



Peace Airshed Zone Association

Ambient Air Monitoring Network Summary

**Ambient Air Quality Monitoring Program
Monthly Report
September 2018**

October 31, 2018

Alberta Environment and Parks

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

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

Enclosed is the PAZA Ambient Monitoring Network Report for the month of September 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 passive monitoring and continuous monitoring programs, 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 September, the following events were noted:

Beaverlodge Station:

- ◆ The measured ambient air quality was within the AAAQO for the Beaverlodge station.
- ◆ The RH sensor malfunctioned, returning an uptime of 11.3%. All other analyzers and meteorological sensors at the Beaverlodge station had an operational uptime greater than 90% for the month of September.

Evergreen Park Station:

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

Henry Pirker Station:

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

Smoky Heights Station:

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

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 September.

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 September.

Rycroft-Portable Station:

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

Passive Monitoring - 27 Stations throughout the PAZA zone:

There were six duplicate sites sampled in the month of September: Forth Creek and Clouston Creek (SO_2), Kinuso (O_3), Smoky Heights and Little Smoky (NO_2), and Griouxville 4 (H_2S). 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 SO_2 passives ranged from 0.1 ppb to 0.3 ppb, with a mean of 0.1 ppb.
- Monthly average concentrations for NO_2 passives ranged from 0.1 ppb to 3.8 ppb, with a mean of 0.9 ppb.
- Monthly average concentrations for O_3 passives ranged from 23.0 ppb to 23.6 ppb, with a mean of 23.3 ppb.
- Monthly average concentrations for H_2S passives ranged from 0.1 to 0.2 ppb, with a mean of 0.1 ppb.

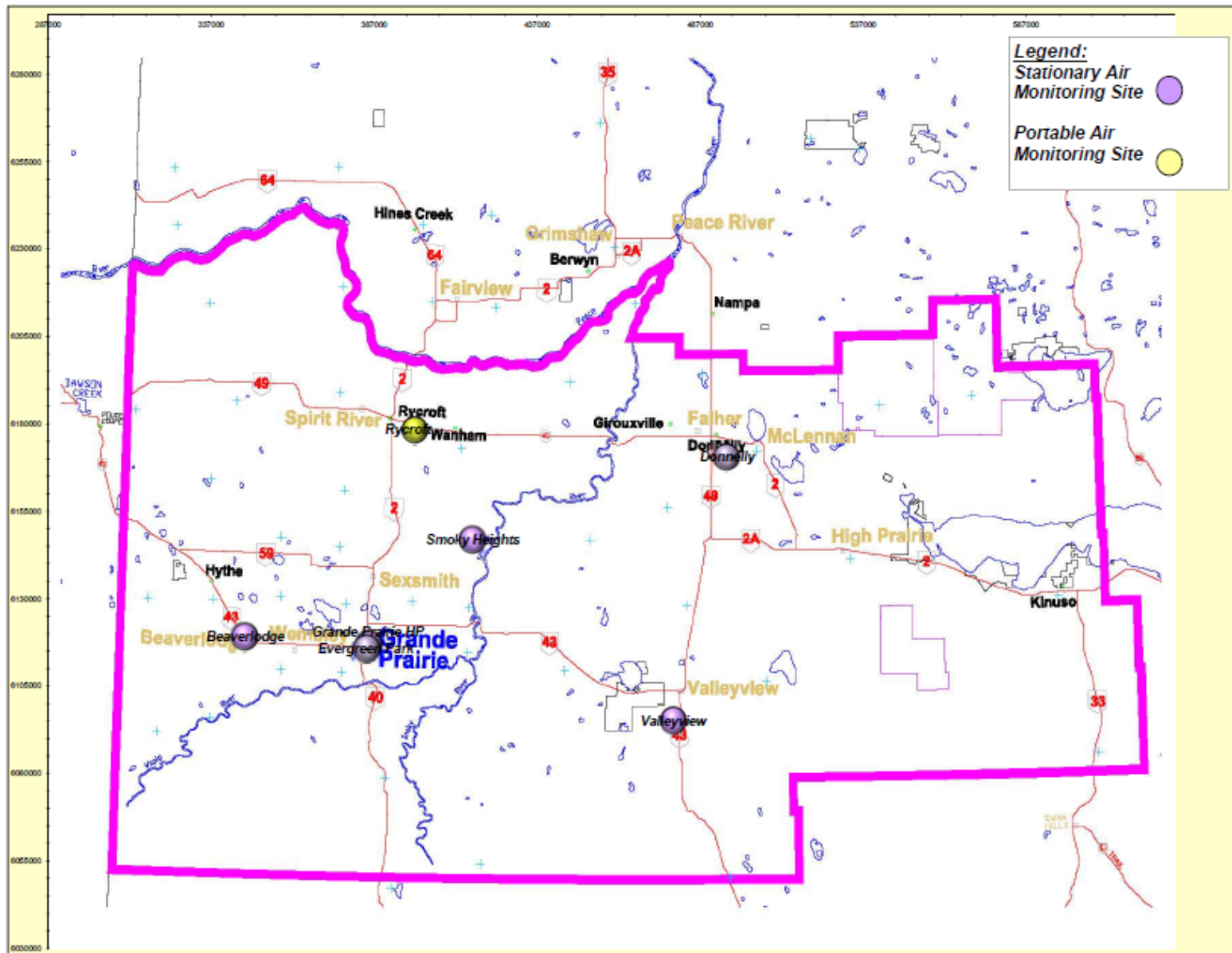
If you have any questions or concerns, please contact Mandeep Dhaliwal at 403.608.9697 or the PAZA office at 780.833.4343.

On Behalf of the Peace Airshed Zone Association



Mandeep Dhaliwal, B.Sc., P.Chem.
Technical Manager

Location of PAZA Continuous Monitoring Stations



PAZA Monthly Continuous Data Summary

Sep-2018 Peace Airshed Zone Association									Maximum Recorded Values					
Parameter (units)	Objectives			Station	Monthly Average	Exceedence			1-hr		24-hr / 8-hr		Operational Time (%)	Calibration Date
	1-hr	24-hr	30-day			1-hr	24-hr	30-day	Conc	Day	Conc	Day		
SO ₂ (ppb)	172	48	8	Beaverlodge	0.1	0	0	0	3.0	Sep-19 12:00	0.3	Sep-19	100.0	Sep-11
NO (ppb)				Beaverlodge	0.4	0	0	-	13.7	Sep-07 09:00	2.7	Sep-07	99.6	Sep-06
NO ₂ (ppb)	159	106		Beaverlodge	2.4	0	0	-	10.0	Sep-07 06:00	5.2	Sep-07	99.6	Sep-06
NO _x (ppb)				Beaverlodge	2.8	0	0	-	19.8	Sep-07 09:00	7.9	Sep-07	99.6	Sep-06
O ₃ (ppb)	82			Beaverlodge	18.2	0	0	-	36.4	Sep-24 13:00	28.3	Sep-24	100.0	Sep-06
O ₃ (ppb) - 8-hr				Beaverlodge		0					34.8	Sep-25		-
PM _{2.5} (µg/m3)	80	30		Beaverlodge	4.9	0	0	-	41.5	Sep-02 13:00	23.5	Sep-02	100.0	Aug-08
RH (%)				Beaverlodge	74.1	-	-	-	95.7	Sep-04 02:00	79.2	Sep-03	11.3	-
Temp (°C)				Beaverlodge	5.2	-	-	-	20.5	Sep-07 17:00	12.4	Sep-07	100.0	-
WSPD s (km/hr)				Beaverlodge	9.6	-	-	-	39.0	Sep-25 17:00	16.4	Sep-25	100.0	-
WSPD v (km/hr)				Beaverlodge	1.9	-	-	-	39.3	Sep-25 17:00	14.1	Sep-01	100.0	-
WDIR				Beaverlodge	N	-	-	-	-	-	-	-	100.0	-

Parameter	Analyzer		Notes
	Make	Model	
SO ₂			
NO/NO ₂ /NO _x			NO _x used to check calibrator Sep 26
O ₃			
THC/CH ₄ /NMHC			
PM _{2.5}			
ET/RH			RH probe failed to return valid data
WS/WD			

Sep-2018 Peace Airshed Zone Association									Maximum Recorded Values					
Parameter (units)	Objectives			Station	Monthly Average	Exceedence			1-hr		24-hr / 8-hr		Operational Time (%)	Calibration Date
	1-hr	24-hr	30-day			1-hr	24-hr	30-day	Conc	Day	Conc	Day		
SO ₂ (ppb)	172	48	8	Evergreen Park	0.1	0	0	0	2.6	Sep-04 14:00	0.3	Sep-04	100.0	Sep-27
TRS (ppb)				Evergreen Park	0.4	-	-	-	1.5	Sep-06 15:00	0.5	Sep-08	100.0	Sep-27
PM _{2.5} (µg/m3)	80	30		Evergreen Park	2.4	0	0	-	38.3	Sep-02 13:00	18.8	Sep-02	100.0	Sep-27
RH (%)				Evergreen Park	79.2	-	-	-	99.0	Sep-28 10:00	94.5	Sep-16	100.0	-
Temp (°C)				Evergreen Park	5.4	-	-	-	20.3	Sep-07 17:00	13.2	Sep-07	100.0	-
WSPD s (km/hr)				Evergreen Park	7.8	-	-	-	37.0	Sep-01 01:00	20.3	Sep-01	100.0	-
WSPD v (km/hr)				Evergreen Park	2.0	-	-	-	36.3	Sep-01 01:00	18.4	Sep-01	100.0	-
WDIR				Evergreen Park	WNW	-	-	-	-	-	-	-	100.0	-

Parameter	Analyzer		Notes
	Make	Model	
SO ₂			
TRS			
PM _{2.5}			
ET/RH			
WS/WD			

Sep-2018 Peace Airshed Zone Association									Maximum Recorded Values					
Parameter (units)	Objectives			Station	Monthly Average	Exceedence			1-hr		24-hr / 8-hr		Operational Time (%)	Calibration Date
	1-hr	24-hr	30-day			1-hr	24-hr	30-day	Conc	Day	Conc	Day		
SO ₂ (ppb)	172	48	8	Henry Pirker	0.3	0	0	0	22.9	Sep-12 13:00	1.0	Sep-12	100.0	Sep-21
TRS (ppb)				Henry Pirker	0.1	-	-	-	0.7	Sep-23 07:00	0.3	Sep-05	100.0	Sep-12
NO (ppb)				Henry Pirker	1.8	0	0	-	48.1	Sep-14 07:00	8.6	Sep-19	100.0	Sep-11
NO ₂ (ppb)	159	106		Henry Pirker	5.0	0	0	-	28.0	Sep-19 21:00	9.3	Sep-19	100.0	Sep-11
NO _x (ppb)				Henry Pirker	7.0	0	0	-	68.2	Sep-14 07:00	18.0	Sep-19	100.0	Sep-11
O ₃ (ppb)	82			Henry Pirker	17.0	0	0	-	39.6	Sep-07 18:00	26.3	Sep-24	100.0	Sep-11
O ₃ (ppb) - 8-hr				Henry Pirker		0					35.9	Sep-24		-
CO (ppm)	13			Henry Pirker	0.16	0	0	-	0.6	Sep-19 21:00	0.3	Sep-02	100.0	Sep-12
CO (ppm) - 8-hr	5			Henry Pirker		0					0.4	Sep-02		-
THC (ppm)				Henry Pirker	2.0	-	-	-	4.7	Sep-23 07:00	2.2	Sep-23	90.3	Sep-15
CH ₄ (ppm)				Henry Pirker	2.0	-	-	-	4.7	Sep-23 07:00	2.2	Sep-23	90.3	Sep-15
NMHC (ppm)				Henry Pirker	0.0	-	-	-	0.1	Sep-29 03:00	0.0	Sep-29	90.3	Sep-15
PM _{2.5} (µg/m3)	80	30		Henry Pirker	4.0	0	0	-	46.8	Sep-02 14:00	25.6	Sep-02	100.0	Jun-11
RH (%)				Henry Pirker	70.7	-	-	-	89.9	Sep-08 03:00	83.1	Sep-16	100.0	-
SR (W/m ²)				Henry Pirker	93.3	-	-	-	644.7	Sep-04 14:00	210.8	Sep-04	100.0	-
Temp (°C)				Henry Pirker	6.2	-	-	-	21.7	Sep-07 17:00	14.7	Sep-07	100.0	-
WSPD s (km/hr)				Henry Pirker	5.7	-	-	-	27.0	Sep-08 15:00	13.0	Sep-08	100.0	-
WSPD v (km/hr)				Henry Pirker	1.1	-	-	-	26.3	Sep-08 15:00	11.9	Sep-08	100.0	-
WDIR				Henry Pirker	NW	-	-	-	-	-	-	-	100.0	-

Parameter	Analyzer		Notes
	Make	Model	
SO ₂			Analyzer motherboard replaced September 21
TRS			
NO/NO ₂ /NO _x			
O ₃			
CO			
THC/CH ₄ /NMHC			Analyzer high-point response during calibration period on Sep 12 unsatisfactory. Maintenance performed Sep 12 and 14, placed into column conditioning and calibrated Sep 15
PM _{2.5}			
ET/RH			
WS/WD			

Sep-2018Peace Airshed Zone Association									Maximum Recorded Values					
									1-hr		24-hr / 8-hr			
Parameter (units)	Objectives			Station	Monthly Average	Exceedence			Conc	Day	Conc	Day	Operational Time (%)	Calibration Date
	1-hr	24-hr	30-day			1-hr	24-hr	30-day						
SO ₂ (ppb)	172	48	8	Smoky Heights	0.2	0	0	0	6.4	Sep-26 01:00	0.8	Sep-26	100.0	Sep-26
TRS (ppb)				Smoky Heights	0.4	-	-	-	2.2	Sep-07 21:00	0.7	Sep-07	100.0	Sep-26
PM _{2.5} (µg/m3)	80	30		Smoky Heights	3.6	0	0	-	54.2	Sep-07 21:00	23.3	Sep-02	100.0	Aug-29
Temp (°C)				Smoky Heights	5.2	-	-	-	19.1	Sep-07 17:00	13.9	Sep-07	100.0	-
WSPD s (km/hr)				Smoky Heights	9.3	-	-	-	33.0	Sep-08 14:00	19.1	Sep-01	100.0	-
WSPD v (km/hr)				Smoky Heights	2.6	-	-	-	32.2	Sep-08 14:00	17.2	Sep-01	100.0	-
WDIR				Smoky Heights	WNW	-	-	-	-	-	-	-	100.0	-

Parameter	Analyzer		Notes
	Make	Model	
SO ₂			
TRS			
PM _{2.5}			
ET/RH			
WS/WD			

Sep-2018Peace Airshed Zone Association									Maximum Recorded Values						
									1-hr			24-hr / 8-hr			
Parameter (units)	Objectives			Station	Monthly Average	Exceedence			Conc	Day		Conc	Day	Operational Time (%)	Calibration Date
	1-hr	24-hr	30-day			1-hr	24-hr	30-day							
SO ₂ (ppb)	172	48	8	Valleyview	0.4	0	0	0	14.7	Sep-26 18:00	3.4	Sep-26	100.0	Sep-24	
H ₂ S (ppb)	10	3		Valleyview	0.1	0	0	-	1.1	Sep-27 05:00	0.4	Sep-14	100.0	Sep-24	
RH (%)				Valleyview	82.6	-	-	-	100.0	Sep-01 22:00	98.2	Sep-16	100.0	-	
Temp (°C)				Valleyview	8.7	-	-	-	23.7	Sep-07 15:00	16.8	Sep-07	100.0	-	
WSPD s (km/hr)				Valleyview	3.9	-	-	-	18.0	Sep-11 20:00	9.2	Sep-01	100.0	-	
WSPD v (km/hr)				Valleyview	1.7	-	-	-	18.0	Sep-11 20:00	8.4	Sep-01	100.0	-	
WDIR				Valleyview	NW	-	-	-	-	-	-	-	100.0	-	

Parameter	Analyzer		Notes
	Make	Model	
SO ₂			
H ₂ S			
ET/RH			
WS/WD			

Sep-2018 Peace Airshed Zone Association									Maximum Recorded Values					
Parameter (units)	Objectives			Station	Monthly Average	Exceedence			1-hr		24-hr / 8-hr		Operational Time (%)	Calibration Date
	1-hr	24-hr	30-day			1-hr	24-hr	30-day	Conc	Day	Conc	Day		
SO ₂ (ppb)	172	48	8	Donnelly	0.1	0	0	0	2.7	Sep-22 11:00	0.3	Sep-22	96.5	Sep-25
H ₂ S (ppb)	10	3		Donnelly	0.2	0	0	-	1.6	Sep-27 08:00	0.5	Sep-27	96.5	Sep-25
Temp (°C)				Donnelly	5.2	-	-	-	19.7	Sep-07 14:00	10.8	Sep-05	96.5	-
WSPD s (km/hr)				Donnelly	8.3	-	-	-	26.0	Sep-25 16:00	17.6	Sep-01	96.5	-
WSPD v (km/hr)				Donnelly	8.0	-	-	-	25.6	Sep-25 16:00	17.1	Sep-01	96.5	-
WDIR				Donnelly	W	-	-	-	-	-	-	-	96.5	-

Parameter	Analyzer		Notes
	Make	Model	Power outage Sep 6-7
SO ₂			
H ₂ S			
ET/RH			
WS/WD			

Sep-2018 Peace Airshed Zone Association									Maximum Recorded Values					
Parameter (units)	Objectives			Station	Monthly Average	Exceedence			1-hr		24-hr / 8-hr		Operational Time (%)	Calibration Date
	1-hr	24-hr	30-day			1-hr	24-hr	30-day	Conc	Day	Conc	Day		
SO ₂ (ppb)	172	48	8	Rycroft-Portable	0.1	0	0	0	1.6	Sep-04 13:00	0.3	Sep-01	100.0	Sep-19
TRS (ppb)				Rycroft-Portable	0.3	-	-	-	3.5	Sep-24 20:00	0.6	Sep-08	100.0	Sep-20
NO (ppb)				Rycroft-Portable	0.3	0	0	-	8.3	Sep-25 08:00	0.6	Sep-28	100.0	Sep-19
NO ₂ (ppb)	159	106		Rycroft-Portable	1.3	0	0	-	13.1	Sep-24 20:00	2.9	Sep-26	100.0	Sep-19
NO _x (ppb)				Rycroft-Portable	1.5	0	0	-	15.4	Sep-24 20:00	3.2	Sep-26	100.0	Sep-19
O ₃ (ppb)	82			Rycroft-Portable	20.2	0	0	-	39.9	Sep-25 15:00	28.4	Sep-26	100.0	Sep-19
O ₃ (ppb) - 8-hr				Rycroft-Portable		0					37.5	Sep-26		-
THC (ppm)				Rycroft-Portable	1.9	-	-	-	2.1	Sep-08 03:00	2.0	Sep-07	98.9	Sep-18
CH ₄ (ppm)				Rycroft-Portable	1.9	-	-	-	2.1	Sep-08 03:00	2.0	Sep-07	98.9	Sep-18
NMHC (ppm)				Rycroft-Portable	0.0	-	-	-	0.0	Sep-14 21:00	0.0	Sep-15	98.9	Sep-18
PM _{2.5} (µg/m3)	80	30		Rycroft-Portable	1.7	0	0	-	46.3	Sep-02 12:00	17.8	Sep-02	100.0	Aug-14
Temp (°C)				Rycroft-Portable	5.4	-	-	-	18.5	Sep-04 17:00	12.3	Sep-07	100.0	-
WSPD s (km/hr)				Rycroft-Portable	7.7	-	-	-	41.0	Sep-12 11:00	15.2	Sep-24	97.8	-
WSPD v (km/hr)				Rycroft-Portable	7.4	-	-	-	40.5	Sep-12 11:00	14.9	Sep-24	97.8	-
WDIR				Rycroft-Portable	WNW	-	-	-	-	-	-	-	97.8	-

Parameter	Analyzer		Notes
	Make	Model	
SO ₂			
TRS			
NO/NO ₂ /NO _x			
O ₃			
THC/CH ₄ /NMHC			Hydrogen tank expired Sep 14, replaced that day
PM _{2.5}			
ET/RH			
WS/WD			Wind system returned invalid values Sep 11-12

PAZA

Beaverlodge Station

Monthly Summary Tables, Graphs and
Roses

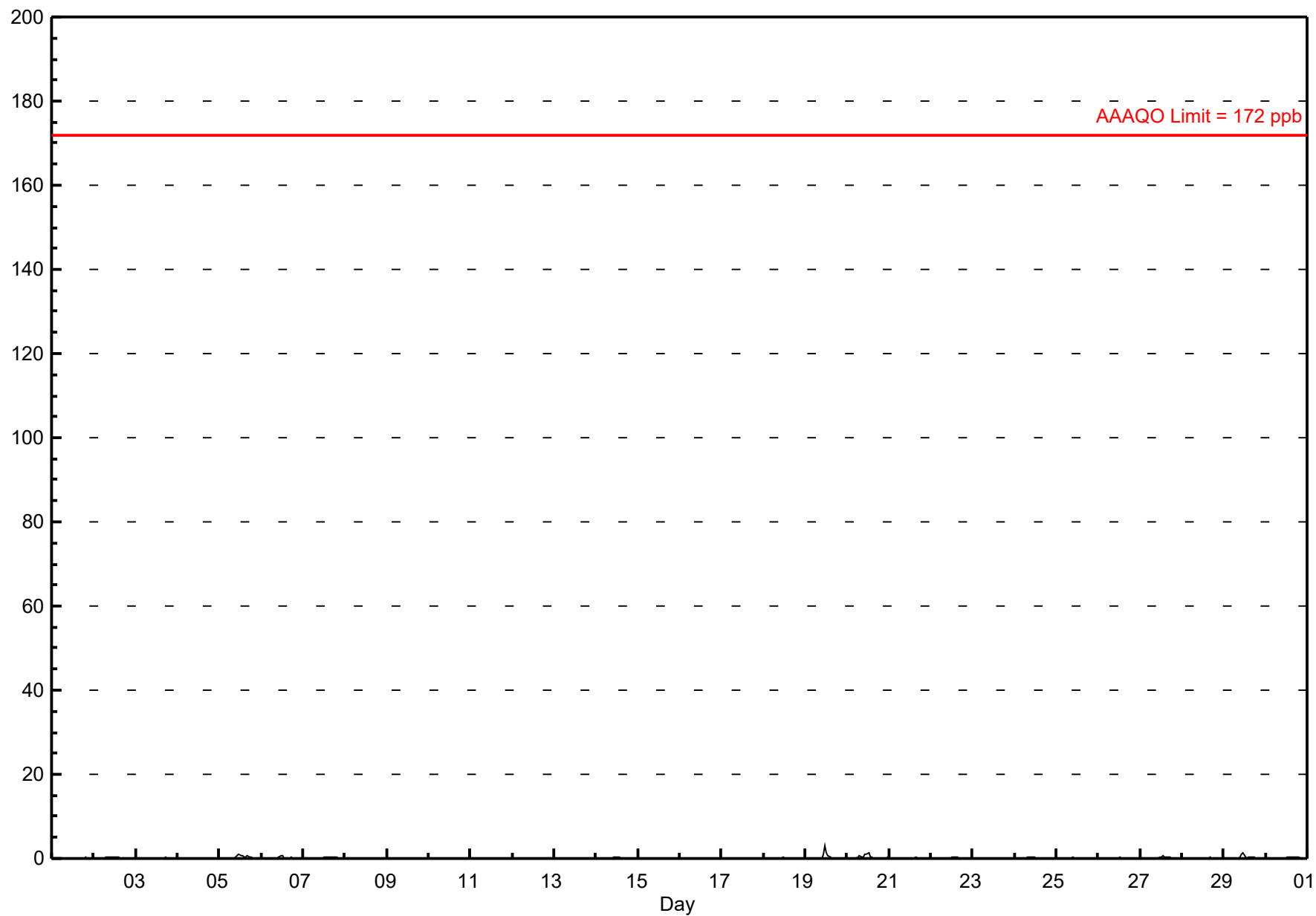
Hourly Averages

Sulphur Dioxide (SO₂) - ppb Beaverlodge - September 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 3.0 ppb on Sep 19 12:00 Maximum Daily Average: 0.3 ppb on Sep 19																				Hours in Service: 720 Hours of Data: 685 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Sep 1 01:00 Maximum Diurnal Average: 0.3 ppb at hour 12 Monthly Average: 0.10 ppb										Minimum Daily Average: 0.0 ppb on Sep 12 Minimum Diurnal Average: 0.0 ppb at hour 4 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.1 P ₉₀ = 0.2 P ₉₉ = 0.9																
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-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
2-Sep	0	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
3-Sep	0	0	0	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
4-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
5-Sep	0	0	0	0	A	0	0	0	0	0	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0.3	0.9
6-Sep	0	0	0	0	A	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
7-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
8-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
9-Sep	0	0	0	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
10-Sep	0	0	0	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
11-Sep	0	0	0	0	A	0	0	0	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0.0	0.1
12-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
13-Sep	0	0	0	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
14-Sep	0	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
15-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
16-Sep	0	0	0	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
17-Sep	0	0	0	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
18-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
19-Sep	0	0	0	0	A	0	0	0	0	0	1	3	2	1	0	0	0	0	0	0	0	0	0	0	0.3	3.0
20-Sep	0	0	0	0	A	0	0	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	1.3
21-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
22-Sep	0	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
23-Sep	0	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-Sep	0	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
25-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
26-Sep	0	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-Sep	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	0.7
28-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
29-Sep	0	0	0	0	A	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.3
30-Sep	0	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
0.0 0.0 0.0 0.0 -- 0.0 0.0 0.1 0.1 0.1 0.2 0.3 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.0 0.0																								Diurnal Average		
0.2 0.2 0.2 0.1 -- 0.2 0.2 0.8 0.3 0.3 1.2 3.0 1.5 0.7 0.5 0.4 0.6 0.4 0.4 0.2 0.2 0.1 0.1 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
Beaverlodge - September 2018



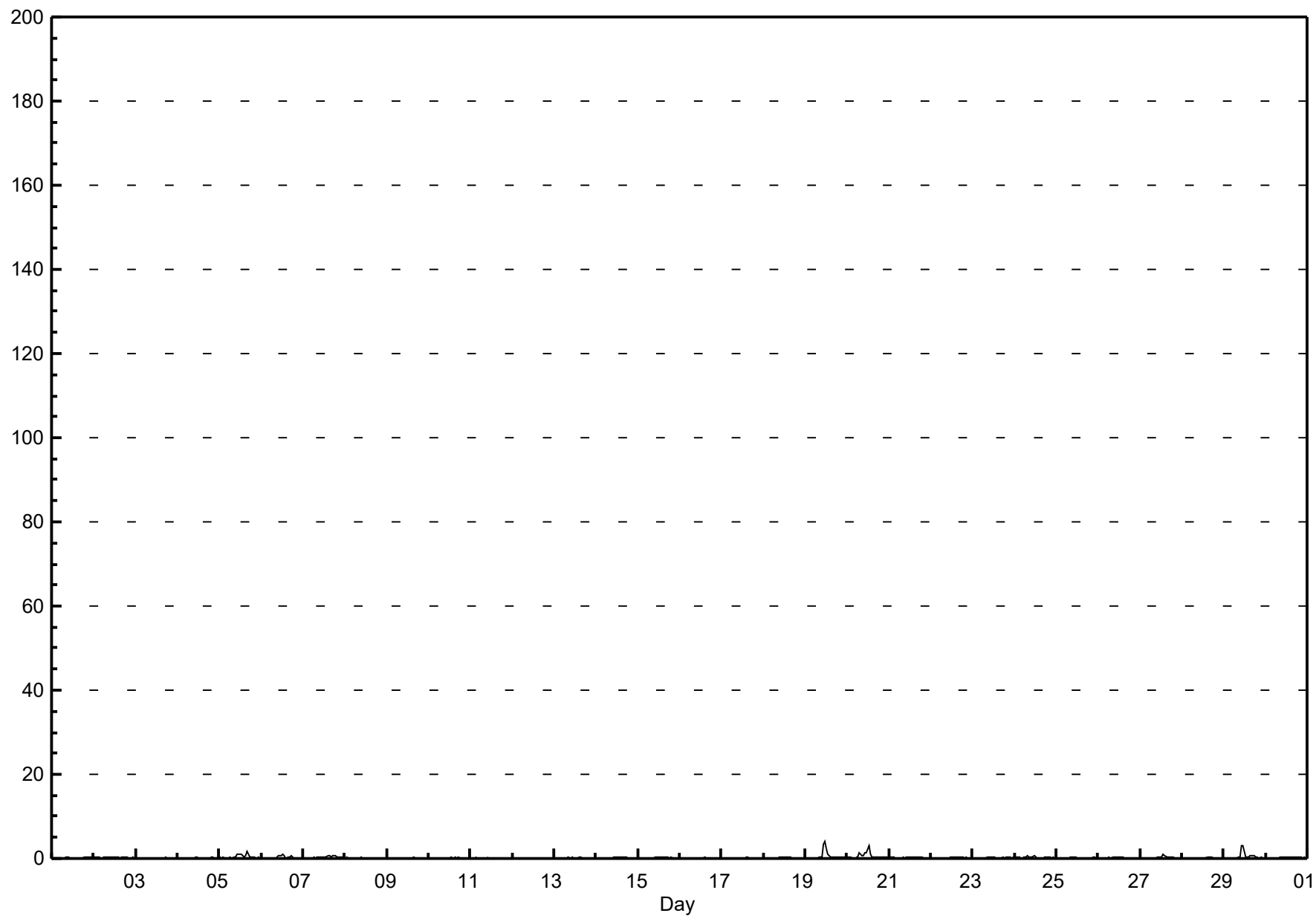
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb Beaverlodge - September 2018

Maximum Value: 4.0 ppb on Sep 19 12:00																			Maximum Daily Average: 0.6 ppb on Sep 19																			Hours in Service: 720	
Minimum Value: 0 ppb on Sep 12 22:00																			Minimum Daily Average: 0.1 ppb on Sep 12																			Hours of Data: 685	
Maximum Diurnal Average: 0.6 ppb at hour 12																			Minimum Diurnal Average: 0.1 ppb at hour 7																			Hours of Missing Data: 35	
Monthly Average: 0.22 ppb																			Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.2 P ₉₀ = 0.3 P ₉₉ = 1.5																			Hours of Calibration: 35	
																																						Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3													
2-Sep	0	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													
3-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5													
4-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3													
5-Sep	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	2	0	0	0	0	0	0	0	0.4	1.5													
6-Sep	0	0	0	0	A	0	0	0	0	0	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0.3	0.9													
7-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	0	0	0.3	0.7													
8-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3													
9-Sep	0	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													
10-Sep	0	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													
11-Sep	0	0	0	0	A	0	0	0	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0.1	0.2													
12-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1													
13-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2													
14-Sep	0	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													
15-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2													
16-Sep	0	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													
17-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2													
18-Sep	0	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													
19-Sep	0	0	0	0	A	0	0	0	0	0	3	4	2	1	0	0	0	0	0	0	0	0	0	0	0.6	4.0													
20-Sep	0	0	0	0	A	0	0	1	1	1	1	1	3	1	0	0	0	0	0	0	0	0	0	0	0.6	3.2													
21-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3													
22-Sep	0	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													
23-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3													
24-Sep	0	0	0	0	A	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7													
25-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3													
26-Sep	0	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-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0.3	1.0													
28-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4													
29-Sep	0	0	0	0	A	0	0	0	0	0	3	3	0	0	0	1	1	1	0	0	0	0	0	0	0.5	3.2													
30-Sep	0	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													
																								Diurnal Average															
																								Diurnal Maximum															
C - Calibration																																							
A - Automated Daily Zero Span																																							

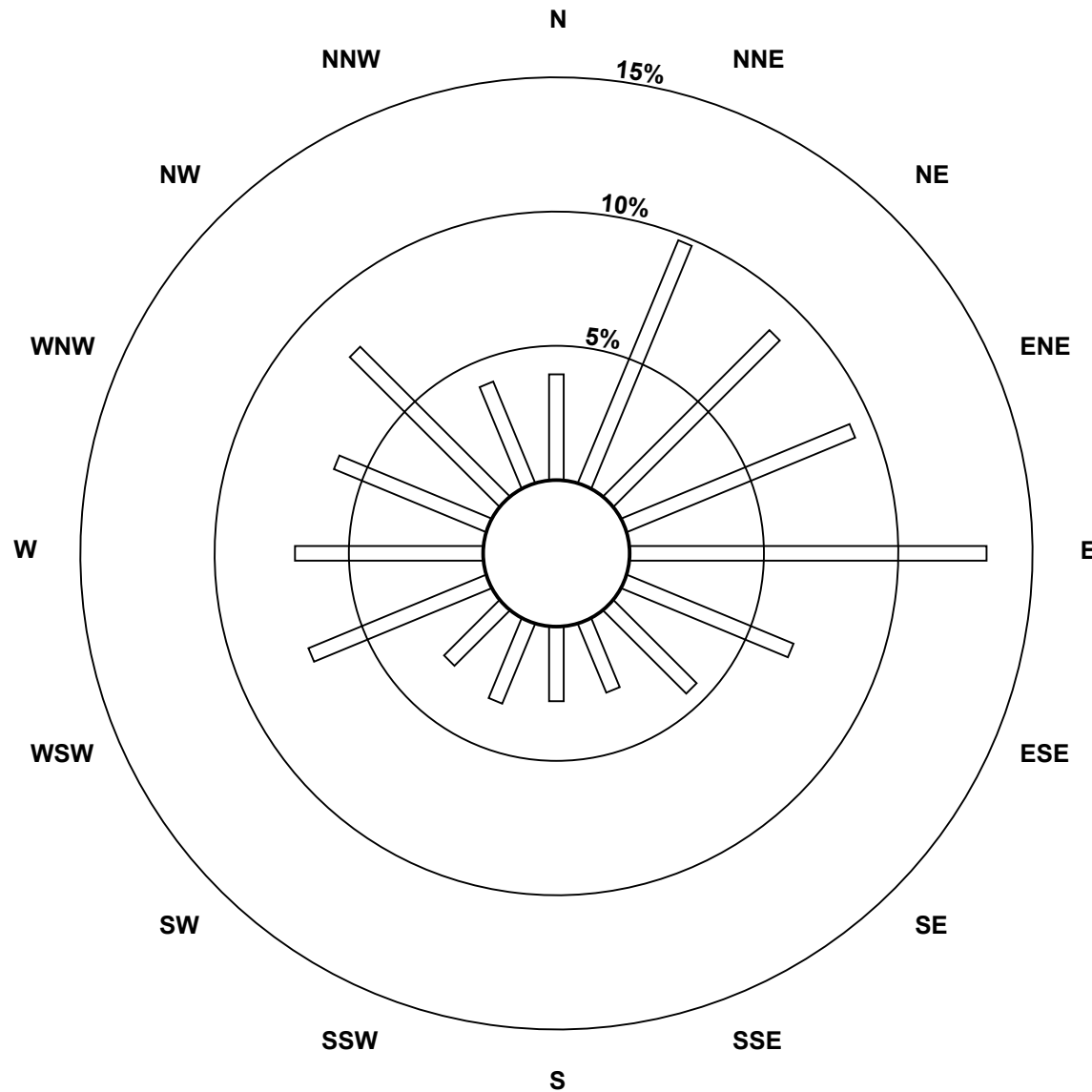
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - September 2018



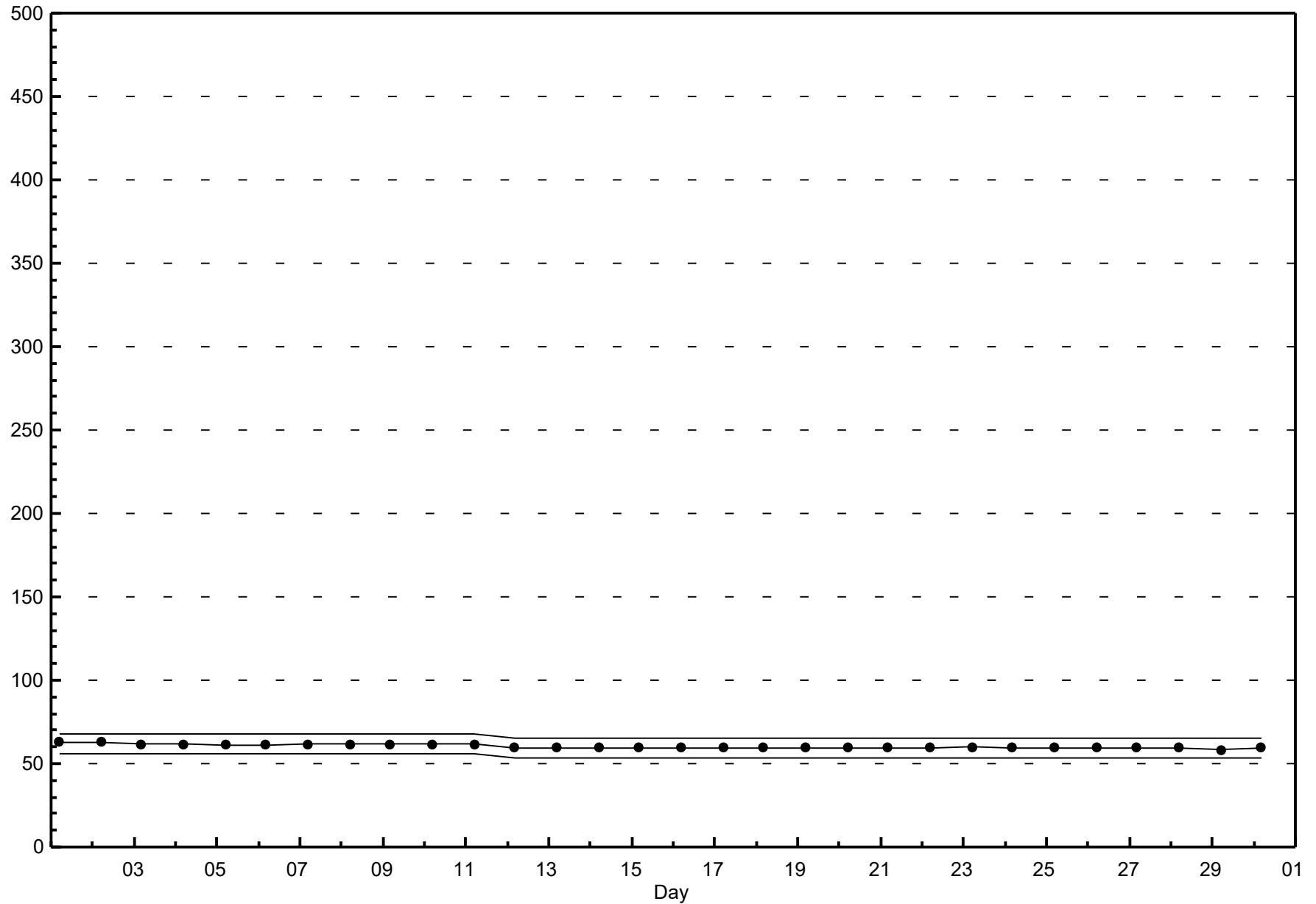
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - September 2018



Span Responses

Sulphur Dioxide (SO₂)
Beaverlodge - September 2018



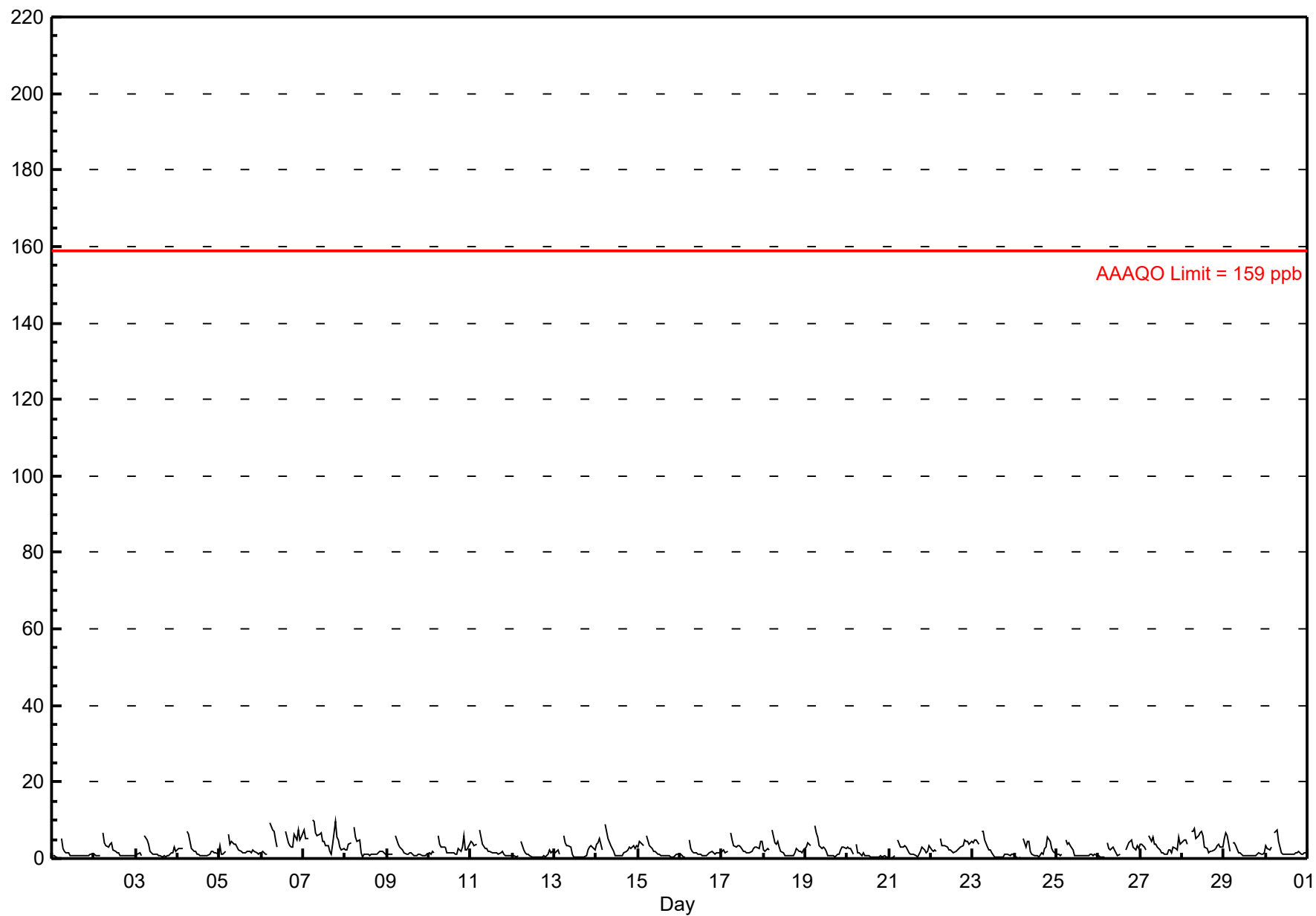
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb Beaverlodge - September 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 10.0 ppb on Sep 7 06:00 Maximum Daily Average: 5.2 ppb on Sep 7																								Hours in Service: 720 Hours of Data: 683 Hours of Missing Data: 37 Hours of Calibration: 34 Percent Operational Time: 99.6		
Minimum Value: 0 ppb on Sep 21 02:00 Minimum Daily Average: 1.0 ppb on Sep 12 Maximum Diurnal Average: 6.3 ppb at hour 6 Minimum Diurnal Average: 1.0 ppb at hour 16 Monthly Average: 2.35 ppb Percentiles: P ₁ = 0.3 P ₁₀ = 0.6 Q ₁ = 1.0 Median = 1.7 Q ₃ = 3.2 P ₉₀ = 5.0 P ₉₉ = 7.8																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Sep	1	1	1	0	A	5	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	5.2
2-Sep	1	1	1	1	A	7	4	3	3	4	4	2	2	1	1	1	1	1	1	1	1	1	1	1	1.8	6.6
3-Sep	1	1	1	1	A	6	5	4	2	2	1	1	1	1	1	1	1	1	1	1	1	3	2	1.7	5.8	
4-Sep	3	2	3	3	A	7	6	4	3	2	2	1	1	1	1	1	1	1	2	2	1	1	1	1	2.1	7.2
5-Sep	3	1	1	2	A	6	4	5	4	4	3	2	2	2	1	1	2	2	2	2	2	1	2	2.4	6.2	
6-Sep	2	2	1	1	A	9	7	7	5	3	C	C	C	C	7	4	3	3	3	6	5	7	5	6	4.6	9.4
7-Sep	7	5	5	5	A	10	10	7	6	6	7	5	4	3	3	2	1	4	10	6	5	3	2	3	5.2	10.0
8-Sep	2	2	4	4	A	8	6	4	5	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1	2.3	8.1
9-Sep	1	1	1	1	A	6	4	3	3	2	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1.6	5.8
10-Sep	1	1	2	1	A	6	4	3	3	3	2	2	1	1	2	1	1	3	2	3	6	2	2	4	2.5	6.1
11-Sep	4	4	4	4	A	7	6	4	3	3	2	2	2	1	1	1	1	2	1	1	1	1	1	1	2.4	7.4
12-Sep	1	1	1	1	A	4	2	1	1	1	1	0	0	0	0	0	0	0	1	1	1	2	1	2	1.0	4.4
13-Sep	2	2	2	1	A	6	4	3	3	3	1	0	0	0	0	0	1	0	1	2	3	3	3	2	1.9	6.1
14-Sep	4	4	5	2	A	9	7	5	3	2	2	1	1	1	1	1	1	2	2	3	3	3	3	3	3.0	9.0
15-Sep	3	4	4	3	A	6	3	3	3	2	2	1	1	1	1	1	1	1	0	0	1	1	1	1	1.9	5.9
16-Sep	1	1	1	1	A	5	2	2	2	1	1	1	1	1	1	1	1	2	2	2	1	2	2	2	1.4	4.7
17-Sep	2	2	2	2	A	7	5	3	3	3	3	3	2	2	2	1	2	2	3	3	3	2	5	4	2.9	6.7
18-Sep	2	2	2	2	A	7	4	4	4	3	2	1	1	1	1	1	1	1	2	2	2	2	2	2	2.2	7.4
19-Sep	3	4	4	3	A	9	7	6	3	3	3	3	2	1	1	1	1	1	1	2	3	3	3	3	2.8	8.7
20-Sep	3	3	2	1	A	4	2	2	1	1	1	1	1	0	0	0	0	0	0	1	0	1	0	1	1.1	3.6
21-Sep	0	0	0	1	A	5	3	3	3	3	3	1	1	1	1	1	0	1	2	3	2	2	2	3	1.8	5.0
22-Sep	2	2	2	2	A	5	3	4	3	3	2	2	2	2	2	2	2	3	3	5	4	4	4	5	3.0	5.2
23-Sep	4	5	5	4	A	7	7	5	3	2	2	1	0	0	0	0	0	0	1	1	1	1	1	1	2.3	7.1
24-Sep	1	0	0	0	A	5	3	4	5	2	1	1	1	1	0	2	1	3	3	6	4	3	2	2	2.1	5.7
25-Sep	1	1	1	1	A	5	4	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.5	5.0
26-Sep	1	0	0	0	A	4	3	2	3	2	1	1	1	M	M	M	2	4	5	5	3	2	3	3	2.3	4.8
27-Sep	4	4	3	2	A	6	5	6	4	4	3	2	2	1	1	1	2	2	2	3	3	2	6	4	3.0	5.9
28-Sep	4	5	5	4	A	7	7	8	5	6	7	7	6	3	3	1	2	2	2	3	3	4	3	3	4.3	7.8
29-Sep	5	7	6	2	A	4	4	4	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2.1	6.8
30-Sep	3	3	2	3	A	7	8	4	3	1	1	1	1	1	1	1	1	2	2	2	1	1	2	1	2.3	7.5
2.4 2.4 2.3 1.9 -- 6.3 4.7 3.9 3.2 2.6 2.1 1.6 1.4 1.1 1.3 1.0 1.1 1.5 1.9 2.3 2.2 2.1 2.1 2.2 7.5 6.8 6.0 5.1 -- 10.0 9.7 7.8 6.1 6.2 6.9 6.9 6.0 3.3 7.1 4.1 3.5 4.0 9.7 6.2 5.8 7.3 5.6 5.6																								Diurnal Average	Diurnal Maximum	
C - Calibration M - Maintenance A - Automated Daily Zero Span Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb																										

Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - September 2018



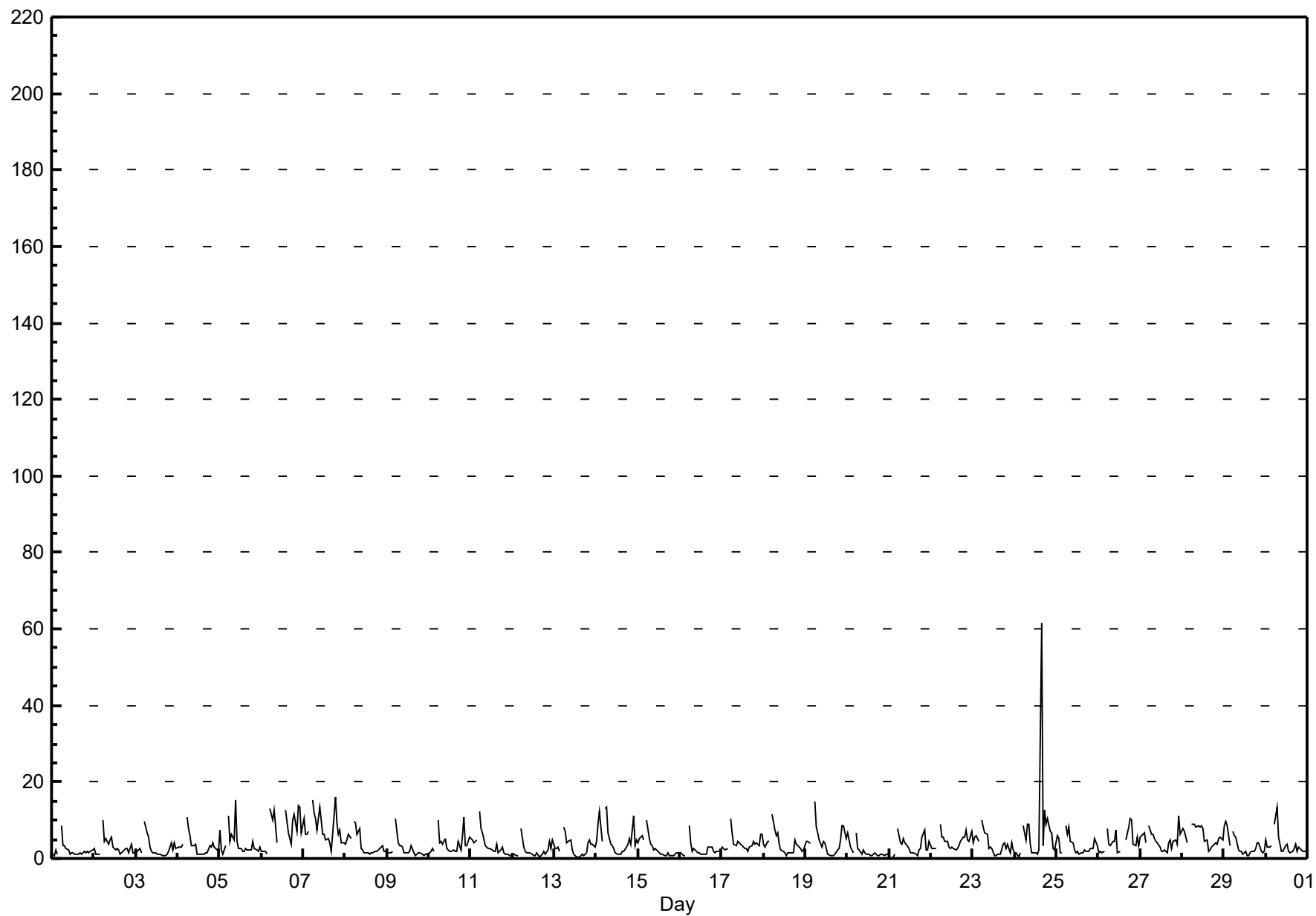
Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb Beaverlodge - September 2018

Maximum Value: 61.7 ppb on Sep 24 16:00																								Hours in Service: 720		
Maximum Daily Average: 7.9 ppb on Sep 7																								Hours of Data: 683		
Minimum Value: 0 ppb on Sep 21 02:00																								Hours of Missing Data: 37		
Maximum Diurnal Average: 9.9 ppb at hour 6																								Hours of Calibration: 34		
Monthly Average: 3.84 ppb																								Percent Operational Time: 99.6		
Percentiles: P ₁ = 0.6 P ₁₀ = 1.1 Q ₁ = 1.6 Median = 2.8 Q ₃ = 4.9 P ₉₀ = 8.3 P ₉₉ = 13.4																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Sep	1	1	2	1	A	9	4	3	3	2	1	1	1	1	1	1	1	2	1	2	2	2	2	2.0	8.6	
2-Sep	3	1	1	1	A	10	5	5	4	5	6	3	2	2	1	2	2	3	2	1	4	1	2	3.0	10.2	
3-Sep	1	2	2	1	A	10	7	6	3	2	1	2	1	1	1	1	1	1	2	4	2	4	3	2.6	9.8	
4-Sep	3	3	3	4	A	11	8	6	3	3	4	1	1	1	1	1	1	3	3	4	3	3	2	3.2	10.6	
5-Sep	8	2	1	3	A	11	5	6	5	15	5	3	3	2	2	2	2	2	4	3	2	2	3	4.1	15.4	
6-Sep	2	2	2	1	A	13	10	13	9	4	C	C	C	C	13	7	5	4	10	11	7	14	13	7	7.7	13.6
7-Sep	11	6	6	7	A	15	12	10	8	13	10	6	6	5	5	4	2	6	16	9	6	7	4	4	7.9	16.1
8-Sep	4	5	6	5	A	10	9	7	8	3	2	1	1	1	1	2	2	2	2	3	3	2	2	2	3.5	9.7
9-Sep	1	2	2	2	A	10	4	3	3	3	2	2	2	2	3	1	1	1	2	1	1	1	1	1	2.2	10.3
10-Sep	2	2	3	2	A	10	4	4	4	5	2	2	2	2	2	2	2	5	2	6	11	3	3	6	3.7	10.8
11-Sep	5	5	4	5	A	12	8	7	4	3	3	3	2	2	2	4	2	2	3	2	1	1	1	1	3.5	12.2
12-Sep	1	1	1	1	A	8	3	2	1	2	1	1	1	1	1	0	1	1	2	1	2	4	3	5	1.9	7.9
13-Sep	2	3	3	2	A	8	7	4	4	5	2	1	1	0	0	1	1	1	1	4	5	4	4	3	3.0	8.2
14-Sep	4	9	12	5	A	13	13	7	4	3	3	1	1	1	1	2	2	3	4	5	4	11	3	5	5.1	13.3
15-Sep	4	5	6	5	A	10	5	4	3	2	3	2	2	1	1	1	1	1	1	1	1	2	1	1	2.7	9.9
16-Sep	1	1	1	1	A	8	4	2	2	2	2	1	1	1	1	3	3	3	2	2	2	2	2	2	2.1	8.4
17-Sep	3	3	2	3	A	10	7	4	3	5	4	4	3	3	3	2	3	3	4	4	4	3	6	6	4.0	10.3
18-Sep	4	3	4	5	A	12	8	6	7	4	2	2	2	1	1	2	2	2	5	4	3	3	2	2	3.6	11.5
19-Sep	4	5	4	4	A	15	8	7	5	3	4	4	3	1	1	1	1	2	3	5	9	9	5	5	4.5	14.8
20-Sep	7	5	3	2	A	7	2	2	1	2	1	1	1	1	1	2	1	1	1	1	1	1	1	1	2.0	6.8
21-Sep	1	0	1	1	A	8	4	4	5	4	4	3	1	1	2	1	1	2	3	6	8	2	2	5	2.9	7.7
22-Sep	2	3	3	2	A	9	6	6	4	4	3	3	3	3	2	2	3	4	5	6	7	5	5	7	4.3	9.0
23-Sep	4	6	6	5	A	10	8	7	6	3	3	3	1	1	1	1	4	4	2	4	1	4	2	2	3.8	10.1
24-Sep	1	2	0	2	A	9	5	9	9	4	1	1	1	1	2	62	3	13	9	10	7	7	3	2	7.1	61.7
25-Sep	6	5	1	1	A	9	6	8	4	4	2	1	2	1	2	2	2	2	3	3	3	5	3	3	3.4	8.7
26-Sep	1	2	2	2	A	8	4	3	4	5	7	2	2	M	M	M	5	8	11	10	4	3	6	3	4.6	10.6
27-Sep	6	6	7	4	A	9	6	6	5	5	4	3	2	2	2	2	4	5	3	4	5	4	11	6	4.8	11.1
28-Sep	8	7	6	4	A	9	9	9	8	9	8	9	8	5	5	2	2	3	4	4	4	5	6	5	5.9	8.9
29-Sep	8	10	9	3	A	7	6	6	2	2	2	1	2	1	1	2	2	2	3	4	4	2	2	2	3.5	9.6
30-Sep	5	3	3	3	A	9	14	5	4	2	2	3	4	2	1	2	3	4	2	3	2	2	2	2	3.5	13.6
3.8 3.6 3.5 2.9 -- 9.9 6.7 5.7 4.5 4.2 3.3 2.4 2.2 1.7 2.2 3.8 2.1 3.0 3.8 4.1 3.9 3.8 3.7 3.4																								Diurnal Average		
10.6 9.6 12.2 6.9 -- 15.3 13.6 12.7 8.8 15.4 9.9 8.6 8.0 4.8 12.7 61.7 5.4 12.7 16.1 11.4 10.8 13.6 13.3 7.2																								Diurnal Maximum		
C - Calibration M - Maintenance A - Automated Daily Zero Span																										

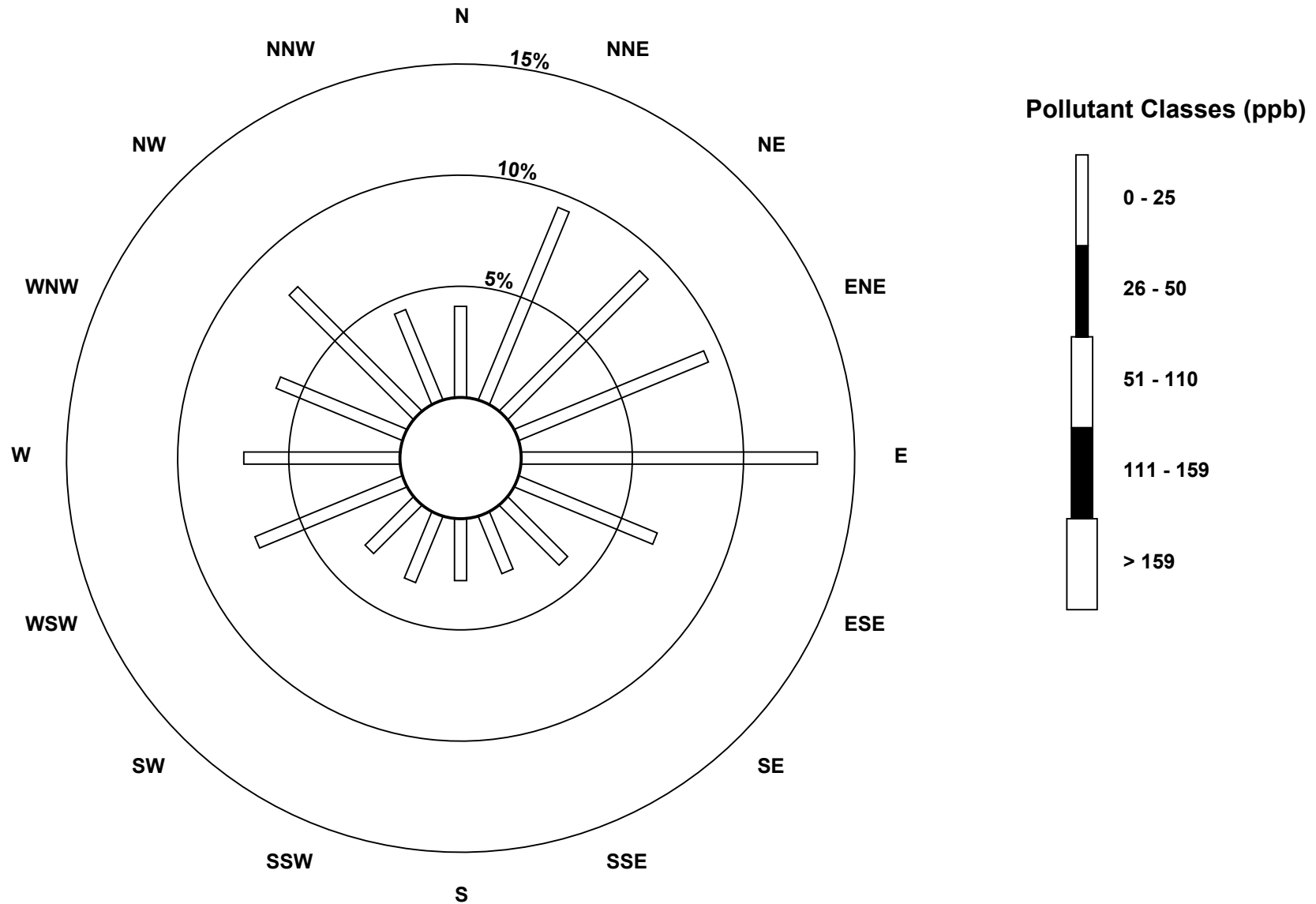
Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - September 2018



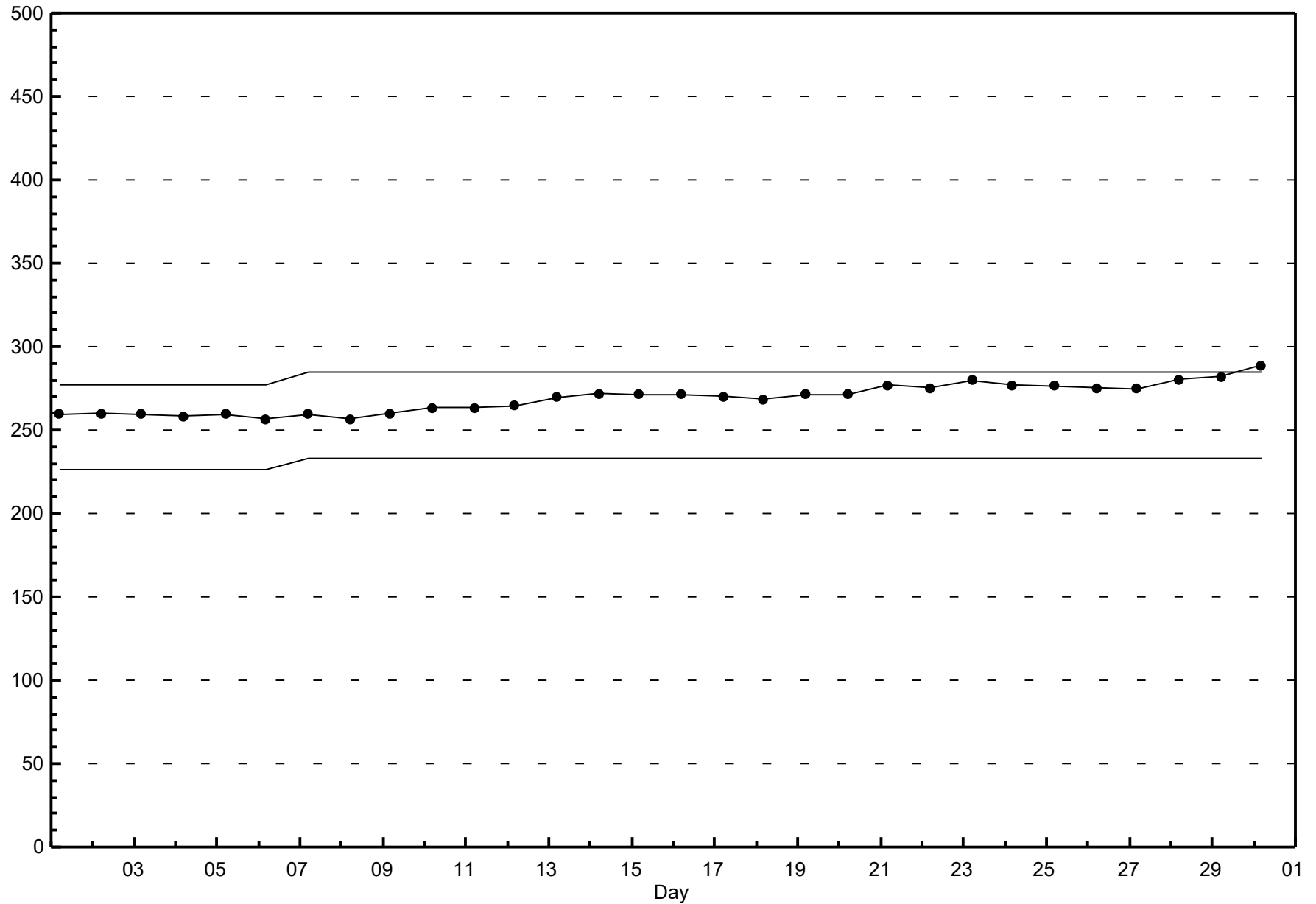
Pollutant Rose

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - September 2018



Span Responses

Nitrogen Dioxide (NO₂)
Beaverlodge - September 2018



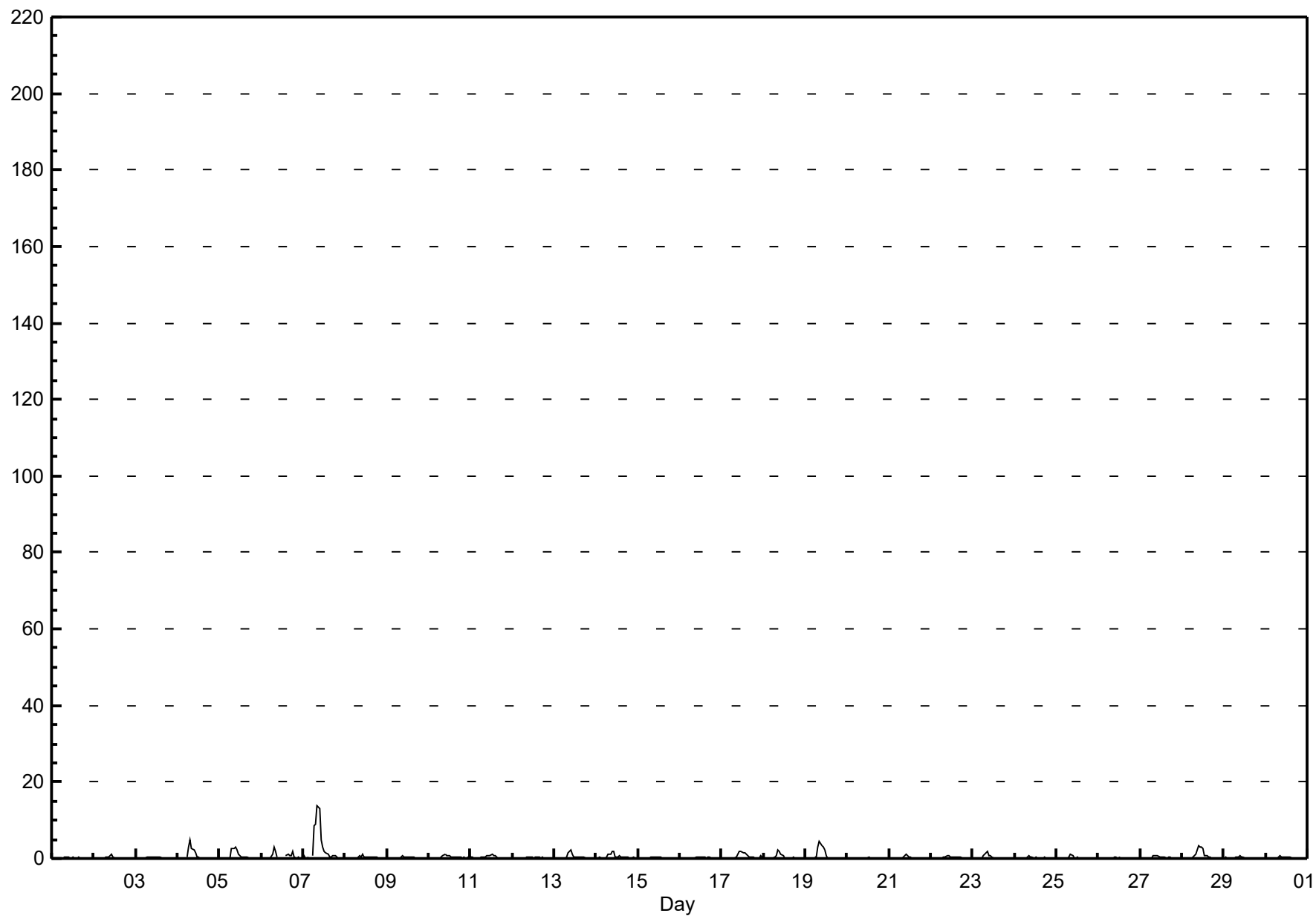
Hourly Averages

Nitrogen Oxide (NO) - ppb Beaverlodge - September 2018

Maximum Value: 13.7 ppb on Sep 7 09:00																		Maximum Daily Average: 2.7 ppb on Sep 7						Hours in Service: 720		
Minimum Value: 0 ppb on Sep 4 23:00																		Minimum Daily Average: 0.1 ppb on Sep 20						Hours of Data: 683		
Maximum Diurnal Average: 1.4 ppb at hour 10																		Minimum Diurnal Average: 0.0 ppb at hour 21						Hours of Missing Data: 37		
Monthly Average: 0.39 ppb																		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.8 P ₉₉ = 3.6						Hours of Calibration: 34		
																								Percent Operational Time: 99.6		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Sep	0	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
2-Sep	0	0	0	0	A	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.0
3-Sep	0	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
4-Sep	0	0	0	0	A	0	3	5	3	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	4.7
5-Sep	0	0	0	0	A	0	0	2	3	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0.6	2.9
6-Sep	0	0	0	0	A	0	1	3	2	1	C	C	C	C	1	1	1	1	2	0	0	0	0	0	0.6	3.0
7-Sep	1	0	0	1	A	1	9	9	14	13	5	3	2	1	1	1	0	1	1	0	0	0	0	0	2.7	13.7
8-Sep	0	0	0	0	A	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.2
9-Sep	0	0	0	0	A	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0.2	0.7
10-Sep	0	0	0	0	A	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0.3	1.0
11-Sep	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.3	1.1
12-Sep	0	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
13-Sep	0	0	0	0	A	0	0	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.3
14-Sep	0	0	1	0	A	0	0	1	1	2	2	0	1	1	0	0	1	0	0	0	0	0	0	0	0.5	1.7
15-Sep	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
16-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
17-Sep	0	0	0	0	A	0	0	0	0	1	2	2	2	2	1	1	1	0	0	0	0	0	1	0	0.6	1.8
18-Sep	0	0	0	0	A	0	0	1	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.4
19-Sep	0	0	0	0	A	0	0	3	5	3	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0.8	4.5
20-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
21-Sep	0	0	0	0	A	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.2
22-Sep	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	0.7
23-Sep	0	0	0	0	A	0	1	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.7
24-Sep	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
25-Sep	0	0	0	0	A	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.3
26-Sep	0	0	0	0	A	0	0	0	0	0	0	0	M	M	M	0	0	0	0	0	0	0	0	0	0.1	0.3
27-Sep	0	0	0	0	A	0	0	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0.3	0.7
28-Sep	0	0	0	0	A	0	0	1	1	3	3	3	2	1	1	0	0	0	0	0	0	0	0	0	0.7	3.4
29-Sep	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
30-Sep	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
0.1					0.1	0.6	1.0	1.4	1.4	1.1	0.7	0.5	0.4	0.4	0.3	0.2	0.2	0.2	0.1	0.0	0.0	0.1	0.1	Diurnal Average		
0.7					0.5	0.7	8.7	9.0	13.7	4.9	3.0	2.5	1.6	1.3	1.0	0.6	0.6	1.8	0.2	0.2	0.4	0.8	0.7	Diurnal Maximum		
C - Calibration					M - Maintenance					A - Automated Daily Zero Span																

Hourly Averages

Nitrogen Oxide (NO) - ppb
Beaverlodge - September 2018



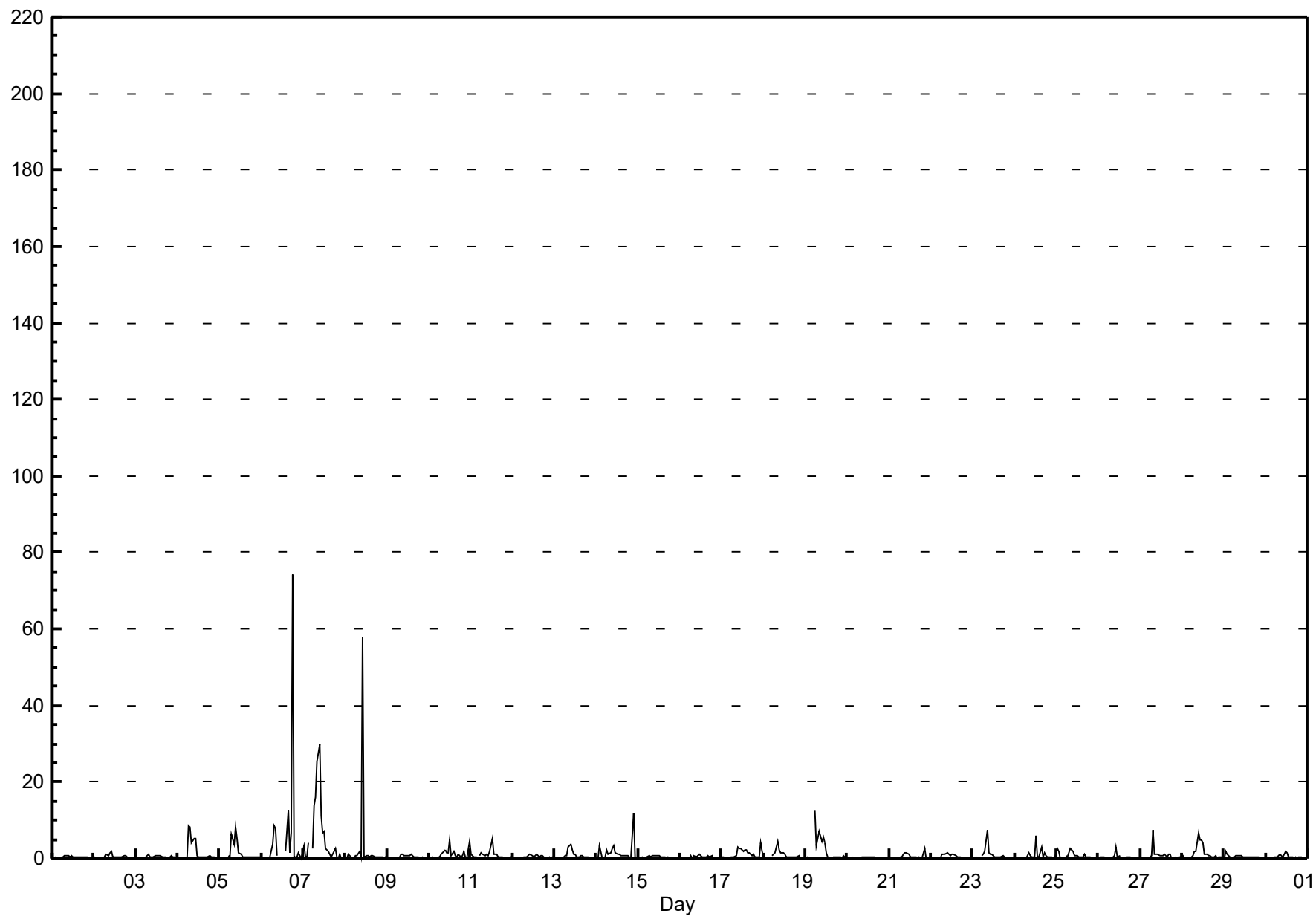
Hourly Maximums

Nitrogen Oxide (NO) - ppb Beaverlodge - September 2018

Maximum Value: 74.2 ppb on Sep 6 19:00																		Hours in Service: 720								
Maximum Daily Average: 6.4 ppb on Sep 6																		Hours of Data: 683								
Minimum Value: 0 ppb on Sep 20 22:00																		Hours of Missing Data: 37								
Maximum Diurnal Average: 4.1 ppb at hour 11																		Hours of Calibration: 34								
Monthly Average: 1.20 ppb																		Percent Operational Time: 99.6								
Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.4 Q ₃ = 0.8 P ₉₀ = 2.0 P ₉₉ = 12.7																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Sep	0	0	1	0	A	0	0	1	1	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0.4	0.8
2-Sep	0	0	0	0	A	0	0	1	1	1	2	0	0	0	0	0	0	1	1	0	0	0	0	0	0.5	1.9
3-Sep	0	0	0	0	A	0	1	1	0	1	0	1	1	1	1	0	0	0	0	0	1	0	0	0	0.4	1.0
4-Sep	0	0	0	0	A	1	8	8	4	5	5	1	0	0	0	0	0	1	1	0	0	1	0	0	1.6	8.4
5-Sep	0	0	0	0	A	1	1	6	4	8	5	1	1	0	0	0	0	1	0	1	0	0	0	0	1.4	8.3
6-Sep	0	0	0	0	A	1	4	9	8	1	C	C	C	C	2	13	2	7	74	0	0	1	1	0	6.4	74.2
7-Sep	4	0	0	4	A	3	14	16	25	30	11	7	7	2	2	1	0	1	2	0	0	1	0	0	5.8	29.9
8-Sep	0	0	1	0	A	0	1	1	2	1	58	1	1	1	1	1	1	0	1	0	0	0	0	1	3.0	57.9
9-Sep	0	0	0	0	A	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.4	1.3
10-Sep	0	0	0	0	A	0	0	1	1	2	1	1	5	1	2	1	0	1	0	1	2	0	0	4	1.1	4.8
11-Sep	1	1	0	0	A	1	1	1	1	1	1	2	5	1	1	1	0	0	0	0	0	0	0	0	0.9	5.2
12-Sep	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.5	1.3
13-Sep	0	0	0	0	A	0	1	1	3	4	2	1	1	0	0	1	1	0	0	0	0	0	0	0	0.8	3.7
14-Sep	0	0	3	0	A	0	2	1	2	3	3	1	1	1	1	1	1	1	1	0	0	12	0	0	1.5	12.0
15-Sep	0	0	0	0	A	0	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9
16-Sep	0	0	0	0	A	0	1	0	1	0	1	1	1	0	0	0	1	0	1	0	0	0	0	0	0.4	1.1
17-Sep	1	0	0	0	A	0	0	0	1	3	3	2	2	2	2	1	2	1	1	0	0	0	4	2	1.3	4.0
18-Sep	0	0	0	0	A	1	1	3	5	2	2	1	1	0	0	1	0	0	1	0	1	0	0	0	0.9	4.5
19-Sep	0	0	0	0	A	13	3	5	7	5	5	4	2	0	0	0	0	0	0	0	0	1	0	0	2.1	12.7
20-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
21-Sep	0	0	0	0	A	0	0	0	1	2	1	1	0	0	0	0	0	0	0	0	2	0	0	0	0.5	2.5
22-Sep	0	0	0	0	A	0	1	1	1	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.5	1.6
23-Sep	0	0	0	0	A	1	1	2	8	2	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0.8	7.6
24-Sep	0	0	0	0	A	0	0	1	1	1	0	0	6	0	0	3	0	2	1	0	0	0	0	0	0.8	6.1
25-Sep	3	2	0	0	A	1	0	2	2	2	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0.8	2.7
26-Sep	0	0	0	0	A	0	0	0	0	1	3	0	1	M	M	M	0	0	0	0	0	0	0	0	0.4	2.9
27-Sep	0	0	0	0	A	0	1	7	1	1	1	1	1	1	1	0	1	1	0	0	0	0	0	0	0.8	7.3
28-Sep	1	0	0	0	A	0	1	2	2	7	5	5	4	1	1	1	1	0	0	1	0	0	0	0	1.4	6.7
29-Sep	0	2	1	0	A	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.8
30-Sep	0	0	0	0	A	0	0	1	1	1	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0.4	1.7
																								Diurnal Average	Diurnal Maximum	
																								3.5	4.3	
C - Calibration M - Maintenance A - Automated Daily Zero Span																										

Hourly Maximums

Nitrogen Oxide (NO) - ppb
Beaverlodge - September 2018



Hourly Averages

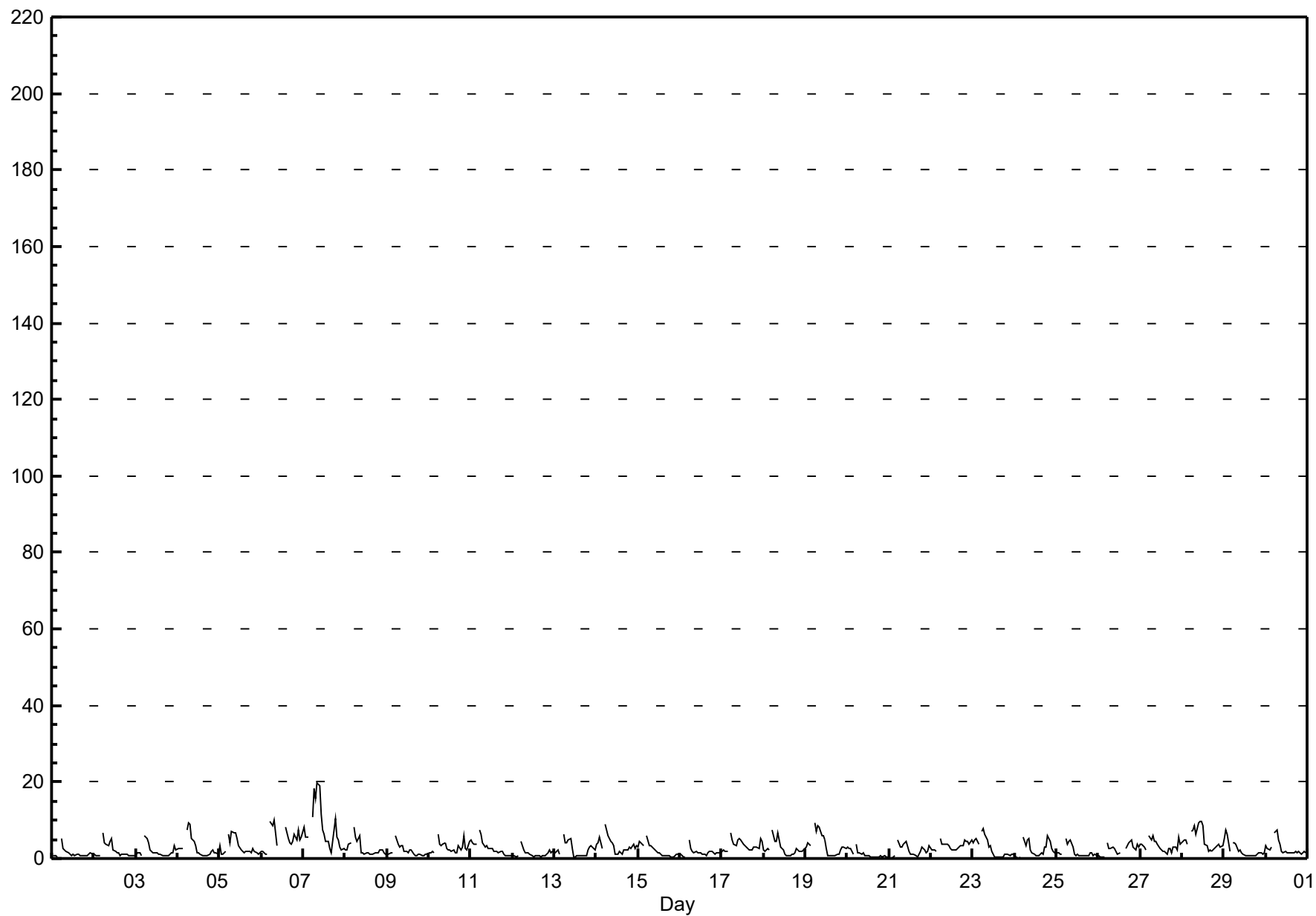
Oxides of Nitrogen (NO_x) - ppb

Beaverlodge - September 2018

Maximum Value: 19.8 ppb on Sep 7 09:00		Maximum Daily Average: 7.9 ppb on Sep 7		Hours in Service: 720																							
Minimum Value: 0 ppb on Sep 21 02:00		Minimum Daily Average: 1.1 ppb on Sep 20		Hours of Data: 683																							
Maximum Diurnal Average: 6.4 ppb at hour 6		Minimum Diurnal Average: 1.3 ppb at hour 16		Hours of Missing Data: 37																							
Monthly Average: 2.75 ppb		Percentiles: P ₁ = 0.4 P ₁₀ = 0.7 Q ₁ = 1.1 Median = 2.0 Q ₃ = 3.7 P ₉₀ = 5.7 P ₉₉ = 10.2		Hours of Calibration: 34																							
				Percent Operational Time: 99.6																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Sep	1	1	1	1	A	5	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.3	5.2	
2-Sep	1	1	1	1	A	7	4	4	3	4	5	2	2	2	1	1	1	1	1	1	1	1	1	1	2.0	6.7	
3-Sep	1	1	1	1	A	6	5	4	2	2	1	2	2	1	1	1	1	1	1	1	1	1	3	2	1.8	5.9	
4-Sep	3	3	3	3	A	7	9	9	5	4	3	1	1	1	1	1	1	1	2	2	2	1	1	1	2.8	9.3	
5-Sep	3	1	1	2	A	6	4	7	7	7	5	3	2	2	2	2	2	2	2	2	2	1	2	2	3.0	7.1	
6-Sep	2	2	1	1	A	10	8	10	7	3	C	C	C	C	8	5	4	4	4	6	5	8	5	6	5.2	10.1	
7-Sep	8	6	5	6	A	11	18	16	20	19	12	8	6	5	5	3	1	5	11	6	5	3	2	3	7.9	19.8	
8-Sep	2	2	4	4	A	8	6	5	6	2	1	1	1	1	1	1	1	1	1	2	2	2	2	1	2.5	8.1	
9-Sep	1	1	1	1	A	6	4	3	3	3	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1.8	5.9	
10-Sep	1	1	2	1	A	6	4	3	4	4	3	2	2	2	2	2	2	3	2	3	6	2	2	4	2.8	6.2	
11-Sep	5	4	4	4	A	8	6	4	3	3	3	3	3	2	2	2	1	2	2	1	1	1	1	1	2.8	7.5	
12-Sep	1	1	1	1	A	4	2	2	1	1	1	1	0	1	1	1	0	1	1	1	1	2	2	2	1.2	4.4	
13-Sep	2	2	2	1	A	6	4	4	5	5	3	0	1	1	1	1	1	1	2	3	3	3	3	2	2.3	6.2	
14-Sep	4	4	6	2	A	9	8	6	4	4	4	1	1	2	1	1	2	2	2	3	3	4	3	3	3.5	9.0	
15-Sep	3	5	4	3	A	6	4	3	3	2	2	2	1	1	1	1	1	1	1	0	1	1	1	1	2.0	5.9	
16-Sep	1	1	1	1	A	5	3	2	2	2	1	1	1	1	1	1	2	2	2	2	1	2	2	2	1.6	4.7	
17-Sep	2	2	2	2	A	7	5	4	3	5	5	5	4	3	3	2	2	2	3	3	3	2	5	5	3.5	6.7	
18-Sep	2	2	2	2	A	8	4	5	7	5	3	2	1	1	1	1	1	2	2	2	2	2	2	2	2.6	7.5	
19-Sep	3	4	4	3	A	9	7	9	8	6	6	5	3	1	1	1	1	1	1	2	3	3	3	3	3.6	9.2	
20-Sep	3	3	3	1	A	4	2	2	1	1	1	1	1	1	1	0	1	0	0	1	0	1	0	1	1.1	3.6	
21-Sep	0	0	0	1	A	5	3	3	4	4	4	2	1	1	1	1	1	2	3	2	2	2	3	3	2.0	5.0	
22-Sep	2	2	2	2	A	5	4	4	4	4	3	3	2	2	2	3	3	4	5	4	4	4	5	5	3.3	5.3	
23-Sep	4	5	5	4	A	7	8	6	5	3	3	2	1	0	0	0	0	1	1	1	1	1	1	1	2.7	7.8	
24-Sep	1	0	0	0	A	5	3	5	5	2	1	1	1	1	1	2	1	3	3	6	4	3	2	2	2.3	5.8	
25-Sep	1	1	1	1	A	5	4	5	5	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.7	5.1	
26-Sep	1	0	0	1	A	4	3	2	3	3	2	1	1	M	M	M	3	4	5	5	3	2	4	3	2.5	4.8	
27-Sep	4	4	3	2	A	6	5	6	4	4	4	3	2	2	2	1	3	3	2	3	3	2	6	4	3.3	6.1	
28-Sep	5	5	5	4	A	7	7	9	6	9	10	10	9	4	3	2	2	2	3	3	4	3	3	3	5.0	9.7	
29-Sep	5	7	6	2	A	4	4	4	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2	2	2.2	7.3	
30-Sep	3	3	2	3	A	7	8	5	4	2	2	2	2	1	1	1	1	2	2	2	1	1	2	1	2.5	7.6	
2.5 8.1		2.5 7.3	2.4 6.2	2.0 5.6	-- --	6.4 10.7	5.2 18.4	5.0 15.6	4.6 19.8	4.1 19.2	3.2 11.7	2.3 9.7	1.9 8.5	1.5 4.7	1.6 8.1	1.3 5.1	1.4 4.1	1.7 4.5	2.0 10.6	2.4 6.4	2.3 6.0	2.1 7.5	2.2 5.7	2.2 5.7	Diurnal Average Diurnal Maximum		
C - Calibration		M - Maintenance				A - Automated Daily Zero Span																					

Hourly Averages

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



Hourly Maximums

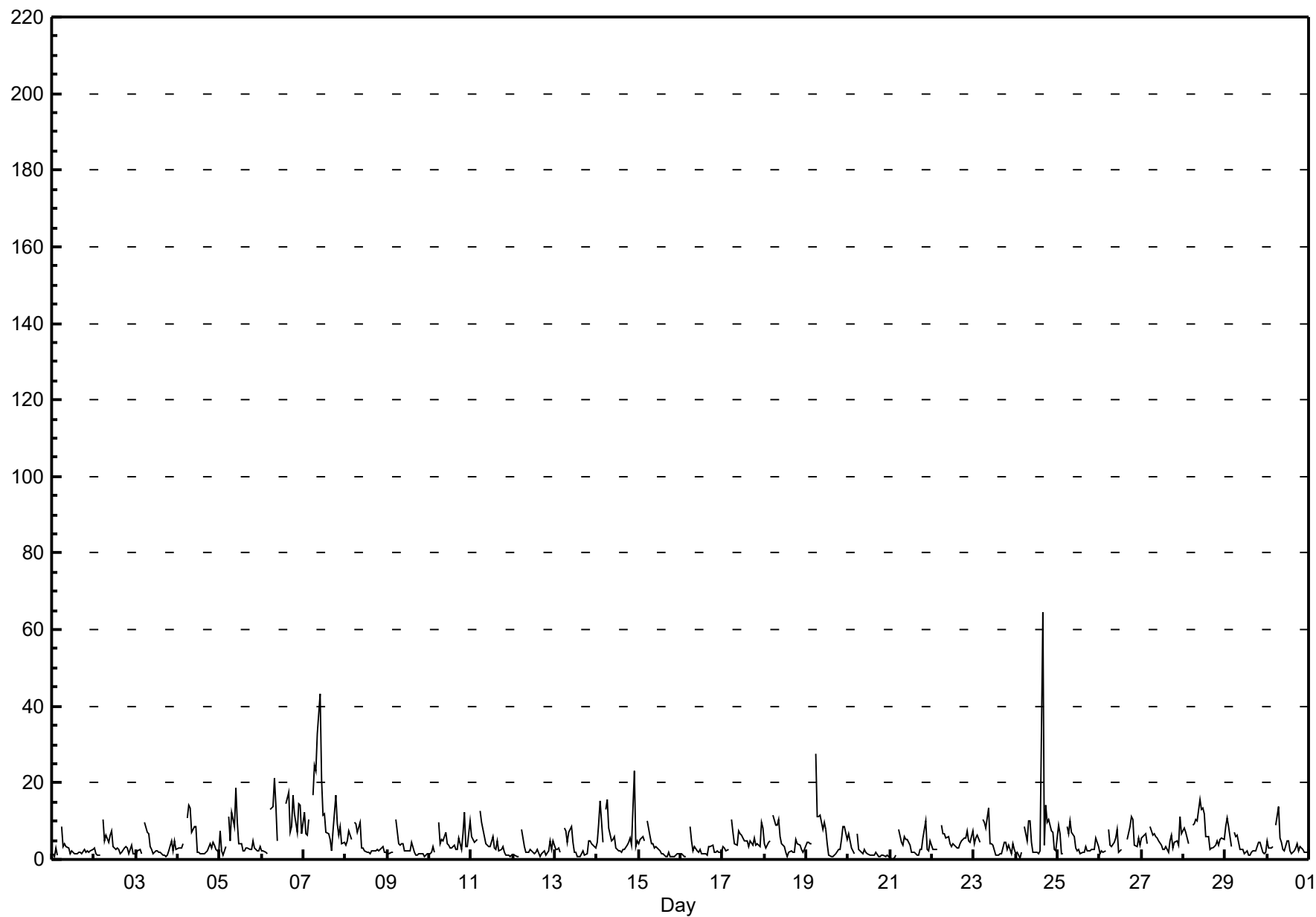
Oxides of Nitrogen (NO_x) - ppb

Beaverlodge - September 2018

Maximum Value: 64.5 ppb on Sep 24 16:00		Maximum Daily Average: 13.0 ppb on Sep 7		Hours in Service: 720																						
Minimum Value: 0 ppb on Sep 21 02:00		Minimum Daily Average: 2.1 ppb on Sep 20		Hours of Data: 683																						
Maximum Diurnal Average: 10.4 ppb at hour 6		Minimum Diurnal Average: 2.3 ppb at hour 14		Hours of Missing Data: 37																						
Monthly Average: 4.71 ppb		Percentiles: P ₁ = 0.7 P ₁₀ = 1.3 Q ₁ = 2.0 Median = 3.4 Q ₃ = 5.8 P ₉₀ = 9.7 P ₉₉ = 21.7		Hours of Calibration: 34																						
				Percent Operational Time: 99.6																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Sep	1	1	3	1	A	9	4	4	3	3	1	2	2	1	2	2	1	2	2	2	2	2	3	2.4	8.6	
2-Sep	3	1	1	1	A	10	5	6	5	6	7	3	3	3	2	2	3	3	3	2	4	1	2	3.4	10.3	
3-Sep	1	2	3	1	A	10	7	7	3	2	2	2	2	2	1	1	1	1	2	5	2	5	3	2.9	9.8	
4-Sep	3	3	3	4	A	11	14	14	7	9	9	2	2	1	1	2	2	2	4	3	5	4	3	2	4.7	14.2
5-Sep	8	2	1	3	A	11	5	12	9	19	10	4	4	2	2	3	3	3	3	5	3	2	2	3	5.2	18.8
6-Sep	2	2	2	1	A	13	14	21	14	5	C	C	C	C	14	17	7	9	17	12	7	14	14	7	10.1	21.4
7-Sep	12	7	6	11	A	17	24	23	33	43	21	11	12	7	7	5	2	7	17	9	6	9	4	4	13.0	43.2
8-Sep	4	5	7	5	A	10	9	7	10	3	3	2	2	2	2	2	2	3	2	3	3	2	2	2	4.0	9.7
9-Sep	1	2	2	2	A	10	4	4	4	4	2	2	2	2	4	2	1	1	2	1	1	1	1	1	2.6	10.3
10-Sep	2	2	3	2	A	10	4	5	5	7	4	4	3	3	4	3	2	5	3	7	12	4	3	10	4.6	12.4
11-Sep	6	5	4	5	A	12	10	8	4	4	3	3	6	3	3	5	2	3	3	2	1	1	1	1	4.2	12.5
12-Sep	1	1	1	1	A	8	3	2	2	2	2	2	1	2	3	1	1	2	2	1	2	5	3	5	2.3	7.9
13-Sep	2	3	3	2	A	8	8	5	7	9	5	2	2	1	1	2	2	1	2	5	5	4	4	3	3.6	8.7
14-Sep	5	9	15	5	A	13	16	8	5	5	6	3	2	2	2	3	3	4	5	5	4	23	4	5	6.5	23.1
15-Sep	4	5	6	5	A	10	6	4	4	3	3	3	2	2	1	1	1	2	1	1	1	1	2	2	3.0	10.0
16-Sep	2	1	1	1	A	8	5	2	3	2	2	3	2	1	1	1	3	3	4	2	2	2	2	2	2.4	8.5
17-Sep	3	3	2	3	A	10	7	4	4	8	7	6	5	5	5	3	5	4	5	4	4	3	10	8	5.1	10.4
18-Sep	4	3	5	5	A	12	9	9	11	6	4	3	2	1	2	2	2	5	4	4	3	2	2	2	4.4	11.6
19-Sep	5	5	4	4	A	28	11	11	12	8	10	8	4	1	1	1	1	3	3	5	9	9	5	5	6.4	27.5
20-Sep	7	5	3	2	A	7	3	2	1	3	2	1	1	1	1	1	2	1	1	1	1	1	1	1	2.1	6.8
21-Sep	1	0	1	1	A	8	4	4	6	5	5	4	2	2	2	1	1	3	3	6	10	2	2	5	3.3	10.1
22-Sep	3	3	3	2	A	9	7	7	5	6	4	3	4	4	3	3	4	5	6	6	7	5	5	7	4.8	9.0
23-Sep	4	6	6	5	A	10	10	8	13	4	4	4	1	1	1	1	5	4	3	4	1	4	2	2	4.5	13.5
24-Sep	2	2	0	2	A	9	5	10	10	4	2	2	2	1	2	65	4	14	10	11	7	7	3	2	7.6	64.5
25-Sep	9	7	2	2	A	9	7	10	7	6	3	2	3	2	2	2	3	2	2	3	3	3	6	4	4.2	10.0
26-Sep	2	2	2	2	A	8	4	3	5	5	8	2	2	M	M	M	5	9	11	10	4	3	6	4	4.8	11.1
27-Sep	6	6	7	4	A	9	6	7	6	6	5	4	3	3	3	2	5	6	3	4	5	4	11	7	5.2	11.1
28-Sep	8	7	6	4	A	9	9	11	10	16	13	13	12	6	6	3	3	3	4	5	4	5	6	5	7.3	15.5
29-Sep	9	11	9	3	A	7	6	6	3	2	3	2	2	1	1	2	2	2	3	5	4	2	2	2	3.9	11.0
30-Sep	5	3	3	3	A	9	14	5	4	3	2	5	5	2	2	2	3	4	2	3	3	2	2	2	3.8	13.7
4.1		3.8	3.8	3.1	--	10.4	8.0	7.6	7.2	6.9	5.2	3.7	3.3	2.3	2.9	4.8	2.6	3.6	4.4	4.3	4.2	4.3	4.0	3.7	Diurnal Average	
12.3		11.0	15.4	10.6	--	27.5	24.5	23.0	32.7	43.2	20.8	13.4	12.0	7.2	14.4	64.5	6.9	14.1	16.9	11.8	12.4	23.1	14.1	10.1	Diurnal Maximum	
C - Calibration		M - Maintenance				A - Automated Daily Zero Span																				

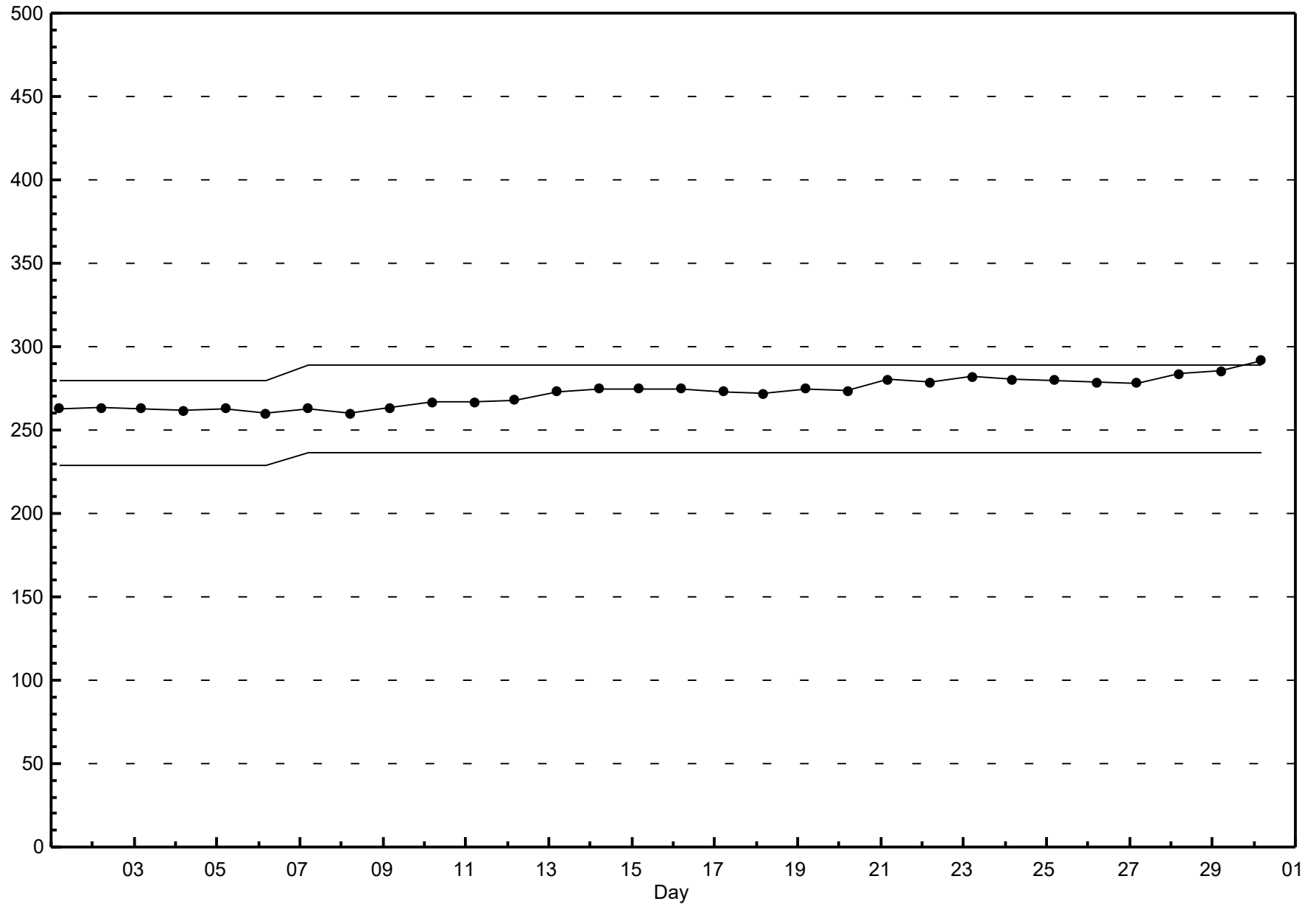
Hourly Maximums

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



Span Responses

Oxides of Nitrogen (NO_x)
Beaverlodge - September 2018



Hourly Averages

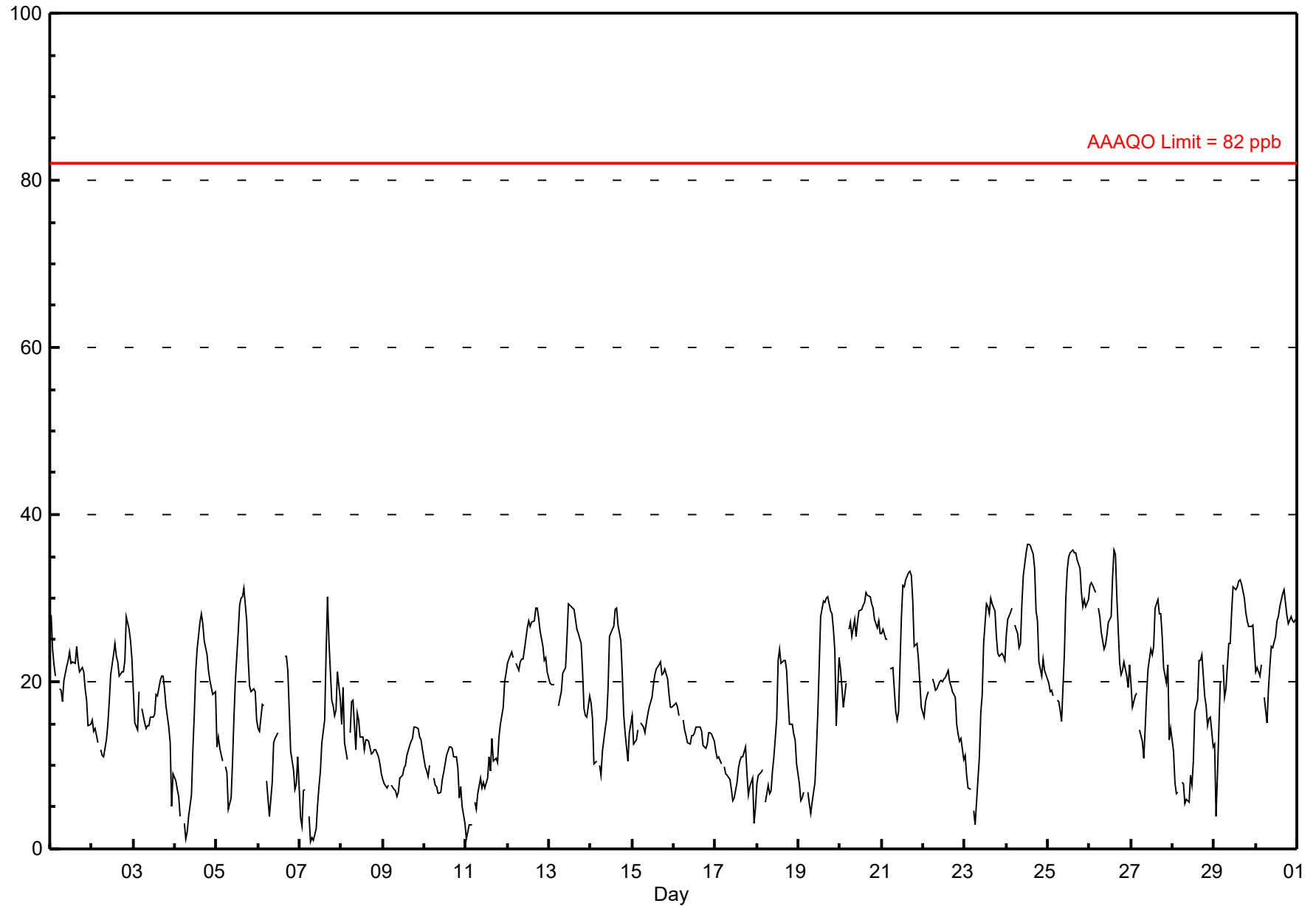
Ozone (O₃) - ppb

Beaverlodge - September 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 36.4 ppb on Sep 24 13:00 Maximum Daily Average: 28.3 ppb on Sep 24																								Hours in Service: 720 Hours of Data: 687 Hours of Missing Data: 33 Hours of Calibration: 33 Percent Operational Time: 100.0		
Minimum Value: 1 ppb on Sep 7 07:00 Minimum Daily Average: 8.7 ppb on Sep 17 Maximum Diurnal Average: 24.7 ppb at hour 16 Minimum Diurnal Average: 12.9 ppb at hour 8 Monthly Average: 18.16 ppb Percentiles: P ₁ = 2.3 P ₁₀ = 7.3 Q ₁ = 11.8 Median = 18.3 Q ₃ = 24.2 P ₉₀ = 29.0 P ₉₉ = 35.4																										
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-Sep	28	24	22	21	A	19	19	18	20	22	22	24	22	22	24	22	21	21	22	21	19	18	15	15	21.0	27.9
2-Sep	15	14	14	13	A	12	11	11	13	15	18	21	23	25	23	22	21	21	21	23	28	26	25	23	19.0	27.8
3-Sep	19	15	14	19	A	17	15	14	15	15	16	16	16	18	18	20	21	21	19	17	15	13	5	9	15.9	20.7
4-Sep	8	7	6	4	A	3	1	2	4	6	12	16	21	24	27	28	27	25	23	21	20	19	18	19	14.9	28.2
5-Sep	12	13	12	10	A	10	9	5	6	11	16	20	26	29	30	30	31	27	23	20	19	19	19	15	17.9	31.1
6-Sep	14	14	17	17	A	8	4	6	8	13	13	14	C	C	C	23	23	21	17	12	10	7	8	11	13.0	23.1
7-Sep	4	3	7	7	A	4	1	1	1	2	5	7	9	13	15	23	30	25	18	17	16	17	21	18	11.5	30.2
8-Sep	15	19	13	11	A	14	18	18	12	16	15	13	13	12	13	13	13	11	11	12	12	11	10	9	13.3	19.4
9-Sep	8	8	7	8	A	8	7	7	6	7	9	9	10	10	11	12	13	13	15	15	14	13	13	12	10.2	14.5
10-Sep	10	9	9	10	A	8	8	7	7	7	8	9	10	11	12	12	12	11	11	10	6	7	5	3	8.8	12.2
11-Sep	1	2	3	3	A	6	5	7	8	7	8	7	9	11	9	13	11	11	10	13	15	17	20	21	9.4	21.0
12-Sep	22	23	24	23	A	22	21	22	23	23	24	26	27	27	27	27	29	29	28	26	24	23	23	21	24.5	28.8
13-Sep	20	20	20	20	A	17	18	19	21	22	25	29	29	29	29	28	26	26	25	21	17	16	16	18	22.1	29.2
14-Sep	17	16	10	10	A	10	9	12	14	16	19	25	26	27	29	29	27	25	21	16	14	10	14	15	17.9	28.9
15-Sep	16	12	13	14	A	15	15	14	15	16	17	18	20	21	21	22	22	21	21	21	20	18	17	17	17.8	22.3
16-Sep	17	18	17	16	A	15	14	14	13	13	14	14	14	14	15	15	14	12	12	13	14	14	14	13	14.2	17.5
17-Sep	12	11	11	10	A	10	9	9	8	7	6	6	8	10	10	11	11	12	9	6	7	8	3	5	8.7	12.2
18-Sep	8	9	9	9	A	6	8	7	7	9	11	16	23	24	22	22	23	21	18	15	15	14	13	10	13.8	23.8
19-Sep	8	6	6	7	A	7	6	4	6	8	12	16	22	28	30	29	30	30	28	28	26	24	15	23	17.3	30.2
20-Sep	22	19	17	20	A	26	27	25	27	25	27	29	29	29	30	31	30	30	29	29	27	26	27	26	26.5	30.7
21-Sep	26	26	25	25	A	22	22	19	16	15	16	28	31	31	32	33	33	33	30	24	25	23	20	17	24.9	33.3
22-Sep	16	18	18	19	A	20	20	19	19	20	20	20	20	20	21	20	20	19	18	15	14	13	13	11	17.9	21.3
23-Sep	11	9	7	7	A	5	3	6	11	16	18	25	29	29	28	30	29	28	25	23	23	23	23	23	18.8	30.0
24-Sep	26	27	28	29	A	27	26	24	25	29	33	35	36	36	36	35	34	29	27	22	21	23	21	21	28.3	36.4
25-Sep	20	19	19	18	A	18	18	17	15	23	30	33	35	35	36	35	35	35	34	31	29	30	29	30	27.1	35.8
26-Sep	32	32	32	31	A	29	28	26	24	24	26	27	28	33	36	35	30	22	21	21	22	21	19	22	26.9	35.7
27-Sep	20	17	18	19	A	14	13	11	14	18	22	24	23	24	29	30	28	28	25	22	20	22	13	14	20.4	29.9
28-Sep	12	8	7	7	A	8	8	5	6	6	9	8	10	17	18	23	23	23	18	17	15	16	16	12	12.6	23.2
29-Sep	12	4	9	20	A	22	18	19	25	25	28	31	31	31	32	32	32	30	28	27	27	27	24	24	24.4	32.1
30-Sep	21	22	21	22	A	18	15	19	22	24	24	25	27	28	29	30	31	30	28	27	28	27	27	28	24.9	31.0
15.7 14.8 14.5 14.9 -- 14.0 13.1 12.9 13.7 15.4 17.4 19.8 21.7 23.0 23.8 24.7 24.3 23.0 21.2 19.5 18.7 18.2 17.0 16.8																								Diurnal Average		
31.5 31.9 31.5 30.6 -- 28.8 27.7 26.0 27.4 29.3 32.7 35.5 36.4 36.4 36.3 35.5 35.4 34.6 33.6 30.7 29.1 29.8 29.0 29.8																								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 - September 2018



Hourly Maximums

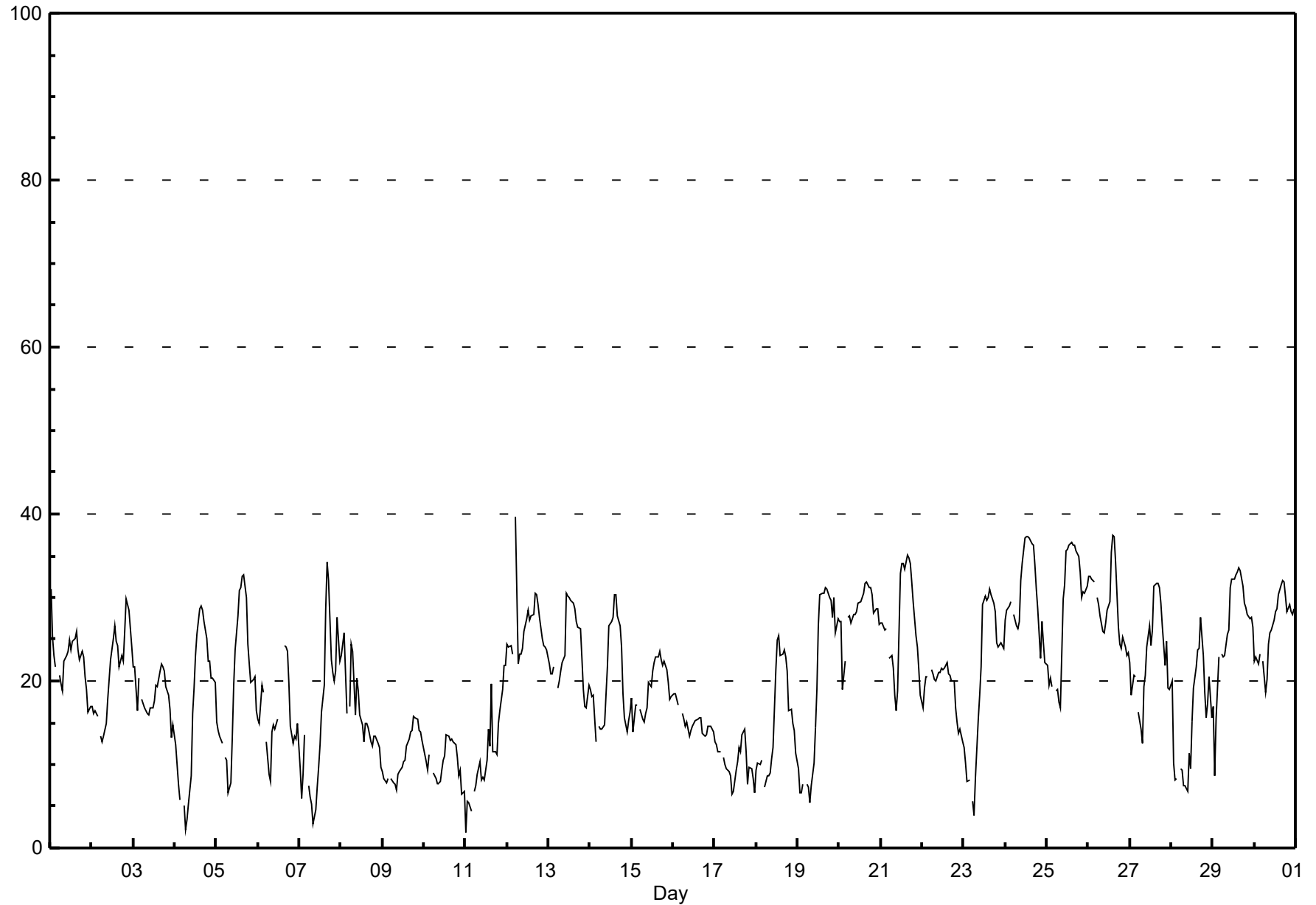
Ozone (O₃) - ppb

Beaverlodge - September 2018

Maximum Value: 39.7 ppb on Sep 12 06:00																								Maximum Daily Average: 30.4 ppb on Sep 24										Hours in Service: 720	
Minimum Value: 2 ppb on Sep 11 01:00																								Minimum Daily Average: 10.2 ppb on Sep 17										Hours of Data: 687	
Maximum Diurnal Average: 26.2 ppb at hour 16																								Minimum Diurnal Average: 14.8 ppb at hour 8										Hours of Missing Data: 33	
Monthly Average: 20.13 ppb																								Percentiles: P ₁ = 5.0 P ₁₀ = 8.9 Q ₁ = 13.9 Median = 20.4 Q ₃ = 26.6 P ₉₀ = 30.6 P ₉₉ = 36.7										Hours of Calibration: 33	
																								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-Sep	31	25	23	22	A	21	20	19	22	23	24	25	24	25	25	26	24	22	24	23	20	19	16	17	22.6	31.0									
2-Sep	17	16	16	16	A	13	13	13	15	18	20	23	25	27	25	24	22	23	22	26	30	28	26	24	21.0	29.8									
3-Sep	22	22	16	20	A	18	17	16	16	16	17	17	18	19	19	21	22	22	21	19	18	17	13	15	18.3	22.0									
4-Sep	12	10	8	6	A	5	2	3	5	9	16	19	23	26	29	29	28	27	25	22	22	20	20	20	16.8	29.0									
5-Sep	15	14	13	13	A	11	10	7	8	13	19	24	28	31	31	32	33	30	24	22	20	20	20	16	19.8	32.7									
6-Sep	15	15	19	19	A	13	9	8	14	15	14	15	C	C	C	24	24	24	20	15	12	13	13	15	15.8	24.2									
7-Sep	9	6	9	14	A	7	6	5	3	4	7	10	12	16	19	29	34	32	23	21	20	21	28	22	15.6	34.3									
8-Sep	23	24	26	16	A	17	24	23	16	20	19	16	15	13	15	15	14	13	12	13	13	12	12	10	16.6	25.8									
9-Sep	9	8	8	8	A	8	8	8	7	9	9	10	10	11	12	13	14	14	16	16	15	14	14	13	11.0	15.7									
10-Sep	11	10	9	11	A	9	9	8	8	8	9	10	11	14	13	13	13	13	12	11	9	9	6	7	10.2	13.6									
11-Sep	2	6	5	4	A	7	7	9	10	8	8	8	11	14	12	20	12	11	11	15	16	19	22	22	11.3	21.9									
12-Sep	24	24	24	23	A	40	22	23	23	24	26	27	29	27	28	28	31	30	29	28	25	24	24	24	26.4	39.7									
13-Sep	22	21	21	22	A	19	20	21	22	23	31	30	30	30	29	29	27	26	26	23	19	17	17	19	23.7	30.6									
14-Sep	19	18	18	13	A	15	14	14	15	18	22	27	27	28	30	30	28	27	24	18	16	14	15	16	20.2	30.3									
15-Sep	18	14	17	17	A	17	15	15	16	17	20	19	21	22	23	23	23	23	22	22	21	20	18	18	19.2	23.5									
16-Sep	18	18	18	17	A	16	15	15	15	13	14	15	15	15	15	16	16	14	13	14	15	15	15	14	15.2	18.4									
17-Sep	13	12	12	12	A	11	10	10	9	9	6	7	9	10	12	12	13	14	12	8	10	10	8	7	10.2	14.2									
18-Sep	9	10	10	11	A	7	9	9	9	11	12	21	25	25	23	23	24	23	21	16	17	15	14	11	15.5	25.4									
19-Sep	10	7	7	8	A	8	7	5	8	10	14	19	27	30	30	30	31	31	30	30	28	30	26	27	19.7	31.2									
20-Sep	27	27	19	22	A	28	28	27	28	28	28	29	29	30	30	32	32	31	31	30	28	29	29	27	28.3	31.9									
21-Sep	27	27	26	26	A	23	23	22	18	16	19	33	34	34	33	35	35	34	32	30	25	24	21	18	26.8	35.0									
22-Sep	17	19	20	21	A	21	21	20	20	21	21	22	21	22	22	21	21	20	20	17	15	14	14	13	19.2	22.3									
23-Sep	12	10	8	8	A	6	4	8	15	18	22	29	30	30	30	31	30	29	28	25	24	25	24	24	20.5	31.0									
24-Sep	27	28	29	30	A	28	27	26	27	32	34	37	37	37	37	37	36	34	31	29	23	27	25	22	30.4	37.2									
25-Sep	22	20	20	19	A	19	19	18	17	30	32	36	36	36	37	36	36	36	35	33	30	31	31	31	28.6	36.7									
26-Sep	33	32	32	32	A	30	29	28	26	26	27	29	30	35	37	37	34	26	24	24	25	24	23	23	29.0	37.4									
27-Sep	22	18	21	21	A	16	14	12	19	21	24	27	24	26	31	32	32	31	29	27	22	25	19	19	23.2	31.7									
28-Sep	20	10	8	8	A	9	9	7	7	7	11	9	15	19	22	24	24	28	23	19	16	17	21	16	15.2	27.6									
29-Sep	17	9	15	23	A	23	23	23	26	26	31	32	32	33	33	34	33	31	29	29	28	27	28	26	26.6	33.5									
30-Sep	22	23	22	23	A	22	19	20	24	26	26	27	28	29	30	32	32	32	30	28	29	28	28	29	26.5	32.0									
18.2 16.8 16.7 16.8 -- 16.2 15.1 14.8 15.6 17.3 19.5 21.7 23.3 24.6 25.4 26.2 25.9 25.0 23.4 21.7 20.4 20.3 19.7 18.9																									Diurnal Average										
32.6 32.5 32.2 31.8 -- 39.7 29.2 27.8 28.0 32.0 34.1 37.1 37.2 37.2 37.4 37.3 36.3 35.6 34.8 33.1 29.9 30.7 30.6 31.3																									Diurnal Maximum										
C - Calibration A - Automated Daily Zero Span																																			

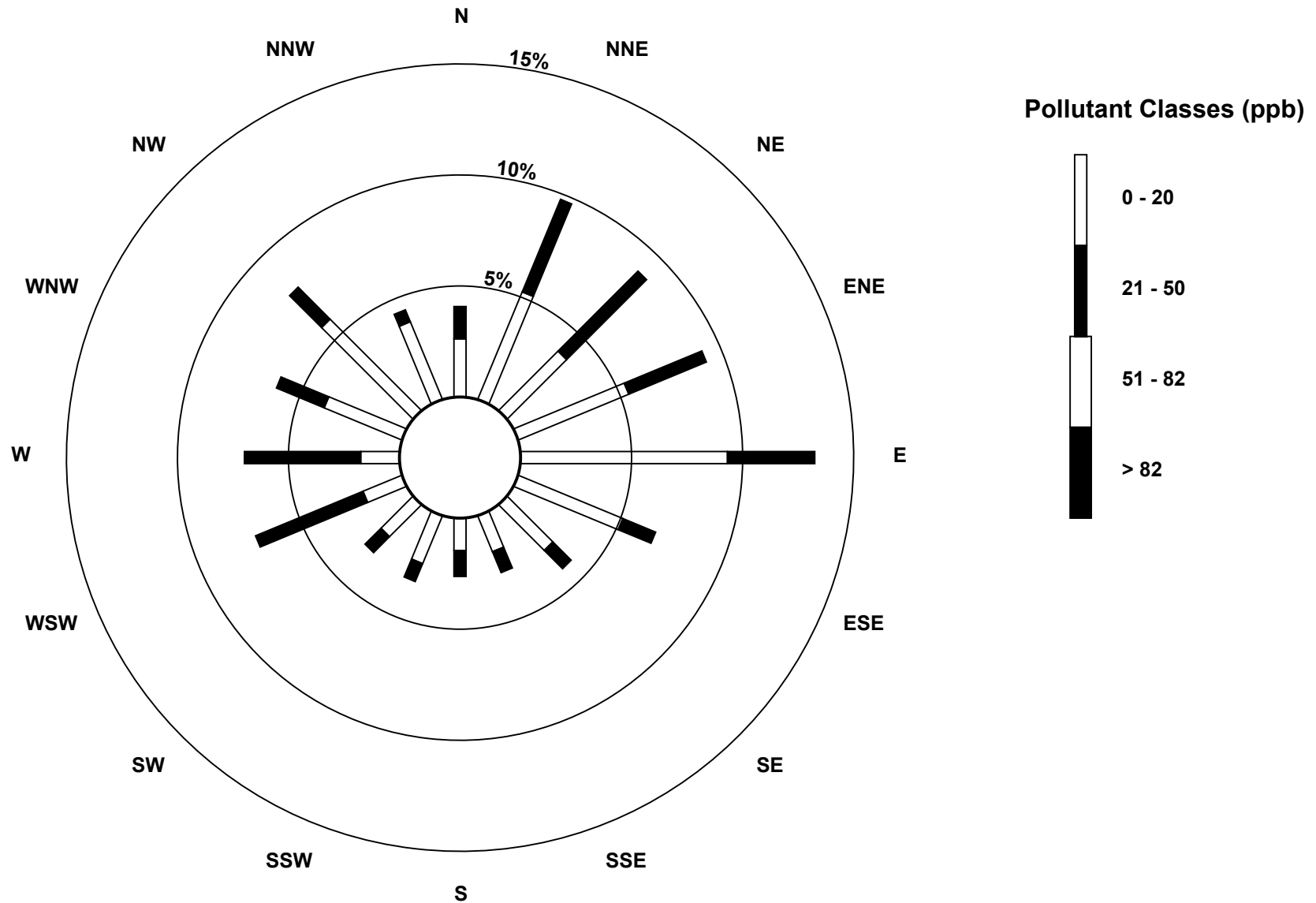
Hourly Maximums

Ozone (O₃) - ppb
Beaverlodge - September 2018



Pollutant Rose

Ozone (O₃) - ppb
Beaverlodge - September 2018



Eight Hour Running Averages

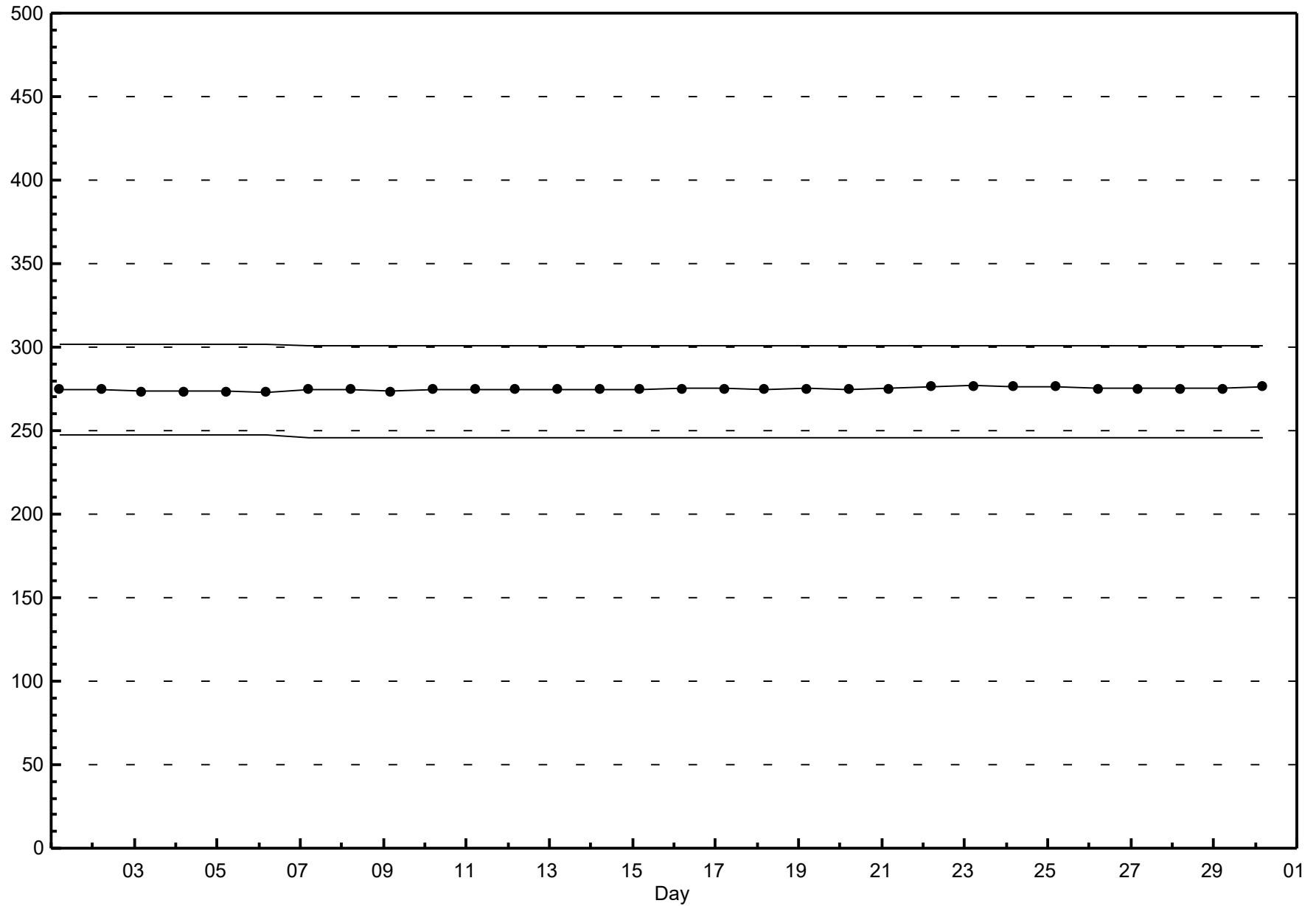
Ozone (O₃) - ppb

Beaverlodge - September 2018

Maximum Value: 34.8 ppb on Sep 25 19:00																								Hours in Service: 720	
Minimum Value: 3.1 ppb on Sep 7 11:00																								Hours of Data: 714	
																								Hours of Missing Data: 6	
Percentiles: P ₁ = 3.7 P ₁₀ = 7.9 Q ₁ = 12.3 Median = 18.4 Q ₃ = 23.7 P ₉₀ = 27.7 P ₉₉ = 33.3																								Hours of Calibration: 6	
																								Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Sep	27	27	26	25	25	25	23	21	20	20	20	21	21	21	22	22	23	23	22	22	22	21	20	19	27.1
2-Sep	18	17	16	15	15	14	14	13	13	13	13	14	15	17	19	20	21	22	22	22	23	23	23	23	23.4
3-Sep	23	22	22	21	20	19	17	16	16	16	16	15	15	16	16	17	18	18	19	19	19	18	16	15	23.2
4-Sep	13	12	10	8	7	6	6	5	4	4	5	6	8	11	14	17	20	23	24	25	24	24	23	22	24.6
5-Sep	20	18	17	16	15	14	12	10	9	9	9	11	13	15	18	21	24	26	27	27	26	25	23	22	27.1
6-Sep	20	18	17	17	17	15	13	12	11	10	10	9	9	10	N	N	N	N	N	N	18	16	15	14	19.6
7-Sep	11	9	8	7	7	6	5	4	3	3	3	3	4	5	7	10	13	16	18	19	20	20	21	20	20.9
8-Sep	18	18	17	16	16	16	15	15	15	14	15	15	15	15	14	14	14	13	13	12	12	12	12	11	18.3
9-Sep	11	10	10	9	9	8	8	8	7	7	7	8	8	8	8	9	10	11	12	12	13	13	14	13	13.5
10-Sep	13	13	12	11	11	10	9	9	8	8	8	8	8	8	9	10	10	11	11	11	11	10	9	8	13.1
11-Sep	7	6	5	4	4	3	3	4	5	6	6	7	7	8	8	9	9	10	10	11	12	12	14	15	14.7
12-Sep	16	18	19	21	21	22	22	22	23	23	23	23	24	24	25	26	26	27	28	27	27	27	26	25	27.5
13-Sep	24	23	22	21	21	20	19	19	19	19	20	22	23	24	25	26	27	28	28	27	25	23	22	21	27.6
14-Sep	19	18	16	15	15	14	13	12	12	12	13	15	16	19	21	23	25	26	26	25	23	21	20	18	26.1
15-Sep	16	15	14	14	14	14	14	14	14	15	15	16	16	17	18	19	20	20	21	21	21	21	20	20	21.3
16-Sep	19	19	18	18	17	17	16	16	15	15	14	14	14	14	14	14	14	14	14	14	14	13	13	13	19.2
17-Sep	13	13	13	12	12	11	11	10	10	9	8	8	8	8	8	8	9	9	10	10	10	9	9	8	12.9
18-Sep	7	7	7	7	7	7	8	8	8	8	8	9	11	13	15	17	19	20	21	21	20	19	18	16	21.1
19-Sep	14	12	11	10	9	8	7	6	6	6	7	8	10	13	16	19	22	25	27	28	29	28	26	26	28.7
20-Sep	24	23	22	21	20	20	22	22	23	24	26	27	27	27	28	28	29	29	30	30	29	29	29	28	29.6
21-Sep	28	27	27	26	26	25	24	23	22	21	19	20	21	22	24	26	28	30	31	31	30	29	28	25	31.4
22-Sep	23	21	20	19	19	18	18	19	19	19	20	20	20	20	20	20	20	20	20	19	18	17	16	15	23.3
23-Sep	14	13	12	11	10	9	8	7	7	8	9	12	14	17	20	23	26	27	28	28	27	26	26	25	28.1
24-Sep	24	24	25	25	26	26	26	27	27	27	27	28	29	31	32	33	34	34	34	32	30	28	27	25	34.4
25-Sep	23	22	21	20	20	19	19	18	18	18	20	22	24	26	28	30	33	34	35	34	34	33	32	32	34.8
26-Sep	31	31	30	30	31	30	30	30	29	28	27	26	26	27	28	29	30	30	29	28	28	26	24	22	31.0
27-Sep	21	20	20	20	19	18	18	16	15	15	16	17	17	19	21	23	25	26	26	26	26	25	23	22	26.5
28-Sep	20	17	15	13	12	10	9	8	7	7	7	7	7	9	10	12	14	16	17	19	19	19	19	17	19.5
29-Sep	16	14	13	13	13	14	14	15	17	20	22	24	25	26	28	29	30	31	31	31	30	29	29	28	31.0
30-Sep	26	25	24	24	23	22	20	20	20	20	21	21	22	23	25	26	27	28	29	29	29	29	29	28	28.8
Diurnal Maximums																									
N - Not Valid																									

Span Responses

Ozone (O₃)
Beaverlodge - September 2018

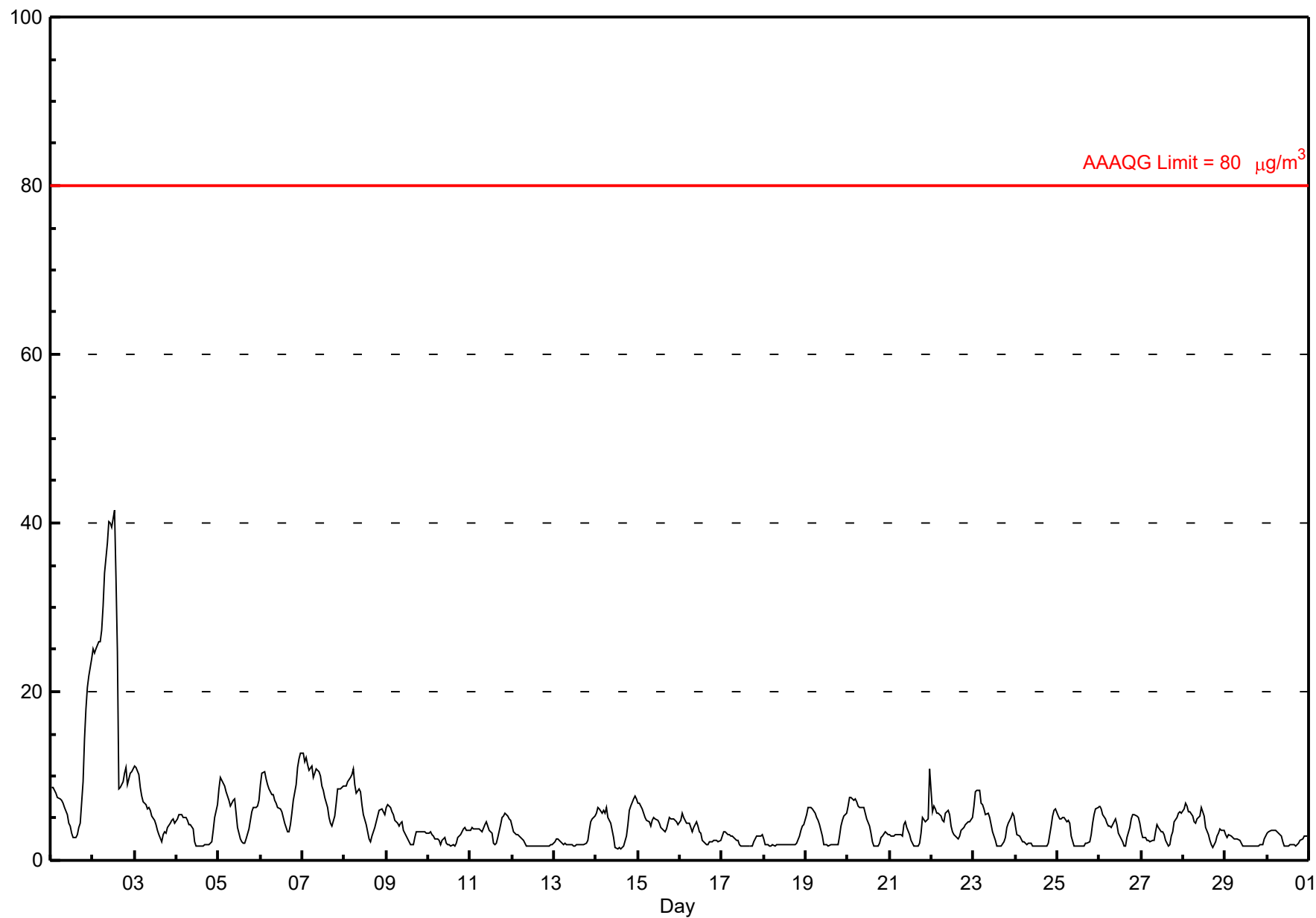


Hourly Averages

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

Beaverlodge - September 2018

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 41.5 µg/m³ on Sep 2 13:00 Maximum Daily Average: 23.5 µg/m³ on Sep 2																								Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0			
Minimum Value: 1 µg/m³ on Sep 14 15:00 Maximum Diurnal Average: 6.5 µg/m³ at hour 2 Monthly Average: 4.89 µg/m³ Minimum Daily Average: 2.1 µg/m³ on Sep 12 Minimum Diurnal Average: 2.3 µg/m³ at hour 16 Percentiles: P ₁ = 1.6 P ₁₀ = 1.7 Q ₁ = 2.2 Median = 3.8 Q ₃ = 5.6 P ₉₀ = 8.5 P ₉₉ = 29.6																											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Sep	9	9	8	8	8	7	7	7	6	5	4	4	3	3	3	3	4	4	9	14	18	20	22	24	8.8	23.9	
2-Sep	25	25	25	26	26	27	30	34	38	40	40	39	42	34	25	8	9	9	10	11	9	10	11	11	23.5	41.5	
3-Sep	11	11	10	9	8	7	7	6	6	6	5	5	4	4	3	2	3	3	3	4	4	5	5	4	5.6	11.2	
4-Sep	5	5	5	5	5	5	5	4	4	4	2	2	2	2	2	2	2	2	2	2	2	4	5	7	3.5	6.6	
5-Sep	8	10	9	9	8	8	7	7	7	7	6	4	3	2	2	2	2	4	5	6	6	6	6	7	5.9	9.8	
6-Sep	9	10	10	10	9	8	8	8	7	7	6	6	6	5	4	3	3	4	6	7	9	11	12	13	7.6	12.7	
7-Sep	13	12	12	11	11	11	10	10	11	10	10	9	8	7	6	5	4	4	5	7	8	8	8	9	8.8	12.7	
8-Sep	9	9	9	10	10	11	9	8	8	8	7	5	4	3	3	2	3	4	5	5	6	6	6	5	6.5	10.8	
9-Sep	6	7	6	6	5	5	4	4	4	5	4	3	3	2	2	2	3	3	3	3	3	3	3	3	3.9	6.7	
10-Sep	3	3	3	3	3	3	2	2	2	3	2	2	2	2	2	2	2	3	3	3	4	4	4	4	2.7	3.9	
11-Sep	3	4	4	4	4	4	4	3	4	5	4	4	3	2	2	2	3	4	5	5	6	5	5	5	3.9	5.6	
12-Sep	4	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.1	4.0	
13-Sep	2	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	4	5	5	5	2.5	5.2	
14-Sep	6	6	6	6	6	6	6	5	4	4	3	1	1	1	1	1	2	3	4	6	6	7	8	7	4.5	7.7	
15-Sep	7	7	6	6	5	5	5	4	5	5	5	5	4	4	4	3	4	4	5	5	5	5	5	4	4.8	6.9	
16-Sep	5	6	5	5	4	4	4	3	4	5	4	3	3	2	2	2	2	2	2	2	2	2	2	2	3.3	5.6	
17-Sep	3	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	2.5	3.4	
18-Sep	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	4	4	4	2.2	4.3	
19-Sep	5	6	6	6	6	6	5	5	4	3	2	2	2	2	2	2	2	2	2	3	4	5	5	6	3.8	6.3	
20-Sep	7	8	8	7	7	7	7	6	6	6	6	5	4	3	2	2	2	2	2	3	3	3	3	3	4.6	7.5	
21-Sep	3	3	3	3	3	3	3	3	4	5	4	3	2	2	2	2	2	2	3	5	5	5	5	11	3.5	10.9	
22-Sep	6	6	6	6	6	5	5	5	6	6	5	4	3	3	3	3	3	4	4	4	4	5	5	5	4.6	6.5	
23-Sep	6	8	8	8	7	7	6	5	6	5	4	3	2	2	2	2	2	2	3	4	4	5	6	5	4.7	8.3	
24-Sep	4	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	4	5	6	6	2.6	6.1	
25-Sep	5	5	5	5	5	5	5	4	3	2	2	2	2	2	2	2	2	2	2	3	4	6	6	6	3.6	6.3	
26-Sep	6	6	5	5	4	4	4	4	5	5	4	3	2	2	2	2	3	4	5	5	5	5	5	4	4.2	6.4	
27-Sep	3	3	3	2	2	2	2	2	3	4	4	3	3	3	2	2	2	3	3	5	5	6	6	6	3.4	5.8	
28-Sep	6	7	7	6	6	5	5	4	5	5	6	6	5	4	3	2	2	2	2	3	3	4	3	4	4.4	6.9	
29-Sep	3	3	3	3	3	3	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2.2	3.1	
30-Sep	3	3	4	4	4	4	3	3	3	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	2.6	3.6	
6.3 6.5 6.4 6.1 5.9 5.7 5.5 5.4 5.6 5.6 5.0 4.5 4.2 3.6 3.1 2.3 2.5 3.0 3.6 4.4 4.9 5.4 5.7 6.0																								Diurnal Average	Diurnal Maximum		
25.1 24.5 25.1 25.9 25.9 27.3 30.2 34.0 37.7 40.1 39.9 39.5 41.5 33.6 24.7 8.5 8.7 9.4 10.4 14.4 17.9 20.4 21.9 23.9																											
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																											



Hourly Maximums

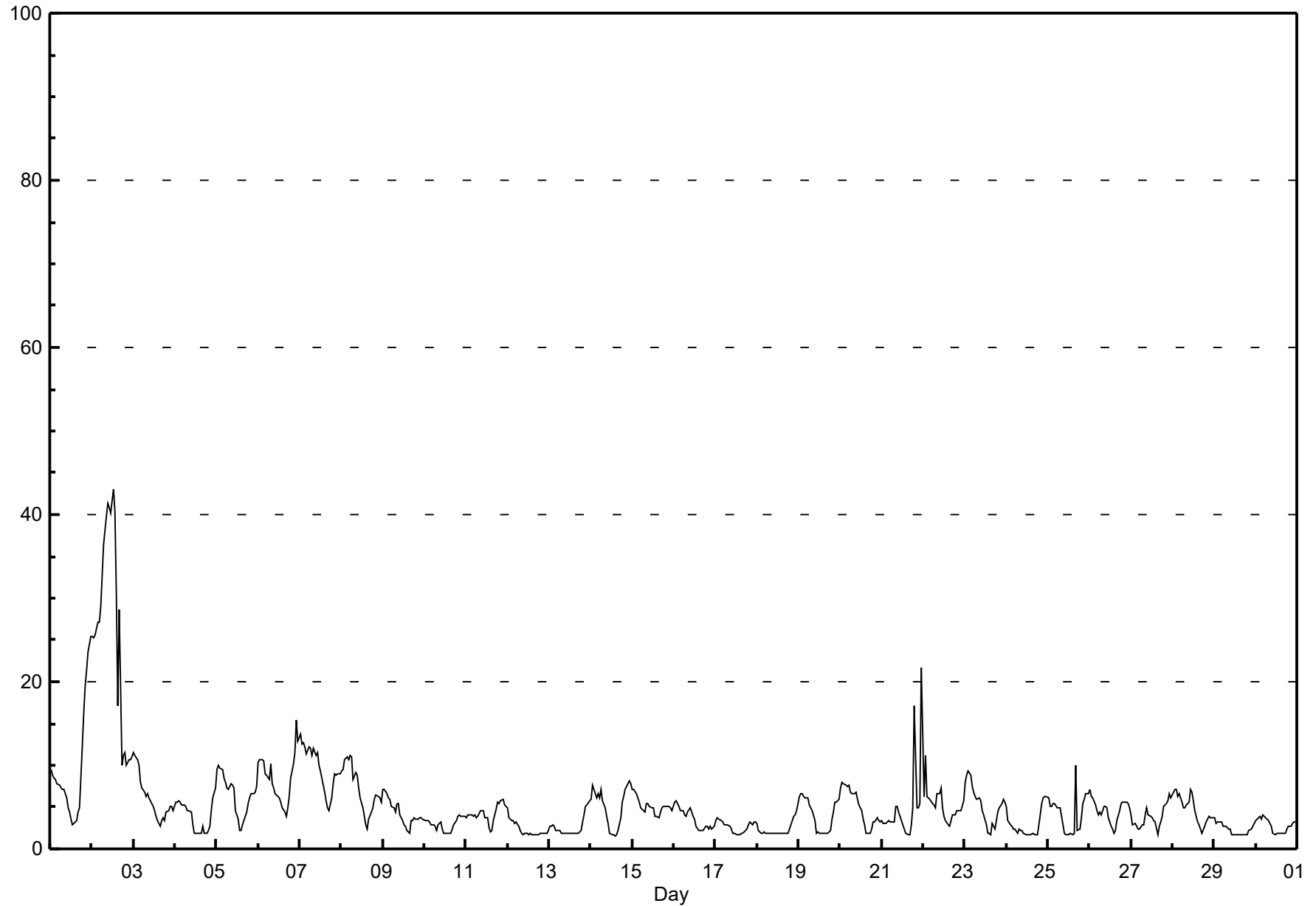
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Beaverlodge - September 2018

Maximum Value: 43.1 μg/m³ on Sep 2 13:00																				Maximum Daily Average: 26.1 μg/m³ on Sep 2										Hours in Service: 720	
Minimum Value: 1 μg/m³ on Sep 14 15:00																				Minimum Daily Average: 2.3 μg/m³ on Sep 12										Hours of Data: 720	
Maximum Diurnal Average: 7.0 μg/m³ at hour 2																				Minimum Diurnal Average: 2.9 μg/m³ at hour 16										Hours of Missing Data: 0	
Monthly Average: 5.41 μg/m³																				Percentiles: P ₁ = 1.7 P ₁₀ = 1.9 Q ₁ = 2.7 Median = 4.1 Q ₃ = 6.1 P ₉₀ = 9.3 P ₉₉ = 32.3										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-Sep	9	9	9	8	8	8	7	7	7	6	5	4	4	3	3	3	4	5	12	16	20	21	23	25	9.5	25.5					
2-Sep	25	25	26	27	27	29	33	36	40	41	41	40	43	40	31	17	29	10	11	11	10	11	11	11	26.1	43.1					
3-Sep	11	11	11	10	8	7	7	6	7	6	6	5	5	4	3	3	3	4	3	4	5	5	5	5	6.0	11.5					
4-Sep	6	6	6	6	5	5	5	5	5	4	3	2	2	2	2	2	3	2	2	2	3	5	6	7	3.9	7.3					
5-Sep	10	10	10	10	8	8	7	7	8	8	7	5	4	2	2	3	3	4	5	6	7	7	7	8	6.4	10.0					
6-Sep	10	11	11	11	9	9	8	10	8	7	7	6	6	6	5	4	4	5	6	9	10	11	15	13	8.4	15.4					
7-Sep	14	12	13	12	11	12	12	11	12	11	12	10	9	9	7	6	5	5	6	8	9	9	9	9	9.7	13.7					
8-Sep	9	10	11	11	11	11	11	8	9	9	7	6	5	4	3	2	4	4	5	6	6	6	6	6	7.1	11.2					
9-Sep	7	7	7	6	6	5	5	4	5	5	4	3	3	3	2	2	3	3	4	4	4	4	4	4	4.3	7.1					
10-Sep	3	3	3	3	3	3	3	2	3	3	2	2	2	2	2	2	2	3	3	4	4	4	4	4	2.9	4.1					
11-Sep	4	4	4	4	4	4	4	4	5	5	5	4	4	3	2	2	3	5	6	5	6	6	5	5	4.2	5.9					
12-Sep	5	4	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.3	4.8					
13-Sep	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	4	5	5	6	2.7	5.8					
14-Sep	6	8	7	6	7	6	7	6	5	4	3	2	2	2	1	2	2	4	6	6	7	8	8	8	5.0	8.1					
15-Sep	7	7	7	6	6	5	5	4	5	5	5	5	5	4	4	4	4	5	5	5	5	5	5	5	5.1	7.1					
16-Sep	6	6	5	5	5	5	4	4	4	5	4	4	4	3	2	2	2	2	3	3	2	3	2	3	3.6	5.8					
17-Sep	3	4	4	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	2.7	3.7					
18-Sep	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	4	4	5	2.4	4.6					
19-Sep	6	7	7	6	6	6	5	5	5	3	2	2	2	2	2	2	2	2	2	4	4	6	6	6	4.1	6.6					
20-Sep	7	8	8	8	8	8	7	7	7	7	6	5	5	4	3	2	2	2	2	3	3	4	3	3	5.0	8.0					
21-Sep	3	3	3	3	3	3	3	3	5	5	4	3	3	2	2	2	2	3	5	17	5	5	5	22	4.8	21.8					
22-Sep	6	11	6	6	6	5	5	5	7	7	7	5	4	3	3	3	3	4	4	5	5	5	5	6	5.2	11.2					
23-Sep	8	9	9	9	8	7	6	6	6	6	5	4	3	2	2	2	3	2	3	4	5	5	6	6	5.2	9.3					
24-Sep	5	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	5	6	6	6	2.9	6.4					
25-Sep	6	5	5	5	5	5	5	5	4	2	2	2	2	2	2	2	10	2	2	4	5	6	7	7	4.2	10.0					
26-Sep	7	6	6	5	5	4	4	4	5	5	5	4	3	2	2	2	3	5	5	6	6	6	5	5	4.6	7.0					
27-Sep	4	3	3	3	2	2	3	3	4	5	4	4	4	3	3	2	3	3	4	5	5	6	7	6	3.8	6.5					
28-Sep	7	7	7	6	7	6	5	5	5	6	7	7	6	5	3	3	2	2	3	3	4	4	4	4	4.8	7.1					
29-Sep	4	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	2.3	3.7					
30-Sep	3	4	4	4	4	4	4	3	3	3	2	2	2	2	2	2	2	2	2	3	3	3	3	3	2.8	4.1					
Diurnal Average																															
Diurnal Maximum																															

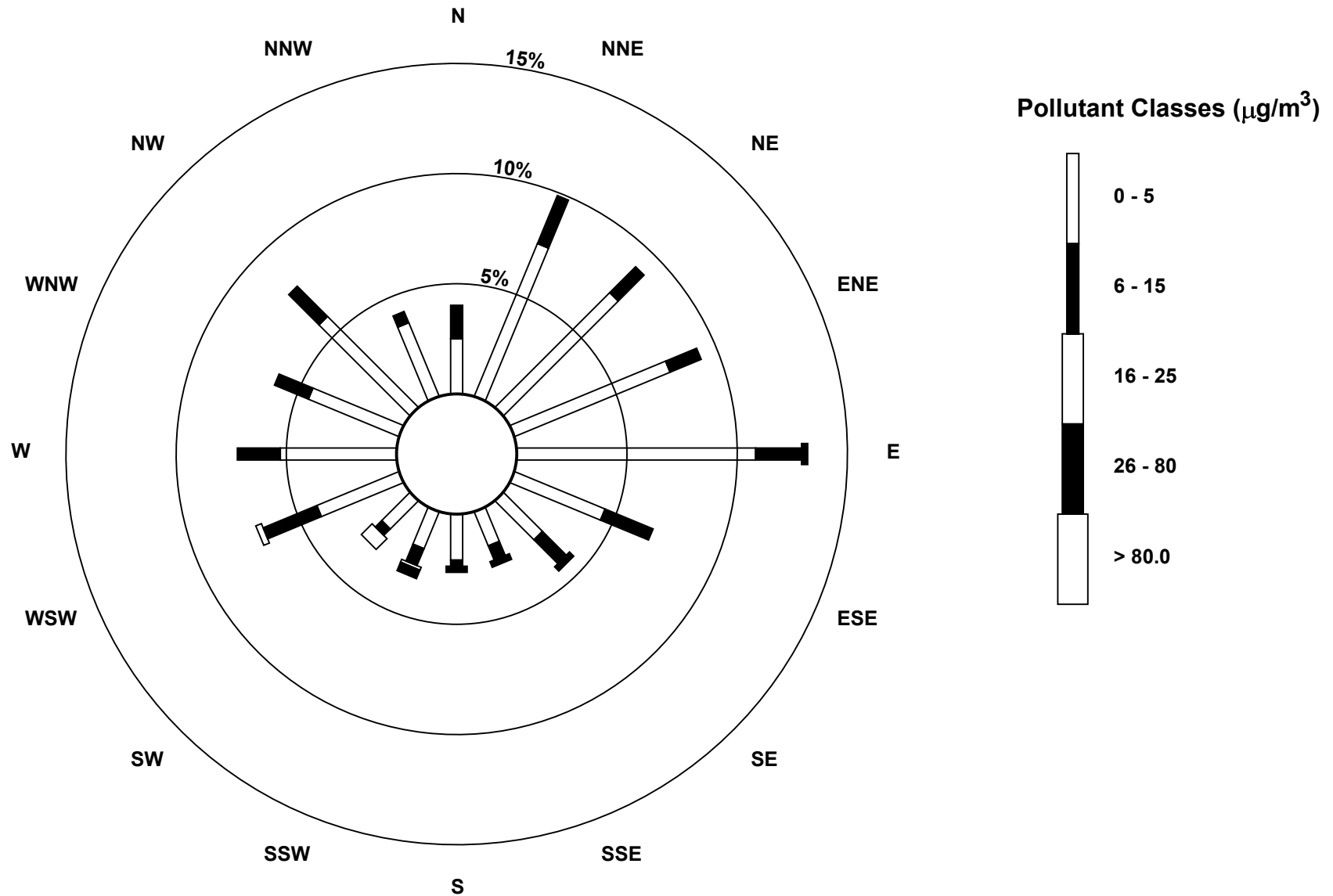
Hourly Maximums

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



Pollutant Rose

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



Hourly Averages

External Temperature (ET) - °C

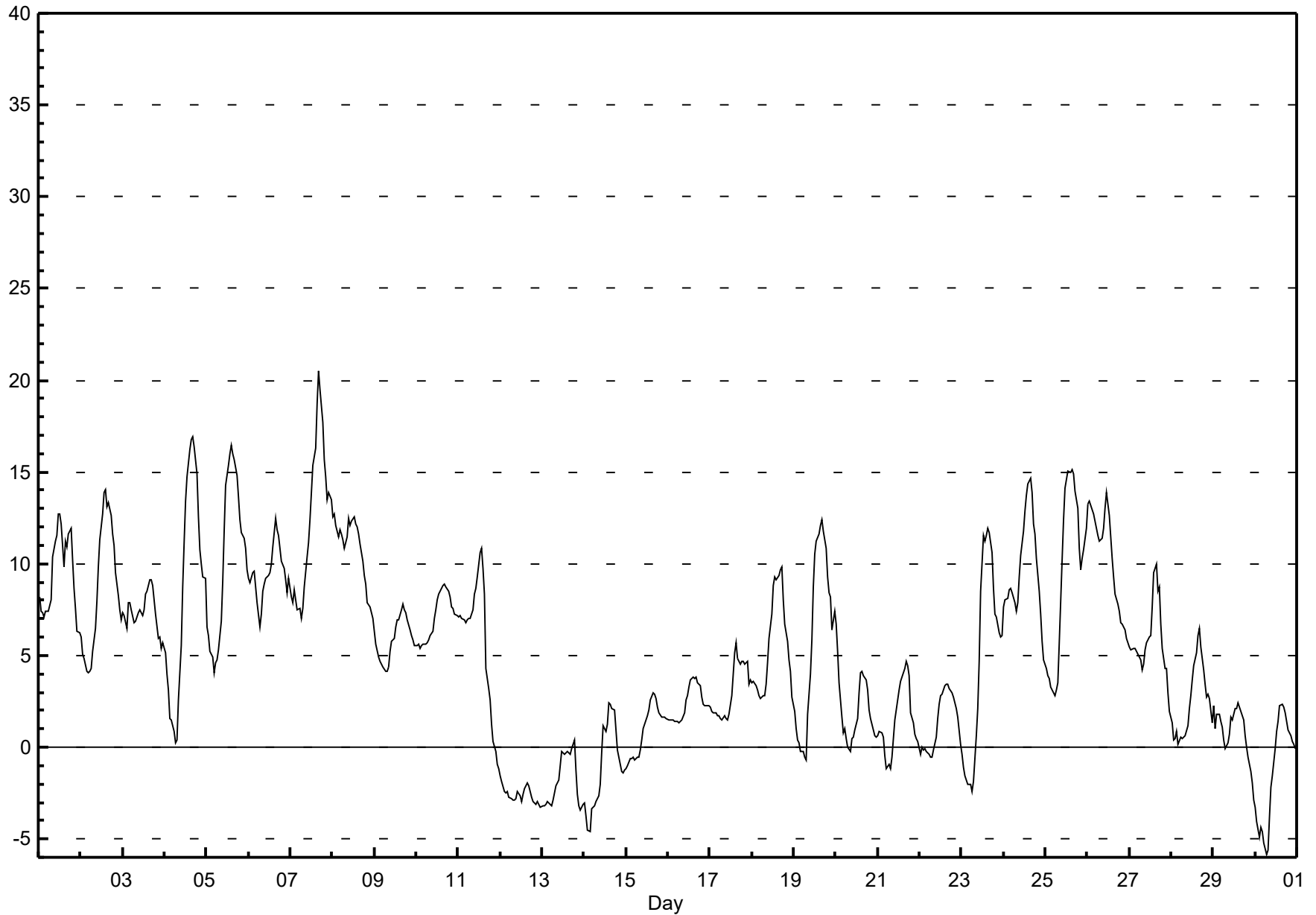
Beaverlodge - September 2018

Maximum Value: 20.5 °C on Sep 7 17:00																				Maximum Daily Average: 12.4 °C on Sep 7					Hours in Service: 720					Hours of Data: 720									
Minimum Value: -6 °C on Sep 30 07:00										Minimum Daily Average: -2.6 °C on Sep 12										Hours of Missing Data: 0					Hours of Calibration: 0														
Maximum Diurnal Average: 8.4 °C at hour 16										Minimum Diurnal Average: 2.7 °C at hour 7										Percent Operational Time: 100.0																			
Monthly Average: 5.17 °C																				Percentiles: P ₁ = -4.3 P ₁₀ = -1.2 Q ₁ = 1.3 Median = 4.9 Q ₃ = 8.7 P ₉₀ = 12.1 P ₉₉ = 16.3																			
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-Sep	8	7	7	7	7	7	8	8	10	11	12	13	13	12	10	11	11	12	12	10	9	8	6	6	9.4	12.7													
2-Sep	6	5	5	4	4	4	4	5	6	8	10	11	13	14	14	13	13	13	12	11	9	8	7	7	8.7	14.0													
3-Sep	7	7	7	8	8	8	7	7	7	7	7	7	8	8	8	9	9	9	8	7	6	6	5	6	7.4	9.2													
4-Sep	5	4	3	2	1	1	0	0	3	6	9	11	13	15	16	17	17	16	15	13	11	10	9	9	8.6	16.9													
5-Sep	7	6	5	5	4	5	5	5	7	9	12	14	15	16	16	16	16	15	14	12	12	11	11	10	10.3	16.4													
6-Sep	9	9	9	10	9	8	7	7	8	9	9	9	10	10	11	12	12	12	11	10	10	9	8	9	9.5	12.5													
7-Sep	8	8	9	8	7	8	7	8	9	10	11	12	14	15	16	19	20	19	18	16	15	14	14	13	12.4	20.5													
8-Sep	13	13	12	11	12	12	11	11	11	12	12	12	13	12	12	12	11	10	9	9	8	8	7	7	10.9	12.7													
9-Sep	6	6	5	5	5	4	4	4	4	5	6	6	7	7	7	8	8	7	7	6	6	6	6	6	5.9	7.8													
10-Sep	6	6	5	6	6	6	6	6	6	6	7	8	8	8	9	9	9	9	9	8	8	8	7	7	7.1	8.9													
11-Sep	7	7	7	7	7	7	7	7	7	8	9	9	11	11	10	8	4	3	3	1	0	0	-1	-1	5.8	10.8													
12-Sep	-2	-2	-2	-2	-2	-3	-3	-3	-3	-3	-2	-3	-3	-3	-2	-2	-2	-2	-3	-3	-3	-3	-3	-3	-2.6	-1.6													
13-Sep	-3	-3	-3	-3	-3	-3	-3	-2	-2	-2	-1	0	0	0	0	0	0	0	0	-1	-3	-3	-3	-3	-1.8	0.4													
14-Sep	-3	-4	-4	-5	-3	-3	-3	-3	-3	-2	0	1	1	1	2	2	2	2	1	0	-1	-1	-1	-1	-1.0	2.4													
15-Sep	-1	-1	-1	-1	-1	-1	-1	-1	0	0	1	1	2	2	3	3	3	3	2	2	2	2	2	2	0.9	3.0													
16-Sep	1	1	1	1	1	1	1	1	2	2	3	3	3	4	4	4	4	3	3	3	2	2	2	2	2.4	3.8													
17-Sep	2	2	2	2	2	2	2	1	2	2	1	2	3	4	5	6	5	5	5	5	5	5	3	4	3.1	5.7													
18-Sep	3	4	3	3	3	3	3	3	3	5	6	7	9	9	9	9	10	10	8	7	6	5	4	3	5.6	9.8													
19-Sep	2	1	0	0	0	0	-1	-1	2	4	6	9	11	11	12	12	12	12	11	9	8	8	6	7	5.9	12.4													
20-Sep	7	5	4	2	1	1	0	0	0	0	1	1	2	3	4	4	4	4	3	2	2	1	1	1	2.1	6.7													
21-Sep	1	1	1	1	0	-1	-1	-1	-1	0	1	3	3	4	4	4	5	4	4	2	1	1	0	0	1.5	4.6													
22-Sep	0	0	0	0	0	0	-1	-1	0	1	2	2	3	3	3	3	3	3	3	3	2	2	2	0	1.4	3.5													
23-Sep	0	-1	-2	-2	-2	-2	-2	-2	1	2	5	8	12	11	12	12	12	11	9	7	7	6	6	6	4.7	11.9													
24-Sep	8	8	8	9	9	8	8	7	8	9	10	12	13	14	14	15	14	12	12	10	8	7	6	5	9.7	14.6													
25-Sep	4	4	4	3	3	3	3	3	6	10	12	14	15	15	15	15	15	14	13	11	10	10	11	12	9.4	15.1													
26-Sep	13	13	13	13	12	12	12	11	11	12	13	14	13	11	10	9	8	8	7	7	7	6	6	6	10.4	13.9													
27-Sep	5	5	5	5	5	5	5	4	5	5	6	6	6	8	9	10	9	9	7	5	4	4	3	2	5.8	10.0													
28-Sep	1	0	0	1	0	1	0	1	1	1	2	3	4	4	5	6	6	5	4	3	3	3	3	1	2.5	6.5													
29-Sep	2	1	2	2	1	1	0	0	0	1	2	1	2	2	2	2	2	1	1	0	-1	-1	-2	-3	0.8	2.4													
30-Sep	-3	-4	-5	-4	-5	-5	-6	-6	-4	-2	-2	0	1	1	2	2	2	2	1	1	1	0	0	0	-1.3	2.3													
4.0 3.6 3.4 3.2 3.0 2.9 2.7 2.7 3.6 4.6 5.6 6.6 7.3 7.8 8.1 8.4 8.1 7.7 6.9 5.9 5.1 4.7 4.2 4.0																								Diurnal Average															
13.2 13.4 13.2 12.7 12.3 11.9 11.6 11.3 11.5 12.5 13.0 14.3 15.4 16.0 16.4 18.7 20.5 19.5 17.7 15.7 14.7 13.5 13.9 13.5																								Diurnal Maximum															

Hourly Averages

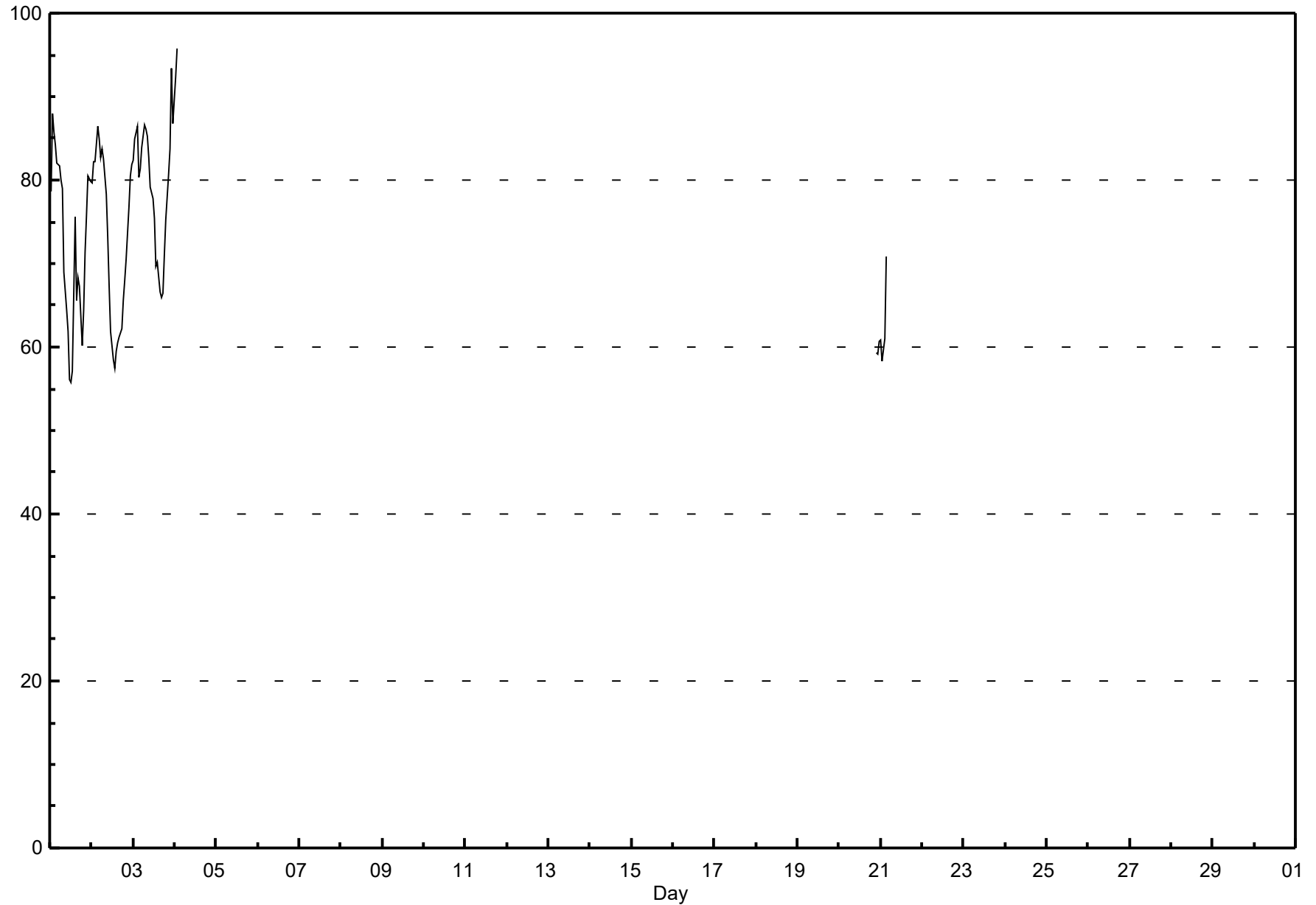
External Temperature (ET) - °C

Beaverlodge - September 2018



Hourly Averages

Relative Humidity (RH) - %
Beaverlodge - September 2018



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Beaverlodge - September 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	20	19	18	16	17	16	14	8	12	22	22	24	23	17	13	12	7	8	26	21	16	11	2	7	14.1	26.0
Dir	265	269	268	271	273	263	251	246	253	259	270	273	275	302	1	314	249	230	248	248	246	244	213	226	265	248
2 Spd	10	4	1	2	4	2	3	4	2	3	3	4	7	10	11	26	20	19	16	16	16	12	11	8	7.3	25.8
Dir	228	221	230	162	127	99	84	137	180	198	192	164	173	194	216	256	261	241	241	252	249	243	256	271	235	256
3 Spd	3	3	2	12	13	9	4	8	17	18	16	19	14	16	15	15	12	11	5	3	3	0	1	2	7.9	19.0
Dir	276	227	211	289	301	294	295	309	323	320	323	329	330	333	339	2	20	14	17	23	33	268	253	329	329	329
4 Spd	1	3	1	3	3	3	2	3	4	6	9	9	10	9	11	14	18	19	15	14	10	9	10	8	5.7	19.4
Dir	54	84	103	77	80	154	110	69	188	192	192	200	217	239	252	247	243	251	257	269	266	301	294	285	245	251
5 Spd	4	3	2	3	3	3	2	1	2	4	6	6	4	6	8	14	13	10	9	9	14	16	10	11	5.7	15.8
Dir	107	109	108	144	48	59	72	73	60	290	3	111	116	93	112	109	99	77	72	50	53	61	98	103	83	61
6 Spd	15	15	9	1	1	2	5	2	6	7	5	5	7	5	4	4	7	7	7	3	2	3	4	2	3.1	15.4
Dir	101	101	89	141	271	285	310	141	153	130	137	126	130	145	180	168	164	185	201	249	3	349	27	69	130	101
7 Spd	5	5	5	2	5	5	2	3	2	3	7	6	6	6	8	7	5	7	4	6	9	10	6	6	1.8	9.8
Dir	311	30	38	331	292	9	307	2	241	192	239	292	333	0	22	19	58	149	134	120	116	110	47	356	31	110
8 Spd	5	4	1	5	3	4	7	5	8	20	25	27	27	29	30	25	20	18	17	13	12	11	12	13	12.4	29.8
Dir	30	325	164	46	355	31	205	210	265	264	285	279	293	303	302	307	310	318	313	315	308	299	307	320	300	302
9 Spd	14	13	13	11	11	9	10	8	8	6	8	7	1	3	10	12	15	13	14	13	17	15	15	16	5.7	16.9
Dir	317	323	317	316	315	321	320	321	330	349	31	39	51	61	107	96	95	96	90	79	73	70	74	79	39	73
10 Spd	14	6	11	7	5	4	5	4	5	8	9	9	7	7	4	6	6	7	5	2	3	4	4	0	4.5	14.0
Dir	68	43	51	70	82	41	24	10	315	319	328	333	327	347	320	319	357	354	4	316	346	25	35	72	8	68
11 Spd	1	0	2	2	3	1	2	3	4	3	4	2	3	12	15	19	23	20	19	16	15	15	16	14	6.5	23.2
Dir	211	53	97	191	210	236	119	174	185	148	204	220	37	348	9	342	330	333	340	4	4	14	22	10	353	330
12 Spd	13	12	15	14	12	15	15	16	15	14	14	17	15	8	10	12	12	9	7	5	5	4	4	6	10.9	17.4
Dir	23	22	33	29	20	28	29	35	40	43	43	44	42	55	36	36	52	42	47	45	27	6	7	347	34	44
13 Spd	5	6	5	3	3	4	2	3	6	8	7	4	5	5	4	5	6	2	1	8	6	7	7	7	3.0	8.0
Dir	13	24	23	39	40	41	60	104	113	134	132	121	130	160	180	222	182	209	174	127	86	77	81	76	103	134
14 Spd	4	4	3	3	0	1	3	3	3	3	2	2	4	3	4	9	8	10	9	4	4	5	3	3	2.0	10.1
Dir	82	288	304	70	102	163	230	197	186	302	304	57	176	232	137	139	123	136	152	127	74	88	68	42	131	136
15 Spd	5	9	2	7	6	7	8	10	10	9	11	19	22	21	20	17	15	15	14	14	14	15	17	17	11.7	22.1
Dir	354	18	33	38	42	45	33	31	33	33	51	78	71	75	79	82	81	85	82	82	81	86	88	91	69	71
16 Spd	18	15	13	13	12	13	12	11	10	12	16	17	16	15	13	16	13	12	10	12	10	12	13	11	13.1	18.0
Dir	88	83	78	80	75	76	74	79	83	86	91	97	95	90	83	88	92	99	95	88	80	84	90	87	86	88
17 Spd	10	9	9	7	6	6	6	6	4	5	4	4	4	4	6	6	6	4	5	1	1	3	4	6	1.1	9.8
Dir	84	89	99	96	86	105	125	68	80	128	207	255	237	275	284	282	276	232	227	160	230	322	224	247	134	84
18 Spd	4	3	3	6	1	1	5	4	4	6	6	6	5	8	9	8	11	12	7	3	3	3	4	3	2.5	11.6
Dir	284	307	296	310	249	68	324	307	292	308	312	301	268	242	206	213	219	208	190	139	98	75	98	93	250	208
19 Spd	4	4	2	3	1	3	2	3	2	3	4	1	2	4	6	3	3	6	6	6	6	4	4	6	1.1	6.5
Dir	153	164	131	182	118	59	87	57	78	190	254	328	155	237	269	190	26	42	32	34	34	18	29	9	50	42
20 Spd	6	11	20	22	15	9	10	9	11	9	13	10	10	6	8	9	10	11	8	12	9	9	10	11	9.3	22.4
Dir	24	22	25	24	24	33	26	346	4	12	29	24	39	67	80	102	92	83	80	71	78	91	75	58	45	24
21 Spd	8	11	10	9	6	6	9	4	1	6	11	17	18	16	15	16	16	14	12	8	7	10	8	9	8.9	17.9
Dir	76	73	59	39	26	6	19	25	299	117	103	125	116	98	83	84	83	100	113	94	70	68	85	103	85	116
22 Spd	11	14	13	13	14	14	13	16	16	18	16	11	12	11	8	8	9	9	7	6	5	4	4	4	10.3	18.1
Dir	93	98	94	85	85	81	84	92	99	107	108	103	132	128	117	104	117	122	122	126	116	113	120	106	103	107

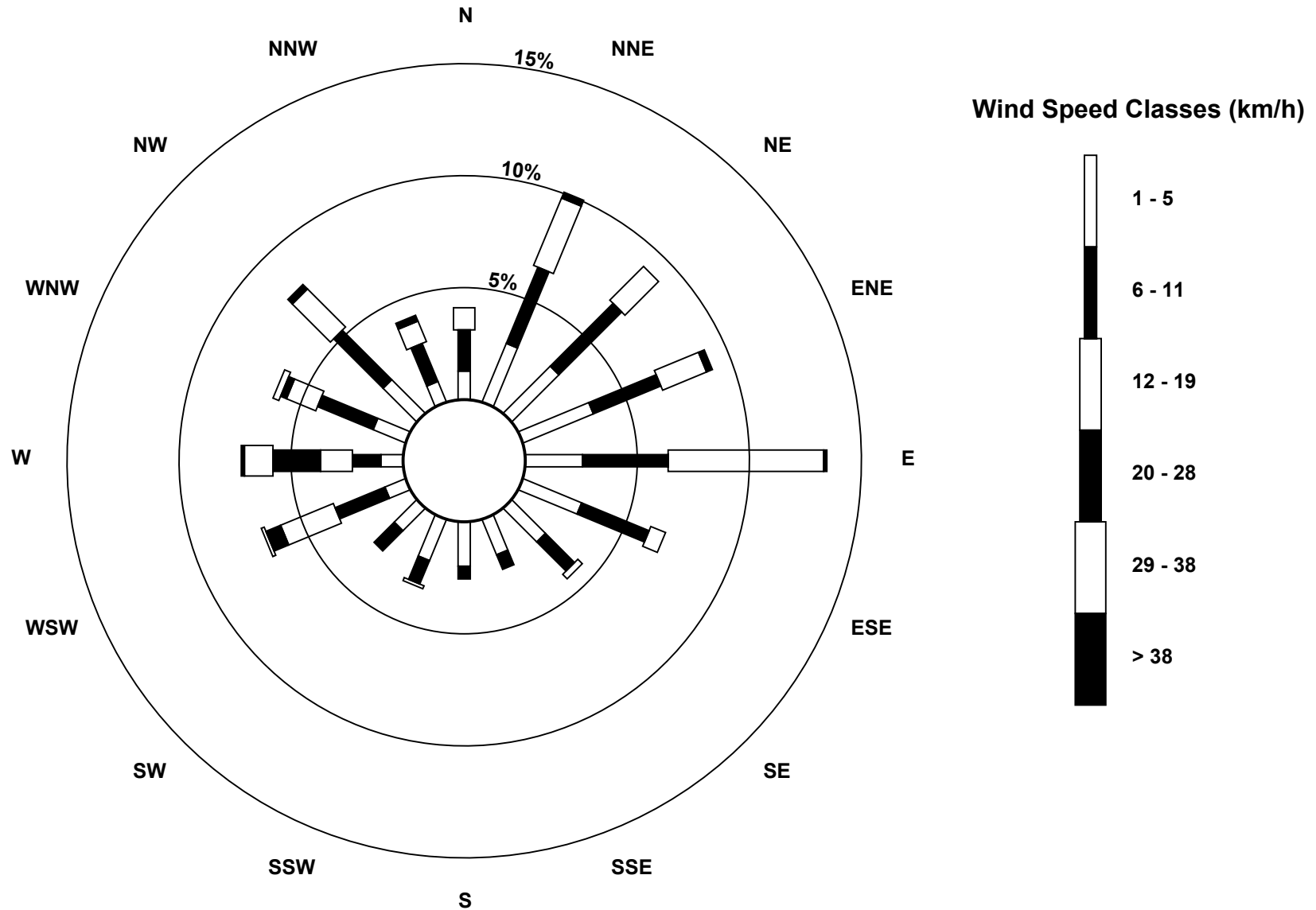
Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Beaverlodge - September 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	2	2	4	3	4	5	5	4	8	9	13	27	32	31	31	30	27	14	10	9	10	8	2	9.7	31.8
Dir	94	128	89	115	106	106	120	111	159	214	224	246	265	260	248	264	266	259	250	250	245	248	235	200	249	260
24 Spd	8	12	17	20	18	12	13	10	11	14	15	19	17	19	15	14	11	7	8	2	2	0	4	5	10.1	20.1
Dir	247	256	268	276	278	289	302	305	293	301	307	306	302	287	306	296	294	241	272	252	77	188	54	46	290	276
25 Spd	5	4	4	6	5	5	6	5	3	12	26	30	29	31	34	36	39	29	24	14	12	10	9	10	12.7	39.3
Dir	47	60	63	48	55	57	51	55	77	255	269	271	275	262	268	267	265	259	255	244	245	254	245	247	266	265
26 Spd	20	22	25	23	17	12	9	9	5	8	14	16	16	19	19	12	6	6	8	7	6	7	5	8	8.7	24.8
Dir	260	258	262	262	274	278	307	321	321	293	285	310	18	30	31	17	316	268	280	292	284	268	280	306	297	262
27 Spd	7	5	5	6	8	3	6	7	7	7	8	6	7	6	6	6	9	8	11	6	7	3	3	6	4.6	10.6
Dir	289	279	292	302	309	327	325	328	338	312	312	300	334	329	299	317	307	294	50	103	49	51	274	33	325	50
28 Spd	2	3	4	2	4	4	6	6	6	4	8	7	7	10	8	4	5	6	5	6	8	7	5	5	3.0	9.8
Dir	44	111	198	177	72	99	135	147	144	151	145	112	87	119	101	40	25	4	346	15	23	19	31	20	84	119
29 Spd	5	3	7	15	14	11	9	8	14	13	11	9	12	14	10	11	12	13	12	11	12	12	7	4	9.3	14.9
Dir	334	312	11	27	25	4	345	359	8	16	44	12	26	46	43	40	52	61	63	59	68	42	59	96	33	27
30 Spd	4	6	8	8	9	13	15	16	12	8	10	12	12	12	12	11	8	6	8	10	12	10	12	11	9.5	16.1
Dir	94	83	88	73	65	36	33	32	44	57	51	62	81	89	92	82	66	62	40	30	44	38	32	39	56	32
Spd	1.6	1.8	2.3	2.7	2.9	3.1	2.9	3.0	2.1	1.7	2.4	2.5	2.1	2.3	2.3	2.6	1.9	0.8	0.7	1.4	2.7	3.0	3.0	3.0	Diurnal Average	
Dir	30	27	21	9	4	19	16	26	14	316	318	325	337	329	345	328	319	277	300	38	41	43	51	43	Diurnal Maximum	
Spd	19.8	22.2	24.8	23.1	17.8	15.6	15.3	16.3	17.1	22.3	25.9	30.0	28.9	31.8	34.4	36.2	39.3	29.1	26.0	20.9	16.9	15.8	17.4	17.2	Diurnal Maximum	
Dir	265	258	262	262	278	263	33	92	323	259	269	271	275	260	268	267	265	259	248	248	73	61	88	91		
Maximum Speed Value: 39 km/h on Sep 25 17:00																								Hours in Service: 720		
Maximum Daily Speed Average: 14.1 km/h on Sep 25																								Hours of Data: 720		
Maximum Diurnal Speed Average: 3.1 km/h at hour 6																								Hours of Missing Data: 0		
Minimum Speed Value: 0 km/h on Sep 3 22:00																								Percent Operational Time: 100.0		
Minimum Daily Speed Average: 1.1 km/h on Sep 19																										
Minimum Diurnal Speed Average: 0.7 km/h at hour 19																										
Monthly Average Velocity: 1.92 km/h 6.1 deg																										
Speed Percentiles: P ₁ = 0.6 P ₁₀ = 2.6 Q ₁ = 4.4 Median = 7.7 Q ₃ = 12.6 P ₉₀ = 16.8 P ₉₉ = 30.4																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										
Frequency Distribution																										
Speed Range (km/h)																										
Direction	0 to 5		5 to 11		11 to 19		19 to 28		28 to 38		> 38		Total													
North	14		29		20		0		0		0		63													
NorthEast	41		57		37		3		0		0		138													
East	45		53		65		3		0		0		166													
SouthEast	26		30		4		0		0		0		60													
South	30		10		0		0		0		0		40													
SouthWest	21		24		10		1		0		0		56													
West	18		23		22		24		10		1		98													
NorthWest	23		40		27		7		2		0		99													
Total	218		266		185		38		12		1		720													

Wind Rose

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



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Beaverlodge - September 2018

Maximum Speed: 39 km/h on Sep 25 17:00																				Maximum Daily Speed Average: 16.4 km/h on Sep 25						Hours in Service: 720	
Minimum Speed: 1 km/h on Sep 11 02:00																				Minimum Daily Speed Average: 4.5 km/h on Sep 19						Hours of Data: 720	
Maximum Diurnal Speed Average: 13.5 km/h at hour 16																				Minimum Diurnal Speed Average: 7.0 km/h at hour 6						Hours of Missing Data: 0	
Monthly Average Speed: 9.60 km/h																				Percentiles: P ₁ = 1.6 P ₁₀ = 3.4 Q ₁ = 4.9 Median = 8.0 Q ₃ = 12.9 P ₉₀ = 17.2 P ₉₉ = 30.5						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-Sep	20	19	18	16	17	16	14	8	12	22	22	24	23	25	13	13	8	8	26	21	16	11	3	7	16.0	26.2	
2-Sep	10	5	3	4	5	4	3	4	3	4	4	4	8	12	12	26	21	19	16	16	16	12	11	8	9.6	26.4	
3-Sep	3	4	3	12	13	9	4	8	17	18	17	19	14	16	15	16	12	11	5	3	3	1	1	3	9.6	19.3	
4-Sep	2	3	3	4	4	3	3	3	5	6	9	9	11	11	12	14	18	20	15	14	11	10	10	8	8.7	19.6	
5-Sep	4	3	3	3	3	3	2	2	2	5	7	7	5	8	9	15	13	10	9	10	14	16	14	11	7.4	15.9	
6-Sep	15	15	9	2	3	2	7	3	6	7	5	6	7	6	5	6	8	7	7	3	3	6	5	4	6.2	15.5	
7-Sep	7	5	5	5	7	6	4	4	5	6	7	7	7	6	8	7	6	8	5	8	9	11	8	8	6.5	10.9	
8-Sep	6	5	4	7	4	6	9	7	9	21	25	27	27	30	30	25	20	18	18	13	12	11	12	13	14.9	30.1	
9-Sep	14	13	13	11	11	9	10	8	8	7	8	7	2	3	10	13	15	14	15	13	17	15	16	16	11.1	16.9	
10-Sep	14	7	11	7	5	4	5	4	5	9	9	9	7	7	5	7	6	7	5	3	4	4	4	3	6.3	14.1	
11-Sep	1	1	2	3	3	2	2	3	4	3	4	3	5	13	15	19	23	20	19	16	15	15	17	15	9.3	23.3	
12-Sep	13	12	15	14	12	15	15	16	15	14	14	17	15	8	10	12	12	9	7	6	5	4	4	6	11.3	17.5	
13-Sep	5	6	5	3	3	4	3	4	6	8	7	5	6	6	4	6	6	4	3	8	6	7	7	7	5.4	8.2	
14-Sep	5	4	4	3	2	2	3	3	3	3	3	3	4	4	5	10	9	11	9	4	4	5	3	3	4.6	10.8	
15-Sep	5	9	3	7	6	7	8	10	10	9	11	19	22	21	20	17	15	15	15	14	14	15	17	17	12.8	22.2	
16-Sep	18	15	13	13	12	13	12	11	10	12	17	17	16	15	13	16	14	12	10	12	10	12	13	11	13.3	18.0	
17-Sep	10	10	9	7	6	7	7	6	4	5	4	4	4	5	6	7	8	4	5	1	1	4	4	6	5.6	9.9	
18-Sep	5	3	3	6	3	2	5	5	4	6	7	7	7	8	9	9	11	12	7	4	3	4	4	3	5.6	11.8	
19-Sep	5	4	3	3	3	3	3	3	2	3	4	4	4	6	7	5	5	7	6	6	6	5	5	6	4.5	7.1	
20-Sep	6	11	20	22	16	9	10	9	11	9	13	10	10	7	9	9	11	11	8	12	10	10	11	11	11.1	22.4	
21-Sep	8	11	10	9	6	6	9	4	3	7	11	17	18	16	15	16	16	14	12	8	7	10	8	10	10.5	18.2	
22-Sep	11	14	13	13	14	14	13	16	17	18	16	12	12	12	9	9	9	9	7	6	5	4	4	4	10.8	18.2	
23-Sep	3	2	3	4	4	4	5	5	4	8	9	14	28	32	31	31	31	27	14	10	9	10	8	3	12.5	32.0	
24-Sep	8	12	17	20	18	12	13	10	11	14	16	20	18	20	16	15	12	7	9	4	2	4	4	5	12.0	20.1	
25-Sep	5	4	4	6	5	5	6	5	3	13	26	30	29	31	35	36	39	29	24	14	12	11	9	10	16.4	39.4	
26-Sep	20	22	25	23	17	12	9	9	5	8	14	17	17	20	19	12	7	6	8	7	6	7	5	8	12.7	24.8	
27-Sep	7	5	5	6	8	3	6	7	7	7	8	7	7	6	7	7	9	8	11	7	7	3	4	7	6.6	11.0	
28-Sep	6	3	4	3	4	4	6	7	7	4	8	8	7	10	8	5	5	8	5	6	8	7	5	5	5.9	10.0	
29-Sep	5	3	8	15	14	11	9	8	14	14	12	9	12	14	12	12	12	13	12	12	12	12	7	5	10.7	15.0	
30-Sep	4	6	8	8	9	13	15	16	12	8	10	12	12	13	12	11	8	6	8	11	12	11	12	11	10.4	16.2	
8.2 7.8 8.2 8.7 7.9 7.0 7.4 7.0 7.5 9.3 10.9 11.8 12.2 13.0 12.7 13.5 13.0 11.9 10.7 9.0 8.7 8.5 7.9 7.7																									Diurnal Average		
20.0 22.2 24.8 23.2 17.9 15.7 15.4 16.4 17.3 22.4 26.1 30.3 29.2 32.0 34.7 36.5 39.4 29.2 26.2 20.9 16.9 15.9 17.5 17.3																									Diurnal Maximum		
All monthly, daily, and diurnal averages have been calculated using scalar methods																											

Hourly Standard Deviations

Wind Direction (WD) - deg
Beaverlodge - September 2018

Maximum Value: 95.2 deg on Sep 8 03:00																		Hours in Service: 720							
Minimum Value: 3.0 deg on Sep 1 21:00																		Hours of Data: 720							
																		Hours of Missing Data: 0							
Percentiles: P ₁ = 3.7 P ₁₀ = 5.2 Q ₁ = 7.5 Median = 13.5 Q ₃ = 26.1 P ₉₀ = 47.1 P ₉₉ = 86.1																		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-Sep	9	5	4	6	5	7	5	15	25	7	6	8	6	49	19	27	34	9	8	3	3	5	72	38	72.3
2-Sep	20	36	87	62	27	48	25	35	45	44	34	29	23	28	22	12	12	5	5	8	5	11	16	18	87.4
3-Sep	62	70	53	8	7	4	6	14	8	9	9	9	14	11	13	15	14	14	13	18	26	86	87	59	87.1
4-Sep	74	28	57	39	48	14	20	11	40	17	17	18	24	33	28	19	8	9	4	4	11	7	5	14	73.9
5-Sep	31	17	39	35	26	26	33	66	53	42	42	29	49	41	27	13	11	6	5	10	7	8	43	13	65.9
6-Sep	4	4	16	83	84	62	54	52	30	21	26	31	22	33	58	54	20	11	6	37	39	54	51	75	84.0
7-Sep	71	15	12	64	51	42	59	41	79	73	15	30	34	28	15	15	29	25	32	35	15	26	42	34	78.5
8-Sep	60	41	95	42	27	43	41	33	21	17	7	7	8	10	8	9	12	7	6	8	7	10	8	7	95.2
9-Sep	6	8	7	9	6	9	10	8	9	19	14	12	74	43	19	16	12	8	8	8	4	7	7	7	74.5
10-Sep	6	13	14	17	19	26	9	17	23	14	16	24	21	16	29	17	13	15	15	35	30	10	5	85	85.1
11-Sep	17	77	34	12	14	66	25	14	19	30	20	69	66	22	11	15	6	7	9	8	8	17	15	10	76.7
12-Sep	11	11	5	5	10	5	6	6	6	7	6	5	6	8	9	8	12	8	9	7	7	7	7	7	11.5
13-Sep	7	5	8	13	14	13	40	17	11	10	19	40	37	35	24	33	26	61	71	5	13	8	6	4	71.3
14-Sep	20	64	49	34	87	67	20	35	38	30	64	71	34	53	66	21	23	21	16	33	27	10	13	17	86.5
15-Sep	15	9	52	21	14	10	6	4	4	4	14	7	5	7	8	7	7	8	6	5	6	5	4	4	51.7
16-Sep	5	5	5	5	4	4	5	5	7	8	9	8	8	10	9	8	17	6	12	8	7	6	6	6	16.6
17-Sep	10	9	5	6	13	27	22	15	23	20	16	23	25	32	32	24	43	26	27	59	60	36	14	11	60.4
18-Sep	22	26	19	12	84	29	23	58	20	11	19	23	43	31	17	12	14	9	10	40	16	21	14	12	84.4
19-Sep	33	14	44	21	59	16	50	21	54	28	37	86	82	51	39	65	76	11	6	10	6	29	56	27	86.4
20-Sep	21	18	7	5	17	21	10	13	9	15	7	15	18	31	34	24	26	11	7	4	6	8	15	6	34.0
21-Sep	9	8	12	9	14	9	13	24	88	32	12	12	10	14	9	8	9	8	8	10	6	7	6	11	87.9
22-Sep	5	5	5	4	4	5	6	5	8	7	9	15	16	20	19	15	12	8	4	4	5	11	11	14	20.1
23-Sep	14	11	20	15	21	20	11	12	28	13	6	12	11	7	10	7	6	5	5	5	7	4	12	43	43.2
24-Sep	16	5	6	5	6	10	12	12	5	8	10	13	17	15	21	23	31	10	11	90	59	82	23	14	89.7
25-Sep	13	9	14	7	10	9	8	6	22	47	5	8	9	8	8	6	5	5	4	4	3	8	7	10	47.0
26-Sep	5	4	4	5	5	6	21	13	21	22	12	18	24	8	8	11	24	6	6	6	8	10	15	8	24.3
27-Sep	5	8	9	11	5	12	6	5	8	12	18	32	25	27	29	27	14	21	16	31	14	30	55	12	55.1
28-Sep	82	27	24	27	23	26	11	16	23	20	14	27	17	11	19	42	30	40	16	10	4	7	11	27	82.4
29-Sep	26	50	19	4	6	6	7	23	7	12	23	19	14	13	30	21	12	6	5	16	6	9	17	20	50.0
30-Sep	27	12	10	6	7	9	3	4	13	17	19	12	14	20	13	13	8	17	10	8	7	7	4	7	26.7
82.4 76.7 95.2 83.4 86.5 67.3 59.2 65.9 87.9 73.2 64.0 86.4 82.3 53.2 66.1 65.5 76.3 60.6 71.3 89.7 60.4 86.3 87.1 85.1																									

PAZA
Evergreen Park Station
Monthly Summary Tables, Graphs and
Roses

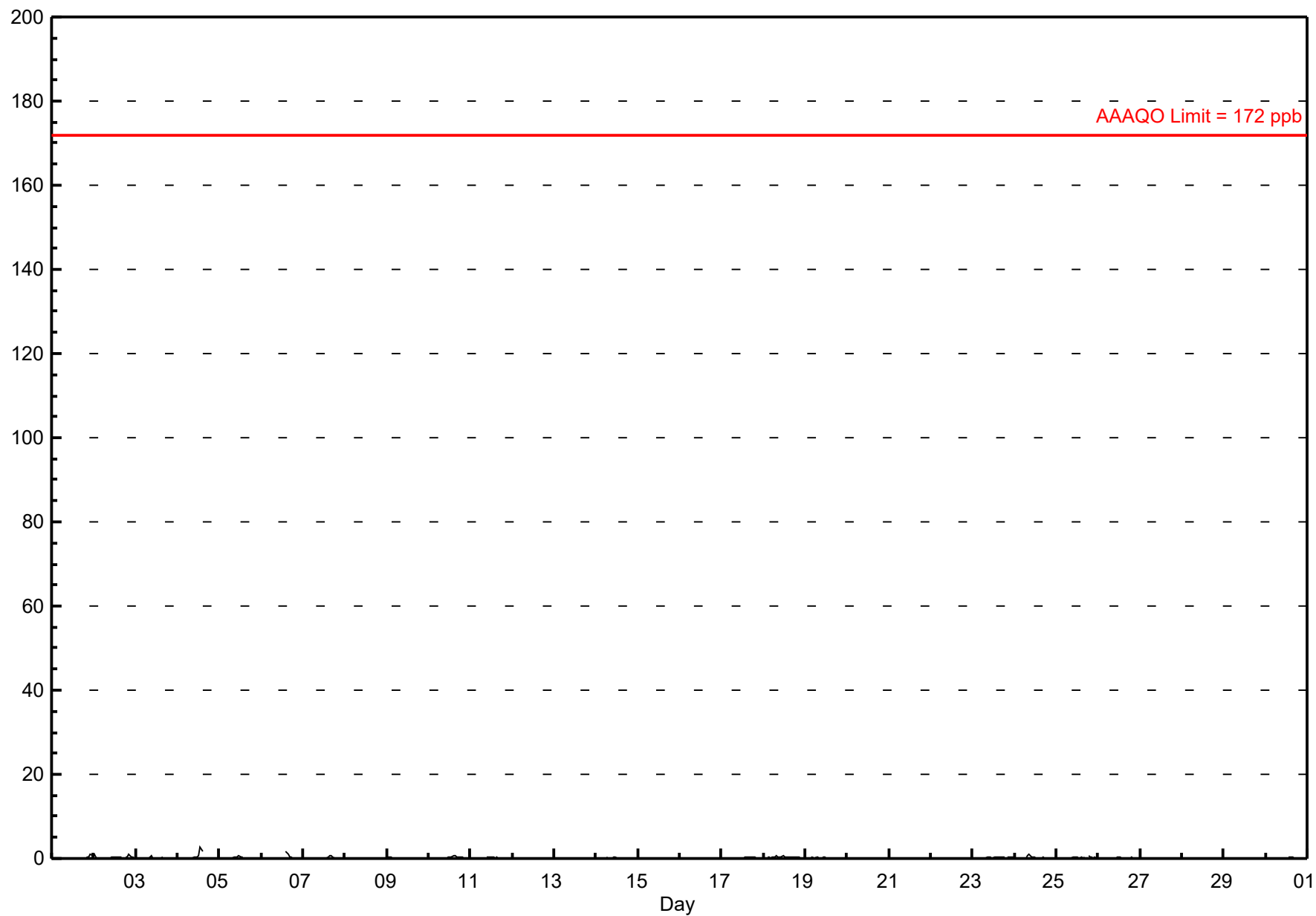
Hourly Averages

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

Number of Exceedences (AAAQO):		1-hr: 0	24-hr: 0	Hours in Service: 720																						
Maximum Value: 2.6 ppb on Sep 4 14:00		Maximum Daily Average: 0.3 ppb on Sep 4																			Hours of Data: 686					
Minimum Value: 0 ppb on Sep 1 03:00		Minimum Daily Average: 0.0 ppb on Sep 28																			Hours of Missing Data: 34					
Maximum Diurnal Average: 0.3 ppb at hour 15		Minimum Diurnal Average: 0.0 ppb at hour 5																			Hours of Calibration: 34					
Monthly Average: 0.11 ppb		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.1 P ₉₀ = 0.3 P ₉₉ = 0.9																			Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	1	1	0.1	1.1
2-Sep	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0	0.3	1.0
3-Sep	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.5
4-Sep	0	0	0	0	0	0	0	0	0	0	0	0	1	3	2	A	0	0	0	0	0	0	0	0	0.3	2.6
5-Sep	0	0	0	0	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.6
6-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	A	2	1	0	0	0	0	0	0	0	0	0.2	1.6
7-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	0	0	0	0	0	0	0	0.1	0.6
8-Sep	0	0	0	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
9-Sep	0	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
10-Sep	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	1	0	0	0	0	0	0	0	0.1	0.6
11-Sep	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
12-Sep	0	0	0	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
13-Sep	0	0	0	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
14-Sep	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
15-Sep	0	0	0	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
16-Sep	0	0	0	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
17-Sep	0	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
18-Sep	0	A	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
19-Sep	A	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
20-Sep	0	0	0	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
21-Sep	0	0	0	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
22-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.1
23-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.4
24-Sep	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	1.1
25-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0.2	0.6
26-Sep	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.5
27-Sep	0	0	0	0	0	0	0	0	0	0	0	0	C	C	C	A	0	0	0	0	0	0	0	0	0.0	0.2
28-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.0	0.0
29-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.1
30-Sep	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
0.1		0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	Diurnal Average	
0.9		0.2	0.3	0.2	0.2	0.2	0.2	0.6	1.1	0.7	0.5	0.6	0.7	2.6	1.8	1.1	0.5	0.4	0.6	0.4	1.0	0.5	1.1	0.7	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																								
Alberta Ambient Air Quality Objectives (AAAQO):		1-hr 172 ppb		24-hr 48 ppb		30-day 11 ppb																				

Hourly Averages

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



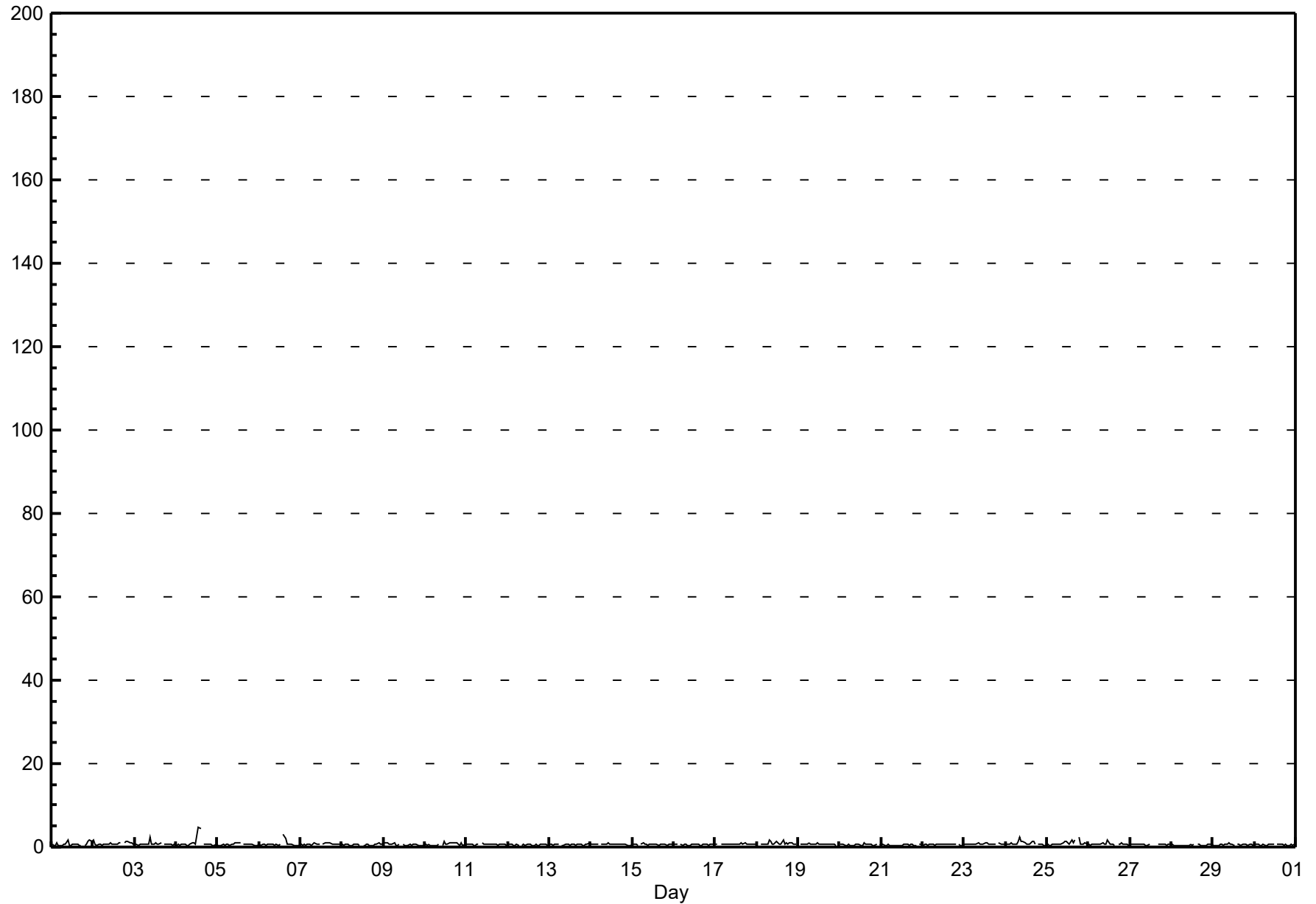
Hourly Maximums

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

Maximum Value: 4.8 ppb on Sep 4 14:00		Maximum Daily Average: 1.0 ppb on Sep 4		Hours in Service: 720																							
Minimum Value: 0 ppb on Sep 21 04:00		Minimum Daily Average: 0.5 ppb on Sep 28		Hours of Data: 686																							
Maximum Diurnal Average: 0.9 ppb at hour 15		Minimum Diurnal Average: 0.5 ppb at hour 3		Hours of Missing Data: 34																							
Monthly Average: 0.67 ppb		Percentiles: P ₁ = 0.4 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.7 P ₉₀ = 0.9 P ₉₉ = 2.0		Hours of Calibration: 34																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Sep	1	0	0	1	0	0	0	1	1	2	0	0	1	1	1	1	0	0	A	0	1	1	2	1	0.7	1.7	
2-Sep	2	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.9	1.6	
3-Sep	1	1	0	1	1	1	1	1	1	2	1	1	1	1	1	1	A	1	1	1	1	1	0	1	0.7	2.3	
4-Sep	1	1	0	1	1	1	0	0	1	1	1	1	3	5	4	A	1	1	1	1	1	1	0	1	1.0	4.8	
5-Sep	0	1	0	1	0	1	1	0	1	1	1	1	1	1	A	1	1	1	1	1	1	0	0	0	0.6	1.1	
6-Sep	1	0	1	1	0	1	1	1	1	1	1	1	1	A	3	2	1	1	1	1	1	0	0	0	0.8	2.9	
7-Sep	1	1	1	0	1	1	0	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2	
8-Sep	1	0	1	1	0	0	0	1	1	1	1	0	A	0	0	1	1	1	0	0	1	1	1	1	0.5	0.9	
9-Sep	1	1	1	1	1	1	1	0	1	1	A	1	0	0	0	1	0	1	1	1	0	0	0	0	0.6	1.1	
10-Sep	1	0	1	0	0	0	0	0	1	A	0	2	1	1	1	1	1	1	1	1	1	1	0	1	0.7	1.5	
11-Sep	1	1	1	1	0	0	1	1	A	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	0.6	0.9	
12-Sep	1	1	1	1	0	1	0	A	0	1	0	1	1	1	1	0	1	0	0	1	1	1	1	0	0.5	0.8	
13-Sep	1	1	0	1	1	1	A	0	0	1	1	1	0	1	1	0	1	1	1	0	0	1	1	1	0.6	0.9	
14-Sep	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0.6	0.9	
15-Sep	1	1	1	1	A	1	1	1	1	0	1	1	1	1	1	0	1	1	1	1	1	0	1	1	0.6	0.9	
16-Sep	1	1	1	A	1	0	1	1	0	0	1	1	1	1	1	0	1	1	1	1	1	0	1	1	0.6	0.7	
17-Sep	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	0.9	
18-Sep	1	A	1	1	1	1	1	2	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	0.9	1.6	
19-Sep	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	0.7	1.1	
20-Sep	1	1	1	1	0	1	0	0	0	1	1	1	0	0	1	1	1	1	1	1	0	0	1	A	1	0.6	0.9
21-Sep	0	1	0	0	1	0	1	0	0	0	0	0	1	1	1	0	1	1	1	0	0	A	1	1	0.5	0.7	
22-Sep	0	1	1	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	1	0.6	0.7	
23-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.7	0.9	
24-Sep	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	A	1	1	1	0	0	0.9	2.5	
25-Sep	1	0	0	1	1	1	1	1	1	1	1	1	1	1	2	1	2	A	2	1	1	1	1	1	0.9	2.5	
26-Sep	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	0	A	1	1	1	1	1	1	0	0.7	1.6	
27-Sep	1	1	1	1	1	1	1	1	1	0	0	1	C	C	C	A	1	1	1	1	1	0	1	1	0.6	0.8	
28-Sep	1	0	0	0	0	0	0	0	0	0	0	1	0	1	A	1	1	0	1	0	0	1	1	1	0.5	0.7	
29-Sep	0	0	0	0	1	1	0	1	1	1	1	1	0	A	1	1	0	1	1	1	0	1	1	0	0.6	0.8	
30-Sep	1	1	1	1	0	1	0	0	1	1	1	1	A	1	1	1	1	0	1	0	0	1	0	1	0.6	0.8	
0.6		0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.8	0.7	0.8	0.7	0.8	0.9	0.8	0.7	0.6	0.7	0.6	0.6	0.7	0.6	0.6	Diurnal Average		
1.6		1.1	0.9	0.9	0.8	0.8	1.1	1.6	2.5	2.3	1.5	1.6	2.7	4.8	4.4	2.0	1.6	1.1	2.5	1.3	1.5	1.5	1.7	1.4	Diurnal Maximum		
C - Calibration		A - Automated Daily Zero Span																									

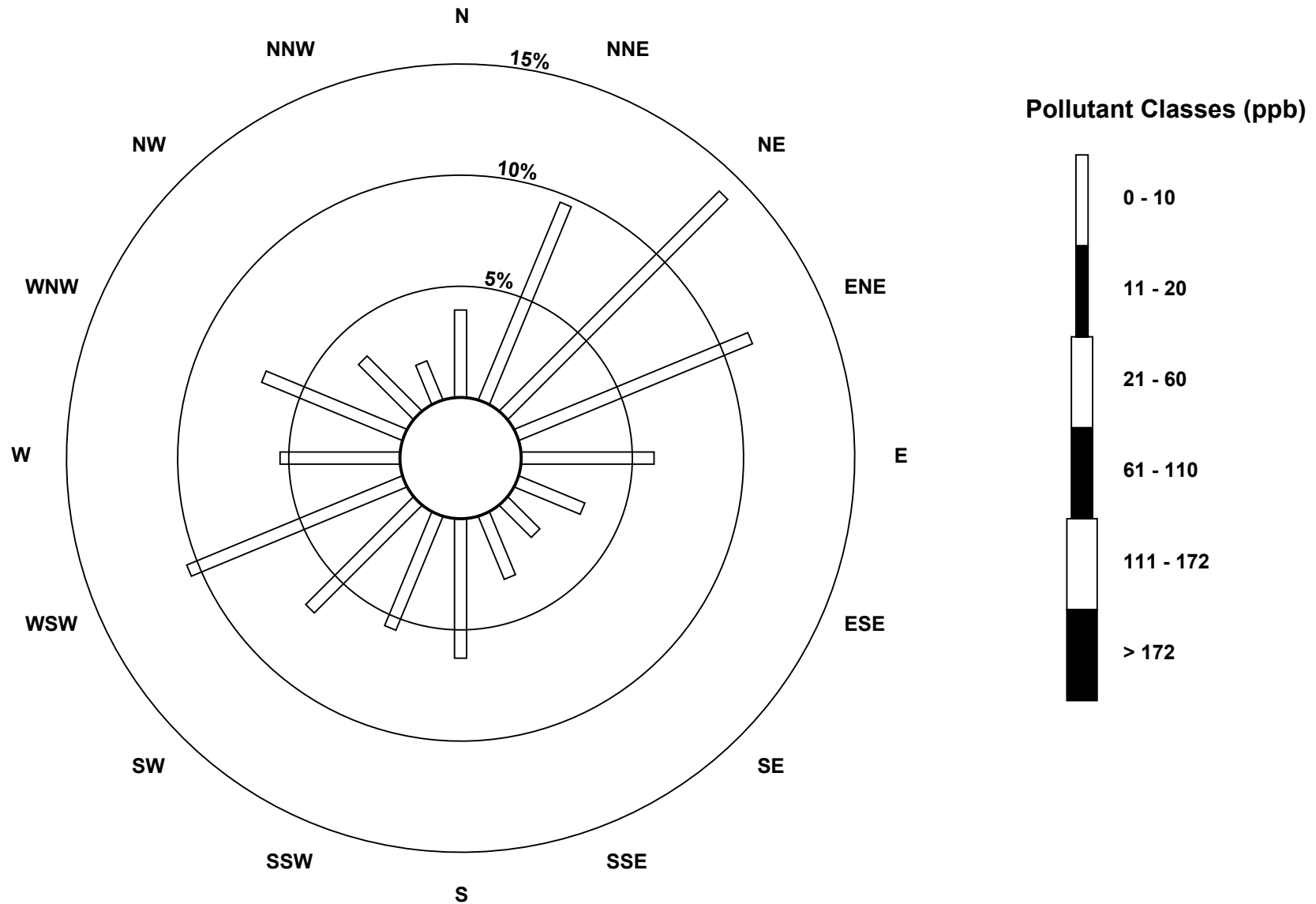
Hourly Maximums

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



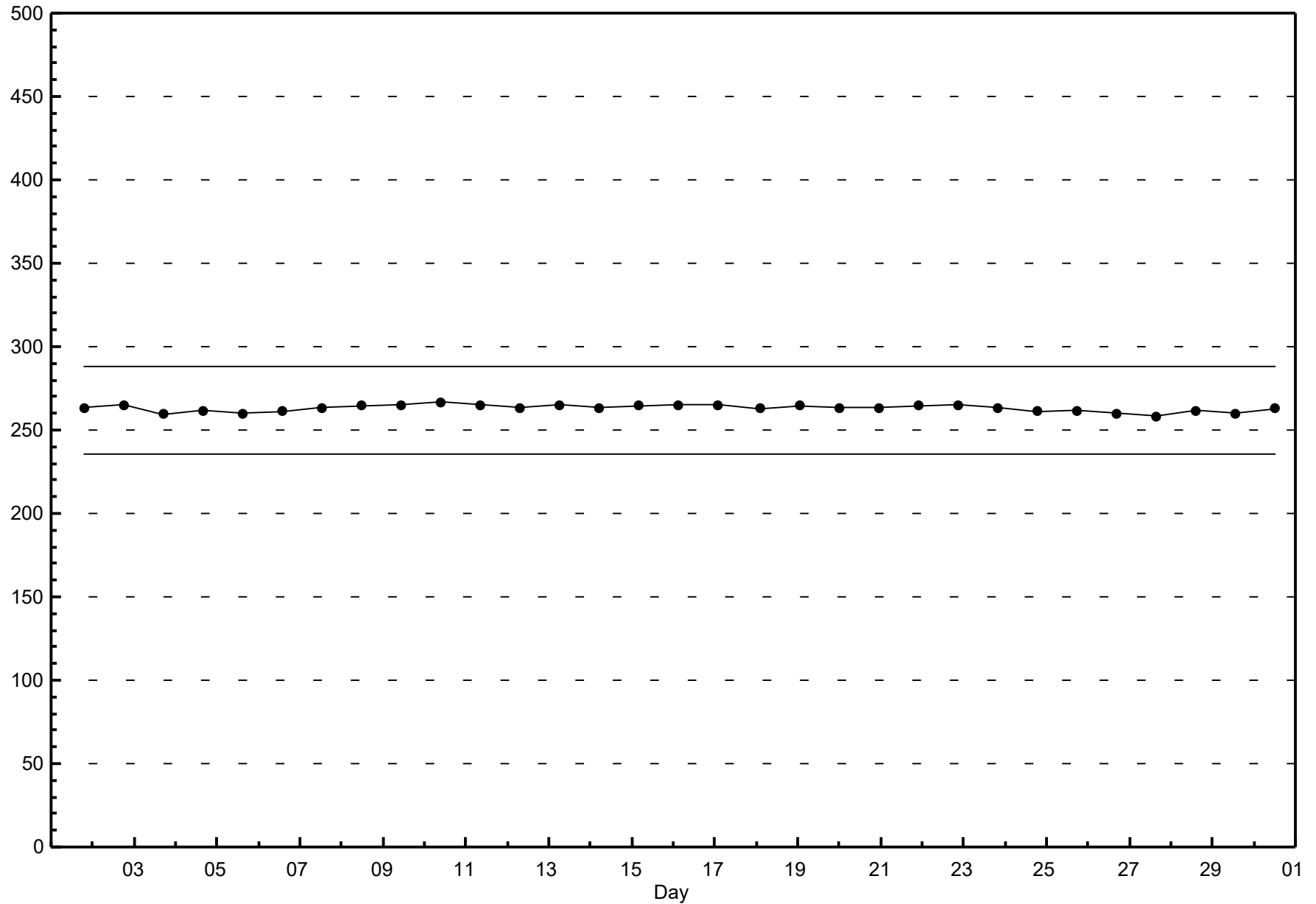
Pollutant Rose

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



Span Responses

Sulphur Dioxide (SO₂)
Evergreen Park - September 2018



Hourly Averages

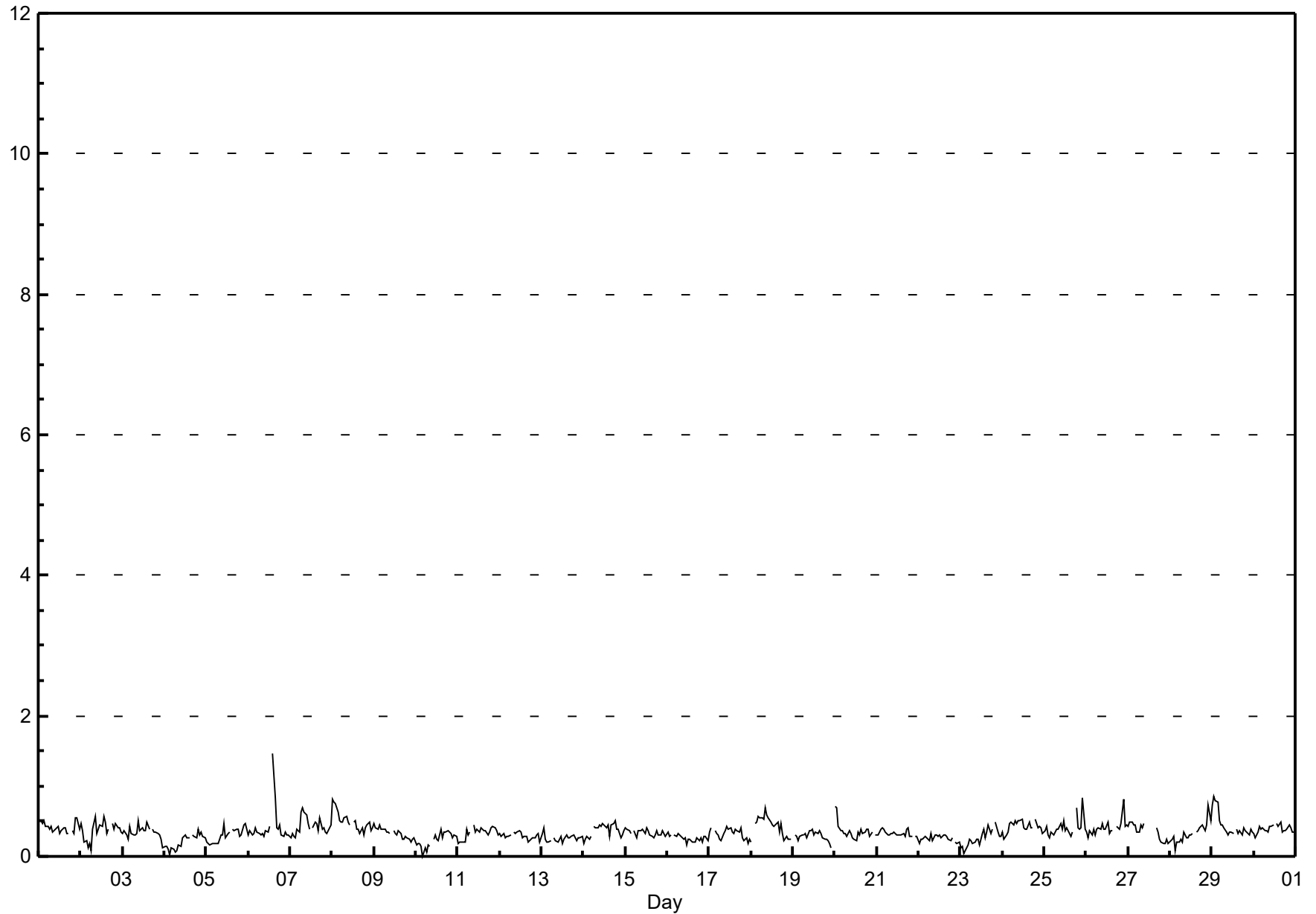
Total Reduced Sulphur (TRS) - ppb

Evergreen Park - September 2018

Maximum Value: 1.5 ppb on Sep 6 15:00		Maximum Daily Average: 0.5 ppb on Sep 8		Hours in Service: 720																							
Minimum Value: 0 ppb on Sep 10 05:00		Minimum Daily Average: 0.2 ppb on Sep 4		Hours of Data: 685																							
Maximum Diurnal Average: 0.4 ppb at hour 15		Minimum Diurnal Average: 0.3 ppb at hour 24		Hours of Missing Data: 35																							
Monthly Average: 0.35 ppb		Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.3 Q ₃ = 0.4 P ₉₀ = 0.5 P ₉₉ = 0.8		Hours of Calibration: 35																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Sep	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	1	0	0.4	0.5	
2-Sep	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	A	0	0	0	0	0	0	0.4	0.6	
3-Sep	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.5	
4-Sep	0	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	
5-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	0.5	
6-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0.4	1.5	
7-Sep	0	0	0	0	0	0	1	1	1	1	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0.4	0.7	
8-Sep	1	1	1	1	1	0	0	1	1	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0.5	0.8	
9-Sep	0	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	
10-Sep	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
11-Sep	0	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	
12-Sep	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4	
13-Sep	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4	
14-Sep	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.4	0.5	
15-Sep	0	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	
16-Sep	0	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	0.3	
17-Sep	0	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	
18-Sep	0	A	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7	
19-Sep	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4	
20-Sep	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.4	0.7	
21-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.4	
22-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	0.3	
23-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0.3	0.5	
24-Sep	0	0	0	0	0	0	0	1	0	1	1	1	0	0	0	0	0	A	1	0	0	0	0	0	0.4	0.5	
25-Sep	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	A	1	0	0	0	1	0	0	0.4	0.8	
26-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	0	0	0	0.4	0.8	
27-Sep	0	0	0	0	0	0	0	0	0	0	C	C	C	C	0	A	0	0	0	0	0	0	0	0	0.3	0.5	
28-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	1	0	0.3	0.7	
29-Sep	1	1	1	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.4	0.9	
30-Sep	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5	
0.3		0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	Diurnal Average		
0.8		0.9	0.8	0.8	0.6	0.6	0.6	0.6	0.7	0.4	0.6	0.5	0.5	0.5	0.6	1.5	0.8	0.5	0.6	0.7	0.5	0.5	0.8	0.8	0.5	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

Hourly Averages

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



Hourly Maximums

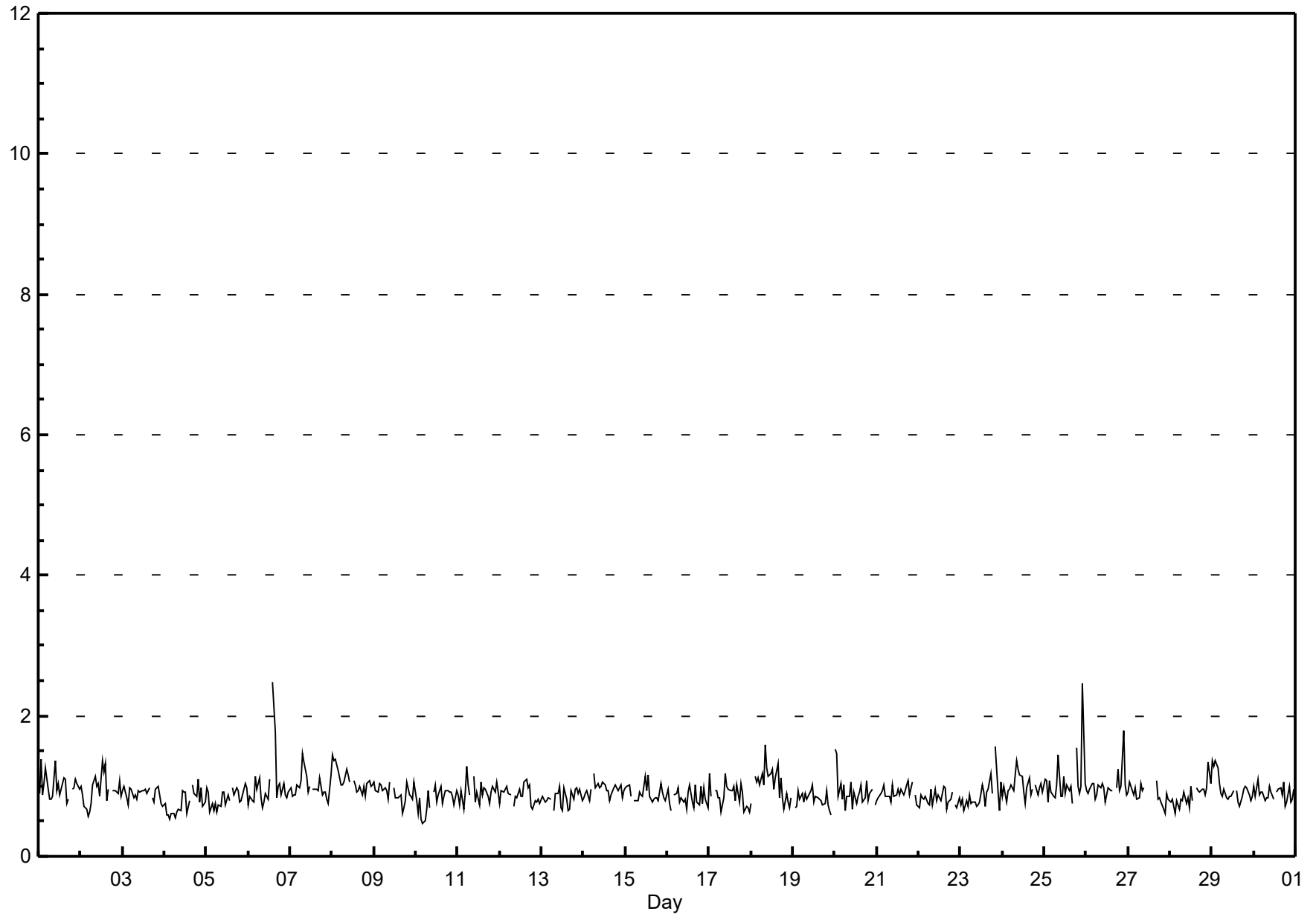
Total Reduced Sulphur (TRS) - ppb

Evergreen Park - September 2018

Maximum Value: 2.5 ppb on Sep 6 15:00																			Maximum Daily Average: 1.1 ppb on Sep 8							Hours in Service: 720	
Minimum Value: 0 ppb on Sep 10 05:00																			Minimum Daily Average: 0.8 ppb on Sep 4							Hours of Data: 685	
Maximum Diurnal Average: 1.0 ppb at hour 15																			Minimum Diurnal Average: 0.9 ppb at hour 7							Hours of Missing Data: 35	
Monthly Average: 0.91 ppb																			Percentiles: P ₁ = 0.6 P ₁₀ = 0.7 Q ₁ = 0.8 Median = 0.9 Q ₃ = 1.0 P ₉₀ = 1.1 P ₉₉ = 1.5							Hours of Calibration: 35	
																										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1.0	1.4	
2-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.9	1.4	
3-Sep	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	1.0	
4-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.8	1.1	
5-Sep	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	1.0	
6-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	2	1	1	1	1	1	1	1	1	1.0	2.5	
7-Sep	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1.0	1.5	
8-Sep	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.4	
9-Sep	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.1	
10-Sep	1	1	1	1	0	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0	
11-Sep	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3	
12-Sep	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.1	
13-Sep	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0	
14-Sep	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.2	
15-Sep	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2	
16-Sep	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	1.0	
17-Sep	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	
18-Sep	1	A	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.6	
19-Sep	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0	
20-Sep	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.9	1.5	
21-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.9	1.1	
22-Sep	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	1.0	
23-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	0.9	1.6	
24-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1.0	1.4	
25-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	2	1	1.1	2.5	
26-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	2	1	1	1.0	1.8	
27-Sep	1	1	1	1	1	1	1	1	1	1	C	C	C	C	1	A	1	1	1	1	1	1	1	1	0.9	1.1	
28-Sep	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	1.3	
29-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1.0	1.4	
30-Sep	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.9	1.1	
																								Diurnal Average			
																								Diurnal Maximum			
C - Calibration																								A - Automated Daily Zero Span			

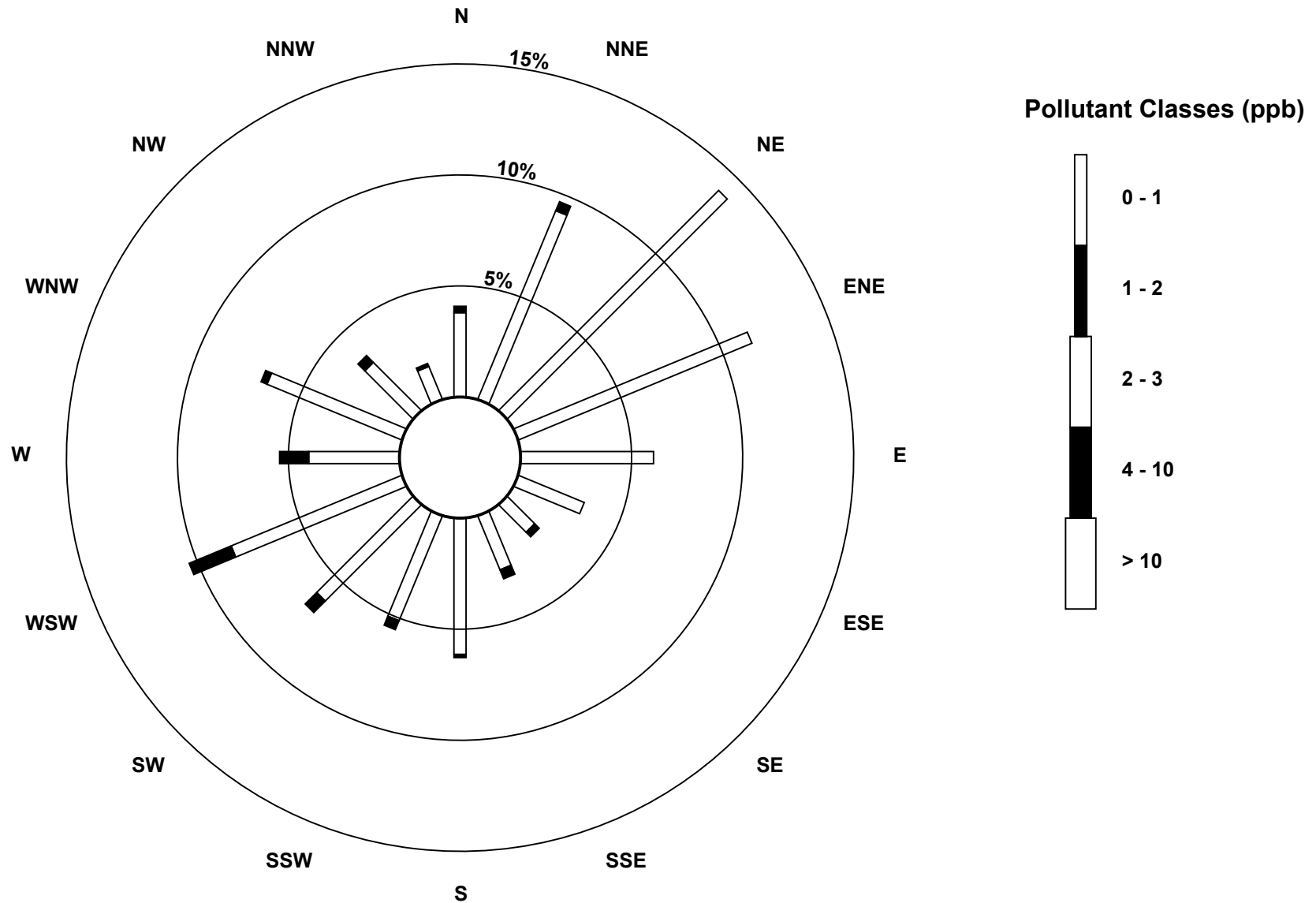
Hourly Maximums

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



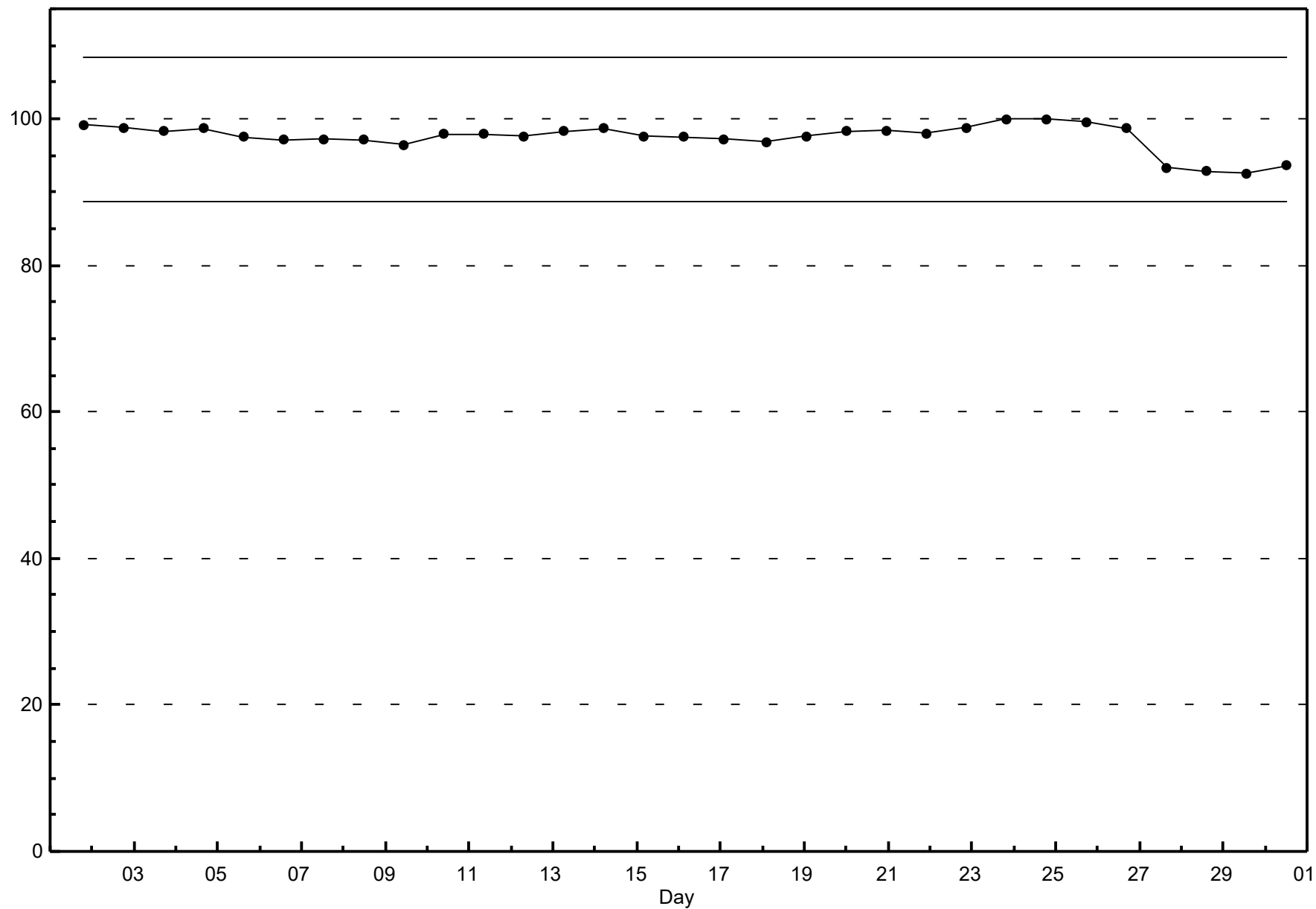
Pollutant Rose

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



Span Responses

Total Reduced Sulphur (TRS)
Evergreen Park - September 2018

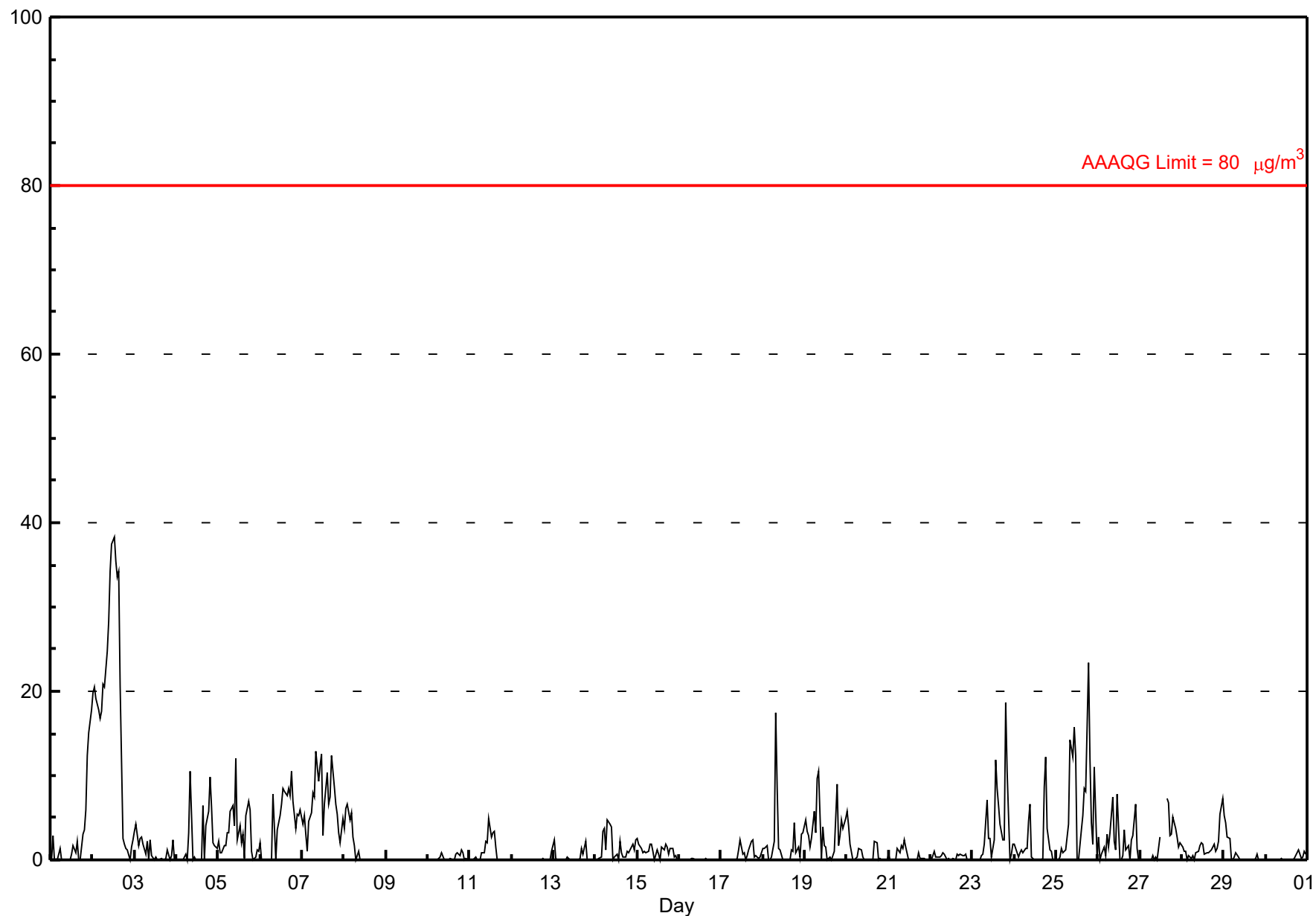


Hourly Averages

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

Evergreen Park - September 2018

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 38.3 µg/m³ on Sep 2 13:00 Maximum Daily Average: 18.8 µg/m³ on Sep 2																				Hours in Service: 720 Hours of Data: 717 Hours of Missing Data: 3 Hours of Calibration: 3 Percent Operational Time: 100.0						
Minimum Value: 0 µg/m³ on Sep 1 01:00 Maximum Diurnal Average: 4.2 µg/m³ at hour 9 Monthly Average: 2.35 µg/m³ Minimum Daily Average: 0.0 µg/m³ on Sep 9 Minimum Diurnal Average: 1.2 µg/m³ at hour 4 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.5 Q ₃ = 2.4 P ₉₀ = 6.6 P ₉₉ = 24.5																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	0	3	0	0	0	1	0	0	0	0	0	0	1	2	1	2	0	0	3	3	6	12	15	18	2.8	17.8
2-Sep	20	21	19	18	17	18	21	20	25	28	34	37	38	36	33	34	21	3	2	1	1	0	2	2	18.8	38.3
3-Sep	3	4	2	3	3	2	1	2	0	2	1	0	0	0	0	0	0	0	0	1	0	1	2	0	1.1	4.2
4-Sep	0	0	0	0	0	1	0	3	11	0	0	0	0	0	0	6	0	4	6	10	6	2	2	1	2.2	10.5
5-Sep	2	1	1	2	2	3	3	6	6	4	12	2	4	2	3	0	5	7	6	1	0	0	1	1	3.1	12.1
6-Sep	2	0	0	0	0	0	0	8	4	0	3	5	7	8	8	8	8	8	11	7	4	5	5	6	4.5	10.6
7-Sep	4	5	3	1	5	6	8	7	13	9	11	13	3	7	10	7	7	12	9	7	5	3	2	5	6.8	12.9
8-Sep	4	6	7	5	6	3	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.3	6.6
9-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
10-Sep	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0.2	1.2
11-Sep	0	0	0	0	0	0	0	1	1	2	2	5	3	3	3	2	0	0	0	0	0	0	0	0	0.9	4.9
12-Sep	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	1.1
13-Sep	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0.3	2.4
14-Sep	0	0	0	0	3	4	1	5	4	4	0	0	1	0	2	1	0	0	1	1	1	2	1	2	1.5	4.7
15-Sep	3	2	1	1	1	1	1	2	2	1	0	1	1	0	2	1	2	2	1	1	1	0	1	0	1.1	2.6
16-Sep	0	0	0	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-Sep	0	0	0	0	0	0	0	0	0	0	1	2	1	1	0	1	1	2	2	0	0	0	0	1	0.6	2.3
18-Sep	1	1	2	0	0	0	2	17	9	1	1	0	0	0	0	0	1	1	4	1	2	0	3	3	2.1	17.4
19-Sep	5	3	3	2	3	6	3	10	10	0	4	2	2	0	0	0	1	1	9	2	3	5	4	5	3.4	10.5
20-Sep	6	4	2	0	0	0	0	1	1	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0.8	5.8
21-Sep	1	0	0	0	0	1	1	2	1	2	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0.5	2.4
22-Sep	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	1	1	1	1	0	1	0	0	0	0.4	0.9
23-Sep	0	0	0	0	0	0	1	2	7	3	3	0	2	12	9	6	4	2	2	19	11	0	1	2	3.6	18.6
24-Sep	2	1	0	1	1	1	1	1	4	7	0	0	0	0	0	0	0	9	12	4	1	1	0	0	2.0	12.2
25-Sep	0	0	0	1	1	1	3	4	14	12	16	12	0	0	4	5	8	8	23	12	4	2	11	0	6.0	23.5
26-Sep	3	0	1	2	1	3	2	3	7	2	1	8	0	0	0	4	1	2	0	2	3	7	1	0	2.2	7.7
27-Sep	0	0	0	0	0	0	0	1	0	0	0	3	C	C	C	7	7	3	3	5	4	3	2	2	1.8	7.3
28-Sep	1	1	1	0	0	0	0	0	1	1	2	2	2	1	1	1	1	1	2	1	1	2	5	7	1.5	7.3
29-Sep	5	4	3	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.7	5.3
30-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	1	1	0.2	1.2
																									Diurnal Average	
																									Diurnal Maximum	
C - Calibration																										
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																										



Hourly Maximums

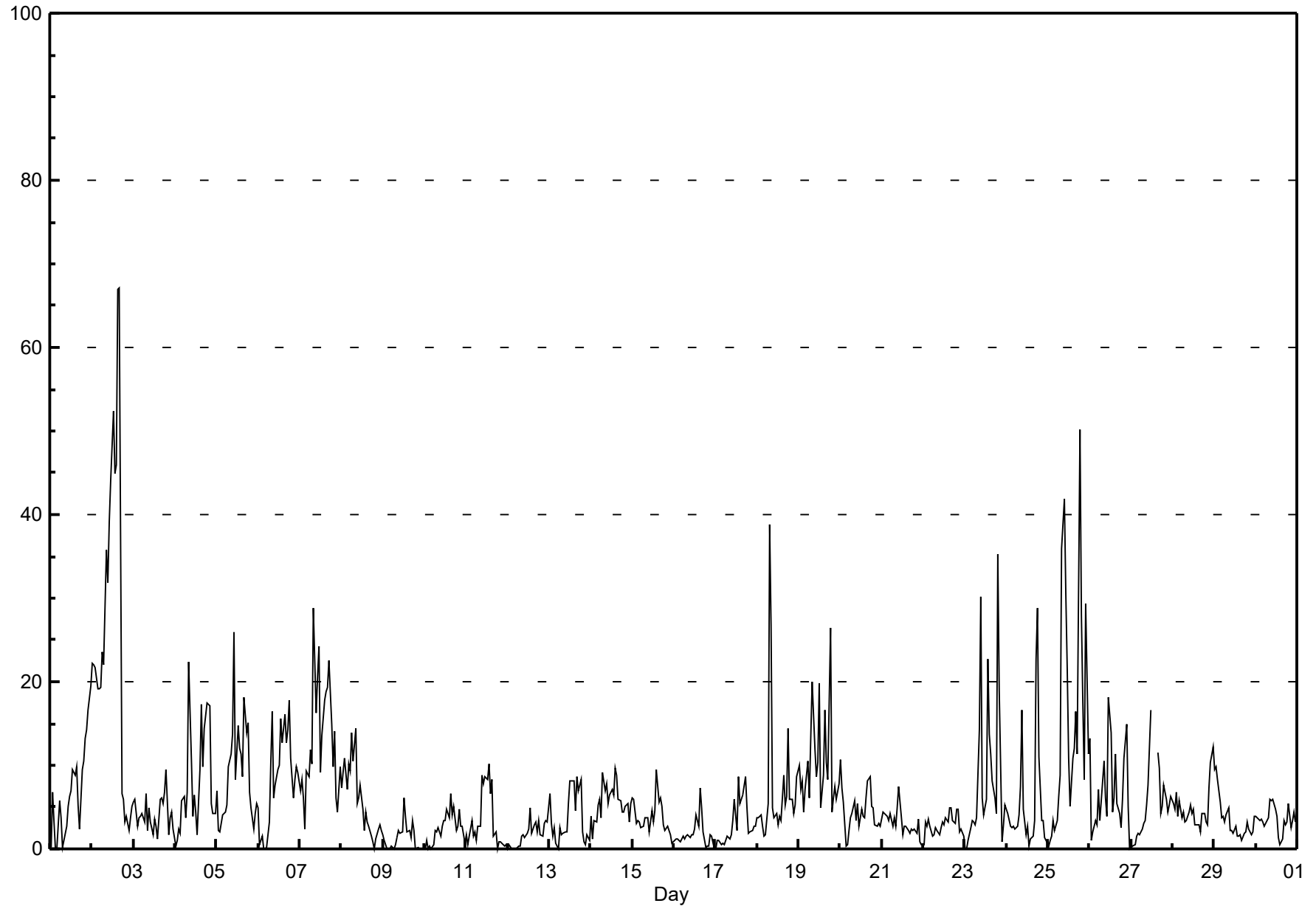
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Evergreen Park - September 2018

Maximum Value: 67.2 µg/m ³ on Sep 2 17:00 Minimum Value: 0 µg/m ³ on Sep 6 05:00 Maximum Diurnal Average: 10.0 µg/m ³ at hour 9 Monthly Average: 6.33 µg/m ³																								
Maximum Daily Average: 26.2 µg/m ³ on Sep 2 Minimum Daily Average: 1.4 µg/m ³ on Sep 9 Minimum Diurnal Average: 3.1 µg/m ³ at hour 4 Percentiles: P ₁ = 0.0 P ₁₀ = 1.0 Q ₁ = 2.2 Median = 3.9 Q ₃ = 7.4 P ₉₀ = 14.1 P ₉₉ = 41.4																								
Hours in Service: 720																								
Hours of Data: 717																								
Hours of Missing Data: 3																								
Hours of Calibration: 3																								
Percent Operational Time: 100.0																								
Day	Hourly Period Ending At (MST)																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1-Sep	0	7	3	0	0	6	4	0	1	3	5	6	7	10	9	10	5	2	10	11	13	14	17	20
2-Sep	22	22	22	19	19	19	23	22	36	32	39	44	52	45	46	67	67	7	6	3	4	2	4	5
3-Sep	6	6	3	4	4	4	3	7	2	5	3	2	4	3	1	6	6	5	7	10	2	4	4	2
4-Sep	0	1	2	2	6	6	4	7	22	11	4	6	4	2	10	17	10	14	17	17	17	5	4	4
5-Sep	7	2	2	4	4	4	5	10	11	14	26	8	15	12	11	9	18	14	15	7	5	2	4	5
6-Sep	5	0	1	0	0	0	3	10	16	6	8	10	10	16	13	16	13	14	18	11	6	8	10	9
7-Sep	7	8	6	2	9	9	12	10	29	16	21	24	9	14	18	19	19	23	15	10	14	6	4	10
8-Sep	7	9	11	7	10	9	14	11	14	5	6	8	5	2	4	3	3	2	1	0	1	2	3	2
9-Sep	2	1	0	0	0	0	0	1	1	2	2	2	6	4	2	2	1	3	2	0	0	0	0	0
10-Sep	0	1	0	0	0	1	2	2	3	2	3	3	5	4	7	4	5	2	3	5	3	3	3	1
11-Sep	2	1	1	3	1	2	1	3	3	9	8	9	8	10	7	8	2	2	0	1	1	1	0	1
12-Sep	0	1	0	0	0	0	0	0	1	2	1	2	2	5	2	3	3	2	3	2	2	3	3	3
13-Sep	7	3	2	2	1	0	3	2	2	2	2	5	8	8	8	5	9	7	8	2	1	1	2	1
14-Sep	4	1	3	3	5	6	4	9	7	8	5	6	7	6	10	9	6	6	4	4	5	5	3	5
15-Sep	6	6	3	3	3	2	3	4	4	4	2	5	3	5	9	6	6	5	3	2	3	2	2	1
16-Sep	1	1	1	1	1	1	1	2	2	1	2	2	2	4	3	7	5	2	0	0	0	2	1	0
17-Sep	0	1	1	1	1	0	1	1	1	2	3	6	2	9	5	6	6	9	5	2	2	2	3	3
18-Sep	4	4	4	3	2	2	5	39	27	5	4	4	3	4	3	9	5	6	14	6	6	4	5	9
19-Sep	10	7	8	4	7	11	6	13	20	12	9	10	20	5	9	17	10	8	26	4	6	7	6	8
20-Sep	11	7	6	0	1	2	4	4	6	3	5	3	5	4	4	6	8	9	5	5	3	3	3	3
21-Sep	4	4	4	4	3	4	3	4	3	5	7	4	2	3	3	2	2	2	2	2	2	4	1	1
22-Sep	1	3	3	4	3	2	2	3	2	2	3	3	3	4	3	5	5	3	3	5	5	2	2	2
23-Sep	0	0	1	3	3	3	3	4	14	30	6	4	6	23	14	11	8	6	4	35	19	1	3	5
24-Sep	5	4	3	2	3	2	3	4	7	17	5	2	3	0	1	1	3	23	29	11	3	3	1	1
25-Sep	0	1	2	3	2	3	6	9	36	42	31	22	11	5	11	12	16	11	50	28	18	8	29	11
26-Sep	13	1	2	3	3	7	3	6	11	6	4	18	14	4	6	11	5	4	3	6	11	15	5	0
27-Sep	0	0	1	1	2	2	2	3	3	5	8	17	C	C	C	12	10	4	5	8	6	4	5	6
28-Sep	5	5	7	4	6	4	4	3	3	4	5	4	5	3	3	3	2	4	4	3	3	7	10	12
29-Sep	10	10	8	6	4	4	3	4	5	2	2	2	3	1	1	2	1	2	2	3	2	2	2	4
30-Sep	4	4	3	4	3	3	3	4	6	6	6	5	4	1	1	1	3	3	3	5	3	3	4	3
	4.7	4.1	3.8	3.1	3.5	4.0	4.4	6.6	10.0	8.7	7.8	8.2	7.8	7.4	7.6	9.7	8.8	7.0	9.0	6.9	5.6	4.3	4.9	4.5
	22.2	22.1	21.8	19.1	19.1	19.4	23.5	38.7	35.9	41.8	39.1	44.1	52.3	45.0	45.9	67.0	67.2	22.6	50.2	35.2	19.0	15.0	29.3	19.6
C - Calibration																								
Diurnal Average																								
Diurnal Maximum																								

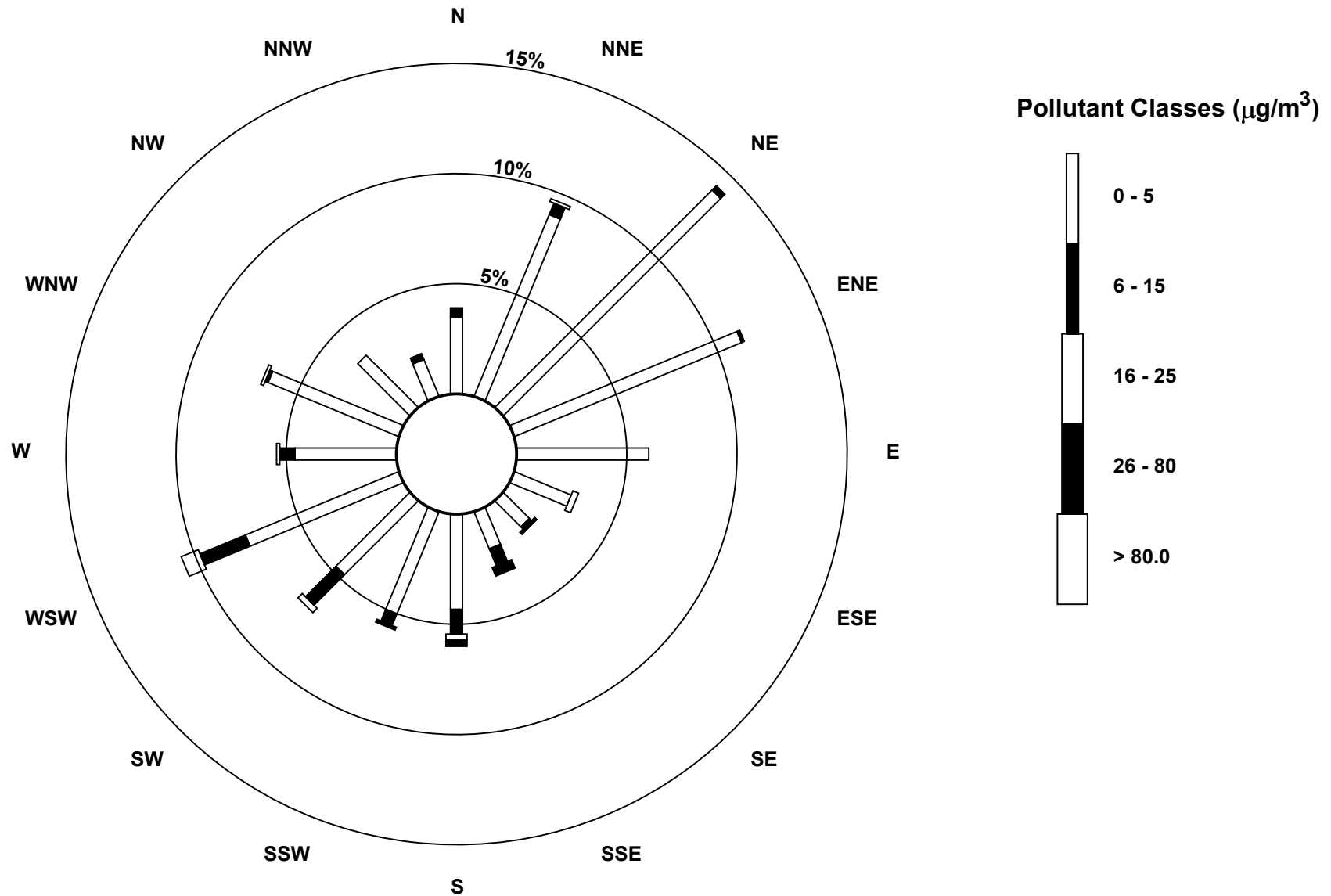
Hourly Maximums

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



Pollutant Rose

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



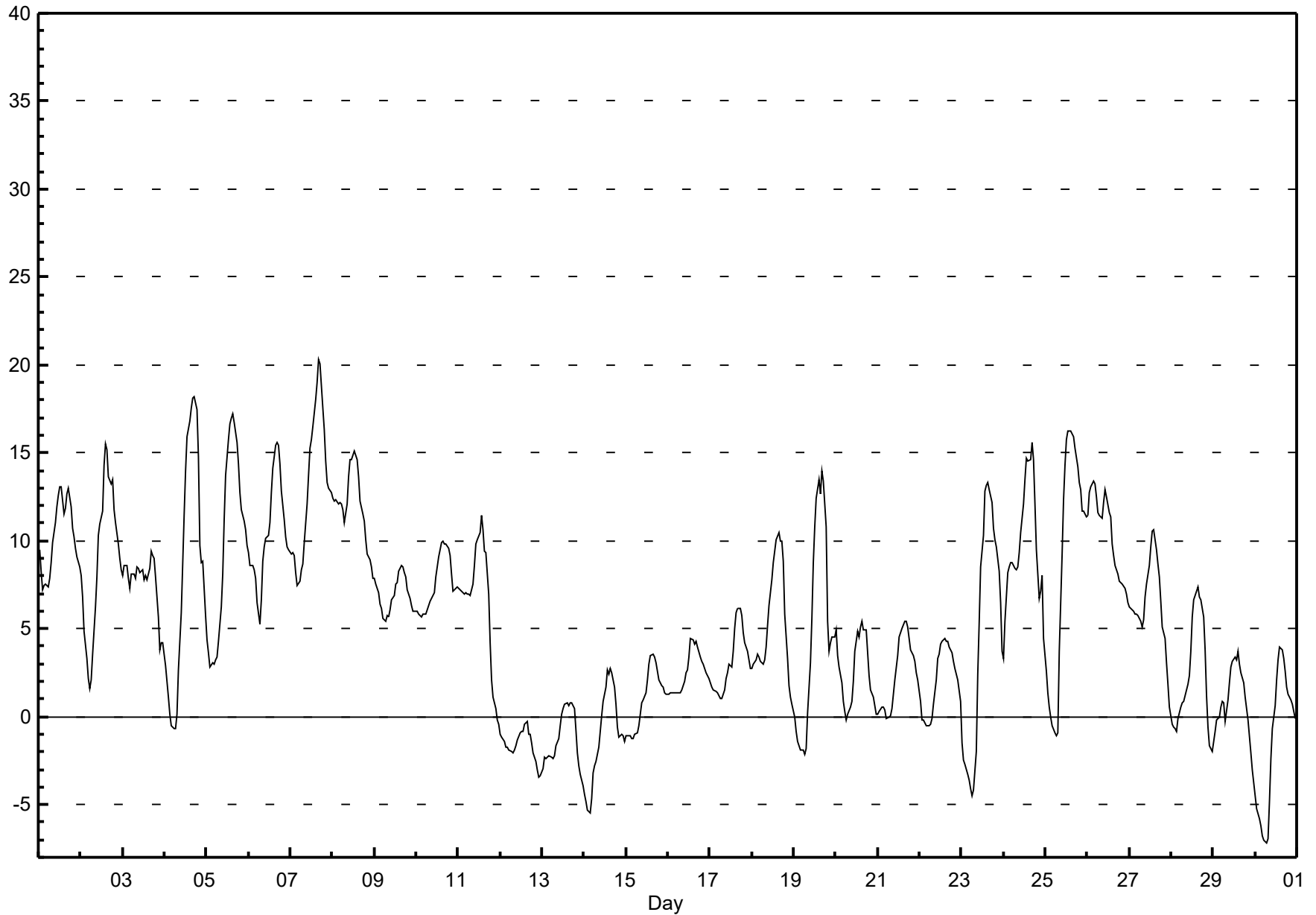
Hourly Averages

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

Maximum Value: 20.3 °C on Sep 7 17:00																				Maximum Daily Average: 13.2 °C on Sep 7					Hours in Service: 720	
Minimum Value: -7 °C on Sep 30 07:00																				Minimum Daily Average: -1.6 °C on Sep 12					Hours of Data: 720	
Maximum Diurnal Average: 9.3 °C at hour 16																				Minimum Diurnal Average: 2.4 °C at hour 7					Hours of Missing Data: 0	
Monthly Average: 5.44 °C																				Percentiles: P ₁ = -5.3 P ₁₀ = -1.2 Q ₁ = 1.0 Median = 5.1 Q ₃ = 9.3 P ₉₀ = 13.0 P ₉₉ = 17.5					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Sep	10	8	7	7	7	7	8	9	10	11	12	13	13	12	12	13	13	12	11	10	10	9	9	10.2	13.1	
2-Sep	8	7	5	3	2	2	2	4	6	8	10	11	12	14	16	15	14	13	14	12	11	10	9	8	9.0	15.5
3-Sep	8	9	9	8	7	8	8	8	8	8	8	8	8	8	8	8	9	9	9	8	6	4	4	4	7.6	9.4
4-Sep	3	2	1	0	-1	-1	-1	0	3	6	9	11	14	16	17	18	18	18	17	15	10	9	9	6	8.3	18.2
5-Sep	4	4	3	3	3	3	3	4	6	8	11	14	16	17	17	17	17	16	14	13	12	11	11	10	9.8	17.2
6-Sep	9	9	9	8	8	7	5	7	9	10	10	10	11	13	14	15	16	15	14	13	11	10	10	9	10.5	15.6
7-Sep	9	9	9	8	7	8	8	9	10	12	14	15	16	17	18	19	20	20	18	16	15	13	13	13	13.2	20.3
8-Sep	12	12	12	12	12	12	12	11	12	14	15	15	15	15	14	12	12	11	10	9	9	8	8	8	12.0	15.1
9-Sep	8	8	7	6	6	6	5	6	6	6	7	7	8	8	8	9	9	8	8	7	7	6	6	6	6.9	8.6
10-Sep	6	6	6	6	6	6	6	6	7	7	7	8	8	9	10	10	10	10	10	9	8	7	7	7	7.6	10.0
11-Sep	7	7	7	7	7	7	7	7	7	9	10	10	10	11	11	9	9	7	4	2	1	0	0	0	6.6	11.4
12-Sep	-1	-1	-1	-2	-2	-2	-2	-2	-2	-2	-1	-1	-1	-1	0	0	-1	-1	-1	-2	-3	-3	-3	-3	-1.6	-0.3
13-Sep	-3	-2	-2	-2	-2	-2	-2	-2	-2	-1	0	0	0	1	1	1	1	1	0	-1	-2	-3	-3	-4	-1.3	0.8
14-Sep	-4	-5	-5	-5	-5	-3	-3	-3	-2	-1	0	1	2	3	2	3	3	2	1	-1	-1	-1	-1	-1	-1.1	2.7
15-Sep	-1	-1	-1	-1	-1	-1	-1	-1	0	1	1	1	2	3	3	4	3	3	3	2	2	2	1	1	1.0	3.6
16-Sep	1	1	1	1	1	1	1	1	2	2	2	3	3	4	4	4	4	4	3	3	3	3	3	2	2.5	4.4
17-Sep	2	2	2	1	1	1	1	1	2	2	2	3	3	4	5	6	6	6	6	5	4	4	3	3	3.1	6.2
18-Sep	3	3	3	4	3	3	3	3	4	5	6	8	9	9	10	10	10	10	9	6	3	2	1	1	5.4	10.5
19-Sep	0	-1	-1	-2	-2	-2	-2	-2	0	3	6	9	11	12	13	13	14	13	11	5	4	4	4	5	4.8	14.0
20-Sep	5	3	3	2	1	0	0	0	1	1	2	4	5	5	5	5	5	5	4	2	2	1	1	0	2.5	5.4
21-Sep	0	0	1	1	0	0	0	0	0	1	2	3	5	5	5	5	5	5	4	4	3	3	2	2	2.5	5.4
22-Sep	1	0	0	0	-1	-1	0	0	1	2	3	4	4	4	4	4	4	4	4	3	3	2	2	1	2.0	4.5
23-Sep	-2	-2	-3	-3	-4	-4	-4	-4	-2	2	5	8	10	13	13	13	13	12	11	10	10	8	6	4	4.6	13.3
24-Sep	3	5	8	9	9	9	8	8	8	9	10	12	13	15	15	15	16	15	12	10	7	7	8	4	9.8	15.6
25-Sep	3	1	1	0	0	-1	-1	-1	4	9	12	14	16	16	16	16	16	15	14	13	13	12	12	11	8.8	16.3
26-Sep	11	13	13	13	13	13	12	11	11	12	13	13	12	11	10	9	9	8	8	8	8	7	7	6	10.4	13.4
27-Sep	6	6	6	6	6	6	5	5	6	7	8	9	10	11	11	10	9	8	7	5	4	3	2	1	6.4	10.6
28-Sep	0	-1	-1	-1	0	1	1	1	1	2	2	4	6	7	7	7	7	6	4	1	-1	-2	-2	-2	2.3	7.4
29-Sep	-1	-1	0	0	1	1	1	0	1	2	3	3	3	3	4	3	2	2	1	0	0	-2	-3	-4	0.8	3.7
30-Sep	-4	-5	-6	-6	-7	-7	-7	-7	-5	-2	-1	1	2	3	4	4	3	3	2	1	1	1	0	0	-1.4	3.9
3.4 3.2 3.0 2.8 2.6 2.5 2.4 2.7 3.7 5.1 6.3 7.3 8.2 8.9 9.2 9.3 9.2 8.8 7.8 6.5 5.3 4.6 4.2 3.5																									Diurnal Average	
12.4 12.7 13.0 13.4 13.2 12.5 11.8 11.5 12.1 13.7 14.6 15.3 15.8 16.6 18.0 19.0 20.3 20.1 17.6 16.3 14.6 13.3 13.0 12.8																									Diurnal Maximum	

Hourly Averages

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



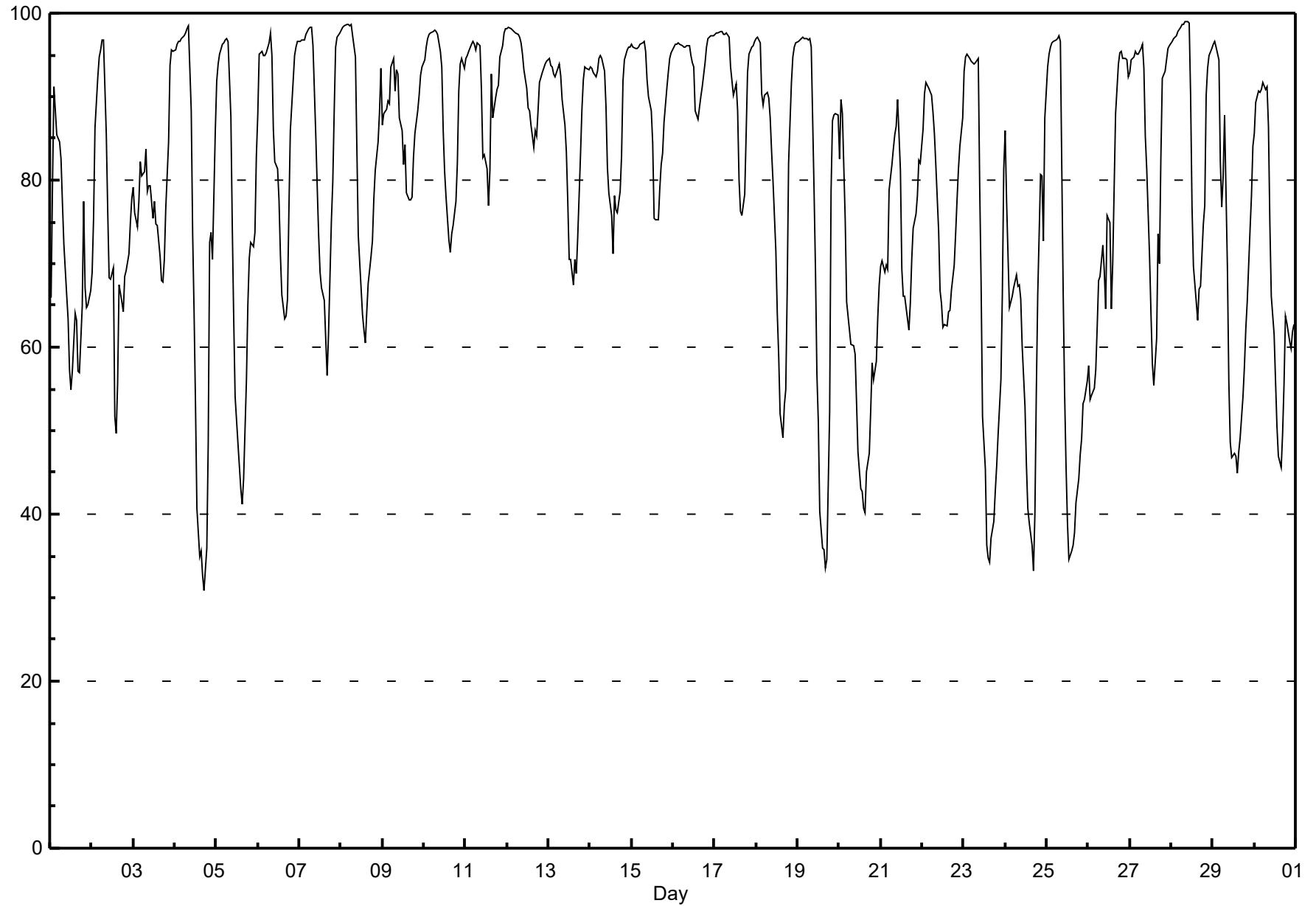
Hourly Averages

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

Maximum Value: 99.0 % on Sep 28 10:00																				Maximum Daily Average: 94.5 % on Sep 16					Hours in Service: 720	
Minimum Value: 31 % on Sep 4 18:00																				Minimum Daily Average: 59.2 % on Sep 20					Hours of Data: 720	
Maximum Diurnal Average: 90.8 % at hour 7																				Minimum Diurnal Average: 60.5 % at hour 15					Hours of Missing Data: 0	
Monthly Average: 79.22 %																				Percentiles: P ₁ = 34.8 P ₁₀ = 53.3 Q ₁ = 67.2 Median = 83.8 Q ₃ = 94.6 P ₉₀ = 96.8 P ₉₉ = 98.6					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	66	80	91	88	85	84	83	77	72	66	63	57	55	57	64	63	57	57	65	77	67	65	65	67	69.7	91.2
2-Sep	69	75	86	92	95	96	97	97	85	76	68	68	70	52	50	56	67	65	64	69	69	71	75	78	74.6	96.8
3-Sep	79	76	74	77	82	81	81	84	79	79	79	75	78	75	75	71	68	68	70	77	85	94	96	95	79.1	95.6
4-Sep	96	96	97	97	97	97	98	98	99	88	74	64	53	41	35	36	33	31	36	48	73	74	70	86	71.4	98.5
5-Sep	92	94	95	96	96	97	97	97	88	74	63	54	48	46	43	41	44	56	65	71	72	72	74	83	73.3	96.9
6-Sep	88	95	95	95	95	95	96	98	95	86	82	81	78	71	66	63	64	66	76	86	92	95	96	97	85.5	97.7
7-Sep	97	97	97	97	98	98	98	98	96	85	79	73	69	67	66	61	57	62	75	80	88	96	97	98	84.5	98.4
8-Sep	98	98	99	99	99	98	99	97	95	84	73	70	64	62	61	64	68	71	73	78	81	85	88	93	83.2	98.6
9-Sep	87	88	89	89	89	94	95	91	93	93	87	86	82	84	79	78	78	83	86	88	90	92	94	94	87.1	94.6
10-Sep	94	96	97	98	98	98	98	98	97	95	93	86	81	78	73	71	74	75	78	82	91	94	95	93	88.8	97.9
11-Sep	95	95	95	96	97	96	96	96	96	91	83	83	81	77	81	93	88	90	91	91	95	96	98	98	91.5	98.1
12-Sep	98	98	98	98	98	98	97	97	96	95	93	91	89	88	87	84	86	85	88	92	93	93	94	94	93.0	98.2
13-Sep	94	94	94	93	92	93	94	93	90	87	83	77	71	70	68	71	69	73	83	88	92	94	93	93	85.4	94.5
14-Sep	93	93	93	92	93	95	95	95	93	89	82	78	76	71	78	76	76	79	83	92	94	96	96	96	87.7	96.0
15-Sep	96	96	96	96	96	96	96	97	95	92	90	88	84	75	75	75	79	82	83	87	91	93	95	95	89.6	96.6
16-Sep	96	96	96	96	96	96	96	96	96	96	95	94	94	88	87	89	90	91	94	96	97	97	97	97	94.5	97.3
17-Sep	98	98	98	98	98	98	98	98	97	94	92	90	91	88	80	76	76	78	85	93	95	96	96	97	91.9	97.8
18-Sep	97	97	97	90	89	90	91	90	87	83	80	72	64	59	52	49	53	55	67	82	92	95	96	96	80.1	97.1
19-Sep	97	97	97	97	97	97	97	97	96	79	69	57	51	40	36	36	34	35	52	79	87	88	88	88	74.5	97.0
20-Sep	82	90	88	75	65	64	62	60	60	59	53	47	43	43	41	40	45	47	52	58	56	58	64	67	59.2	89.7
21-Sep	70	70	69	70	69	79	82	84	85	86	90	81	69	66	66	63	62	65	71	74	76	78	82	82	74.6	89.6
22-Sep	86	90	92	91	91	90	88	86	82	74	67	65	62	63	63	64	64	67	70	74	78	81	84	87	77.5	91.8
23-Sep	93	95	95	95	94	94	94	94	95	79	68	52	45	36	35	34	37	39	43	46	49	56	66	81	67.3	95.0
24-Sep	86	78	65	66	66	67	69	67	67	66	60	53	46	41	39	36	33	40	55	66	81	81	73	87	61.9	87.5
25-Sep	94	95	96	96	97	97	97	97	97	66	54	46	39	35	36	36	38	41	44	47	49	53	54	56	65.0	97.3
26-Sep	58	54	54	55	57	62	68	68	72	69	65	76	75	65	70	79	88	94	95	95	95	95	94	92	74.8	95.5
27-Sep	93	94	95	95	95	95	96	96	93	85	81	71	64	58	55	61	74	70	83	92	93	94	96	96	84.4	96.2
28-Sep	97	97	97	97	98	98	99	99	99	99	99	90	77	70	65	63	67	67	75	77	90	93	95	96	87.7	99.0
29-Sep	96	97	96	94	82	77	81	88	69	56	49	47	47	47	45	47	49	54	58	62	65	74	78	84	68.4	96.5
30-Sep	86	89	91	90	91	92	91	91	86	75	66	62	56	50	47	46	50	56	64	63	61	60	62	63	70.2	91.7
89.0 90.3 90.7 90.4 89.9 90.4 90.8 90.8 88.4 81.6 76.1 71.2 66.7 62.1 60.5 60.8 62.2 64.5 70.7 76.9 81.2 83.5 84.9 87.7																									Diurnal Average	
98.2 98.3 98.5 98.6 98.6 98.5 98.6 98.7 99.0 99.0 98.7 94.1 93.6 88.4 87.3 92.8 90.0 93.8 95.2 95.9 96.9 97.2 97.5 98.1																									Diurnal Maximum	

Hourly Averages

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



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Evergreen Park - September 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	36	31	25	25	20	19	17	21	23	27	23	20	21	20	19	14	11	11	13	12	16	18	17	16	18.4	36.3
Dir	244	244	243	241	246	250	245	239	245	243	237	257	254	262	321	299	263	244	211	207	223	221	224	222	244.8	244.0
2 Spd	14	6	3	2	1	1	0	0	3	4	5	3	4	9	8	7	9	14	18	14	16	14	14	7	6.1	18.0
Dir	227	241	280	293	113	117	178	31	176	194	184	154	136	149	161	176	255	241	227	230	224	225	233	245	218.5	227.3
3 Spd	9	15	15	12	11	12	8	7	17	20	21	20	20	23	19	13	8	7	3	3	2	1	0	0	9.3	22.8
Dir	239	241	250	265	256	278	288	262	285	304	310	310	304	316	314	327	11	15	26	299	281	206	242	181	294.9	315.6
4 Spd	1	2	1	1	2	3	0	1	2	5	8	11	12	11	15	15	16	15	10	5	2	5	6	1	5.9	16.0
Dir	192	187	168	176	203	190	62	182	178	186	195	198	206	219	224	224	230	227	232	243	218	231	226	189	217.0	230.1
5 Spd	3	2	1	1	2	2	3	1	2	5	2	2	5	7	6	7	7	5	4	6	6	8	5	4	2.1	8.3
Dir	199	196	185	183	199	199	189	175	186	249	219	44	52	32	42	91	58	52	33	41	40	37	73	62	60.4	36.8
6 Spd	2	5	4	5	4	0	1	1	3	6	5	7	3	8	4	4	4	1	3	1	1	1	1	0	1.0	7.8
Dir	36	47	28	52	56	7	335	6	54	159	160	205	175	204	231	164	225	163	191	229	323	219	204	162	162.2	204.3
7 Spd	0	1	0	1	1	1	5	3	3	4	6	10	12	7	6	2	3	4	5	6	5	3	2	3	1.8	12.0
Dir	76	120	217	29	218	216	263	247	219	212	222	244	239	276	328	24	61	126	148	152	178	80	36	185	222.0	238.6
8 Spd	1	1	1	3	4	4	5	14	15	16	23	25	27	28	32	34	30	24	23	20	17	12	15	13	14.9	33.9
Dir	23	160	280	10	12	356	298	263	247	256	252	269	270	283	275	299	297	301	293	296	294	267	295	299	283.5	299.2
9 Spd	17	14	16	16	11	10	8	5	5	5	4	5	4	7	7	10	7	7	6	8	6	9	8	7	5.0	17.0
Dir	315	309	312	299	301	283	302	355	18	28	30	66	38	30	60	37	66	102	57	53	50	52	58	55	1.0	315.1
10 Spd	8	7	5	4	2	2	2	2	6	7	11	9	10	9	9	9	7	6	5	4	1	1	1	1	3.6	10.7
Dir	54	46	46	52	63	42	4	308	297	301	319	306	295	284	284	315	299	287	286	295	46	11	135	181	317.3	319.1
11 Spd	1	1	0	1	0	2	2	2	1	1	3	1	1	4	8	8	13	29	20	14	10	10	11	10	5.1	29.2
Dir	130	148	145	190	190	222	185	164	71	129	86	61	330	11	6	24	336	323	1	18	348	336	0	359	353.3	323.1
12 Spd	12	9	11	8	7	9	8	9	8	10	9	9	10	6	6	8	7	5	6	6	2	1	0	1	6.8	12.1
Dir	1	24	15	18	14	16	19	24	34	33	38	43	35	52	41	30	29	35	24	25	29	8	22	40	26.5	1.2
13 Spd	0	0	0	0	0	1	1	3	3	4	4	2	3	3	3	4	3	2	1	3	2	0	1	1	1.3	4.0
Dir	332	322	42	40	60	48	64	90	84	99	119	94	103	163	148	194	216	145	76	102	91	51	30	53	113.2	99.0
14 Spd	1	0	0	0	0	2	2	3	4	4	5	5	5	5	7	7	11	10	4	2	1	1	1	1	1.4	10.6
Dir	40	35	353	187	172	222	246	248	280	292	9	20	16	69	98	102	119	127	124	108	38	28	6	37	83.9	118.7
15 Spd	0	0	1	1	1	1	2	3	4	3	6	6	8	10	8	8	8	6	6	5	5	7	7	5	4.4	9.8
Dir	34	152	113	135	45	41	46	39	32	42	48	50	58	69	69	73	72	74	67	61	58	61	57	57	61.6	69.0
16 Spd	5	5	4	5	6	5	5	5	6	8	10	9	7	9	11	7	9	7	4	5	5	5	5	5	6.2	11.2
Dir	51	51	49	49	51	50	49	56	59	63	69	59	70	83	88	101	95	74	65	65	58	61	67	64	67.2	87.7
17 Spd	5	4	3	4	3	5	4	4	4	4	2	6	8	7	5	3	4	3	1	1	1	0	2	1	0.1	7.8
Dir	55	63	50	60	80	93	88	72	53	54	285	230	227	245	291	283	304	281	194	133	196	155	189	183	53.2	227.5
18 Spd	1	2	3	5	5	5	4	4	7	8	10	6	5	4	3	9	7	6	3	2	2	3	2	3	3.8	10.0
Dir	243	278	253	267	261	249	258	257	250	254	250	293	293	301	241	218	186	200	190	162	181	189	200	200	240.9	250.4
19 Spd	3	3	2	3	4	5	4	4	4	9	8	4	6	4	5	5	4	4	1	0	1	0	0	3	2.6	9.5
Dir	198	182	193	185	194	189	189	184	198	230	223	237	217	236	199	279	285	319	23	61	43	303	235	330	222.4	230.3
20 Spd	1	2	9	12	14	10	7	8	9	9	12	9	10	10	9	9	6	4	7	6	6	7	5	6	7.4	14.4
Dir	194	327	30	37	31	34	37	26	18	18	17	26	5	31	69	40	48	60	44	48	56	58	55	46	34.6	31.2
21 Spd	3	3	3	4	4	3	2	4	5	6	7	7	12	9	9	9	11	9	7	5	6	5	5	6	5.6	11.9
Dir	46	43	51	50	44	46	56	63	67	94	106	95	108	91	65	75	93	114	104	118	90	100	79	87	85.6	108.1
22 Spd	4	3	4	5	5	5	6	6	9	15	14	12	11	10	11	10	8	6	4	4	3	2	2	1	6.3	14.5
Dir	82	60	56	55	57	62	66	73	84	100	109	117	123	101	97	98	99	100	90	91	82	79	77	114	93.1	99.5

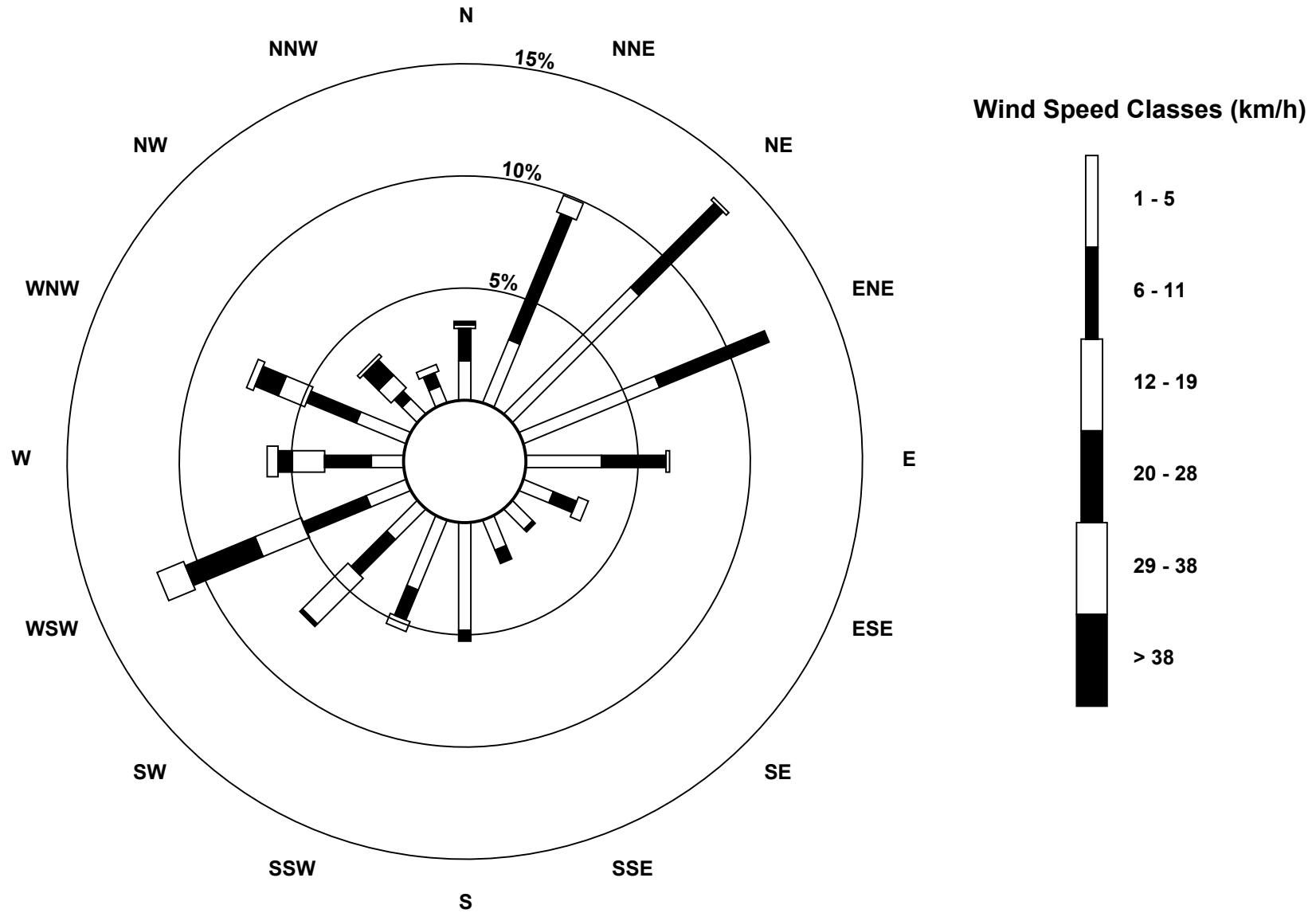
Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Evergreen Park - September 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	0	0	0	0	1	0	1	1	5	6	16	17	34	34	33	22	29	28	25	18	10	7	1	11.2	34.1			
Dir	39	61	98	44	160	178	139	41	184	190	172	235	235	246	254	251	251	247	239	243	241	213	206	66	241.0	253.9			
24 Spd	1	9	17	20	16	14	15	15	11	14	15	21	22	21	21	17	17	10	11	4	4	5	8	0	11.4	22.0			
Dir	152	236	237	241	255	273	260	281	270	269	277	286	282	295	317	290	294	256	235	222	187	208	235	46	269.3	281.9			
25 Spd	0	0	0	1	1	0	0	2	4	14	23	27	24	29	28	32	34	29	25	25	22	14	9	6	14.2	34.3			
Dir	113	20	211	196	203	210	332	331	301	240	241	249	253	266	261	260	255	245	238	239	236	236	259	266	250.3	255.1			
26 Spd	6	18	18	23	26	10	6	11	9	8	11	6	10	15	19	6	2	9	10	8	8	11	14	9	7.1	26.3			
Dir	258	234	237	248	245	276	285	249	244	254	265	355	25	28	25	34	157	209	213	233	259	244	241	260	257.5	245.3			
27 Spd	9	8	8	6	4	5	2	3	1	2	4	6	10	11	10	8	2	3	0	3	1	2	2	1	3.1	11.2			
Dir	257	264	269	280	286	321	12	34	28	313	338	255	301	291	351	347	38	60	45	204	196	33	66	300	304.2	291.0			
28 Spd	2	0	0	1	1	1	1	2	2	5	5	4	3	5	2	4	6	1	3	3	1	0	1	0	1.7	5.9			
Dir	30	345	99	59	63	93	130	64	58	83	60	93	110	89	37	2	27	11	5	14	51	289	208	7	55.6	26.6			
29 Spd	0	2	4	2	7	6	3	1	6	7	7	9	9	11	9	10	7	7	10	4	5	4	1	0	4.7	10.7			
Dir	319	240	270	317	24	12	11	358	29	40	52	355	8	19	18	26	14	38	44	67	71	68	131	94	25.3	18.6			
30 Spd	1	3	2	2	3	2	2	5	7	9	9	9	9	9	10	8	9	3	3	7	7	8	7	7	5.7	10.2			
Dir	65	49	49	59	48	37	46	54	57	54	61	49	61	64	63	69	50	39	36	28	32	35	28	29	49.5	62.7			
Spd	1.8	2.2	2.4	2.2	1.8	1.8	1.5	1.4	1.5	2.0	2.2	3.3	3.4	3.8	3.7	3.2	2.6	2.8	2.1	1.5	1.5	0.9	1.0	0.7	Diurnal Average				
Dir	271.3	259.0	274.9	279.2	288.1	298.2	298.8	295.0	295.3	265.5	263.8	280.8	280.5	296.5	317.2	307.6	296.6	265.5	253.2	257.3	255.0	238.8	256.8	327.8	Diurnal Maximum				
Spd	36.3	31.2	25.0	24.6	26.3	19.0	16.9	21.2	23.1	27.4	23.0	27.5	26.5	33.6	34.1	33.9	34.3	29.2	27.6	25.4	22.1	18.0	17.3	16.4	Diurnal Maximum				
Dir	244.0	243.7	243.1	241.0	245.3	250.0	245.2	239.3	244.8	242.9	251.8	248.7	269.7	246.3	253.9	299.2	255.1	323.1	239.3	239.4	236.0	220.6	224.3	222.2					
Maximum Speed Value: 36 km/h on Sep 1 01:00																		Minimum Speed Value: 0 km/h on Sep 14 04:00										Hours in Service: 720	
Maximum Daily Speed Average: 18.4 km/h on Sep 1																		Minimum Daily Speed Average: 0.1 km/h on Sep 13										Hours of Data: 720	
Maximum Diurnal Speed Average: 3.8 km/h at hour 14																		Minimum Diurnal Speed Average: 0.7 km/h at hour 24										Hours of Missing Data: 0	
Monthly Average Velocity: 2.01 km/h 282.29 deg																		Speed Percentiles: P ₁ = 0.2 P ₁₀ = 0.8 Q ₁ = 2.3 Median = 5.3 Q ₃ = 9.3 P ₉₀ = 16.4 P ₉₉ = 31.5										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		25	25	4	1	0	0	55																					
NorthEast		109	96	4	0	0	0	209																					
East		32	37	5	0	0	0	74																					
SouthEast		28	7	1	0	0	0	36																					
South		67	10	0	0	0	0	77																					
SouthWest		34	27	33	15	5	0	114																					
West		21	30	20	14	6	0	91																					
NorthWest		24	13	12	12	3	0	64																					
Total		340	245	79	42	14	0	720																					

Wind Rose

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



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Evergreen Park - September 2018

Maximum Speed: 37 km/h on Sep 1 01:00																				Maximum Daily Speed Average: 20.3 km/h on Sep 1					Hours in Service: 720	
Minimum Speed: 0 km/h on Sep 14 04:00																				Minimum Daily Speed Average: 2.2 km/h on Sep 13					Hours of Data: 720	
Maximum Diurnal Speed Average: 12.7 km/h at hour 15																				Minimum Diurnal Speed Average: 4.5 km/h at hour 24					Hours of Missing Data: 0	
Monthly Average Speed: 7.83 km/h																				Percentiles: P ₁ = 0.3 P ₁₀ = 1.2 Q ₁ = 2.8 Median = 6.0 Q ₃ = 10.2 P ₉₀ = 17.1 P ₉₉ = 32.2					Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Sep	37	31	25	25	20	19	17	21	23	28	23	21	22	21	20	16	13	11	13	12	16	18	17	17	20.3	36.6
2-Sep	15	7	3	2	1	1	1	1	3	4	6	4	5	10	10	8	11	14	18	14	17	14	14	7	7.8	18.3
3-Sep	9	15	15	13	12	13	8	7	17	21	21	20	21	23	20	14	9	8	4	3	2	1	1	0	11.6	23.4
4-Sep	1	2	2	1	2	3	1	1	2	5	9	11	12	12	16	16	17	15	11	5	2	5	6	2	6.7	16.6
5-Sep	3	2	1	1	2	2	3	1	2	5	3	6	7	8	8	8	8	5	4	6	7	9	6	5	4.7	8.6
6-Sep	3	5	4	5	5	1	1	1	4	7	7	7	5	9	7	7	5	1	3	2	1	1	2	1	3.9	8.8
7-Sep	1	2	1	1	2	3	6	4	4	5	7	11	12	9	7	4	5	5	5	6	6	4	2	5	4.9	12.4
8-Sep	2	3	2	4	5	9	20	14	16	17	24	25	28	29	33	35	31	25	23	20	18	13	17	13	17.8	35.4
9-Sep	17	14	17	17	12	11	9	6	5	6	5	6	5	8	8	10	8	8	7	9	7	9	9	8	9.1	17.4
10-Sep	8	8	5	4	3	2	2	2	6	7	11	10	10	10	10	9	7	7	6	5	1	1	1	1	5.7	11.0
11-Sep	1	1	0	1	1	2	2	3	2	3	4	3	4	6	9	8	15	30	21	15	11	11	12	11	7.3	30.0
12-Sep	13	9	11	9	8	9	9	9	9	11	10	9	11	7	7	9	8	6	6	6	2	1	0	1	7.4	13.1
13-Sep	0	0	0	0	0	1	1	3	3	4	4	3	4	4	4	5	4	2	2	4	2	0	1	1	2.2	4.6
14-Sep	1	1	0	0	0	2	2	4	4	5	6	6	7	6	8	8	12	10	4	2	1	1	1	1	3.9	11.5
15-Sep	0	1	2	1	1	1	2	3	4	3	6	6	8	11	9	9	8	6	7	5	5	7	7	5	4.9	10.7
16-Sep	5	6	5	5	6	5	6	6	7	8	10	10	8	11	12	8	10	7	5	5	5	6	6	5	6.9	12.3
17-Sep	6	4	3	4	3	5	4	4	4	5	3	6	8	8	6	5	4	4	2	1	1	1	2	1	4.1	8.2
18-Sep	1	2	4	5	6	5	4	5	7	8	11	7	7	6	5	10	7	7	4	2	2	4	2	3	5.2	10.5
19-Sep	3	3	2	3	4	5	4	4	5	10	8	5	7	6	7	7	6	6	1	2	2	0	1	4	4.3	9.8
20-Sep	2	3	9	13	15	11	8	8	10	10	13	11	12	10	10	10	7	5	8	6	6	8	6	6	8.6	15.2
21-Sep	3	3	3	4	5	4	3	5	6	7	8	8	13	10	10	10	12	9	7	5	6	6	6	7	6.6	12.8
22-Sep	5	3	4	5	6	5	6	7	9	15	15	13	13	11	12	11	9	7	5	4	3	2	2	2	7.2	15.4
23-Sep	1	0	0	0	0	1	1	1	2	6	6	16	17	34	35	34	22	29	28	25	18	10	8	3	12.4	35.0
24-Sep	2	9	17	20	16	15	15	15	12	15	16	23	23	23	22	18	18	13	12	5	4	5	8	1	13.5	23.5
25-Sep	0	1	0	1	1	0	0	2	4	14	23	28	25	30	29	32	35	29	25	26	22	15	10	7	15.0	34.9
26-Sep	7	18	18	23	27	13	7	11	9	8	12	8	10	16	19	6	3	9	10	9	9	11	14	10	11.9	26.5
27-Sep	9	8	8	7	5	5	2	3	2	3	5	8	12	14	12	11	5	4	1	3	2	2	2	1	5.6	13.6
28-Sep	2	1	1	1	1	2	2	2	2	5	5	6	6	7	5	6	6	2	4	3	1	0	1	1	2.9	6.9
29-Sep	1	2	5	3	7	6	4	2	7	8	8	11	10	12	11	12	8	8	10	5	5	4	2	1	6.2	11.8
30-Sep	2	3	2	2	3	2	2	5	8	10	10	10	10	10	11	9	9	3	3	7	7	8	7	7	6.2	11.2
5.3 5.5 5.7 6.0 5.9 5.5 5.0 5.3 6.6 8.8 9.9 10.6 11.4 12.7 12.7 11.8 10.7 9.9 8.6 7.3 6.4 5.9 5.8 4.5																									Diurnal Average	
36.6 31.5 25.2 24.8 26.5 19.3 19.7 21.4 23.4 27.7 23.7 28.1 28.0 34.3 35.0 35.4 34.9 30.0 27.8 25.6 22.3 18.1 17.4 16.6																									Diurnal Maximum	
All monthly, daily, and diurnal averages have been calculated using scalar methods																										

Hourly Standard Deviations

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

Maximum Value: 98.9 deg on Sep 2 07:00																			Hours in Service: 720						
Minimum Value: 6.6 deg on Sep 23 19:00																			Hours of Data: 720						
																			Hours of Missing Data: 0						
																			Hours of Calibration: 0						
Percentiles: P ₁ = 7.1 P ₁₀ = 13.3 Q ₁ = 18.8 Median = 27.4 Q ₃ = 42.7 P ₉₀ = 67.9 P ₉₉ = 90.3																			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-Sep	7	7	7	7	13	10	9	7	9	9	11	14	14	27	16	35	32	18	11	9	8	8	7	8	35.0
2-Sep	9	15	22	67	54	68	99	85	46	25	26	34	43	33	40	24	28	13	10	9	9	10	8	21	98.9
3-Sep	13	8	11	18	16	14	14	20	16	19	14	14	18	14	15	26	31	22	50	23	56	39	88	78	88.4
4-Sep	58	58	75	58	15	24	87	71	61	36	24	22	23	28	18	19	16	13	11	11	14	14	25	81	86.9
5-Sep	22	57	77	47	13	15	23	55	46	25	56	83	59	40	43	36	25	26	20	17	25	18	35	34	83.0
6-Sep	41	17	26	24	33	90	71	54	38	27	44	30	54	35	72	65	53	72	22	54	69	76	89	72	90.3
7-Sep	85	43	79	78	95	91	37	69	38	44	39	26	16	29	34	62	71	45	18	17	64	61	42	68	95.0
8-Sep	78	84	66	29	28	56	80	18	11	20	15	15	20	19	17	17	14	17	16	14	13	20	24	15	84.1
9-Sep	12	16	13	15	18	16	15	37	24	33	50	42	42	34	43	20	28	27	31	31	27	31	26	38	50.2
10-Sep	22	28	32	38	42	33	39	35	21	19	16	20	20	25	26	21	19	23	19	28	33	42	34	45	45.2
11-Sep	64	43	66	64	78	28	38	67	54	83	55	87	95	53	32	21	31	15	16	17	22	22	21	27	95.3
12-Sep	24	18	20	21	27	19	28	19	24	22	26	27	32	33	36	24	25	33	19	19	21	23	26	19	36.1
13-Sep	75	77	33	46	32	32	36	18	35	27	37	64	46	55	44	37	50	42	33	18	30	48	23	21	76.7
14-Sep	34	68	78	85	79	45	52	44	32	39	37	36	40	35	39	37	24	22	39	46	38	25	33	66	84.9
15-Sep	79	68	53	63	30	31	17	18	23	28	22	35	37	30	26	20	22	22	24	24	34	22	24	25	79.3
16-Sep	25	21	33	23	23	21	34	25	33	31	23	23	31	29	31	26	23	23	35	24	27	27	26	25	35.2
17-Sep	20	29	24	28	28	28	27	35	40	44	54	18	15	35	53	65	37	61	59	72	81	77	36	63	81.4
18-Sep	80	33	36	26	28	24	31	25	21	16	18	43	52	72	72	30	21	25	25	53	60	54	38	13	79.5
19-Sep	27	19	40	22	10	7	8	18	21	14	28	65	38	69	69	66	55	62	59	73	81	87	91	39	90.8
20-Sep	89	31	23	23	29	35	30	25	21	23	28	48	38	30	32	32	30	34	28	25	22	20	22	14	88.7
21-Sep	20	24	27	25	27	21	24	23	35	34	33	32	26	31	30	33	24	20	18	25	18	24	22	23	34.7
22-Sep	20	17	20	17	26	26	24	29	26	22	23	28	36	27	24	25	24	23	20	18	17	17	19	57	57.5
23-Sep	21	62	38	73	68	39	59	41	93	31	21	15	11	11	14	12	13	12	7	7	9	11	63	81	93.5
24-Sep	63	54	7	13	16	21	12	17	17	22	19	23	21	26	14	20	18	36	9	19	13	18	18	61	63.4
25-Sep	73	90	90	45	52	64	75	54	30	14	10	13	17	15	18	13	11	9	7	7	8	9	34	30	90.2
26-Sep	29	7	7	10	7	41	28	10	17	20	16	35	19	21	15	25	29	7	10	16	13	14	9	21	40.7
27-Sep	22	16	17	17	19	31	37	27	88	46	67	60	36	40	42	56	88	45	79	19	86	29	37	62	88.4
28-Sep	38	78	82	51	29	52	51	43	49	38	39	50	72	53	77	43	24	76	38	29	47	50	65	88	87.8
29-Sep	93	55	30	51	15	14	18	53	33	42	35	33	34	28	43	40	35	22	21	23	19	14	38	56	92.9
30-Sep	54	10	18	24	11	14	12	13	23	30	25	31	30	38	26	33	24	20	11	16	18	15	14	14	53.6
	92.9	89.5	90.2	84.9	95.0	91.4	98.9	85.0	93.5	83.0	66.9	87.4	95.3	71.5	77.5	65.7	88.4	75.8	78.6	72.7	86.4	87.4	90.8	87.8	

PAZA

Henry Pirker Station

Monthly Summary Tables, Graphs and
Roses

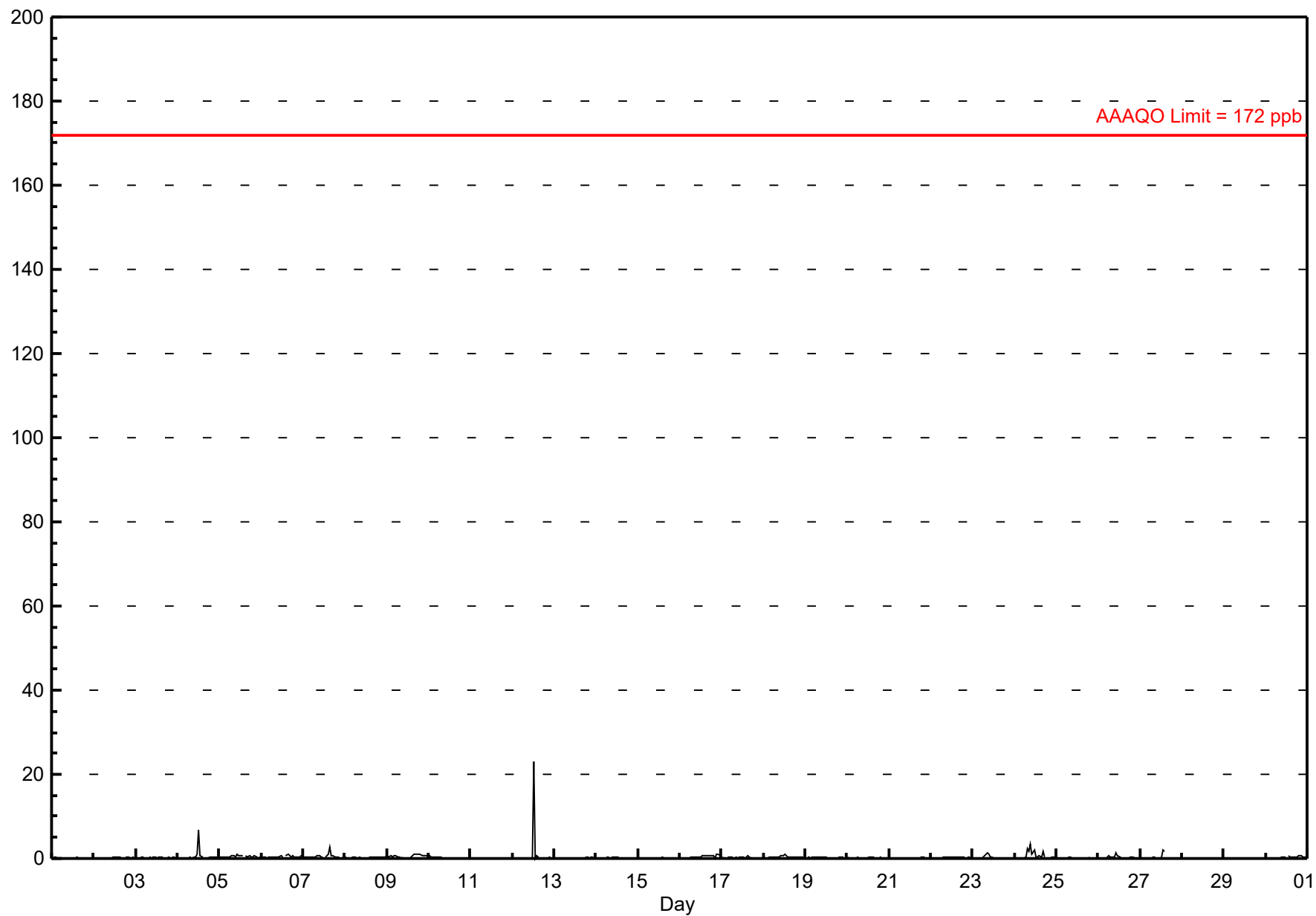
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Henry Pirker - September 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 22.9 ppb on Sep 12 13:00 Maximum Daily Average: 1.0 ppb on Sep 12																				Hours in Service: 720 Hours of Data: 677 Hours of Missing Data: 43 Hours of Calibration: 43 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Sep 1 05:00 Maximum Diurnal Average: 1.4 ppb at hour 13 Monthly Average: 0.27 ppb																				Minimum Daily Average: 0.0 ppb on Sep 11 Minimum Diurnal Average: 0.1 ppb at hour 4 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 = 1.8						
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-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.3
2-Sep	0	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
3-Sep	0	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
4-Sep	0	0	0	0	0	0	0	0	0	0	0	1	7	1	0	A	0	0	0	0	0	0	0	0	0.5	6.7
5-Sep	0	0	0	0	0	0	0	1	1	0	1	1	1	1	A	1	0	1	0	0	1	0	0	0	0.4	1.0
6-Sep	0	0	0	0	0	1	0	0	0	0	0	1	0	A	1	1	1	0	1	0	0	0	0	1	0.4	1.0
7-Sep	0	0	0	0	0	0	0	0	1	1	0	0	A	0	1	3	1	1	0	0	0	0	0	0	0.5	2.8
8-Sep	0	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
9-Sep	1	0	1	0	1	1	0	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	1	1	0.5	1.1
10-Sep	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
11-Sep	0	0	0	0	0	0	0	0	A	A	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
12-Sep	0	0	0	0	0	0	0	A	0	0	0	0	23	0	1	0	0	0	0	0	0	0	0	0	1.0	22.9
13-Sep	0	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
14-Sep	0	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
15-Sep	0	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
16-Sep	0	0	0	A	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	1	1	1	0.4	0.9
17-Sep	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.2	0.5
18-Sep	0	A	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.4	1.2
19-Sep	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.3	0.5
20-Sep	0	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	0.5
21-Sep	0	0	0	0	0	0	0	0	0	C	C	C	C	C	C	C	C	C	0	0	0	A	0	0	--	0.2
22-Sep	0	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
23-Sep	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	1.2
24-Sep	0	0	0	0	0	0	0	2	2	3	1	2	0	0	1	0	2	0	A	0	0	0	0	0	0.7	3.5
25-Sep	0	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
26-Sep	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0.3	1.4
27-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	A	0	0	0	0	0	0	0	0	0.3	2.1
28-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.1
29-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.1
30-Sep	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	1	1	0	0	0	0.3	0.7
0.2 0.1 0.1 0.1 0.2 0.2 0.2 0.3 0.3 0.3 0.3 0.3 1.4 0.3 0.3 0.4 0.3 0.2 0.2 0.2 0.2 0.2 0.2																								Diurnal Average		
0.7 0.5 0.5 0.4 0.6 0.7 0.7 2.3 1.7 3.5 1.4 2.1 22.9 2.1 1.6 2.8 1.6 1.0 0.9 0.9 0.8 0.9 0.8																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Henry Pirker - September 2018



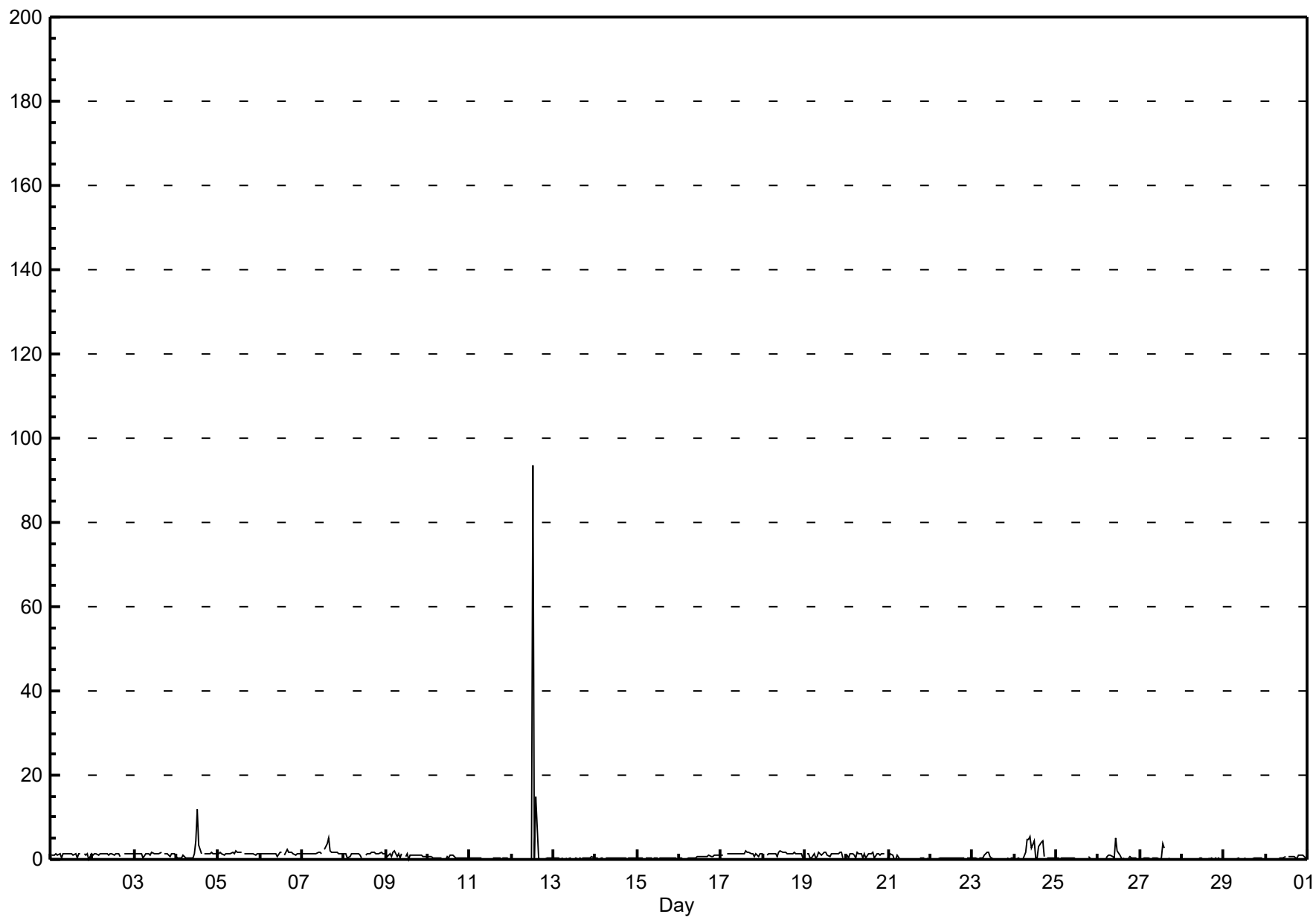
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Henry Pirker - September 2018

Maximum Value: 93.5 ppb on Sep 12 13:00																				Maximum Daily Average: 4.8 ppb on Sep 12					Hours in Service: 720	
Minimum Value: 0 ppb on Sep 10 11:00																				Minimum Daily Average: 0.2 ppb on Sep 28					Hours of Data: 677	
Maximum Diurnal Average: 4.8 ppb at hour 13																				Minimum Diurnal Average: 0.6 ppb at hour 4					Hours of Missing Data: 43	
Monthly Average: 0.97 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.2 Q ₁ = 0.2 Median = 0.5 Q ₃ = 1.3 P ₉₀ = 1.5 P ₉₉ = 4.8					Hours of Calibration: 43	
																				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-Sep	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1	A	1	1	1	0	1	1.1	1.2
2-Sep	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	A	1	1	1	1	1	1	1.2	1.5
3-Sep	1	1	1	1	1	0	1	1	1	1	2	1	1	1	1	2	A	1	1	1	1	1	1	1	1.3	1.8
4-Sep	0	0	0	0	1	0	0	0	0	0	1	4	12	3	1	A	1	1	1	1	2	1	1	1	1.7	11.9
5-Sep	1	2	1	1	1	1	1	2	2	1	2	2	2	2	A	1	1	1	1	1	1	1	1	1	1.5	2.0
6-Sep	1	1	1	1	1	1	1	1	1	1	1	2	2	A	1	2	2	2	2	1	1	1	1	1	1.4	2.3
7-Sep	1	1	1	1	1	1	1	1	1	2	2	2	A	2	4	5	2	2	2	2	2	1	1	1	1.8	5.2
8-Sep	1	1	0	1	1	1	1	1	1	1	0	A	1	1	1	1	2	2	2	2	2	2	2	1	1.3	1.6
9-Sep	1	1	1	1	2	2	1	2	0	1	A	1	1	0	1	1	1	1	1	1	1	1	1	1	1.0	1.9
10-Sep	1	1	1	0	0	0	0	0	0	A	0	1	0	1	1	1	0	1	0	0	0	0	0	0	0.5	1.2
11-Sep	0	0	0	0	0	0	0	0	A	1	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
12-Sep	0	0	0	0	0	0	0	A	0	0	0	0	94	0	15	0	0	0	0	0	0	0	0	0	4.8	93.5
13-Sep	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.2	0.6
14-Sep	0	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
15-Sep	0	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
16-Sep	0	0	0	A	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.0
17-Sep	1	1	A	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1.3	1.9
18-Sep	1	A	1	1	1	1	1	1	1	2	2	2	2	2	1	1	1	1	2	1	2	2	2	0	1.4	2.0
19-Sep	A	1	1	0	0	1	0	1	2	1	1	2	2	1	1	1	1	1	1	1	2	2	0	A	1.1	1.6
20-Sep	1	0	1	1	1	0	2	1	1	0	1	0	1	1	1	2	0	1	1	1	1	1	A	0	1.1	1.7
21-Sep	0	1	1	0	0	1	0	0	0	C	C	C	C	C	C	C	C	C	0	0	0	A	0	0	--	1.3
22-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	0.4
23-Sep	0	0	0	0	0	0	0	1	2	2	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0.4	1.8
24-Sep	0	0	0	0	0	0	2	5	5	6	3	5	0	0	3	4	5	1	A	0	0	0	0	0	1.7	5.6
25-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0.2	0.6
26-Sep	0	0	0	0	0	1	1	1	1	0	5	2	1	0	0	0	A	0	1	0	0	0	0	0	0.7	5.1
27-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	4	3	A	0	0	0	0	0	0	0	0	0.5	3.8
28-Sep	0	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
29-Sep	0	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	0.3
30-Sep	0	0	0	0	0	0	0	0	0	0	0	1	A	1	1	1	1	0	0	1	1	1	1	0	0.4	1.2
																								Diurnal Average		
																								Diurnal Maximum		
C - Calibration																								A - Automated Daily Zero Span		

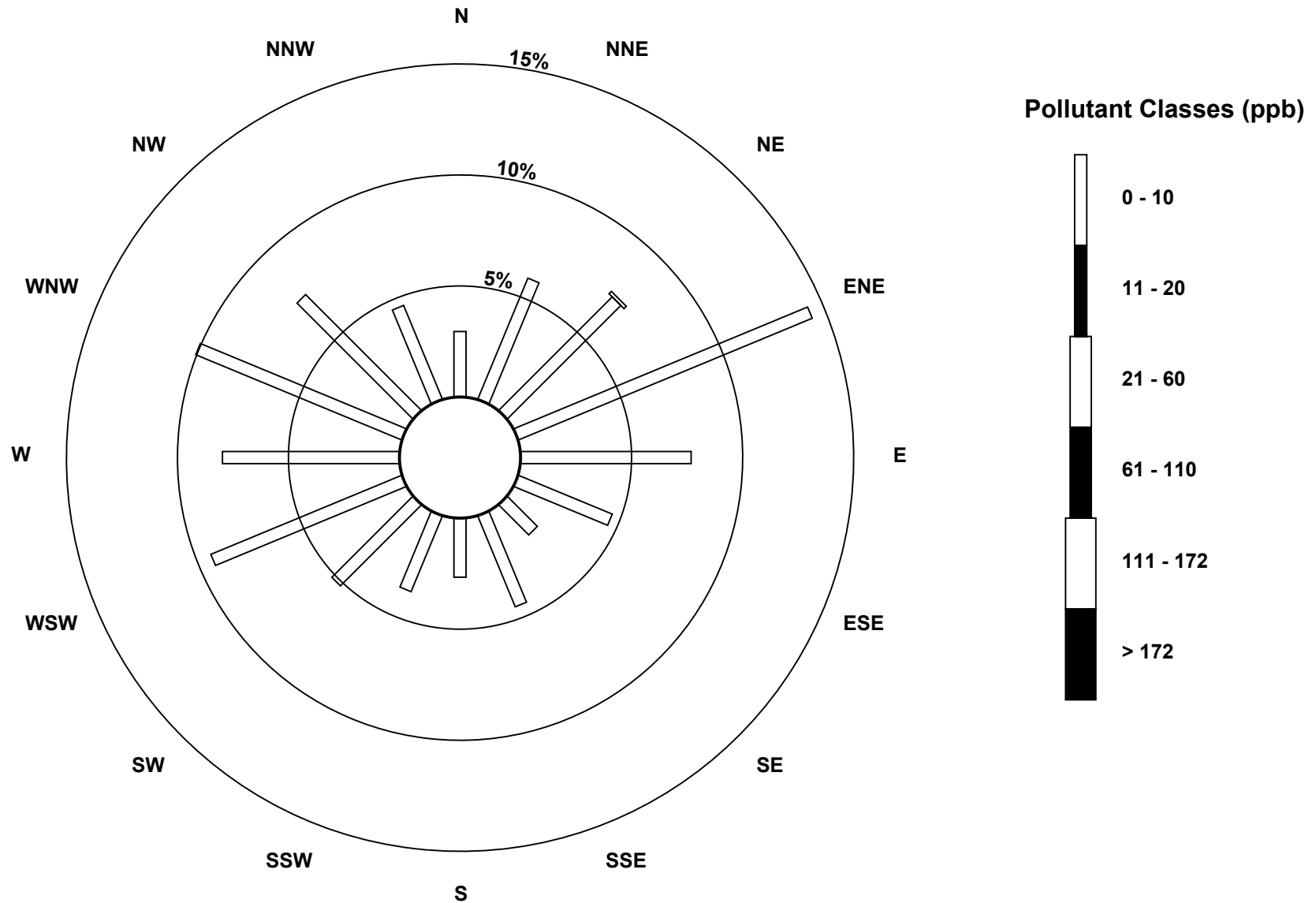
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Henry Pirker - September 2018



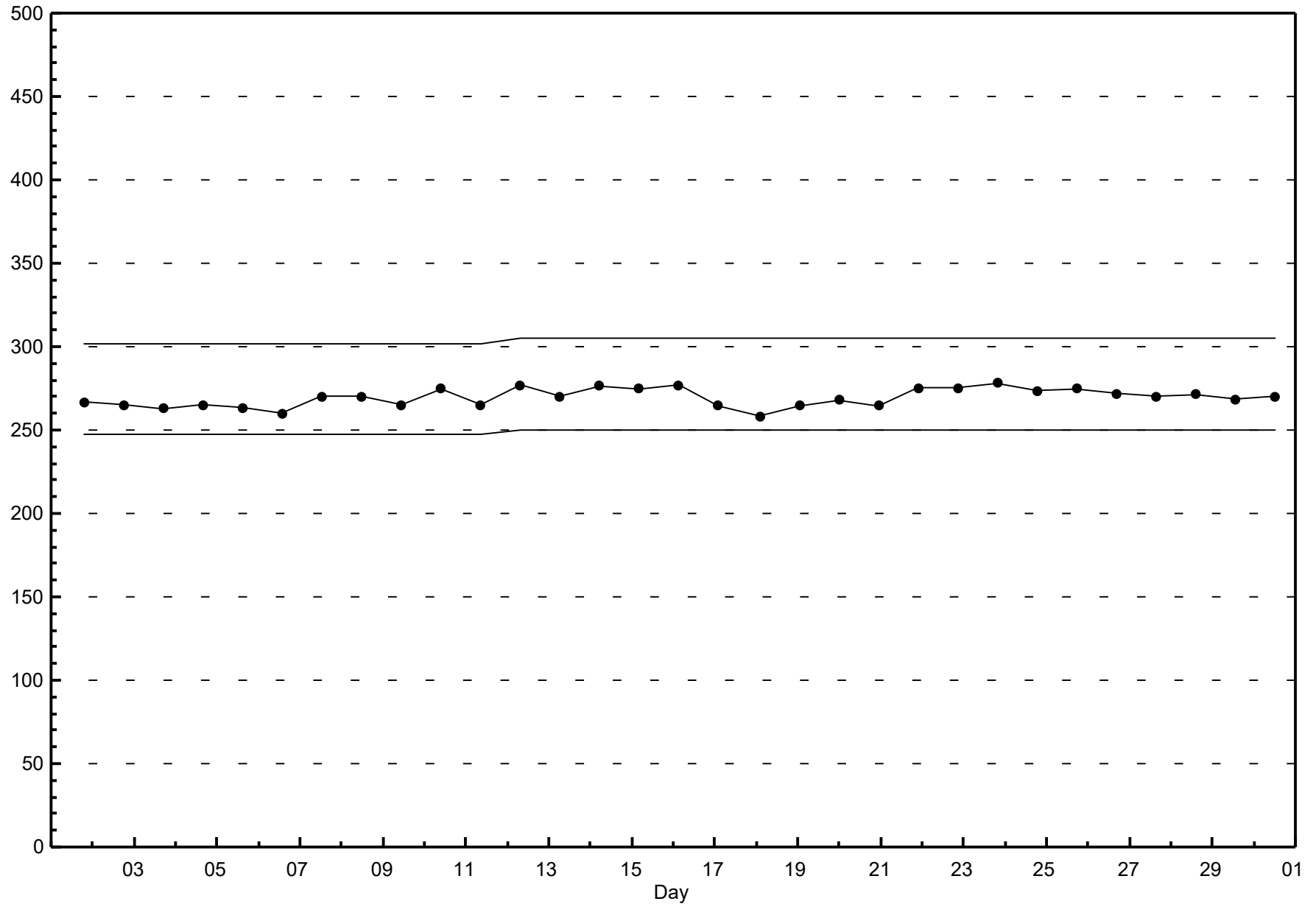
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Henry Pirker - September 2018



Span Responses

Sulphur Dioxide (SO₂)
Henry Pirker - September 2018



Hourly Averages

Total Reduced Sulphur (TRS) - ppb

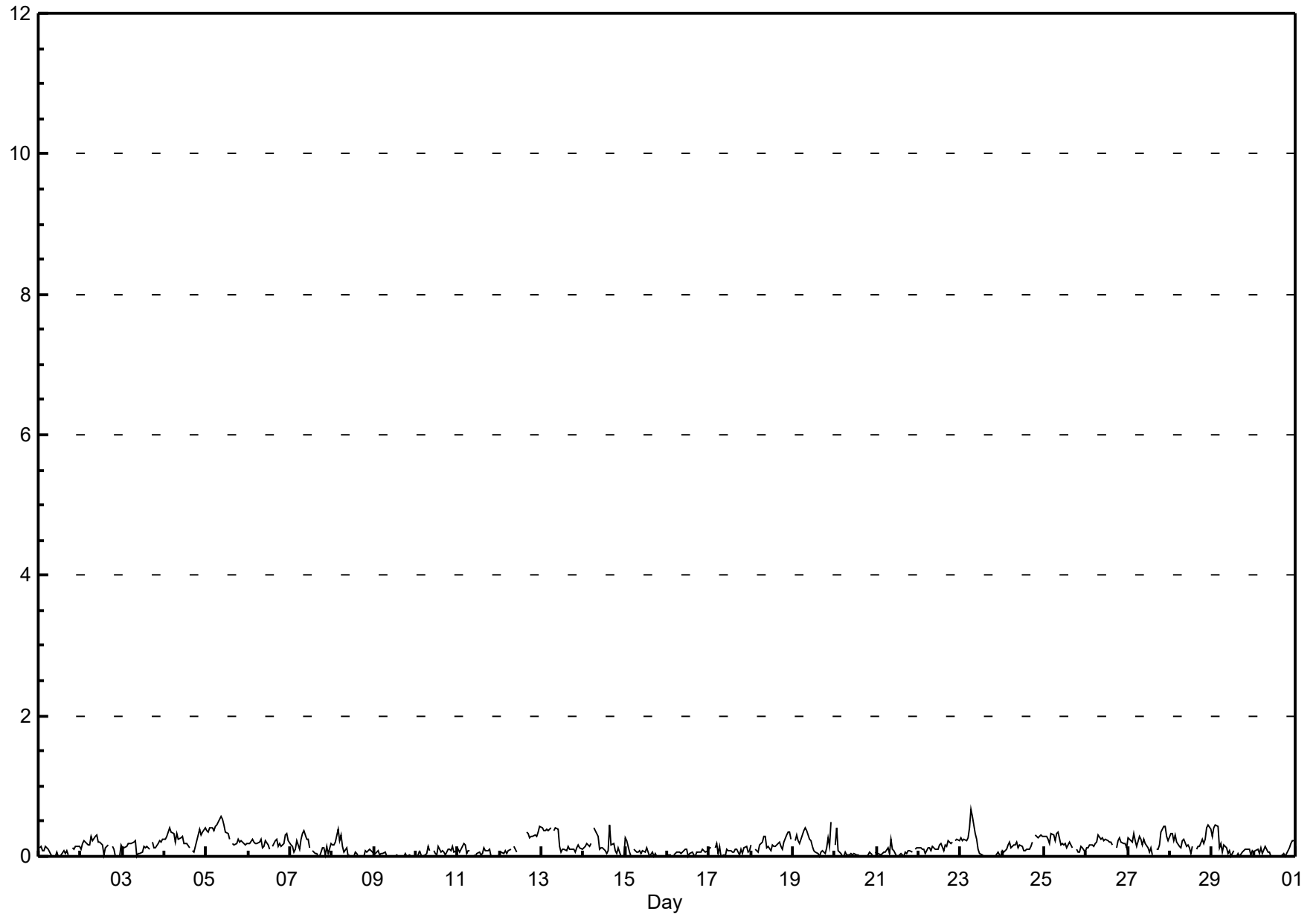
Henry Pirker - September 2018

Maximum Value: 0.7 ppb on Sep 23 07:00																			Maximum Daily Average: 0.3 ppb on Sep 5							Hours in Service: 720	
Minimum Value: 0 ppb on Sep 1 09:00																			Minimum Daily Average: 0.0 ppb on Sep 9							Hours of Data: 685	
Maximum Diurnal Average: 0.2 ppb at hour 8																			Minimum Diurnal Average: 0.1 ppb at hour 15							Hours of Missing Data: 35	
Monthly Average: 0.14 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.3 P ₉₉ = 0.5							Hours of Calibration: 35	
																										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Sep	0	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	0.1	
2-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.3	
3-Sep	0	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	
4-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	0.4	
5-Sep	0	0	0	0	0	0	0	0	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	0.6	
6-Sep	0	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	0.3	
7-Sep	0	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	
8-Sep	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4	
9-Sep	0	0	0	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	
10-Sep	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	
11-Sep	0	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	
12-Sep	0	0	0	0	0	0	0	A	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0.2	0.4	
13-Sep	0	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	
14-Sep	0	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	0.5	
15-Sep	0	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	
16-Sep	0	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	
17-Sep	0	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	
18-Sep	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
19-Sep	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	
20-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.0	0.4	
21-Sep	0	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	
22-Sep	0	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	
23-Sep	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	0.7	
24-Sep	0	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	
25-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.4	
26-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.3	
27-Sep	0	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	
28-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.5	
29-Sep	0	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	
30-Sep	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
0.2		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	Diurnal Average		
0.4		0.4	0.4	0.4	0.4	0.4	0.7	0.6	0.6	0.5	0.5	0.3	0.3	0.2	0.2	0.5	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.4	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - September 2018



Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

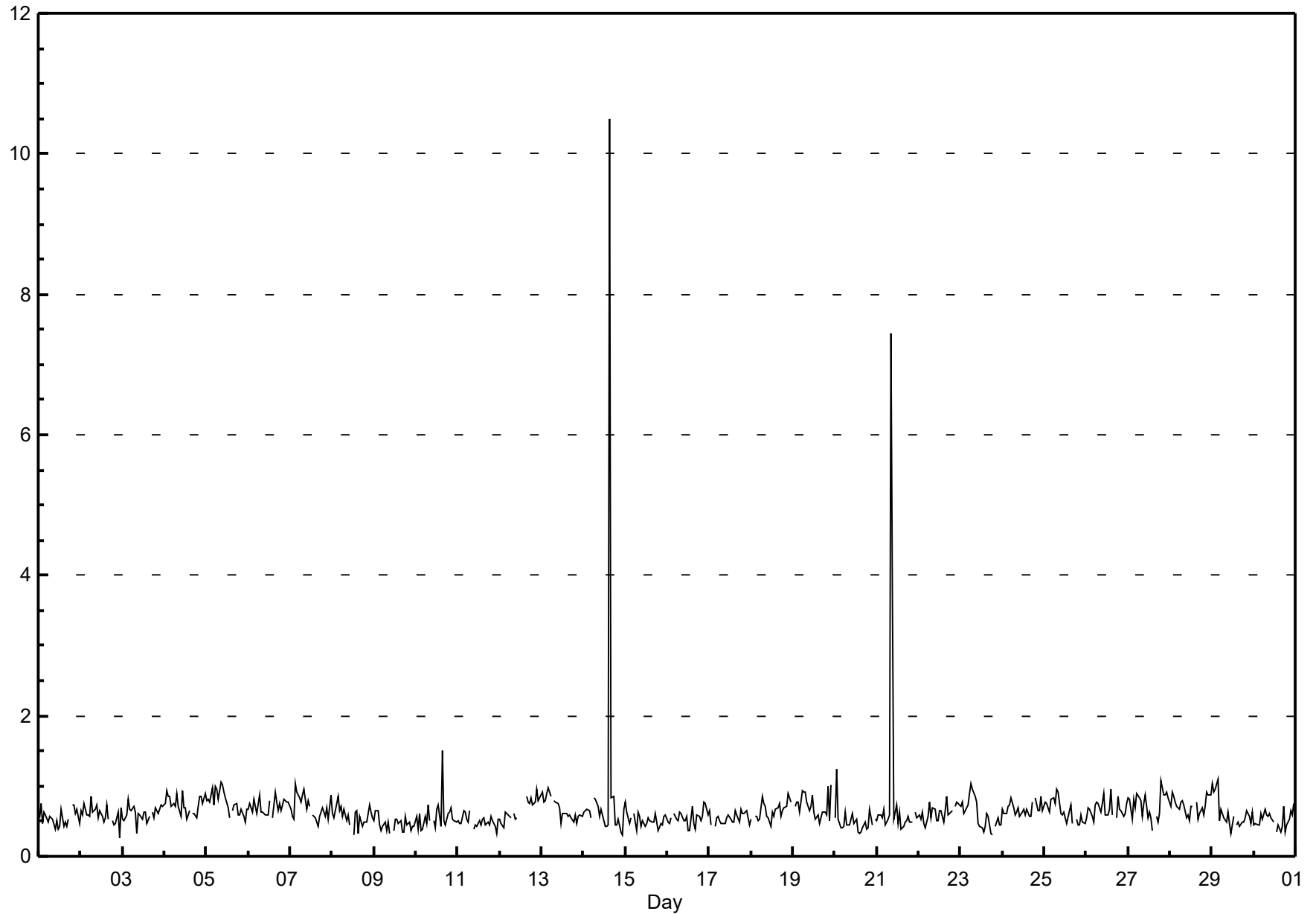
Henry Pirker - September 2018

Maximum Value: 10.5 ppb on Sep 14 16:00																				Maximum Daily Average: 1.0 ppb on Sep 14					Hours in Service: 720	
Minimum Value: 0 ppb on Sep 2 23:00																				Minimum Daily Average: 0.5 ppb on Sep 9					Hours of Data: 685	
Maximum Diurnal Average: 1.0 ppb at hour 16																				Minimum Diurnal Average: 0.5 ppb at hour 15					Hours of Missing Data: 35	
Monthly Average: 0.65 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.7 P ₉₀ = 0.8 P ₉₉ = 1.1					Hours of Calibration: 35	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	1	1	0	1	1	0	1	1	1	0	1	0	0	1	0	0	0	1	A	1	1	1	1	0	0.5	0.8
2-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	A	1	0	0	1	0	1	0.6	0.8
3-Sep	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	1	A	1	1	1	1	1	1	1	0.6	0.8
4-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.7	0.9
5-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	1	0.8	1.1
6-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.7	0.9
7-Sep	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	0	1	1	1	1	1	1	1	0.7	1.0
8-Sep	1	1	1	1	1	1	1	1	0	1	0	A	0	1	1	0	1	0	0	0	0	1	1	1	0.6	0.9
9-Sep	1	1	1	0	0	0	0	0	0	0	A	0	1	1	0	1	0	0	1	0	0	0	0	0	0.5	0.6
10-Sep	1	0	1	0	0	1	0	1	1	A	1	0	1	1	0	1	1	0	1	1	1	1	1	0	0.6	1.5
11-Sep	1	0	0	1	1	1	0	1	A	0	0	0	1	0	1	1	0	0	0	1	1	0	0	1	0.5	0.6
12-Sep	1	0	0	1	1	1	1	A	1	1	1	C	C	C	C	1	1	1	1	1	1	1	1	1	0.7	0.9
13-Sep	1	1	1	1	1	1	A	1	1	1	1	0	1	1	1	1	1	1	0	1	0	1	1	1	0.7	1.0
14-Sep	1	1	1	1	1	A	1	1	1	1	1	1	0	0	0	10	1	1	0	0	1	0	0	1	1.0	10.5
15-Sep	1	1	0	1	A	1	0	1	1	0	1	0	0	1	1	0	0	1	0	0	0	0	1	1	0.5	0.8
16-Sep	0	0	1	A	1	1	1	1	1	1	1	1	0	0	1	0	0	1	1	1	1	1	1	1	0.5	0.8
17-Sep	1	0	A	0	1	1	1	0	0	0	1	1	1	0	0	1	1	0	1	1	1	1	0	0	0.5	0.7
18-Sep	1	A	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
19-Sep	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	A	0.7	1.0
20-Sep	1	1	1	0	0	0	1	0	0	1	1	0	1	0	0	0	0	0	0	0	1	0	A	1	0.5	1.2
21-Sep	1	1	1	1	1	0	1	1	7	4	1	1	0	1	0	0	0	1	1	0	0	A	1	1	1.0	7.4
22-Sep	1	1	1	0	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	A	1	1	1	0.6	0.8
23-Sep	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	0	0	A	0	1	0	0	0.6	1.0
24-Sep	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	0.9
25-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	A	1	0	0	1	0	0	0.6	1.0
26-Sep	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.7	1.0
27-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	1	0	1	1	1	1	1	1	0.7	1.1
28-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.7	0.9
29-Sep	1	1	1	1	1	1	1	1	0	1	0	0	1	A	0	0	0	0	0	1	1	1	0	1	0.6	1.1
30-Sep	0	0	0	0	1	1	1	1	1	1	1	0	A	0	0	0	0	0	1	0	0	1	1	1	0.5	0.7
0.6 0.7 0.6 0.7 0.6 0.7 0.7 0.7 0.9 0.7 0.6 0.5 0.6 0.5 0.5 1.0 0.6 0.6 0.6 0.6 0.6 0.6 0.6																								Diurnal Average		
1.0 1.2 1.0 1.1 1.0 1.0 1.0 1.0 7.4 3.8 0.9 0.9 0.8 0.7 1.0 10.5 0.8 0.9 0.9 1.1 1.0 0.9 0.9																								Diurnal Maximum		
C - Calibration																								A - Automated Daily Zero Span		

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

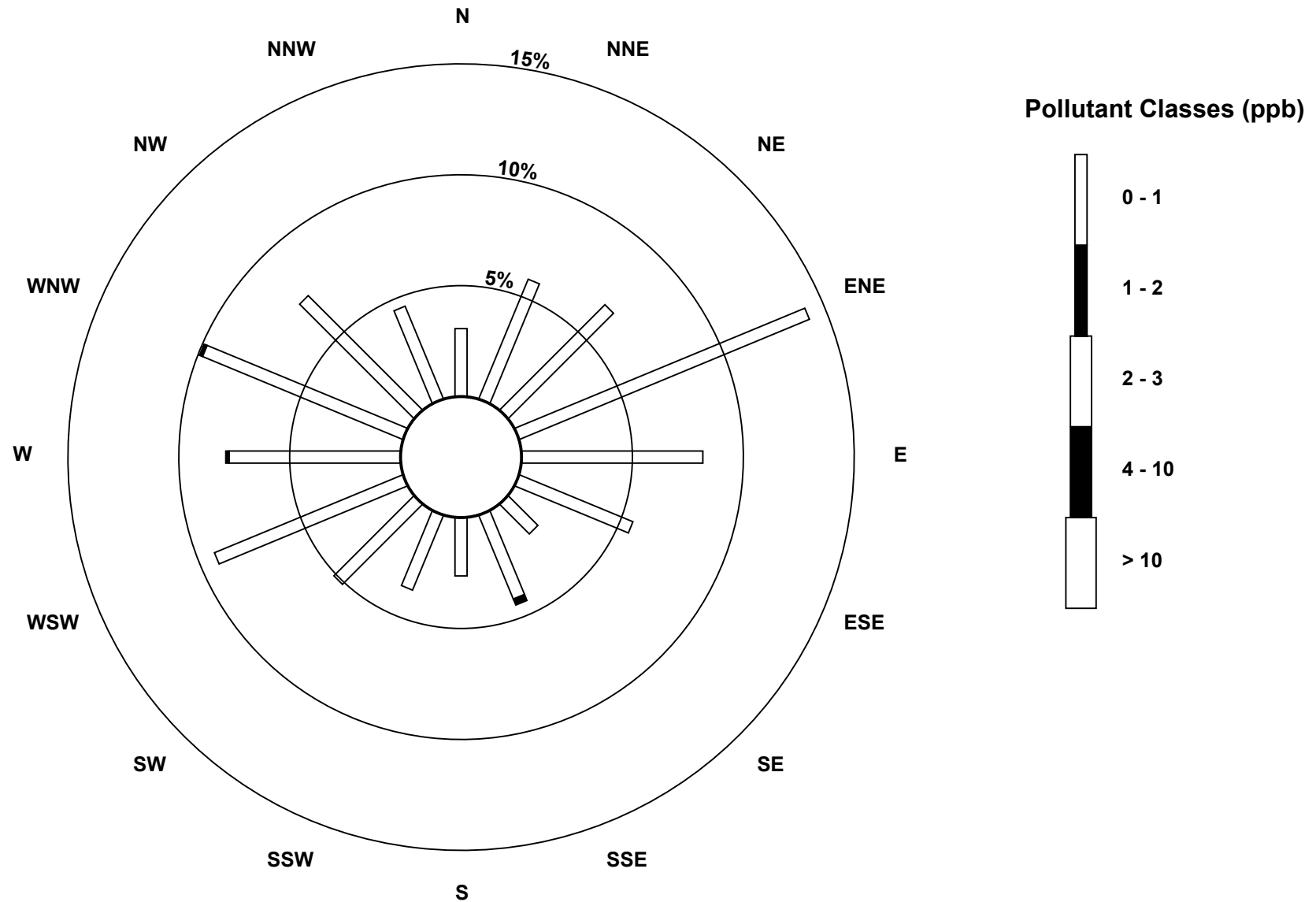
Henry Pirker - September 2018



Pollutant Rose

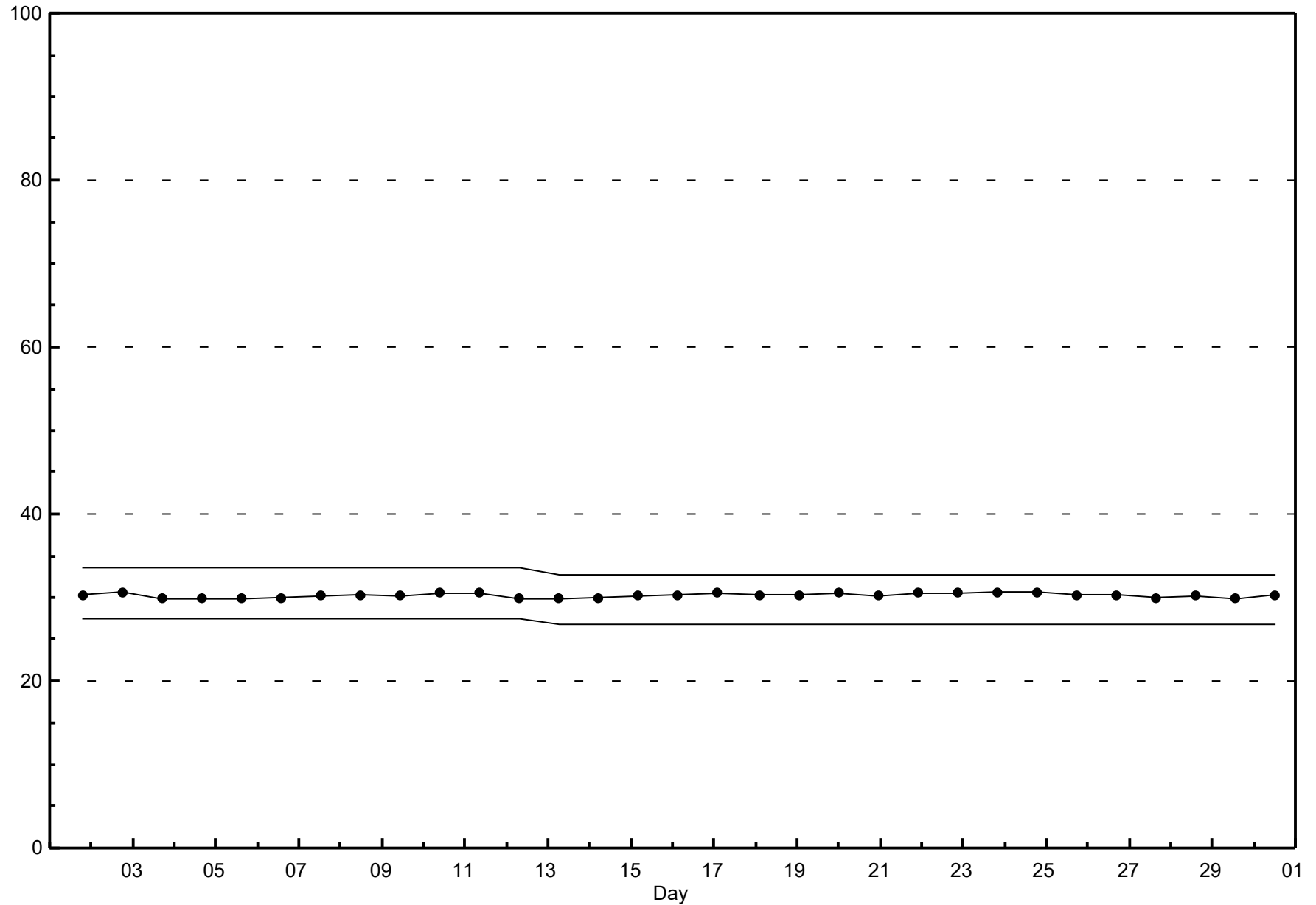
Total Reduced Sulphur (TRS) - ppb

Henry Pirker - September 2018



Span Responses

Total Reduced Sulphur (TRS)
Henry Pirker - September 2018



Hourly Averages

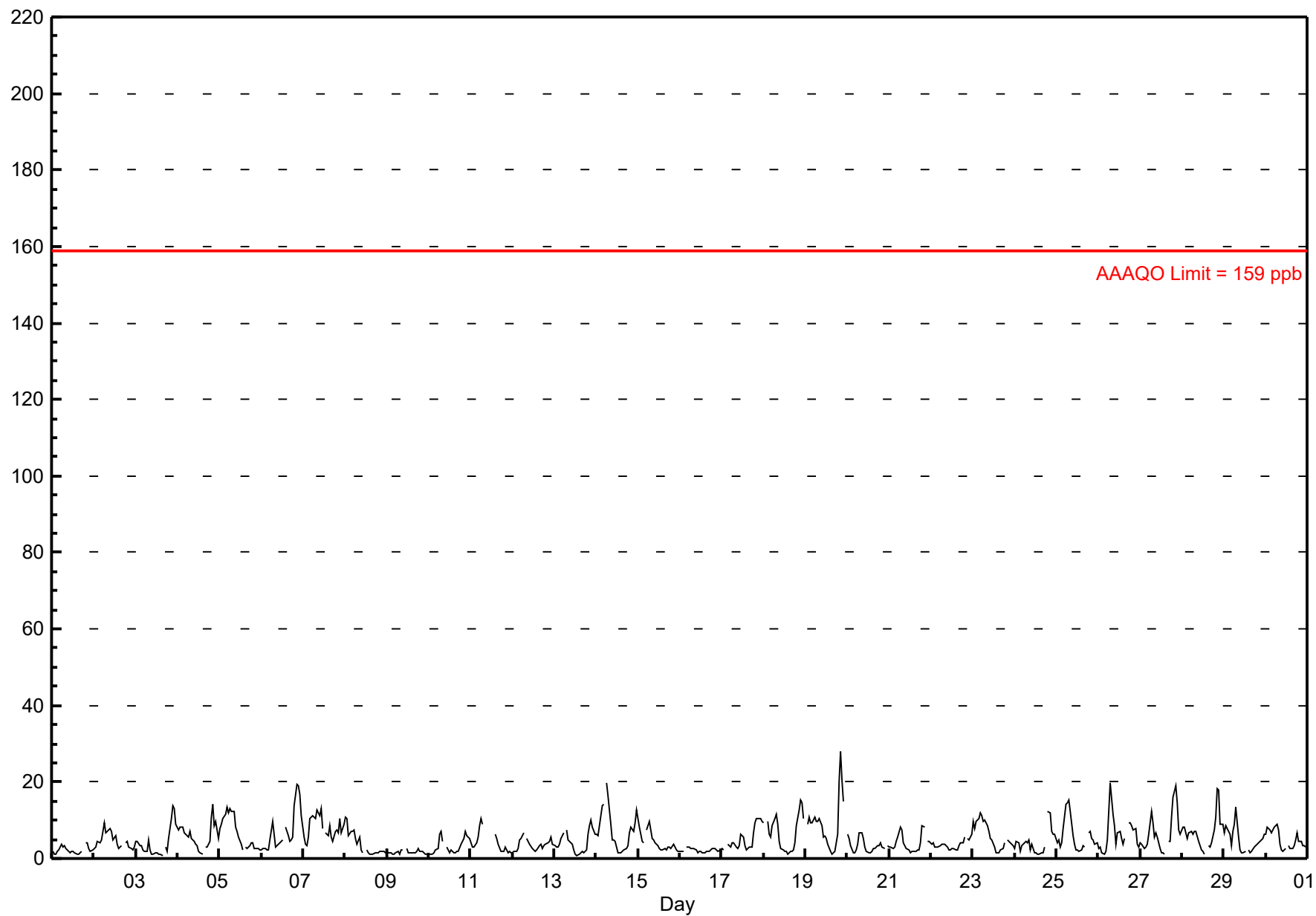
Nitrogen Dioxide (NO₂) - ppb

Henry Pirker - September 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 28.0 ppb on Sep 19 21:00 Maximum Daily Average: 9.3 ppb on Sep 19																				Hours in Service: 720 Hours of Data: 685 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0						
Minimum Value: 1 ppb on Sep 13 14:00 Minimum Daily Average: 1.6 ppb on Sep 9 Maximum Diurnal Average: 8.2 ppb at hour 21 Minimum Diurnal Average: 2.2 ppb at hour 14 Monthly Average: 5.04 ppb Percentiles: P ₁ = 1.1 P ₁₀ = 1.6 Q ₁ = 2.3 Median = 3.8 Q ₃ = 6.8 P ₉₀ = 10.3 P ₉₉ = 18.9																										
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-Sep	2	1	1	2	2	4	3	3	3	2	2	2	2	2	1	1	1	2	A	4	4	3	2	2	2.2	4.1
2-Sep	3	3	4	4	5	7	9	7	7	8	7	5	6	4	3	3	3	A	4	4	3	3	2	3	4.6	9.3
3-Sep	4	5	3	3	2	2	2	5	2	1	1	1	1	1	1	1	A	3	2	5	11	14	13	9	4.1	13.9
4-Sep	7	8	8	8	7	6	6	7	5	5	4	3	2	1	1	A	3	3	4	11	14	8	10	5	6.0	14.1
5-Sep	8	9	10	12	13	12	13	12	12	8	7	5	4	2	A	3	3	3	4	4	3	3	2	2	6.8	13.4
6-Sep	2	2	3	2	2	5	10	6	3	3	4	4	5	A	8	6	5	5	5	14	19	19	17	11	7.0	19.4
7-Sep	6	4	3	6	10	11	11	10	13	11	13	8	A	7	6	9	6	4	7	7	7	11	7	9	8.0	13.1
8-Sep	11	10	6	7	7	8	5	4	5	2	2	A	3	2	1	1	1	1	1	2	2	2	2	1	3.7	10.8
9-Sep	2	1	2	1	1	1	2	1	2	2	A	3	2	2	2	1	1	2	2	2	2	1	1	1	1.6	2.5
10-Sep	1	1	1	1	2	2	6	7	4	A	3	2	2	2	2	2	2	2	4	4	5	7	6	5	3.2	7.1
11-Sep	4	3	3	4	6	8	11	9	A	9	C	C	C	C	6	5	4	2	2	2	3	2	2	1	4.5	10.5
12-Sep	1	2	2	3	5	5	7	A	5	4	4	3	2	2	2	3	4	3	3	4	4	5	6	4	3.6	6.7
13-Sep	3	3	3	4	5	7	A	7	5	4	4	2	1	1	1	2	2	1	2	6	8	10	8	6	4.2	10.0
14-Sep	6	6	8	14	14	A	20	17	9	5	5	5	2	1	1	2	2	3	3	7	8	7	9	13	7.2	19.6
15-Sep	10	8	5	4	A	8	10	7	5	5	4	3	3	2	2	3	2	3	3	3	4	3	2	2	4.4	10.3
16-Sep	2	2	2	A	3	3	3	3	3	2	2	2	2	2	2	2	2	2	3	3	3	2	2	2	2.2	3.1
17-Sep	3	2	A	4	3	3	4	4	3	3	3	6	6	3	2	2	3	3	7	9	11	10	11	10	5.0	10.6
18-Sep	9	A	10	6	5	9	11	11	9	4	3	2	2	2	1	2	2	2	4	9	13	15	15	10	6.8	15.4
19-Sep	A	9	11	9	9	11	10	10	11	8	6	6	5	4	2	1	1	2	6	20	28	20	15	A	9.3	28.0
20-Sep	6	5	3	2	1	2	4	7	7	5	3	2	1	1	2	2	2	3	3	4	3	3	A	3	3.3	6.8
21-Sep	3	3	3	3	4	6	8	8	4	3	3	2	2	2	2	2	2	2	4	9	8	A	4	4	4.0	8.6
22-Sep	4	4	3	3	3	3	4	4	4	3	2	2	3	2	2	2	3	4	4	5	A	5	5	6	3.5	6.3
23-Sep	10	8	10	11	12	11	10	10	8	7	5	5	3	2	2	1	2	3	4	A	5	4	4	3	6.0	11.9
24-Sep	3	5	4	2	3	4	5	4	5	2	4	2	1	1	1	1	2	3	A	12	12	7	6	6	4.1	12.1
25-Sep	4	5	3	4	8	14	15	15	12	6	4	2	2	2	2	3	3	A	7	7	5	5	4	4	5.9	15.4
26-Sep	3	3	2	1	2	5	12	20	12	9	4	7	7	5	4	5	A	9	9	9	7	8	4	3	6.5	19.8
27-Sep	4	4	3	3	4	6	12	10	6	7	6	2	2	1	1	A	5	5	11	16	19	15	7	6	6.6	18.9
28-Sep	8	8	7	5	7	7	6	7	7	4	3	2	2	1	A	3	3	4	8	11	18	18	9	9	6.9	18.1
29-Sep	7	8	8	6	3	7	9	13	6	2	1	1	2	A	2	2	2	3	3	4	4	5	5	6	4.8	13.5
30-Sep	6	8	8	7	7	8	9	7	4	2	2	2	A	3	3	3	3	5	7	4	5	3	3	3	4.9	9.0
4.9 4.8 4.8 4.8 5.4 6.4 8.1 8.1 6.2 4.8 3.9 3.3 2.7 2.2 2.3 2.7 2.7 3.1 4.6 6.9 8.2 7.5 6.3 5.3 Diurnal Average																										
10.8 10.4 10.7 13.8 14.0 14.3 19.6 19.8 12.7 11.4 13.1 8.0 7.0 6.8 8.0 8.6 5.7 9.2 10.8 20.2 28.0 20.3 16.9 12.7 Diurnal Maximum																										
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb																										

Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Henry Pirker - September 2018



Hourly Maximums

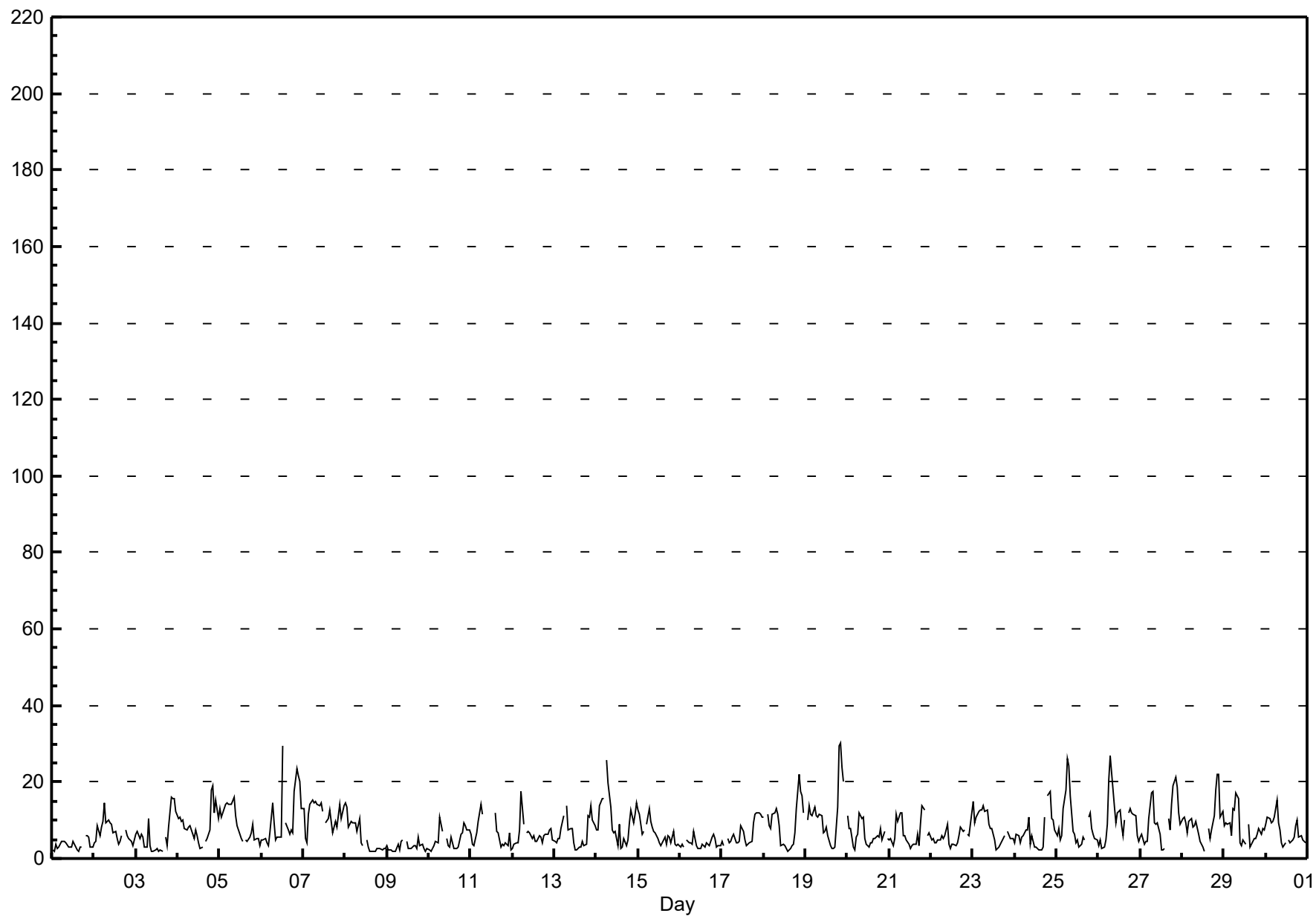
Nitrogen Dioxide (NO₂) - ppb

Henry Pirker - September 2018

Maximum Value: 30.3 ppb on Sep 19 21:00																				Maximum Daily Average: 11.9 ppb on Sep 19					Hours in Service: 720	
Minimum Value: 2 ppb on Sep 8 16:00																				Minimum Daily Average: 3.1 ppb on Sep 9					Hours of Data: 685	
Maximum Diurnal Average: 11.7 ppb at hour 7																				Minimum Diurnal Average: 4.1 ppb at hour 14					Hours of Missing Data: 35	
Monthly Average: 7.50 ppb																				Percentiles: P ₁ = 1.9 P ₁₀ = 2.8 Q ₁ = 3.9 Median = 6.1 Q ₃ = 10.2 P ₉₀ = 13.8 P ₉₉ = 24.0					Hours of Calibration: 35	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	2	2	4	2	3	4	4	4	4	3	3	3	5	4	2	2	3	3	A	6	6	6	3	3	3.6	6.1
2-Sep	4	5	9	6	8	10	15	9	10	9	9	7	7	5	4	4	6	A	7	6	5	5	3	5	6.9	14.6
3-Sep	6	7	5	6	6	3	3	10	4	2	2	2	3	2	2	2	A	5	3	8	16	16	15	12	6.2	15.9
4-Sep	10	11	10	10	8	7	8	8	7	5	7	6	4	3	3	A	5	5	7	18	19	12	15	10	8.7	19.1
5-Sep	13	11	12	14	15	14	14	14	16	11	9	7	5	4	A	5	4	5	7	9	5	5	5	3	9.1	16.1
6-Sep	5	5	5	4	3	7	14	9	5	5	5	5	30	A	9	7	6	8	7	18	23	22	20	13	10.3	29.5
7-Sep	13	5	4	12	14	15	14	15	14	14	15	12	A	9	10	13	10	7	10	8	11	14	11	14	11.5	15.2
8-Sep	15	14	8	10	9	9	9	7	10	4	3	A	5	3	2	2	2	2	3	2	3	2	3	2	5.6	14.7
9-Sep	3	2	2	2	2	2	4	2	4	5	A	5	3	3	3	3	3	3	6	3	4	2	2	2	3.1	5.7
10-Sep	2	2	3	3	4	4	11	9	7	A	5	3	3	6	3	3	3	3	6	7	9	9	7	8	5.2	10.8
11-Sep	6	4	4	7	10	12	14	12	A	14	C	C	C	C	12	7	7	3	4	3	4	3	7	2	7.1	14.5
12-Sep	3	4	4	4	7	18	9	A	7	7	7	5	6	4	4	6	6	4	6	6	6	7	8	5	6.2	17.6
13-Sep	4	4	5	5	8	11	A	14	8	8	8	4	2	2	3	3	5	3	4	11	11	14	10	8	6.7	13.8
14-Sep	8	7	14	16	16	A	26	20	13	8	7	7	3	9	2	3	5	3	5	9	13	9	12	14	10.0	25.6
15-Sep	13	12	6	7	A	9	13	10	8	7	7	5	4	3	4	5	4	6	5	4	7	4	3	4	6.6	13.0
16-Sep	3	4	3	A	5	4	4	4	7	3	2	3	3	4	3	4	4	3	6	6	5	3	3	3	3.9	6.9
17-Sep	4	3	A	5	4	4	6	6	4	4	4	9	7	5	4	4	4	4	9	11	12	12	12	11	6.5	12.0
18-Sep	11	A	12	8	8	11	12	13	12	8	3	4	3	3	2	3	3	4	7	13	22	17	16	12	9.0	22.0
19-Sep	A	10	14	11	11	13	11	11	12	11	7	7	8	6	3	2	3	3	13	29	30	24	20	A	11.9	30.3
20-Sep	11	8	8	3	2	6	6	12	11	11	5	4	3	4	4	5	5	6	6	8	5	7	A	5	6.3	11.9
21-Sep	5	5	4	5	11	10	12	12	6	6	5	4	2	3	4	4	6	3	9	14	13	A	6	7	6.7	14.0
22-Sep	5	5	4	4	5	5	6	5	6	9	4	3	4	4	3	4	6	8	7	8	A	6	6	12	5.6	12.0
23-Sep	15	9	11	12	13	13	14	12	13	9	8	8	5	2	3	3	4	5	6	A	7	5	5	5	8.1	15.1
24-Sep	4	6	6	4	6	6	8	7	11	4	6	3	3	3	2	2	3	11	A	17	18	10	10	8	6.8	17.5
25-Sep	6	8	5	6	13	18	26	24	16	7	6	4	5	3	4	5	5	A	11	12	8	6	5	5	9.1	25.9
26-Sep	3	5	3	3	5	9	21	27	18	13	9	12	13	9	6	10	A	12	13	12	11	11	6	5	10.2	26.7
27-Sep	5	6	4	5	5	11	17	17	9	9	9	6	2	2	3	A	10	7	14	19	21	19	12	9	9.7	21.1
28-Sep	10	11	9	7	10	10	8	9	10	6	4	4	3	2	A	8	5	7	11	18	22	22	11	12	9.6	22.2
29-Sep	8	9	9	9	6	13	13	17	16	4	4	5	4	A	9	3	4	5	5	6	8	6	8	8	7.8	17.3
30-Sep	9	11	10	9	10	11	15	9	7	4	3	4	A	5	4	5	6	9	10	6	6	5	4	4	7.2	15.2
7.2 6.7 6.7 6.9 7.8 9.3 11.7 11.4 9.5 7.3 6.0 5.4 5.3 4.1 4.2 4.6 4.9 5.3 7.4 10.3 11.4 9.9 8.6 7.3																									Diurnal Average	
15.1 13.6 13.9 15.7 15.7 18.0 25.9 26.7 17.9 14.5 14.7 12.4 29.5 9.3 12.0 12.9 10.5 11.8 14.2 29.5 30.3 23.9 20.2 14.4																									Diurnal Maximum	
C - Calibration																									A - Automated Daily Zero Span	

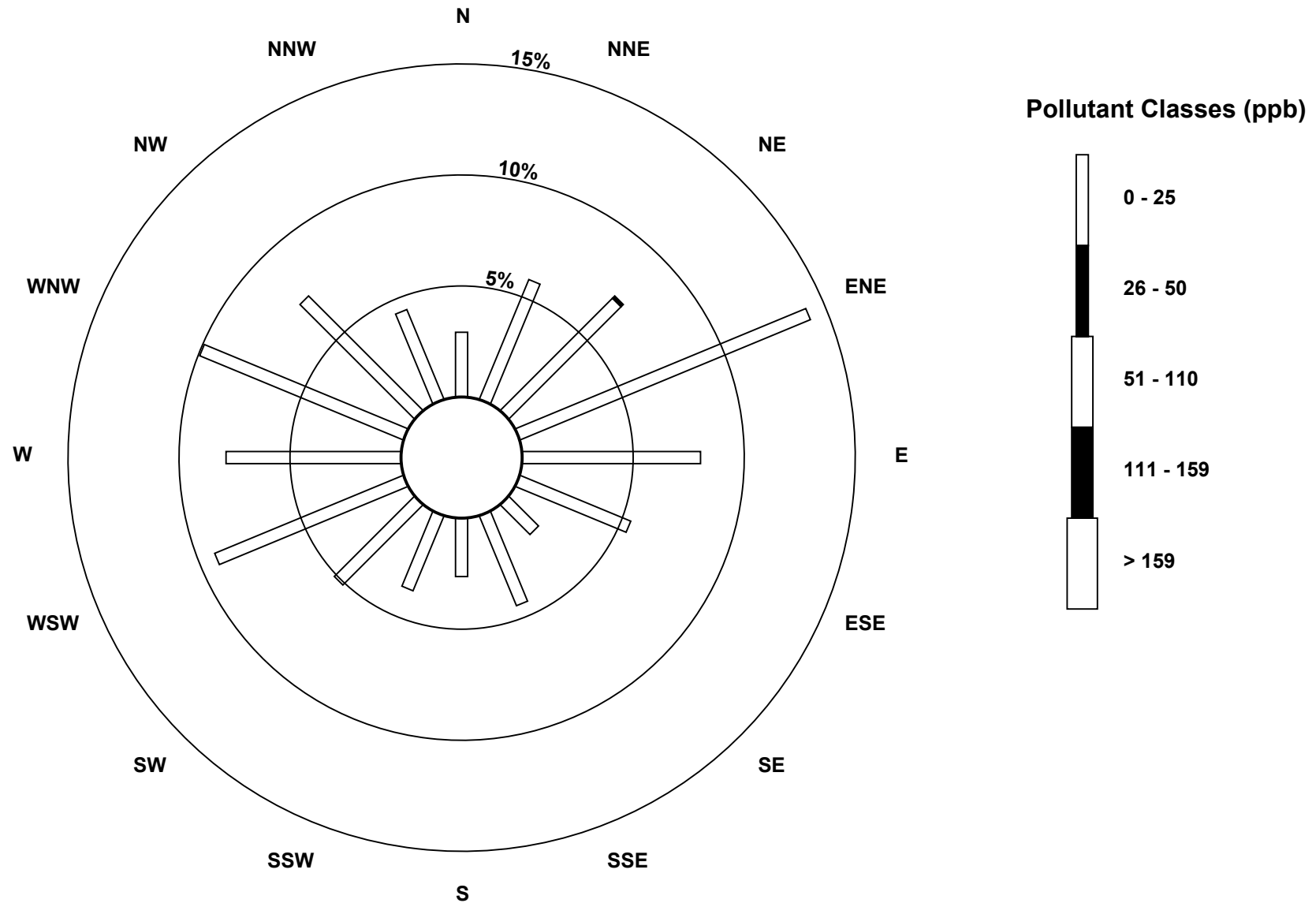
Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb
Henry Pirker - September 2018



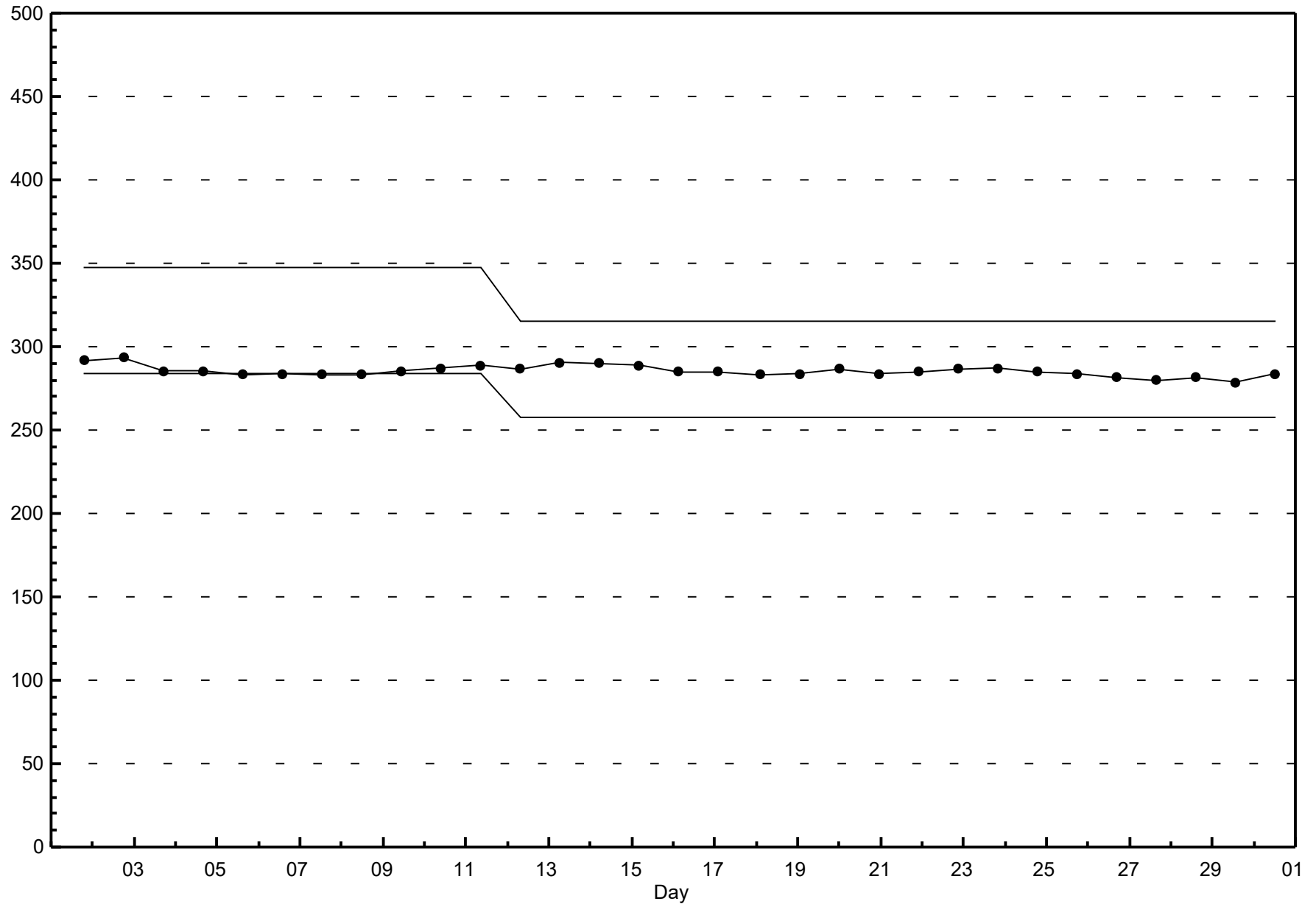
Pollutant Rose

Nitrogen Dioxide (NO₂) - ppb
Henry Pirker - September 2018



Span Responses

Nitrogen Dioxide (NO₂)
Henry Pirker - September 2018



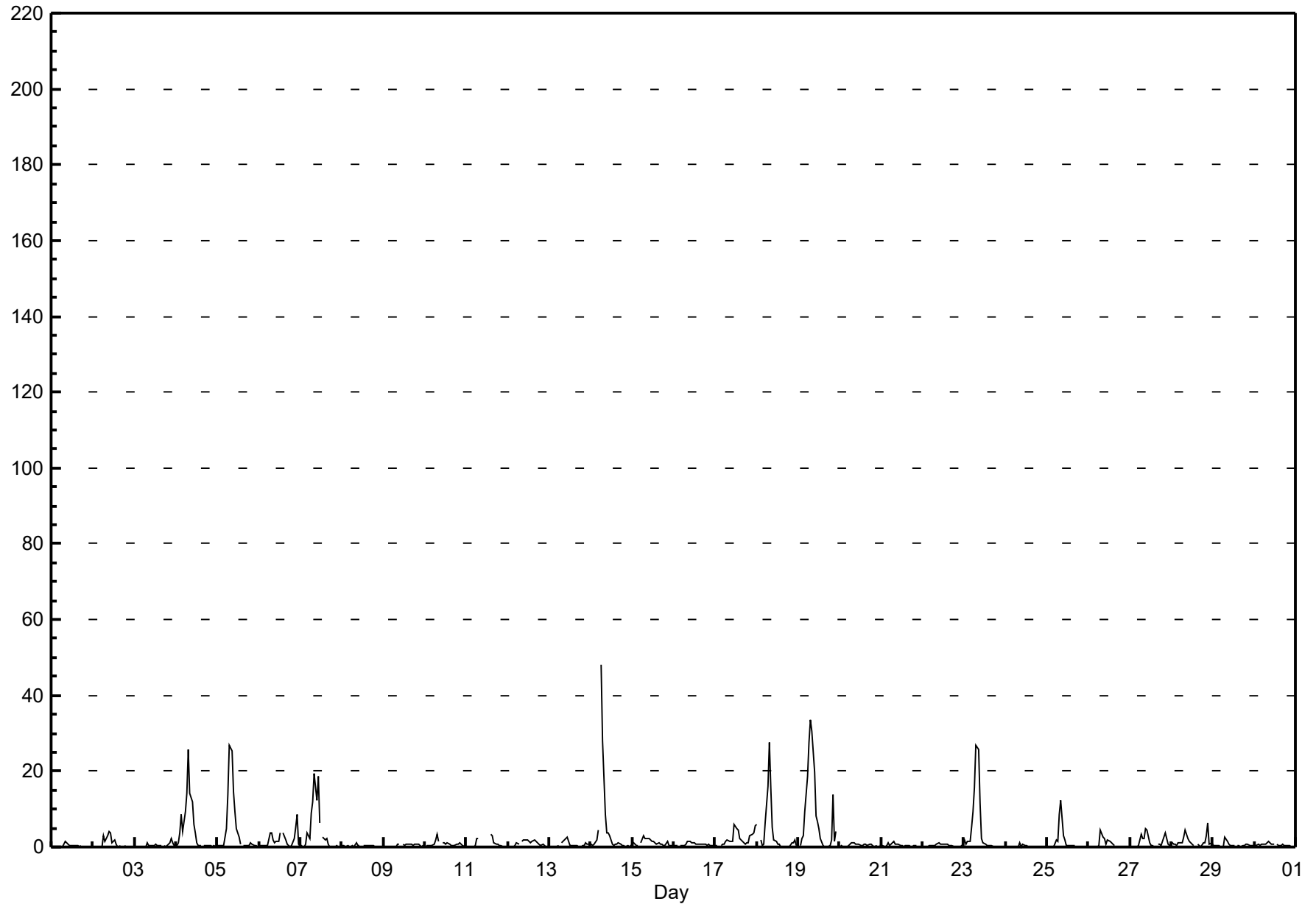
Hourly Averages

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

Maximum Value: 48.1 ppb on Sep 14 07:00																				Maximum Daily Average: 8.6 ppb on Sep 19					Hours in Service: 720	
Minimum Value: 0 ppb on Sep 24 04:00																				Minimum Daily Average: 0.2 ppb on Sep 24					Hours of Data: 685	
Maximum Diurnal Average: 7.8 ppb at hour 8																				Minimum Diurnal Average: 0.3 ppb at hour 2					Hours of Missing Data: 35	
Monthly Average: 1.81 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.2 Median = 0.5 Q ₃ = 1.3 P ₉₀ = 3.7 P ₉₉ = 26.8					Hours of Calibration: 35	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	1.4
2-Sep	0	0	0	0	0	0	3	2	3	4	4	1	2	1	0	0	0	A	0	0	0	0	0	0	0.9	4.0
3-Sep	0	0	0	0	0	0	0	1	1	0	0	1	1	0	1	0	A	0	0	0	1	2	1	0	0.5	2.2
4-Sep	0	1	4	8	4	9	14	26	14	12	6	4	1	0	0	A	0	1	0	0	0	0	0	0	4.6	25.6
5-Sep	0	0	0	1	2	5	14	27	25	15	9	5	3	1	A	0	0	0	1	1	1	1	0	0	4.8	26.8
6-Sep	0	0	0	0	0	0	4	4	2	1	1	1	4	A	4	2	1	0	0	0	2	5	9	1	1.8	8.6
7-Sep	0	0	0	1	4	2	9	12	20	12	19	6	A	2	2	2	1	0	0	0	0	0	0	0	4.0	19.5
8-Sep	0	0	0	0	0	0	0	0	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.3
9-Sep	0	0	0	0	0	0	0	0	1	1	A	1	0	1	1	1	1	0	1	1	1	0	0	0	0.4	0.9
10-Sep	0	0	0	0	0	1	2	3	2	A	1	1	1	1	1	0	0	0	1	1	1	1	0	0	0.8	3.4
11-Sep	0	0	0	0	0	0	2	2	A	6	C	C	C	C	3	3	1	1	1	0	0	0	0	0	1.1	5.7
12-Sep	0	0	0	0	0	1	1	A	1	2	2	2	2	1	1	2	2	1	1	0	1	0	0	0	0.9	2.0
13-Sep	0	0	0	0	0	0	A	1	1	2	3	1	0	0	0	0	0	0	0	0	0	1	1	1	0.6	2.7
14-Sep	1	0	1	2	5	A	48	28	8	4	4	3	1	0	1	1	1	1	0	0	0	0	0	1	4.8	48.1
15-Sep	1	1	1	0	A	1	3	2	2	2	2	2	1	1	1	1	1	1	1	0	2	0	0	0	1.1	2.8
16-Sep	0	0	0	A	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0.7	1.5
17-Sep	0	0	A	0	1	1	2	2	1	1	1	6	5	4	2	2	1	1	1	1	3	3	4	5	2.1	6.0
18-Sep	6	A	2	0	1	6	16	28	16	5	2	2	1	1	0	0	0	0	0	0	1	1	2	0	3.9	27.7
19-Sep	A	0	2	3	9	19	27	34	31	20	8	7	5	2	0	0	0	0	0	2	14	1	4	A	8.6	33.7
20-Sep	0	0	0	0	0	0	1	1	1	1	1	1	1	0	1	1	1	1	1	0	0	0	A	0	0.5	1.0
21-Sep	0	0	0	0	1	1	1	2	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0.5	1.6
22-Sep	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	A	0	0	1	0.4	1.1
23-Sep	2	1	1	2	5	9	16	27	26	12	2	1	1	0	0	0	0	0	0	A	0	0	0	0	4.6	26.9
24-Sep	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	1.1
25-Sep	0	0	0	0	0	2	2	9	12	3	2	1	0	0	0	0	0	A	0	0	0	0	0	0	1.4	12.3
26-Sep	0	0	0	0	0	0	0	4	3	2	1	2	1	1	1	1	A	0	0	0	0	0	0	0	0.7	4.4
27-Sep	0	0	0	0	0	0	3	2	2	5	5	1	0	0	0	A	1	1	0	1	4	2	1	0	1.3	5.0
28-Sep	1	1	1	0	1	1	1	3	4	2	2	1	1	0	A	1	0	0	1	1	3	6	1	1	1.5	6.4
29-Sep	0	0	0	0	0	0	0	3	1	1	0	0	0	A	0	0	0	1	0	1	1	0	0	0	0.5	2.6
30-Sep	0	0	1	0	1	1	1	1	2	1	1	1	A	1	1	1	1	0	0	0	0	0	0	0	0.5	1.5
0.5 0.3 0.5 0.7 1.2 2.1 5.9 7.8 6.4 4.1 2.8 1.9 1.2 0.8 0.8 0.7 0.5 0.4 0.4 0.5 1.3 0.9 0.9 0.4																								Diurnal Average		
6.0 1.1 3.6 8.4 9.5 18.7 48.1 33.7 30.7 19.9 18.6 6.6 4.9 4.4 3.7 3.0 1.6 0.9 1.0 2.0 13.7 6.4 8.6 5.5																								Diurnal Maximum		
C - Calibration																								A - Automated Daily Zero Span		

Hourly Averages

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



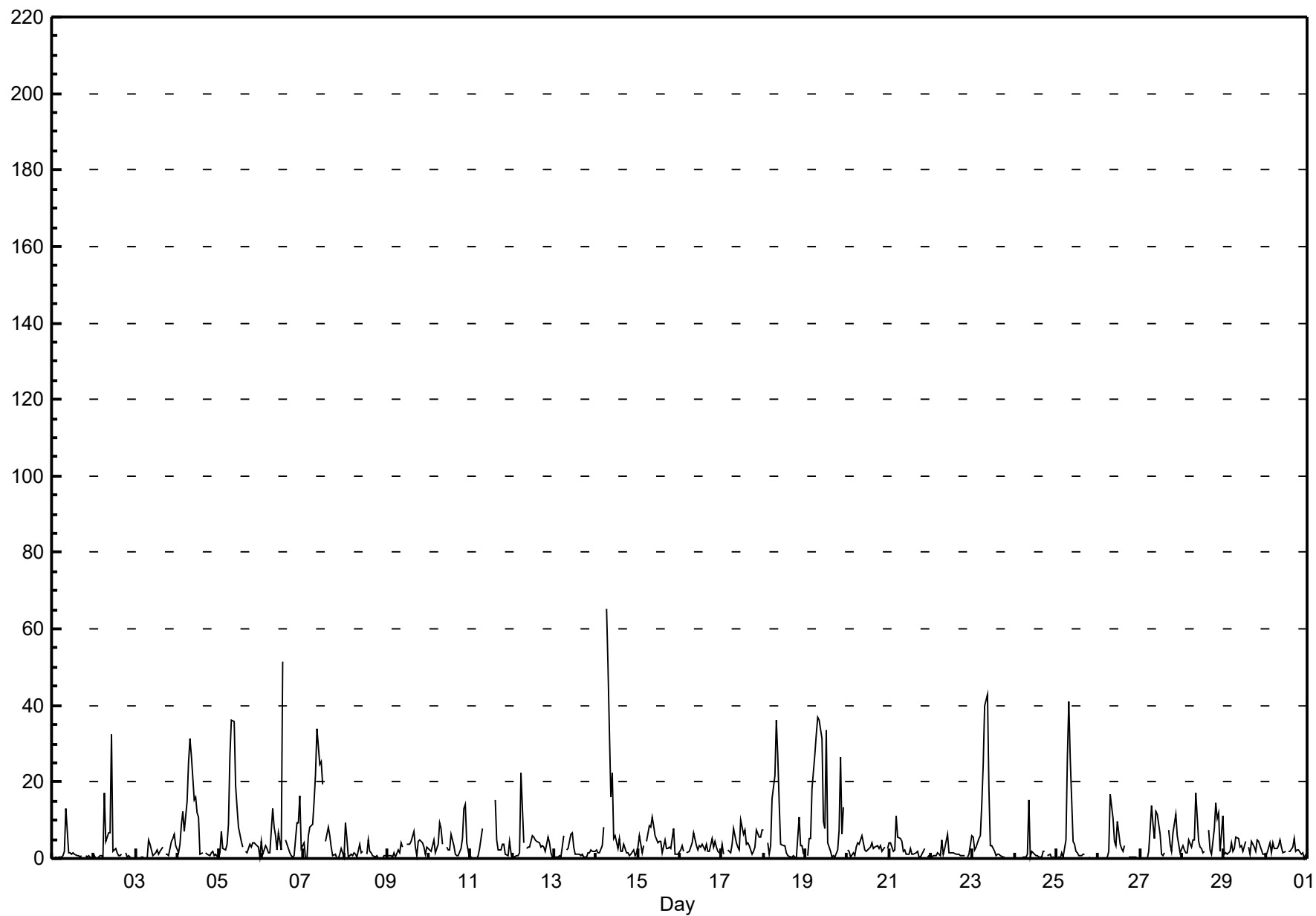
Hourly Maximums

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

Maximum Value: 65.4 ppb on Sep 14 07:00																				Maximum Daily Average: 14.0 ppb on Sep 19					Hours in Service: 720	
Minimum Value: 0 ppb on Sep 24 04:00																				Minimum Daily Average: 1.2 ppb on Sep 1					Hours of Data: 685	
Maximum Diurnal Average: 13.9 ppb at hour 8																				Minimum Diurnal Average: 1.5 ppb at hour 18					Hours of Missing Data: 35	
Monthly Average: 4.59 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.3 Q ₁ = 0.9 Median = 2.2 Q ₃ = 4.6 P ₉₀ = 10.9 P ₉₉ = 36.2					Hours of Calibration: 35	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	0	0	0	0	0	0	1	2	13	1	1	1	1	1	1	1	1	1	A	1	0	1	0	0	1.2	13.2
2-Sep	1	0	0	1	1	0	17	5	7	7	32	2	3	1	1	1	1	A	1	1	1	0	0	0	3.5	32.5
3-Sep	0	0	0	0	0	0	0	5	4	2	1	1	2	1	2	3	A	1	1	1	5	5	6	3	1.9	6.3
4-Sep	1	4	9	12	7	15	25	31	27	15	16	12	11	1	1	A	1	1	1	2	2	1	1	0	8.6	31.3
5-Sep	1	7	3	2	4	9	27	36	36	19	13	8	4	3	A	2	1	4	3	4	4	3	3	0	8.6	36.0
6-Sep	5	1	3	3	2	1	13	8	6	2	7	2	52	A	5	3	1	1	0	1	9	9	17	3	6.7	51.6
7-Sep	4	0	0	6	8	9	15	22	34	24	25	19	A	5	8	6	3	1	1	0	0	1	3	0	8.5	33.9
8-Sep	9	5	0	1	1	1	1	0	4	2	2	A	1	5	2	2	1	1	1	0	0	0	1	1	1.7	9.3
9-Sep	1	1	1	0	1	0	2	2	4	3	A	4	4	4	4	7	3	1	4	5	4	3	1	3	2.7	7.1
10-Sep	2	2	3	5	2	4	9	8	4	A	3	2	2	6	3	1	1	1	2	5	13	14	4	0	4.2	14.2
11-Sep	0	0	0	0	1	3	5	8	A	18	C	C	C	C	15	5	2	2	4	4	1	1	4	2	4.0	18.3
12-Sep	0	1	1	1	2	22	4	A	3	3	3	6	6	5	5	4	3	3	3	2	6	4	2	0	3.8	22.3
13-Sep	0	0	1	1	0	6	A	2	2	6	7	3	1	1	1	1	1	0	0	1	1	2	2	2	1.9	6.6
14-Sep	2	1	1	3	8	A	65	50	16	22	5	6	3	5	2	2	4	1	1	1	1	2	1	1	9.0	65.4
15-Sep	3	6	2	3	A	5	9	8	11	9	6	4	5	4	2	5	2	2	3	3	8	1	1	1	4.4	10.9
16-Sep	2	3	2	A	1	2	3	4	7	3	2	4	3	4	2	4	2	2	5	3	5	3	2	1	3.0	6.6
17-Sep	4	1	A	2	2	2	4	8	4	3	2	10	6	7	4	4	3	1	2	3	7	6	6	8	4.3	10.0
18-Sep	7	A	4	1	3	16	22	36	27	14	4	3	3	2	1	1	0	1	0	0	11	4	3	1	7.1	36.1
19-Sep	A	1	5	5	18	27	33	37	36	31	10	8	34	4	2	0	1	0	2	7	27	6	13	A	14.0	37.0
20-Sep	2	2	0	2	1	3	4	4	6	4	2	2	2	3	4	3	3	3	3	3	2	3	A	3	2.8	5.8
21-Sep	4	4	2	2	11	6	5	5	2	2	1	1	3	1	1	2	2	0	0	1	3	A	1	1	2.6	11.1
22-Sep	1	1	1	1	1	1	5	1	3	6	1	2	2	1	1	1	1	1	1	1	A	0	1	6	1.7	6.3
23-Sep	6	2	3	5	6	14	25	40	43	18	3	3	2	1	1	1	1	0	0	A	0	0	0	0	7.6	42.7
24-Sep	0	0	0	0	0	0	1	1	15	0	2	1	1	1	0	0	2	2	A	1	1	0	0	0	1.2	15.4
25-Sep	0	0	0	2	1	5	27	41	26	4	4	2	2	1	1	1	1	A	0	0	0	0	0	0	5.1	40.9
26-Sep	0	0	0	0	0	0	2	17	10	4	3	10	4	3	2	3	A	0	0	0	0	0	0	0	2.6	16.9
27-Sep	0	0	0	0	0	2	14	9	5	12	12	6	1	1	2	A	7	4	2	7	11	6	4	1	4.6	13.7
28-Sep	3	2	2	2	5	3	5	5	17	4	3	3	2	2	A	7	2	1	8	14	11	12	2	11	5.4	17.3
29-Sep	1	2	1	2	4	2	3	5	5	3	4	2	5	A	3	1	4	3	2	5	4	2	1	1	2.8	5.5
30-Sep	1	2	4	1	4	3	3	3	5	3	2	2	A	2	2	3	5	2	2	2	1	2	0	1	2.3	5.3
2.1 1.7 1.7 2.2 3.2 5.5 11.9 13.9 13.1 8.6 6.3 4.6 6.0 2.8 2.8 2.6 2.2 1.5 2.0 2.7 4.8 3.2 2.7 1.8																									Diurnal Average	
9.3 7.1 9.1 12.1 18.3 27.3 65.4 50.3 42.7 31.2 32.5 19.4 51.6 7.4 15.4 7.4 7.5 3.7 7.7 14.5 26.5 14.2 16.6 11.3																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

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

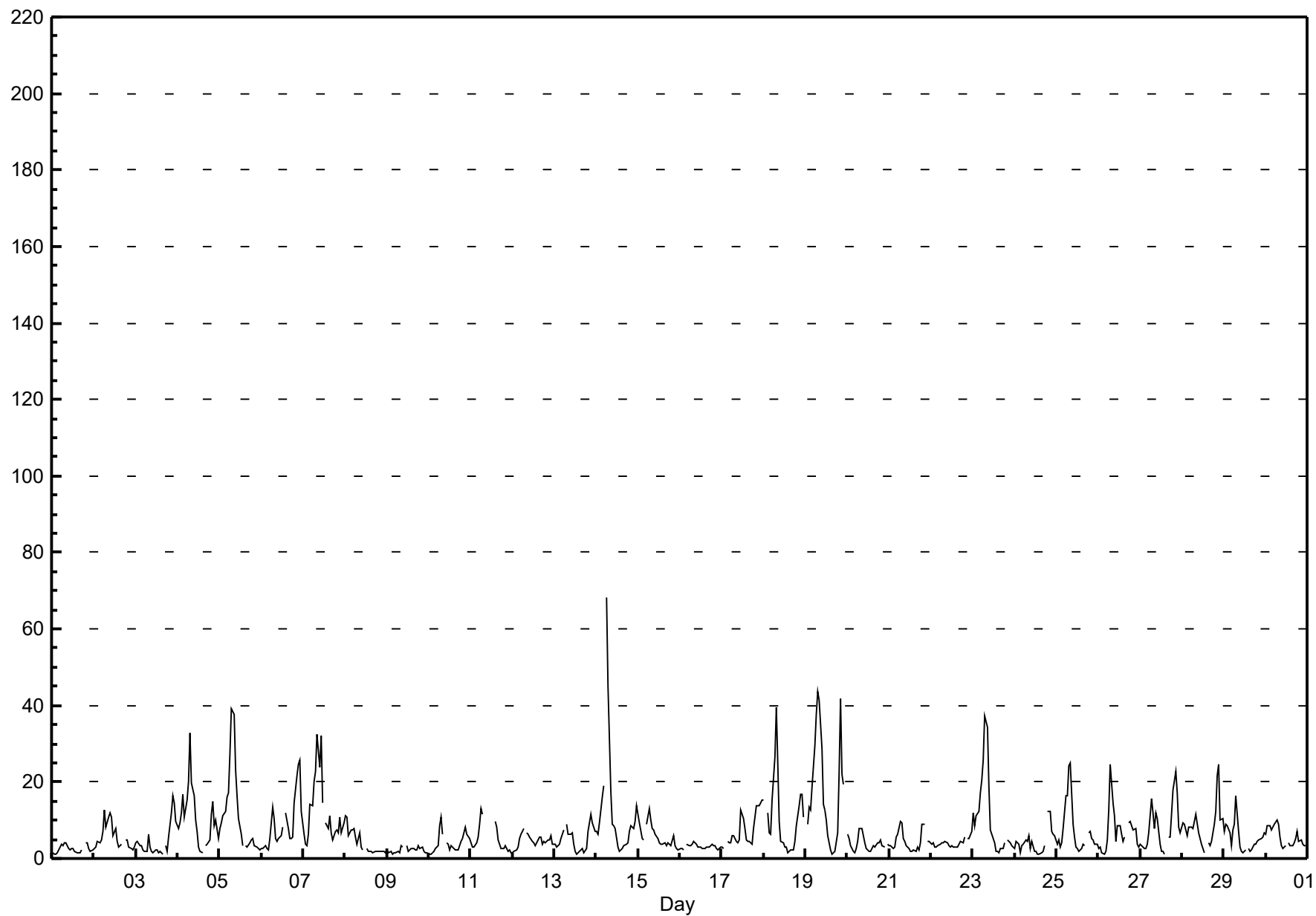


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Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

Henry Pirker - September 2018



Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

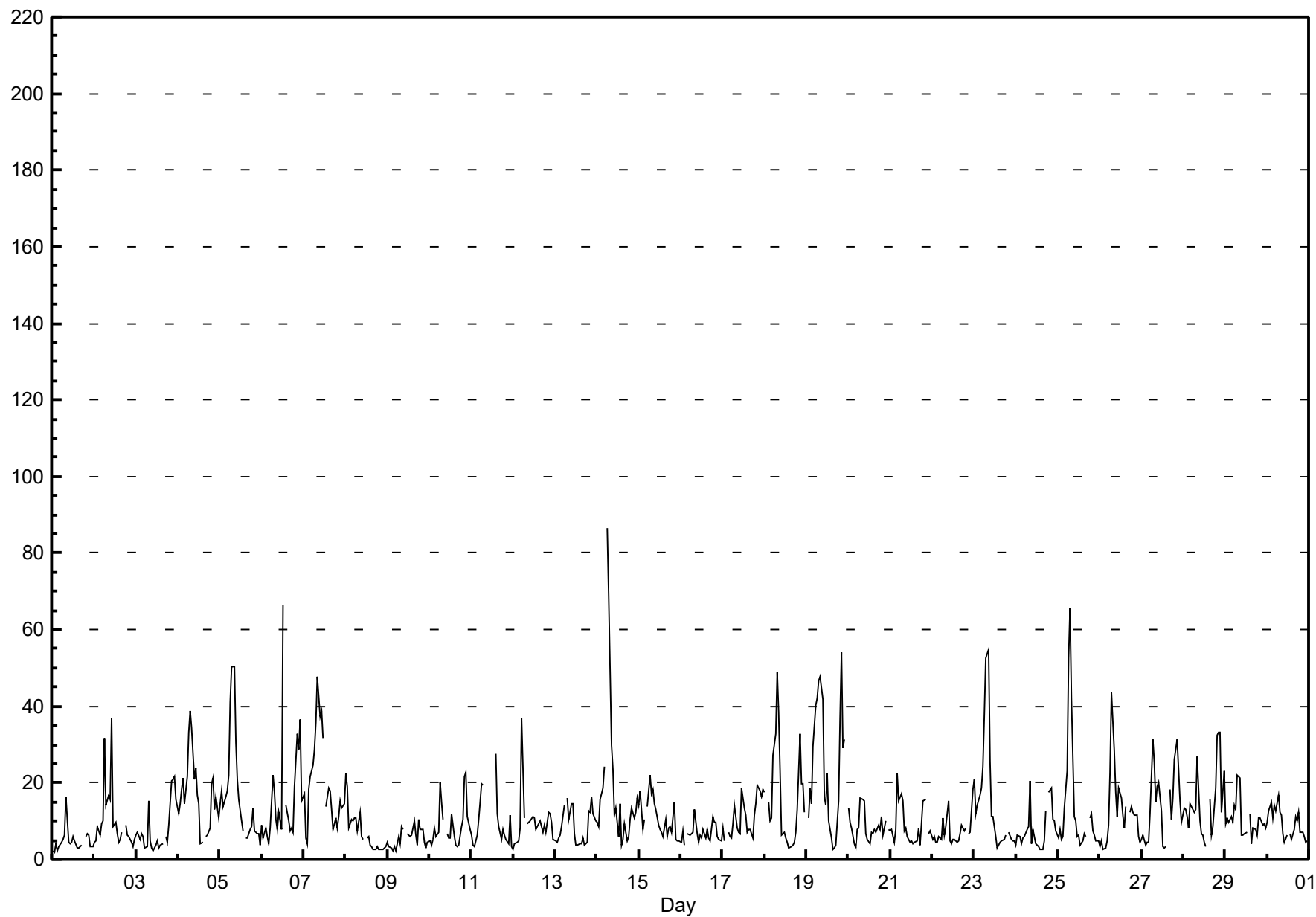
Henry Pirker - September 2018

Maximum Value: 86.6 ppb on Sep 14 07:00																				Maximum Daily Average: 24.4 ppb on Sep 19					Hours in Service: 720	
Minimum Value: 2 ppb on Sep 1 02:00																				Minimum Daily Average: 4.7 ppb on Sep 1					Hours of Data: 685	
Maximum Diurnal Average: 25.0 ppb at hour 8																				Minimum Diurnal Average: 6.7 ppb at hour 18					Hours of Missing Data: 35	
Monthly Average: 11.78 ppb																				Percentiles: P ₁ = 2.4 P ₁₀ = 3.9 Q ₁ = 5.4 Median = 8.2 Q ₃ = 14.4 P ₉₀ = 22.3 P ₉₉ = 52.5					Hours of Calibration: 35	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	2	2	4	2	3	5	5	6	16	4	4	4	6	5	3	3	3	4	A	6	7	6	3	3	4.7	16.4
2-Sep	4	5	9	6	9	10	32	14	17	16	37	9	10	7	4	5	7	A	9	6	6	5	3	5	10.2	37.0
3-Sep	6	7	5	7	6	3	3	15	5	3	2	4	5	3	4	4	A	6	4	9	20	21	22	16	7.9	21.7
4-Sep	12	15	18	21	14	22	33	39	34	21	24	17	14	4	4	A	6	6	8	20	21	13	16	11	17.1	38.8
5-Sep	14	18	14	17	18	22	41	50	50	30	21	16	10	7	A	5	5	8	9	13	7	7	7	4	17.1	50.5
6-Sep	9	6	8	6	4	8	22	18	10	8	12	8	67	A	14	10	8	8	7	19	33	29	37	15	15.9	66.5
7-Sep	17	6	4	18	22	24	29	36	48	37	39	32	A	14	19	18	13	8	11	8	11	15	13	14	19.8	47.9
8-Sep	22	19	8	10	10	11	11	7	12	6	5	A	6	6	4	3	3	3	3	3	3	2	3	3	7.1	22.3
9-Sep	4	3	3	2	3	2	6	4	8	8	A	7	6	6	6	10	6	4	10	8	8	5	3	5	5.6	10.4
10-Sep	5	4	5	8	6	7	20	15	11	A	7	6	6	12	6	4	3	4	8	11	22	23	11	8	9.1	22.8
11-Sep	6	4	4	7	10	15	20	19	A	32	C	C	C	C	28	12	8	5	8	6	5	4	12	3	10.9	31.6
12-Sep	3	4	4	5	8	37	11	A	9	10	10	11	11	8	9	10	9	7	9	7	12	12	10	5	9.6	36.9
13-Sep	5	4	6	6	9	14	A	16	10	14	15	7	4	4	4	4	6	4	4	13	12	16	12	10	8.7	16.3
14-Sep	10	9	16	19	24	A	87	69	30	24	12	13	6	14	4	5	9	5	6	10	14	11	12	16	18.4	86.6
15-Sep	14	18	8	11	A	14	22	17	18	14	13	9	8	7	6	11	6	8	9	7	15	5	5	5	10.8	21.9
16-Sep	5	7	4	A	7	6	7	7	13	7	5	6	6	8	5	8	6	5	11	10	10	6	5	5	6.8	13.1
17-Sep	8	5	A	7	6	6	9	14	8	7	7	19	13	11	7	8	8	6	11	15	19	18	16	18	10.7	19.4
18-Sep	18	A	15	10	11	27	33	49	38	23	7	7	5	4	3	3	4	5	7	13	33	20	20	12	15.9	48.8
19-Sep	A	11	19	15	30	40	42	47	48	42	16	14	22	10	5	3	3	4	15	37	54	29	31	A	24.4	54.0
20-Sep	14	10	8	4	3	8	8	16	16	15	7	5	4	7	7	8	7	9	8	11	6	10	A	8	8.6	16.1
21-Sep	8	8	4	8	22	15	17	15	8	8	6	5	5	4	4	5	8	4	9	15	15	A	7	7	9.1	22.2
22-Sep	5	6	5	4	6	5	11	6	9	15	5	4	5	5	4	5	7	9	7	8	A	7	7	18	7.2	18.3
23-Sep	21	12	14	17	19	24	38	52	55	26	11	11	6	3	4	4	5	5	6	A	7	5	5	5	15.5	54.8
24-Sep	4	6	6	4	6	6	8	8	21	4	8	4	4	3	3	3	5	13	A	17	18	10	10	7	7.8	20.6
25-Sep	6	8	5	6	13	23	53	66	42	11	10	6	6	4	5	7	6	A	11	12	8	6	5	5	14.0	65.6
26-Sep	3	5	2	3	5	9	23	44	28	17	11	19	16	12	8	14	A	12	14	12	12	12	6	5	12.6	43.7
27-Sep	5	6	4	4	5	12	31	25	15	19	20	13	3	3	3	A	18	10	16	26	31	24	15	10	13.9	31.3
28-Sep	13	13	11	8	15	13	12	13	27	10	7	6	4	3	A	16	6	8	19	33	33	33	12	23	14.8	33.2
29-Sep	9	11	10	11	10	14	13	22	21	6	6	7	7	A	12	4	8	8	6	11	11	9	9	8	10.2	21.9
30-Sep	10	13	15	11	14	13	17	12	12	7	4	6	A	7	5	8	11	10	12	7	7	6	5	5	9.4	16.7
9.1 8.3 8.2 8.8 11.0 14.4 22.9 25.0 22.1 15.3 11.8 9.8 9.8 6.7 6.8 7.1 7.0 6.7 9.3 12.9 15.9 12.7 11.1 9.0																									Diurnal Average	
22.3 19.0 18.6 21.1 29.5 40.4 86.6 69.1 54.8 41.7 38.6 31.9 66.5 14.4 27.6 18.1 18.2 12.7 18.8 36.9 54.0 33.2 36.6 23.3																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

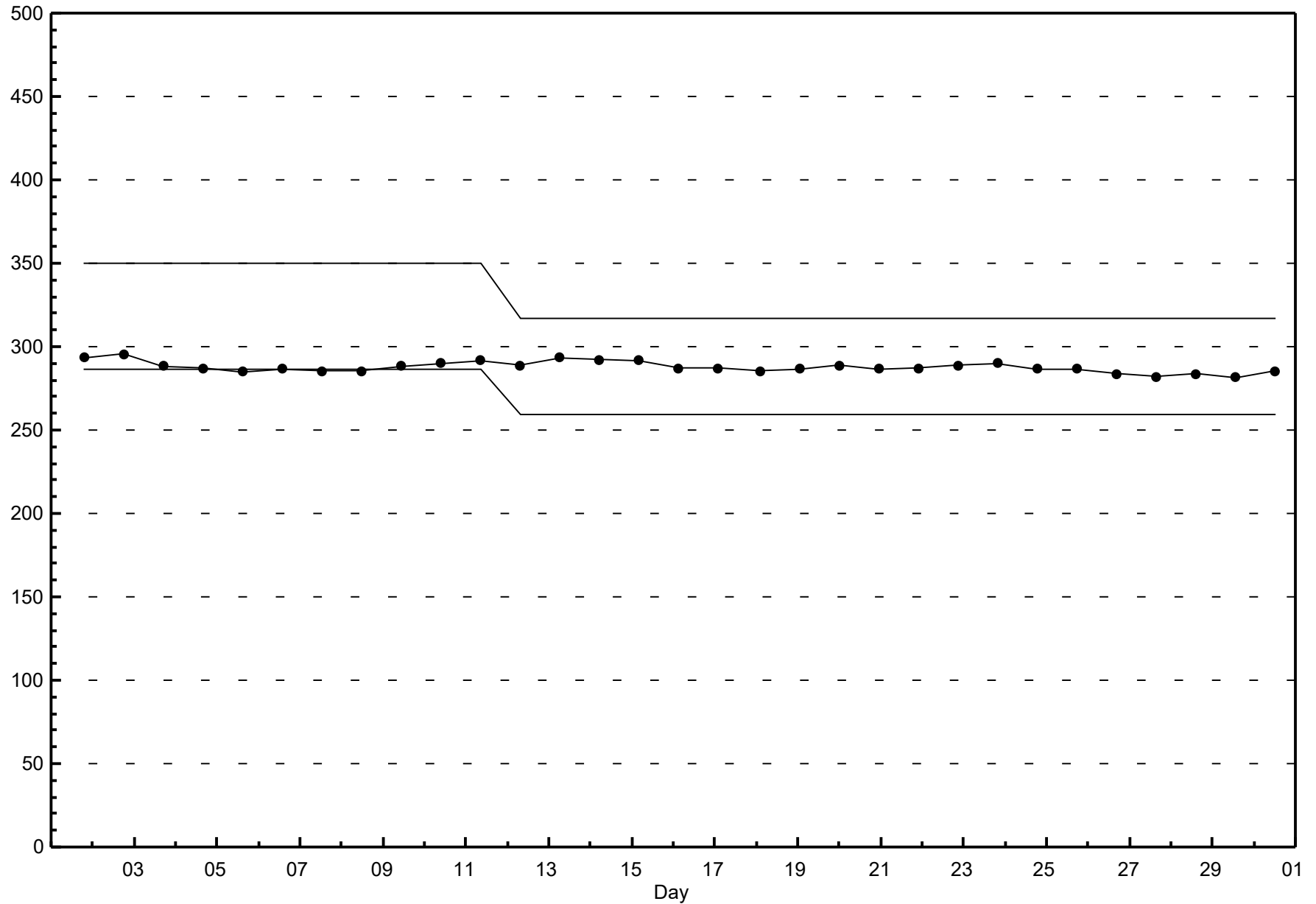
Oxides of Nitrogen (NO_x) - ppb

Henry Pirker - September 2018



Span Responses

Oxides of Nitrogen (NO_x)
Henry Pirker - September 2018



Hourly Averages

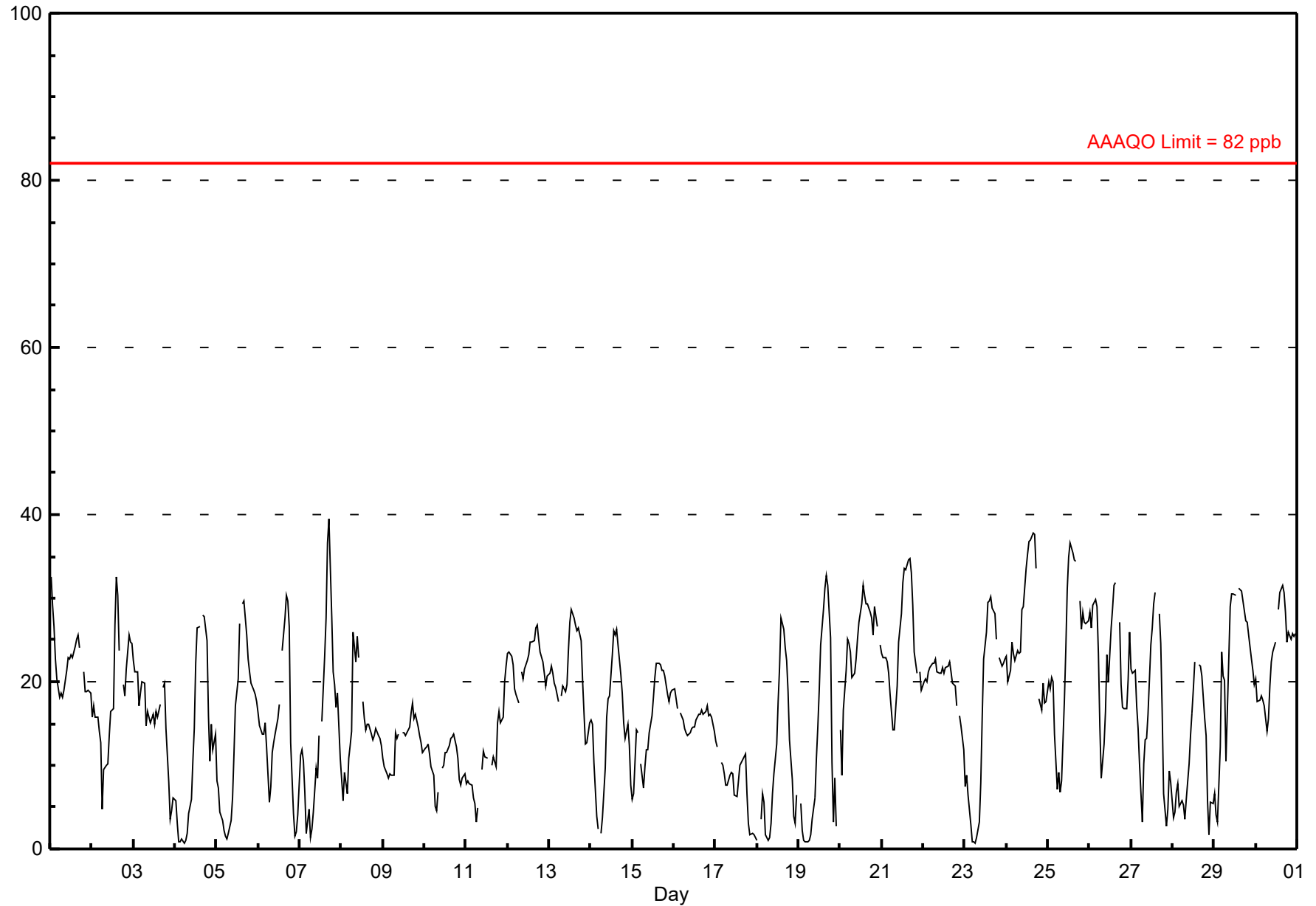
Ozone (O₃) - ppb

Henry Pirker - September 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 39.6 ppb on Sep 7 18:00 Maximum Daily Average: 26.3 ppb on Sep 24																				Hours in Service: 720 Hours of Data: 687 Hours of Missing Data: 33 Hours of Calibration: 33 Percent Operational Time: 100.0						
Minimum Value: 1 ppb on Sep 4 06:00 Maximum Diurnal Average: 25.4 ppb at hour 17 Monthly Average: 17.01 ppb										Minimum Daily Average: 7.7 ppb on Sep 17 Minimum Diurnal Average: 9.8 ppb at hour 7 Percentiles: P ₁ = 0.9 P ₁₀ = 4.7 Q ₁ = 10.4 Median = 17.1 Q ₃ = 23.1 P ₉₀ = 28.4 P ₉₉ = 35.6																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Sep	32	29	27	23	20	18	19	18	19	21	23	23	23	23	24	25	26	24	A	21	19	19	19	19	22.3	32.5
2-Sep	16	17	16	16	14	13	5	10	10	10	13	16	17	27	32	30	24	A	20	18	22	26	25	25	18.3	32.5
3-Sep	23	21	21	17	19	20	20	15	16	16	15	16	15	16	16	17	A	19	20	14	8	4	5	6	15.6	22.6
4-Sep	6	3	1	1	1	1	1	2	4	6	11	14	22	26	27	A	28	28	25	16	11	15	12	14	11.9	28.0
5-Sep	8	7	4	3	2	2	1	2	3	6	11	17	20	27	A	29	30	26	23	21	20	19	18	18	13.8	29.6
6-Sep	16	15	14	14	15	12	6	7	12	13	14	16	17	A	24	28	30	30	27	13	4	2	2	4	14.5	30.4
7-Sep	11	12	10	7	2	5	1	2	4	10	8	14	A	15	23	28	37	40	28	21	20	17	19	11	15.0	39.6
8-Sep	8	6	9	7	11	12	14	26	22	25	23	A	18	16	14	15	15	14	13	14	14	14	13	12	14.5	26.0
9-Sep	11	10	9	8	9	9	9	14	13	14	A	14	14	14	14	15	16	17	16	16	15	14	13	11	12.7	17.5
10-Sep	12	12	13	11	10	9	5	5	7	A	10	10	11	12	12	13	13	14	12	11	8	8	9	9	10.2	13.8
11-Sep	8	8	8	8	6	5	3	5	A	10	12	11	11	C	C	10	11	10	15	16	15	16	20	22	10.9	21.9
12-Sep	23	24	23	22	19	18	17	A	21	20	22	23	23	25	25	25	26	27	25	24	22	21	20	21	22.4	26.7
13-Sep	21	22	21	20	19	18	A	18	19	19	20	24	27	29	28	27	26	26	25	20	16	13	13	15	21.1	28.6
14-Sep	15	15	10	4	2	A	2	4	10	16	18	18	23	26	26	26	24	21	19	15	13	15	12	8	14.9	26.2
15-Sep	6	7	14	14	A	10	7	10	12	12	14	16	18	21	22	22	22	21	21	21	18	18	19	19	15.8	22.1
16-Sep	19	18	17	A	16	15	14	14	14	14	14	15	15	15	16	16	17	16	16	17	16	16	16	14	15.7	19.1
17-Sep	13	12	A	10	10	9	8	8	9	9	9	7	6	8	10	10	11	11	7	3	2	2	2	1	7.7	12.9
18-Sep	1	A	4	7	6	2	1	1	3	7	9	13	18	22	28	26	24	23	19	13	8	4	3	6	10.7	27.7
19-Sep	A	5	2	1	1	1	1	2	4	6	11	15	19	24	29	31	33	32	25	10	3	8	3	A	12.1	32.8
20-Sep	14	9	17	21	25	25	24	20	21	23	25	27	29	31	30	29	29	28	28	26	29	27	A	24	24.4	31.5
21-Sep	23	23	23	22	21	19	14	14	17	20	25	28	32	34	33	35	35	33	29	24	21	A	21	19	24.5	34.7
22-Sep	20	20	20	21	22	22	22	23	21	21	21	22	21	22	22	22	21	20	20	17	A	16	15	12	20.1	22.8
23-Sep	7	9	6	3	1	1	1	1	3	8	16	23	26	30	30	30	29	28	25	A	23	22	22	23	15.9	30.2
24-Sep	23	20	21	25	23	23	24	23	24	29	29	34	35	37	37	38	38	34	A	18	17	20	17	18	26.3	37.8
25-Sep	20	19	21	20	14	7	9	7	8	18	24	31	35	37	35	35	34	A	30	26	28	27	27	27	23.4	36.6
26-Sep	28	27	29	30	29	23	15	8	13	16	23	20	26	29	32	32	A	27	20	17	17	17	20	26	22.8	31.8
27-Sep	21	21	21	17	14	10	3	10	13	13	16	24	26	29	31	A	28	25	16	7	3	5	9	8	16.2	30.7
28-Sep	4	4	7	8	5	6	5	4	6	10	13	16	19	22	A	22	22	21	16	14	6	2	6	5	10.5	22.4
29-Sep	7	4	3	12	24	21	20	10	23	29	31	31	30	A	31	31	31	28	27	27	26	23	21	20	22.1	31.2
30-Sep	20	18	18	18	18	17	14	16	19	22	23	25	A	29	31	31	31	28	25	26	25	26	25	26	23.1	31.5
15.1 14.4 14.1 13.4 13.0 12.1 9.8 10.3 12.8 15.3 17.3 19.3 21.4 23.8 25.2 25.0 25.4 23.9 21.0 17.4 15.4 14.8 14.7 15.2																								Diurnal Average		
32.5 29.1 29.1 29.9 29.0 24.5 23.7 26.0 23.6 29.0 30.5 33.6 35.2 36.7 37.0 37.8 37.7 39.6 29.7 27.1 29.1 27.1 27.0 27.3																								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
Henry Pirker - September 2018



Hourly Maximums

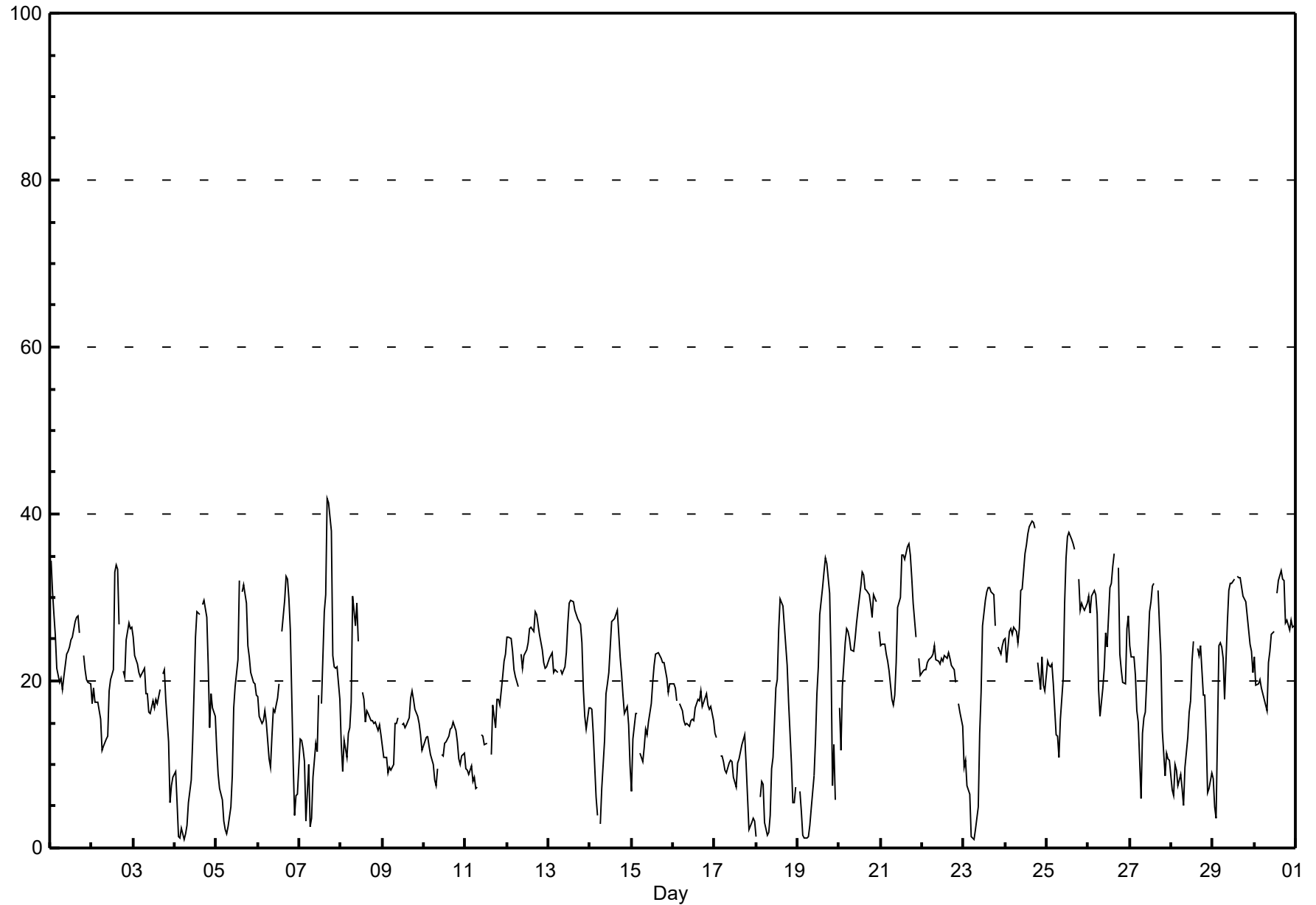
Ozone (O₃) - ppb

Henry Pirker - September 2018

Maximum Value: 41.8 ppb on Sep 7 17:00																								Hours in Service: 720		
Maximum Daily Average: 28.6 ppb on Sep 24																								Hours of Data: 687		
Minimum Value: 1 ppb on Sep 4 06:00																								Hours of Missing Data: 33		
Maximum Diurnal Average: 27.5 ppb at hour 17																								Hours of Calibration: 33		
Monthly Average: 19.26 ppb																								Percent Operational Time: 100.0		
Minimum Daily Average: 9.2 ppb on Sep 17																								Daily Average		
Minimum Diurnal Average: 12.1 ppb at hour 7																										
Percentiles: P ₁ = 1.3 P ₁₀ = 7.4 Q ₁ = 13.1 Median = 19.6 Q ₃ = 25.6 P ₉₀ = 30.6 P ₉₉ = 37.8																								Daily Maximum		
Day	Hourly Period Ending At (MST)																									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	34	31	28	25	22	20	20	19	20	23	24	24	25	25	27	28	28	26	A	23	21	20	20	20	24.0	34.5
2-Sep	17	19	17	18	16	15	12	12	13	13	19	20	21	33	34	33	27	A	21	20	25	27	26	26	21.2	33.9
3-Sep	25	23	22	21	20	21	21	18	18	16	16	18	17	18	17	19	A	21	21	18	13	5	7	8	17.7	25.3
4-Sep	9	5	1	1	2	1	2	3	5	8	13	19	25	28	28	A	29	30	28	22	14	19	17	16	14.2	29.7
5-Sep	12	9	7	6	3	2	2	3	5	9	17	19	23	32	A	31	31	29	24	23	21	20	20	18	15.9	32.1
6-Sep	18	16	15	15	16	15	11	10	13	17	16	18	20	A	26	30	33	32	30	26	10	4	6	6	17.5	32.6
7-Sep	13	13	12	10	3	10	3	4	8	12	12	18	A	17	28	30	42	41	38	23	22	22	22	18	18.3	41.8
8-Sep	12	9	13	11	14	14	17	30	27	29	25	A	19	18	15	16	16	15	15	15	15	14	15	14	16.9	30.2
9-Sep	12	11	11	9	10	9	10	15	15	16	A	15	15	14	15	16	18	19	18	17	16	15	14	12	13.9	18.8
10-Sep	13	13	13	12	11	10	8	7	10	A	11	11	13	13	13	14	14	15	14	13	11	10	11	11	11.8	15.0
11-Sep	10	9	9	10	8	9	7	7	A	14	13	12	13	C	C	11	17	14	18	18	17	20	22	23	13.4	23.3
12-Sep	25	25	25	24	21	20	19	A	23	22	23	24	25	26	26	26	28	28	27	26	24	22	21	22	24.0	28.4
13-Sep	23	23	23	21	21	21	A	21	21	22	23	27	29	30	30	29	28	27	27	25	19	16	14	17	23.3	29.7
14-Sep	17	17	14	6	4	A	3	7	13	18	20	21	27	27	27	28	28	23	21	18	16	17	15	10	17.3	28.5
15-Sep	7	13	16	16	A	11	10	12	14	14	15	17	20	22	23	23	23	23	22	22	20	19	20	20	17.5	23.3
16-Sep	20	19	18	A	17	16	15	15	15	15	15	15	15	17	18	18	19	17	18	18	17	17	17	15	16.8	19.7
17-Sep	14	13	A	11	11	10	9	9	10	10	10	8	7	10	11	12	12	14	10	6	2	3	4	3	9.2	13.7
18-Sep	1	A	6	8	8	3	2	2	4	9	11	19	20	26	30	29	27	24	22	18	10	5	6	7	12.9	29.9
19-Sep	A	7	4	2	1	1	1	3	5	9	13	18	22	28	31	33	35	34	30	23	7	12	6	A	14.8	34.7
20-Sep	17	12	19	25	26	26	25	24	24	25	27	29	31	33	33	31	31	30	29	28	30	29	A	26	26.5	33.0
21-Sep	24	24	24	23	22	21	18	17	18	22	29	30	35	35	35	36	37	35	32	29	25	A	23	21	26.8	36.5
22-Sep	21	21	21	22	23	23	23	24	23	22	22	23	22	23	23	23	23	22	21	20	A	17	16	15	21.5	24.2
23-Sep	10	10	7	6	1	1	1	2	5	14	19	27	30	31	31	31	31	30	27	A	24	23	24	25	17.8	31.3
24-Sep	25	22	26	26	26	26	26	25	26	31	31	35	36	38	39	39	39	38	A	22	19	23	20	19	28.6	39.2
25-Sep	22	22	22	22	20	14	13	11	15	20	29	35	37	38	37	36	36	A	32	28	29	29	29	29	26.3	37.8
26-Sep	30	28	30	31	30	28	19	16	19	22	26	24	31	32	34	35	A	34	23	21	20	20	26	28	26.4	35.3
27-Sep	24	23	23	21	16	15	6	14	16	16	20	28	29	31	32	A	31	27	23	14	9	11	11	10	19.6	31.7
28-Sep	7	6	10	9	7	9	7	5	10	13	16	18	22	25	A	24	23	24	18	13	7	7	9	13.4	24.7	
29-Sep	8	5	4	24	25	24	23	18	27	31	32	32	A	33	33	32	32	30	30	29	28	24	23	21	24.7	32.6
30-Sep	23	19	20	20	19	19	17	16	22	23	26	26	A	31	32	33	32	32	27	27	26	27	27	27	24.8	33.2
17.0 16.2 15.9 15.7 14.7 14.4 12.1 12.7 15.3 17.8 19.7 21.7 23.6 26.0 26.9 26.7 27.5 26.3 23.8 21.1 18.1 17.2 16.8 17.1																									Diurnal Average	
34.5 30.6 30.2 30.9 30.4 27.9 26.0 30.2 27.1 30.9 31.7 35.3 37.3 37.8 38.5 39.2 41.8 41.4 37.9 29.4 30.3 29.5 28.6 29.3																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

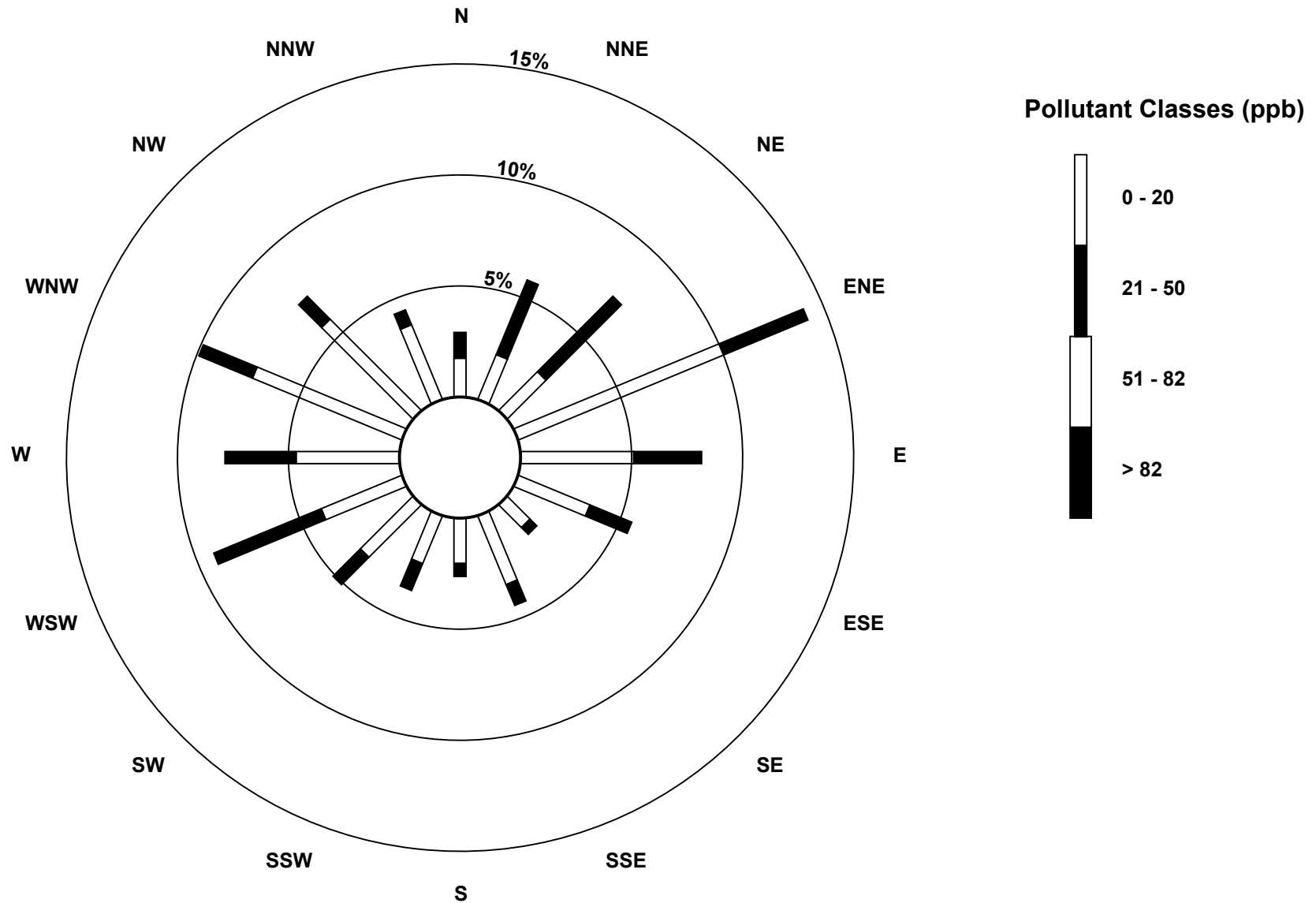
Ozone (O₃) - ppb
Henry Pirker - September 2018



Pollutant Rose

Ozone (O₃) - ppb

Henry Pirker - September 2018



Eight Hour Running Averages

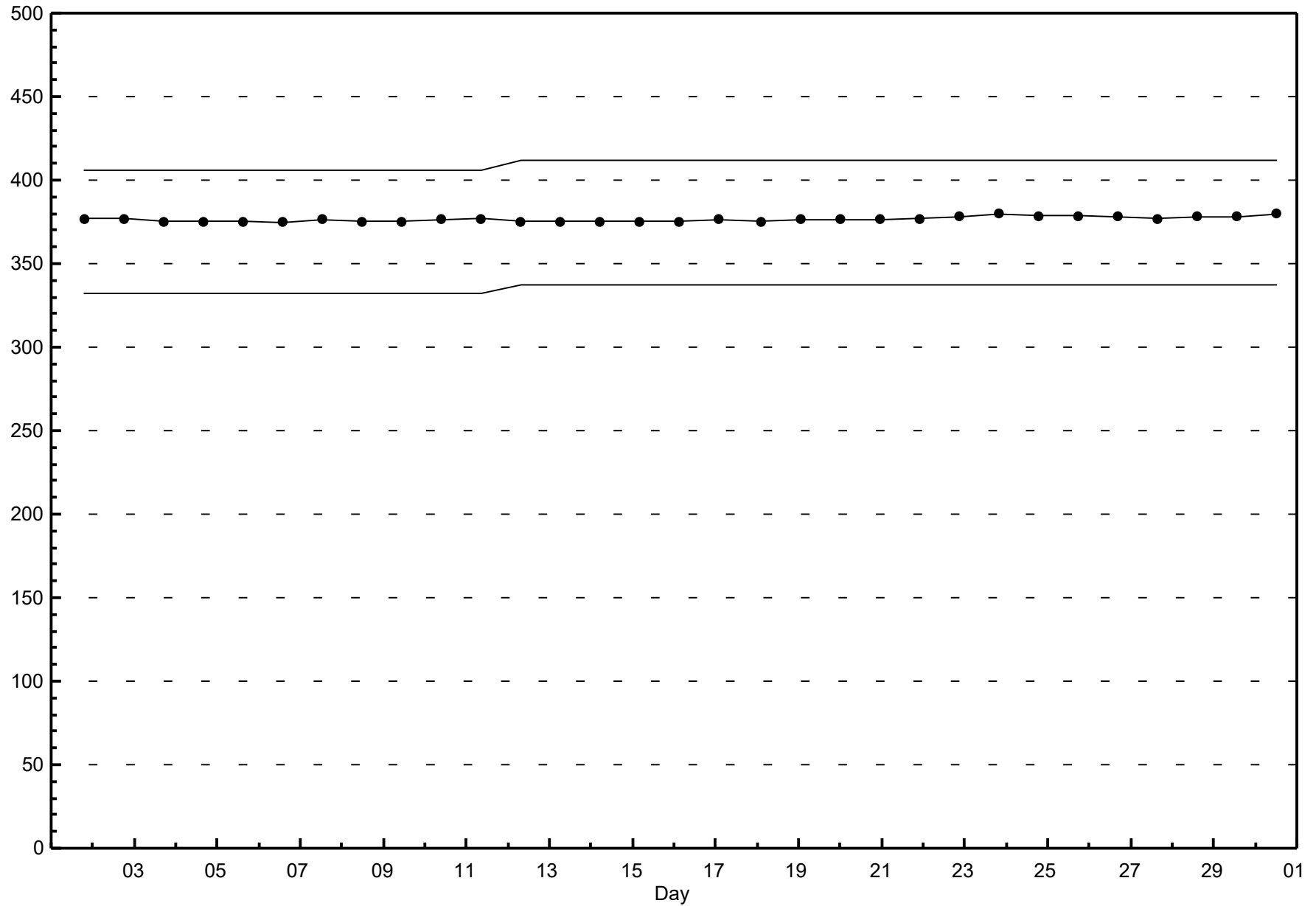
Ozone (O₃) - ppb

Henry Pirker - September 2018

Maximum Value: 35.9 ppb on Sep 24 19:00																							Hours in Service: 720		
Minimum Value: 1.7 ppb on Sep 4 09:00																							Hours of Data: 718		
																							Hours of Missing Data: 2		
Percentiles: P ₁ = 2.4 P ₁₀ = 6.7 Q ₁ = 11.5 Median = 17.7 Q ₃ = 22.5 P ₉₀ = 26.4 P ₉₉ = 32.6																							Hours of Calibration: 2		
																							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-Sep	27	28	29	28	27	26	25	23	22	21	20	20	21	22	23	23	24	24	24	24	23	23	22	21	28.7
2-Sep	19	18	18	17	17	16	14	13	12	12	11	11	12	13	17	20	21	23	24	24	25	25	23	23	24.7
3-Sep	22	22	22	22	22	21	21	19	19	18	17	17	16	16	16	16	16	16	17	17	16	14	12	11	22.5
4-Sep	10	8	6	4	3	3	2	2	2	2	3	5	8	11	14	16	19	22	24	25	23	21	19	18	24.6
5-Sep	16	13	11	9	8	7	5	4	3	3	4	6	8	11	12	16	20	23	24	25	25	24	23	22	25.1
6-Sep	20	19	18	17	16	15	14	12	12	12	12	12	12	15	17	20	23	24	24	22	20	17	14		24.4
7-Sep	11	9	7	7	6	7	7	6	5	5	5	6	6	8	11	15	19	23	26	27	26	27	26	24	27.3
8-Sep	20	16	14	12	11	10	10	12	13	16	18	19	20	21	21	19	18	16	15	15	14	14	14		20.6
9-Sep	13	13	12	11	11	10	10	10	10	11	11	12	12	13	14	14	14	15	15	15	15	15	15	15	15.2
10-Sep	14	14	13	13	12	11	10	10	9	8	8	8	8	8	10	11	12	12	12	12	12	11	11	10	14.2
11-Sep	10	9	8	8	8	8	7	6	6	6	7	7	8	9	N	N	11	11	11	12	13	13	14	16	15.6
12-Sep	17	19	20	21	21	21	21	21	21	20	20	20	21	22	23	23	24	24	25	25	25	24	24	23	24.9
13-Sep	23	22	21	21	21	20	20	20	20	19	19	20	21	22	23	24	25	26	26	26	25	23	21	19	26.4
14-Sep	18	16	15	13	11	11	9	8	7	7	8	10	13	15	18	20	22	23	23	23	21	20	18	16	22.9
15-Sep	14	12	11	11	11	10	9	10	11	11	11	12	12	14	16	17	18	20	20	21	21	21	20	20	21.1
16-Sep	20	19	19	18	18	18	17	16	15	15	15	15	14	14	15	15	15	15	16	16	16	16	16	16	19.5
17-Sep	16	15	15	14	13	12	11	10	9	9	9	8	8	8	8	9	9	9	9	8	8	7	6	5	15.5
18-Sep	4	2	2	3	3	3	3	3	3	4	4	5	7	9	12	16	18	20	21	22	20	18	15	13	21.5
19-Sep	11	8	6	4	3	3	3	2	2	2	3	5	7	10	14	17	21	24	26	25	23	21	18	16	25.9
20-Sep	14	10	9	11	14	16	19	19	20	22	23	24	24	25	26	27	28	29	29	29	29	28	28	27	29.1
21-Sep	26	26	25	25	23	22	21	20	19	19	19	20	21	23	25	28	30	32	32	32	30	30	28	26	32.3
22-Sep	24	22	21	20	21	21	21	21	21	22	22	22	22	22	22	22	22	21	21	21	21	20	19	17	23.8
23-Sep	15	14	12	10	9	7	5	4	3	3	4	7	10	13	17	21	24	26	28	28	28	27	26	25	28.2
24-Sep	24	23	22	22	22	23	23	23	23	24	25	26	27	29	31	33	34	35	36	34	31	29	26	23	35.9
25-Sep	20	18	19	19	19	17	16	15	13	13	13	15	17	21	24	28	31	33	34	33	32	31	30	29	33.8
26-Sep	28	28	27	28	28	28	26	24	22	20	20	18	18	19	21	24	25	27	27	26	25	23	21	21	28.0
27-Sep	21	20	20	20	20	19	17	15	14	13	12	13	15	17	20	22	24	26	26	23	20	16	13	13	25.7
28-Sep	9	7	6	6	6	6	6	5	6	6	7	8	10	12	13	16	18	19	20	19	17	14	13	11	19.7
29-Sep	9	7	6	6	8	10	12	13	15	18	21	23	24	25	26	29	31	30	30	29	29	28	27	25	30.5
30-Sep	24	23	22	20	19	19	18	17	17	18	19	19	20	21	24	26	27	28	28	29	28	28	27	26	28.6
Diurnal Maximums																									
N - Not Valid																									

Span Responses

Ozone (O₃)
Henry Pirker - September 2018



Hourly Averages

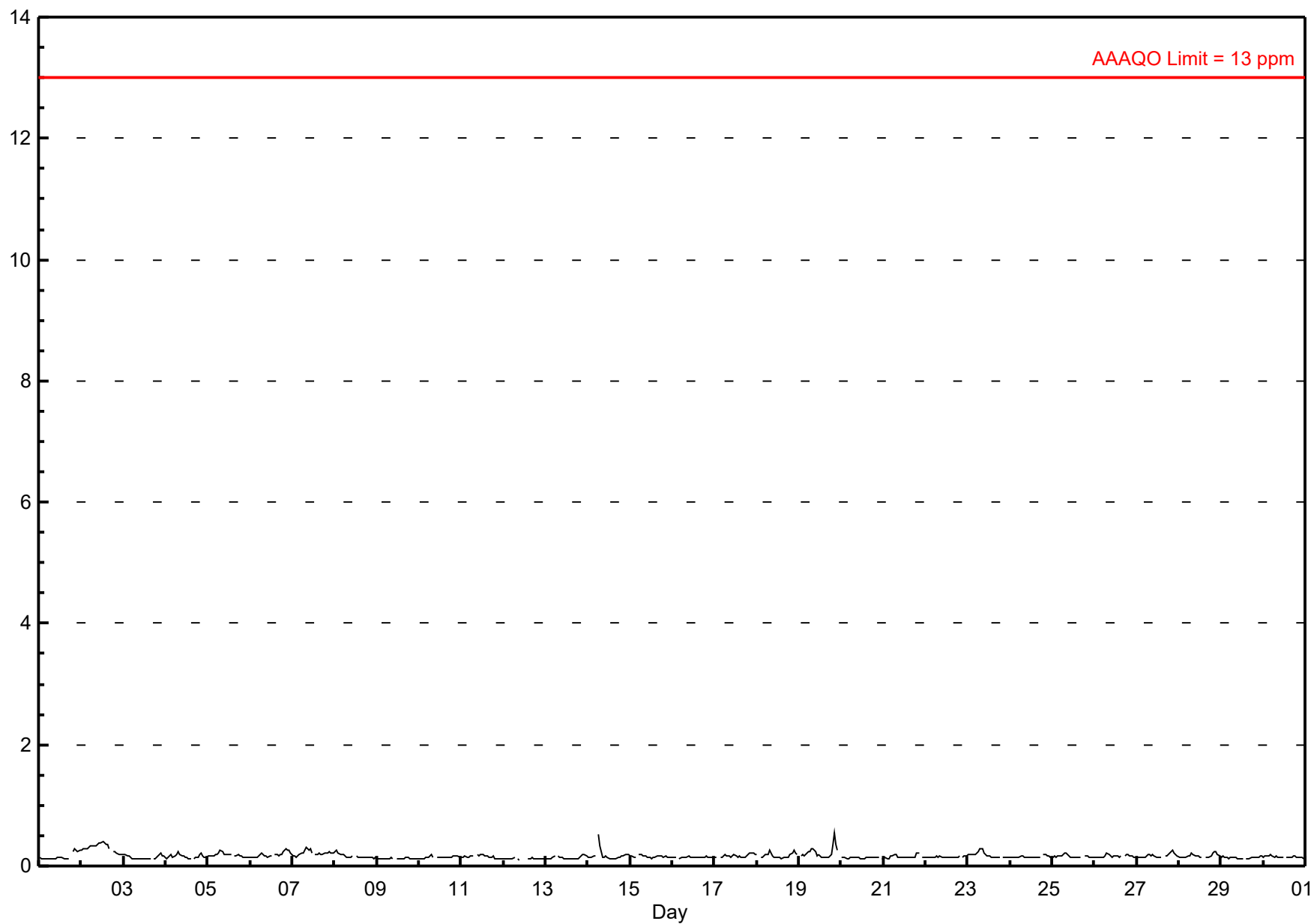
Carbon Monoxide (CO) - ppm

Henry Pirker - September 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 0.55 ppm on Sep 19 21:00 Maximum Daily Average: 0.30 ppm on Sep 2																								Hours in Service: 720 Hours of Data: 685 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0		
Minimum Value: 0.1 ppm on Sep 12 10:00 Maximum Diurnal Average: 0.20 ppm at hour 8 Monthly Average: 0.164 ppm												Minimum Daily Average: 0.12 ppm on Sep 12 Minimum Diurnal Average: 0.15 ppm at hour 18 Percentiles: P ₁ = 0.11 P ₁₀ = 0.12 Q ₁ = 0.14 Median = 0.15 Q ₃ = 0.18 P ₉₀ = 0.21 P ₉₉ = 0.36														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.2	0.3	0.3	0.2	0.3	0.15	0.28	
2-Sep	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	0.3	A	0.2	0.2	0.2	0.2	0.2	0.30	0.40	
3-Sep	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.2	0.2	0.2	0.14	0.21	
4-Sep	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	A	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.16	0.23
5-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.18	0.26
6-Sep	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	0.2	0.2	0.3	0.3	0.3	0.2	0.19	0.29
7-Sep	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21	0.31
8-Sep	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	A	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.16	0.26
9-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	0.14
10-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.14	0.18
11-Sep	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.15	0.19
12-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	C	C	C	C	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12	0.13
13-Sep	0.1	0.1	0.1	0.1	0.1	0.2	A	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.14	0.20
14-Sep	0.2	0.1	0.2	0.2	0.2	A	0.5	0.3	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.17	0.52
15-Sep	0.2	0.2	0.1	0.1	A	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	0.16	0.20
16-Sep	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.15	0.16
17-Sep	0.1	0.1	A	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.17	0.21
18-Sep	0.2	A	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.17	0.26
19-Sep	A	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.4	0.5	0.3	0.3	A	0.22	0.55
20-Sep	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.14	0.15
21-Sep	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	A	0.2	0.1	0.15	0.21
22-Sep	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	A	0.2	0.2	0.2	0.15	0.17
23-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.18	0.30
24-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	A	0.2	0.2	0.2	0.2	0.2	0.15	0.19
25-Sep	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.2	0.2	0.2	0.1	0.1	0.1	0.16	0.22
26-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.2	A	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.16	0.22
27-Sep	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	A	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.17	0.25
28-Sep	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	A	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.17	0.24
29-Sep	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.14	0.16
30-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	A	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.15	0.18
0.15 0.15 0.15 0.15 0.16 0.17 0.19 0.20 0.18 0.17 0.16 0.16 0.15 0.15 0.15 0.15 0.15 0.15 0.16 0.18 0.19 0.18 0.17 0.16 0.26 0.28 0.28 0.27 0.30 0.33 0.52 0.33 0.34 0.36 0.38 0.37 0.40 0.39 0.37 0.35 0.27 0.19 0.23 0.35 0.55 0.35 0.26 0.26																								Diurnal Average	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 - September 2018



Hourly Maximums

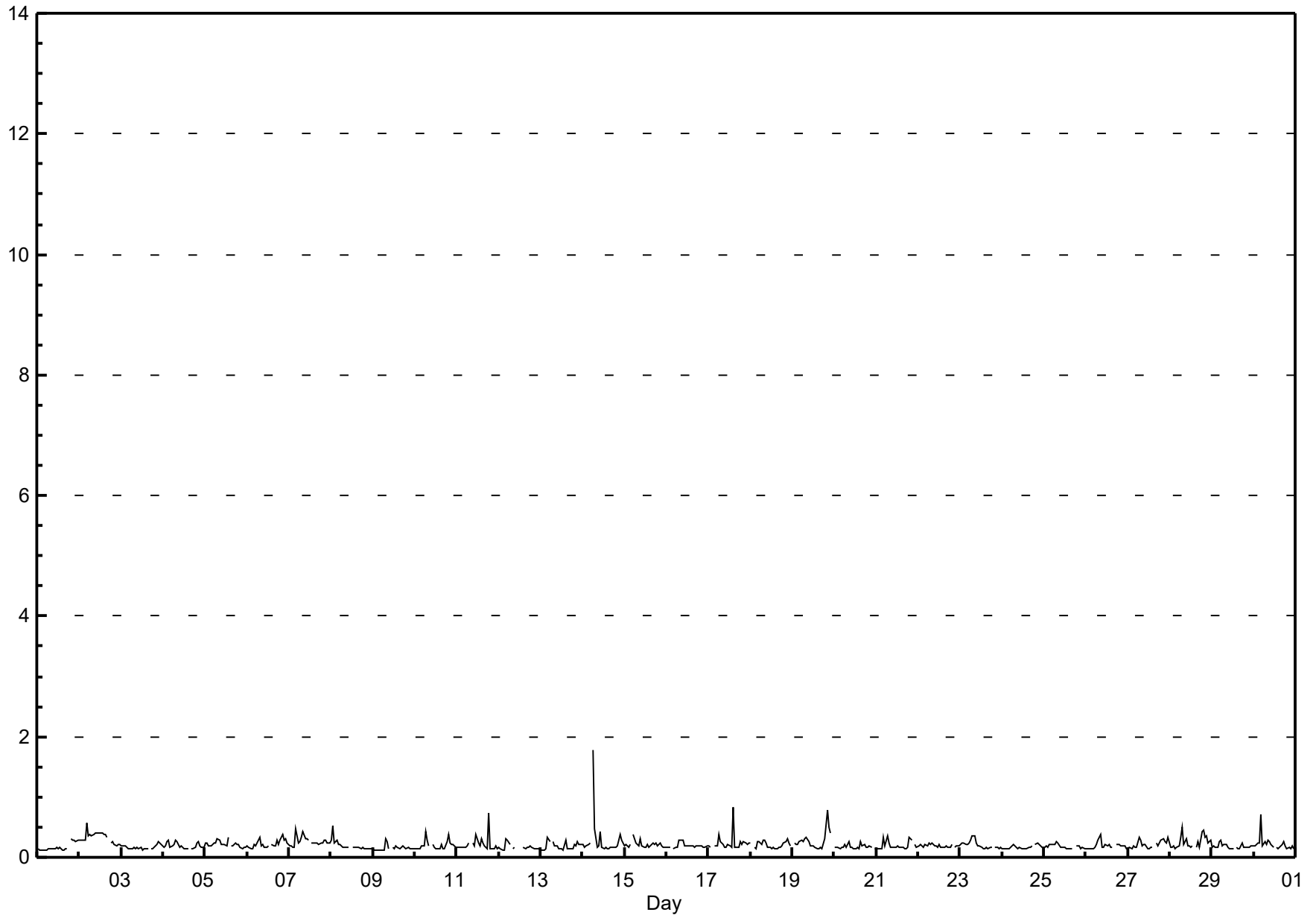
Carbon Monoxide (CO) - ppm

Henry Pirker - September 2018

Maximum Value: 1.77 ppm on Sep 14 07:00																								Hours in Service: 720		
Maximum Daily Average: 0.33 ppm on Sep 2																								Hours of Data: 685		
Minimum Value: 0.1 ppm on Sep 1 03:00																								Hours of Missing Data: 35		
Maximum Diurnal Average: 0.30 ppm at hour 7																								Hours of Calibration: 35		
Monthly Average: 0.209 ppm																								Percent Operational Time: 100.0		
Minimum Daily Average: 0.16 ppm on Sep 9																										
Minimum Diurnal Average: 0.17 ppm at hour 3																										
Percentiles: P ₁ = 0.13 P ₁₀ = 0.14 Q ₁ = 0.16 Median = 0.18 Q ₃ = 0.23 P ₉₀ = 0.29 P ₉₉ = 0.52																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	A	0.3	0.3	0.3	0.3	0.3	0.17	0.30
2-Sep	0.3	0.3	0.3	0.3	0.6	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	A	0.2	0.3	0.2	0.2	0.2	0.2	0.33	0.56
3-Sep	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	A	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.17	0.26
4-Sep	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	A	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.20	0.29
5-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.3	A	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.21	0.34
6-Sep	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.3	0.2	0.3	0.4	0.3	0.3	0.2	0.22	0.38
7-Sep	0.2	0.2	0.2	0.2	0.5	0.2	0.3	0.3	0.4	0.3	0.3	0.3	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.26	0.48
8-Sep	0.3	0.5	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.19	0.52
9-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.1	A	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.16	0.31
10-Sep	0.1	0.1	0.1	0.2	0.2	0.2	0.4	0.3	0.2	A	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.4	0.2	0.2	0.2	0.2	0.20	0.42
11-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.4	0.2	0.2	0.3	0.2	0.2	0.1	0.7	0.1	0.1	0.1	0.2	0.1	0.22	0.74
12-Sep	0.2	0.1	0.1	0.1	0.3	0.3	0.2	A	0.2	0.2	C	C	C	C	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.17	0.31
13-Sep	0.1	0.1	0.1	0.1	0.3	0.3	A	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.18	0.33
14-Sep	0.2	0.2	0.2	0.2	0.2	A	1.8	0.5	0.2	0.2	0.4	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.4	0.3	0.2	0.2	0.28	1.77
15-Sep	0.2	0.2	0.2	0.2	A	0.4	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21	0.39
16-Sep	0.2	0.2	0.2	A	0.1	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19	0.29
17-Sep	0.2	0.2	A	0.2	0.2	0.2	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.8	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.24	0.84
18-Sep	0.2	A	0.2	0.1	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.21	0.30
19-Sep	A	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.3	0.5	0.8	0.5	0.4	A	0.28	0.78
20-Sep	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	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	A	0.1	0.1	0.17	0.25
21-Sep	0.1	0.1	0.1	0.1	0.3	0.2	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.3	0.3	A	0.2	0.2	0.20	0.35
22-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.19	0.24
23-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2	A	0.2	0.2	0.2	0.2	0.20	0.35
24-Sep	0.1	0.1	0.1	0.1	0.1	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	A	0.2	0.2	0.2	0.2	0.2	0.17	0.23
25-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.18	0.27
26-Sep	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.19	0.37
27-Sep	0.1	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	A	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.3	0.21	0.33
28-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.2	0.3	0.2	0.2	0.2	0.2	A	0.2	0.3	0.2	0.4	0.5	0.3	0.4	0.2	0.3	0.25	0.49
29-Sep	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	A	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.18	0.29
30-Sep	0.2	0.2	0.2	0.2	0.7	0.2	0.3	0.2	0.3	0.3	0.2	0.2	A	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.22	0.71
0.18 0.19 0.17 0.18 0.24 0.21 0.30 0.27 0.24 0.21 0.20 0.19 0.18 0.18 0.20 0.18 0.18 0.18 0.23 0.24 0.24 0.22 0.21 0.19																									Diurnal Average	
0.28 0.52 0.29 0.29 0.71 0.39 1.77 0.49 0.42 0.39 0.42 0.40 0.40 0.40 0.84 0.37 0.34 0.28 0.74 0.54 0.78 0.49 0.40 0.33																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

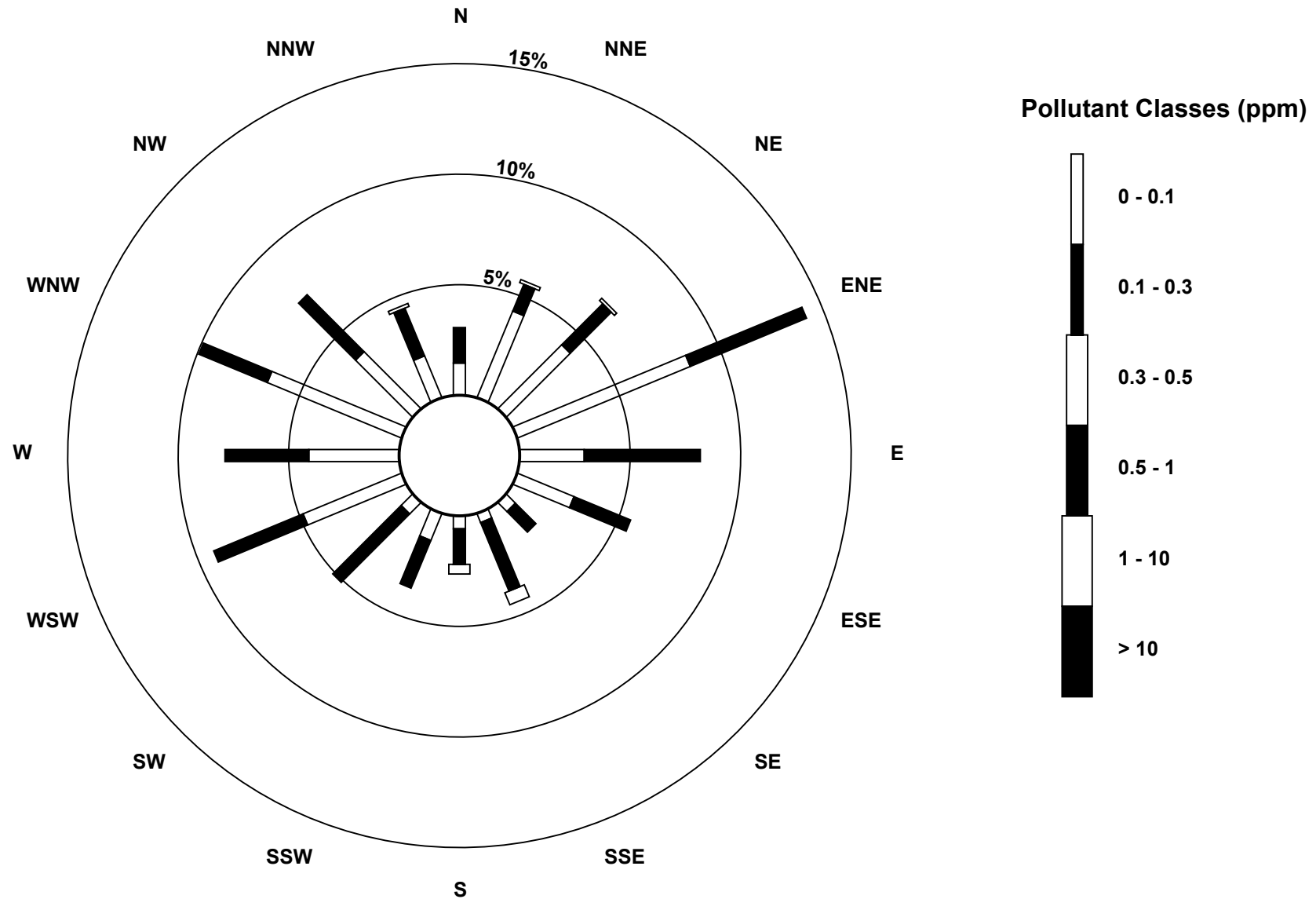
Hourly Maximums

Carbon Monoxide (CO) - ppm
Henry Pirker - September 2018



Pollutant Rose

Carbon Monoxide (CO) - ppm
Henry Pirker - September 2018



Eight Hour Running Averages

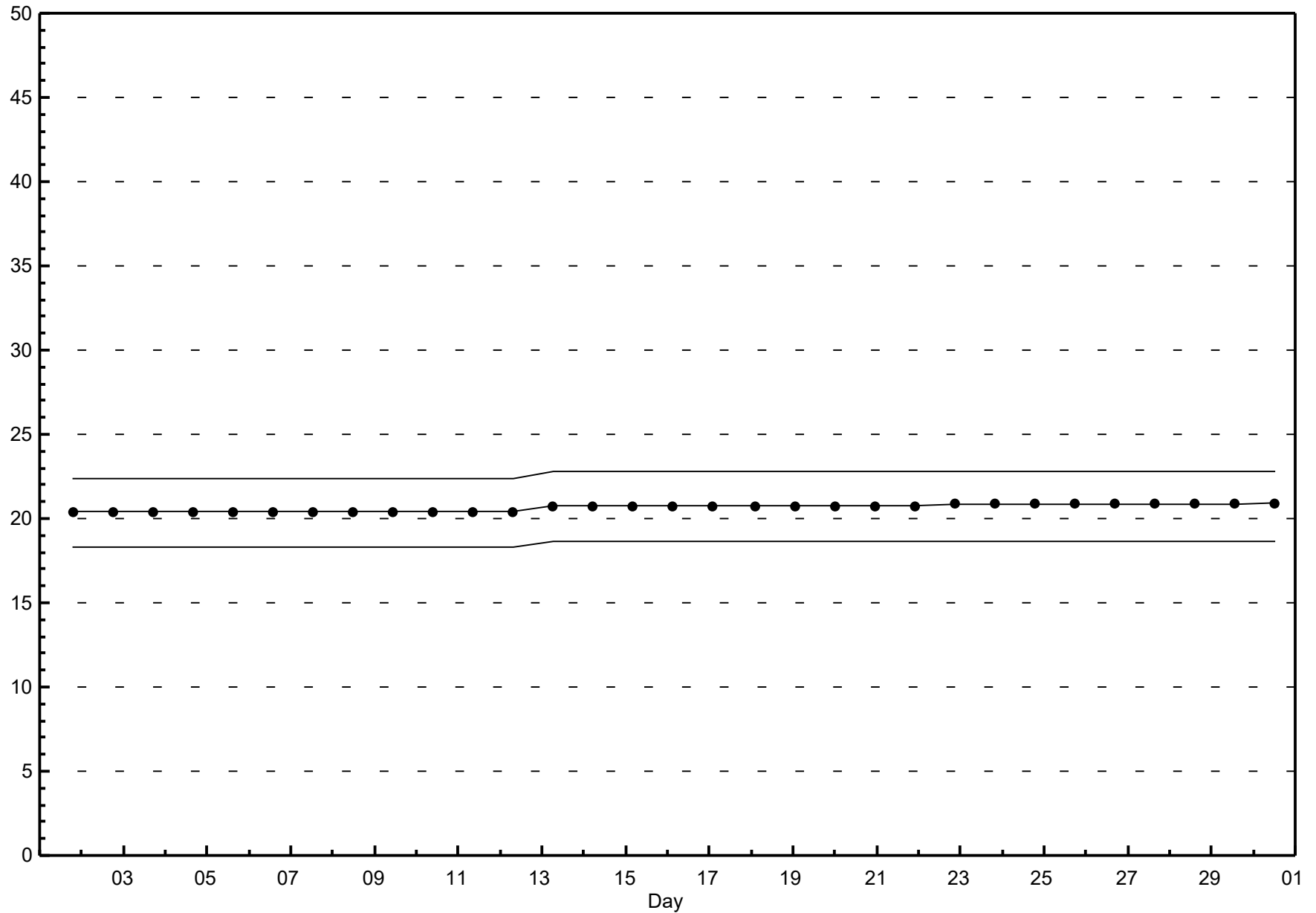
Carbon Monoxide (CO) - ppm

Henry Pirker - September 2018

Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 0.37 ppm on Sep 2 16:00																									Hours in Service: 720 Hours of Data: 712 Hours of Missing Data: 8 Hours of Calibration: 8 Percent Operational Time: 100.0
Minimum Value: 0.12 ppm on Sep 12 04:00 Percentiles: P ₁ = 0.12 P ₁₀ = 0.13 Q ₁ = 0.14 Median = 0.16 Q ₃ = 0.17 P ₉₀ = 0.21 P ₉₉ = 0.34																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
1-Sep	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.31
2-Sep	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.37
3-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.20
4-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.18
5-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20
6-Sep	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
7-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.25
8-Sep	0.2	0.2	0.2	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	0.1	0.1	0.1	0.1	0.1	0.1	0.23
9-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.14
10-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.15
11-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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	0.18
12-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	N	N	N	N	N	N	N	N	0.1	0.1	0.1	0.1	0.1	0.13
13-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.15
14-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.23
15-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.17
16-Sep	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.15
17-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19
18-Sep	0.2	0.2	0.2	0.2	0.2	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	0.2	0.2	0.2	0.2	0.20
19-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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	0.28
20-Sep	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.28
21-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.16
22-Sep	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.17
23-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.22
24-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.16
25-Sep	0.2	0.2	0.2	0.2	0.2	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	0.2	0.2	0.2	0.2	0.18
26-Sep	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.17
27-Sep	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20
28-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.19
29-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.19
30-Sep	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	0.1	0.1	0.1	0.1	0.1	0.1	0.16
0.31 0.28 0.28 0.27 0.27 0.28 0.29 0.30 0.31 0.32 0.33 0.34 0.36 0.36 0.37 0.37 0.36 0.36 0.34 0.32 0.29 0.26 0.26 0.28 Diurnal Maximums																									
N - Not Valid Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 5 ppm																									

Span Responses

Carbon Monoxide (CO)
Henry Pirker - September 2018



Hourly Averages

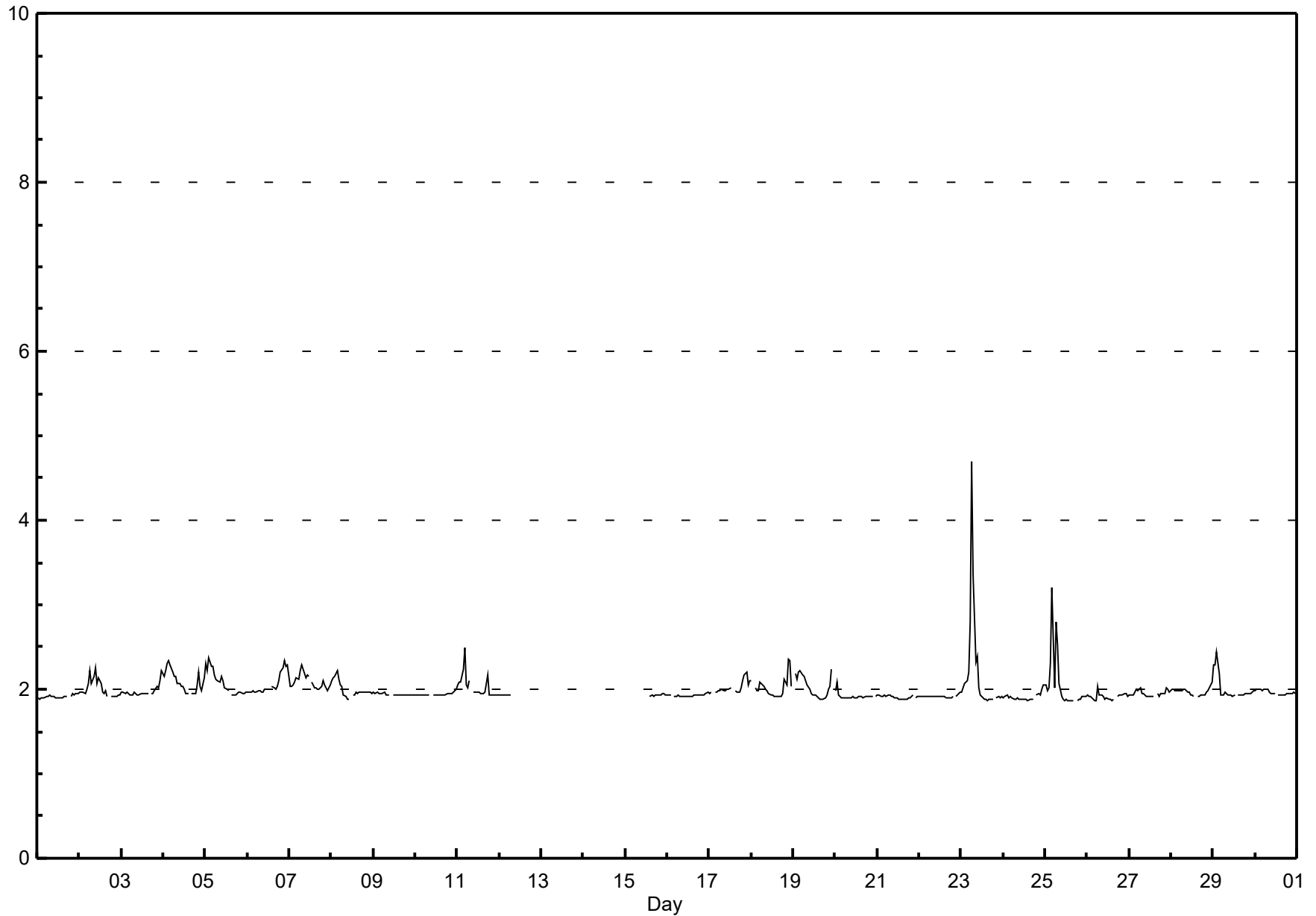
Total Hydrocarbons (THC) - ppm

Henry Pirker - September 2018

Maximum Value: 4.70 ppm on Sep 23 07:00																								Hours in Service: 720		
Maximum Daily Average: 2.20 ppm on Sep 23																								Hours of Data: 612		
Minimum Value: 1.9 ppm on Sep 25 17:00																								Hours of Missing Data: 108		
Maximum Diurnal Average: 2.13 ppm at hour 7																								Hours of Calibration: 38		
Monthly Average: 1.991 ppm																								Percent Operational Time: 90.3		
Percentiles: P ₁ = 1.87 P ₁₀ = 1.90 Q ₁ = 1.92 Median = 1.94 Q ₃ = 2.00 P ₉₀ = 2.13 P ₉₉ = 2.49																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.91	1.95
2-Sep	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.1	2.3	2.1	2.1	2.1	2.0	1.9	2.0	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	2.01	2.25
3-Sep	2.0	2.0	1.9	2.0	1.9	1.9	1.9	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	A	1.9	1.9	2.0	2.0	2.0	2.1	2.2	1.98	2.21
4-Sep	2.1	2.2	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	A	1.9	1.9	2.0	2.0	2.2	2.0	2.0	2.1	2.09	2.35
5-Sep	2.3	2.2	2.4	2.3	2.3	2.2	2.1	2.1	2.1	2.2	2.1	2.0	2.0	2.0	A	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.07	2.38
6-Sep	2.0	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	2.2	2.3	2.3	2.3	2.3	2.05	2.34
7-Sep	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.1	2.2	2.1	A	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1	2.09	2.29
8-Sep	2.1	2.1	2.2	2.2	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	2.0	2.0	2.0	2.0	2.0	2.00	2.21
9-Sep	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.94	1.96
10-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.94	2.00
11-Sep	2.0	2.1	2.1	2.2	2.5	2.1	2.0	2.1	A	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.2	1.9	1.9	1.9	1.9	1.9	1.9	2.02	2.50
12-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	R	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	1.93
13-Sep	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--
14-Sep	M	M	M	M	M	M	M	M	M	M	M	M	M	C	C	C	C	C	M	M	M	M	M	M	--	--
15-Sep	M	M	M	M	M	M	M	M	M	M	C	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	--	1.95	
16-Sep	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.93	1.96	
17-Sep	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	M	M	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.0	2.1	2.02	2.21
18-Sep	2.1	A	2.0	2.0	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	2.1	2.1	2.4	2.3	2.0	2.02	2.35
19-Sep	A	2.2	2.1	2.2	2.2	2.2	2.2	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.2	A	2.03	2.24
20-Sep	2.0	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.92	2.08	
21-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.91	1.94	
22-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	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	1.91	1.96	
23-Sep	2.0	2.0	2.1	2.1	2.2	2.8	4.7	3.4	2.3	2.4	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	2.20	4.70
24-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.1	1.91	2.05	
25-Sep	2.1	2.0	2.0	2.3	3.2	2.0	2.8	2.5	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	2.06	3.21
26-Sep	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	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.91	2.03	
27-Sep	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	1.9	2.0	2.0	2.0	1.95	2.02	
28-Sep	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	1.97	2.08	
29-Sep	2.3	2.3	2.4	2.2	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	2.0	2.0	2.01	2.45
30-Sep	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.96	2.01	
2.00 2.01 2.03 2.04 2.07 2.03 2.13 2.07 2.00 1.99 1.96 1.95 1.94 1.93 1.92 1.93 1.93 1.94 1.94 1.97 1.98 2.00 2.00 2.00																									Diurnal Average	
2.31 2.28 2.45 2.35 3.21 2.80 4.70 3.36 2.33 2.38 2.17 2.15 2.06 2.08 2.03 2.02 2.00 2.18 2.10 2.20 2.25 2.35 2.34 2.30																									Diurnal Maximum	
C - Calibration R - Recovery M - Maintenance A - Automated Daily Zero Span																										

Hourly Averages

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



Hourly Maximums

Total Hydrocarbons (THC) - ppm

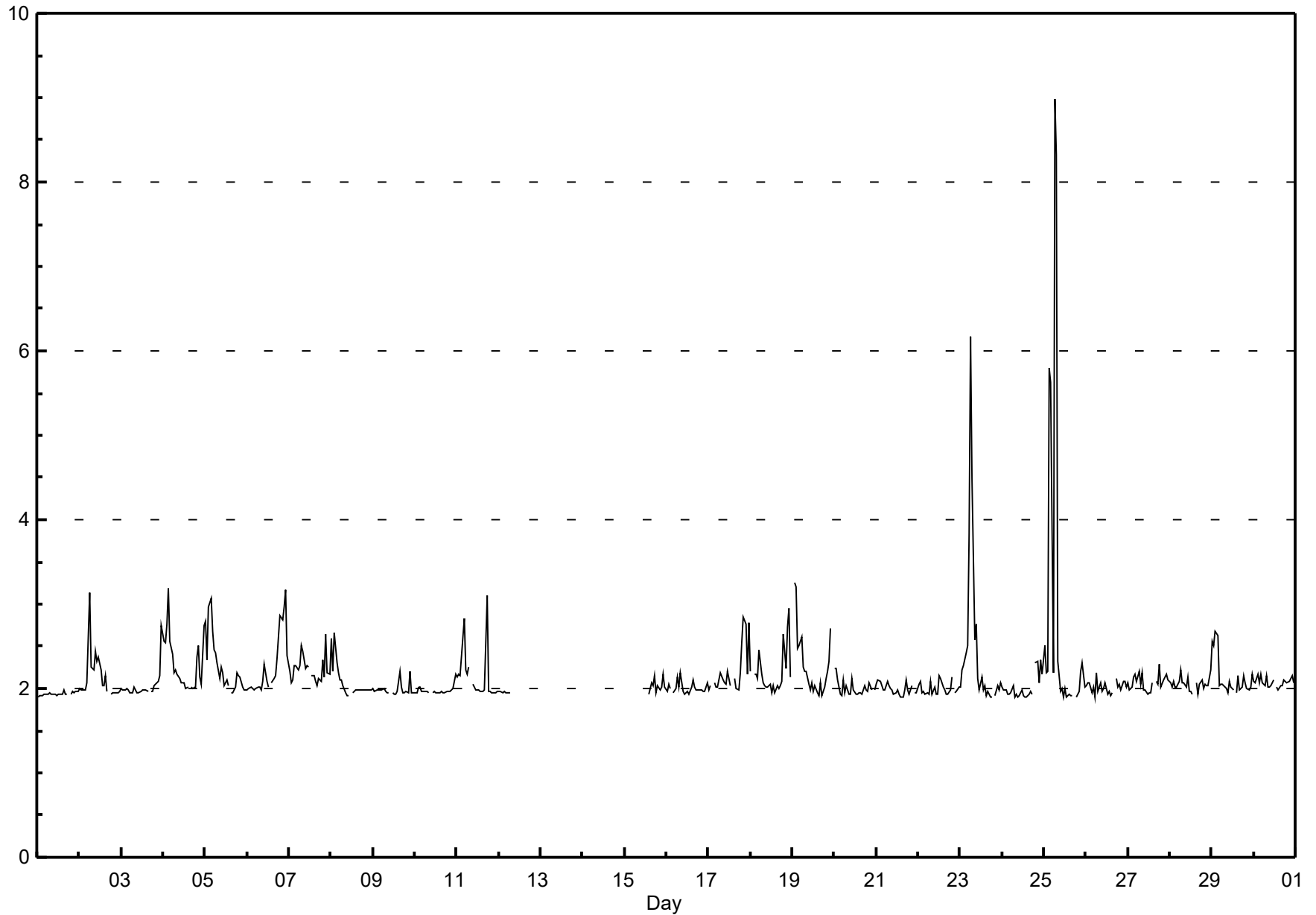
Henry Pirker - September 2018

Maximum Value: 8.98 ppm on Sep 25 07:00																								Hours in Service: 720		
Maximum Daily Average: 2.96 ppm on Sep 25																								Hours of Data: 612		
Minimum Value: 1.9 ppm on Sep 21 16:00																								Hours of Missing Data: 108		
Maximum Diurnal Average: 2.54 ppm at hour 7																								Hours of Calibration: 38		
Monthly Average: 2.142 ppm																								Percent Operational Time: 90.3		
Percentiles: P ₁ = 1.90 P ₁₀ = 1.94 Q ₁ = 1.96 Median = 2.02 Q ₃ = 2.14 P ₉₀ = 2.38 P ₉₉ = 3.77																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	1.9	1.9	1.9	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	A	1.9	2.0	2.0	2.0	2.0	1.93	1.97
2-Sep	2.0	2.0	2.0	2.0	2.1	2.6	3.1	2.3	2.2	2.4	2.3	2.4	2.2	2.0	2.0	2.1	2.0	A	1.9	1.9	1.9	1.9	2.0	2.0	2.15	3.13
3-Sep	2.0	2.0	2.0	2.0	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	2.1	2.1	2.1	2.7	2.03	2.75
4-Sep	2.6	2.5	2.8	3.2	2.6	2.4	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	A	2.0	2.0	2.0	2.4	2.5	2.1	2.1	2.7	2.30	3.19
5-Sep	2.8	2.3	3.0	3.1	2.7	2.5	2.4	2.3	2.1	2.3	2.2	2.0	2.1	2.0	A	2.0	2.0	2.0	2.2	2.2	2.1	2.0	2.0	2.0	2.27	3.07
6-Sep	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.1	2.0	A	2.1	2.1	2.2	2.3	2.6	2.9	2.8	3.0	3.2	2.4	2.26	3.17
7-Sep	2.2	2.1	2.1	2.3	2.3	2.2	2.3	2.5	2.4	2.2	2.3	2.3	A	2.2	2.2	2.1	2.0	2.1	2.1	2.3	2.1	2.6	2.2	2.2	2.23	2.65
8-Sep	2.6	2.2	2.7	2.3	2.2	2.1	2.1	2.0	2.0	1.9	1.9	A	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.07	2.66
9-Sep	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	1.9	1.9	2.0	2.2	2.0	2.0	2.0	2.0	2.0	2.2	1.9	1.9	1.99	2.20
10-Sep	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.9	A	1.9	2.0	1.9	1.9	1.9	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.2	1.97	2.16
11-Sep	2.1	2.2	2.2	2.6	2.8	2.2	2.2	2.3	A	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.1	2.0	2.0	1.9	1.9	1.9	2.0	2.14	3.10
12-Sep	2.0	2.0	1.9	2.0	1.9	1.9	1.9	A	R	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	1.96
13-Sep	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--
14-Sep	M	M	M	M	M	M	M	M	M	M	M	M	M	C	C	C	C	C	M	M	M	M	M	M	--	--
15-Sep	M	M	M	M	M	M	M	M	M	M	C	C	C	C	1.9	2.1	2.0	2.1	1.9	2.0	2.0	2.0	2.2	2.0	--	2.17
16-Sep	2.0	2.0	2.0	A	1.9	2.0	2.1	2.0	2.2	2.0	1.9	1.9	2.0	1.9	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.00	2.18
17-Sep	2.0	2.0	A	2.1	2.0	2.0	2.1	2.2	2.1	2.1	2.1	2.2	2.0	M	M	2.1	2.0	2.0	2.2	2.5	2.9	2.8	2.2	2.8	2.20	2.85
18-Sep	2.2	A	2.2	2.2	2.1	2.5	2.2	2.1	2.0	2.0	2.0	2.1	2.0	2.0	1.9	2.0	2.0	2.0	2.1	2.6	2.2	2.7	2.9	2.1	2.19	2.95
19-Sep	A	3.3	3.2	2.5	2.5	2.6	2.3	2.2	2.2	2.1	2.0	2.1	2.0	2.0	1.9	1.9	2.1	1.9	2.0	2.1	2.2	2.3	2.7	A	2.27	3.26
20-Sep	2.2	2.2	2.1	1.9	1.9	2.1	1.9	2.0	1.9	1.9	2.1	2.0	1.9	1.9	2.0	2.0	1.9	2.0	2.0	2.0	2.1	2.0	A	2.0	2.01	2.25
21-Sep	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.0	2.0	2.0	1.9	1.9	2.0	1.9	1.9	1.9	2.0	2.1	2.0	1.9	2.0	A	2.0	2.0	1.99	2.10
22-Sep	2.1	2.1	1.9	2.0	1.9	1.9	1.9	2.1	1.9	2.0	1.9	1.9	2.2	2.1	2.0	2.0	1.9	1.9	2.0	2.1	A	1.9	2.0	2.0	2.00	2.16
23-Sep	2.0	2.2	2.3	2.4	2.5	3.8	6.2	4.5	2.6	2.8	2.1	2.0	2.1	2.0	2.0	1.9	2.0	1.9	1.9	A	1.9	2.0	2.0	2.1	2.49	6.18
24-Sep	2.0	2.0	2.0	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	2.0	1.9	A	2.3	2.3	2.1	2.3	2.2	2.01	2.33
25-Sep	2.5	2.2	2.2	5.8	5.6	2.2	9.0	8.3	2.3	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	2.2	2.3	2.0	2.96	8.98
26-Sep	2.0	2.1	2.1	2.0	2.0	1.9	2.2	2.0	2.1	2.0	2.0	2.1	1.9	2.0	1.9	2.0	A	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.02	2.18
27-Sep	2.1	2.0	2.0	2.1	2.2	2.1	2.2	2.1	2.2	2.0	2.0	1.9	1.9	1.9	2.1	A	2.1	2.1	2.3	2.0	2.1	2.1	2.2	2.1	2.08	2.29
28-Sep	2.1	2.0	2.1	2.0	2.0	2.1	2.2	2.1	2.1	2.0	2.1	2.0	2.0	1.9	A	2.1	1.9	2.0	2.1	2.0	2.0	2.0	2.0	2.2	2.05	2.21
29-Sep	2.6	2.5	2.7	2.6	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.0	2.0	A	2.0	2.1	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.2	2.13	2.68
30-Sep	2.1	2.1	2.2	2.1	2.2	2.1	2.0	2.2	2.0	2.0	2.0	2.1	A	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.07	2.17
																									Diurnal Average	
																									Diurnal Maximum	
C - Calibration																										
R - Recovery																										
M - Maintenance																										
A - Automated Daily Zero Span																										

Hourly Maximums

Total Hydrocarbons (THC) - ppm

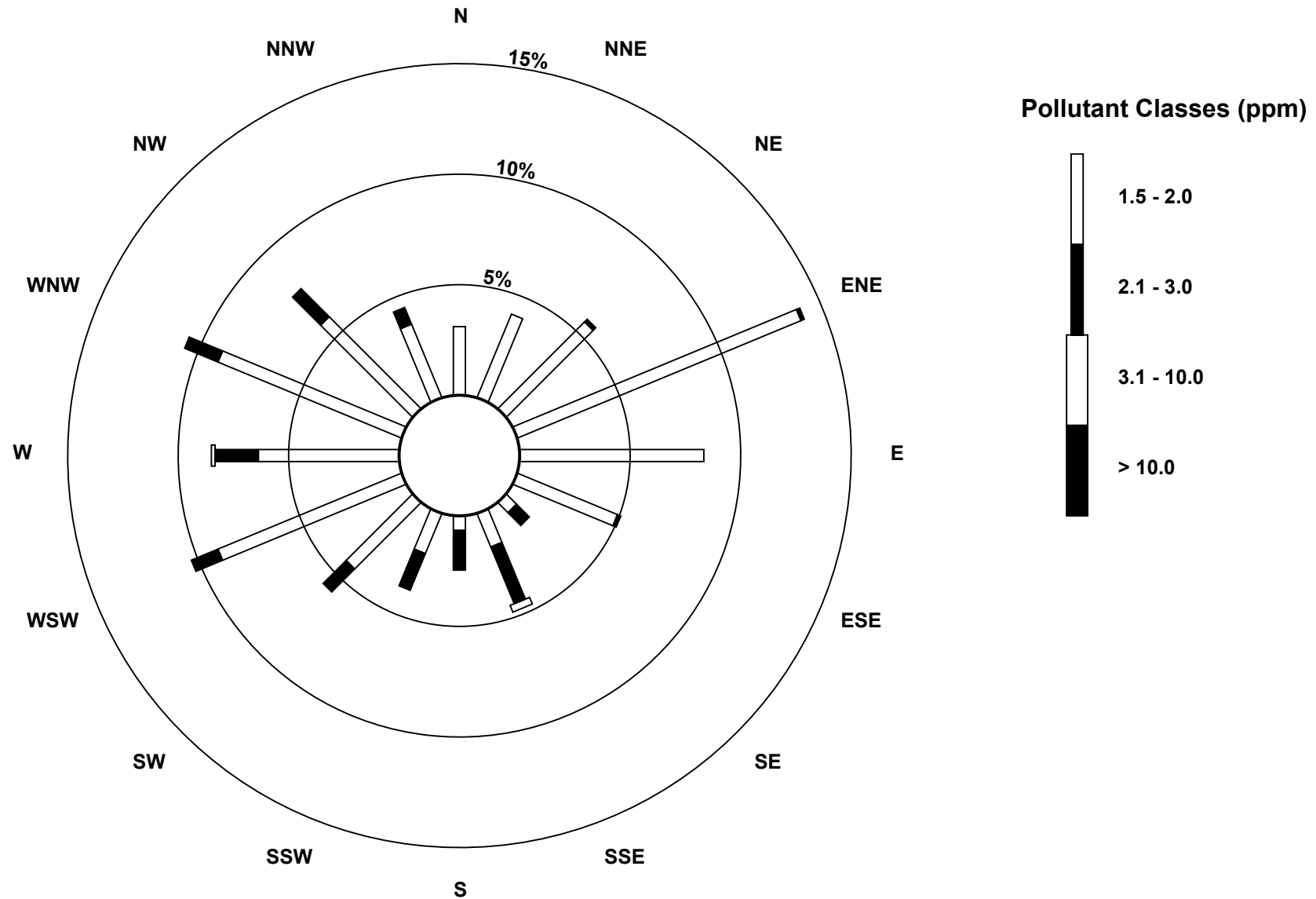
Henry Pirker - September 2018



Pollutant Rose

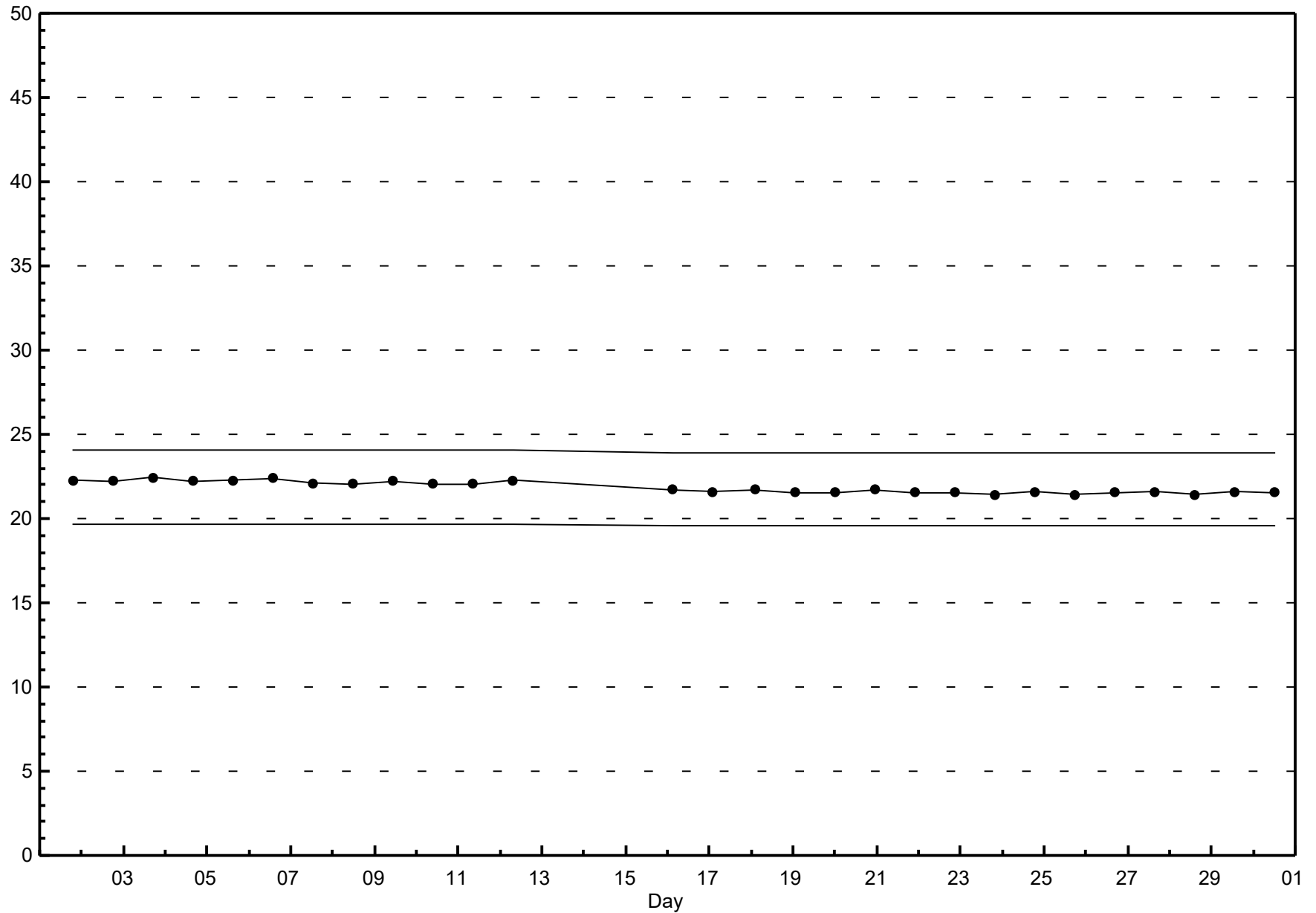
Total Hydrocarbons (THC) - ppm

Henry Pirker - September 2018



Span Responses

Total Hydrocarbons (THC)
Henry Pirker - September 2018



Hourly Averages

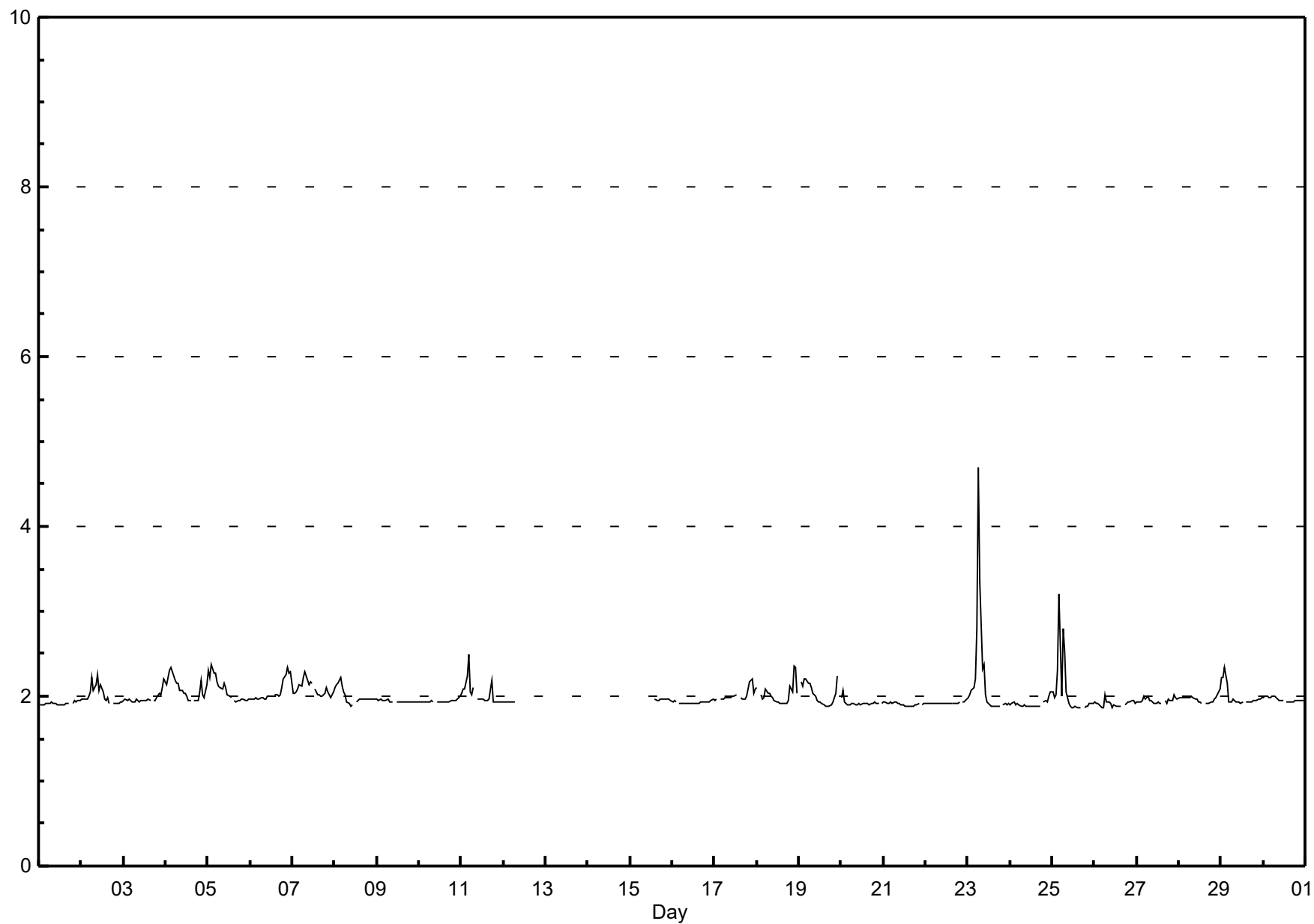
Methane (CH₄) - ppm

Henry Pirker - September 2018

Maximum Value: 4.70 ppm on Sep 23 07:00																								Hours in Service: 720		
Maximum Daily Average: 2.20 ppm on Sep 23																								Hours of Data: 612		
Minimum Value: 1.9 ppm on Sep 25 17:00																								Hours of Missing Data: 108		
Maximum Diurnal Average: 2.13 ppm at hour 7																								Hours of Calibration: 38		
Monthly Average: 1.990 ppm																								Percent Operational Time: 90.3		
Percentiles: P ₁ = 1.87 P ₁₀ = 1.90 Q ₁ = 1.92 Median = 1.95 Q ₃ = 1.99 P ₉₀ = 2.13 P ₉₉ = 2.48																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.91	1.95
2-Sep	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.1	2.3	2.1	2.1	2.1	2.0	1.9	2.0	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	2.01	2.25
3-Sep	2.0	2.0	1.9	2.0	1.9	1.9	1.9	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	A	1.9	2.0	2.0	2.0	2.1	2.2	1.98	2.21	
4-Sep	2.1	2.2	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	A	1.9	2.0	2.0	2.0	2.2	2.0	2.0	2.1	2.09	2.34
5-Sep	2.3	2.2	2.4	2.3	2.3	2.2	2.1	2.1	2.1	2.2	2.1	2.0	2.0	2.0	A	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.07	2.37
6-Sep	2.0	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	2.2	2.2	2.3	2.3	2.3	2.05	2.34
7-Sep	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.3	2.2	2.1	2.2	2.1	A	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.09	2.29
8-Sep	2.1	2.1	2.1	2.2	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	2.0	2.0	2.0	2.0	2.0	2.00	2.21
9-Sep	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.94	1.97
10-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.94	2.00
11-Sep	2.0	2.1	2.1	2.2	2.5	2.0	2.0	2.1	A	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.2	1.9	1.9	1.9	1.9	1.9	1.9	2.02	2.50
12-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	R	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	1.93
13-Sep	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--
14-Sep	M	M	M	M	M	M	M	M	M	M	M	M	M	C	C	C	C	C	M	M	M	M	M	M	--	--
15-Sep	M	M	M	M	M	M	M	M	M	M	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	--	1.97	
16-Sep	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.93	1.96	
17-Sep	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	M	M	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.0	2.1	2.01	2.21
18-Sep	2.1	A	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.0	2.3	2.3	2.0	2.02	2.35
19-Sep	A	2.2	2.1	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.2	A	2.02	2.23
20-Sep	2.0	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.92	2.07	
21-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.91	1.94	
22-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	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	1.92	1.97	
23-Sep	2.0	2.0	2.1	2.1	2.2	2.8	4.7	3.4	2.3	2.4	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	2.20	4.70
24-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.0	2.1	1.91	2.05
25-Sep	2.0	2.0	2.0	2.3	3.2	2.0	2.8	2.5	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	2.06	3.20
26-Sep	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	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.91	2.02
27-Sep	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	1.95	2.02
28-Sep	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	A	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	1.97	2.08
29-Sep	2.2	2.2	2.3	2.1	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.99	2.34
30-Sep	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.96	2.00
2.00 2.01 2.02 2.04 2.07 2.02 2.13 2.07 2.00 1.99 1.96 1.95 1.94 1.93 1.93 1.93 1.93 1.94 1.94 1.97 1.98 2.00 2.00 2.00																								Diurnal Average		
2.30 2.22 2.37 2.34 3.20 2.80 4.70 3.36 2.33 2.38 2.16 2.15 2.06 2.08 2.02 2.02 2.00 2.18 2.10 2.20 2.25 2.35 2.34 2.29																								Diurnal Maximum		
C - Calibration				R - Recovery				M - Maintenance				A - Automated Daily Zero Span														

Hourly Averages

Methane (CH₄) - ppm
Henry Pirker - September 2018



Hourly Maximums

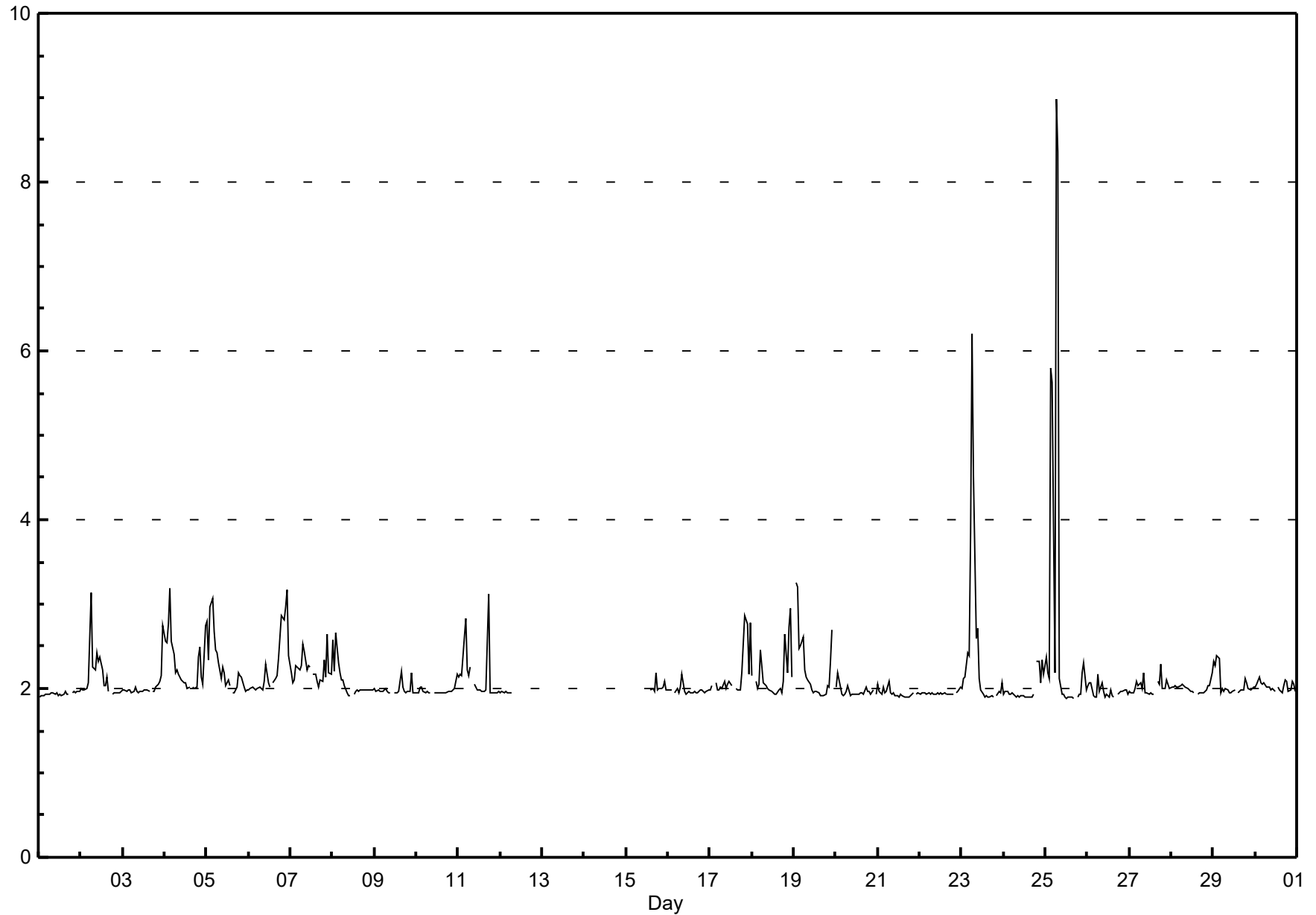
Methane (CH₄) - ppm

Henry Pirker - September 2018

Maximum Value: 8.99 ppm on Sep 25 07:00																					Maximum Daily Average: 2.92 ppm on Sep 25				Hours in Service: 720	
Minimum Value: 1.9 ppm on Sep 25 17:00																					Minimum Daily Average: 1.94 ppm on Sep 1				Hours of Data: 612	
Maximum Diurnal Average: 2.51 ppm at hour 7																					Minimum Diurnal Average: 1.96 ppm at hour 14				Hours of Missing Data: 108	
Monthly Average: 2.117 ppm																					Percentiles: P ₁ = 1.89 P ₁₀ = 1.93 Q ₁ = 1.95 Median = 1.98 Q ₃ = 2.09 P ₉₀ = 2.35 P ₉₉ = 3.78				Hours of Calibration: 38	
																					Percent Operational Time: 90.3					
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-Sep	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	2.0	1.9	1.9	A	1.9	2.0	2.0	2.0	2.0	1.94	1.97
2-Sep	2.0	2.0	2.0	2.0	2.1	2.6	3.1	2.3	2.2	2.4	2.3	2.4	2.2	2.0	2.0	2.1	2.0	A	1.9	1.9	1.9	1.9	2.0	2.0	2.15	3.14
3-Sep	2.0	2.0	2.0	2.0	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	2.1	2.1	2.1	2.7	2.03	2.74
4-Sep	2.6	2.5	2.8	3.2	2.6	2.4	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	A	2.0	2.0	2.0	2.4	2.5	2.1	2.0	2.7	2.29	3.19
5-Sep	2.8	2.3	3.0	3.1	2.7	2.5	2.4	2.3	2.1	2.3	2.2	2.0	2.1	2.0	A	2.0	2.0	2.0	2.2	2.2	2.1	2.0	2.0	2.0	2.27	3.08
6-Sep	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.1	2.0	A	2.1	2.1	2.1	2.4	2.6	2.9	2.8	3.0	3.2	2.4	2.26	3.17
7-Sep	2.2	2.1	2.1	2.3	2.3	2.2	2.3	2.5	2.4	2.2	2.3	2.3	A	2.2	2.2	2.1	2.0	2.1	2.1	2.3	2.1	2.6	2.2	2.2	2.23	2.64
8-Sep	2.6	2.2	2.7	2.3	2.2	2.1	2.1	2.0	1.9	1.9	1.9	A	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.07	2.65
9-Sep	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	1.9	1.9	2.0	2.2	2.0	2.0	1.9	2.0	2.0	2.2	2.0	2.0	1.99	2.20
10-Sep	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	1.97	2.16
11-Sep	2.1	2.2	2.2	2.6	2.8	2.2	2.2	2.3	A	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.1	2.0	2.0	2.0	1.9	2.0	2.0	2.14	3.11
12-Sep	2.0	2.0	2.0	2.0	2.0	1.9	2.0	A	R	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	1.97
13-Sep	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--
14-Sep	M	M	M	M	M	M	M	M	M	M	M	M	M	C	C	C	C	C	M	M	M	M	M	M	--	--
15-Sep	M	M	M	M	M	M	M	M	M	M	C	C	C	C	2.0	2.0	2.0	2.2	2.0	2.0	2.0	2.1	2.0	--	2.19	
16-Sep	2.0	2.0	2.0	A	1.9	2.0	2.0	2.0	2.2	2.0	1.9	2.0	2.0	1.9	1.9	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.98	2.18
17-Sep	2.0	2.0	A	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.0	M	M	2.0	2.0	2.0	2.2	2.5	2.9	2.8	2.2	2.8	2.17	2.86
18-Sep	2.2	A	2.1	2.0	2.0	2.5	2.1	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.1	2.6	2.2	2.7	2.9	2.1	2.15	2.95
19-Sep	A	3.2	3.2	2.5	2.5	2.6	2.2	2.1	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	2.3	2.7	A	2.23	3.25
20-Sep	2.0	2.2	2.1	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	2.0	2.0	2.0	1.9	2.0	A	1.9	1.97	2.18
21-Sep	2.0	2.0	1.9	2.0	2.0	2.0	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	1.9	1.9	1.94	2.08	
22-Sep	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.0	2.0	2.0	1.94	2.02
23-Sep	2.0	2.1	2.1	2.4	2.4	3.8	6.2	4.5	2.6	2.7	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.0	2.0	2.1	2.45	6.20
24-Sep	1.9	2.0	2.0	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.3	2.3	2.1	2.3	2.2	1.99	2.34
25-Sep	2.4	2.2	2.1	5.8	5.6	2.2	9.0	8.4	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.2	2.3	2.0	2.92	8.99
26-Sep	2.0	2.1	2.1	1.9	1.9	1.9	2.2	2.0	2.1	2.0	1.9	1.9	1.9	2.0	1.9	1.9	A	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.97	2.18
27-Sep	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.2	2.0	1.9	1.9	1.9	1.9	1.9	A	2.1	2.1	2.3	2.0	2.0	2.1	2.0	2.0	2.02	2.29
28-Sep	2.0	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	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.2	2.00	2.18
29-Sep	2.3	2.3	2.4	2.4	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	1.9	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.05	2.39
30-Sep	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1	2.1	2.0	2.03	2.13
2.11 2.12 2.17 2.32 2.25 2.17 2.51 2.40 2.07 2.05 2.02 2.00 1.97 1.96 1.96 1.98 1.97 2.04 2.03 2.11 2.09 2.15 2.15 2.12																									Diurnal Average	
2.79 3.25 3.20 5.80 5.63 3.84 8.99 8.35 2.59 2.72 2.32 2.37 2.23 2.16 2.17 2.20 2.15 3.11 2.61 2.87 2.86 2.96 3.17 2.77																									Diurnal Maximum	
C - Calibration				R - Recovery				M - Maintenance				A - Automated Daily Zero Span														

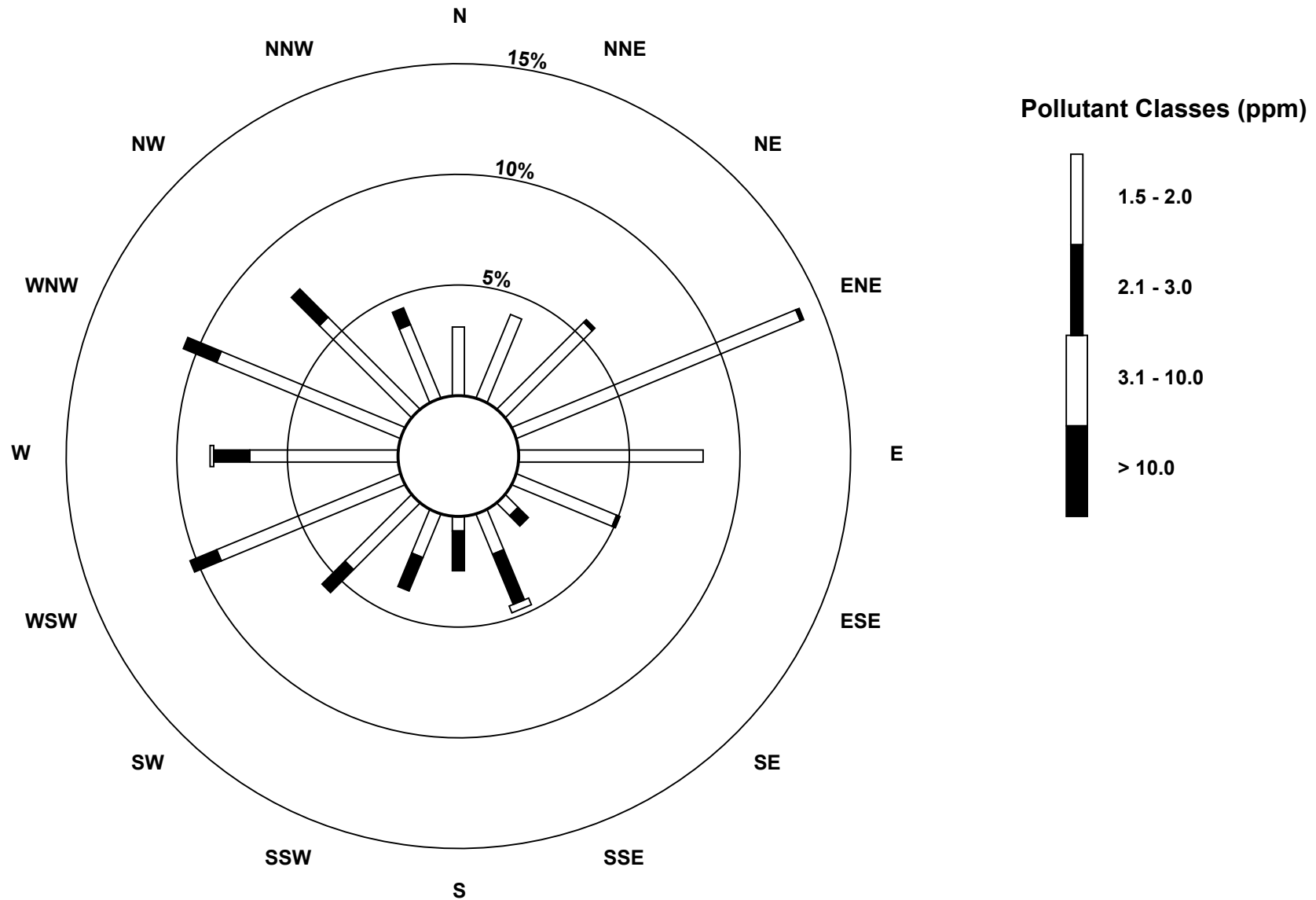
Hourly Maximums

Methane (CH₄) - ppm
Henry Pirker - September 2018



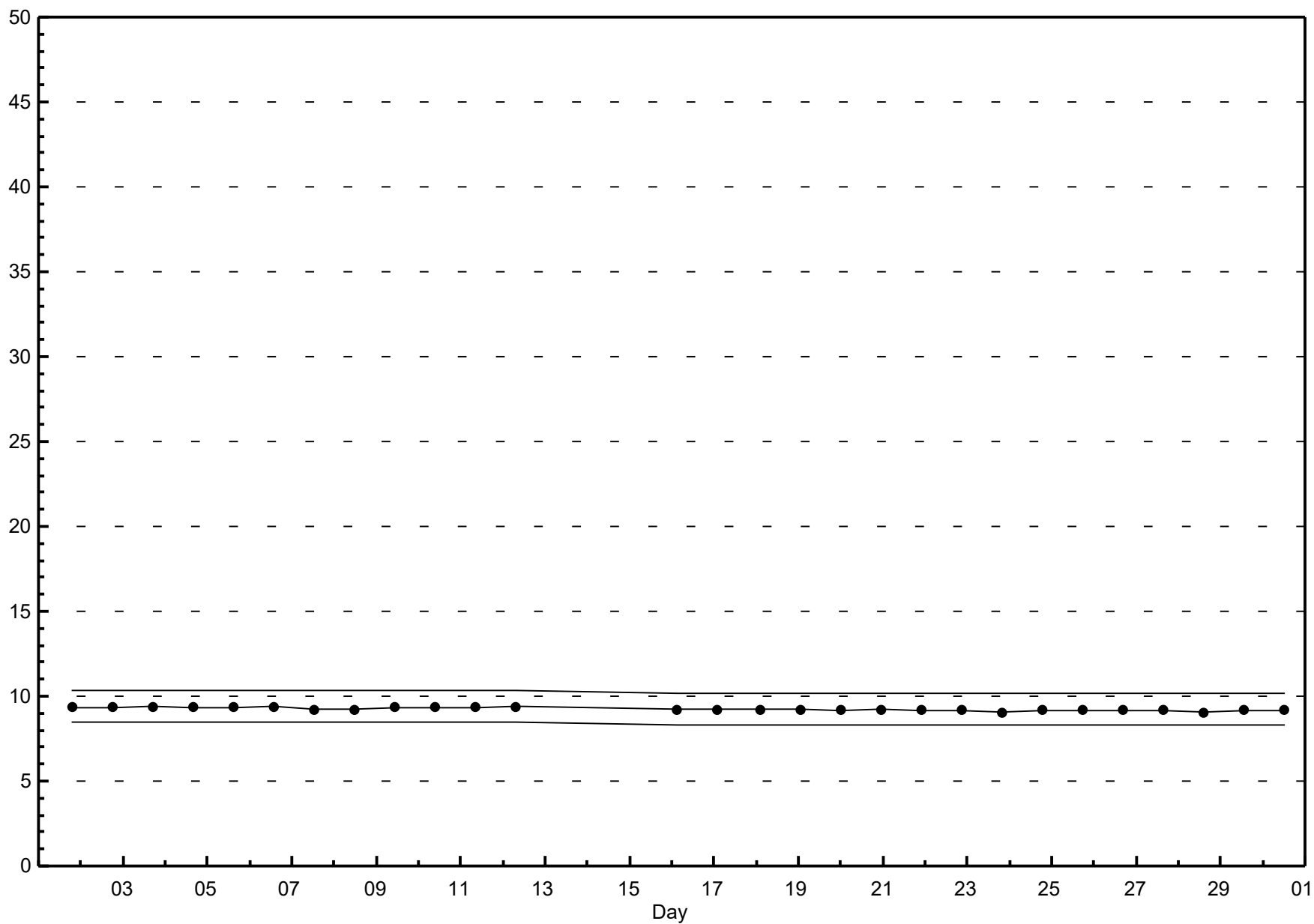
Pollutant Rose

Methane (CH₄) - ppm
Henry Pirker - September 2018



Span Responses

Methane (CH₄)
Henry Pirker - September 2018

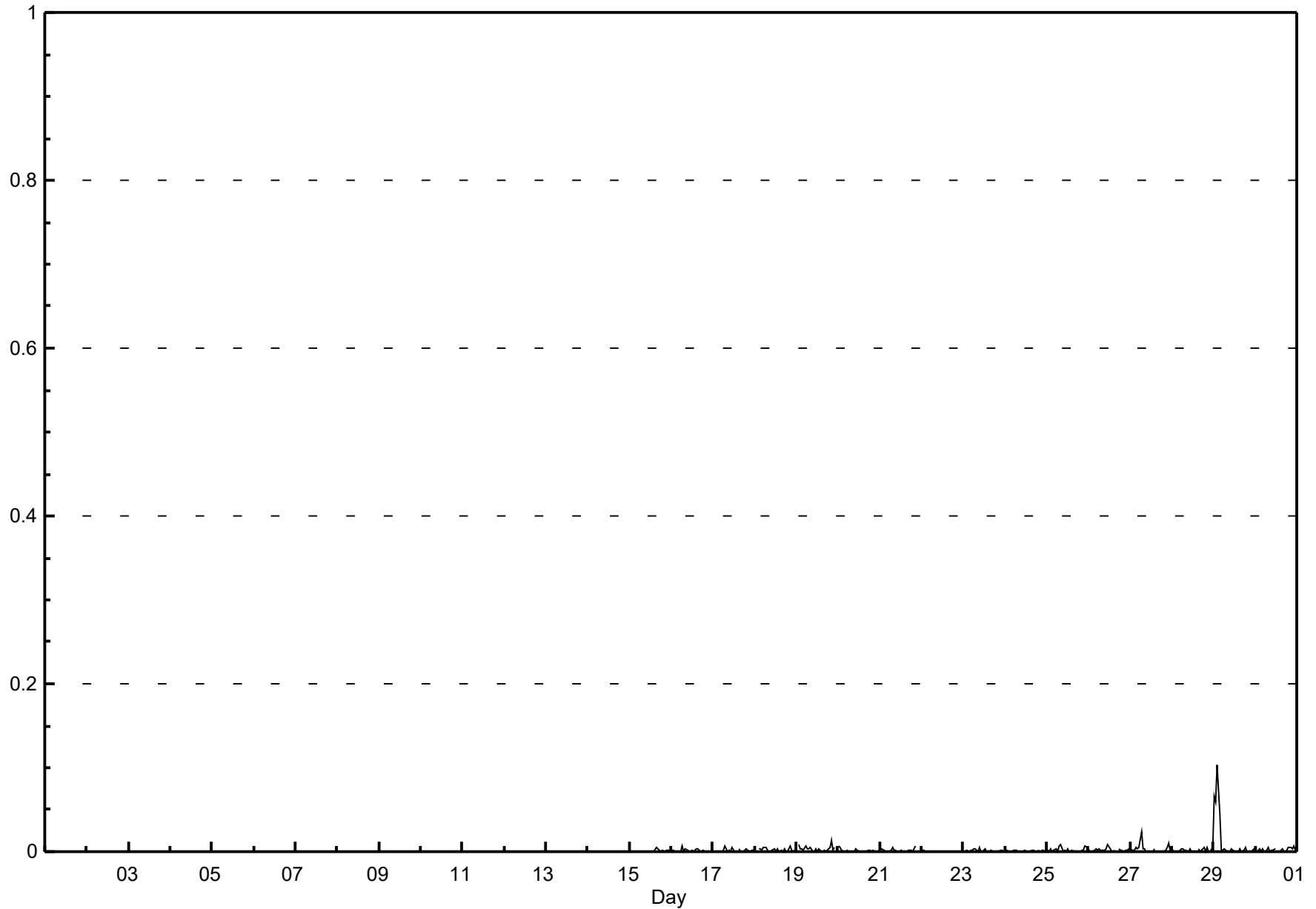


Hourly Averages

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - September 2018

Maximum Value: 0.10 ppm on Sep 29 03:00																								Maximum Daily Average: 0.01 ppm on Sep 29																								Hours in Service: 720	
Minimum Value: 0.0 ppm on Sep 1 01:00																								Minimum Daily Average: 0.00 ppm on Sep 1																								Hours of Data: 612	
Maximum Diurnal Average: 0.00 ppm at hour 3																								Minimum Diurnal Average: 0.00 ppm at hour 14																								Hours of Missing Data: 108	
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 = 0.01																								Hours of Calibration: 38	
																								Percent Operational Time: 90.3																									
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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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																							
2-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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																							
3-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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																							
4-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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																							
5-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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																							
6-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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																							
7-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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																							
8-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																							
9-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																							
10-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																							
11-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																							
12-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	R	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	0.00																							
13-Sep	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--																							
14-Sep	M	M	M	M	M	M	M	M	M	M	M	M	M	C	C	C	C	C	M	M	M	M	M	M	--	--																							
15-Sep	M	M	M	M	M	M	M	M	M	M	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																							
16-Sep	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01																							
17-Sep	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	M	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01																							
18-Sep	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01																							
19-Sep	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.01																							
20-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.00	0.01																							
21-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.01																							
22-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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																							
23-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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																							
24-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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																							
25-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.01																							
26-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.01																							
27-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.02																							
28-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.01																							
29-Sep	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.10																							
30-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01																							
0.00 0.00																								Diurnal Average																									
0.07 0.06 0.10 0.04 0.00 0.01 0.02 0.01 0.01 0.00 0.00 0.01 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.01 0.00 0.01 0.00 0.01 0.01																								Diurnal Maximum																									
C - Calibration				R - Recovery				M - Maintenance				A - Automated Daily Zero Span																																					



Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

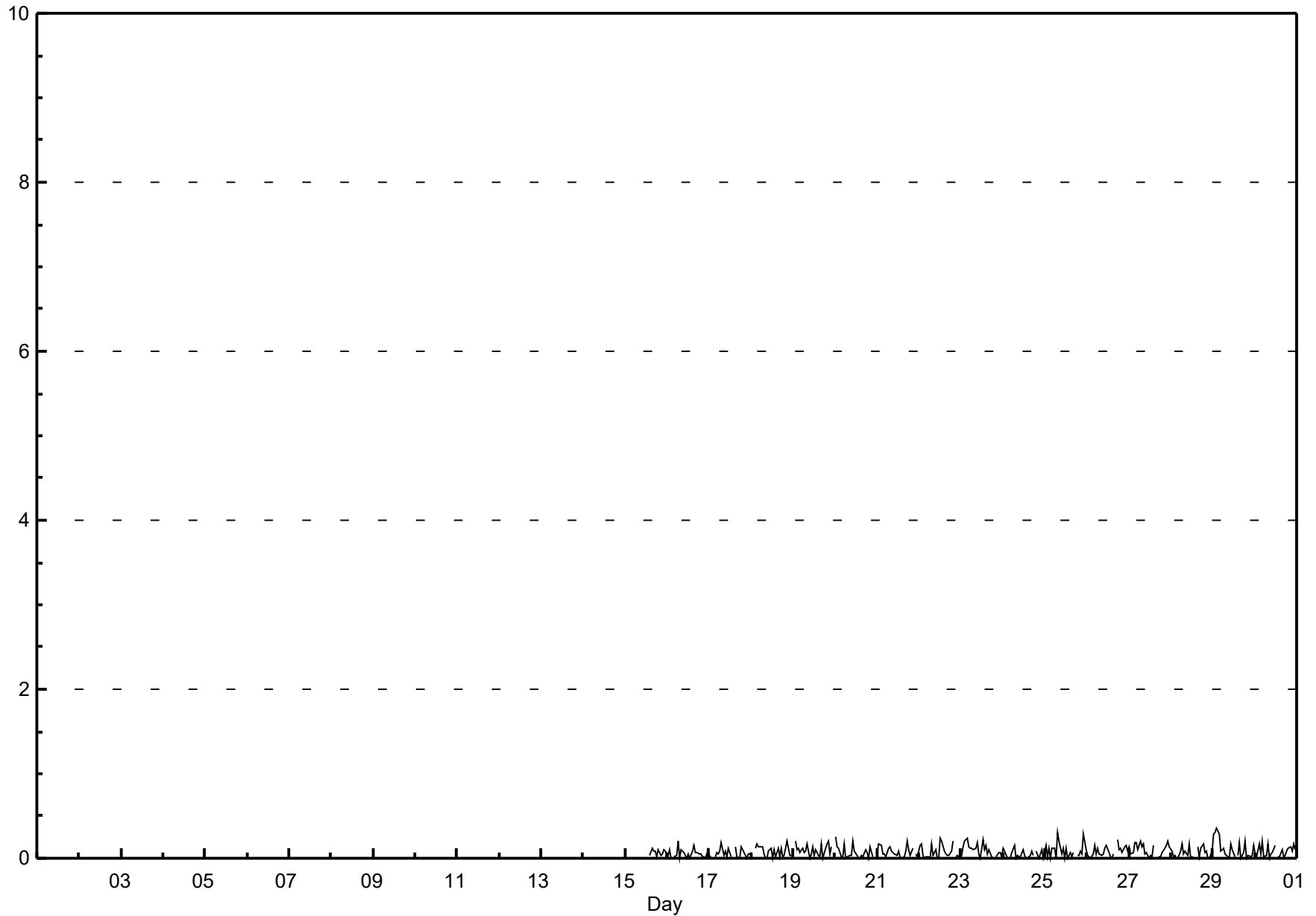
Henry Pirker - September 2018

Maximum Value: 0.35 ppm on Sep 29 03:00																					Maximum Daily Average: 0.12 ppm on Sep 29				Hours in Service: 720	
Minimum Value: 0.0 ppm on Sep 1 08:00																					Minimum Daily Average: 0.00 ppm on Sep 1				Hours of Data: 612	
Maximum Diurnal Average: 0.06 ppm at hour 8																					Minimum Diurnal Average: 0.03 ppm at hour 14				Hours of Missing Data: 108	
Monthly Average: 0.046 ppm																					Percentiles: P ₁ = 0.00 P ₁₀ = 0.00 Q ₁ = 0.00 Median = 0.01 Q ₃ = 0.08 P ₉₀ = 0.14 P ₉₉ = 0.25				Hours of Calibration: 38	
																					Percent Operational Time: 90.3					
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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
2-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
3-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
4-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
5-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
6-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
7-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
8-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
9-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
10-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
11-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
12-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	R	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	0.00
13-Sep	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--
14-Sep	M	M	M	M	M	M	M	M	M	M	M	M	M	C	C	C	C	C	M	M	M	M	M	M	--	--
15-Sep	M	M	M	M	M	M	M	M	M	M	C	C	C	C	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.1	--	0.12
16-Sep	0.0	0.1	0.0	A	0.0	0.0	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.06	0.21
17-Sep	0.0	0.0	A	0.0	0.1	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	M	M	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.06	0.19
18-Sep	0.1	A	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.2	0.1	0.0	0.0	0.08	0.21
19-Sep	A	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.2	0.0	0.1	0.2	0.2	0.1	0.1	A	0.10	0.20
20-Sep	0.2	0.1	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	A	0.1	0.07	0.25
21-Sep	0.1	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.1	A	0.1	0.0	0.07	0.20
22-Sep	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.2	0.2	0.1	0.1	0.0	0.0	0.1	0.2	A	0.0	0.0	0.0	0.07	0.24
23-Sep	0.0	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.0	0.2	0.1	0.2	0.0	0.1	0.0	0.0	A	0.0	0.1	0.1	0.0	0.10	0.24
24-Sep	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	A	0.1	0.0	0.1	0.1	0.0	0.05	0.15
25-Sep	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.3	0.2	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.1	A	0.0	0.0	0.1	0.0	0.3	0.1	0.09	0.30
26-Sep	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.1	0.0	0.0	0.1	A	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.08	0.22
27-Sep	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.2	0.0	0.1	0.0	0.0	0.0	0.1	A	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.10	0.21
28-Sep	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.0	0.2	0.0	0.0	0.0	A	0.1	0.0	0.1	0.2	0.1	0.1	0.0	0.0	0.1	0.06	0.17
29-Sep	0.3	0.3	0.3	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.1	0.0	A	0.0	0.2	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.2	0.12	0.35
30-Sep	0.1	0.0	0.2	0.0	0.2	0.0	0.0	0.2	0.0	0.1	0.1	0.1	A	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.08	0.20
0.06 0.06 0.06 0.05 0.05 0.04 0.06 0.06 0.05 0.03 0.05 0.04 0.04 0.03 0.03 0.05 0.03 0.05 0.05 0.05 0.05 0.05 0.03 0.05 0.04																									Diurnal Average	
0.29 0.30 0.35 0.30 0.20 0.17 0.21 0.30 0.20 0.18 0.20 0.16 0.24 0.20 0.16 0.19 0.17 0.22 0.20 0.20 0.21 0.15 0.29 0.16																									Diurnal Maximum	
C - Calibration				R - Recovery				M - Maintenance				A - Automated Daily Zero Span														

Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

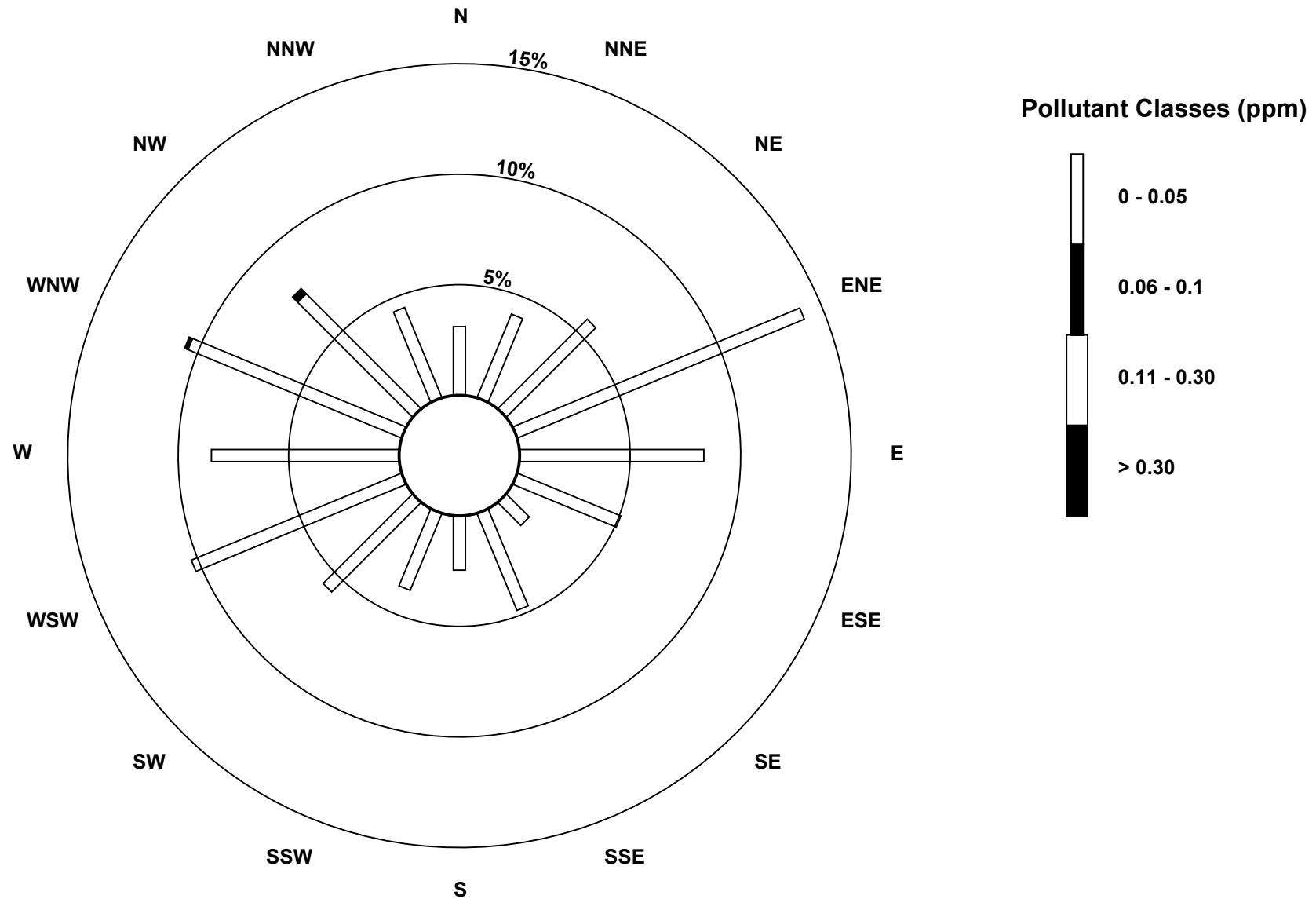
Henry Pirker - September 2018

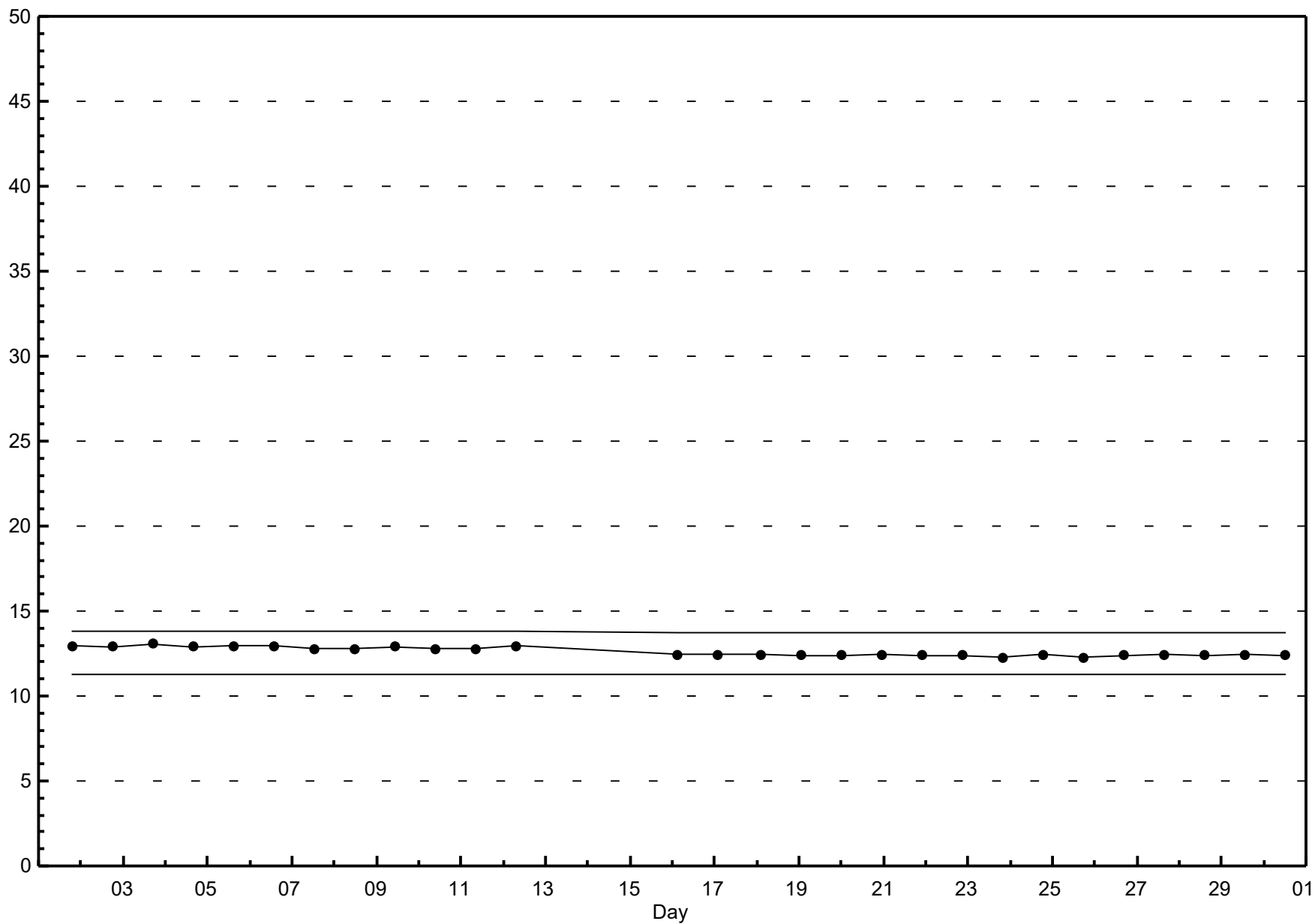


Pollutant Rose

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - September 2018



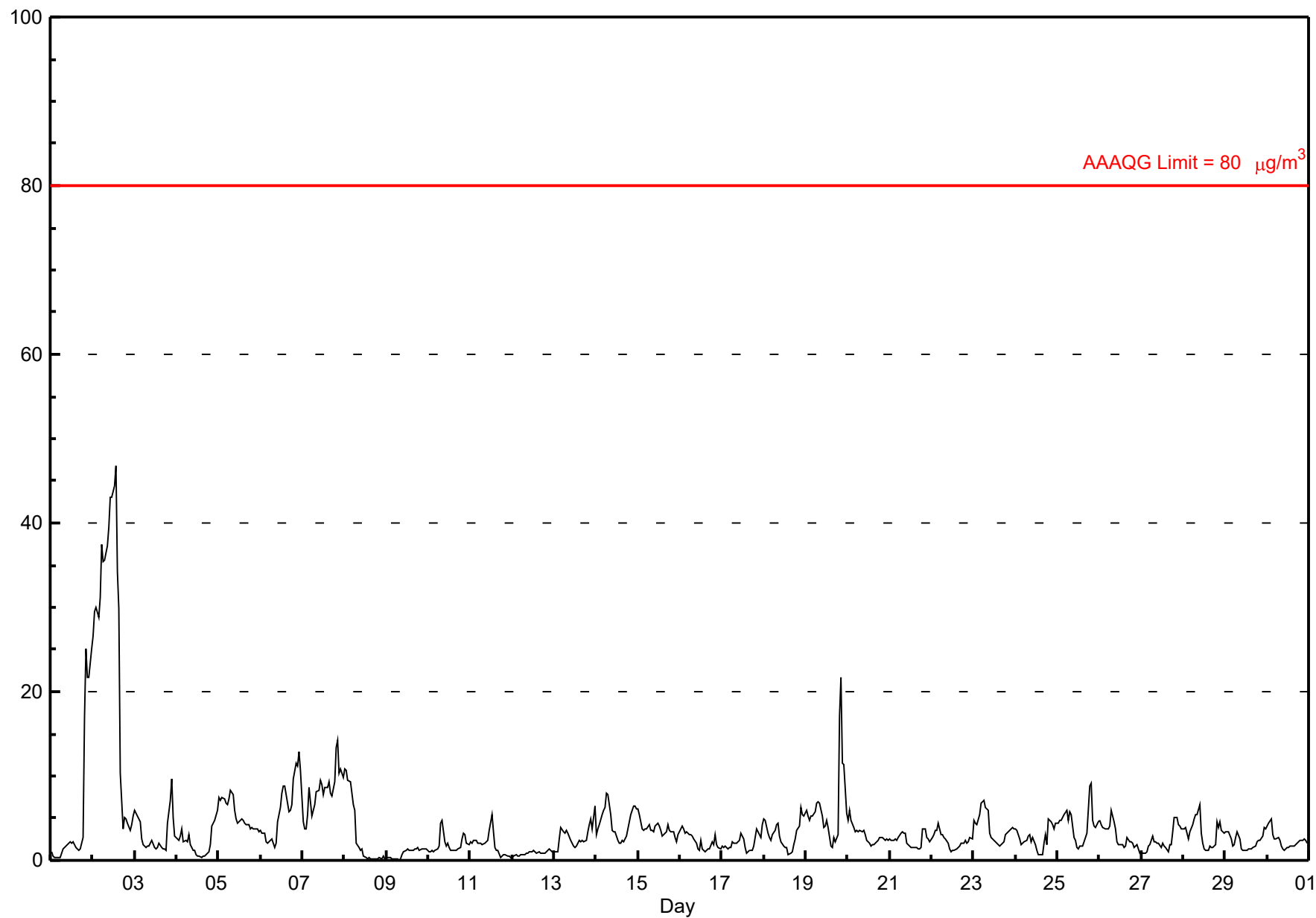


Hourly Averages

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

Henry Pirker - September 2018

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 46.8 µg/m ³ on Sep 2 14:00 Maximum Daily Average: 25.6 µg/m ³ on Sep 2																								Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 0 µg/m ³ on Sep 9 08:00 Maximum Diurnal Average: 5.3 µg/m ³ at hour 21 Monthly Average: 4.03 µg/m ³																								Minimum Daily Average: 0.9 µg/m ³ on Sep 12 Minimum Diurnal Average: 2.3 µg/m ³ at hour 18 Percentiles: P ₁ = 0.2 P ₁₀ = 1.0 Q ₁ = 1.5 Median = 2.6 Q ₃ = 4.3 P ₉₀ = 6.8 P ₉₉ = 35.6		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	1	1	0	0	0	0	1	1	2	2	2	2	2	2	2	1	1	1	3	17	25	22	22	25	5.7	25.1
2-Sep	27	29	30	29	31	38	35	36	37	39	43	43	44	47	34	30	10	4	5	5	4	3	4	5	25.6	46.8
3-Sep	6	6	5	4	3	2	1	2	2	2	2	2	1	2	2	2	1	1	1	4	7	10	5	3	3.2	9.7
4-Sep	3	2	3	4	2	2	2	3	2	1	1	1	0	0	0	0	1	1	1	2	4	4	5	6	2.2	5.9
5-Sep	7	7	7	7	7	7	7	8	8	6	5	4	5	5	5	4	4	4	4	4	4	4	4	3	5.5	8.3
6-Sep	4	3	3	2	2	2	2	2	2	2	5	6	8	9	9	7	6	6	7	10	12	11	13	11	5.9	12.9
7-Sep	5	4	4	5	9	5	6	7	8	8	10	9	8	9	9	9	8	8	9	13	14	10	11	10	8.2	14.3
8-Sep	11	11	9	9	8	7	6	2	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2.9	10.8
9-Sep	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	0.9	1.6
10-Sep	1	1	1	1	1	1	2	4	5	2	2	2	2	1	1	1	1	1	1	3	3	3	2	2	1.9	4.7
11-Sep	2	2	2	2	2	2	2	2	2	2	2	4	5	3	2	1	1	0	0	1	1	1	0	0	1.8	5.4
12-Sep	0	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.4
13-Sep	1	1	1	2	4	3	3	4	3	2	2	2	2	2	2	2	2	2	2	3	4	5	4	6	2.8	6.5
14-Sep	3	4	4	5	6	6	8	8	5	4	3	3	2	2	2	2	2	3	4	5	5	6	6	6	4.5	8.0
15-Sep	6	5	4	4	4	4	4	3	4	3	4	4	4	3	3	3	3	4	4	3	3	3	2	3	3.7	6.1
16-Sep	4	4	4	3	3	3	3	3	3	2	1	1	2	1	1	1	1	1	2	2	3	2	2	1	2.3	4.0
17-Sep	2	2	2	1	2	2	2	2	2	2	2	3	2	1	1	1	1	1	2	3	4	3	3	4	2.1	4.2
18-Sep	5	5	3	3	2	3	4	4	4	3	2	2	1	2	1	1	1	2	3	4	4	6	5	5	3.1	6.2
19-Sep	6	5	5	5	5	6	7	7	7	5	4	4	5	4	2	2	3	2	3	17	22	12	11	6	6.4	21.7
20-Sep	5	6	5	4	3	3	3	4	3	3	3	2	2	2	2	2	2	2	3	3	3	2	3	2	3.0	6.0
21-Sep	2	2	2	3	2	3	3	3	3	3	2	2	2	2	2	1	1	1	1	4	4	3	3	2	2.4	3.7
22-Sep	3	3	3	4	4	3	3	3	3	2	1	1	1	1	1	2	2	2	2	2	2	2	3	3	2.3	4.4
23-Sep	5	4	4	5	7	7	7	6	6	3	3	3	2	2	2	2	2	2	3	3	3	4	4	4	3.9	7.1
24-Sep	4	4	3	2	2	2	2	3	3	2	3	2	1	1	1	1	2	3	2	5	5	4	4	4	2.6	4.9
25-Sep	4	5	5	5	5	6	5	6	5	3	2	2	1	2	2	2	3	3	9	9	5	4	4	5	4.2	9.2
26-Sep	5	4	4	4	4	4	4	6	5	4	2	2	2	2	2	2	3	2	2	2	2	1	1	1	2.8	5.9
27-Sep	1	1	1	1	2	2	3	2	2	2	2	2	2	2	2	1	2	2	3	5	5	4	4	4	2.3	5.1
28-Sep	4	4	3	3	3	4	5	6	5	7	3	2	1	1	1	2	2	2	2	5	4	5	4	3	3.3	6.5
29-Sep	3	3	3	2	2	2	3	3	3	1	1	1	1	1	1	1	1	2	2	2	2	3	4	4	2.3	3.8
30-Sep	4	4	5	3	3	3	3	2	2	1	1	2	2	2	2	2	2	2	2	2	2	3	2	2	2.4	4.9
4.4 4.4 4.2 4.2 4.3 4.4 4.6 4.7 4.6 4.0 4.0 3.8 3.8 3.7 3.1 2.9 2.4 2.3 2.8 4.7 5.3 4.8 4.6 4.5																								Diurnal Average	Diurnal Maximum	
26.7 29.5 29.9 28.9 31.2 37.5 35.4 35.6 37.3 39.4 43.0 43.1 44.4 46.8 34.3 29.9 10.3 7.6 9.3 17.1 25.1 21.8 21.6 25.1																										
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m ³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m ³																										



Hourly Maximums

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

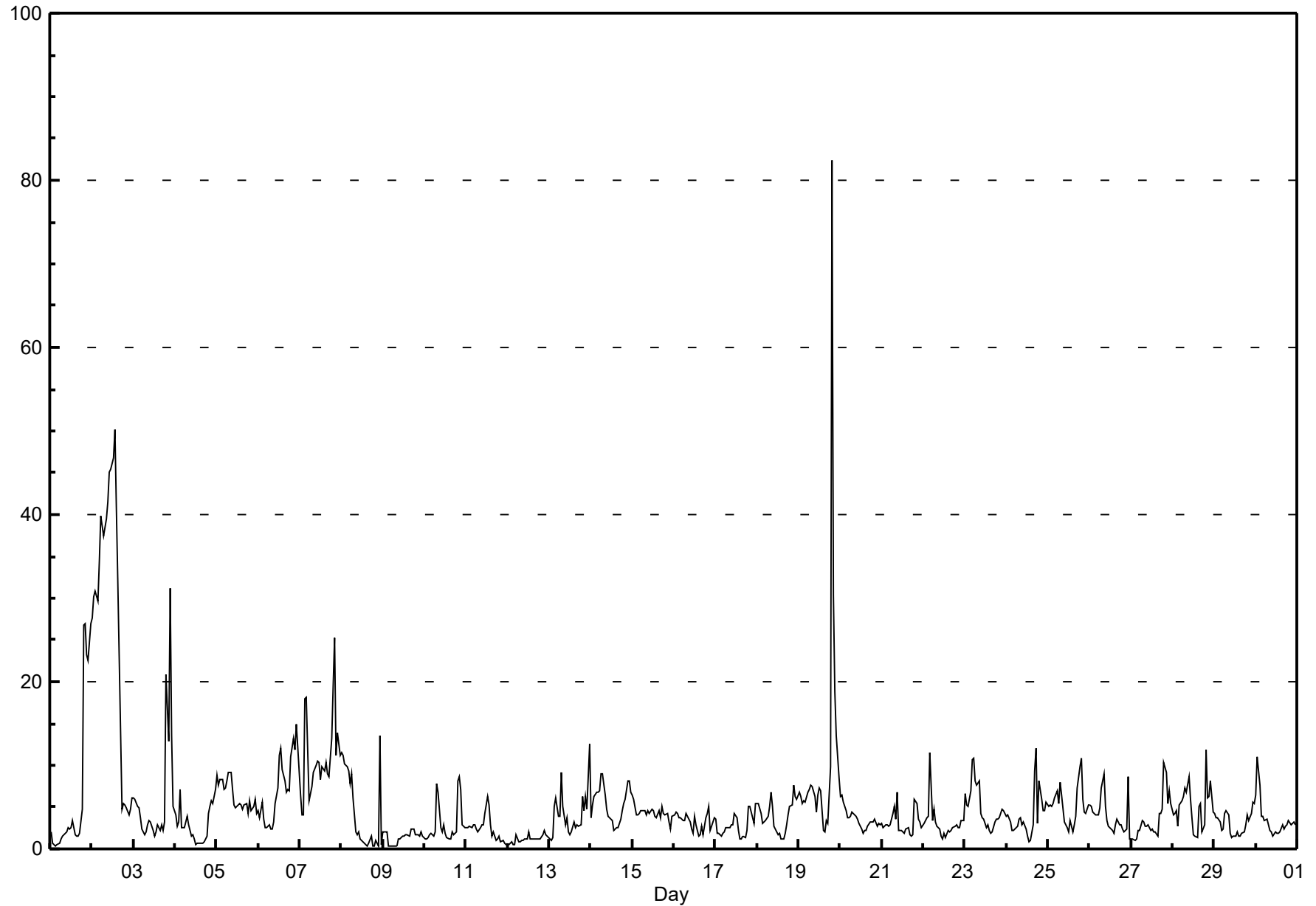
Henry Pirker - September 2018

Maximum Value: 82.3 μg/m ³ on Sep 19 20:00																								Maximum Daily Average: 27.9 μg/m ³ on Sep 2										Hours in Service: 720	
Minimum Value: 0 μg/m ³ on Sep 9 08:00																								Minimum Daily Average: 1.2 μg/m ³ on Sep 12										Hours of Data: 720	
Maximum Diurnal Average: 9.5 μg/m ³ at hour 20																								Minimum Diurnal Average: 3.4 μg/m ³ at hour 18										Hours of Missing Data: 0	
Monthly Average: 5.26 μg/m ³																								Percentiles: P ₁ = 0.4 P ₁₀ = 1.3 Q ₁ = 2.1 Median = 3.4 Q ₃ = 5.6 P ₉₀ = 9.2 P ₉₉ = 39.8										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-Sep	2	1	1	0	0	1	1	2	2	2	2	2	2	3	2	1	2	2	5	27	27	23	23	27	6.7	27.0									
2-Sep	28	30	31	30	34	40	39	37	39	42	45	45	47	50	41	32	23	5	6	5	5	4	5	6	27.9	50.2									
3-Sep	6	6	5	5	4	2	2	2	3	3	3	2	2	2	3	2	3	2	3	21	13	31	14	5	6.0	31.3									
4-Sep	4	3	3	7	3	3	3	4	3	2	2	1	1	1	1	1	1	1	2	4	5	6	5	7	2.9	7.1									
5-Sep	9	8	8	8	7	7	8	9	9	7	5	5	5	5	5	5	5	5	4	6	5	5	6	4	6.3	9.2									
6-Sep	5	4	6	4	3	2	3	2	2	3	5	7	11	12	9	8	7	7	7	11	13	12	15	12	7.1	14.9									
7-Sep	6	4	4	18	18	6	7	7	9	10	11	10	8	10	9	10	9	9	13	20	25	11	14	11	10.8	25.3									
8-Sep	11	11	10	10	9	8	9	6	2	2	2	1	1	1	1	0	1	2	0	0	1	0	14	1	4.3	13.6									
9-Sep	2	2	2	0	0	0	0	0	0	1	1	2	1	2	2	1	2	2	2	2	2	2	2	2	1.4	2.5									
10-Sep	1	1	1	2	2	1	2	8	7	3	2	3	2	1	1	1	2	2	2	8	9	7	3	3	3.1	8.7									
11-Sep	2	3	3	2	3	3	2	2	3	3	3	4	6	5	3	2	2	1	1	2	1	1	1	1	2.4	6.2									
12-Sep	1	1	1	1	1	2	1	1	1	1	1	1	2	1	1	1	1	1	1	1	2	2	2	2	1.2	2.2									
13-Sep	1	1	1	5	6	4	4	9	5	3	4	2	2	2	3	2	3	3	3	6	5	6	5	12	4.1	12.5									
14-Sep	4	5	6	7	7	7	9	9	6	5	4	4	3	2	2	3	3	4	5	5	6	8	8	7	5.3	9.0									
15-Sep	6	6	4	4	4	5	5	5	4	5	4	5	5	4	4	5	4	5	4	4	4	3	2	4	4.3	6.5									
16-Sep	4	4	4	4	4	3	3	4	4	3	2	2	4	3	2	2	3	2	4	4	5	2	3	4	3.3	5.1									
17-Sep	4	2	2	2	2	2	3	3	3	3	3	4	4	2	1	1	1	1	2	5	5	4	3	5	2.8	5.5									
18-Sep	5	5	4	3	3	3	4	5	7	5	3	2	2	2	1	1	2	3	4	5	5	8	6	6	4.0	7.6									
19-Sep	7	6	5	6	6	7	7	8	7	6	4	6	7	7	2	2	3	3	10	82	30	19	14	9	11.0	82.3									
20-Sep	6	6	6	5	4	4	4	4	4	4	4	3	2	2	2	2	3	3	3	3	4	3	3	3	3.6	6.5									
21-Sep	3	3	3	3	3	3	4	5	4	7	2	2	2	2	2	3	2	2	2	6	5	4	3	3	3.1	6.7									
22-Sep	3	3	4	4	12	3	5	3	3	2	2	1	2	1	2	2	2	3	3	3	2	3	3	3	3.1	11.6									
23-Sep	7	5	5	7	11	11	8	8	8	4	4	4	2	3	2	2	2	3	4	4	4	5	5	4	5.0	10.9									
24-Sep	4	4	3	2	2	2	3	4	4	3	3	2	2	1	1	3	9	12	3	8	6	5	5	6	4.0	12.1									
25-Sep	5	5	5	5	6	7	5	8	6	3	3	3	2	3	2	3	4	7	10	11	6	4	4	5	5.2	10.8									
26-Sep	5	5	4	4	4	4	5	7	9	5	3	3	2	2	2	3	4	3	3	2	2	2	9	1	3.9	8.9									
27-Sep	1	1	1	1	2	2	3	3	3	3	3	2	2	2	2	2	4	4	5	10	9	5	7	5	3.5	10.3									
28-Sep	4	4	5	3	5	6	6	7	7	9	6	4	2	1	1	5	5	2	3	12	6	6	8	4	5.1	11.9									
29-Sep	4	4	4	3	2	2	4	5	4	2	1	2	1	2	1	2	2	2	3	4	3	4	6	5	3.0	5.6									
30-Sep	6	11	8	4	4	3	4	3	2	2	1	2	2	2	2	3	2	3	3	3	3	3	3	3	3.4	11.0									
5.3 5.2 5.0 5.3 5.7 5.1 5.4 6.0 5.7 5.0 4.6 4.6 4.6 4.6 3.8 3.7 3.8 3.4 4.0 9.5 7.3 6.6 6.6 5.7																									Diurnal Average										
27.6 30.2 30.8 29.7 34.5 39.9 38.7 37.4 39.5 41.5 45.1 45.4 46.8 50.2 40.9 32.3 23.0 12.1 13.2 82.3 30.3 31.3 22.5 27.0																									Diurnal Maximum										

Hourly Maximums

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

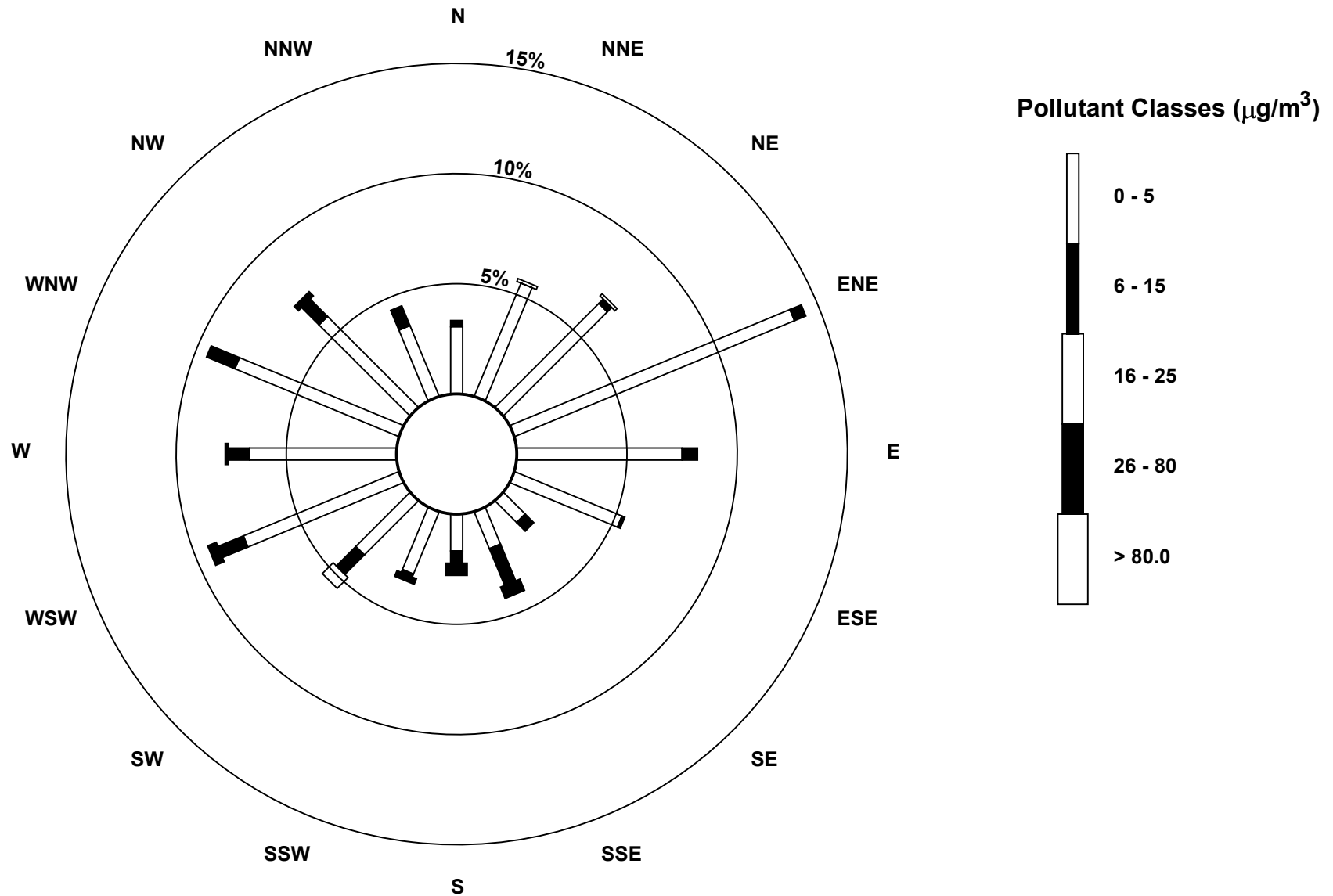
Henry Pirker - September 2018



Pollutant Rose

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

Henry Pirker - September 2018



Hourly Averages

External Temperature (ET) - °C

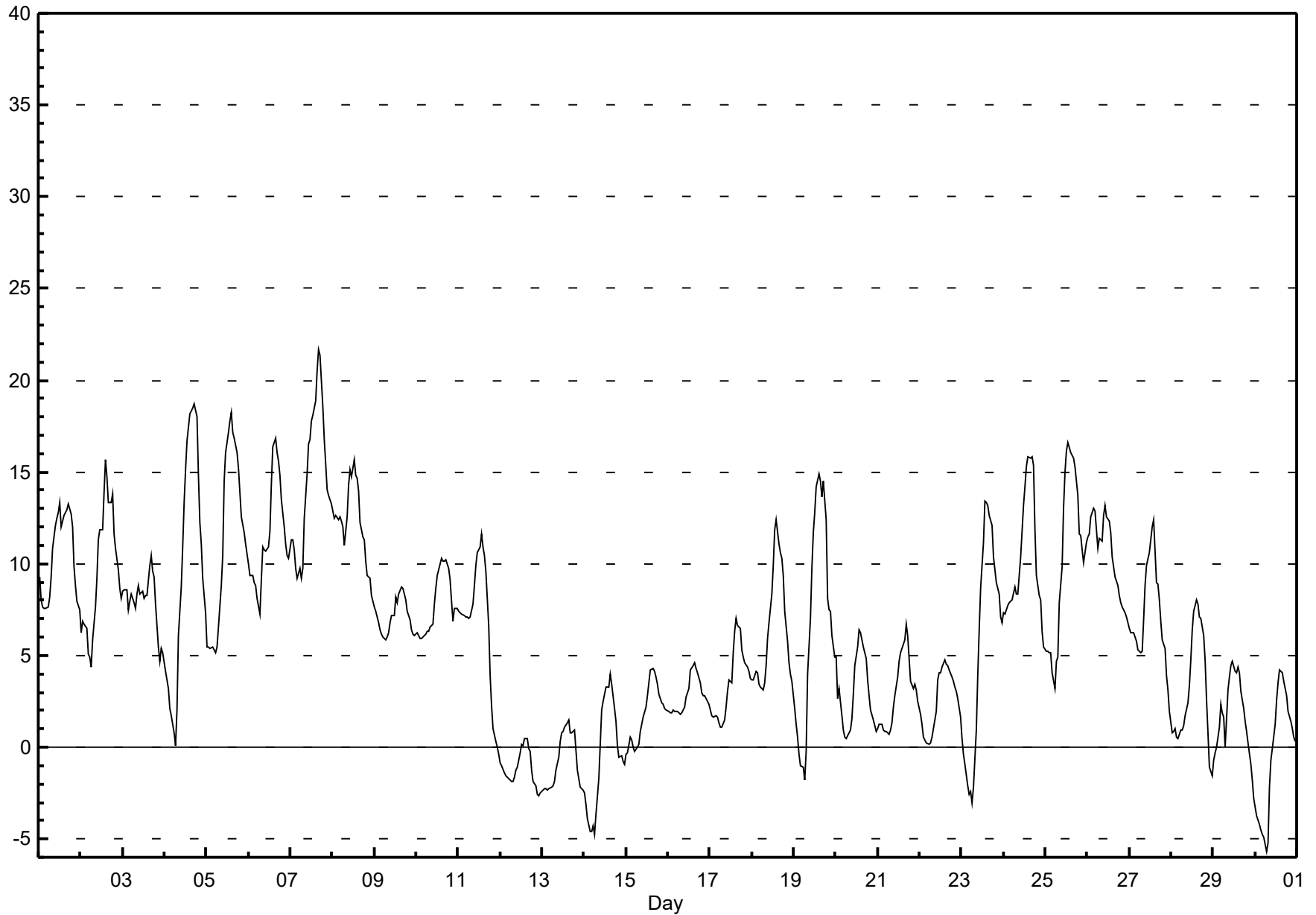
Henry Pirker - September 2018

Maximum Value: 21.7 °C on Sep 7 17:00																				Maximum Daily Average: 14.7 °C on Sep 7					Hours in Service: 720	
Minimum Value: -6 °C on Sep 30 07:00																				Minimum Daily Average: -1.2 °C on Sep 12					Hours of Data: 720	
Maximum Diurnal Average: 10.0 °C at hour 15																				Minimum Diurnal Average: 3.1 °C at hour 7					Hours of Missing Data: 0	
Monthly Average: 6.17 °C																				Percentiles: P ₁ = -4.4 P ₁₀ = -0.4 Q ₁ = 1.9 Median = 6.0 Q ₃ = 9.9 P ₉₀ = 13.4 P ₉₉ = 18.3					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-Sep	9	8	8	8	8	8	8	9	11	12	12	13	13	12	13	13	13	13	13	12	10	9	8	7	10.4	13.4
2-Sep	6	7	7	7	5	5	4	6	8	9	11	12	12	14	16	15	13	13	14	12	11	10	9	8	9.7	15.7
3-Sep	8	9	9	8	8	8	8	8	8	9	8	8	8	8	8	10	10	10	9	8	5	5	5	5	8.0	10.4
4-Sep	4	4	3	2	2	1	0	2	6	9	11	13	15	17	18	18	19	19	18	15	12	11	9	7	9.8	18.7
5-Sep	5	5	5	5	5	5	5	7	9	10	15	16	17	18	18	17	17	16	15	14	13	12	11	11	11.3	18.2
6-Sep	10	9	9	9	9	8	7	9	11	11	11	11	12	14	16	17	16	16	15	14	12	11	10	10	11.6	16.8
7-Sep	11	11	11	10	9	10	9	10	12	15	17	17	18	18	19	20	22	21	19	17	15	14	14	13	14.7	21.7
8-Sep	13	12	13	12	13	12	12	11	13	14	15	15	16	15	15	14	12	11	11	10	9	9	8	8	12.2	15.7
9-Sep	8	7	7	6	6	6	6	6	6	7	7	7	8	8	8	9	9	8	8	7	7	6	6	6	7.1	8.8
10-Sep	6	6	6	6	6	6	6	6	7	7	8	9	9	10	10	10	10	10	10	9	8	7	8	8	7.8	10.3
11-Sep	7	7	7	7	7	7	7	7	8	9	10	11	11	12	11	10	10	7	4	2	1	0	0	0	6.7	11.6
12-Sep	-1	-1	-1	-2	-2	-2	-2	-2	-2	-1	-1	0	0	0	0	0	0	0	-1	-2	-2	-3	-3	-3	-1.2	0.5
13-Sep	-2	-2	-2	-2	-2	-2	-2	-2	-1	-1	0	1	1	1	1	2	1	1	1	0	-1	-2	-2	-2	-0.8	1.5
14-Sep	-2	-3	-4	-5	-5	-4	-5	-4	-2	0	2	3	3	3	3	4	3	2	1	0	-1	0	-1	-1	-0.4	3.9
15-Sep	0	0	1	0	0	0	0	0	1	1	2	2	3	4	4	4	4	4	3	3	2	2	2	2	1.8	4.3
16-Sep	2	2	2	2	2	2	2	2	2	2	3	3	3	4	4	5	4	4	4	3	3	3	3	2	2.8	4.6
17-Sep	2	2	2	2	2	1	1	1	1	2	3	4	4	5	6	7	7	6	5	5	5	4	4	4	3.5	7.0
18-Sep	4	4	4	4	3	3	3	3	4	6	7	8	10	12	12	11	11	10	9	7	6	5	4	4	6.5	12.4
19-Sep	2	1	1	0	-1	-1	-2	0	4	7	10	12	13	14	15	14	14	14	12	8	8	7	6	5	6.8	14.9
20-Sep	5	3	3	2	1	1	0	1	1	2	3	4	5	6	6	6	5	5	4	3	2	2	1	1	3.0	6.4
21-Sep	1	1	1	1	1	1	1	1	1	2	3	4	5	5	5	6	7	6	5	4	3	3	3	3	3.0	6.7
22-Sep	2	1	1	0	0	0	0	1	1	2	4	4	4	4	5	5	4	4	4	4	3	3	3	2	2.5	4.8
23-Sep	0	0	-1	-2	-3	-2	-3	-2	1	4	6	9	11	13	13	13	13	12	10	10	9	8	7	7	5.6	13.4
24-Sep	7	7	8	8	8	8	9	8	8	9	10	13	14	15	16	16	16	15	12	9	8	8	6	5	10.2	15.9
25-Sep	5	5	5	5	4	3	5	5	8	10	13	15	16	17	16	16	16	15	14	12	12	11	10	11	10.3	16.6
26-Sep	11	12	13	13	13	12	11	11	11	13	13	13	12	12	10	10	9	9	8	8	8	7	7	7	10.5	13.2
27-Sep	7	6	6	6	6	5	5	5	7	9	10	11	11	12	12	9	9	8	7	6	5	4	3	2	7.1	12.4
28-Sep	1	1	1	1	0	1	1	1	2	2	3	5	6	7	8	8	7	7	6	5	3	1	-1	-2	3.1	8.0
29-Sep	-1	0	0	1	2	2	2	0	3	4	4	5	4	4	4	4	3	2	1	1	0	-1	-2	-3	1.7	4.7
30-Sep	-3	-4	-4	-4	-5	-5	-6	-5	-2	-1	0	1	3	4	4	4	4	3	3	2	1	1	1	0	-0.4	4.2
																									Diurnal Average	
																									Diurnal Maximum	

Hourly Averages

External Temperature (ET) - °C

Henry Pirker - September 2018



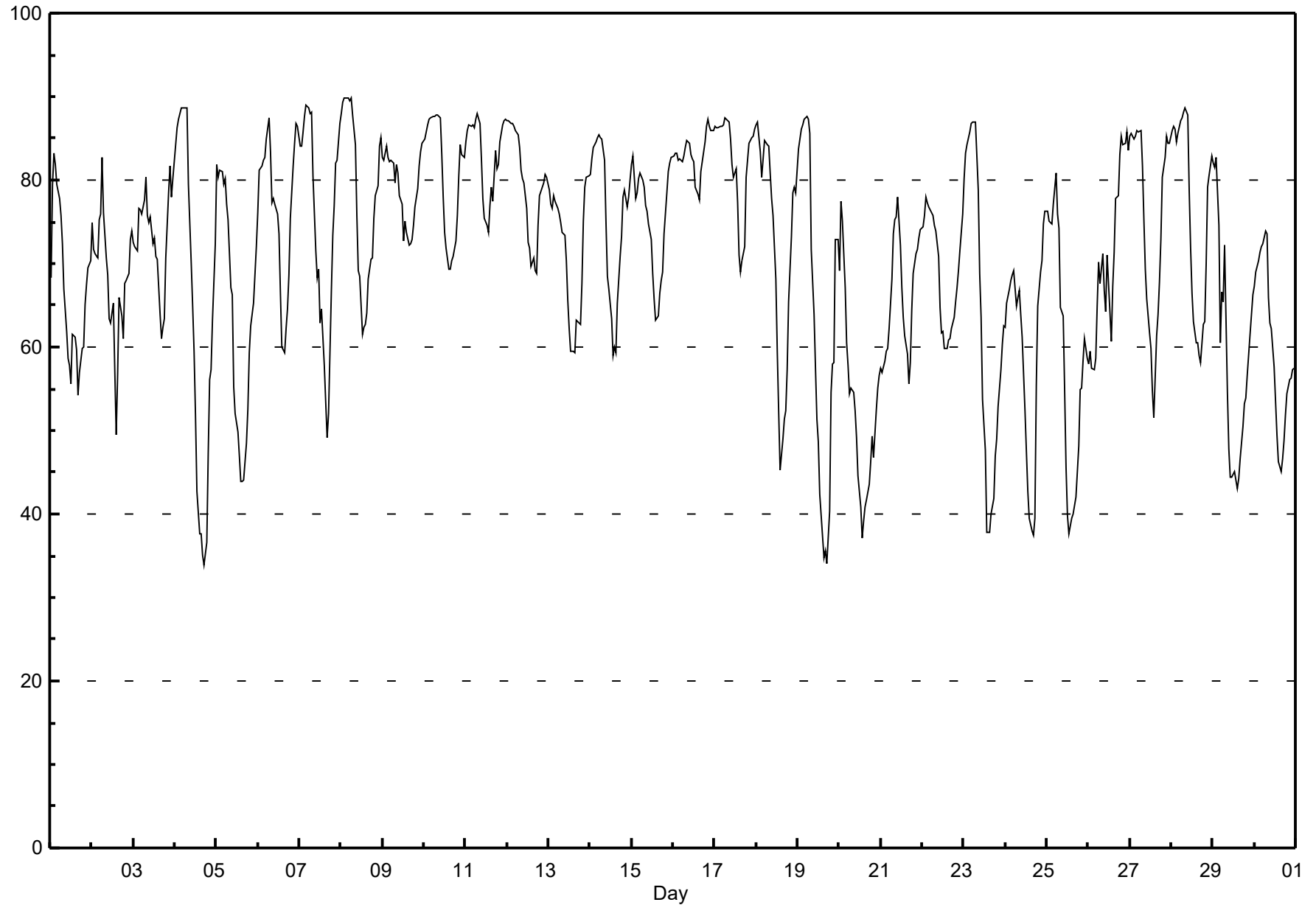
Hourly Averages

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

Maximum Value: 89.9 % on Sep 8 03:00																				Maximum Daily Average: 83.1 % on Sep 16					Hours in Service: 720				
Minimum Value: 34 % on Sep 4 18:00																				Minimum Daily Average: 52.8 % on Sep 20					Hours of Data: 720				
Maximum Diurnal Average: 80.0 % at hour 7																				Minimum Diurnal Average: 56.4 % at hour 15					Hours of Missing Data: 0				
Monthly Average: 70.65 %																				Percentiles: P ₁ = 37.3 P ₁₀ = 51.4 Q ₁ = 61.9 Median = 73.0 Q ₃ = 82.1 P ₉₀ = 86.3 P ₉₉ = 88.7					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-Sep	68	79	83	82	79	78	76	72	67	62	59	58	56	62	61	60	54	57	60	60	65	68	69	70	66.9	83.2			
2-Sep	75	72	71	71	75	76	83	76	71	69	63	63	65	57	49	57	66	64	61	68	68	69	73	74	68.1	82.8			
3-Sep	73	72	72	77	76	76	78	80	76	75	76	72	73	71	71	64	61	62	63	71	79	82	78	80	73.2	81.7			
4-Sep	84	86	87	88	89	89	89	89	79	70	65	59	52	43	38	38	35	34	37	47	56	57	63	72	64.4	88.7			
5-Sep	82	80	81	81	80	80	77	75	67	66	55	52	50	47	44	44	44	48	53	59	63	65	69	72	63.9	81.8			
6-Sep	76	81	82	82	83	85	88	83	77	78	77	76	74	66	60	59	62	65	69	75	82	84	87	86	76.6	87.5			
7-Sep	84	84	86	88	89	89	88	88	81	71	68	69	63	65	58	53	49	52	67	73	77	82	82	87	74.7	88.9			
8-Sep	88	89	90	90	90	89	90	88	84	76	69	68	62	62	63	64	68	71	71	75	78	79	84	85	78.1	89.9			
9-Sep	83	82	84	83	82	82	82	80	82	81	78	77	73	75	74	72	72	73	75	77	79	82	83	84	79.0	84.5			
10-Sep	85	86	87	87	87	88	88	88	88	87	83	78	74	72	69	69	70	71	73	76	81	84	83	83	80.7	87.9			
11-Sep	85	86	87	86	87	86	87	88	87	83	78	75	75	74	77	79	77	84	81	82	85	87	87	87	82.8	88.0			
12-Sep	87	87	87	87	86	86	85	84	81	80	80	77	73	72	70	71	69	69	75	78	79	80	81	80	79.3	87.1			
13-Sep	79	77	77	78	77	77	76	75	74	73	70	66	62	59	59	59	63	63	63	68	75	79	80	80	71.3	80.5			
14-Sep	81	83	84	85	85	85	85	85	82	75	69	67	63	59	60	59	65	71	73	78	79	77	78	80	75.3	85.4			
15-Sep	82	83	78	78	80	81	80	79	77	76	75	73	69	66	63	64	66	68	69	74	78	81	82	83	75.2	82.9			
16-Sep	83	83	83	82	83	82	83	84	85	84	83	82	82	79	78	78	81	82	85	86	87	86	86	86	83.1	87.3			
17-Sep	86	86	86	86	86	87	87	87	87	85	82	80	81	77	71	69	70	72	80	82	84	85	85	86	82.2	87.5			
18-Sep	87	87	83	80	83	85	84	84	81	78	76	68	59	52	45	49	51	52	57	65	73	78	79	79	71.5	87.0			
19-Sep	84	85	86	87	87	88	87	86	72	64	58	51	49	42	37	35	36	34	40	55	58	58	73	73	63.5	87.7			
20-Sep	69	78	75	67	61	58	54	55	55	52	49	45	41	37	39	41	42	44	46	49	47	53	55	57	52.8	77.5			
21-Sep	57	57	58	59	60	62	68	74	75	76	78	72	67	64	61	59	56	58	64	69	71	72	73	74	66.0	78.0			
22-Sep	74	76	78	77	77	76	76	75	74	71	65	62	62	60	60	61	61	62	64	65	67	69	71	76	69.1	78.0			
23-Sep	80	83	84	86	87	87	87	87	79	69	63	54	48	38	38	38	40	42	47	49	53	57	60	63	63.2	87.0			
24-Sep	62	65	67	68	69	69	65	66	67	64	61	52	47	43	39	38	37	40	55	65	69	70	75	76	59.6	76.3			
25-Sep	76	75	75	75	77	81	76	74	65	64	55	46	40	38	39	40	41	42	48	55	55	58	61	59	58.9	80.8			
26-Sep	58	60	58	57	59	65	70	68	71	67	64	71	64	61	67	71	78	78	83	85	84	84	86	84	70.5	85.8			
27-Sep	85	86	85	85	86	86	86	82	75	69	66	62	60	55	52	61	64	68	73	80	83	85	84	84	75.1	86.0			
28-Sep	86	86	86	85	86	87	87	88	89	88	79	72	67	63	60	61	59	58	63	63	70	79	80	83	76.0	88.6			
29-Sep	82	81	83	75	60	67	66	72	55	48	44	44	45	44	43	44	47	50	53	54	57	62	64	66	58.6	82.8			
30-Sep	67	69	70	71	72	72	74	74	66	63	62	58	54	49	46	45	47	49	52	54	56	56	57	58	60.1	73.9			
78.3 79.5 79.7 79.4 79.3 79.9 80.0 79.5 75.5 72.1 68.3 65.0 61.6 58.4 56.4 56.7 57.8 59.4 63.3 68.0 71.2 73.7 75.7 76.9																									Diurnal Average				
88.0 89.4 89.9 89.9 89.8 89.4 89.8 88.7 88.6 87.8 83.1 82.5 82.2 79.1 78.3 79.1 81.0 83.6 84.5 86.4 87.3 86.6 87.1 87.3																									Diurnal Maximum				

Hourly Averages

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



Hourly Averages

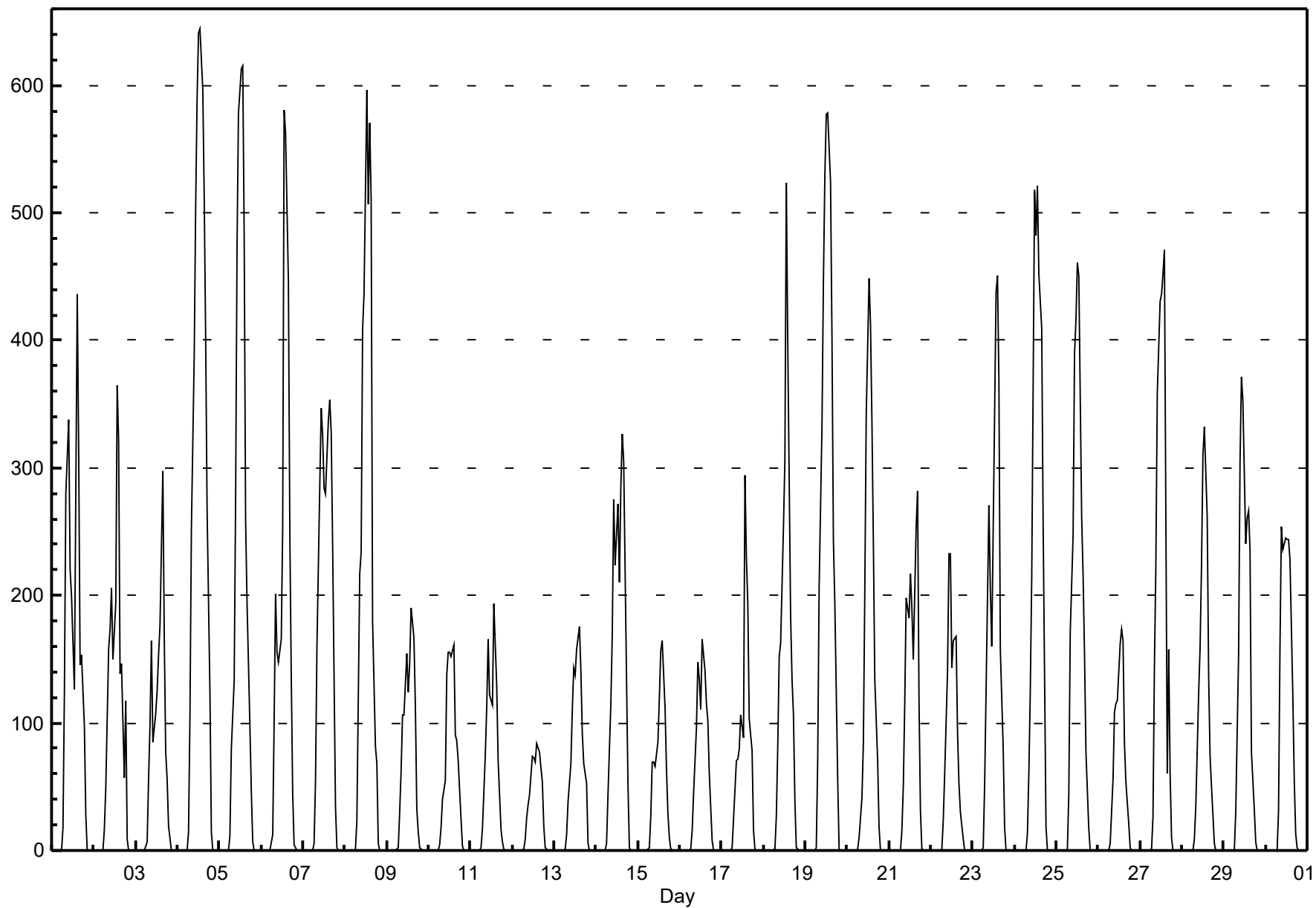
Solar Radiation (SR) - W/m²

Henry Pirker - September 2018

Maximum Value: 644.7 W/m ² on Sep 4 14:00																								Hours in Service: 720		
Maximum Daily Average: 210.8 W/m ² on Sep 4																								Hours of Data: 720		
Minimum Value: 0 W/m ² on Sep 1 01:00																								Hours of Missing Data: 0		
Maximum Diurnal Average: 318.6 W/m ² at hour 14																								Hours of Calibration: 0		
Monthly Average: 93.33 W/m ²																								Percent Operational Time: 100.0		
Minimum Daily Average: 26.3 W/m ² on Sep 12																										
Minimum Diurnal Average: 0.0 W/m ² at hour 22																										
Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 8.9 Q ₃ = 148.6 P ₉₀ = 294.3 P ₉₉ = 580.5																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	0	0	0	0	0	0	17	124	280	338	220	199	163	127	436	314	145	154	98	28	0	0	0	0	110.1	436.0
2-Sep	0	0	0	0	0	0	17	49	158	174	206	150	193	365	321	139	147	57	118	9	0	0	0	0	87.5	365.1
3-Sep	0	0	0	0	0	0	7	56	99	164	84	108	125	153	176	298	167	77	56	19	0	0	0	0	66.2	297.5
4-Sep	0	0	0	0	0	0	15	105	252	389	505	590	641	645	596	511	403	268	125	14	0	0	0	0	210.8	644.7
5-Sep	0	0	0	0	0	0	11	80	134	275	473	579	613	615	483	259	195	98	47	7	0	0	0	0	161.2	615.0
6-Sep	0	0	0	0	0	0	13	100	201	156	148	165	254	581	563	446	249	138	45	4	0	0	0	0	127.6	580.9
7-Sep	0	0	0	0	0	0	6	54	159	287	347	326	284	279	336	353	327	239	34	2	0	0	0	0	126.5	353.4
8-Sep	0	0	0	0	0	0	1	24	217	234	408	437	596	506	571	510	180	82	68	6	0	0	0	0	160.0	595.7
9-Sep	0	0	0	0	0	0	2	30	62	106	106	155	124	146	190	166	113	32	14	3	0	0	0	0	52.1	190.0
10-Sep	0	0	0	0	0	0	4	17	41	55	137	156	155	152	161	91	87	70	24	3	0	0	0	0	48.1	161.2
11-Sep	0	0	0	0	0	0	2	17	75	111	166	122	114	194	161	130	70	16	6	1	0	0	0	0	49.4	193.7
12-Sep	0	0	0	0	0	0	1	9	26	36	44	74	73	69	84	77	65	53	19	2	0	0	0	0	26.3	84.1
13-Sep	0	0	0	0	0	0	1	13	38	69	110	143	137	158	175	141	92	68	53	6	0	0	0	0	50.1	175.1
14-Sep	0	0	0	0	0	0	5	44	115	168	276	224	272	211	284	327	306	134	52	2	0	0	0	0	100.9	327.2
15-Sep	0	0	0	0	0	0	2	27	69	69	66	85	120	156	164	111	64	29	10	1	0	0	0	0	40.6	163.9
16-Sep	0	0	0	0	0	0	1	16	45	96	148	134	111	166	141	115	102	60	8	0	0	0	0	0	47.6	166.1
17-Sep	0	0	0	0	0	0	2	24	70	71	80	106	88	294	231	194	103	79	16	1	0	0	0	0	56.6	293.9
18-Sep	0	0	0	0	0	0	2	27	81	152	163	254	307	524	399	185	135	107	39	2	0	0	0	0	99.0	523.7
19-Sep	0	0	0	0	0	0	3	71	206	333	447	530	577	579	523	401	242	194	56	1	0	0	0	0	173.5	578.6
20-Sep	0	0	0	0	0	0	1	10	41	84	203	342	449	413	336	242	134	70	18	1	0	0	0	0	97.6	448.6
21-Sep	0	0	0	0	0	0	0	15	50	116	198	182	217	190	150	254	281	117	32	1	0	0	0	0	75.2	281.4
22-Sep	0	0	0	0	0	0	1	23	61	141	233	233	143	165	167	93	52	30	9	0	0	0	0	0	56.3	233.1
23-Sep	0	0	0	0	0	0	2	52	198	271	204	160	343	437	450	368	158	80	18	0	0	0	0	0	114.2	450.4
24-Sep	0	0	0	0	0	0	0	14	61	125	214	518	483	522	452	409	256	138	19	0	0	0	0	0	133.8	521.5
25-Sep	0	0	0	0	0	0	1	45	171	247	389	416	461	451	262	215	154	77	17	0	0	0	0	0	121.1	460.7
26-Sep	0	0	0	0	0	0	0	6	55	108	115	118	162	173	164	84	53	22	2	0	0	0	0	0	44.3	173.3
27-Sep	0	0	0	0	0	0	1	27	145	222	358	430	436	452	471	60	157	60	10	0	0	0	0	0	117.9	471.3
28-Sep	0	0	0	0	0	0	0	9	35	123	159	223	310	332	261	137	73	50	6	0	0	0	0	0	71.6	332.2
29-Sep	0	0	0	0	0	0	0	30	153	305	372	353	240	260	266	236	77	32	7	0	0	0	0	0	97.2	371.9
30-Sep	0	0	0	0	0	0	0	31	159	254	236	245	244	244	229	122	56	14	2	0	0	0	0	0	76.5	254.3
0.0																								Diurnal Average		
0.1																								Diurnal Maximum		

Hourly Averages

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



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - September 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	17	17	16	14	14	14	12	13	13	15	16	13	12	13	15	14	9	6	6	10	7	7	8	6	10.8	17.3
Dir	248	250	240	244	248	250	252	248	259	253	255	261	266	311	315	299	284	234	217	231	227	225	226	219	255.6	248.0
2 Spd	5	7	9	7	2	1	2	2	2	2	2	2	4	6	5	7	8	8	9	6	10	7	7	7	4.3	9.5
Dir	253	244	251	260	317	304	207	192	176	180	179	165	157	152	157	171	248	246	236	221	227	226	229	245	224.2	227.3
3 Spd	7	8	12	9	12	13	8	6	15	17	13	15	14	14	12	8	6	4	4	4	2	1	1	1	7.9	17.5
Dir	242	245	250	272	283	286	295	285	291	308	308	301	294	299	307	332	353	345	327	299	298	294	313	304	294.6	308.4
4 Spd	1	0	0	0	1	1	3	2	4	3	4	4	6	7	7	7	9	9	8	5	5	6	5	1	3.6	8.7
Dir	278	194	280	209	199	167	138	181	212	224	207	187	200	199	242	223	232	229	245	250	254	265	285	298	227.7	229.5
5 Spd	1	1	0	0	1	2	2	1	0	2	1	3	4	5	5	6	6	6	4	5	6	6	5	5	2.2	6.3
Dir	215	242	262	232	215	204	221	172	279	293	265	94	97	94	81	68	92	67	45	47	47	47	62	74	72.2	47.3
6 Spd	3	4	4	4	4	2	2	2	3	5	4	4	3	4	2	1	3	2	1	1	1	1	2	0	1.2	4.6
Dir	73	61	57	51	69	76	31	33	72	130	157	148	163	177	232	165	160	139	161	265	307	287	292	340	105.6	130.4
7 Spd	4	5	2	1	1	1	3	1	0	1	2	4	6	6	6	2	2	4	6	6	6	3	1	1	0.6	6.3
Dir	91	108	126	321	324	36	295	317	277	264	215	215	241	288	317	44	58	94	123	153	153	100	63	240	147.7	123.4
8 Spd	1	0	0	3	4	4	4	12	8	11	17	19	22	24	26	26	23	18	17	14	13	11	12	10	11.9	26.3
Dir	68	190	247	334	343	342	340	266	274	279	263	274	279	283	280	285	301	293	289	286	285	284	303	303	286.5	279.9
9 Spd	9	11	11	10	9	8	7	6	3	2	3	5	1	6	6	5	7	7	6	8	6	7	8	7	3.3	11.1
Dir	305	305	306	305	305	305	317	333	346	24	49	76	68	81	69	61	72	85	70	65	66	60	71	69	13.4	305.2
10 Spd	7	6	4	5	4	2	2	3	3	4	6	7	6	6	6	4	5	4	5	4	2	1	2	1	2.2	7.4
Dir	66	64	64	64	81	64	359	349	323	318	312	292	287	287	299	303	297	301	305	329	22	33	93	163	334.8	291.7
11 Spd	1	1	1	1	1	1	1	2	2	2	1	0	2	1	6	5	12	18	16	11	8	8	7	8	3.5	17.9
Dir	164	161	165	157	174	211	169	156	140	143	116	85	7	347	2	11	318	323	343	345	334	322	348	345	338.1	322.9
12 Spd	8	6	6	6	6	5	6	6	6	7	7	6	5	4	5	6	5	4	4	4	3	2	2	2	4.8	8.3
Dir	343	346	9	349	0	9	17	29	31	26	31	35	42	46	41	19	27	32	34	29	38	31	31	34	20.0	342.8
13 Spd	2	2	1	1	0	1	2	3	3	4	4	4	4	4	3	3	4	2	1	3	4	3	2	4	1.9	4.2
Dir	28	29	32	28	45	36	67	93	97	117	120	116	132	147	179	210	173	174	198	116	110	91	76	73	113.9	146.9
14 Spd	3	2	1	1	1	0	2	2	3	3	2	3	2	3	4	5	7	8	5	4	3	1	1	2	1.1	7.9
Dir	78	59	49	349	300	0	341	313	302	289	331	326	33	44	98	92	118	132	135	118	131	55	4	334	83.2	131.9
15 Spd	2	1	4	2	2	3	2	3	3	3	5	6	7	7	10	9	9	8	8	8	7	6	8	7	5.2	9.9
Dir	318	344	75	60	77	65	42	35	32	37	59	61	62	60	79	74	70	73	74	73	73	81	81	72	67.2	78.6
16 Spd	6	5	5	5	5	5	5	6	6	7	9	9	7	7	9	7	8	8	6	7	6	6	6	6	6.6	9.4
Dir	69	61	65	64	66	67	63	68	74	72	79	78	73	77	90	88	95	83	78	79	71	73	78	84	76.0	79.2
17 Spd	4	3	2	4	6	5	5	4	2	2	1	1	3	3	3	3	4	4	1	1	1	1	1	1	0.6	5.7
Dir	64	63	63	72	89	102	96	93	68	81	159	228	238	260	279	283	305	283	204	176	235	209	271	255	84.9	89.4
18 Spd	1	1	4	3	2	2	1	2	3	4	6	5	3	2	4	3	4	5	4	3	3	3	3	1	2.2	5.5
Dir	302	270	258	268	284	249	235	247	270	274	282	279	272	243	234	199	201	204	187	162	159	167	165	203	235.0	282.4
19 Spd	3	2	1	1	1	2	2	1	1	2	1	1	3	2	2	3	3	2	3	2	1	0	2	3	0.9	3.4
Dir	181	202	179	169	192	221	156	147	139	235	251	256	202	196	207	292	290	295	314	19	36	79	298	323	241.9	291.6
20 Spd	2	2	8	8	7	5	6	5	7	7	6	6	4	5	5	5	4	5	5	4	6	5	4	4	4.8	8.5
Dir	318	315	20	36	46	44	50	13	0	20	22	15	36	55	34	34	37	51	43	52	70	64	68	63	35.4	35.7
21 Spd	3	3	3	3	3	2	3	5	7	7	7	8	9	8	8	9	10	10	7	4	4	5	6	7	5.5	9.8
Dir	62	46	48	51	61	56	51	76	91	109	108	102	100	90	88	103	118	117	110	91	93	100	101	108	95.3	118.3
22 Spd	6	7	6	7	7	9	8	8	7	9	8	9	8	8	8	7	6	6	6	5	6	5	4	3	6.7	9.3
Dir	97	85	77	79	78	82	86	86	92	98	107	108	108	102	95	94	111	115	113	110	113	113	104	109	97.5	108.2



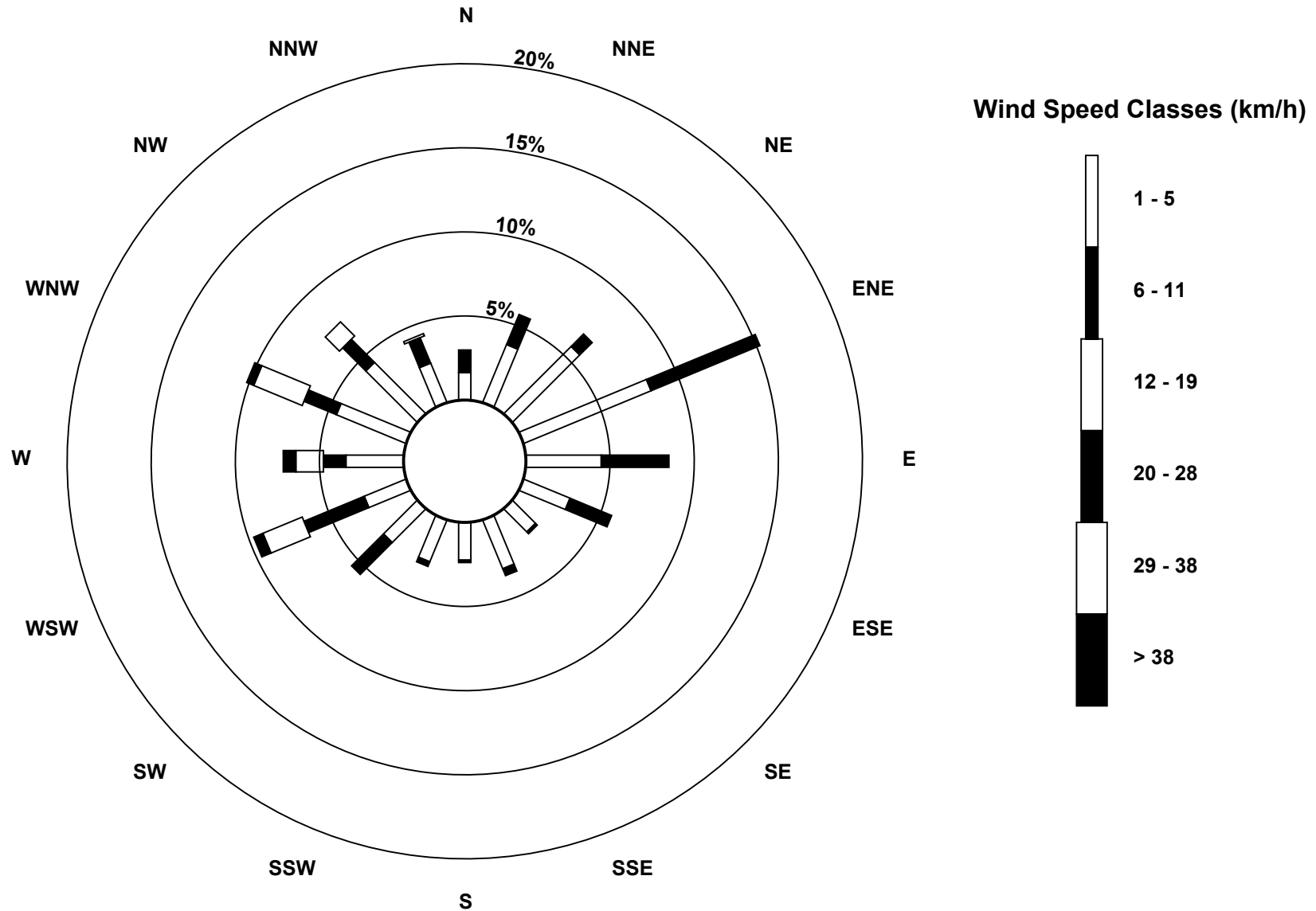
Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - September 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	3	3	2	1	2	2	1	2	3	3	7	8	20	22	21	17	17	14	15	10	6	6	6	6.7	21.8								
Dir	99	106	107	140	140	148	151	150	145	183	213	240	233	250	250	252	250	254	241	245	244	244	271	238	240.8	249.9								
24 Spd	6	6	6	6	5	7	14	14	12	14	13	16	15	15	14	13	10	8	5	4	3	3	2	2	8.3	16.2								
Dir	254	250	253	272	260	288	284	290	290	292	284	286	292	299	300	309	301	278	228	222	221	225	273	279	283.1	285.7								
25 Spd	3	4	4	6	3	4	6	5	2	7	12	15	16	19	21	21	23	21	13	7	10	6	3	5	9.6	23.0								
Dir	280	265	259	254	272	266	248	276	270	243	254	259	261	266	267	260	260	255	242	229	239	235	254	242	256.6	260.4								
26 Spd	5	4	7	13	13	6	4	6	4	4	6	5	6	7	6	2	1	6	5	6	5	4	9	9	4.2	13.0								
Dir	239	243	268	265	262	306	258	256	288	267	307	345	9	23	31	29	225	246	222	242	266	233	244	255	272.6	264.8								
27 Spd	5	5	4	4	4	5	3	3	1	1	4	3	6	7	5	3	2	4	1	2	1	1	2	1	2.3	7.4								
Dir	258	277	283	285	316	322	314	37	44	316	324	270	293	307	323	349	86	52	27	285	319	333	68	7	311.3	306.5								
28 Spd	1	1	2	3	2	3	2	2	3	4	5	4	4	4	3	3	2	2	4	3	1	2	2	2	1.6	5.1								
Dir	359	358	74	103	122	123	108	100	103	90	78	90	95	79	85	24	15	314	334	341	354	299	322	314	61.6	77.9								
29 Spd	2	3	3	4	8	6	5	2	4	6	4	4	5	6	7	6	3	5	5	6	4	4	4	4	3.6	7.6								
Dir	324	308	303	346	359	340	342	311	26	34	6	6	7	15	345	7	8	35	41	44	58	60	65	84	104	15.2	358.8							
30 Spd	3	3	3	3	3	2	3	2	5	9	9	7	7	7	6	6	6	4	3	6	5	5	5	5	4.7	9.1								
Dir	99	75	65	74	69	57	33	45	70	74	76	75	71	72	71	69	67	60	44	34	34	37	34	34	61.7	73.9								
Spd	0.7	1.0	1.2	1.4	1.3	1.2	1.2	1.0	1.1	1.1	1.3	1.5	1.7	2.1	2.5	2.0	1.6	1.4	0.9	0.4	0.2	0.1	0.6	0.5	Diurnal Average									
Dir	296.0	289.1	294.9	311.3	322.2	328.3	323.8	317.9	331.4	318.9	298.4	290.6	285.9	301.2	310.1	313.2	296.1	277.7	277.6	298.4	251.6	349.0	9.0	358.1	Diurnal Maximum									
Spd	17.3	17.1	15.8	13.7	14.0	13.6	13.6	13.7	15.1	17.5	16.7	18.9	21.6	23.7	26.3	26.1	23.2	21.3	17.0	15.3	12.7	11.5	12.0	10.4	Diurnal Maximum									
Dir	248.0	250.2	240.5	244.2	248.0	249.9	283.8	290.0	290.6	308.4	263.3	273.7	279.0	282.8	279.9	284.8	301.2	255.2	289.2	244.8	284.6	284.1	302.5	303.1										
Maximum Speed Value: 26 km/h on Sep 8 15:00																				Minimum Speed Value: 0 km/h on Sep 8 03:00										Hours in Service:				720
Maximum Daily Speed Average: 11.9 km/h on Sep 8																				Minimum Daily Speed Average: 0.6 km/h on Sep 19										Hours of Data:				720
Maximum Diurnal Speed Average: 2.5 km/h at hour 15																				Minimum Diurnal Speed Average: 0.1 km/h at hour 22										Hours of Missing Data:				0
Monthly Average Velocity: 1.11 km/h 306.35 deg																				Speed Percentiles: P ₁ = 0.4 P ₁₀ = 1.3 Q ₁ = 2.4 Median = 4.5 Q ₃ = 6.9 P ₉₀ = 11.1 P ₉₉ = 21.3										Percent Operational Time:				100.0
All monthly, daily, and diurnal averages have been calculated using vector methods																																		
Frequency Distribution																																		
Speed Range (km/h)																																		
Direction	0 to 5		5 to 11		11 to 19		19 to 28		28 to 38		> 38		Total																					
North	28		28		1		0		0		0		57																					
NorthEast	82		42		0		0		0		0		124																					
East	61		81		0		0		0		0		142																					
SouthEast	32		13		0		0		0		0		45																					
South	44		3		0		0		0		0		47																					
SouthWest	41		37		5		0		0		0		83																					
West	50		31		37		11		0		0		129																					
NorthWest	54		20		18		1		0		0		93																					
Total	392		255		61		12		0		0		720																					

Wind Rose

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



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Henry Pirker - September 2018

Maximum Speed: 27 km/h on Sep 8 15:00																			Maximum Daily Speed Average: 13.0 km/h on Sep 8											Hours in Service: 720	
Minimum Speed: 0 km/h on Sep 5 04:00																			Minimum Daily Speed Average: 2.1 km/h on Sep 19											Hours of Data: 720	
Maximum Diurnal Speed Average: 8.4 km/h at hour 15																			Minimum Diurnal Speed Average: 4.2 km/h at hour 24											Hours of Missing Data: 0	
Monthly Average Speed: 5.67 km/h																			Percentiles: P ₁ = 0.6 P ₁₀ = 1.5 Q ₁ = 2.7 Median = 4.8 Q ₃ = 7.1 P ₉₀ = 11.1 P ₉₉ = 21.5											Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Sep	17	17	16	14	14	14	12	13	13	15	16	13	12	14	16	14	10	6	6	10	7	7	8	6	12.2	17.4					
2-Sep	6	8	9	8	2	1	2	3	3	2	2	3	4	6	6	7	9	8	9	6	10	7	7	7	5.6	9.6					
3-Sep	7	8	12	9	12	13	8	6	15	18	14	15	14	14	12	9	7	5	4	4	2	1	2	1	8.8	17.6					
4-Sep	1	0	0	1	2	1	3	2	4	4	4	5	7	8	8	8	9	9	9	5	5	6	5	1	4.5	9.3					
5-Sep	1	2	0	0	1	2	2	1	1	2	2	4	5	6	5	6	6	6	4	5	6	6	5	5	3.5	6.4					
6-Sep	3	4	4	4	4	2	2	3	3	5	4	5	3	4	3	3	3	3	1	1	1	1	2	1	2.9	5.0					
7-Sep	4	5	2	1	2	2	3	1	1	1	2	4	6	7	6	2	3	5	7	6	6	4	2	2	3.5	6.9					
8-Sep	2	1	1	4	4	5	10	12	8	11	17	19	22	24	27	26	23	18	17	14	13	12	12	10	13.0	26.6					
9-Sep	9	11	11	10	9	8	7	6	3	3	3	5	2	6	6	5	7	7	6	8	6	7	8	7	6.8	11.2					
10-Sep	7	6	4	5	4	2	2	3	3	5	6	8	7	7	6	5	5	4	6	4	2	1	2	1	4.2	7.7					
11-Sep	1	1	1	1	1	1	2	2	2	2	1	1	2	1	6	5	12	18	16	11	8	8	8	8	5.0	18.5					
12-Sep	8	6	6	6	6	5	7	6	6	7	7	6	5	4	5	7	5	4	4	4	3	2	2	2	5.2	8.4					
13-Sep	2	2	1	1	0	1	2	4	3	4	4	5	4	4	3	3	4	3	2	4	4	3	2	4	2.9	4.6					
14-Sep	3	2	1	1	1	0	2	2	3	3	2	3	3	3	4	6	7	8	5	4	3	1	1	2	3.0	8.1					
15-Sep	2	1	4	3	2	3	2	3	4	3	5	6	7	8	10	9	9	8	8	8	7	6	8	7	5.5	10.0					
16-Sep	6	5	5	5	6	5	6	6	7	8	10	9	7	7	9	7	8	8	7	7	6	6	6	6	6.8	9.5					
17-Sep	4	3	2	4	6	5	5	4	2	2	1	2	3	3	3	3	4	4	1	1	1	2	2	1	2.9	5.8					
18-Sep	2	1	4	3	2	2	1	2	3	4	6	5	4	3	4	4	4	5	4	3	3	3	3	2	3.2	5.6					
19-Sep	3	2	1	1	1	2	2	1	1	2	2	2	3	3	3	4	4	3	3	2	1	0	2	3	2.1	4.0					
20-Sep	2	3	8	9	7	5	6	6	7	7	6	6	5	6	6	6	5	5	5	5	6	5	4	4	5.6	8.7					
21-Sep	3	3	3	3	3	3	3	5	7	7	8	8	9	8	9	9	10	10	7	4	4	5	6	7	6.0	10.2					
22-Sep	6	7	6	7	7	9	8	8	8	9	8	10	8	9	8	7	6	6	6	5	6	5	4	3	7.0	9.6					
23-Sep	3	3	3	2	1	2	2	1	2	3	3	7	8	20	22	21	17	18	14	15	10	6	6	6	8.1	22.0					
24-Sep	6	6	6	6	5	7	14	14	12	14	13	16	16	16	14	13	11	9	5	4	3	3	3	3	9.1	16.5					
25-Sep	4	4	4	6	3	4	7	5	2	7	13	16	16	19	21	21	23	22	13	7	10	6	3	5	10.0	23.2					
26-Sep	6	5	7	13	13	6	4	6	5	4	7	6	6	8	6	2	2	6	5	6	5	4	9	9	6.2	13.1					
27-Sep	6	5	4	4	4	5	3	3	1	2	4	4	7	8	5	4	3	4	1	2	2	2	2	2	3.6	7.8					
28-Sep	2	1	2	3	2	3	3	2	3	5	5	5	5	4	3	3	3	2	4	3	1	2	2	2	2.9	5.2					
29-Sep	2	3	4	5	8	7	5	2	4	6	5	5	6	6	7	7	4	5	5	6	4	4	5	4	4.9	7.8					
30-Sep	3	3	3	3	3	2	3	2	6	9	9	8	7	8	7	7	6	4	3	6	5	5	5	5	5.0	9.3					
4.4		4.2	4.6	4.7	4.6	4.3	4.5	4.5	4.7	5.8	6.3	7.0	7.2	8.2	8.4	7.8	7.7	7.4	6.2	5.7	5.0	4.4	4.5	4.2	Diurnal Average						
17.4		17.2	15.9	13.8	14.1	13.7	13.6	13.8	15.2	17.6	17.1	19.1	22.1	23.9	26.6	26.3	23.4	21.5	17.1	15.3	12.8	11.5	12.3	10.5	Diurnal Maximum						
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg

Henry Pirker - September 2018

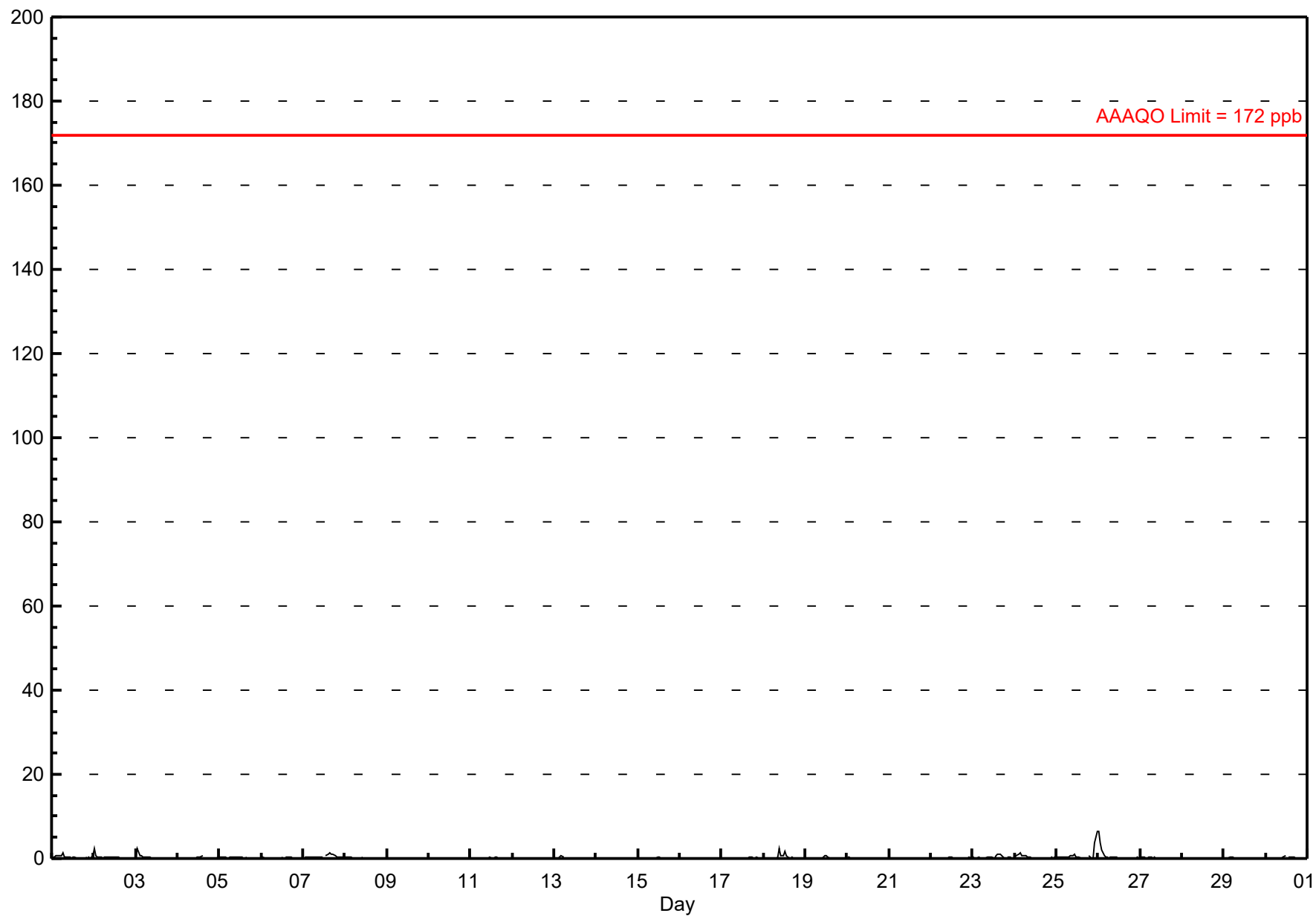
Maximum Value: 95.8 deg on Sep 27 16:00																			Hours in Service: 720						
Minimum Value: 4.6 deg on Sep 24 07:00																			Hours of Data: 720						
																			Hours of Missing Data: 0						
Percentiles: P ₁ = 5.4 P ₁₀ = 8.2 Q ₁ = 11.2 Median = 16.2 Q ₃ = 26.4 P ₉₀ = 40.3 P ₉₉ = 82.1																			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-Sep	6	6	7	7	6	5	8	8	11	10	10	11	11	21	9	10	25	14	19	15	10	7	7	6	24.8
2-Sep	38	13	7	30	29	58	27	33	26	28	37	25	14	18	28	22	19	16	12	8	7	13	17	13	57.9
3-Sep	12	10	7	7	7	6	5	12	7	7	11	7	10	11	9	23	18	23	20	7	10	16	21	32	31.8
4-Sep	58	76	71	86	19	22	13	28	18	23	25	33	25	27	26	26	22	14	14	9	8	14	19	40	86.5
5-Sep	28	24	68	76	18	15	27	58	46	37	82	45	38	39	34	27	19	16	17	12	11	12	20	11	82.1
6-Sep	17	12	14	14	12	28	31	25	30	26	24	27	34	41	65	87	32	30	29	42	23	22	24	87	87.2
7-Sep	11	10	32	62	53	74	33	73	80	73	35	25	23	28	22	55	40	33	18	10	12	26	82	56	82.0
8-Sep	64	88	92	45	8	31	74	12	18	11	13	8	12	7	8	7	7	8	8	6	5	6	11	6	92.1
9-Sep	7	6	7	6	7	6	11	12	21	30	28	18	67	15	17	22	14	13	13	11	11	12	11	11	67.3
10-Sep	10	12	14	12	13	30	17	20	32	13	19	15	16	16	20	16	14	13	12	13	26	22	20	29	32.2
11-Sep	34	17	12	14	26	33	38	25	24	26	65	91	44	72	19	25	16	14	7	9	12	16	12	12	91.3
12-Sep	11	9	18	10	13	13	13	14	13	13	13	14	18	18	18	18	18	19	21	17	18	16	16	17	20.9
13-Sep	20	18	18	18	41	25	26	16	17	17	21	25	27	20	32	30	22	50	46	22	12	10	8	10	50.2
14-Sep	8	14	24	36	32	55	16	17	15	17	51	27	44	40	36	29	22	12	15	14	30	29	20	19	55.3
15-Sep	12	70	22	39	17	11	15	13	19	22	13	13	12	11	11	11	12	10	8	8	9	8	8	9	69.6
16-Sep	9	11	9	10	10	10	11	10	11	11	8	11	10	14	14	16	14	10	10	9	9	11	10	7	16.3
17-Sep	13	12	15	11	13	13	12	18	28	34	65	36	19	27	31	35	25	27	25	37	50	28	52	39	65.0
18-Sep	24	55	11	12	20	25	21	20	16	12	11	16	31	59	25	32	31	14	18	12	9	7	9	56	58.8
19-Sep	18	28	56	16	24	15	10	23	21	44	63	53	31	53	53	37	69	70	22	21	11	31	25	27	69.8
20-Sep	12	45	12	14	34	36	16	23	12	13	22	28	44	28	32	21	26	15	12	14	10	11	15	11	45.1
21-Sep	12	21	22	15	14	19	23	12	12	19	16	15	17	20	16	14	15	13	10	14	15	11	12	11	23.4
22-Sep	8	8	9	8	8	7	10	8	12	12	17	16	19	17	16	17	19	19	12	10	9	10	10	16	19.0
23-Sep	8	6	9	7	14	14	9	16	14	34	39	30	12	10	8	10	10	11	8	5	7	16	17	11	39.1
24-Sep	21	15	16	10	9	11	5	5	5	6	12	10	11	11	13	11	14	31	11	12	18	17	30	20	30.9
25-Sep	27	10	15	13	10	13	5	16	28	17	17	10	12	12	10	7	7	9	8	9	8	18	34	17	34.1
26-Sep	26	30	13	6	6	23	10	27	24	19	17	16	17	17	18	33	66	13	13	13	12	15	9	12	66.3
27-Sep	9	9	7	10	11	7	18	24	77	71	33	54	23	20	25	96	56	15	60	18	23	61	16	55	95.8
28-Sep	23	32	27	14	23	16	29	31	27	17	18	27	25	33	37	32	38	45	17	8	46	71	14	13	71.0
29-Sep	28	19	12	30	12	11	21	30	17	18	38	49	24	32	28	25	37	16	16	17	12	13	11	12	49.2
30-Sep	10	15	8	9	14	14	22	18	16	12	12	16	23	17	21	16	14	17	18	13	10	13	12	12	23.1
	63.9	87.7	92.1	86.5	53.1	74.2	73.9	73.4	79.9	73.5	82.1	91.3	67.3	71.7	64.6	95.8	69.2	69.8	59.6	42.0	49.9	71.0	82.0	87.2	

PAZA
Smoky Heights Station
Monthly Summary Tables, Graphs and
Roses

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 6.4 ppb on Sep 26 01:00 Maximum Daily Average: 0.8 ppb on Sep 26																								Hours in Service: 720 Hours of Data: 686 Hours of Missing Data: 34 Hours of Calibration: 34 Percent Operational Time: 100.0		
Minimum Value: 0 ppb on Sep 8 19:00 Minimum Daily Average: 0.0 ppb on Sep 9 Maximum Diurnal Average: 0.4 ppb at hour 1 Minimum Diurnal Average: 0.1 ppb at hour 21 Monthly Average: 0.19 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.4 P ₉₉ = 2.2																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	0.4	1.3
2-Sep	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	2.4
3-Sep	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	2.3
4-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0.1	0.8
5-Sep	0	0	0	0	0	0	0	0	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.5
6-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.3
7-Sep	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	1	1	0	0	0	0	0	0.4	1.4
8-Sep	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
9-Sep	0	0	0	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
10-Sep	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
11-Sep	0	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
12-Sep	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
13-Sep	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
14-Sep	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
15-Sep	0	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
16-Sep	0	0	0	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
17-Sep	0	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
18-Sep	0	A	0	0	0	0	0	0	0	3	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0.3	2.5
19-Sep	A	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	A	0.1	0.8
20-Sep	0	0	0	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
21-Sep	0	0																								

Hourly Averages

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



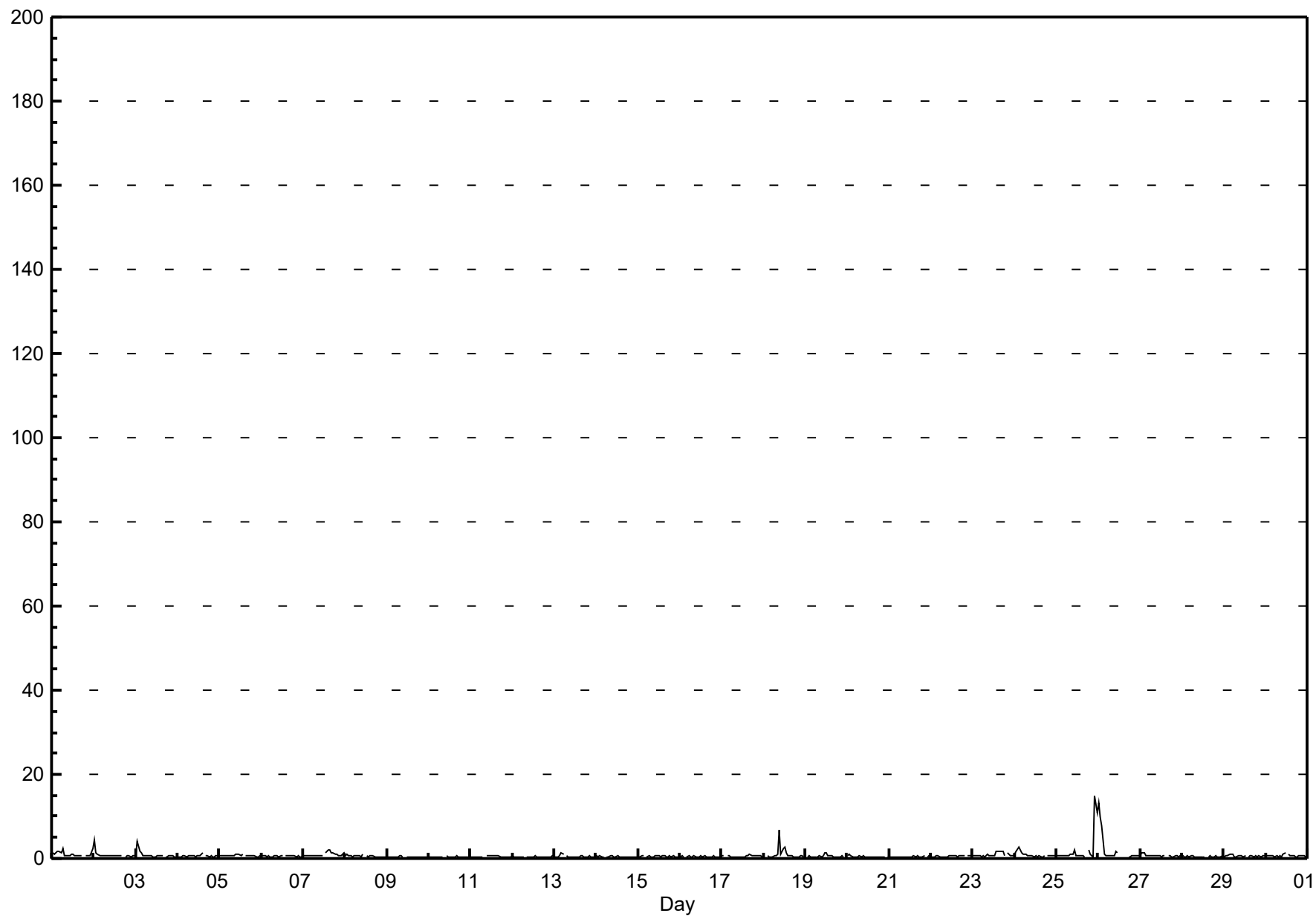
Hourly Maximums

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

Maximum Value: 14.8 ppb on Sep 25 23:00																				Maximum Daily Average: 2.2 ppb on Sep 26					Hours in Service: 720	
Minimum Value: 0 ppb on Sep 12 23:00																				Minimum Daily Average: 0.4 ppb on Sep 9					Hours of Data: 686	
Maximum Diurnal Average: 1.2 ppb at hour 1																				Minimum Diurnal Average: 0.5 ppb at hour 22					Hours of Missing Data: 34	
Monthly Average: 0.71 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.7 P ₉₀ = 0.9 P ₉₉ = 4.0					Hours of Calibration: 34	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	1	1	1	2	2	1	2	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	2	1.0	2.4
2-Sep	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0	1	1	0	1	1	0.9	4.3
3-Sep	1	4	2	1	1	1	1	1	1	1	0	1	1	1	1	1	A	0	1	1	1	1	0	0	0.8	4.0
4-Sep	0	1	0	1	1	0	1	1	1	1	0	1	1	1	1	A	1	1	0	1	0	0	1	1	0.6	1.4
5-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	0	1	0.6	0.9
6-Sep	1	1	1	0	1	1	0	1	1	1	0	1	1	A	1	1	1	1	1	1	0	1	0	0	0.6	0.8
7-Sep	1	1	1	1	1	1	1	1	1	1	1	1	A	1	2	2	1	1	1	1	1	1	1	1	0.9	2.0
8-Sep	1	1	1	1	0	1	1	1	1	0	1	A	1	0	1	1	1	0	0	0	0	0	0	0	0.6	1.2
9-Sep	0	0	0	0	0	0	0	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
10-Sep	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0.4	0.7
11-Sep	0	0	0	0	0	0	0	0	A	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.5	0.8
12-Sep	1	0	0	0	0	1	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.4	0.5
13-Sep	0	0	0	1	1	1	A	1	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0.5	1.2
14-Sep	1	0	1	0	0	A	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.5	0.6
15-Sep	0	0	1	1	A	0	1	0	0	0	1	1	1	0	1	1	0	0	1	0	1	0	0	0	0.5	0.7
16-Sep	0	1	0	A	0	1	0	0	1	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0.5	0.7
17-Sep	1	1	A	1	1	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	0	0.6	1.2
18-Sep	0	A	1	0	0	0	1	1	1	7	1	2	3	1	1	1	1	0	1	0	0	1	1	0	1.0	6.7
19-Sep	A	0	1	0	0	0	0	0	1	0	1	1	1	1	1	1	0	0	0	0	0	1	0	A	0.6	1.5
20-Sep	1	1	1	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0.5	1.0
21-Sep	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1	0	1	0	0	0	1	A	0	1	0.4	0.6
22-Sep	0	0	0	1	1	0	1	0	0	1	1	1	1	1	1	0	1	1	1	1	A	1	1	1	0.6	0.8
23-Sep	1	1	1	1	1	0	1	0	1	1	1	1	1	2	2	2	2	2	1	A	1	1	1	1	0.9	1.8
24-Sep	1	2	3	2	1	1	1	1	1	1	1	0	1	0	1	1	0	1	A	1	1	1	1	1	0.9	2.7
25-Sep	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	A	2	1	1	0	15	11	1.9	14.8
26-Sep	13	10	8	1	1	1	1	1	1	1	2	1	C	C	C	1	A	0	0	1	1	1	1	1	2.2	13.2
27-Sep	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	A	1	1	1	0	1	1	0	1	0.7	1.5
28-Sep	1	0	0	1	0	1	1	0	0	0	0	0	0	0	A	0	1	0	0	1	0	0	0	1	0.5	0.7
29-Sep	0	1	1	1	1	1	0	0	1	1	1	0	1	A	0	1	1	0	1	0	1	0	1	1	0.6	1.1
30-Sep	1	1	1	1	1	0	1	0	1	0	1	1	A	1	1	1	1	0	0	1	1	1	1	1	0.6	1.2
																								Diurnal Average		
																								Diurnal Maximum		
C - Calibration																								A - Automated Daily Zero Span		

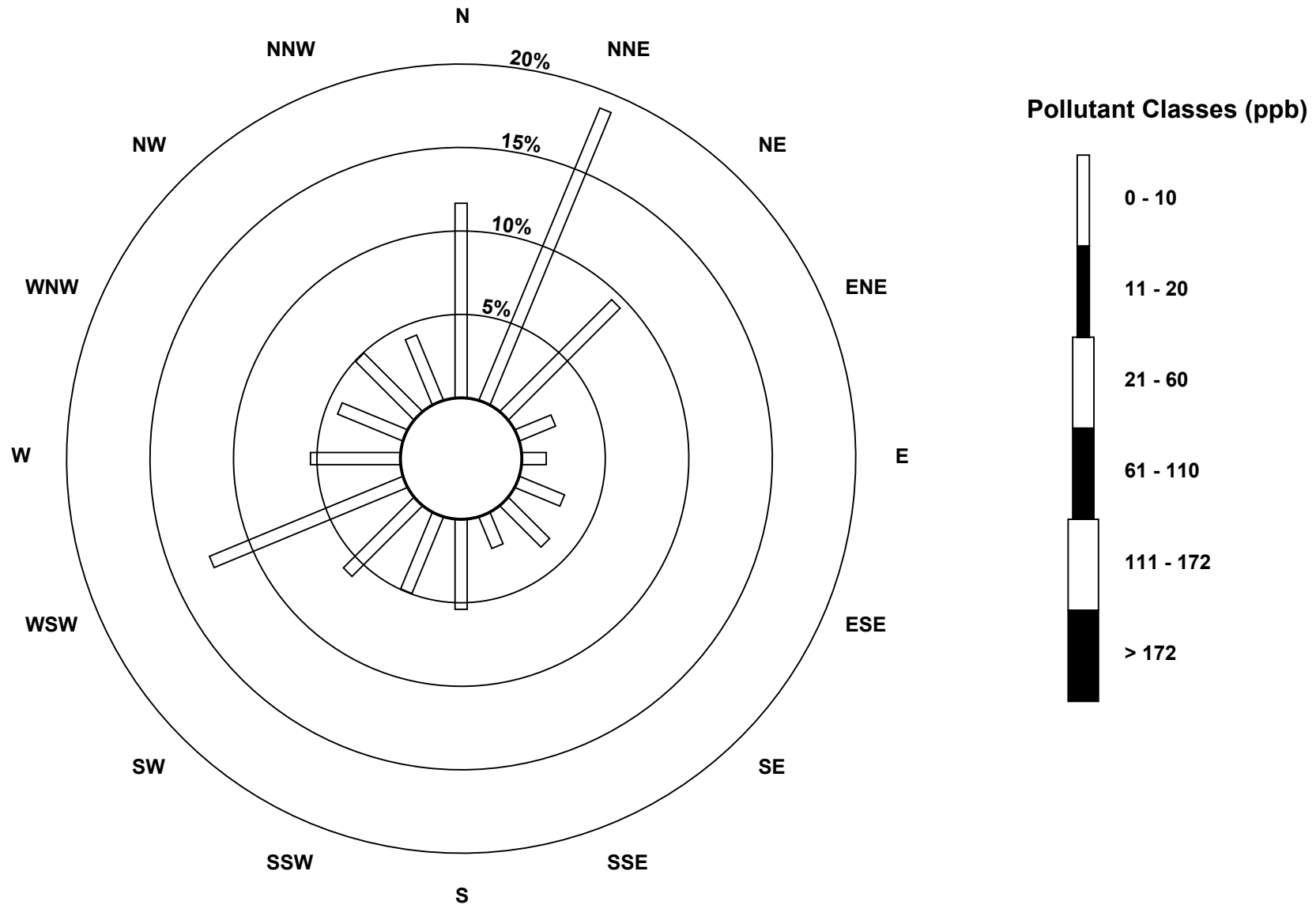
Hourly Maximums

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



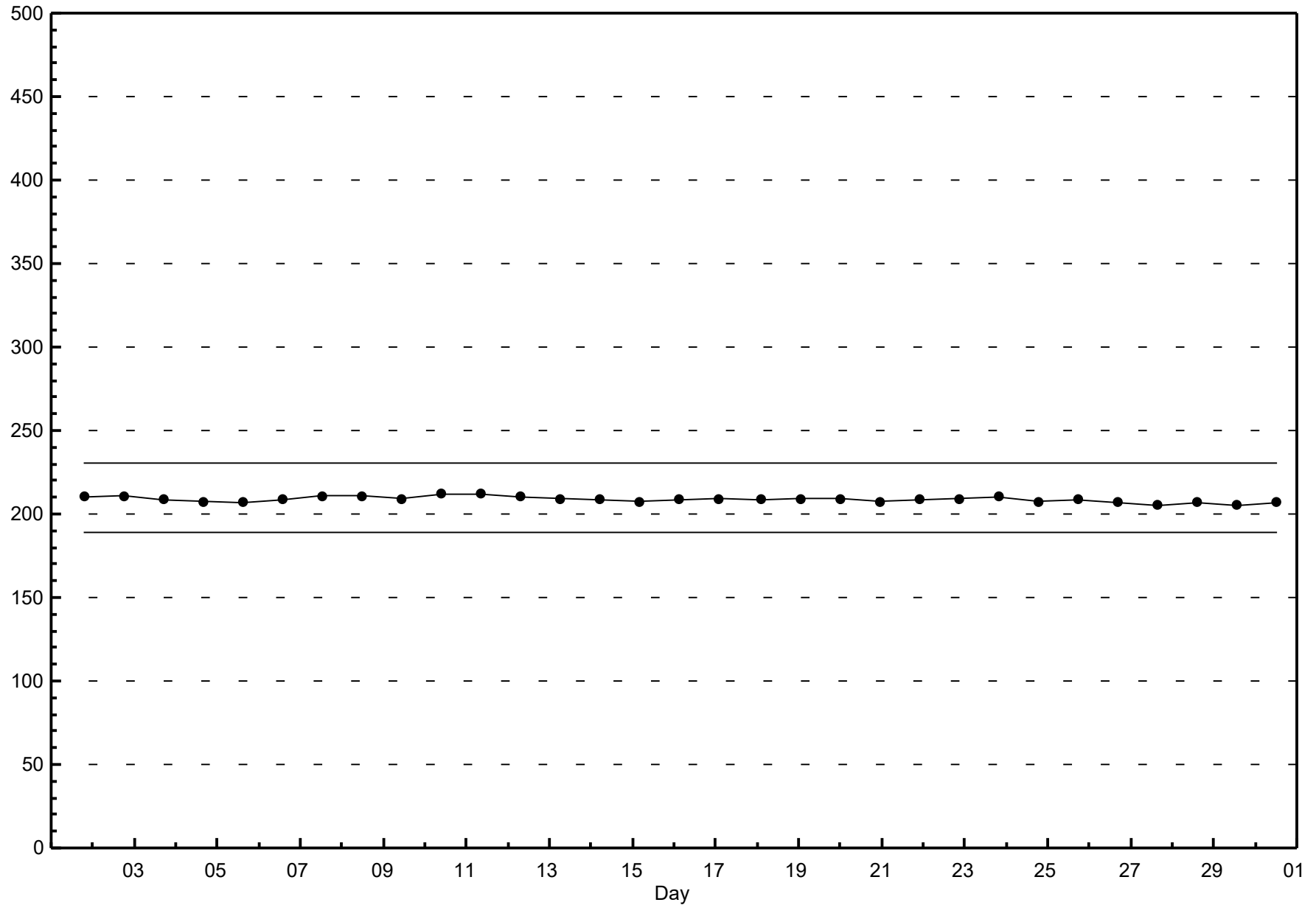
Pollutant Rose

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



Span Responses

Sulphur Dioxide (SO₂)
Smoky Heights - September 2018



Hourly Averages

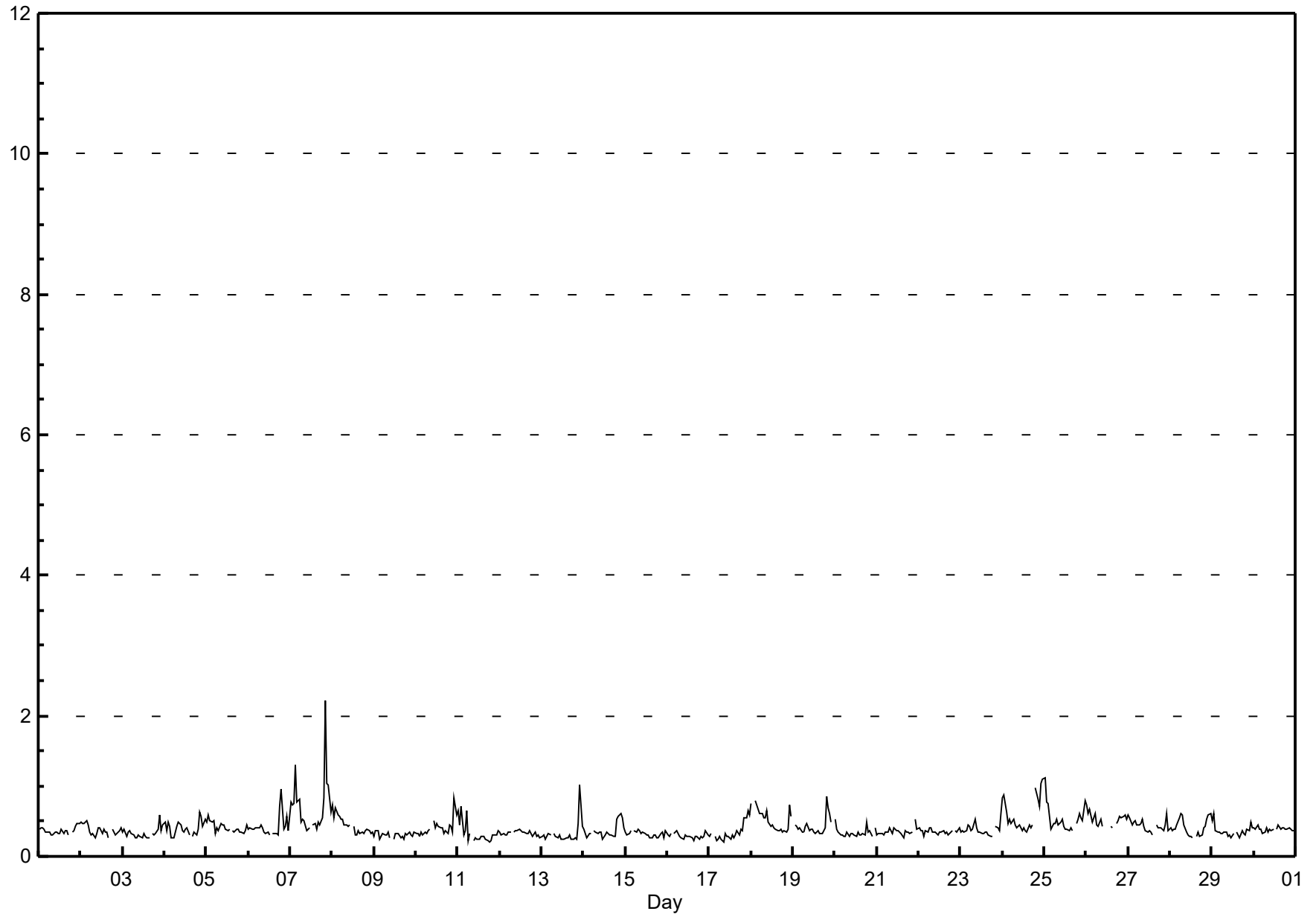
Total Reduced Sulphur (TRS) - ppb

Smoky Heights - September 2018

Maximum Value: 2.2 ppb on Sep 7 21:00																			Maximum Daily Average: 0.7 ppb on Sep 7							Hours in Service: 720	
Minimum Value: 0 ppb on Sep 11 19:00																			Minimum Daily Average: 0.3 ppb on Sep 16							Hours of Data: 685	
Maximum Diurnal Average: 0.5 ppb at hour 23																			Minimum Diurnal Average: 0.3 ppb at hour 16							Hours of Missing Data: 35	
Monthly Average: 0.40 ppb																			Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.3 Median = 0.4 Q ₃ = 0.4 P ₉₀ = 0.6 P ₉₉ = 1.0							Hours of Calibration: 35	
																			Percent Operational Time: 100.0								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.4	0.5	
2-Sep	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.4	0.5	
3-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	0	0	0.3	0.6	
4-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	1	0	1	0.4	0.6	
5-Sep	0	1	1	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.4	0.6	
6-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	1	0	0	1	0	0.4	1.0
7-Sep	1	1	1	1	1	1	0	1	1	0	0	0	A	0	0	0	0	0	0	1	1	2	1	1	1	0.7	2.2
8-Sep	1	1	1	1	1	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7
9-Sep	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
10-Sep	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0.4	0.8
11-Sep	1	0	1	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
12-Sep	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
13-Sep	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.3	1.0
14-Sep	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0.4	0.6
15-Sep	0	0	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
16-Sep	0	0	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
17-Sep	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0.3	0.7
18-Sep	1	A	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0.5	0.8
19-Sep	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	A	0	0.4	0.9
20-Sep	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.5
21-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0.4	0.5
22-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.4	0.4
23-Sep	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	0	0.4	0.6
24-Sep	1	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	1	1	0.6	1.1
25-Sep	1	1	1	1	0	0	0	1	0	0	1	0	0	0	0	0	0	A	0	1	1	1	1	1	1	0.5	1.1
26-Sep	1	1	1	0	1	1	0	0	1	0	C	C	C	C	0	0	A	0	1	1	1	1	1	1	1	0.5	0.7
27-Sep	1	1	0	0	1	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0.4	0.6
28-Sep	0	0	0	0	0	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	1	1	0	0.4	0.6
29-Sep	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
30-Sep	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.4
																									Diurnal Average		
																									Diurnal Maximum		
C - Calibration																									A - Automated Daily Zero Span		

Hourly Averages

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



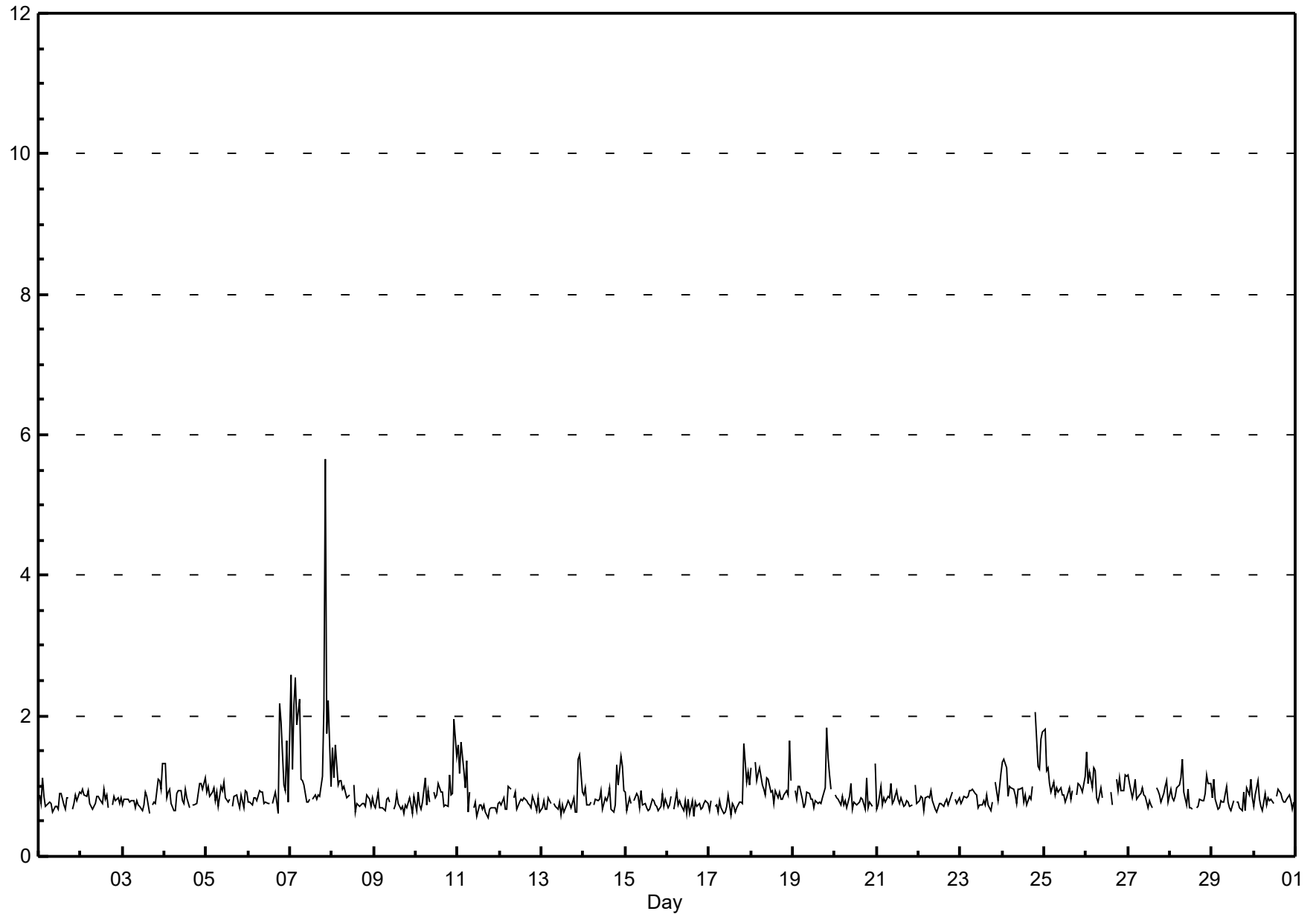
Hourly Maximums

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

Maximum Value: 5.7 ppb on Sep 7 21:00																			Maximum Daily Average: 1.6 ppb on Sep 7										Hours in Service: 720	
Minimum Value: 1 ppb on Sep 11 18:00																			Minimum Daily Average: 0.7 ppb on Sep 16										Hours of Data: 685	
Maximum Diurnal Average: 1.1 ppb at hour 21																			Minimum Diurnal Average: 0.8 ppb at hour 12										Hours of Missing Data: 35	
Monthly Average: 0.89 ppb																			Percentiles: P ₁ = 0.6 P ₁₀ = 0.7 Q ₁ = 0.7 Median = 0.8 Q ₃ = 0.9 P ₉₀ = 1.1 P ₉₉ = 2.1										Hours of Calibration: 35	
																													Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.8	1.1				
2-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.8	1.0				
3-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.8	1.3				
4-Sep	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	1.3				
5-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.9	1.1				
6-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	2	2	1	1	2	1	1.0	2.2				
7-Sep	3	1	2	3	2	2	1	1	1	1	1	1	A	1	1	1	1	1	1	2	6	2	2	1	1.6	5.7				
8-Sep	2	1	2	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.6				
9-Sep	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9				
10-Sep	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	2	1	0.9	2.0				
11-Sep	2	1	2	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.6				
12-Sep	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0				
13-Sep	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				
14-Sep	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.4				
15-Sep	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	0.9				
16-Sep	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9				
17-Sep	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	0.8	1.6				
18-Sep	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1.0	1.6				
19-Sep	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	A	0.9	1.8				
20-Sep	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	1.3				
21-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.8	1.0				
22-Sep	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	0.9				
23-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.8	1.2				
24-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	2	2	1.1	2.1				
25-Sep	2	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	1.8				
26-Sep	1	1	1	1	1	1	1	1	1	1	C	C	C	C	1	1	A	1	1	1	1	1	1	1	1.0	1.5				
27-Sep	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				
28-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.9	1.4				
29-Sep	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	1.1				
30-Sep	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1				
1.0		0.9	1.0	0.9	0.9	0.9	0.8	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	1.0	1.1	1.0	1.1	1.0	Diurnal Average					
2.6		1.4	2.2	2.5	1.9	2.2	1.1	1.4	1.0	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.2	2.1	5.7	1.7	2.2	1.8	Diurnal Maximum					
C - Calibration				A - Automated Daily Zero Span																										

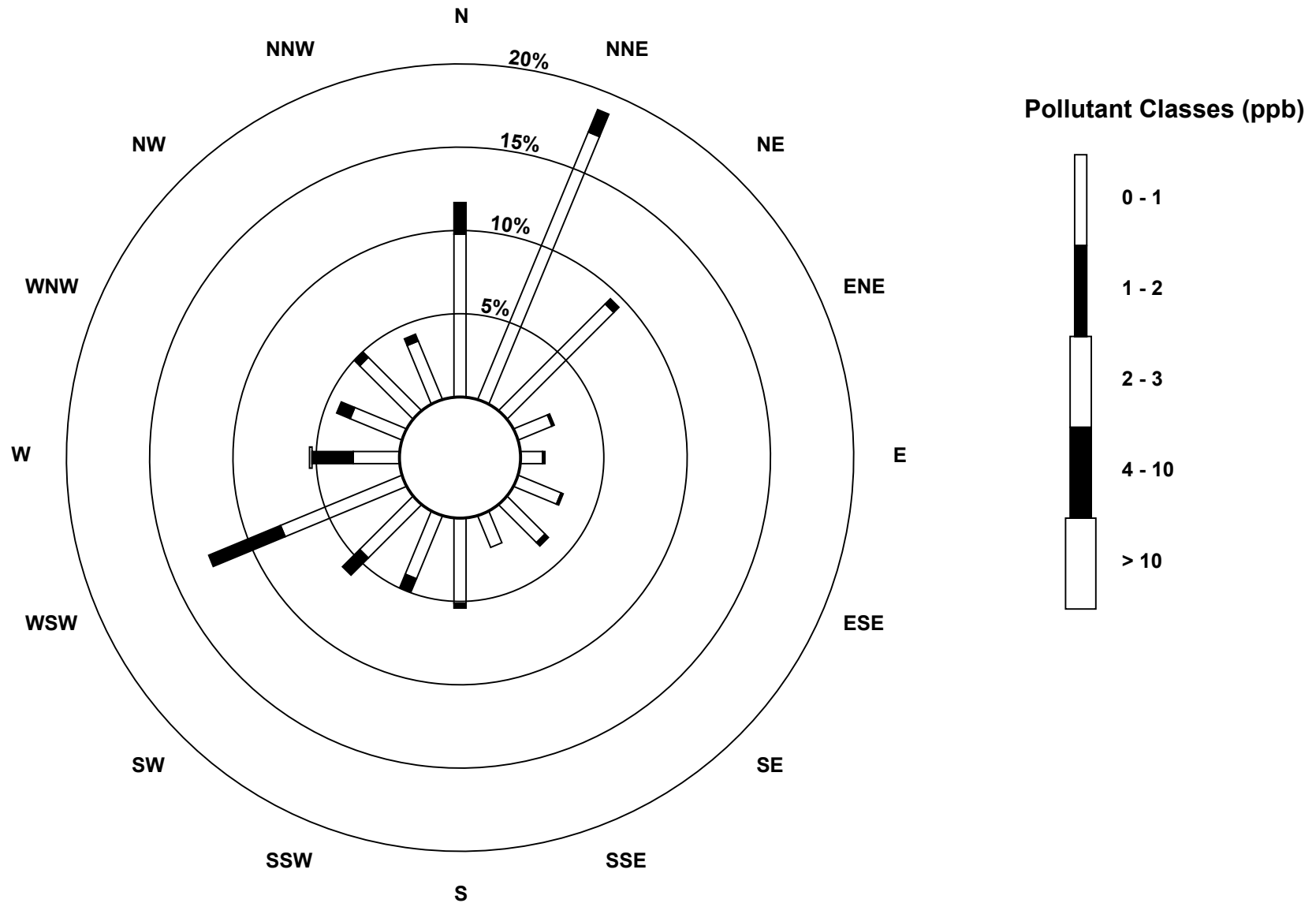
Hourly Maximums

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



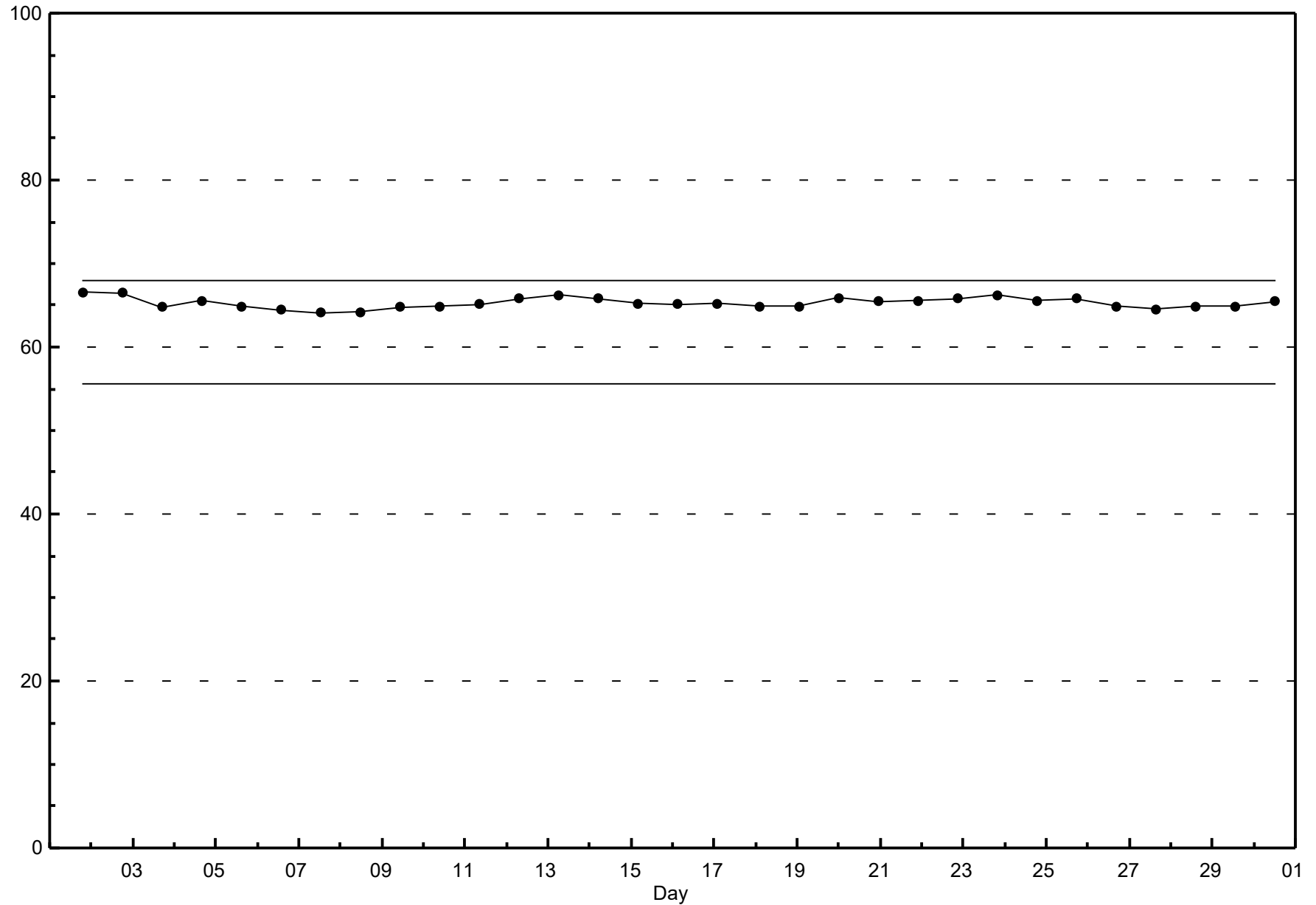
Pollutant Rose

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



Span Responses

Total Reduced Sulphur (TRS)
Smoky Heights - September 2018

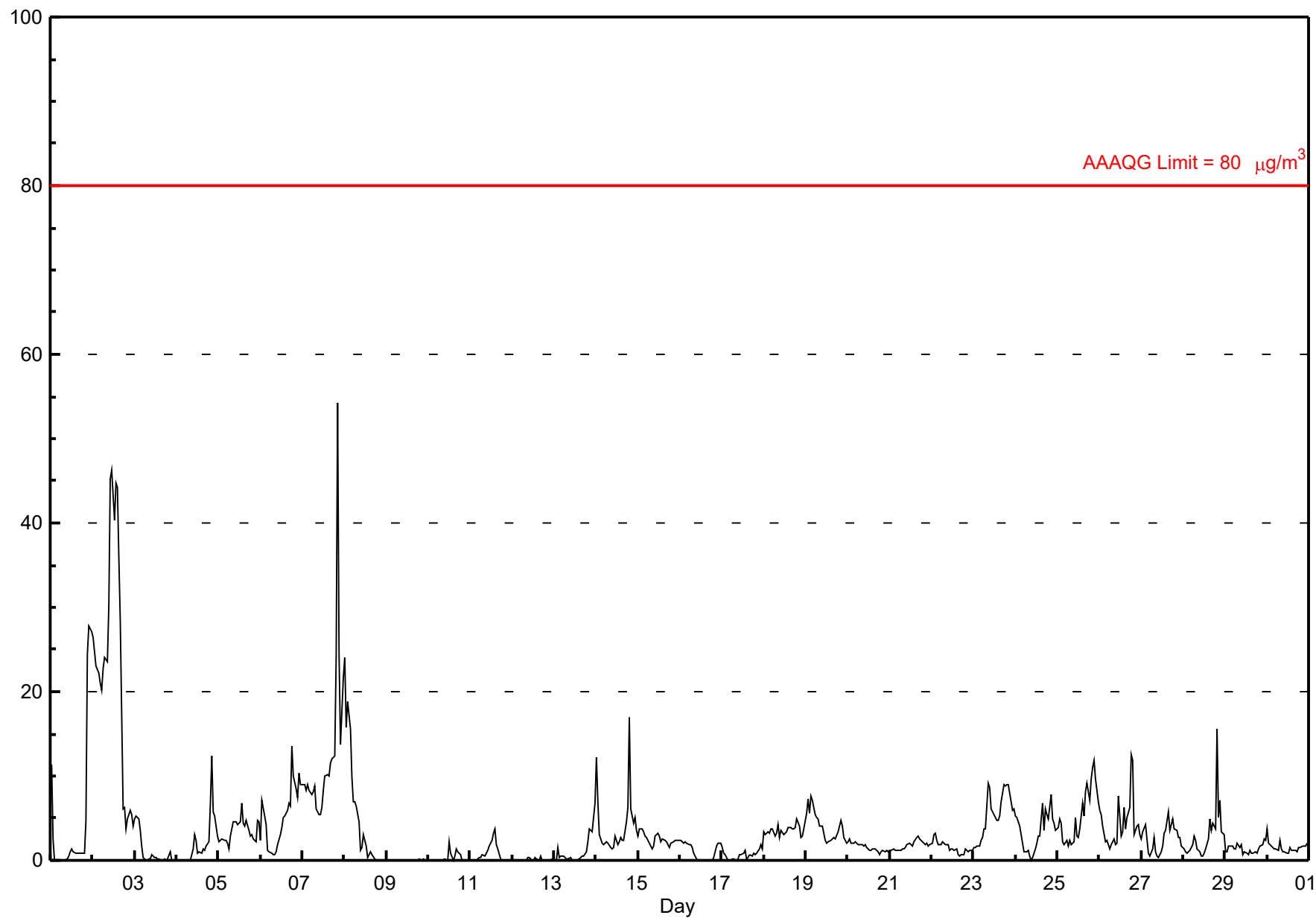


Hourly Averages

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

Smoky Heights - September 2018

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 54.2 µg/m ³ on Sep 7 21:00 Maximum Daily Average: 23.3 µg/m ³ on Sep 2																				Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0						
Minimum Value: 0 µg/m ³ on Sep 1 04:00 Maximum Diurnal Average: 5.3 µg/m ³ at hour 21 Monthly Average: 3.56 µg/m ³																				Minimum Daily Average: 0.0 µg/m ³ on Sep 9 Minimum Diurnal Average: 2.4 µg/m ³ at hour 6 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.7 Median = 1.9 Q ₃ = 3.9 P ₉₀ = 7.5 P ₉₉ = 29.8						
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-Sep	11	2	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	5	24	28	27	4.5	27.8
2-Sep	26	25	23	22	21	20	23	24	24	30	45	46	40	45	44	36	28	6	6	4	5	6	5	4	23.3	46.2
3-Sep	5	5	5	4	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1.0	5.3
4-Sep	0	0	0	0	0	0	0	0	0	1	3	2	1	1	1	1	1	2	2	7	12	6	5	3	2.0	12.3
5-Sep	2	2	3	2	2	2	1	3	5	5	5	4	5	7	4	4	5	3	3	3	3	2	5	5	3.5	6.8
6-Sep	2	7	5	4	1	1	1	1	1	1	2	3	4	5	5	6	7	6	13	10	9	8	10	9	5.0	13.5
7-Sep	9	9	8	9	8	8	8	9	6	5	5	6	8	10	10	10	11	12	12	24	54	25	14	22	12.7	54.2
8-Sep	24	16	19	16	10	7	7	6	5	1	2	3	2	0	1	1	1	0	0	0	0	0	0	0	5.0	24.1
9-Sep	0	0	0	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
10-Sep	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	1	1	1	0	0	0	0	0	0.3	2.3
11-Sep	0	0	0	0	0	0	0	1	1	1	1	2	2	3	4	2	1	0	0	0	0	0	0	0	0.8	3.8
12-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
13-Sep	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	4	4	3	7	1.1	6.7
14-Sep	12	7	3	2	2	2	2	2	2	1	2	3	2	2	3	2	2	5	6	17	6	4	5	4	4.1	17.0
15-Sep	3	4	4	3	3	3	2	2	1	2	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2.5	3.8
16-Sep	2	2	2	2	2	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	1	2	2	2	1.0	2.3
17-Sep	2	1	1	0	0	0	0	0	0	0	1	1	1	1	0	0	1	1	1	1	1	1	2	1	0.7	1.8
18-Sep	3	3	3	3	4	4	3	3	4	3	4	3	3	3	4	4	4	4	4	5	4	3	3	4	3.5	4.9
19-Sep	6	7	6	8	7	5	5	5	4	4	3	2	2	2	2	2	3	3	3	4	5	4	3	2	4.1	7.6
20-Sep	2	3	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.6	2.5
21-Sep	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	3	3	3	2	2	2	2	2	2	1.8	2.9
22-Sep	2	3	3	2	2	2	2	2	2	2	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1.5	3.2
23-Sep	1	2	2	2	2	3	4	4	9	9	6	6	5	5	5	5	7	9	9	9	9	7	6	6	5.4	9.2
24-Sep	5	5	4	3	2	1	1	1	0	0	0	1	2	3	3	7	4	6	5	5	8	5	4	4	3.3	7.8
25-Sep	4	5	4	2	2	2	2	2	2	2	5	3	3	4	7	5	8	9	7	10	11	12	10	7	5.3	11.9
26-Sep	6	5	4	2	2	2	1	2	3	2	2	8	3	3	6	4	5	6	12	12	3	4	4	3	4.4	12.5
27-Sep	2	3	4	2	1	1	1	3	1	0	0	1	2	3	4	6	4	4	5	4	4	3	3	2	2.6	5.7
28-Sep	1	1	1	1	1	2	3	2	1	1	1	0	1	1	3	5	4	4	4	16	5	7	3	3	3.0	15.7
29-Sep	1	1	2	2	2	1	1	2	1	2	1	1	1	1	1	1	1	1	1	1	2	2	3	2	1.4	2.6
30-Sep	4	2	2	2	1	1	1	2	1	1	1	1	1	2	1	1	1	1	1	2	2	2	2	2	1.5	3.7
4.6 4.1 3.7 3.2 2.7 2.4 2.5 2.7 2.6 2.6 3.3 3.5 3.3 3.7 3.9 3.7 3.6 3.0 3.5 4.7 5.3 4.5 4.2 4.1																									Diurnal Average	
26.4 24.8 23.1 22.2 20.9 20.2 22.8 24.1 23.5 30.1 45.3 46.2 40.3 44.8 44.3 35.9 28.5 12.0 13.5 24.3 54.2 24.6 27.8 27.1																									Diurnal Maximum	
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m ³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m ³																										



Hourly Maximums

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

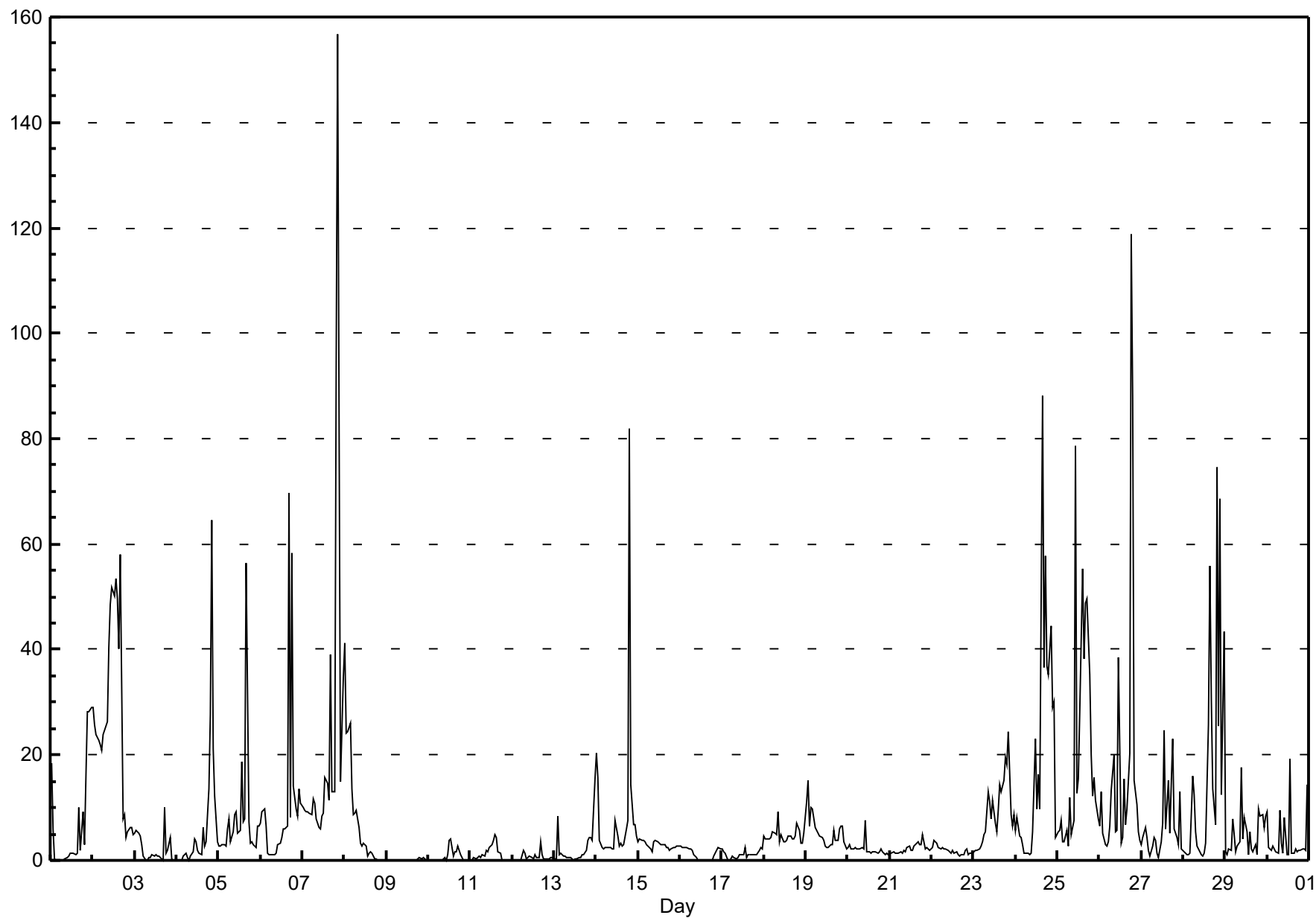
Smoky Heights - September 2018

Maximum Value: 156.8 μg/m ³ on Sep 7 21:00																								Maximum Daily Average: 27.3 μg/m ³ on Sep 2										Hours in Service: 720	
Minimum Value: 0 μg/m ³ on Sep 1 04:00																								Minimum Daily Average: 0.1 μg/m ³ on Sep 9										Hours of Data: 720	
Maximum Diurnal Average: 17.2 μg/m ³ at hour 20																								Minimum Diurnal Average: 3.6 μg/m ³ at hour 5										Hours of Missing Data: 0	
Monthly Average: 7.63 μg/m ³																								Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 1.2 Median = 2.7 Q ₃ = 6.9 P ₉₀ = 18.4 P ₉₉ = 77.9										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-Sep	18	6	0	0	0	0	0	0	0	0	1	1	1	1	1	1	10	2	9	3	16	28	28	29	6.6	29.0									
2-Sep	29	26	24	23	22	21	24	25	26	41	49	52	50	53	50	40	58	8	9	4	5	6	6	5	27.3	58.1									
3-Sep	5	6	5	5	3	1	0	0	0	0	1	1	1	1	1	0	0	10	1	2	4	0	0	0	2.0	10.0									
4-Sep	0	0	0	0	1	1	0	0	1	2	4	3	2	1	1	6	3	4	14	28	64	21	12	4	7.2	64.4									
5-Sep	3	3	3	3	3	6	8	3	5	9	9	5	6	19	7	8	56	7	3	4	3	2	7	7	7.8	56.4									
6-Sep	7	9	10	7	1	1	1	1	1	1	3	3	4	6	6	7	70	8	58	14	10	8	14	11	10.9	69.6									
7-Sep	10	10	9	9	9	9	12	11	8	6	6	8	9	16	15	11	39	13	13	94	157	85	15	35	25.3	156.8									
8-Sep	41	24	24	26	14	9	9	10	6	3	3	3	3	1	1	2	1	0	0	0	0	0	0	0	7.5	41.3									
9-Sep	0	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	0.5									
10-Sep	0	0	0	0	0	0	0	0	0	0	0	1	4	4	1	2	2	3	1	0	0	0	0	0	0.7	4.1									
11-Sep	0	0	0	0	0	1	0	1	1	2	2	2	3	4	5	4	2	1	0	0	0	0	0	0	1.2	4.9									
12-Sep	0	0	0	0	0	0	2	1	0	0	1	0	0	1	0	0	4	1	0	0	0	0	0	0	0.6	3.7									
13-Sep	0	0	9	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	2	4	4	4	4	15	2.2	15.4									
14-Sep	20	16	4	2	2	2	2	2	2	2	2	8	5	3	3	3	3	6	8	82	14	7	7	5	8.8	81.8									
15-Sep	4	4	4	4	4	3	2	2	2	3	4	4	3	3	3	3	2	2	2	2	2	2	3	3	2.9	4.1									
16-Sep	3	2	2	2	2	2	2	2	1	0	0	0	0	0	0	0	0	0	0	1	1	2	2	2	1.2	2.7									
17-Sep	2	2	1	0	0	0	1	0	0	0	1	1	1	2	0	1	1	1	1	1	1	2	2	2	1.1	2.4									
18-Sep	5	4	4	4	4	5	5	5	9	4	5	4	4	4	5	5	4	4	5	7	6	3	3	5	4.7	9.3									
19-Sep	11	15	7	10	10	6	6	5	5	4	4	3	2	2	3	3	6	4	4	6	7	7	3	2	5.6	15.1									
20-Sep	2	3	2	2	2	2	2	2	2	2	8	2	2	1	2	2	2	1	2	2	2	1	1	1	2.1	7.6									
21-Sep	1	1	2	1	1	1	2	1	2	2	2	3	2	2	3	3	3	3	3	5	2	2	2	2	2.2	4.9									
22-Sep	2	4	4	3	2	2	2	2	2	2	2	1	2	1	2	1	1	1	1	2	2	1	1	1	2.0	3.9									
23-Sep	2	2	2	2	3	4	5	5	13	11	8	11	7	5	9	14	13	15	20	18	24	9	7	9	9.1	24.4									
24-Sep	6	8	5	4	3	1	1	1	1	1	5	23	10	16	10	88	37	58	37	35	44	29	30	4	19.1	88.2									
25-Sep	5	6	8	4	3	6	3	12	5	8	79	13	15	28	55	38	49	50	35	20	12	16	11	8	20.3	78.6									
26-Sep	7	13	5	3	3	3	7	13	20	5	6	39	3	4	15	7	10	20	119	88	15	10	5	4	17.7	118.9									
27-Sep	3	4	6	4	2	1	3	4	4	1	0	4	7	25	6	15	5	15	23	6	4	3	13	2	6.7	24.6									
28-Sep	2	1	1	1	1	16	12	5	3	2	1	1	1	3	26	56	31	14	7	75	26	69	12	43	17.0	74.7									
29-Sep	2	1	2	2	8	5	2	3	3	18	4	8	5	1	5	2	2	3	1	10	9	9	6	9	5.0	17.6									
30-Sep	9	2	2	3	2	2	1	9	3	1	8	1	1	19	1	1	2	2	2	2	2	2	2	14	4.0	19.3									
6.6 5.8 4.8 4.2 3.6 3.7 3.9 4.3 4.3 4.5 7.2 6.8 5.1 7.6 7.9 10.8 13.9 8.5 12.7 17.2 14.6 11.0 6.6 7.4																									Diurnal Average										
41.3 25.6 24.4 26.1 22.0 21.0 23.9 24.6 26.4 40.5 78.6 51.8 50.1 53.5 55.4 88.2 69.6 57.6 118.9 94.0 156.8 85.2 30.0 43.5																									Diurnal Maximum										

Hourly Maximums

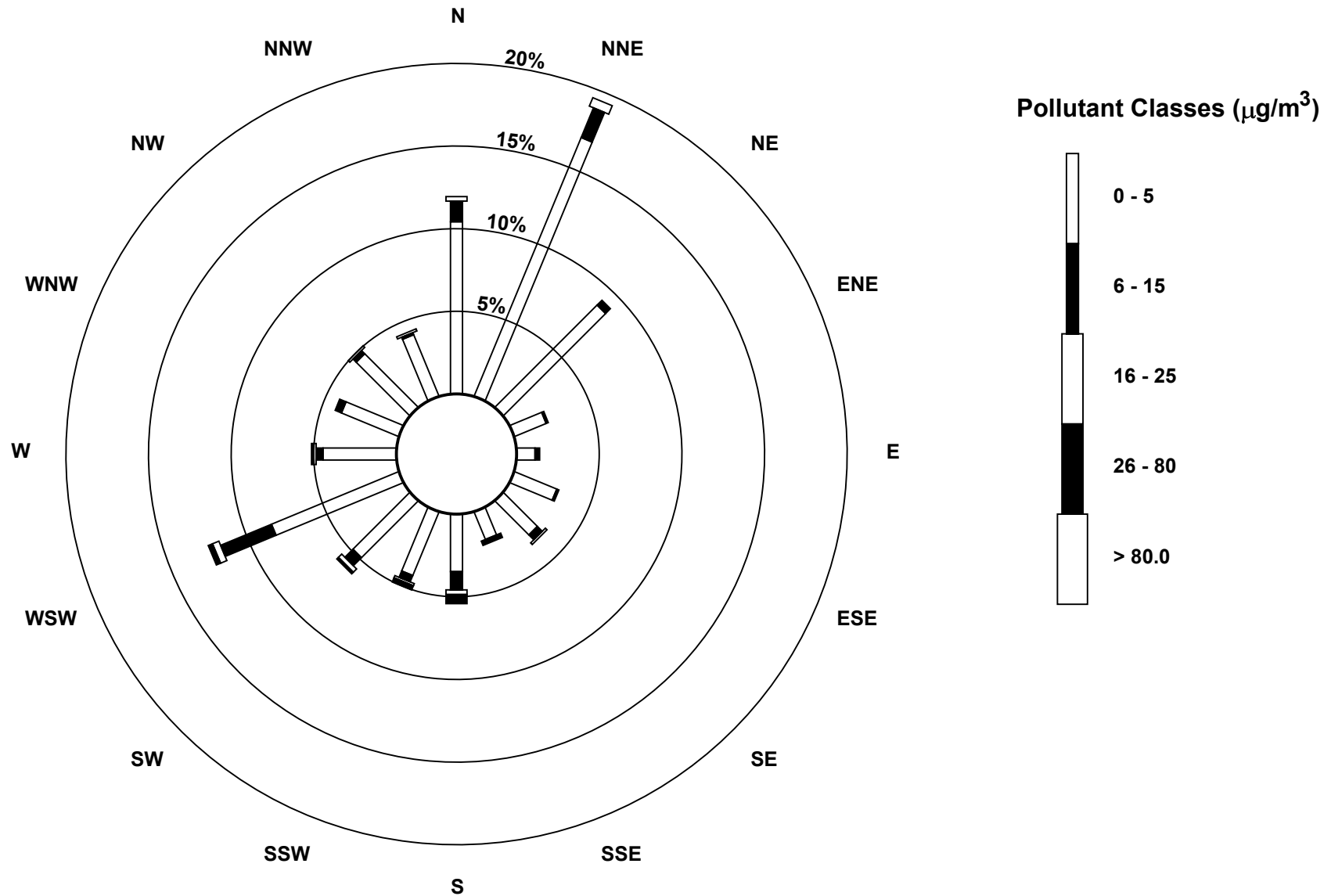
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$

Smoky Heights - September 2018



Pollutant Rose

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



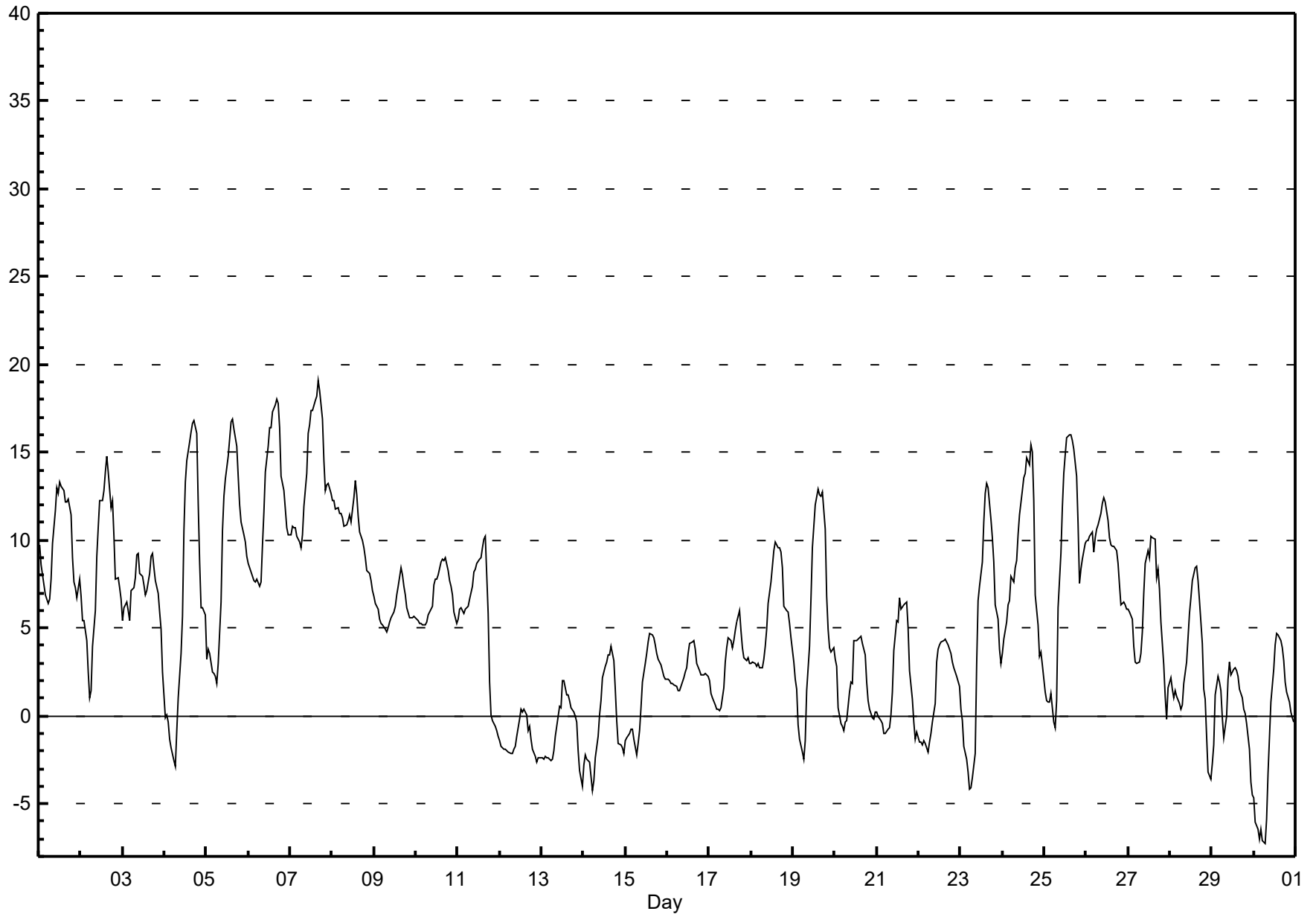
Hourly Averages

External Temperature (ET) - °C
Smoky Heights - September 2018

Maximum Value: 19.1 °C on Sep 7 17:00																				Maximum Daily Average: 13.9 °C on Sep 7					Hours in Service: 720				
Minimum Value: -7 °C on Sep 30 07:00																				Minimum Daily Average: -1.4 °C on Sep 12					Hours of Data: 720				
Maximum Diurnal Average: 9.2 °C at hour 16																				Minimum Diurnal Average: 1.9 °C at hour 7					Hours of Missing Data: 0				
Monthly Average: 5.22 °C																				Percentiles: P ₁ = -4.6 P ₁₀ = -1.5 Q ₁ = 1.0 Median = 4.9 Q ₃ = 9.0 P ₉₀ = 12.6 P ₉₉ = 17.4					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-Sep	10	9	8	7	7	6	7	8	10	12	13	13	13	13	12	12	12	11	9	8	7	7	8	9.8	13.3				
2-Sep	7	5	5	4	2	1	1	4	6	9	11	12	12	13	14	15	14	12	12	10	8	8	7	7	8.4	14.8			
3-Sep	5	6	6	6	5	7	7	8	9	9	8	8	7	7	7	8	9	8	8	7	6	5	3	7.1	9.3				
4-Sep	0	0	0	-1	-2	-3	-3	-1	1	4	6	11	13	15	16	16	17	17	16	12	9	6	6	6	6.6	16.8			
5-Sep	3	4	4	3	2	2	2	3	6	11	13	14	15	16	17	17	16	15	14	12	11	10	10	9	9.5	16.9			
6-Sep	9	8	8	8	8	8	7	8	10	12	14	15	16	16	17	18	18	18	16	14	13	12	11	10	12.2	18.0			
7-Sep	10	11	11	11	10	10	10	10	12	14	16	17	17	17	18	18	19	19	17	15	13	13	13	13	13.9	19.1			
8-Sep	12	12	12	12	12	12	11	11	11	11	11	11	12	13	13	11	11	10	10	9	8	8	8	7	10.7	13.4			
9-Sep	7	6	6	6	5	5	5	5	5	5	6	6	6	7	7	8	8	7	7	6	6	6	6	6	6.1	8.4			
10-Sep	6	5	5	5	5	5	5	6	6	6	7	8	8	8	9	9	9	9	8	8	7	7	6	5	6.8	9.0			
11-Sep	6	6	6	6	6	6	6	7	7	8	8	9	9	9	10	10	10	6	2	0	0	-1	-1	-1	5.6	10.2			
12-Sep	-1	-2	-2	-2	-2	-2	-2	-2	-2	-2	-1	0	0	0	0	0	-1	-1	-1	-2	-2	-3	-2	-2	-1.4	0.4			
13-Sep	-2	-2	-2	-2	-2	-3	-2	-2	-1	0	1	0	2	2	1	1	1	0	0	0	0	-2	-3	-4	-0.9	2.0			
14-Sep	-3	-2	-2	-3	-3	-4	-4	-2	-1	0	1	2	3	3	3	3	4	3	1	0	-2	-2	-2	-2	-0.3	4.0			
15-Sep	-1	-1	-1	-1	-1	-1	-2	-2	-1	0	2	3	4	4	5	5	4	4	4	3	3	3	2	2	1.5	4.7			
16-Sep	2	2	2	2	2	2	1	1	2	2	2	3	4	4	4	4	4	3	3	2	2	2	2	2	2.5	4.3			
17-Sep	2	1	1	1	0	0	0	0	2	3	4	4	4	4	4	5	5	6	5	4	3	3	3	3	2.9	6.0			
18-Sep	3	3	3	3	3	3	3	3	4	5	6	8	9	9	10	10	10	9	8	6	6	6	5	4	5.8	9.9			
19-Sep	3	2	2	0	-1	-2	-2	-1	1	4	7	10	11	12	13	13	12	13	11	7	5	4	4	4	5.3	12.9			
20-Sep	3	3	1	0	-1	-1	0	0	1	2	2	4	4	4	4	5	4	3	2	1	0	0	0	0	1.7	4.5			
21-Sep	0	0	0	0	-1	-1	-1	-1	0	1	4	5	5	7	6	6	6	6	5	3	1	0	-1	-1	2.1	6.7			
22-Sep	-1	-1	-2	-1	-2	-2	-1	-1	0	1	3	4	4	4	4	4	4	4	4	3	3	2	2	2	1.5	4.3			
23-Sep	0	0	-2	-2	-3	-4	-4	-4	-2	3	7	7	9	11	13	13	13	11	10	9	6	5	4	3	4.3	13.2			
24-Sep	4	4	5	6	7	8	8	8	9	10	11	13	14	14	15	14	15	15	12	7	5	3	4	3	8.9	15.4			
25-Sep	1	1	1	1	1	0	-1	1	6	9	12	14	15	16	16	16	16	15	14	11	8	8	9	10	8.3	16.0			
26-Sep	10	10	10	11	9	10	11	11	12	12	12	12	11	10	10	10	10	9	9	7	6	6	6	6	9.6	12.4			
27-Sep	6	6	6	4	3	3	3	4	5	7	9	9	9	10	10	10	8	8	7	5	3	1	0	2	5.7	10.2			
28-Sep	2	2	1	1	1	1	0	1	2	3	4	6	7	8	8	9	8	7	4	2	1	-1	-3	-4	2.9	8.6			
29-Sep	-3	-2	1	2	2	1	0	-1	0	2	3	2	3	3	3	2	2	1	0	0	0	-2	-4	-4	0.5	3.0			
30-Sep	-5	-6	-6	-7	-6	-7	-7	-6	-3	-1	1	3	4	5	5	4	4	3	2	1	1	0	0	0	-1.0	4.7			
3.2 3.0 2.8 2.6 2.2 2.0 1.9 2.5 3.9 5.4 6.7 7.7 8.3 8.8 9.1 9.2 9.1 8.5 7.4 5.7 4.6 3.9 3.4 3.2																									Diurnal Average				
12.3 12.3 11.8 11.9 11.5 11.5 11.2 10.9 12.0 13.8 16.1 16.6 17.4 17.4 18.0 18.2 19.1 18.5 16.9 14.5 12.8 13.1 13.3 12.7																									Diurnal Maximum				

Hourly Averages

External Temperature (ET) - °C
Smoky Heights - September 2018



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Smoky Heights - September 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	25	24	20	15	19	21	20	21	26	25	27	27	23	16	19	13	15	10	10	12	14	15	17	19	17.2	27.3
Dir	250	249	245	241	256	257	257	259	254	254	255	252	249	297	313	317	303	256	218	197	211	230	234	248	254.3	254.7
2 Spd	21	21	21	18	11	8	8	10	8	9	11	10	9	10	14	13	14	14	11	13	10	14	14	15	10.4	21.4
Dir	256	257	255	256	229	206	130	185	175	181	200	208	170	175	161	167	188	212	215	233	236	243	246	257	219.0	257.1
3 Spd	13	17	16	15	12	15	13	14	20	21	18	18	17	19	16	12	10	8	7	2	5	7	5	4	11.2	20.9
Dir	255	248	244	252	266	279	282	279	310	308	314	312	305	302	313	333	338	343	324	290	264	290	320	323	293.9	307.9
4 Spd	3	7	6	4	4	5	5	6	8	9	11	11	14	15	15	18	18	17	10	7	8	10	14	12	8.5	17.9
Dir	264	256	275	237	205	196	193	204	214	191	155	166	205	210	219	218	220	216	200	186	256	271	261	271	219.1	218.4
5 Spd	11	8	9	5	4	5	4	5	5	2	9	8	8	8	8	8	10	9	11	9	10	9	9	7	3.0	10.9
Dir	254	216	196	190	191	196	196	197	202	53	42	42	34	28	20	39	31	33	26	17	13	13	9	26	25.3	25.9
6 Spd	6	6	7	9	8	9	9	9	7	6	3	3	3	4	4	5	3	3	1	4	8	6	5	6	4.6	9.2
Dir	22	6	8	9	30	29	29	29	30	53	53	167	142	108	88	95	52	15	10	349	61	53	27	13	36.6	28.6
7 Spd	1	3	1	1	1	1	5	4	4	3	2	5	7	7	4	7	6	7	5	2	4	5	5	6	1.4	7.1
Dir	126	144	94	245	177	113	15	16	27	113	117	137	207	238	318	14	29	34	40	33	263	306	333	15	11.2	13.5
8 Spd	5	6	4	5	7	8	11	6	5	11	9	8	11	32	31	19	16	15	14	12	11	13	14	15	9.6	32.2
Dir	355	10	15	32	3	357	9	19	261	333	321	322	262	259	257	279	292	298	298	305	294	301	314	312	300.7	259.4
9 Spd	15	14	13	13	13	10	10	9	9	8	8	8	8	6	8	8	8	10	8	8	9	9	10	8	7.3	14.8
Dir	317	308	310	314	319	315	320	331	343	355	15	26	33	23	57	45	33	46	61	51	23	34	43	37	0.1	316.8
10 Spd	7	7	8	7	8	7	6	7	7	7	9	10	11	9	7	9	6	7	11	7	6	4	3	4	6.3	10.9
Dir	33	31	17	26	29	25	9	4	347	332	339	321	315	315	324	315	332	335	310	313	329	332	284	275	341.2	310.1
11 Spd	4	4	5	4	1	2	3	4	5	4	4	2	2	2	4	7	8	20	18	16	17	17	17	15	5.0	19.6
Dir	277	279	285	216	172	236	204	177	179	185	184	181	83	17	352	350	333	344	355	357	355	348	349	352	341.2	343.6
12 Spd	13	12	14	12	10	10	12	13	11	10	11	10	10	9	8	8	6	4	6	4	3	3	4	3	8.4	13.8
Dir	346	346	346	347	354	359	7	13	14	14	15	20	23	20	16	7	19	38	20	22	8	356	2	16	6.2	345.8
13 Spd	3	2	3	3	2	1	2	2	3	3	3	5	3	3	4	5	5	6	4	6	4	1	1	3	0.9	6.1
Dir	12	345	330	339	12	2	27	1	26	30	114	124	159	105	120	172	179	185	195	176	187	109	306	26	132.0	175.5
14 Spd	4	3	3	4	4	4	5	4	4	4	5	6	7	10	9	7	8	11	6	4	6	4	4	4	2.0	10.8
Dir	14	13	6	8	4	357	4	16	66	38	46	38	70	131	134	106	117	155	184	271	252	295	14	9	64.4	155.4
15 Spd	5	6	6	6	7	7	6	7	9	10	9	12	12	13	15	15	14	12	10	7	7	7	7	6	8.4	15.3
Dir	17	22	14	9	4	5	11	8	17	28	31	52	60	60	53	54	72	64	54	55	53	53	48	38	42.3	52.9
16 Spd	6	7	9	9	9	9	9	9	9	11	11	10	10	10	10	12	12	11	10	8	7	6	5	6	8.7	12.0
Dir	26	19	24	24	26	34	37	44	41	45	53	51	46	48	69	67	59	54	53	45	47	58	42	40	45.0	66.8
17 Spd	7	6	7	4	5	6	8	6	2	2	3	5	5	8	8	8	9	8	8	7	6	7	8	6	1.9	9.0
Dir	49	34	46	35	37	92	116	103	97	144	101	97	178	212	227	226	235	238	227	220	244	228	240	248	197.8	235.5
18 Spd	6	6	7	6	3	5	3	4	5	5	4	3	3	6	9	11	9	6	6	9	7	7	2	4	5.2	11.2
Dir	257	252	265	259	251	244	230	212	239	243	218	182	199	226	224	218	215	177	175	193	208	202	220	201	221.1	217.6
19 Spd	7	10	7	8	7	8	7	4	4	5	5	5	8	7	7	7	5	9	6	2	4	5	5	5	3.7	9.7
Dir	182	186	181	184	190	196	203	215	175	172	157	129	146	169	190	204	246	262	239	270	358	351	21	5	193.8	185.6
20 Spd	7	13	16	16	17	16	16	12	13	11	12	11	11	10	10	9	9	9	7	6	6	6	7	7	10.4	16.6
Dir	331	352	358	11	13	14	22	18	20	6	2	12	30	30	16	24	25	25	29	22	17	15	20	24	14.3	13.4
21 Spd	6	6	6	6	5	6	6	8	7	5	4	9	3	8	6	4	6	10	10	7	7	2	1	4	2.8	10.3
Dir	11	12	5	19	13	13	17	19	18	17	89	135	128	154	125	94	122	146	156	157	142	160	74	42	81.5	155.8
22 Spd	5	5	5	7	7	7	7	6	6	7	16	18	19	19	17	15	16	13	11	8	9	9	8	7	7.9	19.3
Dir	16	25	19	53	43	23	21	30	38	50	121	128	120	122	119	122	128	127	129	137	133	142	141	136	108.1	121.8

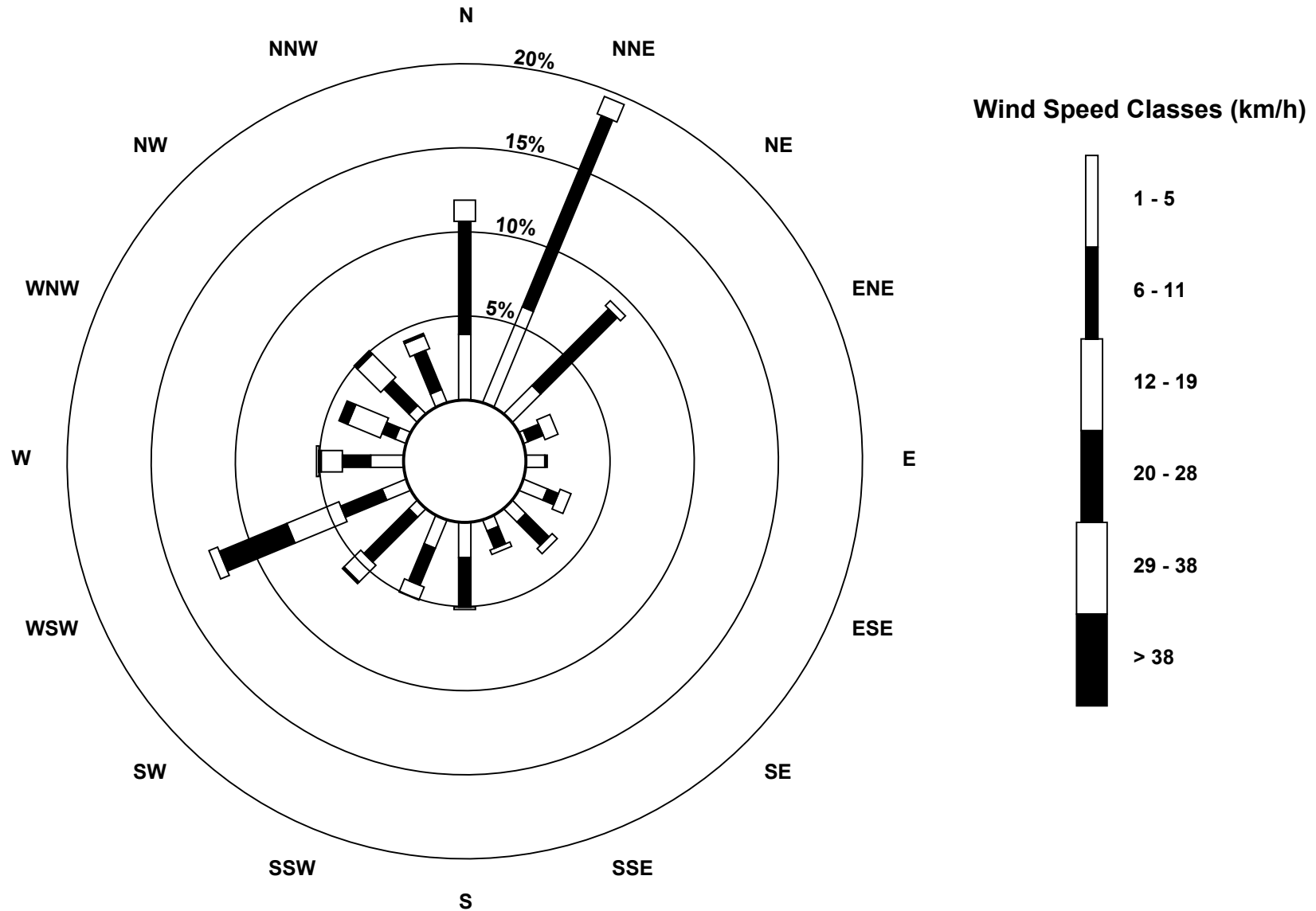
Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Smoky Heights - September 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	6	6	4	6	7	8	9	11	11	13	20	21	19	22	21	29	26	19	20	18	13	15	14	14	14.0	29.2								
Dir	162	159	195	215	227	215	228	231	224	209	230	239	239	246	239	247	249	236	241	243	224	237	241	252	234.5	247.0								
24 Spd	17	19	21	21	14	12	9	13	16	16	16	19	20	20	24	21	22	14	9	6	9	9	7	9	13.9	24.3								
Dir	258	253	250	245	251	260	277	303	302	301	294	288	292	290	279	298	297	290	292	272	260	256	228	205	276.1	279.0								
25 Spd	9	9	10	12	7	8	7	9	10	20	27	29	23	26	29	28	27	26	19	14	14	19	20	22	16.8	29.1								
Dir	215	207	225	218	175	187	217	212	222	242	250	251	248	249	253	256	258	257	248	246	251	253	256	253	244.4	253.0								
26 Spd	20	19	10	2	8	12	15	13	10	7	3	9	11	13	8	11	8	8	5	6	6	2	4	6	6.5	20.5								
Dir	255	250	266	259	240	271	281	287	289	271	15	4	27	13	351	330	322	295	275	256	226	281	253	247	287.1	254.8								
27 Spd	4	3	6	6	6	6	6	5	5	4	2	2	2	6	6	8	10	6	5	8	7	4	4	5	3.9	10.1								
Dir	263	3	359	0	353	358	6	15	28	29	107	186	247	248	10	1	280	286	327	352	1	353	7	5	345.8	280.4								
28 Spd	4	4	4	4	3	2	2	2	4	3	2	6	3	4	5	7	7	8	6	6	7	7	3	1	3.6	8.0								
Dir	26	32	27	19	16	37	352	25	28	35	103	55	55	38	12	4	3	8	23	329	317	311	303	260	9.3	8.3								
29 Spd	4	2	9	11	9	8	4	4	5	10	8	7	9	8	9	10	9	7	5	4	4	3	2	4	5.5	10.8								
Dir	249	50	336	343	340	354	3	359	8	24	22	358	359	11	358	20	35	21	34	19	109	163	72	18	8.3	343.2								
30 Spd	5	5	3	4	5	6	6	6	7	8	8	9	9	11	8	6	10	10	10	9	7	7	6	6	6.7	10.5								
Dir	12	24	358	4	6	8	11	7	27	36	63	34	32	42	41	44	48	32	24	25	8	15	6	0	26.0	42.4								
Spd	4.2	3.9	4.2	3.2	2.8	2.8	2.8	2.7	2.9	2.7	1.5	1.4	1.3	2.5	2.7	2.8	2.8	2.3	1.7	1.8	2.2	3.1	3.2	3.4	Diurnal Average									
Dir	286.1	284.8	297.5	303.8	318.5	316.6	333.2	324.0	321.0	321.0	313.1	308.5	285.7	277.1	289.8	308.4	300.6	297.1	297.4	290.2	288.1	293.9	301.7	306.0	Diurnal Maximum									
Spd	24.7	24.2	20.6	20.5	19.3	21.3	19.8	20.6	26.1	24.7	27.3	28.9	23.1	32.2	30.7	29.2	27.2	25.6	20.2	17.9	16.5	18.7	20.1	21.5	Diurnal Maximum									
Dir	249.9	248.8	249.7	244.8	256.1	256.8	257.4	258.6	253.6	254.0	254.7	250.7	248.7	259.4	256.9	247.0	258.3	256.5	241.4	243.3	355.4	253.2	256.0	253.5										
Maximum Speed Value: 32 km/h on Sep 8 14:00																		Minimum Speed Value: 1 km/h on Sep 13 06:00										Hours in Service: 720						
Maximum Daily Speed Average: 17.2 km/h on Sep 1																		Minimum Daily Speed Average: 0.9 km/h on Sep 13										Hours of Data: 720						
Maximum Diurnal Speed Average: 4.2 km/h at hour 1																		Minimum Diurnal Speed Average: 1.3 km/h at hour 13										Hours of Missing Data: 0						
Monthly Average Velocity: 2.62 km/h 302.50 deg																		Speed Percentiles: P ₁ = 1.2 P ₁₀ = 3.3 Q ₁ = 5.2 Median = 7.6 Q ₃ = 10.8 P ₉₀ = 16.8 P ₉₉ = 27.3										Percent Operational Time: 100.0						
All monthly, daily, and diurnal averages have been calculated using vector methods																																		
Frequency Distribution																																		
Speed Range (km/h)																																		
Direction	0 to 5		5 to 11		11 to 19		19 to 28		28 to 38		> 38		Total																					
North	46		105		24		1		0		0		176																					
NorthEast	31		103		8		0		0		0		142																					
East	17		5		1		0		0		0		23																					
SouthEast	12		24		6		2		0		0		44																					
South	26		34		5		0		0		0		65																					
SouthWest	12		48		26		8		1		0		95																					
West	17		29		24		32		5		0		107																					
NorthWest	7		31		25		5		0		0		68																					
Total	168		379		119		48		6		0		720																					

Wind Rose

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



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Smoky Heights - September 2018

Maximum Speed: 33 km/h on Sep 8 14:00																				Maximum Daily Speed Average: 19.1 km/h on Sep 1										Hours in Service: 720	
Minimum Speed: 1 km/h on Sep 13 23:00																				Minimum Daily Speed Average: 3.6 km/h on Sep 13										Hours of Data: 720	
Maximum Diurnal Speed Average: 12.0 km/h at hour 15																				Minimum Diurnal Speed Average: 7.6 km/h at hour 5										Hours of Missing Data: 0	
Monthly Average Speed: 9.27 km/h																				Percentiles: P ₁ = 2.1 P ₁₀ = 4.0 Q ₁ = 5.6 Median = 7.9 Q ₃ = 11.2 P ₉₀ = 17.0 P ₉₉ = 27.4										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-Sep	25	24	20	15	19	21	20	21	26	25	28	27	23	18	19	14	15	10	10	13	14	15	17	19	19.1	27.5					
2-Sep	21	21	21	18	11	8	12	10	8	9	11	10	10	10	14	14	16	14	11	13	11	14	14	15	13.2	21.4					
3-Sep	13	17	16	15	13	15	13	14	21	21	18	18	17	20	16	12	11	9	7	3	5	7	6	5	12.9	21.1					
4-Sep	3	7	6	4	4	5	5	7	8	10	11	11	15	16	16	19	18	17	10	8	8	10	14	12	10.1	18.5					
5-Sep	11	8	9	5	4	5	5	5	5	4	9	9	9	8	8	8	10	9	11	10	10	9	10	7	7.9	11.1					
6-Sep	6	6	7	9	8	9	9	9	7	6	4	5	6	5	6	6	5	4	2	5	8	7	6	6	6.3	9.3					
7-Sep	3	3	2	2	2	3	6	4	4	4	4	5	7	7	7	7	6	7	5	3	5	6	6	6	4.7	7.4					
8-Sep	6	6	5	7	7	8	11	13	7	11	10	8	12	33	31	20	17	15	14	12	11	13	14	15	12.8	32.6					
9-Sep	15	15	13	13	13	10	10	10	9	8	8	9	8	7	9	8	9	10	9	9	9	9	10	8	9.8	14.9					
10-Sep	7	8	8	7	8	7	6	7	8	7	9	10	11	10	8	9	6	7	11	7	6	5	4	4	7.5	11.0					
11-Sep	4	5	5	4	2	2	3	4	5	4	5	3	3	3	5	8	9	21	18	17	17	17	18	16	8.2	21.4					
12-Sep	13	13	14	13	10	10	13	14	11	10	11	10	10	9	8	8	7	5	6	5	3	3	4	3	8.8	13.9					
13-Sep	3	3	3	3	2	2	2	2	3	3	3	6	3	4	5	7	6	6	4	7	5	2	1	3	3.6	6.9					
14-Sep	4	4	3	4	4	4	5	5	5	5	6	6	7	10	9	7	8	11	6	5	6	4	4	4	5.8	11.3					
15-Sep	5	6	6	6	7	7	6	7	9	10	10	12	12	13	15	15	14	13	10	7	7	8	7	6	9.1	15.5					
16-Sep	7	7	9	9	9	9	9	9	9	11	11	10	10	10	10	12	12	11	10	8	7	6	5	6	9.1	12.2					
17-Sep	7	6	7	5	5	7	8	6	3	3	4	5	6	8	8	8	9	9	8	7	6	7	8	6	6.5	9.4					
18-Sep	6	7	7	7	4	5	4	5	5	5	4	4	5	7	9	12	9	7	6	9	7	7	2	4	6.1	11.5					
19-Sep	7	10	7	8	7	8	7	4	4	6	6	5	8	8	8	8	6	9	6	4	5	6	5	6	6.6	9.7					
20-Sep	8	13	16	16	17	16	16	12	13	12	12	11	11	10	10	10	9	9	7	6	6	6	7	7	10.9	16.8					
21-Sep	6	6	6	6	5	6	6	8	7	5	6	9	4	9	7	4	6	10	10	7	7	3	2	5	6.3	10.4					
22-Sep	5	5	5	7	7	7	7	7	6	7	17	18	19	19	17	15	17	13	11	8	9	9	8	7	10.5	19.5					
23-Sep	6	7	5	6	7	8	9	11	11	13	21	21	19	22	21	30	26	19	20	18	13	15	14	14	14.8	29.5					
24-Sep	17	19	21	21	14	12	10	13	17	16	17	20	20	21	25	21	22	14	9	7	10	9	8	9	15.5	24.6					
25-Sep	9	9	10	12	7	8	7	10	10	21	27	29	23	26	29	29	27	26	19	14	14	19	20	22	17.8	29.3					
26-Sep	20	19	13	4	8	12	15	14	10	7	5	9	11	13	9	12	8	8	6	6	7	3	5	6	9.5	20.5					
27-Sep	4	4	6	6	6	6	6	5	5	4	4	3	4	7	7	9	11	6	6	8	7	4	4	5	5.7	10.6					
28-Sep	4	4	4	4	3	3	2	2	4	3	3	6	5	5	7	8	8	8	7	6	7	7	4	2	4.8	8.1					
29-Sep	4	3	9	11	9	8	4	4	6	10	9	8	9	9	10	11	10	7	5	5	4	3	2	4	6.8	11.0					
30-Sep	5	5	3	4	5	6	6	6	7	8	8	9	9	11	9	7	10	10	10	9	7	7	6	6	7.3	11.0					
8.5 9.0 9.0 8.4 7.6 7.9 8.0 8.2 8.5 8.9 10.0 10.6 10.6 11.9 12.0 11.8 11.6 10.8 9.2 8.1 8.0 7.9 7.9 8.0																									Diurnal Average						
24.8 24.3 20.6 20.6 19.5 21.3 19.8 20.7 26.2 24.9 27.5 29.0 23.2 32.6 31.0 29.5 27.3 25.6 20.3 17.9 16.8 18.8 20.1 21.5																									Diurnal Maximum						
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

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

Maximum Value: 82.9 deg on Sep 7 01:00																			Hours in Service: 720						
Minimum Value: 1.9 deg on Sep 2 03:00																			Hours of Data: 720						
																			Hours of Missing Data: 0						
Percentiles: P ₁ = 2.9 P ₁₀ = 6.5 Q ₁ = 8.5 Median = 12.6 Q ₃ = 20.3 P ₉₀ = 35.5 P ₉₉ = 75.5																			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-Sep	5	4	4	4	7	3	5	5	5	6	8	6	7	24	12	14	10	16	6	6	8	5	4	5	23.9
2-Sep	5	2	2	3	16	10	51	5	6	10	12	17	21	14	9	13	20	11	13	4	10	9	7	3	51.3
3-Sep	8	3	4	4	11	11	8	7	8	8	10	8	11	7	9	13	15	13	14	32	20	6	21	24	32.0
4-Sep	14	10	3	32	22	17	11	8	8	17	11	11	17	12	16	15	12	11	14	22	12	9	4	6	32.5
5-Sep	20	13	11	7	8	11	24	14	23	83	16	18	23	21	19	21	10	8	8	9	7	7	9	14	82.9
6-Sep	14	11	14	18	10	8	8	10	15	20	67	64	62	51	72	49	58	32	60	29	20	18	12	7	71.8
7-Sep	83	23	65	59	74	72	29	17	26	58	73	27	25	14	50	16	17	19	13	37	49	27	31	19	82.9
8-Sep	35	33	31	45	16	15	9	77	55	12	17	14	30	9	8	15	10	7	9	13	11	8	8	7	77.3
9-Sep	8	9	8	7	7	8	10	10	10	16	14	14	18	27	19	19	20	14	16	15	8	7	8	10	27.2
10-Sep	10	11	11	13	11	13	12	13	13	13	16	17	11	19	29	15	14	17	9	9	8	11	27	12	28.8
11-Sep	20	23	11	20	82	44	8	11	10	31	24	48	57	35	36	25	18	24	10	18	10	10	9	17	81.5
12-Sep	9	9	8	8	11	11	12	11	8	10	11	10	11	13	13	15	17	21	12	15	20	16	16	15	20.8
13-Sep	19	19	28	41	25	80	28	39	22	18	28	20	28	34	30	50	19	14	25	31	49	76	34	10	79.7
14-Sep	8	17	10	16	10	11	12	35	33	26	35	23	17	14	27	28	18	18	16	23	18	32	20	7	35.5
15-Sep	11	10	9	12	9	8	21	10	12	8	12	9	11	10	10	9	8	10	9	9	8	9	9	13	21.0
16-Sep	11	10	8	7	8	7	7	7	8	7	9	9	8	9	11	11	12	9	9	8	8	8	8	7	12.5
17-Sep	8	8	13	25	15	29	10	20	37	58	40	28	48	13	18	15	15	14	12	8	14	9	6	10	58.2
18-Sep	10	11	11	12	35	16	32	22	12	16	22	48	59	31	19	15	11	15	14	4	12	33	35	25	59.4
19-Sep	10	4	10	11	15	9	10	15	14	14	19	32	18	27	36	31	37	18	19	59	21	22	14	14	59.4
20-Sep	19	9	9	7	9	7	6	8	10	19	13	18	20	21	20	18	12	8	7	10	10	8	8	9	20.7
21-Sep	10	11	11	13	10	8	9	14	8	14	45	24	48	22	37	31	31	9	6	6	7	32	67	23	66.6
22-Sep	8	19	12	13	10	7	7	11	7	18	20	15	8	8	12	11	7	7	7	8	4	6	7	8	20.2
23-Sep	13	14	10	6	7	7	9	4	10	16	11	8	9	9	11	9	9	5	4	6	6	3	5	3	16.4
24-Sep	4	4	3	6	9	10	21	6	8	15	17	15	15	15	8	10	7	8	6	32	11	11	24	12	31.9
25-Sep	15	10	7	8	11	6	16	15	13	6	6	6	9	9	7	6	5	4	7	6	4	3	3	3	15.6
26-Sep	3	3	48	62	17	8	4	6	7	12	58	14	11	14	17	18	16	13	7	14	8	63	37	21	62.9
27-Sep	47	58	10	9	11	14	12	15	13	54	75	82	59	50	23	20	17	12	20	10	10	32	21	25	81.5
28-Sep	13	16	14	22	17	37	20	26	15	35	76	24	69	61	55	24	22	8	16	16	8	7	63	66	75.9
29-Sep	20	48	18	12	10	15	18	13	17	13	21	23	23	19	22	15	21	20	29	43	46	42	56	7	56.1
30-Sep	6	14	16	13	8	6	12	16	18	12	20	20	27	19	25	27	16	11	8	6	9	7	9	10	26.5
	82.9	57.6	65.1	61.8	81.5	79.7	51.3	77.3	55.1	82.9	75.9	81.5	69.0	61.3	71.8	49.5	57.6	32.0	59.8	59.4	48.8	75.7	66.6	65.5	

PAZA
Valleyview Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

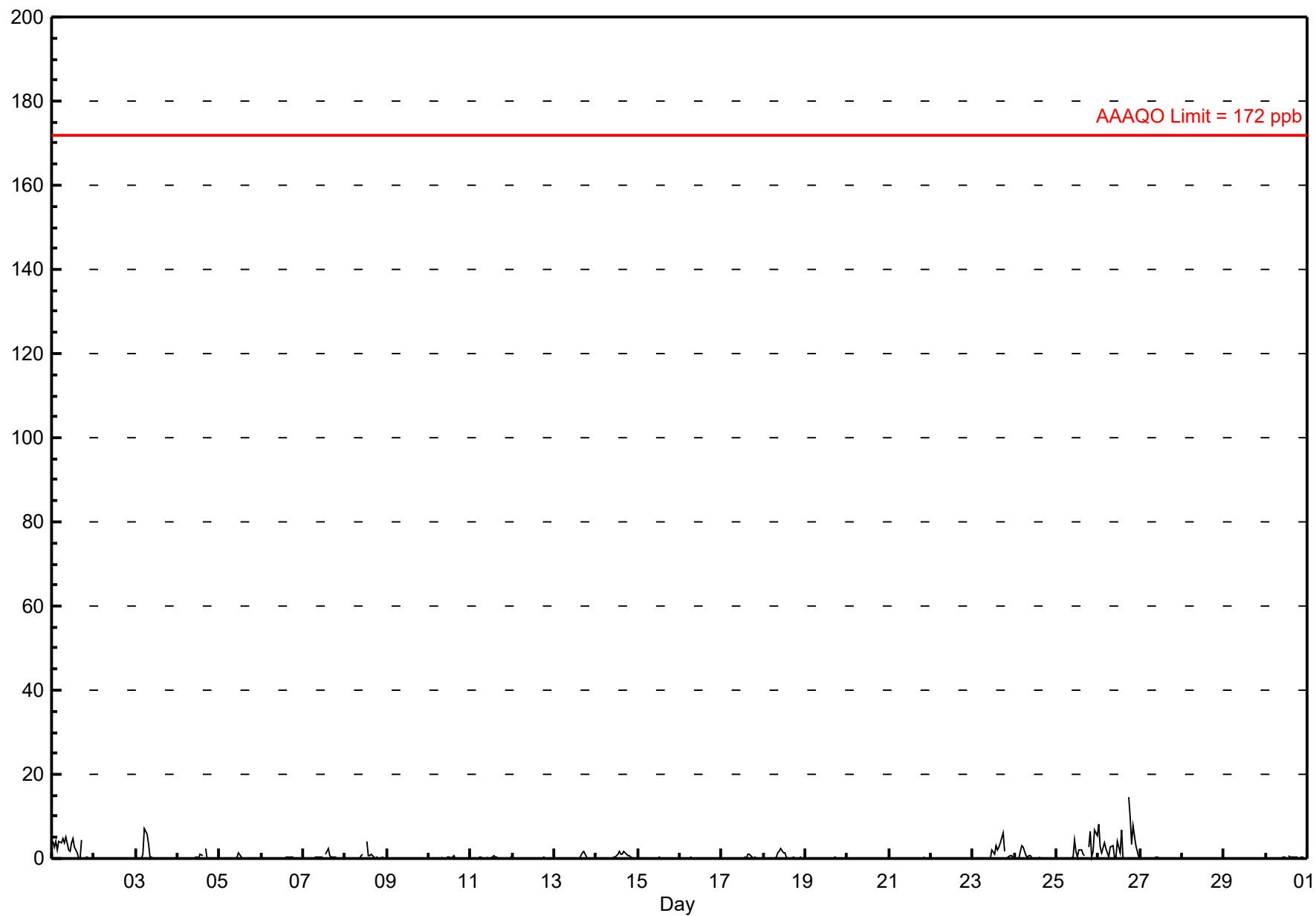
Sulphur Dioxide (SO₂) - ppb

Valleyview - September 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 14.7 ppb on Sep 26 18:00 Maximum Daily Average: 3.4 ppb on Sep 26																				Hours in Service: 720 Hours of Data: 686 Hours of Missing Data: 34 Hours of Calibration: 34 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Sep 2 06:00 Minimum Daily Average: 0.0 ppb on Sep 29 Maximum Diurnal Average: 1.1 ppb at hour 18 Minimum Diurnal Average: 0.2 ppb at hour 2 Monthly Average: 0.44 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 1.2 P ₉₉ = 6.6																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	4	3	4	2	4	4	5	4	5	2	2	4	5	3	1	0	0	4	A	0	0	0	0	0	2.4	5.0
2-Sep	0	0	0	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
3-Sep	0	0	0	0	1	7	6	3	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.8	7.1
4-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	A	2	0	0	0	0	0	0	0	0.2	2.4
5-Sep	0	0	0	0	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0.1	1.3
6-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.3
7-Sep	0	0	0	0	0	0	0	0	0	0	0	0	A	1	2	1	0	0	0	0	0	0	0	0	0.3	2.3
8-Sep	0	0	0	0	0	0	0	0	0	1	1	A	4	1	1	1	1	0	0	0	0	0	0	0	0.4	3.9
9-Sep	0	0	0	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
10-Sep	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.1	0.6
11-Sep	0	0	0	0	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.2	0.6
12-Sep	0	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
13-Sep	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0.2	1.6
14-Sep	0	0	0	0	0	A	0	0	0	0	0	0	1	2	1	1	2	1	1	1	0	0	0	0	0.4	1.6
15-Sep	0	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
16-Sep	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
17-Sep	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0.2	1.0
18-Sep	0	A	0	0	0	0	0	0	1	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0.4	2.5
19-Sep	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.0	0.2
20-Sep	0	0	0	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
21-Sep	0	0	0	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
22-Sep	0	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
23-Sep	0	0	0	0	0	0	0	0	0	0	0	2	1	3	2	3	4	6	2	A	0	1	1	0	1.1	5.9
24-Sep	0	0	0	2	3	3	1	0	1	1	0	C	C	C	0	0	0	0	A	0	0	0	0	0	0.6	2.9
25-Sep	0	0	0	0	0	0	0	0	0	0	4	2	0	2	2	1	1	A	3	7	0	2	7	5	1.6	6.8
26-Sep	8	3	1	4	2	1	0	3	3	0	0	4	1	7	0	0	A	15	10	3	8	3	2	0	3.4	14.7
27-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.4
28-Sep	0	0	0	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
29-Sep	0	0	0	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
30-Sep	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0.2	0.6
																									Diurnal Average	
																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Valleyview - September 2018



Hourly Maximums

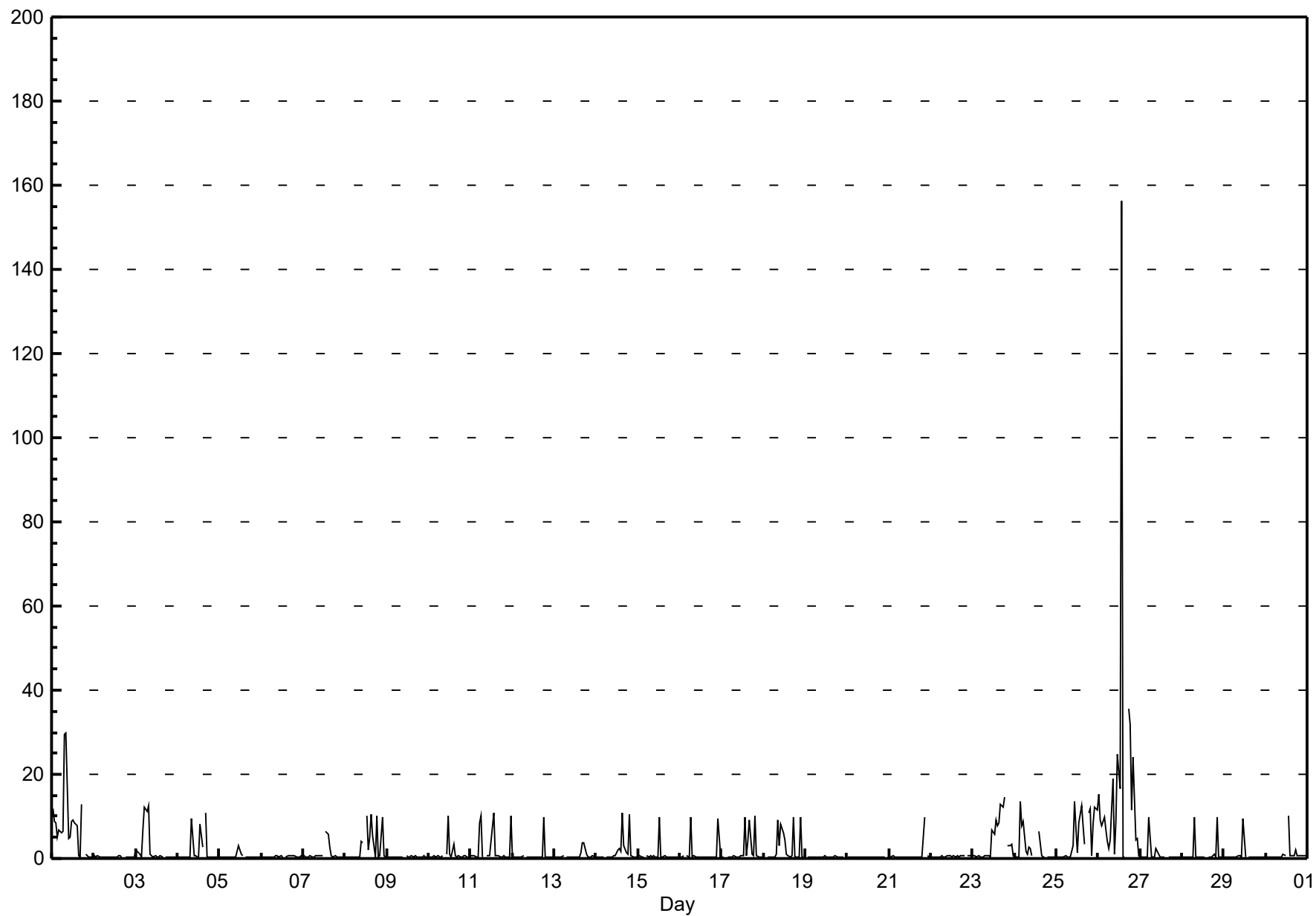
Sulphur Dioxide (SO₂) - ppb

Valleyview - September 2018

Maximum Value: 156.3 ppb on Sep 26 14:00																				Maximum Daily Average: 17.4 ppb on Sep 26					Hours in Service: 720	
Minimum Value: 0 ppb on Sep 29 16:00																				Minimum Daily Average: 0.4 ppb on Sep 20					Hours of Data: 686	
Maximum Diurnal Average: 8.9 ppb at hour 14																				Minimum Diurnal Average: 1.0 ppb at hour 3					Hours of Missing Data: 34	
Monthly Average: 2.20 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.3 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.7 P ₉₀ = 8.1 P ₉₉ = 19.9					Hours of Calibration: 34	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	12	9	9	5	7	6	6	29	30	5	5	9	9	8	8	1	0	13	A	1	1	1	0	1	7.6	30.0
2-Sep	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	A	0	0	0	0	0	0	0.4	0.7
3-Sep	2	2	1	0	7	12	11	12	1	1	0	1	0	0	1	0	A	0	0	0	0	0	0	0	2.4	12.4
4-Sep	0	0	0	0	0	0	0	0	10	1	1	1	0	8	3	A	11	0	0	0	0	0	0	0	1.7	11.0
5-Sep	0	0	0	0	0	0	0	0	0	0	2	3	1	1	A	0	0	0	0	0	0	0	0	0	0.6	3.1
6-Sep	0	0	0	0	0	0	0	0	1	1	0	1	0	A	0	1	1	1	1	1	0	0	0	1	0.5	0.7
7-Sep	1	0	0	0	1	0	0	1	1	1	1	1	A	7	6	3	1	0	1	0	0	0	0	0	1.1	6.5
8-Sep	0	0	0	0	0	0	0	0	0	4	4	A	10	2	5	10	6	0	10	0	1	10	1	0	2.9	10.4
9-Sep	0	0	0	0	0	0	0	0	0	0	A	1	0	0	1	0	1	0	0	0	0	1	0	0	0.4	0.6
10-Sep	0	0	0	1	0	1	0	0	1	A	1	10	1	0	3	1	0	1	0	0	1	1	0	0	1.1	10.0
11-Sep	1	1	1	0	0	8	10	0	A	1	1	1	8	11	1	1	1	0	0	1	0	0	0	10	2.5	10.8
12-Sep	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0.8	9.8
13-Sep	0	0	0	0	0	1	A	0	0	0	0	0	0	1	0	2	4	4	1	0	0	0	1	0	0.8	3.8
14-Sep	0	0	0	0	0	A	0	0	0	0	1	1	2	2	2	11	3	1	1	10	1	0	0	0	1.7	10.9
15-Sep	0	1	0	0	A	1	0	1	0	1	0	0	10	0	0	1	0	0	0	0	0	0	0	0	0.9	9.9
16-Sep	0	0	1	A	1	0	10	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	1.2	10.0
17-Sep	0	0	A	0	0	0	0	1	1	0	0	1	1	10	1	4	9	1	1	10	1	0	0	0	1.9	10.3
18-Sep	0	A	0	0	0	0	0	1	9	3	8	6	4	1	1	0	1	10	0	0	0	10	0	0	2.5	9.7
19-Sep	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	A	0.4	0.8
20-Sep	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.4	0.5
21-Sep	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	A	1	0	0.8	10.0
22-Sep	0	0	0	0	0	0	1	0	0	1	1	1	0	1	0	1	0	1	1	1	A	1	1	1	0.5	0.7
23-Sep	1	1	0	1	0	0	0	1	1	1	0	7	6	9	8	8	13	12	15	A	3	3	3	1	4.1	14.6
24-Sep	1	1	0	14	8	9	2	1	3	2	1	C	C	C	6	1	0	1	A	1	0	0	0	0	2.5	13.6
25-Sep	0	0	0	0	0	1	0	0	0	3	14	7	1	8	12	8	3	A	11	12	1	8	12	12	5.1	13.7
26-Sep	15	9	8	10	7	4	2	5	19	1	9	25	17	156	0	0	A	36	32	11	24	4	5	1	17.4	156.3
27-Sep	1	0	0	0	0	10	0	0	0	2	2	0	0	0	0	A	0	0	0	0	0	0	0	0	0.9	9.7
28-Sep	0	0	0	0	0	0	0	10	0	0	0	0	0	0	A	0	0	0	1	0	10	0	0	0	1.2	10.0
29-Sep	0	0	0	0	0	0	0	0	1	1	0	10	0	A	0	0	0	0	0	0	0	0	0	0	0.7	9.6
30-Sep	0	0	0	0	0	0	0	0	0	0	1	1	A	10	1	1	1	2	1	1	1	1	1	1	1.0	10.2
1.4 1.0 1.0 1.4 1.3 2.0 1.8 2.4 2.8 1.1 1.9 3.1 2.8 8.9 2.2 2.0 2.1 3.1 3.2 1.9 2.0 1.6 1.4 1.2																									Diurnal Average	
15.3 9.1 8.6 13.6 7.8 12.2 11.3 29.5 30.0 4.7 13.7 24.8 16.6 156.3 12.5 10.9 12.9 35.7 31.8 11.8 24.1 9.9 12.3 11.6																									Diurnal Maximum	
C - Calibration																									A - Automated Daily Zero Span	

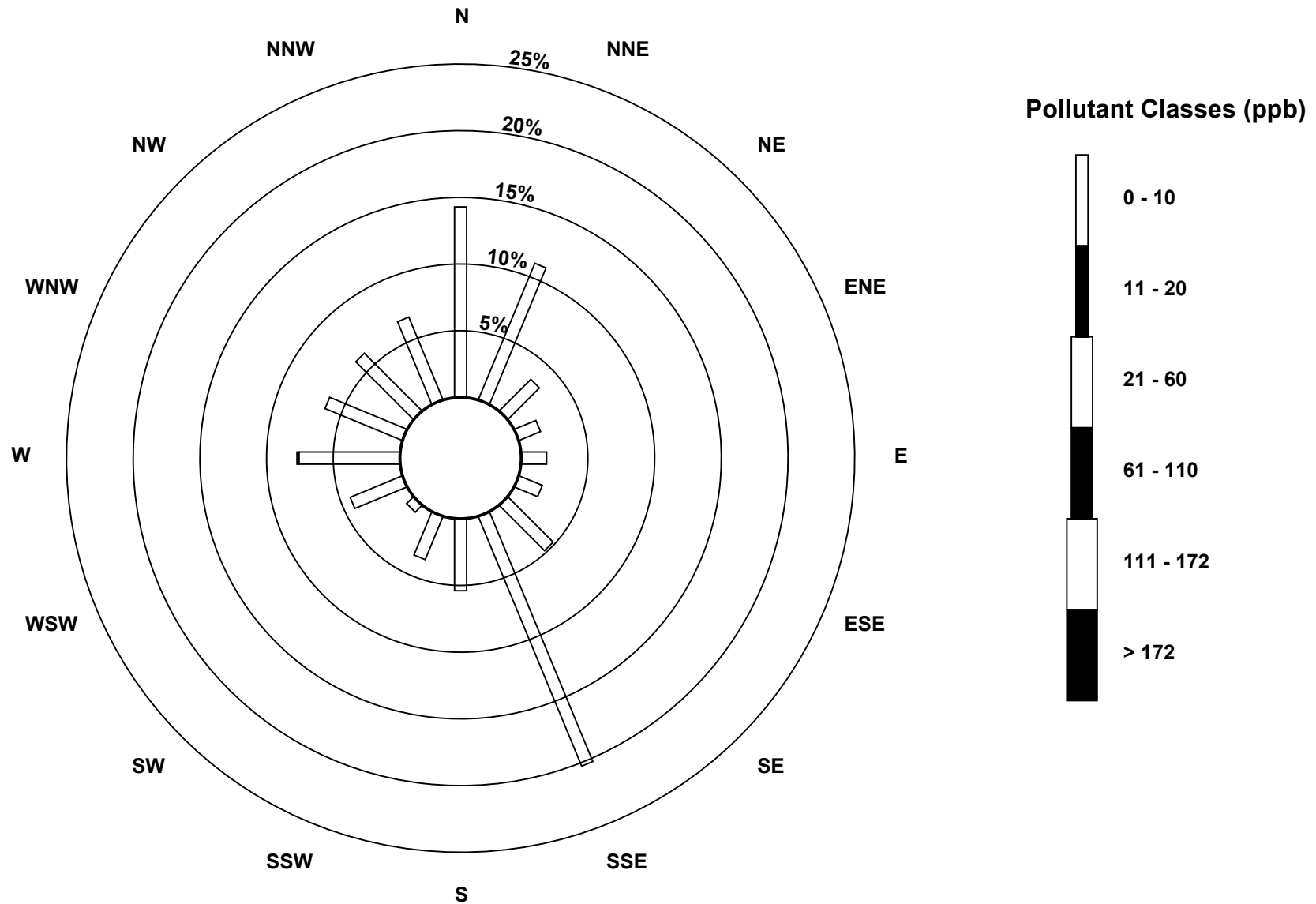
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Valleyview - September 2018



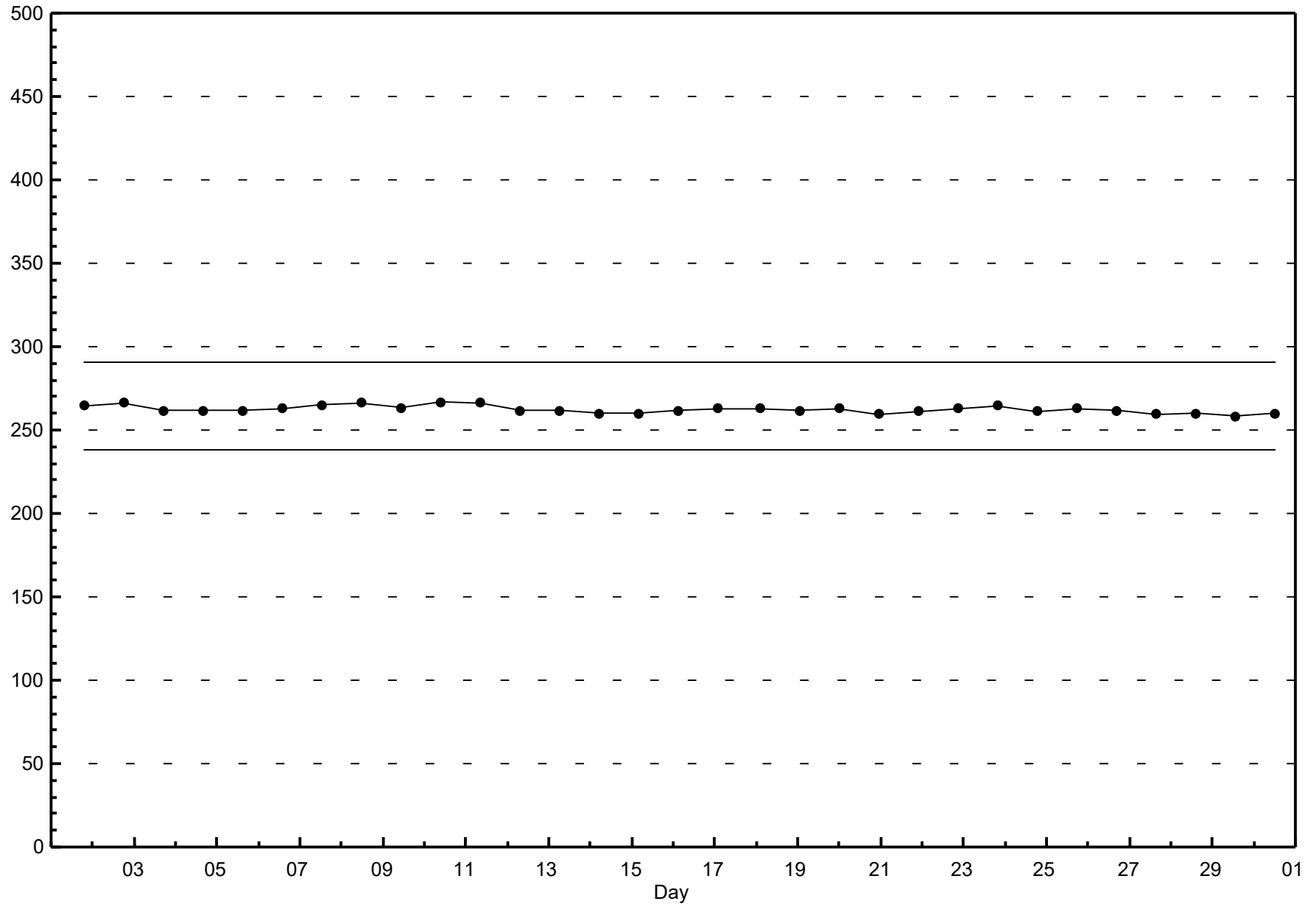
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Valleyview - September 2018



Span Responses

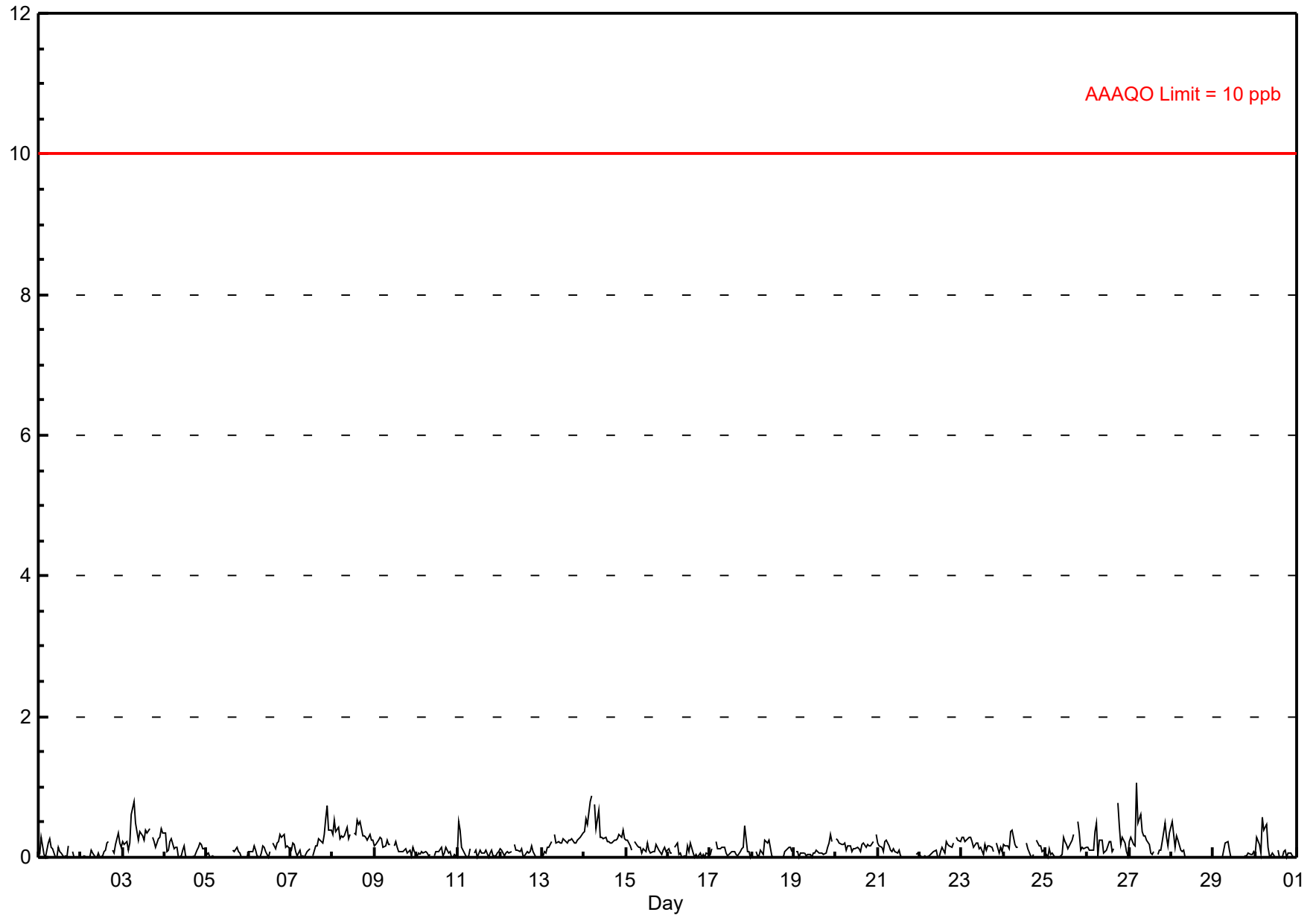
Sulphur Dioxide (SO₂)
Valleyview - September 2018



[illegible]

Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Valleyview - September 2018



Hourly Maximums

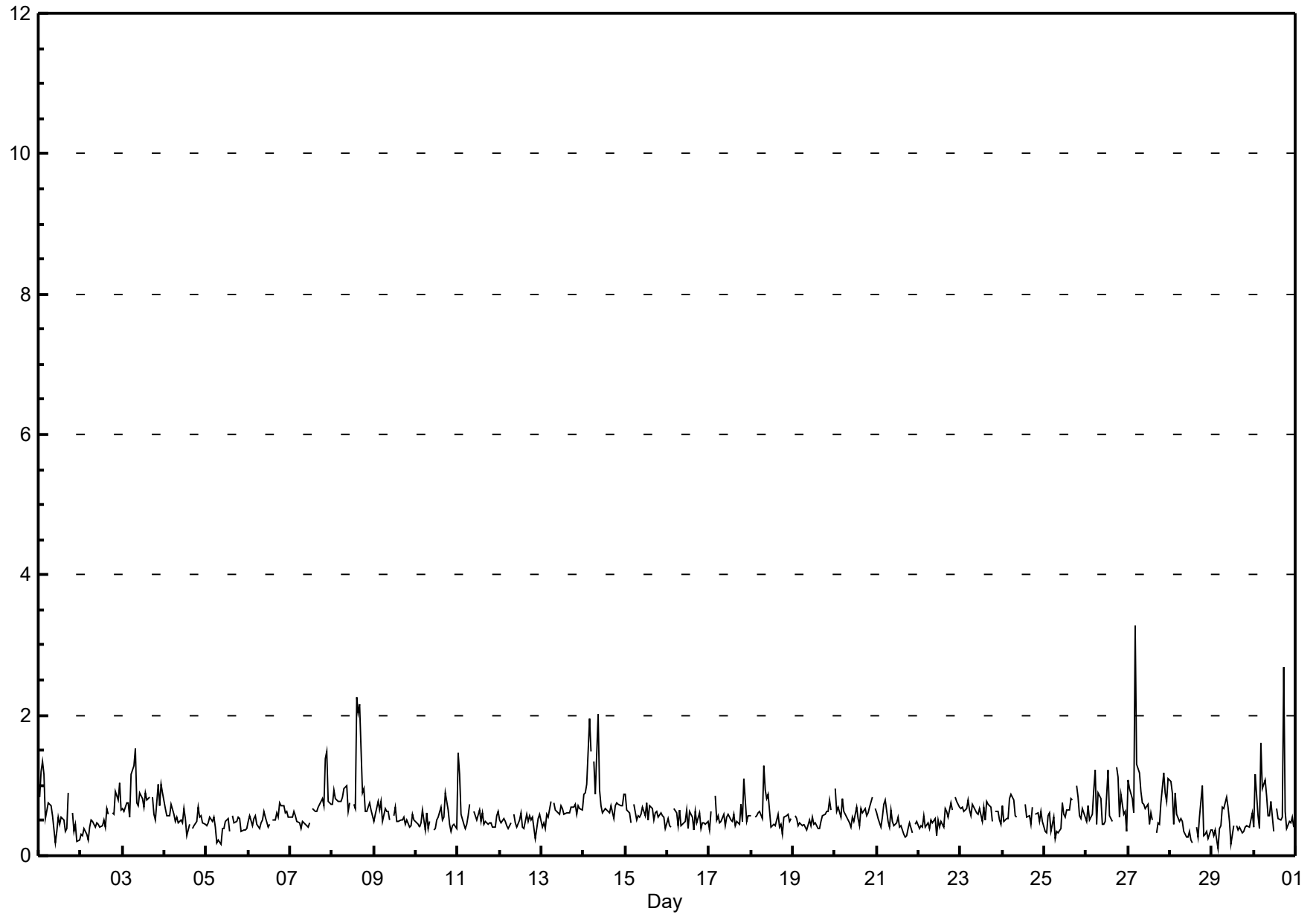
Hydrogen Sulphide (H₂S) - ppb

Valleyview - September 2018

Maximum Value: 3.3 ppb on Sep 27 05:00																			Maximum Daily Average: 1.0 ppb on Sep 8										Hours in Service: 720	
Minimum Value: 0 ppb on Sep 29 04:00																			Minimum Daily Average: 0.4 ppb on Sep 5										Hours of Data: 685	
Maximum Diurnal Average: 0.7 ppb at hour 5																			Minimum Diurnal Average: 0.5 ppb at hour 12										Hours of Missing Data: 35	
Monthly Average: 0.61 ppb																			Percentiles: P ₁ = 0.2 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.7 P ₉₀ = 0.9 P ₉₉ = 1.7										Hours of Calibration: 35	
																													Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Sep	1	1	1	1	1	1	1	1	1	0	0	1	0	1	1	0	0	1	A	1	0	0	0	0	0.6	1.3				
2-Sep	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	1	A	1	1	1	1	1	1	0.5	1.0				
3-Sep	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.8	1.5				
4-Sep	1	1	1	1	1	1	0	1	0	1	0	1	1	0	0	A	0	0	0	1	1	1	0	0	0.5	0.7				
5-Sep	0	0	1	0	1	0	0	0	0	0	0	0	1	0	A	1	0	0	1	1	0	0	0	0	0.4	0.6				
6-Sep	0	1	0	1	1	0	0	0	1	1	1	0	0	A	1	1	1	1	1	1	1	1	1	1	0.5	0.8				
7-Sep	1	1	1	1	0	0	0	0	0	0	0	0	A	1	1	1	1	1	1	1	1	1	1	1	0.7	1.5				
8-Sep	1	1	1	1	1	1	1	1	1	1	1	A	1	1	2	2	2	1	1	1	1	1	1	1	1.0	2.3				
9-Sep	0	1	1	1	1	0	1	1	1	1	A	1	1	0	0	1	1	1	0	1	0	0	1	1	0.6	0.8				
10-Sep	0	0	0	0	1	0	1	0	0	A	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0.5	0.9				
11-Sep	1	1	1	0	0	0	1	1	A	1	1	1	1	0	1	0	0	0	0	0	0	0	1	1	0.6	1.5				
12-Sep	1	0	1	0	0	0	0	A	1	0	0	1	1	0	0	1	0	1	1	1	0	0	1	1	0.5	0.6				
13-Sep	0	0	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8				
14-Sep	1	1	1	2	1	A	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	2.0				
15-Sep	1	1	1	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0.6	0.9				
16-Sep	1	0	0	A	1	1	0	1	0	0	0	1	0	1	1	0	1	0	1	0	0	0	0	0	0.5	0.7				
17-Sep	0	1	A	1	1	1	0	0	1	0	1	1	0	1	0	0	0	0	1	0	1	0	1	1	0.6	1.1				
18-Sep	1	A	1	1	1	1	1	1	1	1	1	0	0	0	0	1	0	0	0	1	1	1	0	1	0.6	1.3				
19-Sep	A	1	1	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1	1	1	1	1	A	0.5	0.8				
20-Sep	1	1	1	1	1	1	1	1	0	0	1	0	1	1	0	1	1	1	1	1	1	1	A	1	0.6	0.9				
21-Sep	1	1	0	1	1	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0.5	0.8				
22-Sep	0	0	0	1	0	0	0	1	0	1	0	1	0	0	0	1	1	1	1	1	A	1	1	1	0.5	0.8				
23-Sep	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	A	1	1	1	0	0.6	0.8				
24-Sep	1	0	1	1	1	1	1	1	1	C	C	C	C	1	1	1	0	1	A	1	1	0	1	0	0.6	0.9				
25-Sep	0	0	1	1	0	1	0	0	0	0	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.6	1.0				
26-Sep	0	1	1	1	1	1	0	1	1	0	0	0	1	1	1	0	A	1	1	1	1	1	1	0	0.7	1.3				
27-Sep	1	1	1	1	3	1	1	1	1	1	1	1	0	1	1	A	0	0	0	1	1	1	1	1	0.9	3.3				
28-Sep	1	1	0	1	1	0	1	0	0	0	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0.5	1.1				
29-Sep	0	0	0	0	0	0	1	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0	1	1	0.4	0.8				
30-Sep	0	1	1	0	2	1	1	1	1	1	1	0	A	1	1	1	1	3	1	0	0	0	1	0	0.7	2.7				
																								Diurnal Average						
																								Diurnal Maximum						
C - Calibration																								A - Automated Daily Zero Span						

Hourly Maximums

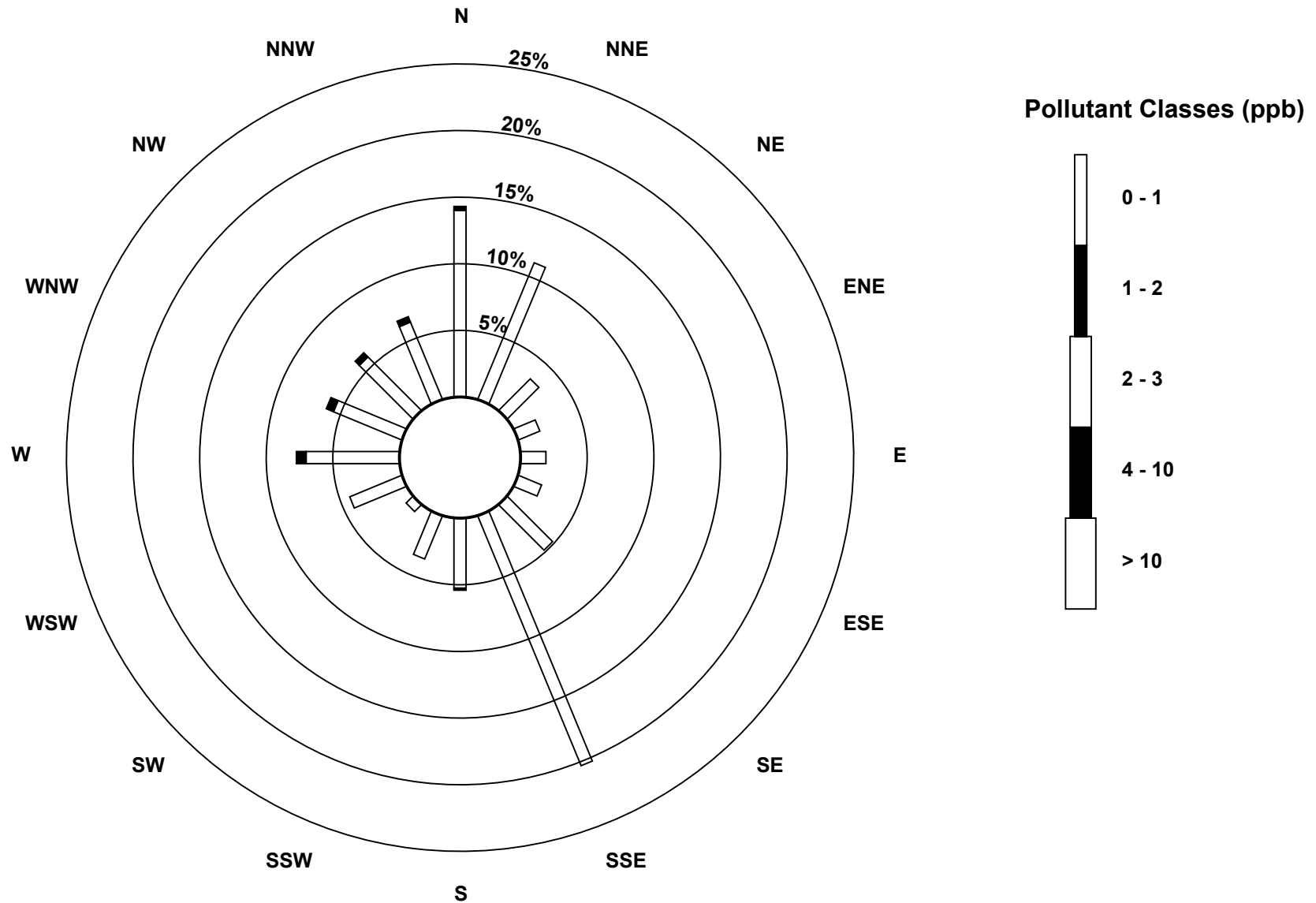
Hydrogen Sulphide (H₂S) - ppb
Valleyview - September 2018



Pollutant Rose

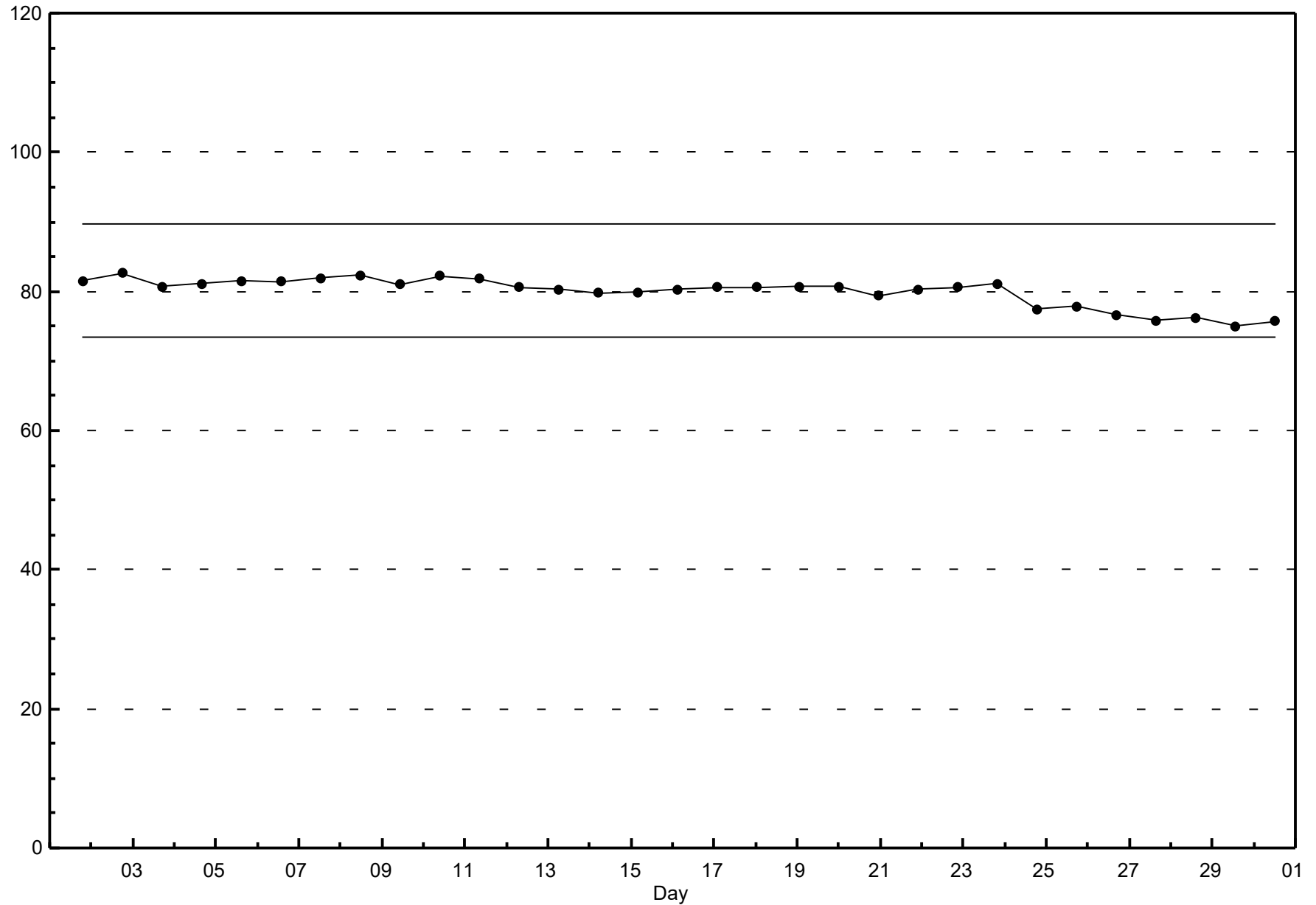
Hydrogen Sulphide (H₂S) - ppb

Valleyview - September 2018



Span Responses

Hydrogen Sulphide (H_2S)
Valleyview - September 2018



Hourly Averages

External Temperature (ET) - °C

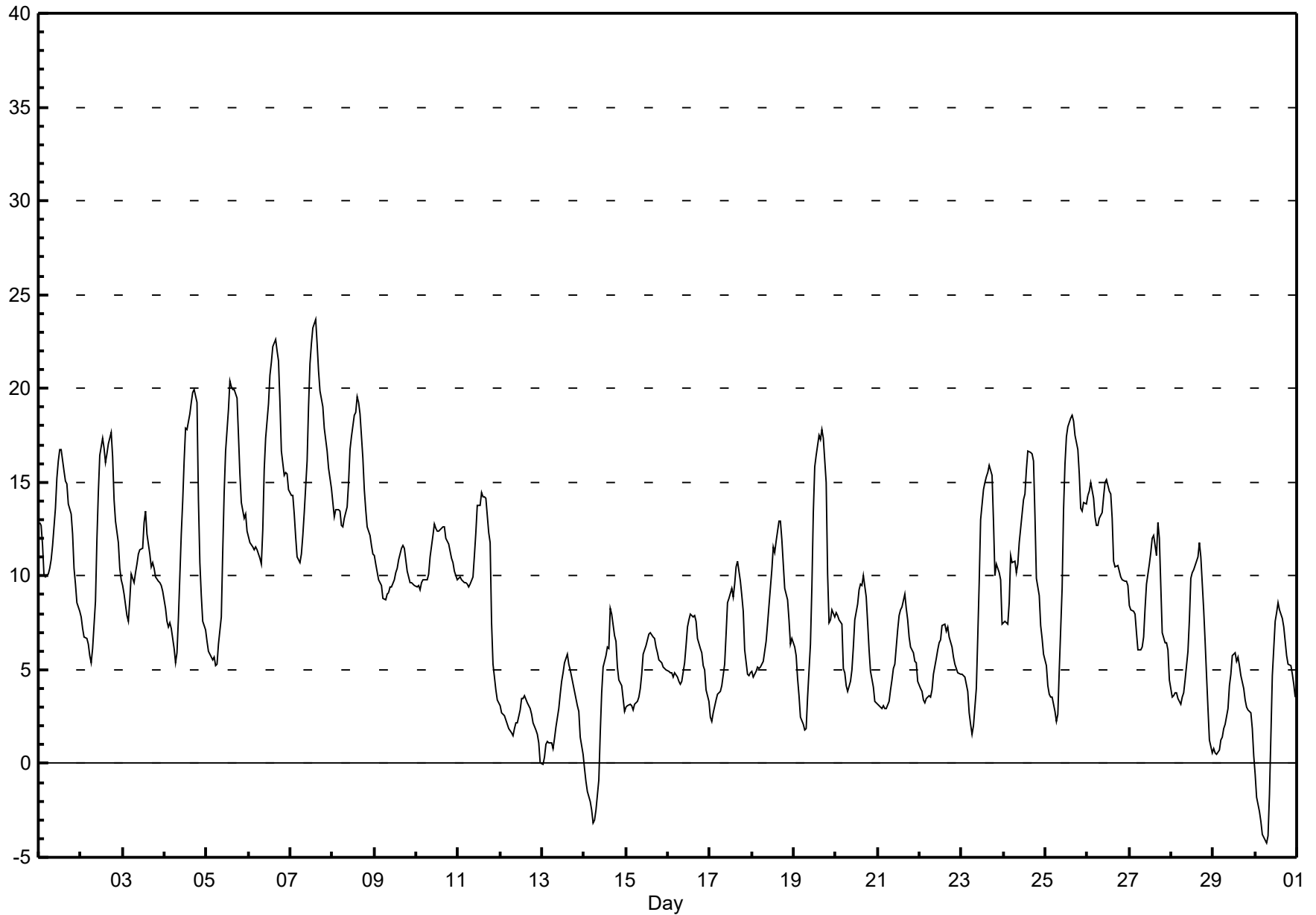
Valleyview - September 2018

Maximum Value: 23.7 °C on Sep 7 15:00																				Maximum Daily Average: 16.8 °C on Sep 7					Hours in Service: 720	
Minimum Value: -4 °C on Sep 30 07:00																				Minimum Daily Average: 2.3 °C on Sep 12					Hours of Data: 720	
Maximum Diurnal Average: 12.7 °C at hour 15																				Minimum Diurnal Average: 5.4 °C at hour 7					Hours of Missing Data: 0	
Monthly Average: 8.69 °C																				Percentiles: P ₁ = -2.5 P ₁₀ = 2.7 Q ₁ = 4.8 Median = 8.2 Q ₃ = 12.2 P ₉₀ = 16.1 P ₉₉ = 21.5					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	13	13	12	10	10	10	10	11	12	14	15	16	17	17	16	15	15	14	13	12	10	10	9	8	12.5	16.7
2-Sep	8	7	7	7	6	6	5	6	9	12	14	16	17	17	16	16	17	18	16	14	13	12	10	10	11.7	17.7
3-Sep	9	9	8	8	9	10	10	10	11	11	11	12	13	13	12	11	10	11	10	10	10	10	9	9	10.3	13.5
4-Sep	8	8	7	8	7	6	5	6	8	12	14	16	18	18	19	19	20	20	19	14	11	9	8	7	11.9	20.0
5-Sep	7	6	6	6	6	5	5	6	8	11	14	17	19	20	20	20	20	19	18	15	14	13	13	12	12.5	20.4
6-Sep	12	12	12	11	12	11	11	11	12	16	17	19	21	21	22	23	22	21	19	17	15	15	15	15	16.0	22.6
7-Sep	14	14	13	12	11	11	11	12	13	16	19	21	22	23	24	22	21	20	19	18	17	17	16	15	16.8	23.7
8-Sep	14	13	14	14	13	13	13	13	14	15	17	17	19	19	20	19	19	16	15	14	13	12	12	11	14.8	19.6
9-Sep	11	11	10	10	9	9	9	9	9	9	9	10	10	10	11	11	12	11	11	10	10	10	10	9	10.0	11.6
10-Sep	9	9	9	10	10	10	10	10	11	12	13	13	12	12	13	13	13	12	12	11	11	11	10	10	11.0	12.8
11-Sep	10	10	10	10	10	10	9	10	10	11	12	14	14	14	14	14	14	12	12	8	5	4	3	3	10.1	14.4
12-Sep	3	3	3	2	2	2	2	1	2	2	2	3	4	3	4	3	3	3	3	2	2	2	1	0	2.3	3.6
13-Sep	0	0	1	1	1	1	1	1	2	3	4	4	5	5	6	5	5	5	4	3	3	3	1	0	2.7	5.8
14-Sep	0	-1	-2	-2	-3	-3	-3	-2	-1	2	4	5	6	6	6	8	8	7	7	5	4	4	3	3	2.6	8.3
15-Sep	3	3	3	3	3	3	3	4	4	5	6	6	7	7	7	7	7	6	6	6	5	5	5	5	4.9	6.9
16-Sep	5	5	5	5	5	5	4	4	4	5	6	7	8	8	8	8	8	7	6	6	5	5	4	3	5.7	8.0
17-Sep	2	2	3	3	4	4	4	4	5	7	9	9	9	9	10	10	11	10	9	8	6	5	5	5	6.3	10.8
18-Sep	5	5	5	5	5	5	5	6	7	7	8	10	12	11	12	13	13	12	11	9	9	8	6	7	8.2	12.9
19-Sep	6	6	5	4	2	2	2	2	4	6	9	13	16	16	17	17	18	17	15	10	8	8	8	8	9.1	17.8
20-Sep	8	8	8	7	5	5	4	4	4	5	6	8	9	9	10	10	10	9	8	6	5	4	3	3	6.5	10.0
21-Sep	3	3	3	3	3	3	3	4	4	5	5	7	8	8	8	9	8	8	7	6	6	5	5	4	5.4	9.0
22-Sep	4	4	3	3	3	4	4	4	5	6	6	6	7	7	7	7	7	7	6	6	5	5	5	5	5.3	7.4
23-Sep	5	5	5	4	3	2	2	2	4	7	10	13	15	15	15	16	16	15	13	10	11	10	10	7	8.8	15.9
24-Sep	8	8	7	9	11	11	11	10	11	12	13	14	14	16	17	17	17	16	13	10	9	7	7	6	11.3	16.7
25-Sep	5	4	4	4	4	3	2	3	5	9	14	16	17	18	18	19	18	17	17	15	14	13	14	14	11.1	18.5
26-Sep	14	15	15	14	13	13	13	13	13	14	15	15	14	14	13	11	11	11	10	10	10	10	10	9	12.5	15.2
27-Sep	8	8	8	8	7	6	6	6	7	8	10	11	11	12	12	11	13	12	9	7	6	6	6	4	8.5	12.8
28-Sep	4	4	4	4	3	3	4	4	4	6	8	10	10	10	11	11	12	11	8	6	5	3	1	1	6.1	11.8
29-Sep	1	1	0	1	1	1	2	2	3	4	5	6	6	5	6	5	5	4	3	3	3	3	2	0	3.0	5.9
30-Sep	-1	-2	-3	-3	-4	-4	-4	-4	-2	2	5	8	8	9	8	8	7	7	6	5	5	5	4	4	2.6	8.6
6.6 6.4 6.1 5.9 5.7 5.5 5.4 5.7 6.7 8.5 10.0 11.4 12.2 12.5 12.7 12.6 12.6 11.9 10.8 9.3 8.3 7.7 7.2 6.6																								Diurnal Average		
14.3 14.5 14.9 14.2 13.4 12.7 12.7 13.1 13.7 16.1 19.0 21.3 22.4 23.2 23.7 22.6 22.0 21.5 19.3 17.9 17.2 16.6 15.7 14.7																								Diurnal Maximum		

Hourly Averages

External Temperature (ET) - °C

Valleyview - September 2018



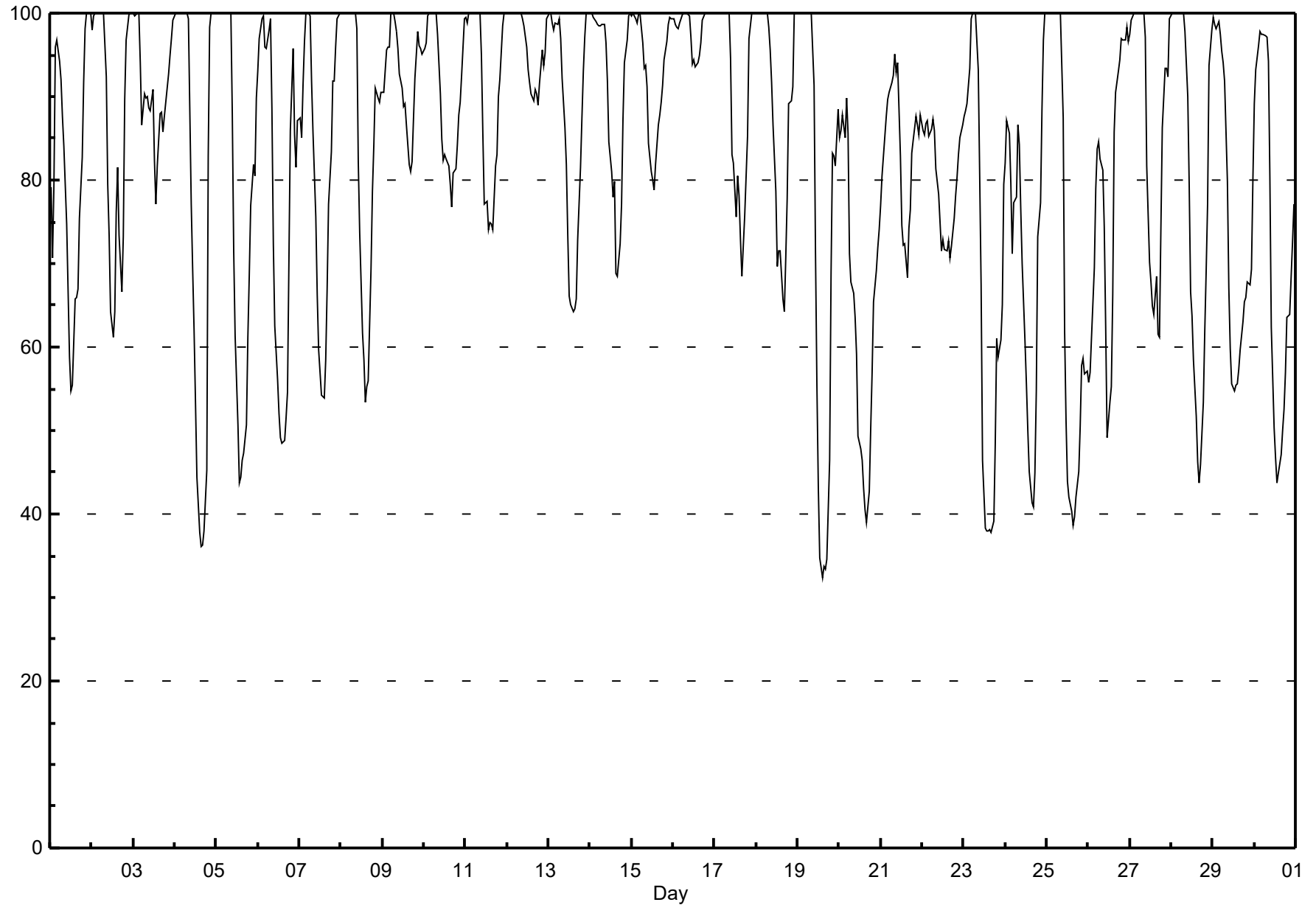
Hourly Averages

Relative Humidity (RH) - %
Valleyview - September 2018

Maximum Value: 100.0 % on Sep 1 22:00																				Hours in Service: 720						
Maximum Daily Average: 98.2 % on Sep 16																				Hours of Data: 720						
Minimum Value: 32 % on Sep 19 15:00																				Hours of Missing Data: 0						
Maximum Diurnal Average: 96.3 % at hour 6																				Hours of Calibration: 0						
Monthly Average: 82.58 %																				Percent Operational Time: 100.0						
Minimum Daily Average: 64.3 % on Sep 20																										
Minimum Diurnal Average: 62.8 % at hour 14																										
Percentiles: P ₁ = 37.8 P ₁₀ = 54.5 Q ₁ = 71.4 Median = 87.8 Q ₃ = 99.0 P ₉₀ = 100.0 P ₉₉ = 100.0																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	79	71	80	96	97	94	92	88	84	75	67	59	55	55	66	66	67	75	83	92	98	100	100	100	80.7	100.0
2-Sep	98	100	100	100	100	100	100	100	92	79	73	64	61	64	76	82	73	67	73	90	97	100	100	100	87.1	100.0
3-Sep	100	100	100	100	94	87	90	90	90	89	88	91	82	77	82	88	88	86	88	89	93	95	97	99	90.9	100.0
4-Sep	100	100	100	100	100	100	100	100	99	77	69	62	53	44	38	36	36	38	45	83	98	100	100	100	78.3	100.0
5-Sep	100	100	100	100	100	100	100	100	100	88	72	61	51	44	44	46	47	51	61	69	77	82	81	90	77.6	100.0
6-Sep	93	97	99	100	96	96	98	99	89	72	63	56	52	49	48	49	52	55	70	86	96	85	81	87	77.8	99.6
7-Sep	87	85	92	97	100	100	100	92	86	76	66	60	57	54	54	58	67	77	83	92	92	96	99	100	82.1	100.0
8-Sep	100	100	100	100	100	100	100	100	100	98	82	74	62	59	53	55	56	69	79	84	91	90	89	91	84.6	100.0
9-Sep	90	91	96	96	96	100	100	99	98	96	93	91	89	89	87	82	81	82	87	92	98	96	96	95	92.4	100.0
10-Sep	96	96	100	100	100	100	100	100	97	90	85	82	83	83	82	79	77	81	81	84	88	89	93	99	90.2	100.0
11-Sep	99	99	100	100	100	100	100	100	100	95	86	77	78	74	75	75	74	82	83	90	92	98	100	100	90.7	100.0
12-Sep	100	100	100	100	100	100	100	100	100	99	98	96	93	92	90	89	91	90	89	92	96	94	95	99	96.0	100.0
13-Sep	100	100	99	98	99	99	99	97	92	86	82	73	66	65	64	65	66	73	81	87	93	97	100	100	86.8	100.0
14-Sep	100	100	100	99	99	98	98	99	99	96	92	85	81	78	80	69	69	72	77	87	94	97	100	100	90.3	100.0
15-Sep	100	100	99	99	100	100	96	93	94	91	84	81	80	79	82	87	88	89	91	94	97	99	100	99	92.6	100.0
16-Sep	99	99	98	98	99	100	100	100	100	100	97	94	94	94	94	95	96	99	100	100	100	100	100	100	98.2	100.0
17-Sep	100	100	100	100	100	100	100	100	100	95	83	82	76	81	78	73	69	76	80	85	97	100	100	100	90.6	100.0
18-Sep	100	100	100	100	100	100	100	98	96	92	87	79	70	72	72	66	64	71	78	89	90	91	100	100	88.0	100.0
19-Sep	100	100	100	100	100	100	100	100	100	91	71	55	43	35	32	34	33	35	46	69	83	83	82	89	74.2	100.0
20-Sep	85	86	88	85	90	86	71	68	66	64	59	49	48	46	43	40	39	43	50	57	65	69	72	74	64.3	89.9
21-Sep	77	81	85	88	90	90	92	92	95	93	94	83	75	72	72	68	74	76	83	85	88	87	85	88	83.9	95.1
22-Sep	86	85	87	87	85	86	87	86	81	78	75	71	73	72	72	73	71	72	75	78	80	83	85	87	79.8	87.3
23-Sep	88	88	89	93	99	100	100	100	93	80	68	46	38	38	38	38	38	39	48	61	59	61	65	80	68.7	100.0
24-Sep	82	87	86	80	71	77	78	87	84	77	70	61	56	50	45	41	41	45	55	73	77	88	97	100	71.1	100.0
25-Sep	100	100	100	100	100	100	100	100	100	87	62	51	44	42	40	39	40	42	45	50	58	59	57	57	69.7	100.0
26-Sep	56	57	61	70	79	84	85	83	81	74	62	49	53	55	66	86	91	93	94	97	97	97	98	97	77.7	98.4
27-Sep	97	99	100	100	100	100	100	100	100	97	82	70	68	65	64	68	62	61	74	86	93	93	92	99	86.3	100.0
28-Sep	100	100	100	100	100	100	100	100	98	90	80	67	64	59	52	46	44	46	53	62	69	77	94	98	79.0	100.0
29-Sep	100	99	98	99	98	95	94	92	80	67	60	56	55	55	56	57	60	63	65	66	68	68	69	80	74.9	99.5
30-Sep	89	93	96	98	97	97	97	97	94	80	62	50	47	44	45	47	50	52	57	64	64	68	73	77	72.5	97.7
93.4 93.7 95.0 96.0 96.3 96.3 95.9 95.3 93.0 85.8 77.1 69.2 64.8 62.8 63.0 63.3 63.4 66.7 72.6 81.1 86.2 88.1 90.0 92.8																								Diurnal Average		
100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 99.7 98.4 96.0 94.4 93.5 94.0 95.0 96.4 99.2 100.0 100.0 100.0 100.0 100.0 100.0																								Diurnal Maximum		

Hourly Averages

Relative Humidity (RH) - %
Valleyview - September 2018



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Valleyview - September 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	10	16	17	16	11	11	9	9	12	13	11	12	12	12	7	14	8	5	2	1	1	1	1	1	8.4	16.6
Dir	264	273	270	266	270	276	275	281	276	282	285	280	276	277	283	316	303	294	250	190	168	176	201	186	278	270
2 Spd	1	1	1	1	1	1	0	1	2	2	1	3	2	2	1	1	2	2	1	0	0	1	1	1	1.2	3.2
Dir	204	155	166	150	144	158	163	155	156	152	156	159	159	158	169	126	147	151	159	200	197	167	166	185	159	159
3 Spd	2	2	1	1	5	8	6	8	10	10	11	10	12	12	11	10	10	7	5	2	1	1	0	0	5.3	12.4
Dir	235	222	205	204	248	266	276	291	308	302	323	326	338	318	311	322	324	334	344	7	260	259	36	192	310	338
4 Spd	0	0	0	1	1	1	1	2	1	1	3	3	2	5	4	3	4	3	1	0	0	0	0	0	1.0	4.9
Dir	221	320	164	159	164	163	158	164	157	153	164	160	174	267	260	266	266	252	250	145	164	202	197	170	220	267
5 Spd	0	1	1	0	0	0	0	0	0	1	1	3	3	3	6	6	3	2	1	1	2	3	3	3	1.4	6.3
Dir	193	165	164	162	165	360	177	179	208	159	149	30	4	26	6	6	41	31	47	22	359	6	359	350	17	6
6 Spd	5	4	2	2	3	4	3	2	3	2	3	3	4	2	2	1	1	0	0	0	2	4	3	1	0.9	4.7
Dir	358	6	12	29	10	15	15	25	74	82	146	142	142	147	162	173	165	179	161	124	153	153	161	162	84	358
7 Spd	2	2	2	1	0	0	2	3	3	4	3	1	1	1	3	4	2	1	1	0	1	2	1	1	0.6	4.2
Dir	163	164	164	164	152	158	153	161	161	160	156	193	191	240	298	300	311	2	343	251	292	359	10	328	196	300
8 Spd	0	1	2	1	1	0	1	2	0	2	8	9	14	14	16	15	16	14	12	11	7	8	8	8	6.6	16.3
Dir	265	175	348	10	333	252	148	253	176	241	273	294	270	283	283	289	292	316	309	322	308	290	290	308	293	283
9 Spd	6	8	7	5	5	5	5	5	6	7	8	7	5	4	6	6	6	5	2	2	2	2	2	2	4.2	8.0
Dir	315	322	329	321	304	297	320	323	341	359	3	14	25	31	5	12	13	33	53	27	22	29	58	21	351	322
10 Spd	2	1	1	1	0	0	1	1	1	2	4	6	7	7	7	8	8	8	5	3	1	2	3	1	2.7	8.2
Dir	12	19	97	141	71	121	140	157	200	214	292	306	297	305	298	309	313	333	330	314	312	316	360	324	312	313
11 Spd	1	0	0	0	0	0	0	0	0	1	1	2	1	2	5	6	9	9	6	18	16	11	9	11	3.9	18.0
Dir	275	333	182	202	15	211	94	163	153	180	175	163	214	9	14	21	8	8	5	4	3	359	342	347	2	4
12 Spd	11	13	11	10	10	9	9	9	9	10	10	9	7	8	8	9	8	5	5	4	4	4	4	3	7.9	13.3
Dir	359	4	358	358	5	5	3	3	3	4	9	14	13	12	5	3	6	14	6	4	359	0	355	344	4	4
13 Spd	1	1	2	2	2	1	2	2	2	1	2	3	2	0	1	1	1	0	1	0	0	0	0	0	1.0	3.0
Dir	339	349	6	0	348	343	349	340	13	9	19	32	351	321	345	354	305	129	136	205	144	172	188	28	0	32
14 Spd	0	1	0	0	0	1	0	0	1	1	2	2	2	1	1	1	2	3	2	1	0	1	1	1	0.3	2.7
Dir	284	337	258	319	318	321	284	288	289	247	209	194	168	168	186	258	349	19	15	15	28	346	349	14	306	19
15 Spd	2	1	2	1	0	1	4	4	5	5	3	3	4	5	4	4	4	3	2	2	2	2	1	2	2.5	5.1
Dir	353	357	341	352	13	342	1	18	15	22	41	58	38	38	47	43	54	65	64	58	40	24	8	0	31	15
16 Spd	2	3	1	1	1	3	4	3	3	3	3	3	2	3	3	2	2	3	2	1	0	1	1	0	1.5	3.9
Dir	358	16	32	29	25	27	28	28	27	42	37	63	87	102	111	116	134	140	141	100	266	97	91	69	59	28
17 Spd	0	0	0	0	0	0	0	1	1	1	3	3	2	1	0	2	5	5	3	2	0	0	0	2	0.4	5.5
Dir	345	299	157	172	135	160	116	146	152	148	159	156	168	166	110	257	286	319	308	305	193	172	146	158	230	286
18 Spd	1	2	1	0	0	0	1	1	2	2	2	1	1	3	1	1	1	2	1	0	1	0	1	2	0.5	2.8
Dir	157	158	161	176	154	171	254	262	260	264	262	245	273	1	110	154	168	159	160	171	162	299	157	161	201	1
19 Spd	1	2	1	1	0	1	0	1	2	2	1	1	2	3	3	2	1	1	1	1	1	2	0	0	0.7	2.8
Dir	176	158	92	174	179	168	175	167	156	156	137	179	161	156	157	202	169	278	1	338	335	342	345	38	164	156
20 Spd	2	1	1	14	12	11	12	11	9	11	7	7	9	9	7	7	3	2	4	3	4	3	2	2	6.2	13.5
Dir	346	356	350	6	3	10	15	10	7	14	29	25	11	7	19	21	47	52	12	10	3	12	10	27	13	6
21 Spd	3	1	1	1	0	1	2	1	1	2	1	3	4	3	3	2	3	3	3	2	2	3	4	2	1.4	4.2
Dir	12	17	353	355	299	25	52	107	153	160	159	156	152	149	146	154	161	159	159	154	154	157	154	149	144	152
22 Spd	2	2	1	1	1	1	1	1	2	4	5	6	6	5	4	4	4	4	4	3	3	4	3	3	3.0	5.8
Dir	143	125	92	82	89	106	100	104	138	143	146	142	137	145	143	159	148	156	151	154	156	159	159	161	144	142

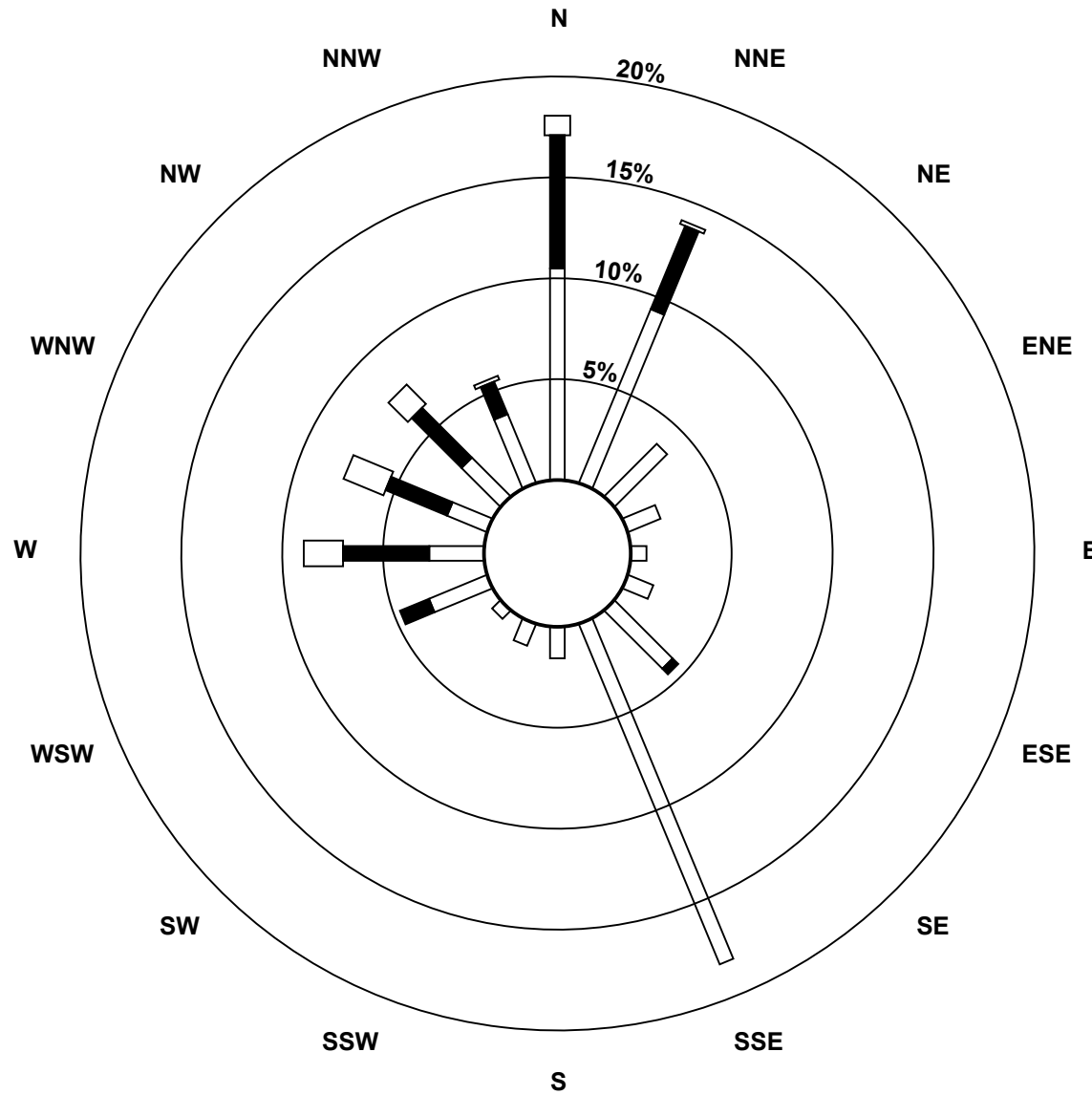
Hourly Averages

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

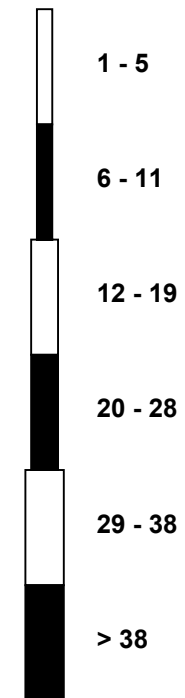
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	4	3	2	2	2	2	1	2	3	3	3	7	11	12	11	11	11	10	5	2	5	7	4	1	3.8	11.6
Dir	160	163	162	164	162	163	165	158	158	156	165	255	277	268	276	276	271	263	249	238	250	254	257	181	249	268
24 Spd	1	1	0	3	10	9	9	7	5	9	11	12	10	12	12	12	10	9	1	0	1	0	0	1	5.5	11.9
Dir	162	159	169	249	272	275	289	289	289	293	310	308	313	308	305	299	297	334	314	207	205	161	150	154	297	308
25 Spd	0	0	0	1	1	0	0	1	2	2	10	13	13	10	11	12	12	12	10	6	3	7	6	7	5.2	12.7
Dir	178	177	178	84	162	171	181	169	165	158	277	283	286	273	282	284	286	284	278	261	240	252	256	256	273	286
26 Spd	9	10	12	9	6	4	7	7	8	8	7	10	8	8	11	9	3	2	3	3	4	4	2	4	4.9	12.4
Dir	258	259	260	264	268	264	247	267	287	294	315	330	347	9	17	6	325	273	269	254	272	269	284	292	293	260
27 Spd	2	1	1	1	1	1	1	2	1	0	2	5	5	5	6	8	5	4	1	1	0	3	2	1	2.3	8.4
Dir	281	3	329	255	310	328	350	11	328	41	6	18	359	1	356	6	18	359	3	10	312	358	5	336	359	6
28 Spd	2	3	1	0	1	0	0	0	0	0	1	1	3	5	5	6	7	7	6	4	3	1	0	0	2.2	7.2
Dir	343	346	346	50	307	192	124	232	178	128	128	63	2	359	5	15	12	14	11	7	360	348	166	164	8	14
29 Spd	1	1	0	0	0	0	0	1	4	7	9	9	11	11	11	10	8	7	5	2	2	2	1	0	4.0	10.8
Dir	154	159	152	178	127	352	205	2	358	15	11	1	5	13	12	18	21	32	25	22	357	16	77	48	14	5
30 Spd	0	1	0	0	1	1	1	2	3	2	4	4	3	4	2	3	5	4	1	2	2	2	1	0	1.1	4.7
Dir	157	347	320	278	333	348	336	352	19	42	132	147	126	130	114	68	39	48	55	159	155	144	150	152	90	39
Spd	1.0	1.1	1.2	1.1	1.4	1.4	1.4	1.4	1.4	1.4	1.7	2.1	2.5	2.7	3.1	3.8	3.1	2.5	1.5	1.4	1.0	0.9	0.7	0.7	Diurnal Average	
Dir	305	309	303	312	309	316	325	323	327	329	325	327	320	323	328	329	326	339	335	345	333	316	314	314	Diurnal Maximum	
Spd	11.1	15.6	16.6	15.8	11.9	11.1	12.4	10.9	11.7	13.2	11.5	12.7	14.0	14.4	16.3	14.7	15.9	13.9	11.5	18.0	15.9	10.8	9.1	10.7	Diurnal Maximum	
Dir	359	273	270	266	3	276	15	10	276	282	323	283	270	283	283	289	292	316	309	4	3	359	342	347		
Maximum Speed Value: 18 km/h on Sep 11 20:00																									Hours in Service: 720	
Maximum Daily Speed Average: 8.4 km/h on Sep 1																									Hours of Data: 720	
Maximum Diurnal Speed Average: 3.8 km/h at hour 16																									Hours of Missing Data: 0	
Minimum Speed Value: 0 km/h on Sep 11 06:00																										
Minimum Daily Speed Average: 0.3 km/h on Sep 14																										
Minimum Diurnal Speed Average: 0.7 km/h at hour 23																										
Monthly Average Velocity: 1.67 km/h 324.2 deg																									Percent Operational Time: 100.0	
Speed Percentiles: P ₁ = 0.1 P ₁₀ = 0.3 Q ₁ = 0.9 Median = 2.0 Q ₃ = 5.0 P ₉₀ = 9.7 P ₉₉ = 14.6																										
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	114	63	9	0	0	0	186																			
NorthEast	55	3	0	0	0	0	58																			
East	25	0	0	0	0	0	25																			
SouthEast	96	2	0	0	0	0	98																			
South	141	0	0	0	0	0	141																			
SouthWest	22	1	0	0	0	0	23																			
West	45	37	25	0	0	0	107																			
NorthWest	41	31	10	0	0	0	82																			
Total	539	137	44	0	0	0	720																			

Wind Rose

Wind Speed (WS) (km/h)
Valleyview - September 2018



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Valleyview - September 2018

Maximum Speed: 18 km/h on Sep 11 20:00																				Maximum Daily Speed Average: 9.2 km/h on Sep 1					Hours in Service: 720	
Minimum Speed: 0 km/h on Sep 11 06:00																				Minimum Daily Speed Average: 1.3 km/h on Sep 14					Hours of Data: 720	
Maximum Diurnal Speed Average: 6.5 km/h at hour 16																				Minimum Diurnal Speed Average: 2.1 km/h at hour 24					Hours of Missing Data: 0	
Monthly Average Speed: 3.85 km/h																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.5 Q ₁ = 1.1 Median = 2.3 Q ₃ = 5.3 P ₉₀ = 10.0 P ₉₉ = 15.2					Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	10	16	17	16	11	11	9	9	12	13	12	12	13	13	9	14	9	5	2	1	1	1	2	1	9.2	16.9
2-Sep	1	1	1	1	1	1	0	1	2	2	1	3	2	2	1	1	2	2	1	1	1	1	1	1	1.3	3.3
3-Sep	2	2	1	2	5	8	6	8	10	10	12	11	13	12	11	11	10	7	6	2	1	1	0	0	6.3	12.9
4-Sep	0	0	0	1	1	1	1	2	1	2	3	3	4	6	5	5	5	4	1	0	0	0	0	1	1.9	5.8
5-Sep	1	1	1	0	0	0	0	0	1	1	2	3	3	4	7	6	3	2	2	1	2	3	3	3	2.2	6.9
6-Sep	5	4	2	2	3	4	3	2	3	3	3	3	4	3	3	2	1	0	0	0	2	4	3	2	2.5	4.8
7-Sep	2	2	2	1	0	1	2	3	3	4	3	2	2	2	4	5	2	2	1	1	2	2	2	1	2.1	4.5
8-Sep	1	1	2	1	1	0	1	2	1	3	9	9	14	15	17	15	17	14	12	11	7	8	8	8	7.4	16.9
9-Sep	7	8	7	6	6	5	5	5	6	7	8	8	5	4	7	6	6	5	2	2	2	2	2	2	5.1	8.1
10-Sep	2	1	1	1	0	1	1	1	1	3	5	7	8	7	7	9	9	8	5	3	1	2	3	1	3.6	8.7
11-Sep	1	1	0	0	0	0	0	0	0	1	2	2	2	2	5	6	9	9	6	18	16	11	9	11	4.7	18.2
12-Sep	11	13	11	10	10	10	9	10	9	10	10	9	8	9	8	9	8	5	5	4	4	4	4	3	8.1	13.5
13-Sep	1	1	2	2	2	1	2	2	2	1	2	3	2	1	1	1	1	1	1	0	0	0	0	0	1.3	3.2
14-Sep	0	1	0	0	0	1	0	1	1	2	2	2	2	2	1	2	3	3	2	1	0	1	1	1	1.3	3.0
15-Sep	2	1	2	1	0	1	4	4	5	5	4	4	4	5	4	4	4	3	3	2	3	2	1	2	2.9	5.2
16-Sep	2	3	1	1	1	3	4	4	3	3	4	3	3	3	3	2	2	3	2	1	0	1	1	0	2.2	3.9
17-Sep	1	0	0	1	1	0	0	1	1	1	3	3	2	2	1	3	6	5	3	2	0	0	1	2	1.6	5.8
18-Sep	1	2	1	0	0	0	1	1	3	2	2	1	3	4	2	2	1	2	1	0	1	1	1	2	1.4	3.5
19-Sep	1	2	1	1	0	1	0	1	2	2	2	2	2	4	3	3	2	1	1	1	1	2	1	1	1.6	3.5
20-Sep	2	1	1	14	12	11	13	11	9	11	7	8	9	9	8	7	4	3	4	3	4	3	2	2	6.5	13.7
21-Sep	3	1	2	1	1	1	2	1	1	2	1	3	4	4	3	2	3	3	4	2	2	3	4	2	2.2	4.4
22-Sep	2	2	1	1	2	1	1	1	2	4	5	6	6	5	5	4	4	4	4	3	3	4	4	3	3.2	6.0
23-Sep	4	3	3	2	2	2	1	2	3	3	3	8	12	12	12	11	11	10	5	2	5	7	4	1	5.4	12.1
24-Sep	1	1	0	4	10	10	10	7	6	9	12	12	11	13	13	12	10	9	2	0	1	0	1	1	6.4	12.8
25-Sep	0	0	0	1	1	0	0	1	2	2	10	13	13	11	11	13	12	12	10	6	3	7	6	7	6.0	13.1
26-Sep	9	10	13	9	6	4	7	7	8	8	7	10	8	9	11	9	3	2	3	3	4	5	2	4	6.8	12.7
27-Sep	2	1	1	1	1	1	1	2	1	1	2	5	5	6	7	9	5	4	1	1	1	3	2	1	2.8	8.7
28-Sep	2	3	1	1	1	0	0	1	1	1	2	3	3	5	6	7	7	7	6	4	3	2	0	0	2.8	7.4
29-Sep	1	1	1	0	0	0	1	2	4	7	9	10	11	11	11	10	9	7	5	2	2	2	1	0	4.5	11.2
30-Sep	0	1	0	0	1	1	1	2	3	3	4	4	4	4	3	3	5	4	1	2	2	2	1	0	2.2	4.9
2.6 2.8 2.6 2.7 2.7 2.7 2.9 3.2 3.6 4.2 5.0 5.7 6.1 6.2 6.3 6.5 5.8 4.9 3.3 2.7 2.5 2.8 2.3 2.1																									Diurnal Average	
11.2 15.8 16.9 16.1 12.1 11.3 12.5 11.0 11.9 13.5 11.7 13.1 14.5 14.8 16.8 15.3 16.9 14.3 11.8 18.2 16.1 11.0 9.3 10.8																									Diurnal Maximum	
All monthly, daily, and diurnal averages have been calculated using scalar methods																										

Hourly Standard Deviations

Wind Direction (WD) - deg
Valleyview - September 2018

Maximum Value: 99.2 deg on Sep 17 15:00																			Hours in Service: 720						
Minimum Value: 6.4 deg on Sep 20 21:00																			Hours of Data: 720						
																			Hours of Missing Data: 0						
Percentiles: P ₁ = 7.7 P ₁₀ = 10.5 Q ₁ = 13.9 Median = 24.7 Q ₃ = 43.5 P ₉₀ = 65.4 P ₉₉ = 92.3																			Hours of Calibration: 0						
																			Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Sep	14	10	10	10	10	10	9	11	10	12	18	16	13	20	50	14	19	21	38	24	28	18	26	33	50.4
2-Sep	31	18	17	11	12	28	38	32	34	12	24	20	19	15	36	51	16	18	17	56	39	14	30	32	56.5
3-Sep	43	37	66	33	22	12	13	16	13	16	10	11	17	15	11	13	11	11	14	27	37	40	92	36	92.3
4-Sep	33	69	55	37	20	11	11	11	28	42	29	42	44	44	55	64	36	36	56	13	33	57	64	43	68.9
5-Sep	46	10	16	13	25	93	62	40	62	33	51	64	47	58	32	20	41	26	43	46	9	12	15	24	93.3
6-Sep	12	12	23	23	37	25	17	29	25	50	30	30	28	56	41	45	35	46	58	72	9	10	13	22	72.3
7-Sep	11	8	9	43	29	43	25	12	20	15	21	50	46	76	60	22	42	81	83	72	52	44	82	43	83.2
8-Sep	94	39	67	69	84	79	55	54	83	46	41	19	14	14	18	19	14	12	11	15	13	12	14	14	93.6
9-Sep	13	11	11	14	19	13	13	11	14	15	12	16	23	23	24	21	20	24	38	18	30	27	37	29	38.4
10-Sep	23	42	70	25	69	49	38	46	38	47	55	21	19	20	25	17	19	13	14	21	21	21	14	67	69.9
11-Sep	32	69	88	77	76	85	51	68	24	55	40	28	63	51	21	16	14	11	8	10	9	12	10	9	88.0
12-Sep	10	10	9	12	9	10	8	9	10	9	13	12	14	11	13	10	10	13	10	10	10	9	7	7	13.7
13-Sep	12	10	11	14	15	20	11	15	21	30	25	24	40	96	90	45	64	54	49	94	82	91	77	82	96.4
14-Sep	54	25	46	65	43	16	33	31	29	54	49	43	26	30	61	70	62	20	25	35	57	65	55	55	70.3
15-Sep	22	31	11	31	60	38	8	11	11	12	32	28	23	16	24	27	28	40	46	39	29	26	29	14	59.7
16-Sep	14	12	28	53	42	13	11	12	15	29	26	40	41	28	30	36	25	16	21	59	77	45	45	95	94.6
17-Sep	61	76	38	49	56	33	63	30	30	49	17	20	33	27	99	63	21	21	18	24	55	40	77	41	99.2
18-Sep	42	8	17	64	50	30	28	47	31	50	43	75	68	66	51	42	55	11	27	22	13	83	10	19	83.4
19-Sep	35	29	62	57	57	9	43	26	18	32	67	59	55	46	45	58	71	76	36	53	57	25	92	88	92.2
20-Sep	26	74	68	10	10	10	9	10	10	11	29	29	24	30	25	27	40	33	15	9	6	12	14	27	74.0
21-Sep	21	46	13	53	54	39	22	36	28	26	25	28	19	21	23	27	15	12	10	18	25	11	12	9	54.4
22-Sep	8	17	23	37	26	23	24	25	22	17	17	12	16	17	16	14	14	13	13	12	15	13	11	11	37.3
23-Sep	11	14	12	8	8	9	13	20	12	25	25	43	21	16	17	16	15	11	12	27	8	8	37	15	43.0
24-Sep	7	8	14	40	10	12	13	11	15	17	19	16	19	22	22	14	15	18	54	28	29	46	43	12	53.5
25-Sep	40	39	48	67	26	52	33	17	11	50	14	15	15	19	17	12	13	14	14	12	21	9	11	9	66.7
26-Sep	9	10	11	10	13	19	8	14	14	13	18	14	19	20	13	10	30	40	13	28	14	15	21	16	39.7
27-Sep	49	68	51	44	38	55	56	23	46	80	39	26	29	37	30	14	27	20	47	43	71	12	11	57	79.8
28-Sep	15	11	36	77	69	71	69	65	76	79	69	83	63	31	28	23	21	15	9	8	15	81	28	39	82.8
29-Sep	14	18	83	79	98	73	47	75	10	16	14	28	17	18	16	15	17	16	16	32	20	26	60	51	97.7
30-Sep	75	69	78	82	48	27	27	25	13	41	31	46	33	33	40	38	19	23	68	22	17	15	12	48	82.1
	93.6	75.7	88.0	82.1	97.7	93.3	69.2	75.0	82.6	79.8	68.9	82.8	67.6	96.4	99.2	70.3	71.5	81.3	83.2	93.8	82.1	90.7	92.3	94.6	

PAZA
Donnelly Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

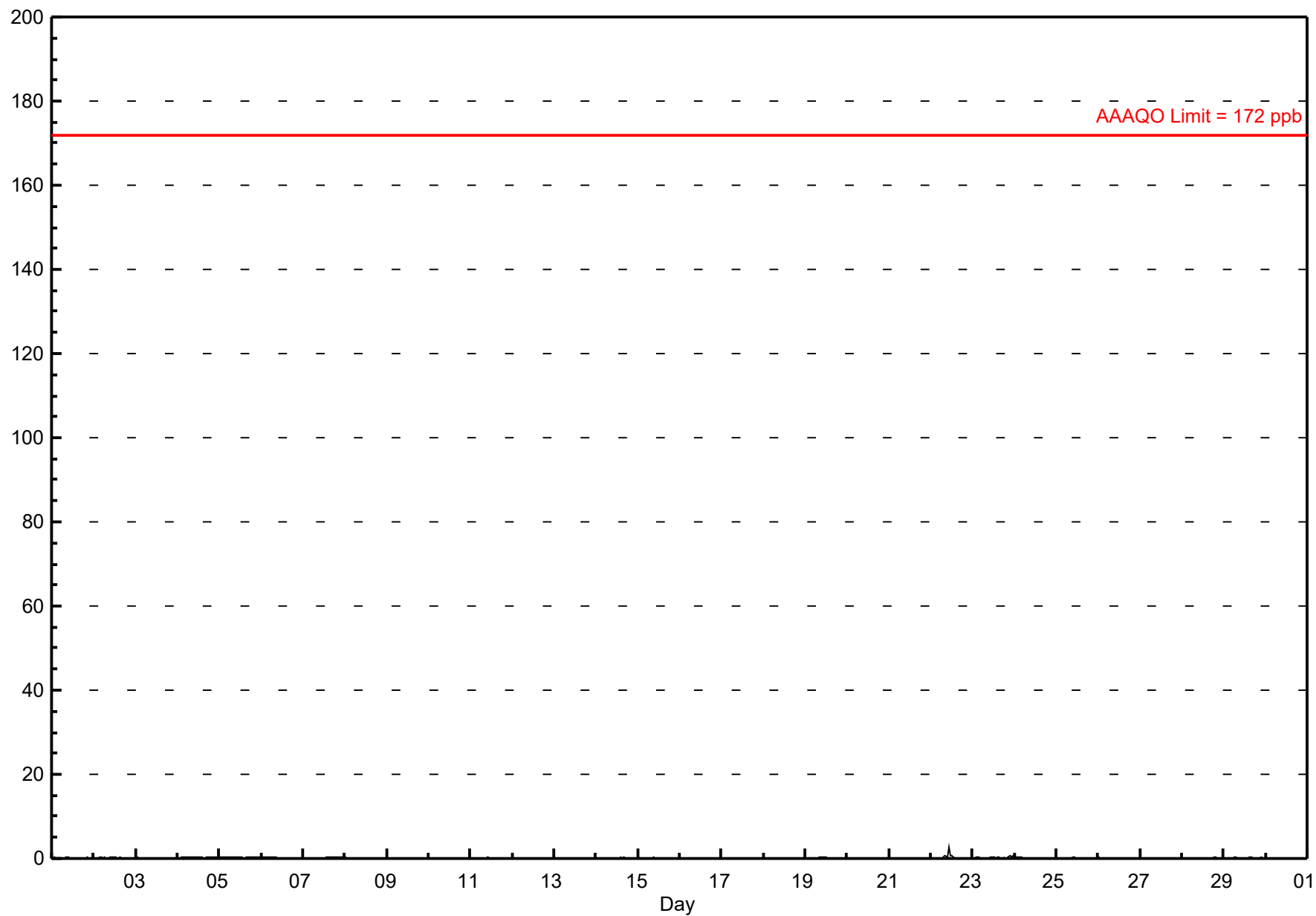
Sulphur Dioxide (SO₂) - ppb

Donnelly - September 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 2.7 ppb on Sep 22 11:00 Maximum Daily Average: 0.3 ppb on Sep 22																								Hours in Service: 720 Hours of Data: 663 Hours of Missing Data: 57 Hours of Calibration: 32 Percent Operational Time: 96.5		
Minimum Value: 0 ppb on Sep 8 16:00 Minimum Daily Average: 0.0 ppb on Sep 12 Maximum Diurnal Average: 0.2 ppb at hour 11 Minimum Diurnal Average: 0.1 ppb at hour 20 Monthly Average: 0.11 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.1 P ₉₀ = 0.2 P ₉₉ = 0.5																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	0	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
2-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.3
3-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.2
4-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	0.4
5-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	0.4
6-Sep	0	0	0	0	0	0	0	0	0	0	P	P	P	P	P	P	P	P	P	P	P	P	P	P	--	0.3
7-Sep	P	P	P	P	P	P	P	P	P	P	P	0	A	0	0	0	0	0	0	0	0	0	0	0	--	0.4
8-Sep	0	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
9-Sep	0	0	0	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
10-Sep	0	0	0	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
11-Sep	0	0	0	0	0	0	0	0	A	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
12-Sep	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
13-Sep	0	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	0.1
14-Sep	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
15-Sep	0	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
16-Sep	0	0	0	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
17-Sep	0	0	A	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
18-Sep	0	A	0	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
19-Sep	A	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
20-Sep	0	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
21-Sep	0	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	0.1
22-Sep	0	0	0	0	0	0	0	0	1	0	3	1	1	0	0	0	0	0	0	0	A	0	0	0	0.3	2.7
23-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	1	0.2	0.6
24-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.3
25-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	C	C	0	0	A	0	0	0	0	0	0	0.1	0.3
26-Sep	0	0	0	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
27-Sep	0	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
28-Sep	0	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
29-Sep	0	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	0.2
30-Sep	0	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	0.1
0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1																								Diurnal Average		
0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.4 0.7 0.5 2.7 0.8 0.6 0.4 0.4 0.4 0.4 0.3 0.4 0.4 0.3 0.3 0.5 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
Donnelly - September 2018



Hourly Maximums

Sulphur Dioxide (SO₂) - ppb

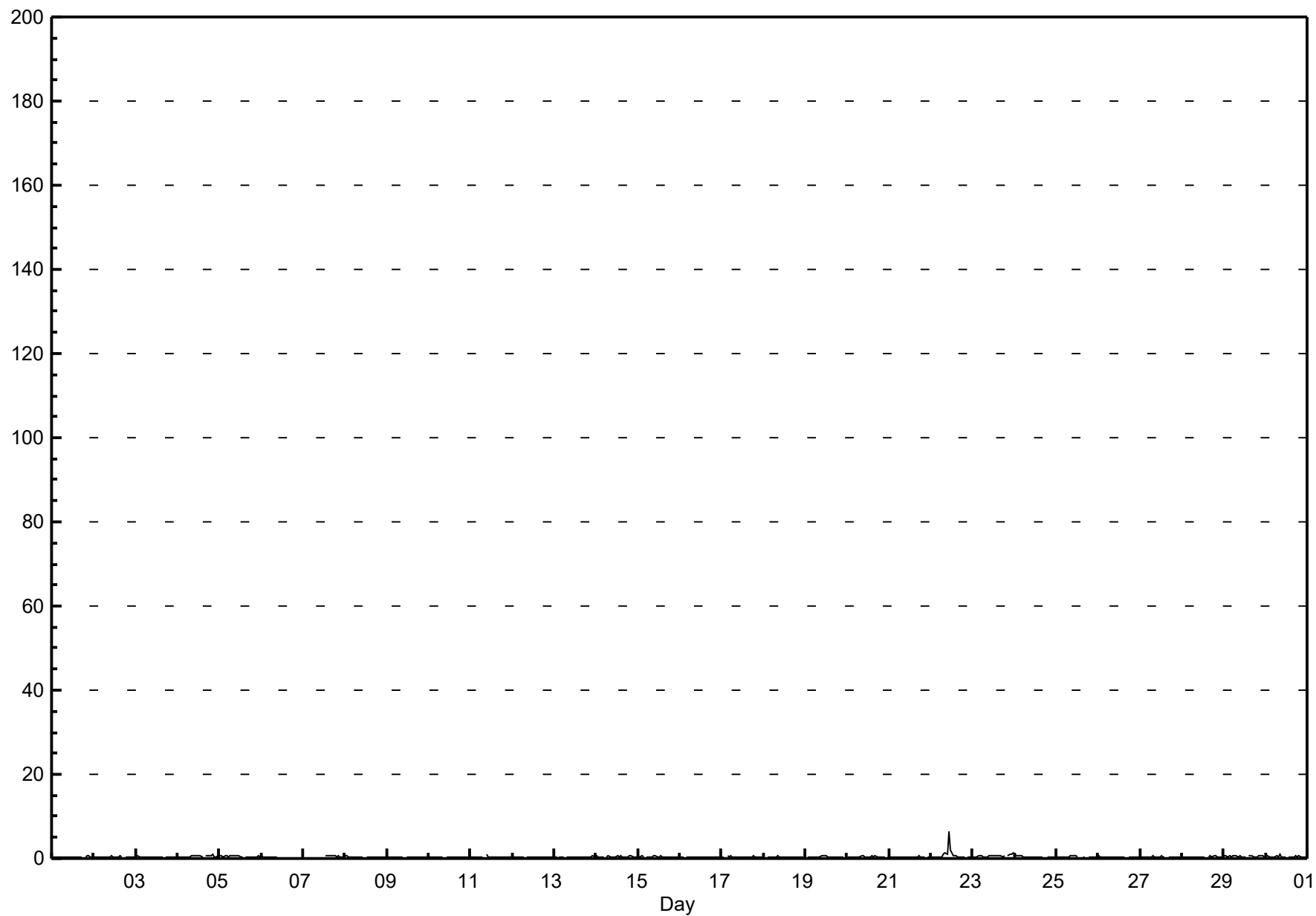
Donnelly - September 2018

Maximum Value: 6.3 ppb on Sep 22 11:00																		Maximum Daily Average: 0.9 ppb on Sep 22										Hours in Service: 720	
Minimum Value: 0 ppb on Sep 24 17:00																		Minimum Daily Average: 0.3 ppb on Sep 12										Hours of Data: 663	
Maximum Diurnal Average: 0.7 ppb at hour 11																		Minimum Diurnal Average: 0.4 ppb at hour 3										Hours of Missing Data: 57	
Monthly Average: 0.43 ppb																		Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.3 Median = 0.4 Q ₃ = 0.5 P ₉₀ = 0.6 P ₉₉ = 1.0										Hours of Calibration: 32	
																												Percent Operational Time: 96.5	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	0	0	0.4	0.5			
2-Sep	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	A	0	0	0	0	0	0	0.4	0.6			
3-Sep	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.4	0.5			
4-Sep	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	A	1	1	1	1	1	0	0	1	0.5	0.9			
5-Sep	1	1	0	1	1	1	1	1	1	1	1	1	1	0	A	0	0	0	0	0	0	0	1	0	0.5	0.8			
6-Sep	1	0	0	0	0	0	0	0	0	0	P	P	P	P	P	P	P	P	P	P	P	P	P	P	--	0.7			
7-Sep	P	P	P	P	P	P	P	P	P	P	P	1	A	1	1	1	1	1	1	1	1	0	1	0	--	0.8			
8-Sep	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5			
9-Sep	0	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			
10-Sep	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4			
11-Sep	0	0	0	0	0	0	0	0	A	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9			
12-Sep	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4			
13-Sep	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.3	0.5			
14-Sep	1	0	0	0	0	A	0	1	0	0	0	0	1	0	1	0	1	0	0	1	1	0	0	0	0.4	0.6			
15-Sep	0	0	1	0	A	0	0	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0.4	0.6			
16-Sep	0	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			
17-Sep	0	0	A	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.4	0.6			
18-Sep	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6			
19-Sep	A	0	0	0	0	1	0	0	0	1	1	1	1	0	0	0	0	0	1	0	0	0	0	A	0.4	0.7			
20-Sep	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	1	0	0	0	0	0	A	0	0.4	0.6			
21-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	A	0	0	0.4	0.5			
22-Sep	0	0	0	1	0	0	0	1	1	1	6	2	1	1	1	0	0	0	0	0	A	0	0	0	0.9	6.3			
23-Sep	0	0	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	0	1	A	1	1	1	1	0.6	1.3			
24-Sep	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.4	1.1			
25-Sep	0	0	0	0	0	0	0	0	1	1	1	1	0	C	C	0	0	A	0	0	0	0	0	0	0.4	0.8			
26-Sep	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.7			
27-Sep	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0.4	0.5			
28-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	1	1	0	0	0	0	0.4	0.5			
29-Sep	1	1	0	1	0	1	1	1	0	1	0	0	0	A	1	1	1	0	0	0	1	1	1	0	0.5	0.8			
30-Sep	0	1	0	0	0	0	1	0	1	0	0	0	A	0	0	0	0	1	0	1	0	0	0	0	0.5	1.0			
0.5 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.5 0.5 0.7 0.5 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4																									Diurnal Average				
1.1 0.6 0.6 0.8 0.6 0.6 0.6 0.6 0.9 1.2 0.9 6.3 2.1 1.3 0.8 0.6 0.7 0.7 0.7 0.8 0.6 0.9 1.1 1.0 1.3																									Diurnal Maximum				
C - Calibration P - Power Failure A - Automated Daily Zero Span																													

Hourly Maximums

Sulphur Dioxide (SO₂) - ppb

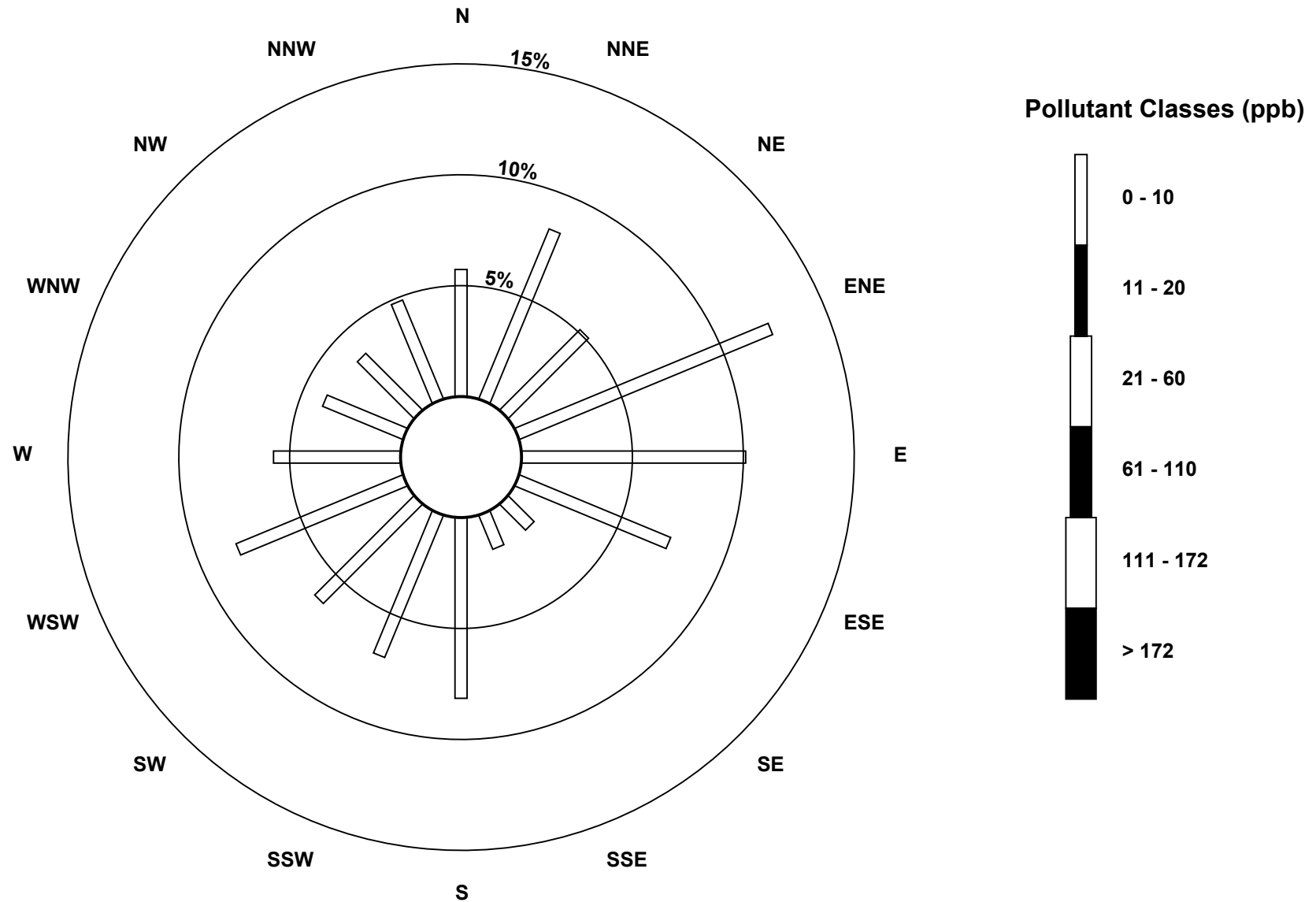
Donnelly - September 2018



Pollutant Rose

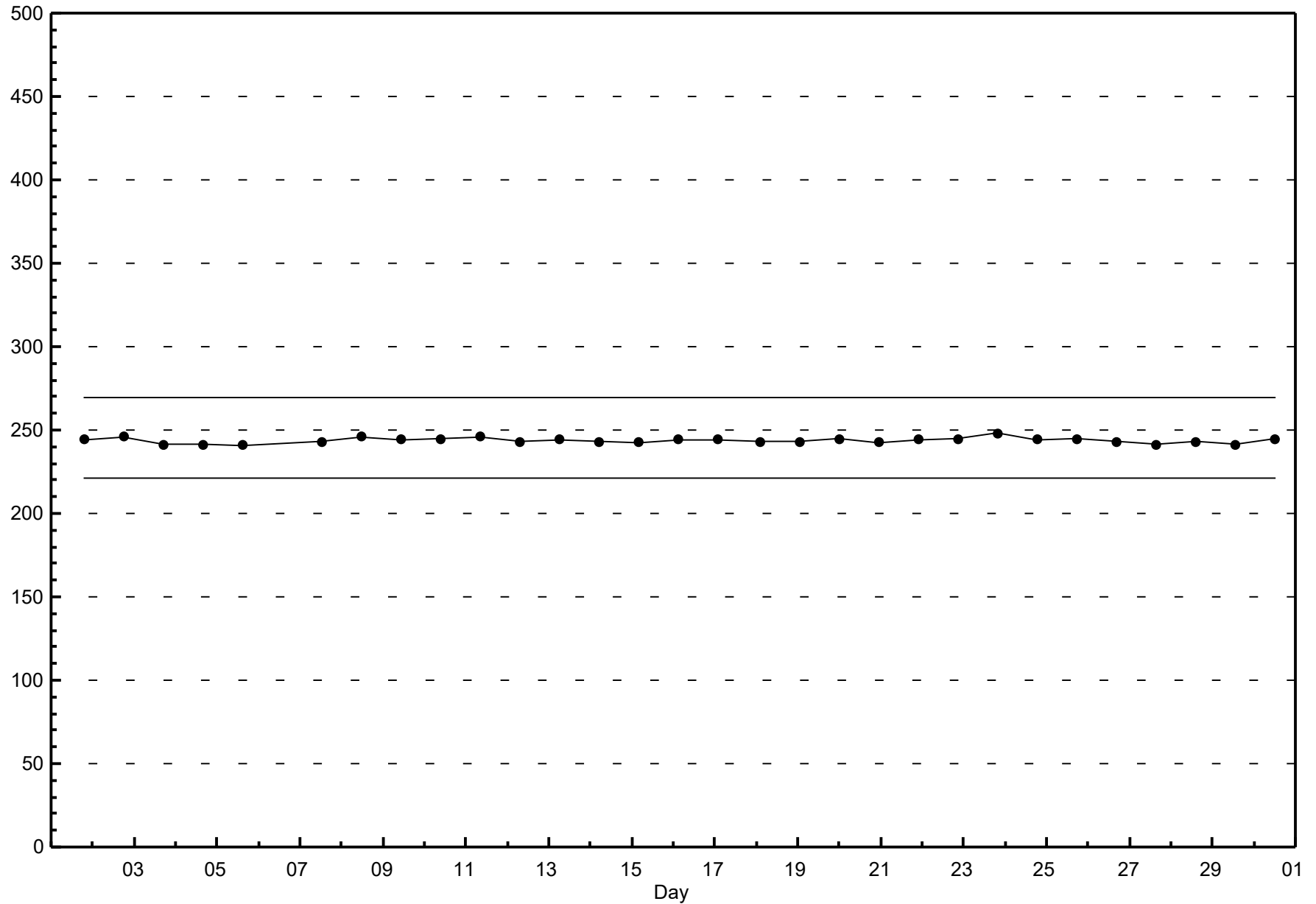
Sulphur Dioxide (SO₂) - ppb

Donnelly - September 2018



Span Responses

Sulphur Dioxide (SO₂)
Donnelly - September 2018



Hourly Averages

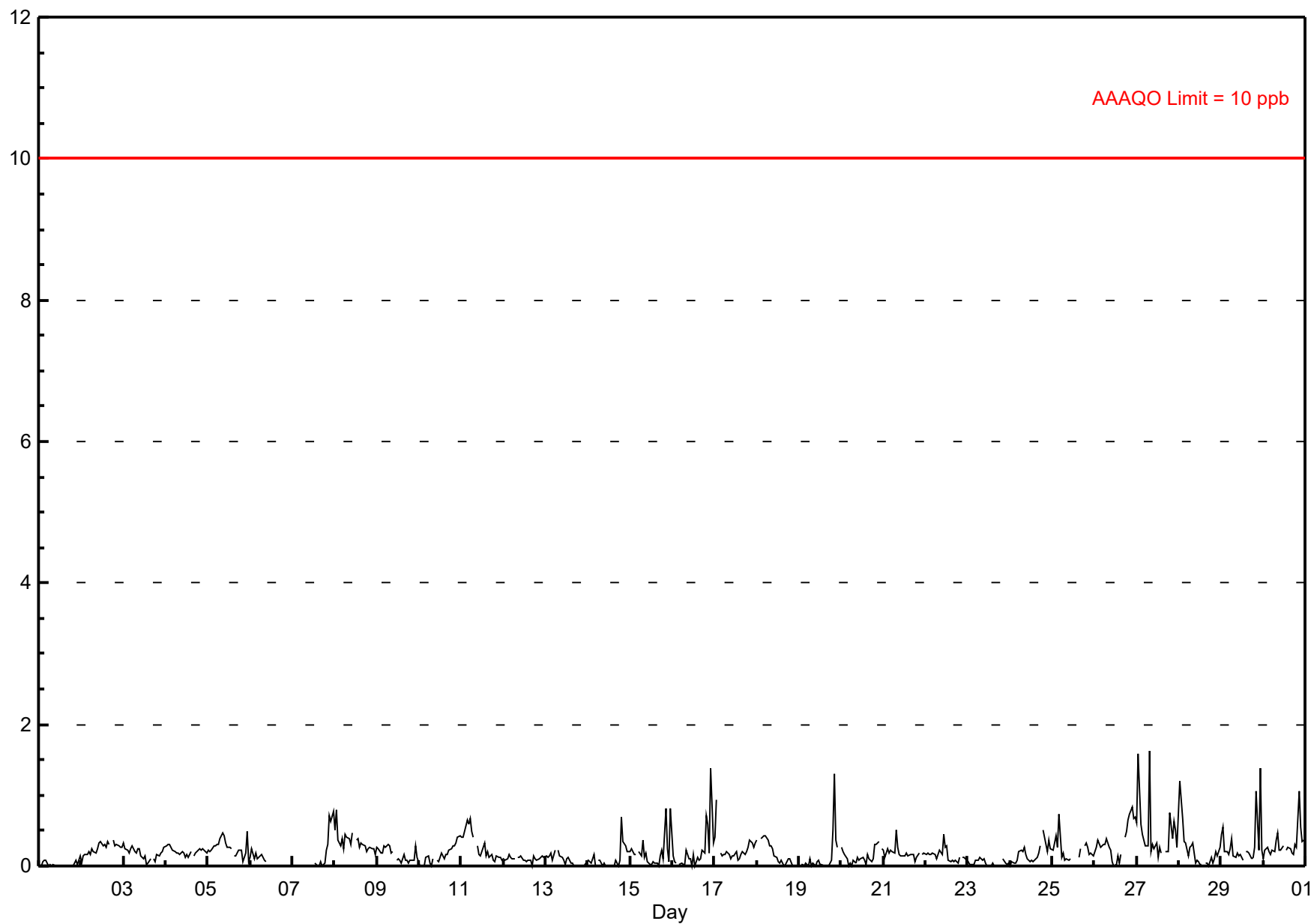
Hydrogen Sulphide (H₂S) - ppb

Donnelly - September 2018

Number of Exceedences (AAAQO):		1-hr: 0		24-hr: 0		Hours in Service: 720																				
Maximum Value: 1.6 ppb on Sep 27 08:00		Maximum Daily Average: 0.5 ppb on Sep 27		Hours of Data: 661																						
Minimum Value: 0 ppb on Sep 1 01:00		Minimum Daily Average: 0.0 ppb on Sep 1		Hours of Missing Data: 59																						
Maximum Diurnal Average: 0.4 ppb at hour 21		Minimum Diurnal Average: 0.1 ppb at hour 15		Hours of Calibration: 34																						
Monthly Average: 0.20 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 = 1.1		Percent Operational Time: 96.5																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	0	0	0	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
2-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.4
3-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.3
4-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.3
5-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	0.5
6-Sep	0	0	0	0	0	0	0	0	0	0	P	P	P	P	P	P	P	P	P	P	P	P	P	P	--	0.2
7-Sep	P	P	P	P	P	P	P	P	P	P	P	0	A	0	0	0	0	0	0	0	0	1	1	1	--	0.8
8-Sep	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8
9-Sep	0	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
10-Sep	0	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
11-Sep	0	0	0	1	1	1	0	0	A	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
12-Sep	0	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
13-Sep	0	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
14-Sep	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.1	0.7
15-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.2	0.8
16-Sep	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0.2	1.4
17-Sep	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
18-Sep	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
19-Sep	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	A	0.1	1.3
20-Sep	0	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
21-Sep	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.5
22-Sep	0	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
23-Sep	0	0	0	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
24-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0.2	0.5
25-Sep	0	0	0	0	1	0	0	0	0	0	0	C	C	C	C	0	0	A	0	0	0	0	0	0	0.2	0.7
26-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	1	1	1	1	0.3	0.8
27-Sep	1	2	1	0	0	0	0	2	0	0	0	0	0	0	0	A	0	0	0	1	0	1	1	0	0.5	1.6
28-Sep	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	1.2
29-Sep	0	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	0	1	0	0.3	1.4
30-Sep	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	0	0	0.3	1.1
0.3		0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.3	0.3	0.3	Diurnal Average	
1.2		1.6	0.7	0.6	0.7	0.7	0.5	1.6	0.5	0.4	0.5	0.3	0.4	0.4	0.3	0.4	0.3	0.4	0.5	0.7	1.3	0.8	1.4	0.8	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 - September 2018



Hourly Maximums

Hydrogen Sulphide (H₂S) - ppb

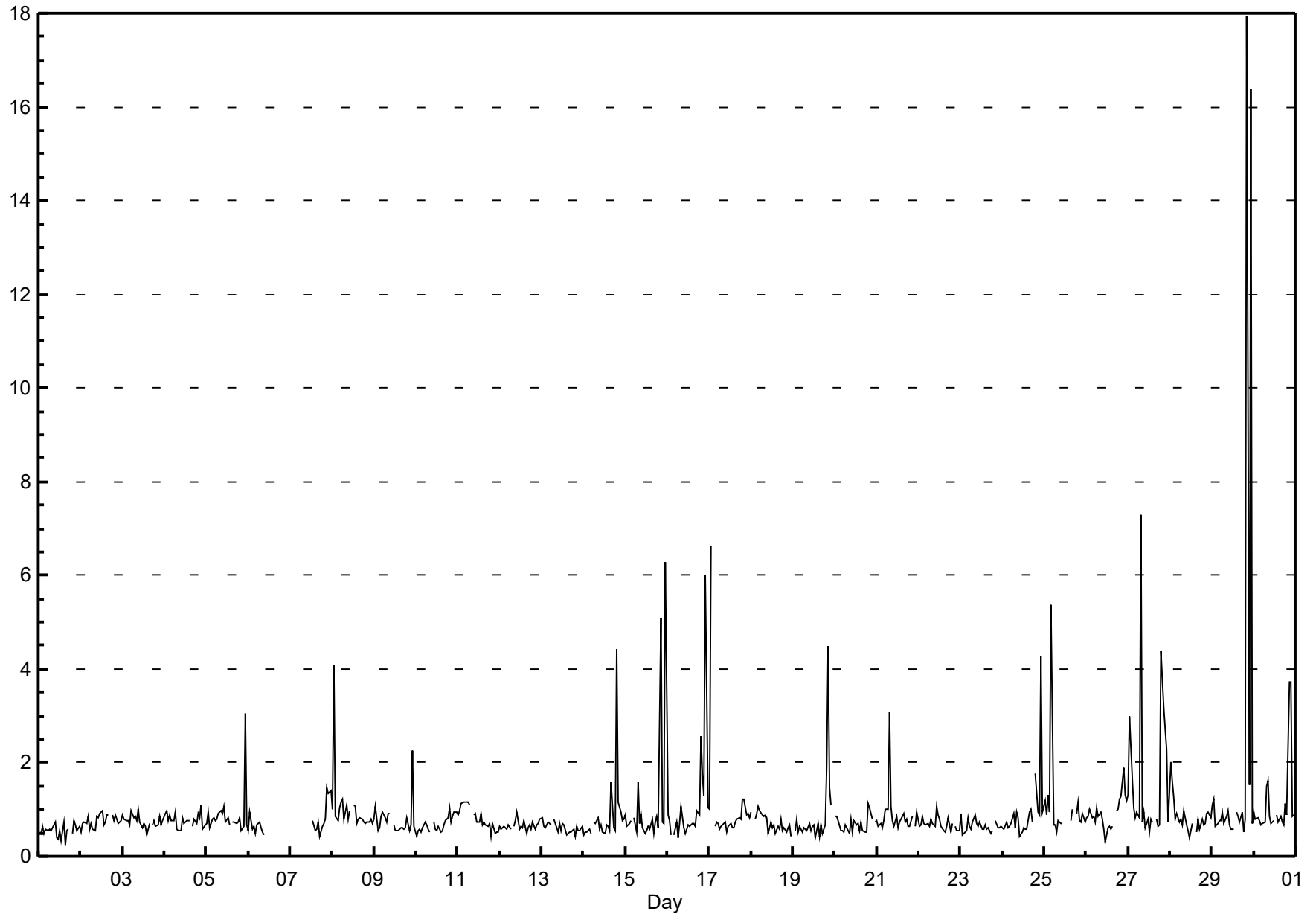
Donnelly - September 2018

Maximum Value: 18.0 ppb on Sep 29 21:00																				Maximum Daily Average: 2.3 ppb on Sep 29										Hours in Service: 720									
Minimum Value: 0 ppb on Sep 1 16:00																				Minimum Daily Average: 0.5 ppb on Sep 1										Hours of Data: 661									
Maximum Diurnal Average: 1.9 ppb at hour 21																				Minimum Diurnal Average: 0.6 ppb at hour 12										Hours of Missing Data: 59									
Monthly Average: 0.91 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.7 Q ₃ = 0.9 P ₉₀ = 1.1 P ₉₉ = 5.2										Hours of Calibration: 34									
																				Percent Operational Time: 96.5																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Sep	1	0	1	0	1	1	1	1	1	1	0	0	1	0	1	0	1	1	A	0	1	1	1	1	0.5	0.8													
2-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.8	1.0													
3-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	1	1	1	1	1	1	1	0.7	1.0													
4-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.8	1.1													
5-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	3	1	0.9	3.1													
6-Sep	1	1	1	1	0	1	1	1	1	0	P	P	P	P	P	P	P	P	P	P	P	P	P	P	--	0.9													
7-Sep	P	P	P	P	P	P	P	P	P	P	P	0	A	1	1	1	1	0	1	1	1	1	1	1	--	1.5													
8-Sep	1	4	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1.0	4.1													
9-Sep	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	2	1	0.8	2.3													
10-Sep	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0													
11-Sep	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	0.8	1.2													
12-Sep	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0.7	1.0													
13-Sep	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	0	1	1	1	0	1	1	1	1	0.6	0.8													
14-Sep	0	1	1	1	0	A	1	1	1	1	1	1	0	1	1	1	2	1	1	4	1	1	1	1	0.9	4.4													
15-Sep	1	1	1	1	A	1	1	2	1	1	1	0	1	1	1	1	0	1	1	1	5	1	1	6	1.2	6.3													
16-Sep	1	1	0	A	0	1	0	1	1	1	0	1	1	1	1	1	1	1	1	3	2	1	6	1	1.1	6.0													
17-Sep	1	7	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	6.6													
18-Sep	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	0.7	1.1													
19-Sep	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	2	4	1	1	A	0.9	4.5													
20-Sep	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.7	1.1													
21-Sep	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.9	3.1													
22-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	1.1													
23-Sep	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	1	1	1	1	0.6	0.9													
24-Sep	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	A	2	1	1	4	1	0.9	4.3													
25-Sep	1	1	1	1	5	1	1	1	1	1	1	C	C	C	C	1	1	A	1	1	1	1	1	1	1.1	5.4													
26-Sep	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	A	1	1	1	1	2	1	1	0.9	1.9													
27-Sep	1	3	2	1	1	1	1	7	1	1	1	1	1	1	1	A	1	1	1	4	3	3	2	1	1.6	7.3													
28-Sep	2	2	1	1	1	1	1	1	1	1	1	0	1	1	A	1	1	1	1	1	1	1	1	1	0.8	2.0													
29-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	18	2	16	1	2.3	18.0													
30-Sep	1	1	1	1	1	1	1	2	2	1	1	1	A	1	1	1	1	1	1	1	4	4	1	1	1.1	3.7													
0.9 1.2 0.8 0.7 0.9 0.8 0.8 1.1 0.8 0.8 0.7 0.6 0.7 0.7 0.6 0.7 0.7 0.7 0.7 1.2 1.9 1.1 1.8 1.0																									Diurnal Average														
2.0 6.6 1.6 1.2 5.4 1.2 1.2 7.3 1.6 1.0 1.1 0.9 1.1 1.1 1.0 0.9 1.6 1.0 1.1 4.4 18.0 3.7 16.4 6.3																									Diurnal Maximum														
C - Calibration				P - Power Failure				A - Automated Daily Zero Span																															

Hourly Maximums

Hydrogen Sulphide (H₂S) - ppb

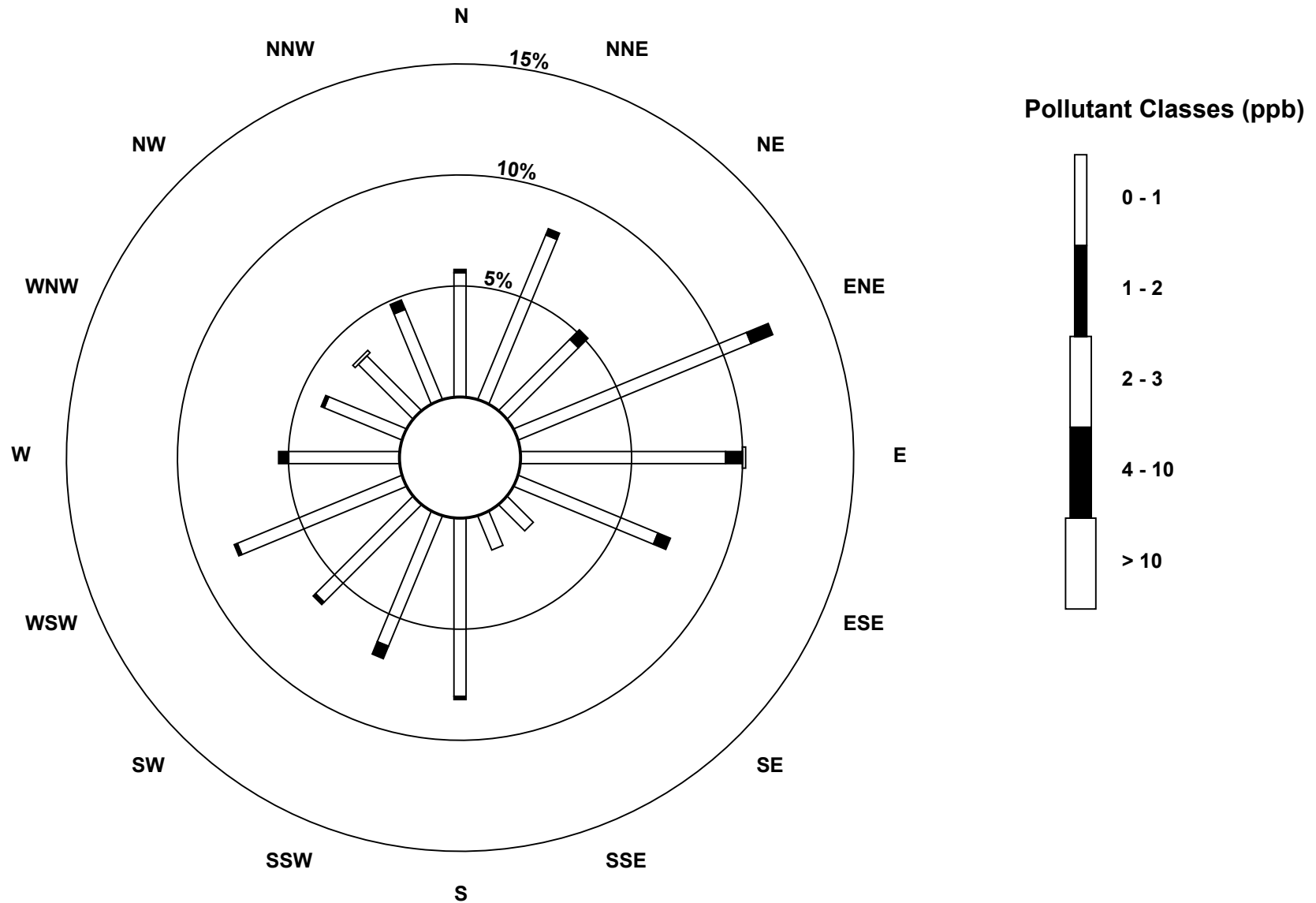
Donnelly - September 2018



Pollutant Rose

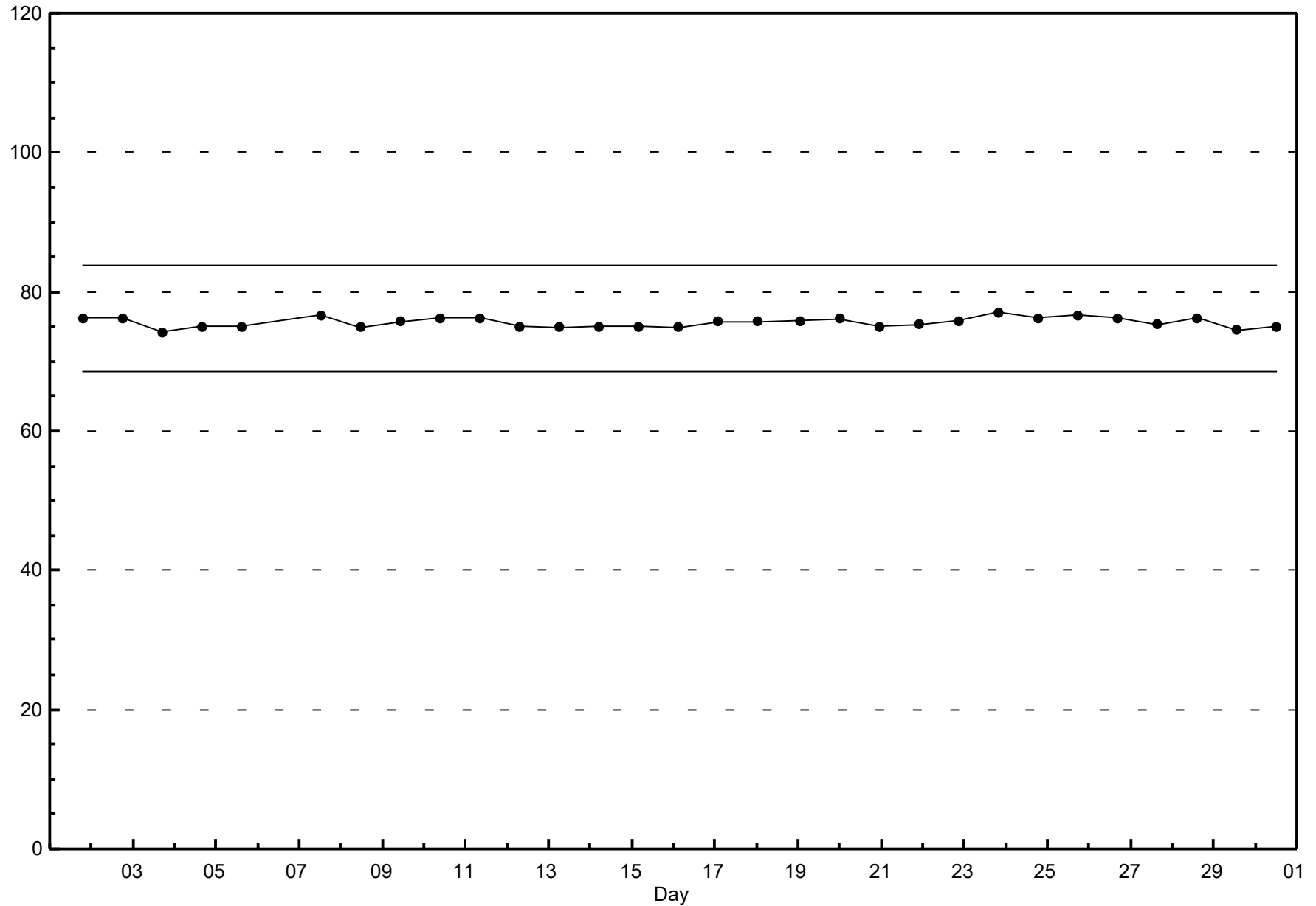
Hydrogen Sulphide (H₂S) - ppb

Donnelly - September 2018



Span Responses

Hydrogen Sulphide (H₂S)
Donnelly - September 2018



Hourly Averages

External Temperature (ET) - °C

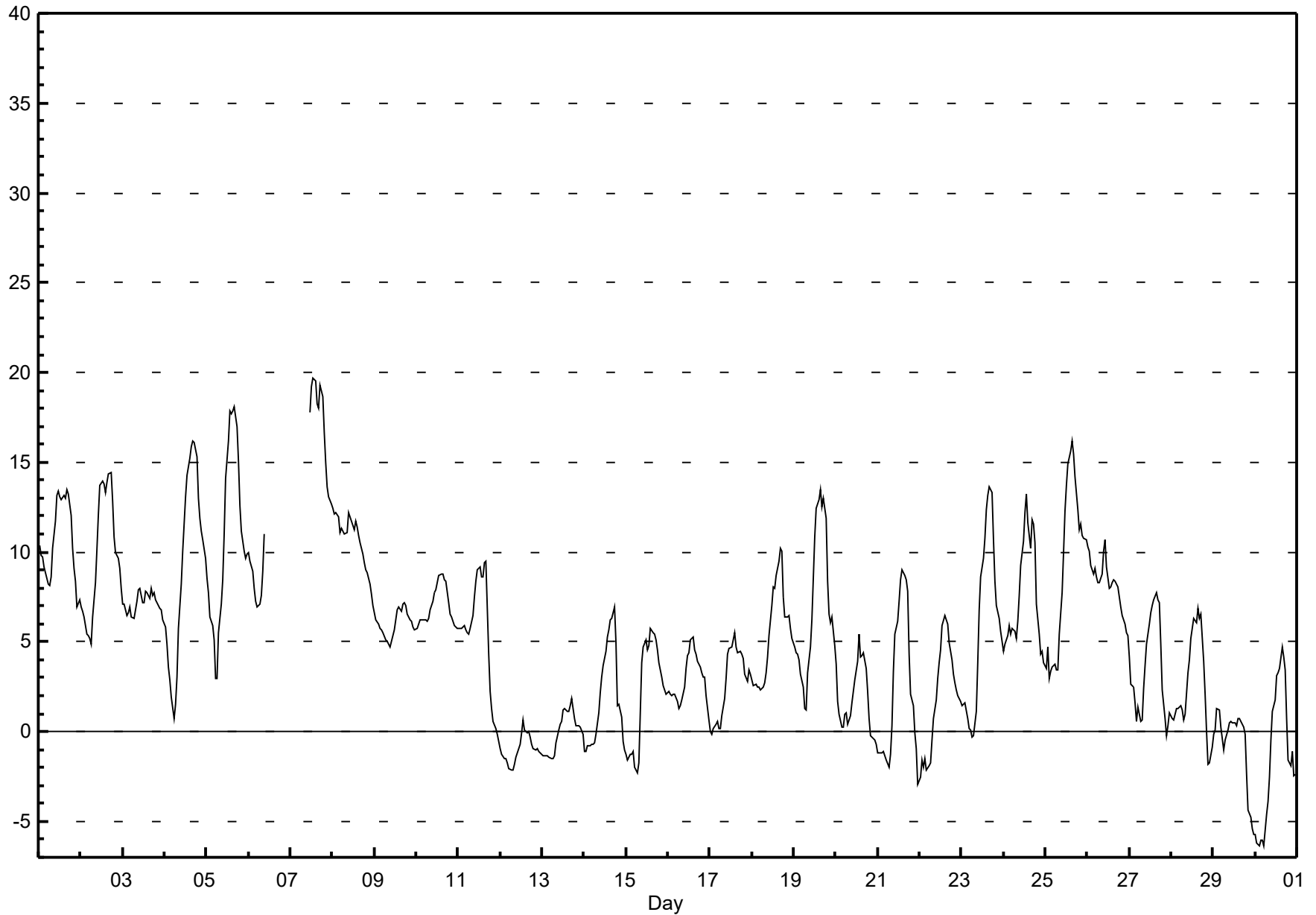
Donnelly - September 2018

Maximum Value: 19.7 °C on Sep 7 14:00																				Maximum Daily Average: 10.8 °C on Sep 5					Hours in Service: 720	
Minimum Value: -6 °C on Sep 30 06:00																				Minimum Daily Average: -1.3 °C on Sep 30					Hours of Data: 695	
Maximum Diurnal Average: 8.8 °C at hour 17																				Minimum Diurnal Average: 2.3 °C at hour 7					Hours of Missing Data: 25	
Monthly Average: 5.24 °C																				Percentiles: P ₁ = -5.5 P ₁₀ = -1.0 Q ₁ = 1.2 Median = 5.3 Q ₃ = 8.3 P ₉₀ = 12.0 P ₉₉ = 18.0					Hours of Calibration: 0	
																									Percent Operational Time: 96.5	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	10	10	10	9	9	8	8	9	10	12	13	13	13	13	13	13	13	13	12	10	9	8	7	7	10.6	13.5
2-Sep	7	7	6	5	5	5	5	6	8	10	12	14	14	14	13	14	14	14	13	11	10	10	9	8	9.8	14.4
3-Sep	7	7	6	7	7	6	6	7	7	8	8	7	7	8	8	7	8	8	8	7	7	7	7	6	7.2	8.0
4-Sep	6	5	4	3	2	1	1	3	6	8	10	12	13	14	15	16	16	16	15	13	12	11	11	10	9.3	16.1
5-Sep	9	8	6	6	5	3	3	6	7	8	11	14	16	18	18	18	18	17	15	13	11	10	10	10	10.8	18.1
6-Sep	10	9	9	8	7	7	7	8	9	11	P	P	P	P	P	P	P	P	P	P	P	P	P	P	--	11.0
7-Sep	P	P	P	P	P	P	P	P	P	P	P	18	19	20	20	18	18	19	19	17	15	14	13	13	--	19.7
8-Sep	12	12	12	12	11	11	11	11	11	12	12	12	11	12	11	11	11	10	9	9	9	8	8	7	10.7	12.4
9-Sep	7	6	6	6	6	5	5	5	5	5	5	6	6	7	7	7	7	7	7	7	6	6	6	6	6.0	7.2
10-Sep	6	6	6	6	6	6	6	6	7	7	8	8	8	9	9	9	8	8	7	7	6	6	6	6	7.0	8.8
11-Sep	6	6	6	6	6	5	5	6	6	8	8	9	9	9	9	9	9	4	2	1	1	0	0	-1	5.4	9.5
12-Sep	-1	-1	-1	-1	-2	-2	-2	-2	-2	-1	-1	-1	0	1	0	0	0	0	-1	-1	-1	-1	-1	-1	-1.0	0.6
13-Sep	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	1	1	1	1	1	1	2	1	0	0	0	0	0	0.0	1.9
14-Sep	-1	-1	-1	-1	-1	-1	-1	0	1	2	3	4	4	5	6	6	6	7	5	1	1	1	-1	-1	1.9	6.9
15-Sep	-1	-2	-1	-1	-1	-2	-2	-2	1	4	5	5	5	5	6	5	5	5	5	4	3	3	2	2	2.2	5.8
16-Sep	2	2	2	2	2	2	1	1	2	2	4	4	4	5	5	5	4	4	4	3	3	3	2	1	2.9	5.3
17-Sep	0	0	0	0	1	0	0	1	2	3	4	5	5	5	5	5	4	4	4	4	3	3	3	3	2.7	5.5
18-Sep	3	3	3	2	2	2	2	3	3	4	5	7	8	8	9	9	10	10	7	6	6	6	6	5	5.5	10.2
19-Sep	5	4	4	4	3	2	1	1	3	5	6	8	11	12	13	13	13	13	12	8	7	6	6	5	7.0	13.5
20-Sep	4	2	1	0	0	1	1	0	1	2	2	3	4	5	4	4	4	4	2	1	0	0	0	-1	1.8	5.5
21-Sep	-1	-1	-1	-1	-1	-2	-2	-1	0	3	5	6	7	8	9	9	8	8	4	2	1	0	-1	-3	2.4	9.0
22-Sep	-3	-2	-2	-2	-2	-2	-2	0	1	2	3	4	5	6	6	6	6	5	4	3	3	2	2	2	1.9	6.5
23-Sep	1	2	2	1	0	0	0	0	1	4	7	9	10	11	12	13	14	13	11	8	7	6	6	5	5.9	13.6
24-Sep	5	5	5	6	5	6	6	5	6	8	9	11	12	13	12	10	12	12	10	7	5	4	4	4	7.6	13.3
25-Sep	4	5	3	3	4	4	3	3	5	8	10	12	14	15	16	16	15	14	12	11	12	11	11	11	9.2	16.2
26-Sep	10	10	9	9	9	9	8	8	9	10	11	9	8	8	8	8	8	8	8	7	6	6	6	5	8.3	10.7
27-Sep	4	3	3	2	1	1	1	1	2	4	5	6	7	7	7	8	7	7	5	2	1	0	0	1	3.5	7.7
28-Sep	1	1	1	1	1	1	1	1	1	3	4	5	6	6	6	7	6	7	4	2	0	-2	-2	-1	2.5	6.8
29-Sep	0	0	1	1	0	0	-1	0	0	0	1	1	0	0	1	1	1	0	0	-2	-4	-5	-5	-6	-0.7	1.3
30-Sep	-6	-6	-6	-6	-6	-6	-5	-4	-3	0	1	2	3	3	4	5	4	3	1	-2	-2	-1	-2	-2	-1.3	4.7
3.6 3.3 3.1 3.0 2.7 2.4 2.3 2.7 3.8 5.2 6.1 7.3 8.0 8.6 8.7 8.8 8.8 8.4 7.1 5.6 4.8 4.2 3.8 3.4																									Diurnal Average	
12.4 12.1 12.2 12.0 11.1 11.3 11.1 11.0 11.1 12.2 13.1 17.7 19.2 19.7 19.5 18.2 18.1 19.3 18.6 16.6 15.0 13.6 13.1 12.7																									Diurnal Maximum	
P - Power Failure																										

Hourly Averages

External Temperature (ET) - °C

Donnelly - September 2018



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	14	14	17	20	21	19	17	22	21	24	24	24	21	20	21	22	22	18	11	6	11	8	4	9	15.0	24.0
Dir	232	219	238	259	269	267	256	266	274	281	282	282	290	291	304	296	293	295	264	208	187	230	208	187	269	282
2 Spd	14	12	12	10	11	13	11	12	10	11	10	8	7	8	6	2	11	8	7	7	12	13	14	14	9.4	14.5
Dir	187	190	193	190	198	193	186	189	202	216	214	227	256	260	286	184	187	172	196	207	186	190	192	198	199	198
3 Spd	12	16	10	8	11	10	12	16	16	13	15	17	16	15	16	13	14	10	8	5	4	3	4	4	8.0	17.1
Dir	207	218	216	220	240	252	266	281	297	311	318	349	331	323	320	336	341	342	312	262	249	285	283	214	294	349
4 Spd	1	2	4	7	5	4	4	5	8	13	14	12	13	13	14	14	15	16	13	10	11	12	13	14	9.3	15.7
Dir	244	242	202	191	182	179	181	184	189	208	209	214	215	218	220	221	220	220	201	173	166	176	187	182	202	220
5 Spd	10	10	9	7	5	1	3	2	3	6	8	6	6	5	6	7	6	5	5	5	4	4	4	5	2.2	10.2
Dir	187	180	190	190	190	147	180	227	331	337	28	47	54	92	39	31	73	79	66	68	73	78	73	79	90	180
6 Spd	6	6	5	6	7	8	6	7	8	10	P	P	P	P	P	P	P	P	P	P	P	P	P	P	--	9.9
Dir	71	71	84	81	70	65	75	87	88	94	P	P	P	P	P	P	P	P	P	P	P	P	P	P	--	94
7 Spd	P	P	P	P	P	P	P	P	P	P	P	5	4	6	9	9	5	2	4	2	1	5	3	4	--	8.8
Dir	P	P	P	P	P	P	P	P	P	P	P	156	163	204	247	254	276	278	265	319	237	202	222	339	--	247
8 Spd	4	5	2	3	7	6	4	5	6	3	3	11	18	19	17	15	20	20	16	18	21	17	15	14	8.2	20.6
Dir	55	52	78	68	45	43	343	358	16	49	294	258	252	264	271	281	267	274	277	271	276	288	297	294	285	276
9 Spd	13	13	13	12	10	8	10	10	11	10	10	10	10	8	10	7	6	6	6	4	4	3	5	4	6.6	13.4
Dir	306	317	325	329	328	335	339	344	344	335	342	360	8	16	31	14	16	43	62	77	85	80	97	81	354	325
10 Spd	5	5	6	6	6	6	7	6	4	4	3	2	7	9	11	12	11	10	7	7	4	4	6	6	2.1	12.1
Dir	82	86	94	95	97	97	98	96	95	96	106	5	298	309	338	321	323	307	336	324	299	283	239	239	354	321
11 Spd	6	4	4	5	7	5	7	6	6	6	7	7	6	7	4	3	6	23	20	18	14	15	16	13	3.3	23.2
Dir	239	216	218	202	205	194	191	184	194	216	229	248	251	326	4	348	299	358	359	6	4	14	20	18	335	358
12 Spd	15	15	12	11	12	11	10	10	11	13	13	16	17	11	12	14	11	10	11	7	6	6	5	5	10.7	16.6
Dir	19	18	16	10	19	13	13	11	21	23	22	33	43	51	34	34	33	8	21	20	16	21	3	15	23	43
13 Spd	5	6	5	2	2	2	2	3	3	2	3	3	3	7	6	7	6	6	8	6	3	5	3	3	1.6	8.3
Dir	22	29	30	40	10	348	4	30	113	123	139	206	196	196	243	216	226	227	235	240	214	215	193	178	218	235
14 Spd	3	2	2	1	2	4	4	3	4	4	4	5	4	5	2	3	2	4	2	2	3	2	3	4	2.8	5.2
Dir	123	134	146	72	89	101	60	84	68	67	86	50	100	140	120	91	83	122	87	117	65	97	72	64	90	50
15 Spd	3	3	4	5	5	3	3	4	5	7	9	9	7	7	9	9	7	6	5	5	4	3	2	3	5.3	9.3
Dir	68	65	62	73	68	71	68	66	71	76	80	75	99	83	72	71	78	84	80	73	71	80	61	66	75	71
16 Spd	5	5	5	7	5	7	8	8	8	8	8	8	7	7	7	7	7	8	6	3	3	5	4	3	6.2	8.5
Dir	67	67	64	60	72	69	62	64	66	72	83	90	86	92	98	101	77	64	62	88	92	99	84	68	76	62
17 Spd	3	4	3	6	6	3	3	3	6	7	3	6	8	8	9	11	11	8	5	4	5	6	8	8	4.0	11.2
Dir	70	79	96	100	102	113	116	119	181	189	98	128	145	182	202	211	237	250	229	198	174	179	189	198	176	211
18 Spd	7	6	8	7	7	6	7	7	7	7	6	6	4	5	7	9	8	13	9	8	9	12	13	12	6.0	12.8
Dir	219	219	250	249	237	246	236	243	261	274	283	282	317	342	267	265	244	214	200	172	176	175	179	178	228	179
19 Spd	12	13	14	13	11	11	5	5	7	8	8	4	3	4	7	7	3	4	4	4	6	5	5	5	3.9	13.9
Dir	180	176	176	178	181	190	206	186	217	225	256	247	244	240	242	236	302	3	16	58	54	69	98	63	193	176
20 Spd	3	8	12	17	16	14	10	6	8	11	14	14	9	9	13	12	12	11	6	4	3	3	4	4	9.1	17.1
Dir	46	4	25	33	34	47	34	15	359	28	25	31	21	23	8	23	29	32	28	44	58	70	74	82	29	33
21 Spd	3	2	4	3	3	2	2	0	3	3	1	3	5	4	2	5	6	5	3	4	4	4	3	3	2.8	5.8
Dir	79	72	68	66	57	60	65	71	66	100	103	30	43	97	92	126	130	107	108	116	111	122	122	91	92	130
22 Spd	3	3	2	4	3	5	7	9	9	8	10	13	9	9	12	11	11	11	12	5	5	5	5	5	7.3	12.8
Dir	108	99	98	99	97	99	102	102	106	106	109	116	110	108	123	120	117	115	120	109	106	123	122	117	112	116

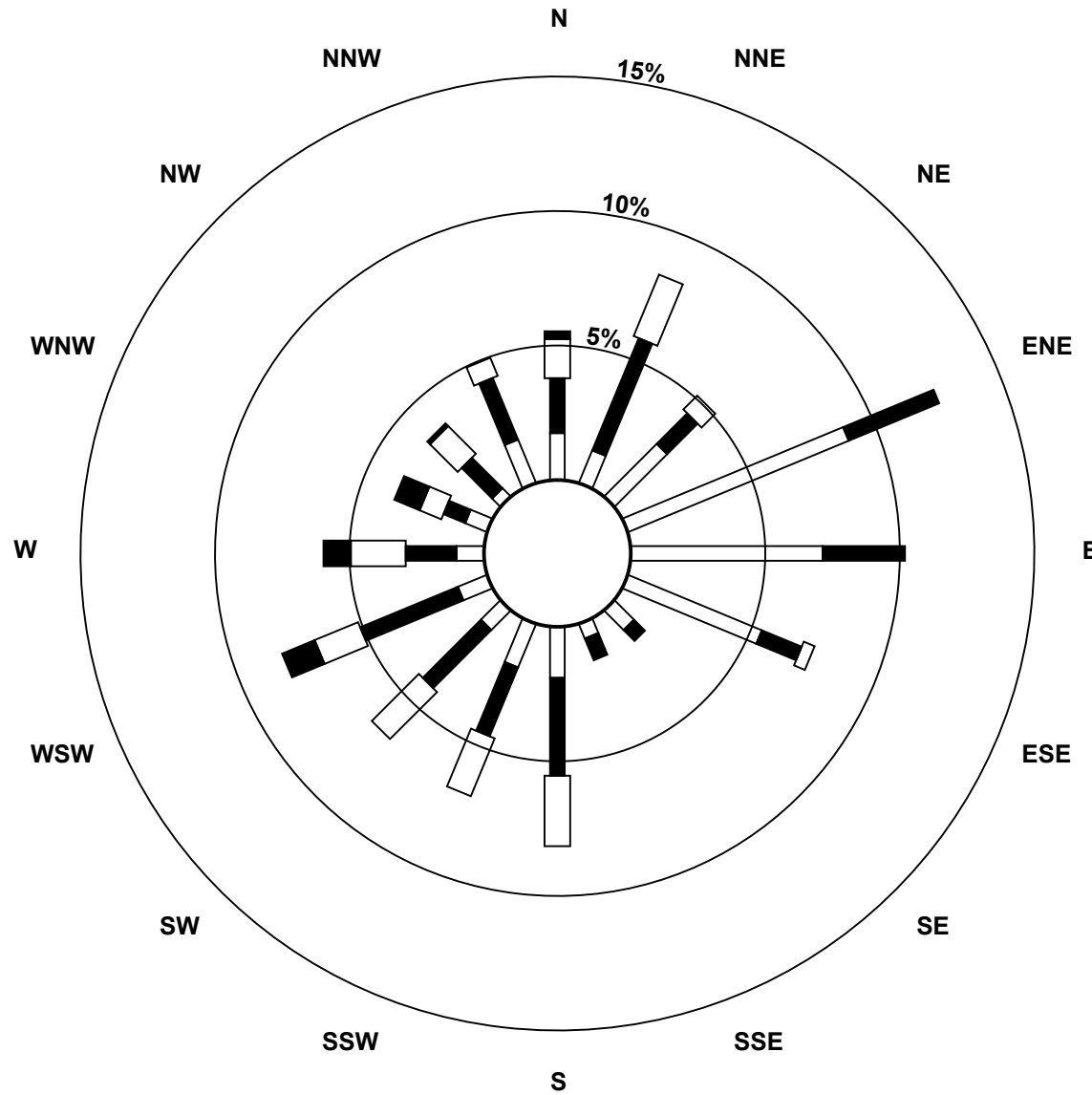
Hourly Averages

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

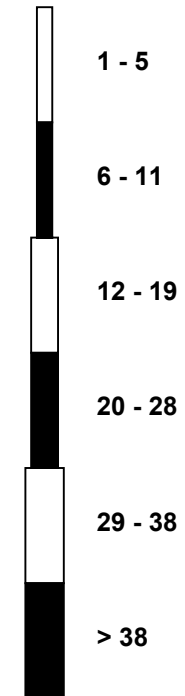
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	4	7	9	10	10	11	13	16	16	15	18	18	21	18	19	20	20	16	14	14	15	15	13	13	11.9	21.5
Dir	114	132	152	160	161	164	170	173	177	198	225	242	252	245	243	245	248	249	233	221	216	214	206	210	214	252
24 Spd	12	12	12	10	9	10	8	9	10	12	12	14	18	23	13	4	11	9	2	1	2	4	4	5	6.2	23.0
Dir	204	209	202	198	215	264	307	268	273	303	309	278	261	261	308	339	313	320	311	352	112	115	119	142	264	261
25 Spd	1	3	3	6	5	10	8	8	10	13	14	18	18	20	19	26	23	18	13	14	18	20	20	19	12.1	25.6
Dir	168	89	190	165	171	178	183	192	205	213	224	260	262	249	253	254	255	267	251	243	235	238	241	243	238	254
26 Spd	13	10	7	8	6	6	6	3	3	5	13	14	5	6	11	12	9	7	8	8	6	3	3	3	4.8	13.7
Dir	246	260	238	204	231	240	212	257	269	338	6	14	359	286	270	260	270	251	234	260	250	277	333	344	270	14
27 Spd	2	1	1	2	3	3	3	3	3	3	2	2	3	7	6	11	10	8	9	3	3	3	3	2	2.8	10.8
Dir	32	307	79	50	67	79	72	81	79	111	42	8	332	319	336	324	1	3	18	24	51	79	68	115	18	324
28 Spd	1	0	3	1	2	3	2	4	3	3	4	7	8	9	9	8	10	6	6	5	1	1	2	4	3.0	10.2
Dir	274	300	55	182	83	147	15	45	61	99	38	23	11	29	11	3	15	334	348	9	45	158	205	255	18	15
29 Spd	0	1	7	5	7	3	5	9	13	16	16	16	14	14	12	10	11	9	7	3	2	3	3	4	6.9	16.3
Dir	341	41	3	360	359	341	350	3	8	8	355	353	349	333	328	343	348	4	15	54	110	116	120	126	358	353
30 Spd	3	2	3	2	3	4	3	4	4	4	6	8	6	9	5	3	9	8	6	6	4	4	5	3	4.3	8.8
Dir	116	111	103	89	71	73	91	86	105	99	75	61	68	57	64	35	36	26	32	48	62	101	51	78	65	36
Spd	1.6	1.4	1.3	1.4	0.7	0.8	0.4	0.4	0.6	1.0	2.2	2.7	3.0	3.5	4.1	3.9	3.9	3.3	1.8	0.8	1.5	2.1	1.8	2.0	Diurnal Average	
Dir	191	183	178	165	159	165	181	230	277	301	320	328	302	287	301	293	298	310	305	256	194	192	186	186	Diurnal Maximum	
Spd	14.9	16.1	16.9	20.4	21.0	18.8	17.0	21.8	21.2	23.6	24.0	23.5	21.5	23.0	21.2	25.6	23.5	23.2	19.6	17.7	20.6	20.2	20.2	18.5	Diurnal Maximum	
Dir	19	218	238	259	269	267	256	266	274	281	282	282	252	261	304	254	255	358	359	271	276	238	241	243		
Maximum Speed Value: 26 km/h on Sep 25 16:00																								Hours in Service: 720		
Maximum Daily Speed Average: 15.0 km/h on Sep 1																								Hours of Data: 695		
Maximum Diurnal Speed Average: 4.1 km/h at hour 15																								Hours of Missing Data: 25		
Minimum Speed Value: 0 km/h on Sep 28 02:00																								Percent Operational Time: 96.5		
Minimum Daily Speed Average: 1.6 km/h on Sep 14																										
Minimum Diurnal Speed Average: 0.4 km/h at hour 8																										
Monthly Average Velocity: 1.10 km/h 271.6 deg																										
Speed Percentiles: P ₁ = 1.0 P ₁₀ = 2.7 Q ₁ = 4.0 Median = 6.6 Q ₃ = 11.1 P ₉₀ = 15.0 P ₉₉ = 22.0																										
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	20		43		25		2		0		0		90													
NorthEast	44		37		15		0		0		0		96													
East	88		57		0		0		0		0		145													
SouthEast	28		9		6		0		0		0		43													
South	20		41		28		0		0		0		89													
SouthWest	16		44		35		3		0		0		98													
West	12		29		21		18		0		0		80													
NorthWest	11		18		22		3		0		0		54													
Total	239		278		152		26		0		0		695													

Wind Rose

Wind Speed (WS) (km/h)
Donnelly - September 2018



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Donnelly - September 2018

Maximum Speed: 26 km/h on Sep 25 16:00																				Maximum Daily Speed Average: 17.6 km/h on Sep 1										Hours in Service: 720	
Minimum Speed: 1 km/h on Sep 28 02:00																				Minimum Daily Speed Average: 3.7 km/h on Sep 14										Hours of Data: 695	
Maximum Diurnal Speed Average: 11.0 km/h at hour 17																				Minimum Diurnal Speed Average: 6.6 km/h at hour 1										Hours of Missing Data: 25	
Monthly Average Speed: 8.29 km/h																				Percentiles: P ₁ = 1.7 P ₁₀ = 3.0 Q ₁ = 4.4 Median = 7.0 Q ₃ = 11.4 P ₉₀ = 15.4 P ₉₉ = 22.2										Percent Operational Time: 96.5	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Sep	14	14	17	21	21	19	17	22	21	24	24	24	21	20	22	22	22	18	12	7	11	14	7	9	17.6	24.3					
2-Sep	14	12	12	10	11	13	11	12	10	11	11	9	7	8	6	3	11	9	11	8	12	13	14	15	10.5	14.5					
3-Sep	12	16	10	8	11	10	12	16	17	13	17	17	16	15	16	14	14	10	8	6	4	3	5	4	11.4	17.3					
4-Sep	2	3	4	7	5	4	4	5	9	13	15	13	14	13	15	14	16	16	13	10	11	12	13	14	10.1	16.0					
5-Sep	10	10	9	7	5	2	4	3	4	7	9	7	6	6	8	8	6	5	5	5	5	4	5	5	6.0	10.2					
6-Sep	6	6	6	6	7	8	6	7	8	10	P	P	P	P	P	P	P	P	P	P	P	P	P	P	--	9.6					
7-Sep	P	P	P	P	P	P	P	P	P	P	P	6	5	6	10	9	5	3	4	2	1	6	3	4	11.4	20.6					
8-Sep	5	5	2	3	7	6	4	5	6	4	4	12	18	19	17	15	20	20	16	18	21	17	15	14	8.6	13.5					
9-Sep	13	13	14	12	10	8	10	10	11	10	10	10	10	8	10	7	7	6	6	5	4	3	5	4	6.6	12.3					
10-Sep	5	6	6	6	6	6	7	6	4	4	3	3	7	9	12	12	11	10	8	7	4	4	6	6							
11-Sep	6	4	4	5	7	5	7	6	6	6	8	7	7	7	4	3	7	23	20	18	14	15	16	13	9.1	23.3					
12-Sep	15	15	12	11	12	11	10	10	11	13	13	16	17	11	13	14	12	10	11	7	6	6	5	6	11.0	16.7					
13-Sep	5	6	5	2	2	2	2	3	3	3	4	4	5	8	7	8	8	8	9	7	4	6	4	4	5.0	8.6					
14-Sep	3	3	2	2	2	4	5	4	4	4	6	6	6	5	4	4	3	5	2	2	3	2	4	4	3.7	6.4					
15-Sep	4	3	5	5	5	3	4	4	5	7	10	9	7	7	9	9	8	6	5	5	4	3	3	4	5.5	9.7					
16-Sep	5	5	6	7	6	7	9	8	8	9	8	8	8	8	8	7	7	8	6	4	3	5	4	3	6.5	8.5					
17-Sep	3	4	3	6	6	4	4	3	6	7	4	6	8	8	9	11	11	9	6	4	5	6	9	8	6.3	11.3					
18-Sep	7	7	8	7	7	6	7	7	7	7	6	7	6	6	7	9	9	13	9	8	9	12	13	12	8.2	12.8					
19-Sep	12	13	14	13	11	11	6	5	8	9	8	5	5	5	7	8	4	4	4	4	6	5	5	5	7.4	13.9					
20-Sep	5	8	13	17	16	14	11	7	8	12	14	14	10	10	13	13	13	11	6	4	3	3	4	4	9.7	17.1					
21-Sep	3	2	4	3	3	2	2	2	3	3	3	4	6	5	5	6	6	5	3	4	4	4	3	3	3.8	6.3					
22-Sep	3	3	2	4	3	5	7	9	9	8	10	13	9	9	12	12	12	11	12	5	5	5	5	5	7.5	13.0					
23-Sep	5	7	10	10	10	12	13	16	16	15	19	19	22	19	20	21	21	16	14	14	15	15	13	13	14.6	21.6					
24-Sep	12	12	12	10	9	10	8	9	10	13	12	15	19	23	20	9	12	10	2	3	3	5	4	5	10.3	23.4					
25-Sep	2	5	5	7	6	10	8	8	10	13	14	18	19	21	19	26	24	18	13	14	18	20	20	19	14.0	26.0					
26-Sep	13	10	8	8	7	6	6	3	4	5	13	14	5	6	11	12	9	7	8	8	6	3	3	3	7.4	13.9					
27-Sep	3	2	1	2	3	4	3	3	3	3	3	3	4	8	7	12	10	8	10	3	3	3	3	2	4.4	12.3					
28-Sep	2	1	4	2	2	3	3	4	3	3	5	8	9	10	9	10	11	7	6	5	2	1	3	5	4.8	11.1					
29-Sep	1	2	7	5	7	4	5	9	13	16	17	17	14	14	12	11	11	10	7	3	2	3	3	4	8.2	16.7					
30-Sep	3	2	3	2	3	4	3	4	5	4	6	8	7	9	6	6	9	8	6	7	5	4	5	4	5.1	9.3					
6.6 6.9 7.1 7.1 7.3 7.0 6.8 7.2 8.0 8.9 9.7 10.4 10.2 10.5 11.0 10.9 11.0 10.1 8.3 6.8 6.6 7.0 7.0 6.8																								Diurnal Average							
15.0 16.3 17.0 20.6 21.0 19.0 21.8 21.4 23.8 24.3 23.8 21.6 23.4 21.6 26.0 23.6 23.3 19.7 17.8 20.6 20.2 20.2 18.5																								Diurnal Maximum							
P - Power Failure																															
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg

Donnelly - September 2018

Maximum Value: 87.6 deg on Sep 21 08:00																			Hours in Service: 720						
Minimum Value: 2.2 deg on Sep 19 01:00																			Hours of Data: 695						
																			Hours of Missing Data: 25						
Percentiles: P ₁ = 2.6 P ₁₀ = 5.6 Q ₁ = 8.3 Median = 12.9 Q ₃ = 22.2 P ₉₀ = 42.1 P ₉₉ = 73.5																			Hours of Calibration: 0						
																			Percent Operational Time: 96.5						
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Sep	9	6	7	10	4	7	3	4	6	7	9	9	9	9	11	8	8	7	15	22	4	54	56	8	56.0
2-Sep	5	3	3	3	4	7	4	3	9	11	13	22	28	16	14	64	13	20	48	22	4	3	3	5	64.0
3-Sep	6	8	11	5	10	6	6	8	8	8	26	8	10	11	9	9	11	11	9	17	9	12	18	12	26.0
4-Sep	50	42	27	3	10	6	11	7	7	12	13	22	20	18	20	14	15	9	10	7	5	4	4	4	49.5
5-Sep	10	3	10	8	7	69	58	37	20	22	22	28	32	39	41	27	25	22	10	10	12	9	9	11	69.2
6-Sep	10	10	12	13	10	8	13	14	11	11	P	P	P	P	P	P	P	P	P	P	P	P	P	P	13.8
7-Sep	P	P	P	P	P	P	P	P	P	P	P	35	47	36	24	13	15	42	16	26	78	23	53	19	78.1
8-Sep	21	16	20	32	22	25	57	19	12	49	52	24	9	10	12	9	8	7	10	7	3	11	9	6	56.7
9-Sep	11	6	8	8	7	8	7	9	9	10	12	15	10	16	12	26	24	19	11	16	16	18	18	15	26.1
10-Sep	13	15	12	13	15	14	12	14	17	16	31	41	19	15	15	9	8	11	9	11	11	19	8	9	41.3
11-Sep	5	15	12	9	6	12	5	5	12	16	14	18	29	19	22	33	27	6	6	7	7	8	5	6	33.4
12-Sep	5	5	6	7	6	7	7	9	10	7	7	10	8	12	14	9	10	10	10	8	6	7	6	8	13.6
13-Sep	5	9	9	22	21	25	10	20	33	42	54	65	65	21	26	35	55	50	17	37	40	27	34	45	65.4
14-Sep	14	34	64	69	44	14	29	19	29	37	46	42	53	46	73	51	47	35	19	28	18	23	32	8	73.4
15-Sep	16	11	11	8	8	10	9	9	15	16	17	18	21	17	14	13	15	14	13	12	15	18	19	13	20.8
16-Sep	10	10	8	7	12	10	6	8	8	11	12	13	13	14	15	14	21	8	9	22	20	16	16	13	21.7
17-Sep	12	16	18	8	8	53	68	22	19	16	40	27	22	20	18	8	11	16	37	9	8	6	7	6	67.9
18-Sep	10	10	6	8	8	7	6	7	13	12	18	27	49	25	29	17	22	8	12	4	3	3	3	2	48.8
19-Sep	2	3	2	3	2	7	46	26	8	17	13	41	59	60	32	31	44	22	15	11	9	10	17	25	59.8
20-Sep	31	17	7	4	7	7	10	13	12	13	15	11	46	31	12	16	16	9	5	10	10	10	7	10	45.6
21-Sep	12	14	11	17	15	14	30	88	22	42	73	59	47	50	80	53	21	19	8	6	7	9	8	15	87.6
22-Sep	10	18	32	18	21	23	6	8	8	11	10	10	14	17	12	12	14	9	10	10	8	14	12	10	32.5
23-Sep	17	8	8	5	4	5	4	4	5	14	9	11	7	12	16	12	11	11	4	8	6	4	5	5	17.4
24-Sep	4	5	4	7	10	13	12	6	6	23	15	19	14	10	54	66	14	18	36	77	62	14	15	28	77.3
25-Sep	81	67	74	24	12	5	8	7	6	6	10	11	13	15	13	10	5	3	7	2	5	4	3	2	81.3
26-Sep	3	9	16	9	18	18	22	24	48	23	8	8	22	9	9	9	5	15	4	11	21	29	16	29	47.6
27-Sep	44	71	37	57	15	20	36	22	31	29	34	61	46	24	56	33	12	16	7	58	19	11	15	40	70.8
28-Sep	46	68	23	74	39	66	52	14	26	31	37	25	27	27	18	35	24	30	7	13	66	57	24	31	74.1
29-Sep	69	57	18	7	7	20	14	8	8	11	12	12	12	14	14	18	14	25	11	35	20	17	17	11	68.7
30-Sep	7	27	23	23	13	13	21	22	12	21	20	14	29	23	34	65	23	11	10	9	16	11	26	22	64.5
	81.3	70.8	74.4	74.1	43.7	69.2	67.9	87.6	47.6	48.5	72.8	64.7	65.4	59.8	80.1	66.1	54.8	49.6	48.1	77.3	78.1	56.6	56.0	45.2	
P - Power Failure																									

PAZA

Portable – Rycroft Station

Monthly Summary Tables, Graphs and
Roses

Hourly Averages

Sulphur Dioxide (SO₂) - ppb

Portable Rycroft - September 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0										Hours in Service: 720																			
Maximum Value: 1.6 ppb on Sep 4 13:00										Maximum Daily Average: 0.3 ppb on Sep 1										Hours of Data: 685									
Minimum Value: 0 ppb on Sep 1 17:00										Minimum Daily Average: 0.0 ppb on Sep 29										Hours of Missing Data: 35									
Maximum Diurnal Average: 0.2 ppb at hour 13										Minimum Diurnal Average: 0.1 ppb at hour 6										Hours of Calibration: 35									
Monthly Average: 0.09 ppb										Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.1 P ₉₀ = 0.3 P ₉₉ = 0.6										Percent Operational Time: 100.0									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Sep	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	0.6			
2-Sep	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.6			
3-Sep	0	0	0	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			
4-Sep	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	A	0	0	0	0	0	0	0	0	0.2	1.6			
5-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.3			
6-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.3			
7-Sep	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	1	1	0	0	0	0	0	0	0	0.2	0.7			
8-Sep	0	0	0	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			
9-Sep	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1			
10-Sep	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2			
11-Sep	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	0.7			
12-Sep	0	0	0	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			
13-Sep	0	0	0	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			
14-Sep	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2			
15-Sep	0	0	0	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			
16-Sep	0	0	0	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			
17-Sep	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.3			
18-Sep	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	0.7			
19-Sep	A	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4			
20-Sep	0	0	0	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			
21-Sep	0	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			
22-Sep	0	0	0	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			
23-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0	0	0.1	1.3			
24-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0.2	0.8			
25-Sep	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.6			
26-Sep	0	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			
27-Sep	0	0	0	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			
28-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.0	0.0			
29-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.0	0.0			
30-Sep	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3			
																								Diurnal Average	Diurnal Maximum				
																								0.1	0.5				
																								0.3	0.5				

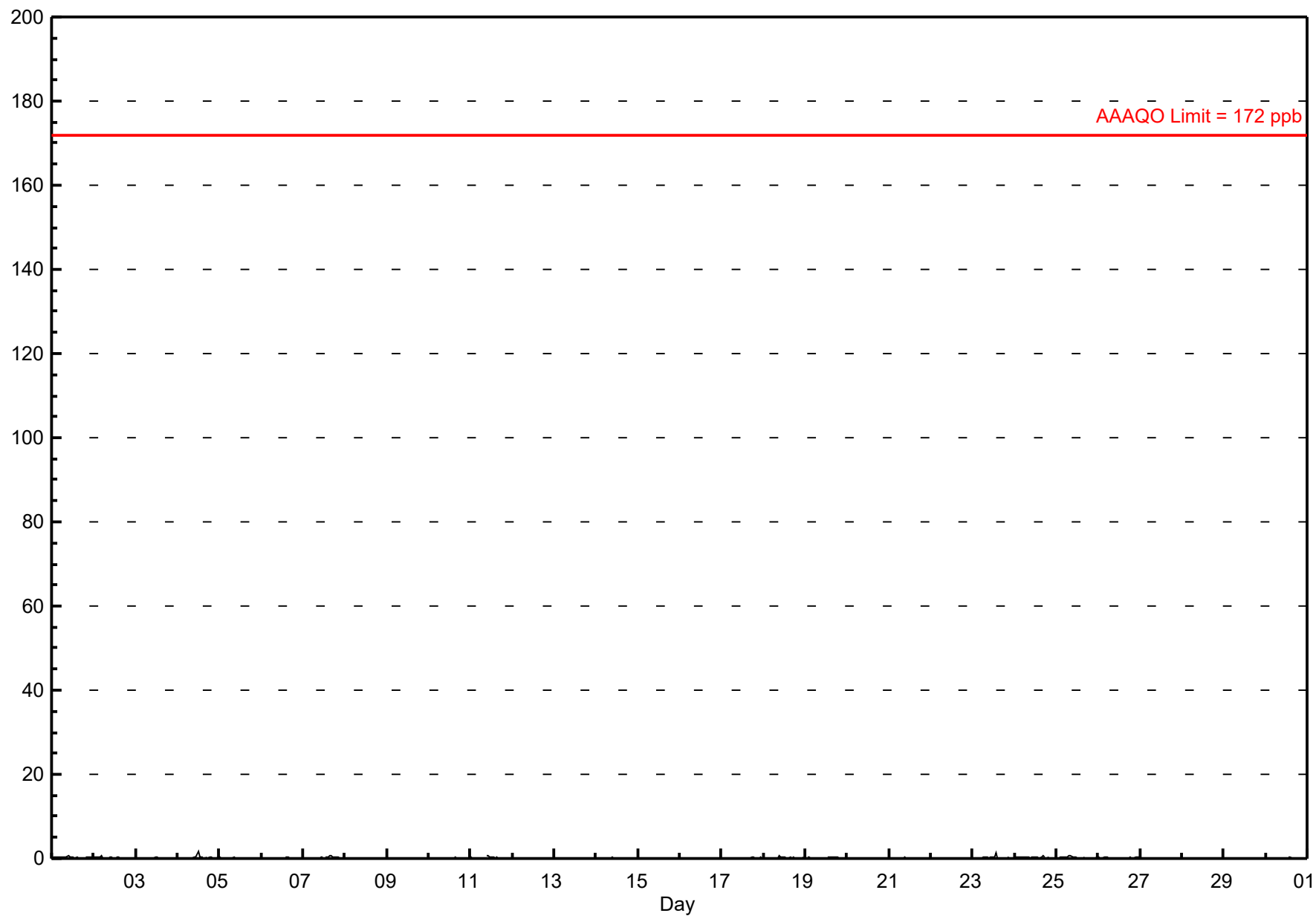
C - CalibrationA - Automated Daily Zero Span

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

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

Hourly Averages

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



Hourly Maximums

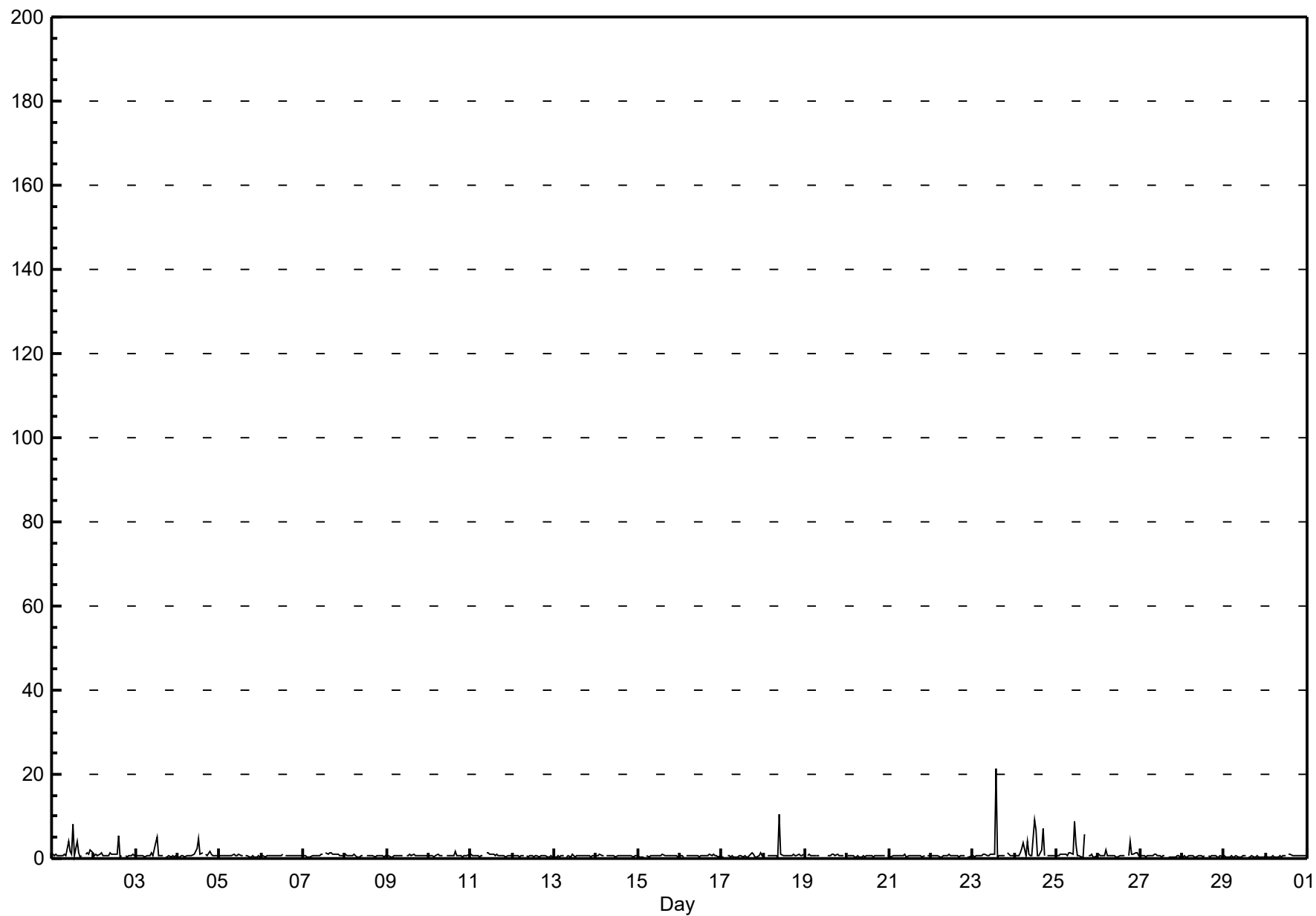
Sulphur Dioxide (SO₂) - ppb

Portable Rycroft - September 2018

Maximum Value: 21.2 ppb on Sep 23 14:00																				Maximum Daily Average: 2.1 ppb on Sep 24					Hours in Service: 720	
Minimum Value: 0 ppb on Sep 30 00:00																				Minimum Daily Average: 0.5 ppb on Sep 29					Hours of Data: 685	
Maximum Diurnal Average: 1.5 ppb at hour 13																				Minimum Diurnal Average: 0.6 ppb at hour 2					Hours of Missing Data: 35	
Monthly Average: 0.84 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.5 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.8 P ₉₀ = 1.0 P ₉₉ = 5.9					Hours of Calibration: 35	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	1	1	1	1	1	1	1	1	1	4	2	1	8	1	4	1	0	1	A	1	1	1	2	1	1.6	8.0
2-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	0	1	A	1	0	1	1	1	1	1.0	5.5
3-Sep	1	1	1	1	1	0	1	1	1	1	1	4	5	1	1	1	A	0	0	1	0	1	0	1	1.0	5.1
4-Sep	0	0	1	1	0	1	1	1	1	1	2	2	5	1	1	A	1	1	2	1	1	1	1	1	1.0	4.8
5-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	1	1	0	1	0	0.7	1.0
6-Sep	1	1	0	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.6	0.9
7-Sep	1	1	0	0	0	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.8	1.4
8-Sep	1	1	1	1	1	1	1	0	0	1	1	A	1	1	1	1	1	0	1	1	1	0	1	1	0.6	1.0
9-Sep	1	1	0	0	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1
10-Sep	1	1	1	0	1	1	1	1	1	1	A	1	1	1	1	1	2	1	1	1	0	1	1	1	0.7	1.6
11-Sep	1	1	1	1	1	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0.8	1.3
12-Sep	1	1	1	1	0	1	1	A	1	0	1	1	0	1	1	0	1	1	1	1	0	0	1	0	0.5	0.6
13-Sep	0	0	1	0	1	1	A	0	1	0	1	1	0	1	1	1	1	1	1	1	1	0	1	1	0.6	0.9
14-Sep	1	1	1	1	1	A	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0	1	1	0.7	0.9
15-Sep	1	0	0	0	A	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0.6	1.0
16-Sep	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0.7	1.0
17-Sep	0	0	A	1	1	0	1	0	0	0	1	1	0	1	0	0	1	1	1	0	0	1	2	1	0.6	1.5
18-Sep	1	A	1	1	1	1	1	1	0	10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	10.5
19-Sep	A	1	1	1	1	1	1	1	1	C	C	C	C	1	1	1	1	1	1	1	1	1	1	A	0.8	1.0
20-Sep	1	1	1	1	0	0	1	0	0	1	0	1	1	1	1	0	1	1	1	1	1	1	A	1	0.6	0.7
21-Sep	1	0	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	1	A	1	1	0.6	0.9
22-Sep	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	0	1	1	1	A	0	0	1	0.6	1.0
23-Sep	1	0	1	1	1	1	1	1	1	1	1	1	1	21	0	1	1	1	1	A	1	1	1	1	1.6	21.2
24-Sep	1	1	1	1	2	4	1	4	1	1	1	9	7	1	1	2	7	1	A	1	1	1	1	1	2.1	9.2
25-Sep	1	1	1	1	1	1	1	1	1	1	9	3	1	1	0	0	6	A	1	1	1	0	1	1	1.5	8.7
26-Sep	1	1	1	1	2	1	1	1	1	1	0	1	1	1	1	1	A	1	4	1	1	1	1	1	1.0	4.0
27-Sep	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	A	0	0	0	0	0	1	0	0	0.6	1.1
28-Sep	0	1	0	0	1	1	1	0	0	1	1	1	0	1	1	A	1	0	1	1	0	0	1	0	0.5	0.7
29-Sep	1	0	0	0	1	0	0	1	0	0	0	1	1	A	0	0	1	0	0	1	0	0	0	0	0.5	0.8
30-Sep	1	0	0	0	1	0	0	0	1	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9
0.7 0.6 0.6 0.6 0.7 0.7 0.6 0.8 0.7 1.2 1.1 1.3 1.5 1.4 1.0 0.8 1.1 0.7 0.8 0.7 0.7 0.6 0.7 0.7																								Diurnal Average		
1.1 0.9 0.9 1.3 2.4 3.8 0.9 4.1 1.3 10.5 8.7 9.2 8.0 21.2 5.5 2.0 7.2 1.3 4.0 1.1 1.3 1.4 2.0 1.4																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

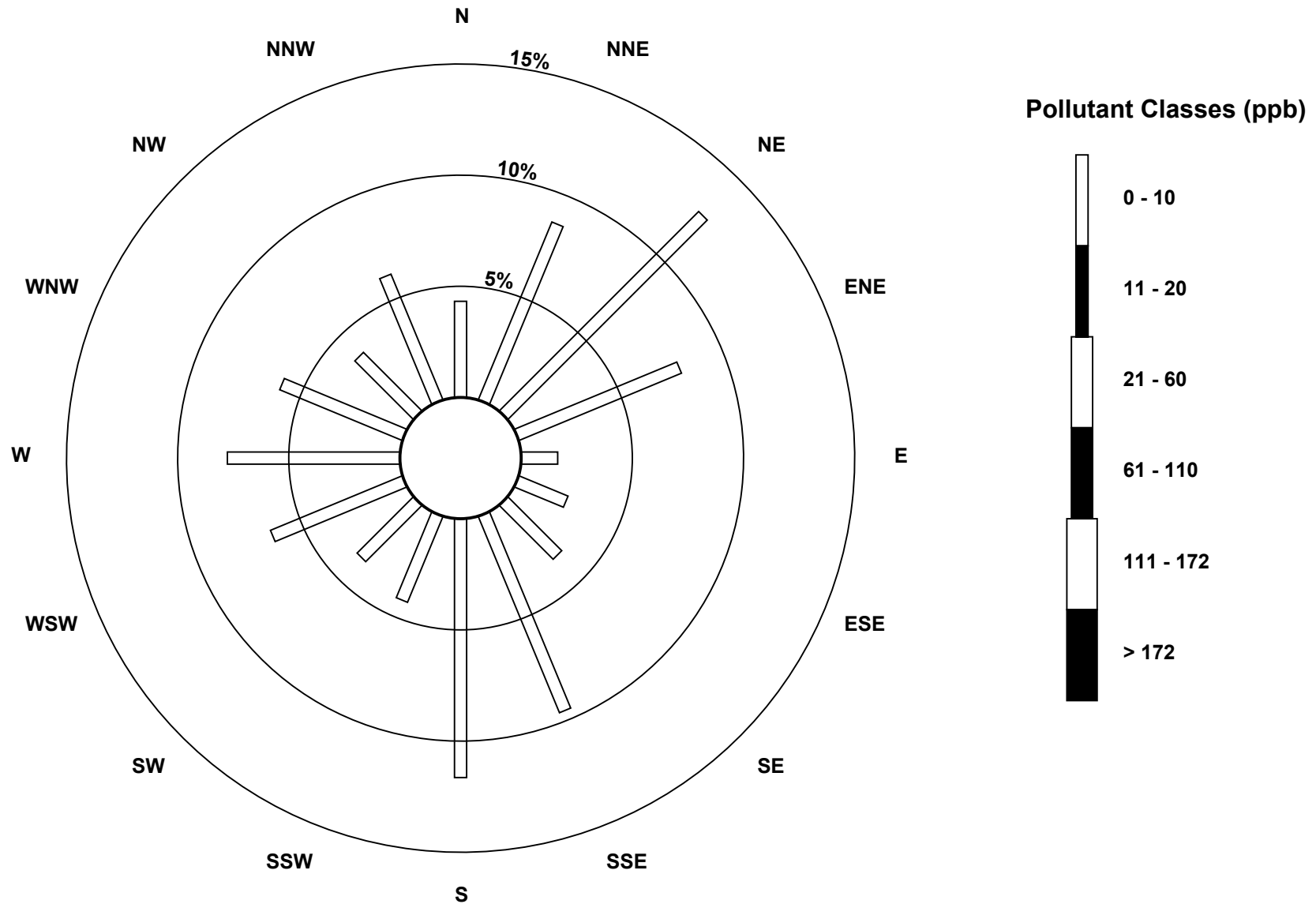
Hourly Maximums

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



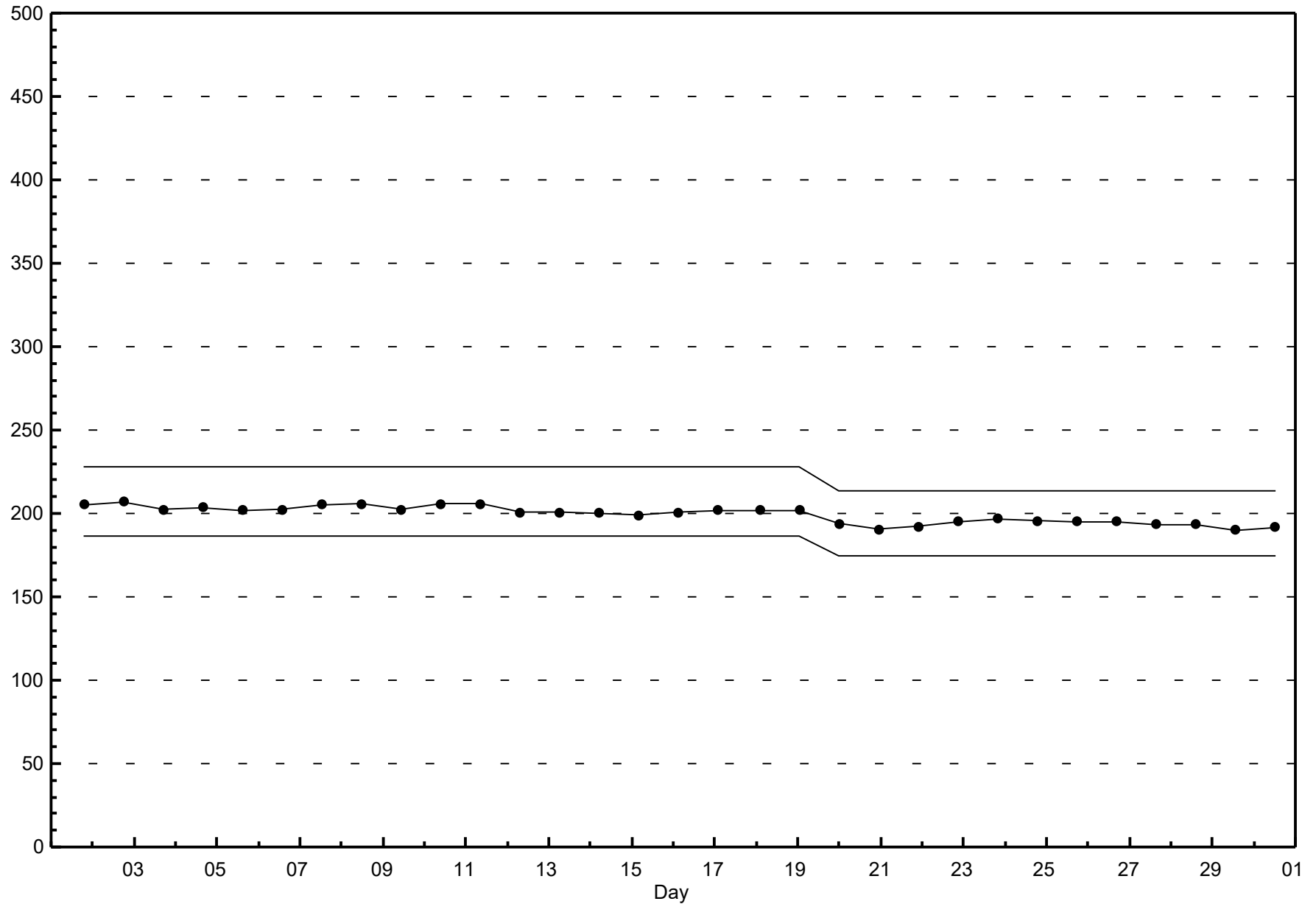
Pollutant Rose

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



Span Responses

Sulphur Dioxide (SO₂)
Portable Rycroft - September 2018



Hourly Averages

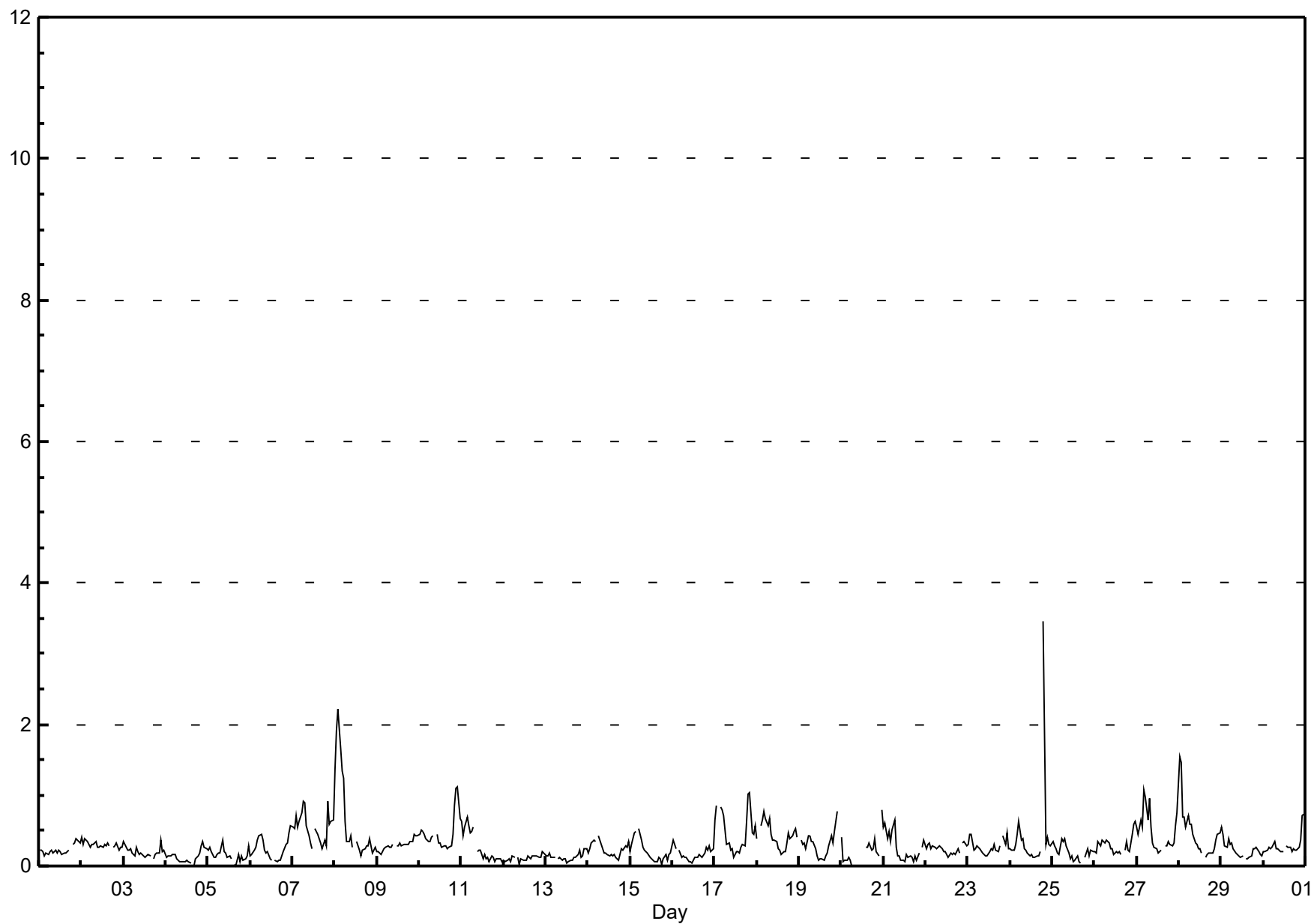
Total Reduced Sulphur (TRS) - ppb

Portable Rycroft - September 2018

Maximum Value: 3.5 ppb on Sep 24 20:00																				Maximum Daily Average: 0.6 ppb on Sep 8										Hours in Service: 720									
Minimum Value: 0 ppb on Sep 4 17:00																				Minimum Daily Average: 0.1 ppb on Sep 12										Hours of Data: 685									
Maximum Diurnal Average: 0.4 ppb at hour 2																				Minimum Diurnal Average: 0.2 ppb at hour 13										Hours of Missing Data: 35									
Monthly Average: 0.30 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.5 P ₉₉ = 1.3										Hours of Calibration: 35									
																				Percent Operational Time: 100.0																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0	0	0	0	0.2	0.4													
2-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0	0	0	0	0.3	0.4													
3-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0	0	0	0	0	0.2	0.4													
4-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.4													
5-Sep	0	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													
6-Sep	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	0.6													
7-Sep	1	1	1	1	1	1	1	1	1	0	0	0	A	1	0	0	0	0	0	0	1	1	1	1	0.5	0.9													
8-Sep	1	2	2	2	1	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.6	2.2													
9-Sep	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4													
10-Sep	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.5	1.1													
11-Sep	1	0	1	1	1	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7													
12-Sep	0	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													
13-Sep	0	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													
14-Sep	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4													
15-Sep	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5													
16-Sep	0	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													
17-Sep	1	1	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0.5	1.0													
18-Sep	0	A	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8													
19-Sep	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	A	0.3	0.8													
20-Sep	0	0	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	A	1	0.2	0.8													
21-Sep	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.6													
22-Sep	0	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													
23-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.3	0.5													
24-Sep	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	3	0	0	0	0	0.4	3.5													
25-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.4													
26-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	1	0.3	0.6													
27-Sep	1	0	1	1	1	1	1	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	1	1	0.5	1.1													
28-Sep	2	1	1	1	1	1	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.5	1.5													
29-Sep	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.5													
30-Sep	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	1	0.3	0.7													
0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.3 0.3 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.4 0.3 0.3 0.4 0.4																									Diurnal Average														
1.5 1.9 2.2 1.7 1.3 1.2 0.9 1.0 0.6 0.4 0.4 0.4 0.4 0.5 0.5 0.4 0.3 0.3 0.6 3.5 1.0 1.1 1.1 0.8																									Diurnal Maximum														
C - Calibration																									A - Automated Daily Zero Span														

Hourly Averages

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



Hourly Maximums

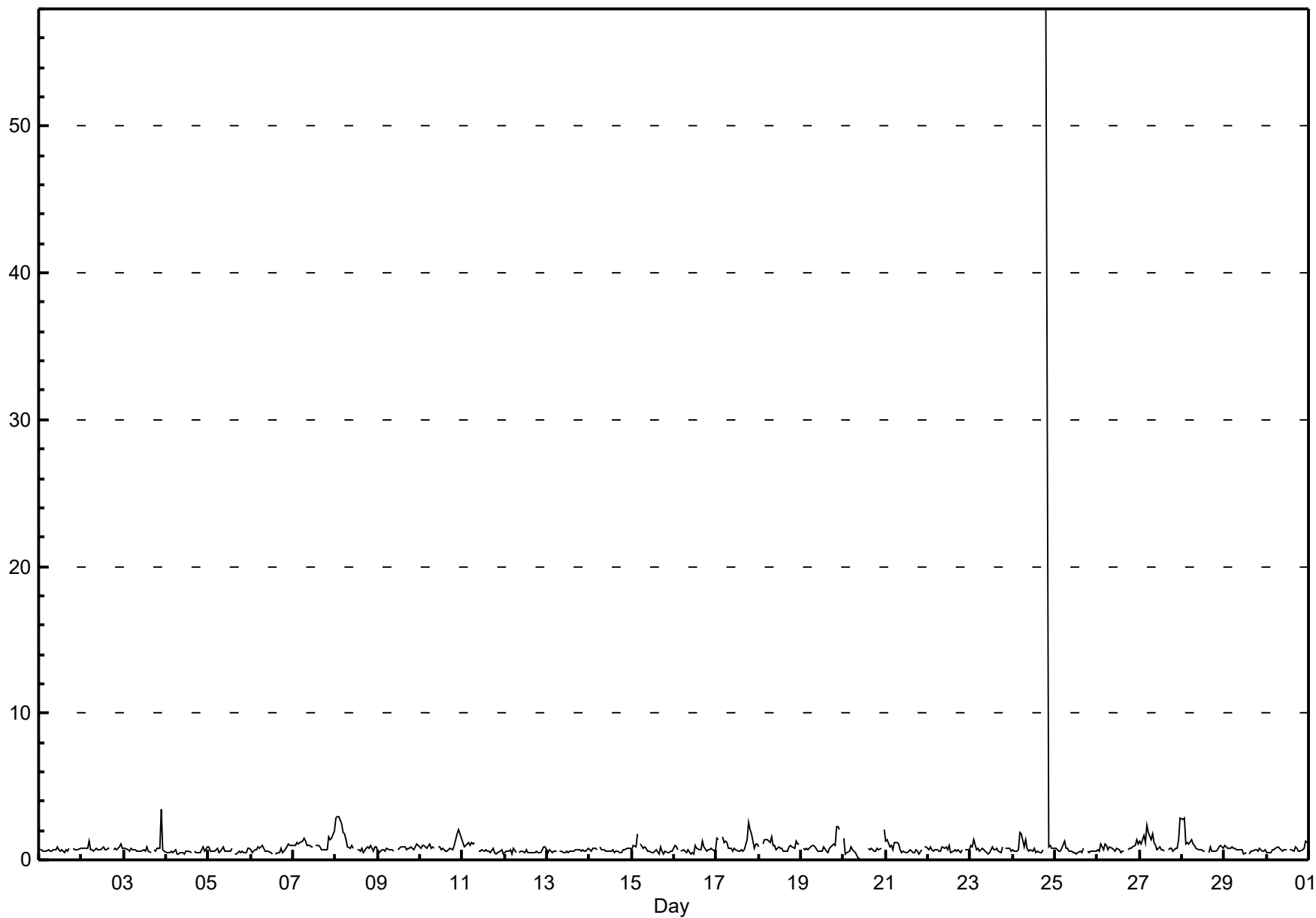
Total Reduced Sulphur (TRS) - ppb

Portable Rycroft - September 2018

Maximum Value: 58.0 ppb on Sep 24 20:00																				Maximum Daily Average: 3.3 ppb on Sep 24					Hours in Service: 720	
Minimum Value: 0 ppb on Sep 20 10:00																				Minimum Daily Average: 0.6 ppb on Sep 4					Hours of Data: 685	
Maximum Diurnal Average: 2.7 ppb at hour 20																				Minimum Diurnal Average: 0.6 ppb at hour 16					Hours of Missing Data: 35	
Monthly Average: 0.88 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.7 Q ₃ = 0.9 P ₉₀ = 1.2 P ₉₉ = 2.7					Hours of Calibration: 35	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	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	0.8
2-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.8	1.3
3-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	1	1	1	1	3	1	1	0.8	3.4
4-Sep	1	1	0	1	1	1	0	0	1	1	0	1	1	1	0	A	1	0	0	1	1	1	1	1	0.6	0.9
5-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0	0	1	1	1	1	0	1	1	0.6	0.9
6-Sep	1	1	1	1	1	1	1	1	1	1	1	0	0	A	0	0	0	1	1	1	1	1	1	1	0.7	1.0
7-Sep	1	1	1	1	1	1	2	1	1	1	1	1	A	1	1	1	1	1	1	1	2	1	1	2	1.1	1.9
8-Sep	3	3	3	2	2	2	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1.2	3.0
9-Sep	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
10-Sep	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1.0	2.0
11-Sep	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0	0.8	1.2
12-Sep	0	1	1	1	0	1	0	A	0	1	1	1	1	0	0	0	1	1	1	0	1	1	1	1	0.6	0.9
13-Sep	1	1	1	0	1	1	A	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0.6	0.7
14-Sep	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0.7	0.8
15-Sep	1	1	1	2	A	1	1	1	1	1	1	0	0	1	1	0	1	1	0	1	1	0	1	1	0.7	1.7
16-Sep	1	1	1	A	1	1	1	0	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2
17-Sep	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	2	2	1	1	1	1.1	2.5
18-Sep	1	A	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.5
19-Sep	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	A	1.0	2.2
20-Sep	1	0	0	1	1	1	1	1	0	0	C	C	C	C	1	1	1	1	1	1	1	1	A	2	0.7	2.0
21-Sep	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	0	1	1	0	1	A	1	1	0.8	1.4
22-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	1.0
23-Sep	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	A	1	1	1	1	0.7	1.4
24-Sep	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	0	0	1	A	58	1	1	1	1	3.3	58.0
25-Sep	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	0	1	A	1	1	1	1	1	1	0.6	1.3
26-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.8	1.4
27-Sep	1	1	2	1	2	2	1	2	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	3	1.2	2.8
28-Sep	3	3	1	1	1	1	1	1	1	1	1	1	1	1	A	0	1	1	1	1	1	1	1	1	1.0	2.8
29-Sep	1	1	1	1	1	1	1	1	1	1	1	0	1	A	0	1	1	1	1	1	1	1	1	1	0.7	1.0
30-Sep	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.7	1.3
1.0 0.9 0.9 0.9 1.0 1.0 0.9 0.9 0.7 0.6 0.6 0.6 0.6 0.7 0.7 0.6 0.6 0.7 0.7 0.7 2.7 0.9 1.0 1.0 1.0																									Diurnal Average	
2.8 3.0 2.9 2.5 2.4 1.9 1.5 1.8 1.2 1.0 0.9 0.9 1.0 1.0 0.9 0.9 1.2 1.3 2.5 58.0 2.2 3.4 2.1 2.8																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

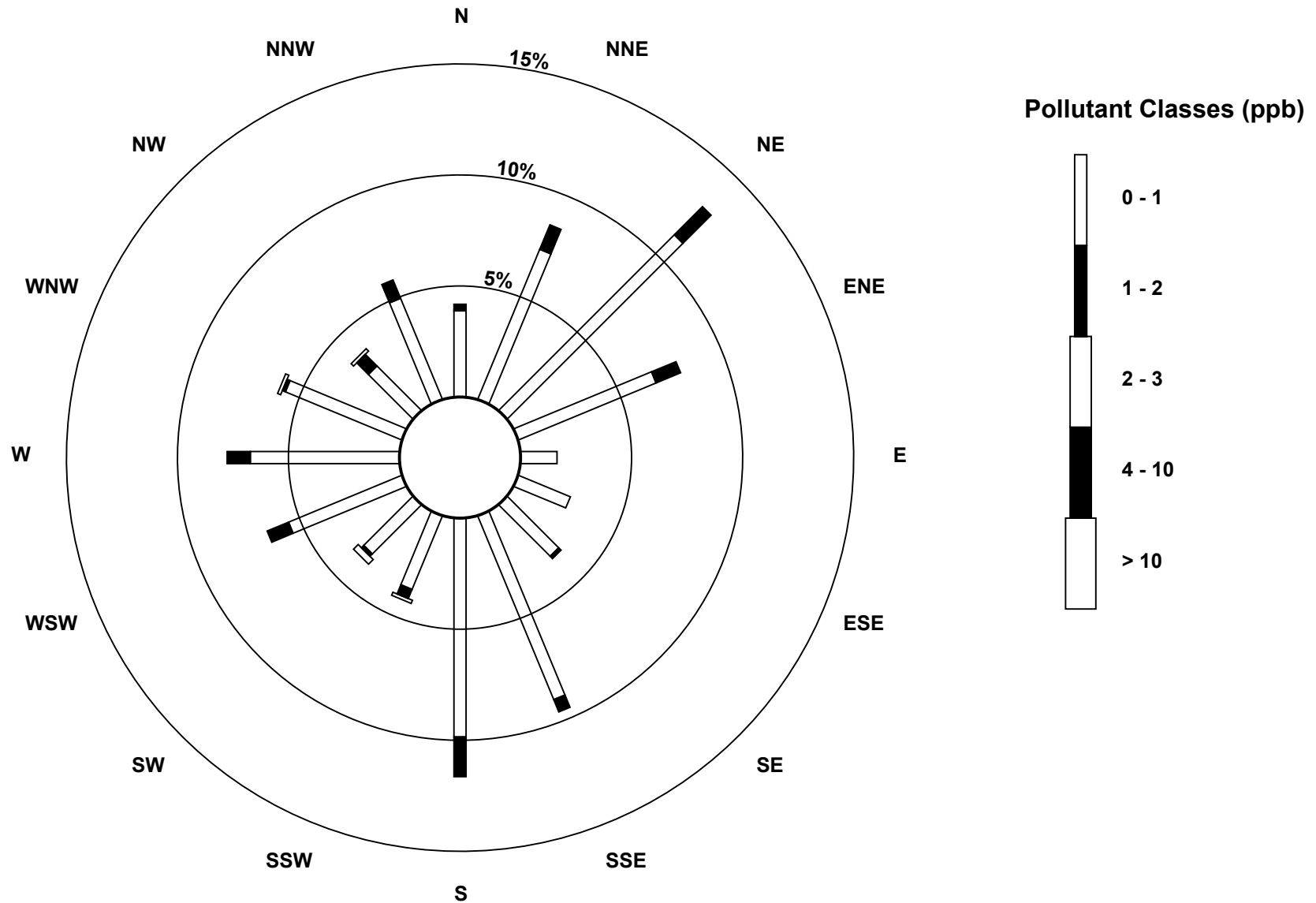
Hourly Maximums

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



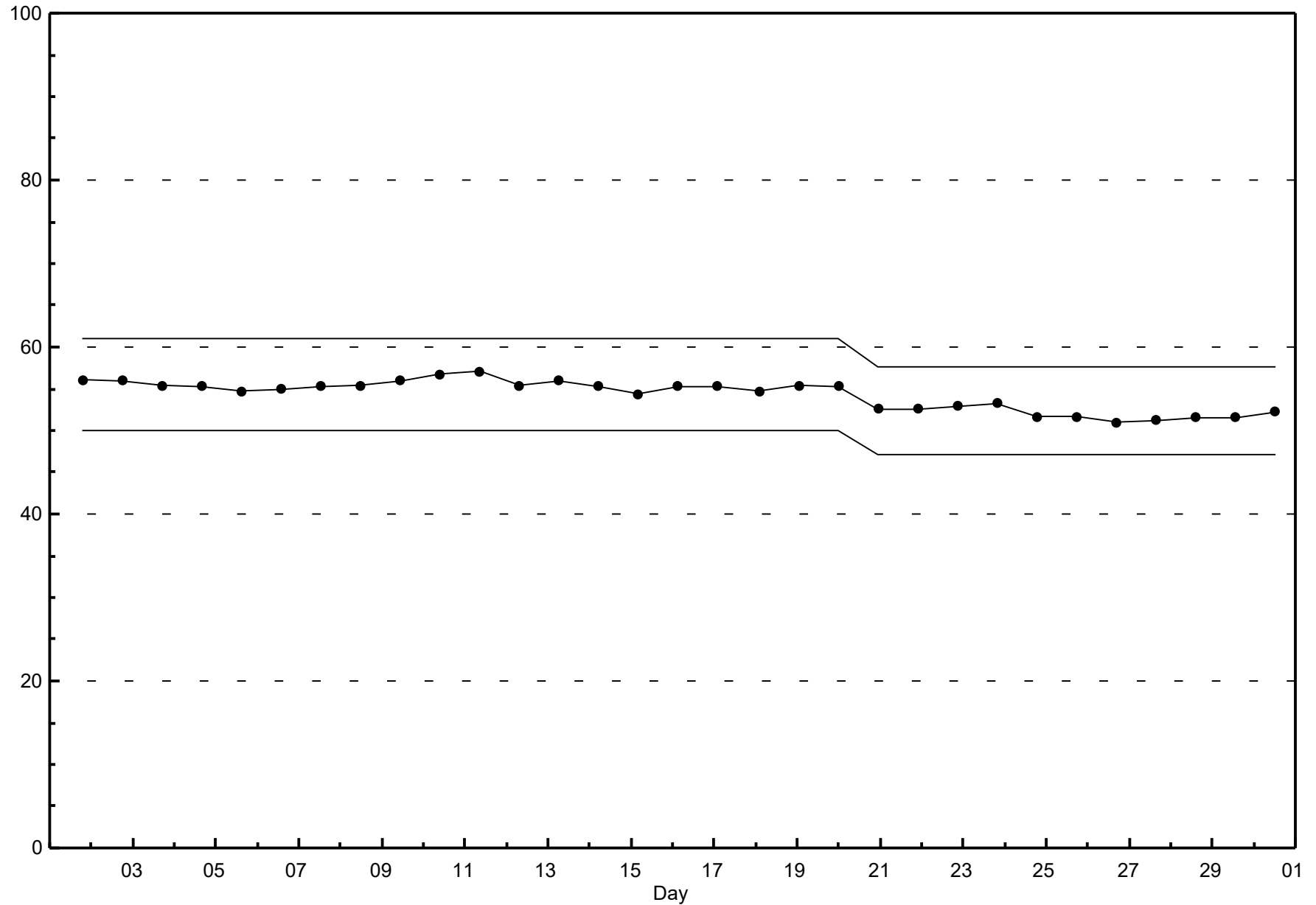
Pollutant Rose

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



Span Responses

Total Reduced Sulphur (TRS)
Portable Rycroft - September 2018



Hourly Averages

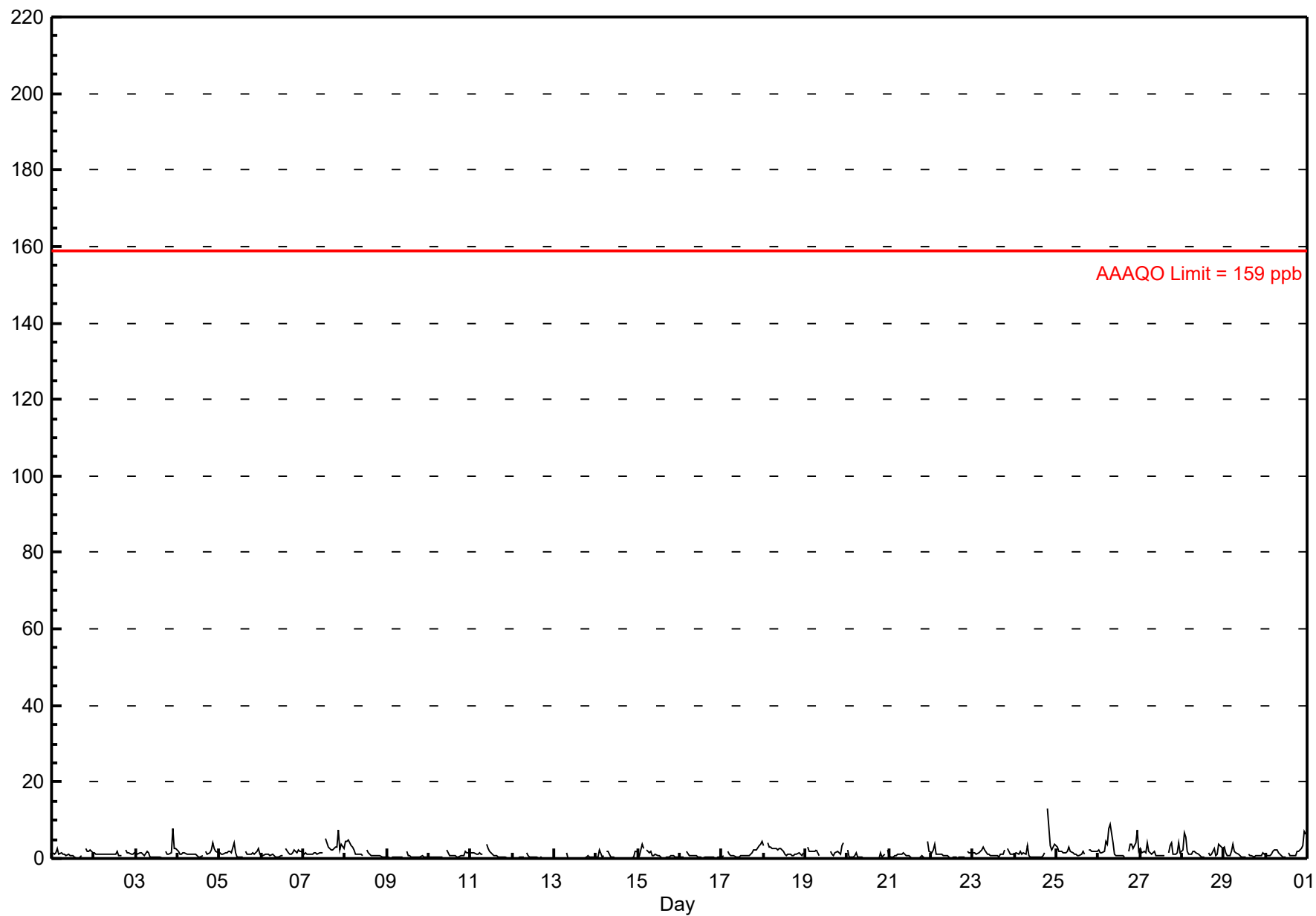
Nitrogen Dioxide (NO₂) - ppb

Portable Rycroft - September 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 13.1 ppb on Sep 24 20:00 Maximum Daily Average: 2.9 ppb on Sep 26																				Hours in Service: 720 Hours of Data: 684 Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Sep 13 01:00 Minimum Daily Average: 0.2 ppb on Sep 13 Maximum Diurnal Average: 2.3 ppb at hour 23 Minimum Diurnal Average: 0.6 ppb at hour 13 Monthly Average: 1.27 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.2 Q ₁ = 0.4 Median = 1.0 Q ₃ = 1.7 P ₉₀ = 2.6 P ₉₉ = 6.7																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	2	1	1	3	1	1	1	1	1	1	1	1	1	0	0	0	0	1	A	3	2	2	2	2	1.2	2.6
2-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	A	2	1	1	1	1	1	1.2	2.4
3-Sep	1	1	1	2	1	1	2	1	1	0	0	0	0	0	0	0	A	2	1	1	2	8	3	3	1.4	7.9
4-Sep	2	1	1	1	1	1	1	1	1	1	1	1	0	0	1	A	2	1	1	2	4	3	2	1	1.4	4.0
5-Sep	1	1	1	1	2	2	2	2	4	1	0	0	0	0	A	2	1	1	1	1	1	2	3	1	1.4	4.1
6-Sep	1	1	1	1	1	1	1	1	1	0	1	1	1	A	2	2	1	1	1	2	1	2	2	2	1.2	2.4
7-Sep	1	2	1	1	1	1	1	2	1	1	2	1	A	5	3	3	2	2	3	3	7	2	4	2	2.3	7.5
8-Sep	4	4	5	3	3	2	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	0	0	0	1.6	4.7
9-Sep	0	0	0	0	0	0	0	0	0	0	0	A	2	1	1	0	0	0	0	0	1	0	0	0	0.4	1.8
10-Sep	0	0	0	0	0	0	0	0	1	A	2	1	1	1	1	1	0	1	1	1	1	2	2	1	0.8	2.3
11-Sep	1	1	1	1	1	2	1	1	A	4	3	2	1	1	1	1	1	0	0	0	0	0	0	0	1.1	3.9
12-Sep	0	0	0	0	0	0	1	A	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.5
13-Sep	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0.2	1.3
14-Sep	0	0	2	0	1	A	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	0.6	2.4
15-Sep	2	1	4	3	A	2	2	2	1	1	1	1	1	0	0	0	0	0	0	1	1	0	0	0	1.0	3.8
16-Sep	1	0	0	A	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.7
17-Sep	0	1	A	2	1	1	1	1	0	0	0	1	1	1	1	1	1	1	2	2	2	3	4	4	1.4	4.3
18-Sep	3	A	4	3	3	3	3	2	2	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1.9	4.1
19-Sep	A	3	2	2	2	2	2	1	1	C	C	C	C	C	2	1	1	1	2	1	1	3	4	A	--	4.0
20-Sep	2	1	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	1	A	2	0.5	2.3
21-Sep	1	1	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	0	A	4	2	0.8	4.3
22-Sep	1	2	4	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	A	2	1	1	0.9	3.8
23-Sep	1	1	1	1	2	2	3	2	1	1	1	1	1	1	0	1	1	1	2	A	3	1	1	1	1.4	2.8
24-Sep	1	1	1	2	1	2	1	3	1	0	0	0	0	0	0	0	1	1	A	13	4	2	3	4	1.9	13.1
25-Sep	3	2	2	2	2	1	2	3	2	2	1	1	1	1	1	2	1	A	2	2	2	2	2	2	1.7	2.9
26-Sep	2	2	2	2	5	4	8	9	4	1	1	1	1	1	1	0	A	2	4	4	3	4	7	2	2.9	8.8
27-Sep	2	2	2	1	4	2	1	1	2	1	1	1	1	1	1	A	2	3	4	1	1	2	4	2	1.7	4.1
28-Sep	2	7	6	2	1	1	2	2	1	1	1	0	0	0	A	1	1	1	2	1	1	4	3	3	1.9	6.6
29-Sep	3	1	1	1	2	4	2	1	1	1	1	0	0	A	1	1	1	1	1	1	1	1	1	1	1.1	3.6
30-Sep	1	1	1	1	2	2	2	1	1	1	1	0	A	1	1	1	1	1	2	2	3	3	7	6	1.9	7.2
																									Diurnal Average	
																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb																										

Hourly Averages

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



Hourly Maximums

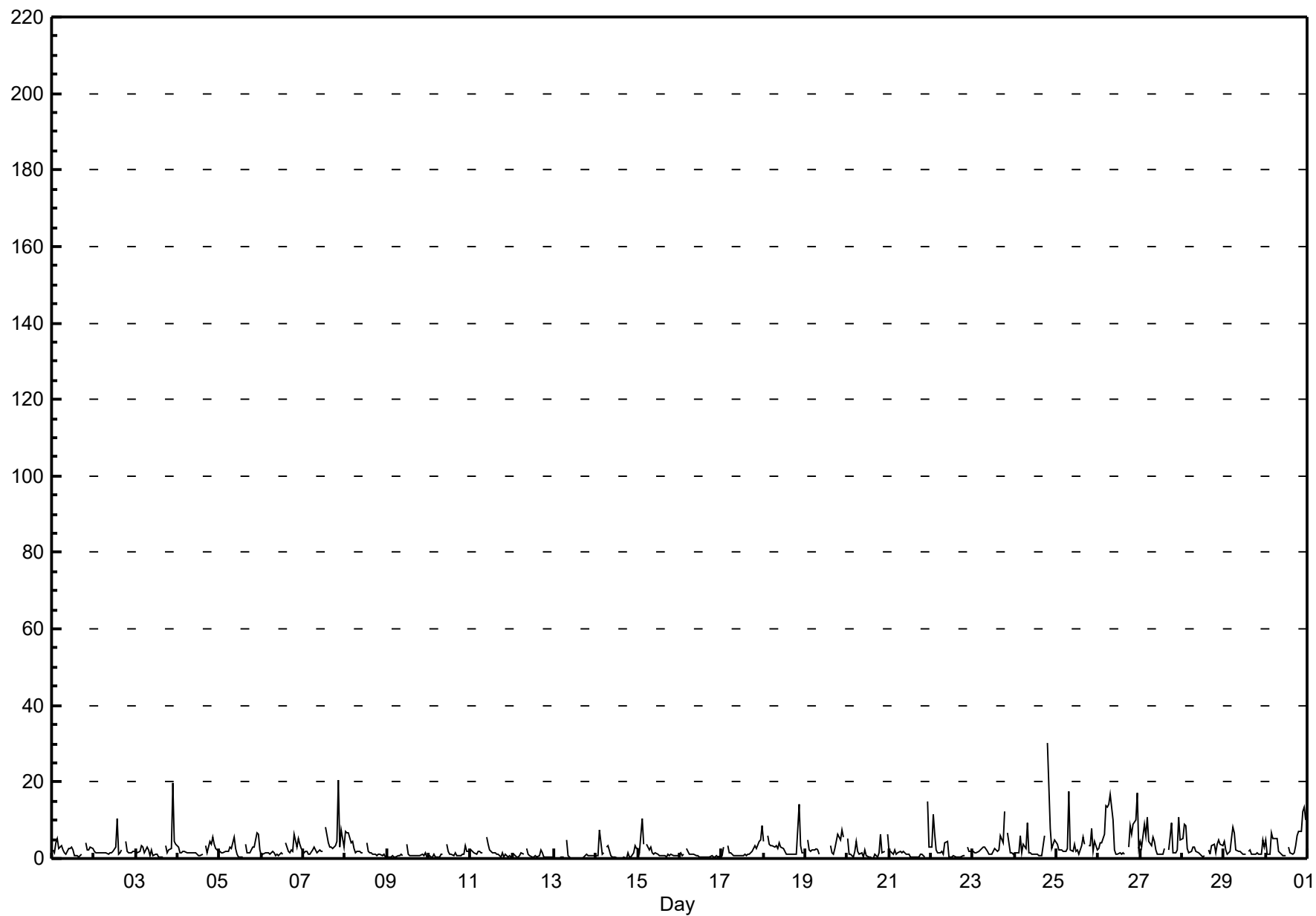
Nitrogen Dioxide (NO₂) - ppb

Portable Rycroft - September 2018

Maximum Value: 30.4 ppb on Sep 24 20:00																				Maximum Daily Average: 6.6 ppb on Sep 26					Hours in Service: 720	
Minimum Value: 0 ppb on Sep 13 12:00																				Minimum Daily Average: 0.5 ppb on Sep 13					Hours of Data: 684	
Maximum Diurnal Average: 4.4 ppb at hour 23																				Minimum Diurnal Average: 1.2 ppb at hour 13					Hours of Missing Data: 36	
Monthly Average: 2.48 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.5 Q ₁ = 0.9 Median = 1.6 Q ₃ = 2.9 P ₉₀ = 5.4 P ₉₉ = 14.2					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-Sep	2	1	4	5	2	3	2	1	1	3	3	3	2	1	1	0	1	1	A	4	2	2	3	3	2.2	5.3
2-Sep	2	2	1	1	1	1	1	1	1	1	2	2	3	10	1	2	2	A	4	2	2	2	2	2	2.1	10.3
3-Sep	2	1	2	3	3	1	3	2	1	2	1	1	1	1	0	0	A	3	2	2	3	20	4	4	2.7	19.9
4-Sep	3	1	1	2	2	1	2	2	1	1	2	1	1	1	1	A	3	1	4	4	6	4	2	2	2.1	5.7
5-Sep	2	2	1	2	2	2	3	2	6	2	1	1	0	0	A	4	2	2	2	3	3	7	6	2	2.5	6.6
6-Sep	1	1	2	1	1	1	2	2	1	1	1	1	1	A	4	2	2	2	2	6	3	5	4	3	2.1	6.4
7-Sep	2	2	2	1	1	2	3	2	1	2	2	2	A	8	4	3	3	3	4	5	21	3	7	3	3.8	20.7
8-Sep	7	7	7	4	4	3	2	2	2	2	2	A	4	2	2	2	1	1	1	1	1	1	1	1	2.5	7.2
9-Sep	0	1	0	1	0	1	1	1	1	1	A	4	1	1	1	1	1	1	1	1	1	1	1	1	0.9	3.7
10-Sep	1	1	1	1	1	1	1	1	1	A	4	2	1	1	1	2	1	1	1	1	1	3	2	2	1.2	3.6
11-Sep	2	2	2	1	2	2	1	1	A	6	4	2	1	1	1	1	1	1	2	1	1	0	1	0	1.6	5.5
12-Sep	1	1	0	0	1	1	1	A	3	1	1	1	0	1	0	1	2	1	1	0	0	0	0	0	0.8	2.8
13-Sep	0	0	0	0	0	0	A	5	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0.5	4.9
14-Sep	1	1	7	1	1	A	3	3	1	0	1	0	0	0	0	0	0	0	1	0	0	1	3	3	1.3	7.5
15-Sep	3	2	10	4	A	4	2	3	2	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1.8	10.3
16-Sep	1	1	1	A	3	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1	0	1	0.8	2.8	
17-Sep	1	3	A	3	2	2	1	1	1	1	1	1	1	1	1	1	1	2	3	3	3	4	5	9	2.1	8.5
18-Sep	4	A	6	4	3	3	3	3	3	4	3	3	2	1	1	1	1	1	1	1	14	3	1	2	3.0	14.1
19-Sep	A	5	2	2	2	2	3	2	1	C	C	C	C	C	3	1	1	3	6	5	5	7	6	A	--	7.3
20-Sep	5	1	1	1	2	5	2	1	1	0	2	1	0	0	0	0	1	0	1	6	2	2	A	6	1.8	6.2
21-Sep	2	2	1	2	1	2	2	2	2	2	1	1	1	1	0	0	0	1	1	1	0	A	15	3	1.8	14.9
22-Sep	3	12	6	2	2	2	2	1	4	4	1	0	0	1	1	0	0	1	1	1	A	3	2	2	2.2	11.5
23-Sep	2	2	2	2	2	3	3	3	2	1	1	1	3	2	2	2	6	4	12	A	7	2	1	1	2.8	12.3
24-Sep	1	2	1	6	2	4	3	9	1	1	1	1	1	1	1	1	3	6	A	30	8	3	4	5	4.1	30.4
25-Sep	4	2	2	2	2	2	3	17	2	2	4	2	2	1	3	5	4	A	3	3	8	2	5	2	3.6	17.4
26-Sep	3	4	4	6	14	14	14	17	10	2	1	1	1	1	1	1	A	3	9	6	9	10	17	2	6.6	17.3
27-Sep	5	3	9	6	11	4	3	6	5	2	1	1	1	1	2	A	2	6	9	1	2	2	11	5	4.3	11.0
28-Sep	5	9	9	3	2	2	3	3	2	2	1	1	0	1	A	2	1	3	4	1	4	5	4	3	3.0	9.1
29-Sep	4	2	1	2	5	8	7	2	2	2	1	1	1	A	2	2	1	1	1	2	1	1	5	3	2.6	8.2
30-Sep	5	1	1	7	5	5	5	2	1	1	1	1	A	3	1	1	2	3	6	7	7	12	13	10	4.4	13.4
2.5 2.5 3.0 2.6 2.8 2.8 2.8 3.4 2.1 1.8 1.5 1.3 1.2 1.5 1.4 1.4 1.6 1.9 3.0 3.5 3.9 3.7 4.4 2.7																									Diurnal Average	
7.2 11.5 10.3 6.6 13.6 13.5 14.0 17.4 10.0 5.5 3.8 3.7 4.0 10.3 4.3 5.5 6.1 5.8 12.3 30.4 20.7 19.9 17.3 10.0																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

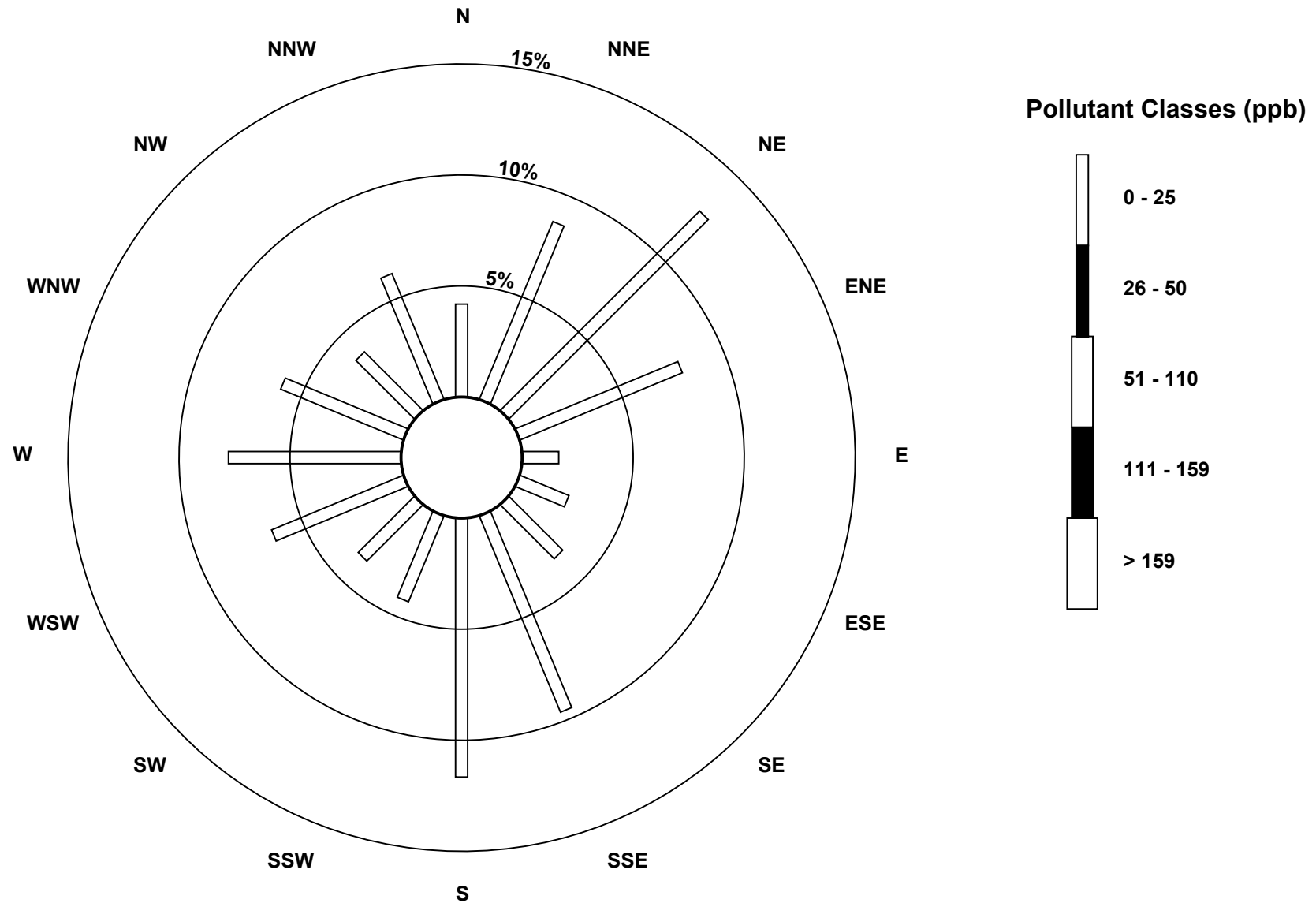
Hourly Maximums

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



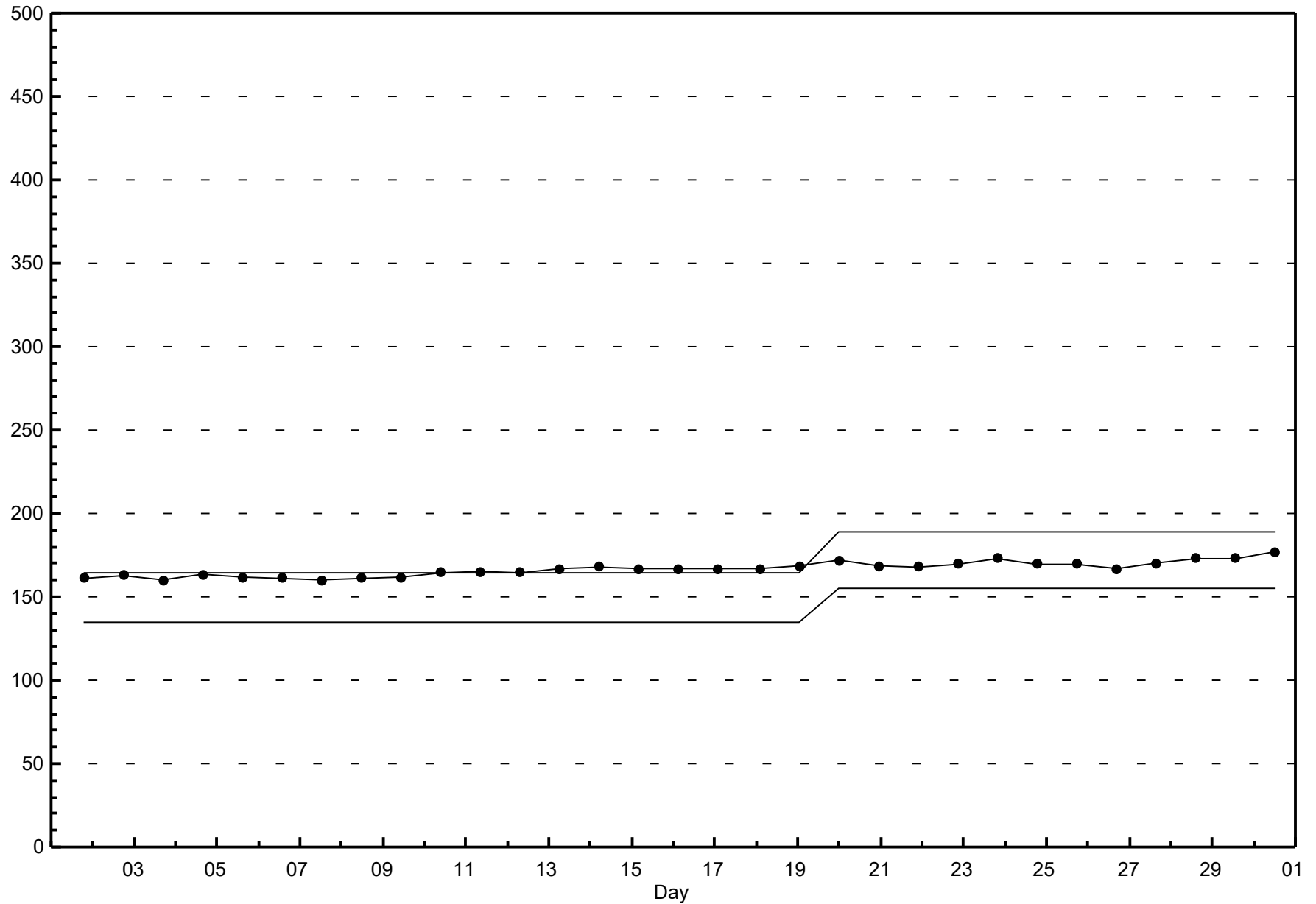
Pollutant Rose

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



Span Responses

Nitrogen Dioxide (NO₂)
Portable Rycroft - September 2018



Hourly Averages

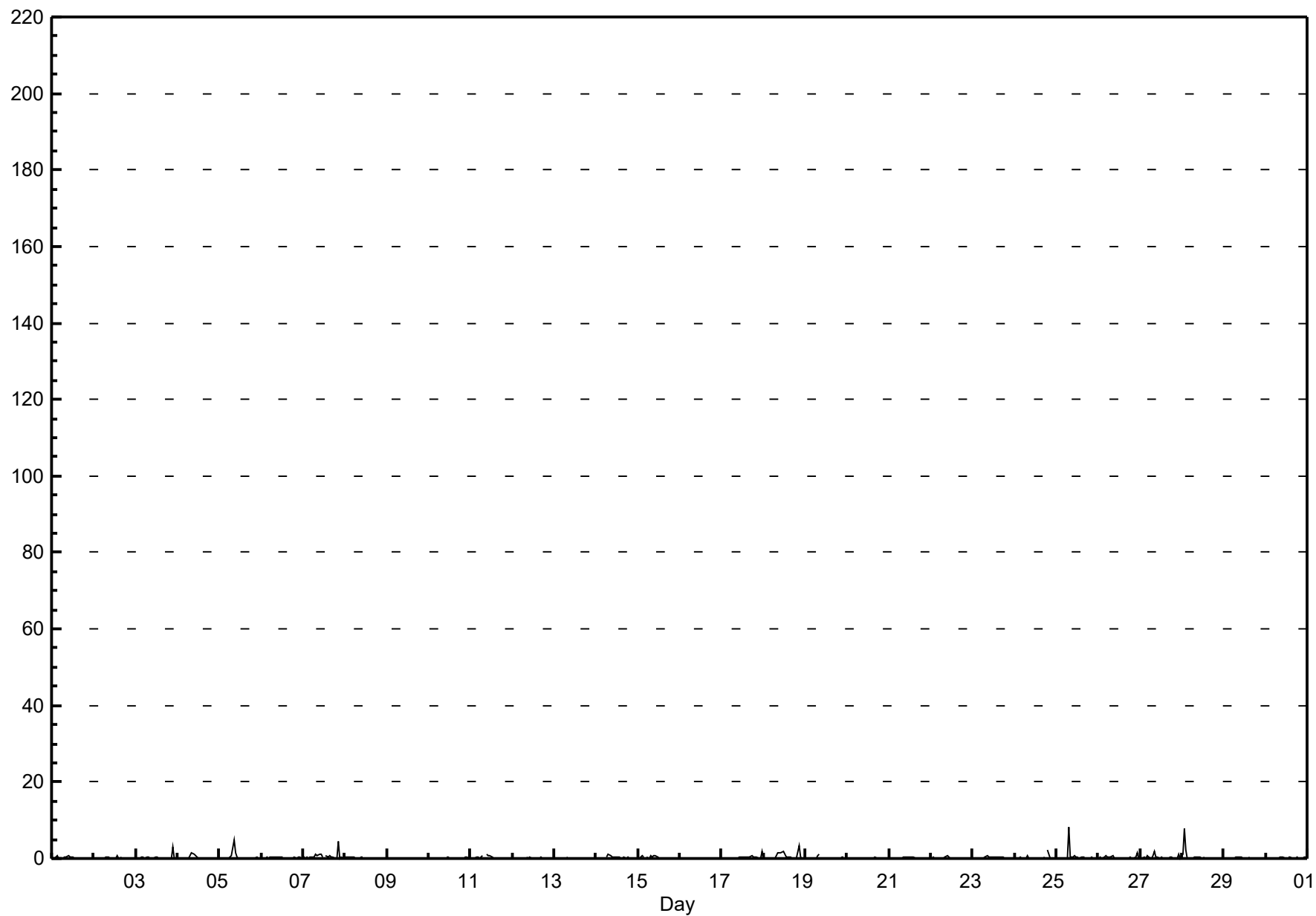
Nitrogen Oxide (NO) - ppb

Portable Rycroft - September 2018

Maximum Value: 8.3 ppb on Sep 25 08:00																		Maximum Daily Average: 0.6 ppb on Sep 28										Hours in Service: 720	
Minimum Value: 0 ppb on Sep 4 04:00																		Minimum Daily Average: 0.1 ppb on Sep 16										Hours of Data: 684	
Maximum Diurnal Average: 0.7 ppb at hour 8																		Minimum Diurnal Average: 0.1 ppb at hour 6										Hours of Missing Data: 36	
Monthly Average: 0.25 ppb																		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.5 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-Sep	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.8			
2-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	A	0	0	0	0	0	0	0.1	0.6			
3-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	3	0	0	0.3	3.1			
4-Sep	0	0	0	0	0	0	0	1	2	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	1.7			
5-Sep	0	0	0	0	0	0	0	1	5	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.4	5.0			
6-Sep	0	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			
7-Sep	0	0	0	0	0	0	1	1	1	1	1	0	A	1	1	1	0	0	0	0	4	0	0	0	0.6	4.3			
8-Sep	1	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6			
9-Sep	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2			
10-Sep	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4			
11-Sep	0	0	0	0	0	0	0	1	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.2			
12-Sep	0	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			
13-Sep	0	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			
14-Sep	0	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1			
15-Sep	0	0	1	0	A	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8			
16-Sep	0	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			
17-Sep	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	0	0.3	1.8			
18-Sep	0	A	0	0	0	0	0	1	1	2	2	2	1	0	0	0	0	0	0	0	3	0	0	0	0.6	3.3			
19-Sep	A	0	0	0	0	0	0	1	1	C	C	C	C	C	0	0	0	0	0	0	0	0	0	A	--	1.1			
20-Sep	0	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			
21-Sep	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.6			
22-Sep	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.9			
23-Sep	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	0.8			
24-Sep	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	2	0	0	0	0	0.2	2.1			
25-Sep	0	0	0	0	0	0	0	8	0	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0.5	8.3			
26-Sep	0	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	1	0	0.3	1.4			
27-Sep	0	0	0	0	1	0	0	1	2	0	0	0	0	0	0	A	0	1	0	0	0	0	1	0	0.3	1.8			
28-Sep	1	8	2	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.6	7.7			
29-Sep	0	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			
30-Sep	0	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	0.5			
0.1		0.4	0.2	0.1	0.1	0.1	0.1	0.7	0.6	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.4	0.2	0.2	0.1	Diurnal Average				
1.2		7.7	2.2	0.8	0.7	0.3	0.5	8.3	5.0	1.6	1.5	1.7	1.1	0.8	0.5	0.6	0.5	0.7	0.5	2.1	4.3	3.1	1.4	1.8	Diurnal Maximum				
C - Calibration		A - Automated Daily Zero Span																											

Hourly Averages

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



Hourly Maximums

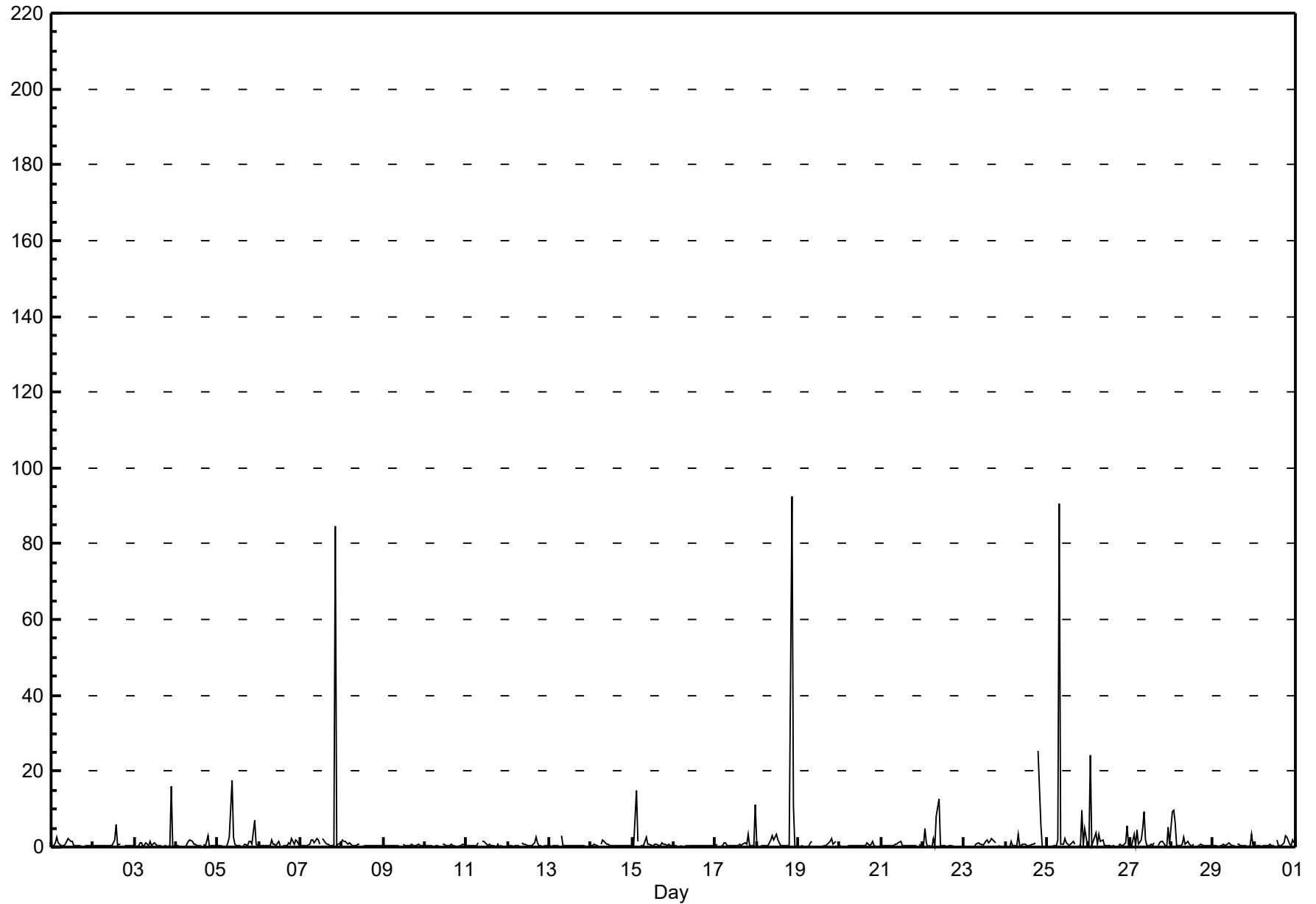
Nitrogen Oxide (NO) - ppb

Portable Rycroft - September 2018

Maximum Value: 92.5 ppb on Sep 18 21:00																				Maximum Daily Average: 5.3 ppb on Sep 18					Hours in Service: 720	
Minimum Value: 0 ppb on Sep 11 20:00																				Minimum Daily Average: 0.3 ppb on Sep 16					Hours of Data: 684	
Maximum Diurnal Average: 7.0 ppb at hour 21																				Minimum Diurnal Average: 0.4 ppb at hour 6					Hours of Missing Data: 36	
Monthly Average: 1.32 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.2 Median = 0.4 Q ₃ = 0.8 P ₉₀ = 1.7 P ₉₉ = 15.1					Hours of Calibration: 36	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	0	0	1	2	1	0	0	0	1	2	2	2	1	0	0	0	0	0	A	0	0	0	0	0	0.8	2.5
2-Sep	0	0	0	0	0	0	0	0	0	0	0	0	2	6	0	1	1	A	0	0	0	0	0	0	0.7	5.8
3-Sep	0	0	0	1	1	0	1	1	0	1	0	1	1	0	0	0	A	0	0	0	0	16	0	0	1.2	15.9
4-Sep	0	0	0	0	0	0	1	1	2	2	1	1	0	0	1	A	1	0	3	0	0	0	0	0	0.6	2.9
5-Sep	0	0	0	0	0	0	1	2	17	2	1	0	0	0	A	0	1	0	1	2	1	7	1	0	1.7	17.4
6-Sep	0	0	0	0	0	0	0	2	1	1	0	1	0	A	0	0	0	1	1	2	1	2	2	1	0.8	2.4
7-Sep	0	0	0	0	0	1	2	2	1	2	2	1	A	2	1	1	1	0	0	0	85	0	1	1	4.6	84.7
8-Sep	2	1	1	1	1	1	0	0	0	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0.6	2.0
9-Sep	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	1	0	0	0	1	0	0	0	0.3	0.7
10-Sep	0	0	0	0	0	0	0	0	0	A	1	1	0	0	0	1	0	0	0	0	0	0	1	0	0.4	0.9
11-Sep	0	0	0	0	0	0	1	1	A	2	2	1	0	1	0	0	0	0	1	0	0	0	0	0	0.5	1.6
12-Sep	0	0	0	0	0	0	0	A	1	1	1	0	0	0	0	1	3	1	1	0	0	0	0	0	0.5	2.8
13-Sep	0	0	0	0	0	0	A	3	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.4	2.9
14-Sep	0	0	1	0	0	A	1	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.9
15-Sep	0	0	15	1	A	1	0	1	2	1	1	1	0	1	1	0	0	1	1	1	0	1	0	0	1.3	14.9
16-Sep	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.3	0.5
17-Sep	0	1	A	0	0	1	1	0	0	0	1	1	1	1	1	1	1	1	1	3	1	0	1	11	1.2	11.4
18-Sep	1	A	0	0	0	0	0	1	2	3	2	3	2	1	0	0	0	0	0	0	92	11	0	0	5.3	92.5
19-Sep	A	0	0	0	0	0	0	1	1	C	C	C	C	C	0	0	0	1	1	2	1	1	2	A	--	2.2
20-Sep	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	1	0	0	A	1	0.4	1.4
21-Sep	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	A	1	0	0.4	1.3
22-Sep	0	5	1	0	0	0	2	0	8	13	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1.4	12.6
23-Sep	0	0	0	0	0	0	0	1	1	1	1	1	2	2	1	1	2	1	1	A	0	0	0	0	0.7	2.3
24-Sep	0	0	0	2	0	0	0	3	0	0	1	1	0	1	0	1	1	1	A	25	6	0	0	0	1.9	25.3
25-Sep	0	0	0	0	0	0	2	91	1	1	2	1	1	0	1	1	1	A	0	0	10	0	5	0	5.2	90.7
26-Sep	0	24	0	3	4	1	3	2	2	0	0	0	0	0	0	0	A	0	1	0	0	1	5	0	2.1	24.2
27-Sep	0	0	4	0	4	1	2	5	9	2	1	1	1	0	1	A	0	1	1	1	0	0	5	1	1.8	9.3
28-Sep	9	10	6	0	0	0	1	3	1	1	1	0	0	1	A	0	0	1	0	0	0	0	0	0	1.6	9.7
29-Sep	0	0	0	0	0	0	1	1	1	1	1	0	0	A	1	1	0	0	0	0	0	0	4	0	0.6	3.5
30-Sep	1	0	0	0	0	0	0	0	1	1	0	0	A	2	0	0	1	1	3	3	1	0	2	1	0.8	2.8
0.7 1.6 1.2 0.5 0.6 0.4 0.8 4.3 2.0 1.5 0.8 0.7 0.6 0.8 0.5 0.5 0.7 0.6 0.7 1.6 7.0 1.5 1.1 0.7																									Diurnal Average	
9.3 24.2 14.9 2.5 4.3 1.2 3.4 90.7 17.4 12.6 2.3 3.4 1.9 5.8 1.2 1.4 2.8 1.5 2.9 25.3 92.5 15.9 5.4 11.4																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

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



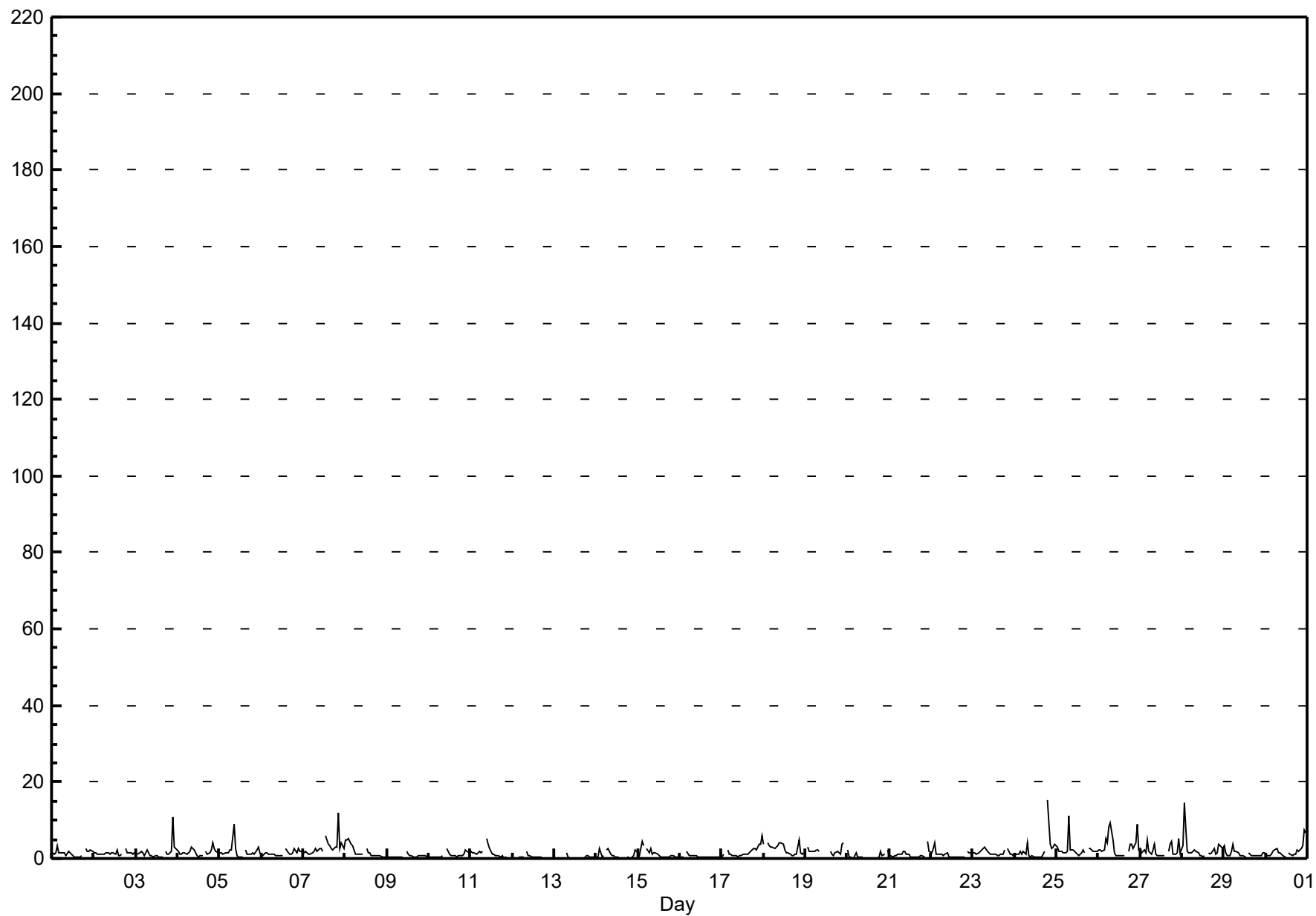
Hourly Averages

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

Maximum Value: 15.4 ppb on Sep 24 20:00																				Maximum Daily Average: 3.2 ppb on Sep 26										Hours in Service: 720									
Minimum Value: 0 ppb on Sep 13 01:00																				Minimum Daily Average: 0.2 ppb on Sep 13										Hours of Data: 684									
Maximum Diurnal Average: 2.5 ppb at hour 23																				Minimum Diurnal Average: 0.8 ppb at hour 13										Hours of Missing Data: 36									
Monthly Average: 1.52 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.3 Q ₁ = 0.6 Median = 1.2 Q ₃ = 1.9 P ₉₀ = 2.9 P ₉₉ = 8.9										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-Sep	2	1	2	3	1	1	1	1	1	2	1	1	1	0	0	0	0	1	A	3	2	2	2	2	1.4	3.4													
2-Sep	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	A	3	2	2	1	1	2	1.4	2.5													
3-Sep	2	1	1	2	2	1	2	2	1	1	1	1	1	0	0	0	A	2	1	1	2	11	3	3	1.7	11.0													
4-Sep	2	1	1	1	1	1	1	2	3	2	2	1	1	1	1	A	2	1	2	2	4	3	2	2	1.7	4.1													
5-Sep	2	1	1	1	2	2	2	2	9	3	1	1	0	0	A	2	1	1	1	1	1	2	3	1	1.8	9.1													
6-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	A	3	2	1	1	1	2	1	3	2	2	1.4	2.6													
7-Sep	1	2	1	1	1	2	2	3	2	2	3	2	A	6	4	3	3	2	3	3	12	2	4	3	2.9	11.9													
8-Sep	5	5	5	4	3	2	1	1	1	1	1	A	3	2	1	1	1	1	1	1	1	0	0	0	1.8	5.3													
9-Sep	0	0	0	0	0	0	0	0	0	1	0	A	2	1	1	1	0	0	1	1	1	1	1	0	0.6	2.0													
10-Sep	0	0	0	0	0	0	0	0	1	A	3	2	1	1	1	1	1	1	1	1	1	2	2	2	0.9	2.8													
11-Sep	2	2	2	1	2	2	1	2	A	5	4	3	1	1	1	1	1	0	1	0	0	0	0	0	1.3	5.1													
12-Sep	0	0	0	0	0	0	1	A	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.8													
13-Sep	0	0	0	0	0	0	A	2	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0.2	1.5													
14-Sep	0	0	2	0	1	A	2	3	1	1	1	0	0	0	0	0	0	0	0	0	0	1	2	2	0.8	2.7													
15-Sep	2	1	5	3	A	3	2	3	1	1	2	1	1	0	0	0	0	0	0	1	1	0	0	0	1.2	4.6													
16-Sep	1	0	0	A	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.7													
17-Sep	0	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	3	2	4	4	6	1.7	6.1													
18-Sep	4	A	4	3	3	3	3	3	3	4	4	4	2	1	1	1	1	1	1	1	5	1	1	1	2.5	4.8													
19-Sep	A	3	2	2	2	2	2	2	2	C	C	C	C	C	2	1	1	2	2	1	1	4	4	A	--	4.2													
20-Sep	2	1	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	1	A	2	0.6	2.4													
21-Sep	1	1	0	1	1	1	1	1	2	2	1	1	1	0	0	0	0	0	1	1	0	A	4	2	1.0	4.4													
22-Sep	1	2	4	1	1	1	1	1	1	2	1	0	0	0	0	0	0	0	0	0	A	2	1	1	1.1	4.0													
23-Sep	1	1	1	1	2	2	3	3	2	1	1	1	1	1	1	1	1	1	2	A	3	1	1	1	1.5	2.8													
24-Sep	1	1	1	2	1	2	1	4	1	1	1	0	0	0	0	0	1	2	A	15	4	3	3	4	2.1	15.4													
25-Sep	3	2	2	2	2	2	2	11	2	2	2	1	1	1	1	2	1	A	2	2	2	2	2	2	2.3	11.2													
26-Sep	2	2	2	2	5	4	8	9	5	1	1	1	1	1	1	1	A	2	4	4	3	4	9	2	3.2	9.5													
27-Sep	3	2	2	1	5	2	1	2	4	1	1	1	1	1	1	A	2	4	5	1	1	2	5	2	2.1	5.3													
28-Sep	3	14	8	2	1	1	2	2	2	2	1	1	0	1	A	2	1	1	3	1	1	4	3	3	2.6	14.5													
29-Sep	3	1	1	1	2	4	2	2	2	1	1	1	1	A	1	1	1	1	1	1	1	1	2	1	1.3	3.8													
30-Sep	1	1	1	1	2	2	2	2	1	1	1	1	A	2	1	1	1	1	2	2	3	3	8	7	2.0	7.5													
1.6 1.8 1.8 1.5 1.6 1.6 1.7 2.3 1.8 1.4 1.2 1.0 0.8 0.9 0.9 0.8 0.8 1.0 1.5 1.9 1.9 2.1 2.5 1.8																									Diurnal Average														
4.8 14.5 7.8 3.6 5.3 4.0 8.3 11.2 9.1 5.1 4.0 3.6 2.5 6.0 3.6 3.2 2.5 3.8 4.5 15.4 11.9 11.0 8.9 6.7																									Diurnal Maximum														
C - Calibration																									A - Automated Daily Zero Span														

Hourly Averages

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



Hourly Maximums

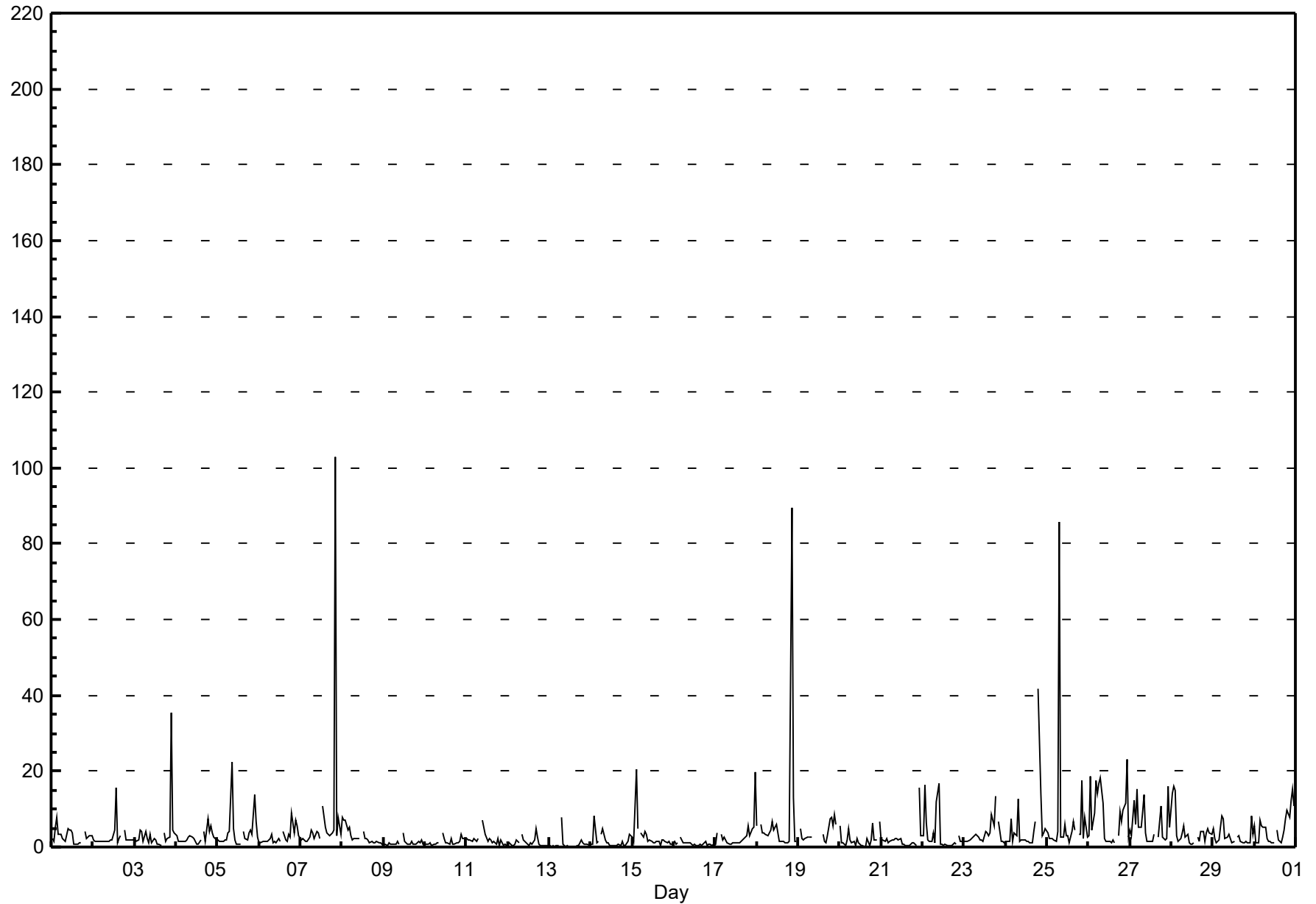
Oxides of Nitrogen (NO_x) - ppb

Portable Rycroft - September 2018

Maximum Value: 102.9 ppb on Sep 7 21:00																				Maximum Daily Average: 8.3 ppb on Sep 26					Hours in Service: 720	
Minimum Value: 0 ppb on Sep 13 13:00																				Minimum Daily Average: 0.7 ppb on Sep 13					Hours of Data: 684	
Maximum Diurnal Average: 10.1 ppb at hour 21																				Minimum Diurnal Average: 1.6 ppb at hour 13					Hours of Missing Data: 36	
Monthly Average: 3.52 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.6 Q ₁ = 1.2 Median = 1.8 Q ₃ = 3.6 P ₉₀ = 6.8 P ₉₉ = 20.9					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-Sep	2	1	5	8	3	4	2	2	1	5	4	4	4	1	1	1	1	1	A	4	2	3	3	3	2.9	7.7
2-Sep	2	2	1	1	2	1	2	2	2	2	2	2	5	16	1	2	3	A	4	2	2	2	2	2	2.6	15.8
3-Sep	2	1	2	4	4	2	4	2	1	3	1	2	2	1	1	1	A	4	2	2	3	35	4	4	3.8	35.3
4-Sep	3	2	1	2	2	1	2	2	3	3	2	1	1	1	2	A	4	1	7	4	6	4	3	2	2.5	7.4
5-Sep	2	2	1	2	2	2	4	4	22	5	2	1	1	1	A	4	2	2	4	4	3	14	7	2	4.0	22.4
6-Sep	1	1	2	2	1	1	2	3	1	1	1	2	2	A	4	2	2	3	3	9	4	7	5	3	2.7	8.9
7-Sep	2	2	2	1	1	3	5	4	2	4	4	2	A	11	5	4	4	3	4	5	103	3	8	3	8.0	102.9
8-Sep	8	7	7	4	5	3	2	2	2	2	2	A	4	2	2	2	1	2	1	1	1	1	1	1	2.9	7.9
9-Sep	0	1	0	1	1	1	1	1	1	1	1	A	4	2	1	1	1	1	1	1	1	1	2	1	1.1	3.9
10-Sep	1	1	1	1	0	1	1	1	1	A	4	2	1	1	1	2	1	1	1	1	1	4	2	2	1.4	3.8
11-Sep	2	2	2	1	2	2	1	2	A	7	5	3	2	2	2	1	1	1	2	1	2	0	1	0	2.0	7.0
12-Sep	1	1	0	0	1	2	1	A	3	2	1	1	1	1	1	2	5	3	1	0	0	0	0	0	1.2	5.0
13-Sep	0	0	0	0	0	0	A	8	1	0	0	0	0	0	0	0	0	1	2	1	1	1	1	1	0.7	7.9
14-Sep	1	1	8	1	1	A	3	5	2	1	1	1	0	0	0	0	1	0	2	0	0	1	3	3	1.6	8.1
15-Sep	3	2	21	5	A	4	3	4	3	2	2	2	1	1	1	1	0	2	2	2	1	1	1	1	2.7	20.6
16-Sep	2	1	1	A	3	1	1	1	1	1	1	1	1	1	0	1	0	1	1	0	1	1	0	1	0.9	2.8
17-Sep	1	4	A	3	2	3	2	1	1	1	1	1	1	1	1	1	2	3	3	6	3	5	5	20	3.0	19.9
18-Sep	6	A	6	4	4	3	3	4	4	7	5	6	4	1	2	2	1	1	1	1	89	13	2	2	7.4	89.4
19-Sep	A	5	2	2	2	2	3	2	3	C	C	C	C	C	3	1	1	3	8	8	6	8	6	A	--	8.5
20-Sep	6	1	1	0	2	5	2	1	2	0	2	1	0	1	0	0	2	0	2	6	2	2	A	7	2.0	6.6
21-Sep	2	2	1	2	1	2	2	2	2	2	2	2	1	1	0	1	0	1	1	1	0	A	16	3	2.1	15.7
22-Sep	3	16	7	2	2	2	4	1	12	17	1	1	0	1	1	0	0	1	1	1	A	3	2	2	3.4	16.7
23-Sep	2	1	1	2	2	3	3	3	2	2	2	2	4	4	3	4	9	6	13	A	7	1	1	1	3.4	13.5
24-Sep	1	2	1	8	2	4	3	13	2	2	2	2	1	1	1	1	4	7	A	42	14	3	4	5	5.4	41.9
25-Sep	4	2	2	2	2	2	4	86	3	3	6	3	3	1	4	7	5	A	3	3	17	2	8	2	7.6	85.7
26-Sep	3	19	4	9	18	14	17	18	12	2	1	2	1	1	2	1	A	3	9	7	10	11	23	3	8.3	23.0
27-Sep	5	3	12	6	15	5	5	9	14	4	1	1	2	1	3	A	2	7	11	3	2	2	16	5	5.9	16.1
28-Sep	14	16	15	3	2	2	4	6	3	3	1	1	1	1	A	3	1	4	4	1	4	5	4	3	4.4	16.2
29-Sep	5	2	1	2	5	8	7	2	3	3	2	1	1	A	3	3	2	1	1	2	1	1	8	3	3.0	8.3
30-Sep	5	1	1	7	5	5	5	2	2	2	1	1	A	4	2	1	2	4	7	10	8	12	15	11	5.0	15.1
3.0 3.5 3.8 3.0 3.2 3.0 3.3 6.7 3.8 3.1 2.2 1.8 1.6 2.1 1.7 1.7 2.1 2.3 3.6 4.4 10.1 5.1 5.3 3.3																									Diurnal Average	
14.2 18.7 20.6 9.1 17.6 14.2 16.8 85.7 22.4 16.7 5.9 6.0 4.6 15.8 5.2 6.8 8.5 6.8 13.5 41.9 102.9 35.3 23.0 19.9																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

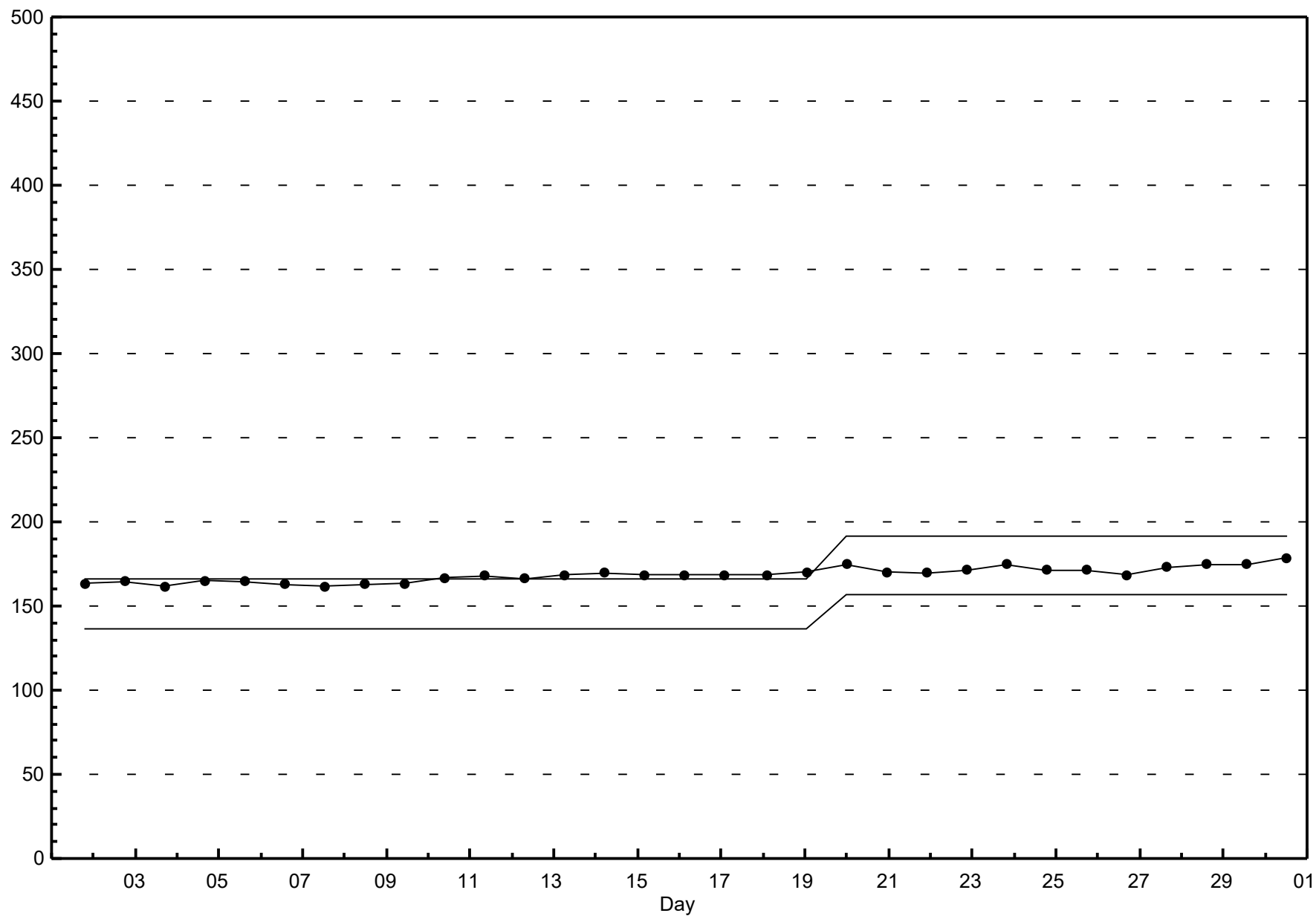
Hourly Maximums

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



Span Responses

Oxides of Nitrogen (NO_x)
Portable Rycroft - September 2018



Hourly Averages

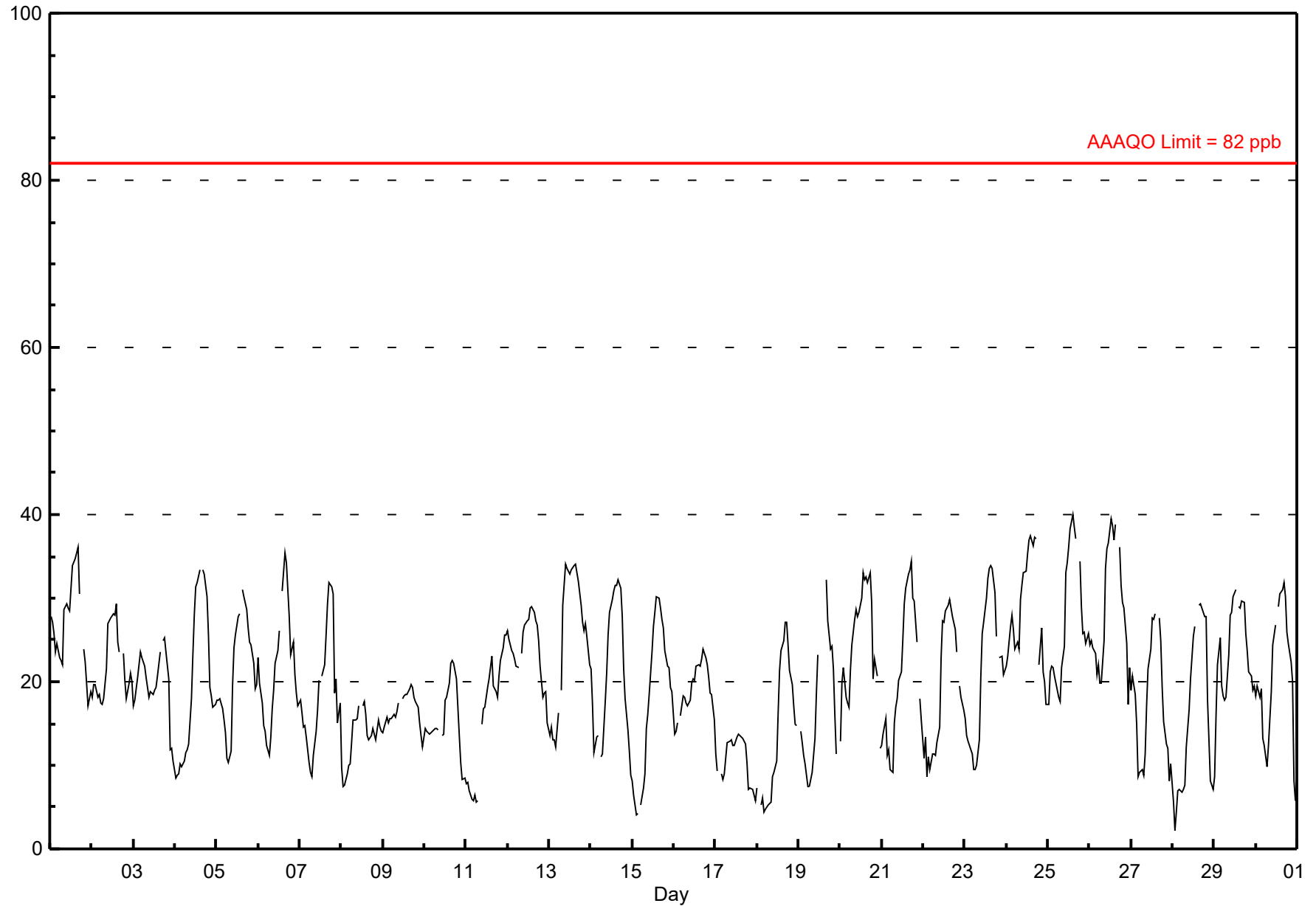
Ozone (O₃) - ppb

Portable Rycroft - September 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 39.9 ppb on Sep 25 15:00 Maximum Daily Average: 28.4 ppb on Sep 26																								Hours in Service: 720 Hours of Data: 685 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0		
Minimum Value: 2 ppb on Sep 28 02:00 Minimum Daily Average: 10.6 ppb on Sep 17 Maximum Diurnal Average: 28.5 ppb at hour 17 Minimum Diurnal Average: 13.5 ppb at hour 7 Monthly Average: 20.21 ppb Percentiles: P ₁ = 5.3 P ₁₀ = 9.4 Q ₁ = 14.0 Median = 19.8 Q ₃ = 26.1 P ₉₀ = 31.1 P ₉₉ = 37.3																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Sep	28	27	26	24	25	23	22	22	29	29	29	29	31	34	35	36	36	30	A	24	22	20	17	19	26.7	36.1
2-Sep	18	20	20	18	18	18	17	18	22	27	27	28	28	29	25	23	A	23	20	18	20	21	20	20	22.0	29.4
3-Sep	17	18	21	22	24	23	22	21	19	18	19	18	19	19	21	24	A	25	25	24	20	12	12	11	19.7	25.3
4-Sep	8	9	9	10	10	10	11	12	12	18	23	28	31	32	33	A	33	33	30	26	19	18	17	17	19.7	33.4
5-Sep	18	18	18	17	15	14	11	10	12	19	24	26	28	28	A	31	30	29	26	25	24	22	19	20	21.0	31.0
6-Sep	23	20	17	15	14	12	11	13	17	19	22	24	26	A	31	35	34	31	28	23	25	21	19	17	21.6	35.5
7-Sep	18	16	15	15	13	10	9	9	11	14	17	20	A	21	22	26	29	32	31	30	19	20	15	18	18.7	31.9
8-Sep	10	7	8	9	10	10	13	15	15	16	17	A	17	18	16	14	13	13	14	14	13	15	15	14	13.3	17.6
9-Sep	14	15	16	15	16	16	16	16	16	17	A	18	18	18	19	19	20	19	18	18	17	15	14	12	16.6	19.7
10-Sep	14	14	14	14	14	14	14	14	14	A	13	14	18	18	20	22	22	22	20	17	14	10	8	9	15.5	22.5
11-Sep	8	8	7	6	6	6	6	6	A	15	17	17	19	20	22	23	19	19	18	21	22	24	26	26	15.7	25.6
12-Sep	26	25	24	23	23	22	22	A	23	26	27	27	27	29	29	28	27	27	25	22	18	19	19	15	24.0	29.0
13-Sep	13	15	13	13	12	16	A	19	29	34	34	33	33	33	34	34	33	32	29	27	26	27	25	22	25.6	34.1
14-Sep	22	17	11	13	14	A	11	11	18	21	26	28	30	31	32	32	32	31	28	22	18	14	12	9	20.9	32.2
15-Sep	8	6	4	4	A	5	7	9	14	16	18	23	27	28	30	30	29	28	26	24	22	22	19	19	18.3	30.2
16-Sep	14	14	15	A	16	18	18	17	17	18	20	20	20	22	22	22	23	24	23	22	20	19	19	15	19.1	24.0
17-Sep	11	9	A	9	8	9	11	13	13	13	12	12	13	14	14	13	13	13	10	7	7	7	6	6	10.6	13.7
18-Sep	7	A	5	6	4	5	5	5	6	9	9	11	16	21	24	25	27	27	24	21	20	17	15	15	14.1	27.2
19-Sep	A	14	13	11	10	7	7	8	9	13	19	23	C	C	C	C	32	27	24	24	21	16	11	A	16.2	32.2
20-Sep	13	20	22	18	18	17	21	24	28	29	28	28	30	33	32	33	32	33	30	20	23	21	A	12	24.5	33.1
21-Sep	12	14	16	11	12	10	9	15	17	18	20	21	25	29	31	33	33	34	30	30	25	A	18	15	20.8	34.4
22-Sep	11	13	9	11	9	11	11	11	13	15	23	27	27	28	29	30	29	28	26	24	A	19	18	17	19.1	29.8
23-Sep	16	14	13	12	11	10	9	10	13	20	26	27	30	32	34	34	33	31	25	A	23	23	21	21	21.2	33.9
24-Sep	22	23	27	28	26	24	25	24	30	31	33	33	35	37	37	36	37	37	A	22	26	21	20	17	28.4	37.5
25-Sep	17	21	22	22	21	19	18	18	22	24	33	34	36	38	40	38	37	A	34	29	26	26	25	26	27.2	39.9
26-Sep	24	25	24	23	21	22	20	20	25	34	36	37	39	39	37	39	A	36	32	29	29	25	17	22	28.4	39.4
27-Sep	19	21	18	15	9	9	10	9	11	17	22	24	28	27	28	A	28	25	19	15	13	12	8	10	17.2	28.2
28-Sep	6	2	4	7	7	7	7	8	12	17	20	23	25	27	A	29	29	29	28	28	18	13	8	7	15.7	29.4
29-Sep	9	16	22	25	20	18	18	18	23	28	28	30	31	A	29	29	30	30	26	24	21	21	19	19	23.2	31.1
30-Sep	18	20	18	19	13	12	10	12	16	19	24	27	A	29	31	31	32	30	26	25	22	20	8	6	20.3	31.9
15.3 15.9 15.5 15.0 14.4 13.7 13.5 14.1 17.4 20.5 23.0 24.5 26.3 27.2 28.1 28.5 28.5 27.7 25.0 22.6 20.4 18.6 16.2 15.7																								Diurnal Average		
27.7 27.2 26.6 27.9 26.2 23.9 24.7 24.3 29.8 34.0 35.9 36.6 39.4 38.6 39.9 38.9 37.3 37.1 34.4 30.4 28.7 27.0 25.6 25.8																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na																										

Hourly Averages

Ozone (O₃) - ppb
Portable Rycroft - September 2018



Hourly Maximums

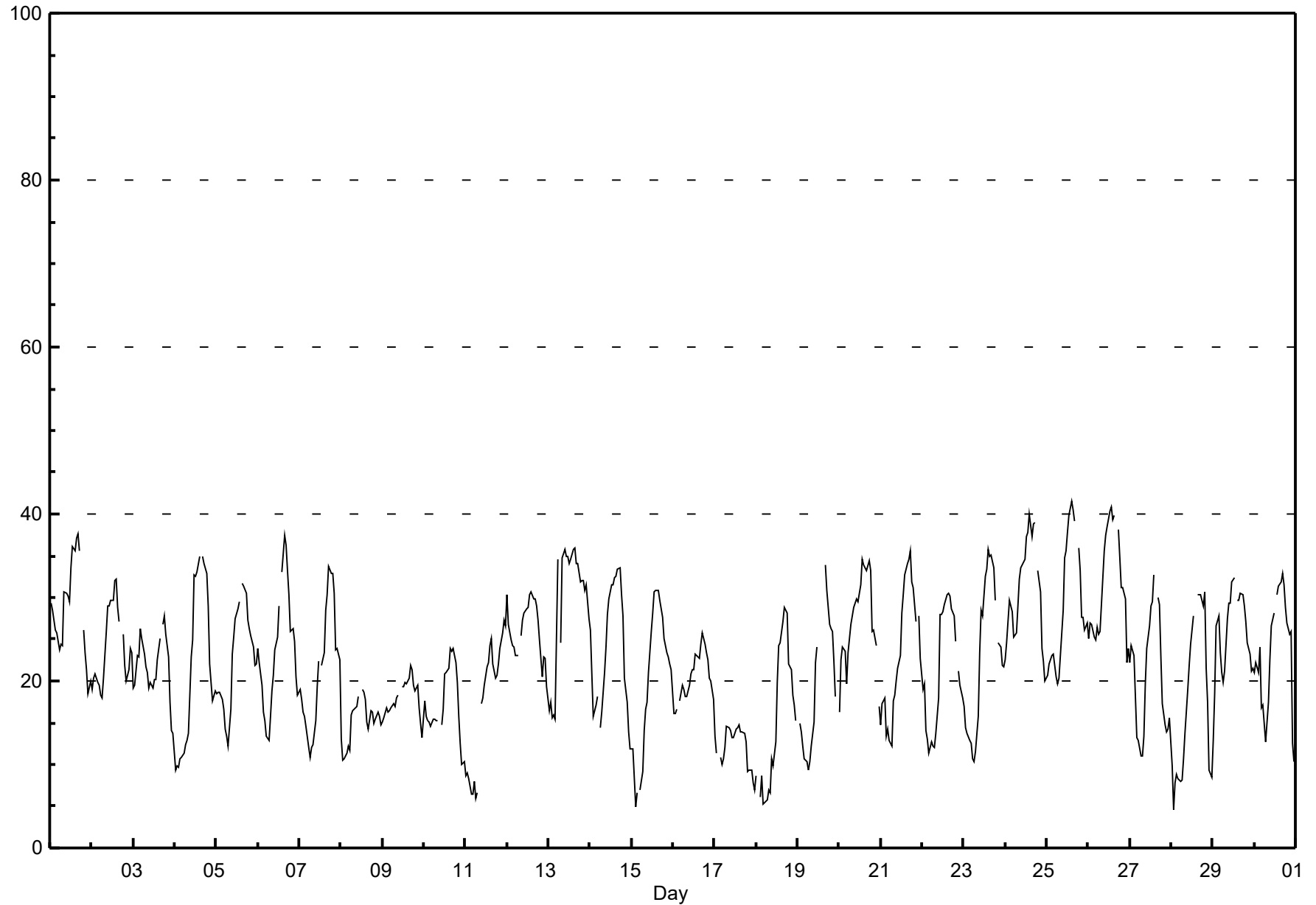
Ozone (O₃) - ppb

Portable Rycroft - September 2018

Maximum Value: 41.5 ppb on Sep 25 15:00																				Maximum Daily Average: 31.4 ppb on Sep 26					Hours in Service: 720	
Minimum Value: 5 ppb on Sep 28 02:00																				Minimum Daily Average: 12.1 ppb on Sep 17					Hours of Data: 685	
Maximum Diurnal Average: 30.1 ppb at hour 17																				Minimum Diurnal Average: 15.4 ppb at hour 7					Hours of Missing Data: 35	
Monthly Average: 22.38 ppb																				Percentiles: P ₁ = 6.4 P ₁₀ = 12.0 Q ₁ = 16.3 Median = 22.3 Q ₃ = 28.7 P ₉₀ = 33.2 P ₉₉ = 39.4					Hours of Calibration: 35	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	29	28	27	26	26	24	24	24	31	30	30	30	33	36	36	37	38	36	A	26	23	21	18	20	28.5	37.7
2-Sep	19	20	21	20	19	18	18	20	26	29	29	30	30	32	32	29	27	A	26	22	20	21	24	23	24.2	32.3
3-Sep	19	19	23	23	26	25	23	22	21	19	20	19	20	20	23	25	A	27	28	26	23	17	14	14	21.6	27.9
4-Sep	9	10	10	11	11	11	12	13	14	23	25	33	32	33	35	A	35	34	33	29	22	20	18	19	21.3	34.9
5-Sep	19	19	19	18	17	14	13	12	17	23	25	27	29	29	A	32	31	30	27	26	25	24	22	22	22.7	31.7
6-Sep	24	22	20	16	15	13	13	16	19	21	24	25	29	A	33	37	36	33	30	26	26	25	21	18	23.6	37.5
7-Sep	19	18	16	16	15	12	11	12	12	15	19	22	A	22	23	28	30	34	33	33	31	24	24	23	21.4	33.7
8-Sep	13	10	11	11	12	12	16	16	17	17	18	18	A	19	19	18	15	14	16	15	15	16	16	15	15.2	19.0
9-Sep	15	16	17	16	16	17	17	17	18	18	A	19	19	20	20	20	22	21	20	19	19	17	15	13	17.9	21.9
10-Sep	18	16	15	15	15	15	15	15	15	A	15	17	21	21	21	24	24	24	22	20	16	13	10	10	17.2	24.0
11-Sep	9	9	8	6	7	8	6	7	A	17	18	20	22	22	24	25	22	20	21	22	24	26	27	27	17.2	27.2
12-Sep	30	27	25	24	24	23	23	A	25	27	28	29	29	30	31	30	30	29	27	25	21	23	23	19	26.2	30.6
13-Sep	16	17	16	16	15	35	A	25	35	36	35	35	34	35	36	36	34	34	32	32	32	31	32	27	29.3	35.9
14-Sep	26	21	16	17	18	A	14	16	21	24	28	30	32	32	32	32	33	33	30	28	20	17	14	12	23.8	33.5
15-Sep	12	12	5	7	A	7	9	14	17	17	21	26	28	31	31	31	30	29	28	25	23	23	22	21	20.3	30.9
16-Sep	16	16	17	A	18	19	19	18	18	19	21	21	21	23	23	23	24	26	24	23	22	20	20	18	20.5	25.7
17-Sep	13	11	A	11	10	11	12	15	14	14	13	13	14	14	15	14	14	14	13	9	9	9	8	7	12.1	14.8
18-Sep	9	A	6	9	5	5	6	7	7	11	10	13	20	24	25	27	29	29	28	22	21	18	17	15	15.7	28.8
19-Sep	A	15	14	12	11	10	9	10	12	15	22	24	C	C	C	C	34	31	27	26	26	22	18	A	18.9	33.9
20-Sep	16	23	24	24	20	23	25	27	29	29	30	29	32	35	34	34	33	34	33	26	26	24	A	17	27.2	34.6
21-Sep	15	17	18	13	14	13	12	18	18	20	22	23	28	30	33	34	35	36	32	31	27	A	28	23	23.5	35.7
22-Sep	19	20	14	13	11	13	12	12	14	18	28	28	28	29	30	30	30	29	28	25	A	21	20	18	21.3	30.5
23-Sep	17	14	14	13	12	11	10	12	16	23	28	28	33	33	36	35	35	33	30	A	25	24	22	22	22.9	35.7
24-Sep	23	25	30	29	28	25	26	29	32	34	34	35	37	38	40	37	39	39	A	33	31	24	22	20	30.8	40.0
25-Sep	21	22	22	23	23	21	20	20	23	29	35	36	38	40	42	40	39	A	36	33	28	28	26	27	29.1	41.5
26-Sep	25	27	27	25	25	26	26	26	32	36	37	38	40	41	39	40	A	38	35	31	31	30	22	24	31.4	40.9
27-Sep	22	24	23	18	13	13	11	11	13	20	24	27	29	29	33	A	30	29	23	17	15	14	14	16	20.3	32.8
28-Sep	10	5	8	9	8	8	8	11	14	19	22	24	26	28	A	30	30	30	29	31	21	17	9	8	17.7	30.7
29-Sep	13	18	27	28	23	21	20	21	27	29	29	32	32	A	30	30	30	30	29	27	25	23	21	22	25.6	32.3
30-Sep	21	22	21	24	17	17	13	15	17	23	27	28	A	30	31	32	33	31	29	27	26	26	13	10	23.2	33.0
17.8 18.1 17.6 17.0 16.4 16.3 15.4 16.6 19.8 22.6 24.7 26.2 28.0 28.8 29.8 29.9 30.1 29.7 27.4 25.4 23.3 21.4 19.3 18.3																								Diurnal Average		
30.3 28.4 29.6 29.1 28.3 34.7 25.7 29.0 34.7 35.7 37.4 38.5 40.4 40.9 41.5 40.4 39.2 39.1 35.9 33.2 32.1 30.8 31.6 27.5																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

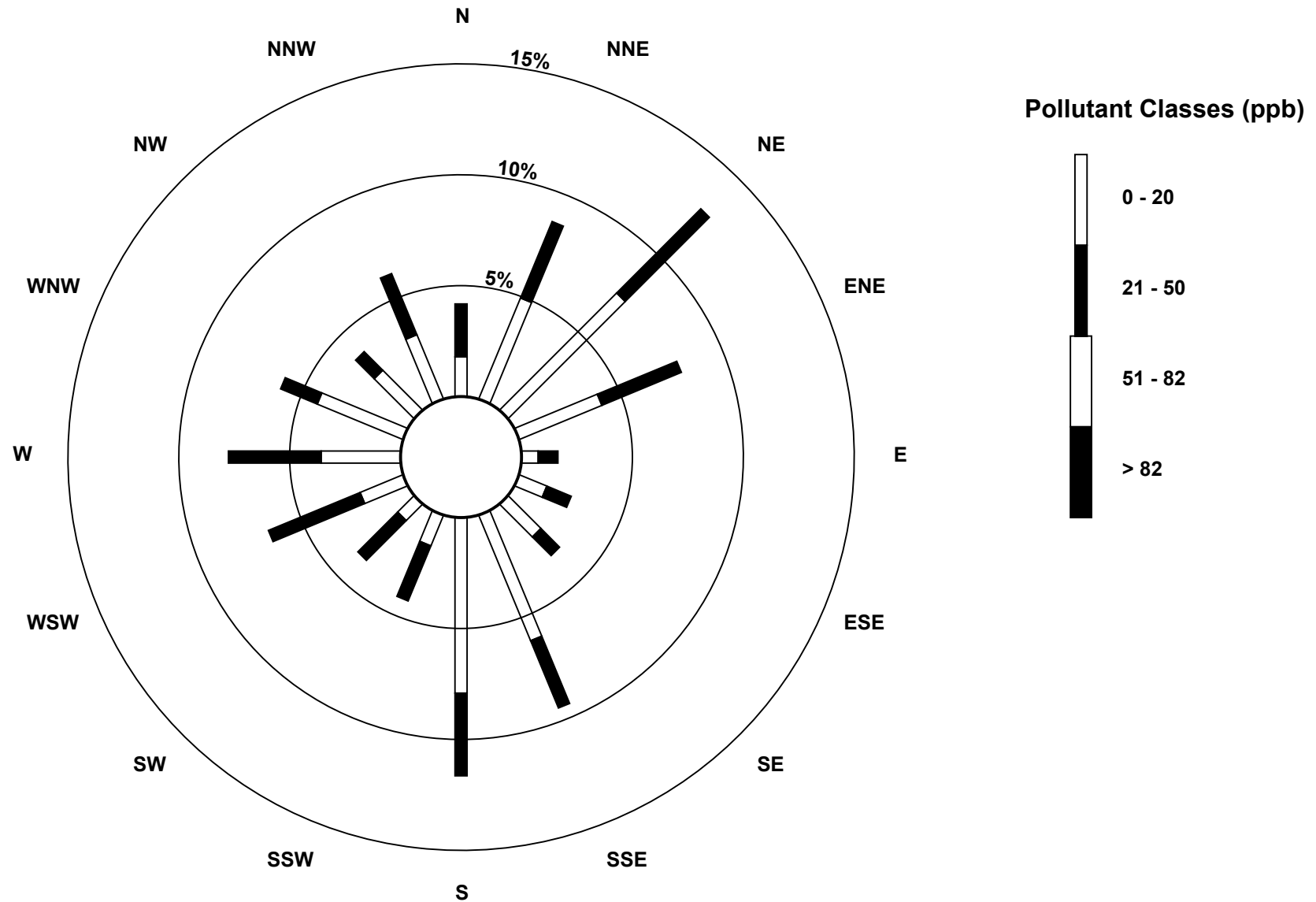
Hourly Maximums

Ozone (O₃) - ppb
Portable Rycroft - September 2018



Pollutant Rose

Ozone (O₃) - ppb
Portable Rycroft - September 2018



Eight Hour Running Averages

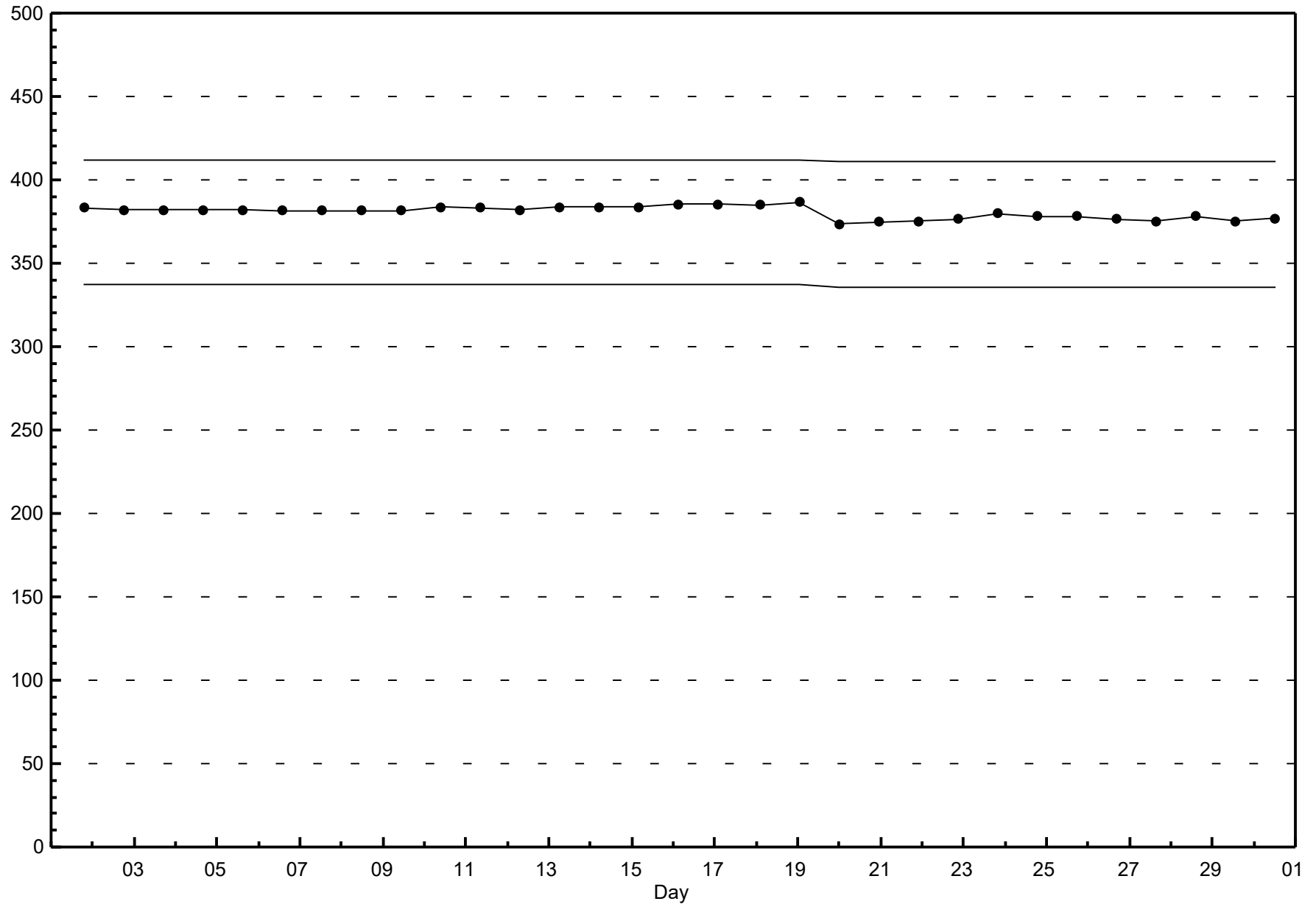
Ozone (O₃) - ppb

Portable Rycroft - September 2018

Maximum Value: 37.5 ppb on Sep 26 18:00																								Hours in Service: 720		
Minimum Value: 5.3 ppb on Sep 18 09:00																								Hours of Data: 713		
																								Hours of Missing Data: 7		
Percentiles: P ₁ = 6.2 P ₁₀ = 11.5 Q ₁ = 15.0 Median = 20.0 Q ₃ = 25.5 P ₉₀ = 29.3 P ₉₉ = 35.9																								Hours of Calibration: 7		
																								Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	29	29	29	28	27	26	25	25	25	25	25	26	27	28	30	31	32	32	33	32	31	29	26	24	32.9	
2-Sep	22	20	20	19	19	18	18	18	19	20	21	22	23	24	26	27	27	27	26	25	24	23	22	21	27.0	
3-Sep	20	20	19	20	20	21	21	21	21	21	21	20	20	19	19	20	20	21	22	22	23	21	20	18	22.5	
4-Sep	17	15	13	11	10	10	10	10	11	12	13	16	18	21	24	25	28	31	32	31	29	28	25	24	31.6	
5-Sep	22	20	19	18	17	17	16	15	14	15	15	16	18	20	21	24	27	28	28	28	28	27	26	24	28.3	
6-Sep	24	22	21	20	19	18	16	16	15	15	15	17	18	19	22	25	27	29	30	30	30	29	27	25	29.9	
7-Sep	23	21	19	18	17	15	14	13	12	12	12	13	13	14	16	19	21	24	26	27	26	26	25	24	27.3	
8-Sep	22	19	16	13	12	11	11	10	11	12	13	14	15	16	16	16	16	15	15	15	14	14	14	14	21.9	
9-Sep	14	14	14	15	15	15	15	15	16	16	16	16	17	17	18	18	19	19	19	19	18	18	17	17	18.8	
10-Sep	16	15	15	14	14	14	14	14	14	14	14	14	15	15	16	17	18	19	20	20	19	19	17	15	20.0	
11-Sep	14	12	10	9	8	7	7	7	6	7	9	10	12	14	17	19	19	20	20	20	21	21	22	22	21.9	
12-Sep	23	23	24	24	25	24	24	23	23	23	24	24	25	26	27	27	28	28	27	27	26	24	23	21	27.7	
13-Sep	20	18	17	16	15	15	14	15	17	20	22	25	28	31	31	33	34	33	33	32	31	30	29	28	33.5	
14-Sep	26	24	22	21	19	18	16	14	14	14	16	18	21	22	25	27	29	30	30	30	28	26	24	21	30.4	
15-Sep	18	15	12	9	8	7	6	6	7	9	11	13	15	18	21	23	25	27	28	28	27	26	25	24	27.7	
16-Sep	22	20	19	18	17	16	16	16	17	17	18	18	19	19	20	20	21	22	22	22	22	22	21	21	22.2	
17-Sep	19	17	17	15	13	12	10	10	10	11	11	12	13	13	13	13	13	13	13	12	11	11	10	9	19.2	
18-Sep	8	7	7	6	6	6	6	5	5	6	6	7	8	10	13	15	18	20	22	23	24	23	22	21	23.7	
19-Sep	20	18	16	15	14	12	11	10	10	10	11	12	12	13	N	N	N	N	N	N	N	24	22	22	24.2	
20-Sep	20	19	18	17	17	17	18	19	21	22	23	24	26	28	29	30	31	31	31	31	30	29	28	27	24	31.3
21-Sep	22	19	17	15	14	12	12	12	13	13	14	15	17	19	22	24	26	28	30	31	31	31	29	27	30.9	
22-Sep	23	20	17	15	12	12	11	11	11	11	13	15	17	19	22	24	26	28	28	28	28	26	25	23	28.1	
23-Sep	21	19	17	15	15	14	13	12	11	12	14	16	18	21	24	27	30	31	31	31	30	29	27	25	31.4	
24-Sep	24	23	23	23	24	24	24	25	26	27	28	28	29	31	33	34	35	36	36	36	35	33	29	26	36.2	
25-Sep	23	21	21	21	20	20	20	20	20	21	22	24	26	28	31	33	35	37	37	37	36	35	33	29	36.9	
26-Sep	27	27	26	25	24	24	23	22	22	24	25	27	29	31	33	36	37	38	37	36	34	32	30	27	37.5	
27-Sep	26	24	22	21	18	16	15	14	13	12	13	14	16	18	21	22	25	26	26	24	22	20	17	16	26.0	
28-Sep	13	11	9	8	7	6	6	6	7	9	11	13	15	17	19	22	24	26	27	28	27	25	23	20	27.9	
29-Sep	17	16	15	15	15	16	17	18	20	22	22	23	24	25	27	28	29	29	29	28	27	26	25	24	29.5	
30-Sep	22	21	20	19	18	17	16	15	15	15	16	17	17	20	23	25	28	29	29	29	28	27	24	21	29.4	
28.7 28.7 28.6 28.0 27.3 26.3 25.3 24.8 25.8 26.8 27.6 28.3 29.4 31.1 33.2 35.6 37.1 37.5 36.9 36.2 34.7 33.0 30.8 29.0																										
Diurnal Maximums																										
N - Not Valid																										

Span Responses

Ozone (O₃)
Portable Rycroft - September 2018



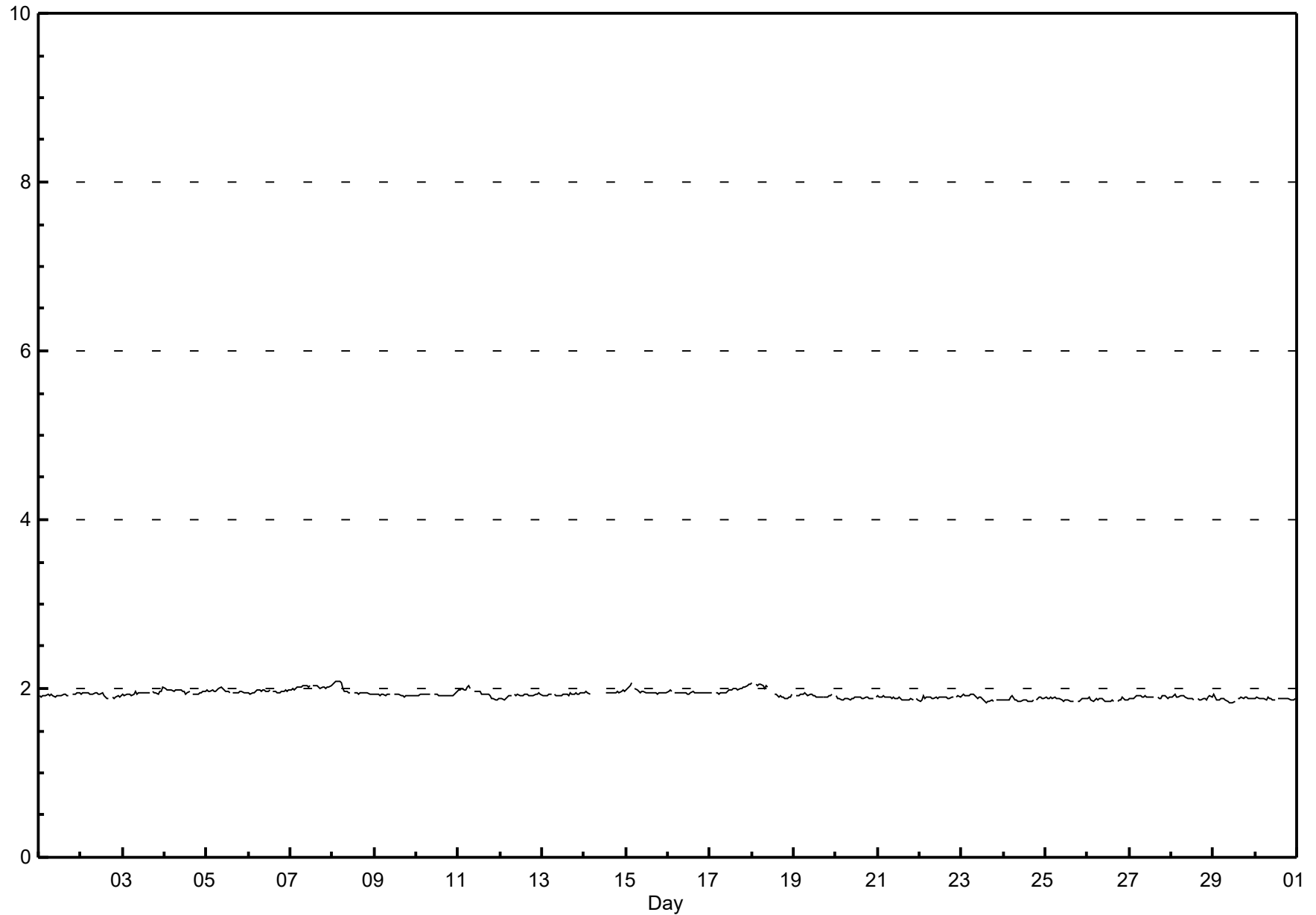
Hourly Averages

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

Maximum Value: 2.09 ppm on Sep 8 03:00																				Maximum Daily Average: 2.02 ppm on Sep 7					Hours in Service: 720				
Minimum Value: 1.8 ppm on Sep 29 12:00																				Minimum Daily Average: 1.87 ppm on Sep 26					Hours of Data: 679				
Maximum Diurnal Average: 1.94 ppm at hour 6																				Minimum Diurnal Average: 1.91 ppm at hour 19					Hours of Missing Data: 41				
Monthly Average: 1.925 ppm																				Percentiles: P ₁ = 1.85 P ₁₀ = 1.87 Q ₁ = 1.89 Median = 1.92 Q ₃ = 1.95 P ₉₀ = 1.99 P ₉₉ = 2.06					Hours of Calibration: 33				
																				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-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.92	1.95			
2-Sep	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.92	1.95			
3-Sep	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	2.0	2.0	1.9	A	2.0	2.0	1.9	1.9	2.0	2.0	2.0	1.95	2.02			
4-Sep	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	A	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.96	1.99			
5-Sep	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.97	2.02			
6-Sep	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.97	1.98			
7-Sep	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.02	2.04			
8-Sep	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.98	2.09			
9-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.92	1.94			
10-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.93	1.97			
11-Sep	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.95	2.03			
12-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.91	1.94			
13-Sep	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.93	1.95			
14-Sep	1.9	2.0	1.9	1.9	N	N	N	N	N	N	N	N	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	--	1.98			
15-Sep	2.0	2.0	2.0	2.1	A	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	2.0	2.0	2.0	2.0	1.97	2.06			
16-Sep	2.0	2.0	2.0	A	2.0	1.9	1.9	2.0	1.9	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	1.9	2.0	1.95	1.98			
17-Sep	2.0	2.0	A	2.0	1.9	1.9	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.98	2.05			
18-Sep	2.1	A	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.96	2.07			
19-Sep	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.92	1.95			
20-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.89	1.92			
21-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	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	1.91			
22-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	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	1.89	1.92			
23-Sep	1.9	1.9	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	1.9	1.9	A	1.9	1.9	1.9	1.9	1.89	1.94			
24-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.87	1.91			
25-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	A	1.9	1.8	1.9	1.9	1.9	1.9	1.87	1.90			
26-Sep	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.8	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.87	1.90			
27-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.90	1.91			
28-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.89	1.93			
29-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.88	1.94			
30-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.88	1.89			
1.94 1.93 1.94 1.93 1.93 1.94 1.94 1.93 1.93 1.93 1.92 1.92 1.92 1.92 1.92 1.91 1.91 1.92 1.91 1.92 1.92 1.92 1.93 1.93																									Diurnal Average				
2.07 2.06 2.09 2.08 2.08 2.06 2.03 2.03 2.03 2.03 2.01 2.03 1.99 2.03 2.03 2.04 2.01 2.00 2.01 2.02 2.01 2.03 2.04 2.05																									Diurnal Maximum				
C - Calibration N - Not Valid A - Automated Daily Zero Span																													

Hourly Averages

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



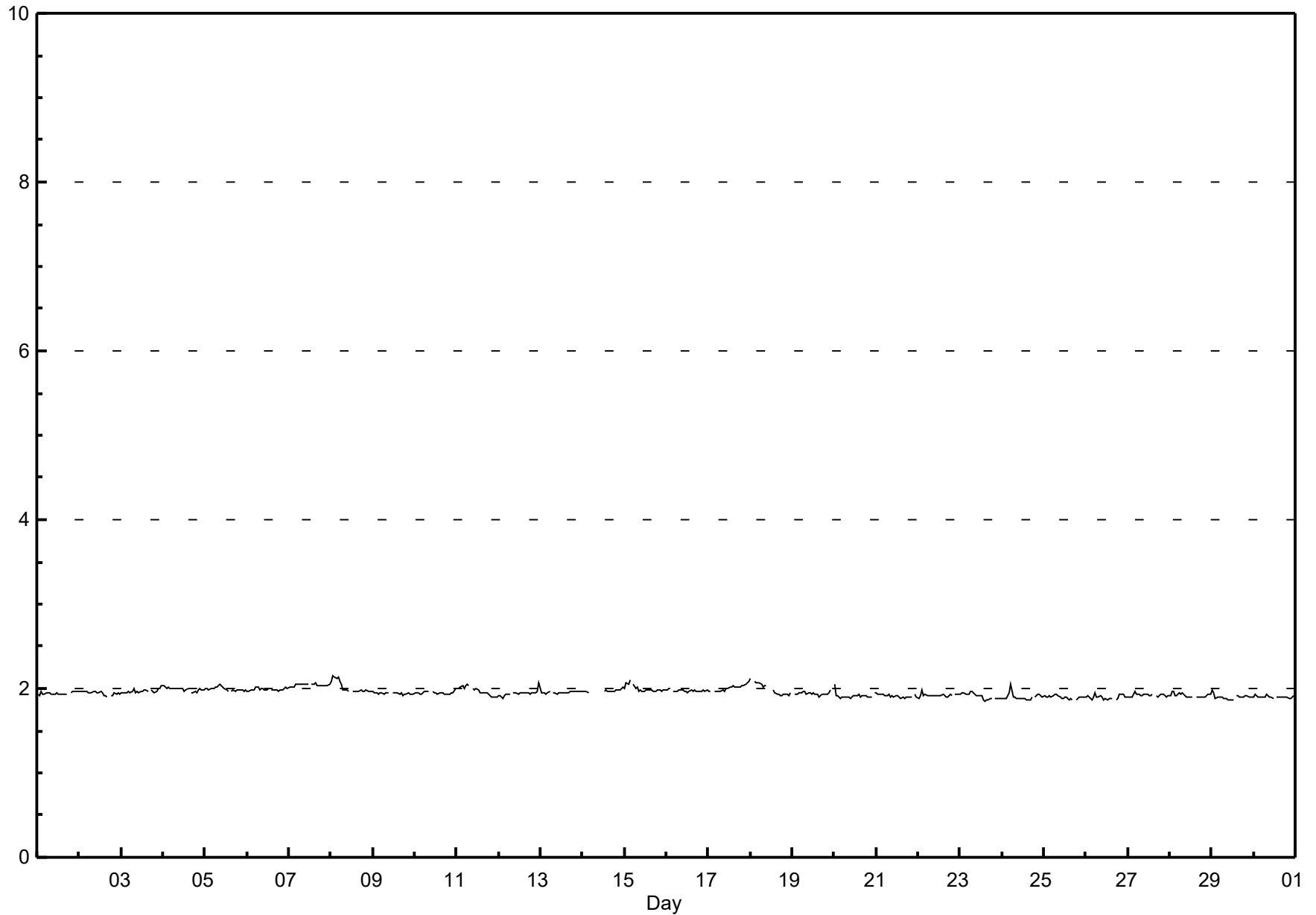
Hourly Maximums

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

Maximum Value: 2.15 ppm on Sep 8 02:00																				Maximum Daily Average: 2.04 ppm on Sep 7					Hours in Service: 720	
Minimum Value: 1.9 ppm on Sep 23 15:00																				Minimum Daily Average: 1.90 ppm on Sep 26					Hours of Data: 679	
Maximum Diurnal Average: 1.97 ppm at hour 6																				Minimum Diurnal Average: 1.93 ppm at hour 17					Hours of Missing Data: 41	
Monthly Average: 1.950 ppm																				Percentiles: P ₁ = 1.87 P ₁₀ = 1.89 Q ₁ = 1.91 Median = 1.95 Q ₃ = 1.97 P ₉₀ = 2.02 P ₉₉ = 2.08					Hours of Calibration: 33	
																				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-Sep	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.0	2.0	2.0	2.0	1.94	1.97
2-Sep	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.95	1.97
3-Sep	2.0	1.9	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	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.97	2.04
4-Sep	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.99	2.03
5-Sep	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.99	2.05
6-Sep	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.99	2.02
7-Sep	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.1	A	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.04	2.07
8-Sep	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.01	2.15
9-Sep	2.0	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	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	1.94	1.96
10-Sep	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	1.95	2.00
11-Sep	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	1.9	2.0	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.97	2.05
12-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	1.94	2.06
13-Sep	1.9	1.9	1.9	1.9	1.9	2.0	A	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.95	1.97
14-Sep	2.0	2.0	2.0	2.0	N	N	N	N	N	N	N	N	N	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	--	2.01
15-Sep	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	2.0	2.0	1.99	2.10
16-Sep	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.97	2.00
17-Sep	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.01	2.08
18-Sep	2.1	A	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	C	C	C	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.99	2.11
19-Sep	A	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	A	1.94	1.99
20-Sep	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.0	1.91	2.05
21-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.91	1.94
22-Sep	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.92	1.99
23-Sep	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.91	1.97
24-Sep	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.90	2.04
25-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.90	1.93
26-Sep	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.90	1.95
27-Sep	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.92	1.96
28-Sep	1.9	2.0	2.0	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.92	1.97
29-Sep	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	1.9	1.9	1.9	1.9	1.9	1.9	1.90	1.98
30-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.90	1.93
1.96 1.96 1.96 1.96 1.96 1.97 1.96 1.96 1.95 1.95 1.94 1.94 1.94 1.94 1.94 1.94 1.94 1.93 1.94 1.94 1.94 1.94 1.95 1.95 1.96																									Diurnal Average	
2.11 2.15 2.13 2.11 2.13 2.08 2.05 2.06 2.05 2.05 2.04 2.06 2.02 2.06 2.06 2.07 2.03 2.03 2.03 2.04 2.04 2.05 2.06 2.08																									Diurnal Maximum	
C - Calibration N - Not Valid A - Automated Daily Zero Span																										

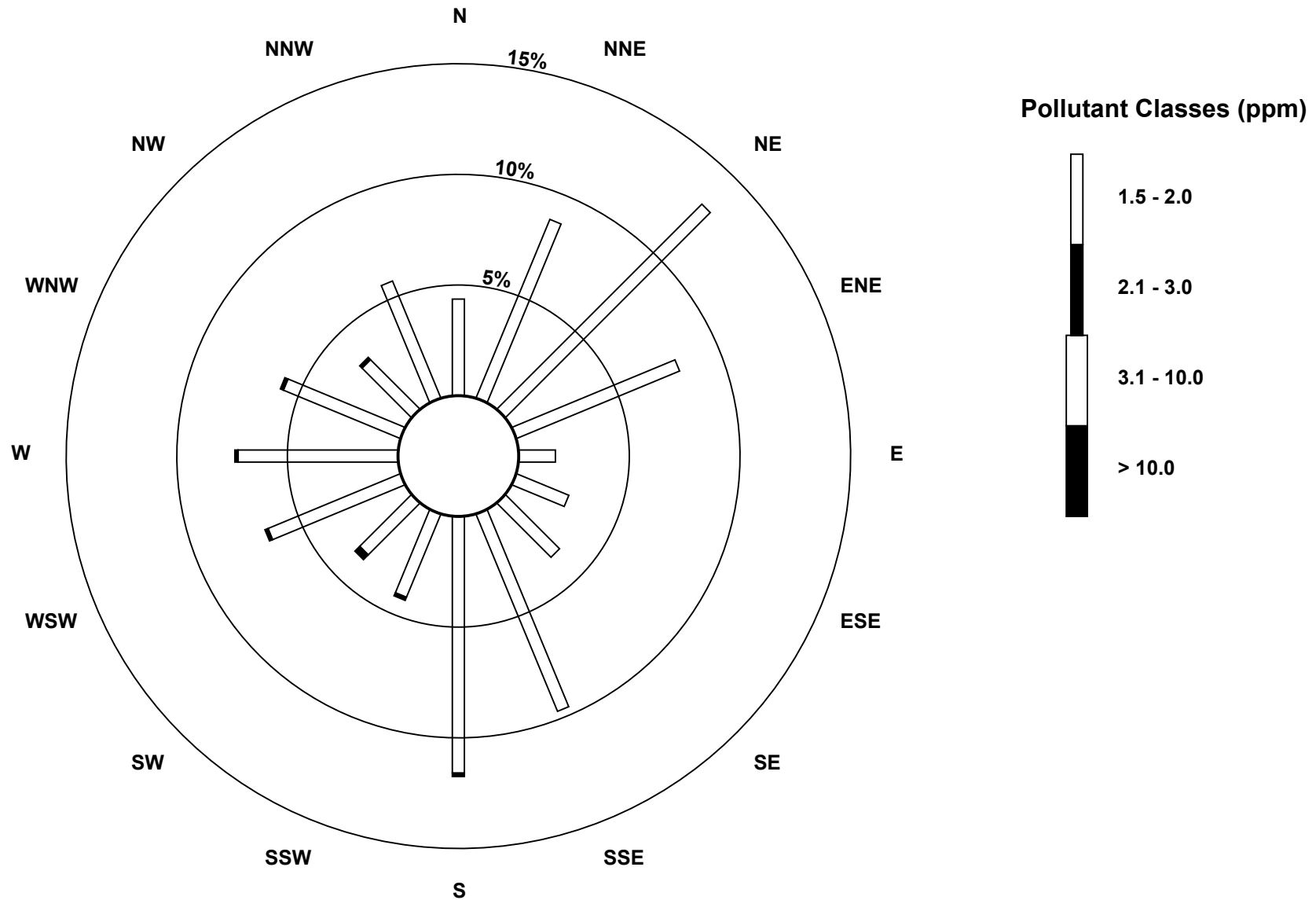
Hourly Maximums

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



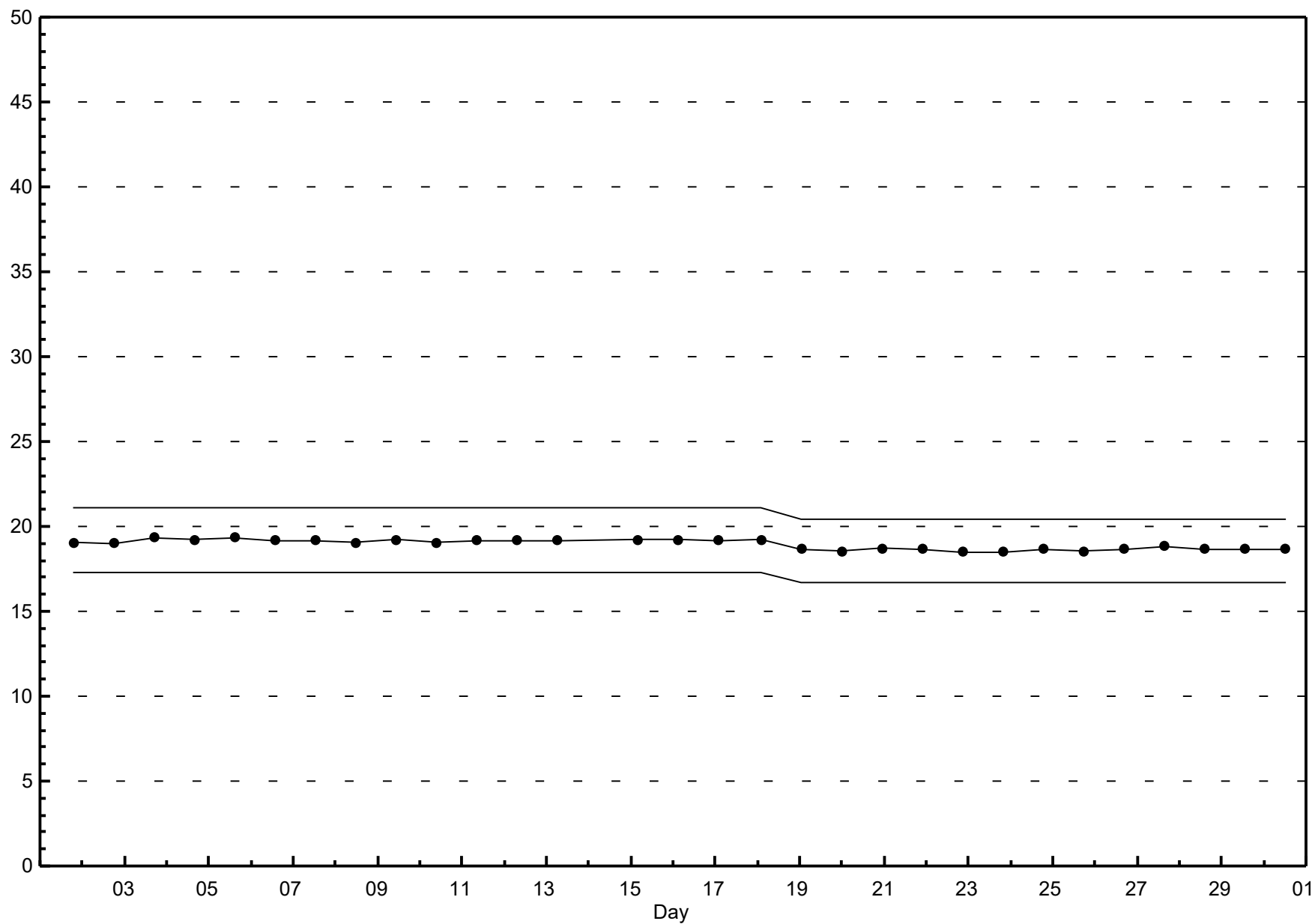
Pollutant Rose

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



Span Responses

Total Hydrocarbons (THC)
Portable Rycroft - September 2018



Hourly Averages

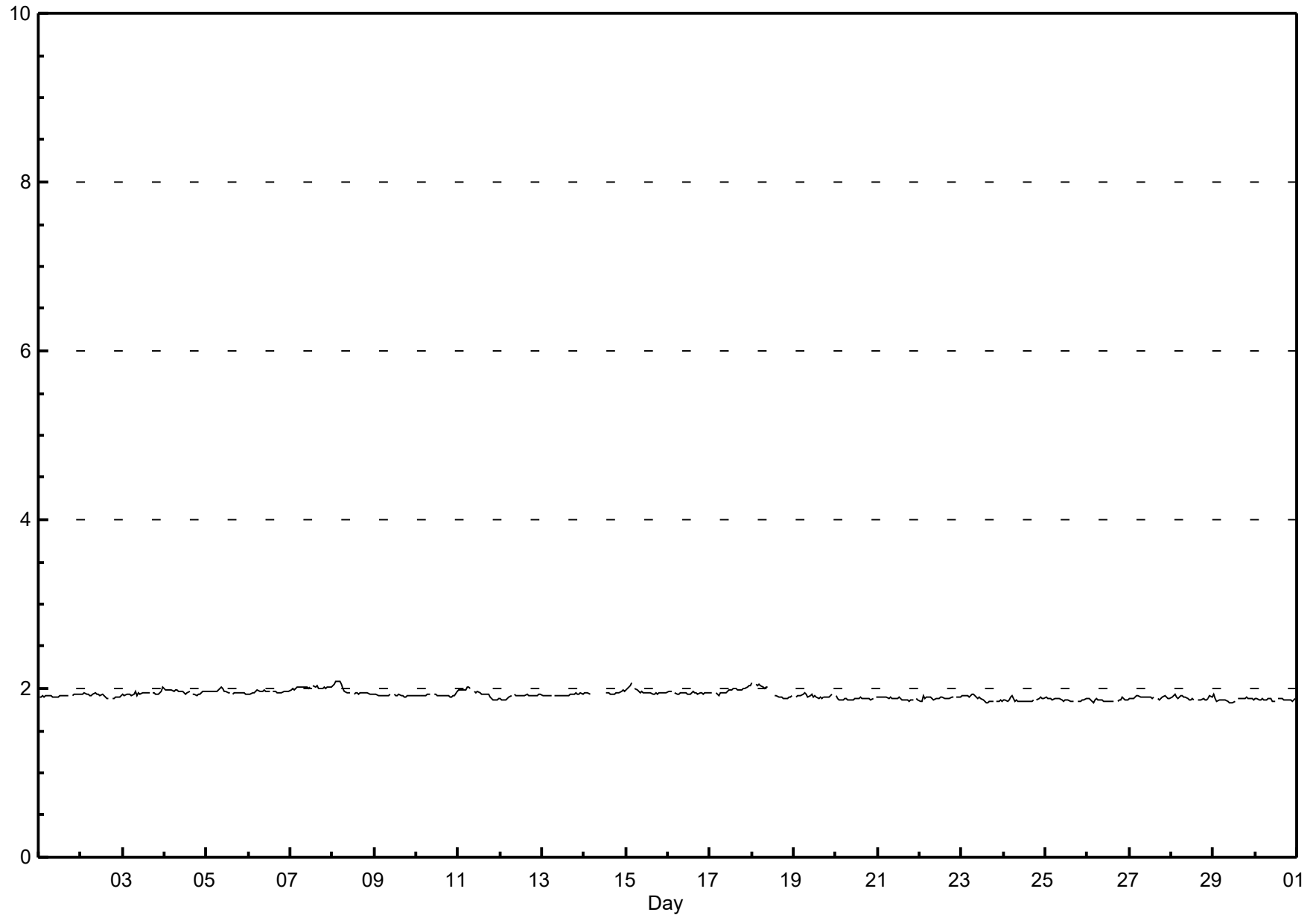
Methane (CH₄) - ppm

Portable Rycroft - September 2018

Maximum Value: 2.09 ppm on Sep 8 03:00																				Maximum Daily Average: 2.01 ppm on Sep 7										Hours in Service: 720	
Minimum Value: 1.8 ppm on Sep 29 12:00																				Minimum Daily Average: 1.86 ppm on Sep 26										Hours of Data: 679	
Maximum Diurnal Average: 1.93 ppm at hour 6																				Minimum Diurnal Average: 1.91 ppm at hour 16										Hours of Missing Data: 41	
Monthly Average: 1.919 ppm																				Percentiles: P ₁ = 1.84 P ₁₀ = 1.86 Q ₁ = 1.88 Median = 1.92 Q ₃ = 1.95 P ₉₀ = 1.98 P ₉₉ = 2.05										Hours of Calibration: 33	
																				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-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.91	1.94					
2-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.92	1.95					
3-Sep	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	2.0	1.9	A	2.0	1.9	1.9	1.9	2.0	2.0	2.0	1.94	2.01					
4-Sep	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.96	1.99					
5-Sep	2.0	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	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.96	2.01					
6-Sep	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.96	1.98					
7-Sep	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.01	2.03					
8-Sep	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.98	2.09					
9-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.92	1.93					
10-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.92	1.96					
11-Sep	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.94	2.02					
12-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.91	1.94					
13-Sep	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.92	1.95					
14-Sep	1.9	2.0	1.9	1.9	N	N	N	N	N	N	N	N	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	--	1.98					
15-Sep	2.0	2.0	2.0	2.1	A	2.0	2.0	2.0	1.9	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	1.96	2.06					
16-Sep	2.0	2.0	2.0	A	1.9	1.9	1.9	2.0	1.9	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.95	1.97					
17-Sep	1.9	1.9	A	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.98	2.04					
18-Sep	2.1	A	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.96	2.06					
19-Sep	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.91	1.94					
20-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	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	1.88	1.92					
21-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	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	1.88	1.90					
22-Sep	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.89	1.92					
23-Sep	1.9	1.9	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	1.9	1.8	A	1.9	1.9	1.9	1.9	1.88	1.93					
24-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.9	A	1.9	1.9	1.9	1.9	1.9	1.86	1.91					
25-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.8	1.8	1.8	A	1.8	1.8	1.8	1.9	1.9	1.9	1.86	1.89					
26-Sep	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.8	A	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.86	1.89					
27-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.89	1.91					
28-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.89	1.93					
29-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.87	1.94					
30-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.87	1.89					
1.93 1.92 1.93 1.93 1.93 1.93 1.93 1.93 1.92 1.92 1.91 1.91 1.91 1.91 1.91 1.91 1.91 1.91 1.91 1.91 1.91 1.91 1.92 1.92 1.92																								Diurnal Average							
2.06 2.06 2.09 2.08 2.08 2.06 2.02 2.02 2.03 2.02 2.01 2.02 1.99 2.03 2.02 2.03 2.01 2.00 2.01 2.01 2.01 2.02 2.04 2.04																								Diurnal Maximum							
C - Calibration				N - Not Valid				A - Automated Daily Zero Span																							

Hourly Averages

Methane (CH₄) - ppm
Portable Rycroft - September 2018



Hourly Maximums

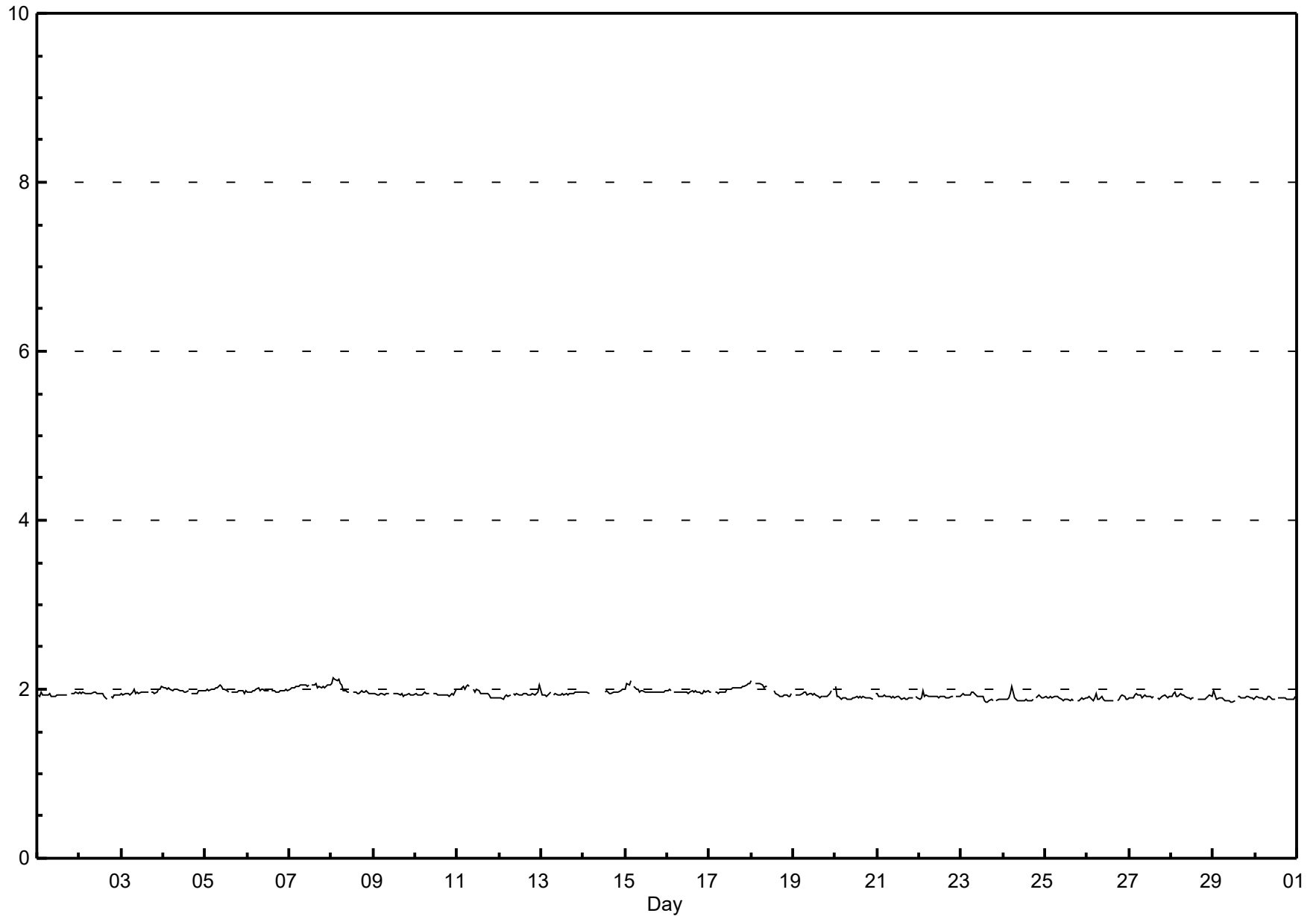
Methane (CH₄) - ppm

Portable Rycroft - September 2018

Maximum Value: 2.14 ppm on Sep 8 02:00																				Maximum Daily Average: 2.04 ppm on Sep 7					Hours in Service: 720				
Minimum Value: 1.8 ppm on Sep 23 15:00																				Minimum Daily Average: 1.89 ppm on Sep 25					Hours of Data: 679				
Maximum Diurnal Average: 1.96 ppm at hour 6																				Minimum Diurnal Average: 1.93 ppm at hour 17					Hours of Missing Data: 41				
Monthly Average: 1.944 ppm																				Percentiles: P ₁ = 1.86 P ₁₀ = 1.89 Q ₁ = 1.91 Median = 1.94 Q ₃ = 1.97 P ₉₀ = 2.01 P ₉₉ = 2.07					Hours of Calibration: 33				
																				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-Sep	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	2.0	2.0	1.94	1.97			
2-Sep	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	1.9	1.9	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.94	1.97			
3-Sep	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.97	2.04			
4-Sep	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	1.99	2.02			
5-Sep	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.99	2.05			
6-Sep	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.98	2.02			
7-Sep	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	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.04	2.06			
8-Sep	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	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.00	2.14			
9-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.94	1.95			
10-Sep	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	1.94	2.00			
11-Sep	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	1.9	2.0	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.97	2.04			
12-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	1.94	2.06			
13-Sep	1.9	1.9	1.9	1.9	1.9	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.95	1.97			
14-Sep	2.0	2.0	2.0	1.9	N	N	N	N	N	N	N	N	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	--	2.01			
15-Sep	2.0	2.1	2.0	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	2.0	2.0	1.99	2.09			
16-Sep	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	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			
17-Sep	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.00	2.07			
18-Sep	2.1	A	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	C	C	C	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.99	2.10			
19-Sep	A	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	2.0	A	1.93	1.98			
20-Sep	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.91	2.03			
21-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.91	1.94			
22-Sep	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.91	1.98			
23-Sep	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.90	1.97			
24-Sep	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.89	2.04			
25-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.89	1.91			
26-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.89	1.94			
27-Sep	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.91	1.95			
28-Sep	1.9	2.0	2.0	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.91	1.96			
29-Sep	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.89	1.98			
30-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.90	1.92			
1.96 1.95 1.96 1.95 1.96 1.96 1.96 1.95 1.95 1.94 1.93 1.94 1.94 1.94 1.94 1.93 1.93 1.93 1.93 1.94 1.94 1.94 1.95 1.95																									Diurnal Average				
2.10 2.14 2.12 2.10 2.12 2.07 2.05 2.05 2.05 2.05 2.03 2.04 2.01 2.05 2.05 2.06 2.02 2.03 2.02 2.03 2.03 2.05 2.06 2.07																									Diurnal Maximum				
C - Calibration N - Not Valid A - Automated Daily Zero Span																													

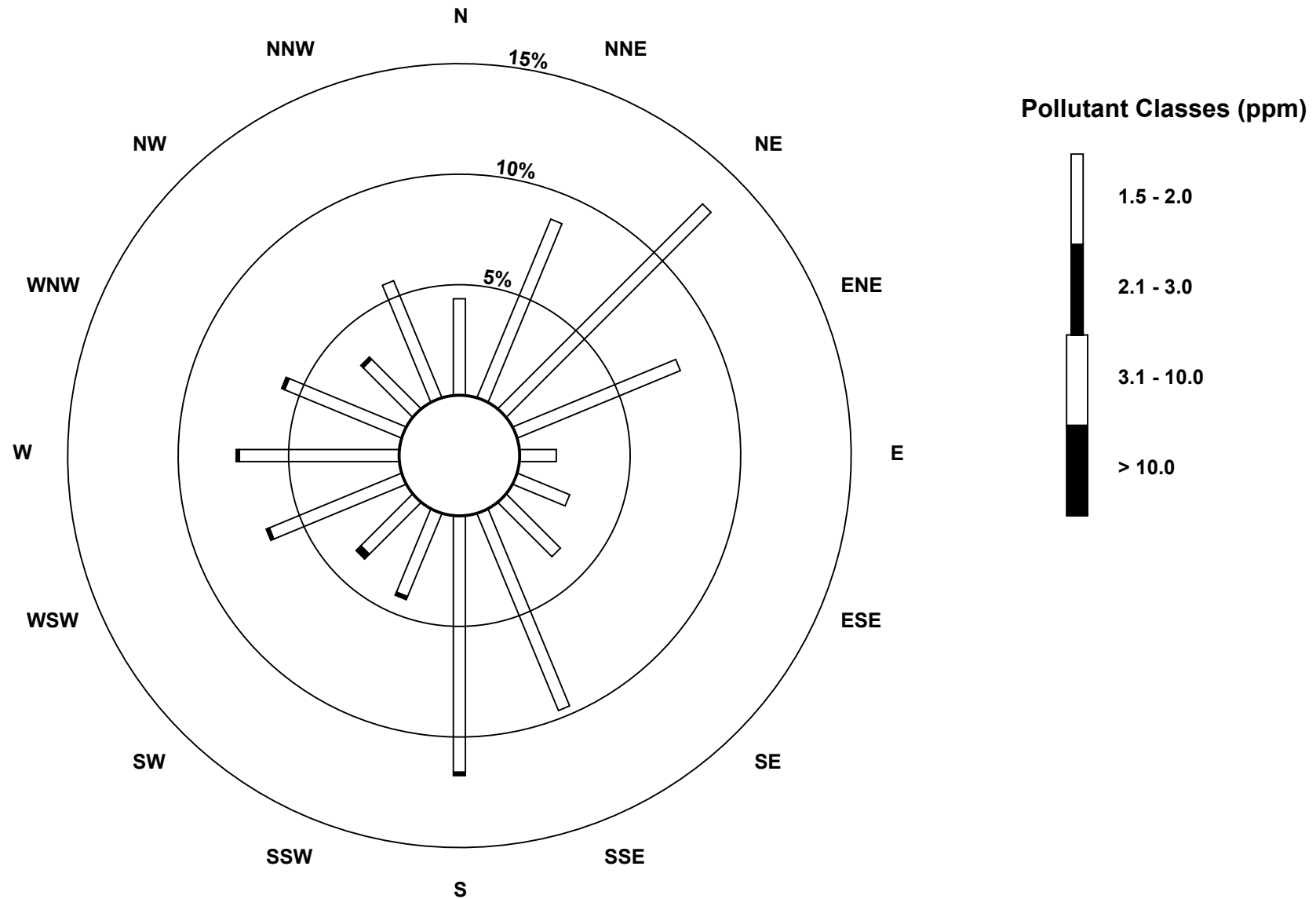
Hourly Maximums

Methane (CH₄) - ppm
Portable Rycroft - September 2018



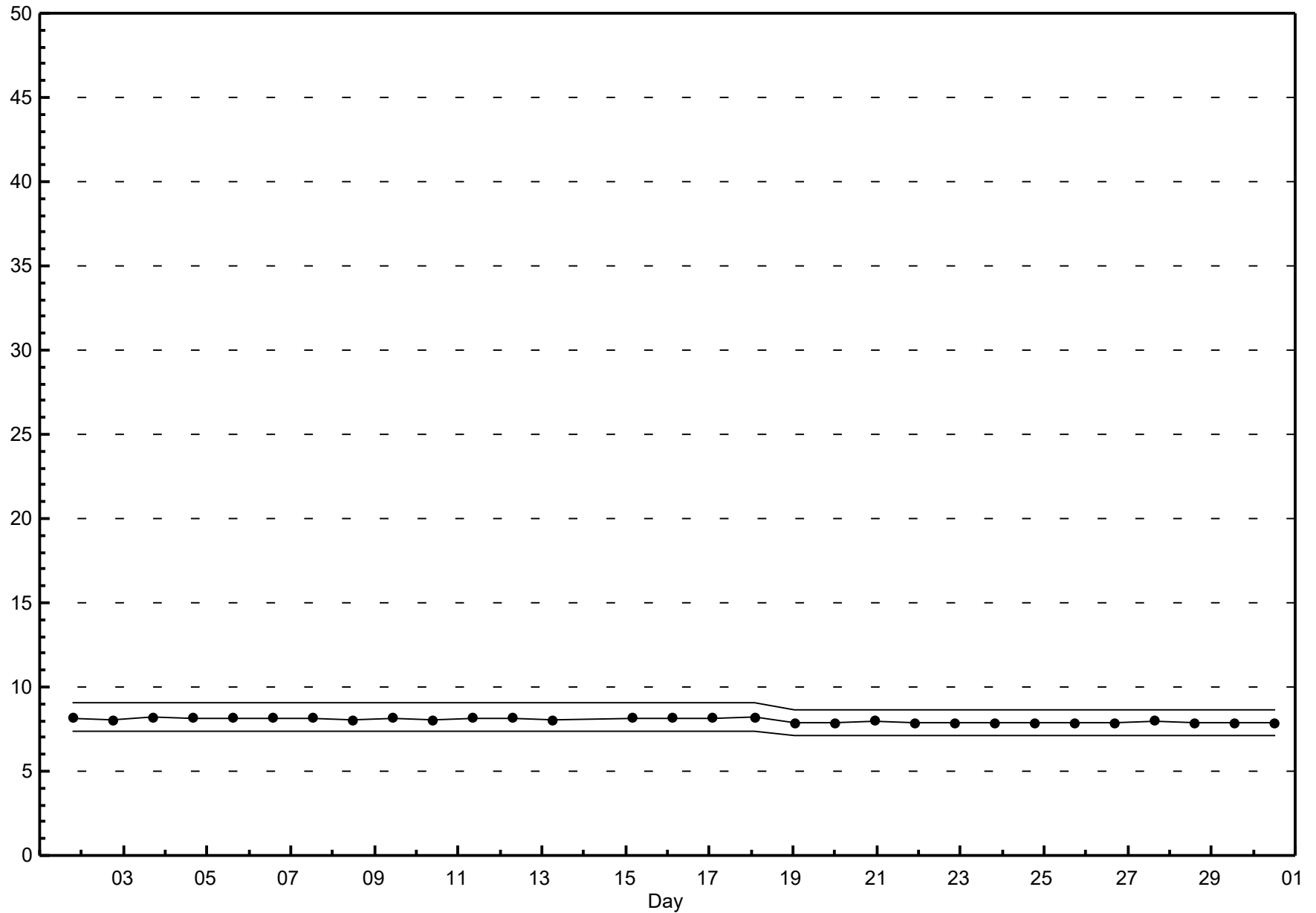
Pollutant Rose

Methane (CH₄) - ppm
Portable Rycroft - September 2018



Span Responses

Methane (CH₄)
Portable Rycroft - September 2018



Hourly Averages

Non Methane Hydrocarbon (NMHC) - ppm

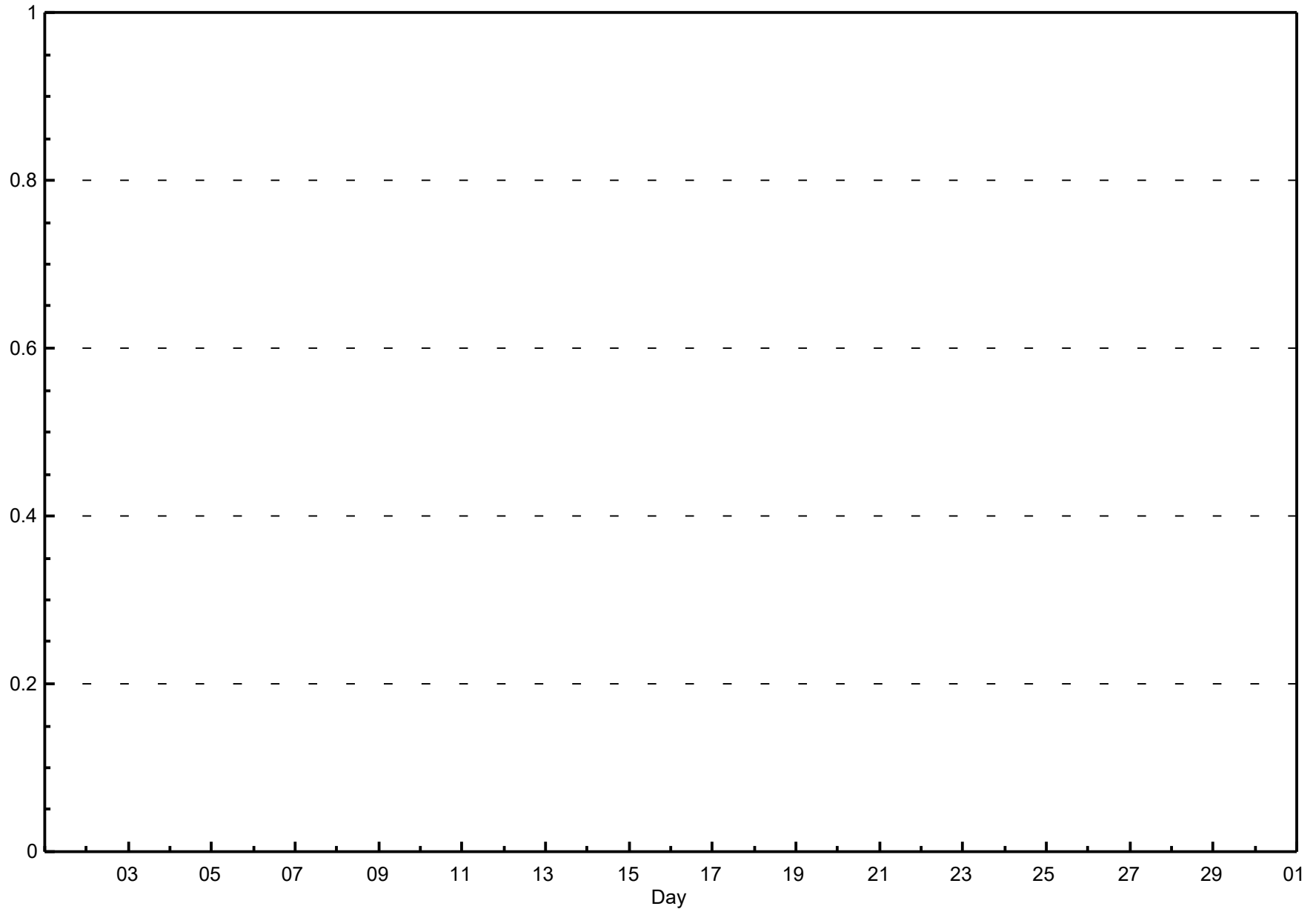
Portable Rycroft - September 2018

Maximum Value: 0.00 ppm on Sep 14 21:00																				Maximum Daily Average: 0.00 ppm on Sep 15					Hours in Service: 720	
Minimum Value: 0.0 ppm on Sep 1 01:00																				Minimum Daily Average: 0.00 ppm on Sep 1					Hours of Data: 679	
Maximum Diurnal Average: 0.00 ppm at hour 16																				Minimum Diurnal Average: 0.00 ppm at hour 5					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: 33	
																									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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
2-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
3-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
4-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
5-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
6-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
7-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
8-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
9-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
10-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
11-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
12-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
13-Sep	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	N	N	N	N	N	N	N	N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.00
15-Sep	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
19-Sep	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
20-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
21-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
22-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
23-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
24-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
25-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
26-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
27-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
28-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
29-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
30-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
0.00 0.00																								Diurnal Average		
0.00 0.00																								Diurnal Maximum		
C - Calibration N - Not Valid A - Automated Daily Zero Span																										

Hourly Averages

Non Methane Hydrocarbon (NMHC) - ppm

Portable Rycroft - September 2018



Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

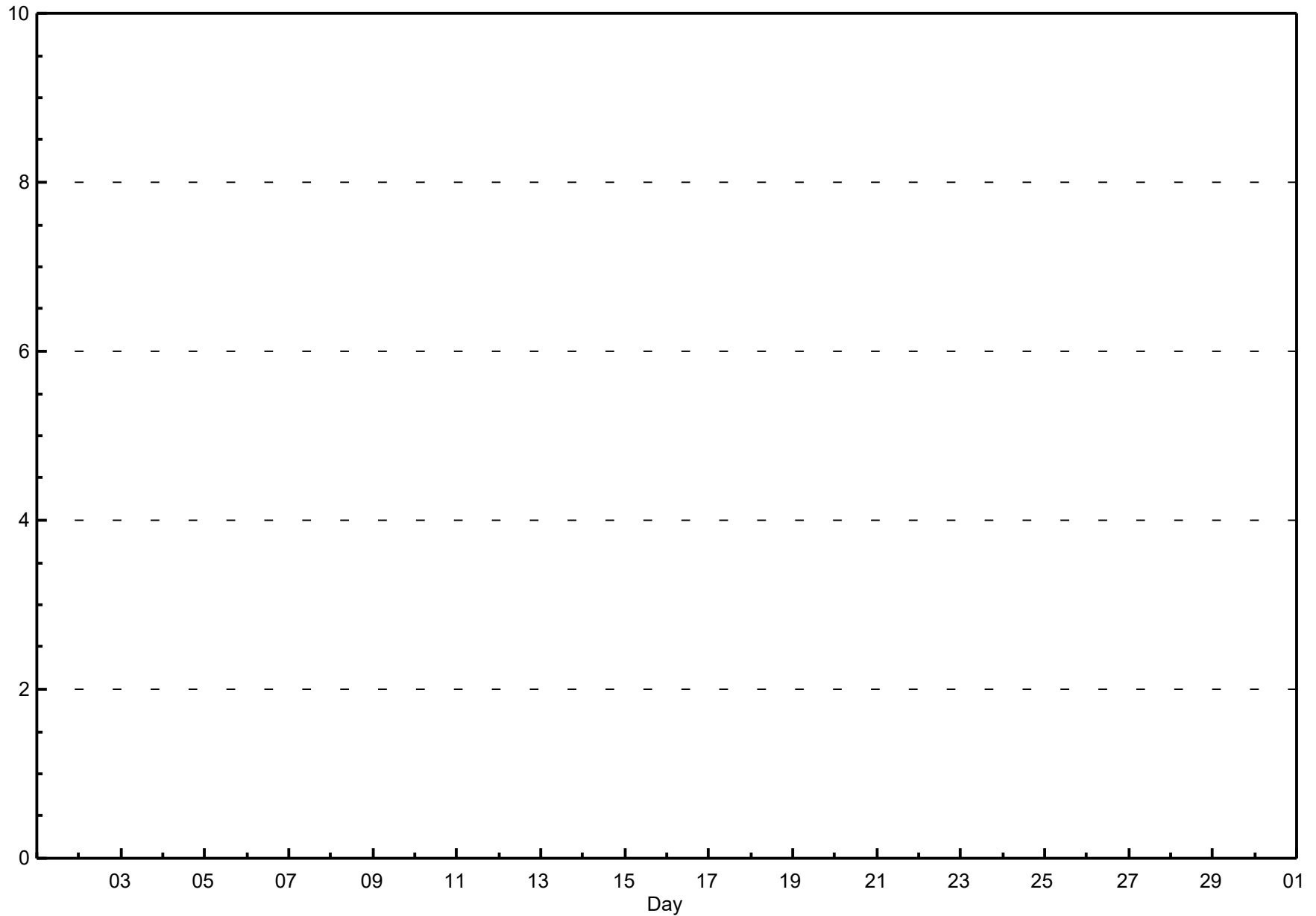
Portable Rycroft - September 2018

Maximum Value: 0.00 ppm on Sep 21 17:00																				Maximum Daily Average: 0.00 ppm on Sep 13					Hours in Service: 720	
Minimum Value: 0.0 ppm on Sep 1 01:00																				Minimum Daily Average: 0.00 ppm on Sep 19					Hours of Data: 679	
Maximum Diurnal Average: 0.00 ppm at hour 17																				Minimum Diurnal Average: 0.00 ppm at hour 8					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: 33	
																									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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
2-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
3-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
4-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
5-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
6-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
7-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
8-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
9-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
10-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
11-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
12-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
13-Sep	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	N	N	N	N	N	N	N	N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.00
15-Sep	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
19-Sep	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
20-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
21-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
22-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
23-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
24-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
25-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
26-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
27-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
28-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
29-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
30-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
0.00 0.00																								Diurnal Average		
0.00 0.00																								Diurnal Maximum		
C - Calibration N - Not Valid A - Automated Daily Zero Span																										

Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

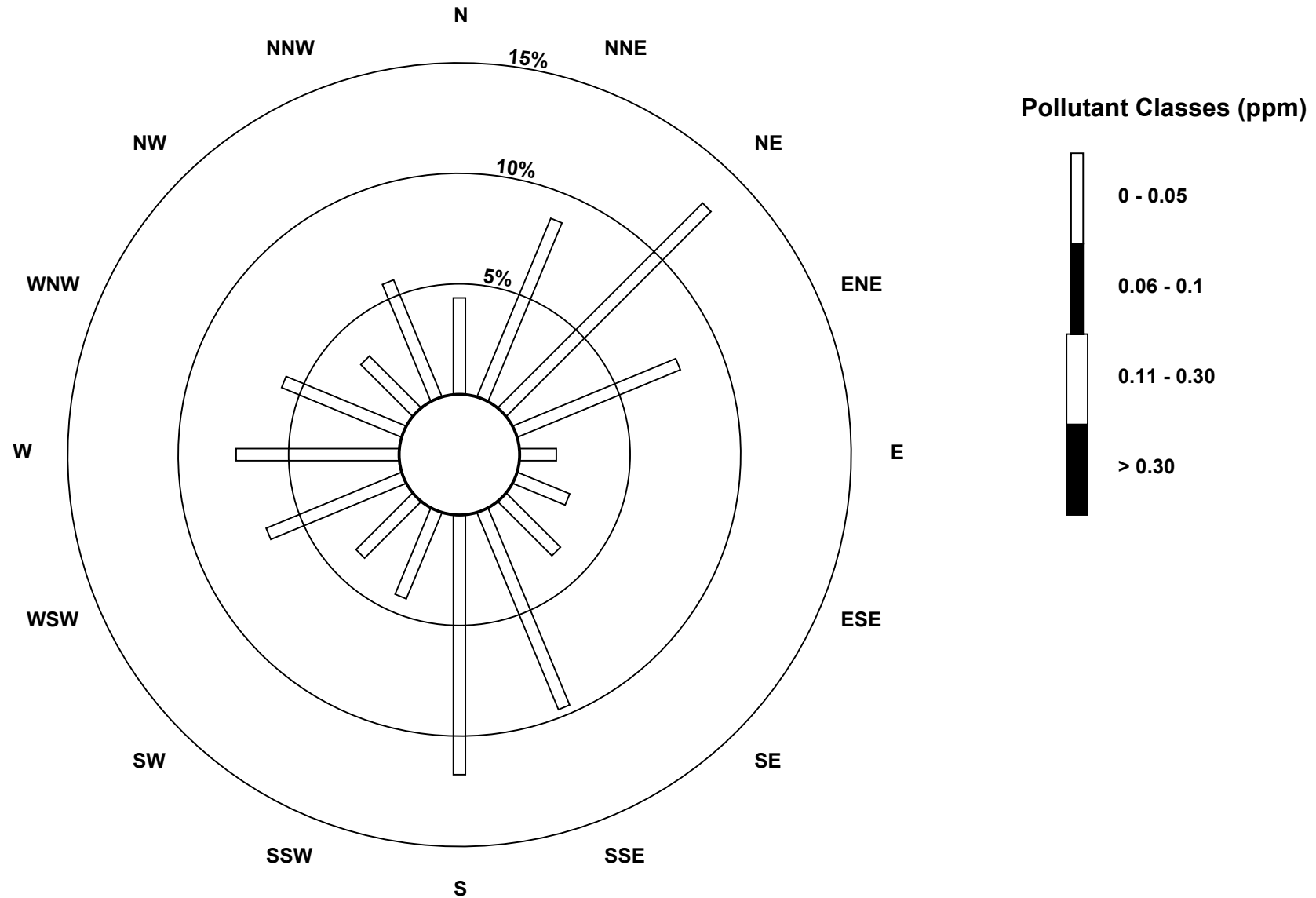
Portable Rycroft - September 2018

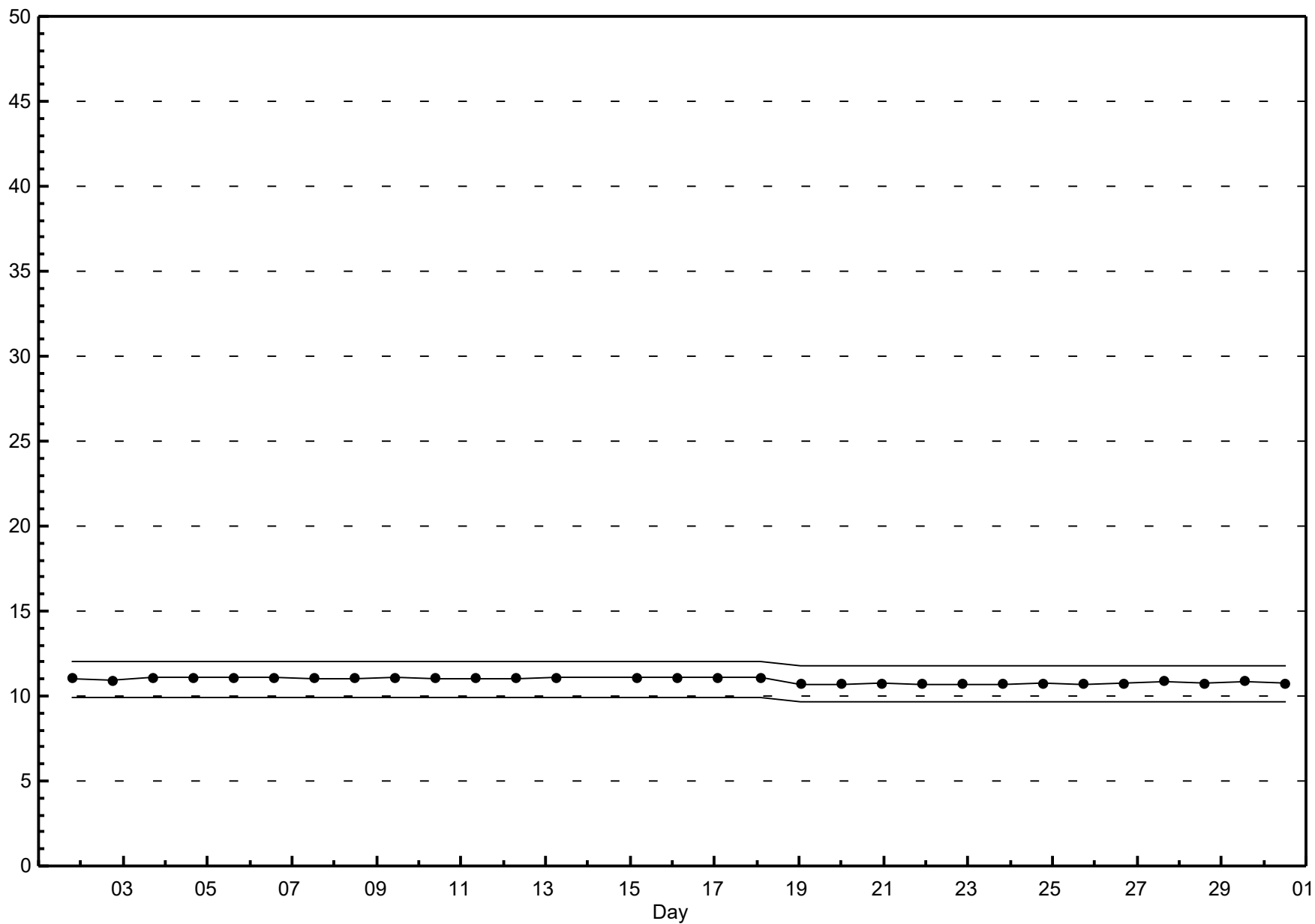


Pollutant Rose

Non Methane Hydrocarbon (NMHC) - ppm

Portable Rycroft - September 2018





Hourly Averages

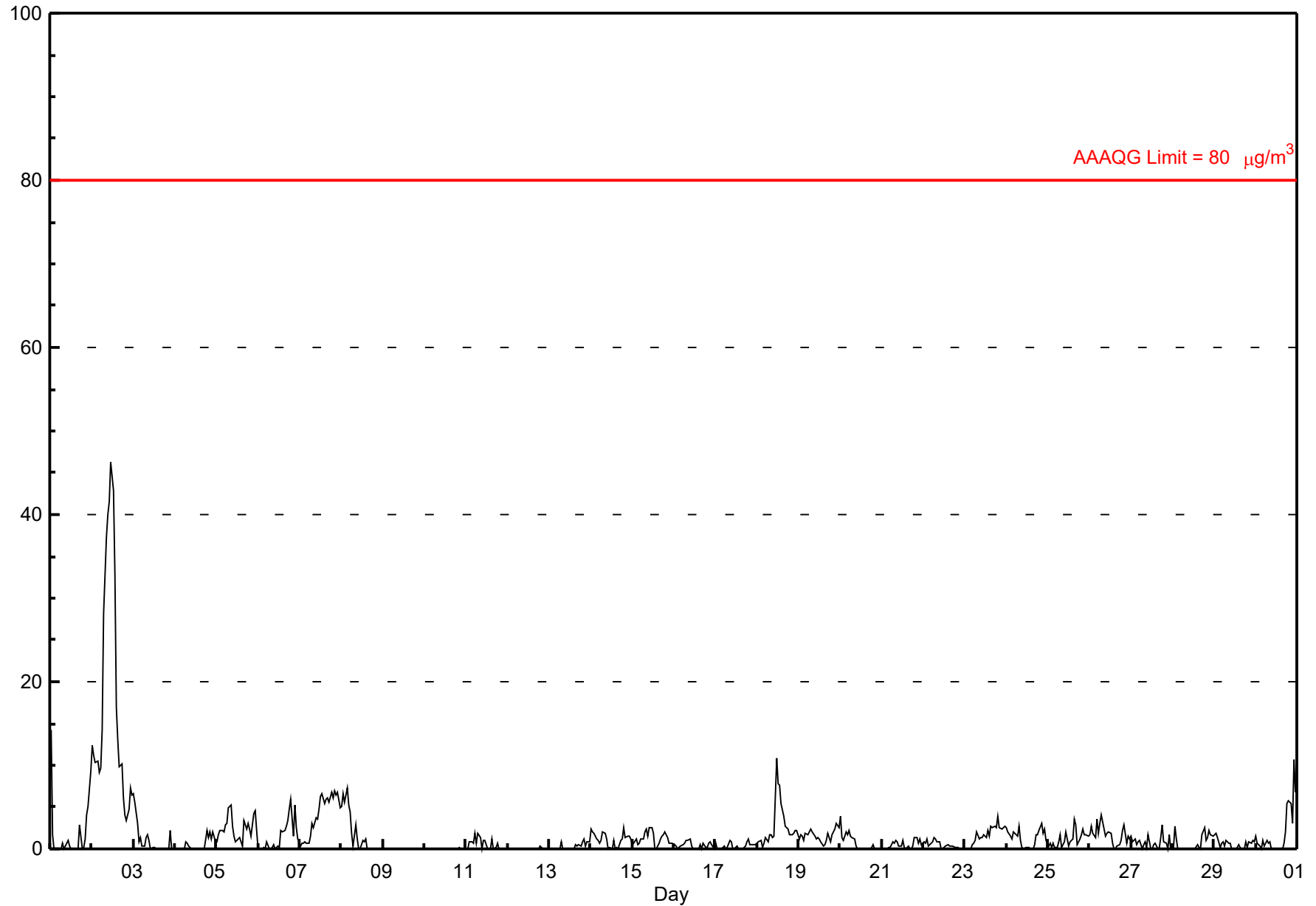
PM2.5 (PM_{2.5}) - µg/m³

Portable Rycroft - September 2018

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 46.3 µg/m³ on Sep 2 12:00 Maximum Daily Average: 17.8 µg/m³ on Sep 2																								Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 0 µg/m³ on Sep 1 04:00 Maximum Diurnal Average: 2.5 µg/m³ at hour 12 Monthly Average: 1.68 µg/m³ Minimum Daily Average: 0.0 µg/m³ on Sep 9 Minimum Diurnal Average: 1.1 µg/m³ at hour 4 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.7 Q ₃ = 1.7 P ₉₀ = 3.4 P ₉₉ = 16.4																										
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-Sep	14	2	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	3	0	0	1	4	5	9	1.7	14.3
2-Sep	12	11	10	10	9	10	14	28	37	40	42	46	43	33	17	13	10	10	6	4	3	5	7	6	17.8	46.3
3-Sep	7	6	3	1	1	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1.0	6.7
4-Sep	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	1	2	1	2	1	0.5	2.2
5-Sep	1	2	2	2	2	3	3	5	5	3	2	1	1	1	1	0	3	2	3	2	2	4	5	2	2.4	5.3
6-Sep	0	0	0	0	0	1	0	0	0	0	0	0	0	2	2	2	3	3	5	6	2	5	3	1	1.5	5.9
7-Sep	0	1	1	1	1	1	2	3	3	4	3	5	6	7	5	6	6	6	7	6	7	6	7	5	4.0	6.9
8-Sep	5	7	6	7	5	4	2	0	3	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1.8	7.4
9-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
10-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
11-Sep	0	0	1	1	1	2	1	2	1	0	1	1	0	0	0	1	0	0	1	0	0	0	0	0	0.5	1.9
12-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.4
13-Sep	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0.3	1.1
14-Sep	2	2	2	1	1	1	1	2	2	1	0	0	0	1	0	0	0	1	1	3	1	2	1	1	1.1	2.6
15-Sep	0	1	1	0	1	1	1	2	2	2	3	3	2	0	0	1	1	1	2	2	1	1	1	1	1.2	2.6
16-Sep	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0.4	1.2
17-Sep	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	1	0	1	1	0.3	1.3
18-Sep	1	1	1	0	1	1	1	2	2	1	2	11	8	8	5	4	3	3	2	2	2	2	2	2	2.7	10.8
19-Sep	1	2	2	1	2	2	2	2	2	2	1	1	1	1	0	1	1	2	1	2	2	2	3	3	1.6	3.1
20-Sep	4	1	1	2	2	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	3.9
21-Sep	0	0	0	0	0	0	1	1	1	1	0	0	1	0	0	0	0	0	0	1	1	1	1	1	0.5	1.4
22-Sep	1	1	1	0	0	1	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.5	1.4
23-Sep	0	0	0	0	0	1	1	2	1	1	1	2	1	2	2	3	3	3	3	4	2	2	3	3	1.7	4.0
24-Sep	3	2	2	1	2	2	2	3	1	0	0	0	0	0	0	0	1	2	2	2	3	2	2	1	1.3	3.1
25-Sep	0	1	0	1	0	0	1	2	0	1	2	1	0	1	1	3	3	0	1	2	2	2	2	1	1.2	3.5
26-Sep	2	3	2	1	4	2	3	4	2	2	2	2	2	1	0	0	0	0	1	2	3	1	1	1	1.7	4.0
27-Sep	2	1	1	1	1	1	0	0	1	0	2	0	0	0	1	0	0	1	3	1	1	0	2	0	0.7	2.9
28-Sep	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	1	1	2	2	2	0.7	2.7
29-Sep	2	2	1	0	1	1	0	1	1	1	0	0	0	0	0	0	0	0	1	0	1	1	1	1	0.6	1.9
30-Sep	1	1	0	0	1	0	1	1	1	0	0	0	0	0	0	0	1	2	5	6	5	3	11	7	1.9	10.7
2.0 1.6 1.3 1.1 1.2 1.2 1.3 2.2 2.4 2.1 2.1 2.5 2.3 2.0 1.2 1.2 1.2 1.2 1.5 1.7 1.7 1.5 1.7 2.1 1.6																								Diurnal Average		
14.3 11.2 10.4 10.5 9.1 9.7 14.3 28.2 37.4 40.0 41.5 46.3 42.8 32.8 16.9 13.0 9.9 10.2 6.8 6.1 6.9 6.4 10.7 9.3																								Diurnal Maximum		
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																										

Hourly Averages

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



Hourly Maximums

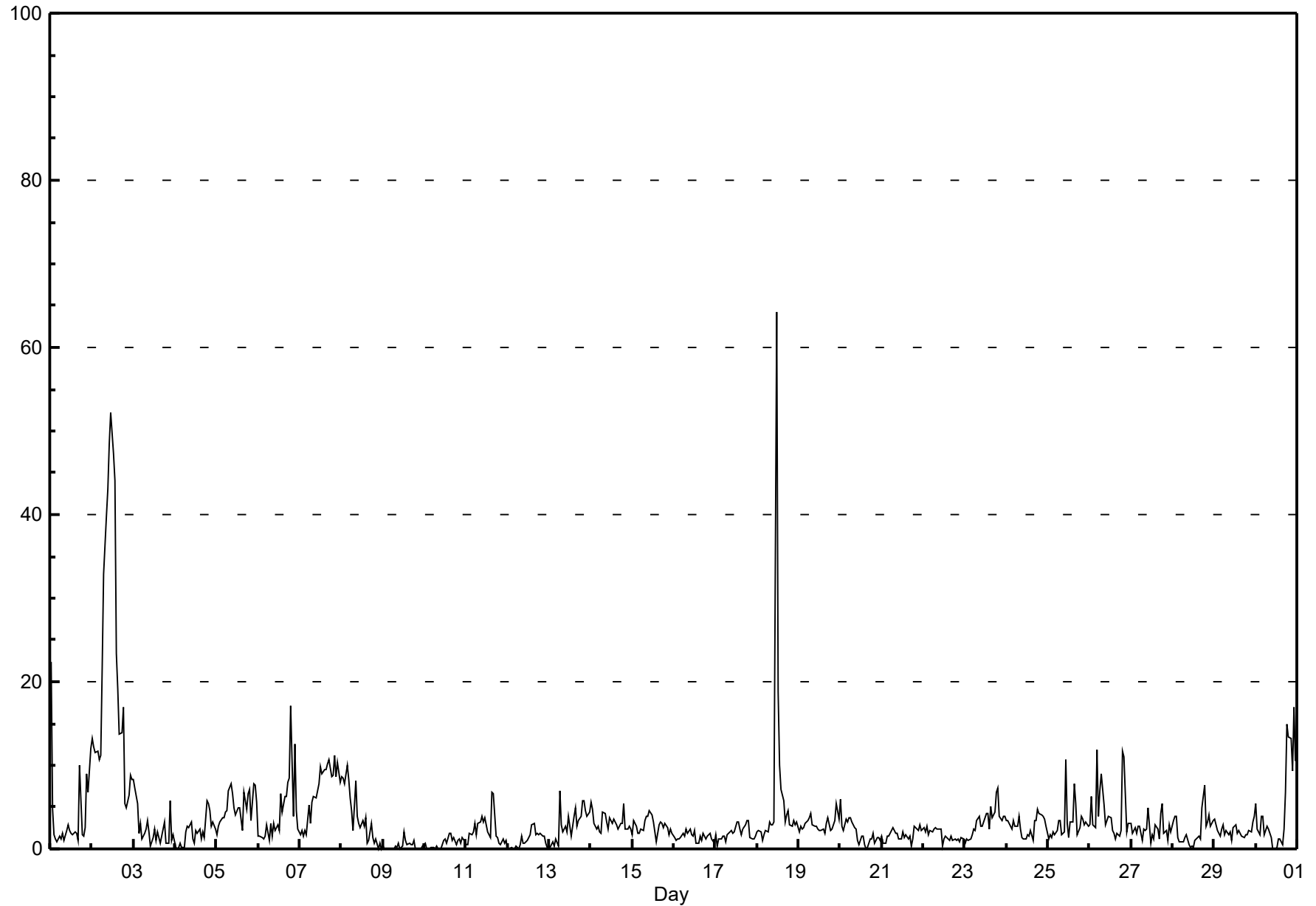
PM2.5 (PM_{2.5}) - µg/m³

Portable Rycroft - September 2018

Maximum Value: 64.2 μg/m ³ on Sep 18 12:00																				Maximum Daily Average: 21.7 μg/m ³ on Sep 2					Hours in Service: 720	
Minimum Value: 0 μg/m ³ on Sep 8 22:00																				Minimum Daily Average: 0.4 μg/m ³ on Sep 9					Hours of Data: 720	
Maximum Diurnal Average: 6.0 μg/m ³ at hour 12																				Minimum Diurnal Average: 2.3 μg/m ³ at hour 4					Hours of Missing Data: 0	
Monthly Average: 3.57 μg/m ³																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.6 Q ₁ = 1.3 Median = 2.3 Q ₃ = 3.6 P ₉₀ = 7.0 P ₉₉ = 31.1					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	22	5	2	1	1	1	1	2	1	2	3	2	2	2	2	2	1	10	2	1	3	9	7	12	4.0	22.3
2-Sep	13	12	11	12	11	11	22	33	40	43	49	52	47	44	23	19	14	14	17	6	5	7	9	8	21.7	52.1
3-Sep	8	7	5	2	3	1	2	2	3	2	0	1	2	1	2	1	1	2	3	1	1	6	1	2	2.6	8.4
4-Sep	0	0	0	1	0	0	2	3	3	3	1	1	2	2	2	1	2	1	6	5	5	3	3	2	2.1	5.8
5-Sep	2	3	3	4	4	4	5	7	8	7	5	4	5	5	4	2	7	5	7	7	3	8	8	6	5.0	7.9
6-Sep	2	2	1	1	1	3	1	3	2	3	2	3	2	7	4	6	6	8	9	17	4	13	5	2	4.4	17.1
7-Sep	2	2	2	2	2	5	3	6	6	6	7	8	10	9	10	10	10	11	9	9	11	9	10	8	6.9	11.2
8-Sep	9	8	8	10	8	6	5	2	8	4	3	3	3	3	4	1	1	3	1	1	1	0	1	0	3.8	10.0
9-Sep	1	0	0	0	0	0	0	0	0	1	0	0	2	1	1	1	0	1	1	0	0	0	0	0	0.4	2.0
10-Sep	1	0	0	0	0	0	0	0	0	0	1	1	1	1	2	2	1	1	1	1	1	1	1	1	0.7	1.9
11-Sep	0	1	2	2	2	3	2	3	3	4	3	4	2	2	1	7	7	1	1	1	1	1	1	1	2.2	6.8
12-Sep	0	0	0	0	0	0	0	1	1	1	1	1	1	2	3	3	2	2	2	2	2	1	1	0	1.0	3.0
13-Sep	0	0	1	0	1	0	7	3	2	3	2	4	3	1	4	5	3	3	4	6	6	5	4	4	3.0	7.0
14-Sep	6	5	3	2	3	2	2	4	4	3	2	4	3	4	3	3	2	3	3	5	2	2	3	2	3.2	5.6
15-Sep	2	3	3	2	2	2	2	3	4	4	5	4	3	2	1	3	3	3	2	3	3	2	2	2	2.7	4.6
16-Sep	1	1	1	1	1	2	1	2	2	2	2	1	2	1	1	1	1	2	1	1	2	2	1	1	1.5	2.4
17-Sep	2	0	1	1	1	1	1	2	2	2	2	2	3	3	2	2	2	3	3	3	1	1	1	1	1.9	3.4
18-Sep	2	2	2	1	2	2	2	3	3	3	3	64	19	10	7	6	3	4	5	3	3	3	3	3	6.6	64.2
19-Sep	2	3	2	3	3	3	4	4	3	3	3	2	2	2	2	2	3	4	2	2	3	3	5	4	2.9	5.4
20-Sep	6	3	2	4	3	4	4	3	2	2	1	0	1	1	0	0	0	1	1	2	1	1	1	1	1.9	5.9
21-Sep	2	1	1	2	1	2	3	2	2	2	1	1	2	1	2	1	1	0	1	3	2	2	3	2	1.7	2.9
22-Sep	2	2	3	2	2	2	2	2	2	2	2	0	1	2	1	1	1	1	1	1	1	1	1	1	1.7	2.7
23-Sep	1	1	1	1	2	2	2	3	4	3	3	3	4	4	2	5	4	4	7	7	4	3	4	4	3.3	7.3
24-Sep	3	3	3	2	3	3	3	4	2	1	1	1	2	2	2	1	3	3	5	4	4	4	4	3	2.8	4.7
25-Sep	1	2	1	2	2	2	3	3	2	2	11	3	1	3	3	8	5	2	3	4	4	3	3	3	3.2	10.6
26-Sep	3	6	3	3	12	4	7	9	5	3	3	4	4	2	2	1	2	1	2	12	11	2	3	3	4.5	11.9
27-Sep	3	2	3	2	3	3	1	2	2	2	5	1	2	1	3	2	1	4	5	2	2	1	3	2	2.4	5.5
28-Sep	3	4	4	1	1	1	1	1	2	0	0	0	0	1	1	1	1	5	8	3	3	4	3	3	2.2	7.6
29-Sep	4	3	2	1	2	3	2	2	2	2	1	2	3	2	2	2	1	1	2	2	2	2	3	4	2.2	3.8
30-Sep	6	2	2	4	4	2	3	2	2	1	0	0	0	1	1	1	2	7	15	13	13	9	17	10	4.9	16.9
3.6 2.8 2.4 2.3 2.7 2.6 3.0 4.0 4.1 3.9 4.0 6.0 4.5 4.0 3.3 3.3 3.1 3.7 4.3 4.2 3.4 3.6 3.7 3.2																									Diurnal Average	
22.3 12.2 11.5 11.7 11.9 11.2 21.5 32.9 39.8 43.1 48.5 64.2 47.2 44.0 23.4 19.2 13.8 14.0 17.0 17.1 13.3 12.6 16.9 12.0																									Diurnal Maximum	

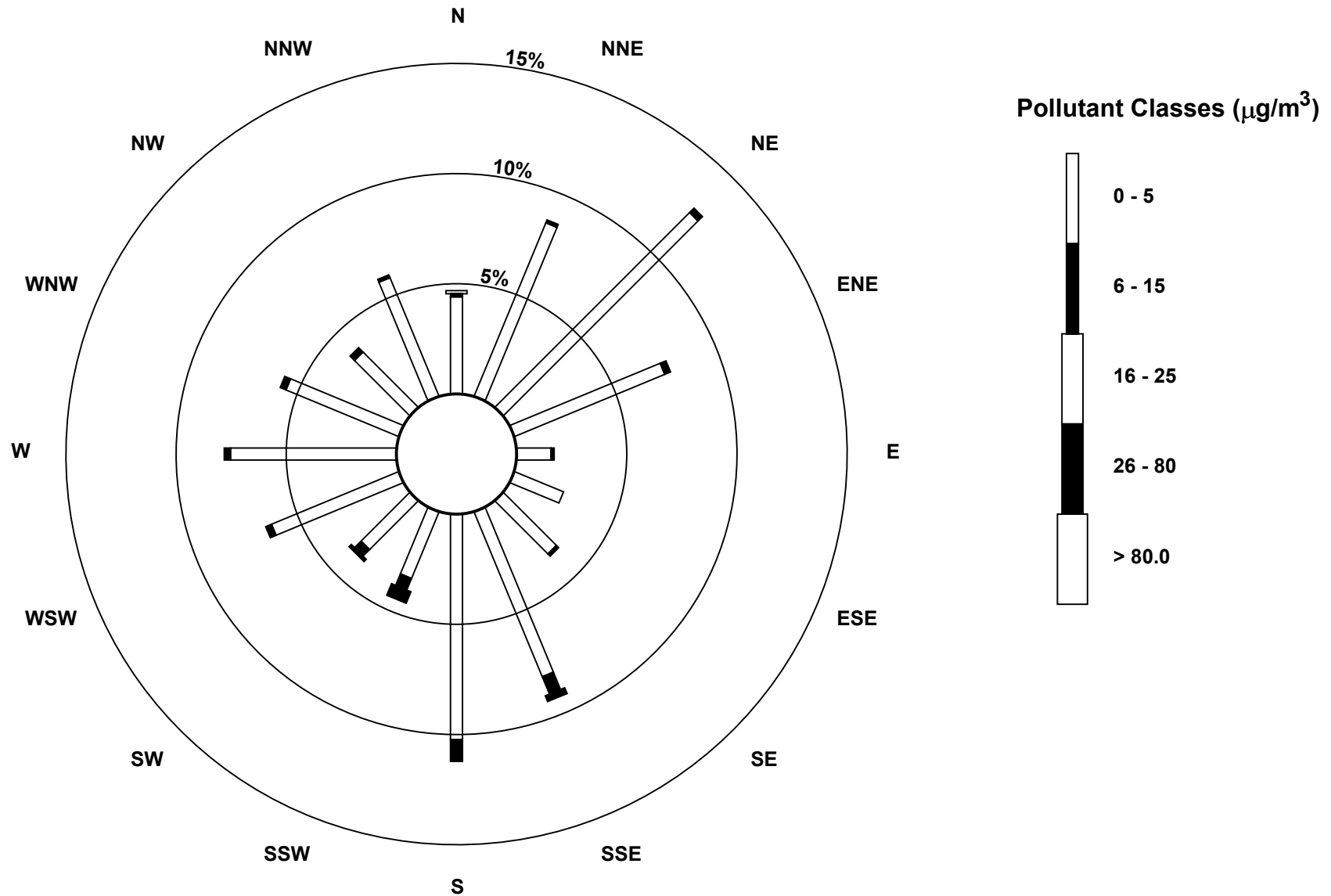
Hourly Maximums

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



Pollutant Rose

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



Hourly Averages

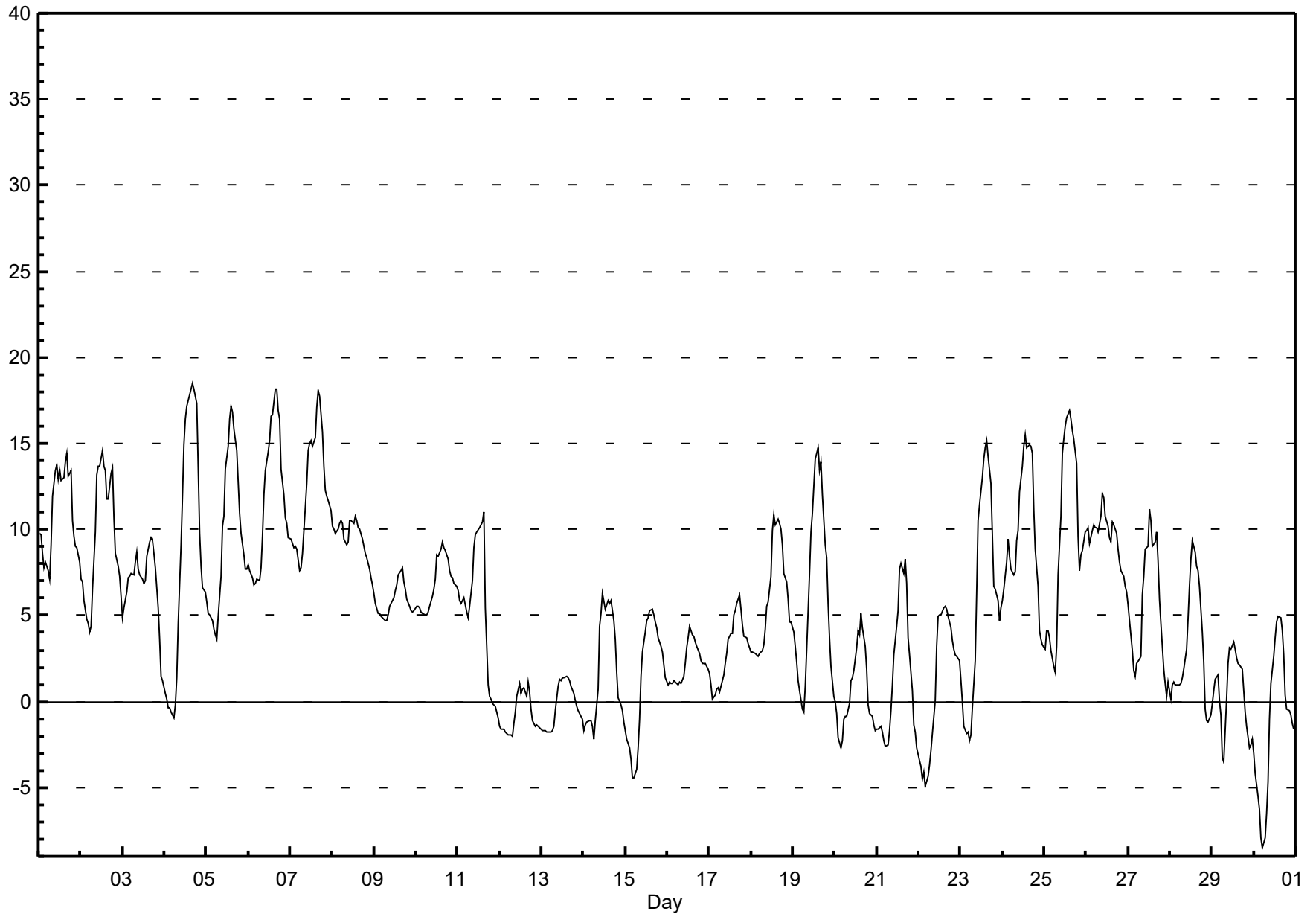
External Temperature (ET) - °C

Portable Rycroft - September 2018

Maximum Value: 18.5 °C on Sep 4 17:00																				Maximum Daily Average: 12.3 °C on Sep 7										Hours in Service: 720	
Minimum Value: -9 °C on Sep 30 06:00																				Minimum Daily Average: -1.3 °C on Sep 30										Hours of Data: 720	
Maximum Diurnal Average: 9.6 °C at hour 16																				Minimum Diurnal Average: 2.0 °C at hour 7										Hours of Missing Data: 0	
Monthly Average: 5.41 °C																				Percentiles: P ₁ = -4.6 P ₁₀ = -1.4 Q ₁ = 1.1 Median = 5.2 Q ₃ = 9.2 P ₉₀ = 13.3 P ₉₉ = 17.7										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-Sep	10	10	9	8	8	8	7	9	12	13	14	13	14	13	13	14	14	13	13	11	10	9	9	8	10.8	14.4					
2-Sep	7	7	6	5	5	4	4	7	10	13	14	14	15	14	13	12	12	13	14	11	9	8	7	6	9.5	14.6					
3-Sep	5	5	6	7	7	7	7	8	9	8	7	7	7	7	8	9	9	9	9	8	5	4	1	1	6.8	9.5					
4-Sep	0	0	0	0	-1	-1	0	1	5	9	12	15	16	17	18	18	19	18	17	14	10	8	7	6	8.7	18.5					
5-Sep	6	5	5	5	4	4	4	5	7	10	11	13	15	16	17	17	16	15	13	11	10	9	8	8	9.7	17.1					
6-Sep	8	8	7	7	7	7	7	8	10	12	13	15	15	17	17	18	18	17	16	14	12	11	10	10	11.7	18.2					
7-Sep	9	9	9	9	9	8	8	9	10	13	15	15	15	15	15	17	18	18	16	14	12	12	12	11	12.3	18.0					
8-Sep	10	10	10	10	10	10	10	9	9	9	10	11	10	11	11	10	10	9	9	9	8	8	7	7	9.5	10.7					
9-Sep	6	6	5	5	5	5	5	5	5	6	6	6	6	7	7	8	8	7	6	6	6	5	5	5	5.8	7.7					
10-Sep	6	6	5	5	5	5	5	5	6	6	7	7	9	8	9	9	9	9	8	8	7	7	7	7	6.8	9.3					
11-Sep	6	6	6	6	6	5	5	6	7	9	10	10	10	10	10	11	5	1	0	0	0	0	-1	-1	5.3	11.0					
12-Sep	-1	-2	-2	-2	-2	-2	-2	-2	-1	-1	0	1	1	1	1	0	1	1	0	-1	-1	-1	-1	-2	-0.7	1.2					
13-Sep	-2	-2	-2	-2	-2	-2	-2	-1	-1	1	1	1	1	1	1	1	1	1	0	0	0	-1	-1	-1	-0.2	1.5					
14-Sep	-2	-1	-1	-1	-1	-1	-2	-1	1	4	5	6	5	6	6	6	6	5	4	2	0	0	0	-1	1.7	6.3					
15-Sep	-2	-2	-3	-3	-4	-4	-4	-3	-1	1	3	4	5	5	5	5	5	5	4	4	3	3	2	1	1.2	5.4					
16-Sep	1	1	1	1	1	1	1	1	1	1	2	3	4	4	4	4	3	3	3	2	2	2	2	2	2.2	4.4					
17-Sep	2	1	0	0	1	1	1	1	2	2	3	4	4	4	5	5	6	6	5	4	4	4	3	3	2.9	6.2					
18-Sep	3	3	3	3	3	3	3	3	4	6	6	7	10	11	10	11	10	10	9	7	7	6	5	5	6.1	10.9					
19-Sep	4	3	2	1	1	0	-1	1	3	7	10	11	13	14	15	13	14	12	9	8	6	4	2	0	6.4	14.8					
20-Sep	0	-1	-2	-3	-2	-1	-1	-1	0	1	1	2	3	4	4	5	4	3	2	0	-1	-1	-1	-2	0.6	5.1					
21-Sep	-2	-2	-1	-2	-2	-3	-3	-2	-1	1	3	4	5	8	8	7	8	7	4	3	1	-1	-2	-3	1.5	8.3					
22-Sep	-3	-4	-5	-4	-5	-4	-4	-3	-2	0	3	5	5	5	5	6	5	5	4	4	3	3	3	2	1.0	5.6					
23-Sep	1	0	-1	-2	-2	-2	-2	0	2	6	11	11	13	14	15	15	14	13	10	7	7	6	5	5	6.0	15.2					
24-Sep	6	7	8	9	8	8	7	8	9	10	12	14	15	16	15	15	15	14	11	9	7	4	4	3	9.7	15.5					
25-Sep	3	4	4	4	3	2	2	3	7	11	14	15	16	17	17	16	16	15	14	10	8	9	9	10	9.5	16.9					
26-Sep	10	10	9	10	10	10	10	10	11	12	12	11	10	10	9	10	10	10	9	8	8	7	7	6	9.5	12.1					
27-Sep	6	5	3	2	1	2	2	3	6	7	9	9	11	11	9	9	10	8	6	5	2	1	0	1	5.3	11.2					
28-Sep	0	1	1	1	1	1	1	1	2	3	5	7	8	9	9	8	8	7	4	2	0	-1	-1	-1	3.1	9.3					
29-Sep	0	1	1	2	0	-1	-3	-4	0	2	3	3	3	3	3	2	2	2	1	-1	-1	-3	-3	-2	0.4	3.5					
30-Sep	-3	-4	-6	-6	-8	-9	-8	-6	-5	-1	1	3	4	5	5	5	4	3	0	0	-1	-1	-1	-2	-1.3	4.9					
3.1 3.0 2.6 2.5 2.2 2.0 2.0 2.6 4.2 6.1 7.4 8.2 8.9 9.4 9.5 9.6 9.4 8.6 7.4 5.8 4.7 4.0 3.4 3.2																									Diurnal Average						
10.2 10.1 9.8 10.0 10.3 10.5 10.4 9.8 12.0 13.4 14.6 15.2 16.4 17.1 17.8 18.2 18.5 18.2 17.3 13.6 12.2 11.9 11.6 11.1																									Diurnal Maximum						

Hourly Averages

External Temperature (ET) - °C
Portable Rycroft - September 2018



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Portable Rycroft - September 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	12	21	17	14	15	13	6	4	15	22	19	23	24	22	20	19	10	3	5	8	10	6	4	6	11.5	23.7
Dir	234	255	247	244	239	236	229	198	236	249	242	264	275	292	279	284	277	199	192	170	179	222	189	178	249.3	274.7
2 Spd	6	6	6	7	6	6	6	7	8	8	7	6	9	5	4	6	5	5	7	7	9	7	5	5	4.9	9.4
Dir	172	176	163	165	166	158	157	161	168	196	211	211	191	216	5	24	54	129	187	180	168	185	200	194	175.9	191.4
3 Spd	4	5	9	16	18	17	16	22	22	22	23	22	22	20	18	14	9	8	12	9	6	4	3	7	12.1	22.5
Dir	188	191	231	244	260	259	251	266	277	270	267	265	269	273	284	306	319	305	289	297	298	234	197	169	267.3	266.6
4 Spd	7	6	7	7	7	6	8	8	7	7	9	8	8	8	8	8	7	7	4	3	4	8	8	7	6.7	9.1
Dir	175	162	169	171	169	163	165	171	173	177	180	193	193	202	212	200	208	216	219	221	201	182	172	174	184.5	179.5
5 Spd	7	7	6	5	5	6	5	4	5	11	16	12	14	11	12	14	13	14	14	11	12	9	1	3	5.3	16.0
Dir	164	169	166	180	176	179	184	193	276	22	45	31	45	40	30	28	23	24	23	26	30	26	348	64	41.0	45.3
6 Spd	10	5	6	7	9	4	5	4	4	5	9	10	11	6	5	3	4	6	4	3	5	6	5	1	5.4	10.9
Dir	48	62	35	35	48	336	40	65	57	31	41	44	50	61	77	114	90	69	74	72	68	58	63	16	52.9	49.8
7 Spd	8	7	5	6	6	5	3	1	2	2	2	2	5	8	6	7	9	7	4	2	3	3	1	2	2.0	8.7
Dir	64	48	45	62	51	40	344	307	61	1	67	124	251	270	296	304	329	8	34	99	181	154	196	50	14.3	328.9
8 Spd	2	2	4	3	4	6	11	12	5	4	9	6	5	5	11	18	16	14	12	12	14	17	13	14	7.4	18.0
Dir	271	216	290	209	281	326	14	13	333	328	341	24	18	337	295	288	283	288	285	275	269	289	282	285	300.8	288.0
9 Spd	14	14	17	11	10	10	9	9	10	9	10	10	9	7	8	7	10	10	6	10	8	8	11	10	5.5	16.6
Dir	280	283	278	281	278	283	292	296	332	356	353	15	38	32	33	48	47	53	62	60	56	45	30	34	349.6	277.8
10 Spd	10	10	8	10	12	9	6	7	7	6	9	10	10	7	10	12	13	12	10	5	4	2	2	3	4.9	12.6
Dir	48	41	39	27	36	21	5	8	10	340	306	302	318	315	284	279	277	279	282	294	280	243	164	188	330.7	277.3
11 Spd	4	2	4	3	3	4	4	3	2	2	3	5	5	6	8	13	26	18	N	N	N	N	N	N	3.5	25.6
Dir	179	182	182	185	191	181	171	156	162	263	300	341	310	274	285	281	320	334	N	N	N	N	N	N	289.7	320.3
12 Spd	N	N	N	N	N	N	N	N	N	N	40	9	10	8	4	5	6	6	6	2	2	0	0	1	--	40.5
Dir	N	N	N	N	N	N	N	N	N	N	179	10	21	25	24	48	18	24	44	77	96	136	260	144	--	179.0
13 Spd	1	1	1	2	1	1	1	1	2	1	1	3	3	4	5	5	5	4	3	4	3	3	1	1	2.2	5.0
Dir	143	154	161	146	145	114	84	101	181	199	216	161	162	144	177	163	154	158	159	170	154	148	178	107	157.1	163.5
14 Spd	2	1	3	1	1	1	2	3	5	3	3	4	3	5	8	8	9	6	2	4	4	3	2	0	1.5	9.2
Dir	95	103	290	355	315	279	315	279	308	337	335	335	62	35	46	37	59	64	83	157	147	171	161	304	36.0	59.2
15 Spd	2	2	3	3	3	2	1	2	6	9	10	13	14	12	13	12	11	11	9	8	7	8	6	8	6.2	13.6
Dir	82	171	183	252	308	315	332	341	33	27	34	53	47	54	59	62	63	58	60	65	68	66	49	57	52.0	47.3
16 Spd	5	5	6	6	8	11	11	11	13	14	16	15	15	16	15	16	17	15	14	13	10	8	9	7	11.5	17.5
Dir	41	35	31	50	48	47	38	41	45	49	52	52	52	62	57	53	50	46	36	46	46	44	53	58	48.2	49.8
17 Spd	4	3	2	2	2	6	5	5	4	4	4	3	3	2	2	2	2	1	1	0	2	2	3	5	1.2	5.7
Dir	34	36	2	32	20	35	57	53	45	64	123	102	90	102	147	139	236	257	41	348	184	219	223	238	68.3	35.3
18 Spd	5	4	2	3	5	4	5	3	2	5	7	4	4	1	3	3	5	7	5	6	7	8	6	8	3.5	8.1
Dir	230	229	190	206	182	183	186	198	199	247	279	281	296	229	187	151	160	167	163	153	162	170	164	162	191.0	162.3
19 Spd	8	8	8	9	7	3	5	4	4	1	2	3	5	3	3	2	3	7	7	5	1	3	3	4	1.5	8.8
Dir	173	175	168	168	163	192	173	170	179	238	53	106	48	358	135	163	1	355	27	48	66	25	258	291	146.8	168.1
20 Spd	9	9	8	7	4	4	8	9	11	11	12	11	8	10	9	7	9	9	6	6	4	5	3	2	6.8	12.3
Dir	353	12	356	308	297	331	2	350	358	355	347	352	347	25	31	30	15	25	25	29	62	61	38	0	4.9	346.8
21 Spd	3	3	5	4	4	3	1	1	2	3	3	4	4	3	5	3	7	10	7	3	2	0	1	2	2.6	10.1
Dir	343	353	346	348	338	325	346	12	12	26	58	34	44	345	56	40	38	51	49	90	152	20	153	172	29.3	50.7
22 Spd	1	1	2	5	7	9	7	6	7	10	9	7	7	7	6	8	6	7	6	3	3	2	4	4	4.2	10.0
Dir	122	245	4	60	46	53	63	34	44	42	70	107	119	107	114	126	134	140	137	139	139	148	139	138	92.0	41.6

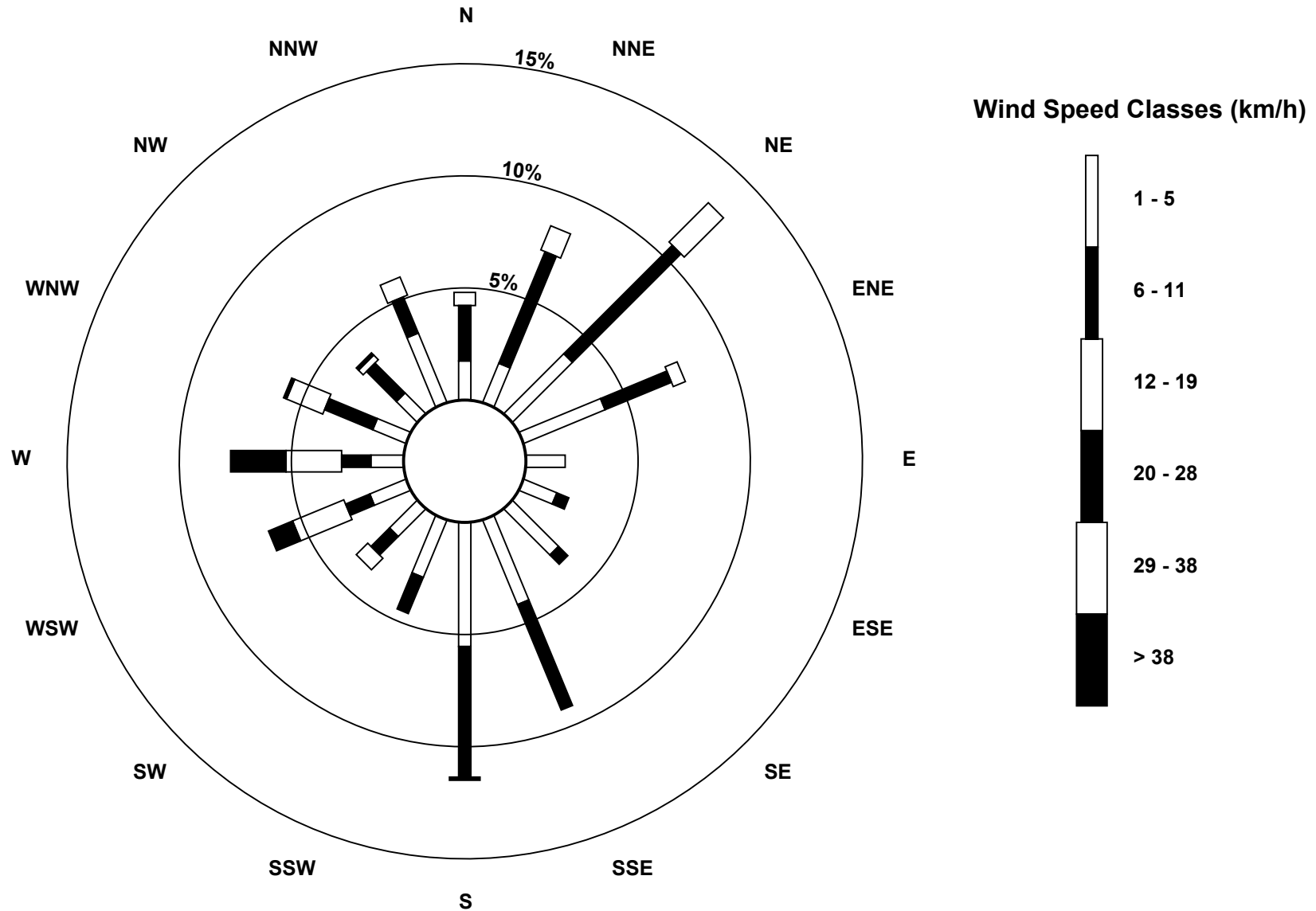
Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Portable Rycroft - September 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	4	4	5	5	6	6	8	7	8	9	8	8	13	19	18	22	18	16	6	5	6	9	9	9	7.4	22.5									
Dir	141	155	146	140	147	161	157	152	160	187	201	198	233	244	245	256	240	241	224	195	183	180	173	185	207.6	255.8									
24 Spd	8	7	9	21	18	12	13	15	17	17	25	24	25	27	25	20	21	16	9	4	5	6	6	7	13.0	26.6									
Dir	186	188	224	255	260	258	263	260	272	265	263	270	268	272	279	275	268	258	271	235	157	169	157	156	258.3	272.3									
25 Spd	8	8	7	6	6	7	6	6	7	6	26	24	17	15	23	23	18	15	9	4	7	8	5	5	9.2	26.2									
Dir	170	169	166	147	152	165	173	167	170	184	243	252	236	237	249	247	239	231	228	202	184	185	190	193	218.9	243.2									
26 Spd	5	6	3	7	9	10	9	8	6	9	15	18	12	12	11	14	17	15	12	9	4	7	8	7	7.8	17.7									
Dir	189	315	211	235	242	246	243	245	273	293	320	357	337	301	283	274	268	267	255	247	283	257	255	275	276.2	356.8									
27 Spd	6	2	4	1	3	4	2	2	2	4	4	3	2	9	10	6	9	9	6	11	6	3	2	1	2.0	10.8									
Dir	302	350	23	347	267	346	66	170	268	177	165	246	333	334	328	241	325	333	16	57	49	137	257	135	339.2	57.2									
28 Spd	1	1	3	3	3	4	4	8	9	9	7	5	6	7	7	8	5	6	2	4	3	7	7	5	2.6	9.0									
Dir	322	21	63	40	70	45	57	38	50	52	58	53	50	22	10	338	300	347	96	185	156	171	176	187	47.1	52.3									
29 Spd	4	5	9	5	6	5	7	9	10	15	13	12	12	14	12	10	7	2	1	2	3	3	4	2	5.4	14.8									
Dir	234	292	314	280	275	296	306	302	319	336	341	350	331	353	353	345	328	334	169	130	135	103	79	107	329.7	335.7									
30 Spd	2	2	2	1	2	1	1	3	5	7	11	12	10	9	6	10	9	10	8	4	2	1	1	3	4.5	11.9									
Dir	76	87	111	75	354	11	17	34	41	34	47	38	44	41	37	18	1	14	17	76	73	296	251	309	31.8	37.9									
Spd	1.1	1.0	1.1	1.8	1.6	1.3	0.7	1.1	1.7	2.6	2.3	3.5	3.1	3.7	3.9	4.1	4.1	2.8	1.3	0.9	1.5	1.4	1.4	1.5	Diurnal Average										
Dir	177.3	219.5	242.6	234.4	250.3	269.3	271.7	301.1	314.2	320.1	288.1	329.1	327.3	320.4	312.2	306.0	318.0	336.1	351.6	90.9	134.9	166.3	172.1	176.9	Diurnal Maximum										
Spd	13.6	20.6	16.6	21.4	17.7	16.9	15.9	21.6	21.5	22.1	40.5	24.3	25.4	26.6	24.7	23.1	25.6	17.5	14.1	12.6	13.7	17.4	13.3	14.2	Diurnal Maximum										
Dir	279.8	255.0	277.8	254.8	259.9	258.6	251.5	265.9	277.2	270.0	179.0	251.8	268.0	272.3	279.2	246.9	320.3	334.0	35.9	46.4	268.7	288.9	282.0	285.4											
Maximum Speed Value: 40 km/h on Sep 12 11:00																		Minimum Speed Value: 0 km/h on Sep 12 22:00																Hours in Service: 720	
Maximum Daily Speed Average: 13.0 km/h on Sep 24																		Minimum Daily Speed Average: 1.2 km/h on Sep 13																Hours of Data: 704	
Maximum Diurnal Speed Average: 4.1 km/h at hour 17																		Minimum Diurnal Speed Average: 0.7 km/h at hour 7																Hours of Missing Data: 16	
Monthly Average Velocity: 1.29 km/h 301.38 deg																		Speed Percentiles: P ₁ = 0.7 P ₁₀ = 1.9 Q ₁ = 3.6 Median = 6.3 Q ₃ = 9.4 P ₉₀ = 14.4 P ₉₉ = 24.3																Percent Operational Time: 97.8	
All monthly, daily, and diurnal averages have been calculated using vector methods																																			
N - Not Valid																																			
Frequency Distribution																																			
Speed Range (km/h)																																			
Direction	0 to 5		5 to 11		11 to 19		19 to 28		28 to 38		> 38		Total																						
North	31		35		10		0		0		0		76																						
NorthEast	40		99		31		0		0		0		170																						
East	31		5		0		0		0		0		36																						
SouthEast	39		17		0		0		0		0		56																						
South	56		86		0		0		0		1		143																						
SouthWest	21		20		17		2		0		0		60																						
West	21		18		35		24		0		0		98																						
NorthWest	27		29		8		1		0		0		65																						
Total	266		309		101		27		0		1		704																						

Wind Rose

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



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Portable Rycroft - September 2018

Maximum Speed: 41 km/h on Sep 12 11:00																				Maximum Daily Speed Average: 15.2 km/h on Sep 24										Hours in Service: 720	
Minimum Speed: 1 km/h on Sep 12 23:00																				Minimum Daily Speed Average: 2.8 km/h on Sep 13										Hours of Data: 704	
Maximum Diurnal Speed Average: 11.5 km/h at hour 11																				Minimum Diurnal Speed Average: 4.9 km/h at hour 23										Hours of Missing Data: 16	
Monthly Average Speed: 7.74 km/h																				Percentiles: P ₁ = 1.2 P ₁₀ = 2.4 Q ₁ = 4.1 Median = 6.6 Q ₃ = 9.7 P ₉₀ = 14.5 P ₉₉ = 24.6										Percent Operational Time: 97.8	
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-Sep	12	21	17	14	16	13	7	4	16	22	19	24	24	22	21	19	10	3	6	8	10	8	4	6	13.6	24.3					
2-Sep	6	6	6	7	6	6	6	7	8	9	7	7	10	6	5	7	6	6	7	7	9	7	6	6	6.7	9.7					
3-Sep	5	5	9	16	18	17	16	22	22	22	23	22	22	20	18	14	10	8	12	9	6	5	3	7	13.8	22.6					
4-Sep	7	6	7	7	7	7	8	8	7	7	9	8	9	8	9	8	8	8	4	3	4	8	8	7	7.2	9.2					
5-Sep	7	7	6	5	5	6	5	5	5	12	16	13	14	12	13	14	13	14	14	11	12	9	2	4	9.3	16.2					
6-Sep	10	5	6	7	9	5	6	4	5	6	9	11	11	7	6	6	5	6	4	3	5	6	5	3	6.2	11.4					
7-Sep	8	7	6	6	6	6	4	3	3	2	3	2	6	8	6	7	9	8	5	2	3	3	3	3	5.0	8.9					
8-Sep	3	3	4	4	5	6	11	13	9	5	9	6	6	5	12	18	16	14	12	13	14	17	13	14	9.7	18.2					
9-Sep	14	14	17	11	10	10	9	9	10	10	10	10	9	7	9	7	11	10	6	10	8	8	11	10	10.0	16.7					
10-Sep	10	10	8	11	12	10	6	7	7	6	9	10	11	8	10	12	13	12	10	5	4	3	2	3	8.3	12.9					
11-Sep	4	2	4	3	3	4	4	3	2	3	4	6	5	7	8	14	27	20	N	N	N	N	N	N	6.8	26.7					
12-Sep	N	N	N	N	N	N	N	N	N	N	41	11	10	10	4	5	6	7	6	2	2	2	1	2	--	40.7					
13-Sep	2	1	1	2	1	2	2	1	3	2	3	4	4	4	5	5	5	4	4	4	3	4	1	2	2.8	5.4					
14-Sep	2	2	3	2	1	1	2	3	5	3	4	5	5	6	8	9	10	7	2	4	4	3	2	1	3.9	9.7					
15-Sep	2	3	3	4	3	2	2	3	6	9	10	13	14	13	13	12	11	11	9	8	7	8	6	8	7.5	13.9					
16-Sep	5	5	7	6	8	11	11	11	13	15	16	15	15	16	15	16	18	15	14	13	10	8	9	7	11.6	17.6					
17-Sep	4	3	2	3	2	6	5	5	4	4	5	4	4	3	3	2	2	2	2	3	3	2	3	5	3.4	5.8					
18-Sep	6	5	2	3	5	4	5	3	2	5	7	5	5	5	4	3	5	7	5	6	7	8	6	8	5.0	8.1					
19-Sep	8	8	8	9	7	5	5	4	4	2	4	4	6	5	5	4	4	7	7	6	3	5	4	4	5.3	8.8					
20-Sep	10	9	8	7	4	5	8	9	11	12	13	11	9	10	10	9	9	9	6	6	4	5	4	3	7.9	12.6					
21-Sep	3	3	5	4	4	3	2	2	2	3	3	5	6	5	7	5	9	10	7	3	2	1	2	2	4.1	10.3					
22-Sep	2	2	2	5	7	9	7	6	7	10	9	8	7	8	7	8	6	7	6	3	3	2	4	4	5.8	10.1					
23-Sep	4	4	5	5	6	6	8	7	8	10	8	8	14	19	19	23	18	16	7	5	6	9	9	9	9.6	22.8					
24-Sep	8	7	10	21	18	13	13	15	17	17	25	25	26	27	25	21	21	16	9	5	6	6	6	7	15.2	27.0					
25-Sep	8	8	7	7	6	7	7	6	7	6	26	24	17	16	23	23	18	15	9	4	7	8	5	6	11.3	26.4					
26-Sep	5	9	4	8	9	10	9	8	6	10	16	18	12	12	12	14	17	15	12	9	7	7	8	7	10.1	18.0					
27-Sep	6	3	4	2	3	4	2	2	2	5	5	4	5	9	12	6	10	9	8	11	6	3	2	2	5.2	12.0					
28-Sep	1	2	3	3	3	4	5	8	9	9	7	6	7	8	8	9	5	7	3	4	3	7	7	5	5.6	9.2					
29-Sep	4	5	10	6	7	6	7	9	10	15	14	12	13	14	13	11	8	3	2	2	4	4	4	3	7.7	15.1					
30-Sep	2	2	2	1	2	1	1	4	5	8	12	13	11	11	7	10	10	10	8	4	2	1	1	3	5.5	12.6					
5.7 5.8 6.1 6.5 6.7 6.4 6.3 6.6 7.5 8.6 11.5 10.4 10.5 10.4 10.6 10.8 10.7 9.5 7.1 5.9 5.6 5.7 4.9 5.2																									Diurnal Average						
13.7 20.7 16.7 21.4 17.8 16.9 15.9 21.8 21.7 22.4 40.7 24.6 25.8 27.0 25.4 23.3 26.7 20.2 14.1 12.6 13.8 17.5 13.4 14.2																									Diurnal Maximum						
N - Not Valid																															
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg

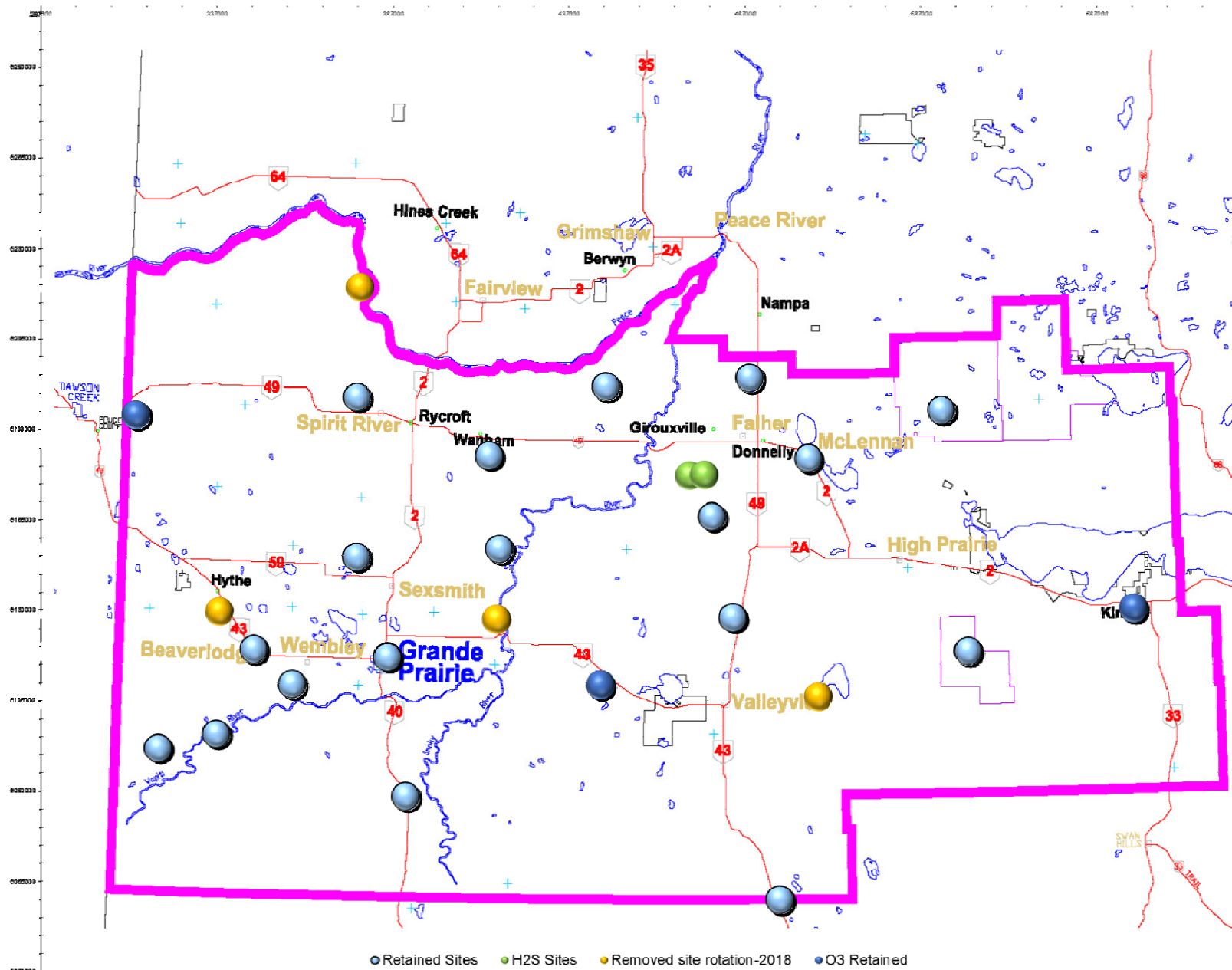
Portable Rycroft - September 2018

Maximum Value: 91.5 deg on Sep 15 00:00																			Hours in Service: 720						
Minimum Value: 0.0 deg on Sep 12 08:00																			Hours of Data: 720						
Percentiles: P ₁ = 1.9 P ₁₀ = 5.5 Q ₁ = 8.3 Median = 14.7 Q ₃ = 28.6 P ₉₀ = 51.2 P ₉₉ = 81.2																			Hours of Missing Data: 0						
																			Hours of Calibration: 0						
																			Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Sep	17	5	8	8	6	6	22	20	10	9	9	15	14	11	14	13	30	35	20	6	8	32	12	7	35.4
2-Sep	9	10	14	8	7	9	8	7	9	15	15	17	15	26	37	22	43	38	13	11	7	6	22	23	43.1
3-Sep	17	10	16	9	7	4	4	6	7	8	5	6	7	8	11	14	16	22	7	6	13	18	14	4	21.9
4-Sep	5	8	3	2	4	7	4	4	5	11	12	18	20	20	26	20	21	17	18	14	14	6	5	7	26.5
5-Sep	7	6	12	5	4	6	33	35	30	27	9	16	16	20	15	13	11	10	4	4	4	5	44	67	67.3
6-Sep	10	20	11	7	8	39	16	13	16	29	19	21	16	50	47	61	40	14	17	15	6	9	8	52	60.7
7-Sep	7	12	13	10	8	22	32	72	47	47	69	69	39	13	20	19	15	20	41	40	23	15	73	54	72.8
8-Sep	65	74	37	42	25	16	13	11	69	49	19	12	20	30	12	8	10	9	8	5	5	4	7	6	74.3
9-Sep	5	6	8	5	4	6	7	9	14	14	15	15	15	24	23	23	16	10	16	9	10	10	5	6	23.5
10-Sep	6	8	10	6	6	9	8	9	9	18	11	9	20	15	14	16	12	10	5	9	10	50	16	11	50.4
11-Sep	10	24	8	6	10	11	5	24	34	61	42	20	28	21	17	19	18	55	73	45	48	23	32	5	73.2
12-Sep	3	2	1	1	0	0	0	0	0	47	19	57	9	20	18	18	11	9	16	15	15	87	75	72	86.7
13-Sep	26	64	63	35	29	59	45	38	69	61	66	36	39	32	34	18	25	28	32	31	21	22	52	64	69.3
14-Sep	30	71	41	82	59	49	21	16	15	26	40	49	65	42	37	23	18	37	35	13	10	22	61	92	91.5
15-Sep	25	46	36	38	10	29	62	49	12	11	11	15	16	16	12	10	9	7	7	5	6	5	7	8	61.8
16-Sep	10	9	9	7	5	4	4	5	4	7	7	7	8	8	8	8	8	8	5	6	6	9	5	6	10.5
17-Sep	9	25	45	20	14	12	9	9	17	31	31	39	37	45	54	63	38	61	61	88	36	22	17	21	88.3
18-Sep	13	17	12	23	5	7	6	21	22	21	15	17	38	90	54	37	18	7	13	8	6	5	10	4	89.5
19-Sep	5	6	4	3	3	45	8	16	9	79	87	61	46	67	66	82	53	12	10	23	60	58	60	25	87.2
20-Sep	33	5	9	10	11	47	11	5	6	13	13	14	22	25	21	37	22	9	5	9	13	7	40	27	47.4
21-Sep	39	15	9	11	8	17	62	72	45	33	45	35	51	77	63	58	58	13	22	20	27	59	44	35	76.9
22-Sep	26	62	60	11	4	5	6	10	11	10	19	28	24	27	27	22	19	11	10	11	25	25	15	12	61.9
23-Sep	17	9	8	5	11	12	5	7	8	10	15	11	19	11	13	10	9	5	16	10	9	5	4	5	18.9
24-Sep	4	5	25	5	4	5	5	9	6	9	9	12	10	10	13	13	12	6	7	31	17	12	17	14	30.8
25-Sep	4	6	6	9	28	7	14	8	6	13	11	6	11	13	11	8	7	5	10	15	7	6	7	9	27.8
26-Sep	10	63	38	15	11	7	6	11	28	10	16	11	16	9	12	11	6	6	5	8	54	14	8	14	62.9
27-Sep	11	49	22	64	25	21	40	47	51	31	24	41	87	22	35	24	24	8	29	7	25	23	50	32	86.9
28-Sep	71	52	23	19	24	24	16	7	9	12	15	48	48	32	37	15	23	36	54	7	29	8	7	16	71.0
29-Sep	21	12	16	27	13	23	10	6	12	11	16	16	19	14	15	18	25	60	54	22	17	29	13	29	59.6
30-Sep	37	35	32	69	37	29	67	42	13	15	17	21	24	33	55	19	18	11	7	16	23	57	34	31	68.6
	71.0	74.3	62.6	81.8	58.8	59.3	66.9	72.0	69.3	78.7	87.2	68.5	86.9	89.5	65.7	82.0	57.9	61.1	73.2	88.3	60.2	86.7	75.3	91.5	

PAZA

Monthly Passive Data Summary

Location of PAZA Passive Monitoring Stations



PAZA Passive Results for September 2018

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	Site Legal
Duplicates						
3a	Fourth Creek	0.2				
3b	Fourth Creek	0.1				
29a	Smoky Heights			0.7		
29b	Smoky Heights			0.7		
39a	Clouston Creek	0.1				
39b	Clouston Creek	0.1				
46a	Little Smoky			2.0		
46b	Little Smoky			1.7		
47a	Kinuso		24.6			
47b	Kinuso		22.6			
64a	Girouxville 4				0.2	
64b	Girouxville 4				0.2	
2	Bay Tree	0.1	BDL	0.6		13-16-078-13 W6M
3	Fourth Creek	0.2		0.4		04-13-082-07 W6M
9	Spirit River	0.1		0.1		08-12-079-07 W6M
12	Hythe	0.2		0.2		14-36-072-11 W6M
14	Sylvester	0.1		0.9		08-06-069-12 W6M
16	Beaverlodge	0.2		1.3		15-36-071-10 W6M
18	Saddle Hills	0.2		0.5		04-25-074-07 W6M
19	Wanham	0.2		0.5		16-22-077-03 W6M
21	Eaglesham	0.1		0.4		16-21-079-25 W5M
24	Wembley	0.1		1.1		12-31-070-08 W6M
25	Pinto Creek	0.2		0.6		04-24-069-11 W6M
27	Grande Prairie I	0.2		3.8		08-15-071-06 W6M
29	Smoky Heights	0.2		0.7		04-06-075-02 W6M
30	Fitzsimmons	0.1		0.9		15-36-072-03 W6M
32	Gold Creek	0.3		1.6		06-33-067-05 W6M
35	Jean Cote	0.1		0.6		12-35-079-21 W5M
36	Guy	0.1		0.5	0.1	03-04-076-22 W5M
37	Crooked Creek	0.1	23.0	0.6		16-01-071-26 W5M
39	Clouston Creek	0.1		0.4		12-01-073-22 W5M
40	McLennan	0.2		0.9		03-29-077-19 W5M
42	Sunset House	0.1		0.5		05-32-070-19 W5M
44	Peavine	0.1		0.2		03-05-079-15 W5M
46	Little Smoky	0.1		1.9		12-01-065-21 W5M
47	Kinuso	0.1	23.6	0.4		12-10-073-10 W5M
49	Grande Prairie HP	0.2		3.1		17-26-071-06 W6M
50	East Prairie	0.1		0.2		13-02-072-15 W5M
63	Girouxville 3				0.1	14-02-077-23 W5M
64	Girouxville 4				0.2	4-08-077-22 W5M

*BDL = Below Detection Level

*N/S - No sample

Passive Summary for September 2018

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

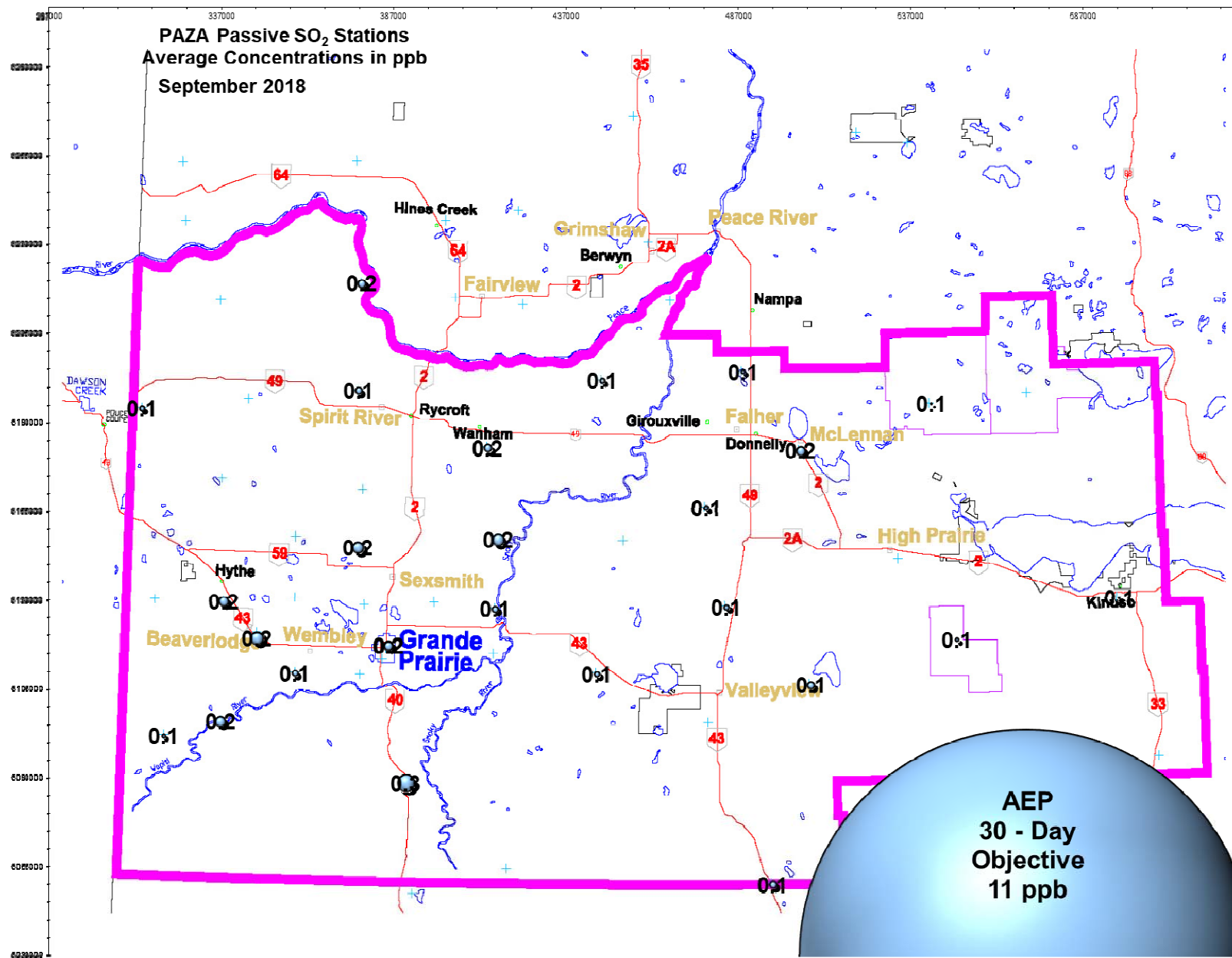
Passive Summary for September 2018 (PAZA Zone)				
Mean	0.1	23.3	0.9	0.1
Standard Deviation	0.1	0.4	0.9	0.0
Minimum	0.1	23.0	0.1	0.1
Minimum At	Kinuso (#47)	Crooked Creek (#37)	Spirit River (#9)	Guy (#36)
Maximum	0.3	23.6	3.8	0.2
Maximum At	Gold Creek (#32)	Kinuso (#47)	Grande Prairie I (#27)	Girouxville 4 (#64a)

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

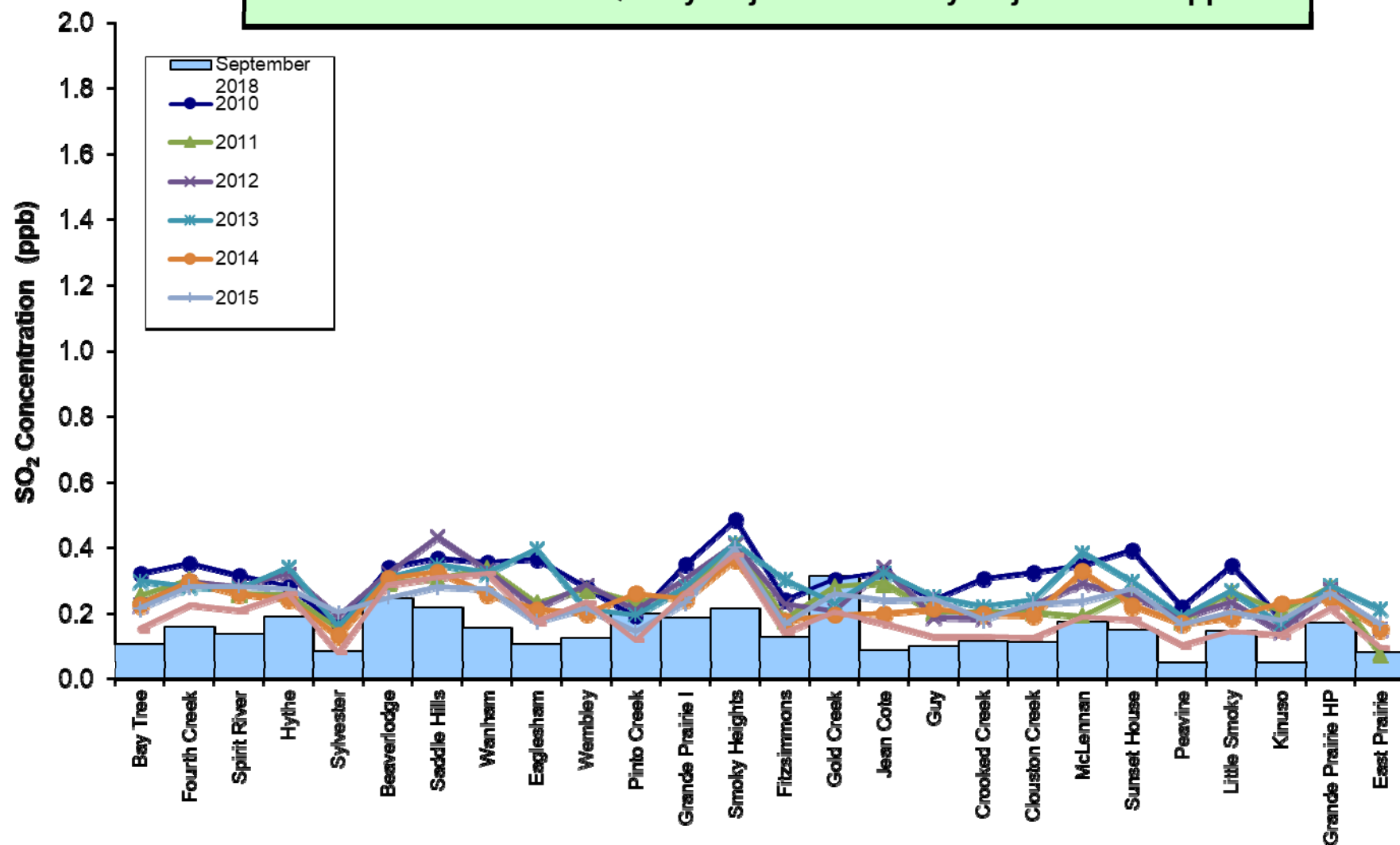
	SO ₂	NO ₂
PAZA Beaverlodge station	0.1	2.4
PAZA Beaverlodge passive	0.2	1.3

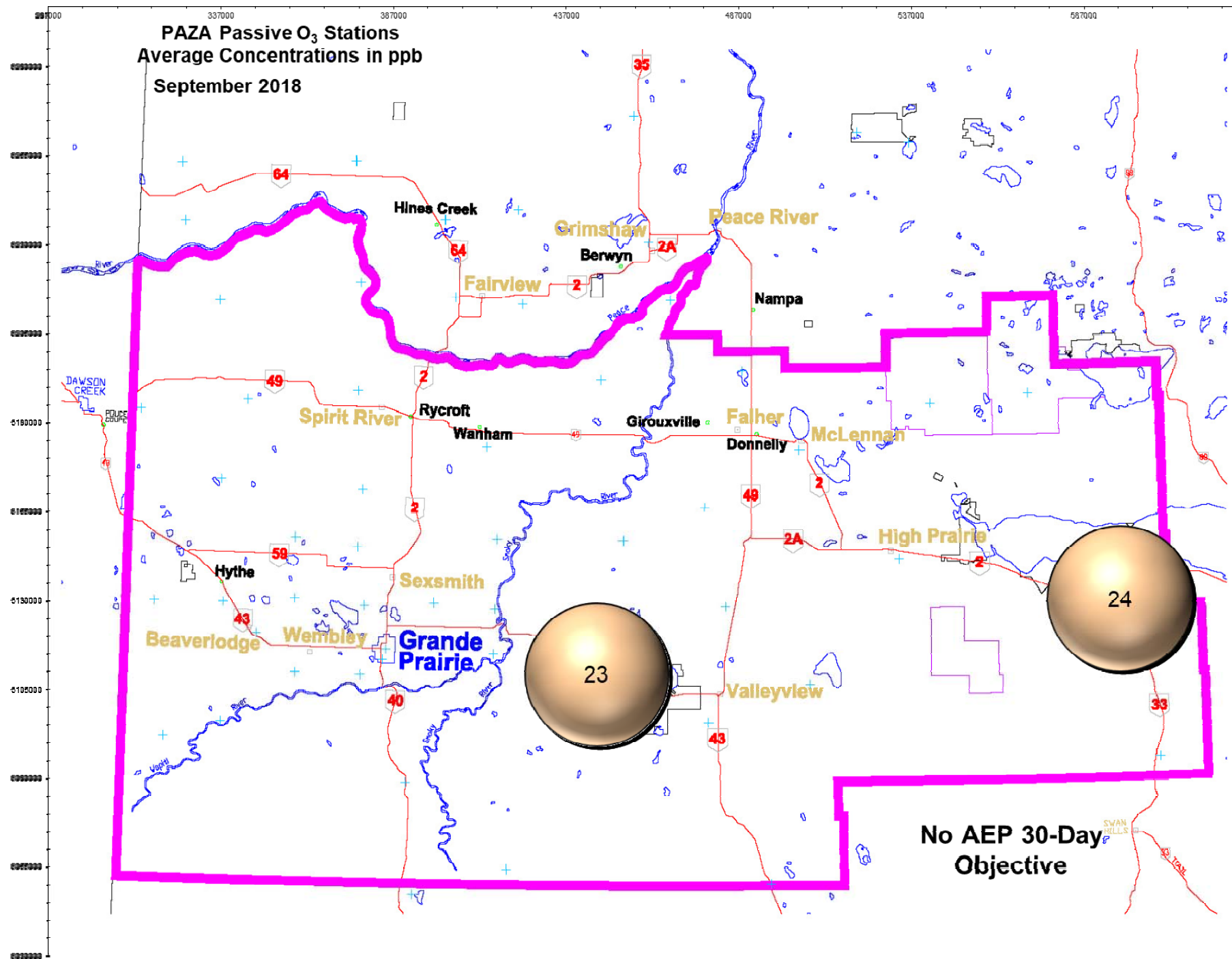
Comparison between Continuous and Passive monitoring at Henry Pirker (passive #49 Grande Prairie HP)

	SO ₂	NO ₂
PAZA Henry Pirker station	0.3	5.0
PAZA Grande Prairie passive	0.2	3.8

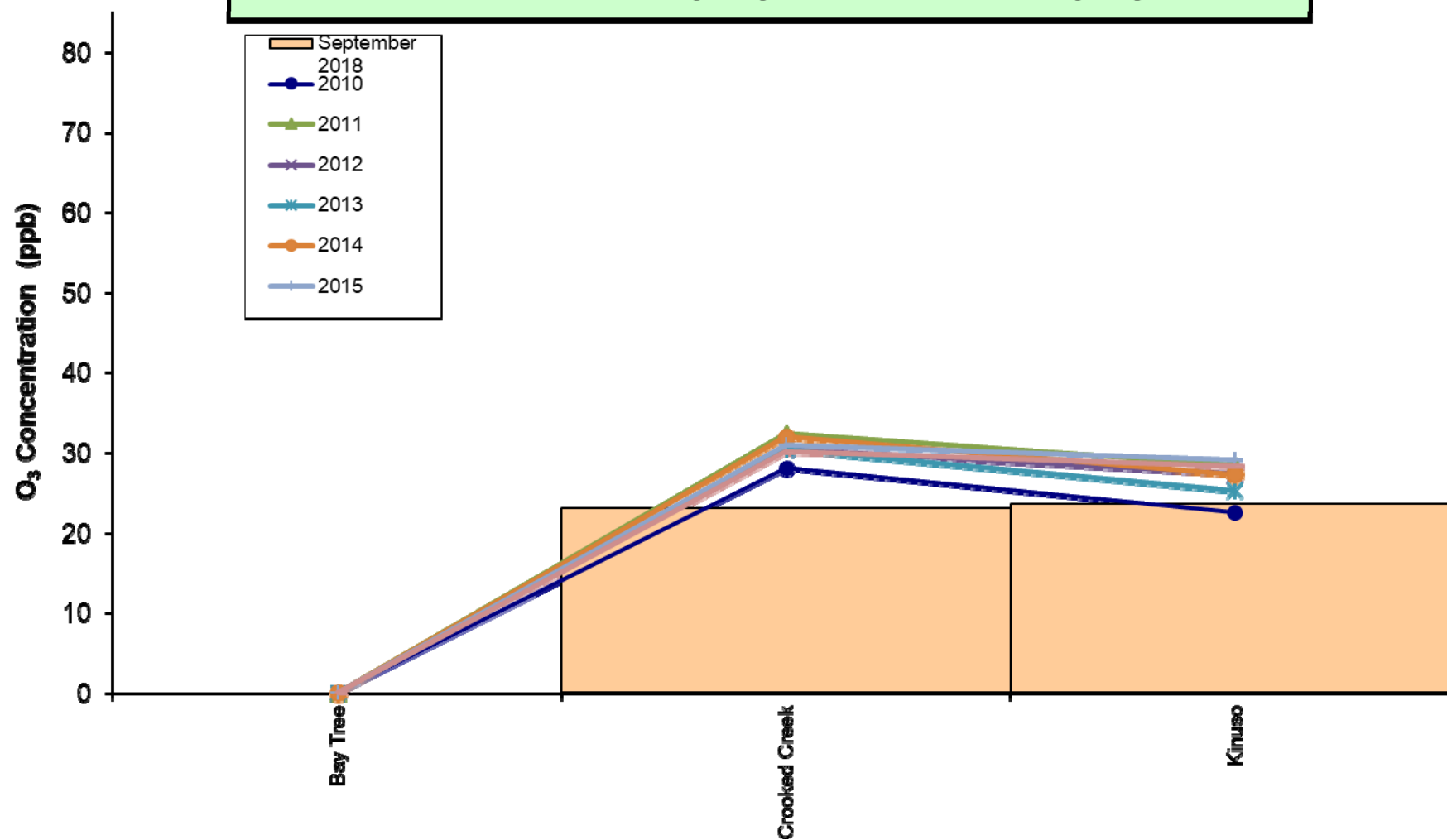


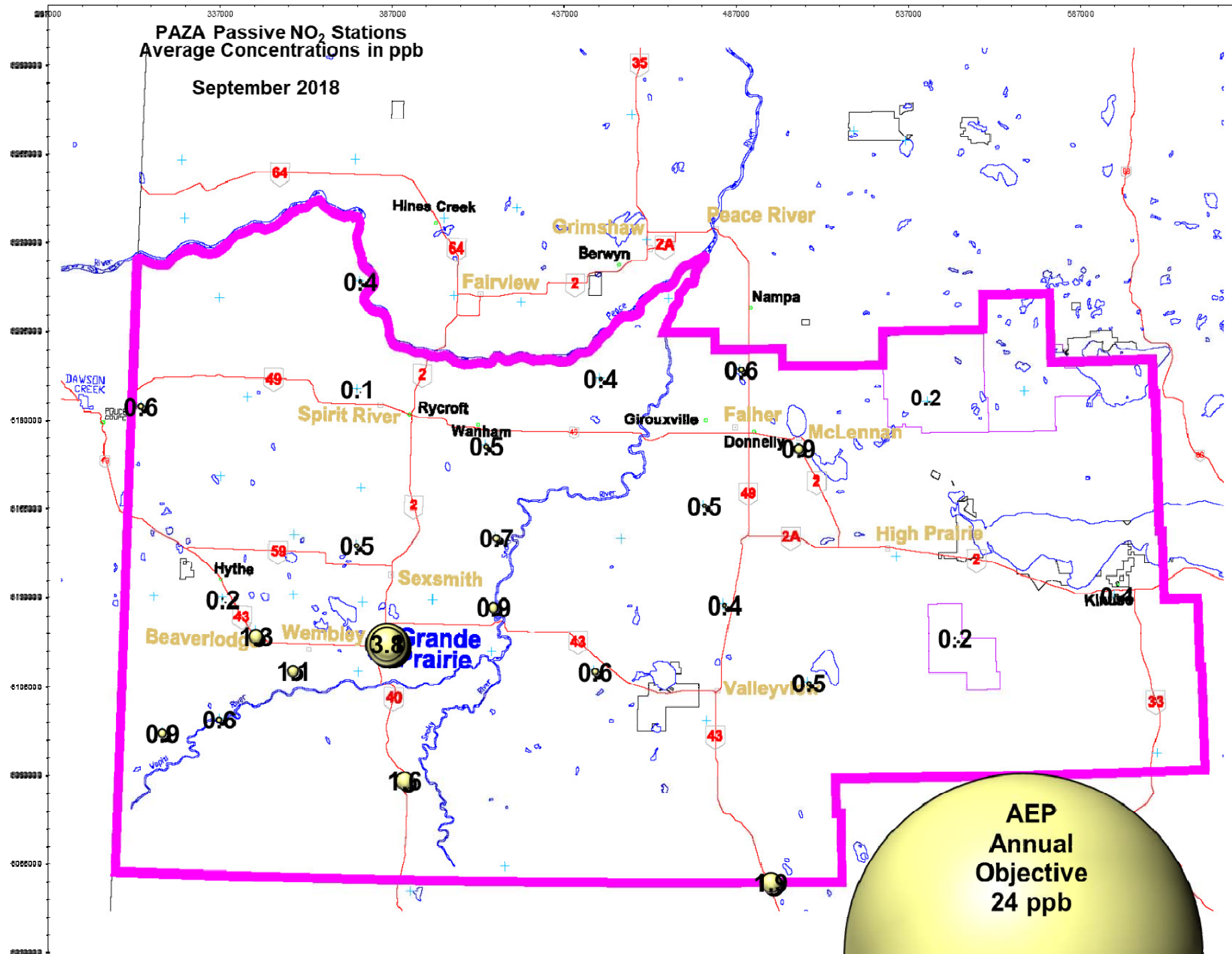
Alberta Ambient Air Quality Objective - 30-day Objective is 11 ppb



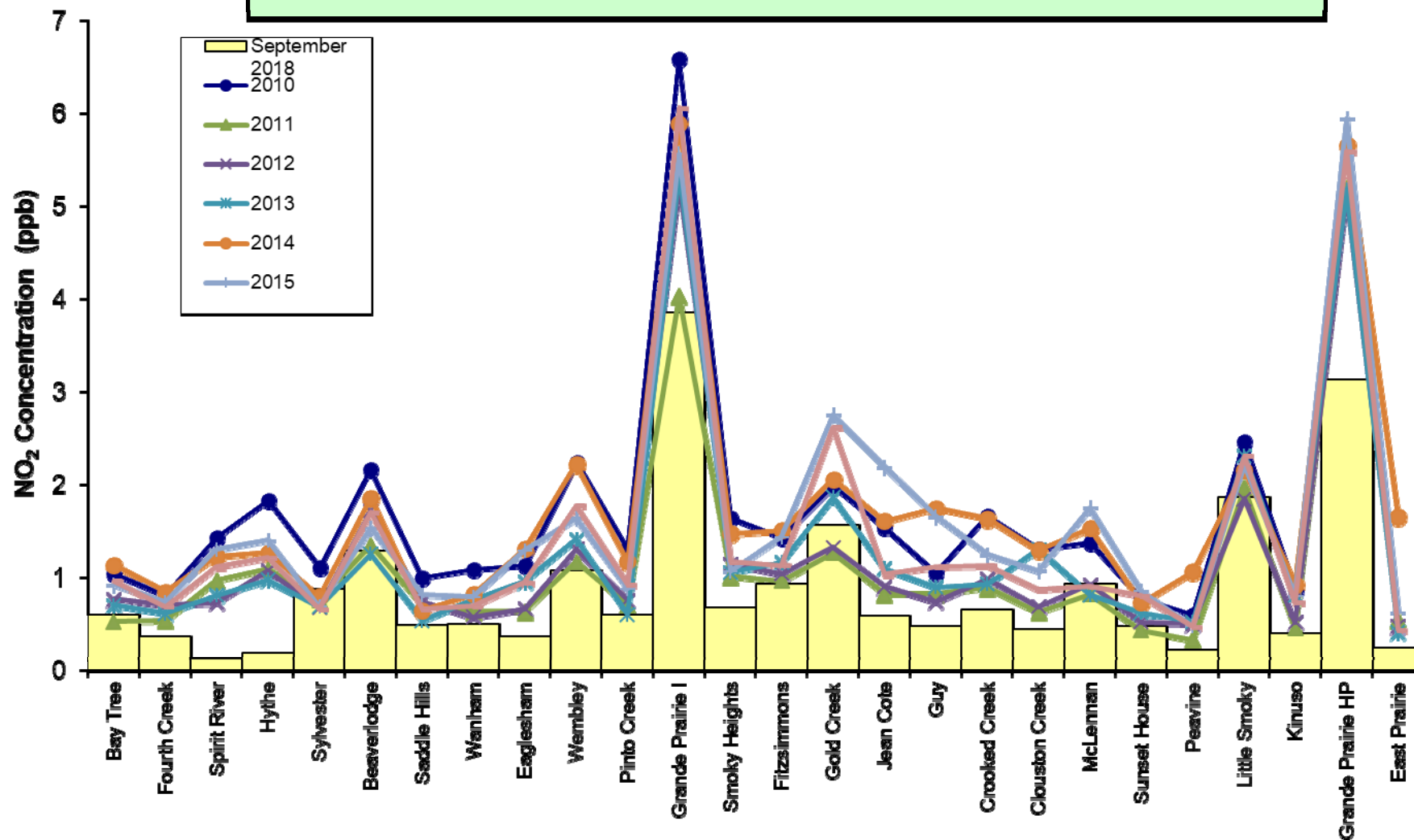


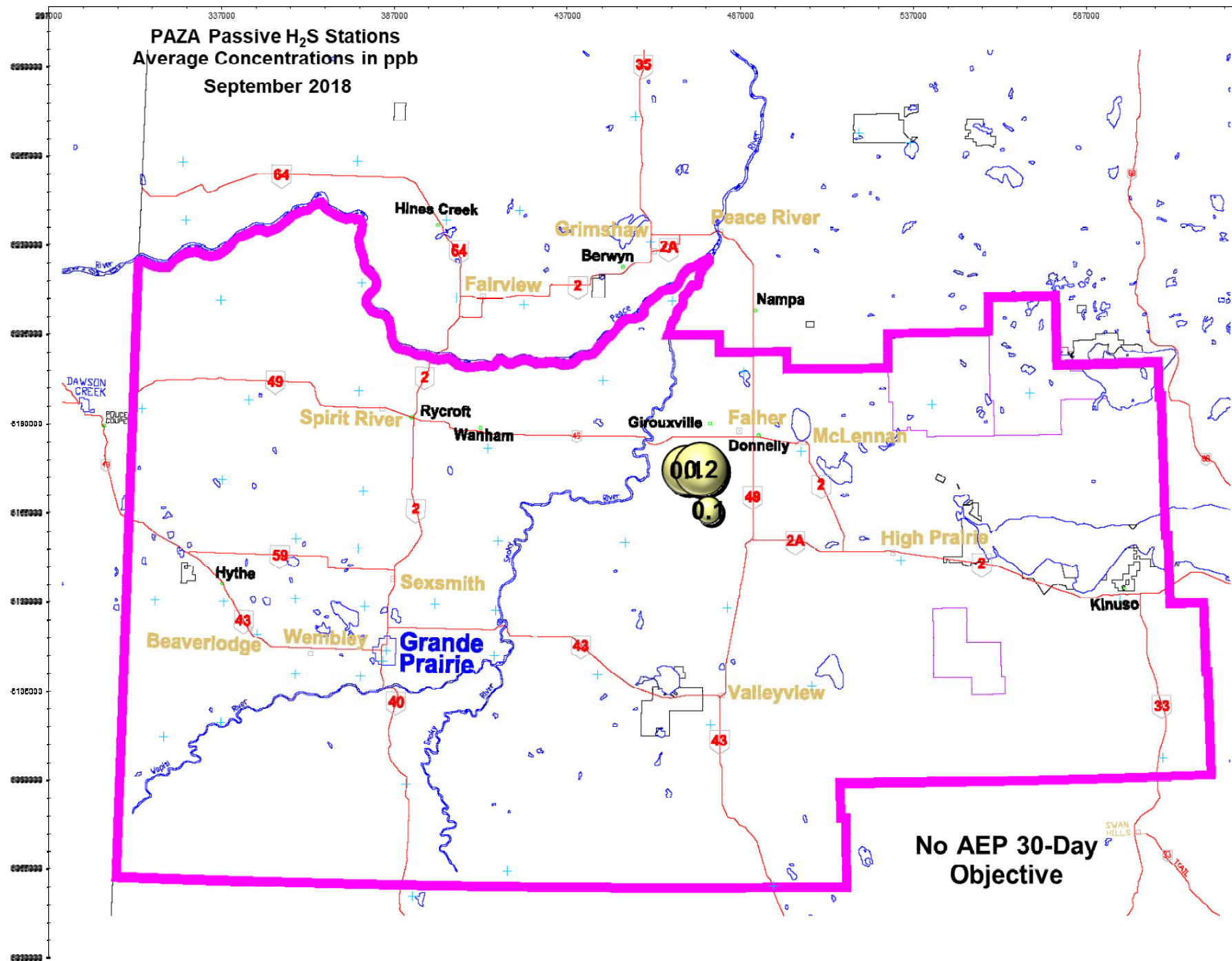
Alberta Ambient Air Quality Objective - No Annual O₃ Objective





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





September 2018 Calibration Reports

Calibration Report



Parameter SO2

Air Monitoring Network PAZA

Station Information

Calibration Date	September 11, 2018	Previous Calibration	August 7, 2018
Station Number	4	Station Location	Beaverlodge
Reason:	Routine	Install	Removal
Start Time (MST)	11:30	End Time (MST)	15:50
Barometric Pressure	0.921 atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3016
Cal Gas Concentratio	10.1 ppm	Cal Gas Expiry Date	21/02/2021
Gas Cert Reference	EX0012231		
DACS make	CR3000	DACS serial No.	5237
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.967382	Calculated slope	1.000983
Calculated intercept	0.256189	Calculated intercept	0.197878
Analyzer make	TEI Model 43i-TLE	Analyzer serial #	713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.86		2.77	
Coefficient	0.975		0.936	
PMT	-768.2	V	-768.2	V
UV Lamp Voltage	1115	V	1113	V
Chamber Temp	45	Deg C	45	Deg C
Pressure	664.9	mm Hg	654.7	mm Hg
Sample Flow	0.502	LPM	0.522	LPM
Lamp Intensity	94	%	93	%

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	0.1	N/A
4995	39.94	80.1	80.0	1.0019
4995	19.97	40.2	39.9	1.0084
4995	9.97	20.1	19.6	1.0273
4995	0.00	0.0	0.1	As found zero
4995	39.94	80.1	80.0	As found span
Average Correction Factor				1.0125

Calculated value of As Found Response: 77.528 ppm Percent Change of As Found: 3.2%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.3	ppb
Auto span	60.0	ppb	59.9	ppb

Notes: Slight adjustment made

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



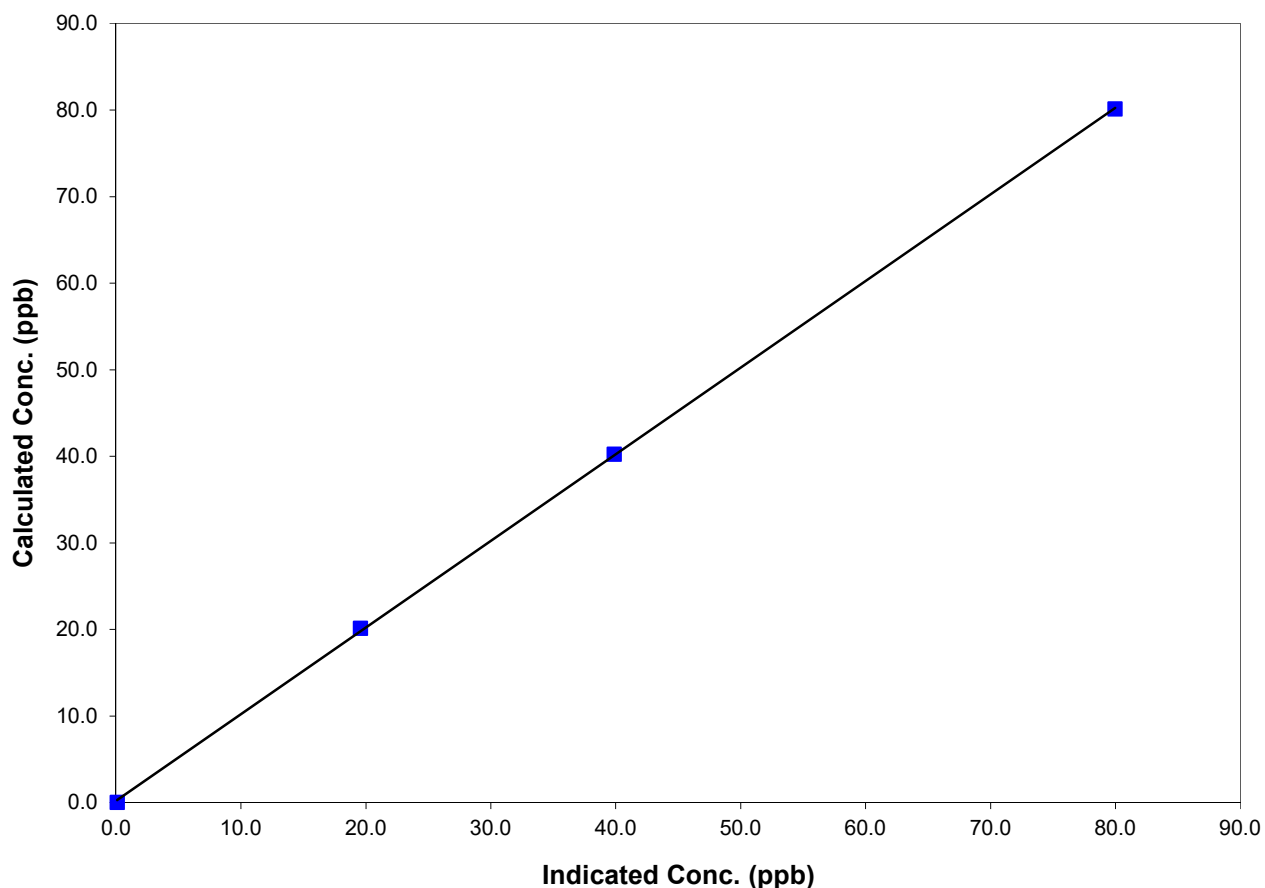
Station Information

Calibration Date	September 11, 2018	Previous Calibration	August 7, 2018
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	11:30	End Time (MST)	15:50
Analyzer make/model	TEI Model 43i-TLE	Analyzer serial #	713021137

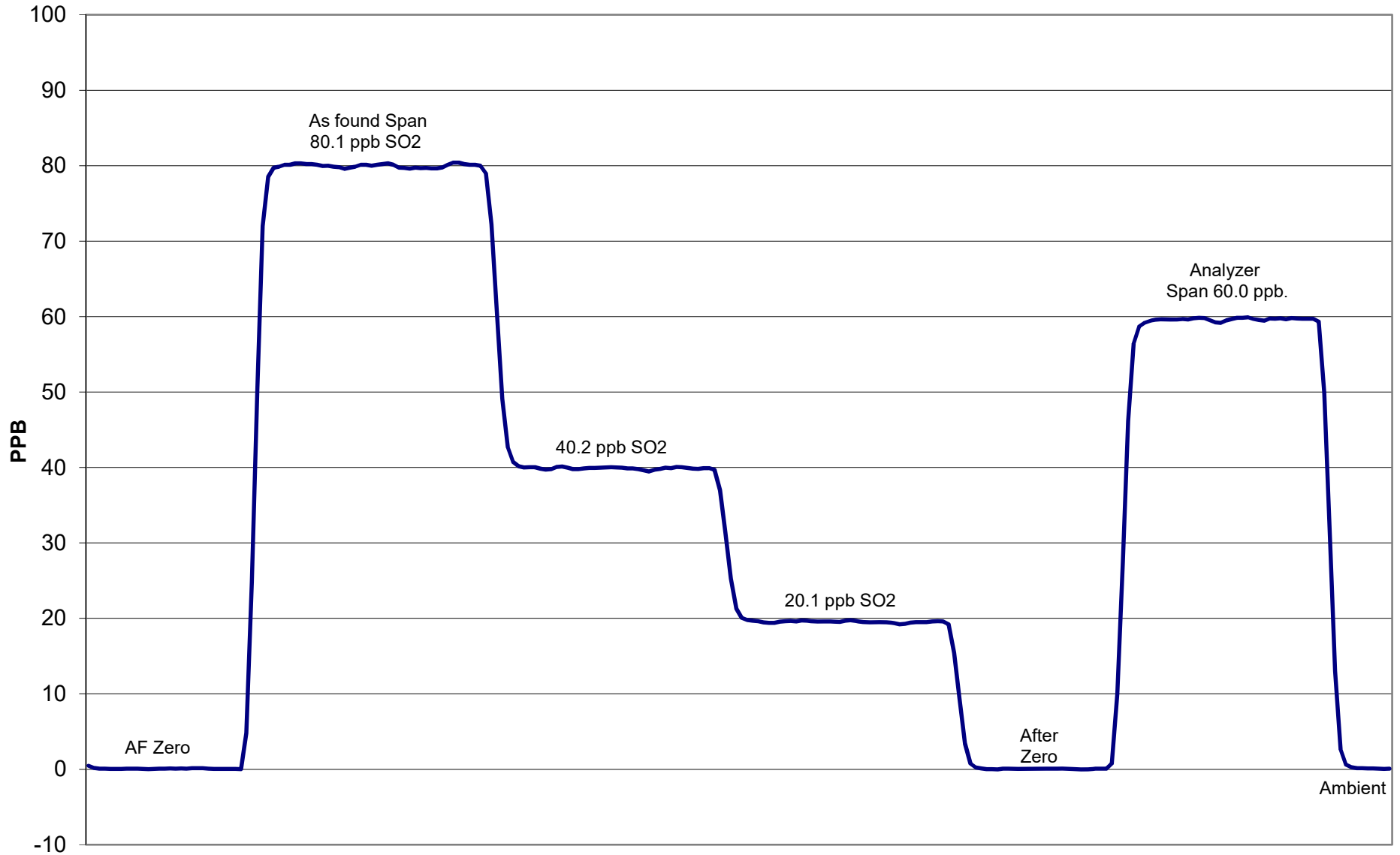
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999940
80.1	80.0	1.0019		
40.2	39.9	1.0084		
20.1	19.6	1.0273		
			Slope	1.000983
			Intercept	0.197878

SO2 Calibration Curve



SO2 Calibration



September 11, 2018

Calibration Report

Parameter
Air Monitoring Network

NO_x-NO-NO₂
PAZA



Station Information

Calibration Date	September 6, 2018	Previous Calibration	August 7, 2018		
Station Number	4	Station Location	Beaverlodge		
Reason:	Routine	Installation	Removal		
Start Time (MST)	10:00	End Time (MST)	13:45:00 PM		
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	0.998906	0.995548	0.996153
	Data Offset	0.370405	2.335925	2.200345
After	Data Slope	1.000422	0.986002	0.987135
	Data Offset	-0.108666	1.555934	1.750910
	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	2.1	mV	2.1	mV
NOx bkgnd	2.9	mV	2.9	mV
NO coefficient	0.993		0.993	
NOx coefficient	1.001		1.001	
NO2 conv temp	322.4	Deg C	322.4	Deg C
PMT Temp	-3.0	Deg C	-3.0	Deg C
PMT Volt	-729.6	mV	-729.6	mV
R Cell Press	174.7	in Hg	174.8	in Hg
Sample Flow	0.798	LPM	0.799	LPM

Notes: No adjustment made

Calibration Report

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



Station Information

Calibration Date: September 6, 2018 Station Location: Beaverlodge

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4995	0.00	0.0	0.0	0.0	0.2	-0.1	0.1	N/A	N/A
1	4995	39.94	400.6	399.8	0.8	405.5	404.1	0.6	0.9878	0.9894
2	4995	19.97	201.1	200.7	0.4	201.6	200.6	0.1	0.9974	1.0004
3	4995	9.97	100.6	100.4	0.2	98.6	98.3	0.1	1.0207	1.0211
AFZ	4995	0.00	0.0	0.0	0.0	0.2	-0.1	0.1	0.0000	0.0000
AFS	4995	39.94	400.6	399.8	0.8	405.5	404.1	0.6	0.9878	0.9894
								Average Correction Factor	1.0020	1.0036

As Found Concentrations: NO_x= 405.8 NO= 404.8 As Found Percent Change NO_x= 1.3% NO= 1.3%

GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.94 ccm

O3 Setpoint (ppb)	Indicated NOx high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	-0.1	-0.1	0.0	0.2	-0.1	0.1	N/A	N/A	N/A	N/A
NO point	403.4	403.4	0.0	404.3	403.4	0.1	0.9978	1.0000	N/A	N/A
300	403.4	98.8	304.6	403.9	98.8	304.5	0.9987	1.0000	1.0002	100.0%
200	403.4	194.6	208.8	404.4	194.6	208.9	0.9975	1.0000	0.9996	100.0%
100	403.4	290.1	113.3	404.1	290.1	113.3	0.9981	1.0000	0.9997	100.0%
Average Correction Factor							0.9981	1.0000	0.9998	100.0%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.3	-0.3	-0.1	ppb	0.1	0.1	-0.1	ppb
Auto span	289.4	286.0	2.5	ppb	260.5	257.2	2.5	ppb

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



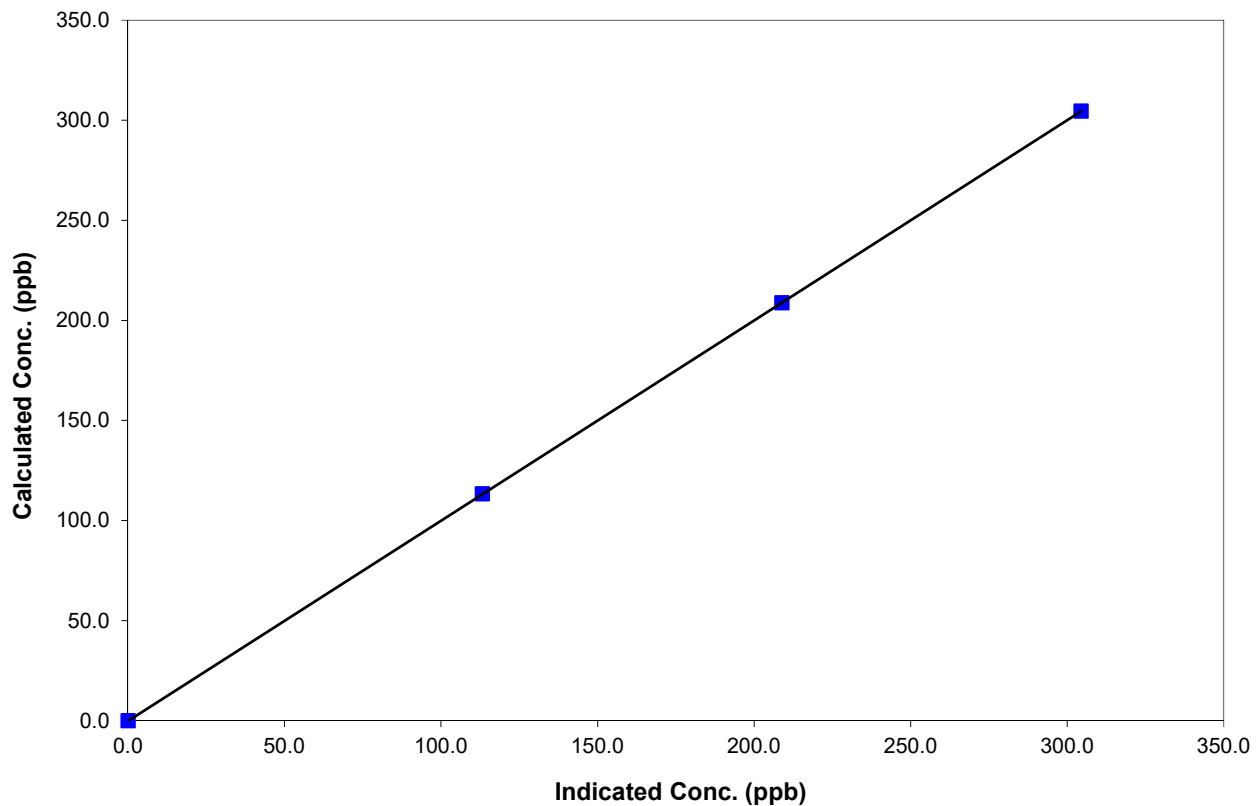
Station Information

Calibration Date	September 6, 2018	Previous Calibration	August 7, 2018
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	10:00	End Time (MST)	13:45:00 PM
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	1.000000
304.6	304.5	1.0002		
208.8	208.9	0.9996		
113.3	113.3	0.9997	Slope	1.000422
			Intercept	-0.108666

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



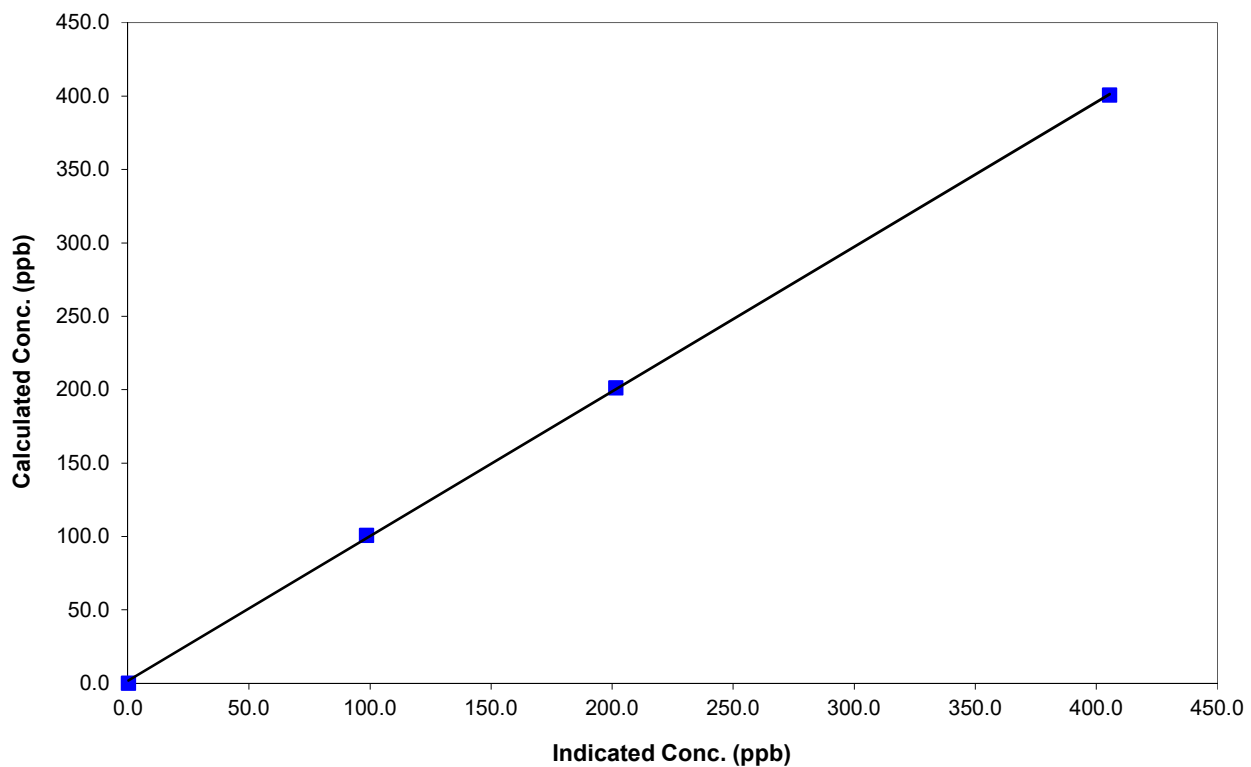
Station Information

Calibration Date	September 6, 2018	Previous Calibration	August 7, 2018
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	10:00	End Time (MST)	13:45:00 PM
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999911
400.6	405.5	0.9878		
201.1	201.6	0.9974		
100.6	98.6	1.0207	Slope	0.986002
			Intercept	1.555934

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



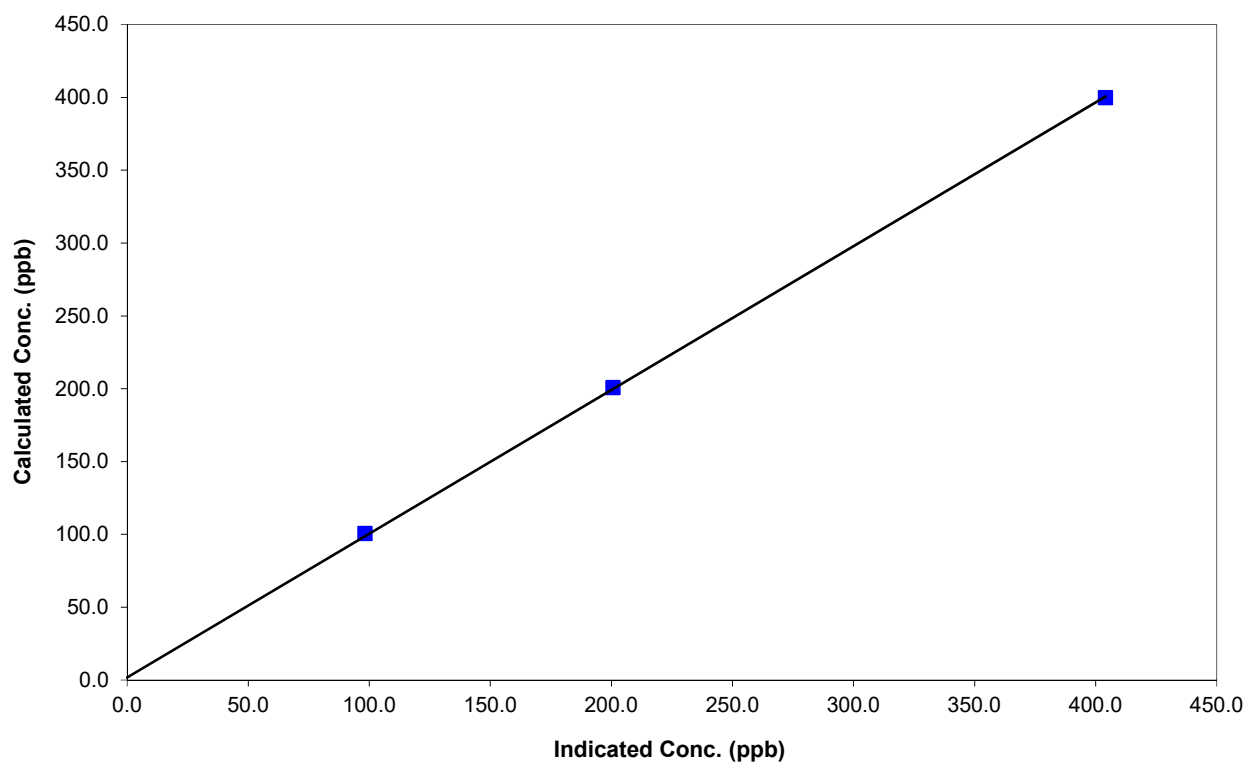
Station Information

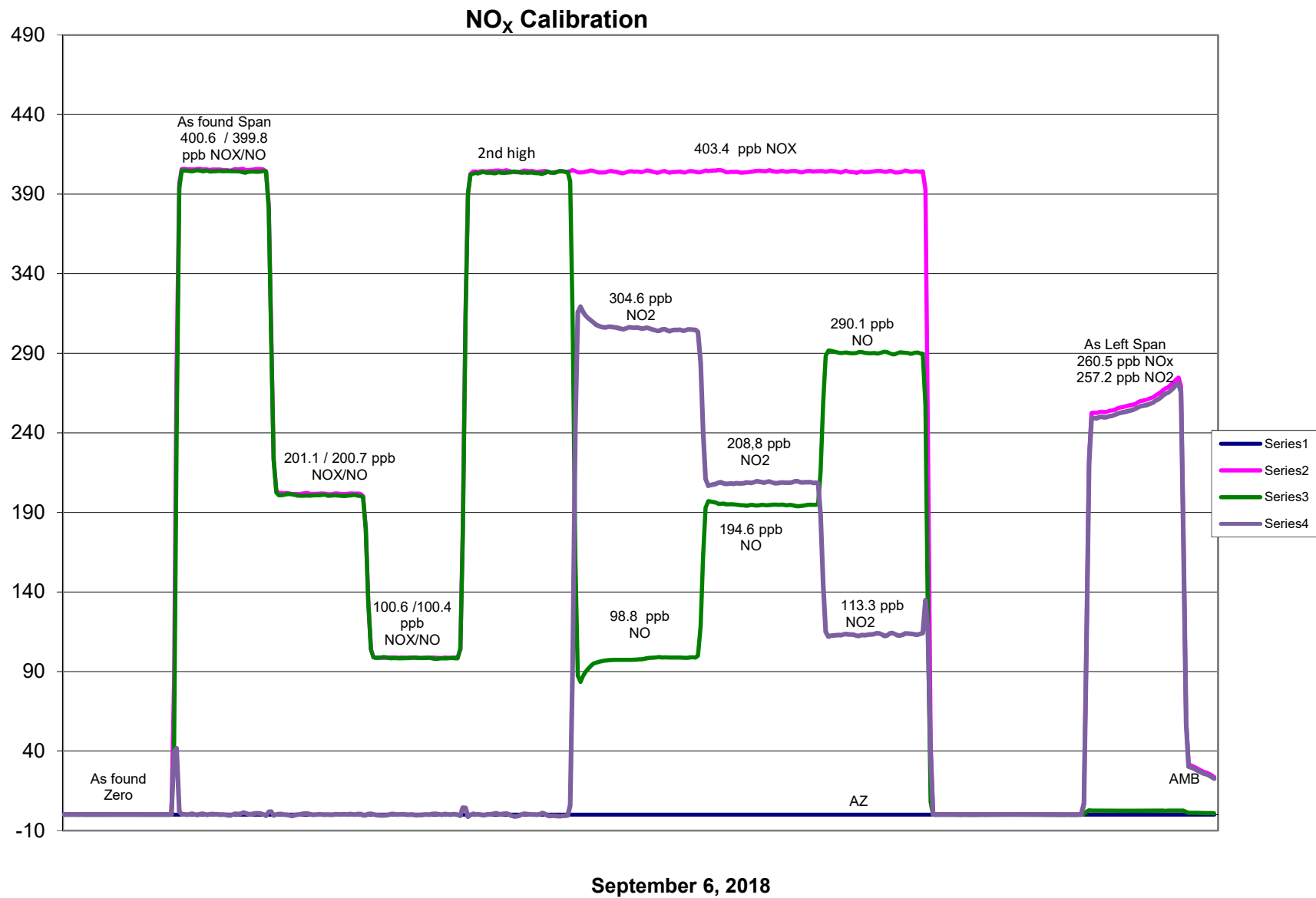
Calibration Date	September 6, 2018	Previous Calibration	August 7, 2018
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	10:00	End Time (MST)	13:45:00 PM
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A		
399.8	404.1	0.9894	Correlation Coefficient	0.999923
200.7	200.6	1.0004		
100.4	98.3	1.0211		
			Slope	0.987135
			Intercept	1.750910

NO Calibration Curve





Calibration Report

Parameter 03

Air Monitoring Network PAZA



Station Information

Calibration Date	September 6, 2018	Previous Calibration	August 7, 2018
Station Number	4	Station Location	Beaverlodge
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	12:50	End Time (MST)	14:45
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	0.987505	Calculated slope	0.985041
Calculated intercept	0.564812	Calculated intercept	0.154632

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	63890/77453	mV	63679/77398	mV
Pressure	683	mm Hg	684	mm Hg
Flow A	0.784	LPM	0.784	LPM
Flow B	0.742	LPM	0.742	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	304.6	309.4	0.9846
5032	0.20	208.8	211.5	0.9872
5032	0.10	113.3	114.6	0.9885
5032				
5032	0.00	0.0	0.1	As found zero
5032	0.30	304.6	309.4	As found span
Average Correction Factor				0.9868

Calculated value of As Found Response: 306.0 ppm Percent Change of As Found: 0.5%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.1	ppb
Auto span	275.7	ppb	274.3	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter 03

Air Monitoring Network PAZA



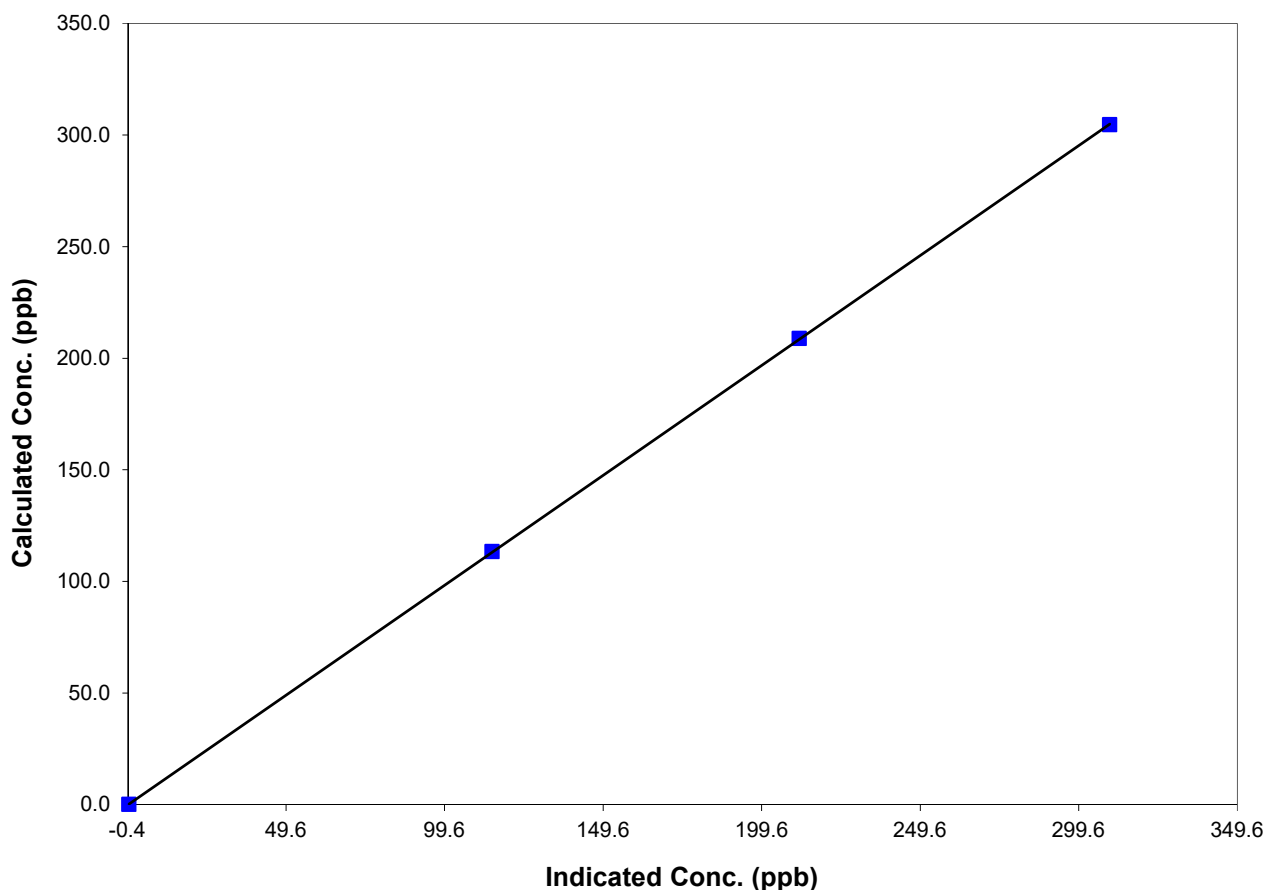
Station Information

Calibration Date	September 6, 2018	Previous Calibration	August 7, 2018
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	12:50	End Time (MST)	14:45
Analyzer make/model	Teco 49i	Analyzer serial #	1136451236,AMU 1879

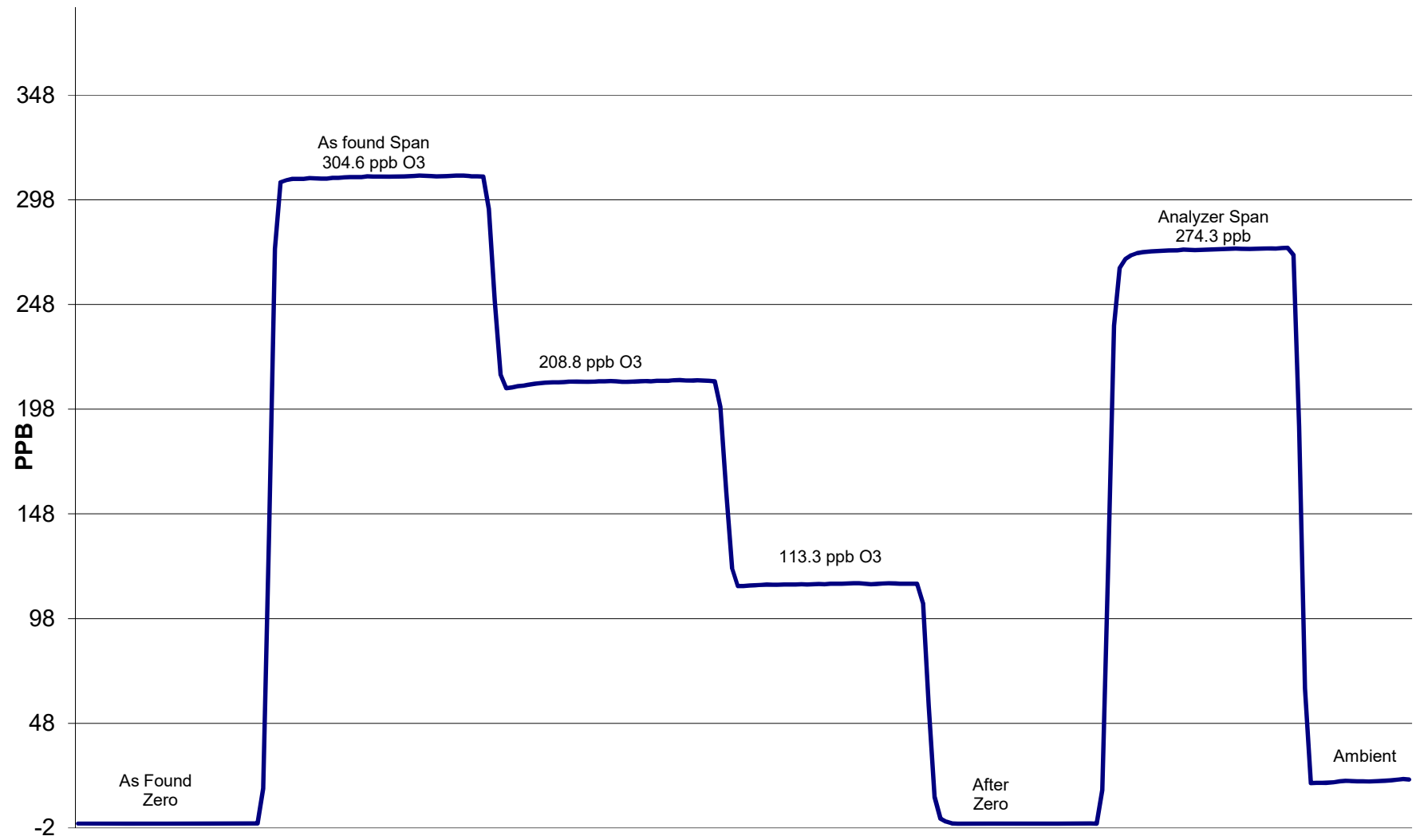
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	NA	Correlation Coefficient	0.999994
304.6	309.4	0.9846		
208.8	211.5	0.9872		
113.3	114.6	0.9885	Slope	0.985041
			Intercept	0.154632

O3 Calibration Curve



O3 Calibration



September 6, 2018

Calibration Report



Parameter SO₂
Air Monitoring Network PAZA

Station Information

Calibration Date	September 27, 2018	Previous Calibration	August 3, 2018
Station Number	2	Station Location	Evergreen Park
Reason:	Routine	Install	Removal
		Other:	

Start Time (MST)	12:05	End Time (MST)	14:25:00 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	04/05/2019
Correction factor	0.031602	Cal Gas Cylinder #	LL107945
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	1.002083	Calculated slope	1.000773
Calculated intercept	0.393923	Calculated intercept	-0.273893

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	843	volts	842	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	679.2	mm Hg	680.2	mm Hg
Sample Flow	0.436	ccm	0.436	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	393.6	1.0000
4997	19.99	197.6	198.2	0.9971
4997	9.98	98.9	98.0	1.0087
4997	0.0	0.0	0.8	As Found Zero
4997	39.98	393.7	393.6	As Found Span
Average Correction Factor				1.0019

Calculated value of As Found Response: 393.966 ppm Percent Change of As Found: -0.1%

	before calibration		after calibration	
Auto zero	0.7	ppm	0.8	ppm
Auto span	263.2	ppm	259.3	ppm

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2
Air Monitoring Network PAZA



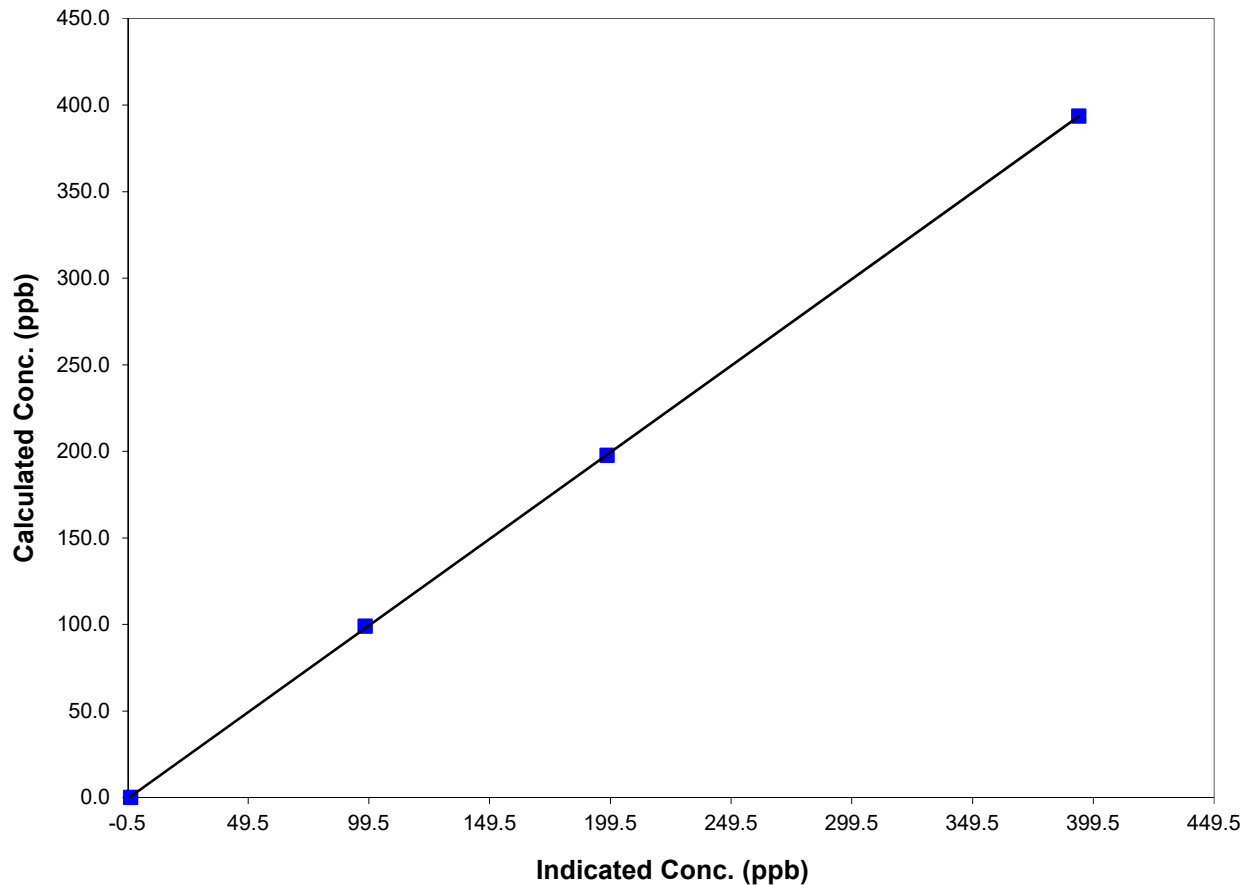
Station Information

Calibration Date	September 27, 2018	Previous Calibration	August 3, 2018
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	12:05	End Time (MST)	14:25:00 PM
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

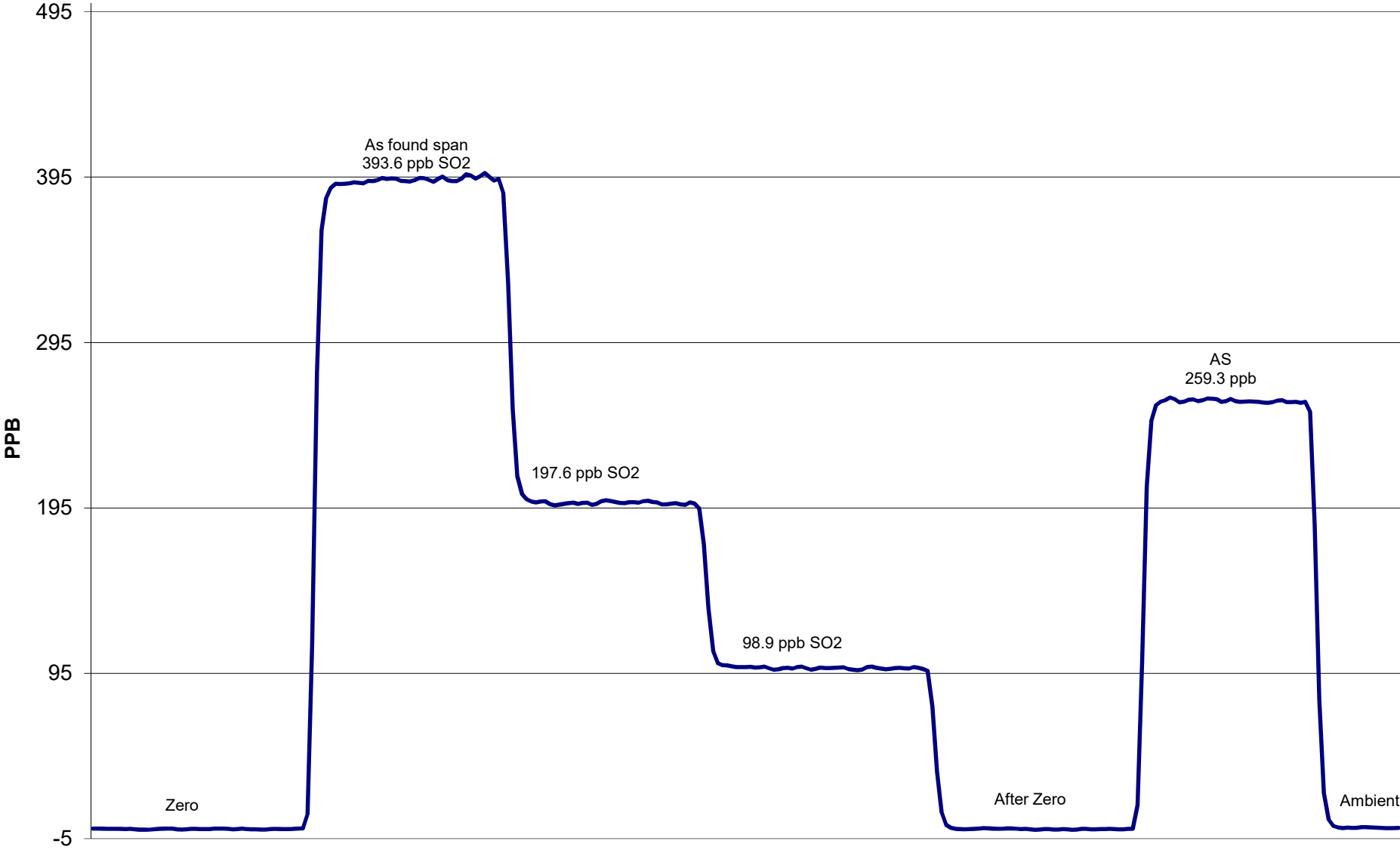
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.8	N/A	Correlation Coefficient	0.999981
393.6	393.6	1.0000		
197.6	198.2	0.9971		
98.9	98.0	1.0087	Slope	1.000773
			Intercept	-0.273893

SO2 Calibration Curve



SO2 Calibration



September 27, 2018

Calibration Report



Parameter TRS

Air Monitoring Network PAZA

Station Information

Calibration Date	September 27, 2018	Previous Calibration	August 4, 2018
Station Number	2	Station Location	Evergreen Park
Reason:	Routine	Install	Removal
Start Time (MST)	12:20	End Time (MST)	13:20:00 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	23/02/2019
Correction factor	0.031602	Cal Gas Cylinder #	EY0000380
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
Calculated slope	0.981676	Calculated slope	1.000771
Calculated intercept	0.216815	Calculated intercept	0.255830

Analyzer make TEI Model 43I Analyzer serial #

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	28.7	ppb	27.2	ppb
coefficient	0.928		0.880	
Lamp Voltage	888	volts	888	volts
Chamber Temp	44.5	Deg C	44.6	Deg C
Perm Gas Temp	45	Deg C	44.9	Deg C
Pressure	665.4	mm Hg	664.9	mm Hg
Sample Flow	0.466	ccm	0.466	ccm
Lamp Intensity	30,431	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	-0.4	N/A
4996	39.97	77.62	77.2	1.0053
4996	19.96	38.92	38.8	1.0038
6999	9.97	13.91	13.8	1.0105
4996	10.00	0.00	-0.3	Sox
4996	0.00	0.00	-0.4	As Found Zero
4996	39.97	77.62	80.6	As Found Span
Average Correction Factor				1.0065

Calculated value of As Found Response: 79.78 ppm Percent Change of As Found: **-2.8%**

	before calibration		after calibration	
Auto zero	-0.3	ppm	-0.2	ppm
Auto span	97.9	ppm	94.4	ppm

Notes: Slight span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter TRS
Air Monitoring Network PAZA



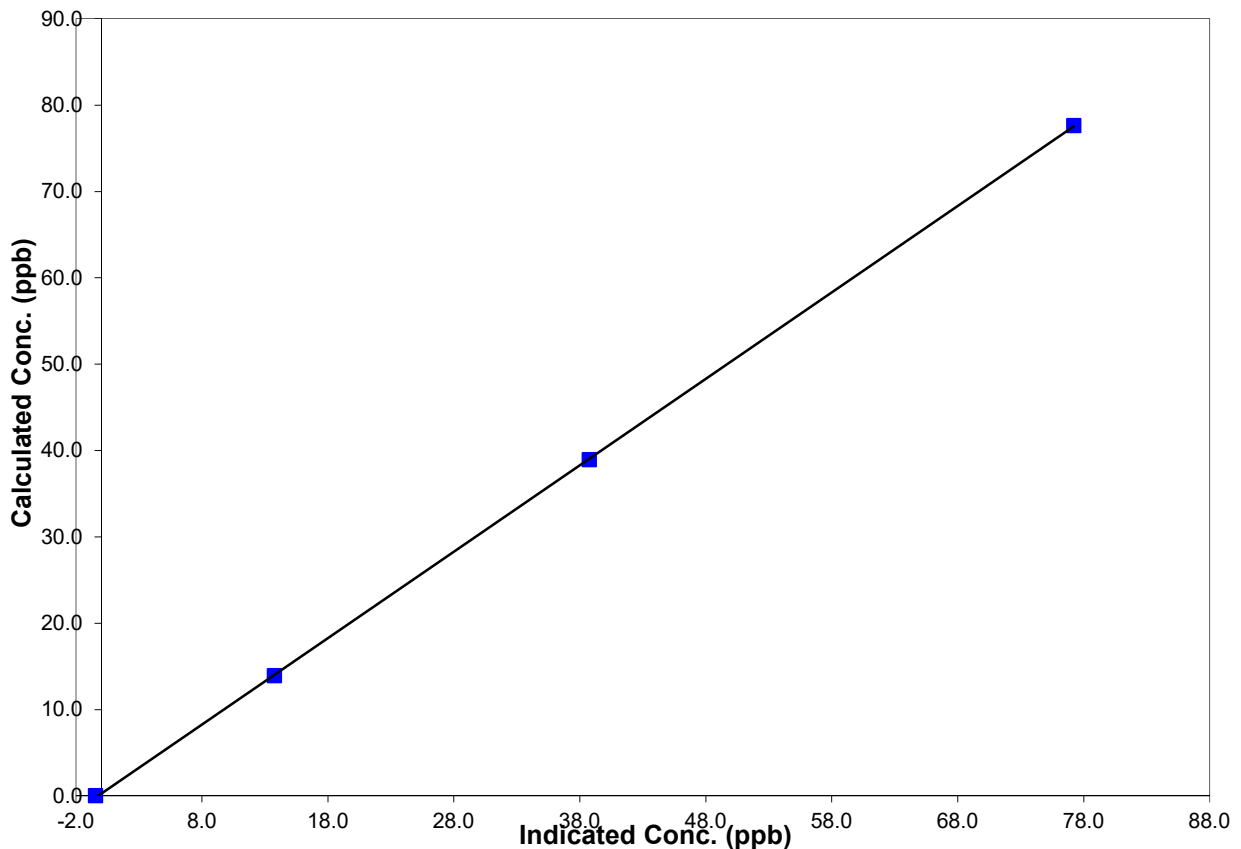
Station Information

Calibration Date	September 27, 2018	Previous Calibration	August 4, 2018
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	12:20	End Time (MST)	13:20:00 PM
Analyzer make/model	TEI Model 43I	Analyzer serial #	0

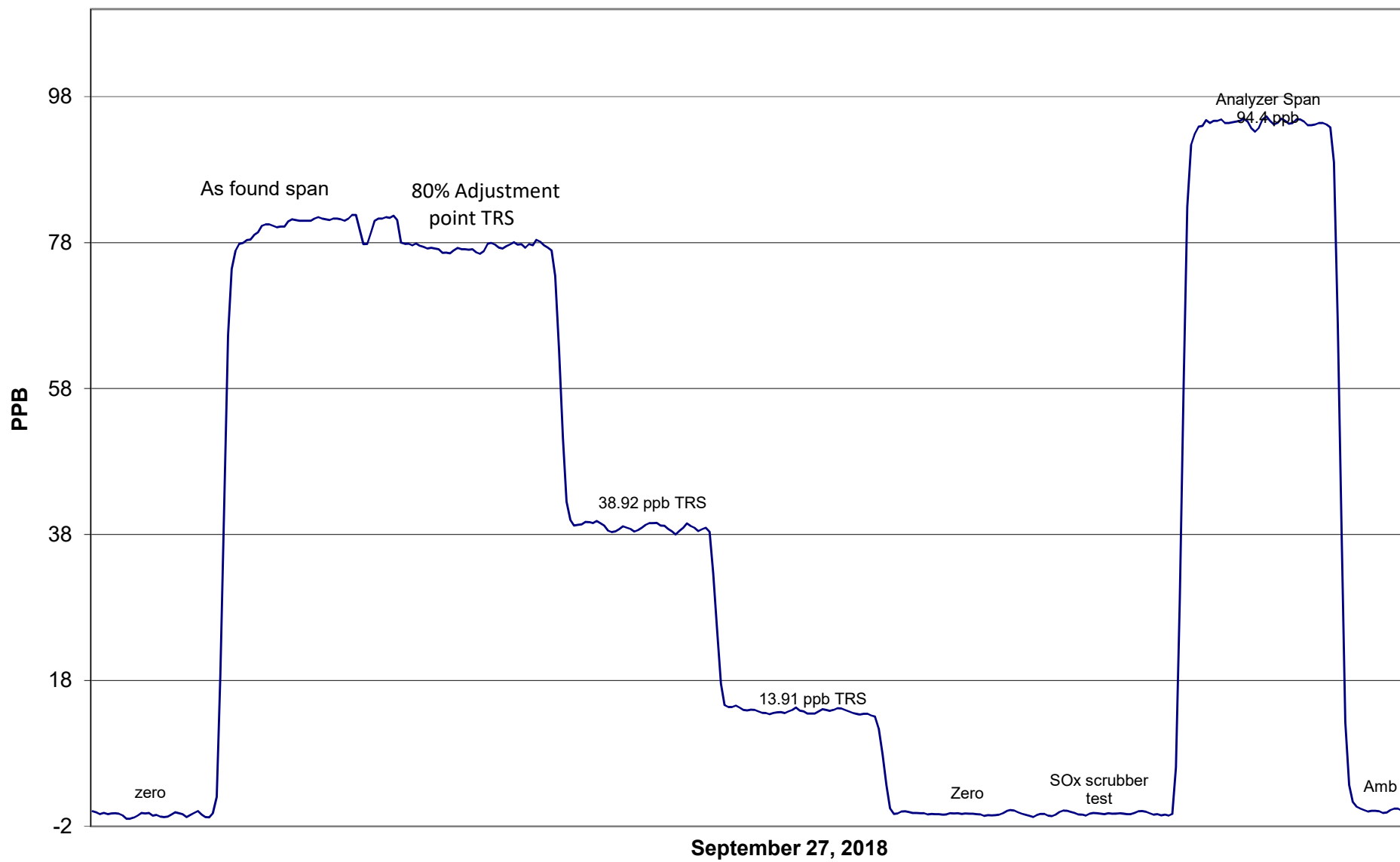
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.4	N/A	Correlation Coefficient	0.999980
77.6	77.2	1.0053		
38.9	38.8	1.0038		
13.9	13.8	1.0105	Slope	1.000771
			Intercept	0.255830

TRS Calibration Curve



TRS Calibration



Calibration Report

Parameter SO2

Air Monitoring Network PAZA



Station Information

Calibration Date	September 11, 2018	Previous Calibration	August 17, 2018
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	10:00	End Time (MST)	12:55
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	0.985942	Calculated slope	0.985887
Calculated intercept	0.411393	Calculated intercept	3.369128
Analyzer make	TEI 43I-TLE	Analyzer serial #	1507864682 (AMU 2006)

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	1.34		1.33	
Coefficient	0.860		0.860	
Pressure	666.7	mm Hg	676.4	mm Hg
Flow	0.441	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	0.4	N/A
4995	39.99	393.9	396.7	0.9931
4995	19.97	197.5	198.6	0.9943
4995	9.98	98.9	90.9	1.0884
4995	0.00	0.0	0.4	As Found Zero
4995	39.97	393.7	396.7	As Found Span
Average Correction Factor				1.0253

Calculated value of As Found Response: 391.1 ppb Percent Change of As Found: 0.7%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.2	ppb
Auto span	281.6	ppb	216.1	ppb

Notes: Analyzer is having issues with motherboard, which causes spikes on data logger calibration trace.
While analyzer front display values are good and steady
Talked to the manufacture about the issue, been suggested to replace motherboard.
No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



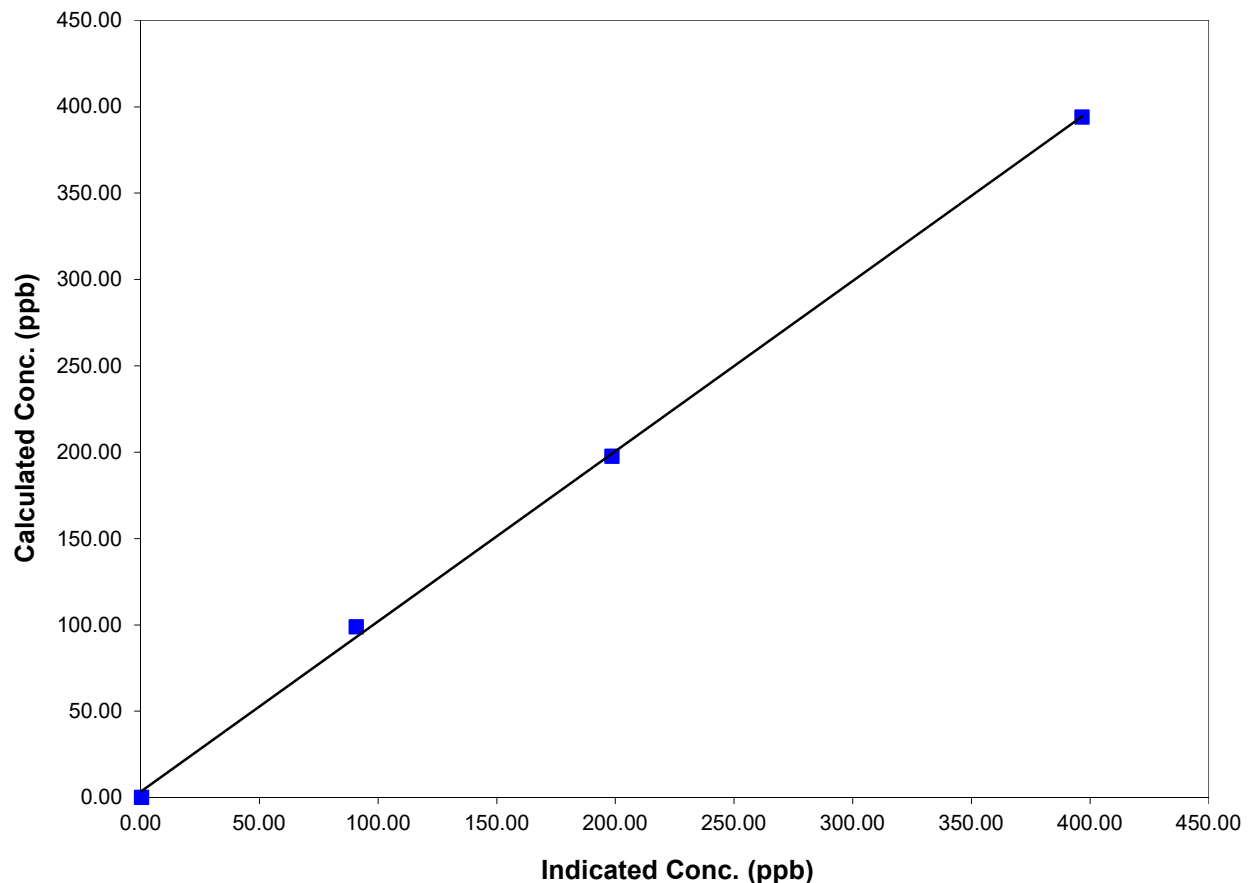
Station Information

Calibration Date	September 11, 2018	Previous Calibration	August 17, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:00	End Time (MST)	12:55
Analyzer make/model	TEI 43I-TLE	Analyzer serial #	1507864682 (AMU 2006)

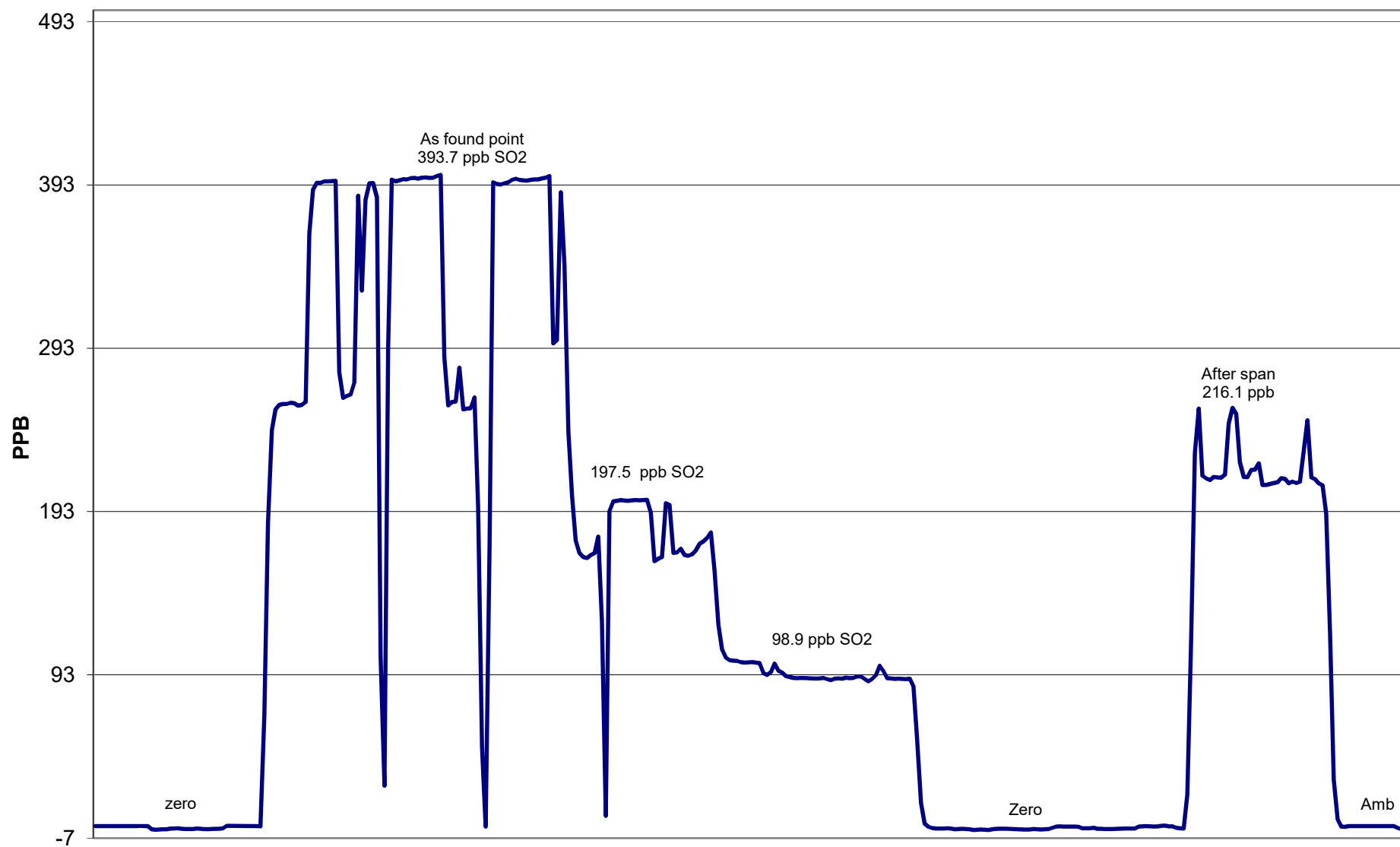
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A	Correlation Coefficient	0.999382
393.9	396.7	0.9931		
197.5	198.6	0.9943		
98.9	90.9	1.0884	Slope	0.985887
			Intercept	3.369128

SO2 Calibration Curve



SO2 Calibration



September 11, 2018

Calibration Report

Parameter SO2

Air Monitoring Network PAZA



Station Information

Calibration Date	September 21, 2018	Previous Calibration	September 11, 2018
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	9:11	End Time (MST)	17:30:00 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	0.985942	Calculated slope	1.000385
Calculated intercept	0.411393	Calculated intercept	1.564898
Analyzer make	TEI 43I-TLE	Analyzer serial #	1507864682 (AMU 2006)

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	1.34		1.39	
Coefficient	0.860		0.905	
Pressure	666.7	mm Hg	673.4	mm Hg
Flow	0.441	lpm	0.445	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	393.0	1.0024
4995	19.97	197.5	195.2	1.0120
4995	9.98	98.9	95.5	1.0354
4995	0.00	0.0	-1.2	As Found Zero
4995	39.97	393.7	372.7	As Found Span
Average Correction Factor				1.0166

Calculated value of As Found Response: 369.1 ppb Percent Change of As Found: 6.3%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.2	ppb
Auto span	281.6	ppb	276.3	ppb

Notes: Motherboard replaced
Zero/span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2
Air Monitoring Network PAZA



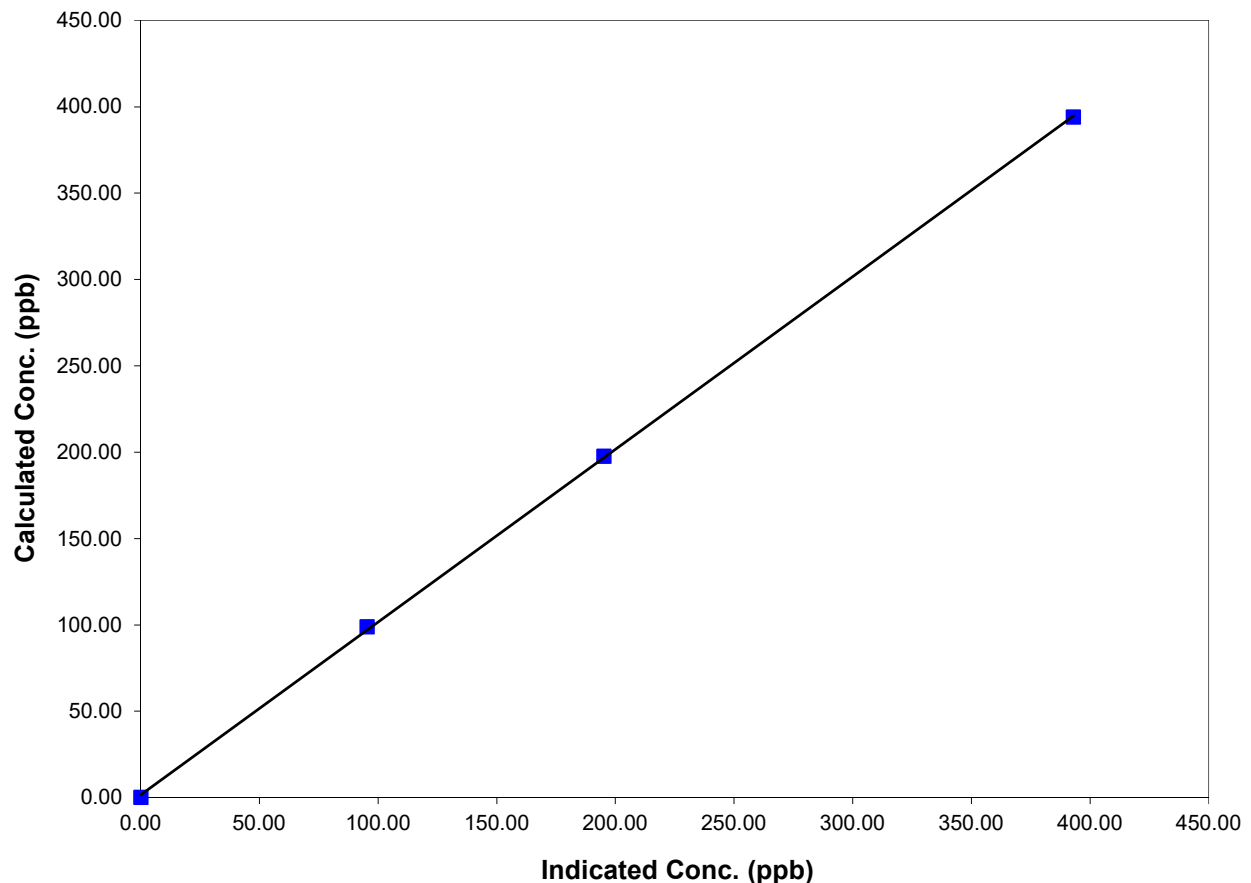
Station Information

Calibration Date	September 21, 2018	Previous Calibration	September 11, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:11	End Time (MST)	17:30:00 PM
Analyzer make/model	TEI 43I-TLE	Analyzer serial #	1507864682 (AMU 2006)

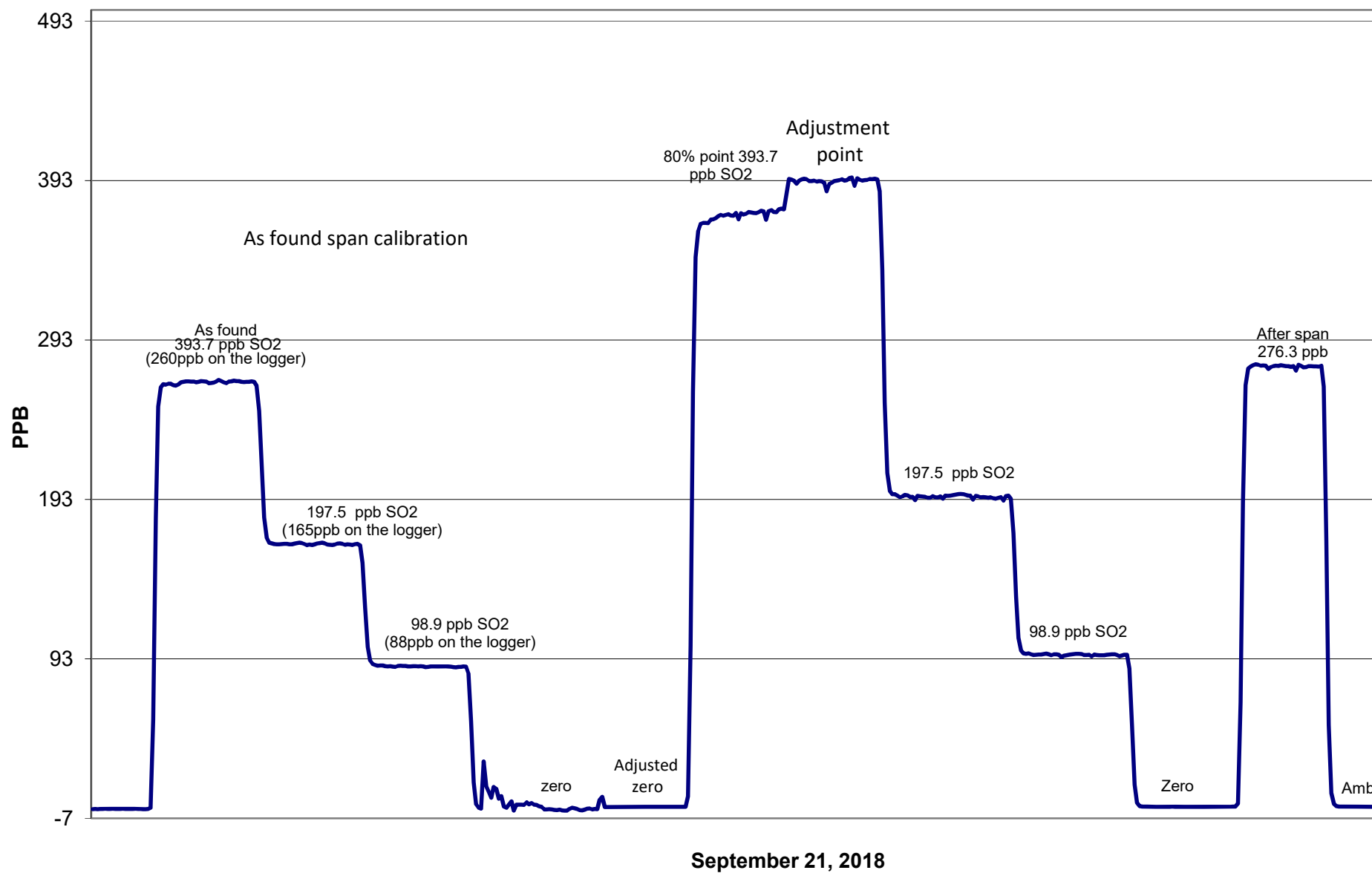
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999916
393.9	393.0	1.0024		
197.5	195.2	1.0120		
98.9	95.5	1.0354	Slope	1.000385
			Intercept	1.564898

SO2 Calibration Curve



SO2 Calibration



Calibration Report

Parameter H2S
Air Monitoring Network

PAZA



Station Information

Calibration Date	September 12, 2018	Previous Calibration	August 20, 2018
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	12:05	End Time (MST)	15:10:00 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	0.997227	Calculated slope	0.991497
Calculated intercept	0.031996	Calculated intercept	0.601916
Analyzer make	TEI 450i	Analyzer serial #	1170050143(AMU 2198)

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Coefficient	0.875		0.875	
Background	13.7		13.7	
Pressure	555.3	mm Hg	556.1	mm Hg
Flow	0.964	ccm	0.961	ccm
Lamp Voltage	767	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	-0.29	N/A
4997	39.98	77.63	77.82	0.9975
4998	19.97	38.92	38.47	1.0117
6997	9.98	13.93	13.17	1.0576
4997	0.00	0.00	-0.29	As Found Zero
4997	41.20	79.98	77.82	As Found Span
Average Correction Factor				1.0223

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

	before calibration		after calibration	
Auto zero	0.36	ppb	-0.31	ppb
Auto span	30.42	ppb	30.06	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter H2S
Air Monitoring Network PAZA



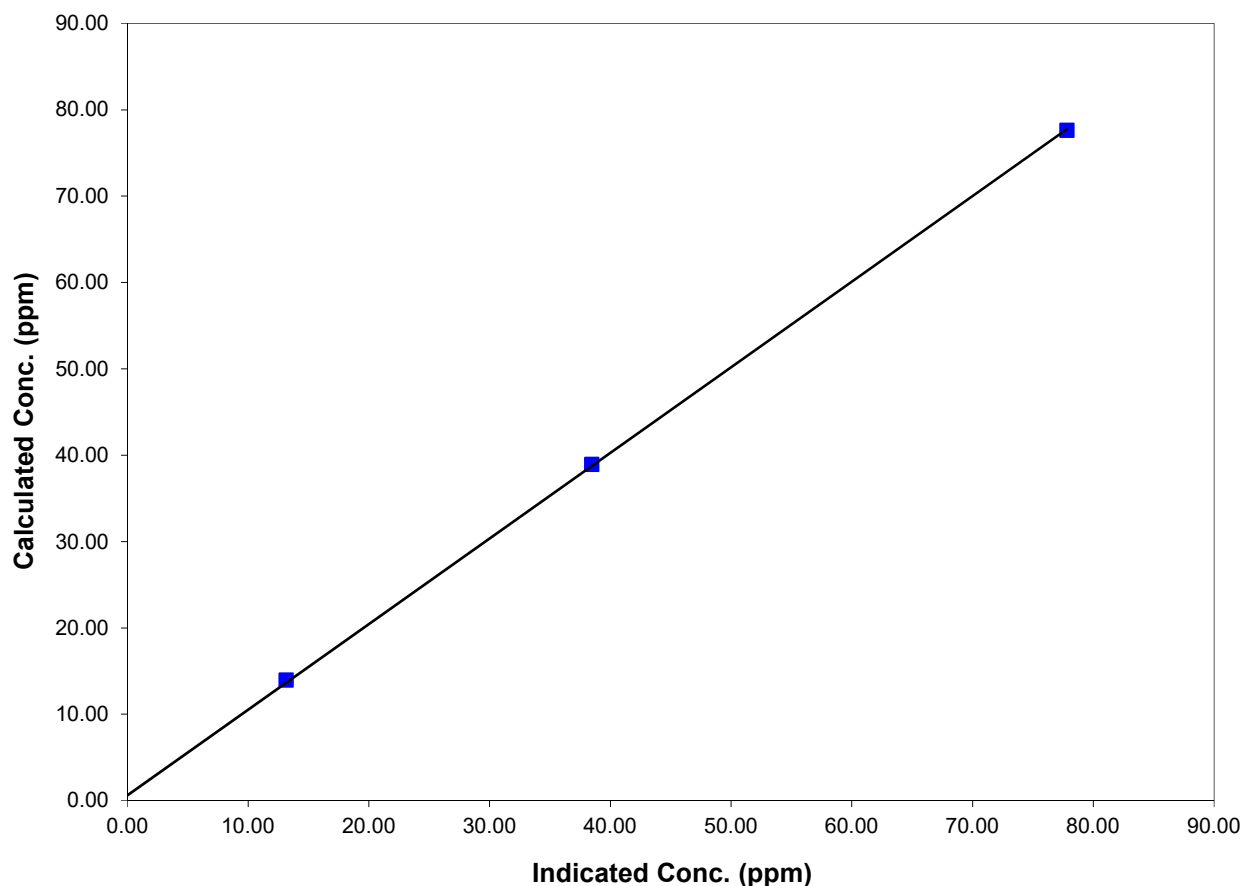
Station Information

Calibration Date	September 12, 2018	Previous Calibration	August 20, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:05	End Time (MST)	15:10:00 PM
Analyzer make/model	TEI 450i	Analyzer serial #	1170050143(AMU 2198)

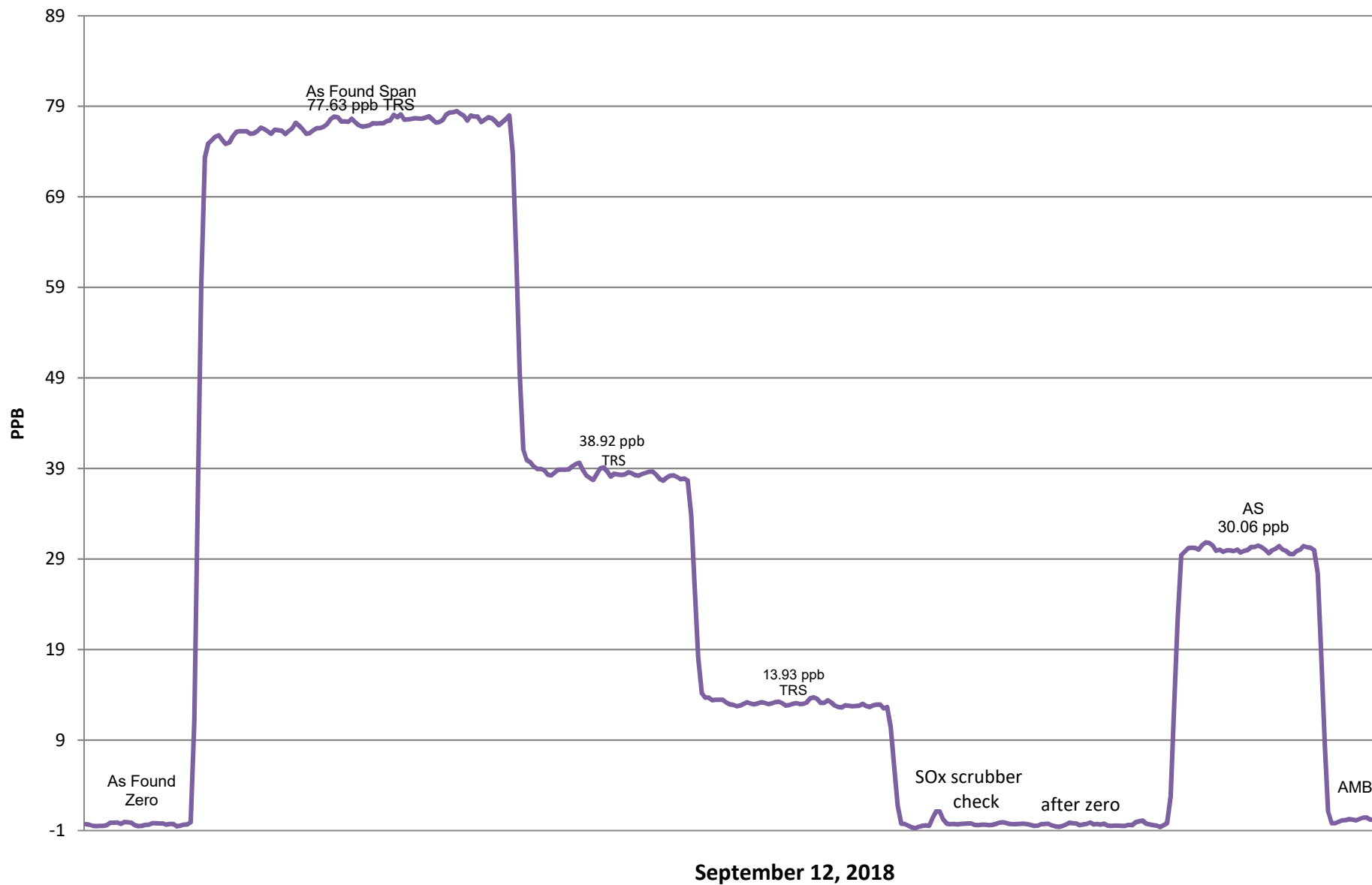
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	-0.293	N/A	Correlation Coefficient	0.999937
77.627	77.820	0.9975		
38.921	38.471	1.0117		
13.930	13.171	1.0576	Slope	0.991497
			Intercept	0.601916

TRS Calibration Curve



TRS Calibration



Calibration Report

Parameter
Air Monitoring Network

NO_x-NO-NO₂
PAZA



Station Information

Calibration Date	September 11, 2018	Previous Calibration	August 17, 2018
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Installation	Removal
Start Time (MST)	10:05	End Time (MST)	13:55:00 PM
Barometric Pressure	0.923 mbar	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
NO Cal Gas Conc	51.9 ppm	Cal Gas Expiry Date	10/24/2020
NO _x Cal Gas Conc	52.0 ppm	Cal Gas Serial #	LL107945

DACS Information

DACS make	CR3000	DACS serial No.	5408
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Parameter		NO ₂	NO _x	NO
Before	Data Slope	1.008099	0.996268	0.998839
	Data Offset	-0.956859	0.947494	1.031050
After	Data Slope	1.007421	0.999633	0.995852
	Data Offset	-0.741001	0.757281	1.161816
Channel #		8	6	7
Voltage Range		0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model	42i	Analyzer serial #	906535087
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Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	8.3	mV	8.3	mV
NO _x bkgnd	8.5	mV	8.5	mV
NO coefficient	1.198		1.198	
NO _x coefficient	0.999		0.999	
NO ₂ conv temp	324.7	Deg C	322.4	Deg C
Cooler Temp	2.8	Deg C	2.8	Deg C
PMT Volt	-834.4	mV	-834.4	mV
R Cell Press	201.1	in Hg	202.3	in Hg
Sample Flow	0.547	LPM	0.550	LPM

Notes: No adjustment made

Calibration Report

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



Station Information

Calibration Date: September 11, 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	0.4	0.1	0.7	N/A	N/A
1	4996	39.97	412.7	411.9	0.8	412.7	413.2	0.2	1.0002	0.9970
2	4996	19.98	207.1	206.7	0.4	206.0	205.6	0.2	1.0055	1.0053
3	4996	9.97	103.6	103.4	0.2	101.6	101.4	0.3	1.0197	1.0193
AFZ	4996	0.00	0.0	0.0	0.0	0.4	0.1	0.7	0.0000	0.0000
AFS	4996	39.97	412.7	411.9	0.8	412.7	413.2	0.2	1.0002	0.9970
								Average Correction Factor	1.0084	1.0072

As Found Concentrations: NO_x= 411.6 NO= 413.6 As Found Percent Change NO_x= -0.3% NO= 0.4%

GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.93 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Calculated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	0.1	0.1	0.0	0.4	0.1	0.7	N/A	N/A	N/A	N/A
NO point	413.0	413.0	0.0	413.3	413.0	0.4	0.9991	1.0000	N/A	N/A
300	413.0	113.1	299.8	411.3	113.1	298.1	1.0041	1.0000	1.0060	99.4%
200	413.0	210.4	202.5	413.6	210.4	202.3	0.9985	1.0000	1.0010	99.9%
100	413.0	314.4	98.5	413.6	314.4	98.3	0.9984	1.0000	1.0023	99.8%
Average Correction Factor							1.0003	1.0000	1.0031	99.7%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	1.1	1.0	0.2	ppb	0.0	0.2	0.1	ppb
Auto span	292.7	289.9	2.6	ppb	291.6	288.9	2.4	ppb

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



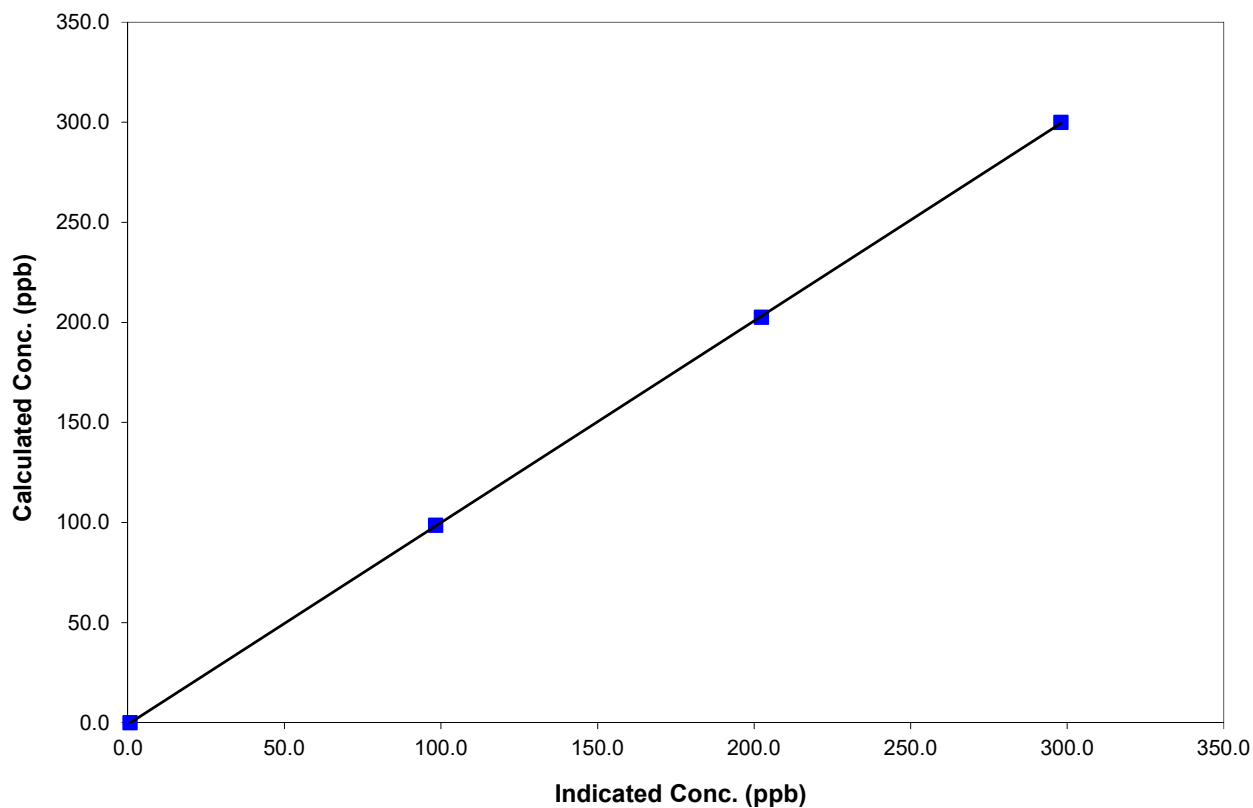
Station Information

Calibration Date	September 11, 2018	Previous Calibration	August 17, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:05	End Time (MST)	13:55:00 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	0.7	N/A	Correlation Coefficient	0.999991
299.8	298.1	1.0060		
202.5	202.3	1.0010		
98.5	98.3	1.0023	Slope	1.007421
			Intercept	-0.741001

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



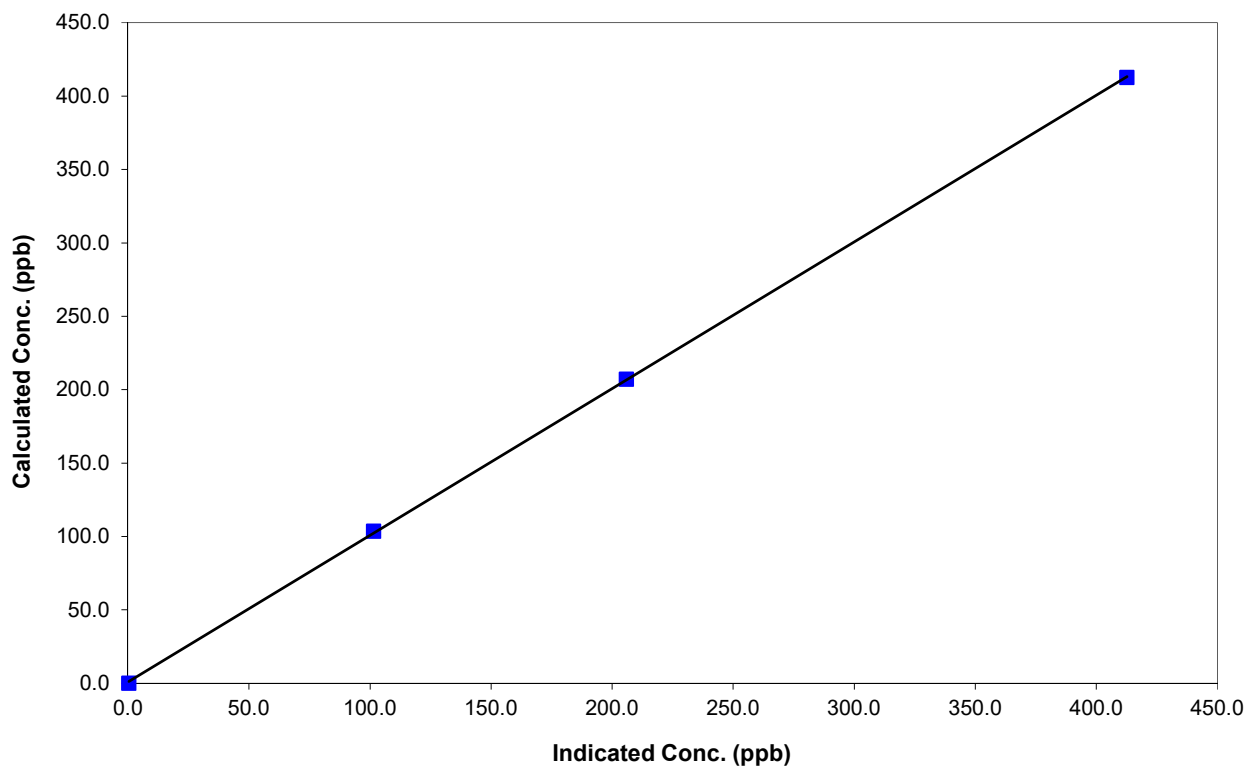
Station Information

Calibration Date	September 11, 2018	Previous Calibration	August 17, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:05	End Time (MST)	13:55:00 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	0.4	N/A	Correlation Coefficient	0.999962
412.7	412.7	1.0002		
207.1	206.0	1.0055		
103.6	101.6	1.0197	Slope	0.999633
			Intercept	0.757281

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



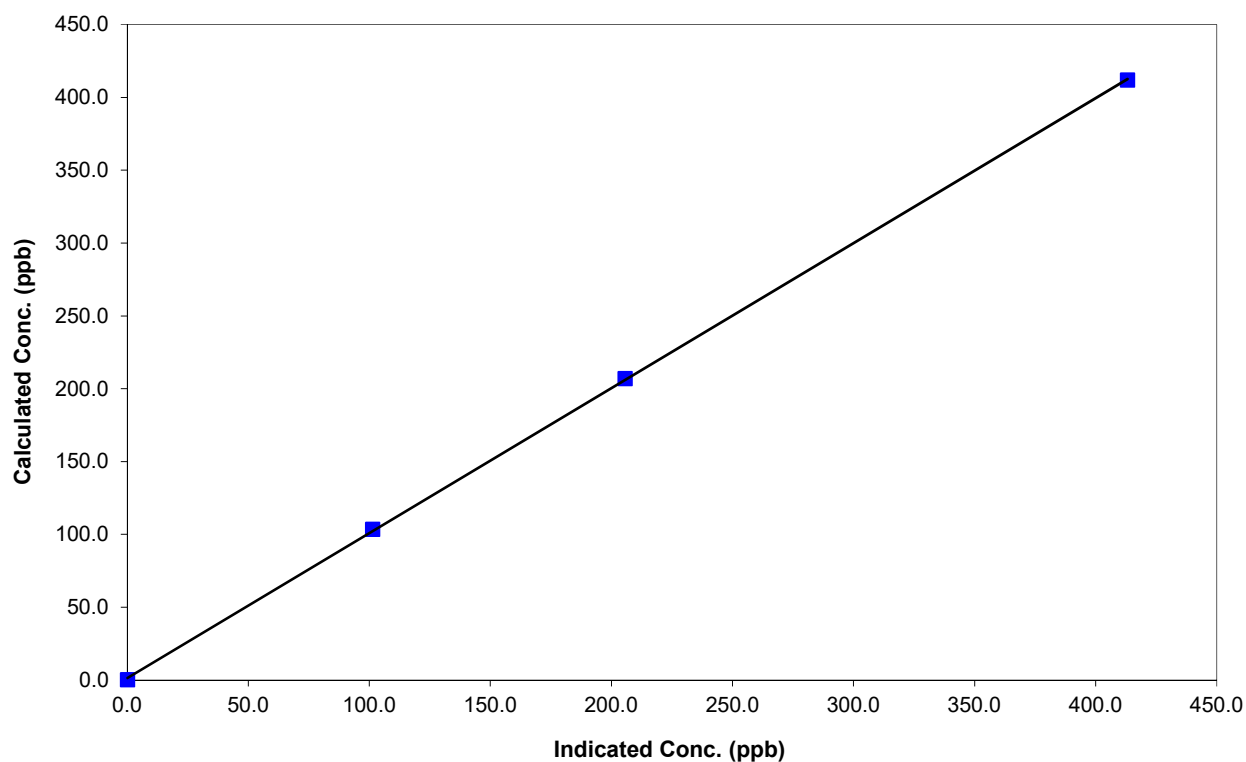
Station Information

Calibration Date	September 11, 2018	Previous Calibration	August 17, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:05	End Time (MST)	13:55:00 PM
Analyzer make	42i	Analyzer serial #	906535087

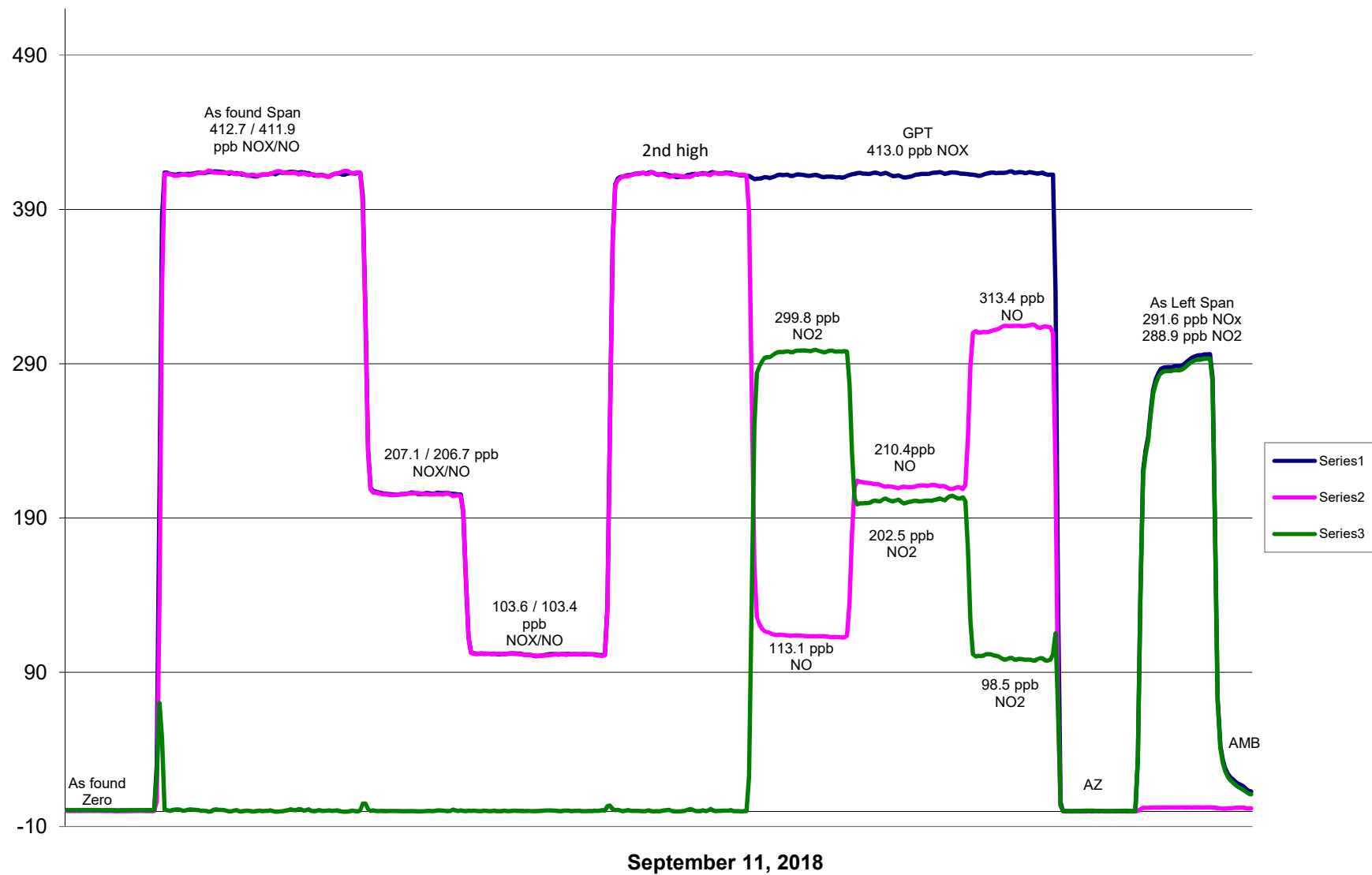
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999954
411.9	413.2	0.9970		
206.7	205.6	1.0053		
103.4	101.4	1.0193	Slope	0.995852
			Intercept	1.161816

NO Calibration Curve



NO_x Calibration



Calibration Report

Parameter 03

Air Monitoring Network PAZA



Station Information

Calibration Date	September 11, 2018	Previous Calibration	August 17, 2018
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Install	Removal
		Other:	

Start Time (MST)	13:00:00 PM	End Time (MST)	15:10:00 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	1.005155	Calculated slope	1.010934
Calculated intercept	-0.321566	Calculated intercept	-0.512715

Analyzer make	Teco 49I	Analyzer serial #	1507964699 (AMU:2015)
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	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-0.30	ppb	-0.30	ppb
slope	1.013		1.013	
Lamp temp	53.6	mV	53.6	mV
Lamp Intensity A/B	62955/68181	mV	62812/68134	mV
Pressure	689.2	mm Hg	690.2	mm Hg
Flow A	0.726	ccm	0.727	ccm
Flow B	0.730	ccm	0.731	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	299.8	296.8	1.0100
4998	0.2	202.5	200.6	1.0093
4998	0.1	98.5	99.0	0.9951
4996	0.0	0.0	-0.1	As found zero
4996	0.3	299.8	296.8	As found span
Average Correction Factor				1.0048

Calculated value of As Found Response: 298.2 ppm Percent Change of As Found: -0.5%

	before calibration		after calibration	
Auto zero	0.3	ppb	0.0	ppb
Auto span	374.5	ppb	375.9	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter 03
Air Monitoring Network PAZA



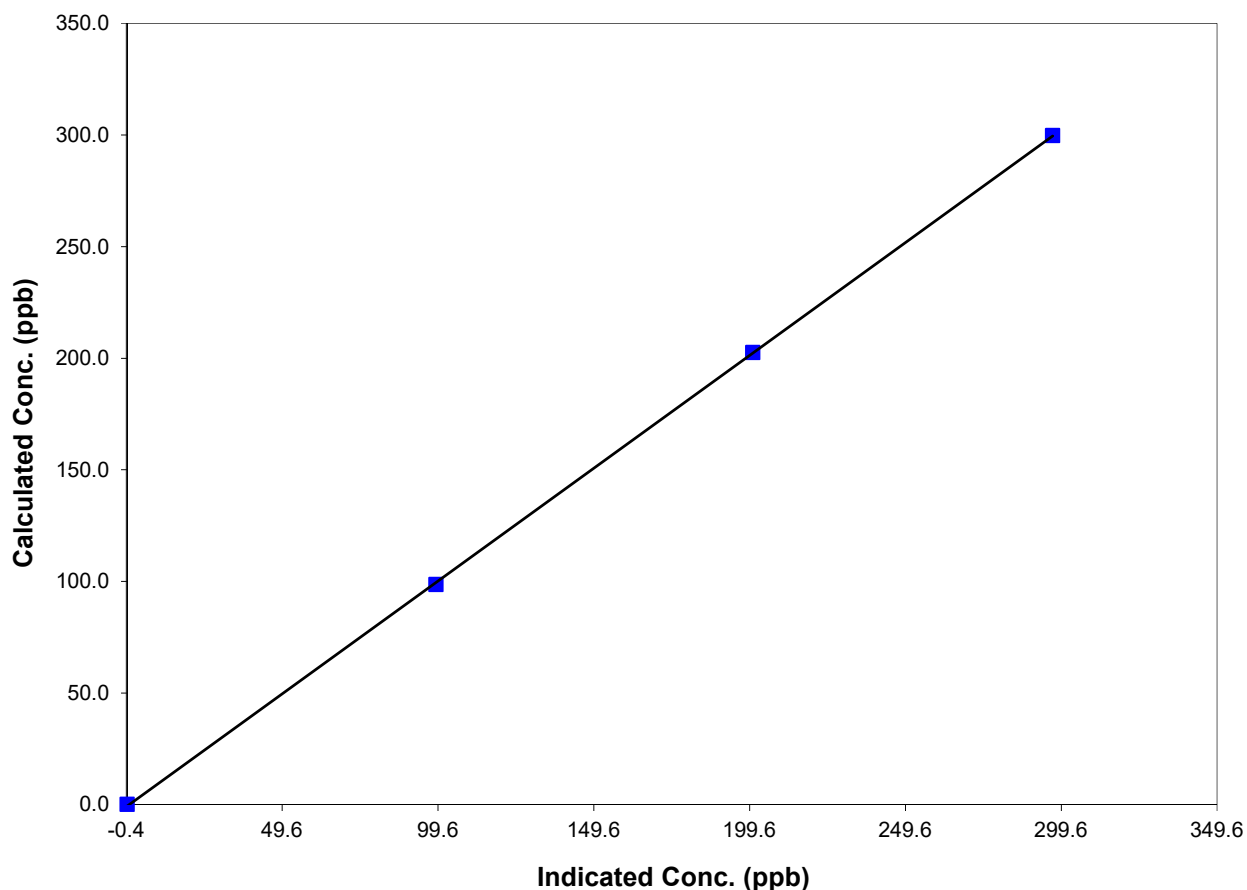
Station Information

Calibration Date	September 11, 2018	Previous Calibration	August 17, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	13:00:00 PM	End Time (MST)	15:10:00 PM
Analyzer make/model	Teco 49I	Analyzer serial #	1507964699 (AMU:2015)

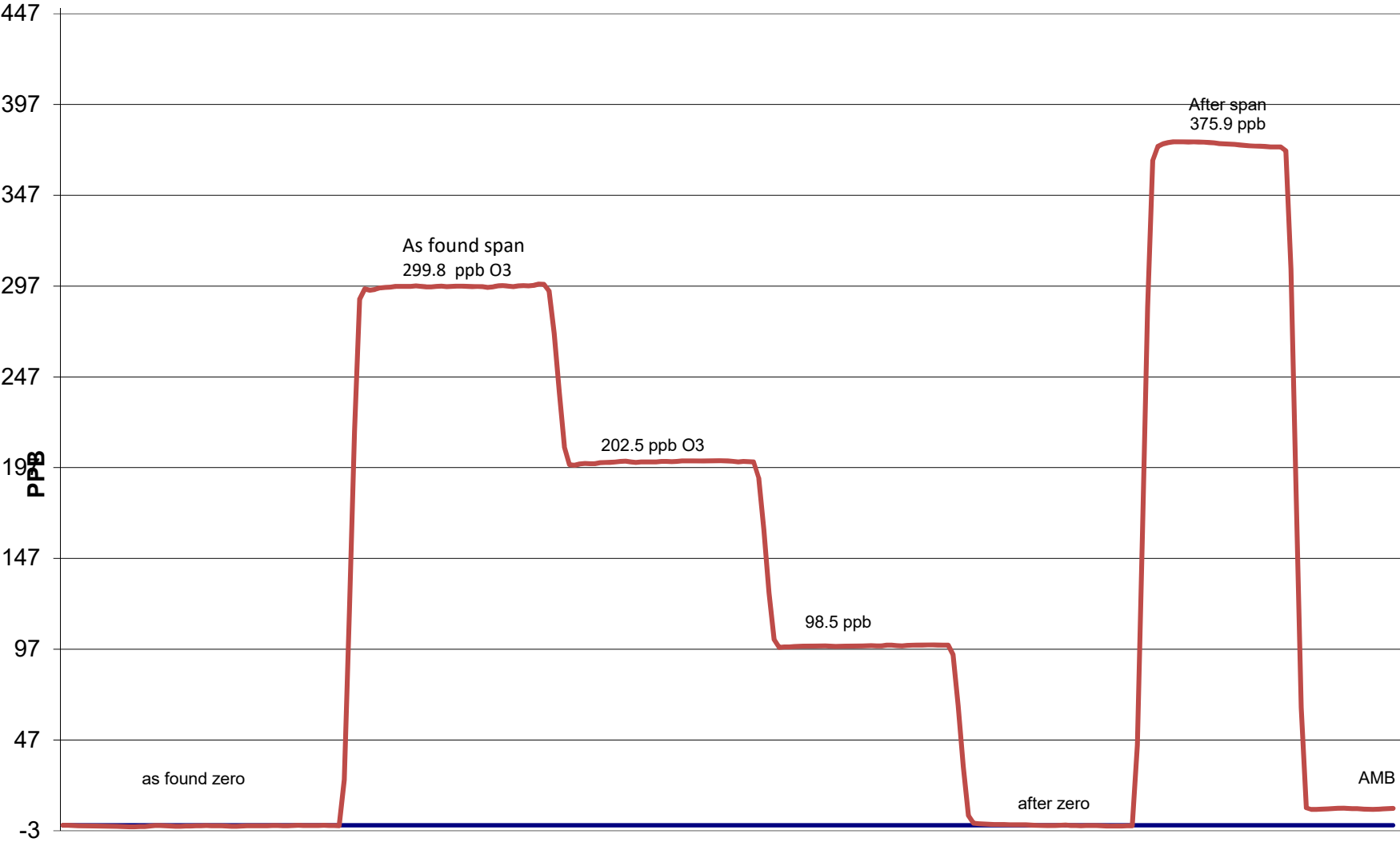
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	NA	Correlation Coefficient	0.999968
299.8	296.8	1.0100		
202.5	200.6	1.0093		
98.5	99.0	0.9951	Slope	1.010934
			Intercept	-0.512715

O3 Calibration Curve



O3 Calibration



September 11, 2018

Calibration Report

Parameter CO
Air Monitoring Network PAZA



Station Information

Calibration Date	September 12, 2018	Previous Calibration	August 20, 2018
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Install	Removal
Start Time (MST)	10:10	End Time (MST)	13:40:00 PM
Barometric Pressure	0.921 mBar	Station Temperature	23.0 Deg C
Calibrator	Envionics 6100	Serial Number	6586
Cal Gas Conc	2906 ppm	Cal Gas Expiry Date	07/07/2023
DACS make	CR3000	Cal Gas Cylinder #	LL109096
DACS voltage range	0 - 5 volt	DACS serial No.	5408
	Before	DACS channel #	9
Calculated slope	1.004125		After
Calculated intercept	-0.411789	Calculated slope	1.003742
		Calculated intercept	-0.298527
Analyzer make	Model 48I-TLE	Analyzer serial #	1408761378

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO zero setting	10.681		10.814	
CO span setting	1.074		1.087	
Sample pressure	700.4	mm Hg	700.7	mm Hg
Sample Flow	0.449	LPM	0.448	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	0.05	N/A
4998	69.96	40.12	40.09	1.0005
4998	34.98	20.20	20.66	0.9778
4998	17.99	10.42	10.86	0.9600
4998	0.00	0.00	0.05	As Found Zero
4998	69.96	40.12	39.61	As Found Span
Average Correction Factor				0.9794

Calculated value of As Found Response: 39.304 ppm Percent Change of As Found: 2.0%

	before calibration		after calibration	
Auto zero	0.00	ppm	0.05	ppm
Auto span	20.33	ppm	20.72	ppm

Notes: Slight span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter CO
Air Monitoring Network PAZA



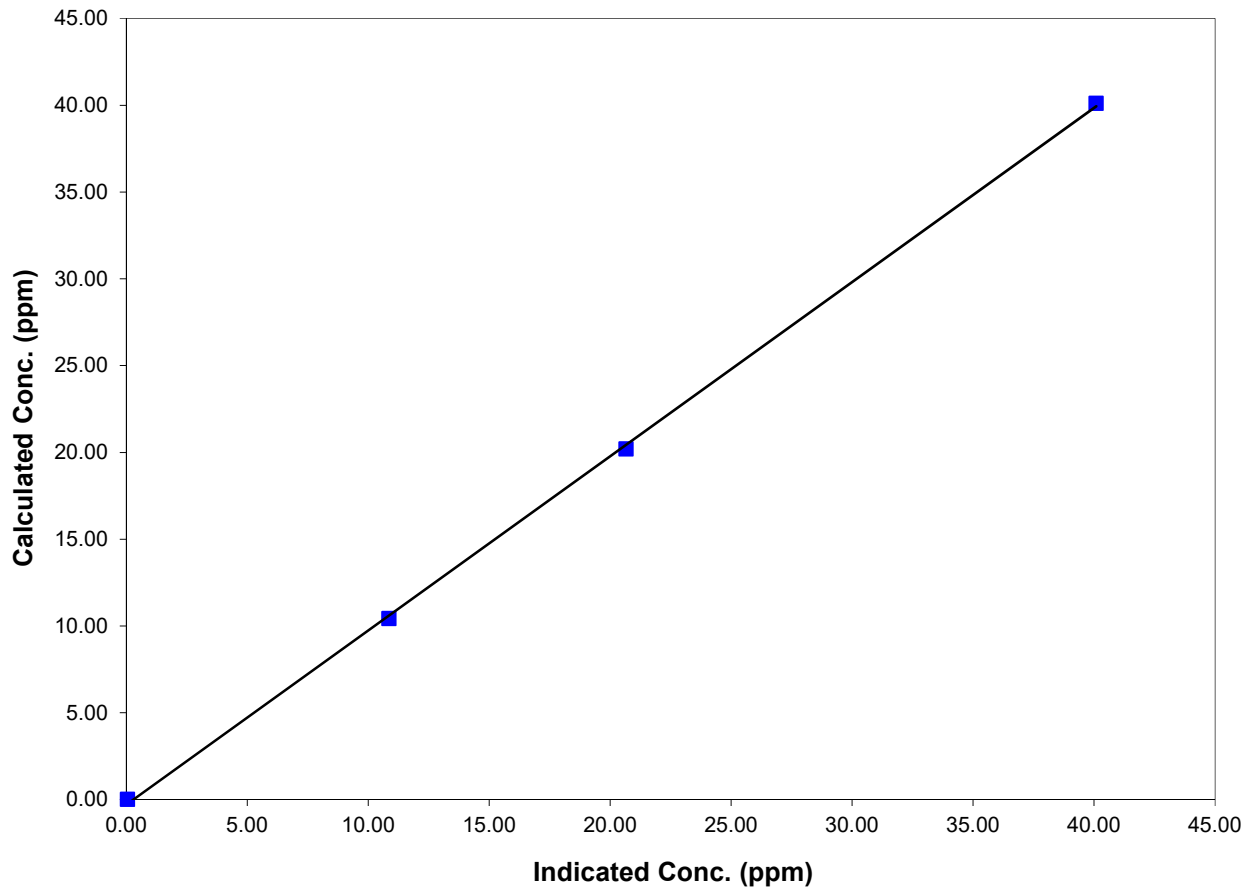
Station Information

Calibration Date	September 12, 2018	Previous Calibration	August 20, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:10	End Time (MST)	13:40:00 PM
Analyzer make/model	Model 48I-TLE	Analyzer serial #	1408761378

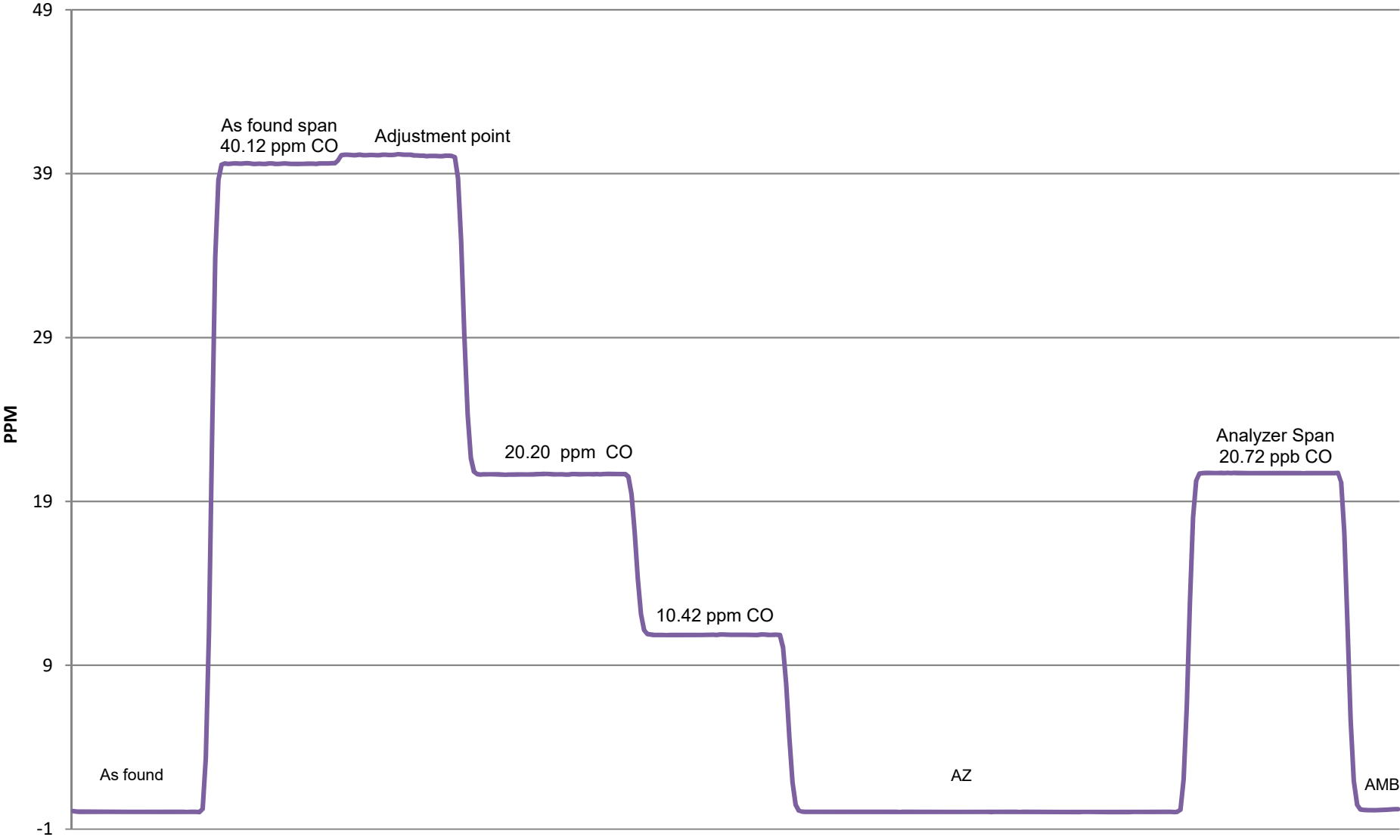
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.054	N/A	Correlation Coefficient	0.999799
40.116	40.094	1.0005		
20.197	20.656	0.9778		
10.422	10.857	0.9600	Slope	1.003742
			Intercept	-0.298527

CO Calibration Curve



CO Calibration



September 12, 2018

Calibration Report



Parameter CH4 / NMHC / THC

Air Monitoring Network PAZA

Station Information

Calibration Date	September 15, 2018	Previous Calibration	August 20, 2018
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Install	Removal
			Other: Mair

Start Time (MST)	12:06	End Time (MST)	14:20:00 PM
Barometric Pressure	0.921 mBar	Station Temperature	23.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas CH4 Conc	995.6 ppm CH4	Cal Gas Expiry Date	05/07/2015
Cal Gas C3H8 Conc	370.5 1018.875 ppm CH4	Cal Gas Cylinder #	LL34318
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 5 volt	DACS channel #	SE 11,12,13

Analyzer make TEI 55I Analyzer serial # 1134650658

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

CH4 Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
3495	0.00	0.00	0.02	N/A
3495	54.94	15.41	15.42	0.9992
3494	34.97	9.87	9.81	1.0061
3495	14.96	4.24	4.18	1.0147
3495	0.00	0.00	0.02	As Found Zero
3495	64.99	18.18	14.88	As Found Span
Average Correction Factor				1.0066

Calculated value of As Found Response: 14.850 ppm Percent Change of As Found: 18.3%

	Before		After
Calculated slope	0.998792	Calculated slope	0.999910
Calculated intercept	0.008349	Calculated intercept	0.022820

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.03	ppm	0.05	ppm
Auto span	9.31	ppm	9.11	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)
3495	0.00	0.00	0.02	N/A
3495	54.94	15.77	15.82	0.9965
3494	34.97	10.10	9.99	1.0109
3495	14.96	4.34	4.24	1.0250
3495	0.00	0.00	0.02	As Found Zero
3495	64.99	18.60	15.06	As Found Span
Average Correction Factor				1.0108

Calculated value of As Found Response: 15.051 ppm Percent Change of As Found: 19.1%

	Before		After
Calculated slope	0.999054	Calculated slope	0.997279
Calculated intercept	0.029615	Calculated intercept	0.055328

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.02	ppm
Auto span	12.91	ppm	12.21	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)
3495	0.00	0.00	0.03	N/A
3495	54.94	31.18	31.22	0.9987
3494	34.97	19.96	19.78	1.0092
3495	14.96	8.59	8.39	1.0230
3495	0.00	0.00	0.03	As Found Zero
3495	64.99	36.78	29.91	As Found Span
Average Correction Factor				1.0103

Calculated value of As Found Response: 29.900 ppm Percent Change of As Found: 18.7%

	Before		After
Calculated slope	0.999181	Calculated slope	0.999091
Calculated intercept	0.051506	Calculated intercept	0.089062

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.04	ppm
Auto span	22.21	ppm	21.32	ppm

Notes: Rotor & actuator replaced
Owen conditioning performed
Span adjustment made

Calibration Performed By: Dmytro Dolotii, Grover Christiansen

Calibration Summary

Parameter CH4

Air Monitoring Network PAZA



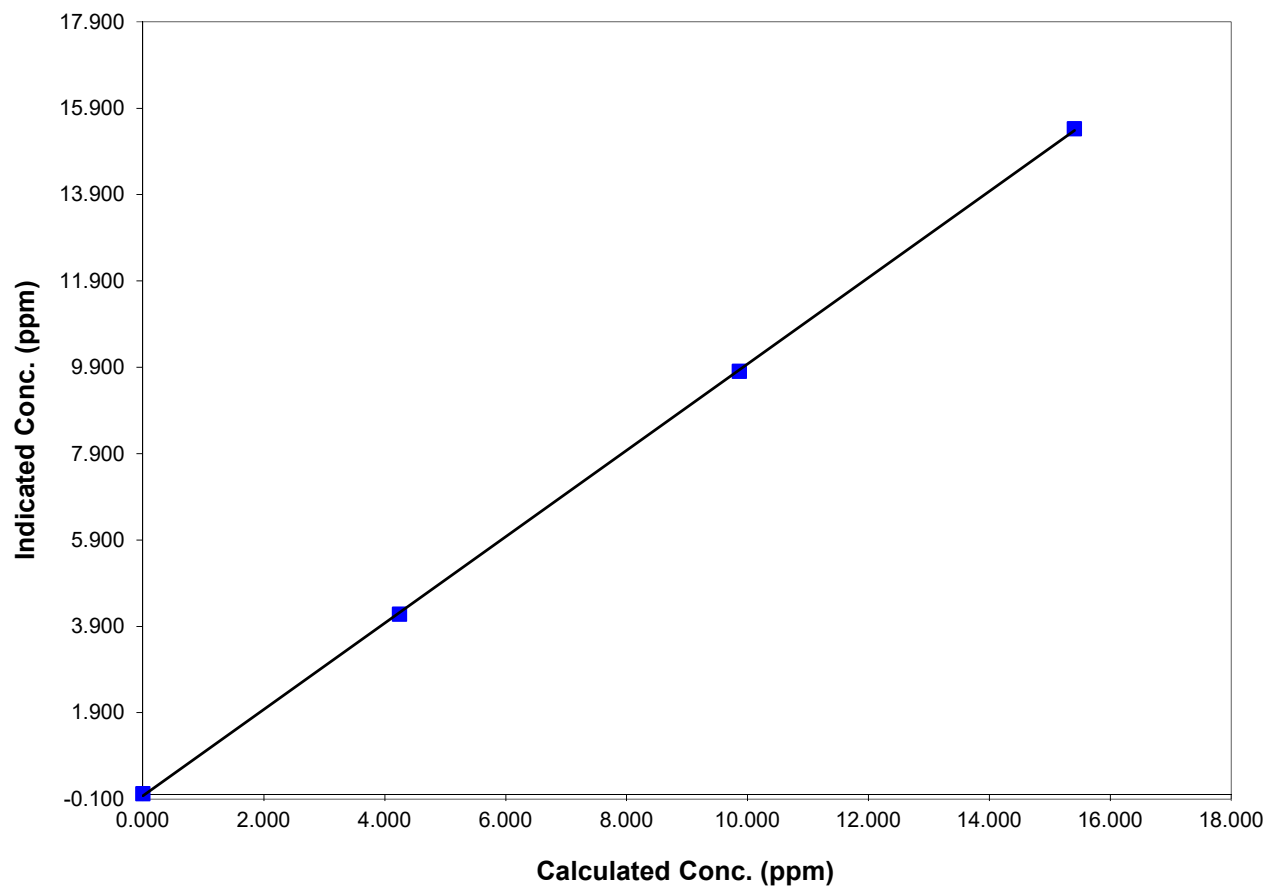
Station Information

Calibration Date	September 15, 2018	Previous Calibration	August 20, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:06	End Time (MST)	14:20:00 PM
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.019	N/A	Correlation Coefficient	0.999956
15.408	15.421	0.9992		
9.866	9.806	1.0061	Slope	0.999910
4.243	4.182	1.0147		
			Intercept	0.022820

CH4 Calibration Data



Calibration Summary

Parameter NMHC

Air Monitoring Network PAZA



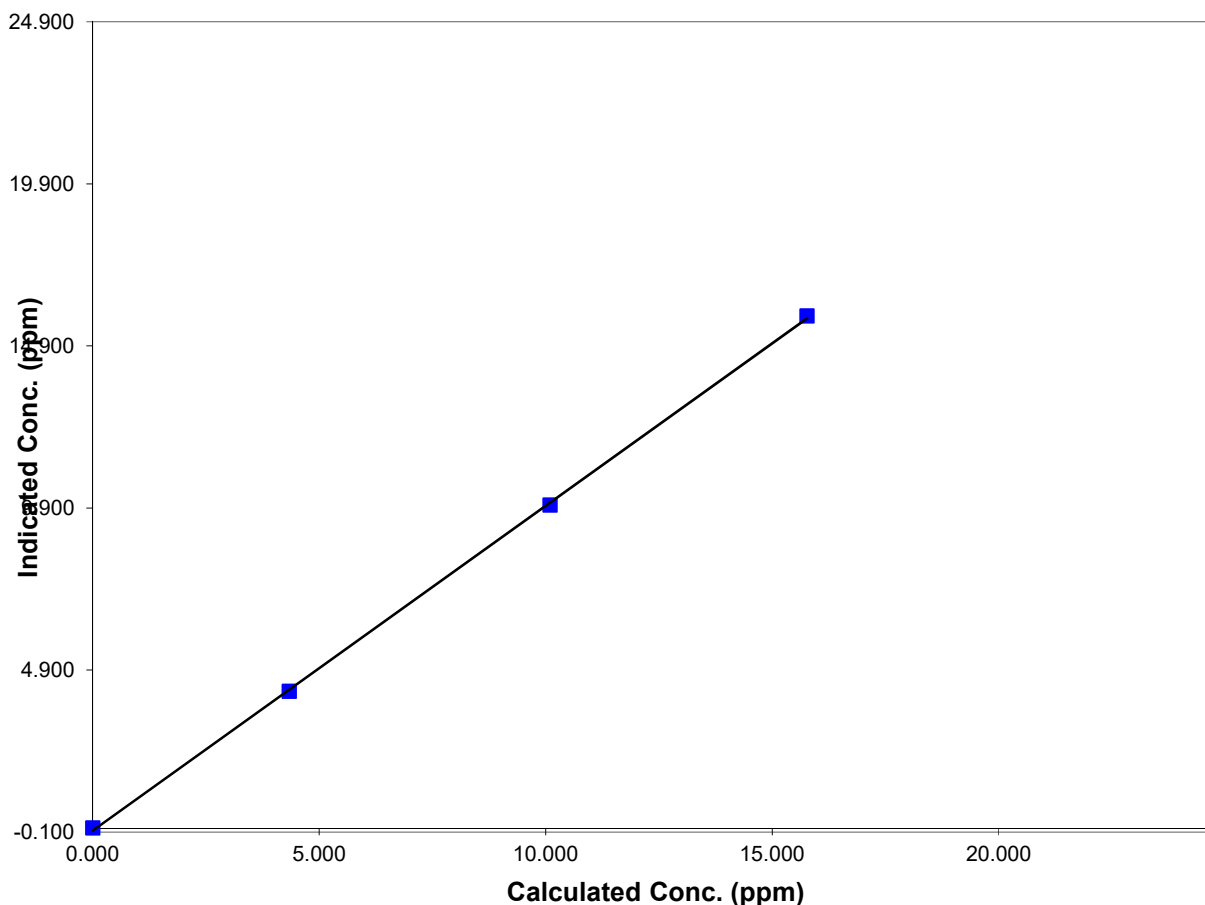
Station Information

Calibration Date	September 15, 2018	Previous Calibration	August 20, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:06	End Time (MST)	14:20:00 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	0.999854
15.768	15.824	0.9965		
10.096	9.988	1.0109		
4.343	4.237	1.0250	Slope	0.997279
			Intercept	0.055328

NMHC Calibration Data



Calibration Summary

Parameter THC

Air Monitoring Network PAZA



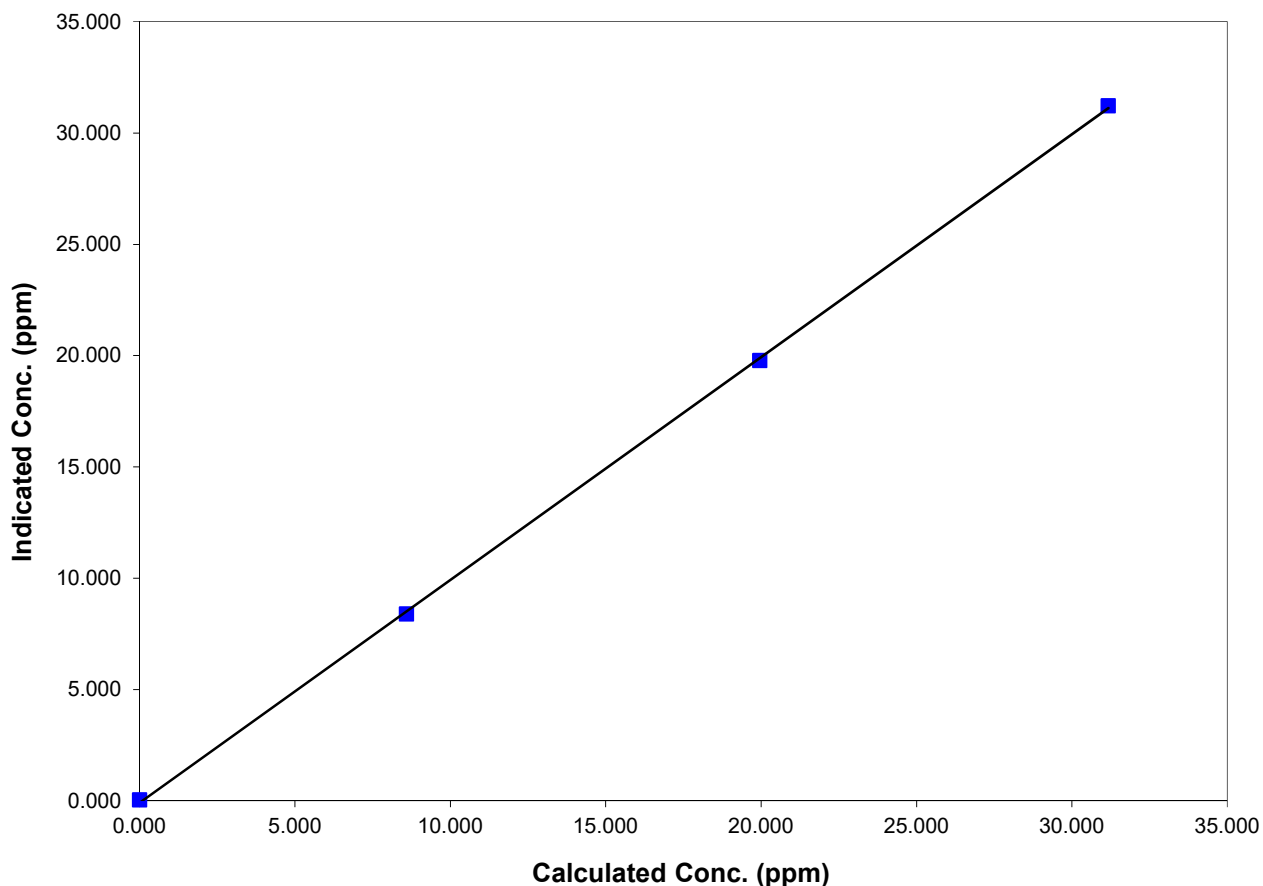
Station Information

Calibration Date	September 15, 2018	Previous Calibration	August 20, 2018
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:06	End Time (MST)	14:20:00 PM
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

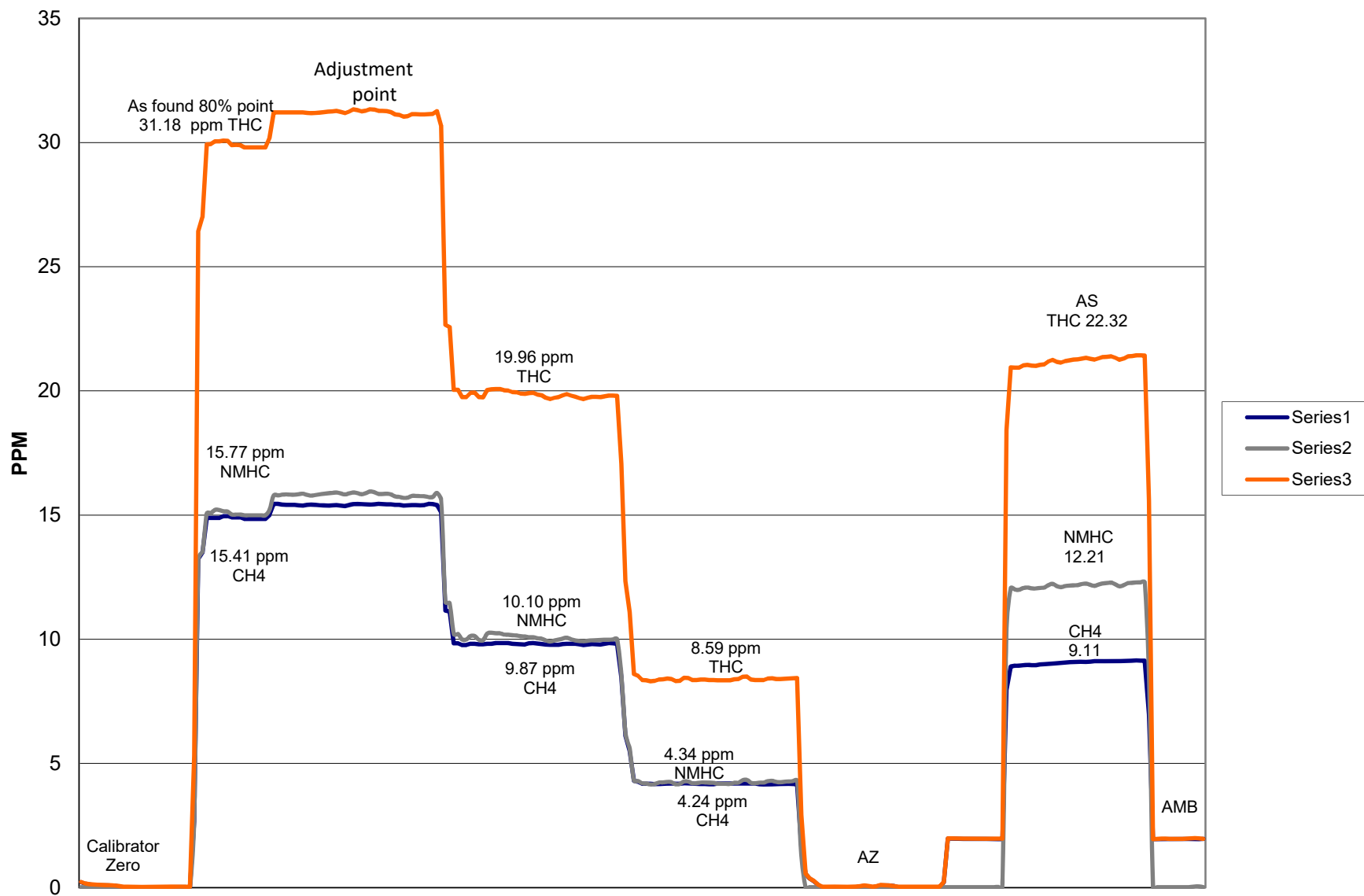
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.033	N/A	Correlation Coefficient	0.999910
31.177	31.216	0.9987		
19.962	19.780	1.0092	Slope	0.999091
8.586	8.393	1.0230		
			Intercept	0.089062

THC Calibration Data



THC/CH₄/NMHC Calibration



Calibration Report



Parameter SO₂

Air Monitoring Network PAZA

Station Information

Calibration Date	September 26, 2018	Previous Calibration	August 29, 2018
Station Number	3	Station Location	Smokey Heights
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	12:35	End Time (MST)	14:50:00 PM
Barometric Pressure	0.924 ATM	Station Temperature	19.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Concentration	49.6 ppm	Cal Gas Cert Date	10/24/2020
Correction factor	0.031517	Cal Gas Cylinder #	LL107945
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	6
	<u>Before</u>		<u>After</u>
Calculated slope	1.001165	Calculated slope	0.993821
Calculated intercept	-0.375629	Calculated intercept	0.887402
Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	14.3		14.3	
coefficient	0.951		0.951	
Lamp Voltage	944	volts	944	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	670.8	mm Hg	670.9	mm Hg
Sample Flow	0.450	lpm	0.450	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	396.0	0.9939
4996	19.97	197.47	197.2	1.0013
4996	9.99	98.98	96.3	1.0275
4996	0.0	0.00	1.2	As Found Zero
4996	39.96	393.57	396.0	As Found Span
Average Correction Factor				1.0076

Calculated value of As Found Response: 394.870 ppb Percent Change of As Found: -0.3%

	before calibration		after calibration	
Auto zero	1.0	ppb	1.4	ppb
Auto span	213.2	ppb	207.6	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



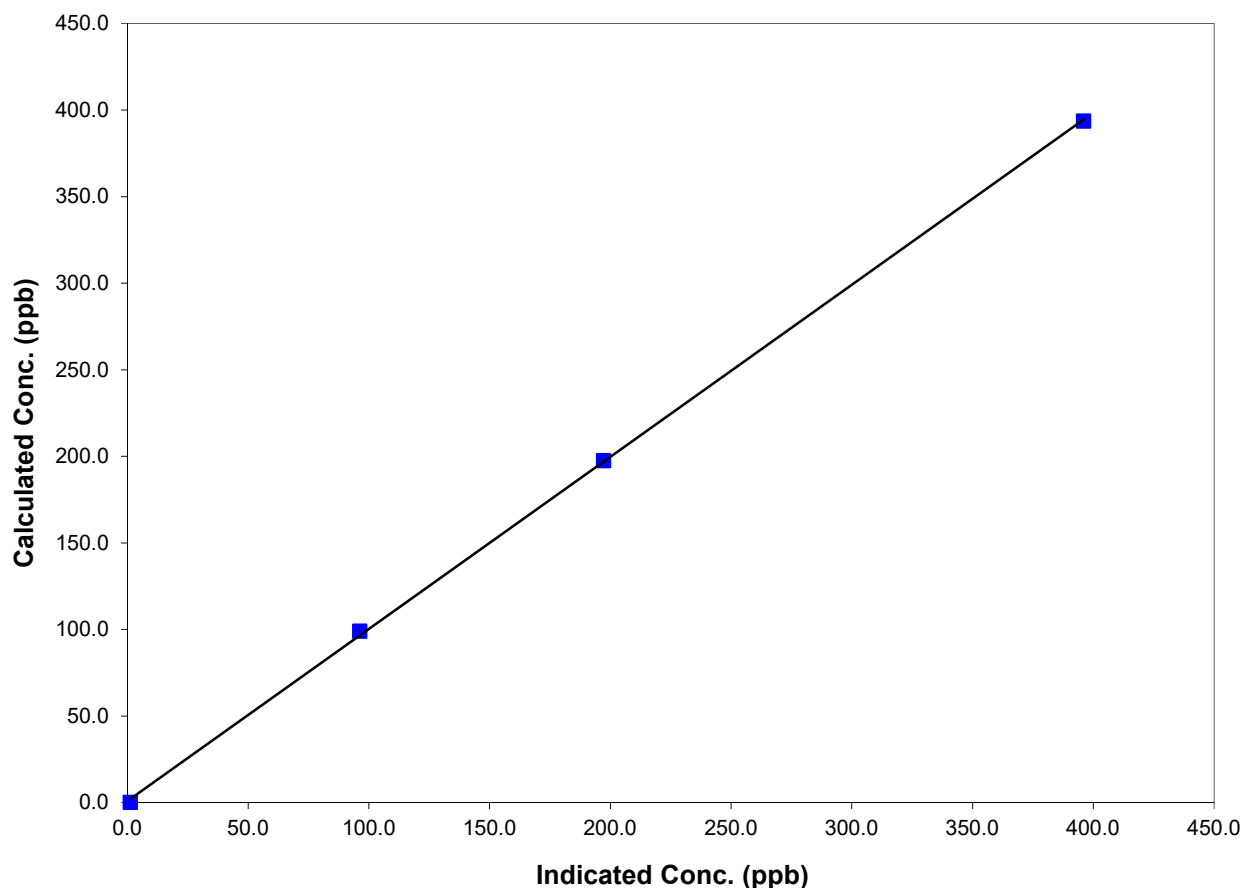
Station Information

Calibration Date	September 26, 2018	Previous Calibration	August 29, 2018
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	12:35	End Time (MST)	14:50:00 PM
Analyzer make/model	Teco 43i	Analyzer serial #	701120009

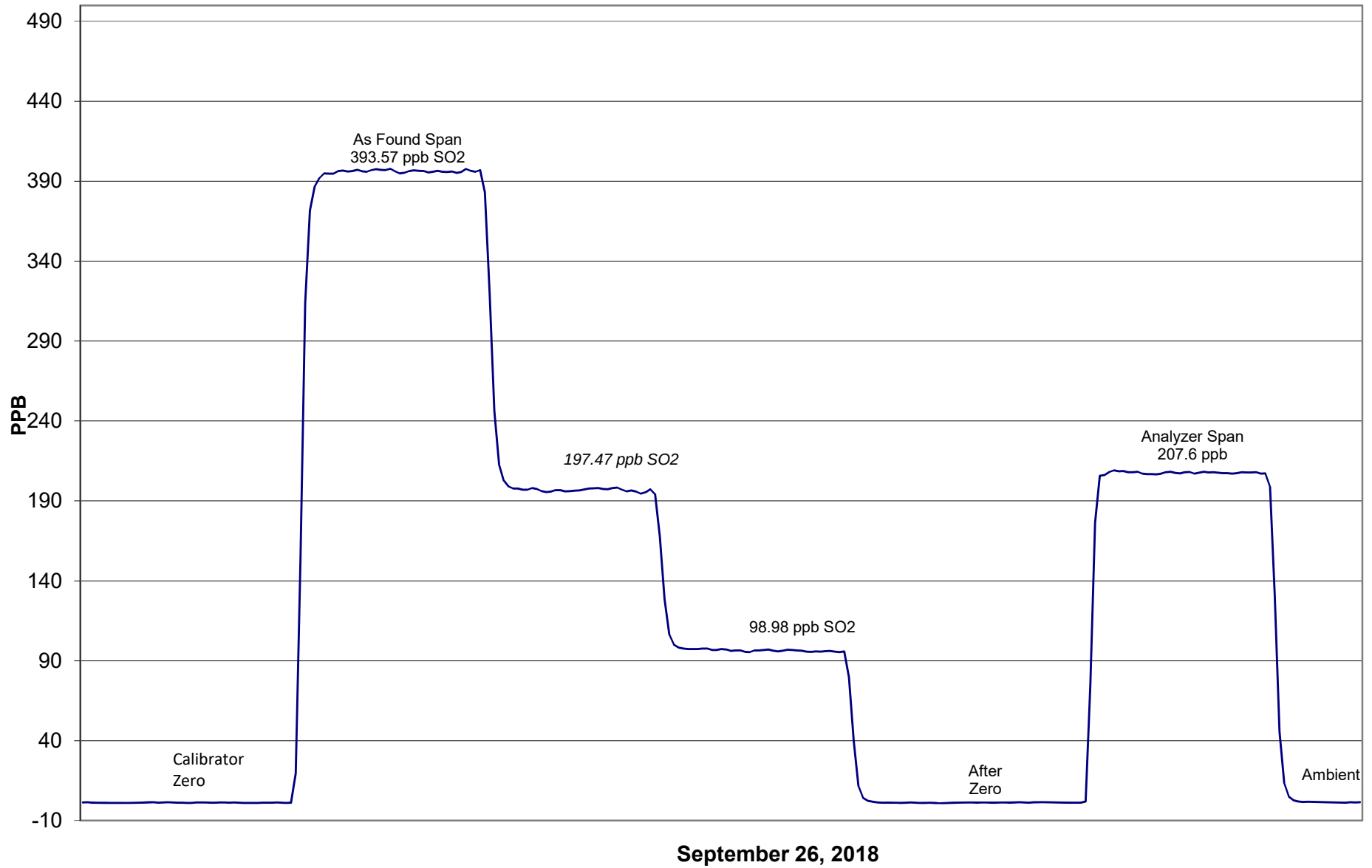
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	1.2	N/A	Correlation Coefficient	0.999870
393.6	396.0	0.9939		
197.5	197.2	1.0013		
99.0	96.3	1.0275	Slope	0.993821
			Intercept	0.887402

SO2 Calibration Curve



Smokey Heights SO₂ Calibration



Calibration Report

Parameter TRS

Air Monitoring Network PAZA



Station Information

Calibration Date	September 26, 2018	Previous Calibration	August 29, 2018
Station Number	3	Station Location	Smokey Heights
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	10:55	End Time (MST)	14:05:00 PM
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	0.998855	Calculated slope	1.000115
Calculated intercept	-0.184684	Calculated intercept	0.623690

Analyzer make TEI Model 43I APSAA Analyzer serial # 1153630151

	before		after	
Concentration range	100	ppb	100	ppb
Background	15.1	ppb	15.1	ppb
coefficient	1.075		1.075	
Lamp Voltage	805	volts	804	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	675.6	mm Hg	676.1	mm Hg
Sample Flow	0.421	lpm	0.420	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	-0.2	N/A
4996	39.96	77.60	77.1	1.0059
4996	19.97	38.94	38.1	1.0226
6998	9.99	13.94	13.0	1.0755
4996	9.99		0.4	Sox test
4996	0.0	0.00	-0.2	As Found Zero
4996	39.96	77.60	77.1	As Found Span
Average Correction Factor				1.0347

Calculated value of As Found Response: 77.09 ppb Percent Change of As Found: 0.7%

	before calibration		after calibration	
Auto zero	0.3	ppb	-0.1	ppb
Auto span	70.3	ppb	65.4	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



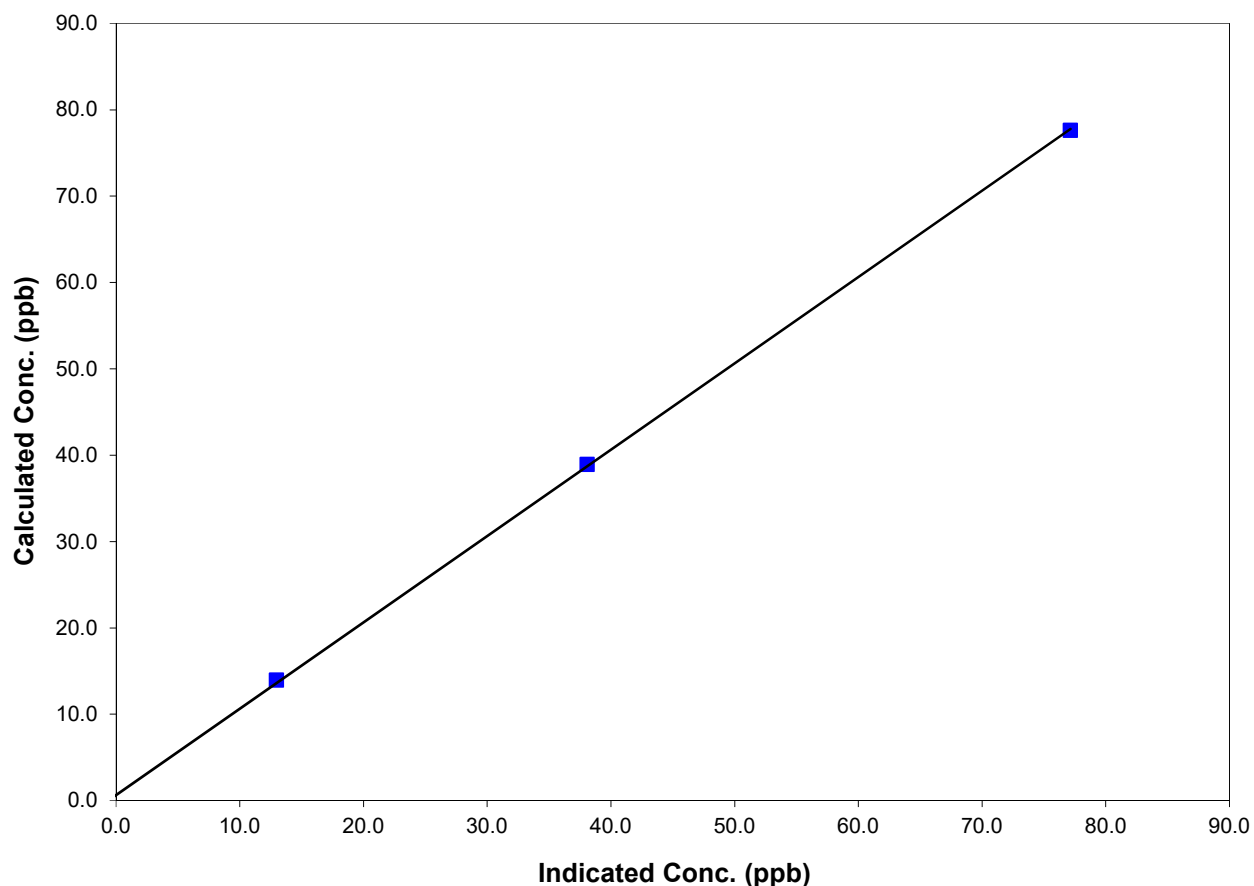
Station Information

Calibration Date	September 26, 2018	Previous Calibration	August 29, 2018
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	10:55	End Time (MST)	14:05:00 PM
Analyzer make/model	TEI Model 43I APSAA	Analyzer serial #	1153630151

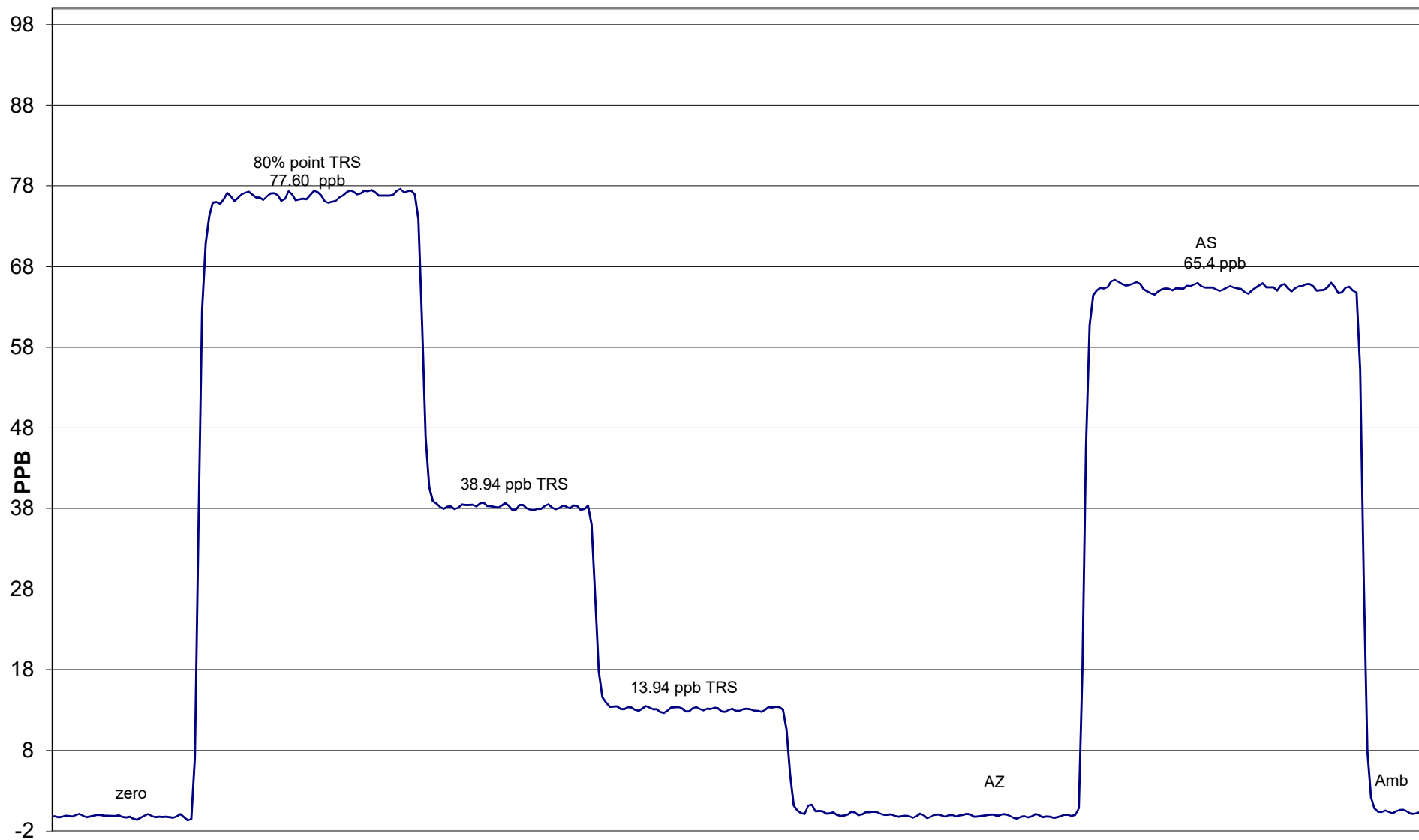
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.2	N/A	Correlation Coefficient	0.999891
77.6	77.1	1.0059		
38.9	38.1	1.0226		
13.9	13.0	1.0755	Slope	1.000115
			Intercept	0.623690

TRS Calibration Curve



Smokey Heights TRS Calibration



September 26, 2018

Calibration Report

Parameter SO2
Air Monitoring Network

PAZA



Station Information

Calibration Date	September 24, 2018	Previous Calibration	August 15, 2018
Station Number	6	Station Location	Valleyview
Reason:	Routine	Install	Removal
Start Time (MST)	12:10	End Time (MST)	14:10:00 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	1.004279	Calculated slope	0.994508
Calculated intercept	0.287931	Calculated intercept	1.773196
Analyzer make	TEI Model 43i - APSCB	Analyzer serial #	701120010

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	7.1		7.1	
Coefficient	0.831		0.831	
UV Lamp Voltage	794	LPM	794	LPM
Chamber Temp	45	V	45	V
Perm Gas Temp	45	C	45	C
Pressure	677.3	in Hg	677.8	in Hg
Sample Flow	0.457	LPM	0.460	LPM
Lamp Intensity	91	Hz	91	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	0.7	N/A
4995	39.94	391.9	393.5	0.9958
4995	19.97	196.7	194.5	1.0114
4995	9.97	98.4	95.0	1.0363
4995	0.00	0.0	0.7	As found zero
4995	39.94	391.9	393.5	As found span
Average Correction Factor				1.0145

Calculated value of As Found Response: 394.8 ppb Percent Change of As Found: -0.8%

	before calibration		after calibration	
Auto zero	0.6	ppb	0.8	ppb
Auto span	264.7	ppb	262.5	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2
Air Monitoring Network PAZA



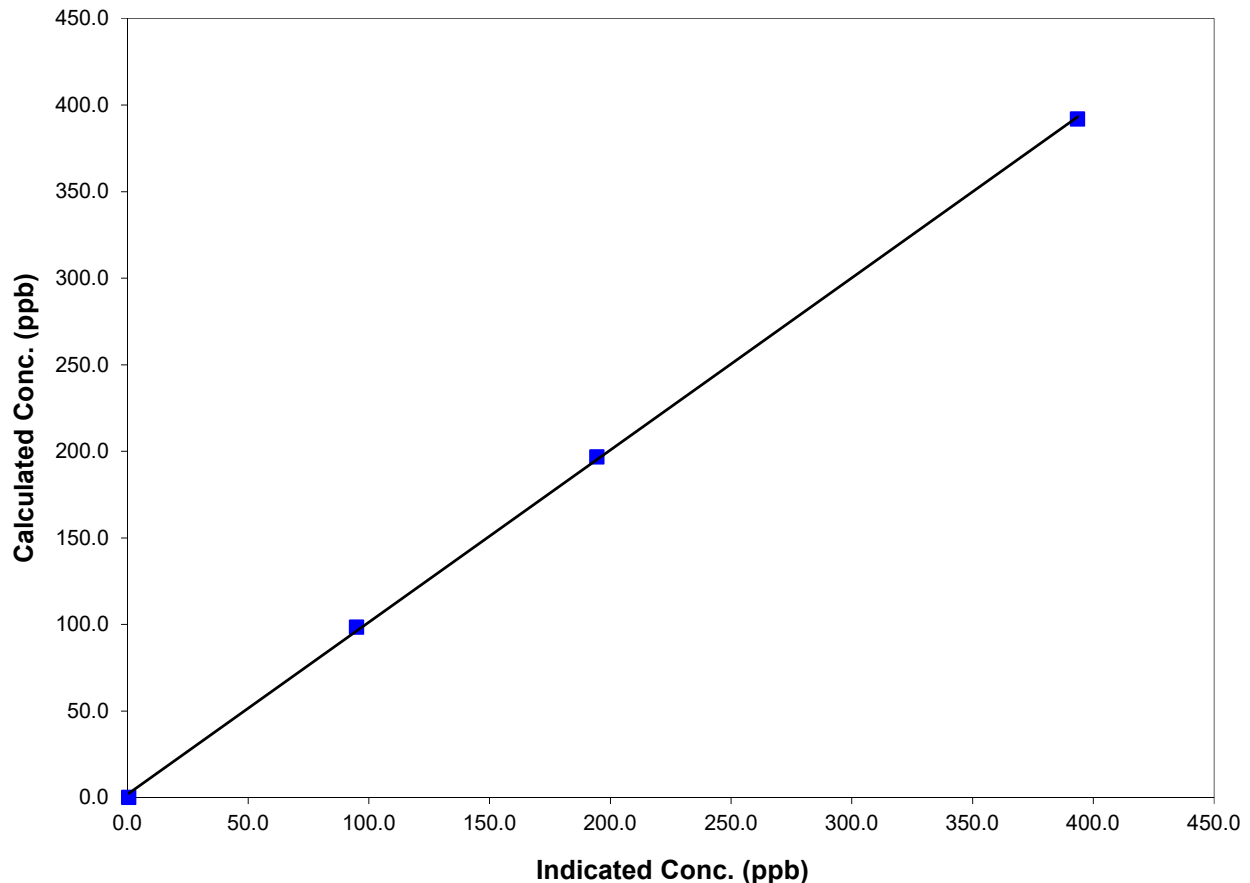
Station Information

Calibration Date	September 24, 2018	Previous Calibration	August 15, 2018
Station Number	6	Station Location	Valleyview
Start Time (MST)	12:10	End Time (MST)	14:10:00 PM
Analyzer make/model	TEI Model 43i - APSCB	Analyzer serial #	701120010

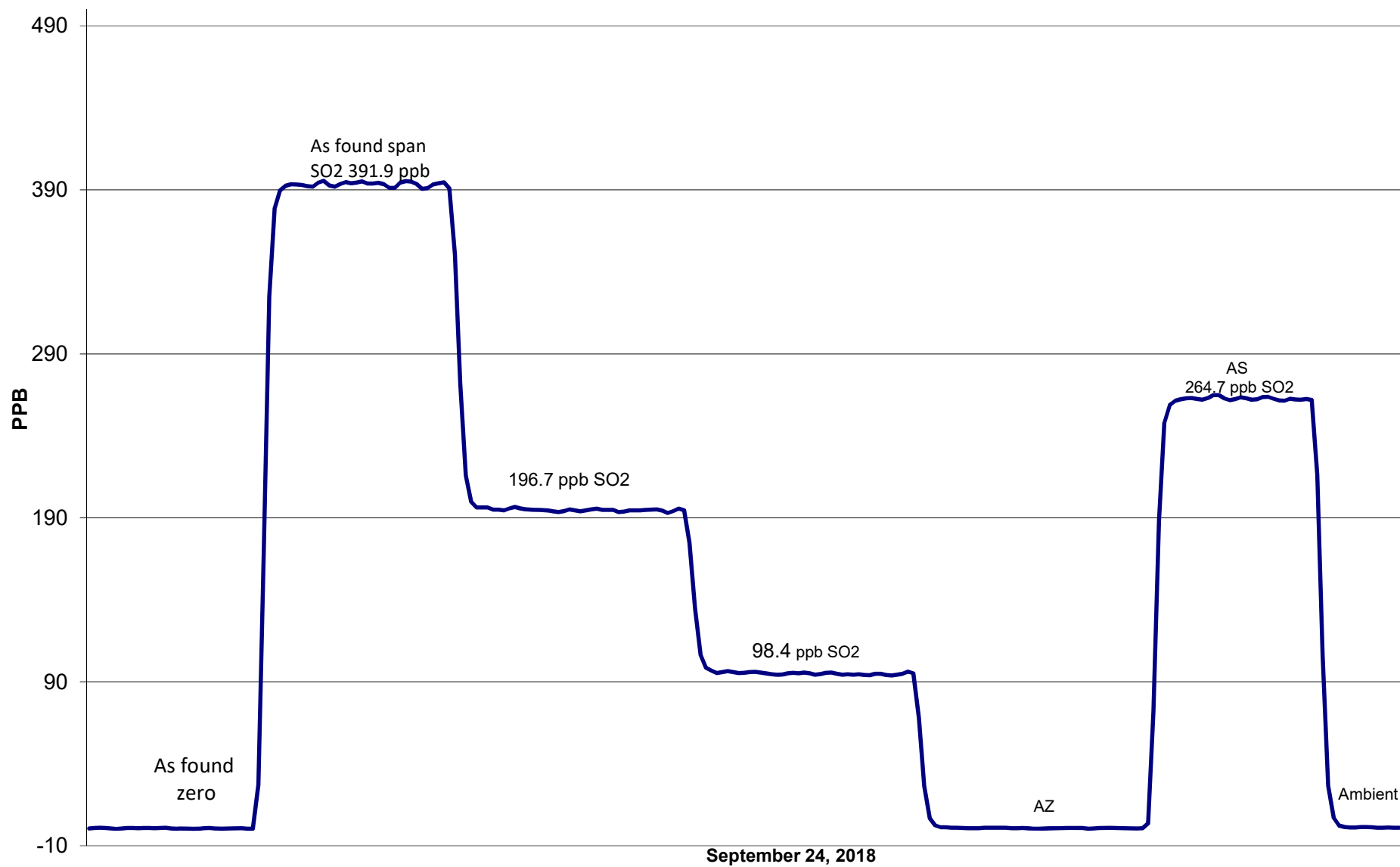
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.7	N/A	Correlation Coefficient	0.999825
391.9	393.5	0.9958		
196.7	194.5	1.0114		
98.4	95.0	1.0363	Slope	0.994508
			Intercept	1.773196

SO2 Calibration Curve



SO2 Calibration



Calibration Report

Parameter H2S

Air Monitoring Network PAZA



Station Information

Calibration Date	September 24, 2018	Previous Calibration	August 15, 2018
Station Number	6	Station Location	Valleyview
Reason:	Routine	Install	Removal
		Other:	

Start Time (MST)	9:35	End Time (MST)	12:55
Barometric Pressure	0.929 atm	Station Temperature	22.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3016
Cal Gas Concentration	9.78 ppm	Cal Gas Expiry Date	19/03/2021
Gas Cert Reference	EY0000943		
DACS make	CR3000	DACS serial No.	5409
DACS voltage range	0 - 5 volt	DACS channel #	9
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.996910	Calculated slope	0.991407
Calculated intercept	0.038378	Calculated intercept	0.645592

Analyzer make	TEI Model 450i-APHAA	Analyzer serial #	1170050144
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	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	15.1	ppb	14.4	ppb
Coefficient	0.989		0.947	
Lamp Voltage	768	V	764	V
Chamber Temp	45.1	c	45.1	c
Convertor	322.3	c	326.9	c
Pressure	489.30	mm Hg	489.60	mm Hg
Sample Flow	0.807	ccm	0.810	lpm
Lamp Intensity	90	%	90	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	-0.3	N/A
4995	39.94	77.6	77.8	0.9976
4995	19.97	38.9	38.4	1.0135
6995	9.97	13.9	13.0	1.0680
4995	0.00	0.0	-0.3	As found zero
4995	39.94	77.6	80.9	As found span
Average Correction Factor				1.0264

Calculated value of As Found Response: 80.91 ppb Percent Change of As Found: -4.3%

	before calibration		after calibration	
Auto zero	0.2	ppb	0.1	ppb
Auto span	82.5	ppb	78.3	ppb

Notes: Span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter H2S

Air Monitoring Network PAZA



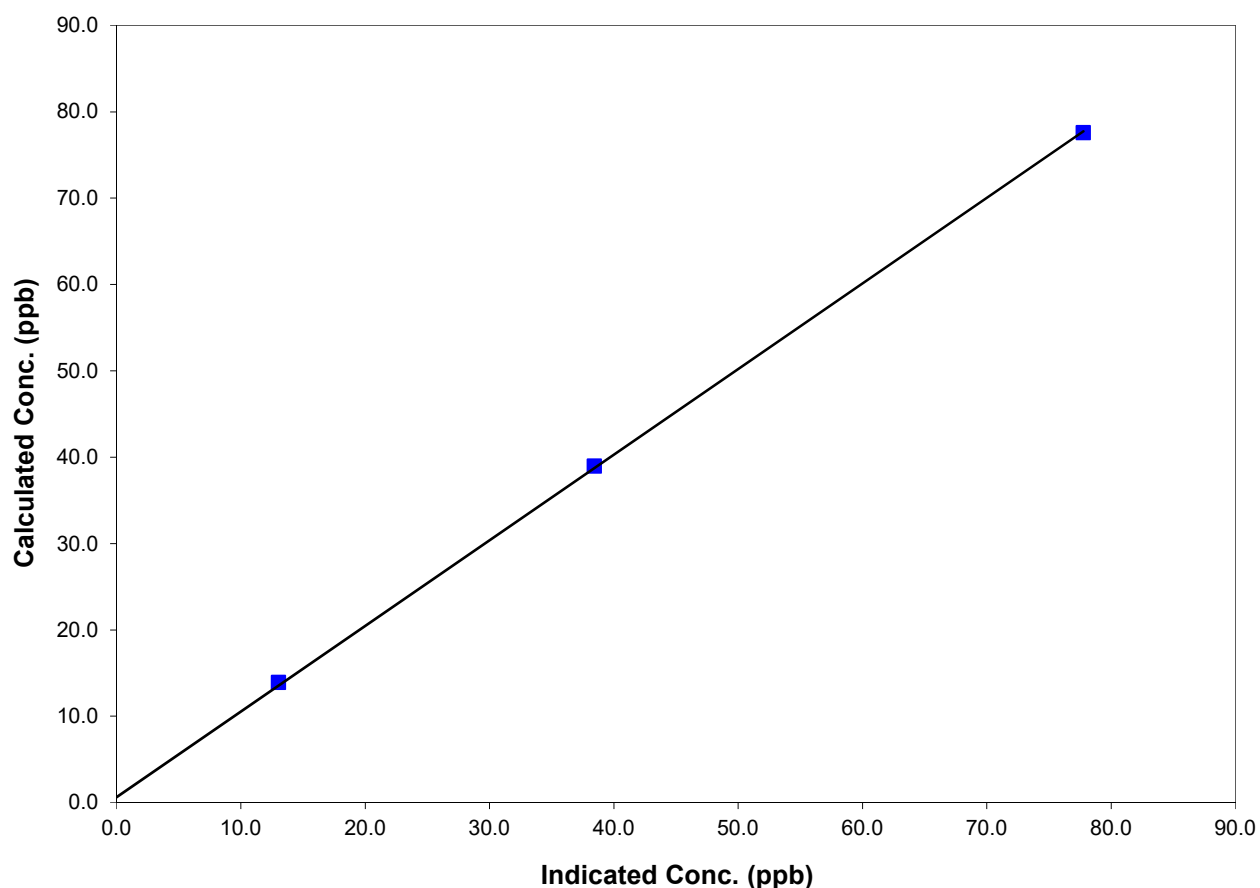
Station Information

Calibration Date	September 24, 2018	Previous Calibration	August 15, 2018
Station Number	6	Station Location	Valleyview
Start Time (MST)	9:35	End Time (MST)	12:55
Analyzer make/model	TEI Model 450i-APHAA	Analyzer serial #	1170050144

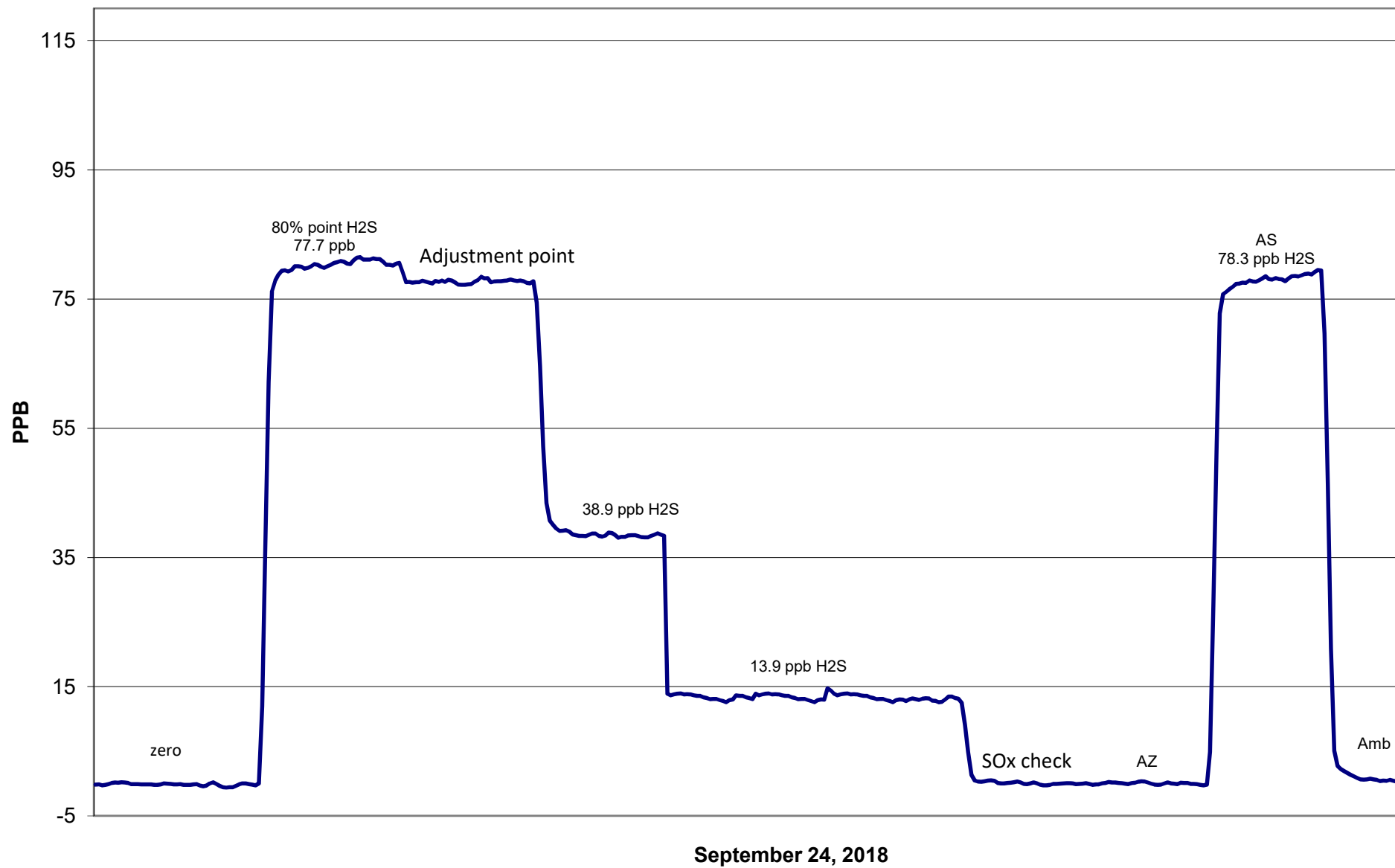
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.3	N/A	Correlation Coefficient	0.999900
77.6	77.8	0.9976		
38.9	38.4	1.0135		
13.9	13.0	1.0680	Slope	0.991407
			Intercept	0.645592

H2S Calibration Curve



H2S Calibration



Calibration Report

Parameter SO₂

Air Monitoring Network PAZA



Station Information

Calibration Date	September 25, 2018	Previous Calibration	August 24, 2018
Station Number	1	Station Location	Donnelly
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	13:00:00 PM	End Time (MST)	15:20:00 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	1.001573	Calculated slope	0.984949
Calculated intercept	-0.047586	Calculated intercept	1.342359
Analyzer make	Teco 43i	Analyzer serial #	1207452008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	6.9		6.9	
coefficient	1.029		1.029	
Lamp Voltage	842	volts	842	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	679.1	mm Hg	679.2	mm Hg
Sample Flow	0.429	ccm	0.428	ccm
Lamp Intensity	97	%	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	398.2	0.9870
4995	19.78	195.6	197.4	0.9913
4995	9.90	98.1	95.8	1.0243
4995	0.0	0.0	0.5	As Found Zero
4995	39.99	393.9	398.2	As Found Span
Average Correction Factor				1.0009

Calculated value of As Found Response: 398.268 ppb Percent Change of As Found: -1.1%

	before calibration		after calibration	
Auto zero	0.4	ppb	0.6	ppb
Auto span	243.4	ppb	245.0	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2
Air Monitoring Network PAZA



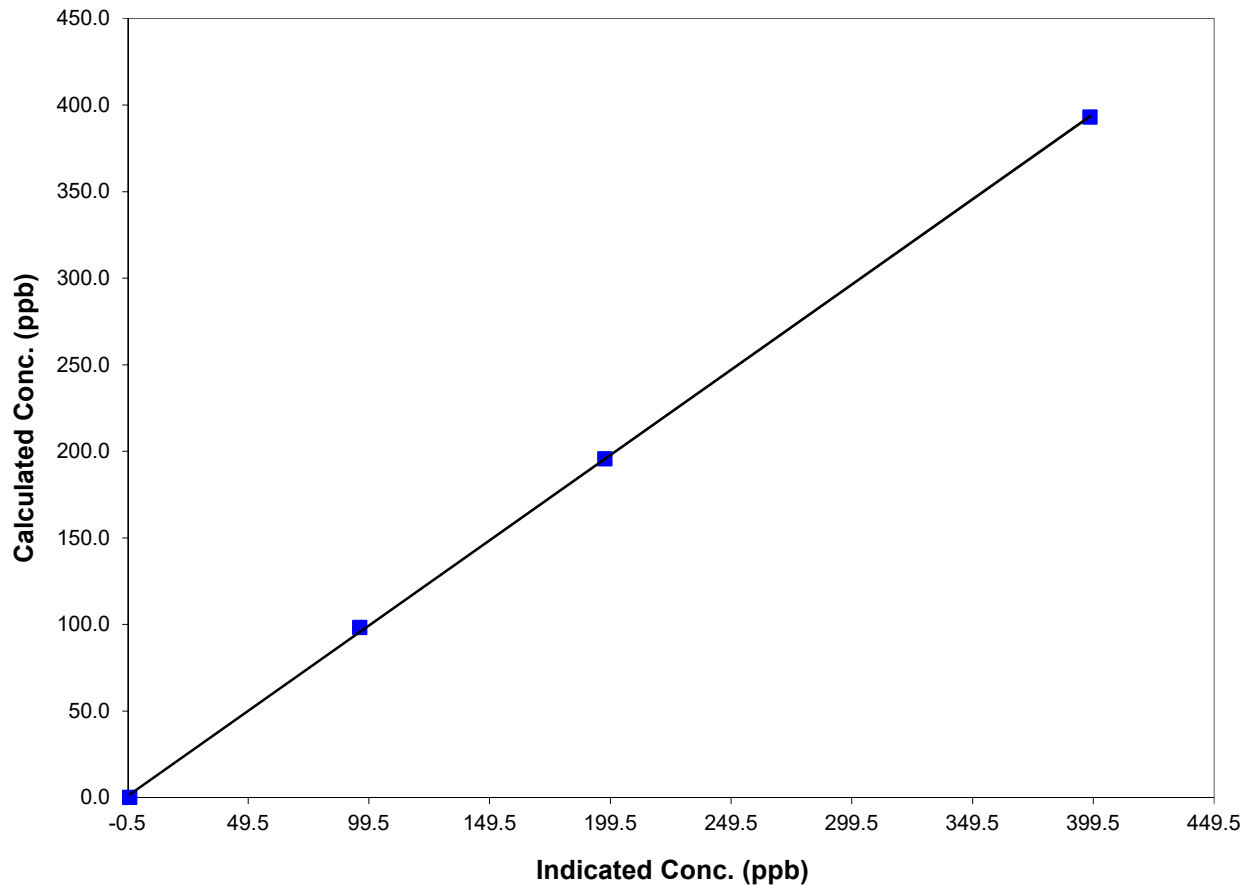
Station Information

Calibration Date	September 25, 2018	Previous Calibration	August 24, 2018
Station Number	1	Station Location	Donnely
Start Time (MST)	13:00:00 PM	End Time (MST)	15:20:00 PM
Analyzer make/model	Teco 43i	Analyzer serial #	1207452008

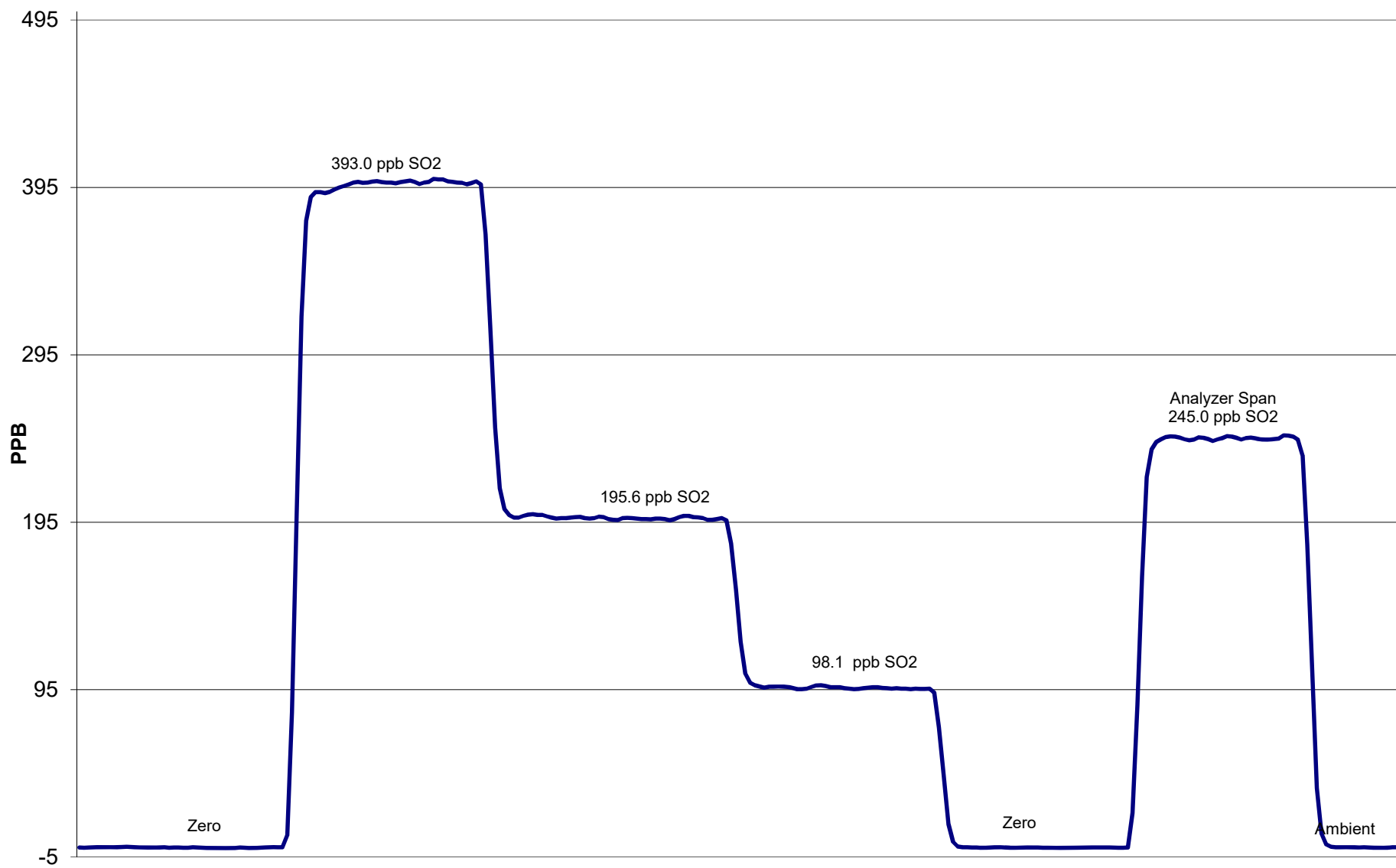
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A	Correlation Coefficient	0.999888
393.0	398.2	0.9870		
195.6	197.4	0.9913		
98.1	95.8	1.0243	Slope	0.984949
			Intercept	1.342359

SO2 Calibration Curve



SO2 Calibration



September 25, 2018

Calibration Report

Parameter H2S
Air Monitoring Network PAZA



Station Information

Calibration Date	25/09/2018	Previous Calibration	24/08/2018
Station Number	1	Station Location	Donnelly
Reason:	Routine	Install	Removal
Start Time (MST)	11:35	End Time (MST)	14:30:00 PM
Barometric Pressure	0.926 atm	Station Temperature	20.0 Deg C
Calibrator	Envionics 6103	Serial Number	6586
Cal Gas Conc	9.78 ppm	Cal Gas Expiry Date	March 19, 2021
Correction factor	0.031477	Cal Gas Cylinder #	LL119574
DACS make	CR1000	DACS serial No.	3980
DACS voltage range	0 - 5 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
Calculated slope	1.009067	Calculated slope	0.978232
Calculated intercept	-0.000685	Calculated intercept	-0.012988
Analyzer make	Thermo 450i	Analyzer serial #	1207452006

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	9.9	ppb	9.9	ppb
coefficient	1.091		1.091	
Lamp Voltage	767	volts	767	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	475.4	mm Hg	476	mm Hg
Sample Flow	0.669	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	0.4	N/A
4991	39.92	77.60	79.4	0.9772
4991	19.84	38.72	39.6	0.9780
6970	9.93	13.91	13.8	1.0065
4992	0.00	0.00	0.4	As Found Zero
4991	39.92	77.60	79.4	As Found Span
Average Correction Factor				0.9872

Calculated value of As Found Response: 79.77 ppb Percent Change of As Found: **-2.8%**

	before calibration		after calibration	
Auto zero	0.3	ppb	0.6	ppb
Auto span	76.1	ppb	76.4	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter H2S

Air Monitoring Network PAZA



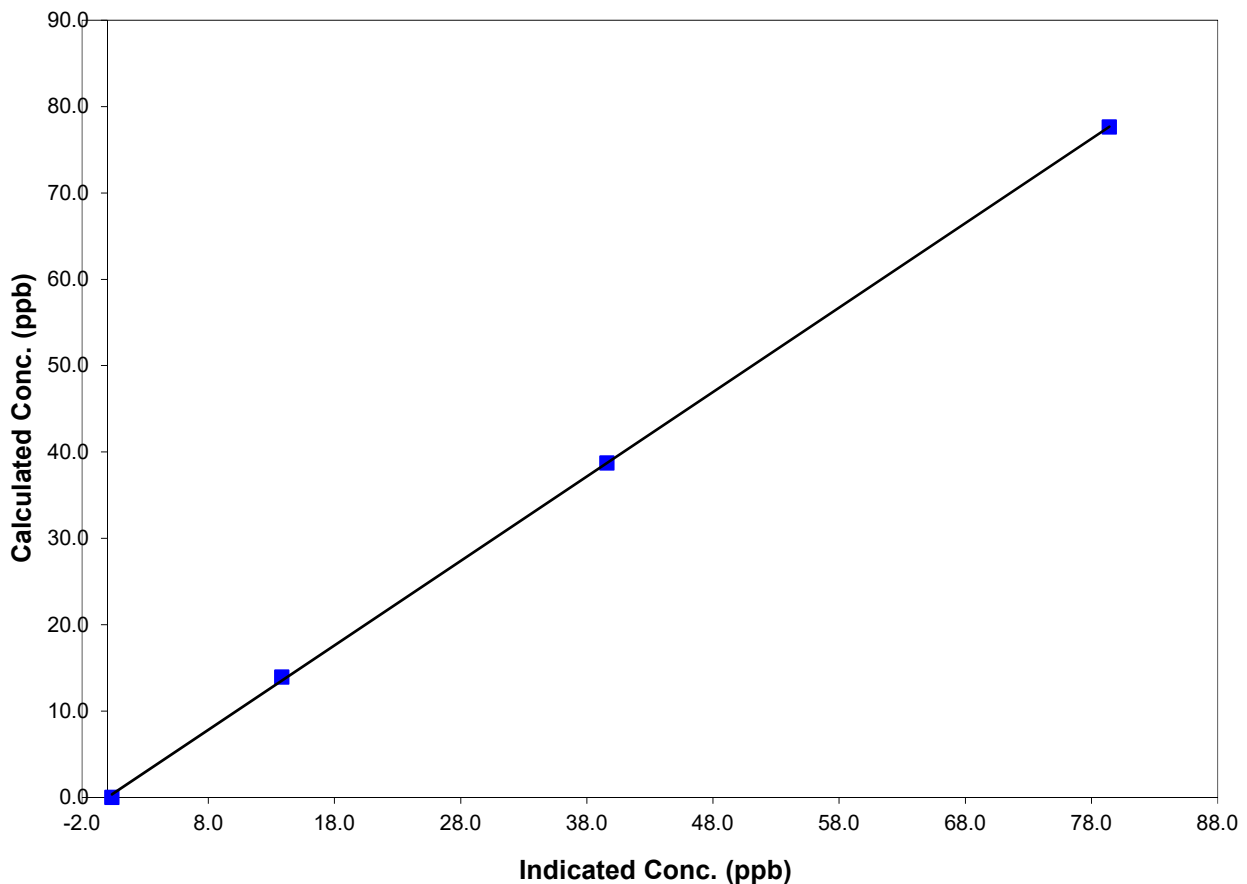
Station Information

Calibration Date	25/09/2018	Previous Calibration	24/08/2018
Station Number	1	Station Location	Donnely
Start Time (MST)	11:35	End Time (MST)	14:30:00 PM
Analyzer make/model	Thermo 450i	Analyzer serial #	1207452006

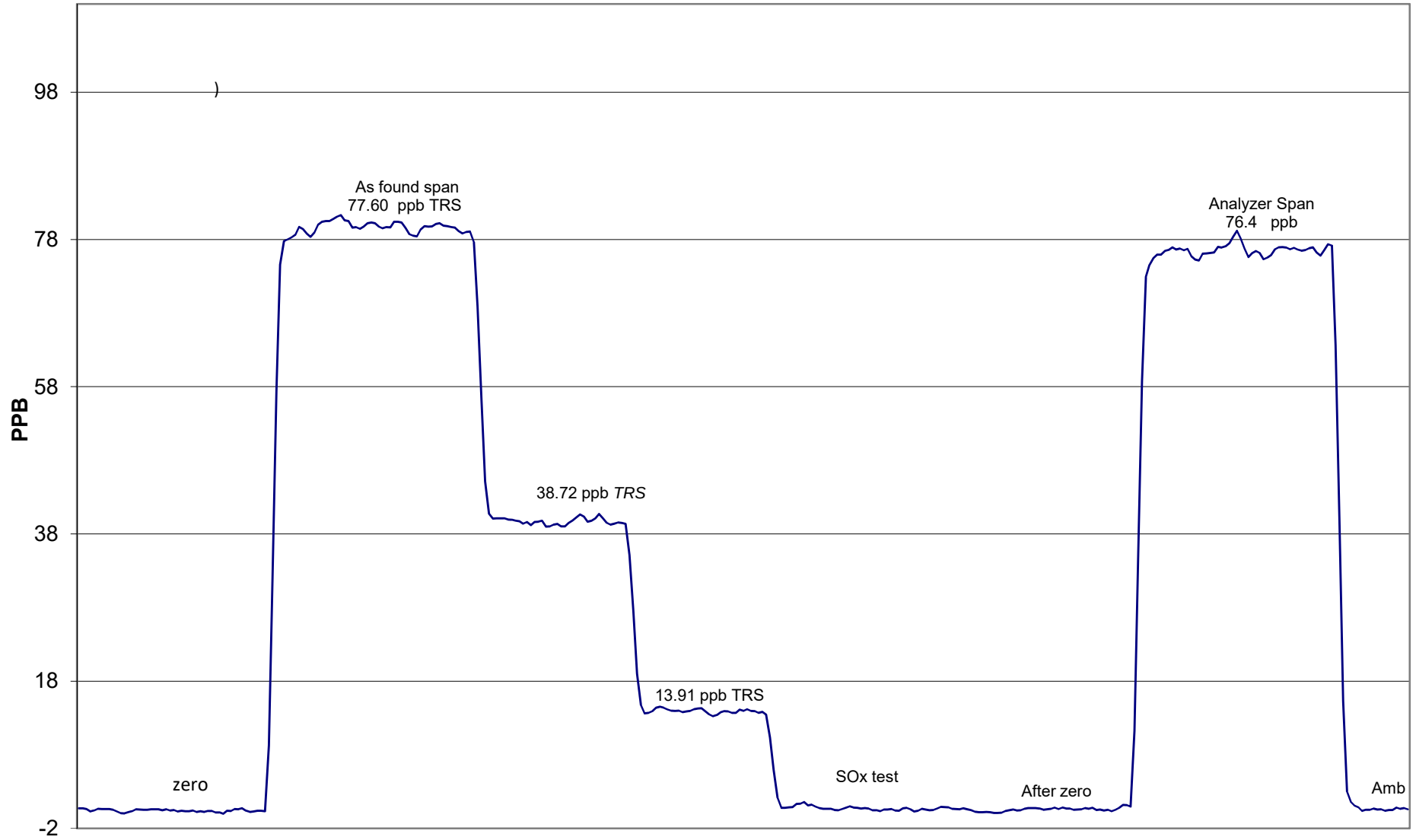
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A	Correlation Coefficient	0.999919
77.6	79.4	0.9772		
38.7	39.6	0.9780		
13.9	13.8	1.0065	Slope	0.978232
			Intercept	-0.012988

TRS Calibration Curve



H2S Calibration



25/09/2018

Calibration Report

Parameter SO2
Air Monitoring Network PAZA



Station Information

Calibration Date	September 19, 2018	Previous Calibration	August 2, 2018
Station Number	10	Station Location	Rycroft
Reason:	Routine	Install	Removal
Start Time (MST)	9:40	End Time (MST)	12:20
Barometric Pressure	0.919 Atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Concentration	49.6 ppm	Cal Gas Expiry Date	10/10/2020
Gas Cert Reference	LL104185		
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volt	DACS channel #	2
	<u>Before</u>		<u>After</u>
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.996481	Calculated slope	1.000406
Calculated intercept	-0.499516	Calculated intercept	0.350038
Analyzer make	TEI 43I	Analyzer serial #	1173410005

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	16.4		15.7	
Coefficient	1.008		0.971	
UV Lamp Voltage	754	V	754	V
Chamber Temp	45	C	45	C
Perm Gas Temp	45	C	45	C
Pressure	675.5	mm Hg	674.3	mm Hg
Sample Flow	0.444	LPM	0.444	LPM
Lamp Intesity	97	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	1.3	N/A
4996	39.96	393.6	393.8	0.9993
4996	19.99	197.7	196.5	1.0060
4996	9.98	98.9	96.8	1.0215
4996	0.00	0.0	1.3	As found zero
4996	39.96	393.6	408.3	As found span
Average Correction Factor				1.0089

Calculated value of As Found Response: 405.030 ppb Percent Change of As Found: -2.9%

	before calibration		after calibration	
Auto zero	0.3	ppb	0.3	ppb
Auto span	207.9	ppb	195.3	ppb

Notes: Span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2
Air Monitoring Network PAZA



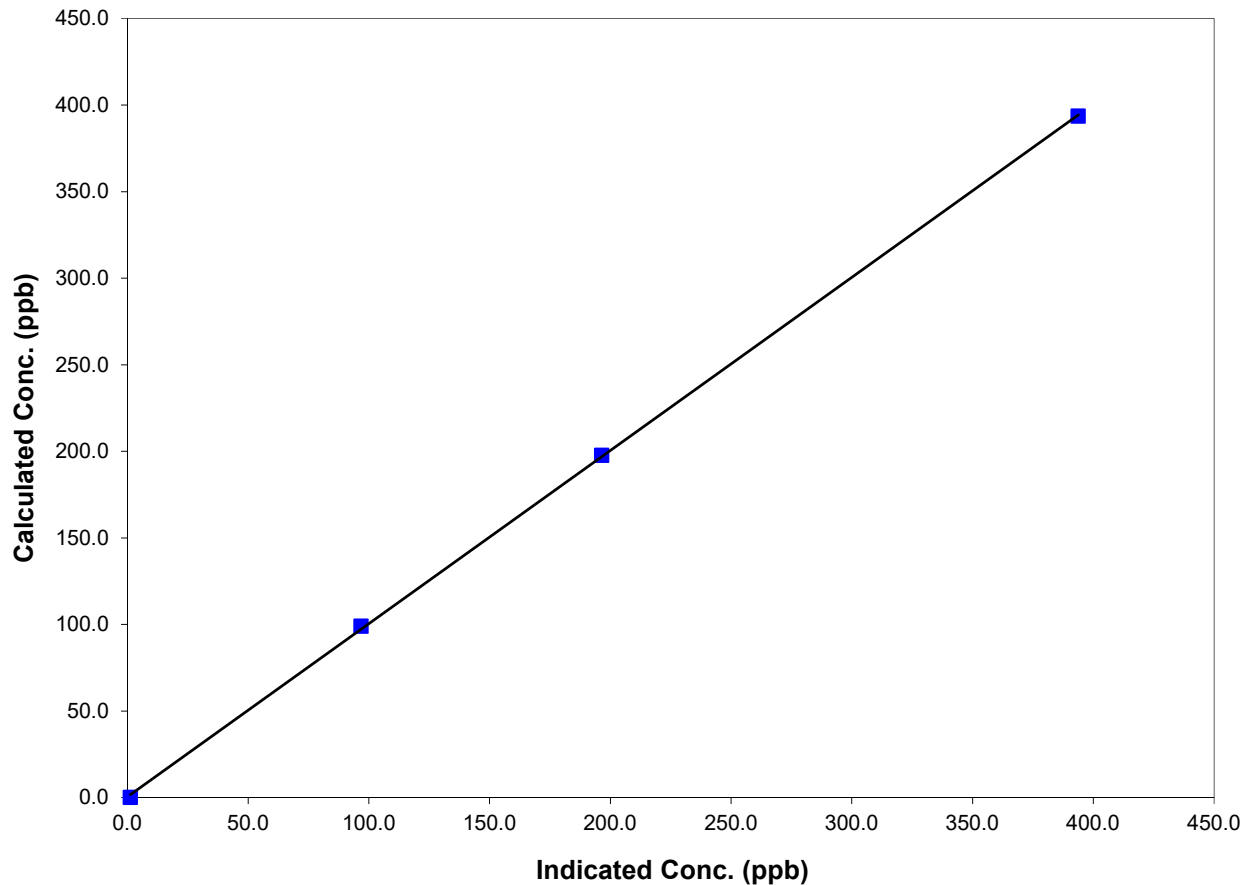
Station Information

Calibration Date	September 19, 2018	Previous Calibration	August 2, 2018
Station Number	10	Station Location	Rycroft
Start Time (MST)	9:40	End Time (MST)	12:20
Analyzer make/model	TEI 43I	Analyzer serial #	1173410005

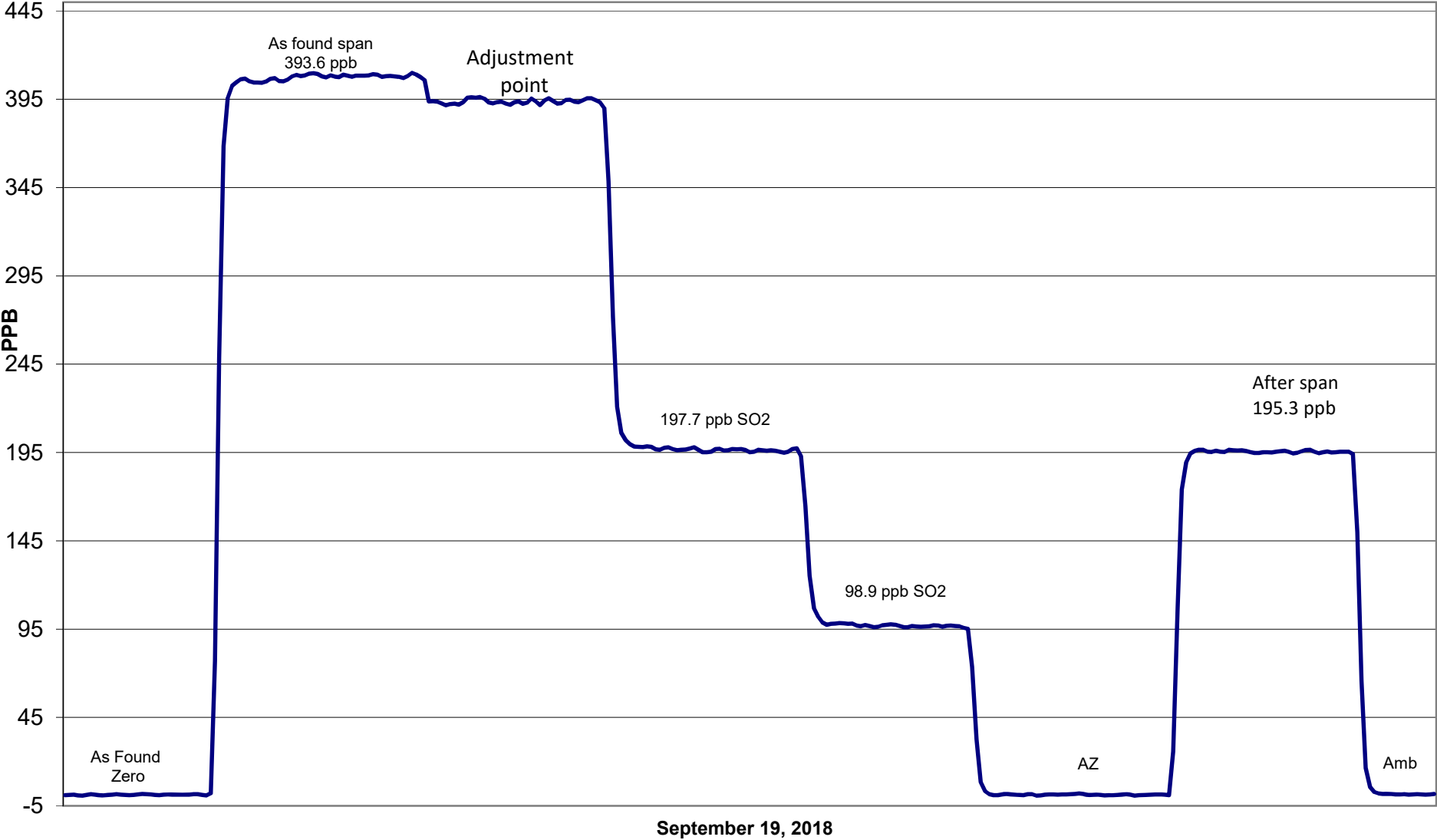
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	1.3	N/A	Correlation Coefficient	0.999920
393.6	393.8	0.9993		
197.7	196.5	1.0060		
98.9	96.8	1.0215	Slope	1.000406
			Intercept	0.350038

SO2 Calibration Curve



SO2 Calibration



Calibration Report



Parameter TR5
Air Monitoring Network PAZA

Station Information

Calibration Date	September 20, 2018	Previous Calibration	August 14, 2018
Station Name	PAZA Rover	Station Location	Rycroft
Reason:	Routine	Install	Removal
Start Time (MST)	10:15 AM	End Time (MST)	13:30:00 PM
Barometric Pressure	0.919 mbar	Station Temperature	21.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Concentration	9.78 ppm	Cal Gas Expiry Date	02/02/2020
Gas Cert Reference	LL119574		
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volt	DACS channel #	1
	<u>Before</u>		<u>After</u>
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.988893	Calculated slope	0.987933
Calculated intercept	0.530322	Calculated intercept	0.734319
Analyzer make	TEI 43C	Analyzer serial #	

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	13.3	ppb	11.4	ppb
Coefficient	1.040		0.964	
Lamp Voltage	773	V	775	V
Chamber Temp	45	C	45	C
Perm gas Temp	45	C	45	C
Pressure	678.3	mmHg	684.1	mmHg
Sample Flow	0.387	lpm	0.391	lpm
Lamp Intensity	86	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	0.2	N/A
4996	39.96	77.6	78.2	0.9923
4998	19.98	38.9	38.1	1.0221
6996	9.97	13.9	12.6	1.1048
			0.1	Sox Test
4996	0.00	0.0	-0.7	As found zero
4996	39.96	77.6	82.5	As found span
Average Correction Factor				1.0397

Calculated value of As Found Response: 82.73 ppb Percent Change of As Found: -6.6%

	before calibration		after calibration	
Auto zero	-0.1	ppb	0.2	ppb
Auto span	59.4	ppb	52.2	ppb

Notes: Zero & span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter TRS
Air Monitoring Network PAZA



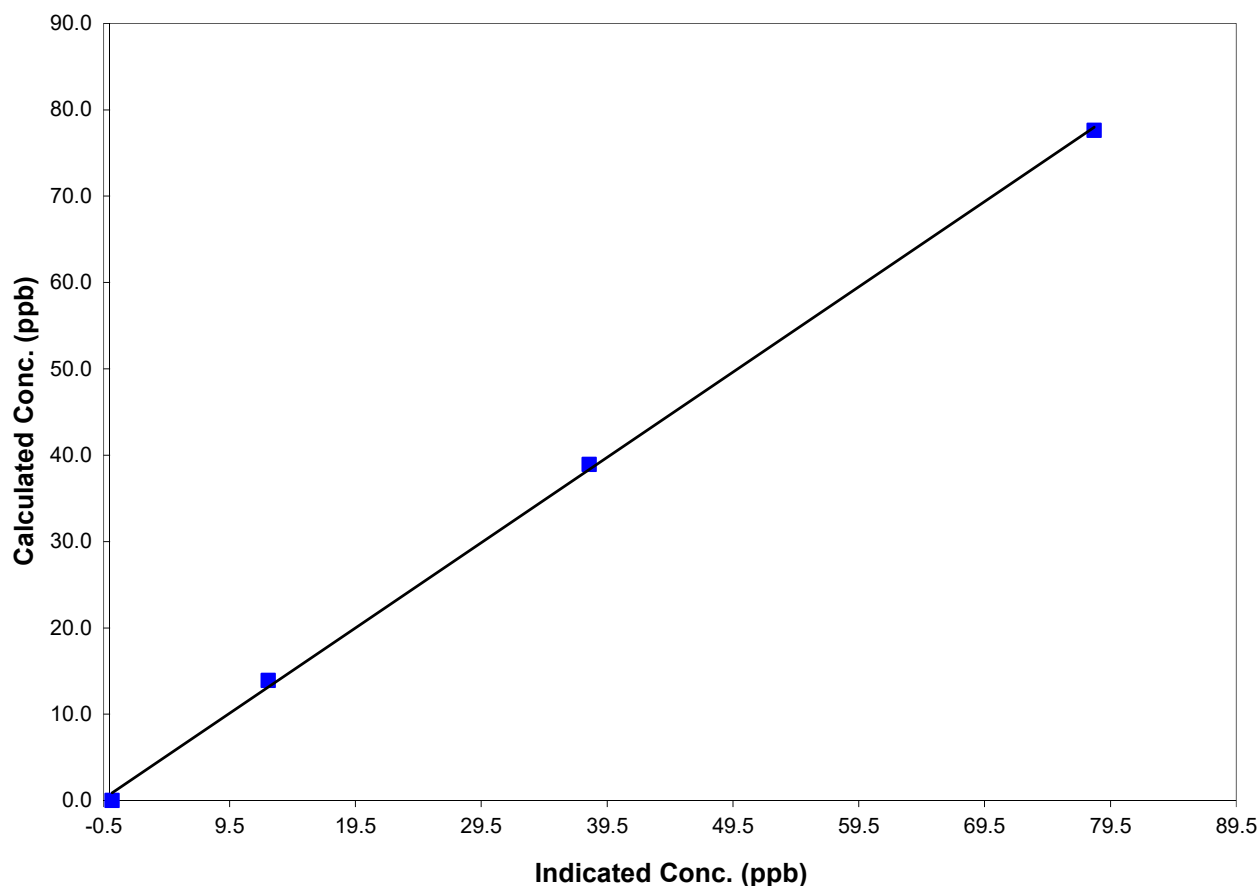
Station Information

Calibration Date	September 20, 2018	Previous Calibration	August 14, 2018
Station Number	PAZA Rover	Station Location	Rycroft
Start Time (MST)	10:15	End Time (MST)	13:30:00 PM
Analyzer make/model	TEI 43C	Analyzer serial #	0

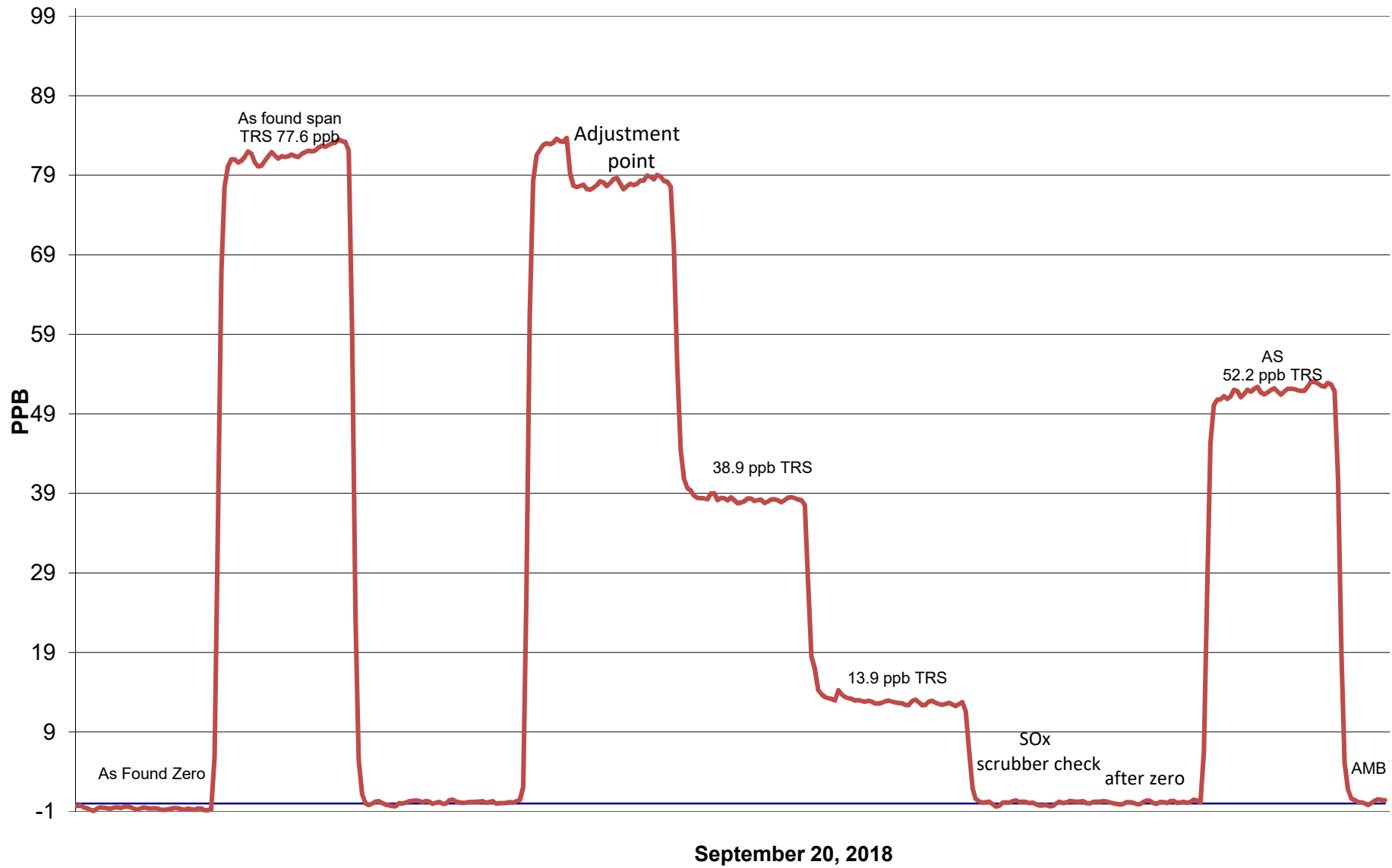
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999468
77.6	78.2	0.9923		
38.9	38.1	1.0221		
13.9	12.6	1.1048	Slope	0.987933
			Intercept	0.734319

TRS Calibration Curve



TRS Calibration



Calibration Report

Parameter
Air Monitoring Network

NO_x-NO-NO₂
PAZA



Station Information

Calibration Date	September 19, 2018	Previous Calibration	August 2, 2018
Station Number	10	Station Location	Rycroft
Reason:	Routine Installation Removal Other: Maintenance		
Start Time (MST)	9:35	End Time (MST)	13:45:00 PM
Barometric Pressure	0.919 Atm	Station Temperature	20.0 Deg C
Calibrator	Enviroicsn 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	1.001325	0.995231	0.992727
	Data Offset	-0.120245	0.235133	0.229588
After	Data Slope	1.006542	1.002179	0.999409
	Data Offset	0.452592	1.790533	1.897272
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	7.0	mV	6.8	mV
NOx bkgnd	7.2	mV	8.0	mV
NO coefficient	1.078		1.044	
NOx coefficient	0.995		0.995	
NO2 conv temp	326.8	Deg C	326.7	Deg C
Cooler	-2.7	Deg C	-2.7	Deg C
PMT Volt	-839.9	mV	-840.6	mV
R Cell Press	177.8	in Hg	178.1	in Hg
Sample Flow	0.740	LPM	0.733	LPM

Notes: Span adjustment made

Calibration Report

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



Station Information

Calibration Date: September 19, 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	0.1	-0.2	0.5	N/A	N/A
1	4996	39.96	412.6	411.8	0.8	410.9	411.2	-1.9	1.0041	1.0015
2	4996	19.99	207.2	206.8	0.4	203.8	203.6	-0.5	1.0168	1.0161
3	4996	9.98	103.7	103.5	0.2	99.9	100.4	-0.3	1.0376	1.0306
AFZ	4996	0.00	0.0	0.0	0.0	0.1	-0.2	0.5	0.0000	0.0000
AFS	4996	39.96	412.6	411.8	0.8	425.9	425.8	-1.6	0.9687	0.9671
Average Correction Factor									1.0195	1.0160

As Found Concentrations: NO_x= 424.0 NO= 423.2 As Found Percent Change NO_x= 2.8% NO= 2.8%

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	0.1	-0.2	0.5	N/A	N/A	N/A	N/A
NO point	409.2	409.2	0.0	409.5	409.2	-1.6	0.9992	1.0000	N/A	N/A
300	409.2	109.2	300.0	408.8	109.2	298.1	1.0009	1.0000	1.0065	99.4%
200	409.2	203.9	205.4	409.5	203.9	203.7	0.9994	1.0000	1.0083	99.2%
100	409.2	297.6	111.6	408.6	297.6	108.9	1.0016	1.0000	1.0245	97.6%
Average Correction Factor							1.0006	1.0000	1.0131	98.7%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.2	0.3	0.0	ppb	0.3	0.4	0.0	ppb
Auto span	155.7	153.5	1.6	ppb	192.3	189.9	1.4	ppb

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



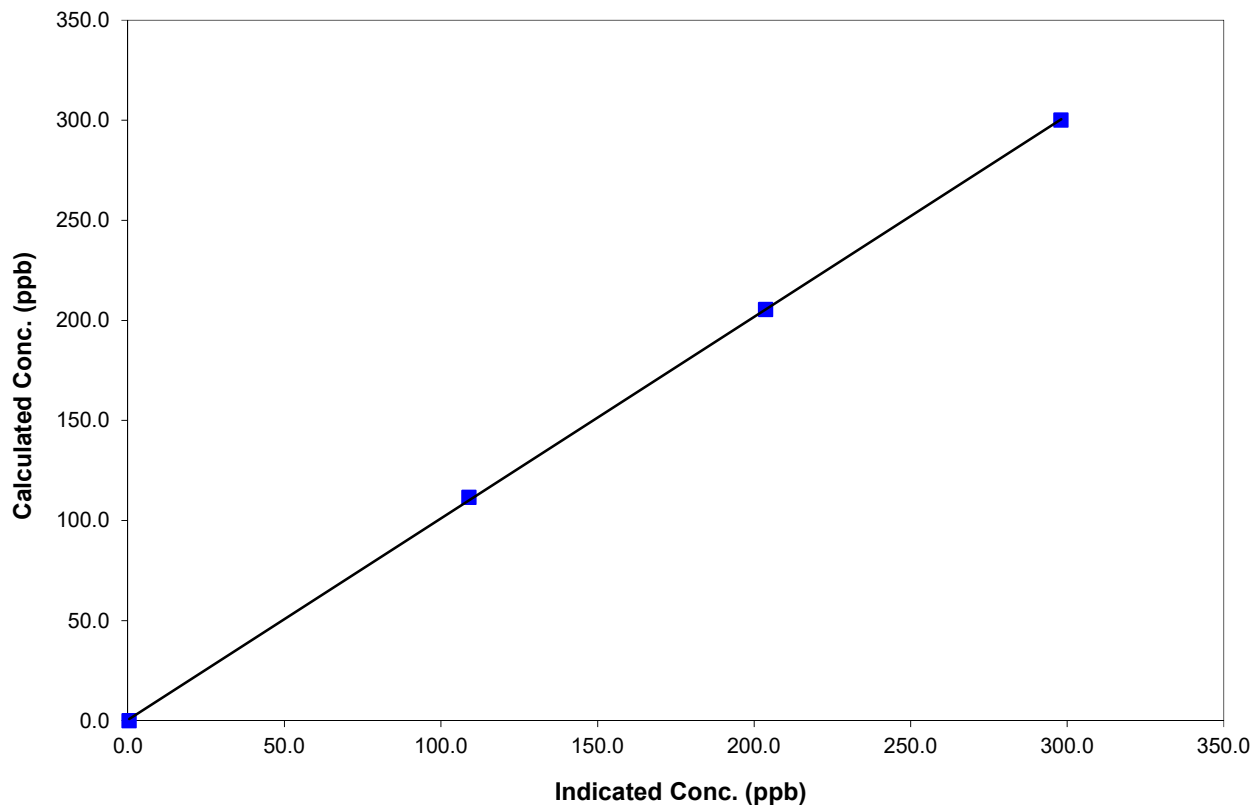
Station Information

Calibration Date	September 19, 2018	Previous Calibration	August 2, 2018
Station Number	10	Station Location	Rycroft
Start Time (MST)	9:35	End Time (MST)	13:45:00 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	0.5	N/A	Correlation Coefficient	0.999932
300.0	298.1	1.0065		
205.4	203.7	1.0083		
111.6	108.9	1.0245	Slope	1.006542
			Intercept	0.452592

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



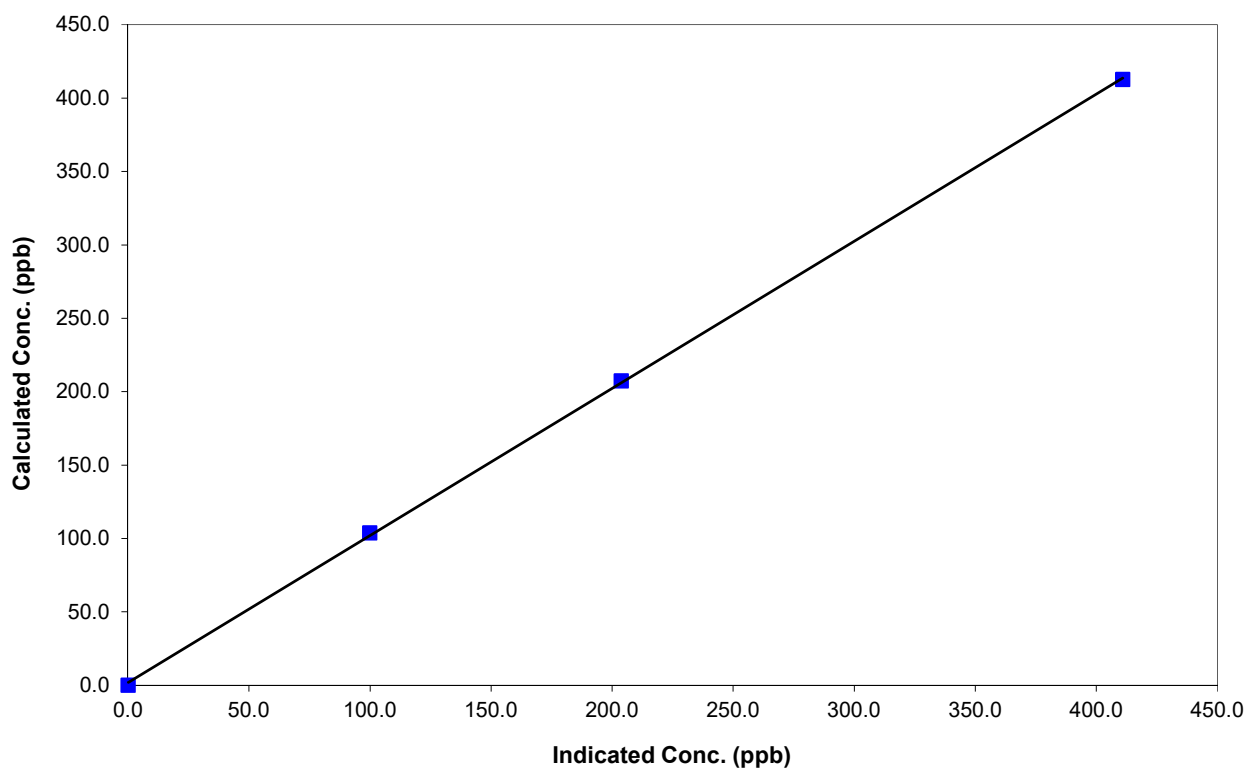
Station Information

Calibration Date	September 19, 2018	Previous Calibration	August 2, 2018
Station Number	10	Station Location	Rycroft
Start Time (MST)	9:35	End Time (MST)	13:45:00 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	0.999901
412.6	410.9	1.0041		
207.2	203.8	1.0168		
103.7	99.9	1.0376	Slope	1.002179
			Intercept	1.790533

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



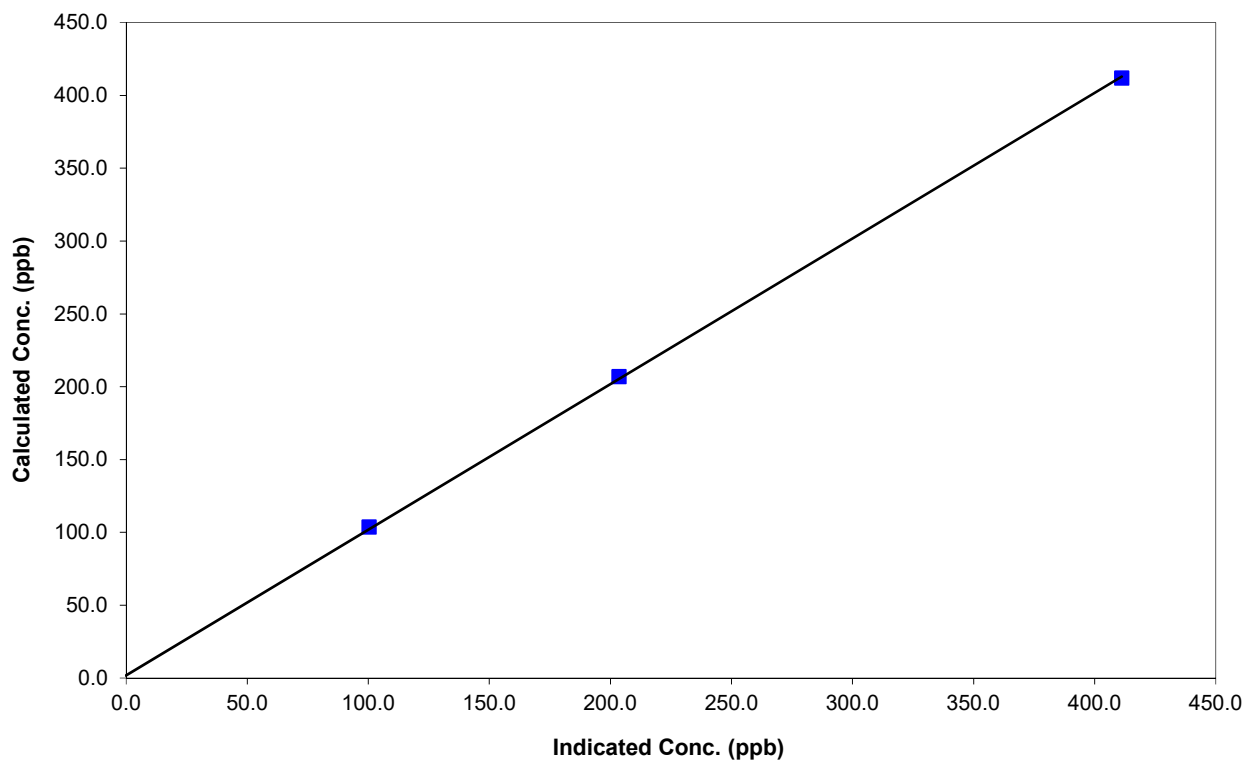
Station Information

Calibration Date	September 19, 2018	Previous Calibration	August 2, 2018
Station Number	10	Station Location	Rycroft
Start Time (MST)	9:35	End Time (MST)	13:45:00 PM
Analyzer make	TEI 42i	Analyzer serial #	0701120011

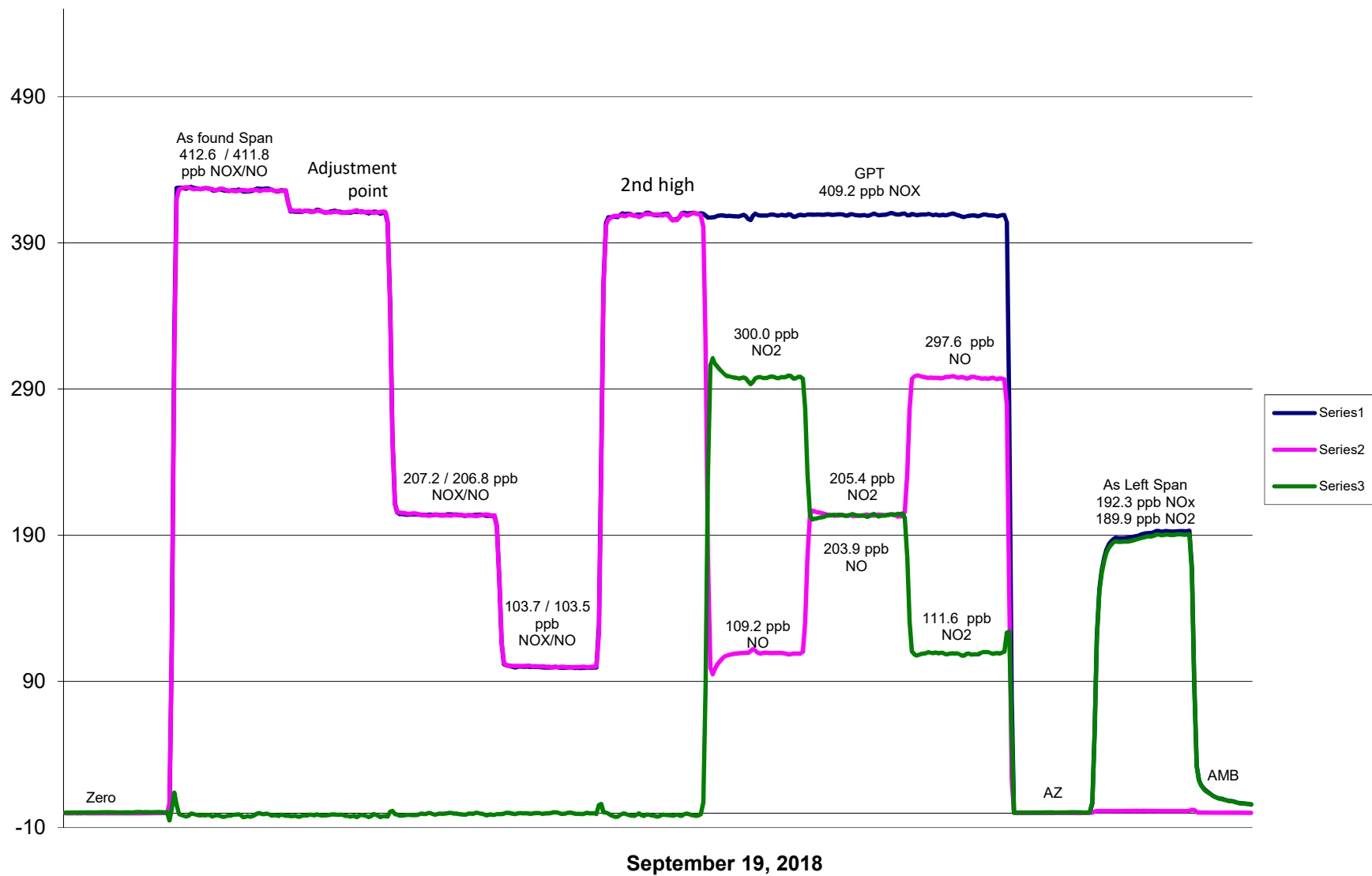
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.2	N/A		
411.8	411.2	1.0015	Correlation Coefficient	0.999918
206.8	203.6	1.0161		
103.5	100.4	1.0306		
			Slope	0.999409
			Intercept	1.897272

NO Calibration Curve



NO_x Calibration



Calibration Report



Parameter 03
Air Monitoring Network PAZA

Station Information

Calibration Date	September 19 2018	Previous Calibration	August 2 2018
Station Number	10	Station Location	Rycroft
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	13:00:00 PM	End Time (MST)	15:40:00 PM
Barometric Pressure	0.919 atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volts	DACS channel #	6
	Before		After
Calculated slope	1.005849	Calculated slope	1.000937
Calculated intercept	-0.217323	Calculated intercept	0.273305
Analyzer make	TEI Model 49I	Analyzer serial #	49I-115363156

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	-0.8	ppb	-0.8	ppb
Span	1.027		1.001	
Cell A intensity	92628	Hz	92009	Hz
Cell B intensity	79592	Hz	80960	Hz
Pressure	699.70	in Hg	698.40	in Hg
CellA Flow	0.687	ccm	0.687	ccm
Cell B Flow	0.685	cmm	0.684	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	0.2	N/A
4996	0.30	300.0	299.8	1.0007
4996	0.20	205.4	204.8	1.0028
4996	0.10	111.6	110.5	1.0101
4996	0.00	0.0	0.2	As found zero
4996	0.30	300.0	309.5	As found span
Average Correction Factor				1.0045

Calculated value of As Found Response: 310.9 ppm Percent Change of As Found: 3.6%

	before calibration		after calibration	
Auto zero	0.2	ppb	0.8	ppb
Auto span	374.6	ppb	371.2	ppb

Notes: Span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter 03
Air Monitoring Network PAZA



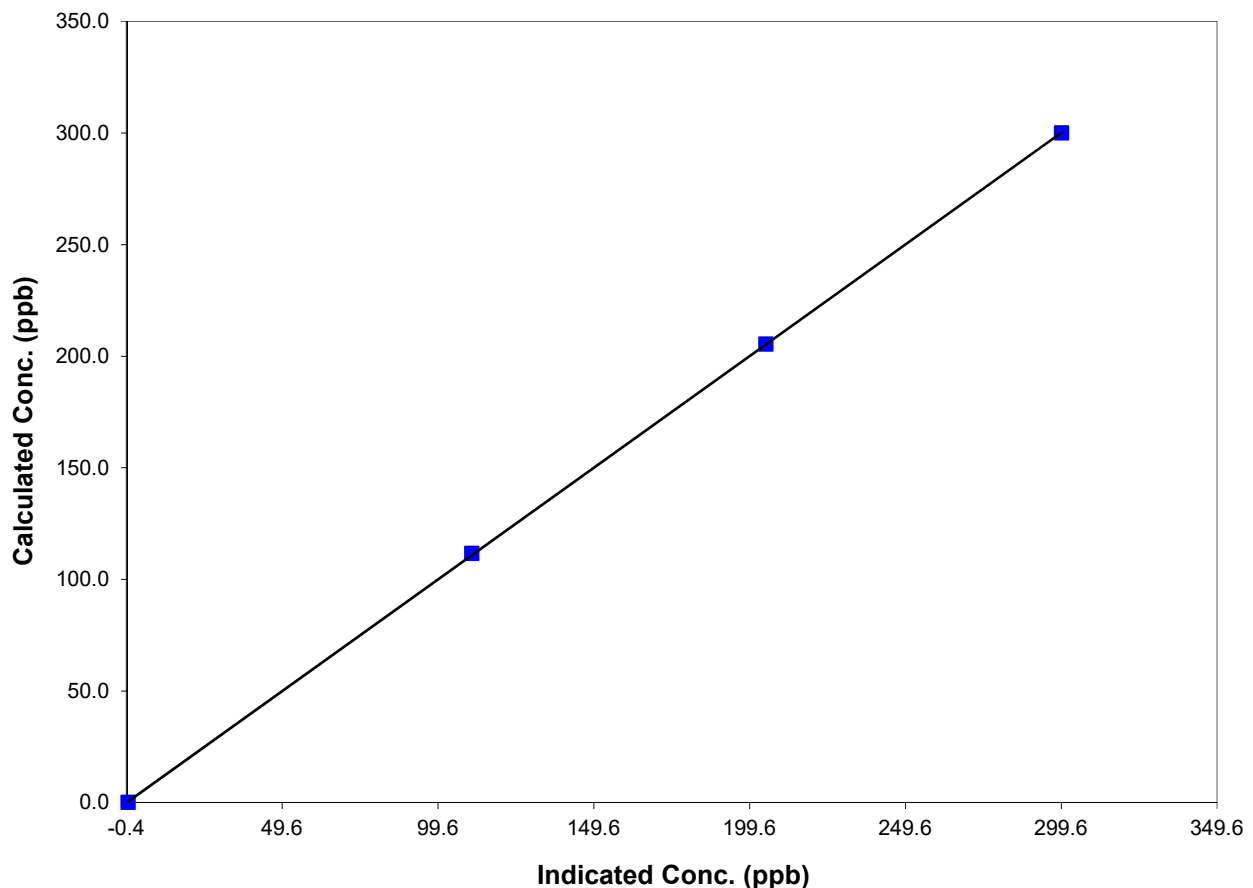
Station Information

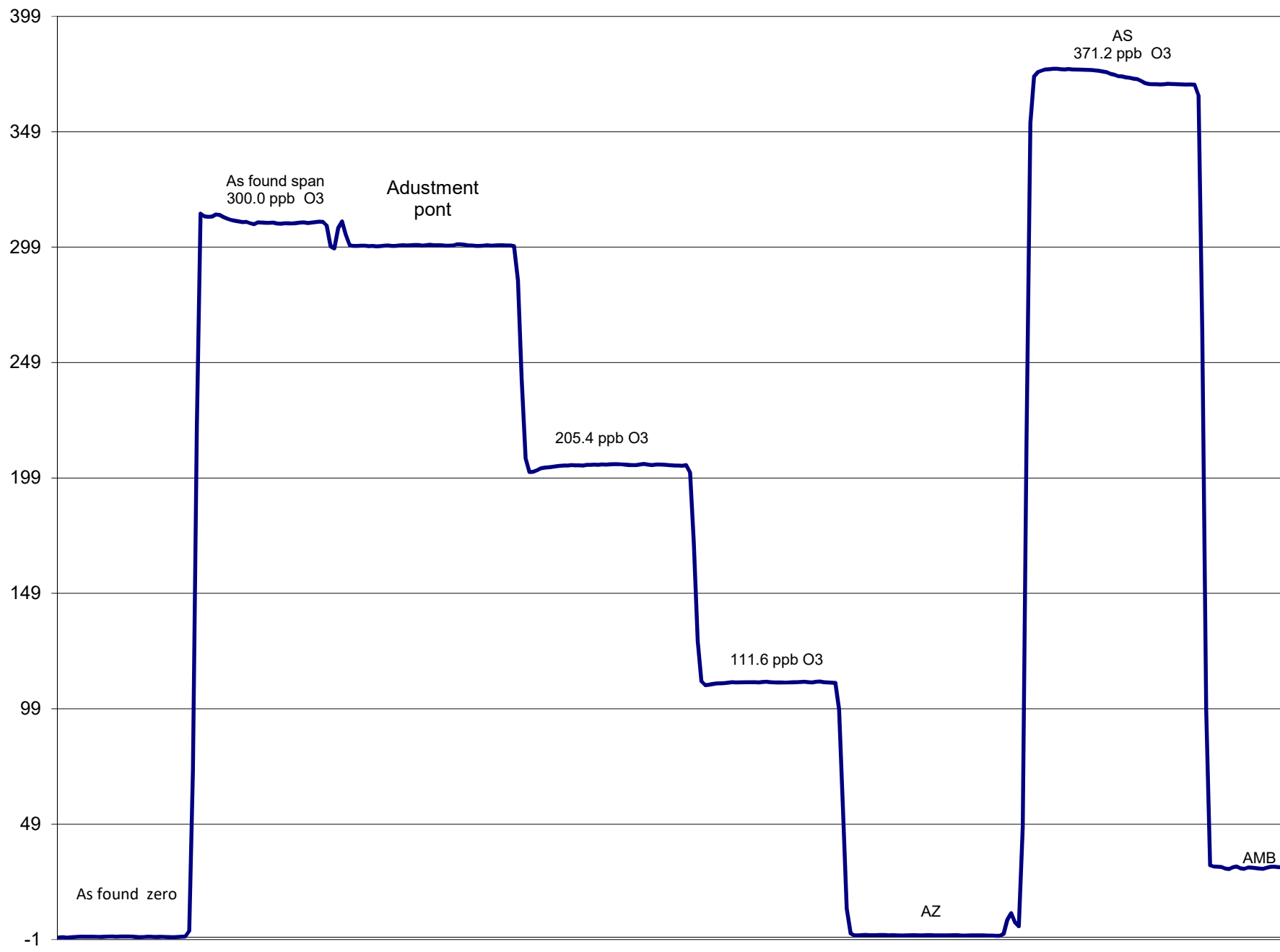
Calibration Date	September 19 2018	Previous Calibration	August 2 2018
Station Number	10	Station Location	Rycroft
Start Time (MST)	13:00:00 PM	End Time (MST)	15:40:00 PM
Analyzer make/model	TEI Model 49I	Analyzer serial #	49I-115363156

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	NA	Correlation Coefficient	0.999981
300.0	299.8	1.0007		
205.4	204.8	1.0028		
111.6	110.5	1.0101	Slope	1.000937
			Intercept	0.273305

O3 Calibration Curve





September 19 2018

Calibration Report



Parameter CH4 / NMHC / THC

Air Monitoring Network PAZA

Station Information

Calibration Date	September 18, 2018	Previous Calibration	August 14, 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	28/03/2014
Cal Gas C3H8 Conc	201 552.75 ppm CH4	Cal Gas Cylinder #	LL34988
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 5 volt	DACS channel #	SE 12,13,14

Analyzer make TEI 55I-A3PHAA Analyzer serial # 1151980005

	before		after	
Concentration range	0-20 (CH4, NMHC); 0-40 (THC)	ppm	0-20 (CH4, NMHC); 0-40 (THC)	ppm
Air pressure	34.7	PSI	34.7	PSI
Fuel pressure	49.4	PSI	49.4	PSI
Carrier pressure	40.1	PSI	40.1	PSI
CH4 cal factor	7.0662145		7.06582160	E ⁻⁴
NMHC cal factor	1.8812365		1.8934355	E ⁻⁴
CH4 Rt	12.60	Sec	12.60	Sec
CH4 Pk HT	18037		18009.00	

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	0.01	N/A
2000	64.96	12.71	12.79	0.9933
2000	34.97	6.94	6.91	1.0051
2000	15.96	3.20	3.10	1.0308
2000	0.00	0.00	0.01	As Found Zero
2000	64.93	12.70	13.11	As Found Span
Average Correction Factor				1.0098

Calculated value of As Found Response: 13.022 ppm Percent Change of As Found: -2.5%

	Before		After
Calculated slope	0.991970	Calculated slope	0.991757
Calculated intercept	0.025802	Calculated intercept	0.055769

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.01	ppm	0.02	ppm
Auto span	8.02	ppm	7.91	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	17.37	1.0003
2000	34.97	9.50	9.38	1.0131
2000	15.96	4.38	4.13	1.0601
2000	0.00	0.00	0.00	As Found Zero
2000	64.93	17.38	17.96	As Found Span
Average Correction Factor				1.0245

Calculated value of As Found Response: 18.100 ppm Percent Change of As Found: -4.1%

	Before		After
Calculated slope	1.003977	Calculated slope	0.996274
Calculated intercept	0.071489	Calculated intercept	0.122504

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.00	ppm
Auto span	10.98	ppm	10.73	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	0.01	N/A
2000	64.96	30.10	30.19	0.9968
2000	34.97	16.44	16.29	1.0091
2000	15.96	7.57	7.25	1.0445
2000	0.00	0.00	0.01	As Found Zero
2000	64.93	30.08	31.11	As Found Span
Average Correction Factor				1.0168

Calculated value of As Found Response: 31.137 ppm Percent Change of As Found: -3.5%

	Before		After
Calculated slope	0.998158	Calculated slope	0.993982
Calculated intercept	0.090288	Calculated intercept	0.172336

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.01	ppm	0.02	ppm
Auto span	18.99	ppm	18.64	ppm

Notes: Span adjustment made
Hydrogen & nitrogen cylinders replaced

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter CH4
Air Monitoring Network PAZA



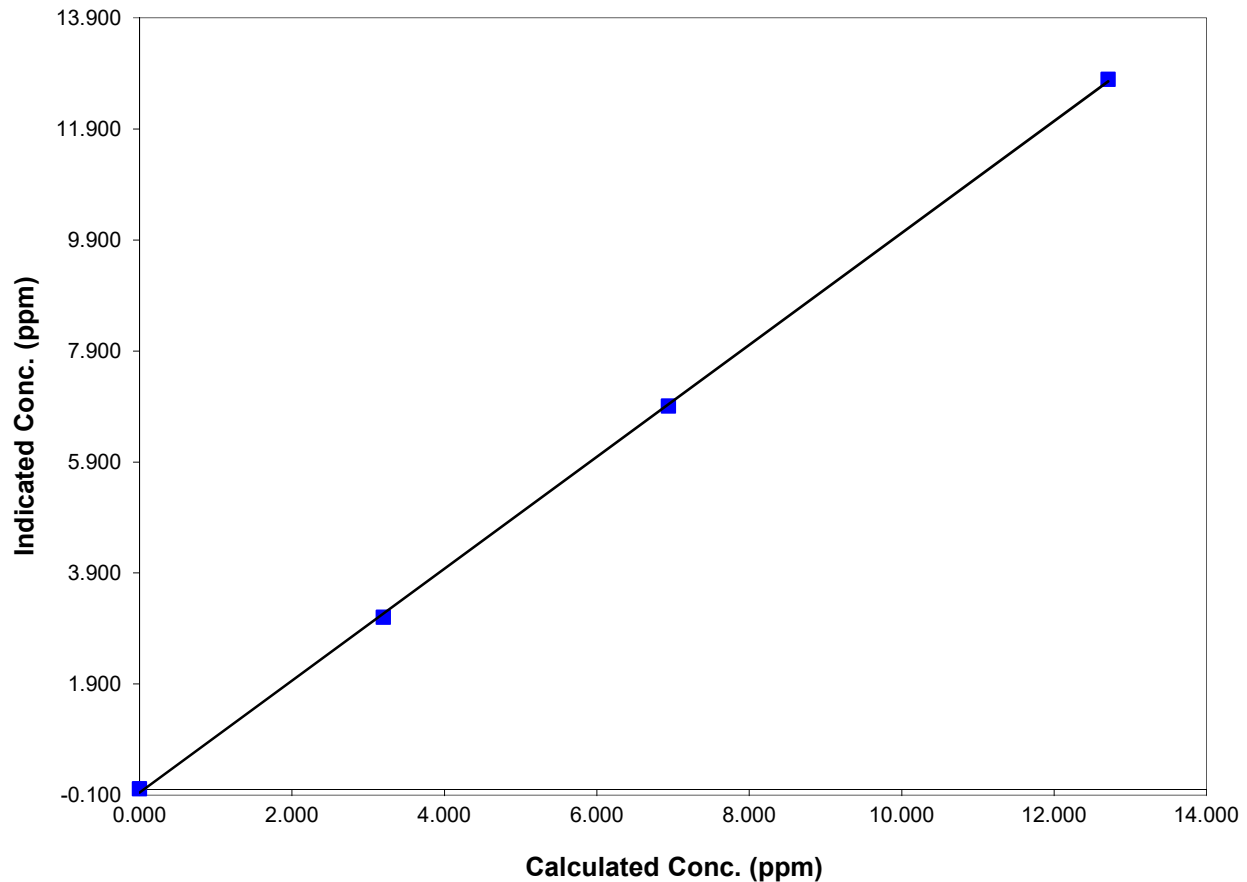
Station Information

Calibration Date	September 18, 2018	Previous Calibration	August 14, 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	0.011	N/A	Correlation Coefficient	0.999873
12.709	12.794	0.9933		
6.943	6.907	1.0051		
3.198	3.103	1.0308	Slope	0.991757
			Intercept	0.055769

CH4 Calibration Data



Calibration Summary

Parameter NMHC
Air Monitoring Network PAZA



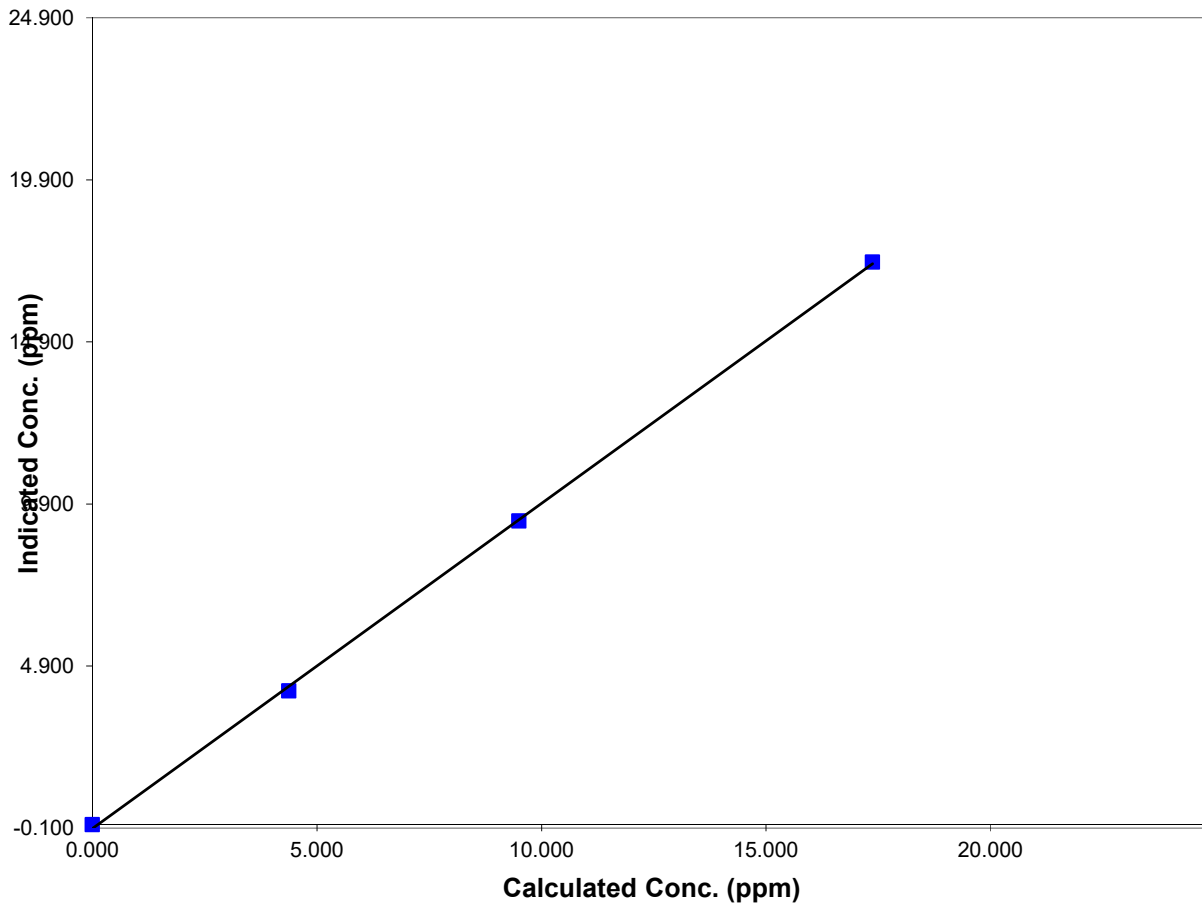
Station Information

Calibration Date	September 18, 2018	Previous Calibration	August 14, 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	0.999766
17.372	17.366	1.0003		
9.499	9.376	1.0131		
4.376	4.128	1.0601	Slope	0.996274
			Intercept	0.122504

NMHC Calibration Data



Calibration Summary

Parameter THC
Air Monitoring Network PAZA



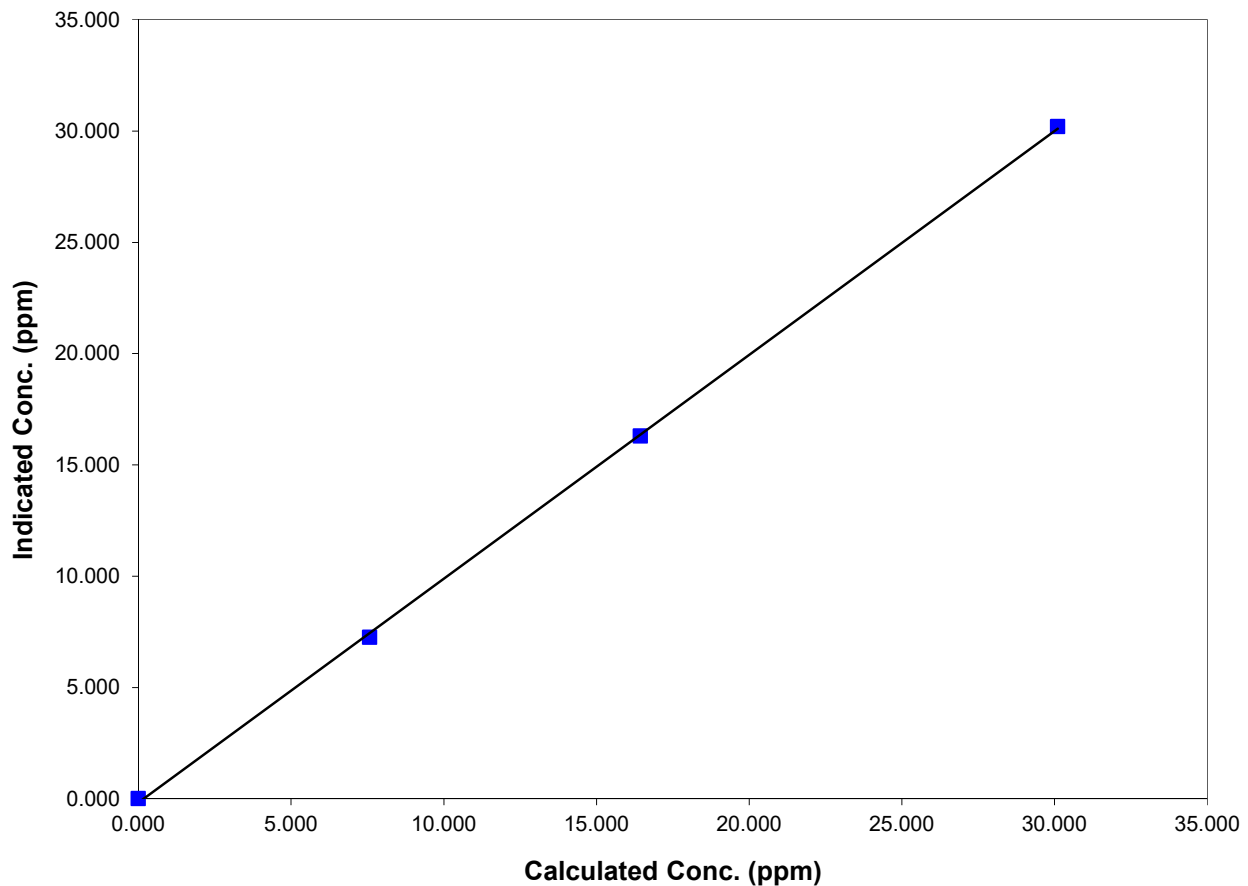
Station Information

Calibration Date	September 18, 2018	Previous Calibration	August 14, 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	0.009	N/A	Correlation Coefficient	0.999833
30.098	30.194	0.9968		
16.441	16.293	1.0091		
7.574	7.252	1.0445	Slope	0.993982
			Intercept	0.172336

THC Calibration Data



THC/CH₄/NMHC Calibration

