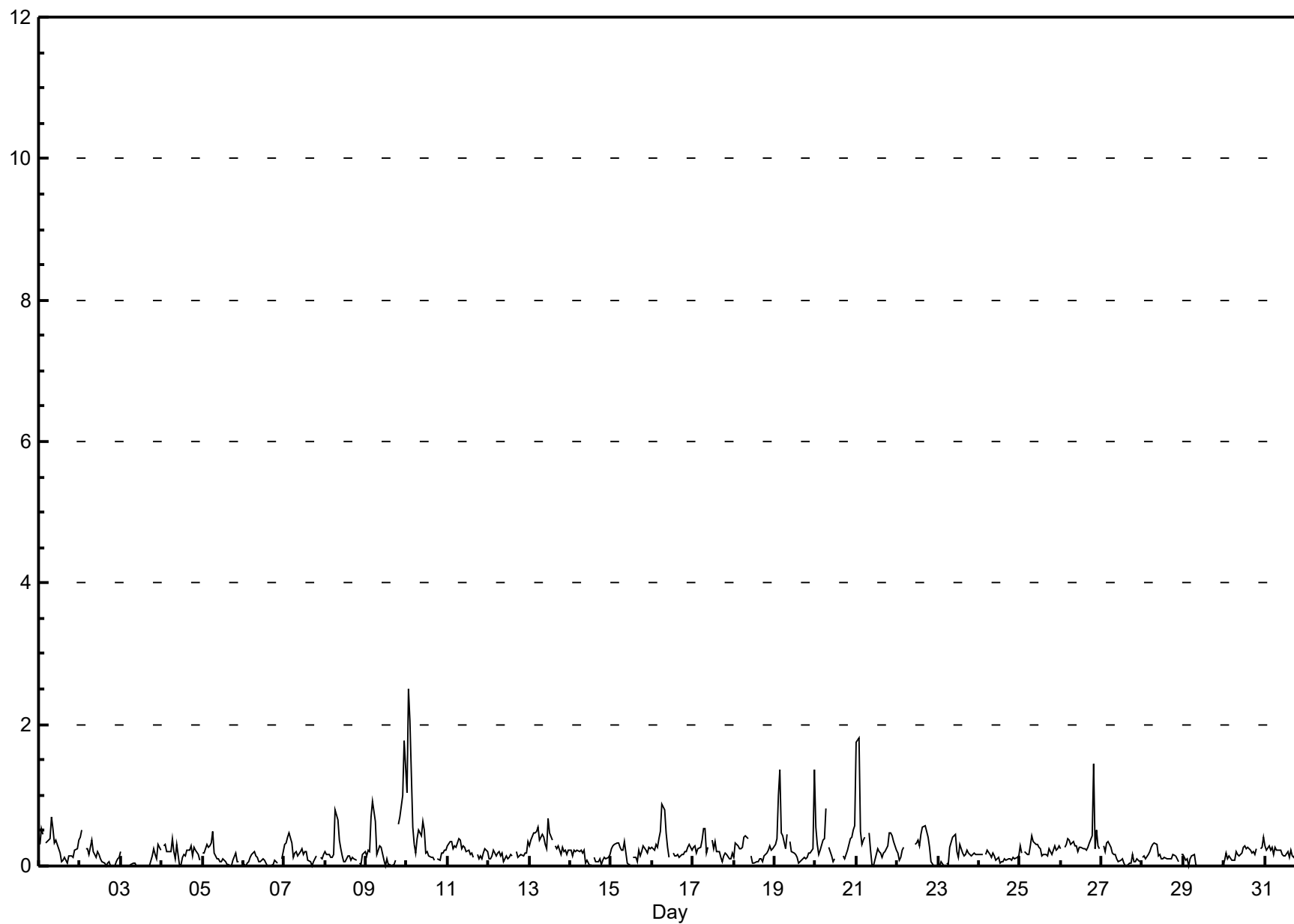
Total Reduced Sulphur (TRS) - ppb

Henry Pirker - August 2018

Maximum Value: 2.5 ppb on Aug 10 02:00																				Maximum Daily Average: 0.5 ppb on Aug 10										Hours in Service: 744									
Minimum Value: 0 ppb on Aug 2 19:00																				Minimum Daily Average: 0.0 ppb on Aug 29										Hours of Data: 704									
Maximum Diurnal Average: 0.4 ppb at hour 2																				Minimum Diurnal Average: 0.1 ppb at hour 15										Hours of Missing Data: 40									
Monthly Average: 0.22 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.4 P ₉₉ = 1.4										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-Aug	0	1	0	A	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7													
2-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5													
3-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3													
4-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.4													
5-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.5													
6-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.2													
7-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.5													
8-Aug	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.8													
9-Aug	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	2	1	0.4	1.8													
10-Aug	1	3	2	1	0	0	0	1	0	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0.5	2.5													
11-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.4													
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.4													
13-Aug	0	0	0	0	0	1	0	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0.3	0.7													
14-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.2													
15-Aug	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4													
16-Aug	0	0	0	0	0	0	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9													
17-Aug	0	0	0	0	0	0	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5													
18-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4													
19-Aug	0	0	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	1.4													
20-Aug	1	0	0	0	0	0	1	A	0	0	0	0	C	C	C	C	0	0	0	0	0	0	1	1	0.3	0.8													
21-Aug	2	2	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.8													
22-Aug	0	0	0	0	0	A	0	C	C	C	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0.3	0.6													
23-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4													
24-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2													
25-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4													
26-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0.3	1.4													
27-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.3													
28-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.3													
29-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.0	0.2													
30-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.4													
31-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.3													
0.3 0.4 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.2 0.2 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.2 0.2 0.2 0.3																									Diurnal Average														
1.8 2.5 2.1 1.4 0.9 0.6 0.9 0.8 0.5 0.6 0.5 0.7 0.5 0.4 0.4 0.5 0.6 0.5 0.4 0.4 1.4 0.7 1.0 1.8 1.4																									Diurnal Maximum														
C - Calibration																									A - Automated Daily Zero Span														

Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Henry Pirker - August 2018



Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

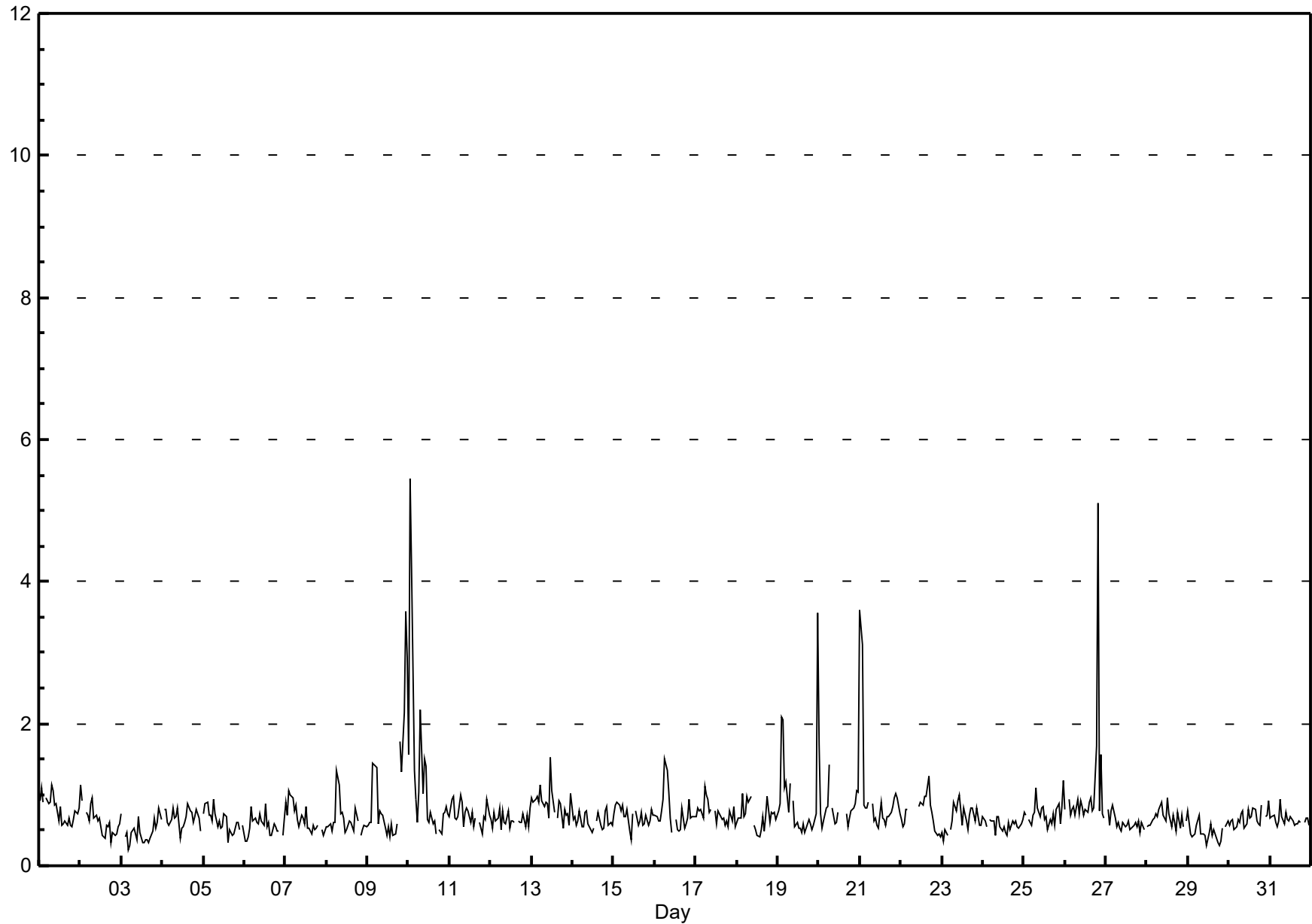
Henry Pirker - August 2018

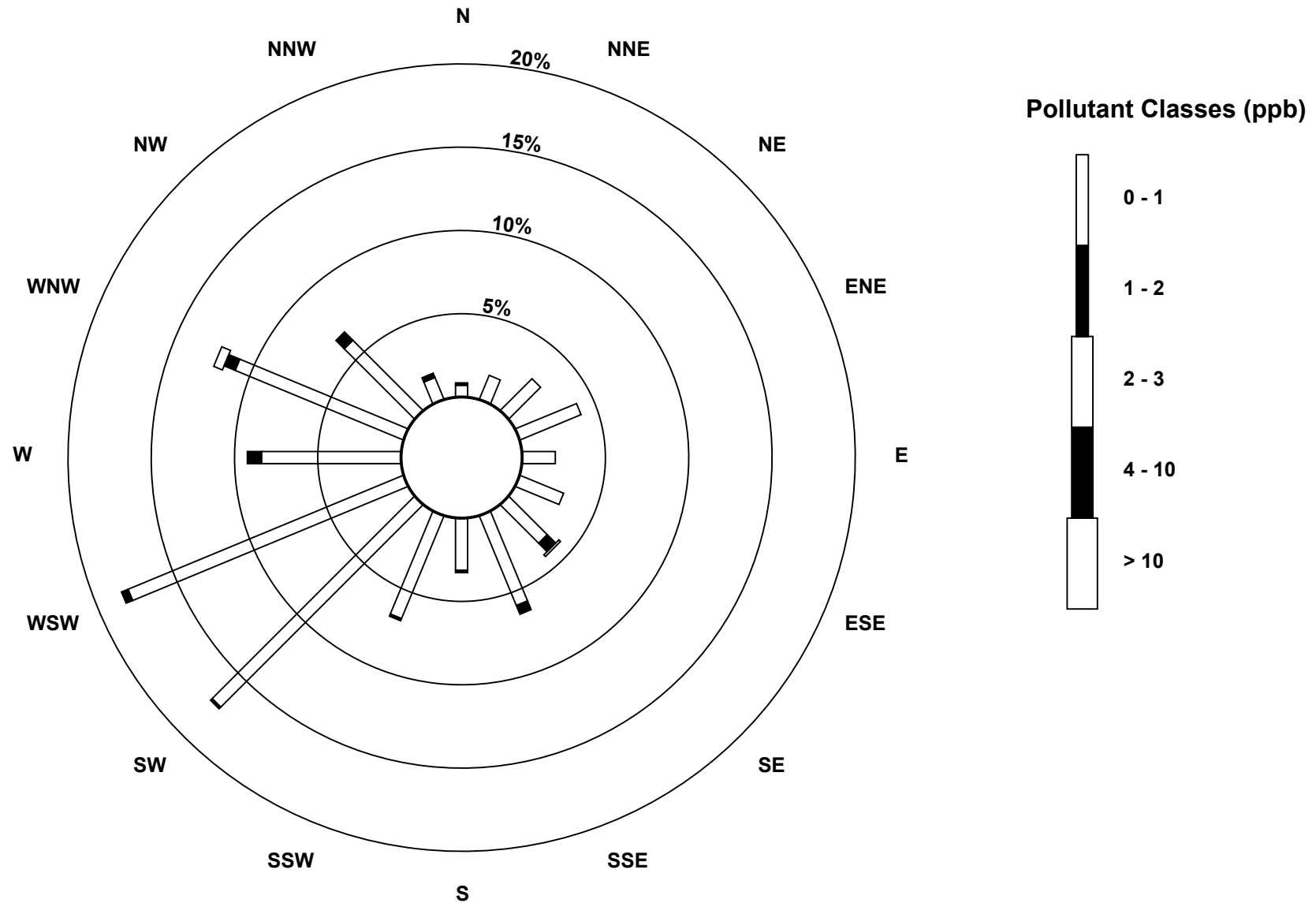
Maximum Value: 5.4 ppb on Aug 10 02:00																				Maximum Daily Average: 1.3 ppb on Aug 10										Hours in Service: 744	
Minimum Value: 0 ppb on Aug 3 05:00																				Minimum Daily Average: 0.5 ppb on Aug 3										Hours of Data: 704	
Maximum Diurnal Average: 0.9 ppb at hour 2																				Minimum Diurnal Average: 0.6 ppb at hour 15										Hours of Missing Data: 40	
Monthly Average: 0.74 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 = 2.9										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-Aug	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1					
2-Aug	1	1	A	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	0	0	0	0	1	1	0.6	1.1					
3-Aug	1	A	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	1	1	1	1	0.5	0.8					
4-Aug	A	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	A	0.7	0.9					
5-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0	1	1	1	A	1	0.6	0.9					
6-Aug	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0	0	A	0	1	0.6	0.9					
7-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	A	1	0	0	0.7	1.1					
8-Aug	1	1	1	0	1	1	1	1	1	1	1	0	1	1	1	0	1	0	1	A	0	1	1	1	0.6	1.3					
9-Aug	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0	0	1	A	2	1	2	4	3	1.1	3.6					
10-Aug	2	5	4	1	1	1	1	2	1	1	1	1	1	1	1	1	0	A	1	0	1	1	1	1	1.3	5.4					
11-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	1	1	1	1	0.7	1.0					
12-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.6	0.8					
13-Aug	1	1	1	1	1	1	1	1	1	1	1	2	1	1	A	1	1	1	1	1	1	1	1	1	0.9	1.5					
14-Aug	1	1	1	1	1	1	1	1	1	1	1	0	1	A	1	1	1	1	1	1	1	1	1	1	0.6	0.8					
15-Aug	1	1	1	1	1	1	1	1	1	0	0	1	A	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9					
16-Aug	1	1	1	1	1	1	2	1	1	1	0	A	1	1	0	1	1	1	1	1	1	1	1	1	0.7	1.5					
17-Aug	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1					
18-Aug	1	1	1	1	1	1	1	1	1	1	A	1	1	0	0	1	1	0	1	1	1	1	1	1	0.7	1.0					
19-Aug	1	1	2	2	1	1	1	1	A	1	1	1	1	1	0	1	0	1	1	1	1	1	1	4	1.0	3.6					
20-Aug	2	1	1	1	1	1	1	A	1	1	1	1	C	C	C	C	1	1	1	1	1	1	1	1	0.8	1.7					
21-Aug	4	3	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	3.6					
22-Aug	1	1	1	1	1	A	1	C	C	C	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0.8	1.3					
23-Aug	0	0	1	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0					
24-Aug	1	1	1	A	1	1	1	0	1	1	1	0	1	0	0	1	1	1	1	1	1	1	1	1	0.6	0.7					
25-Aug	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2					
26-Aug	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	5	1	2	1	1	1.1	5.1					
27-Aug	A	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	A	0.6	0.9					
28-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	A	1	0.7	0.9					
29-Aug	1	0	0	0	0	1	1	0	0	0	0	0	0	1	0	1	0	0	0	0	1	A	1	1	0.5	0.8					
30-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	0.9					
31-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.6	0.9					
																								Diurnal Average							
																								Diurnal Maximum							
C - Calibration																															
A - Automated Daily Zero Span																															

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - August 2018

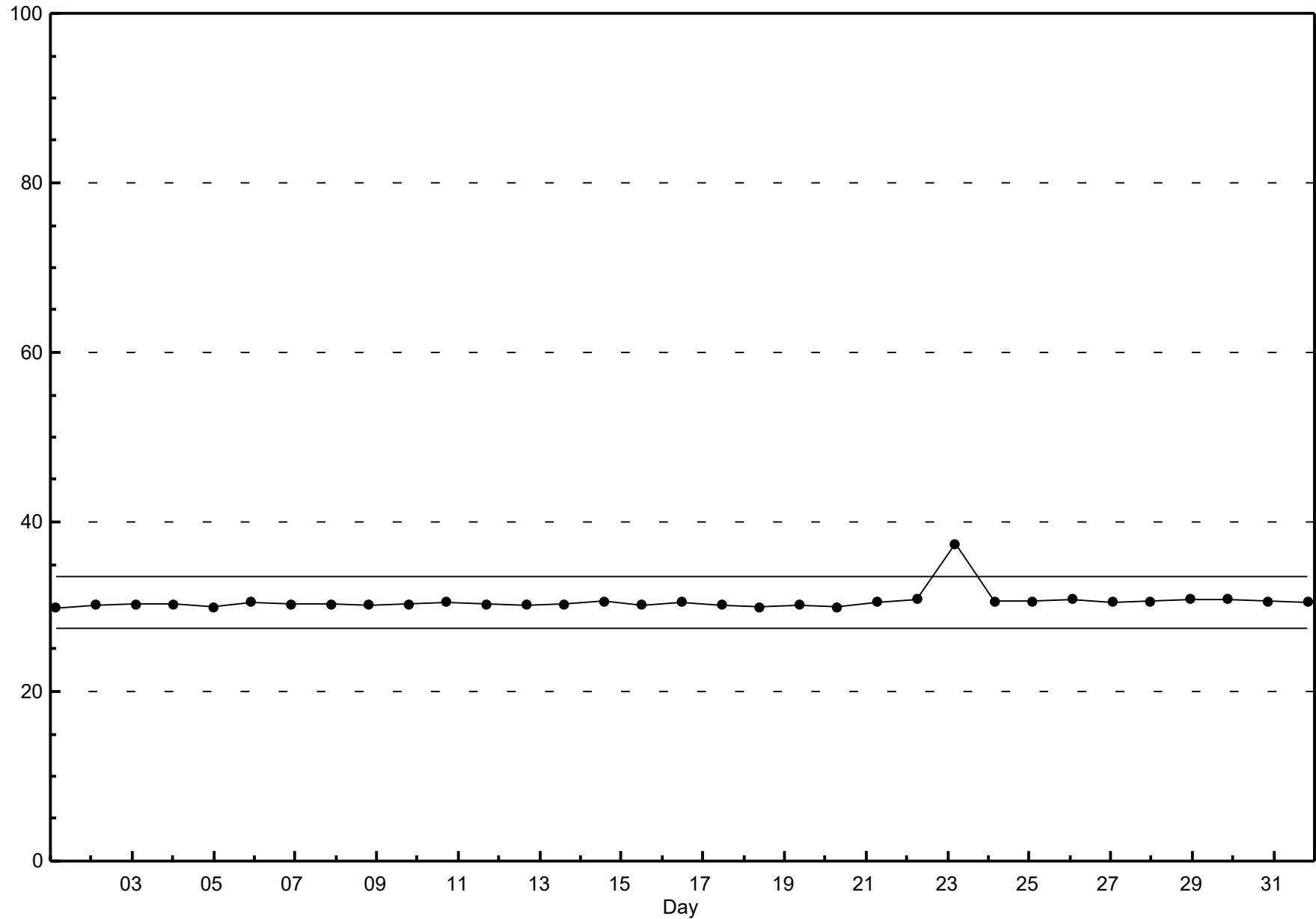




Span Responses

Total Reduced Sulphur (TRS)

Henry Pirker - August 2018



Hourly Averages

Nitrogen Dioxide (NO₂) - ppb

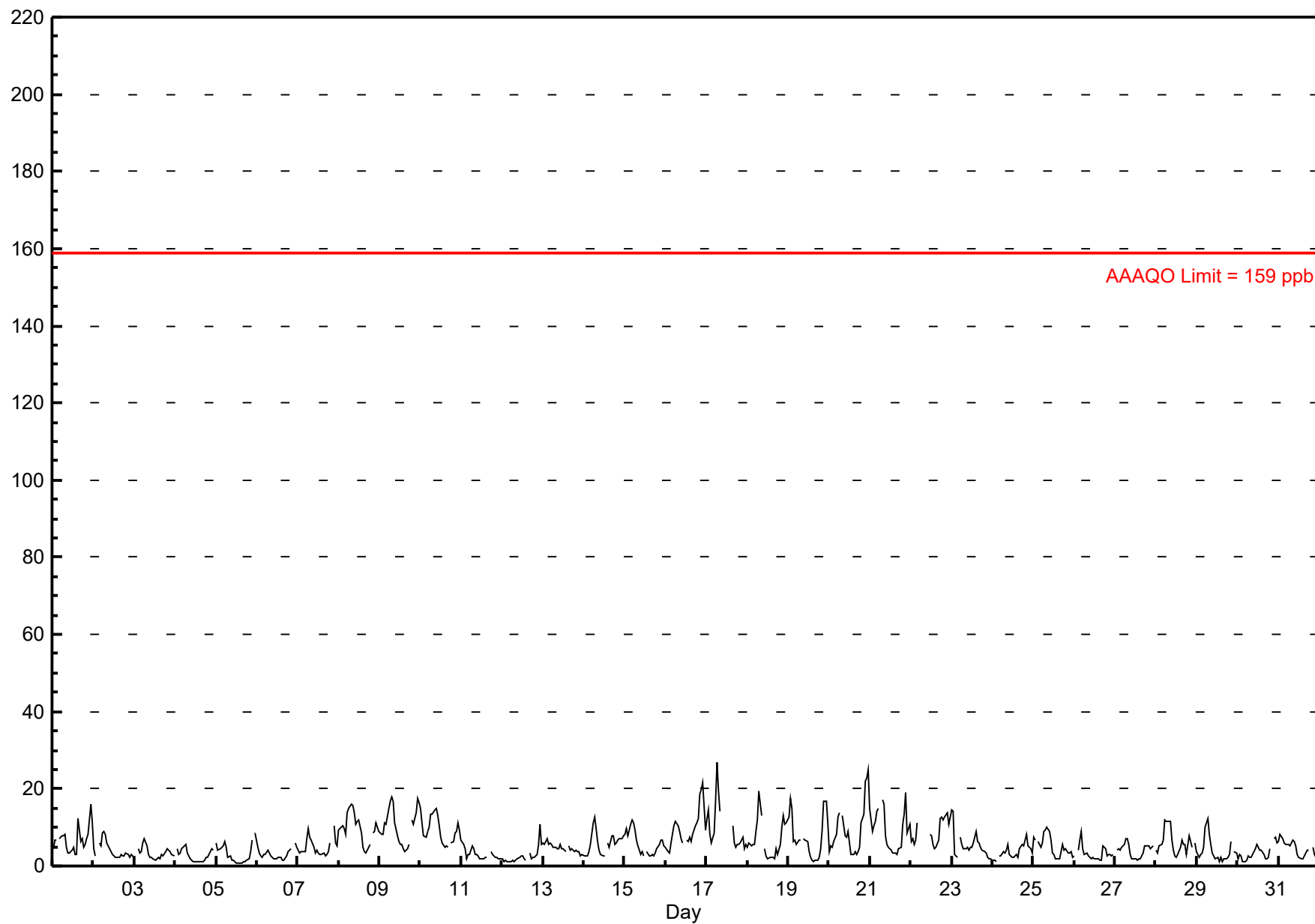
Henry Pirker - August 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 27.0 ppb on Aug 17 07:00 Maximum Daily Average: 10.4 ppb on Aug 9																				Hours in Service: 744 Hours of Data: 702 Hours of Missing Data: 42 Hours of Calibration: 42 Percent Operational Time: 100.0							
Minimum Value: 1 ppb on Aug 5 16:00 Maximum Diurnal Average: 9.5 ppb at hour 7 Monthly Average: 5.81 ppb										Minimum Daily Average: 2.6 ppb on Aug 12 Minimum Diurnal Average: 3.2 ppb at hour 14 Percentiles: P ₁ = 1.1 P ₁₀ = 2.0 Q ₁ = 2.8 Median = 4.7 Q ₃ = 7.3 P ₉₀ = 11.5 P ₉₉ = 19.4																	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	4	7	7	A	7	8	8	8	5	4	3	4	5	3	3	12	6	7	5	5	7	8	16	11	6.7	16.0	
2-Aug	4	3	A	6	5	9	9	8	6	4	4	3	3	2	2	2	3	3	3	3	3	2	3	3	4.1	8.8	
3-Aug	2	A	4	3	4	6	7	5	3	2	2	2	2	2	2	2	3	3	4	4	4	4	3	3	3.3	7.0	
4-Aug	A	4	3	3	5	5	6	4	3	2	1	1	1	1	1	1	1	1	2	2	3	4	4	A	2.7	5.7	
5-Aug	6	4	4	5	5	6	5	2	3	1	1	1	1	1	1	1	1	1	1	2	4	7	A	9	3.1	8.5	
6-Aug	5	3	3	2	3	3	4	3	3	2	2	2	2	2	2	1	2	3	4	4	4	A	6	5	3.1	5.8	
7-Aug	4	3	4	4	4	7	10	7	7	5	3	4	3	3	3	3	3	3	4	6	A	11	6	5	4.8	10.5	
8-Aug	9	10	10	10	8	14	15	16	16	14	11	11	12	9	5	4	3	4	6	A	9	9	11	9	9.7	15.9	
9-Aug	8	8	8	11	11	15	17	18	17	11	8	6	6	6	4	4	5	5	A	12	11	14	18	16	10.4	18.0	
10-Aug	15	11	8	7	9	10	13	14	15	15	13	11	8	6	5	5	5	A	6	6	9	9	11	9	9.5	15.0	
11-Aug	7	6	4	2	3	3	5	5	3	3	2	2	2	2	2	2	A	4	3	3	2	2	2	2	3.0	6.6	
12-Aug	2	1	2	1	1	1	2	1	1	2	2	3	3	2	2	A	3	2	2	2	3	6	11	5	2.6	10.8	
13-Aug	6	6	7	6	6	6	5	5	4	5	6	5	4	4	A	5	4	5	4	4	4	4	3	3	4.7	6.9	
14-Aug	3	3	3	4	6	11	13	10	6	4	3	3	2	A	6	5	8	8	5	6	7	7	7	8	5.9	12.6	
15-Aug	8	10	8	11	12	11	9	7	5	3	4	2	A	4	3	3	3	3	3	4	5	7	7	5	5.9	11.9	
16-Aug	5	4	4	6	8	11	11	11	9	7	6	A	7	6	8	7	8	10	11	12	18	20	21	9	9.5	21.4	
17-Aug	12	14	8	6	8	17	27	19	14	C	C	C	C	C	C	10	6	5	6	6	6	7	5	6	10.2	27.0	
18-Aug	5	6	5	5	6	9	12	19	13	A	5	3	2	2	2	2	2	4	3	6	10	13	11	11	6.8	19.3	
19-Aug	13	18	15	6	7	6	7	7	A	13	7	7	6	4	2	2	1	1	2	2	5	9	17	17	11	7.4	17.6
20-Aug	4	5	5	6	8	13	14	A	13	8	8	9	6	3	3	4	3	4	5	11	13	22	23	25	9.3	25.1	
21-Aug	15	9	10	12	14	15	A	17	16	8	6	5	4	3	3	4	3	4	5	11	13	19	9	11	9.4	19.1	
22-Aug	6	7	6	7	11	A	27	C	C	C	C	8	8	6	4	5	7	12	13	12	13	14	11	13	9.9	26.6	
23-Aug	14	14	3	2	A	7	6	5	5	5	4	5	5	6	9	6	6	5	4	4	3	2	2	2	5.4	14.4	
24-Aug	1	1	1	A	3	3	4	3	4	6	3	2	2	3	3	2	5	6	5	7	8	5	4	3	3.7	8.2	
25-Aug	8	7	A	6	5	6	9	9	10	9	7	3	3	2	2	2	4	6	4	4	3	3	4	2	5.1	10.2	
26-Aug	3	A	4	7	9	4	3	3	2	2	2	2	2	2	2	2	2	5	4	2	3	3	3	3	3.2	9.1	
27-Aug	A	4	4	4	5	6	7	7	5	3	2	2	2	1	2	2	3	5	5	5	5	5	5	A	4.1	7.2	
28-Aug	4	3	5	6	7	12	12	11	12	7	4	3	2	3	5	7	6	6	3	8	7	5	A	6	6.1	12.1	
29-Aug	4	2	3	3	5	10	12	8	6	3	3	2	2	1	2	1	2	2	2	3	6	A	4	3	3.9	12.3	
30-Aug	2	3	3	1	1	2	2	2	2	3	4	6	5	4	4	3	2	2	2	4	A	7	8	6	3.4	7.6	
31-Aug	6	8	7	6	6	6	6	5	7	6	5	3	2	2	2	3	3	4	4	A	5	3	2	2	4.5	8.1	
6.4 6.4 5.4 5.5 6.3 8.0 9.5 8.3 7.4 5.4 4.5 4.1 3.7 3.2 3.3 3.7 3.7 4.4 4.4 5.7 6.9 8.2 8.1 7.1																								Diurnal Average			
15.1 17.6 14.9 11.7 14.2 17.3 27.0 19.4 16.6 15.0 13.1 11.5 12.0 8.5 8.9 12.1 8.3 12.3 12.6 12.3 18.5 21.9 22.6 25.1																								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 - August 2018



Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb

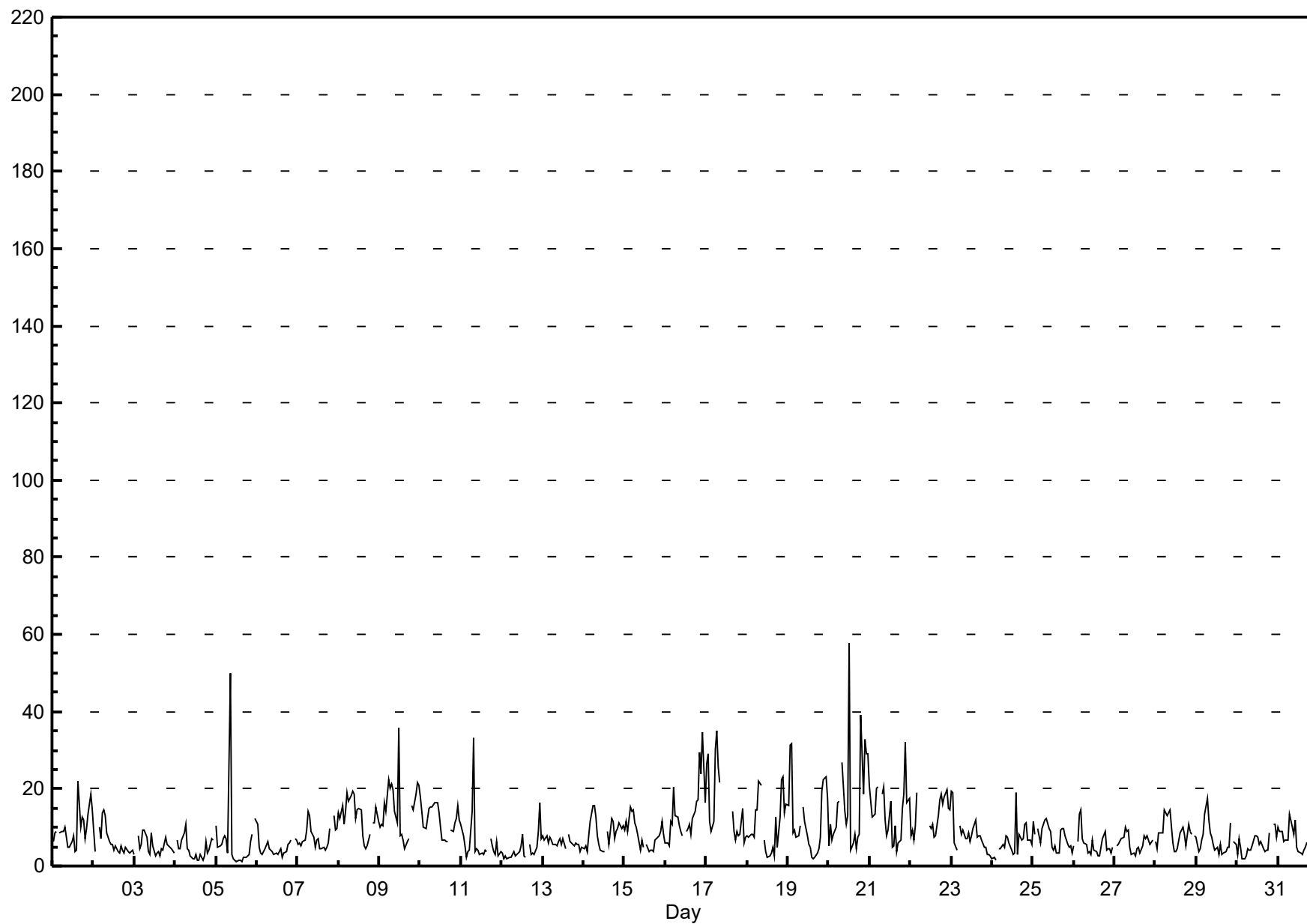
Henry Pirker - August 2018

Maximum Value: 57.7 ppb on Aug 20 13:00																				Maximum Daily Average: 16.7 ppb on Aug 20										Hours in Service: 744	
Minimum Value: 1 ppb on Aug 5 16:00																				Minimum Daily Average: 4.4 ppb on Aug 12										Hours of Data: 702	
Maximum Diurnal Average: 12.6 ppb at hour 7																				Minimum Diurnal Average: 5.1 ppb at hour 14										Hours of Missing Data: 42	
Monthly Average: 8.80 ppb																				Percentiles: P ₁ = 1.6 P ₁₀ = 3.1 Q ₁ = 4.5 Median = 7.1 Q ₃ = 10.9 P ₉₀ = 16.5 P ₉₉ = 33.3										Hours of Calibration: 42	
																				Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Aug	6	9	9	A	9	9	9	10	8	5	5	6	8	4	4	22	10	13	12	7	10	13	19	14	9.6	22.0					
2-Aug	9	4	A	10	7	14	14	13	9	7	6	5	4	5	4	3	5	4	3	5	4	3	4	4	6.4	14.5					
3-Aug	3	A	8	5	5	9	9	7	4	3	9	5	3	3	4	3	4	4	8	6	5	5	4	3	5.2	9.5					
4-Aug	A	7	4	5	7	9	11	5	4	3	2	2	3	2	2	3	2	3	6	3	4	7	7	A	4.5	11.0					
5-Aug	11	5	5	6	7	8	7	3	50	3	2	2	1	1	1	1	2	2	2	3	6	8	A	12	6.5	49.8					
6-Aug	11	5	3	3	4	4	6	5	4	4	3	3	3	4	4	2	3	4	5	6	7	A	7	7	4.7	10.9					
7-Aug	5	6	5	6	7	9	14	13	9	7	5	7	7	4	4	5	4	5	6	10	A	13	9	10	7.5	14.2					
8-Aug	14	12	16	11	14	19	17	18	19	19	12	15	15	15	8	5	4	5	8	A	11	11	15	11	12.8	19.5					
9-Aug	10	11	11	17	14	22	20	21	20	14	11	36	8	8	7	4	6	7	A	16	14	19	21	21	14.7	35.8					
10-Aug	18	14	10	10	12	15	15	15	16	16	17	14	10	7	7	6	6	A	9	9	11	12	16	12	12.1	17.9					
11-Aug	11	8	5	2	4	4	14	33	4	4	4	3	3	3	4	4	A	7	5	4	3	7	3	4	6.2	33.3					
12-Aug	3	2	3	2	2	2	3	4	3	3	4	5	8	3	2	A	6	3	3	3	5	9	16	7	4.4	16.4					
13-Aug	8	7	8	6	8	7	6	6	5	6	7	6	7	5	A	8	6	6	5	6	5	5	4	5	6.1	8.1					
14-Aug	5	5	4	8	11	16	15	13	8	6	4	4	4	A	9	6	12	12	7	9	10	11	10	10	8.6	15.6					
15-Aug	9	12	9	15	14	14	11	10	8	4	7	5	A	6	4	4	4	4	7	7	8	9	12	8	8.3	15.1					
16-Aug	6	6	5	12	11	20	13	13	11	9	8	A	9	10	11	8	12	14	17	17	29	24	35	17	13.7	34.8					
17-Aug	27	29	11	9	12	30	35	26	22	C	C	C	C	C	C	14	9	7	9	8	8	15	6	7	15.7	35.1					
18-Aug	8	8	8	8	8	14	15	22	21	A	7	4	2	3	3	5	3	13	5	13	22	23	14	16	10.6	23.0					
19-Aug	16	31	32	9	9	8	8	11	A	15	12	8	6	5	2	2	2	3	4	7	19	22	23	17	11.8	31.7					
20-Aug	5	11	7	8	10	17	17	A	27	14	11	13	58	4	6	8	4	8	8	39	19	33	29	29	16.7	57.7					
21-Aug	21	13	13	13	20	20	A	19	20	12	8	9	17	5	5	10	4	6	7	15	19	32	16	18	14.0	32.0					
22-Aug	8	9	7	11	19	A	34	C	C	C	C	11	10	11	7	8	13	17	19	16	18	20	15	14	14.0	34.1					
23-Aug	19	19	6	4	A	10	8	9	7	7	9	6	8	10	12	8	8	8	7	5	5	3	3	3	8.0	19.3					
24-Aug	2	2	1	A	4	4	6	5	8	7	6	4	3	3	19	3	8	7	7	11	11	7	7	6	6.1	19.0					
25-Aug	12	8	A	10	6	10	11	12	12	10	9	5	4	5	3	3	9	10	10	8	6	5	5	4	7.6	12.2					
26-Aug	5	A	6	14	15	7	6	5	3	4	3	7	4	4	3	3	5	7	9	4	4	4	3	5	5.7	14.5					
27-Aug	A	5	5	7	7	7	10	9	9	5	3	3	3	4	5	3	5	8	7	8	7	6	7	A	6.1	10.1					
28-Aug	6	5	8	8	9	14	14	13	15	10	6	4	4	5	8	9	10	8	5	11	9	8	A	8	8.6	14.6					
29-Aug	7	4	4	7	8	14	17	12	9	7	5	4	5	3	5	3	3	4	5	5	11	A	6	6	6.7	17.4					
30-Aug	3	7	5	2	2	3	4	4	4	5	8	8	7	6	6	4	4	4	4	9	A	11	11	7	5.6	10.8					
31-Aug	10	9	9	6	7	7	7	13	10	8	12	5	4	3	3	4	5	6	6	A	8	5	3	3	6.6	13.4					
9.5 9.4 7.9 8.0 9.0 11.6 12.6 12.1 12.0 7.8 6.9 7.1 7.8 5.1 5.7 5.8 6.0 6.9 7.2 9.2 10.3 12.1 11.4 9.9																									Diurnal Average						
26.6 31.5 31.7 16.6 20.0 30.3 35.1 33.3 49.8 18.8 16.5 35.8 57.7 14.6 19.0 22.0 12.9 17.0 18.7 39.3 29.3 32.6 34.8 28.9																									Diurnal Maximum						
C - Calibration																									A - Automated Daily Zero Span						

Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb

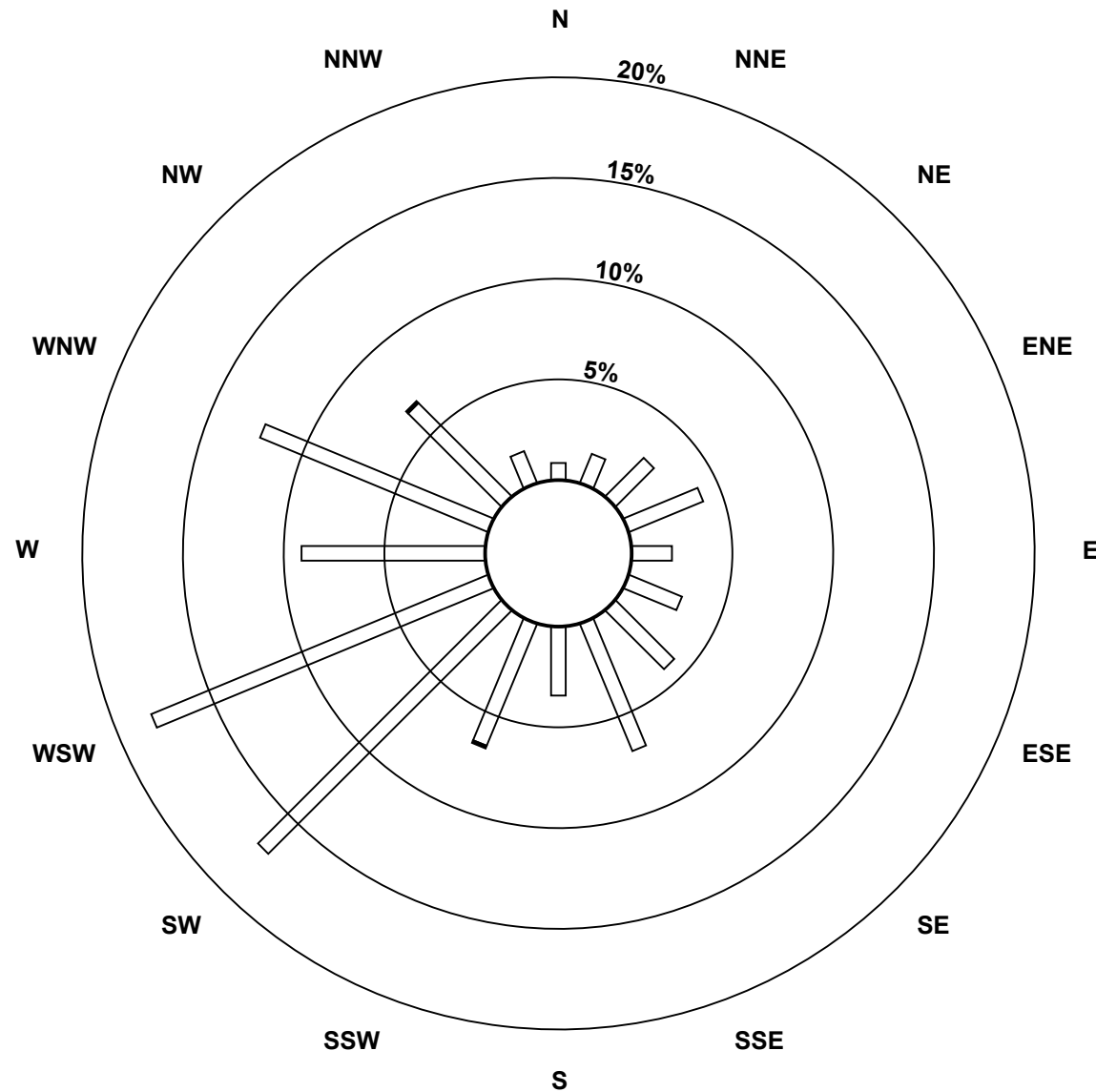
Henry Pirker - August 2018



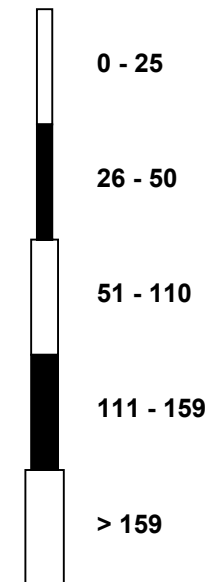
Pollutant Rose

Nitrogen Dioxide (NO₂) - ppb

Henry Pirker - August 2018

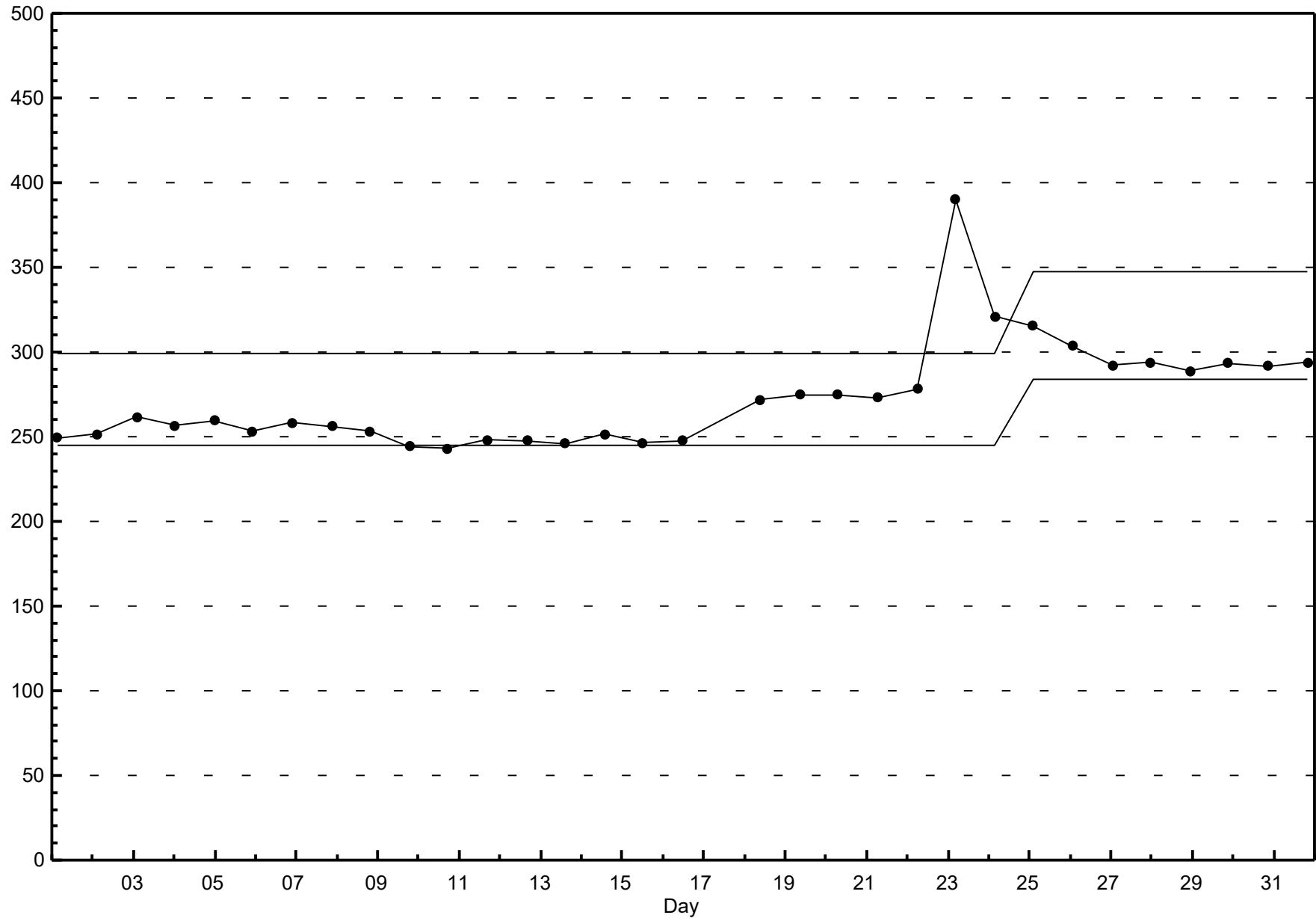


Pollutant Classes (ppb)



Span Responses

Nitrogen Dioxide (NO₂)
Henry Pirker - August 2018



Hourly Averages

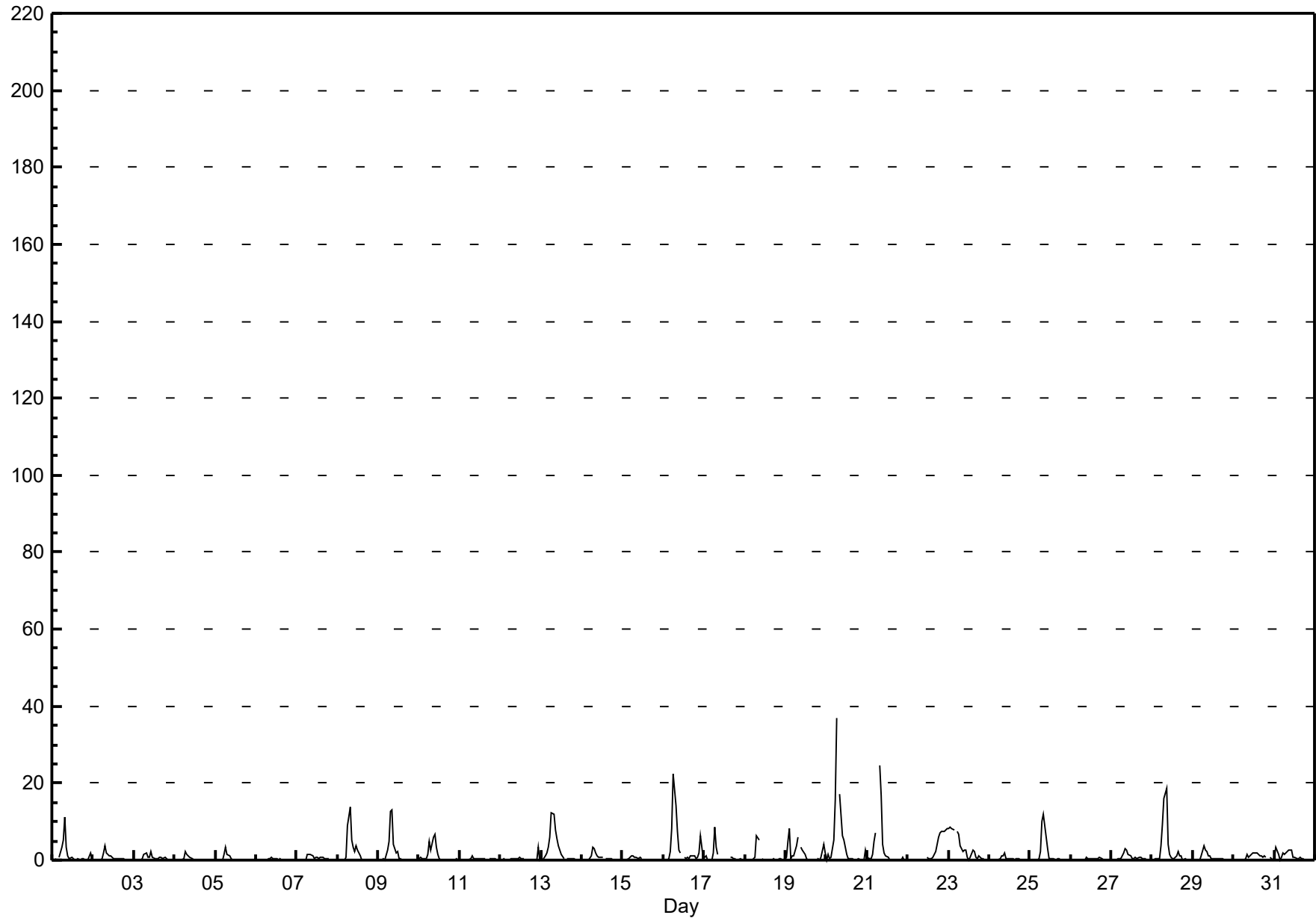
Nitrogen Oxide (NO) - ppb

Henry Pirker - August 2018

Maximum Value: 37.1 ppb on Aug 20 07:00																				Maximum Daily Average: 4.3 ppb on Aug 20					Hours in Service: 744	
Minimum Value: 0 ppb on Aug 3 01:00																				Minimum Daily Average: 0.1 ppb on Aug 6					Hours of Data: 702	
Maximum Diurnal Average: 5.5 ppb at hour 8																				Minimum Diurnal Average: 0.4 ppb at hour 21					Hours of Missing Data: 42	
Monthly Average: 1.32 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.3 Q ₃ = 1.0 P ₉₀ = 3.4 P ₉₉ = 15.5					Hours of Calibration: 42	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	0	A	1	3	5	11	3	1	0	1	1	0	0	0	0	0	0	0	0	0	2	0	1.3	11.3
2-Aug	0	0	A	0	0	0	2	4	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.6	3.6
3-Aug	0	A	0	0	0	0	1	2	1	1	2	1	0	0	0	1	1	0	1	0	0	0	0	0	0.5	2.3
4-Aug	A	0	0	0	0	0	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.3	2.2
5-Aug	0	0	0	0	0	1	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.4	3.3
6-Aug	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.6
7-Aug	0	0	0	0	0	0	2	1	2	1	0	1	1	1	1	1	0	0	0	0	A	0	0	0	0.5	1.5
8-Aug	0	0	0	0	0	1	9	14	5	3	2	4	3	1	0	0	0	0	0	A	0	0	0	0	1.9	13.8
9-Aug	0	0	0	0	0	2	5	13	13	4	2	2	1	0	0	0	0	0	A	0	0	0	0	0	1.8	12.9
10-Aug	0	1	0	0	0	1	5	3	6	7	3	1	0	0	0	0	0	A	0	0	0	0	0	0	1.3	6.6
11-Aug	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0.3	1.2
12-Aug	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	A	0	0	0	0	0	0	3	0	0.3	3.3
13-Aug	0	0	1	2	3	6	12	12	8	6	4	3	2	1	A	0	0	0	0	0	0	0	0	0	2.6	12.3
14-Aug	0	0	0	0	0	1	3	3	2	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0.6	3.3
15-Aug	0	0	0	0	1	1	1	1	1	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	1.2
16-Aug	0	0	0	0	2	8	23	14	7	3	2	A	1	1	1	1	1	1	1	0	1	2	6	0	3.2	22.5
17-Aug	1	1	0	0	0	2	9	3	2	C	C	C	C	C	C	1	1	0	0	0	0	0	0	0	1.1	8.7
18-Aug	0	0	0	0	0	0	1	6	5	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.7	6.2
19-Aug	1	5	8	1	1	1	4	6	A	3	2	1	0	0	0	0	0	0	0	0	0	1	4	2	1.8	8.3
20-Aug	0	1	0	1	5	16	37	A	17	6	5	3	1	0	0	0	0	0	0	0	0	0	0	3	4.3	37.1
21-Aug	1	0	1	1	5	7	A	25	17	4	2	1	1	0	0	0	0	0	0	0	0	1	0	0	2.9	24.8
22-Aug	0	0	0	0	0	A	6	C	C	C	C	1	0	1	0	1	2	4	6	7	7	8	8	8	3.1	8.2
23-Aug	8	8	8	8	A	7	7	4	2	3	3	1	0	1	3	2	1	1	1	0	0	0	0	0	3.0	8.4
24-Aug	0	0	0	A	0	0	1	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.8
25-Aug	0	0	A	0	0	0	2	10	12	6	3	1	0	0	0	0	0	0	0	0	0	0	0	0	1.6	11.8
26-Aug	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.2	0.7
27-Aug	A	0	0	0	0	0	1	2	3	3	1	1	1	0	1	0	1	1	0	0	0	0	0	A	0.7	2.9
28-Aug	0	0	0	0	0	4	9	16	19	4	1	1	0	1	1	2	1	1	0	0	0	0	A	0	2.7	18.6
29-Aug	0	0	0	0	0	1	4	2	2	1	1	1	1	0	0	0	0	0	0	0	0	A	0	0	0.6	3.9
30-Aug	0	0	0	0	0	0	0	0	2	1	2	2	2	2	2	1	1	1	1	1	A	1	0	0	0.8	1.9
31-Aug	1	3	2	0	1	2	2	2	3	3	3	1	1	0	0	1	0	0	0	A	0	0	0	0	1.0	3.2
		0.5	0.7	0.7	0.5	0.7	2.3	5.2	5.5	4.7	2.3	1.5	1.0	0.6	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.5	0.9	0.5	Diurnal Average
		8.3	8.4	8.3	7.9	5.3	15.5	37.1	24.8	18.6	6.6	5.2	3.8	2.8	1.8	2.6	2.3	2.1	4.0	6.0	7.0	7.4	7.6	7.9	8.2	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																								

Hourly Averages

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



Hourly Maximums

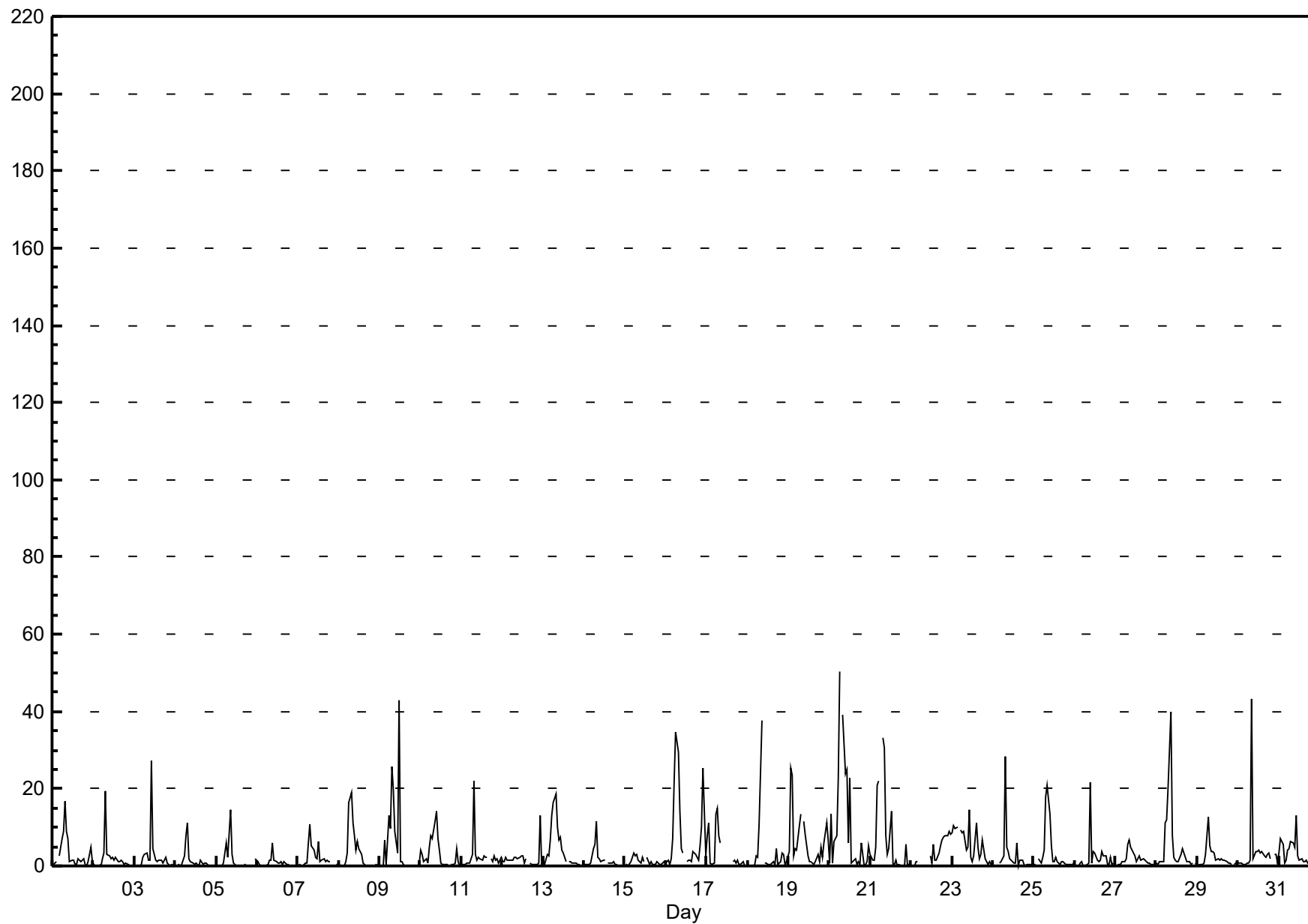
Nitrogen Oxide (NO) - ppb

Henry Pirker - August 2018

Maximum Value: 50.2 ppb on Aug 20 07:00																				Maximum Daily Average: 10.3 ppb on Aug 20					Hours in Service: 744	
Minimum Value: 0 ppb on Aug 4 22:00																				Minimum Daily Average: 0.8 ppb on Aug 6					Hours of Data: 702	
Maximum Diurnal Average: 12.5 ppb at hour 8																				Minimum Diurnal Average: 1.0 ppb at hour 21					Hours of Missing Data: 42	
Monthly Average: 3.54 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.4 Median = 1.2 Q ₃ = 3.4 P ₉₀ = 9.3 P ₉₉ = 33.1					Hours of Calibration: 42	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	1	1	A	3	7	9	17	9	7	1	1	1	0	0	2	1	1	2	0	0	1	5	1	3.1	16.9
2-Aug	0	0	A	0	0	2	3	19	3	3	2	2	1	2	1	1	1	1	1	1	1	0	0	0	2.0	19.4
3-Aug	0	A	0	0	0	2	3	3	1	2	27	5	1	1	2	1	2	1	2	1	0	0	0	0	2.4	27.1
4-Aug	A	0	0	0	0	3	8	11	2	1	1	1	1	0	0	1	0	1	1	0	0	0	0	A	1.4	11.1
5-Aug	0	0	0	0	1	3	6	2	15	3	1	0	0	0	0	0	0	0	0	0	0	0	A	2	1.5	14.7
6-Aug	1	0	0	0	0	0	0	1	2	6	1	1	1	1	1	0	1	1	0	0	0	A	0	0	0.8	6.0
7-Aug	0	0	0	0	1	1	6	11	5	4	2	2	6	1	1	2	1	1	1	1	A	0	0	0	2.1	10.8
8-Aug	1	0	0	0	1	3	17	19	11	8	4	6	4	3	1	0	0	0	0	A	0	0	0	0	3.4	19.1
9-Aug	0	0	0	7	0	13	10	26	20	9	3	43	1	1	0	0	0	0	A	0	0	0	0	1	5.8	42.9
10-Aug	4	3	1	2	1	5	8	7	12	14	7	4	1	1	0	0	0	A	0	0	1	4	1	0	3.4	14.3
11-Aug	0	0	0	1	1	1	3	22	3	1	2	2	2	3	2	2	A	2	1	3	1	2	1	2	2.5	21.8
12-Aug	1	1	2	1	1	2	1	2	2	2	2	3	3	1	2	A	1	1	0	0	0	1	13	0	1.9	13.0
13-Aug	1	1	3	3	7	13	16	19	10	7	7	4	3	1	A	1	1	1	1	1	0	0	0	0	4.4	18.7
14-Aug	0	0	0	0	1	5	6	12	2	2	1	1	1	A	1	1	1	1	0	0	0	0	0	0	1.6	11.6
15-Aug	0	0	0	1	2	3	3	3	1	1	2	1	A	2	0	1	0	0	1	1	0	1	1	1	1.2	3.4
16-Aug	1	1	0	2	7	22	35	29	14	4	3	A	1	1	1	1	4	3	2	1	5	10	25	3	7.7	34.6
17-Aug	8	11	1	1	1	13	15	8	6	C	C	C	C	C	C	1	1	1	1	0	0	1	0	0	3.9	15.1
18-Aug	0	0	0	0	0	3	2	11	38	A	1	1	0	0	1	1	0	4	0	1	4	3	0	1	3.1	37.5
19-Aug	4	25	23	3	4	4	10	14	A	11	8	3	1	1	1	1	1	3	1	5	2	6	11	7	6.5	25.3
20-Aug	1	14	1	6	8	23	50	A	39	24	25	6	23	1	1	2	0	1	0	6	0	1	1	5	10.3	50.2
21-Aug	3	1	1	5	21	22	A	33	31	8	3	5	14	0	1	1	0	0	0	0	0	6	0	0	6.8	33.1
22-Aug	0	0	0	1	1	A	15	C	C	C	C	3	1	6	1	1	3	5	7	8	8	8	9	8	4.4	15.0
23-Aug	8	10	10	10	A	9	8	9	4	5	14	2	1	3	11	5	2	3	7	2	1	0	1	0	5.5	14.4
24-Aug	0	0	0	A	1	1	3	28	5	4	2	1	1	1	6	0	2	1	0	0	0	0	0	0	2.5	28.2
25-Aug	0	1	A	2	1	2	4	18	21	14	5	1	1	2	1	0	1	1	1	0	0	0	0	0	3.4	20.9
26-Aug	1	A	0	1	1	0	0	0	1	22	1	4	3	1	1	1	4	3	3	0	0	2	1	1	2.2	21.7
27-Aug	A	0	1	0	1	1	2	6	7	5	4	2	1	2	3	1	2	1	1	1	1	0	A	1	2.0	6.8
28-Aug	1	0	1	1	1	11	12	20	40	8	2	2	1	1	3	4	3	2	1	1	0	1	A	1	5.1	39.8
29-Aug	0	0	0	0	1	3	13	5	4	4	4	2	2	1	2	1	2	1	1	1	0	A	0	1	2.1	12.7
30-Aug	1	1	1	0	0	1	1	1	43	2	4	4	4	3	4	3	2	3	3	2	A	3	3	1	3.9	43.4
31-Aug	4	7	6	1	1	4	4	6	6	5	13	3	1	2	1	1	1	1	0	A	0	0	0	0	2.9	12.9
1.4 2.8 1.8 1.7 2.3 6.1 9.1 12.5 12.3 6.6 5.3 3.9 2.9 1.5 1.7 1.3 1.3 1.5 1.3 1.3 1.0 1.8 2.6 1.3																									Diurnal Average	
8.5 25.3 23.4 10.2 20.8 22.8 50.2 33.1 43.4 23.9 27.1 42.9 22.6 5.6 11.0 4.8 3.9 5.2 6.7 7.6 7.7 10.1 25.4 8.3																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

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



Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

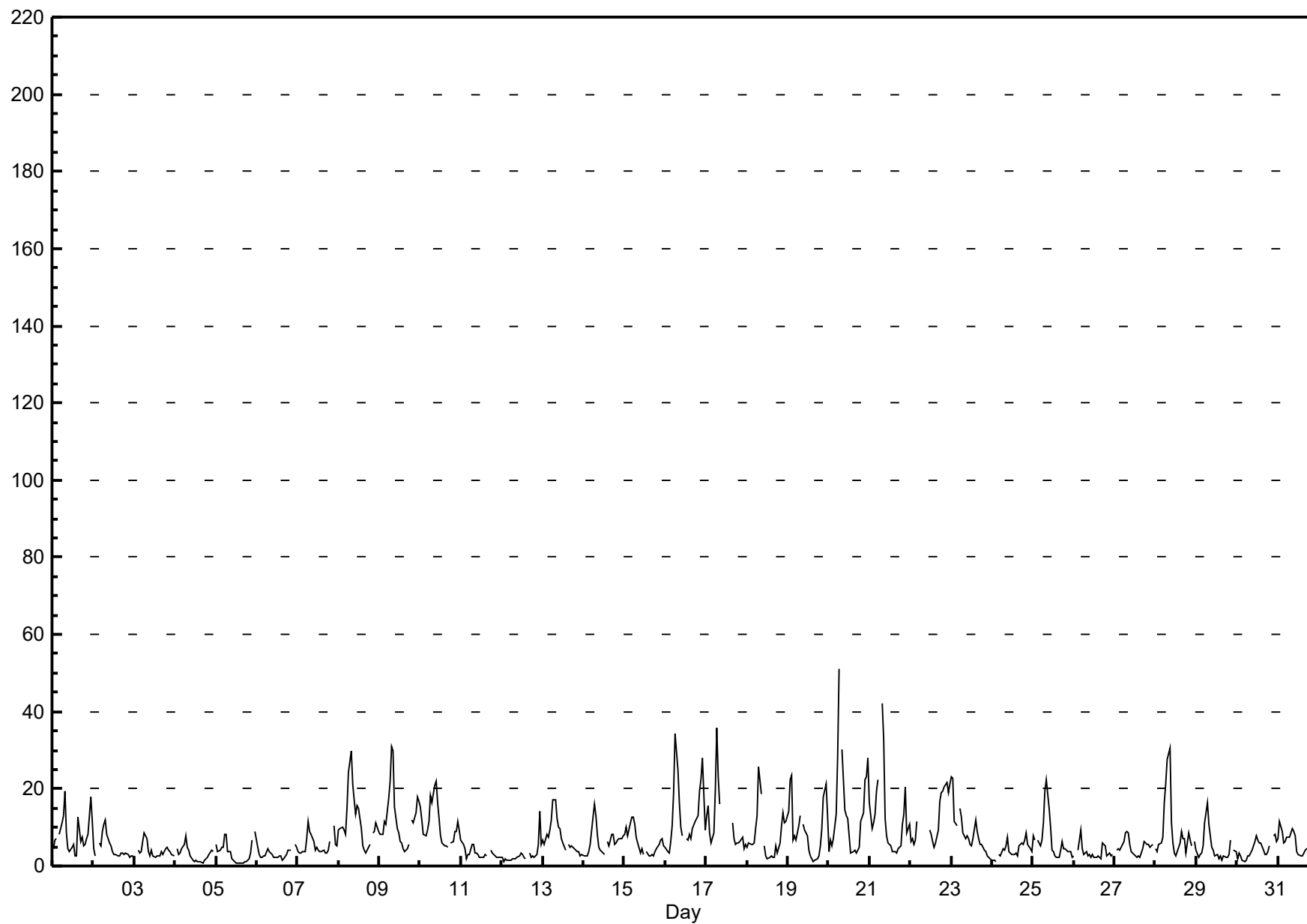
Henry Pirker - August 2018

Maximum Value: 51.2 ppb on Aug 20 07:00																				Maximum Daily Average: 13.8 ppb on Aug 20					Hours in Service: 744	
Minimum Value: 1 ppb on Aug 5 16:00																				Minimum Daily Average: 3.0 ppb on Aug 4					Hours of Data: 702	
Maximum Diurnal Average: 14.9 ppb at hour 7																				Minimum Diurnal Average: 3.7 ppb at hour 14					Hours of Missing Data: 42	
Monthly Average: 7.22 ppb																				Percentiles: P ₁ = 1.1 P ₁₀ = 2.3 Q ₁ = 3.1 Median = 5.3 Q ₃ = 8.8 P ₉₀ = 15.1 P ₉₉ = 30.5					Hours of Calibration: 42	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	4	7	7	A	8	11	13	19	8	5	4	5	6	3	3	13	6	8	5	6	7	8	18	12	8.0	19.5
2-Aug	4	3	A	6	5	9	11	12	8	6	5	4	3	3	3	3	3	3	3	4	3	2	3	3	4.7	12.1
3-Aug	2	A	4	3	4	6	9	7	4	3	4	2	2	3	3	3	4	3	4	5	4	4	3	3	3.8	8.6
4-Aug	A	4	3	3	5	5	8	5	4	3	2	1	1	1	1	1	1	1	2	2	3	4	4	A	3.0	7.9
5-Aug	6	4	4	5	5	8	8	4	4	2	2	1	1	1	1	1	1	1	1	2	4	7	A	9	3.4	8.9
6-Aug	5	3	2	2	3	3	4	4	3	3	2	2	2	3	3	1	2	3	4	4	4	A	6	5	3.2	5.6
7-Aug	4	3	3	4	4	7	11	9	8	6	4	5	4	4	4	4	3	3	4	6	A	11	6	5	5.3	11.5
8-Aug	9	10	10	9	8	15	24	30	21	17	13	16	15	10	5	4	3	4	6	A	9	9	11	9	11.6	30.0
9-Aug	8	8	8	12	11	17	22	31	30	15	10	8	6	6	5	4	5	6	A	12	11	14	18	17	12.3	30.8
10-Aug	15	12	8	8	9	11	18	16	21	22	16	12	8	6	5	5	5	A	6	7	9	9	12	9	10.9	21.8
11-Aug	7	6	4	2	3	3	6	6	3	3	3	2	2	2	3	3	A	4	3	3	2	2	2	2	3.4	6.7
12-Aug	2	1	2	1	1	1	2	2	2	2	3	3	3	2	2	A	3	2	2	2	3	6	14	6	3.0	14.3
13-Aug	7	6	8	7	9	12	17	17	12	10	10	7	6	4	A	6	5	5	4	4	4	4	3	3	7.4	17.3
14-Aug	3	3	3	4	6	13	16	13	8	5	4	3	3	A	6	5	8	8	6	6	7	7	7	8	6.6	16.2
15-Aug	8	10	8	11	13	13	11	7	6	4	4	3	A	4	3	3	3	3	4	4	5	7	7	5	6.3	12.7
16-Aug	5	4	4	6	10	19	34	25	16	10	8	A	7	7	8	7	10	12	12	13	19	22	28	9	12.9	34.1
17-Aug	13	16	8	6	9	20	36	23	16	C	C	C	C	C	C	11	7	6	6	6	6	8	5	6	11.5	35.9
18-Aug	5	6	5	6	6	10	13	26	19	A	5	3	2	2	3	2	2	5	3	6	11	14	11	11	7.6	25.7
19-Aug	14	23	23	7	8	7	11	13	A	11	9	8	4	3	2	1	1	2	3	5	10	18	21	13	9.4	23.5
20-Aug	4	7	5	7	14	28	51	A	30	14	13	12	8	3	4	4	3	4	5	12	14	22	23	28	13.8	51.2
21-Aug	16	10	11	13	19	23	A	42	33	12	8	6	5	4	4	4	3	5	5	11	14	20	9	11	12.5	42.2
22-Aug	6	7	6	7	11	A	33	C	C	C	C	9	8	6	5	6	9	17	19	19	21	22	19	21	13.2	33.0
23-Aug	23	23	12	11	A	15	13	9	7	8	7	6	5	7	12	9	7	6	5	4	4	2	2	2	8.6	23.1
24-Aug	1	1	1	A	3	3	4	4	5	8	4	3	3	3	4	2	5	6	5	7	8	5	4	4	4.1	8.4
25-Aug	8	7	A	7	5	7	11	19	22	15	10	4	4	2	2	2	4	6	4	5	4	4	4	2	6.9	22.2
26-Aug	3	A	4	7	9	4	3	4	3	3	2	3	2	2	3	2	2	6	5	3	3	3	3	3	3.6	9.3
27-Aug	A	4	4	4	5	6	8	9	9	6	4	3	2	2	3	2	4	6	6	6	6	5	5	A	5.0	9.1
28-Aug	4	4	6	6	7	16	21	28	31	11	6	3	3	4	6	9	7	7	3	9	7	5	A	6	9.1	30.5
29-Aug	4	2	3	3	5	11	16	11	8	5	4	3	3	2	3	2	3	2	2	3	7	A	4	4	4.7	16.4
30-Aug	2	3	3	1	1	2	3	3	3	4	6	8	7	6	6	4	3	3	4	5	A	8	8	6	4.3	8.1
31-Aug	7	12	9	6	6	8	7	7	10	9	8	4	3	3	3	3	4	4	4	A	5	3	2	2	5.6	11.6
6.9 7.1 6.2 6.0 7.1 10.5 14.9 13.9 12.2 7.9 6.2 5.2 4.5 3.7 3.8 4.2 4.2 5.0 4.9 6.2 7.3 8.8 9.0 7.7																									Diurnal Average	
23.1 22.9 23.5 13.5 19.4 28.5 51.2 42.2 33.0 21.8 16.5 15.5 15.0 9.7 11.8 12.5 9.6 16.7 18.9 19.2 20.6 22.3 28.1 28.1																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

Henry Pirker - August 2018



Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

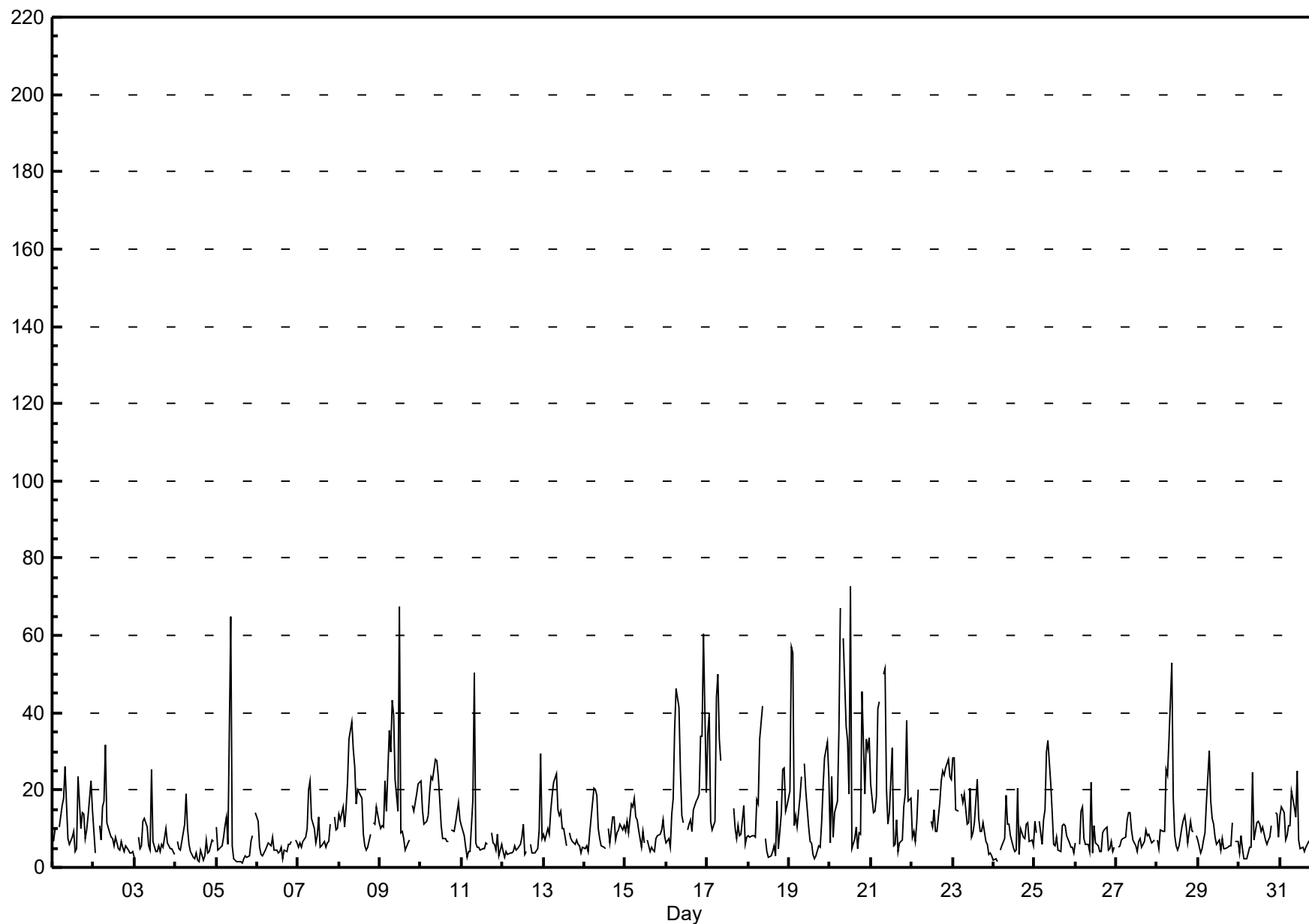
Henry Pirker - August 2018

Maximum Value: 72.9 ppb on Aug 20 13:00																				Maximum Daily Average: 26.1 ppb on Aug 20					Hours in Service: 744	
Minimum Value: 1 ppb on Aug 5 16:00																				Minimum Daily Average: 5.3 ppb on Aug 6					Hours of Data: 702	
Maximum Diurnal Average: 23.1 ppb at hour 8																				Minimum Diurnal Average: 6.6 ppb at hour 14					Hours of Missing Data: 42	
Monthly Average: 12.04 ppb																				Percentiles: P ₁ = 1.9 P ₁₀ = 4.0 Q ₁ = 5.5 Median = 8.5 Q ₃ = 14.4 P ₉₀ = 24.0 P ₉₉ = 55.5					Hours of Calibration: 42	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	7	10	10	A	11	16	18	26	17	8	6	8	9	4	5	23	10	14	14	7	10	14	22	15	12.3	26.0
2-Aug	9	4	A	11	7	16	17	32	12	9	8	8	6	8	5	5	7	5	4	6	4	4	4	4	8.3	31.9
3-Aug	3	A	8	5	6	12	13	11	5	4	26	7	4	4	6	4	6	5	10	6	5	5	5	3	7.1	25.5
4-Aug	A	7	5	5	7	11	19	10	6	4	2	2	4	2	2	5	2	3	7	4	4	7	7	A	5.6	19.1
5-Aug	11	5	5	6	8	11	13	6	65	6	2	2	1	2	1	1	2	3	3	3	7	8	A	14	8.0	64.9
6-Aug	12	5	3	3	4	5	7	6	5	8	4	5	4	4	5	2	4	4	6	6	7	A	7	6	5.3	12.1
7-Aug	5	6	5	7	8	10	20	22	13	10	6	8	13	5	6	7	5	6	7	11	A	13	10	10	9.3	22.3
8-Aug	14	12	16	11	15	22	33	38	31	26	17	20	19	18	9	5	5	5	8	A	12	11	16	11	16.2	37.7
9-Aug	10	11	11	23	14	35	30	43	40	23	15	67	9	9	7	4	6	7	A	16	15	19	22	22	19.9	67.4
10-Aug	22	15	11	12	13	20	23	23	28	28	23	18	11	7	7	7	7	A	10	9	11	14	17	12	15.1	27.9
11-Aug	11	8	5	3	4	4	17	50	6	5	5	5	5	5	6	6	A	9	6	6	4	9	3	6	8.3	50.3
12-Aug	4	2	4	3	4	4	4	5	4	5	6	8	11	3	4	A	6	4	4	4	5	10	29	8	6.1	29.5
13-Aug	8	7	10	9	14	19	22	24	15	13	14	10	10	6	A	9	7	7	6	7	6	6	4	5	10.4	24.1
14-Aug	5	5	4	8	13	20	20	19	10	8	6	5	5	A	10	6	13	13	7	9	10	11	10	11	9.9	20.4
15-Aug	9	12	9	16	16	18	13	12	10	5	9	6	A	7	4	5	5	4	7	8	8	10	12	8	9.4	18.1
16-Aug	6	8	5	14	18	36	46	41	25	13	11	A	10	11	12	9	15	17	18	19	34	34	61	19	21.0	60.5
17-Aug	35	40	12	10	12	44	50	33	28	C	C	C	C	C	C	15	10	8	11	8	9	16	6	8	19.6	50.1
18-Aug	8	8	8	8	8	17	17	33	42	A	7	4	3	3	4	6	3	17	5	14	25	26	14	16	12.9	41.8
19-Aug	20	57	56	11	14	10	18	24	A	27	20	11	7	6	3	2	3	6	5	12	21	28	33	24	18.1	56.9
20-Aug	6	24	8	14	17	36	67	A	59	37	33	19	73	5	7	10	5	9	9	46	19	33	30	34	26.1	72.9
21-Aug	22	14	15	18	41	43	A	50	51	20	11	14	31	6	6	12	4	6	7	16	19	38	17	18	20.8	51.3
22-Aug	8	9	7	11	20	A	47	C	C	C	C	12	11	15	9	9	17	22	25	24	26	28	24	23	18.2	46.6
23-Aug	28	28	15	15	A	19	17	19	11	12	20	8	9	12	23	13	9	9	12	7	6	3	4	3	13.1	28.4
24-Aug	2	2	2	A	4	6	7	19	11	11	8	5	4	4	21	3	10	8	7	11	12	7	7	6	7.7	20.6
25-Aug	12	9	A	12	6	12	15	30	33	21	14	6	5	8	5	4	11	11	11	8	6	5	5	4	11.0	32.7
26-Aug	6	A	6	15	16	7	6	6	4	22	4	11	6	6	4	4	9	10	11	4	5	7	4	5	7.7	21.8
27-Aug	A	5	6	7	8	8	12	14	14	10	7	6	4	7	8	5	7	10	8	8	8	6	7	A	7.9	14.3
28-Aug	7	5	10	9	9	25	24	33	53	18	8	5	5	6	11	12	14	10	6	12	9	9	A	8	13.5	53.0
29-Aug	7	4	5	7	9	17	30	17	13	11	8	6	7	4	8	5	5	5	6	6	11	A	7	7	8.8	30.3
30-Aug	4	8	5	2	2	4	5	5	25	7	12	12	11	9	10	7	6	7	8	11	A	14	14	8	8.5	24.6
31-Aug	14	16	14	7	8	11	11	20	16	13	25	7	5	5	4	5	6	7	6	A	8	5	3	3	9.5	24.9
10.9 12.0 9.6 9.6 11.2 17.2 21.4 23.1 22.4 13.7 11.7 10.5 10.4 6.6 7.3 7.1 7.3 8.4 8.4 10.6 11.2 13.8 13.9 11.1																									Diurnal Average	
34.6 56.9 55.5 22.5 41.2 44.0 67.2 50.3 64.9 36.7 32.7 67.4 72.9 17.8 22.8 23.5 16.6 22.2 25.1 45.5 33.9 38.1 60.5 33.6																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

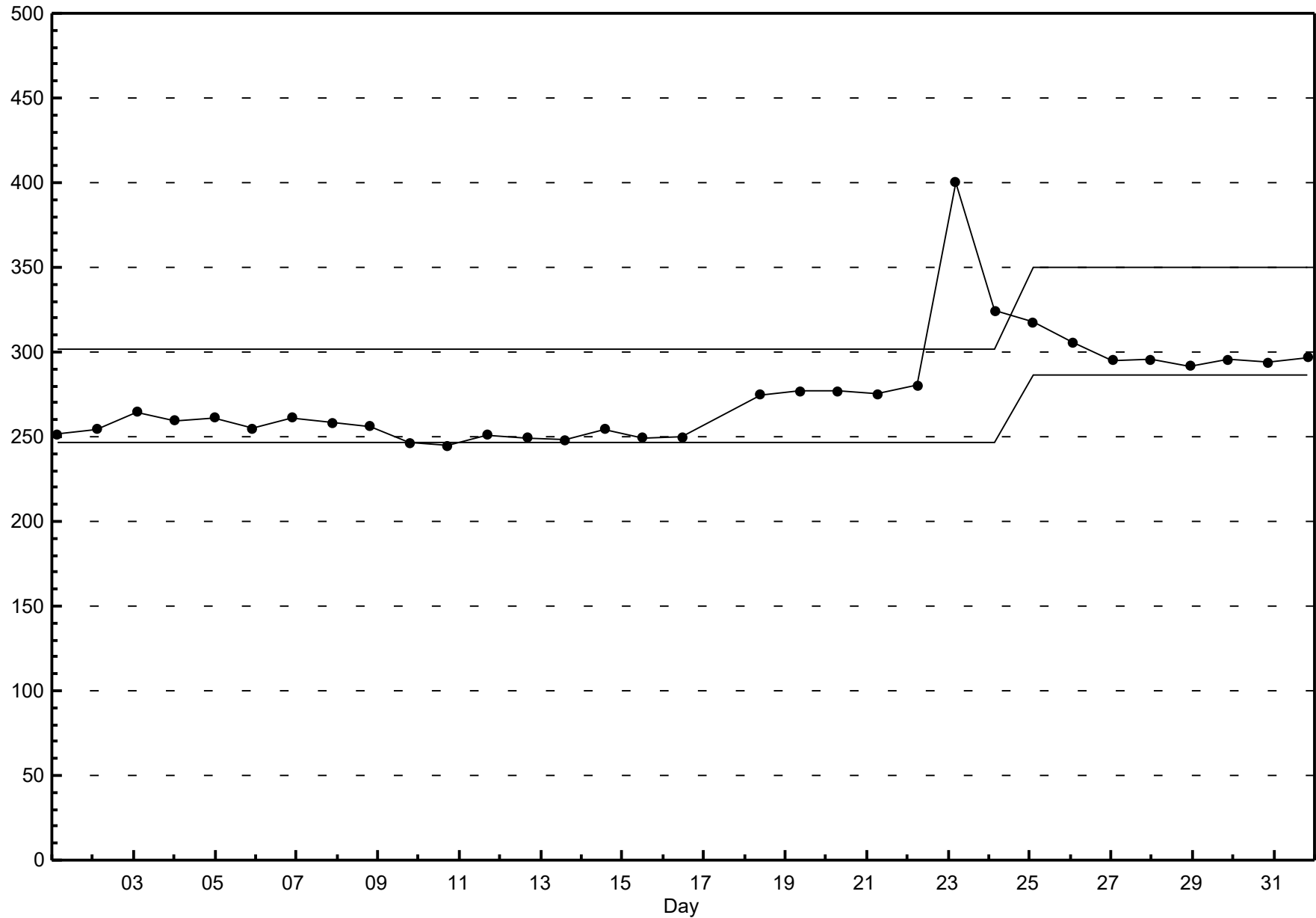
Oxides of Nitrogen (NO_x) - ppb

Henry Pirker - August 2018



Span Responses

Oxides of Nitrogen (NO_x)
Henry Pirker - August 2018



Hourly Averages

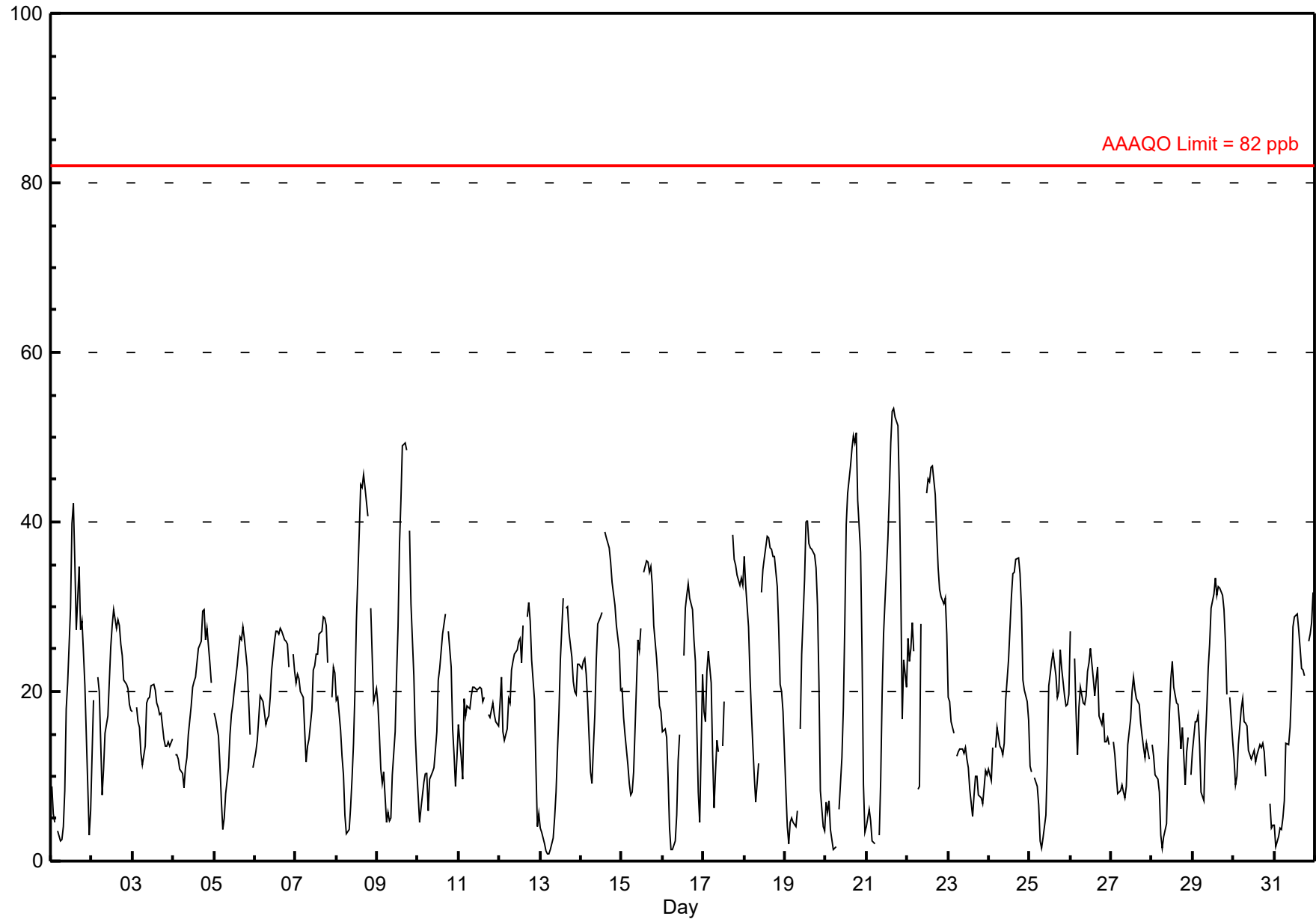
Ozone (O₃) - ppb

Henry Pirker - August 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 53.5 ppb on Aug 21 17:00 Maximum Daily Average: 31.8 ppb on Aug 22																								Hours in Service: 744 Hours of Data: 705 Hours of Missing Data: 39 Hours of Calibration: 39 Percent Operational Time: 100.0		
Minimum Value: 1 ppb on Aug 13 06:00 Maximum Diurnal Average: 30.5 ppb at hour 17 Monthly Average: 19.49 ppb												Minimum Daily Average: 11.5 ppb on Aug 23 Minimum Diurnal Average: 8.5 ppb at hour 7 Percentiles: P ₁ = 1.4 P ₁₀ = 5.8 Q ₁ = 12.0 Median = 18.6 Q ₃ = 26.0 P ₉₀ = 34.1 P ₉₉ = 49.4														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Aug	9	6	5	A	4	2	3	4	8	18	21	30	40	42	35	27	35	27	28	25	21	15	3	6	18.0	42.3
2-Aug	13	19	A	22	20	14	8	11	15	17	21	25	28	30	27	28	26	24	21	21	20	18	18	20.6	29.7	
3-Aug	18	A	18	16	16	13	11	14	19	19	19	21	21	20	19	18	17	17	14	14	14	14	13	14	16.5	20.9
4-Aug	A	12	12	12	11	10	9	11	12	15	18	21	21	22	23	25	26	29	30	26	27	23	21	A	19.0	29.6
5-Aug	17	17	15	11	7	4	5	8	11	15	17	19	20	23	25	26	26	28	26	23	19	15	A	11	16.9	27.7
6-Aug	13	14	17	20	19	19	16	17	17	19	22	26	27	27	27	27	26	26	26	23	A	24	22	21.8	27.5	
7-Aug	21	22	21	20	19	15	12	14	14	18	22	23	24	24	27	27	29	29	28	23	A	19	23	22	21.7	28.8
8-Aug	19	19	15	12	10	5	3	4	6	10	14	20	28	39	44	44	46	44	41	A	30	24	19	20	22.5	45.7
9-Aug	19	15	11	9	10	5	6	5	5	10	15	22	28	37	43	49	49	48	A	39	30	22	15	11	21.8	49.4
10-Aug	8	4	6	9	10	10	6	10	10	11	13	15	21	23	27	28	29	A	27	23	16	13	9	12	14.8	29.1
11-Aug	16	12	10	19	17	18	18	19	21	20	20	20	21	20	19	19	A	17	17	18	19	17	16	16	17.9	20.6
12-Aug	19	22	15	14	16	19	19	23	24	24	25	26	26	23	28	A	29	31	28	24	19	11	4	6	20.6	30.6
13-Aug	4	3	2	1	1	1	1	3	5	8	13	18	24	31	A	30	30	27	24	21	20	20	23	23	14.5	31.1
14-Aug	23	24	24	22	19	11	9	13	17	24	28	29	29	A	39	38	37	35	33	31	30	28	25	20	25.6	38.7
15-Aug	20	17	15	11	9	8	8	10	16	26	25	27	A	34	35	35	34	35	32	28	24	21	18	18	22.1	35.4
16-Aug	15	16	15	10	4	1	1	2	5	12	15	A	24	30	31	33	31	30	26	24	16	8	5	22	16.3	32.8
17-Aug	18	16	22	25	21	12	6	11	14	13	A	14	19	C	C	C	C	38	36	35	34	33	33	33	22.7	38.4
18-Aug	36	33	28	22	18	13	10	7	12	A	32	34	36	38	38	37	37	36	36	32	27	21	20	18	26.9	38.3
19-Aug	8	4	2	5	5	5	4	6	A	16	24	33	40	40	38	37	37	36	35	30	21	8	4	4	19.2	40.2
20-Aug	7	6	7	4	1	1	2	A	6	12	18	28	40	43	47	49	50	49	50	43	36	25	9	3	23.3	50.5
21-Aug	4	6	5	2	2	2	A	3	10	20	27	31	38	43	49	53	53	52	51	44	32	17	24	21	25.6	53.5
22-Aug	26	23	25	28	25	A	9	9	28	C	C	43	45	45	46	47	43	39	35	32	31	30	31	27	31.8	46.6
23-Aug	19	19	16	15	A	12	13	13	13	13	13	12	11	9	5	8	10	10	8	8	7	9	11	10	11.5	19.4
24-Aug	11	10	13	A	13	16	14	13	13	14	19	24	27	31	34	34	36	36	34	30	21	20	19	17	21.6	35.8
25-Aug	11	11	A	10	9	7	2	2	3	5	12	21	22	24	25	22	19	20	25	23	20	18	18	20	15.1	24.8
26-Aug	27	A	24	17	13	18	21	19	18	20	22	23	25	22	20	21	23	17	16	17	14	14	15	14	19.1	27.1
27-Aug	A	14	13	10	8	8	9	8	7	9	14	17	20	22	20	19	18	16	15	13	12	14	12	A	13.6	21.7
28-Aug	14	12	10	10	8	3	2	3	4	12	17	22	24	21	19	19	16	13	16	9	13	15	A	10	12.6	23.6
29-Aug	13	16	16	17	14	8	7	14	18	23	26	30	32	33	31	32	32	31	30	26	20	A	19	14	21.9	33.4
30-Aug	12	9	10	14	18	19	16	16	16	13	12	13	13	12	13	14	13	14	13	10	A	7	4	4	12.4	19.1
31-Aug	4	2	3	4	4	5	7	14	14	16	20	28	29	29	27	25	23	23	22	A	26	27	28	32	17.8	31.7
15.3 13.9 13.6 13.5 11.7 9.5 8.5 10.1 12.7 15.5 19.5 23.7 26.8 28.9 29.7 30.1 30.5 29.3 27.5 24.7 22.1 18.2 16.7 16.1																								Diurnal Average		
35.9 32.5 27.7 28.1 24.8 19.1 20.5 22.6 28.0 26.0 31.7 43.4 45.1 44.8 49.4 53.0 53.5 52.3 51.3 43.7 36.5 32.6 33.4 32.6																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na																										

Hourly Averages

Ozone (O₃) - ppb
Henry Pirker - August 2018



Hourly Maximums

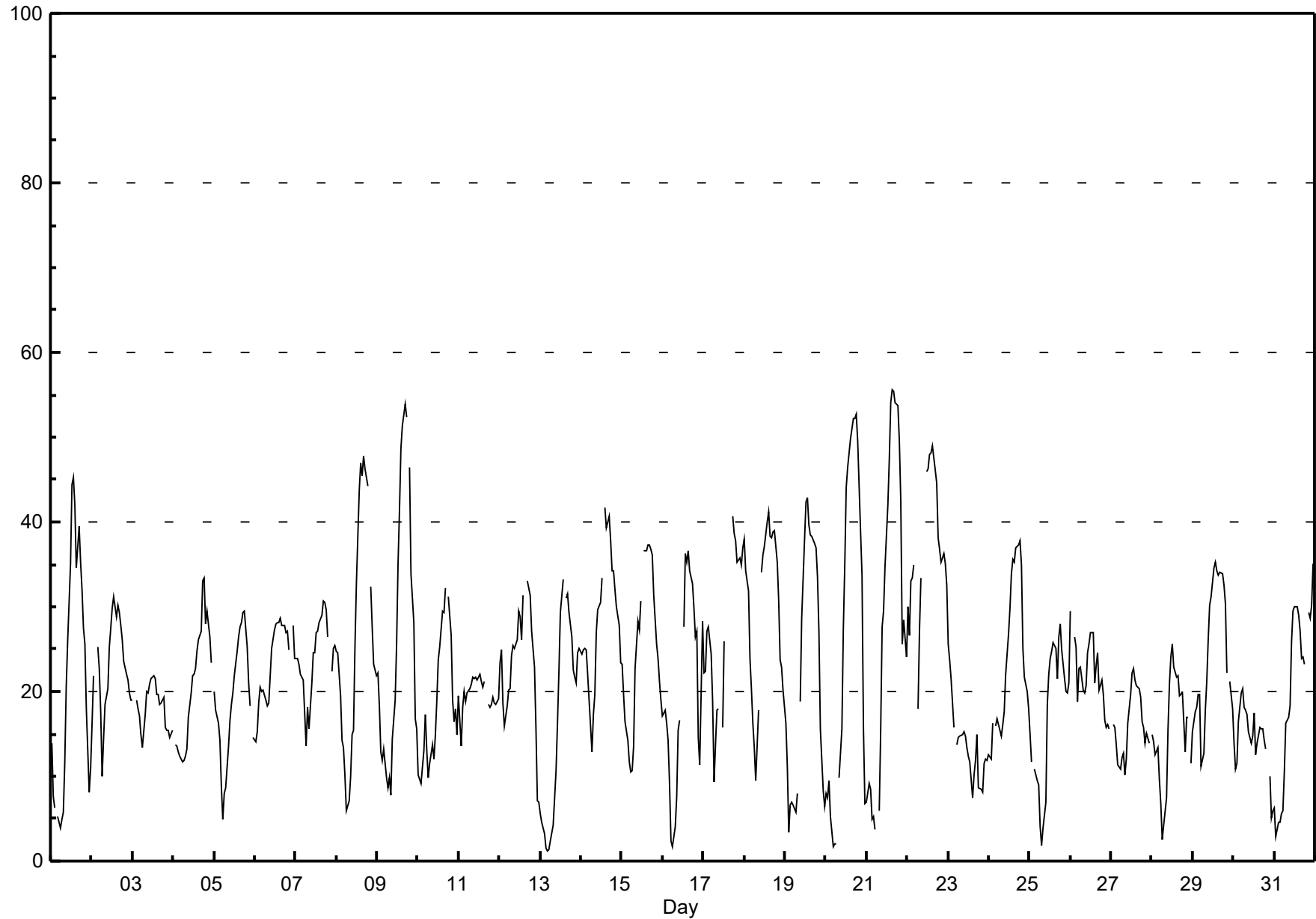
Ozone (O₃) - ppb

Henry Pirker - August 2018

Maximum Value: 55.6 ppb on Aug 21 16:00																					Maximum Daily Average: 37.1 ppb on Aug 22					Hours in Service: 744	
Minimum Value: 1 ppb on Aug 13 05:00																					Minimum Daily Average: 13.8 ppb on Aug 23					Hours of Data: 705	
Maximum Diurnal Average: 32.8 ppb at hour 17																					Minimum Diurnal Average: 11.2 ppb at hour 7					Hours of Missing Data: 39	
Monthly Average: 22.28 ppb																					Percentiles: P ₁ = 2.1 P ₁₀ = 8.9 Q ₁ = 14.8 Median = 21.1 Q ₃ = 28.6 P ₉₀ = 36.9 P ₉₉ = 52.4					Hours of Calibration: 39	
																										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	14	8	6	A	5	4	5	6	12	21	26	35	44	45	42	35	39	35	32	28	26	18	8	11	21.9	45.2	
2-Aug	16	22	A	25	23	18	10	14	18	20	25	27	30	31	29	30	29	28	26	24	22	21	20	19	23.0	31.2	
3-Aug	19	A	19	18	17	15	13	17	20	20	21	21	22	21	20	20	18	19	19	16	15	15	15	15	18.1	21.9	
4-Aug	A	14	13	13	12	12	12	12	13	17	20	22	22	23	25	26	27	33	33	28	30	26	23	A	20.8	33.4	
5-Aug	20	18	16	14	9	5	8	9	14	17	18	20	22	25	26	28	28	29	30	25	21	18	A	15	18.9	29.5	
6-Aug	14	15	19	21	20	20	19	18	19	22	25	27	28	28	28	29	28	28	27	27	25	A	28	24	23.4	28.6	
7-Aug	24	24	23	22	21	17	14	18	16	21	25	25	27	27	28	29	31	31	30	26	A	22	25	25	23.9	30.7	
8-Aug	25	25	19	14	13	10	6	7	10	15	16	25	33	44	47	45	48	46	44	A	32	28	23	22	26.0	47.8	
9-Aug	22	18	13	12	13	10	9	10	8	14	19	26	35	41	49	51	54	52	A	46	34	28	17	16	26.0	54.0	
10-Aug	10	10	9	13	17	13	10	12	14	12	15	19	24	25	29	29	32	A	31	27	19	16	18	15	18.2	32.3	
11-Aug	20	14	18	20	19	20	20	21	22	22	22	21	22	21	20	21	A	18	18	19	19	19	19	19	19.7	22.1	
12-Aug	23	25	19	16	18	20	20	24	25	25	26	30	29	26	31	A	33	32	31	27	23	16	7	7	23.3	33.1	
13-Aug	6	5	3	1	1	1	2	4	7	11	16	22	29	33	A	31	32	29	27	23	22	21	25	25	16.4	33.2	
14-Aug	24	25	25	25	22	16	13	17	20	27	30	30	33	A	42	39	41	38	34	34	32	30	28	23	28.2	41.6	
15-Aug	23	20	16	14	12	10	11	14	23	28	27	31	A	37	37	37	37	37	36	31	26	24	21	19	24.8	37.3	
16-Aug	17	18	16	14	9	2	2	4	8	15	17	A	28	36	35	37	34	33	30	26	27	15	11	28	20.1	36.6	
17-Aug	22	22	27	28	24	19	9	14	18	18	A	16	26	C	C	C	C	41	39	38	35	36	35	37	26.5	40.7	
18-Aug	38	34	32	24	20	16	13	9	18	A	34	36	37	40	41	38	38	39	39	35	31	24	23	20	29.6	41.1	
19-Aug	16	11	3	7	7	7	6	8	A	19	29	38	42	43	40	39	38	37	37	34	27	16	8	6	22.5	42.9	
20-Aug	8	8	9	5	2	2	2	A	10	16	28	35	44	46	50	51	52	52	53	50	39	34	16	7	26.8	52.6	
21-Aug	7	9	8	5	5	4	A	6	15	28	30	35	42	47	54	56	55	54	54	49	42	26	29	24	29.7	55.6	
22-Aug	30	27	33	33	35	A	18	27	33	C	C	46	46	48	48	49	46	45	38	37	35	36	35	33	37.1	49.0	
23-Aug	26	24	22	16	A	14	15	15	15	15	15	13	12	12	7	10	12	15	9	9	8	12	12	12	13.8	25.6	
24-Aug	13	12	16	A	16	17	15	15	16	18	22	27	30	34	36	35	37	37	38	35	25	22	20	18	24.0	37.7	
25-Aug	15	12	A	11	10	9	4	2	4	7	18	22	24	25	26	25	22	27	28	25	22	20	20	21	17.2	28.0	
26-Aug	30	A	26	25	19	23	23	20	20	21	25	26	27	27	21	23	25	20	21	20	17	16	16	16	21.9	29.5	
27-Aug	A	16	16	14	11	11	12	13	10	12	16	20	22	23	21	21	20	19	16	16	14	15	14	A	16.0	22.7	
28-Aug	15	14	13	13	10	7	2	4	7	15	21	24	26	23	22	22	19	20	20	13	17	17	A	11	15.4	25.6	
29-Aug	15	18	18	20	20	11	13	18	21	26	30	31	35	35	34	34	34	34	33	30	22	A	21	18	24.8	35.3	
30-Aug	14	11	11	16	20	20	18	18	17	15	14	15	18	12	14	16	16	16	14	13	A	10	5	6	14.3	20.4	
31-Aug	6	3	5	5	6	6	10	16	17	18	26	30	30	30	29	27	24	24	23	A	29	29	30	35	19.9	35.1	
18.3 16.5 16.4 16.0 14.6 12.0 11.2 13.1 15.6 18.4 22.5 26.5 29.6 31.4 32.1 32.1 32.8 32.3 30.3 27.9 25.4 21.7 19.7 18.9																								Diurnal Average			
37.9 34.2 33.1 33.4 35.0 22.7 22.9 27.1 33.4 28.4 34.1 45.9 46.3 48.0 54.0 55.6 55.4 54.1 53.7 49.5 42.4 36.3 35.1 36.9																								Diurnal Maximum			
C - Calibration																								A - Automated Daily Zero Span			

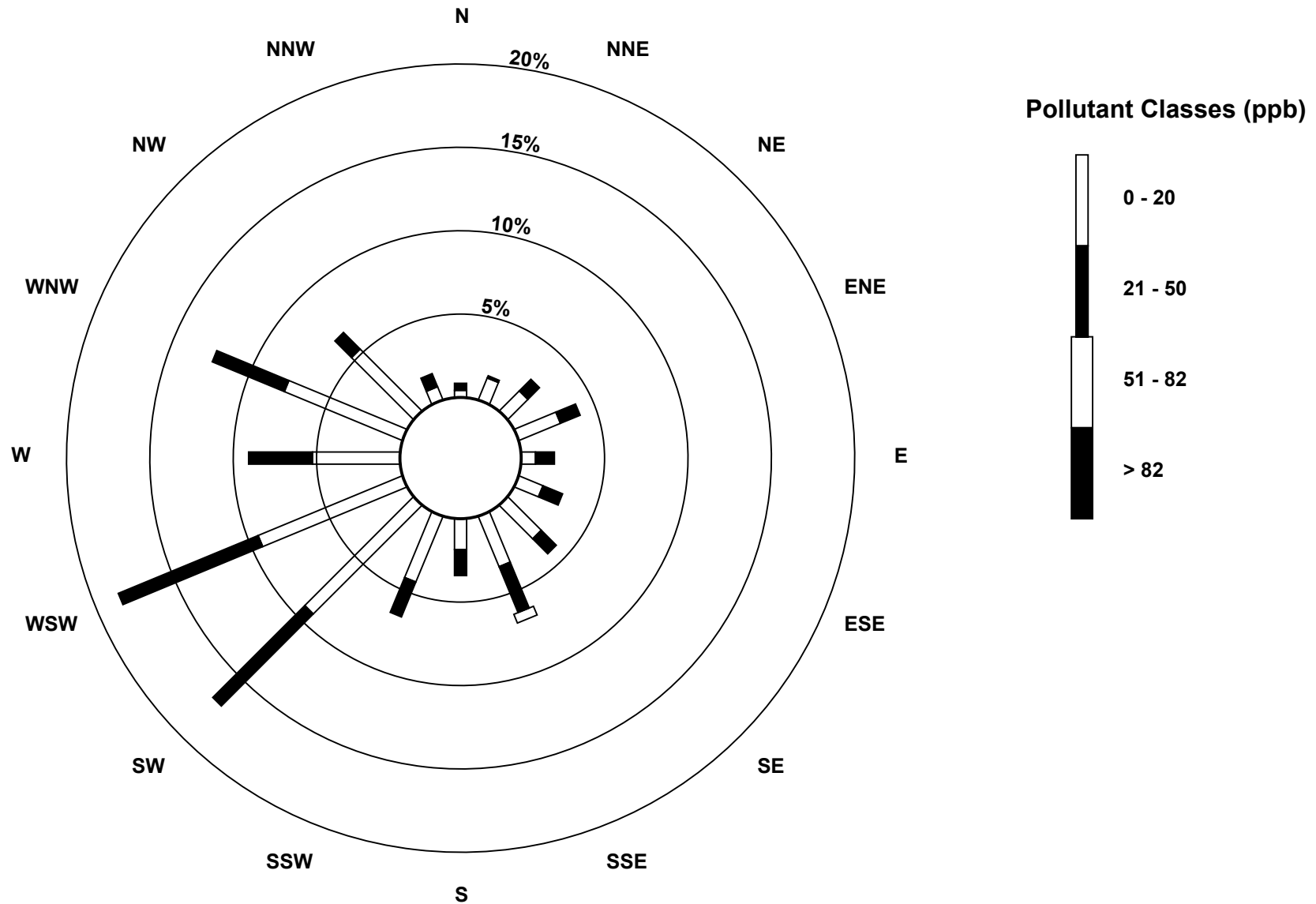
Hourly Maximums

Ozone (O₃) - ppb
Henry Pirker - August 2018



Pollutant Rose

Ozone (O_3) - ppb
Henry Pirker - August 2018



Eight Hour Running Averages

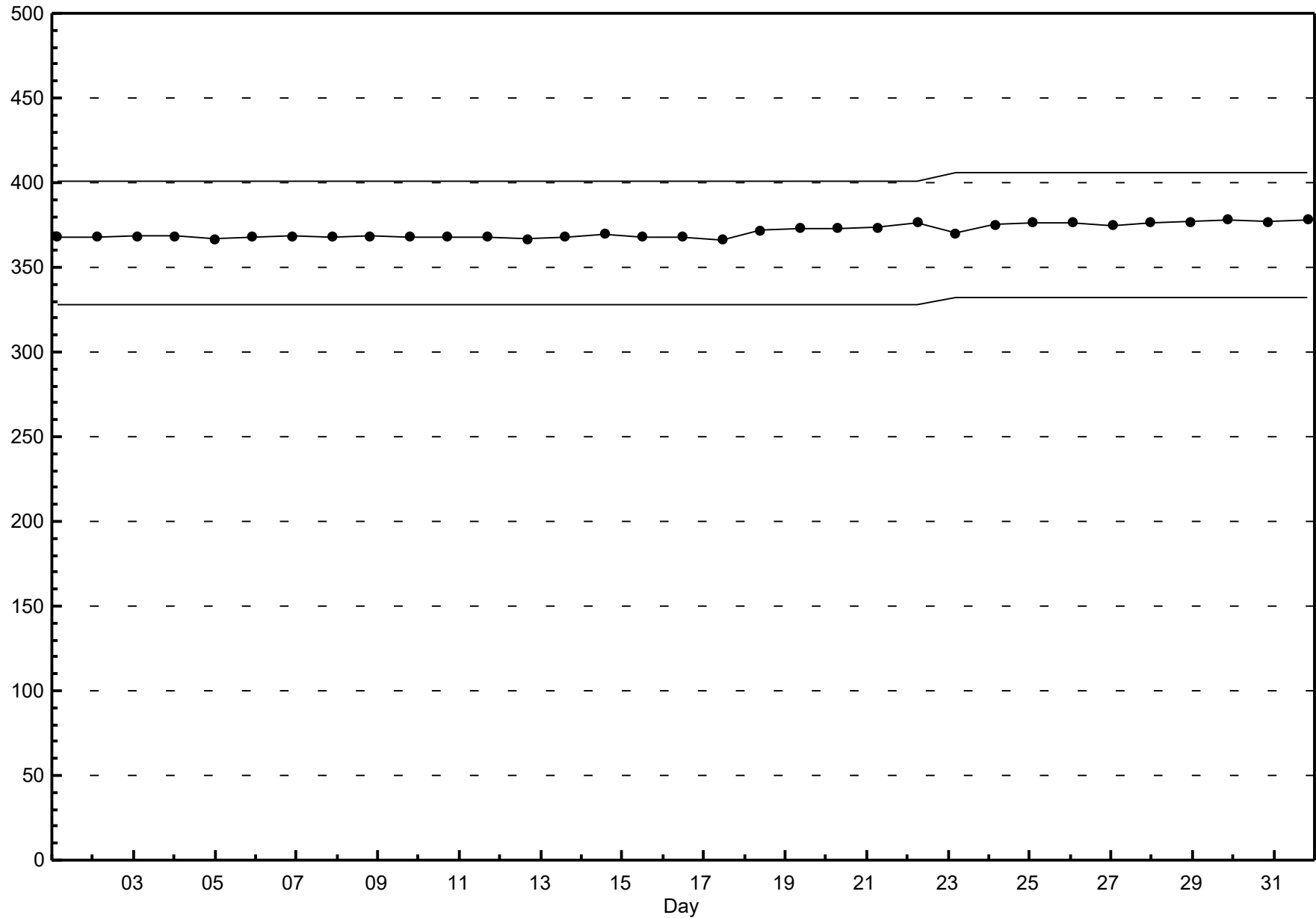
Ozone (O₃) - ppb

Henry Pirker - August 2018

Maximum Value: 48.1 ppb on Aug 21 20:00																								Hours in Service: 744	
Minimum Value: 2.0 ppb on Aug 13 08:00																								Hours of Data: 733	
																								Hours of Missing Data: 11	
Percentiles: P ₁ = 3.8 P ₁₀ = 8.9 Q ₁ = 13.3 Median = 18.4 Q ₃ = 24.6 P ₉₀ = 31.9 P ₉₉ = 44.0																								Hours of Calibration: 11	
																								Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	23	19	15	13	9	6	5	5	4	6	9	11	16	21	25	28	31	32	33	32	30	27	23	20	33.1
2-Aug	17	16	14	14	14	14	14	15	16	15	16	16	17	19	22	24	26	27	27	27	26	25	23	22	27.0
3-Aug	21	20	19	19	18	17	16	15	15	16	16	16	17	18	19	19	19	19	18	18	17	16	15	15	20.8
4-Aug	14	14	13	13	13	12	12	11	11	12	12	13	15	16	18	20	21	23	25	25	26	26	26	26	26.3
5-Aug	25	23	21	19	16	13	11	11	10	9	10	11	12	15	17	20	21	23	24	25	25	24	23	21	24.9
6-Aug	19	17	16	15	16	16	16	17	17	18	19	19	20	22	23	24	25	26	27	27	26	26	26	25	26.7
7-Aug	24	23	23	22	22	21	19	18	17	17	17	17	18	19	21	23	24	26	26	26	27	26	25	25	26.7
8-Aug	23	22	20	19	18	16	13	11	10	8	8	9	11	16	21	26	31	35	38	41	41	39	35	32	41.1
9-Aug	28	24	20	18	16	13	12	10	8	8	8	10	12	16	21	26	32	36	39	42	42	40	36	31	42.3
10-Aug	25	18	17	13	11	9	8	8	8	9	10	11	12	14	16	19	21	22	24	25	25	23	21	18	25.4
11-Aug	16	16	14	13	13	14	15	16	17	18	19	19	20	20	20	20	20	20	19	19	18	18	18	17	20.1
12-Aug	17	18	18	17	17	17	17	18	19	19	20	22	23	24	25	25	26	27	27	27	26	24	21	19	27.3
13-Aug	16	12	9	6	4	3	2	2	2	3	4	6	9	13	14	18	22	25	26	27	26	25	24	24	26.7
14-Aug	23	22	22	22	22	21	19	18	17	17	18	19	20	21	26	29	32	34	34	35	35	34	32	30	34.8
15-Aug	28	26	23	21	18	16	14	12	12	13	14	16	17	21	25	28	31	32	33	33	32	31	28	26	33.4
16-Aug	24	22	19	17	15	12	10	8	7	6	6	6	9	13	17	21	25	28	29	29	27	25	21	20	29.3
17-Aug	18	17	16	16	17	18	18	16	16	16	15	13	13	13	N	N	N	N	N	N	N	N	35	34	34.8
18-Aug	35	34	33	31	29	27	24	21	18	16	16	18	21	24	28	32	36	36	37	36	35	33	31	28	36.5
19-Aug	25	21	17	13	10	8	6	5	4	6	9	13	18	23	28	33	33	36	37	37	34	30	26	22	36.9
20-Aug	18	14	11	8	5	4	4	4	4	5	6	10	15	21	28	30	36	40	45	46	46	44	39	33	46.4
21-Aug	28	22	16	11	7	4	4	4	4	6	9	13	19	24	28	34	39	43	46	48	47	44	41	37	48.1
22-Aug	33	30	26	24	24	25	22	21	21	21	N	N	N	30	36	42	45	44	43	41	40	38	36	33	44.9
23-Aug	30	28	26	24	23	20	17	15	15	14	13	13	13	12	11	11	10	10	9	8	8	8	9	9	30.5
24-Aug	9	9	10	10	11	12	12	13	13	14	14	16	17	19	22	24	27	30	32	33	32	31	29	27	32.7
25-Aug	23	20	18	16	14	12	9	7	6	5	6	7	9	11	14	17	19	20	22	22	22	21	21	20	23.5
26-Aug	21	22	21	21	20	20	20	20	19	19	18	19	21	21	21	21	22	22	21	20	19	18	17	16	22.0
27-Aug	15	15	14	13	12	12	11	10	10	9	9	10	12	13	15	16	17	18	18	18	17	16	15	14	18.4
28-Aug	14	13	13	12	11	10	8	8	7	6	7	9	11	13	15	17	19	19	19	17	16	15	14	13	18.7
29-Aug	13	13	13	14	14	14	13	13	14	15	16	17	20	23	26	28	30	31	31	31	29	29	27	25	31.5
30-Aug	22	18	16	14	14	14	14	14	15	15	16	15	15	14	13	13	13	13	13	13	13	12	11	9	21.7
31-Aug	8	6	5	4	4	4	4	5	7	8	10	13	17	20	22	23	25	25	26	25	25	25	25	26	25.7
34.6 33.9 32.9 31.3 29.3 26.9 24.0 20.8 21.0 20.6 20.4 21.8 23.2 29.8 36.1 42.4 44.9 44.0 46.4 48.1 47.3 44.0 40.8 36.7																									
Diurnal Maximums																									
N - Not Valid																									

Span Responses

Ozone (O₃)
Henry Pirker - August 2018



Hourly Averages

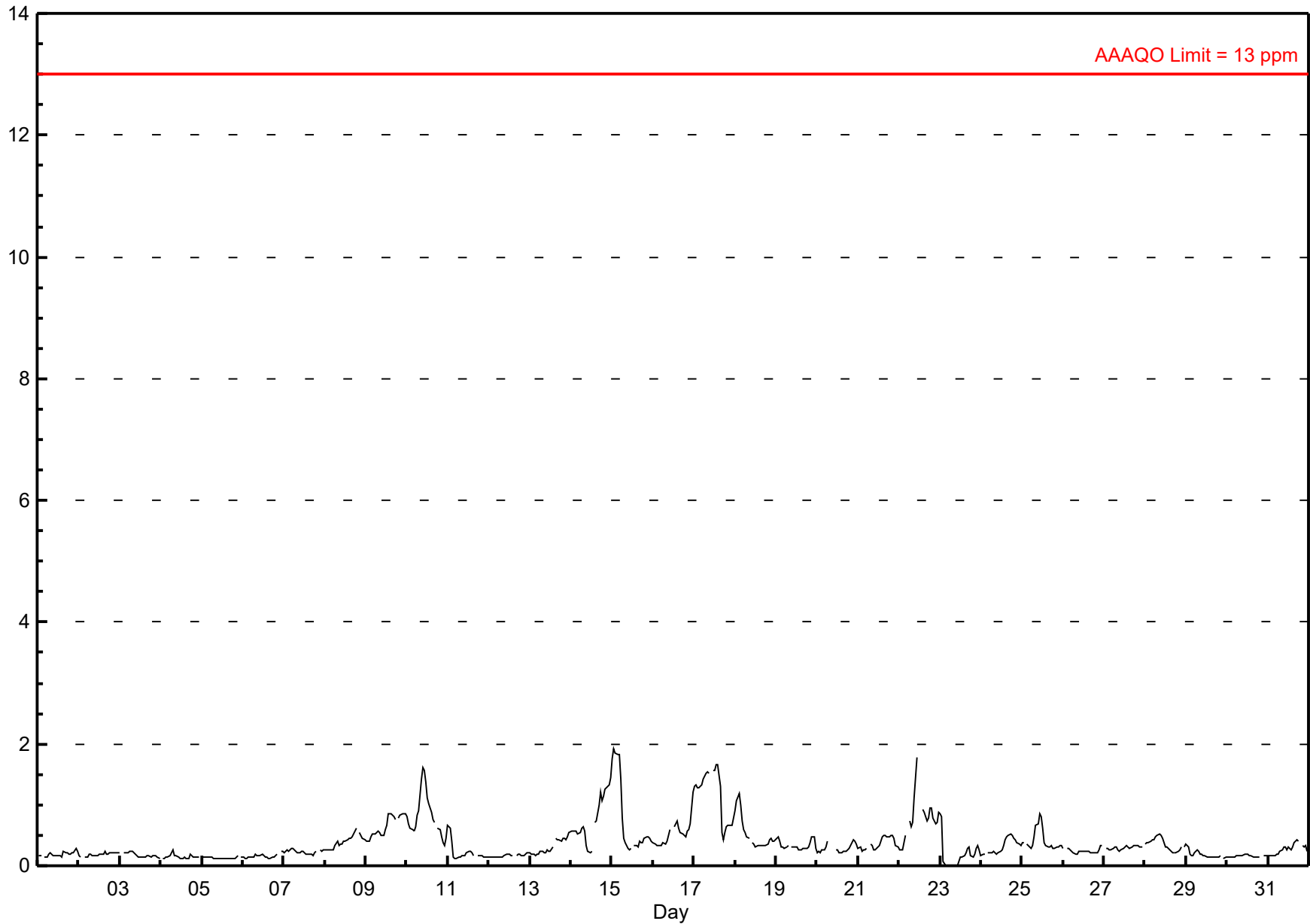
Carbon Monoxide (CO) - ppm

Henry Pirker - August 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 1.93 ppm on Aug 15 02:00 Maximum Daily Average: 1.16 ppm on Aug 17																					Hours in Service: 744 Hours of Data: 705 Hours of Missing Data: 39 Hours of Calibration: 39 Percent Operational Time: 100.0					
Minimum Value: 0.0 ppm on Aug 23 04:00 Maximum Diurnal Average: 0.43 ppm at hour 2 Monthly Average: 0.375 ppm										Minimum Daily Average: 0.13 ppm on Aug 5 Minimum Diurnal Average: 0.34 ppm at hour 6 Percentiles: P ₁ = 0.08 P ₁₀ = 0.14 Q ₁ = 0.18 Median = 0.27 Q ₃ = 0.44 P ₉₀ = 0.74 P ₉₉ = 1.66																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0.2	0.2	0.2	A	0.1	0.1	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	0.3	0.2	0.19	0.29
2-Aug	0.2	0.1	A	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	0.18	0.23
3-Aug	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.17	0.25
4-Aug	A	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	A	0.15	0.27
5-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	A	0.1	0.13	0.17
6-Aug	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	0.2	0.2	A	0.2	0.2	0.16	0.23
7-Aug	0.2	0.2	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	A	0.3	0.2	0.3	0.23	0.29
8-Aug	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.6	A	0.5	0.5	0.5	0.4	0.39	0.62
9-Aug	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.6	0.7	0.9	0.8	0.8	0.8	0.8	A	0.8	0.8	0.9	0.8	0.8	0.65	0.86
10-Aug	0.8	0.7	0.6	0.6	0.6	0.6	0.8	0.9	1.4	1.6	1.6	1.4	1.1	1.0	0.9	0.8	0.7	A	0.6	0.6	0.5	0.4	0.3	0.5	0.82	1.63
11-Aug	0.7	0.6	0.4	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	A	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.22	0.67
12-Aug	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	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.17	0.22
13-Aug	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	0.3	A	0.5	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.6	0.31	0.56
14-Aug	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.6	0.6	0.3	0.2	0.2	0.2	A	0.7	0.7	1.0	1.2	1.1	1.1	1.2	1.3	1.3	1.4	0.75	1.44
15-Aug	1.8	1.9	1.9	1.8	1.8	1.4	0.8	0.5	0.4	0.3	0.3	0.3	A	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.76	1.93
16-Aug	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.5	0.6	A	0.6	0.7	0.7	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.7	1.2	0.52	1.20
17-Aug	1.3	1.3	1.3	1.3	1.3	1.4	1.5	1.5	1.5	1.5	A	1.6	1.6	1.7	1.7	1.3	0.5	0.4	0.5	0.6	0.7	0.7	0.7	0.8	1.16	1.67
18-Aug	0.9	1.1	1.2	1.0	0.7	0.6	0.5	0.5	0.5	A	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.4	0.4	0.52	1.18
19-Aug	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.3	A	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.3	0.33	0.48
20-Aug	0.2	0.2	0.2	0.3	0.3	0.3	0.4	C	C	C	C	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.28	0.44
21-Aug	0.3	0.3	0.2	0.3	0.3	0.3	A	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.3	0.3	0.37	0.51
22-Aug	0.3	0.3	0.3	0.4	0.5	A	0.7	0.6	0.7	1.1	1.8	C	C	C	0.9	0.9	0.7	0.8	1.0	0.9	0.8	0.7	0.7	0.9	0.75	1.78
23-Aug	0.8	0.8	0.1	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.2	0.1	0.2	0.3	0.3	0.3	0.19	0.85
24-Aug	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.31	0.51
25-Aug	0.4	0.4	A	0.4	0.3	0.3	0.3	0.5	0.7	0.7	0.9	0.8	0.6	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.42	0.86
26-Aug	0.3	A	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	0.3	0.3	0.3	0.3	0.24	0.33
27-Aug	A	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	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	A	0.30	0.34
28-Aug	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	A	0.3	0.35	0.52
29-Aug	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	A	0.1	0.1	0.18	0.35
30-Aug	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	A	0.2	0.2	0.2	0.16	0.19
31-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	A	0.3	0.3	0.3	0.2	0.27	0.43
0.42 0.43 0.38 0.37 0.37 0.34 0.37 0.37 0.38 0.38 0.37 0.35 0.35 0.35 0.39 0.38 0.36 0.35 0.35 0.36 0.39 0.40 0.39 0.41																								Diurnal Average		
1.75 1.93 1.86 1.83 1.83 1.42 1.48 1.52 1.54 1.63 1.78 1.57 1.57 1.67 1.66 1.32 0.99 1.22 1.07 1.13 1.25 1.27 1.32 1.44																								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 - August 2018

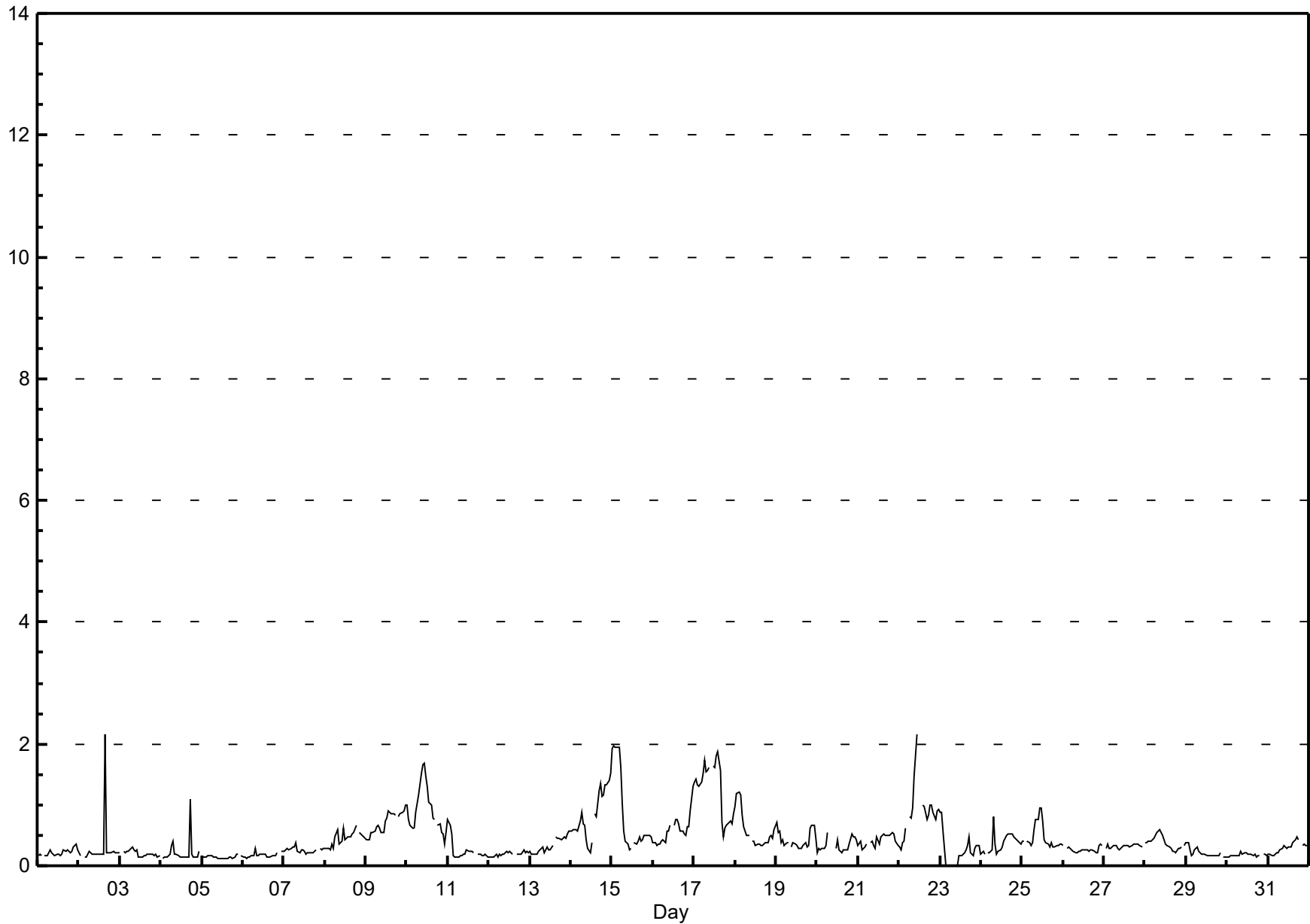


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Hourly Maximums

Carbon Monoxide (CO) - ppm

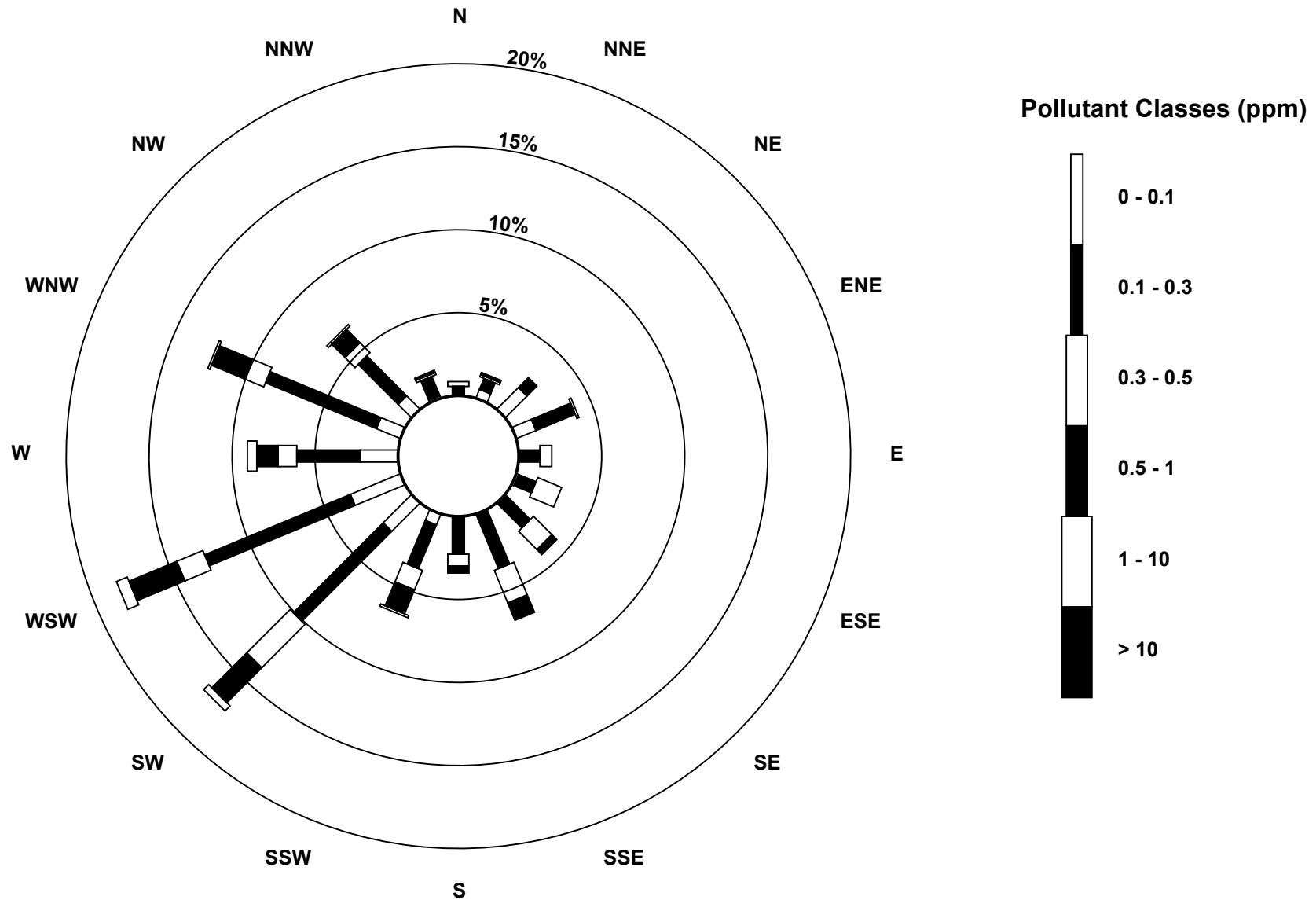
Henry Pirker - August 2018



Pollutant Rose

Carbon Monoxide (CO) - ppm

Henry Pirker - August 2018



Eight Hour Running Averages

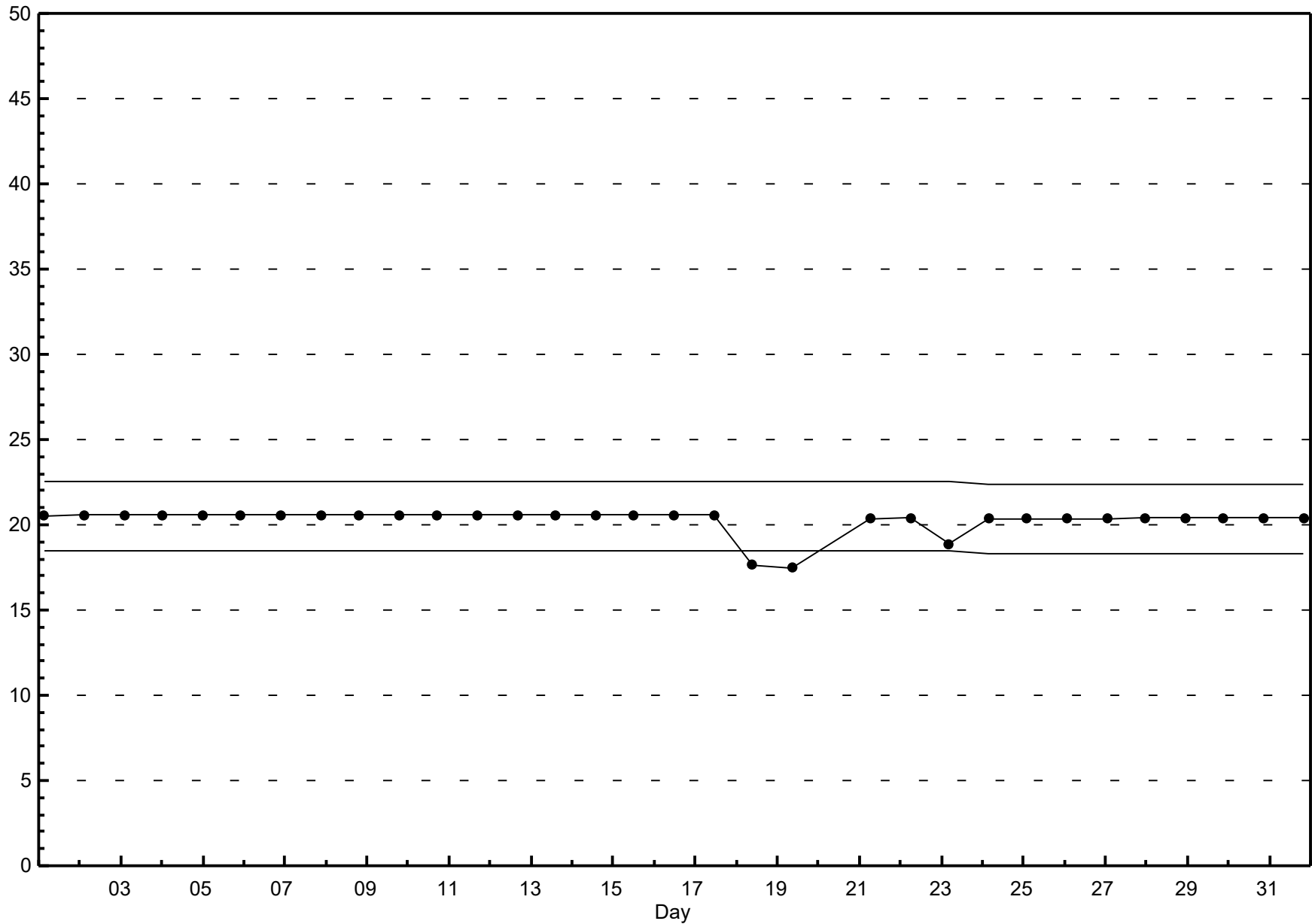
Carbon Monoxide (CO) - ppm

Henry Pirker - August 2018

Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 1.67 ppm on Aug 15 06:00																								Hours in Service: 744	
Minimum Value: 0.00 ppm on Aug 23 09:00																								Hours of Data: 730	
Percentiles: P ₁ = 0.05 P ₁₀ = 0.14 Q ₁ = 0.18 Median = 0.28 Q ₃ = 0.43 P ₉₀ = 0.76 P ₉₉ = 1.51																								Hours of Missing Data: 14	
																								Hours of Calibration: 14	
																								Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22
2-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21
3-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.22
4-Aug	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.17
5-Aug	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.15
6-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.17
7-Aug	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	0.26
8-Aug	0.2	0.2	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	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.51
9-Aug	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.82
10-Aug	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.8	0.9	1.0	1.1	1.2	1.2	1.2	1.2	1.1	1.1	0.9	0.8	0.7	0.6	0.6	0.5	1.24
11-Aug	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.51
12-Aug	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19
13-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.45
14-Aug	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.6	0.7	0.9	1.0	1.0	1.1	1.2	1.21
15-Aug	1.3	1.4	1.5	1.6	1.7	1.7	1.6	1.5	1.3	1.1	0.9	0.7	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	1.67
16-Aug	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.64
17-Aug	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.4	1.4	1.4	1.5	1.5	1.6	1.6	1.5	1.4	1.3	1.2	1.0	0.9	0.8	0.7	0.6	1.58
18-Aug	0.7	0.7	0.8	0.9	0.9	0.9	0.9	0.8	0.8	0.7	0.6	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.88
19-Aug	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	0.3	0.3	0.3	0.3	0.3	0.42
20-Aug	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	N	N	N	N	N	N	N	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.34
21-Aug	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	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.48
22-Aug	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.5	0.6	0.8	0.9	N	N	N	N	N	N	N	0.9	0.9	0.8	0.8	0.8	0.92
23-Aug	0.8	0.8	0.7	0.6	0.5	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.83
24-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.46
25-Aug	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.61
26-Aug	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.31
27-Aug	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	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.32
28-Aug	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.46
29-Aug	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	0.1	0.1	0.1	0.1	0.1	0.1	0.28
30-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.17
31-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.37
1.31 1.39 1.49 1.58 1.65 1.67 1.61 1.48 1.40 1.42 1.44 1.48 1.52 1.55 1.58 1.55 1.41 1.25 1.16 1.05 1.02 1.05 1.12 1.21																									
Diurnal Maximums																									
N - Not Valid																									
Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 5 ppm																									

Span Responses

Carbon Monoxide (CO)
Henry Pirker - August 2018



Hourly Averages

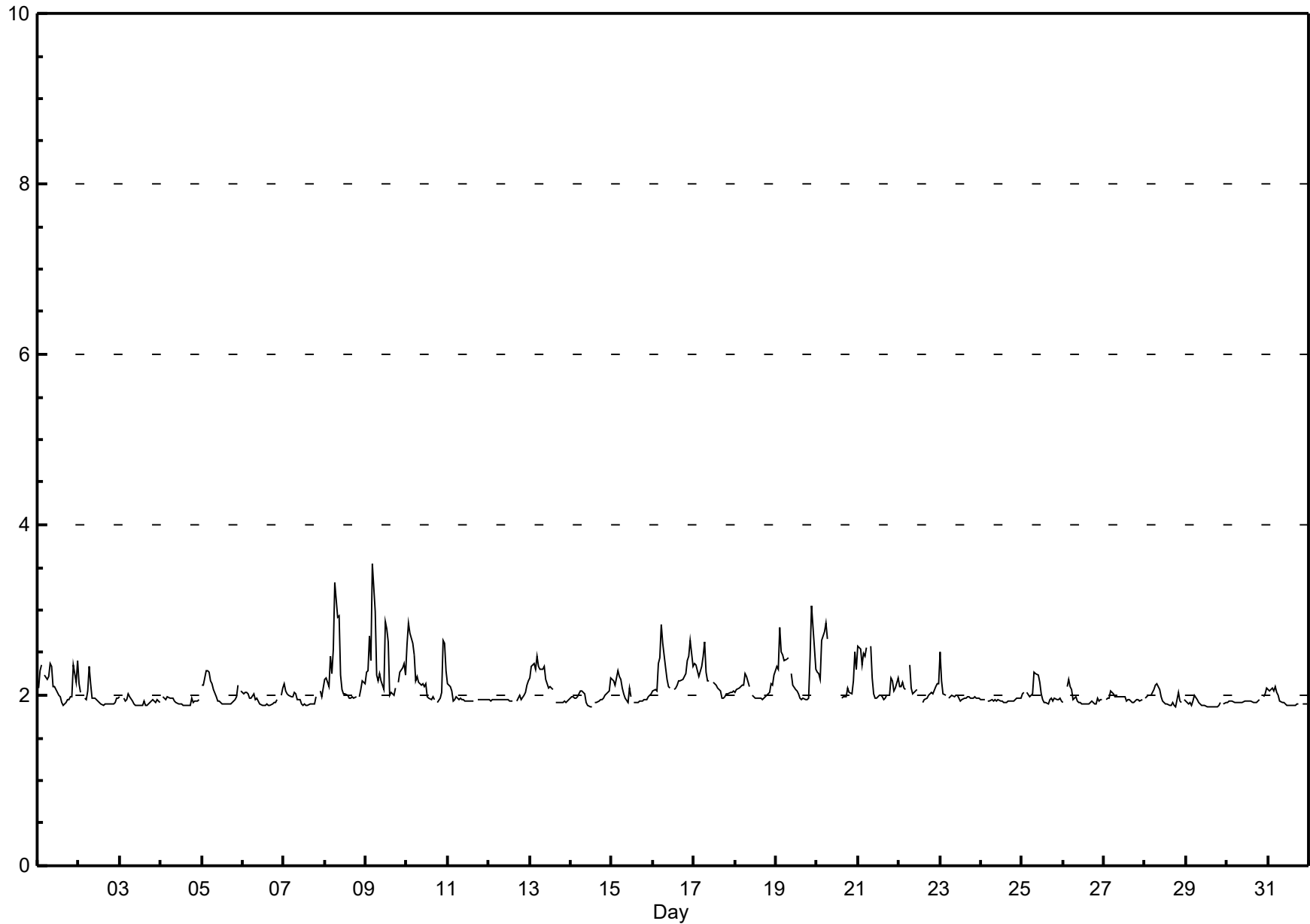
Total Hydrocarbons (THC) - ppm

Henry Pirker - August 2018

Maximum Value: 3.54 ppm on Aug 9 05:00																				Maximum Daily Average: 2.38 ppm on Aug 9										Hours in Service: 744	
Minimum Value: 1.9 ppm on Aug 29 16:00																				Minimum Daily Average: 1.90 ppm on Aug 29										Hours of Data: 703	
Maximum Diurnal Average: 2.20 ppm at hour 5																				Minimum Diurnal Average: 1.94 ppm at hour 16										Hours of Missing Data: 41	
Monthly Average: 2.055 ppm																				Percentiles: P ₁ = 1.87 P ₁₀ = 1.90 Q ₁ = 1.93 Median = 1.98 Q ₃ = 2.10 P ₉₀ = 2.31 P ₉₉ = 2.85										Hours of Calibration: 41	
																				Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Aug	2.1	2.3	2.4	A	2.2	2.2	2.2	2.4	2.3	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.4	2.2	2.4	2.12	2.40					
2-Aug	2.1	2.0	A	2.0	1.9	2.1	2.3	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	2.0	2.0	1.97	2.35					
3-Aug	2.0	A	2.0	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.92	2.02					
4-Aug	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	A	1.93	1.99					
5-Aug	2.1	2.1	2.3	2.3	2.3	2.2	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	1.9	2.0	2.1	A	2.1	2.03	2.29					
6-Aug	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	2.0	A	2.0	2.1	1.95	2.08					
7-Aug	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	2.0	2.0	2.1	1.97	2.13					
8-Aug	2.2	2.2	2.1	2.4	2.3	2.5	3.3	2.9	2.9	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.1	2.2	2.1	2.24	3.33					
9-Aug	2.3	2.3	2.7	2.4	3.5	3.0	2.2	2.2	2.2	2.2	2.1	2.9	2.8	2.6	2.0	2.0	2.0	2.1	A	2.2	2.3	2.3	2.4	2.2	2.38	3.54					
10-Aug	2.6	2.9	2.7	2.6	2.5	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	1.9	2.0	1.9	A	1.9	2.0	2.0	2.6	2.6	2.3	2.24	2.85					
11-Aug	2.1	2.1	2.1	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.0	1.9	1.9	1.9	2.0	2.0	2.0	1.97	2.14					
12-Aug	1.9	1.9	1.9	1.9	2.0	1.9	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.2	1.97	2.17					
13-Aug	2.2	2.3	2.4	2.3	2.5	2.3	2.3	2.3	2.3	2.2	2.1	2.1	2.1	2.1	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.12	2.45					
14-Aug	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.2	1.97	2.21					
15-Aug	2.2	2.2	2.1	2.3	2.2	2.2	2.1	2.0	2.0	1.9	2.1	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.03	2.28					
16-Aug	2.0	2.1	2.0	2.4	2.4	2.8	2.6	2.3	2.2	2.1	2.1	A	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.4	2.5	2.7	2.3	2.27	2.83					
17-Aug	2.4	2.4	2.3	2.2	2.3	2.5	2.6	2.3	2.2	2.2	A	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.17	2.62					
18-Aug	2.0	2.1	2.1	2.1	2.1	2.1	2.3	2.2	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.06	2.26					
19-Aug	2.3	2.3	2.8	2.5	2.5	2.4	2.4	2.4	A	2.3	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.4	3.1	2.6	2.3	2.28	3.06					
20-Aug	2.3	2.2	2.2	2.6	2.7	2.8	2.7	A	2.3	C	C	C	C	C	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.2	2.5	2.3	2.27	2.85					
21-Aug	2.6	2.5	2.4	2.5	2.5	2.6	A	2.6	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.2	2.1	2.1	2.2	2.19	2.58					
22-Aug	2.1	2.1	2.2	2.1	2.1	A	2.4	2.1	2.0	2.0	2.1	C	C	C	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.07	2.36					
23-Aug	2.5	2.2	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.01	2.50					
24-Aug	1.9	2.0	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.94	1.97					
25-Aug	2.0	2.0	A	2.0	2.0	2.0	2.0	2.3	2.3	2.2	2.2	2.0	2.0	1.9	1.9	1.9	2.0	2.0	1.9	2.0	1.9	2.0	2.0	1.9	2.01	2.27					
26-Aug	1.9	A	2.1	2.2	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	2.0	1.9	1.9	1.9	1.96	2.19					
27-Aug	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	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	1.96	2.05					
28-Aug	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	A	2.0	1.97	2.13					
29-Aug	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	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.90	2.00					
30-Aug	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	2.0	2.0	2.1	1.94	2.08					
31-Aug	2.1	2.0	2.1	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	A	1.9	1.9	1.9	1.9	1.95	2.10					
																								Diurnal Average							
																								Diurnal Maximum							
C - Calibration																								A - Automated Daily Zero Span							

Hourly Averages

Total Hydrocarbons (THC) - ppm
Henry Pirker - August 2018



Hourly Maximums

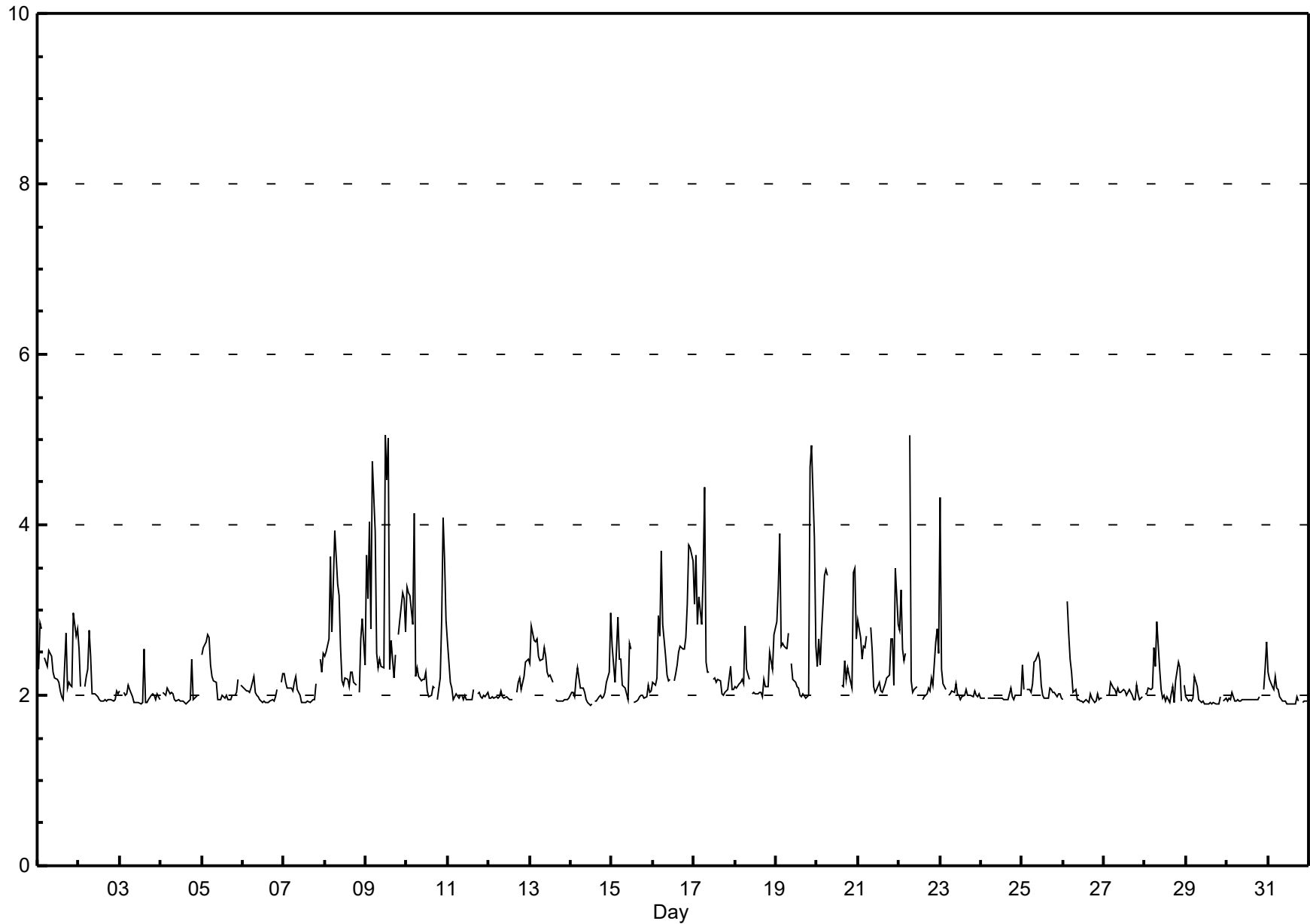
Total Hydrocarbons (THC) - ppm

Henry Pirker - August 2018

Maximum Value: 5.06 ppm on Aug 9 12:00																					Maximum Daily Average: 3.18 ppm on Aug 9					Hours in Service: 744	
Minimum Value: 1.9 ppm on Aug 14 12:00																					Minimum Daily Average: 1.95 ppm on Aug 29					Hours of Data: 703	
Maximum Diurnal Average: 2.50 ppm at hour 7																					Minimum Diurnal Average: 2.02 ppm at hour 15					Hours of Missing Data: 41	
Monthly Average: 2.247 ppm																					Percentiles: P ₁ = 1.90 P ₁₀ = 1.93 Q ₁ = 1.97 Median = 2.06 Q ₃ = 2.32 P ₉₀ = 2.77 P ₉₉ = 4.43					Hours of Calibration: 41	
																					Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	2.3	2.8	2.8	A	2.4	2.3	2.5	2.5	2.5	2.3	2.2	2.2	2.1	2.1	2.0	1.9	2.7	2.1	2.2	2.1	2.1	3.0	2.7	2.8	2.37	2.97	
2-Aug	2.5	2.1	A	2.1	2.2	2.3	2.8	2.5	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	1.9	1.9	1.9	2.0	1.9	1.9	2.1	2.0	2.09	2.77	
3-Aug	2.1	A	2.0	2.0	2.0	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.5	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	2.00	2.55		
4-Aug	A	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.4	1.9	2.0	2.0	2.0	A	1.99	2.42	
5-Aug	2.5	2.6	2.6	2.7	2.7	2.4	2.2	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	A	2.1	2.17	2.72	
6-Aug	2.1	2.1	2.1	2.1	2.0	2.1	2.2	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	A	2.1	2.3	2.02	2.25	
7-Aug	2.3	2.1	2.1	2.1	2.1	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	2.1	A	2.4	2.3	2.5	2.08	2.49	
8-Aug	2.5	2.5	2.7	3.6	2.7	3.3	3.9	3.3	3.2	2.6	2.2	2.1	2.2	2.2	2.1	2.3	2.3	2.1	2.1	A	2.0	2.7	2.9	2.3	2.60	3.93	
9-Aug	3.6	3.1	4.0	2.8	4.8	3.9	2.5	2.3	2.4	2.3	2.3	5.1	4.5	5.0	2.3	2.6	2.2	2.5	A	2.7	2.9	3.2	3.1	2.7	3.18	5.06	
10-Aug	3.3	3.2	3.2	2.8	4.1	2.2	2.3	2.2	2.2	2.2	2.2	2.3	2.1	2.0	2.0	2.1	2.1	A	2.0	2.2	2.9	4.1	3.6	2.9	2.61	4.14	
11-Aug	2.6	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.03	2.62	
12-Aug	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.1	2.2	2.1	2.2	2.4	2.4	2.4	2.06	2.42	
13-Aug	2.4	2.8	2.6	2.6	2.7	2.5	2.4	2.4	2.6	2.5	2.3	2.2	2.2	2.2	A	2.0	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.25	2.82	
14-Aug	2.0	2.0	2.0	2.2	2.3	2.1	2.1	2.1	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.3	3.0	2.07	2.97	
15-Aug	2.6	2.3	2.2	2.9	2.4	2.4	2.1	2.1	2.1	1.9	2.6	2.5	A	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.18	2.91	
16-Aug	2.1	2.1	2.2	2.9	2.7	3.7	2.8	2.5	2.2	2.2	2.2	A	2.2	2.3	2.4	2.5	2.6	2.5	2.5	2.7	3.1	3.8	3.7	3.6	2.67	3.76	
17-Aug	3.1	3.6	2.8	3.2	2.8	3.4	4.4	2.4	2.3	2.3	A	2.2	2.2	2.2	2.2	2.2	2.0	2.0	2.0	2.1	2.1	2.3	2.1	2.1	2.52	4.44	
18-Aug	2.1	2.1	2.1	2.1	2.2	2.1	2.8	2.3	2.2	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.1	2.5	2.4	2.3	2.7	2.20	2.82	
19-Aug	2.9	3.3	3.9	2.6	2.6	2.6	2.5	2.7	A	2.4	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	4.7	4.9	3.9	2.6	2.69	4.94	
20-Aug	2.3	2.7	2.4	2.8	3.4	3.5	3.4	A	2.6	C	C	C	C	C	2.1	2.1	2.4	2.2	2.3	2.2	2.1	3.4	3.5	2.7	2.67	3.49	
21-Aug	2.9	2.7	2.4	2.6	2.6	2.7	A	2.8	2.5	2.1	2.0	2.1	2.2	2.1	2.0	2.1	2.1	2.2	2.2	2.7	2.7	2.1	3.5	2.8	2.44	3.50	
22-Aug	2.8	3.2	2.5	2.4	2.5	A	5.0	2.2	2.0	2.1	2.1	C	C	C	1.9	2.0	2.0	2.1	2.0	2.2	2.1	2.6	2.8	2.5	2.46	5.05	
23-Aug	4.3	2.3	2.1	2.1	A	2.0	2.0	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.14	4.32	
24-Aug	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.97	2.08	
25-Aug	2.3	2.1	A	2.1	2.1	2.0	2.1	2.4	2.4	2.5	2.4	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.11	2.48	
26-Aug	1.9	A	3.1	2.7	2.4	2.3	2.0	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.08	3.11	
27-Aug	A	2.0	2.0	2.0	2.2	2.1	2.1	2.0	2.1	2.0	2.0	2.1	2.1	2.0	2.0	2.1	2.0	2.0	1.9	2.1	2.0	2.0	2.0	A	2.03	2.16	
28-Aug	2.0	2.0	2.1	2.1	2.1	2.6	2.3	2.9	2.3	2.1	2.0	2.0	1.9	2.0	1.9	2.0	2.1	1.9	2.2	2.4	2.3	1.9	A	2.1	2.14	2.86	
29-Aug	2.0	1.9	1.9	1.9	2.0	2.2	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	1.9	2.0	1.95	2.22	
30-Aug	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	A	2.1	2.3	2.6	2.00	2.63	
31-Aug	2.3	2.2	2.1	2.1	2.2	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	A	1.9	1.9	1.9	1.9	1.99	2.27	
																									Diurnal Average		
																									Diurnal Maximum		
C - Calibration																									A - Automated Daily Zero Span		

Hourly Maximums

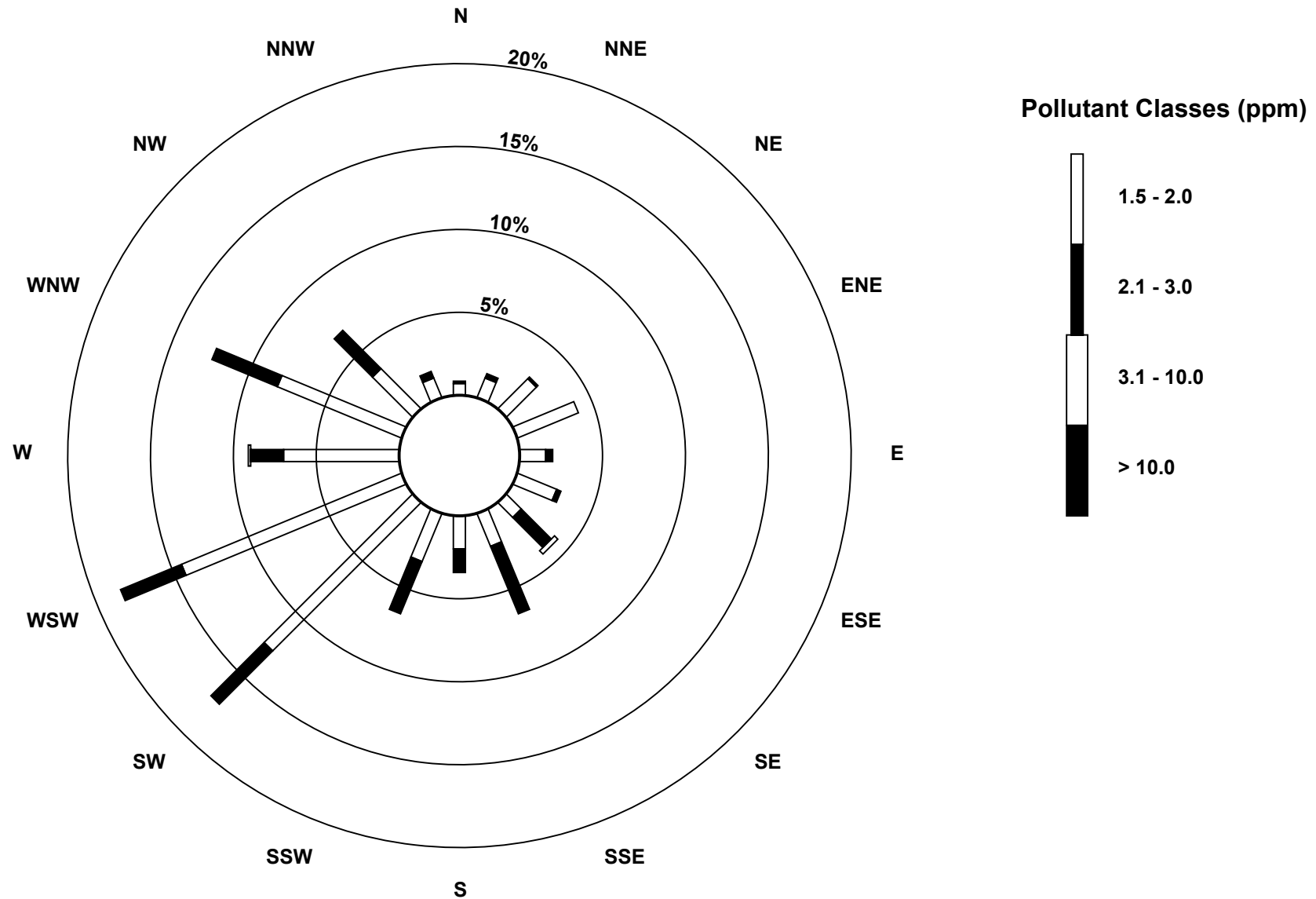
Total Hydrocarbons (THC) - ppm
Henry Pirker - August 2018



Pollutant Rose

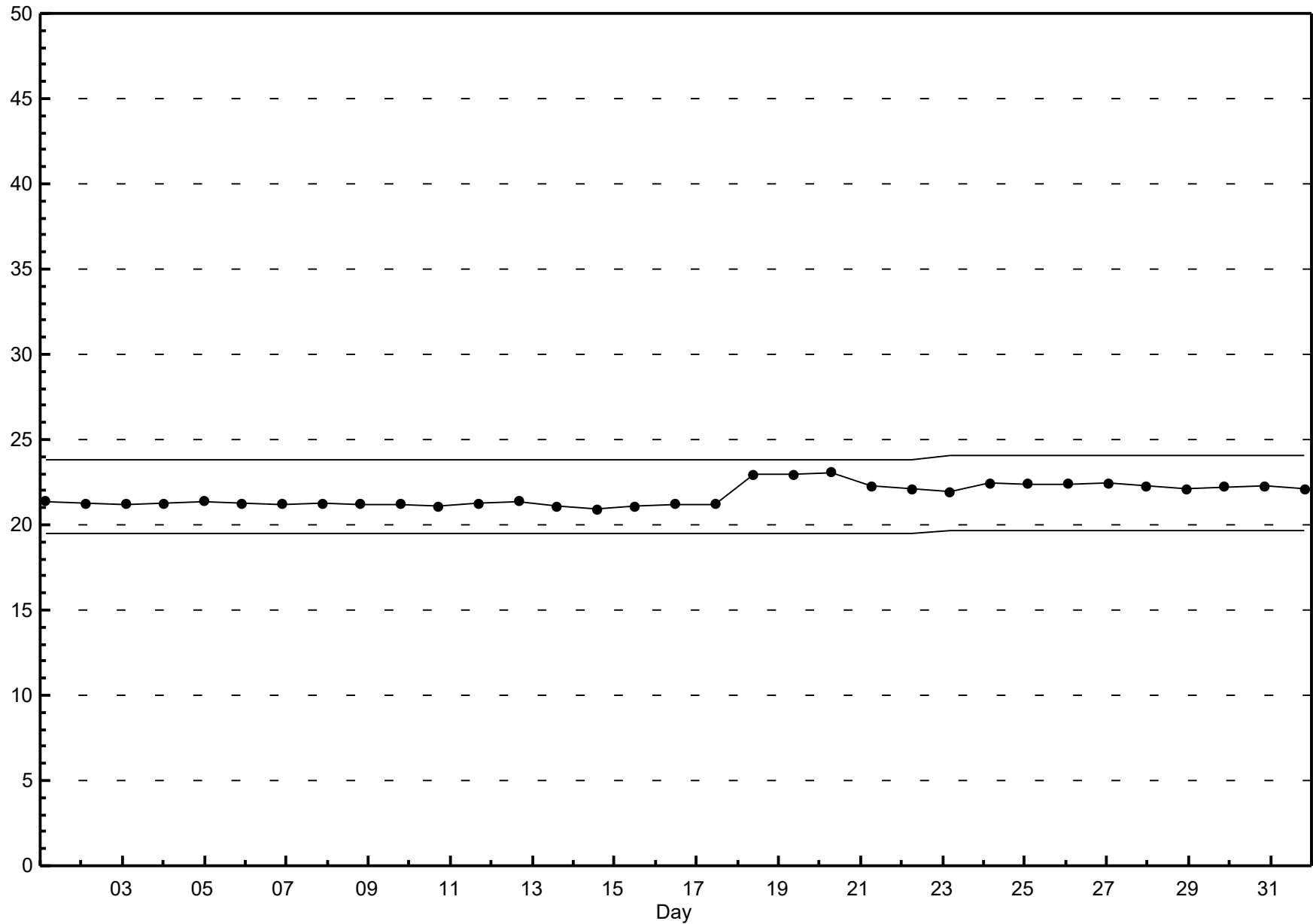
Total Hydrocarbons (THC) - ppm

Henry Pirker - August 2018



Span Responses

Total Hydrocarbons (THC)
Henry Pirker - August 2018



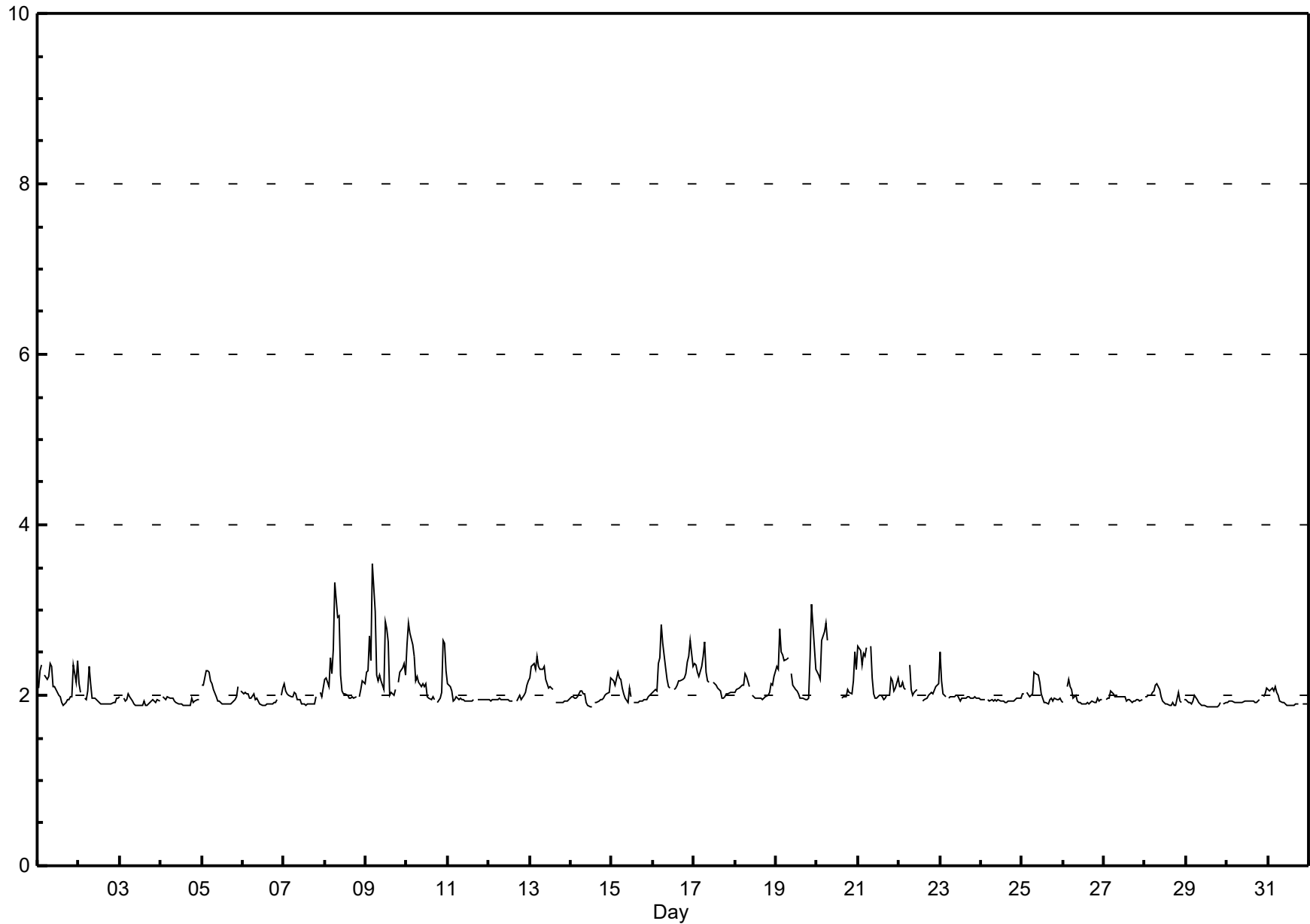
Hourly Averages

Methane (CH₄) - ppm
Henry Pirker - August 2018

Maximum Value: 3.54 ppm on Aug 9 05:00																				Maximum Daily Average: 2.38 ppm on Aug 9					Hours in Service: 744	
Minimum Value: 1.9 ppm on Aug 29 16:00																				Minimum Daily Average: 1.90 ppm on Aug 29					Hours of Data: 703	
Maximum Diurnal Average: 2.19 ppm at hour 5																				Minimum Diurnal Average: 1.94 ppm at hour 16					Hours of Missing Data: 41	
Monthly Average: 2.055 ppm																				Percentiles: P ₁ = 1.87 P ₁₀ = 1.90 Q ₁ = 1.93 Median = 1.98 Q ₃ = 2.10 P ₉₀ = 2.31 P ₉₉ = 2.85					Hours of Calibration: 41	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	2.1	2.3	2.4	A	2.2	2.2	2.2	2.4	2.3	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.4	2.2	2.4	2.12	2.40
2-Aug	2.1	2.0	A	2.0	1.9	2.1	2.3	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	1.9	1.9	2.0	2.0	1.97	2.35
3-Aug	2.0	A	2.0	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	1.9	1.92	2.02
4-Aug	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	A	1.93	1.99
5-Aug	2.1	2.1	2.3	2.3	2.3	2.2	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	1.9	2.0	2.1	A	2.1	2.03	2.29
6-Aug	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	2.0	A	2.0	2.1	1.95	2.08
7-Aug	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	2.0	2.0	2.1	1.97	2.13
8-Aug	2.2	2.2	2.1	2.4	2.3	2.5	3.3	2.9	2.9	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.1	2.2	2.1	2.24	3.33
9-Aug	2.3	2.3	2.7	2.4	3.5	3.0	2.2	2.2	2.2	2.2	2.1	2.9	2.8	2.6	2.0	2.0	2.0	2.1	A	2.1	2.3	2.3	2.4	2.2	2.38	3.54
10-Aug	2.6	2.9	2.7	2.6	2.5	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	1.9	2.0	1.9	A	1.9	2.0	2.0	2.6	2.6	2.3	2.24	2.85
11-Aug	2.1	2.1	2.1	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.0	1.9	1.9	1.9	2.0	2.0	2.0	1.97	2.14
12-Aug	1.9	1.9	1.9	1.9	2.0	1.9	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.2	1.97	2.17
13-Aug	2.2	2.3	2.4	2.3	2.5	2.3	2.3	2.3	2.3	2.2	2.1	2.1	2.1	2.1	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.12	2.45
14-Aug	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.2	1.97	2.21
15-Aug	2.2	2.2	2.1	2.3	2.2	2.2	2.1	2.0	2.0	1.9	2.1	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.03	2.28
16-Aug	2.0	2.1	2.0	2.4	2.4	2.8	2.6	2.3	2.2	2.1	2.1	A	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.4	2.5	2.7	2.3	2.27	2.83
17-Aug	2.4	2.4	2.3	2.2	2.3	2.5	2.6	2.3	2.2	2.2	A	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.17	2.62
18-Aug	2.0	2.1	2.1	2.1	2.1	2.1	2.3	2.2	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.06	2.26
19-Aug	2.3	2.3	2.8	2.5	2.5	2.4	2.4	2.4	A	2.3	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.4	3.1	2.6	2.3	2.28	3.06
20-Aug	2.3	2.2	2.2	2.6	2.7	2.8	2.7	A	2.3	C	C	C	C	C	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.2	2.5	2.3	2.27	2.85
21-Aug	2.6	2.5	2.4	2.5	2.5	2.6	A	2.6	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.2	2.0	2.1	2.2	2.19	2.58
22-Aug	2.1	2.1	2.2	2.1	2.1	A	2.4	2.1	2.0	2.0	2.1	C	C	C	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.07	2.36
23-Aug	2.5	2.2	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.01	2.50
24-Aug	2.0	2.0	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.94	1.97
25-Aug	2.0	2.0	A	2.0	2.0	2.0	2.0	2.3	2.3	2.2	2.2	2.0	2.0	1.9	1.9	1.9	2.0	2.0	1.9	2.0	2.0	2.0	2.0	1.9	2.01	2.26
26-Aug	1.9	A	2.1	2.2	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	2.0	1.9	1.9	1.9	2.0	1.96	2.19
27-Aug	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	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	1.96	2.05
28-Aug	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	A	2.0	1.97	2.13
29-Aug	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	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.90	2.00
30-Aug	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	2.0	2.0	2.1	1.94	2.08
31-Aug	2.1	2.0	2.1	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	A	1.9	1.9	1.9	1.9	1.95	2.09
2.14 2.14 2.15 2.16 2.19 2.19 2.19 2.13 2.08 2.02 1.99 1.99 1.98 1.97 1.94 1.94 1.94 1.95 1.95 1.98 2.02 2.10 2.10 2.09																								Diurnal Average		
2.59 2.85 2.79 2.64 3.54 2.98 3.33 2.91 2.93 2.26 2.16 2.86 2.77 2.62 2.12 2.18 2.17 2.19 2.21 2.26 2.44 3.06 2.65 2.40																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

Hourly Averages

Methane (CH₄) - ppm
Henry Pirker - August 2018



Hourly Maximums

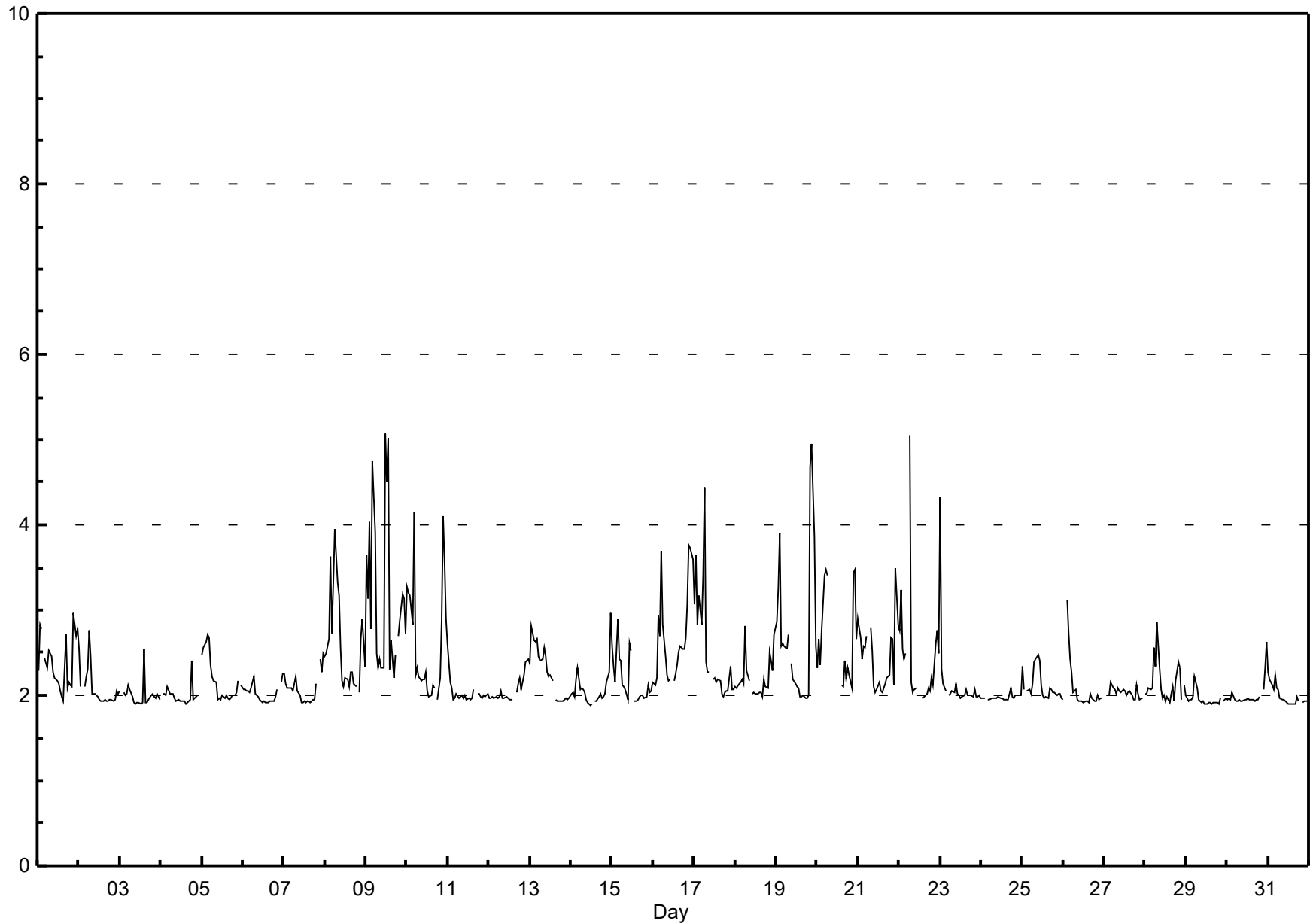
Methane (CH₄) - ppm

Henry Pirker - August 2018

Maximum Value: 5.07 ppm on Aug 9 12:00																				Maximum Daily Average: 3.17 ppm on Aug 9										Hours in Service: 744	
Minimum Value: 1.9 ppm on Aug 14 12:00																				Minimum Daily Average: 1.95 ppm on Aug 29										Hours of Data: 703	
Maximum Diurnal Average: 2.50 ppm at hour 7																				Minimum Diurnal Average: 2.02 ppm at hour 15										Hours of Missing Data: 41	
Monthly Average: 2.247 ppm																				Percentiles: P ₁ = 1.90 P ₁₀ = 1.93 Q ₁ = 1.97 Median = 2.06 Q ₃ = 2.33 P ₉₀ = 2.77 P ₉₉ = 4.44										Hours of Calibration: 41	
																				Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Aug	2.3	2.8	2.8	A	2.4	2.3	2.5	2.5	2.5	2.3	2.2	2.2	2.1	2.1	2.0	1.9	2.7	2.1	2.2	2.1	2.1	3.0	2.7	2.8	2.37	2.97					
2-Aug	2.5	2.1	A	2.1	2.2	2.3	2.8	2.5	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	1.9	1.9	1.9	2.0	1.9	1.9	2.0	2.0	2.09	2.77					
3-Aug	2.0	A	2.0	2.0	2.0	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.5	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	2.00	2.55						
4-Aug	A	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.4	1.9	2.0	2.0	2.0	A	1.99	2.41					
5-Aug	2.5	2.6	2.6	2.7	2.7	2.4	2.2	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	A	2.1	2.17	2.71					
6-Aug	2.1	2.1	2.1	2.1	2.0	2.1	2.2	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	A	2.1	2.3	2.02	2.25					
7-Aug	2.3	2.1	2.1	2.1	2.1	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	2.0	2.1	A	2.4	2.3	2.5	2.08	2.49					
8-Aug	2.5	2.5	2.7	3.6	2.7	3.3	3.9	3.3	3.2	2.6	2.2	2.1	2.2	2.2	2.1	2.3	2.3	2.1	2.1	A	2.0	2.7	2.9	2.3	2.60	3.94					
9-Aug	3.6	3.1	4.0	2.8	4.8	3.9	2.5	2.3	2.4	2.3	2.3	5.1	4.5	5.0	2.3	2.6	2.2	2.5	A	2.7	2.9	3.2	3.1	2.7	3.17	5.07					
10-Aug	3.3	3.2	3.2	2.8	4.1	2.2	2.3	2.2	2.2	2.2	2.2	2.3	2.1	2.0	2.0	2.1	2.1	A	2.0	2.2	2.9	4.1	3.6	2.9	2.61	4.15					
11-Aug	2.6	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	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.02	2.62					
12-Aug	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.1	2.2	2.1	2.2	2.4	2.4	2.4	2.06	2.42					
13-Aug	2.4	2.8	2.6	2.6	2.7	2.5	2.4	2.4	2.6	2.5	2.3	2.2	2.2	2.2	A	2.0	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.25	2.82					
14-Aug	2.0	2.0	2.0	2.2	2.3	2.1	2.1	2.1	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.2	2.3	3.0	2.07	2.97					
15-Aug	2.6	2.3	2.2	2.9	2.4	2.4	2.1	2.1	2.1	1.9	2.6	2.5	A	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.18	2.91					
16-Aug	2.1	2.1	2.2	2.9	2.7	3.7	2.8	2.5	2.2	2.2	2.2	A	2.2	2.3	2.4	2.5	2.6	2.5	2.5	2.7	3.1	3.8	3.7	3.6	2.67	3.76					
17-Aug	3.1	3.6	2.8	3.2	2.8	3.4	4.4	2.4	2.3	2.3	A	2.2	2.2	2.2	2.2	2.2	2.0	2.0	2.0	2.1	2.1	2.3	2.1	2.1	2.51	4.44					
18-Aug	2.1	2.1	2.1	2.1	2.2	2.1	2.8	2.3	2.2	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.1	2.5	2.4	2.3	2.7	2.19	2.82					
19-Aug	2.9	3.3	3.9	2.6	2.6	2.6	2.5	2.7	A	2.4	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	4.7	4.9	3.9	2.6	2.69	4.95					
20-Aug	2.3	2.7	2.4	2.8	3.4	3.5	3.4	A	2.6	C	C	C	C	C	2.1	2.1	2.4	2.2	2.3	2.2	2.1	3.4	3.5	2.7	2.67	3.48					
21-Aug	2.9	2.7	2.4	2.6	2.6	2.7	A	2.8	2.5	2.1	2.0	2.1	2.2	2.0	2.0	2.1	2.1	2.2	2.2	2.7	2.7	2.1	3.5	2.8	2.44	3.49					
22-Aug	2.8	3.2	2.5	2.4	2.5	A	5.1	2.2	2.0	2.1	2.1	C	C	C	2.0	2.0	2.0	2.1	2.0	2.2	2.1	2.6	2.8	2.5	2.46	5.06					
23-Aug	4.3	2.3	2.1	2.1	A	2.0	2.0	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.13	4.32					
24-Aug	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.97	2.08					
25-Aug	2.3	2.1	A	2.1	2.1	2.0	2.1	2.4	2.4	2.5	2.4	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.11	2.48					
26-Aug	1.9	A	3.1	2.7	2.4	2.3	2.0	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.08	3.11					
27-Aug	A	2.0	2.0	2.0	2.2	2.1	2.1	2.0	2.1	2.0	2.0	2.1	2.1	2.0	2.0	2.1	2.0	2.0	1.9	2.1	2.0	2.0	2.0	A	2.03	2.16					
28-Aug	2.0	2.0	2.1	2.1	2.1	2.6	2.3	2.9	2.3	2.1	2.0	2.0	1.9	2.0	1.9	2.0	2.1	1.9	2.2	2.4	2.3	1.9	A	2.1	2.14	2.87					
29-Aug	2.0	1.9	1.9	1.9	2.0	2.2	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	1.9	2.0	1.95	2.23					
30-Aug	1.9	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	A	2.1	2.3	2.6	2.00	2.63					
31-Aug	2.3	2.2	2.1	2.1	2.2	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	A	1.9	1.9	1.9	1.9	1.99	2.27					
2.47 2.41 2.41 2.39 2.47 2.43 2.50 2.26 2.18 2.10 2.07 2.15 2.10 2.11 2.02 2.03 2.06 2.05 2.06 2.11 2.26 2.47 2.46 2.36																									Diurnal Average						
4.32 3.64 4.03 3.63 4.75 3.91 5.06 3.32 3.17 2.55 2.61 5.07 4.52 5.03 2.55 2.64 2.72 2.55 2.54 2.70 4.69 4.95 3.86 3.59																									Diurnal Maximum						
C - Calibration																									A - Automated Daily Zero Span						

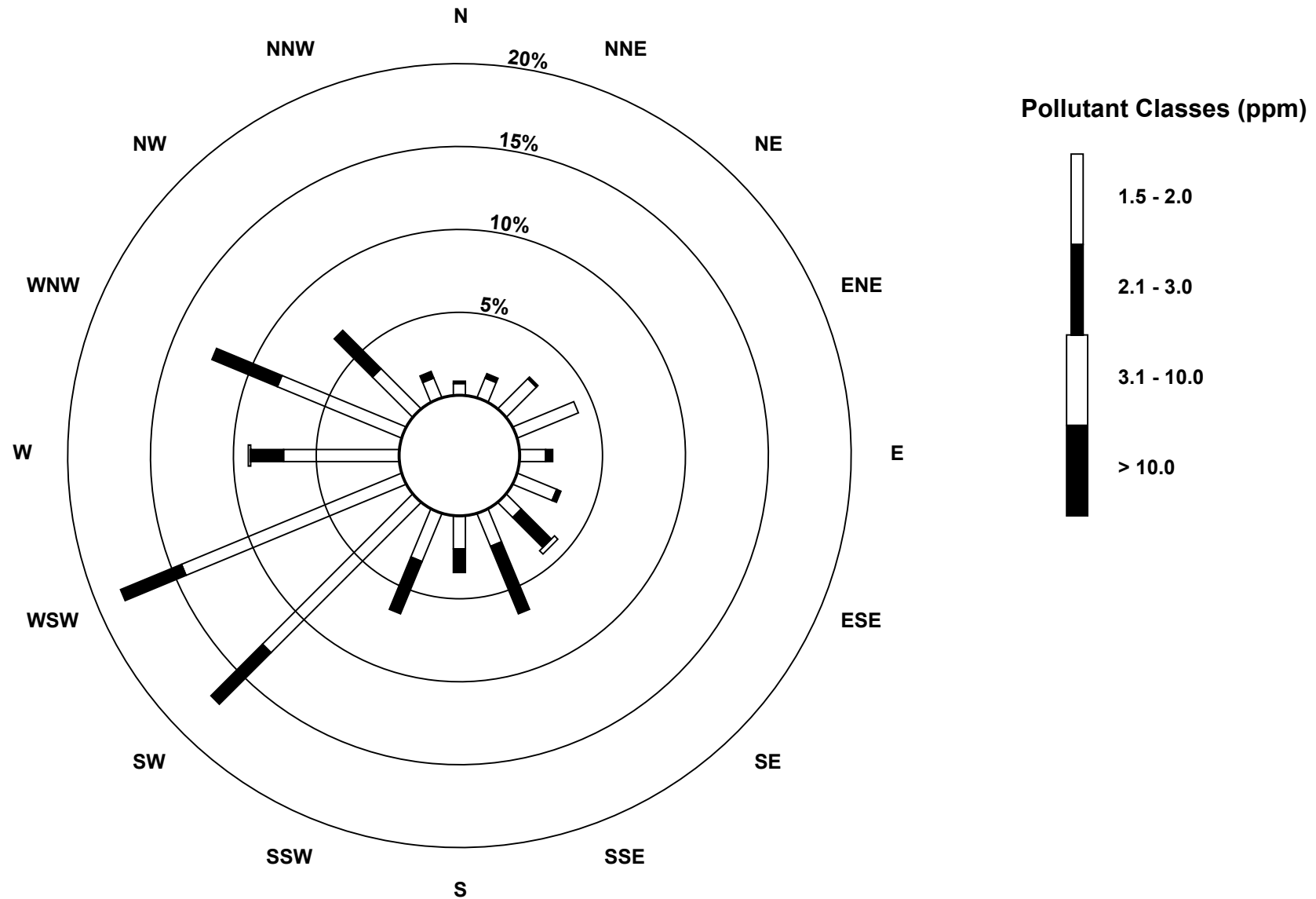
Hourly Maximums

Methane (CH₄) - ppm
Henry Pirker - August 2018



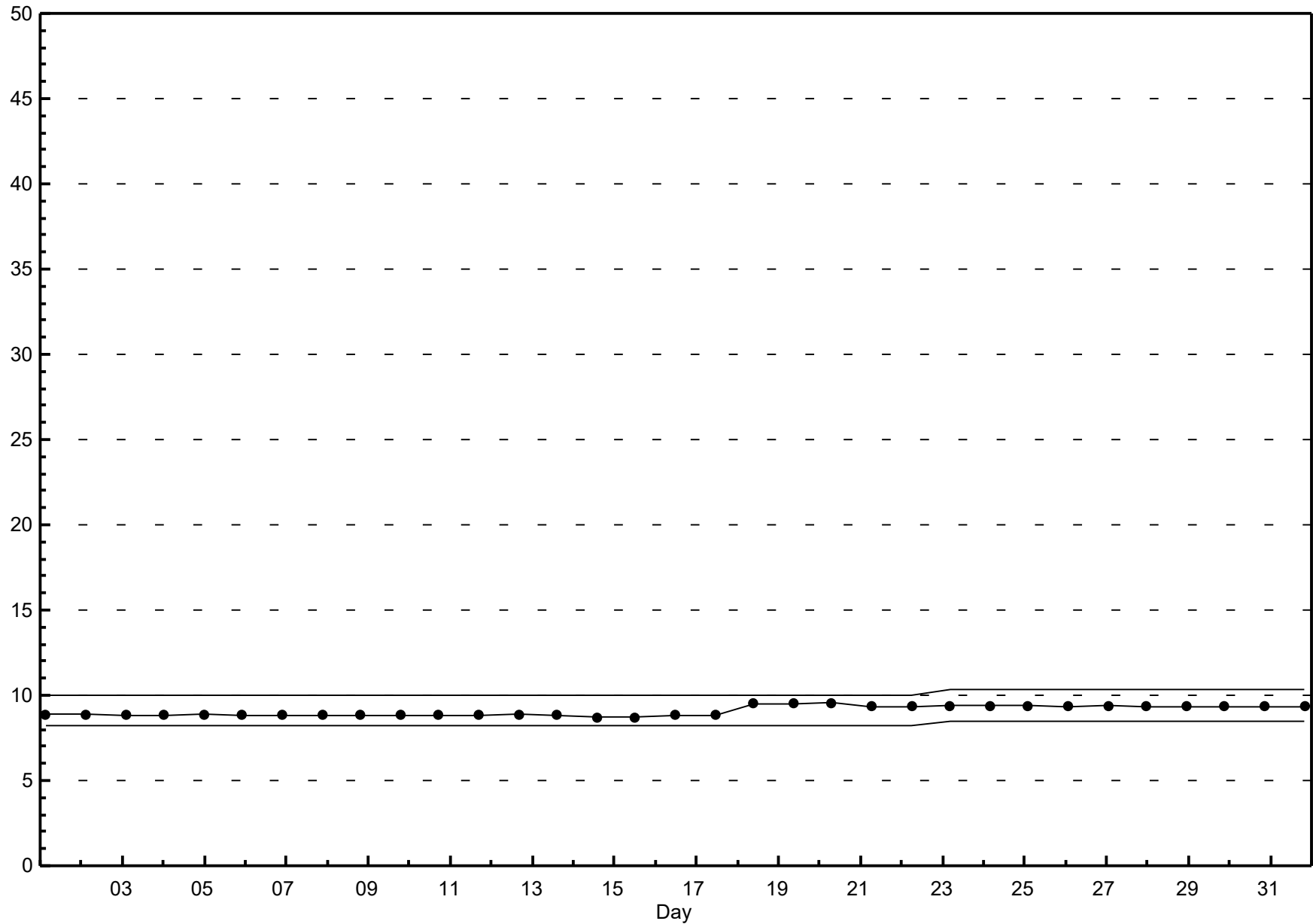
Pollutant Rose

Methane (CH₄) - ppm
Henry Pirker - August 2018



Span Responses

Methane (CH₄)
Henry Pirker - August 2018

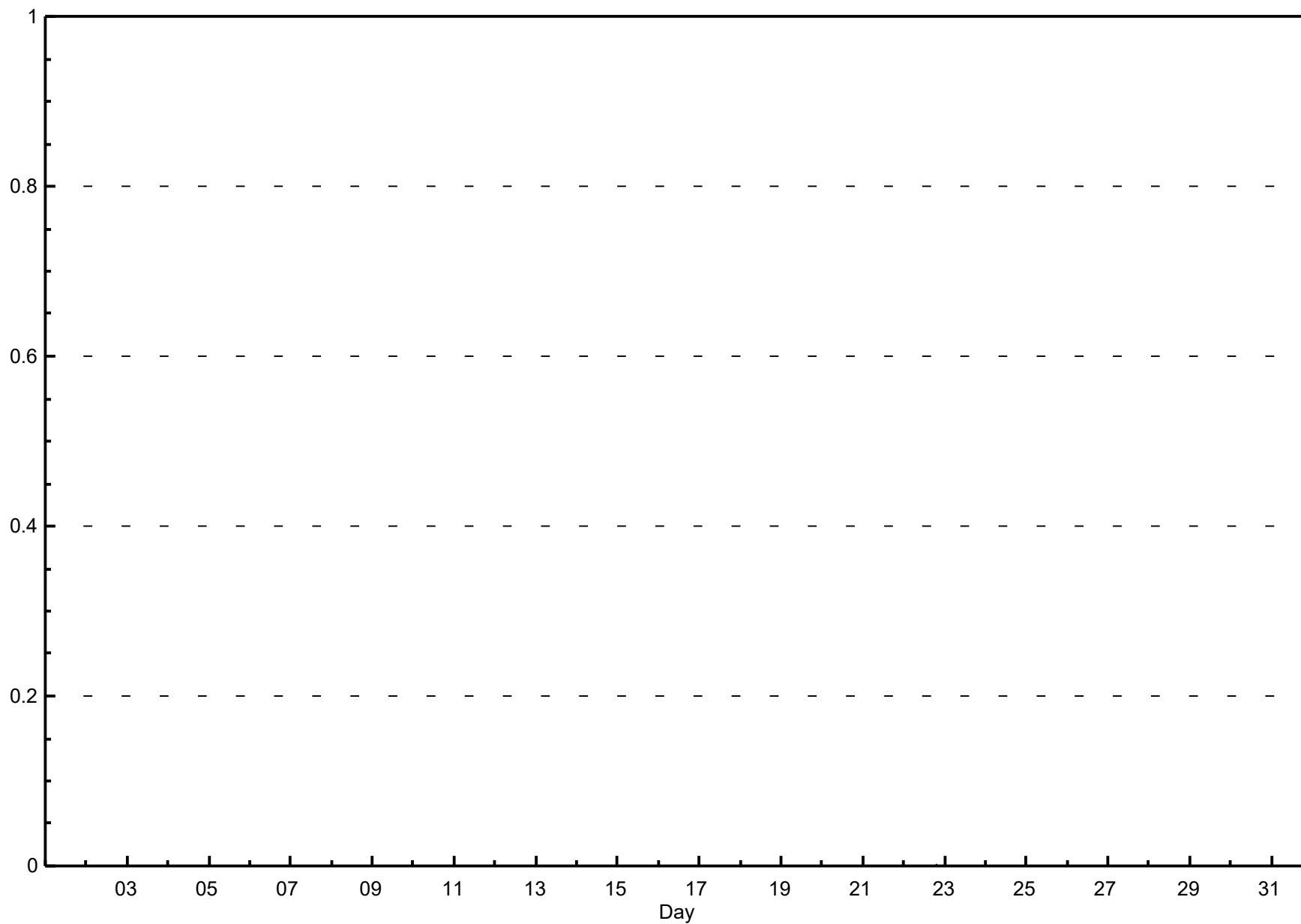


Hourly Averages

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - August 2018

Maximum Value: 0.00 ppm on Aug 22 20:00																					Maximum Daily Average: 0.00 ppm on Aug 22					Hours in Service: 744	
Minimum Value: 0.0 ppm on Aug 1 02:00																					Minimum Daily Average: 0.00 ppm on Aug 2					Hours of Data: 703	
Maximum Diurnal Average: 0.00 ppm at hour 23																					Minimum Diurnal Average: 0.00 ppm at hour 11					Hours of Missing Data: 41	
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: 41	
																										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	0.0	0.0	0.0	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	
2-Aug	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
3-Aug	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
4-Aug	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
5-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.00	0.00	
6-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.00	
7-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.00	0.00	
8-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.00	0.00	
9-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
10-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
11-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	
12-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	
13-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
14-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
15-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
16-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
17-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
18-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
19-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
20-Aug	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
21-Aug	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
22-Aug	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
23-Aug	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
24-Aug	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
25-Aug	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Aug	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
27-Aug	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.00	0.00	
28-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.00	0.00	
29-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.00	
30-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.00	0.00	
31-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.00	0.00	
0.00 0.00																									Diurnal Average		
0.00 0.00																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											



Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

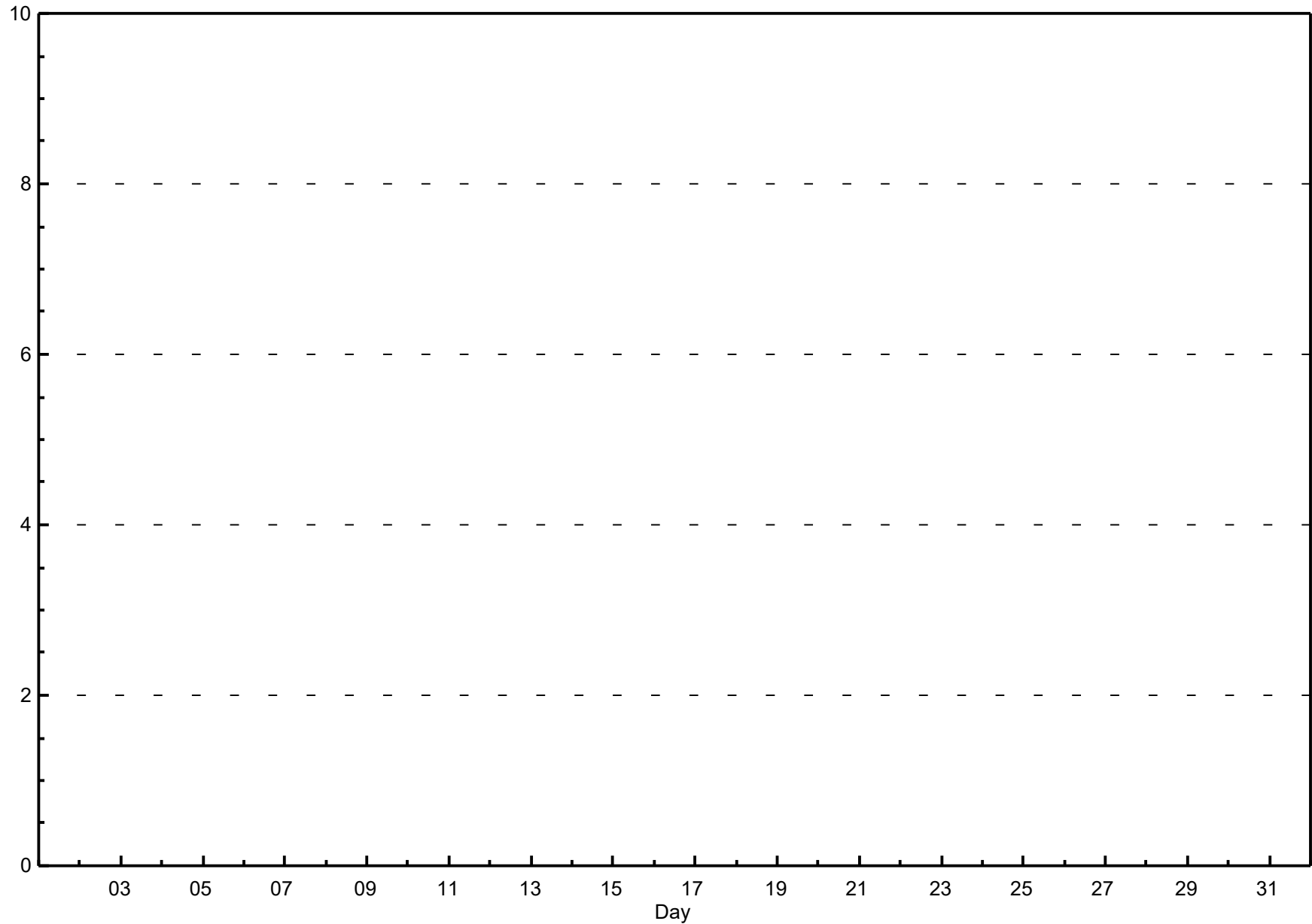
Henry Pirker - August 2018

Maximum Value: 0.00 ppm on Aug 22 17:00																					Maximum Daily Average: 0.00 ppm on Aug 28				Hours in Service: 744	
Minimum Value: 0.0 ppm on Aug 1 03:00																					Minimum Daily Average: 0.00 ppm on Aug 2				Hours of Data: 703	
Maximum Diurnal Average: 0.00 ppm at hour 17																					Minimum Diurnal Average: 0.00 ppm at hour 24				Hours of Missing Data: 41	
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: 41	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0.0	0.0	0.0	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
2-Aug	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
3-Aug	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
4-Aug	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.00	0.00
5-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.00	0.00
6-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.00
7-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.00	0.00
8-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.00	0.00
9-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.00	0.00
10-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
11-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
12-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
13-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
14-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
15-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
16-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
17-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
18-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
19-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
20-Aug	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
21-Aug	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
22-Aug	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
23-Aug	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
24-Aug	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
25-Aug	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Aug	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
27-Aug	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.00	0.00
28-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.00	0.00
29-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.00
30-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.00	0.00
31-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.00	0.00
0.00 0.00																								Diurnal Average		
0.00 0.00																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

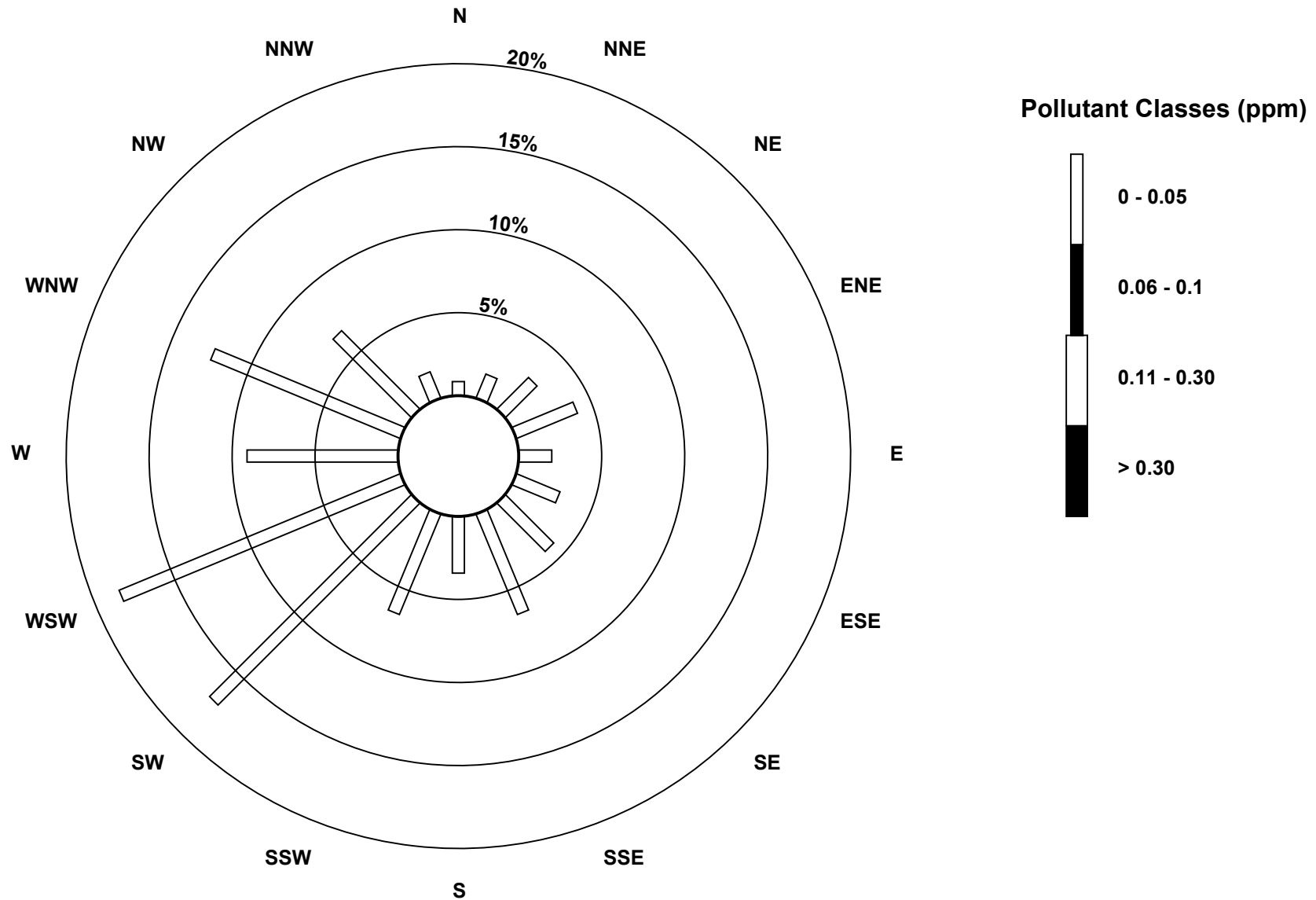
Henry Pirker - August 2018



Pollutant Rose

Non Methane Hydrocarbon (NMHC) - ppm

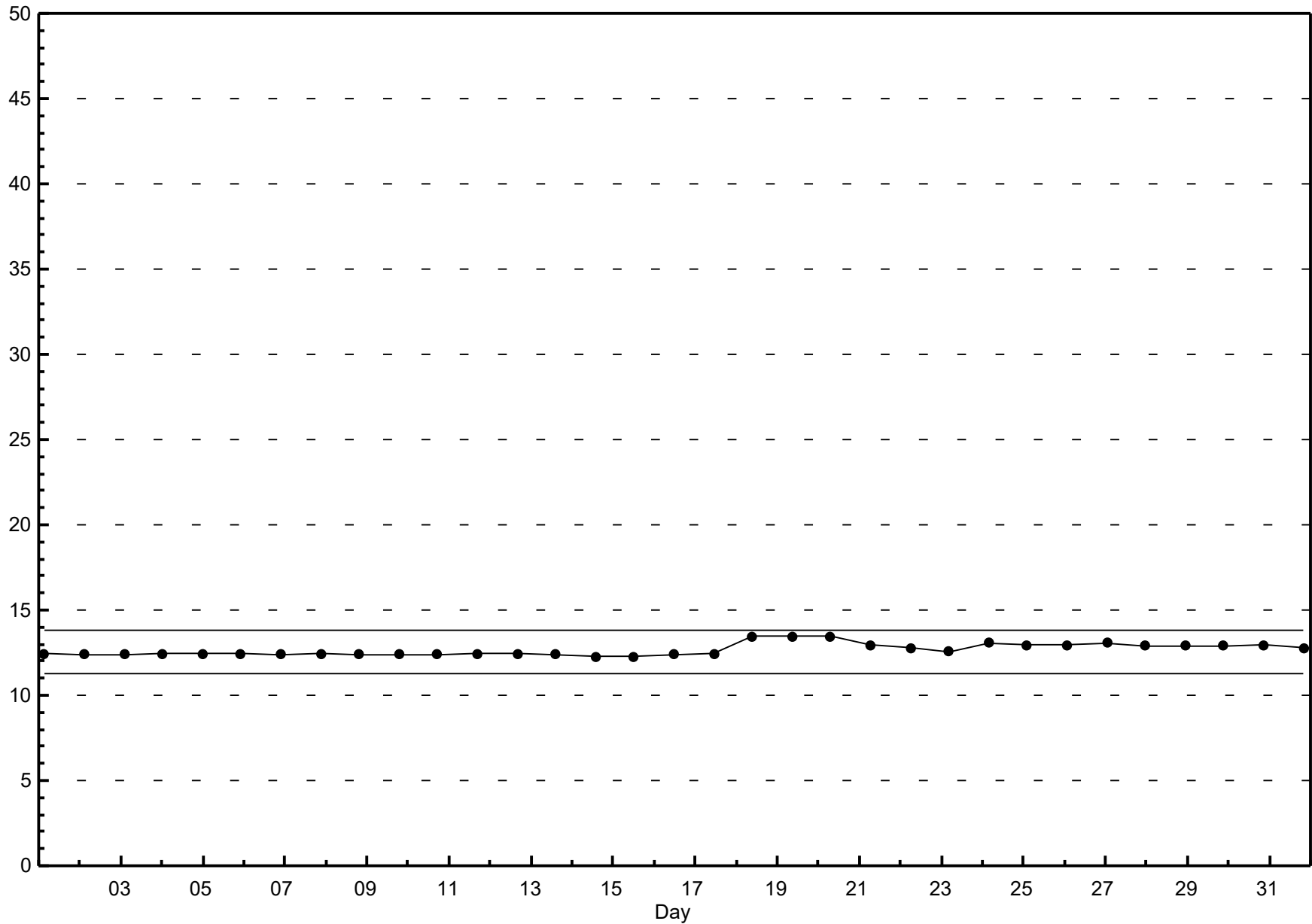
Henry Pirker - August 2018



Span Responses

Non Methane Hydrocarbon (NMHC)

Henry Pirker - August 2018



Hourly Averages

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

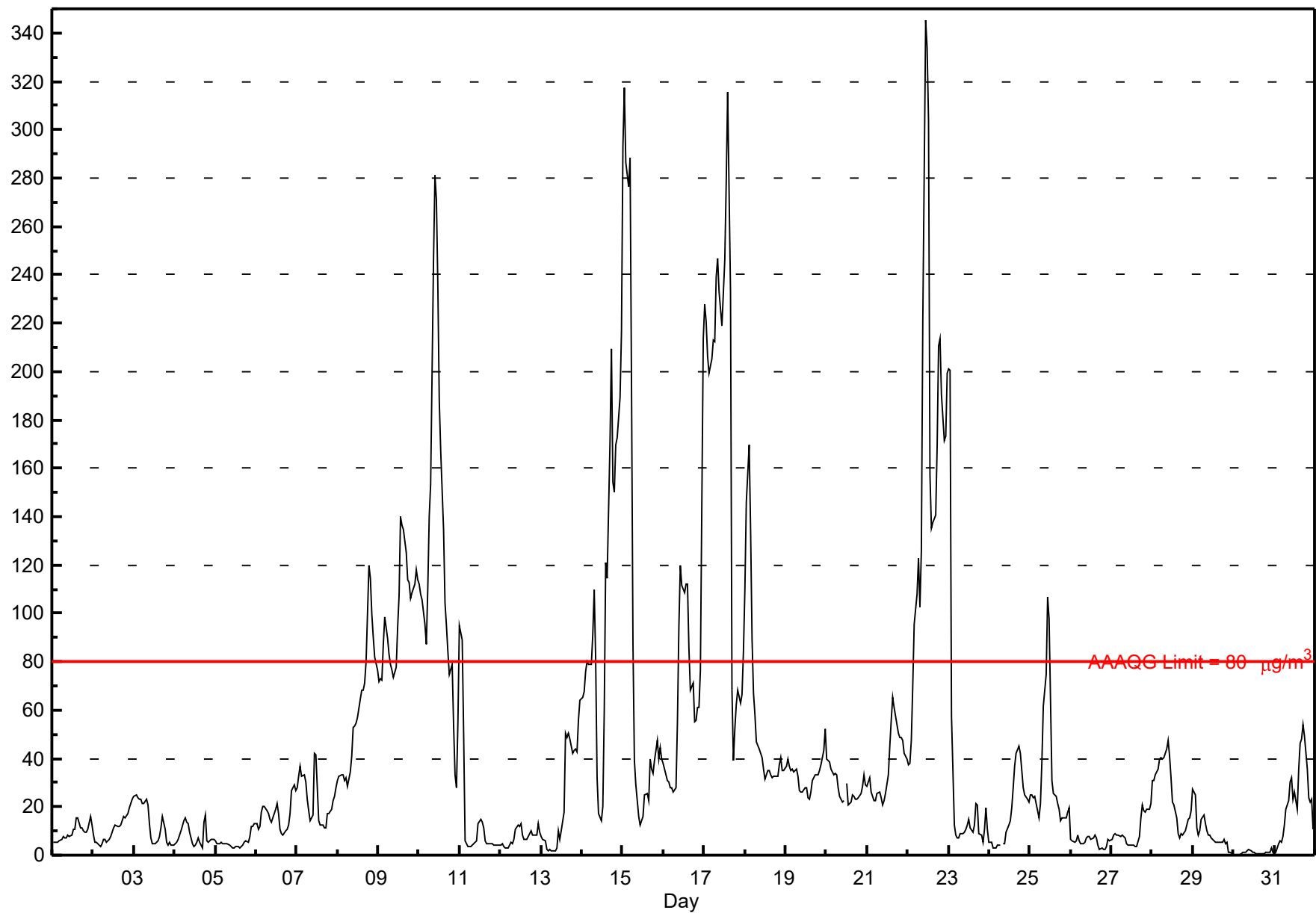
Henry Pirker - August 2018

Number of Exceedences: 1-hr: 116 24-hr: 12 Maximum Value: 345.0 µg/m³ on Aug 22 11:00 Minimum Value: 0 µg/m³ on Aug 30 03:00 Maximum Diurnal Average: 52.8 µg/m³ at hour 2 Monthly Average: 43.33 µg/m³																								Hours in Service: 744 Hours of Data: 742 Hours of Missing Data: 2 Hours of Calibration: 2 Percent Operational Time: 100.0		
Maximum Daily Average: 176.4 µg/m³ on Aug 17 Minimum Daily Average: 1.0 µg/m³ on Aug 30 Minimum Diurnal Average: 37.7 µg/m³ at hour 22 Percentiles: P ₁ = 0.7 P ₁₀ = 4.3 Q ₁ = 7.5 Median = 21.5 Q ₃ = 47.4 P ₉₀ = 112.9 P ₉₉ = 284.5																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Aug	5	5	5	6	6	7	8	7	7	8	8	11	11	16	16	11	11	10	10	10	11	16	12	9.3	15.9	
2-Aug	8	5	5	4	4	5	7	6	5	6	7	10	11	12	12	13	14	16	16	17	20	21	23	10.8	22.9	
3-Aug	24	25	24	23	23	22	21	23	21	13	7	5	5	5	6	8	11	16	11	5	4	5	4	4	13.1	24.8
4-Aug	5	5	6	8	10	14	16	14	13	9	5	4	4	6	7	5	3	14	16	6	6	6	7	8.2	16.5	
5-Aug	6	5	5	5	5	5	5	4	4	3	3	3	3	3	4	4	6	6	5	8	12	12	13	5.5	13.0	
6-Aug	13	11	12	18	20	20	19	17	15	13	15	19	21	17	11	9	8	10	10	12	17	27	29	27	16.3	29.0
7-Aug	28	33	37	33	33	31	23	18	14	17	42	42	28	14	13	12	12	11	17	19	22	24	28	23.7	41.9	
8-Aug	31	33	33	33	31	32	29	34	41	53	53	55	57	65	68	68	71	80	120	115	100	90	82	77	60.4	120.1
9-Aug	72	73	72	87	98	90	83	79	76	74	78	94	107	140	137	135	125	114	113	106	108	112	118	114	100.2	139.7
10-Aug	112	108	106	95	87	111	140	154	246	281	271	236	188	167	135	104	95	84	75	79	53	33	28	55	126.8	281.4
11-Aug	95	89	50	6	5	4	3	4	5	5	6	13	15	13	11	6	5	5	5	4	4	4	4	4	15.2	94.7
12-Aug	4	5	3	3	3	4	5	5	7	11	13	12	13	8	6	7	8	9	10	9	8	8	13	9	7.6	13.2
13-Aug	8	7	6	2	2	3	2	2	2	3	10	7	10	18	50	49	50	48	42	44	44	42	56	64	23.7	64.2
14-Aug	65	68	76	80	79	79	91	110	81	32	17	14	20	60	121	115	171	210	154	150	169	173	189	216	105.8	216.4
15-Aug	293	317	287	276	288	193	88	39	29	16	13	14	16	25	26	23	40	35	34	39	47	40	44	40	94.2	317.2
16-Aug	38	33	31	30	28	28	26	28	55	95	120	112	109	112	112	85	68	71	55	56	61	61	76	213	71.0	213.5
17-Aug	228	221	207	199	205	213	213	239	247	233	219	233	246	278	316	233	68	39	52	62	68	63	66	84	176.4	315.9
18-Aug	110	146	170	134	90	67	58	47	44	42	40	36	31	35	35	33	32	33	32	33	37	40	35	35	58.1	169.5
19-Aug	37	40	37	35	35	34	35	33	26	26	26	28	28	24	23	26	31	33	33	33	35	37	43	52	33.0	52.2
20-Aug	40	39	39	36	33	34	33	28	24	22	23	C	29	21	22	25	24	23	23	23	25	29	33	29	28.5	39.7
21-Aug	28	32	26	24	22	23	26	26	24	21	23	26	33	45	56	65	61	57	50	48	49	48	42	40	37.3	65.3
22-Aug	38	38	48	70	96	108	123	103	126	221	345	334	304	157	135	138	141	169	210	213	191	171	173	199	160.5	345.0
23-Aug	201	201	57	12	8	7	7	9	9	9	11	12	15	11	9	12	22	21	9	8	5	11	19	11	29.1	201.0
24-Aug	5	5	3	3	3	4	4	C	5	4	10	13	14	20	28	37	42	45	42	35	28	25	23	22	18.3	45.0
25-Aug	25	25	24	25	19	15	21	39	62	75	107	98	65	31	26	24	21	19	14	15	15	16	18	20	34.1	107.0
26-Aug	7	6	5	6	8	6	5	5	5	7	8	8	6	7	8	7	4	3	3	2	2	4	6	6	5.6	8.4
27-Aug	7	8	9	8	8	8	8	8	7	5	4	4	4	4	4	4	8	15	21	18	18	19	19	21	9.9	21.4
28-Aug	31	31	33	35	40	40	40	40	44	47	41	32	22	21	15	9	7	9	9	10	12	15	16	18	25.7	47.4
29-Aug	27	25	11	8	10	15	17	13	10	9	8	7	6	5	5	5	5	5	6	5	5	1	1	1	8.9	27.0
30-Aug	0	0	0	0	1	1	1	1	2	2	2	1	1	1	1	1	0	1	1	1	1	3	1	1	1.0	2.8
31-Aug	1	1	5	6	5	8	12	19	23	30	32	23	26	19	36	46	48	54	49	35	24	22	23	11	23.3	53.8
51.3 52.8 46.2 42.4 42.2 39.6 37.7 38.5 41.2 44.9 50.5 50.1 46.8 43.8 46.8 42.6 39.0 40.8 40.3 39.2 38.5 37.7 40.2 46.9																								Diurnal Average		
293.0 317.2 286.7 276.4 288.3 213.1 212.6 239.3 247.1 281.4 345.0 334.2 303.6 278.2 315.9 232.7 170.7 209.7 210.4 213.4 190.5 172.5 189.5 216.4																								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}) - $\mu\text{g}/\text{m}^3$

Henry Pirker - August 2018



Hourly Maximums

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

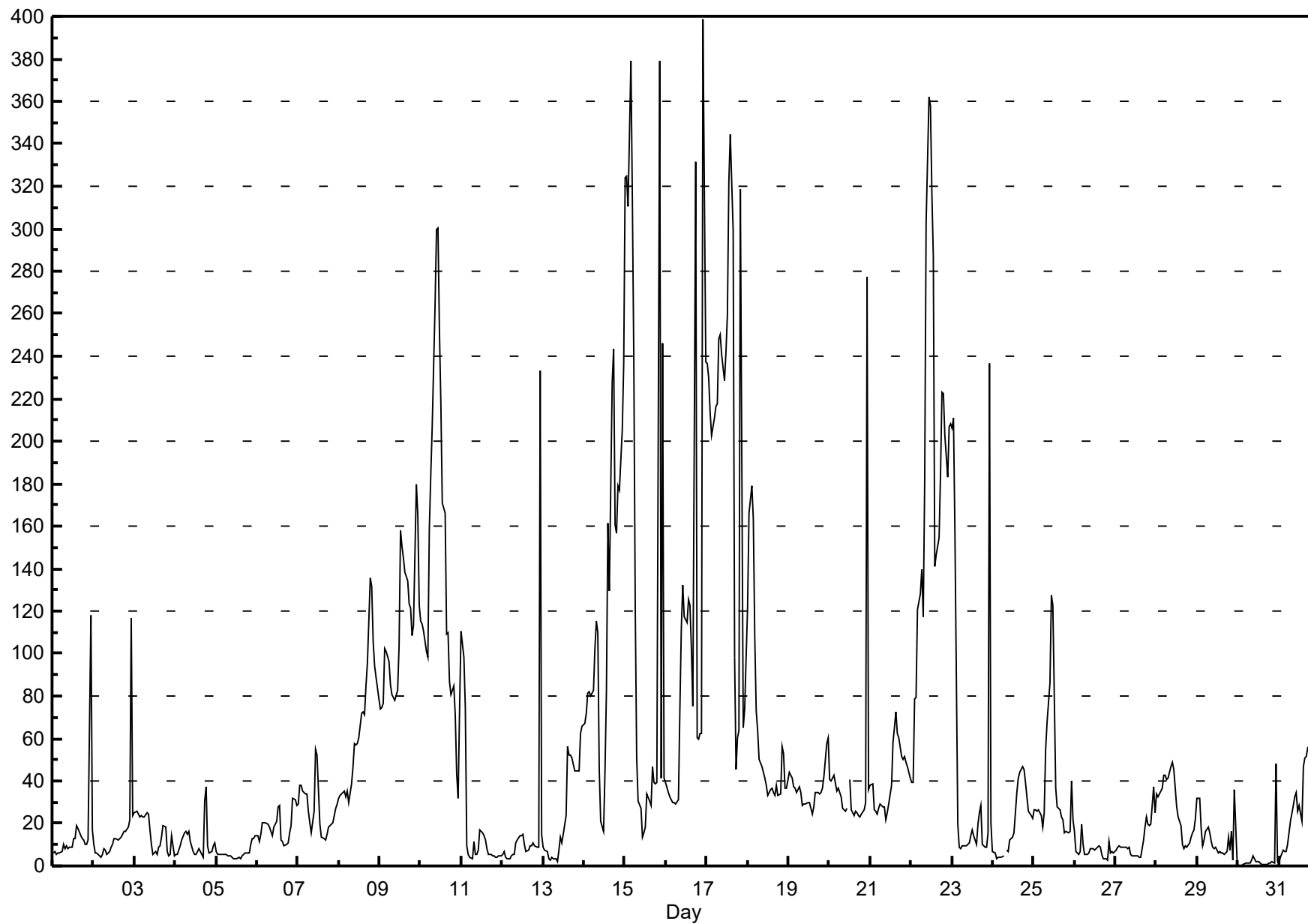
Henry Pirker - August 2018

Maximum Value: 398.8 µg/m ³ on Aug 16 23:00																								Maximum Daily Average: 199.4 µg/m ³ on Aug 17								Hours in Service: 744	
Minimum Value: 0 µg/m ³ on Aug 30 03:00																								Minimum Daily Average: 3.4 µg/m ³ on Aug 30								Hours of Data: 742	
Maximum Diurnal Average: 94.7 µg/m ³ at hour 23																								Minimum Diurnal Average: 42.1 µg/m ³ at hour 20								Hours of Missing Data: 2	
Monthly Average: 52.03 µg/m ³																								Percentiles: P ₁ = 1.0 P ₁₀ = 5.1 Q ₁ = 9.1 Median = 25.3 Q ₃ = 55.7 P ₉₀ = 146.3 P ₉₉ = 324.6								Hours of Calibration: 2	
																								Percent Operational Time: 100.0									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum							
1-Aug	6	7	6	6	6	7	10	8	10	8	9	13	13	19	18	14	13	12	10	10	12	118	17	15.0	118.0								
2-Aug	10	6	6	5	4	6	8	7	6	7	9	10	13	13	12	13	14	15	16	16	18	21	117	24	15.6	116.8							
3-Aug	25	25	24	23	24	23	23	25	24	17	10	5	6	6	9	10	13	19	18	7	5	5	14	5	15.4	25.4							
4-Aug	5	6	7	9	12	15	16	15	16	11	7	5	5	7	8	6	4	31	37	9	6	7	10	11	11.2	37.1							
5-Aug	7	5	5	6	5	5	5	5	4	4	3	3	4	4	3	5	6	6	6	6	10	13	13	14	6.2	14.0							
6-Aug	14	12	15	20	21	20	20	18	16	14	18	21	28	28	12	12	9	10	11	16	19	32	31	29	18.6	31.7							
7-Aug	29	38	38	35	34	34	26	20	16	26	55	53	36	20	13	13	12	15	18	19	21	24	27	29	27.1	54.6							
8-Aug	32	34	35	35	33	36	30	39	47	58	57	58	61	72	71	85	96	135	132	106	94	89	79		66.0	135.3							
9-Aug	74	75	77	103	101	96	86	81	80	78	83	104	158	150	145	138	134	124	122	109	113	180	166	123	112.3	179.9							
10-Aug	115	114	110	101	98	159	184	207	265	300	300	253	218	171	166	109	110	87	81	85	71	43	32	73	143.8	300.1							
11-Aug	111	98	74	9	5	4	4	11	5	6	7	17	16	15	12	8	5	5	5	5	4	4	5	5	18.4	110.8							
12-Aug	6	6	4	3	4	5	6	5	11	12	15	14	15	10	7	7	10	10	11	9	9	9	233	15	18.1	233.1							
13-Aug	9	7	7	3	3	4	4	3	2	7	14	11	15	23	56	52	52	51	45	45	45	45	62	66	26.3	65.7							
14-Aug	67	72	81	82	80	83	102	115	110	46	21	16	45	83	161	130	228	243	161	157	179	177	206	237	120.0	243.3							
15-Aug	324	325	311	379	314	238	122	51	30	27	14	15	18	34	31	29	47	39	39	40	379	41	246	41	130.6	379.2							
16-Aug	39	35	32	31	30	30	29	31	74	112	132	117	115	125	123	103	76	332	60	60	62	63	399	237	101.9	398.8							
17-Aug	237	230	214	203	211	216	218	248	250	241	228	242	259	322	344	299	98	45	60	64	318	65	74	99	199.4	344.3							
18-Aug	121	166	179	164	108	73	63	50	47	44	42	38	33	36	36	35	33	38	33	34	56	53	37	37	64.8	178.7							
19-Aug	44	43	42	38	37	35	37	35	29	29	29	30	30	27	25	28	35	35	34	34	37	42	58	60	36.2	60.1							
20-Aug	41	40	41	43	35	36	34	33	27	26	27	C	41	27	24	26	25	24	23	24	27	30	277	36	42.0	277.2							
21-Aug	38	39	27	25	24	27	29	28	28	22	25	29	38	59	65	73	63	61	51	50	51	49	47	42	41.2	72.7							
22-Aug	39	39	79	79	121	128	139	117	180	303	362	358	317	287	141	146	155	184	223	222	203	183	207	208	184.2	362.0							
23-Aug	206	211	158	20	9	8	9	9	9	10	11	14	17	14	10	20	25	28	10	9	9	16	237	20	45.4	236.9							
24-Aug	7	6	4	4	4	4	5	C	7	7	12	14	16	25	35	41	44	47	45	39	32	26	24	22	20.4	46.5							
25-Aug	27	27	26	26	23	18	25	55	68	86	128	122	80	36	28	27	23	22	16	16	16	16	40	22	40.5	127.5							
26-Aug	16	7	6	7	20	10	5	6	6	8	8	8	7	9	9	9	5	4	3	3	11	6	7	6	7.8	19.7							
27-Aug	8	9	9	9	9	9	9	8	9	5	5	5	5	5	4	4	12	18	23	20	19	20	37	25	11.9	37.1							
28-Aug	34	33	34	36	43	43	41	41	47	49	45	37	28	23	19	10	8	10	9	11	14	16	17	23	27.9	49.1							
29-Aug	32	32	18	9	12	16	18	16	11	9	8	9	6	6	6	6	6	7	14	7	16	2	36	1	12.7	35.8							
30-Aug	0	0	0	0	1	1	1	1	3	5	2	2	2	1	1	1	1	1	1	1	2	2	48	2	3.4	48.4							
31-Aug	1	4	7	7	7	10	16	21	29	33	35	26	28	21	47	51	51	56	55	47	27	23	25	24	27.1	55.8							
55.6 56.4 54.0 49.1 46.4 45.2 42.7 43.6 47.3 51.9 55.5 54.8 53.9 54.0 53.1 48.3 45.2 54.0 44.5 42.1 61.2 42.6 94.7 52.6																								Diurnal Average									
324.2 324.8 310.5 379.2 313.9 238.4 217.6 248.2 264.5 302.8 362.0 358.0 316.9 321.7 344.3 299.0 227.7 331.6 223.0 222.1 379.1 183.2 398.8 237.0																								Diurnal Maximum									
C - Calibration																																	

Hourly Maximums

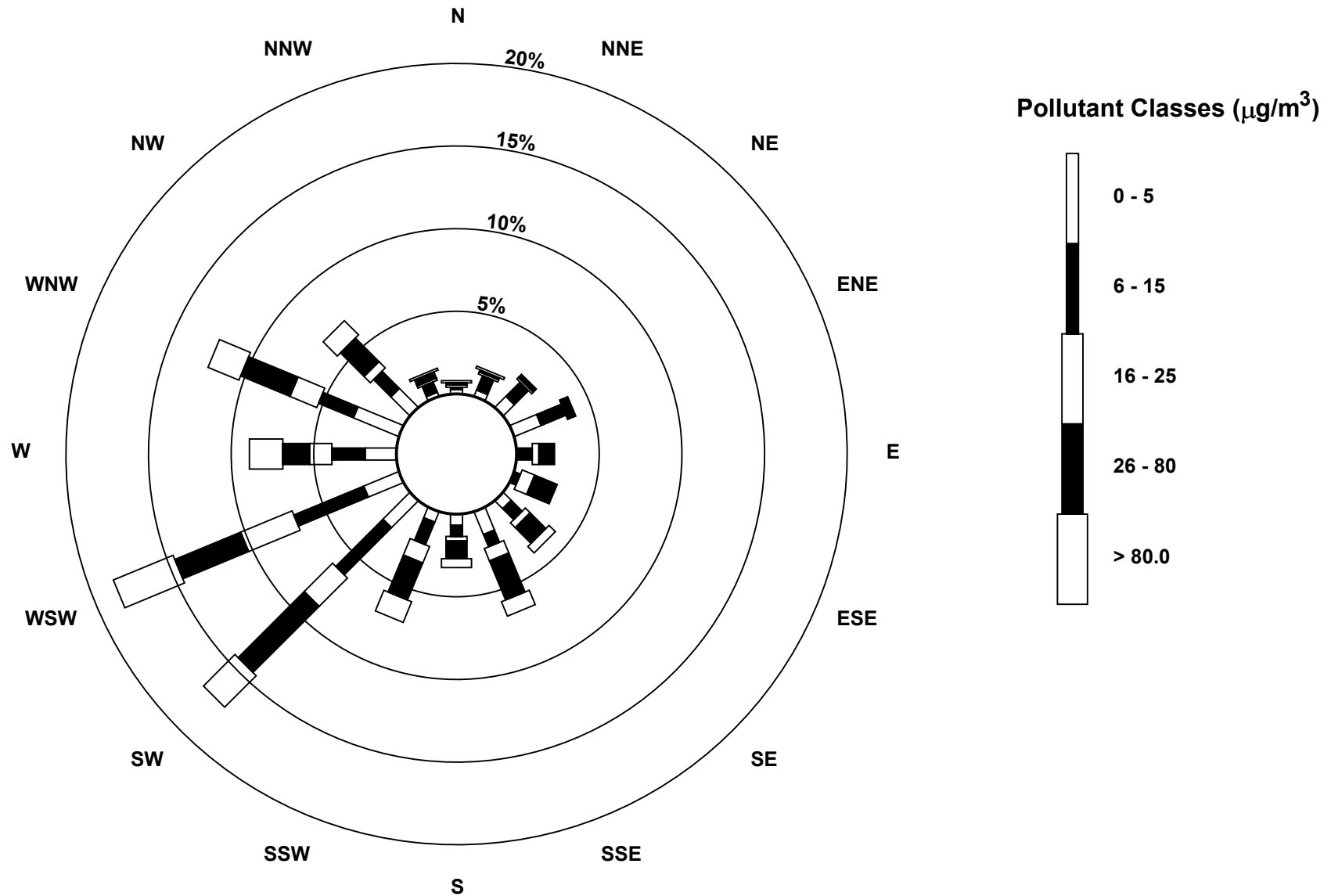
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$

Henry Pirker - August 2018



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Henry Pirker - August 2018



Hourly Averages

External Temperature (ET) - °C

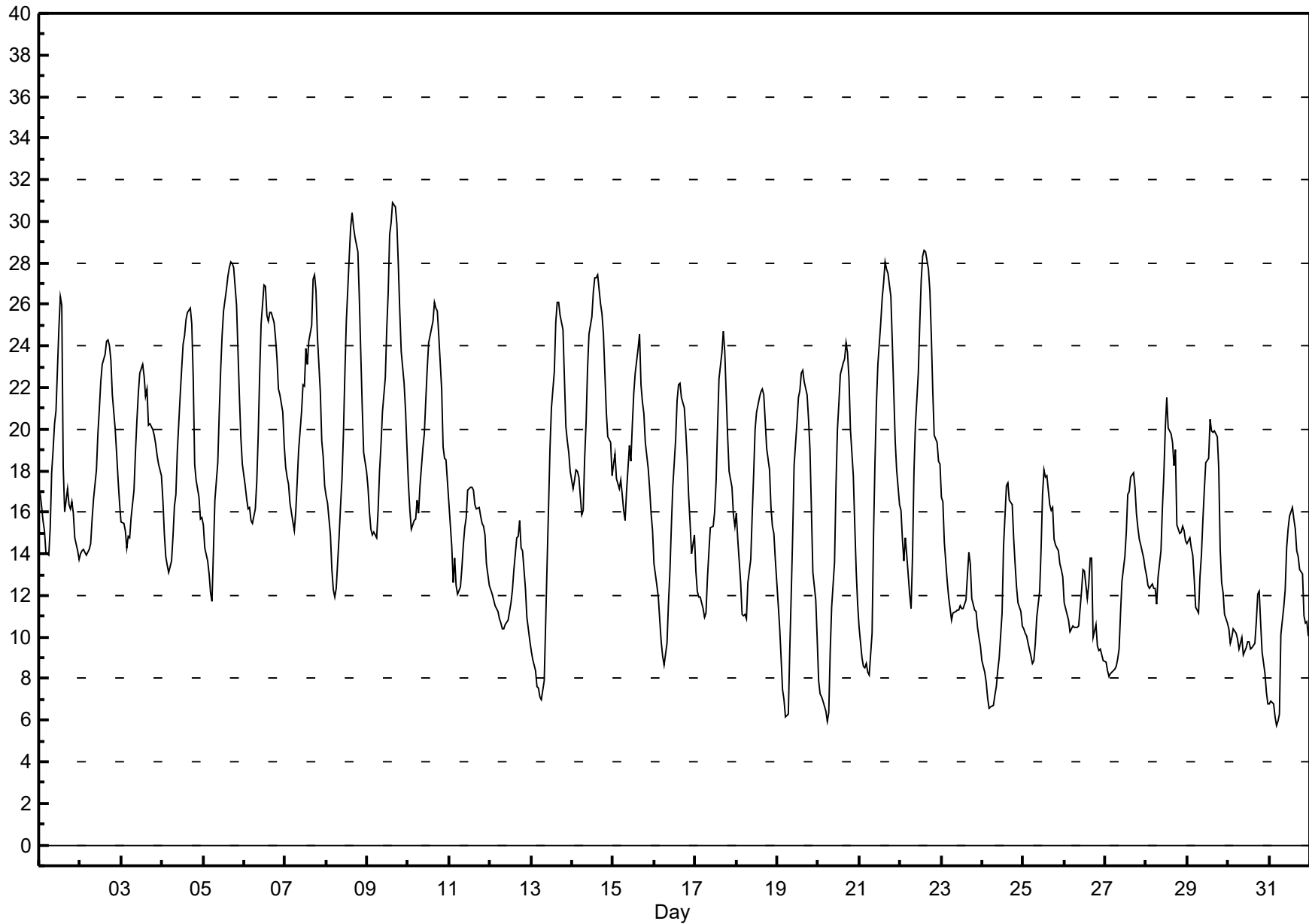
Henry Pirker - August 2018

Maximum Value: 30.9 °C on Aug 9 16:00																					Maximum Daily Average: 22.1 °C on Aug 9					Hours in Service: 744	
Minimum Value: 6 °C on Aug 31 05:00																					Minimum Daily Average: 9.7 °C on Aug 30					Hours of Data: 744	
Maximum Diurnal Average: 21.8 °C at hour 16																					Minimum Diurnal Average: 11.4 °C at hour 6					Hours of Missing Data: 0	
Monthly Average: 16.52 °C																					Percentiles: P ₁ = 6.4 P ₁₀ = 9.6 Q ₁ = 12.2 Median = 16.0 Q ₃ = 20.2 P ₉₀ = 24.7 P ₉₉ = 29.3					Hours of Calibration: 0	
																					Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	17	16	16	15	14	14	15	18	19	20	21	25	26	26	18	16	17	16	16	17	16	15	14	14	17.6	26.4	
2-Aug	14	14	14	14	14	14	15	16	17	18	20	21	22	23	24	24	24	24	23	22	20	19	18	16	18.7	24.3	
3-Aug	16	15	15	14	15	15	16	17	19	20	22	23	23	23	22	22	20	20	20	20	19	19	18	18	18.8	23.1	
4-Aug	17	15	14	13	13	14	15	16	17	19	22	23	24	24	25	26	26	25	22	18	18	17	16	16	18.9	25.8	
5-Aug	15	14	14	13	12	12	14	17	18	21	23	25	26	27	27	28	28	28	28	26	24	22	20	18	20.7	28.1	
6-Aug	17	17	16	16	16	15	16	18	20	23	25	27	27	25	25	26	26	25	24	23	22	22	21	19	21.3	26.9	
7-Aug	18	18	17	16	16	15	16	17	19	21	22	22	24	23	24	25	27	27	27	24	22	19	19	17	20.7	27.4	
8-Aug	17	16	15	13	12	12	12	15	16	18	20	23	25	28	30	30	30	29	29	26	24	21	19	18	20.8	30.4	
9-Aug	17	16	15	15	15	15	16	18	19	21	22	25	27	29	30	31	31	30	28	26	24	22	21	19	22.1	30.9	
10-Aug	17	16	15	16	16	17	16	17	19	20	21	23	24	24	25	26	26	26	24	22	19	19	19	17	20.2	26.1	
11-Aug	16	14	13	14	12	12	12	13	14	15	16	17	17	17	16	16	16	16	15	15	15	13	12		14.9	17.2	
12-Aug	12	12	12	12	11	11	11	10	10	11	11	11	12	12	13	15	15	16	14	14	12	11	10	10	12.0	15.6	
13-Aug	9	9	8	8	8	7	7	8	11	14	16	19	21	23	25	26	26	25	25	22	20	19	19	18	16.4	26.1	
14-Aug	17	18	18	18	18	16	16	19	20	23	25	25	27	27	27	27	26	26	25	23	21	20	19	18	21.5	27.4	
15-Aug	18	19	18	17	18	17	16	16	17	19	18	20	22	23	24	25	22	21	21	19	18	17	16	15	19.0	24.5	
16-Aug	14	12	12	11	10	9	9	10	12	13	15	17	20	21	22	22	22	21	20	19	17	15	14	15	15.4	22.2	
17-Aug	13	12	12	12	11	11	11	13	14	15	15	16	17	20	22	24	25	24	22	20	18	17	16	15	16.5	24.7	
18-Aug	16	15	13	11	11	11	11	13	14	16	18	20	21	22	22	22	22	20	19	18	16	15	15	14	16.4	21.9	
19-Aug	12	10	9	8	7	6	6	9	12	15	18	20	22	22	23	23	22	22	20	19	16	13	12	10	14.8	22.8	
20-Aug	8	7	7	7	6	6	6	9	11	14	17	20	21	23	23	23	24	24	22	20	18	15	13	12	14.9	24.2	
21-Aug	10	9	9	9	9	8	8	10	15	18	21	23	25	26	27	28	28	27	26	24	22	19	18	16	18.2	28.0	
22-Aug	16	15	14	15	14	12	11	14	18	20	23	25	27	28	29	29	28	27	25	22	20	19	18	18	20.2	28.6	
23-Aug	17	17	15	13	12	11	11	11	11	11	11	11	11	11	12	13	14	14	12	11	11	10	10	10	12.1	16.7	
24-Aug	9	8	8	7	7	7	7	7	8	8	9	11	14	16	17	17	17	16	15	14	12	12	11	11	11.1	17.4	
25-Aug	10	10	10	10	9	9	9	10	11	12	14	17	18	18	18	16	16	16	15	14	14	14	13	13	13.2	18.0	
26-Aug	12	11	11	10	10	11	10	10	11	11	12	13	13	12	13	14	14	10	11	10	9	9	9	9	11.1	13.8	
27-Aug	9	8	8	8	8	8	9	9	9	11	13	14	15	17	17	18	18	17	16	15	15	14	14	13	12.7	17.9	
28-Aug	13	12	12	13	12	12	12	13	14	16	18	20	22	20	20	19	18	19	15	15	15	15	15	15	15.7	21.6	
29-Aug	14	15	14	14	13	11	11	13	14	16	17	18	19	20	20	20	20	20	18	14	13	12	11	11	15.3	20.5	
30-Aug	10	10	10	10	10	10	9	10	10	9	9	10	10	9	10	10	11	12	12	11	9	8	7	7	9.7	12.2	
31-Aug	7	7	7	6	6	6	6	10	11	12	14	15	16	16	16	15	14	14	13	13	11	11	11	10	11.2	16.2	
																									Diurnal Average		
																									Diurnal Maximum		

Hourly Averages

External Temperature (ET) - °C

Henry Pirker - August 2018



Hourly Averages

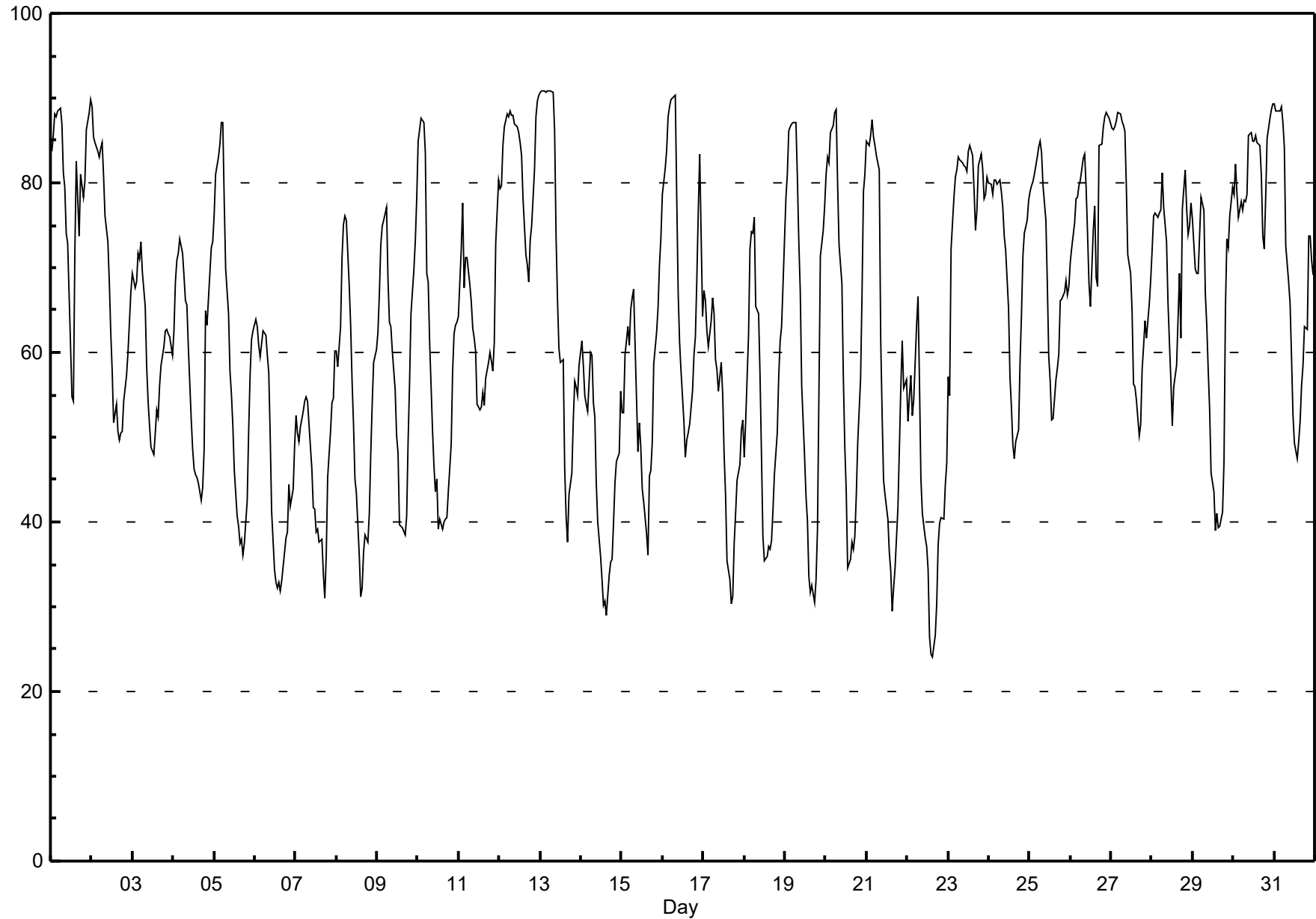
Relative Humidity (RH) - %

Henry Pirker - August 2018

Maximum Value: 90.8 % on Aug 13 03:00																				Maximum Daily Average: 82.6 % on Aug 12					Hours in Service: 744	
Minimum Value: 24 % on Aug 22 16:00																				Minimum Daily Average: 43.1 % on Aug 22					Hours of Data: 744	
Maximum Diurnal Average: 77.6 % at hour 6																				Minimum Diurnal Average: 47.4 % at hour 16					Hours of Missing Data: 0	
Monthly Average: 63.15 %																				Percentiles: P ₁ = 30.3 P ₁₀ = 39.1 Q ₁ = 50.5 Median = 63.1 Q ₃ = 78.1 P ₉₀ = 85.7 P ₉₉ = 90.6					Hours of Calibration: 0	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	84	86	88	88	88	89	87	81	80	74	73	61	55	54	72	83	74	81	80	78	80	86	88	90	79.1	89.8
2-Aug	89	85	85	84	83	84	85	81	76	73	68	62	58	52	54	51	50	51	51	54	57	60	64	67	67.6	88.9
3-Aug	69	68	68	72	71	73	70	65	58	54	51	49	48	51	53	52	56	58	61	62	63	62	62	60	60.7	73.1
4-Aug	63	68	71	72	73	72	69	66	66	61	52	49	46	46	45	45	42	44	48	65	63	69	72	73	60.0	73.4
5-Aug	76	81	83	85	87	87	78	70	65	58	55	51	46	41	40	37	38	36	37	43	51	57	62	63	59.4	87.2
6-Aug	64	63	61	60	61	63	62	60	58	50	41	34	33	32	33	32	33	36	38	39	44	42	44	49	47.1	64.0
7-Aug	53	51	49	51	53	54	55	54	52	46	42	42	39	39	38	38	34	31	36	45	51	54	55	60	46.7	60.2
8-Aug	60	58	63	71	75	76	76	68	63	57	52	45	43	36	31	32	36	39	38	41	48	54	59	60	53.4	76.1
9-Aug	62	67	73	75	76	77	69	64	63	60	56	50	48	40	40	39	38	41	50	56	65	70	73	78	59.5	78.2
10-Aug	85	86	88	87	84	69	68	61	51	47	44	45	39	40	39	40	40	41	44	49	58	62	63	64	58.0	87.7
11-Aug	64	72	78	68	71	71	68	66	63	62	60	54	53	54	55	54	57	59	60	59	58	61	73	80	63.3	80.3
12-Aug	79	80	84	87	88	88	88	88	88	87	87	86	85	83	78	72	70	68	73	75	81	88	90	90	82.6	90.3
13-Aug	91	91	91	91	91	91	91	91	86	74	66	61	59	59	46	41	38	43	46	52	57	56	55	59	67.6	90.8
14-Aug	61	58	55	54	53	60	60	54	52	45	40	36	33	30	31	29	34	35	36	40	45	47	48	55	45.4	61.3
15-Aug	53	53	60	63	61	65	66	67	61	48	52	49	44	42	39	36	45	46	49	59	62	65	70	74	55.4	73.6
16-Aug	79	82	84	88	89	90	90	90	78	67	61	58	52	48	50	50	51	55	60	62	69	77	83	64	69.9	90.4
17-Aug	67	66	63	61	64	66	65	59	58	55	59	55	48	43	35	33	30	31	37	41	45	47	51	52	51.3	67.3
18-Aug	48	52	62	72	74	74	76	65	65	57	48	38	35	36	37	37	38	41	46	50	57	61	63	68	54.2	76.0
19-Aug	78	81	86	87	87	87	87	81	73	67	56	48	43	40	34	32	33	31	33	39	55	71	74	77	61.7	87.1
20-Aug	81	83	82	86	87	88	89	80	73	68	57	49	44	35	36	38	37	38	43	49	57	67	79	81	63.6	88.6
21-Aug	85	84	86	87	85	84	83	82	62	53	45	43	40	36	34	30	32	35	42	49	56	61	56	57	58.6	87.5
22-Aug	52	55	57	53	54	63	67	56	45	41	38	37	34	26	24	24	27	30	37	40	40	40	44	47	43.1	66.6
23-Aug	57	55	72	78	81	81	83	83	82	82	82	81	84	84	83	79	74	77	82	83	82	78	79	81	78.5	84.5
24-Aug	80	80	79	80	80	80	80	79	77	74	72	65	57	54	49	47	50	51	59	64	71	74	76	78	69.0	80.4
25-Aug	79	80	80	81	83	84	85	84	80	76	68	60	57	52	52	57	58	60	66	66	67	69	67	68	69.9	84.9
26-Aug	71	72	75	78	78	80	80	83	83	80	74	68	65	74	77	69	68	84	85	87	88	88	88	88	78.5	88.3
27-Aug	87	86	87	87	88	88	87	87	86	80	72	69	65	56	56	54	50	52	58	61	64	62	66	69	71.5	88.4
28-Aug	72	76	77	76	76	77	81	77	73	66	61	57	51	56	58	64	69	62	77	82	77	74	75	78	70.5	81.5
29-Aug	76	70	69	69	74	78	77	67	63	58	53	46	43	39	41	39	39	41	47	65	73	72	76	80	60.7	79.5
30-Aug	79	82	79	76	78	77	78	78	79	86	86	85	85	86	85	84	81	74	72	78	85	88	89	89	81.5	89.4
31-Aug	89	89	88	88	89	87	84	72	68	66	59	53	49	48	50	52	56	58	63	63	74	74	71	69	69.2	89.3
72.0 72.9 74.9 75.9 76.9 77.6 76.9 72.9 68.6 63.5 59.0 54.4 51.1 48.8 48.2 47.4 47.7 49.3 53.3 58.0 62.7 65.7 68.1 69.9																									Diurnal Average	
90.7 90.8 90.8 90.7 90.8 90.8 90.8 90.7 88.0 86.9 86.6 85.9 84.9 85.7 84.8 84.3 80.8 84.5 84.5 86.7 87.8 88.3 89.7 90.3																									Diurnal Maximum	

Hourly Averages

Relative Humidity (RH) - %
Henry Pirker - August 2018



Hourly Averages

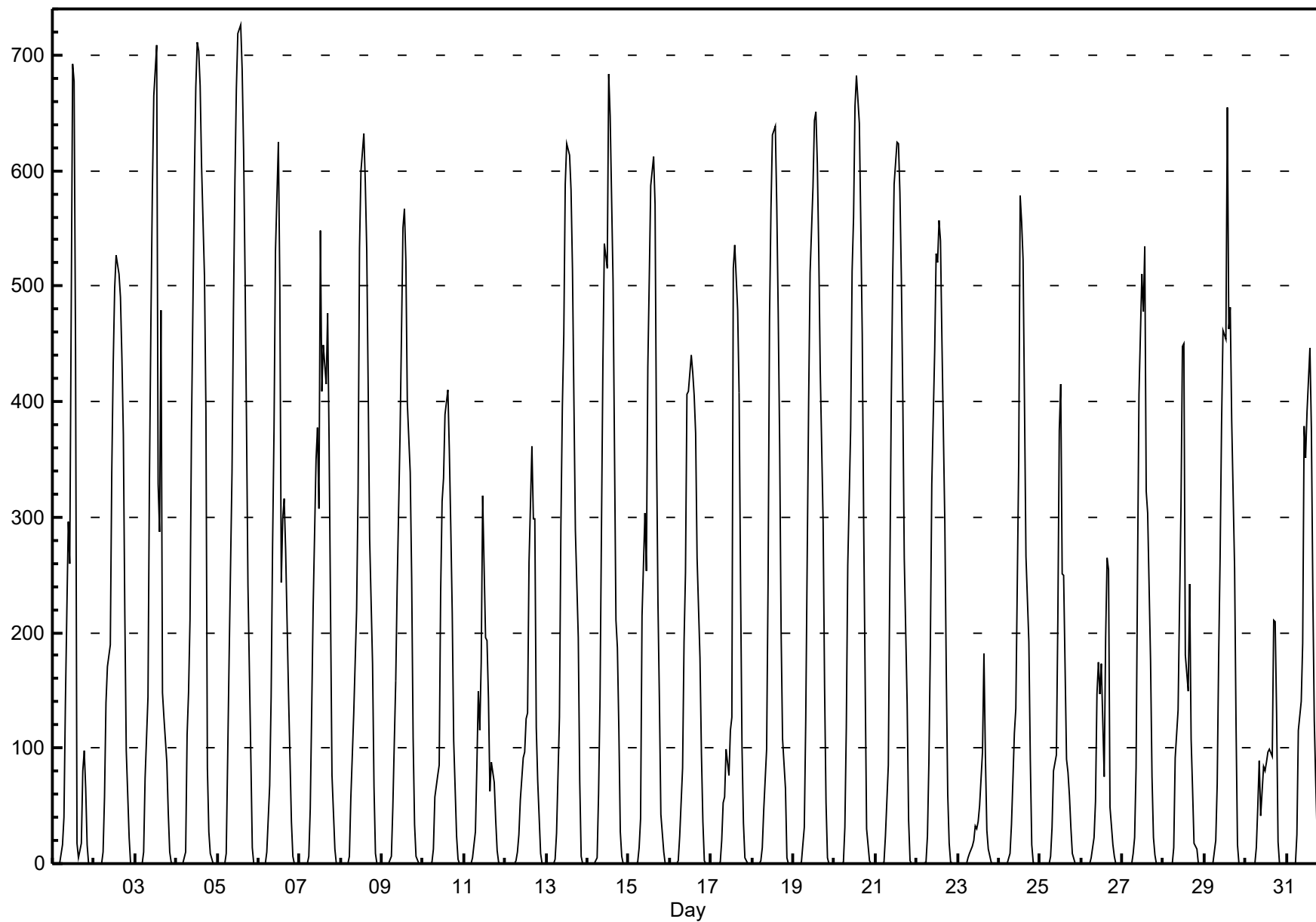
Solar Radiation (SR) - W/m²

Henry Pirker - August 2018

Maximum Value: 726.3 W/m ² on Aug 5 14:00																								Maximum Daily Average: 264.4 W/m ² on Aug 5												Hours in Service: 744	
Minimum Value: 0 W/m ² on Aug 1 01:00																								Minimum Daily Average: 25.6 W/m ² on Aug 23												Hours of Data: 744	
Maximum Diurnal Average: 473.9 W/m ² at hour 13																								Minimum Diurnal Average: 0.0 W/m ² at hour 2												Hours of Missing Data: 0	
Monthly Average: 154.36 W/m ²																								Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 37.1 Q ₃ = 265.3 P ₉₀ = 509.9 P ₉₉ = 682.8												Hours of Calibration: 0	
																								Percent Operational Time: 100.0													
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24													
1-Aug	0	0	0	0	0	17	40	139	219	295	260	692	678	446	17	5	18	80	98	65	17	0	0	0	128.6	692.3											
2-Aug	0	0	0	0	0	10	58	139	171	190	339	433	499	527	510	490	437	371	217	98	22	0	0	0	188.1	527.2											
3-Aug	0	0	0	0	0	10	74	145	332	466	581	665	709	329	287	479	148	127	88	44	10	1	0	0	187.2	708.7											
4-Aug	0	0	0	0	0	9	111	148	211	374	591	673	712	703	673	603	508	392	83	27	8	0	0	0	242.9	711.7											
5-Aug	0	0	0	0	0	9	91	178	338	480	590	672	719	726	688	617	510	382	241	91	14	0	0	0	264.4	726.3											
6-Aug	0	0	0	0	0	10	68	144	275	376	530	624	499	244	298	316	272	147	91	37	6	0	0	0	164.1	624.3											
7-Aug	0	0	0	0	0	7	48	133	222	350	378	308	548	409	448	416	476	366	220	76	13	0	0	0	184.1	547.8											
8-Aug	0	0	0	0	0	7	56	129	174	219	322	533	600	632	590	531	408	281	173	67	9	0	0	0	197.1	632.4											
9-Aug	0	0	0	0	0	6	49	104	158	240	372	461	551	567	522	399	338	247	109	34	6	0	0	0	173.5	566.7											
10-Aug	0	0	0	0	0	1	13	58	76	86	234	314	334	388	411	357	291	217	106	24	4	0	0	0	121.5	410.5											
11-Aug	0	0	0	0	0	5	28	84	150	116	175	318	195	193	143	62	88	70	38	11	2	0	0	0	69.8	318.3											
12-Aug	0	0	0	0	0	0	2	11	25	55	92	96	125	131	261	362	298	298	118	71	9	0	0	0	81.4	361.8											
13-Aug	0	0	0	0	0	4	26	126	292	395	458	588	624	614	584	514	398	288	196	71	6	0	0	0	216.1	624.0											
14-Aug	0	0	0	0	0	5	60	144	290	435	536	515	683	647	576	504	210	187	117	28	6	0	0	0	205.9	683.0											
15-Aug	0	0	0	0	0	1	13	39	214	303	254	430	507	587	612	571	361	226	140	42	10	0	0	0	179.6	612.4											
16-Aug	0	0	0	0	0	2	24	83	192	253	406	409	441	425	405	373	265	177	96	37	2	0	0	0	149.5	440.6											
17-Aug	0	0	0	0	0	2	21	53	57	99	76	115	127	515	536	480	408	243	101	35	5	0	0	0	119.7	535.9											
18-Aug	0	0	0	0	0	2	14	47	99	243	471	567	631	638	569	477	363	201	108	65	5	0	0	0	187.5	638.2											
19-Aug	0	0	0	0	0	2	31	124	264	400	511	586	643	651	606	528	428	295	153	53	5	0	0	0	220.0	651.2											
20-Aug	0	0	0	0	0	2	32	118	259	376	513	559	655	682	641	554	457	292	159	30	2	0	0	0	222.1	682.5											
21-Aug	0	0	0	0	0	2	23	86	243	396	507	588	624	624	580	507	403	265	137	37	3	0	0	0	209.4	624.1											
22-Aug	0	0	0	0	0	1	24	88	188	329	444	529	521	557	539	452	294	165	61	17	1	0	0	0	175.4	557.1											
23-Aug	0	0	0	0	0	0	5	9	15	20	33	30	37	50	96	182	93	29	12	2	0	0	0	0	25.6	182.2											
24-Aug	0	0	0	0	0	0	9	34	72	113	135	348	578	555	523	396	266	191	90	16	1	0	0	0	138.6	578.3											
25-Aug	0	0	0	0	0	0	6	31	81	94	210	375	416	251	249	90	79	59	32	9	0	0	0	0	82.6	415.8											
26-Aug	0	0	0	0	0	0	5	22	54	147	174	147	173	76	196	265	255	49	17	6	0	0	0	0	66.1	264.9											
27-Aug	0	0	0	0	0	0	9	23	83	251	406	510	478	534	322	304	176	75	22	7	0	0	0	0	133.3	533.8											
28-Aug	0	0	0	0	0	0	14	92	133	223	309	447	450	181	150	242	108	63	17	12	1	0	0	0	101.8	450.2											
29-Aug	0	0	0	0	0	0	20	69	178	264	380	461	454	655	463	482	384	256	121	16	0	0	0	0	175.1	655.0											
30-Aug	0	0	0	0	0	0	14	49	90	41	84	80	88	97	99	93	211	209	129	19	0	0	0	0	54.3	210.6											
31-Aug	0	0	0	0	0	0	25	115	140	191	379	352	392	446	377	236	124	71	23	6	0	0	0	0	119.9	446.1											
0.0 0.0 0.0 0.0 0.0 3.7 32.7 89.1 170.9 252.2 346.8 433.0 473.9 454.2 418.4 383.4 292.7 203.9 106.9 37.2 5.3 0.1 0.0 0.0																								Diurnal Average													
0.1 0.1 0.1 0.2 0.4 16.7 111.5 178.1 338.1 479.8 591.3 692.3 719.2 726.3 687.5 616.6 509.6 391.9 241.1 98.3 22.0 0.9 0.1 0.1																								Diurnal Maximum													

Hourly Averages

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



Hourly Averages

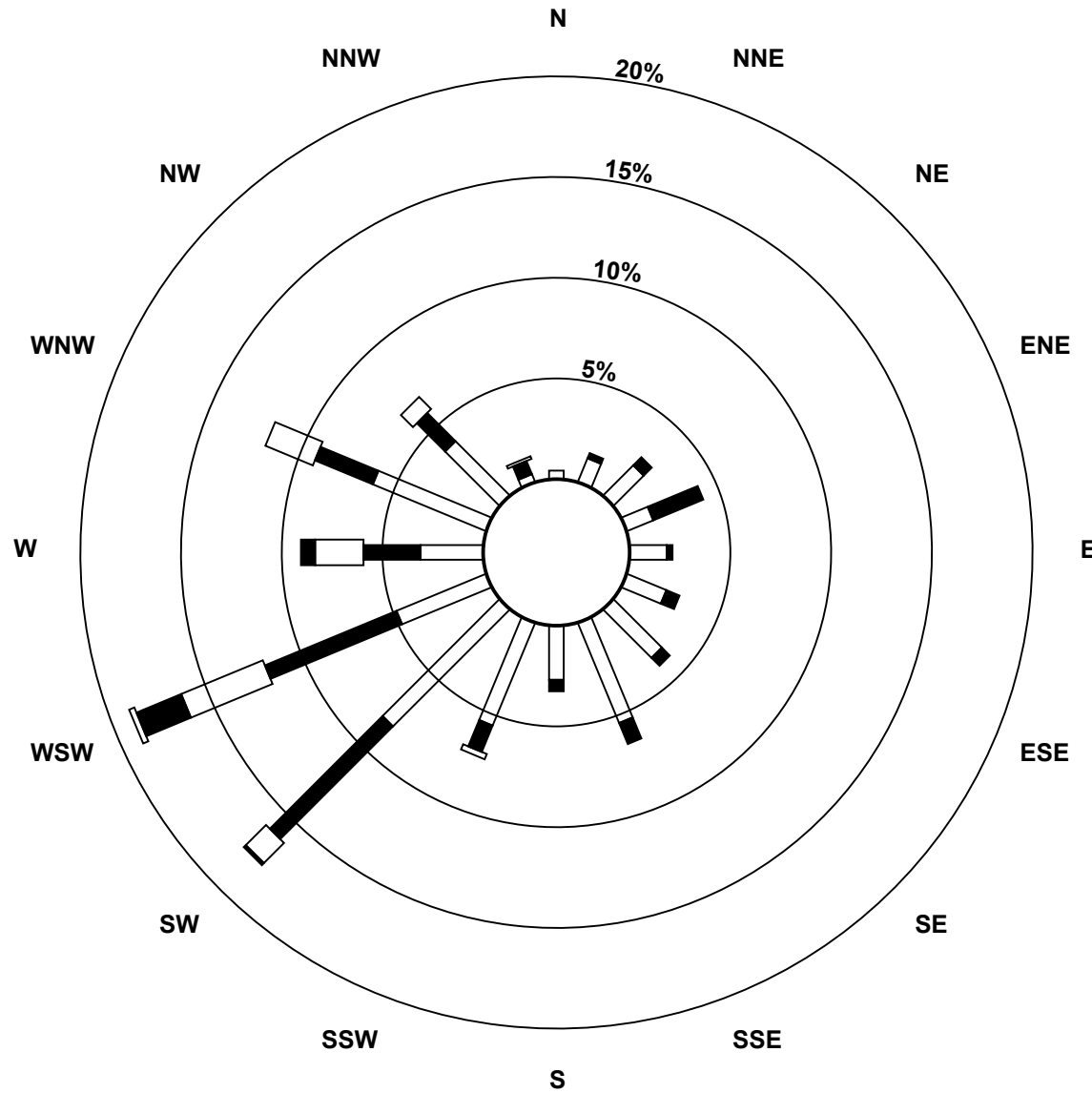
Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - August 2018

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	1	1	1	2	3	2	0	3	6	5	4	2	2	2	13	7	4	7	7	3	1	1	2	2	1.5	13.1
Dir	229	332	282	316	314	316	319	291	304	315	287	251	172	104	312	19	58	204	214	233	282	136	146	192	289.0	312.1
2 Spd	6	6	5	3	2	2	3	3	4	5	6	9	12	15	10	11	13	12	13	13	13	12	6	5	7.6	14.6
Dir	236	257	251	283	315	191	161	188	215	226	223	234	245	252	228	236	232	229	236	237	240	241	242	250	237.2	252.4
3 Spd	7	6	7	5	7	6	5	10	19	21	21	22	23	21	23	24	21	12	9	4	4	5	11	13	12.5	24.3
Dir	264	275	259	297	271	270	253	265	246	247	250	265	261	264	261	257	260	277	280	242	220	220	244	247	258.3	257.1
4 Spd	11	6	6	5	4	6	4	6	10	11	11	10	10	13	11	11	9	13	4	10	8	3	4	1	6.9	12.6
Dir	244	243	274	251	244	243	236	262	246	263	290	285	278	282	290	305	299	330	291	234	237	279	309	199	272.5	281.9
5 Spd	4	1	1	1	2	2	3	4	6	6	5	6	7	8	8	8	6	8	6	5	5	6	6	6	4.9	8.4
Dir	195	218	207	202	204	211	224	220	232	234	228	233	224	225	242	251	236	249	237	232	224	231	229	224	230.7	242.4
6 Spd	5	6	7	5	3	7	3	6	10	12	15	23	26	27	22	25	23	17	15	12	8	10	6	5	12.2	27.0
Dir	222	220	219	238	296	258	254	257	227	230	239	248	250	250	245	241	242	245	254	254	258	247	247	242	244.8	249.7
7 Spd	5	8	7	5	6	6	5	4	5	10	18	18	19	21	19	16	16	19	13	6	5	4	5	4	9.8	21.2
Dir	236	242	256	280	286	305	282	273	271	255	246	249	252	252	256	254	250	255	263	269	287	225	296	296	258.3	251.6
8 Spd	3	3	1	1	2	1	3	2	3	2	2	1	3	3	3	5	6	5	8	7	7	4	3	2	2.9	7.9
Dir	253	243	187	192	172	176	144	151	155	188	216	205	158	186	215	218	215	221	239	229	232	245	249	234	215.6	238.6
9 Spd	1	1	2	3	2	2	3	1	2	2	4	5	4	4	6	2	1	2	3	3	2	3	2	1	1.5	5.9
Dir	240	148	143	149	138	190	270	256	289	223	223	212	206	235	292	288	157	179	153	139	162	135	133	337	203.3	292.1
10 Spd	1	2	2	3	4	8	5	7	9	10	10	5	8	10	11	5	5	3	3	4	2	0	1	2	4.6	10.6
Dir	299	294	296	273	238	247	214	249	258	258	266	274	292	295	292	279	293	305	319	300	310	289	264	265	274.4	292.4
11 Spd	3	5	5	5	3	2	2	2	5	5	7	8	9	9	8	9	7	8	9	7	8	8	7	5	5.3	9.5
Dir	301	318	326	32	25	48	32	47	66	64	64	68	71	68	65	64	62	73	74	69	70	78	70	49	59.1	70.8
12 Spd	5	7	4	6	5	7	5	8	7	6	6	6	6	7	6	6	3	5	4	5	3	2	3	2	3.8	7.9
Dir	39	57	56	71	53	59	49	58	50	47	56	51	74	89	79	94	98	164	177	219	200	139	141	158	75.0	58.2
13 Spd	3	2	2	2	3	3	1	3	4	5	5	6	6	7	9	11	14	9	12	8	9	8	8	7	5.0	13.9
Dir	144	153	137	138	148	153	133	153	153	154	154	145	156	157	203	224	237	226	233	223	229	208	210	229	198.8	237.2
14 Spd	7	9	9	7	7	4	6	6	7	10	14	20	20	23	24	25	15	12	17	13	6	3	5	2	11.3	24.9
Dir	230	236	235	237	247	230	240	241	236	238	248	242	238	242	238	244	234	225	241	239	225	218	235	212	237.9	243.5
15 Spd	5	5	4	2	3	4	6	7	10	13	11	12	12	6	6	4	7	6	6	6	5	4	4	3	2.5	12.6
Dir	234	256	308	240	294	303	307	304	292	285	278	294	314	330	330	2	110	103	112	105	101	109	108	96	303.1	284.5
16 Spd	2	2	3	1	1	1	2	2	4	5	5	5	5	4	4	5	6	5	5	4	3	1	1	3	2.4	6.1
Dir	77	89	103	120	303	214	231	239	226	234	219	197	210	219	179	160	164	158	165	153	152	160	199	263	185.5	164.1
17 Spd	3	2	2	3	1	1	2	4	4	5	3	7	10	9	12	11	15	16	12	9	7	7	7	7	6.3	15.6
Dir	147	203	222	249	164	169	209	266	280	240	240	240	230	220	210	211	232	238	235	226	219	207	222	231	226.6	237.6
18 Spd	9	8	7	5	4	3	1	1	4	5	8	4	5	5	4	2	3	1	4	6	4	3	3	1	2.2	9.4
Dir	248	241	308	305	305	315	269	257	284	285	297	299	299	279	233	274	302	137	112	137	149	142	137	123	267.7	248.0
19 Spd	1	1	1	3	2	3	2	2	3	3	2	0	1	3	2	2	3	3	5	3	1	0	2	2	0.3	4.9
Dir	293	18	270	308	309	287	309	215	226	231	216	98	43	115	38	72	60	51	82	79	96	279	320	298	12.6	82.2
20 Spd	2	1	3	1	1	1	0	1	3	3	3	1	4	5	6	6	4	3	4	3	4	1	1	1	1.7	6.2
Dir	302	304	305	306	341	254	307	213	207	206	236	191	146	166	164	182	203	186	162	154	143	150	299	308	188.4	164.0
21 Spd	2	2	1	0	2	2	1	1	2	4	4	4	4	5	7	5	6	5	5	4	4	3	3	2	2.3	6.8
Dir	290	302	295	292	289	310	311	286	228	223	214	202	190	190	173	168	157	159	150	159	201	229	238	208	196.7	173.3
22 Spd	3	2	3	1	0	0	1	2	7	10	11	13	12	16	18	15	11	7	7	5	5	4	2	1	6.2	17.6
Dir	219	221	199	223	356	320	309	284	246	247	259	256	252	267	277	274	275	258	229	276	285	241	271	286	260.4	276.9

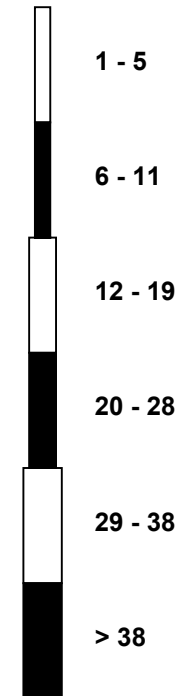
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Wind Rose

Wind Speed (WS) (km/h)
Henry Pirker - August 2018



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Henry Pirker - August 2018

Maximum Speed: 31 km/h on Aug 31 15:00																				Maximum Daily Speed Average: 13.0 km/h on Aug 3										Hours in Service: 744	
Minimum Speed: 0 km/h on Aug 19 22:00																				Minimum Daily Speed Average: 2.5 km/h on Aug 19										Hours of Data: 744	
Maximum Diurnal Speed Average: 11.2 km/h at hour 15																				Minimum Diurnal Speed Average: 3.7 km/h at hour 7										Hours of Missing Data: 0	
Monthly Average Speed: 6.65 km/h																				Percentiles: P ₁ = 0.6 P ₁₀ = 1.9 Q ₁ = 3.0 Median = 5.4 Q ₃ = 8.6 P ₉₀ = 12.9 P ₉₉ = 24.4										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-Aug	3	2	2	3	3	2	1	3	6	5	4	2	3	3	15	8	8	8	8	3	2	1	2	2	4.2	15.0					
2-Aug	6	7	6	4	2	2	3	3	4	5	6	10	13	15	10	12	13	12	13	14	13	12	6	6	8.1	15.0					
3-Aug	7	6	7	5	7	6	5	10	19	21	21	23	24	22	23	25	21	13	9	4	5	5	12	13	13.0	24.6					
4-Aug	11	7	6	5	4	6	4	6	10	11	11	11	11	13	12	11	9	13	6	11	8	4	4	2	8.2	13.1					
5-Aug	4	2	2	1	2	2	3	4	6	6	6	6	8	8	9	9	7	9	6	5	5	6	6	6	5.3	9.2					
6-Aug	5	6	7	6	4	7	4	6	11	12	16	23	26	27	23	25	23	18	15	13	8	10	7	5	12.7	27.2					
7-Aug	5	9	7	6	6	6	5	5	6	10	18	18	19	21	19	17	16	19	13	6	5	4	7	4	10.5	21.3					
8-Aug	3	3	2	1	2	2	3	2	3	2	2	2	3	3	4	6	6	5	8	8	7	5	4	2	3.6	8.1					
9-Aug	2	1	2	3	2	3	3	2	2	3	4	5	4	5	6	2	2	3	3	4	2	3	2	1	2.8	6.4					
10-Aug	1	2	3	3	4	8	5	7	9	10	10	5	8	10	11	6	5	3	3	4	2	0	1	2	5.2	10.7					
11-Aug	4	5	5	5	3	2	2	2	5	5	7	9	10	9	8	9	7	8	9	7	8	8	8	5	6.2	9.7					
12-Aug	6	7	4	6	6	7	5	8	7	6	7	6	6	7	7	6	4	5	4	5	3	3	3	2	5.4	8.0					
13-Aug	3	2	2	2	3	3	1	4	4	5	5	6	7	8	10	12	14	9	12	9	9	8	9	7	6.4	14.1					
14-Aug	7	9	9	7	7	4	6	6	7	11	14	20	20	23	24	25	15	13	17	13	6	3	6	2	11.5	25.1					
15-Aug	5	5	4	2	4	4	6	7	11	13	11	13	12	7	7	5	7	6	6	6	5	4	4	3	6.5	12.7					
16-Aug	2	2	3	1	1	1	2	2	4	5	5	5	5	5	4	5	6	5	5	4	3	2	2	4	3.5	6.2					
17-Aug	3	2	3	3	2	1	2	4	4	5	4	7	10	10	12	12	16	16	12	9	7	7	7	7	6.9	15.8					
18-Aug	10	8	7	5	4	3	2	1	4	5	8	5	5	6	5	4	3	2	4	6	4	3	3	1	4.5	9.6					
19-Aug	1	1	1	3	2	3	2	2	3	3	2	2	3	4	4	3	4	4	5	3	1	0	2	2	2.5	5.0					
20-Aug	2	1	3	1	1	1	0	2	3	4	3	2	4	5	7	6	4	3	4	3	4	1	1	0	2.8	6.6					
21-Aug	2	2	1	0	2	2	1	1	2	4	5	5	5	6	7	6	6	5	5	4	4	3	3	3	3.4	7.0					
22-Aug	3	2	4	2	2	1	2	3	7	10	11	13	12	16	18	16	12	7	7	6	6	5	3	2	7.0	17.8					
23-Aug	1	2	5	5	4	6	3	3	3	2	2	1	3	2	1	2	1	3	5	3	7	14	10	11	4.2	13.5					
24-Aug	12	12	14	13	11	10	9	7	4	2	5	5	5	4	3	3	2	3	6	7	5	6	5	5	6.5	13.9					
25-Aug	3	2	2	3	4	4	2	1	2	3	5	11	13	14	13	10	5	7	8	6	7	6	7	10	6.1	13.6					
26-Aug	3	2	1	2	5	5	5	8	10	13	12	8	10	11	12	14	14	3	6	7	6	3	4	2	6.8	13.8					
27-Aug	3	2	1	0	1	3	4	4	4	4	6	7	7	9	7	9	9	8	5	5	6	6	7	6	5.2	9.4					
28-Aug	7	5	3	3	4	2	2	1	3	3	5	6	7	7	8	2	6	9	7	2	3	4	4	3	4.4	8.5					
29-Aug	5	8	6	10	7	4	6	8	11	13	13	17	15	14	14	17	12	11	12	10	7	12	12	9	10.6	17.1					
30-Aug	10	8	12	15	18	17	13	14	13	7	6	7	10	12	13	12	12	12	10	6	3	2	2	3	10.0	18.2					
31-Aug	3	3	4	3	4	5	6	11	9	9	12	23	24	30	31	24	13	10	10	18	9	10	10	15	12.4	31.5					
4.6 4.3 4.4 4.2 4.2 4.3 3.7 4.7 6.3 7.0 7.9 9.1 10.1 10.8 11.2 10.3 9.1 8.1 7.9 6.8 5.5 5.2 5.2 4.8																									Diurnal Average						
12.3 12.4 13.9 14.7 18.2 16.7 13.3 13.6 19.5 21.3 21.0 23.4 26.3 30.3 31.5 25.1 22.9 19.0 17.0 17.6 13.0 13.5 12.1 15.0																									Diurnal Maximum						
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg

Henry Pirker - August 2018

Maximum Value: 95.6 deg on Aug 19 12:00																			Hours in Service: 744						
Minimum Value: 4.9 deg on Aug 30 05:00																			Hours of Data: 744						
Percentiles: P ₁ = 5.8 P ₁₀ = 8.1 Q ₁ = 10.3 Median = 15.3 Q ₃ = 26.0 P ₉₀ = 45.2 P ₉₉ = 83.4																			Hours of Missing Data: 0						
																			Hours of Calibration: 0						
																			Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	78	70	51	33	32	47	91	20	25	16	23	55	84	62	46	35	61	49	19	34	93	46	31	34	92.9
2-Aug	15	8	15	31	47	21	15	21	13	14	13	13	14	13	20	12	10	9	8	8	6	12	14	14	47.3
3-Aug	13	12	12	23	15	10	14	14	6	7	10	12	10	10	7	9	8	6	5	19	11	11	8	6	22.6
4-Aug	6	15	14	21	12	9	15	13	9	12	12	17	17	12	16	15	14	15	51	11	11	34	10	85	85.0
5-Aug	21	13	17	32	18	12	13	14	16	16	19	18	19	20	25	21	24	21	18	12	9	8	8	9	32.1
6-Aug	7	6	7	19	41	24	45	29	7	10	9	8	8	6	6	7	6	9	7	7	9	6	12	10	45.3
7-Aug	15	10	14	23	17	14	12	39	31	10	7	9	8	8	8	8	11	11	16	10	13	14	45	25	45.1
8-Aug	42	19	43	44	27	18	6	18	13	19	32	45	31	34	38	21	22	17	12	10	12	30	23	14	44.8
9-Aug	71	40	20	7	13	48	29	45	32	44	16	22	32	25	24	48	66	52	25	28	24	17	13	66	71.0
10-Aug	69	26	49	28	26	11	14	10	9	6	10	9	9	8	8	13	17	27	17	13	33	92	27	18	92.1
11-Aug	23	9	22	15	21	25	29	21	14	15	10	12	11	9	11	11	11	11	8	10	9	12	15	10	29.4
12-Aug	13	11	16	8	13	11	12	10	9	11	12	14	11	10	14	18	38	21	23	12	16	13	16	18	38.0
13-Aug	14	17	17	16	10	17	38	14	16	16	19	17	19	17	19	19	9	9	10	8	8	9	7	11	37.7
14-Aug	10	8	7	15	19	9	10	10	9	9	10	9	8	8	8	7	9	14	6	10	9	28	15	27	27.9
15-Aug	23	15	18	24	21	22	7	14	7	9	6	13	21	32	32	50	29	20	14	8	10	10	16	10	50.2
16-Aug	18	20	13	47	44	49	34	28	15	17	19	19	21	20	23	12	11	9	10	21	22	82	87	44	86.7
17-Aug	43	30	45	55	65	64	29	17	17	20	31	16	9	13	9	18	11	8	7	10	8	17	7	8	64.6
18-Aug	12	8	22	13	13	16	33	36	11	13	14	53	45	39	34	55	41	73	23	11	7	13	10	23	72.7
19-Aug	55	65	37	14	28	17	21	24	16	22	43	96	78	51	64	58	55	31	19	15	44	81	20	12	95.6
20-Aug	16	36	7	37	45	28	72	32	15	21	22	60	30	32	32	26	37	29	10	10	5	38	27	59	72.5
21-Aug	39	24	21	36	6	18	32	22	20	14	19	19	23	21	17	28	15	12	10	9	11	13	41	70	70.0
22-Aug	13	41	30	66	90	74	79	25	12	10	9	8	12	17	9	8	7	13	9	35	22	22	43	49	89.7
23-Aug	39	70	15	16	19	15	20	27	20	26	22	45	13	42	38	70	82	78	26	26	65	6	9	10	81.9
24-Aug	7	7	6	14	8	8	8	12	49	43	50	38	33	50	69	79	74	64	15	11	11	7	9	11	79.3
25-Aug	25	16	31	20	13	11	23	24	27	16	21	14	13	10	15	11	14	18	12	9	9	9	9	47	47.3
26-Aug	58	29	58	51	14	8	10	12	7	7	13	17	11	13	9	12	34	34	25	11	13	24	23	17	58.0
27-Aug	25	19	54	75	18	14	12	15	17	24	26	18	23	21	19	14	22	12	10	12	9	9	8	9	75.5
28-Aug	11	27	16	19	16	33	33	35	15	22	19	23	24	20	13	42	29	30	27	33	11	9	10	27	41.9
29-Aug	27	9	17	11	29	33	21	10	14	8	12	11	11	16	12	8	11	14	18	12	16	11	10	8	33.0
30-Aug	12	11	8	11	5	6	7	8	8	18	21	14	11	11	6	10	8	9	7	17	13	14	12	16	20.8
31-Aug	11	12	10	13	21	32	24	8	9	10	10	9	8	8	8	10	8	11	10	12	9	9	22	7	32.0
78.1 70.2 58.0 75.5 89.7 73.9 91.5 45.5 48.7 43.6 49.7 95.6 84.4 61.9 68.7 79.3 81.9 78.1 50.9 34.6 92.9 92.1 86.7 85.0																									

PAZA
Evergreen Park Station
Monthly Summary Tables, Graphs and
Roses

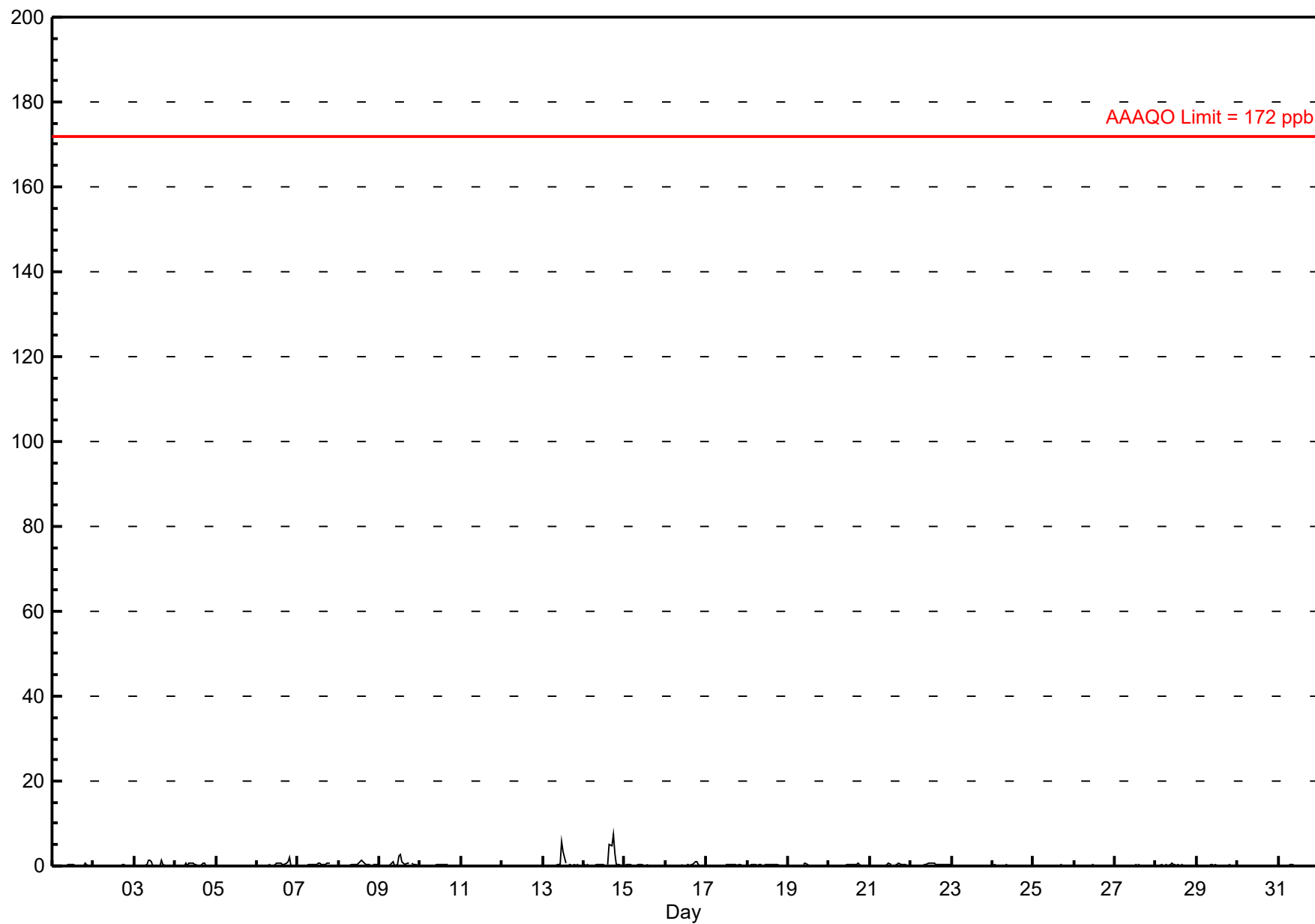
Hourly Averages

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 7.4 ppb on Aug 14 18:00 Maximum Daily Average: 1.1 ppb on Aug 14																				Hours in Service: 744 Hours of Data: 706						
Minimum Value: 0 ppb on Aug 1 18:00 Minimum Daily Average: 0.0 ppb on Aug 11 Maximum Diurnal Average: 0.5 ppb at hour 18 Minimum Diurnal Average: 0.1 ppb at hour 5 Monthly Average: 0.21 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.4 P ₉₉ = 2.3																				Hours of Missing Data: 38 Hours of Calibration: 38 Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.2	0.5
2-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
3-Aug	0	A	0	0	0	0	0	0	2	1	1	0	C	C	C	0	1	0	0	0	0	0	0	0	0.3	1.5
4-Aug	A	0	0	0	0	0	1	0	1	1	1	0	0	0	0	0	1	1	0	0	0	0	0	A	0.3	0.8
5-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.0	0.1
6-Aug	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	1	1	2	0	A	0	0	0.3	1.9
7-Aug	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	1	A	0	0	0	0.3	0.7
8-Aug	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	A	0	0	0	0	0.4	1.5
9-Aug	0	0	0	0	0	0	0	1	1	0	0	2	3	1	1	0	1	1	A	1	0	0	0	0	0.5	2.7
10-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.4
11-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.1
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.1
13-Aug	0	0	0	0	0	0	0	0	0	0	0	6	3	1	A	0	0	0	0	0	0	0	0	0	0.5	5.6
14-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	5	5	7	3	0	0	0	0	0	1.1	7.4
15-Aug	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
16-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	1	0	0	0	0	0	0.2	1.1
17-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
18-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
19-Aug	0	0	0	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
20-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.2	0.5
21-Aug	0	0	0	0	0	0	A	0	0	0	0	1	0	C	C	0	0	1	0	0	0	0	0	0	0.2	0.6
22-Aug	0	0	0	0	0	A	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.3	0.7
23-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
24-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
25-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
26-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
27-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.2
28-Aug	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
29-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.3
30-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.0	0.2
31-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.4
0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.2 0.3 0.5 0.4 0.3 0.2 0.3 0.4 0.5 0.3 0.2 0.1 0.1 0.1 0.1																									Diurnal Average	
0.3 0.3 0.2 0.3 0.2 0.2 0.7 0.6 1.5 1.5 1.0 5.6 3.4 1.5 0.9 5.1 4.9 7.4 3.1 1.9 0.5 0.3 0.2 0.2																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

Hourly Averages

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



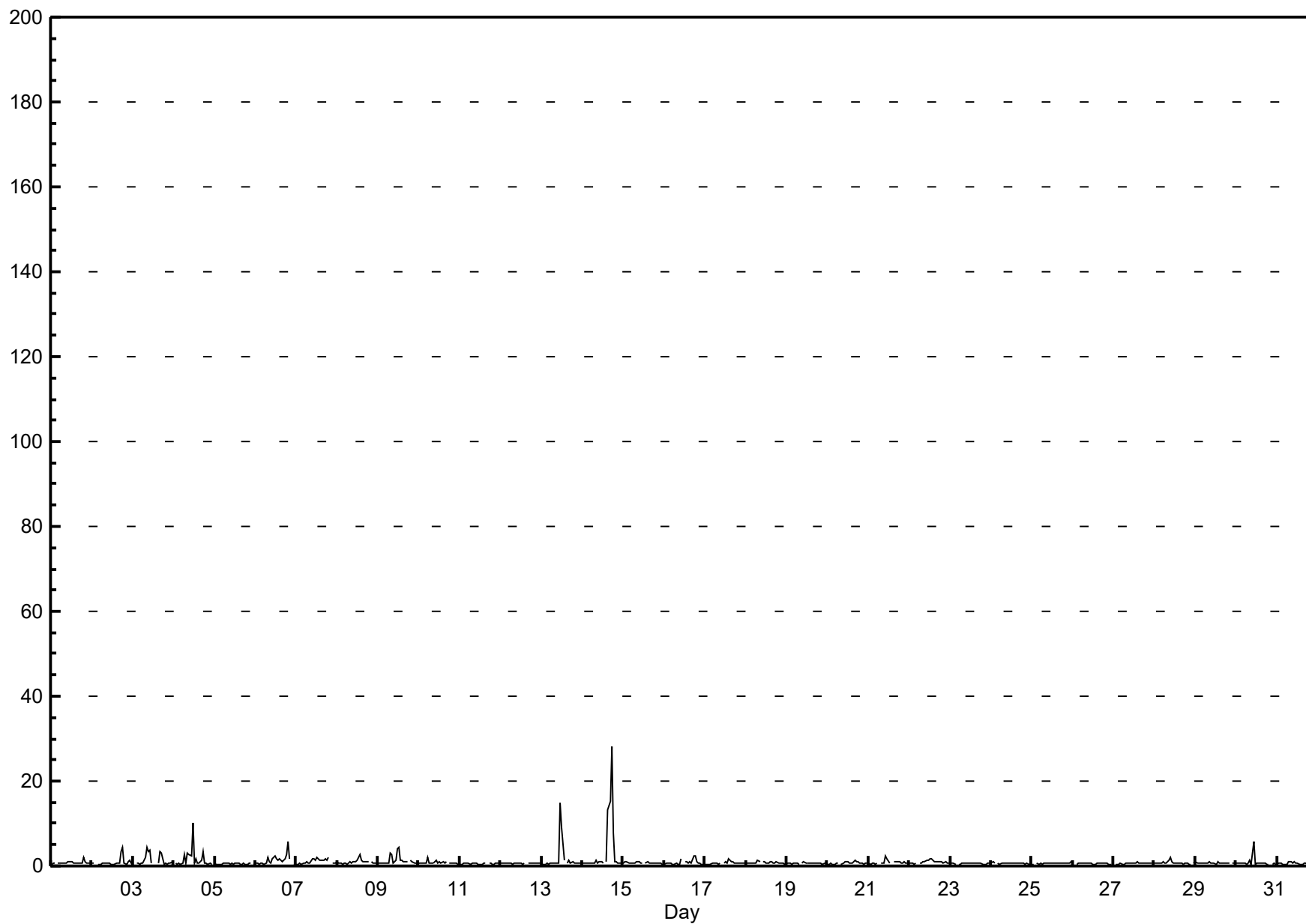
Hourly Maximums

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

Maximum Value: 28.2 ppb on Aug 14 18:00																				Maximum Daily Average: 3.5 ppb on Aug 14										Hours in Service: 744	
Minimum Value: 0 ppb on Aug 23 04:00																				Minimum Daily Average: 0.5 ppb on Aug 5										Hours of Data: 706	
Maximum Diurnal Average: 2.0 ppb at hour 18																				Minimum Diurnal Average: 0.6 ppb at hour 4										Hours of Missing Data: 38	
Monthly Average: 0.93 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.5 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.8 P ₉₀ = 1.2 P ₉₉ = 5.9										Hours of Calibration: 38	
																				Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Aug	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	0.8	2.1					
2-Aug	1	1	A	0	0	0	1	1	1	1	1	0	0	0	1	1	1	3	4	1	0	1	1	1	0.9	4.4					
3-Aug	0	A	1	1	0	1	1	2	4	3	4	1	C	C	C	1	3	3	0	1	0	1	1	1	1.4	4.4					
4-Aug	A	1	0	1	0	1	3	1	3	3	2	10	1	2	1	1	1	3	1	1	0	1	0	A	1.6	10.1					
5-Aug	1	0	0	0	0	1	1	1	1	0	1	0	1	1	1	0	0	1	0	0	1	1	A	0	0.5	0.8					
6-Aug	1	1	0	1	1	0	1	2	1	1	2	2	2	1	2	1	1	2	3	6	2	A	0	0	1.4	5.8					
7-Aug	0	0	1	0	1	1	1	1	1	2	2	1	2	2	1	1	1	2	1	2	A	1	1	1	1.1	2.1					
8-Aug	1	1	1	0	1	1	0	1	1	1	1	1	1	3	1	1	1	1	1	A	1	1	1	1	0.9	2.6					
9-Aug	1	1	1	1	1	1	1	3	3	1	1	4	4	1	1	1	1	1	A	1	1	1	1	0	1.3	4.4					
10-Aug	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0	0.8	2.2					
11-Aug	1	1	1	1	1	1	0	1	1	1	1	0	0	0	1	1	A	1	1	0	0	1	1	1	0.5	0.8					
12-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	1	1	1	1	1	1	1	1	0.6	0.8					
13-Aug	1	0	0	1	0	1	1	1	1	1	1	15	9	1	A	1	1	1	1	1	1	1	1	1	1.7	15.0					
14-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	13	15	28	8	1	1	1	1	1	3.5	28.2					
15-Aug	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	0.7	1.0					
16-Aug	0	1	1	1	1	0	0	1	0	0	2	A	1	1	1	1	1	2	2	1	1	1	0	0	0.8	2.3					
17-Aug	0	0	0	0	1	1	1	1	0	1	A	1	1	1	2	1	1	1	1	1	1	1	1	1	0.7	1.7					
18-Aug	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2					
19-Aug	1	1	1	0	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0.6	1.1					
20-Aug	0	0	1	0	0	1	1	A	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2					
21-Aug	1	0	1	1	0	1	A	1	1	1	2	2	1	C	C	1	1	1	1	1	1	1	1	1	0.8	2.3					
22-Aug	1	1	1	0	1	A	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	0.9	1.7					
23-Aug	1	1	1	0	A	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	0.5	0.7					
24-Aug	1	1	1	A	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0.6	1.0					
25-Aug	0	0	A	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9					
26-Aug	1	A	0	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	0	0	0	0.6	0.8					
27-Aug	A	0	0	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.6	0.9					
28-Aug	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	0	0	A	1	0.8	1.9					
29-Aug	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	A	1	1	0.7	1.1					
30-Aug	1	1	1	1	1	1	0	1	1	1	6	0	1	1	1	1	1	1	0	0	A	0	1	0	0.8	5.9					
31-Aug	0	1	1	0	0	0	0	1	1	1	1	1	1	0	1	0	1	1	0	A	1	1	0	1	0.6	1.1					
0.6 0.6 0.6 0.6 0.6 0.6 0.7 0.8 1.0 0.9 1.3 1.8 1.2 0.9 0.9 1.2 1.4 2.0 1.2 1.0 0.7 0.6 0.6 0.6																									Diurnal Average						
1.0 1.0 0.9 0.8 0.8 2.2 2.8 3.0 4.4 3.5 5.9 15.0 9.2 2.6 1.7 13.3 15.2 28.2 7.9 5.8 1.8 1.1 1.4 0.9																									Diurnal Maximum						
C - Calibration A - Automated Daily Zero Span																															

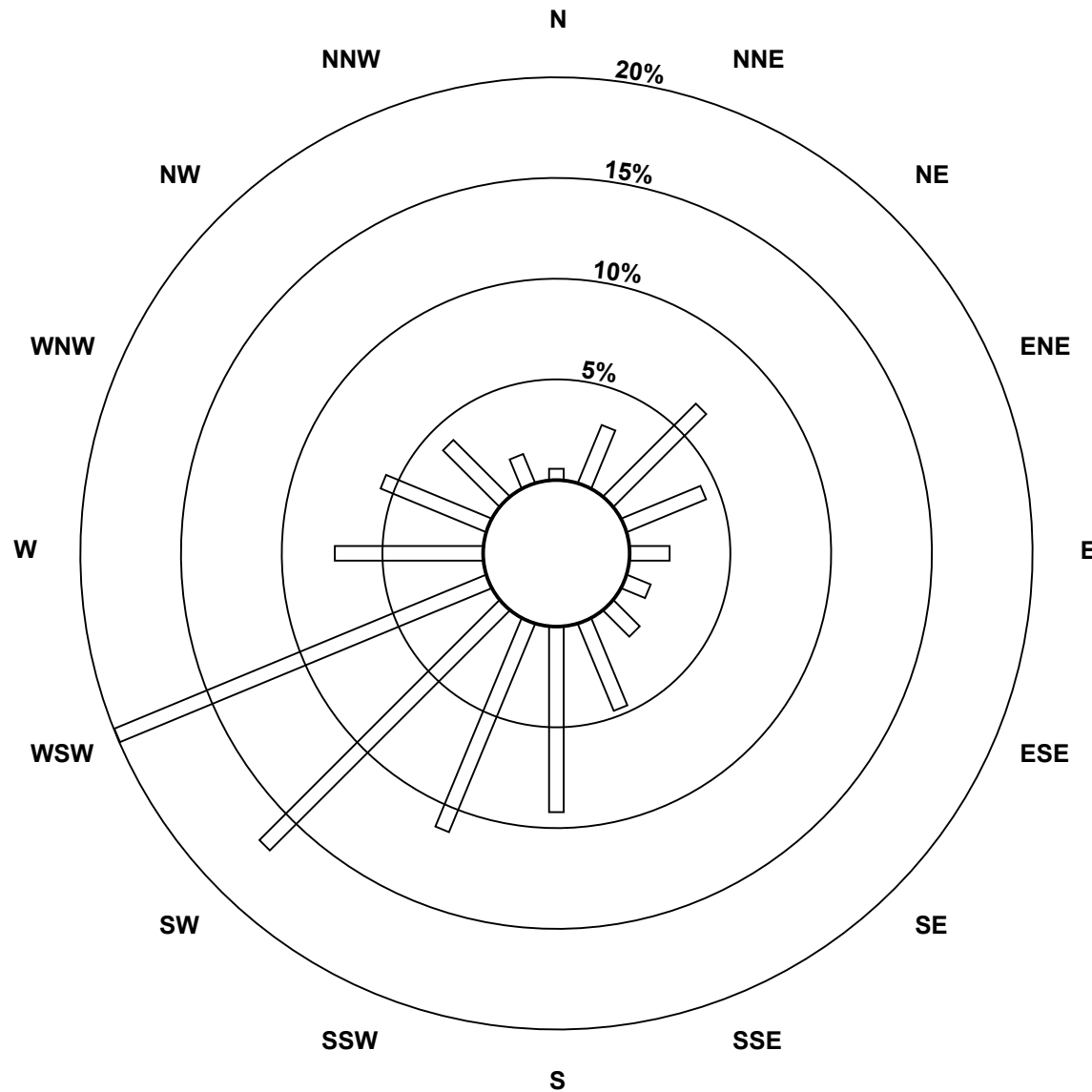
Hourly Maximums

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

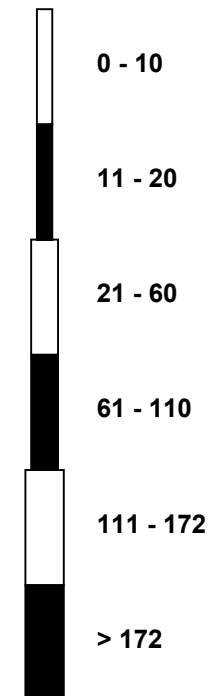


Pollutant Rose

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

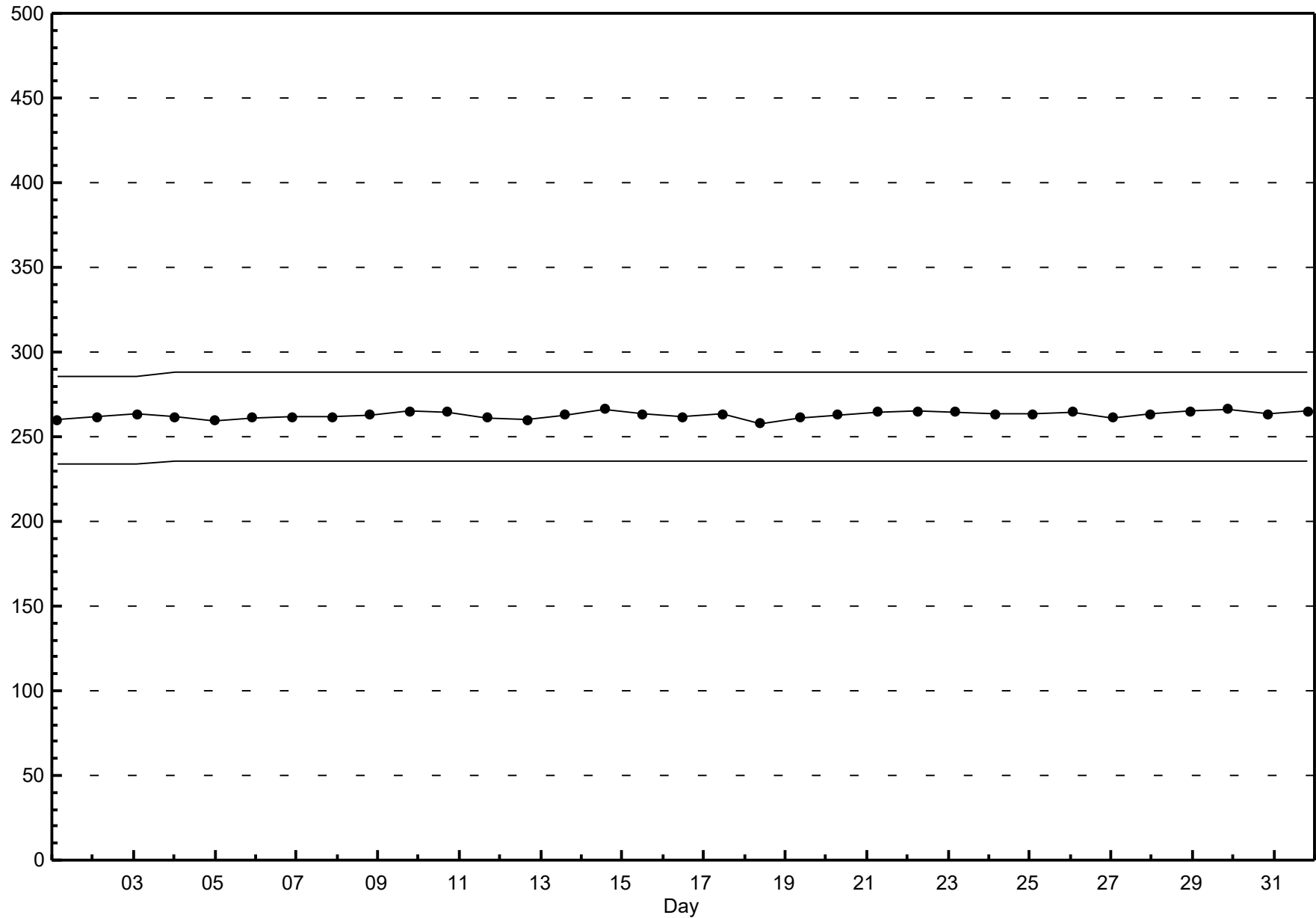


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Evergreen Park - August 2018



Hourly Averages

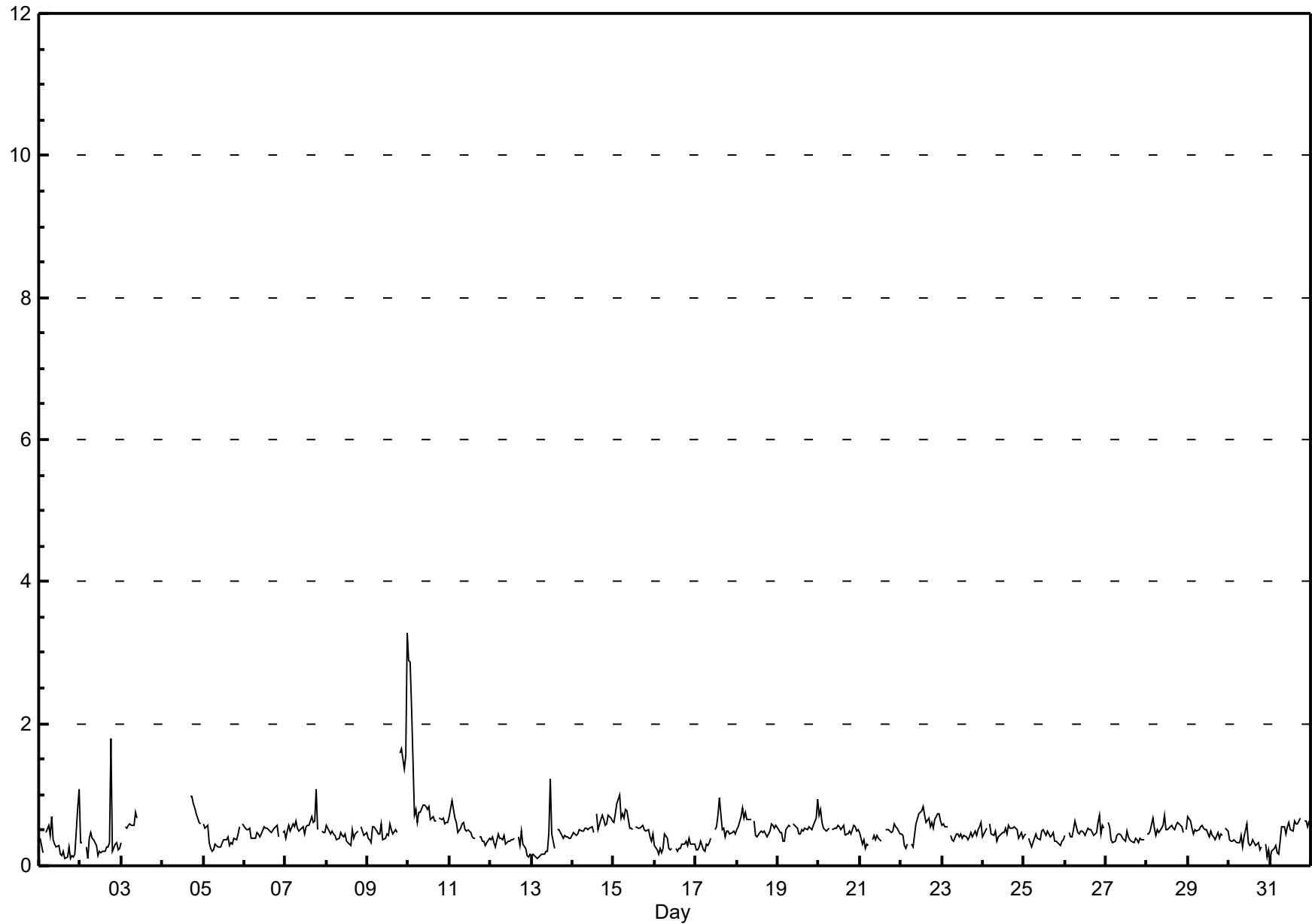
Total Reduced Sulphur (TRS) - ppb

Evergreen Park - August 2018

Maximum Value: 3.3 ppb on Aug 10 00:00																				Maximum Daily Average: 1.0 ppb on Aug 10				Hours in Service: 744		
Minimum Value: 0 ppb on Aug 31 01:00																				Minimum Daily Average: 0.3 ppb on Aug 16				Hours of Data: 680		
Maximum Diurnal Average: 0.6 ppb at hour 24																				Minimum Diurnal Average: 0.4 ppb at hour 5				Hours of Missing Data: 64		
Monthly Average: 0.49 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.3 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.6 P ₉₀ = 0.7 P ₉₉ = 1.6				Hours of Calibration: 44		
																								Percent Operational Time: 97.3		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	0	A	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.3	1.1
2-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0.3	1.8
3-Aug	0	A	1	1	1	1	1	1	1	1	C	C	C	C	C	C	M	M	M	M	M	M	M	M	--	0.7
4-Aug	M	M	M	M	M	M	M	M	M	M	M	M	C	C	C	C	1	1	1	1	1	1	1	A	--	1.0
5-Aug	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	1	0.4	0.6
6-Aug	1	1	1	1	0	0	0	0	0	0	0	1	1	1	1	0	0	1	1	1	0	A	0	0	0.5	0.6
7-Aug	0	0	1	0	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	1	A	0	0	0	0.6	1.1
8-Aug	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	A	1	0	0	0	0.4	0.6
9-Aug	0	0	0	1	1	0	0	0	1	0	0	0	0	1	1	0	1	0	A	2	1	2	3	3	0.8	3.3
10-Aug	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1.0	2.9
11-Aug	1	1	1	1	1	0	1	1	1	1	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0.5	0.9
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	0.5
13-Aug	0	0	0	0	0	0	0	0	0	0	0	1	0	0	A	1	1	0	0	0	0	0	0	0	0.3	1.2
14-Aug	0	0	0	0	1	0	0	1	1	1	1	1	0	A	1	1	1	1	1	1	1	1	1	1	0.6	0.7
15-Aug	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	1	0	0	0	0.6	1.0
16-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
17-Aug	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	1	1	0	0	0	0	0	0	0	0.4	1.0
18-Aug	1	1	1	1	1	1	1	1	1	A	1	0	0	0	0	0	0	0	0	0	1	1	1	1	0.6	0.8
19-Aug	1	0	0	0	0	1	1	1	A	1	1	1	0	0	1	0	1	1	1	1	1	1	1	1	0.5	0.9
20-Aug	1	1	1	1	0	1	1	A	1	1	1	1	1	1	1	0	0	0	0	0	1	1	0	1	0.5	0.8
21-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	C	C	1	1	0	0	0	1	1	1	0	0.4	0.6
22-Aug	0	0	0	0	0	A	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8
23-Aug	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.5	0.6
24-Aug	0	0	1	A	1	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	0	0	0	0.5	0.6
25-Aug	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
26-Aug	0	A	0	0	0	1	1	0	0	0	0	0	0	1	1	1	0	0	0	1	1	0	1	1	0.5	0.7
27-Aug	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0.4	0.6
28-Aug	0	0	0	1	1	0	1	0	1	1	1	1	1	1	1	1	0	1	1	1	1	0	A	1	0.5	0.7
29-Aug	1	1	1	0	1	0	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	A	1	0	0.5	0.7
30-Aug	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	0.6
31-Aug	0	0	0	0	0	0	0	1	1	0	1	1	1	0	1	1	1	1	1	A	1	1	1	1	0.5	0.7
0.5 0.5 0.5 0.4 0.4 0.4 0.5 0.5 0.5 0.4 0.5 0.5 0.4 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.6																									Diurnal Average	
2.9 2.9 2.2 1.0 0.8 0.8 0.8 0.8 0.9 0.9 0.8 1.2 0.8 0.8 1.0 0.7 1.0 1.0 1.8 1.6 1.7 1.4 1.5 3.3																									Diurnal Maximum	
C - Calibration M - Maintenance A - Automated Daily Zero Span																										

Hourly Averages

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



Hourly Maximums

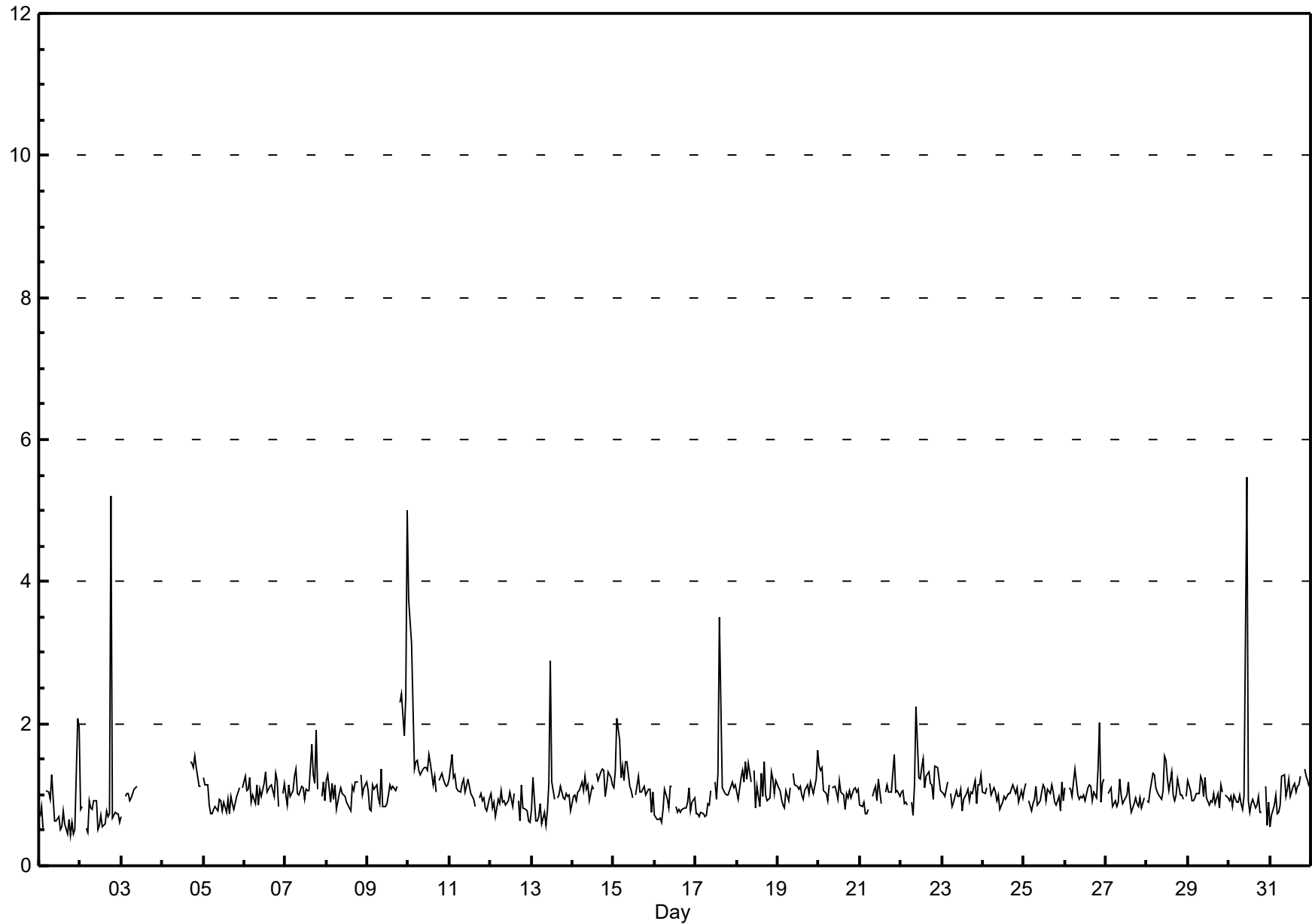
Total Reduced Sulphur (TRS) - ppb

Evergreen Park - August 2018

Maximum Value: 5.5 ppb on Aug 30 11:00																				Maximum Daily Average: 1.6 ppb on Aug 10										Hours in Service: 744									
Minimum Value: 0 ppb on Aug 1 19:00																				Minimum Daily Average: 0.8 ppb on Aug 1										Hours of Data: 680									
Maximum Diurnal Average: 1.2 ppb at hour 24																				Minimum Diurnal Average: 0.9 ppb at hour 5										Hours of Missing Data: 64									
Monthly Average: 1.07 ppb																				Percentiles: P ₁ = 0.5 P ₁₀ = 0.8 Q ₁ = 0.9 Median = 1.0 Q ₃ = 1.1 P ₉₀ = 1.3 P ₉₉ = 2.9										Hours of Calibration: 44									
																				Percent Operational Time: 97.3																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Aug	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0	1	2	2	0.8	2.1													
2-Aug	1	1	A	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1	1	1	1	1	0.9	5.2													
3-Aug	1	A	1	1	1	1	1	1	1	1	C	C	C	C	C	C	M	M	M	M	M	M	M	M	--	1.1													
4-Aug	M	M	M	M	M	M	M	M	M	M	M	M	C	C	C	C	1	1	1	2	1	1	1	A	--	1.5													
5-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.9	1.2													
6-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1.1	1.3													
7-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	2	1	A	1	1	1	1.1	1.9													
8-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1.0	1.3													
9-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	2	2	5	1	1.4	5.0													
10-Aug	4	3	3	1	1	1	1	1	1	1	1	1	2	1	1	1	1	A	1	1	1	1	1	1	1.6	3.7													
11-Aug	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1.1	1.6													
12-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.9	1.1													
13-Aug	1	1	1	1	1	1	1	1	1	1	1	3	1	1	A	1	1	1	1	1	1	1	1	1	1.0	2.9													
14-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1.1	1.4													
15-Aug	1	1	2	2	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1.2	2.1													
16-Aug	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1													
17-Aug	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	3	1	1	1	1	1	1	1	1	1.1	3.5													
18-Aug	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	1.5													
19-Aug	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.1	1.6													
20-Aug	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.4													
21-Aug	1	1	1	1	1	1	A	1	1	1	1	1	1	C	C	1	1	1	1	1	2	1	1	1	1.0	1.6													
22-Aug	1	1	1	1	1	A	1	1	1	2	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1.2	2.2													
23-Aug	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.3													
24-Aug	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.2													
25-Aug	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.2													
26-Aug	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1.1	2.0													
27-Aug	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.9	1.2													
28-Aug	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	A	1	1.1	1.5													
29-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1.0	1.3													
30-Aug	1	1	1	1	1	1	1	1	1	1	5	1	1	1	1	1	1	1	1	1	A	1	1	1	1.1	5.5													
31-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1.0	1.4													
1.1 1.1 1.1 1.0 0.9 1.0 1.0 1.0 1.0 1.1 1.2 1.1 1.0 1.0 1.1 1.0 1.0 1.0 1.2 1.1 1.2 1.0 1.1 1.2																									Diurnal Average														
3.7 3.4 3.1 1.8 1.5 1.5 1.4 1.5 1.5 2.2 5.5 2.9 1.6 1.5 3.5 1.7 1.5 1.4 5.2 2.3 2.4 1.8 2.4 5.0																									Diurnal Maximum														
C - Calibration M - Maintenance A - Automated Daily Zero Span																																							

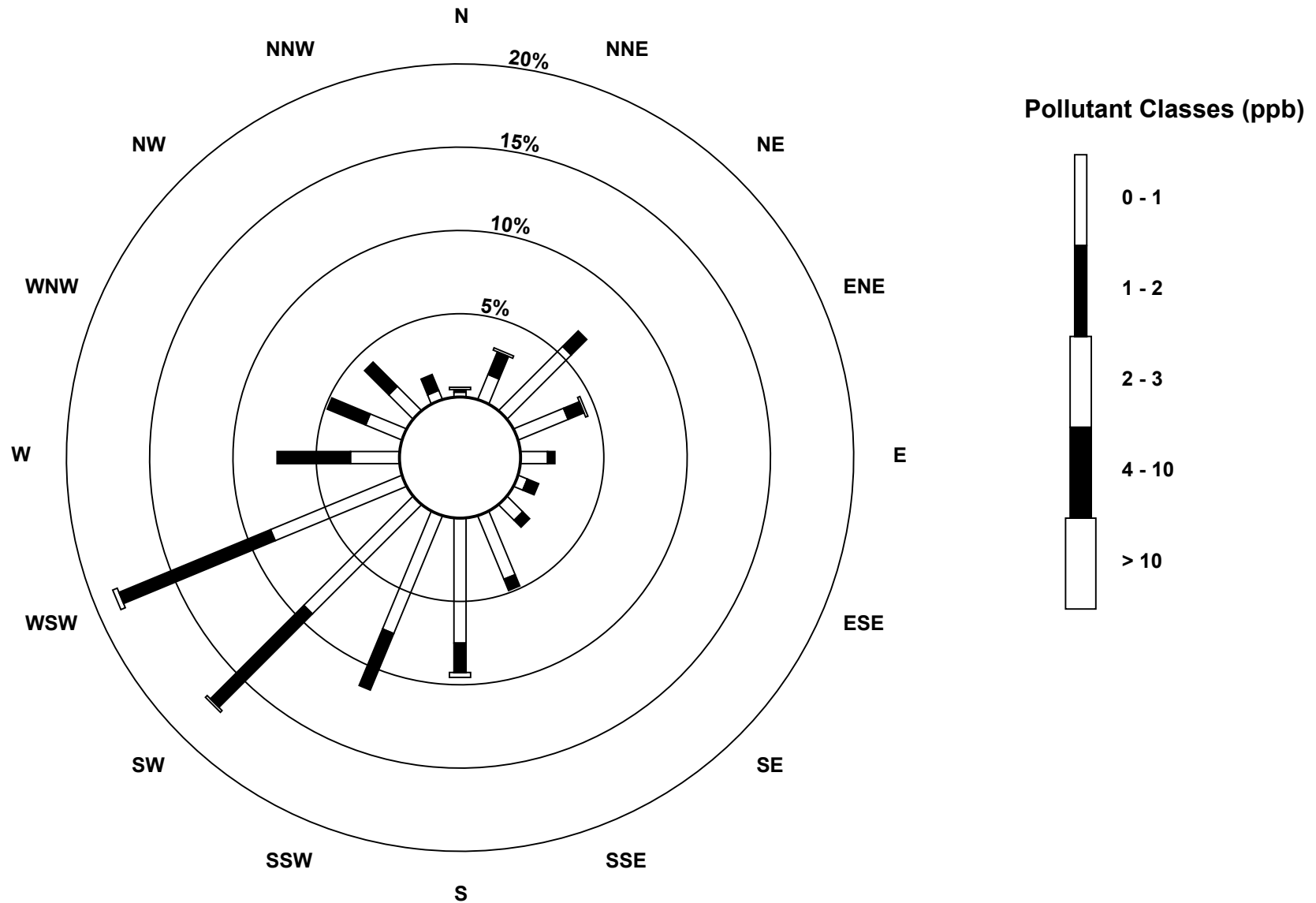
Hourly Maximums

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



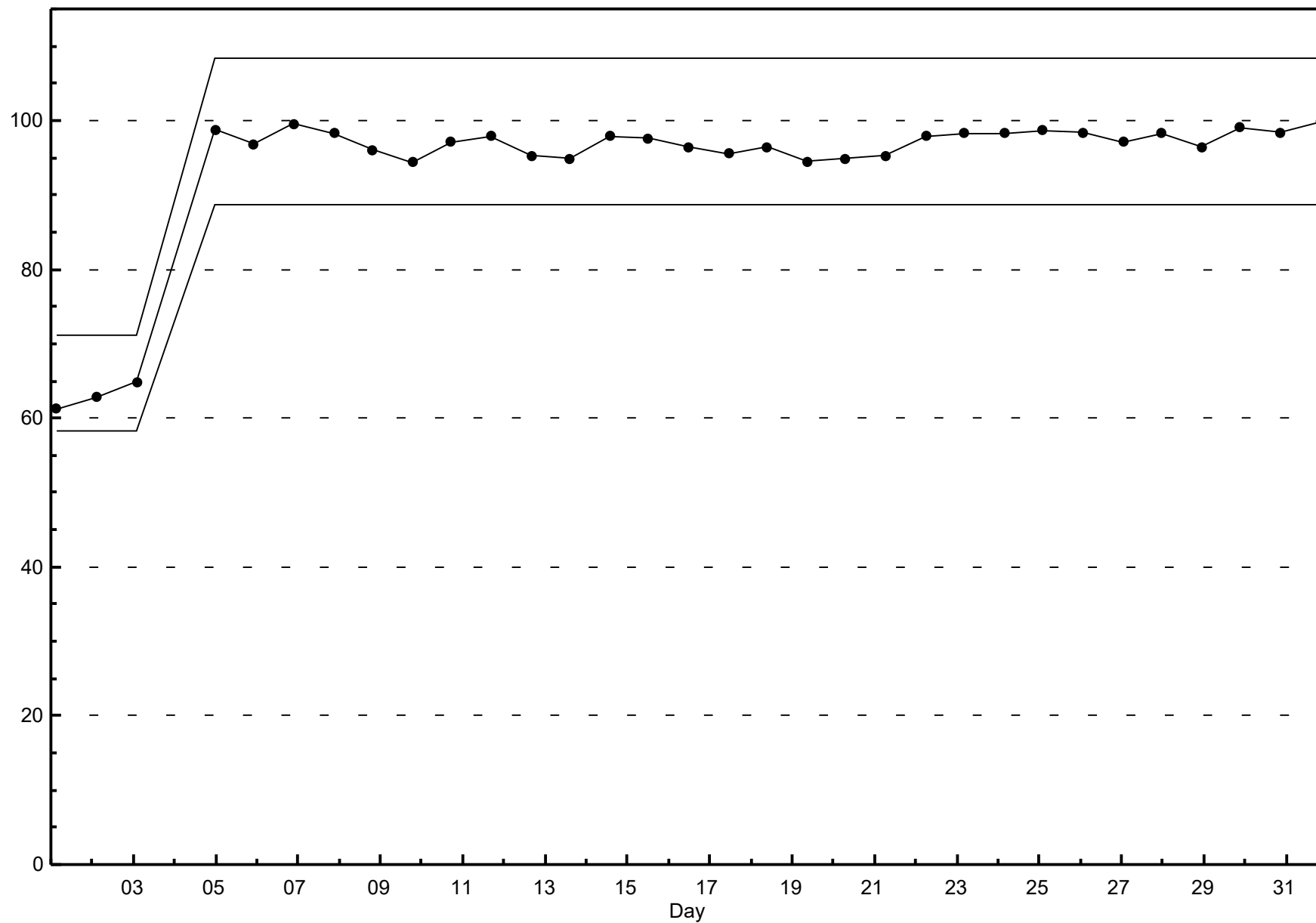
Pollutant Rose

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



Span Responses

Total Reduced Sulphur (TRS)
Evergreen Park - August 2018



Hourly Averages

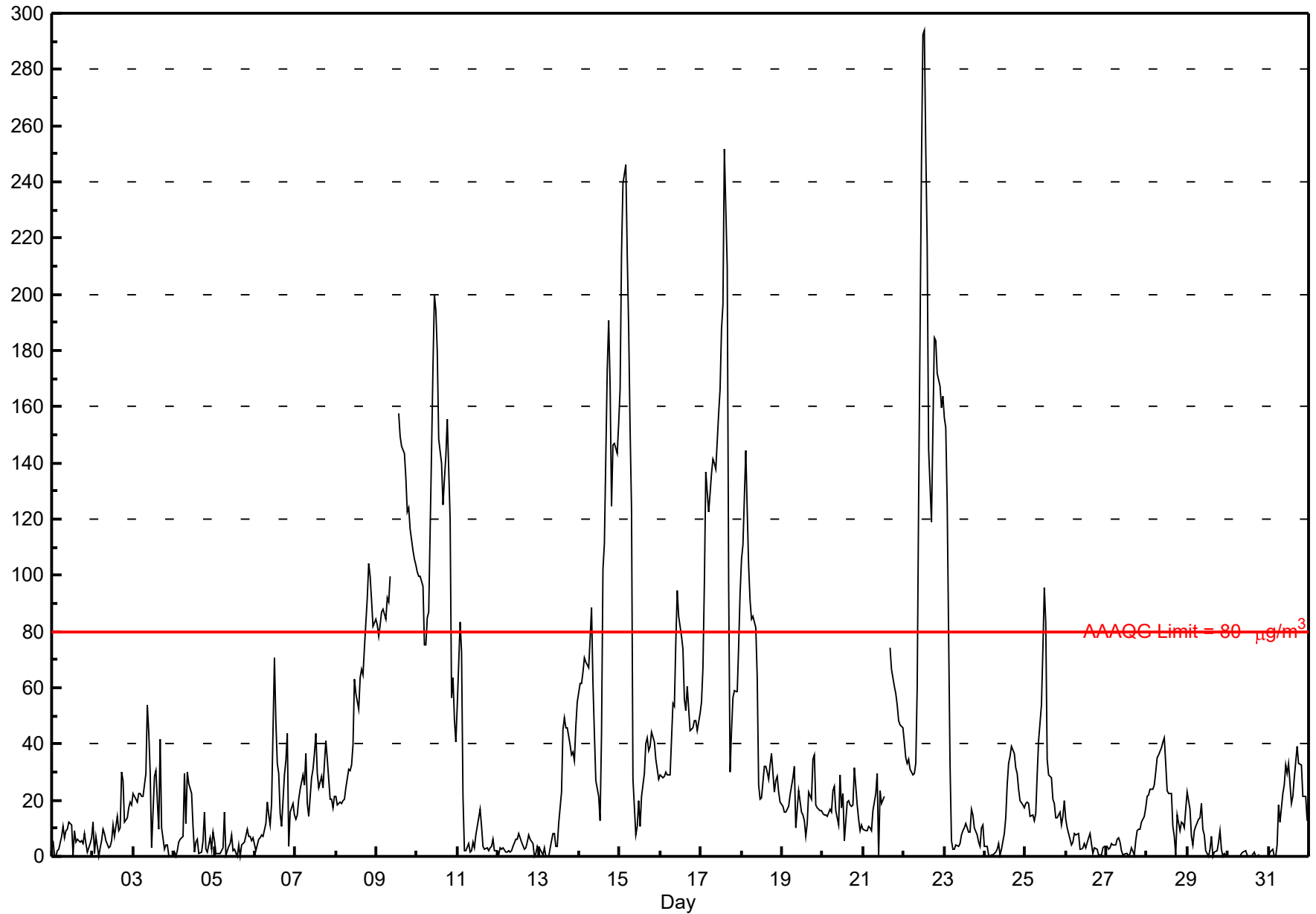
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Evergreen Park - August 2018

Number of Exceedences: 1-hr: 110 24-hr: 10 Maximum Value: 293.7 µg/m³ on Aug 22 13:00 Minimum Value: 0 µg/m³ on Aug 1 03:00 Maximum Diurnal Average: 45.4 µg/m³ at hour 15 Monthly Average: 36.57 µg/m³																								Hours in Service: 744 Hours of Data: 737 Hours of Missing Data: 7 Hours of Calibration: 7 Percent Operational Time: 100.0		
Maximum Daily Average: 133.4 µg/m³ on Aug 22 Minimum Daily Average: 0.3 µg/m³ on Aug 30 Minimum Diurnal Average: 29.4 µg/m³ at hour 6 Percentiles: P ₁ = 0.0 P ₁₀ = 1.5 Q ₁ = 5.2 Median = 18.2 Q ₃ = 41.5 P ₉₀ = 104.8 P ₉₉ = 216.1																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Aug	5	1	0	2	3	7	11	7	9	10	12	11	1	9	5	6	5	5	4	8	4	1	5	7	5.8	12.3
2-Aug	12	1	7	0	3	6	10	8	6	3	3	6	11	7	14	9	10	30	27	12	14	17	19	18	10.6	30.1
3-Aug	22	20	19	22	22	21	21	29	54	44	30	3	28	31	20	10	42	10	3	4	4	0	0	0	19.2	53.9
4-Aug	2	0	2	5	6	7	29	11	30	26	22	11	1	5	6	1	2	5	16	3	2	7	3	9	8.8	29.8
5-Aug	5	1	1	1	2	3	16	0	4	4	8	2	3	0	4	0	4	4	5	10	7	7	6	7	4.3	15.7
6-Aug	2	4	6	6	8	7	12	20	15	11	19	71	48	33	29	15	10	29	34	44	3	16	19	15	19.8	70.5
7-Aug	13	15	21	24	29	25	37	19	14	28	31	36	44	29	24	28	24	33	41	35	20	20	18	21	26.3	43.7
8-Aug	21	19	19	19	20	20	25	31	30	33	40	63	58	52	64	67	64	74	92	104	100	91	82	84	53.0	104.1
9-Aug	83	78	83	87	88	84	92	91	100	C	C	C	C	157	150	146	143	135	122	124	116	109	106	104	109.9	157.5
10-Aug	101	100	100	96	75	75	85	87	144	175	200	194	180	149	140	125	134	142	155	120	56	64	49	41	116.1	200.0
11-Aug	54	84	73	21	2	2	5	1	2	5	3	8	14	17	10	4	2	3	2	3	4	6	2	2	13.7	83.6
12-Aug	1	3	2	3	2	2	2	1	2	4	6	6	8	7	5	3	3	5	7	6	5	0	1	3	3.6	8.3
13-Aug	2	3	0	3	0	0	0	5	8	8	4	3	12	23	45	49	46	46	39	36	37	34	46	55	21.0	55.1
14-Aug	61	62	66	71	69	67	77	88	62	44	27	21	13	44	102	111	173	191	168	125	147	147	143	154	93.0	190.8
15-Aug	166	214	240	246	214	187	152	123	28	8	11	20	11	22	29	40	42	38	39	44	41	35	31	27	83.7	246.2
16-Aug	29	28	28	30	29	29	29	54	53	76	94	86	78	74	56	52	61	45	45	46	48	49	45	51	50.6	94.4
17-Aug	55	67	97	137	123	129	137	141	140	138	157	166	188	196	252	210	97	30	45	57	59	59	75	94	118.6	251.7
18-Aug	106	111	145	123	103	91	84	85	81	64	25	20	21	32	32	30	27	32	36	23	27	28	23	19	57.1	144.6
19-Aug	18	16	16	17	18	22	28	32	10	17	23	16	15	13	7	11	23	21	35	36	18	17	16	16	19.2	36.0
20-Aug	15	15	15	14	17	16	24	25	16	11	29	17	22	6	19	20	19	18	19	32	18	13	9	11	17.5	31.7
21-Aug	10	9	9	10	10	9	16	23	29	0	23	19	21	C	C	C	74	67	60	58	54	48	47	46	30.6	74.5
22-Aug	41	35	33	35	31	29	29	33	60	126	246	292	294	252	217	145	119	152	185	184	172	168	160	164	133.4	293.7
23-Aug	156	153	126	32	6	2	3	4	4	4	8	9	10	12	9	9	17	15	10	8	5	3	10	11	26.1	156.1
24-Aug	3	4	1	0	0	1	2	3	4	1	2	8	14	25	33	36	39	37	32	30	24	20	18	17	14.7	39.4
25-Aug	19	19	19	14	15	13	15	29	41	54	74	96	83	34	29	28	20	19	14	14	16	11	14	20	29.6	95.5
26-Aug	13	10	6	4	5	8	8	8	3	2	3	5	3	7	8	5	1	3	3	1	0	1	3	4	4.8	13.2
27-Aug	4	3	3	5	4	4	6	7	5	2	0	1	1	0	1	3	1	6	9	10	10	12	14	17	5.3	17.2
28-Aug	21	22	24	24	25	30	35	36	38	41	42	33	23	22	22	11	7	0	15	9	12	12	10	17	22.2	42.5
29-Aug	23	17	7	4	9	11	13	14	19	10	8	2	0	3	7	0	2	2	5	9	3	0	1	0	7.0	22.7
30-Aug	0	0	0	0	0	0	0	0	1	2	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0.3	1.9
31-Aug	0	1	2	0	0	4	19	12	22	26	33	29	33	19	21	28	34	39	33	33	21	21	21	13	19.4	39.1
34.3 35.9 37.7 34.1 30.2 29.4 32.9 33.2 33.4 32.5 39.6 41.8 41.3 42.6 45.4 40.1 40.2 39.9 42.0 39.5 33.8 32.8 32.1 33.8																								Diurnal Average		
166.4 214.4 239.6 246.2 213.9 187.5 151.9 141.3 144.5 174.6 246.4 292.3 293.7 252.3 251.7 209.5 173.4 190.8 184.5 183.8 171.7 167.5 159.6 164.0																								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 - August 2018



Hourly Maximums

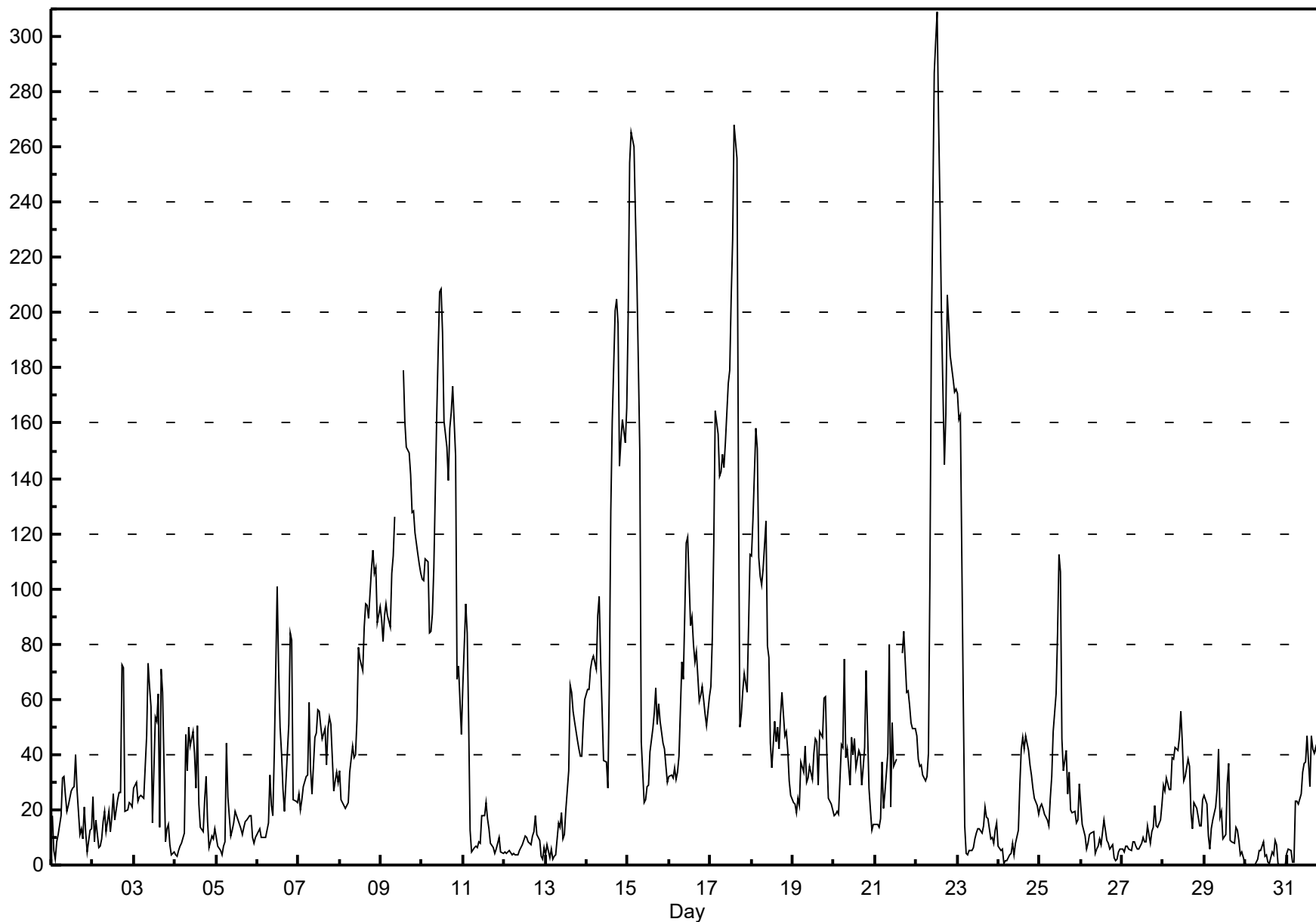
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Evergreen Park - August 2018

Maximum Value: 308.9 μg/m ³ on Aug 22 13:00																					Maximum Daily Average: 150.0 μg/m ³ on Aug 22										Hours in Service: 744	
Minimum Value: 0 μg/m ³ on Aug 30 01:00																					Minimum Daily Average: 2.3 μg/m ³ on Aug 30										Hours of Data: 737	
Maximum Diurnal Average: 62.2 μg/m ³ at hour 15																					Minimum Diurnal Average: 36.4 μg/m ³ at hour 6										Hours of Missing Data: 7	
Monthly Average: 47.41 μg/m ³																					Percentiles: P ₁ = 0.0 P ₁₀ = 5.4 Q ₁ = 12.0 Median = 28.2 Q ₃ = 59.0 P ₉₀ = 122.1 P ₉₉ = 255.3										Hours of Calibration: 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-Aug	18	5	2	8	11	18	31	32	25	19	21	27	28	28	40	27	11	13	9	21	12	5	13	13	18.3	40.1						
2-Aug	24	8	16	6	7	10	16	19	12	20	12	18	26	17	23	26	26	72	72	19	20	22	22	21	22.3	72.3						
3-Aug	28	30	23	25	25	24	24	47	73	65	57	15	54	52	62	13	71	63	8	13	15	7	4	5	33.5	72.8						
4-Aug	4	3	5	7	8	12	47	34	50	43	48	41	28	51	22	13	12	23	32	16	6	10	9	13	22.4	50.6						
5-Aug	10	7	5	3	7	8	44	24	11	13	15	20	18	15	13	11	14	16	16	18	18	10	8	10	13.9	44.0						
6-Aug	12	13	10	10	10	10	15	33	21	18	41	101	71	50	41	27	19	41	51	84	82	24	23	23	34.5	100.7						
7-Aug	26	20	24	28	32	32	59	35	26	46	48	56	56	51	46	49	36	49	54	51	27	30	34	30	39.3	59.0						
8-Aug	34	23	22	21	22	23	33	43	39	40	53	79	75	71	86	95	94	90	107	114	106	108	88	94	64.8	114.0						
9-Aug	89	81	90	95	90	86	105	112	126	C	C	C	C	179	161	152	149	141	128	128	120	113	109	105	118.0	179.1						
10-Aug	103	103	111	110	84	85	91	108	163	187	208	208	193	161	152	139	158	164	174	148	67	72	60	47	128.9	208.4						
11-Aug	65	95	84	52	13	5	6	7	6	9	8	18	18	23	17	13	8	6	4	6	8	10	5	4	20.3	94.8						
12-Aug	5	4	5	5	3	4	4	3	4	5	8	9	11	10	9	7	11	12	18	11	9	3	2	6	7.0	17.9						
13-Aug	4	7	3	6	2	3	4	15	13	19	9	11	20	34	65	62	56	52	45	42	39	39	52	60	27.6	65.2						
14-Aug	64	64	71	74	76	71	90	97	74	56	38	37	28	66	128	161	201	205	196	145	154	161	153	166	107.3	204.9						
15-Aug	200	255	265	260	235	212	181	150	45	22	23	28	29	41	50	55	64	51	58	52	44	42	36	30	101.2	265.1						
16-Aug	32	32	32	35	31	34	39	73	68	91	117	119	87	90	80	74	77	59	61	65	60	54	50	61	63.4	118.5						
17-Aug	65	82	116	165	156	141	143	149	144	153	174	179	205	227	268	256	141	50	55	63	69	62	87	113	135.9	268.2						
18-Aug	112	125	158	151	111	105	102	107	125	79	75	44	35	52	45	50	42	54	63	47	48	41	31	25	76.1	158.4						
19-Aug	22	22	19	24	21	38	33	43	30	31	35	31	40	45	45	29	49	46	61	61	39	24	22	20	34.7	61.2						
20-Aug	18	19	20	18	44	43	75	39	42	29	46	40	46	35	41	40	29	35	43	70	28	20	13	14	35.2	74.8						
21-Aug	15	15	14	17	37	20	26	41	80	21	52	35	38	C	C	C	77	85	63	63	58	51	49	49	43.1	84.8						
22-Aug	47	38	36	36	33	31	32	41	103	190	287	298	309	269	237	198	145	163	207	196	184	176	171	172	150.0	308.9						
23-Aug	171	162	163	61	14	4	4	5	5	6	10	12	13	13	12	14	21	17	17	10	10	8	13	15	32.5	170.8						
24-Aug	7	5	6	1	2	2	4	4	8	3	8	12	29	42	46	42	47	41	36	33	28	24	22	18	19.6	46.7						
25-Aug	21	22	20	18	16	14	24	32	48	62	84	112	106	46	34	41	26	34	20	19	20	15	16	29	36.7	112.2						
26-Aug	22	14	10	6	8	11	11	12	4	6	7	10	7	17	13	9	8	6	7	2	2	2	5	6	8.5	21.5						
27-Aug	6	5	7	7	6	5	8	8	7	6	6	8	10	8	9	14	8	12	14	21	14	14	16	22	10.0	22.0						
28-Aug	29	27	32	27	27	39	38	43	41	46	56	45	31	32	38	36	19	13	23	21	17	14	14	23	30.5	55.8						
29-Aug	25	22	10	6	13	17	21	27	42	17	19	9	11	29	37	9	8	8	14	13	9	4	5	1	15.7	41.8						
30-Aug	0	0	0	0	0	0	1	2	5	5	8	3	3	1	0	5	4	9	7	1	0	0	0	0	2.3	8.9						
31-Aug	4	6	5	1	1	23	23	22	26	34	37	37	47	29	47	42	40	42	39	43	28	24	30	29	27.5	47.0						
41.2 42.4 44.6 41.4 37.0 36.4 43.1 45.4 47.3 44.7 53.7 55.4 55.6 59.4 62.2 57.0 53.9 54.0 54.8 51.5 43.2 38.5 37.4 39.6																									Diurnal Average							
199.9 254.5 265.1 260.2 234.8 211.6 181.3 149.9 163.0 190.1 287.1 298.3 308.9 269.2 268.2 255.8 200.9 204.9 206.5 195.8 184.4 176.0 171.1 172.2																									Diurnal Maximum							
C - Calibration																																

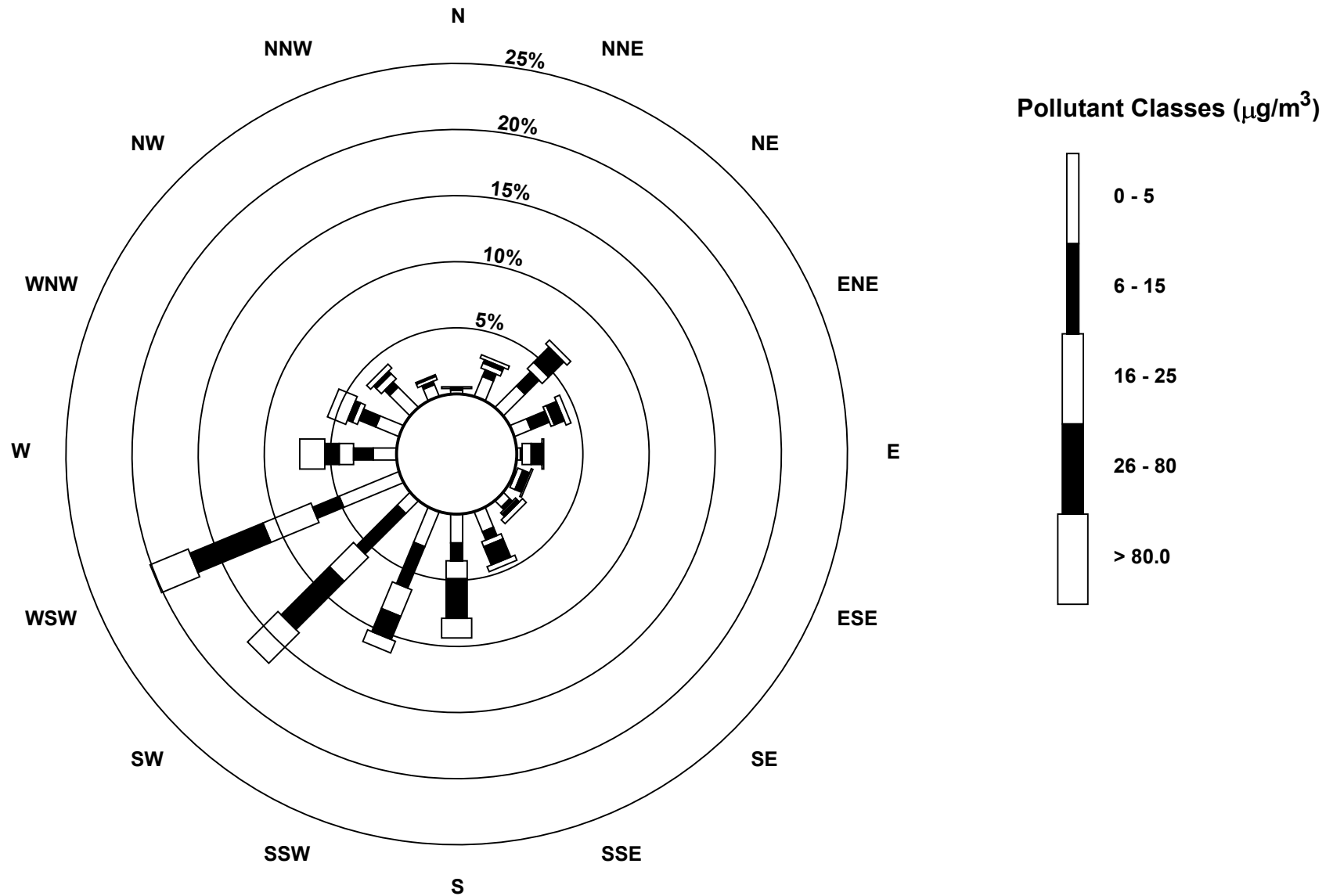
Hourly Maximums

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



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Evergreen Park - August 2018



Hourly Averages

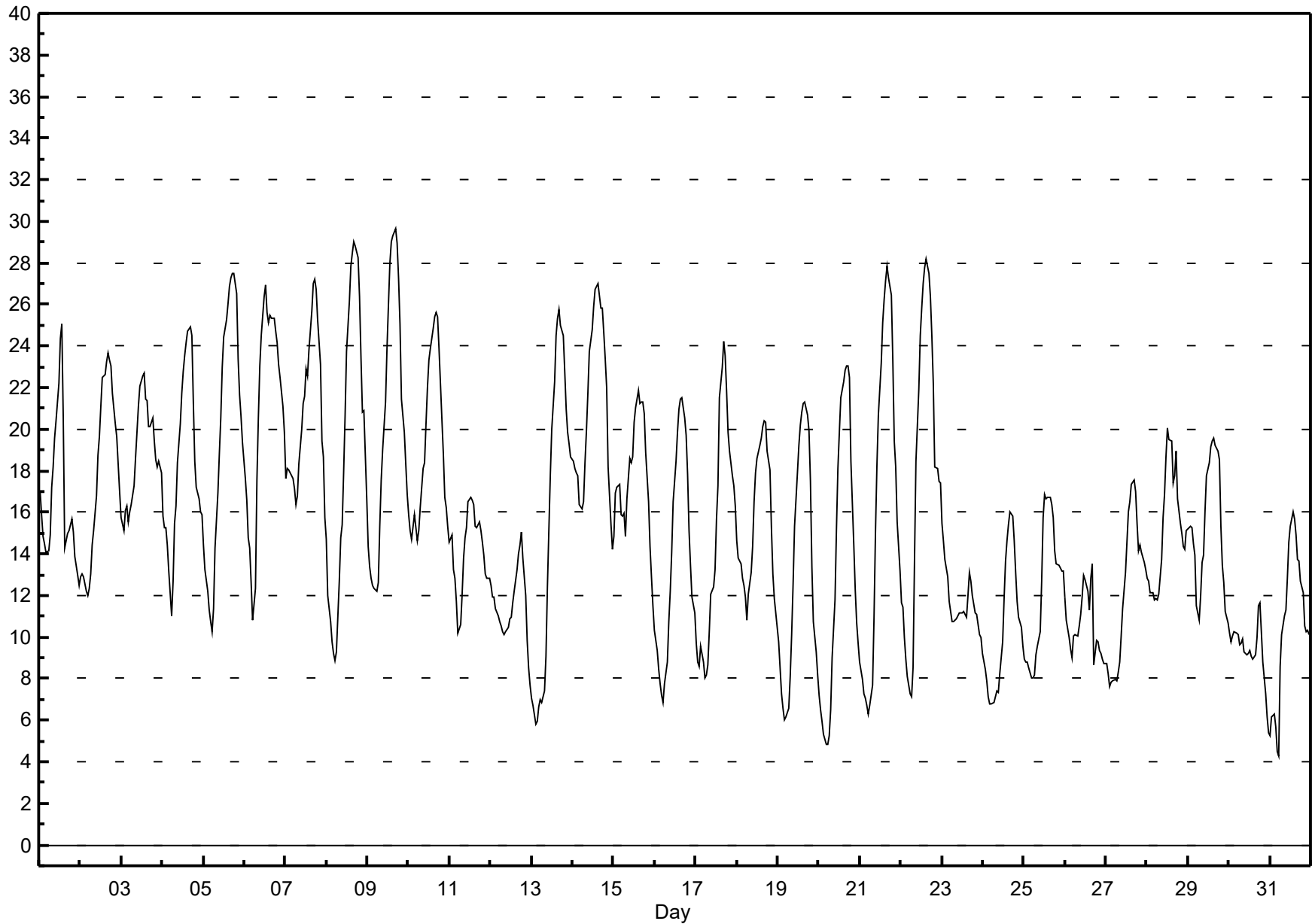
External Temperature (ET) - °C

Evergreen Park - August 2018

Maximum Value: 29.7 °C on Aug 9 17:00																					Maximum Daily Average: 21.1 °C on Aug 14					Hours in Service: 744	
Minimum Value: 4 °C on Aug 31 06:00																					Minimum Daily Average: 9.4 °C on Aug 30					Hours of Data: 744	
Maximum Diurnal Average: 21.1 °C at hour 17																					Minimum Diurnal Average: 10.3 °C at hour 6					Hours of Missing Data: 0	
Monthly Average: 15.64 °C																					Percentiles: P ₁ = 5.5 P ₁₀ = 8.6 Q ₁ = 11.1 Median = 15.1 Q ₃ = 19.7 P ₉₀ = 24.2 P ₉₉ = 28.2					Hours of Calibration: 0	
																					Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	17	16	15	15	14	14	15	17	18	20	20	22	24	25	21	14	15	15	15	16	15	14	13	12	16.8	25.0	
2-Aug	13	13	13	12	12	12	13	14	15	17	19	20	21	23	23	23	24	23	23	22	20	20	18	17	17.9	23.7	
3-Aug	16	15	16	16	16	16	16	17	19	20	21	22	23	23	21	21	20	20	21	19	19	18	18	18	18.8	22.7	
4-Aug	16	15	15	14	13	11	13	15	16	18	20	22	23	24	24	25	25	25	21	18	17	17	16	16	18.3	24.9	
5-Aug	14	13	12	11	11	10	11	14	17	19	21	23	24	25	26	27	27	28	28	27	23	22	21	19	19.7	27.5	
6-Aug	18	17	15	14	13	11	12	18	21	23	24	26	27	26	25	25	25	25	25	24	23	23	21	20	20.8	27.0	
7-Aug	18	18	18	18	18	17	16	17	18	20	21	22	23	23	24	26	27	27	27	25	23	19	19	16	20.8	27.2	
8-Aug	15	12	11	10	9	9	9	13	15	15	18	21	24	26	28	28	29	29	28	26	23	21	21	17	19.0	29.0	
9-Aug	14	13	13	12	12	12	13	15	18	19	21	24	26	28	29	29	30	29	27	25	21	20	18	17	20.3	29.7	
10-Aug	16	15	15	16	15	15	15	16	18	18	20	22	23	24	25	25	26	25	24	20	19	17	16	15	19.2	25.6	
11-Aug	15	15	13	13	12	10	11	12	14	15	15	17	17	17	16	15	15	16	15	15	14	13	13	13	14.1	16.8	
12-Aug	12	12	12	11	11	11	11	10	10	10	10	11	11	12	12	13	14	14	15	14	12	10	9	8	11.5	15.1	
13-Aug	7	7	6	6	7	7	7	7	9	12	15	18	20	22	24	25	26	25	25	23	21	20	19	19	15.7	25.8	
14-Aug	18	18	18	18	16	16	16	18	20	22	24	25	26	27	27	27	26	26	25	23	22	18	15	14	21.1	27.0	
15-Aug	15	17	17	17	16	16	16	15	17	19	18	19	20	21	22	21	21	21	21	19	16	14	13	12	17.6	21.8	
16-Aug	10	9	8	8	7	7	8	9	11	12	14	17	18	20	21	21	21	21	20	18	15	13	12	11	13.8	21.5	
17-Aug	10	9	9	10	9	8	8	9	10	12	12	13	16	17	21	23	24	24	22	20	19	18	17	16	14.8	24.2	
18-Aug	15	14	14	13	13	12	11	12	13	14	17	18	19	19	20	20	20	20	19	18	15	13	12	11	15.4	20.4	
19-Aug	10	9	7	7	6	6	7	8	10	13	15	18	19	20	21	21	21	21	20	18	13	11	9	8	13.2	21.3	
20-Aug	7	7	6	5	5	5	5	7	9	12	15	18	20	22	22	23	23	23	23	18	14	12	11	10	13.4	23.1	
21-Aug	9	8	7	7	7	6	7	8	11	15	18	21	23	25	26	27	28	27	26	23	19	18	16	13	16.5	27.9	
22-Aug	12	11	10	9	8	7	7	9	14	18	22	24	26	27	28	28	28	26	24	22	18	18	18	17	18.0	28.2	
23-Aug	15	15	14	13	12	11	11	11	11	11	11	11	11	11	11	12	13	13	12	11	11	11	10	10	11.7	15.5	
24-Aug	9	8	8	7	7	7	7	7	7	7	8	10	12	14	15	15	16	16	15	13	12	11	10	10	10.5	16.1	
25-Aug	9	9	9	9	8	8	8	9	10	10	13	16	17	17	17	17	16	16	14	14	13	13	13	13	12.4	16.8	
26-Aug	12	11	10	9	9	10	10	10	11	11	12	13	13	12	11	13	14	9	10	10	9	9	9	9	10.6	13.6	
27-Aug	9	8	8	8	8	8	8	8	9	10	11	13	15	16	17	17	18	17	15	14	14	14	14	13	12.2	17.6	
28-Aug	13	13	12	12	12	12	12	12	14	16	17	19	20	19	19	17	18	19	17	15	15	14	14	15	15.3	20.1	
29-Aug	15	15	15	14	14	11	11	12	14	14	16	18	18	19	19	20	19	19	19	15	13	13	11	11	15.3	19.6	
30-Aug	10	10	10	10	10	10	10	10	10	9	9	9	9	9	9	9	10	12	12	10	9	7	6	5	9.4	11.7	
31-Aug	5	6	6	6	4	4	9	10	11	11	13	15	15	16	16	15	14	14	13	12	11	10	10	10	10.7	16.0	
12.7 12.2 11.7 11.3 10.7 10.3 10.7 11.9 13.5 15.0 16.6 18.2 19.5 20.2 20.6 20.8 21.1 20.7 19.9 18.3 16.5 15.2 14.3 13.4																									Diurnal Average		
18.4 18.1 18.0 17.9 17.6 17.1 16.5 18.4 20.5 23.0 24.5 26.4 27.0 28.0 29.0 29.3 29.7 29.0 28.2 26.5 23.5 22.5 21.1 19.8																									Diurnal Maximum		

Hourly Averages

External Temperature (ET) - °C
Evergreen Park - August 2018



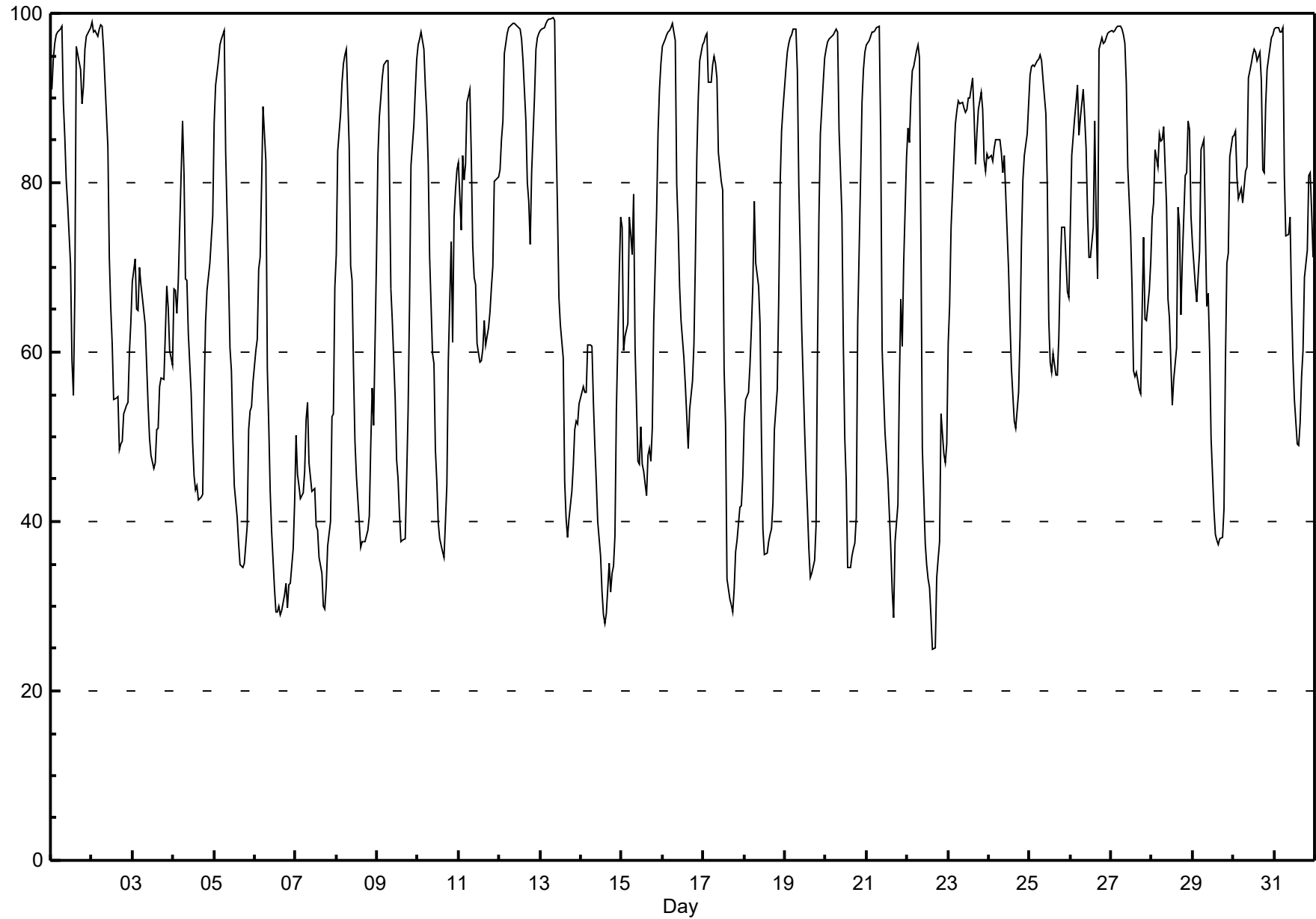
Hourly Averages

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

Maximum Value: 99.5 % on Aug 13 08:00																								Maximum Daily Average: 91.9 % on Aug 12								Hours in Service: 744			
Minimum Value: 25 % on Aug 22 16:00																								Minimum Daily Average: 43.6 % on Aug 7								Hours of Data: 744			
Maximum Diurnal Average: 88.1 % at hour 6																								Minimum Diurnal Average: 49.6 % at hour 17								Hours of Missing Data: 0			
Monthly Average: 69.32 %																								Percentiles: P ₁ = 29.2 P ₁₀ = 37.8 Q ₁ = 51.5 Median = 70.5 Q ₃ = 89.3 P ₉₀ = 97.2 P ₉₉ = 98.8								Hours of Calibration: 0			
																																Percent Operational Time: 100.0			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24											
1-Aug	91	95	97	98	98	98	98	89	85	80	78	70	59	55	67	96	94	93	89	91	96	97	98	98	88.0	98.4									
2-Aug	99	98	98	97	98	99	99	96	92	84	71	65	61	54	55	55	48	49	49	53	54	54	60	64	73.0	98.9									
3-Aug	68	71	65	65	70	68	66	63	59	54	50	48	46	47	51	51	56	57	57	62	68	65	60	58	59.4	71.1									
4-Aug	67	67	65	68	75	87	81	69	68	62	55	49	45	44	44	43	43	43	55	64	67	70	73	76	61.8	87.4									
5-Aug	87	92	94	96	97	97	98	84	69	61	58	50	44	40	37	35	35	35	35	39	51	53	54	56	62.4	97.9									
6-Aug	60	61	70	71	80	89	83	58	51	44	39	32	29	29	30	29	29	31	33	30	32	33	37	42	46.8	88.9									
7-Aug	50	46	44	43	43	46	52	54	47	44	44	44	40	39	36	34	30	30	32	37	40	52	53	68	43.6	67.6									
8-Aug	71	84	88	92	94	95	96	84	70	68	58	49	45	40	37	38	38	38	39	41	49	56	51	71	62.2	95.8									
9-Aug	83	88	90	92	94	94	94	82	67	64	55	47	45	41	38	38	38	45	53	66	82	87	91	95	69.5	94.6									
10-Aug	96	97	98	96	91	88	82	71	60	59	48	45	40	38	36	36	40	44	59	73	61	76	79	82	66.5	97.8									
11-Aug	82	74	83	80	82	89	91	83	73	69	68	61	59	59	60	64	61	63	65	68	70	80	80	81	72.7	91.0									
12-Aug	82	85	87	95	98	98	99	99	99	99	99	98	98	97	94	87	80	78	73	81	90	96	97	98	91.9	98.8									
13-Aug	98	98	98	99	99	99	99	100	99	86	77	66	63	59	45	40	38	40	44	47	51	52	52	54	71.0	99.5									
14-Aug	55	56	55	55	61	61	61	54	49	45	40	36	32	29	28	29	35	32	34	35	38	53	69	76	46.6	75.9									
15-Aug	75	60	62	63	76	74	72	79	60	47	47	51	47	46	43	48	49	47	51	64	76	86	91	94	62.8	94.1									
16-Aug	96	97	97	98	98	98	99	97	80	75	68	64	59	56	52	49	53	57	61	71	83	90	94	96	78.7	98.8									
17-Aug	97	97	98	92	92	94	95	94	92	83	80	79	58	51	33	31	30	29	32	36	38	42	42	45	65.1	97.7									
18-Aug	52	54	55	58	63	68	78	71	68	63	50	39	36	36	38	39	39	42	51	56	66	80	86	89	57.4	88.8									
19-Aug	93	95	97	97	98	98	98	93	80	72	63	51	46	41	37	33	34	35	40	60	76	86	92	95	71.2	98.2									
20-Aug	96	97	97	97	97	98	98	98	86	76	61	50	45	35	35	36	37	37	41	63	80	90	93	95	72.4	98.1									
21-Aug	96	97	97	98	98	98	98	99	86	60	55	51	45	41	37	32	29	38	42	56	66	61	71	83	68.0	98.5									
22-Aug	86	85	90	93	94	96	96	95	74	49	38	35	33	32	29	25	25	33	36	38	53	48	47	49	57.4	96.2									
23-Aug	61	66	75	83	87	89	90	89	90	89	88	89	90	90	92	88	82	86	89	91	89	83	81	83	84.9	92.4									
24-Aug	83	83	83	84	85	85	85	84	81	83	79	70	64	58	55	52	51	55	62	73	80	83	86	89	74.7	89.3									
25-Aug	93	94	94	94	94	95	95	94	92	88	80	64	59	58	60	57	57	62	70	75	75	71	67	67	77.2	95.1									
26-Aug	75	83	88	89	92	86	88	91	88	84	76	71	71	75	87	76	69	96	97	96	97	97	98	98	86.1	97.9									
27-Aug	98	98	98	98	98	98	98	97	96	92	82	74	67	58	57	58	56	55	65	74	64	64	67	71	78.5	98.4									
28-Aug	76	78	84	82	86	85	85	87	77	66	64	59	54	57	61	77	75	64	71	81	81	87	86	76	74.9	87.3									
29-Aug	73	68	66	69	72	84	85	75	65	67	60	50	41	38	38	37	38	38	42	59	70	72	83	85	61.5	85.4									
30-Aug	86	86	81	78	79	78	79	81	82	92	94	95	96	95	94	95	92	82	81	89	93	96	97	98	88.4	97.5									
31-Aug	98	98	98	98	98	98	81	74	74	76	66	59	54	49	49	52	57	60	69	72	81	81	77	71	74.6	98.3									
81.4 82.2 83.6 84.5 86.7 88.1 87.7 83.3 76.1 70.4 64.2 58.4 53.9 51.3 50.2 50.2 49.6 51.5 55.3 62.5 68.4 72.2 74.6 77.5																								Diurnal Average											
98.9 98.3 98.3 98.8 99.1 99.3 99.4 99.5 99.1 98.7 98.5 98.3 98.1 96.9 94.4 96.1 94.2 95.8 97.0 96.4 96.6 97.4 97.9 98.2																								Diurnal Maximum											

Hourly Averages

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



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Evergreen Park - August 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	5	0	1	2	1	1	1	5	7	5	4	3	4	6	25	10	4	12	11	2	2	2	2	2	1.4	24.7
Dir	208	265	26	191	289	223	170	286	292	311	263	208	194	110	323	43	57	201	216	271	62	164	199	169	262.8	322.7
2 Spd	7	3	5	2	2	3	4	3	5	8	14	18	19	21	18	17	23	22	21	21	23	23	15	14	12.3	23.3
Dir	226	234	259	175	125	134	189	162	187	214	228	232	236	241	226	221	239	236	238	235	240	238	223	213	229.8	239.2
3 Spd	5	6	12	11	6	11	16	18	24	34	35	34	33	36	32	36	26	17	13	7	8	10	15	12	18.8	36.2
Dir	246	255	243	250	275	251	239	238	246	246	249	247	255	251	249	252	253	252	253	228	207	209	240	248	246.9	251.5
4 Spd	7	11	15	9	4	2	6	8	15	17	18	15	14	17	15	14	13	15	3	16	13	5	5	5	9.8	18.0
Dir	253	240	240	252	281	292	257	282	251	259	256	270	284	285	293	290	314	321	309	243	254	287	307	186	270.2	255.6
5 Spd	5	3	1	3	2	2	7	7	11	14	12	13	15	15	17	14	14	11	9	7	7	9	11	9	8.7	16.7
Dir	207	199	174	188	198	196	190	234	243	232	230	251	249	239	239	249	256	264	247	235	222	236	236	221	236.8	239.1
6 Spd	8	8	6	6	4	1	6	16	19	23	29	43	40	35	36	37	33	28	24	24	16	15	11	5	19.4	42.8
Dir	225	208	228	234	225	152	226	238	231	232	238	245	248	253	241	239	235	240	246	249	253	246	235	239	240.6	244.6
7 Spd	5	9	13	15	13	13	5	6	18	21	25	23	28	25	27	23	26	27	18	11	10	7	7	1	15.5	27.6
Dir	223	241	238	238	243	238	243	248	238	241	238	238	247	254	256	258	248	248	251	254	234	221	234	307	245.0	246.6
8 Spd	3	1	1	0	2	1	1	2	3	4	2	1	1	5	3	6	5	10	9	9	7	8	8	1	3.3	9.8
Dir	217	141	154	45	196	212	189	184	174	182	163	248	208	199	197	170	203	229	238	236	235	245	247	157	217.0	229.0
9 Spd	1	0	1	1	1	0	0	2	6	9	11	11	6	5	7	5	1	5	5	2	1	3	1	1	2.2	11.5
Dir	67	62	190	202	202	295	90	244	236	224	235	239	231	277	307	299	174	125	147	177	187	153	77	31	231.1	238.5
10 Spd	0	0	2	7	3	4	5	8	10	8	11	11	11	11	8	6	4	2	1	1	2	3	2	2	4.3	11.3
Dir	354	246	232	266	273	232	256	283	277	279	283	291	286	285	278	272	214	186	59	16	321	190	182	171	271.9	283.1
11 Spd	3	4	6	4	2	1	1	3	5	5	8	13	10	9	9	10	8	8	8	7	7	5	7	7	5.4	12.8
Dir	275	271	341	21	15	304	345	31	52	57	46	53	63	56	60	50	49	58	57	51	59	53	54	43	46.9	53.3
12 Spd	9	9	8	5	8	9	9	11	12	10	10	8	6	6	4	7	4	4	8	10	4	1	0	1	4.4	11.7
Dir	44	55	74	47	44	60	48	45	49	42	42	45	54	68	64	91	158	148	225	221	194	130	176	194	61.3	48.5
13 Spd	2	1	0	0	1	2	2	3	5	5	7	9	7	11	17	21	20	18	20	19	18	20	20	17	9.0	20.7
Dir	170	171	31	94	126	157	162	150	172	153	137	143	166	183	216	226	232	229	233	225	219	216	212	214	209.6	225.5
14 Spd	14	13	11	8	6	7	9	13	19	23	24	25	29	36	41	29	15	24	24	27	10	3	2	1	16.9	41.2
Dir	235	234	227	230	233	231	234	234	236	239	242	239	236	238	239	221	230	239	238	233	145	123	138	138	235.0	237.6
15 Spd	3	6	3	2	1	2	5	2	9	17	15	12	13	9	9	7	7	5	5	4	2	1	1	1	2.2	16.9
Dir	209	237	296	236	219	307	228	280	294	276	273	260	320	347	36	72	62	99	108	109	89	100	44	43	299.3	276.3
16 Spd	3	1	0	1	0	1	4	5	11	9	9	9	7	8	7	8	7	6	3	2	1	2	1	2	3.6	10.6
Dir	40	49	38	38	245	190	222	243	235	237	226	199	190	182	192	199	177	150	168	166	183	189	143	206	200.9	235.4
17 Spd	1	1	2	5	2	0	2	2	1	4	5	3	12	13	24	24	22	24	22	15	17	16	13	11	9.8	24.3
Dir	72	183	219	218	212	48	186	189	176	177	183	210	226	221	224	224	233	237	237	226	220	216	231	230	224.3	236.8
18 Spd	8	12	9	7	7	4	3	4	5	11	9	9	8	6	4	5	1	3	4	4	4	1	1	1	3.7	11.7
Dir	247	240	282	282	303	258	230	240	272	256	311	315	289	255	279	285	319	82	99	114	167	51	58	16	272.0	240.2
19 Spd	1	1	2	1	1	4	5	9	8	8	6	2	5	5	4	6	6	7	4	1	0	0	0	0	0.4	9.4
Dir	274	83	178	209	192	268	214	237	249	245	263	157	48	37	61	46	75	39	39	31	28	343	268	250	285.9	236.7
20 Spd	1	0	2	1	2	2	4	7	9	5	3	3	8	7	9	9	8	6	4	0	1	1	0	0	3.6	9.3
Dir	205	327	195	187	196	262	202	198	227	217	267	234	202	199	195	199	176	174	155	131	186	205	8	196	201.8	226.8
21 Spd	1	1	3	3	3	3	4	4	6	9	6	6	7	9	10	9	8	7	4	4	4	4	3	1	4.5	10.1
Dir	205	194	194	194	200	193	186	191	202	233	197	176	188	186	185	174	154	150	167	187	204	227	177	37	187.3	185.4
22 Spd	4	3	2	1	1	1	1	0	6	16	18	15	20	19	19	17	12	8	12	9	2	6	5	3	7.5	19.9
Dir	184	188	52	174	148	62	183	75	227	233	240	244	241	237	247	266	270	264	254	245	312	274	277	212	245.6	241.4

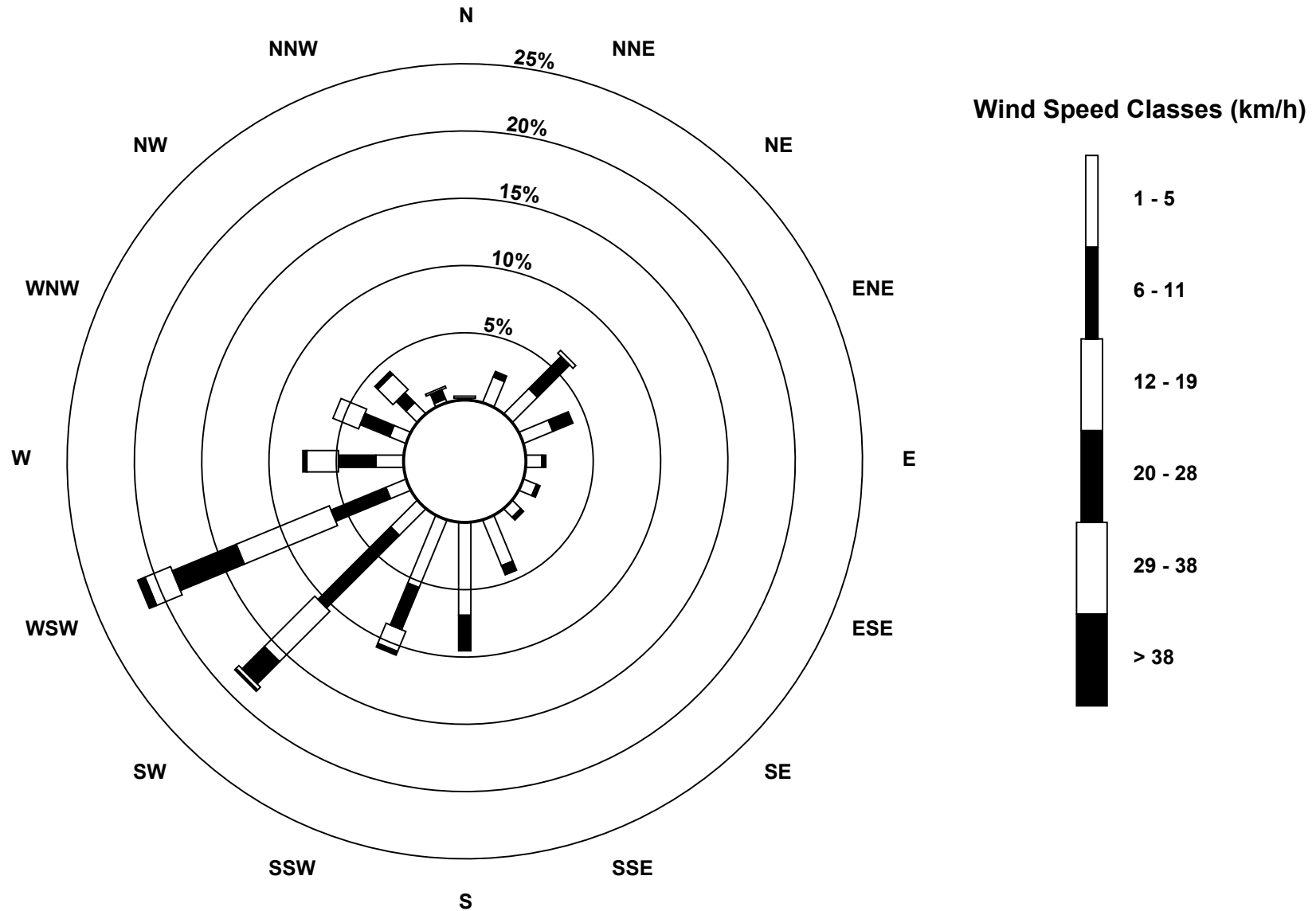
Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Evergreen Park - August 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	2	2	6	6	8	7	7	6	4	4	3	3	3	3	5	2	1	4	4	3	6	18	13	11	3.3	17.7											
Dir	184	42	50	36	22	24	36	28	33	36	41	23	19	18	45	74	79	143	63	76	296	305	303	292	3.9	304.8											
24 Spd	19	19	19	16	12	12	11	10	7	3	2	8	8	7	6	3	3	6	7	3	3	4	3	1	5.0	19.3											
Dir	311	314	303	294	293	321	326	328	337	57	18	307	247	255	261	289	16	101	120	110	103	103	91	83	311.5	313.5											
25 Spd	1	1	2	2	1	1	2	2	2	4	6	16	20	17	15	11	8	11	15	9	11	11	14	11	6.3	19.8											
Dir	95	54	40	74	97	60	177	169	168	186	185	226	252	279	257	273	289	237	229	207	215	215	219	280	238.6	252.2											
26 Spd	2	2	1	2	3	7	6	10	11	15	20	12	13	9	13	18	17	4	2	6	10	5	5	2	6.7	19.8											
Dir	59	62	200	210	259	267	268	269	293	306	320	346	10	331	305	309	319	19	327	316	320	19	25	5	318.4	319.6											
27 Spd	2	2	0	1	3	4	4	5	7	5	7	9	10	14	9	8	11	13	12	10	16	16	13	11	7.2	16.5											
Dir	344	20	332	181	201	193	192	202	202	184	191	178	170	207	171	168	213	229	210	206	212	211	213	225	202.7	210.7											
28 Spd	14	7	3	4	6	7	4	3	7	10	10	11	11	10	13	5	4	17	12	7	7	5	8	15	7.9	17.4											
Dir	232	245	297	259	236	237	239	217	230	232	235	230	227	225	242	186	179	239	266	218	204	191	208	209	229.3	238.7											
29 Spd	16	19	20	16	12	3	11	14	18	13	16	22	21	19	19	18	17	15	14	14	10	12	11	13	13.6	21.9											
Dir	213	229	237	238	230	209	199	237	242	236	238	241	274	272	280	281	290	275	285	300	279	274	263	258	255.2	241.2											
30 Spd	17	19	23	22	21	18	16	14	16	8	12	12	14	19	19	18	16	15	13	9	7	3	2	2	12.9	22.7											
Dir	241	239	244	250	263	275	297	292	303	280	248	242	244	246	251	249	259	258	246	233	211	191	168	178	255.3	244.4											
31 Spd	2	2	4	2	1	8	24	17	6	7	22	26	25	33	41	39	28	19	16	21	14	21	22	24	17.0	40.6											
Dir	159	152	154	167	190	204	212	222	225	210	225	234	238	245	243	229	214	210	207	236	234	214	215	242	226.0	242.7											
Spd	3.6	3.5	3.8	3.6	2.7	2.6	3.7	4.7	6.7	8.2	9.2	9.7	10.2	10.8	11.5	9.8	8.1	8.2	7.7	7.2	6.0	5.6	5.1	4.4	Diurnal Average												
Dir	237.3	243.5	250.3	247.8	256.1	253.1	232.1	247.2	247.7	243.4	245.1	243.7	247.6	246.9	249.1	244.4	242.3	234.3	235.2	234.9	231.7	229.5	230.9	233.6	Diurnal Maximum												
Spd	18.6	19.3	22.7	22.2	21.0	18.2	24.0	17.5	23.8	34.5	35.4	42.8	40.3	36.1	41.2	39.4	33.3	28.0	24.1	26.7	23.3	22.9	21.6	24.2	Diurnal Maximum												
Dir	310.7	313.5	244.4	250.3	262.7	275.4	211.8	237.8	245.9	245.5	248.9	244.6	248.5	235.9	237.6	229.0	235.1	240.0	245.5	238.5	239.5	238.0	214.9	242.1													
Maximum Speed Value: 43 km/h on Aug 6 12:00																								Minimum Speed Value: 0 km/h on Aug 20 00:00										Hours in Service: 744			
Maximum Daily Speed Average: 19.4 km/h on Aug 6																								Minimum Daily Speed Average: 0.4 km/h on Aug 19										Hours of Data: 744			
Maximum Diurnal Speed Average: 11.5 km/h at hour 15																								Minimum Diurnal Speed Average: 2.6 km/h at hour 6										Hours of Missing Data: 0			
Monthly Average Velocity: 6.48 km/h 242.11 deg																								Speed Percentiles: P ₁ = 0.2 P ₁₀ = 1.2 Q ₁ = 2.9 Median = 7.0 Q ₃ = 13.2 P ₉₀ = 19.8 P ₉₉ = 35.9										Percent Operational Time: 100.0			
All monthly, daily, and diurnal averages have been calculated using vector methods																																					
Frequency Distribution																																					
		Speed Range (km/h)																																			
Direction		0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																													
North		16	4	2	0	0	0	22																													
NorthEast		42	37	2	0	0	0	81																													
East		23	8	0	0	0	0	31																													
SouthEast		26	7	0	0	0	0	33																													
South		93	35	2	0	0	0	130																													
SouthWest		41	78	84	45	12	4	264																													
West		28	39	47	11	6	1	132																													
NorthWest		14	16	17	4	0	0	51																													
Total		283	224	154	60	18	5	744																													

Wind Rose

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



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Evergreen Park - August 2018

Maximum Speed: 43 km/h on Aug 6 12:00																				Maximum Daily Speed Average: 20.0 km/h on Aug 6										Hours in Service: 744																				
Minimum Speed: 0 km/h on Aug 19 23:00																				Minimum Daily Speed Average: 4.1 km/h on Aug 9										Hours of Data: 744																				
Maximum Diurnal Speed Average: 16.6 km/h at hour 15																				Minimum Diurnal Speed Average: 4.9 km/h at hour 5										Hours of Missing Data: 0																				
Monthly Average Speed: 9.84 km/h																				Percentiles: P ₁ = 0.6 P ₁₀ = 1.9 Q ₁ = 3.8 Median = 7.8 Q ₃ = 13.8 P ₉₀ = 20.5 P ₉₉ = 36.5										Percent Operational Time: 100.0																				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																										
1-Aug	6	2	2	3	3	2	2	7	8	6	5	5	7	8	26	11	12	14	11	4	3	3	2	3	6.4	26.2																								
2-Aug	8	3	5	3	3	4	4	3	5	8	14	18	20	22	19	18	24	22	22	21	24	23	15	14	13.4	24.1																								
3-Aug	6	7	12	11	7	11	17	18	24	35	36	35	34	36	33	37	27	17	14	7	8	11	15	12	19.5	36.8																								
4-Aug	7	11	15	9	5	2	7	9	16	18	19	16	16	19	17	15	14	16	10	17	13	6	5	6	12.1	19.4																								
5-Aug	5	3	2	3	2	2	7	7	11	15	12	13	16	17	18	15	15	12	10	8	8	9	11	9	9.6	17.8																								
6-Aug	8	8	6	6	4	2	6	17	19	23	30	43	41	35	36	37	34	28	24	24	16	15	11	5	20.0	43.5																								
7-Aug	6	9	13	15	13	13	6	7	18	22	25	23	28	25	28	24	27	27	19	12	10	7	9	4	16.2	28.1																								
8-Aug	4	3	2	1	2	1	1	2	3	4	2	3	3	5	4	8	6	10	10	10	7	8	8	2	4.5	10.2																								
9-Aug	2	2	1	1	1	1	1	3	6	9	11	12	7	7	8	6	3	5	5	2	1	3	2	1	4.1	11.7																								
10-Aug	1	2	4	7	4	5	5	8	10	9	12	11	11	11	8	8	5	3	1	4	2	3	2	3	5.8	11.6																								
11-Aug	4	6	6	4	2	2	1	3	6	6	9	13	11	10	10	11	9	9	9	7	7	5	8	8	6.8	13.5																								
12-Aug	10	10	8	6	8	10	10	11	12	11	11	9	7	6	5	8	5	5	9	10	4	1	1	1	7.3	12.3																								
13-Aug	2	1	1	1	2	3	2	4	6	6	8	10	9	12	18	21	20	18	20	19	18	20	20	18	10.7	21.2																								
14-Aug	14	13	12	9	6	7	9	13	19	23	25	26	30	37	42	30	16	24	24	27	11	3	2	2	17.6	41.6																								
15-Aug	3	6	3	2	2	3	5	4	10	18	16	12	16	11	10	8	8	6	5	4	2	1	2	1	6.7	17.6																								
16-Aug	3	1	1	1	0	1	4	6	11	9	9	10	8	9	8	8	8	6	4	3	2	4	3	2	5.1	10.8																								
17-Aug	2	1	3	6	2	1	2	2	2	4	5	4	12	14	24	24	22	25	22	16	17	17	14	12	10.4	24.6																								
18-Aug	8	12	11	7	7	5	4	5	6	11	11	10	10	9	7	8	6	4	4	4	4	2	2	1	6.6	12.0																								
19-Aug	3	3	3	2	2	4	6	9	9	9	7	5	8	8	6	8	7	8	4	1	0	1	0	1	4.7	9.5																								
20-Aug	1	0	2	1	2	3	5	7	10	7	5	6	9	9	11	10	9	7	4	1	1	1	0	0	4.6	10.9																								
21-Aug	1	1	3	3	3	3	4	4	6	9	7	7	8	10	11	10	8	7	4	4	5	4	4	1	5.3	10.9																								
22-Aug	5	4	2	2	2	3	3	2	6	16	18	16	20	19	20	17	12	9	12	9	4	7	6	4	9.1	20.3																								
23-Aug	4	3	6	7	9	8	7	7	5	5	3	3	4	3	6	5	2	4	5	4	7	18	14	12	6.2	18.4																								
24-Aug	19	20	20	17	13	13	11	11	9	4	4	9	10	9	9	6	6	7	7	3	4	4	3	2	9.1	19.8																								
25-Aug	2	1	2	2	2	1	3	2	3	4	7	16	21	18	15	12	8	12	15	9	11	12	14	17	8.8	20.5																								
26-Aug	5	2	3	3	4	8	6	10	11	16	20	13	14	12	13	19	21	5	4	7	10	6	5	2	9.0	20.9																								
27-Aug	2	2	0	1	3	4	4	5	7	6	7	10	12	14	10	9	11	13	12	10	16	17	13	12	8.3	16.6																								
28-Aug	14	8	4	5	6	8	4	3	7	10	10	12	12	11	13	6	4	18	12	8	7	5	8	16	8.8	18.0																								
29-Aug	16	19	21	16	12	4	11	14	18	13	16	22	23	21	21	19	18	15	16	15	10	12	12	13	15.8	22.9																								
30-Aug	17	19	23	23	22	19	17	15	17	9	13	12	15	19	19	19	17	16	14	9	7	3	2	2	14.3	23.0																								
31-Aug	2	2	4	3	2	8	24	17	7	8	23	27	25	34	41	40	29	19	16	21	15	21	22	25	18.1	41.1																								
																									6.1	5.9	6.5	5.8	4.9	5.1	6.3	7.5	9.9	11.3	12.9	14.0	15.0	15.5	16.6	15.4	13.4	12.6	11.2	9.7	8.2	8.1	7.6	6.8	Diurnal Average	
																									19.1	19.7	23.0	22.6	21.7	18.9	24.2	17.7	24.2	35.0	35.9	43.5	40.9	36.6	41.6	39.8	33.6	28.3	24.4	26.8	23.5	23.1	21.9	24.6	Diurnal Maximum	
All monthly, daily, and diurnal averages have been calculated using scalar methods																																																		

Hourly Standard Deviations

Wind Direction (WD) - deg
Evergreen Park - August 2018

Maximum Value: 99.8 deg on Aug 27 03:00																			Hours in Service: 744						
Minimum Value: 5.1 deg on Aug 27 22:00																			Hours of Data: 744						
Percentiles: P ₁ = 6.6 P ₁₀ = 9.2 Q ₁ = 14.2 Median = 24.1 Q ₃ = 44.5 P ₉₀ = 71.8 P ₉₉ = 90.0																			Hours of Missing Data: 0						
																			Hours of Calibration: 0						
																			Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	72	95	89	82	78	81	80	41	33	51	49	80	82	52	44	34	65	37	12	82	61	52	56	53	94.9
2-Aug	18	36	33	50	44	44	18	30	29	22	14	13	13	12	19	22	14	11	10	9	8	9	10	8	49.6
3-Aug	39	27	9	18	20	20	8	8	10	10	10	10	16	12	10	10	10	12	16	18	7	10	8	10	38.8
4-Aug	8	8	7	16	19	35	23	22	12	17	21	25	30	30	30	28	28	28	70	12	14	32	23	34	70.1
5-Aug	19	17	65	39	35	40	10	20	12	15	20	19	19	28	22	27	23	27	26	17	12	7	9	9	64.6
6-Aug	10	12	15	13	31	65	59	8	8	11	9	10	10	10	7	8	9	9	9	9	12	11	7	26	65.2
7-Aug	18	10	8	6	8	7	37	31	7	9	8	8	11	11	14	17	15	11	13	11	9	16	48	74	74.0
8-Aug	60	66	77	83	72	47	67	31	25	26	59	84	82	39	58	41	48	17	16	18	18	21	33	70	83.6
9-Aug	66	82	92	85	58	55	85	46	18	12	13	13	44	54	38	29	77	28	18	49	81	26	90	34	91.9
10-Aug	89	85	84	24	69	19	12	17	16	16	15	15	16	18	38	51	47	39	76	84	66	31	66	73	88.7
11-Aug	42	53	20	32	43	69	49	25	44	33	31	23	22	27	26	22	28	31	39	29	23	20	23	15	68.6
12-Aug	25	27	21	26	26	34	24	23	24	32	21	20	24	30	32	32	54	30	24	13	14	36	85	64	85.5
13-Aug	31	75	83	75	58	46	33	40	29	37	25	31	32	24	23	12	11	8	11	8	10	6	6	9	83.2
14-Aug	8	7	9	31	19	13	10	8	9	8	10	11	11	10	7	10	21	9	10	7	33	48	51	86	86.5
15-Aug	29	29	30	29	49	47	46	69	25	16	20	19	45	41	39	32	32	31	19	25	18	55	60	74	74.3
16-Aug	34	76	79	76	81	68	32	39	10	13	21	23	27	20	24	22	26	19	47	63	83	66	86	59	85.9
17-Aug	64	84	61	32	57	93	46	61	37	27	15	42	16	18	11	12	11	9	8	8	8	10	10	20	92.8
18-Aug	15	16	29	22	16	32	43	21	29	16	34	37	45	64	73	71	98	52	21	19	18	62	45	76	98.3
19-Aug	74	80	71	83	70	20	27	10	31	23	39	79	52	62	69	48	46	29	24	65	62	70	82	82	82.5
20-Aug	88	93	35	27	20	32	15	17	14	47	61	55	39	59	36	35	32	28	19	85	80	79	85	97	97.4
21-Aug	46	73	18	15	32	11	10	37	20	14	36	27	34	22	23	27	26	24	25	18	26	32	65	53	73.1
22-Aug	42	66	65	77	89	67	76	86	34	11	10	14	12	13	14	20	17	18	11	22	77	31	33	74	88.7
23-Aug	76	81	24	26	15	19	22	23	27	31	38	40	42	42	30	63	86	31	37	54	64	16	18	23	85.9
24-Aug	15	13	15	19	17	19	17	21	49	28	67	50	43	48	65	76	70	37	21	29	18	17	25	58	76.0
25-Aug	73	52	77	37	46	51	75	62	40	19	26	21	16	19	17	29	18	21	12	10	8	8	8	53	77.3
26-Aug	65	40	90	58	26	22	22	19	15	18	12	26	20	42	20	15	38	46	55	22	15	26	15	34	90.2
27-Aug	23	26	100	32	20	24	17	14	16	28	27	26	32	19	26	22	20	12	7	7	6	5	5	11	99.8
28-Aug	9	40	36	31	14	14	28	64	10	11	18	19	23	14	23	49	33	17	21	33	11	9	12	7	64.2
29-Aug	9	8	7	7	15	81	19	10	14	13	13	13	23	25	24	22	20	17	25	27	20	16	20	17	80.9
30-Aug	9	8	8	11	14	16	17	19	16	21	19	12	12	10	10	10	16	17	14	10	8	25	50	23	50.0
31-Aug	33	43	45	61	57	49	7	8	28	28	9	10	10	13	9	9	7	7	7	14	14	9	9	10	60.9
88.7 94.9 99.8 85.3 88.7 92.8 84.8 86.0 49.5 50.6 67.1 83.6 82.0 63.6 73.3 76.0 98.3 52.0 76.5 84.8 82.6 78.5 89.8 97.4																									

PAZA
Smoky Heights Station
Monthly Summary Tables, Graphs and
Roses

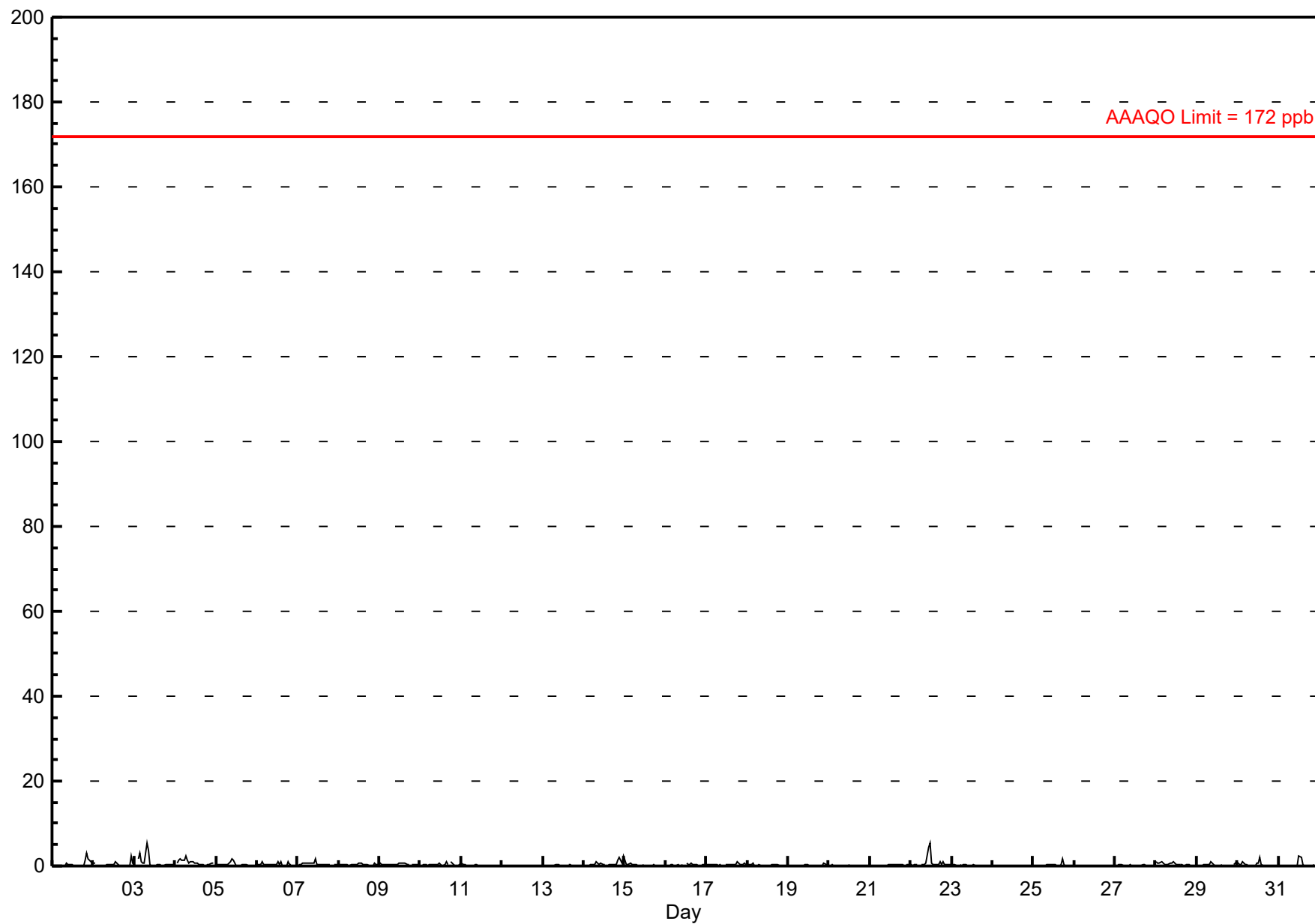
Hourly Averages

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 744						
Maximum Value: 5.5 ppb on Aug 3 08:00																				Maximum Daily Average: 0.9 ppb on Aug 3		Hours of Data: 706				
Minimum Value: 0 ppb on Aug 2 19:00																				Minimum Daily Average: 0.0 ppb on Aug 26		Hours of Missing Data: 38				
Maximum Diurnal Average: 0.5 ppb at hour 11																				Minimum Diurnal Average: 0.2 ppb at hour 17		Hours of Calibration: 38				
Monthly Average: 0.31 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.7 P ₉₉ = 2.4		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-Aug	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	3	2	1	1	0.4	3.1
2-Aug	1	1	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	1	0.3	2.5
3-Aug	0	A	2	3	1	1	1	6	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.9	5.5
4-Aug	A	1	1	2	1	1	2	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	1	A	0.8	2.3
5-Aug	0	0	0	0	0	0	0	0	1	2	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0.4	1.6
6-Aug	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	A	0	0	0.4	1.1
7-Aug	0	0	0	1	1	1	1	1	1	1	2	0	0	0	0	0	0	0	0	0	A	0	0	0	0.4	1.7
8-Aug	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	A	0	1	0	0	0.3	0.8
9-Aug	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	A	0	0	0	0	0	0.4	0.8
10-Aug	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	A	1	0	0	0	0	0	0.3	0.9
11-Aug	1	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	0.5
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.1
13-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.4
14-Aug	0	0	0	0	0	0	0	1	1	0	1	0	0	A	0	0	0	0	0	0	1	2	1	2	0.6	2.3
15-Aug	1	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	1.4
16-Aug	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	1	0	0	0	0	0	0	0	0	0.2	0.8
17-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	1	0	1	0	0.3	1.1
18-Aug	0	0	0	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
19-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.1	0.6
20-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0.1	0.3
21-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
22-Aug	0	0	0	0	0	A	0	0	0	1	4	5	1	0	0	0	0	1	0	1	0	0	0	0	0.8	5.4
23-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
24-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
25-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0.2	1.8
26-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
27-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.3
28-Aug	1	1	1	1	1	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0.4	1.1
29-Aug	0	0	0	0	0	0	0	0	1	1	0	0	C	C	0	0	0	0	0	0	0	A	0	1	0.2	1.1
30-Aug	1	0	1	1	1	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	A	0	0	0	0.3	2.1
31-Aug	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	A	0	0	0	0	0.2	2.4
0.3 0.2 0.3 0.4 0.3 0.2 0.3 0.4 0.4 0.3 0.5 0.4 0.4 0.4 0.2 0.2 0.2 0.2 0.2 0.2 0.3 0.3 0.3 0.3																									Diurnal Average	
1.4 0.7 1.6 2.9 1.4 1.4 2.3 5.5 3.7 1.6 4.4 5.4 2.4 2.2 1.0 0.9 0.5 1.8 1.1 1.4 3.1 2.2 2.5 2.3																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

Hourly Averages

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



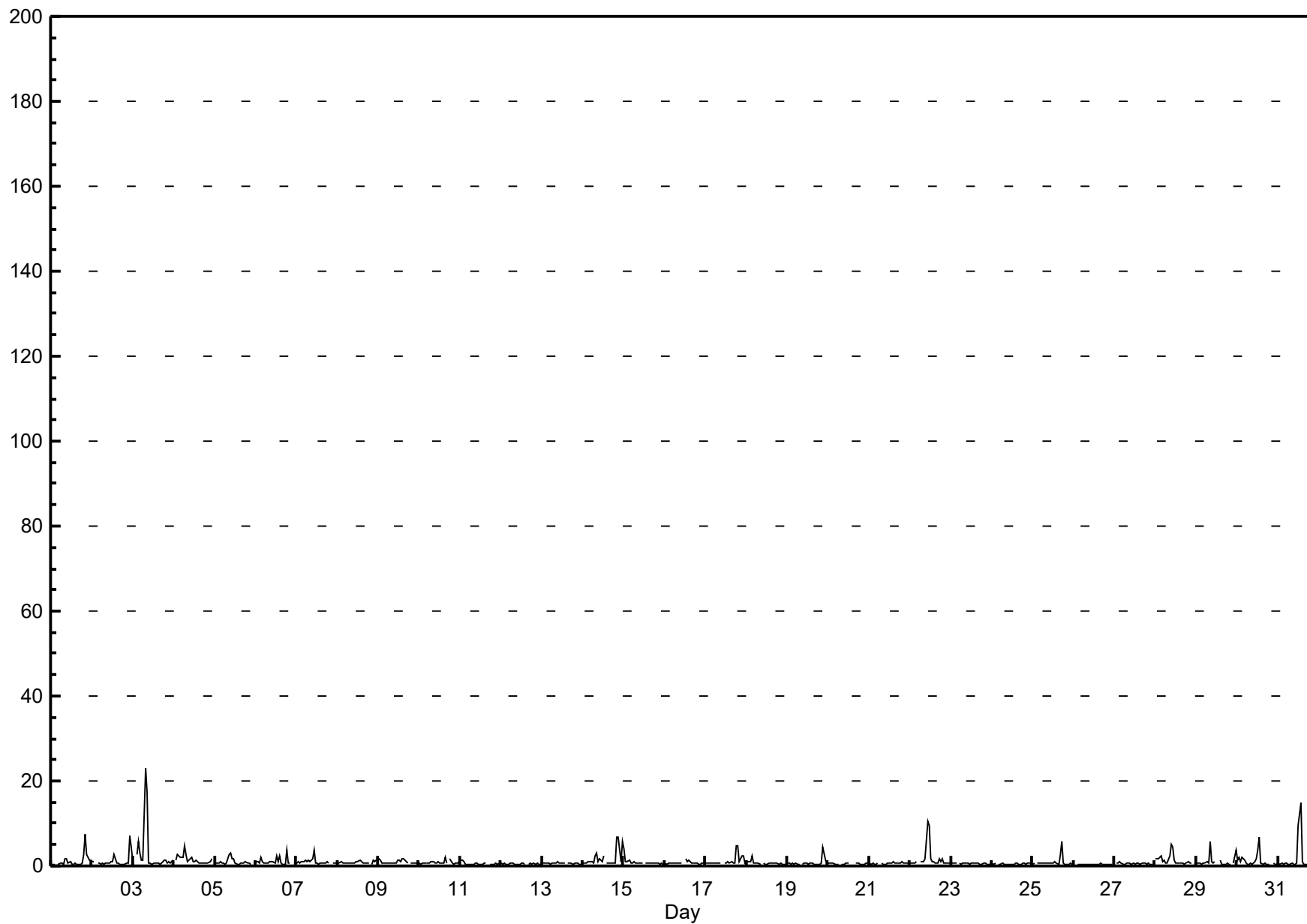
Hourly Maximums

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

Maximum Value: 23.2 ppb on Aug 3 08:00																				Maximum Daily Average: 3.0 ppb on Aug 3										Hours in Service: 744	
Minimum Value: 0 ppb on Aug 26 14:00																				Minimum Daily Average: 0.4 ppb on Aug 26										Hours of Data: 706	
Maximum Diurnal Average: 1.6 ppb at hour 9																				Minimum Diurnal Average: 0.7 ppb at hour 17										Hours of Missing Data: 38	
Monthly Average: 1.01 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.9 P ₉₀ = 1.6 P ₉₉ = 7.2										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-Aug	0	0	0	A	0	1	1	0	2	2	1	1	0	0	1	0	0	0	1	3	7	3	1	1	1.2	7.4					
2-Aug	1	1	A	1	1	0	1	0	1	1	1	1	1	3	1	1	0	0	0	0	1	1	7	4	1.2	7.2					
3-Aug	1	A	3	6	3	1	1	23	17	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	3.0	23.2					
4-Aug	A	1	3	2	2	2	5	3	1	1	2	1	1	1	1	1	1	1	1	1	1	1	2	A	1.5	4.8					
5-Aug	1	1	1	1	1	1	0	1	3	3	2	2	1	0	0	1	1	1	1	1	1	0	A	1	1.0	3.2					
6-Aug	1	1	1	2	1	1	1	1	1	1	1	1	2	1	3	1	0	0	4	1	1	A	1	1	1.1	3.6					
7-Aug	1	1	1	1	1	1	1	1	1	2	4	1	1	1	1	1	1	1	1	1	A	1	1	1	1.0	3.8					
8-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0	1	1	2	0.8	1.8					
9-Aug	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	A	1	1	1	1	1	0.9	1.7					
10-Aug	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	A	2	1	0	1	1	1	0.8	1.9					
11-Aug	1	1	1	0	0	0	0	0	0	1	1	0	0	0	1	1	A	0	0	0	1	1	1	1	0.6	1.5					
12-Aug	1	0	1	1	0	1	1	1	0	0	1	0	1	1	0	A	0	1	0	1	1	1	0	0	0.5	0.6					
13-Aug	1	1	1	1	1	0	1	1	1	1	1	1	1	1	A	1	1	1	0	1	1	1	0	1	0.6	1.0					
14-Aug	1	1	1	1	1	1	1	2	3	1	2	1	2	A	1	1	1	1	1	1	7	7	1	6	1.8	6.8					
15-Aug	4	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	0.9	4.1					
16-Aug	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	0	0	1	1	0.7	1.5					
17-Aug	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	5	5	1	2	2	1.2	4.7					
18-Aug	1	1	1	3	1	1	1	1	0	A	1	0	1	1	1	1	1	1	1	0	1	0	0	0	0.7	2.5					
19-Aug	1	1	0	1	0	1	0	0	A	0	1	1	0	1	1	1	0	0	0	0	1	4	1	0	0.7	4.4					
20-Aug	1	1	1	1	0	0	0	A	0	0	1	1	1	C	C	C	1	1	1	0	0	0	1	1	0.5	0.8					
21-Aug	1	0	1	0	0	1	A	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9					
22-Aug	1	1	1	1	1	A	1	1	1	2	11	9	2	1	1	1	1	2	1	2	1	1	1	1	1.8	10.5					
23-Aug	1	1	1	1	A	1	0	1	1	1	1	0	1	1	1	1	1	0	0	1	1	0	0	0	0.6	0.7					
24-Aug	1	0	1	A	0	0	1	0	1	1	0	0	0	0	1	1	0	0	1	1	0	1	1	1	0.5	0.7					
25-Aug	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	3	6	1	0	0	0	1	0	0.9	5.7					
26-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0.4	0.5					
27-Aug	A	1	1	1	1	0	1	1	1	1	0	1	0	1	1	0	1	1	1	0	1	0	0	A	0.6	0.9					
28-Aug	2	2	2	2	1	1	1	1	2	5	4	1	1	1	1	1	1	0	1	1	1	1	A	0	1.4	4.9					
29-Aug	1	1	1	1	1	1	1	1	6	1	1	1	C	C	1	0	0	0	1	1	1	A	1	4	1.1	5.9					
30-Aug	1	2	1	2	1	1	0	0	1	0	1	2	4	7	1	0	1	0	0	0	A	1	0	0	1.2	6.9					
31-Aug	1	0	1	0	1	1	0	1	1	0	0	1	10	15	1	0	1	0	0	A	2	0	0	0	1.6	15.0					
																									Diurnal Average						
																									Diurnal Maximum						
C - Calibration																									A - Automated Daily Zero Span						

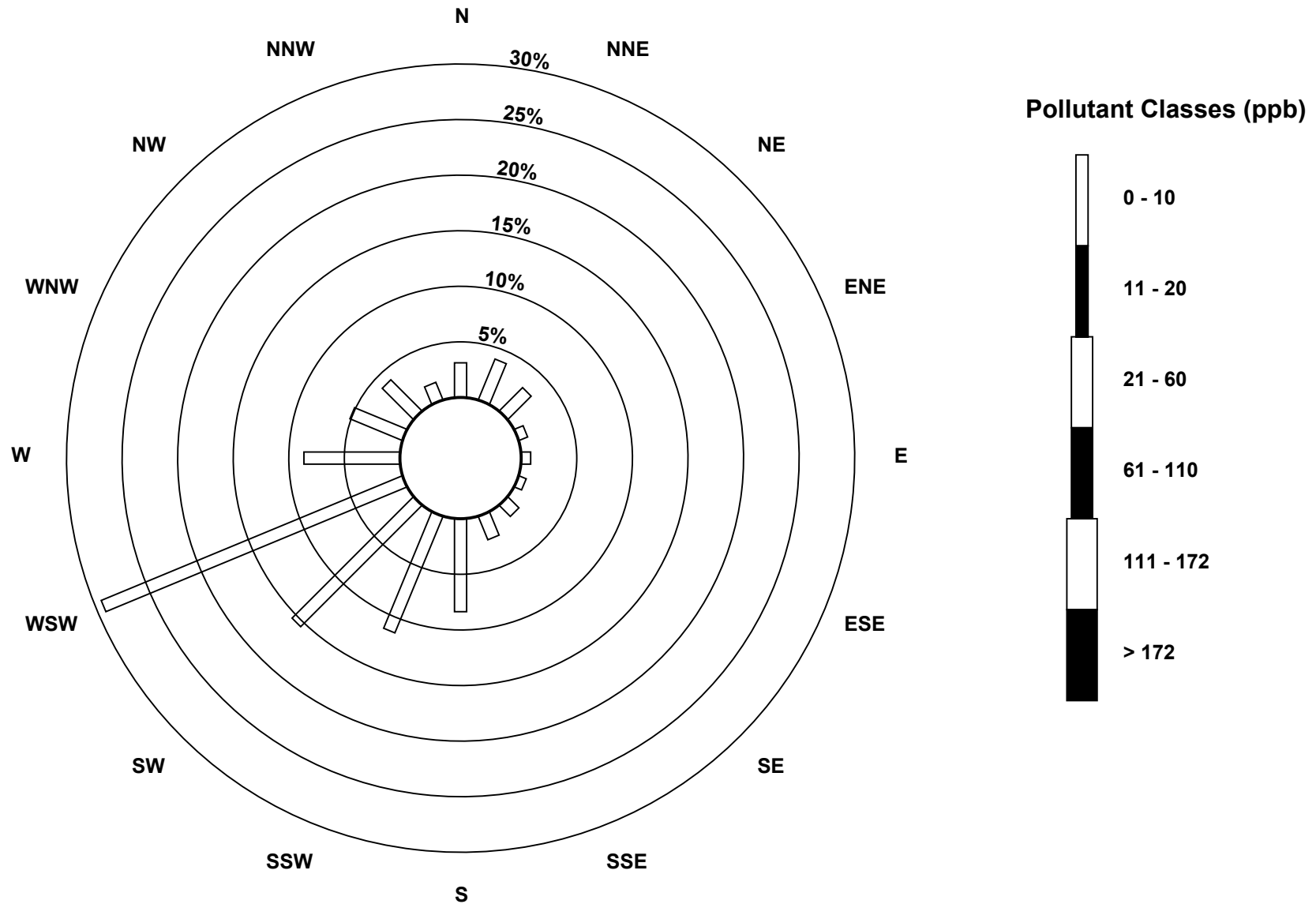
Hourly Maximums

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



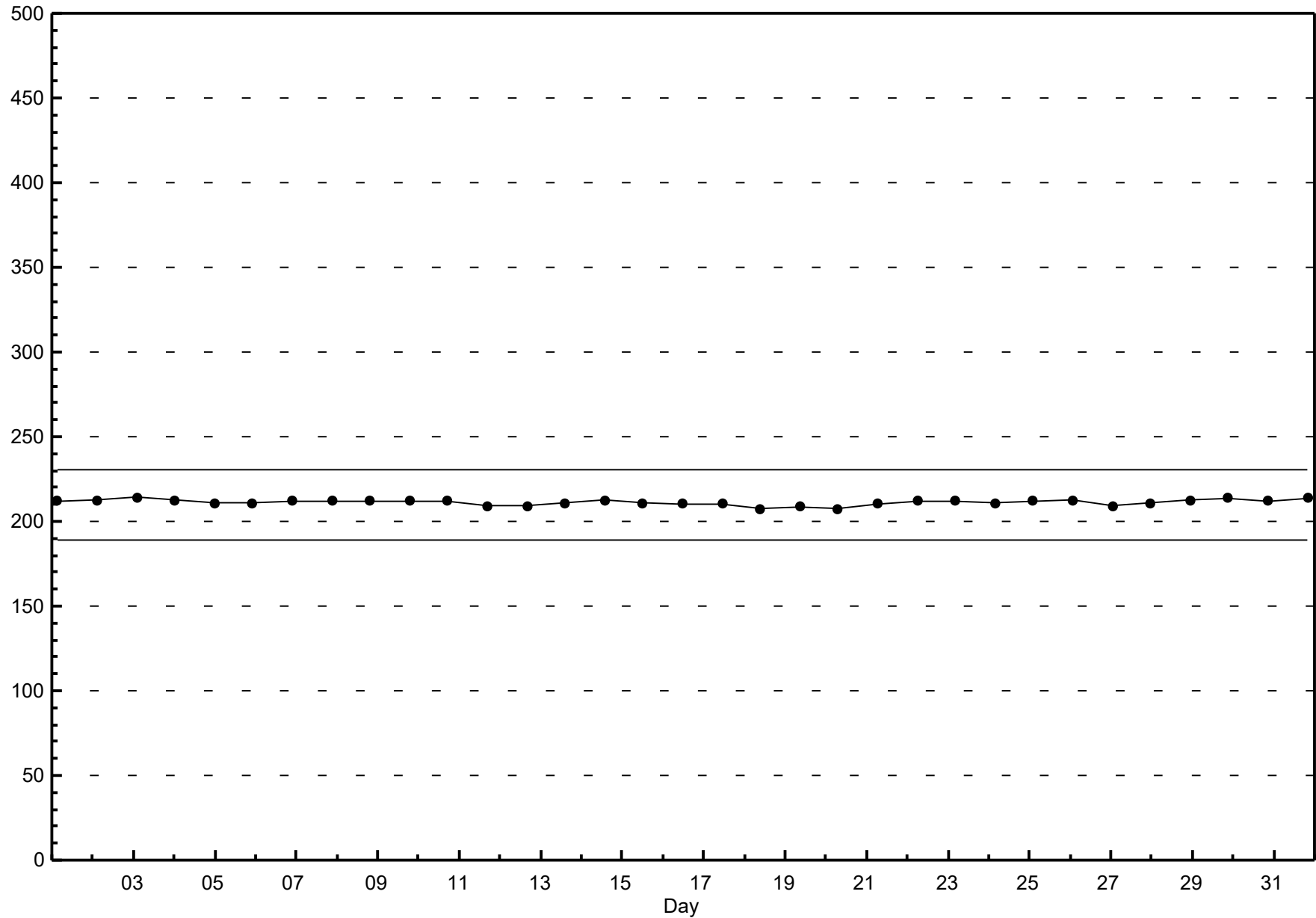
Pollutant Rose

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



Span Responses

Sulphur Dioxide (SO₂)
Smoky Heights - August 2018



Hourly Averages

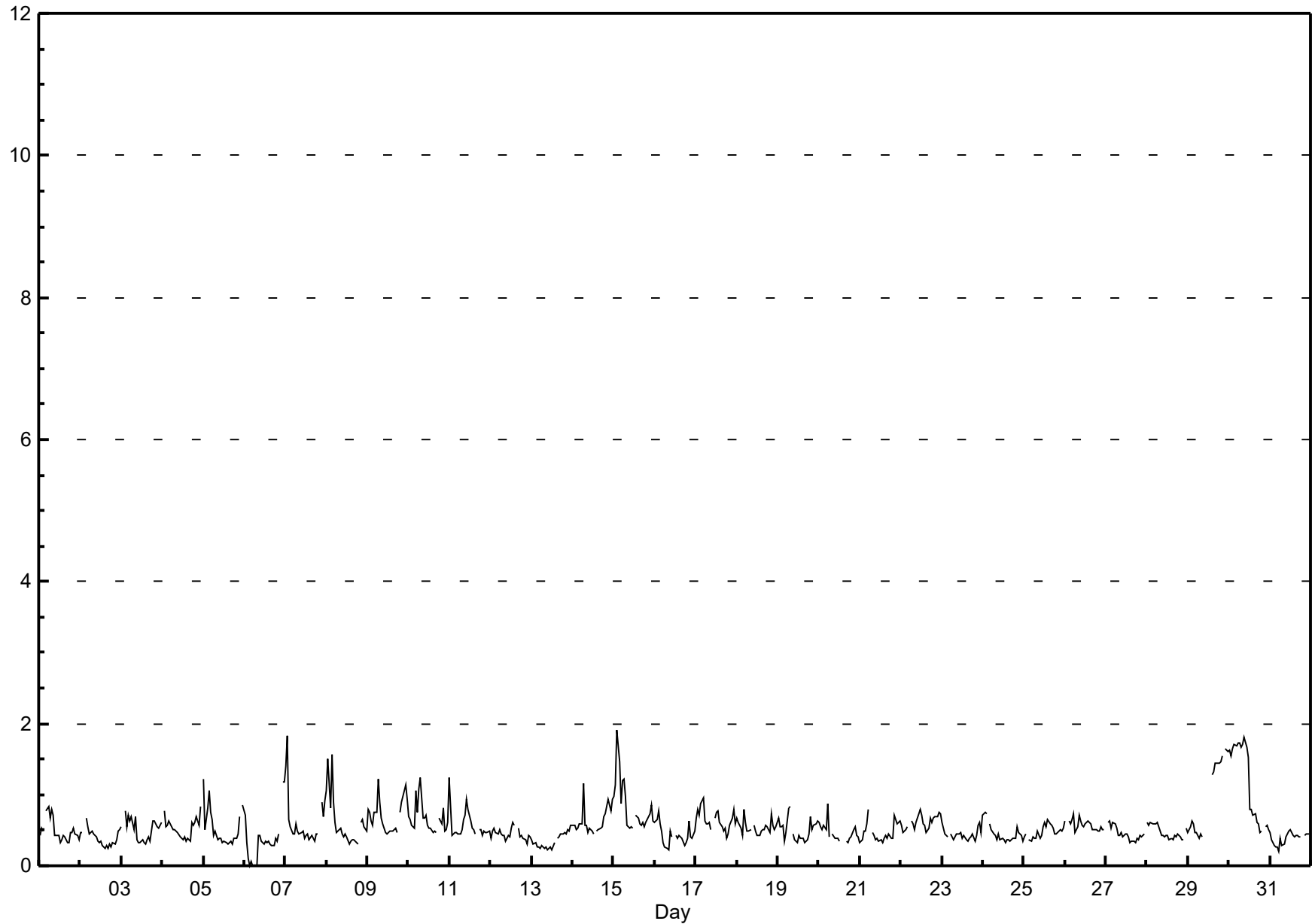
Total Reduced Sulphur (TRS) - ppb

Smoky Heights - August 2018

Maximum Value: 1.9 ppb on Aug 15 03:00																				Maximum Daily Average: 1.2 ppb on Aug 30										Hours in Service: 744									
Minimum Value: 0 ppb on Aug 6 04:00																				Minimum Daily Average: 0.3 ppb on Aug 13										Hours of Data: 703									
Maximum Diurnal Average: 0.7 ppb at hour 1																				Minimum Diurnal Average: 0.5 ppb at hour 14										Hours of Missing Data: 41									
Monthly Average: 0.56 ppb																				Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.6 P ₉₀ = 0.8 P ₉₉ = 1.7										Hours of Calibration: 41									
																				Percent Operational Time: 100.0																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Aug	0	1	0	A	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.5	0.8													
2-Aug	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	0.7													
3-Aug	1	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0.5	0.8													
4-Aug	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	A	0.5	0.8													
5-Aug	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	1	0.5	1.2													
6-Aug	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	0.4	1.2													
7-Aug	1	2	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	0.6	1.8													
8-Aug	1	2	1	2	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	A	1	1	1	0	0.6	1.6													
9-Aug	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1	0	A	1	1	1	1	1	0.7	1.2													
10-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	A	1	1	1	0	1	1	0.7	1.2													
11-Aug	1	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	A	1	1	0	0	0	0	0	0.6	1.3													
12-Aug	0	0	1	0	0	1	0	0	0	0	0	0	1	1	1	A	1	0	0	0	0	0	0	0	0.4	0.6													
13-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	0	1	0.3	0.6													
14-Aug	1	1	1	1	1	1	1	1	1	0	1	0	0	A	0	1	1	1	1	1	1	1	1	1	0.6	1.2													
15-Aug	1	1	2	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.9													
16-Aug	1	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0.4	0.8													
17-Aug	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	1	0	0	1	1	1	1	0.6	1.0													
18-Aug	1	1	1	0	1	1	0	0	1	A	1	0	0	0	0	1	1	1	1	0	1	1	0	1	0.5	0.8													
19-Aug	1	1	1	1	0	0	1	1	A	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0.5	0.8													
20-Aug	1	1	1	1	1	1	0	A	0	0	0	0	0	C	C	C	0	0	0	0	1	1	0	0	0.5	0.9													
21-Aug	0	0	0	0	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.5	0.8													
22-Aug	1	0	0	1	1	A	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0.6	0.8													
23-Aug	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0.4	0.6													
24-Aug	1	1	1	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.5	0.8													
25-Aug	0	0	A	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	1	0	1	0.5	0.7													
26-Aug	1	A	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	0.6	0.7													
27-Aug	A	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.5	0.6													
28-Aug	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0.5	0.6													
29-Aug	0	1	1	1	0	0	0	0	0	C	C	C	C	C	1	1	1	1	1	1	2	A	2	2	1.0	1.6													
30-Aug	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	0	0	A	1	1	1	1.2	1.8													
31-Aug	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0.4	0.5													
																									Diurnal Average														
																									Diurnal Maximum														
C - Calibration																									A - Automated Daily Zero Span														

Hourly Averages

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



Hourly Maximums

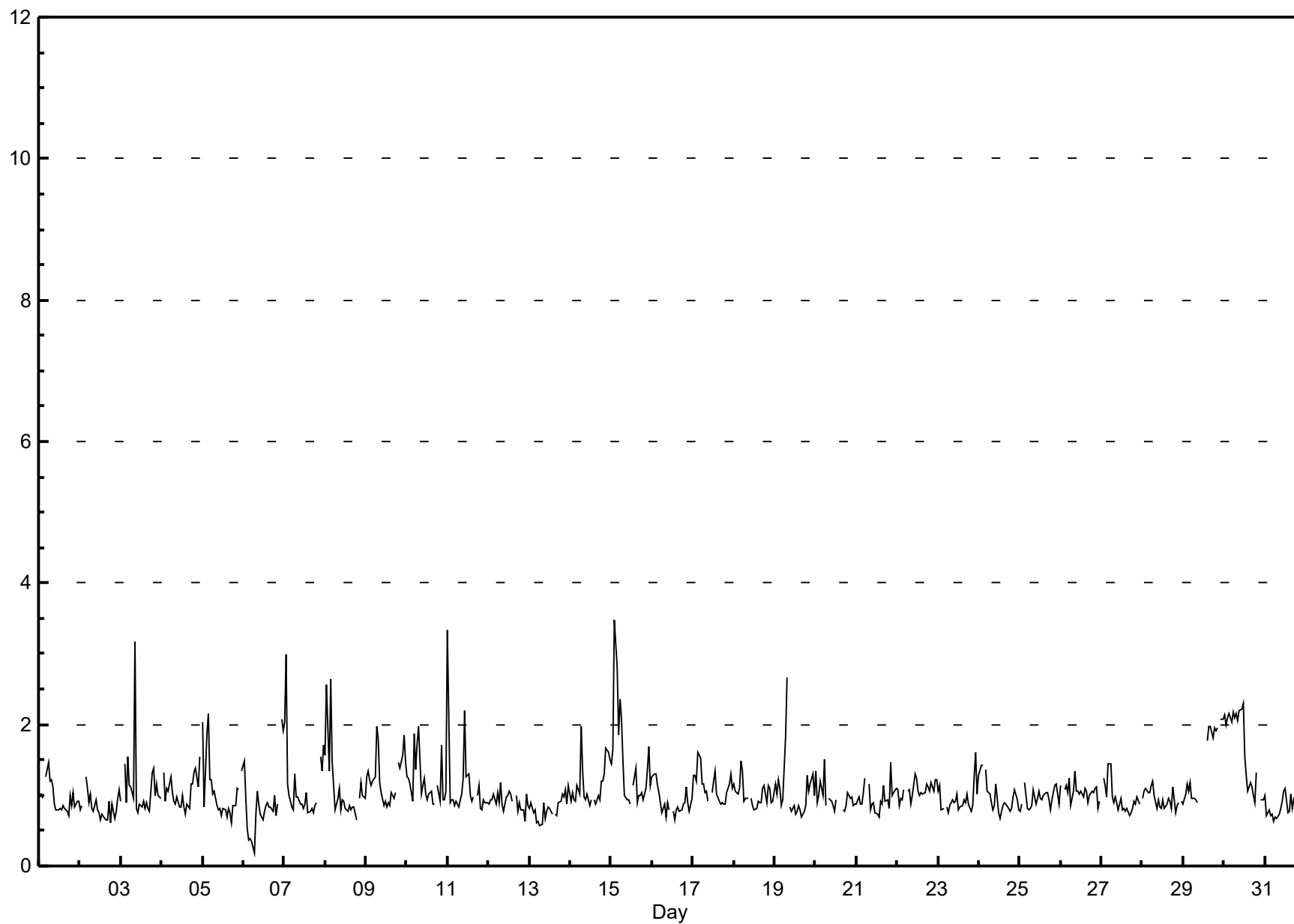
Total Reduced Sulphur (TRS) - ppb

Smoky Heights - August 2018

Maximum Value: 3.5 ppb on Aug 15 03:00																				Maximum Daily Average: 1.6 ppb on Aug 30										Hours in Service: 744									
Minimum Value: 0 ppb on Aug 6 07:00																				Minimum Daily Average: 0.8 ppb on Aug 13										Hours of Data: 703									
Maximum Diurnal Average: 1.3 ppb at hour 1																				Minimum Diurnal Average: 0.9 ppb at hour 14										Hours of Missing Data: 41									
Monthly Average: 1.06 ppb																				Percentiles: P ₁ = 0.6 P ₁₀ = 0.8 Q ₁ = 0.8 Median = 1.0 Q ₃ = 1.1 P ₉₀ = 1.5 P ₉₉ = 2.5										Hours of Calibration: 41									
																				Percent Operational Time: 100.0																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Aug	1	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	1.5													
2-Aug	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	1.3													
3-Aug	1	A	1	1	2	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	3.2													
4-Aug	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	A	1.0	1.5													
5-Aug	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1.1	2.2													
6-Aug	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	2	0.9	2.1													
7-Aug	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	2	1.1	3.0													
8-Aug	2	3	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1.1	2.6													
9-Aug	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	A	1	1	2	2	1	1.2	2.0													
10-Aug	1	1	1	1	2	1	2	2	1	1	1	1	1	1	1	1	A	1	1	1	2	1	1	1	1.2	2.0													
11-Aug	3	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	A	1	1	1	1	1	1	1	1.1	3.3													
12-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.9	1.2													
13-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.8	1.1													
14-Aug	1	1	1	1	1	1	2	1	1	1	1	1	1	A	1	1	1	1	1	1	1	2	2	2	1.1	2.0													
15-Aug	1	2	3	3	2	2	2	1	1	1	1	1	A	1	1	1	1	1	1	1	1	2	1	1	1.5	3.5													
16-Aug	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3													
17-Aug	1	1	1	2	2	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.6													
18-Aug	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.5													
19-Aug	1	1	1	1	1	1	2	3	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	2.7													
20-Aug	1	1	1	1	1	2	1	A	1	1	1	1	1	C	C	C	1	1	1	1	1	1	1	1	1.0	1.5													
21-Aug	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.5													
22-Aug	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.3													
23-Aug	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	0.9	1.6													
24-Aug	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.4													
25-Aug	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.2													
26-Aug	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.3													
27-Aug	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.9	1.5													
28-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.9	1.2													
29-Aug	1	1	1	1	1	1	1	1	1	C	C	C	C	C	2	2	2	2	2	2	2	A	2	2	1.5	2.1													
30-Aug	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	A	1	1	1	1.6	2.3													
31-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.8	1.1													
1.3 1.2 1.2 1.2 1.2 1.1 1.1 1.1 1.1 1.0 1.0 1.0 0.9 0.9 0.9 0.9 0.9 0.9 1.0 1.0 1.1 1.1 1.2 1.1																									Diurnal Average														
3.3 3.0 3.5 2.8 2.0 2.4 2.1 2.7 3.2 2.2 2.2 2.3 1.6 1.3 1.8 2.0 2.0 1.8 1.9 1.9 2.0 1.7 2.1 2.1																									Diurnal Maximum														
C - Calibration																									A - Automated Daily Zero Span														

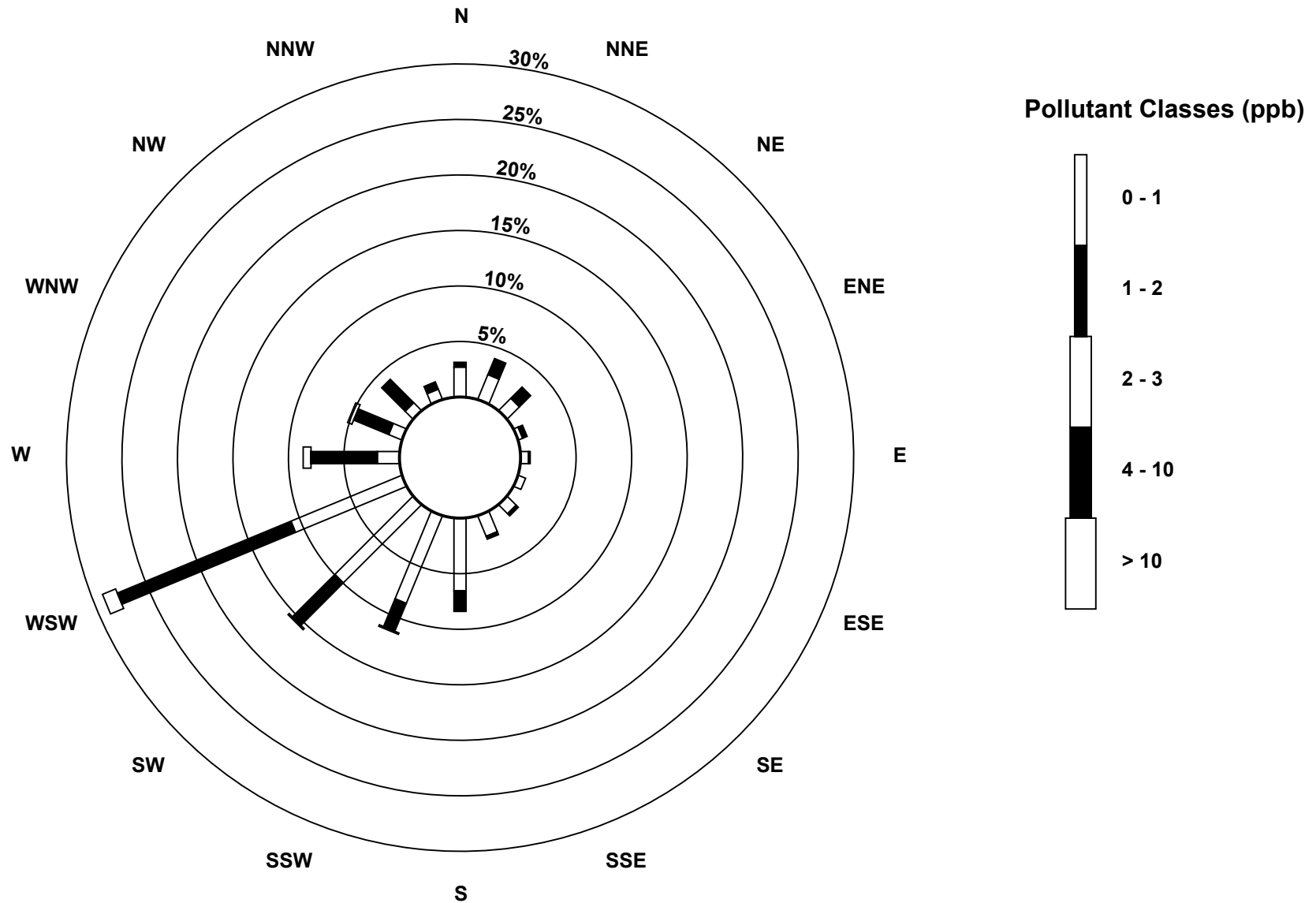
Hourly Maximums

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



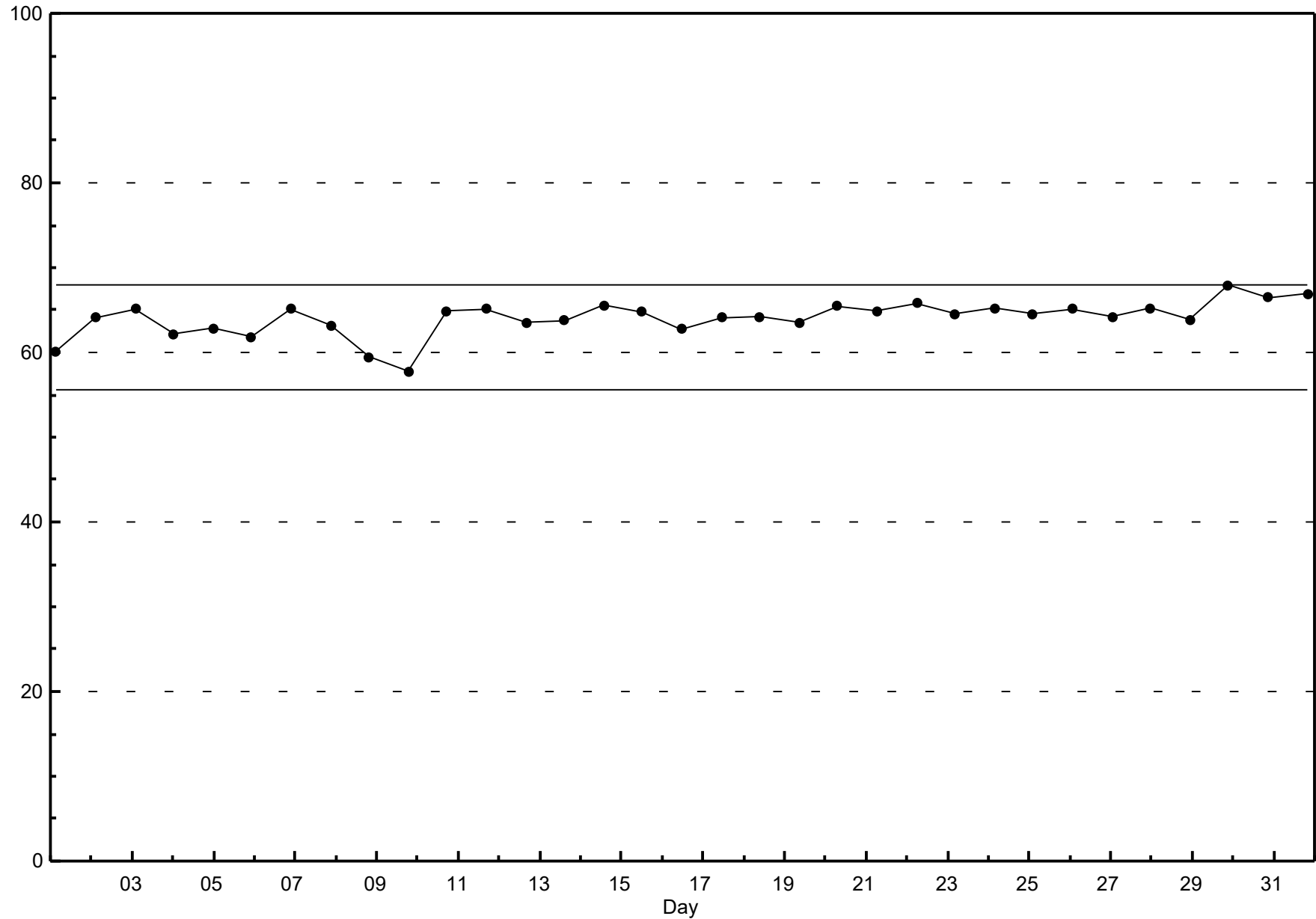
Pollutant Rose

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



Span Responses

Total Reduced Sulphur (TRS)
Smoky Heights - August 2018



Hourly Averages

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

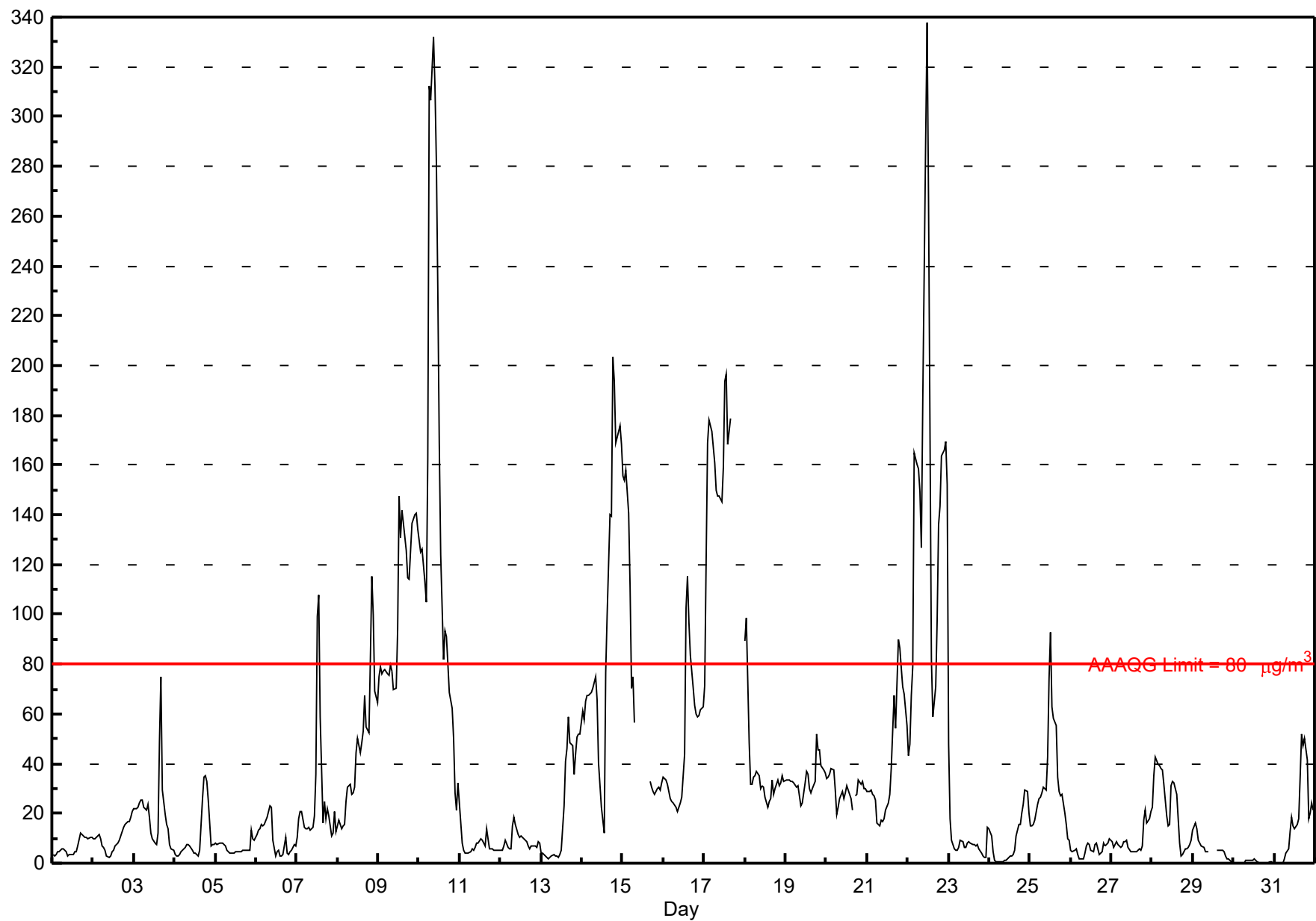
Smoky Heights - August 2018

Number of Exceedences: 1-hr: 91 24-hr: 10 Maximum Value: 337.5 µg/m³ on Aug 22 12:00 Minimum Value: 0 µg/m³ on Aug 30 01:00 Maximum Diurnal Average: 45.7 µg/m³ at hour 13 Monthly Average: 37.11 µg/m³																								Maximum Daily Average: 145.5 µg/m³ on Aug 22 Minimum Daily Average: 0.5 µg/m³ on Aug 30 Minimum Diurnal Average: 32.3 µg/m³ at hour 1 Percentiles: P ₁ = 0.0 P ₁₀ = 3.2 Q ₁ = 6.0 Median = 17.8 Q ₃ = 39.3 P ₉₀ = 104.4 P ₉₉ = 258.3																								Hours in Service: 744 Hours of Data: 723 Hours of Missing Data: 21 Hours of Calibration: 5 Percent Operational Time: 97.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Aug	3	3	3	5	5	6	6	5	5	3	3	3	4	4	4	7	12	12	11	11	10	10	10	10	6.5	11.9																							
2-Aug	10	10	10	11	10	7	7	5	3	2	3	4	5	7	8	9	11	13	15	16	16	17	18	21	9.9	20.8																							
3-Aug	22	22	22	24	25	25	23	21	23	18	12	10	8	8	12	49	75	29	19	15	14	8	6	5	20.7	75.0																							
4-Aug	4	3	3	4	5	6	6	7	8	7	5	4	4	4	3	5	26	34	35	33	25	7	7	7	10.5	35.3																							
5-Aug	8	7	8	8	8	7	7	5	4	4	4	4	5	5	4	5	5	5	5	5	5	14	10	9	6.3	13.5																							
6-Aug	12	13	14	16	15	15	18	21	23	22	9	3	5	5	3	3	4	10	4	4	5	5	7	7	10.2	22.9																							
7-Aug	10	18	21	21	15	14	14	14	13	14	19	36	99	108	59	16	25	18	22	19	11	12	20	13	26.3	107.7																							
8-Aug	15	18	14	15	16	25	31	31	27	28	31	44	50	44	49	53	67	55	53	83	115	100	69	65	45.7	115.4																							
9-Aug	75	79	76	77	78	76	75	79	77	70	70	94	148	131	142	137	126	115	114	126	137	140	140	134	104.8	147.6																							
10-Aug	129	125	126	113	105	163	312	306	332	312	281	230	169	124	82	93	91	80	69	62	50	28	21	32	143.2	331.7																							
11-Aug	24	8	5	4	4	4	5	6	5	7	8	8	10	9	8	7	14	6	6	6	5	5	5	5	7.2	24.4																							
12-Aug	5	5	7	9	6	6	6	15	18	15	11	10	11	10	10	9	7	6	7	7	7	6	8	8	8.8	18.5																							
13-Aug	4	4	3	2	2	2	3	3	3	3	3	3	5	23	41	46	59	49	47	36	44	51	52	52	22.4	58.7																							
14-Aug	61	58	65	67	68	69	70	72	75	66	40	22	17	12	77	100	140	139	203	193	169	171	176	168	95.8	203.4																							
15-Aug	156	154	158	140	110	70	75	56	N	N	N	N	N	N	N	N	33	31	29	28	30	31	30	32	--	157.8																							
16-Aug	34	34	31	29	26	25	24	22	21	22	24	26	44	103	115	97	84	70	64	60	59	59	61	63	49.9	115.4																							
17-Aug	71	121	169	178	173	167	161	150	147	148	145	159	193	196	168	179	N	N	N	N	N	N	N	N	--	196.5																							
18-Aug	89	98	49	31	32	34	35	37	35	30	31	30	27	22	25	26	34	28	30	33	31	32	35	33	37.0	98.3																							
19-Aug	33	33	33	33	33	32	30	31	27	23	24	32	37	36	30	28	30	33	52	46	45	39	37	37	34.0	51.7																							
20-Aug	34	34	36	38	37	30	20	23	26	29	26	28	31	29	26	22	C	27	28	33	32	33	30	30	29.6	38.2																							
21-Aug	29	29	30	28	27	25	16	15	17	16	18	21	24	27	38	53	68	54	90	86	78	71	68	55	41.1	89.8																							
22-Aug	43	48	67	79	165	160	158	149	127	187	291	338	266	175	82	59	71	97	136	143	164	166	170	152	145.5	337.5																							
23-Aug	48	18	9	6	5	5	6	9	9	6	6	8	8	8	7	8	7	7	6	4	3	3	2	14	8.9	47.8																							
24-Aug	14	11	5	1	1	1	0	1	1	1	1	2	3	3	3	5	11	16	15	20	23	30	29	20	9.0	29.6																							
25-Aug	15	15	15	17	23	26	27	28	31	29	43	74	93	63	58	55	34	29	27	28	20	16	10	9	32.7	92.6																							
26-Aug	5	5	5	6	4	2	2	2	4	7	8	8	5	4	8	8	6	4	5	8	7	7	8	10	5.7	10.0																							
27-Aug	9	7	7	9	8	7	7	9	9	9	6	5	5	5	5	5	6	5	7	17	21	16	18	20	9.2	21.4																							
28-Aug	22	35	43	40	39	38	37	32	19	15	15	31	33	32	28	18	8	3	3	6	6	6	7	9	21.9	42.9																							
29-Aug	13	16	14	9	8	7	6	5	4	5	C	C	C	C	5	5	5	5	5	3	2	2	1	0	6.1	16.4																							
30-Aug	0	0	0	0	0	0	0	1	1	1	1	1	2	1	1	0	0	0	0	0	0	1	0	0	0.5	1.8																							
31-Aug	0	0	0	0	0	0	2	4	6	13	19	15	14	16	18	35	52	47	50	41	18	20	24	21	17.2	51.6																							
32.3 33.2 33.8 32.9 33.9 33.9 38.4 37.6 36.7 37.2 40.0 43.3 45.7 41.9 37.3 38.0 38.2 34.3 38.5 39.1 38.5 36.8 36.1 34.8																								Diurnal Average																									
155.8 154.2 168.9 178.0 173.2 166.9 312.2 306.4 331.7 312.3 290.6 337.5 266.3 196.5 168.4 178.9 140.1 139.2 203.4 193.3 169.0 170.9 175.9 168.1																								Diurnal Maximum																									
C - Calibration N - Not Valid																																																	
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																																																	

Hourly Averages

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

Smoky Heights - August 2018



Hourly Maximums

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

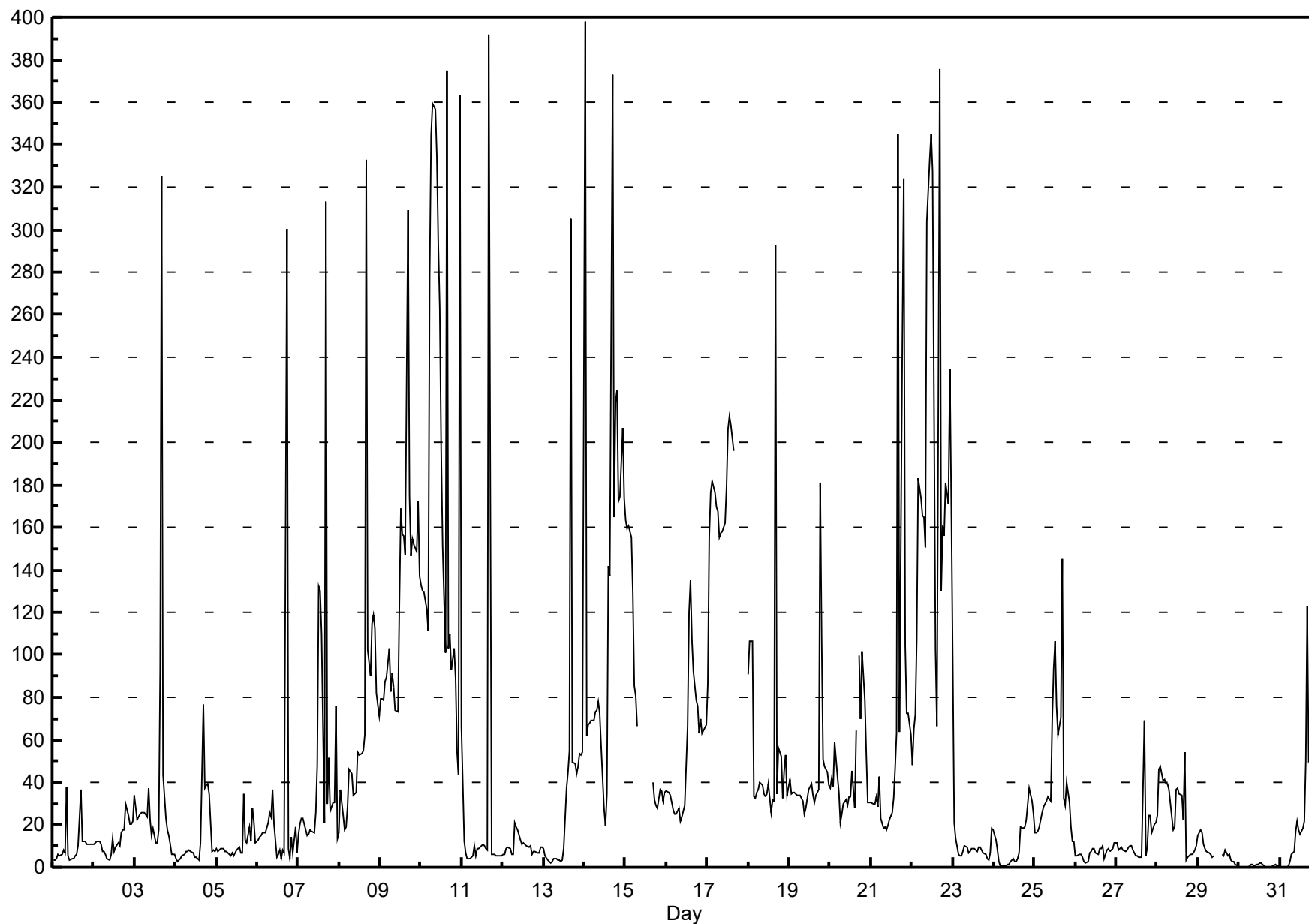
Smoky Heights - August 2018

Maximum Value: 397.7 μg/m ³ on Aug 14 01:00																								Maximum Daily Average: 193.2 μg/m ³ on Aug 10				Hours in Service: 744	
Minimum Value: 0 μg/m ³ on Aug 30 01:00																								Minimum Daily Average: 0.7 μg/m ³ on Aug 30				Hours of Data: 723	
Maximum Diurnal Average: 146.6 μg/m ³ at hour 17																								Minimum Diurnal Average: 36.7 μg/m ³ at hour 4				Hours of Missing Data: 21	
Monthly Average: 50.54 μg/m ³																								Percentiles: P ₁ = 0.0 P ₁₀ = 4.1 Q ₁ = 7.6 Median = 22.8 Q ₃ = 54.7 P ₉₀ = 151.6 P ₉₉ = 354.0				Hours of Calibration: 5	
																								Percent Operational Time: 97.9					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
1-Aug	4	4	4	6	5	6	8	7	38	5	4	4	5	6	10	36	12	12	12	11	11	11	11	9.8	38.1				
2-Aug	11	11	12	12	11	8	7	6	4	3	6	13	7	10	11	10	17	17	18	30	24	20	20	21	12.9	29.8			
3-Aug	34	22	23	25	26	26	26	24	37	22	15	19	11	12	17	93	326	44	23	18	15	11	6	6	36.7	325.6			
4-Aug	4	3	3	4	5	6	7	8	8	8	7	5	5	4	3	11	77	38	39	39	34	7	8	8	14.2	76.7			
5-Aug	9	8	9	9	9	8	7	7	5	7	6	7	8	10	7	7	34	13	11	19	12	28	22	11	11.3	34.4			
6-Aug	13	14	15	16	16	17	21	26	24	37	21	5	6	8	4	8	7	300	9	4	14	7	19	7	25.7	300.2			
7-Aug	15	20	23	23	18	15	16	17	17	17	26	48	132	130	110	21	313	30	52	26	31	31	76	13	50.8	313.4			
8-Aug	17	37	24	18	19	29	46	44	34	35	35	54	53	54	55	62	333	102	90	115	119	113	82	71	68.3	332.7			
9-Aug	79	79	79	87	90	103	83	92	85	74	74	124	169	157	156	147	309	175	147	155	152	149	172	137	127.9	309.0			
10-Aug	133	130	130	121	111	278	345	359	356	334	293	263	196	151	101	375	103	110	93	103	89	54	44	363	193.2	375.2			
11-Aug	66	12	7	4	4	4	5	10	6	9	9	10	11	10	9	8	392	6	6	6	6	6	5	5	25.6	391.8			
12-Aug	6	6	9	10	9	6	6	21	19	18	13	11	11	11	10	9	10	6	7	7	7	7	10	10	9.9	20.7			
13-Aug	9	6	3	3	2	2	4	4	3	3	3	4	9	37	44	55	305	49	49	44	47	53	53	54	35.3	304.8			
14-Aug	398	62	67	68	69	69	73	74	78	73	57	28	20	35	141	137	373	165	219	225	172	174	207	173	131.5	397.7			
15-Aug	164	159	161	155	129	86	80	67	N	N	N	N	N	N	N	N	40	32	29	28	36	36	31	35	--	163.6			
16-Aug	36	35	34	31	27	25	25	28	22	24	26	29	67	120	135	107	92	79	76	63	70	63	65	67	56.0	134.8			
17-Aug	86	155	176	182	176	169	168	155	157	158	162	179	206	213	208	196	N	N	N	N	N	N	N	N	--	212.5			
18-Aug	91	106	107	33	33	35	37	40	38	35	33	35	39	26	32	31	293	35	56	52	32	46	53	34	56.3	292.9			
19-Aug	42	35	35	35	35	34	34	33	31	25	28	36	38	39	34	31	34	37	181	108	51	47	44	39	45.2	181.0			
20-Aug	38	42	38	59	42	35	21	25	30	32	29	33	33	46	28	65	C	99	70	102	78	53	30	31	46.0	101.6			
21-Aug	30	30	30	33	29	43	23	18	19	18	20	23	26	32	47	63	345	64	248	324	105	73	72	62	74.0	345.4			
22-Aug	48	65	72	107	183	173	166	165	151	304	333	345	328	215	103	67	376	130	161	156	181	171	235	170	183.4	375.7			
23-Aug	96	21	13	6	6	5	8	10	10	7	7	9	9	9	8	9	9	8	7	6	4	4	7	18	12.3	96.0			
24-Aug	17	13	8	2	1	1	1	1	2	1	2	4	3	3	4	7	19	18	19	22	30	37	31	25	11.3	37.1			
25-Aug	17	16	17	19	26	29	30	31	33	31	69	93	107	76	62	70	145	33	29	40	31	19	12	12	43.6	145.1			
26-Aug	6	6	6	6	5	2	2	3	7	8	9	9	7	6	9	9	10	4	8	9	8	8	9	11	6.8	11.2			
27-Aug	11	8	9	9	8	7	8	9	10	10	8	6	5	5	5	5	69	5	10	25	25	17	20	21	13.1	69.1			
28-Aug	24	46	47	41	41	39	39	37	24	17	19	37	37	35	34	22	54	3	5	6	6	7	8	10	26.7	54.5			
29-Aug	15	18	16	11	9	8	7	6	5	5	C	C	C	C	6	5	8	6	6	3	3	2	1	1	7.0	17.8			
30-Aug	0	0	0	0	0	0	1	1	1	1	1	2	2	2	1	0	0	0	0	0	1	1	1	0	0.7	2.2			
31-Aug	0	0	0	0	0	1	2	6	8	17	21	17	15	18	22	50	123	50	52	46	25	24	25	24	22.8	122.6			
49.0 37.7 38.0 36.7 36.9 40.9 42.1 43.0 42.0 44.5 46.0 50.0 53.9 50.9 47.0 56.4 146.6 55.7 57.6 59.8 47.2 42.5 46.0 48.4																								Diurnal Average					
397.7 159.3 176.1 181.7 183.2 278.0 344.7 359.1 356.4 334.1 332.9 345.4 327.5 215.4 207.9 375.2 391.8 300.2 247.7 324.4 180.7 173.9 234.7 363.2																								Diurnal Maximum					
C - Calibration N - Not Valid																													

Hourly Maximums

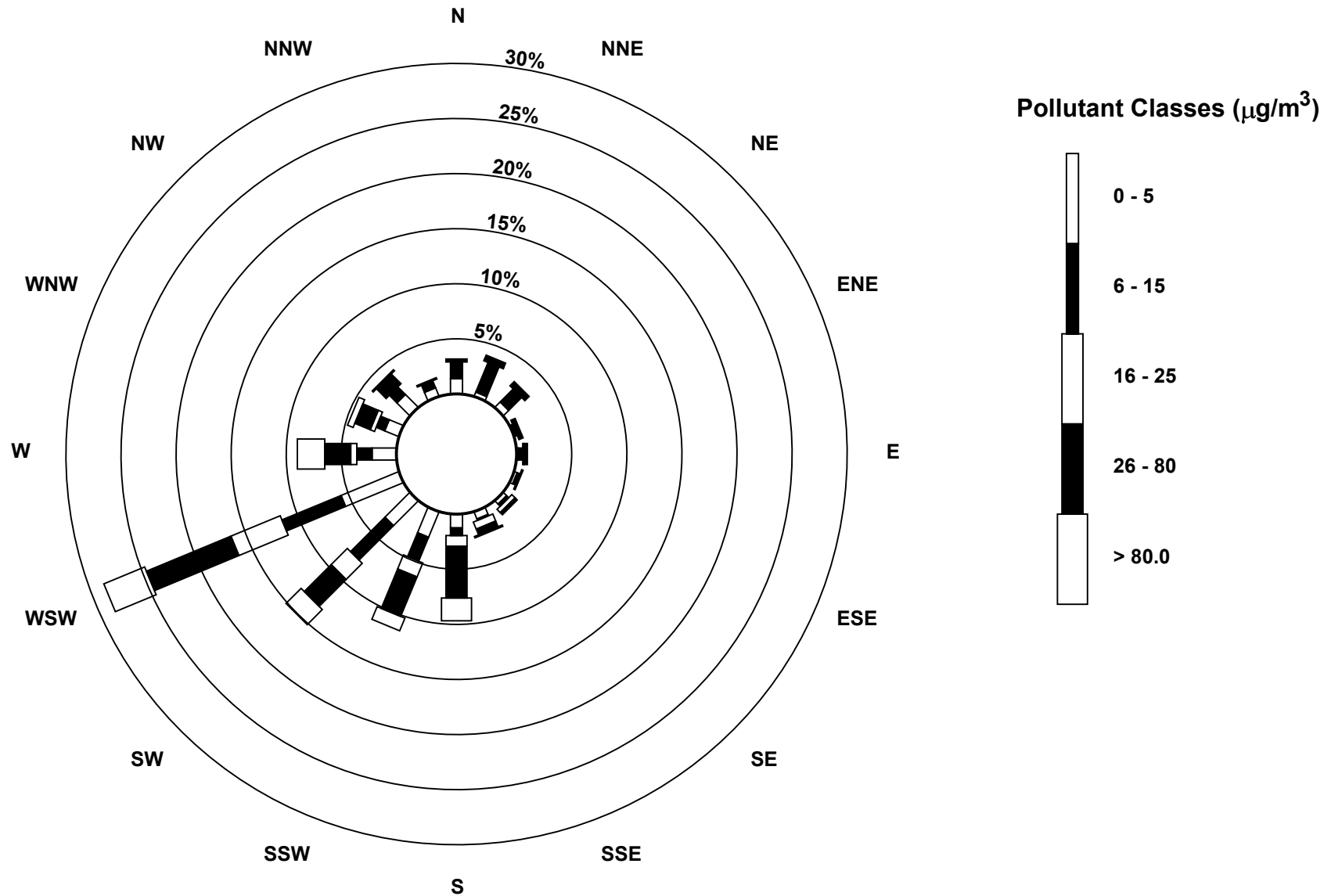
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$

Smoky Heights - August 2018



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Smoky Heights - August 2018



Hourly Averages

External Temperature (ET) - °C

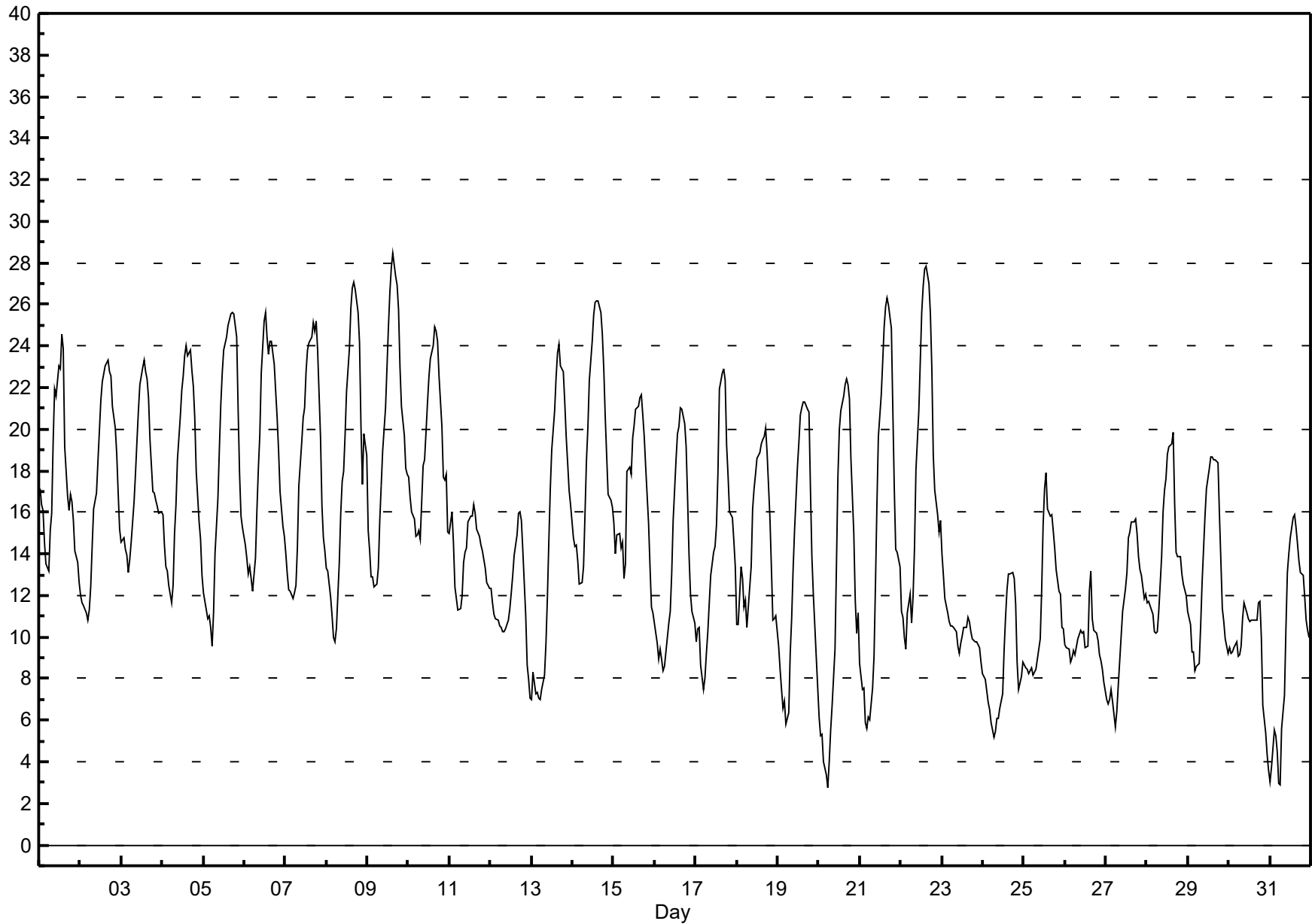
Smoky Heights - August 2018

Maximum Value: 28.4 °C on Aug 9 16:00																								Maximum Daily Average: 19.9 °C on Aug 9										Hours in Service: 744	
Minimum Value: 3 °C on Aug 20 06:00																								Minimum Daily Average: 8.7 °C on Aug 24										Hours of Data: 744	
Maximum Diurnal Average: 20.6 °C at hour 16																								Minimum Diurnal Average: 9.8 °C at hour 6										Hours of Missing Data: 0	
Monthly Average: 14.87 °C																								Percentiles: P ₁ = 4.0 P ₁₀ = 8.4 Q ₁ = 10.6 Median = 14.1 Q ₃ = 18.9 P ₉₀ = 23.0 P ₉₉ = 26.9										Hours of Calibration: 0	
																								Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24											
1-Aug	17	16	16	15	14	13	15	16	19	22	22	23	23	25	24	19	17	16	17	16	16	14	14	13	17.5	24.5									
2-Aug	12	12	11	11	11	11	12	14	16	17	18	20	21	22	23	23	23	23	23	21	20	19	17	15	17.4	23.3									
3-Aug	15	15	14	14	13	14	15	17	18	19	21	22	23	23	23	22	22	20	17	17	17	16	16	16	17.8	23.3									
4-Aug	16	14	13	13	12	12	12	15	16	19	21	22	23	24	24	24	24	23	22	21	18	16	15	13	17.9	24.0									
5-Aug	12	12	11	11	10	10	11	14	17	19	21	23	24	24	25	25	26	26	26	24	21	18	16	15	18.3	25.6									
6-Aug	14	14	13	13	13	12	14	16	18	20	23	25	26	24	24	24	24	23	22	21	19	17	15	15	18.7	25.6									
7-Aug	14	13	12	12	12	12	12	14	17	19	21	21	23	24	24	24	25	25	25	24	20	16	15	14	18.3	25.2									
8-Aug	13	13	12	11	10	10	10	14	16	17	18	20	22	24	26	27	27	27	26	24	20	17	20	19	18.4	27.1									
9-Aug	15	14	13	13	12	13	13	16	17	19	21	23	25	27	28	28	27	27	26	23	21	20	18	18	19.9	28.4									
10-Aug	18	17	16	16	15	15	15	15	18	19	20	21	22	23	24	25	25	24	23	20	18	18	18	15	19.1	24.9									
11-Aug	15	16	15	12	12	11	11	12	14	14	14	16	16	16	16	16	15	15	14	14	14	13	13	12	14.0	16.4									
12-Aug	12	12	11	11	11	11	10	10	10	10	11	11	12	13	14	15	16	16	16	14	11	9	8	7	11.7	16.0									
13-Aug	7	8	7	7	7	7	7	8	10	12	15	17	19	21	23	24	24	23	23	21	20	18	17	16	15.1	24.1									
14-Aug	15	14	14	14	13	13	13	16	18	20	22	24	25	26	26	26	26	25	23	21	19	17	17	16	19.3	26.2									
15-Aug	15	14	15	15	14	15	13	14	18	18	18	20	20	21	21	22	22	21	20	18	15	13	11	11	16.8	21.7									
16-Aug	11	10	9	9	9	8	9	10	11	11	13	16	19	20	20	21	21	20	19	17	14	12	11	11	13.7	21.0									
17-Aug	10	10	10	9	7	8	9	10	12	13	14	14	15	18	22	23	23	22	19	18	16	16	15	13	14.5	22.9									
18-Aug	11	11	13	13	11	12	10	11	13	16	17	18	19	19	19	20	20	19	16	13	11	11	11	11	14.7	20.1									
19-Aug	10	8	7	7	7	6	6	9	11	13	15	18	19	21	21	21	21	21	21	17	14	12	9	8	13.5	21.3									
20-Aug	6	5	5	4	3	3	4	6	7	9	13	18	20	21	22	22	22	22	21	19	15	12	10	11	12.5	22.4									
21-Aug	9	7	8	6	6	6	6	8	9	13	16	20	22	23	25	26	26	26	25	21	17	14	14	13	15.2	26.3									
22-Aug	11	11	10	9	11	12	11	12	14	18	21	23	26	27	28	28	27	26	23	19	17	16	15	16	17.9	27.8									
23-Aug	14	13	12	11	11	11	11	10	10	10	9	10	10	10	10	11	11	10	10	10	10	9	9	9	10.5	14.0									
24-Aug	8	8	7	7	6	6	5	5	6	6	7	7	9	11	12	13	13	13	13	12	9	7	8	9	8.7	13.1									
25-Aug	9	9	8	8	8	8	8	8	9	10	12	15	17	18	16	16	16	15	14	13	12	12	10	10	11.9	17.9									
26-Aug	10	9	9	9	9	9	9	10	10	10	10	10	10	10	12	13	11	10	10	10	9	9	8	8	9.8	13.2									
27-Aug	7	7	7	7	7	6	6	8	9	10	11	12	13	15	15	16	16	16	15	14	13	13	12	12	11.1	15.7									
28-Aug	12	12	11	11	10	10	10	11	14	16	17	18	19	19	19	20	16	14	14	14	13	13	12	12	14.1	19.8									
29-Aug	11	11	9	9	8	9	9	11	13	14	16	17	18	19	19	18	19	18	16	14	11	11	10	9	13.3	18.7									
30-Aug	9	9	9	10	10	9	9	10	11	12	11	11	11	11	11	11	11	12	12	10	7	5	4	4	9.5	11.8									
31-Aug	3	4	6	5	4	3	3	6	7	10	13	14	15	16	16	15	15	14	13	13	12	11	10	10	9.9	15.9									
11.6 11.2 10.9 10.4 10.0 9.8 10.1 11.4 13.2 14.7 16.2 17.7 18.9 19.8 20.4 20.6 20.3 19.7 18.9 17.2 15.2 13.7 12.9 12.3 Diurnal Average																																			
17.7 16.8 16.1 15.7 14.8 14.9 15.1 16.5 19.4 21.9 22.7 25.2 25.6 26.9 27.8 28.4 27.3 27.0 25.7 24.4 21.1 19.7 19.8 18.8 Diurnal Maximum																																			

Hourly Averages

External Temperature (ET) - °C

Smoky Heights - August 2018



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Smoky Heights - August 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	7	6	6	2	4	3	5	7	8	6	5	5	6	4	4	19	10	4	10	17	11	10	7	7	4.4	18.6
Dir	360	352	350	208	302	293	233	245	267	252	111	135	134	163	262	259	222	121	247	247	235	213	204	193	238.6	258.8
2 Spd	9	6	8	8	7	7	6	6	10	11	14	13	14	15	17	20	22	20	20	17	19	21	20	16	12.9	22.4
Dir	240	191	183	217	184	196	204	187	206	213	214	217	215	224	224	229	231	234	232	234	235	248	255	249	226.0	231.5
3 Spd	17	20	20	16	15	20	16	18	25	29	30	27	29	29	31	29	26	25	13	9	9	9	8	11	19.3	30.7
Dir	249	250	252	225	240	251	245	243	249	253	255	257	257	252	256	274	291	273	253	226	227	230	233	233	253.3	256.2
4 Spd	16	17	14	16	15	17	16	10	11	10	8	8	9	9	7	6	9	7	5	4	12	13	7	8	9.4	17.0
Dir	252	255	250	253	254	258	254	240	245	246	256	235	223	235	258	348	357	319	324	263	250	257	272	261	257.3	254.9
5 Spd	7	8	9	7	10	6	8	10	12	13	12	16	17	18	17	16	16	13	10	7	7	9	12	13	10.9	18.0
Dir	220	238	249	220	199	215	201	197	211	216	208	218	225	235	235	236	233	240	234	216	200	243	256	255	226.7	235.0
6 Spd	13	12	12	14	15	11	12	16	18	20	26	26	30	28	25	32	28	21	15	13	10	11	9	10	17.7	32.2
Dir	247	250	248	237	227	229	230	232	233	236	230	237	247	247	240	239	238	243	251	247	253	258	263	258	241.1	238.7
7 Spd	11	14	14	14	14	15	17	16	16	20	23	22	26	26	22	22	18	10	8	2	7	9	7	12	14.9	26.0
Dir	262	263	257	255	253	249	257	253	243	245	249	251	250	248	244	234	257	261	296	241	263	288	267	261	253.2	250.4
8 Spd	13	7	7	9	10	7	6	6	9	11	12	11	9	9	9	10	10	11	10	14	12	14	18	13	8.7	18.2
Dir	263	238	226	195	212	205	209	194	177	173	175	195	198	177	174	169	176	185	179	197	223	252	261	261	206.8	261.0
9 Spd	11	8	9	7	7	8	8	7	9	7	7	11	10	7	5	6	7	6	6	6	6	5	6	6	6.3	10.6
Dir	258	254	242	209	243	218	209	220	184	191	172	216	205	191	207	180	152	174	173	200	241	254	255	243	213.2	215.6
10 Spd	8	7	11	9	13	13	13	13	15	16	14	13	11	12	14	5	5	6	7	10	4	8	11	13	10.2	15.8
Dir	245	244	255	265	252	260	263	264	270	257	258	264	272	287	281	301	288	247	267	294	304	266	255	256	265.3	257.0
11 Spd	11	10	9	8	8	7	6	7	8	7	7	7	7	7	8	8	8	6	7	7	6	6	6	6	6.5	11.2
Dir	282	346	347	360	359	360	3	6	34	26	23	32	36	38	39	40	32	26	23	18	14	14	17	35	13.8	282.1
12 Spd	10	12	5	6	11	12	12	13	3	6	6	5	10	9	6	2	4	6	9	9	8	9	7	5	2.8	12.8
Dir	80	61	44	39	64	40	37	51	348	358	4	4	31	35	39	43	129	190	225	243	215	229	243	237	39.1	50.7
13 Spd	6	5	10	6	10	8	12	13	11	10	12	14	15	17	16	16	16	13	12	13	18	20	17	18	11.3	20.2
Dir	219	210	104	141	219	208	196	205	187	167	166	168	172	188	190	192	211	218	217	221	227	238	236	236	202.5	238.5
14 Spd	16	14	15	13	13	14	15	14	18	19	21	26	30	30	34	31	29	22	20	15	18	16	14	11	19.3	33.7
Dir	240	236	239	242	241	247	252	244	239	241	252	249	249	237	232	234	239	238	233	236	251	234	252	275	241.8	232.1
15 Spd	11	9	12	11	10	9	9	7	12	13	11	11	10	7	7	2	1	5	4	4	2	0	3	2	4.0	12.8
Dir	265	261	258	261	258	256	242	271	296	284	297	331	18	41	23	62	53	47	65	69	93	186	209	189	289.2	283.9
16 Spd	3	3	5	6	9	9	9	7	9	11	9	10	11	13	12	11	10	9	8	7	7	8	8	9	7.4	12.8
Dir	228	252	256	245	251	243	223	191	182	202	193	190	175	198	176	175	175	181	195	215	260	246	241	255	208.4	198.2
17 Spd	11	15	15	15	10	6	6	5	6	5	8	10	10	14	22	20	17	13	13	14	11	11	16	15	10.9	21.6
Dir	257	261	257	247	234	188	185	192	182	180	187	196	190	222	236	232	217	241	233	239	241	251	251	255	231.8	236.4
18 Spd	13	15	13	4	6	6	10	11	9	12	12	11	9	12	10	13	9	6	6	4	5	6	7	5	7.8	15.3
Dir	242	248	312	239	296	287	256	262	263	295	313	308	287	273	257	246	235	210	196	205	248	268	260	283	266.1	248.3
19 Spd	1	6	5	2	5	4	3	2	4	4	6	4	4	3	3	3	4	3	1	3	4	7	5	3	0.4	7.0
Dir	212	235	251	250	22	255	254	143	174	134	132	133	86	39	5	32	40	57	294	246	318	302	322	321	309.3	302.3
20 Spd	1	5	4	4	6	6	7	8	9	7	8	6	8	12	12	11	11	12	8	5	5	10	11	11	6.5	12.4
Dir	290	248	256	210	204	184	210	186	177	168	164	176	181	194	179	191	201	216	213	179	229	257	263	272	206.4	194.5
21 Spd	7	8	8	7	10	9	7	7	8	9	10	10	11	12	13	13	11	8	7	7	8	10	13	15	8.3	15.4
Dir	257	193	224	213	210	196	189	192	175	165	166	159	161	169	176	180	198	170	179	197	242	241	219	245	195.5	244.9
22 Spd	15	11	11	11	15	15	13	11	11	12	19	21	27	25	28	23	17	8	8	11	14	12	13	7	13.6	27.7
Dir	239	238	216	236	254	265	241	215	173	203	221	232	258	269	267	260	253	265	232	247	259	252	263	316	247.1	266.6

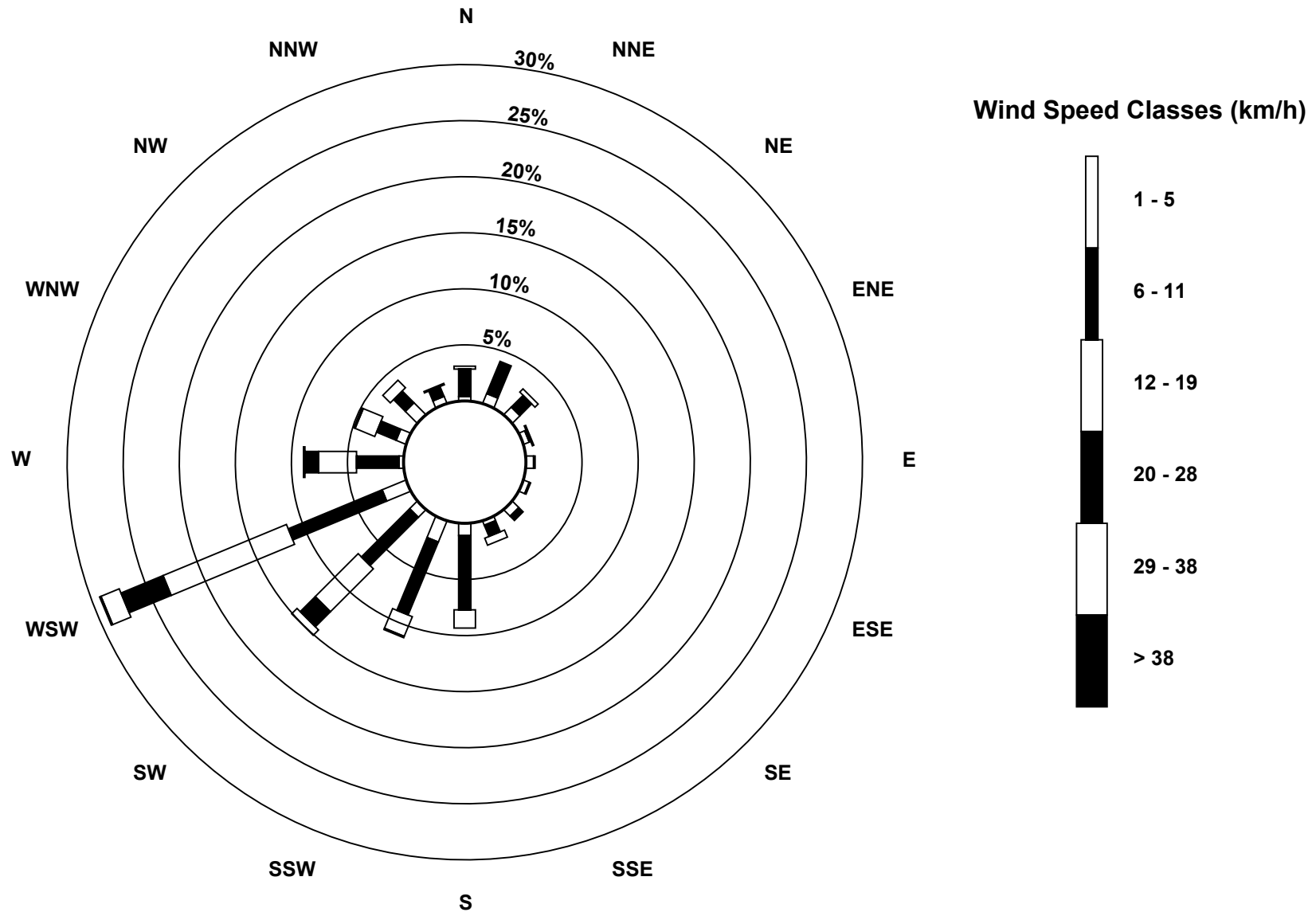
Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Smoky Heights - August 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	10	9	9	12	10	12	10	10	9	8	6	5	6	6	5	7	7	5	4	4	3	4	9	10	7.0	11.9
Dir	18	23	15	10	359	360	2	14	18	14	6	348	4	353	19	13	3	27	17	343	328	318	315	311	1.9	9.6
24 Spd	12	12	17	14	13	13	10	10	10	11	7	6	2	5	6	5	5	5	5	4	3	5	5	8	4.2	16.6
Dir	302	294	295	305	304	304	311	313	319	301	310	304	284	41	48	55	82	81	84	101	162	171	157	134	313.7	294.7
25 Spd	3	4	0	5	3	4	5	4	5	7	10	12	14	18	9	9	15	9	5	7	9	6	3	7	5.2	17.6
Dir	135	18	81	211	194	205	204	189	180	183	183	190	217	247	289	264	248	242	196	187	229	291	103	296	225.2	247.2
26 Spd	1	6	5	5	9	3	2	2	5	10	11	12	10	9	13	16	12	7	6	8	6	6	5	5	5.2	16.0
Dir	323	185	248	227	266	310	186	218	275	320	333	323	328	298	302	309	332	342	7	22	15	17	15	3	320.1	308.7
27 Spd	4	1	3	5	3	6	5	7	12	15	12	13	14	17	15	14	13	11	10	10	11	11	11	13	7.9	16.7
Dir	347	325	309	323	251	270	238	201	203	201	199	190	190	192	179	155	156	176	198	208	213	232	244	244	203.1	191.6
28 Spd	12	14	13	14	13	12	10	10	11	13	11	11	13	13	9	11	16	3	11	10	7	5	5	7	10.0	15.8
Dir	249	248	250	245	246	252	238	250	247	231	227	216	224	218	205	215	271	197	239	233	190	196	225	219	234.7	271.4
29 Spd	9	9	10	11	13	11	13	11	15	18	20	21	25	21	21	20	22	14	15	15	12	12	8	14	14.4	25.4
Dir	212	246	244	250	254	254	248	247	239	244	252	258	259	254	257	271	262	263	298	303	285	271	251	245	258.0	259.3
30 Spd	15	17	19	19	21	20	17	16	18	14	12	12	16	17	18	16	17	17	15	10	11	11	10	8	14.5	20.7
Dir	239	235	238	243	275	281	277	279	287	294	257	253	236	250	268	277	273	273	254	246	242	253	242	241	260.4	274.6
31 Spd	6	5	4	7	9	10	11	9	6	19	32	31	35	34	35	40	35	23	21	24	27	21	20	20	19.7	40.4
Dir	229	217	202	199	199	213	225	211	201	225	233	236	244	242	242	237	235	221	205	226	241	233	233	244	231.2	237.0
Spd	7.0	6.9	7.1	6.8	7.3	7.0	7.2	6.4	7.3	8.3	8.7	9.5	10.0	10.7	10.4	10.5	9.6	7.2	6.7	6.9	7.8	8.5	8.2	8.2	Diurnal Average	
Dir	253.7	251.6	255.3	244.4	249.6	252.0	242.8	236.5	233.9	237.1	232.9	235.0	236.3	237.7	240.6	239.9	240.6	235.8	233.3	235.0	242.4	249.8	251.0	254.4	Diurnal Maximum	
Spd	16.8	19.9	19.9	19.4	20.7	20.0	17.3	18.2	24.5	29.3	31.6	31.3	34.6	33.8	35.0	40.4	34.6	25.2	20.6	24.3	26.9	21.1	20.0	20.1	Diurnal Maximum	
Dir	249.3	250.3	252.4	243.1	274.6	280.8	257.3	242.7	249.5	253.1	232.7	235.6	244.3	241.8	242.5	237.0	234.6	272.5	204.7	225.9	241.0	233.1	255.0	243.8		
Maximum Speed Value: 40 km/h on Aug 31 16:00																								Hours in Service: 744		
Maximum Daily Speed Average: 19.7 km/h on Aug 31																								Hours of Data: 744		
Maximum Diurnal Speed Average: 10.7 km/h at hour 14																								Hours of Missing Data: 0		
Minimum Speed Value: 0 km/h on Aug 15 22:00																										
Minimum Daily Speed Average: 0.4 km/h on Aug 19																										
Minimum Diurnal Speed Average: 6.4 km/h at hour 8																										
Monthly Average Velocity: 8.03 km/h 242.24 deg																								Percent Operational Time: 100.0		
Speed Percentiles: P ₁ = 1.5 P ₁₀ = 4.6 Q ₁ = 6.7 Median = 10.1 Q ₃ = 13.8 P ₉₀ = 19.6 P ₉₉ = 31.5																										
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	9		39		2		0		0		0		50													
NorthEast	8		25		5		0		0		0		38													
East	8		4		0		0		0		0		12													
SouthEast	7		6		2		0		0		0		15													
South	13		81		30		0		0		0		124													
SouthWest	18		102		91		28		14		1		254													
West	14		57		90		28		7		0		196													
NorthWest	14		22		19		0		0		0		55													
Total	91		336		239		56		21		1		744													

Wind Rose

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



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Smoky Heights - August 2018

Maximum Speed: 41 km/h on Aug 31 16:00																				Maximum Daily Speed Average: 20.4 km/h on Aug 31										Hours in Service: 744	
Minimum Speed: 1 km/h on Aug 15 22:00																				Minimum Daily Speed Average: 4.3 km/h on Aug 19										Hours of Data: 744	
Maximum Diurnal Speed Average: 15.2 km/h at hour 16																				Minimum Diurnal Speed Average: 9.6 km/h at hour 1										Hours of Missing Data: 0	
Monthly Average Speed: 11.49 km/h																				Percentiles: P ₁ = 2.7 P ₁₀ = 5.2 Q ₁ = 7.0 Median = 10.4 Q ₃ = 14.0 P ₉₀ = 19.7 P ₉₉ = 31.7										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-Aug	7	6	7	5	5	6	5	7	9	6	6	6	7	6	8	20	11	8	15	17	12	10	8	7	8.4	19.6					
2-Aug	9	7	8	8	7	7	6	6	10	11	14	13	14	16	18	21	23	20	20	17	19	21	20	16	13.8	22.6					
3-Aug	17	20	20	17	16	20	16	18	25	29	30	27	29	29	31	29	26	26	13	9	9	9	8	11	20.2	30.9					
4-Aug	16	17	14	16	15	17	16	11	12	10	9	9	10	10	8	6	9	7	5	4	12	13	8	8	11.0	17.1					
5-Aug	8	8	9	8	10	6	8	10	13	14	13	17	17	19	18	16	17	14	10	7	7	9	12	13	11.7	18.5					
6-Aug	13	12	12	14	15	11	12	16	18	21	26	27	30	28	25	32	28	21	15	13	10	11	9	10	17.9	32.3					
7-Aug	11	14	14	15	14	15	17	16	16	20	23	22	26	26	23	22	19	10	9	6	8	10	7	12	15.5	26.1					
8-Aug	13	9	8	9	10	7	6	6	9	11	12	12	10	9	10	10	11	11	10	15	12	14	18	14	10.6	18.2					
9-Aug	11	9	9	8	8	9	8	8	9	7	8	11	10	8	6	7	7	6	6	7	6	5	6	6	7.6	11.2					
10-Aug	9	8	11	9	13	13	13	13	15	16	15	13	11	12	14	5	5	6	7	11	4	8	11	13	10.7	16.0					
11-Aug	12	10	9	8	8	7	6	7	8	8	7	7	7	7	8	8	8	6	7	7	6	6	6	7	7.5	12.2					
12-Aug	10	12	6	6	11	12	12	13	4	7	6	6	10	9	6	3	5	7	9	9	8	9	7	5	8.1	13.2					
13-Aug	6	7	14	14	10	8	12	13	12	10	12	14	16	17	16	17	17	13	12	13	18	20	18	18	13.7	20.3					
14-Aug	16	15	15	13	13	14	15	14	18	19	21	26	31	30	34	31	29	22	20	15	18	16	14	11	19.6	33.9					
15-Aug	11	10	12	11	10	10	10	8	12	13	11	12	10	8	8	4	3	5	4	4	2	1	3	2	7.7	13.0					
16-Aug	3	3	5	6	9	9	10	8	9	11	9	11	11	13	13	11	10	9	8	8	7	8	8	9	8.8	13.1					
17-Aug	11	15	15	15	11	7	6	5	6	5	9	10	10	16	22	20	17	14	13	14	12	11	16	15	12.2	21.8					
18-Aug	13	16	15	7	6	6	11	11	9	13	12	11	10	12	11	13	10	6	6	4	5	6	7	6	9.5	15.7					
19-Aug	2	7	5	2	5	4	4	3	4	5	7	4	5	4	5	4	5	4	1	3	5	7	5	3	4.3	7.1					
20-Aug	3	6	4	5	6	6	7	8	9	7	8	7	9	13	12	12	11	12	8	5	5	10	12	11	8.1	13.0					
21-Aug	7	8	9	7	10	9	7	7	8	9	10	10	11	12	14	13	11	8	7	7	8	10	14	15	9.7	15.5					
22-Aug	15	12	11	11	15	15	13	12	11	12	19	21	27	25	28	23	18	10	9	11	14	12	13	13	15.4	28.0					
23-Aug	10	9	10	12	10	12	10	10	9	8	6	5	6	6	6	7	7	6	5	4	3	4	9	10	7.7	12.1					
24-Aug	12	12	17	14	13	13	10	11	11	12	7	6	5	6	6	6	6	5	5	4	4	5	6	8	8.5	16.7					
25-Aug	4	4	3	5	3	4	5	4	5	7	10	12	14	18	10	9	15	9	5	7	9	9	6	11	7.8	17.9					
26-Aug	4	7	8	5	9	4	3	4	6	11	11	12	10	9	13	17	12	7	6	8	7	6	5	5	7.8	16.6					
27-Aug	4	2	3	5	3	6	5	7	12	15	12	14	15	17	15	14	14	12	10	10	11	11	11	13	10.1	17.2					
28-Aug	12	14	13	14	13	12	10	10	12	13	11	11	13	13	10	12	18	6	11	11	7	6	6	7	11.0	17.7					
29-Aug	9	9	11	12	13	12	14	11	15	18	20	22	26	22	21	20	22	14	16	15	12	13	8	14	15.3	25.7					
30-Aug	15	17	19	20	21	20	17	16	18	15	14	12	16	17	19	17	17	18	15	10	11	11	10	8	15.5	21.1					
31-Aug	6	5	5	7	9	10	11	10	7	19	32	32	35	34	35	41	35	24	21	25	27	21	20	20	20.4	40.8					
9.6 9.9 10.3 9.9 10.4 10.0 9.9 9.7 11.0 12.3 13.2 13.6 14.9 15.2 15.2 15.2 14.3 11.1 10.0 9.7 9.7 10.1 10.0 10.4																									Diurnal Average						
16.8 19.9 19.9 19.6 21.1 20.1 17.3 18.3 24.6 29.5 31.7 31.6 34.8 34.0 35.3 40.8 34.7 25.8 20.6 25.0 27.2 21.1 20.0 20.2																									Diurnal Maximum						
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg
Smoky Heights - August 2018

Maximum Value: 92.8 deg on Aug 26 01:00																		Hours in Service: 744							
Minimum Value: 1.8 deg on Aug 6 05:00																		Hours of Data: 744							
Percentiles: P ₁ = 2.6 P ₁₀ = 4.7 Q ₁ = 7.2 Median = 11.2 Q ₃ = 17.2 P ₉₀ = 30.4 P ₉₉ = 74.8																		Hours of Missing Data: 0							
																		Hours of Calibration: 0							
																		Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	17	10	51	68	44	54	26	12	11	25	37	37	31	53	62	20	25	57	67	4	26	10	35	10	67.5
2-Aug	13	14	11	8	15	10	11	15	18	17	12	10	17	14	16	10	9	7	6	4	4	6	3	2	18.0
3-Aug	3	4	3	16	16	4	4	4	5	6	7	9	10	9	7	10	7	13	5	13	11	6	11	10	15.9
4-Aug	3	4	5	3	2	4	5	12	8	11	22	32	23	41	41	20	18	19	18	38	5	4	41	8	41.2
5-Aug	34	17	8	33	8	7	7	8	15	14	12	14	15	14	14	12	13	11	7	11	13	11	4	4	34.1
6-Aug	6	4	3	4	2	3	3	3	4	6	5	8	6	5	5	4	4	4	4	3	5	8	8	9	8.8
7-Aug	6	6	5	3	4	7	2	3	6	5	6	4	6	7	17	8	14	12	34	65	16	9	14	6	65.3
8-Aug	6	41	26	12	7	11	13	10	6	6	8	16	16	12	15	16	9	6	10	19	10	8	2	7	41.2
9-Aug	12	33	12	20	13	14	11	29	5	16	10	21	11	39	43	35	9	10	9	17	14	11	10	12	43.2
10-Aug	9	15	7	19	10	8	6	8	4	9	9	5	8	7	6	24	16	11	8	17	41	21	13	8	40.7
11-Aug	25	12	10	18	8	9	10	10	19	10	10	12	11	9	12	8	11	11	13	12	16	13	9	17	24.8
12-Aug	10	13	21	12	16	8	12	15	48	14	15	18	10	12	19	58	29	36	15	6	6	7	6	11	57.8
13-Aug	10	41	60	69	9	23	11	7	13	11	8	8	8	15	10	13	10	3	4	7	4	6	3	3	69.3
14-Aug	3	2	2	4	4	6	3	6	5	7	6	7	9	7	6	6	5	5	5	14	6	5	12	19	19.1
15-Aug	12	16	7	10	11	12	15	25	8	9	19	23	21	31	29	78	84	11	13	15	25	88	54	25	88.2
16-Aug	24	18	8	11	8	6	11	11	9	7	18	22	12	14	18	9	7	6	7	29	13	9	11	25	28.9
17-Aug	9	4	7	5	26	16	10	13	10	7	9	9	8	30	7	9	7	15	10	5	18	13	6	5	30.4
18-Aug	6	12	29	66	19	27	4	4	12	14	15	16	24	20	24	16	25	26	10	25	17	5	7	69	69.1
19-Aug	81	12	26	52	16	46	33	62	18	18	13	30	41	71	59	40	17	20	65	17	36	10	28	26	81.4
20-Aug	58	7	17	38	12	9	21	8	9	12	14	24	21	20	17	20	21	12	11	12	24	4	8	3	58.0
21-Aug	22	7	18	15	6	5	10	25	10	7	8	11	13	11	12	10	15	11	4	18	20	9	15	6	24.6
22-Aug	14	14	12	10	7	6	9	11	7	19	8	5	10	7	8	9	6	30	33	7	16	15	10	57	57.1
23-Aug	9	8	9	8	13	12	12	10	10	11	17	22	18	20	18	15	15	22	20	21	19	28	10	13	28.0
24-Aug	7	10	8	8	8	11	9	9	12	16	23	30	89	45	27	36	25	23	15	11	36	9	25	11	89.1
25-Aug	52	29	92	23	18	12	5	10	11	9	11	14	17	9	15	15	5	9	14	7	13	51	61	57	92.0
26-Aug	93	34	52	15	9	49	64	67	28	10	8	14	12	10	8	17	12	11	22	8	11	14	11	11	92.8
27-Aug	17	82	30	6	36	13	29	11	7	11	14	17	26	13	11	11	9	10	7	8	4	7	4	5	82.0
28-Aug	7	4	5	8	3	7	10	5	5	14	9	12	13	13	25	22	29	60	20	15	11	14	15	11	59.6
29-Aug	9	20	5	13	8	15	13	5	5	5	6	9	9	14	11	10	9	8	17	10	19	28	5	5	27.6
30-Aug	6	4	4	7	11	6	7	6	11	12	26	15	6	14	8	7	6	9	7	7	4	3	10	12	25.9
31-Aug	14	27	38	24	8	7	12	9	25	15	5	7	5	6	7	8	5	9	5	13	7	3	3	6	38.4
92.8 82.0 92.0 69.3 44.4 54.5 63.6 66.6 47.8 25.0 36.7 36.9 89.1 71.0 62.3 77.7 84.0 59.6 67.5 65.3 40.7 88.2 60.8 69.1																									

PAZA
Beaverlodge Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

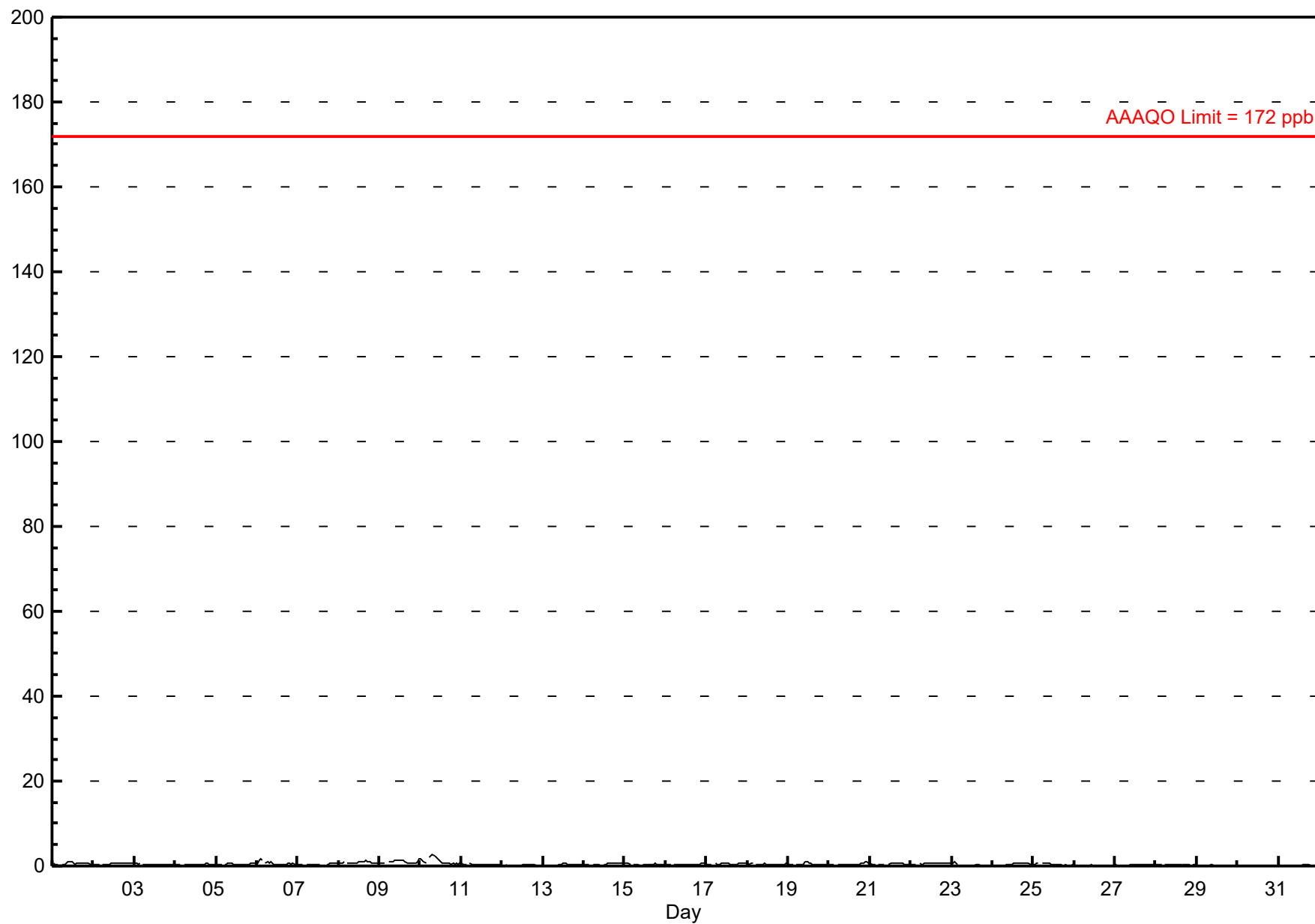
Sulphur Dioxide (SO₂) - ppb

Beaverlodge - August 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 2.7 ppb on Aug 10 08:00 Maximum Daily Average: 1.2 ppb on Aug 10																				Hours in Service: 744 Hours of Data: 708						
Minimum Value: 0 ppb on Aug 30 23:00 Minimum Daily Average: 0.0 ppb on Aug 30 Maximum Diurnal Average: 0.5 ppb at hour 11 Minimum Diurnal Average: 0.4 ppb at hour 4 Monthly Average: 0.41 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.4 Q ₃ = 0.5 P ₉₀ = 0.7 P ₉₉ = 1.7																				Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	1	0	0	0	A	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0.6	1.0
2-Aug	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.5	0.8
3-Aug	1	1	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
4-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0.3	0.7
5-Aug	0	0	0	0	A	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.4	0.6
6-Aug	1	1	2	1	A	1	1	1	1	1	0	0	0	0	0	0	1	0	1	1	0	1	1	0	0.7	1.7
7-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	C	C	C	0	0	1	1	1	1	1	0.4	0.8
8-Aug	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
9-Aug	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.0	1.5
10-Aug	2	1	1	1	A	2	2	3	3	2	2	1	1	1	1	1	1	1	1	1	0	1	0	1	1.2	2.7
11-Aug	1	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	0.7
12-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2
13-Aug	0	0	0	0	A	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0.3	0.5
14-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0.4	0.7
15-Aug	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.4	0.7
16-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.4	0.6
17-Aug	0	0	0	0	A	1	0	0	0	1	1	1	1	1	0	0	0	0	0	1	1	1	1	1	0.5	0.7
18-Aug	1	0	1	1	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	0.6
19-Aug	0	0	0	0	A	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.4	1.1
20-Aug	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	1	1	1	0.5	1.2
21-Aug	1	0	0	0	A	0	0	0	0	C	C	1	1	1	1	1	1	1	1	1	0	0	0	0	0.5	0.7
22-Aug	0	0	0	0	A	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8
23-Aug	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.0
24-Aug	0	0	0	0	A	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0.4	0.8
25-Aug	0	1	1	1	A	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
26-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
27-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
28-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
29-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
30-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
31-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
0.4 0.4 0.4 0.4 -- 0.4 0.4 0.4 0.4 0.4 0.5 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4																									Diurnal Average	
1.8 1.5 1.7 1.2 -- 2.0 2.3 2.7 2.5 2.1 1.8 1.3 1.4 1.5 1.3 1.1 1.2 1.1 0.9 0.8 0.8 1.2 1.0 1.5																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - August 2018



Hourly Maximums

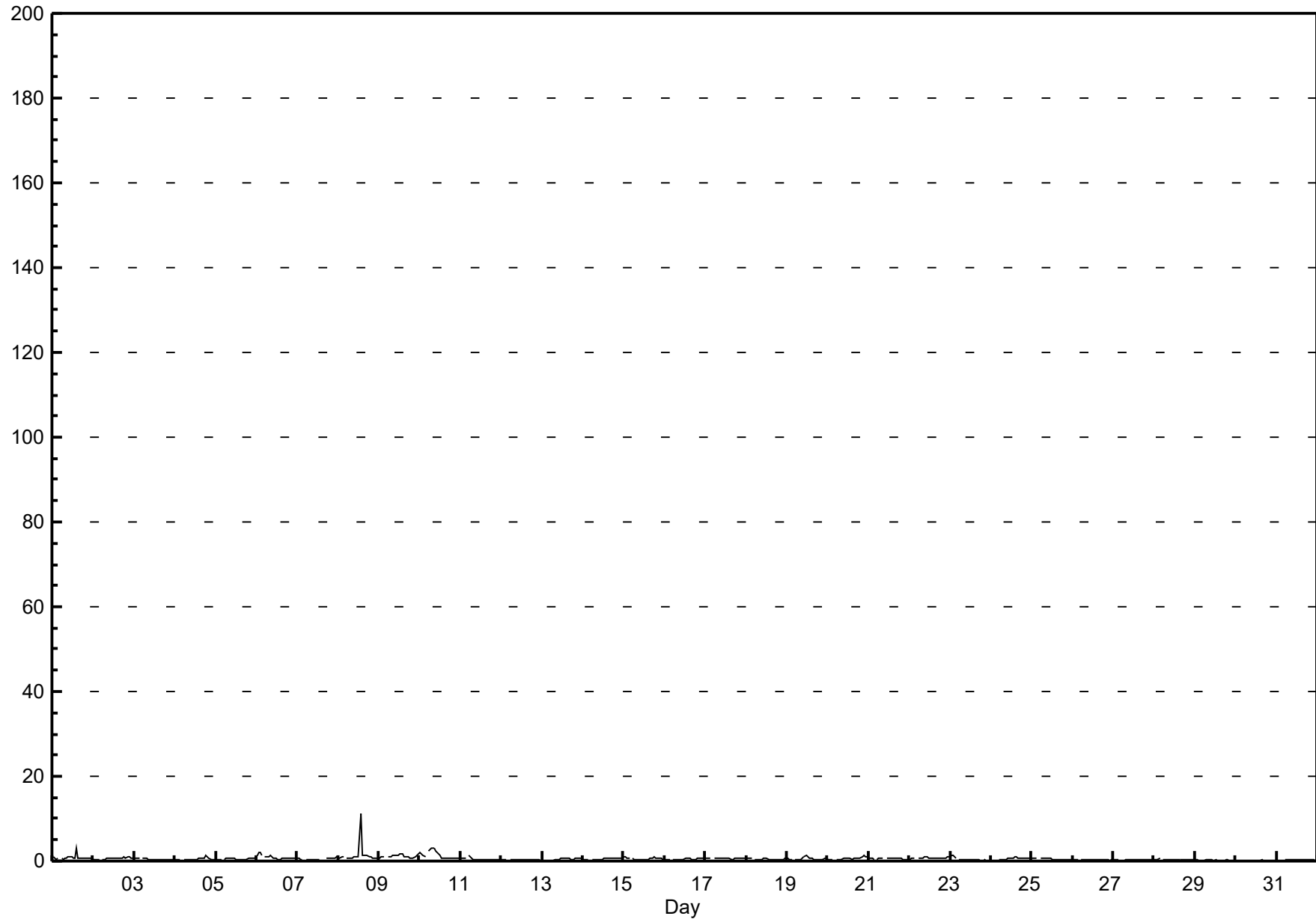
Sulphur Dioxide (SO₂) - ppb

Beaverlodge - August 2018

Maximum Value: 11.2 ppb on Aug 8 14:00																			Maximum Daily Average: 1.4 ppb on Aug 8										Hours in Service: 744	
Minimum Value: 0 ppb on Aug 30 23:00																			Minimum Daily Average: 0.1 ppb on Aug 30										Hours of Data: 708	
Maximum Diurnal Average: 0.9 ppb at hour 14																			Minimum Diurnal Average: 0.5 ppb at hour 4										Hours of Missing Data: 36	
Monthly Average: 0.56 ppb																			Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.5 Q ₃ = 0.7 P ₉₀ = 0.9 P ₉₉ = 2.1										Hours of Calibration: 36	
																													Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Aug	1	1	0	1	A	1	0	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	0.8	3.0				
2-Aug	0	0	0	0	A	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9				
3-Aug	1	1	1	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.7				
4-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0.5	1.3				
5-Aug	0	0	0	0	A	0	1	1	1	1	1	1	0	0	0	0	0	0	0	1	1	1	1	1	0.5	0.7				
6-Aug	1	2	2	2	A	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	0.9	2.1				
7-Aug	1	1	0	0	A	0	0	0	0	0	0	0	0	0	C	C	C	1	1	1	1	1	1	1	0.6	0.9				
8-Aug	1	1	1	1	A	1	1	1	1	1	1	1	1	11	1	1	1	1	1	1	1	1	1	1	1.4	11.2				
9-Aug	1	1	1	1	A	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	2	1.1	1.8				
10-Aug	2	2	1	1	A	2	3	3	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1.4	3.1				
11-Aug	1	1	1	1	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.4				
12-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4				
13-Aug	0	0	0	0	A	0	0	0	0	0	0	1	1	1	1	1	1	0	0	1	1	1	1	1	0.4	0.6				
14-Aug	1	1	0	0	A	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8				
15-Aug	1	1	1	1	A	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0.6	1.1				
16-Aug	0	0	0	0	A	0	0	0	0	0	0	1	1	1	1	1	0	0	0	1	1	1	1	1	0.5	0.7				
17-Aug	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	0.6	0.8				
18-Aug	1	1	1	1	A	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	1	0.5	0.8				
19-Aug	1	1	0	0	A	0	0	0	0	1	1	1	1	1	1	1	0	0	1	1	1	0	1	1	0.6	1.2				
20-Aug	0	0	0	0	A	0	0	0	0	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0.6	1.4				
21-Aug	1	1	1	0	A	0	1	1	1	C	C	1	1	1	1	1	1	1	1	1	0	0	0	0	0.6	0.8				
22-Aug	0	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	1.0				
23-Aug	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.3				
24-Aug	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.5	0.9				
25-Aug	1	1	1	1	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.8				
26-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3				
27-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4				
28-Aug	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7				
29-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5				
30-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2				
31-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4				
0.6 0.6 0.5 0.5 -- 0.5 0.5 0.5 0.6 0.6 0.6 0.6 0.6 0.9 0.6 0.5 0.5 0.5 0.6 0.5 0.5 0.5 0.5 0.5																									Diurnal Average					
2.0 2.0 2.1 1.5 -- 2.5 2.6 3.1 2.9 2.4 2.0 1.7 1.6 11.2 3.0 1.3 1.3 1.3 1.3 1.3 1.1 1.0 1.4 1.2 1.8																									Diurnal Maximum					
C - Calibration					A - Automated Daily Zero Span																									

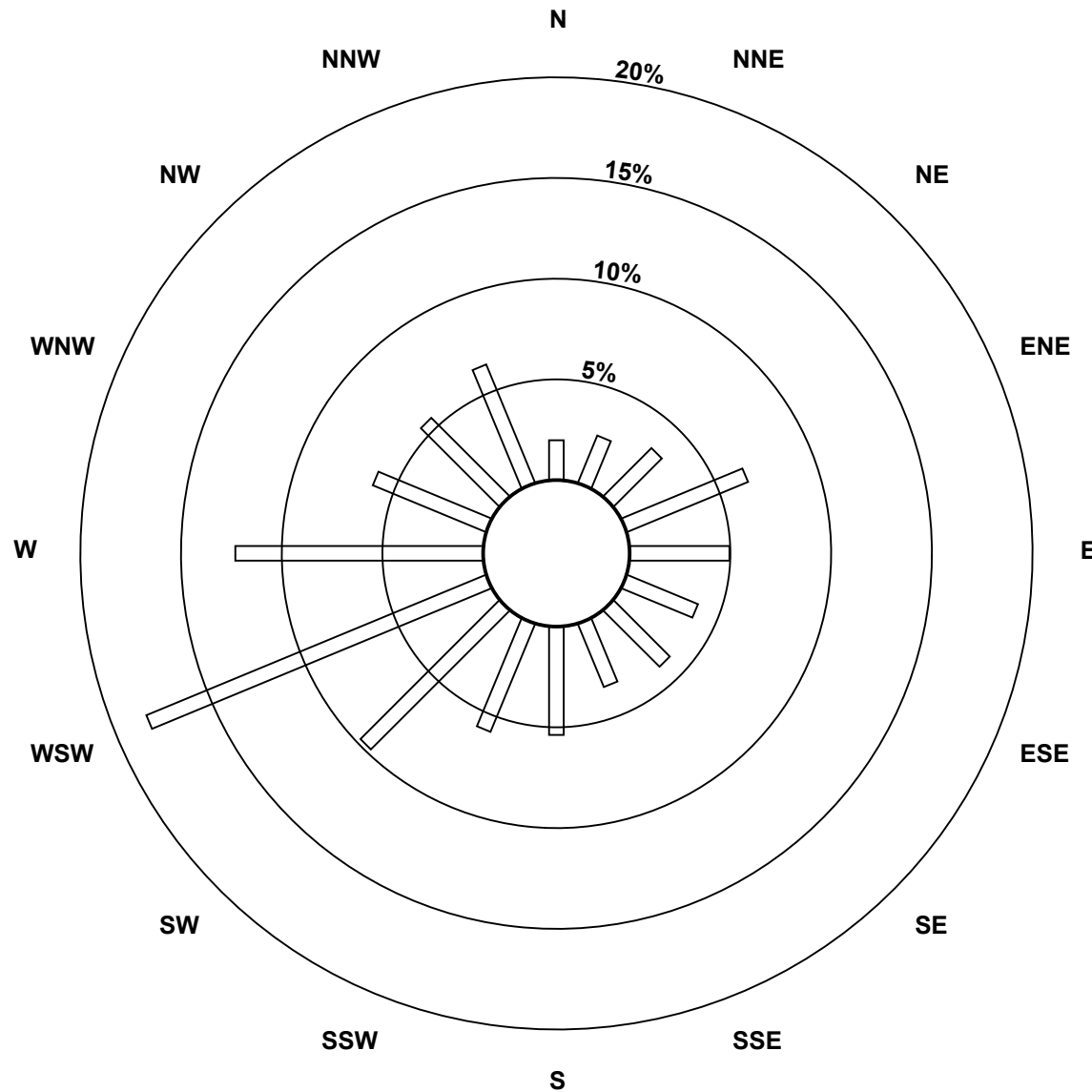
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - August 2018

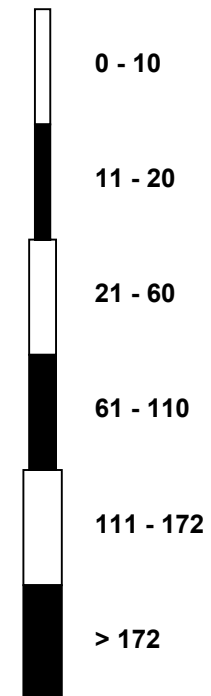


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - August 2018

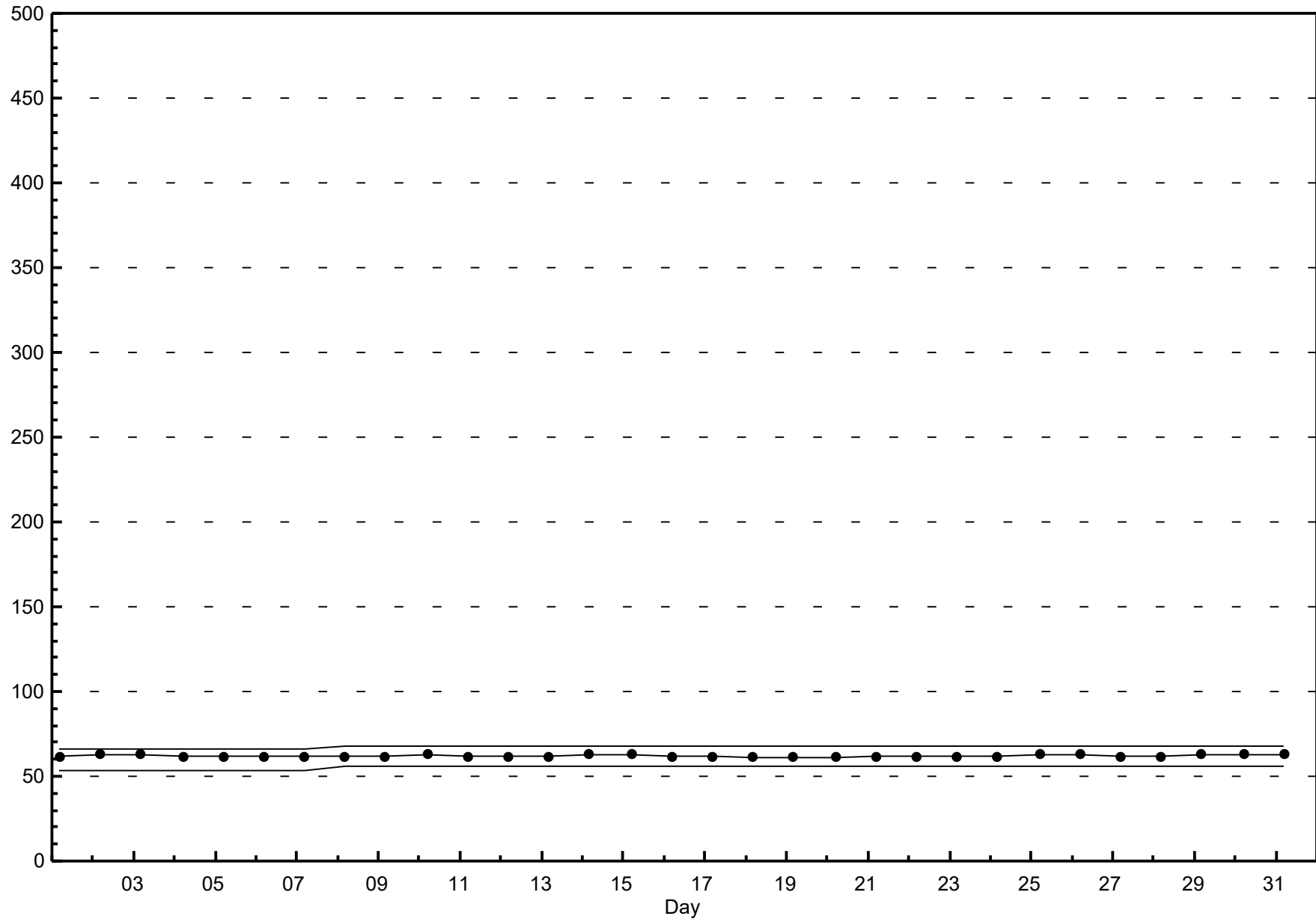


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Beaverlodge - August 2018



Hourly Averages

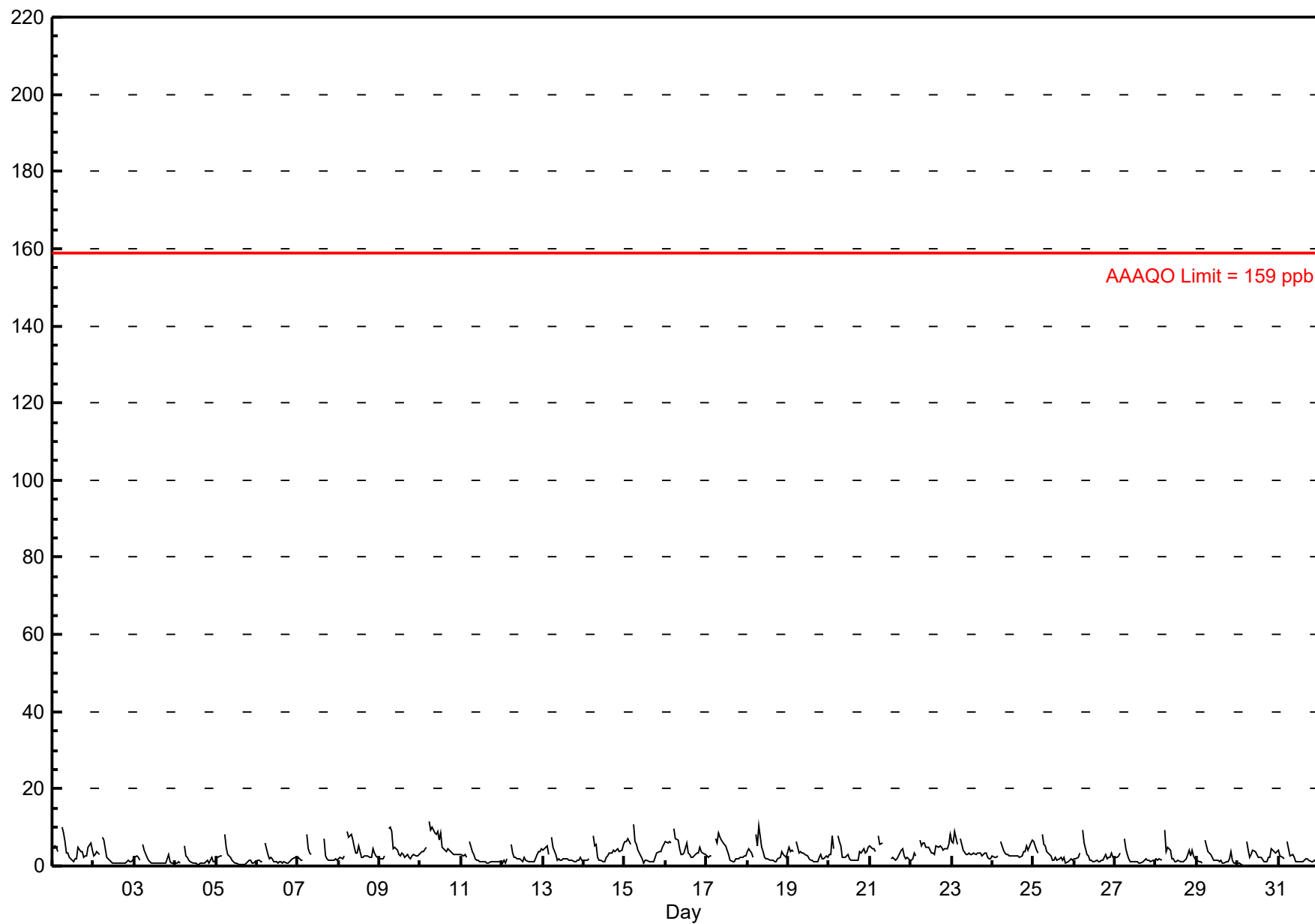
Nitrogen Dioxide (NO₂) - ppb

Beaverlodge - August 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 11.6 ppb on Aug 10 06:00 Maximum Daily Average: 5.5 ppb on Aug 10																				Hours in Service: 744 Hours of Data: 703						
Minimum Value: 0 ppb on Aug 5 17:00 Maximum Diurnal Average: 7.7 ppb at hour 6 Monthly Average: 2.94 ppb															Minimum Daily Average: 1.3 ppb on Aug 4 Minimum Diurnal Average: 1.7 ppb at hour 15 Percentiles: P ₁ = 0.6 P ₁₀ = 1.0 Q ₁ = 1.5 Median = 2.4 Q ₃ = 3.8 P ₉₀ = 5.9 P ₉₉ = 9.6					Hours of Missing Data: 41 Hours of Calibration: 41 Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	4	5	5	4	A	10	9	7	3	3	2	1	1	2	2	5	4	4	2	3	3	5	6	4	4.1	9.9
2-Aug	3	3	4	3	A	7	7	4	2	2	1	1	1	1	1	1	1	1	1	1	2	1	1	1	2.1	7.4
3-Aug	2	3	2	1	A	6	4	2	1	1	1	1	1	1	1	1	1	1	1	2	3	1	1	1	1.7	5.7
4-Aug	1	1	1	1	A	5	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1.3	5.3
5-Aug	2	2	3	3	A	8	5	3	2	2	1	1	1	1	0	1	0	1	1	1	2	1	1	1	1.8	8.2
6-Aug	2	2	1	1	A	6	3	2	2	2	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1.6	5.9
7-Aug	2	2	1	2	A	8	5	3	3	C	C	C	C	C	C	7	3	2	2	1	1	2	2	2	--	8.2
8-Aug	2	2	2	2	A	9	8	8	7	5	3	4	5	2	2	3	3	3	2	2	5	3	3	2	3.7	8.8
9-Aug	2	2	2	3	A	10	10	9	5	5	4	3	3	3	3	2	3	2	2	3	3	2	3	3	3.7	9.9
10-Aug	3	4	4	5	A	12	9	10	9	8	9	7	9	5	4	4	4	4	4	3	3	3	3	3	5.5	11.6
11-Aug	3	3	3	2	A	7	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.9	6.5
12-Aug	1	1	1	2	A	5	3	2	2	2	2	1	1	2	1	1	1	1	1	1	3	4	4	4	2.1	5.4
13-Aug	4	4	5	3	A	8	5	3	2	2	1	1	2	2	2	2	2	2	1	1	1	1	2	2	2.5	7.6
14-Aug	1	2	2	2	A	8	5	6	2	2	1	1	1	2	3	3	3	4	4	4	4	4	4	6	3.3	8.0
15-Aug	6	6	7	6	A	11	6	5	4	2	2	1	1	1	1	1	1	1	2	3	4	4	5	6	3.8	10.9
16-Aug	6	6	6	6	A	10	7	7	5	3	3	3	6	3	3	2	2	3	3	4	5	4	3	3	4.5	9.6
17-Aug	2	2	3	3	A	7	6	9	8	7	6	5	4	3	1	1	1	2	2	2	2	2	3	3	3.6	8.5
18-Aug	4	4	3	2	A	8	5	10	5	4	2	2	2	2	1	1	1	1	2	2	4	3	3	2	3.3	10.5
19-Aug	5	4	4	4	A	6	3	4	3	3	3	3	2	1	2	1	1	1	2	3	2	2	3	2	2.8	6.3
20-Aug	3	3	8	5	A	8	6	5	2	2	3	3	2	2	2	2	2	2	4	3	4	3	4	5	3.5	8.0
21-Aug	5	5	4	4	A	8	6	6	C	C	C	C	2	2	2	2	2	3	4	4	3	2	2	1	3.5	7.7
22-Aug	1	2	3	3	A	7	5	6	6	5	5	4	3	3	3	5	5	5	5	4	4	5	5	8	4.6	8.4
23-Aug	6	6	9	6	A	7	6	4	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	3.9	8.8
24-Aug	3	2	2	3	A	6	4	3	3	3	3	3	2	3	3	3	2	3	4	4	5	4	6	7	3.4	6.9
25-Aug	6	5	4	3	A	8	6	5	4	3	3	2	2	2	2	2	2	2	2	1	1	2	2	1	3.0	8.2
26-Aug	2	2	2	3	A	9	6	3	3	2	1	1	1	1	1	1	1	1	3	2	2	2	3	2	2.5	9.5
27-Aug	2	2	3	3	A	7	4	3	2	1	1	1	1	1	1	1	1	2	2	2	2	1	1	2	2.0	7.0
28-Aug	2	2	2	2	A	9	4	5	4	2	2	1	1	2	1	1	1	2	2	4	2	4	3	2	2.5	9.2
29-Aug	2	1	1	1	A	7	4	4	3	2	2	1	1	1	1	1	1	1	1	2	4	1	1	1	1.9	6.7
30-Aug	1	1	1	1	A	6	4	2	3	4	4	3	2	2	2	1	1	1	2	2	4	4	3	4	2.5	6.4
31-Aug	4	3	2	2	A	6	4	2	3	2	1	1	1	1	1	1	2	2	1	1	1	1	1	1	2.0	6.3
3.0 2.9 3.2 2.8 -- 7.7 5.3 4.8 3.5 2.9 2.5 2.1 2.1 1.9 1.7 2.0 1.9 1.9 2.2 2.4 2.8 2.6 2.7 2.7																									Diurnal Average	
6.4 6.2 8.8 5.8 -- 11.6 9.9 10.5 8.7 8.1 8.9 6.8 8.7 4.8 4.0 7.1 4.9 5.2 5.0 4.3 5.3 4.7 5.9 8.4																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb																										

Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - August 2018



Hourly Maximums

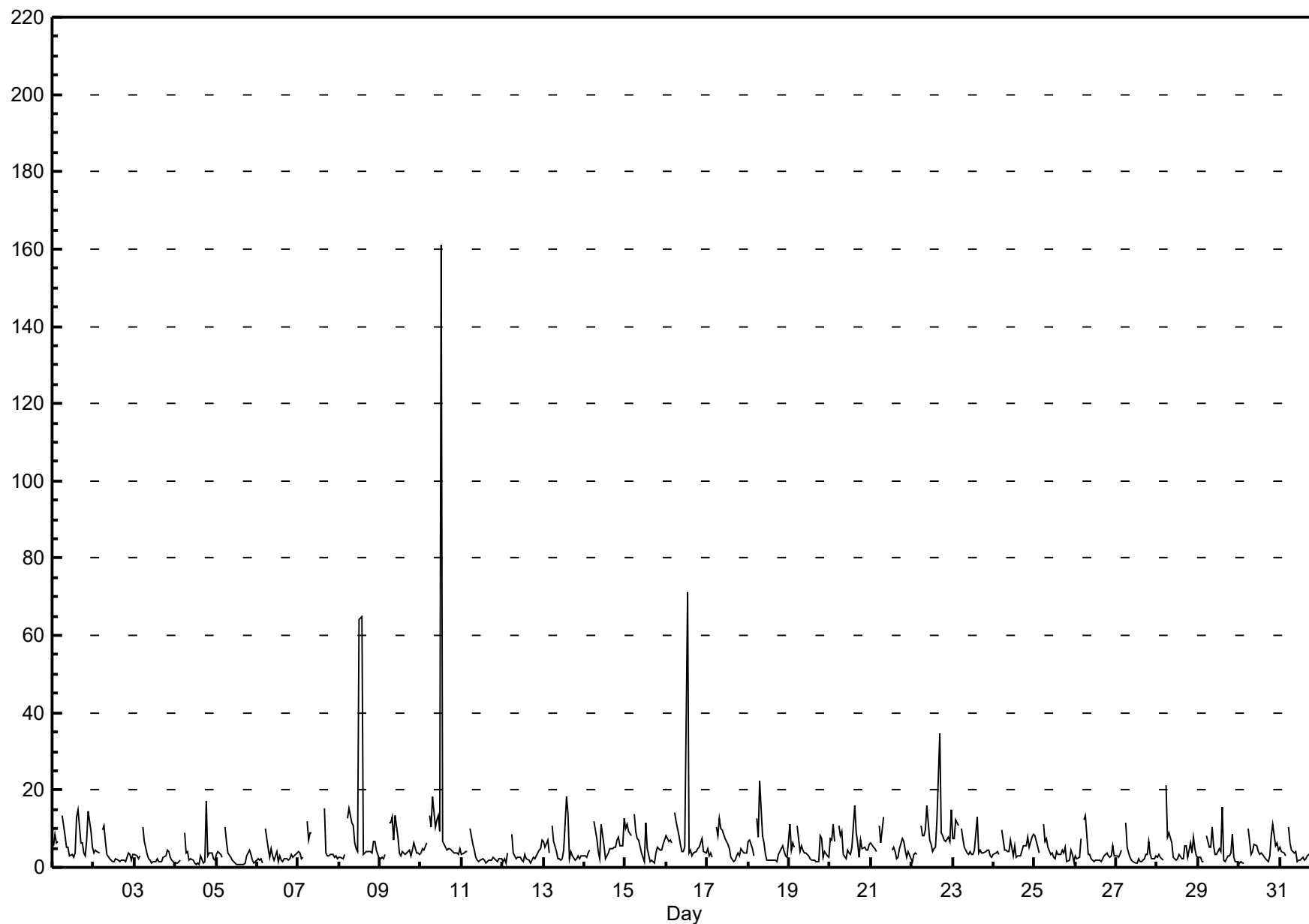
Nitrogen Dioxide (NO₂) - ppb

Beaverlodge - August 2018

Maximum Value: 161.0 ppb on Aug 10 13:00																				Maximum Daily Average: 13.8 ppb on Aug 10										Hours in Service: 744	
Minimum Value: 1 ppb on Aug 5 15:00																				Minimum Daily Average: 2.7 ppb on Aug 5										Hours of Data: 703	
Maximum Diurnal Average: 12.6 ppb at hour 13																				Minimum Diurnal Average: 3.2 ppb at hour 12										Hours of Missing Data: 41	
Monthly Average: 5.27 ppb																				Percentiles: P ₁ = 0.9 P ₁₀ = 1.7 Q ₁ = 2.4 Median = 3.8 Q ₃ = 6.3 P ₉₀ = 10.0 P ₉₉ = 18.3										Hours of Calibration: 41	
																				Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Aug	6	8	6	7	A	13	11	8	5	5	3	3	4	13	15	6	6	4	3	7	14	9	5	7.2	14.9						
2-Aug	4	5	4	4	A	10	11	7	3	2	2	1	1	2	2	1	2	2	2	4	3	2	3	3.4	10.8						
3-Aug	3	3	2	3	A	10	7	3	2	2	1	1	1	2	2	1	1	2	3	5	4	3	2	1	2.9	10.4					
4-Aug	1	1	2	2	A	9	4	4	2	2	2	1	1	1	1	3	1	2	17	3	4	4	2	2	3.0	17.1					
5-Aug	3	4	3	3	A	10	7	4	2	2	2	1	1	1	1	1	1	1	3	5	3	2	1	1	2.7	10.4					
6-Aug	2	2	2	1	A	10	5	3	5	3	2	4	2	3	2	1	2	2	2	2	3	3	4	4	3.0	10.0					
7-Aug	4	4	2	3	A	12	7	9	9	C	C	C	C	C	C	15	4	3	3	3	3	3	2	--	15.4						
8-Aug	2	2	2	3	A	13	15	12	11	6	5	4	64	65	3	4	4	4	4	4	7	7	4	2	10.8	65.0					
9-Aug	2	3	2	3	A	11	11	13	7	13	8	4	3	4	4	3	4	5	3	4	6	4	4	3	5.4	13.3					
10-Aug	4	5	5	6	A	13	10	18	10	12	13	9	161	7	5	4	5	5	5	4	4	4	3	5	13.8	161.0					
11-Aug	3	4	4	4	A	10	6	4	3	2	2	2	2	2	1	1	2	2	3	2	2	1	2	2	2.9	10.1					
12-Aug	2	2	1	4	A	8	4	3	2	2	3	2	2	3	2	2	1	2	2	2	4	5	5	7	3.0	8.4					
13-Aug	7	5	7	4	A	11	7	4	2	2	2	2	4	18	14	2	4	3	2	2	3	2	3	3	5.0	18.3					
14-Aug	3	3	4	5	A	12	10	8	4	2	11	5	2	3	4	5	5	5	5	7	8	6	5	13	5.8	12.7					
15-Aug	10	11	9	8	A	14	9	7	7	4	2	1	12	5	1	2	1	1	4	5	4	4	6	7	5.9	13.7					
16-Aug	8	7	7	6	A	14	12	8	6	4	4	5	71	4	4	3	4	4	5	5	6	7	4	4	8.9	71.2					
17-Aug	5	3	4	3	A	10	8	13	10	10	8	7	6	5	3	2	2	3	4	3	5	4	4	4	5.3	12.8					
18-Aug	7	7	5	3	A	13	8	22	8	6	3	2	2	2	2	2	2	1	3	5	5	4	3	3	5.1	22.3					
19-Aug	11	5	6	5	A	11	4	5	5	4	4	3	2	2	2	2	1	1	8	7	3	4	3	3	4.4	11.2					
20-Aug	8	7	11	7	A	11	8	9	3	2	5	4	3	5	16	9	6	3	7	5	5	5	5	6	6.5	15.9					
21-Aug	6	5	5	4	A	11	6	13	C	C	C	C	4	5	4	2	3	5	8	7	4	3	4	2	5.3	12.9					
22-Aug	2	3	4	3	A	11	8	8	10	16	7	6	4	5	5	12	35	9	8	7	7	8	7	15	8.6	34.5					
23-Aug	8	7	12	11	A	10	7	5	4	3	4	3	3	5	13	4	5	4	4	4	5	5	3	3	5.7	12.9					
24-Aug	3	4	4	3	A	10	5	4	4	4	7	3	5	3	3	3	3	6	6	6	8	5	8	8	5.0	9.7					
25-Aug	8	7	5	4	A	11	7	7	5	3	4	3	2	4	3	3	5	4	5	2	2	4	3	2	4.5	11.4					
26-Aug	3	2	3	7	A	12	13	3	3	2	2	1	2	2	2	2	2	3	4	3	3	3	6	3	3.8	13.3					
27-Aug	3	2	3	4	A	12	5	4	3	2	2	1	1	2	1	2	2	3	3	7	3	2	2	3	3.2	11.5					
28-Aug	2	3	3	2	A	21	8	9	6	3	2	2	2	3	2	2	6	6	3	6	4	8	5	3	4.8	21.4					
29-Aug	3	3	1	2	A	8	5	5	10	6	3	3	5	4	16	2	2	3	3	4	9	2	2	1	4.4	15.5					
30-Aug	1	1	1	1	A	10	7	3	4	6	5	4	3	4	3	2	2	2	3	8	11	5	6	4	4.3	11.2					
31-Aug	5	4	4	3	A	10	6	5	4	4	2	2	2	2	2	2	3	4	3	2	2	2	2	2	3.3	10.3					
4.5 4.3 4.4 4.1 -- 11.4 7.8 7.5 5.4 4.7 4.1 3.2 12.6 5.9 4.5 3.7 4.0 3.4 4.4 4.3 4.8 4.4 3.9 4.1																									Diurnal Average						
11.2 11.1 12.1 11.0 -- 21.4 15.2 22.3 10.9 15.9 13.4 9.3 161.0 65.0 15.9 15.4 34.5 9.1 17.1 8.2 11.2 14.4 9.5 14.9																									Diurnal Maximum						
C - Calibration					A - Automated Daily Zero Span																										

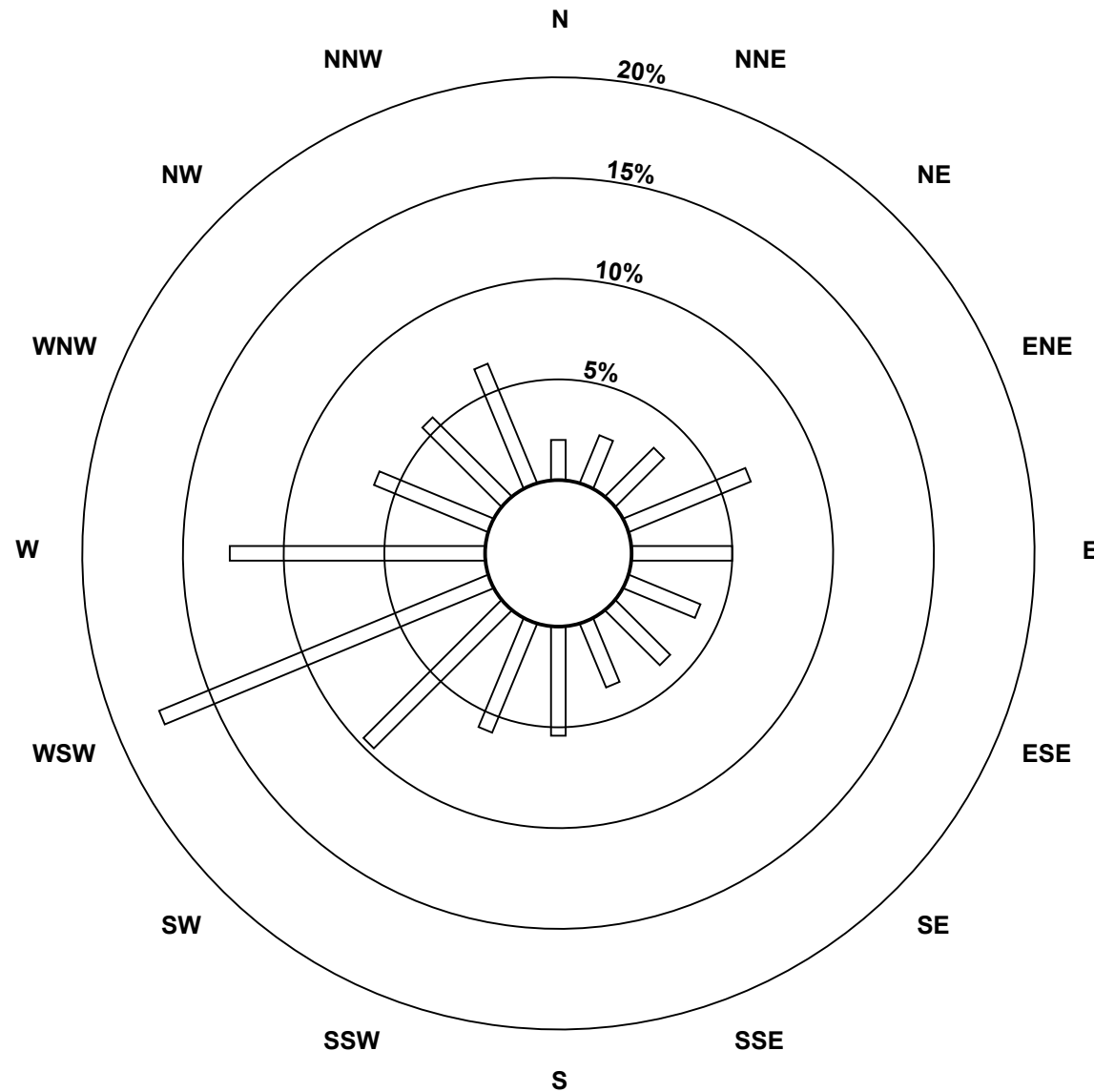
Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - August 2018

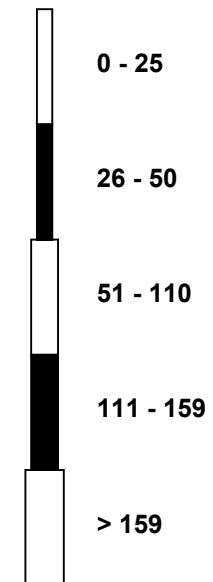


Pollutant Rose

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - August 2018

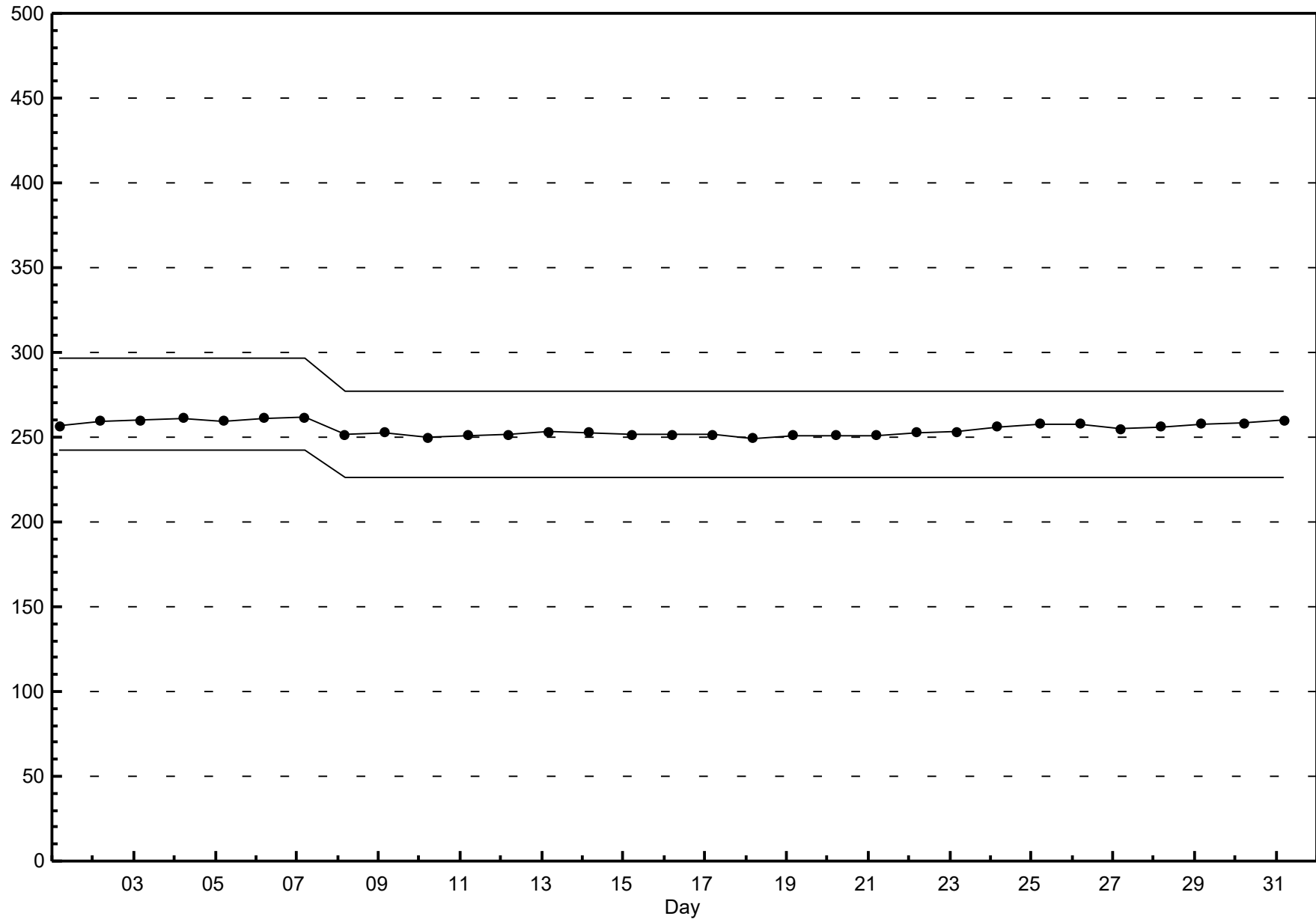


Pollutant Classes (ppb)



Span Responses

Nitrogen Dioxide (NO₂)
Beaverlodge - August 2018



Hourly Averages

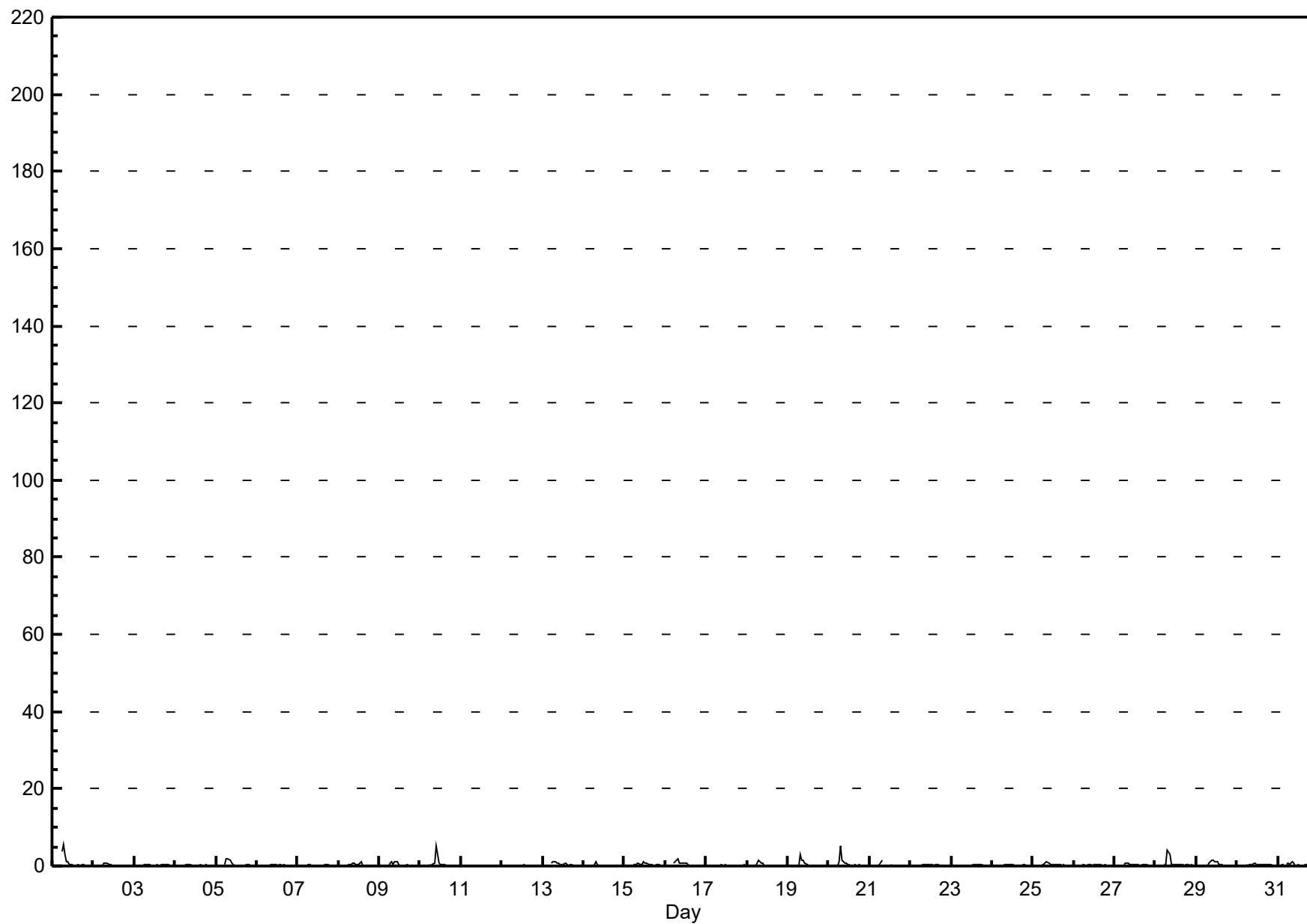
Nitrogen Oxide (NO) - ppb

Beaverlodge - August 2018

Maximum Value: 5.7 ppb on Aug 1 07:00																			Maximum Daily Average: 0.7 ppb on Aug 1																			Hours in Service: 744	
Minimum Value: 0 ppb on Aug 16 21:00																			Minimum Daily Average: 0.1 ppb on Aug 12																			Hours of Data: 703	
Maximum Diurnal Average: 1.1 ppb at hour 8																			Minimum Diurnal Average: 0.1 ppb at hour 24																			Hours of Missing Data: 41	
Monthly Average: 0.27 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.6 P ₉₉ = 2.9																			Hours of Calibration: 41	
																																						Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Aug	0	0	0	0	A	4	6	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	5.7													
2-Aug	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9													
3-Aug	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	0.5													
4-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4													
5-Aug	0	0	0	0	A	0	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.0													
6-Aug	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5													
7-Aug	0	0	0	0	A	0	0	0	0	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	--	0.4													
8-Aug	0	0	0	0	A	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.3	1.0													
9-Aug	0	0	0	0	A	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.2													
10-Aug	0	0	0	0	A	0	0	0	1	5	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	5.1													
11-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2													
12-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2													
13-Aug	0	0	0	0	A	1	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0.3	1.2													
14-Aug	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.3													
15-Aug	0	0	0	0	A	0	0	0	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0.3	1.0													
16-Aug	0	0	0	0	A	1	1	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.4	1.8													
17-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3													
18-Aug	0	0	0	0	A	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.4													
19-Aug	0	0	0	0	A	0	0	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	3.1													
20-Aug	0	0	0	0	A	0	1	5	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	5.1													
21-Aug	0	0	0	0	A	0	0	2	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.5													
22-Aug	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5													
23-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.2	0.5													
24-Aug	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	0.5													
25-Aug	0	0	0	0	A	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.0													
26-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4													
27-Aug	0	0	0	0	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8													
28-Aug	0	0	0	0	A	0	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	4.2													
29-Aug	0	0	0	0	A	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.4	1.4													
30-Aug	0	0	0	0	A	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6													
31-Aug	0	0	0	0	A	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.0													
0.1 0.1 0.1 0.1 -- 0.3 0.6 1.1 0.7 0.7 0.5 0.3 0.3 0.3 0.2 0.2 0.2 0.2 0.2 0.1 0.1 0.1 0.1 0.1																									Diurnal Average														
0.3 0.2 0.2 0.3 -- 3.6 5.7 5.1 3.1 5.1 2.9 1.2 0.9 1.0 0.5 0.5 0.4 0.3 0.3 0.5 0.3 0.3 0.2 0.2																									Diurnal Maximum														
C - Calibration																									A - Automated Daily Zero Span														

Hourly Averages

Nitrogen Oxide (NO) - ppb
Beaverlodge - August 2018



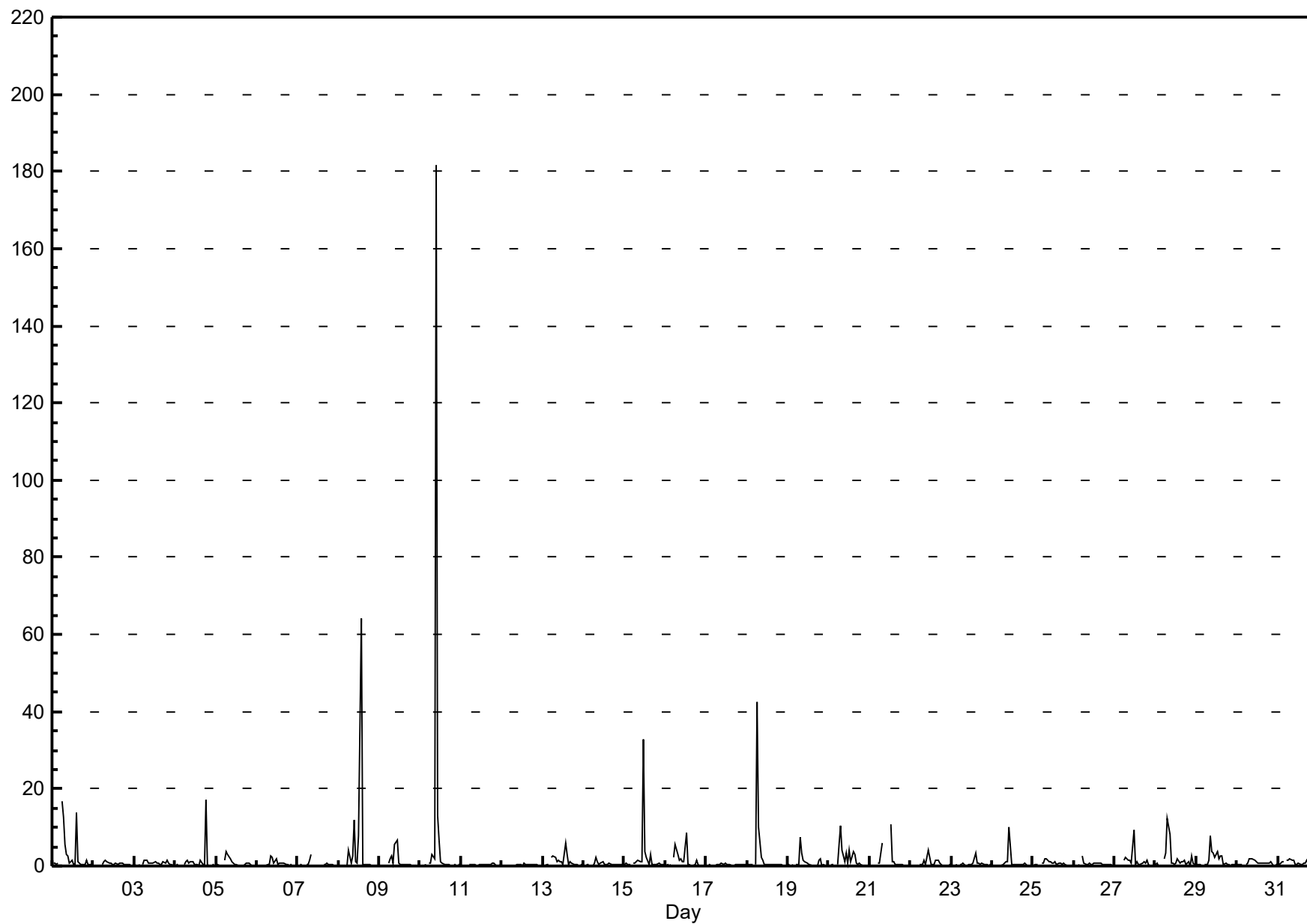
Hourly Maximums

Nitrogen Oxide (NO) - ppb Beaverlodge - August 2018

Maximum Value: 181.7 ppb on Aug 10 10:00																				Maximum Daily Average: 9.3 ppb on Aug 10										Hours in Service: 744	
Minimum Value: 0 ppb on Aug 16 23:00																				Minimum Daily Average: 0.2 ppb on Aug 12										Hours of Data: 703	
Maximum Diurnal Average: 8.0 ppb at hour 10																				Minimum Diurnal Average: 0.2 ppb at hour 23										Hours of Missing Data: 41	
Monthly Average: 1.40 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.4 Q ₃ = 0.8 P ₉₀ = 2.0 P ₉₉ = 13.2										Hours of Calibration: 41	
																				Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Aug	1	1	0	1	A	17	13	6	3	2	1	2	0	0	14	1	0	0	0	0	2	0	0	0	2.8	16.7					
2-Aug	0	0	0	0	A	0	1	2	1	1	1	0	0	1	0	1	1	1	1	0	0	0	0	0	0.5	1.7					
3-Aug	0	0	0	0	A	0	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	0	0	0	0.6	1.4					
4-Aug	0	0	0	0	A	0	1	2	1	1	1	0	0	0	0	1	0	0	17	0	0	0	0	0	1.2	17.2					
5-Aug	0	0	0	0	A	2	4	3	2	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0.7	3.8					
6-Aug	0	0	0	0	A	0	0	0	3	2	1	2	0	1	1	1	1	0	0	0	0	0	0	0	0.6	2.7					
7-Aug	0	0	0	0	A	0	0	1	3	C	C	C	C	C	C	1	0	1	1	0	0	0	0	0	--	2.9					
8-Aug	0	0	0	0	A	0	4	1	3	12	1	1	8	64	0	0	0	0	0	0	0	0	0	0	4.2	64.0					
9-Aug	0	0	0	0	A	1	2	3	1	5	7	1	0	0	0	0	0	0	0	0	0	0	0	0	1.0	6.6					
10-Aug	0	0	0	0	A	1	1	3	2	182	13	7	1	1	0	0	0	0	0	0	0	0	0	0	9.3	181.7					
11-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0.3	0.8					
12-Aug	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					
13-Aug	0	0	0	0	A	2	3	2	1	2	1	1	0	6	3	0	1	1	0	0	0	0	0	0	1.1	6.0					
14-Aug	0	0	0	0	A	0	1	2	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0.5	2.2					
15-Aug	0	1	0	0	A	1	1	1	2	1	1	33	4	2	0	3	1	0	0	0	1	0	0	0	2.3	32.7					
16-Aug	0	0	0	0	A	2	6	3	1	2	1	1	9	0	0	0	0	0	2	0	0	0	0	0	1.3	8.6					
17-Aug	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	0.7					
18-Aug	0	0	0	0	A	0	42	10	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2.6	42.4					
19-Aug	0	0	0	0	A	0	0	8	4	2	1	1	0	0	0	0	0	0	1	2	0	0	0	0	0.9	7.6					
20-Aug	0	0	1	0	A	0	6	10	4	1	3	1	4	1	4	3	1	0	1	0	0	0	0	0	1.8	10.3					
21-Aug	0	0	0	0	A	1	1	6	C	C	C	C	11	1	1	0	0	0	1	0	0	0	0	0	1.2	10.9					
22-Aug	0	0	0	0	A	0	0	1	1	1	4	2	0	1	0	1	2	1	0	0	0	0	0	0	0.7	4.3					
23-Aug	0	0	0	0	A	0	1	1	0	0	0	0	0	1	3	1	1	1	1	0	0	0	0	0	0.5	3.3					
24-Aug	0	0	0	0	A	0	0	1	1	1	10	0	0	0	0	0	0	1	1	1	0	0	0	0	0.8	10.2					
25-Aug	0	0	0	0	A	1	1	2	2	1	1	1	1	1	0	1	1	0	1	0	0	0	0	0	0.6	1.7					
26-Aug	0	0	0	0	A	3	1	0	0	1	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0.5	2.6					
27-Aug	0	0	0	0	A	1	2	2	1	1	1	9	0	1	1	0	1	1	1	2	0	0	0	0	1.2	9.4					
28-Aug	0	1	0	0	A	2	3	12	8	1	1	1	1	2	1	1	1	1	0	1	0	3	1	0	1.8	12.3					
29-Aug	0	0	0	0	A	0	0	1	8	4	3	2	4	2	3	3	0	1	0	0	0	0	0	0	1.5	8.0					
30-Aug	0	1	0	0	A	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	0	0	0	0.8	1.9					
31-Aug	1	0	1	1	A	1	2	2	2	2	0	1	1	0	0	1	1	1	1	0	1	0	0	0	0.8	1.9					
0.2 0.2 0.2 0.3 -- 1.2 3.1 2.9 2.0 8.0 2.0 2.4 1.7 3.0 1.3 0.8 0.5 0.5 1.1 0.5 0.3 0.3 0.2 0.2																									Diurnal Average						
0.8 0.7 1.3 1.3 -- 16.7 42.4 12.3 8.1 181.7 13.2 32.7 10.9 64.0 13.8 3.1 1.6 1.5 17.2 1.7 1.7 2.7 0.6 0.4																									Diurnal Maximum						
C - Calibration A - Automated Daily Zero Span																															

Hourly Maximums

Nitrogen Oxide (NO) - ppb
Beaverlodge - August 2018



Hourly Averages

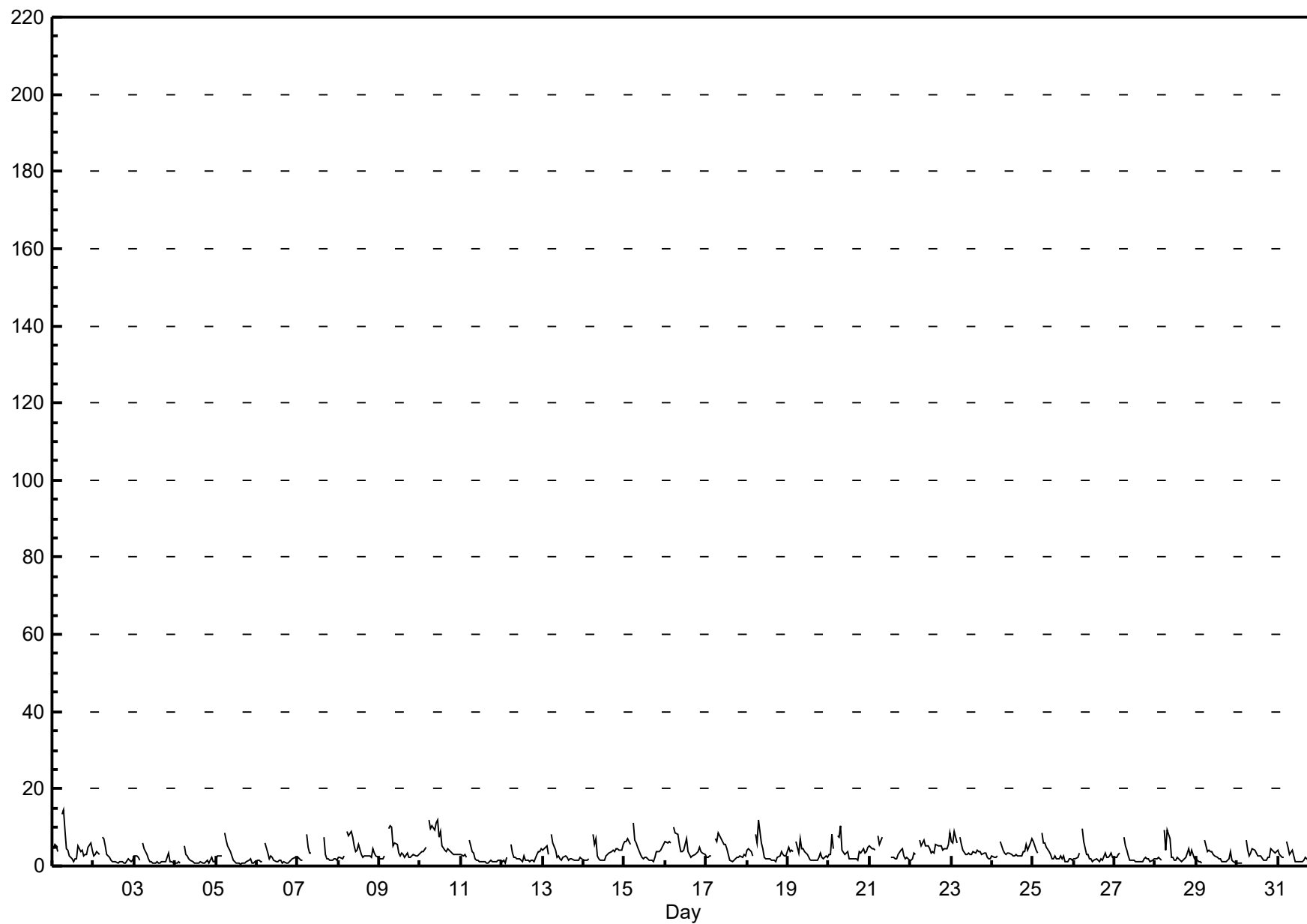
Oxides of Nitrogen (NO_x) - ppb

Beaverlodge - August 2018

Maximum Value: 14.4 ppb on Aug 1 07:00																			Maximum Daily Average: 5.9 ppb on Aug 10										Hours in Service: 744	
Minimum Value: 1 ppb on Aug 5 15:00																			Minimum Daily Average: 1.4 ppb on Aug 4										Hours of Data: 703	
Maximum Diurnal Average: 8.0 ppb at hour 6																			Minimum Diurnal Average: 1.9 ppb at hour 15										Hours of Missing Data: 41	
Monthly Average: 3.21 ppb																			Percentiles: P ₁ = 0.6 P ₁₀ = 1.1 Q ₁ = 1.6 Median = 2.6 Q ₃ = 4.1 P ₉₀ = 6.2 P ₉₉ = 10.6										Hours of Calibration: 41	
																													Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Aug	4	5	5	4	A	14	14	9	5	4	3	2	1	2	2	5	4	4	3	3	3	5	6	4	4.8	14.4				
2-Aug	3	3	4	3	A	8	7	5	3	2	1	1	1	1	1	1	1	1	1	1	2	1	1	2	2.3	7.5				
3-Aug	2	3	2	2	A	6	4	3	2	1	1	1	1	1	1	1	1	1	1	2	3	1	1	1	1.8	5.8				
4-Aug	1	1	1	1	A	5	3	3	2	2	1	1	1	1	1	1	1	1	1	2	1	2	1	1	1.4	5.4				
5-Aug	2	2	3	3	A	9	7	5	4	3	2	1	1	1	1	1	1	1	1	2	2	1	1	1	2.2	8.7				
6-Aug	2	2	1	1	A	6	3	2	3	2	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1.7	6.0				
7-Aug	2	2	1	2	A	8	5	3	3	C	C	C	C	C	C	7	3	2	2	2	2	2	2	2	--	8.3				
8-Aug	2	2	2	3	A	9	8	9	8	5	4	4	6	3	2	3	3	3	3	2	5	3	3	2	4.0	8.9				
9-Aug	2	2	2	3	A	10	11	10	5	6	5	3	3	4	3	2	3	2	2	3	3	3	3	3	4.0	10.6				
10-Aug	3	4	4	5	A	12	10	10	9	11	12	7	9	5	4	4	4	4	4	3	3	3	3	3	5.9	11.8				
11-Aug	3	3	3	2	A	7	4	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.9	6.6				
12-Aug	1	1	1	2	A	5	3	2	2	2	2	2	1	2	2	1	1	1	1	1	3	4	4	4	2.2	5.5				
13-Aug	4	4	5	3	A	8	6	4	2	3	2	2	2	3	2	2	2	2	2	1	1	2	2	2	2.9	8.2				
14-Aug	1	2	2	2	A	8	6	7	3	2	2	1	1	3	3	3	4	4	4	4	4	4	4	6	3.4	8.0				
15-Aug	6	6	7	6	A	11	7	6	5	3	2	2	2	2	1	2	1	1	2	4	4	4	5	6	4.1	11.1				
16-Aug	6	6	6	6	A	10	9	8	5	4	4	4	7	4	3	2	2	3	4	4	5	4	3	3	4.9	10.2				
17-Aug	2	2	3	3	A	7	6	9	8	7	6	6	4	3	2	1	1	2	2	2	2	2	3	3	3.7	8.7				
18-Aug	4	4	4	3	A	8	6	12	6	4	2	2	2	2	2	2	1	1	2	3	4	3	3	2	3.5	11.9				
19-Aug	5	4	4	4	A	6	3	7	5	5	4	3	2	2	2	1	1	1	2	3	2	2	3	2	3.2	7.0				
20-Aug	3	3	8	5	A	8	8	11	4	3	3	4	2	2	2	2	2	2	4	4	4	3	4	5	4.1	10.5				
21-Aug	5	5	4	4	A	8	6	8	C	C	C	C	2	2	2	2	2	3	4	4	3	2	2	1	3.6	7.8				
22-Aug	1	2	3	3	A	7	5	6	7	5	5	4	3	4	3	6	5	5	5	4	4	5	5	8	4.7	8.4				
23-Aug	6	6	9	6	A	7	6	4	3	3	3	3	3	4	3	4	4	4	3	3	3	2	2	2	4.1	8.9				
24-Aug	3	2	2	3	A	6	4	3	3	3	3	3	3	3	3	3	2	3	4	4	5	4	6	7	3.6	6.9				
25-Aug	6	5	4	3	A	8	6	6	5	4	3	2	2	3	2	2	3	2	3	1	1	2	2	1	3.3	8.5				
26-Aug	2	2	2	4	A	10	6	3	3	2	2	1	2	2	2	1	2	2	3	2	2	2	3	2	2.7	9.8				
27-Aug	2	2	3	4	A	7	5	4	2	1	1	1	1	1	1	1	1	2	2	2	2	1	1	2	2.3	7.5				
28-Aug	2	2	2	2	A	9	4	9	7	2	2	1	1	2	1	1	1	2	2	5	3	4	3	2	3.1	9.5				
29-Aug	2	1	1	1	A	7	4	4	4	4	3	3	2	2	2	1	1	1	1	2	4	1	1	1	2.3	6.7				
30-Aug	1	1	1	1	A	7	4	3	3	4	4	4	3	2	3	2	2	1	2	2	5	4	3	4	2.8	6.5				
31-Aug	4	3	2	2	A	7	5	3	4	3	1	1	1	1	1	1	2	2	1	1	1	1	1	1	2.2	6.5				
3.0 3.0 3.3 2.9 --					8.0	5.9	5.9	4.2	3.5	3.0	2.4	2.4	2.2	1.9	2.1	2.1	2.1	2.1	2.4	2.5	2.9	2.6	2.7	2.8	Diurnal Average					
6.4 6.3 8.9 5.9 --					13.5	14.4	11.9	9.3	11.1	11.8	7.4	9.0	5.0	4.2	7.3	5.2	5.3	5.1	4.6	5.4	4.8	6.0	8.4	Diurnal Maximum						
C - Calibration A - Automated Daily Zero Span																														

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb
Beaverlodge - August 2018



Hourly Maximums

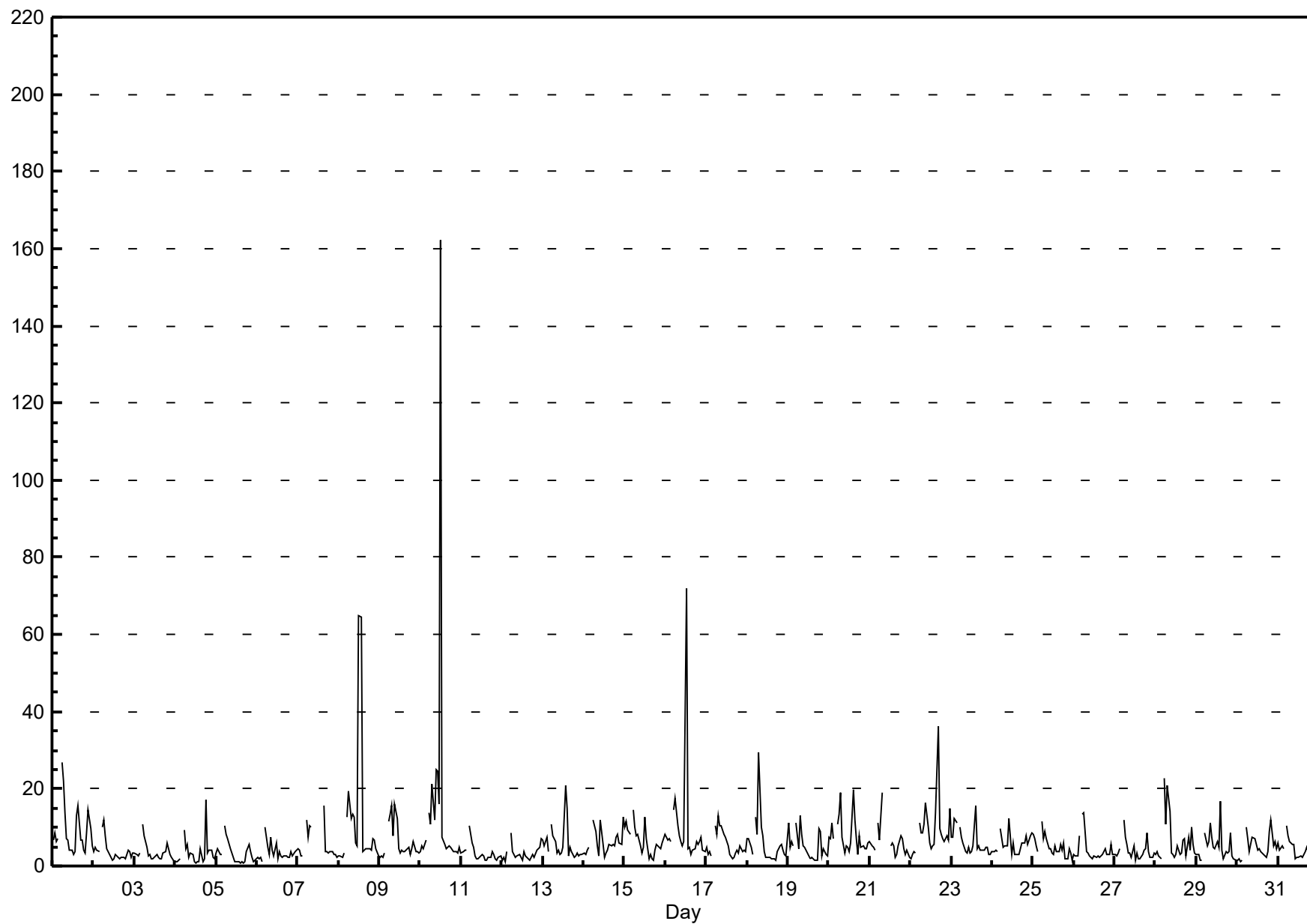
Oxides of Nitrogen (NO_x) - ppb

Beaverlodge - August 2018

Maximum Value: 162.0 ppb on Aug 10 13:00																					Maximum Daily Average: 15.6 ppb on Aug 10					Hours in Service: 744	
Minimum Value: 1 ppb on Aug 5 15:00																					Minimum Daily Average: 3.2 ppb on Aug 11					Hours of Data: 703	
Maximum Diurnal Average: 13.1 ppb at hour 13																					Minimum Diurnal Average: 3.9 ppb at hour 18					Hours of Missing Data: 41	
Monthly Average: 5.96 ppb																					Percentiles: P ₁ = 1.0 P ₁₀ = 2.0 Q ₁ = 2.8 Median = 4.2 Q ₃ = 6.9 P ₉₀ = 11.1 P ₉₉ = 25.0					Hours of Calibration: 41	
																					Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	7	9	7	7	A	27	22	14	7	7	4	4	3	4	13	16	7	7	4	3	9	14	10	5	9.0	26.8	
2-Aug	4	5	4	4	A	10	12	8	4	3	2	2	2	3	2	2	2	2	2	2	4	4	2	3	3.8	11.8	
3-Aug	3	3	2	3	A	11	8	5	3	3	2	2	3	3	2	2	2	4	4	6	4	3	2	1	3.5	10.7	
4-Aug	1	1	2	2	A	9	5	6	2	3	3	1	1	1	1	4	1	2	17	3	4	4	2	2	3.4	17.3	
5-Aug	3	4	3	3	A	10	8	7	4	3	2	1	1	1	1	1	1	1	4	6	4	2	1	2	3.2	10.4	
6-Aug	2	2	2	1	A	10	5	3	8	4	3	6	2	4	3	2	3	3	2	2	4	3	4	4	3.5	10.1	
7-Aug	4	4	3	3	A	12	7	10	10	C	C	C	C	C	C	16	4	4	3	4	4	3	3	2	--	15.7	
8-Aug	2	2	2	3	A	13	19	12	13	13	6	5	65	64	4	4	5	4	4	4	7	7	4	3	11.6	64.8	
9-Aug	2	3	2	3	A	11	13	16	8	16	12	4	3	4	4	4	4	5	3	4	6	4	4	3	6.1	15.9	
10-Aug	4	5	5	7	A	14	11	21	12	25	24	16	162	7	5	5	5	5	5	4	4	4	3	5	15.6	162.0	
11-Aug	3	4	4	4	A	11	6	5	3	2	2	2	3	2	1	2	2	2	4	3	2	2	2	2	3.2	10.5	
12-Aug	2	2	1	4	A	8	4	3	2	3	3	2	2	4	2	2	2	2	3	2	4	5	5	7	3.2	8.4	
13-Aug	7	5	8	4	A	11	8	6	3	4	3	3	5	21	15	2	5	4	2	2	3	3	3	3	5.7	20.9	
14-Aug	3	3	4	5	A	12	10	9	5	2	12	6	2	3	4	5	5	6	5	7	8	6	6	13	6.2	12.7	
15-Aug	10	12	9	8	A	14	10	8	8	5	3	5	13	7	2	3	2	1	4	6	5	5	6	7	6.6	14.4	
16-Aug	8	7	7	6	A	14	18	11	8	6	5	6	72	4	5	3	4	4	6	6	6	7	4	4	9.7	72.1	
17-Aug	5	3	4	3	A	10	8	13	10	10	8	8	6	5	3	2	2	3	4	3	5	4	4	4	5.6	13.2	
18-Aug	7	7	5	3	A	13	8	29	10	8	4	2	2	2	2	2	2	2	4	5	6	4	3	3	5.7	29.5	
19-Aug	11	5	6	5	A	11	4	13	8	5	5	4	3	2	2	2	1	2	10	9	3	4	3	3	5.3	13.2	
20-Aug	8	7	11	7	A	11	13	19	7	4	5	5	4	6	20	12	7	3	8	5	5	5	5	6	7.9	19.7	
21-Aug	6	5	5	4	A	11	7	19	C	C	C	C	5	6	5	2	3	5	8	7	4	3	4	2	5.9	19.0	
22-Aug	2	3	4	3	A	11	8	9	11	16	10	6	4	5	6	14	36	10	8	7	6	8	7	15	9.1	36.0	
23-Aug	8	7	12	11	A	10	7	6	4	4	5	3	4	5	16	4	5	4	4	4	5	5	3	3	6.0	15.6	
24-Aug	4	4	4	4	A	10	5	5	5	5	12	3	6	3	3	3	3	6	6	6	8	5	8	9	5.5	12.2	
25-Aug	8	7	5	4	A	11	7	9	7	5	5	3	3	5	4	4	6	4	6	2	2	4	3	2	5.0	11.5	
26-Aug	3	2	3	8	A	13	14	4	4	3	2	2	2	2	3	2	3	3	4	3	3	3	6	3	4.1	14.0	
27-Aug	3	3	3	5	A	12	7	5	3	3	2	5	1	3	2	2	3	4	4	8	4	2	2	3	4.0	11.8	
28-Aug	3	4	3	2	A	23	11	21	14	3	3	2	3	5	3	3	7	7	3	7	4	10	6	3	6.5	22.8	
29-Aug	3	3	2	2	A	8	5	6	11	7	5	4	6	5	17	4	2	4	3	4	9	3	2	2	5.1	16.9	
30-Aug	1	2	1	1	A	10	7	4	6	8	7	5	4	4	4	3	3	2	4	9	12	5	6	5	4.9	12.1	
31-Aug	6	4	5	4	A	10	8	6	5	6	2	2	2	3	2	3	4	5	4	2	3	3	2	2	4.0	10.4	
4.6 4.4 4.5 4.3 -- 12.1 9.3 10.1 6.9 6.4 5.6 4.2 13.1 6.5 5.1 4.3 4.5 3.9 4.9 4.7 5.0 4.6 4.0 4.2																									Diurnal Average		
11.3 11.7 12.2 11.0 -- 26.8 21.9 29.5 14.3 25.0 24.4 16.2 162.0 64.5 19.7 15.7 36.0 9.9 17.3 9.1 12.1 14.5 9.6 15.0																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											

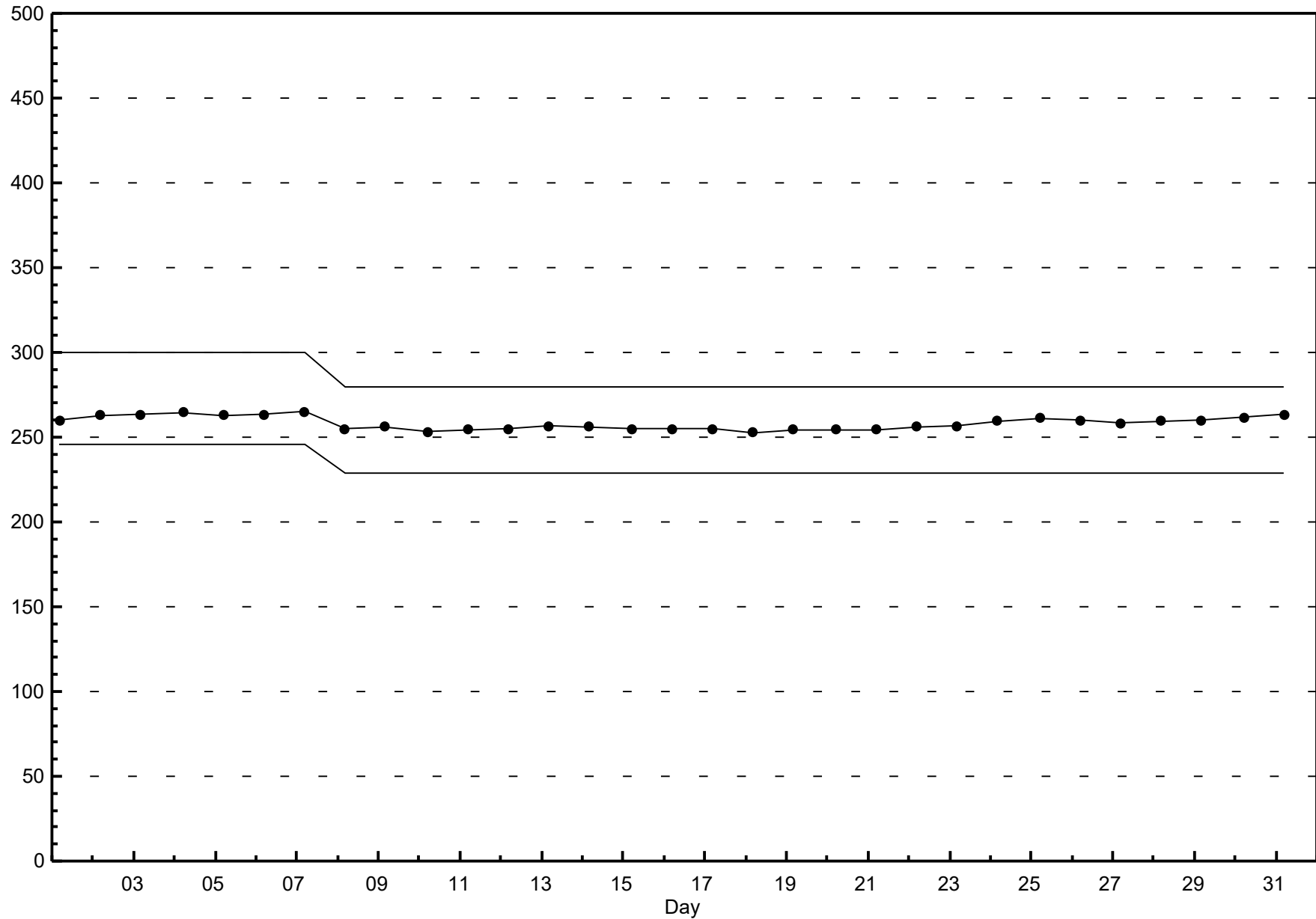
Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb
Beaverlodge - August 2018



Span Responses

Oxides of Nitrogen (NO_x)
Beaverlodge - August 2018



Hourly Averages

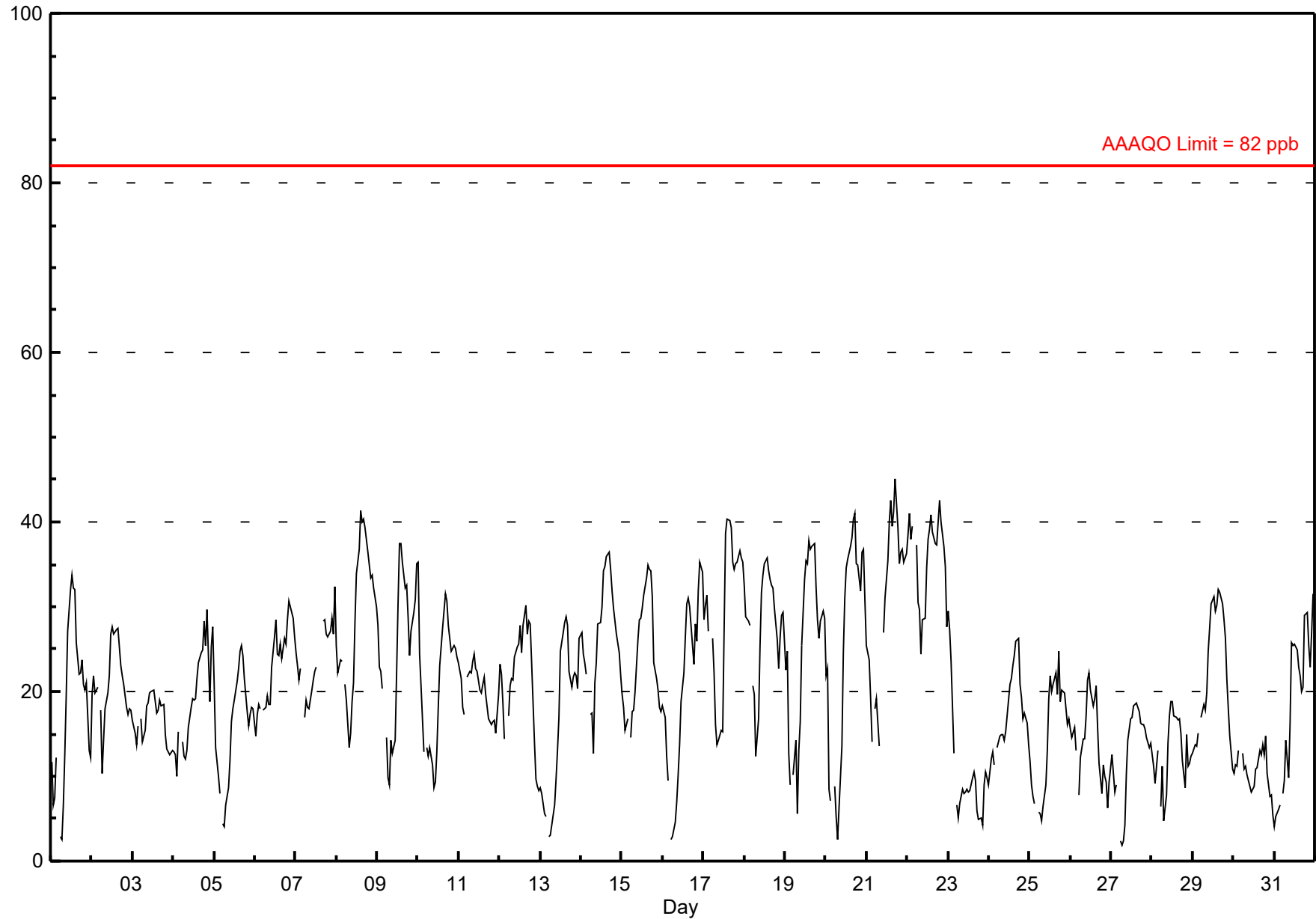
Ozone (O₃) - ppb

Beaverlodge - August 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 45.1 ppb on Aug 21 18:00 Maximum Daily Average: 35.8 ppb on Aug 22																								Hours in Service: 744 Hours of Data: 708 Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0		
Minimum Value: 2 ppb on Aug 27 07:00 Maximum Diurnal Average: 28.0 ppb at hour 16 Monthly Average: 20.94 ppb												Minimum Daily Average: 10.5 ppb on Aug 23 Minimum Diurnal Average: 12.4 ppb at hour 8 Percentiles: P ₁ = 2.9 P ₁₀ = 8.8 Q ₁ = 13.7 Median = 20.2 Q ₃ = 27.7 P ₉₀ = 34.7 P ₉₉ = 40.8														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	12	7	7	12	A	3	3	7	13	20	27	32	34	32	32	26	22	22	24	21	20	21	13	12	18.3	33.7
2-Aug	20	22	20	20	A	18	10	14	18	20	22	27	28	27	27	27	25	23	22	21	18	17	18	18	21.0	27.6
3-Aug	17	15	14	16	A	17	14	15	18	19	20	20	20	19	17	18	19	18	18	15	13	13	13	13	16.6	20.2
4-Aug	13	13	10	15	A	14	12	12	13	16	18	19	19	19	22	23	25	25	28	25	30	19	25	28	19.3	29.7
5-Aug	21	13	10	8	A	4	4	7	9	12	16	18	19	21	23	25	25	24	22	18	16	17	18	18	16.0	25.4
6-Aug	15	17	19	18	A	18	18	19	19	19	23	26	28	24	24	26	24	26	26	28	31	30	29	26	23.2	30.6
7-Aug	25	23	21	23	A	17	19	18	18	20	21	22	23	C	C	C	28	28	27	26	27	29	27	32	23.8	32.4
8-Aug	25	22	24	23	A	21	19	13	15	19	21	28	34	37	41	40	40	39	37	35	33	34	32	30	28.9	41.3
9-Aug	28	23	22	20	A	15	10	9	14	13	14	22	30	37	37	35	32	33	29	24	27	29	31	35	24.8	37.4
10-Aug	35	24	21	13	A	13	12	13	11	9	9	13	18	23	27	29	32	31	28	25	25	25	25	24	21.2	35.2
11-Aug	23	21	18	17	A	22	22	22	24	24	23	22	20	20	21	22	20	17	16	16	16	17	15	20	19.9	24.4
12-Aug	23	22	19	14	A	17	21	22	21	24	25	26	28	25	28	30	27	28	28	23	14	10	9	8	21.4	30.1
13-Aug	9	8	6	5	A	3	3	6	7	10	13	17	25	27	28	29	28	22	20	22	22	22	20	26	16.4	28.8
14-Aug	27	24	23	22	A	17	17	13	21	23	28	28	30	34	35	36	36	34	32	30	28	27	25	22	26.7	36.4
15-Aug	20	18	15	17	A	15	18	18	20	26	29	29	30	31	33	35	34	34	31	23	22	20	18	18	24.1	34.9
16-Aug	18	17	12	9	A	3	3	5	7	10	14	19	22	26	30	31	30	25	23	28	26	32	35	34	20.0	35.2
17-Aug	28	30	31	27	A	26	22	16	14	14	15	15	27	39	40	40	39	35	34	35	35	37	36	35	29.3	40.4
18-Aug	32	29	28	28	A	21	20	12	17	25	32	34	35	36	34	33	33	32	30	26	23	26	29	29	28.0	35.8
19-Aug	23	25	13	9	A	10	14	6	13	17	25	33	35	35	38	37	37	37	32	29	26	28	29	29	25.2	37.8
20-Aug	22	23	8	7	A	9	5	3	6	14	25	31	34	36	37	38	40	41	35	35	32	36	37	31	25.4	41.1
21-Aug	25	24	19	14	A	18	19	14	C	C	27	31	35	40	43	39	41	45	39	35	36	37	35	36	31.1	45.1
22-Aug	38	41	38	39	A	37	31	30	24	29	29	35	38	39	41	39	37	37	40	43	40	37	35	28	35.8	42.5
23-Aug	30	27	24	13	A	7	5	7	8	8	8	9	8	8	10	11	9	6	5	5	4	9	11	10	10.5	29.6
24-Aug	9	12	13	11	A	13	15	15	15	14	15	19	21	22	23	24	26	26	21	19	17	17	16	14	17.3	26.3
25-Aug	12	9	8	7	A	6	6	5	6	9	13	19	22	20	21	22	20	25	19	20	20	18	16	17	14.7	24.8
26-Aug	16	15	16	13	A	8	12	14	14	17	21	22	20	18	19	21	16	12	8	11	10	9	6	9	14.3	22.2
27-Aug	13	10	8	9	A	2	2	2	4	10	14	17	17	18	18	19	18	16	16	16	16	15	13	14	12.5	18.7
28-Aug	13	11	9	13	A	6	11	5	8	14	17	19	19	17	17	17	17	15	12	9	15	11	11	12	13.0	18.9
29-Aug	13	14	14	15	A	17	18	18	20	25	27	30	31	29	30	32	32	30	28	26	21	18	15	11	22.4	32.0
30-Aug	10	11	11	13	A	13	11	11	10	9	8	9	9	11	11	13	13	14	13	15	10	8	8	5	10.7	14.7
31-Aug	4	5	6	7	A	8	9	14	10	16	26	25	26	25	23	22	20	21	29	29	25	23	27	32	18.8	31.6
19.9 18.6 16.4 15.5 -- 13.4 13.1 12.4 13.9 16.8 20.2 23.1 25.4 26.6 27.7 28.0 27.3 26.6 24.9 23.7 22.6 22.3 21.8 21.8																								Diurnal Average		
38.4 41.1 38.0 39.4 -- 37.3 30.5 29.6 24.4 28.5 31.6 34.6 37.9 40.1 42.5 40.2 41.2 45.1 40.0 42.5 40.0 37.2 36.7 36.3																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na																										

Hourly Averages

Ozone (O₃) - ppb
Beaverlodge - August 2018



Hourly Maximums

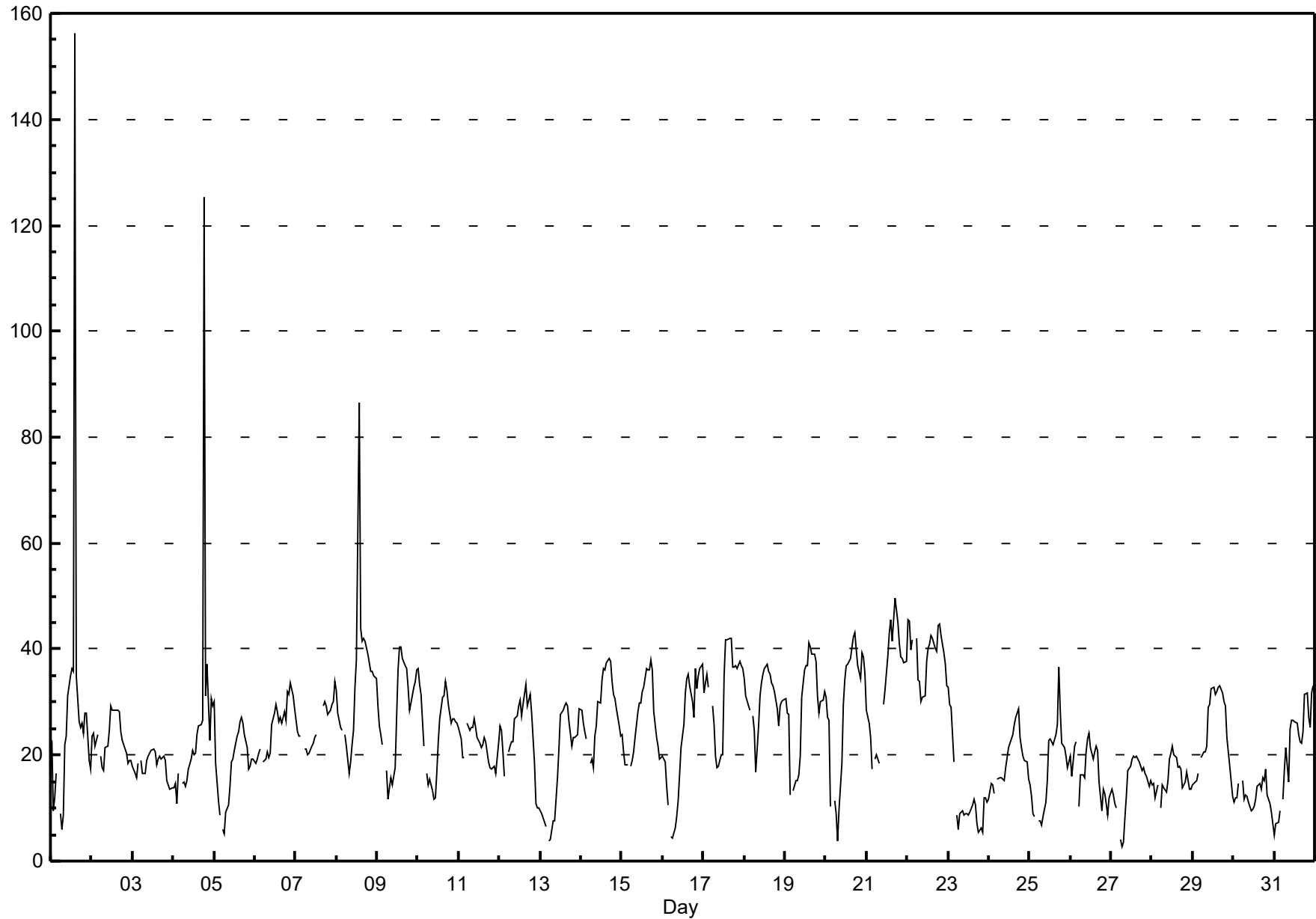
Ozone (O₃) - ppb

Beaverlodge - August 2018

Maximum Value: 156.2 ppb on Aug 1 15:00																					Maximum Daily Average: 39.1 ppb on Aug 22				Hours in Service: 744	
Minimum Value: 3 ppb on Aug 27 07:00																					Minimum Daily Average: 12.2 ppb on Aug 23				Hours of Data: 708	
Maximum Diurnal Average: 33.7 ppb at hour 15																					Minimum Diurnal Average: 15.5 ppb at hour 8				Hours of Missing Data: 36	
Monthly Average: 23.88 ppb																					Percentiles: P ₁ = 4.7 P ₁₀ = 10.9 Q ₁ = 16.6 Median = 22.8 Q ₃ = 30.3 P ₉₀ = 36.9 P ₉₉ = 45.2				Hours of Calibration: 36	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	23	9	12	17	A	9	6	9	22	24	31	35	36	36	156	35	26	25	26	24	28	28	19	17	28.4	156.2
2-Aug	23	24	22	24	A	20	18	17	21	22	25	29	29	28	28	28	28	24	23	22	20	18	19	19	23.2	29.3
3-Aug	18	17	16	18	A	19	16	17	19	20	20	21	21	21	18	19	20	19	20	19	15	14	13	14	18.0	21.0
4-Aug	14	15	11	17	A	15	15	14	15	17	19	21	20	20	24	25	26	26	125	31	37	23	31	29	25.7	125.3
5-Aug	30	18	11	9	A	6	5	9	10	14	19	19	21	24	24	26	27	26	24	21	17	18	19	19	18.2	30.1
6-Aug	19	19	20	21	A	19	19	21	20	20	26	28	30	28	26	27	26	28	27	32	32	34	31	29	25.2	33.7
7-Aug	27	24	24	24	A	21	21	20	20	22	22	23	24	C	C	C	29	30	29	28	28	30	30	34	25.6	34.0
8-Aug	32	28	25	25	A	24	22	17	19	22	25	33	38	87	44	42	42	41	39	37	36	36	35	34	34.0	86.6
9-Aug	29	25	24	22	A	17	12	14	16	14	18	27	36	41	40	38	37	36	33	28	30	33	34	36	27.8	40.5
10-Aug	36	33	31	22	A	17	14	16	13	12	12	17	23	27	31	31	34	32	30	26	27	27	26	26	24.5	36.2
11-Aug	25	23	20	20	A	26	25	25	25	27	25	23	22	22	22	23	23	19	18	17	18	18	17	22	21.9	26.9
12-Aug	25	25	21	16	A	21	22	23	22	27	27	29	30	27	30	33	29	30	31	28	19	11	10	10	23.8	33.3
13-Aug	9	9	7	6	A	4	4	8	8	12	16	21	28	29	29	30	29	26	22	23	23	23	24	29	18.2	29.7
14-Aug	28	26	24	23	A	18	19	18	24	25	30	30	34	36	36	37	38	38	34	32	31	29	25	24	28.7	38.3
15-Aug	24	20	18	18	A	18	19	20	23	28	30	30	32	33	36	36	36	38	36	28	23	22	19	20	26.5	37.9
16-Aug	20	19	14	11	A	5	4	6	8	11	16	21	26	32	34	35	33	30	27	36	33	35	36	37	23.1	37.2
17-Aug	32	34	35	33	A	29	26	20	18	18	20	20	35	42	42	42	42	37	37	37	36	38	37	36	32.3	42.1
18-Aug	34	31	29	29	A	27	25	17	25	31	34	35	36	37	36	35	34	33	32	29	25	29	30	30	30.7	37.1
19-Aug	31	28	28	12	A	13	15	15	16	20	31	36	37	37	41	40	39	39	38	31	28	30	30	32	29.0	41.1
20-Aug	31	27	27	10	A	11	9	4	10	19	30	34	37	37	38	40	42	43	40	37	34	39	38	35	29.3	43.0
21-Aug	28	26	23	17	A	19	20	18	C	C	30	32	39	43	46	41	46	50	45	41	38	38	37	38	34.1	49.6
22-Aug	46	45	40	42	A	42	34	34	30	31	31	38	40	41	43	42	40	40	44	45	43	39	37	33	39.1	45.6
23-Aug	33	30	29	19	A	9	6	9	9	9	9	9	9	9	11	12	11	7	6	6	6	12	12	11	12.2	32.8
24-Aug	12	15	14	13	A	15	16	16	16	15	17	21	22	23	24	26	27	29	23	21	20	19	19	15	19.1	28.9
25-Aug	14	12	9	8	A	8	7	7	8	11	15	23	23	23	22	24	26	37	29	22	21	20	18	19	17.6	36.6
26-Aug	20	16	22	22	A	10	16	16	16	21	23	24	21	19	21	22	21	15	9	14	13	11	9	12	17.1	24.0
27-Aug	14	13	11	10	A	4	3	3	8	12	17	18	19	20	20	20	19	18	17	18	17	16	14	15	14.1	19.7
28-Aug	14	15	12	14	A	10	14	14	13	15	19	20	22	20	19	18	18	17	14	15	17	15	14	14	15.8	21.6
29-Aug	14	15	15	17	A	20	21	21	22	29	30	33	33	32	32	33	33	32	30	29	23	21	18	12	24.5	33.1
30-Aug	11	12	12	15	A	15	12	12	12	11	10	10	10	12	14	15	13	16	15	17	12	11	9	7	12.3	17.3
31-Aug	5	7	7	10	A	12	17	22	15	25	27	27	26	26	24	23	22	24	31	32	27	25	32	33	21.7	33.2
23.3 21.3 19.8 18.1 -- 16.2 15.6 15.5 16.8 19.5 22.7 25.4 27.7 30.3 33.7 30.0 29.5 29.3 30.7 26.7 25.1 24.5 24.0 24.0																								Diurnal Average		
45.6 45.2 39.8 41.8 -- 42.0 34.3 34.0 30.2 31.2 33.7 37.8 40.2 86.6 156.2 42.1 45.6 49.6 125.3 44.8 42.7 39.3 38.4 37.7																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

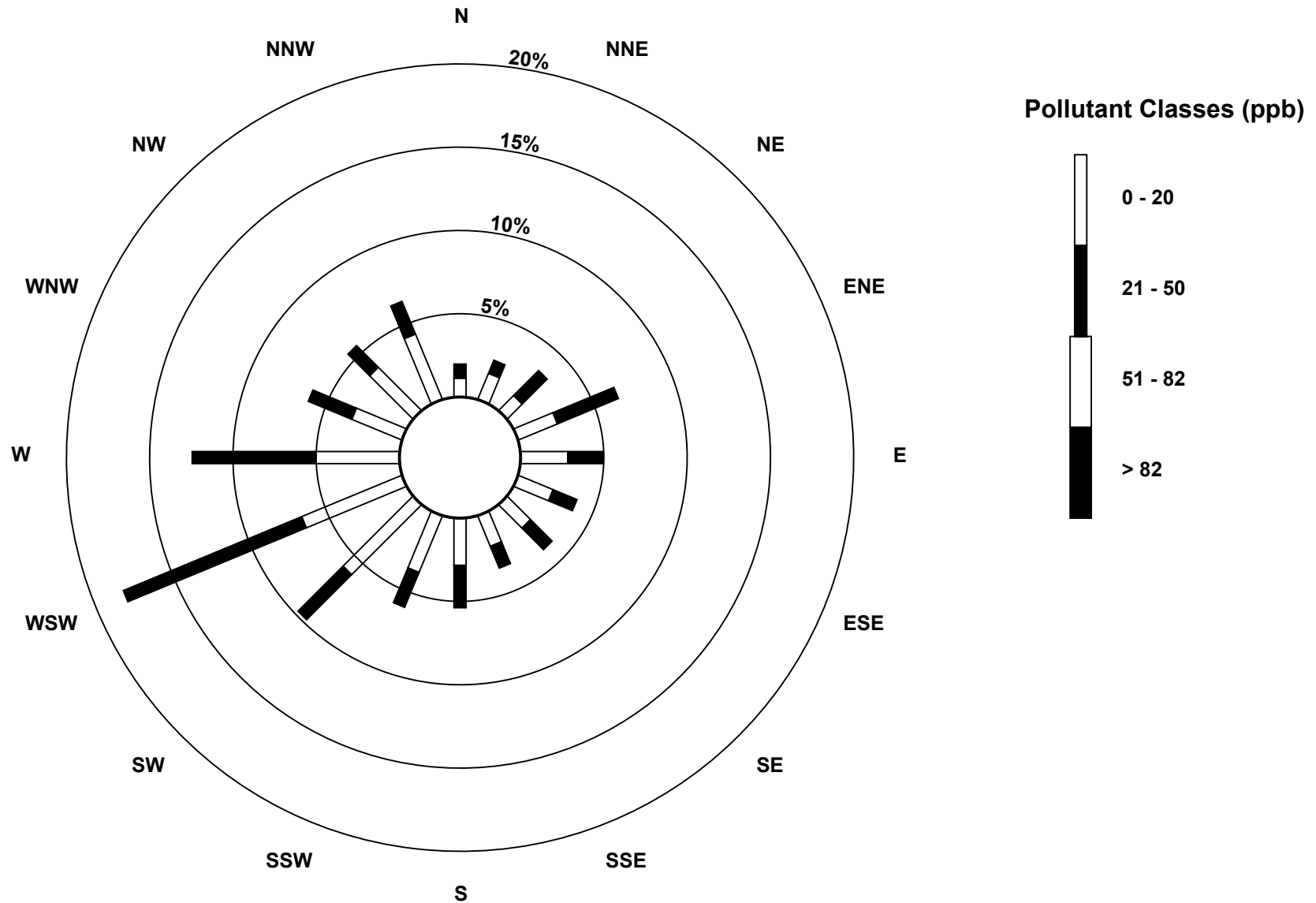
Hourly Maximums

Ozone (O₃) - ppb
Beaverlodge - August 2018



Pollutant Rose

Ozone (O₃) - ppb
Beaverlodge - August 2018



Eight Hour Running Averages

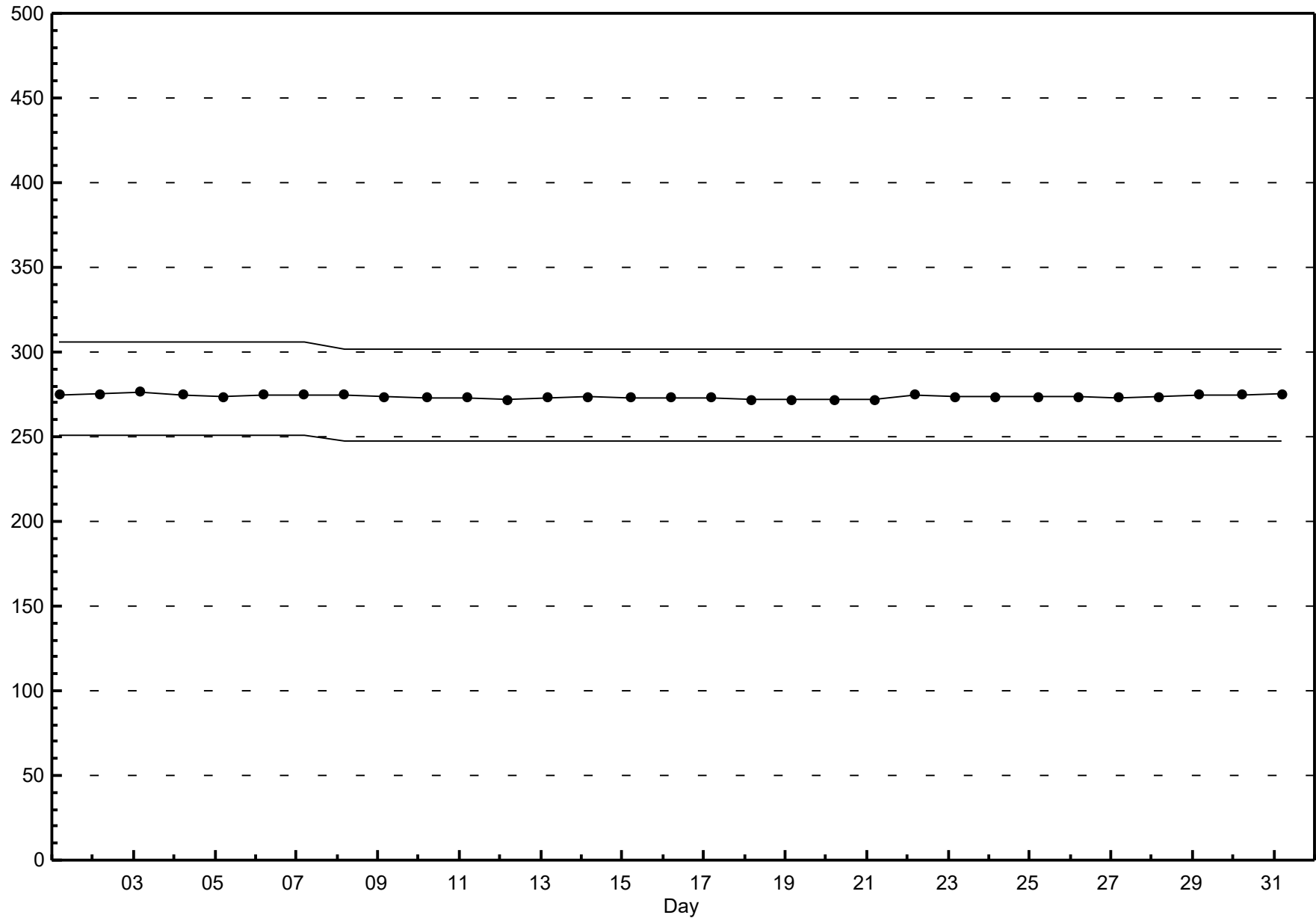
Ozone (O₃) - ppb

Beaverlodge - August 2018

Maximum Value: 39.9 ppb on Aug 21 21:00																								Hours in Service: 744	
Minimum Value: 5.3 ppb on Aug 13 09:00																								Hours of Data: 735	
Percentiles: P ₁ = 6.2 P ₁₀ = 9.8 Q ₁ = 14.7 Median = 20.1 Q ₃ = 26.4 P ₉₀ = 32.3 P ₉₉ = 38.5																								Hours of Missing Data: 9	
																								Hours of Calibration: 9	
																								Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																							Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
1-Aug	26	23	19	17	16	12	7	7	7	9	12	15	17	21	24	27	28	28	28	27	25	23	21	19	28.4
2-Aug	19	19	19	19	18	18	17	18	18	17	18	18	20	21	23	24	25	26	26	25	24	23	21	20	25.7
3-Aug	19	18	17	17	16	16	16	15	16	16	17	18	18	18	19	19	19	19	19	18	17	17	16	15	19.2
4-Aug	15	14	13	13	13	13	13	13	13	13	14	15	15	16	17	19	20	21	23	23	25	25	25	26	25.6
5-Aug	25	24	21	19	18	16	13	10	8	8	9	10	11	13	16	18	20	21	22	22	22	21	21	20	25.1
6-Aug	18	18	17	17	17	17	17	18	18	18	19	20	21	22	23	24	24	25	26	26	26	27	27	27	27.5
7-Aug	28	27	27	26	25	23	22	21	20	19	19	19	20	20	20	N	N	N	N	N	N	28	27	28	28.1
8-Aug	28	27	27	26	26	25	24	21	20	19	19	19	21	23	26	29	33	35	37	38	38	37	36	35	37.9
9-Aug	33	31	30	28	27	24	21	18	16	15	14	14	16	19	22	25	28	30	32	32	32	31	30	30	33.5
10-Aug	30	29	28	27	27	25	22	19	16	13	12	12	12	14	16	18	20	23	25	27	27	28	27	27	30.4
11-Aug	26	25	23	22	22	22	21	21	21	21	22	23	22	22	22	22	21	21	20	19	18	18	17	17	25.8
12-Aug	18	18	18	18	18	19	19	20	19	20	21	22	23	24	25	26	27	27	27	27	25	24	21	18	27.4
13-Aug	16	14	11	9	8	7	6	6	5	5	7	8	10	13	16	19	22	24	25	25	25	24	23	23	25.1
14-Aug	23	23	23	23	24	23	23	21	20	20	20	21	22	24	27	29	31	33	33	33	33	32	31	29	33.4
15-Aug	27	25	23	21	20	19	18	17	17	18	20	22	23	25	27	29	31	32	32	32	31	29	27	25	32.2
16-Aug	23	21	19	17	16	14	11	10	8	7	7	9	10	13	17	20	23	25	26	27	28	28	29	29	29.2
17-Aug	29	30	31	31	31	30	29	26	24	22	19	18	19	20	23	26	29	31	34	36	37	37	37	36	37.4
18-Aug	35	34	33	33	32	30	28	24	22	22	22	23	24	26	28	31	33	34	33	32	31	30	29	29	35.0
19-Aug	27	26	24	22	22	20	18	14	13	12	13	17	19	22	25	29	32	35	36	35	34	33	32	31	35.7
20-Aug	29	27	24	22	21	18	15	11	9	7	10	13	16	19	23	28	32	35	37	37	37	37	37	36	37.1
21-Aug	34	32	30	27	27	24	21	19	18	N	N	N	24	28	32	36	37	38	39	40	40	39	39	38	39.9
22-Aug	38	37	37	38	38	38	37	36	34	33	31	31	31	32	33	34	36	37	38	39	40	39	39	37	39.5
23-Aug	36	35	33	29	28	23	19	16	13	10	8	7	7	8	8	9	9	9	8	8	7	7	7	7	36.1
24-Aug	7	8	9	10	11	11	12	13	13	14	14	15	16	17	18	19	21	22	23	23	22	22	21	20	22.8
25-Aug	18	16	14	12	12	10	9	7	7	7	7	9	11	12	14	17	18	20	21	21	21	21	20	19	21.1
26-Aug	19	17	17	16	16	14	14	13	13	14	14	16	16	18	18	19	19	19	17	16	14	13	12	10	19.3
27-Aug	10	10	10	9	9	8	8	7	5	5	6	7	9	11	13	15	16	17	17	17	17	17	16	15	17.4
28-Aug	15	14	13	13	13	11	11	10	9	9	11	11	12	14	14	16	17	17	17	15	15	14	13	13	17.2
29-Aug	12	12	12	13	13	14	15	16	17	18	20	22	23	25	26	28	30	30	30	30	29	27	25	23	30.4
30-Aug	20	18	15	14	13	12	11	12	12	11	11	10	10	10	10	10	10	11	11	12	12	12	12	11	20.0
31-Aug	10	8	8	7	6	6	6	8	9	10	13	16	17	19	21	22	23	23	24	24	24	24	24	26	25.7
37.8 37.3 37.1 37.7 37.9 38.0 37.3 36.3 34.3 32.5 31.2 30.5 31.5 31.7 33.0 35.9 36.6 37.7 39.2 39.7 39.9 39.5 38.5 38.1																									
Diurnal Maximums																									
N - Not Valid																									

Span Responses

Ozone (O₃)
Beaverlodge - August 2018

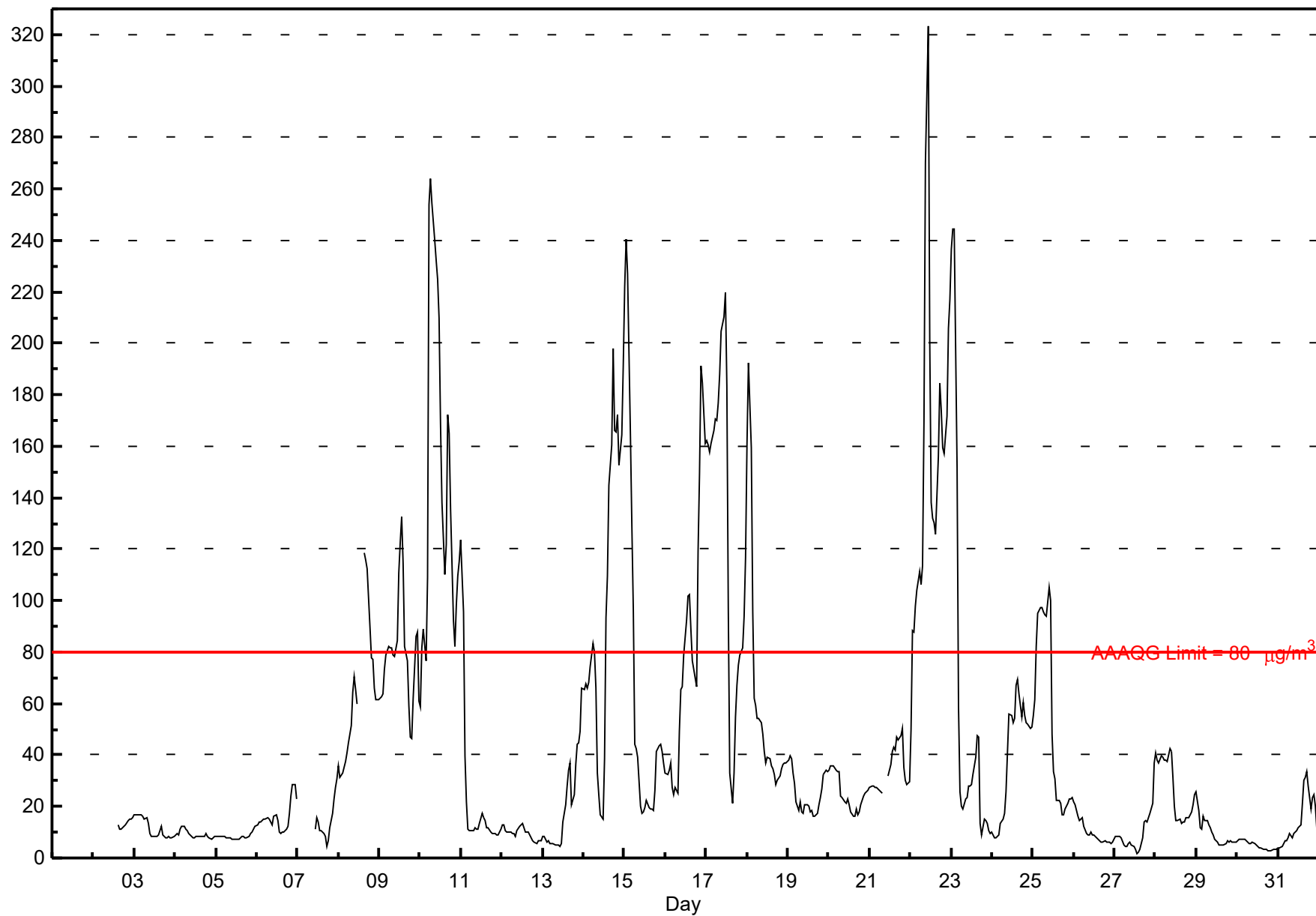


Number of Exceedences: 1-hr: 123 24-hr: 13 Maximum Value: 323.4 µg/m³ on Aug 22 11:00 Maximum Daily Average: 153.1 µg/m³ on Aug 22																								Hours in Service: 744 Hours of Data: 690 Hours of Missing Data: 54 Hours of Calibration: 5 Percent Operational Time: 93.4			
Minimum Value: 2 µg/m³ on Aug 27 14:00 Maximum Diurnal Average: 58.4 µg/m³ at hour 2 Monthly Average: 44.94 µg/m³																								Minimum Daily Average: 4.8 µg/m³ on Aug 30 Minimum Diurnal Average: 35.4 µg/m³ at hour 15 Percentiles: P ₁ = 3.2 P ₁₀ = 6.7 Q ₁ = 9.8 Median = 21.1 Q ₃ = 55.5 P ₉₀ = 122.0 P ₉₉ = 240.8			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
2-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	13	11	11	12	12	13	14	15	15	16	--	15.9
3-Aug	17	17	17	17	17	16	15	15	13	9	9	8	8	9	9	10	12	9	8	8	8	8	8	8	8	11.4	16.8
4-Aug	9	10	9	11	12	12	11	11	10	9	8	8	9	9	8	8	8	8	10	9	8	7	8	8	8	9.2	12.3
5-Aug	8	8	8	8	8	8	8	8	8	7	7	7	7	8	8	8	8	8	8	8	9	10	11	13	8.4	12.6	
6-Aug	13	14	14	14	15	15	16	15	14	13	16	17	14	10	10	10	10	11	12	17	24	29	28	23	15.7	28.6	
7-Aug	N	N	N	N	N	N	N	N	N	N	11	15	14	11	11	9	8	5	7	12	17	23	27	31	--	30.6	
8-Aug	36	31	33	35	37	41	45	51	64	71	65	60	N	C	118	116	113	89	78	77	66	61	62	64.3	118.4		
9-Aug	62	62	64	73	79	82	81	82	79	78	85	111	122	132	115	82	76	59	47	46	62	86	88	61	79.8	132.4	
10-Aug	59	82	89	76	109	254	264	255	240	232	225	210	169	138	110	122	172	165	135	93	82	98	110	115	150.1	263.9	
11-Aug	123	96	40	22	11	11	10	11	11	11	11	13	18	16	14	12	12	10	10	10	9	9	9	11	21.3	123.4	
12-Aug	13	13	10	10	10	10	10	10	8	11	12	13	13	12	10	10	9	8	7	6	6	7	7	7	9.6	13.3	
13-Aug	8	8	6	7	6	6	5	5	5	5	5	6	14	21	28	34	37	21	25	36	44	45	49	66	20.5	66.2	
14-Aug	65	67	66	68	74	84	80	66	33	24	17	15	38	94	110	145	160	198	166	165	172	153	164	191	100.7	197.9	
15-Aug	222	240	227	164	129	96	44	42	39	20	18	18	20	22	20	19	19	19	26	41	43	44	42	37	67.1	240.4	
16-Aug	33	33	34	37	27	25	27	25	49	65	66	79	92	102	103	89	76	70	67	119	149	192	184	161	79.4	191.6	
17-Aug	162	161	158	161	166	170	170	177	188	205	210	220	183	97	33	21	33	55	67	75	79	82	94	117	128.5	219.7	
18-Aug	161	192	160	96	62	60	54	53	48	42	37	39	39	36	34	32	29	30	32	35	37	37	37	37	59.8	192.3	
19-Aug	38	39	38	33	29	22	19	22	18	18	21	21	20	18	18	16	16	17	21	24	27	33	34	34	24.8	39.5	
20-Aug	34	36	36	36	34	34	33	24	24	22	21	23	21	18	16	16	19	17	18	21	24	25	26	26	25.1	35.9	
21-Aug	27	28	28	27	27	27	26	25	C	C	C	32	37	41	43	42	47	46	48	51	35	30	28	29	34.5	50.5	
22-Aug	50	88	88	98	104	111	106	113	170	270	323	201	138	132	130	126	156	184	174	159	157	172	206	217	153.1	323.4	
23-Aug	237	244	244	152	59	25	20	19	23	23	28	28	29	32	39	48	47	14	9	15	15	13	10	9	57.6	244.2	
24-Aug	10	8	8	8	9	13	15	18	26	41	56	55	53	54	67	70	64	55	60	56	53	52	50	51	39.6	69.6	
25-Aug	55	62	82	95	97	98	95	95	94	105	100	48	33	31	23	22	21	17	17	19	21	23	23	24	54.2	105.3	
26-Aug	22	21	16	15	15	16	12	10	9	9	10	9	8	8	8	7	6	6	7	6	6	6	6	6	10.1	21.9	
27-Aug	8	8	8	8	8	5	5	4	6	6	5	4	3	2	2	3	8	14	15	14	16	18	21	37	9.6	36.9	
28-Aug	41	38	37	40	39	38	38	38	42	41	31	20	14	14	15	14	14	14	16	16	17	18	21	25	26.7	42.4	
29-Aug	26	18	12	11	16	15	14	13	12	10	9	7	6	5	5	5	5	6	7	6	7	6	6	6	9.7	26.0	
30-Aug	7	7	7	7	7	6	6	5	5	6	6	5	5	4	4	3	3	3	3	3	3	3	3	4	4.8	7.4	
31-Aug	4	4	5	6	7	7	8	9	8	9	10	11	12	13	21	30	31	34	28	19	24	24	20	11	14.8	33.8	
55.4 58.4 55.2 47.7 43.4 46.7 44.3 43.6 46.3 50.7 50.9 44.9 40.7 39.0 35.4 38.3 41.3 40.9 38.3 39.2 41.4 44.4 46.6 48.1																								Diurnal Average			
236.8 244.2 244.2 164.0 166.1 254.1 263.9 254.5 239.8 270.0 323.4 219.7 183.3 137.9 130.3 145.0 172.1 197.9 173.7 165.4 172.4 191.6 205.6 217.1																								Diurnal Maximum			
C - Calibration N - Not Valid																											
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																											

Hourly Averages

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

Beaverlodge - August 2018



Hourly Maximums

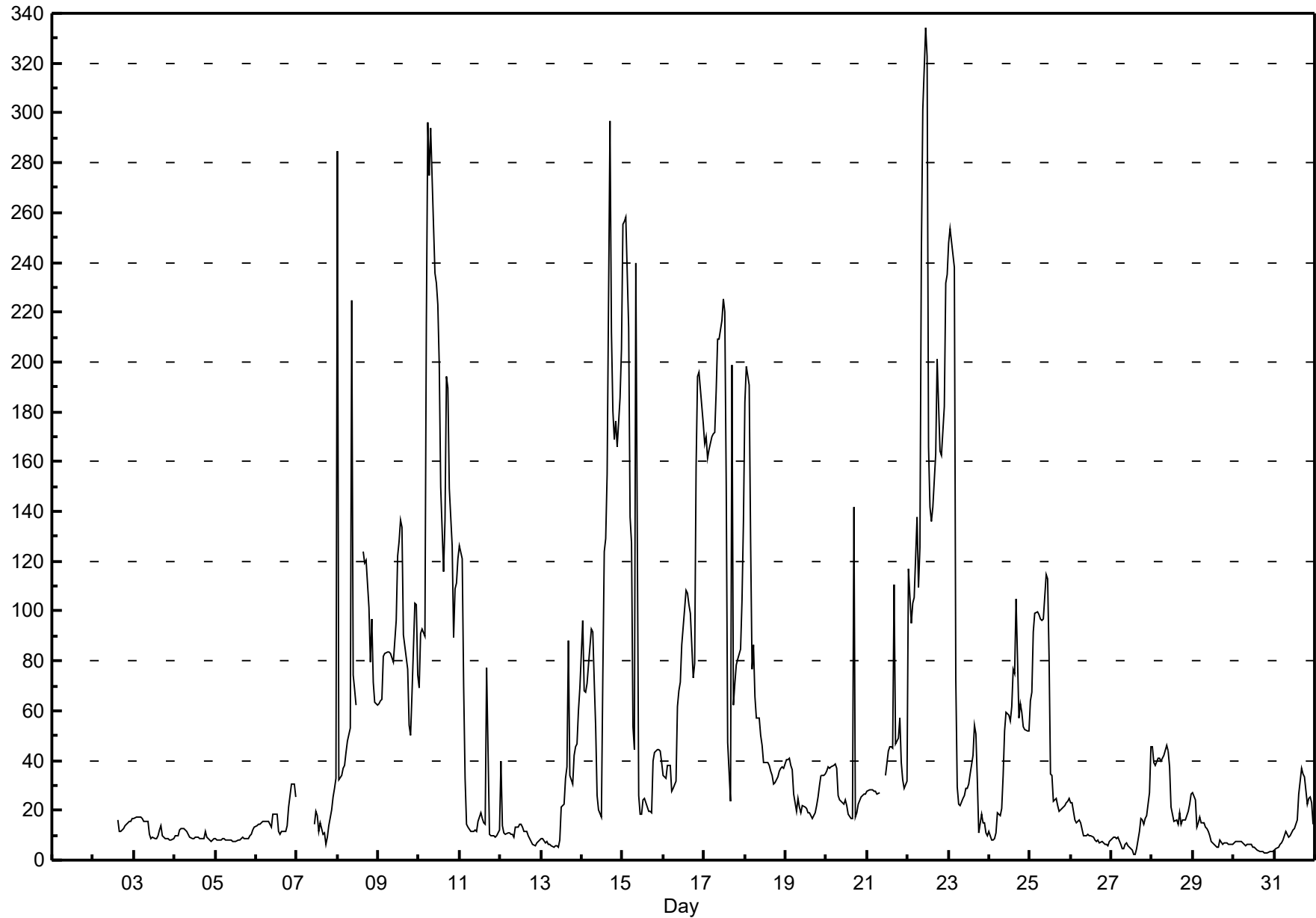
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Beaverlodge - August 2018

Maximum Value: 334.0 µg/m³ on Aug 22 11:00																					Maximum Daily Average: 175.4 µg/m³ on Aug 22				Hours in Service: 744	
Minimum Value: 2 µg/m³ on Aug 27 14:00																					Minimum Daily Average: 5.2 µg/m³ on Aug 30				Hours of Data: 690	
Maximum Diurnal Average: 72.7 µg/m³ at hour 1																					Minimum Diurnal Average: 39.3 µg/m³ at hour 15				Hours of Missing Data: 54	
Monthly Average: 51.64 µg/m³																					Percentiles: P ₁ = 3.6 P ₁₀ = 7.3 Q ₁ = 11.0 Median = 24.0 Q ₃ = 67.1 P ₉₀ = 142.7 P ₉₉ = 275.9				Hours of Calibration: 5	
																					Percent Operational Time: 93.4					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
2-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	16	11	12	12	12	14	15	15	15	17	--	16.6
3-Aug	17	17	17	17	17	17	15	16	16	10	9	9	9	9	10	12	14	10	9	9	9	8	8	9	12.1	17.1
4-Aug	10	10	10	12	13	13	12	11	10	9	9	9	9	9	9	9	9	9	12	9	9	8	8	9	9.7	12.7
5-Aug	9	8	8	8	9	9	8	8	8	8	7	8	8	8	8	9	9	9	9	9	10	10	12	13	8.8	13.4
6-Aug	14	14	14	15	15	16	16	16	15	13	18	19	18	11	10	11	11	12	14	22	26	31	30	25	16.9	30.6
7-Aug	N	N	N	N	N	N	N	N	N	N	14	20	18	11	15	10	11	7	9	14	20	25	29	33	--	32.8
8-Aug	285	32	34	37	38	43	48	53	225	74	69	62	N	C	C	124	120	121	102	79	97	71	63	62	87.5	284.8
9-Aug	63	64	64	82	83	84	83	83	81	80	97	122	128	136	134	90	81	76	54	50	67	103	103	74	86.8	136.4
10-Aug	69	91	93	90	216	296	275	294	255	236	232	223	199	150	116	137	194	190	149	126	89	109	111	121	169.2	296.1
11-Aug	126	121	70	33	14	13	11	11	12	12	12	16	19	17	15	14	77	10	10	10	10	9	10	12	27.7	126.1
12-Aug	40	14	11	11	11	11	10	11	10	13	13	14	14	13	11	11	10	9	7	7	6	7	8	8	11.6	39.9
13-Aug	9	9	7	7	6	6	6	5	6	6	5	8	21	23	33	37	88	34	31	42	45	46	60	69	25.4	87.9
14-Aug	97	68	68	71	78	93	92	72	54	26	20	17	74	124	129	155	297	212	180	169	176	166	185	205	117.8	296.6
15-Aug	255	256	258	214	138	127	54	44	240	26	18	18	24	25	21	20	20	19	40	43	44	44	44	39	84.7	258.2
16-Aug	34	33	38	38	38	27	29	32	62	68	71	86	101	109	107	102	99	73	79	158	194	196	189	175	89.1	195.9
17-Aug	167	170	162	165	170	171	172	189	209	209	217	225	220	150	47	24	199	62	71	79	81	85	104	136	145.1	225.3
18-Aug	184	198	191	128	76	87	66	57	57	50	46	39	39	39	38	36	34	31	31	33	36	37	37	37	67.0	198.1
19-Aug	40	40	41	38	36	26	20	25	21	19	22	21	21	19	19	18	17	19	22	25	30	34	34	34	26.8	41.1
20-Aug	35	37	37	37	38	38	37	26	24	23	23	24	22	19	17	17	142	17	19	23	25	26	26	27	31.6	141.5
21-Aug	28	28	28	28	28	27	26	27	C	C	C	34	44	45	45	45	111	47	49	57	39	32	29	32	39.5	110.7
22-Aug	117	106	95	103	106	138	109	126	244	301	334	323	166	142	136	142	163	201	183	164	163	182	232	235	175.4	334.0
23-Aug	248	253	248	238	72	29	23	22	25	26	29	29	31	35	42	54	51	32	11	18	15	15	11	10	65.3	253.4
24-Aug	11	8	8	9	11	19	18	21	34	52	60	58	56	61	76	75	105	57	63	59	54	53	52	52	44.7	104.8
25-Aug	64	67	92	99	100	99	97	96	97	114	113	82	34	34	24	25	22	20	20	21	22	23	23	25	58.8	114.4
26-Aug	23	23	16	15	16	16	15	10	10	10	11	10	10	9	8	7	8	7	8	7	7	6	6	7	11.0	23.3
27-Aug	9	9	9	9	9	6	5	5	7	7	6	5	4	2	2	5	11	17	16	15	17	18	27	46	11.0	45.5
28-Aug	45	39	38	41	41	40	41	42	46	44	37	22	18	16	16	14	19	15	16	16	18	19	22	26	28.9	46.0
29-Aug	27	24	13	15	17	15	15	13	13	11	10	8	6	6	5	5	8	6	7	7	7	7	6	6	10.8	26.9
30-Aug	7	8	8	8	7	7	6	6	6	6	6	5	5	4	4	4	3	4	3	3	3	3	4	4	5.2	7.6
31-Aug	4	4	5	7	7	8	10	11	9	10	11	12	12	16	27	32	37	35	33	22	25	25	23	14	16.7	37.0
72.7 62.6 60.2 56.2 50.4 52.9 47.1 47.6 66.4 54.2 54.2 52.7 47.5 44.4 39.3 41.8 65.9 45.7 42.3 43.6 45.2 47.2 50.4 52.1																									Diurnal Average	
284.8 256.4 258.2 237.8 215.7 296.1 274.8 294.1 254.5 301.2 334.0 322.5 220.3 150.3 135.9 155.3 296.6 211.8 182.7 169.0 194.4 195.9 231.7 235.2																									Diurnal Maximum	
C - Calibration N - Not Valid																										

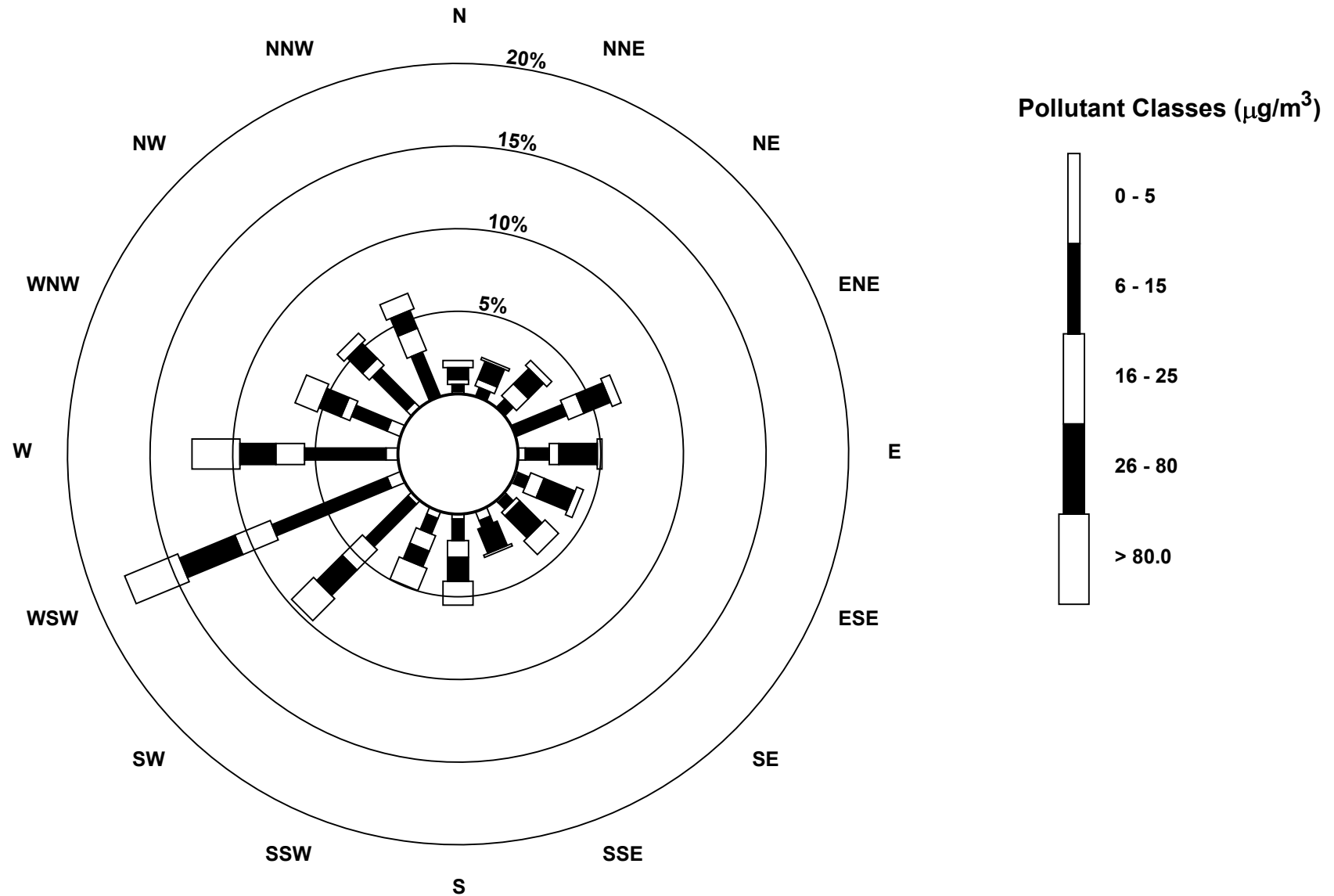
Hourly Maximums

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



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Beaverlodge - August 2018



Hourly Averages

External Temperature (ET) - °C

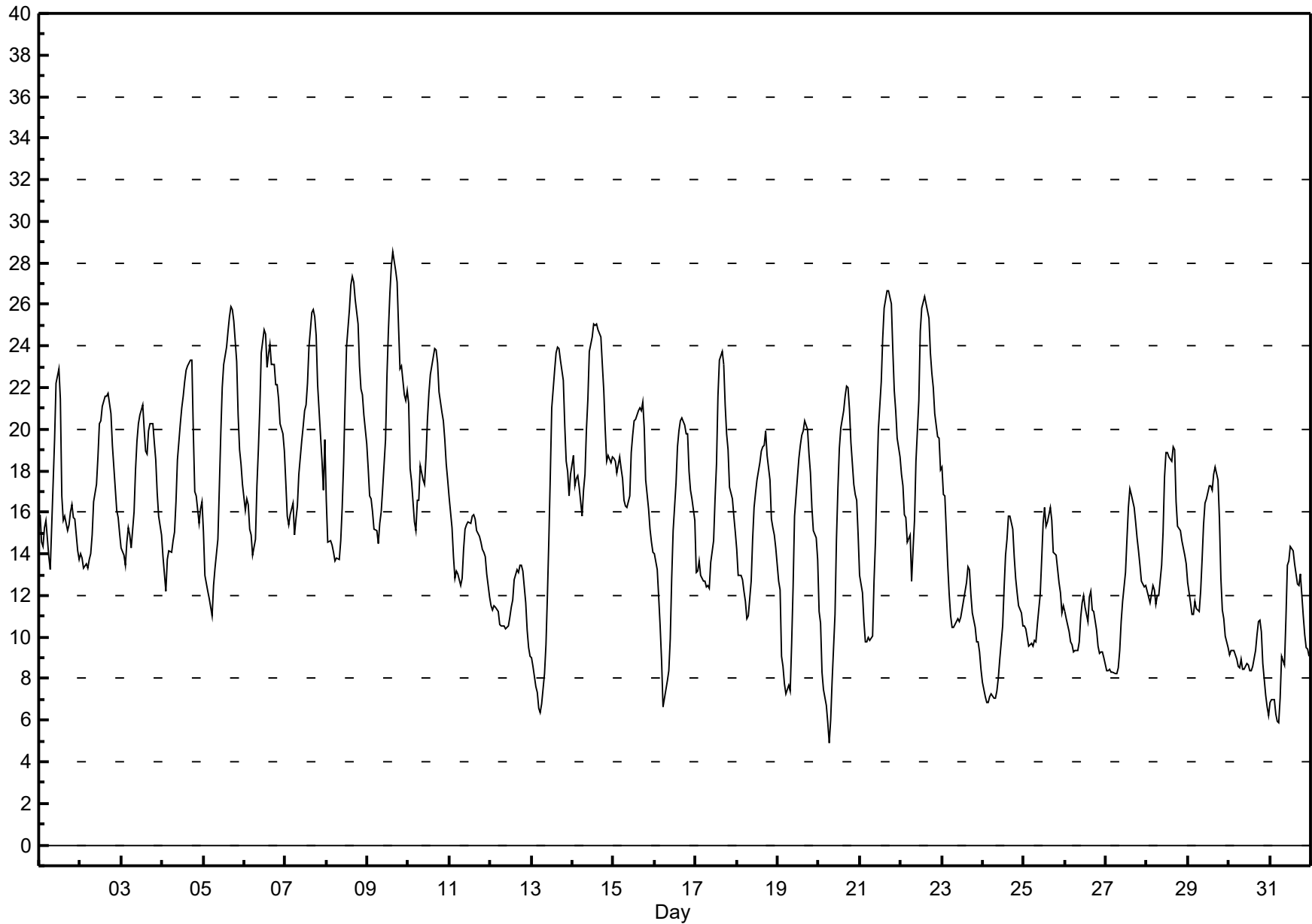
Beaverlodge - August 2018

Maximum Value: 28.5 °C on Aug 9 16:00																								Maximum Daily Average: 20.9 °C on Aug 9								Hours in Service: 744			
Minimum Value: 5 °C on Aug 20 07:00																								Minimum Daily Average: 8.8 °C on Aug 30								Hours of Data: 744			
Maximum Diurnal Average: 20.1 °C at hour 16																								Minimum Diurnal Average: 11.5 °C at hour 7								Hours of Missing Data: 0			
Monthly Average: 15.66 °C																								Percentiles: P ₁ = 6.5 P ₁₀ = 9.2 Q ₁ = 11.8 Median = 15.3 Q ₃ = 19.2 P ₉₀ = 22.9 P ₉₉ = 26.7								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-Aug	16	15	14	15	16	14	13	15	17	19	22	23	21	17	16	16	15	15	16	16	16	16	14	14	16.3	22.9									
2-Aug	14	14	13	14	13	14	14	15	16	17	19	20	20	21	22	22	22	21	21	19	17	16	16	15	17.3	21.7									
3-Aug	14	14	13	15	15	15	14	16	18	19	20	21	21	20	19	19	20	20	20	19	19	17	16	15	17.5	21.2									
4-Aug	14	13	12	14	14	14	15	15	16	19	20	21	22	22	23	23	23	23	20	17	17	15	16	16	17.7	23.3									
5-Aug	15	13	12	12	11	11	12	13	15	17	20	22	23	24	25	25	26	26	25	23	21	19	18	17	18.6	25.9									
6-Aug	16	17	16	15	15	14	15	17	19	21	24	25	25	23	24	24	23	23	22	22	21	20	20	19	20.0	24.8									
7-Aug	17	16	15	16	16	15	16	16	18	19	20	21	21	22	24	26	26	25	25	22	20	19	17	20	19.7	25.7									
8-Aug	17	15	15	14	14	14	14	14	15	16	18	21	24	26	27	27	27	26	25	23	22	22	21	19	19.8	27.3									
9-Aug	18	17	17	16	15	15	14	15	16	17	19	23	25	27	28	29	28	27	25	23	23	22	21	22	20.9	28.5									
10-Aug	21	18	17	16	15	17	17	18	18	17	19	20	22	23	23	24	24	23	22	21	20	19	18	18	19.6	23.9									
11-Aug	17	15	14	13	13	13	13	13	14	15	15	16	15	16	16	16	15	15	15	14	14	14	13	12	14.4	16.7									
12-Aug	11	11	12	11	11	11	11	11	11	10	11	11	11	12	13	13	13	13	13	13	12	10	9	9	11.4	13.5									
13-Aug	9	9	8	7	7	6	7	8	10	12	15	18	21	23	24	24	24	23	22	20	18	18	17	18	15.3	24.0									
14-Aug	19	17	18	18	17	16	17	18	20	21	24	24	25	25	25	25	24	23	22	20	18	19	18	19	20.5	25.1									
15-Aug	19	18	18	19	18	18	17	16	16	17	19	20	20	20	21	21	21	21	20	18	16	15	15	14	18.2	21.3									
16-Aug	14	13	12	11	9	7	7	8	8	10	13	15	17	19	20	20	21	20	20	20	18	17	17	16	14.6	20.5									
17-Aug	13	13	14	13	13	13	12	12	12	14	15	17	18	22	23	24	23	21	20	19	17	17	16	15	16.5	23.7									
18-Aug	14	13	13	13	12	12	11	11	13	15	16	17	18	18	19	19	19	20	19	18	16	15	15	14	15.4	19.9									
19-Aug	13	12	9	9	8	7	8	7	10	12	16	18	19	19	20	20	20	20	19	18	16	15	15	14	14.3	20.4									
20-Aug	11	11	8	7	7	6	5	6	8	11	15	17	19	20	21	22	22	22	21	19	17	17	17	15	14.3	22.1									
21-Aug	13	12	11	10	10	10	10	10	13	15	18	20	22	24	26	26	27	27	26	24	22	21	20	19	18.0	26.7									
22-Aug	18	17	16	16	15	15	13	14	16	18	21	25	26	26	26	26	25	24	23	22	21	20	20	18	20.0	26.4									
23-Aug	18	17	17	13	12	11	10	10	11	11	11	11	11	12	13	13	13	12	11	10	10	10	9	8	11.9	18.2									
24-Aug	8	7	7	7	7	7	7	7	7	8	9	11	12	14	15	16	16	15	14	13	12	12	11	11	10.5	15.8									
25-Aug	11	10	10	10	10	10	10	10	11	12	14	15	16	15	16	16	16	14	14	14	13	12	11	11	12.5	16.2									
26-Aug	11	11	10	10	10	9	9	9	10	11	12	12	11	11	12	12	11	11	10	10	9	9	9	9	10.4	12.2									
27-Aug	8	8	8	8	8	8	8	8	9	11	12	13	15	16	17	17	16	16	15	14	13	13	12	13	12.0	17.1									
28-Aug	12	12	12	12	12	12	12	12	13	15	18	19	19	19	18	19	19	16	15	15	15	14	14	14	15.0	19.2									
29-Aug	13	12	11	11	12	11	11	12	14	15	16	17	17	17	17	18	18	18	16	13	11	11	10	9	13.8	18.2									
30-Aug	9	9	9	9	9	9	9	9	8	8	9	9	8	8	9	9	10	11	11	10	9	7	7	6	8.8	10.8									
31-Aug	7	7	7	6	6	6	7	9	9	11	13	14	14	14	14	13	13	12	13	11	10	10	9	9	10.2	14.3									
13.9 13.1 12.5 12.2 11.9 11.5 11.5 12.2 13.2 14.7 16.5 17.9 18.8 19.2 19.8 20.1 20.0 19.6 18.7 17.5 16.2 15.5 14.9 14.4																								Diurnal Average											
21.2 18.4 17.9 18.6 18.1 17.7 17.1 18.3 20.0 21.5 23.7 24.8 25.8 26.5 27.8 28.5 27.6 27.1 26.0 23.8 23.0 21.7 21.4 21.9																								Diurnal Maximum											

Hourly Averages

External Temperature (ET) - °C

Beaverlodge - August 2018



Hourly Averages

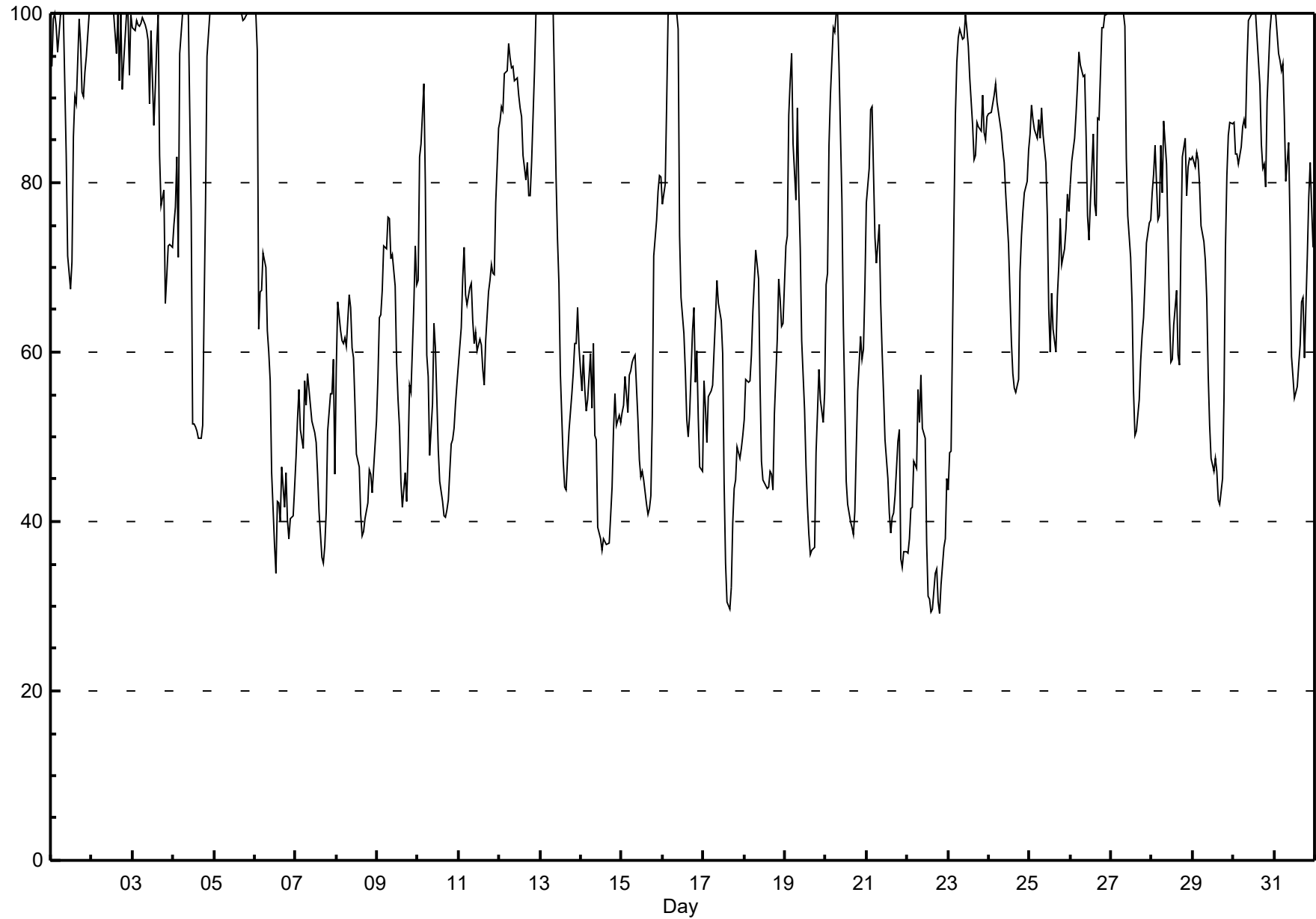
Relative Humidity (RH) - %

Beaverlodge - August 2018

Maximum Value: 100.0 % on Aug 1 03:00																				Maximum Daily Average: 99.9 % on Aug 5				Hours in Service: 744		
Minimum Value: 29 % on Aug 22 20:00																				Minimum Daily Average: 39.8 % on Aug 22				Hours of Data: 744		
Maximum Diurnal Average: 81.7 % at hour 8																				Minimum Diurnal Average: 56.3 % at hour 16				Hours of Missing Data: 0		
Monthly Average: 70.42 %																				Percentiles: P ₁ = 31.7 P ₁₀ = 42.4 Q ₁ = 52.6 Median = 69.3 Q ₃ = 89.1 P ₉₀ = 100.0 P ₉₉ = 100.0				Hours of Calibration: 0		
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	94	99	100	99	95	100	100	100	92	83	71	67	71	85	90	89	99	96	91	90	93	95	100	100	91.7	100.0
2-Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100	95	100	92	100	91	94	100	100	93	100	98.5	100.0
3-Aug	98	98	99	99	99	99	100	99	98	97	89	98	87	91	96	100	83	77	79	66	69	72	73	72	89.1	99.8
4-Aug	75	77	83	71	95	100	100	100	100	100	77	52	52	51	51	50	50	51	65	78	95	100	100	100	78.0	100.0
5-Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	99	99	100	100	100	100	100	99.9	100.0
6-Aug	100	96	63	67	67	72	70	63	60	57	46	37	34	42	42	40	46	42	46	40	38	40	41	44	53.8	100.0
7-Aug	48	52	56	51	49	57	54	57	56	52	51	50	49	46	41	36	35	37	41	51	55	55	59	46	49.3	59.2
8-Aug	58	66	63	61	61	62	61	67	65	60	59	54	48	46	41	38	39	40	42	46	46	43	46	52	52.7	66.8
9-Aug	57	64	64	67	73	72	76	76	71	72	68	59	54	51	45	42	46	42	48	56	55	66	73	68	61.0	75.9
10-Aug	68	83	85	92	80	60	57	48	54	63	60	55	48	45	42	41	40	41	43	49	50	51	54	56	56.9	91.7
11-Aug	58	63	69	72	67	66	68	68	64	61	62	60	61	61	58	56	61	67	68	70	69	69	78	86	66.0	86.5
12-Aug	87	89	88	93	93	96	95	94	94	92	92	90	89	88	83	80	82	78	78	83	93	100	100	100	90.0	100.0
13-Aug	100	100	100	100	100	100	100	100	91	81	73	68	57	47	44	44	47	51	55	58	61	61	65	60	73.5	100.0
14-Aug	55	60	56	53	54	60	53	61	50	50	39	38	37	38	38	37	37	41	44	51	55	51	53	52	48.5	61.1
15-Aug	53	54	57	53	57	58	59	59	60	52	47	45	46	45	42	41	41	43	52	71	76	79	81	81	56.3	80.9
16-Aug	77	80	89	100	100	100	100	100	100	98	74	67	62	58	52	50	53	63	65	56	60	52	46	46	72.8	100.0
17-Aug	57	53	49	55	56	56	60	64	68	66	64	60	45	35	31	30	32	40	44	45	49	47	49	50	50.1	68.4
18-Aug	52	57	56	57	60	65	68	72	69	56	47	45	45	44	44	46	46	44	53	61	69	66	63	63	56.1	72.1
19-Aug	73	74	88	92	95	85	78	89	79	72	61	53	47	42	39	36	37	37	48	53	58	54	52	55	62.3	95.2
20-Aug	68	69	84	90	98	98	100	100	94	78	63	54	45	42	40	39	38	41	49	55	62	59	60	68	66.5	100.0
21-Aug	78	82	89	89	81	74	71	75	66	60	55	50	45	41	39	40	41	43	50	51	36	35	36	36	56.7	88.9
22-Aug	36	38	41	42	47	46	56	52	57	51	50	37	31	31	29	30	34	34	30	29	33	37	38	45	39.8	57.3
23-Aug	44	48	48	76	88	94	97	98	97	97	100	98	96	92	87	83	83	87	87	86	90	86	85	88	84.8	99.8
24-Aug	88	88	89	90	92	90	87	86	84	82	79	73	67	61	57	56	55	57	69	74	77	79	80	84	76.8	91.7
25-Aug	86	89	87	86	85	87	85	89	86	82	76	65	60	67	63	60	67	70	76	70	72	74	79	77	76.6	89.1
26-Aug	80	83	85	88	92	95	94	93	93	85	76	73	78	86	77	76	88	87	98	98	100	100	100	100	88.6	100.0
27-Aug	100	100	100	100	100	100	100	100	99	83	76	71	66	55	50	51	54	59	62	64	68	73	75	76	78.4	100.0
28-Aug	79	81	84	76	76	84	79	87	82	74	65	59	59	63	67	60	58	73	83	85	79	82	83	83	75.0	87.3
29-Aug	83	82	84	83	80	75	73	71	66	57	51	47	46	47	46	43	42	45	55	72	81	86	87	87	66.2	87.2
30-Aug	87	83	83	82	84	87	88	86	94	99	100	100	100	100	97	91	85	82	82	80	90	98	100	100	90.8	100.0
31-Aug	100	100	95	94	93	94	88	80	85	75	60	57	55	56	59	61	66	66	59	71	78	82	77	72	76.0	100.0
75.4 77.7 78.6 79.9 81.2 81.6 81.1 81.7 79.7 75.4 68.8 64.0 60.6 59.9 57.6 56.3 57.4 59.2 63.0 66.3 69.5 70.8 71.8 72.5																								Diurnal Average		
100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 99.3 100.0 100.0 100.0 100.0 100.0																								Diurnal Maximum		

Hourly Averages

Relative Humidity (RH) - %
Beaverlodge - August 2018



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Beaverlodge - August 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	8	7	24	19	13	6	15	15	13	9	6	8	1	17	10	9	14	12	12	6	7	11	3	4	2.3	24.0
Dir	302	7	48	28	25	97	262	313	22	335	149	175	107	4	64	272	212	212	196	143	36	255	63	151	359	48
2 Spd	7	7	5	3	4	6	2	5	6	10	12	18	19	19	21	22	21	23	22	20	12	11	11	11	11.5	23.2
Dir	208	232	153	199	85	228	147	203	215	211	226	239	245	243	237	235	237	239	244	244	236	225	218	219	232	239
3 Spd	6	8	10	6	8	10	11	11	19	23	32	34	31	32	28	26	25	18	12	11	8	15	16	12	14.8	34.0
Dir	170	123	93	211	227	220	226	244	256	262	266	268	267	268	267	267	277	280	257	225	200	249	249	241	256	268
4 Spd	13	2	14	15	16	14	5	11	13	15	17	17	14	13	13	12	15	17	12	9	7	4	4	13	8.4	16.8
Dir	240	226	58	271	272	272	229	219	278	279	290	295	308	317	320	315	286	280	77	247	305	30	346	234	285	290
5 Spd	10	16	14	15	17	14	13	14	12	11	9	8	10	13	13	10	12	15	12	10	12	13	13	13	6.0	16.8
Dir	251	83	62	56	123	98	145	184	187	180	196	209	228	225	229	238	242	254	257	244	253	259	255	231	210	123
6 Spd	12	15	17	21	20	16	15	17	12	11	21	34	37	23	26	30	23	23	16	22	18	12	13	14	18.1	37.1
Dir	167	208	205	217	226	208	200	239	219	235	252	259	264	247	240	238	241	253	251	265	263	263	265	267	241	264
7 Spd	14	15	13	15	16	2	19	19	13	15	19	18	20	24	21	28	27	22	16	14	18	19	7	14	16.7	28.1
Dir	272	251	245	260	283	167	280	267	266	252	248	247	243	245	248	265	262	259	252	241	256	262	280	268	258	265
8 Spd	6	7	16	16	18	16	15	10	9	14	13	8	8	M	15	19	20	22	21	16	11	9	4	2	2.6	22.2
Dir	91	72	75	53	67	81	95	97	134	182	162	183	202	M	227	256	256	259	266	261	277	282	249	173	206	259
9 Spd	5	2	3	3	2	3	4	2	6	4	3	8	8	7	7	7	8	13	9	5	5	6	7	5	1.9	12.7
Dir	49	93	113	166	106	139	144	121	211	198	141	211	219	271	242	235	246	250	244	89	89	73	60	59	200	250
10 Spd	1	6	4	2	1	3	1	3	11	9	6	5	9	14	16	15	17	17	15	15	15	6	3	4	6.7	17.4
Dir	39	351	336	187	181	253	193	290	232	233	227	253	267	276	288	299	303	297	308	340	321	317	303	333	294	297
11 Spd	9	13	11	10	7	6	9	8	5	10	16	21	15	16	21	22	15	12	15	17	15	13	13	14	11.3	22.4
Dir	322	333	16	1	0	73	33	47	78	74	68	73	77	69	76	77	76	65	67	63	61	55	79	88	60	77
12 Spd	21	23	22	16	10	16	23	24	23	26	21	19	17	10	8	9	9	8	8	8	5	3	4	5	11.4	26.0
Dir	51	71	88	85	56	54	70	72	66	68	69	71	85	83	132	155	170	187	190	186	178	117	92	106	82	68
13 Spd	4	3	4	6	4	4	3	4	6	8	10	11	15	22	25	25	19	16	14	17	14	10	5	13	8.4	25.5
Dir	94	121	112	152	135	143	92	159	154	150	170	186	221	238	240	239	239	263	251	243	239	231	218	237	223	240
14 Spd	17	12	17	12	5	1	3	2	9	10	29	28	30	32	33	29	31	29	24	11	14	18	14	7	17.1	33.3
Dir	240	229	237	249	263	174	274	193	245	231	265	255	247	241	241	238	245	245	245	247	245	240	255	277	246	241
15 Spd	11	7	2	9	9	14	14	13	12	16	17	15	12	11	9	7	6	3	8	8	7	8	7	7	5.1	17.3
Dir	236	254	251	300	294	280	285	294	285	282	288	306	328	337	339	345	327	40	120	99	86	83	105	87	303	288
16 Spd	6	4	3	2	2	2	0	1	5	5	5	7	6	6	8	8	8	8	5	11	8	6	9	8	4.2	11.2
Dir	98	107	177	230	220	36	96	58	203	176	186	204	211	197	178	177	172	169	184	220	241	238	261	238	199	220
17 Spd	1	3	6	2	2	4	3	2	2	3	7	5	18	26	27	29	25	23	20	21	17	18	15	13	10.6	29.0
Dir	73	213	210	169	55	51	82	132	121	174	227	202	228	235	249	264	254	246	244	243	241	254	258	263	244	264
18 Spd	9	6	10	11	9	4	4	6	3	5	6	4	2	4	6	6	7	4	8	7	5	5	4	4	0.8	11.5
Dir	288	282	332	330	330	355	280	290	316	282	317	2	262	173	148	120	139	163	149	138	107	76	92	93	321	330
19 Spd	0	3	1	4	6	7	9	3	10	6	2	4	4	6	5	7	6	5	6	4	6	6	5	6	2.9	10.0
Dir	285	14	10	322	324	333	327	237	309	323	314	57	102	114	117	48	84	37	74	52	43	53	54	25	23	309
20 Spd	4	1	1	1	1	1	4	2	4	3	5	5	7	8	7	8	8	8	4	4	5	6	5	2	2.7	8.1
Dir	26	27	219	75	114	78	49	121	177	170	201	197	176	174	196	185	174	141	125	86	87	71	70	139	147	174
21 Spd	1	5	5	2	5	4	4	3	2	5	6	7	7	6	7	9	9	6	1	9	13	4	5	3	1.8	12.8
Dir	154	49	59	100	63	64	66	60	141	191	205	215	214	197	166	139	133	147	103	265	286	301	231	238	180	286
22 Spd	4	11	8	2	4	2	4	3	3	8	9	22	29	26	26	23	16	19	20	21	14	8	5	3	10.2	29.0
Dir	231	227	223	138	85	28	69	121	182	205	205	263	268	267	272	274	279	273	269	262	272	280	234	268	261	268

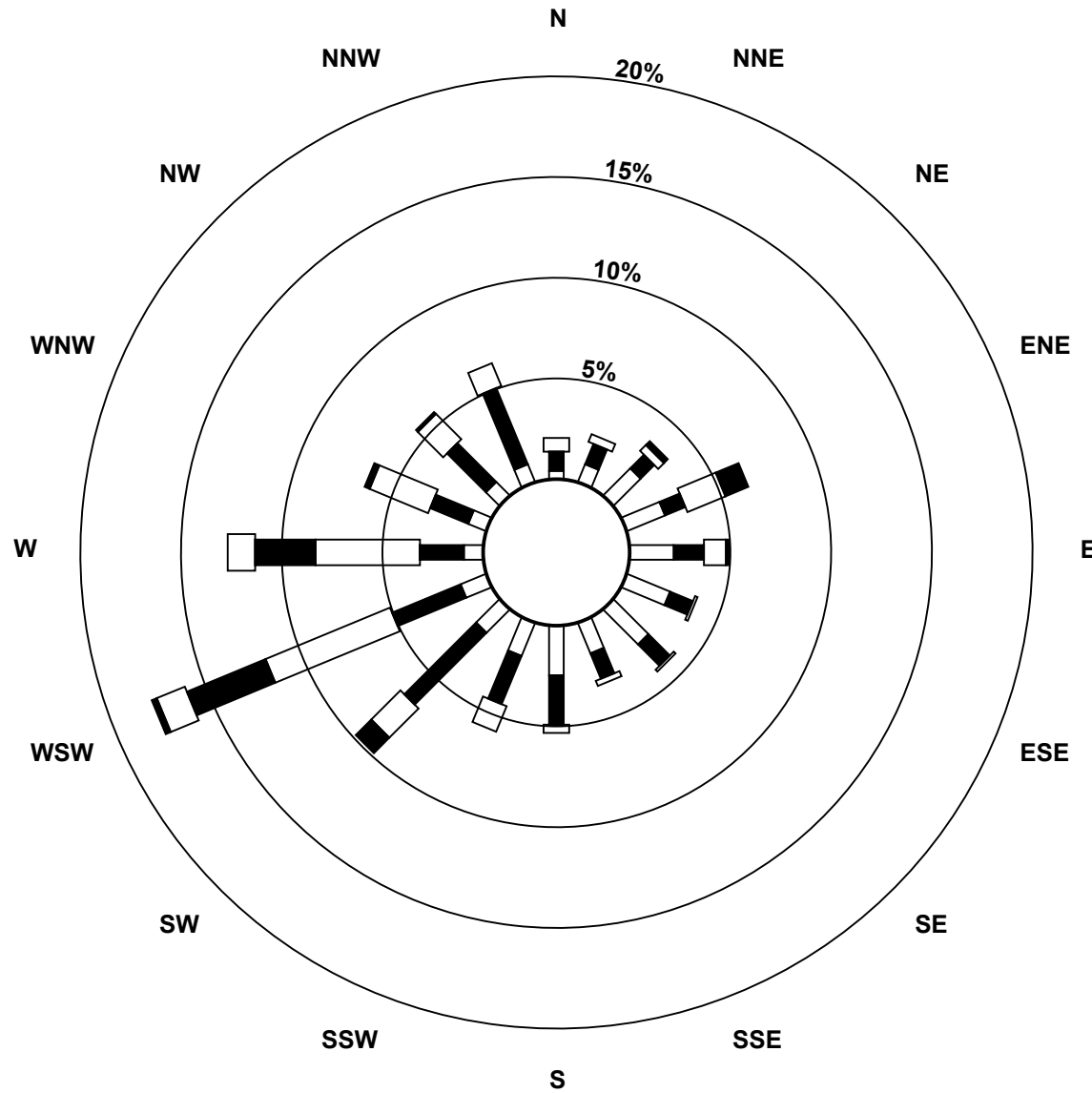
Hourly Averages

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

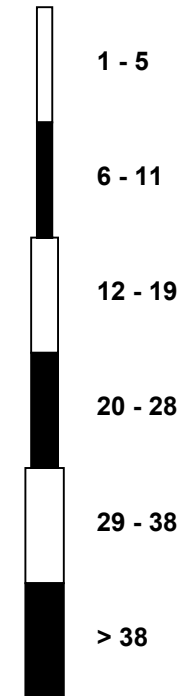
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	2	6	9	12	10	8	7	8	7	4	4	4	3	4	6	6	10	14	12	10	9	9	9	10	7.1	13.9
Dir	45	8	331	353	0	333	328	9	42	50	24	12	346	310	335	345	336	332	334	335	331	328	332	330	344	332
24 Spd	10	11	11	10	11	11	11	8	8	5	6	5	4	3	2	3	6	6	9	9	9	7	6	4	2.6	11.5
Dir	333	330	334	326	322	322	329	342	346	332	322	314	274	312	9	129	109	138	142	134	122	113	116	125	348	330
25 Spd	3	3	4	5	4	4	3	2	3	5	10	17	19	14	9	14	9	12	8	15	8	4	4	10	5.2	19.0
Dir	132	146	170	141	128	176	144	146	187	209	227	267	272	274	302	271	254	269	229	236	230	208	223	20	247	272
26 Spd	3	6	7	7	7	5	6	10	11	15	16	16	20	16	17	18	15	18	11	12	13	9	10	8	10.6	20.3
Dir	103	20	28	319	299	270	306	318	315	320	332	339	323	330	331	313	320	325	331	356	350	345	338	17	331	323
27 Spd	6	3	5	7	7	5	5	6	7	9	12	13	15	16	22	23	19	15	13	12	10	8	7	9	9.3	23.4
Dir	19	329	300	302	265	247	252	225	217	214	208	205	207	216	242	246	246	243	240	240	243	247	257	245	239	246
28 Spd	8	0	3	4	4	1	3	2	4	5	5	14	14	11	11	25	21	15	5	3	8	3	8	12	6.6	24.6
Dir	223	104	52	306	288	18	345	158	160	201	244	257	262	284	241	249	252	294	296	209	249	226	236	240	255	249
29 Spd	6	14	8	7	7	8	7	8	11	21	26	29	22	17	23	24	22	21	13	11	9	11	14	17	14.1	28.5
Dir	234	241	240	255	276	270	279	253	264	262	269	273	278	294	288	278	276	280	298	326	297	287	289	289	277	273
30 Spd	16	19	20	21	17	12	10	11	14	7	7	10	12	12	15	14	14	9	8	7	5	2	3	4	9.7	21.2
Dir	271	272	271	285	294	295	307	319	350	320	265	260	263	277	291	293	304	303	312	281	249	82	82	105	290	285
31 Spd	4	5	7	10	11	10	9	13	5	14	29	33	39	40	37	27	18	20	31	27	25	21	18	20	18.7	39.7
Dir	143	146	181	222	205	228	240	241	214	232	255	251	253	251	247	235	216	227	256	256	233	225	244	260	241	251
Spd	2.1	1.0	0.9	2.6	2.2	0.9	1.7	2.4	2.7	4.7	7.2	9.1	10.8	10.6	10.6	11.6	10.5	10.5	7.5	6.7	5.5	4.5	3.6	3.9	Diurnal Average	
Dir	256	277	43	302	302	282	286	264	255	244	251	256	256	260	255	256	254	260	254	253	261	260	260	258	Diurnal Maximum	
Spd	21.5	22.5	24.0	21.4	20.1	16.5	22.6	23.9	23.5	26.0	31.9	34.5	39.5	39.7	37.0	30.5	30.6	28.7	31.4	27.3	24.8	21.4	17.9	20.2	Diurnal Maximum	
Dir	51	71	48	217	226	54	70	72	66	68	266	259	253	251	247	238	245	245	256	256	233	225	244	260		
Maximum Speed Value: 40 km/h on Aug 31 14:00																									Hours in Service: 744	
Maximum Daily Speed Average: 18.7 km/h on Aug 31																									Hours of Data: 743	
Maximum Diurnal Speed Average: 11.6 km/h at hour 16																									Hours of Missing Data: 1	
Minimum Speed Value: 0 km/h on Aug 16 07:00																									Percent Operational Time: 99.9	
Minimum Daily Speed Average: 0.8 km/h on Aug 20																										
Minimum Diurnal Speed Average: 0.9 km/h at hour 6																										
Monthly Average Velocity: 5.40 km/h 258.5 deg																										
Speed Percentiles: P ₁ = 0.9 P ₁₀ = 3.1 Q ₁ = 5.3 Median = 9.3 Q ₃ = 15.0 P ₉₀ = 21.4 P ₉₉ = 32.7																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										
M - Maintenance																										
Frequency Distribution																										
Speed Range (km/h)																										
Direction	0 to 5		5 to 11		11 to 19		19 to 28		28 to 38		> 38		Total													
North	10		19		8		0		0		0		37													
NorthEast	27		13		12		4		0		0		56													
East	31		23		15		9		0		0		78													
SouthEast	30		29		2		0		0		0		61													
South	29		29		8		0		0		0		66													
SouthWest	16		66		58		28		8		0		176													
West	15		31		69		39		15		2		171													
NorthWest	13		45		39		1		0		0		98													
Total	171		255		211		81		23		2		743													

Wind Rose

Wind Speed (WS) (km/h)
Beaverlodge - August 2018



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Beaverlodge - August 2018

Maximum Speed: 40 km/h on Aug 31 14:00																				Maximum Daily Speed Average: 20.2 km/h on Aug 31										Hours in Service: 744	
Minimum Speed: 1 km/h on Aug 20 05:00																				Minimum Daily Speed Average: 4.8 km/h on Aug 20										Hours of Data: 743	
Maximum Diurnal Speed Average: 17.2 km/h at hour 16																				Minimum Diurnal Speed Average: 8.4 km/h at hour 6										Hours of Missing Data: 1	
Monthly Average Speed: 11.78 km/h																				Percentiles: P ₁ = 2.2 P ₁₀ = 4.0 Q ₁ = 6.1 Median = 10.5 Q ₃ = 15.5 P ₉₀ = 21.7 P ₉₉ = 32.9										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-Aug	16	19	24	21	20	17	17	16	14	13	10	9	13	25	14	15	14	12	14	12	10	12	12	11	15.0	24.9					
2-Aug	9	7	6	5	12	6	4	5	7	10	13	18	19	19	21	22	21	23	22	20	12	11	11	11	13.1	23.3					
3-Aug	11	12	12	9	11	10	11	12	19	23	32	34	32	32	29	27	25	18	13	11	8	15	16	12	18.1	34.3					
4-Aug	13	14	15	15	16	14	13	12	14	15	17	18	15	14	13	13	15	17	15	16	13	12	12	13	14.4	17.8					
5-Aug	19	20	15	15	19	16	15	14	13	11	10	9	11	14	14	11	13	15	12	10	12	13	13	14	13.7	19.6					
6-Aug	15	15	17	22	20	16	16	17	13	11	22	35	37	23	26	31	23	24	16	22	18	12	13	14	20.0	37.3					
7-Aug	15	15	15	15	17	15	21	19	13	15	19	18	20	24	22	28	28	22	17	14	18	19	14	15	18.3	28.3					
8-Aug	14	16	17	16	19	17	16	11	11	14	14	8	8	M	15	19	20	22	21	16	11	9	5	4	14.2	22.3					
9-Aug	5	3	3	4	5	3	4	3	7	4	3	9	8	8	7	7	9	13	9	6	5	6	7	5	6.0	12.9					
10-Aug	2	9	6	3	4	4	2	5	11	9	6	6	9	14	17	15	17	17	15	15	15	6	4	5	9.0	17.4					
11-Aug	9	14	13	11	7	8	9	8	6	11	16	21	16	16	21	23	15	12	15	17	15	13	14	15	13.5	22.6					
12-Aug	22	23	22	16	11	17	23	24	24	26	21	19	17	10	9	9	9	8	8	8	5	4	4	5	14.3	26.1					
13-Aug	4	3	4	6	5	4	3	5	6	8	10	11	15	22	26	25	19	16	14	17	14	11	5	13	11.2	25.6					
14-Aug	17	12	17	12	7	2	4	3	10	11	30	28	31	32	33	29	31	29	24	11	14	18	14	7	17.8	33.4					
15-Aug	11	8	4	9	9	14	15	13	13	16	18	16	13	12	10	8	7	3	8	8	7	8	8	7	10.1	17.7					
16-Aug	6	4	4	2	2	3	3	4	6	5	5	8	6	6	8	9	8	8	5	11	8	6	10	9	6.1	11.5					
17-Aug	3	4	6	3	4	5	4	3	3	4	7	5	18	26	27	29	26	24	20	21	17	18	15	14	12.7	29.2					
18-Aug	10	7	11	12	9	6	4	6	5	6	7	6	5	6	7	6	7	5	8	7	6	5	4	4	6.6	11.5					
19-Aug	5	4	3	5	7	7	10	4	10	7	4	5	6	8	7	8	7	5	6	4	6	6	5	6	6.0	10.3					
20-Aug	5	1	2	2	1	2	4	2	4	4	4	5	5	8	9	9	8	9	8	5	5	6	6	5	3	4.8	8.7				
21-Aug	2	5	5	4	5	4	4	4	3	5	6	8	7	6	7	10	9	6	2	10	13	5	6	3	5.7	13.1					
22-Aug	5	12	8	2	5	6	5	3	5	8	9	22	29	26	26	23	16	19	20	21	15	9	5	6	12.8	29.2					
23-Aug	5	6	9	12	10	9	7	8	7	5	4	4	3	5	7	7	10	14	12	11	9	9	10	10	8.0	14.1					
24-Aug	10	12	11	10	11	11	12	8	8	6	7	6	6	5	4	5	6	6	9	9	9	7	6	4	7.9	11.6					
25-Aug	4	4	4	5	4	4	3	3	4	6	10	18	19	15	9	15	9	12	8	15	8	4	5	11	8.3	19.4					
26-Aug	5	7	7	8	7	5	6	10	11	15	16	17	21	16	18	18	16	18	12	13	13	9	10	8	11.8	20.6					
27-Aug	6	3	5	7	7	5	5	7	7	9	12	14	15	16	22	24	19	15	13	12	10	8	7	9	10.7	23.7					
28-Aug	8	3	3	5	4	2	5	3	4	5	6	14	15	12	12	25	22	15	6	3	8	5	8	12	8.5	24.7					
29-Aug	6	14	9	7	8	8	8	9	11	21	26	29	22	18	23	24	23	21	15	12	9	12	15	17	15.1	28.8					
30-Aug	16	19	20	21	17	12	10	11	14	8	8	11	13	12	15	14	14	9	8	7	5	3	4	4	11.4	21.4					
31-Aug	4	6	8	10	11	11	9	14	6	15	30	34	40	40	37	28	18	20	32	28	25	22	18	20	20.2	39.9					
9.1 9.6 9.8 9.6 9.5 8.4 8.7 8.6 9.2 10.5 13.0 15.0 16.0 16.3 16.6 17.2 15.7 14.8 13.1 12.6 11.2 9.8 9.2 9.4																									Diurnal Average						
21.7 23.0 24.3 21.7 20.5 17.0 22.7 24.0 23.6 26.1 32.2 34.7 39.7 39.9 37.2 30.5 30.7 28.7 31.6 27.7 24.9 21.5 18.3 20.4																									Diurnal Maximum						
M - Maintenance																															
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg

Beaverlodge - August 2018

Maximum Value: 93.0 deg on Aug 10 07:00																		Hours in Service: 744							
Minimum Value: 2.3 deg on Aug 5 22:00																		Hours of Data: 744							
Percentiles: P ₁ = 3.5 P ₁₀ = 5.3 Q ₁ = 8.2 Median = 14.9 Q ₃ = 28.3 P ₉₀ = 59.7 P ₉₉ = 88.0																		Hours of Missing Data: 0							
																		Hours of Calibration: 0							
																		Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	63	73	9	26	66	75	23	19	21	47	58	33	88	46	47	57	19	8	37	71	49	26	91	69	90.5
2-Aug	52	17	30	60	77	15	59	28	17	11	16	9	7	8	6	5	6	4	4	4	11	4	12	10	77.1
3-Aug	63	46	31	57	39	17	11	6	7	8	8	7	9	6	4	8	8	9	14	5	23	5	6	5	63.1
4-Aug	4	88	21	10	6	7	77	29	19	11	13	20	16	21	18	22	15	14	37	82	65	83	75	9	87.8
5-Aug	70	39	21	14	27	36	32	19	19	17	26	28	25	19	17	30	14	10	10	4	6	2	4	10	69.7
6-Aug	38	14	13	9	10	8	22	5	14	11	9	6	5	9	4	4	11	5	4	7	5	8	8	4	38.1
7-Aug	8	11	37	8	15	89	30	7	5	5	4	8	4	7	12	6	6	6	13	5	4	5	63	23	89.0
8-Aug	79	83	22	11	26	22	21	28	31	19	21	17	24	68	18	7	5	4	4	5	8	11	61	62	83.2
9-Aug	17	37	19	45	60	39	14	29	18	23	38	24	16	28	20	14	22	10	36	26	16	10	8	9	60.0
10-Aug	43	45	69	63	73	80	93	55	8	9	11	19	12	8	9	8	8	5	8	7	6	18	78	43	93.0
11-Aug	8	7	35	24	29	58	17	19	21	32	7	6	8	7	6	7	7	7	4	5	5	6	25	10	58.5
12-Aug	9	12	5	7	19	14	5	4	6	5	4	6	8	15	14	16	16	15	13	10	11	19	9	16	19.5
13-Aug	9	24	32	16	27	24	16	40	16	12	15	13	15	6	5	4	4	8	5	7	6	34	45	6	44.6
14-Aug	9	6	4	11	70	75	66	50	12	15	8	11	11	5	4	4	5	3	3	6	7	4	3	20	74.9
15-Aug	14	22	75	18	15	7	8	18	16	10	12	12	23	24	41	36	32	39	13	9	4	11	16	8	75.1
16-Aug	13	16	20	66	64	83	89	75	33	18	17	14	21	26	13	10	10	9	29	12	13	12	10	44	88.7
17-Aug	66	49	27	53	72	18	41	35	42	21	17	20	8	9	12	7	8	5	4	4	6	5	5	25	72.0
18-Aug	21	44	21	5	17	78	36	21	65	16	30	61	82	64	32	29	23	47	7	10	28	16	11	18	82.4
19-Aug	89	49	92	70	64	18	6	39	18	25	87	43	68	39	44	36	28	31	15	19	6	10	8	8	92.2
20-Aug	77	70	66	63	42	57	9	27	20	26	28	31	29	28	33	28	21	15	36	17	16	9	11	21	76.9
21-Aug	51	10	10	47	10	15	6	12	36	16	17	17	15	26	24	16	11	21	64	44	11	64	65	52	64.9
22-Aug	41	15	43	39	38	88	32	20	62	12	15	16	7	6	5	6	7	4	6	4	8	73	34	76	88.2
23-Aug	76	30	13	19	12	8	8	12	19	21	15	23	29	25	27	24	11	8	11	11	17	12	17	13	76.2
24-Aug	10	10	9	10	9	10	14	12	16	23	23	54	62	67	76	71	23	14	8	5	4	15	10	16	76.2
25-Aug	42	16	13	24	27	17	42	34	22	17	9	16	12	9	15	10	8	16	23	6	15	15	40	43	43.4
26-Aug	59	48	17	17	21	22	10	12	9	9	10	19	10	7	11	8	16	8	11	10	12	6	8	19	58.9
27-Aug	18	19	15	5	11	15	13	19	10	17	15	14	13	13	9	8	5	5	4	3	3	5	6	13	19.1
28-Aug	30	85	23	24	21	51	44	70	23	19	43	13	9	30	42	5	9	11	29	60	4	77	14	7	84.8
29-Aug	12	5	70	34	33	25	34	20	11	9	10	8	10	8	8	9	10	8	27	13	18	12	7	8	69.9
30-Aug	5	7	5	7	5	6	7	11	8	32	20	8	13	8	6	9	7	11	11	19	20	50	24	10	49.9
31-Aug	20	24	29	8	7	23	19	25	14	23	7	6	6	5	5	7	9	8	6	10	7	5	11	6	29.0
89.3 87.8 92.2 70.0 77.1 89.0 93.0 75.1 64.8 47.4 86.8 61.3 88.1 68.3 76.2 71.3 32.3 47.4 63.8 81.6 64.7 83.3 90.5 75.7																									

PAZA
Valleyview Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

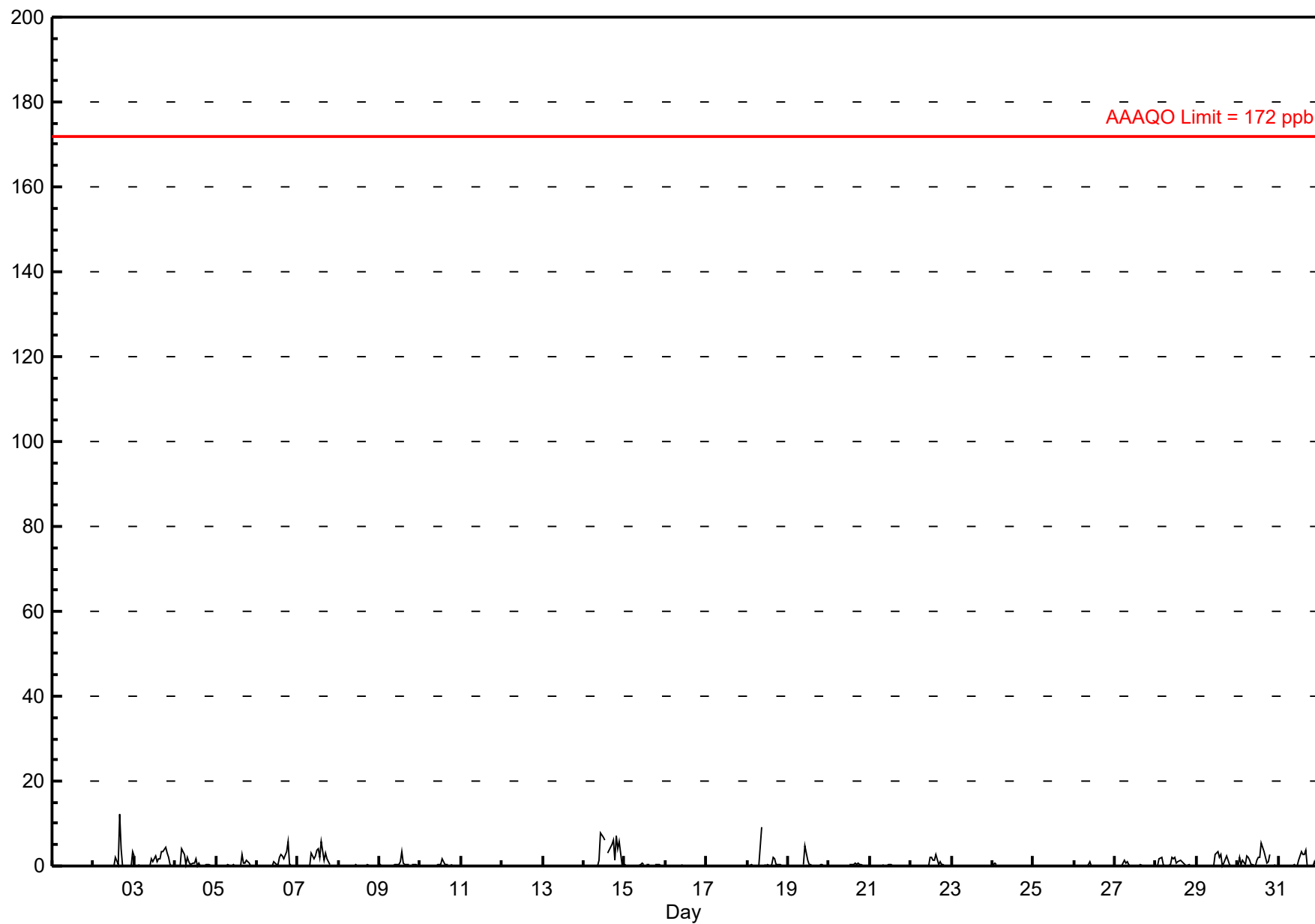
Sulphur Dioxide (SO₂) - ppb

Valleyview - August 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 12.3 ppb on Aug 2 16:00 Maximum Daily Average: 2.6 ppb on Aug 14																				Hours in Service: 744 Hours of Data: 705 Hours of Missing Data: 39 Hours of Calibration: 39 Percent Operational Time: 100.0							
Minimum Value: 0 ppb on Aug 2 06:00 Maximum Diurnal Average: 1.3 ppb at hour 16 Monthly Average: 0.49 ppb																				Minimum Daily Average: 0.0 ppb on Aug 25 Minimum Diurnal Average: 0.1 ppb at hour 23 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 1.6 P ₉₉ = 5.9							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	0	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	0.1	
2-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	2	0	12	4	0	0	0	0	0	0	0	4	1.0	12.3
3-Aug	3	A	0	0	0	0	0	0	0	0	2	1	2	1	2	2	3	4	5	3	2	0	0	0	1.3	4.5	
4-Aug	A	0	0	0	4	3	0	2	1	0	1	1	2	0	1	0	0	0	0	0	0	0	0	0	A	0.7	4.1
5-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	1	1	1	0	0	A	0	0.3	2.6	
6-Aug	0	0	0	0	0	0	0	0	0	0	1	0	0	2	3	2	2	3	6	0	0	A	0	0	0.9	5.9	
7-Aug	0	0	0	0	0	0	0	0	3	2	2	4	4	2	6	1	3	2	1	0	A	0	0	0	1.3	5.8	
8-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.5	
9-Aug	0	0	0	0	0	0	0	0	0	0	0	0	1	3	1	0	0	0	A	0	0	0	0	0	0.4	3.5	
10-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	A	0	0	0	0	0	0	0.2	1.7	
11-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.1	
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.1	
13-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.0	0.1	
14-Aug	0	0	0	0	0	0	0	0	0	1	8	7	6	A	3	4	5	6	1	7	4	6	0	0	2.6	7.9	
15-Aug	0	0	0	0	0	0	0	0	0	0	1	0	A	0	0	C	C	C	0	0	0	0	0	0	0.2	0.8	
16-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
17-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	
18-Aug	0	0	0	0	0	0	0	0	9	A	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0.7	9.1
19-Aug	0	0	0	0	0	0	0	0	A	0	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	4.6
20-Aug	0	0	0	0	0	0	0	A	0	C	C	C	0	0	0	1	0	1	0	0	0	0	0	0	0.2	0.6	
21-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
22-Aug	0	0	0	0	0	A	0	0	0	0	0	2	2	1	1	3	0	1	0	0	0	0	0	0	0.5	2.9	
23-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	
24-Aug	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.6	
25-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	
26-Aug	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.1	
27-Aug	A	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	1.4	
28-Aug	0	0	2	2	0	0	0	0	1	2	2	2	1	1	1	1	1	0	0	0	0	0	A	0	0.7	2.1	
29-Aug	0	0	0	0	0	0	0	0	0	0	0	3	3	2	3	0	1	2	1	0	0	A	0	0	0.7	3.3	
30-Aug	0	2	0	1	0	2	2	1	0	0	0	1	2	2	5	3	2	1	1	3	A	0	0	0	1.4	5.5	
31-Aug	0	0	0	0	0	0	0	0	0	0	0	0	1	3	3	3	4	0	0	A	0	1	0	0	0.7	3.7	
0.1 0.1 0.1 0.1 0.2 0.3 0.1 0.2 0.5 0.3 0.8 0.8 0.9 0.8 1.0 1.3 1.0 0.8 0.6 0.6 0.3 0.3 0.1 0.2																									Diurnal Average		
2.5 2.2 1.5 2.0 4.1 2.8 1.9 2.2 9.1 2.1 7.9 6.7 6.2 3.5 5.8 12.3 4.9 6.1 5.9 7.0 4.1 5.6 0.4 3.5																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																											

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Valleyview - August 2018



Hourly Maximums

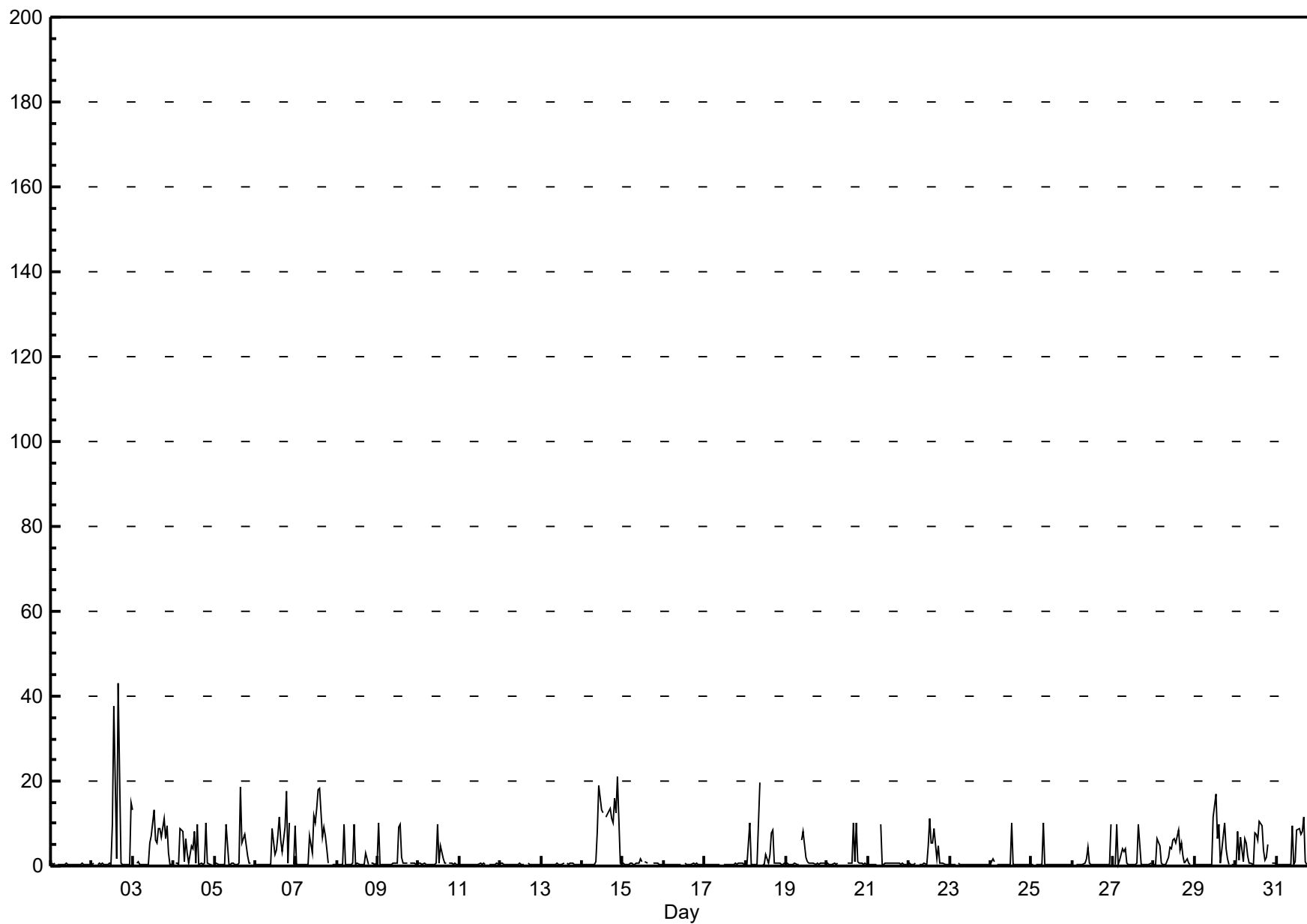
Sulphur Dioxide (SO₂) - ppb

Valleyview - August 2018

Maximum Value: 42.9 ppb on Aug 2 16:00																				Maximum Daily Average: 7.2 ppb on Aug 14										Hours in Service: 744	
Minimum Value: 0 ppb on Aug 29 10:00																				Minimum Daily Average: 0.4 ppb on Aug 23										Hours of Data: 705	
Maximum Diurnal Average: 5.5 ppb at hour 16																				Minimum Diurnal Average: 0.4 ppb at hour 23										Hours of Missing Data: 39	
Monthly Average: 2.15 ppb																				Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.7 P ₉₀ = 8.2 P ₉₉ = 18.3										Hours of Calibration: 39	
																				Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Aug	1	1	1	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.5	0.6					
2-Aug	0	1	A	0	1	0	1	0	1	0	1	0	10	37	2	43	22	1	0	0	0	0	0	15	5.9	42.9					
3-Aug	13	A	1	1	0	0	0	0	0	0	5	7	13	6	5	9	9	7	11	7	9	3	0	0	4.8	13.2					
4-Aug	A	1	1	0	9	8	1	6	3	1	5	4	8	1	10	0	1	0	1	10	1	0	0	A	3.2	10.0					
5-Aug	0	1	0	0	0	0	0	10	0	0	1	1	0	0	1	19	6	7	8	2	1	1	A	0	2.5	18.8					
6-Aug	0	0	0	0	0	0	0	0	0	0	9	3	4	7	11	6	3	9	18	1	10	A	0	10	4.1	17.7					
7-Aug	0	0	0	0	0	0	0	0	7	3	12	10	14	18	18	7	9	7	4	1	A	0	0	0	5.0	18.4					
8-Aug	0	0	0	0	10	0	0	0	0	1	10	1	1	0	0	0	0	3	0	A	1	1	0	1	1.4	10.0					
9-Aug	10	0	0	1	0	0	0	0	0	1	1	1	9	10	2	1	1	1	A	1	1	1	0	1	1.8	10.1					
10-Aug	1	1	0	1	0	0	0	0	0	0	1	10	1	5	2	1	1	A	1	1	0	1	0	0	1.2	9.7					
11-Aug	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	A	0	1	0	0	0	1	1	0.4	0.6					
12-Aug	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	A	1	0	0	0	0	0	0	0	0.4	0.7					
13-Aug	0	0	0	0	0	0	0	0	0	1	0	0	0	1	A	1	0	1	1	0	0	0	0	0	0.4	0.6					
14-Aug	0	0	0	0	0	0	0	0	1	8	19	13	12	A	12	12	13	11	10	16	12	21	1	1	7.2	20.9					
15-Aug	1	0	1	0	1	1	0	0	1	1	2	1	A	1	1	C	C	C	1	1	1	1	1	0	0.7	1.6					
16-Aug	0	0	0	0	0	0	0	0	0	1	0	A	1	0	0	0	0	1	0	1	0	0	0	0	0.4	0.6					
17-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	0	1	1	1	0	0.4	0.7					
18-Aug	0	0	10	0	0	0	0	0	20	A	0	0	3	1	3	8	9	1	1	1	1	0	0	1	2.6	19.8					
19-Aug	1	0	0	0	0	1	0	0	A	6	8	2	1	1	1	1	1	1	1	1	1	1	1	0	1.2	8.3					
20-Aug	1	0	0	0	1	0	1	A	1	C	C	C	1	1	1	10	1	10	1	1	1	0	1	0	1.6	10.3					
21-Aug	0	0	0	1	0	0	A	10	0	0	1	1	1	1	1	1	1	1	1	0	1	0	0	1	0.9	10.0					
22-Aug	1	0	0	0	1	A	0	0	0	1	0	5	11	6	6	9	2	5	1	1	1	0	0	0	2.2	11.2					
23-Aug	0	0	0	0	A	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6					
24-Aug	0	2	1	A	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0.9	10.2					
25-Aug	0	0	A	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8	10.0					
26-Aug	0	A	0	0	0	0	0	1	2	4	1	0	0	0	0	0	0	0	0	0	0	0	0	10	1.0	9.8					
27-Aug	A	0	10	0	1	4	3	4	1	0	0	0	0	0	1	10	0	0	1	0	1	0	1	A	1.8	9.7					
28-Aug	0	0	6	5	1	0	0	0	2	4	4	6	6	5	8	4	5	2	1	2	1	0	A	0	2.9	8.5					
29-Aug	0	0	0	0	0	0	0	0	0	0	0	11	17	6	10	1	4	10	4	2	0	A	0	0	3.0	17.0					
30-Aug	0	8	1	7	1	7	5	2	1	1	1	8	7	6	10	9	4	1	2	5	A	1	1	1	3.9	10.4					
31-Aug	0	0	0	0	0	0	0	0	0	10	0	1	9	9	7	8	11	1	0	A	1	7	0	0	3.0	11.4					
																									Diurnal Average						
																									Diurnal Maximum						
C - Calibration A - Automated Daily Zero Span																															

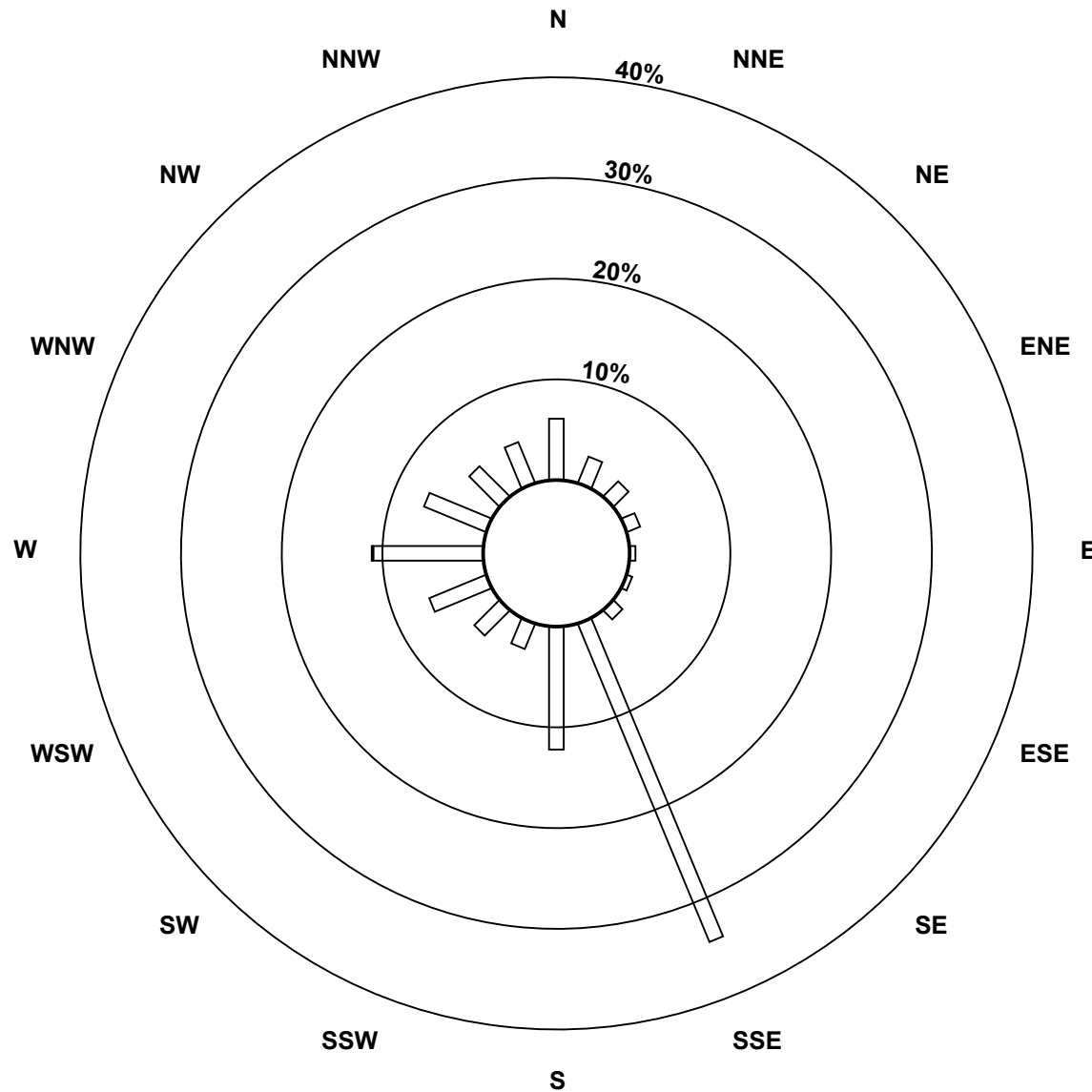
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Valleyview - August 2018

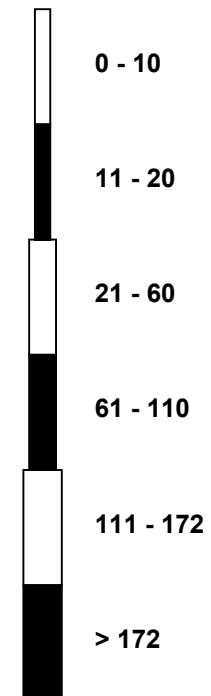


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Valleyview - August 2018

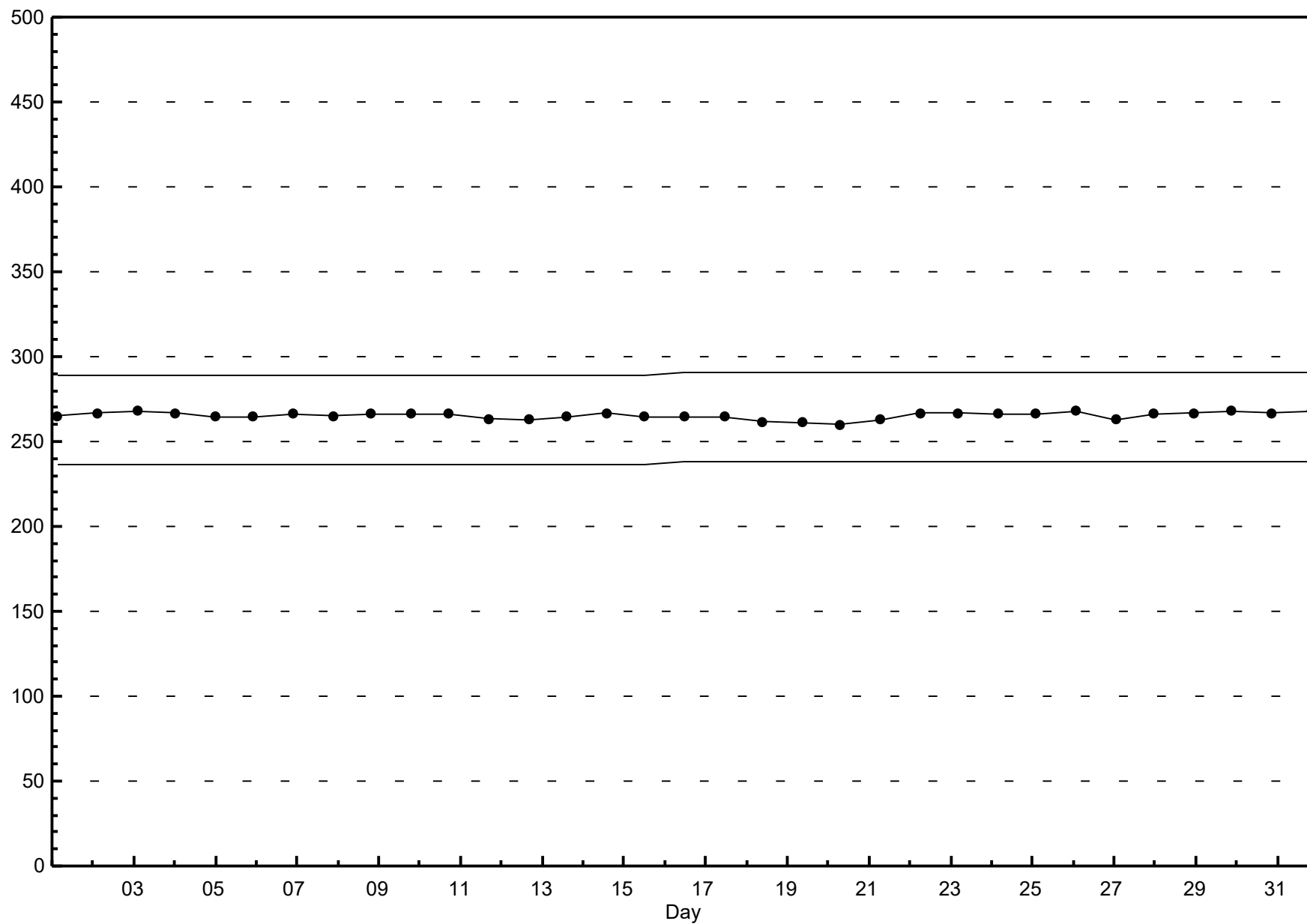


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Valleyview - August 2018



Hourly Averages

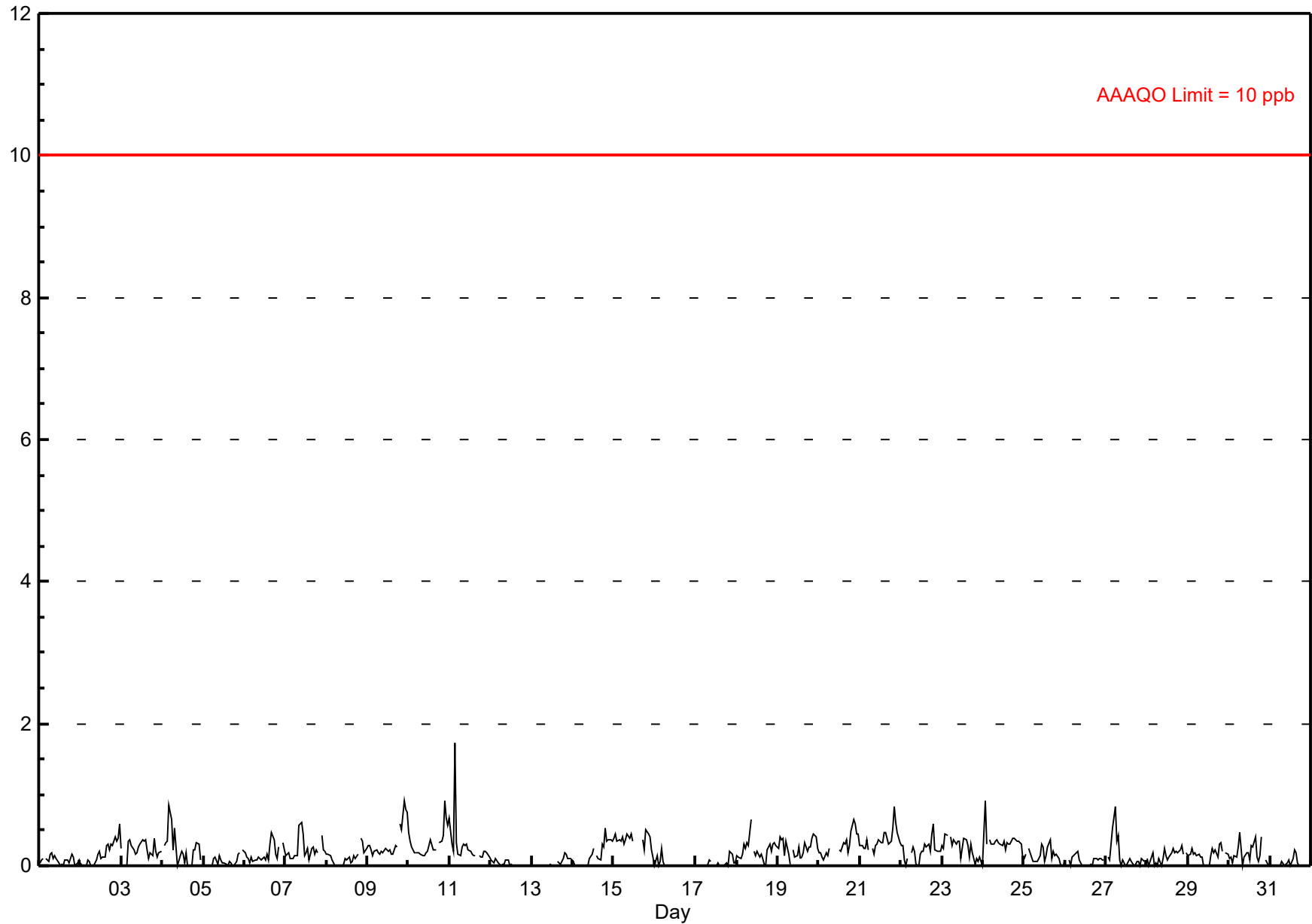
Hydrogen Sulphide (H₂S) - ppb

Valleyview - August 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 1.7 ppb on Aug 11 04:00 Maximum Daily Average: 0.4 ppb on Aug 21																				Hours in Service: 744 Hours of Data: 703 Hours of Missing Data: 41 Hours of Calibration: 41 Percent Operational Time: 100.0							
Minimum Value: 0 ppb on Aug 1 13:00 Maximum Diurnal Average: 0.3 ppb at hour 22 Monthly Average: 0.18 ppb										Minimum Daily Average: 0.0 ppb on Aug 16 Minimum Diurnal Average: 0.1 ppb at hour 13 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.4 P ₉₉ = 0.8																	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	0	0	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
2-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	0.6
3-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
4-Aug	A	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.9
5-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.2
6-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.5
7-Aug	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.6
8-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.4
9-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	1	1	1	1	0.3	0.9
10-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	1	1	1	0.3	0.9
11-Aug	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	1.7
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.0	0.1
13-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.0	0.2
14-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0.1	0.5
15-Aug	0	0	0	0	0	0	0	0	0	0	0	0	C	C	C	C	C	0	0	1	0	0	0	0	0	0.4	0.5
16-Aug	0	0	0	0	0	0	0	0	0	0	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
17-Aug	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
18-Aug	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
19-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
20-Aug	0	0	0	0	0	0	0	A	0	C	C	C	0	0	0	0	0	0	0	0	1	1	0	0	0	0.3	0.6
21-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0.4	0.8
22-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.2	0.6
23-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
24-Aug	0	1	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	0.9
25-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
26-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
27-Aug	A	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.8
28-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.3
29-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.3
30-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.5
31-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.0	0.2
0.2 0.2 0.1 0.2 0.2 0.2 0.2 0.2 0.2 0.1 0.2 0.1 0.1 0.1 0.2 0.2 0.2 0.2 0.2 0.3 0.3 0.3 0.2 0.2																									Diurnal Average		
0.7 0.9 0.4 1.7 0.9 0.8 0.5 0.5 0.7 0.6 0.5 0.4 0.4 0.4 0.5 0.5 0.5 0.4 0.5 0.6 0.8 0.9 0.8 0.7																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																											

Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Valleyview - August 2018



Hourly Maximums

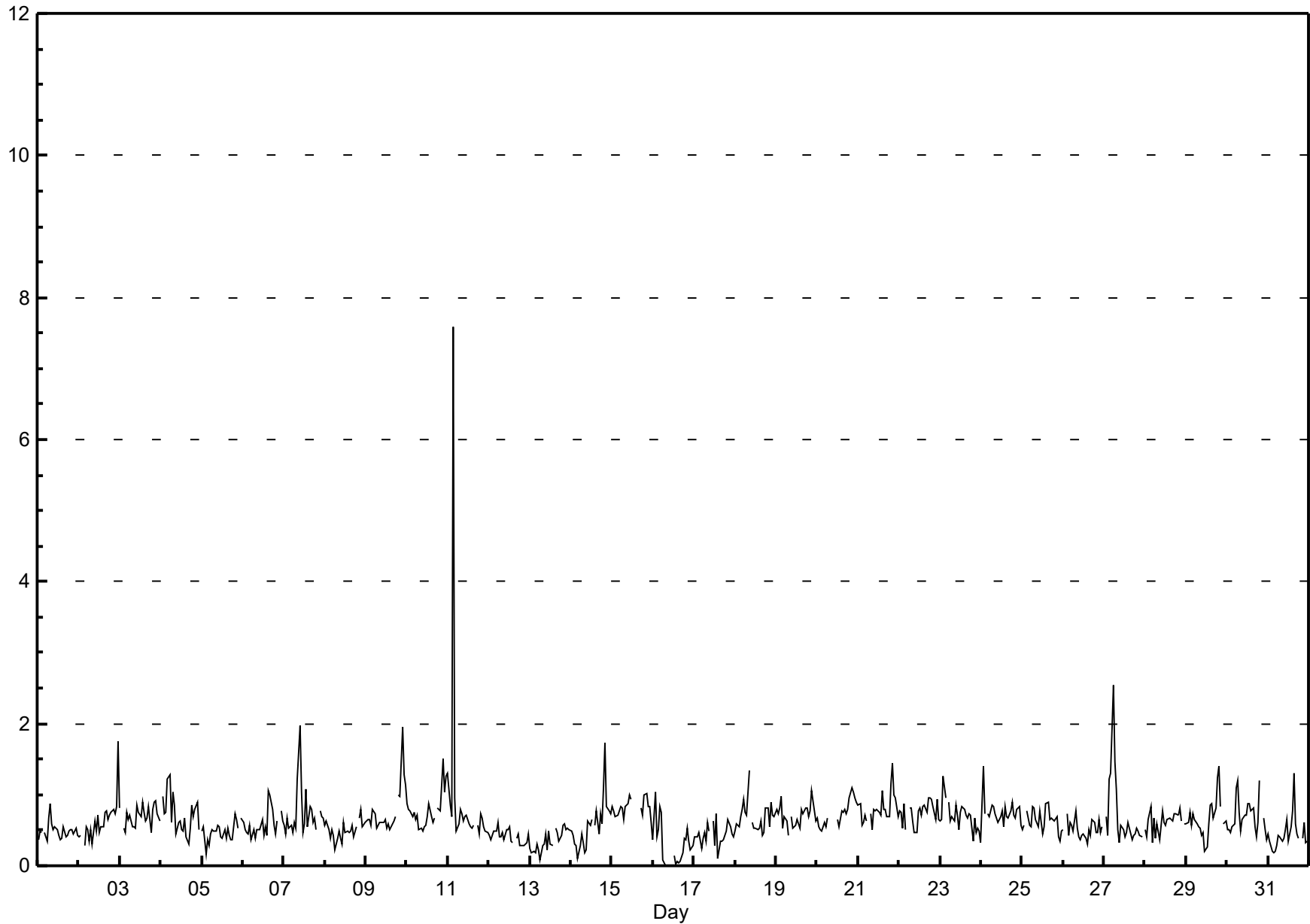
Hydrogen Sulphide (H₂S) - ppb

Valleyview - August 2018

Maximum Value: 7.6 ppb on Aug 11 04:00																				Maximum Daily Average: 1.0 ppb on Aug 11										Hours in Service: 744									
Minimum Value: 0 ppb on Aug 16 08:00																				Minimum Daily Average: 0.3 ppb on Aug 16										Hours of Data: 703									
Maximum Diurnal Average: 0.8 ppb at hour 4																				Minimum Diurnal Average: 0.5 ppb at hour 13										Hours of Missing Data: 41									
Monthly Average: 0.63 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.7 P ₉₀ = 0.9 P ₉₉ = 1.5										Hours of Calibration: 41									
																				Percent Operational Time: 100.0																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Aug	0	0	0	A	0	0	1	1	1	1	1	0	0	0	1	0	0	0	1	1	0	1	0	0	0.5	0.9													
2-Aug	0	0	A	0	1	0	0	1	0	1	0	1	0	1	1	1	1	1	1	1	1	1	1	2	0.6	1.7													
3-Aug	1	A	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0.7	0.9													
4-Aug	A	1	1	1	1	1	1	1	1	0	1	1	1	0	1	0	0	1	1	1	1	1	1	A	0.7	1.3													
5-Aug	0	1	0	0	0	0	1	0	0	1	1	0	0	1	0	1	0	0	0	1	1	1	A	1	0.5	0.7													
6-Aug	1	1	0	0	1	0	1	0	1	1	1	1	0	1	0	1	1	1	1	0	1	A	1	1	0.6	1.0													
7-Aug	1	0	1	1	1	0	1	1	1	2	1	0	1	1	1	1	1	1	1	1	A	1	1	1	0.7	2.0													
8-Aug	1	1	1	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0	1	A	1	1	1	1	0.5	0.8													
9-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	2	1	1	0.8	1.9													
10-Aug	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.8	1.5													
11-Aug	1	1	1	8	1	0	1	1	1	1	1	1	1	1	1	1	A	1	0	1	1	1	0	0	1.0	7.6													
12-Aug	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	A	0	0	0	0	0	0	0	0	0.4	0.6													
13-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	1	1	0	1	1	0.4	0.6													
14-Aug	0	0	0	0	0	0	0	0	0	0	1	1	1	A	1	1	0	1	1	1	2	1	1	1	0.6	1.7													
15-Aug	1	1	1	1	1	1	1	1	1	1	1	C	C	C	C	C	C	1	1	1	1	1	1	1	0.8	1.0													
16-Aug	0	1	0	1	1	1	0	0	0	0	C	C	0	0	0	0	0	0	0	0	1	0	0	0	0.3	1.0													
17-Aug	0	0	0	0	0	0	0	0	1	0	A	1	0	1	0	0	0	0	0	0	1	1	0	0	0.4	0.7													
18-Aug	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	0	1	1	1	1	1	1	0.7	1.3													
19-Aug	1	1	1	1	1	1	1	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1													
20-Aug	1	1	1	0	1	1	1	A	1	C	C	C	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1													
21-Aug	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.4													
22-Aug	1	1	1	1	0	A	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0													
23-Aug	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0	0.7	1.3													
24-Aug	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.4													
25-Aug	1	1	A	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	0	0	0.6	0.9													
26-Aug	1	A	1	0	1	1	0	1	1	0	0	0	0	0	0	1	0	1	1	0	0	1	0	1	0.5	0.8													
27-Aug	A	1	0	1	1	3	1	1	1	0	1	1	0	0	1	1	0	0	0	1	0	0	0	A	0.7	2.5													
28-Aug	1	0	1	1	0	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.6	0.8													
29-Aug	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	A	1	1	0.7	1.4													
30-Aug	1	1	0	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1	A	1	1	0	0.7	1.2													
31-Aug	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	0	0	A	0	1	0	0	0.5	1.3													
Diurnal Average																									0.6														
Diurnal Maximum																									1.7														
C - Calibration A - Automated Daily Zero Span																																							

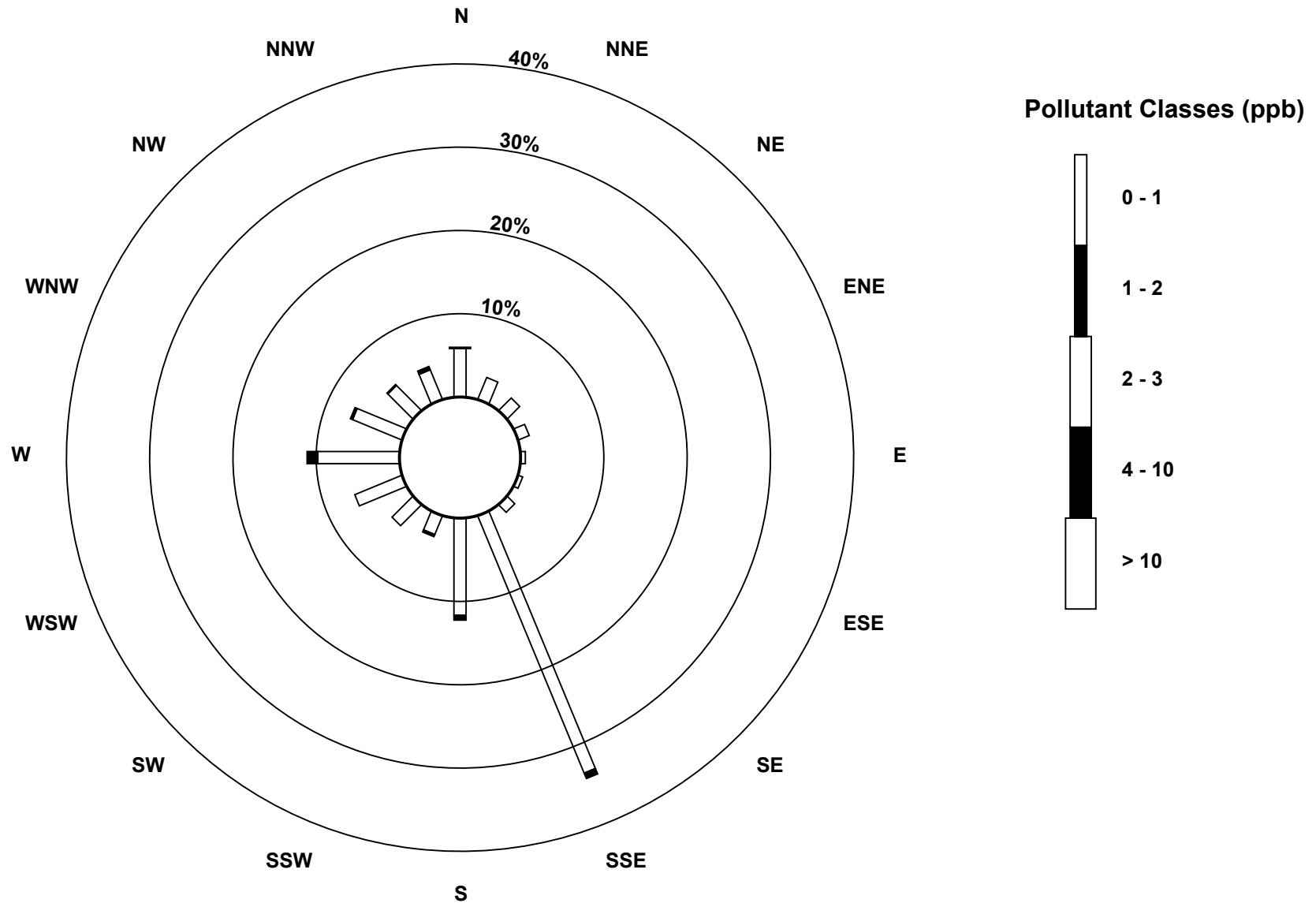
Hourly Maximums

Hydrogen Sulphide (H₂S) - ppb
Valleyview - August 2018



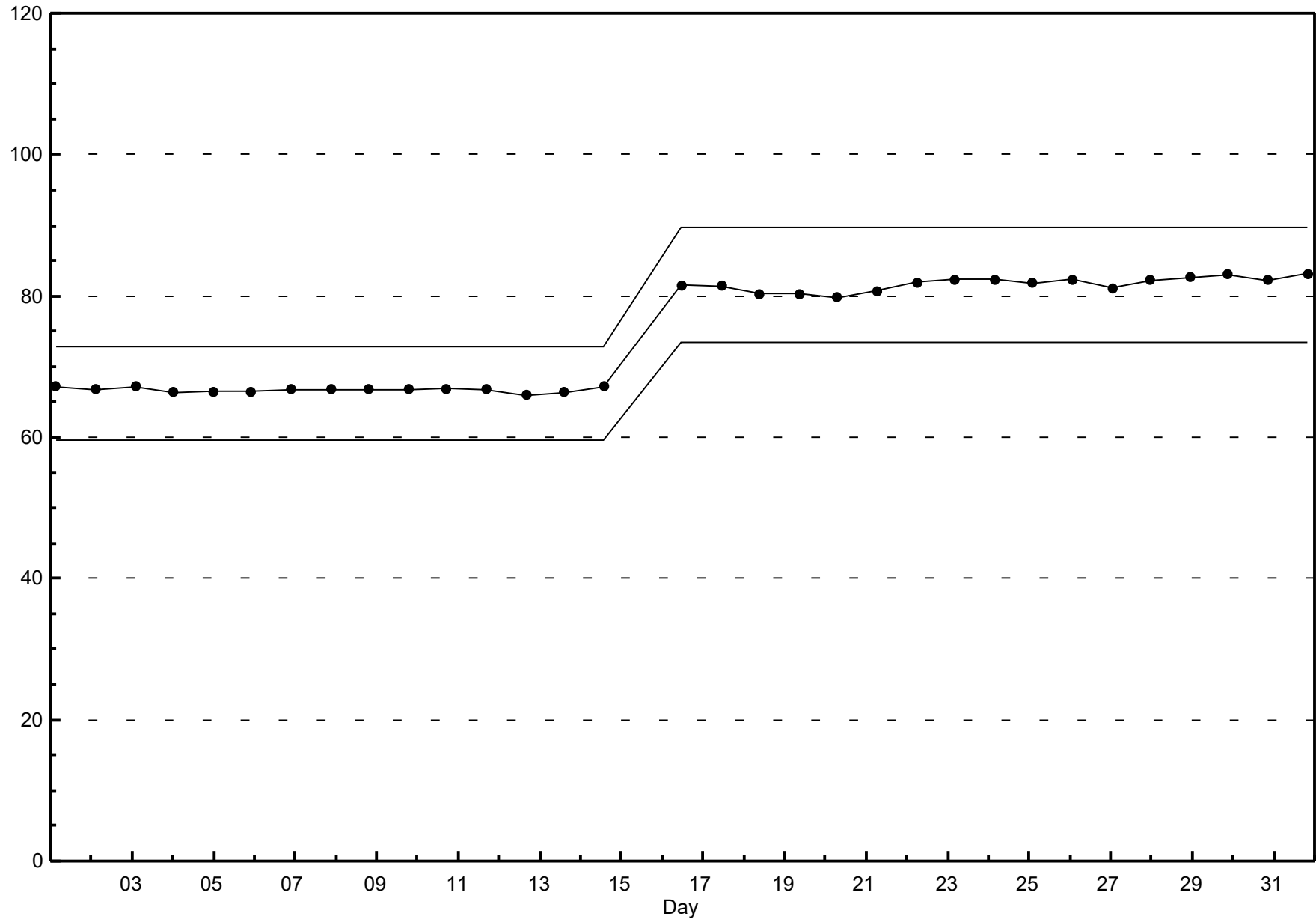
Pollutant Rose

Hydrogen Sulphide (H₂S) - ppb
Valleyview - August 2018



Span Responses

Hydrogen Sulphide (H_2S)
Valleyview - August 2018



Hourly Averages

External Temperature (ET) - °C

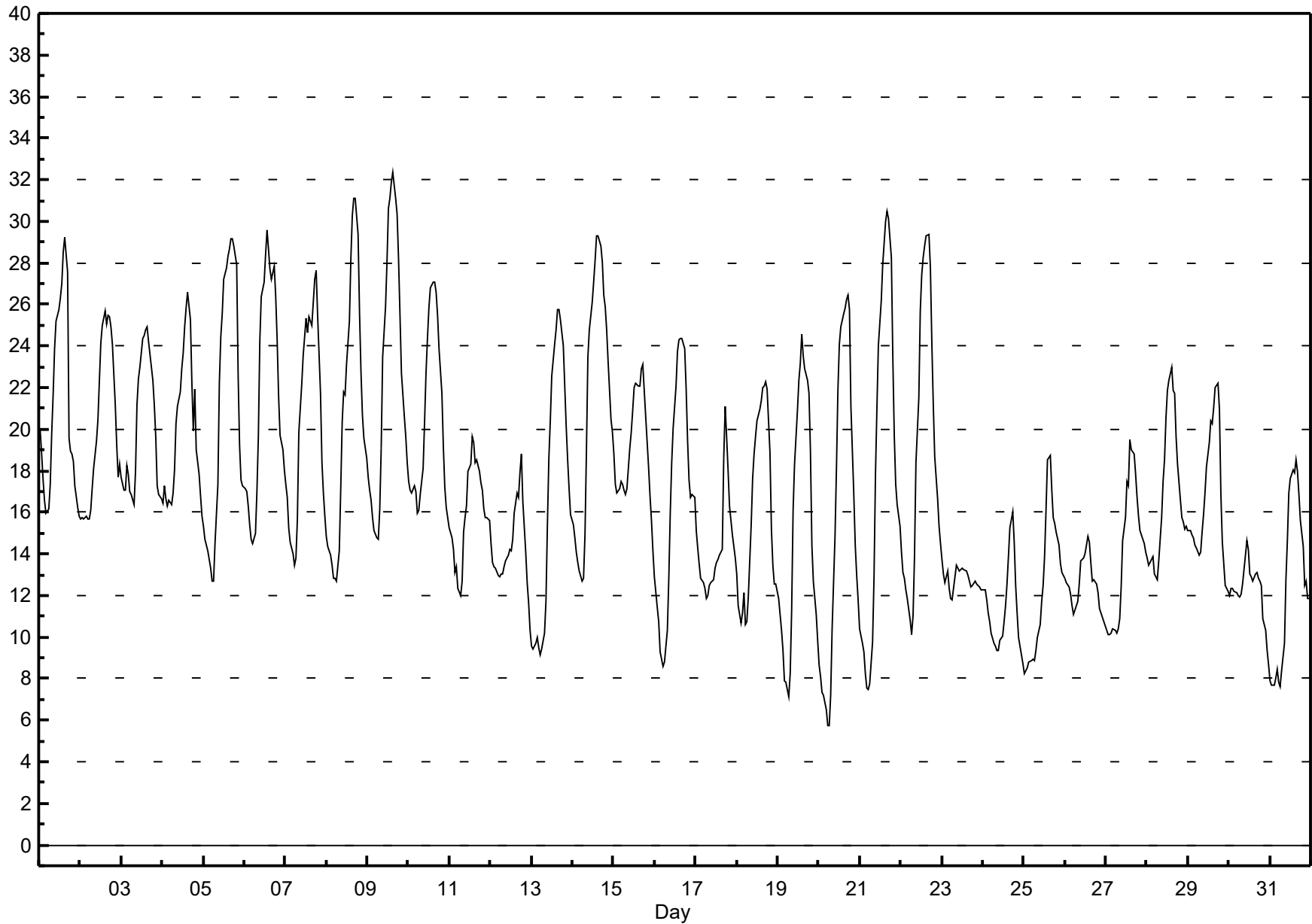
Valleyview - August 2018

Maximum Value: 32.4 °C on Aug 9 16:00																					Maximum Daily Average: 22.8 °C on Aug 9					Hours in Service: 744	
Minimum Value: 6 °C on Aug 20 06:00																					Minimum Daily Average: 11.3 °C on Aug 24					Hours of Data: 744	
Maximum Diurnal Average: 23.0 °C at hour 17																					Minimum Diurnal Average: 12.2 °C at hour 7					Hours of Missing Data: 0	
Monthly Average: 17.21 °C																					Percentiles: P ₁ = 7.5 P ₁₀ = 10.4 Q ₁ = 12.8 Median = 16.3 Q ₃ = 21.2 P ₉₀ = 25.7 P ₉₉ = 30.4					Hours of Calibration: 0	
																					Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	20	19	18	17	16	16	17	20	22	24	25	26	26	27	29	29	28	20	19	19	18	17	16	16	20.9	29.3	
2-Aug	16	16	16	16	16	16	16	17	18	19	20	22	24	25	26	25	25	25	25	24	21	19	18	18	20.2	25.7	
3-Aug	18	17	17	18	18	17	17	16	18	21	22	23	24	24	25	25	24	24	22	21	20	17	17	17	20.1	24.9	
4-Aug	16	17	17	16	17	16	17	18	20	21	22	23	24	25	26	27	25	22	20	22	19	18	17	16	20.0	26.6	
5-Aug	15	15	14	14	13	13	13	14	17	22	24	26	27	28	28	29	29	29	29	28	23	19	18	17	21.0	29.2	
6-Aug	17	17	16	15	15	15	15	17	20	24	26	27	28	30	29	28	27	28	26	24	22	20	19	18	21.8	29.6	
7-Aug	17	17	15	15	14	13	14	16	20	22	24	24	25	25	25	26	27	28	25	22	18	17	16	16	20.4	27.6	
8-Aug	15	14	14	13	13	13	13	14	17	20	22	22	23	25	28	30	31	31	29	26	23	21	20	19	20.6	31.1	
9-Aug	18	17	17	16	15	15	15	16	19	23	26	28	31	31	32	32	31	30	28	25	23	21	20	18	22.8	32.4	
10-Aug	17	17	17	17	17	16	16	17	18	20	23	24	26	27	27	27	27	25	24	22	19	17	16	16	20.5	27.1	
11-Aug	15	15	14	13	13	12	12	13	15	16	16	18	18	20	19	18	19	18	17	17	16	16	16	16	16.0	19.6	
12-Aug	14	14	13	13	13	13	13	13	13	14	14	14	14	15	16	17	17	18	19	16	14	13	12	10	14.3	18.8	
13-Aug	10	9	10	10	9	9	9	10	12	15	19	20	23	24	25	26	26	25	24	22	20	18	17	16	17.0	25.8	
14-Aug	15	15	14	14	13	13	13	15	19	23	25	26	27	28	29	29	29	28	26	26	25	23	20	20	21.5	29.3	
15-Aug	19	17	17	17	17	17	17	17	17	19	20	21	22	22	22	22	23	23	22	21	18	17	16	14	19.1	23.1	
16-Aug	13	11	11	9	9	9	9	10	13	16	18	20	22	24	24	24	24	24	22	19	18	17	17	17	16.7	24.4	
17-Aug	15	14	14	13	13	12	12	12	12	13	13	13	14	14	14	14	19	21	20	18	16	15	14	14	14.5	21.1	
18-Aug	13	11	11	11	12	11	11	12	15	18	19	20	20	21	21	22	22	22	22	19	15	13	13	13	16.1	22.3	
19-Aug	12	11	10	9	8	8	7	8	11	16	18	21	22	23	25	24	23	22	22	19	14	13	11	10	15.3	24.6	
20-Aug	9	8	7	7	6	6	6	7	10	15	18	22	24	25	26	26	26	26	26	21	17	14	13	12	15.7	26.4	
21-Aug	10	10	9	8	8	7	8	10	13	18	21	24	26	28	29	30	31	30	28	23	20	17	16	15	18.3	30.5	
22-Aug	14	13	13	12	12	11	10	11	14	18	22	26	27	28	29	29	29	28	24	21	19	17	15	15	19.0	29.4	
23-Aug	14	13	13	13	12	12	12	12	13	13	13	13	13	13	13	13	13	12	12	13	13	12	12	12	12.8	13.8	
24-Aug	12	12	12	11	11	10	10	10	9	9	10	10	11	11	13	14	15	16	15	13	11	10	9	9	11.3	16.0	
25-Aug	8	8	9	9	9	9	9	9	10	11	12	12	14	16	19	19	17	16	15	15	14	14	13	13	12.5	18.8	
26-Aug	13	13	12	12	11	11	11	12	13	14	14	14	14	15	15	14	13	13	13	12	11	11	11	11	12.5	14.8	
27-Aug	10	10	10	10	10	10	10	10	11	12	15	16	17	17	19	19	19	18	17	16	15	15	15	14	14.0	19.5	
28-Aug	14	13	14	14	13	13	13	14	16	18	19	21	22	22	23	22	22	20	18	17	16	16	15	15	16.9	23.0	
29-Aug	15	15	15	15	14	14	14	14	15	16	17	18	19	20	20	21	22	22	21	17	15	14	12	12	16.6	22.2	
30-Aug	12	12	12	12	12	12	12	12	13	13	15	14	13	13	13	13	13	13	13	12	11	10	9	9	12.2	14.6	
31-Aug	8	8	8	8	8	8	8	8	10	13	15	17	18	18	18	19	18	17	16	14	13	13	12	12	12.6	18.6	
14.0 13.5 13.1 12.9 12.6 12.2 12.2 13.1 15.0 17.4 18.9 20.2 21.3 22.1 22.8 22.9 23.0 22.4 21.3 19.6 17.4 16.0 15.0 14.4																									Diurnal Average		
20.0 18.9 17.6 18.3 17.9 17.4 17.3 19.8 21.6 24.2 26.4 28.0 30.6 31.1 31.8 32.4 31.1 31.1 29.3 27.9 24.8 23.2 20.4 19.9																									Diurnal Maximum		

Hourly Averages

External Temperature (ET) - °C

Valleyview - August 2018



Hourly Averages

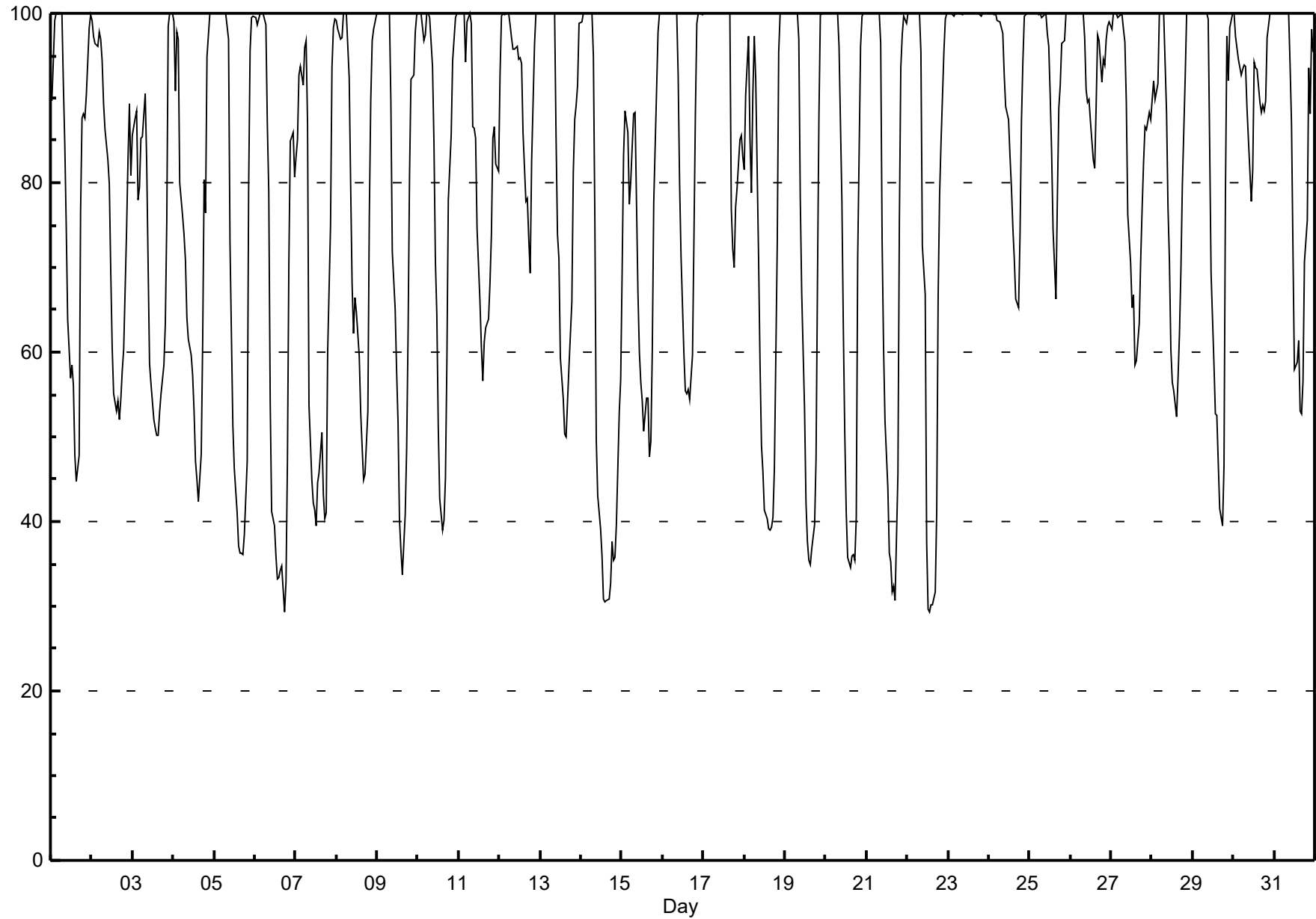
Relative Humidity (RH) - %

Valleyview - August 2018

Maximum Value: 100.0 % on Aug 1 04:00																								Maximum Daily Average: 100.0 % on Aug 23										Hours in Service: 744			
Minimum Value: 29 % on Aug 22 14:00																								Minimum Daily Average: 60.5 % on Aug 14										Hours of Data: 744			
Maximum Diurnal Average: 98.2 % at hour 3																								Minimum Diurnal Average: 53.8 % at hour 16										Hours of Missing Data: 0			
Monthly Average: 80.52 %																								Percentiles: P ₁ = 30.8 P ₁₀ = 44.1 Q ₁ = 62.3 Median = 89.7 Q ₃ = 100.0 P ₉₀ = 100.0 P ₉₉ = 100.0										Hours of Calibration: 0			
																								Percent Operational Time: 100.0													
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24													
1-Aug	90	94	99	100	100	100	100	92	85	75	64	57	59	56	48	45	48	77	88	88	88	90	98	100	80.8	100.0											
2-Aug	99	97	96	96	98	97	94	89	86	83	80	69	60	55	53	54	52	54	58	60	74	83	89	81	77.5	99.2											
3-Aug	86	88	88	78	80	85	85	90	83	70	59	56	52	51	50	50	53	55	58	63	75	99	100	100	73.1	100.0											
4-Aug	99	91	98	97	80	76	74	71	64	61	60	57	53	47	45	42	48	61	80	76	95	100	100	100	74.0	100.0											
5-Aug	100	100	100	100	100	100	100	100	97	73	62	51	46	41	37	36	36	36	38	47	79	96	99	100	74.0	100.0											
6-Aug	100	99	99	100	100	100	99	87	79	54	41	40	36	33	33	34	35	29	33	47	71	85	86	81	66.7	100.0											
7-Aug	83	85	93	94	92	96	97	87	54	45	42	41	39	45	46	51	43	40	41	60	75	93	98	99	68.3	99.4											
8-Aug	99	98	97	97	100	100	100	92	80	68	62	66	65	59	53	49	45	46	53	76	90	97	98	100	78.8	100.0											
9-Aug	100	100	100	100	100	100	100	100	90	72	65	58	52	40	37	34	41	49	62	81	92	93	98	100	77.6	100.0											
10-Aug	100	100	100	97	97	100	100	100	94	85	71	64	51	43	39	40	45	59	78	86	94	97	99	100	80.8	100.0											
11-Aug	100	100	100	100	94	99	100	99	87	87	85	75	66	61	57	61	63	64	68	74	85	87	82	81	82.3	100.0											
12-Aug	93	100	100	100	100	100	99	97	96	96	96	95	95	94	86	78	78	73	69	83	96	100	100	100	92.6	100.0											
13-Aug	100	100	100	100	100	100	100	100	100	85	74	71	59	55	50	50	54	58	66	81	87	89	92	99	82.1	100.0											
14-Aug	99	100	100	100	100	100	100	95	76	50	43	39	36	31	31	31	31	33	38	35	36	40	53	57	60.5	100.0											
15-Aug	69	83	89	86	77	80	84	88	88	67	60	56	54	51	55	55	48	50	60	78	91	98	100	100	73.6	100.0											
16-Aug	100	100	100	100	100	100	100	100	100	93	80	71	60	55	55	56	54	60	74	88	99	100	100	100	85.2	100.0											
17-Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	77	72	70	77	79	85	86	83	92.9	100.0											
18-Aug	82	90	97	85	79	91	97	92	71	59	49	46	41	40	39	39	39	40	46	73	95	100	100	100	70.5	100.0											
19-Aug	100	100	100	100	100	100	100	100	97	78	67	53	42	38	35	35	37	40	47	68	88	100	100	100	76.1	100.0											
20-Aug	100	100	100	100	100	100	100	100	96	78	63	50	41	36	35	36	36	35	40	71	96	100	100	100	75.6	100.0											
21-Aug	100	100	100	100	100	100	100	100	96	73	60	52	44	36	35	32	32	31	46	75	93	98	100	99	75.1	100.0											
22-Aug	100	100	100	100	100	100	100	100	95	73	67	38	30	29	30	30	32	41	67	79	85	95	99	100	74.6	100.0											
23-Aug	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											
24-Aug	100	100	100	100	100	99	99	98	98	93	89	88	83	80	75	71	66	65	74	87	94	100	100	100	89.9	100.0											
25-Aug	100	100	100	100	100	100	100	99	100	100	98	96	90	84	74	66	78	89	92	96	97	100	100	100	94.1	100.0											
26-Aug	100	100	100	100	100	100	100	100	97	91	89	90	87	83	82	89	97	97	92	95	94	97	99	99	94.9	100.0											
27-Aug	98	100	100	100	100	100	100	98	97	90	76	70	65	67	58	59	63	71	77	82	87	86	88	87	84.2	100.0											
28-Aug	90	92	90	92	100	100	100	100	88	77	71	60	56	55	52	57	62	70	80	92	100	100	100	100	82.7	100.0											
29-Aug	100	100	100	100	100	100	100	100	100	99	85	69	59	53	53	47	42	40	47	79	97	92	98	100	81.6	100.0											
30-Aug	100	97	96	95	93	93	94	94	89	85	78	81	94	94	93	89	88	89	88	90	97	100	100	100	92.4	100.0											
31-Aug	100	100	100	100	100	100	100	100	100	94	87	72	58	59	61	53	53	57	71	76	94	88	98	95	84.0	100.0											
96.3 97.2 98.2 97.3 96.4 97.3 97.5 95.8 89.7 79.1 71.7 65.6 60.5 57.1 54.8 53.8 54.1 57.4 64.5 76.3 87.9 93.1 95.5 95.5																									Diurnal Average												
100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 99.7 100.0 100.0 100.0 100.0																									Diurnal Maximum												

Hourly Averages

Relative Humidity (RH) - %
Valleyview - August 2018



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Valleyview - August 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	2	1	0	0	0	0	1	2	2	1	2	1	2	1	1	2	6	8	1	2	1	0	1	1	0.9	8.3
Dir	161	256	167	172	1	204	342	262	325	285	333	322	340	287	306	6	292	294	165	165	214	168	157	147	291	294
2 Spd	1	1	1	1	1	2	2	3	2	1	2	2	2	5	6	6	7	8	4	4	1	1	1	9	2.2	9.1
Dir	167	165	154	158	157	157	155	158	156	157	161	180	201	247	243	280	261	242	235	240	183	165	160	266	227	266
3 Spd	11	5	4	7	4	4	3	2	2	2	11	12	13	13	12	15	17	15	14	9	7	1	1	1	6.9	17.3
Dir	263	242	236	248	234	225	234	150	160	176	267	283	277	283	279	279	275	272	272	278	288	153	157	173	268	275
4 Spd	1	1	1	1	5	6	6	8	10	9	7	6	7	8	8	9	10	7	2	1	0	1	1	1	3.9	9.7
Dir	86	291	204	179	271	282	287	273	291	291	304	302	290	300	293	322	5	356	328	1	196	188	154	143	302	291
5 Spd	1	1	1	1	1	1	0	1	1	1	2	3	3	4	5	5	5	5	4	1	0	0	1	1	1.5	5.3
Dir	160	159	156	157	165	159	182	152	161	155	173	241	238	239	246	270	249	255	258	267	164	172	170	168	230	246
6 Spd	1	2	2	2	2	2	2	2	2	7	12	12	13	12	12	12	12	13	8	2	1	1	1	1	4.6	13.2
Dir	160	159	158	156	158	160	157	155	151	248	252	255	252	258	261	276	279	273	262	242	219	168	172	178	252	273
7 Spd	1	1	1	1	1	1	1	1	7	10	10	8	10	6	7	3	7	6	2	1	1	0	0	1	3.1	10.4
Dir	180	168	160	163	158	160	163	164	278	279	271	262	277	270	263	277	273	286	266	153	236	130	185	166	265	279
8 Spd	1	1	1	0	1	1	1	1	2	2	2	2	1	1	1	1	1	1	0	0	0	1	1	0	1.0	2.3
Dir	182	181	178	191	170	169	176	162	153	156	156	156	159	157	152	157	143	143	149	168	183	171	180	196	162	156
9 Spd	0	1	0	0	0	0	0	0	1	1	1	2	1	3	4	2	1	0	1	0	1	2	0	0	0.3	3.8
Dir	174	152	178	183	176	161	164	187	159	144	308	174	200	277	336	343	51	43	348	327	335	338	197	214	305	336
10 Spd	0	1	2	2	1	1	2	3	2	1	2	2	2	2	4	3	2	0	0	0	0	0	0	0	0.5	3.5
Dir	173	158	166	212	170	165	155	156	154	158	155	154	221	273	299	333	331	359	152	162	342	337	304	165	198	299
11 Spd	1	1	0	2	3	0	0	1	2	2	5	4	3	4	3	4	3	3	2	1	0	0	2	1	1.7	4.9
Dir	157	154	65	357	21	88	178	349	23	10	3	41	39	59	55	39	59	95	54	30	160	358	50	50	39	3
12 Spd	3	4	1	2	3	3	3	4	4	3	2	4	5	2	3	3	4	2	1	1	0	0	0	0	1.9	4.9
Dir	99	117	89	74	55	68	39	28	4	5	6	16	7	336	12	34	3	32	146	163	163	164	164	179	36	7
13 Spd	0	1	1	1	3	3	3	3	4	4	4	4	6	4	6	5	6	3	1	1	1	1	1	2	2.8	5.8
Dir	181	160	157	157	159	158	159	161	161	162	160	159	159	159	160	158	158	159	163	170	177	172	167	156	160	160
14 Spd	3	1	1	1	1	1	1	1	2	9	12	11	15	16	13	13	12	9	8	12	9	8	2	4	6.2	15.9
Dir	154	154	164	158	160	159	166	162	223	258	272	276	274	284	272	264	263	260	254	265	257	258	236	242	262	284
15 Spd	1	0	0	1	1	1	1	0	0	5	5	8	7	10	9	6	3	1	1	0	0	1	0	0	1.7	9.6
Dir	188	158	166	159	184	163	160	157	151	291	286	292	309	338	3	3	341	307	305	156	122	152	186	175	321	338
16 Spd	0	0	0	0	0	0	0	1	3	2	2	1	2	1	1	1	1	0	0	0	0	0	1	1	0.5	2.5
Dir	306	359	352	297	307	312	227	153	241	171	158	202	236	171	151	137	128	151	149	159	164	230	162	178	188	241
17 Spd	0	1	1	1	1	1	0	0	0	0	1	1	1	0	0	1	1	1	1	1	1	1	1	1	0.7	1.3
Dir	242	162	175	166	169	178	4	169	199	185	174	161	151	158	162	159	172	156	163	174	185	172	158	181	168	158
18 Spd	0	1	0	3	3	2	1	1	4	9	9	8	8	7	7	6	5	2	1	0	0	0	1	0	3.0	9.5
Dir	227	236	168	318	303	279	201	197	271	292	316	326	298	314	303	292	295	323	310	152	176	178	164	164	300	316
19 Spd	0	0	1	0	0	0	0	1	1	1	1	1	2	2	1	5	7	5	2	0	0	0	0	0	1.0	6.6
Dir	7	359	326	232	43	192	216	164	154	160	14	116	344	353	6	10	12	10	5	329	161	161	172	176	10	12
20 Spd	0	0	0	1	0	0	0	1	2	2	1	1	2	2	1	0	1	1	0	0	0	0	0	0	0.6	2.1
Dir	301	196	160	167	179	193	177	162	153	152	160	164	158	153	71	158	148	142	58	163	178	179	160	163	152	153
21 Spd	0	0	0	0	0	0	0	1	1	1	2	2	2	2	2	1	1	1	0	0	0	1	0	0	0.8	2.3
Dir	61	205	173	192	175	176	167	159	158	157	155	158	157	168	160	175	155	227	154	152	180	163	155	214	165	157
22 Spd	0	1	1	1	0	0	0	0	1	2	2	8	14	14	10	8	5	1	0	0	0	0	0	0	2.3	14.0
Dir	173	180	167	156	160	166	262	214	158	158	147	279	281	285	289	278	302	261	196	187	162	107	163	165	275	281

Hourly Averages

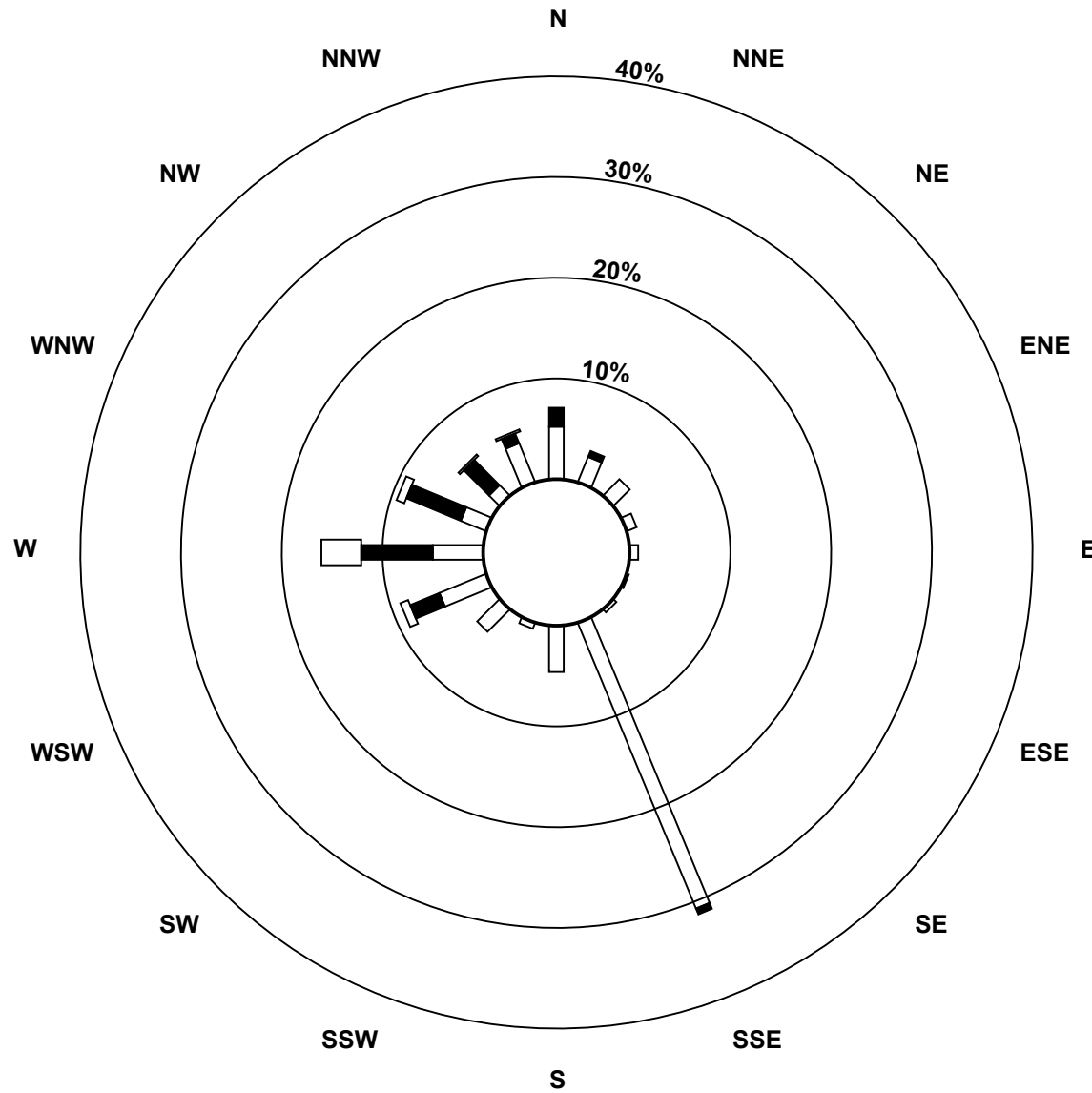
Wind Speed (km/h)
Wind Direction (deg)
Valleyview - August 2018

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	1	1	1	0	2	2	1	5	6	5	4	4	4	4	5	5	5	2	1	0	0	2	1	2.4	6.3										
Dir	172	352	21	21	341	349	339	342	1	359	345	341	335	345	354	7	2	12	15	17	51	68	12	3	356	359										
24 Spd	0	4	7	5	6	8	8	8	7	8	8	7	7	7	6	6	4	1	1	1	1	1	1	1	3.9	8.3										
Dir	223	282	282	298	304	303	304	300	320	314	312	312	322	330	334	351	10	66	131	153	157	160	159	159	312	314										
25 Spd	0	1	1	1	1	1	1	1	1	1	2	2	2	1	1	5	3	2	2	1	2	1	2	0	1.2	5.1										
Dir	31	153	159	39	148	164	161	161	169	163	159	159	156	158	174	237	191	164	158	157	214	170	159	43	174	237										
26 Spd	1	0	1	1	0	0	0	1	2	4	6	8	9	11	13	7	8	7	7	7	7	4	3	5	4.1	12.7										
Dir	10	167	173	179	356	79	32	296	298	286	293	326	332	318	327	346	1	356	12	8	12	13	3	360	340	327										
27 Spd	3	1	1	1	1	2	2	2	2	2	2	2	3	3	3	2	2	2	2	2	2	2	2	1	1.1	3.4										
Dir	3	322	323	263	264	276	262	264	231	166	215	215	169	161	166	179	153	154	161	175	158	159	158	156	192	3										
28 Spd	1	1	2	1	1	1	1	1	1	2	3	4	3	5	5	4	2	4	2	1	1	2	1	2	1.5	5.4										
Dir	158	187	258	260	162	154	152	147	254	275	287	272	250	250	270	273	268	243	156	333	150	155	154	157	244	270										
29 Spd	2	2	2	1	1	1	1	1	1	1	3	5	8	8	6	8	7	7	4	1	2	12	2	1	2.3	12.2										
Dir	164	155	156	157	158	170	152	151	162	159	242	257	271	270	280	308	280	275	283	187	164	307	356	190	270	307										
30 Spd	1	6	7	6	9	10	10	11	11	11	10	9	8	7	9	10	10	9	10	7	2	4	1	1	6.9	11.2										
Dir	162	258	252	257	253	264	279	283	296	299	305	294	255	265	266	275	278	285	285	274	241	239	194	156	275	296										
31 Spd	1	2	2	2	2	2	2	2	2	1	2	4	11	8	5	13	13	9	2	5	1	6	1	2	3.1	12.9										
Dir	158	158	163	153	163	159	161	159	155	158	154	225	259	266	264	266	264	247	187	262	263	265	179	188	242	266										
Spd	0.5	0.7	0.8	0.6	0.6	0.8	0.7	0.7	1.1	2.0	2.7	3.1	3.9	4.0	3.6	3.7	3.3	2.8	1.4	1.1	0.6	0.7	0.4	0.4	Diurnal Average											
Dir	189	202	213	225	233	237	250	240	271	276	280	279	277	284	286	294	291	280	271	263	241	258	158	216	Diurnal Maximum											
Spd	11.4	5.8	7.3	6.9	8.5	10.0	10.2	11.1	11.2	10.8	12.3	12.3	15.1	15.9	12.8	15.1	17.3	15.3	13.7	11.5	8.8	12.2	3.0	9.1	Diurnal Maximum											
Dir	263	258	282	248	253	264	279	283	296	299	252	255	274	284	272	279	275	272	272	265	257	307	3	266												
Maximum Speed Value: 17 km/h on Aug 3 17:00																		Minimum Speed Value: 0 km/h on Aug 21 01:00										Hours in Service:				744				
Maximum Daily Speed Average: 6.9 km/h on Aug 3																		Minimum Daily Speed Average: 0.3 km/h on Aug 20														Hours of Data:				744
Maximum Diurnal Speed Average: 4.0 km/h at hour 14																		Minimum Diurnal Speed Average: 0.4 km/h at hour 23														Hours of Missing Data:				0
Monthly Average Velocity: 1.53 km/h 273.0 deg																		Speed Percentiles: P ₁ = 0.1 P ₁₀ = 0.3 Q ₁ = 0.7 Median = 1.5 Q ₃ = 4.0 P ₉₀ = 8.2 P ₉₉ = 13.5														Percent Operational Time:				100.0
All monthly, daily, and diurnal averages have been calculated using vector methods																																				
Frequency Distribution																																				
Speed Range (km/h)																																				
Direction	0 to 5		5 to 11		11 to 19		19 to 28		28 to 38		> 38		Total																							
North	59		18		0		0		0		0		77																							
NorthEast	28		0		0		0		0		0		28																							
East	11		0		0		0		0		0		11																							
SouthEast	107		0		0		0		0		0		107																							
South	262		4		0		0		0		0		266																							
SouthWest	44		7		0		0		0		0		51																							
West	39		63		31		0		0		0		133																							
NorthWest	35		32		4		0		0		0		71																							
Total	585		124		35		0		0		0		744																							

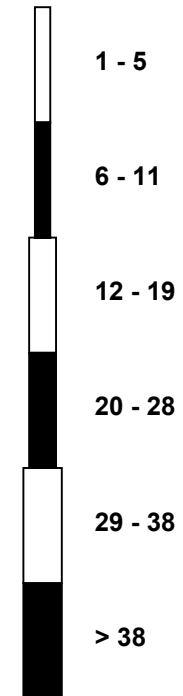
Wind Rose

Wind Speed (WS) (km/h)

Valleyview - August 2018



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Valleyview - August 2018

Maximum Speed: 18 km/h on Aug 3 17:00																				Maximum Daily Speed Average: 8.0 km/h on Aug 3										Hours in Service: 744	
Minimum Speed: 0 km/h on Aug 20 00:00																				Minimum Daily Speed Average: 0.8 km/h on Aug 17										Hours of Data: 744	
Maximum Diurnal Speed Average: 6.1 km/h at hour 14																				Minimum Diurnal Speed Average: 1.1 km/h at hour 23										Hours of Missing Data: 0	
Monthly Average Speed: 3.21 km/h																				Percentiles: P ₁ = 0.2 P ₁₀ = 0.4 Q ₁ = 0.9 Median = 1.8 Q ₃ = 4.3 P ₉₀ = 8.5 P ₉₉ = 13.9										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Aug	2	2	1	0	1	1	1	3	3	2	2	2	3	3	2	3	7	9	1	2	1	1	1	1	2.2	8.9					
2-Aug	1	1	1	1	1	2	2	3	2	1	2	3	3	6	6	6	7	9	4	4	1	1	1	10	3.3	9.6					
3-Aug	12	6	4	7	4	4	3	2	2	3	11	12	13	13	13	15	18	16	14	9	7	1	1	1	8.0	17.8					
4-Aug	2	2	1	1	5	6	7	8	10	10	7	7	7	9	9	10	11	7	2	1	0	1	1	1	5.1	10.6					
5-Aug	1	1	1	1	1	1	0	1	1	2	3	4	4	5	6	5	6	5	4	1	0	0	1	1	2.3	5.9					
6-Aug	2	2	2	2	2	2	2	2	2	8	13	13	13	12	13	12	12	13	8	2	1	1	1	1	5.8	13.5					
7-Aug	1	1	1	1	1	1	1	1	7	11	11	9	11	7	7	3	7	6	3	1	1	1	0	1	3.9	10.8					
8-Aug	1	1	1	0	1	1	1	2	2	2	2	2	1	1	1	1	1	0	1	1	1	1	1	1	1.2	2.3					
9-Aug	1	1	1	1	0	0	0	1	1	1	2	2	2	4	4	3	1	1	1	1	1	2	0	1	1.4	4.3					
10-Aug	1	1	2	3	2	1	2	3	2	1	2	2	2	3	4	4	2	1	0	1	1	0	1	0	1.6	3.7					
11-Aug	1	1	1	2	3	0	0	1	3	2	5	5	4	5	3	4	3	3	2	1	0	1	2	2	2.2	5.1					
12-Aug	4	4	2	3	4	3	4	4	4	3	2	4	5	2	4	4	5	2	1	1	0	0	0	0	2.8	4.9					
13-Aug	0	1	1	1	3	3	3	3	4	4	4	5	6	5	6	5	6	3	1	1	1	1	1	2	2.9	5.9					
14-Aug	3	1	1	1	1	1	1	1	3	9	12	12	16	16	13	14	12	9	8	12	9	8	2	4	7.1	16.3					
15-Aug	1	0	0	1	1	1	1	0	1	5	5	8	8	10	9	6	4	2	1	0	0	1	0	0	2.8	10.2					
16-Aug	0	1	0	0	0	1	0	1	3	2	2	2	3	1	1	1	1	0	0	0	0	0	1	1	1.0	2.8					
17-Aug	1	1	1	1	1	1	1	0	0	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0.8	1.4					
18-Aug	1	1	1	4	3	2	1	1	4	9	10	8	9	8	8	7	6	3	1	0	0	0	1	0	3.7	10.0					
19-Aug	0	0	1	0	0	0	0	1	1	1	2	1	3	3	2	6	7	5	2	0	0	0	0	0	1.6	6.8					
20-Aug	1	0	0	1	0	0	0	1	2	2	1	1	2	3	3	2	1	1	0	0	0	1	0	0	1.0	2.5					
21-Aug	0	0	0	0	0	0	0	1	1	1	2	2	3	2	2	2	1	2	1	0	0	1	0	1	1.0	2.5					
22-Aug	1	1	1	1	0	0	0	0	1	2	2	8	14	14	10	9	5	2	1	0	1	0	1	0	3.1	14.3					
23-Aug	1	2	1	1	0	2	2	1	6	7	6	4	4	4	4	5	5	5	2	1	1	0	2	1	2.8	6.5					
24-Aug	0	4	8	5	6	8	8	8	7	9	9	7	7	8	6	6	5	2	1	1	1	1	1	1	4.9	8.7					
25-Aug	0	1	1	2	2	1	1	1	1	1	2	2	2	1	2	5	3	2	2	1	3	1	2	1	1.7	5.5					
26-Aug	1	1	1	1	0	1	1	2	3	4	6	8	9	12	13	8	8	7	8	7	7	4	3	5	4.9	12.9					
27-Aug	3	1	1	1	1	2	2	2	2	2	3	3	3	3	3	3	2	2	2	2	2	2	1	2.3	3.5						
28-Aug	1	1	3	2	1	1	1	1	2	3	4	4	4	6	6	4	3	5	2	3	2	2	1	2	2.5	6.1					
29-Aug	3	2	2	2	1	1	1	1	1	1	3	5	8	8	7	8	7	7	4	1	2	14	3	1	3.8	13.7					
30-Aug	1	6	7	6	9	10	10	11	12	11	10	9	8	7	9	11	10	9	10	7	2	4	1	1	7.6	11.5					
31-Aug	1	2	2	2	2	2	2	2	2	1	2	5	11	8	6	13	13	9	2	6	2	7	2	2	4.4	13.2					
1.5 1.5 1.6 1.8 1.9 1.9 1.9 2.2 3.1 3.9 4.8 5.2 6.1 6.1 5.9 6.0 5.8 4.8 2.9 2.2 1.6 1.9 1.1 1.4																									Diurnal Average						
11.9 6.1 7.5 7.1 8.7 10.2 10.4 11.4 11.5 11.0 12.6 12.5 15.5 16.3 13.3 15.4 17.8 15.7 14.1 11.7 8.9 13.7 3.1 9.6																									Diurnal Maximum						
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg

Valleyview - August 2018

Maximum Value: 100.0 deg on Aug 10 21:00																								Hours in Service: 744	
Minimum Value: 5.5 deg on Aug 6 03:00																								Hours of Data: 744	
																								Hours of Missing Data: 0	
																								Hours of Calibration: 0	
																								Percent Operational Time: 100.0	
Percentiles: P ₁ = 6.6 P ₁₀ = 11.2 Q ₁ = 14.6 Median = 27.0 Q ₃ = 45.7 P ₉₀ = 69.1 P ₉₉ = 91.1																									
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-Aug	10	66	81	68	80	55	85	33	34	91	62	81	69	85	56	50	39	50	33	43	65	34	39		91.0
2-Aug	41	27	12	14	7	8	7	9	10	15	20	37	42	41	27	41	23	21	32	28	31	24	28	40	42.0
3-Aug	18	33	35	17	35	30	40	11	16	36	23	16	13	17	12	14	13	13	14	45	22	23	43	44.6	
4-Aug	62	85	37	32	19	13	14	15	19	17	25	30	28	21	25	19	26	21	59	25	86	59	18	59	85.7
5-Aug	14	11	46	9	24	40	64	16	19	21	51	52	54	45	38	42	28	27	20	57	40	10	8	18	63.9
6-Aug	9	26	6	6	7	7	8	8	15	37	12	13	14	14	12	14	11	11	18	26	31	19	18	14	36.9
7-Aug	19	15	7	11	9	18	9	19	16	11	15	16	18	25	21	42	21	28	46	39	48	72	63	29	72.0
8-Aug	42	36	27	38	12	12	22	20	11	12	11	14	15	17	32	49	28	61	49	72	49	40	52	77	76.8
9-Aug	70	35	60	56	42	36	45	39	19	50	73	39	57	41	43	56	38	74	13	80	90	51	61	62	90.2
10-Aug	39	27	13	40	42	35	10	6	30	51	18	26	45	52	25	22	27	71	46	80	100	91	75	47	100.0
11-Aug	40	62	91	32	10	72	82	19	35	37	16	36	31	33	35	21	33	31	46	57	85	67	59	44	91.2
12-Aug	21	27	50	36	32	35	34	19	12	12	54	14	11	24	26	31	14	57	52	25	46	19	18	19	57.3
13-Aug	21	24	11	14	11	10	10	12	11	13	15	13	11	13	10	12	9	10	13	17	27	12	12	7	27.5
14-Aug	6	9	12	6	13	9	12	8	39	11	13	17	14	13	16	15	11	11	11	12	12	14	22	31	39.3
15-Aug	27	45	18	9	25	19	15	68	56	26	16	19	24	20	18	18	30	41	47	66	86	46	63	74	86.4
16-Aug	90	84	94	52	66	85	68	19	45	30	16	39	56	65	26	24	16	36	71	29	46	72	63	69	94.4
17-Aug	87	45	35	29	32	28	89	48	58	52	26	10	41	88	75	22	33	23	20	21	17	15	12	39	89.2
18-Aug	81	73	64	55	19	39	46	42	22	13	18	19	22	26	24	24	24	54	60	48	26	31	29	34	80.6
19-Aug	87	65	74	72	87	53	51	23	18	50	60	84	57	79	74	25	12	12	15	40	57	43	28	45	86.9
20-Aug	70	69	71	11	34	31	43	19	11	21	59	63	32	49	66	88	34	27	77	30	60	45	32	53	87.9
21-Aug	77	67	45	62	39	46	39	21	11	32	23	25	25	29	35	44	48	47	57	40	42	18	56	56	77.3
22-Aug	70	44	69	39	34	84	75	78	40	12	18	27	12	13	16	16	21	38	43	33	87	73	70	79	87.0
23-Aug	47	80	69	42	91	20	11	17	15	14	13	13	14	16	18	13	14	10	53	41	49	82	14	52	91.3
24-Aug	79	13	14	14	14	13	11	11	18	17	18	18	17	18	28	22	40	64	17	11	13	10	10	12	79.4
25-Aug	75	49	34	51	48	13	15	20	35	33	14	10	8	14	32	28	27	17	10	16	42	28	15	80	80.4
26-Aug	90	65	30	35	96	69	95	43	37	21	15	14	13	13	10	25	10	13	10	10	10	14	14	14	95.6
27-Aug	12	24	38	35	25	14	19	22	44	38	52	53	30	24	34	38	20	10	9	28	13	8	6	13	52.7
28-Aug	26	39	60	72	29	19	11	12	76	56	31	28	43	33	33	25	57	51	15	95	14	7	20	24	94.8
29-Aug	27	19	10	15	16	27	15	33	33	40	42	17	19	23	30	21	20	25	23	36	10	39	47	39	46.7
30-Aug	18	33	8	12	11	10	10	14	13	13	19	22	15	14	12	14	14	12	13	12	28	22	32	27	33.5
31-Aug	17	6	12	21	49	15	15	12	14	11	14	44	19	16	20	14	16	26	26	52	65	34	43	25	65.2
90.0 85.3 94.4 71.8 95.6 85.0 94.6 78.1 75.9 91.0 73.3 84.4 69.2 88.0 84.9 87.9 57.4 73.7 76.9 94.8 100.0 91.3 75.2 80.4																									

PAZA

Donnelly Station

Monthly Summary Tables, Graphs and Roses

Hourly Averages

Sulphur Dioxide (SO₂) - ppb

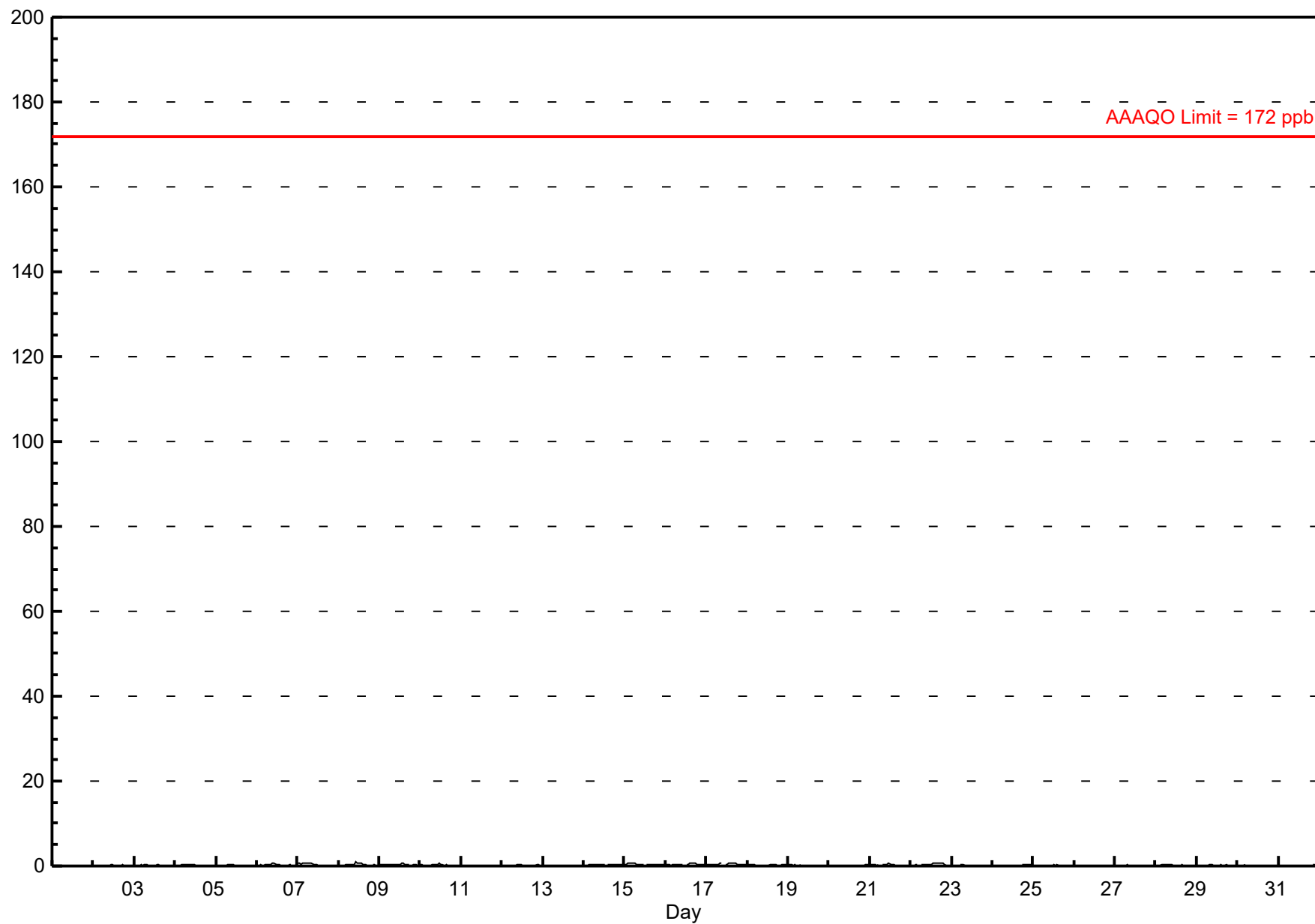
Donnelly - August 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 0.9 ppb on Aug 8 11:00 Maximum Daily Average: 0.4 ppb on Aug 17																			Hours in Service: 744 Hours of Data: 699							
Minimum Value: 0 ppb on Aug 1 01:00 Maximum Diurnal Average: 0.2 ppb at hour 10 Monthly Average: 0.17 ppb																			Minimum Daily Average: 0.0 ppb on Aug 1 Minimum Diurnal Average: 0.1 ppb at hour 20 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.4 P ₉₉ = 0.7		Hours of Missing Data: 45 Hours of Calibration: 40 Percent Operational Time: 99.3					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	0	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-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
3-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
4-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.4
5-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.0	0.3
6-Aug	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.8
7-Aug	1	1	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	0.7
8-Aug	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	A	0	0	0	0	0.3	0.9
9-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	A	0	0	0	0	0	0.3	0.6
10-Aug	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.5
11-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.1
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.2
13-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.2
14-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.3	0.5
15-Aug	0	0	1	1	1	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
16-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	1	1	1	0	0	0	0	0	0	0.3	0.6
17-Aug	0	0	0	0	0	0	0	0	1	1	A	0	0	1	1	1	1	1	0	0	0	0	0	0	0.4	0.7
18-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
19-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
20-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
21-Aug	0	0	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
22-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0.4	0.8
23-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
24-Aug	0	0	0	A	0	0	0	0	0	0	C	C	C	C	C	C	C	0	0	0	0	0	0	0	--	0.3
25-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
26-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
27-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.2
28-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.2
29-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.2
30-Aug	0	0	0	0	0	P	P	P	P	P	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.0	0.2
31-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.2
																									Diurnal Average	Diurnal Maximum
																									0.1	0.7
																									0.2	0.5
																									0.2	0.6
																									0.2	0.6
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																									0.1	0.5

Hourly Averages

Sulphur Dioxide (SO₂) - ppb

Donnelly - August 2018



Hourly Maximums

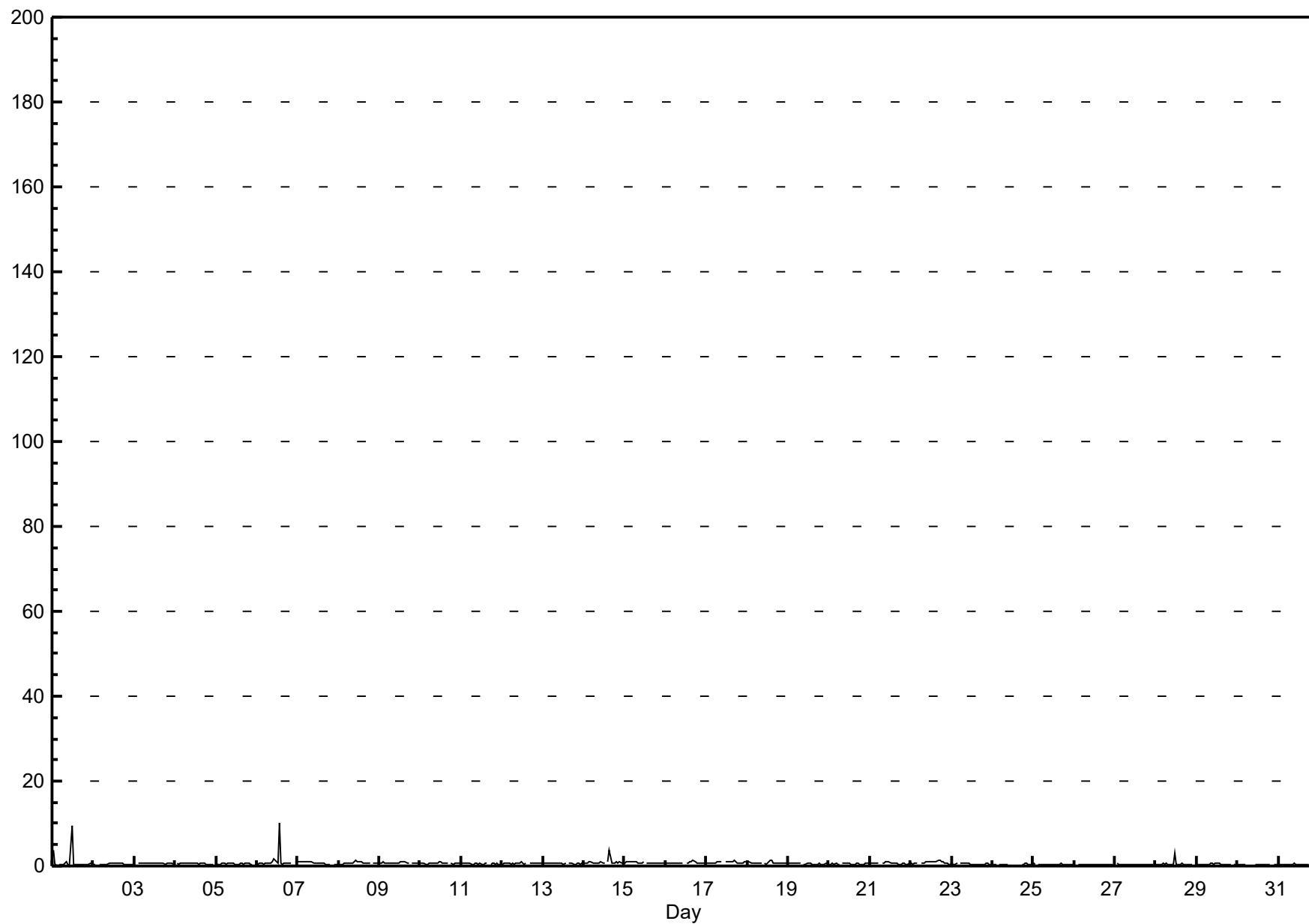
Sulphur Dioxide (SO₂) - ppb

Donnelly - August 2018

Maximum Value: 10.0 ppb on Aug 6 14:00																				Maximum Daily Average: 1.1 ppb on Aug 6										Hours in Service: 744	
Minimum Value: 0 ppb on Aug 1 11:00																				Minimum Daily Average: 0.4 ppb on Aug 30										Hours of Data: 699	
Maximum Diurnal Average: 1.0 ppb at hour 12																				Minimum Diurnal Average: 0.5 ppb at hour 19										Hours of Missing Data: 45	
Monthly Average: 0.63 ppb																				Percentiles: P ₁ = 0.2 P ₁₀ = 0.4 Q ₁ = 0.4 Median = 0.6 Q ₃ = 0.7 P ₉₀ = 0.9 P ₉₉ = 1.3										Hours of Calibration: 40	
																				Percent Operational Time: 99.3											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Aug	4	0	0	A	0	0	0	1	1	0	0	10	0	0	0	0	0	0	0	0	0	0	1	1	0.9	9.6					
2-Aug	0	0	A	0	0	0	1	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.5	0.8					
3-Aug	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0.6	0.8					
4-Aug	A	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0	A	0.6	0.8					
5-Aug	1	0	0	1	1	1	0	1	1	1	1	0	0	0	1	1	0	1	1	1	0	0	A	0	0.5	0.8					
6-Aug	0	1	1	1	1	1	1	1	1	1	2	1	1	10	1	0	1	1	1	1	1	A	1	1	1.1	10.0					
7-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	A	0	1	0	0.7	1.1					
8-Aug	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.7	1.3					
9-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.7	1.0					
10-Aug	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.6	0.9					
11-Aug	1	1	1	1	1	1	1	0	1	1	0	1	0	0	1	1	A	0	1	1	0	1	0	0	0.5	0.7					
12-Aug	0	1	1	1	1	0	1	0	1	1	1	1	1	0	1	A	1	1	1	1	1	1	1	1	0.6	0.9					
13-Aug	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	1	1	1	0	1	1	1	0	1	0.6	0.7					
14-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	4	1	1	1	1	1	1	1	1	0.9	3.8					
15-Aug	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1					
16-Aug	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2					
17-Aug	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3					
18-Aug	1	1	1	1	1	1	1	1	1	1	A	0	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.3					
19-Aug	1	1	1	1	1	1	1	1	A	0	0	1	1	1	0	0	0	0	1	0	0	1	1	0	0.5	0.7					
20-Aug	0	0	1	0	1	0	0	A	1	1	1	1	1	1	0	0	1	1	0	0	0	1	1	1	0.5	0.8					
21-Aug	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0	1	0.7	0.9					
22-Aug	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0.8	1.3					
23-Aug	1	0	0	1	A	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0.5	0.8					
24-Aug	0	0	0	A	0	0	0	0	0	0	0	C	C	C	C	C	C	C	0	0	1	1	0	0	--	0.8					
25-Aug	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.4	0.6					
26-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5					
27-Aug	A	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.4	0.5					
28-Aug	0	0	0	0	1	0	1	0	0	0	0	3	0	0	0	1	0	0	0	0	0	0	A	0	0.6	2.9					
29-Aug	0	0	0	0	0	0	0	0	1	1	0	1	1	1	0	0	0	0	0	0	0	A	0	0	0.5	0.6					
30-Aug	0	0	0	0	0	P	P	P	P	P	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.4	0.5					
31-Aug	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.4	0.7					
																								Diurnal Average							
																								Diurnal Maximum							
C - Calibration																															
P - Power Failure																															
A - Automated Daily Zero Span																															

Hourly Maximums

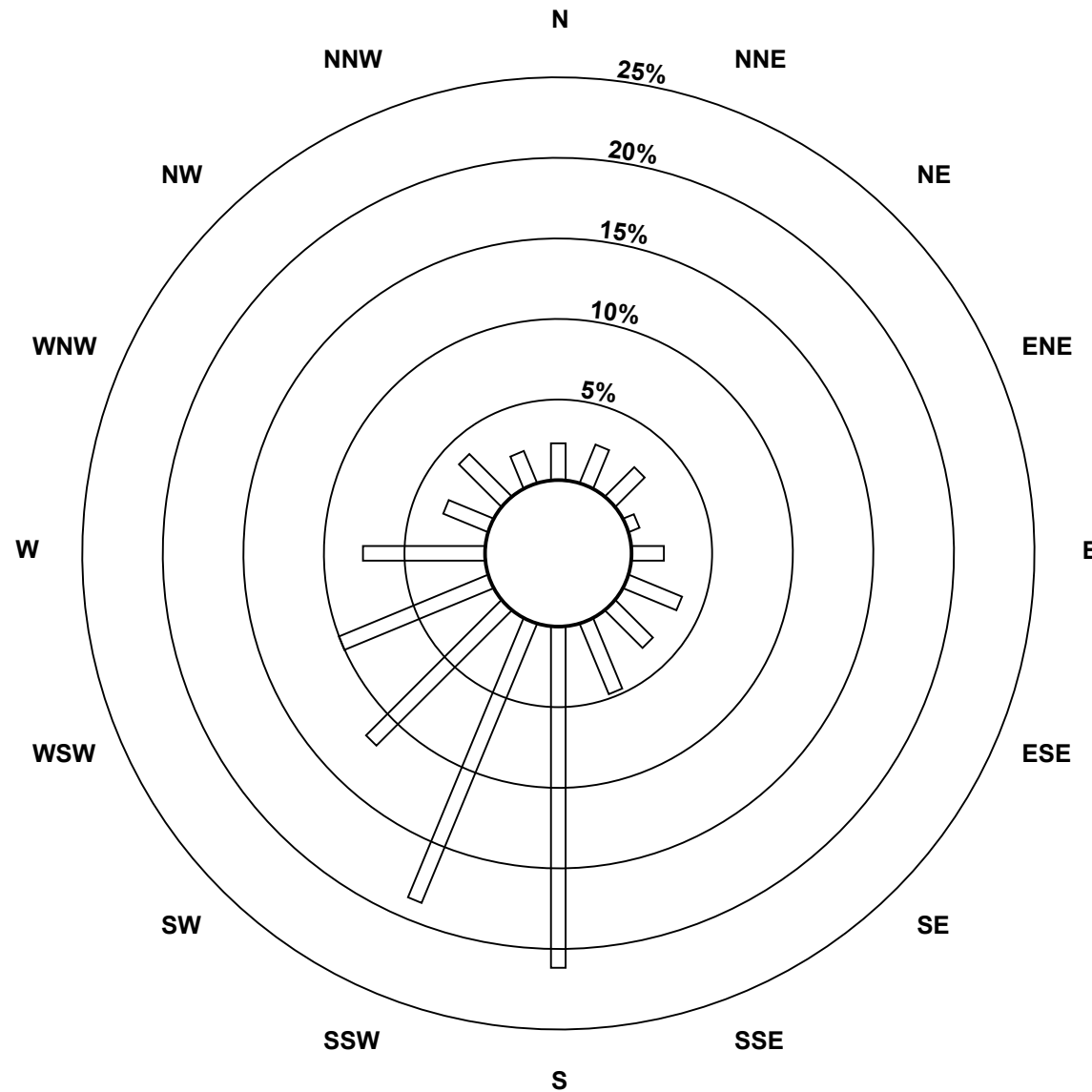
Sulphur Dioxide (SO₂) - ppb
Donnelly - August 2018



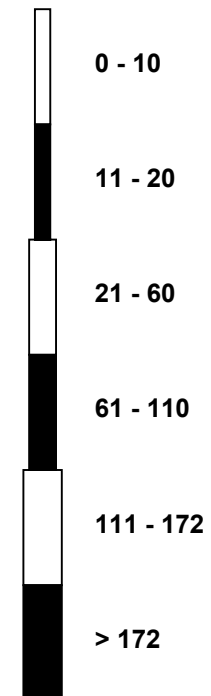
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb

Donnelly - August 2018

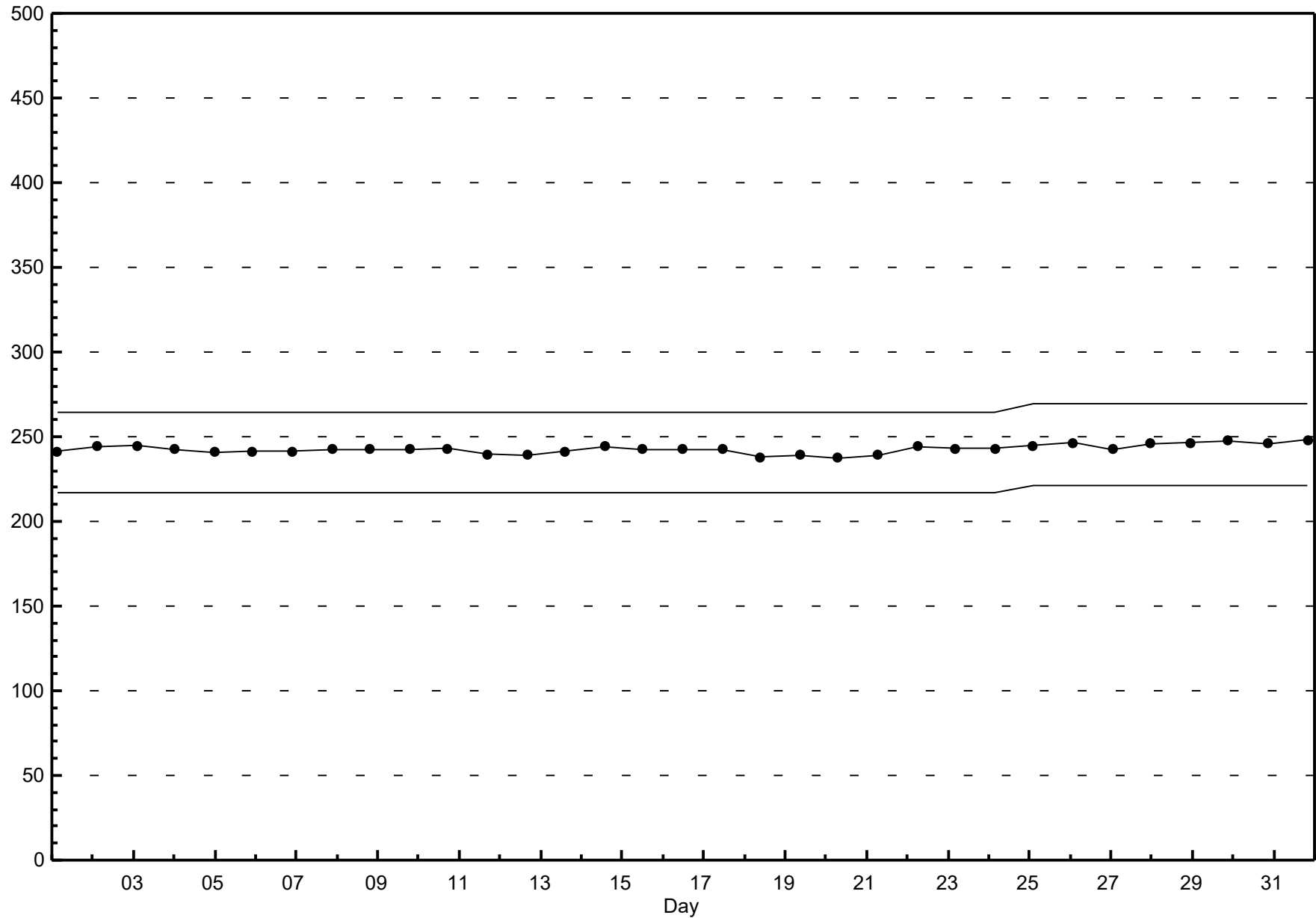


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Donnelly - August 2018



Hourly Averages

Hydrogen Sulphide (H₂S) - ppb

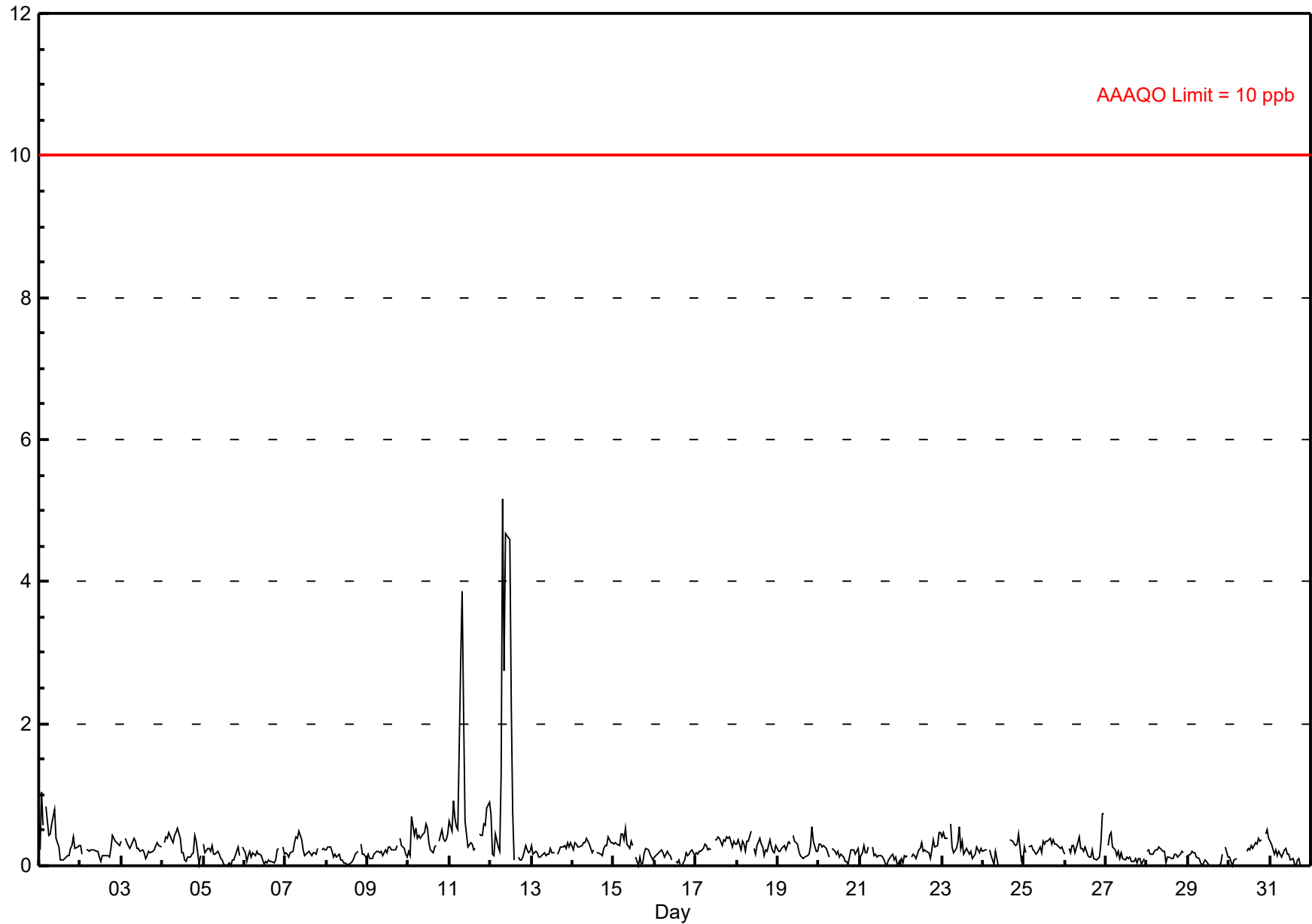
Donnelly - August 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 5.2 ppb on Aug 12 08:00 Maximum Daily Average: 1.3 ppb on Aug 12																					Hours in Service: 744 Hours of Data: 700 Hours of Missing Data: 44 Hours of Calibration: 39 Percent Operational Time: 99.3						
Minimum Value: 0 ppb on Aug 5 14:00 Maximum Diurnal Average: 0.6 ppb at hour 8 Monthly Average: 0.28 ppb										Minimum Daily Average: 0.1 ppb on Aug 29 Minimum Diurnal Average: 0.1 ppb at hour 16 Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.4 P ₉₉ = 2.3																	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	0	1	1	A	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.0	
2-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
3-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4	
4-Aug	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.3	0.5	
5-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.3	
6-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.3	
7-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.5	
8-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.3	
9-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.4	
10-Aug	0	0	1	0	1	0	0	0	0	0	1	1	0	0	0	0	A	0	0	0	1	0	0	0	0	0.4	0.7
11-Aug	1	0	1	1	1	1	3	4	2	1	0	0	0	0	0	0	A	0	0	0	1	1	1	1	0.8	3.9	
12-Aug	1	0	0	0	0	0	1	5	3	5	5	5	2	1	0	A	0	0	0	0	0	0	0	0	1.3	5.2	
13-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.3	
14-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.3	0.4	
15-Aug	0	0	0	0	0	0	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5	
16-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
17-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4	
18-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5	
19-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.2	0.5	
20-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
21-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
22-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5	
23-Aug	0	0	0	0	A	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6	
24-Aug	0	0	0	A	0	0	0	0	0	0	C	C	C	C	C	C	0	0	0	0	0	0	0	0	--	0.4	
25-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4	
26-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.3	0.7	
27-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.5	
28-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.3	
29-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.3	
30-Aug	0	0	0	0	0	P	P	P	P	P	0	0	0	0	0	0	0	0	0	0	A	0	1	0	0.3	0.5	
31-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.3	
0.3 0.3 0.3 0.3 0.3 0.3 0.4 0.6 0.4 0.4 0.4 0.4 0.3 0.2 0.1 0.1 0.2 0.2 0.2 0.2 0.3 0.3 0.2 0.3 0.3																									Diurnal Average		
0.7 1.0 0.9 0.7 0.8 0.6 2.9 5.2 2.7 4.7 4.6 4.6 2.3 0.7 0.4 0.4 0.4 0.4 0.4 0.4 0.5 0.6 0.6 0.8 0.9																									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

Donnelly - August 2018



Hourly Maximums

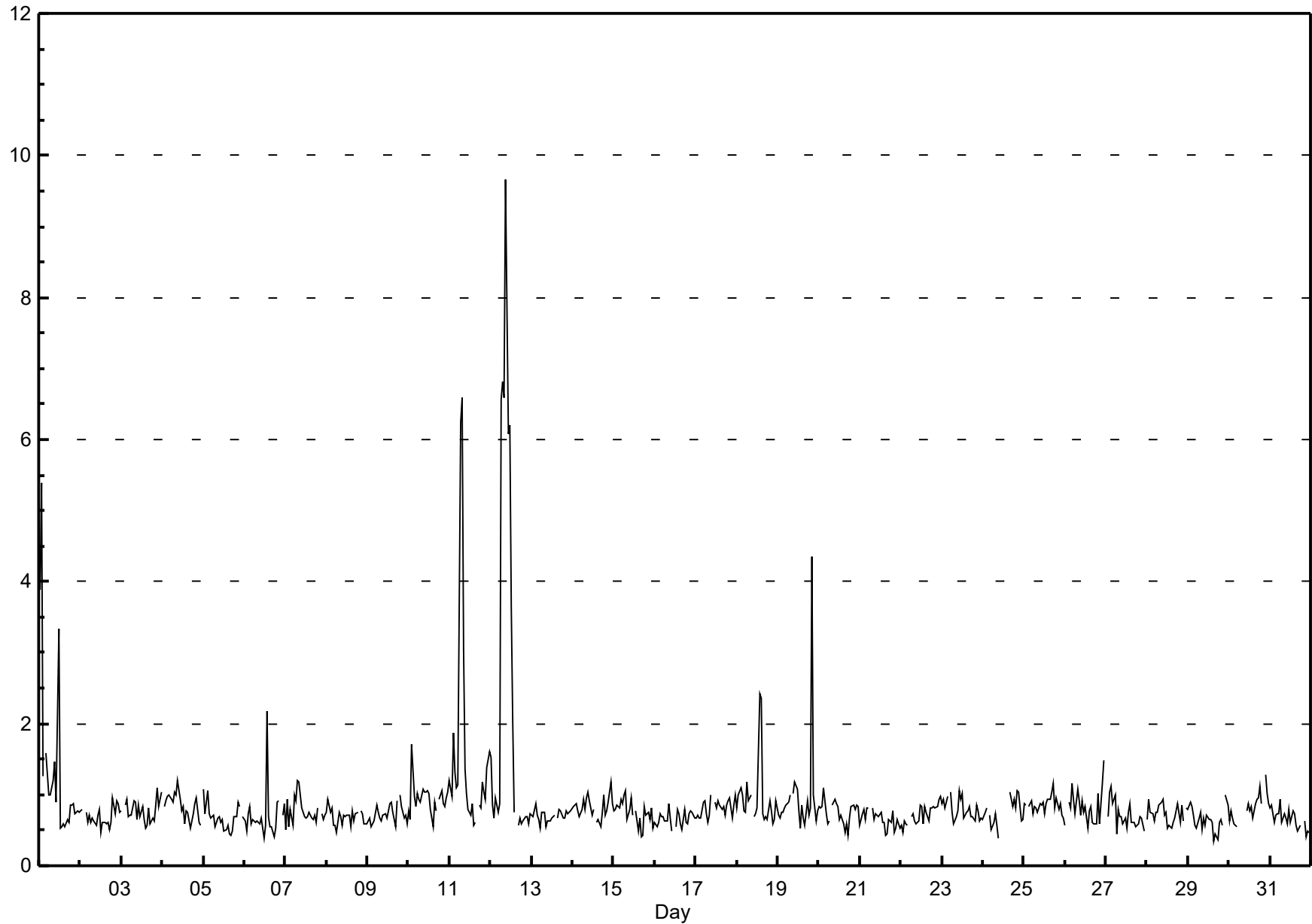
Hydrogen Sulphide (H₂S) - ppb

Donnelly - August 2018

Maximum Value: 9.7 ppb on Aug 12 10:00																			Maximum Daily Average: 2.6 ppb on Aug 12																			Hours in Service: 744	
Minimum Value: 0 ppb on Aug 29 16:00																			Minimum Daily Average: 0.6 ppb on Aug 29																			Hours of Data: 700	
Maximum Diurnal Average: 1.2 ppb at hour 8																			Minimum Diurnal Average: 0.6 ppb at hour 17																			Hours of Missing Data: 44	
Monthly Average: 0.87 ppb																			Percentiles: P ₁ = 0.4 P ₁₀ = 0.6 Q ₁ = 0.6 Median = 0.7 Q ₃ = 0.9 P ₉₀ = 1.0 P ₉₉ = 6.1																			Hours of Calibration: 39	
																																						Percent Operational Time: 99.3	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Aug	4	5	1	A	2	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1.3	5.4													
2-Aug	1	1	A	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0													
3-Aug	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1													
4-Aug	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	1.2													
5-Aug	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0	0	1	1	1	1	A	1	0.7	1.1													
6-Aug	1	0	1	1	1	1	1	1	1	1	1	0	1	2	1	1	1	0	1	1	1	A	1	1	0.7	2.2													
7-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.2													
8-Aug	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.7	0.9													
9-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.7	1.0													
10-Aug	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.9	1.7													
11-Aug	1	1	2	1	1	1	6	7	3	1	1	1	1	1	1	1	A	1	1	1	1	1	1	2	1.6	6.6													
12-Aug	2	1	1	1	1	1	7	7	7	10	6	6	4	2	1	A	1	1	1	1	1	1	1	1	2.6	9.7													
13-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.7	0.9													
14-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.8	1.2													
15-Aug	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	1	0	0	1	1	1	1	1	1	0.8	1.1													
16-Aug	1	1	1	1	1	1	1	1	1	1	0	A	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9													
17-Aug	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0													
18-Aug	1	1	1	1	1	1	1	1	1	1	A	1	1	2	2	1	1	1	1	1	1	1	1	1	1.0	2.4													
19-Aug	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	4	1	1	1	1.0	4.3													
20-Aug	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	0.8	1.1													
21-Aug	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	0	1	1	1	0	1	1	1	0.7	0.8													
22-Aug	1	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0													
23-Aug	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1													
24-Aug	1	1	1	A	1	0	1	1	1	0	C	C	C	C	C	C	1	1	1	1	1	1	1	1	--	1.1													
25-Aug	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2													
26-Aug	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.5													
27-Aug	A	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	0.7	1.1													
28-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.7	0.9													
29-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	A	1	1	0.6	1.0													
30-Aug	1	1	1	1	1	P	P	P	P	P	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.3													
31-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	A	1	0	0	0	0.7	0.9													
																									Diurnal Average														
																									Diurnal Maximum														
C - Calibration																																							
P - Power Failure																																							
A - Automated Daily Zero Span																																							

Hourly Maximums

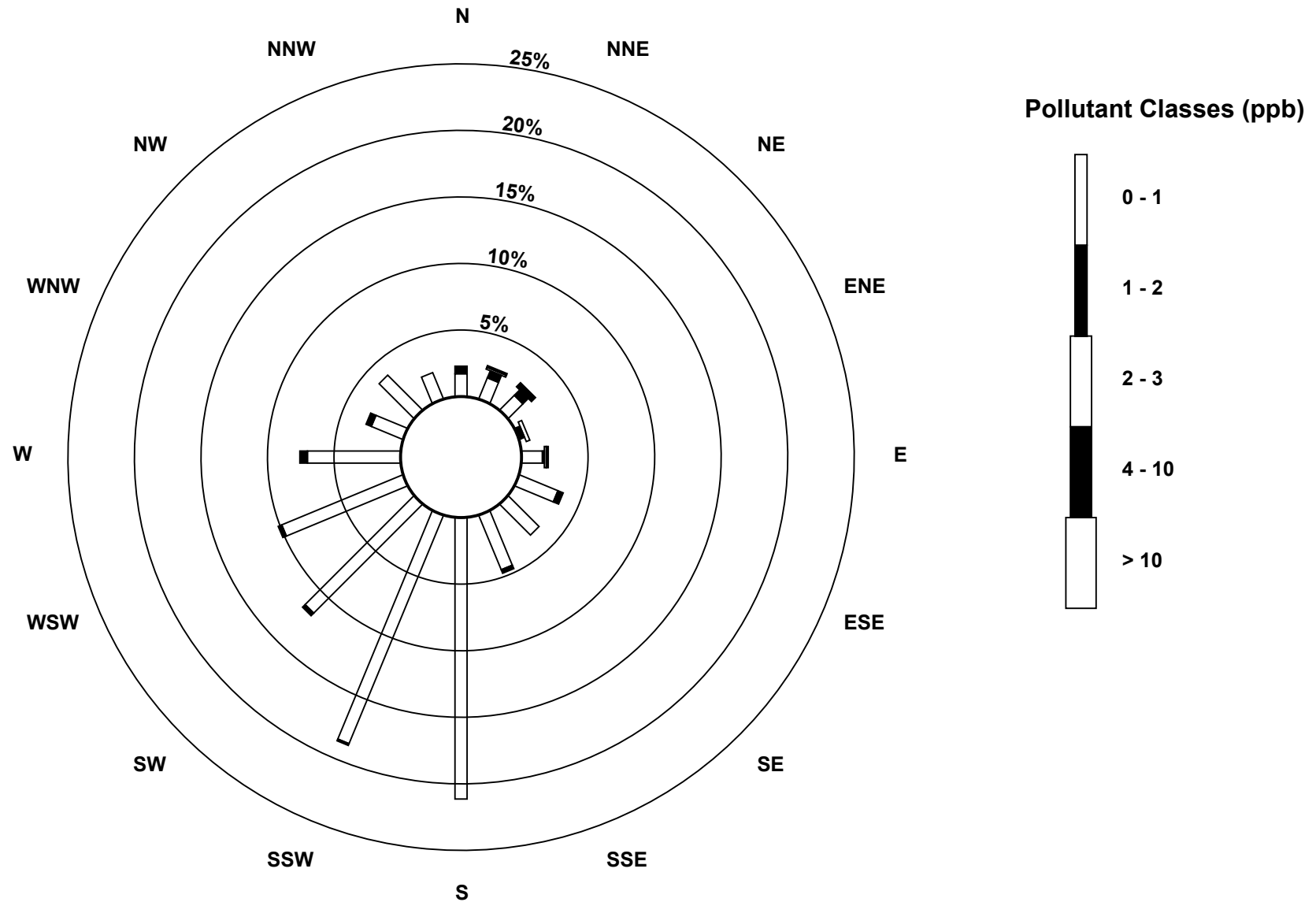
Hydrogen Sulphide (H₂S) - ppb
Donnelly - August 2018



Pollutant Rose

Hydrogen Sulphide (H₂S) - ppb

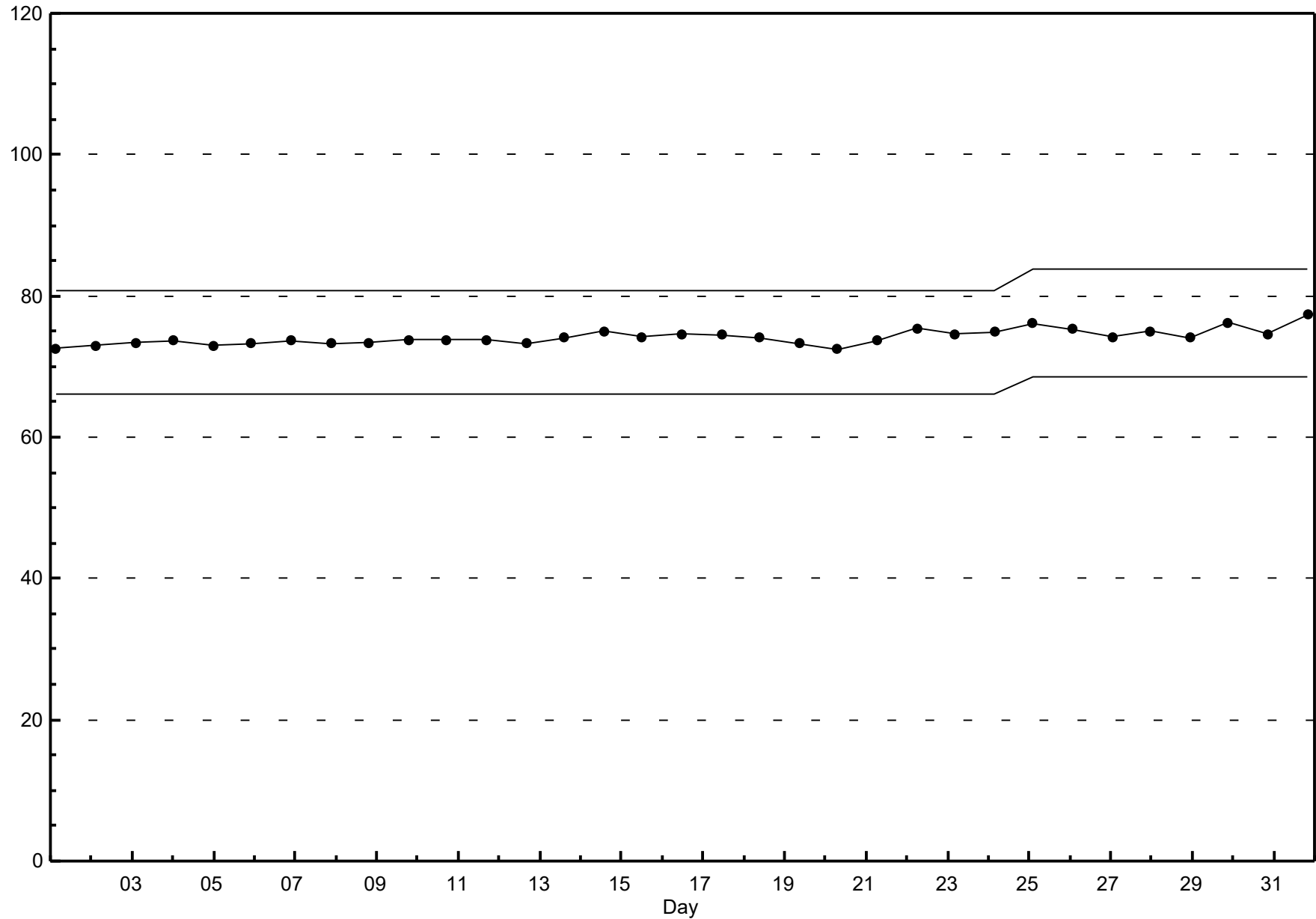
Donnelly - August 2018



Span Responses

Hydrogen Sulphide (H_2S)

Donnelly - August 2018



Hourly Averages

External Temperature (ET) - °C

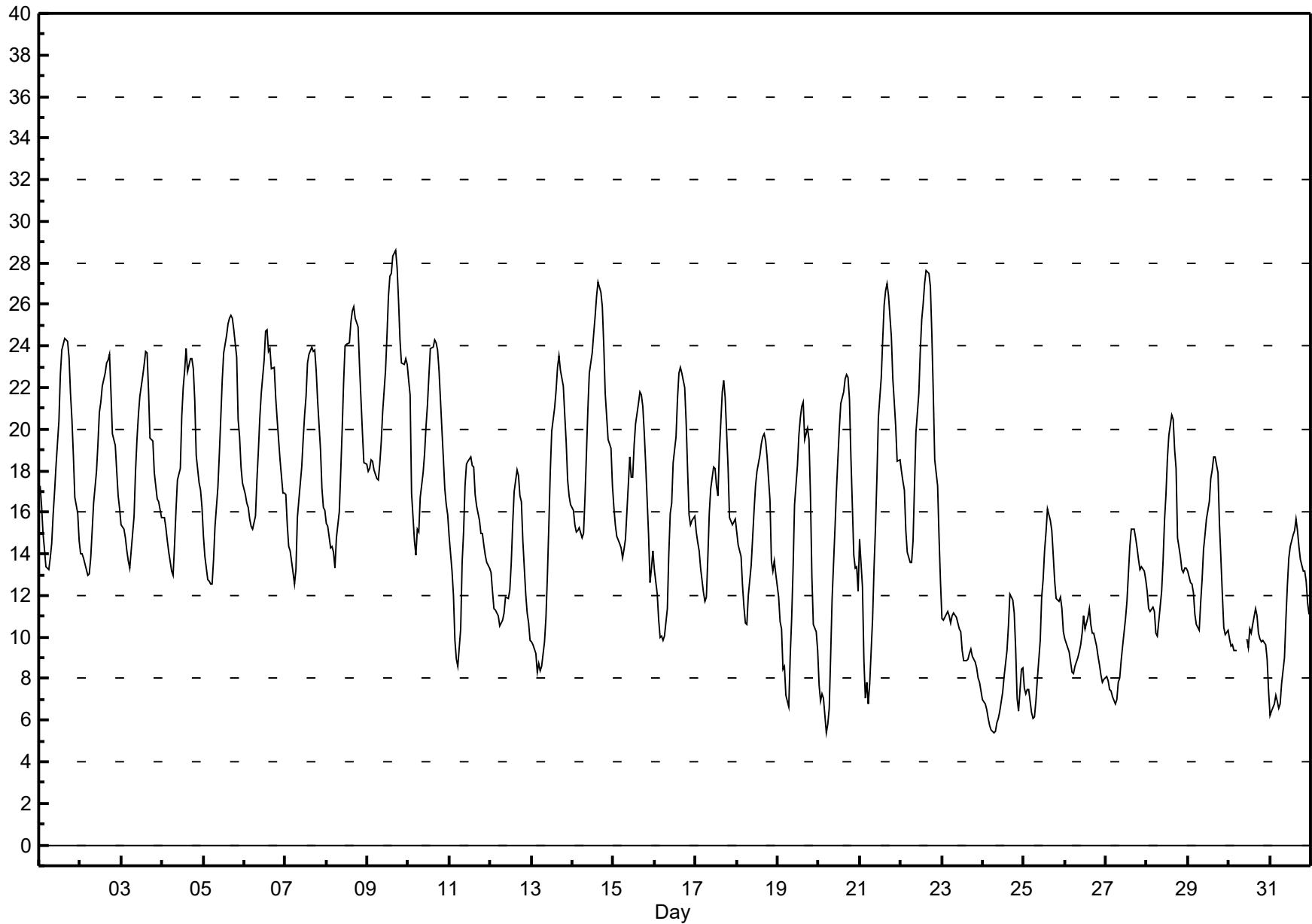
Donnelly - August 2018

Maximum Value: 28.6 °C on Aug 9 17:00																				Maximum Daily Average: 22.6 °C on Aug 9					Hours in Service: 744	
Minimum Value: 5 °C on Aug 24 07:00																				Minimum Daily Average: 7.7 °C on Aug 24					Hours of Data: 739	
Maximum Diurnal Average: 20.7 °C at hour 16																				Minimum Diurnal Average: 10.9 °C at hour 6					Hours of Missing Data: 5	
Monthly Average: 15.63 °C																				Percentiles: P ₁ = 6.1 P ₁₀ = 8.7 Q ₁ = 11.3 Median = 15.2 Q ₃ = 19.5 P ₉₀ = 23.3 P ₉₉ = 27.0					Hours of Calibration: 0	
																									Percent Operational Time: 99.3	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Aug	17	16	15	14	13	13	14	14	16	17	18	20	23	24	24	24	23	22	20	19	17	16	15	18.3	24.4	
2-Aug	14	14	14	13	13	13	14	15	16	18	19	21	21	22	23	23	24	22	20	19	18	17	16	18.0	23.6	
3-Aug	15	15	15	14	14	13	14	16	18	20	21	22	23	23	24	24	22	20	19	18	17	17	16	18.1	23.7	
4-Aug	16	16	15	15	14	13	13	14	16	18	18	21	22	23	24	23	23	23	21	19	17	17	16	18.3	23.9	
5-Aug	15	14	13	13	13	13	14	15	17	19	21	22	24	25	25	25	25	25	23	20	20	18	17	19.2	25.5	
6-Aug	17	16	16	16	15	15	16	18	19	21	22	23	25	25	24	24	23	23	22	20	19	19	17	17	19.6	24.8
7-Aug	17	15	14	14	13	13	13	16	17	18	19	21	22	23	24	24	24	24	23	21	19	17	16	16	18.5	23.9
8-Aug	15	15	14	14	14	13	15	16	18	20	22	24	24	24	25	26	26	25	25	23	21	20	18	18	19.9	25.9
9-Aug	18	18	19	18	18	18	18	18	19	21	23	25	26	27	28	28	29	28	26	24	23	23	23	23	22.6	28.6
10-Aug	22	22	17	15	14	15	15	17	18	19	20	21	23	24	24	24	24	24	23	20	19	17	16	16	19.5	24.3
11-Aug	15	13	12	10	9	9	10	14	15	17	18	18	19	18	18	17	16	16	15	15	14	14	14	13	14.6	18.6
12-Aug	13	12	11	11	11	11	11	11	11	12	12	12	14	15	17	18	18	17	17	15	12	11	11	10	13.0	18.0
13-Aug	10	10	9	8	9	8	9	10	11	13	15	18	20	21	22	23	24	23	22	21	19	18	17	16	15.6	23.5
14-Aug	16	15	15	15	15	15	15	17	19	21	23	24	25	25	26	27	27	26	24	22	21	19	19	17	20.3	27.1
15-Aug	16	15	15	14	14	14	14	15	16	19	18	18	19	20	21	22	22	21	20	18	15	13	13	14	16.9	21.8
16-Aug	13	12	11	10	10	10	10	11	14	16	16	18	20	21	23	23	23	22	20	18	16	15	16	16	16.0	23.0
17-Aug	15	15	14	13	12	12	12	14	16	17	18	18	17	17	19	22	22	22	20	18	16	15	16	16	16.5	22.4
18-Aug	15	14	14	13	11	11	11	12	13	15	16	17	18	19	19	20	20	19	19	17	14	13	14	13	15.2	19.8
19-Aug	12	11	10	8	9	7	7	9	11	13	16	18	20	21	21	21	20	20	20	17	13	11	10	9	13.9	21.3
20-Aug	8	7	7	7	5	6	7	9	12	15	17	19	20	21	22	22	23	22	21	19	14	13	13	12	14.3	22.6
21-Aug	15	12	9	7	8	7	8	11	13	15	18	21	22	24	26	27	27	26	24	22	21	20	18	19	17.6	27.0
22-Aug	18	17	17	15	14	14	14	15	17	20	22	24	25	26	27	28	27	27	25	22	19	17	15	13	19.8	27.6
23-Aug	11	11	11	11	11	11	11	11	11	11	10	10	9	9	9	9	9	9	9	9	8	8	7	9.8	11.2	
24-Aug	7	7	6	6	6	6	5	5	6	6	6	7	8	9	9	11	12	12	11	9	7	6	8	9	7.7	12.1
25-Aug	8	7	7	7	6	6	6	7	8	10	12	13	14	15	16	16	15	14	13	12	12	12	11	10	10.7	16.1
26-Aug	10	10	9	9	8	8	9	9	9	10	10	11	10	11	11	11	10	10	9	9	8	8	8	8	9.5	11.4
27-Aug	8	8	7	7	7	7	7	8	8	9	10	11	12	13	14	15	15	15	14	14	13	13	13	13	10.9	15.2
28-Aug	12	11	11	11	11	10	10	11	12	14	16	17	19	20	21	20	19	18	15	14	13	13	13	13	14.4	20.7
29-Aug	13	13	13	12	11	11	10	12	13	14	15	16	17	18	18	19	19	18	15	14	12	10	10	10	13.8	18.6
30-Aug	10	10	10	9	9	P	P	P	P	P	10	9	10	10	11	11	11	10	10	10	10	10	9	7	9.8	11.4
31-Aug	6	6	7	7	7	7	7	8	9	11	12	14	14	15	15	16	15	14	14	13	13	13	12	11	11.1	15.7
13.5 12.9 12.2 11.6 11.2 10.9 11.2 12.6 14.0 15.5 16.6 17.8 18.8 19.6 20.3 20.7 20.5 20.0 18.9 17.4 15.7 14.8 14.3 13.8																								Diurnal Average		
22.4 21.6 18.6 18.5 18.0 17.6 17.6 18.3 19.4 20.9 22.8 24.5 26.4 27.4 27.5 28.3 28.6 27.8 26.2 24.3 23.2 23.1 23.4 23.1																								Diurnal Maximum		
P - Power Failure																										

Hourly Averages

External Temperature (ET) - °C

Donnelly - August 2018



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Donnelly - August 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	8	3	2	2	2	1	1	4	5	8	8	9	6	4	4	6	9	8	6	4	5	9	9	7	3.2	9.4
Dir	24	108	23	97	156	104	223	238	232	263	242	254	316	323	270	264	266	281	258	145	188	196	197	206	244	196
2 Spd	8	8	9	8	10	11	10	8	10	9	9	7	10	10	9	11	10	11	8	6	10	12	12	11	9.1	12.0
Dir	185	177	179	178	186	185	188	189	191	197	202	164	151	171	204	211	214	229	228	192	182	185	189	194	190	185
3 Spd	11	13	12	12	12	11	12	12	14	17	18	20	17	19	20	26	24	12	16	13	8	6	6	5	11.6	26.0
Dir	202	215	210	195	198	192	197	213	235	250	261	260	254	264	263	268	278	305	280	263	250	223	41	181	246	268
4 Spd	8	5	3	7	8	10	8	9	12	10	9	9	8	9	8	10	12	10	7	3	11	6	3	5	4.8	11.5
Dir	199	177	135	193	199	205	198	225	262	268	241	257	281	299	298	289	283	298	289	320	356	40	113	204	257	283
5 Spd	4	3	4	6	7	5	6	9	9	11	11	12	12	14	14	14	13	12	10	8	11	12	12	14	8.6	14.2
Dir	208	107	123	193	197	189	189	188	201	210	200	217	228	240	227	241	241	241	228	199	185	176	181	180	208	240
6 Spd	15	15	15	13	13	12	10	12	13	15	16	21	22	15	13	15	17	18	11	10	10	11	12	12	12.8	21.7
Dir	184	186	188	190	190	192	196	202	213	219	232	234	246	250	266	238	242	236	238	244	238	239	215	214	222	246
7 Spd	12	11	8	7	10	8	8	9	12	13	12	14	14	18	20	18	14	13	9	10	11	10	10	12	10.2	19.7
Dir	217	207	204	203	203	194	189	207	220	230	235	257	254	259	268	272	268	268	237	219	198	205	194	186	231	268
8 Spd	11	9	10	12	9	5	5	9	9	11	12	13	13	11	13	12	9	6	9	11	12	12	12	12	10.1	13.1
Dir	186	180	185	182	180	180	177	186	195	209	210	209	191	188	185	186	180	156	182	183	180	192	196	193	189	209
9 Spd	13	12	12	14	14	12	10	10	7	7	11	13	14	15	13	11	8	6	8	8	10	10	13	11	9.8	15.3
Dir	183	182	179	177	183	180	177	174	179	177	188	197	221	223	233	224	199	200	164	159	154	142	140	142	184	223
10 Spd	9	9	2	4	1	7	10	11	10	12	11	16	18	19	14	10	7	7	5	8	10	10	10	6	6.6	18.8
Dir	142	139	353	62	154	192	194	195	233	238	234	268	276	291	293	270	255	263	249	214	227	199	199	218	238	291
11 Spd	6	4	4	1	2	3	3	2	3	5	5	7	5	6	5	3	2	4	2	3	4	1	1	3	2.8	6.6
Dir	4	50	29	301	356	55	75	83	79	91	100	107	100	135	125	134	86	56	82	91	34	62	8	47	76	107
12 Spd	7	16	7	8	9	6	7	6	4	4	8	6	9	5	6	7	7	9	9	8	6	8	9	10	4.5	16.4
Dir	116	133	113	108	110	110	36	40	64	46	30	41	31	56	94	131	142	170	187	189	182	182	177	181	122	133
13 Spd	9	7	7	12	12	7	8	11	13	18	19	20	19	20	21	20	17	12	12	13	14	15	16	15	13.8	21.2
Dir	174	155	164	178	176	171	165	165	170	170	171	171	174	182	184	194	199	186	174	176	181	190	189	196	179	184
14 Spd	12	12	13	14	13	14	13	13	15	17	20	21	20	22	20	22	25	23	18	15	18	19	19	14	16.5	24.7
Dir	199	198	202	210	212	211	205	212	229	247	255	249	238	241	238	230	233	232	244	243	231	230	235	224	230	233
15 Spd	13	11	10	9	7	4	4	5	7	9	13	11	16	14	7	7	6	5	3	1	5	4	4	5	2.6	15.7
Dir	219	223	224	219	205	210	209	244	268	307	320	337	356	13	13	335	329	322	334	187	125	120	111	105	294	356
16 Spd	5	5	5	3	4	4	3	6	3	6	11	13	14	12	15	13	12	9	9	9	10	11	11	13	7.1	15.3
Dir	108	136	121	104	114	114	97	113	106	152	175	182	197	215	229	216	215	193	181	178	179	178	178	179	181	229
17 Spd	14	14	16	13	9	11	11	10	8	10	11	10	11	12	16	18	17	14	12	12	11	13	17	19	12.4	18.5
Dir	181	182	186	188	189	191	189	191	206	208	209	209	192	192	212	234	226	212	209	219	204	207	217	226	205	226
18 Spd	18	16	11	7	7	8	9	11	13	16	17	19	18	20	19	19	17	13	6	5	7	7	9	11	10.0	19.8
Dir	228	242	325	329	291	270	240	248	261	274	284	281	283	278	276	262	263	260	237	170	164	161	170	179	260	278
19 Spd	10	10	8	6	9	6	5	7	6	4	3	6	8	7	8	6	5	5	4	1	2	2	3	3	2.5	10.2
Dir	183	182	184	198	189	200	190	209	241	271	253	271	316	336	329	337	350	295	302	92	111	152	150	160	231	183
20 Spd	3	2	4	5	5	6	6	2	4	4	9	11	10	13	13	13	13	13	9	3	4	6	5	5	6.2	13.2
Dir	175	174	172	185	182	186	188	189	202	194	215	234	223	246	234	210	206	209	204	178	160	157	149	165	204	206
21 Spd	8	5	2	1	3	2	1	2	3	6	7	6	11	13	14	15	15	12	9	10	12	12	14	19	8.2	18.6
Dir	166	177	159	137	180	188	187	190	188	201	181	162	176	193	203	200	195	198	187	168	171	173	179	185	185	185
22 Spd	19	20	17	13	16	13	10	11	15	16	17	17	17	17	15	13	12	12	8	9	8	6	5	3	11.6	19.8
Dir	189	189	194	204	208	205	190	199	207	225	236	239	250	242	240	240	237	231	203	210	203	216	10	320	218	189

Hourly Averages

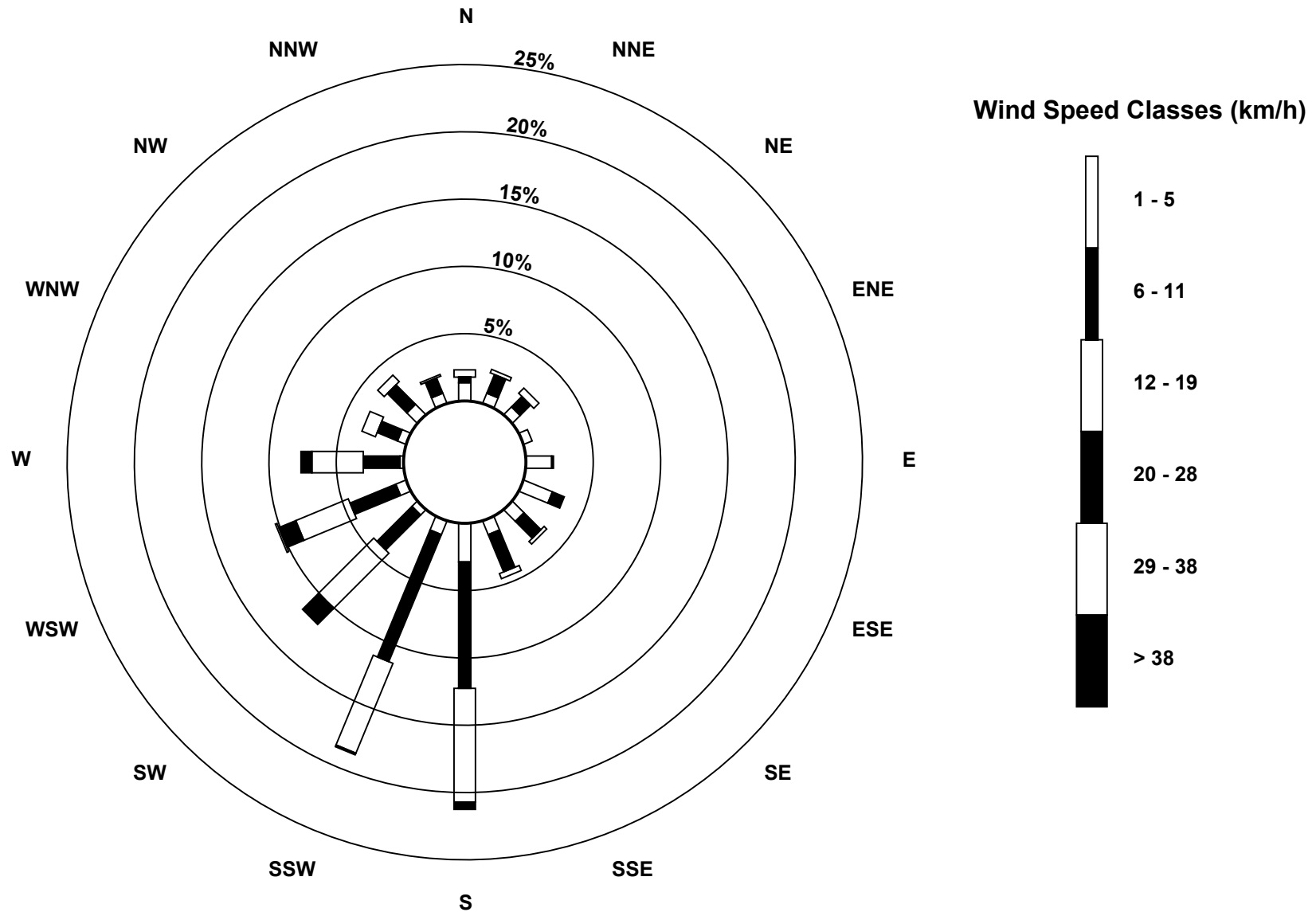
Wind Speed (km/h)
Wind Direction (deg)
Donnelly - August 2018

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	3	5	5	6	6	6	9	9	12	12	9	5	8	7	6	5	6	5	4	5	7	6	5	7	5.7	11.8	
Dir	307	13	20	34	23	16	21	27	43	47	48	25	17	16	3	357	19	354	353	334	317	328	313	319	12	47	
24 Spd	7	8	9	9	9	9	11	11	12	12	12	13	11	11	10	6	4	9	8	6	6	5	8	12	5.6	13.0	
Dir	324	308	308	315	319	315	313	304	304	305	307	290	293	293	281	293	249	228	205	153	135	129	143	166	289	290	
25 Spd	5	3	8	4	4	3	4	4	3	6	6	10	7	6	3	2	2	8	10	12	10	11	11	8	4.6	11.5	
Dir	134	97	127	113	96	107	96	103	90	130	131	133	153	177	207	333	134	173	193	173	171	172	256	202	156	173	
26 Spd	9	7	7	10	7	10	11	12	11	11	12	13	12	12	12	12	7	14	16	12	6	3	1	4	5.0	16.4	
Dir	259	213	234	246	256	235	252	270	266	278	287	291	345	353	1	6	345	28	37	37	49	348	293	297	310	37	
27 Spd	4	5	2	3	5	3	1	3	5	8	8	10	14	12	14	15	14	10	9	12	15	15	14	12	6.9	15.5	
Dir	327	353	324	343	6	320	51	217	205	209	205	192	192	181	184	189	193	178	151	166	174	176	181	190	187	176	
28 Spd	9	8	10	11	9	11	12	10	12	12	13	8	10	13	11	14	14	9	13	7	6	6	14	16	9.3	15.9	
Dir	204	203	198	201	198	209	224	250	267	262	260	255	257	257	229	238	232	201	202	223	186	157	174	180	221	180	
29 Spd	15	14	14	15	13	12	11	14	16	17	14	12	14	14	12	13	13	11	9	7	4	5	11	12	10.6	16.7	
Dir	186	190	187	195	205	204	190	209	211	236	243	243	230	238	261	276	267	270	229	274	258	235	247	226	227	236	
30 Spd	13	12	11	14	15	P	P	P	P	P	10	9	8	6	8	12	17	7	6	10	11	8	6	6	8.8	16.6	
Dir	227	234	227	221	239	P	P	P	P	P	300	295	294	278	270	272	270	309	243	253	254	232	262	194	255	270	
31 Spd	6	9	13	12	11	15	18	11	15	16	21	24	29	28	26	24	28	27	24	24	25	26	19	20	17.8	28.7	
Dir	194	181	174	167	162	169	176	183	190	208	225	234	242	241	238	239	232	230	229	220	228	239	243	234	221	242	
Spd	6.8	6.6	5.5	5.9	5.9	5.8	5.4	5.8	6.4	7.2	7.8	8.6	7.9	8.4	8.8	9.4	9.3	7.2	6.3	5.9	6.4	7.1	7.1	8.3	Diurnal Average		
Dir	195	189	191	194	196	195	195	207	221	231	236	239	242	245	243	242	238	235	220	205	198	195	197	197	Diurnal Maximum		
Spd	19.0	19.8	17.3	15.1	15.9	14.7	17.7	13.9	15.5	17.6	20.9	24.4	28.7	27.7	25.6	26.0	28.4	27.1	23.6	24.1	25.3	25.6	19.4	19.9	Diurnal Maximum		
Dir	189	189	194	195	208	169	176	209	211	170	225	234	242	241	238	268	232	230	229	220	228	239	243	234			
Maximum Speed Value: 29 km/h on Aug 31 13:00																		Minimum Speed Value: 1 km/h on Aug 19 20:00							Hours in Service: 744		
Maximum Daily Speed Average: 17.8 km/h on Aug 31																		Minimum Daily Speed Average: 2.5 km/h on Aug 11							Hours of Data: 739		
Maximum Diurnal Speed Average: 9.4 km/h at hour 16																		Minimum Diurnal Speed Average: 5.4 km/h at hour 7							Hours of Missing Data: 5		
Monthly Average Velocity: 6.62 km/h 217.1 deg																		Speed Percentiles: P ₁ = 1.2 P ₁₀ = 3.9 Q ₁ = 6.3 Median = 9.9 Q ₃ = 12.9 P ₉₀ = 16.5 P ₉₉ = 25.1							Percent Operational Time: 99.3		
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		8	15	7	0	0	0																			30	
NorthEast		12	15	5	0	0	0																			32	
East		25	7	0	0	0	0																			32	
SouthEast		19	28	3	0	0	0																			50	
South		21	120	102	5	0	0																			248	
SouthWest		10	64	102	21	2	0																			199	
West		6	36	40	11	0	0																			93	
NorthWest		16	31	8	0	0	0																			55	
Total		117	316	267	37	2	0																			739	

Wind Rose

Wind Speed (WS) (km/h)

Donnelly - August 2018



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Donnelly - August 2018

Maximum Speed: 29 km/h on Aug 31 13:00																				Maximum Daily Speed Average: 19.7 km/h on Aug 31										Hours in Service: 744	
Minimum Speed: 1 km/h on Aug 21 04:00																				Minimum Daily Speed Average: 4.0 km/h on Aug 11										Hours of Data: 739	
Maximum Diurnal Speed Average: 13.5 km/h at hour 14																				Minimum Diurnal Speed Average: 8.1 km/h at hour 7										Hours of Missing Data: 5	
Monthly Average Speed: 10.38 km/h																				Percentiles: P ₁ = 2.0 P ₁₀ = 4.2 Q ₁ = 6.7 Median = 10.3 Q ₃ = 13.1 P ₉₀ = 16.6 P ₉₉ = 25.5										Percent Operational Time: 99.3	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Aug	10	4	3	3	3	3	2	4	5	8	9	9	7	5	6	7	10	8	7	4	6	9	9	7	6.2	9.8					
2-Aug	8	8	9	8	10	11	10	9	10	9	9	8	11	11	10	11	11	11	8	6	10	12	12	11	9.7	12.0					
3-Aug	11	13	12	12	12	11	12	12	15	17	19	21	17	19	21	26	26	12	16	13	8	7	6	6	14.3	26.2					
4-Aug	8	5	3	7	8	10	8	10	12	10	10	10	9	10	8	10	12	10	7	4	12	7	4	6	8.3	11.8					
5-Aug	5	3	4	6	7	5	6	9	9	11	12	12	12	15	14	14	13	12	10	8	11	12	12	14	9.8	14.5					
6-Aug	15	15	15	13	13	12	10	12	13	15	16	22	22	16	13	15	18	18	11	10	10	11	12	12	14.1	21.8					
7-Aug	12	11	8	7	10	8	8	9	12	13	13	14	15	18	20	18	14	13	9	10	11	10	11	12	11.9	20.0					
8-Aug	11	9	10	12	9	6	5	9	9	11	12	13	13	11	13	12	9	6	9	11	12	12	12	12	10.3	13.5					
9-Aug	13	12	12	14	14	12	11	10	7	7	11	13	15	16	13	11	9	7	8	8	10	10	13	11	11.0	15.6					
10-Aug	9	10	4	4	3	7	10	11	11	12	11	16	18	19	14	11	7	7	5	8	10	10	10	9	9.9	19.0					
11-Aug	7	4	5	2	2	3	4	3	4	5	6	7	5	6	5	3	3	4	2	3	4	1	2	4	4.0	7.0					
12-Aug	8	17	7	8	9	6	7	6	5	4	8	6	9	6	6	7	7	9	9	8	6	8	10	10	7.8	16.6					
13-Aug	9	7	8	12	12	7	8	11	13	18	19	20	19	20	21	21	17	12	12	13	14	15	16	15	14.1	21.4					
14-Aug	12	12	13	14	13	14	13	13	15	17	20	21	21	23	20	22	25	24	18	15	18	19	19	14	17.2	24.8					
15-Aug	13	11	10	9	7	5	4	5	8	9	13	12	16	15	8	7	7	5	4	2	5	4	4	5	7.9	15.9					
16-Aug	5	5	5	3	4	4	3	6	3	7	12	14	14	13	16	14	12	9	9	9	10	11	11	13	8.8	15.5					
17-Aug	14	14	16	13	9	11	11	10	8	10	12	11	11	12	16	18	17	14	12	12	11	13	17	19	13.0	18.6					
18-Aug	18	17	11	8	7	9	9	11	13	17	17	19	18	20	20	20	17	13	7	5	7	7	9	11	12.9	20.2					
19-Aug	10	10	8	6	9	6	5	8	6	5	4	7	8	8	9	9	5	5	4	2	2	2	3	3	6.0	10.3					
20-Aug	3	2	4	5	5	6	6	2	4	4	9	12	11	13	14	13	14	13	9	3	4	6	5	5	7.1	14.0					
21-Aug	8	5	3	1	3	2	1	3	4	7	7	7	11	14	14	15	15	13	9	10	12	12	14	19	8.7	18.6					
22-Aug	19	20	17	13	16	13	10	11	15	16	17	17	18	17	15	13	12	12	8	9	9	11	6	4	13.3	19.9					
23-Aug	3	5	6	6	6	6	9	9	12	12	9	6	8	7	6	6	6	5	5	5	7	6	5	7	6.8	11.9					
24-Aug	7	8	9	9	9	9	11	11	12	12	12	13	12	11	11	7	5	9	8	6	6	5	8	12	9.3	13.2					
25-Aug	5	4	8	4	6	3	5	4	4	6	7	10	8	7	4	3	3	8	11	12	10	11	14	9	6.8	14.4					
26-Aug	10	7	7	11	7	10	11	12	11	11	12	13	14	12	12	12	7	14	17	12	6	3	1	4	9.8	16.5					
27-Aug	5	5	3	4	5	4	2	3	6	8	8	11	14	13	14	16	14	10	9	12	15	16	14	12	9.2	15.5					
28-Aug	9	8	10	12	9	12	12	11	12	12	13	9	10	14	12	14	14	9	13	10	6	7	14	16	11.2	16.0					
29-Aug	15	14	14	15	13	12	11	14	16	17	14	13	14	14	14	14	13	11	13	8	4	5	11	13	12.5	16.9					
30-Aug	13	12	12	14	15	P	P	P	P	P	11	9	8	6	8	12	17	8	7	10	11	8	7	6	10.3	16.9					
31-Aug	6	10	13	12	11	15	18	11	15	16	21	25	29	28	26	24	28	27	24	24	26	26	19	20	19.7	28.9					
																									Diurnal Average						
																									Diurnal Maximum						
P - Power Failure																															
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg

Donnelly - August 2018

Maximum Value: 95.7 deg on Aug 10 05:00																		Hours in Service: 744							
Minimum Value: 1.5 deg on Aug 6 00:00																		Hours of Data: 739							
																		Hours of Missing Data: 5							
Percentiles: P ₁ = 2.2 P ₁₀ = 3.8 Q ₁ = 6.0 Median = 9.8 Q ₃ = 16.8 P ₉₀ = 30.1 P ₉₉ = 74.8																		Hours of Calibration: 0							
																		Percent Operational Time: 99.3							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	49	43	67	39	79	90	80	23	22	15	18	16	35	46	49	27	16	12	26	33	55	9	16	9	89.7
2-Aug	6	7	10	11	6	3	3	7	14	17	16	33	14	15	22	15	17	13	9	6	3	4	2	4	32.6
3-Aug	4	9	12	4	4	3	4	11	8	9	9	10	15	10	8	7	24	11	14	7	7	27	31	43	43.2
4-Aug	7	30	28	6	3	5	5	18	10	9	17	19	26	16	23	15	13	10	7	18	22	36	33	47	46.7
5-Aug	29	24	21	16	11	10	8	6	10	12	12	17	16	12	12	14	9	8	8	8	4	3	2	2	29.3
6-Aug	2	2	2	2	2	2	4	6	4	6	5	10	6	6	9	8	6	3	7	6	7	7	7	4	10.3
7-Aug	4	6	10	5	4	3	5	6	6	7	12	7	10	8	10	7	11	9	18	9	4	11	16	6	18.4
8-Aug	7	7	3	5	5	38	14	4	9	13	8	13	8	6	7	5	13	11	9	3	4	4	3	5	37.8
9-Aug	5	4	6	7	6	4	6	5	9	8	7	8	12	10	9	17	11	13	9	8	6	3	3	4	16.6
10-Aug	6	51	54	26	96	17	14	11	29	8	10	9	5	8	8	10	12	16	17	5	13	6	4	55	95.7
11-Aug	22	16	46	68	34	21	23	31	21	20	18	15	19	14	15	33	28	12	32	20	23	38	69	33	69.4
12-Aug	20	11	15	9	7	12	14	11	45	21	11	16	9	28	28	24	20	16	7	5	9	6	8	4	45.5
13-Aug	7	6	13	6	4	10	8	9	9	9	7	9	11	7	7	10	7	6	3	3	5	2	6	6	12.8
14-Aug	4	3	3	4	2	3	3	4	8	7	7	9	9	8	8	7	5	4	5	3	5	4	4	6	9.4
15-Aug	5	11	10	25	18	48	31	23	25	15	7	21	11	16	30	25	20	10	30	79	14	15	8	8	78.7
16-Aug	9	23	11	17	14	7	24	12	28	22	11	13	9	17	11	11	7	8	4	3	2	3	3	7	27.6
17-Aug	3	2	3	2	2	3	7	9	7	7	10	8	6	4	17	5	8	4	3	14	10	5	5	4	17.3
18-Aug	3	23	18	18	16	26	6	7	11	8	8	10	12	12	12	12	12	7	22	12	4	5	6	3	25.9
19-Aug	5	5	3	11	4	10	4	8	22	24	43	27	29	27	29	45	15	19	12	83	20	17	10	15	82.8
20-Aug	8	41	46	4	4	3	6	67	10	36	16	16	19	17	21	12	18	8	6	72	9	8	8	8	72.4
21-Aug	5	15	65	75	47	54	83	63	74	15	17	24	16	10	12	11	9	7	10	6	4	4	2	4	83.1
22-Aug	2	3	4	4	2	3	5	3	3	8	5	6	8	7	9	8	5	5	6	15	32	64	22	28	63.6
23-Aug	20	11	35	15	10	14	15	11	7	7	10	24	10	10	14	25	13	12	19	12	8	18	16	9	34.6
24-Aug	11	9	11	7	7	7	6	8	7	14	12	11	17	16	13	40	62	24	14	20	5	8	6	9	62.2
25-Aug	33	39	11	21	36	49	17	12	27	18	12	10	18	31	41	42	64	13	20	11	4	6	49	42	63.8
26-Aug	28	13	18	16	24	8	9	5	5	5	6	10	28	10	11	8	8	16	6	8	14	24	31	12	31.5
27-Aug	22	11	26	22	17	18	41	65	13	9	11	13	12	19	14	10	8	9	8	6	4	4	3	3	64.9
28-Aug	9	7	6	6	7	5	11	9	8	10	14	27	21	17	25	10	9	9	20	43	20	21	3	5	42.7
29-Aug	4	5	3	6	6	5	5	6	4	9	10	15	11	18	28	13	14	13	42	15	19	11	4	11	41.8
30-Aug	9	13	11	6	5	P	P	P	P	P	15	10	12	23	10	9	10	28	32	6	10	8	30	24	31.9
31-Aug	8	4	4	4	7	5	4	8	4	8	7	6	5	5	5	5	4	4	5	3	7	5	3	6	8.5
48.9 50.6 66.6 75.4 95.7 89.7 83.1 66.8 73.7 35.8 43.4 32.6 34.5 45.8 48.7 44.8 63.8 28.3 41.8 82.8 54.6 63.6 69.4 55.1																									
P - Power Failure																									

PAZA

Portable – Rycroft Station

Monthly Summary Tables, Graphs and
Roses

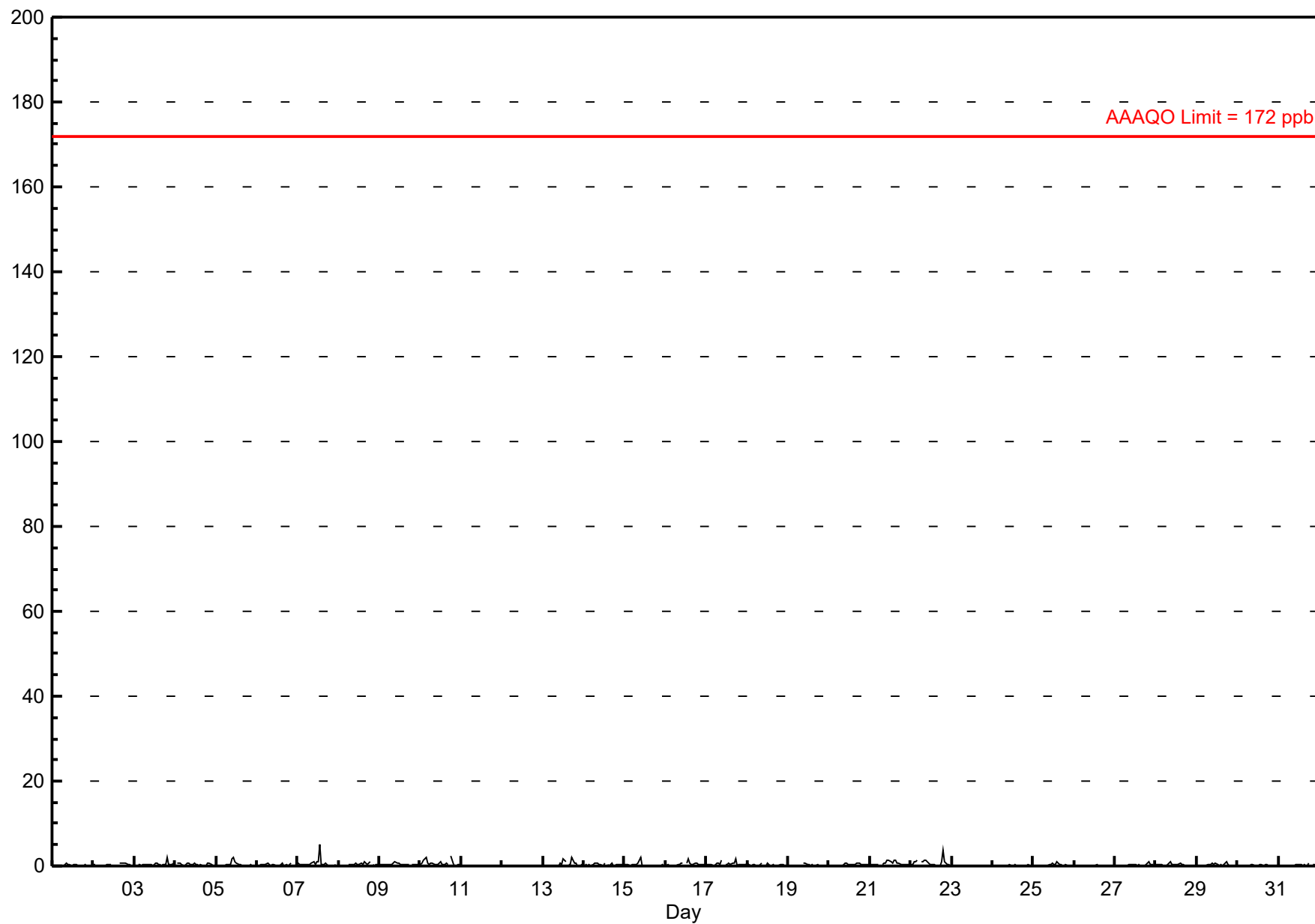
Hourly Averages

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 744							
Maximum Value: 5.2 ppb on Aug 7 14:00																			Maximum Daily Average: 0.8 ppb on Aug 22		Hours of Data: 698					
Minimum Value: 0 ppb on Aug 1 02:00																			Minimum Daily Average: 0.0 ppb on Aug 12		Hours of Missing Data: 46					
Maximum Diurnal Average: 0.5 ppb at hour 10																			Minimum Diurnal Average: 0.1 ppb at hour 6		Hours of Calibration: 39					
Monthly Average: 0.30 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.4 P ₉₀ = 0.7 P ₉₉ = 1.9		Percent Operational Time: 99.1					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
2-Aug	0	0	A	0	0	0	0	0	1	0	0	C	C	C	C	1	1	1	1	1	0	0	0	0	0.3	0.7
3-Aug	0	A	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0	0	0	1	0.4	2.0
4-Aug	A	1	1	1	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	1	1	0	0	A	0.4	0.8
5-Aug	0	0	0	0	0	0	0	0	0	2	2	1	1	0	0	0	0	0	0	0	0	0	A	0	0.3	2.0
6-Aug	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	1	A	1	0	0.3	0.7
7-Aug	1	0	0	0	0	0	0	0	1	1	0	1	1	5	0	0	1	0	0	0	A	0	0	P	0.7	5.2
8-Aug	P	P	P	P	P	P	0	0	0	0	1	0	0	1	0	1	1	0	1	A	A	0	0	0	--	1.0
9-Aug	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0.5	1.0
10-Aug	0	1	1	2	1	0	1	1	0	0	0	1	1	0	0	1	0	A	2	0	0	0	0	0	0.6	2.3
11-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.1
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.0	0.1
13-Aug	0	0	0	0	0	0	0	0	0	0	1	0	2	1	A	0	0	2	1	1	0	0	0	0	0.4	2.0
14-Aug	0	0	0	0	0	0	1	1	1	0	0	0	1	A	0	0	1	0	0	0	0	0	0	0	0.3	0.7
15-Aug	0	0	0	0	0	0	0	0	1	2	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	2.1
16-Aug	0	0	0	0	0	0	0	0	0	1	1	A	1	2	1	0	0	1	1	0	0	0	0	0	0.4	1.6
17-Aug	0	0	0	0	0	0	1	1	0	1	A	0	0	1	0	1	1	2	0	0	0	0	0	0	0.5	1.6
18-Aug	1	0	0	0	0	0	0	0	1	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
19-Aug	0	0	0	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
20-Aug	0	0	0	0	0	0	0	A	0	1	1	0	0	0	0	0	1	1	1	0	0	0	0	0	0.3	0.7
21-Aug	0	0	0	0	0	0	A	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.6	1.4
22-Aug	0	0	1	1	1	A	1	1	1	1	1	1	0	0	0	0	0	0	1	4	1	0	0	0	0.8	3.6
23-Aug	0	0	0	0	A	0	0	0	0	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
24-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
25-Aug	0	0	A	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0.2	0.8
26-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
27-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	A	0.2	1.1
28-Aug	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0.3	0.9
29-Aug	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	A	0	0	0.3	0.9
30-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.4
31-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	1	0	0	0	0.2	0.7
0.2 0.2 0.2 0.2 0.2 0.1 0.2 0.3 0.4 0.5 0.4 0.4 0.4 0.5 0.3 0.3 0.3 0.4 0.3 0.4 0.3 0.2 0.2 0.2																									Diurnal Average	
0.5 0.8 1.3 1.9 1.3 0.5 0.9 1.1 1.3 2.1 2.0 1.4 1.7 5.2 1.3 1.2 0.8 2.0 2.3 3.6 1.1 0.4 0.5 0.6																									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
Portable Rycroft - August 2018



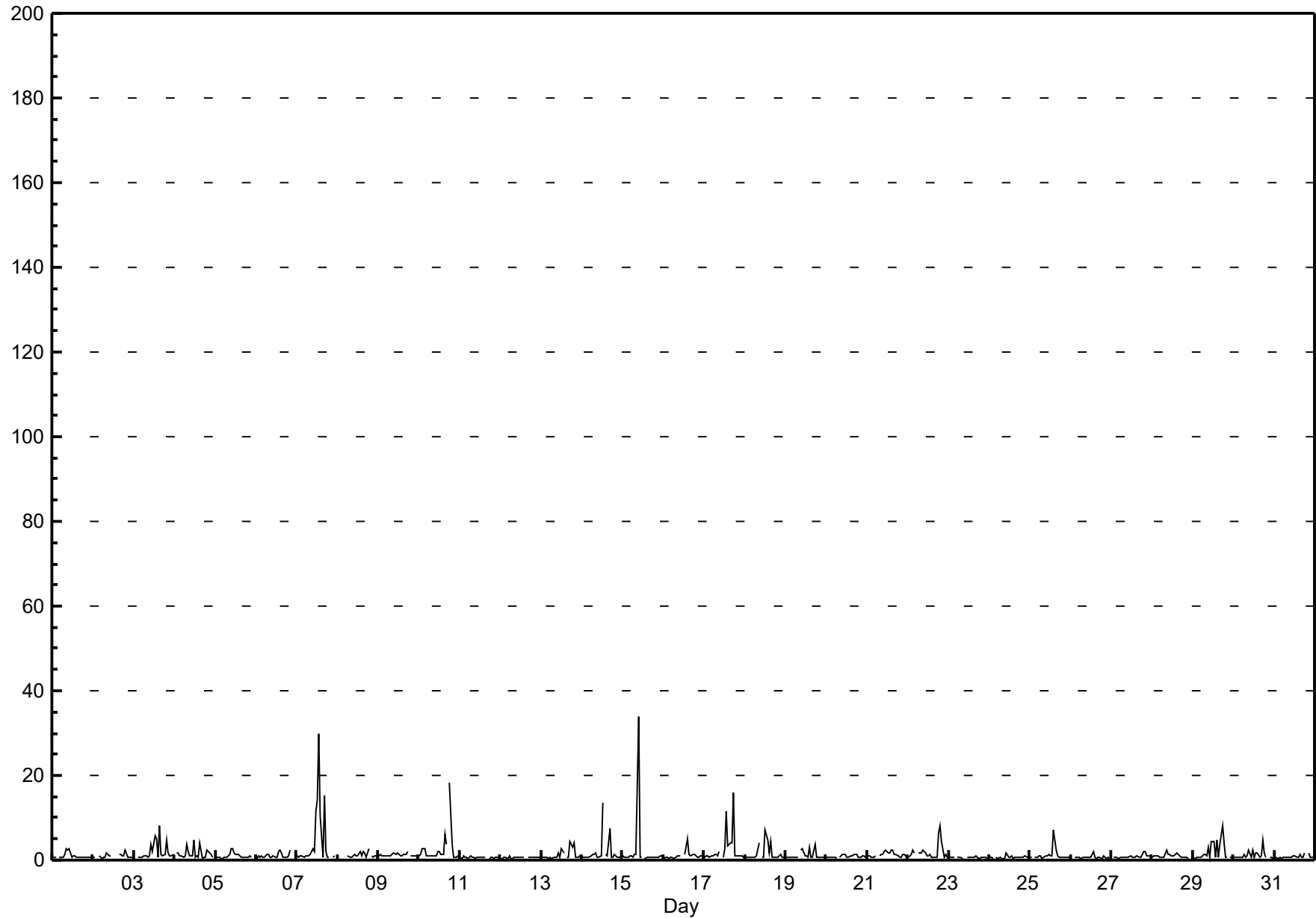
Hourly Maximums

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

Maximum Value: 33.8 ppb on Aug 15 10:00																				Maximum Daily Average: 4.6 ppb on Aug 7					Hours in Service: 744	
Minimum Value: 0 ppb on Aug 11 06:00																				Minimum Daily Average: 0.6 ppb on Aug 12					Hours of Data: 698	
Maximum Diurnal Average: 2.8 ppb at hour 14																				Minimum Diurnal Average: 0.7 ppb at hour 1					Hours of Missing Data: 46	
Monthly Average: 1.39 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.6 Q ₁ = 0.7 Median = 0.8 Q ₃ = 1.2 P ₉₀ = 2.3 P ₉₉ = 11.6					Hours of Calibration: 39	
																				Percent Operational Time: 99.1						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Aug	1	1	1	A	1	1	1	1	3	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.6
2-Aug	1	1	A	1	1	0	1	1	2	1	1	C	C	C	C	1	1	1	1	2	1	1	1	1	1.0	2.2
3-Aug	1	A	1	1	1	1	1	1	1	1	4	2	6	5	1	8	1	1	1	5	2	1	1	1	2.0	8.0
4-Aug	A	2	2	1	1	1	1	4	2	1	1	5	1	1	1	4	0	1	1	2	2	1	1	A	1.6	4.8
5-Aug	1	1	1	0	0	1	1	1	1	3	3	2	1	1	1	1	1	1	1	1	1	1	A	1	1.0	2.8
6-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1	1	1	2	A	1	1	1.1	2.3
7-Aug	1	1	1	1	1	1	1	1	1	3	2	11	14	30	11	1	15	2	1	1	A	1	1	P	4.6	29.7
8-Aug	P	P	P	P	P	P	1	1	1	1	1	1	1	2	1	2	2	1	3	A	1	1	1	1	--	2.6
9-Aug	1	1	1	1	1	1	1	1	1	2	1	2	1	1	1	1	1	2	A	1	1	1	1	1	1.2	1.9
10-Aug	1	1	3	3	1	1	1	1	1	1	1	2	2	1	1	6	4	A	18	4	1	1	1	1	2.5	18.3
11-Aug	1	0	1	1	1	0	1	1	1	0	1	1	1	1	1	1	A	1	1	1	0	1	1	1	0.6	1.0
12-Aug	0	0	1	1	0	1	0	0	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.6	1.1
13-Aug	1	1	1	1	0	1	0	1	1	1	2	1	3	2	A	1	1	4	3	4	1	1	1	1	1.2	4.4
14-Aug	1	1	1	1	1	1	1	1	2	1	1	1	14	A	1	1	7	1	1	1	1	1	1	1	1.8	13.6
15-Aug	1	1	1	1	1	1	1	1	1	34	1	1	A	0	1	1	1	1	1	1	1	1	1	1	2.3	33.8
16-Aug	0	1	1	0	1	1	0	1	1	1	1	A	1	3	5	1	1	1	1	1	1	1	1	1	1.2	5.1
17-Aug	1	1	1	1	1	1	1	1	1	2	A	1	3	11	3	4	4	16	1	1	1	1	1	1	2.6	15.9
18-Aug	1	1	1	1	1	1	1	1	1	4	A	1	1	7	5	2	4	1	1	1	1	1	1	1	1.6	7.2
19-Aug	1	1	1	1	1	1	1	1	A	3	3	1	1	1	3	1	1	4	1	1	1	1	1	1	1.1	3.6
20-Aug	1	1	1	1	1	1	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.5
21-Aug	1	1	1	1	1	1	A	1	1	1	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1.3	2.4
22-Aug	1	1	1	2	2	A	2	2	2	2	2	1	1	1	1	1	1	1	7	8	4	1	1	1	1.9	8.2
23-Aug	1	1	1	1	A	1	1	1	0	C	C	1	1	1	1	1	1	1	0	1	1	1	1	0	0.6	0.9
24-Aug	1	1	0	A	1	0	1	0	1	0	2	1	1	1	0	1	1	1	1	1	1	1	1	1	0.7	1.6
25-Aug	1	1	A	1	1	1	1	0	1	1	1	1	1	1	7	2	1	1	1	1	1	1	1	1	1.1	7.1
26-Aug	1	A	1	1	1	1	0	1	1	1	1	1	1	2	1	0	1	1	0	1	1	0	1	0	0.7	2.0
27-Aug	A	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	A	0.9	1.9
28-Aug	1	1	1	1	1	1	1	1	2	1	1	1	1	1	2	1	1	1	1	1	1	1	A	1	1.0	2.3
29-Aug	1	0	1	1	1	1	1	1	1	3	1	4	5	1	5	1	4	8	4	1	1	A	1	1	2.0	8.2
30-Aug	1	1	1	1	1	1	1	1	1	2	1	2	1	2	2	1	1	5	2	1	A	1	1	0	1.1	4.9
31-Aug	1	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	2	A	2	1	1	1	0.8	1.7
0.7 0.8 0.9 0.9 0.7 0.8 0.9 1.0 1.2 2.5 1.4 1.7 2.5 2.8 2.0 1.8 1.9 2.0 1.9 1.5 1.1 0.8 0.8 0.8																										Diurnal Average
1.2 1.6 2.6 2.8 1.8 1.1 1.7 3.7 4.2 33.8 3.9 11.5 14.3 29.7 10.7 8.0 15.2 15.9 18.3 8.2 4.3 1.4 1.5 1.3																										Diurnal Maximum
C - Calibration P - Power Failure A - Automated Daily Zero Span																										

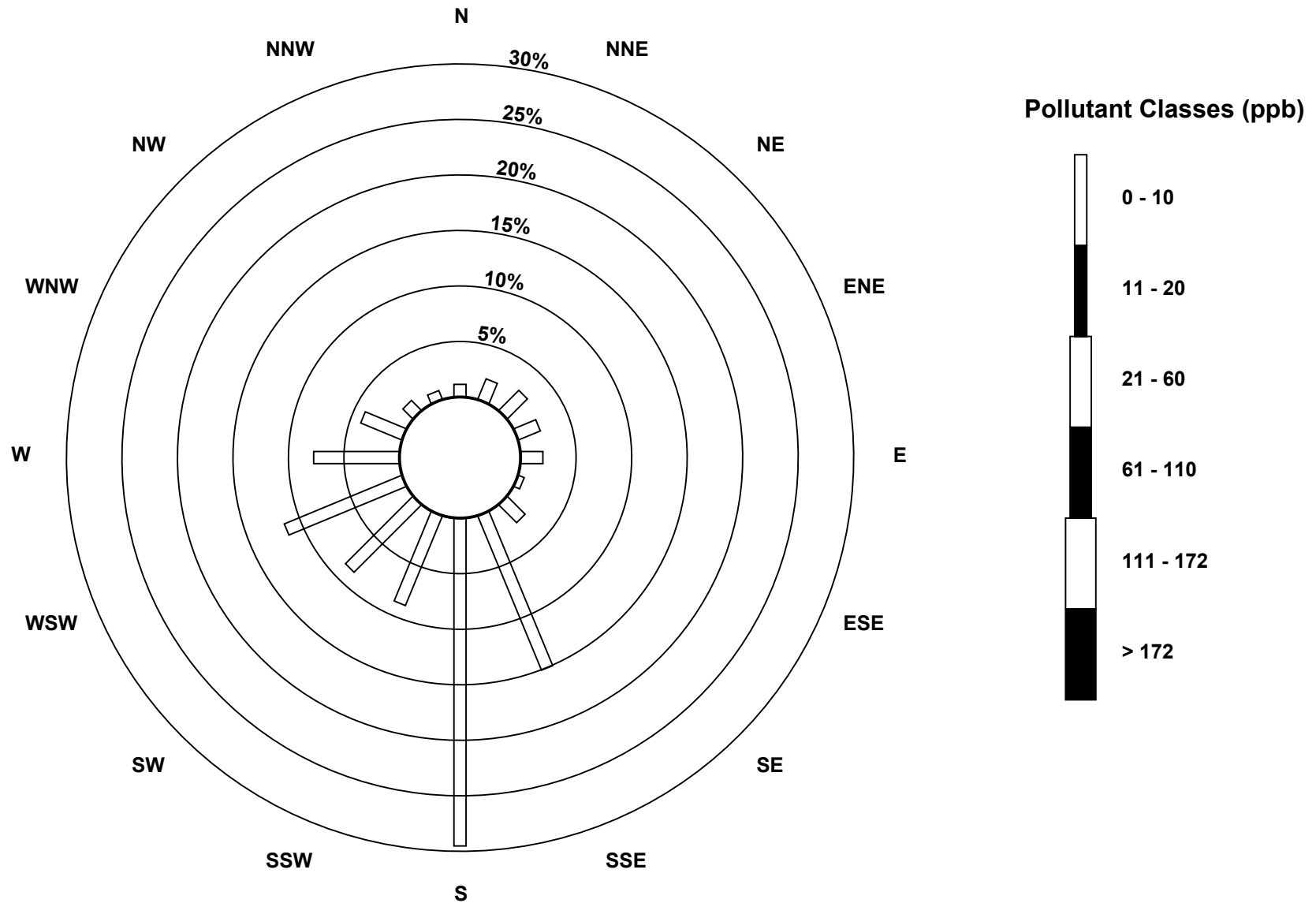
Hourly Maximums

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



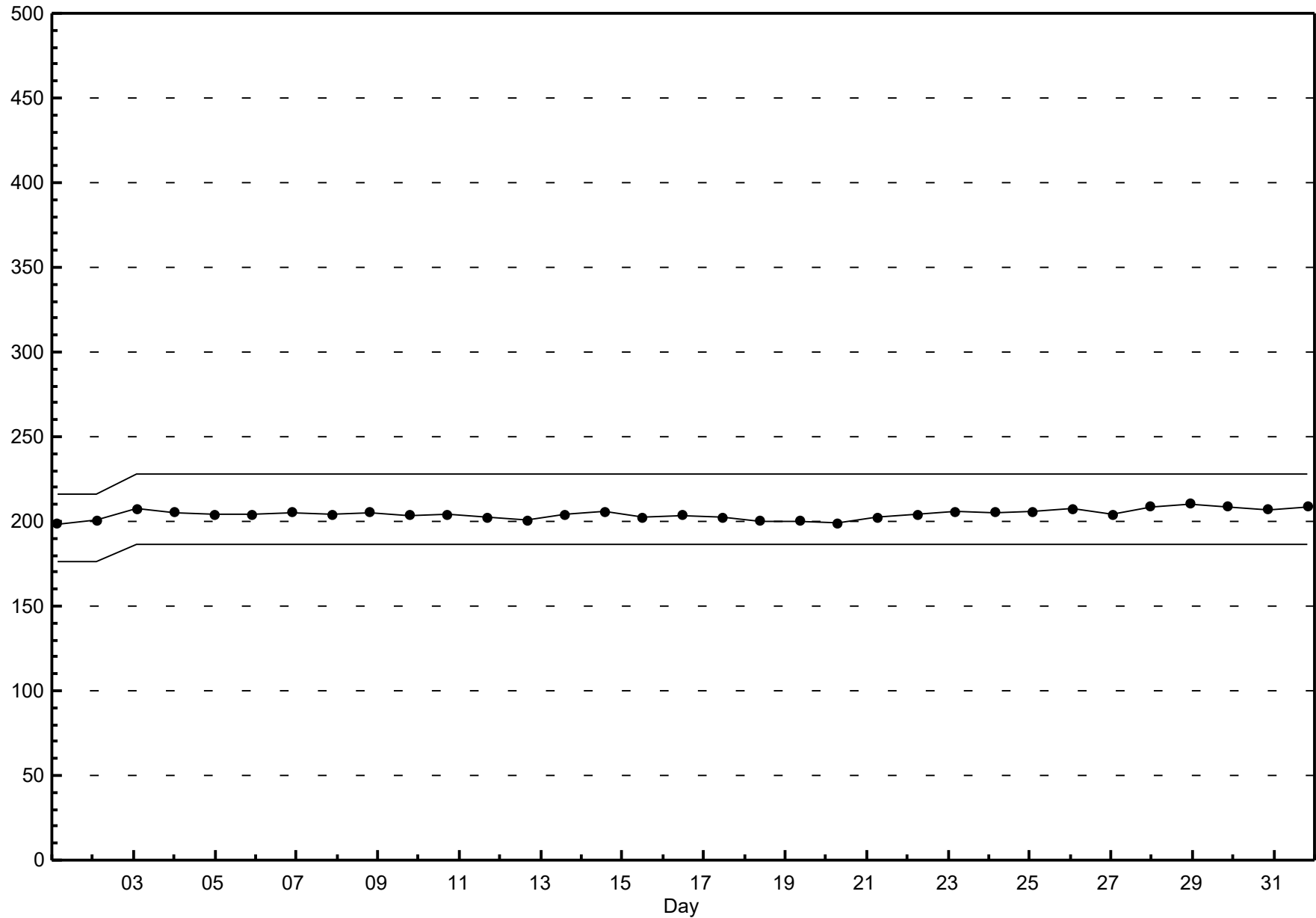
Pollutant Rose

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



Span Responses

Sulphur Dioxide (SO₂)
Portable Rycroft - August 2018



Hourly Averages

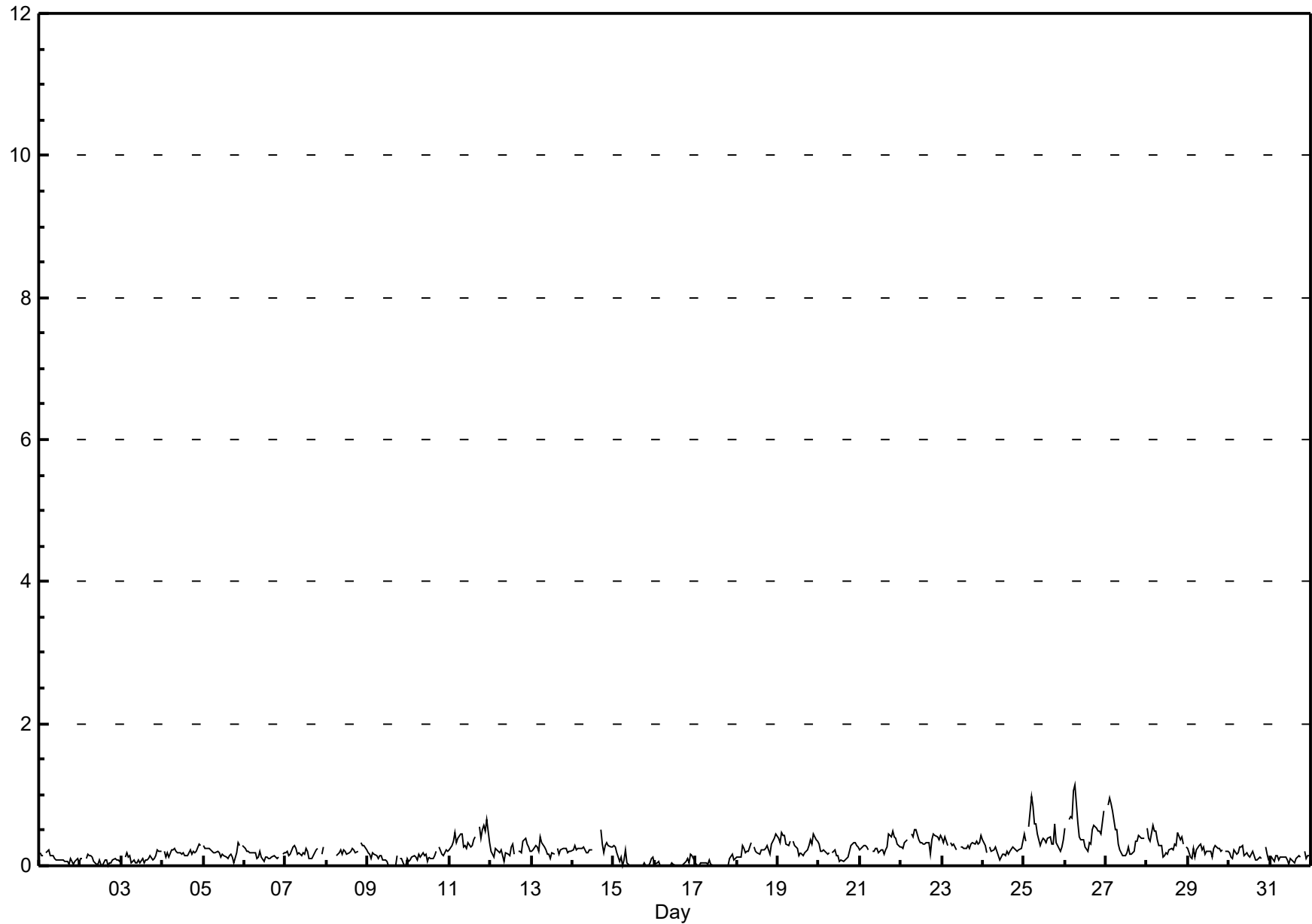
Total Reduced Sulphur (TRS) - ppb

Portable Rycroft - August 2018

Maximum Value: 1.1 ppb on Aug 26 07:00																				Maximum Daily Average: 0.5 ppb on Aug 26										Hours in Service: 744									
Minimum Value: 0 ppb on Aug 2 17:00																				Minimum Daily Average: 0.0 ppb on Aug 17										Hours of Data: 702									
Maximum Diurnal Average: 0.3 ppb at hour 4																				Minimum Diurnal Average: 0.2 ppb at hour 14										Hours of Missing Data: 42									
Monthly Average: 0.22 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.4 P ₉₉ = 0.8										Hours of Calibration: 35									
																				Percent Operational Time: 99.1																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2													
2-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2													
3-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2													
4-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.3													
5-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.3													
6-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.2													
7-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	P	0.2	0.3													
8-Aug	P	P	P	P	P	P	0	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0	0	--	0.3													
9-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.2													
10-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.3													
11-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	1	1	0	1	0	0.4	0.6													
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.4													
13-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.4													
14-Aug	0	0	0	0	0	0	0	0	0	0	0	0	C	C	C	C	1	0	0	0	0	0	0	0	0.3	0.5													
15-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3													
16-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2													
17-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2													
18-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4													
19-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5													
20-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3													
21-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5													
22-Aug	0	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5													
23-Aug	0	0	0	0	A	0	0	0	0	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4													
24-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4													
25-Aug	0	0	A	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.4	1.0													
26-Aug	1	A	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0	1	1	0.5	1.1													
27-Aug	A	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.4	1.0													
28-Aug	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.3	0.6													
29-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.3													
30-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.3													
31-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.2													
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 0.3 0.3 0.3 0.2																									Diurnal Average														
0.5 0.8 1.0 0.9 1.0 1.1 1.1 0.6 0.5 0.5 0.4 0.4 0.4 0.3 0.4 0.4 0.5 0.6 0.6 0.5 0.6 0.5 0.6 0.8																									Diurnal Maximum														
C - Calibration				P - Power Failure				A - Automated Daily Zero Span																															

Hourly Averages

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



Hourly Maximums

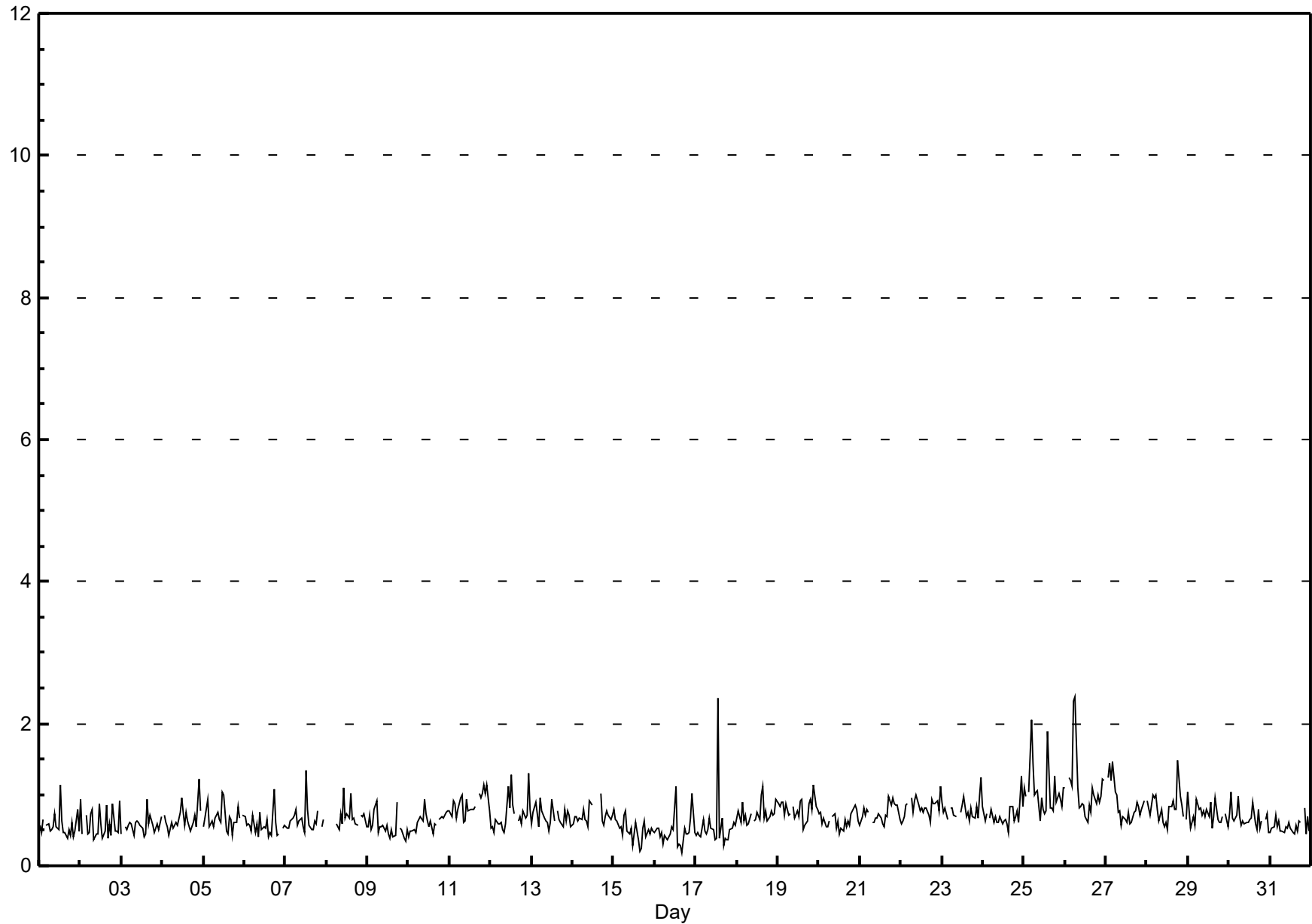
Total Reduced Sulphur (TRS) - ppb

Portable Rycroft - August 2018

Maximum Value: 2.4 ppb on Aug 26 07:00																				Maximum Daily Average: 1.1 ppb on Aug 26										Hours in Service: 744									
Minimum Value: 0 ppb on Aug 16 17:00																				Minimum Daily Average: 0.5 ppb on Aug 16										Hours of Data: 702									
Maximum Diurnal Average: 0.8 ppb at hour 6																				Minimum Diurnal Average: 0.6 ppb at hour 17										Hours of Missing Data: 42									
Monthly Average: 0.70 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.7 Q ₃ = 0.8 P ₉₀ = 1.0 P ₉₉ = 1.4										Hours of Calibration: 35									
																				Percent Operational Time: 99.1																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Aug	1	0	1	A	1	1	0	1	1	1	1	1	1	1	0	0	0	0	0	1	0	0	1	0	0.6	1.1													
2-Aug	1	0	A	1	0	0	1	1	0	0	0	1	1	0	0	1	0	1	0	1	0	0	0	1	0.6	0.9													
3-Aug	0	A	1	1	1	1	1	0	1	1	1	1	1	0	0	1	1	1	1	0	1	1	0	1	0.6	0.9													
4-Aug	A	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	A	0.7	1.2													
5-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0	1	1	1	1	A	1	0.7	1.0													
6-Aug	1	1	1	1	0	1	0	1	0	1	1	1	1	1	0	0	0	1	1	0	0	A	1	1	0.6	1.1													
7-Aug	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	A	1	1	P	0.6	1.3													
8-Aug	P	P	P	P	P	P	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	--	1.1													
9-Aug	1	1	1	1	1	1	0	1	1	1	0	1	0	0	0	0	0	1	A	1	1	0	0	1	0.5	0.9													
10-Aug	0	0	0	1	0	1	1	1	1	1	1	1	1	1	0	1	1	A	1	1	1	1	1	1	0.6	0.9													
11-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.9	1.1													
12-Aug	1	1	0	1	1	1	1	1	0	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.7	1.3													
13-Aug	1	1	1	1	1	1	1	1	1	1	0	1	1	1	A	1	1	1	1	1	1	1	1	1	0.7	1.0													
14-Aug	1	1	1	1	1	1	1	1	1	1	1	1	C	C	C	C	1	1	1	1	1	1	1	1	0.7	1.0													
15-Aug	1	1	1	1	1	0	1	1	0	0	1	0	0	1	0	0	0	1	1	0	0	0	1	0	0.5	0.8													
16-Aug	0	1	1	0	0	0	0	0	0	0	1	1	1	0	0	0	0	1	0	0	0	1	1	0	0.5	1.1													
17-Aug	0	0	0	0	1	0	0	0	1	1	0	0	0	2	0	1	0	0	0	0	1	1	1	1	0.6	2.4													
18-Aug	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1													
19-Aug	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1													
20-Aug	1	1	1	1	1	1	1	A	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1	0.6	0.8													
21-Aug	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0													
22-Aug	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1													
23-Aug	1	1	1	1	A	1	1	1	1	C	C	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2													
24-Aug	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0.7	1.3													
25-Aug	1	1	A	1	2	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1.0	2.1													
26-Aug	1	A	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	2.4													
27-Aug	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.9	1.5													
28-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.8	1.5													
29-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.7	1.0													
30-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	0.7	1.0													
31-Aug	0	1	1	1	1	1	0	0	0	1	1	1	1	0	0	1	0	1	1	A	1	0	1	0	0.6	0.8													
0.7 0.7 0.7 0.7 0.7 0.8 0.7 0.7 0.6 0.6 0.7 0.7 0.7 0.7 0.7 0.7 0.6 0.7 0.7 0.7 0.7 0.7 0.8 0.7																									Diurnal Average														
1.1 1.2 1.4 1.2 2.1 2.3 2.4 1.1 1.1 1.0 1.1 1.0 1.3 2.4 1.9 1.1 1.1 1.1 1.1 1.5 1.0 1.1 1.2 1.3 1.2																									Diurnal Maximum														
C - Calibration P - Power Failure A - Automated Daily Zero Span																																							

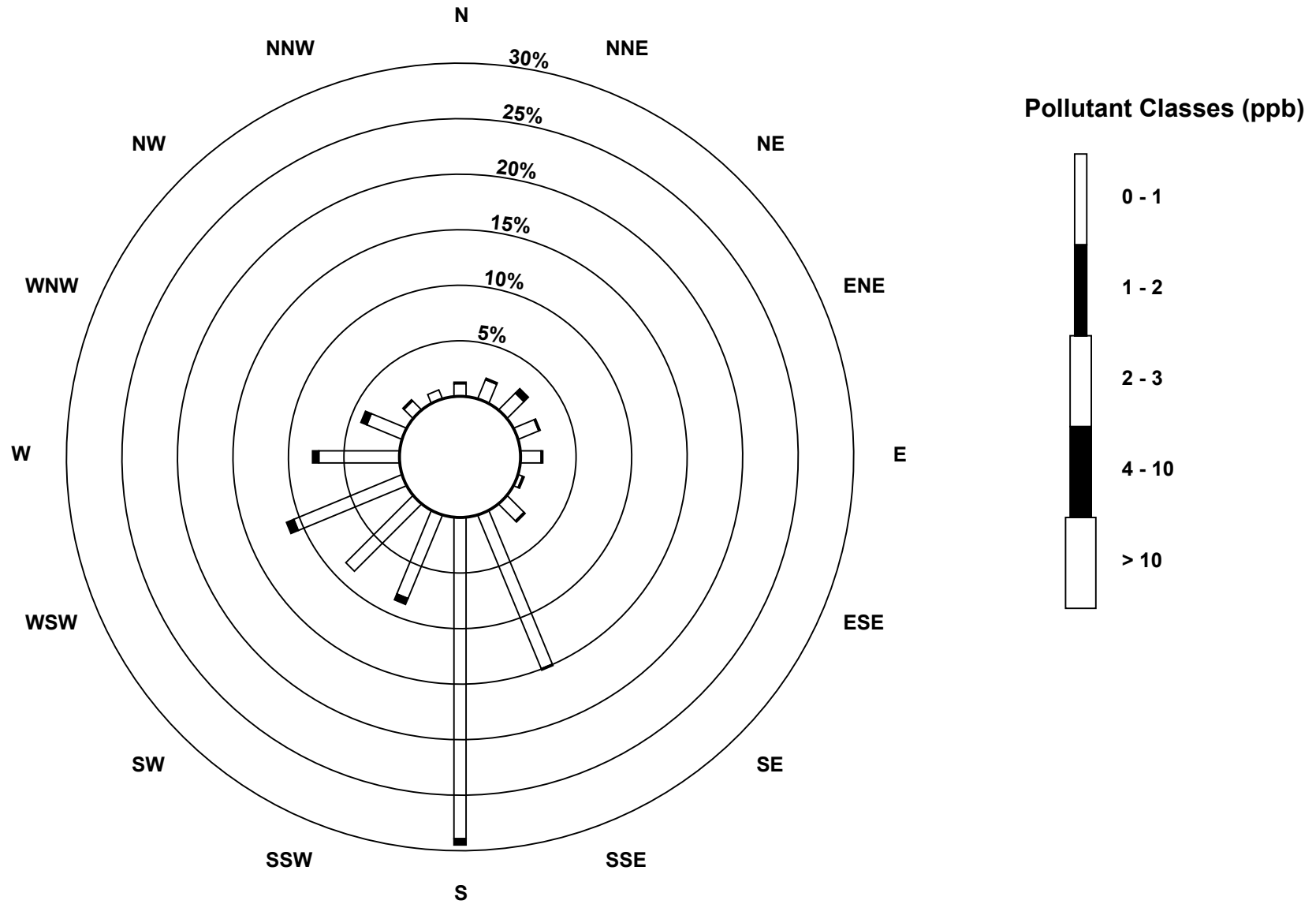
Hourly Maximums

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



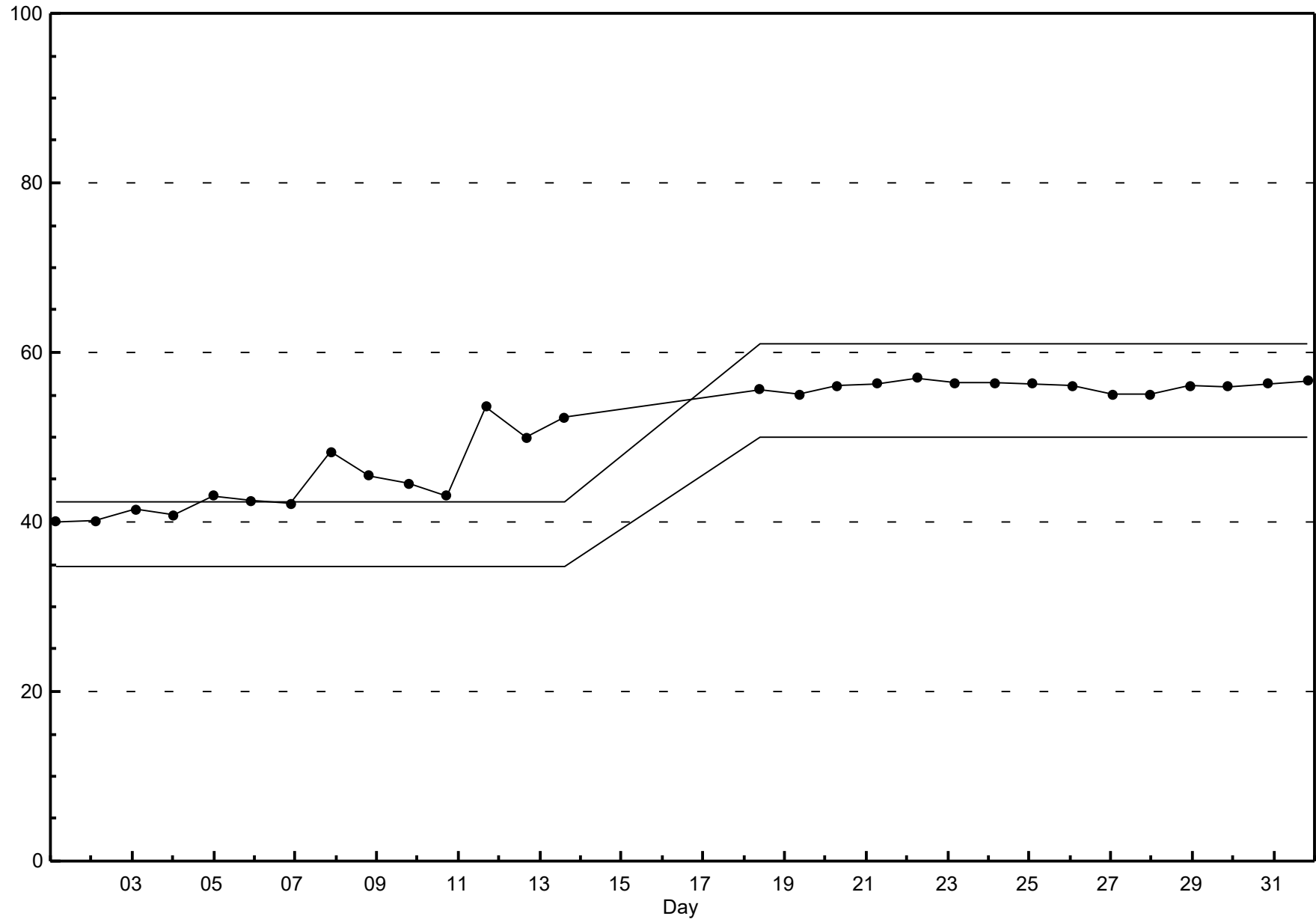
Pollutant Rose

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



Span Responses

Total Reduced Sulphur (TRS)
Portable Rycroft - August 2018



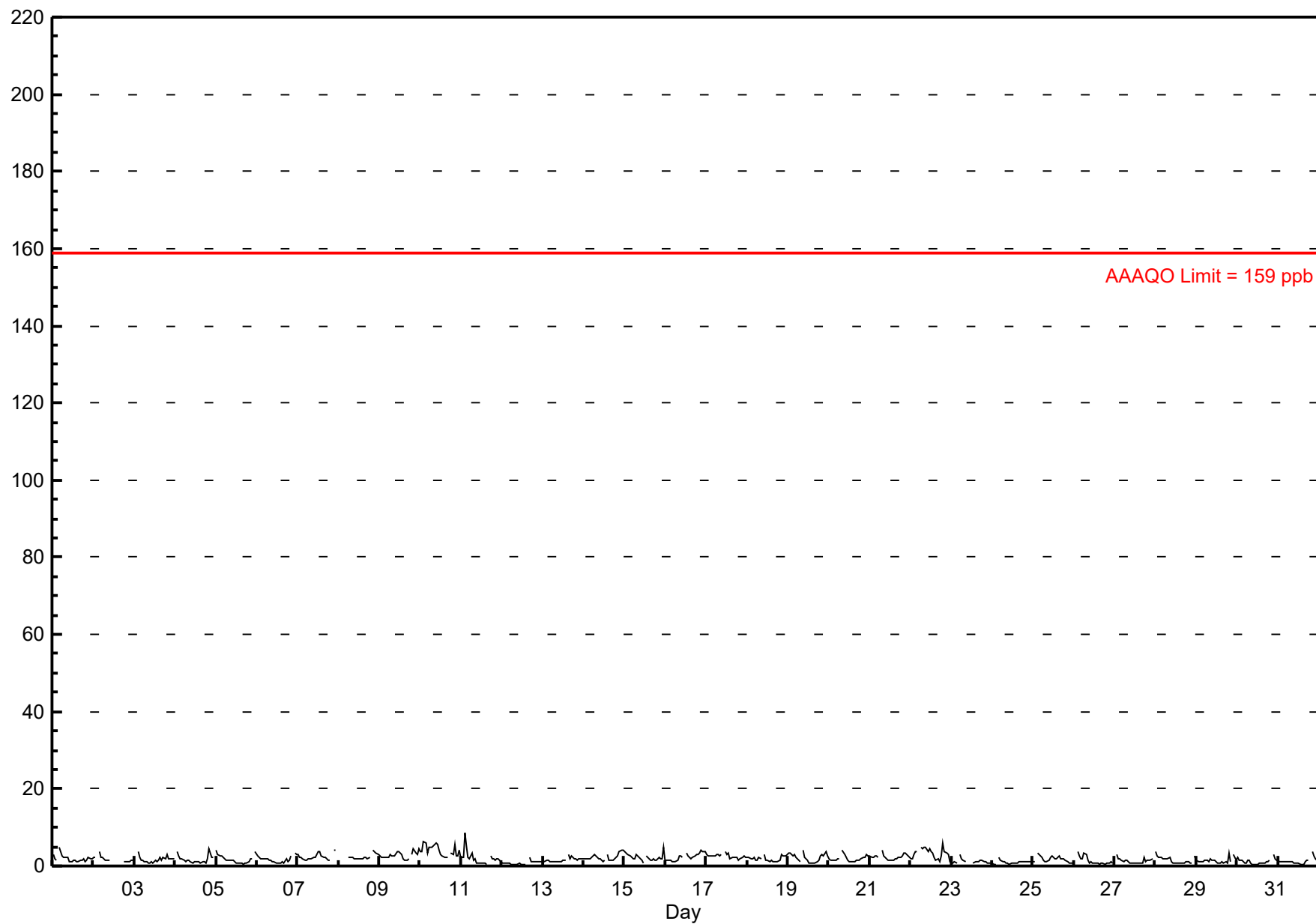
Hourly Averages

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 744						
Maximum Value: 8.5 ppb on Aug 11 03:00																				Maximum Daily Average: 4.0 ppb on Aug 10		Hours of Data: 692				
Minimum Value: 0 ppb on Aug 12 08:00																				Minimum Daily Average: 0.8 ppb on Aug 12		Hours of Missing Data: 52				
Maximum Diurnal Average: 2.4 ppb at hour 3																				Minimum Diurnal Average: 1.3 ppb at hour 15		Hours of Calibration: 45				
Monthly Average: 1.90 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.7 Q ₁ = 1.1 Median = 1.7 Q ₃ = 2.4 P ₉₀ = 3.4 P ₉₉ = 5.5		Percent Operational Time: 99.1				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	3	2	2	A	5	3	2	2	2	2	1	1	1	1	1	1	1	2	2	1	2	2	2	2	1.9	4.7
2-Aug	2	2	A	4	2	2	2	2	2	2	C	C	C	C	C	C	C	C	1	1	1	1	1	1	--	3.7
3-Aug	1	A	4	2	2	1	1	1	1	1	1	1	1	1	1	2	2	2	2	3	2	2	2	2	1.7	3.6
4-Aug	A	4	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	4	2	2	A	1.6	4.5
5-Aug	4	3	3	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	A	4	1.6	4.0
6-Aug	3	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	2	1	1	3	A	3	3	1.6	3.5
7-Aug	3	2	2	2	2	2	2	2	2	2	2	3	4	4	3	2	2	2	1	1	A	4	4	P	2.4	4.2
8-Aug	P	P	P	P	P	P	2	2	2	2	2	2	2	2	2	2	2	2	2	A	4	4	3	3	--	4.3
9-Aug	3	2	2	2	2	2	3	3	3	3	4	4	3	3	2	1	1	2	A	3	5	3	3	4	2.8	4.6
10-Aug	4	4	6	6	3	5	5	5	5	6	6	4	3	3	2	2	2	A	3	3	5	3	3	4	4.0	6.2
11-Aug	2	2	9	5	2	2	3	2	2	1	1	1	1	1	1	1	A	3	2	2	2	2	2	1	2.0	8.5
12-Aug	1	1	1	1	1	1	0	0	0	0	1	1	0	0	0	A	2	1	1	1	1	1	1	1	0.8	2.2
13-Aug	1	1	2	1	1	1	1	1	1	1	1	1	1	1	A	3	2	2	2	2	2	2	2	2	1.5	3.0
14-Aug	2	2	2	2	2	2	3	3	2	2	2	1	2	A	3	2	1	2	2	2	3	4	4	4	2.3	4.2
15-Aug	4	3	3	3	2	2	2	3	3	2	1	1	A	3	2	2	2	2	2	1	2	2	2	5	2.2	4.8
16-Aug	1	1	2	1	1	1	1	1	2	3	2	A	3	2	2	2	2	3	3	3	3	4	4	4	2.3	4.1
17-Aug	3	3	3	3	2	3	3	3	3	3	A	4	3	3	2	2	2	2	2	2	2	2	2	2	2.5	3.6
18-Aug	2	2	2	2	2	2	2	2	2	A	3	2	1	1	1	1	1	1	1	1	3	2	3	3	1.9	3.0
19-Aug	3	4	3	3	3	2	2	1	A	4	2	1	1	1	1	1	1	1	1	3	3	3	4	3	2.1	4.2
20-Aug	2	2	2	1	1	2	2	A	4	3	2	1	1	1	1	1	1	1	2	2	2	2	3	3	1.9	4.2
21-Aug	3	2	2	3	3	2	A	4	3	2	2	1	1	1	2	2	2	2	2	2	3	3	3	2	2.3	4.1
22-Aug	2	2	3	4	4	A	5	5	5	5	4	4	4	3	2	2	2	1	3	6	4	3	3	1	3.3	6.0
23-Aug	1	1	1	1	A	3	2	1	1	C	C	C	C	1	1	1	1	1	2	1	1	1	1	1	1.2	2.8
24-Aug	1	1	0	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.4
25-Aug	1	1	A	3	3	2	1	1	1	2	2	2	2	2	2	3	2	2	2	2	1	1	1	1	1.7	3.5
26-Aug	1	A	4	3	2	2	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.3	3.8
27-Aug	A	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	2	2	A	1.3	3.1
28-Aug	4	3	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	A	3	1.5	3.8
29-Aug	2	1	1	1	1	1	2	1	2	1	2	1	1	1	1	1	1	1	1	3	1	A	3	2	1.4	3.3
30-Aug	2	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	A	3	2	2	1.1	2.9
31-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	2	A	4	3	2	2	1.2	3.9
																								Diurnal Average		
																								Diurnal Maximum		
C - Calibration 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
Portable Rycroft - August 2018



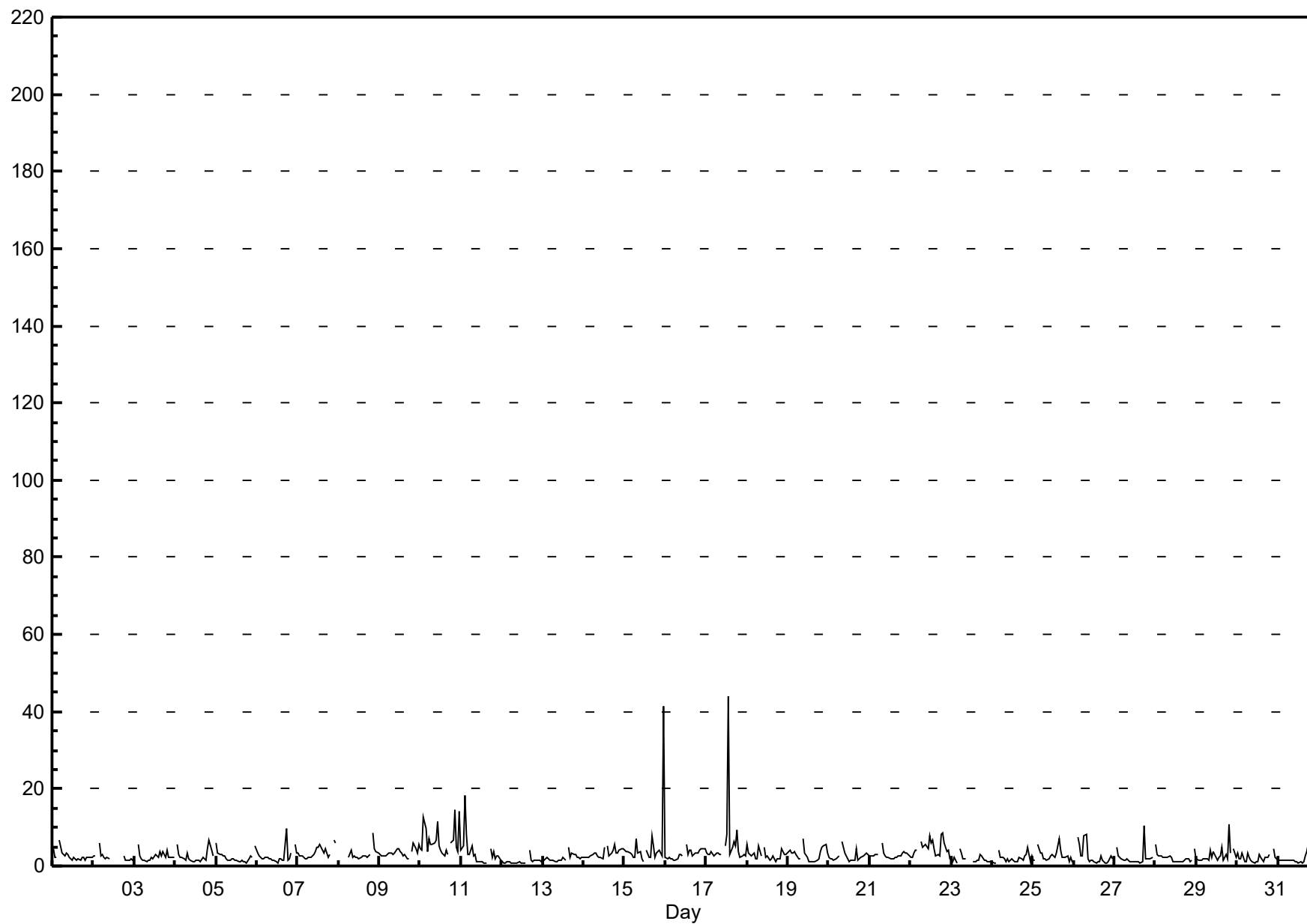
Hourly Maximums

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

Maximum Value: 44.1 ppb on Aug 17 14:00																				Maximum Daily Average: 6.5 ppb on Aug 10										Hours in Service: 744									
Minimum Value: 1 ppb on Aug 12 08:00																				Minimum Daily Average: 1.2 ppb on Aug 12										Hours of Data: 692									
Maximum Diurnal Average: 4.5 ppb at hour 24																				Minimum Diurnal Average: 2.1 ppb at hour 15										Hours of Missing Data: 52									
Monthly Average: 2.96 ppb																				Percentiles: P ₁ = 0.8 P ₁₀ = 1.2 Q ₁ = 1.6 Median = 2.3 Q ₃ = 3.4 P ₉₀ = 5.2 P ₉₉ = 11.1										Hours of Calibration: 45									
																				Percent Operational Time: 99.1																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Aug	5	2	2	A	7	3	3	3	3	3	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2.6	6.7													
2-Aug	2	3	A	6	3	3	2	2	2	2	C	C	C	C	C	C	C	C	3	1	2	2	2	2	--	5.8													
3-Aug	2	A	6	3	2	2	1	1	1	2	2	2	3	3	2	4	2	4	2	4	2	2	2	2	2.4	5.6													
4-Aug	A	6	3	2	2	2	1	4	2	1	1	1	1	1	1	1	2	2	1	5	7	4	3	A	2.5	6.7													
5-Aug	6	3	3	3	3	3	2	2	2	2	2	2	1	1	1	1	1	1	1	2	3	2	A	5	2.2	5.9													
6-Aug	3	2	2	2	2	2	2	2	2	2	1	1	1	2	2	1	1	10	1	2	4	A	6	3	2.5	9.9													
7-Aug	3	3	3	3	2	2	2	2	2	3	4	5	5	6	5	3	5	4	2	3	A	7	6	P	3.5	6.7													
8-Aug	P	P	P	P	P	P	2	4	2	2	2	2	2	2	3	3	3	2	3	A	9	5	4	3	--	8.7													
9-Aug	3	3	2	2	3	3	4	3	3	3	4	4	4	3	2	3	2	2	A	4	6	4	3	6	3.4	5.8													
10-Aug	4	4	13	10	4	7	5	5	6	7	12	5	4	3	3	4	3	A	6	7	15	5	4	14	6.5	14.5													
11-Aug	4	5	18	8	3	3	5	3	3	1	1	1	1	1	1	1	A	4	2	4	2	3	3	2	3.4	18.2													
12-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	4	2	1	1	2	1	2	1	1.2	4.2													
13-Aug	2	2	2	2	1	2	1	1	1	2	2	2	2	2	A	5	2	3	3	3	2	2	2	2	2.1	4.7													
14-Aug	2	2	2	2	3	3	3	3	3	2	2	2	5	A	5	2	3	4	6	3	3	4	5	4	3.3	5.5													
15-Aug	4	4	4	3	3	2	2	7	3	4	2	1	A	4	2	2	8	5	2	3	4	3	2	41	5.1	41.4													
16-Aug	2	2	2	2	2	2	1	2	3	3	3	A	6	3	4	4	3	3	3	3	4	4	4	4	3.1	5.7													
17-Aug	3	3	3	4	3	3	3	3	3	3	3	A	5	8	44	3	5	6	5	9	4	2	3	3	5.8	44.1													
18-Aug	6	3	3	3	3	2	2	5	2	A	5	2	3	2	2	3	2	1	2	2	4	4	3	3	2.9	5.7													
19-Aug	4	4	4	3	4	3	2	2	A	7	3	2	1	1	1	1	1	2	2	4	5	5	6	4	3.0	6.9													
20-Aug	2	2	2	2	2	2	3	A	6	3	3	2	1	1	2	1	5	2	2	2	3	3	3	3	2.5	6.4													
21-Aug	3	3	3	3	3	3	A	6	3	3	2	2	2	2	2	2	2	3	2	3	4	4	3	3	2.8	5.9													
22-Aug	2	2	4	4	4	A	6	5	5	6	5	8	6	7	4	3	3	2	8	9	6	4	4	2	4.7	8.7													
23-Aug	1	1	2	1	A	5	3	2	2	C	C	C	C	1	1	2	2	3	3	1	2	1	1	1	1.8	4.5													
24-Aug	1	1	1	A	4	2	2	2	1	2	1	2	1	1	1	1	2	2	2	2	3	5	1	3	1.9	4.8													
25-Aug	1	1	A	6	4	3	2	2	1	2	3	3	3	2	3	7	4	2	2	2	2	1	2	1	2.6	7.0													
26-Aug	1	A	7	6	3	3	8	8	2	1	1	1	1	1	1	1	3	1	1	1	1	2	3	2	2.6	8.1													
27-Aug	A	5	3	2	2	1	2	2	1	1	1	1	1	1	1	1	1	11	2	2	2	2	2	A	2.1	10.6													
28-Aug	6	3	2	3	2	2	2	2	3	2	1	1	1	1	1	1	1	2	2	2	1	1	A	5	2.1	5.6													
29-Aug	2	1	1	1	2	2	2	2	4	2	4	3	1	2	2	5	1	3	2	11	3	A	5	2	2.8	11.0													
30-Aug	3	2	2	4	1	1	3	2	1	1	1	1	1	3	2	1	2	2	2	3	A	5	2	2	2.1	4.6													
31-Aug	2	2	1	1	2	2	1	1	2	1	1	1	1	1	1	1	3	4	5	A	11	6	11	2	2.7	11.1													
																									Diurnal Average														
																									Diurnal Maximum														
C - Calibration				P - Power Failure				A - Automated Daily Zero Span																															

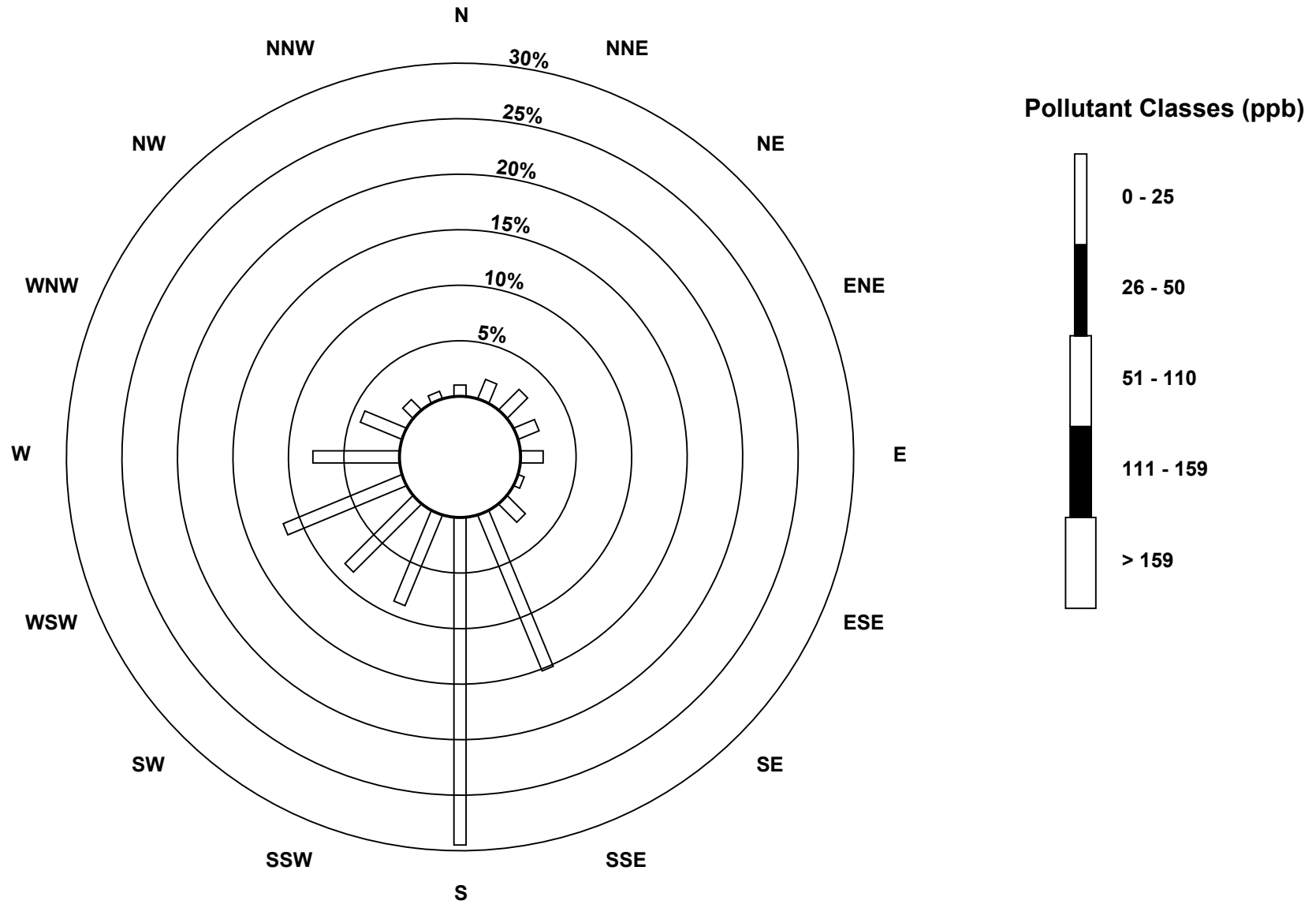
Hourly Maximums

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



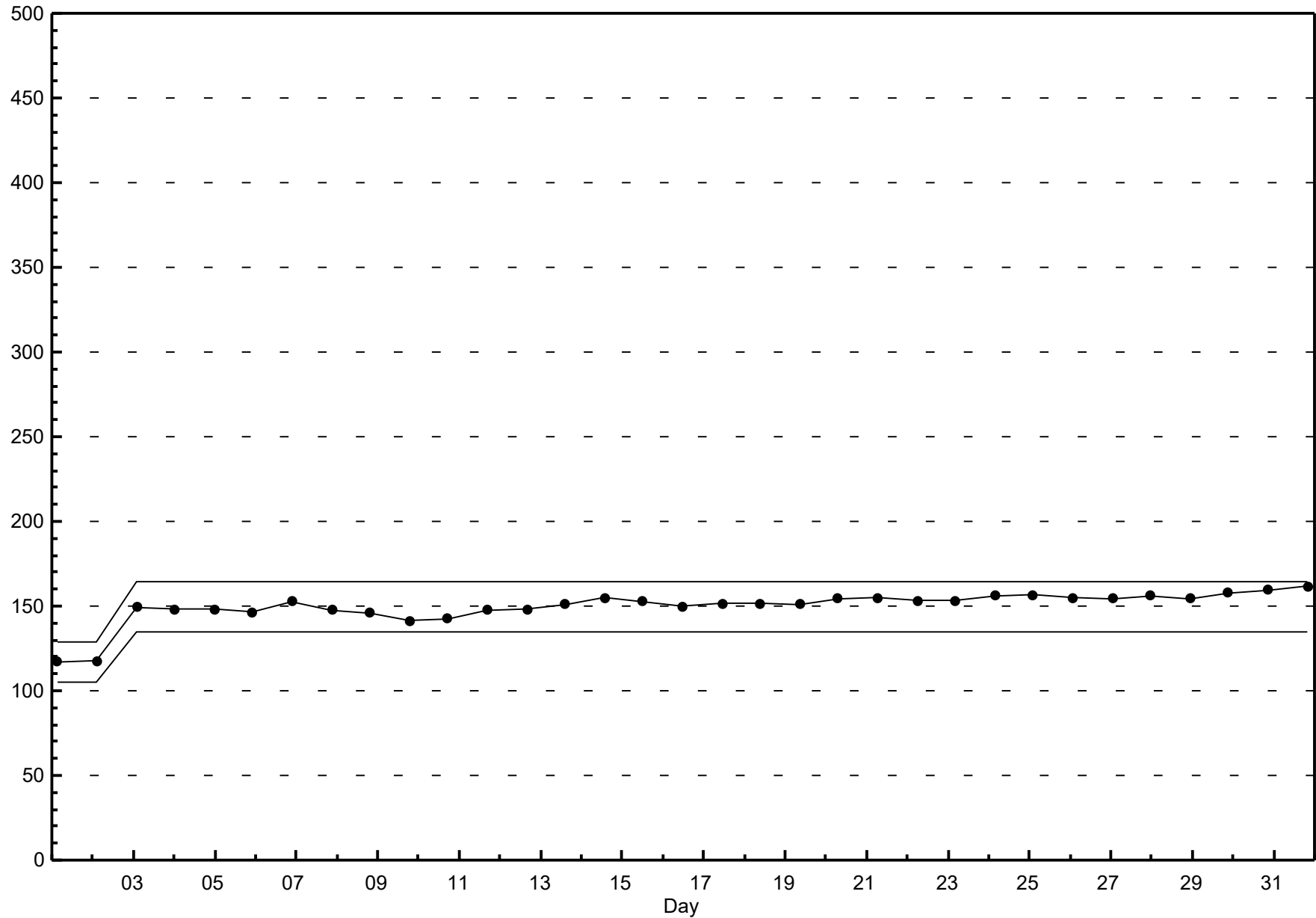
Pollutant Rose

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



Span Responses

Nitrogen Dioxide (NO₂)
Portable Rycroft - August 2018



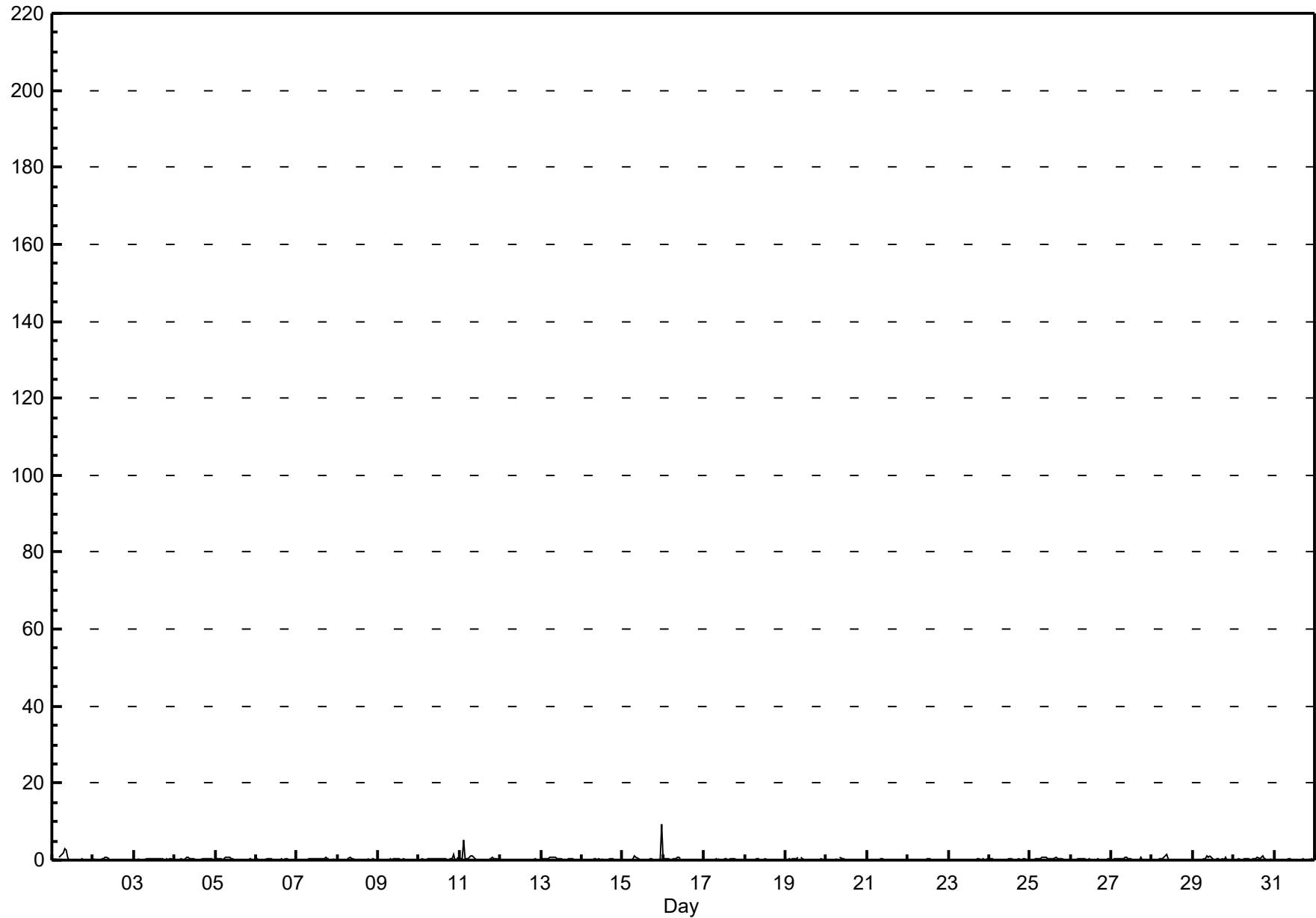
Hourly Averages

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

Maximum Value: 9.4 ppb on Aug 16 00:00																			Maximum Daily Average: 0.6 ppb on Aug 15										Hours in Service: 744	
Minimum Value: 0 ppb on Aug 1 02:00																			Minimum Daily Average: 0.1 ppb on Aug 21										Hours of Data: 692	
Maximum Diurnal Average: 0.6 ppb at hour 9																			Minimum Diurnal Average: 0.1 ppb at hour 22										Hours of Missing Data: 52	
Monthly Average: 0.25 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.5 P ₉₉ = 1.4										Hours of Calibration: 45	
																			Percent Operational Time: 99.1											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Aug	0	0	0	A	1	1	2	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	2.9				
2-Aug	0	0	A	0	0	0	1	1	1	0	C	C	C	C	C	C	C	C	0	0	0	0	0	0	--	0.7				
3-Aug	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5				
4-Aug	A	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.3	0.7				
5-Aug	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.3	0.8				
6-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	A	0	0	0.2	0.5				
7-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	A	0	0	P	0.3	0.6				
8-Aug	P	P	P	P	P	P	0	1	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0	0	--	0.7				
9-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.3				
10-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0	1	0.3	1.5				
11-Aug	0	0	5	1	0	0	1	1	1	0	0	0	0	0	0	0	A	0	0	1	0	0	1	0	0.6	5.1				
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.2				
13-Aug	0	0	0	0	0	1	1	1	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	0.8				
14-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.4				
15-Aug	0	0	0	0	0	0	0	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	9	0.6	9.4				
16-Aug	0	0	0	0	0	0	0	0	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9				
17-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3				
18-Aug	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3				
19-Aug	0	0	0	0	0	0	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9				
20-Aug	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8				
21-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4				
22-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4				
23-Aug	0	0	0	0	A	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	1	0.1	0.5					
24-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4				
25-Aug	0	0	A	0	1	0	0	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.3	0.8				
26-Aug	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6				
27-Aug	A	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	A	0.3	0.8				
28-Aug	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.3	1.5				
29-Aug	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	1	0	A	0	0	0	0.3	1.1				
30-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	0	A	0	0	0	0.3	1.2				
31-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0.2	0.5				
																									Diurnal Average					
																									Diurnal Maximum					
C - Calibration																														
P - Power Failure																														
A - Automated Daily Zero Span																														

Hourly Averages

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



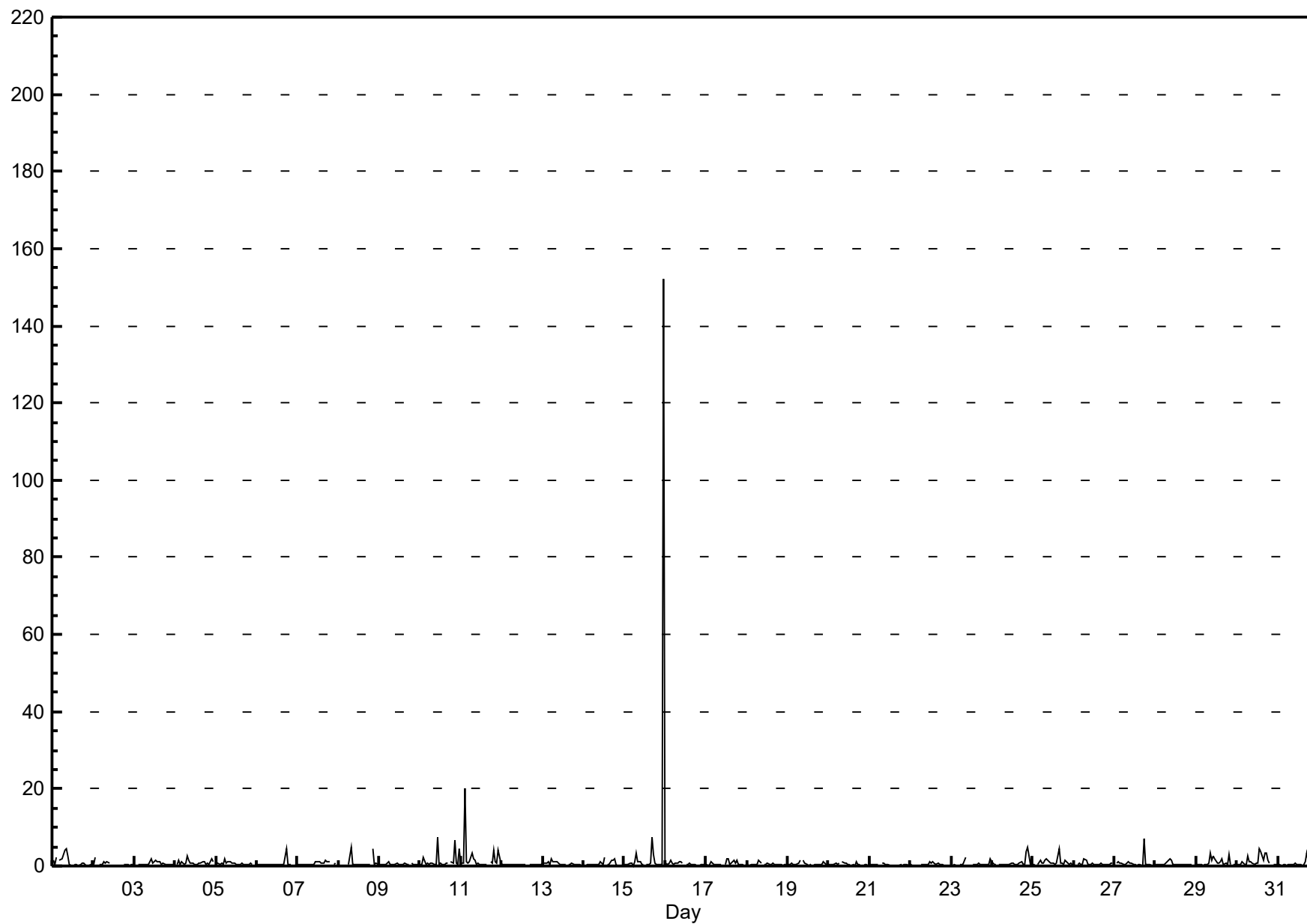
Hourly Maximums

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

Maximum Value: 152.3 ppb on Aug 16 00:00																				Maximum Daily Average: 7.6 ppb on Aug 15										Hours in Service: 744									
Minimum Value: 0 ppb on Aug 1 12:00																				Minimum Daily Average: 0.3 ppb on Aug 21										Hours of Data: 692									
Maximum Diurnal Average: 5.9 ppb at hour 24																				Minimum Diurnal Average: 0.4 ppb at hour 2										Hours of Missing Data: 52									
Monthly Average: 0.98 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.4 Q ₃ = 0.8 P ₉₀ = 1.4 P ₉₉ = 5.2										Hours of Calibration: 45									
																				Percent Operational Time: 99.1																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Aug	2	0	2	A	2	2	3	4	5	2	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1.1	4.6													
2-Aug	0	2	A	0	0	0	1	1	1	1	C	C	C	C	C	C	C	C	1	0	0	0	0	0	--	2.3													
3-Aug	0	A	0	0	0	0	0	0	0	1	2	1	2	1	1	1	1	1	0	0	0	0	0	0	0.7	1.7													
4-Aug	A	0	2	0	1	0	1	3	1	1	1	0	0	0	1	1	1	1	1	1	0	2	1	A	0.9	2.8													
5-Aug	1	1	0	1	0	2	1	1	1	1	1	1	0	0	0	1	0	0	0	1	1	0	A	0	0.6	1.7													
6-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	4	0	0	0	A	0	0	0.5	4.4													
7-Aug	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	A	1	1	P	0.7	1.3													
8-Aug	P	P	P	P	P	P	1	5	1	0	0	0	0	0	1	0	0	0	0	A	5	0	1	0	--	4.8													
9-Aug	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0	A	1	0	0	0	0	0.4	1.2													
10-Aug	0	0	2	1	1	1	1	1	1	1	7	0	1	0	1	1	1	A	1	1	7	1	0	5	1.4	7.3													
11-Aug	1	1	20	1	1	1	4	2	1	0	1	0	0	0	0	0	A	1	1	4	1	1	4	1	2.1	20.0													
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	0.5													
13-Aug	1	1	1	1	1	2	1	1	1	1	1	0	1	0	A	0	0	1	1	0	0	0	0	0	0.7	2.0													
14-Aug	0	0	0	0	0	0	0	0	0	0	1	0	2	A	0	0	2	1	2	0	0	0	0	0	0.6	2.1													
15-Aug	0	0	0	1	1	0	1	3	1	1	0	0	A	0	0	1	7	3	1	0	0	0	0	152	7.6	152.3													
16-Aug	1	0	1	2	1	1	1	1	1	1	1	A	0	0	1	1	0	0	0	0	0	0	0	0	0.6	1.5													
17-Aug	0	0	0	1	0	0	0	0	0	0	0	A	0	2	2	0	1	1	1	2	0	0	0	0	0.6	2.0													
18-Aug	1	0	0	0	0	0	0	2	1	A	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0.4	1.5													
19-Aug	0	0	1	0	0	1	1	2	A	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0.5	1.5													
20-Aug	0	0	0	0	1	0	1	A	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0.4	1.2													
21-Aug	0	0	0	0	0	0	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7													
22-Aug	0	0	0	0	0	A	0	0	0	0	0	1	1	1	1	0	1	0	0	0	0	0	0	0	0.4	1.3													
23-Aug	0	0	0	0	A	0	0	0	2	C	C	C	C	0	0	0	1	0	0	0	0	0	2	0	0.5	2.4													
24-Aug	1	0	1	A	0	0	0	0	0	0	0	1	1	0	0	0	1	1	0	0	4	5	0	0	0.8	5.0													
25-Aug	0	0	A	0	1	1	1	2	2	1	1	1	1	0	1	4	1	1	0	1	1	0	1	0	0.9	4.3													
26-Aug	0	A	0	1	0	1	2	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	1	0.5	2.0													
27-Aug	A	1	1	1	1	0	0	1	1	1	1	0	0	0	0	0	0	7	0	0	0	0	0	A	0.8	7.2													
28-Aug	0	0	0	0	0	0	1	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.5	1.8													
29-Aug	0	0	0	0	0	0	0	1	3	1	3	2	1	1	1	2	0	1	0	3	0	A	0	0	1.0	3.4													
30-Aug	0	0	0	1	0	0	3	1	1	1	0	1	1	4	4	1	3	3	1	1	A	0	0	0	1.3	4.3													
31-Aug	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	3	1	A	4	2	10	0	1.2	10.4													
																									Diurnal Average														
																									Diurnal Maximum														
C - Calibration				P - Power Failure				A - Automated Daily Zero Span																															

Hourly Maximums

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



Hourly Averages

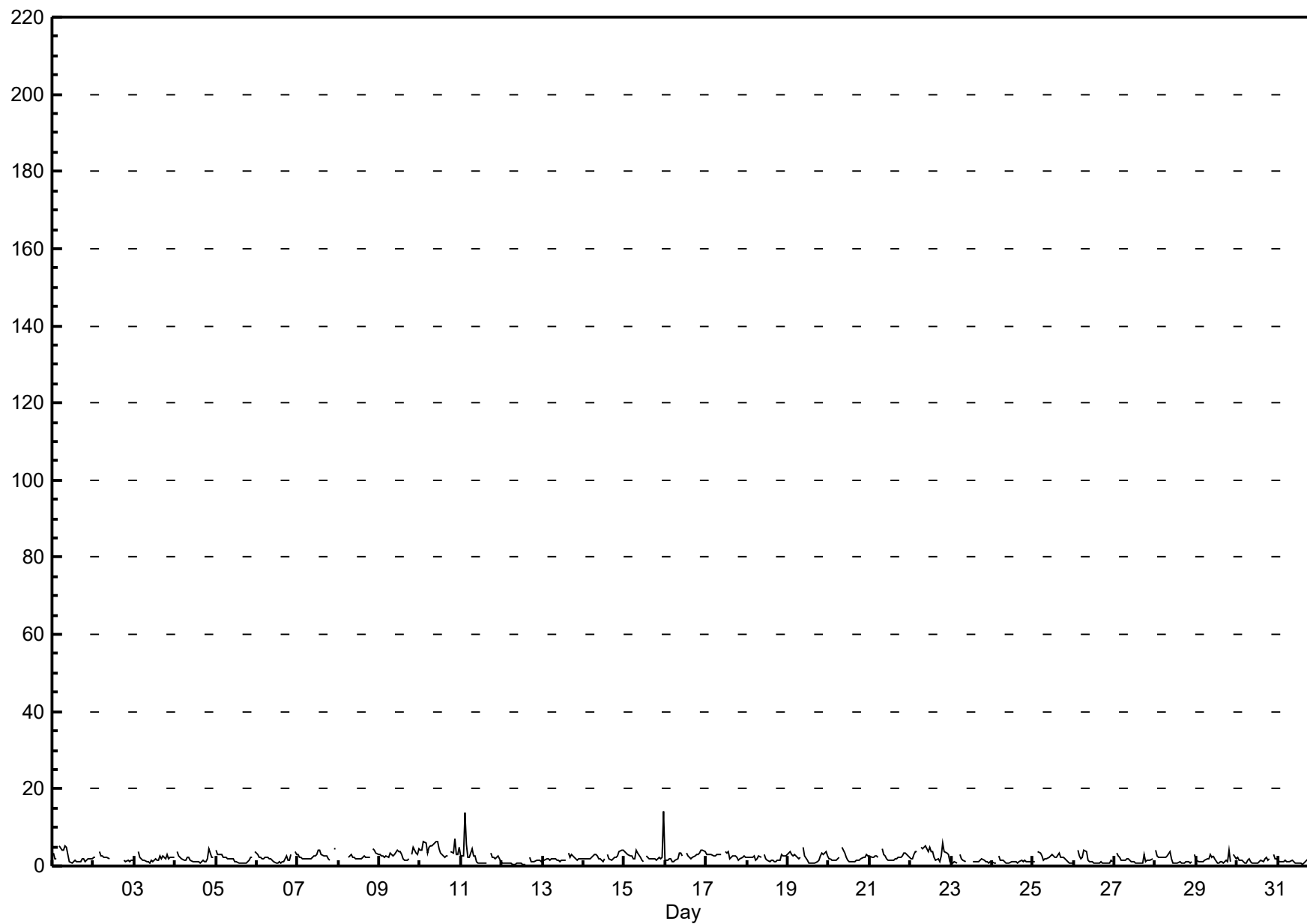
Oxides of Nitrogen (NO_x) - ppb

Portable Rycroft - August 2018

Maximum Value: 14.2 ppb on Aug 16 00:00																				Maximum Daily Average: 4.4 ppb on Aug 10										Hours in Service: 744	
Minimum Value: 0 ppb on Aug 12 08:00																				Minimum Daily Average: 0.9 ppb on Aug 12										Hours of Data: 692	
Maximum Diurnal Average: 2.8 ppb at hour 24																				Minimum Diurnal Average: 1.5 ppb at hour 15										Hours of Missing Data: 52	
Monthly Average: 2.13 ppb																				Percentiles: P ₁ = 0.6 P ₁₀ = 0.8 Q ₁ = 1.2 Median = 1.9 Q ₃ = 2.6 P ₉₀ = 3.6 P ₉₉ = 6.1										Hours of Calibration: 45	
																														Percent Operational Time: 99.1	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Aug	3	2	2	A	5	4	4	5	5	3	1	1	1	1	1	1	1	2	2	1	2	2	2	2	2.3	5.4					
2-Aug	2	2	A	4	3	2	2	2	2	2	C	C	C	C	C	C	C	C	1	1	1	1	2	1	--	3.8					
3-Aug	2	A	4	2	2	2	1	1	1	1	1	1	2	2	2	3	2	3	2	3	2	2	2	2	1.9	3.8					
4-Aug	A	4	3	2	2	2	1	2	2	1	1	1	1	1	1	1	2	1	1	2	5	2	2	A	1.8	4.7					
5-Aug	4	3	3	3	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	2	2	A	4	1.9	4.2					
6-Aug	3	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	2	1	1	3	A	4	3	1.8	3.6					
7-Aug	3	2	2	2	2	2	2	2	2	3	3	3	4	4	3	2	3	3	2	2	A	4	4	P	2.6	4.5					
8-Aug	P	P	P	P	P	P	2	3	3	2	2	2	2	2	2	3	2	2	2	A	5	4	4	3	--	4.6					
9-Aug	3	3	2	2	2	2	3	3	3	3	4	4	4	3	2	2	2	2	A	3	5	3	3	4	2.9	4.7					
10-Aug	4	4	7	6	4	5	5	5	6	6	6	5	3	3	2	2	2	A	4	3	7	3	3	5	4.4	7.0					
11-Aug	2	3	14	6	2	2	5	3	3	1	1	1	1	1	1	1	A	3	2	2	2	2	2	1	2.6	13.7					
12-Aug	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	A	2	1	1	1	1	1	1	1	0.9	2.2					
13-Aug	1	1	2	2	1	2	2	2	2	2	1	1	2	2	A	3	2	3	2	2	2	2	2	2	1.8	3.2					
14-Aug	2	2	2	2	2	3	3	3	2	2	2	1	2	A	3	2	2	2	2	2	3	4	4	4	2.4	4.2					
15-Aug	4	3	3	3	3	2	2	4	3	2	1	1	A	3	2	2	2	2	2	2	2	2	2	14	2.9	14.2					
16-Aug	2	2	2	2	1	1	1	2	3	3	3	A	4	3	2	2	2	3	3	3	3	4	4	4	2.5	4.2					
17-Aug	3	3	3	3	3	3	3	3	3	3	A	4	3	4	2	3	2	2	2	2	2	2	3	2	2.7	3.7					
18-Aug	2	2	2	2	2	2	2	3	2	A	3	2	2	1	1	1	1	1	1	1	3	2	3	3	2.0	3.1					
19-Aug	3	4	3	3	3	3	2	2	A	5	3	2	1	1	1	1	1	1	2	3	3	3	4	3	2.3	4.9					
20-Aug	2	2	2	1	2	2	2	A	5	3	2	1	1	1	1	1	2	1	2	2	2	2	3	3	2.0	5.0					
21-Aug	3	2	2	3	3	2	A	4	3	3	2	1	1	1	2	2	2	2	2	2	3	3	3	2	2.4	4.5					
22-Aug	2	2	3	4	4	A	5	5	5	5	4	5	4	4	2	2	2	1	3	6	4	3	3	1	3.3	6.1					
23-Aug	1	1	1	1	A	3	2	1	1	C	C	C	C	1	1	1	1	2	2	1	1	1	1	1	1.3	2.9					
24-Aug	1	1	1	A	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	2.6					
25-Aug	1	1	A	4	3	3	2	2	2	2	3	3	3	2	2	3	2	2	2	2	1	1	1	1	2.0	3.6					
26-Aug	1	A	4	3	2	2	4	4	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.5	3.9					
27-Aug	A	4	2	2	2	1	2	2	2	2	1	1	1	1	1	1	1	3	1	1	2	2	2	A	1.6	3.5					
28-Aug	4	3	2	2	2	2	2	3	4	2	1	1	1	1	1	1	1	1	1	1	1	1	A	3	1.7	3.9					
29-Aug	2	1	1	1	1	2	2	2	3	2	3	2	1	1	1	1	1	1	1	4	1	A	3	2	1.7	3.9					
30-Aug	2	2	1	2	1	1	2	2	1	1	1	1	1	1	1	1	2	2	1	2	A	3	2	2	1.5	3.1					
31-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	2	2	A	4	3	2	2	1.4	4.1					
																									Diurnal Average						
																									Diurnal Maximum						
C - Calibration P - Power Failure A - Automated Daily Zero Span																															

Hourly Averages

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



Hourly Maximums

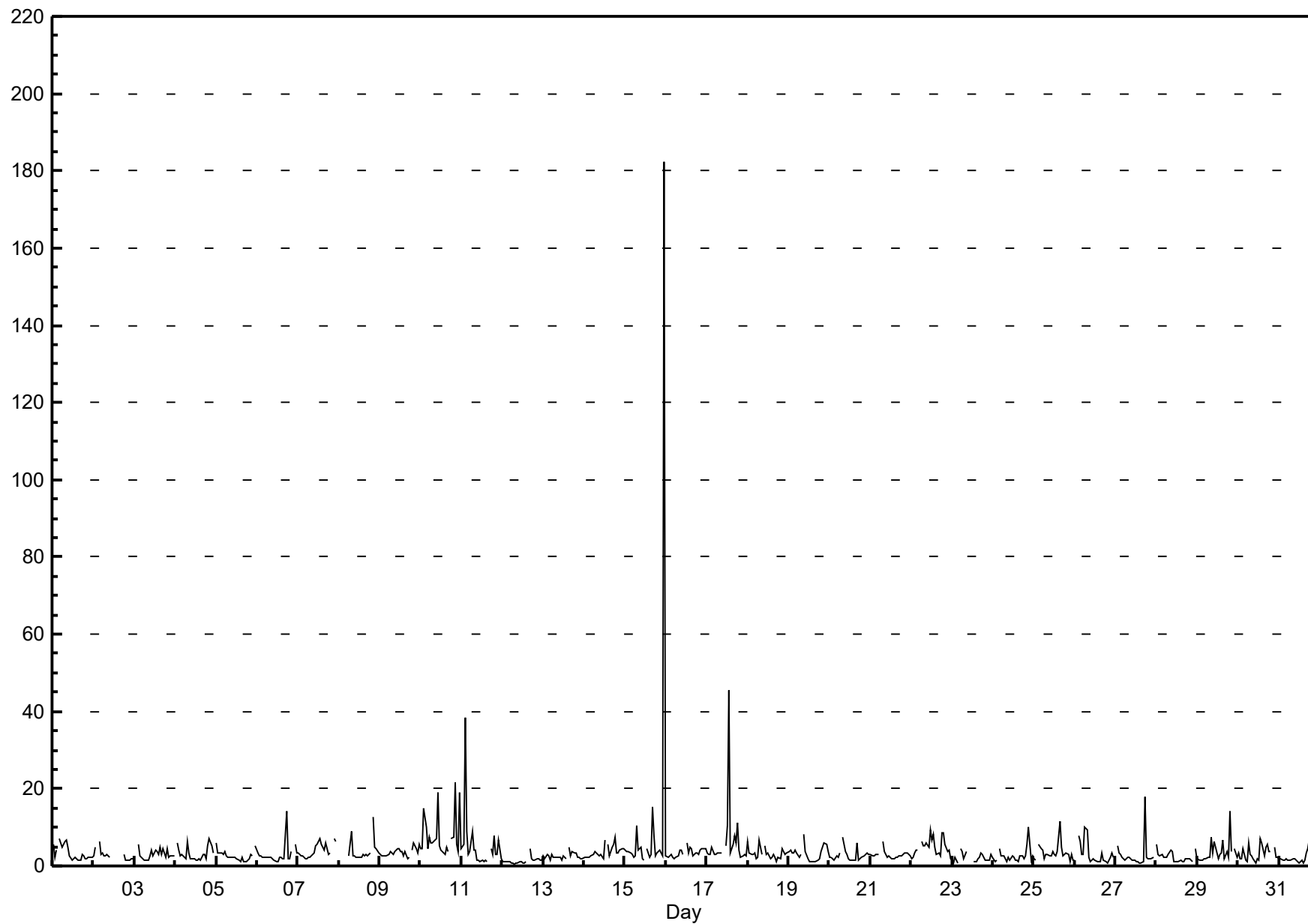
Oxides of Nitrogen (NO_x) - ppb

Portable Rycroft - August 2018

Maximum Value: 182.4 ppb on Aug 16 00:00																				Maximum Daily Average: 12.1 ppb on Aug 15										Hours in Service: 744																		
Minimum Value: 1 ppb on Aug 12 08:00																				Minimum Daily Average: 1.3 ppb on Aug 12										Hours of Data: 692																		
Maximum Diurnal Average: 9.9 ppb at hour 24																				Minimum Diurnal Average: 2.6 ppb at hour 15										Hours of Missing Data: 52																		
Monthly Average: 3.72 ppb																				Percentiles: P ₁ = 0.8 P ₁₀ = 1.3 Q ₁ = 1.9 Median = 2.7 Q ₃ = 4.0 P ₉₀ = 5.9 P ₉₉ = 18.1										Hours of Calibration: 45																		
																				Percent Operational Time: 99.1																												
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Aug	6	2	4	A	7	5	6	6	7	5	3	1	2	2	2	2	2	3	3	2	2	2	2	2	3.3	6.9																						
2-Aug	3	5	A	6	3	3	3	3	3	2	C	C	C	C	C	C	C	C	3	1	2	2	2	2	--	6.2																						
3-Aug	2	A	6	3	2	2	2	2	2	3	4	3	4	4	3	5	3	5	2	4	2	3	3	3	3.0	5.7																						
4-Aug	A	6	4	3	3	2	2	6	3	2	2	2	2	2	2	2	3	3	2	5	7	5	3	A	3.2	7.0																						
5-Aug	6	4	3	3	3	4	3	2	2	2	2	2	2	1	1	2	1	1	1	2	3	2	A	5	2.6	6.1																						
6-Aug	3	3	2	2	2	2	2	2	2	2	2	1	1	2	2	2	2	14	2	2	4	A	6	3	2.8	14.3																						
7-Aug	3	3	3	3	2	2	2	2	3	3	5	6	6	7	5	4	6	4	3	3	A	7	6	P	4.1	7.0																						
8-Aug	P	P	P	P	P	P	3	9	3	3	2	2	2	2	3	3	3	3	3	A	13	5	5	3	--	12.7																						
9-Aug	3	3	3	3	3	3	4	3	3	4	5	5	4	4	3	4	2	2	A	4	6	4	3	6	3.5	6.1																						
10-Aug	5	4	15	10	4	7	6	6	7	7	19	5	4	4	3	5	4	A	7	8	22	5	4	19	7.8	21.6																						
11-Aug	4	6	38	9	3	4	9	4	4	2	1	1	1	1	1	1	A	5	3	8	3	3	7	2	5.2	38.3																						
12-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	4	2	1	1	2	2	2	1	1.3	4.3																						
13-Aug	2	2	3	3	2	3	2	2	2	2	2	2	3	2	A	5	3	4	3	3	2	2	2	2	2.5	5.0																						
14-Aug	2	2	2	2	3	3	4	4	3	3	3	2	7	A	6	3	5	6	7	3	3	4	5	4	3.6	7.4																						
15-Aug	4	4	4	3	3	2	3	11	4	5	2	1	A	4	2	3	15	8	3	3	4	3	3	182	12.1	182.4																						
16-Aug	3	2	3	3	2	2	2	3	4	4	3	A	6	3	5	5	3	3	4	3	4	5	4	4	3.5	5.8																						
17-Aug	3	3	3	5	3	3	3	3	3	3	A	5	10	46	3	6	8	6	11	4	2	3	3	3	6.2	45.6																						
18-Aug	6	3	3	3	3	2	2	7	3	A	5	3	3	2	2	3	2	1	2	2	4	4	3	3	3.2	6.7																						
19-Aug	4	4	3	3	4	3	2	3	A	8	4	2	1	1	1	1	1	2	2	4	5	6	6	4	3.3	8.3																						
20-Aug	2	2	2	2	3	2	3	A	7	4	3	2	1	1	1	2	6	2	2	2	3	3	3	3	2.7	7.3																						
21-Aug	3	3	3	3	3	3	A	6	4	3	2	2	2	2	2	2	2	3	2	3	3	3	3	3	2.8	6.2																						
22-Aug	2	2	4	4	4	A	6	5	5	6	5	9	7	8	5	3	3	3	9	9	6	4	4	2	4.9	9.2																						
23-Aug	1	1	2	1	A	4	4	2	4	C	C	C	C	1	1	2	2	3	3	2	2	2	1	3	2.1	4.5																						
24-Aug	2	1	1	A	4	3	3	2	1	2	2	3	2	1	1	1	3	3	2	3	6	10	1	3	2.6	9.9																						
25-Aug	2	1	A	6	5	4	2	3	3	3	3	4	3	3	4	11	5	3	3	3	3	1	3	1	3.4	11.4																						
26-Aug	1	A	8	7	3	3	10	9	2	1	1	2	1	1	1	1	3	1	1	1	1	2	3	2	3.0	10.0																						
27-Aug	A	5	3	3	2	2	2	2	2	2	1	1	1	1	1	1	1	18	2	2	2	2	2	A	2.7	18.0																						
28-Aug	6	3	3	3	2	2	2	3	4	4	1	1	1	1	1	1	1	2	2	2	1	1	A	5	2.3	5.7																						
29-Aug	2	1	2	1	2	2	2	2	7	3	6	5	2	3	3	7	2	4	2	14	4	A	5	2	3.6	14.1																						
30-Aug	3	2	2	4	1	1	6	3	3	2	1	2	2	7	6	3	5	5	4	4	A	5	2	2	3.2	7.2																						
31-Aug	2	2	1	1	2	1	1	1	2	2	2	1	1	1	1	1	4	5	7	A	15	6	19	2	3.4	19.1																						
Diurnal Average																									3.1	2.8	4.6	3.6	2.9	2.8	3.4	3.9	3.4	3.1	3.3	2.7	2.9	4.1	2.6	3.1	3.6	4.2	3.4	3.7	4.7	3.6	4.0	9.9
Diurnal Maximum																									6.3	5.9	38.3	10.0	6.9	7.3	10.0	10.6	7.5	8.3	19.2	9.2	10.3	45.6	5.9	11.4	15.2	18.0	11.2	14.1	21.6	9.9	19.1	182.4
C - Calibration																									P - Power Failure					A - Automated Daily Zero Span																		

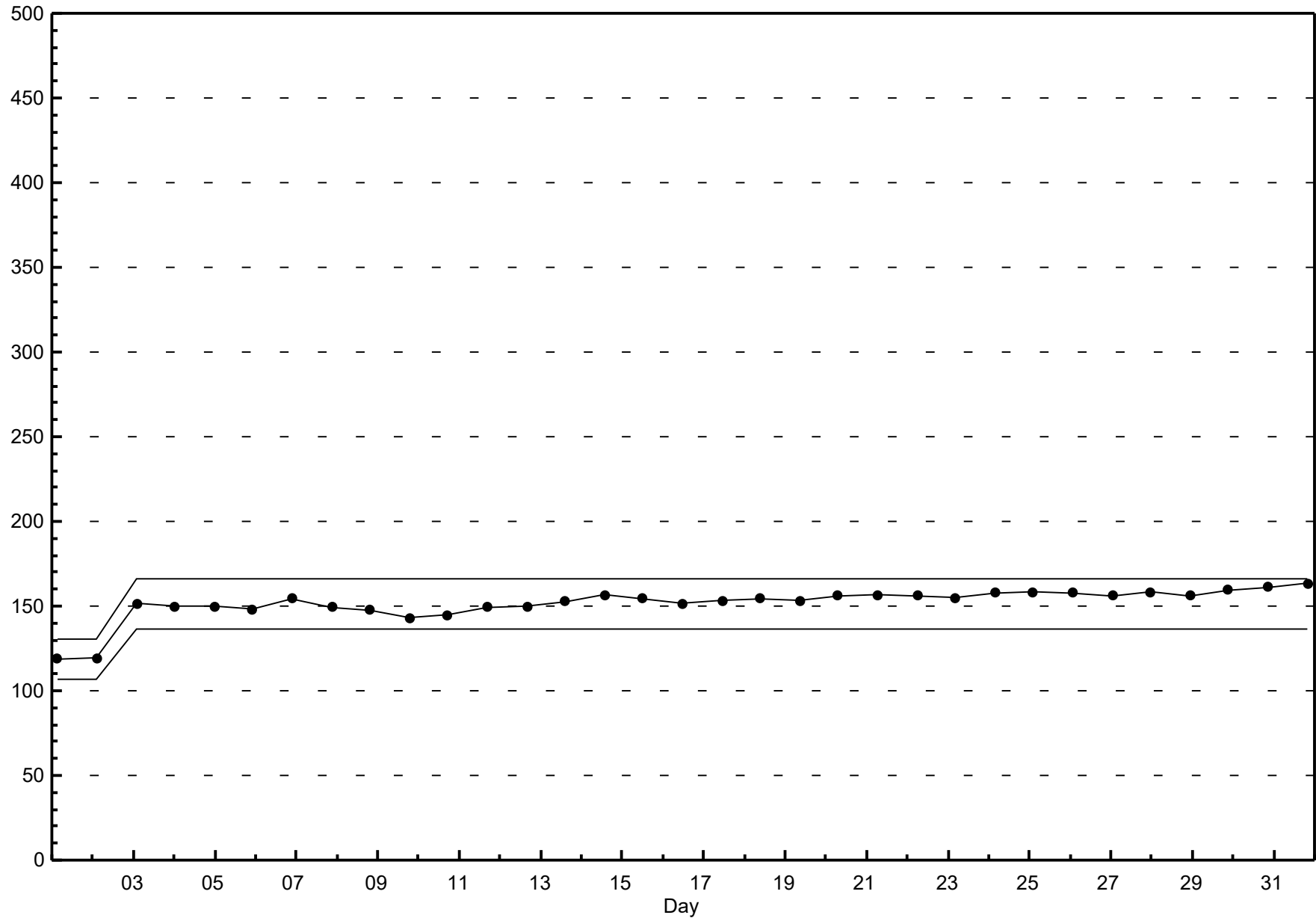
Hourly Maximums

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



Span Responses

Oxides of Nitrogen (NO_x)
Portable Rycroft - August 2018



Hourly Averages

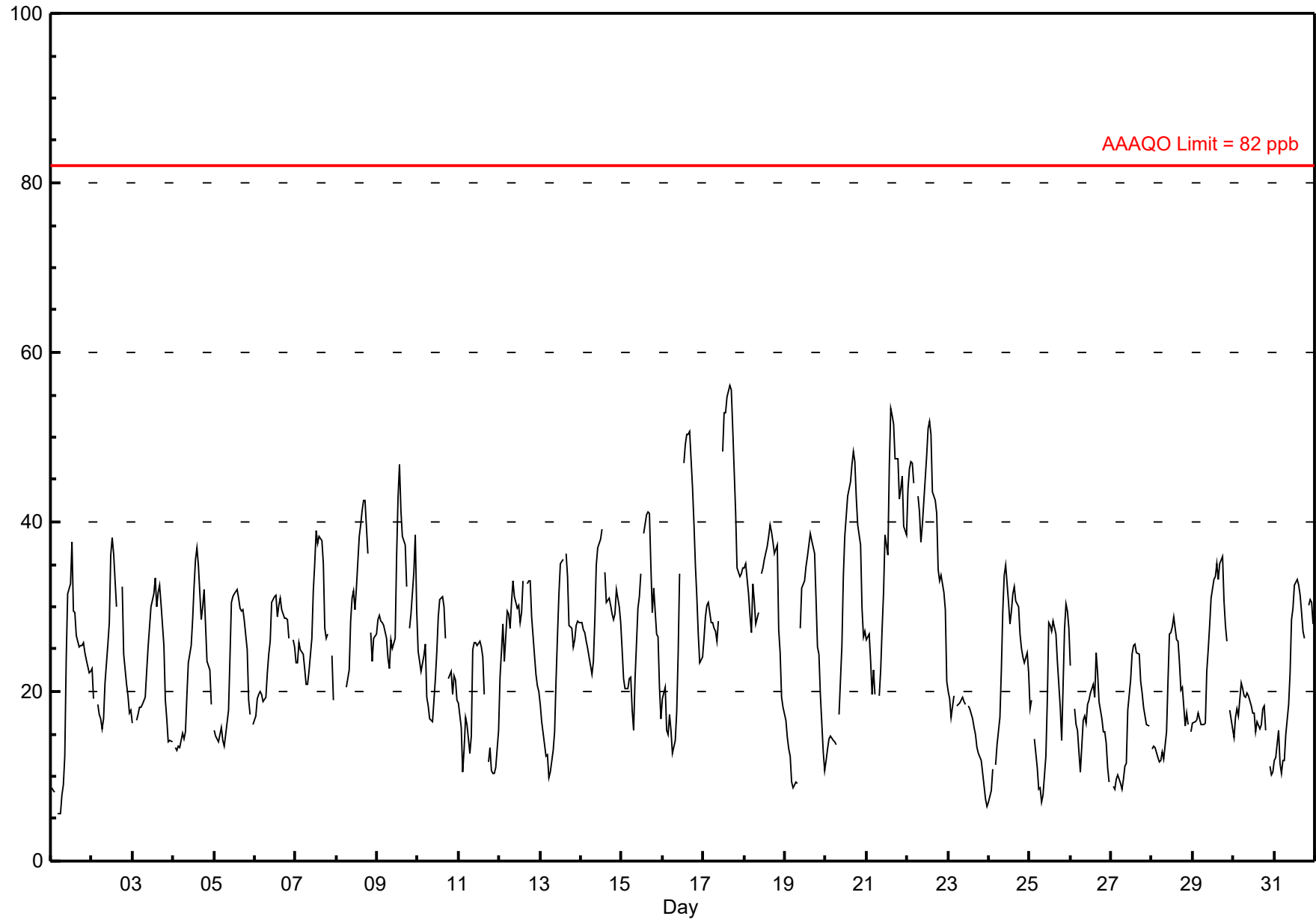
Ozone (O₃) - ppb

Portable Rycroft - August 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 56.0 ppb on Aug 17 16:00 Maximum Daily Average: 41.2 ppb on Aug 22																								Hours in Service: 744 Hours of Data: 700 Hours of Missing Data: 44 Hours of Calibration: 37 Percent Operational Time: 99.1		
Minimum Value: 6 ppb on Aug 1 05:00 Maximum Diurnal Average: 34.4 ppb at hour 15 Monthly Average: 25.21 ppb												Minimum Daily Average: 15.6 ppb on Aug 23 Minimum Diurnal Average: 17.2 ppb at hour 6 Percentiles: P ₁ = 7.8 P ₁₀ = 12.9 Q ₁ = 17.4 Median = 25.0 Q ₃ = 31.1 P ₉₀ = 38.4 P ₉₉ = 51.9														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Aug	9	8	8	A	6	6	8	9	12	24	31	33	38	29	29	27	25	26	25	26	25	24	22	22	20.5	37.6
2-Aug	23	19	A	18	17	17	16	17	21	26	28	36	38	36	30	C	C	C	32	24	21	19	17	18	23.7	38.2
3-Aug	16	A	17	17	18	18	18	19	22	25	28	30	32	33	30	32	33	30	25	19	17	14	14	14	22.7	33.5
4-Aug	A	13	13	13	13	15	14	15	19	23	25	28	32	36	37	35	28	30	32	28	24	22	18	A	23.5	36.9
5-Aug	15	15	14	15	16	14	14	15	18	24	31	31	32	32	31	30	30	30	28	25	19	17	A	16	22.2	32.1
6-Aug	17	19	20	20	20	19	19	22	24	26	30	31	31	29	30	31	30	29	29	29	26	A	26	25	25.3	31.3
7-Aug	23	23	26	25	24	23	21	21	22	26	32	35	39	38	38	38	35	28	26	27	A	24	19	P	27.9	38.9
8-Aug	P	P	P	P	P	P	20	23	28	31	32	30	32	38	40	41	43	43	36	A	27	24	26	27	--	42.6
9-Aug	28	29	28	28	28	26	24	23	26	25	26	36	43	47	41	38	37	32	A	27	29	34	38	29	31.5	46.8
10-Aug	25	24	22	24	26	19	18	17	17	19	22	25	29	31	31	30	26	A	22	22	20	22	21	19	23.0	31.2
11-Aug	19	16	11	13	17	16	13	15	25	26	26	25	26	25	24	20	A	12	13	11	10	10	11	16	17.3	25.9
12-Aug	22	25	28	24	30	29	27	30	33	31	30	30	28	29	33	A	33	33	33	29	24	22	21	20	28.0	33.1
13-Aug	19	16	14	12	13	10	10	13	15	21	27	31	35	36	A	36	34	28	27	25	26	28	28	28	23.2	36.3
14-Aug	28	27	27	26	25	23	22	24	28	35	37	38	39	A	34	30	31	30	29	28	29	32	30	28	29.7	39.2
15-Aug	25	22	20	20	22	22	18	15	21	30	31	34	A	39	41	41	41	35	29	32	27	27	20	17	27.3	41.2
16-Aug	19	21	15	15	17	15	13	14	18	24	34	A	47	49	50	50	51	44	40	35	31	27	23	24	29.4	50.7
17-Aug	26	29	30	30	28	28	28	27	26	28	A	48	53	53	55	56	56	51	46	41	35	34	34	34	38.1	56.0
18-Aug	35	35	31	29	27	33	31	28	29	A	34	35	36	37	38	40	39	38	36	37	27	25	19	18	32.0	39.6
19-Aug	17	15	13	12	9	9	9	9	A	27	32	33	35	36	37	39	38	36	31	25	24	20	13	11	23.1	38.6
20-Aug	12	13	14	15	14	14	14	A	17	25	33	38	41	43	45	47	48	47	43	40	37	30	26	27	29.8	48.3
21-Aug	26	27	23	20	23	20	A	19	23	27	32	39	36	47	53	53	51	48	47	43	44	45	39	39	35.8	53.3
22-Aug	44	46	47	47	45	A	43	41	38	40	45	48	51	52	50	44	43	41	34	33	34	32	30	21	41.2	51.9
23-Aug	20	19	17	20	A	18	19	19	19	19	18	C	18	18	17	16	15	13	13	12	10	9	7	6	15.6	20.0
24-Aug	7	8	11	A	11	14	17	23	29	34	35	30	28	29	32	32	31	30	27	25	24	23	25	22	23.8	35.0
25-Aug	18	19	A	14	11	8	9	7	8	12	19	28	28	27	28	27	23	21	18	14	28	30	30	27	19.8	30.4
26-Aug	23	A	18	16	15	13	11	17	17	16	19	19	20	21	19	25	22	19	17	15	15	14	11	9	17.0	24.6
27-Aug	A	9	8	10	10	9	8	10	11	12	18	21	24	25	26	25	24	21	20	18	17	16	16	A	16.3	25.5
28-Aug	13	14	13	12	12	12	13	12	15	21	27	27	28	29	26	26	23	20	20	16	18	16	A	15	18.6	28.8
29-Aug	16	17	17	17	17	16	16	16	22	25	28	31	33	34	35	33	35	36	31	28	26	A	18	16	24.4	35.9
30-Aug	15	17	18	17	21	20	19	19	20	20	18	17	17	15	16	16	16	18	18	15	A	11	10	10	16.8	21.0
31-Aug	12	12	15	11	10	12	12	15	18	22	28	30	32	33	33	31	29	27	26	A	30	31	31	28	23.1	33.2
20.4 19.9 19.3 19.4 18.8 17.2 17.5 18.4 21.5 24.9 28.5 31.7 33.4 34.2 34.4 34.0 33.4 30.8 28.5 25.9 24.9 23.5 22.3 21.0																								Diurnal Average		
44.0 46.3 47.1 47.0 44.7 32.7 43.1 41.1 37.6 39.7 45.1 48.3 52.8 52.9 54.7 56.0 55.5 50.9 47.5 42.7 44.0 45.3 39.4 38.5																								Diurnal Maximum		
C - Calibration P - Power Failure A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na																										

Hourly Averages

Ozone (O₃) - ppb
Portable Rycroft - August 2018



Hourly Maximums

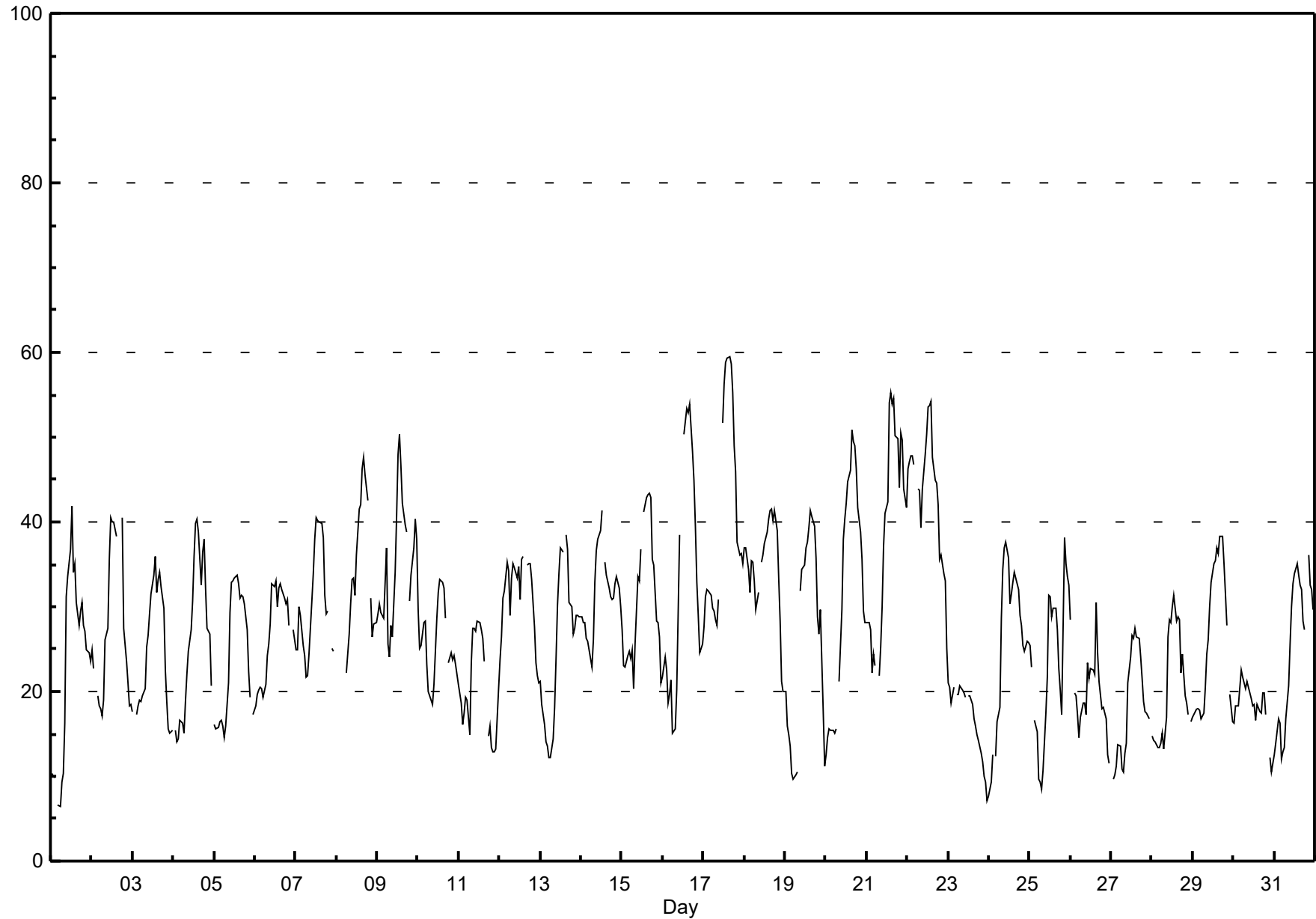
Ozone (O₃) - ppb

Portable Rycroft - August 2018

Maximum Value: 59.6 ppb on Aug 17 16:00																				Maximum Daily Average: 43.9 ppb on Aug 22					Hours in Service: 744	
Minimum Value: 6 ppb on Aug 1 06:00																				Minimum Daily Average: 16.8 ppb on Aug 23					Hours of Data: 700	
Maximum Diurnal Average: 36.9 ppb at hour 15																				Minimum Diurnal Average: 19.3 ppb at hour 7					Hours of Missing Data: 44	
Monthly Average: 27.73 ppb																				Percentiles: P ₁ = 9.4 P ₁₀ = 14.9 Q ₁ = 19.4 Median = 27.6 Q ₃ = 34.1 P ₉₀ = 41.4 P ₉₉ = 54.6					Hours of Calibration: 37	
																				Percent Operational Time: 99.1						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Aug	10	10	10	A	7	6	9	10	16	31	34	37	42	34	35	31	28	30	30	28	27	25	25	23	23.4	41.9
2-Aug	25	23	A	19	18	18	17	19	26	28	36	40	40	40	38	C	C	C	41	28	24	21	18	18	26.8	40.5
3-Aug	18	A	17	18	19	19	20	20	25	27	29	32	34	36	32	33	34	32	30	23	19	16	15	15	24.4	35.9
4-Aug	A	15	14	14	17	16	15	19	22	25	27	31	36	40	40	39	33	36	38	32	27	27	21	A	26.5	40.3
5-Aug	16	16	16	16	17	16	15	16	21	29	33	33	33	34	33	31	31	31	30	27	22	19	A	17	24.1	33.7
6-Aug	18	20	20	20	20	19	21	24	26	28	33	32	33	30	32	33	32	31	30	31	28	A	27	26	26.7	33.0
7-Aug	25	25	30	29	25	24	22	22	24	31	34	38	41	40	40	40	38	31	29	29	A	25	25	P	30.3	40.5
8-Aug	P	P	P	P	P	P	22	27	30	33	33	31	36	42	42	46	48	46	43	A	31	26	28	28	--	47.6
9-Aug	29	30	29	29	29	37	26	24	28	26	34	41	48	50	47	42	40	39	A	31	34	37	40	38	35.1	50.3
10-Aug	30	25	25	28	28	23	20	19	18	21	25	29	32	33	33	32	29	A	23	25	24	24	23	22	25.7	33.3
11-Aug	21	19	16	17	19	19	15	23	27	27	27	28	28	27	26	24	A	15	16	13	13	13	13	20	20.4	28.3
12-Aug	24	26	31	32	35	34	29	33	35	35	33	35	31	36	36	A	35	35	35	33	28	23	22	21	31.2	36.0
13-Aug	21	18	16	14	13	12	12	14	18	24	30	34	37	37	A	38	37	31	30	27	27	29	29	29	25.2	38.5
14-Aug	29	28	28	26	26	24	23	26	33	37	38	39	41	A	35	34	32	31	31	31	33	34	32	30	31.3	41.4
15-Aug	27	23	23	24	25	24	25	20	26	34	33	37	A	41	43	43	43	43	36	35	28	28	26	21	30.8	43.3
16-Aug	22	24	23	19	20	21	15	16	20	29	39	A	50	52	53	53	54	48	45	39	33	29	25	26	32.8	54.0
17-Aug	28	31	32	32	31	30	30	29	28	31	A	52	56	59	59	60	59	55	49	46	38	36	36	35	40.9	59.6
18-Aug	37	37	34	32	35	35	33	30	32	A	35	36	37	39	40	41	42	40	41	39	33	28	21	20	34.8	41.6
19-Aug	20	16	15	14	10	10	10	11	A	32	34	35	37	38	39	41	41	39	36	29	27	30	18	11	25.7	41.3
20-Aug	13	15	16	15	15	15	16	A	21	30	38	40	42	45	46	51	50	49	46	42	39	36	29	28	32.0	50.9
21-Aug	28	28	27	22	24	23	A	22	25	30	37	41	42	54	55	54	55	50	50	44	51	50	44	42	39.1	55.2
22-Aug	46	47	48	48	47	A	44	44	39	44	48	50	54	54	54	48	45	45	42	36	36	34	33	25	43.9	54.2
23-Aug	21	20	19	20	A	20	20	21	20	20	19	C	19	19	18	17	16	15	14	13	12	10	9	7	16.8	21.1
24-Aug	8	9	12	A	12	16	18	29	34	37	38	36	30	32	33	34	33	32	29	28	25	25	26	26	26.2	37.6
25-Aug	25	23	A	17	15	10	9	9	11	17	22	31	31	29	30	30	27	23	20	17	38	35	34	33	23.3	38.1
26-Aug	28	A	20	19	17	15	17	19	19	17	23	21	23	23	22	31	25	21	18	18	17	17	13	12	19.7	30.6
27-Aug	A	10	10	11	14	14	11	11	13	14	21	24	27	26	27	26	26	24	21	19	18	17	17	A	18.2	27.4
28-Aug	15	14	14	13	13	14	15	13	17	27	29	28	30	31	28	29	28	22	24	20	19	17	A	16	20.8	31.4
29-Aug	17	18	18	18	18	17	17	21	24	26	30	33	35	35	37	36	38	38	35	31	28	A	20	17	26.4	38.4
30-Aug	16	18	18	18	22	22	21	20	21	21	19	18	18	17	19	18	17	20	20	17	A	12	11	12	18.1	22.5
31-Aug	13	14	17	16	12	13	13	17	21	26	30	33	34	35	34	33	32	28	27	A	36	33	32	30	25.1	36.1
22.5 21.5 21.4 21.6 20.9 19.5 19.3 20.9 24.0 27.8 31.4 34.3 36.0 36.9 36.9 36.8 36.1 33.9 32.0 28.6 28.0 26.1 24.5 23.2																								Diurnal Average		
46.2 47.1 47.9 47.8 46.8 36.9 44.0 43.7 39.3 44.0 47.9 51.7 56.2 58.8 59.3 59.6 58.6 55.3 49.8 46.0 50.5 49.6 43.9 41.7																								Diurnal Maximum		
C - Calibration P - Power Failure A - Automated Daily Zero Span																										

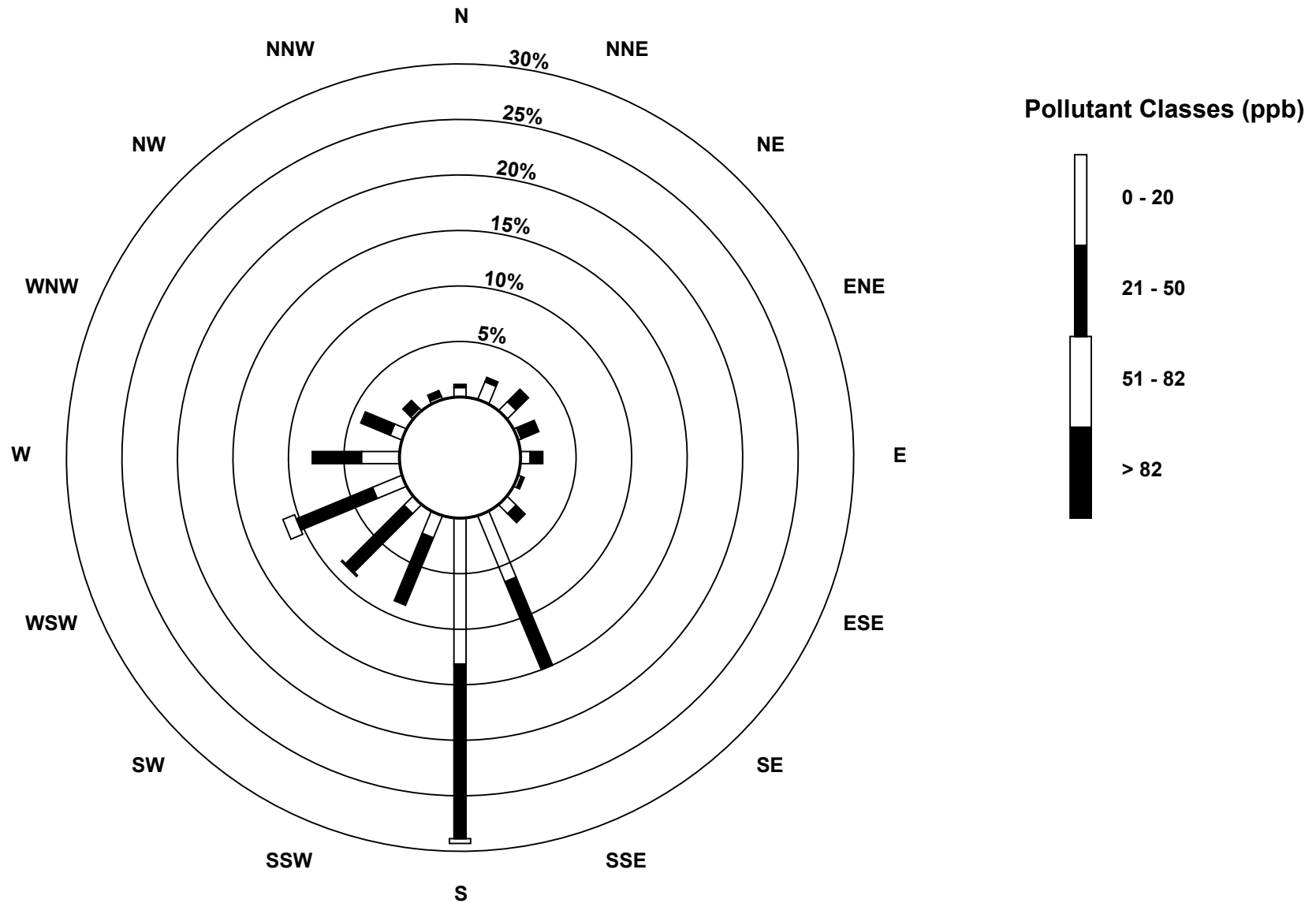
Hourly Maximums

Ozone (O₃) - ppb
Portable Rycroft - August 2018



Pollutant Rose

Ozone (O₃) - ppb
Portable Rycroft - August 2018



Eight Hour Running Averages

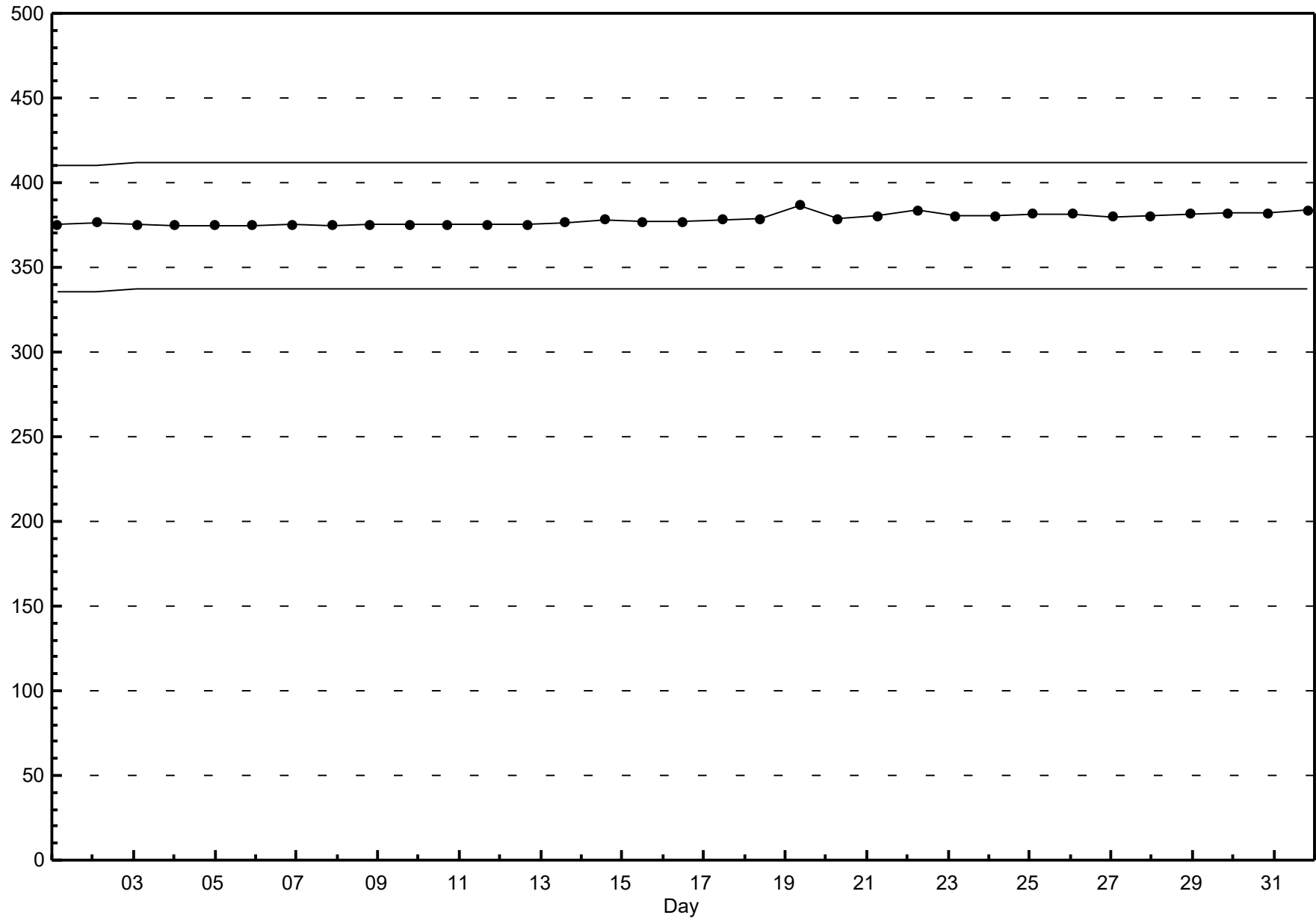
Ozone (O₃) - ppb

Portable Rycroft - August 2018

Maximum Value: 53.0 ppb on Aug 17 18:00																				Hours in Service: 744					
Minimum Value: 7.6 ppb on Aug 1 08:00																				Hours of Data: 727					
																				Hours of Missing Data: 17					
Percentiles: P ₁ = 9.1 P ₁₀ = 14.2 Q ₁ = 18.3 Median = 24.5 Q ₃ = 30.3 P ₉₀ = 36.8 P ₉₉ = 47.3																				Hours of Calibration: 10					
																				Percent Operational Time: 99.1					
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-Aug	15	13	12	12	10	9	8	8	8	10	14	16	20	23	26	28	30	30	29	28	26	26	25	24	29.7
2-Aug	24	23	23	22	21	20	19	18	18	19	20	22	25	27	29	31	32	N	N	N	N	N	N	22	32.4
3-Aug	21	21	19	18	18	17	18	18	19	19	21	22	24	26	27	29	30	31	31	29	27	25	23	21	30.9
4-Aug	19	17	15	14	14	14	14	14	15	16	17	19	22	24	27	30	31	32	32	32	31	30	27	26	32.4
5-Aug	24	22	19	18	17	15	15	15	15	16	18	20	22	24	27	29	30	31	30	30	28	26	25	24	30.7
6-Aug	22	20	19	18	18	19	19	19	20	21	23	24	25	27	28	29	30	30	30	30	29	29	28	28	30.1
7-Aug	27	26	26	25	25	24	24	23	23	24	24	26	27	29	31	34	35	35	35	34	33	31	28	26	35.3
8-Aug	N	N	N	N	N	N	N	N	N	N	N	27	28	29	32	34	36	37	38	39	38	36	34	32	39.0
9-Aug	30	28	27	27	27	28	27	27	27	26	26	27	29	31	33	35	37	38	39	38	36	34	34	33	39.3
10-Aug	31	30	29	28	28	26	23	22	21	20	20	20	21	22	24	25	27	28	28	27	26	25	23	22	30.8
11-Aug	21	20	19	18	17	16	15	15	16	17	19	20	21	23	24	25	25	23	21	19	16	14	12	12	24.6
12-Aug	13	15	17	18	21	23	25	27	28	29	29	30	30	30	31	31	31	31	31	31	31	30	28	27	31.4
13-Aug	25	23	21	19	17	16	14	13	13	14	15	18	20	24	25	29	31	32	32	32	30	29	29	28	32.4
14-Aug	27	27	27	27	27	27	26	25	25	26	28	29	31	32	34	35	35	34	33	32	30	31	30	30	35.0
15-Aug	29	28	27	26	25	24	22	20	20	21	22	24	24	27	30	34	37	37	37	37	36	34	32	28	37.4
16-Aug	26	24	22	20	19	17	17	16	16	16	19	19	24	28	34	39	44	46	47	46	44	41	38	34	47.3
17-Aug	31	29	28	28	27	27	28	28	28	28	30	34	38	41	46	50	53	52	51	49	47	44	41	41	53.0
18-Aug	39	37	35	33	32	32	32	31	30	30	31	32	33	34	35	37	37	37	37	38	37	35	33	30	38.7
19-Aug	27	24	21	18	16	14	13	12	11	13	16	18	22	26	30	34	35	36	36	35	33	31	28	25	35.7
20-Aug	21	19	17	15	14	13	13	14	15	16	19	22	26	30	35	36	40	43	44	44	44	42	40	37	44.1
21-Aug	35	32	30	27	25	24	24	23	22	22	23	26	28	32	34	39	42	45	47	47	48	48	46	45	48.2
22-Aug	44	43	43	44	44	44	44	45	44	43	43	43	44	45	46	46	46	47	45	43	41	39	36	33	46.7
23-Aug	31	28	26	24	23	21	19	19	19	19	19	19	19	19	18	18	17	17	16	15	14	13	12	11	30.6
24-Aug	10	9	9	8	9	9	11	13	16	20	23	24	26	28	30	31	31	31	30	29	29	28	27	26	31.4
25-Aug	24	23	22	21	19	17	15	12	11	10	11	13	15	17	20	22	24	25	25	23	23	24	24	24	25.2
26-Aug	24	24	24	25	23	20	18	16	15	15	15	16	16	17	18	19	20	20	20	20	19	18	17	15	24.6
27-Aug	14	13	12	11	10	10	9	9	9	10	11	12	14	16	18	20	22	23	23	23	22	21	20	19	23.3
28-Aug	17	16	15	15	14	13	13	13	13	14	15	17	19	21	23	25	26	26	25	24	22	21	20	18	25.8
29-Aug	17	17	16	17	16	16	16	16	17	18	20	21	23	26	28	30	32	33	33	33	32	32	29	27	33.5
30-Aug	24	21	19	18	17	18	18	18	19	19	19	19	19	18	18	17	17	17	17	17	16	16	15	14	24.0
31-Aug	14	13	12	12	12	12	12	12	13	15	16	19	21	24	27	29	30	31	30	30	30	30	29	29	30.6
43.6 43.5 43.4 44.0 44.0 43.9 44.4 44.8 43.8 42.9 42.6 42.7 43.6 44.7 45.6 45.9 49.8 53.0 52.2 51.3 49.0 48.0 46.3 44.6																									
Diurnal Maximums																									
N - Not Valid																									

Span Responses

Ozone (O₃)
Portable Rycroft - August 2018



Hourly Averages

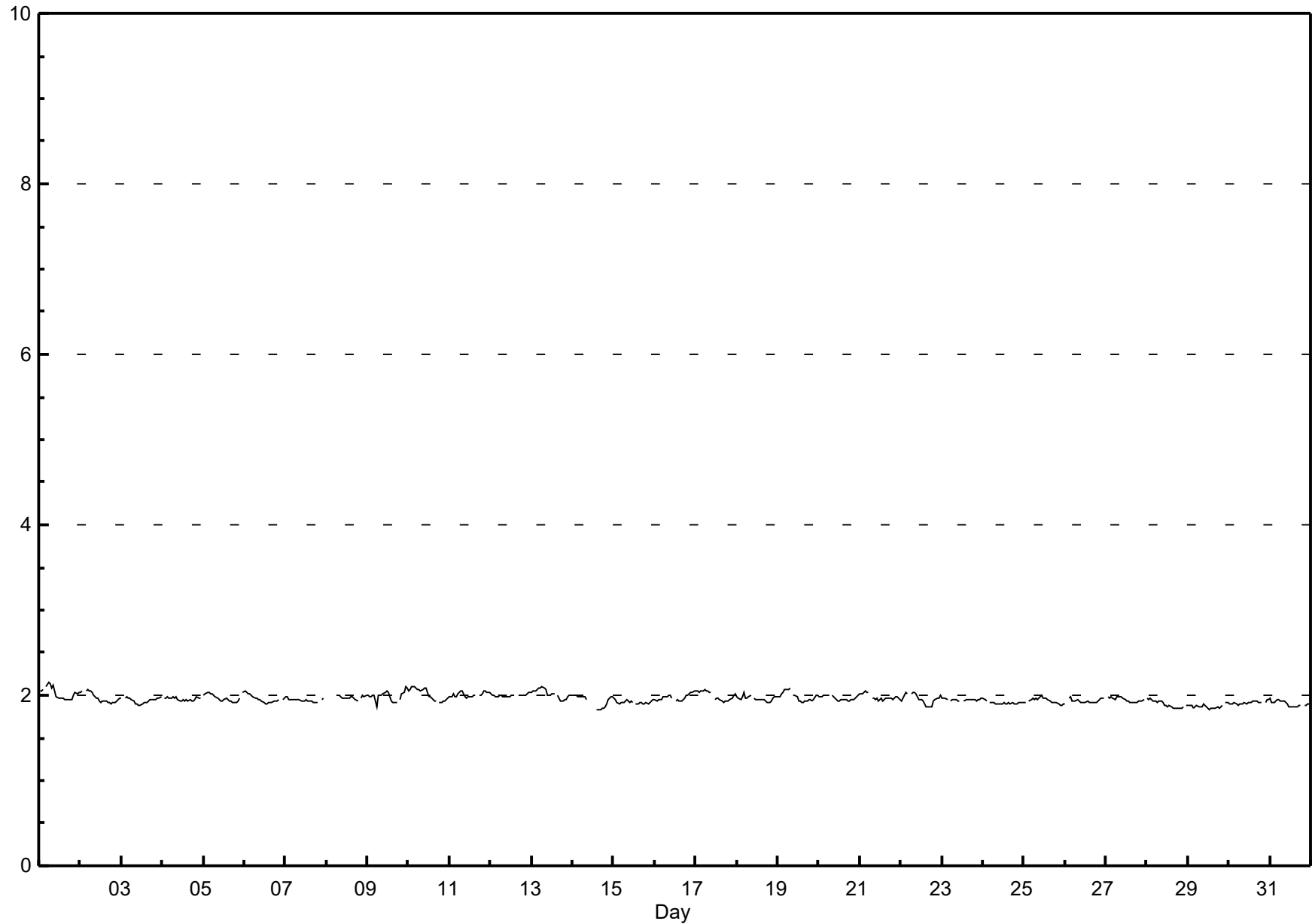
Total Hydrocarbons (THC) - ppm

Portable Rycroft - August 2018

Maximum Value: 2.15 ppm on Aug 1 06:00																					Maximum Daily Average: 2.02 ppm on Aug 1										Hours in Service: 744	
Minimum Value: 1.8 ppm on Aug 14 17:00																					Minimum Daily Average: 1.87 ppm on Aug 29										Hours of Data: 698	
Maximum Diurnal Average: 1.99 ppm at hour 5																					Minimum Diurnal Average: 1.92 ppm at hour 17										Hours of Missing Data: 46	
Monthly Average: 1.957 ppm																					Percentiles: P ₁ = 1.84 P ₁₀ = 1.90 Q ₁ = 1.92 Median = 1.95 Q ₃ = 1.99 P ₉₀ = 2.03 P ₉₉ = 2.09										Hours of Calibration: 39	
																					Percent Operational Time: 99.1											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24								
1-Aug	2.0	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.02	2.15					
2-Aug	2.0	2.0	A	2.0	2.1	2.0	2.1	2.0	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	2.0	2.0	1.97	2.06					
3-Aug	2.0	A	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	2.0	2.0	1.94	1.98						
4-Aug	A	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	2.0	2.0	2.0	A	1.96	1.98						
5-Aug	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	2.0	1.97	2.03						
6-Aug	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.0	2.0	1.96	2.05						
7-Aug	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	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.0	P	1.94	1.98						
8-Aug	P	P	P	P	P	P	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	A	2.0	2.0	2.0	2.0	--	2.00						
9-Aug	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	A	1.9	2.0	2.0	2.1	2.1	1.99	2.10						
10-Aug	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	2.0	2.0	2.01	2.10						
11-Aug	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.01	2.06						
12-Aug	2.0	2.0	2.0	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	2.00	2.04						
13-Aug	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	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	2.02	2.09						
14-Aug	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	C	C	C	C	C	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.0	2.0	2.0	1.93	2.01						
15-Aug	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.92	1.97						
16-Aug	2.0	1.9	1.9	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	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.97	2.04						
17-Aug	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	A	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.00	2.06						
18-Aug	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	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.96	2.04						
19-Aug	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	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	2.0	2.0	1.98	2.09						
20-Aug	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	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.97	2.01						
21-Aug	2.0	2.0	2.0	2.1	2.0	2.0	A	2.0	2.0	1.9	2.0	1.9	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.98	2.05						
22-Aug	1.9	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.96	2.04						
23-Aug	2.0	2.0	2.0	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	C	C	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.95	1.97							
24-Aug	2.0	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.91	1.96						
25-Aug	1.9	1.9	A	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.94	2.00						
26-Aug	1.9	A	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.93	1.98						
27-Aug	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.95	1.99						
28-Aug	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	A	1.89	1.97						
29-Aug	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.9	A	1.9	1.9	1.87	1.91						
30-Aug	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	1.91	1.96						
31-Aug	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.90	1.96						
1.98 1.98 1.98 1.99 1.99 1.98 1.99 1.98 1.98 1.96 1.95 1.94 1.94 1.94 1.93 1.92 1.92 1.92 1.92 1.92 1.93 1.94 1.96 1.97 1.98																									Diurnal Average							
2.06 2.07 2.10 2.10 2.10 2.15 2.13 2.09 2.12 2.08 2.08 2.04 2.03 2.02 2.00 2.00 2.00 2.00 2.00 2.01 2.04 2.06 2.10 2.08																									Diurnal Maximum							
C - Calibration P - Power Failure A - Automated Daily Zero Span																																

Hourly Averages

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



Hourly Maximums

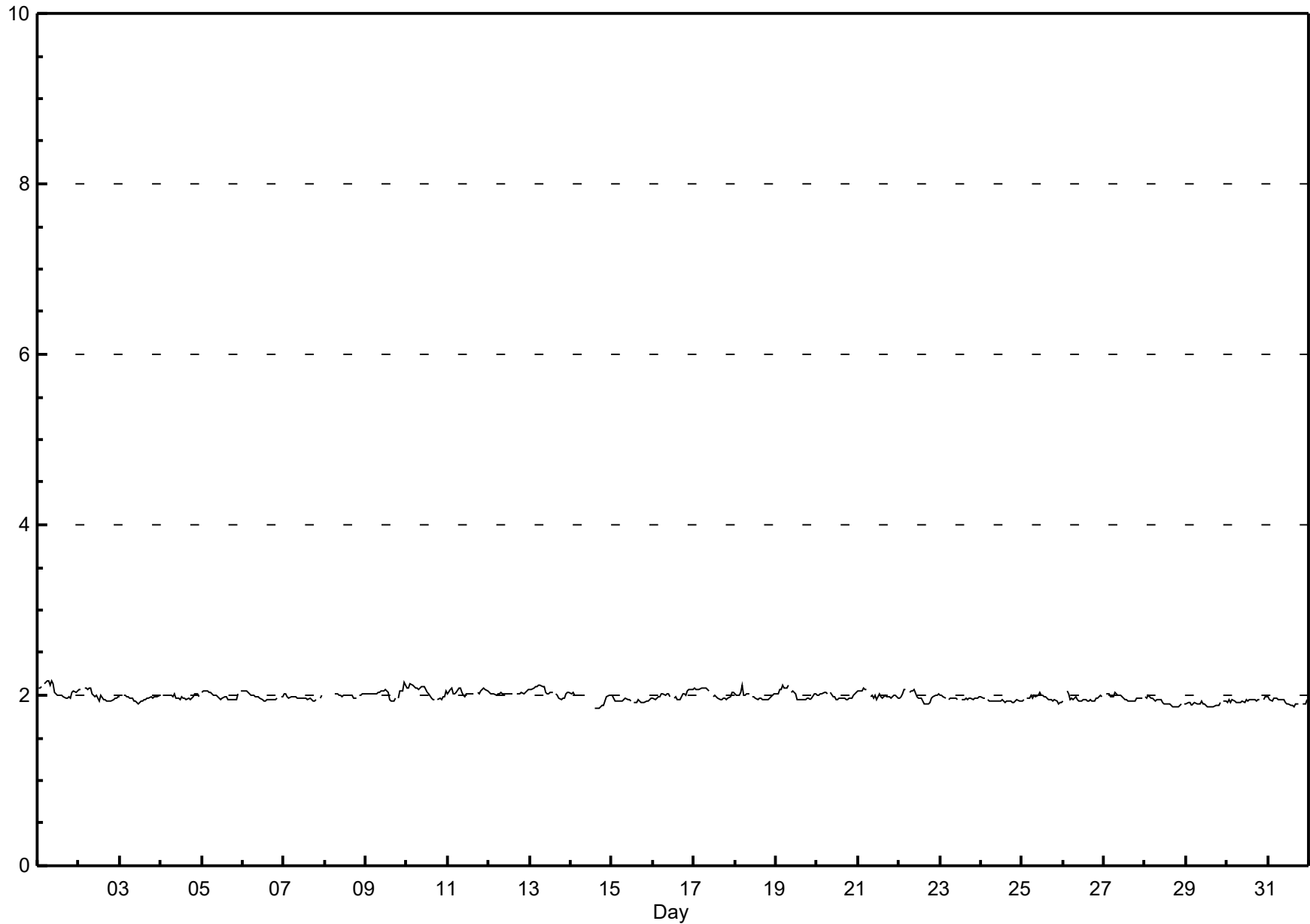
Total Hydrocarbons (THC) - ppm

Portable Rycroft - August 2018

Maximum Value: 2.17 ppm on Aug 1 06:00																					Maximum Daily Average: 2.05 ppm on Aug 1				Hours in Service: 744	
Minimum Value: 1.8 ppm on Aug 14 17:00																					Minimum Daily Average: 1.90 ppm on Aug 29				Hours of Data: 698	
Maximum Diurnal Average: 2.02 ppm at hour 5																					Minimum Diurnal Average: 1.94 ppm at hour 17				Hours of Missing Data: 46	
Monthly Average: 1.984 ppm																					Percentiles: P ₁ = 1.87 P ₁₀ = 1.92 Q ₁ = 1.95 Median = 1.98 Q ₃ = 2.02 P ₉₀ = 2.06 P ₉₉ = 2.13				Hours of Calibration: 39	
																					Percent Operational Time: 99.1					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	2.1	2.1	2.1	A	2.1	2.2	2.2	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	2.1	2.0	2.1	2.05	2.17
2-Aug	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.00	2.08
3-Aug	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.96	2.00
4-Aug	A	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	1.98	2.02
5-Aug	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	2.0	2.0	A	2.1	1.99	2.06
6-Aug	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	A	2.0	2.0	1.98	2.06
7-Aug	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	A	2.0	2.0	P	1.97	2.01
8-Aug	P	P	P	P	P	P	2.0	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	--	2.02
9-Aug	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	1.9	1.9	1.9	2.0	A	2.0	2.1	2.1	2.1	2.1	2.02	2.15
10-Aug	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.04	2.14
11-Aug	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.04	2.09
12-Aug	2.0	2.0	2.0	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	2.1	2.02	2.06
13-Aug	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	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	2.04	2.12
14-Aug	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	C	C	C	C	C	1.9	1.9	1.8	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.96	2.03
15-Aug	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.94	2.00
16-Aug	2.0	1.9	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	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.00	2.07
17-Aug	2.1	2.1	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	2.02	2.09
18-Aug	2.0	2.0	2.0	2.0	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	1.9	1.9	2.0	2.0	2.0	1.99	2.11
19-Aug	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	A	2.0	2.1	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.01	2.11
20-Aug	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.99	2.04
21-Aug	2.1	2.0	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	2.0	2.0	2.01	2.08
22-Aug	2.0	2.0	2.0	2.1	2.1	A	2.0	2.0	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	1.99	2.07
23-Aug	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.97	2.00
24-Aug	2.0	2.0	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.94	1.98
25-Aug	1.9	1.9	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	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.96	2.03
26-Aug	1.9	A	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.96	2.06
27-Aug	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	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	A	1.98	2.04
28-Aug	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.92	1.99
29-Aug	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.90	1.93
30-Aug	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	A	2.0	2.0	2.0	1.94	1.98
31-Aug	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.93	1.99
2.01 2.01 2.02 2.01 2.02 2.01 2.01 2.01 2.00 1.99 1.98 1.97 1.97 1.97 1.95 1.95 1.94 1.95 1.95 1.95 1.95 1.97 1.99 2.00 2.00																									Diurnal Average	
2.09 2.09 2.14 2.13 2.13 2.17 2.16 2.12 2.16 2.13 2.11 2.07 2.05 2.04 2.02 2.02 2.02 2.02 2.03 2.02 2.05 2.07 2.09 2.15 2.11																									Diurnal Maximum	
C - Calibration P - Power Failure A - Automated Daily Zero Span																										

Hourly Maximums

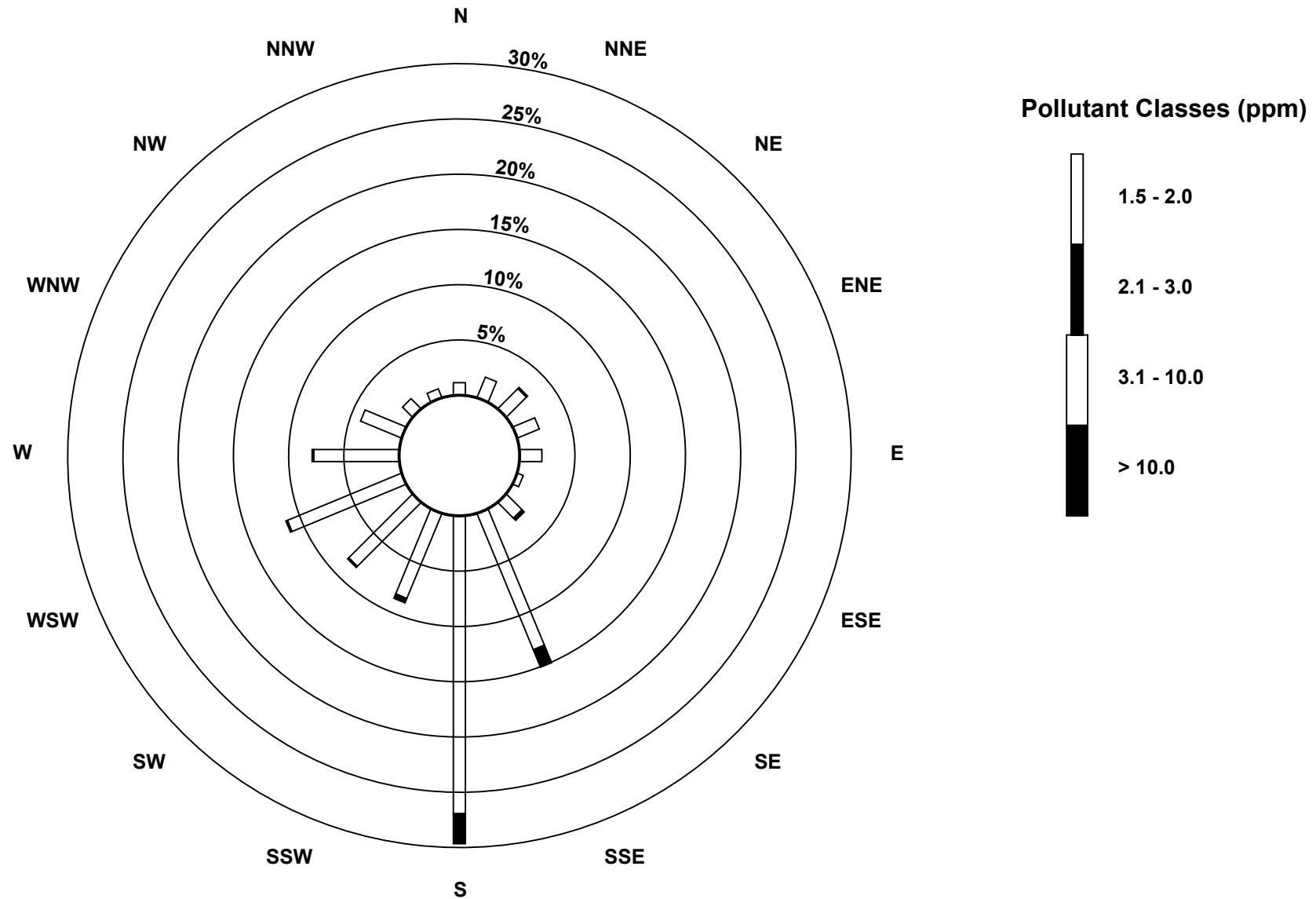
Total Hydrocarbons (THC) - ppm
Portable Rycroft - August 2018



Pollutant Rose

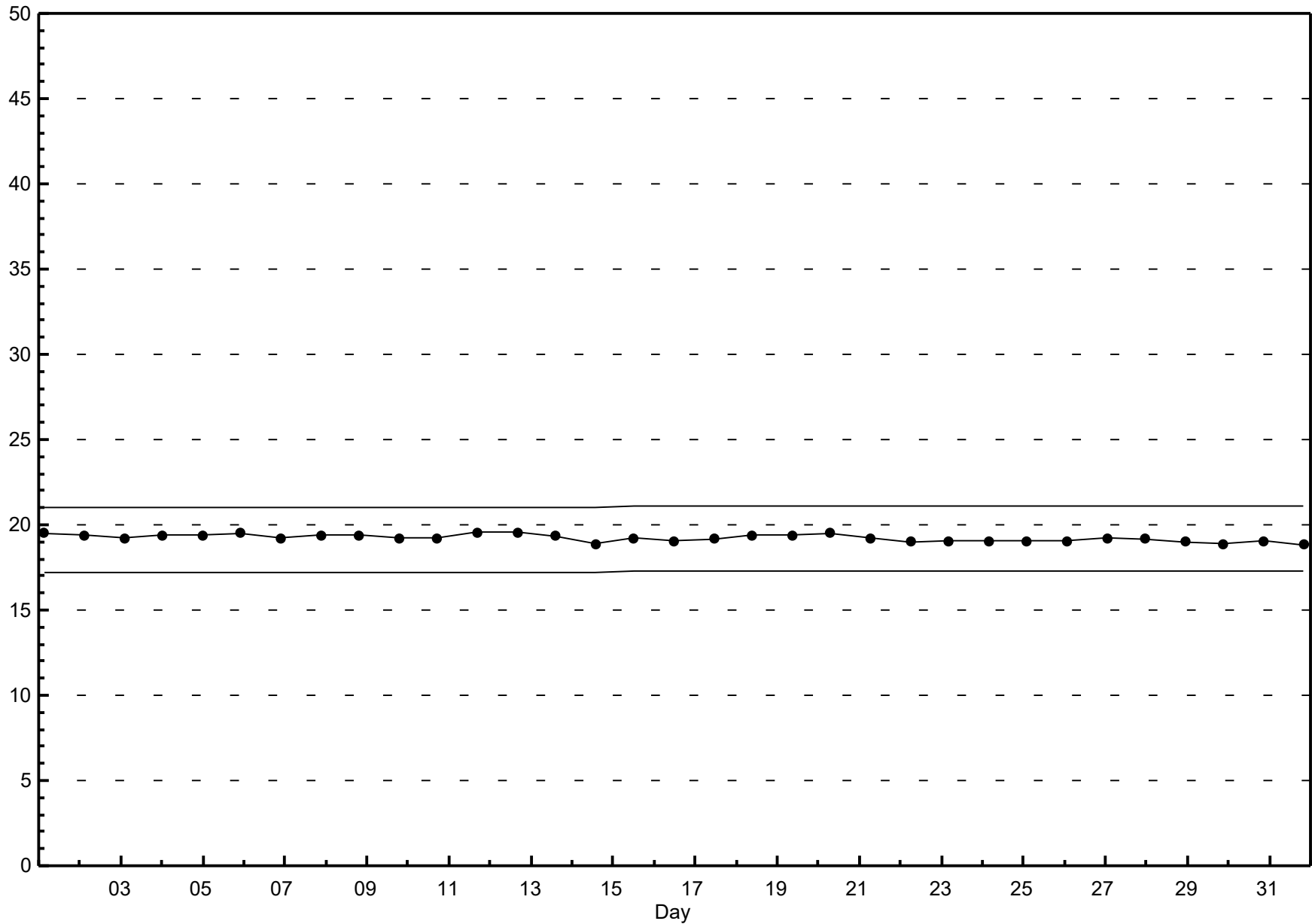
Total Hydrocarbons (THC) - ppm

Portable Rycroft - August 2018



Span Responses

Total Hydrocarbons (THC)
Portable Rycroft - August 2018



Hourly Averages

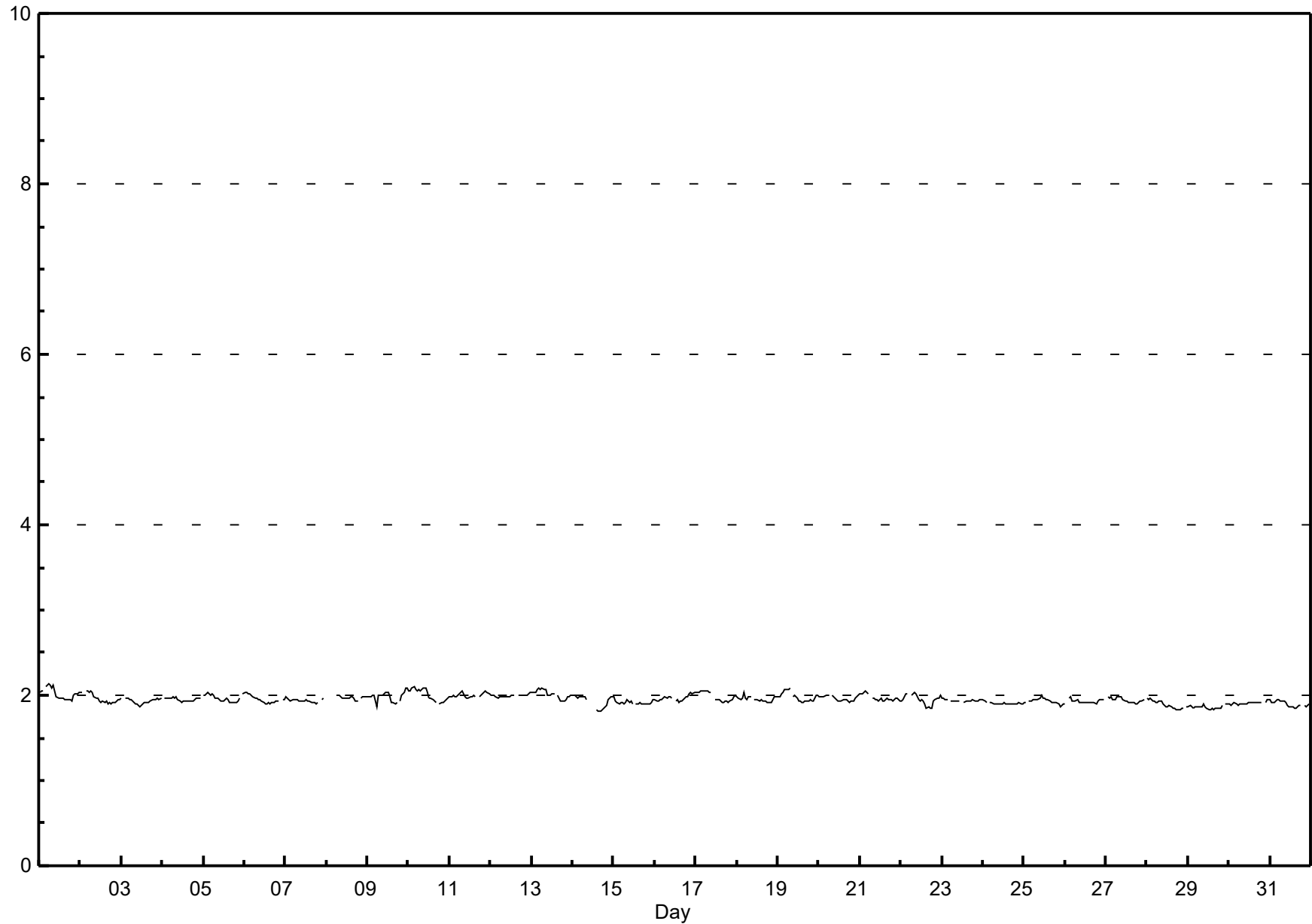
Methane (CH₄) - ppm

Portable Rycroft - August 2018

Maximum Value: 2.14 ppm on Aug 1 06:00																				Maximum Daily Average: 2.02 ppm on Aug 1					Hours in Service: 744	
Minimum Value: 1.8 ppm on Aug 14 17:00																				Minimum Daily Average: 1.86 ppm on Aug 29					Hours of Data: 698	
Maximum Diurnal Average: 1.98 ppm at hour 5																				Minimum Diurnal Average: 1.91 ppm at hour 17					Hours of Missing Data: 46	
Monthly Average: 1.952 ppm																				Percentiles: P ₁ = 1.84 P ₁₀ = 1.89 Q ₁ = 1.92 Median = 1.95 Q ₃ = 1.98 P ₉₀ = 2.03 P ₉₉ = 2.09					Hours of Calibration: 39	
																				Percent Operational Time: 99.1						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	2.0	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.02	2.14
2-Aug	2.0	2.0	A	2.0	2.1	2.0	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	1.9	1.9	1.9	2.0	1.97	2.06
3-Aug	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	1.9	1.9	2.0	2.0	2.0	1.93	1.97
4-Aug	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	A	1.95	1.98
5-Aug	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	2.0	1.96	2.03
6-Aug	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	1.9	A	1.9	2.0	1.95	2.04
7-Aug	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.0	P	1.94	1.98
8-Aug	P	P	P	P	P	P	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	A	2.0	2.0	2.0	2.0	--	1.99
9-Aug	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	A	1.9	2.0	2.0	2.1	2.1	1.99	2.09
10-Aug	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	2.0	2.01	2.09
11-Aug	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.00	2.05
12-Aug	2.0	2.0	2.0	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	2.00	2.03
13-Aug	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.01	2.09
14-Aug	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	C	C	C	C	C	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.0	2.0	2.0	1.93	2.00
15-Aug	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.92	1.97
16-Aug	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	A	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.97	2.04
17-Aug	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	A	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.99	2.06
18-Aug	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.95	2.03
19-Aug	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	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	2.0	2.0	1.98	2.09
20-Aug	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	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.96	2.00
21-Aug	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	1.9	2.0	1.9	2.0	1.9	1.9	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	1.9	1.97	2.05
22-Aug	1.9	1.9	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.95	2.04
23-Aug	2.0	2.0	2.0	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	C	C	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.94	1.96	
24-Aug	2.0	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.91	1.95
25-Aug	1.9	1.9	A	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.93	2.00
26-Aug	1.9	A	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.93	1.98
27-Aug	A	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.94	1.99
28-Aug	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	A	1.9	1.89	1.96
29-Aug	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.9	A	1.9	1.9	1.86	1.91
30-Aug	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.91	1.95
31-Aug	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.90	1.96
1.98 1.98 1.98 1.98 1.98 1.98 1.98 1.98 1.97 1.96 1.95 1.94 1.94 1.93 1.92 1.92 1.91 1.92 1.92 1.93 1.94 1.95 1.97 1.97																									Diurnal Average	
2.05 2.06 2.09 2.09 2.10 2.14 2.13 2.09 2.11 2.09 2.08 2.04 2.03 2.01 2.00 2.00 1.99 1.99 2.00 2.01 2.04 2.05 2.09 2.08																									Diurnal Maximum	
C - Calibration P - Power Failure A - Automated Daily Zero Span																										

Hourly Averages

Methane (CH₄) - ppm
Portable Rycroft - August 2018



Hourly Maximums

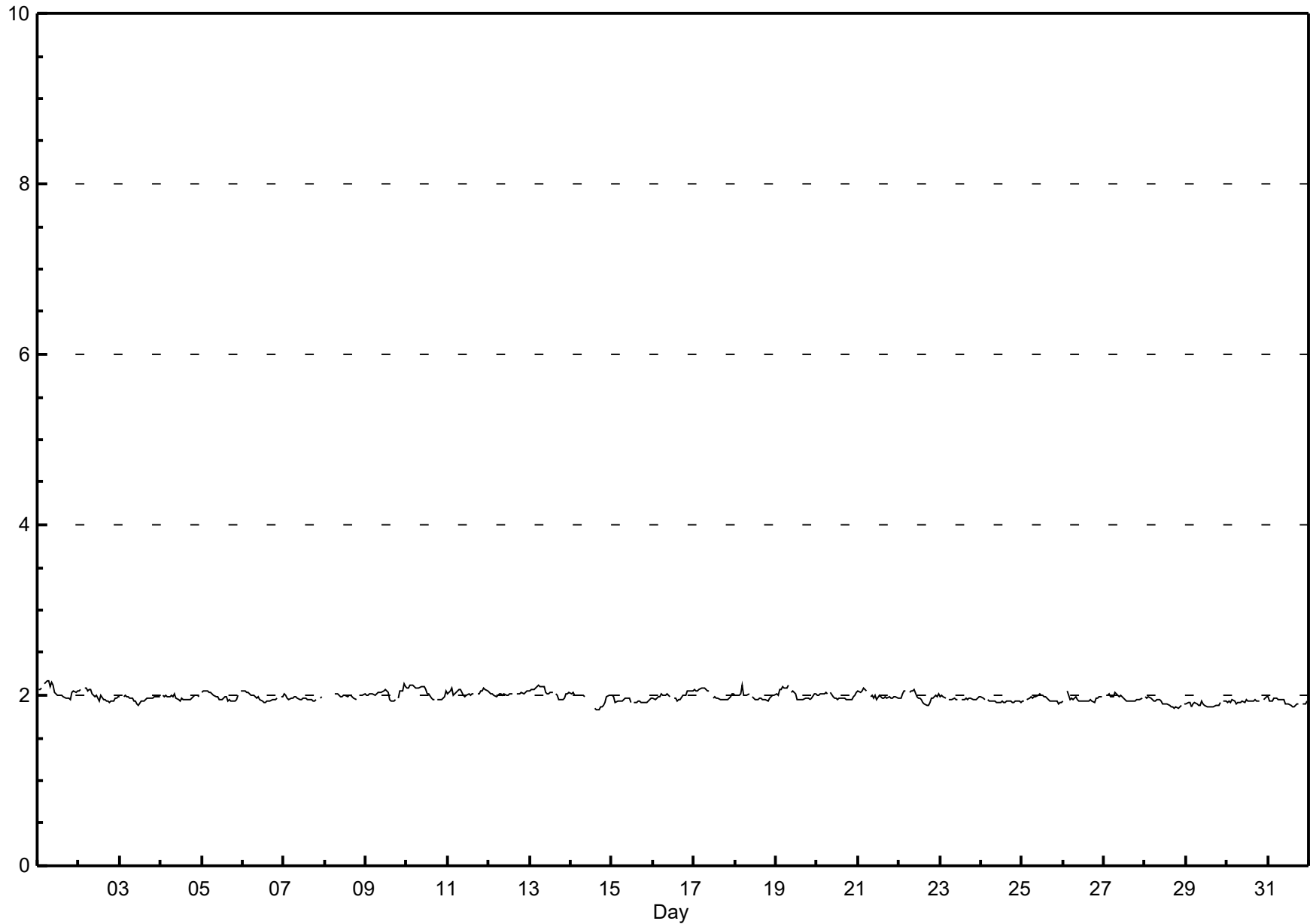
Methane (CH₄) - ppm

Portable Rycroft - August 2018

Maximum Value: 2.17 ppm on Aug 1 06:00																				Maximum Daily Average: 2.05 ppm on Aug 1					Hours in Service: 744				
Minimum Value: 1.8 ppm on Aug 14 17:00																				Minimum Daily Average: 1.89 ppm on Aug 29					Hours of Data: 698				
Maximum Diurnal Average: 2.01 ppm at hour 5																				Minimum Diurnal Average: 1.94 ppm at hour 17					Hours of Missing Data: 46				
Monthly Average: 1.979 ppm																				Percentiles: P ₁ = 1.86 P ₁₀ = 1.92 Q ₁ = 1.94 Median = 1.97 Q ₃ = 2.01 P ₉₀ = 2.06 P ₉₉ = 2.12					Hours of Calibration: 39				
																				Percent Operational Time: 99.1									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Aug	2.1	2.1	2.1	A	2.1	2.2	2.2	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	2.1	2.0	2.0	2.05	2.17			
2-Aug	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.99	2.08			
3-Aug	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.96	2.00			
4-Aug	A	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	1.98	2.02			
5-Aug	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	A	2.0	1.99	2.05			
6-Aug	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	A	2.0	2.0	1.97	2.06			
7-Aug	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	A	2.0	2.0	P	1.96	2.01			
8-Aug	P	P	P	P	P	P	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	2.0	2.0	2.0	--	2.01			
9-Aug	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	1.9	1.9	1.9	2.0	A	2.0	2.1	2.0	2.1	2.1	2.02	2.14			
10-Aug	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	A	1.9	2.0	1.9	2.0	2.0	2.0	2.04	2.13			
11-Aug	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.03	2.09			
12-Aug	2.0	2.0	2.0	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	2.1	2.02	2.06			
13-Aug	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	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	2.04	2.11			
14-Aug	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	C	C	C	C	C	1.8	1.8	1.8	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.95	2.03			
15-Aug	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.94	1.99			
16-Aug	2.0	1.9	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	2.1	2.1	2.1	2.1	1.99	2.06			
17-Aug	2.1	2.1	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	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.01	2.09			
18-Aug	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	1.9	1.9	2.0	2.0	2.0	2.0	1.98	2.11			
19-Aug	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	A	2.0	2.1	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.01	2.11			
20-Aug	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.99	2.03			
21-Aug	2.1	2.0	2.0	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	2.0	2.0	2.00	2.08			
22-Aug	2.0	2.0	2.0	2.1	2.0	A	2.0	2.0	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	1.98	2.07			
23-Aug	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	1.9	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.96	1.99			
24-Aug	2.0	2.0	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.93	1.98			
25-Aug	1.9	1.9	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	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.96	2.02			
26-Aug	1.9	A	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	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.96	2.05			
27-Aug	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	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	A	1.97	2.03			
28-Aug	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.91	1.98			
29-Aug	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.89	1.93			
30-Aug	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.0	2.0	2.0	1.94	1.97			
31-Aug	2.0	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.92	1.99			
2.00 2.01 2.01 2.01 2.01 2.00 2.01 2.00 2.00 1.99 1.97 1.96 1.96 1.96 1.94 1.94 1.94 1.94 1.94 1.95 1.96 1.98 1.99 2.00																									Diurnal Average				
2.08 2.09 2.13 2.12 2.13 2.17 2.16 2.11 2.16 2.12 2.11 2.07 2.06 2.03 2.02 2.02 2.01 2.02 2.02 2.05 2.06 2.08 2.14 2.11																									Diurnal Maximum				
C - Calibration P - Power Failure A - Automated Daily Zero Span																													

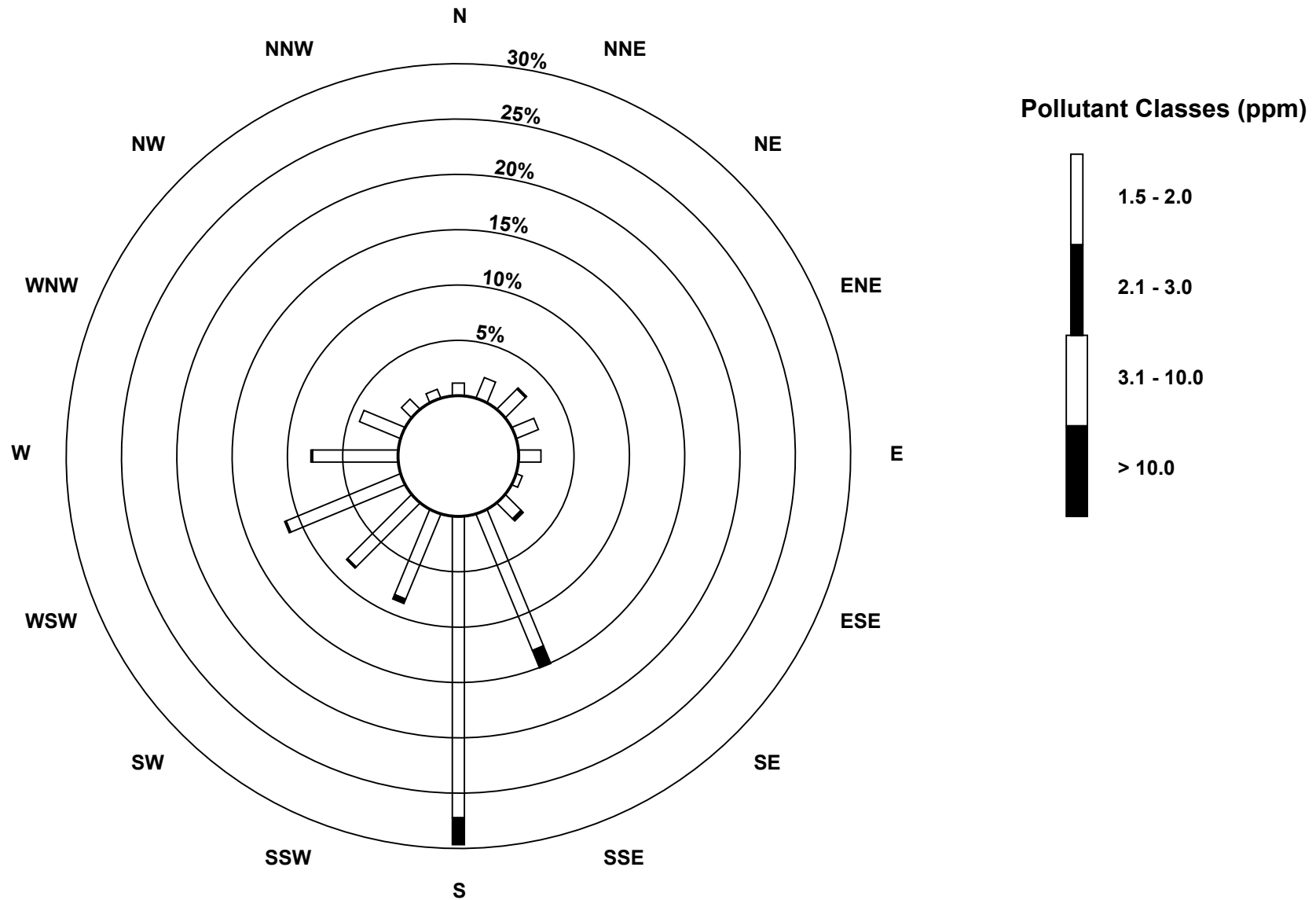
Hourly Maximums

Methane (CH₄) - ppm
Portable Rycroft - August 2018



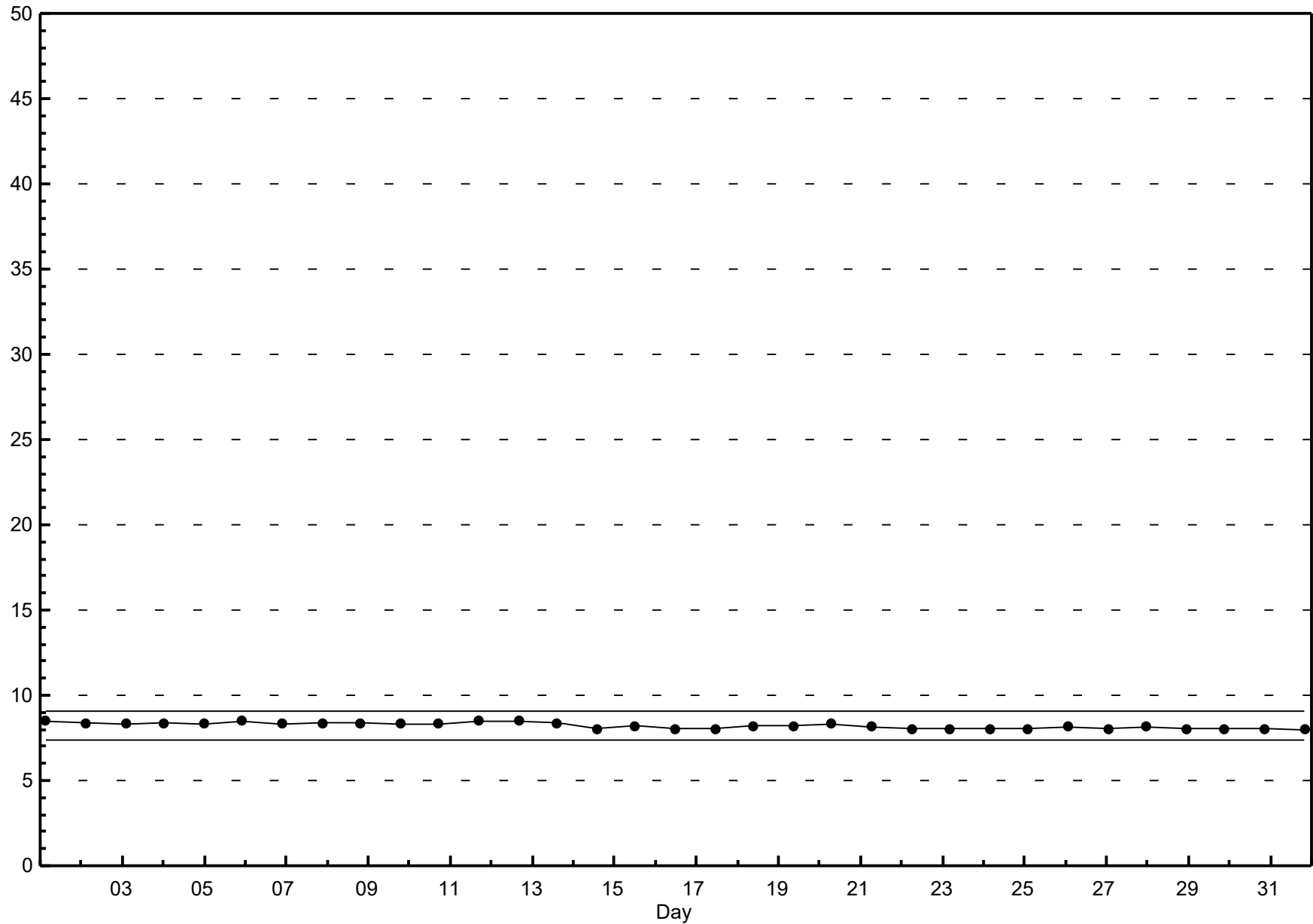
Pollutant Rose

Methane (CH₄) - ppm
Portable Rycroft - August 2018



Span Responses

Methane (CH₄)
Portable Rycroft - August 2018

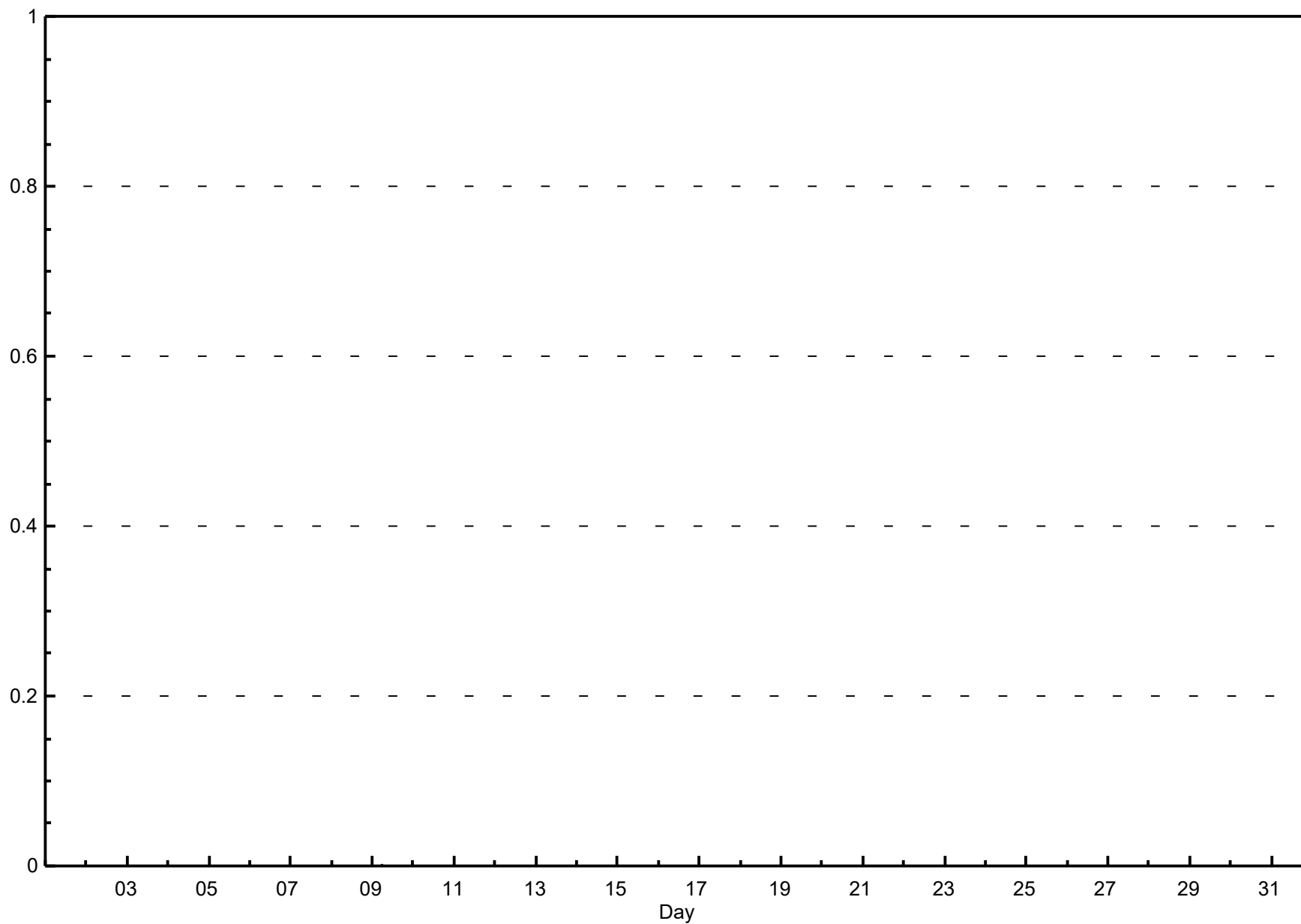


Hourly Averages

Non Methane Hydrocarbon (NMHC) - ppm

Portable Rycroft - August 2018

Maximum Value: 0.00 ppm on Aug 9 06:00																				Maximum Daily Average: 0.00 ppm on Aug 9					Hours in Service: 744		
Minimum Value: 0.0 ppm on Aug 1 01:00																				Minimum Daily Average: 0.00 ppm on Aug 1					Hours of Data: 698		
Maximum Diurnal Average: 0.00 ppm at hour 6																				Minimum Diurnal Average: 0.00 ppm at hour 8					Hours of Missing Data: 46		
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: 39		
																				Percent Operational Time: 99.1							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
2-Aug	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
3-Aug	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
4-Aug	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.00	0.00	
5-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.00	0.00	
6-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.00	
7-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	P	0.00	0.00	
8-Aug	P	P	P	P	P	P	0.0	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	A	0.0	0.0	0.0	0.0	--	0.00
9-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
10-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
11-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
12-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
13-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
14-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
15-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
16-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
17-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
18-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
19-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
20-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
21-Aug	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
22-Aug	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
23-Aug	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
24-Aug	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
25-Aug	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Aug	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
27-Aug	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.00	0.00	
28-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.00	0.00
29-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.00
30-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.00	0.00
31-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	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 P - Power Failure A - Automated Daily Zero Span																											



Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

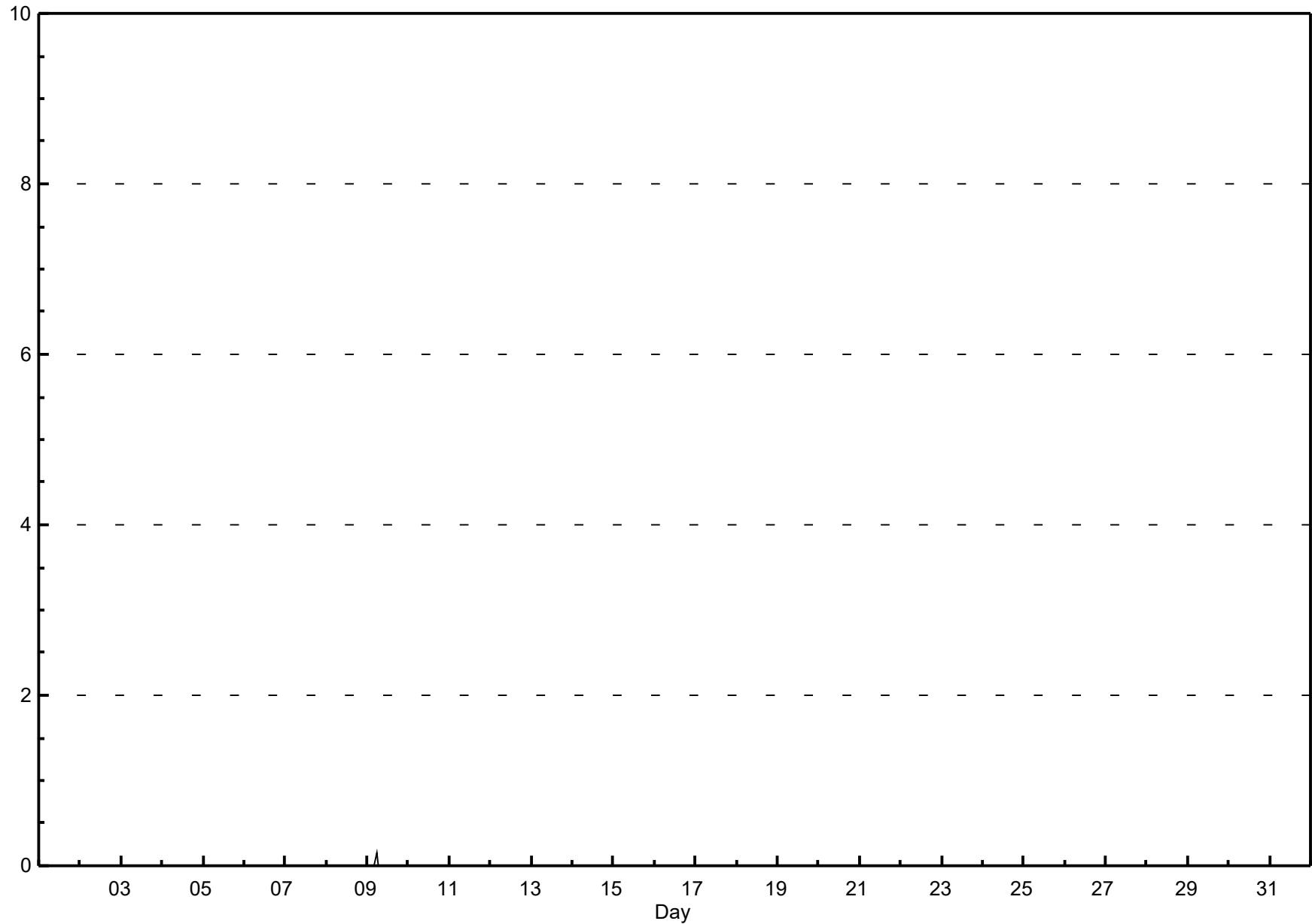
Portable Rycroft - August 2018

Maximum Value: 0.15 ppm on Aug 9 06:00																					Maximum Daily Average: 0.01 ppm on Aug 9					Hours in Service: 744	
Minimum Value: 0.0 ppm on Aug 3 09:00																					Minimum Daily Average: 0.00 ppm on Aug 18					Hours of Data: 698	
Maximum Diurnal Average: 0.01 ppm at hour 6																					Minimum Diurnal Average: 0.00 ppm at hour 17					Hours of Missing Data: 46	
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: 39	
																					Percent Operational Time: 99.1						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
2-Aug	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
3-Aug	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
4-Aug	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.00	0.00	
5-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.00	0.00	
6-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.00	
7-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	P	0.00	0.00	
8-Aug	P	P	P	P	P	P	0.0	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	A	0.0	0.0	0.0	0.0	--	0.00
9-Aug	0.0	0.0	0.0	0.0	0.0	0.2	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	A	0.0	0.0	0.0	0.0	0.0	0.01	0.15
10-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
11-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	
12-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	
13-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
14-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
15-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	
16-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
17-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
18-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
19-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
20-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
21-Aug	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
22-Aug	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
23-Aug	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
24-Aug	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
25-Aug	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Aug	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
27-Aug	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.00	0.00	
28-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.00	0.00	
29-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.00	0.00	
30-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.00	
31-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	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 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00																									Diurnal Average		
0.00 0.00 0.00 0.00 0.00 0.15 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00																									Diurnal Maximum		
C - Calibration P - Power Failure A - Automated Daily Zero Span																											

Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

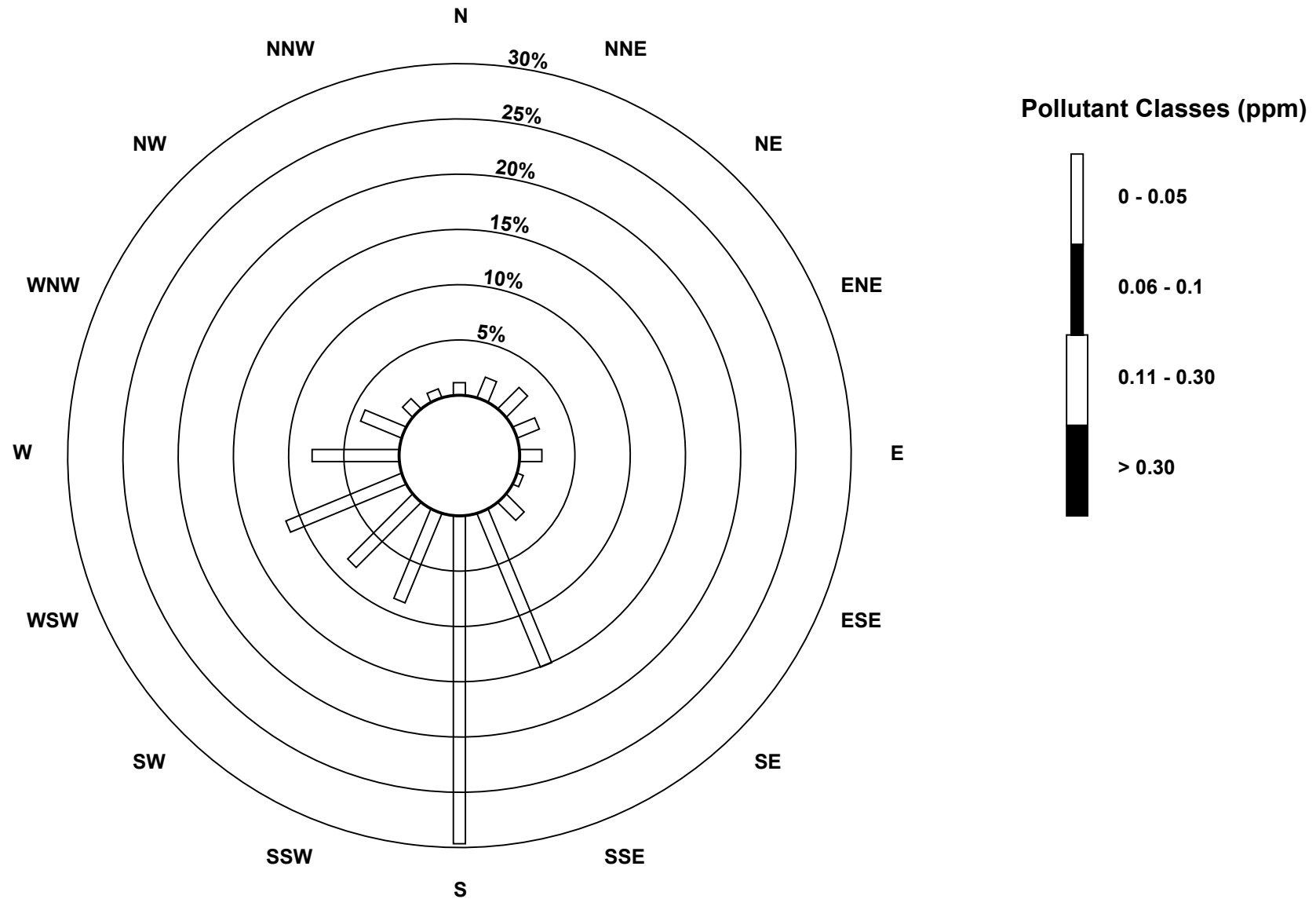
Portable Rycroft - August 2018



Pollutant Rose

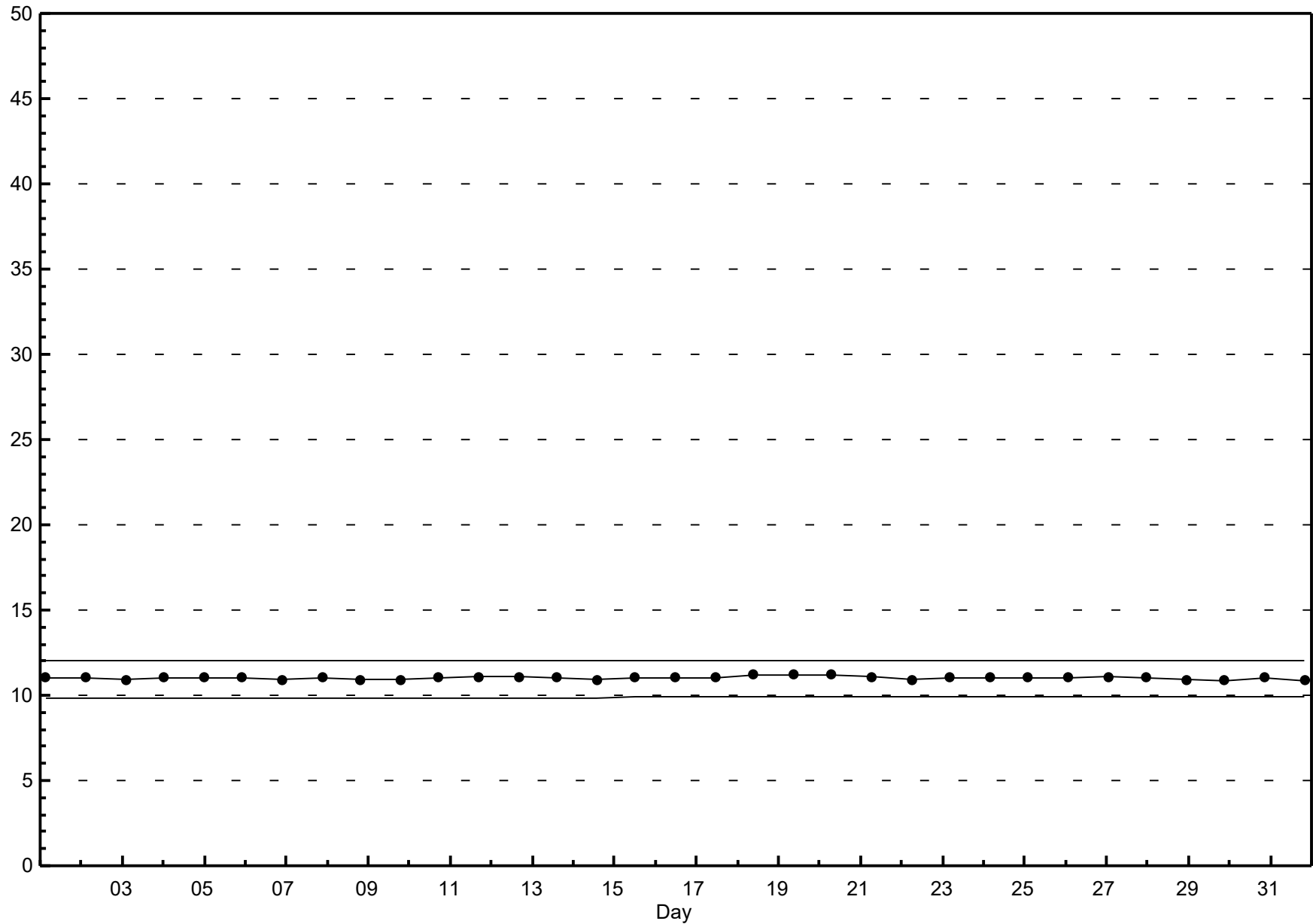
Non Methane Hydrocarbon (NMHC) - ppm

Portable Rycroft - August 2018



Span Responses

Non Methane Hydrocarbon (NMHC)
Portable Rycroft - August 2018



Hourly Averages

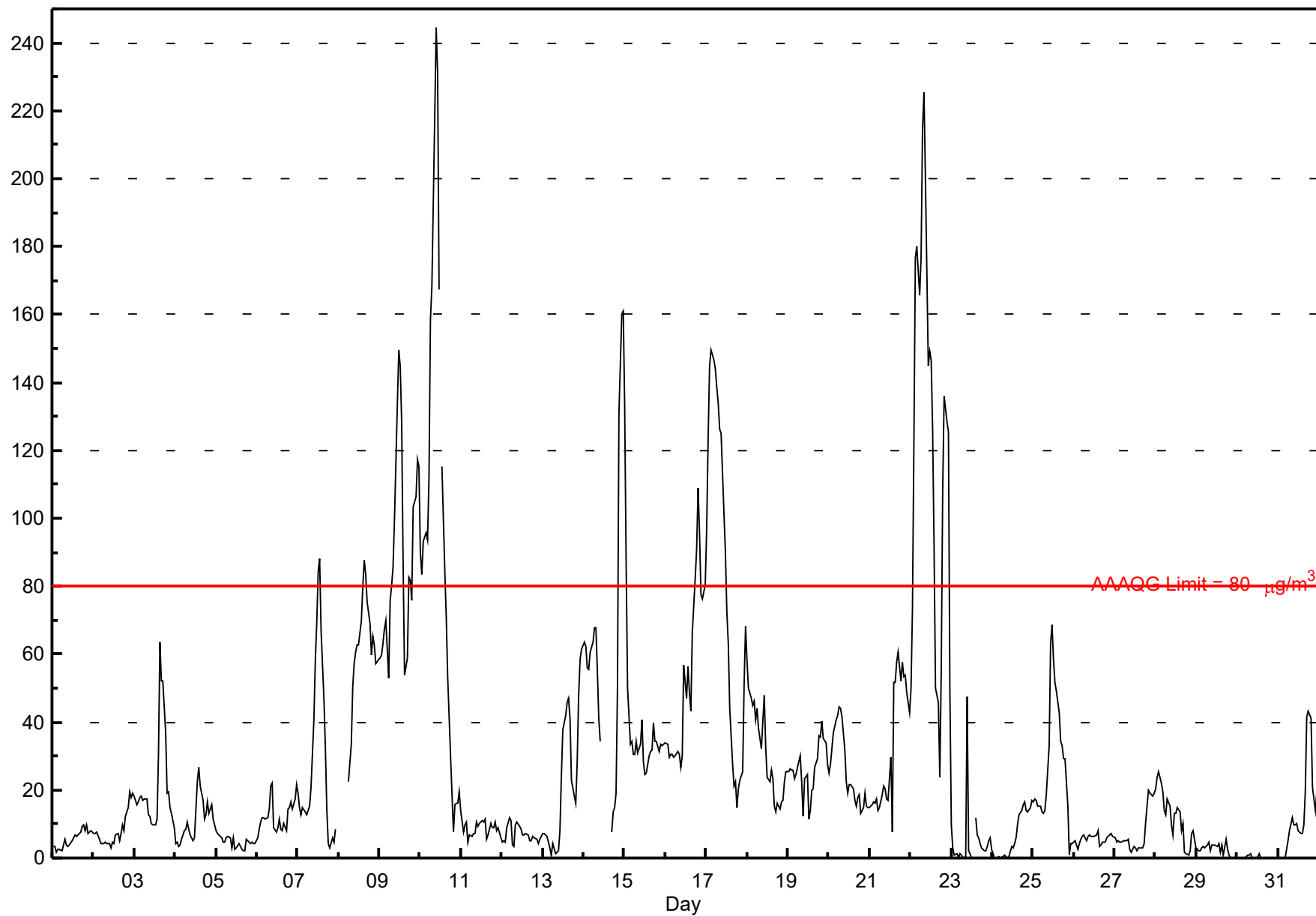
PM2.5 (PM_{2.5}) - µg/m³

Portable Rycroft - August 2018

Number of Exceedences: 1-hr: 69 24-hr: 10 Maximum Value: 244.5 µg/m³ on Aug 10 10:00 Minimum Value: 0 µg/m³ on Aug 23 13:00 Maximum Diurnal Average: 37.5 µg/m³ at hour 10 Monthly Average: 29.59 µg/m³																								Hours in Service: 744 Hours of Data: 730 Hours of Missing Data: 14 Hours of Calibration: 6 Percent Operational Time: 98.9		
Maximum Daily Average: 123.6 µg/m³ on Aug 22 Minimum Daily Average: 0.2 µg/m³ on Aug 30 Minimum Diurnal Average: 24.1 µg/m³ at hour 19 Percentiles: P ₁ = 0.0 P ₁₀ = 2.2 Q ₁ = 5.5 Median = 14.7 Q ₃ = 37.5 P ₉₀ = 76.6 P ₉₉ = 176.8																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	3	4	2	3	3	2	4	6	4	3	4	5	6	7	6	7	8	9	10	8	10	7	8	8	5.6	9.8
2-Aug	7	7	8	6	4	4	4	5	4	4	3	5	4	7	7	5	7	10	8	12	15	19	18	19	8.1	19.3
3-Aug	18	16	17	18	18	17	17	17	13	12	10	10	10	11	31	64	52	52	37	19	20	15	13	9	21.5	63.7
4-Aug	4	5	3	4	5	8	9	10	8	7	5	6	14	22	27	21	17	11	13	17	13	16	11	10	11.2	26.8
5-Aug	8	7	6	6	5	5	6	6	6	3	6	3	3	4	3	2	2	2	6	5	4	4	4	4	4.6	8.2
6-Aug	6	9	10	12	12	11	12	15	21	22	9	8	9	11	8	8	10	8	14	15	16	14	17	21	12.5	21.9
7-Aug	19	15	13	15	14	13	14	15	21	41	58	70	84	88	67	46	32	14	4	3	6	5	8	P	28.9	88.2
8-Aug	P	P	P	P	P	P	22	33	50	57	60	63	63	70	80	88	83	76	69	60	65	63	57	59	62.1	87.5
9-Aug	59	60	63	67	70	53	76	80	85	100	134	150	145	128	87	54	59	83	82	76	104	106	117	115	89.7	149.6
10-Aug	90	83	93	96	94	112	158	168	219	245	231	168	M	115	84	71	53	41	30	8	16	16	16	19	96.8	244.5
11-Aug	14	7	10	11	5	7	6	7	7	10	9	10	11	11	12	5	7	10	9	9	11	8	9	6	8.8	13.8
12-Aug	5	5	5	9	12	11	4	4	10	11	9	9	7	7	7	7	5	5	6	6	5	4	6	6	6.8	12.0
13-Aug	7	7	6	5	3	1	4	1	2	2	8	24	38	42	46	47	41	23	18	16	28	48	58	61	22.4	61.3
14-Aug	63	62	56	55	61	64	68	68	55	41	34	C	C	C	C	C	7	14	15	19	51	131	160	161	62.4	160.9
15-Aug	133	87	50	34	34	30	30	34	31	34	41	28	24	25	30	31	32	40	34	34	31	34	33	34	39.5	132.5
16-Aug	34	33	30	31	31	30	30	31	31	27	30	57	47	56	49	43	67	82	91	109	96	78	76	80	52.8	108.9
17-Aug	98	124	145	149	147	144	139	134	126	125	101	90	72	63	44	28	21	22	15	20	23	25	51	68	82.3	149.5
18-Aug	58	50	47	45	46	41	44	38	32	40	48	32	24	23	26	23	15	13	16	14	17	17	23	26	31.6	58.0
19-Aug	26	26	26	26	23	25	29	30	22	12	23	25	11	14	20	20	27	29	36	35	40	35	34	27	25.9	40.2
20-Aug	25	28	32	37	40	42	44	44	41	32	22	19	22	22	21	17	15	18	19	13	15	19	15	15	25.7	44.4
21-Aug	15	16	17	16	17	14	15	19	21	20	18	17	30	7	52	52	58	61	52	58	53	54	49	43	32.1	60.6
22-Aug	50	74	122	177	180	166	177	215	226	200	145	149	147	126	92	50	46	24	55	108	136	128	126	49	123.6	225.6
23-Aug	10	3	1	1	0	1	1	0	1	47	2	1	0	C	12	7	6	4	3	2	2	3	5	6	5.1	47.2
24-Aug	3	0	0	0	0	0	0	1	0	0	0	3	3	4	6	10	13	14	16	16	14	14	15	17	6.2	17.2
25-Aug	16	17	17	15	15	13	13	14	19	33	63	69	59	52	49	43	34	33	29	29	15	1	4	4	27.4	68.7
26-Aug	4	5	3	4	6	6	7	5	6	7	6	6	6	7	8	3	4	5	5	6	6	7	7	6	5.7	8.0
27-Aug	6	5	5	5	5	5	5	5	5	2	2	4	3	2	3	3	3	4	10	15	20	19	18	19	7.2	19.7
28-Aug	20	24	25	22	20	14	13	17	15	10	7	13	13	15	14	8	10	2	1	1	2	7	8	5	12.0	25.2
29-Aug	3	2	2	3	3	3	4	5	2	4	4	4	3	4	2	4	1	5	3	1	0	0	0	0	2.6	5.3
30-Aug	0	0	0	0	0	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.2	1.4
31-Aug	0	0	0	0	0	2	5	8	12	10	10	10	8	7	7	10	20	42	43	41	21	17	14	20	12.7	43.2
26.8 26.0 27.1 29.0 29.1 28.2 31.0 33.5 35.4 37.5 35.6 35.2 29.9 32.9 30.0 25.9 24.3 24.4 24.1 25.0 27.6 29.5 31.7 30.6 132.5 123.7 144.8 176.5 180.0 165.5 177.0 215.0 225.6 244.5 230.8 167.6 146.6 128.5 91.9 87.5 83.3 82.6 91.2 108.9 136.2 130.9 160.2 160.9																								Diurnal Average		
																								Diurnal Maximum		
C - Calibration P - Power Failure M - Maintenance Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																										

Hourly Averages

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



Hourly Maximums

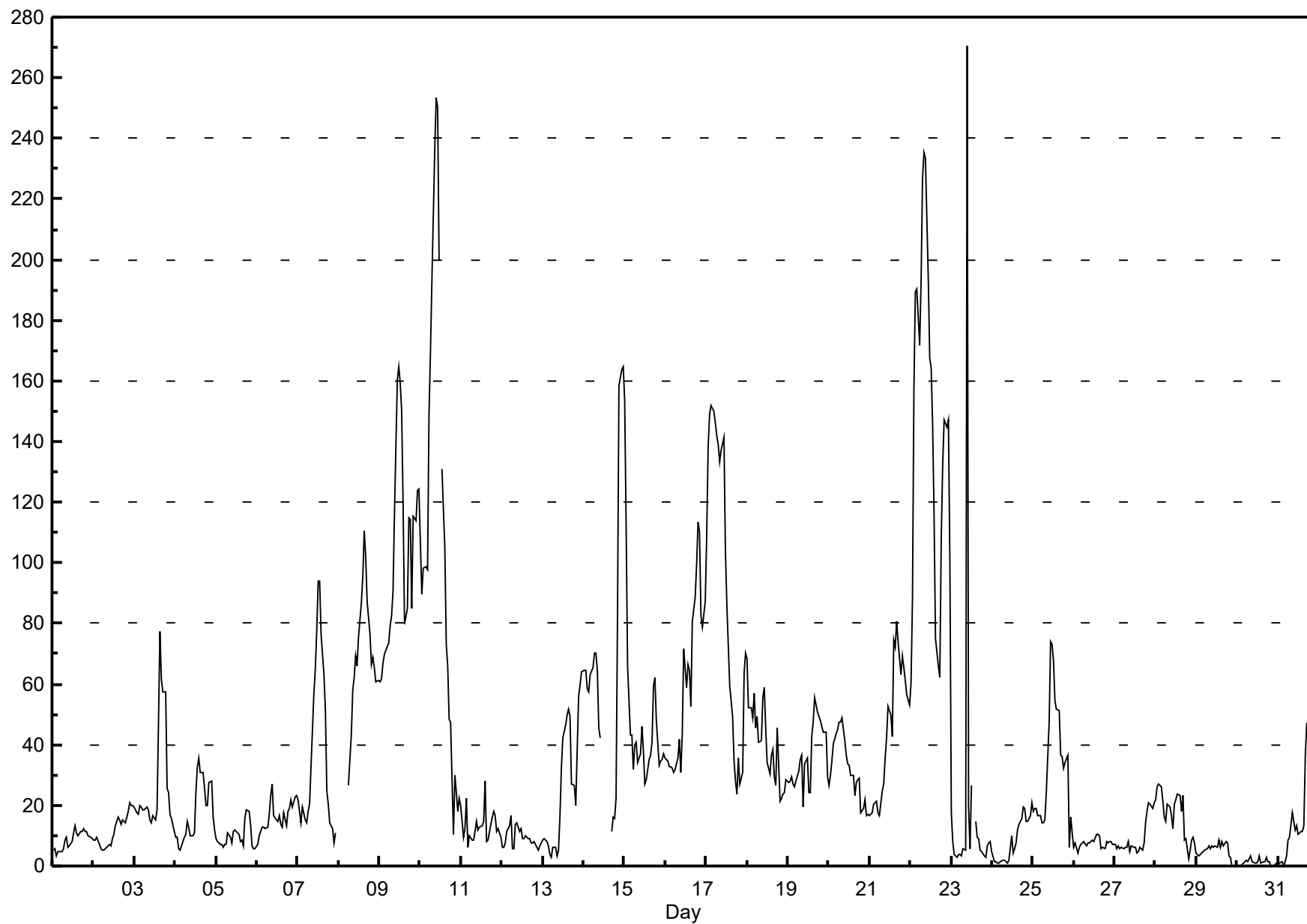
PM2.5 (PM_{2.5}) - µg/m³

Portable Rycroft - August 2018

Maximum Value: 270.6 μg/m ³ on Aug 23 10:00																								Maximum Daily Average: 146.5 μg/m ³ on Aug 22								Hours in Service: 744	
Minimum Value: 0 μg/m ³ on Aug 29 22:00																								Minimum Daily Average: 1.2 μg/m ³ on Aug 30								Hours of Data: 730	
Maximum Diurnal Average: 51.7 μg/m ³ at hour 10																								Minimum Diurnal Average: 29.7 μg/m ³ at hour 2								Hours of Missing Data: 14	
Monthly Average: 36.42 μg/m ³																								Percentiles: P ₁ = 0.0 P ₁₀ = 5.1 Q ₁ = 8.3 Median = 19.1 Q ₃ = 47.6 P ₉₀ = 88.1 P ₉₉ = 198.1								Hours of Calibration: 6	
																								Percent Operational Time: 98.9									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24									
1-Aug	5	6	3	5	5	5	6	8	9	6	7	8	11	13	11	10	11	12	12	11	11	10	9	9	8.5	13.1							
2-Aug	9	8	9	7	6	5	5	6	6	7	7	9	11	13	16	15	14	15	15	14	18	21	20	20	11.5	20.7							
3-Aug	20	18	17	20	19	18	19	20	19	15	14	17	15	19	47	77	62	57	57	26	24	17	16	11	26.8	77.2							
4-Aug	9	10	6	5	7	10	10	15	13	10	10	11	24	33	36	31	31	26	20	20	28	28	16	12	17.5	35.6							
5-Aug	9	8	7	7	6	7	7	11	9	8	12	12	11	11	8	9	7	15	19	18	14	7	6	6	9.7	18.7							
6-Aug	7	10	11	13	13	12	13	17	23	27	17	15	15	17	14	13	18	13	18	19	22	19	23	23	16.3	26.9							
7-Aug	22	18	14	19	15	14	18	20	33	57	65	78	94	94	76	63	51	25	20	14	12	8	11	P	36.7	94.1							
8-Aug	P	P	P	P	P	P	27	43	58	62	70	66	75	87	95	111	102	87	77	66	69	66	61	61	71.3	110.5							
9-Aug	61	62	67	70	71	73	79	82	91	116	160	165	160	150	119	80	85	115	114	85	115	114	124	124	103.4	164.5							
10-Aug	107	90	98	99	98	149	169	193	236	253	250	200	M	131	105	73	66	48	48	10	30	24	18	22	109.5	253.3							
11-Aug	20	10	12	22	6	10	9	9	11	15	12	13	13	15	28	8	8	14	16	18	17	11	12	9	13.3	28.2							
12-Aug	6	6	8	11	13	17	6	6	14	14	11	12	9	9	10	9	9	8	8	8	6	5	6	8	9.1	16.5							
13-Aug	9	9	8	7	4	3	6	6	3	5	16	33	42	47	50	52	50	27	26	20	39	56	60	64	26.7	64.0							
14-Aug	64	65	58	58	63	65	70	70	65	45	42	C	C	C	C	C	11	16	16	22	82	158	164	165	68.4	164.7							
15-Aug	153	112	66	43	43	32	40	41	34	37	46	38	27	29	35	37	41	59	62	48	33	35	35	37	48.5	153.1							
16-Aug	36	35	33	33	32	31	32	36	42	31	43	72	59	66	65	52	81	89	100	113	110	83	79	87	59.9	113.4							
17-Aug	109	138	149	152	150	146	142	139	133	137	142	104	86	73	59	49	35	28	24	36	27	31	64	70	92.6	152.1							
18-Aug	69	52	52	49	57	46	49	41	41	56	59	45	34	30	36	38	29	26	46	21	22	24	24	28	40.7	68.5							
19-Aug	28	28	29	27	26	28	31	35	37	19	34	36	24	24	43	48	55	51	49	48	46	44	44	29	36.0	55.4							
20-Aug	27	30	35	40	44	45	47	47	49	41	37	34	33	30	30	23	27	28	29	18	19	22	17	17	32.1	49.0							
21-Aug	16	18	20	21	21	18	17	25	27	36	42	53	50	43	75	72	81	74	63	69	65	61	56	53	44.8	80.9							
22-Aug	60	88	157	189	190	172	193	227	235	234	193	168	164	146	117	75	66	62	108	132	147	145	147	101	146.5	235.3							
23-Aug	18	8	4	3	4	4	3	6	5	271	19	6	27	C	15	10	9	5	5	3	3	7	8	8	19.5	270.6							
24-Aug	5	1	2	1	1	1	2	2	2	1	2	10	4	6	7	12	14	16	19	19	15	15	17	21	8.1	21.0							
25-Aug	18	19	19	17	17	14	14	15	24	47	74	73	68	55	52	51	37	36	32	34	37	6	16	11	32.7	74.1							
26-Aug	6	8	4	6	7	8	8	7	7	8	8	8	8	10	10	10	6	6	6	8	8	8	8	7	7.5	10.4							
27-Aug	7	6	6	6	6	6	6	6	8	5	7	6	6	4	5	6	5	7	14	18	21	20	19	21	9.3	20.8							
28-Aug	22	26	27	26	22	16	15	20	20	17	12	21	22	24	23	18	23	9	9	3	5	9	9	7	16.8	27.0							
29-Aug	4	4	4	4	5	5	6	7	6	7	6	7	6	8	6	8	7	8	8	3	3	0	0	0	5.0	8.4							
30-Aug	0	0	0	0	2	2	2	2	3	1	1	1	1	3	1	1	1	3	1	1	0	0	1	1	1.2	3.3							
31-Aug	1	1	1	0	2	3	8	10	17	15	12	13	10	11	12	13	36	47	47	43	41	19	17	23	16.8	47.4							
30.9 29.7 31.0 32.0 31.8 32.2 34.1 37.8 41.4 51.7 46.1 44.4 38.3 41.4 40.2 35.8 34.8 33.3 35.1 31.3 35.1 34.6 35.7 35.3																								Diurnal Average									
153.1 138.2 157.1 189.2 190.2 171.8 193.1 227.0 236.2 270.6 250.3 200.0 164.3 150.2 119.3 110.5 102.2 114.7 114.2 132.4 147.2 158.4 163.5 164.7																								Diurnal Maximum									
C - Calibration P - Power Failure M - Maintenance																																	

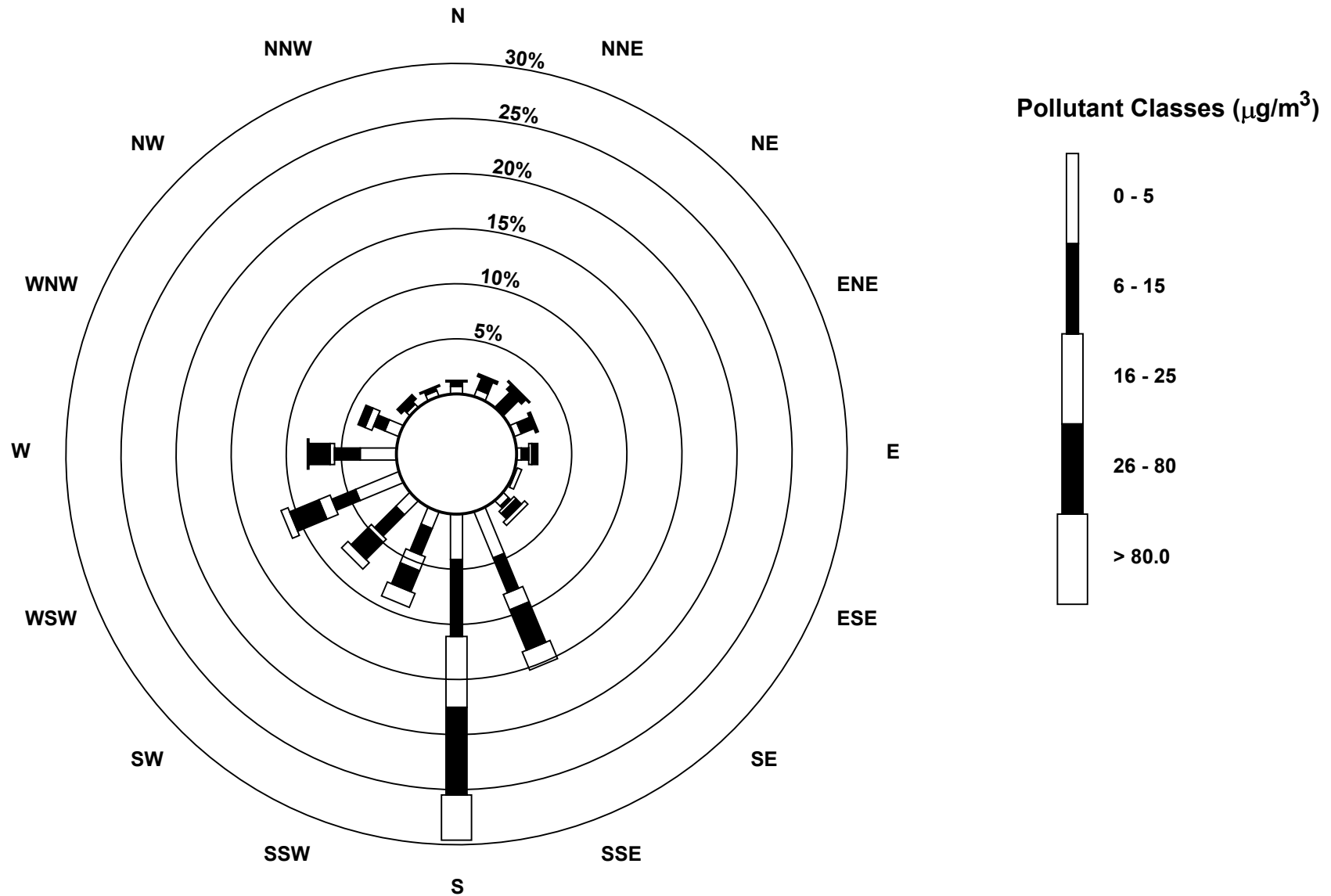
Hourly Maximums

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



Pollutant Rose

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



Hourly Averages

External Temperature (ET) - °C

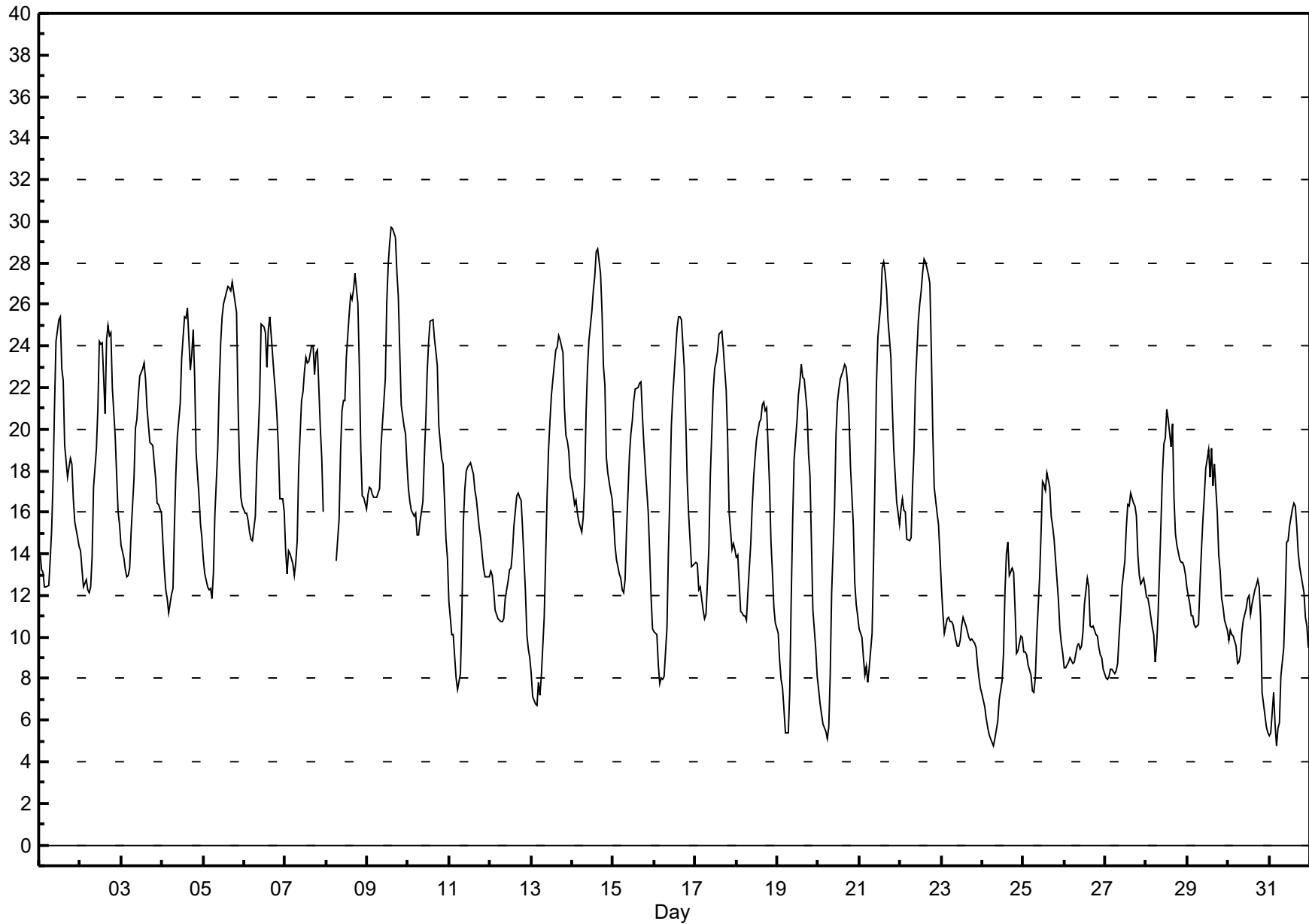
Portable Rycroft - August 2018

Maximum Value: 29.7 °C on Aug 9 15:00																					Maximum Daily Average: 21.9 °C on Aug 9					Hours in Service: 744	
Minimum Value: 5 °C on Aug 31 05:00																					Minimum Daily Average: 8.8 °C on Aug 24					Hours of Data: 737	
Maximum Diurnal Average: 21.4 °C at hour 15																					Minimum Diurnal Average: 10.4 °C at hour 6					Hours of Missing Data: 7	
Monthly Average: 15.83 °C																					Percentiles: P ₁ = 5.4 P ₁₀ = 8.6 Q ₁ = 11.1 Median = 15.3 Q ₃ = 20.3 P ₉₀ = 24.3 P ₉₉ = 28.1					Hours of Calibration: 0	
																					Percent Operational Time: 99.1						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	14	13	13	12	12	12	14	15	18	21	24	25	25	23	22	19	18	18	19	18	17	16	15	14	17.5	25.4	
2-Aug	14	13	12	13	12	12	12	14	17	19	21	24	24	24	21	24	25	24	25	22	20	18	16	15	18.5	25.0	
3-Aug	14	14	13	13	13	13	15	18	20	20	22	23	23	23	22	21	20	19	19	18	18	16	16	16	18.0	23.2	
4-Aug	15	13	12	12	11	12	12	15	18	20	21	23	24	25	25	26	23	24	25	23	19	17	15	15	18.6	25.8	
5-Aug	14	13	12	12	12	12	13	16	19	22	24	25	26	27	27	27	27	27	27	26	21	18	17	16	20.0	27.1	
6-Aug	16	16	16	15	15	15	16	18	20	22	25	25	25	23	25	25	24	23	22	21	19	17	17	16	19.7	25.4	
7-Aug	14	13	14	14	13	13	14	15	18	21	22	23	23	23	23	24	24	23	24	24	20	19	16	P	19.0	24.0	
8-Aug	P	P	P	P	P	P	14	16	19	21	21	21	23	26	26	26	27	28	26	23	19	17	17	16	21.4	27.5	
9-Aug	17	17	17	17	17	17	17	17	19	20	22	26	28	29	30	30	29	28	26	24	21	20	20	18	21.9	29.7	
10-Aug	17	16	16	16	16	15	15	16	17	19	20	23	24	25	25	24	24	23	20	19	18	17	15	14	18.9	25.3	
11-Aug	12	10	10	9	8	7	8	11	16	17	18	18	18	18	18	17	17	15	15	14	13	13	13	13	13.7	18.4	
12-Aug	13	13	12	11	11	11	11	11	11	12	13	13	13	14	15	17	17	17	17	15	12	10	9	9	12.8	16.9	
13-Aug	8	7	7	7	8	7	8	11	14	17	19	20	22	23	24	24	24	24	24	21	20	19	19	18	16.4	24.5	
14-Aug	17	16	17	16	16	15	16	17	21	23	24	26	27	27	29	29	28	26	23	22	19	18	17	17	21.0	28.7	
15-Aug	16	14	14	13	13	12	12	13	15	19	20	20	21	22	22	22	22	21	19	18	16	14	12	10	16.7	22.3	
16-Aug	10	10	9	8	8	8	8	10	14	17	20	22	24	25	25	25	25	23	20	18	16	15	13	13	16.1	25.4	
17-Aug	14	13	12	12	11	11	11	13	14	18	22	23	23	24	25	25	24	23	22	19	16	14	14	14	17.4	24.7	
18-Aug	14	14	11	11	11	11	11	12	14	16	18	19	20	20	20	21	21	21	21	17	15	13	11	11	15.6	21.3	
19-Aug	10	9	8	8	6	5	5	7	12	16	19	20	22	22	23	22	22	21	19	18	15	11	9	8	14.1	23.1	
20-Aug	7	7	6	6	5	5	6	8	12	16	20	21	22	22	23	23	23	22	21	18	15	13	12	11	14.4	23.1	
21-Aug	10	10	9	8	9	8	9	10	14	18	22	24	26	28	28	28	27	25	23	21	19	18	16	15	17.7	28.1	
22-Aug	16	17	16	16	15	15	15	17	19	22	25	26	27	28	28	28	27	27	24	20	17	16	15	14	20.4	28.2	
23-Aug	12	11	10	11	11	11	11	11	10	10	10	10	11	11	11	10	10	10	10	10	9	9	8	8	10.1	12.4	
24-Aug	7	7	6	6	5	5	5	5	6	6	7	8	9	12	14	15	13	13	13	11	9	9	10	10	8.8	14.5	
25-Aug	9	9	9	9	8	7	7	8	10	13	15	17	17	17	18	17	16	15	15	14	12	10	10	9	12.2	17.9	
26-Aug	9	8	9	9	9	9	9	10	10	9	10	10	12	13	12	11	10	11	10	10	9	9	9	8	9.8	12.8	
27-Aug	8	8	8	8	8	8	8	9	10	11	12	14	15	16	16	17	16	16	16	14	13	13	13	12	12.2	16.9	
28-Aug	12	12	11	10	10	9	10	11	15	18	19	20	21	20	19	20	17	15	14	14	14	14	13	13	14.7	21.0	
29-Aug	12	12	11	11	11	10	11	13	14	16	17	18	19	18	19	17	18	16	14	13	12	11	11	10	13.9	19.1	
30-Aug	10	10	10	10	10	9	9	9	10	11	11	12	12	11	12	12	12	13	12	11	7	6	6	5	10.0	12.7	
31-Aug	5	5	7	6	5	6	6	8	10	12	15	15	15	16	16	16	15	14	13	13	12	11	11	10	10.9	16.4	
12.3 11.8 11.3 11.0 10.7 10.4 10.8 12.4 14.7 16.8 18.6 19.9 20.7 21.2 21.4 21.4 20.9 20.1 19.3 17.7 15.6 14.2 13.4 12.7																									Diurnal Average		
17.1 17.2 17.1 16.8 16.7 16.7 16.9 18.3 20.8 23.0 25.2 26.1 27.9 29.0 29.7 29.7 29.2 27.6 26.6 25.6 21.4 20.1 19.8 18.3																									Diurnal Maximum		
P - Power Failure																											

Hourly Averages

External Temperature (ET) - °C

Portable Rycroft - August 2018



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Portable Rycroft - August 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	5	5	4	4	3	4	4	3	6	8	2	3	4	6	3	7	6	2	2	6	8	8	6	8	3.5	8.4
Dir	182	182	164	193	192	161	181	200	247	273	0	306	292	274	201	190	185	255	149	170	177	183	182	168	200.0	273.4
2 Spd	6	5	6	7	7	6	6	5	4	1	5	2	4	3	1	1	6	5	3	6	8	8	8	9	4.3	9.1
Dir	172	170	164	176	173	162	173	167	162	79	335	259	188	233	37	60	173	179	233	181	181	187	180	174	178.0	173.6
3 Spd	8	7	6	7	8	7	8	6	10	20	22	22	25	26	29	30	27	17	7	4	4	5	6	5	11.2	29.5
Dir	172	178	172	170	168	181	182	191	234	237	249	247	253	249	247	255	259	251	227	196	189	177	173	163	232.5	255.2
4 Spd	5	5	5	5	2	5	6	4	12	14	11	8	9	7	5	7	8	3	4	3	3	2	6	7	3.7	14.1
Dir	168	161	149	157	149	168	181	204	269	267	260	281	278	285	304	286	280	279	305	250	239	122	162	165	242.8	267.2
5 Spd	6	6	7	4	6	4	7	6	4	3	2	5	6	7	8	8	8	6	5	2	5	8	9	10	5.6	9.8
Dir	169	169	167	171	171	182	167	170	163	199	224	222	205	202	191	185	193	223	230	224	182	169	171	172	184.7	171.8
6 Spd	12	9	10	10	9	9	9	10	8	7	10	14	13	6	7	6	7	11	7	6	4	8	8	6	7.9	13.9
Dir	169	179	177	176	176	174	176	187	194	197	222	229	226	215	207	214	224	238	231	226	202	182	186	189	199.5	229.3
7 Spd	7	7	6	6	8	8	6	7	5	5	20	19	22	22	16	19	13	12	10	3	4	8	7	P	8.9	22.5
Dir	186	178	194	182	173	173	179	178	188	211	240	242	251	262	241	245	249	258	264	234	207	235	180	P	229.2	250.7
8 Spd	P	P	P	P	P	P	6	8	10	10	12	11	10	9	7	7	8	6	4	6	3	5	7	8	7.4	11.9
Dir	P	P	P	P	P	P	144	169	174	179	178	177	183	190	191	179	177	197	202	184	199	185	175	165	179.2	178.5
9 Spd	10	8	9	10	8	8	11	11	11	12	9	6	6	7	8	10	6	5	4	4	5	6	6	5	7.1	11.6
Dir	170	164	163	166	164	160	167	165	170	172	178	202	214	201	215	231	223	163	137	154	171	145	146	164	175.4	172.4
10 Spd	6	7	5	4	6	6	8	8	9	8	9	6	7	5	9	13	15	7	15	11	8	5	7	7	6.5	15.4
Dir	171	158	232	169	165	195	179	178	177	188	189	207	219	212	230	244	257	261	264	258	244	226	180	246	217.6	257.2
11 Spd	8	8	6	4	3	3	3	3	1	8	11	11	7	5	5	2	1	5	5	4	6	3	2	3	1.8	10.9
Dir	291	273	250	225	206	194	209	173	291	46	55	48	77	81	73	90	65	40	50	53	44	39	120	57	52.1	54.6
12 Spd	5	5	5	5	5	6	9	9	6	1	2	5	8	6	3	2	5	6	5	5	6	6	6	6	3.2	9.0
Dir	72	84	72	34	50	58	74	78	79	48	332	356	29	40	85	152	154	160	178	164	162	156	154	146	93.5	78.2
13 Spd	5	5	4	5	5	4	5	7	7	9	10	11	12	10	12	11	6	3	5	8	10	14	13	11	7.8	13.6
Dir	163	164	156	156	142	169	166	160	166	173	176	174	184	191	184	169	193	214	190	184	186	185	187	187	177.6	185.1
14 Spd	10	10	10	9	9	9	8	9	8	17	15	16	20	20	18	18	27	28	13	6	5	6	5	6	11.4	28.3
Dir	188	187	190	189	189	188	189	187	213	234	231	231	239	234	228	229	250	256	241	209	196	193	193	192	222.5	256.1
15 Spd	6	6	4	2	3	3	1	2	3	14	16	17	12	8	4	3	2	3	3	2	2	4	4	5	0.9	17.4
Dir	185	186	175	87	178	144	150	228	212	286	322	347	3	16	66	47	291	38	62	100	134	142	165	172	335.1	347.4
16 Spd	6	4	3	2	0	3	5	6	6	5	4	5	6	6	9	8	5	7	8	7	9	10	9	11	5.2	11.2
Dir	175	156	176	91	49	148	155	145	173	169	154	168	218	216	239	227	220	166	163	154	164	170	171	166	176.8	165.8
17 Spd	11	11	8	9	8	10	8	8	7	5	8	11	18	19	18	22	24	20	16	8	5	7	9	9	9.6	24.0
Dir	166	172	177	171	172	168	168	170	177	178	214	227	239	242	237	248	258	256	240	220	186	183	188	189	215.3	258.4
18 Spd	11	18	10	7	10	4	8	9	14	17	18	15	15	10	12	7	8	7	3	1	4	5	7	7	8.2	18.0
Dir	227	266	264	241	261	223	232	237	263	267	275	281	270	253	247	229	263	284	320	187	201	173	171	167	253.0	275.4
19 Spd	6	7	3	6	8	4	8	6	5	4	5	5	5	4	4	3	5	9	6	3	2	3	8	8	2.9	8.7
Dir	172	168	208	160	180	185	174	173	245	246	281	289	296	303	304	297	269	265	326	316	164	192	172	171	219.6	265.4
20 Spd	7	7	8	6	5	6	4	3	3	5	6	10	10	11	9	9	9	8	7	5	5	7	8	8	6.9	10.6
Dir	171	170	169	171	182	175	185	200	178	168	173	178	171	163	168	176	173	169	167	154	155	165	165	165	170.3	163.0
21 Spd	6	6	5	7	7	7	7	6	6	4	3	5	6	7	8	8	8	7	8	8	10	9	11	12	7.1	11.8
Dir	172	162	178	176	168	175	172	175	181	167	156	149	149	172	185	187	180	166	161	164	169	174	172	173	171.1	173.4
22 Spd	11	12	10	10	10	9	10	9	7	7	19	25	25	24	18	18	17	11	4	4	6	7	5	14	9.1	25.4
Dir	179	185	186	187	182	181	178	186	181	198	239	244	243	242	236	250	252	236	222	187	175	163	51	41	218.0	243.1

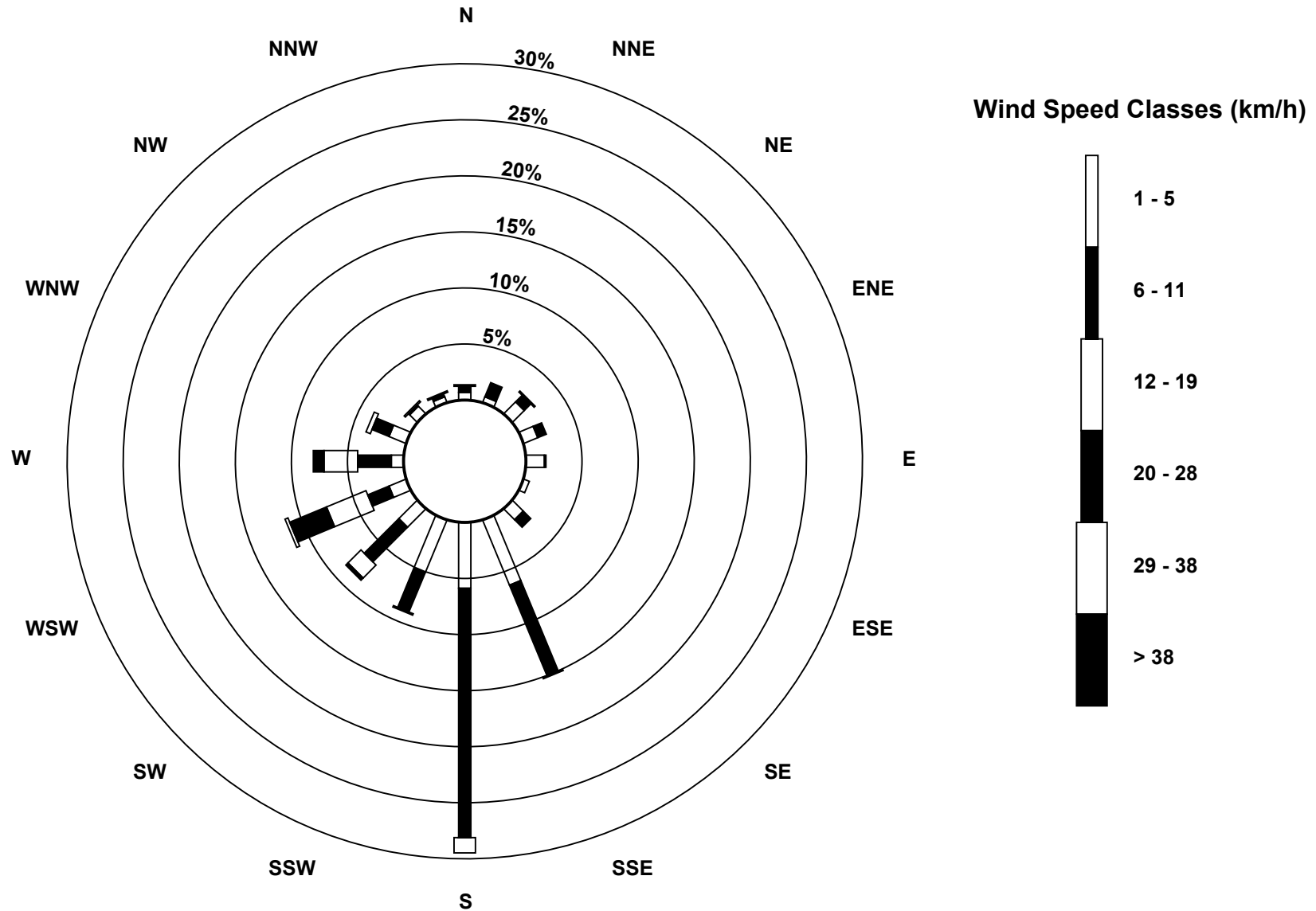
Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Portable Rycroft - August 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	11	9	4	9	8	7	7	8	11	8	7	6	5	3	6	5	7	5	4	5	9	14	13	15	5.3	15.4				
Dir	27	22	12	349	334	340	351	19	30	23	1	358	22	353	31	25	24	344	291	304	273	274	284	261	342.4	260.8				
24 Spd	14	20	18	13	12	13	11	12	10	5	4	5	4	3	3	2	6	8	3	2	2	6	7	2	4.7	20.5				
Dir	250	263	269	274	270	270	273	263	267	253	239	257	283	308	337	64	57	61	90	109	100	139	140	181	263.9	262.7				
25 Spd	3	5	4	3	0	4	4	1	2	3	4	7	10	9	7	13	5	4	2	2	8	5	10	1	1.8	13.0				
Dir	91	138	153	165	32	36	59	84	103	145	168	262	301	295	269	257	230	231	197	97	302	132	296	274	257.9	257.4				
26 Spd	3	5	8	5	6	3	2	9	12	11	11	11	13	20	15	13	6	7	8	7	7	5	4	5	6.6	19.7				
Dir	191	246	286	241	273	253	206	254	268	279	279	272	272	268	269	302	265	283	291	26	34	7	351	317	280.3	267.7				
27 Spd	4	4	3	3	1	1	4	4	4	5	7	8	10	12	12	9	9	5	6	9	9	8	7	5	5.5	12.0				
Dir	274	260	242	260	285	145	177	183	175	181	173	162	166	160	171	165	157	196	184	168	171	184	187	179	178.0	170.9				
28 Spd	7	7	7	6	5	5	5	6	3	4	5	6	7	4	4	3	7	5	4	4	5	7	9	8	5.2	8.5				
Dir	170	182	182	183	186	223	192	187	199	205	178	181	205	195	209	208	161	167	309	136	156	172	184	183	185.2	183.9				
29 Spd	9	9	8	10	9	6	5	4	15	17	16	17	17	14	11	6	8	26	19	11	6	14	11	10	10.2	25.8				
Dir	181	181	181	184	185	188	188	198	246	252	248	250	250	256	240	216	224	255	265	242	229	240	233	230	234.2	255.2				
30 Spd	9	11	12	16	25	25	20	20	20	21	19	19	20	21	23	21	21	20	18	6	3	6	8	6	15.4	25.3				
Dir	229	231	233	251	257	264	256	254	260	263	263	259	254	256	254	247	250	250	251	246	202	179	169	157	249.9	263.9				
31 Spd	5	5	6	4	6	7	7	8	9	10	10	10	13	16	21	14	11	14	11	9	7	7	7	5	8.4	20.7				
Dir	155	152	141	174	149	157	155	185	187	192	208	214	223	225	229	220	204	192	192	195	213	190	194	196	197.7	228.9				
Spd	5.3	5.3	4.7	4.5	4.4	4.1	4.7	4.9	5.0	5.6	6.2	6.7	7.8	7.7	7.7	7.4	7.1	6.3	4.5	3.3	3.9	5.3	5.7	5.3	Diurnal Average					
Dir	183.2	192.8	195.8	191.7	197.0	192.8	185.2	191.7	216.0	230.0	237.7	241.4	240.7	239.0	231.3	232.8	233.9	237.6	235.1	195.8	189.2	184.8	182.8	180.8	Diurnal Maximum					
Spd	13.6	20.5	18.5	16.0	24.8	25.3	20.0	20.2	20.4	20.9	21.5	25.4	25.4	26.5	29.4	29.5	27.3	28.3	19.1	11.4	10.4	14.0	12.9	15.4	Diurnal Maximum					
Dir	250.1	262.7	269.1	250.6	257.2	263.9	255.6	253.7	259.6	263.3	248.6	244.0	243.1	249.0	246.9	255.2	250.2	256.1	265.1	258.2	168.7	274.1	186.9	260.8						
Maximum Speed Value: 30 km/h on Aug 3 16:00																			Minimum Speed Value: 0 km/h on Aug 16 05:00										Hours in Service: 744	
Maximum Daily Speed Average: 15.4 km/h on Aug 30																			Minimum Daily Speed Average: 0.9 km/h on Aug 11										Hours of Data: 737	
Maximum Diurnal Speed Average: 7.8 km/h at hour 13																			Minimum Diurnal Speed Average: 3.3 km/h at hour 20										Hours of Missing Data: 7	
Monthly Average Velocity: 5.11 km/h 213.97 deg																			Speed Percentiles: P ₁ = 1.1 P ₁₀ = 3.2 Q ₁ = 4.9 Median = 6.9 Q ₃ = 9.8 P ₉₀ = 15.0 P ₉₉ = 25.4										Percent Operational Time: 99.1	
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	7		9		2		0		0		0		18																	
NorthEast	19		17		3		0		0		0		39																	
East	15		7		0		0		0		0		22																	
SouthEast	27		24		0		0		0		0		51																	
South	68		250		20		0		0		0		338																	
SouthWest	30		57		27		11		1		0		126																	
West	17		34		40		26		2		0		119																	
NorthWest	14		8		2		0		0		0		24																	
Total	197		406		94		37		3		0		737																	

Wind Rose

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



Hourly Standard Deviations

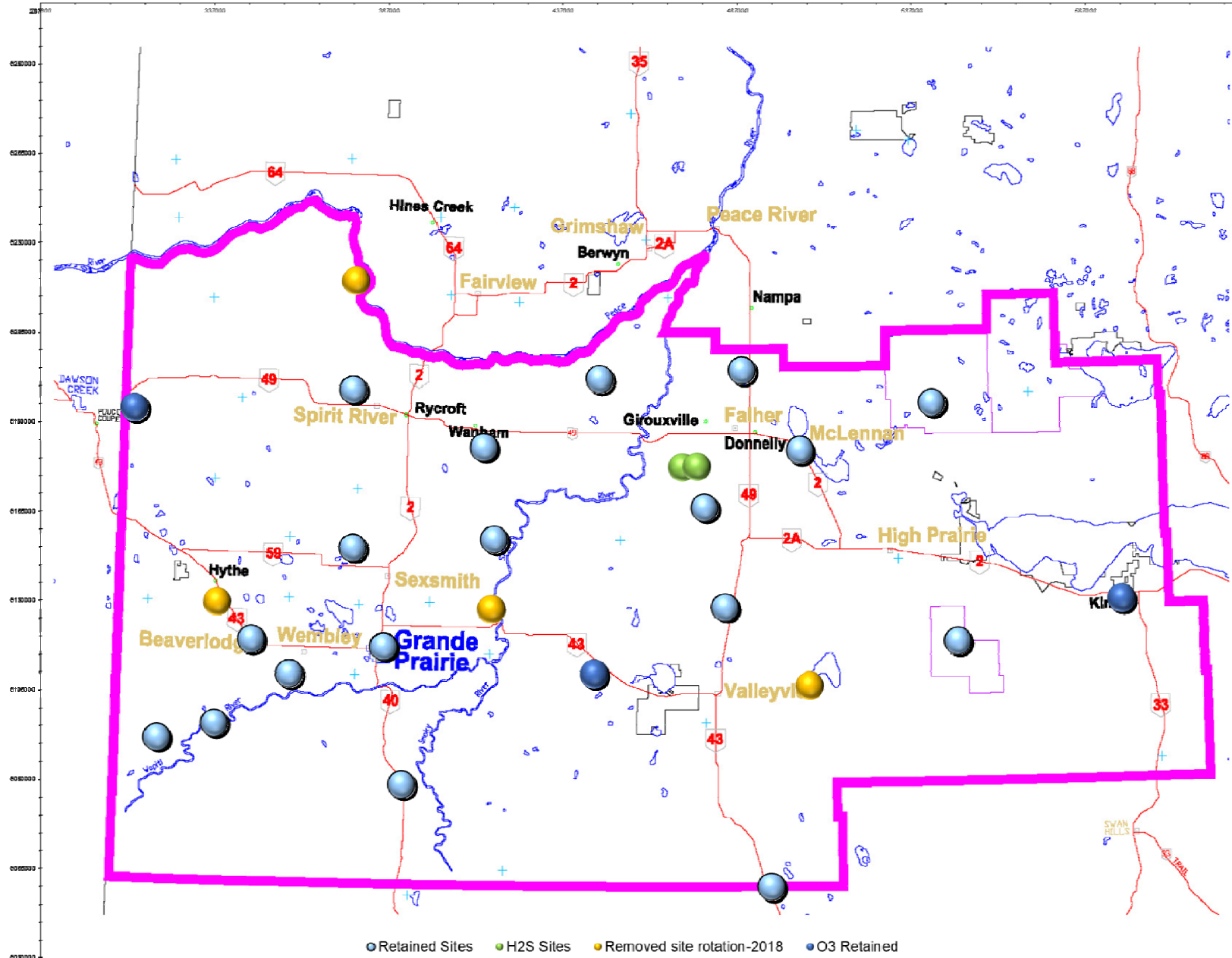
Wind Direction (WD) - deg
Portable Rycroft - August 2018

Maximum Value: 90.1 deg on Aug 15 07:00																			Hours in Service: 744						
Minimum Value: 2.1 deg on Aug 20 02:00																			Hours of Data: 737						
																			Hours of Missing Data: 7						
Percentiles: P ₁ = 3.1 P ₁₀ = 4.3 Q ₁ = 6.7 Median = 11.4 Q ₃ = 21.5 P ₉₀ = 39.4 P ₉₉ = 80.3																			Hours of Calibration: 0						
																			Percent Operational Time: 99.1						
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-Aug	8	13	20	41	17	17	16	30	29	39	54	47	42	13	30	21	11	89	50	16	7	6	17	5	89.1
2-Aug	7	11	10	10	7	11	4	9	15	70	20	85	35	72	69	74	24	39	52	5	6	5	9	4	84.6
3-Aug	4	8	4	5	5	4	4	14	25	7	12	11	9	10	8	6	8	12	13	17	8	7	7	8	25.0
4-Aug	13	20	12	30	52	12	5	37	7	10	16	19	21	30	40	32	14	53	39	42	61	60	10	4	61.4
5-Aug	6	6	18	41	3	27	5	6	20	53	79	35	30	26	20	15	18	22	17	33	7	3	3	3	78.8
6-Aug	2	4	3	3	4	4	5	5	6	9	12	8	7	15	15	12	17	8	9	10	15	5	4	4	17.4
7-Aug	6	6	23	19	4	7	12	8	14	28	7	9	8	5	12	12	17	7	8	42	17	4	19	P	42.0
8-Aug	P	P	P	P	P	P	11	6	4	5	6	4	7	11	9	11	10	18	21	8	10	22	10	7	21.5
9-Aug	4	8	10	5	5	7	4	3	4	4	7	23	21	18	16	14	19	10	10	37	30	6	9	12	36.7
10-Aug	10	7	56	51	29	18	9	10	7	5	6	16	23	20	16	16	6	37	23	17	10	23	8	25	56.4
11-Aug	19	10	10	32	45	25	28	30	68	20	12	15	14	24	19	42	65	10	13	30	8	16	44	48	68.5
12-Aug	23	30	20	19	50	33	10	9	28	70	72	32	9	16	49	64	41	19	14	14	7	9	5	7	71.7
13-Aug	20	14	17	15	9	15	11	10	12	10	10	10	8	11	10	8	21	21	20	8	6	4	4	4	21.4
14-Aug	4	4	3	3	4	4	4	5	19	8	10	11	13	9	10	10	14	6	8	19	8	7	11	6	19.5
15-Aug	6	4	66	70	32	23	90	68	29	20	19	11	18	28	60	58	66	21	26	30	20	13	7	8	90.1
16-Aug	7	13	11	63	87	67	19	10	13	22	18	45	26	26	27	23	23	19	7	10	9	4	7	3	86.5
17-Aug	4	4	5	7	7	3	4	5	6	17	23	12	14	13	11	12	7	7	9	25	14	6	3	4	25.1
18-Aug	28	6	5	12	15	14	7	10	5	7	11	14	19	28	16	37	31	30	36	62	33	10	4	4	62.5
19-Aug	4	4	51	9	5	33	4	7	17	36	26	31	61	65	52	71	39	12	21	26	56	24	3	3	71.0
20-Aug	3	2	3	3	14	5	26	26	22	13	23	15	15	16	17	15	13	7	4	9	7	5	5	4	26.2
21-Aug	6	9	25	3	4	5	6	8	7	22	46	25	17	21	14	11	9	6	5	4	5	8	4	3	45.5
22-Aug	5	4	4	3	4	4	4	4	6	20	13	6	7	8	9	14	7	9	15	21	10	12	75	10	75.1
23-Aug	10	5	34	17	19	16	11	12	9	10	11	11	23	42	21	13	8	15	37	12	16	5	6	9	42.1
24-Aug	11	4	5	5	6	4	4	5	13	57	31	38	41	66	62	67	37	10	33	33	23	8	7	77	77.0
25-Aug	38	20	27	38	86	22	16	38	41	22	25	52	21	17	22	19	16	15	29	15	80	36	80	86	86.1
26-Aug	44	23	14	30	18	36	20	15	10	5	6	6	8	6	7	12	16	13	11	21	11	16	8	14	43.9
27-Aug	14	8	14	11	82	37	8	19	21	28	18	16	19	14	10	13	9	40	9	4	4	5	4	8	82.5
28-Aug	5	7	6	7	7	13	7	5	18	22	33	20	27	23	23	30	20	29	51	19	6	13	4	5	50.7
29-Aug	5	5	7	3	5	7	9	26	8	8	12	10	15	15	14	28	39	6	8	7	15	7	6	10	39.3
30-Aug	11	8	6	8	4	3	4	3	6	6	7	9	9	5	5	7	6	9	7	22	12	7	3	11	22.0
31-Aug	8	11	7	18	8	6	5	9	6	8	9	11	10	12	7	10	8	6	6	6	16	12	6	9	18.2
43.9 30.2 65.6 69.8 86.5 66.7 90.1 68.2 68.5 70.1 78.8 84.6 60.9 71.6 69.0 73.5 65.6 89.1 51.8 62.5 80.4 59.7 80.0 85.9																									
P - Power Failure																									

PAZA

Monthly Passive Data Summary

Location of PAZA Passive Monitoring Stations



PAZA Passive Results for August 2018

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	Site Legal
Duplicates						
3a	Fourth Creek			0.5		
3b	Fourth Creek			0.5		
9a	Spirit River	0.3				
9b	Spirit River	0.3				
19a	Wanham			0.4		
19b	Wanham			0.6		
21a	Eaglesham	0.2				
21b	Eaglesham	0.1				
47a	Kinuso		28.4			
47b	Kinuso		24.7			
63a	Girouxville 3				0.2	
63b	Girouxville 3				0.3	
2	Bay Tree	0.1	26.8	0.5		13-16-078-13 W6M
3	Fourth Creek	0.2		0.2		04-13-082-07 W6M
9	Spirit River	0.3		0.3		08-12-079-07 W6M
12	Hythe	0.3		0.6		14-36-072-11 W6M
14	Sylvester	0.1		0.4		08-06-069-12 W6M
16	Beaverlodge	0.2		1.0		15-36-071-10 W6M
18	Saddle Hills	0.2		0.4		04-25-074-07 W6M
19	Wanham	0.3		0.5		16-22-077-03 W6M
21	Eaglesham	0.1		0.4		16-21-079-25 W5M
24	Wembley	0.1		0.8		12-31-070-08 W6M
25	Pinto Creek	0.1		0.5		04-24-069-11 W6M
27	Grande Prairie I	0.2		2.2		08-15-071-06 W6M
29	Smoky Heights	0.3		0.7		04-06-075-02 W6M
30	Fitzsimmons	0.2		1.1		15-36-072-03 W6M
32	Gold Creek	0.2		1.4		06-33-067-05 W6M
35	Jean Cote	0.3		0.4		12-35-079-21 W5M
36	Guy	0.1		0.4	0.2	03-04-076-22 W5M
37	Crooked Creek	0.1	21.6	0.6		16-01-071-26 W5M
39	Clouston Creek	0.2		0.4		12-01-073-22 W5M
40	McLennan	0.2		0.4		03-29-077-19 W5M
42	Sunset House	0.2		0.5		05-32-070-19 W5M
44	Peavine	0.2		0.2		03-05-079-15 W5M
46	Little Smoky	0.1		1.3		12-01-065-21 W5M
47	Kinuso	0.1	26.6	0.4		12-10-073-10 W5M
49	Grande Prairie HP	0.2		2.8		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 August 2018

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

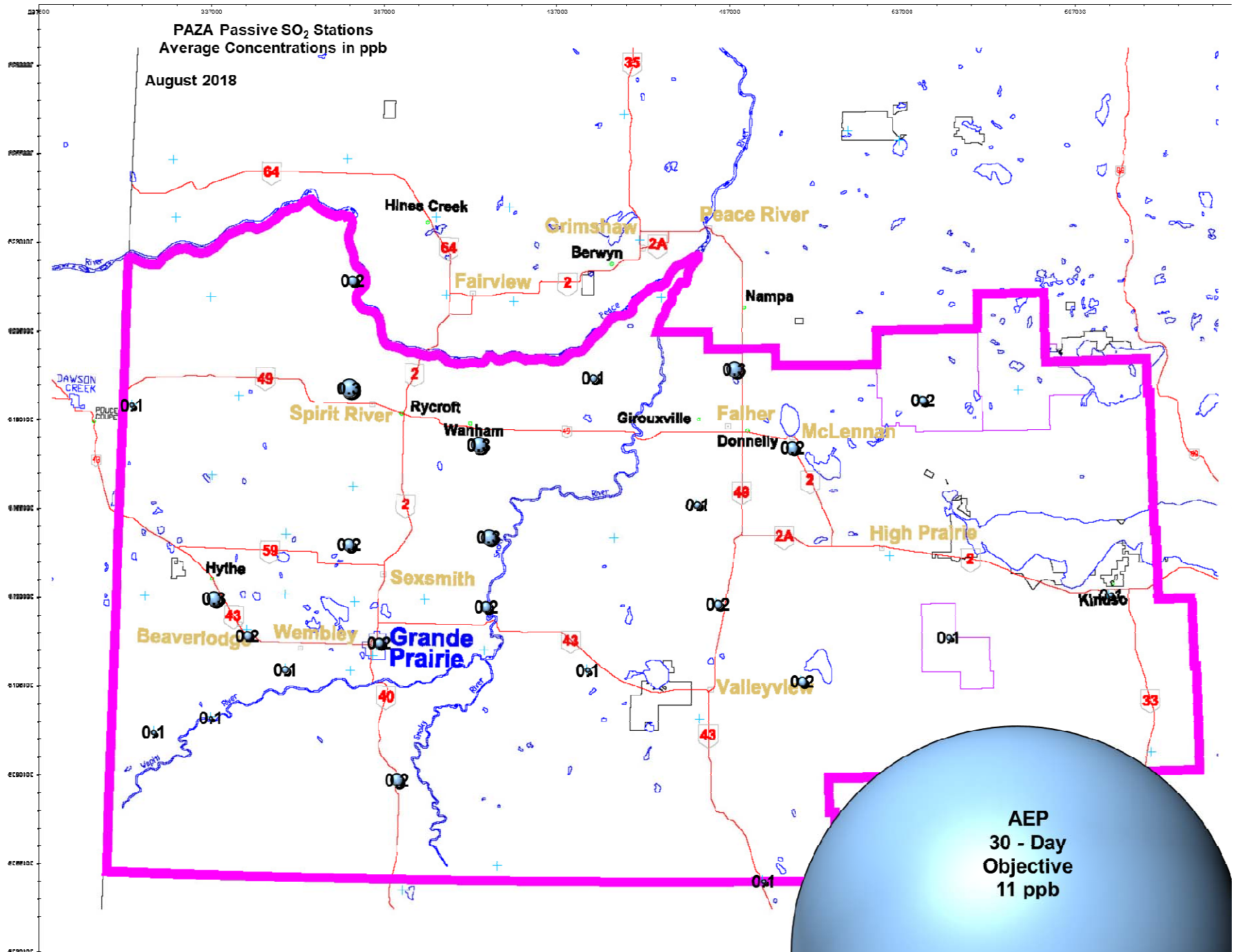
Passive Summary for August 2018 (PAZA Zone)				
Mean	0.2	25.0	0.7	0.3
Standard Deviation	0.1	2.9	0.6	0.1
Minimum	0.1	21.6	0.2	0.2
Minimum At	Pinto Creek (#25)	Crooked Creek (#37)	Fourth Creek (#3)	Guy (#36)
Maximum	0.3	26.8	2.8	0.3
Maximum At	Spirit River (#9a)	Bay Tree (#2)	Grande Prairie HP	Girouxville 4 (#64)

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

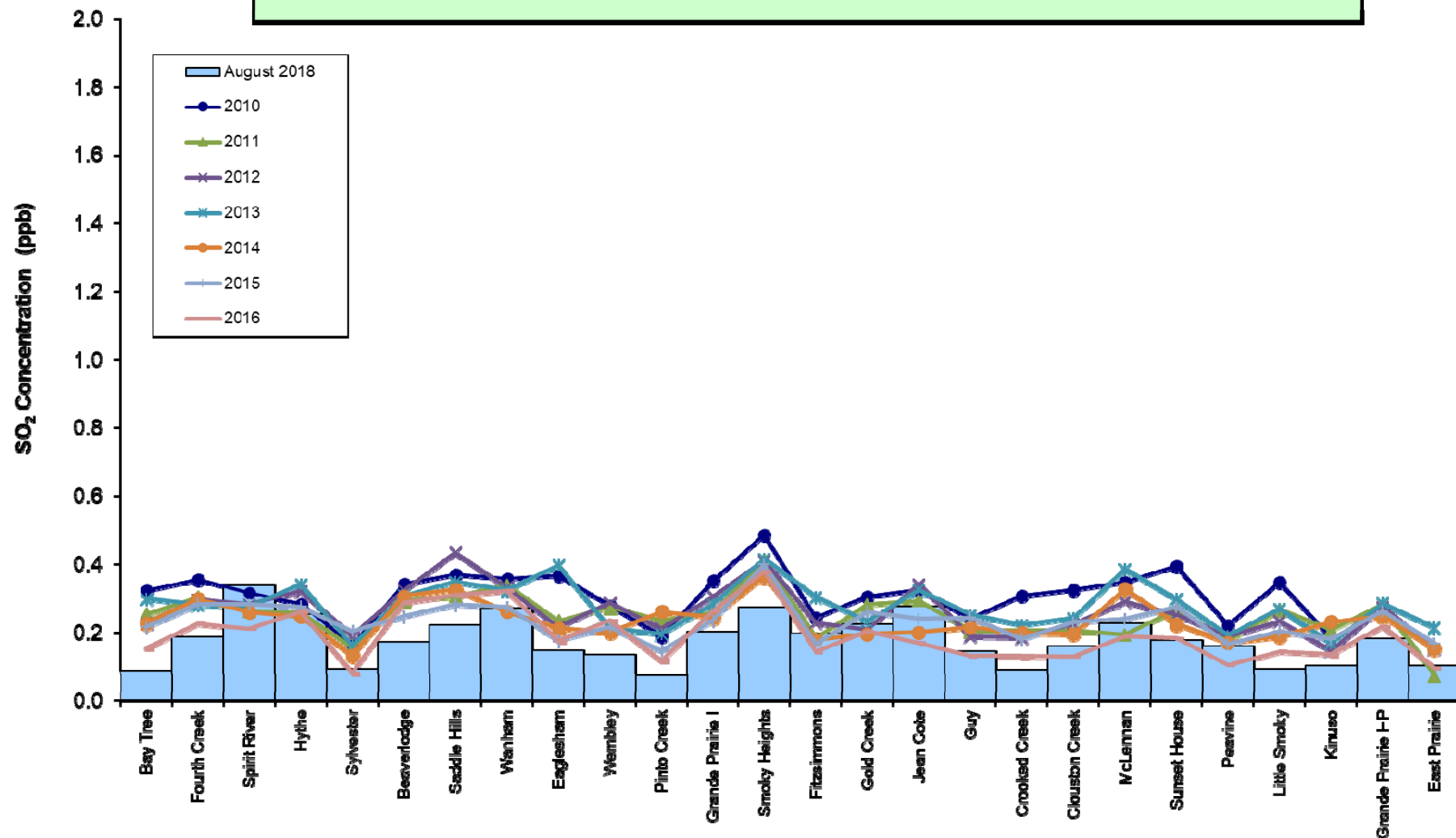
	SO ₂	NO ₂
PAZA Beaverlodge station	0.4	2.9
PAZA Beaverlodge passive	0.2	1.0

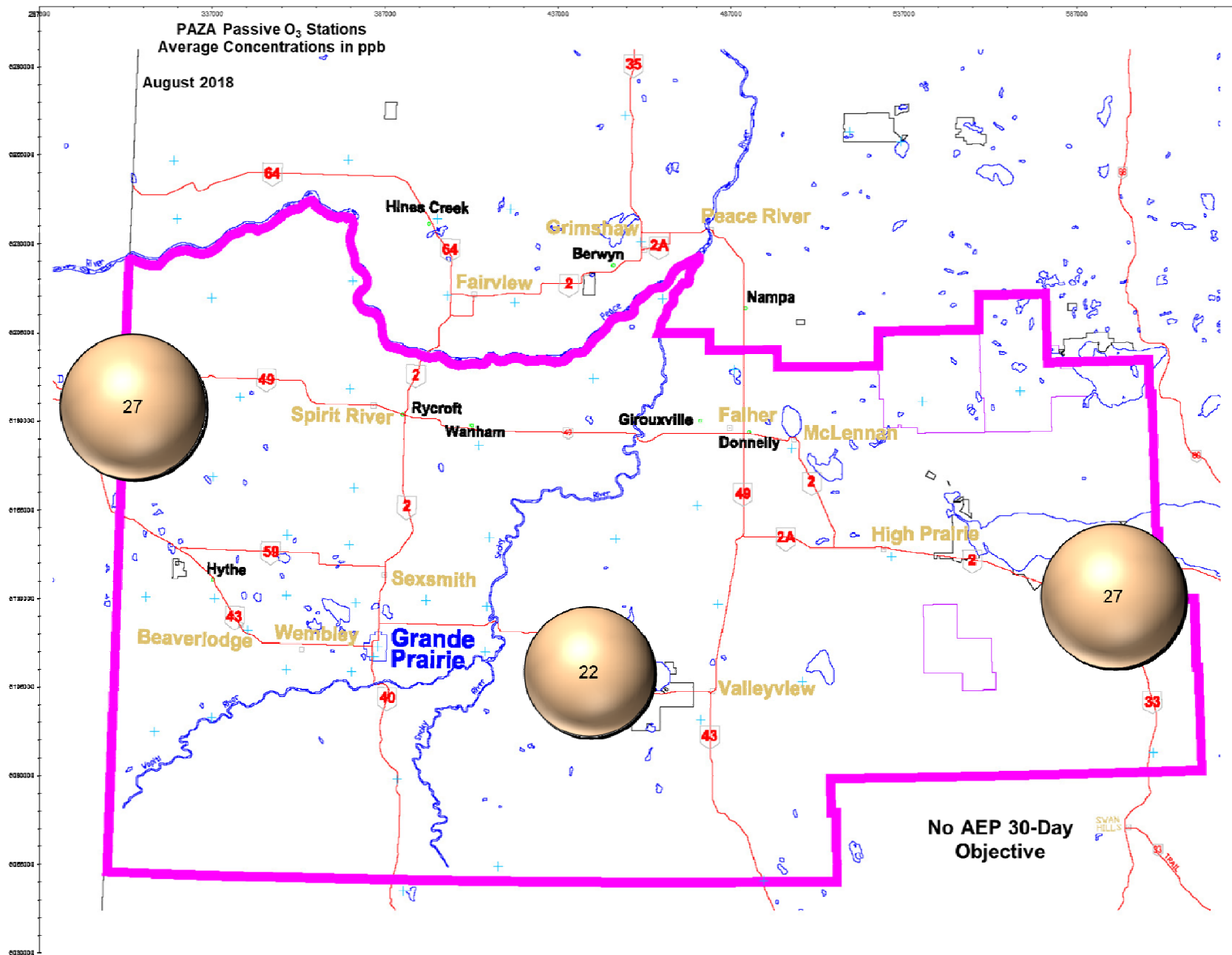
Comparison between Continuous and Passive monitoring at Henry Pirker (passive #49 Grande Prairie HP)

	SO ₂	NO ₂
PAZA Henry Pirker station	0.2	5.8
PAZA Grande Prairie passive	0.2	2.2

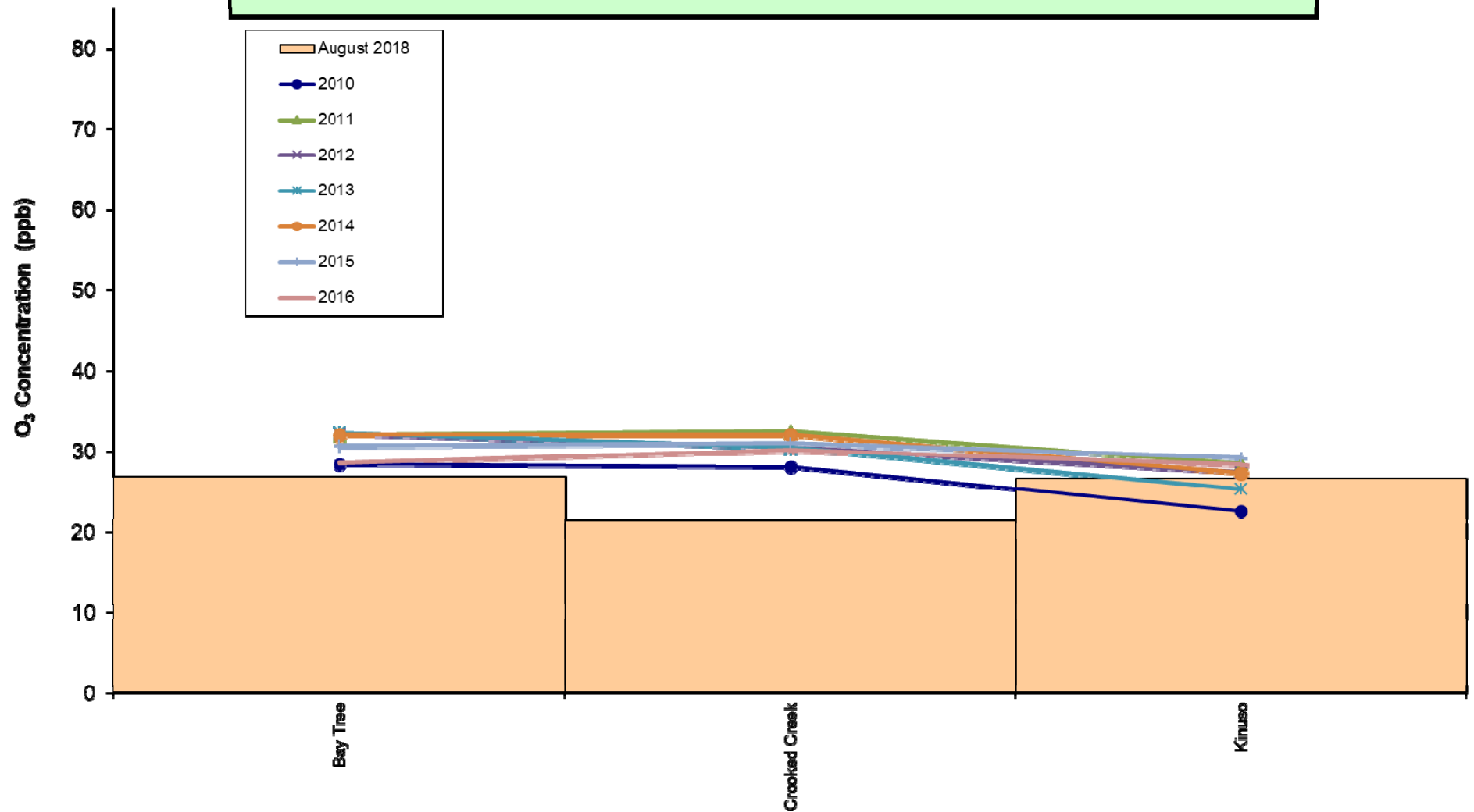


Alberta Ambient Air Quality Objective - 30-day Objective is 11 ppb

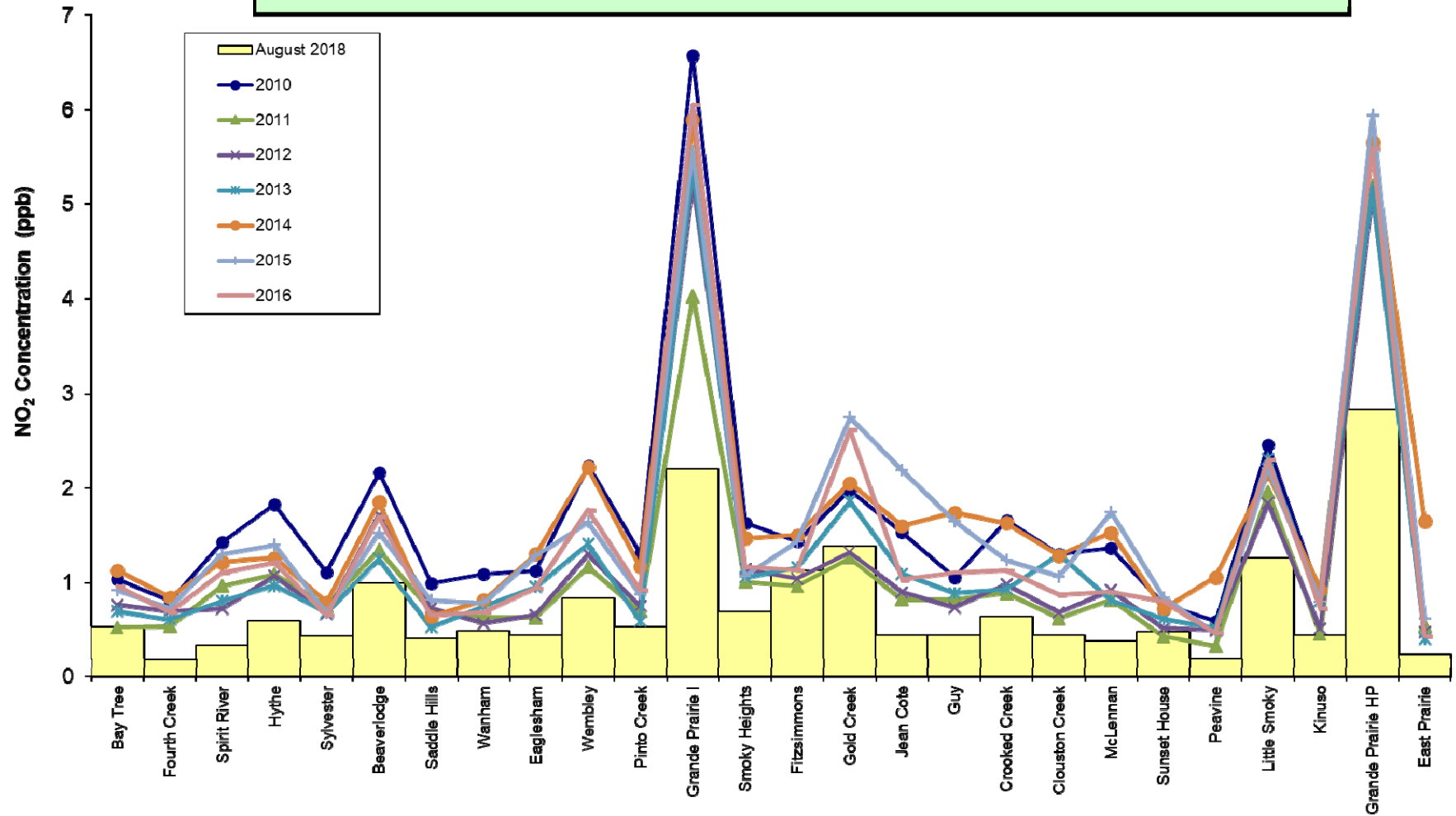


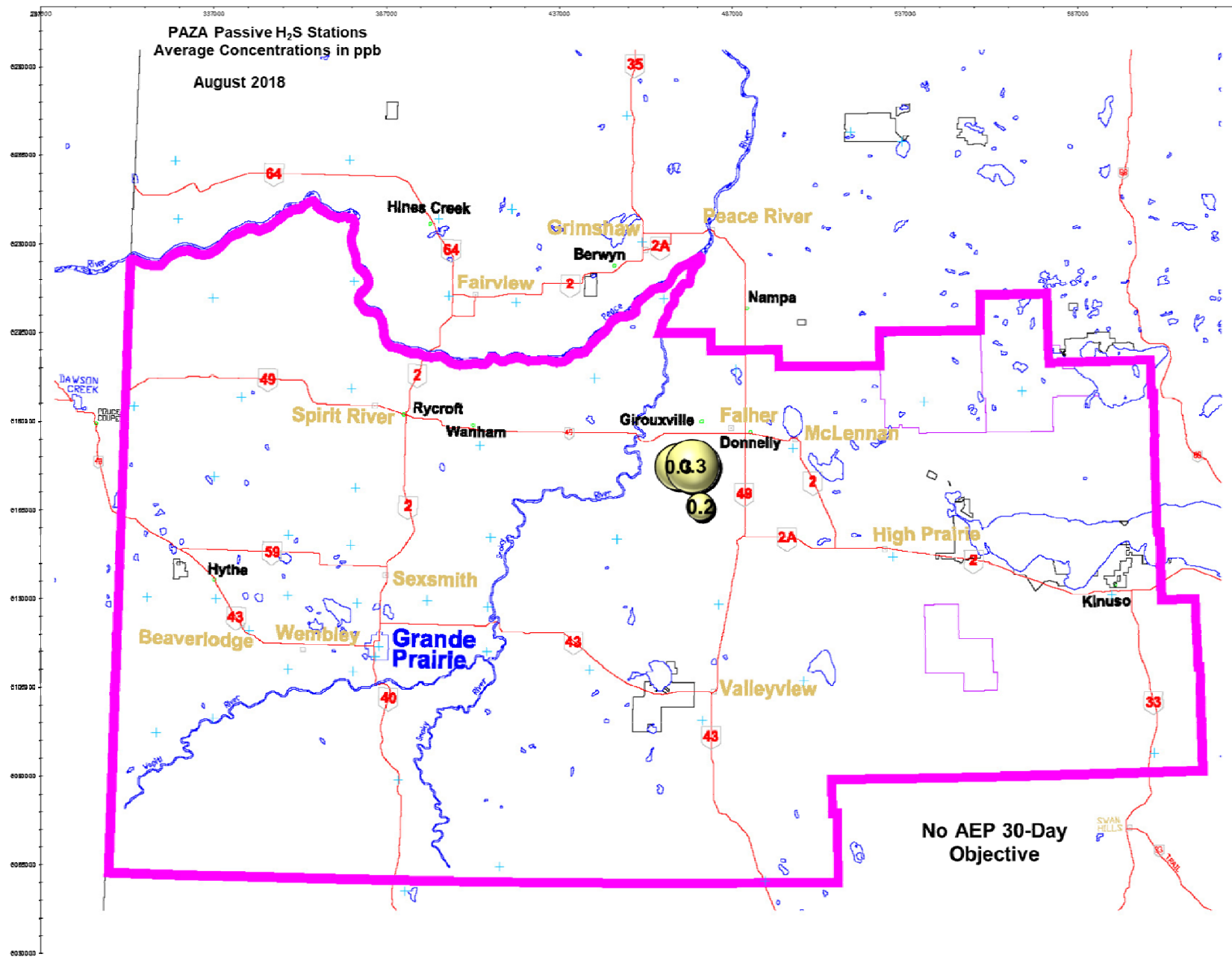


Alberta Ambient Air Quality Objective - No Annual O₃ Objective



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





August 2018 Calibration Reports

Calibration Report



Parameter SO2

Air Monitoring Network PAZA

Station Information

Calibration Date	August 7, 2018	Previous Calibration	July 18, 2018
Station Number	4	Station Location	Beaverlodge
Reason:	Routine	Install	Removal
Start Time (MST)	14:35:00 PM	End Time (MST)	17:10
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	2021-02-21
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	0.999787	Calculated slope	0.967382
Calculated intercept	0.279901	Calculated intercept	0.256189
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	82.7	0.9693
4995	19.97	40.2	41.3	0.9740
4995	9.97	20.1	20.2	0.9974
4995	0.00	0.0	0.3	As found zero
4995	39.94	80.1	82.7	As found span
Average Correction Factor				0.9803

Calculated value of As Found Response: 82.574 ppm Percent Change of As Found: -3.1%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.3	ppb
Auto span	58.7	ppb	60.0	ppb

Notes: No adjustment made

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



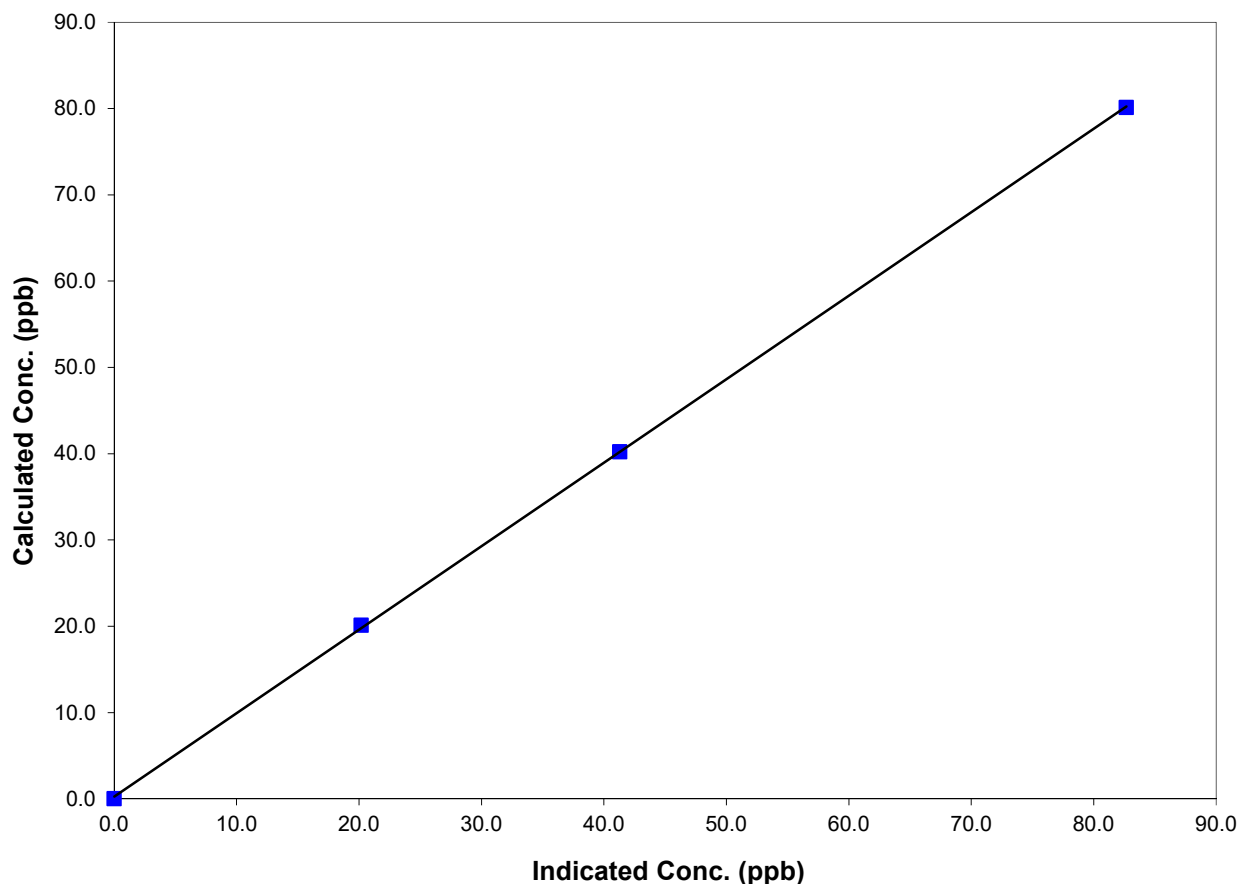
Station Information

Calibration Date	August 7, 2018	Previous Calibration	July 18, 2018
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	14:35:00 PM	End Time (MST)	17:10
Analyzer make/model	TEI Model 43i-TLE	Analyzer serial #	713021137

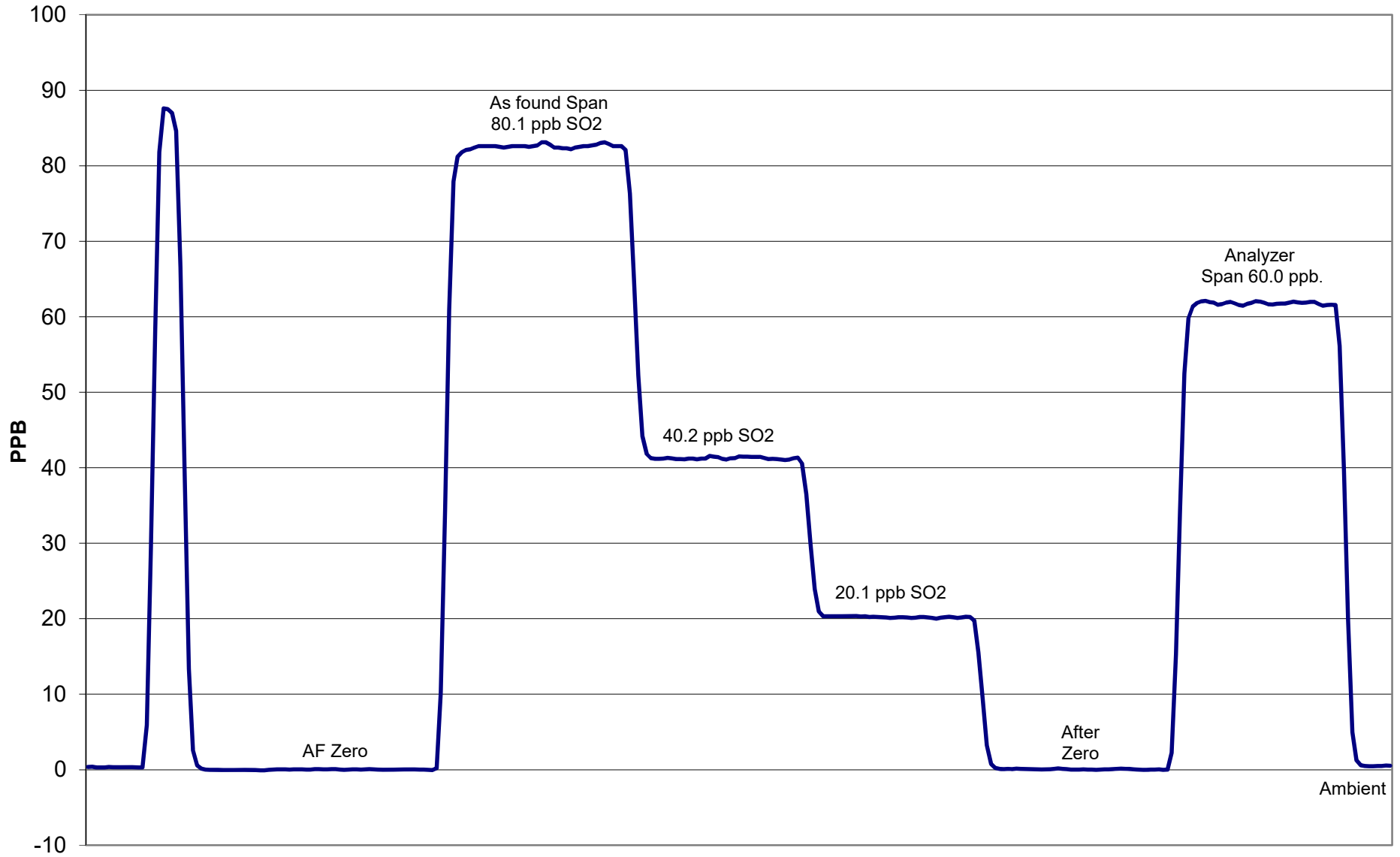
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999941
80.1	82.7	0.9693		
40.2	41.3	0.9740		
20.1	20.2	0.9974	Slope	0.967382
			Intercept	0.256189

SO2 Calibration Curve



SO2 Calibration



August 7, 2018

Calibration Report

Parameter
Air Monitoring Network

NO_x-NO-NO₂
PAZA



Station Information

Calibration Date	August 7, 2018	Previous Calibration	July 18, 2018		
Station Number	4	Station Location	Beaverlodge		
Reason:	Routine	Installation	Removal		
Start Time (MST)	9:05	End Time (MST)	14:40		
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	NO	
Before	Data Slope	1.002208	0.971335	0.969696
	Data Offset	0.188947	0.754676	1.059561
After	Data Slope	0.998906	0.995548	0.996153
	Data Offset	0.370405	2.335925	2.200345
Channel #	8	6	7	
Voltage Range	0 - 5 VDC	0 - 5 VDC	0 - 5 VDC	

Analyzer Information

Analyzer make/model	TEI 42i	Analyzer serial #	906535068	
Test Point	before	after		
Concentration range	0-500	ppb	0-500	ppb
NO offset	2.4	mV	2.1	mV
NOx bkgnd	2.7	mV	2.9	mV
NO coefficient	1.037		0.993	
NOx coefficient	0.999		1.001	
NO2 conv temp	326.6	Deg C	322.4	Deg C
PMT Temp	-3.0	Deg C	-3.0	Deg C
PMT Volt	-729.3	mV	-729.6	mV
R Cell Press	181.3	in Hg	181.9	in Hg
Sample Flow	0.786	LPM	0.792	LPM

Notes: Slight span adjust.

Calibration Report

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



Station Information

Calibration Date: August 7, 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	0.0	-0.1	-0.1	N/A	N/A
1	4995	39.94	400.6	399.8	0.8	401.2	400.2	0.2	0.9986	0.9990
2	4995	19.97	201.1	200.7	0.4	198.5	198.0	-0.3	1.0131	1.0134
3	4995	9.97	100.6	100.4	0.2	96.4	96.6	-0.3	1.0432	1.0394
AFZ	4995	0.00	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0000	0.0000
AFS	4995	39.94	400.6	399.8	0.8	418.1	417.8	-0.4	0.9580	0.9570
								Average Correction Factor	1.0183	1.0172

As Found Concentrations: NO_x= 406.9 NO= 406.3 As Found Percent Change NO_x= 1.6% NO= 1.6%

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	0.0	-0.1	-0.1	N/A	N/A	N/A	N/A
NO point	400.2	400.2	0.0	400.4	400.2	-0.5	0.9995	1.0000	N/A	N/A
300	400.2	98.7	301.5	400.9	98.7	301.7	0.9982	1.0000	0.9993	100.1%
200	400.2	193.6	206.6	400.6	193.6	206.2	0.9989	1.0000	1.0016	99.8%
100	400.2	288.0	112.2	400.2	288.0	111.6	1.0000	1.0000	1.0052	99.5%
Average Correction Factor							0.9990	1.0000	1.0020	99.8%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.1	0.1	-0.1	ppb	-0.3	-0.3	-0.1	ppb
Auto span	301.2	298.0	2.5	ppb	289.4	286.0	2.5	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



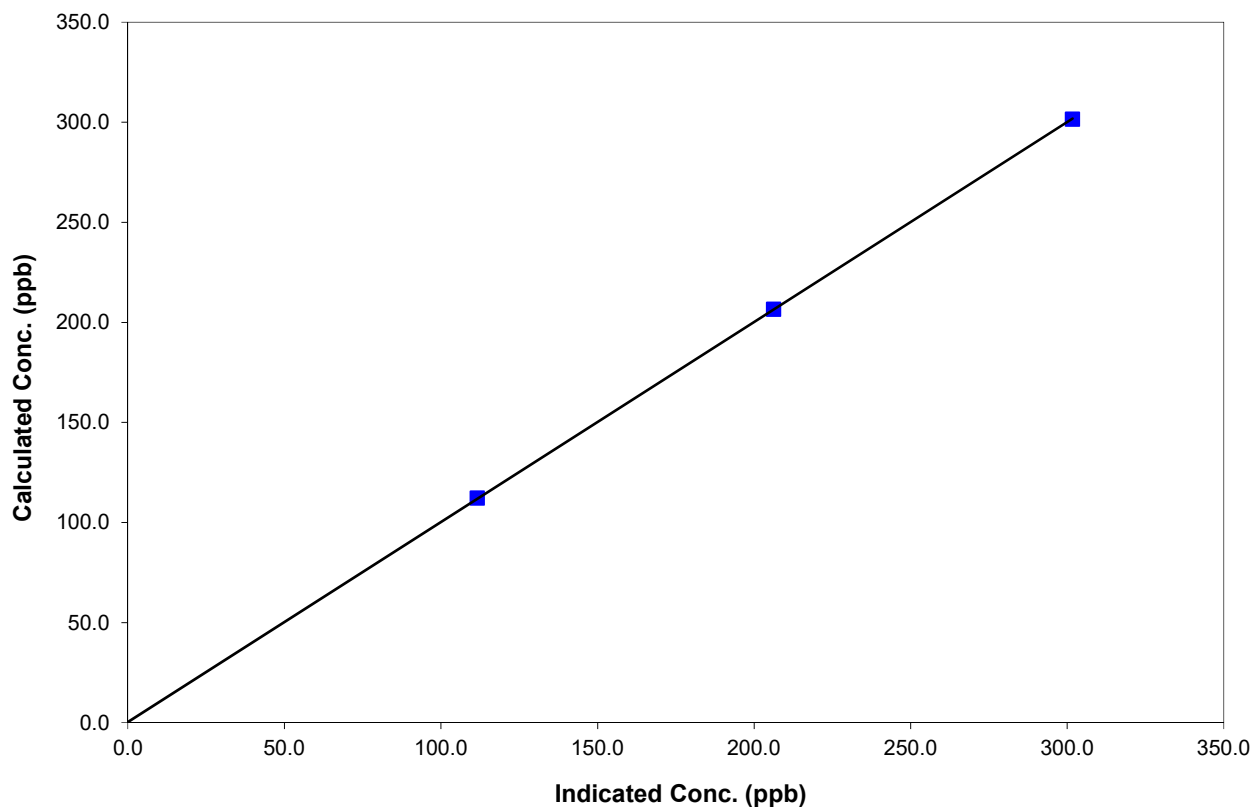
Station Information

Calibration Date	August 7, 2018	Previous Calibration	July 18, 2018
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	9:05	End Time (MST)	14:40
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	0.999994
301.5	301.7	0.9993		
206.6	206.2	1.0016		
112.2	111.6	1.0052	Slope	0.998906
			Intercept	0.370405

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



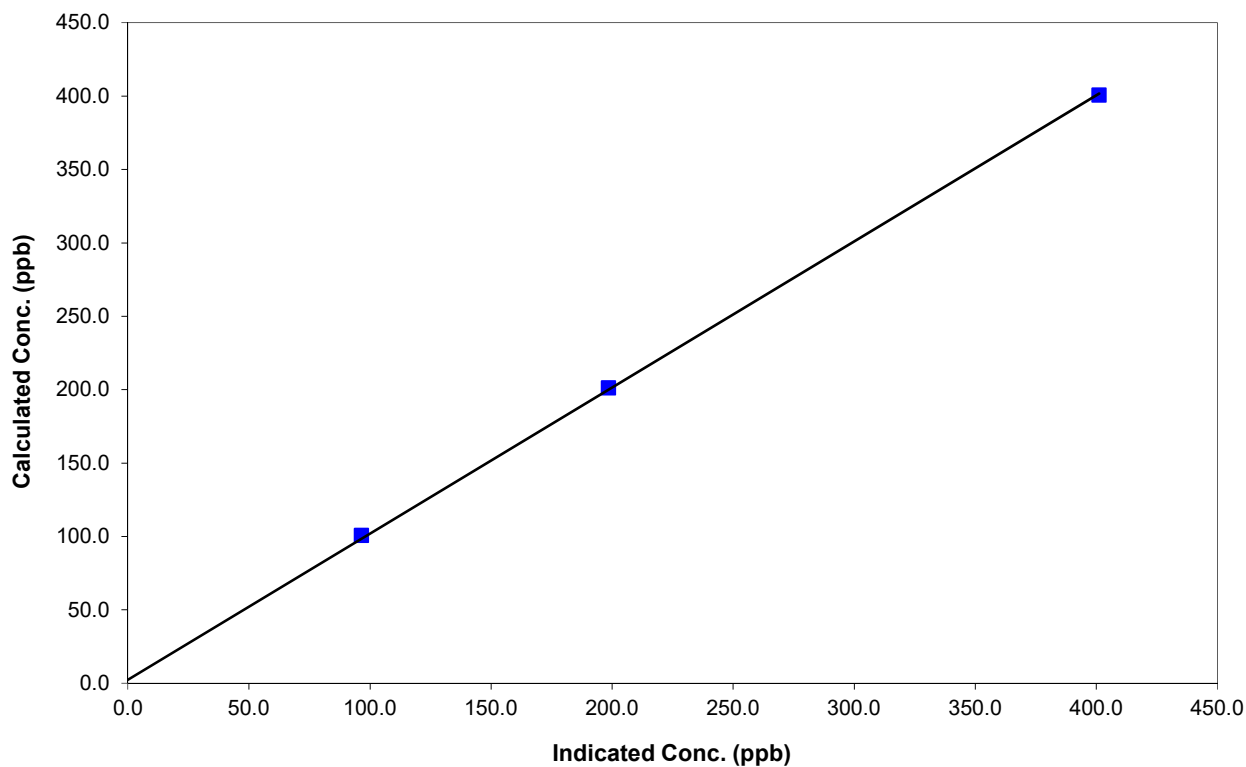
Station Information

Calibration Date	August 7, 2018	Previous Calibration	July 18, 2018
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	9:05	End Time (MST)	14:40
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999853
400.6	401.2	0.9986		
201.1	198.5	1.0131		
100.6	96.4	1.0432	Slope	0.995548
			Intercept	2.335925

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



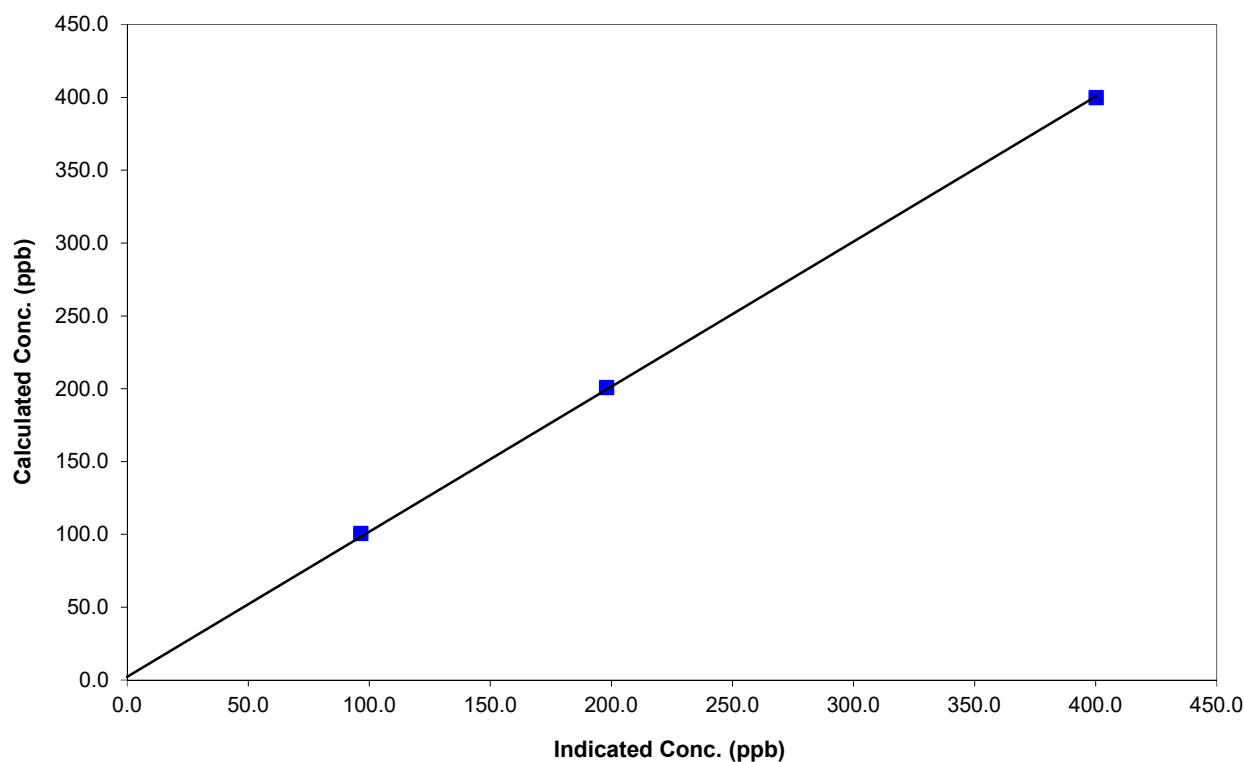
Station Information

Calibration Date	August 7, 2018	Previous Calibration	July 18, 2018
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	9:05	End Time (MST)	14:40
Analyzer make	TEI 42i	Analyzer serial #	906535068

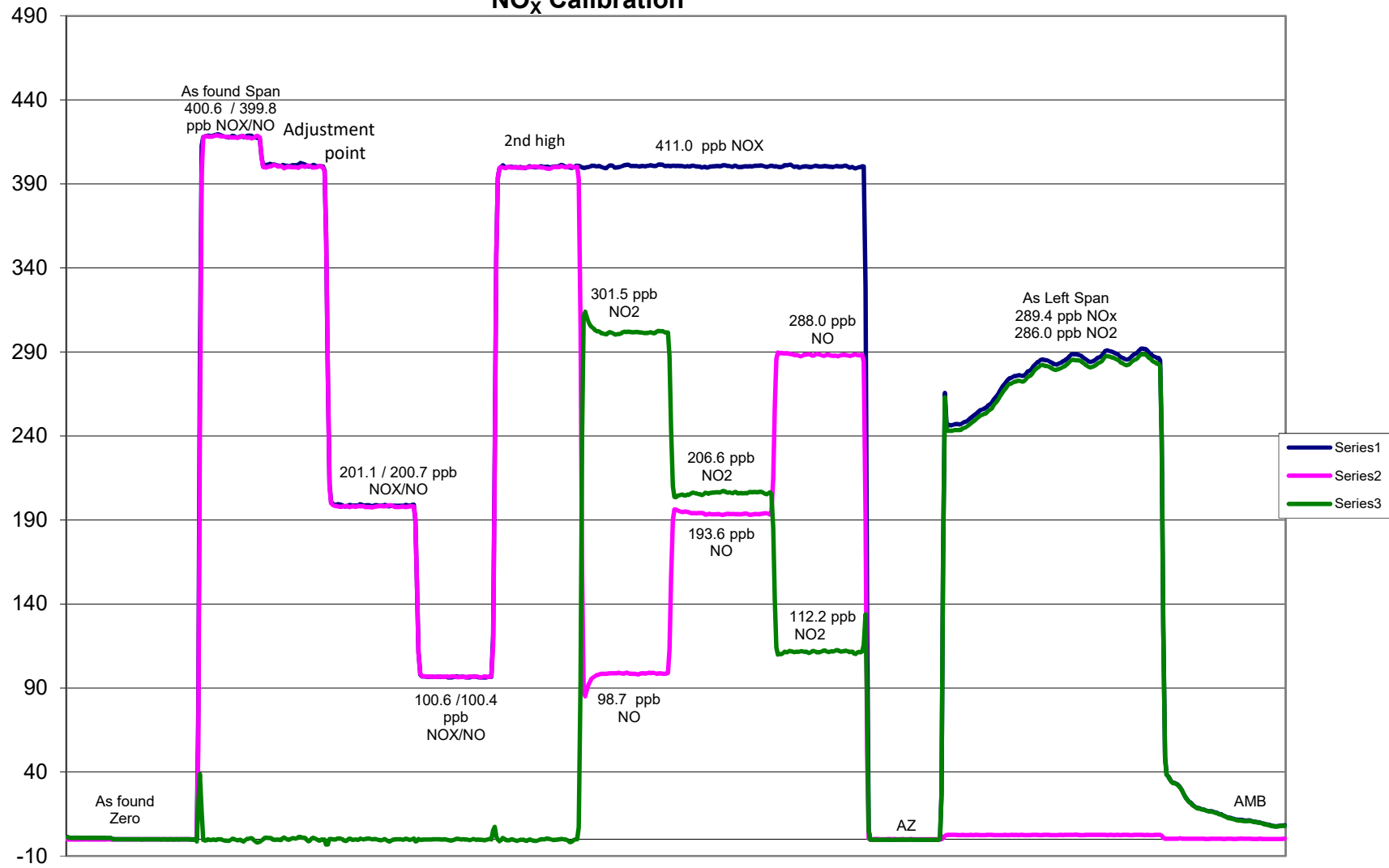
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A		
399.8	400.2	0.9990	Correlation Coefficient	0.999874
200.7	198.0	1.0134		
100.4	96.6	1.0394		
			Slope	0.996153
			Intercept	2.200345

NO Calibration Curve



NO_x Calibration



August 7, 2018

Calibration Report

Parameter 03

Air Monitoring Network PAZA



Station Information

Calibration Date	August 7, 2018	Previous Calibration	July 18, 2018
Station Number	4	Station Location	Beaverlodge
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	13:15:00 PM	End Time (MST)	15:20
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	0.987505
Calculated intercept	-0.191343	Calculated intercept	0.564812

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

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	0.20	ppb	0.20	ppb
slope	1.021		1.021	
Lamp temp	67.6	mV	67.5	mV
Lamp Intensity A/B	64246/77604	mV	64079/77398	mV
Pressure	683	mm Hg	682.7	mm Hg
Flow A	0.784	LPM	0.781	LPM
Flow B	0.744	LPM	0.743	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	301.5	305.3	0.9875
5032	0.20	206.6	208.3	0.9919
5032	0.10	112.2	112.1	1.0005
5032				
5032	0.00	0.0	0.1	As found zero
5032	0.30	301.5	305.3	As found span
Average Correction Factor				0.9933

Calculated value of As Found Response: 305.4 ppm Percent Change of As Found: 1.3%

	before calibration		after calibration	
Auto zero	0.5	ppb	0.1	ppb
Auto span	286.7	ppb	275.7	ppb

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter O3

Air Monitoring Network PAZA



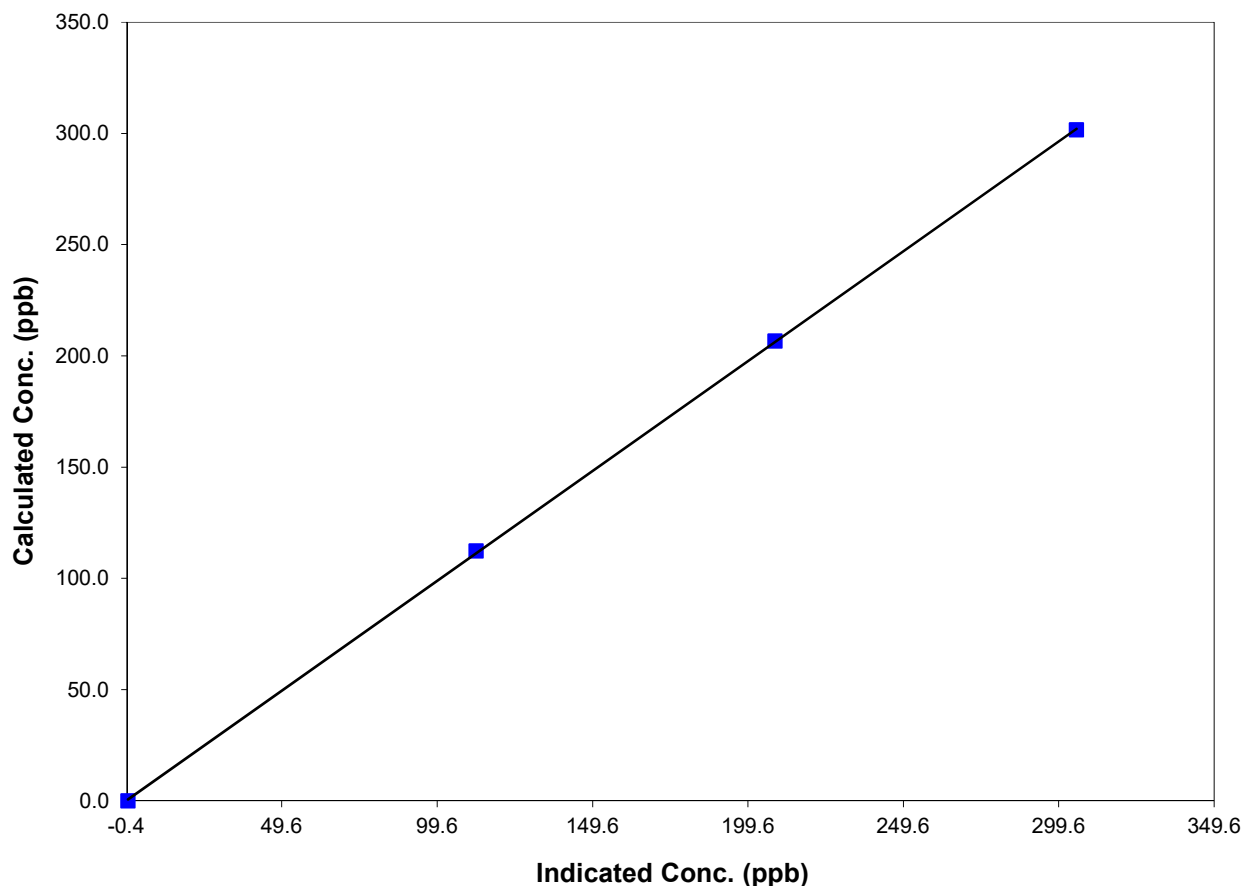
Station Information

Calibration Date	August 7, 2018	Previous Calibration	July 18, 2018
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	13:15:00 PM	End Time (MST)	15:20
Analyzer make/model	Teco 49i	Analyzer serial #	1136451236,AMU 1879

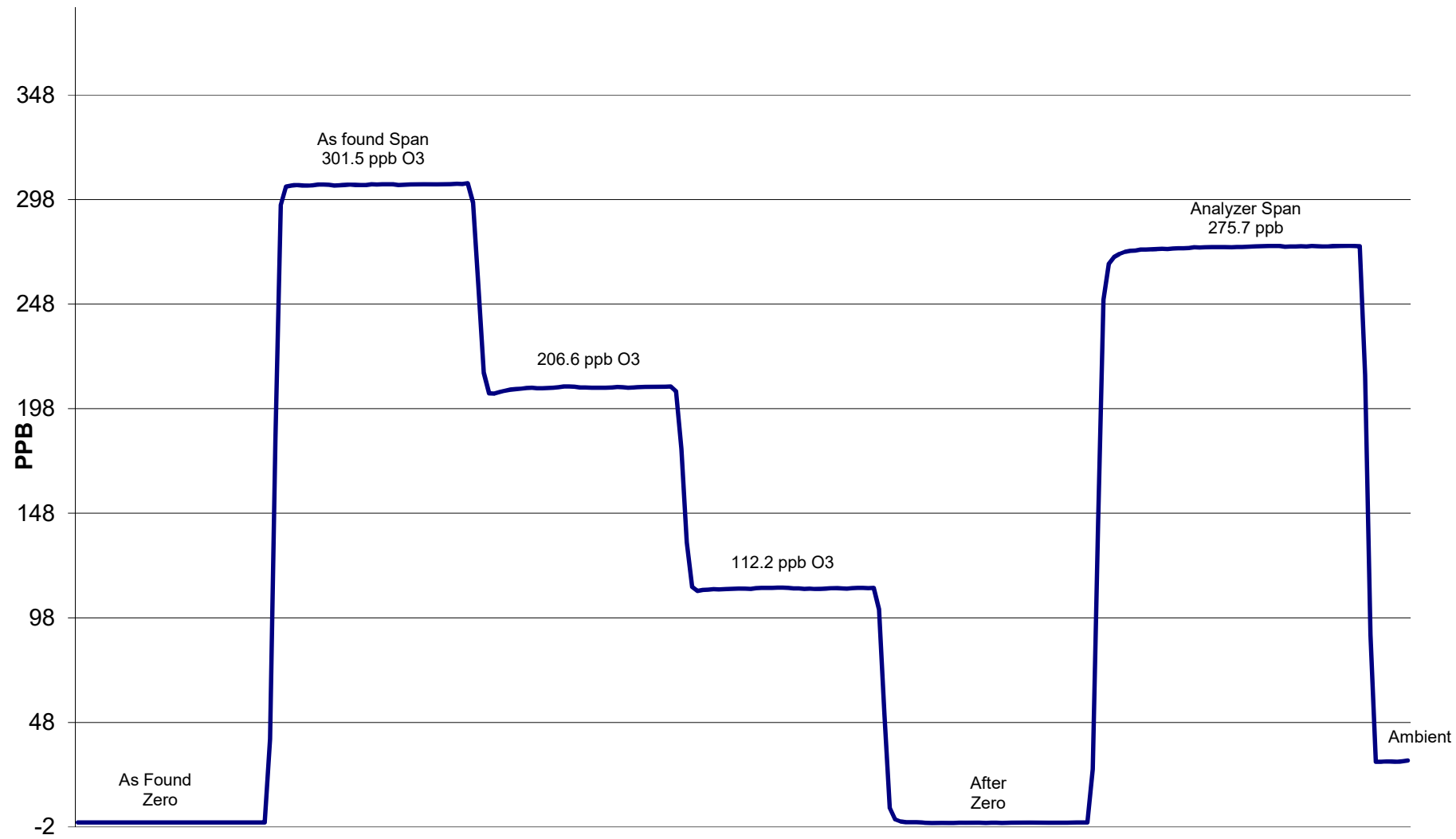
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	NA	Correlation Coefficient	0.999967
301.5	305.3	0.9875		
206.6	208.3	0.9919		
112.2	112.1	1.0005	Slope	0.987505
			Intercept	0.564812

O3 Calibration Curve



O3 Calibration



August 7, 2018

SHARP 5030 PM2.5 Calibration



Station: Beaverlodge
 Location: Agricultural centre
 Start Time (MST): 12:00

Operator: Dmytro Dolotii
 Date: Aug 8 2018
 End Time (MST): 14:40:00 PM

MONITOR INFO / PARAMETER VALUES:

Make/Model SHARP 5030
 Configuration PM 2.5
 AMU Number AMU1969
 Serial Number 208

Audit Device Model Delta cal
 AMU S/N AMU 1789
 Serial Number 1612
 Certification Date 01-Oct-17

AUDIT / CALIBRATION RESULTS:

	Ambient Temp. (°C)	Ambient Pres. (mbar)	RH (%)	Leak Check (l/min)	Flow Rate (lpm)	Foil Calibration (ug)	Nephelometer (ug)	Time settings (hh:mm)
Audit values (l)	27.0	911	38.8	16.67	16.67	7023	0.0	14:40
MEASURED (AF)	26.3	911	38.0	16.47	16.51	7022	1.5	14:41
AF Difference (AF-l)	-0.7	0	-0.8	-0.20	-0.16	-1	1.5	0:01
MEASURED (M)	26.3	911	38.0	16.47	16.51	7023	0.0	14:40
Adj Difference (M-l)	-0.7	0	-0.8	-0.20	-0.16	1	0.0	0:00
LIMITS	± 4.0 °C	13.33 mbar(hPa)	± 2.0%	0.8 L/min	± 1.0 L/min	(+/-5%)	(<+/-2 ug/m3)	±2 min

Sample Head Inspect/Cleaning: Heads cleaned

Status of sampling tape: 60%

Nozzle Inspection / cleanliness: Clean

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

COMMENTS:

Calibration Report



Parameter SO₂

Air Monitoring Network PAZA

Station Information

Calibration Date	August 24, 2018	Previous Calibration	July 18, 2018
Station Number	1	Station Location	Donnelly
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	14:50:00 PM	End Time (MST)	17:05:00 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	1.001573
Calculated intercept	0.488549	Calculated intercept	-0.047586
Analyzer make	Teco 43i	Analyzer serial #	1207452008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	6.8		6.8	
coefficient	1.029		1.029	
Lamp Voltage	831	volts	836	volts
Chamber Temp	45.2	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	677.6	mm Hg	677.6	mm Hg
Sample Flow	0.428	ccm	0.428	ccm
Lamp Intensity	98	%	97	%

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	0.5	N/A
4995	39.89	393.0	392.2	1.0020
4995	19.78	195.6	196.5	0.9958
4995	9.90	98.1	96.7	1.0148
4995	0.0	0.0	0.5	As Found Zero
4995	39.99	393.9	392.2	As Found Span
Average Correction Factor				1.0042

Calculated value of As Found Response: 390.920 ppb Percent Change of As Found: 0.8%

	before calibration		after calibration	
Auto zero	-0.1	ppb	0.4	ppb
Auto span	242.3	ppb	243.4	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



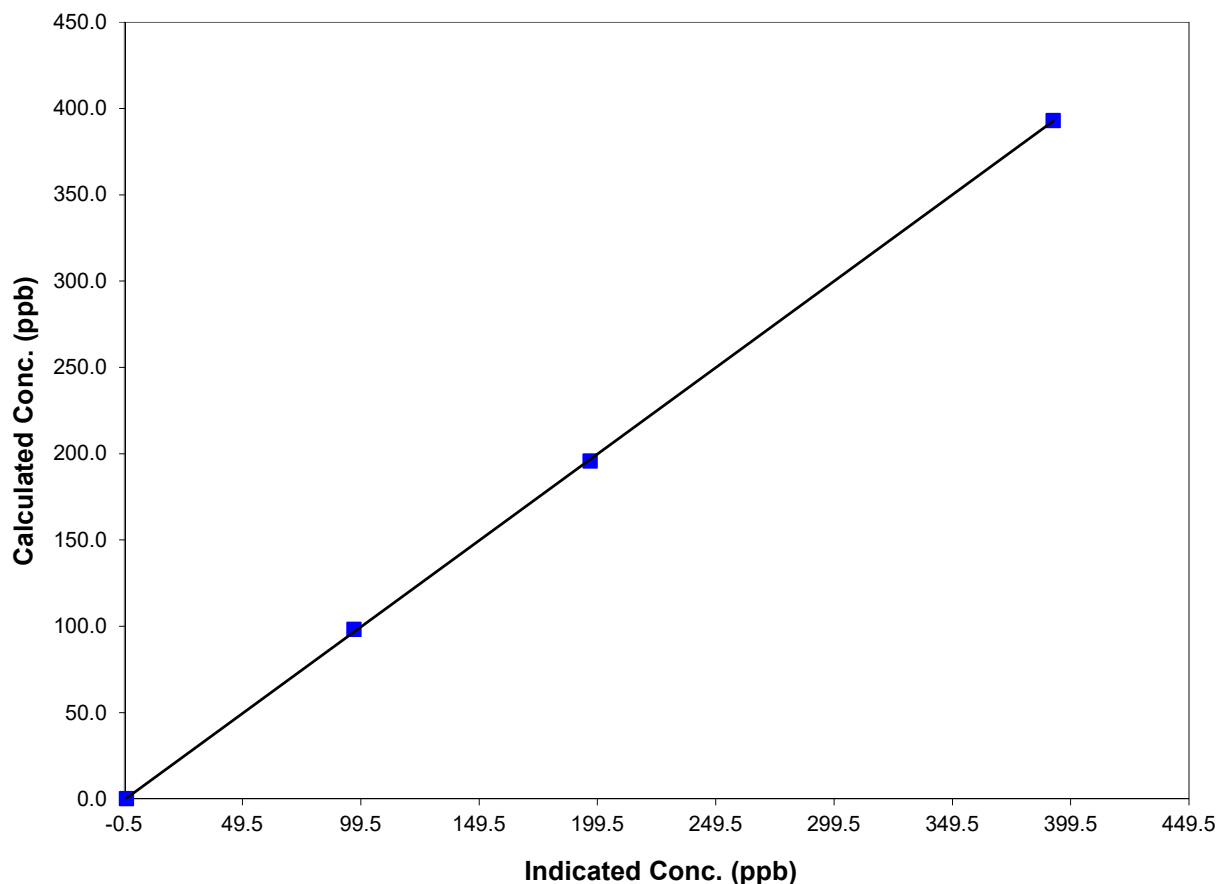
Station Information

Calibration Date	August 24, 2018	Previous Calibration	July 18, 2018
Station Number	1	Station Location	Donnely
Start Time (MST)	14:50:00 PM	End Time (MST)	17:05:00 PM
Analyzer make/model	Teco 43i	Analyzer serial #	1207452008

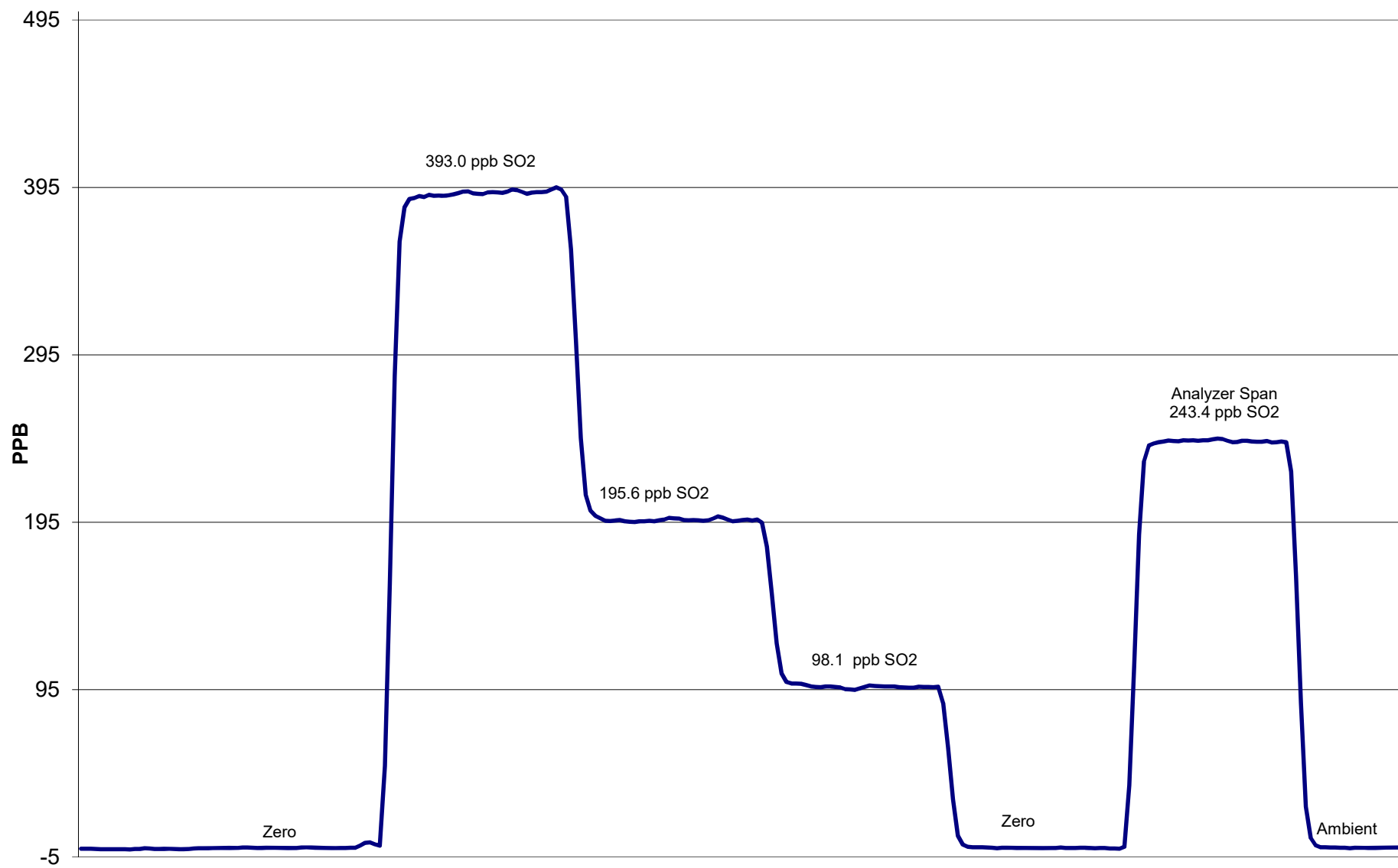
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A	Correlation Coefficient	0.999962
393.0	392.2	1.0020		
195.6	196.5	0.9958		
98.1	96.7	1.0148	Slope	1.001573
			Intercept	-0.047586

SO2 Calibration Curve



SO2 Calibration



August 24, 2018

Calibration Report

Parameter H2S
Air Monitoring Network PAZA



Station Information

Calibration Date	24/08/2018	Previous Calibration	18/08/2018
Station Number	1	Station Location	Donnelly
Reason:	☐ Routine	☐ Install	☐ Removal
			☒ Other: Audit/after fail calibration

Start Time (MST)	10:20	End Time (MST)	15:50:00 PM
Barometric Pressure	0.926 atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 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
	<u>Before</u>		<u>After</u>
Calculated slope	0.984317	Calculated slope	1.009067
Calculated intercept	0.044289	Calculated intercept	-0.000685

Analyzer make Thermo 450i Analyzer serial # 1207452006

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	10	ppb	9.9	ppb
coefficient	1.074		1.091	
Lamp Voltage	768	volts	767	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	480.5	mm Hg	476	mm Hg
Sample Flow	0.680	lpm	0.670	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)
4992	0.00	0.00	0.3	N/A
4991	39.92	77.60	77.0	1.0074
4991	19.84	38.72	38.2	1.0137
6970	9.93	13.91	13.6	1.0264
4992	0.00	0.00	0.3	As Found Zero
4991	39.92	77.60	75.9	As Found Span
Average Correction Factor				1.0158

Calculated value of As Found Response: 74.48 ppb Percent Change of As Found: 4.0%

	before calibration		after calibration	
Auto zero	0.2	ppb	0.3	ppb
Auto span	73.8	ppb	76.1	ppb

Notes: Analyzer failed the audit due to the faulty Sox scrubber materail.
Replaced scrubber material
Slight span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter H2S

Air Monitoring Network PAZA



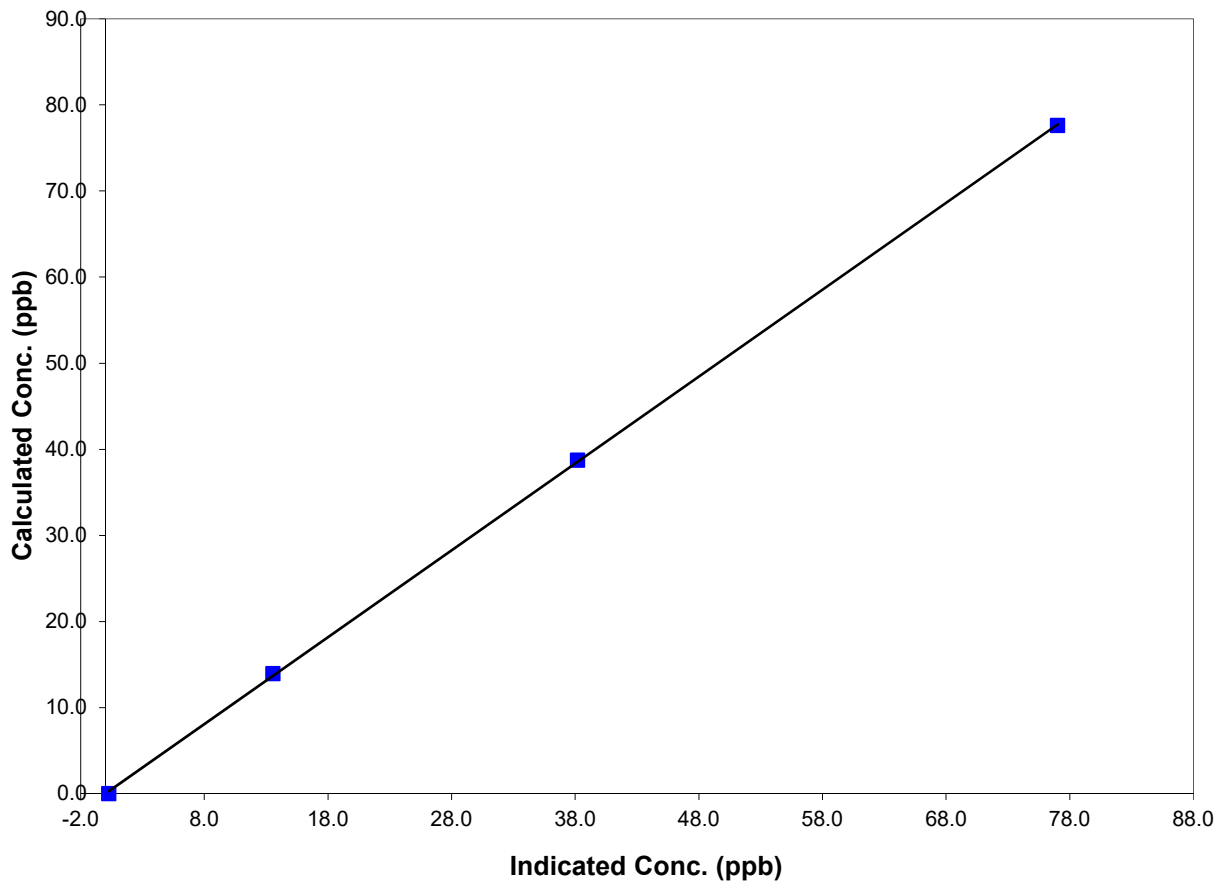
Station Information

Calibration Date	24/08/2018	Previous Calibration	18/08/2018
Station Number	1	Station Location	Donnely
Start Time (MST)	10:20	End Time (MST)	15:50:00 PM
Analyzer make/model	Thermo 450i	Analyzer serial #	1207452006

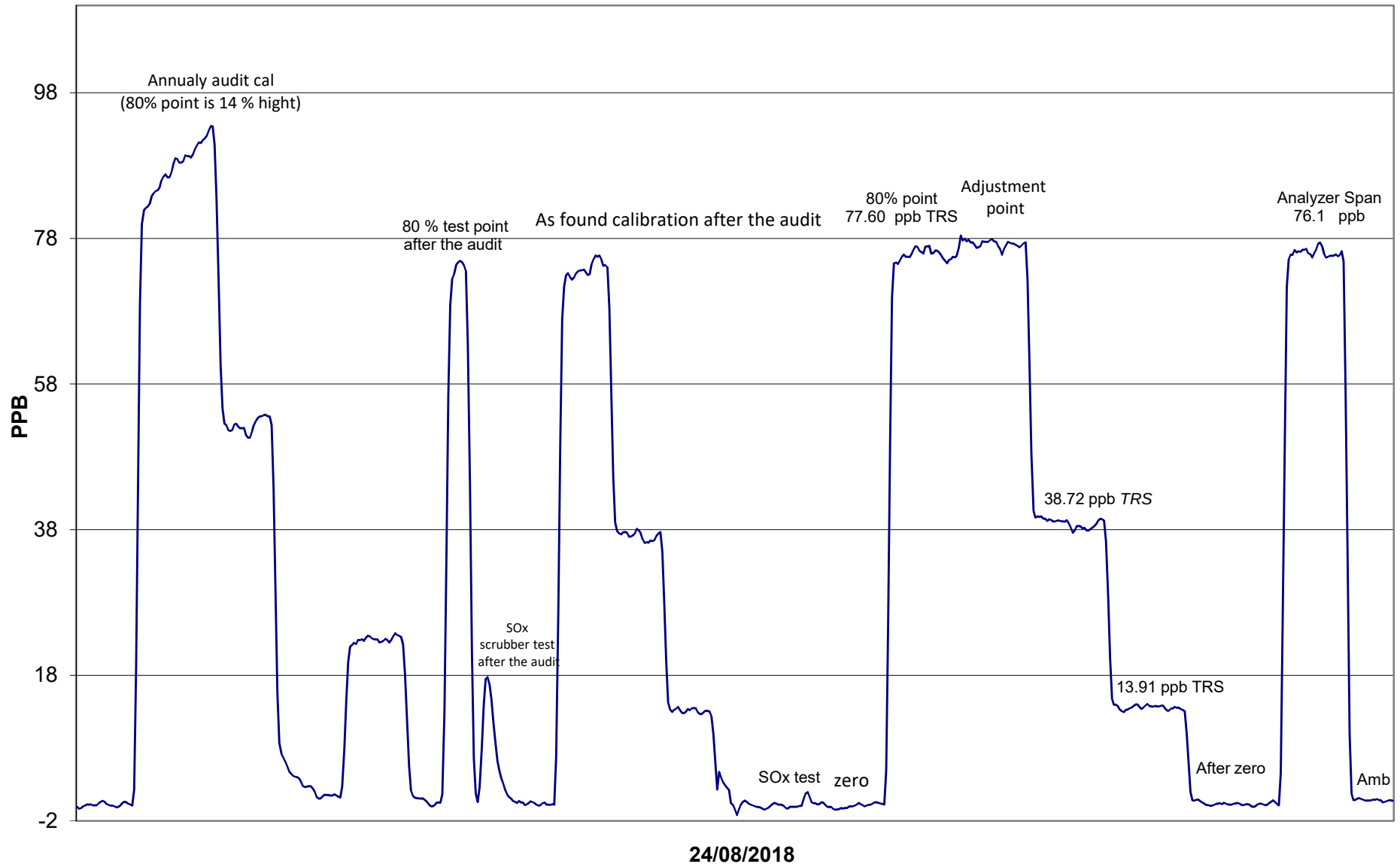
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A	Correlation Coefficient	0.999947
77.6	77.0	1.0074		
38.7	38.2	1.0137		
13.9	13.6	1.0264	Slope	1.009067
			Intercept	-0.000685

TRS Calibration Curve



H2S Calibration



Calibration Report

Parameter SO₂

Air Monitoring Network PAZA



Station Information

Calibration Date	August 3, 2018	Previous Calibration	July 17, 2018
Station Number	2	Station Location	Evergreen Park
Reason:	Routine	Install	Removal
		Other:	

Start Time (MST)	12:45	End Time (MST)	15:10:00 PM
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	2019-05-04
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	1.000813	Calculated slope	1.002083
Calculated intercept	0.220358	Calculated intercept	0.393923

Analyzer make	Teco 43i	Analyzer serial #	701120008
---------------	----------	-------------------	-----------

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	12.1		12.1	
coefficient	1.072		1.072	
Lamp Voltage	840	volts	841	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	664.7	mm Hg	665.2	mm Hg
Sample Flow	0.434	ccm	0.435	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	0.8	N/A
4997	39.97	393.6	392.9	1.0017
4997	19.99	197.6	196.3	1.0068
4997	9.98	98.9	97.1	1.0185
4997	0.0	0.0	0.8	As Found Zero
4997	39.98	393.7	392.9	As Found Span
Average Correction Factor				1.0090

Calculated value of As Found Response: 392.704 ppm Percent Change of As Found: 0.3%

	before calibration		after calibration	
Auto zero	0.8	ppm	0.7	ppm
Auto span	208.6	ppm	263.2	ppm

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2
Air Monitoring Network PAZA



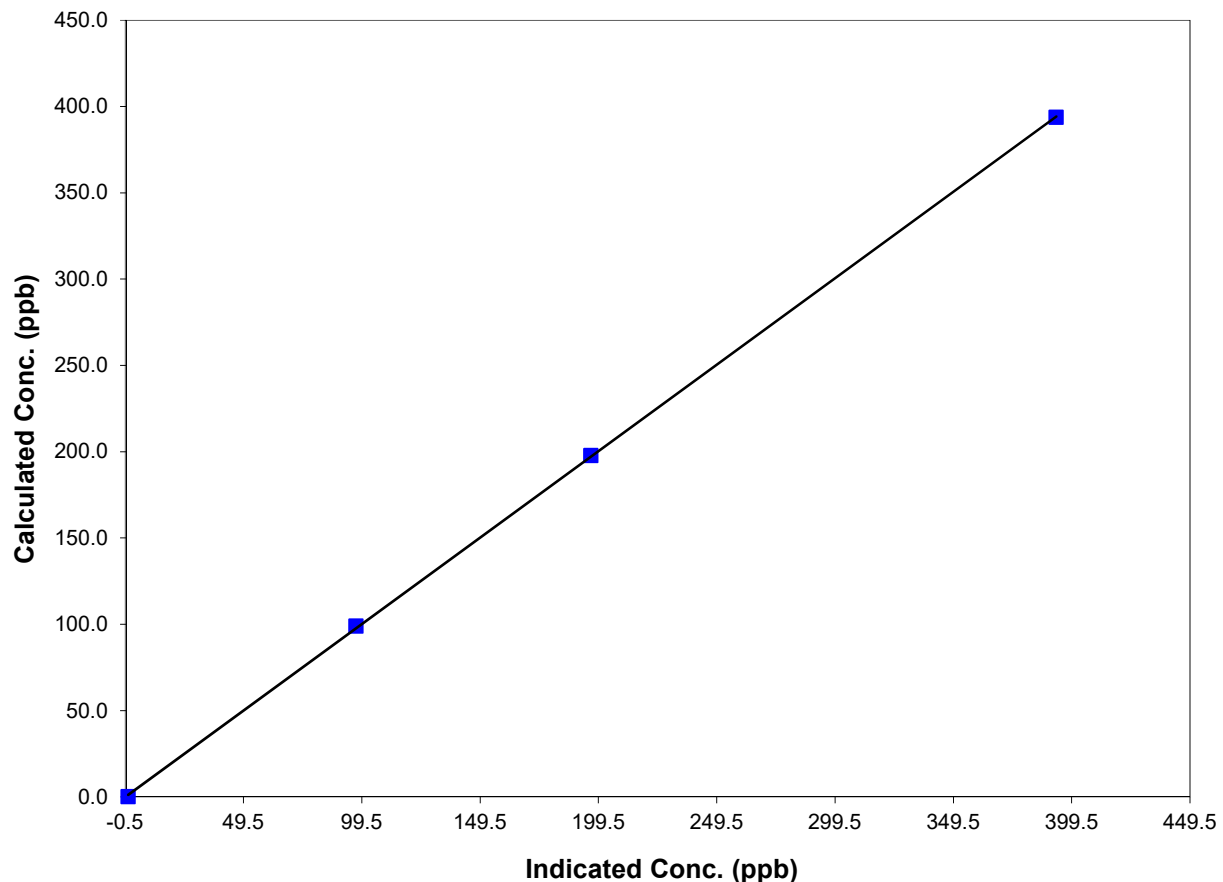
Station Information

Calibration Date	August 3, 2018	Previous Calibration	July 17, 2018
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	12:45	End Time (MST)	15:10:00 PM
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

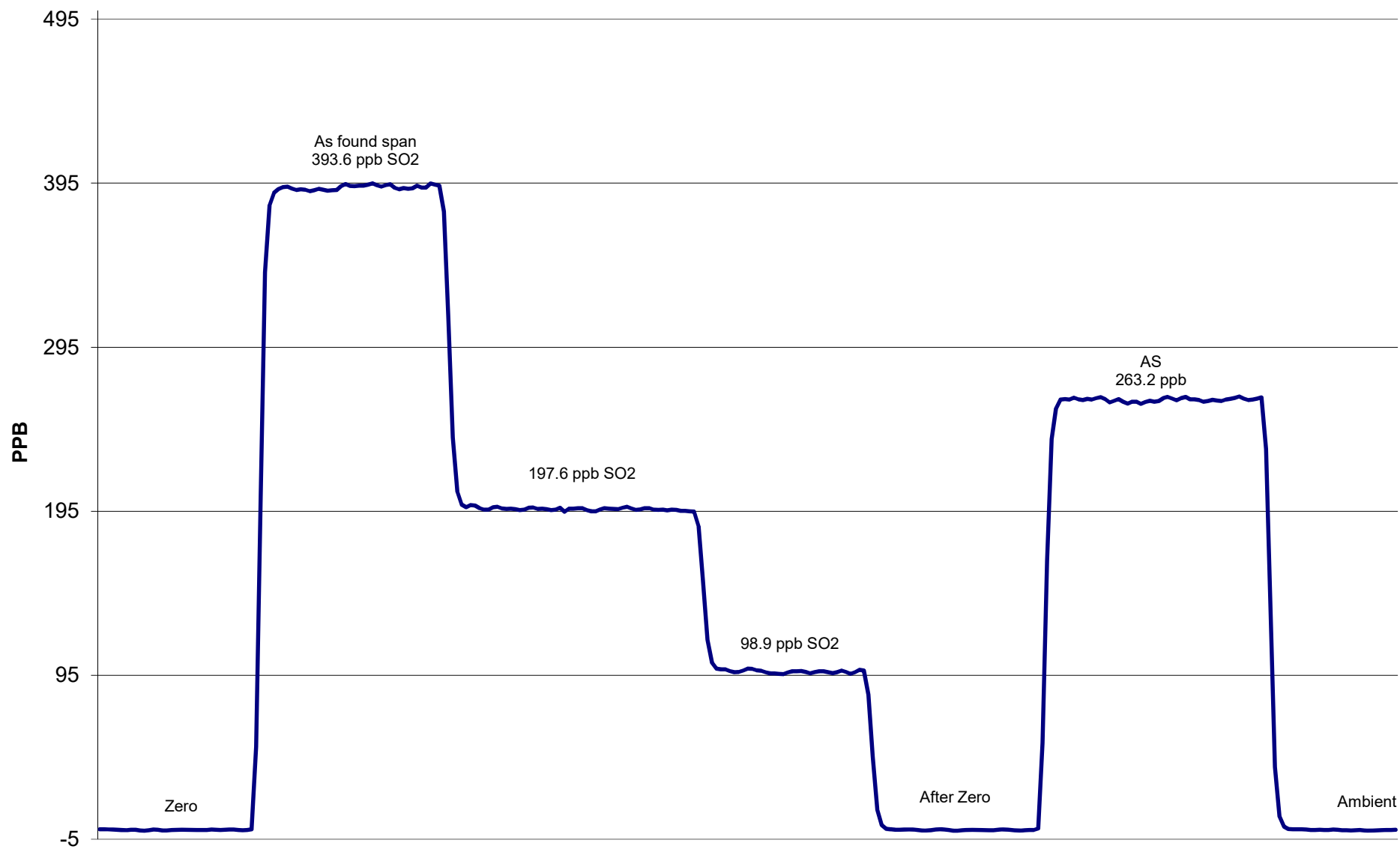
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.8	N/A	Correlation Coefficient	0.999960
393.6	392.9	1.0017		
197.6	196.3	1.0068		
98.9	97.1	1.0185	Slope	1.002083
			Intercept	0.393923

SO2 Calibration Curve



SO2 Calibration



August 3, 2018

Calibration Report



Parameter TRS

Air Monitoring Network PAZA

Station Information

Calibration Date	August 4, 2018	Previous Calibration	July 17, 2018
Station Number	2	Station Location	Evergreen Park
Reason:	☐ Routine ☒ Install ☐ Removal ☐ Other:		
Start Time (MST)	12:20	End Time (MST)	15:45:00 PM
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	2019-02-23
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		Calculated slope	0.981676
Calculated intercept		Calculated intercept	0.216815
Analyzer make	TEI Model 43I	Analyzer serial #	

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background		ppb	28.8	ppb
coefficient			0.928	
Lamp Voltage		volts	884	volts
Chamber Temp		Deg C	44.6	Deg C
Perm Gas Temp		Deg C	44.9	Deg C
Pressure		mm Hg	659.8	mm Hg
Sample Flow		ccm	0.464	ccm
Lamp Intensity		mv	30,458	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	0.2	N/A
4996	39.97	77.62	79.0	0.9824
4996	19.96	38.92	39.2	0.9924
6999	9.97	13.91	13.6	1.0233
4996	10.00	0.00	0.0	Sox Test
4996	0.00	0.00	0.2	As Found Zero
4996	39.97	77.62	79.0	As Found Span
Average Correction Factor				0.9994

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

	before calibration		after calibration	
Auto zero		ppm	-0.3	ppm
Auto span		ppm	97.9	ppm

Notes: PMT, zero & span adjustments made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



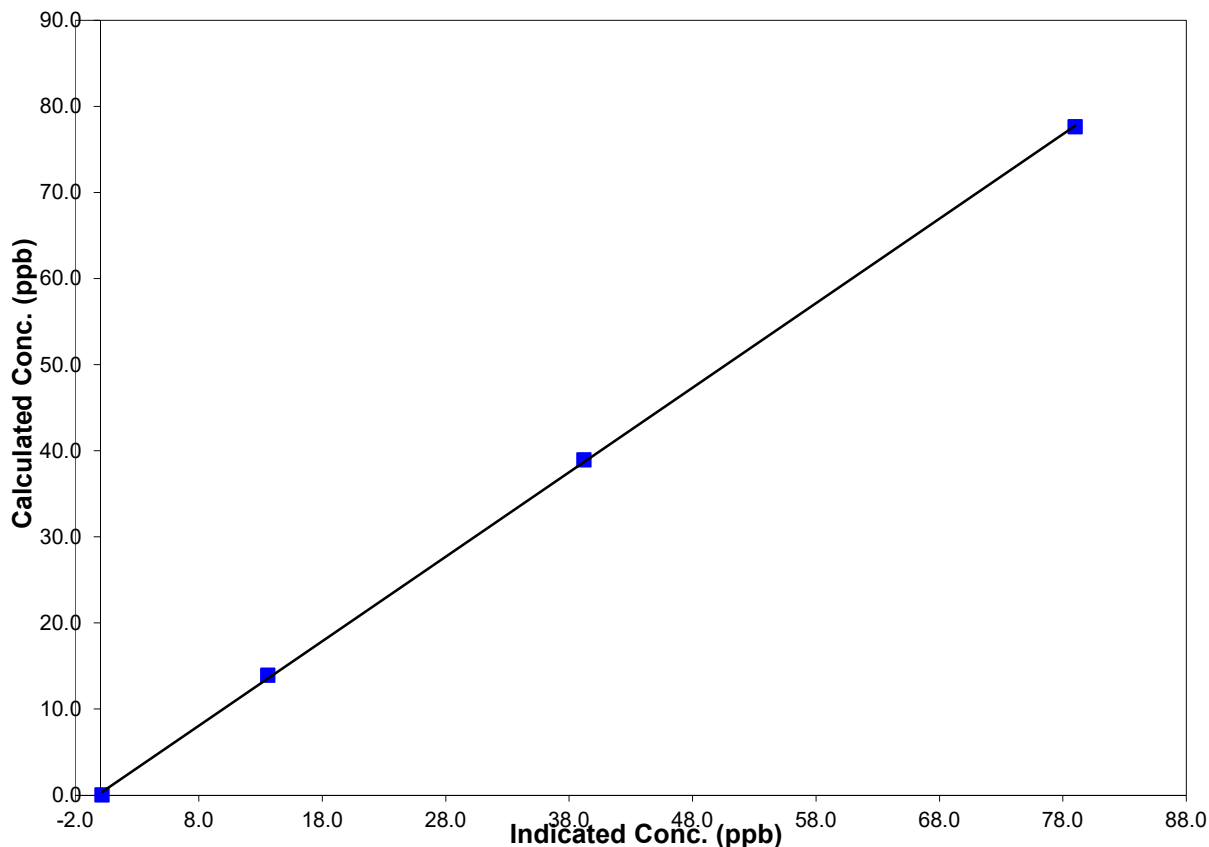
Station Information

Calibration Date	August 4, 2018	Previous Calibration	July 17, 2018
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	12:20	End Time (MST)	15:45:00 PM
Analyzer make/model	TEI Model 43I	Analyzer serial #	0

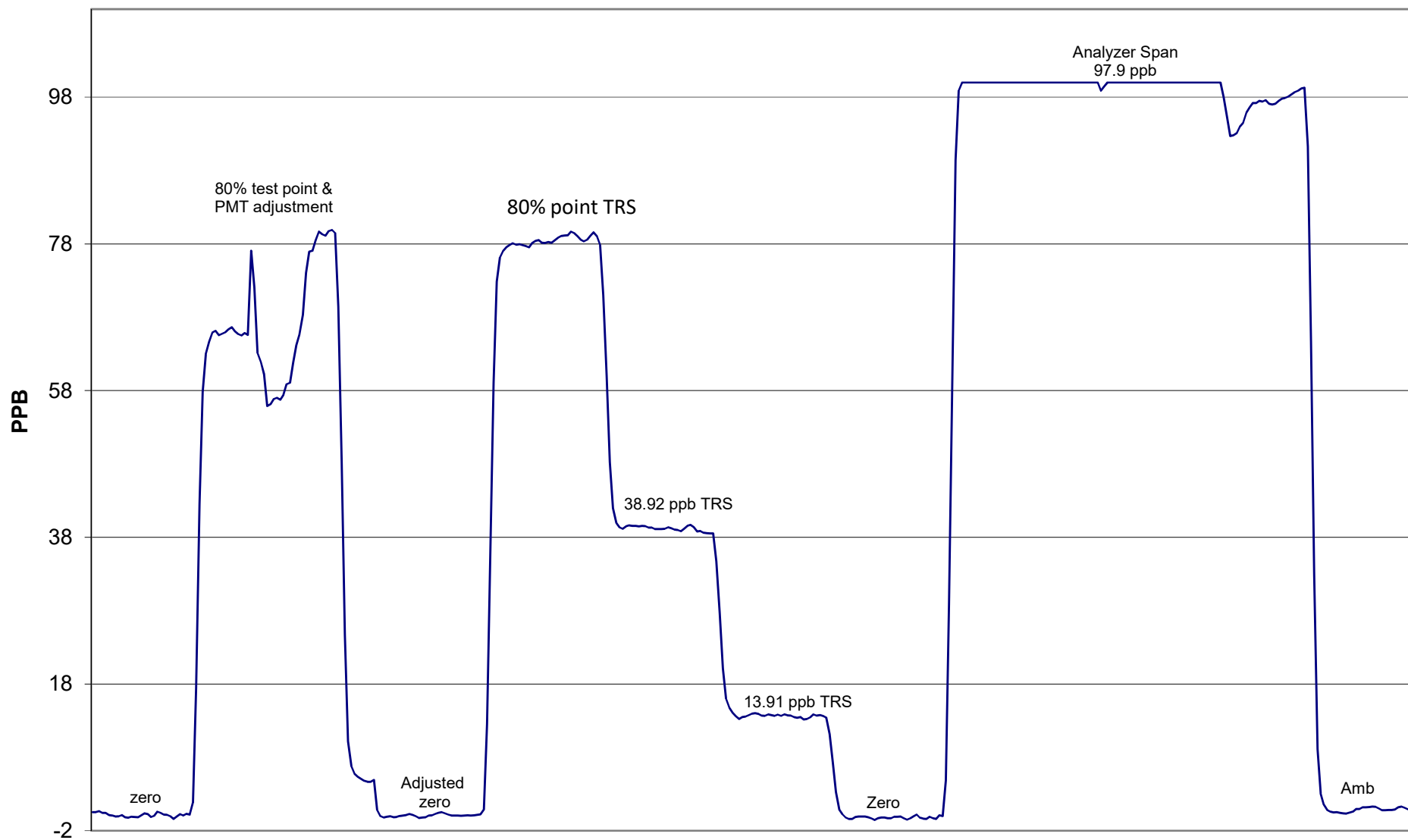
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999901
77.6	79.0	0.9824		
38.9	39.2	0.9924		
13.9	13.6	1.0233	Slope	0.981676
			Intercept	0.216815

TRS Calibration Curve



TRS Calibration



August 4, 2018

AB TEOM PM2.5 Calibration



STATION: Evergreen Park
 LOCATION: PAZA - Grande Prairie

OPERATOR: Dmytro Dolotii, Grover Christ
 DATE: 09-Aug-18

MONITOR INFO / PARAMETER VALUES:

Make/Model	TEOM AB
Configuration	PM2.5
Serial Number	24634
Site Number	2
Inlet Type	PM 10 / SCC
FAdj. Main Setting	1.000
FAdj. Aux. Setting	1.000
T-Case Indicated / Set Point	40/40
T-Air Indicated / Set Point	40/40
T-Cap Indicated / Set Point	40/40
Splitter Assembly Alignment (cm)	15.5
(vs. specified depth of 15.5 cm from top of flow tube to top of concentric 1/2 in. tube)	

RECENT CALIBRATION AND AUDIT HISTORY

Previous Audit	
Previous Calibration	18-Aug-18

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

* capacity test or pump on timed test utilized to verify pump integrity
 "FAIL" indicates that pump requires service.

LEAK CHECK	Indicated Flow (lpm)	
	Main	Auxiliary
PUMP ON	0.020	-0.020
PUMP OFF	0.000	0.000
NET	0.020	-0.020
LIMITS	<0.15	<0.60

	Ambient Temp. (°C)	Ambient Pres. (atm)	Ko *	Bypass flow (lpm)	Sample flow (lpm)
SET POINT (S)	na	na	16147	13.67	3.000
INDICATED (I)	20.3	0.925		13.69	3.000
MEASURED (AF)	19.7	0.924		13.83	3.450
MEASURED (M)	19.7	0.924	16047	13.65	3.200
DIFFERENCE (M-I)	-0.6	-0.001	-0.6%	-0.02	0.20
LIMITS	± 2 ° C	± 0.005 atm	± 2.5 %	± 1.0 L/min	± 0.2 L/min

As Found Data
 Adjusted Data

Ko Audit Filter data Weight: 0.11014 Serial #: CVK 2123

COMMENTS: Pass.

Sample Head Inspection/Cleaning: Large In Line Filter Inspection & Or Cleaning:

Calibration Report

Parameter SO2

Air Monitoring Network PAZA



Station Information

Calibration Date	August 17, 2018	Previous Calibration	July 10, 2018
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	9:05	End Time (MST)	13:10:00 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	0.997780	Calculated slope	0.985942
Calculated intercept	-0.161790	Calculated intercept	0.411393
Analyzer make	TEI 43I-TLE	Analyzer serial #	1507864682 (AMU 2006)

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	1.32		1.33	
Coefficient	0.849		0.860	
Pressure	669.4	mm Hg	676.4	mm Hg
Flow	0.443	lpm	0.447	lpm
Lamp intensity	92	Hz	91	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	398.6	0.9882
4995	19.97	197.5	201.9	0.9784
4995	9.98	98.9	97.9	1.0102
4995	0.00	0.0	0.1	As Found Zero
4995	39.97	393.7	392.9	As Found Span
Average Correction Factor				0.9923

Calculated value of As Found Response: 391.7 ppb Percent Change of As Found: 0.5%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.1	ppb
Auto span	276.2	ppb	281.6	ppb

Notes: Span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2
Air Monitoring Network PAZA



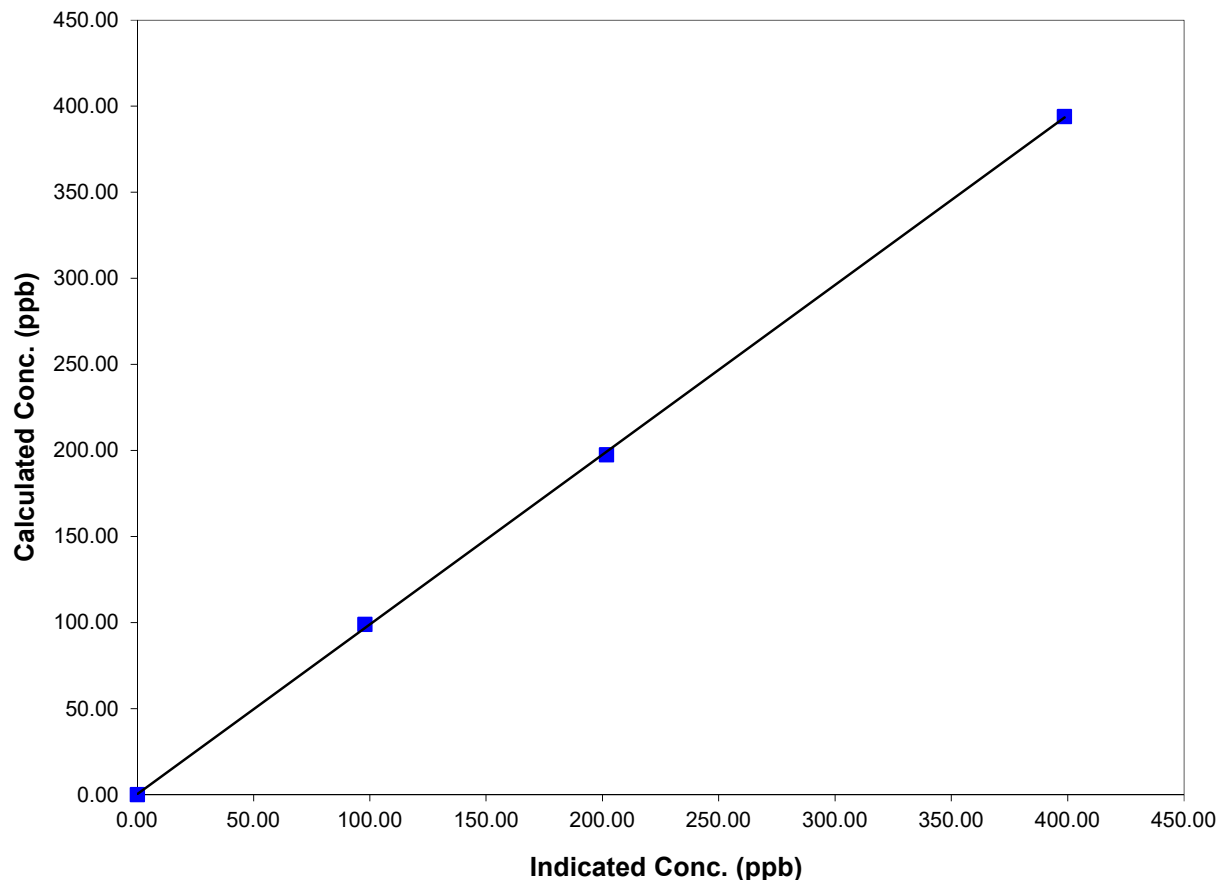
Station Information

Calibration Date	August 17, 2018	Previous Calibration	July 10, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:05	End Time (MST)	13:10:00 PM
Analyzer make/model	TEI 43I-TLE	Analyzer serial #	1507864682 (AMU 2006)

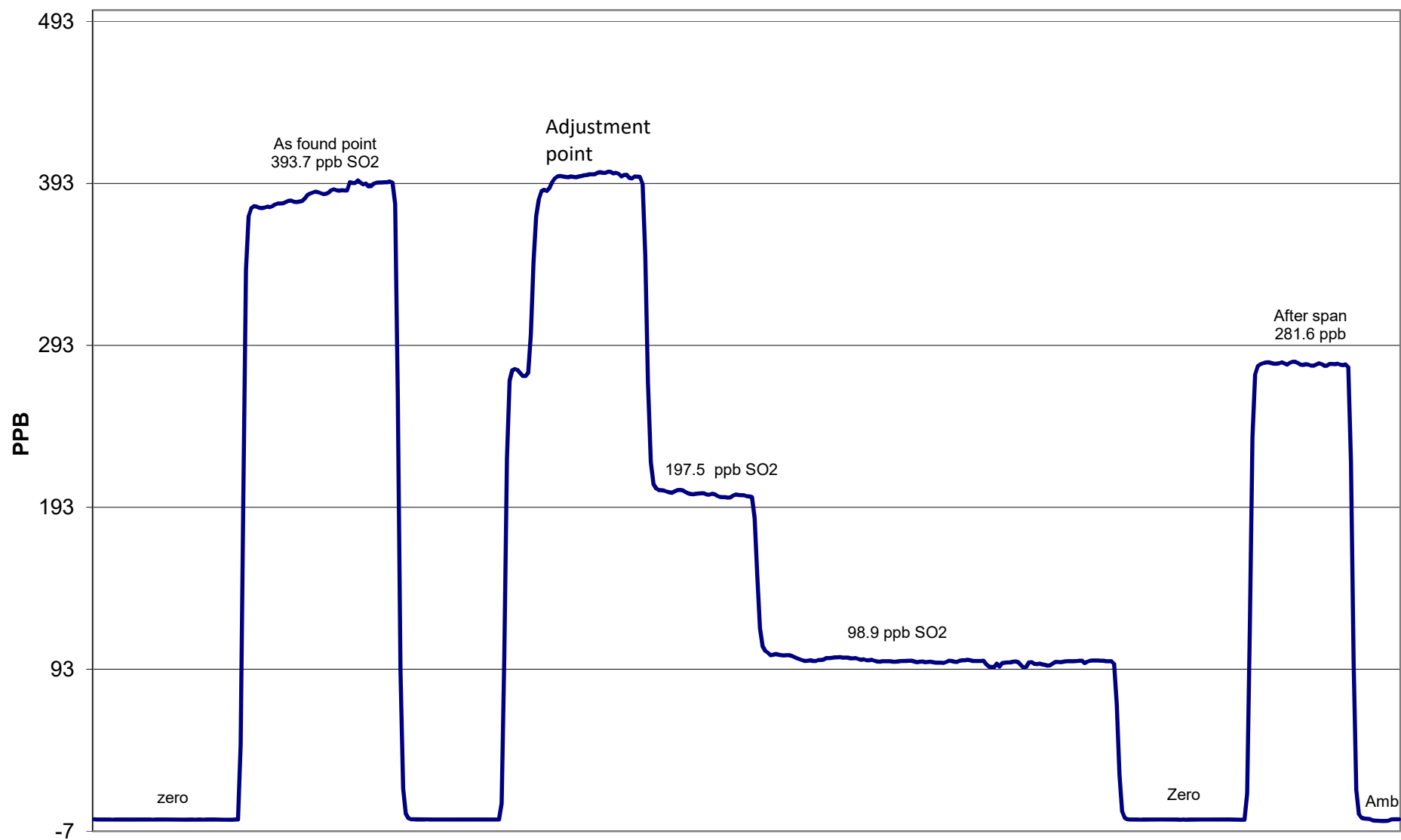
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999905
393.9	398.6	0.9882		
197.5	201.9	0.9784		
98.9	97.9	1.0102	Slope	0.985942
			Intercept	0.411393

SO2 Calibration Curve



SO2 Calibration



August 17, 2018

Calibration Report

Parameter H2S
Air Monitoring Network

PAZA



Station Information

Calibration Date	August 20, 2018	Previous Calibration	July 11, 2018
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	0:15	End Time (MST)	15:30:00 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	0.999935	Calculated slope	0.997227
Calculated intercept	-0.451233	Calculated intercept	0.031996
Analyzer make	TEI 450i	Analyzer serial #	1170050143(AMU 2198)

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Coefficient	0.862		0.875	
Background	12.7		13.6	
Pressure	555.8	mm Hg	562.8	mm Hg
Flow	0.970	ccm	0.996	ccm
Lamp Voltage	783	V	767	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	0.37	N/A
4997	39.98	77.63	77.84	0.9973
4998	19.97	38.92	39.14	0.9944
6997	9.98	13.93	13.37	1.0422
4997	0.00	0.00	0.58	As Found Zero
4997	41.20	79.98	71.44	As Found Span
Average Correction Factor				1.0113

Calculated value of As Found Response: 70.4 ppb Percent Change of As Found: 12.0%

	before calibration		after calibration	
Auto zero	0.63	ppb	0.36	ppb
Auto span	30.73	ppb	30.42	ppb

Notes: Sox scrubber replaced
Slight zero/span adjustments done.

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter H2S
Air Monitoring Network PAZA



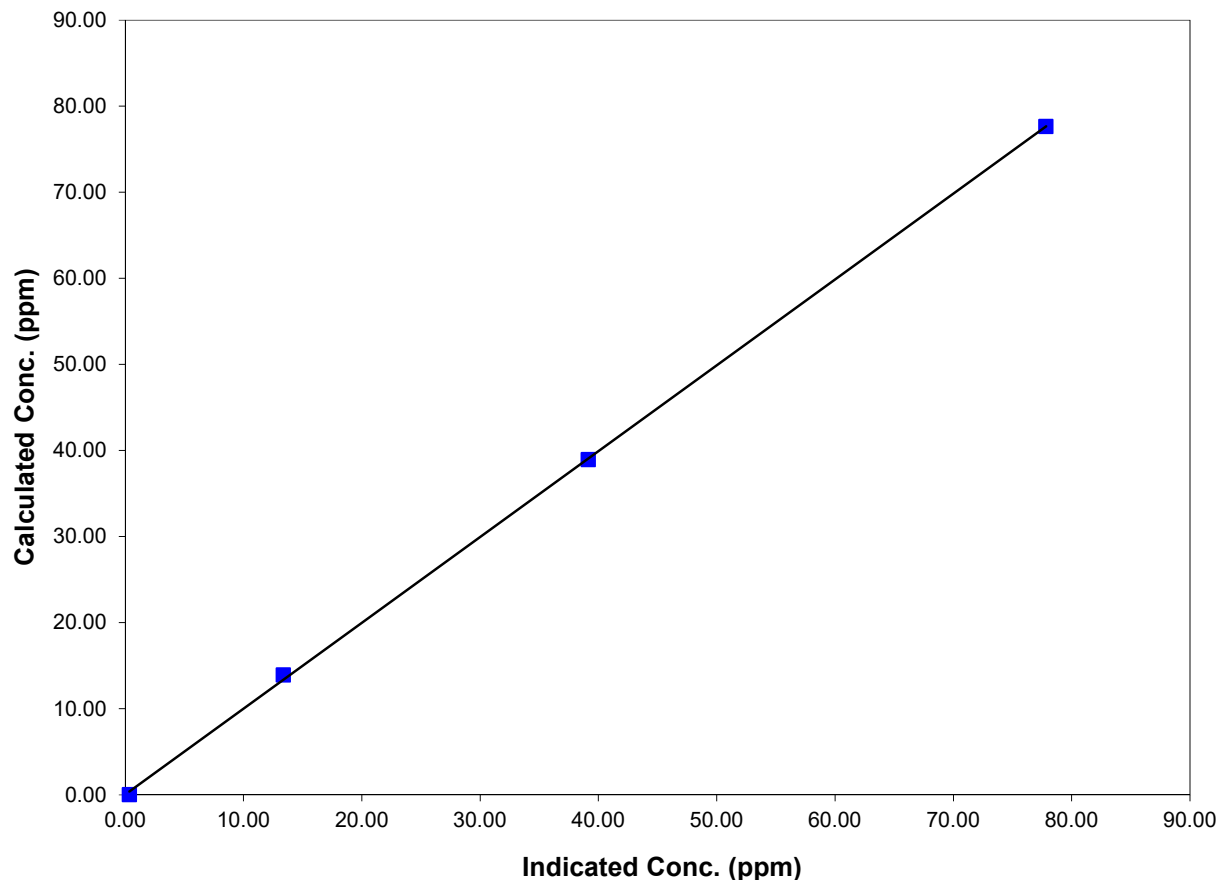
Station Information

Calibration Date	August 20, 2018	Previous Calibration	July 11, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	0:15	End Time (MST)	15:30:00 PM
Analyzer make/model	TEI 450i	Analyzer serial #	1170050143(AMU 2198)

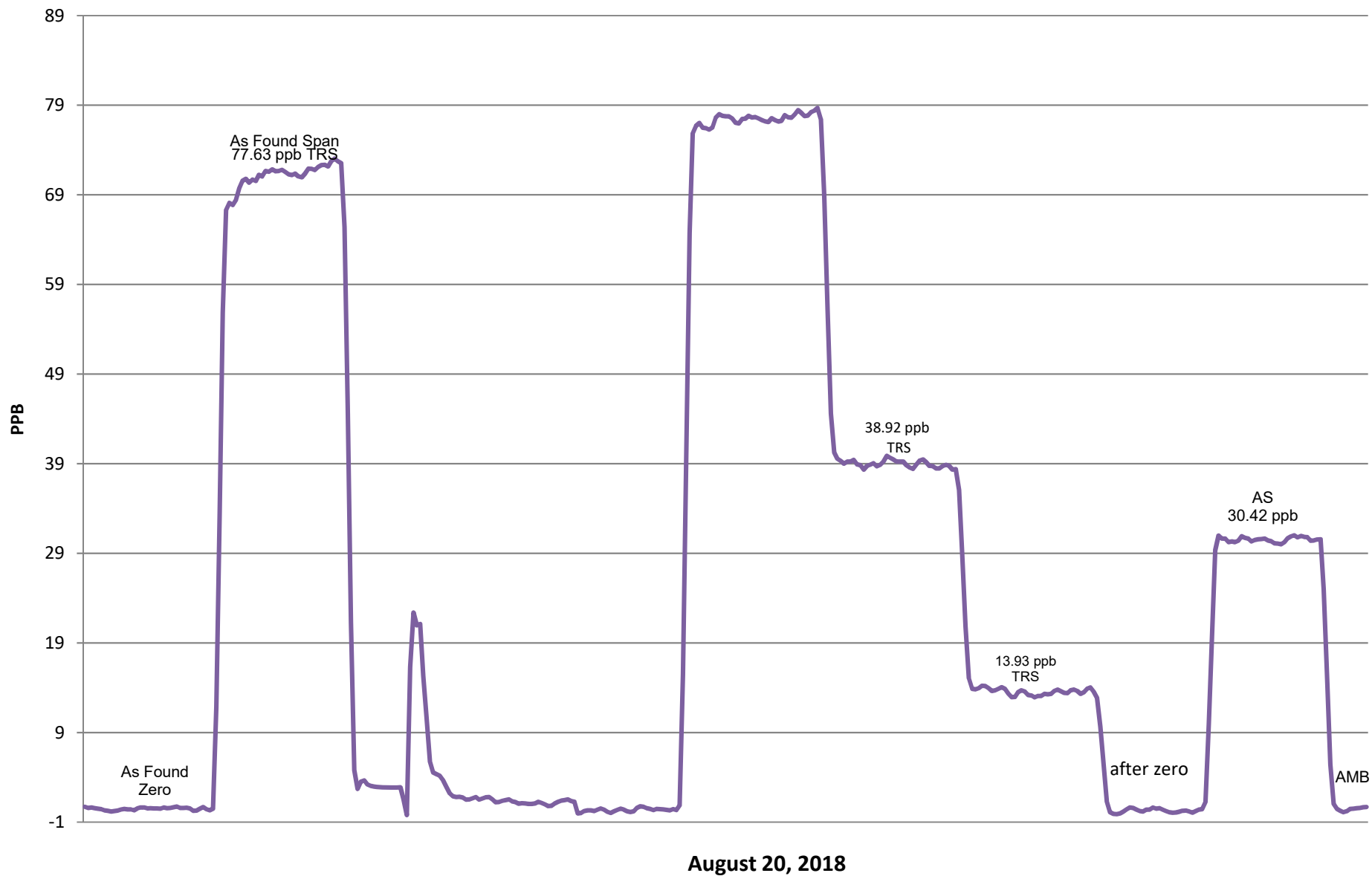
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.372	N/A	Correlation Coefficient	0.999854
77.627	77.836	0.9973		
38.921	39.139	0.9944		
13.930	13.366	1.0422	Slope	0.997227
			Intercept	0.031996

TRS Calibration Curve



TRS Calibration



Calibration Report

Parameter
Air Monitoring Network

NO_x-NO-NO₂
PAZA



Station Information

Calibration Date	August 17, 2018	Previous Calibration	July 10, 2018
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Installation	Removal
Start Time (MST)	9:10	End Time (MST)	14:55:00 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
Parameter	NO ₂	NO _x	NO
Before	Data Slope	1.006824	1.002613
	Data Offset	0.615028	0.986009
After	Data Slope	1.008099	0.996268
	Data Offset	-0.956859	0.947494
Channel #	8	6	7
Voltage Range	0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model	42i	Analyzer serial #	906535087
Test Point	before	after	
Concentration range	0 - 500	ppb	0 - 500
NO offset	8.3	mV	8.3
NO _x bkgnd	8.5	mV	8.5
NO coefficient	1.107		1.198
NO _x coefficient	0.999		0.999
NO ₂ conv temp	322.1	Deg C	322.4
Cooler Temp	-2.9	Deg C	2.8
PMT Volt	-834.4	mV	-834.4
R Cell Press	203.2	in Hg	204.7
Sample Flow	0.549	LPM	0.552

Notes: Span adjustment made

Calibration Report

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



Station Information

Calibration Date: August 17, 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	0.1	0.2	0.2	N/A	N/A
1	4996	39.97	412.7	411.9	0.8	413.6	411.9	2.0	0.9978	1.0001
2	4996	19.98	207.1	206.7	0.4	207.1	205.6	1.0	1.0002	1.0054
3	4996	9.97	103.6	103.4	0.2	101.5	101.1	0.5	1.0203	1.0226
AFZ	4996	0.00	0.0	0.0	0.0	0.1	0.2	0.2	0.0000	0.0000
AFS	4996	39.97	412.7	411.9	0.8	380.4	380.9	-0.2	1.0851	1.0814
								Average Correction Factor	1.0061	1.0094

As Found Concentrations: NO_x= 382.2 NO= 381.7 As Found Percent Change NO_x= -7.4% NO= -7.3%

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	0.2	0.2	0.0	0.1	0.2	0.2	N/A	N/A	N/A	N/A
NO point	413.9	413.9	0.0	413.8	413.9	0.0	1.0002	1.0000	N/A	N/A
300	413.9	111.5	302.4	412.3	111.5	300.8	1.0038	1.0000	1.0054	99.5%
200	413.9	209.4	204.5	413.6	209.4	203.4	1.0008	1.0000	1.0057	99.4%
100	413.9	313.9	100.0	416.3	313.9	101.5	0.9942	1.0000	0.9850	101.5%
							Average Correction Factor	0.9996	1.0000	0.9987

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.0	0.0	0.2	ppb	1.1	1.0	0.2	ppb
Auto span	264.6	262.0	2.5	ppb	292.7	289.9	2.6	ppb

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



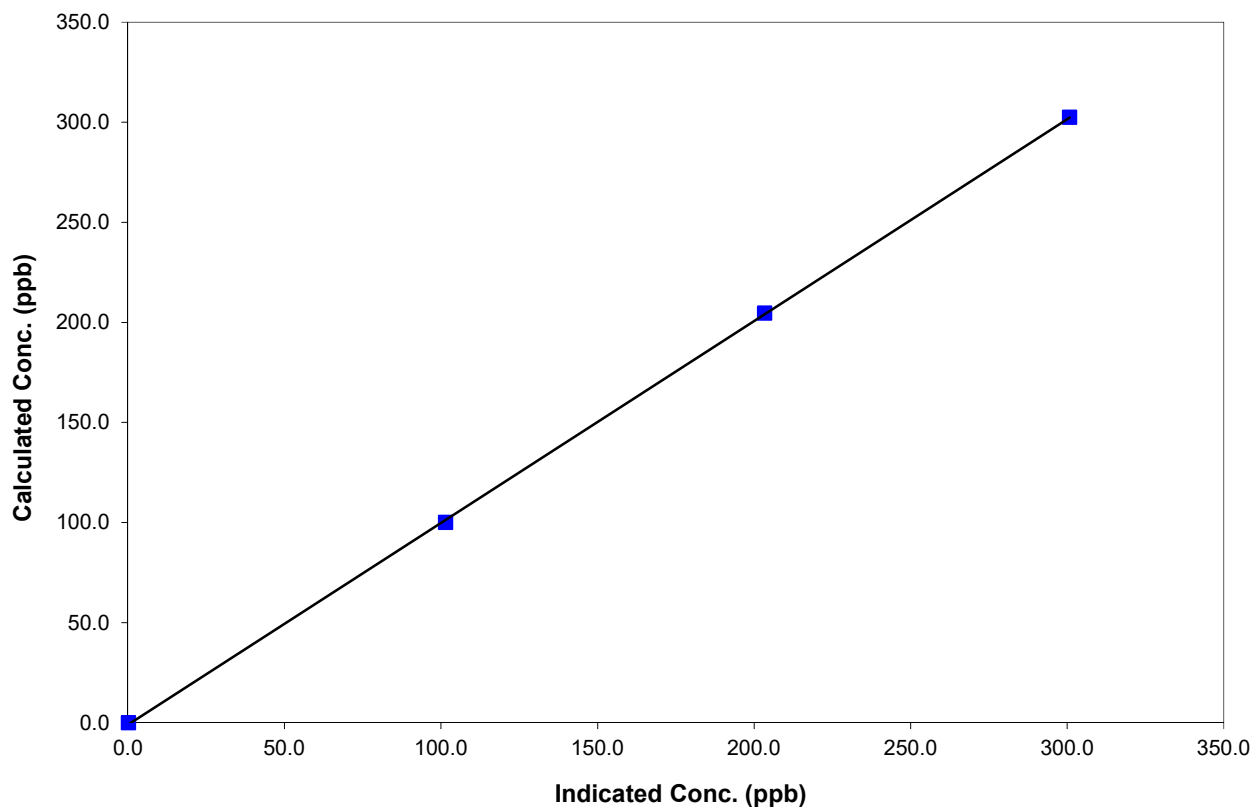
Station Information

Calibration Date	August 17, 2018	Previous Calibration	July 10, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:10	End Time (MST)	14:55:00 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	0.2	N/A	Correlation Coefficient	0.999946
302.4	300.8	1.0054		
204.5	203.4	1.0057		
100.0	101.5	0.9850	Slope	1.008099
			Intercept	-0.956859

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



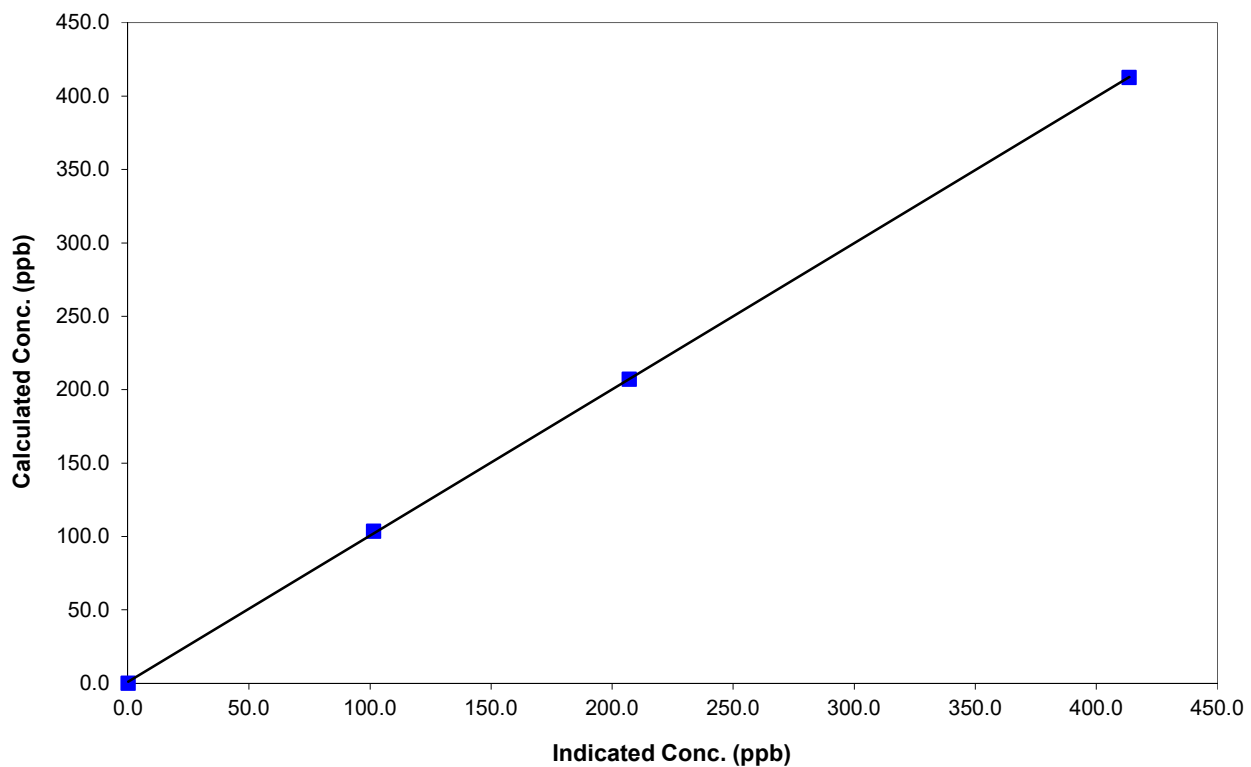
Station Information

Calibration Date	August 17, 2018	Previous Calibration	July 10, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:10	End Time (MST)	14:55:00 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	Correlation Coefficient	0.999963
412.7	413.6	0.9978		
207.1	207.1	1.0002		
103.6	101.5	1.0203	Slope	0.996268
			Intercept	0.947494

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



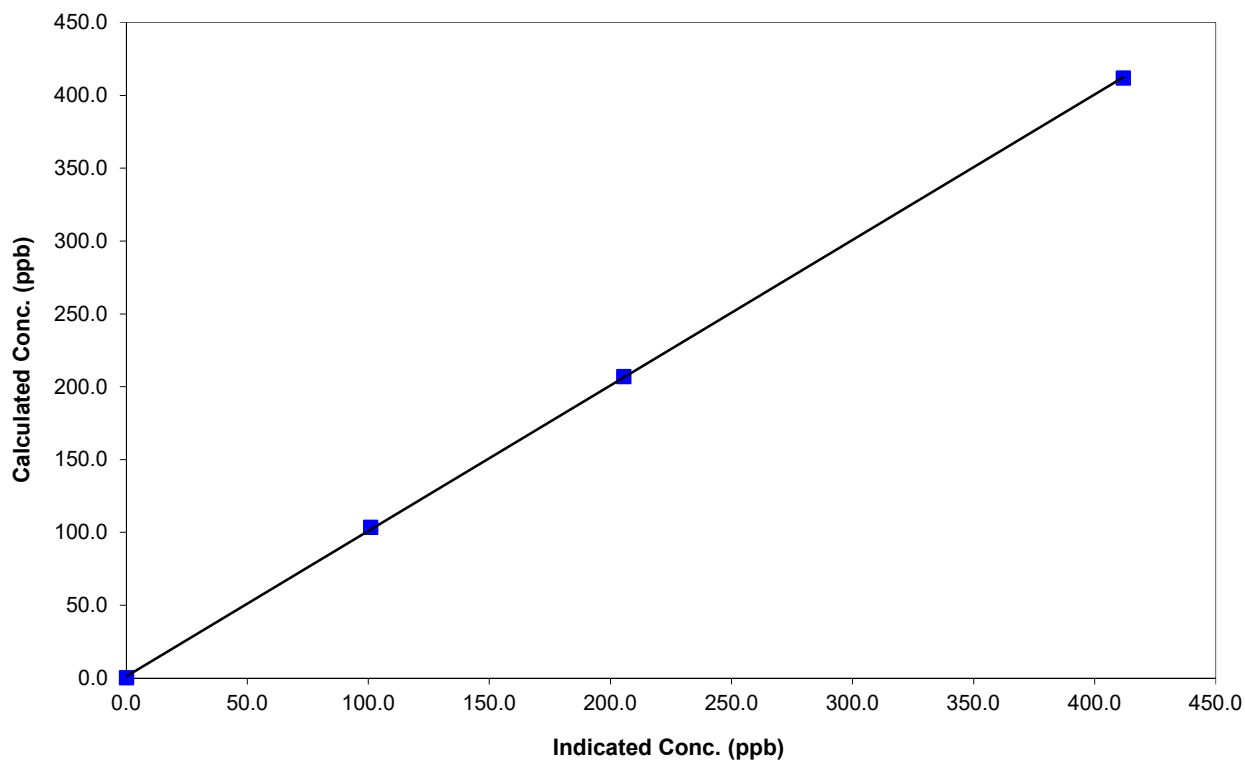
Station Information

Calibration Date	August 17, 2018	Previous Calibration	July 10, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:10	End Time (MST)	14:55:00 PM
Analyzer make	42i	Analyzer serial #	906535087

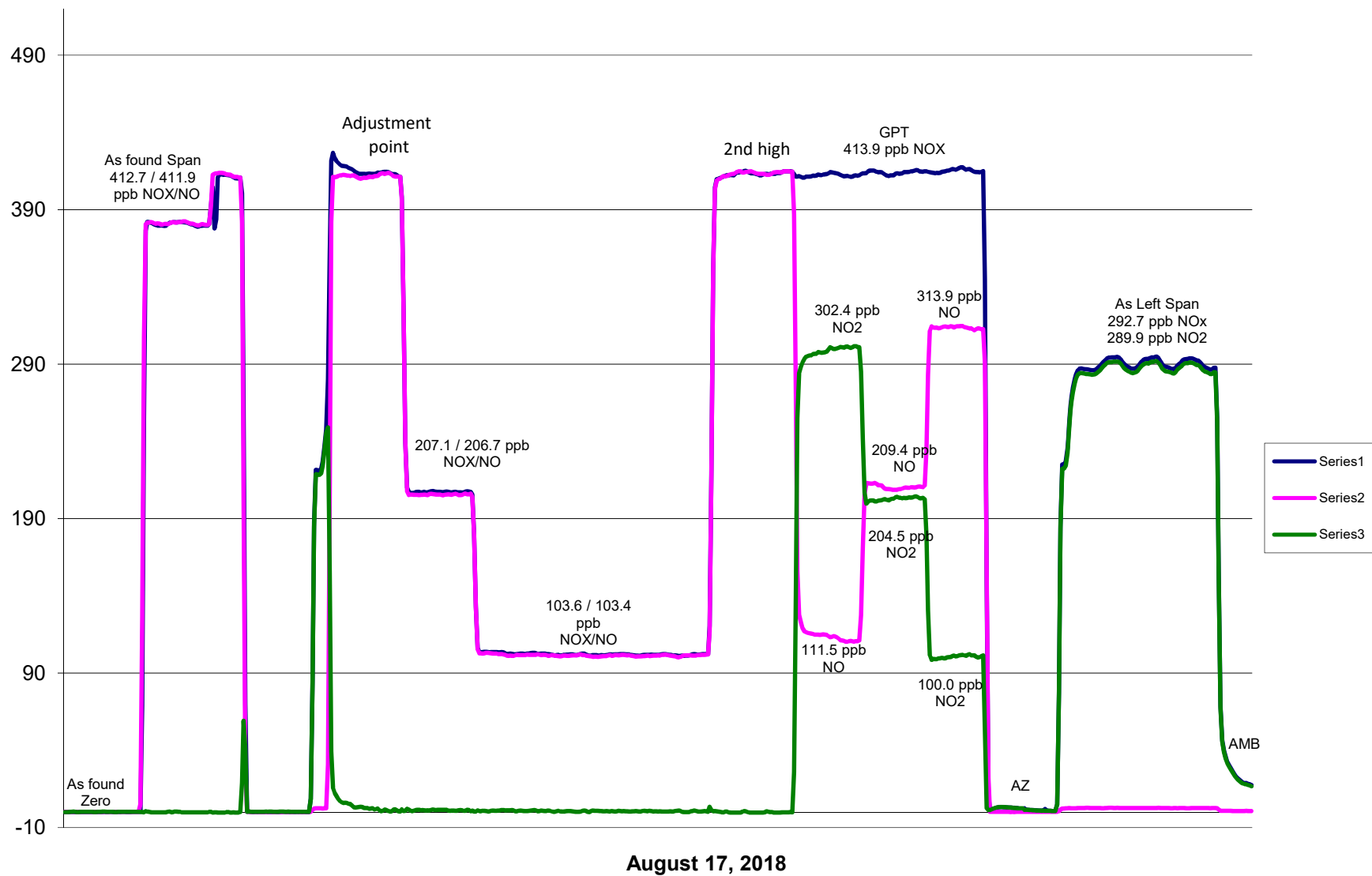
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
411.9	411.9	1.0001	Correlation Coefficient	0.999961
206.7	205.6	1.0054		
103.4	101.1	1.0226		
			Slope	0.998839
			Intercept	1.031050

NO Calibration Curve



NO_x Calibration



Calibration Report



Parameter 03
Air Monitoring Network PAZA

Station Information

Calibration Date	August 17, 2018	Previous Calibration	July 11, 2018
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	13:40:00 PM	End Time (MST)	16:55:00 PM
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	1.008860	Calculated slope	1.005155
Calculated intercept	-1.159282	Calculated intercept	-0.321566
Analyzer make	Teco 49I	Analyzer serial #	1507964699 (AMU:2015)

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-1.80	ppb	-0.30	ppb
slope	0.994		1.013	
Lamp temp	53.6	mV	53.6	mV
Lamp Intensity A/B	63720/69142	mV	63412/68822	mV
Pressure	691.6	mm Hg	696.1	mm Hg
Flow A	0.731	ccm	0.732	ccm
Flow B	0.733	ccm	0.736	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	302.4	301.6	1.0028
4998	0.2	204.5	202.8	1.0083
4998	0.1	100.0	100.5	0.9946
4996	0.0	0.0	1.4	As found zero
4996	0.3	302.4	295.8	As found span
Average Correction Factor				1.0019

Calculated value of As Found Response: 295.8 ppm Percent Change of As Found: -2.2%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.3	ppb
Auto span	367.6	ppb	374.5	ppb

Notes: Zero/span adjustment made
Zero canister carbon replaced

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter 03
Air Monitoring Network PAZA



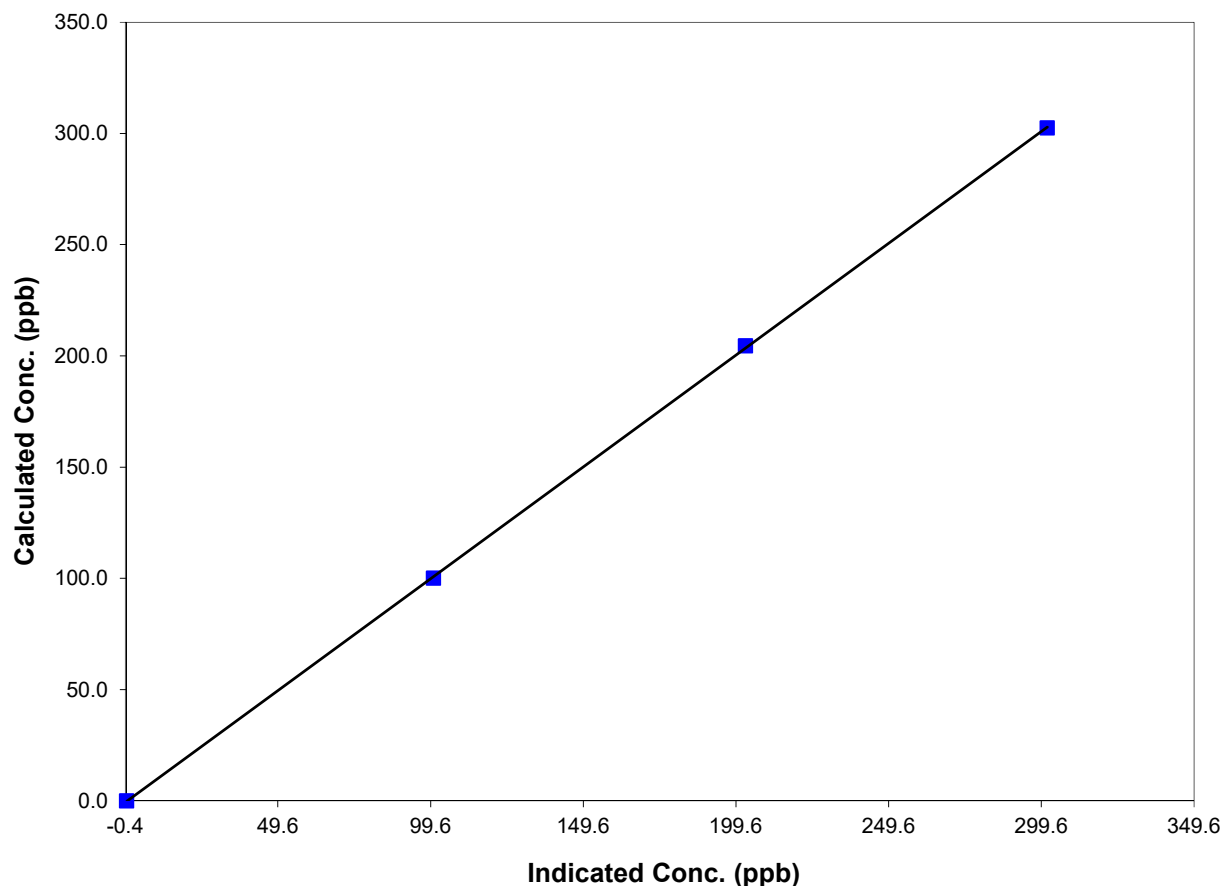
Station Information

Calibration Date	August 17, 2018	Previous Calibration	July 11, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	13:40:00 PM	End Time (MST)	16:55:00 PM
Analyzer make/model	Teco 49I	Analyzer serial #	1507964699 (AMU:2015)

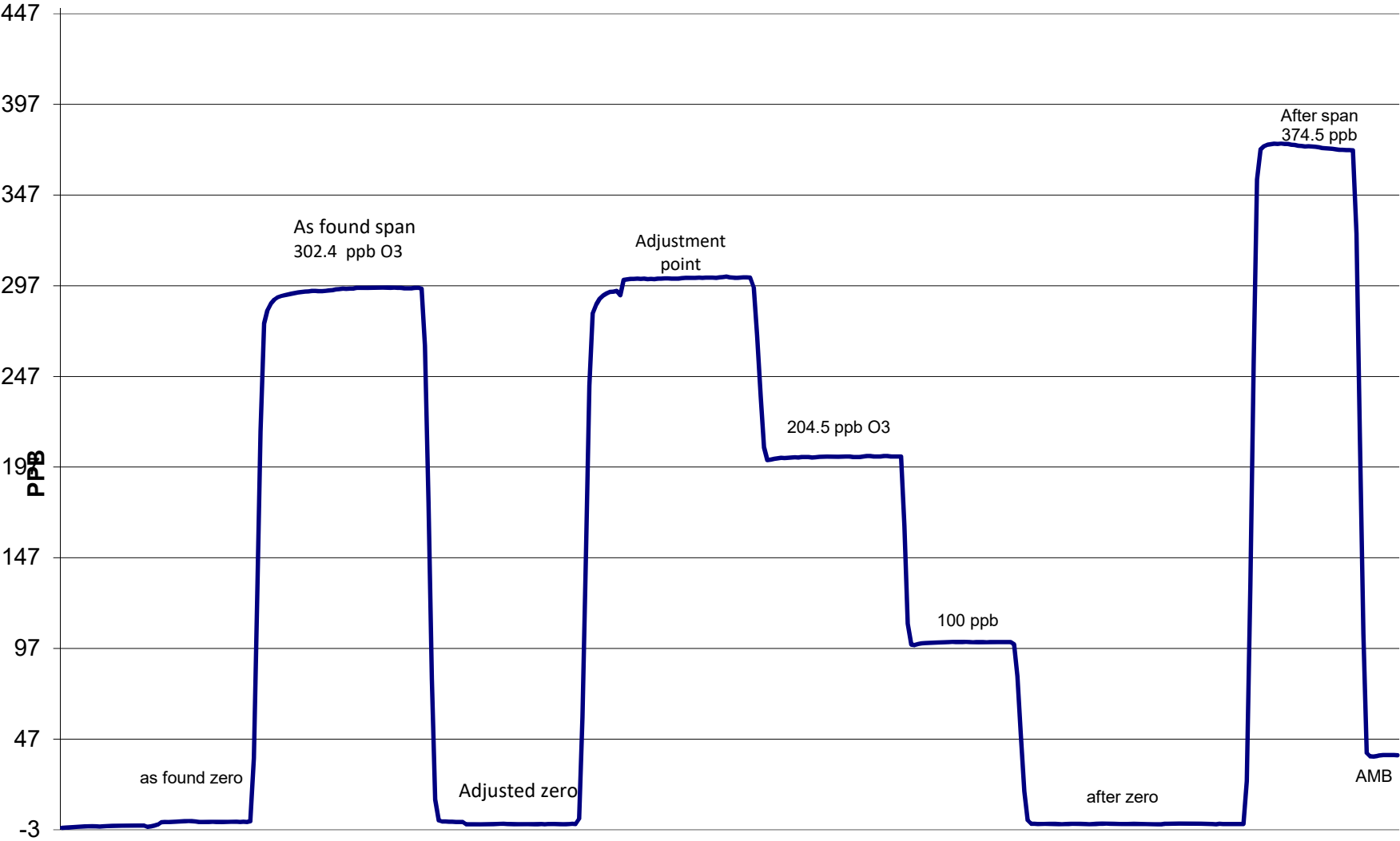
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	NA	Correlation Coefficient	0.999967
302.4	301.6	1.0028		
204.5	202.8	1.0083		
100.0	100.5	0.9946	Slope	1.005155
			Intercept	-0.321566

O3 Calibration Curve



O3 Calibration



August 17, 2018

Calibration Report

Parameter CO
Air Monitoring Network

PAZA



Station Information

Calibration Date	August 20, 2018	Previous Calibration	July 11, 2018
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	7:25	End Time (MST)	10:25
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	2023-07-07
		Cal Gas Cylinder #	LL109096
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 5 volt	DACS channel #	9
	Before		After
Calculated slope	0.998327	Calculated slope	1.004125
Calculated intercept	-0.244235	Calculated intercept	-0.411789
Analyzer make	Model 48I-TLE	Analyzer serial #	1408761378

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO zero setting	10.811		10.592	
CO span setting	1.085		1.074	
Sample pressure	699.7	mm Hg	709.7	mm Hg
Sample Flow	0.450	LPM	0.455	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	-0.01	N/A
4998	69.96	40.12	40.04	1.0019
4998	34.98	20.20	21.00	0.9618
4998	17.99	10.42	11.05	0.9429
4998	0.00	0.00	-0.01	As Found Zero
4998	69.96	40.12	40.52	As Found Span
Average Correction Factor				0.9689

Calculated value of As Found Response: 40.219 ppm Percent Change of As Found: -0.3%

	before calibration		after calibration	
Auto zero	-0.04	ppm	0.00	ppm
Auto span	20.56	ppm	20.33	ppm

Notes: Slight span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter CO
Air Monitoring Network PAZA



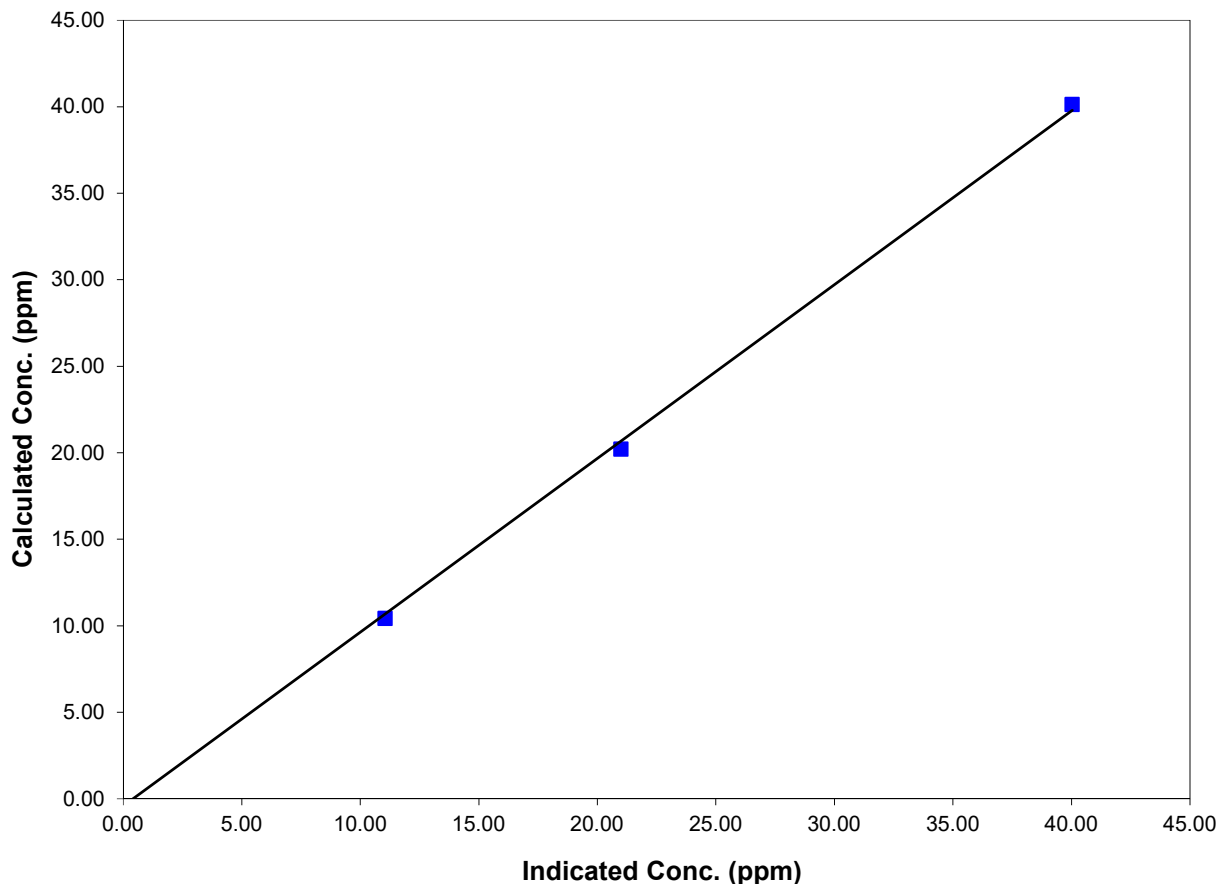
Station Information

Calibration Date	August 20, 2018	Previous Calibration	July 11, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	7:25	End Time (MST)	10:25
Analyzer make/model	Model 48I-TLE	Analyzer serial #	1408761378

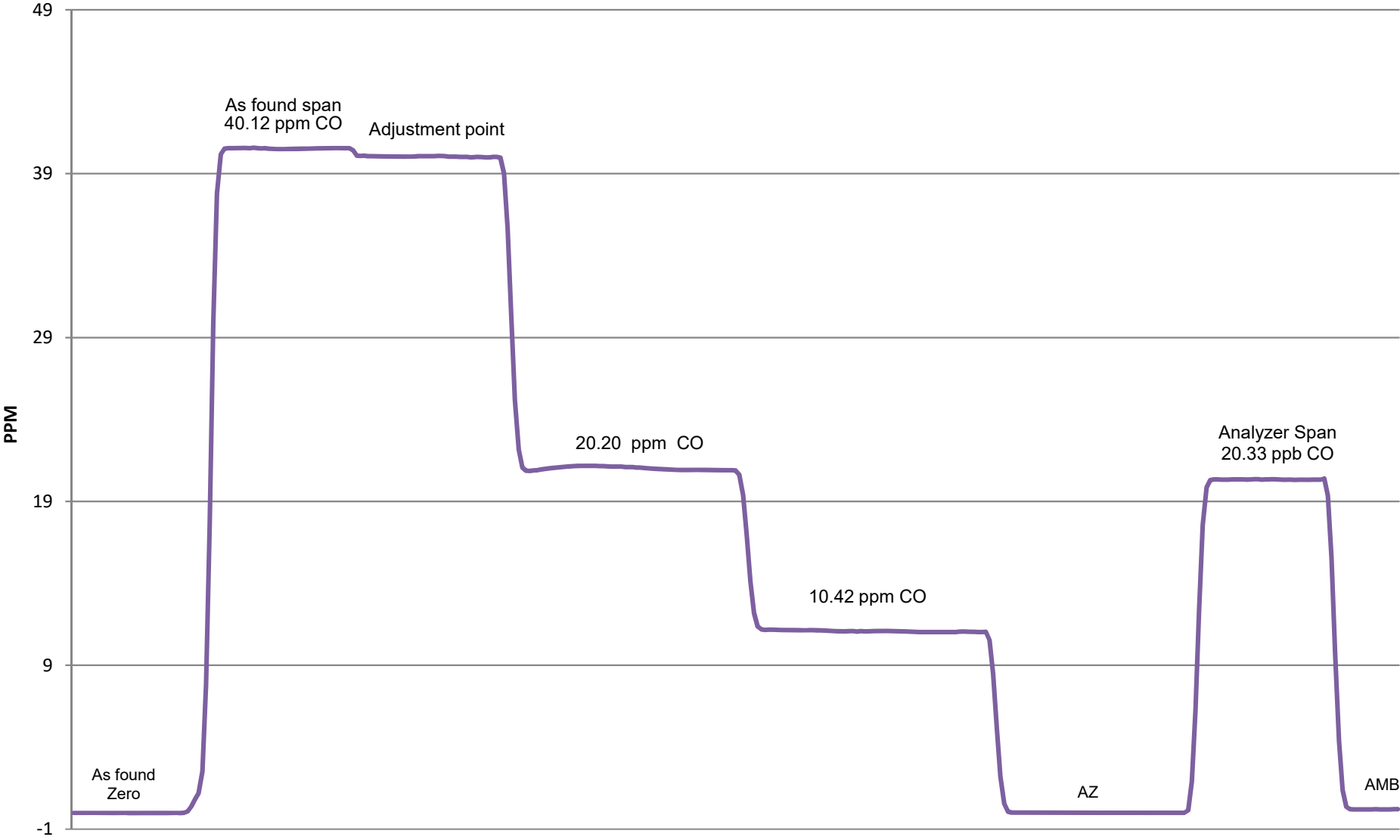
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	-0.007	N/A	Correlation Coefficient	0.999338
40.116	40.038	1.0019		
20.197	21.000	0.9618		
10.422	11.054	0.9429	Slope	1.004125
			Intercept	-0.411789

CO Calibration Curve



CO Calibration



August 20, 2018

Calibration Report

Parameter CH4 / NMHC / THC

Air Monitoring Network PAZA



Station Information

Calibration Date	August 20, 2018	Previous Calibration	July 12, 2018
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Install	Removal
			Other:Mair

Start Time (MST)	9:05	End Time (MST)	13:05:00 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	2015-07-05
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	0.9973
3500	34.97	9.85	9.81	1.0040
3500	14.98	4.24	4.22	1.0049
3500	0.00	0.00	0.02	As Found Zero
3500	64.99	18.15	15.51	As Found Span
Average Correction Factor				1.0021

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

	Before		After
Calculated slope	0.998761	Calculated slope	0.998792
Calculated intercept	-0.015062	Calculated intercept	0.008349

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	9.00	ppm	9.31	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	15.78	0.9986
3500	34.97	10.08	10.02	1.0058
3500	14.98	4.34	4.27	1.0174
3500	0.00	0.00	0.02	As Found Zero
3500	64.99	18.57	15.99	As Found Span
Average Correction Factor				1.0072

Calculated value of As Found Response: 15.960 ppm Percent Change of As Found: 14.1%

	Before		After
Calculated slope	0.999872	Calculated slope	0.999054
Calculated intercept	-0.004474	Calculated intercept	0.029615

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.02	ppm
Auto span	12.43	ppm	12.91	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	31.20	0.9985
3500	34.97	19.93	19.81	1.0058
3500	14.98	8.59	8.47	1.0141
3500	0.00	0.00	0.03	As Found Zero
3500	64.99	36.72	31.47	As Found Span
Average Correction Factor				1.0062

Calculated value of As Found Response: 31.421 ppm Percent Change of As Found: 14.4%

	Before		After
Calculated slope	0.999732	Calculated slope	0.999181
Calculated intercept	-0.007510	Calculated intercept	0.051506

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.02	ppm
Auto span	21.42	ppm	22.21	ppm

Notes: Hydrogen cylinder replaced
Slight span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter CH4

Air Monitoring Network PAZA



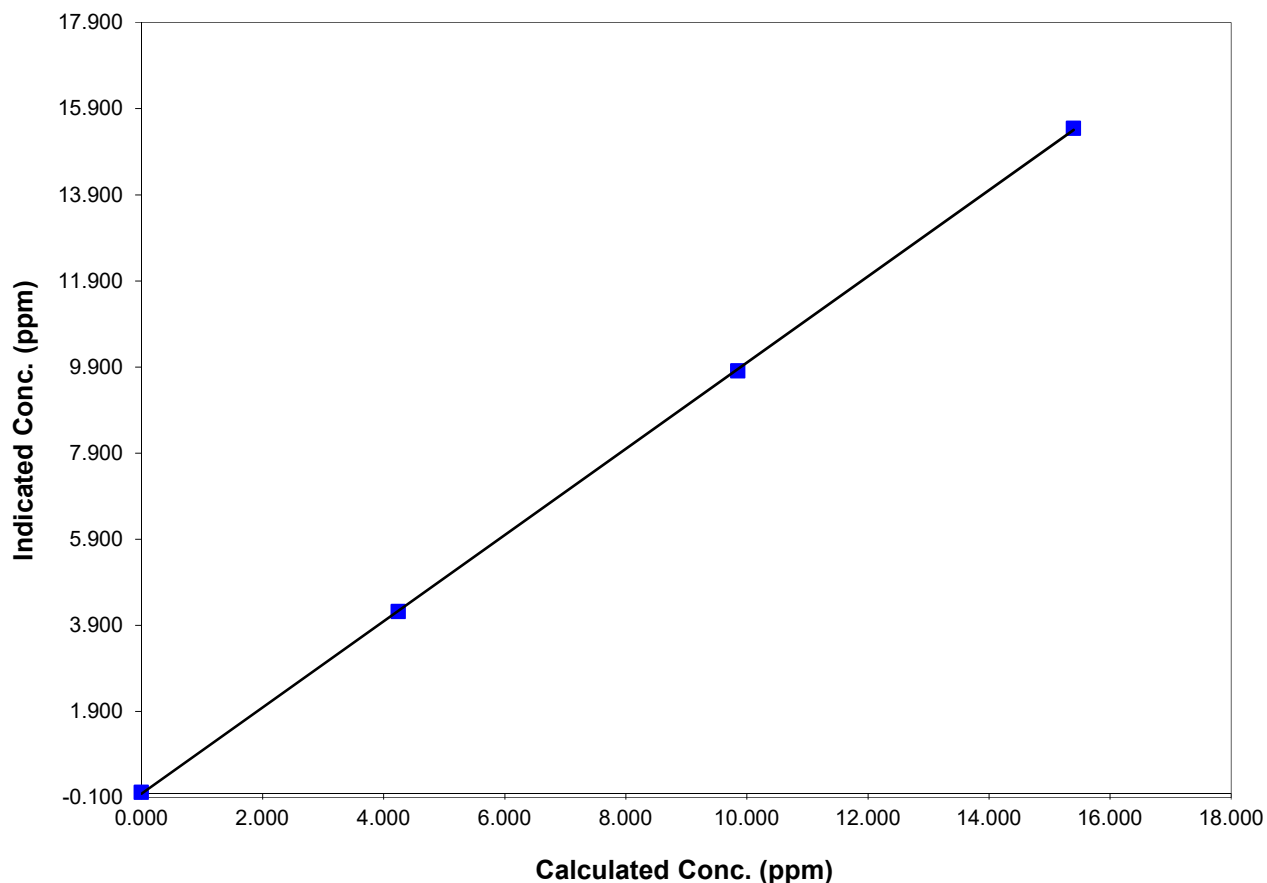
Station Information

Calibration Date	August 20, 2018	Previous Calibration	July 12, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:05	End Time (MST)	13:05:00 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	0.020	N/A	Correlation Coefficient	0.999970
15.398	15.440	0.9973		
9.849	9.809	1.0040		
4.243	4.223	1.0049	Slope	0.998792
			Intercept	0.008349

CH4 Calibration Data



Calibration Summary

Parameter NMHC

Air Monitoring Network PAZA



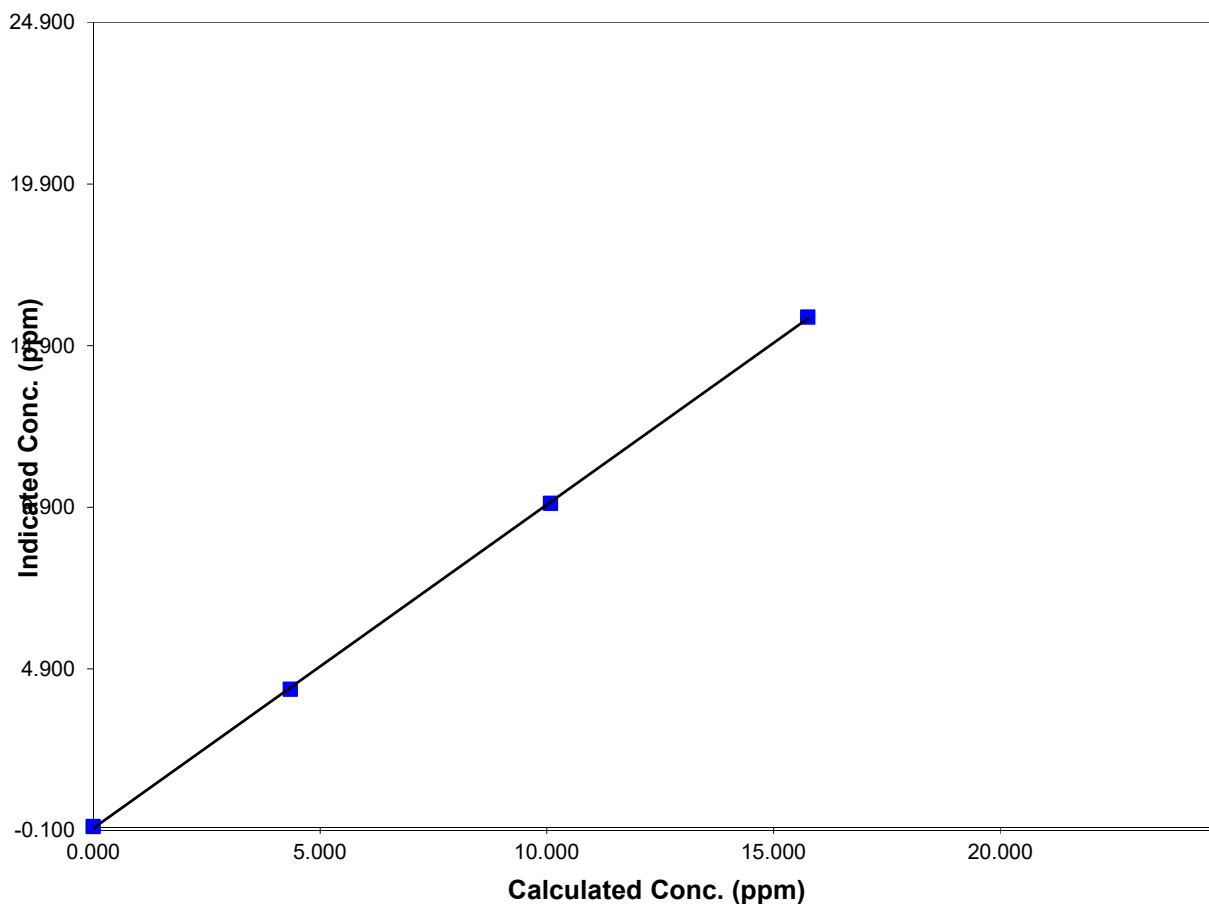
Station Information

Calibration Date	August 20, 2018	Previous Calibration	July 12, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:05	End Time (MST)	13:05:00 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	0.020	N/A	Correlation Coefficient	0.999946
15.758	15.780	0.9986		
10.079	10.021	1.0058		
4.342	4.268	1.0174	Slope	0.999054
			Intercept	0.029615

NMHC Calibration Data



Calibration Summary



Parameter THC
Air Monitoring Network PAZA

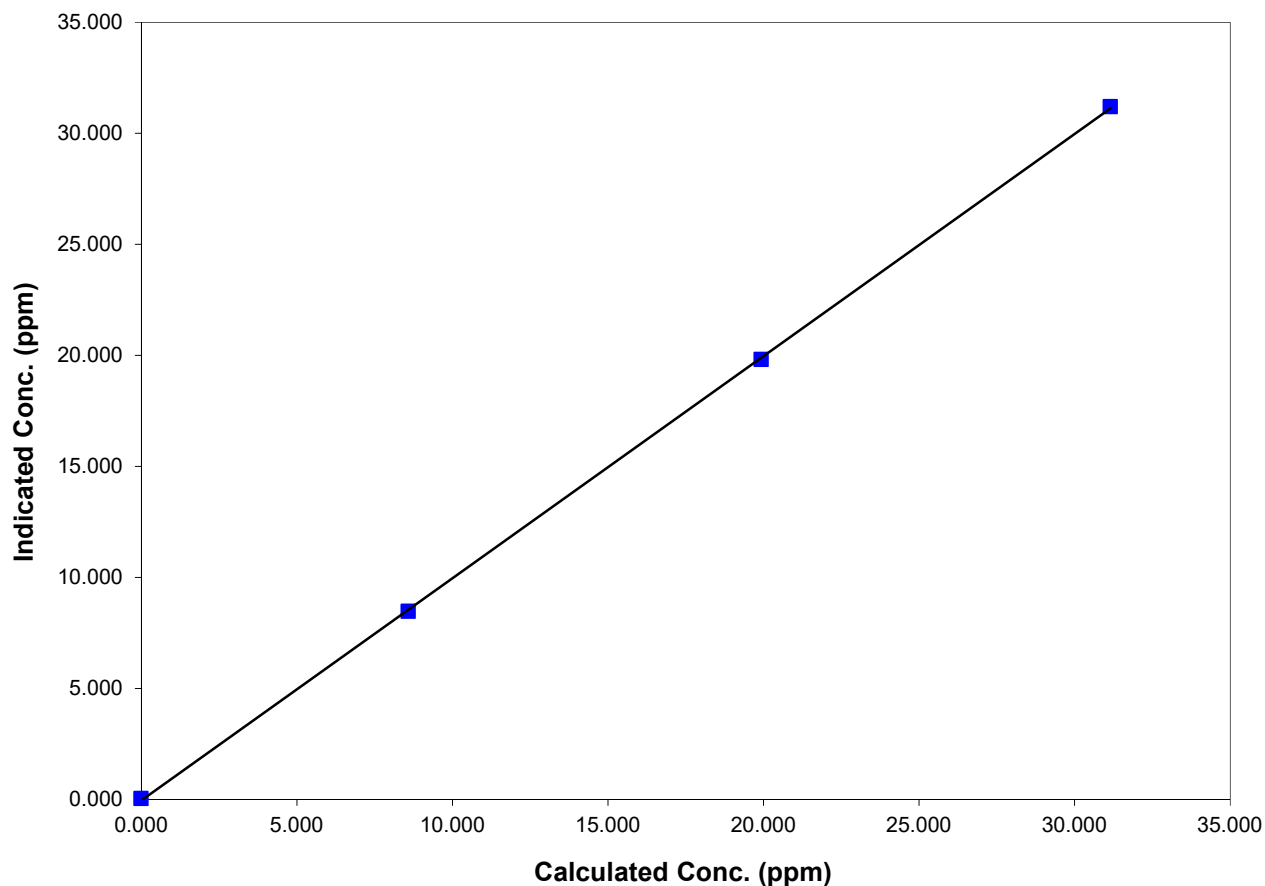
Station Information

Calibration Date	August 20, 2018	Previous Calibration	July 12, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:05	End Time (MST)	13:05:00 PM
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

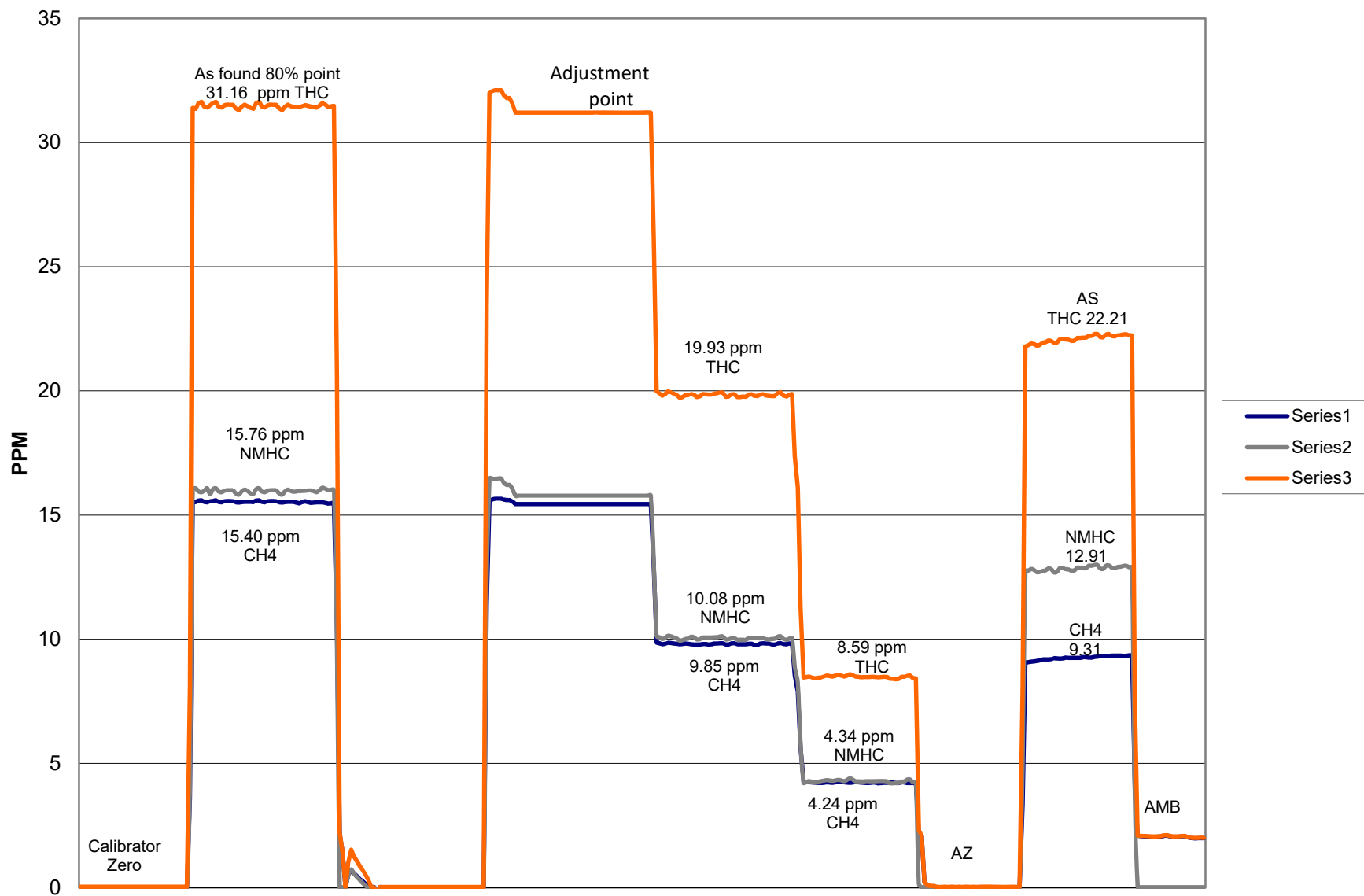
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.033	N/A	Correlation Coefficient	0.999956
31.155	31.201	0.9985		
19.928	19.813	1.0058	Slope	0.999181
8.585	8.466	1.0141		
			Intercept	0.051506

THC Calibration Data



THC/CH₄/NMHC Calibration



Calibration Report

Parameter SO2

Air Monitoring Network PAZA



Station Information

Calibration Date	August 2, 2018	Previous Calibration	July 30, 2018
Station Number	10	Station Location	Rycroft
Reason:	Routine	Install	Removal
Other:			
Start Time (MST)	11:55	End Time (MST)	14:50:00 PM
Barometric Pressure	0.919 Atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Concentratio	49.6 ppm	Cal Gas Expiry Date	2020-10-10
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	1.001561	Calculated slope	0.996481
Calculated intercept	0.817506	Calculated intercept	-0.499516
Analyzer make	TEI 43I	Analyzer serial #	1173410005

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	17.3		16.5	
Coefficient	0.993		1.008	
UV Lamp Voltage	758	V	756	V
Chamber Temp	45	C	44.6	C
Perm Gas Temp	45	C	45	C
Pressure	676.9	mm Hg	665.6	mm Hg
Sample Flow	0.444	LPM	0.439	LPM
Lamp Intesity	95	Hz	96	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	1.1	N/A
4996	39.96	393.6	395.5	0.9950
4996	19.99	197.7	199.2	0.9923
4996	9.98	98.9	98.7	1.0015
4996	0.00	0.0	1.1	As found zero
4996	39.96	393.6	383.0	As found span
Average Correction Factor				0.9963

Calculated value of As Found Response: 383.341 ppb Percent Change of As Found: 2.6%

	before calibration		after calibration	
Auto zero	0.3	ppb	0.3	ppb
Auto span	196.0	ppb	207.9	ppb

Notes: Slight span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2
Air Monitoring Network PAZA



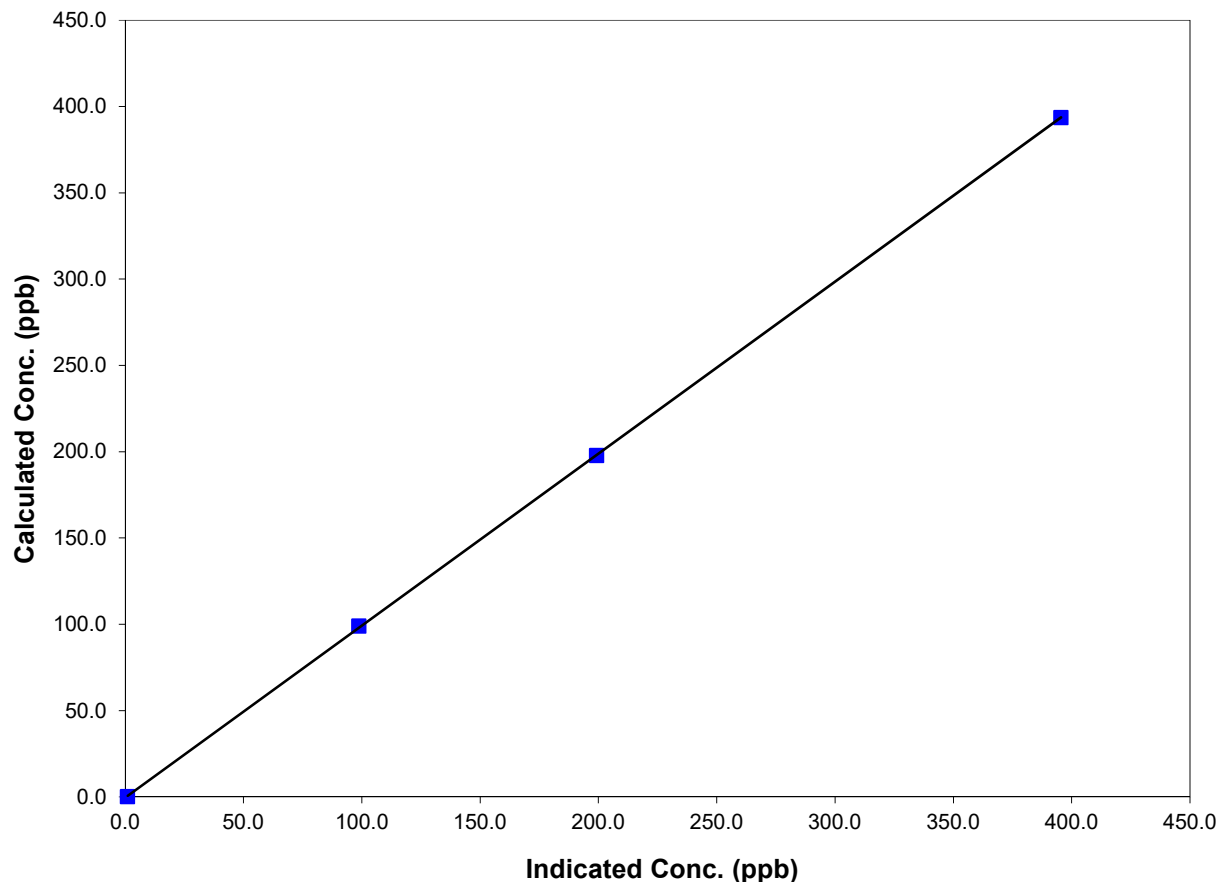
Station Information

Calibration Date	August 2, 2018	Previous Calibration	July 30, 2018
Station Number	10	Station Location	Rycroft
Start Time (MST)	11:55	End Time (MST)	14:50:00 PM
Analyzer make/model	TEI 43I	Analyzer serial #	1173410005

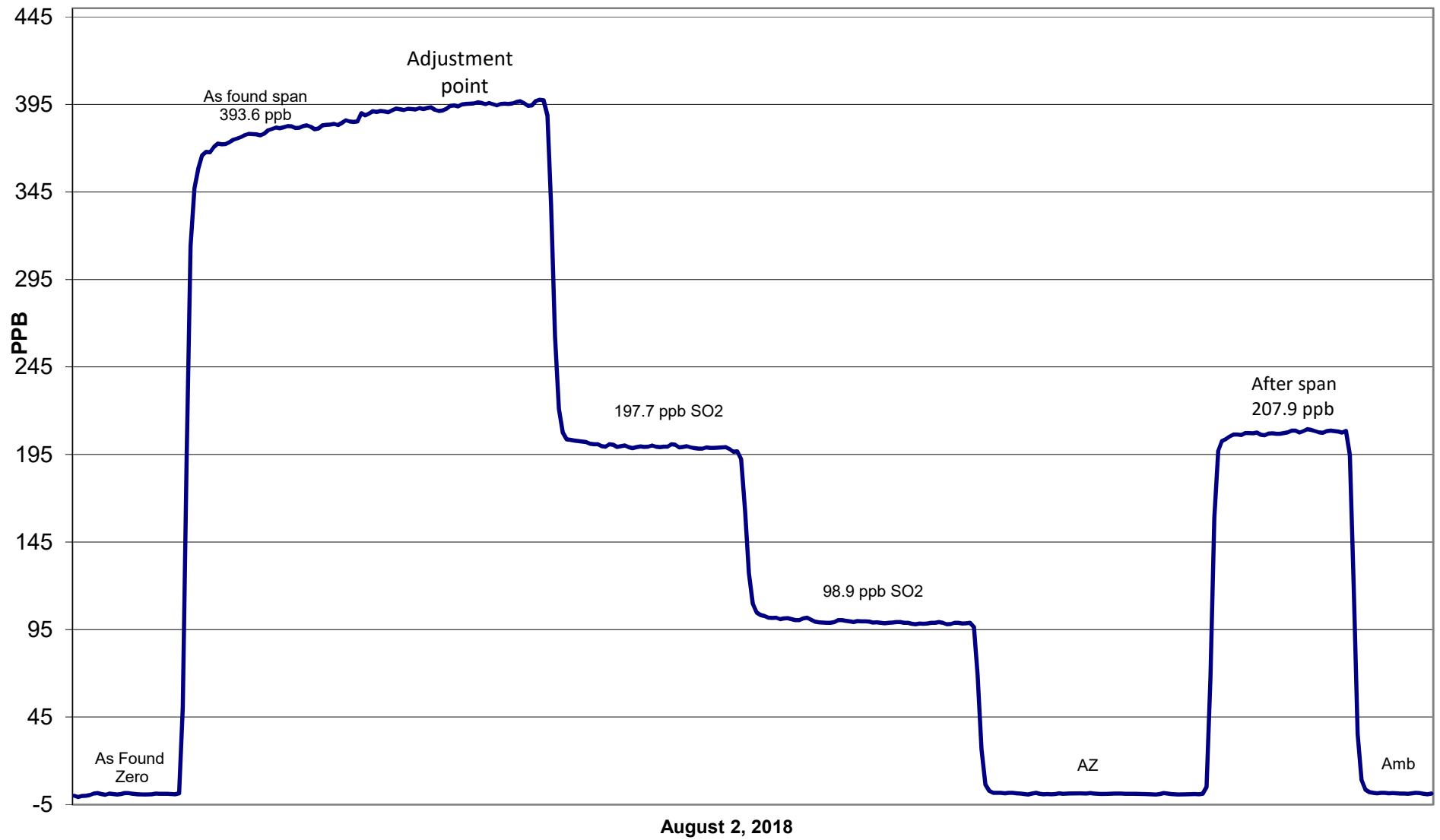
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	1.1	N/A	Correlation Coefficient	0.999983
393.6	395.5	0.9950		
197.7	199.2	0.9923		
98.9	98.7	1.0015	Slope	0.996481
			Intercept	-0.499516

SO2 Calibration Curve



SO2 Calibration



Calibration Report



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

Station Information

Calibration Date	August 14, 2018	Previous Calibration	July 19, 2018
Station Name	PAZA Rover	Station Location	Rycroft
Reason:	Routine	Install	Removal
Start Time (MST)	12:15 PM	End Time (MST)	15:55:00 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	2020-02-02
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	1.010197	Calculated slope	0.988893
Calculated intercept	0.305872	Calculated intercept	0.530322
Analyzer make	TEI 43C	Analyzer serial #	

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	11.3	ppb	13.7	ppb
Coefficient	1.130		1.040	
Lamp Voltage	775	V	770	V
Chamber Temp	45	C	45	C
Perm gas Temp	45	C	45	C
Pressure	670.2	mmHg	671.4	mmHg
Sample Flow	0.384	lpm	0.384	lpm
Lamp Intensity	85	Hz	87	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	0.3	N/A
4996	39.96	77.6	78.2	0.9924
4998	19.98	38.9	38.6	1.0091
6996	9.97	13.9	12.7	1.0978
			0.0	Sox Test
4996	0.00	0.0	0.4	As found zero
4996	39.96	77.6	66.3	As found span
Average Correction Factor				1.0331

Calculated value of As Found Response: 66.87 ppb Percent Change of As Found: 13.8%

	before calibration		after calibration	
Auto zero	0.2	ppb	-0.1	ppb
Auto span	55.8	ppb	59.4	ppb

Notes: Replaced Sox scrubber check.
 PMT, zero & span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



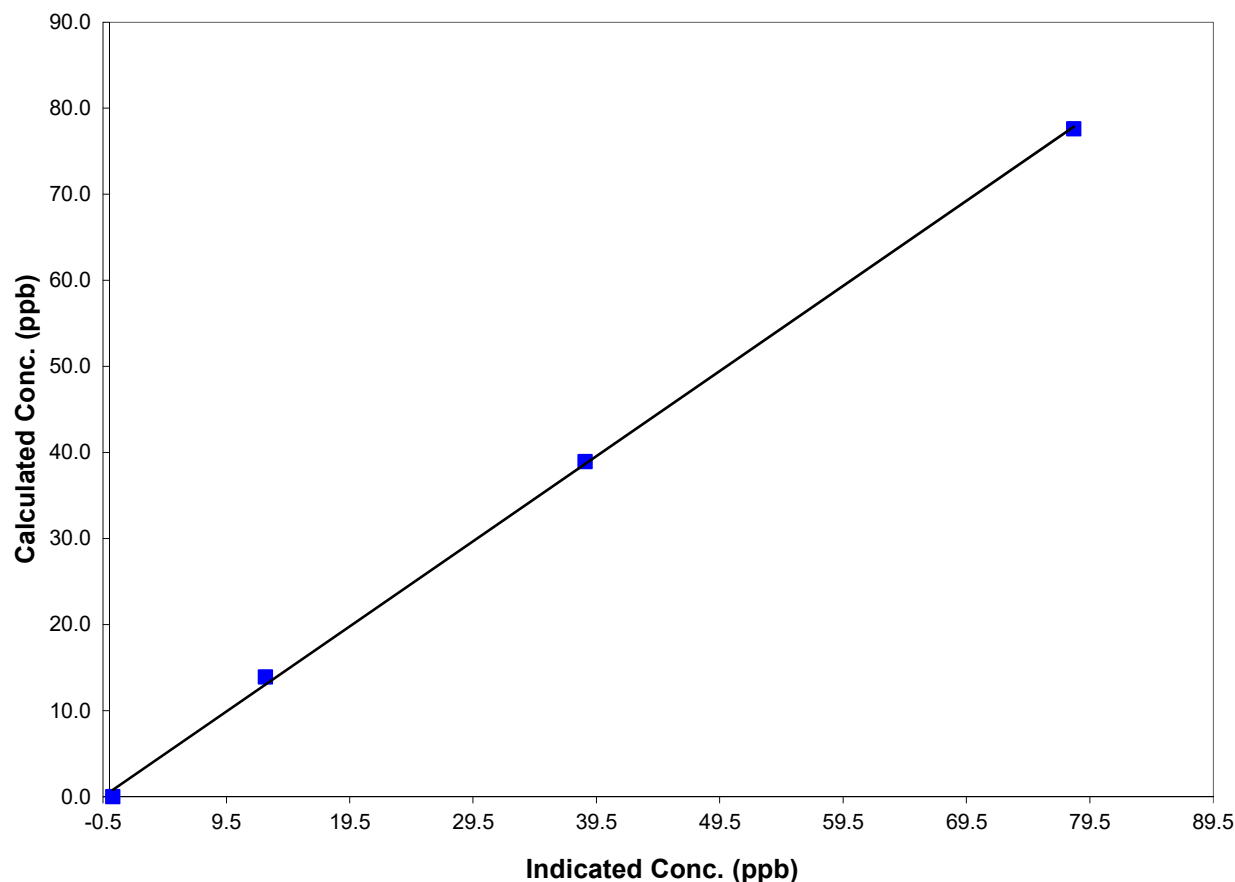
Station Information

Calibration Date	August 14, 2018	Previous Calibration	July 19, 2018
Station Number	PAZA Rover	Station Location	Rycroft
Start Time (MST)	12:15	End Time (MST)	15:55:00 PM
Analyzer make/model	TEI 43C	Analyzer serial #	0

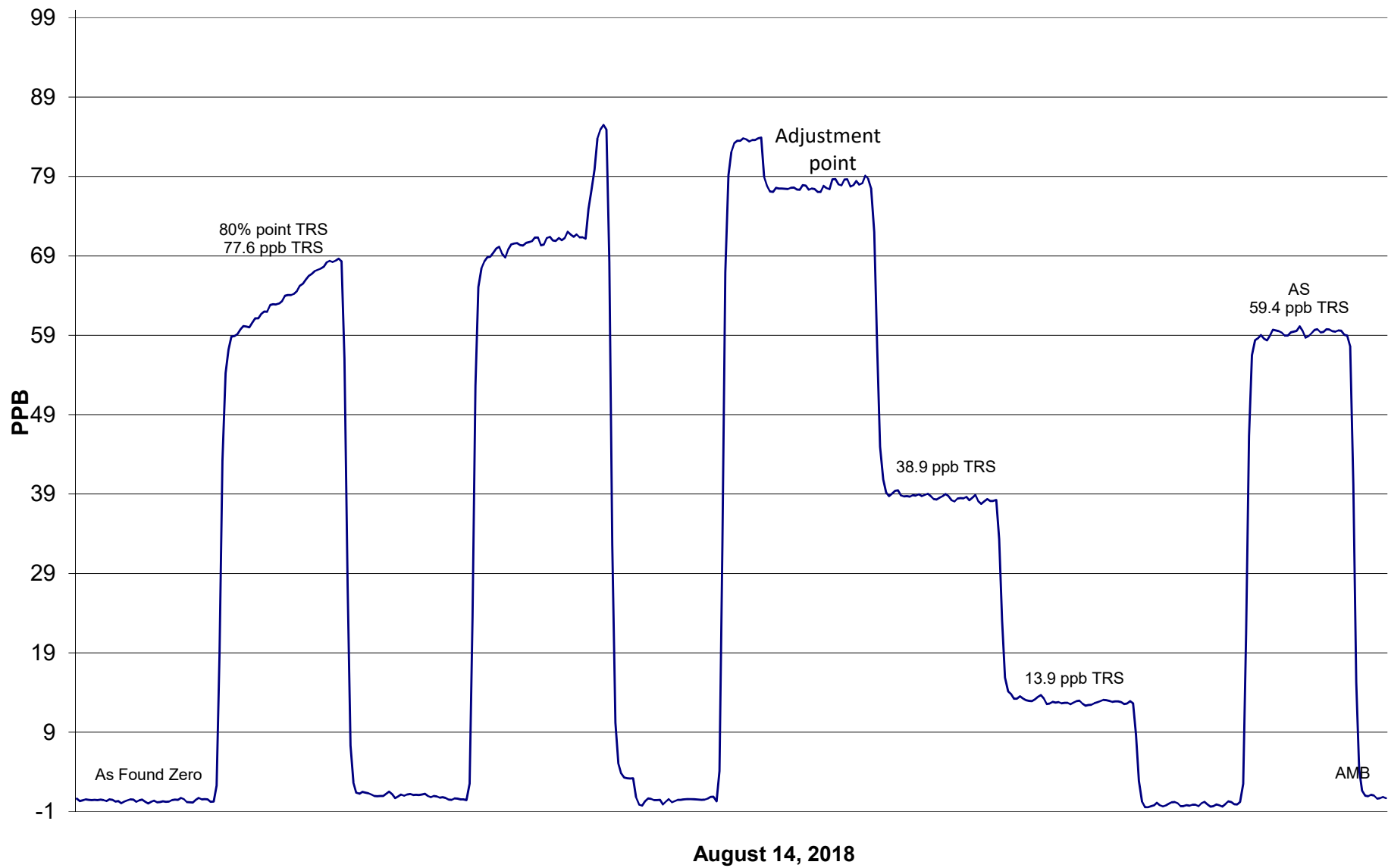
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A	Correlation Coefficient	0.999552
77.6	78.2	0.9924		
38.9	38.6	1.0091		
13.9	12.7	1.0978	Slope	0.988893
			Intercept	0.530322

TRS Calibration Curve



TRS Calibration



Calibration Report

Parameter
Air Monitoring Network

NO_x-NO-NO₂
PAZA



Station Information

Calibration Date	August 2, 2018	Previous Calibration	June 13, 2018
Station Number	10	Station Location	Rycroft
Reason:	Routine Installation Removal Other: Maintenance		
Start Time (MST)	10:25	End Time (MST)	16:45:00 PM
Barometric Pressure	0.919 Atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNicsn 6103	Serial Number	6586
NO Cal Gas Conc	51.9 ppm	Cal Gas Expiry Date	10/24/2020
NOx Cal Gas Conc	52 ppm	Cal Gas Serial #	LL107945

DACS Information

DACS make

CR3000

DACS serial No.

5407

Parameter		NO2	NOx	NO
Before	Data Slope	0.992859	0.992829	0.997555
	Data Offset	-0.786272	1.349933	1.322384
After	Data Slope	1.001325	0.995231	0.992727
	Data Offset	-0.120245	0.235133	0.229588
Channel #		8	6	7
Voltage Range		0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model	TEI 42i	Analyzer serial #	0701120011	
Test Point	before		after	
Concentration range	0-500	ppb	0-500	ppb
NO offset	6.6	mV	7.1	mV
NOx bkgnd	6.7	mV	7.2	mV
NO coefficient	1.091		1.078	
NOx coefficient	1.001		0.995	
NO2 conv temp	323.2	Deg C	325.5	Deg C
Cooler	-2.8	Deg C	-2.7	Deg C
PMT Volt	-840.3	mV	-840.6	mV
R Cell Press	209.2	in Hg	176.9	in Hg
Sample Flow	0.285	LPM	0.726	LPM

Notes: Flow capillaries & O-ring replaced
Slight zero/span adjustment made

Calibration Report

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



Station Information

Calibration Date: August 2, 2018 Station Location: Rycroft

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4996	0.00	0.0	0.0	0.0	0.0	0.2	-0.1	N/A	N/A
1	4996	39.96	412.6	411.8	0.8	414.3	414.8	-2.1	0.9960	0.9928
2	4996	19.99	207.2	206.8	0.4	208.4	208.0	-0.4	0.9944	0.9946
3	4996	9.98	103.7	103.5	0.2	103.4	103.5	0.0	1.0028	0.9997
AFZ	4996	0.00	0.0	0.0	0.0	0.5	0.2	0.5	0.0000	0.0000
AFS	4996	39.96	412.6	411.8	0.8	325.0	322.3	1.4	1.2698	1.2779
Average Correction Factor									0.9977	0.9957

As Found Concentrations: NO_x= 323.5 NO= 322.6 As Found Percent Change NO_x= -21.6% NO= -21.7%

GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.94 ccm

O3 Setpoint (ppb)	Indicated NOX high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	0.2	0.2	0.0	0.0	0.2	-0.1	N/A	N/A	N/A	N/A
NO point	417.3	417.3	0.0	418.1	417.3	-1.3	0.9981	1.0000	N/A	N/A
300	417.3	116.3	301.0	418.7	116.3	300.5	0.9967	1.0000	1.0016	99.8%
200	417.3	215.8	201.5	419.5	215.8	201.6	0.9947	1.0000	0.9997	100.0%
100	417.3	320.4	96.9	419.4	320.4	97.0	0.9950	1.0000	0.9984	100.2%
Average Correction Factor							0.9955	1.0000	0.9999	100.0%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.1	0.1	0.2	ppb	0.2	0.3	0.0	ppb
Auto span	160.1	158.3	1.2	ppb	155.7	153.5	1.6	ppb

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



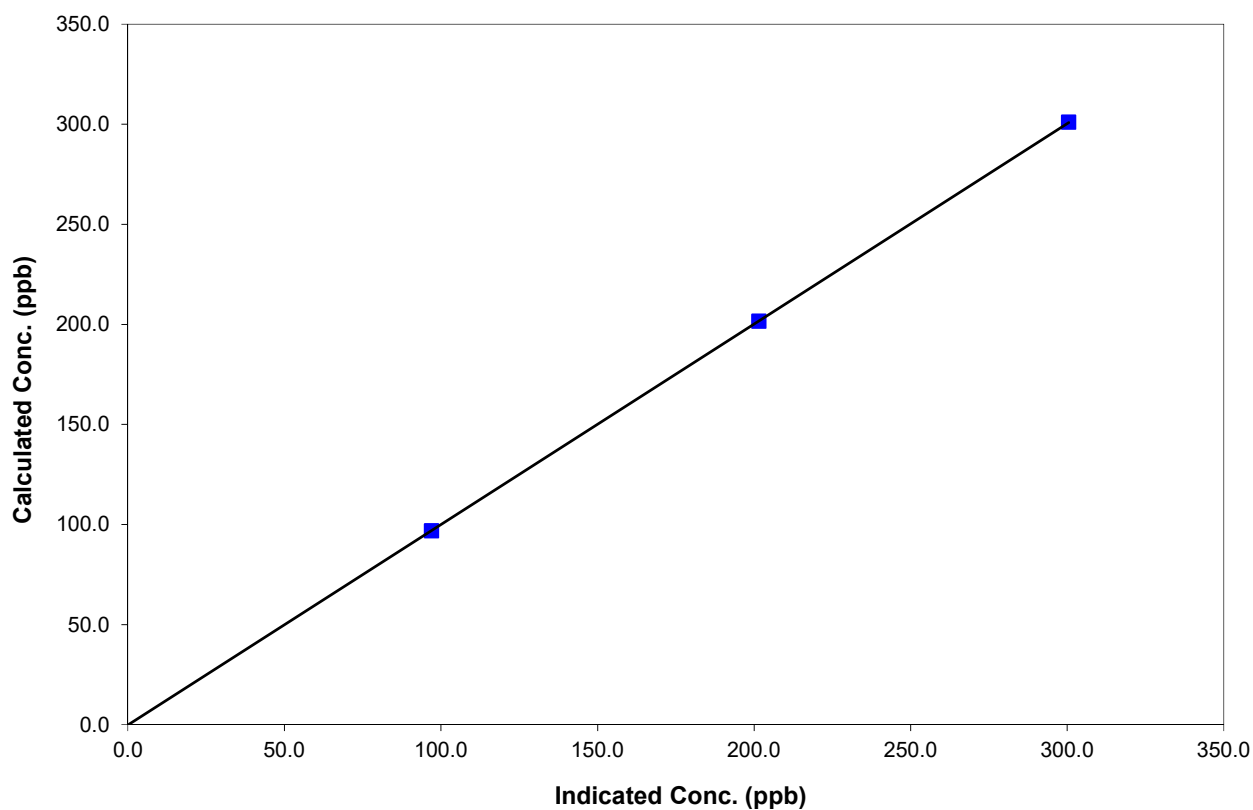
Station Information

Calibration Date	August 2, 2018	Previous Calibration	June 13, 2018
Station Number	10	Station Location	Rycroft
Start Time (MST)	10:25	End Time (MST)	16:45:00 PM
Analyzer make	TEI 42i	Analyzer serial #	0701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A	Correlation Coefficient	0.999997
301.0	300.5	1.0016		
201.5	201.6	0.9997		
96.9	97.0	0.9984	Slope	1.001325
			Intercept	-0.120245

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



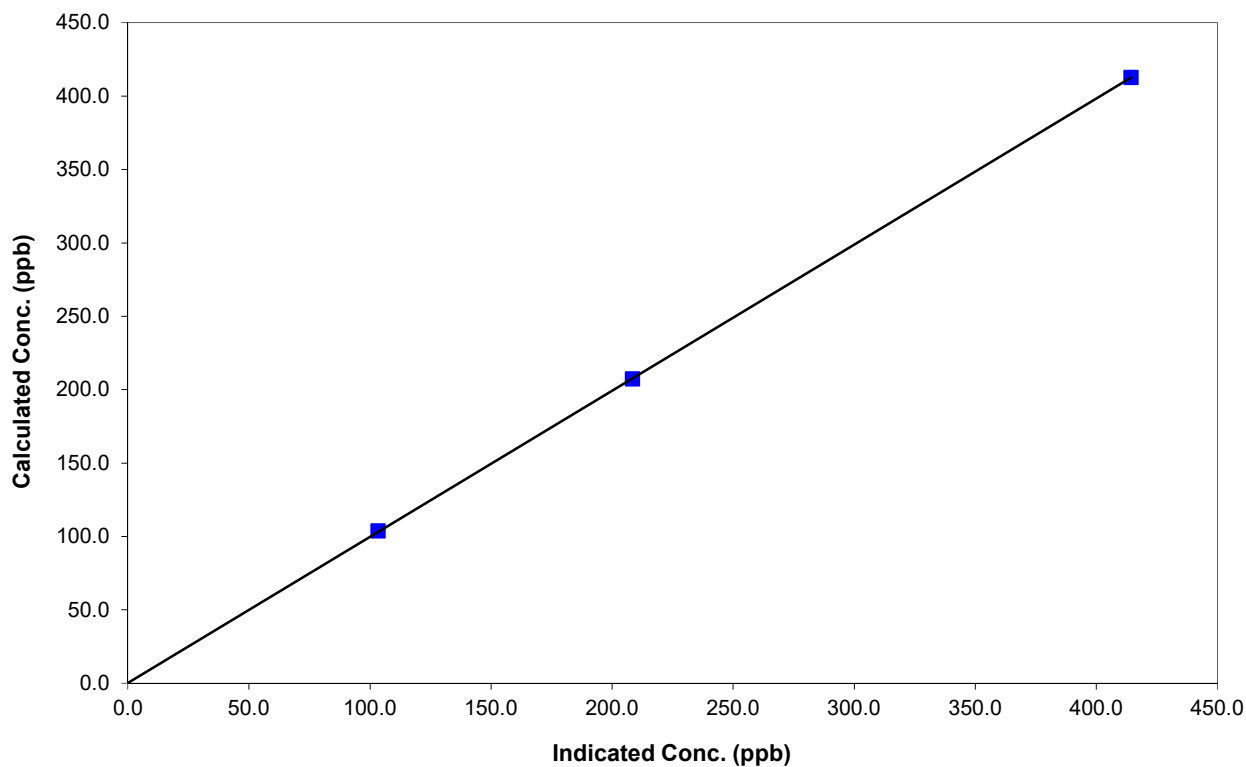
Station Information

Calibration Date	August 2, 2018	Previous Calibration	June 13, 2018
Station Number	10	Station Location	Rycroft
Start Time (MST)	10:25	End Time (MST)	16:45:00 PM
Analyzer make	TEI 42i	Analyzer serial #	0701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999995
412.6	414.3	0.9960		
207.2	208.4	0.9944		
103.7	103.4	1.0028	Slope	0.995231
			Intercept	0.235133

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



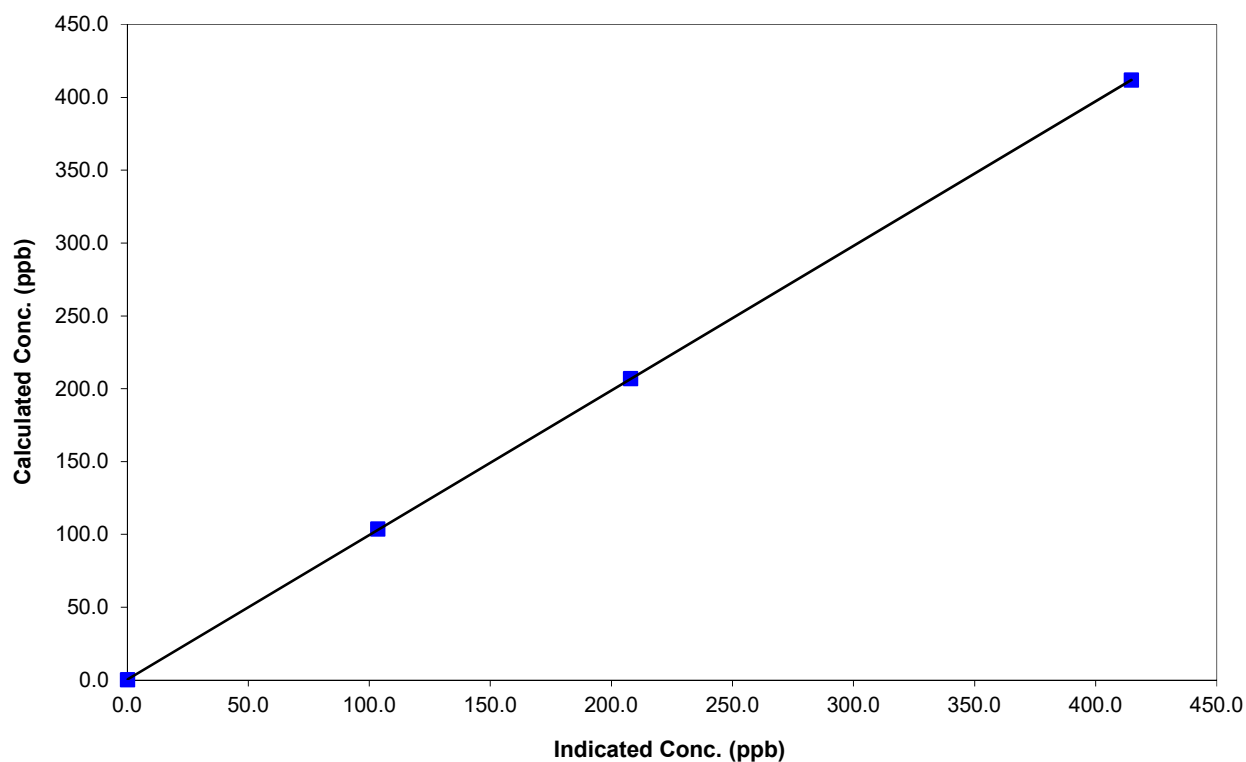
Station Information

Calibration Date	August 2, 2018	Previous Calibration	June 13, 2018
Station Number	10	Station Location	Rycroft
Start Time (MST)	10:25	End Time (MST)	16:45:00 PM
Analyzer make	TEI 42i	Analyzer serial #	0701120011

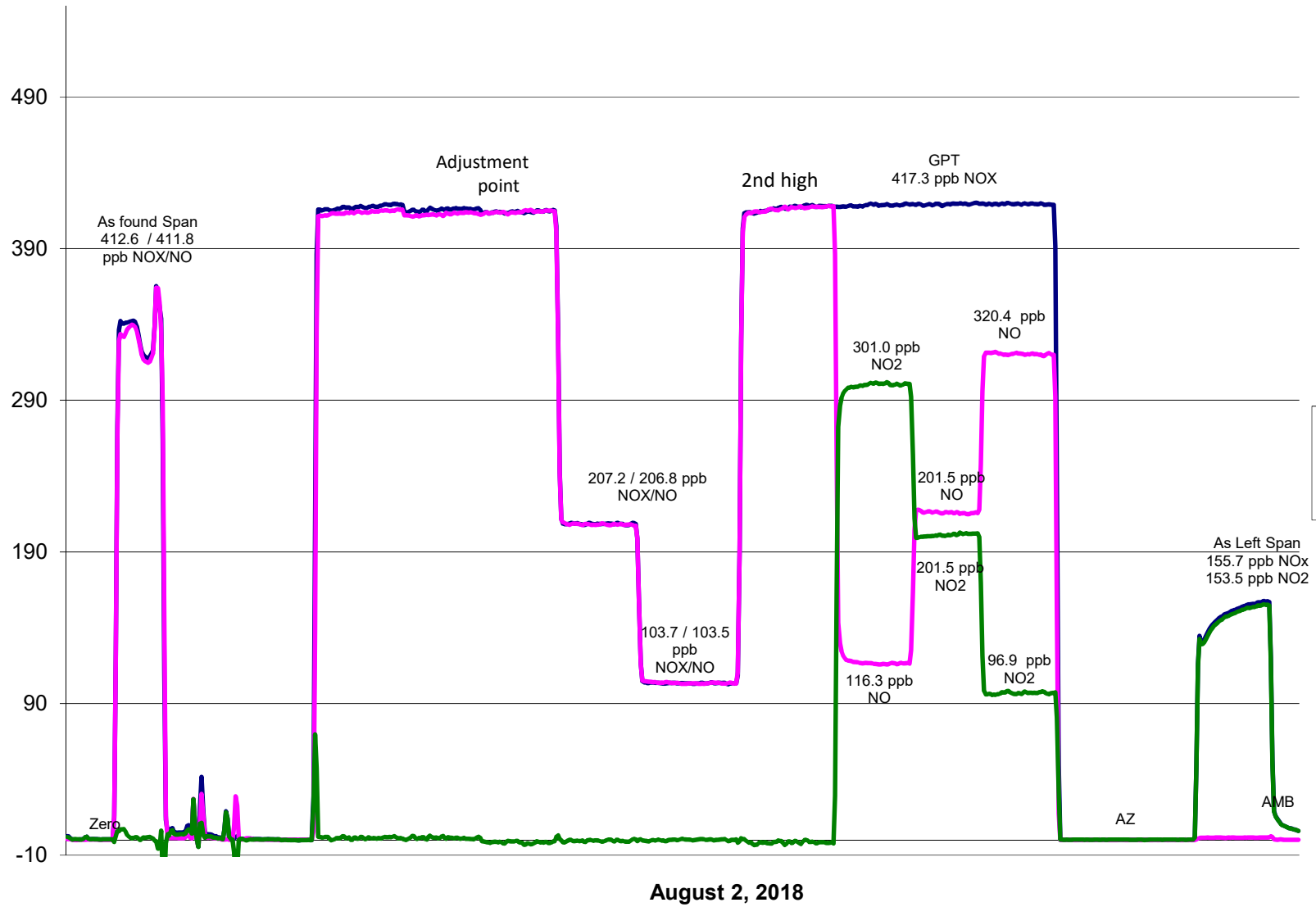
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
411.8	414.8	0.9928	Correlation Coefficient	0.999995
206.8	208.0	0.9946		
103.5	103.5	0.9997		
			Slope	0.992727
			Intercept	0.229588

NO Calibration Curve



NO_x Calibration



Calibration Report



Parameter 03
Air Monitoring Network PAZA

Station Information

Calibration Date	August 2 2018	Previous Calibration	July 30 2018
Station Number	10	Station Location	Rycroft
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	15:33:00 PM	End Time (MST)	17:40:00 PM
Barometric Pressure	0.919 atm	Station Temperature	20.0 Deg C
Calibrator	Envionics 6103	Serial Number	6586
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volts	DACS channel #	6
	Before		After
Calculated slope	0.986532	Calculated slope	1.005849
Calculated intercept	0.240235	Calculated intercept	-0.217323
Analyzer make	TEI Model 49I	Analyzer serial #	49I-115363156

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	-0.1	ppb	-0.1	ppb
Span	1.027		1.027	
Cell A intensity	93990	Hz	94009	Hz
Cell B intensity	80980	Hz	80960	Hz
Pressure	706.20	in Hg	693.80	in Hg
Cell A Flow	0.691	ccm	0.687	ccm
Cell B Flow	0.690	cmm	0.682	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	0.3	N/A
4996	0.30	301.0	300.3	1.0024
4996	0.20	201.5	199.0	1.0128
4996	0.10	96.9	97.3	0.9960
4996	0.00	0.0	0.3	As found zero
4996	0.30	301.0	300.3	As found span
Average Correction Factor				1.0037

Calculated value of As Found Response: 296.2 ppm Percent Change of As Found: -1.6%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.2	ppb
Auto span	373.2	ppb	374.6	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter 03
Air Monitoring Network PAZA



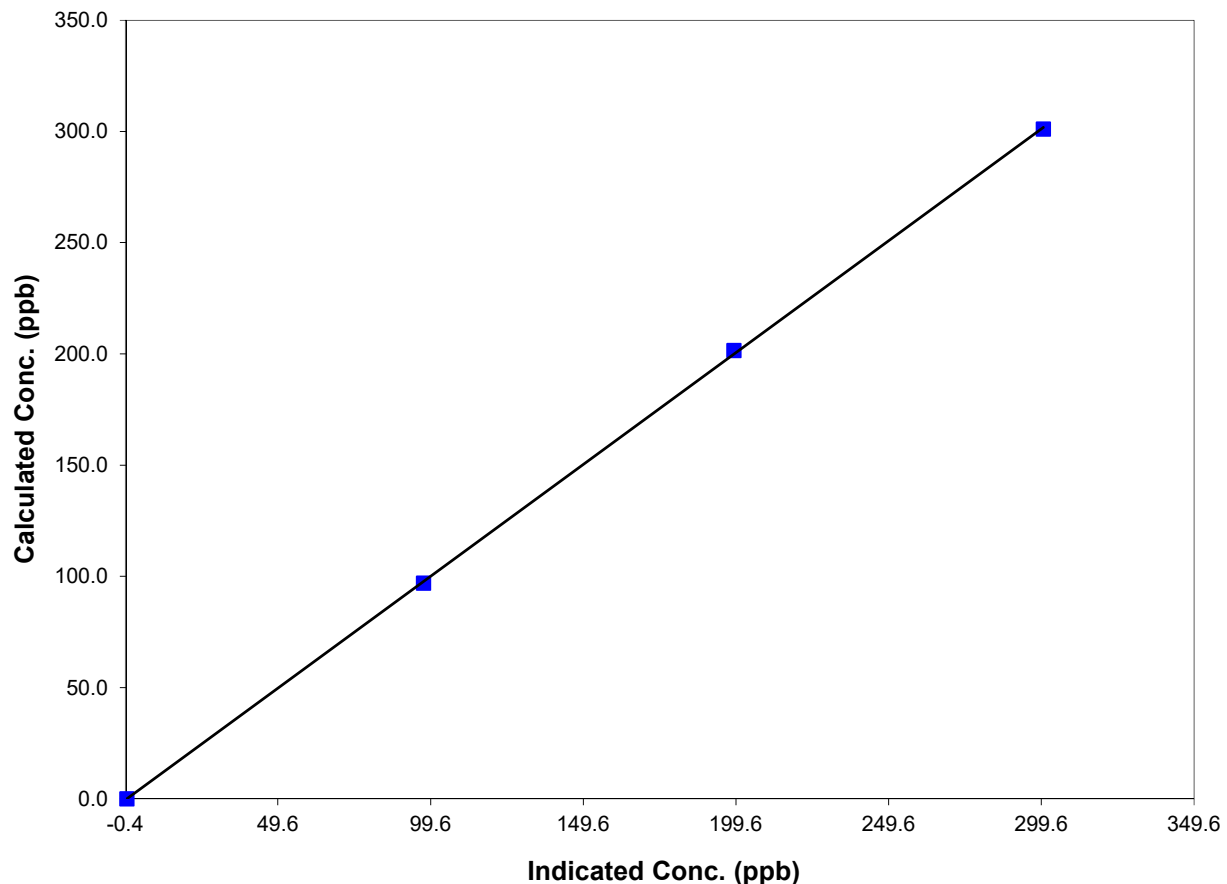
Station Information

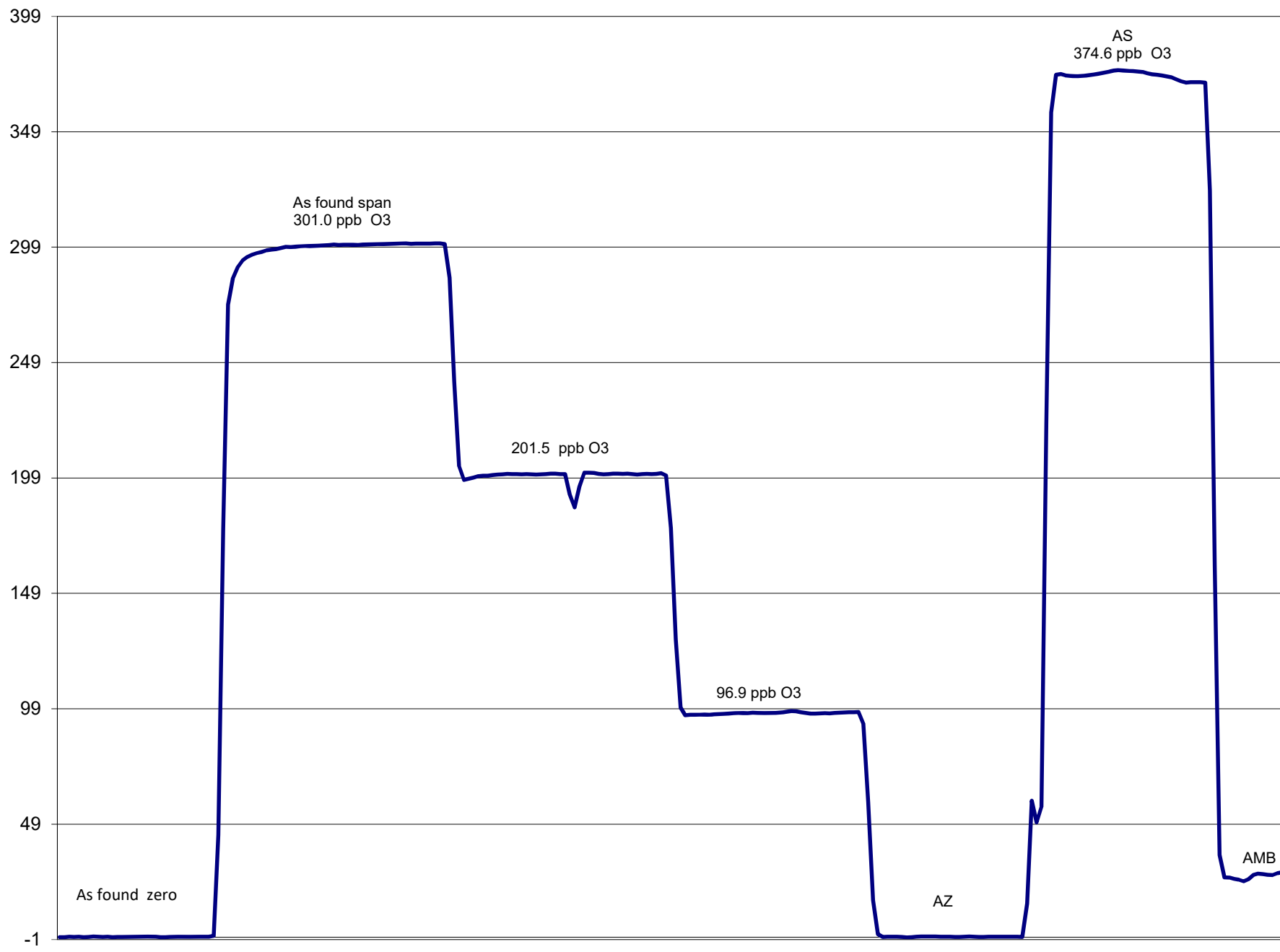
Calibration Date	August 2 2018	Previous Calibration	July 30 2018
Station Number	10	Station Location	Rycroft
Start Time (MST)	15:33:00 PM	End Time (MST)	17:40:00 PM
Analyzer make/model	TEI Model 49I	Analyzer serial #	49I-115363156

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	NA	Correlation Coefficient	0.999925
301.0	300.3	1.0024		
201.5	199.0	1.0128		
96.9	97.3	0.9960	Slope	1.005849
			Intercept	-0.217323

O3 Calibration Curve





August 2 2018

Calibration Report



Parameter CH4 / NMHC / THC

Air Monitoring Network PAZA

Station Information

Calibration Date	August 14, 2018	Previous Calibration	July 19, 2018
Station Number	1	Station Location	Rycroft
Reason:	Routine	Install	Removal
		Other:	

Start Time (MST)	9:35	End Time (MST)	13:15:00 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	2014-03-28
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	12.80	0.9931
2000	34.97	6.94	6.97	0.9964
2000	15.96	3.20	3.16	1.0113
2000	0.00	0.00	0.00	As Found Zero
2000	64.93	12.70	13.17	As Found Span
Average Correction Factor				1.0003

Calculated value of As Found Response: 13.174 ppm Percent Change of As Found: -3.7%

	Before		After
Calculated slope	0.999361	Calculated slope	0.991970
Calculated intercept	0.015447	Calculated intercept	0.025802

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.01	ppm
Auto span	8.03	ppm	8.02	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	17.27	1.0061
2000	34.97	9.50	9.36	1.0147
2000	15.96	4.38	4.21	1.0396
2000	0.00	0.00	0.00	As Found Zero
2000	64.93	17.38	17.25	As Found Span
Average Correction Factor				1.0201

Calculated value of As Found Response: 17.289 ppm Percent Change of As Found: 0.5%

	Before		After
Calculated slope	0.996473	Calculated slope	1.003977
Calculated intercept	0.101286	Calculated intercept	0.071489

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.00	ppm
Auto span	10.97	ppm	10.98	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	30.11	0.9996
2000	34.97	16.44	16.34	1.0062
2000	15.96	7.57	7.40	1.0235
2000	0.00	0.00	0.00	As Found Zero
2000	64.93	30.08	30.46	As Found Span
Average Correction Factor				1.0098

Calculated value of As Found Response: 30.479 ppm Percent Change of As Found: -1.3%

	Before		After
Calculated slope	0.997220	Calculated slope	0.998158
Calculated intercept	0.110608	Calculated intercept	0.090288

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.01	ppm	0.01	ppm
Auto span	19.00	ppm	18.99	ppm

Notes: Nitrogen cylinder replaced
Slight span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter CH4
Air Monitoring Network PAZA



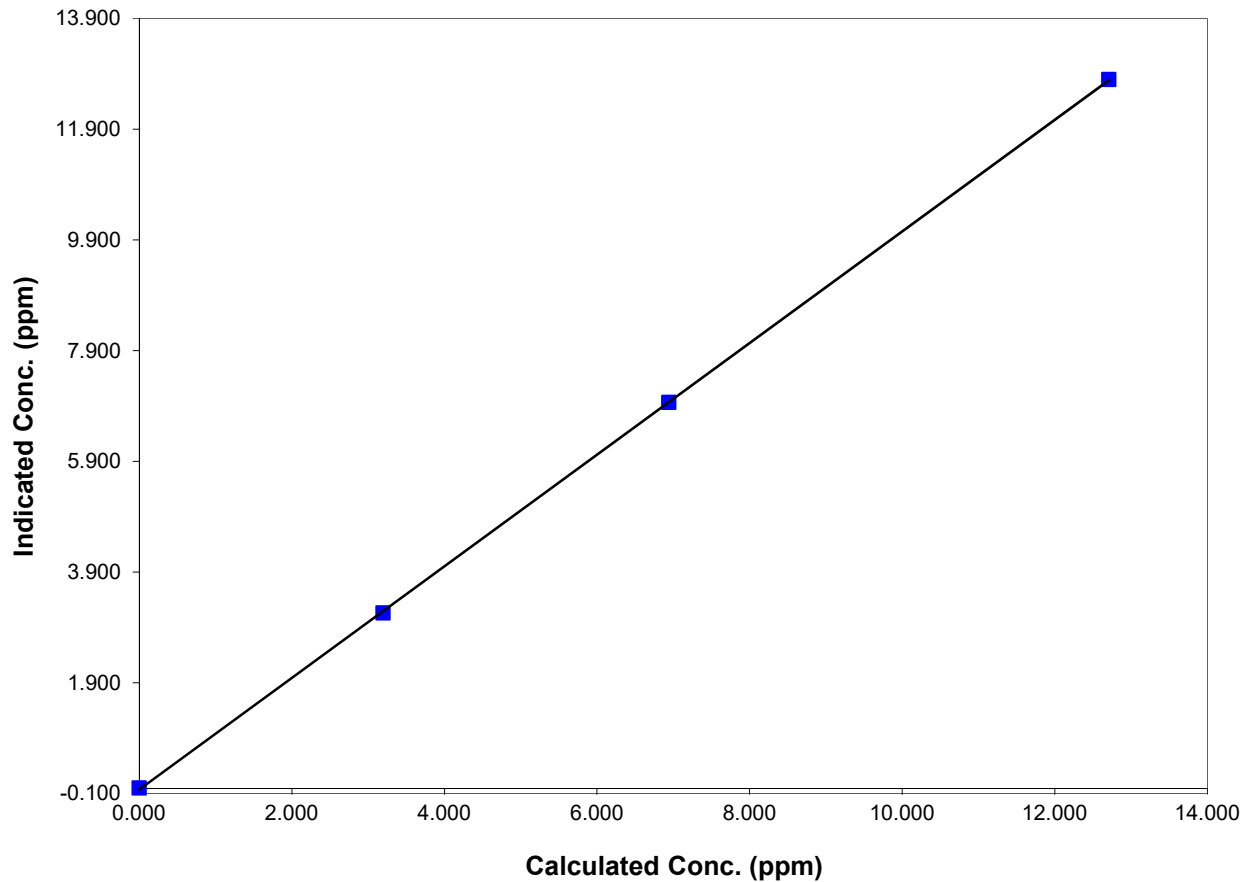
Station Information

Calibration Date	August 14, 2018	Previous Calibration	July 19, 2018
Station Number	1	Station Location	Rycroft
Start Time (MST)	9:35	End Time (MST)	13:15:00 PM
Analyzer make/model	TEI 55I-A3PHAA	Analyzer serial #	1151980005

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.003	N/A	Correlation Coefficient	0.999975
12.709	12.798	0.9931		
6.943	6.968	0.9964		
3.198	3.163	1.0113	Slope	0.991970
			Intercept	0.025802

CH4 Calibration Data



Calibration Summary

Parameter NMHC
Air Monitoring Network PAZA



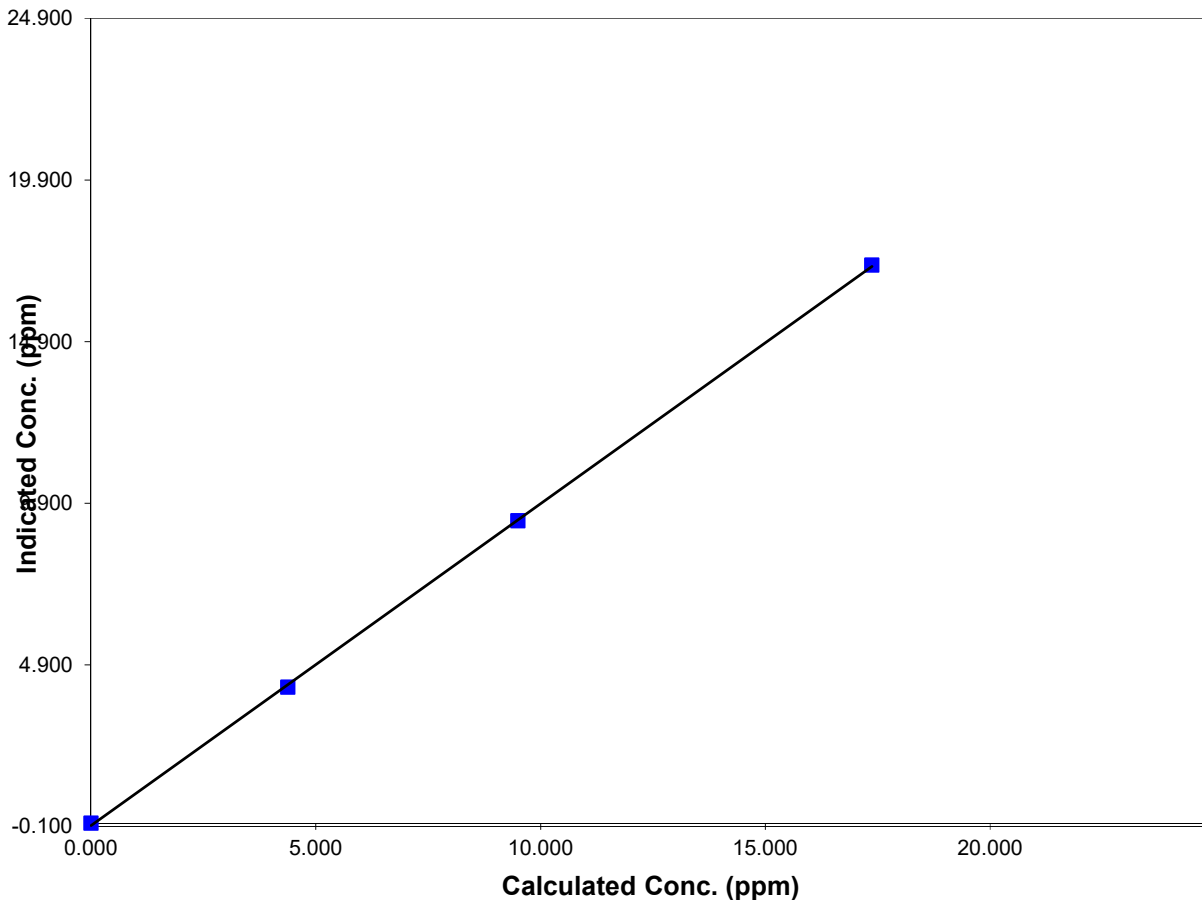
Station Information

Calibration Date	August 14, 2018	Previous Calibration	July 19, 2018
Station Number	1	Station Location	Rycroft
Start Time (MST)	9:35	End Time (MST)	13:15:00 PM
Analyzer make/model	TEI 55I-A3PHAA	Analyzer serial #	1151980005

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.001	N/A	Correlation Coefficient	0.999920
17.372	17.266	1.0061		
9.499	9.361	1.0147		
4.376	4.209	1.0396	Slope	1.003977
			Intercept	0.071489

NMHC Calibration Data



Calibration Summary

Parameter THC
Air Monitoring Network PAZA



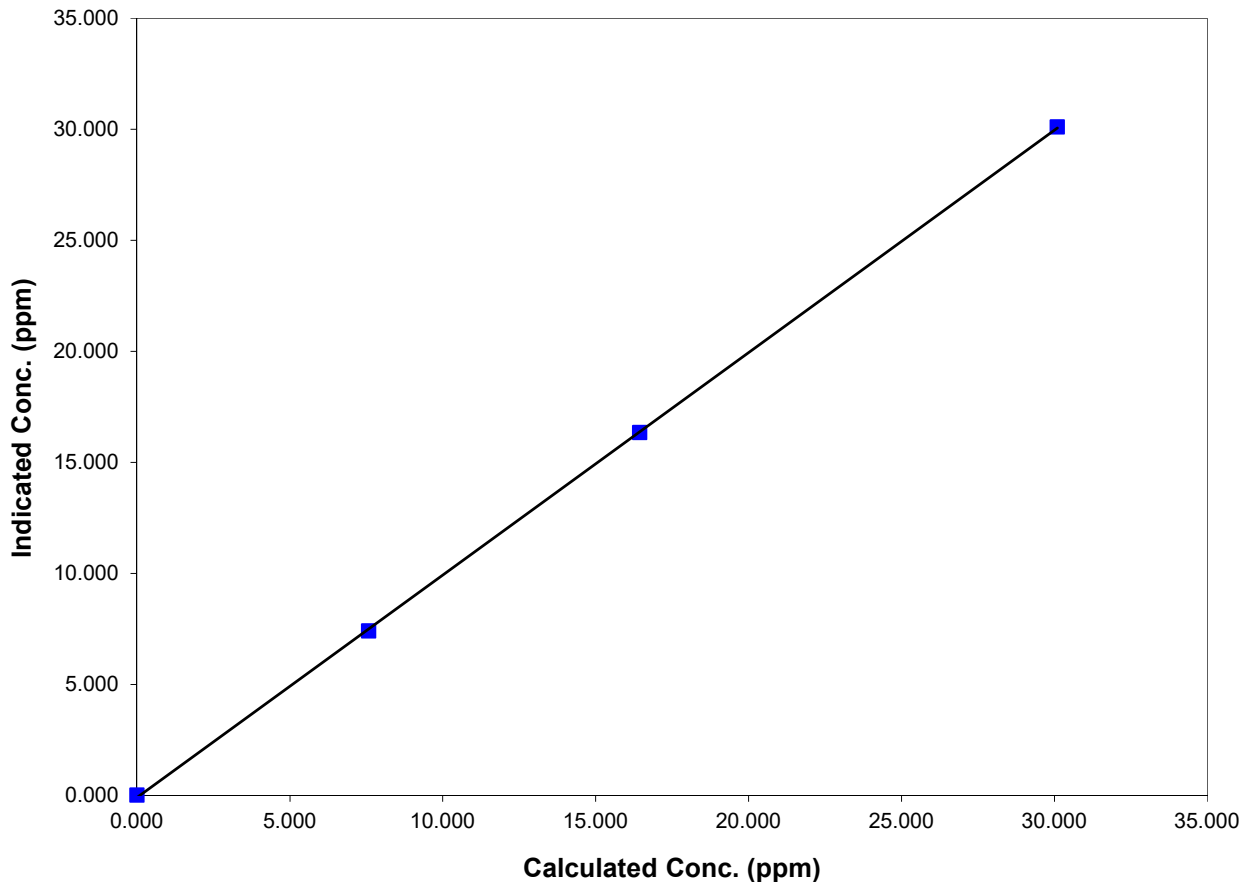
Station Information

Calibration Date	August 14, 2018	Previous Calibration	July 19, 2018
Station Number	1	Station Location	Rycroft
Start Time (MST)	9:35	End Time (MST)	13:15:00 PM
Analyzer make/model	TEI 55I-A3PHAA	Analyzer serial #	1151980005

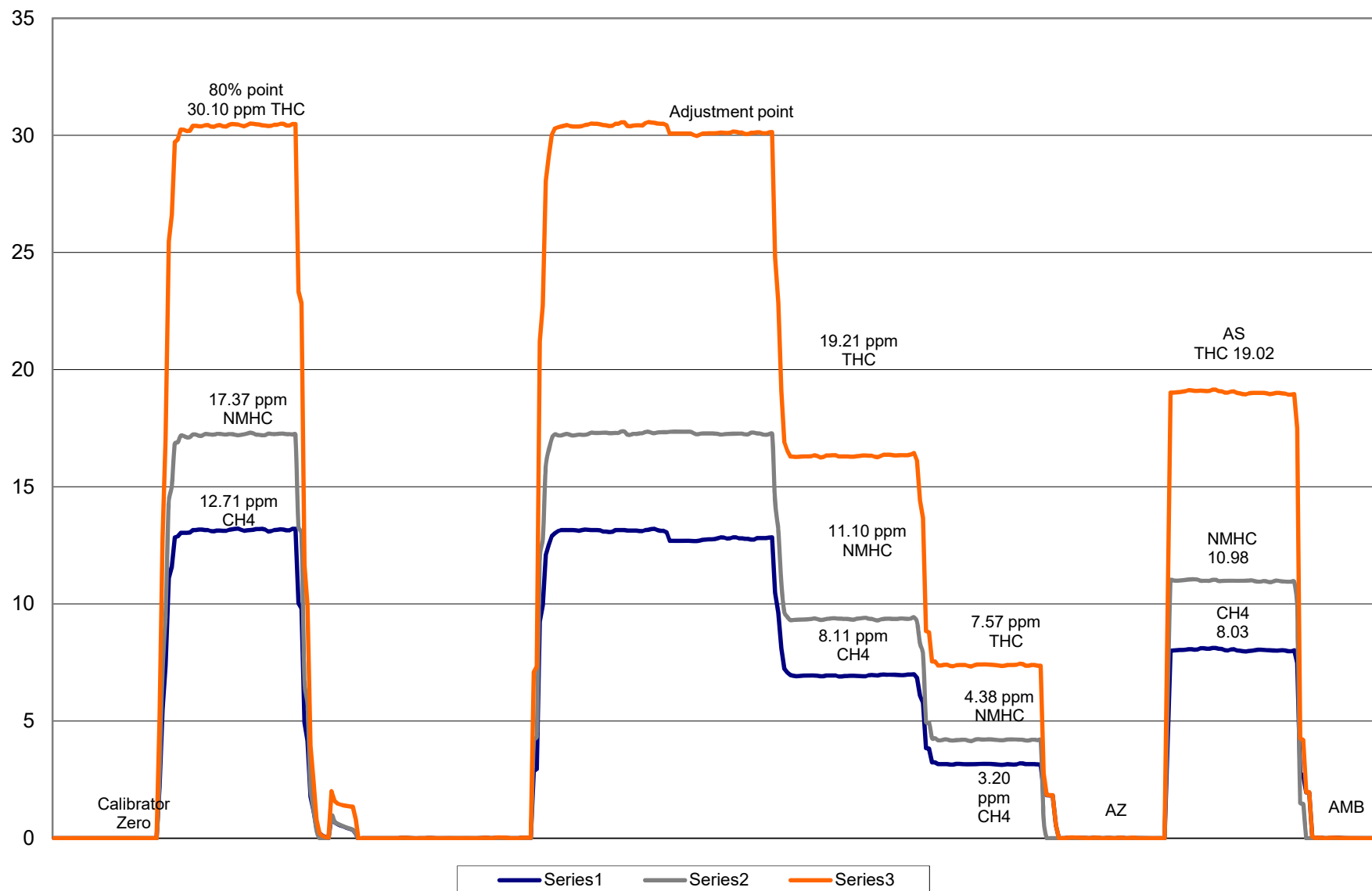
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.002	N/A	Correlation Coefficient	0.999957
30.098	30.109	0.9996		
16.441	16.341	1.0062		
7.574	7.400	1.0235	Slope	0.998158
			Intercept	0.090288

THC Calibration Data



THC/CH₄/NMHC Calibration



AB TEOM PM2.5 Calibration



STATION: **Rover-Rycroft**
 LOCATION: PAZA - Grande Prairie

OPERATOR: Dmytro Dolotii, Grover Christ
 DATE: 14-Aug-18

MONITOR INFO / PARAMETER VALUES:

Make/Model	TEOM AB
Configuration	PM2.5
Serial Number	140AB245710304
Site Number	10
Inlet Type	PM 10 / SCC
FAdj. Main Setting	1.000
FAdj. Aux. Setting	0.990
T-Case Indicated / Set Point	40/40
T-Air Indicated / Set Point	40/40
T-Cap Indicated / Set Point	40/40
Splitter Assembly Alignment (cm)	15.5
(vs. specified depth of 15.5 cm from top of flow tube to top of concentric 1/2 in. tube)	

RECENT CALIBRATION AND AUDIT HISTORY

Previous Audit	
Previous Calibration	10-Oct-17

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

* capacity test or pump on timed test utilized to verify pump integrity
 "FAIL" indicates that pump requires service.

LEAK CHECK	Indicated Flow (lpm)	
	Main	Auxiliary
PUMP ON	0.140	0.300
PUMP OFF	0.100	0.170
NET	0.040	0.130
LIMITS	<0.15	<0.60

	Ambient Temp. (° C)	Ambient Pres. (atm)	Ko *	Bypass flow (lpm)	Sample flow (lpm)
SET POINT (S)	na	na	12247	13.67	3.000
INDICATED (I)	26.4	0.921		13.68	3.000
MEASURED (AF)	25.3	0.922		13.38	3.280
MEASURED (M)	25.3	0.922	12276	13.68	3.140
DIFFERENCE (M-I)	-1.1	0.001	0.2%	0.01	0.14
LIMITS	± 2 ° C	± 0.005 atm	± 2.5 %	± 1.0 L/min	± 0.2 L/min

As Found Data
 Adjusted Data

Ko Audit Filter data Weight: 0.09687 Serial #: CVK 5445

COMMENTS: Pass
 Full audit was performed.
 Full hard calibration performed
 Flow adjustment made
 Cleaned the heads

Sample Head Inspection/Cleaning: Large In Line Filter Inspection & Or Cleaning:

Calibration Report



Parameter SO₂

Air Monitoring Network PAZA

Station Information

Calibration Date	August 29, 2018	Previous Calibration	July 27, 2018
Station Number	3	Station Location	Smokey Heights
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	12:20	End Time (MST)	14:20:00 PM
Barometric Pressure	0.924 ATM	Station Temperature	19.0 Deg C
Calibrator	Envionics 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
	Before		After
Calculated slope	1.002588	Calculated slope	1.001165
Calculated intercept	0.006665	Calculated intercept	-0.375629
Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	14.4		14.5	
coefficient	0.951		0.951	
Lamp Voltage	944	volts	945	volts
Chamber Temp	45.2	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	661.5	mm Hg	661.5	mm Hg
Sample Flow	0.445	lpm	0.445	lpm
Lamp Intensity	88	%	88	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
4996	0.0	0.00	1.2	N/A
4996	39.96	393.57	393.7	0.9996
4996	19.97	197.47	197.6	0.9992
4996	9.99	98.98	98.2	1.0084
4996	0.0	0.00	1.2	As Found Zero
4996	39.96	393.57	393.7	As Found Span
Average Correction Factor				1.0024

Calculated value of As Found Response: 393.591 ppb Percent Change of As Found: 0.0%

	before calibration		after calibration	
Auto zero	0.8	ppb	1.0	ppb
Auto span	208.9	ppb	213.2	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



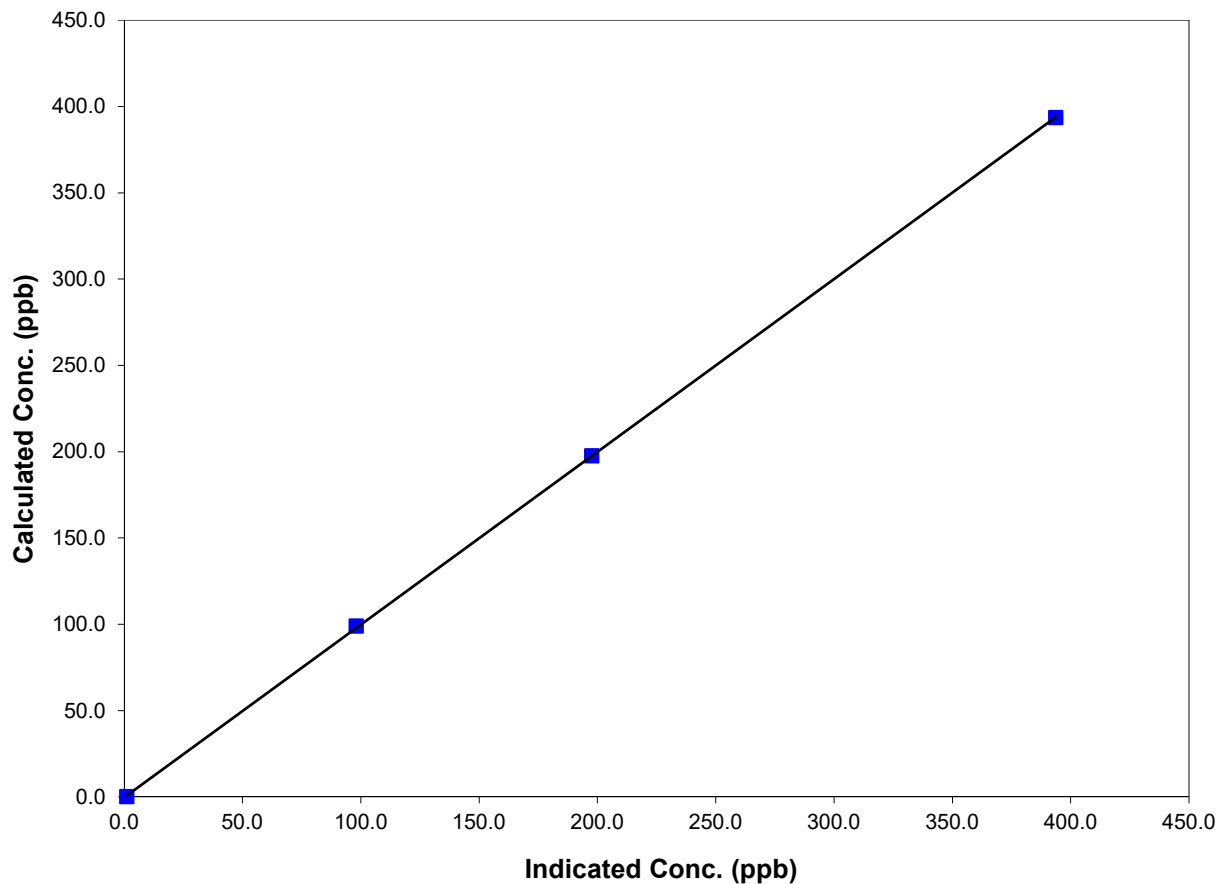
Station Information

Calibration Date	August 29, 2018	Previous Calibration	July 27, 2018
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	12:20	End Time (MST)	14:20:00 PM
Analyzer make/model	Teco 43i	Analyzer serial #	701120009

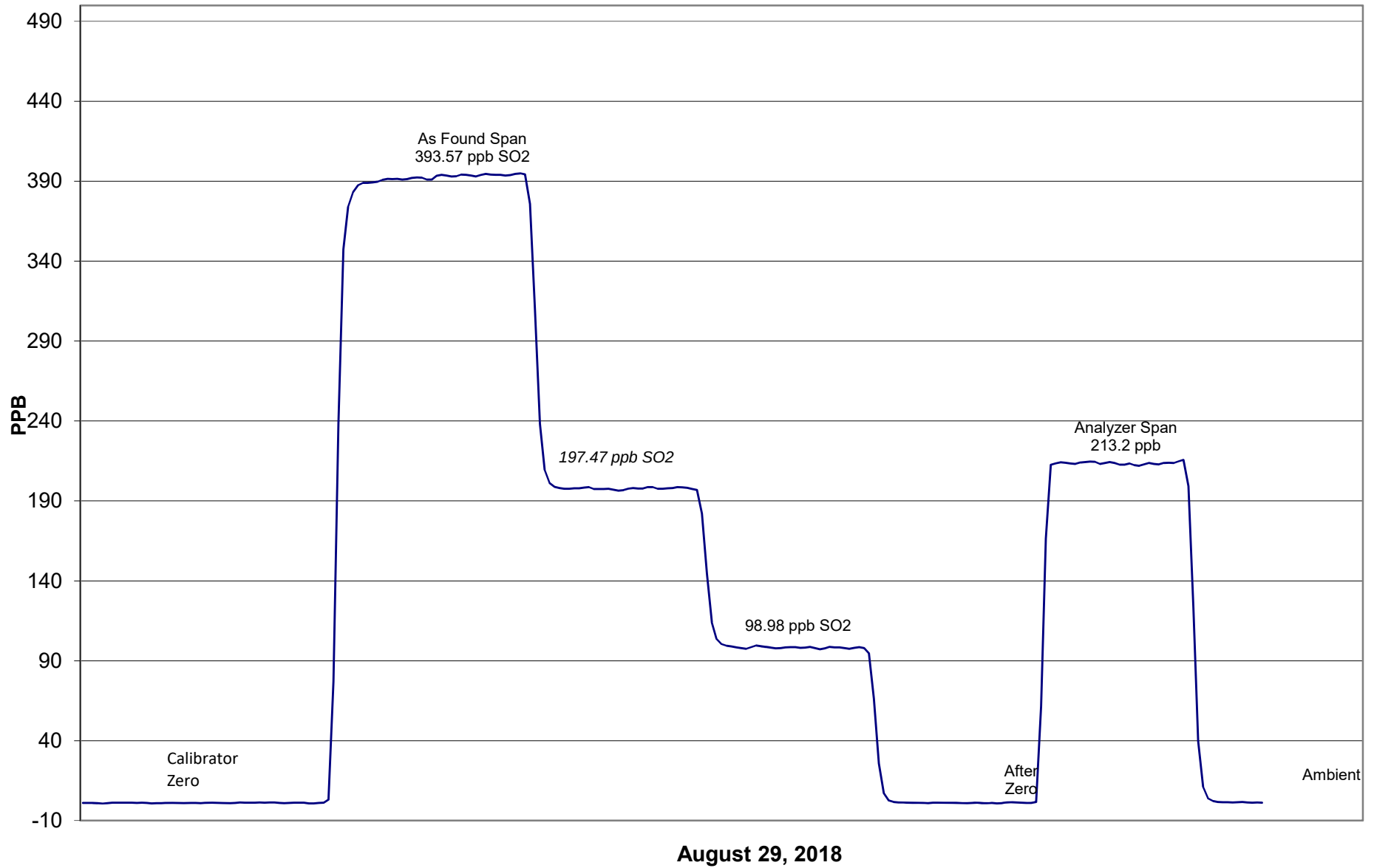
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	1.2	N/A	Correlation Coefficient	0.999978
393.6	393.7	0.9996		
197.5	197.6	0.9992		
99.0	98.2	1.0084	Slope	1.001165
			Intercept	-0.375629

SO2 Calibration Curve



Smokey Heights SO₂ Calibration



Calibration Report



Parameter TRS

Air Monitoring Network PAZA

Station Information

Calibration Date	August 29, 2018	Previous Calibration	July 27, 2018
Station Number	3	Station Location	Smokey Heights
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	10:00	End Time (MST)	13:25:00 AM
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	0.981456	Calculated slope	0.998855
Calculated intercept	0.290414	Calculated intercept	-0.184684

Analyzer make TEI Model 43I APSAA Analyzer serial # 1153630151

	before		after	
Concentration range	100	ppb	100	ppb
Background	15.3	ppb	14.5	ppb
coefficient	1.105		1.075	
Lamp Voltage	804	volts	803	volts
Chamber Temp	45.5	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	664.5	mm Hg	665.5	mm Hg
Sample Flow	0.414	lpm	0.414	lpm
Lamp Intensity	93	mv	91	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	0.6	N/A
4996	39.96	77.60	78.0	0.9951
4996	19.97	38.94	39.1	0.9960
6998	9.99	13.94	13.7	1.0156
4996	9.99			Sox test
4996	0.0	0.00	-0.1	As Found Zero
4996	39.96	77.60	73.6	As Found Span
Average Correction Factor				1.0022

Calculated value of As Found Response: 72.66 ppb Percent Change of As Found: 6.4%

	before calibration		after calibration	
Auto zero	0.0	ppb	0.3	ppb
Auto span	69.3	ppb	70.3	ppb

Notes: Zero/span adjustment
Sox scrubber replaced

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter TRS
Air Monitoring Network PAZA



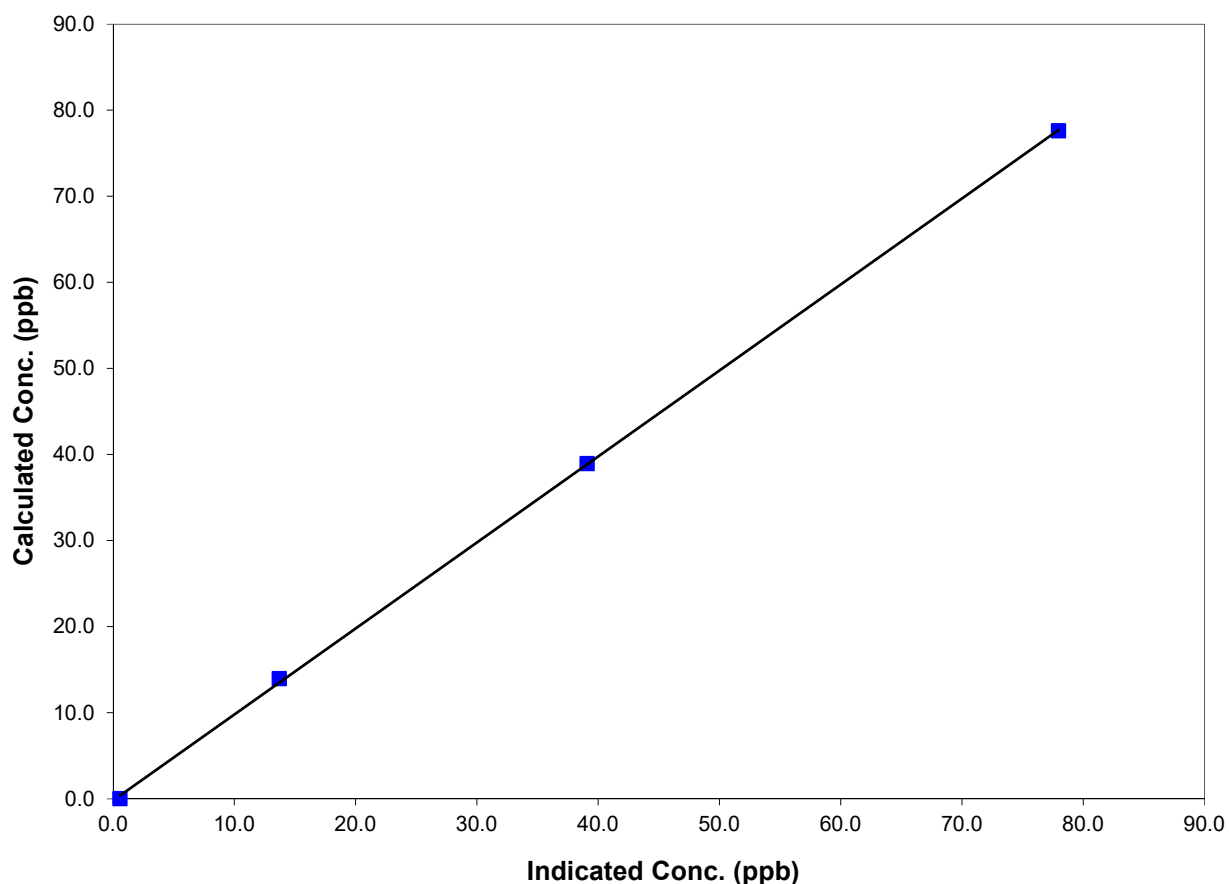
Station Information

Calibration Date	August 29, 2018	Previous Calibration	July 27, 2018
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	10:00	End Time (MST)	13:25:00 AM
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	0.6	N/A	Correlation Coefficient	0.999904
77.6	78.0	0.9951		
38.9	39.1	0.9960		
13.9	13.7	1.0156	Slope	0.998855
			Intercept	-0.184684

TRS Calibration Curve



Smokey Heights TRS Calibration



August 29, 2018

SHARP 5030 PM2.5 Calibration



Station: Smokey Heights
Location: Smokey Heights
Start Time (MST): 12:40

Operator: Dmytro Dolotii
Date: August 29 2017
End Time (MST): 14:20:00 PM

MONITOR INFO / PARAMETER VALUES:

Make/Model SHARP 5030
Configuration PM 2.5
AMU Number
Serial Number CM-0271

Audit Device Model Delta cal
AMU S/N AMU 1789
Serial Number 1612
Certification Date 01-Oct-15

AUDIT / CALIBRATION RESULTS:

	Ambient Temp. (°C)	Ambient Pres. (mbar)	RH (%)	Leak Check (l/min)	Flow Rate (lpm)	Foil Calibration (ug)	Nephelometer (ug)	Time settings (hh:mm)
Audit values (l)	17.0	926	23.0	16.67	16.67	6946	0.0	14:13
MEASURED (AF)	18.0	926	23.0	15.90	16.65	7007	0.2	14:14
AF Difference (AF-l)	1.0	0	0.0	-0.77	-0.02	61	0.2	0:01
MEASURED (M)	18.0	926	23.0	16.55	16.65	7007	0.2	14:14
Adj Difference (M-l)	1.0	0	0.0	-0.12	-0.02	0	0.2	0:01
LIMITS	± 4.0 °C	13.33 mbar(hPa)	± 2.0%	0.8 L/min	± 1.0 L/min	(+/-5%)	(<+/-2 ug/m3)	±2 min

Sample Head Inspect/Cleaning: Heads cleaned

Status of sampling tape: 70% roll

Nozzle Inspection / cleanliness: Clean

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

COMMENTS:

Adjusted temperature from 17 to 18 degrees

Calibration Report

Parameter SO2
Air Monitoring Network PAZA



Station Information

Calibration Date	August 15, 2018	Previous Calibration	July 26, 2018
Station Number	6	Station Location	Valleyview
Reason:	Routine	Install	Removal
Start Time (MST)	15:40:00 PM	End Time (MST)	17:35:00 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	1.004219	Calculated slope	1.004279
Calculated intercept	0.630645	Calculated intercept	0.287931
Analyzer make	TEI Model 43i - APSCB	Analyzer serial #	701120010

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	7		7	
Coefficient	0.831		0.831	
UV Lamp Voltage	793	LPM	792	LPM
Chamber Temp	45	V	45	V
Perm Gas Temp	45	C	45	C
Pressure	676.4	in Hg	681.8	in Hg
Sample Flow	0.456	LPM	0.460	LPM
Lamp Intensity	90	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	195.5	1.0063
4995	9.97	98.4	96.7	1.0172
4995	0.00	0.0	0.5	As found zero
4995	39.94	391.9	390.2	As found span
Average Correction Factor				1.0092

Calculated value of As Found Response: 392.0 ppb Percent Change of As Found: 0.0%

	before calibration		after calibration	
Auto zero	0.5	ppb	0.6	ppb
Auto span	261.9	ppb	264.7	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2
Air Monitoring Network PAZA



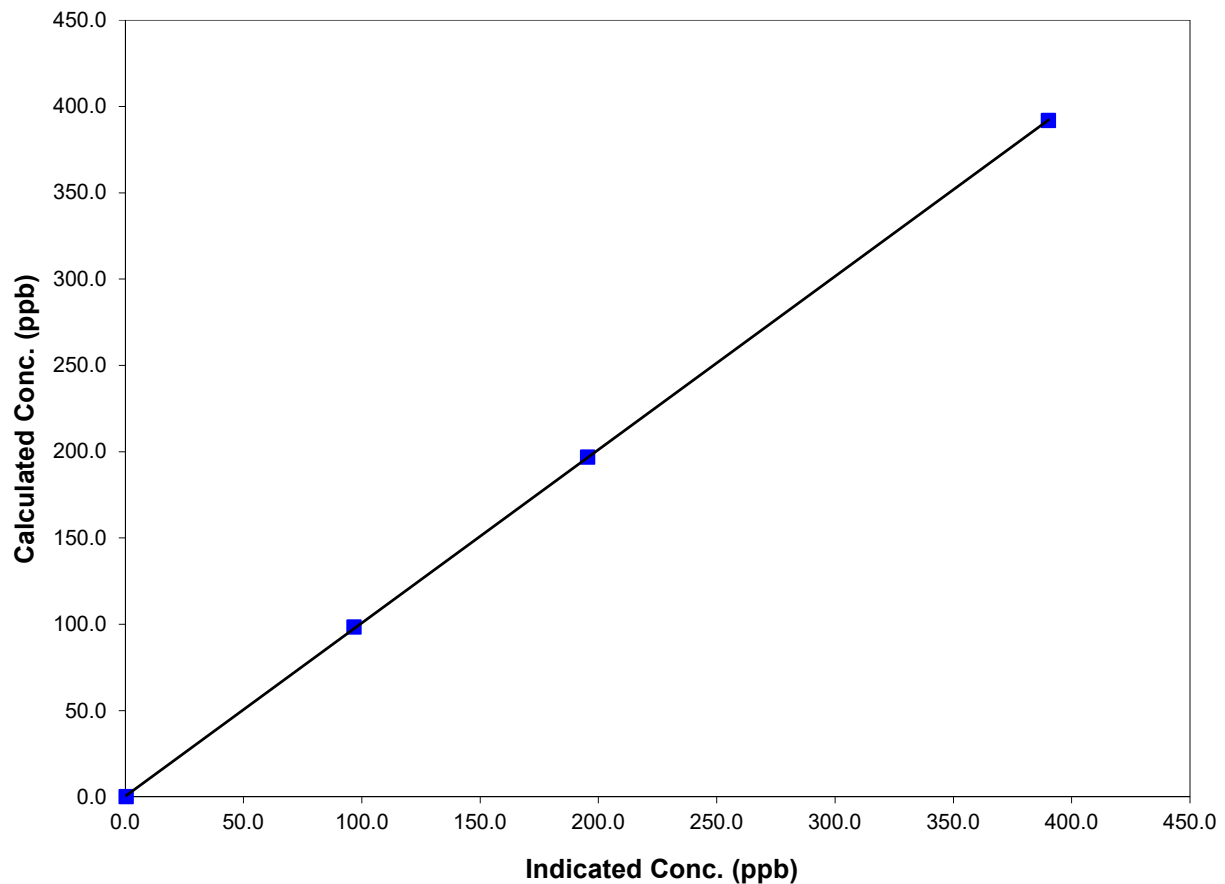
Station Information

Calibration Date	August 15, 2018	Previous Calibration	July 26, 2018
Station Number	6	Station Location	Valleyview
Start Time (MST)	15:40:00 PM	End Time (MST)	17:35:00 PM
Analyzer make/model	TEI Model 43i - APSCB	Analyzer serial #	701120010

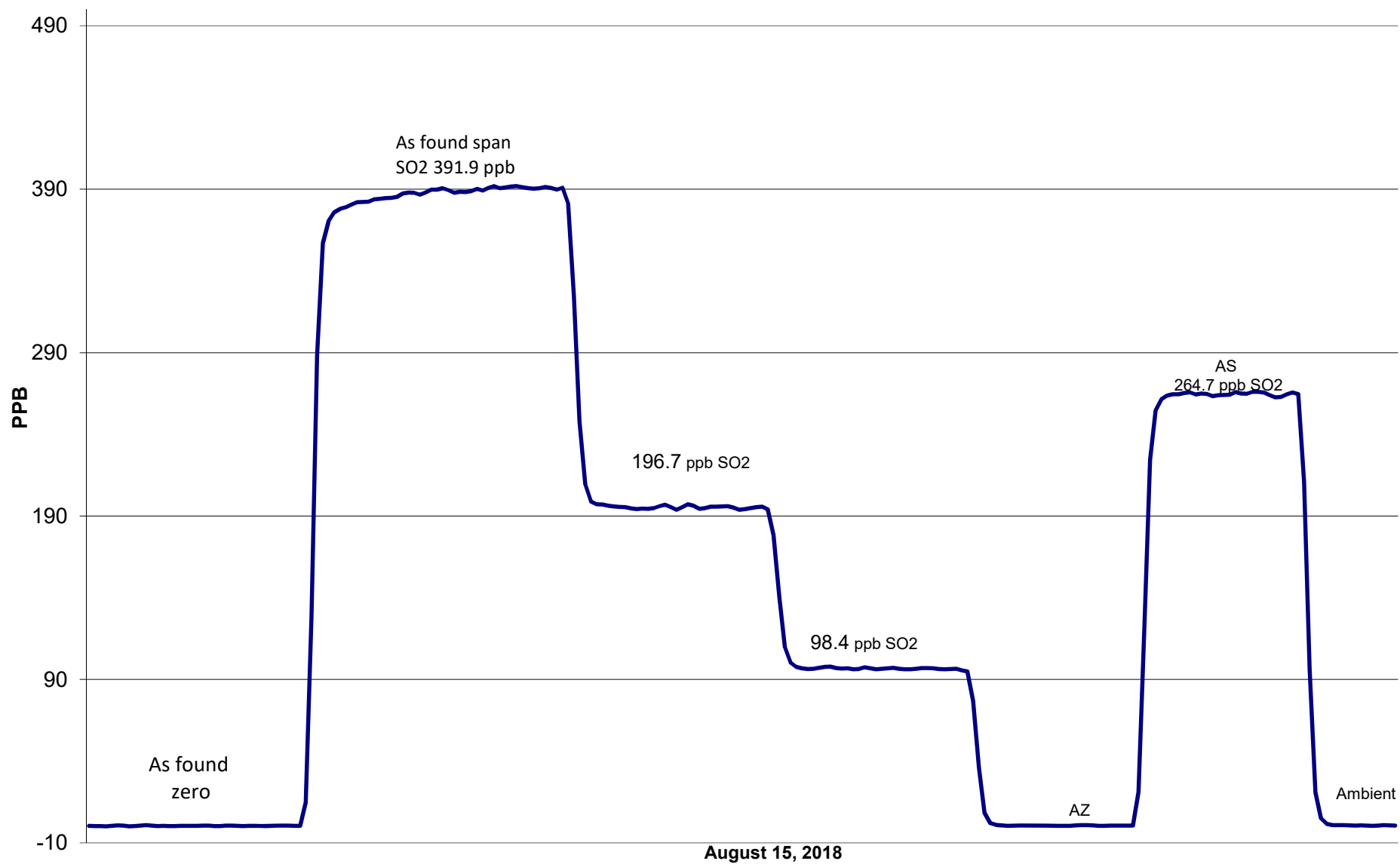
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A	Correlation Coefficient	0.999981
391.9	390.2	1.0043		
196.7	195.5	1.0063		
98.4	96.7	1.0172	Slope	1.004279
			Intercept	0.287931

SO2 Calibration Curve



SO2 Calibration



Calibration Report



Parameter H2S

Air Monitoring Network PAZA

Station Information

Calibration Date	August 15, 2018	Previous Calibration	July 22, 2018
Station Number	6	Station Location	Valleyview
Reason:	Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	13:15:00 PM	End Time (MST)	16:45:00 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	2021-03-19
Gas Cert Reference	EY0000943		
DACS make	CR3000	DACS serial No.	5409
DACS voltage range	0 - 5 volt	DACS channel #	9
	<u>Before</u>		<u>After</u>
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.006270	Calculated slope	0.996910
Calculated intercept	0.192037	Calculated intercept	0.038378
Analyzer make	TEI Model 450i-APHAA	Analyzer serial #	1170050144

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	13.6	ppb	15.0	ppb
Coefficient	1.052		0.989	
Lamp Voltage	752	V	764	V
Chamber Temp	45.1	c	45.1	c
Convertor	325.6	c	326.9	c
Pressure	564.00	mm Hg	489.60	mm Hg
Sample Flow	0.925	ccm	0.808	lpm
Lamp Intensity	88	%	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	0.2	N/A
4995	39.94	77.6	77.9	0.9961
4995	19.97	38.9	38.9	1.0010
6995	9.97	13.9	13.7	1.0159
4995	0.00	0.0	1.7	As found zero
4995	39.94	77.6	77.6	As found span
Average Correction Factor				1.0044

Calculated value of As Found Response: 76.58 ppb Percent Change of As Found: 1.3%

	before calibration		after calibration	
Auto zero	-0.1	ppb	0.2	ppb
Auto span	66.8	ppb	82.5	ppb

Notes: Lamp voltage adjusted
Zero/span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter H2S

Air Monitoring Network PAZA



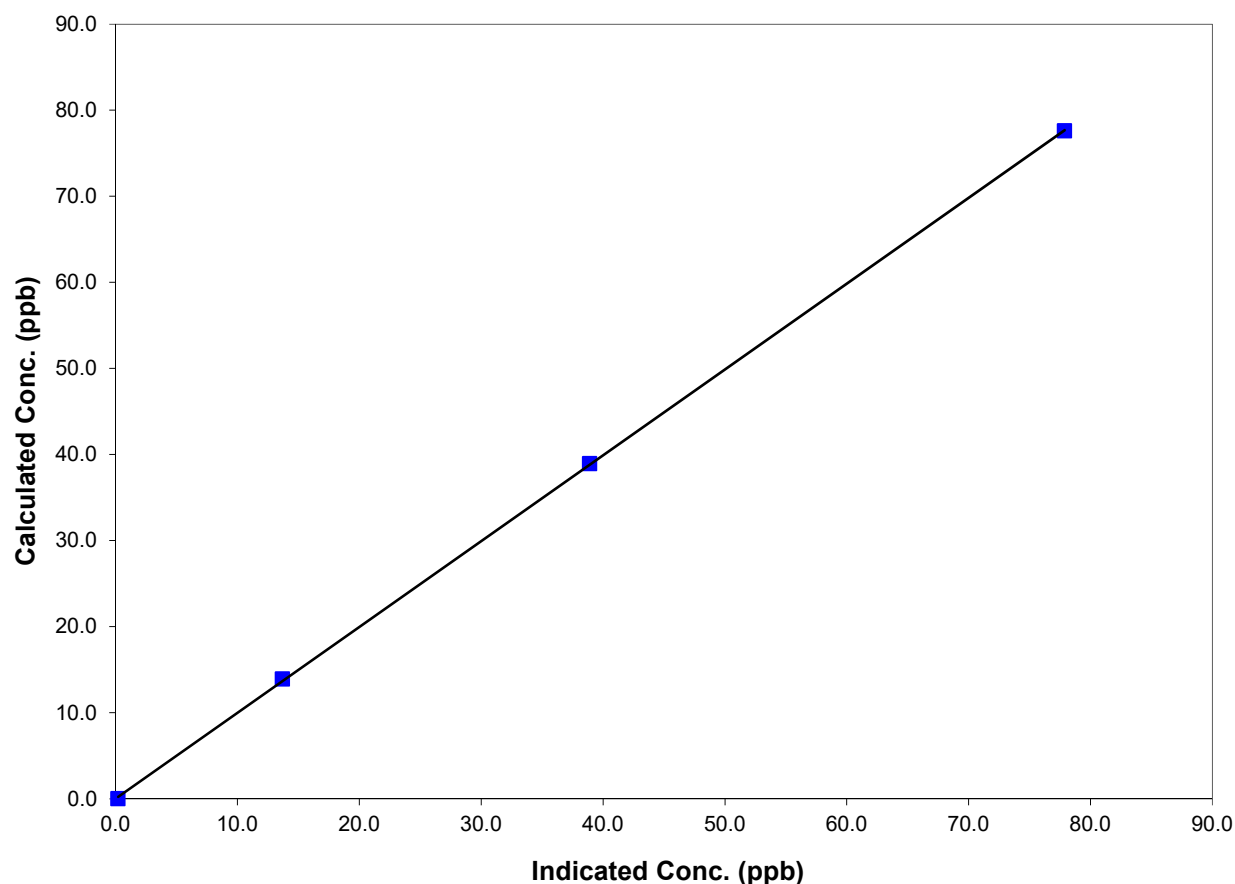
Station Information

Calibration Date	August 15, 2018	Previous Calibration	July 22, 2018
Station Number	6	Station Location	Valleyview
Start Time (MST)	13:15:00 PM	End Time (MST)	16:45:00 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	0.2	N/A	Correlation Coefficient	0.999961
77.6	77.9	0.9961		
38.9	38.9	1.0010		
13.9	13.7	1.0159	Slope	0.996910
			Intercept	0.038378

H2S Calibration Curve



H2S Calibration

