



Peace Airshed Zone Association

Ambient Air Monitoring Network Summary

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

April 30, 2017

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

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

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

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

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

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

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

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

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

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

Henry Pirker Station:

- ◆ The measured ambient air quality was within the AAAQO for the Henry Pirker station.
- ◆ All analyzers and sensors at the Henry Pirker station had an operational uptime greater than 90% for the month of March.
- ◆ The station was audited by AEP on March 15.

Evergreen Park Station:

- ◆ The measured ambient air quality was within the AAAQO for the Evergreen Park station.
- ◆ All analyzers and sensors at the Evergreen Park station had an operational uptime greater than 90% for the month of March.
- ◆ The station was audited by AEP on March 15.

Smoky Heights Station:

- ◆ The measured ambient air quality was within the AAAQO for the Smoky Heights station, with the exception of three 1-hour PM_{2.5} exceedances recorded on March 6, 21 and 22. AEP reference #321689, 322183, 322229.
- ◆ All analyzers and sensors at the Smoky Heights station had an operational uptime greater than 90% for the month of March.
- ◆ The station was audited by AEP on March 14.

Beaverlodge Station:

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

Valleyview Station:

- ◆ The measured ambient air quality was within the AAAQO for the Valleyview station, with the exception of five 1-hour H₂S exceedances recorded on March 15, 16 and 24. AEP reference #322019, 322329.
- ◆ All analyzers and sensors at the Valleyview station had an operational uptime greater than 90% for the month of March.
- ◆ The H₂S analyzer was audited by AEP on March 14.

Donnelly Station:

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

Rycroft-Portable Station:

- ◆ The measured ambient air quality was within the AAAQO for the Rycroft-Portable station.
- ◆ All analyzers and sensors at the Rycroft-Portable station had an operational uptime greater than 90% for the month of March.
- ◆ The station was audited by AEP on March 16.

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

There were six duplicate sites sampled in the month of March: Gordondale and Saddle Hills (SO₂), Crooked Creek (O₃), Boone Creek and Spirit River (NO₂), and Guy (H₂S). The passive sample analyses were performed by MAXXAM Analytics Inc.

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

- Monthly average concentrations for SO₂ passives ranged from 0.2 ppb to 0.5 ppb, with a mean of 0.3 ppb.
- Monthly average concentrations for NO₂ passives ranged from 0.3 ppb to 7.8 ppb, with a mean of 1.1 ppb.
- Monthly average concentrations for O₃ passives ranged from 29.4 ppb to 38.8 ppb, with a mean of 35.3 ppb.
- Monthly average concentrations for H₂S passives ranged from 0.1 ppb to 0.2 ppb, with a mean of 0.1 ppb.

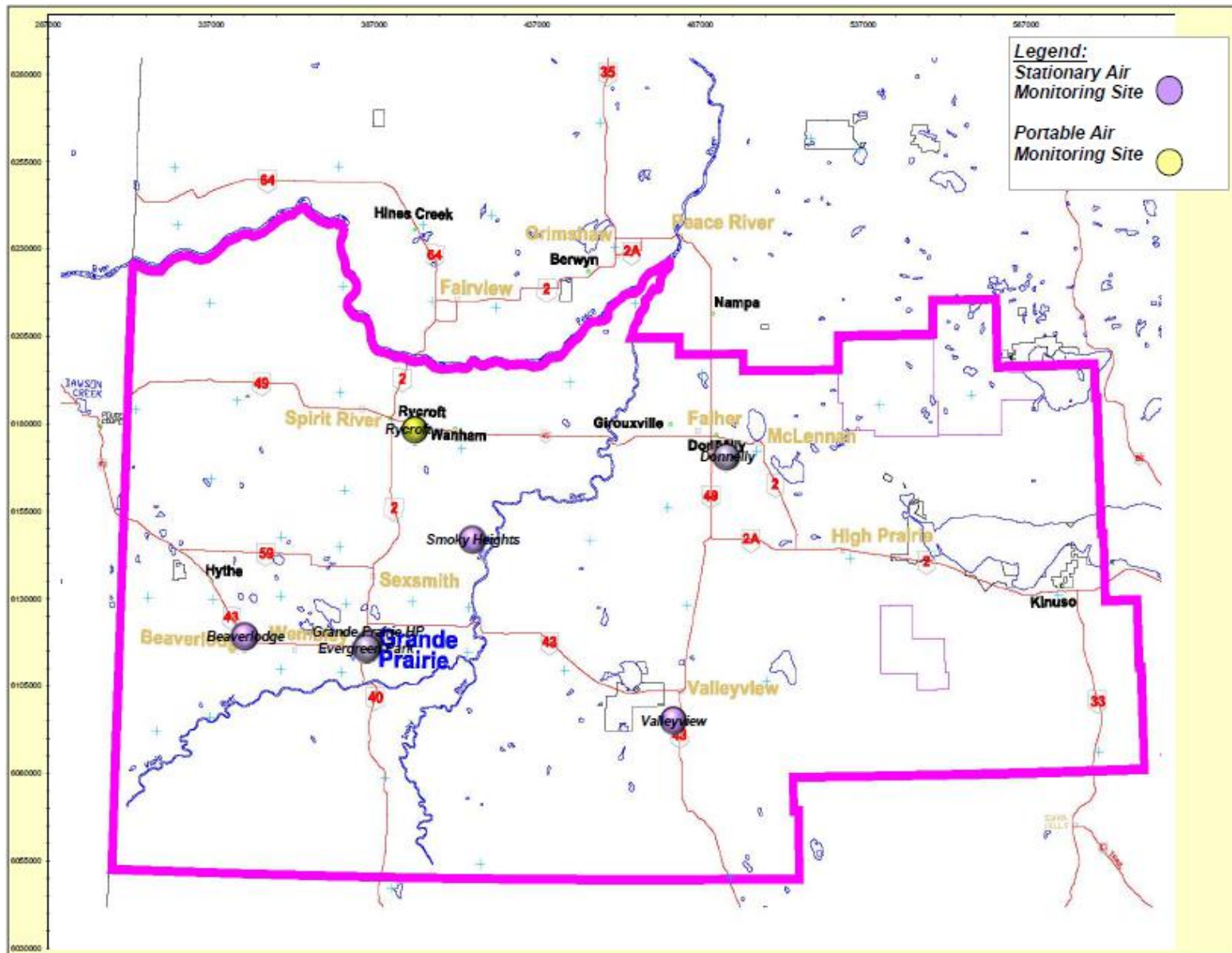
If you have any questions or concerns, please contact Patrick Andersen at 403.505.1041 or the PAZA office at 780.833.4343.

On Behalf of the
Peace Airshed Zone Association



Patrick Andersen, B.Sc.
Program Manager

Location of PAZA Continuous Monitoring Stations



PAZA Monthly Continuous Data Summary

Mar-2017 Peace Airshed Zone Association							Maximum Recorded Values					
							1-hr		24-hr / 8-hr			
Pollutant (units)	Objectives		Station	Monthly Average	Exceedence		Conc	Day	Conc	Day	Operational Time (%)	Calibration Date
	1-hr	24-hr			1-hr	24-hr						
SO ₂ (ppb)	172	48	Henry Pirker	0.4	0	0	3.1	Mar-07 23:00	1.0	Mar-12	100.0%	Mar-02
SO ₂ (ppb)	172	48	Evergreen Park	0.2	0	0	1.8	Mar-25 12:00	0.7	Mar-12	100.0%	Mar-13
SO ₂ (ppb)	172	48	Smoky Heights	0.4	0	0	5.9	Mar-13 16:00	1.5	Mar-13	99.7%	Mar-27
SO ₂ (ppb)	172	48	Beaverlodge	0.6	0	0	9.7	Mar-06 13:00	3.3	Mar-06	100.0%	Mar-06
SO ₂ (ppb)	172	48	Valleyview	0.7	0	0	46.2	Mar-22 12:00	3.5	Mar-22	100.0%	Mar-25
SO ₂ (ppb)	172	48	Donnelly	0.2	0	0	1.6	Mar-21 06:00	0.6	Mar-01	100.0%	Mar-31
SO ₂ (ppb)	172	48	Rycroft-Portable	0.3	0	0	5.8	Mar-14 00:00	0.9	Mar-13	98.8%	Mar-07
NO (ppb)			Henry Pirker	4.8	-	-	97.4	Mar-28 08:00	21.2	Mar-13	100.0%	Mar-02
NO ₂ (ppb)	159	106	Henry Pirker	12.0	0	0	46.0	Mar-23 23:00	23.4	Mar-13	100.0%	Mar-02
NO _x (ppb)			Henry Pirker	17.1	-	-	129.3	Mar-28 08:00	45.0	Mar-13	100.0%	Mar-02
NO (ppb)			Beaverlodge	1.1	-	-	41.9	Mar-05 11:00	3.5	Mar-05	100.0%	Mar-06
NO ₂ (ppb)	159	106	Beaverlodge	4.2	0	0	22.2	Mar-05 11:00	11.7	Mar-02	100.0%	Mar-06
NO _x (ppb)			Beaverlodge	5.3	-	-	64.1	Mar-05 11:00	15.0	Mar-02	100.0%	Mar-06
NO (ppb)			Rycroft-Portable	0.4	-	-	7.1	Mar-09 10:00	0.9	Mar-09	99.3%	Mar-07
NO ₂ (ppb)	159	106	Rycroft-Portable	2.3	0	0	30.7	Mar-05 22:00	5.5	Mar-05	99.3%	Mar-07
NO _x (ppb)			Rycroft-Portable	2.7	-	-	34.5	Mar-05 22:00	6.4	Mar-05	99.3%	Mar-07
O ₃ (ppb)	82		Henry Pirker	28.1	0	-	48.4	Mar-23 16:00	37.0	Mar-30	100.0%	Mar-02
O ₃ (ppb) - 8-hr			Henry Pirker		0				45.1	Mar-31		-
O ₃ (ppb)	82		Beaverlodge	36.5	0	-	50.8	Mar-24 18:00	46.5	Mar-15	100.0%	Mar-06
O ₃ (ppb) - 8-hr			Beaverlodge		0				49.0	Mar-23		-
O ₃ (ppb)	82		Rycroft-Portable	35.4	0	-	54.1	Mar-15 15:00	48.8	Mar-15	99.6%	Mar-17
O ₃ (ppb) - 8-hr			Rycroft-Portable		0				51.5	Mar-15		-
CO (ppm)	13		Henry Pirker	0.25	0	-	1.2	Mar-29 08:00	0.4	Mar-28	100.0%	Mar-03
CO (ppm) - 8-hr	5		Henry Pirker		0				0.6	Mar-29		-

PAZA Monthly Continuous Data Summary – continued

Mar-2017Peace Airshed Zone Association							Maximum Recorded Values					
							1-hr		24-hr / 8-hr			
THC (ppm)			Henry Pirker	2.1	-	-	3.6	Mar-31 10:00	2.3	Mar-31	100.0%	Mar-03
CH ₄ (ppm)			Henry Pirker	2.1	-	-	3.6	Mar-31 10:00	2.3	Mar-31	100.0%	Mar-03
NMHC (ppm)			Henry Pirker	0.0	-	-	0.0	Mar-25 11:00	0.0	Mar-25	100.0%	Mar-03
THC (ppm)			Rycroft-Portable	1.8	-	-	2.0	Mar-16 04:00	1.9	Mar-12	96.2%	Mar-29
CH ₄ (ppm)			Rycroft-Portable	1.8	-	-	2.0	Mar-16 04:00	1.9	Mar-12	96.2%	Mar-29
NMHC (ppm)			Rycroft-Portable	0.0	-	-	0.0	Mar-15 18:00	0.0	Mar-13	96.2%	Mar-29
TRS (ppb)			Henry Pirker	0.3	-	-	1.4	Mar-30 20:00	0.5	Mar-13	99.9%	Mar-21
TRS (ppb)			Evergreen Park	0.4	-	-	2.2	Mar-28 10:00	0.6	Mar-28	100.0%	Mar-13
TRS (ppb)			Smoky Heights	0.2	-	-	1.0	Mar-19 05:00	0.4	Mar-13	99.7%	Mar-27
TRS (ppb)			Rycroft-Portable	0.2	-	-	0.4	Mar-12 15:00	0.4	Mar-09	98.9%	Mar-20
H ₂ S (ppb)	10	3	Valleyview	0.5	5	0	36.7	Mar-15 23:00	3.0	Mar-16	100.0%	Mar-25
H ₂ S (ppb)	10	3	Donnelly	0.1	0	0	1.7	Mar-01 23:00	0.3	Mar-01	100.0%	Mar-31
PM _{2.5} (µg/m3)	80	30	Henry Pirker	4.6	0	0	26.2	Mar-05 02:00	8.3	Mar-28	100.0%	Dec-20
PM _{2.5} (µg/m3)	80	30	Evergreen Park	2.5	0	0	18.3	Mar-13 15:00	6.0	Mar-13	100.0%	Mar-13
PM _{2.5} (µg/m3)	80	30	Smoky Heights	4.2	3	0	197.0	Mar-21 00:00	11.2	Mar-20	99.7%	Mar-27
PM _{2.5} (µg/m3)	80	30	Beaverlodge	6.1	0	0	55.8	Mar-20 11:00	15.1	Mar-16	94.4%	Mar-23
PM _{2.5} (µg/m3)	80	30	Rycroft-Portable	1.8	0	0	14.3	Mar-07 17:00	4.1	Mar-07	99.6%	Mar-07
RH (%)			Henry Pirker	62.7	-	-	86.9	Mar-25 22:00	72.5	Mar-25	100.0%	-
RH (%)			Evergreen Park	68.8	-	-	96.6	Mar-14 08:00	80.9	Mar-25	100.0%	-
RH (%)			Beaverlodge	70.4	-	-	100.0	Mar-14 05:00	82.7	Mar-22	100.0%	-
RH (%)			Valleyview	50.3	-	-	97.8	Mar-23 16:00	67.3	Mar-25	100.0%	-
SR (W/m ²)			Henry Pirker	119.1	-	-	663.0	Mar-13 14:00	169.0	Mar-20	100.0%	-
Temp (°C)			Henry Pirker	-5.4	-	-	11.3	Mar-25 13:00	5.6	Mar-30	100.0%	-
Temp (°C)			Evergreen Park	-5.8	-	-	12.0	Mar-31 17:00	5.2	Mar-30	100.0%	-
Temp (°C)			Smoky Heights	-5.9	-	-	10.0	Mar-31 17:00	5.0	Mar-30	99.7%	-
Temp (°C)			Beaverlodge	-6.0	-	-	9.6	Mar-31 16:00	4.5	Mar-30	100.0%	-
Temp (°C)			Valleyview	-4.2	-	-	12.8	Mar-31 18:00	6.3	Mar-30	100.0%	-
Temp (°C)			Donnelly	-5.6	-	-	11.4	Mar-30 17:00	5.9	Mar-31	100.0%	-
Temp (°C)			Rycroft-Portable	-6.1	-	-	11.8	Mar-29 16:00	5.6	Mar-29	99.6%	-

PAZA Monthly Continuous Data Summary – continued

Mar-2017 Peace Airshed Zone Association							Maximum Recorded Values					
							1-hr		24-hr / 8-hr			
WSPD s (km/hr)			Henry Pirker	6.8	-	-	26.0	Mar-18 18:00	11.3	Mar-15	99.3%	-
WSPD s (km/hr)			Evergreen Park	8.9	-	-	38.0	Mar-18 18:00	17.5	Mar-15	100.0%	-
WSPD s (km/hr)			Smoky Heights	10.5	-	-	33.0	Mar-15 03:00	16.0	Mar-31	100.0%	-
WSPD s (km/hr)			Beaverlodge	9.9	-	-	36.0	Mar-13 17:00	18.5	Mar-10	99.7%	-
WSPD s (km/hr)			Valleyview	5.1	-	-	20.0	Mar-18 19:00	9.9	Mar-04	100.0%	-
WSPD s (km/hr)			Donnelly	9.0	-	-	34.0	Mar-31 17:00	20.4	Mar-31	100.0%	-
WSPD s (km/hr)			Rycroft-Portable	8.9	-	-	33.0	Mar-03 11:00	16.7	Mar-10	99.7%	-
WSPD v (km/hr)			Henry Pirker	2.0	-	-	26.0	Mar-18 18:00	9.2	Mar-15	99.3%	-
WSPD v (km/hr)			Evergreen Park	3.0	-	-	37.0	Mar-18 18:00	16.1	Mar-15	100.0%	-
WSPD v (km/hr)			Smoky Heights	3.8	-	-	33.0	Mar-15 03:00	15.2	Mar-31	100.0%	-
WSPD v (km/hr)			Beaverlodge	2.9	-	-	36.0	Mar-13 17:00	18.0	Mar-10	99.7%	-
WSPD v (km/hr)			Valleyview	0.9	-	-	19.0	Mar-18 19:00	9.6	Mar-04	100.0%	-
WSPD v (km/hr)			Donnelly	2.6	-	-	34.0	Mar-31 17:00	17.9	Mar-31	100.0%	-
WSPD v (km/hr)			Rycroft-Portable	1.5	-	-	33.0	Mar-03 11:00	16.5	Mar-10	99.7%	-
WDIR			Henry Pirker	N	-	-	-	-	-	-	99.3%	-
WDIR			Evergreen Park	N	-	-	-	-	-	-	100.0%	-
WDIR			Smoky Heights	NW	-	-	-	-	-	-	100.0%	-
WDIR			Beaverlodge	NE	-	-	-	-	-	-	99.7%	-
WDIR			Valleyview	N	-	-	-	-	-	-	100.0%	-
WDIR			Donnelly	E	-	-	-	-	-	-	100.0%	-
WDIR			Rycroft-Portable	N	-	-	-	-	-	-	99.7%	-

Continuous Network Equipment Summary

PAZA – Henry Pirker Station

General Station Issues:

The station was audited by AEP on March 15.

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
NOx/NO/NO ₂	TEI	42i	No operational issues observed.
O ₃	TEI	49i	No operational issues observed.
CO	TEI	48C	No operational issues observed.
THC/CH ₄ /NMHC	TEI	55i	No operational issues observed.
TRS	TEI	45C	One hour of data is flagged as “maintenance”, resulting in an uptime of 99.9%.
PM _{2.5}	Sharp	5030	No operational issues observed.
RH	Met One	083D	No operational issues observed.
ET	Met One	083D	No operational issues observed.
SR	Met One	096-1	No operational issues observed.
WS / WD	Met One	010C/020C	Intermittent instrument malfunctioning resulted in an uptime of 99.3%.

PAZA – Evergreen Park Station

General Station Issues

The station was audited by AEP on March 15.

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

PAZA – Smoky Heights Station

General Station Issues

Parameter	Make	Model	Notes
SO ₂	TEI	43C	Power disruptions at the station and analyzer recovery following the power issues resulted in an uptime of 99.7%.
TRS	TEI	43i	Power disruptions at the station resulted in an uptime of 99.7%.
PM _{2.5}	Sharp	5030	Power disruptions at the station resulted in an uptime of 99.7%.
ET	Met One	083D	Power disruptions at the station resulted in an uptime of 99.7%.
WS / WD	Met One	010C/020C	No operational issues observed.

PAZA – Beaverlodge Station

General Station Issues

Parameter	Make	Model	Notes
SO ₂	TEI	43CTL	No operational issues observed.
NOx/NO/NO ₂	TEI	42C	No operational issues observed.
O ₃	TEI	49C	No operational issues observed.
PM _{2.5}	Sharp	5030	Uptime for March was 94.4%. The analyzer malfunctioned on March 5, due to hoar frost in the sample inlet. Analyzer analog outputs were malfunctioning intermittently throughout the month. Hourly data was recovered directly from the analyzer, however hourly maximum data cannot be calculated for these time periods. Maintenance was performed on March 22 to resolve this issue and the analyzer was left overnight to stabilize prior to calibration.
ET	n/a	n/a	No operational issues observed.
RH	n/a	n/a	No operational issues observed.
WS / WD	Met One	50.5H	Instrument malfunctioning and maintenance resulted in an uptime of 99.7%. The wind instrument was replaced on March 22.

PAZA – Valleyview Station

General Station Issues

The H₂S analyzer was audited by AEP on March 14.

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

PAZA – Donnelly Station

General Station Issues

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

PAZA – Portable-Rycroft

General Station Issues

The station was audited by AEP on March 16.

Parameter	Make	Model	Notes
SO ₂	TEI	43i	A power disruption at the station, data logger malfunctioning, and maintenance resulted in an uptime of 98.8%.
NO _x /NO/NO ₂	TEI	42i	A power disruption at the station, data logger malfunctioning, and maintenance resulted in an uptime of 99.3%.
O ₃	TEI	49i	A power disruption at the station and data logger malfunctioning resulted in an uptime of 99.6%.
TRS	TEI	43i	A power disruption at the station, data logger malfunctioning, and maintenance resulted in an uptime of 98.9%.
THC/CH ₄ /NMHC	TEI	55i	A power disruption at the station, data logger malfunctioning, and instrument malfunctioning resulted in an uptime of 96.2%.
PM _{2.5}	Sharp	5030	A power disruption at the station and data logger malfunctioning resulted in an uptime of 99.6%.
ET	Gill	Met Pak 3	A power disruption at the station and data logger malfunctioning resulted in an uptime of 99.6%.
WS / WD	Gill	Met Pak 3	Data logger malfunctioning resulted in an uptime of 99.7%.

PAZA
Henry Pirker Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

Sulphur Dioxide (SO₂) - ppb

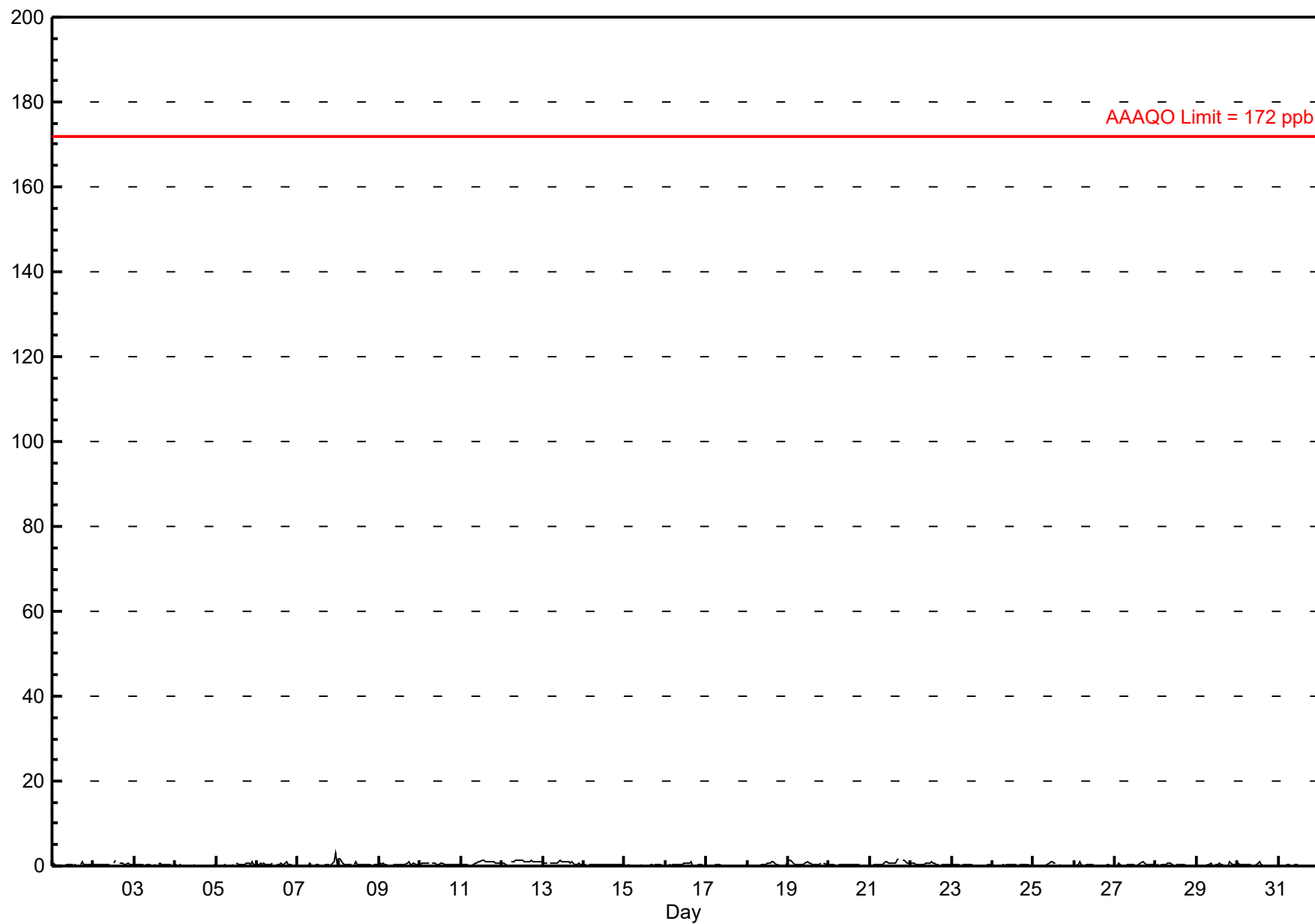
Henry Pirker - March 2017

Number of Exceedences (AAAQO): Maximum Value: 3.1 ppb on Mar 7 23:00																			1-hr: 0 24-hr: 0 Maximum Daily Average: 1.0 ppb on Mar 12					Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 37 Percent Operational Time: 100.0				
Minimum Value: 0 ppb on Mar 3 12:00 Maximum Diurnal Average: 0.5 ppb at hour 14 Monthly Average: 0.37 ppb																			Minimum Daily Average: 0.1 ppb on Mar 31 Minimum Diurnal Average: 0.2 ppb at hour 5 Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.3 Q ₃ = 0.5 P ₉₀ = 0.8 P ₉₉ = 1.4									
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-Mar	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0.3	1.1		
2-Mar	0	0	0	0	0	0	0	0	0	0	C	C	1	2	A	1	1	1	0	0	1	0	0	0	0.4	1.5		
3-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0.3	0.7		
4-Mar	0	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		
5-Mar	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	1	1	0	1	0	0	0.3	0.9		
6-Mar	0	0	1	0	1	0	0	0	0	1	A	0	0	0	1	0	0	1	0	0	0	0	0	0	0.4	1.2		
7-Mar	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	1	1	3	1	0.4	3.1		
8-Mar	2	2	1	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.6		
9-Mar	1	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0.4	1.0		
10-Mar	0	1	1	1	1	1	A	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0.4	0.6		
11-Mar	0	0	0	0	0	A	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.3		
12-Mar	1	1	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.3		
13-Mar	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	0	0	0.8	1.3		
14-Mar	0	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		
15-Mar	0	A	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4		
16-Mar	A	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	A	0.4	1.1		
17-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3		
18-Mar	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	A	A	0	0.3	1.1		
19-Mar	1	1	1	1	0	0	0	0	0	0	1	1	1	1	0	0	1	0	0	1	A	1	0	0	0.5	1.3		
20-Mar	0	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		
21-Mar	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	A	1	1	1	1	1	0.7	1.6		
22-Mar	1	1	1	0	0	0	0	0	0	1	1	1	1	1	1	0	0	A	0	0	0	0	0	0	0.5	1.0		
23-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.5		
24-Mar	0	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		
25-Mar	0	0	0	0	0	0	0	0	0	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0.2	1.0		
26-Mar	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.9		
27-Mar	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	1	1	1	0	0	0	0	0	0	0.3	0.9		
28-Mar	0	0	0	0	0	0	0	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6		
29-Mar	0	0	0	0	0	0	0	0	1	0	A	0	0	1	0	0	0	0	0	1	1	1	0	0	0.3	0.9		
30-Mar	1	0	0	0	0	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0.3	0.9		
31-Mar	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4		
0.4 0.3 0.3 0.3 0.2 0.2 0.3 0.3 0.4 0.4 0.5 0.5 0.5 0.5 0.4 0.4 0.4 0.4 0.3 0.4 0.4 0.4 0.4 0.3																									Diurnal Average			
1.6 1.6 1.0 0.9 0.6 1.0 1.0 1.1 1.2 1.2 1.3 1.3 1.3 1.5 1.1 1.1 1.4 1.6 1.1 1.4 1.3 1.1 3.1 0.9																									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 - March 2017



Hourly Maximums

Sulphur Dioxide (SO₂) - ppb

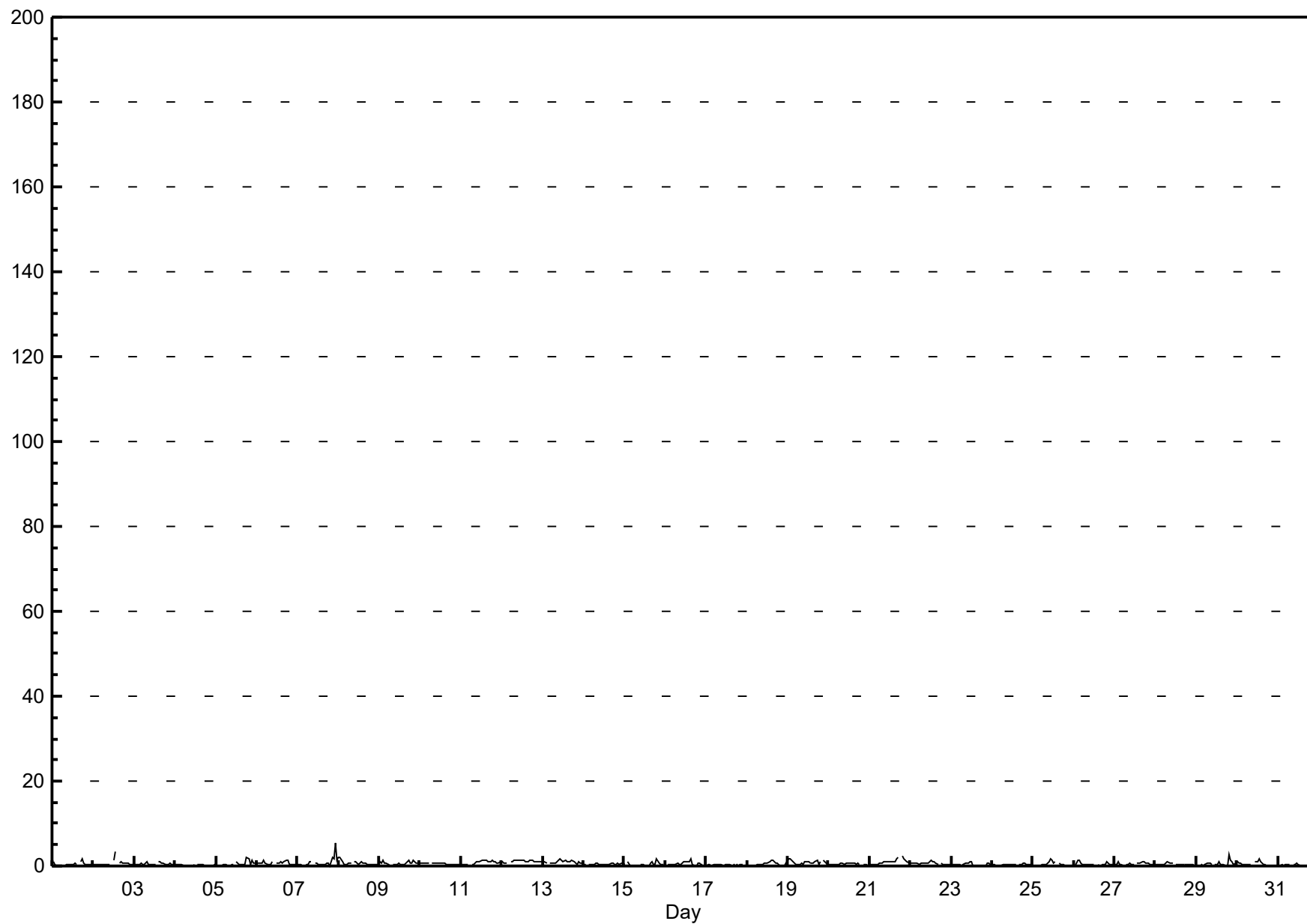
Henry Pirker - March 2017

Maximum Value: 5.5 ppb on Mar 7 23:00																			Maximum Daily Average: 1.1 ppb on Mar 12										Hours in Service: 744	
Minimum Value: 0 ppb on Mar 31 18:00																			Minimum Daily Average: 0.2 ppb on Mar 31										Hours of Data: 707	
Maximum Diurnal Average: 0.8 ppb at hour 14																			Minimum Diurnal Average: 0.3 ppb at hour 6										Hours of Missing Data: 37	
Monthly Average: 0.55 ppb																			Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.4 Q ₃ = 0.7 P ₉₀ = 1.2 P ₉₉ = 2.0										Hours of Calibration: 37	
																			Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Mar	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	A	1	2	1	0	0	0	0	0	0.4	1.6				
2-Mar	0	0	0	0	0	0	0	0	0	0	C	C	1	3	A	1	1	1	1	1	1	0	0	0	0.6	3.5				
3-Mar	0	0	0	0	1	0	0	1	0	0	0	0	0	A	1	1	1	1	0	0	0	1	0	0	0.5	1.2				
4-Mar	0	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				
5-Mar	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	2	2	0	1	1	1	0.5	1.9				
6-Mar	1	1	1	1	1	1	0	0	0	1	A	1	1	1	1	1	1	1	1	0	0	0	0	0	0.7	1.4				
7-Mar	0	0	0	0	0	0	0	1	1	A	1	1	0	0	0	0	0	1	1	0	2	2	6	1	0.8	5.5				
8-Mar	2	2	1	0	0	0	1	1	A	1	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0.7	2.2				
9-Mar	1	1	1	1	1	0	0	A	0	0	0	1	0	0	0	0	1	1	1	1	1	1	1	1	0.6	1.4				
10-Mar	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.5	0.7				
11-Mar	0	0	0	0	0	A	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.4				
12-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.4				
13-Mar	1	1	1	A	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.5				
14-Mar	0	0	A	0	0	0	0	1	1	1	0	0	0	0	0	0	1	1	0	0	1	0	1	1	0.5	0.8				
15-Mar	0	A	1	0	0	0	C	C	C	0	0	0	0	0	0	1	1	0	0	2	1	0	0	0	0.4	1.6				
16-Mar	A	0	0	0	0	0	0	1	1	0	1	1	1	1	1	2	0	0	0	1	1	0	0	A	0.6	1.9				
17-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.3	0.4				
18-Mar	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	A	0	1	0.5	1.4				
19-Mar	2	2	1	1	1	0	0	0	1	0	1	1	1	1	1	1	1	1	0	1	A	1	1	0	0.8	1.7				
20-Mar	0	0	0	0	0	0	0	1	1	0	1	1	1	1	1	1	0	1	0	A	0	0	0	0	0.4	0.7				
21-Mar	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	2	2	A	2	2	1	1	1	0.9	2.4				
22-Mar	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0	A	1	0	0	0	0	0	0.6	1.4				
23-Mar	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	A	0	0	0	0	1	1	0	0.4	1.1				
24-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	1	0	0	0	0	0.3	0.6				
25-Mar	0	0	0	0	0	0	0	0	0	1	2	1	1	1	A	1	0	0	0	0	0	0	0	0	0.4	1.5				
26-Mar	0	0	1	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	1	0	0	0	0.4	1.3				
27-Mar	0	0	1	0	0	0	0	0	0	1	0	0	A	1	1	1	1	1	1	1	1	0	0	0	0.5	1.2				
28-Mar	0	0	0	0	0	0	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.9				
29-Mar	0	0	0	0	0	0	1	1	1	0	A	0	0	1	0	0	0	0	0	3	1	1	0	1	0.6	2.6				
30-Mar	1	1	1	0	0	0	0	0	0	A	1	1	1	2	1	0	0	0	0	0	0	0	0	0	0.5	1.5				
31-Mar	0	0	0	0	0	0	0	1	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5				
0.5 0.5 0.5 0.4 0.4 0.3 0.4 0.5 0.5 0.6 0.7 0.7 0.7 0.8 0.6 0.6 0.6 0.7 0.5 0.7 0.6 0.6 0.6 0.4																										Diurnal Average				
2.0 2.2 1.3 1.3 1.3 1.2 1.1 1.2 1.3 1.4 1.5 1.5 1.4 3.5 1.3 1.9 1.6 2.1 1.9 2.6 2.0 1.6 5.5 1.4																										Diurnal Maximum				
C - Calibration																														
A - Automated Daily Zero Span																														

Hourly Maximums

Sulphur Dioxide (SO₂) - ppb

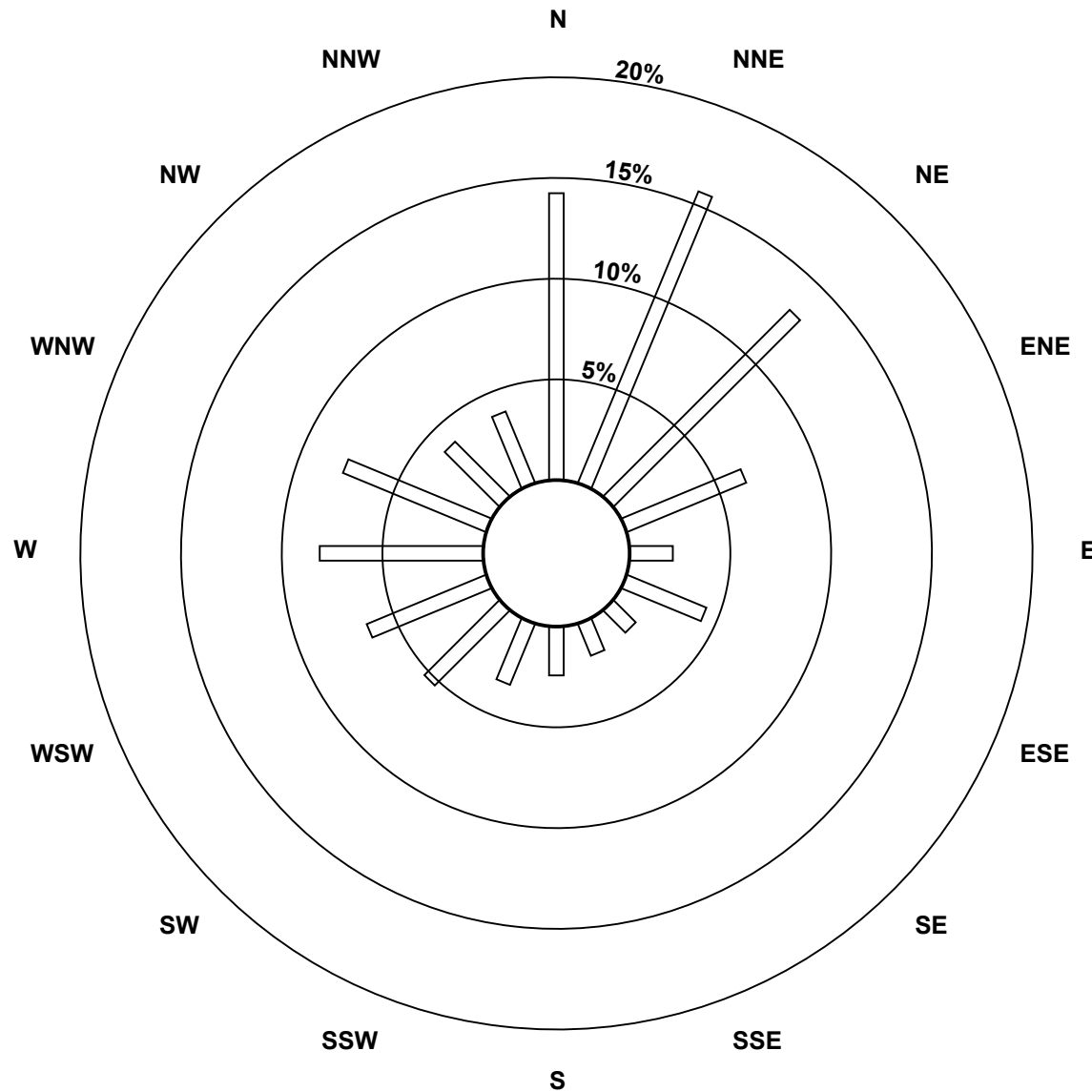
Henry Pirker - March 2017



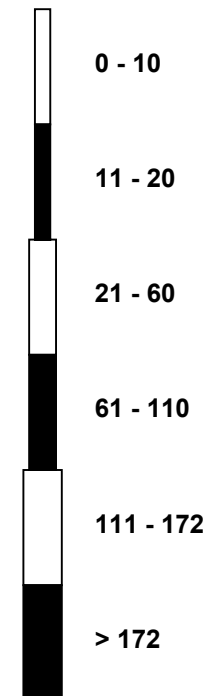
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb

Henry Pirker - March 2017

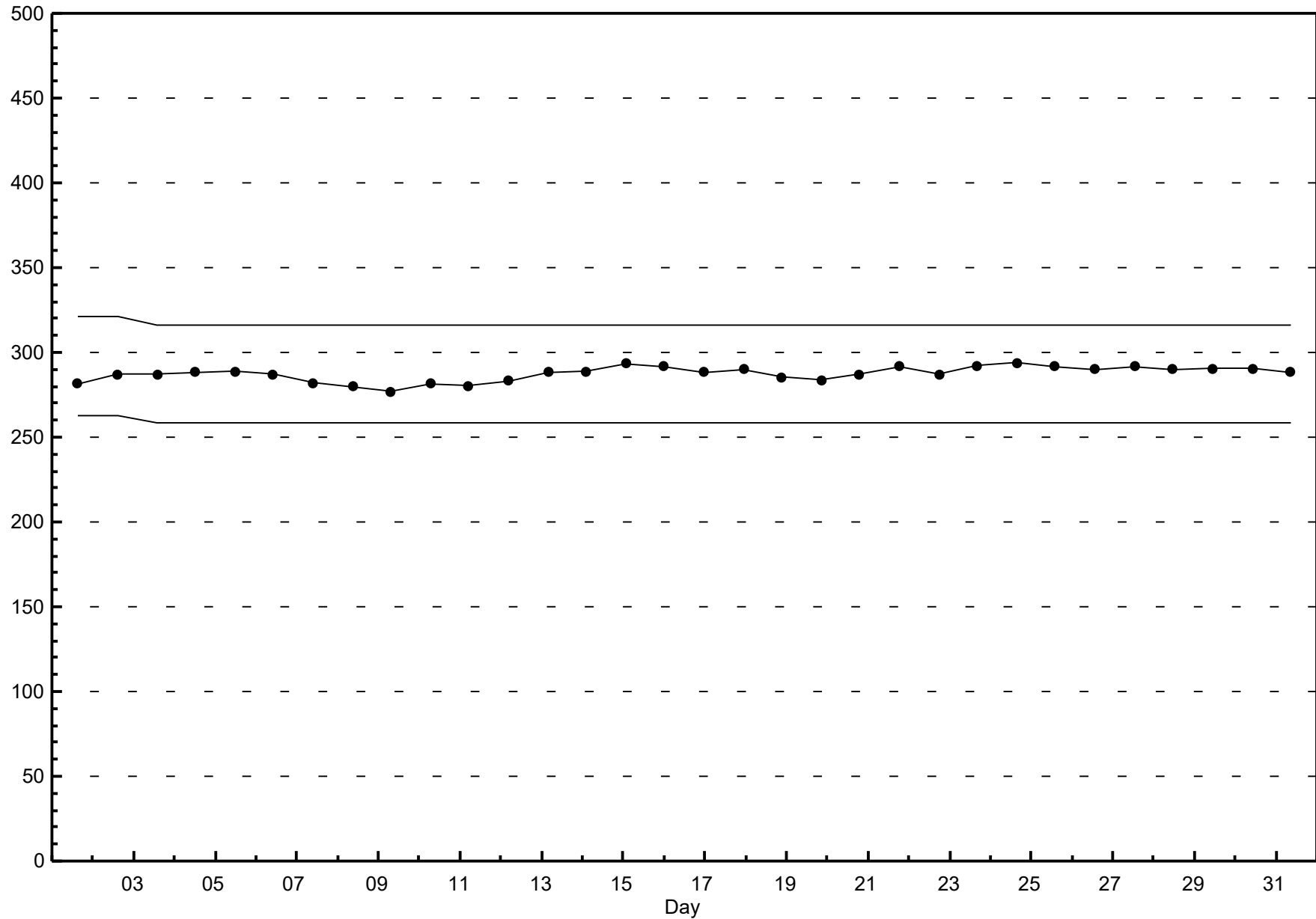


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Henry Pirker - March 2017



Hourly Averages

Total Reduced Sulphur (TRS) - ppb

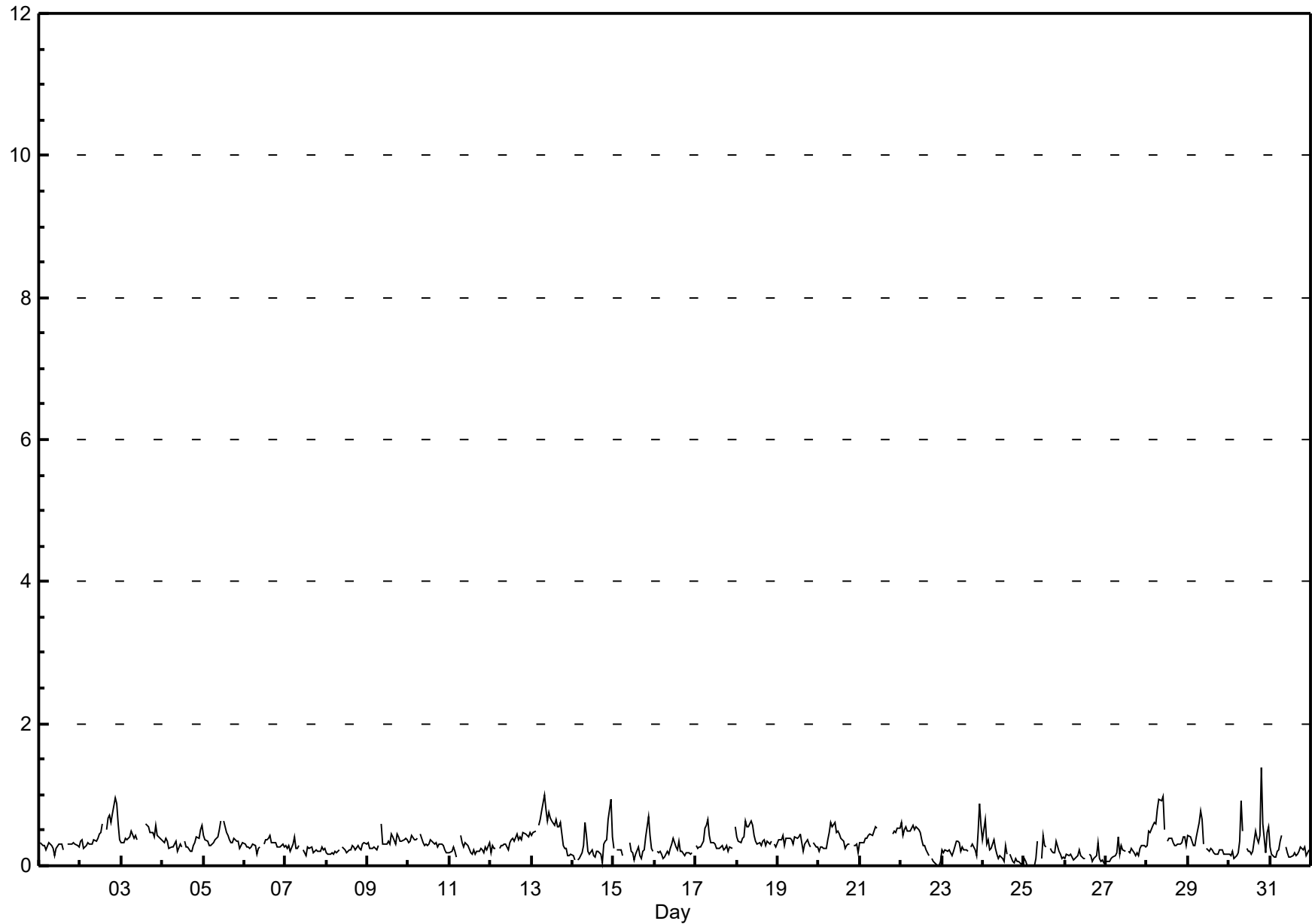
Henry Pirker - March 2017

Maximum Value: 1.4 ppb on Mar 30 20:00																			Maximum Daily Average: 0.5 ppb on Mar 13										Hours in Service: 744	
Minimum Value: 0 ppb on Mar 22 22:00																			Minimum Daily Average: 0.1 ppb on Mar 26										Hours of Data: 699	
Maximum Diurnal Average: 0.4 ppb at hour 8																			Minimum Diurnal Average: 0.3 ppb at hour 4										Hours of Missing Data: 45	
Monthly Average: 0.31 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.3 Q ₃ = 0.4 P ₉₀ = 0.5 P ₉₉ = 0.9										Hours of Calibration: 44	
																													Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Mar	0	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	0.3				
2-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	1	1	1	1	1	1	1	1	0	0.5	1.0				
3-Mar	0	0	0	0	0	0	0	0	0	0	C	C	C	C	1	1	1	0	0	0	1	0	0	0	0.4	0.6				
4-Mar	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	0.6				
5-Mar	0	0	0	0	0	0	0	0	0	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6				
6-Mar	0	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				
7-Mar	0	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				
8-Mar	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3				
9-Mar	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6				
10-Mar	0	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				
11-Mar	0	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				
12-Mar	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5				
13-Mar	0	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.5	1.0				
14-Mar	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0.3	0.9				
15-Mar	0	A	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.2	0.7				
16-Mar	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.4				
17-Mar	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	0.6				
18-Mar	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0.4	0.6				
19-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	0.5				
20-Mar	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.4	0.6				
21-Mar	0	0	0	0	0	0	0	0	0	1	1	C	C	C	C	C	C	0	A	0	0	0	1	1	--	0.5				
22-Mar	1	0	1	1	0	0	1	1	1	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.6				
23-Mar	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	0.9				
24-Mar	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.6				
25-Mar	0	0	0	0	0	0	0	0	0	M	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.4				
26-Mar	0	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				
27-Mar	0	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				
28-Mar	0	0	0	1	1	1	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.0				
29-Mar	0	0	0	0	0	0	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8				
30-Mar	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0.4	1.4				
31-Mar	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4				
0.3 0.3 0.3 0.3 0.3 0.3 0.4 0.4 0.4 0.4 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3																									Diurnal Average					
0.6 0.6 0.5 0.6 0.6 0.6 0.8 1.0 0.9 1.0 0.8 0.7 0.6 0.6 0.7 0.6 0.7 0.7 0.6 1.4 1.0 0.9 0.9 0.6																									Diurnal Maximum					
C - Calibration				M - Maintenance				A - Automated Daily Zero Span																						

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - March 2017



Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

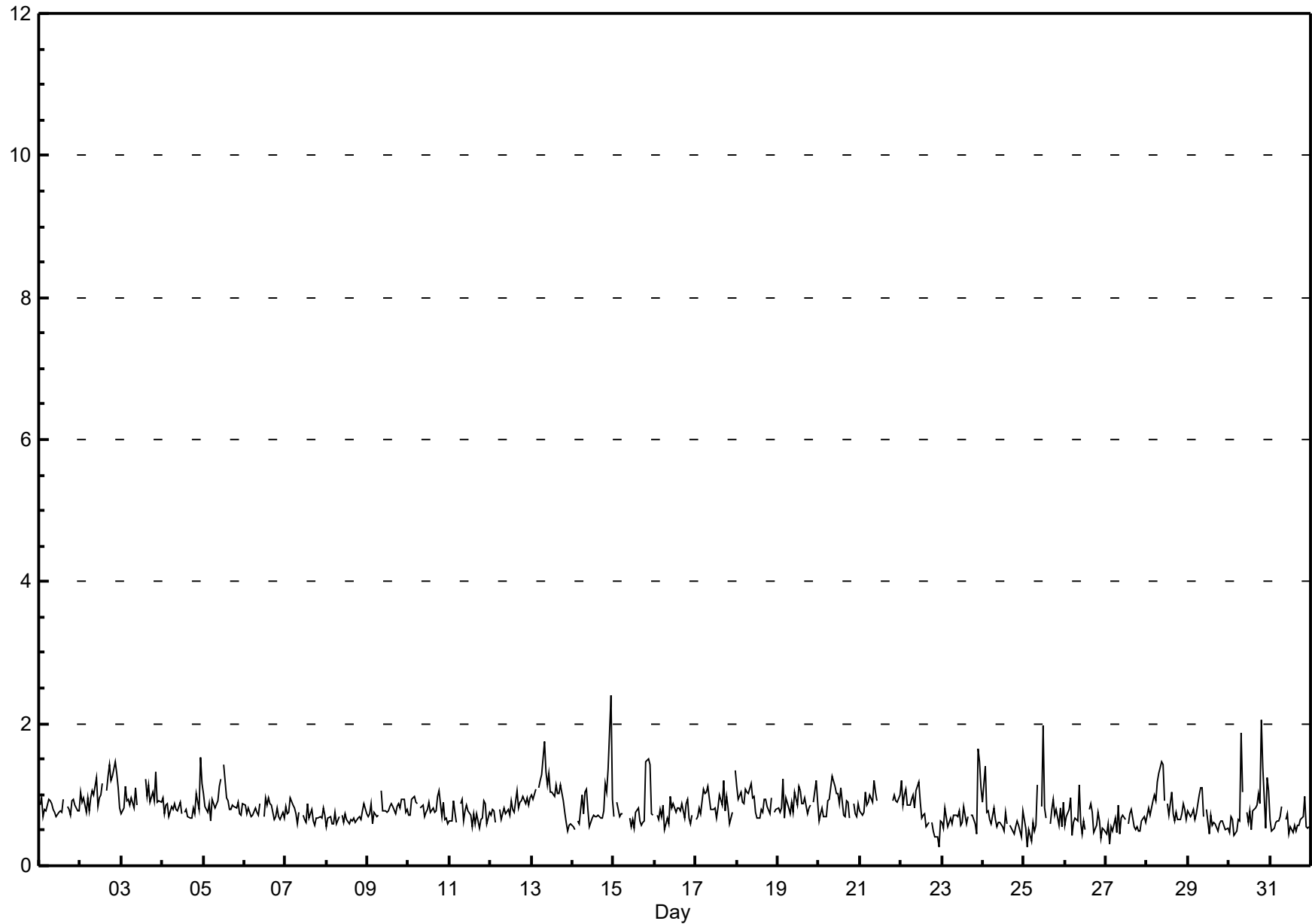
Henry Pirker - March 2017

Maximum Value: 2.4 ppb on Mar 14 23:00																				Maximum Daily Average: 1.1 ppb on Mar 2										Hours in Service: 744									
Minimum Value: 0 ppb on Mar 22 23:00																				Minimum Daily Average: 0.6 ppb on Mar 27										Hours of Data: 699									
Maximum Diurnal Average: 0.9 ppb at hour 9																				Minimum Diurnal Average: 0.7 ppb at hour 5										Hours of Missing Data: 45									
Monthly Average: 0.81 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.6 Q ₁ = 0.7 Median = 0.8 Q ₃ = 0.9 P ₉₀ = 1.1 P ₉₉ = 1.5										Hours of Calibration: 44									
																				Percent Operational Time: 99.9																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	A	1	1	1	1	1	1	1	0.8	1.0													
2-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1.1	1.5													
3-Mar	1	1	1	1	1	1	1	1	1	1	C	C	C	C	1	1	1	1	1	1	1	1	1	1	1.0	1.3													
4-Mar	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	2	1	0.8	1.5													
5-Mar	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.4													
6-Mar	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0													
7-Mar	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9													
8-Mar	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9													
9-Mar	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1													
10-Mar	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	1.1													
11-Mar	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9													
12-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1													
13-Mar	1	1	1	A	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1.0	1.8													
14-Mar	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	0.9	2.4													
15-Mar	1	A	1	1	1	1	C	C	C	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.5													
16-Mar	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	1.0													
17-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3													
18-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	A	1	0.9	1.2													
19-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.9	1.2													
20-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.9	1.3													
21-Mar	1	1	1	1	1	1	1	1	1	1	C	C	C	C	C	C	C	1	A	1	1	1	1	1	--	1.2													
22-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	0	0	0	1	0.8	1.2													
23-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	2	1	1	0.7	1.6													
24-Mar	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	A	1	0	0	1	1	1	0	1	0.7	1.4													
25-Mar	1	1	0	1	0	1	0	1	1	M	1	2	1	1	A	1	1	1	1	1	1	1	1	1	0.7	2.0													
26-Mar	1	1	1	1	0	1	1	1	1	1	0	1	1	A	1	1	1	0	1	1	1	0	1	1	0.6	1.1													
27-Mar	0	1	0	1	0	1	0	1	0	1	1	1	A	1	1	1	1	1	1	0	0	1	1	1	0.6	0.9													
28-Mar	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.5													
29-Mar	1	1	1	1	1	1	1	1	1	1	1	A	1	0	1	1	1	1	0	1	1	1	1	1	0.7	1.1													
30-Mar	0	1	1	0	0	1	1	2	1	A	1	1	1	1	1	1	1	1	1	2	1	1	1	1	0.9	2.1													
31-Mar	1	0	1	1	1	1	1	1	A	1	1	0	1	0	1	0	1	1	1	1	1	1	1	1	0.6	1.0													
0.8		0.8	0.8	0.8	0.7	0.8	0.8	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	Diurnal Average														
1.2		1.4	1.1	1.2	1.1	1.2	1.3	1.9	1.5	1.4	1.3	2.0	1.4	1.2	1.2	1.1	1.3	1.4	1.2	2.1	1.5	1.6	2.4	1.3	Diurnal Maximum														
C - Calibration		M - Maintenance						A - Automated Daily Zero Span																															

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

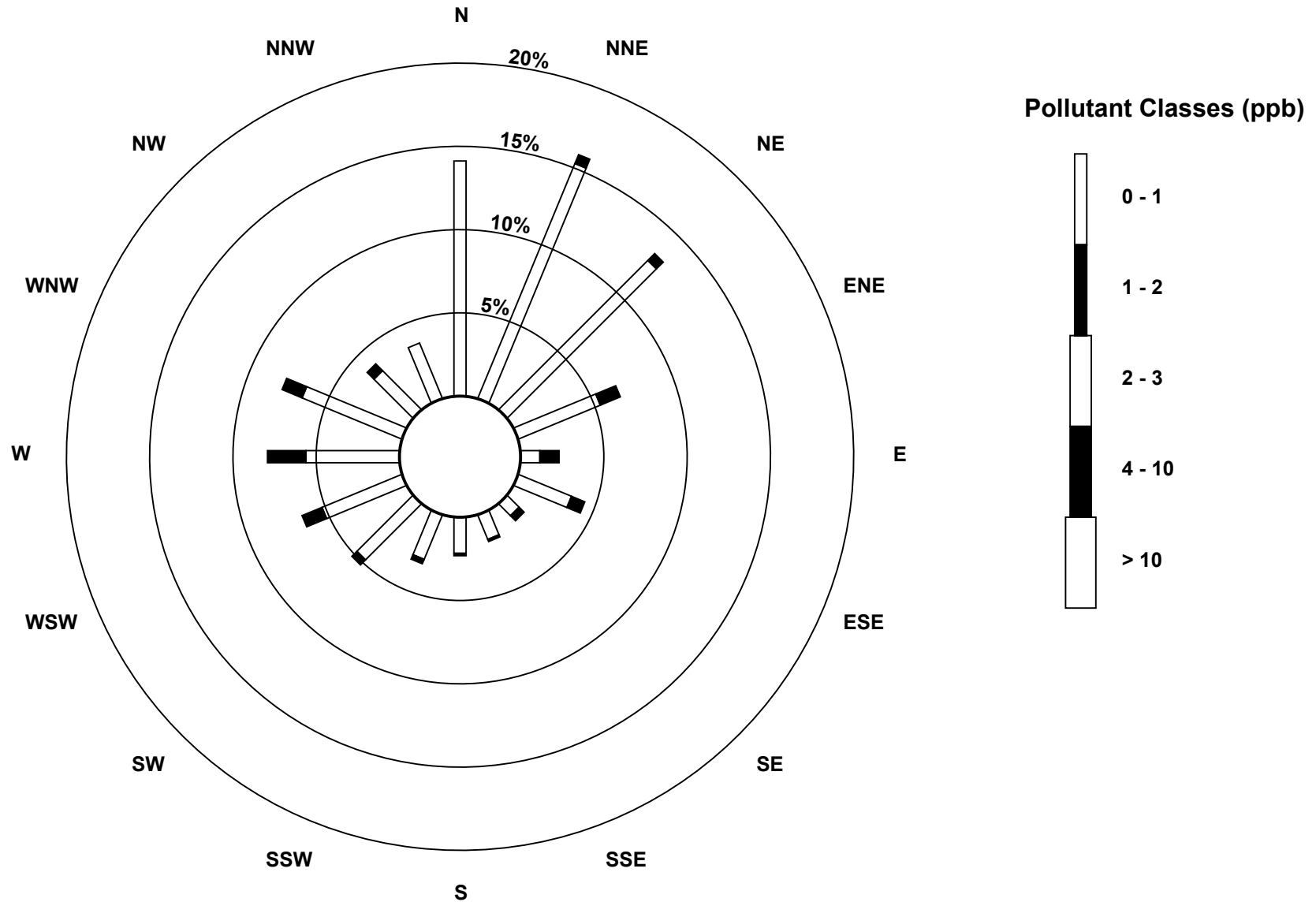
Henry Pirker - March 2017

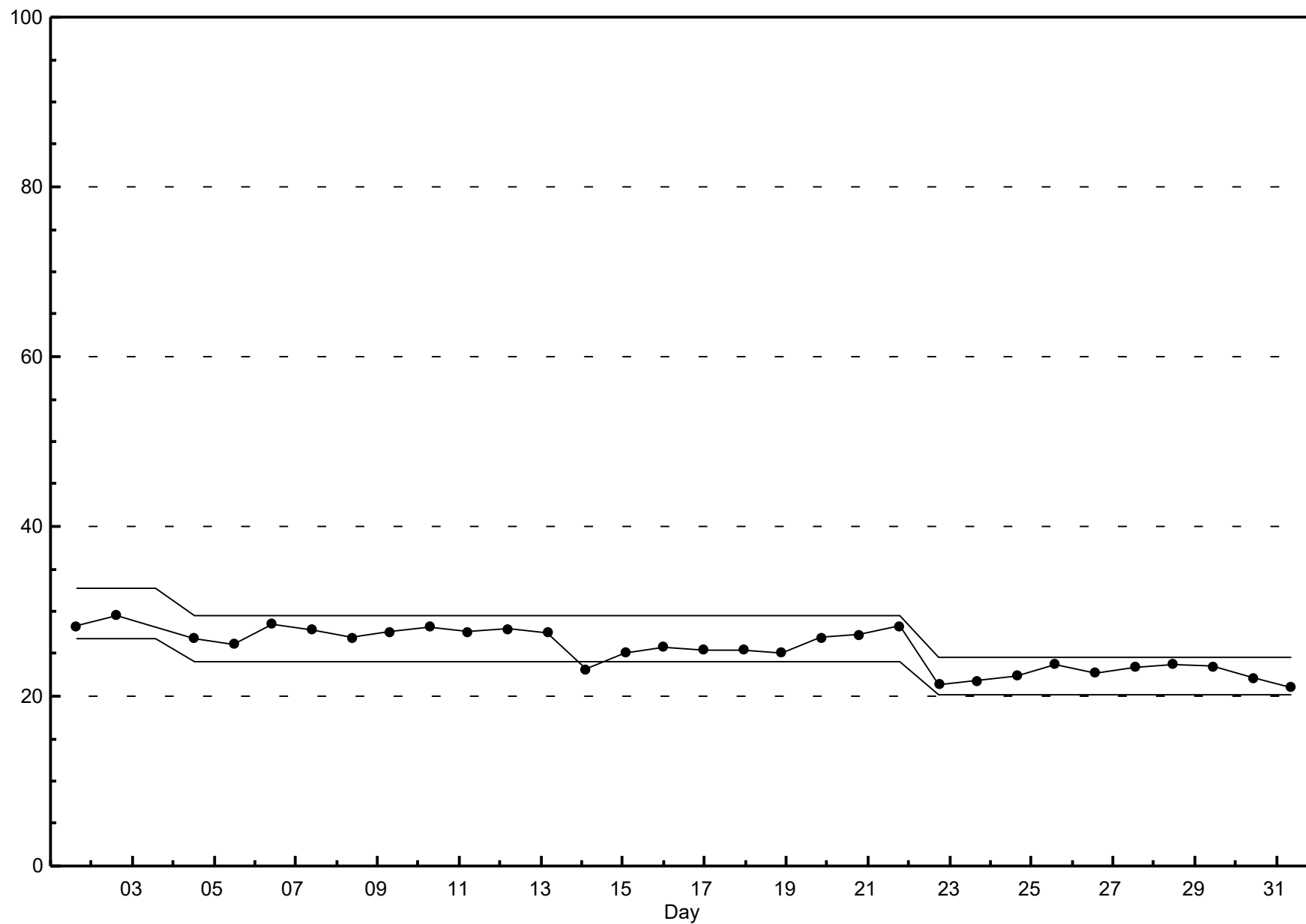


Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - March 2017





Hourly Averages

Nitrogen Dioxide (NO₂) - ppb

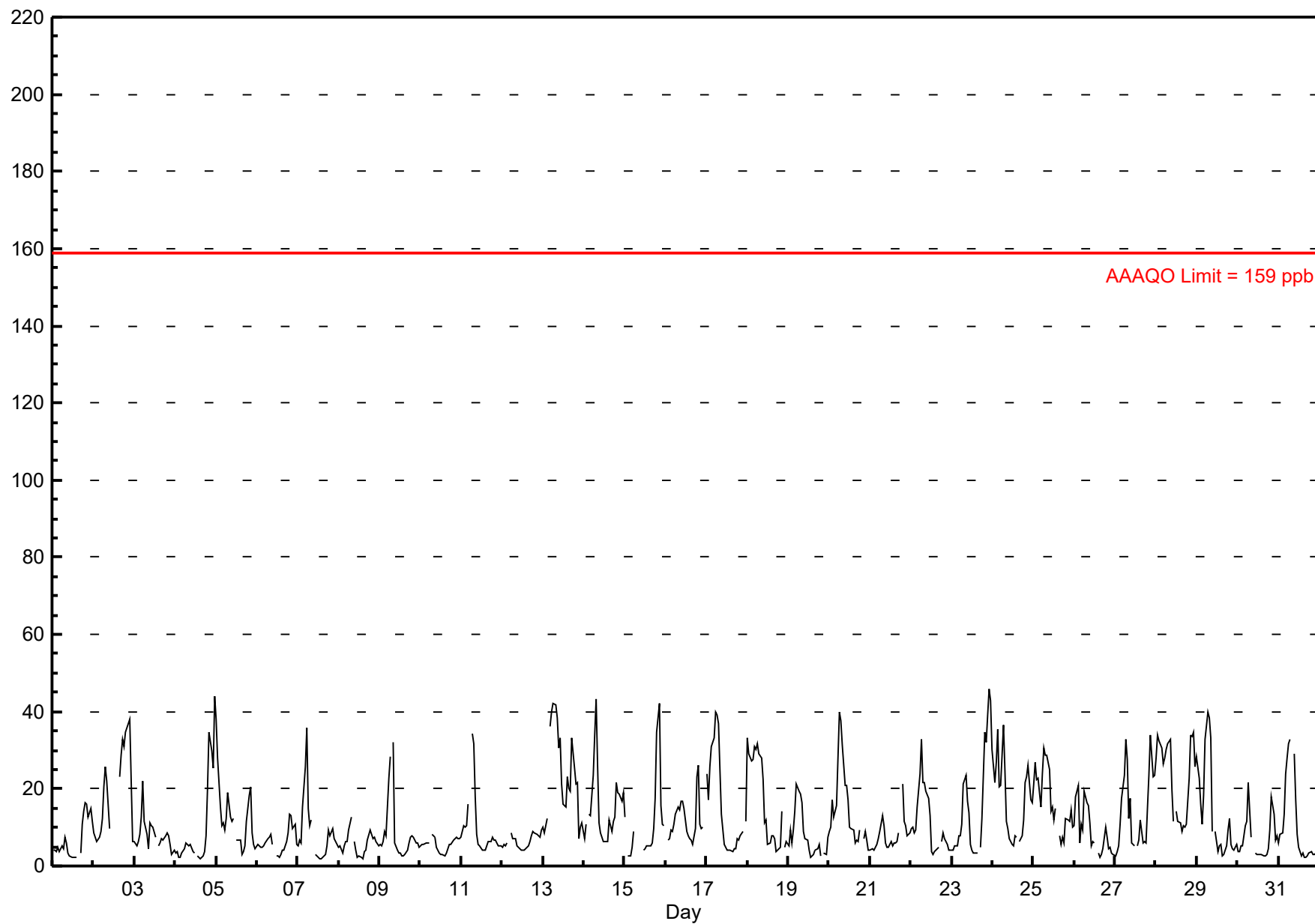
Henry Pirker - March 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 46.0 ppb on Mar 23 23:00 Maximum Daily Average: 23.4 ppb on Mar 13																				Hours in Service: 744 Hours of Data: 703 Hours of Missing Data: 41 Hours of Calibration: 41 Percent Operational Time: 100.0							
Minimum Value: 2 ppb on Mar 7 14:00 Minimum Daily Average: 5.4 ppb on Mar 10 Maximum Diurnal Average: 23.1 ppb at hour 7 Minimum Diurnal Average: 5.4 ppb at hour 15 Monthly Average: 11.96 ppb Percentiles: P ₁ = 2.1 P ₁₀ = 3.3 Q ₁ = 5.2 Median = 7.9 Q ₃ = 16.1 P ₉₀ = 28.5 P ₉₉ = 41.8																											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Mar	4	4	4	5	4	5	5	7	6	3	3	2	2	2	2	A	3	11	14	16	16	13	15	12	6.9	16.3	
2-Mar	8	8	6	7	9	12	21	26	22	10	C	C	C	C	A	23	29	33	31	35	37	38	22	6	20.1	38.0	
3-Mar	7	5	6	8	13	22	12	8	5	11	11	10	7	A	5	6	7	7	8	9	8	6	3	4	8.1	21.8	
4-Mar	3	4	2	2	4	4	6	6	5	6	4	3	A	3	2	2	3	4	8	20	35	30	25	44	9.7	44.1	
5-Mar	38	28	15	10	11	9	12	19	13	11	12	A	7	7	7	3	4	5	12	18	20	9	6	5	12.2	38.0	
6-Mar	6	5	5	5	5	6	7	7	8	5	A	3	3	2	3	4	4	6	9	13	13	10	11	6	6.4	13.3	
7-Mar	5	7	6	15	26	36	15	11	12	A	3	3	2	2	2	3	3	5	9	8	10	7	6	6	8.7	35.7	
8-Mar	5	5	3	5	6	6	9	13	A	6	4	2	3	2	2	4	4	7	9	8	7	8	6	5	5.7	12.5	
9-Mar	5	5	6	9	8	23	28	A	32	6	4	3	3	3	3	3	4	6	7	8	7	6	6	5	8.3	32.0	
10-Mar	5	5	6	6	6	6	A	8	8	5	4	3	3	3	3	3	4	5	5	7	7	7	7	7	5.4	8.2	
11-Mar	8	11	10	10	16	A	34	32	18	8	6	5	4	4	4	5	6	6	8	7	7	6	5	5	9.8	34.2	
12-Mar	5	6	5	6	A	9	7	7	7	5	4	4	4	4	5	5	6	8	9	9	8	8	7	10	6.4	9.5	
13-Mar	10	9	12	A	36	40	42	42	38	30	33	21	16	15	23	20	19	33	25	21	22	7	10	11	23.4	42.0	
14-Mar	7	11	A	13	13	23	34	43	26	11	9	7	6	6	6	12	9	11	13	22	19	19	17	19	15.5	43.1	
15-Mar	13	A	2	3	5	9	C	C	C	C	C	4	4	5	5	5	6	10	17	35	42	16	11	10	11.3	42.0	
16-Mar	A	7	7	9	9	11	14	15	14	17	17	15	9	8	7	7	6	10	23	26	11	10	10	A	11.9	26.2	
17-Mar	24	17	26	31	33	40	39	37	25	14	5	5	4	4	4	4	5	5	7	7	8	9	A	12	15.8	39.9	
18-Mar	33	29	27	28	31	30	32	29	28	22	11	12	6	6	8	8	7	4	4	5	14	A	5	6	16.7	33.3	
19-Mar	5	9	6	9	14	21	19	19	16	9	7	7	4	2	3	3	4	5	5	2	A	3	3	7	8.0	21.3	
20-Mar	9	10	17	13	16	28	40	37	31	21	21	17	10	10	9	6	7	6	9	A	7	9	7	4	15.0	39.9	
21-Mar	4	4	4	5	6	7	9	13	10	6	5	5	6	5	6	6	7	9	A	21	11	11	8	9	7.7	21.2	
22-Mar	10	10	9	9	15	24	33	22	22	19	18	13	4	3	4	4	5	A	6	8	7	6	4	4	11.2	32.6	
23-Mar	4	4	5	5	8	8	11	21	24	17	14	6	4	3	3	3	A	5	12	35	32	39	46	43	15.3	46.0	
24-Mar	30	22	27	35	21	21	37	25	11	10	7	6	5	8	7	A	6	8	12	22	23	26	17	17	17.4	36.7	
25-Mar	21	27	22	23	15	24	31	29	29	25	14	15	12	15	A	8	6	7	6	12	12	11	15	10	16.9	30.6	
26-Mar	11	18	21	6	11	9	19	16	16	11	5	6	6	A	3	2	3	5	10	7	5	5	3	3	8.8	21.0	
27-Mar	3	4	5	11	18	24	33	28	12	18	6	5	A	5	7	12	6	6	6	15	24	34	23	23	14.2	33.9	
28-Mar	28	34	33	31	26	28	30	32	33	20	12	A	14	12	11	9	11	10	11	23	34	34	35	26	23.2	34.6	
29-Mar	28	23	16	11	18	33	40	38	33	9	A	9	4	5	6	3	3	5	9	12	6	4	4	6	14.1	39.7	
30-Mar	4	4	5	5	10	11	22	15	7	A	3	3	3	3	3	3	3	3	4	9	18	13	7	8	7.2	21.7	
31-Mar	6	8	9	13	24	28	32	33	A	29	17	8	5	3	3	2	2	3	3	4	3	3	4	3	10.7	32.7	
11.6 11.4 10.9 11.6 14.6 18.6 23.1 21.9 18.3 13.0 9.6 7.3 5.8 5.4 5.4 6.1 6.4 8.2 10.5 14.8 15.7 13.5 11.5 11.2 38.0 33.9 32.5 35.5 36.2 39.9 42.0 43.1 38.4 30.4 33.2 21.1 16.1 15.5 23.1 23.0 28.5 33.3 31.0 34.8 42.0 39.3 46.0 44.1																										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

Henry Pirker - March 2017



Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb

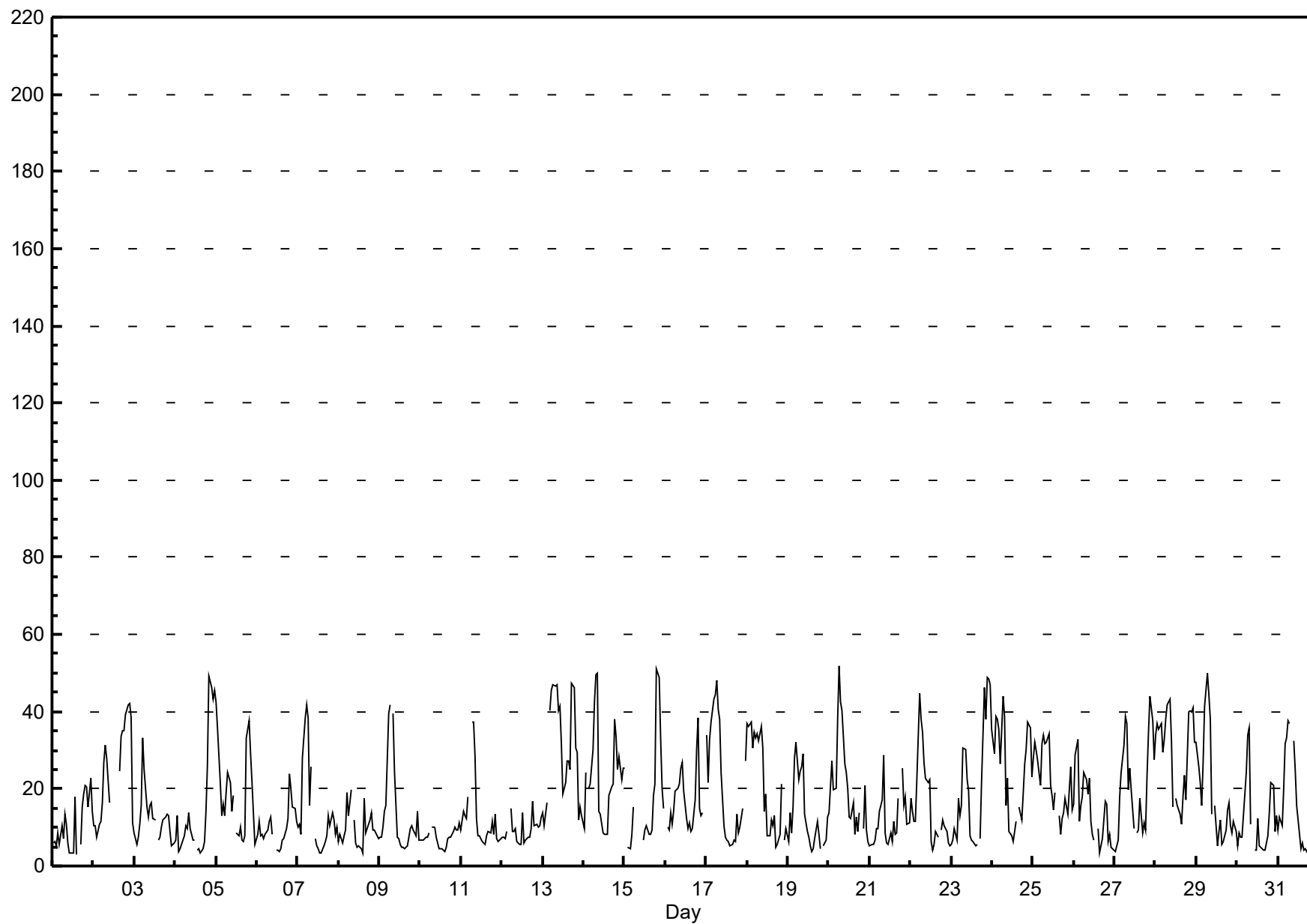
Henry Pirker - March 2017

Maximum Value: 51.9 ppb on Mar 20 07:00																				Maximum Daily Average: 30.2 ppb on Mar 13					Hours in Service: 744	
Minimum Value: 3 ppb on Mar 1 15:00																				Minimum Daily Average: 7.4 ppb on Mar 10					Hours of Data: 703	
Maximum Diurnal Average: 30.1 ppb at hour 7																				Minimum Diurnal Average: 8.2 ppb at hour 15					Hours of Missing Data: 41	
Monthly Average: 16.97 ppb																				Percentiles: P ₁ = 3.4 P ₁₀ = 5.5 Q ₁ = 7.6 Median = 12.5 Q ₃ = 24.2 P ₉₀ = 37.0 P ₉₉ = 48.7					Hours of Calibration: 41	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	6	6	5	8	6	10	7	13	11	6	3	3	4	18	3	A	6	15	19	21	21	15	23	14	10.6	22.6
2-Mar	10	10	7	11	11	16	27	31	28	16	C	C	C	C	A	25	34	35	35	39	42	42	38	11	24.7	42.1
3-Mar	9	6	7	11	16	33	25	15	13	15	16	12	12	A	7	8	10	12	13	13	13	9	5	6	12.4	33.3
4-Mar	7	13	4	4	6	8	10	10	14	10	7	7	A	4	4	3	5	6	14	26	49	46	43	46	15.0	49.1
5-Mar	43	36	21	13	16	13	19	24	22	14	18	A	9	8	10	7	6	8	33	38	29	22	14	6	18.6	42.6
6-Mar	8	12	8	8	7	8	9	12	13	8	A	4	4	4	5	7	7	10	12	24	20	15	15	11	10.0	23.8
7-Mar	10	11	8	28	38	42	39	16	26	A	7	5	4	3	3	5	6	8	13	10	14	12	8	10	14.2	41.8
8-Mar	6	8	6	8	9	19	13	20	A	12	6	5	5	4	3	17	9	10	12	14	9	9	9	7	9.6	19.9
9-Mar	8	8	10	14	15	40	42	A	39	25	8	7	6	5	5	4	5	7	10	10	9	8	14	7	13.3	41.8
10-Mar	7	7	7	7	8	9	A	10	10	8	6	4	4	5	4	5	7	8	7	9	10	9	9	11	7.4	11.0
11-Mar	9	14	13	12	18	A	37	37	28	12	8	8	6	6	6	8	9	9	12	8	13	7	6	7	12.8	37.4
12-Mar	8	8	7	9	A	15	9	9	10	6	6	6	14	6	7	7	8	10	17	10	11	10	10	13	9.3	16.9
13-Mar	14	11	16	A	40	45	47	46	47	40	42	32	19	21	27	27	25	47	46	31	30	12	15	13	30.2	47.3
14-Mar	10	24	A	20	21	30	43	50	50	14	13	8	8	8	8	18	21	21	38	33	25	28	23	25	23.5	50.0
15-Mar	26	A	5	5	8	15	C	C	C	C	C	7	9	10	8	8	9	18	21	51	49	33	20	15	17.7	51.0
16-Mar	A	10	9	14	11	14	19	20	21	25	27	19	12	10	11	9	10	17	30	39	15	13	14	A	16.8	38.5
17-Mar	34	22	33	37	43	44	48	41	38	24	10	7	7	6	5	6	7	6	13	9	10	15	A	27	21.5	48.2
18-Mar	37	36	37	31	35	33	34	32	36	31	14	18	8	8	12	10	13	5	6	8	21	A	7	10	21.0	37.4
19-Mar	6	14	9	15	28	32	22	25	26	29	13	9	7	5	4	5	7	12	8	4	A	5	7	13	13.3	32.1
20-Mar	14	20	27	20	20	38	52	43	40	26	24	20	13	12	16	8	13	9	14	A	10	21	9	6	20.7	51.9
21-Mar	5	6	6	7	10	10	14	17	29	8	6	6	9	6	12	8	9	17	A	25	16	18	11	11	11.5	28.9
22-Mar	17	14	11	11	22	45	38	35	27	23	22	22	6	4	6	9	8	A	9	12	11	9	6	5	16.2	44.9
23-Mar	6	7	10	7	17	13	16	31	30	22	19	8	7	6	5	5	A	7	22	46	38	49	48	47	20.3	48.8
24-Mar	35	29	39	38	35	27	44	39	16	23	9	8	6	9	12	A	15	12	19	26	30	37	36	23	24.7	43.9
25-Mar	28	32	30	27	21	32	34	32	32	34	21	18	15	19	A	13	8	12	14	17	14	20	26	14	22.3	34.2
26-Mar	16	29	33	12	16	18	24	22	19	23	11	8	7	A	10	3	5	7	17	16	6	8	5	4	13.9	32.7
27-Mar	4	5	7	18	24	31	39	37	20	25	20	10	A	8	9	18	9	11	9	23	34	44	38	28	20.4	43.8
28-Mar	34	37	35	37	30	33	38	42	43	33	15	A	18	16	13	11	18	24	17	40	40	40	41	32	29.8	43.1
29-Mar	32	26	22	16	27	41	50	44	38	13	A	16	5	9	12	6	6	9	14	16	10	9	12	9	19.2	50.1
30-Mar	5	8	7	8	19	24	34	36	11	A	4	4	12	5	5	4	4	6	8	14	22	21	9	13	12.3	35.9
31-Mar	9	13	11	20	32	33	38	37	A	33	25	16	12	5	6	4	5	4	5	6	5	5	6	7	14.5	37.5
15.4 16.0 15.0 15.8 20.3 25.7 30.1 28.4 26.3 20.0 14.1 10.6 8.8 8.3 8.2 9.3 10.1 12.7 16.9 21.4 20.8 19.7 17.5 15.0																									Diurnal Average	
42.6 36.9 38.8 38.0 43.4 45.5 51.9 49.5 50.0 40.4 41.5 31.8 18.5 21.5 27.2 27.2 33.6 47.3 46.2 51.0 49.1 48.8 48.5 46.8																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb

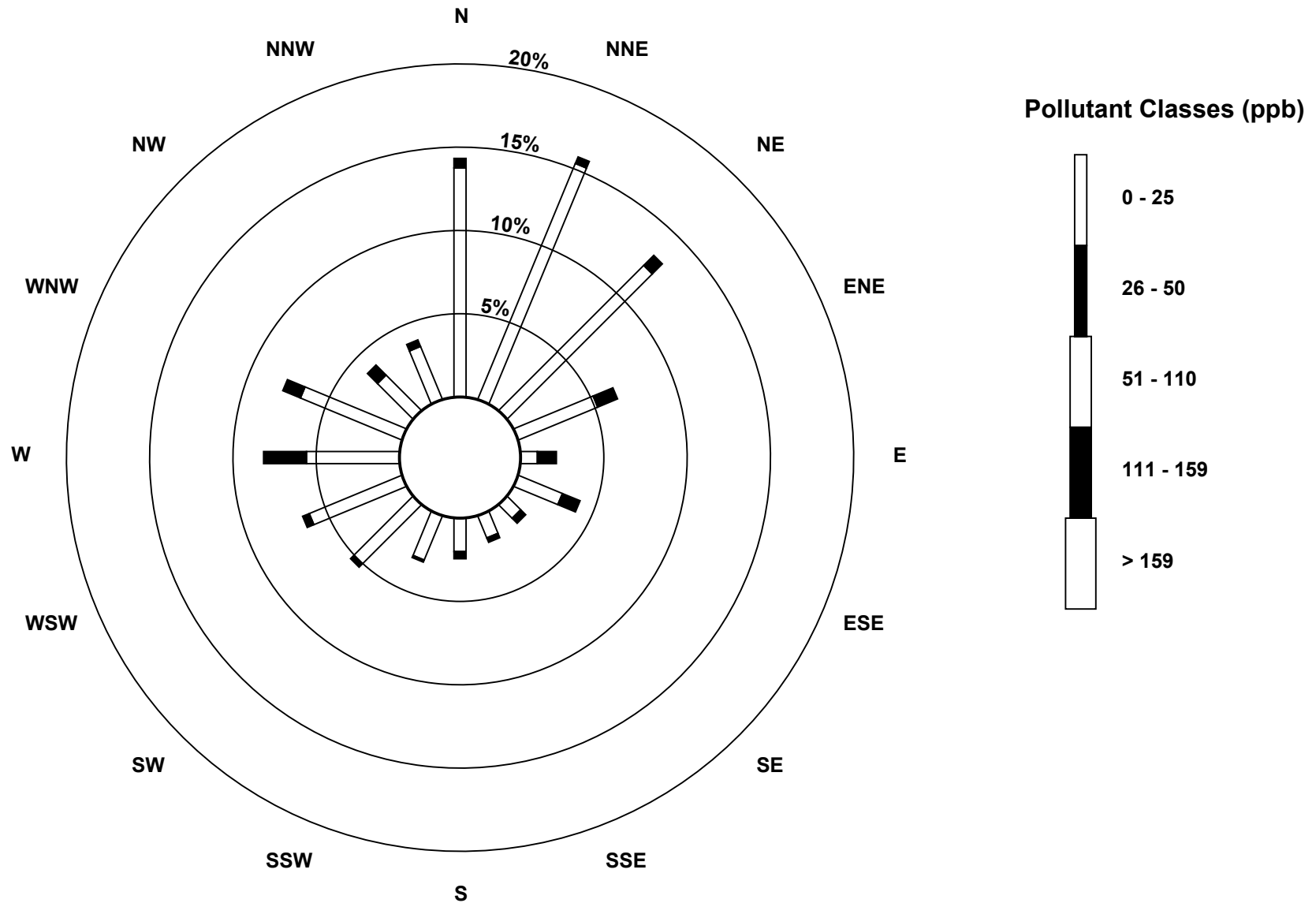
Henry Pirker - March 2017



Pollutant Rose

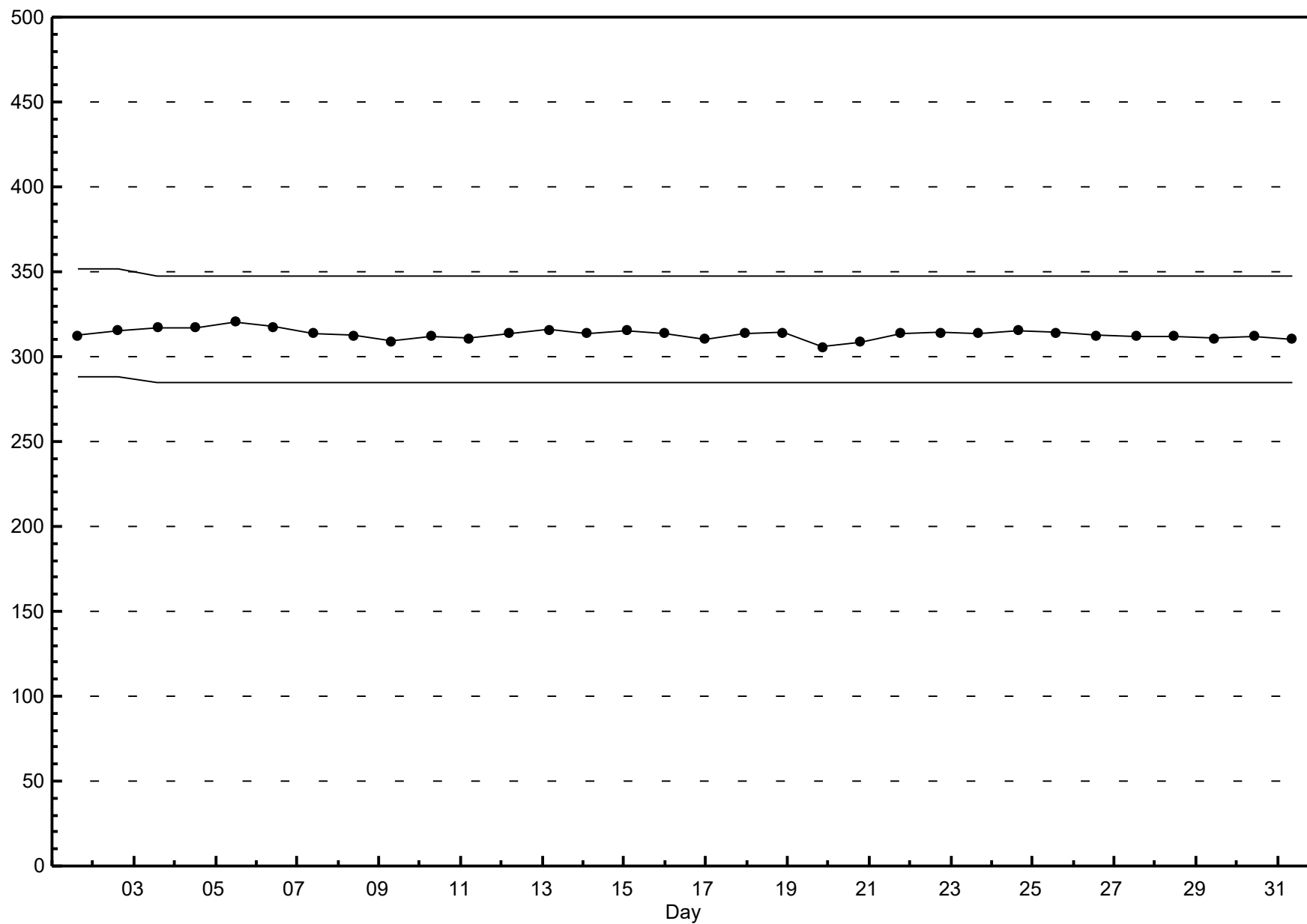
Nitrogen Dioxide (NO₂) - ppb

Henry Pirker - March 2017



Span Responses

Nitrogen Dioxide (NO₂)
Henry Pirker - March 2017



Hourly Averages

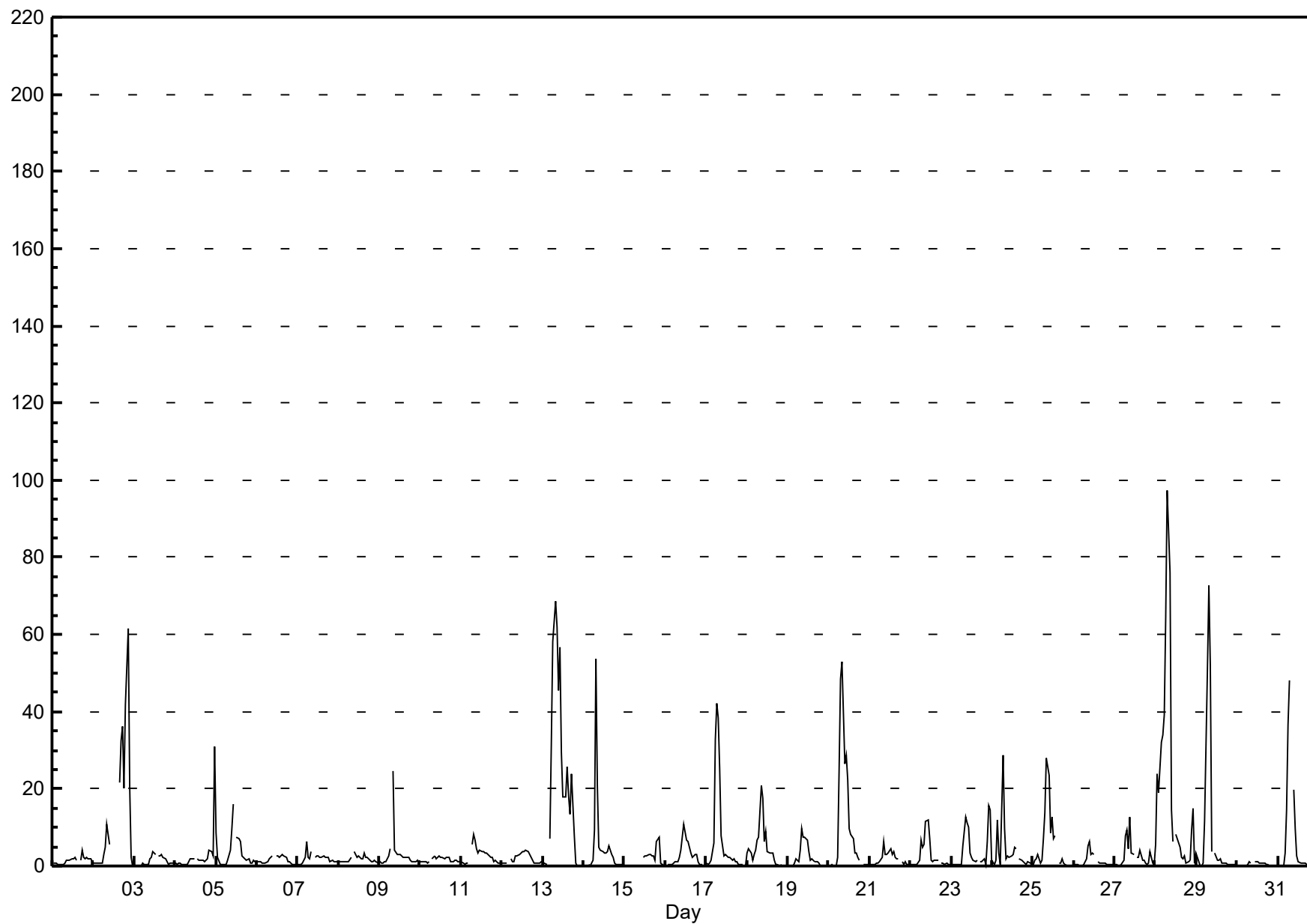
Nitrogen Oxide (NO) - ppb

Henry Pirker - March 2017

Maximum Value: 97.4 ppb on Mar 28 08:00																				Maximum Daily Average: 21.2 ppb on Mar 13										Hours in Service: 744									
Minimum Value: 0 ppb on Apr 1 00:00																				Minimum Daily Average: 0.5 ppb on Mar 30										Hours of Data: 703									
Maximum Diurnal Average: 17.7 ppb at hour 8																				Minimum Diurnal Average: 1.2 ppb at hour 1										Hours of Missing Data: 41									
Monthly Average: 4.84 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.2 Q ₁ = 0.6 Median = 1.5 Q ₃ = 3.3 P ₉₀ = 10.6 P ₉₉ = 61.4										Hours of Calibration: 41									
																				Percent Operational Time: 100.0																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Mar	1	1	1	1	0	0	0	1	1	1	2	2	2	2	1	A	2	4	2	2	2	2	2	1	1.4	4.0													
2-Mar	1	1	1	1	1	1	3	5	11	6	C	C	C	C	A	22	33	36	20	42	62	21	2	0	13.9	61.6													
3-Mar	0	0	0	0	0	1	1	0	0	2	2	4	3	A	3	3	3	2	2	1	0	1	1	1	1.3	3.7													
4-Mar	1	0	1	1	0	1	0	0	1	2	2	2	A	2	2	1	2	1	1	2	4	4	3	31	2.7	31.1													
5-Mar	9	2	0	0	0	0	0	1	4	10	16	A	7	7	6	2	2	2	2	2	1	1	1	1	3.4	15.9													
6-Mar	1	1	1	1	1	1	1	2	2	3	A	2	3	2	3	3	2	2	1	1	1	1	0	0	1.5	2.8													
7-Mar	1	0	0	1	2	6	2	2	4	A	2	3	3	2	2	3	2	2	2	1	2	1	1	1	2.0	6.3													
8-Mar	1	1	1	1	1	1	1	2	A	4	3	2	3	2	2	3	2	2	2	1	1	1	1	1	1.8	3.9													
9-Mar	1	1	1	1	1	3	4	A	25	4	3	3	3	3	2	2	2	2	2	1	1	1	1	1	3.0	24.6													
10-Mar	1	1	1	1	1	1	A	2	3	2	2	2	2	2	2	2	2	2	1	1	1	2	1	1	1.7	2.6													
11-Mar	1	1	0	1	1	A	6	8	7	4	4	4	4	4	3	3	3	2	2	1	1	1	1	1	2.7	8.2													
12-Mar	1	1	1	1	A	2	1	1	2	3	3	3	4	4	4	4	3	2	2	1	1	1	1	1	2.0	3.9													
13-Mar	1	1	0	A	7	31	58	69	62	45	57	29	18	18	26	18	14	24	8	1	0	0	0	0	21.2	68.5													
14-Mar	0	0	A	0	0	1	9	54	21	5	4	4	3	3	4	5	3	2	1	1	0	0	0	0	5.3	53.6													
15-Mar	0	A	0	0	0	0	C	C	C	C	C	2	2	3	3	3	2	2	2	6	7	1	0	0	2.0	7.4													
16-Mar	A	0	0	0	0	1	1	1	2	4	7	11	7	6	5	3	2	3	3	1	0	0	0	A	2.8	10.8													
17-Mar	1	0	1	2	6	33	42	38	25	8	3	3	3	2	2	2	2	1	1	0	0	1	A	0	7.6	42.2													
18-Mar	3	4	3	1	3	4	7	8	21	17	6	9	4	3	4	3	1	0	0	0	0	A	0	0	4.5	20.8													
19-Mar	0	0	0	0	1	2	1	4	10	8	7	7	4	1	2	1	1	1	1	0	A	0	0	0	2.2	9.9													
20-Mar	0	0	0	0	0	2	25	48	53	27	29	22	10	8	7	3	3	2	2	A	1	1	0	0	10.6	52.8													
21-Mar	0	0	0	0	1	1	1	2	7	3	3	3	5	3	4	2	2	2	A	1	0	1	0	0	1.9	6.5													
22-Mar	0	0	0	0	0	1	7	5	6	11	12	7	1	1	1	1	2	A	1	1	0	1	1	0	2.7	11.8													
23-Mar	0	0	0	0	0	0	0	5	13	11	10	3	2	1	1	1	A	1	1	2	0	6	16	14	4.0	15.7													
24-Mar	1	0	1	12	3	0	29	10	2	3	2	3	3	5	4	A	2	2	1	1	0	1	1	0	3.8	28.7													
25-Mar	0	1	2	3	1	2	7	14	28	23	9	13	7	8	A	1	1	2	1	0	0	0	0	0	5.3	28.0													
26-Mar	0	0	0	0	0	0	0	2	5	6	3	3	3	A	1	1	1	1	1	0	0	1	0	0	1.3	6.2													
27-Mar	0	0	0	0	0	1	8	9	4	13	3	3	A	2	2	4	1	2	1	0	1	4	1	1	2.7	12.8													
28-Mar	6	24	19	32	34	39	65	97	76	15	6	A	8	7	5	2	2	3	1	1	1	9	15	1	20.3	97.4													
29-Mar	3	1	0	0	1	12	51	73	52	4	A	3	1	2	2	1	1	1	1	0	0	0	0	0	9.0	72.5													
30-Mar	0	0	0	0	0	0	0	1	1	A	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.5	1.2													
31-Mar	0	0	0	0	4	15	37	48	A	20	10	3	1	1	1	1	1	1	0	0	0	0	0	0	6.1	48.0													
1.2 1.5 1.2 2.0 2.3 5.4 12.7 17.7 16.0 9.4 7.8 5.6 4.2 3.8 3.6 3.5 3.3 3.7 2.1 2.4 3.0 2.0 1.7 1.9																									Diurnal Average														
8.7 23.8 18.9 32.0 33.8 39.1 64.6 97.4 76.2 45.3 56.7 29.4 17.9 17.9 25.6 21.7 32.5 36.0 20.3 41.6 61.6 20.5 15.7 31.1																									Diurnal Maximum														
C - Calibration																									A - Automated Daily Zero Span														

Hourly Averages

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



Hourly Maximums

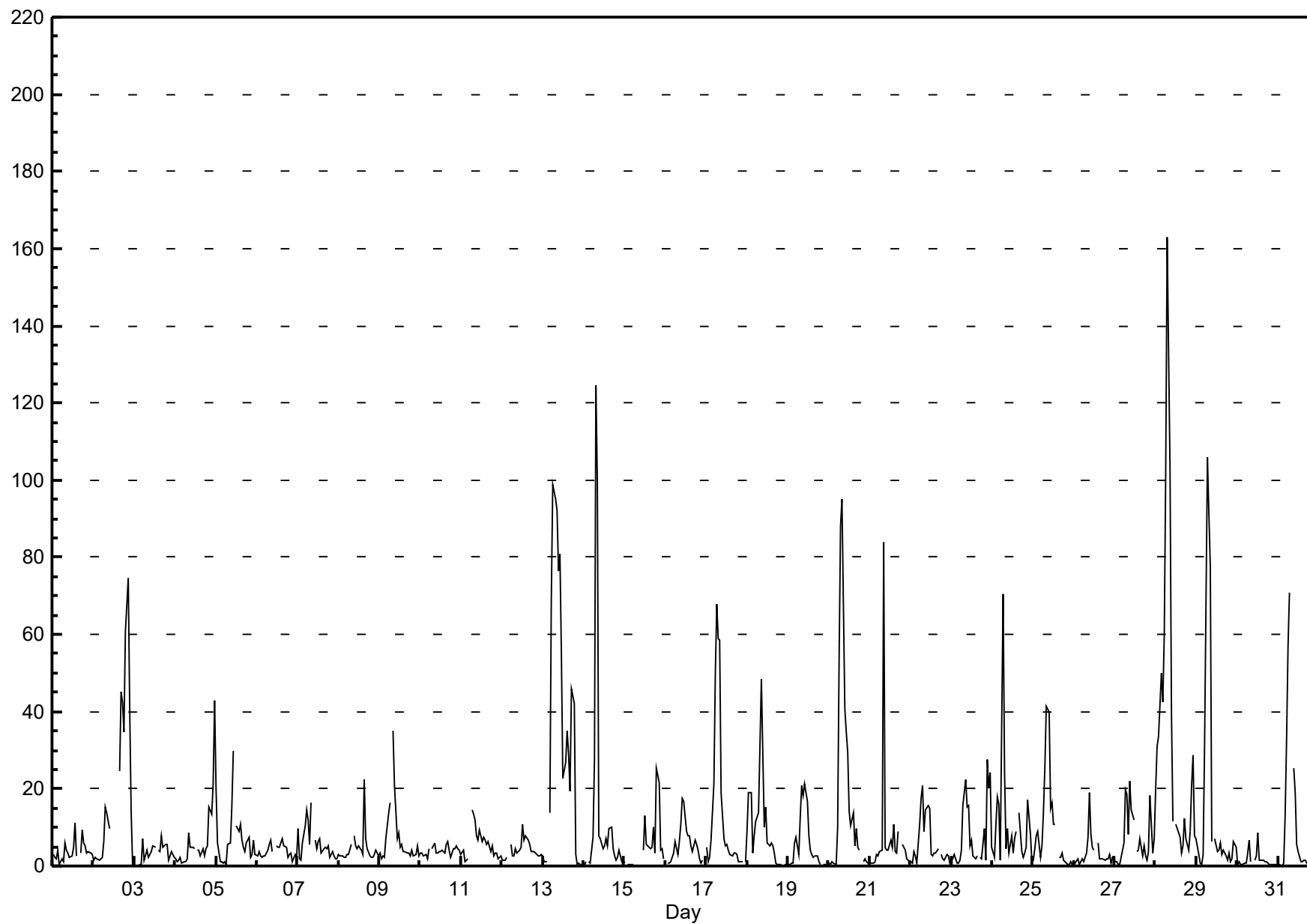
Nitrogen Oxide (NO) - ppb

Henry Pirker - March 2017

Maximum Value: 163.1 ppb on Mar 28 08:00																				Maximum Daily Average: 35.3 ppb on Mar 13										Hours in Service: 744									
Minimum Value: 0 ppb on Mar 3 02:00																				Minimum Daily Average: 1.6 ppb on Mar 30										Hours of Data: 703									
Maximum Diurnal Average: 32.0 ppb at hour 9																				Minimum Diurnal Average: 3.4 ppb at hour 2										Hours of Missing Data: 41									
Monthly Average: 9.70 ppb																				Percentiles: P ₁ = 0.2 P ₁₀ = 0.8 Q ₁ = 1.9 Median = 4.0 Q ₃ = 8.0 P ₉₀ = 21.3 P ₉₉ = 98.6										Hours of Calibration: 41									
																				Percent Operational Time: 100.0																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Mar	3	2	2	4	0	2	1	6	4	3	2	3	5	11	3	A	3	9	6	5	3	4	3	3	3.9	11.2													
2-Mar	1	2	2	2	2	2	6	15	14	10	C	C	C	C	A	25	45	42	35	61	74	41	14	0	20.7	74.4													
3-Mar	0	0	0	0	0	7	1	4	2	3	4	5	5	A	4	4	8	5	6	6	1	2	4	2	3.2	7.8													
4-Mar	2	1	1	2	1	1	1	2	9	5	5	5	A	4	4	3	4	3	5	5	15	13	21	43	6.7	42.8													
5-Mar	20	6	1	1	1	1	0	5	6	16	30	A	11	9	11	7	5	4	6	7	2	3	7	3	7.0	29.7													
6-Mar	3	4	3	2	2	3	4	6	7	4	A	5	5	5	6	7	5	5	2	3	3	1	3	2	3.9	6.9													
7-Mar	10	2	1	6	11	15	12	6	16	A	7	4	6	7	3	5	5	5	5	2	4	3	2	2	6.0	16.4													
8-Mar	3	3	3	2	2	3	3	6	A	8	5	4	5	4	3	22	7	5	3	2	2	3	4	3	4.6	22.2													
9-Mar	3	2	2	2	7	14	16	A	35	21	7	8	5	6	4	4	3	3	3	4	3	3	5	3	7.1	35.0													
10-Mar	3	3	3	3	2	5	A	5	6	3	3	4	4	4	3	5	6	4	2	4	5	5	5	4	4.0	6.4													
11-Mar	3	4	1	1	2	A	15	13	12	8	7	9	6	7	7	6	6	4	5	3	3	3	2	2	5.7	14.5													
12-Mar	1	2	1	2	A	6	3	3	4	3	4	5	11	7	8	7	5	4	4	4	3	3	3	3	4.1	10.7													
13-Mar	3	1	1	A	14	69	99	95	92	77	81	55	23	27	35	29	19	46	42	3	1	1	0	1	35.3	98.9													
14-Mar	0	1	A	1	1	7	28	125	99	8	7	5	5	7	5	10	10	5	3	1	2	4	1	2	14.7	124.7													
15-Mar	1	A	0	0	0	0	C	C	C	C	C	4	13	5	5	4	5	10	3	25	22	4	5	2	6.1	25.5													
16-Mar	A	1	1	1	2	4	6	3	6	11	18	17	9	8	8	5	4	7	6	4	2	1	1	A	5.6	17.7													
17-Mar	5	1	2	7	21	50	68	59	59	19	7	5	6	4	3	3	3	3	3	1	1	1	A	1	14.4	67.7													
18-Mar	9	19	19	3	8	12	13	14	49	29	10	15	6	5	6	5	3	1	1	0	0	A	0	0	9.9	48.6													
19-Mar	0	0	1	1	6	7	3	13	21	18	21	17	8	4	3	2	3	3	1	0	A	0	0	0	5.8	21.1													
20-Mar	1	0	1	1	0	10	53	88	95	40	35	30	14	11	14	5	10	5	4	A	1	2	1	1	18.3	94.9													
21-Mar	1	1	1	1	3	2	4	4	84	5	4	4	7	5	11	4	3	9	A	6	5	4	2	1	7.4	84.0													
22-Mar	1	1	4	3	1	11	18	21	9	15	16	15	3	3	3	3	5	A	3	2	1	3	3	1	6.2	20.9													
23-Mar	1	2	3	1	1	1	4	16	22	15	16	5	7	3	2	3	A	2	2	10	1	28	20	24	8.2	27.7													
24-Mar	5	2	11	18	16	1	70	24	5	10	3	8	3	7	9	A	14	4	2	3	5	17	8	1	10.7	70.4													
25-Mar	2	4	8	9	2	5	14	25	41	40	15	17	11	11	A	2	2	3	1	1	0	0	1	0	9.4	41.4													
26-Mar	0	1	2	0	1	2	1	3	8	19	8	5	4	A	6	2	2	2	2	2	2	3	1	2	3.3	18.9													
27-Mar	1	1	0	0	2	6	20	19	8	22	14	12	A	4	4	7	3	5	2	1	4	18	3	7	7.2	21.9													
28-Mar	20	31	34	50	43	60	102	163	103	39	12	A	11	10	7	3	5	12	7	4	9	21	29	8	34.0	163.1													
29-Mar	7	3	1	0	3	31	106	91	78	7	A	7	4	4	6	3	4	3	1	3	1	2	6	5	16.3	105.7													
30-Mar	0	1	0	1	1	1	3	7	1	A	2	3	9	1	2	2	1	1	1	0	0	0	0	0	1.6	8.7													
31-Mar	0	0	0	1	13	33	56	71	A	25	19	5	4	1	1	2	2	1	1	0	0	0	0	0	10.3	70.9													
3.7 3.4 3.6 4.2 5.6 12.4 25.2 31.4 32.0 17.2 13.4 10.0 7.4 6.5 6.4 6.4 6.7 7.1 5.6 5.8 6.0 6.4 5.2 4.2																									Diurnal Average														
20.1 30.8 33.5 49.8 42.6 69.2 105.7 163.1 102.9 76.6 81.0 55.2 22.7 26.7 35.0 29.1 45.3 45.8 42.2 61.0 74.4 40.6 28.7 42.8																									Diurnal Maximum														
C - Calibration																									A - Automated Daily Zero Span														

Hourly Maximums

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



Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

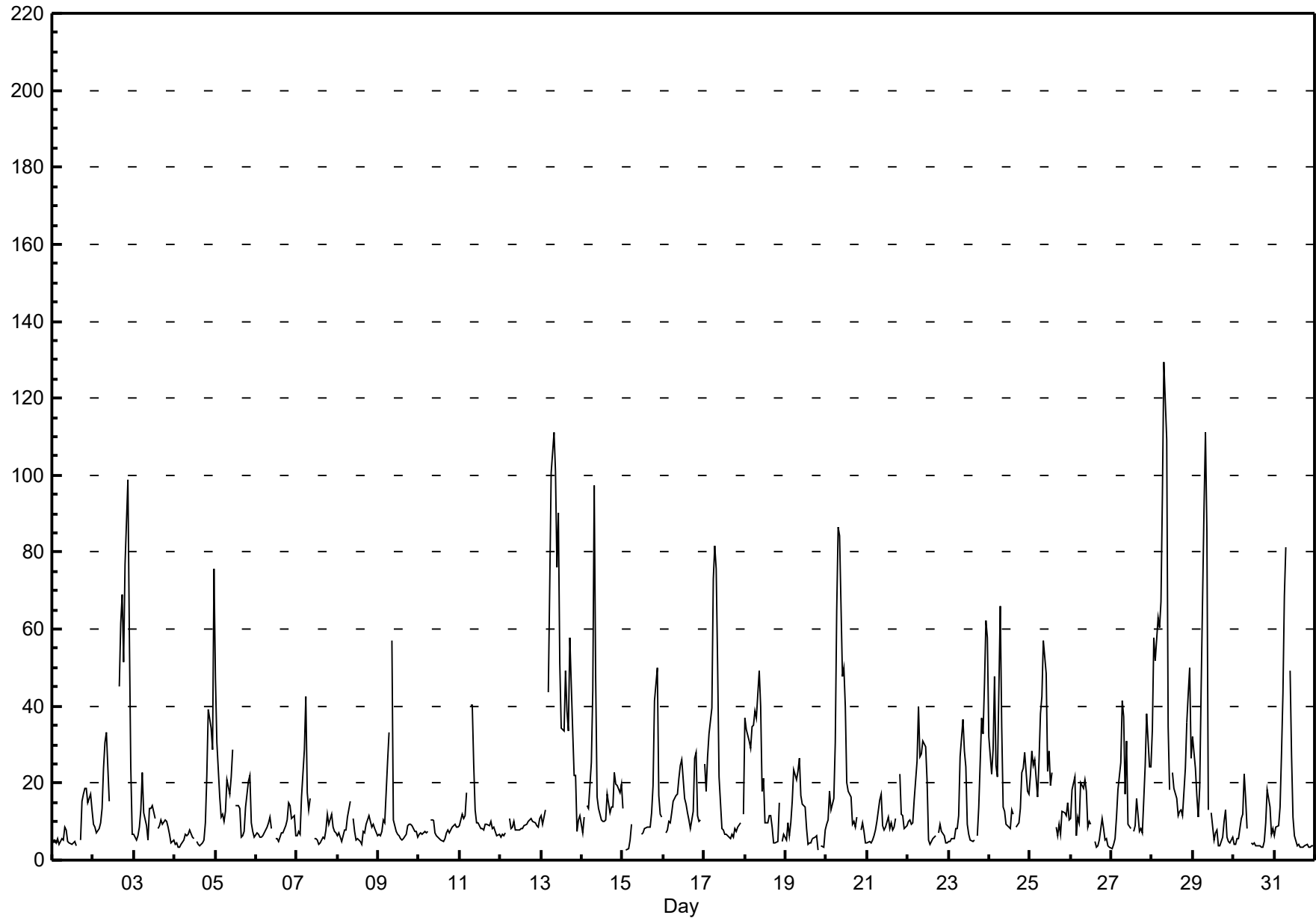
Henry Pirker - March 2017

Maximum Value: 129.3 ppb on Mar 28 08:00																								Maximum Daily Average: 45.0 ppb on Mar 13										Hours in Service: 744	
Minimum Value: 3 ppb on Mar 19 20:00																								Minimum Daily Average: 7.4 ppb on Mar 10										Hours of Data: 703	
Maximum Diurnal Average: 40.0 ppb at hour 8																								Minimum Diurnal Average: 9.2 ppb at hour 15										Hours of Missing Data: 41	
Monthly Average: 17.11 ppb																								Percentiles: P ₁ = 3.2 P ₁₀ = 4.7 Q ₁ = 6.8 Median = 9.9 Q ₃ = 19.4 P ₉₀ = 39.0 P ₉₉ = 98.0										Hours of Calibration: 41	
																								Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24											
1-Mar	5	5	5	6	4	6	5	9	8	5	4	4	4	5	4	A	5	15	17	19	19	15	17	13	8.6	18.7									
2-Mar	9	9	7	8	10	13	24	31	33	15	C	C	C	C	A	45	61	69	52	77	99	59	24	7	34.3	99.0									
3-Mar	7	5	6	9	13	23	12	9	5	13	13	14	11	A	8	9	10	9	10	10	9	7	4	5	9.7	22.8									
4-Mar	4	4	3	3	4	5	7	6	7	8	6	6	A	5	4	4	5	5	10	22	39	34	29	76	12.9	75.8									
5-Mar	47	31	16	11	12	10	13	21	17	22	29	A	14	14	13	6	6	7	14	20	22	10	7	6	16.0	47.2									
6-Mar	7	7	6	6	6	7	9	10	11	8	A	6	5	5	6	7	7	9	10	15	14	11	12	6	8.3	14.8									
7-Mar	6	8	7	17	29	43	18	13	16	A	6	5	5	4	4	6	6	8	12	9	12	9	8	7	11.1	42.6									
8-Mar	6	7	5	7	8	8	11	15	A	11	8	5	6	5	4	7	7	9	11	10	8	9	8	6	7.9	15.2									
9-Mar	7	7	7	10	10	26	33	A	57	10	7	7	7	6	5	5	7	9	9	9	9	8	8	6	11.7	57.2									
10-Mar	7	7	7	7	7	8	A	10	11	7	7	6	5	5	5	6	7	8	7	9	9	9	9	9	7.4	10.6									
11-Mar	9	12	11	12	18	A	40	40	25	13	10	10	8	8	8	9	9	9	10	8	9	7	6	7	13.0	40.4									
12-Mar	6	7	6	7	A	11	8	9	10	8	8	8	8	8	9	9	10	10	11	10	10	9	9	11	8.8	10.9									
13-Mar	12	9	13	A	44	72	101	111	101	76	90	51	34	34	49	39	33	58	34	22	22	7	10	12	45.0	111.0									
14-Mar	7	11	A	14	14	25	44	97	47	16	13	10	10	10	10	17	12	14	14	23	20	19	17	20	21.1	97.3									
15-Mar	13	A	3	3	5	9	C	C	C	C	C	7	7	8	8	9	9	12	19	41	50	17	12	11	13.6	50.0									
16-Mar	A	7	8	10	10	12	15	17	17	21	25	26	16	15	12	10	8	13	27	28	12	10	10	A	15.0	27.8									
17-Mar	25	18	27	33	40	73	82	76	51	21	8	8	7	7	6	5	7	6	8	7	9	10	A	12	23.7	81.8									
18-Mar	37	34	31	29	34	35	39	37	49	40	18	21	10	10	12	11	9	4	4	5	15	A	5	7	21.5	49.3									
19-Mar	5	10	6	10	15	24	21	23	27	17	15	14	8	4	4	5	5	6	6	3	A	4	3	8	10.5	26.5									
20-Mar	9	10	18	13	16	31	65	86	84	48	50	40	20	18	16	9	10	9	11	A	8	10	7	4	25.8	86.3									
21-Mar	5	5	5	5	6	8	10	15	17	9	8	8	11	8	10	8	9	11	A	22	12	12	8	9	9.6	22.4									
22-Mar	10	10	9	10	16	26	40	27	27	31	30	20	5	4	5	5	6	A	7	9	8	6	5	4	14.0	39.7									
23-Mar	5	5	6	6	8	8	12	27	37	28	24	9	7	5	5	5	A	6	14	37	33	46	62	58	19.6	62.2									
24-Mar	32	22	29	48	24	22	66	35	14	13	10	9	8	13	12	A	9	10	13	23	24	28	18	17	21.6	65.9									
25-Mar	22	28	25	26	16	26	38	43	57	49	23	28	19	23	A	9	6	9	7	13	12	12	15	10	22.4	57.0									
26-Mar	11	18	22	6	11	10	20	19	21	18	9	10	9	A	5	3	4	5	11	8	5	6	4	3	10.3	21.5									
27-Mar	3	4	6	11	18	25	41	37	17	31	9	8	A	8	9	16	7	8	7	16	25	38	24	24	17.1	41.2									
28-Mar	34	58	52	63	61	67	95	129	109	35	18	A	23	19	16	11	13	13	12	24	36	43	50	27	43.7	129.3									
29-Mar	32	24	17	11	19	45	91	111	85	13	A	12	5	7	8	4	4	6	10	13	6	5	4	6	23.4	111.3									
30-Mar	4	4	6	6	11	12	22	16	8	A	4	4	4	4	4	4	4	4	5	10	18	14	7	8	7.9	22.5									
31-Mar	6	9	9	14	28	43	69	81	A	49	27	11	6	4	4	3	3	3	4	4	3	3	4	4	17.0	81.1									
13.1 13.2 12.5 14.0 17.2 24.3 36.2 40.0 34.6 22.7 17.7 13.1 10.2 9.4 9.2 9.9 10.0 12.2 12.9 17.5 19.1 15.8 13.6 13.4																									Diurnal Average										
47.2 57.9 51.6 62.9 60.5 73.0 100.8 129.3 109.2 76.2 90.4 51.0 34.3 33.7 49.1 44.9 61.4 69.2 51.6 76.8 99.0 58.8 62.2 75.8																									Diurnal Maximum										
C - Calibration A - Automated Daily Zero Span																																			

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

Henry Pirker - March 2017



Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

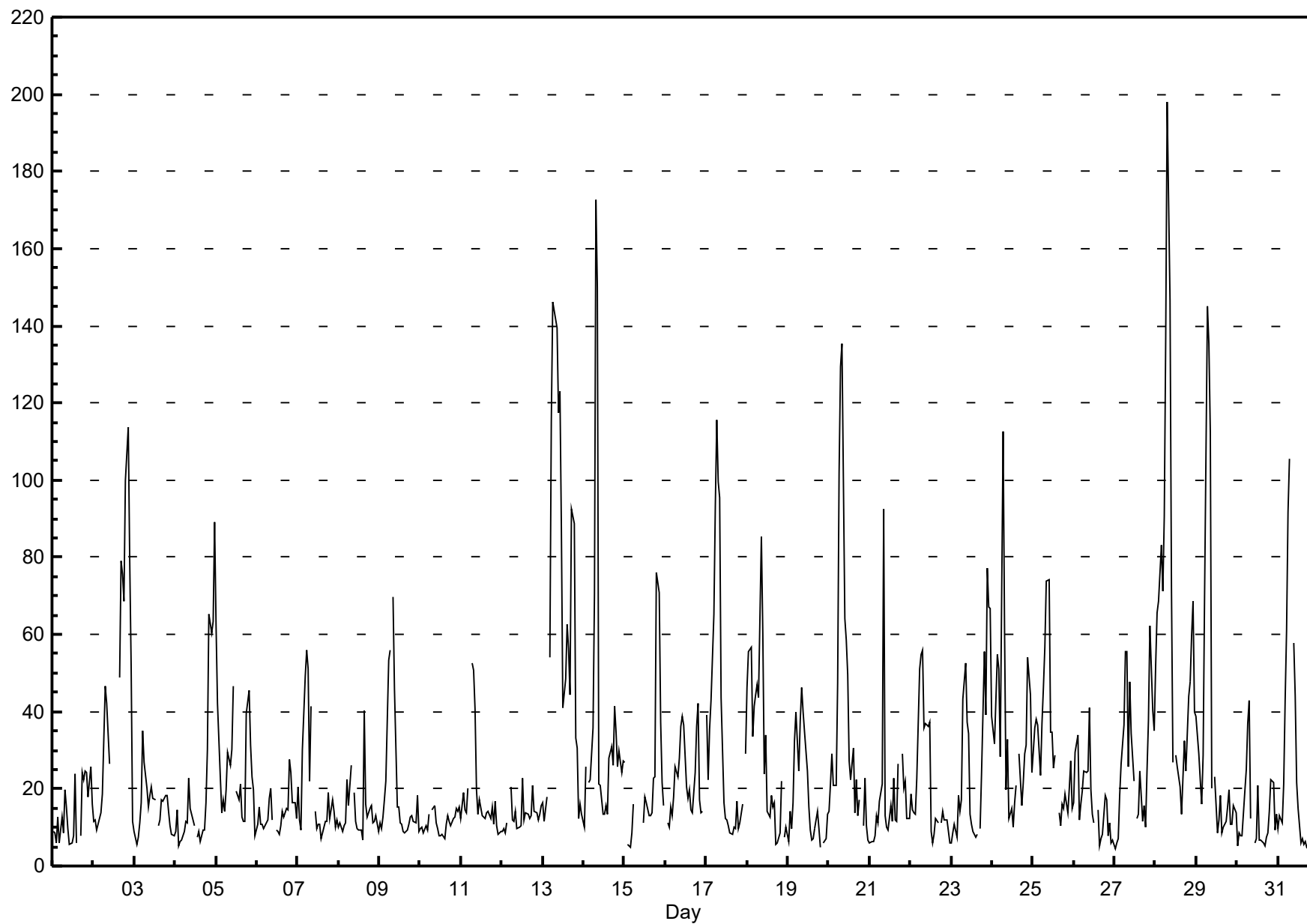
Henry Pirker - March 2017

Maximum Value: 197.8 ppb on Mar 28 08:00																					Maximum Daily Average: 65.7 ppb on Mar 13										Hours in Service: 744	
Minimum Value: 4 ppb on Mar 27 01:00																					Minimum Daily Average: 11.2 ppb on Mar 10										Hours of Data: 703	
Maximum Diurnal Average: 59.2 ppb at hour 8																					Minimum Diurnal Average: 14.5 ppb at hour 14										Hours of Missing Data: 41	
Monthly Average: 26.33 ppb																					Percentiles: P ₁ = 5.2 P ₁₀ = 8.0 Q ₁ = 11.0 Median = 16.1 Q ₃ = 30.7 P ₉₀ = 56.0 P ₉₉ = 140.2										Hours of Calibration: 41	
																					Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24								
1-Mar	9	9	6	13	6	13	9	20	15	10	6	6	8	24	6	A	8	24	22	24	24	18	26	16	13.9	25.7						
2-Mar	12	12	9	12	14	19	33	47	42	26	C	C	C	C	A	49	79	76	69	100	114	79	52	11	44.9	113.7						
3-Mar	9	6	8	11	16	35	27	20	15	18	20	18	17	A	10	12	17	17	18	18	14	10	8	8	15.4	34.9						
4-Mar	9	15	5	6	7	9	12	11	23	15	12	10	A	7	9	6	9	9	16	30	65	60	63	89	21.7	89.0						
5-Mar	63	42	23	14	17	14	20	30	26	30	46	A	20	17	21	13	12	12	40	46	31	23	20	8	25.5	62.6						
6-Mar	11	15	11	11	10	11	12	18	20	12	A	9	9	8	10	14	13	15	15	27	24	16	16	12	13.9	27.5						
7-Mar	20	12	9	30	49	56	51	22	41	A	14	10	11	11	7	10	12	11	19	12	17	14	10	12	20.1	55.8						
8-Mar	10	11	9	11	11	22	16	26	A	19	12	10	9	9	7	40	16	13	15	16	11	12	13	9	14.2	40.3						
9-Mar	11	10	13	17	22	53	56	A	70	46	15	15	11	11	9	9	9	11	13	13	12	11	18	9	20.1	69.9						
10-Mar	10	10	9	10	9	13	A	14	15	11	10	8	8	8	7	11	13	11	10	12	13	15	14	15	11.2	15.5						
11-Mar	12	19	14	14	20	A	52	51	41	20	14	17	13	13	12	14	14	12	15	11	17	10	8	9	18.4	52.4						
12-Mar	9	10	9	11	A	21	12	12	14	10	10	10	23	12	14	13	12	13	21	14	14	12	13	16	13.2	22.9						
13-Mar	17	12	18	A	54	115	146	142	140	117	123	88	41	49	63	56	44	93	89	33	30	12	16	14	65.7	146.2						
14-Mar	10	26	A	21	22	36	70	173	150	21	21	13	13	16	13	28	31	26	41	35	26	30	24	27	38.0	172.6						
15-Mar	27	A	5	5	9	16	C	C	C	C	C	11	18	16	13	13	14	23	23	76	71	37	22	16	23.0	76.0						
16-Mar	A	11	10	15	13	18	26	23	28	36	39	36	21	17	20	15	14	24	36	42	17	14	14	A	22.2	42.1						
17-Mar	39	22	36	43	65	93	116	100	96	44	16	12	12	10	9	8	10	10	17	10	11	16	A	29	35.8	115.5						
18-Mar	46	56	56	34	41	44	47	43	85	60	24	34	14	13	18	15	16	6	6	9	22	A	7	10	30.8	85.3						
19-Mar	6	14	10	16	32	40	24	38	46	40	35	24	15	9	7	7	10	14	10	5	A	6	7	13	18.7	46.3						
20-Mar	14	21	29	21	21	47	102	129	135	64	59	50	27	22	30	14	22	13	17	A	10	23	10	7	38.6	135.2						
21-Mar	6	7	6	8	13	11	17	21	93	13	10	9	16	11	23	12	12	27	A	29	20	22	12	12	17.8	92.6						
22-Mar	19	15	14	13	23	51	55	56	36	37	36	37	9	6	8	12	11	A	11	14	12	12	9	6	21.8	55.8						
23-Mar	6	9	11	8	18	14	17	43	53	37	34	13	11	9	7	8	A	10	24	56	39	77	67	67	27.8	77.2						
24-Mar	39	32	43	55	51	28	113	61	20	33	12	15	10	16	21	A	29	16	22	29	31	54	44	24	34.7	112.5						
25-Mar	30	36	38	37	23	37	46	57	74	74	35	35	26	29	A	14	10	16	15	19	14	20	27	15	31.5	74.3						
26-Mar	16	29	34	12	16	19	25	24	25	41	20	13	11	A	14	5	7	8	18	17	8	11	6	7	16.8	41.0						
27-Mar	4	6	7	18	27	37	56	56	26	48	34	22	A	12	13	25	11	16	10	25	38	62	40	35	27.3	62.4						
28-Mar	52	66	69	83	71	90	137	198	147	72	27	A	29	26	21	13	23	33	24	44	48	60	69	40	62.6	197.8						
29-Mar	39	29	22	16	29	70	145	135	112	20	A	23	9	12	18	9	10	12	15	20	11	11	16	14	34.6	144.9						
30-Mar	5	9	8	8	19	25	37	43	12	A	6	7	21	7	7	6	5	7	9	14	22	22	9	13	14.0	42.8						
31-Mar	10	13	11	21	43	61	92	105	A	58	44	22	15	6	7	6	6	5	5	6	5	6	6	7	24.4	105.5						
																								Diurnal Average								
																								Diurnal Maximum								
C - Calibration																								A - Automated Daily Zero Span								

Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

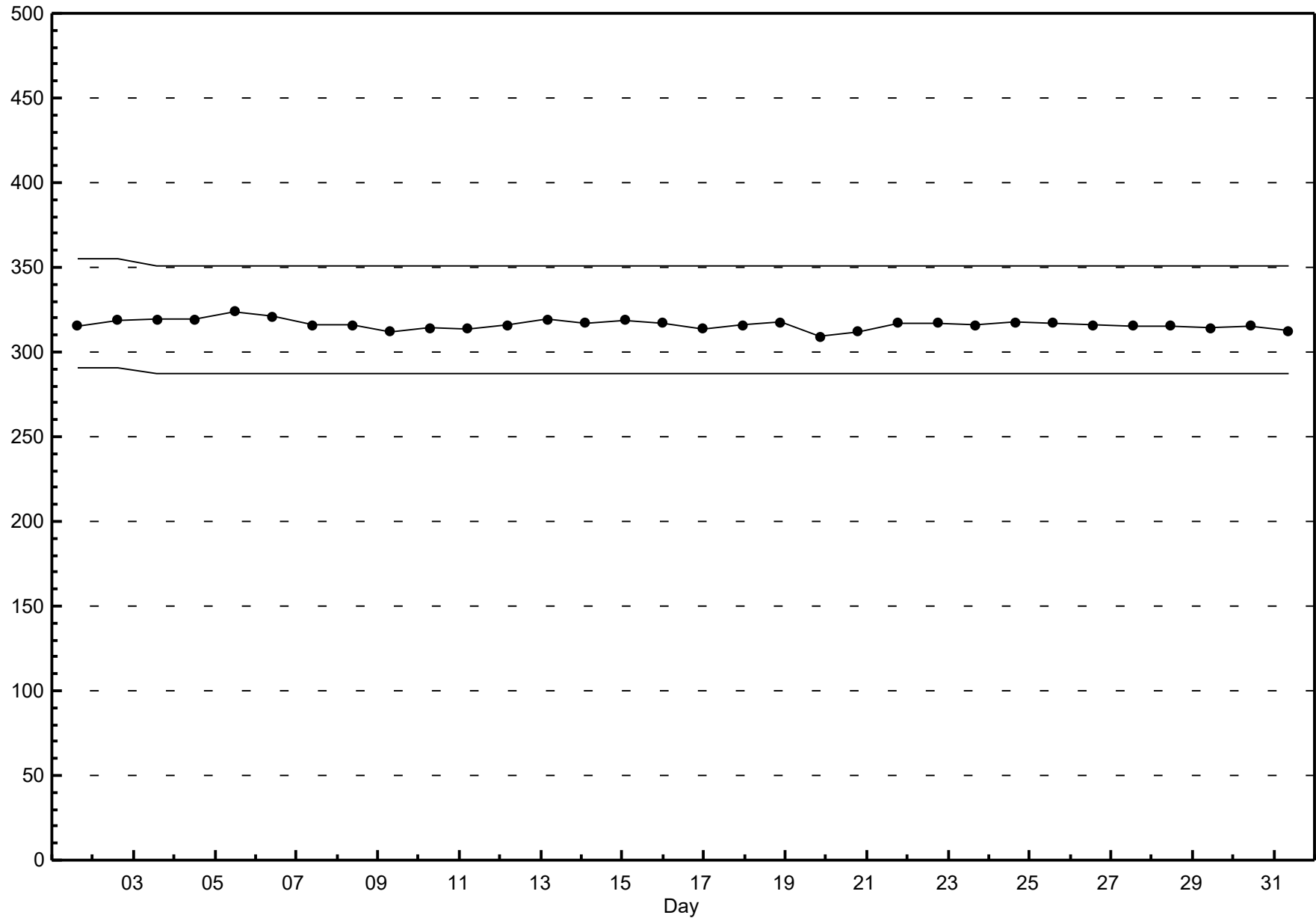
Henry Pirker - March 2017



Span Responses

Oxides of Nitrogen (NO_x)

Henry Pirker - March 2017



Hourly Averages

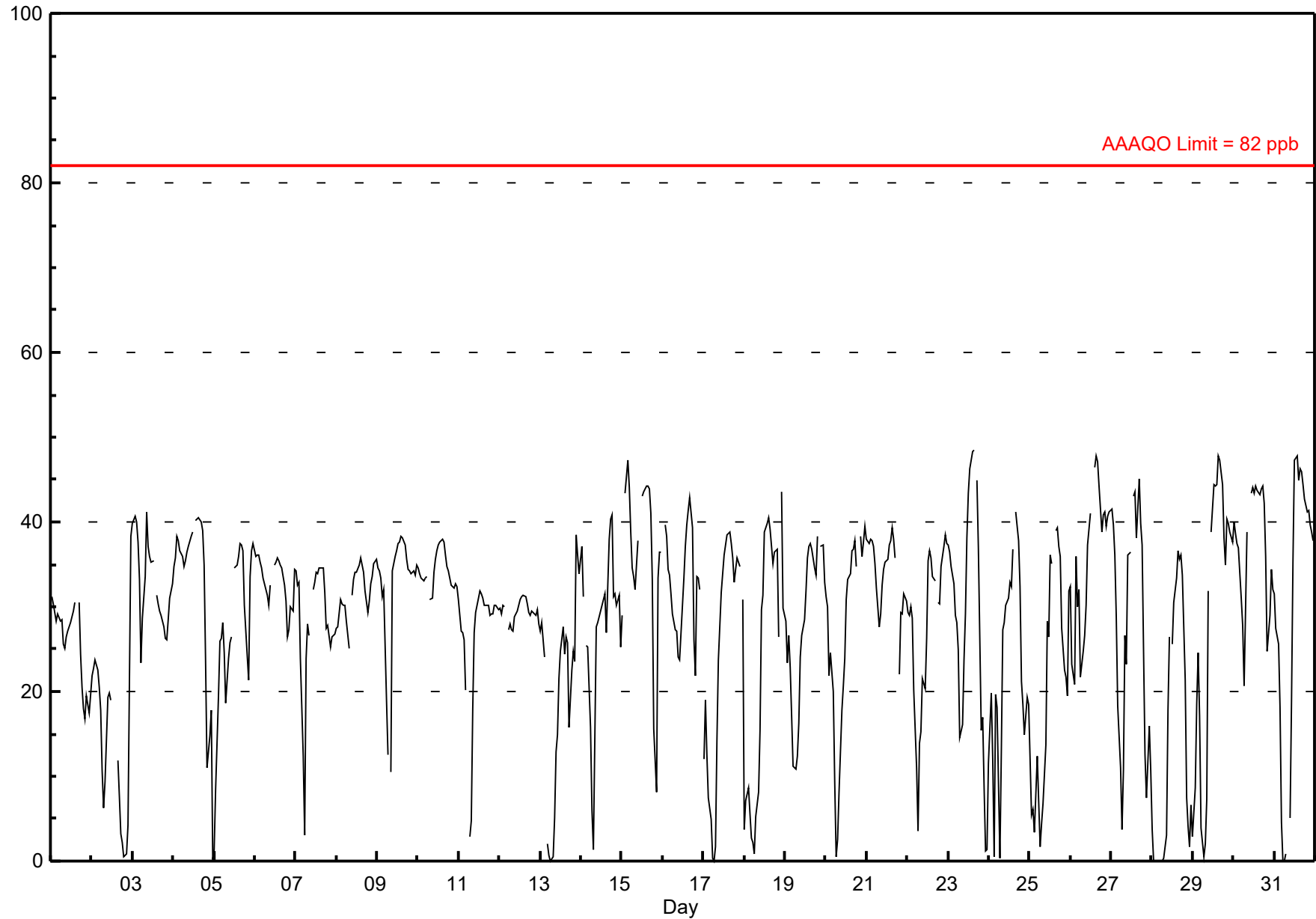
Ozone (O₃) - ppb

Henry Pirker - March 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 48.4 ppb on Mar 23 16:00 Maximum Daily Average: 37.0 ppb on Mar 30																								Hours in Service: 744 Hours of Data: 708 Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0		
Minimum Value: 0 ppb on Mar 13 07:00 Minimum Daily Average: 14.1 ppb on Mar 28 Maximum Diurnal Average: 37.5 ppb at hour 15 Minimum Diurnal Average: 14.9 ppb at hour 7 Monthly Average: 28.10 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 8.2 Q ₁ = 23.4 Median = 30.8 Q ₃ = 36.1 P ₉₀ = 39.8 P ₉₉ = 47.3																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Mar	31	30	29	28	29	28	28	26	25	26	27	28	29	29	30	A	31	24	21	18	17	19	17	20	25.8	31.1
2-Mar	22	23	24	22	20	18	11	6	9	19	20	19	C	C	C	12	8	3	2	0	1	4	21	38	14.4	38.3
3-Mar	40	41	40	38	33	23	29	33	41	37	36	35	35	A	31	30	29	29	28	26	26	29	31	33	32.8	41.1
4-Mar	35	36	38	38	37	36	35	35	37	37	38	39	A	40	40	41	40	39	35	24	11	15	18	0	32.3	40.6
5-Mar	1	9	20	26	26	28	25	19	24	26	26	A	35	35	36	38	37	37	30	24	21	33	37	37	27.4	37.5
6-Mar	36	36	36	35	35	33	32	31	30	33	A	35	35	36	35	35	35	33	31	26	27	30	29	34	33.0	36.1
7-Mar	34	33	33	24	12	3	24	28	27	A	32	33	34	34	35	35	35	32	28	28	25	27	27	27	28.1	34.6
8-Mar	27	28	31	30	30	30	28	25	A	31	33	34	34	35	36	35	34	32	29	31	33	34	35	36	31.8	35.8
9-Mar	35	34	33	31	32	19	13	A	10	34	36	37	37	38	38	38	37	36	34	34	34	34	34	35	32.3	38.3
10-Mar	35	34	33	33	33	34	A	31	31	34	36	37	37	38	38	38	36	35	34	33	32	32	33	32	34.2	37.9
11-Mar	31	27	27	26	20	A	3	5	18	27	29	30	32	31	31	30	30	30	29	29	29	30	30	30	26.3	31.8
12-Mar	30	29	30	30	A	27	28	27	27	29	30	30	31	31	31	31	30	29	29	30	29	29	30	28	29.4	31.4
13-Mar	27	28	24	A	2	1	0	1	5	13	15	21	25	28	24	27	26	16	23	25	24	38	36	34	20.0	38.5
14-Mar	37	31	A	25	25	16	6	1	15	28	28	30	30	31	32	27	38	40	41	31	31	30	31	25	27.4	40.8
15-Mar	29	A	43	47	44	39	35	34	32	38	C	C	43	44	44	44	44	41	33	16	8	33	36	37	36.4	47.4
16-Mar	A	40	38	34	34	32	29	27	27	24	24	27	33	37	40	41	43	39	26	22	34	33	32	A	32.6	42.9
17-Mar	12	19	13	8	5	0	0	2	14	24	32	34	36	37	39	39	38	36	33	34	36	35	A	31	24.1	38.8
18-Mar	4	7	9	6	3	2	1	5	8	15	30	31	39	40	40	39	37	35	37	37	27	A	44	30	22.8	43.5
19-Mar	28	23	27	23	17	11	11	12	16	24	27	28	32	36	37	38	37	35	34	38	A	37	37	33	27.9	38.3
20-Mar	31	30	22	25	20	9	1	3	8	18	21	24	31	33	34	37	37	38	35	A	38	36	38	39	26.3	39.4
21-Mar	38	37	38	38	37	35	32	28	29	33	34	35	36	37	38	39	38	36	A	22	29	29	31	31	34.0	39.4
22-Mar	29	29	30	29	20	11	3	14	15	22	20	26	35	37	36	34	33	A	31	30	35	37	38	37	27.5	38.4
23-Mar	37	36	35	33	29	28	25	15	16	24	29	38	43	46	48	48	A	45	37	15	17	9	1	1	28.6	48.4
24-Mar	12	20	12	1	20	18	0	13	27	28	30	31	33	32	37	A	41	38	32	21	18	15	19	18	22.5	41.2
25-Mar	12	5	6	3	12	7	2	4	7	14	28	27	36	35	A	39	39	37	36	27	23	22	19	32	20.6	39.4
26-Mar	32	23	21	36	30	32	22	25	27	30	37	39	41	A	46	48	47	44	39	41	41	39	41	41	35.8	47.8
27-Mar	41	40	36	29	18	11	4	11	27	23	36	37	A	43	44	38	45	40	37	25	12	8	16	11	27.4	45.0
28-Mar	4	0	0	0	0	0	0	0	3	18	26	A	26	30	33	37	36	36	34	21	7	4	2	7	14.1	36.5
29-Mar	3	9	18	25	17	4	0	2	7	32	A	39	44	44	44	48	47	44	38	35	40	40	39	38	28.6	47.8
30-Mar	40	39	37	37	31	28	21	30	39	A	43	44	43	44	44	43	44	44	42	36	25	29	34	32	37.0	44.2
31-Mar	32	28	26	18	5	0	0	1	A	5	19	35	47	48	45	46	46	44	43	41	41	40	39	38	29.8	47.8
26.8 26.8 27.0 25.9 22.6 18.8 14.9 16.4 20.8 25.7 29.4 32.3 35.5 36.8 37.5 37.0 36.6 34.9 32.0 27.4 25.8 27.7 29.2 28.8																								Diurnal Average		
41.5 40.6 43.4 47.4 44.1 38.8 34.8 35.4 41.1 37.8 43.4 44.1 47.3 47.8 48.3 48.4 47.3 44.9 42.6 41.2 41.3 39.8 43.5 41.1																								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 - March 2017



Hourly Maximums

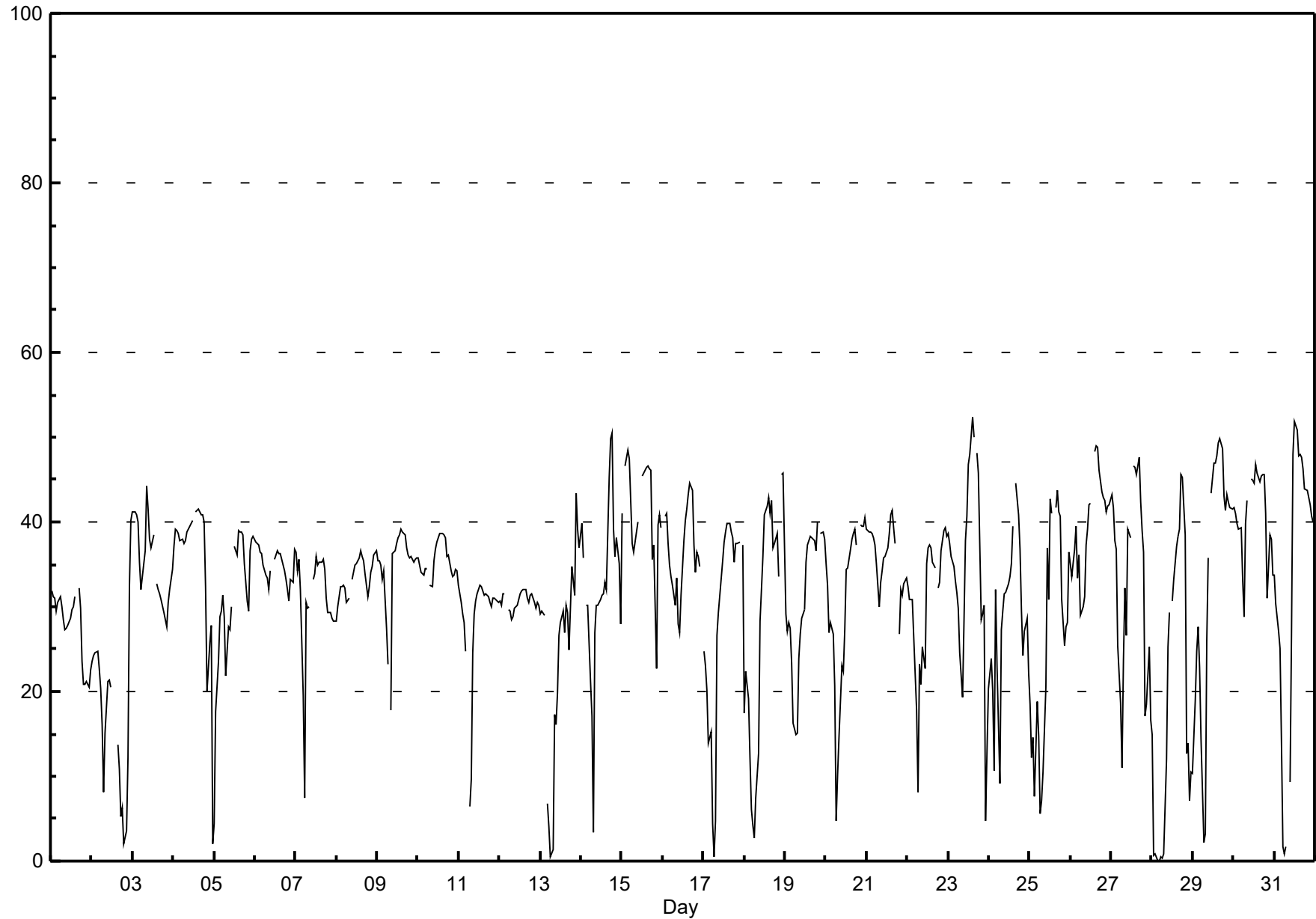
Ozone (O₃) - ppb

Henry Pirker - March 2017

Maximum Value: 52.3 ppb on Mar 23 15:00																								Hours in Service: 744		
Maximum Daily Average: 41.4 ppb on Mar 15																								Hours of Data: 708		
Minimum Value: 0 ppb on Mar 28 04:00																								Hours of Missing Data: 36		
Maximum Diurnal Average: 39.4 ppb at hour 15																								Hours of Calibration: 36		
Monthly Average: 31.66 ppb																								Percent Operational Time: 100.0		
Minimum Daily Average: 17.6 ppb on Mar 2																										
Minimum Diurnal Average: 19.0 ppb at hour 7																										
Percentiles: P ₁ = 0.8 P ₁₀ = 16.1 Q ₁ = 28.1 Median = 33.5 Q ₃ = 38.5 P ₉₀ = 42.6 P ₉₉ = 49.8																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Mar	32	31	31	30	31	31	30	28	27	27	28	29	30	30	31	A	32	30	24	21	21	21	20	23	27.7	32.2
2-Mar	24	24	25	25	23	20	16	8	15	21	21	20	C	C	C	14	11	5	6	2	4	12	32	40	17.6	40.2
3-Mar	41	41	41	40	35	32	33	37	44	42	38	37	38	A	33	32	32	31	29	28	28	31	32	34	35.2	44.2
4-Mar	37	39	39	39	38	38	37	38	39	39	40	40	A	41	41	41	41	41	40	32	20	26	28	2	35.5	41.5
5-Mar	4	18	23	29	29	31	29	22	28	27	30	A	37	36	39	39	39	39	35	31	30	37	38	38	30.7	38.9
6-Mar	38	37	37	37	36	35	34	33	32	34	A	36	36	37	36	36	36	34	33	32	31	33	33	37	34.9	37.5
7-Mar	36	34	36	32	19	7	31	30	30	A	33	34	36	35	35	35	36	34	31	29	29	29	28	28	30.8	36.5
8-Mar	28	30	32	32	32	32	31	31	A	33	34	35	35	36	37	36	35	34	31	32	34	35	36	37	33.5	36.7
9-Mar	35	35	35	33	34	27	23	A	18	36	37	37	38	38	39	39	39	37	36	36	36	35	36	36	34.6	39.2
10-Mar	36	35	34	34	35	34	A	32	32	35	37	38	38	39	39	38	38	36	36	34	34	34	34	34	35.5	38.7
11-Mar	33	30	29	28	25	A	6	10	25	29	31	31	33	32	32	31	31	31	31	30	31	31	31	31	28.3	32.6
12-Mar	31	30	32	32	A	30	30	28	29	30	30	31	32	32	32	32	31	31	31	31	31	30	31	30	30.6	32.1
13-Mar	29	29	29	A	7	4	0	1	17	16	20	27	28	30	27	30	29	25	35	33	31	43	39	37	24.7	43.4
14-Mar	40	36	A	30	30	21	17	3	27	30	30	31	31	32	33	32	45	50	50	39	36	38	35	28	32.4	50.4
15-Mar	41	A	47	49	47	42	38	36	38	40	C	C	45	46	46	47	46	46	36	37	23	40	41	39	41.4	48.5
16-Mar	A	41	41	37	35	34	33	30	33	28	27	31	38	40	42	43	45	44	37	34	37	36	35	A	36.4	44.6
17-Mar	25	23	20	14	15	4	0	5	27	29	33	35	38	39	40	40	39	38	35	38	38	38	A	37	28.2	39.8
18-Mar	17	22	19	12	6	4	3	7	13	28	32	36	41	42	43	41	43	37	37	39	33	A	46	46	28.1	45.7
19-Mar	29	27	28	27	23	16	15	15	24	27	29	30	35	37	38	38	38	38	37	40	A	39	39	38	30.7	40.0
20-Mar	35	33	27	28	27	21	5	10	15	23	22	27	34	35	37	38	39	39	37	A	40	39	40	41	30.0	40.5
21-Mar	39	39	39	39	38	37	35	30	33	34	36	36	37	39	41	41	39	37	A	27	32	31	33	33	35.9	41.4
22-Mar	32	31	31	31	26	18	8	23	21	25	23	35	37	37	37	35	35	A	32	33	37	39	39	38	30.6	39.4
23-Mar	39	37	36	35	33	32	30	25	19	28	38	41	47	48	52	50	A	48	46	28	29	30	5	13	34.3	52.3
24-Mar	20	24	20	11	32	23	9	27	30	32	32	33	34	35	39	A	45	41	37	30	24	27	29	22	28.4	44.6
25-Mar	19	12	15	8	19	15	6	7	11	20	37	31	43	41	A	42	44	41	41	31	25	28	28	36	26.0	43.7
26-Mar	35	34	37	39	33	36	29	30	31	37	39	42	42	A	48	49	49	46	44	43	43	41	42	42	39.6	48.9
27-Mar	43	42	38	37	26	19	11	24	32	27	39	38	A	47	46	46	48	42	39	36	17	19	25	17	32.9	47.7
28-Mar	15	1	1	0	0	1	0	1	12	25	29	A	31	33	37	38	39	46	45	39	13	14	7	10	19.0	45.6
29-Mar	10	19	25	28	23	14	2	3	26	36	A	43	47	47	48	49	50	49	43	41	43	42	42	42	33.6	49.8
30-Mar	42	41	40	39	39	33	29	40	43	A	45	45	45	47	46	45	45	46	46	41	31	39	38	34	40.7	46.7
31-Mar	34	30	27	25	14	2	1	2	A	9	27	48	52	51	48	48	48	46	44	44	43	42	41	40	33.2	51.9
30.6 30.2 30.4 29.3 27.1 23.2 19.0 20.6 26.5 29.3 32.0 34.9 37.7 38.6 39.4 38.8 38.8 38.1 36.1 33.1 30.0 32.6 32.7 32.1																								Diurnal Average		
43.3 41.7 46.7 48.5 47.4 42.4 37.5 39.8 44.2 41.6 45.0 48.0 51.9 50.8 52.3 50.0 49.8 49.8 50.4 43.7 43.2 43.4 45.6 45.7																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

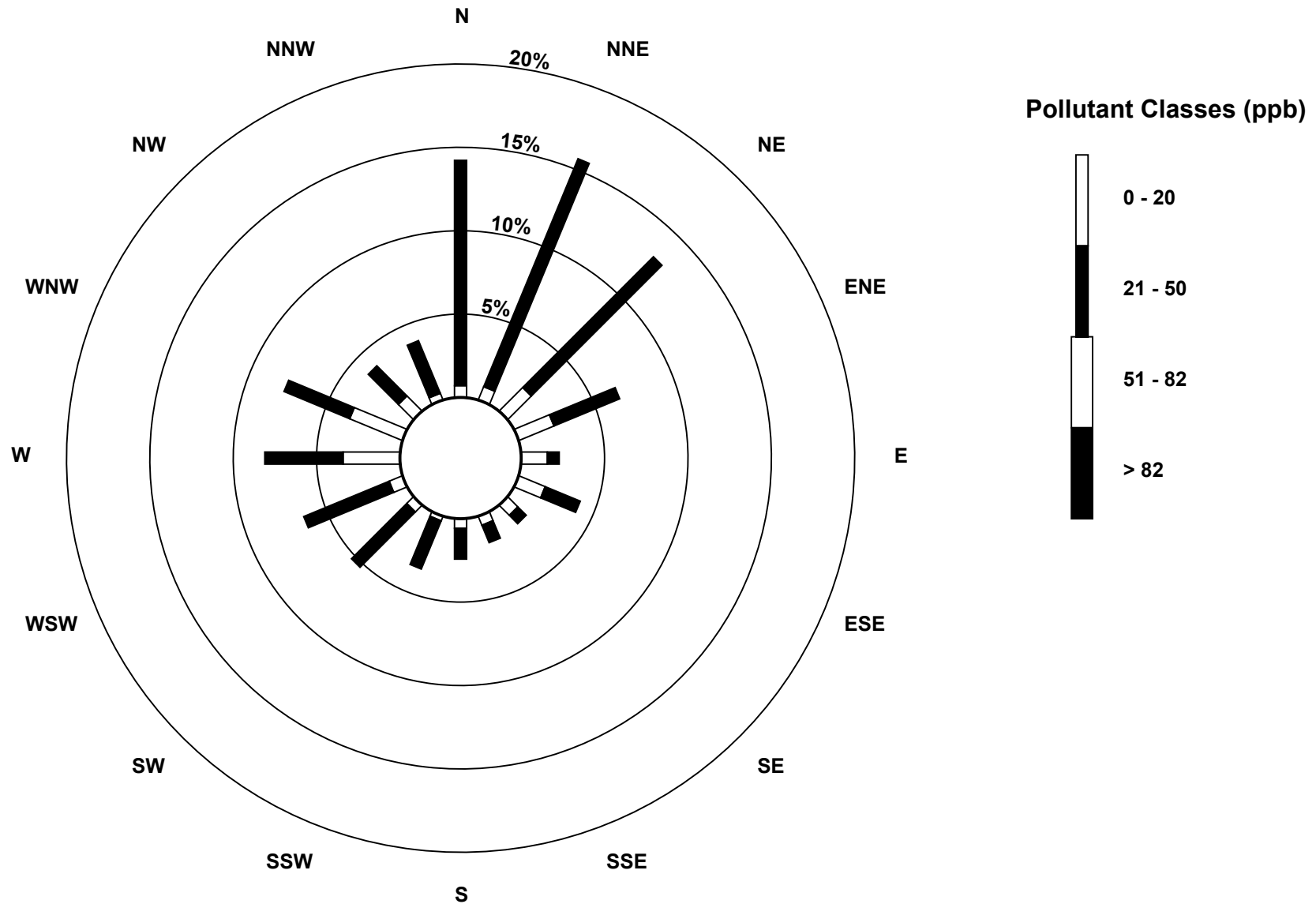
Hourly Maximums

Ozone (O₃) - ppb
Henry Pirker - March 2017



Pollutant Rose

Ozone (O₃) - ppb
Henry Pirker - March 2017



Eight Hour Running Averages

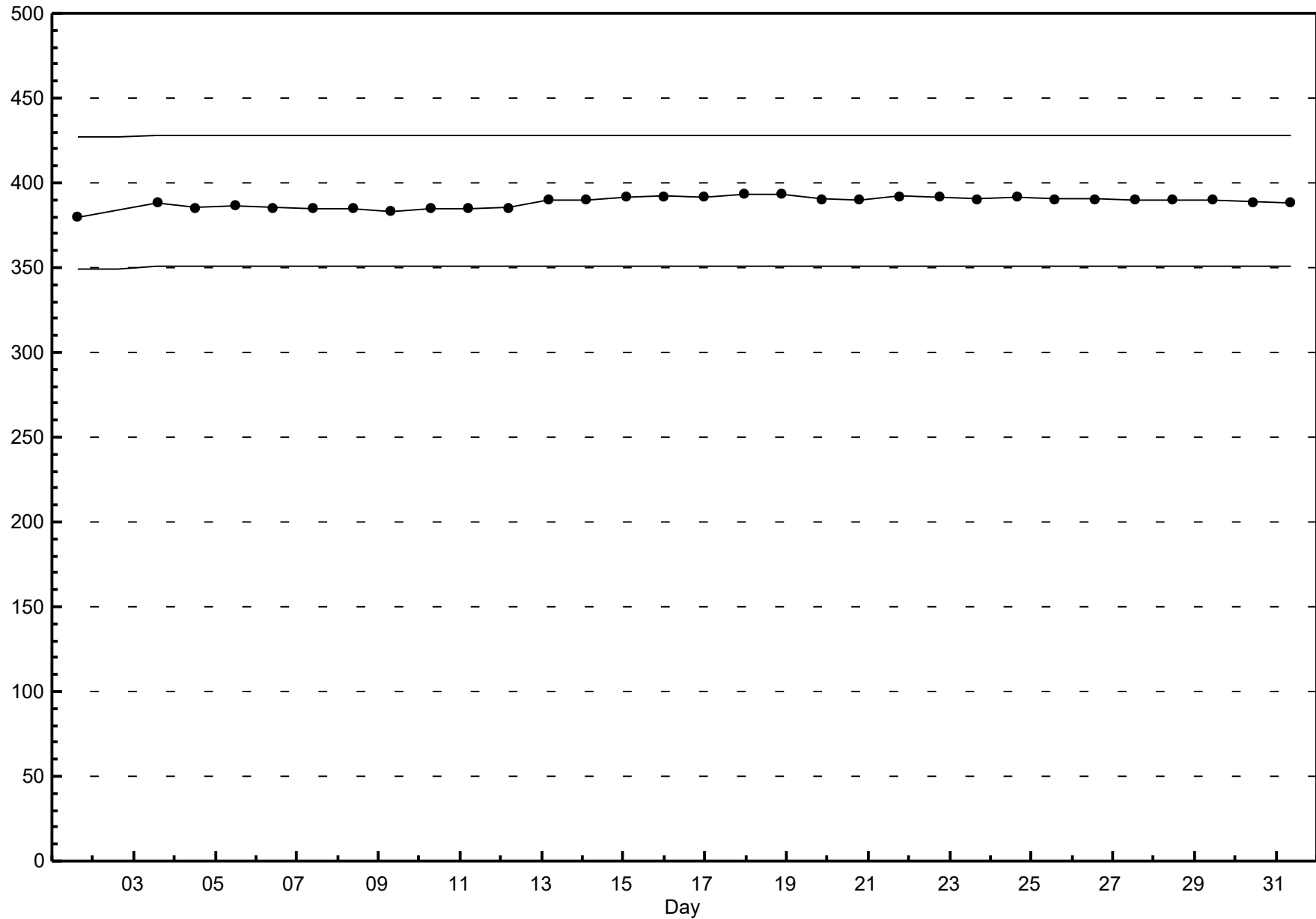
Ozone (O₃) - ppb

Henry Pirker - March 2017

Maximum Value: 45.1 ppb on Mar 31 20:00																								Hours in Service: 744	
Minimum Value: 0.3 ppb on Mar 28 09:00																								Hours of Data: 738	
																								Hours of Missing Data: 6	
Percentiles: P ₁ = 4.5 P ₁₀ = 14.0 Q ₁ = 23.2 Median = 30.3 Q ₃ = 34.4 P ₉₀ = 37.3 P ₉₉ = 43.8																								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-Mar	24	25	26	27	27	27	29	29	28	28	27	27	27	27	28	28	29	28	27	26	24	23	21	21	29.4
2-Mar	20	20	20	20	21	21	20	18	17	16	16	15	15	14	N	N	N	N	N	N	4	4	6	10	20.9
3-Mar	14	18	23	28	32	34	35	35	35	34	34	34	34	35	36	35	34	32	31	30	29	29	29	29	35.7
4-Mar	30	30	32	33	34	35	36	36	36	37	37	37	37	37	38	39	39	40	39	37	34	31	28	23	39.6
5-Mar	18	14	12	12	14	16	17	19	22	24	25	25	26	27	29	31	33	35	35	34	32	32	32	32	35.3
6-Mar	32	32	33	34	36	36	35	34	34	33	33	33	33	33	34	34	35	35	34	33	32	31	31	31	35.7
7-Mar	31	31	31	31	29	25	25	24	23	22	21	23	26	30	32	33	34	34	33	32	31	30	29	28	33.8
8-Mar	27	27	27	28	28	29	29	29	29	29	30	30	31	32	33	34	34	34	34	33	33	33	33	33	34.1
9-Mar	33	33	34	34	34	34	32	29	28	25	25	25	26	27	29	33	34	37	37	37	36	36	35	35	37.1
10-Mar	34	34	34	34	34	34	34	33	33	33	33	34	34	35	35	36	37	37	36	36	35	35	34	33	36.7
11-Mar	33	32	31	30	29	28	24	20	18	18	18	19	21	22	25	29	30	31	30	30	30	30	30	30	32.7
12-Mar	30	30	30	30	30	29	29	29	28	28	28	28	29	29	30	30	30	30	30	30	30	30	30	29	30.5
13-Mar	29	29	28	28	24	20	16	12	9	6	5	7	10	13	16	20	22	23	24	24	24	25	27	28	28.9
14-Mar	29	31	32	32	33	29	25	20	17	17	18	19	19	21	24	27	30	32	34	34	34	34	34	34	33.9
15-Mar	32	31	32	34	36	37	37	39	39	39	38	37	37	37	39	41	43	43	42	39	34	33	32	31	43.3
16-Mar	29	29	30	32	36	36	35	33	33	31	29	28	28	29	30	32	34	36	36	35	35	35	34	33	36.0
17-Mar	28	25	23	21	17	13	8	7	7	8	10	14	18	22	27	32	35	36	36	36	36	36	36	35	36.4
18-Mar	30	26	22	18	13	9	8	5	5	6	9	12	16	21	26	30	34	36	37	38	36	36	36	35	38.0
19-Mar	34	32	31	29	27	25	21	19	18	18	18	18	20	23	27	30	32	34	34	36	36	36	36	36	36.5
20-Mar	35	34	33	31	29	26	21	18	15	13	13	13	14	17	21	26	29	32	33	35	36	36	37	37	37.2
21-Mar	37	37	38	38	38	38	37	35	34	34	33	33	33	33	34	35	36	37	37	35	34	33	32	31	37.8
22-Mar	30	29	29	30	29	26	23	21	19	18	17	16	18	22	26	28	30	32	33	34	34	34	34	35	34.5
23-Mar	35	35	36	36	35	34	33	30	27	25	25	25	27	30	32	37	40	43	44	41	37	31	25	18	43.8
24-Mar	17	14	11	9	9	11	10	12	14	15	17	21	23	24	29	31	33	35	35	34	31	29	26	25	34.9
25-Mar	22	18	14	12	11	10	8	7	6	7	10	13	16	19	22	26	31	34	36	36	34	32	30	29	35.7
26-Mar	29	27	25	26	27	28	29	28	27	28	30	30	32	32	35	38	41	43	44	44	44	43	43	42	43.8
27-Mar	41	40	40	39	36	32	28	24	22	20	20	21	21	26	31	35	38	40	40	39	36	31	28	24	41.0
28-Mar	19	14	9	6	5	4	2	0	0	3	6	7	10	15	20	25	29	32	33	32	29	26	22	18	33.0
29-Mar	14	11	9	9	11	10	10	10	10	13	12	14	18	24	30	37	43	44	44	43	43	42	41	40	44.5
30-Mar	39	39	38	39	38	36	34	33	33	32	33	34	35	38	41	43	44	44	44	43	40	38	37	36	43.8
31-Mar	34	32	30	28	25	22	17	14	11	8	7	9	15	22	29	35	36	41	44	45	44	43	43	41	45.1
Diurnal Maximums																									
N - Not Valid																									

Span Responses

Ozone (O₃)
Henry Pirker - March 2017



Hourly Averages

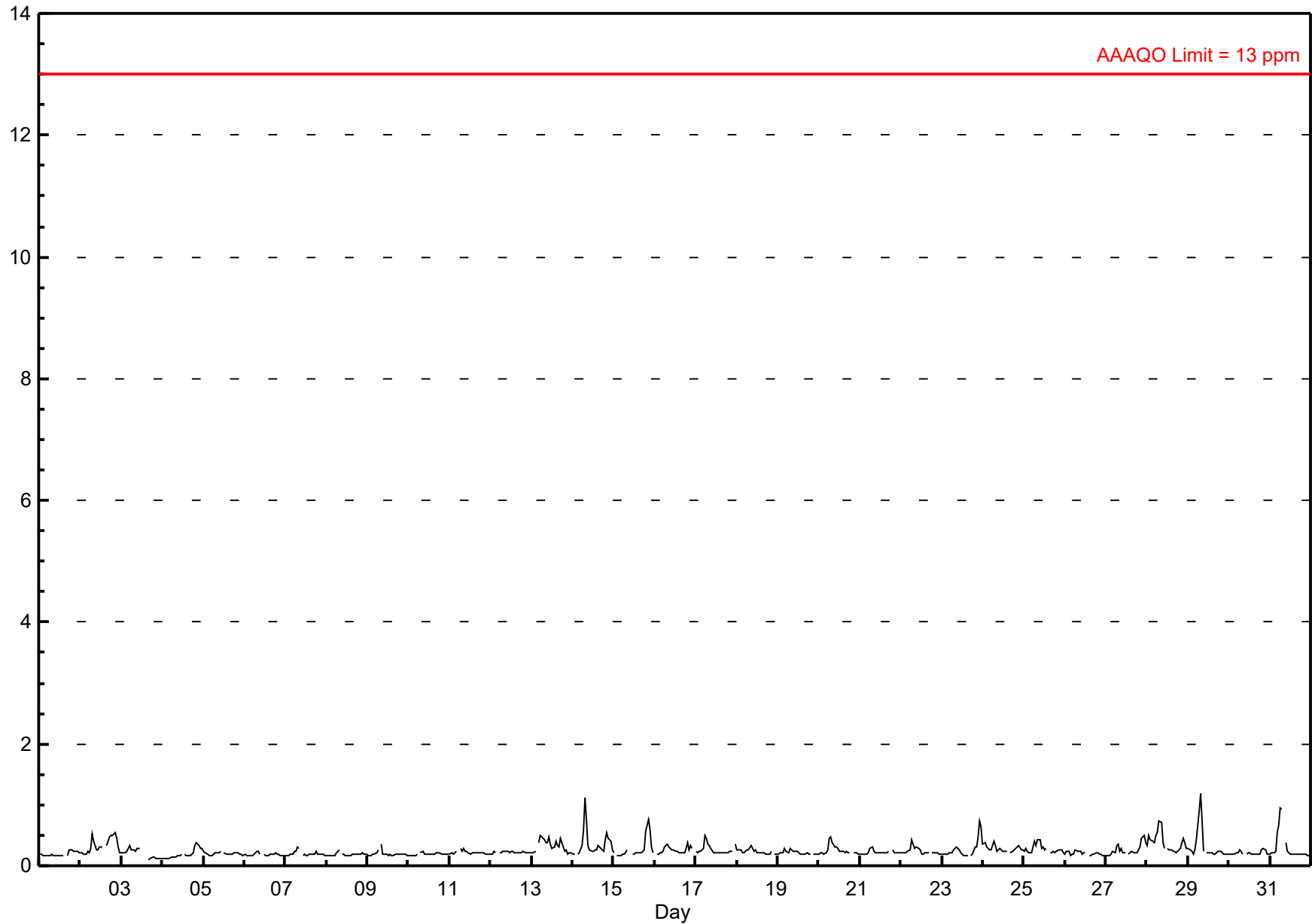
Carbon Monoxide (CO) - ppm

Henry Pirker - March 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 1.19 ppm on Mar 29 08:00 Maximum Daily Average: 0.38 ppm on Mar 28																								Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 37 Percent Operational Time: 100.0			
Minimum Value: 0.1 ppm on Mar 3 17:00 Maximum Diurnal Average: 0.39 ppm at hour 8 Monthly Average: 0.247 ppm												Minimum Daily Average: 0.18 ppm on Mar 8 Minimum Diurnal Average: 0.20 ppm at hour 4 Percentiles: P ₁ = 0.12 P ₁₀ = 0.17 Q ₁ = 0.19 Median = 0.21 Q ₃ = 0.26 P ₉₀ = 0.35 P ₉₉ = 0.76															
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.19	0.26	
2-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.4	0.3	0.3	0.3	0.3	A	0.3	0.4	0.5	0.5	0.5	0.6	0.4	0.3	0.2	0.33	0.55	
3-Mar	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	C	C	C	C	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.20	0.32	
4-Mar	0.1	0.1	0.1	0.1	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	0.3	0.4	0.3	0.3	0.3	0.19	0.38	
5-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20	0.25	
6-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19	0.24	
7-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20	0.31	
8-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.18	0.25	
9-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.3	A	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20	0.35	
10-Mar	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19	0.23	
11-Mar	0.2	0.2	0.2	0.2	0.2	A	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22	0.29	
12-Mar	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22	0.25	
13-Mar	0.2	0.2	0.2	A	0.4	0.5	0.5	0.4	0.4	0.4	0.5	0.3	0.3	0.3	0.4	0.3	0.3	0.5	0.3	0.2	0.3	0.2	0.2	0.2	0.33	0.50	
14-Mar	0.2	0.2	A	0.2	0.2	0.3	0.6	1.1	0.8	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.4	0.5	0.5	0.4	0.2	0.36	1.11
15-Mar	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	C	C	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.6	0.8	0.6	0.3	0.2	0.27	0.76	
16-Mar	A	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.3	A	0.26	0.38	
17-Mar	0.2	0.2	0.2	0.2	0.3	0.5	0.5	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.26	0.50	
18-Mar	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.23	0.33	
19-Mar	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.21	0.30	
20-Mar	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.26	0.48	
21-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.3	0.2	0.2	0.2	0.2	0.22	0.31	
22-Mar	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.24	0.42	
23-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.3	0.3	0.5	0.7	0.6	0.27	0.73	
24-Mar	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	A	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.28	0.40	
25-Mar	0.2	0.3	0.2	0.2	0.2	0.3	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.3	A	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.27	0.43	
26-Mar	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	0.2	0.2	0.2	0.2	0.2	0.20	0.25	
27-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.2	0.3	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.4	0.26	0.50	
28-Mar	0.3	0.5	0.4	0.4	0.4	0.5	0.5	0.7	0.7	0.4	0.3	A	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.3	0.38	0.72	
29-Mar	0.3	0.3	0.2	0.2	0.3	0.4	0.9	1.2	0.7	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.33	1.19	
30-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.21	0.28	
31-Mar	0.2	0.2	0.2	0.2	0.5	0.7	0.9	0.9	A	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.30	0.94	
0.21 0.22 0.21 0.20 0.23 0.27 0.35 0.39 0.33 0.27 0.24 0.23 0.21 0.21 0.21 0.21 0.21 0.21 0.22 0.23 0.26 0.27 0.27 0.25 0.23																								Diurnal Average			
0.36 0.49 0.43 0.41 0.55 0.66 0.94 1.19 0.77 0.42 0.48 0.35 0.32 0.31 0.41 0.34 0.41 0.48 0.49 0.57 0.76 0.60 0.73 0.64																								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 - March 2017



Hourly Maximums

Carbon Monoxide (CO) - ppm

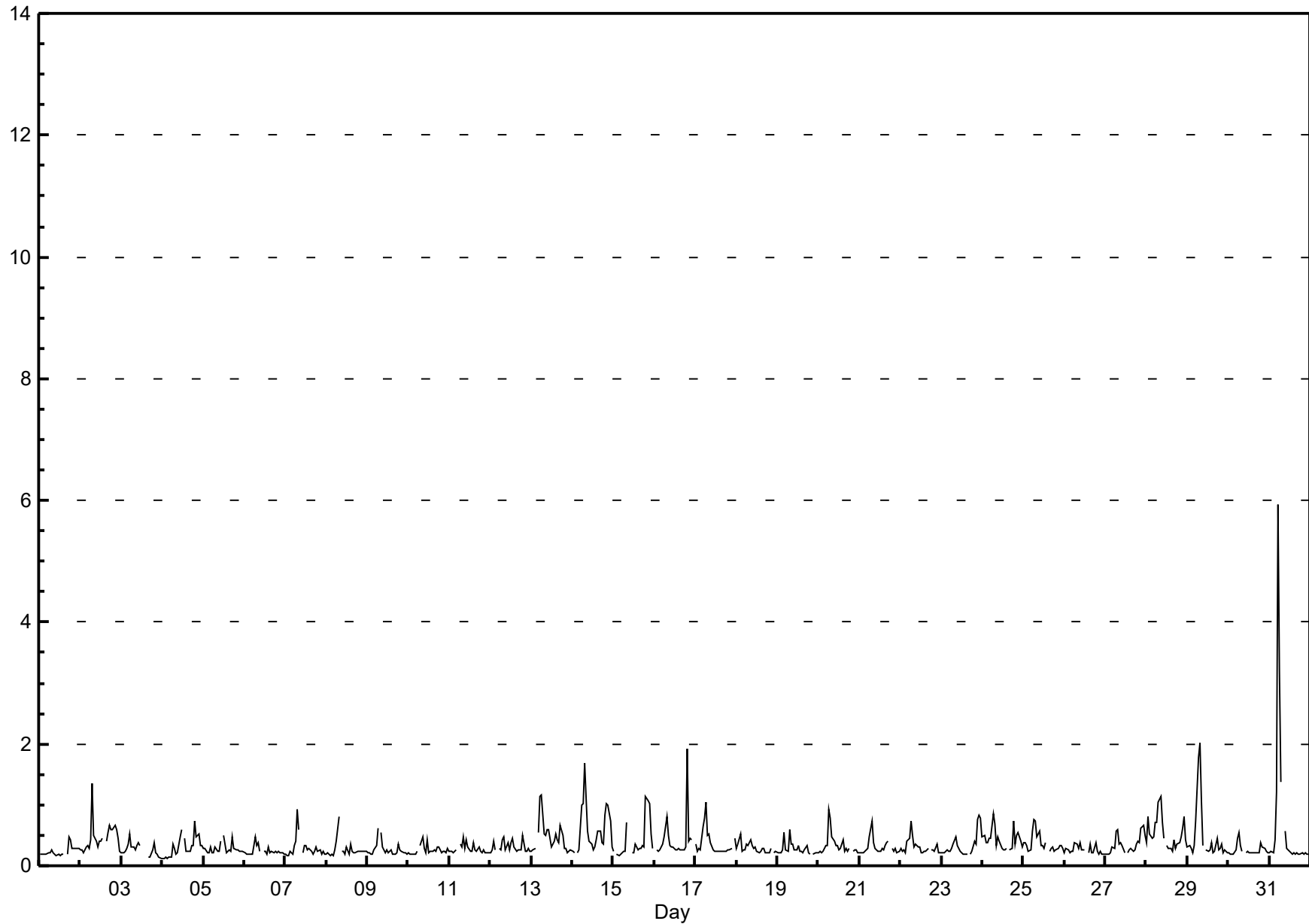
Henry Pirker - March 2017

Maximum Value: 5.92 ppm on Mar 31 06:00																					Maximum Daily Average: 0.71 ppm on Mar 31					Hours in Service: 744	
Minimum Value: 0.1 ppm on Mar 4 01:00																					Minimum Daily Average: 0.24 ppm on Mar 1					Hours of Data: 707	
Maximum Diurnal Average: 0.66 ppm at hour 8																					Minimum Diurnal Average: 0.25 ppm at hour 4					Hours of Missing Data: 37	
Monthly Average: 0.354 ppm																					Percentiles: P ₁ = 0.14 P ₁₀ = 0.20 Q ₁ = 0.22 Median = 0.27 Q ₃ = 0.38 P ₉₀ = 0.57 P ₉₉ = 1.20					Hours of Calibration: 37	
																					Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Mar	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	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.24	0.48	
2-Mar	0.3	0.3	0.2	0.3	0.3	0.3	0.4	1.4	0.5	0.4	0.3	0.4	0.4	0.4	A	0.4	0.6	0.7	0.6	0.6	0.7	0.6	0.4	0.2	0.46	1.36	
3-Mar	0.2	0.2	0.2	0.3	0.3	0.5	0.3	0.3	0.3	0.3	0.4	0.3	C	C	C	C	0.1	0.1	0.3	0.4	0.2	0.2	0.1	0.1	0.27	0.53	
4-Mar	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.2	0.2	0.5	0.6	A	0.4	0.2	0.2	0.2	0.3	0.3	0.7	0.5	0.5	0.3	0.3	0.31	0.74	
5-Mar	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.4	A	0.5	0.2	0.2	0.3	0.2	0.5	0.3	0.3	0.3	0.2	0.2	0.2	0.27	0.49	
6-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.3	0.4	0.2	A	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.24	0.48	
7-Mar	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.9	0.6	A	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.29	0.92	
8-Mar	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.8	A	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26	0.80	
9-Mar	0.2	0.2	0.2	0.2	0.2	0.3	0.6	A	0.6	0.3	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.4	0.3	0.2	0.2	0.2	0.2	0.27	0.61	
10-Mar	0.2	0.2	0.2	0.2	0.2	0.2	A	0.3	0.5	0.3	0.2	0.4	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.25	0.47	
11-Mar	0.2	0.2	0.2	0.2	0.3	A	0.4	0.3	0.5	0.3	0.4	0.3	0.2	0.2	0.4	0.3	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.28	0.47	
12-Mar	0.2	0.2	0.4	0.3	A	0.3	0.3	0.4	0.5	0.3	0.4	0.3	0.4	0.4	0.3	0.2	0.3	0.3	0.3	0.5	0.2	0.2	0.3	0.2	0.31	0.49	
13-Mar	0.2	0.3	0.3	A	0.5	1.1	1.2	0.5	0.5	0.6	0.6	0.5	0.3	0.4	0.5	0.4	0.4	0.7	0.5	0.3	0.3	0.2	0.2	0.3	0.47	1.15	
14-Mar	0.2	0.2	A	0.2	0.3	1.0	1.0	1.7	1.1	0.6	0.4	0.3	0.3	0.3	0.4	0.6	0.6	0.4	0.4	0.8	1.0	1.0	0.7	0.3	0.60	1.69	
15-Mar	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.7	C	C	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	1.1	1.1	1.0	0.5	0.3	0.40	1.13	
16-Mar	A	0.3	0.2	0.3	0.3	0.4	0.5	0.8	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1.9	0.4	0.4	0.4	A	0.42	1.93	
17-Mar	0.4	0.2	0.3	0.3	0.6	0.8	1.0	0.5	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	A	0.4	0.37	1.05	
18-Mar	0.3	0.4	0.5	0.2	0.3	0.3	0.4	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.3	A	0.2	0.2	0.29	0.51	
19-Mar	0.2	0.2	0.2	0.3	0.5	0.3	0.2	0.6	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.2	A	0.2	0.2	0.2	0.28	0.58	
20-Mar	0.2	0.2	0.2	0.2	0.3	0.3	0.9	0.8	0.5	0.4	0.3	0.3	0.3	0.3	0.4	0.2	0.3	0.2	0.3	A	0.2	0.3	0.3	0.2	0.34	0.94	
21-Mar	0.2	0.2	0.2	0.2	0.3	0.3	0.5	0.7	0.4	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.4	0.4	A	0.3	0.2	0.3	0.2	0.2	0.31	0.74	
22-Mar	0.3	0.2	0.3	0.2	0.4	0.5	0.7	0.5	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	A	0.3	0.3	0.2	0.4	0.2	0.2	0.31	0.75	
23-Mar	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.4	0.5	0.3	0.3	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.4	0.3	0.8	0.8	0.8	0.33	0.82	
24-Mar	0.5	0.5	0.4	0.4	0.4	0.4	0.9	0.7	0.3	0.5	0.4	0.3	0.3	0.3	0.3	A	0.3	0.3	0.7	0.4	0.5	0.5	0.4	0.3	0.43	0.86	
25-Mar	0.4	0.4	0.3	0.2	0.3	0.6	0.7	0.7	0.5	0.6	0.3	0.3	0.3	0.4	A	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.37	0.75	
26-Mar	0.2	0.3	0.3	0.2	0.2	0.2	0.4	0.3	0.3	0.4	0.3	0.3	0.3	A	0.2	0.4	0.2	0.2	0.4	0.2	0.2	0.2	0.2	0.2	0.26	0.38	
27-Mar	0.2	0.2	0.2	0.2	0.3	0.3	0.6	0.6	0.4	0.4	0.3	0.2	A	0.3	0.2	0.3	0.2	0.3	0.4	0.4	0.4	0.6	0.7	0.5	0.35	0.67	
28-Mar	0.4	0.8	0.5	0.5	0.5	0.7	0.7	1.0	1.1	0.7	0.4	A	0.3	0.3	0.3	0.2	0.4	0.3	0.4	0.4	0.5	0.6	0.8	0.4	0.54	1.13	
29-Mar	0.3	0.3	0.3	0.2	0.3	0.7	1.8	2.0	1.1	0.3	A	0.3	0.2	0.3	0.4	0.2	0.2	0.5	0.3	0.3	0.3	0.2	0.3	0.2	0.48	2.02	
30-Mar	0.2	0.2	0.2	0.2	0.2	0.4	0.6	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	0.4	0.3	0.3	0.2	0.2	0.26	0.56
31-Mar	0.2	0.2	0.2	0.4	1.2	5.9	3.2	1.4	A	0.6	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	0.71	5.92	
0.25 0.26 0.25 0.25 0.34 0.59 0.66 0.66 0.48 0.37 0.32 0.30 0.27 0.27 0.28 0.27 0.28 0.31 0.32 0.42 0.36 0.38 0.33 0.28																									Diurnal Average		
0.48 0.81 0.53 0.46 1.21 5.92 3.20 2.02 1.13 0.71 0.60 0.60 0.49 0.45 0.51 0.58 0.57 0.66 0.74 1.93 1.06 1.02 0.82 0.79																									Diurnal Maximum		
C - Calibration																											
A - Automated Daily Zero Span																											

Hourly Maximums

Carbon Monoxide (CO) - ppm

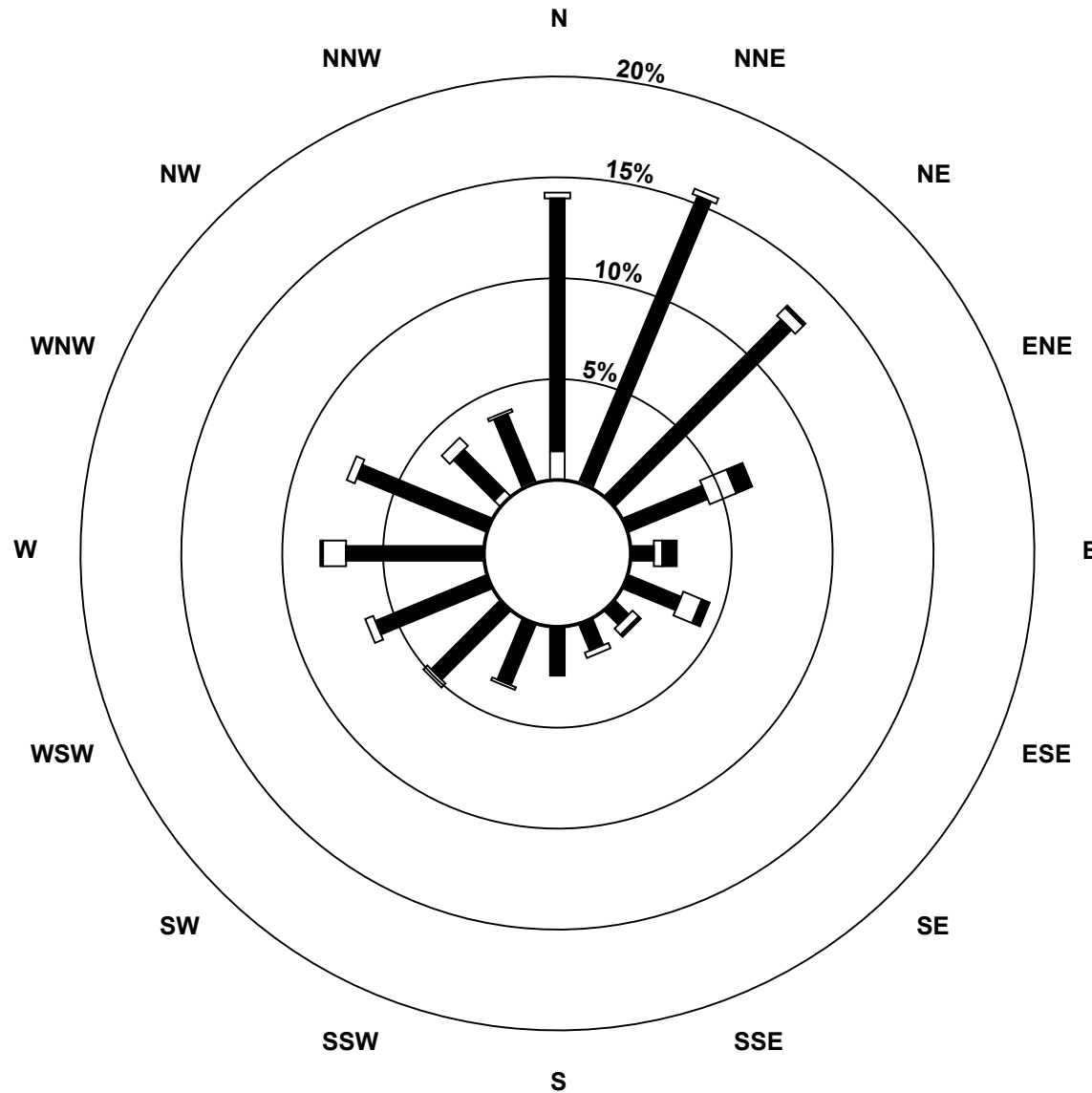
Henry Pirker - March 2017



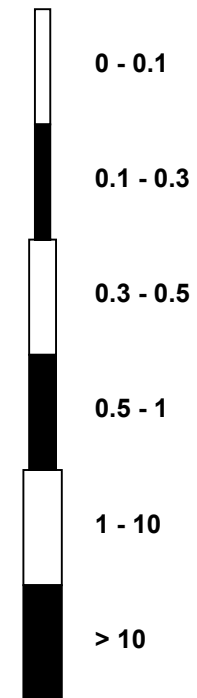
Pollutant Rose

Carbon Monoxide (CO) - ppm

Henry Pirker - March 2017



Pollutant Classes (ppm)



Eight Hour Running Averages

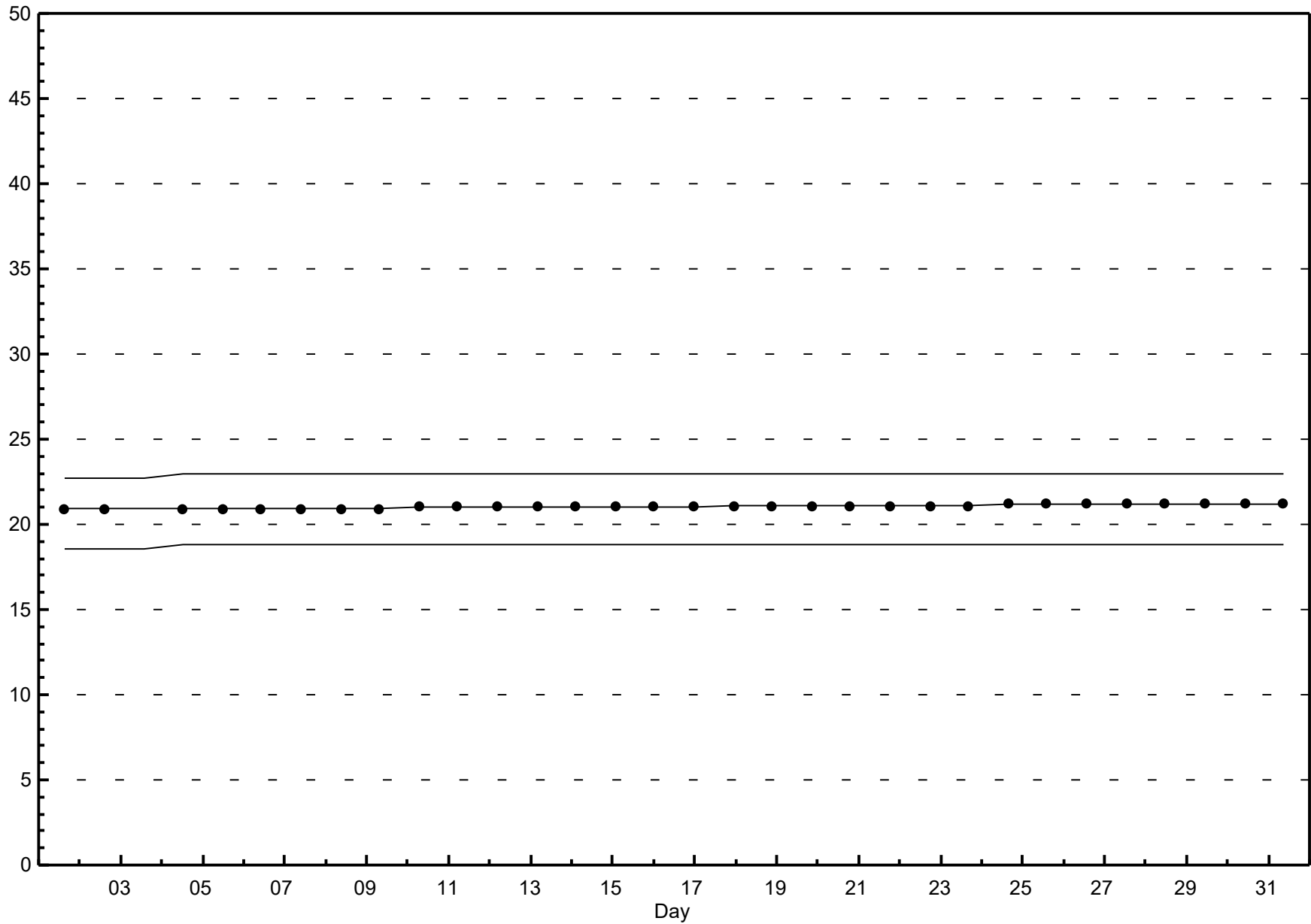
Carbon Monoxide (CO) - ppm

Henry Pirker - March 2017

Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 0.57 ppm on Mar 29 12:00																									Hours in Service: 744 Hours of Data: 737 Hours of Missing Data: 7 Hours of Calibration: 7 Percent Operational Time: 100.0
Minimum Value: 0.12 ppm on Mar 4 05:00 Percentiles: P ₁ = 0.12 P ₁₀ = 0.18 Q ₁ = 0.20 Median = 0.22 Q ₃ = 0.27 P ₉₀ = 0.36 P ₉₉ = 0.51																									
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-Mar	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26
2-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.4	0.4	0.46
3-Mar	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	N	N	N	N	N	N	N	0.1	0.1	0.1	0.40
4-Mar	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	0.2	0.2	0.2	0.3	0.3	0.27
5-Mar	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.29
6-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20
7-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
8-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19
9-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
10-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20
11-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.25
12-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
13-Mar	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.43
14-Mar	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.51
15-Mar	0.3	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	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.39
16-Mar	0.4	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.42
17-Mar	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.33
18-Mar	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.27
19-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.25
20-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.34
21-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.24
22-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.30
23-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.40
24-Mar	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.43
25-Mar	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.34
26-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
27-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.32
28-Mar	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.53
29-Mar	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.57
30-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22
31-Mar	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.5	0.6	0.6	0.6	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.56
	0.42	0.42	0.43	0.43	0.43	0.43	0.44	0.49	0.53	0.56	0.56	0.57	0.56	0.53	0.43	0.37	0.36	0.37	0.38	0.41	0.44	0.46	0.44	0.42	
Diurnal Maximums																									
N - Not Valid																									
Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 5 ppm																									

Span Responses

Carbon Monoxide (CO)
Henry Pirker - March 2017



Hourly Averages

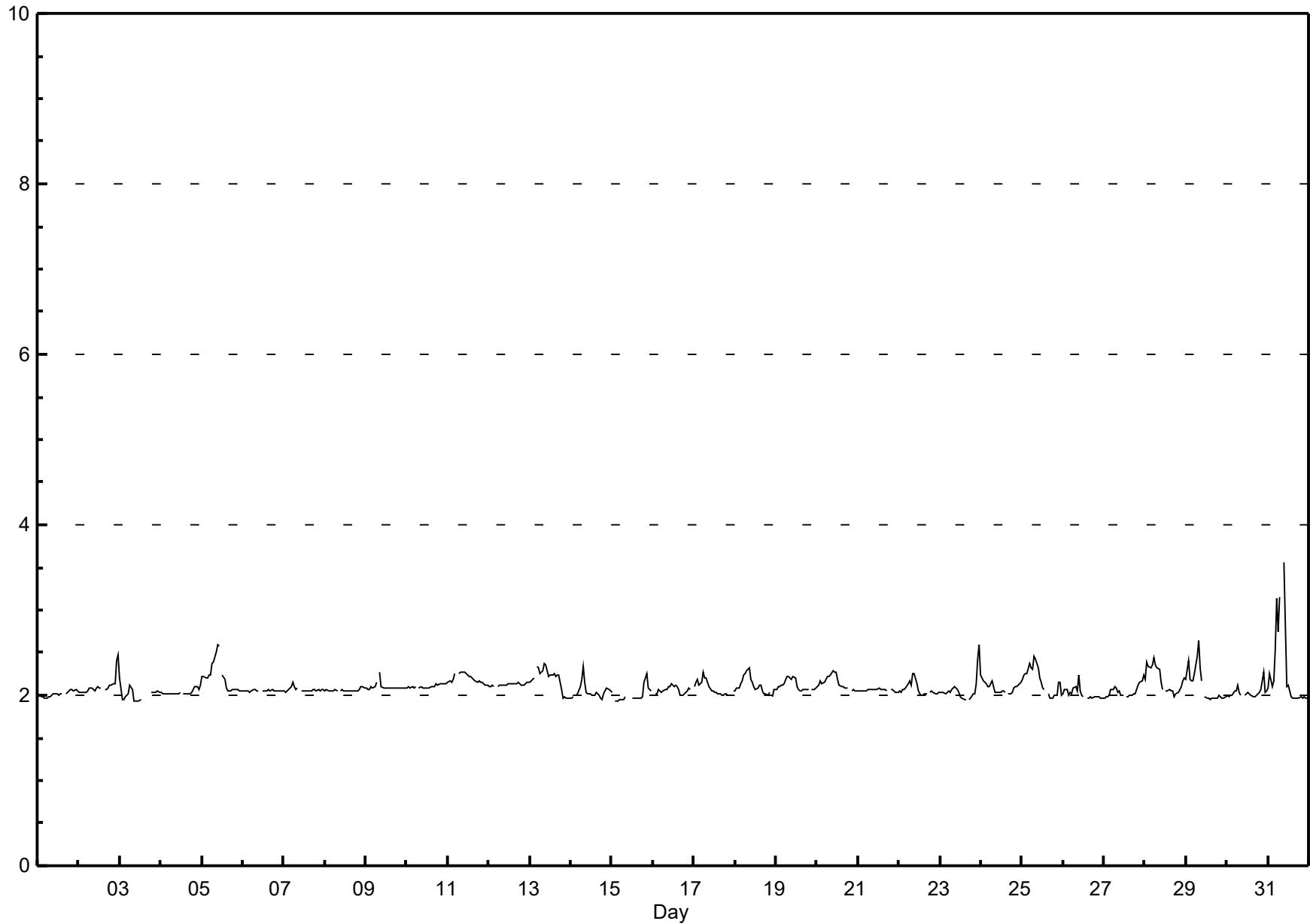
Total Hydrocarbons (THC) - ppm

Henry Pirker - March 2017

Maximum Value: 3.55 ppm on Mar 31 10:00																								Maximum Daily Average: 2.28 ppm on Mar 31										Hours in Service: 744	
Minimum Value: 1.9 ppm on Mar 3 10:00																								Minimum Daily Average: 2.00 ppm on Mar 15										Hours of Data: 706	
Maximum Diurnal Average: 2.20 ppm at hour 8																								Minimum Diurnal Average: 2.04 ppm at hour 18										Hours of Missing Data: 38	
Monthly Average: 2.096 ppm																								Percentiles: P ₁ = 1.95 P ₁₀ = 1.98 Q ₁ = 2.02 Median = 2.07 Q ₃ = 2.13 P ₉₀ = 2.24 P ₉₉ = 2.58										Hours of Calibration: 38	
																								Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24											
1-Mar	2.0	2.0	2.0	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	2.1	2.1	2.1	2.1	2.1	2.1	2.02	2.07									
2-Mar	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.4	2.5	2.11	2.47									
3-Mar	2.2	2.0	2.0	2.0	2.0	2.0	2.1	2.1	1.9	1.9	1.9	1.9	1.9	A	2.0	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.01	2.20									
4-Mar	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.04	2.13									
5-Mar	2.2	2.2	2.2	2.2	2.2	2.2	2.4	2.4	2.5	2.6	2.6	A	2.2	2.2	2.1	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.21	2.60									
6-Mar	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.0	A	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.05	2.07									
7-Mar	2.0	2.0	2.0	2.1	2.1	2.2	2.1	2.1	2.1	A	2.1	2.1	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.06	2.15									
8-Mar	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.06	2.10									
9-Mar	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.09	2.27									
10-Mar	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.10	2.14									
11-Mar	2.2	2.2	2.1	2.2	2.3	A	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.20	2.28									
12-Mar	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.13	2.15									
13-Mar	2.2	2.2	2.2	A	2.3	2.3	2.3	2.3	2.4	2.4	2.3	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.19	2.37									
14-Mar	2.0	2.0	A	2.0	2.0	2.1	2.2	2.3	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.05	2.34									
15-Mar	2.0	A	1.9	1.9	2.0	2.0	2.0	2.0	2.0	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.1	2.0	2.00	2.25									
16-Mar	A	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	A	2.06	2.14									
17-Mar	2.1	2.2	2.2	2.1	2.1	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.08	2.28									
18-Mar	2.0	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.3	2.2	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	2.1	2.11	2.31									
19-Mar	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.12	2.23									
20-Mar	2.1	2.1	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.15	2.29									
21-Mar	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.0	2.0	2.06	2.08									
22-Mar	2.1	2.0	2.1	2.1	2.1	2.1	2.2	2.1	2.3	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.07	2.26									
23-Mar	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.1	2.4	2.6	2.07	2.59									
24-Mar	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	A	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.09	2.24									
25-Mar	2.2	2.2	2.3	2.3	2.4	2.3	2.3	2.5	2.4	2.3	2.2	2.2	2.1	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.2	2.0	2.17	2.45								
26-Mar	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.1	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.02	2.23									
27-Mar	2.0	2.0	2.0	2.0	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	2.1	2.1	2.1	2.2	2.2	2.05	2.24									
28-Mar	2.2	2.4	2.3	2.3	2.4	2.4	2.4	2.3	2.3	2.2	2.1	A	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.18	2.45									
29-Mar	2.2	2.4	2.2	2.2	2.2	2.3	2.5	2.6	2.3	2.2	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	2.11	2.64									
30-Mar	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.0	2.0	2.03	2.26									
31-Mar	2.1	2.3	2.1	2.2	2.5	3.1	2.7	3.2	A	3.6	2.8	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.28	3.55									
2.08 2.10 2.09 2.09 2.12 2.16 2.17 2.20 2.15 2.20 2.14 2.08 2.07 2.06 2.05 2.05 2.04 2.04 2.04 2.05 2.06 2.08 2.09 2.10																								Diurnal Average											
2.24 2.41 2.34 2.32 2.54 3.14 2.74 3.16 2.51 3.55 2.81 2.27 2.25 2.24 2.26 2.22 2.24 2.24 2.16 2.16 2.25 2.26 2.43 2.59																								Diurnal Maximum											
C - Calibration A - Automated Daily Zero Span																																			

Hourly Averages

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



Hourly Maximums

Total Hydrocarbons (THC) - ppm

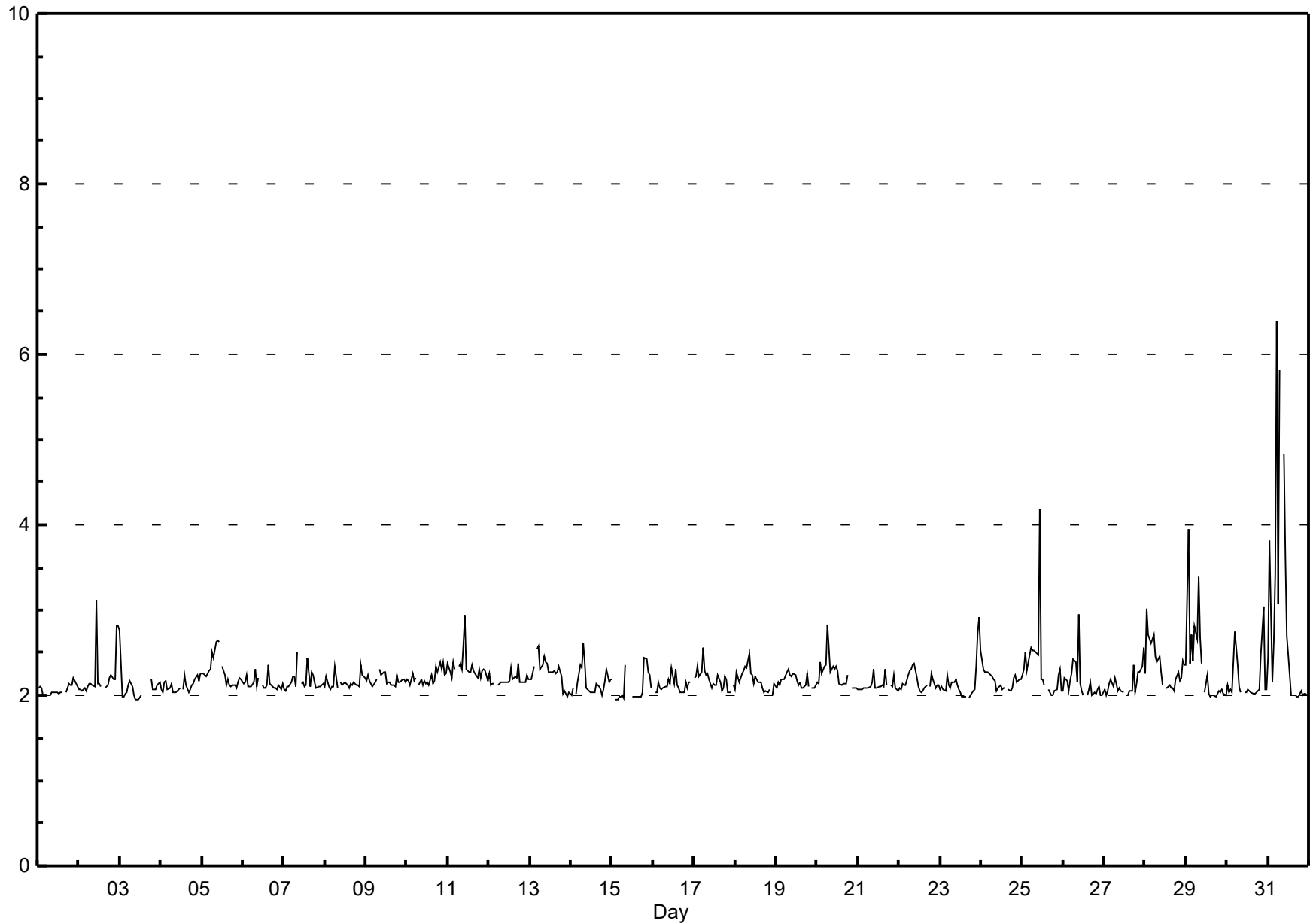
Henry Pirker - March 2017

Maximum Value: 6.39 ppm on Mar 31 06:00																				Maximum Daily Average: 2.84 ppm on Mar 31				Hours in Service: 744		
Minimum Value: 2.0 ppm on Mar 3 10:00																				Minimum Daily Average: 2.06 ppm on Mar 1				Hours of Data: 706		
Maximum Diurnal Average: 2.40 ppm at hour 6																				Minimum Diurnal Average: 2.11 ppm at hour 17				Hours of Missing Data: 38		
Monthly Average: 2.209 ppm																				Percentiles: P ₁ = 1.98 P ₁₀ = 2.03 Q ₁ = 2.08 Median = 2.14 Q ₃ = 2.25 P ₉₀ = 2.39 P ₉₉ = 3.54				Hours of Calibration: 38		
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.06	2.21
2-Mar	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	3.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.8	2.8	2.22	3.11
3-Mar	2.8	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.0	2.0	2.0	2.0	A	2.0	C	C	C	2.2	2.1	2.1	2.1	2.1	2.2	2.08	2.76	
4-Mar	2.1	2.0	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	A	2.1	2.2	2.1	2.0	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.11	2.25
5-Mar	2.3	2.3	2.2	2.3	2.3	2.3	2.5	2.4	2.6	2.6	A	2.3	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.28	2.64
6-Mar	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.3	2.1	2.2	A	2.1	2.1	2.1	2.1	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.14	2.35
7-Mar	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.5	A	2.1	2.2	2.1	2.1	2.4	2.1	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.16	2.52
8-Mar	2.1	2.2	2.1	2.1	2.1	2.1	2.3	2.1	A	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.4	2.2	2.2	2.15	2.36
9-Mar	2.2	2.2	2.2	2.1	2.1	2.1	2.2	A	2.3	2.2	2.3	2.3	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.2	2.2	2.2	2.18	2.31
10-Mar	2.2	2.2	2.1	2.3	2.2	2.2	A	2.1	2.2	2.1	2.2	2.1	2.2	2.1	2.2	2.1	2.2	2.3	2.3	2.4	2.3	2.4	2.2	2.3	2.21	2.39
11-Mar	2.4	2.3	2.2	2.4	2.3	A	2.3	2.4	2.3	2.6	2.9	2.3	2.3	2.3	2.4	2.3	2.3	2.2	2.3	2.2	2.3	2.3	2.3	2.2	2.33	2.93
12-Mar	2.3	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.2	2.2	2.4	2.2	2.1	2.1	2.2	2.2	2.2	2.18	2.37
13-Mar	2.2	2.2	2.3	A	2.5	2.6	2.3	2.3	2.5	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.0	2.1	2.0	2.0	2.0	2.26	2.57
14-Mar	2.0	2.1	A	2.0	2.2	2.3	2.3	2.6	2.4	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1	2.2	2.3	2.1	2.2	2.15	2.61
15-Mar	2.2	A	2.0	2.0	2.0	2.0	2.0	2.0	2.3	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.4	2.4	2.3	2.2	2.1	2.09	2.44
16-Mar	A	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.3	2.1	2.3	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	A	2.12	2.32
17-Mar	2.2	2.2	2.3	2.2	2.3	2.6	2.3	2.2	2.3	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.2	2.2	2.0	2.0	A	2.1	2.19	2.56
18-Mar	2.1	2.3	2.2	2.2	2.3	2.3	2.3	2.3	2.5	2.3	2.2	2.1	2.2	2.1	2.2	2.2	2.1	2.0	2.1	2.0	2.1	A	2.0	2.1	2.18	2.49
19-Mar	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.3	2.1	A	2.1	2.1	2.1	2.17	2.30
20-Mar	2.1	2.1	2.4	2.3	2.3	2.4	2.8	2.6	2.3	2.3	2.3	2.3	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.2	A	2.1	2.1	2.1	2.25	2.83
21-Mar	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.1	A	2.1	2.1	2.2	2.1	2.1	2.12	2.31
22-Mar	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.3	2.4	2.2	2.1	2.1	2.0	2.1	2.1	2.1	A	2.1	2.3	2.2	2.1	2.1	2.1	2.15	2.37
23-Mar	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.2	2.1	2.2	2.1	2.1	2.0	2.0	2.0	2.0	A	2.0	2.0	2.1	2.1	2.3	2.7	2.9	2.15	2.91
24-Mar	2.5	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.18	2.53
25-Mar	2.2	2.3	2.5	2.3	2.5	2.6	2.5	2.5	2.5	2.5	4.2	2.2	2.2	2.1	A	2.1	2.0	2.0	2.0	2.1	2.1	2.2	2.3	2.1	2.34	4.19
26-Mar	2.1	2.2	2.2	2.1	2.2	2.3	2.4	2.4	2.2	2.9	2.1	2.1	2.0	A	2.0	2.1	2.2	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.15	2.95
27-Mar	2.1	2.0	2.1	2.1	2.2	2.1	2.2	2.1	2.1	2.1	2.0	A	2.0	2.0	2.0	2.1	2.1	2.3	2.0	2.1	2.3	2.3	2.6	2.6	2.14	2.55
28-Mar	2.3	3.0	2.7	2.6	2.7	2.7	2.5	2.4	2.5	2.3	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.2	2.4	2.4	2.34	3.02
29-Mar	2.3	3.9	2.4	2.7	2.4	2.8	2.7	3.4	2.7	2.4	A	2.0	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.0	2.36	3.95
30-Mar	2.1	2.0	2.1	2.0	2.7	2.6	2.4	2.1	2.0	A	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.5	3.0	2.1	2.1	2.18	3.03
31-Mar	2.4	3.8	2.1	2.6	3.4	6.4	3.1	5.8	A	4.8	3.6	2.7	2.5	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.84	6.39
2.19 2.29 2.18 2.19 2.27 2.40 2.30 2.39 2.26 2.35 2.35 2.16 2.14 2.11 2.12 2.11 2.11 2.11 2.12 2.14 2.15 2.21 2.19 2.19																								Diurnal Average		
2.76 3.95 2.72 2.72 3.42 6.39 3.06 5.81 2.68 4.82 4.19 2.70 2.47 2.32 2.44 2.35 2.31 2.37 2.31 2.44 2.48 3.03 2.81 2.91																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

Total Hydrocarbons (THC) - ppm

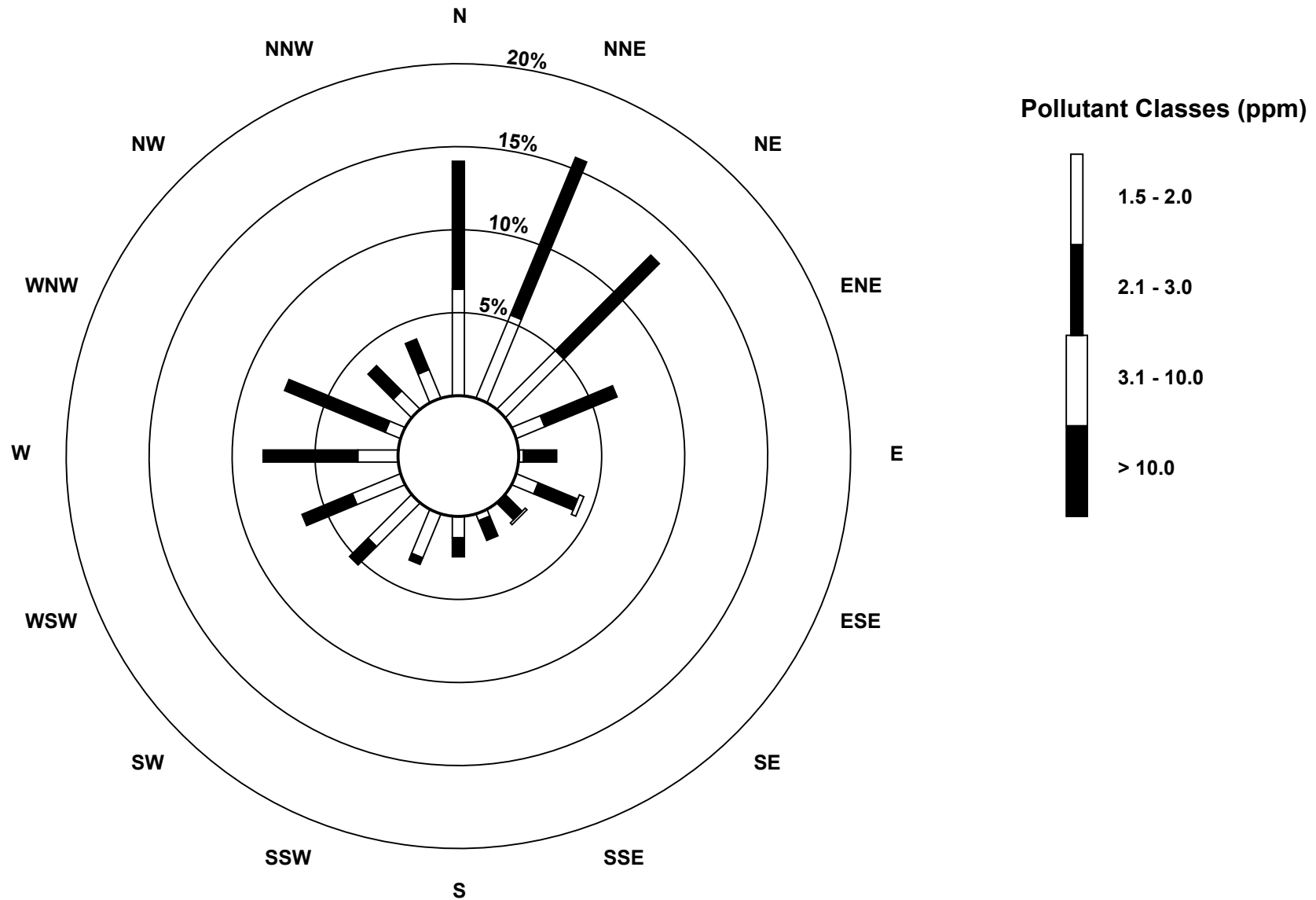
Henry Pirker - March 2017



Pollutant Rose

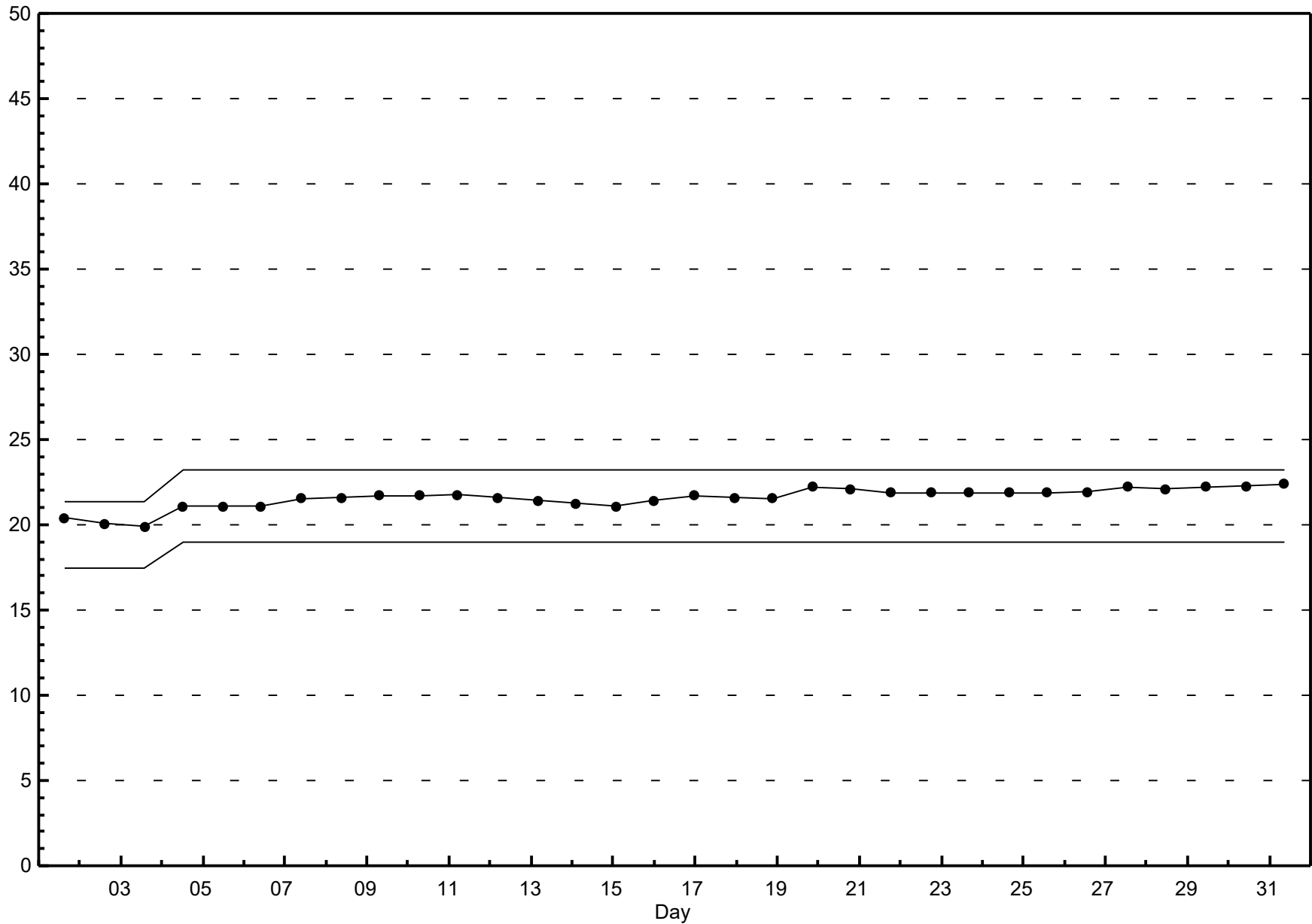
Total Hydrocarbons (THC) - ppm

Henry Pirker - March 2017



Span Responses

Total Hydrocarbons (THC)
Henry Pirker - March 2017



Hourly Averages

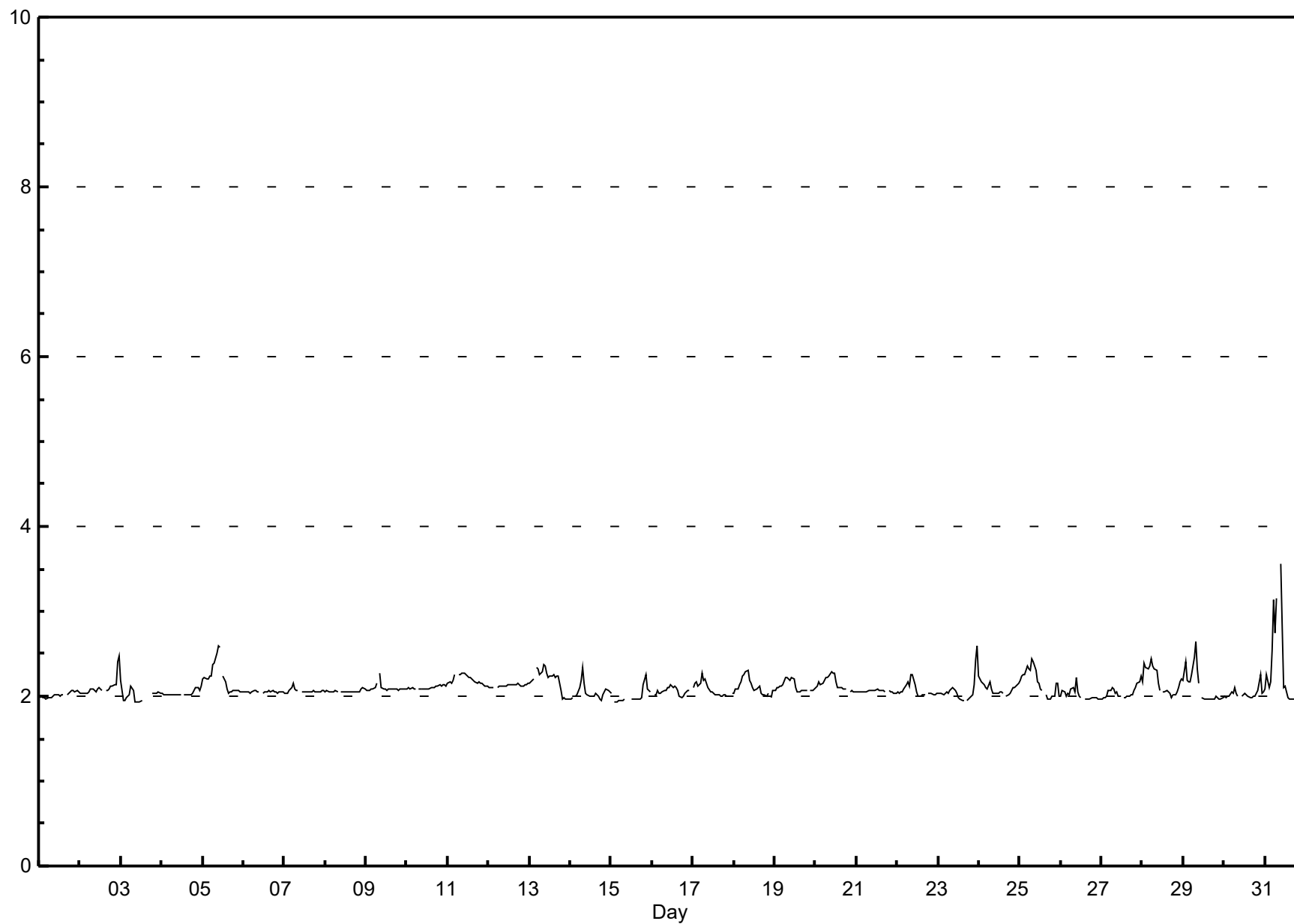
Methane (CH₄) - ppm

Henry Pirker - March 2017

Maximum Value: 3.55 ppm on Mar 31 10:00																				Maximum Daily Average: 2.28 ppm on Mar 31					Hours in Service: 744	
Minimum Value: 1.9 ppm on Mar 3 10:00																				Minimum Daily Average: 2.00 ppm on Mar 15					Hours of Data: 706	
Maximum Diurnal Average: 2.20 ppm at hour 8																				Minimum Diurnal Average: 2.04 ppm at hour 18					Hours of Missing Data: 38	
Monthly Average: 2.094 ppm																				Percentiles: P ₁ = 1.95 P ₁₀ = 1.98 Q ₁ = 2.02 Median = 2.06 Q ₃ = 2.13 P ₉₀ = 2.24 P ₉₉ = 2.57					Hours of Calibration: 38	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	2.0	2.0	2.0	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	2.1	2.1	2.01	2.07
2-Mar	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.4	2.5	2.11	2.47
3-Mar	2.2	2.0	2.0	2.0	2.0	2.0	2.1	2.1	1.9	1.9	1.9	1.9	1.9	A	2.0	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.01	2.19
4-Mar	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.04	2.12
5-Mar	2.2	2.2	2.2	2.2	2.2	2.2	2.4	2.4	2.5	2.6	2.6	A	2.2	2.2	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.21	2.60
6-Mar	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.0	A	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.05	2.07
7-Mar	2.0	2.0	2.0	2.1	2.1	2.2	2.1	2.1	2.1	A	2.1	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.0	2.1	2.0	2.1	2.1	2.06	2.15
8-Mar	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.06	2.10
9-Mar	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.09	2.27
10-Mar	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.10	2.13
11-Mar	2.2	2.2	2.1	2.2	2.3	A	2.2	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.19	2.27
12-Mar	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.13	2.15
13-Mar	2.2	2.2	2.2	A	2.3	2.3	2.3	2.3	2.4	2.4	2.3	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.19	2.37
14-Mar	2.0	2.0	A	2.0	2.0	2.1	2.2	2.3	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.04	2.34
15-Mar	2.0	A	1.9	1.9	2.0	2.0	2.0	2.0	2.0	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.1	2.0	2.00	2.25
16-Mar	A	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	A	2.06	2.13
17-Mar	2.1	2.2	2.2	2.1	2.1	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.08	2.28
18-Mar	2.0	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.2	2.1	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	2.11	2.31
19-Mar	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.11	2.23
20-Mar	2.1	2.1	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.0	2.15	2.29
21-Mar	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.0	2.0	2.06	2.08
22-Mar	2.1	2.0	2.1	2.1	2.1	2.1	2.2	2.1	2.3	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.07	2.26
23-Mar	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.1	2.4	2.6	2.07	2.59
24-Mar	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	A	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.09	2.23
25-Mar	2.2	2.2	2.3	2.3	2.4	2.3	2.3	2.4	2.4	2.3	2.2	2.1	2.1	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.0	2.16	2.45
26-Mar	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.1	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.02	2.23
27-Mar	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.04	2.24
28-Mar	2.2	2.4	2.3	2.3	2.3	2.4	2.4	2.3	2.3	2.2	2.1	A	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.17	2.44
29-Mar	2.2	2.4	2.2	2.2	2.2	2.2	2.5	2.6	2.3	2.2	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	2.11	2.64
30-Mar	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.0	2.0	2.03	2.26
31-Mar	2.1	2.3	2.1	2.2	2.5	3.1	2.7	3.2	A	3.6	2.8	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.28	3.55
2.08 2.10 2.09 2.08 2.12 2.16 2.17 2.20 2.15 2.19 2.13 2.08 2.07 2.06 2.05 2.05 2.04 2.04 2.04 2.05 2.06 2.08 2.09 2.10																								Diurnal Average		
2.23 2.40 2.34 2.32 2.53 3.14 2.74 3.16 2.50 3.55 2.81 2.27 2.24 2.24 2.26 2.22 2.24 2.24 2.16 2.16 2.25 2.26 2.43 2.59																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

Hourly Averages

Methane (CH₄) - ppm
Henry Pirker - March 2017



Hourly Maximums

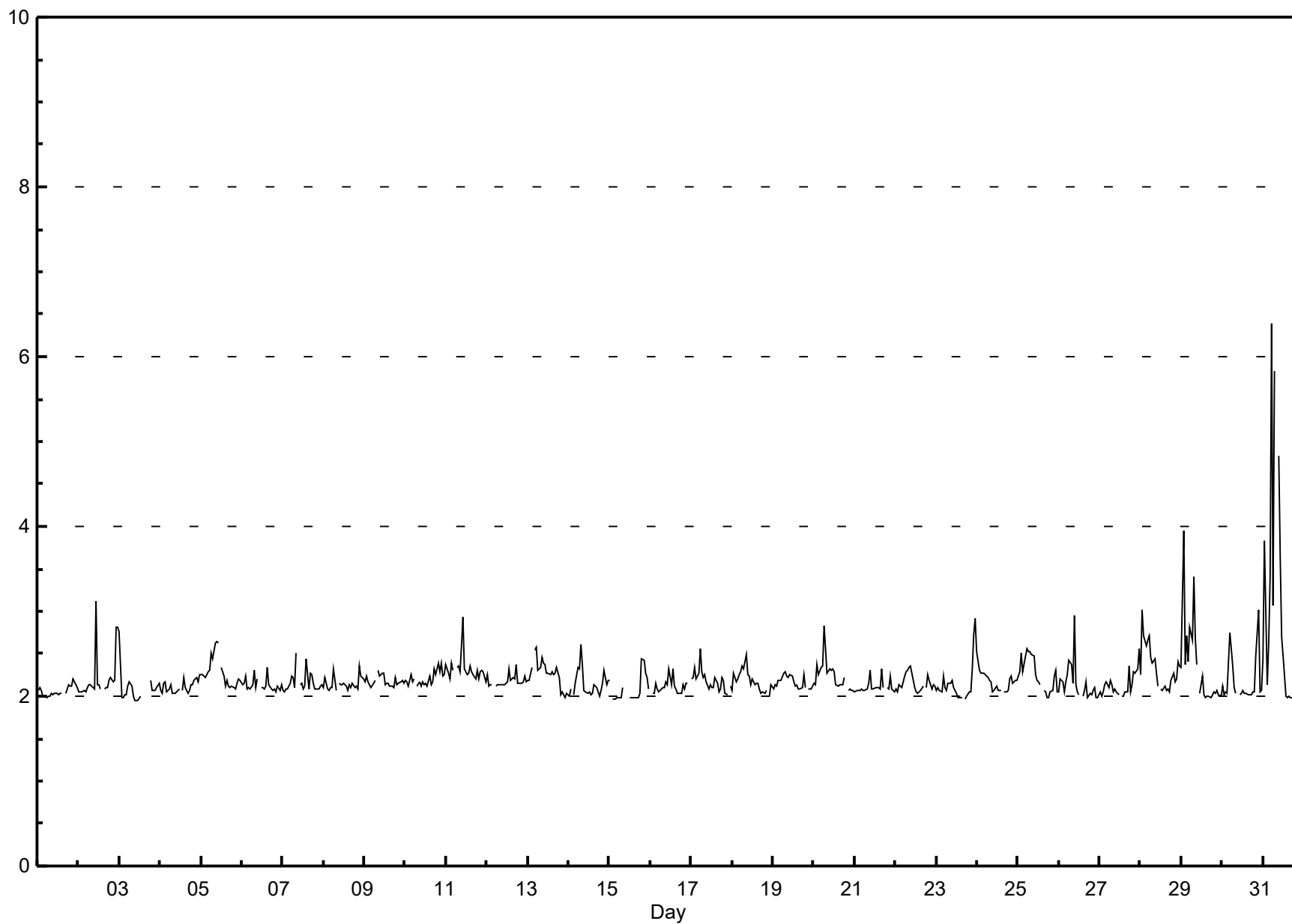
Methane (CH₄) - ppm

Henry Pirker - March 2017

Maximum Value: 6.39 ppm on Mar 31 06:00																				Maximum Daily Average: 2.84 ppm on Mar 31					Hours in Service: 744		
Minimum Value: 2.0 ppm on Mar 3 12:00																				Minimum Daily Average: 2.06 ppm on Mar 1					Hours of Data: 706		
Maximum Diurnal Average: 2.40 ppm at hour 6																				Minimum Diurnal Average: 2.11 ppm at hour 18					Hours of Missing Data: 38		
Monthly Average: 2.204 ppm																				Percentiles: P ₁ = 1.97 P ₁₀ = 2.02 Q ₁ = 2.07 Median = 2.13 Q ₃ = 2.25 P ₉₀ = 2.38 P ₉₉ = 3.29					Hours of Calibration: 38		
																									Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Mar	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.06	2.21
2-Mar	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	3.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.8	2.8	2.8	2.22	3.12
3-Mar	2.8	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.0	2.0	2.0	2.0	A	2.0	C	C	C	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.08	2.76	
4-Mar	2.1	2.0	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	A	2.1	2.2	2.1	2.0	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.11	2.25	
5-Mar	2.2	2.3	2.2	2.3	2.3	2.3	2.5	2.4	2.6	2.6	A	2.3	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.28	2.64	
6-Mar	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.3	2.1	2.2	A	2.1	2.1	2.1	2.1	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.13	2.35	
7-Mar	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.5	A	2.1	2.2	2.1	2.1	2.4	2.1	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.16	2.51	
8-Mar	2.1	2.2	2.1	2.1	2.1	2.1	2.3	2.1	A	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.4	2.2	2.2	2.14	2.35	
9-Mar	2.2	2.2	2.2	2.1	2.1	2.1	2.2	A	2.3	2.2	2.3	2.3	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.2	2.2	2.2	2.17	2.30	
10-Mar	2.2	2.2	2.1	2.2	2.2	2.2	A	2.1	2.2	2.1	2.2	2.1	2.2	2.1	2.2	2.1	2.2	2.3	2.3	2.4	2.3	2.4	2.2	2.2	2.21	2.39	
11-Mar	2.4	2.3	2.2	2.4	2.3	A	2.3	2.4	2.3	2.6	2.9	2.3	2.3	2.3	2.4	2.3	2.3	2.2	2.3	2.2	2.3	2.3	2.3	2.2	2.33	2.93	
12-Mar	2.2	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.2	2.2	2.2	2.4	2.2	2.1	2.1	2.2	2.2	2.2	2.18	2.37	
13-Mar	2.2	2.2	2.3	A	2.5	2.6	2.3	2.3	2.5	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.0	2.0	2.0	2.0	2.0	2.26	2.57	
14-Mar	2.0	2.1	A	2.0	2.2	2.3	2.3	2.6	2.4	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1	2.2	2.3	2.1	2.2	2.14	2.61	
15-Mar	2.2	A	2.0	2.0	2.0	2.0	2.0	2.0	2.1	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.4	2.4	2.3	2.2	2.1	2.08	2.44	
16-Mar	A	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.3	2.1	2.3	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.2	A	2.12	2.32	
17-Mar	2.2	2.2	2.3	2.2	2.3	2.6	2.3	2.2	2.3	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.0	2.1	2.2	2.2	2.0	2.0	A	2.1	2.19	2.56	
18-Mar	2.1	2.3	2.2	2.2	2.3	2.3	2.4	2.3	2.5	2.3	2.2	2.1	2.2	2.1	2.2	2.2	2.1	2.0	2.0	2.0	2.1	A	2.0	2.1	2.18	2.49	
19-Mar	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.1	A	2.1	2.1	2.1	2.16	2.29	
20-Mar	2.1	2.1	2.4	2.2	2.3	2.4	2.8	2.6	2.3	2.3	2.3	2.3	2.3	2.1	2.1	2.1	2.1	2.1	2.2	A	2.1	2.1	2.1	2.1	2.25	2.83	
21-Mar	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.1	A	2.1	2.1	2.2	2.1	2.1	2.11	2.32	
22-Mar	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.3	2.4	2.2	2.1	2.0	2.0	2.0	2.1	2.1	A	2.1	2.2	2.2	2.1	2.1	2.1	2.15	2.36	
23-Mar	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.2	2.1	2.2	2.1	2.1	2.0	2.0	2.0	2.0	A	2.0	2.0	2.1	2.1	2.3	2.7	2.9	2.15	2.92	
24-Mar	2.5	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.0	2.1	2.1	2.1	2.1	2.1	A	2.1	2.0	2.1	2.2	2.2	2.2	2.2	2.2	2.18	2.52	
25-Mar	2.2	2.3	2.5	2.3	2.5	2.6	2.5	2.5	2.5	2.5	2.2	2.2	2.2	2.1	A	2.1	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2.1	2.26	2.55	
26-Mar	2.0	2.2	2.2	2.0	2.2	2.3	2.4	2.4	2.2	2.9	2.1	2.1	2.0	A	2.0	2.1	2.2	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.15	2.95	
27-Mar	2.1	2.0	2.1	2.1	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.0	A	2.0	2.0	2.0	2.0	2.4	2.0	2.1	2.3	2.3	2.3	2.6	2.14	2.55	
28-Mar	2.3	3.0	2.7	2.6	2.7	2.7	2.5	2.4	2.4	2.3	2.1	A	2.1	2.1	2.1	2.1	2.1	2.0	2.2	2.3	2.2	2.2	2.4	2.4	2.33	3.01	
29-Mar	2.3	3.9	2.4	2.7	2.4	2.8	2.7	3.4	2.7	2.4	A	2.0	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.0	2.35	3.95	
30-Mar	2.1	2.0	2.1	2.0	2.7	2.6	2.4	2.1	2.0	A	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.5	3.0	2.1	2.1	2.17	3.02	
31-Mar	2.4	3.8	2.1	2.6	3.4	6.4	3.1	5.8	A	4.8	3.6	2.7	2.5	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.84	6.39	
2.19 2.29 2.18 2.19 2.26 2.40 2.30 2.39 2.25 2.34 2.27 2.15 2.14 2.11 2.11 2.11 2.11 2.11 2.12 2.13 2.14 2.20 2.19 2.19																								Diurnal Average			
2.76 3.95 2.71 2.72 3.42 6.39 3.07 5.82 2.67 4.82 3.64 2.70 2.47 2.32 2.43 2.35 2.32 2.37 2.31 2.44 2.48 3.02 2.81 2.92																								Diurnal Maximum			
C - Calibration A - Automated Daily Zero Span																											

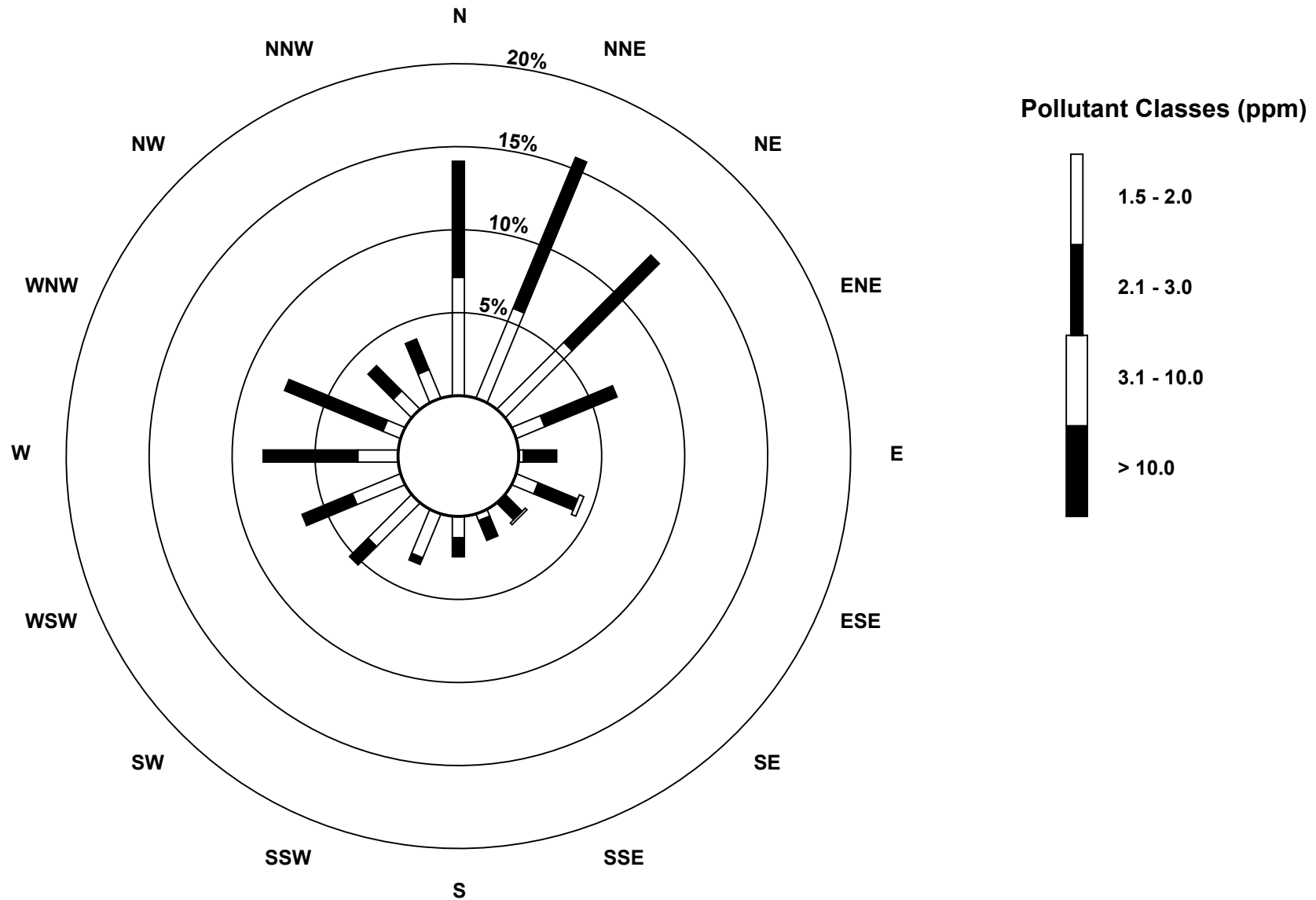
Hourly Maximums

Methane (CH₄) - ppm
Henry Pirker - March 2017



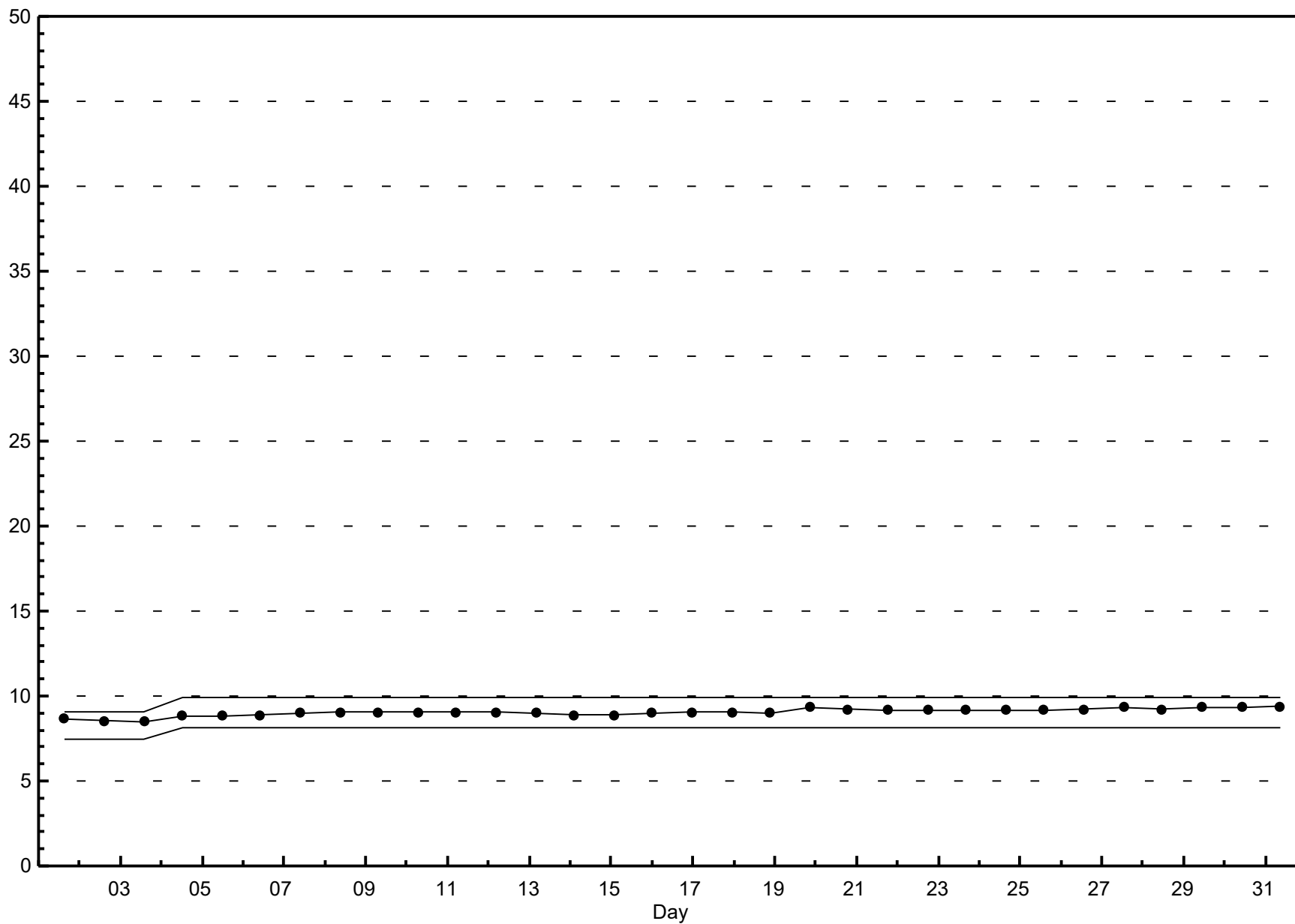
Pollutant Rose

Methane (CH₄) - ppm
Henry Pirker - March 2017



Span Responses

Methane (CH₄)
Henry Pirker - March 2017

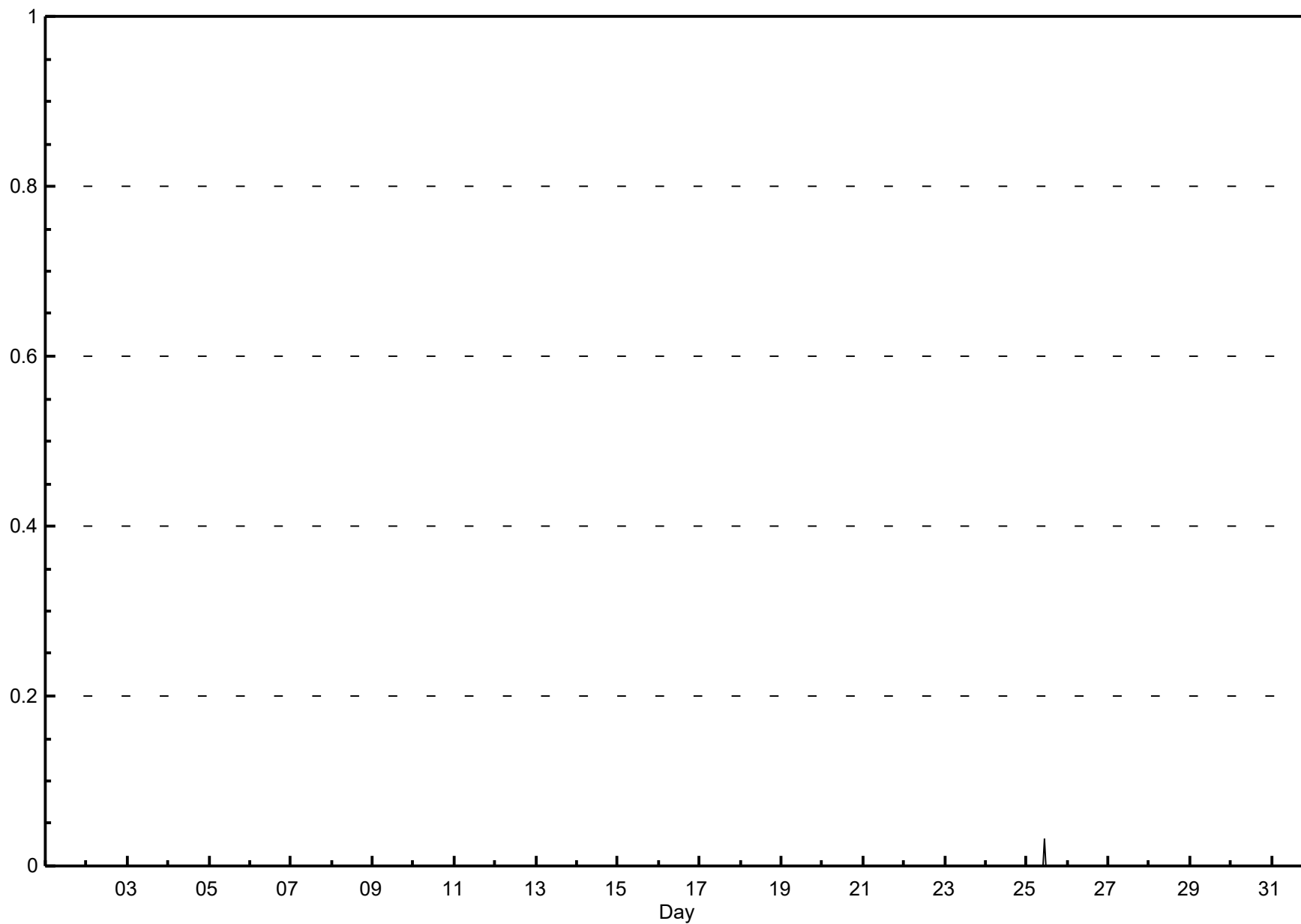


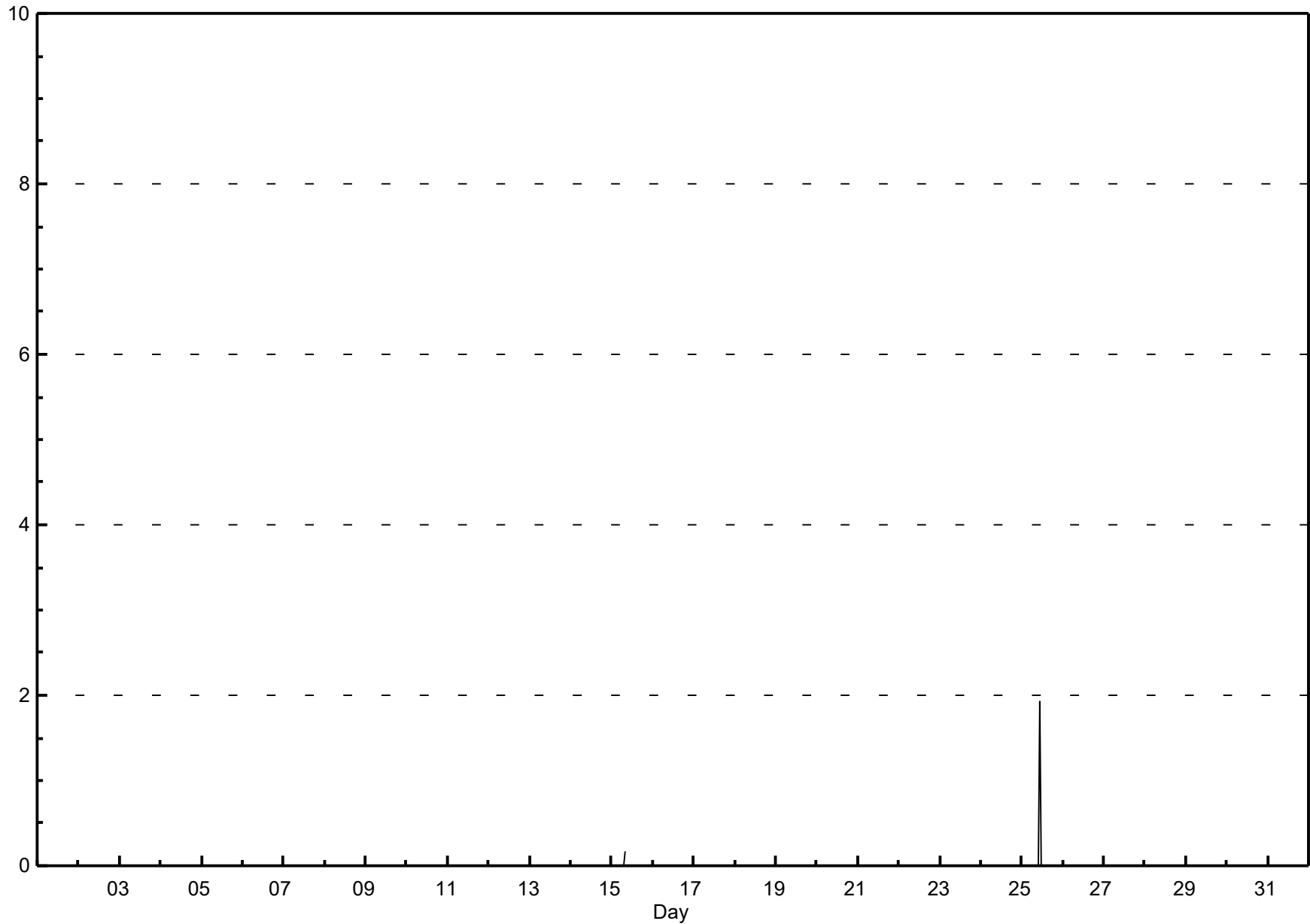
Hourly Averages

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - March 2017

Maximum Value: 0.03 ppm on Mar 25 11:00																				Maximum Daily Average: 0.00 ppm on Mar 25				Hours in Service: 744		
Minimum Value: 0.0 ppm on Mar 1 01:00																				Minimum Daily Average: 0.00 ppm on Mar 1				Hours of Data: 706		
Maximum Diurnal Average: 0.00 ppm at hour 11																				Minimum Diurnal Average: 0.00 ppm at hour 20				Hours of Missing Data: 38		
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: 38		
																								Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	0.0	0.0	0.0	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
2-Mar	0.0	0.0	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
3-Mar	0.0	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	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
4-Mar	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
5-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
6-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
15-Mar	0.0	A	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	0.0	0.00	0.00
16-Mar	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
17-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
19-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
20-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
21-Mar	0.0	0.0	0.0	0.0	0.0	0.0	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
22-Mar	0.0	0.0	0.0	0.0	0.0	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
23-Mar	0.0	0.0	0.0	0.0	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
24-Mar	0.0	0.0	0.0	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
25-Mar	0.0	0.0	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	0.03
26-Mar	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
27-Mar	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
28-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
29-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
31-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	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 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.03 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

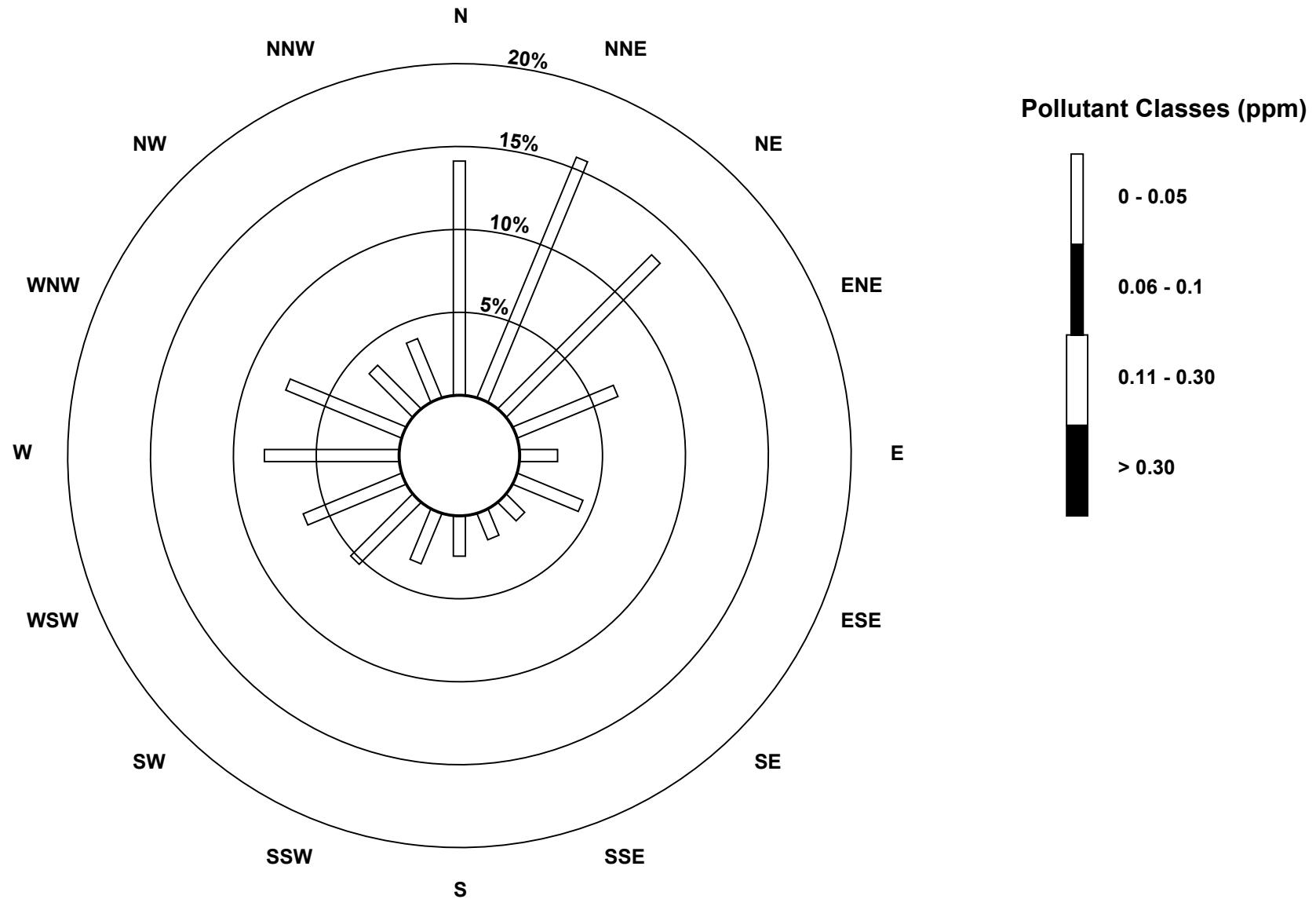


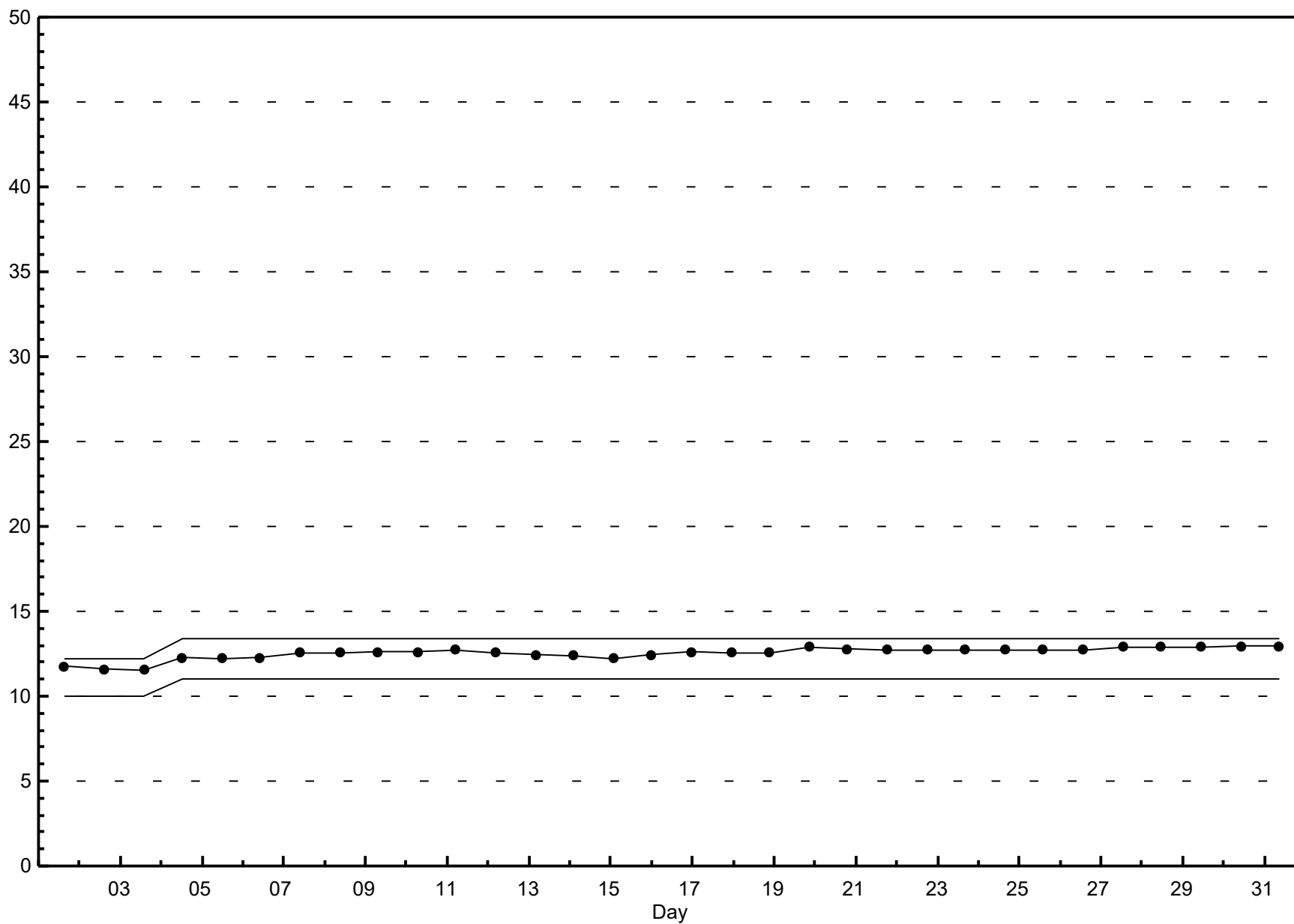


Pollutant Rose

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - March 2017



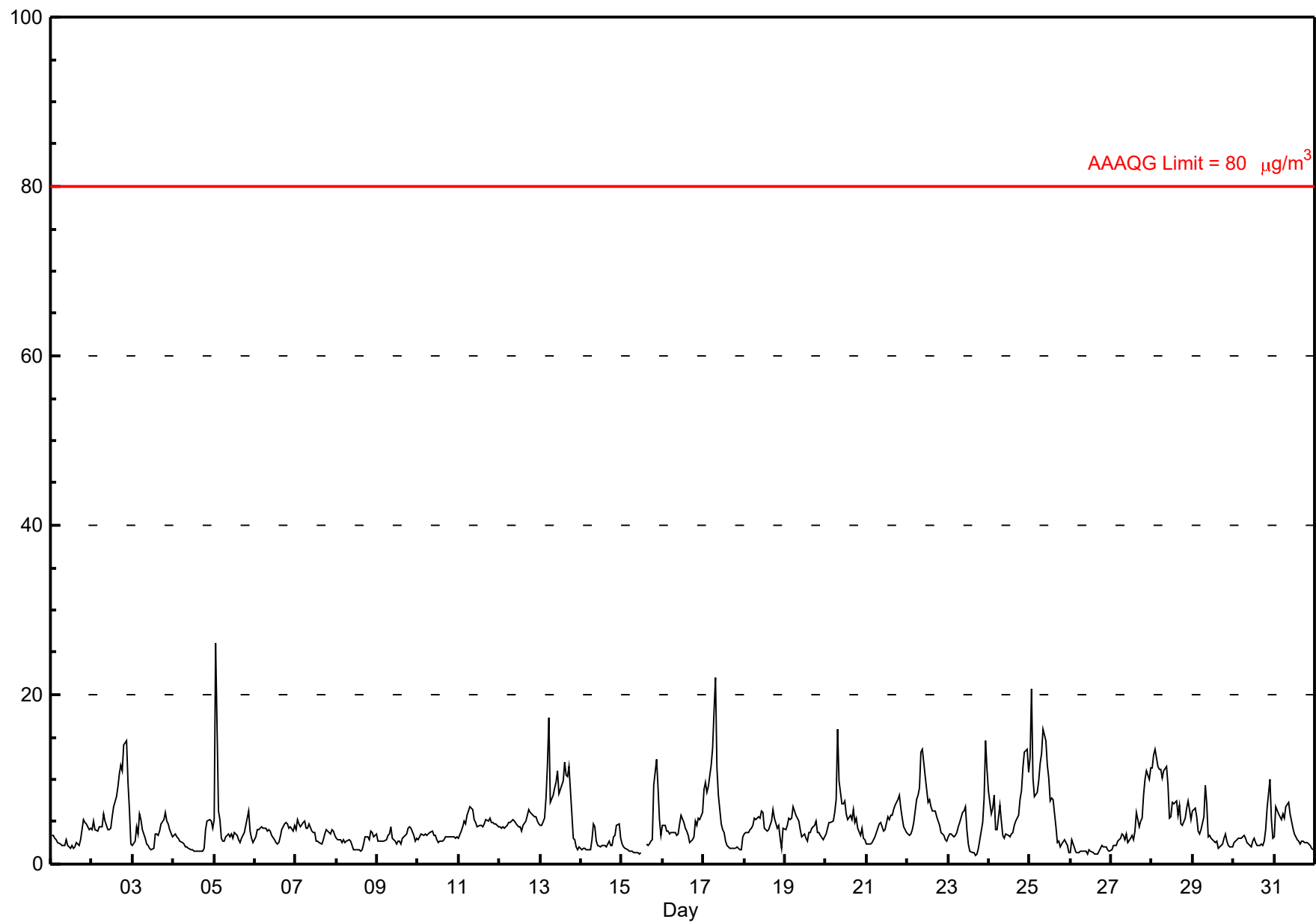


Hourly Averages

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

Henry Pirker - March 2017

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 26.2 µg/m³ on Mar 5 02:00 Maximum Daily Average: 8.3 µg/m³ on Mar 28																				Hours in Service: 744 Hours of Data: 742						
Minimum Value: 1 µg/m³ on Mar 23 17:00 Maximum Diurnal Average: 6.0 µg/m³ at hour 8 Monthly Average: 4.60 µg/m³ Minimum Daily Average: 1.6 µg/m³ on Mar 26 Minimum Diurnal Average: 3.8 µg/m³ at hour 14 Percentiles: P ₁ = 1.3 P ₁₀ = 1.9 Q ₁ = 2.8 Median = 3.9 Q ₃ = 5.3 P ₉₀ = 8.1 P ₉₉ = 15.7																				Hours of Missing Data: 2 Hours of Calibration: 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-Mar	3	3	3	3	3	2	2	2	2	3	2	2	2	2	2	3	2	3	4	5	5	5	4	4	3.0	5.3
2-Mar	4	5	4	4	4	4	4	6	5	4	4	4	6	7	8	9	11	12	11	14	15	10	6	2	6.8	14.6
3-Mar	2	3	4	4	6	5	4	3	2	2	2	2	2	4	4	3	4	5	5	6	5	5	4	3	3.7	6.0
4-Mar	3	4	3	3	3	3	2	2	2	2	2	2	2	1	2	2	1	2	2	4	5	5	5	4	2.7	5.3
5-Mar	5	26	6	5	3	3	3	3	4	3	3	3	4	3	3	3	3	3	4	5	6	4	3	3	4.7	26.2
6-Mar	3	4	4	4	4	4	4	4	4	4	3	3	3	2	3	3	4	5	5	5	4	4	4	5	3.9	4.9
7-Mar	4	5	5	4	5	5	4	4	5	4	4	4	3	3	3	2	3	4	4	4	4	4	4	3	3.9	5.2
8-Mar	3	3	3	3	3	3	3	3	3	2	2	2	2	2	2	2	3	3	3	3	4	4	3	4	2.6	3.9
9-Mar	3	3	3	3	3	3	3	4	4	3	3	2	3	3	2	3	3	3	4	4	4	3	3	3	3.1	4.4
10-Mar	3	3	4	3	4	3	3	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.2	3.9
11-Mar	3	4	4	5	5	6	7	7	6	5	5	4	5	5	4	5	5	5	5	5	5	5	5	4	5.0	6.7
12-Mar	4	4	4	4	5	5	5	5	5	5	5	4	4	4	5	5	6	6	6	6	6	6	5	5	5.0	6.4
13-Mar	5	5	5	8	12	17	7	8	9	10	11	8	9	10	12	11	10	12	6	3	3	2	2	2	7.7	17.3
14-Mar	2	2	2	2	2	2	3	5	4	3	2	2	2	2	2	2	3	2	2	3	3	5	5	3	2.7	4.8
15-Mar	2	2	2	2	2	2	1	1	1	1	1	1	C	C	2	2	2	3	3	9	12	9	5	3	3.2	12.5
16-Mar	5	5	4	4	4	4	4	4	3	4	5	6	5	4	4	3	3	3	3	5	5	5	5	6	4.2	6.0
17-Mar	9	10	8	9	12	14	18	22	11	8	5	4	4	3	2	2	2	2	2	2	2	2	2	3	6.5	22.0
18-Mar	4	4	4	4	4	5	5	5	6	5	6	6	4	4	4	5	5	6	5	4	5	3	2	4	4.6	6.4
19-Mar	4	5	5	5	5	7	6	5	5	4	3	4	3	3	4	4	4	5	5	4	4	3	3	3	4.3	6.7
20-Mar	4	4	5	5	5	6	8	16	10	7	7	7	6	5	6	5	6	5	5	4	3	4	3	3	5.9	16.0
21-Mar	2	2	2	3	3	3	4	5	5	4	4	4	6	5	6	6	6	7	8	8	7	5	4	4	4.7	8.1
22-Mar	4	3	4	4	5	8	8	9	13	14	10	9	7	8	7	6	6	6	5	5	4	3	3	3	6.3	13.6
23-Mar	3	4	4	3	3	4	4	5	6	6	7	4	2	1	1	1	1	1	2	4	5	8	15	11	4.4	14.6
24-Mar	9	6	7	8	4	4	7	5	3	3	4	3	3	4	4	5	5	6	8	9	11	13	13	11	6.4	13.5
25-Mar	13	21	10	8	9	10	12	13	16	15	12	10	8	8	8	4	3	3	2	2	3	3	2	1	8.0	20.6
26-Mar	1	3	2	1	1	1	1	2	2	2	1	2	2	1	1	1	1	2	2	2	2	2	2	1	1.6	2.9
27-Mar	2	2	2	2	3	3	4	3	3	4	3	3	3	3	4	6	4	5	5	8	10	11	10	11	4.8	11.4
28-Mar	11	13	14	12	11	11	10	11	12	9	5	6	7	7	7	6	7	5	5	5	7	8	6	5	8.3	13.5
29-Mar	6	7	6	4	4	4	6	9	7	3	3	3	3	3	3	2	2	2	3	4	3	2	2	2	3.8	9.4
30-Mar	2	3	3	3	3	3	3	3	3	2	2	3	3	2	2	2	2	2	3	4	7	10	5	3	3.3	10.1
31-Mar	3	7	6	6	5	6	5	7	7	6	5	4	4	3	3	2	3	3	3	3	2	2	2	2	4.1	7.3
4.3 5.6 4.6 4.5 4.6 5.1 5.2 6.0 5.6 4.9 4.3 4.0 3.9 3.8 3.9 3.8 4.0 4.2 4.3 4.9 5.3 5.1 4.5 4.1																								Diurnal Average		
12.6 26.2 13.5 11.6 11.7 17.3 18.1 22.0 15.9 14.5 11.8 10.2 8.9 9.8 12.1 10.6 10.6 11.8 11.0 14.0 14.6 13.2 14.6 11.4																								Diurnal Maximum		
C - Calibration Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																										



Hourly Maximums

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

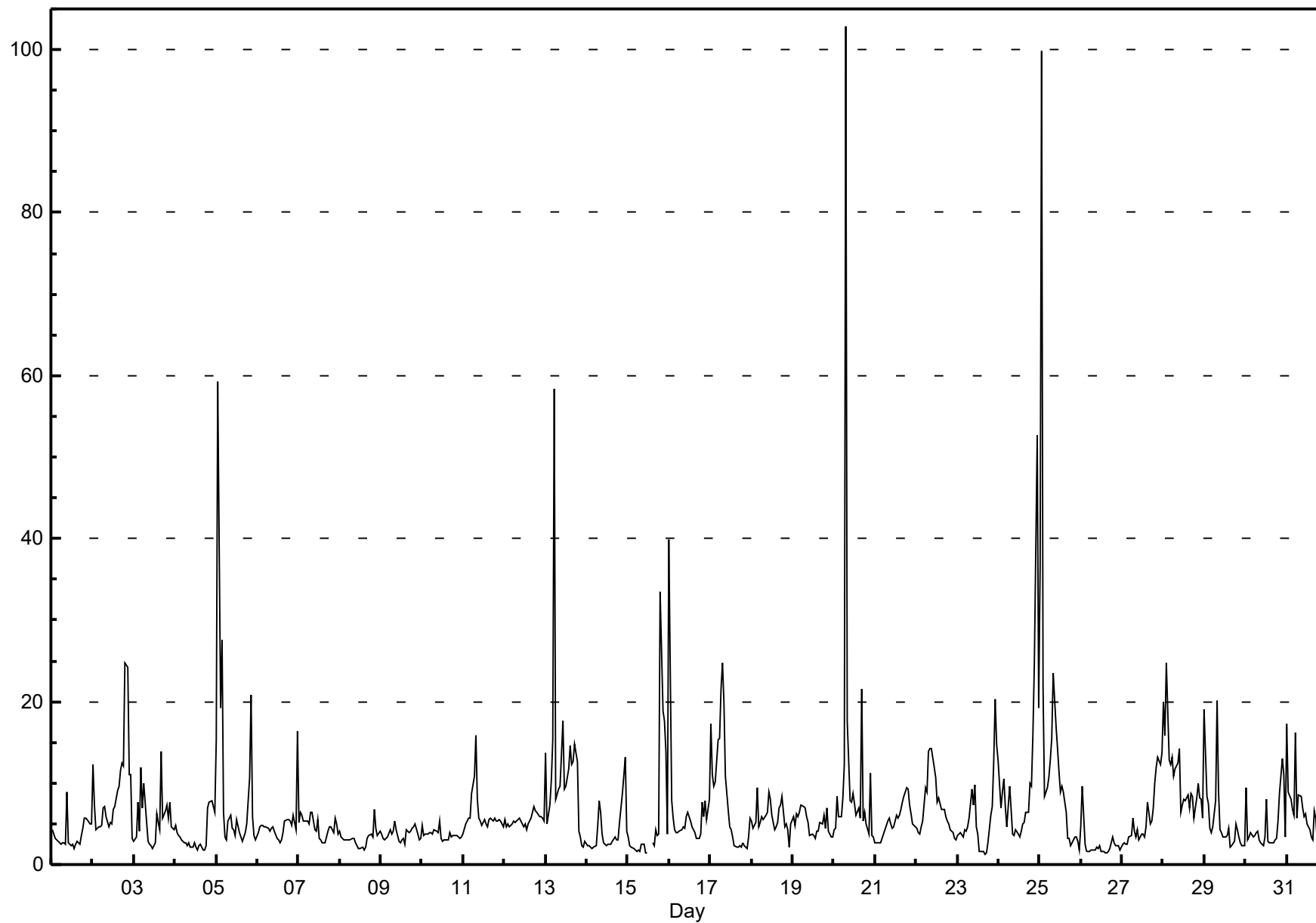
Henry Pirker - March 2017

Maximum Value: 102.9 µg/m ³ on Mar 20 08:00																					Maximum Daily Average: 14.1 µg/m ³ on Mar 25					Hours in Service: 744	
Minimum Value: 1 µg/m ³ on Mar 23 17:00																					Minimum Daily Average: 2.4 µg/m ³ on Mar 26					Hours of Data: 742	
Maximum Diurnal Average: 10.5 µg/m ³ at hour 8																					Minimum Diurnal Average: 4.4 µg/m ³ at hour 14					Hours of Missing Data: 2	
Monthly Average: 6.47 µg/m ³																					Percentiles: P ₁ = 1.5 P ₁₀ = 2.4 Q ₁ = 3.2 Median = 4.7 Q ₃ = 7.0 P ₉₀ = 12.0 P ₉₉ = 33.8					Hours of Calibration: 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-Mar	4	4	3	3	3	2	3	3	2	9	3	2	2	2	2	3	2	4	4	6	6	6	5	5	3.7	8.9	
2-Mar	12	7	4	5	5	5	7	7	6	5	5	5	7	7	9	10	12	12	12	25	24	11	11	3	9.0	24.8	
3-Mar	3	3	8	4	12	7	10	5	3	3	2	2	3	6	5	4	14	6	6	7	6	8	5	4	5.6	13.9	
4-Mar	5	4	3	3	3	3	3	2	3	2	2	3	2	2	2	2	2	2	2	7	8	8	7	6	3.6	7.8	
5-Mar	15	59	19	28	6	3	3	5	6	4	4	4	5	4	3	3	3	4	5	11	21	6	4	3	9.6	59.4	
6-Mar	4	5	5	5	5	5	4	4	4	5	4	3	3	3	3	4	5	6	6	5	5	6	4	16	4.9	16.5	
7-Mar	5	6	6	5	5	5	5	6	6	4	4	6	3	3	3	3	3	4	5	5	4	6	5	4	4.6	6.5	
8-Mar	4	3	3	3	3	3	3	3	3	3	2	2	2	2	2	2	3	4	4	3	7	4	4	4	3.2	6.7	
9-Mar	4	3	3	3	3	4	4	4	5	4	3	3	3	3	2	4	4	4	5	5	5	4	3	3	3.7	5.3	
10-Mar	5	4	4	4	4	4	4	4	4	4	5	3	3	3	3	3	4	3	4	4	4	3	3	3	3.7	5.3	
11-Mar	4	5	5	6	6	9	11	16	8	6	5	5	6	5	5	6	6	5	6	5	5	6	5	5	6.2	15.9	
12-Mar	6	5	5	5	5	5	5	5	6	6	5	5	5	4	5	6	6	7	6	6	6	6	6	5	5.4	7.1	
13-Mar	14	5	7	10	15	58	8	9	10	14	18	9	10	12	15	12	13	15	13	4	3	2	2	3	11.7	58.4	
14-Mar	2	2	2	2	2	2	5	8	6	4	3	2	2	2	2	3	3	3	3	5	7	9	13	4	4.1	13.1	
15-Mar	3	2	2	2	2	2	2	2	2	2	1	1	C	C	3	2	4	4	4	33	19	18	14	4	5.8	33.4	
16-Mar	40	8	6	4	4	4	4	4	5	4	6	6	5	5	4	4	3	3	4	8	6	8	6	8	6.6	39.9	
17-Mar	17	11	10	10	15	15	22	25	20	11	7	5	4	3	2	2	2	2	2	3	2	2	3	6	8.4	24.8	
18-Mar	5	4	5	10	5	5	6	6	6	6	9	8	6	4	5	5	7	7	8	5	5	4	2	5	5.8	9.5	
19-Mar	6	5	6	6	6	7	7	7	6	5	4	4	4	3	4	4	5	5	6	4	7	4	3	3	5.1	7.2	
20-Mar	4	4	8	6	6	8	12	103	18	8	8	9	7	6	7	6	21	5	6	5	4	11	4	3	11.7	102.9	
21-Mar	3	3	3	3	3	4	4	5	6	5	4	5	6	6	6	7	8	8	9	9	7	6	5	5	5.4	9.4	
22-Mar	4	4	4	5	5	9	9	14	14	14	12	11	8	8	7	7	7	6	5	5	4	4	3	3	7.2	14.3	
23-Mar	4	4	4	3	4	4	5	6	9	7	10	5	4	2	2	2	1	1	3	6	7	13	20	15	5.8	20.3	
24-Mar	13	7	9	11	7	5	10	7	4	4	4	4	3	4	5	5	6	6	10	10	16	25	53	19	10.2	52.7	
25-Mar	37	100	22	8	9	11	13	16	23	17	14	11	9	10	9	6	3	3	2	3	3	3	3	2	14.1	99.8	
26-Mar	5	10	2	2	2	2	2	2	2	2	2	2	2	2	1	1	2	2	3	3	2	2	2	2	2.4	9.5	
27-Mar	2	3	2	2	3	4	6	4	3	4	3	4	4	3	5	8	5	5	7	10	12	13	12	14	5.8	13.7	
28-Mar	20	16	25	13	12	13	11	12	13	14	6	7	8	8	9	7	9	8	6	8	10	8	8	6	10.7	24.8	
29-Mar	19	8	7	4	4	5	8	20	9	4	4	3	3	4	4	2	2	3	5	4	3	3	2	2	5.6	20.2	
30-Mar	9	3	3	4	3	4	4	4	3	3	2	3	8	3	3	3	3	3	3	5	9	13	11	3	4.7	13.0	
31-Mar	17	9	8	7	6	16	6	8	8	7	6	6	5	4	3	3	7	6	3	3	4	7	2	2	6.4	17.3	
9.5 10.2 6.6 6.0 5.6 7.5 6.6 10.5 7.2 6.1 5.4 4.7 4.8 4.4 4.5 4.5 5.7 5.1 5.4 7.1 7.4 7.3 7.4 5.5																									Diurnal Average		
39.9 99.8 24.8 27.6 15.3 58.4 21.6 102.9 23.4 17.0 17.6 11.4 9.6 11.7 14.5 12.2 21.5 14.8 12.7 33.4 24.3 24.5 52.7 19.2																									Diurnal Maximum		
C - Calibration																											

Hourly Maximums

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

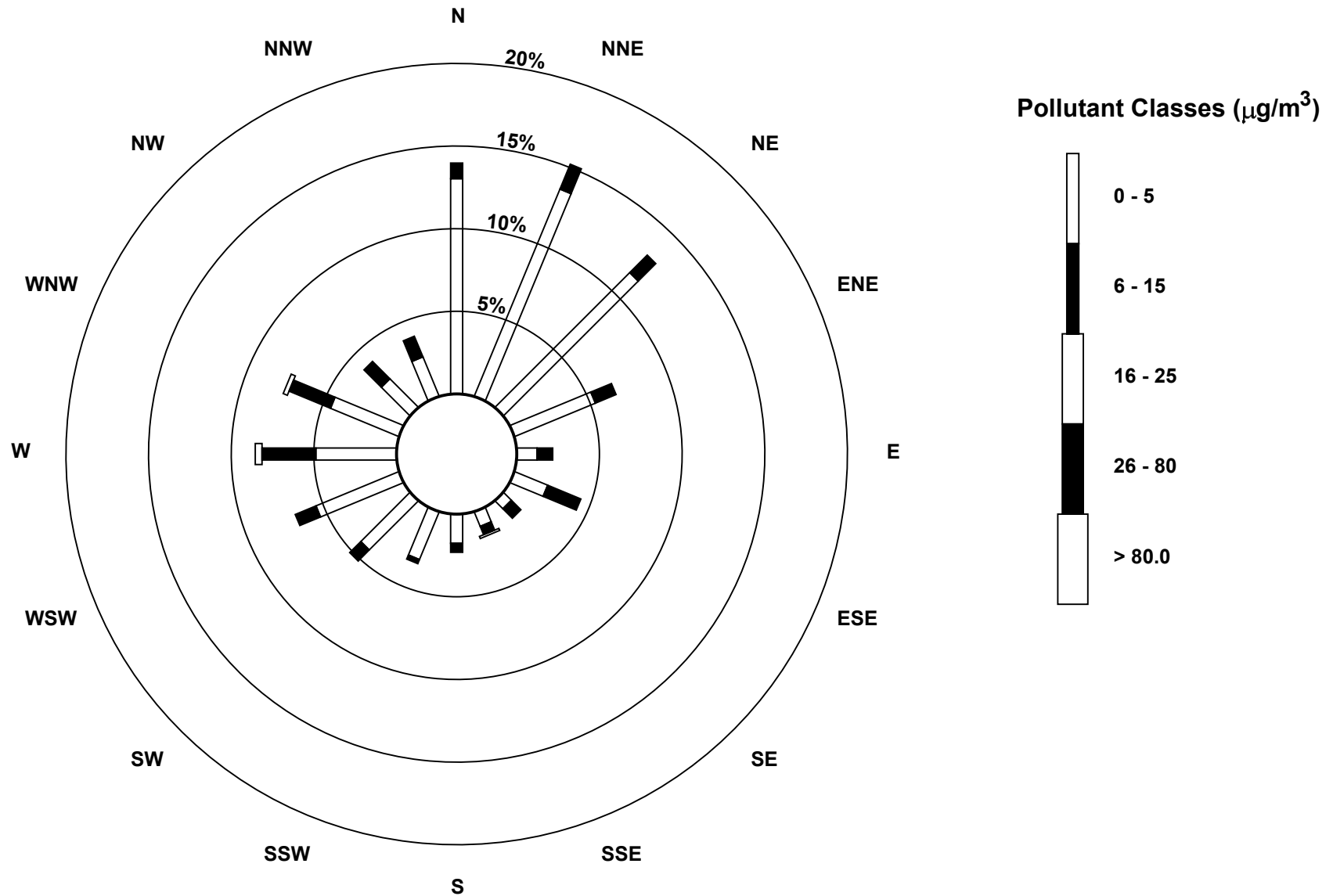
Henry Pirker - March 2017



Pollutant Rose

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

Henry Pirker - March 2017



Hourly Averages

External Temperature (ET) - °C

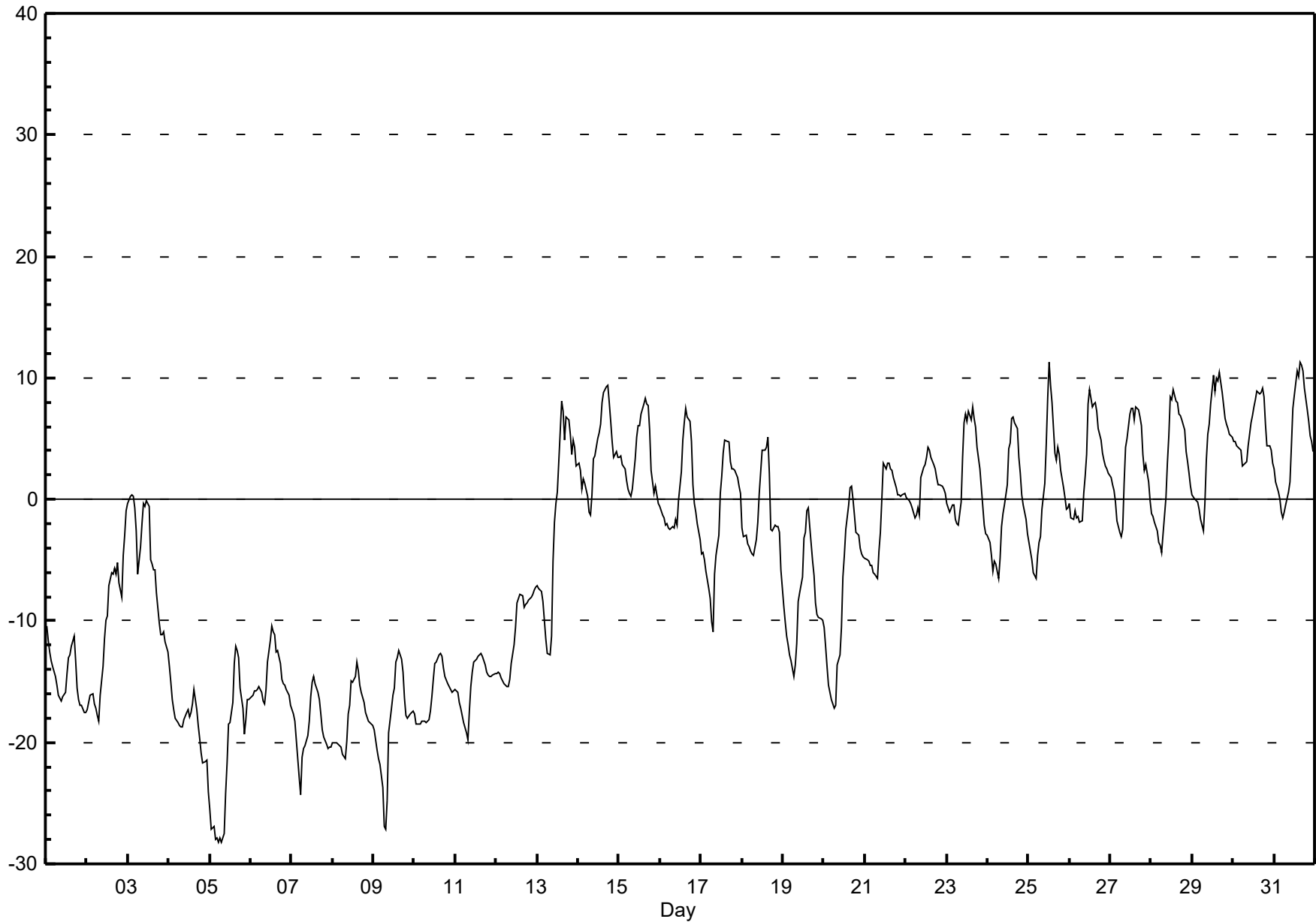
Henry Pirker - March 2017

Maximum Value: 11.3 °C on Mar 25 13:00																				Maximum Daily Average: 5.6 °C on Mar 30										Hours in Service: 744	
Minimum Value: -28 °C on Mar 5 06:00																				Minimum Daily Average: -20.9 °C on Mar 5										Hours of Data: 744	
Maximum Diurnal Average: -0.7 °C at hour 16																				Minimum Diurnal Average: -10.2 °C at hour 7										Hours of Missing Data: 0	
Monthly Average: -5.41 °C																				Percentiles: P ₁ = -27.1 P ₁₀ = -18.2 Q ₁ = -14.6 Median = -2.9 Q ₃ = 2.5 P ₉₀ = 6.5 P ₉₉ = 10.0										Hours of Calibration: 0	
																				Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Mar	-10	-12	-13	-13	-14	-15	-15	-16	-16	-17	-16	-16	-14	-13	-13	-12	-11	-13	-16	-16	-17	-17	-18	-18	-14.6	-10.4					
2-Mar	-17	-17	-16	-16	-17	-17	-18	-18	-16	-14	-11	-10	-10	-7	-6	-6	-6	-6	-5	-7	-8	-5	-3	-1	-10.7	-1.0					
3-Mar	0	0	0	0	-1	-3	-6	-4	-2	0	-1	0	-1	-5	-5	-6	-6	-8	-10	-11	-11	-11	-12	-13	-4.7	0.4					
4-Mar	-14	-15	-17	-17	-18	-18	-19	-19	-19	-18	-18	-17	-18	-18	-17	-16	-17	-19	-20	-21	-22	-22	-21	-24	-18.4	-13.8					
5-Mar	-26	-27	-27	-28	-28	-28	-28	-28	-28	-24	-22	-18	-18	-17	-13	-12	-12	-13	-16	-17	-19	-18	-16	-16	-20.9	-12.1					
6-Mar	-16	-16	-16	-16	-16	-15	-16	-17	-17	-16	-13	-12	-10	-11	-11	-13	-12	-13	-15	-15	-15	-16	-16	-17	-14.6	-10.4					
7-Mar	-17	-18	-18	-20	-23	-24	-21	-20	-20	-19	-18	-16	-15	-15	-15	-16	-16	-18	-19	-20	-20	-21	-20	-20	-18.8	-14.6					
8-Mar	-20	-20	-20	-20	-20	-20	-21	-21	-20	-18	-17	-15	-15	-15	-13	-14	-15	-16	-17	-18	-18	-18	-18	-19	-17.9	-13.4					
9-Mar	-19	-20	-21	-21	-22	-24	-27	-27	-25	-19	-17	-16	-16	-13	-13	-12	-13	-14	-16	-18	-18	-18	-18	-17	-18.5	-12.4					
10-Mar	-18	-18	-19	-18	-18	-18	-18	-18	-18	-17	-16	-15	-14	-13	-13	-13	-13	-14	-15	-15	-15	-16	-16	-16	-16.0	-12.6					
11-Mar	-16	-16	-17	-17	-18	-18	-19	-20	-17	-15	-14	-13	-13	-13	-13	-13	-13	-14	-14	-14	-15	-15	-14	-14	-15.2	-12.7					
12-Mar	-14	-14	-14	-15	-15	-15	-15	-15	-15	-14	-12	-11	-9	-8	-8	-8	-9	-9	-9	-8	-8	-8	-7	-7	-11.1	-7.2					
13-Mar	-7	-7	-8	-8	-10	-11	-13	-13	-11	-5	-2	0	1	6	8	7	5	7	7	5	4	5	4	3	-1.5	8.1					
14-Mar	3	2	1	2	1	0	-1	-1	0	3	4	5	5	6	8	9	9	9	8	6	5	4	4	3	4.0	9.4					
15-Mar	4	4	3	3	2	1	1	0	1	3	5	6	6	7	8	8	8	8	6	2	1	1	0	0	3.6	8.3					
16-Mar	-1	-1	-2	-2	-2	-2	-2	-2	-2	-2	-2	0	2	5	6	8	7	6	5	1	0	-1	-2	-3	0.5	7.5					
17-Mar	-5	-4	-5	-6	-7	-8	-10	-11	-6	-5	-3	0	2	4	5	5	5	3	3	3	2	2	1	0	-1.5	4.9					
18-Mar	-2	-3	-3	-4	-4	-4	-4	-5	-3	-2	0	2	4	4	4	5	2	-2	-3	-2	-2	-2	-3	-6	-1.3	5.1					
19-Mar	-9	-10	-11	-12	-13	-13	-15	-14	-12	-8	-8	-6	-3	-3	-1	-1	-2	-5	-6	-9	-9	-10	-10	-10	-8.3	-0.6					
20-Mar	-11	-12	-14	-15	-17	-17	-17	-17	-14	-13	-11	-6	-5	-2	-1	1	1	0	-1	-3	-3	-4	-5	-5	-7.8	1.1					
21-Mar	-5	-5	-5	-5	-5	-6	-6	-7	-4	-3	0	3	3	3	3	3	2	2	1	0	0	0	0	0	-1.3	3.0					
22-Mar	0	0	0	0	-1	-1	-1	-1	-1	2	3	3	4	4	4	3	3	3	2	1	1	1	1	0	1.2	4.3					
23-Mar	0	-1	-1	0	0	-2	-2	-2	0	3	6	7	6	7	7	8	7	6	4	2	1	-1	-2	-3	2.1	7.6					
24-Mar	-3	-4	-5	-6	-5	-5	-6	-5	-2	-1	0	1	4	5	7	7	6	6	3	2	0	0	-2	-3	-0.2	6.8					
25-Mar	-4	-4	-5	-6	-7	-5	-4	-3	-1	1	5	8	11	9	8	4	3	4	4	2	1	0	-1	-1	0.9	11.3					
26-Mar	0	-2	-2	-1	-1	-1	-2	-2	1	2	4	8	9	8	8	8	7	6	5	4	3	3	3	2	2.8	9.0					
27-Mar	2	1	1	0	-2	-3	-3	-2	1	4	5	7	8	7	7	8	7	7	6	4	2	3	1	0	2.9	7.7					
28-Mar	-1	-1	-2	-3	-4	-4	-4	-3	0	3	5	8	8	9	8	8	7	7	7	6	4	3	2	1	2.7	9.0					
29-Mar	0	0	0	0	-1	-2	-3	0	3	5	6	8	10	9	10	10	10	9	8	7	6	6	5	5	4.7	10.4					
30-Mar	5	5	4	4	4	3	3	3	3	4	6	7	8	8	9	9	9	9	8	6	4	4	4	3	5.6	9.1					
31-Mar	3	1	1	0	-1	-1	-1	0	1	1	4	8	9	11	10	11	11	11	9	7	6	5	5	4	4.7	11.2					
																									Diurnal Average						
																									Diurnal Maximum						

Hourly Averages

External Temperature (ET) - °C

Henry Pirker - March 2017



Hourly Averages

Relative Humidity (RH) - %

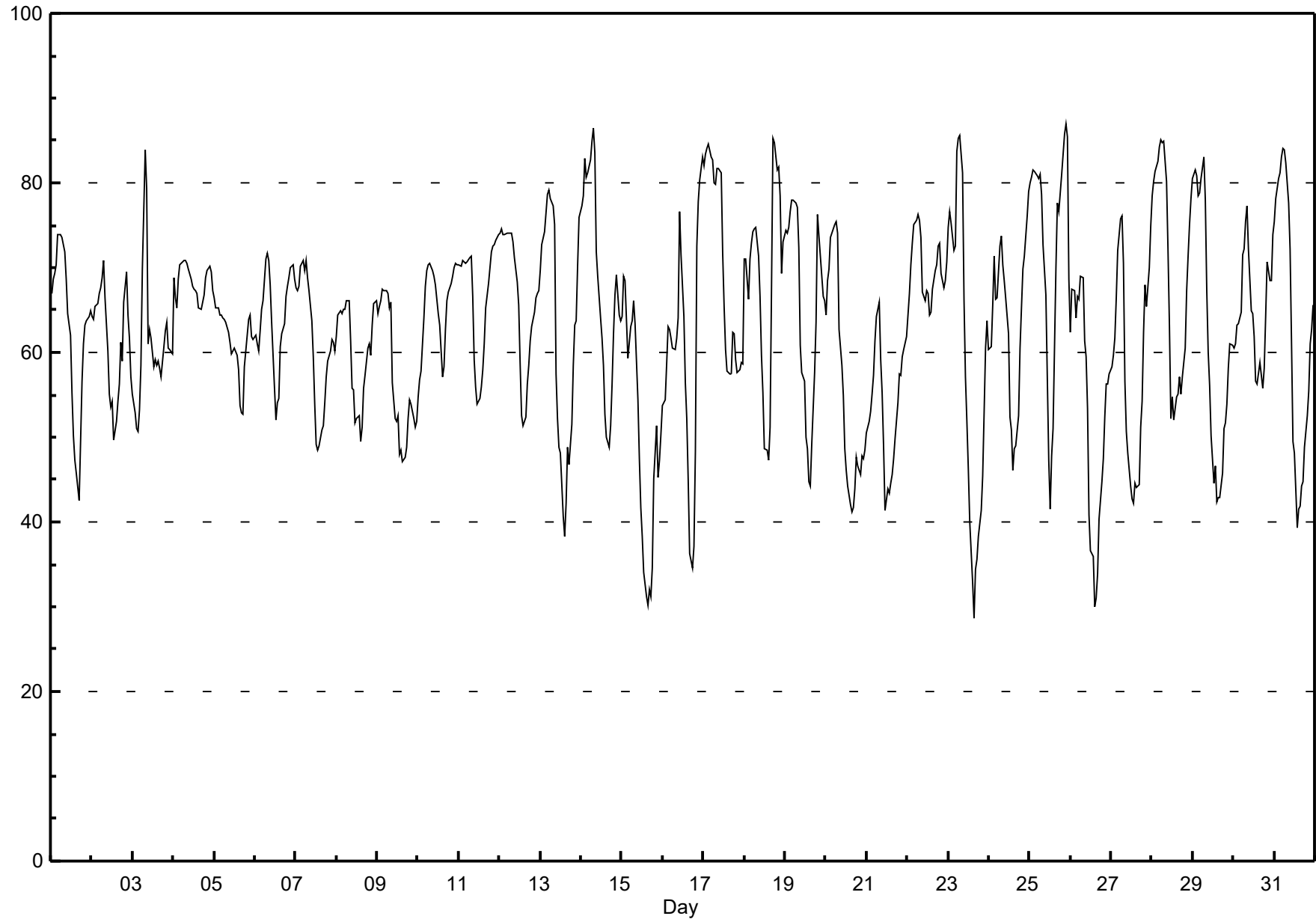
Henry Pirker - March 2017

Maximum Value: 86.9 % on Mar 25 22:00																								Hours in Service: 744		
Maximum Daily Average: 72.5 % on Mar 25																								Hours of Data: 744		
Minimum Value: 29 % on Mar 23 16:00																								Hours of Missing Data: 0		
Maximum Diurnal Average: 73.7 % at hour 8																								Hours of Calibration: 0		
Monthly Average: 62.70 %																								Percent Operational Time: 100.0		
Minimum Daily Average: 49.7 % on Mar 15																										
Minimum Diurnal Average: 49.2 % at hour 15																										
Percentiles: P ₁ = 32.8 P ₁₀ = 47.3 Q ₁ = 54.6 Median = 63.9 Q ₃ = 70.6 P ₉₀ = 78.0 P ₉₉ = 85.2																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Mar	67	69	69	70	74	74	74	73	72	69	65	62	55	50	47	46	42	49	57	61	63	64	64	65	62.5	73.9
2-Mar	64	64	65	66	67	68	69	71	66	60	55	54	54	50	52	54	56	61	59	66	70	64	62	57	61.4	70.8
3-Mar	55	53	51	51	53	58	70	84	79	61	63	62	58	59	59	58	57	61	63	64	61	60	60	60	60.7	83.8
4-Mar	69	66	65	69	70	71	71	71	71	70	69	68	67	67	67	65	65	66	67	69	70	70	69	67	68.3	70.9
5-Mar	66	65	65	64	64	64	64	64	62	61	60	60	61	60	58	54	53	53	58	62	64	64	62	61	61.3	66.4
6-Mar	62	61	60	63	65	66	71	72	71	68	64	56	52	54	55	61	62	63	67	68	69	70	70	69	64.0	71.7
7-Mar	68	67	68	70	71	70	71	69	67	64	60	54	49	48	49	51	51	54	57	59	60	61	61	60	60.8	70.8
8-Mar	62	64	65	65	65	65	66	66	61	56	56	52	52	53	49	51	56	57	61	61	60	63	66	66	59.9	66.1
9-Mar	65	65	66	67	67	67	67	65	66	56	52	52	53	48	48	47	48	49	52	54	54	52	51	52	56.9	67.4
10-Mar	55	57	58	64	68	70	70	71	70	69	68	66	65	63	57	58	63	66	67	68	69	70	70	70	65.5	70.5
11-Mar	70	70	71	71	71	71	71	71	67	59	56	54	55	56	58	61	65	68	70	72	73	73	73	74	66.6	73.9
12-Mar	74	75	74	74	74	74	74	74	73	71	68	66	59	53	51	52	56	58	61	63	65	66	67	67	66.3	74.6
13-Mar	70	73	74	77	79	79	78	77	75	57	52	49	48	41	38	42	49	47	52	58	63	64	70	76	62.0	79.1
14-Mar	77	78	83	81	81	83	85	86	84	72	69	64	62	58	53	50	49	51	56	62	67	69	64	64	68.7	86.4
15-Mar	64	69	69	59	61	63	64	66	63	54	48	42	38	34	31	30	32	31	35	45	51	45	47	50	49.7	68.9
16-Mar	54	54	59	63	63	62	61	60	62	64	77	72	64	56	52	45	36	35	37	48	73	78	80	83	59.9	83.0
17-Mar	82	83	84	85	83	83	80	80	82	82	81	72	66	60	58	58	57	62	62	59	58	58	59	59	70.5	84.6
18-Mar	71	71	66	71	73	74	75	75	71	67	60	55	49	48	47	51	68	85	85	81	82	78	69	73	68.6	85.2
19-Mar	74	74	75	77	78	78	78	77	72	61	58	57	50	49	45	44	49	58	63	76	74	71	67	66	65.4	78.0
20-Mar	64	68	70	74	75	75	75	74	63	59	55	49	46	44	42	41	42	44	48	47	46	48	47	49	56.0	75.5
21-Mar	51	52	53	55	57	61	64	66	59	55	49	41	44	43	45	46	47	50	54	57	57	60	60	62	53.7	65.9
22-Mar	64	67	70	73	75	76	76	76	74	67	66	67	67	64	65	67	70	70	73	73	69	68	69	71	69.9	76.3
23-Mar	75	77	75	72	72	84	85	86	81	66	57	52	46	40	33	29	34	36	38	41	45	53	60	64	58.4	85.5
24-Mar	60	61	66	71	66	66	73	74	70	69	66	62	52	51	46	49	49	53	60	65	70	71	76	79	63.6	79.0
25-Mar	80	81	82	81	81	80	81	79	73	67	57	47	41	48	51	70	78	77	79	81	86	87	85	69	72.5	86.9
26-Mar	62	67	67	64	67	66	69	69	61	59	53	41	37	36	30	31	34	40	45	47	52	56	56	57	52.9	68.9
27-Mar	58	60	62	66	72	76	76	71	57	51	48	44	43	42	45	44	44	51	54	62	68	65	70	75	58.5	76.1
28-Mar	79	80	81	83	84	85	85	85	80	72	63	52	55	52	55	55	57	55	57	60	67	71	75	78	69.5	85.1
29-Mar	81	81	81	78	79	81	83	78	67	60	56	50	45	47	42	43	43	46	51	52	54	58	61	61	61.5	83.1
30-Mar	61	61	63	63	65	72	72	75	77	72	65	65	62	57	56	59	57	56	58	64	71	68	68	74	65.1	77.2
31-Mar	75	78	80	81	83	84	84	82	78	72	61	50	48	39	42	42	44	45	49	52	55	61	63	66	63.1	84.0
67.1 68.2 69.0 69.9 71.1 72.4 73.6 73.7 70.1 64.2 60.5 55.9 53.0 50.7 49.2 50.2 52.1 54.6 57.8 61.3 64.1 64.8 65.3 65.9																								Diurnal Average		
82.1 83.4 84.0 84.6 84.2 85.1 85.2 86.4 83.6 81.7 81.2 71.7 67.5 66.9 69.9 77.6 85.2 84.8 81.4 85.7 86.9 85.5 83.0																								Diurnal Maximum		

Hourly Averages

Relative Humidity (RH) - %

Henry Pirker - March 2017



Hourly Averages

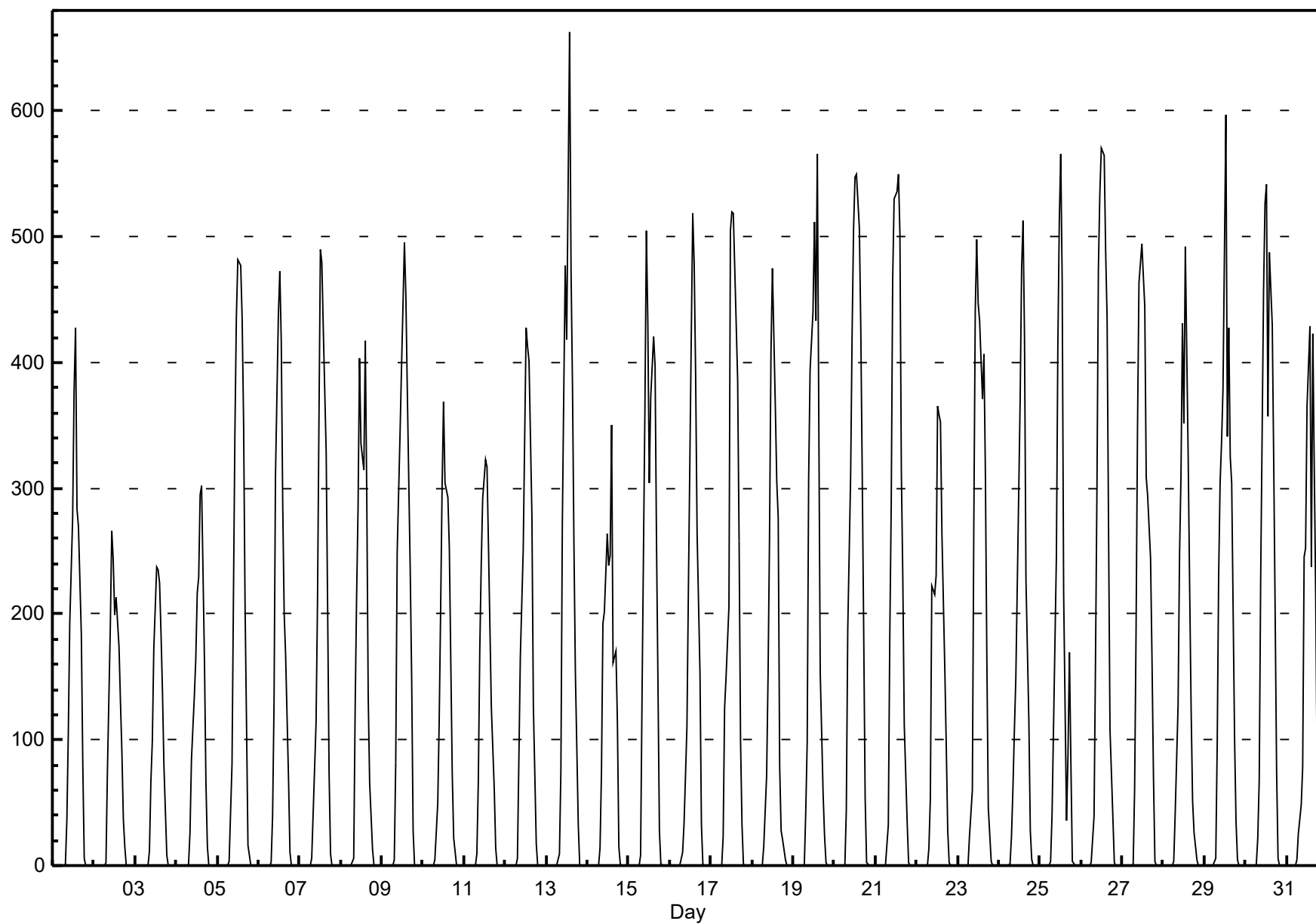
Solar Radiation (SR) - W/m²

Henry Pirker - March 2017

Maximum Value: 663.0 W/m ² on Mar 13 14:00																								Maximum Daily Average: 169.0 W/m ² on Mar 20				Hours in Service: 744	
Minimum Value: 0 W/m ² on Mar 1 01:00																								Minimum Daily Average: 60.7 W/m ² on Mar 3				Hours of Data: 744	
Maximum Diurnal Average: 419.1 W/m ² at hour 13																								Minimum Diurnal Average: 0.0 W/m ² at hour 1				Hours of Missing Data: 0	
Monthly Average: 119.10 W/m ²																								Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 4.4 Q ₃ = 227.9 P ₉₀ = 419.5 P ₉₉ = 536.0				Hours of Calibration: 0	
																								Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Mar	0	0	0	0	0	0	0	1	36	105	192	277	378	427	283	269	183	81	6	0	0	0	0	0	93.3	427.3			
2-Mar	0	0	0	0	0	0	0	2	75	190	266	243	199	213	174	130	90	37	15	0	0	0	0	0	68.1	265.7			
3-Mar	0	0	0	0	0	0	0	0	12	66	99	172	237	235	224	184	138	80	8	0	0	0	0	0	60.7	237.3			
4-Mar	0	0	0	0	0	0	0	1	26	84	135	165	216	229	295	302	162	66	15	0	0	0	0	0	70.7	302.4			
5-Mar	0	0	0	0	0	0	0	3	80	215	345	436	481	478	434	352	207	114	16	0	0	0	0	0	131.7	481.4			
6-Mar	0	0	0	0	0	0	0	3	39	130	310	438	472	416	287	201	167	70	10	0	0	0	0	0	106.0	472.4			
7-Mar	0	0	0	0	0	0	0	6	41	113	209	352	490	480	426	328	204	74	9	0	0	0	0	0	113.8	489.9			
8-Mar	0	0	0	0	0	0	0	5	125	215	284	403	336	314	417	296	135	66	13	0	0	0	0	0	108.7	417.3			
9-Mar	0	0	0	0	0	0	0	4	82	249	345	396	445	496	453	377	235	148	27	0	0	0	0	0	135.7	496.1			
10-Mar	0	0	0	0	0	0	0	5	50	115	203	301	369	304	293	252	162	74	22	0	0	0	0	0	89.6	368.9			
11-Mar	0	0	0	0	0	0	0	9	67	171	239	291	322	317	255	190	126	62	14	0	0	0	0	0	85.9	322.3			
12-Mar	0	0	0	0	0	0	0	6	85	166	251	340	428	413	401	278	127	73	17	0	0	0	0	0	107.7	427.6			
13-Mar	0	0	0	0	0	0	0	9	76	272	378	477	418	663	474	382	255	153	32	0	0	0	0	0	149.6	663.0			
14-Mar	0	0	0	0	0	0	0	14	74	192	202	264	239	246	351	162	171	115	14	1	0	0	0	0	85.2	350.8			
15-Mar	0	0	0	0	0	0	0	8	134	364	504	432	305	372	421	398	256	145	28	1	0	0	0	0	140.4	504.2			
16-Mar	0	0	0	0	0	0	0	11	33	72	111	219	422	519	479	390	265	153	32	1	0	0	0	0	112.7	519.1			
17-Mar	0	0	0	0	0	0	0	23	126	150	206	505	520	519	475	386	258	99	32	2	0	0	0	0	137.5	520.1			
18-Mar	0	0	0	0	0	0	0	15	72	153	262	408	475	366	306	277	80	28	20	4	0	0	0	0	102.6	474.9			
19-Mar	0	0	0	0	0	0	0	43	98	306	394	440	512	433	566	358	153	57	24	2	0	0	0	0	141.1	565.5			
20-Mar	0	0	0	0	0	0	0	44	188	311	423	506	548	550	508	426	311	185	54	2	0	0	0	0	169.0	550.0			
21-Mar	0	0	0	0	0	0	0	32	180	287	465	530	535	549	503	312	228	112	35	2	0	0	0	0	157.1	549.3			
22-Mar	0	0	0	0	0	0	0	14	53	222	216	230	366	359	353	265	156	94	28	2	0	0	0	0	98.2	365.7			
23-Mar	0	0	0	0	0	0	0	23	60	270	441	498	447	433	371	407	311	165	46	3	0	0	0	0	144.8	498.5			
24-Mar	0	0	0	0	0	0	1	23	61	107	148	297	371	475	512	420	227	115	28	5	0	0	0	0	116.3	512.3			
25-Mar	0	0	0	0	0	0	3	40	108	245	413	512	566	464	218	36	88	170	83	4	0	0	0	0	122.9	566.3			
26-Mar	0	0	0	0	0	0	2	40	164	299	474	535	571	565	488	436	269	108	38	3	0	0	0	0	166.3	570.9			
27-Mar	0	0	0	0	0	0	1	61	188	349	463	495	469	445	309	294	244	164	71	3	0	0	0	0	148.2	495.0			
28-Mar	0	0	0	0	0	0	3	41	127	246	310	431	351	492	322	219	124	52	26	5	0	0	0	0	114.6	491.6			
29-Mar	0	0	0	0	0	0	5	96	231	304	337	379	596	341	428	325	304	100	35	4	0	0	0	0	145.2	596.5			
30-Mar	0	0	0	0	0	0	1	22	68	227	457	526	542	357	488	430	322	200	75	6	0	0	0	0	155.1	542.1			
31-Mar	0	0	0	0	0	0	4	26	49	78	245	252	366	429	237	423	314	213	69	7	0	0	0	0	113.1	429.1			
0.0 0.0 0.0 0.0 0.0 0.0 0.7 20.3 90.6 202.4 300.9 379.1 419.1 416.1 379.1 306.6 202.3 108.7 30.4 1.9 0.0 0.0 0.0 0.0																									Diurnal Average				
0.0 0.1 0.0 0.0 0.0 0.2 5.3 95.6 230.7 364.3 504.2 535.0 596.5 663.0 565.5 435.6 321.7 212.8 83.2 7.3 0.1 0.0 0.0 0.0 0.2																									Diurnal Maximum				

Hourly Averages

Solar Radiation (SR) - W/m²
Henry Pirker - March 2017



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	9	9	6	5	10	9	10	8	13	18	16	16	12	10	7	5	4	5	6	5	6	6	4	5	5.2	17.9
Dir	18	24	10	342	309	307	308	294	273	271	270	263	253	258	266	267	273	349	40	35	42	51	19	37	303.2	271.2
2 Spd	4	5	6	5	4	3	4	2	3	5	3	3	3	1	4	3	2	1	1	1	1	8	11	9	2.5	10.5
Dir	61	57	47	68	61	39	68	45	46	77	59	99	114	101	263	248	243	313	124	110	134	106	125	139	87.9	125.2
3 Spd	9	9	9	9	7	2	15	10	18	11	10	10	8	13	11	11	7	7	6	6	3	7	8	10	2.5	18.3
Dir	121	116	113	106	103	257	286	270	254	214	189	201	231	277	286	294	318	3	23	334	305	7	11	358	277.1	254.2
4 Spd	11	12	9	9	10	6	6	9	9	8	7	6	9	7	5	5	5	4	4	4	5	3	3	3	5.7	11.8
Dir	0	353	10	7	355	1	349	315	326	343	337	33	43	29	37	17	39	41	38	39	353	40	70	238	5.2	352.8
5 Spd	N	N	3	4	7	5	N	4	6	5	5	6	7	9	5	7	7	6	7	7	5	5	8	7	4.1	8.8
Dir	N	N	294	291	293	295	N	289	281	267	248	259	292	283	303	43	31	10	353	346	320	9	16	13	322.1	283.2
6 Spd	6	7	7	7	7	7	5	7	5	5	7	8	7	7	7	9	9	7	6	7	6	6	5	5	6.5	9.1
Dir	26	23	21	15	6	10	18	18	7	9	9	6	17	26	13	29	10	5	359	351	346	343	341	358	9.4	9.5
7 Spd	7	6	6	4	N	N	5	4	4	5	6	6	6	7	9	11	8	6	6	8	9	7	4	4	6.0	10.7
Dir	352	355	355	325	N	N	14	15	29	36	30	21	23	25	37	35	27	26	11	3	4	5	16	21	16.2	35.4
8 Spd	6	6	8	8	6	6	5	7	9	7	6	6	6	7	8	10	8	7	7	8	8	6	6	6	7.0	10.4
Dir	10	13	5	359	2	7	11	1	357	360	9	17	21	354	3	357	2	4	0	1	6	16	17	7	5.1	356.6
9 Spd	6	7	6	6	7	4	5	4	3	7	6	7	9	8	10	11	11	12	10	8	8	7	9	9	6.8	11.5
Dir	13	8	5	7	358	320	272	269	297	32	37	31	35	9	15	4	1	360	2	6	7	12	22	37	8.0	359.9
10 Spd	8	8	9	9	10	8	9	10	9	12	11	12	12	13	13	11	8	9	10	8	7	6	5	5	9.2	12.8
Dir	28	28	33	30	39	30	30	30	34	44	40	34	32	39	38	33	15	29	38	33	33	26	23	26	32.9	39.5
11 Spd	4	4	4	4	2	2	2	3	3	5	4	8	9	9	8	8	8	8	8	10	8	9	10	9	5.9	9.6
Dir	26	7	4	7	13	320	321	330	357	40	38	358	18	24	20	19	9	9	12	20	22	24	32	37	16.6	20.0
12 Spd	10	10	10	10	10	10	9	9	9	9	9	9	8	8	9	9	10	9	10	10	9	8	7	8	8.9	10.5
Dir	42	51	71	64	57	64	68	66	64	73	67	68	58	33	29	31	31	38	46	48	46	43	32	42	51.6	71.1
13 Spd	9	7	2	2	1	2	3	2	3	2	2	4	4	3	3	4	3	1	8	8	6	11	7	4	2.0	10.8
Dir	44	59	44	357	24	273	270	270	266	252	222	277	274	258	249	249	273	228	222	216	203	190	189	239	235.1	190.2
14 Spd	8	6	7	9	4	4	2	4	5	6	7	8	7	9	10	3	9	7	8	7	4	5	7	8	4.3	9.6
Dir	173	189	195	198	158	40	81	83	68	59	54	55	54	52	56	55	115	105	102	71	70	81	78	104	91.1	55.7
15 Spd	8	24	14	20	14	10	12	11	8	15	16	16	15	14	12	11	9	7	3	3	4	6	7	5	8.6	23.7
Dir	231	250	234	219	216	194	192	200	193	204	208	213	213	213	212	238	229	214	168	77	70	64	56	46	213.5	249.8
16 Spd	6	7	9	6	9	10	9	7	6	2	5	5	4	5	4	6	10	6	4	1	5	5	3	1	1.5	10.2
Dir	60	48	55	44	53	53	54	73	101	283	254	247	248	255	260	249	243	250	235	12	54	77	58	52	43.6	243.3
17 Spd	4	4	1	0	1	2	4	3	3	3	7	6	8	7	7	10	9	9	8	9	10	8	4	2	4.3	10.0
Dir	260	325	336	9	86	58	282	272	32	54	50	35	37	20	18	26	26	31	29	39	57	58	69	66	31.0	25.7
18 Spd	1	3	1	3	3	3	3	2	3	5	5	8	7	8	5	6	23	26	11	9	6	9	13	9	6.4	25.5
Dir	306	41	357	274	262	274	273	277	286	291	286	289	263	251	282	254	261	271	268	256	194	215	227	273	262.0	271.0
19 Spd	9	9	6	4	4	5	4	2	7	5	6	7	4	6	5	2	3	7	7	15	12	12	13	9	5.9	14.7
Dir	278	284	280	297	286	293	286	315	288	284	296	288	336	341	337	321	291	5	315	276	269	251	252	236	285.7	276.5
20 Spd	7	6	4	4	2	3	2	2	5	7	7	7	6	6	6	5	5	7	6	8	12	8	9	11	2.9	12.1
Dir	230	217	292	289	282	286	278	280	283	283	281	273	291	308	337	354	12	24	28	38	50	54	52	46	342.6	50.5
21 Spd	11	12	12	13	14	13	12	9	8	8	6	2	6	5	8	8	7	6	6	5	6	4	5	6	6.3	14.4
Dir	51	51	50	51	51	55	54	52	47	60	80	135	278	351	341	350	344	336	314	330	357	11	23	52	32.4	51.3
22 Spd	4	4	3	3	1	3	3	1	4	1	3	3	6	6	7	7	6	6	4	4	5	7	9	7	3.4	8.9
Dir	48	58	29	23	297	216	38	144	199	219	260	349	31	26	24	23	15	14	11	27	15	18	32	38	23.1	32.2

Hourly Averages

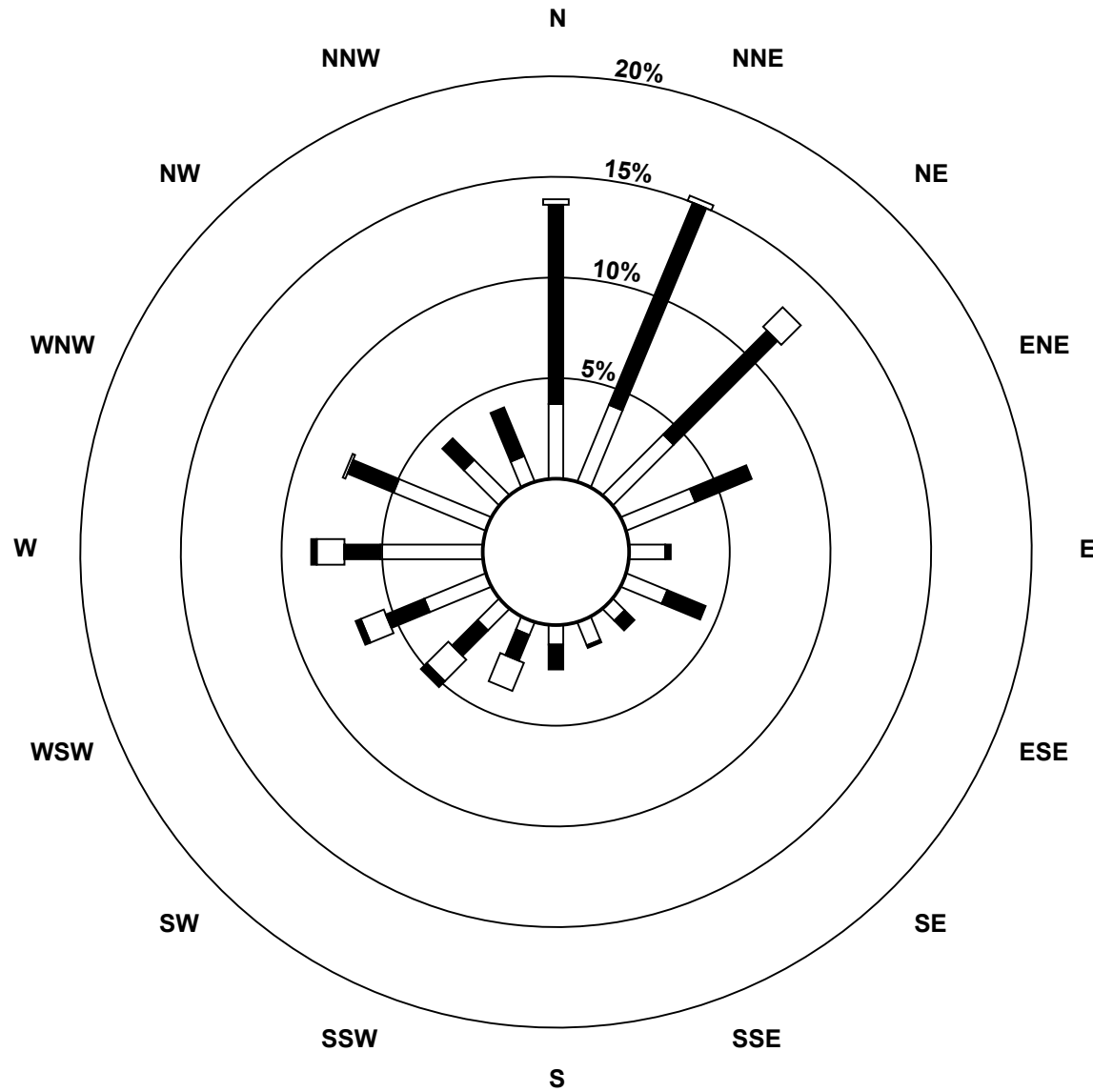
Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - March 2017

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	5	7	5	7	1	8	4	2	3	2	3	6	13	12	17	15	15	12	6	3	4	2	2	2	3.8	17.4
Dir	30	39	30	51	195	261	272	249	225	191	191	240	226	212	207	223	247	245	243	181	189	108	83	64	228.0	206.8
24 Spd	3	2	2	2	4	2	2	3	5	5	6	5	2	6	6	7	5	3	3	3	2	3	4	3	2.2	6.5
Dir	60	58	91	29	24	109	327	37	49	55	70	58	38	327	340	340	350	352	274	310	288	264	288	279	5.8	340.4
25 Spd	3	3	2	4	6	2	3	1	0	3	2	3	2	4	6	10	4	6	9	7	6	5	3	6	0.9	9.9
Dir	292	294	287	280	294	79	133	281	160	272	252	241	224	322	298	242	204	92	107	115	120	118	151	200	203.8	242.5
26 Spd	4	2	4	5	3	5	3	3	1	6	7	3	4	7	8	8	8	6	5	4	6	4	9	7	1.8	8.6
Dir	188	218	248	233	271	242	158	185	153	123	143	224	280	334	349	353	356	358	351	9	16	15	360	5	339.4	359.7
27 Spd	7	3	1	2	3	3	3	3	3	1	4	2	1	5	5	3	4	5	5	2	2	3	3	2	1.3	6.7
Dir	6	10	287	236	289	240	285	307	282	148	74	322	247	285	292	32	36	38	47	341	130	69	66	118	352.5	5.9
28 Spd	1	2	1	2	2	2	1	1	0	4	4	1	5	7	7	6	7	6	1	3	1	0	2	1	1.3	6.9
Dir	275	43	155	277	60	85	305	265	47	112	90	246	267	288	278	289	316	312	23	351	104	210	309	175	304.1	277.9
29 Spd	1	3	3	4	1	1	2	2	3	4	3	3	2	5	6	6	5	6	4	6	8	5	6	6	2.1	7.7
Dir	260	167	185	194	267	8	83	100	107	133	124	91	12	333	351	11	19	34	1	342	354	10	354	346	15.1	353.9
30 Spd	4	4	7	6	1	5	3	9	8	10	16	15	13	13	14	15	15	10	8	4	3	6	8	7	6.2	15.9
Dir	26	0	339	341	321	244	230	247	257	263	267	271	271	250	236	213	217	224	215	213	156	170	197	190	243.7	267.1
31 Spd	7	4	2	1	2	2	1	3	5	6	7	10	11	14	14	20	21	21	19	16	17	14	13	10	8.0	20.9
Dir	176	158	108	121	82	105	70	101	121	124	139	170	151	209	221	236	232	224	220	219	227	239	224	215	208.6	231.9
Spd	2.5	2.6	2.4	1.8	2.1	1.6	1.6	1.5	1.5	0.8	0.6	1.6	1.7	3.2	3.3	3.2	3.2	3.1	2.3	2.8	2.5	2.2	2.2	2.1	Diurnal Average	
Dir	25.7	19.4	18.5	6.8	6.3	352.3	347.1	332.4	318.4	356.2	344.6	303.3	316.2	315.8	325.5	325.9	320.2	343.0	358.7	358.7	16.9	35.7	26.8	27.7	Diurnal Maximum	
Spd	11.1	23.7	14.4	19.7	14.4	12.8	14.5	10.5	18.3	17.9	16.1	16.4	15.4	14.1	17.4	19.7	22.6	25.5	19.4	16.1	17.1	14.0	13.3	11.2	Diurnal Maximum	
Dir	0.0	249.8	234.0	218.7	51.3	55.2	285.7	199.6	254.2	271.2	269.9	262.6	213.1	209.0	206.8	236.5	260.8	271.0	220.4	219.5	227.5	239.1	227.0	46.5		
Maximum Speed Value: 26 km/h on Mar 18 18:00								Minimum Speed Value: 0 km/h on Mar 17 04:00												Hours in Service: 744						
Maximum Daily Speed Average: 9.2 km/h on Mar 15								Minimum Daily Speed Average: 0.9 km/h on Mar 28												Hours of Data: 739						
Maximum Diurnal Speed Average: 3.3 km/h at hour 15								Minimum Diurnal Speed Average: 0.6 km/h at hour 11												Hours of Missing Data: 5						
Monthly Average Velocity: 1.95 km/h 351.45 deg								Speed Percentiles: P ₁ = 0.7 P ₁₀ = 2.1 Q ₁ = 3.7 Median = 6.1 Q ₃ = 8.4 P ₉₀ = 10.7 P ₉₉ = 19.7												Percent Operational Time: 99.3						
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	32		129		4		0		0		0		165													
NorthEast	52		124		14		0		0		0		190													
East	33		22		0		0		0		0		55													
SouthEast	18		12		1		0		0		0		31													
South	17		18		1		0		0		0		36													
SouthWest	24		22		24		5		0		0		75													
West	73		37		18		3		0		0		131													
NorthWest	32		24		0		0		0		0		56													
Total	281		388		62		8		0		0		739													

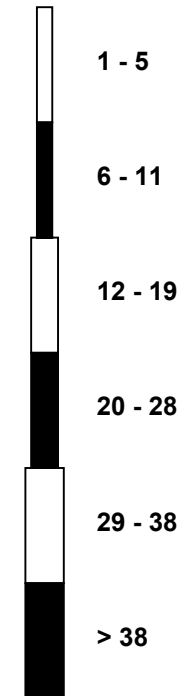
Wind Rose

Wind Speed (WS) (km/h)

Henry Pirker - March 2017



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Henry Pirker - March 2017

Maximum Speed: 26 km/h on Mar 18 18:00																			Maximum Daily Speed Average: 11.3 km/h on Mar 15										Hours in Service: 744	
Minimum Speed: 1 km/h on Mar 28 08:00																			Minimum Daily Speed Average: 3.6 km/h on Mar 28										Hours of Data: 739	
Maximum Diurnal Speed Average: 8.6 km/h at hour 17																			Minimum Diurnal Speed Average: 5.5 km/h at hour 8										Hours of Missing Data: 5	
Monthly Average Speed: 6.84 km/h																			Percentiles: P ₁ = 1.8 P ₁₀ = 2.9 Q ₁ = 4.1 Median = 6.4 Q ₃ = 8.7 P ₉₀ = 11.2 P ₉₉ = 19.8										Percent Operational Time: 99.3	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Mar	9	9	6	6	10	10	10	8	13	18	16	17	12	10	7	5	4	5	6	5	6	7	4	5	8.7	18.0				
2-Mar	5	5	6	6	4	3	4	3	3	5	3	3	3	3	4	4	2	2	2	2	2	9	11	9	4.3	10.6				
3-Mar	9	10	10	9	8	5	15	10	19	11	10	10	11	14	11	11	8	7	6	6	4	8	8	10	9.6	19.5				
4-Mar	11	12	9	9	11	7	6	9	10	8	8	7	10	7	6	5	5	4	4	4	5	3	3	4	6.9	12.2				
5-Mar	N	N	5	8	7	7	N	8	7	5	5	6	7	9	6	8	7	6	7	7	5	5	8	7	6.7	8.9				
6-Mar	6	7	7	7	7	8	6	7	6	6	7	8	7	7	8	9	9	8	7	7	6	7	6	5	7.0	9.3				
7-Mar	7	6	6	4	N	N	5	5	4	5	6	6	7	7	10	11	9	6	6	8	9	7	4	5	6.5	11.0				
8-Mar	6	6	8	8	6	6	5	7	9	7	6	6	7	7	9	11	8	7	7	9	8	7	6	6	7.2	10.7				
9-Mar	6	7	7	6	7	5	9	9	5	8	6	7	9	8	11	11	12	12	11	9	8	7	9	10	8.2	11.7				
10-Mar	8	8	9	9	10	9	9	10	9	12	12	12	12	13	13	11	9	10	10	8	7	7	6	5	9.5	13.0				
11-Mar	4	4	5	4	3	2	3	3	3	5	5	8	9	9	8	8	8	9	9	10	8	9	10	9	6.4	9.8				
12-Mar	10	10	11	10	10	10	9	9	9	9	9	10	8	9	9	10	10	9	10	10	9	8	8	8	9.3	10.6				
13-Mar	9	8	3	3	2	3	3	3	4	2	3	5	4	3	3	4	4	3	8	8	6	11	8	5	4.8	11.3				
14-Mar	8	7	7	9	6	4	2	4	5	6	7	8	8	9	10	3	9	7	8	7	4	5	7	8	6.6	9.7				
15-Mar	12	24	15	20	14	11	12	11	9	15	16	16	16	14	12	11	9	7	4	3	4	7	7	5	11.3	23.9				
16-Mar	7	7	9	6	9	10	9	7	7	3	5	5	4	5	4	6	10	7	4	5	6	6	3	2	6.2	10.4				
17-Mar	5	4	3	3	3	3	4	4	3	4	7	6	8	7	7	10	9	10	8	9	10	8	4	3	5.9	10.2				
18-Mar	2	3	2	3	4	3	3	3	4	5	5	8	8	8	5	6	23	26	11	9	6	9	14	10	7.5	25.7				
19-Mar	9	9	6	4	4	5	5	3	7	5	7	8	6	7	6	4	5	7	8	15	12	12	13	9	7.2	15.0				
20-Mar	7	6	4	4	2	4	3	4	6	7	7	7	7	7	6	5	6	7	6	8	12	8	9	11	6.5	12.1				
21-Mar	11	12	12	13	14	13	12	9	8	9	7	3	7	6	8	8	7	6	6	5	6	5	5	6	8.2	14.4				
22-Mar	4	4	3	4	2	4	3	4	4	2	4	4	7	7	8	8	7	6	5	4	5	7	9	7	5.0	9.1				
23-Mar	5	7	5	7	7	9	5	3	3	2	3	7	14	13	18	16	15	12	6	4	4	3	2	2	7.1	17.7				
24-Mar	4	2	2	2	4	4	3	4	5	5	7	6	3	6	6	7	6	4	4	3	3	3	4	3	4.2	6.8				
25-Mar	3	3	3	4	7	3	5	3	1	4	4	3	2	5	6	12	6	7	10	7	6	5	4	6	4.9	11.6				
26-Mar	4	3	5	5	4	6	4	4	2	6	7	4	5	7	8	8	8	6	5	5	6	4	9	7	5.5	8.8				
27-Mar	7	3	3	3	3	4	4	4	4	3	5	3	3	5	5	4	5	5	5	3	3	3	3	3	3.8	6.9				
28-Mar	2	2	2	2	3	3	1	1	2	4	5	3	5	7	7	6	7	6	4	3	3	2	3	2	3.6	7.2				
29-Mar	2	3	3	5	3	2	2	2	4	4	4	3	3	5	6	6	6	6	5	6	8	6	6	6	4.5	7.9				
30-Mar	4	5	7	6	4	5	3	9	8	10	16	15	13	13	15	15	15	11	8	4	3	7	8	7	8.7	16.1				
31-Mar	7	5	2	1	3	2	1	3	5	6	7	10	12	15	15	20	21	21	20	16	17	14	13	10	10.3	21.2				
6.4 6.7 6.0 6.1 6.0 5.6 5.5 5.5 6.1 6.6 7.1 7.2 7.7 8.2 8.3 8.4 8.6 8.0 7.0 6.8 6.6 6.7 6.9 6.3																									Diurnal Average					
11.6 23.9 14.8 19.9 14.4 12.8 14.7 10.8 19.5 18.0 16.3 16.6 15.6 14.7 17.7 19.9 22.8 25.7 19.6 16.5 17.5 14.1 14.3 11.2																									Diurnal Maximum					
N - Not Valid																														
All monthly, daily, and diurnal averages have been calculated using scalar methods																														

Hourly Standard Deviations

Wind Direction (WD) - deg

Henry Pirker - March 2017

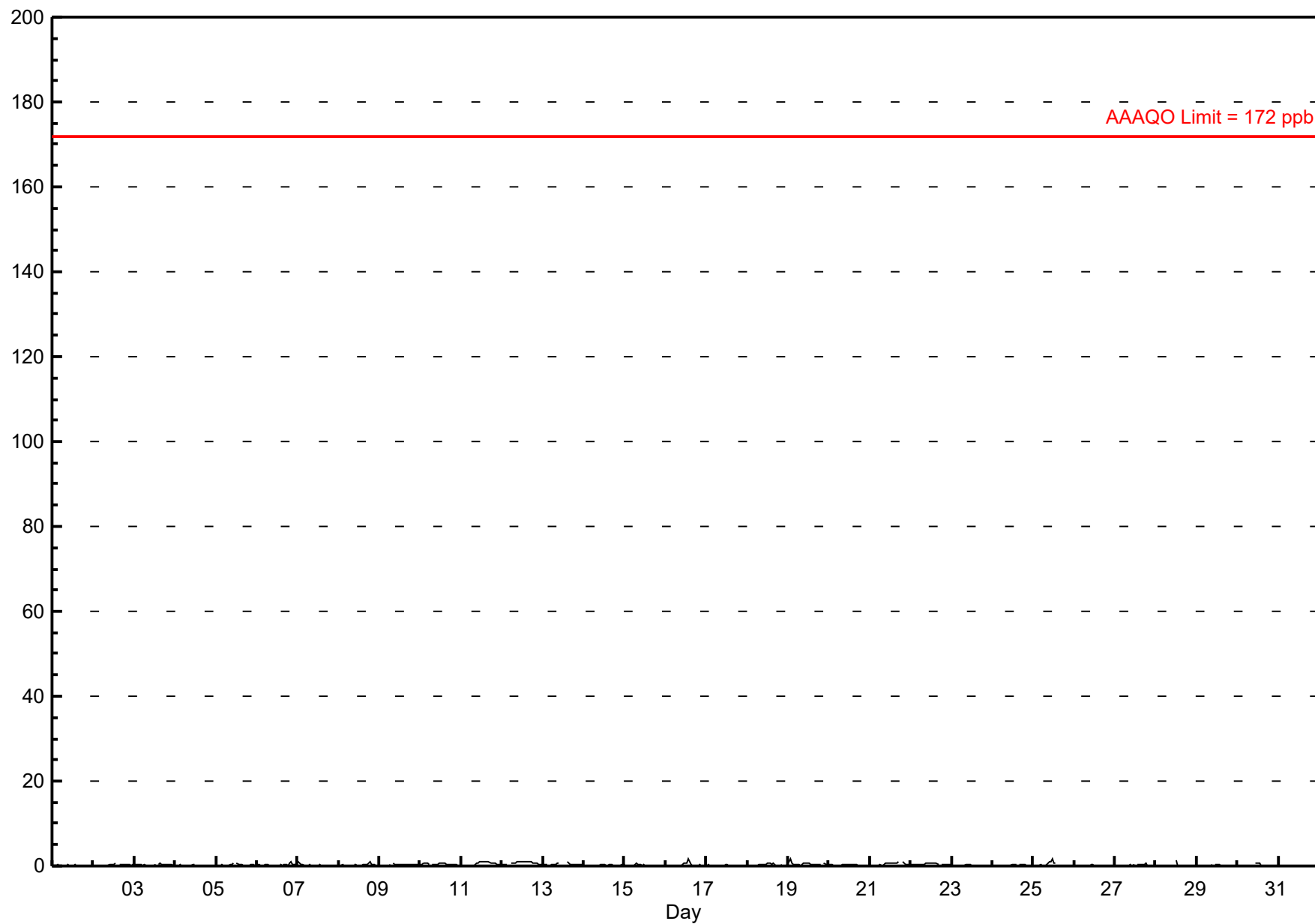
Maximum Value: 98.4 deg on Mar 27 21:00																		Hours in Service: 744							
Minimum Value: 4.4 deg on Mar 3 03:00																		Hours of Data: 739							
Percentiles: P ₁ = 5.6 P ₁₀ = 8.8 Q ₁ = 12.2 Median = 16.9 Q ₃ = 29.2 P ₉₀ = 52.5 P ₉₉ = 87.2																		Hours of Missing Data: 5							
																		Hours of Calibration: 0							
																		Percent Operational Time: 99.3							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Mar	12	12	26	27	12	21	9	13	9	7	9	9	9	17	22	30	31	29	14	13	12	15	22	13	30.8
2-Mar	20	20	12	19	35	25	26	48	27	27	26	42	38	70	24	17	42	69	40	78	62	6	5	9	78.0
3-Mar	8	7	4	8	8	73	8	17	22	15	12	9	42	7	13	9	32	14	17	30	69	21	14	14	73.0
4-Mar	12	15	12	15	14	16	16	8	10	13	17	22	11	17	22	33	22	15	12	11	22	12	36	44	44.1
5-Mar	N	N	55	56	13	39	N	54	30	28	12	19	11	10	47	18	17	16	13	13	21	26	13	13	56.1
6-Mar	18	14	15	17	15	15	15	14	20	19	22	16	19	18	17	14	14	16	16	16	17	15	15	16	22.2
7-Mar	13	16	17	18	N	N	20	15	21	20	19	18	20	17	17	13	17	17	15	12	12	16	26	24	25.8
8-Mar	20	18	13	13	18	18	15	12	9	19	20	22	21	23	17	14	15	19	16	14	14	13	11	14	23.2
9-Mar	12	13	14	13	16	36	51	59	46	14	20	14	14	15	15	11	14	12	10	13	12	15	13	9	58.7
10-Mar	12	10	12	10	12	12	12	12	10	9	11	10	12	12	12	13	18	13	11	10	11	10	12	16	18.5
11-Mar	13	20	15	16	21	29	19	20	35	15	28	18	14	14	13	16	17	15	12	11	12	13	10	10	35.5
12-Mar	8	10	8	12	9	9	9	8	10	13	13	15	21	14	16	11	11	10	8	7	7	10	9	10	21.3
13-Mar	10	14	51	37	81	66	51	52	53	59	52	19	15	32	23	14	32	62	8	13	12	20	21	23	80.9
14-Mar	9	26	10	9	48	18	40	31	14	14	12	10	10	7	10	35	19	13	17	9	27	10	9	10	48.1
15-Mar	59	5	13	7	7	11	14	14	13	7	7	8	9	10	11	15	19	12	31	36	20	9	15	8	59.4
16-Mar	11	8	6	13	7	7	7	15	35	67	41	26	21	16	24	31	10	23	12	82	42	14	32	77	81.7
17-Mar	33	26	90	96	88	59	49	33	54	43	18	24	13	17	16	12	13	10	10	10	7	7	14	72	96.3
18-Mar	60	36	78	24	44	31	33	82	36	42	11	9	24	9	16	11	8	7	12	16	14	12	23	14	82.3
19-Mar	6	7	13	21	27	19	26	51	21	17	16	14	46	23	32	59	52	16	27	20	8	6	7	10	59.1
20-Mar	17	18	14	26	38	48	49	42	20	7	6	13	27	25	15	23	21	13	10	12	6	6	6	6	49.1
21-Mar	6	6	6	5	6	6	7	8	11	15	39	62	29	24	18	20	16	12	11	12	14	16	14	11	61.6
22-Mar	13	18	22	23	57	77	23	65	16	58	46	42	24	29	26	18	18	16	21	18	14	15	12	12	77.2
23-Mar	14	13	19	8	84	18	31	38	20	25	37	17	18	13	12	15	7	9	11	17	23	46	29	28	83.5
24-Mar	34	26	47	34	17	65	42	34	13	18	14	21	73	17	21	18	21	30	45	30	69	27	20	33	72.6
25-Mar	47	19	35	19	25	54	49	65	95	55	72	21	49	33	22	31	73	16	10	8	8	15	51	11	94.7
26-Mar	12	57	42	24	39	41	56	45	64	30	18	39	40	19	18	16	17	18	15	18	13	27	14	13	63.6
27-Mar	15	58	80	43	43	21	42	28	33	70	36	69	89	22	19	34	19	21	16	40	98	38	30	44	98.4
28-Mar	75	54	86	29	56	57	53	54	79	29	24	74	28	14	9	11	17	21	94	20	73	80	67	83	93.8
29-Mar	84	30	40	19	65	77	47	39	19	14	36	42	69	26	19	17	20	18	18	15	15	17	19	20	83.8
30-Mar	28	26	9	15	82	24	43	6	9	12	8	9	11	7	21	11	12	9	13	18	20	22	6	6	81.9
31-Mar	14	31	41	67	18	41	35	21	6	7	12	15	15	17	13	8	9	9	6	12	12	9	10	11	66.9
83.8 58.2 89.7 96.3 87.8 77.2 55.6 82.3 94.7 69.7 72.0 74.3 88.5 70.2 46.6 59.1 73.2 69.1 93.8 81.7 98.4 80.4 66.9 82.7																									
N - Not Valid																									

PAZA
Evergreen Park Station
Monthly Summary Tables, Graphs and
Roses

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0		Hours in Service: 744																										
Maximum Value: 1.8 ppb on Mar 25 12:00		Maximum Daily Average: 0.7 ppb on Mar 12																										
Minimum Value: 0 ppb on Mar 1 06:00		Hours of Data: 705																										
Maximum Diurnal Average: 0.4 ppb at hour 13		Hours of Missing Data: 39																										
Monthly Average: 0.24 ppb		Hours of Calibration: 39																										
Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.6 P ₉₉ = 1.1		Percent Operational Time: 100.0																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1-Mar	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	0.1	0.4	
2-Mar	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	0	0.2	0.6
3-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0.3	0.7	
4-Mar	0	0	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	
5-Mar	0	0	0	0	0	0	0	0	0	0	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6	
6-Mar	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	0	0	1	0.2	0.8		
7-Mar	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9	
8-Mar	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.2	0.9	
9-Mar	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6	
10-Mar	0	0	1	1	1	0	A	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.4	0.7	
11-Mar	0	0	0	0	0	A	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0.5	1.0	
12-Mar	0	0	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0.7	1.1	
13-Mar	0	0	0	A	0	0	0	0	1	1	C	C	C	C	1	1	0	1	0	0	0	0	0	0	0	0.4	0.9	
14-Mar	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4	
15-Mar	0	A	0	0	0	0	0	1	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0.1	0.6	
16-Mar	A	0	0	0	0	0	0	0	0	0	0	1	1	2	1	0	0	0	0	0	0	0	0	A	0	0.3	1.7	
17-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
18-Mar	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	A	A	0	0	0.2	0.6	
19-Mar	1	2	1	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	A	1	0	0	0	0.5	1.6	
20-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.4	
21-Mar	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	A	1	1	0	0	0	0	0.5	1.1	
22-Mar	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	A	0	0	0	0	0	0	0	0.4	0.8	
23-Mar	0	0	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	
24-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.4	
25-Mar	0	0	0	0	0	0	0	0	0	1	1	2	1	1	A	0	0	0	0	0	0	0	0	0	0	0.3	1.8	
26-Mar	0	0	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	
27-Mar	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0.1	0.5	
28-Mar	0	0	0	0	0	0	0	0	0	0	0	A	2	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.5	
29-Mar	0	0	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	
30-Mar	0	0	0	0	0	0	0	0	0	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7	
31-Mar	0	0	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	
																									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
Evergreen Park - March 2017



Hourly Maximums

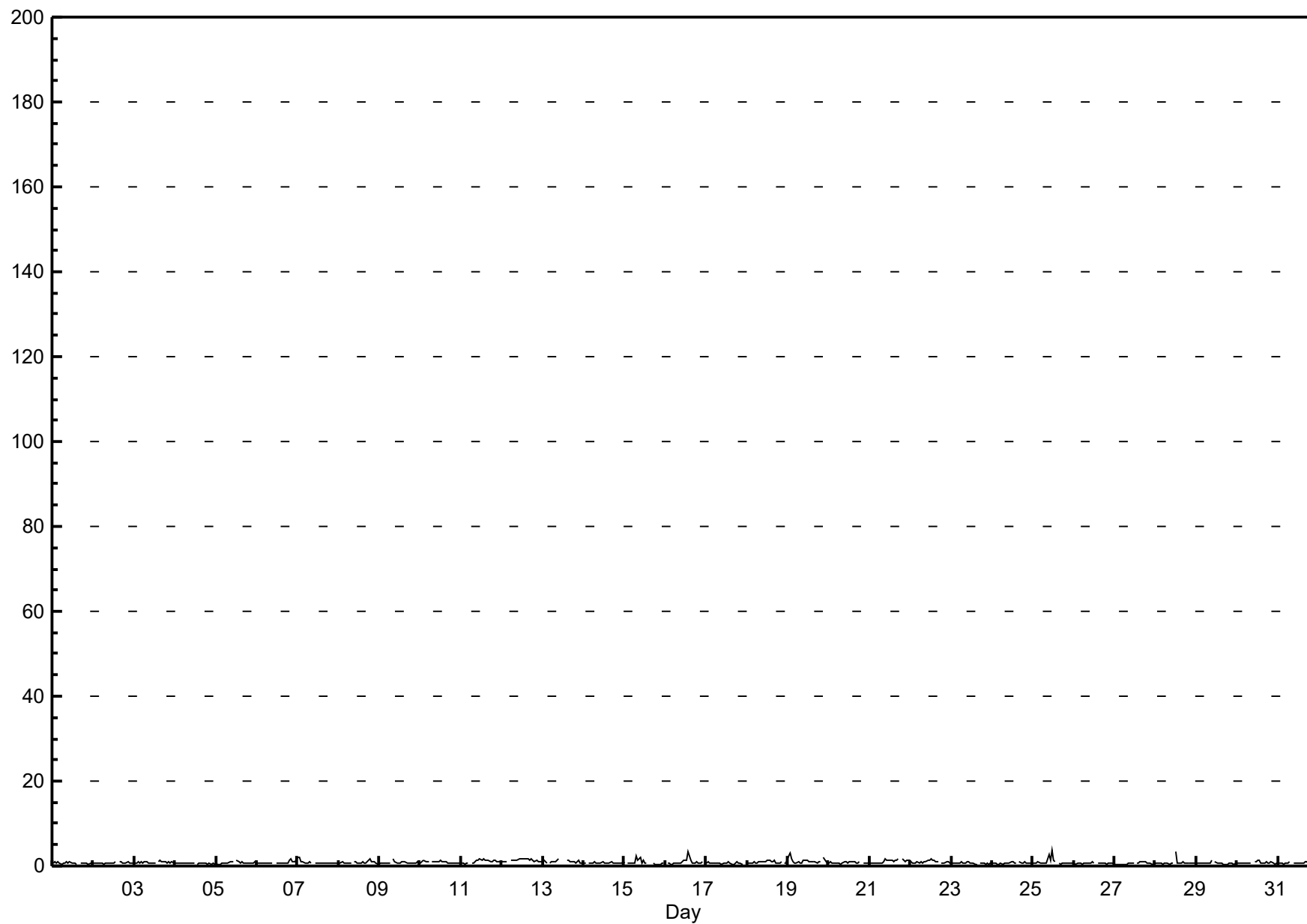
Sulphur Dioxide (SO₂) - ppb

Evergreen Park - March 2017

Maximum Value: 3.6 ppb on Mar 25 12:00																			Maximum Daily Average: 1.3 ppb on Mar 12										Hours in Service: 744	
Minimum Value: 0 ppb on Mar 15 22:00																			Minimum Daily Average: 0.6 ppb on Mar 4										Hours of Data: 705	
Maximum Diurnal Average: 1.1 ppb at hour 13																			Minimum Diurnal Average: 0.7 ppb at hour 5										Hours of Missing Data: 39	
Monthly Average: 0.83 ppb																			Percentiles: P ₁ = 0.4 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.7 Q ₃ = 0.9 P ₉₀ = 1.3 P ₉₉ = 2.2										Hours of Calibration: 39	
																													Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Mar	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	A	1	1	1	1	1	0	1	1	0.7	1.1				
2-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.7	1.1				
3-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	2	1	1	1	1	1	1	1	1	0.9	1.5				
4-Mar	1	1	1	1	1	1	1	1	1	1	1	1	A	0	1	1	1	1	1	0	1	1	1	0	0.6	0.8				
5-Mar	1	0	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2				
6-Mar	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	2	1	1	2	0.8	1.8				
7-Mar	2	2	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	2.2				
8-Mar	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	2	1	1	1	1	0	0.8	1.7				
9-Mar	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.5				
10-Mar	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.4				
11-Mar	1	1	0	1	1	A	1	1	1	1	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1.1	1.7				
12-Mar	1	1	1	1	A	1	1	1	1	1	2	2	2	2	2	2	1	2	1	1	1	1	1	1	1.3	1.7				
13-Mar	1	1	1	A	1	1	1	1	1	2	C	C	C	C	1	1	1	1	1	1	1	1	1	1	1.1	1.5				
14-Mar	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1				
15-Mar	1	A	1	1	1	1	1	2	1	2	1	1	1	1	C	C	C	1	0	0	0	0	1	1	0.8	2.2				
16-Mar	A	1	1	0	0	1	1	1	1	1	1	1	1	4	3	1	1	1	1	1	1	1	1	A	0.9	3.5				
17-Mar	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	1	1	1	A	1	0.7	1.0				
18-Mar	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	1.3				
19-Mar	2	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1.2	2.9				
20-Mar	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.8	1.0				
21-Mar	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	2	2	A	2	1	1	1	1	1.1	1.7				
22-Mar	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	A	1	1	1	1	1	1	1.0	1.7				
23-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	A	1	1	1	0	1	0	1	0.7	1.0				
24-Mar	1	1	1	0	0	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.7	1.2				
25-Mar	1	1	1	1	1	1	1	1	1	3	1	4	1	1	A	1	0	1	1	1	1	1	1	1	0.9	3.6				
26-Mar	1	0	1	1	1	0	1	1	1	1	1	1	1	A	1	1	1	1	1	0	1	1	1	1	0.6	0.9				
27-Mar	0	0	0	0	0	0	0	0	1	1	1	1	A	1	1	1	1	1	1	1	1	0	0	0	0.6	1.1				
28-Mar	1	1	1	1	0	1	1	1	0	1	1	A	3	1	1	1	1	1	1	1	1	1	1	1	0.7	3.5				
29-Mar	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0	0	1	1	1	1	0	1	0.7	1.4				
30-Mar	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0.7	1.3				
31-Mar	1	1	1	0	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0				
0.8 0.8 0.7 0.7 0.7 0.7 0.7 0.8 0.8 1.1 0.9 1.1 1.1 1.0 0.9 0.9 0.9 0.8 0.8 0.8 0.8 0.8 0.7 0.8																								Diurnal Average						
2.3 2.9 1.7 1.1 1.2 1.3 1.3 2.2 1.5 2.8 1.7 3.6 3.5 3.5 2.5 1.5 1.5 1.5 1.7 1.7 1.7 1.8 2.0 1.2 1.8																								Diurnal Maximum						
C - Calibration																								A - Automated Daily Zero Span						

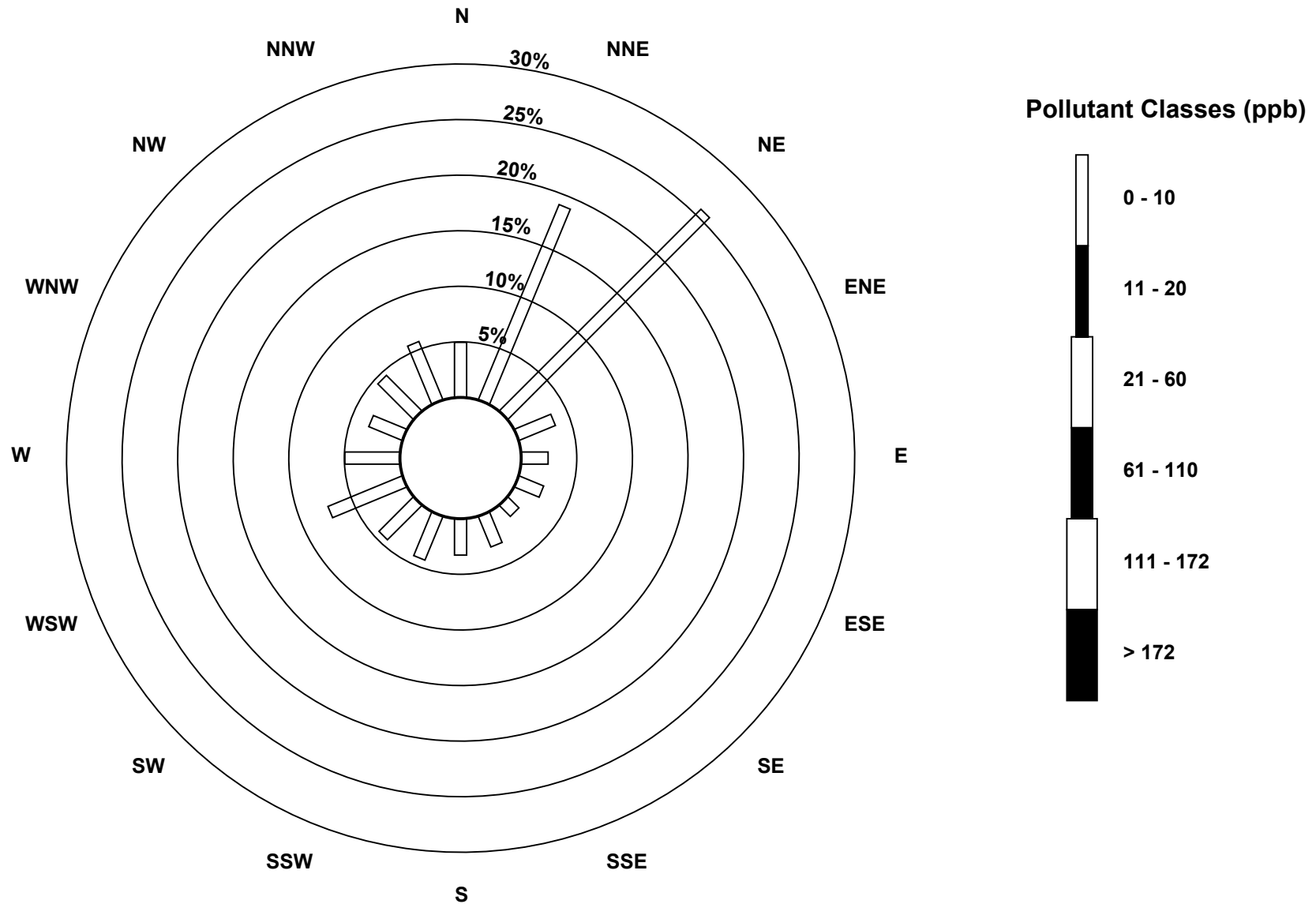
Hourly Maximums

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



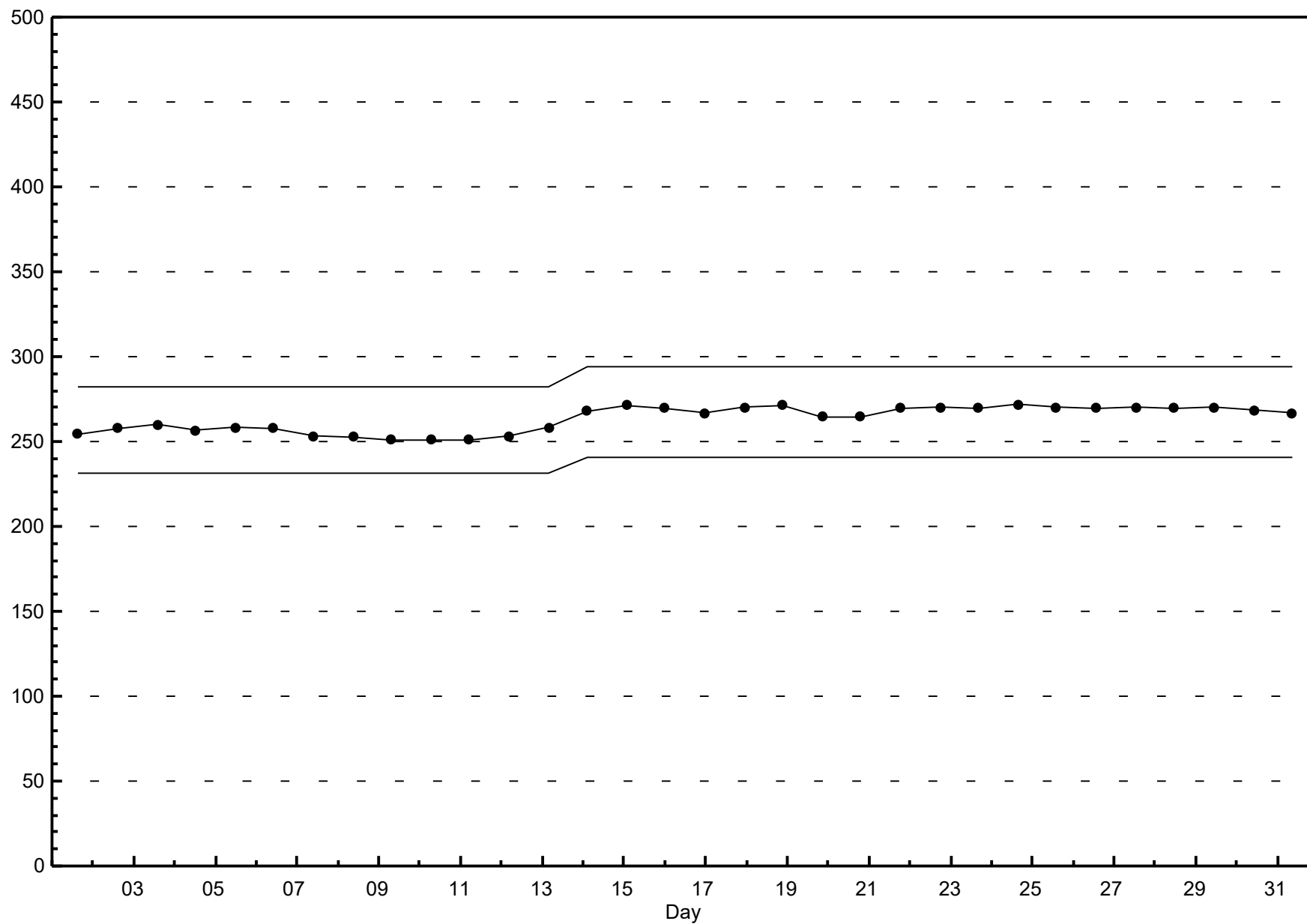
Pollutant Rose

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



Span Responses

Sulphur Dioxide (SO₂)
Evergreen Park - March 2017



Hourly Averages

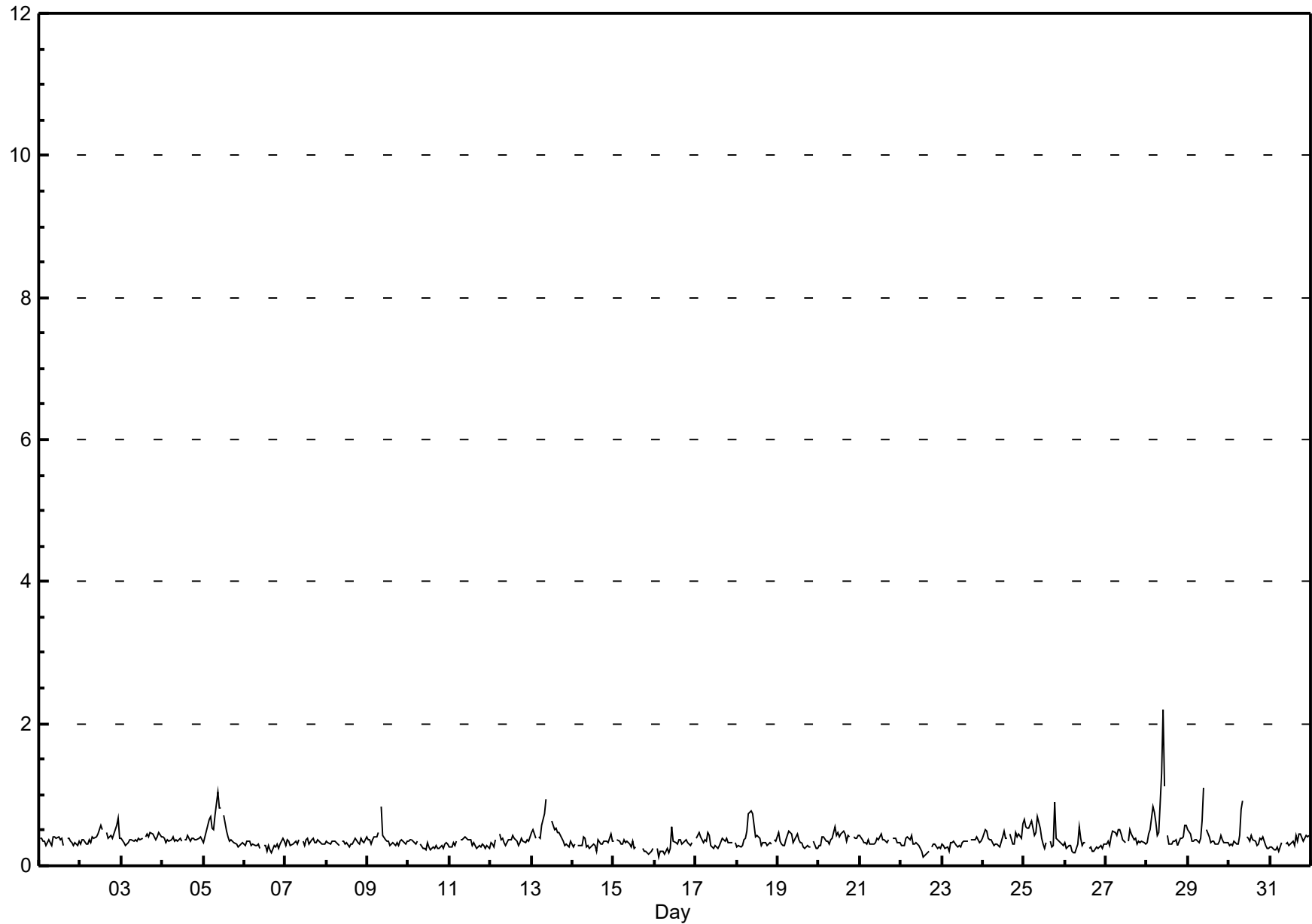
Total Reduced Sulphur (TRS) - ppb

Evergreen Park - March 2017

Maximum Value: 2.2 ppb on Mar 28 10:00																			Maximum Daily Average: 0.6 ppb on Mar 28										Hours in Service: 744	
Minimum Value: 0 ppb on Mar 16 03:00																			Minimum Daily Average: 0.3 ppb on Mar 22										Hours of Data: 706	
Maximum Diurnal Average: 0.5 ppb at hour 9																			Minimum Diurnal Average: 0.3 ppb at hour 17										Hours of Missing Data: 38	
Monthly Average: 0.36 ppb																			Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.3 Median = 0.3 Q ₃ = 0.4 P ₉₀ = 0.5 P ₉₉ = 0.9										Hours of Calibration: 38	
																													Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.4	0.4				
2-Mar	0	0	0	0	0	0	0	0	0	0	0	1	1	1	A	0	0	0	0	0	1	1	1	0	0.4	0.7				
3-Mar	0	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				
4-Mar	0	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	0.4				
5-Mar	0	0	1	1	1	1	1	1	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.0				
6-Mar	0	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				
7-Mar	0	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				
8-Mar	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4				
9-Mar	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8				
10-Mar	0	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				
11-Mar	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4				
12-Mar	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.4				
13-Mar	0	1	0	A	0	0	1	1	1	C	C	C	1	1	1	0	0	0	0	0	0	0	0	0	0.5	0.9				
14-Mar	0	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				
15-Mar	0	A	0	0	0	0	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0.3	0.4				
16-Mar	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0.3	0.6				
17-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5				
18-Mar	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	A	A	0	0.4	0.8				
19-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	0.5				
20-Mar	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.4	0.5				
21-Mar	0	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	0.4				
22-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.4				
23-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.4				
24-Mar	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	0.6				
25-Mar	1	1	1	1	1	1	0	0	1	1	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0.4	0.9				
26-Mar	0	0	0	0	0	0	0	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.3	0.6				
27-Mar	0	0	0	0	0	0	0	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5				
28-Mar	0	0	1	1	1	1	0	0	1	2	1	A	0	0	0	0	0	0	0	0	0	0	1	1	0.6	2.2				
29-Mar	1	0	0	0	0	0	0	0	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.1				
30-Mar	0	0	0	0	0	0	0	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.9				
31-Mar	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4				
																									Diurnal Average					
																									Diurnal Maximum					
C - Calibration																									A - Automated Daily Zero Span					

Hourly Averages

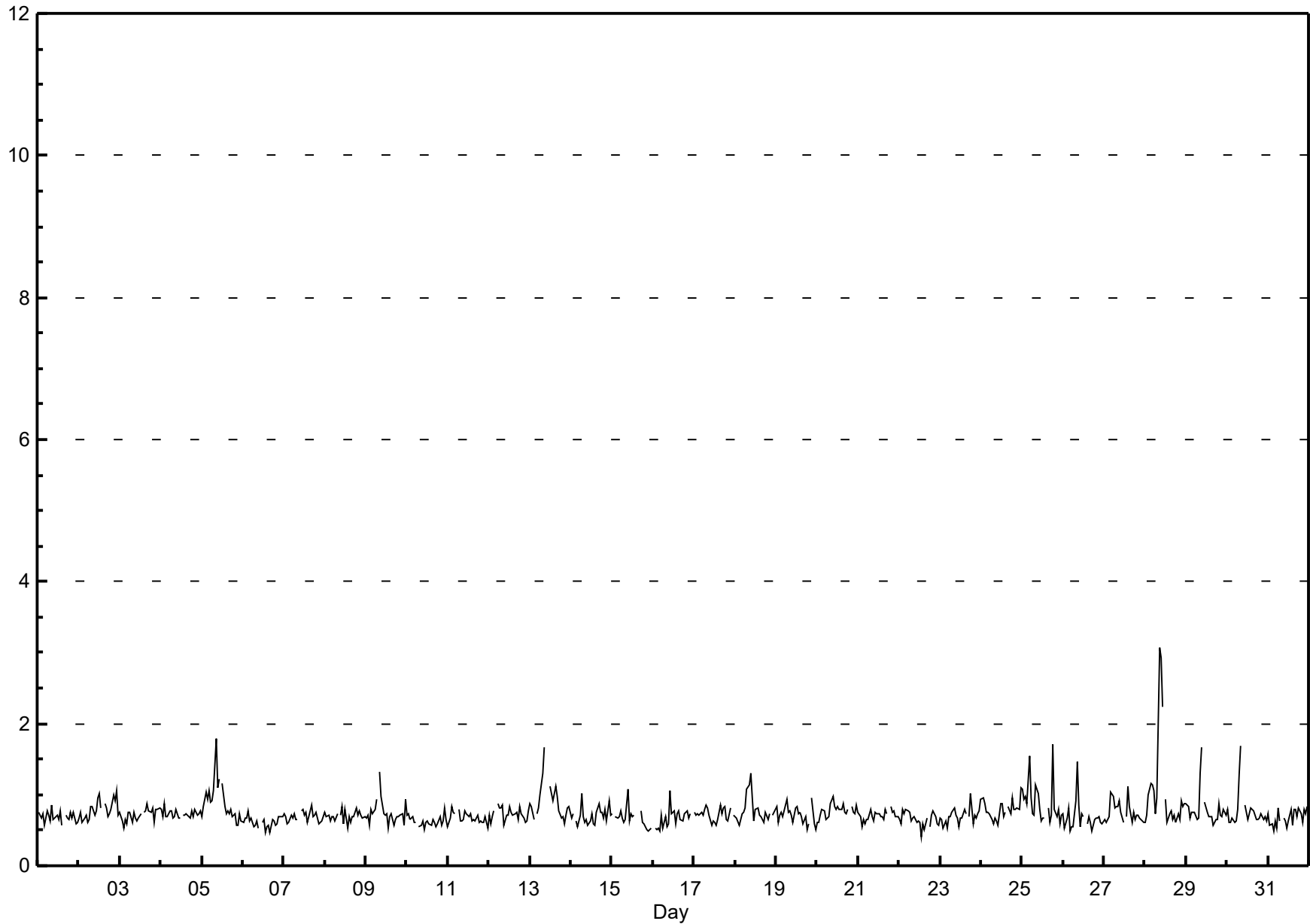
Total Reduced Sulphur (TRS) - ppb
Evergreen Park - March 2017



Page 103 of 411

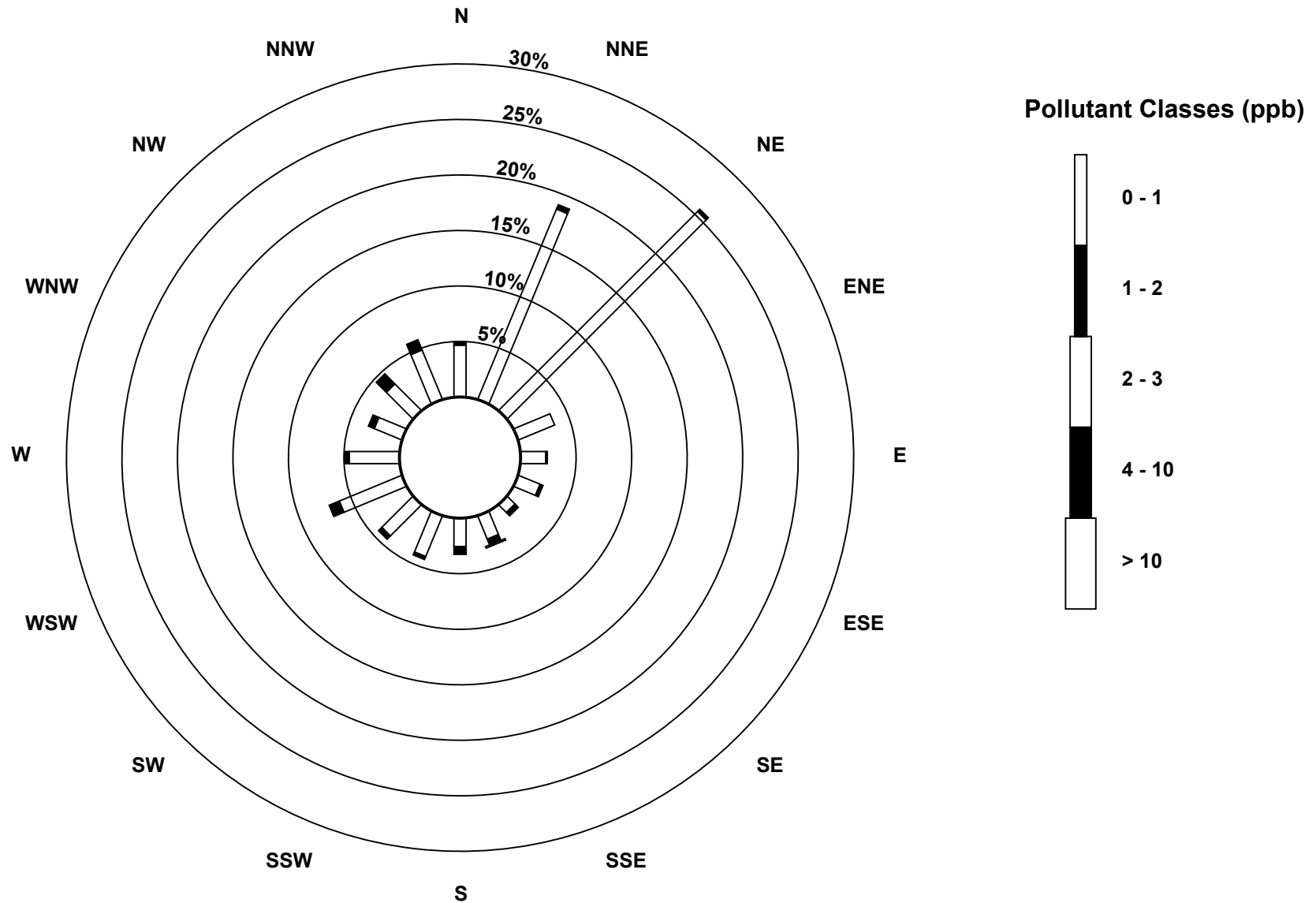
Hourly Maximums

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



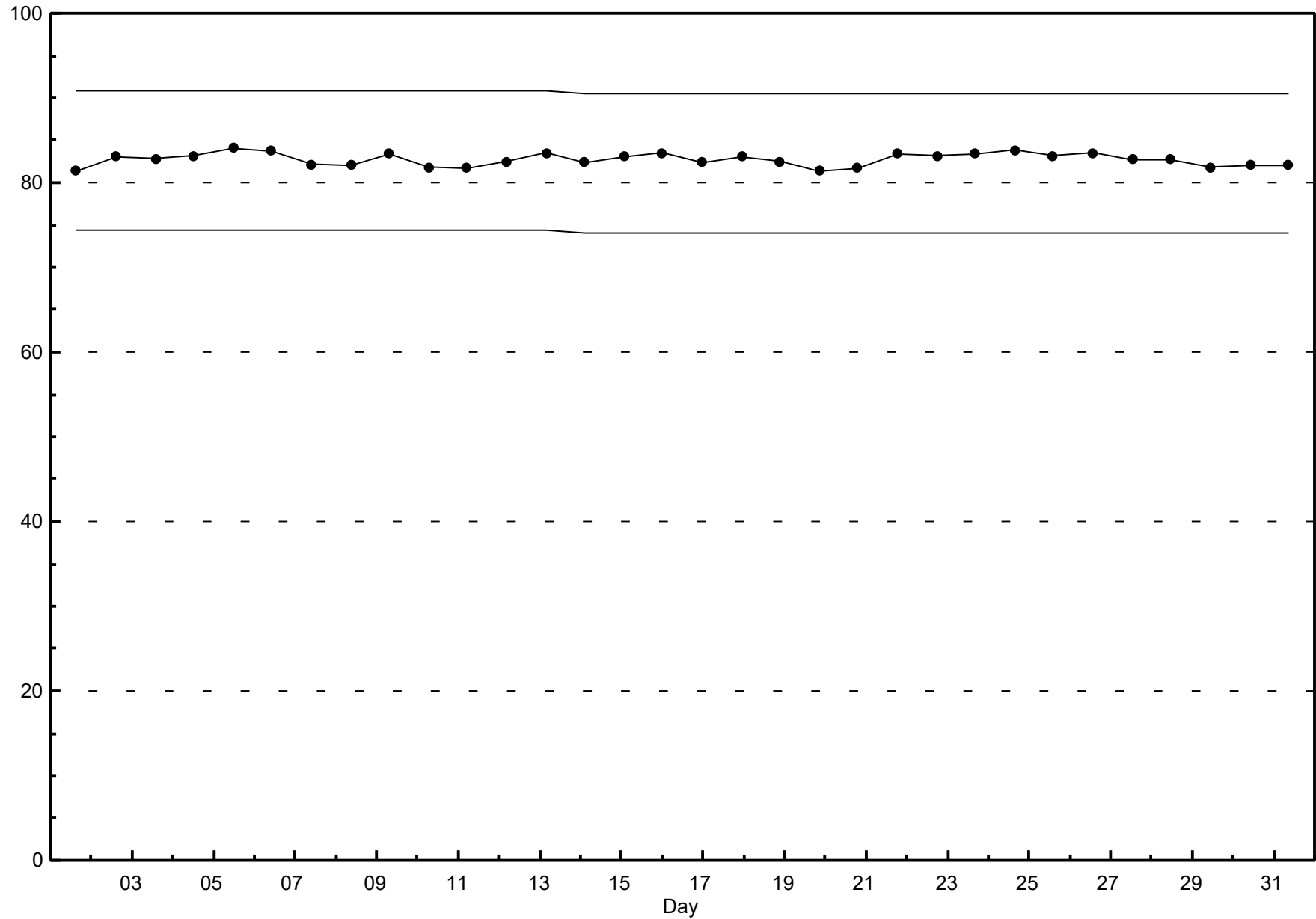
Pollutant Rose

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



Span Responses

Total Reduced Sulphur (TRS)
Evergreen Park - March 2017



Hourly Averages

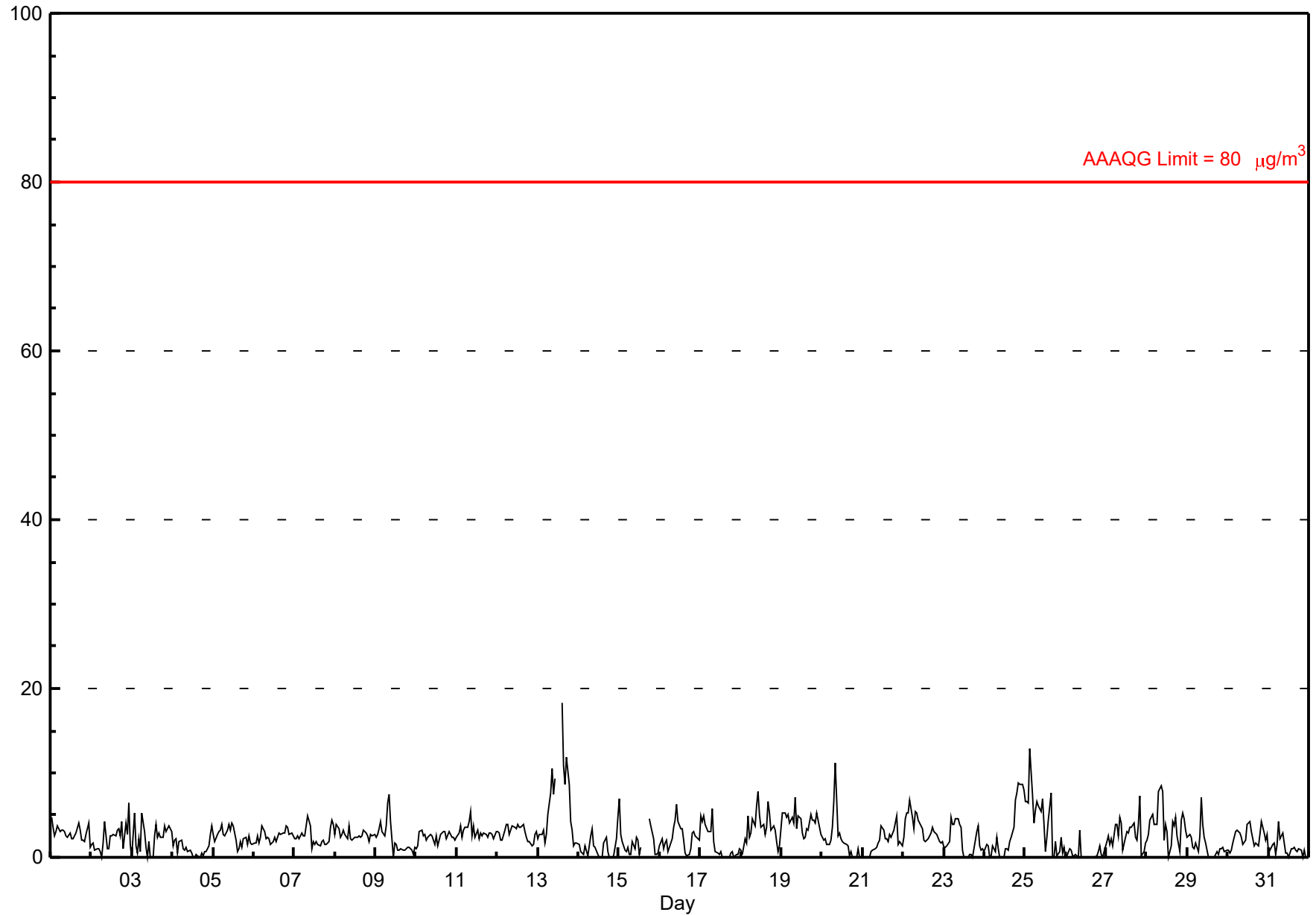
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Evergreen Park - March 2017

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 18.3 µg/m ³ on Mar 13 15:00																								
Maximum Daily Average: 6.0 µg/m ³ on Mar 13																								
Minimum Value: 0 µg/m ³ on Mar 2 07:00 Maximum Diurnal Average: 4.3 µg/m ³ at hour 9 Monthly Average: 2.51 µg/m ³																								
Minimum Daily Average: 0.4 µg/m ³ on Mar 26 Minimum Diurnal Average: 1.7 µg/m ³ at hour 14 Percentiles: P ₁ = 0.0 P ₁₀ = 0.2 Q ₁ = 1.1 Median = 2.3 Q ₃ = 3.4 P ₉₀ = 4.7 P ₉₉ = 8.3																								
Hours in Service: 744 Hours of Data: 737 Hours of Missing Data: 7 Hours of Calibration: 7 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-Mar	5	4	3	3	4	3	3	3	3	3	2	3	2	2	3	3	4	3	2	2	2	3	4	1
2-Mar	2	2	1	1	1	1	0	2	4	1	1	3	3	3	3	3	3	3	4	1	4	3	6	1
3-Mar	0	5	1	1	2	1	5	3	1	0	2	0	0	2	4	2	3	2	2	4	3	3	4	3
4-Mar	1	2	2	1	2	2	1	1	1	1	1	1	0	0	0	0	0	1	0	1	1	1	3	4
5-Mar	3	2	3	3	3	4	3	3	3	4	3	4	4	2	1	1	2	1	2	2	2	2	2	2
6-Mar	2	2	2	2	2	4	3	2	2	2	2	2	2	2	2	3	3	3	3	4	4	3	3	3
7-Mar	2	2	3	2	3	3	3	4	5	4	1	2	1	2	2	1	2	2	2	2	2	4	4	4
8-Mar	3	4	3	2	3	3	3	2	4	2	2	2	2	2	2	2	3	3	3	2	2	3	2	3
9-Mar	2	3	3	4	3	2	4	6	7	4	0	2	2	1	1	1	1	1	1	1	1	1	0	1
10-Mar	1	1	3	3	3	3	2	2	3	3	2	2	3	1	3	3	3	3	2	3	3	2	2	2
11-Mar	2	3	4	2	3	4	4	4	5	3	4	2	3	2	3	3	3	3	2	3	3	3	2	3
12-Mar	3	3	2	2	3	4	4	3	3	4	4	3	4	4	4	4	3	2	2	2	1	2	3	3
13-Mar	2	3	3	3	2	3	5	8	10	7	9	C	C	C	18	11	9	12	9	4	3	1	2	2
14-Mar	2	1	1	0	1	0	1	2	3	1	1	0	0	0	0	2	2	1	0	0	0	0	2	5
15-Mar	7	3	2	1	1	1	0	0	2	1	2	2	0	1	C	C	C	C	5	4	2	0	0	1
16-Mar	1	2	1	2	2	1	1	2	4	4	6	4	3	3	2	1	0	0	1	3	3	2	2	2
17-Mar	5	4	5	4	3	3	3	6	2	1	1	0	1	0	0	0	0	0	0	1	0	0	0	1
18-Mar	1	0	2	2	5	2	3	5	4	6	8	5	4	4	3	4	7	5	3	4	3	2	1	1
19-Mar	5	5	5	5	5	4	5	4	7	3	5	5	3	2	2	3	3	5	4	4	4	5	4	3
20-Mar	2	2	2	1	2	2	4	7	11	3	3	2	2	2	2	1	0	1	0	0	0	1	0	0
21-Mar	0	0	0	0	0	1	1	1	1	2	2	4	3	2	2	2	3	2	3	4	5	1	2	1
22-Mar	2	5	5	5	7	5	3	5	5	4	4	3	2	2	2	2	3	4	3	3	3	2	2	2
23-Mar	1	1	1	2	5	4	4	5	5	4	4	1	0	0	0	0	0	0	1	3	4	1	1	1
24-Mar	1	2	1	0	0	1	1	2	1	0	0	0	1	1	1	2	2	4	7	8	9	9	9	8
25-Mar	7	7	6	13	7	4	6	7	6	5	7	4	1	2	4	8	0	0	2	0	1	2	1	1
26-Mar	0	0	1	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1
27-Mar	2	3	1	2	1	4	4	3	5	4	1	2	3	3	4	4	4	2	2	4	7	0	1	2
28-Mar	2	3	4	5	4	4	4	8	8	8	2	4	3	0	1	4	4	5	3	1	4	5	5	3
29-Mar	2	3	2	1	1	2	1	3	7	4	2	2	0	0	0	0	0	1	0	1	1	1	1	1
30-Mar	1	1	1	2	3	3	3	3	2	1	2	4	4	4	3	1	2	2	1	3	4	3	2	3
31-Mar	0	1	2	2	0	2	4	2	3	2	1	0	0	1	1	1	1	1	1	1	0	1	0	0
2.2 2.4 2.5 2.5 2.6 2.5 2.8 3.4 4.3 2.9 2.7 2.3 1.9 1.7 2.4 2.4 2.3 2.3 2.3 2.4 2.6 2.2 2.2 2.1 Diurnal Average																								
6.9 6.6 6.4 12.8 7.2 4.8 5.6 7.8 11.2 7.8 9.3 5.1 4.1 4.3 18.3 10.9 8.6 11.9 8.7 7.6 8.8 8.6 8.7 7.9 Diurnal Maximum																								
C - Calibration 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 Averages

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



Hourly Maximums

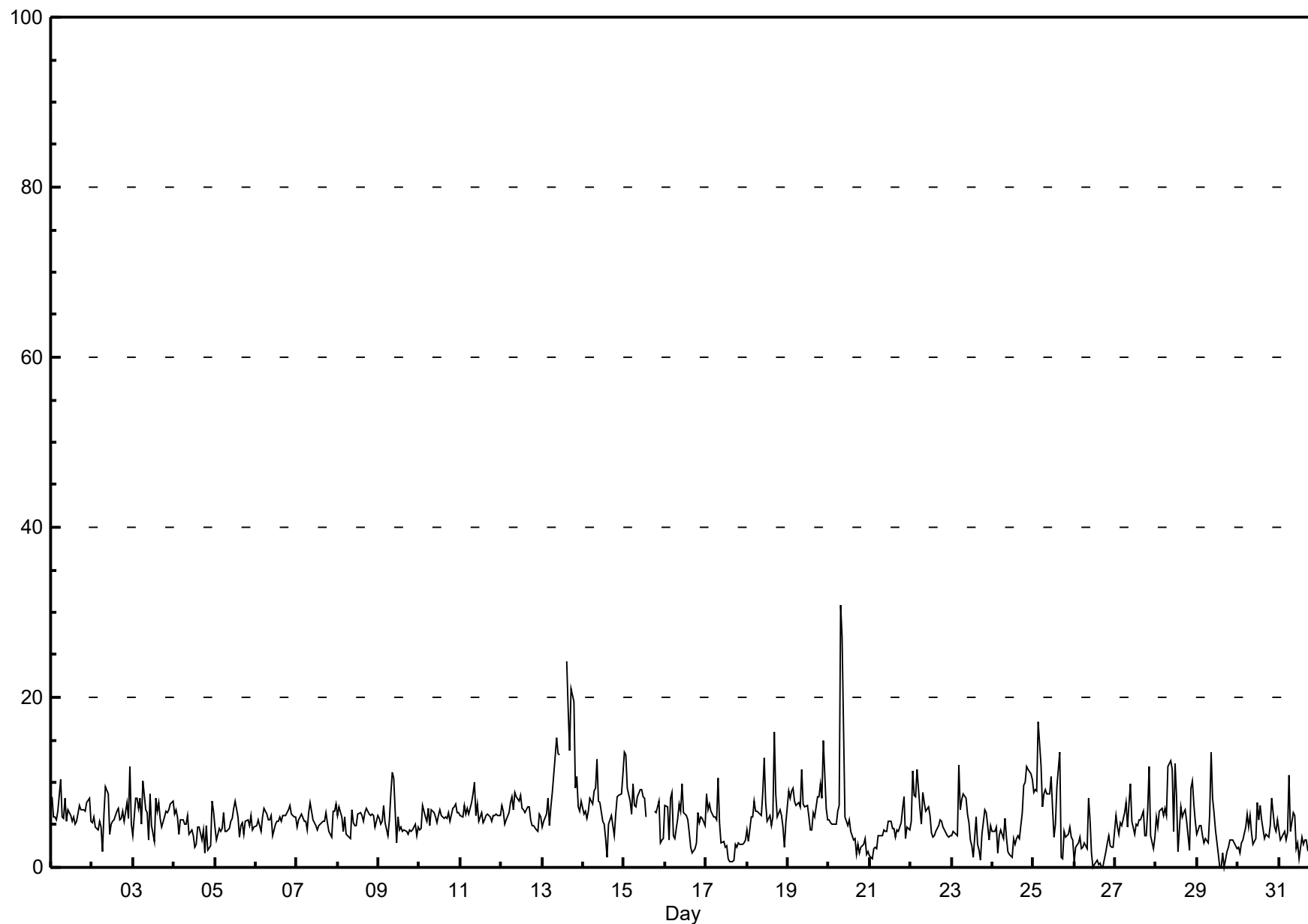
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Evergreen Park - March 2017

Maximum Value: 30.8 μg/m ³ on Mar 20 08:00																								Maximum Daily Average: 11.4 μg/m ³ on Mar 13						Hours in Service: 744	
Minimum Value: 0 μg/m ³ on Mar 26 12:00																								Minimum Daily Average: 2.2 μg/m ³ on Mar 26						Hours of Data: 737	
Maximum Diurnal Average: 8.7 μg/m ³ at hour 9																								Minimum Diurnal Average: 4.5 μg/m ³ at hour 14						Hours of Missing Data: 7	
Monthly Average: 5.80 μg/m ³																								Percentiles: P ₁ = 0.3 P ₁₀ = 2.6 Q ₁ = 4.0 Median = 5.6 Q ₃ = 6.9 P ₉₀ = 8.6 P ₉₉ = 15.9						Hours of Calibration: 7	
																														Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
1-Mar	8	6	6	6	7	10	6	6	8	5	7	6	5	6	5	5	7	7	7	7	8	8	5	6.6	10.4						
2-Mar	5	6	5	4	5	5	2	6	10	9	4	5	5	6	7	7	6	6	7	5	8	6	12	5	6.0	11.8					
3-Mar	4	8	8	7	8	5	10	7	6	3	9	5	3	8	7	8	6	5	6	7	6	7	7	8	6.5	10.1					
4-Mar	6	7	6	4	6	6	5	5	6	4	4	4	2	3	5	5	3	4	2	5	2	2	8	7	4.6	7.9					
5-Mar	5	3	4	4	5	6	4	4	5	5	6	7	8	6	3	5	5	4	5	6	5	6	4	5	5.0	7.8					
6-Mar	5	6	5	4	6	7	6	6	6	6	4	5	5	5	6	5	6	6	6	7	7	6	6	6	5.7	7.3					
7-Mar	5	6	6	6	5	5	4	6	8	6	5	5	4	5	5	5	5	6	5	4	3	7	7	7	5.5	7.6					
8-Mar	6	7	6	4	6	4	4	3	7	5	5	5	6	6	6	5	6	7	6	6	6	6	5	6	5.6	7.1					
9-Mar	6	5	5	7	5	4	6	9	11	11	3	6	4	5	4	4	4	4	4	4	4	5	4	5	5.4	11.1					
10-Mar	4	5	7	6	5	7	5	7	6	6	5	6	7	6	6	6	6	6	5	7	7	7	6	6	6.1	7.5					
11-Mar	6	6	7	6	7	6	8	9	10	6	7	5	6	5	6	6	6	6	5	6	6	6	6	6	6.5	10.1					
12-Mar	7	7	5	6	6	8	8	7	9	8	8	8	7	7	6	7	7	6	5	5	4	4	6	6	6.6	8.8					
13-Mar	5	5	6	8	5	7	9	13	15	13	13	C	C	C	24	19	14	21	20	9	11	7	7	8	11.4	24.2					
14-Mar	6	7	6	7	8	7	9	9	13	8	8	5	5	3	1	5	6	5	4	6	8	8	9	11	6.9	12.7					
15-Mar	14	13	9	8	6	10	7	7	8	9	9	8	8	6	C	C	C	C	7	6	8	3	3	3	7.7	13.5					
16-Mar	7	7	3	8	9	4	3	6	7	7	10	6	6	6	4	2	2	2	3	6	5	6	6	5	5.5	9.8					
17-Mar	9	7	7	7	6	6	6	11	5	3	3	2	2	1	1	1	1	3	2	3	3	3	3	3	4.0	10.6					
18-Mar	4	3	6	6	8	7	7	6	6	9	13	8	5	6	5	6	16	9	6	7	6	5	2	5	6.7	15.9					
19-Mar	9	8	9	9	8	7	8	7	12	7	7	7	6	4	4	6	6	8	8	10	8	15	7	6	7.8	15.0					
20-Mar	6	5	5	5	5	7	7	31	27	6	5	5	6	4	3	3	2	3	2	2	3	3	1	2	6.2	30.8					
21-Mar	1	1	2	2	2	4	4	4	4	4	4	5	6	5	5	4	4	4	5	7	8	3	5	4	4.1	8.4					
22-Mar	5	11	8	8	12	7	5	9	8	7	7	6	4	4	4	4	5	6	5	5	4	4	4	4	6.0	11.5					
23-Mar	4	4	4	4	12	7	8	9	8	6	5	3	2	1	6	3	2	1	4	7	7	5	3	5	5.0	12.0					
24-Mar	4	4	5	2	4	4	3	6	4	2	1	1	3	3	3	4	3	6	10	10	12	12	11	10	5.3	11.9					
25-Mar	9	9	9	17	12	7	9	9	9	9	11	7	3	5	10	13	1	1	4	3	4	5	3	3	7.2	17.1					
26-Mar	1	2	3	4	2	2	3	2	8	6	2	0	0	1	0	1	0	0	2	3	4	2	2	2	2.2	8.1					
27-Mar	6	5	4	5	5	6	8	5	7	10	5	4	5	5	6	6	7	4	4	7	12	4	2	4	5.6	11.8					
28-Mar	6	5	7	7	6	7	6	12	13	12	4	12	8	2	7	6	6	7	5	2	9	10	7	5	7.2	12.5					
29-Mar	4	5	5	4	3	3	3	6	13	8	6	4	1	0	0	2	0	2	2	3	3	3	3	2	3.7	13.5					
30-Mar	2	2	3	3	5	6	5	6	4	3	3	8	6	7	6	3	4	4	4	5	8	5	4	6	4.6	8.1					
31-Mar	4	3	4	4	3	4	11	4	6	6	2	3	1	4	3	3	3	2	2	3	3	3	1	2	3.5	10.8					
5.6 5.7 5.7 5.9 6.2 6.0 6.1 7.6 8.7 6.7 6.0 5.5 4.8 4.5 5.2 5.3 5.0 5.1 5.3 5.6 6.2 5.7 5.3 5.3																								Diurnal Average							
13.5 13.2 9.4 17.1 12.0 10.4 10.8 30.8 27.1 13.5 13.3 12.3 8.4 8.1 24.2 18.6 15.9 21.0 19.5 10.0 11.9 15.0 11.8 11.1																								Diurnal Maximum							
C - Calibration																															

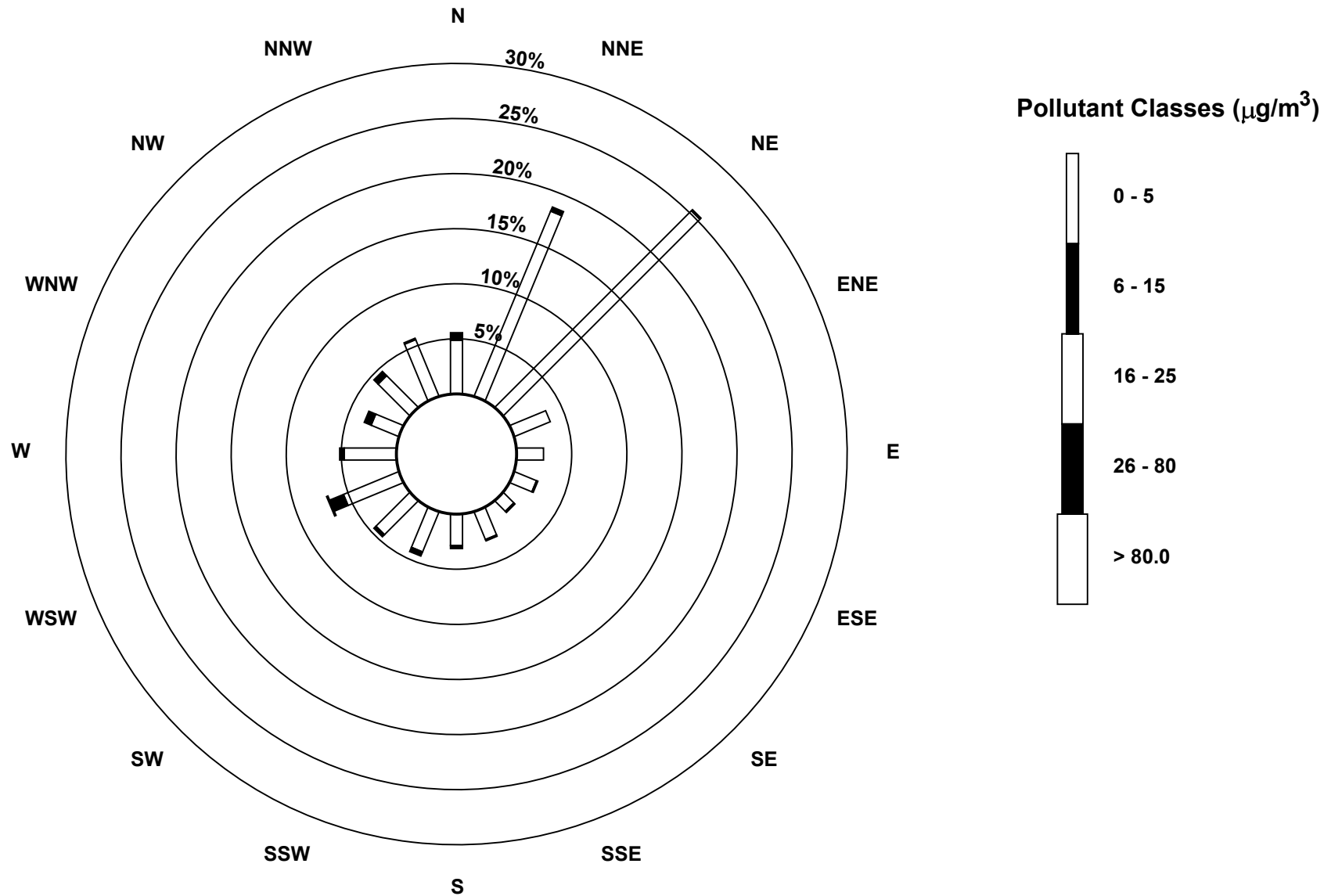
Hourly Maximums

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



Pollutant Rose

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



Hourly Averages

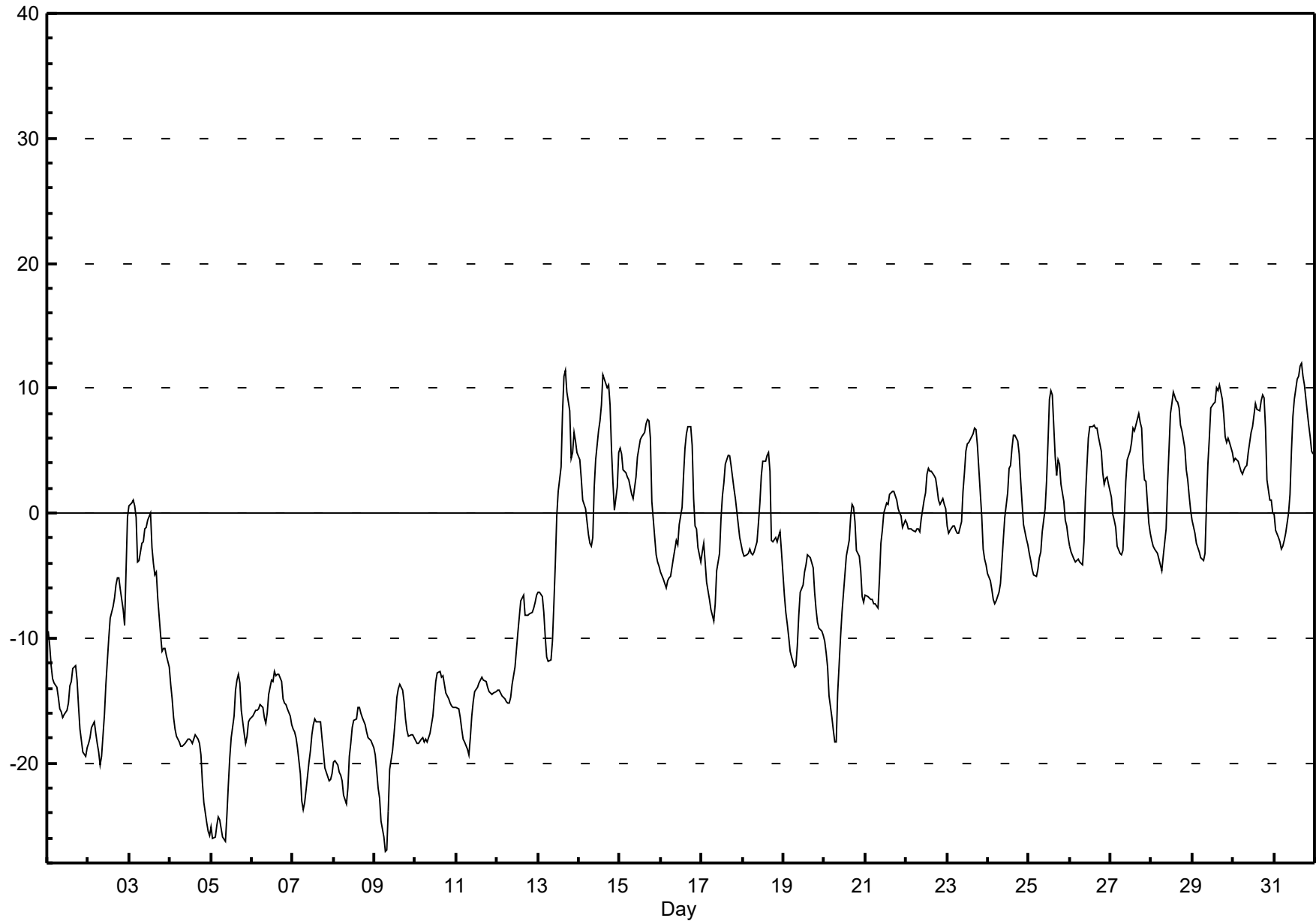
External Temperature (ET) - °C

Evergreen Park - March 2017

Maximum Value: 12.0 °C on Mar 31 17:00																				Maximum Daily Average: 5.2 °C on Mar 30					Hours in Service: 744	
Minimum Value: -27 °C on Mar 9 07:00																				Minimum Daily Average: -20.2 °C on Mar 5					Hours of Data: 744	
Maximum Diurnal Average: -1.0 °C at hour 16																				Minimum Diurnal Average: -10.2 °C at hour 7					Hours of Missing Data: 0	
Monthly Average: -5.76 °C																				Percentiles: P ₁ = -25.8 P ₁₀ = -18.3 Q ₁ = -14.7 Median = -3.7 Q ₃ = 1.9 P ₉₀ = 6.3 P ₉₉ = 10.9					Hours of Calibration: 0	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Mar	-9	-11	-12	-13	-14	-14	-15	-16	-16	-16	-16	-15	-14	-13	-12	-12	-13	-15	-17	-18	-19	-19	-19	-14.8	-9.4	
2-Mar	-18	-18	-17	-17	-18	-18	-19	-20	-19	-16	-14	-12	-10	-8	-8	-7	-6	-5	-6	-8	-9	-5	0	-11.8	-0.4	
3-Mar	1	1	1	1	0	-4	-4	-2	-2	-1	-1	-1	0	-3	-4	-5	-5	-7	-10	-11	-11	-11	-12	-4.3	1.0	
4-Mar	-14	-15	-16	-17	-18	-18	-19	-19	-19	-18	-18	-18	-18	-18	-18	-18	-18	-19	-22	-23	-25	-26	-26	-19.1	-13.7	
5-Mar	-25	-26	-26	-25	-24	-25	-25	-26	-26	-24	-22	-20	-18	-16	-14	-13	-13	-14	-16	-18	-18	-18	-17	-16	-20.2	-13.0
6-Mar	-16	-16	-16	-16	-16	-15	-16	-16	-17	-16	-15	-13	-13	-13	-13	-13	-13	-15	-15	-15	-16	-16	-17	-15.0	-12.7	
7-Mar	-17	-18	-18	-19	-21	-23	-24	-23	-22	-20	-19	-18	-17	-17	-17	-17	-17	-18	-19	-20	-21	-21	-21	-19.4	-16.5	
8-Mar	-20	-20	-20	-21	-21	-21	-23	-23	-22	-19	-18	-17	-17	-16	-16	-16	-16	-17	-18	-18	-18	-18	-19	-18.8	-15.6	
9-Mar	-19	-21	-22	-23	-25	-26	-27	-27	-24	-20	-19	-18	-16	-15	-14	-14	-14	-15	-16	-17	-18	-18	-18	-19.3	-13.7	
10-Mar	-18	-18	-18	-18	-18	-18	-18	-18	-18	-17	-16	-15	-14	-13	-13	-13	-13	-14	-14	-15	-15	-15	-16	-16	-15.9	-12.7
11-Mar	-16	-16	-16	-17	-18	-18	-19	-19	-18	-16	-15	-14	-14	-14	-13	-13	-13	-13	-14	-14	-14	-14	-14	-15.4	-13.1	
12-Mar	-14	-14	-14	-15	-15	-15	-15	-15	-15	-14	-12	-11	-10	-8	-7	-7	-8	-8	-8	-8	-8	-7	-7	-10.9	-6.5	
13-Mar	-6	-6	-7	-8	-10	-12	-12	-12	-10	-7	-4	0	2	4	8	11	11	10	8	4	5	6	6	5	-0.6	11.4
14-Mar	4	3	1	1	0	-2	-2	-3	-2	2	4	7	7	9	11	11	10	10	9	5	2	0	2	5	4.0	11.0
15-Mar	5	5	3	3	3	3	2	1	1	3	5	5	6	6	7	7	7	7	6	1	-2	-3	-4	-4	3.1	7.5
16-Mar	-5	-5	-6	-6	-5	-5	-5	-4	-3	-2	-3	-1	0	3	5	6	7	7	5	1	-1	-1	-3	-4	-1.0	6.9
17-Mar	-3	-2	-4	-6	-7	-8	-8	-9	-7	-5	-3	0	1	2	4	5	5	4	3	2	1	-1	-2	-2	-1.7	4.7
18-Mar	-3	-3	-3	-3	-3	-3	-3	-3	-2	-1	1	3	4	4	5	5	3	-2	-2	-2	-2	-1	-3	-0.8	4.8	
19-Mar	-7	-8	-9	-10	-11	-12	-12	-12	-11	-8	-6	-6	-5	-4	-3	-3	-4	-4	-6	-8	-9	-9	-9	-10	-7.8	-3.3
20-Mar	-10	-11	-12	-15	-16	-17	-18	-18	-14	-10	-8	-7	-5	-4	-2	0	1	0	-1	-3	-3	-5	-7	-7	-8.0	0.7
21-Mar	-7	-7	-7	-7	-7	-7	-7	-8	-5	-2	-1	0	1	1	1	2	2	2	1	0	0	0	-1	-1	-2.4	1.7
22-Mar	-1	-1	-1	-1	-1	-2	-1	-1	-1	0	1	2	3	4	3	3	3	3	2	1	1	1	1	0	0.7	3.5
23-Mar	-1	-2	-1	-1	-1	-1	-2	-2	-1	2	3	5	6	6	6	6	7	7	5	2	0	-3	-4	-4	1.3	6.8
24-Mar	-5	-5	-6	-7	-7	-7	-6	-6	-4	-2	0	2	4	4	5	6	6	6	5	3	1	-1	-2	-3	-0.8	6.3
25-Mar	-3	-4	-4	-5	-5	-4	-4	-3	-2	0	3	6	9	10	9	5	3	4	4	2	1	-1	-1	-2	0.7	9.8
26-Mar	-3	-3	-4	-4	-4	-4	-4	-4	-2	1	4	6	7	7	7	7	7	6	5	3	2	3	3	2	1.6	7.0
27-Mar	1	0	-1	-1	-3	-3	-3	-3	0	2	4	5	6	7	7	7	8	7	7	4	3	3	-1	-2	2.2	7.9
28-Mar	-2	-3	-3	-3	-4	-4	-5	-3	-1	2	5	8	9	10	9	9	8	7	7	5	3	3	1	0	2.4	9.7
29-Mar	-1	-2	-2	-3	-3	-4	-4	-3	1	4	6	8	9	9	10	10	10	9	8	6	6	6	6	5	3.8	10.3
30-Mar	4	4	4	4	3	3	3	4	4	5	6	7	8	9	8	8	9	9	9	7	3	1	1	0	5.2	9.4
31-Mar	0	-1	-2	-2	-3	-3	-2	-2	0	1	5	8	9	11	11	12	12	11	10	8	7	6	5	5	4.4	12.0
-7.4 -7.8 -8.4 -8.8 -9.4 -9.9 -10.2 -10.2 -9.0 -6.9 -5.3 -3.7 -2.6 -1.9 -1.2 -1.0 -1.0 -1.7 -2.7 -4.5 -5.5 -6.1 -6.4 -6.6																									Diurnal Average	
5.2 4.7 4.2 4.1 3.3 3.1 3.5 3.7 3.9 4.8 6.5 8.4 9.1 10.8 11.0 11.7 12.0 11.0 10.3 8.1 7.0 6.4 5.8 4.9																									Diurnal Maximum	

Hourly Averages

External Temperature (ET) - °C
Evergreen Park - March 2017



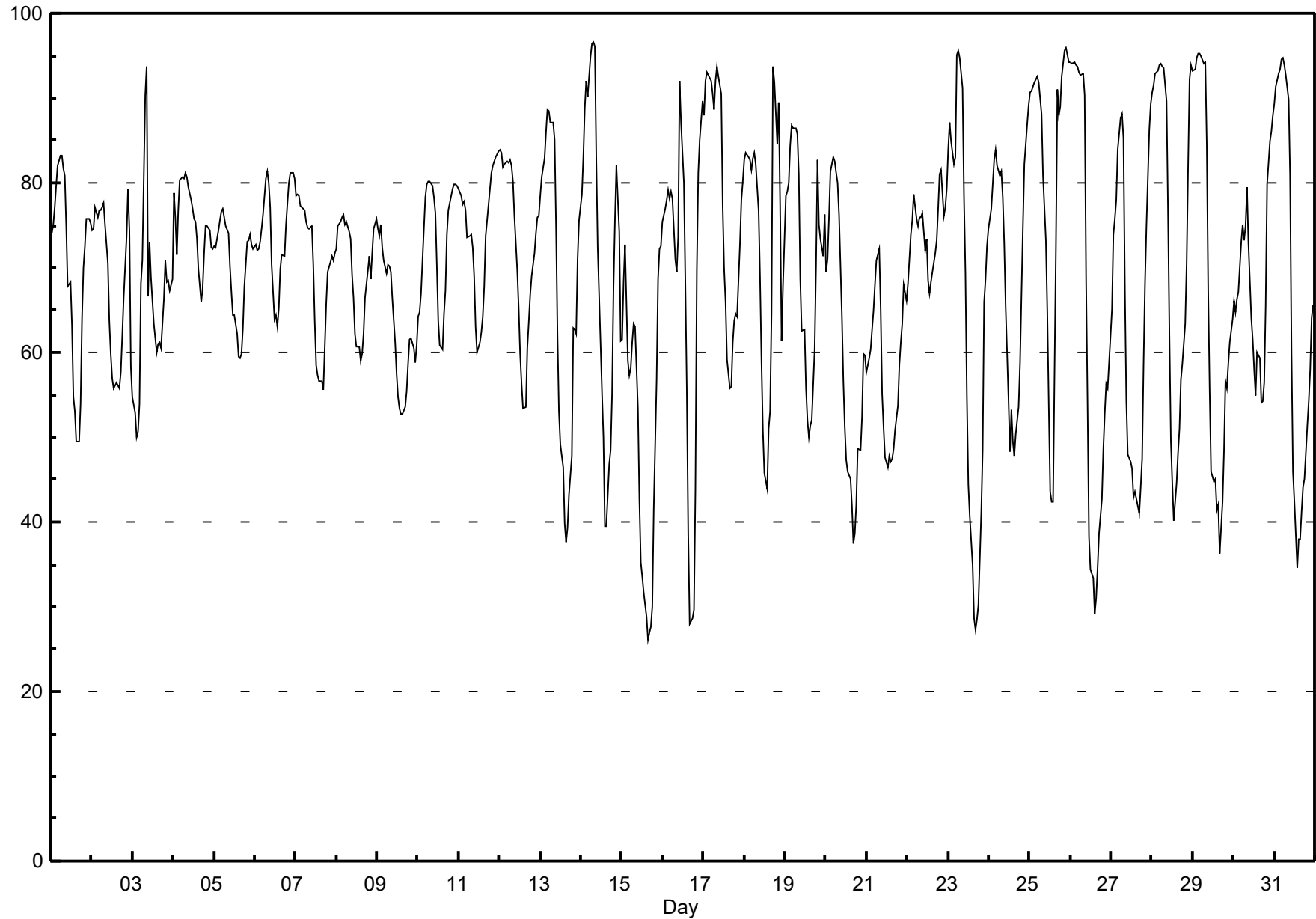
Hourly Averages

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

Maximum Value: 96.6 % on Mar 14 08:00																								Maximum Daily Average: 80.9 % on Mar 25						Hours in Service: 744	
Minimum Value: 26 % on Mar 15 16:00																								Minimum Daily Average: 50.5 % on Mar 15						Hours of Data: 744	
Maximum Diurnal Average: 82.1 % at hour 8																								Minimum Diurnal Average: 51.0 % at hour 15						Hours of Missing Data: 0	
Monthly Average: 68.81 %																								Percentiles: P ₁ = 28.7 P ₁₀ = 46.8 Q ₁ = 58.7 Median = 71.4 Q ₃ = 79.8 P ₉₀ = 89.6 P ₉₉ = 95.1						Hours of Calibration: 0	
																								Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
1-Mar	74	75	77	80	82	83	83	82	81	75	68	68	63	55	53	50	49	54	64	70	73	76	76	75	70.2	83.2					
2-Mar	74	75	77	76	77	77	77	78	75	71	64	60	57	56	56	56	56	58	62	66	74	79	74	58	68.0	79.3					
3-Mar	55	53	50	51	54	68	71	90	94	67	73	69	63	62	60	61	61	61	66	71	68	68	67	69	65.5	93.7					
4-Mar	79	76	71	77	80	81	81	81	81	79	78	77	76	75	73	70	66	68	72	75	75	74	72	72	75.4	81.2					
5-Mar	73	72	74	76	77	77	76	75	74	70	67	64	64	62	60	59	60	63	68	73	73	74	73	72	69.8	76.9					
6-Mar	73	72	72	73	75	76	80	81	80	77	70	64	64	63	65	70	71	71	75	78	80	81	81	80	74.0	81.4					
7-Mar	78	79	78	77	77	77	75	75	75	75	70	64	59	57	57	57	56	61	66	70	71	71	71	72	69.4	78.7					
8-Mar	72	75	75	76	76	75	75	74	73	69	67	62	61	61	59	60	62	66	70	71	69	72	75	76	69.6	76.2					
9-Mar	74	74	75	72	71	69	70	70	69	66	61	57	55	53	53	53	54	55	59	61	62	60	59	61	63.1	75.1					
10-Mar	64	65	67	75	78	80	80	80	80	78	76	70	64	61	60	65	67	74	77	78	79	80	80	80	73.3	80.1					
11-Mar	79	78	77	78	77	74	74	74	72	69	63	60	61	62	64	68	74	77	79	81	82	83	83	84	73.9	83.7					
12-Mar	84	84	82	82	83	82	83	82	80	76	70	65	60	56	53	54	61	64	67	69	72	74	76	76	72.2	84.0					
13-Mar	79	81	83	86	89	88	87	87	85	75	62	53	49	46	40	38	39	43	48	63	63	62	71	76	66.3	88.6					
14-Mar	79	83	89	92	90	95	96	97	96	83	72	61	55	50	39	40	47	48	55	68	76	82	74	61	72.0	96.6					
15-Mar	62	68	73	59	57	58	61	63	63	53	43	35	34	32	29	26	27	28	30	42	57	69	72	73	50.5	72.7					
16-Mar	75	77	78	79	78	79	78	71	69	74	92	87	80	68	56	39	28	29	30	44	70	81	85	90	68.2	92.0					
17-Mar	88	92	93	93	92	90	89	92	94	93	90	77	70	66	59	56	56	61	64	65	64	73	78	80	78.1	93.8					
18-Mar	83	84	83	83	82	83	83	82	77	69	59	51	46	44	51	53	65	94	92	85	89	77	61	68	72.6	93.8					
19-Mar	78	79	80	84	87	87	86	86	81	69	63	63	56	52	50	51	52	60	70	83	75	73	71	76	71.4	86.8					
20-Mar	69	71	76	81	83	83	81	80	76	64	57	51	47	46	45	42	37	39	42	49	48	52	60	60	60.0	83.0					
21-Mar	58	59	60	63	65	68	71	72	65	55	51	48	46	48	47	47	49	51	54	59	61	63	68	66	58.1	72.2					
22-Mar	68	71	74	76	79	76	75	76	76	76	72	73	68	67	68	70	72	73	77	81	81	76	77	79	74.2	81.5					
23-Mar	84	87	85	82	83	95	96	95	91	78	69	55	44	41	35	29	27	29	30	41	48	66	69	73	63.8	95.5					
24-Mar	75	77	80	83	84	82	81	81	78	73	65	54	48	53	49	48	50	53	59	67	75	82	87	89	69.8	89.2					
25-Mar	91	91	91	92	92	92	90	88	81	73	65	54	44	42	42	73	91	88	89	93	96	96	95	94	80.9	95.9					
26-Mar	94	94	94	94	94	93	93	93	90	69	54	38	34	33	29	31	35	39	43	49	53	56	56	59	63.2	94.2					
27-Mar	65	74	76	78	84	88	88	85	67	54	48	47	46	43	44	43	41	44	48	59	68	75	86	89	64.2	89.4					
28-Mar	91	92	93	93	94	94	94	94	90	77	62	50	45	40	45	48	51	57	59	63	70	82	92	94	73.7	94.1					
29-Mar	93	93	95	95	95	95	94	94	85	67	56	46	45	45	41	42	36	42	49	57	56	59	61	64	66.9	95.3					
30-Mar	66	65	66	67	73	75	73	75	80	73	64	62	58	55	60	59	54	54	57	65	80	85	86	88	68.3	88.0					
31-Mar	89	91	93	93	95	95	94	93	90	81	60	46	42	35	38	38	41	44	45	51	54	58	64	66	66.5	94.8					
76.3 77.6 78.7 79.5 80.7 81.7 81.8 82.1 79.6 71.9 65.5 59.1 55.0 52.6 51.0 51.4 52.7 56.4 60.0 65.9 69.7 72.9 74.2 74.8																								Diurnal Average							
94.2 94.0 94.8 95.3 95.3 95.0 96.4 96.6 96.1 92.5 92.0 87.0 80.1 75.4 73.5 72.6 91.1 93.8 91.8 92.6 95.6 95.9 95.1 94.3																								Diurnal Maximum							

Hourly Averages

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



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	8	10	14	13	10	9	10	13	14	23	21	19	13	10	7	6	6	8	6	4	5	3	6	4	7.4	22.9
Dir	32	32	25	26	16	346	346	330	308	312	304	298	286	276	309	315	8	28	50	45	54	41	32	53	341.5	312.0
2 Spd	1	3	4	1	1	0	1	1	1	4	6	7	4	6	5	4	4	2	2	0	1	5	10	14	0.7	14.3
Dir	55	33	57	111	39	57	100	337	28	33	325	330	332	334	350	331	336	14	18	123	172	150	171	180	1.1	180.3
3 Spd	13	12	9	12	7	1	18	13	16	16	16	16	16	18	13	14	10	16	14	8	11	16	15	16	2.8	17.7
Dir	163	165	158	159	162	292	313	297	279	232	214	229	226	313	329	333	15	34	38	23	16	36	36	26	321.4	313.1
4 Spd	24	22	22	19	15	12	12	6	10	11	9	11	13	10	11	11	8	4	3	2	2	0	0	0	9.6	23.6
Dir	29	29	32	28	28	25	22	30	27	17	39	47	53	52	37	26	354	41	37	30	32	210	204	227	31.0	29.0
5 Spd	0	0	2	2	3	5	4	4	4	3	7	7	12	12	10	12	12	14	14	9	9	8	13	12	5.2	13.8
Dir	138	271	173	311	294	336	313	308	281	308	239	274	338	350	21	39	37	32	27	26	16	27	49	53	10.3	31.7
6 Spd	10	11	7	11	9	7	7	13	7	11	12	13	13	13	16	14	15	11	9	8	10	10	6	11	10.5	16.2
Dir	49	50	45	41	31	28	42	33	33	29	47	53	42	42	38	40	37	31	33	27	25	26	23	24	37.0	37.9
7 Spd	10	12	9	3	3	5	7	2	2	7	11	11	13	16	18	19	16	12	9	9	7	3	1	3	8.6	19.1
Dir	31	32	26	11	344	26	34	14	21	36	37	31	38	40	37	36	39	31	32	36	29	41	343	22	32.8	35.8
8 Spd	6	7	9	10	9	6	3	6	8	12	14	10	14	12	14	17	14	14	12	11	9	9	7	6	9.8	17.2
Dir	35	30	24	31	31	25	18	23	30	41	32	37	17	14	25	26	36	30	31	32	41	41	43	33	30.2	26.1
9 Spd	5	3	4	4	2	2	1	1	0	10	6	9	11	17	20	20	25	24	18	13	11	13	13	10	9.7	24.8
Dir	31	2	22	11	340	337	292	207	247	50	19	25	33	37	38	39	32	32	34	38	38	47	51	53	35.5	32.2
10 Spd	9	10	10	9	11	11	11	11	9	10	15	15	15	15	17	19	17	17	11	8	7	8	6	6	11.5	18.6
Dir	46	49	53	54	51	51	55	54	51	48	44	63	69	67	46	43	44	47	51	50	47	45	50	51	51.3	43.2
11 Spd	4	3	1	2	0	0	1	1	2	5	6	12	15	19	18	18	19	18	20	17	15	13	12	9	9.3	20.0
Dir	51	31	12	357	338	349	345	344	23	57	12	35	47	39	36	41	40	42	43	47	49	47	54	56	41.5	43.2
12 Spd	8	9	11	10	8	10	7	7	9	12	12	11	12	9	11	10	15	13	9	5	7	6	7	5	8.6	15.2
Dir	53	74	87	85	85	81	81	83	90	105	99	103	106	100	110	82	42	44	54	62	54	51	42	46	77.8	41.8
13 Spd	7	5	1	1	2	0	1	1	2	4	4	5	5	6	4	6	10	7	10	4	15	29	19	19	4.9	29.0
Dir	60	81	5	348	199	203	208	282	234	252	277	319	323	329	249	265	253	251	248	258	231	222	214	213	239.5	221.9
14 Spd	16	9	6	6	2	4	1	1	3	4	4	4	5	7	9	14	11	10	5	3	1	2	7	10	3.3	15.9
Dir	212	210	226	211	168	50	78	50	46	62	40	33	40	56	106	173	149	154	140	107	135	161	162	166	152.5	212.0
15 Spd	20	26	23	29	25	24	21	20	18	19	27	31	26	25	23	20	14	11	2	0	0	0	2	3	16.1	30.7
Dir	237	268	254	248	238	233	232	223	210	235	245	245	250	250	254	257	253	259	240	93	45	52	49	34	244.6	244.6
16 Spd	1	2	2	2	4	5	7	3	0	2	7	8	9	8	10	20	20	11	8	2	5	2	1	1	3.0	19.9
Dir	70	40	43	24	47	54	58	93	99	341	250	256	264	251	265	258	264	258	279	183	56	106	48	356	271.2	264.0
17 Spd	4	6	0	1	3	1	3	4	5	5	9	11	14	17	18	18	17	13	11	9	4	2	1	0	6.6	18.3
Dir	280	334	21	165	140	45	12	351	47	31	30	32	37	35	40	41	47	53	52	54	63	37	37	29	38.5	41.2
18 Spd	2	1	0	1	0	1	0	2	3	3	7	11	10	11	10	11	24	37	15	5	5	13	22	10	6.5	36.9
Dir	31	43	19	27	31	345	293	230	334	247	320	323	330	324	338	327	297	313	312	253	160	223	236	299	300.5	313.2
19 Spd	13	13	6	2	1	2	1	0	5	6	10	13	10	12	12	9	6	13	9	20	15	14	15	15	7.0	19.6
Dir	313	322	317	307	246	276	290	127	8	342	339	341	356	359	19	1	25	24	30	314	292	283	263	254	327.2	314.4
20 Spd	12	7	5	1	0	1	0	1	2	5	9	12	12	11	11	10	14	13	10	8	8	3	5	8	4.8	13.7
Dir	251	272	295	221	236	31	22	13	2	324	329	336	341	344	348	352	36	39	43	49	57	43	46	53	0.9	36.3
21 Spd	8	8	8	10	9	8	6	6	6	12	5	7	10	13	14	11	12	7	6	4	5	4	4	4	5.9	13.6
Dir	57	54	60	56	59	54	50	45	52	102	122	245	354	348	350	8	14	5	359	10	5	17	49	59	31.6	349.9
22 Spd	1	0	2	1	4	6	1	5	9	3	4	9	10	12	13	16	12	11	8	8	7	9	8	5	4.3	15.7
Dir	197	147	231	217	240	260	98	239	248	273	326	342	39	36	28	36	36	28	32	34	45	41	47	66	23.3	36.2

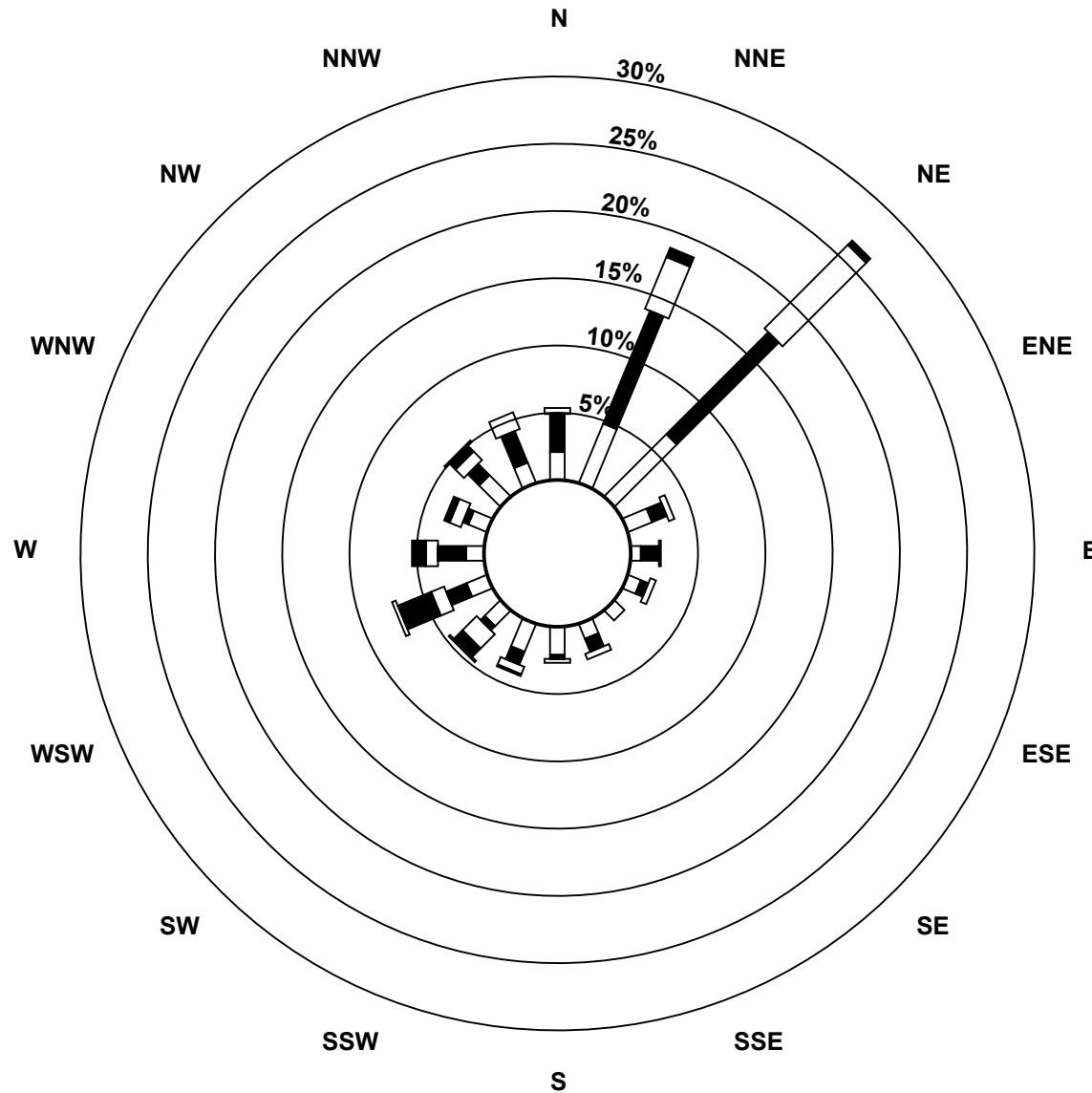
Hourly Averages

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

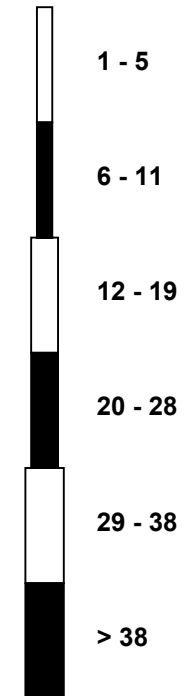
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	4	7	7	5	7	8	6	3	3	2	5	15	25	25	23	21	22	13	7	1	7	1	2	1	6.8	25.4
Dir	43	51	48	61	249	275	268	241	208	210	242	263	249	242	260	250	259	278	261	195	206	89	41	71	256.0	241.8
24 Spd	2	2	1	2	3	1	1	2	3	3	3	5	1	10	11	11	10	4	4	1	1	1	1	1	2.4	11.3
Dir	116	30	67	30	49	172	0	28	47	33	107	116	358	356	2	5	10	351	297	282	217	307	196	279	13.9	4.6
25 Spd	1	1	1	0	2	2	4	1	1	3	4	5	6	9	8	23	7	6	8	5	5	5	10	4	1.5	22.9
Dir	110	0	41	253	306	54	185	332	27	299	309	234	226	6	355	292	232	120	147	165	182	180	195	194	242.0	291.7
26 Spd	0	1	1	1	2	1	1	2	3	4	8	4	9	14	16	18	13	11	7	7	8	7	9	6	4.3	17.5
Dir	124	37	189	58	52	99	39	186	154	200	205	222	322	12	24	25	19	28	30	37	39	37	31	15	24.5	24.8
27 Spd	2	1	1	2	1	1	2	0	3	2	4	8	8	8	8	9	6	9	6	2	5	1	1	1	2.4	8.8
Dir	282	230	315	285	275	224	275	30	323	308	313	332	343	358	354	35	17	40	41	356	194	141	37	175	354.6	40.2
28 Spd	2	1	1	0	0	1	1	1	3	1	5	4	10	20	15	5	7	4	3	3	1	1	0	1	1.5	20.1
Dir	190	39	3	137	120	169	43	6	26	156	130	229	206	219	219	276	11	31	42	46	238	268	163	219	220.9	219.3
29 Spd	3	0	1	1	4	3	1	1	2	3	2	2	13	11	9	14	15	12	6	10	11	11	5	6	4.5	15.4
Dir	200	180	50	152	179	39	63	207	136	191	131	249	339	7	29	34	32	35	31	25	38	42	41	37	30.1	32.4
30 Spd	8	10	7	2	1	5	6	8	10	14	22	23	17	19	24	18	22	15	9	2	1	7	4	2	8.2	24.1
Dir	36	28	16	33	242	287	284	279	285	302	306	312	281	263	262	257	257	258	260	262	178	195	208	207	281.0	261.6
31 Spd	4	2	1	1	1	0	1	1	0	4	11	16	22	26	22	21	22	27	22	25	25	17	15	17	11.3	26.5
Dir	185	179	201	38	52	318	32	33	195	174	189	207	199	219	255	269	262	249	252	245	241	245	256	234	237.7	249.1
Spd	1.7	2.9	2.6	1.8	1.1	1.6	1.9	1.5	1.5	1.9	2.7	4.0	4.1	5.7	6.4	6.8	6.7	6.6	4.8	3.7	2.3	1.5	1.1	1.2	Diurnal Average	
Dir	31.5	21.0	29.0	33.8	27.5	3.6	353.5	338.1	340.5	352.8	326.0	319.1	335.2	346.4	356.6	355.4	1.5	10.8	20.3	21.9	27.0	31.6	43.5	43.5	Diurnal Maximum	
Spd	23.6	26.4	22.8	29.1	25.1	23.6	21.4	19.8	18.2	22.9	27.4	30.7	25.7	25.7	24.1	22.9	24.8	36.9	22.2	24.9	25.0	29.0	21.7	18.6	Diurnal Maximum	
Dir	29.0	268.0	253.9	247.7	237.9	233.1	232.3	223.2	210.0	312.0	245.4	244.6	250.3	218.6	261.6	291.7	32.2	313.2	251.5	245.3	240.8	221.9	235.8	212.7		
Maximum Speed Value: 37 km/h on Mar 18 18:00							Minimum Speed Value: 0 km/h on Mar 5 00:00													Hours in Service:				744		
Maximum Daily Speed Average: 16.1 km/h on Mar 15							Minimum Daily Speed Average: 0.7 km/h on Mar 24													Hours of Data:				744		
Maximum Diurnal Speed Average: 6.8 km/h at hour 16							Minimum Diurnal Speed Average: 1.1 km/h at hour 5													Hours of Missing Data:				0		
Monthly Average Velocity: 2.96 km/h 2.52 deg							Speed Percentiles: P ₁ = 0.2 P ₁₀ = 1.0 Q ₁ = 2.7 Median = 7.4 Q ₃ = 12.0 P ₉₀ = 17.4 P ₉₉ = 26.4													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	42	34	21	0	0	0	97																			
NorthEast	91	123	89	9	0	0	312																			
East	16	12	6	0	0	0	34																			
SouthEast	18	7	0	0	0	0	25																			
South	33	9	6	1	0	0	49																			
SouthWest	33	11	15	12	2	0	73																			
West	24	27	14	21	1	0	87																			
NorthWest	28	16	16	6	1	0	67																			
Total	285	239	167	49	4	0	744																			

Wind Rose

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



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Evergreen Park - March 2017

Maximum Speed: 38 km/h on Mar 18 18:00																				Maximum Daily Speed Average: 17.5 km/h on Mar 15										Hours in Service: 744	
Minimum Speed: 0 km/h on Mar 25 04:00																				Minimum Daily Speed Average: 4.1 km/h on Mar 2										Hours of Data: 744	
Maximum Diurnal Speed Average: 14.9 km/h at hour 16																				Minimum Diurnal Speed Average: 5.0 km/h at hour 8										Hours of Missing Data: 0	
Monthly Average Speed: 8.94 km/h																				Percentiles: P ₁ = 0.5 P ₁₀ = 1.6 Q ₁ = 3.6 Median = 7.8 Q ₃ = 12.5 P ₉₀ = 18.2 P ₉₉ = 26.5										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-Mar	9	10	14	13	11	11	11	13	15	24	22	20	15	11	9	7	7	9	6	4	5	3	6	4	10.8	23.7					
2-Mar	2	3	4	2	1	0	1	1	2	5	7	8	4	7	6	5	4	2	2	1	1	6	10	15	4.1	14.5					
3-Mar	13	12	10	12	7	3	18	14	18	18	17	16	16	19	13	15	11	17	14	9	11	16	16	17	13.9	19.2					
4-Mar	24	22	23	19	16	12	13	7	10	11	9	12	14	11	11	12	9	5	3	2	2	1	0	0	10.3	24.0					
5-Mar	0	0	2	3	4	5	4	4	5	4	8	10	12	13	12	13	13	14	14	9	9	8	13	12	7.9	14.2					
6-Mar	11	11	7	11	10	7	7	13	8	11	13	14	14	14	17	15	15	12	9	8	10	10	6	11	11.0	17.0					
7-Mar	10	12	9	4	4	5	7	3	2	7	12	12	14	17	19	20	17	12	9	10	7	3	2	4	9.2	19.8					
8-Mar	6	7	9	10	9	6	3	6	8	13	15	11	14	13	15	18	15	14	13	12	10	9	7	6	10.3	17.6					
9-Mar	5	3	4	4	2	2	2	1	1	10	8	10	12	18	21	21	25	24	18	13	11	13	14	10	10.5	25.2					
10-Mar	9	11	10	9	11	11	11	11	9	11	15	17	17	17	18	19	17	18	12	8	7	8	7	6	12.1	19.1					
11-Mar	4	3	2	2	1	1	1	1	2	5	7	13	16	19	18	18	19	18	20	17	15	14	12	9	9.9	20.4					
12-Mar	9	10	12	10	8	10	8	7	10	13	12	12	14	11	12	12	16	13	9	6	7	7	7	5	10.0	15.6					
13-Mar	7	5	1	1	3	3	2	2	3	6	5	6	7	7	5	7	10	8	10	4	15	29	19	19	7.6	29.4					
14-Mar	16	9	7	6	5	5	4	2	4	5	5	5	6	8	11	14	11	11	6	3	2	3	7	10	6.8	16.0					
15-Mar	23	27	23	29	25	24	22	20	18	19	28	31	26	25	23	21	15	11	3	1	1	1	3	3	17.5	31.1					
16-Mar	3	2	3	3	4	5	7	4	4	4	8	9	10	9	11	20	21	11	8	7	5	3	2	1	6.8	20.8					
17-Mar	7	7	2	3	4	2	4	5	5	5	9	11	14	18	18	19	18	13	11	9	4	2	1	1	8.1	18.8					
18-Mar	2	2	1	1	1	1	2	2	3	5	8	12	11	12	11	12	25	38	16	7	5	13	22	12	9.3	37.7					
19-Mar	14	13	7	4	3	3	3	2	5	7	11	13	12	13	13	11	7	14	10	20	16	15	15	15	10.2	20.3					
20-Mar	12	8	5	1	1	1	1	2	2	5	9	12	12	12	12	11	14	13	10	8	8	3	6	8	7.3	14.3					
21-Mar	8	8	8	10	9	8	6	6	7	13	7	8	11	14	14	12	12	7	6	4	5	4	4	4	8.2	14.4					
22-Mar	2	2	2	1	4	7	2	6	9	4	5	10	11	13	14	16	13	11	9	8	7	9	8	5	7.4	16.1					
23-Mar	4	7	7	5	8	9	7	5	3	2	6	16	26	26	23	22	23	14	8	2	7	3	3	3	9.9	26.0					
24-Mar	4	2	4	2	4	4	1	2	3	3	3	6	6	11	11	12	11	5	4	2	3	2	4	2	4.6	12.0					
25-Mar	1	2	1	0	3	3	5	2	1	5	6	5	6	11	10	26	12	6	8	5	6	5	10	4	5.9	26.0					
26-Mar	1	2	1	2	2	3	2	2	4	4	8	5	10	15	17	18	14	12	7	7	8	8	9	6	6.9	18.4					
27-Mar	3	1	2	3	2	2	3	1	3	4	7	9	8	9	9	9	7	9	7	2	8	3	2	2	4.7	9.4					
28-Mar	3	2	2	1	1	1	2	1	4	3	6	5	11	21	16	6	8	6	3	3	1	2	2	2	4.7	20.9					
29-Mar	3	1	1	1	4	4	3	2	3	4	4	5	14	12	10	14	16	12	6	10	11	12	6	7	6.8	15.8					
30-Mar	8	10	7	6	1	5	7	9	11	15	23	24	18	20	24	19	23	16	9	2	1	7	4	2	11.3	24.5					
31-Mar	4	3	1	1	2	1	1	1	1	4	11	17	23	27	22	21	23	27	23	25	25	18	16	18	13.0	27.4					
7.3 7.0 6.2 5.8 5.4 5.3 5.4 5.0 5.8 8.0 10.2 11.7 13.1 14.6 14.4 14.9 14.5 13.0 9.4 7.4 7.5 7.6 7.8 7.2																									Diurnal Average						
24.0 27.0 23.1 29.5 25.2 23.8 21.6 20.1 18.3 23.7 27.8 31.1 26.1 27.4 24.5 26.0 25.2 37.7 22.5 25.1 25.2 29.4 21.8 18.7																									Diurnal Maximum						

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

Hourly Standard Deviations

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

Maximum Value: 97.6 deg on Mar 28 04:00																								Hours in Service: 744	
Minimum Value: 4.8 deg on Mar 13 23:00																								Hours of Data: 744	
																								Hours of Missing Data: 0	
Percentiles: P ₁ = 7.2 P ₁₀ = 10.9 Q ₁ = 15.0 Median = 22.5 Q ₃ = 44.1 P ₉₀ = 73.7 P ₉₉ = 94.3																								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-Mar	22	15	12	13	19	37	25	16	18	15	19	21	31	38	55	44	33	23	14	13	11	22	11	16	55.2
2-Mar	82	40	29	62	73	64	81	59	41	30	19	20	53	28	33	21	48	50	32	95	91	13	10	10	95.5
3-Mar	10	9	13	12	13	85	38	28	32	23	11	8	12	26	16	18	29	16	12	17	14	15	13	15	85.4
4-Mar	12	12	11	13	15	20	15	13	14	14	24	20	22	24	24	27	26	37	10	14	47	96	78	96	96.3
5-Mar	81	68	56	56	32	24	24	34	25	49	23	45	18	25	35	26	23	14	10	11	10	15	14	14	81.4
6-Mar	15	16	15	15	17	19	19	13	21	17	24	24	21	23	19	18	16	16	13	12	11	13	10	11	24.4
7-Mar	12	14	13	19	22	21	11	40	67	23	29	28	24	26	19	16	21	15	10	8	21	40	73	40	73.0
8-Mar	14	15	15	9	11	7	15	7	10	22	23	39	23	25	26	14	15	12	14	12	16	12	12	10	38.8
9-Mar	7	15	8	12	23	31	63	48	85	17	49	38	30	20	18	16	11	8	10	10	10	14	11	13	84.7
10-Mar	11	16	15	16	15	18	16	17	18	19	18	28	25	25	22	15	14	12	15	15	21	20	16	19	28.1
11-Mar	21	22	20	15	31	53	38	39	37	39	38	23	22	17	15	14	15	13	12	12	13	13	17	17	52.7
12-Mar	17	19	17	17	19	14	21	22	24	19	25	32	36	42	39	38	14	16	16	20	15	13	13	19	41.6
13-Mar	16	56	77	65	81	97	84	68	73	44	44	40	45	22	36	38	12	22	12	82	10	10	5	7	96.6
14-Mar	6	10	26	24	67	52	93	72	28	28	30	39	51	30	33	19	23	22	28	23	52	67	13	13	93.0
15-Mar	34	11	10	9	6	8	8	10	7	12	9	9	10	10	12	14	18	19	65	77	84	67	49	16	83.7
16-Mar	71	25	33	66	21	9	10	40	88	54	24	21	33	22	29	17	18	19	19	90	35	52	83	59	90.2
17-Mar	70	33	85	77	63	81	62	34	25	38	17	29	16	12	13	13	15	13	13	15	17	56	82	86	86.4
18-Mar	36	81	94	76	89	50	74	72	60	53	35	25	24	24	19	19	11	19	46	16	21	5	30	93.8	
19-Mar	14	13	55	68	78	49	67	81	28	36	30	18	29	21	28	29	36	23	27	20	18	17	16	11	81.2
20-Mar	10	18	21	65	89	78	76	28	27	21	15	17	19	20	20	30	18	17	11	10	10	15	9	9	89.0
21-Mar	7	8	10	9	11	9	10	9	25	21	54	36	26	21	19	21	19	18	22	14	18	12	19	23	54.1
22-Mar	83	87	65	89	45	38	49	51	12	44	43	31	39	28	19	15	21	16	16	10	10	13	16	19	89.3
23-Mar	14	13	15	22	67	23	39	45	55	43	38	19	16	11	13	12	12	20	25	67	23	76	77	74	76.8
24-Mar	68	74	72	52	29	90	40	59	23	30	59	42	94	23	25	21	16	32	32	82	78	87	90	66	93.8
25-Mar	70	84	83	85	54	61	54	65	64	72	59	19	33	35	33	29	85	23	19	21	22	13	10	44	85.0
26-Mar	56	55	67	78	57	63	84	35	25	29	28	44	31	28	19	19	15	13	11	7	10	19	14	24	83.7
27-Mar	46	55	42	55	71	60	65	71	25	63	71	26	29	36	28	26	30	16	20	25	79	84	77	87	86.8
28-Mar	95	57	60	98	81	75	56	81	45	94	51	38	35	16	22	44	28	72	50	44	62	83	93	64	97.6
29-Mar	41	95	77	79	27	60	74	69	66	33	80	75	20	20	32	19	16	11	17	10	18	24	39	29	94.6
30-Mar	14	12	11	80	66	24	18	16	17	18	17	16	26	19	11	16	17	12	17	35	42	14	15	27	80.2
31-Mar	22	30	72	80	73	91	57	71	48	34	16	17	11	21	13	16	16	9	9	8	8	11	21	7	91.3
95.0 94.6 93.8 97.6 89.4 96.6 93.0 81.5 88.4 93.6 79.5 75.3 93.8 41.6 55.2 44.2 85.0 71.8 65.4 95.5 91.3 95.8 92.5 96.3																									

PAZA
Smoky Heights Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

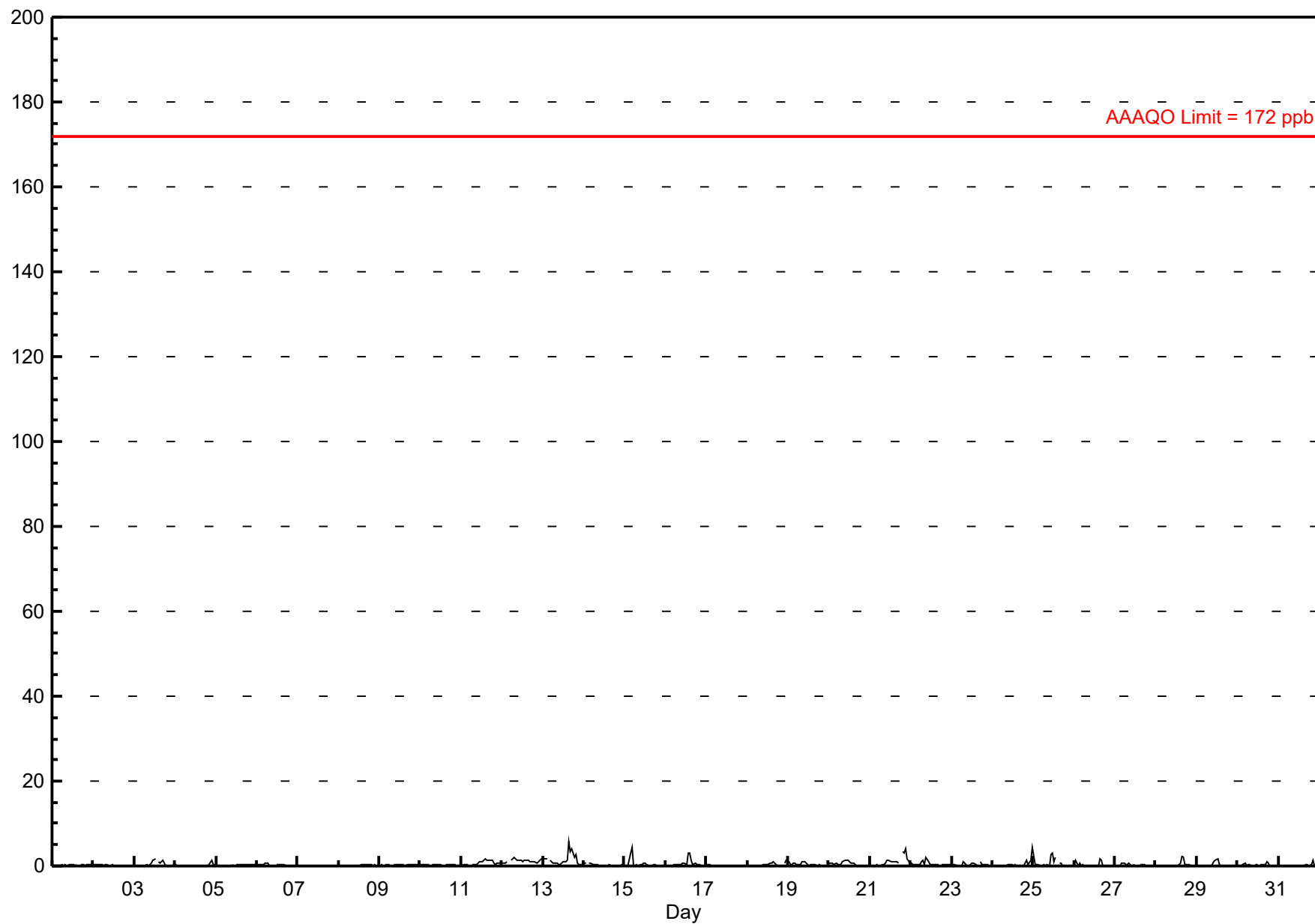
Sulphur Dioxide (SO₂) - ppb

Smoky Heights - March 2017

Number of Exceedences (AAAQO):		1-hr: 0 24-hr: 0		Hours in Service: 744																						
Maximum Value: 5.9 ppb on Mar 13 16:00		Maximum Daily Average: 1.5 ppb on Mar 13		Hours of Data: 709																						
Minimum Value: 0 ppb on Mar 31 19:00		Minimum Daily Average: 0.1 ppb on Mar 7		Hours of Missing Data: 35																						
Maximum Diurnal Average: 0.7 ppb at hour 16		Minimum Diurnal Average: 0.2 ppb at hour 3		Hours of Calibration: 33																						
Monthly Average: 0.41 ppb		Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.4 P ₉₀ = 1.1 P ₉₉ = 3.1		Percent Operational Time: 99.7																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	0	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
2-Mar	0	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
3-Mar	0	0	0	0	0	0	0	0	0	0	1	1	2	A	1	1	1	1	0	0	0	0	0	0	0.4	1.6
4-Mar	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0.2	1.2
5-Mar	0	0	0	P	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
6-Mar	0	0	0	0	0	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
7-Mar	0	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
8-Mar	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
9-Mar	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
10-Mar	0	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
11-Mar	0	0	0	0	0	A	0	0	0	0	1	1	1	1	2	1	1	1	1	1	0	1	1	1	0.7	1.5
12-Mar	1	1	1	1	A	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1.2	1.9
13-Mar	2	2	2	A	1	1	1	1	1	0	0	1	1	1	1	6	3	4	2	3	1	0	0	0	1.5	5.9
14-Mar	1	1	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
15-Mar	0	A	0	3	4	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.5	4.4
16-Mar	A	0	0	0	0	0	0	0	0	0	1	1	0	3	3	1	0	1	0	0	0	0	0	A	0.6	3.2
17-Mar	0	0	0	0	0	0	0	0	0	0	P	R	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.4
18-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	A	1	1	0.3	1.4
19-Mar	1	0	0	1	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0.4	1.2
20-Mar	1	1	1	0	1	0	0	0	1	1	1	1	1	1	1	0	0	0	0	A	0	0	0	0	0.5	1.4
21-Mar	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	A	3	3	4	2	1	1.0	4.0
22-Mar	1	0	0	0	0	0	1	1	0	2	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0.5	2.1
23-Mar	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	A	1	0	0	0	0	0	0	0.3	1.0
24-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	1	0	1	4	0.4	4.3
25-Mar	2	0	0	0	0	0	0	0	0	0	3	3	1	2	A	1	1	0	0	0	0	0	0	0	0.6	3.0
26-Mar	0	1	0	1	0	0	0	0	0	0	0	0	0	A	0	2	1	0	0	0	0	0	0	0	0.3	1.7
27-Mar	0	0	0	0	1	1	0	0	1	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0.3	0.8
28-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	0	0	0	0	0	0	0	0.3	2.5
29-Mar	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0.2	1.7
30-Mar	0	0	0	0	1	0	0	1	0	A	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0.2	1.0
31-Mar	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.2	1.4
		0.4	0.3	0.2	0.4	0.4	0.3	0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.5	0.7	0.6	0.5	0.3	0.4	0.4	0.3	0.3	0.5	Diurnal Average	
		2.4	1.6	1.6	3.1	4.4	1.5	1.7	1.9	1.8	2.1	2.7	3.0	1.7	3.0	3.2	5.9	3.5	4.1	2.1	3.2	3.1	4.0	1.7	4.3	Diurnal Maximum
C - Calibration		R - Recovery				P - Power Failure				A - Automated Daily Zero Span																
Alberta Ambient Air Quality Objectives (AAAQO):		1-hr 172 ppb				24-hr 48 ppb				30-day 11 ppb																

Hourly Averages

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



Hourly Maximums

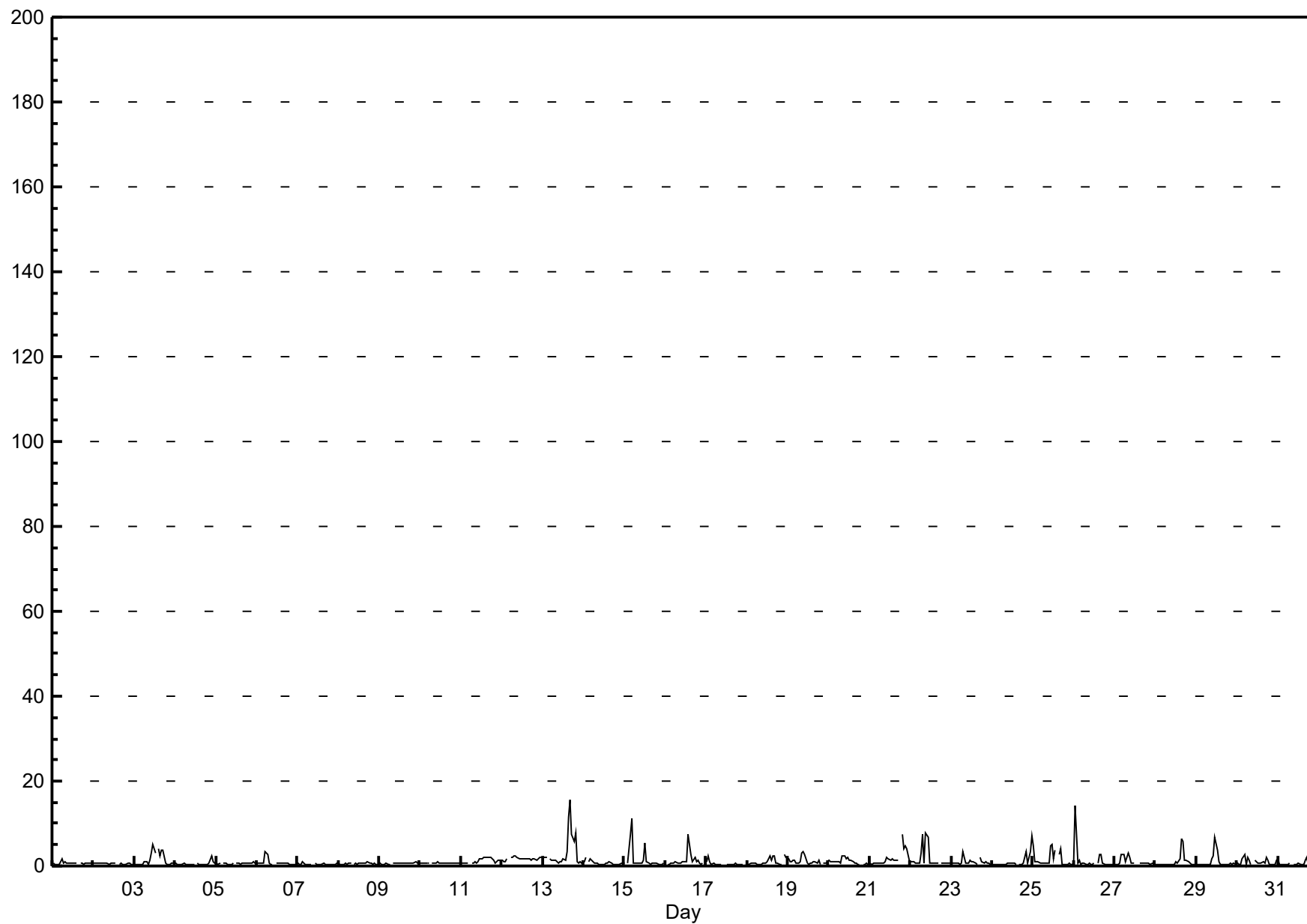
Sulphur Dioxide (SO₂) - ppb

Smoky Heights - March 2017

Maximum Value: 15.7 ppb on Mar 13 17:00																				Maximum Daily Average: 3.2 ppb on Mar 13					Hours in Service: 744	
Minimum Value: 0 ppb on Mar 30 22:00																				Minimum Daily Average: 0.4 ppb on Mar 7					Hours of Data: 709	
Maximum Diurnal Average: 1.8 ppb at hour 17																				Minimum Diurnal Average: 0.7 ppb at hour 3					Hours of Missing Data: 35	
Monthly Average: 1.10 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.6 Q ₃ = 1.0 P ₉₀ = 2.1 P ₉₉ = 7.5					Hours of Calibration: 33	
																									Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	1	0	0	0	0	2	1	1	1	1	1	1	1	1	1	A	1	1	0	1	1	1	1	1	0.7	1.6
2-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0	1	0	0	0	1	1	0	0	0.6	0.8
3-Mar	0	0	0	0	0	0	1	1	0	1	3	5	3	A	4	2	4	4	1	0	0	0	1	1	1.5	5.2
4-Mar	1	0	0	1	0	1	0	0	0	0	0	0	A	1	0	0	0	0	0	0	1	2	1	1	0.5	2.5
5-Mar	1	0	1	P	1	1	1	1	0	0	1	A	1	1	0	1	1	1	1	1	1	1	1	1	0.6	0.9
6-Mar	1	1	1	1	1	3	3	1	0	0	A	1	1	1	1	1	1	1	1	0	0	0	0	0	0.8	3.3
7-Mar	1	0	0	1	0	1	0	0	0	A	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0.4	0.9
8-Mar	1	0	0	0	1	0	1	1	A	0	1	0	1	1	1	1	1	1	1	1	0	1	1	0	0.6	1.0
9-Mar	1	0	0	0	1	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9
10-Mar	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
11-Mar	1	1	1	1	1	A	1	1	1	1	1	2	2	2	2	2	2	2	2	1	1	1	1	1	1.2	2.1
12-Mar	1	1	1	2	A	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2	1.7	2.3
13-Mar	2	2	2	A	2	1	1	1	1	1	1	1	2	1	3	11	16	7	6	8	1	1	1	1	3.2	15.7
14-Mar	1	2	A	1	2	1	1	1	1	1	0	0	0	1	1	1	1	0	0	0	0	0	1	1	0.7	2.1
15-Mar	1	A	1	8	11	1	1	1	1	1	1	1	5	1	1	0	1	1	1	1	0	0	0	1	1.6	11.3
16-Mar	A	0	0	1	1	1	1	1	1	1	1	1	7	5	3	1	2	1	1	1	0	1	A	1.4	7.5	
17-Mar	1	2	1	0	1	0	0	0	0	0	P	R	0	0	0	0	0	1	0	1	0	0	0	0.5	2.3	
18-Mar	0	0	1	1	1	1	0	0	0	1	1	1	1	2	1	2	2	1	1	0	0	A	A	2	1.0	2.8
19-Mar	2	1	1	1	1	1	1	1	3	3	3	1	0	1	1	1	1	1	1	0	A	1	1	1	1.2	3.3
20-Mar	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1	1	0	0	A	0	0	1	0	1.0	2.3
21-Mar	1	0	1	1	1	1	1	1	1	1	2	2	1	2	1	1	1	1	A	8	4	5	4	1	1.7	7.6
22-Mar	1	1	1	1	1	1	3	7	1	8	7	1	1	1	1	1	1	A	1	1	1	1	1	1	1.7	7.9
23-Mar	1	1	1	1	1	0	1	3	1	1	1	1	1	1	1	0	A	2	1	1	1	1	1	0	0.9	3.3
24-Mar	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	A	0	0	1	2	3	1	3	7	1.1	7.2
25-Mar	5	1	1	1	1	1	1	1	1	1	5	5	2	4	A	3	4	0	0	0	0	1	0	0	1.6	5.1
26-Mar	1	14	1	1	0	1	1	0	0	1	0	0	1	A	1	3	3	1	0	0	0	0	0	0	1.3	14.2
27-Mar	0	0	0	1	3	3	1	2	3	2	1	1	C	C	C	1	1	1	1	1	1	0	1	0	1.0	3.0
28-Mar	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	7	6	1	1	1	1	0	0	0	1.1	6.5
29-Mar	0	0	0	0	0	0	0	0	0	2	2	7	4	1	0	0	0	0	0	0	1	0	1	0	0.9	6.7
30-Mar	1	0	0	2	3	0	2	1	0	A	1	1	1	1	1	1	1	2	1	0	0	0	0	1	1.0	2.8
31-Mar	2	0	0	0	0	0	0	1	A	0	0	0	1	0	0	0	1	2	0	2	4	0	2	2	0.9	4.1
0.9 1.2 0.7 1.0 1.2 0.8 0.9 1.1 0.8 1.2 1.3 1.4 1.2 1.2 1.1 1.6 1.8 1.2 0.9 1.2 0.9 0.8 1.0 1.0																								Diurnal Average		
4.7 14.2 2.0 7.6 11.3 3.3 2.9 7.3 3.2 7.9 6.6 6.7 5.5 7.5 5.0 11.4 15.7 7.4 5.7 7.8 4.1 4.9 4.1 7.2																								Diurnal Maximum		
C - Calibration R - Recovery P - Power Failure A - Automated Daily Zero Span																										

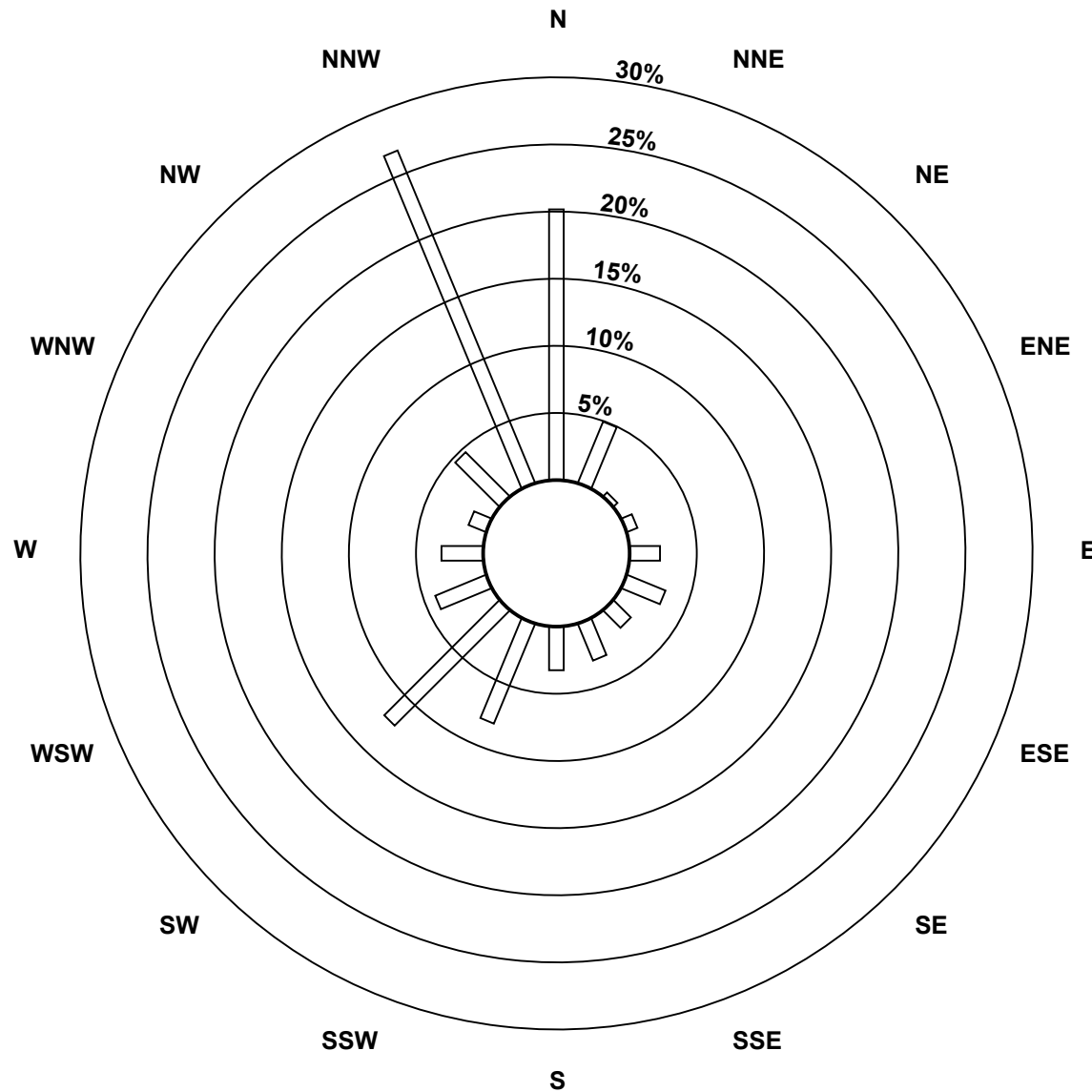
Hourly Maximums

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

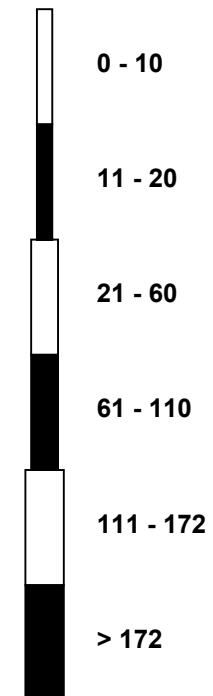


Pollutant Rose

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

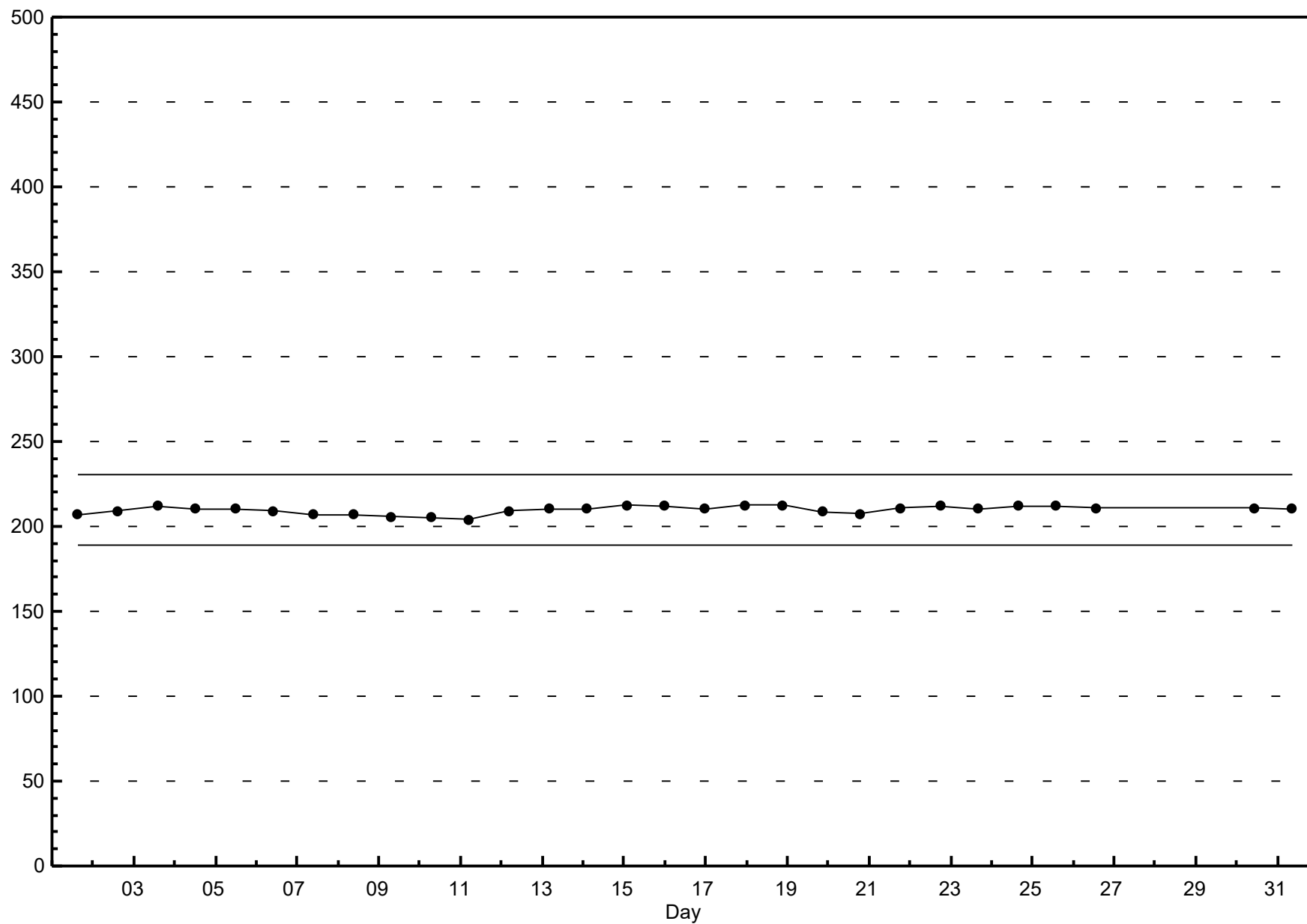


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Smoky Heights - March 2017



Hourly Averages

Total Reduced Sulphur (TRS) - ppb

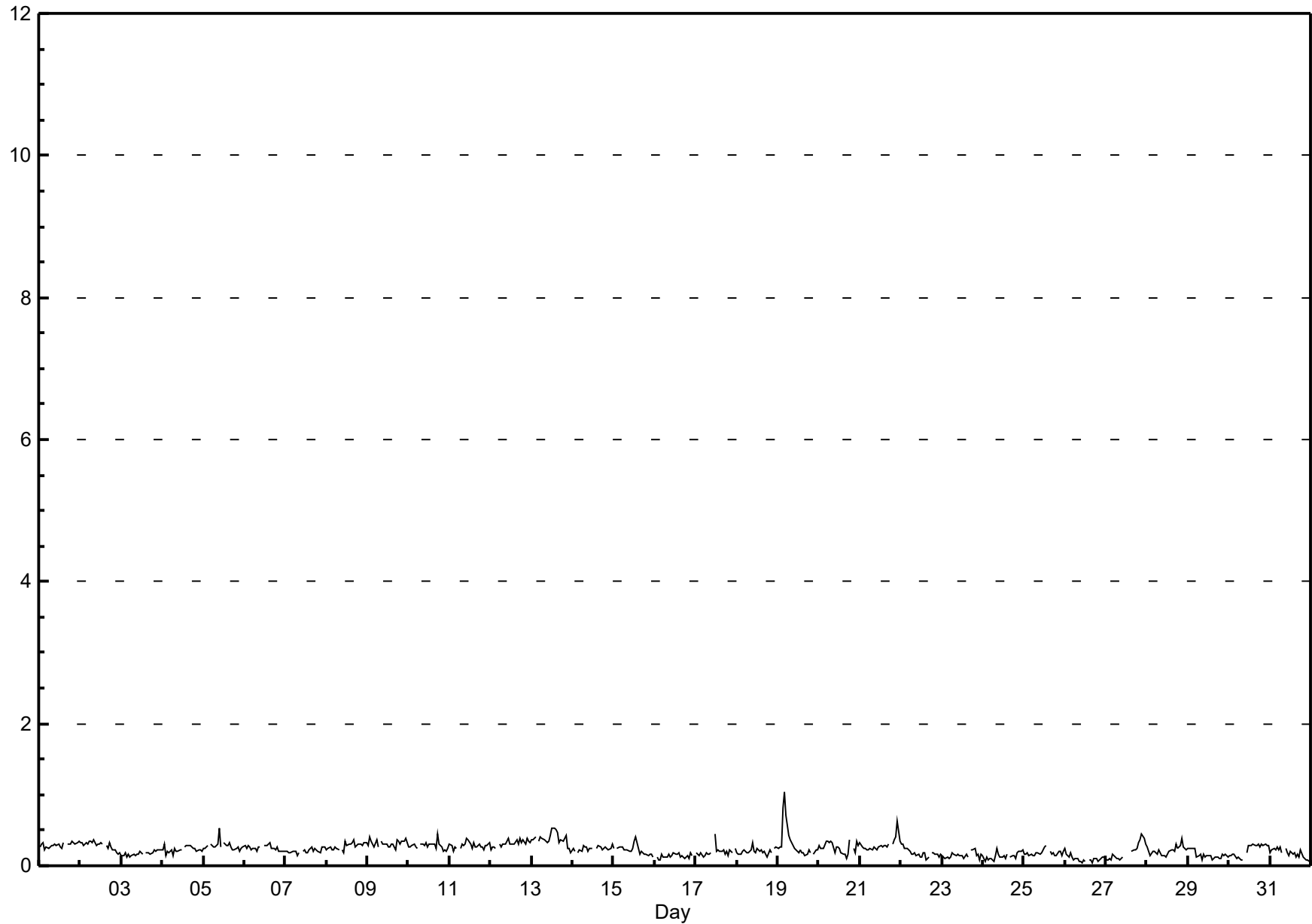
Smoky Heights - March 2017

Maximum Value: 1.0 ppb on Mar 19 05:00																				Maximum Daily Average: 0.4 ppb on Mar 13				Hours in Service: 744		
Minimum Value: 0 ppb on Mar 26 17:00																				Minimum Daily Average: 0.1 ppb on Mar 26				Hours of Data: 707		
Maximum Diurnal Average: 0.2 ppb at hour 14																				Minimum Diurnal Average: 0.2 ppb at hour 7				Hours of Missing Data: 37		
Monthly Average: 0.23 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.3 P ₉₉ = 0.5				Hours of Calibration: 35		
																				Percent Operational Time: 99.7						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	0	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	0.3
2-Mar	0	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
3-Mar	0	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
4-Mar	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
5-Mar	0	0	0	P	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
6-Mar	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.3
7-Mar	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
8-Mar	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
9-Mar	0	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
10-Mar	0	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
11-Mar	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
12-Mar	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
13-Mar	0	0	0	A	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0.4	0.5
14-Mar	0	0	A	0	0	0	0	0	0	0	0	0	C	C	0	0	0	0	0	0	0	0	0	0	0.2	0.3
15-Mar	0	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
16-Mar	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.2
17-Mar	0	0	0	0	0	0	0	0	0	0	P	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
18-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0.2	0.3
19-Mar	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	1.0
20-Mar	0	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	0.4
21-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	0	0.3	0.6
22-Mar	0	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
23-Mar	0	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
24-Mar	0	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
25-Mar	0	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
26-Mar	0	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
27-Mar	0	0	0	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0.2	0.4
28-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
29-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
30-Mar	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
31-Mar	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
0.2 0.2																									Diurnal Average	
0.4 0.4 0.4 0.8 1.0 0.7 0.4 0.4 0.4 0.5 0.4 0.4 0.5 0.5 0.5 0.5 0.4 0.4 0.4 0.4 0.4 0.4 0.6 0.3																									Diurnal Maximum	
C - Calibration				P - Power Failure				A - Automated Daily Zero Span																		

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - March 2017



Hourly Maximums

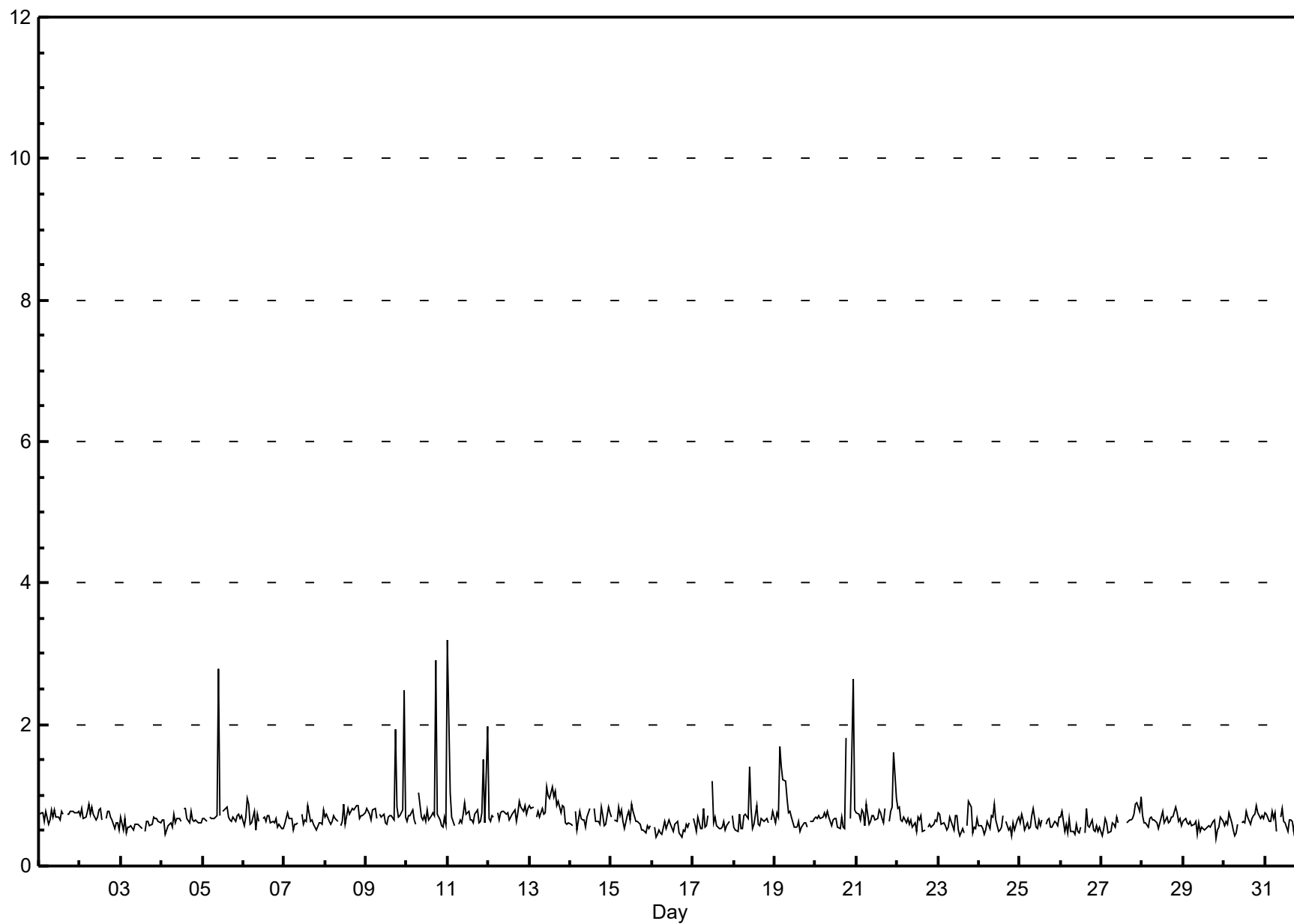
Total Reduced Sulphur (TRS) - ppb

Smoky Heights - March 2017

Maximum Value: 3.2 ppb on Mar 11 01:00																				Maximum Daily Average: 0.9 ppb on Mar 11					Hours in Service: 744	
Minimum Value: 0 ppb on Mar 29 20:00																				Minimum Daily Average: 0.5 ppb on Mar 16					Hours of Data: 707	
Maximum Diurnal Average: 0.8 ppb at hour 23																				Minimum Diurnal Average: 0.6 ppb at hour 17					Hours of Missing Data: 37	
Monthly Average: 0.69 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.7 Q ₃ = 0.7 P ₉₀ = 0.8 P ₉₉ = 1.9					Hours of Calibration: 35	
																									Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	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	0.8
2-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.7	0.9
3-Mar	1	1	1	0	1	1	1	1	1	1	1	1	1	A	0	1	1	1	1	1	1	1	1	1	0.6	0.7
4-Mar	1	1	0	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8
5-Mar	1	1	1	P	1	1	1	1	1	3	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.8	2.8
6-Mar	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
7-Mar	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9
8-Mar	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
9-Mar	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	2	1	1	1	1	2	1	0.8	2.5
10-Mar	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	0.8	2.9
11-Mar	3	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	0.9	3.2
12-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
13-Mar	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1
14-Mar	1	1	A	1	1	1	1	1	1	1	1	1	C	C	1	1	1	1	1	1	1	1	1	1	0.7	0.8
15-Mar	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	0.6	0.9
16-Mar	A	1	0	0	1	0	0	1	1	1	1	0	1	1	1	1	0	0	1	0	1	1	1	A	0.5	0.7
17-Mar	1	1	0	1	1	1	1	1	1	1	P	1	1	1	1	1	1	1	1	1	1	1	A	1	0.6	1.2
18-Mar	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.7	1.4
19-Mar	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	A	1	1	1	0.8	1.7
20-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	A	1	2	3	1	0.8	2.6
21-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	2	1	0.8	1.6
22-Mar	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	A	1	1	1	1	1	1	0.6	0.8
23-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	A	1	1	1	0	1	1	1	0.6	0.9
24-Mar	1	1	1	0	1	1	1	1	1	1	1	0	1	1	1	A	1	1	1	0	1	1	1	1	0.6	0.9
25-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.6	0.8
26-Mar	1	1	0	1	0	1	0	0	0	1	0	0	1	A	0	1	1	1	1	1	0	1	0	1	0.6	0.8
27-Mar	0	1	1	1	0	0	1	1	1	1	1	C	C	C	C	1	1	1	1	1	1	1	1	1	0.7	1.0
28-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8
29-Mar	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	0	1	1	1	1	0.6	0.7
30-Mar	1	1	1	1	1	1	0	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9
31-Mar	1	1	1	1	1	1	1	0	A	1	1	1	1	0	1	1	1	0	1	1	1	1	1	1	0.6	0.8
0.8 0.7 0.6 0.7 0.7 0.7 0.7 0.7 0.7 0.6 0.8 0.7 0.7 0.7 0.7 0.7 0.6 0.8 0.7 0.7 0.6 0.7 0.8 0.7																									Diurnal Average	
3.2 1.0 1.0 1.7 1.4 1.2 1.2 1.0 0.8 2.8 1.1 1.2 1.0 1.1 1.0 1.1 0.8 2.9 1.8 0.9 0.9 1.6 2.6 2.0																									Diurnal Maximum	
C - Calibration P - Power Failure A - Automated Daily Zero Span																										

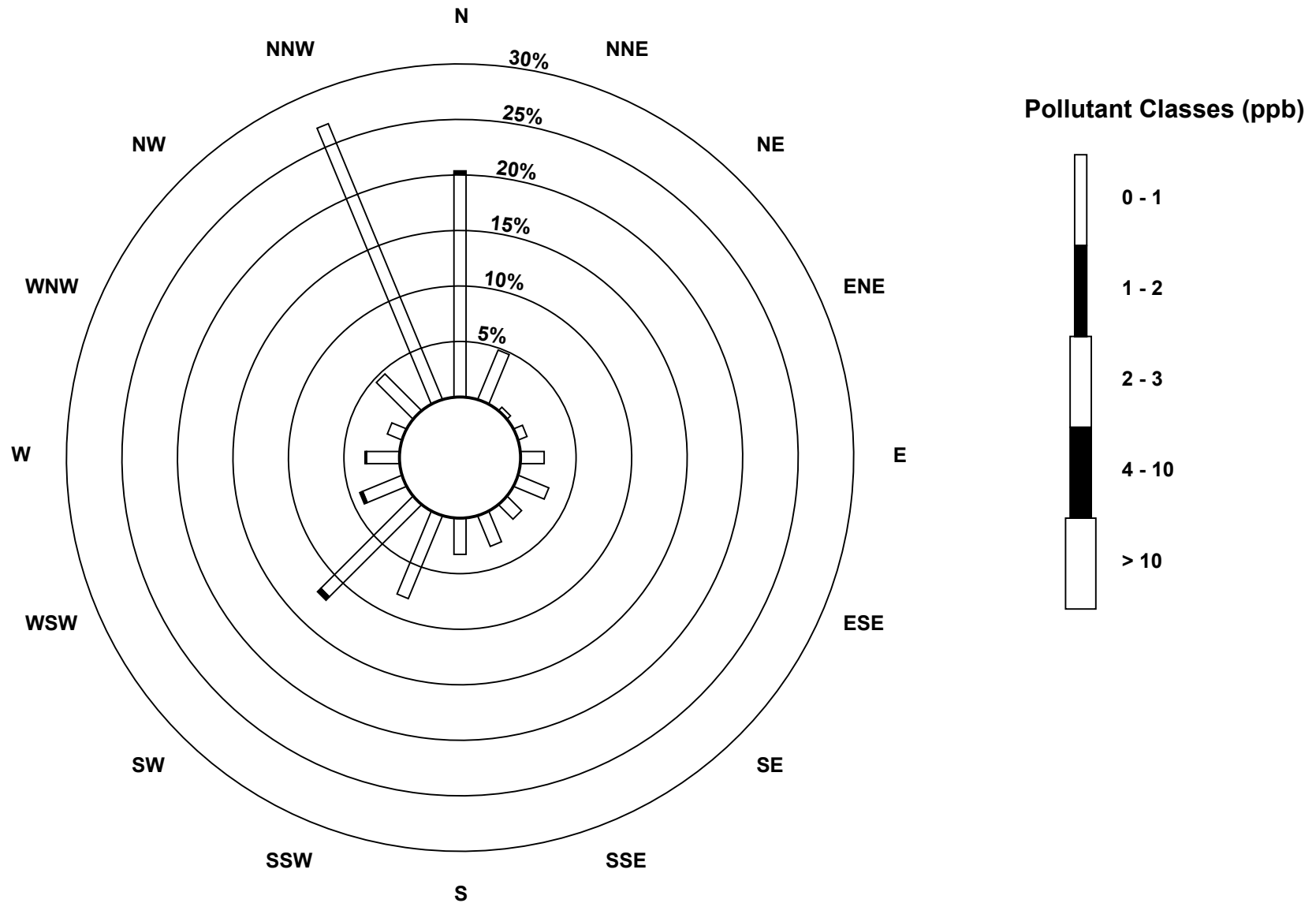
Hourly Maximums

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



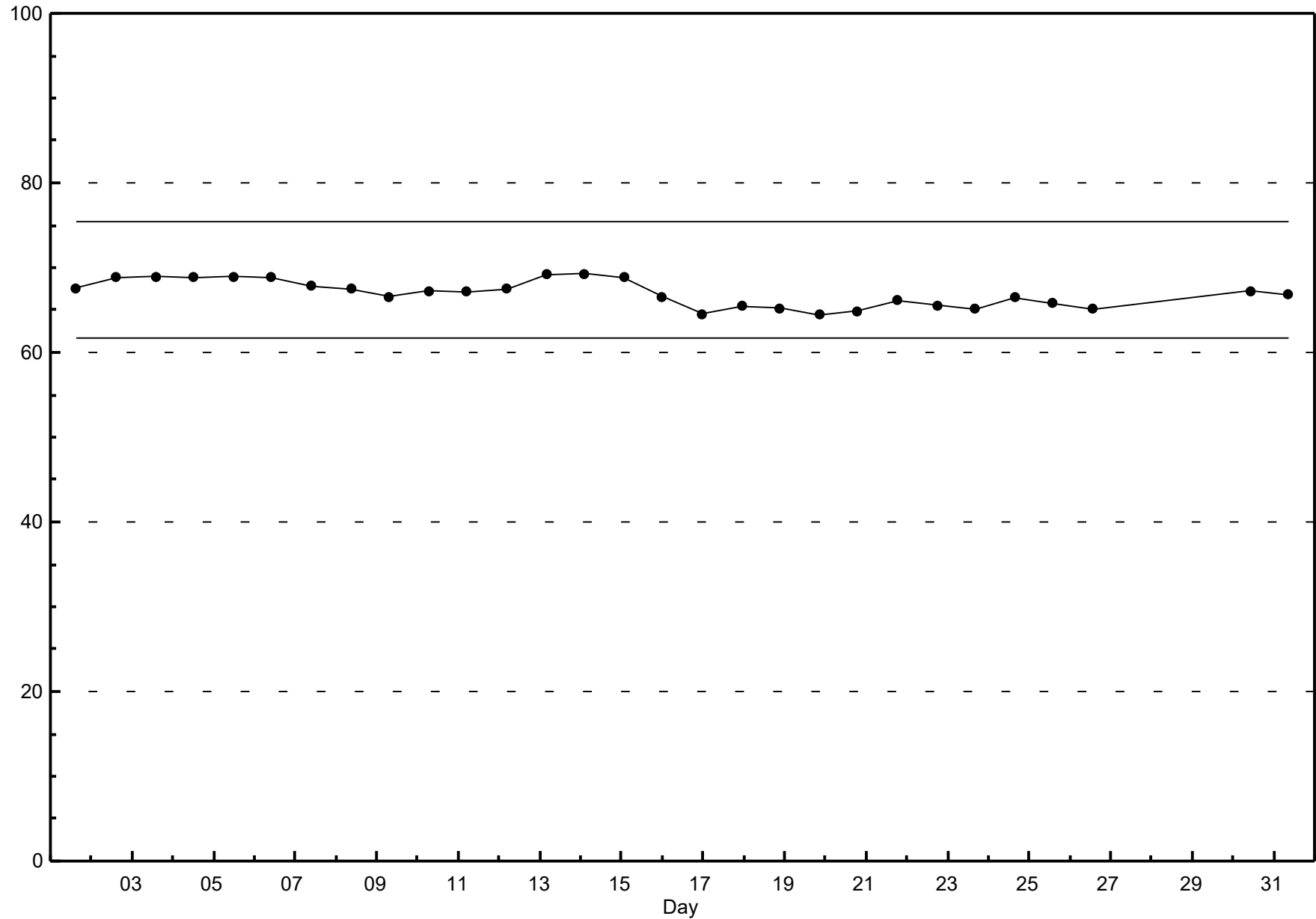
Pollutant Rose

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



Span Responses

Total Reduced Sulphur (TRS)
Smoky Heights - March 2017

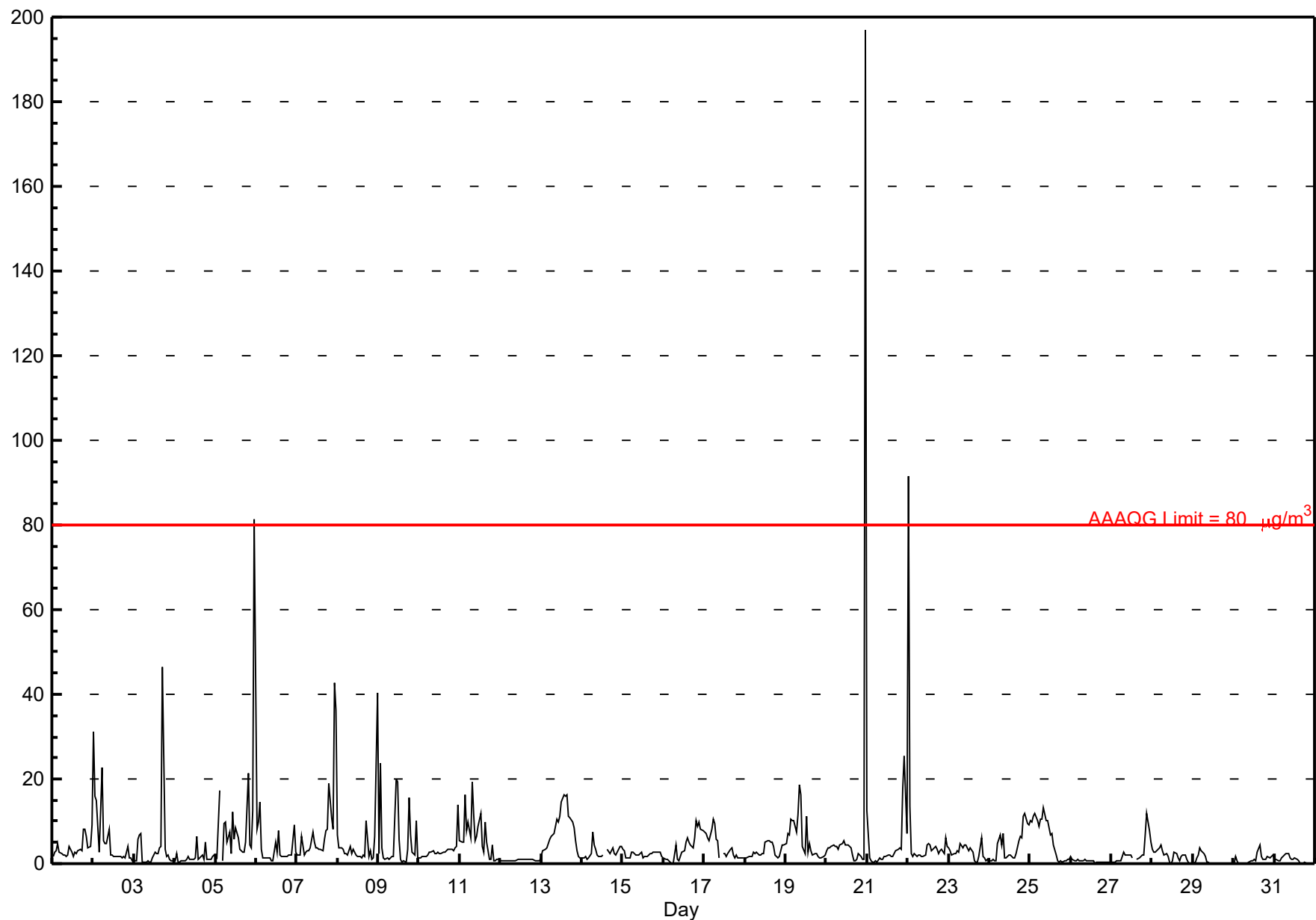


Hourly Averages

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

Smoky Heights - March 2017

Number of Exceedences: 1-hr: 3 24-hr: 0 Maximum Value: 197.0 µg/m³ on Mar 21 00:00 Minimum Value: 0 µg/m³ on Mar 29 00:00 Maximum Diurnal Average: 14.2 µg/m³ at hour 24 Monthly Average: 4.20 µg/m³																								Hours in Service: 744 Hours of Data: 738 Hours of Missing Data: 6 Hours of Calibration: 4 Percent Operational Time: 99.7		
Maximum Daily Average: 11.2 µg/m³ on Mar 20 Minimum Daily Average: 0.6 µg/m³ on Mar 29 Minimum Diurnal Average: 2.5 µg/m³ at hour 17 Percentiles: P ₁ = 0.0 P ₁₀ = 0.5 Q ₁ = 1.1 Median = 2.2 Q ₃ = 4.3 P ₉₀ = 9.3 P ₉₉ = 32.7																										
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-Mar	2	3	3	5	3	2	2	2	2	2	4	3	2	3	2	3	3	3	8	8	7	4	4	9	3.7	9.3
2-Mar	31	16	15	3	13	23	5	5	5	8	2	2	2	2	2	2	2	1	2	2	4	1	1	1	6.1	31.0
3-Mar	1	1	6	7	7	0	0	0	1	0	0	1	3	2	2	4	4	46	3	2	2	1	1	1	4.0	46.5
4-Mar	1	2	0	0	1	1	1	1	2	1	1	1	1	6	1	1	2	1	5	1	1	1	2	2	1.5	6.3
5-Mar	2	1	17	P	1	9	10	5	7	2	12	6	8	6	3	3	3	3	5	21	4	4	12	81	9.9	81.5
6-Mar	8	10	15	4	1	1	1	1	1	1	1	5	3	8	2	2	2	2	2	2	2	2	9	3	3.6	14.6
7-Mar	2	2	2	6	2	3	3	3	4	8	5	4	4	3	3	3	6	8	8	19	11	8	43	36	8.2	42.7
8-Mar	7	4	4	3	2	2	2	4	3	3	3	2	2	2	2	2	2	10	2	3	1	1	7	40	4.7	40.3
9-Mar	2	24	4	1	1	1	1	1	2	2	20	19	6	1	1	1	0	3	16	7	3	2	10	1	5.4	23.8
10-Mar	1	1	2	2	2	2	3	3	3	2	3	3	2	2	3	3	3	3	3	3	3	4	4	14	3.1	14.0
11-Mar	5	5	5	16	8	10	6	19	11	5	6	9	12	4	3	10	5	1	1	4	1	1	1	1	6.3	19.3
12-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
13-Mar	2	3	3	4	5	6	6	7	9	10	10	11	15	16	16	16	11	11	10	9	6	3	2	1	7.9	16.4
14-Mar	1	1	2	1	1	2	8	4	4	2	2	2	2	C	C	3	2	3	4	2	2	3	4	4	2.7	7.5
15-Mar	3	3	1	1	1	3	3	2	2	2	2	3	1	2	2	2	2	2	3	3	3	3	3	2	2.3	3.5
16-Mar	1	1	1	1	0	0	0	5	1	1	2	3	3	5	6	5	5	4	6	10	9	10	8	8	3.9	10.3
17-Mar	8	7	6	6	8	11	10	6	5	1	P	2	2	2	2	4	4	2	1	2	1	1	1	2	4.1	10.6
18-Mar	1	2	2	2	2	3	2	3	2	2	2	2	5	5	5	5	5	4	2	1	2	3	4	4	3.0	5.3
19-Mar	5	7	7	11	10	10	7	12	19	16	4	2	11	3	5	3	2	2	2	2	1	1	2	2	6.1	18.7
20-Mar	3	4	4	4	4	4	4	3	4	5	5	4	5	5	4	2	1	1	1	2	2	1	1	197	11.2	197.0
21-Mar	12	2	1	0	0	1	0	1	1	1	2	2	2	2	2	2	2	3	4	4	3	18	26	7	4.0	25.6
22-Mar	91	13	2	2	2	2	2	2	2	2	2	4	5	4	3	3	4	3	2	3	3	2	6	4	7.1	91.5
23-Mar	4	3	2	2	2	3	3	5	4	5	4	4	3	4	3	1	0	0	2	6	2	1	1	1	2.6	6.0
24-Mar	1	1	1	1	1	5	7	4	7	1	1	2	2	2	1	1	2	5	6	6	11	12	10	9	4.2	11.8
25-Mar	10	10	11	12	10	9	11	11	13	10	10	9	7	7	4	2	1	0	1	0	1	1	1	1	6.3	13.4
26-Mar	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.6	1.6
27-Mar	0	0	0	1	1	1	2	3	2	2	2	2	1	C	C	1	1	2	2	2	7	12	8	5	2.6	11.7
28-Mar	3	3	3	3	4	4	3	2	2	2	0	0	1	3	2	1	1	2	2	2	1	0	0	0	1.8	4.3
29-Mar	0	0	1	2	4	3	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	3.6
30-Mar	0	2	1	0	0	0	0	0	0	0	1	1	1	1	3	5	2	1	1	1	2	1	2	2	1.0	4.5
31-Mar	1	1	1	1	2	2	2	2	2	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.8	2.4
6.8 4.3 3.9 3.4 3.2 4.0 3.5 3.9 3.9 3.3 3.7 3.5 3.6 3.5 2.9 2.9 2.5 4.2 3.4 4.2 3.0 3.3 5.6 14.2																								Diurnal Average		
91.5 23.8 17.3 16.1 12.6 22.7 10.5 19.3 18.7 16.3 19.9 19.5 14.6 16.4 15.9 16.1 11.1 46.5 15.6 21.3 11.1 17.6 42.7 197.0																								Diurnal Maximum		
C - Calibration P - Power Failure Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																										



Hourly Maximums

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

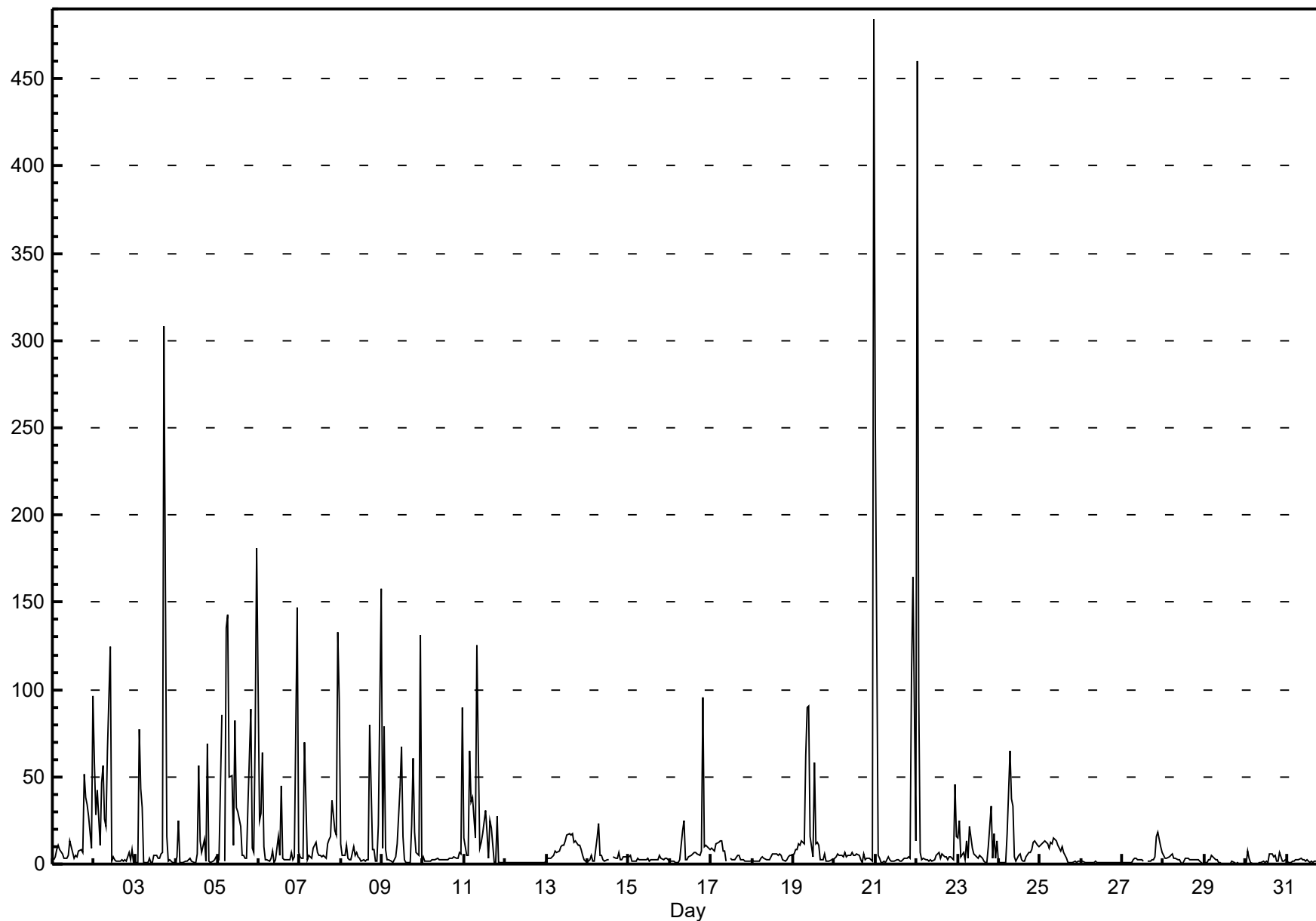
Smoky Heights - March 2017

Maximum Value: 484.4 μg/m ³ on Mar 21 00:00																					Maximum Daily Average: 46.1 μg/m ³ on Mar 5				Hours in Service: 744	
Minimum Value: 0 μg/m ³ on Mar 29 12:00																					Minimum Daily Average: 0.9 μg/m ³ on Mar 26				Hours of Data: 738	
Maximum Diurnal Average: 39.0 μg/m ³ at hour 24																					Minimum Diurnal Average: 4.4 μg/m ³ at hour 15				Hours of Missing Data: 6	
Monthly Average: 12.53 μg/m ³																					Percentiles: P ₁ = 0.0 P ₁₀ = 0.7 Q ₁ = 1.7 Median = 3.4 Q ₃ = 8.0 P ₉₀ = 24.6 P ₉₉ = 152.0				Hours of Calibration: 4	
																									Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	3	4	8	11	8	6	3	3	3	5	14	6	4	5	4	7	8	7	51	39	34	28	9	97	15.3	96.7
2-Mar	58	29	42	10	47	57	25	22	64	124	2	4	2	2	2	2	1	3	2	7	3	9	1	1	21.7	124.3
3-Mar	1	1	77	43	32	0	1	1	3	0	1	5	5	3	3	6	7	308	16	2	2	2	1	1	21.7	307.8
4-Mar	4	25	1	1	1	1	2	2	3	1	1	1	6	57	13	7	14	2	69	1	1	2	2	4	9.2	68.6
5-Mar	2	3	86	P	2	135	143	50	51	11	82	32	30	21	5	5	3	4	34	89	9	7	76	181	46.1	181.4
6-Mar	25	29	64	10	2	2	1	4	8	1	2	16	5	45	4	3	2	3	3	7	3	4	147	7	16.4	147.0
7-Mar	4	3	3	70	2	5	4	3	9	13	7	5	5	4	5	4	11	14	16	37	19	16	133	94	20.3	133.1
8-Mar	12	5	5	11	4	2	2	10	5	7	4	4	2	2	2	3	2	80	8	8	1	2	22	158	15.0	157.8
9-Mar	9	79	9	2	2	2	1	2	4	12	44	67	16	2	1	1	1	22	61	18	6	5	131	1	20.8	131.4
10-Mar	4	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	4	4	4	3	7	6	89	6.8	89.4
11-Mar	15	5	5	65	36	38	15	126	63	9	12	17	31	19	4	25	21	1	1	28	1	1	1	1	22.4	125.8
12-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
13-Mar	3	3	4	4	5	7	7	8	10	11	11	13	17	18	17	17	12	13	11	11	8	5	2	2	9.1	17.6
14-Mar	1	3	5	1	2	15	23	5	5	2	2	2	2	C	C	4	3	3	7	3	2	4	4	4	4.7	23.4
15-Mar	4	5	2	2	2	3	3	3	3	2	3	3	2	2	2	2	3	3	5	4	3	4	4	2	2.9	5.1
16-Mar	2	1	1	1	1	1	2	19	25	2	3	4	5	6	7	7	6	5	7	95	10	11	10	9	9.9	95.2
17-Mar	9	8	8	11	13	13	13	8	8	2	P	3	3	2	2	5	5	3	3	2	2	2	2	2	5.5	13.4
18-Mar	2	2	2	2	2	4	4	3	3	2	3	4	6	6	6	5	6	5	3	1	2	4	5	5	3.6	6.1
19-Mar	6	8	8	12	11	13	11	63	90	91	16	4	58	12	13	11	3	3	6	2	2	2	3	3	18.7	90.8
20-Mar	4	4	6	5	5	4	7	4	5	5	6	5	5	6	5	3	1	6	2	4	4	2	1	484	24.3	484.4
21-Mar	253	5	3	1	1	1	1	4	3	2	2	2	2	2	2	2	3	3	4	4	4	107	164	13	24.5	253.3
22-Mar	460	95	6	2	3	2	2	2	2	2	3	5	6	6	4	6	4	4	3	4	4	3	46	16	28.8	459.7
23-Mar	15	25	4	7	3	13	3	21	9	6	5	4	4	5	4	2	0	0	10	33	4	18	4	14	8.8	33.2
24-Mar	1	1	1	1	1	18	65	38	33	4	2	5	6	2	2	1	4	7	7	8	12	13	11	10	10.6	64.9
25-Mar	11	12	13	13	11	9	13	11	15	13	11	10	8	10	7	3	1	1	1	1	1	1	2	2	7.5	15.1
26-Mar	2	2	1	1	1	1	1	1	2	1	1	1	1	1	0	0	0	0	0	1	1	0	0	0	0.9	1.9
27-Mar	0	1	1	1	1	1	3	3	4	3	3	2	2	C	C	1	2	3	3	4	16	18	10	6	3.9	18.3
28-Mar	5	3	3	4	5	6	4	3	3	2	1	0	2	4	3	3	3	2	3	3	2	2	1	0	2.8	5.6
29-Mar	0	1	2	3	5	4	3	2	1	1	0	0	0	0	0	0	2	1	0	0	0	0	0	0	1.1	4.6
30-Mar	0	7	3	1	0	0	0	0	0	1	2	1	1	1	6	6	4	5	1	1	7	2	2	3	2.3	7.1
31-Mar	2	1	1	2	2	2	3	3	3	2	3	1	3	1	1	0	1	2	2	0	0	0	0	0	1.5	3.4
29.6 12.0 12.2 10.0 6.8 11.9 11.9 13.7 14.3 11.0 8.3 7.5 7.7 8.5 4.4 4.7 4.5 16.7 11.1 13.4 5.5 8.8 26.1 39.0																									Diurnal Average	
459.7 95.2 85.9 69.8 46.9 135.0 142.6 125.8 89.6 124.3 82.0 67.2 58.4 56.6 16.8 24.9 20.7 307.8 68.6 95.2 33.7 107.4 164.4 484.4																									Diurnal Maximum	
C - Calibration P - Power Failure																										

Hourly Maximums

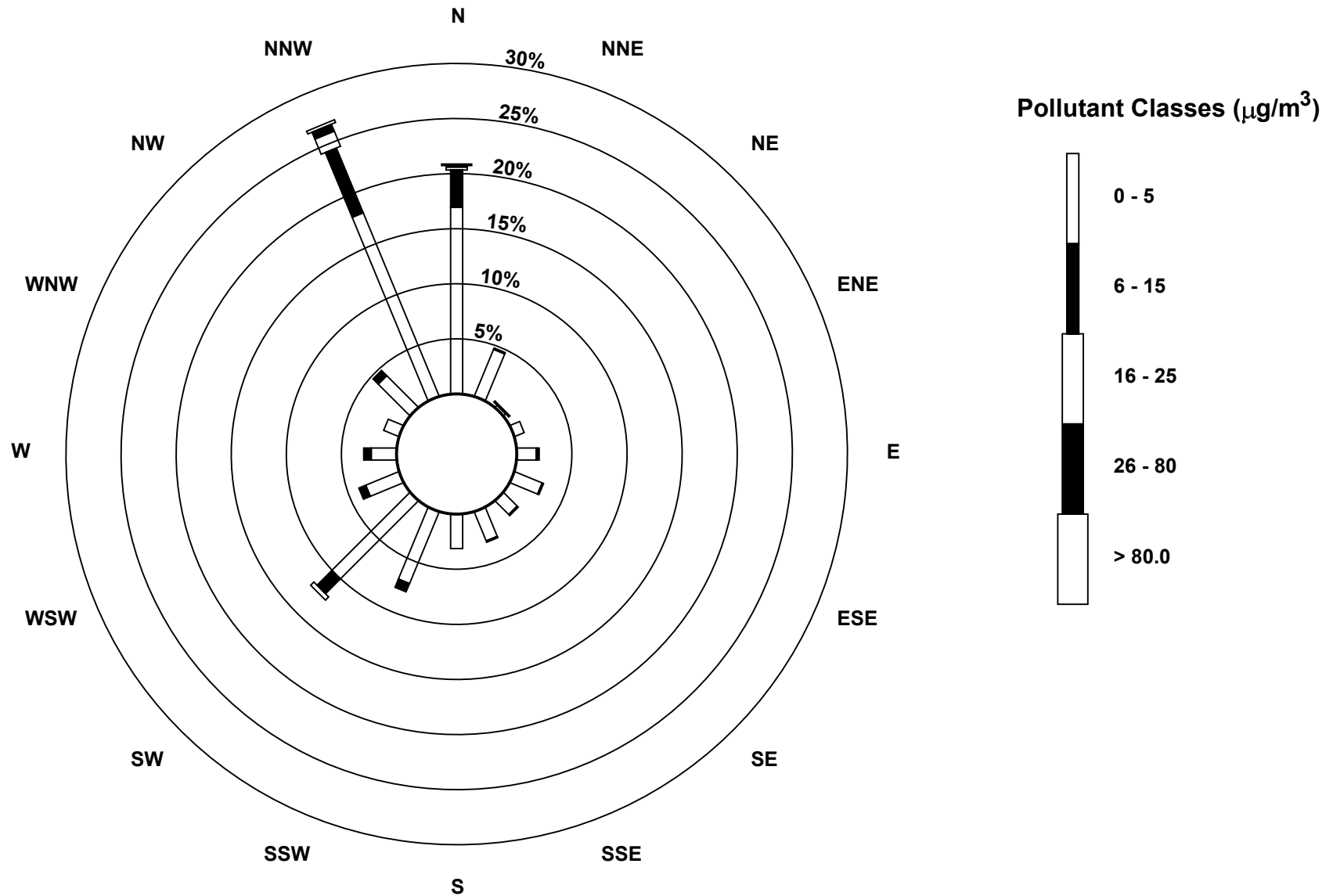
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$

Smoky Heights - March 2017



Pollutant Rose

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



Hourly Averages

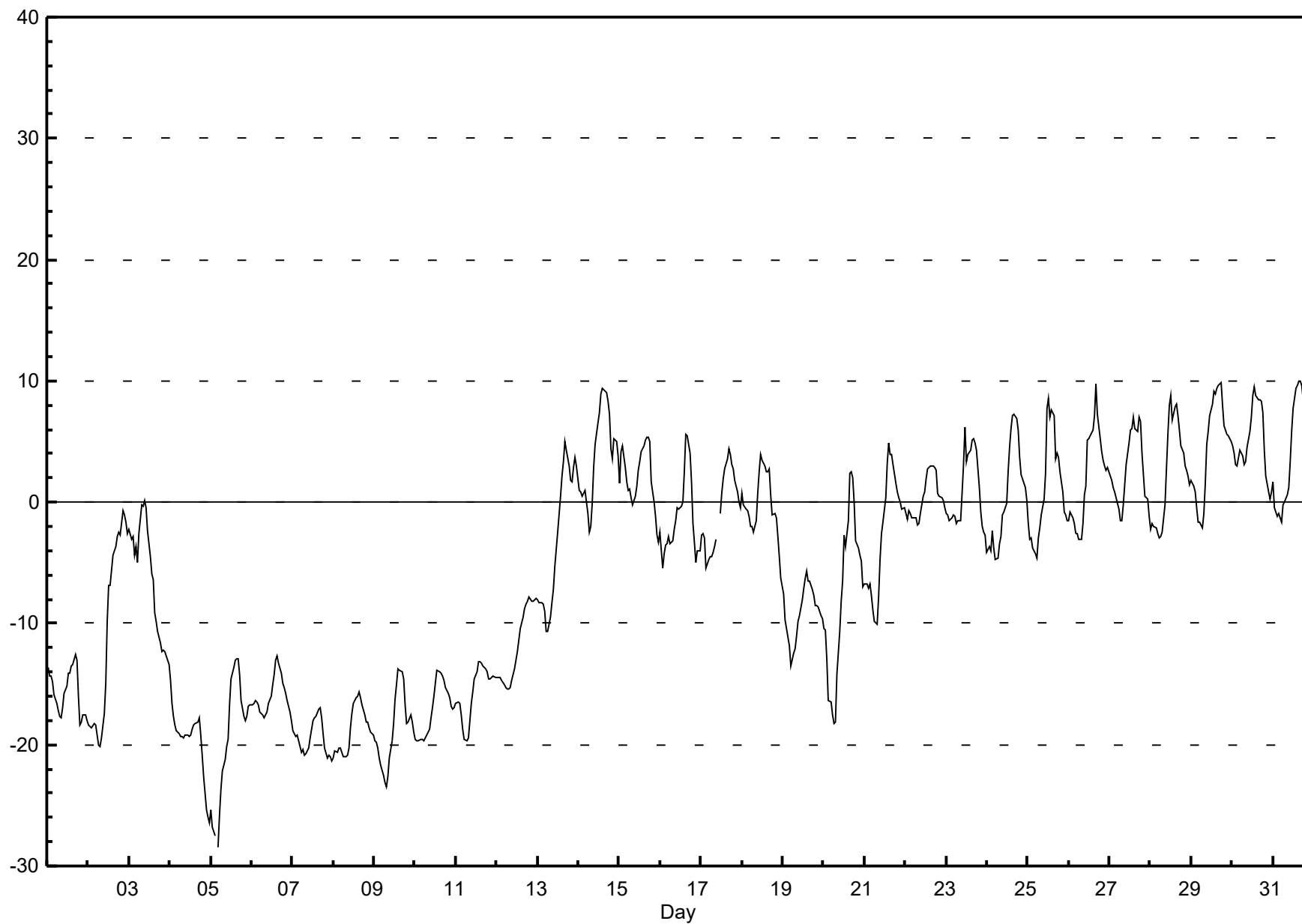
External Temperature (ET) - °C

Smoky Heights - March 2017

Maximum Value: 10.0 °C on Mar 31 17:00																				Maximum Daily Average: 5.0 °C on Mar 30					Hours in Service: 744	
Minimum Value: -29 °C on Mar 5 05:00																				Minimum Daily Average: -19.7 °C on Mar 4					Hours of Data: 742	
Maximum Diurnal Average: -1.7 °C at hour 17																				Minimum Diurnal Average: -9.6 °C at hour 7					Hours of Missing Data: 2	
Monthly Average: -5.91 °C																				Percentiles: P ₁ = -25.5 P ₁₀ = -19.1 Q ₁ = -15.1 Median = -3.0 Q ₃ = 1.8 P ₉₀ = 5.3 P ₉₉ = 9.6					Hours of Calibration: 0	
																									Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Mar	-14	-14	-14	-15	-16	-17	-17	-18	-18	-17	-16	-15	-14	-14	-13	-13	-13	-16	-18	-18	-18	-18	-18	-15.7	-12.5	
2-Mar	-18	-19	-19	-18	-18	-19	-20	-20	-19	-17	-15	-10	-7	-7	-4	-4	-3	-2	-3	-1	-1	-2	-3	-10.5	-0.7	
3-Mar	-2	-3	-3	-4	-4	-5	-3	0	0	0	0	-2	-5	-6	-6	-9	-10	-11	-12	-12	-12	-13	-13	-6.2	0.1	
4-Mar	-15	-17	-18	-18	-19	-19	-19	-19	-19	-19	-19	-19	-19	-19	-18	-18	-18	-18	-19	-21	-23	-25	-26	-26	-19.7	-14.7
5-Mar	-25	-27	-27	P	-29	-26	-24	-22	-21	-20	-20	-17	-15	-14	-13	-13	-13	-14	-16	-18	-18	-18	-17	-17	-19.2	-12.9
6-Mar	-17	-17	-16	-17	-17	-17	-18	-18	-18	-17	-17	-16	-15	-14	-13	-13	-13	-14	-15	-15	-16	-16	-17	-18	-16.0	-12.6
7-Mar	-19	-19	-19	-19	-20	-21	-20	-21	-21	-20	-19	-19	-18	-18	-18	-17	-17	-18	-19	-20	-21	-21	-21	-21	-19.4	-16.9
8-Mar	-21	-21	-21	-20	-20	-21	-21	-21	-21	-20	-19	-17	-17	-16	-16	-16	-16	-17	-18	-18	-18	-19	-19	-19	-18.8	-15.6
9-Mar	-20	-20	-20	-21	-22	-22	-23	-23	-23	-21	-20	-18	-16	-15	-14	-14	-14	-15	-17	-18	-18	-18	-18	-19	-18.7	-13.8
10-Mar	-20	-20	-20	-20	-20	-20	-19	-19	-19	-18	-17	-16	-15	-14	-14	-14	-14	-15	-15	-16	-16	-17	-17	-17	-17.1	-13.9
11-Mar	-17	-16	-17	-18	-19	-20	-20	-19	-18	-17	-16	-15	-14	-13	-13	-13	-13	-14	-14	-15	-15	-14	-14	-14	-15.7	-13.1
12-Mar	-14	-14	-14	-15	-15	-15	-15	-15	-15	-15	-14	-13	-12	-11	-10	-9	-9	-8	-8	-8	-8	-8	-8	-8	-11.9	-7.9
13-Mar	-8	-8	-8	-8	-9	-11	-11	-9	-8	-7	-5	-4	-2	0	2	3	5	4	3	2	2	3	4	3	-2.9	5.0
14-Mar	1	1	0	1	1	-1	-2	-2	0	3	5	7	7	9	9	9	9	8	7	4	4	5	5	4	3.9	9.4
15-Mar	2	4	5	3	2	1	1	0	0	0	1	3	3	4	5	5	5	5	5	2	0	-1	-3	-3	2.0	5.4
16-Mar	-2	-5	-4	-4	-3	-3	-3	-3	-2	-2	0	-1	0	0	3	6	5	4	2	-2	-3	-5	-4	-4	-1.3	5.5
17-Mar	-3	-3	-3	-5	-5	-4	-4	-4	-4	-3	P	-1	1	2	3	4	4	4	3	3	2	1	0	0	-0.6	4.4
18-Mar	1	0	-1	-1	-1	-2	-2	-3	-2	1	2	4	3	3	2	3	3	1	-1	-1	-1	-3	-4	-6	-0.2	4.0
19-Mar	-8	-10	-10	-11	-12	-13	-12	-12	-11	-10	-9	-8	-7	-6	-6	-6	-7	-7	-8	-9	-9	-9	-9	-10	-9.1	-5.7
20-Mar	-10	-11	-13	-16	-16	-18	-18	-18	-14	-11	-8	-7	-3	-4	-2	2	2	2	0	-3	-4	-4	-5	-7	-7.7	2.4
21-Mar	-7	-7	-7	-7	-8	-9	-10	-10	-8	-5	-3	-2	0	3	5	4	4	3	2	1	0	0	-1	0	-2.5	4.8
22-Mar	-1	-1	-1	-1	-1	-1	-1	-2	-2	-1	1	1	2	3	3	3	3	3	3	1	0	0	0	0	0.4	3.0
23-Mar	-1	-1	-2	-1	-1	-1	-2	-2	-1	1	3	6	3	4	4	5	5	5	4	1	-1	-2	-3	-3	0.9	6.2
24-Mar	-4	-4	-4	-2	-4	-5	-5	-3	-3	-1	-1	0	2	5	6	7	7	7	6	4	2	2	1	0	0.6	7.3
25-Mar	-2	-3	-3	-4	-4	-5	-3	-2	-1	0	2	8	9	7	8	7	4	4	4	2	1	-1	-1	-1	1.1	8.6
26-Mar	-1	-1	-1	-2	-3	-3	-3	-3	-2	1	1	5	5	6	6	7	10	7	5	4	3	3	3	3	2.1	9.7
27-Mar	2	2	1	1	0	-1	-1	-2	0	1	3	5	6	6	7	6	6	7	7	4	2	1	0	-1	2.6	7.0
28-Mar	-2	-2	-2	-2	-3	-3	-3	-2	0	3	6	8	9	7	8	8	7	6	5	4	3	3	2	1	2.5	8.8
29-Mar	2	1	1	0	-2	-2	-2	-1	2	5	6	7	8	9	9	9	10	10	8	6	6	6	5	5	4.5	9.9
30-Mar	5	4	3	3	4	4	4	3	3	5	6	7	9	10	9	8	8	8	7	4	2	1	0	1	5.0	9.5
31-Mar	2	0	-1	-1	-1	-2	0	0	1	1	3	6	8	9	10	10	10	10	8	6	6	5	4	4	4.0	10.0
																								Diurnal Average		
																								Diurnal Maximum		
P - Power Failure																										

Hourly Averages

External Temperature (ET) - °C
Smoky Heights - March 2017



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	19	23	23	16	16	17	17	15	12	8	9	10	9	10	8	8	5	3	4	6	8	8	8	8	10.9	23.1
Dir	343	347	347	340	330	322	323	322	318	333	349	353	0	353	358	355	354	322	336	351	354	360	352	352	341.2	346.6
2 Spd	10	11	10	12	8	9	10	7	9	8	7	1	1	4	4	6	5	13	10	7	12	10	11	15	0.7	14.7
Dir	345	344	345	353	341	346	350	332	349	354	4	11	81	228	231	225	210	157	184	160	142	147	142	177	338.2	176.8
3 Spd	13	3	3	3	1	6	12	22	23	15	15	10	11	14	13	17	16	15	13	14	16	21	23	23	8.2	23.2
Dir	184	196	86	2	0	272	266	274	251	214	213	288	340	348	348	343	332	334	331	330	345	5	5	4	319.2	3.6
4 Spd	27	29	26	23	24	19	16	9	12	13	15	17	14	11	9	7	5	6	5	5	5	3	2	2	12.3	28.5
Dir	0	353	357	359	356	355	358	344	345	353	356	3	0	354	4	347	327	341	342	314	311	317	298	267	352.5	352.6
5 Spd	6	3	3	4	1	19	2	4	4	4	8	7	6	9	9	11	11	11	11	11	11	13	10	11	5.8	18.8
Dir	260	280	48	302	269	139	9	344	343	10	351	350	346	348	339	340	347	341	336	335	335	352	350	347	343.5	139.0
6 Spd	15	16	11	12	16	15	16	17	20	19	17	17	16	16	13	15	14	15	13	13	12	15	12	12	14.8	19.9
Dir	349	348	348	346	340	343	343	349	359	358	354	347	345	344	341	347	347	347	345	352	348	350	348	340	347.8	359.4
7 Spd	11	12	10	11	11	10	13	14	12	11	11	13	13	14	15	13	12	11	10	10	11	11	13	14	11.8	15.0
Dir	330	327	328	332	327	345	356	359	3	349	347	352	348	345	346	346	341	334	332	338	346	342	338	342	342.7	345.6
8 Spd	12	13	14	16	18	18	17	17	16	15	13	13	13	13	15	13	13	13	9	8	8	10	10	10	13.1	18.1
Dir	347	344	341	348	350	353	349	347	345	345	344	341	333	337	336	335	335	335	333	341	329	333	337	336	341.7	353.1
9 Spd	11	11	11	10	11	12	12	13	11	13	12	10	11	11	15	16	18	13	12	13	14	13	15	14	12.3	17.6
Dir	335	343	343	338	337	340	339	341	343	353	348	336	337	339	353	14	25	360	345	346	347	353	3	7	350.0	24.5
10 Spd	17	17	17	18	20	20	18	16	17	16	15	16	17	17	18	20	17	15	12	10	9	9	8	8	15.2	20.3
Dir	360	3	0	359	3	5	11	12	6	14	13	12	18	16	18	24	21	15	19	16	3	354	355	353	9.6	4.7
11 Spd	7	5	4	4	5	5	4	4	7	7	8	10	12	15	18	17	18	16	14	12	12	12	13	12	9.7	17.9
Dir	2	25	28	350	338	341	335	335	348	353	349	350	352	5	21	20	22	19	12	356	1	7	19	19	6.4	21.5
12 Spd	9	10	8	13	10	9	11	13	14	15	17	21	22	20	17	16	14	14	14	17	20	19	17	17	14.2	22.4
Dir	22	27	67	81	77	76	79	86	90	92	102	104	104	106	108	87	88	74	72	82	94	88	93	102	88.0	103.5
13 Spd	18	17	13	12	10	6	8	11	9	10	9	12	13	14	13	14	9	9	13	14	17	25	24	20	10.1	24.7
Dir	102	103	126	137	140	165	196	208	205	215	220	233	226	219	223	233	229	221	215	222	225	218	216	218	202.9	218.4
14 Spd	16	14	14	13	9	8	12	6	5	4	2	2	6	5	8	17	15	12	8	1	4	16	17	11	6.4	17.0
Dir	223	236	217	222	203	207	231	198	236	222	221	214	110	85	104	108	127	163	157	160	158	147	138	137	175.2	138.1
15 Spd	7	26	33	26	18	14	21	22	21	21	17	22	24	15	17	16	14	11	2	4	2	1	3	1	14.6	33.2
Dir	209	228	240	225	223	211	207	214	205	208	210	220	217	233	218	211	198	200	212	153	150	225	246	242	216.8	240.1
16 Spd	3	1	3	0	3	6	7	7	3	5	5	5	7	12	5	2	3	7	11	7	4	3	4	6	2.2	12.0
Dir	352	346	342	353	11	358	347	354	11	167	180	121	176	237	215	291	245	321	332	353	329	334	344	336	321.5	236.9
17 Spd	8	4	4	2	6	5	7	5	6	8	9	9	10	11	13	13	14	15	16	12	9	6	5	3	8.0	15.6
Dir	345	275	332	336	345	340	328	330	356	4	359	353	348	352	0	356	359	17	19	3	20	345	344	22	356.1	19.2
18 Spd	7	5	2	1	3	6	6	4	3	1	1	7	11	12	11	11	13	30	32	13	4	2	7	6	5.6	31.5
Dir	114	120	149	134	8	353	338	346	300	351	61	350	338	344	343	335	322	279	269	263	227	352	328	334	310.7	269.1
19 Spd	4	5	7	10	7	2	4	7	10	12	13	15	13	15	14	13	18	16	14	11	16	17	13	10	8.6	17.6
Dir	316	197	215	249	267	239	352	353	349	340	339	351	345	332	335	333	318	313	313	281	292	274	265	223	309.7	318.0
20 Spd	13	10	10	8	7	6	5	3	6	4	3	5	2	6	3	1	3	3	7	8	8	7	8	6	2.2	12.6
Dir	230	255	253	233	251	254	274	207	198	206	225	237	248	240	236	200	106	45	28	10	28	37	34	1	265.9	229.7
21 Spd	8	7	5	6	7	9	10	8	7	6	13	14	9	3	3	4	4	5	8	8	7	7	6	7	4.3	14.2
Dir	353	346	346	2	357	349	354	359	342	345	101	116	106	114	89	124	295	323	326	323	334	342	353	351	5.0	115.6
22 Spd	5	2	4	4	8	6	5	9	6	6	7	6	7	8	11	8	12	9	6	7	7	7	6	12	6.8	12.1
Dir	345	320	17	347	346	321	346	0	353	342	0	336	355	354	359	340	347	348	349	345	358	3	7	358	350.9	346.8



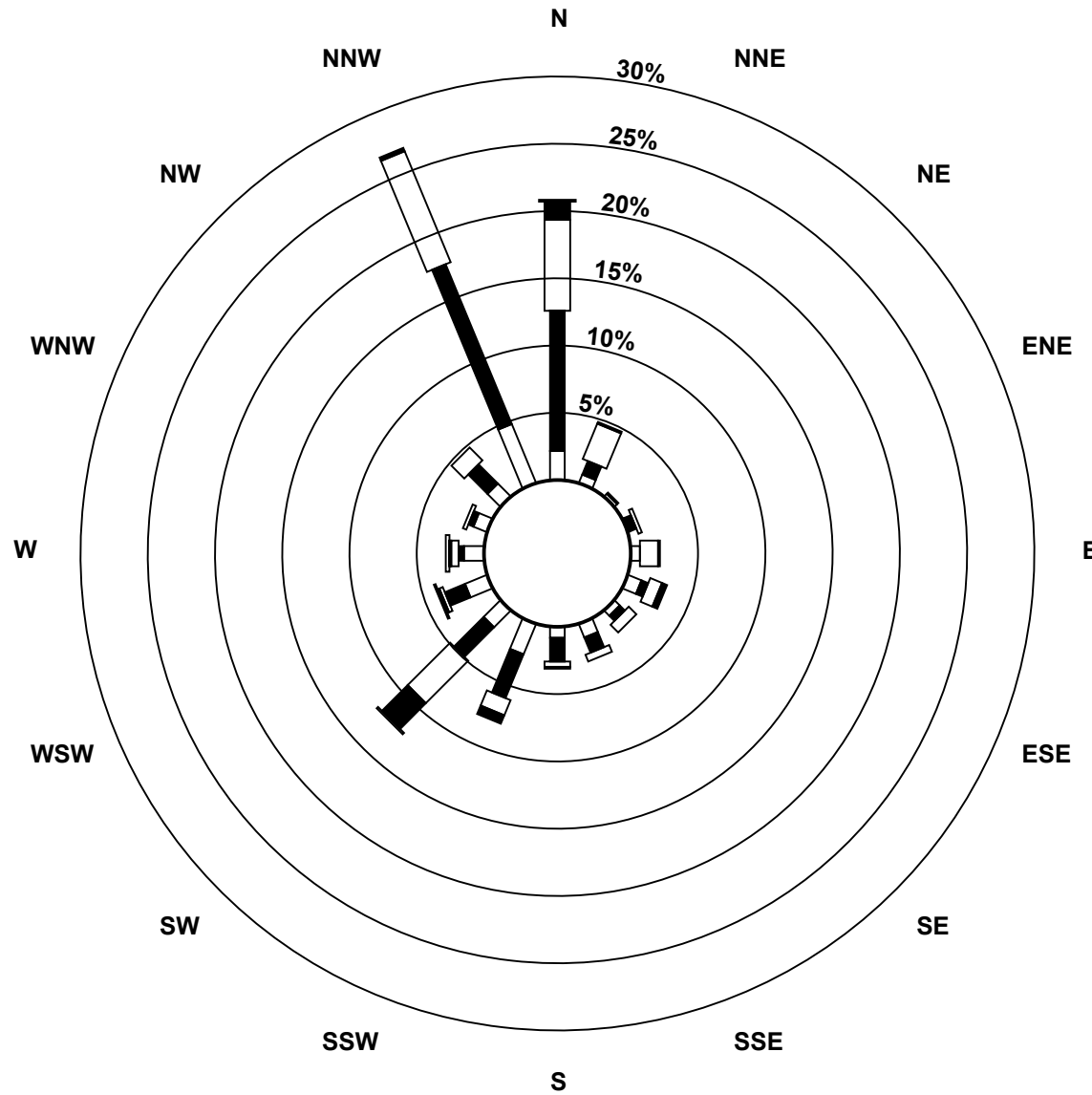
Hourly Averages

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

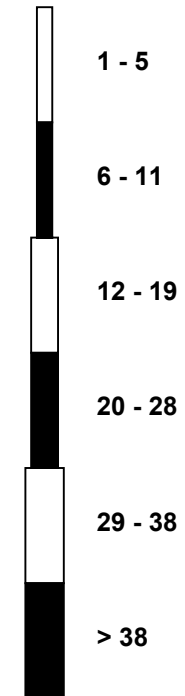
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	11	12	12	12	13	5	7	3	3	2	2	4	14	14	12	15	20	11	5	1	2	4	3	5	3.3	19.7
Dir	355	358	0	360	1	332	295	304	245	118	117	177	202	217	223	215	219	225	273	357	191	213	234	266	261.0	218.7
24 Spd	3	3	3	3	4	7	4	4	6	6	7	8	8	8	6	6	8	9	7	6	6	7	6	2	4.8	8.6
Dir	215	210	205	221	297	355	343	344	349	346	355	351	352	349	346	341	321	328	333	322	340	324	327	331	333.6	328.2
25 Spd	1	2	3	3	2	4	1	0	7	5	4	2	3	8	8	18	30	17	8	12	8	9	13	11	6.2	29.6
Dir	348	274	339	320	339	261	93	269	224	207	196	120	228	254	207	224	225	221	181	173	184	191	202	220	215.6	225.4
26 Spd	15	18	14	12	11	11	9	3	6	8	11	6	8	8	8	4	1	6	9	11	11	11	13	15	3.2	18.2
Dir	230	236	247	232	207	198	165	181	186	160	153	182	208	223	239	254	155	340	350	9	6	7	354	360	239.8	236.1
27 Spd	11	10	11	11	11	11	11	11	8	8	7	6	6	3	2	5	2	4	4	5	4	4	4	3	5.9	11.5
Dir	354	341	335	331	328	325	318	334	318	344	355	14	355	297	9	242	340	336	342	348	322	251	247	273	330.9	318.2
28 Spd	3	4	2	5	6	8	8	9	8	5	7	7	4	9	7	12	13	10	10	11	8	3	5	6	6.4	12.7
Dir	213	237	125	208	204	186	203	210	209	165	153	170	198	240	249	230	233	234	220	232	258	173	200	217	214.4	232.6
29 Spd	10	11	11	8	9	8	11	9	6	9	11	9	8	6	10	6	5	3	8	9	10	10	10	10	3.7	11.0
Dir	239	225	200	218	213	225	221	223	193	172	200	227	198	212	212	137	103	28	351	345	345	349	352	352	232.0	200.3
30 Spd	8	5	2	7	10	12	11	12	10	12	10	9	6	4	17	21	21	21	16	13	12	7	10	13	7.2	20.9
Dir	345	351	287	307	318	310	312	303	312	306	332	320	332	271	219	215	214	224	218	228	234	199	210	212	258.2	223.6
31 Spd	15	11	9	7	5	8	5	4	5	5	9	13	19	25	25	25	23	27	25	23	25	21	23	20	14.5	26.7
Dir	230	186	189	214	208	177	198	181	153	144	160	159	192	189	205	217	222	215	210	223	233	232	228	227	208.9	215.2
Spd	4.5	4.4	3.9	4.1	4.9	4.1	4.8	4.7	3.9	2.9	2.4	3.1	2.9	4.0	3.4	3.2	3.6	4.5	4.6	4.2	4.1	3.4	3.0	3.3	Diurnal Average	
Dir	326.9	318.8	319.8	316.8	327.9	326.6	321.1	322.0	318.7	337.1	352.2	344.1	332.9	315.0	315.9	312.8	304.5	304.6	314.3	322.5	327.0	334.8	330.6	327.9	Diurnal Maximum	
Spd	26.7	28.5	33.2	26.5	23.8	20.3	21.2	22.4	22.6	21.2	17.2	22.3	24.0	24.7	24.6	24.9	29.6	30.4	31.5	22.6	25.4	24.7	24.2	23.2	Diurnal Maximum	
Dir	0.0	352.6	240.1	224.6	355.9	4.7	207.3	274.1	251.2	208.4	209.7	219.8	217.1	189.1	205.2	217.1	225.4	278.6	269.1	222.9	232.7	218.4	216.0	3.6		
Maximum Speed Value: 33 km/h on Mar 15 03:00								Minimum Speed Value: 0 km/h on Mar 16 04:00												Hours in Service:				744		
Maximum Daily Speed Average: 15.2 km/h on Mar 31								Minimum Daily Speed Average: 0.7 km/h on Mar 16												Hours of Data:				744		
Maximum Diurnal Speed Average: 4.9 km/h at hour 5								Minimum Diurnal Speed Average: 2.4 km/h at hour 11												Hours of Missing Data:				0		
Monthly Average Velocity: 3.77 km/h 322.85 deg								Speed Percentiles: P ₁ = 1.0 P ₁₀ = 3.3 Q ₁ = 5.9 Median = 9.9 Q ₃ = 13.5 P ₉₀ = 17.4 P ₉₉ = 26.7												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	36		128		137		14		1		0		316													
NorthEast	5		7		1		1		0		0		14													
East	7		6		18		4		0		0		35													
SouthEast	14		8		11		0		0		0		33													
South	12		30		12		1		0		0		55													
SouthWest	31		46		41		25		2		0		145													
West	16		13		6		2		2		0		39													
NorthWest	25		47		35		0		0		0		107													
Total	146		285		261		47		5		0		744													

Wind Rose

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



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Smoky Heights - March 2017

Maximum Speed: 33 km/h on Mar 15 03:00																				Maximum Daily Speed Average: 16.0 km/h on Mar 31										Hours in Service: 744	
Minimum Speed: 1 km/h on Mar 15 22:00																				Minimum Daily Speed Average: 5.6 km/h on Mar 16										Hours of Data: 744	
Maximum Diurnal Speed Average: 12.3 km/h at hour 18																				Minimum Diurnal Speed Average: 9.4 km/h at hour 10										Hours of Missing Data: 0	
Monthly Average Speed: 10.52 km/h																				Percentiles: P ₁ = 1.9 P ₁₀ = 3.9 Q ₁ = 6.3 Median = 10.0 Q ₃ = 13.6 P ₉₀ = 17.5 P ₉₉ = 26.7										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Mar	20	23	23	16	16	18	17	15	12	8	9	10	9	10	8	8	5	4	4	6	8	8	8	8	11.4	23.1					
2-Mar	10	11	10	12	8	9	10	7	9	8	7	2	2	5	5	6	5	13	11	7	12	10	11	15	8.5	15.1					
3-Mar	13	4	4	4	2	7	13	23	23	16	16	12	11	14	13	17	16	15	13	14	17	21	23	23	14.0	23.2					
4-Mar	27	29	27	23	24	19	16	9	12	13	15	17	14	11	9	7	5	6	5	5	5	4	2	3	12.8	28.7					
5-Mar	8	7	3	5	4	24	3	4	4	4	8	7	6	9	10	11	11	11	11	11	11	13	10	11	8.5	23.7					
6-Mar	15	16	11	12	16	15	16	17	20	19	17	17	16	16	13	15	14	15	13	13	12	15	12	12	14.9	20.0					
7-Mar	11	12	10	11	11	10	13	14	12	11	11	13	13	14	15	13	12	11	10	10	11	11	13	14	12.0	15.1					
8-Mar	12	13	14	16	18	18	17	17	16	15	13	13	14	14	15	13	13	13	9	8	8	10	10	10	13.3	18.1					
9-Mar	11	11	11	10	11	12	12	13	11	14	12	10	11	11	15	17	18	13	12	13	14	14	15	14	12.8	17.8					
10-Mar	17	17	17	18	20	20	18	16	18	16	15	17	17	17	18	20	17	15	12	10	10	10	9	8	15.4	20.3					
11-Mar	7	5	4	4	5	5	4	4	7	7	8	11	12	15	18	17	18	16	14	12	12	12	13	12	10.1	18.1					
12-Mar	9	10	10	13	10	9	11	13	14	15	17	21	23	20	17	16	14	14	14	17	20	19	18	17	15.1	22.6					
13-Mar	18	18	13	12	10	6	8	11	10	10	10	12	13	14	13	14	10	10	13	14	18	25	24	20	13.5	24.7					
14-Mar	16	15	14	14	10	9	12	6	5	4	3	3	6	5	8	17	16	12	8	2	4	16	17	11	9.7	17.0					
15-Mar	9	27	33	27	18	14	21	22	21	21	17	22	24	15	17	16	14	11	3	4	2	1	3	2	15.4	33.3					
16-Mar	3	2	3	1	3	6	8	8	3	7	6	5	8	12	7	3	3	8	12	7	5	3	4	6	5.6	12.4					
17-Mar	8	6	5	4	7	5	7	5	6	8	9	9	10	11	13	13	14	15	16	12	9	6	5	4	8.7	15.6					
18-Mar	7	5	2	2	4	6	6	4	4	3	2	7	12	13	11	11	13	32	32	14	4	3	7	6	8.8	31.9					
19-Mar	4	6	7	10	8	4	4	7	10	12	14	15	13	16	14	13	18	16	14	12	16	17	13	10	11.4	17.7					
20-Mar	13	10	11	9	7	7	5	3	6	4	3	5	3	6	3	1	3	4	7	8	9	8	8	7	6.2	12.9					
21-Mar	8	7	5	6	8	9	10	9	7	7	14	14	9	4	3	5	5	6	8	8	8	7	6	7	7.4	14.4					
22-Mar	5	3	5	5	8	6	5	9	6	6	7	6	7	8	11	8	12	9	6	7	8	7	6	12	7.1	12.2					
23-Mar	11	12	12	12	13	6	7	5	4	3	2	4	14	14	12	15	20	11	6	2	3	4	3	5	8.5	19.9					
24-Mar	4	3	3	3	4	8	5	4	6	6	7	8	8	8	6	6	8	9	7	6	6	7	6	4	6.0	8.7					
25-Mar	2	2	4	3	3	5	6	2	8	5	5	3	3	8	8	18	30	21	9	12	8	9	13	11	8.2	29.7					
26-Mar	15	18	14	12	11	11	9	4	7	9	12	7	8	8	8	4	1	6	9	11	11	11	13	15	9.8	18.2					
27-Mar	11	10	11	11	11	11	12	11	9	8	7	6	6	4	2	5	4	4	4	5	4	4	4	3	7.0	11.6					
28-Mar	4	5	3	6	6	8	8	9	8	6	8	7	5	9	8	13	13	10	11	12	8	5	6	7	7.6	12.8					
29-Mar	10	11	11	8	10	8	11	9	6	9	11	10	9	6	10	6	5	5	8	9	10	10	10	10	8.8	11.3					
30-Mar	8	8	4	8	10	12	11	12	11	12	10	9	7	6	17	21	21	21	16	13	12	8	10	14	11.6	21.0					
31-Mar	15	11	9	7	5	8	7	4	5	5	9	14	19	25	25	25	23	27	25	23	26	21	23	20	16.0	26.9					
10.7 10.9 10.1 9.8 9.7 10.2 10.0 9.6 9.6 9.4 9.8 10.2 10.7 11.2 11.4 12.2 12.3 12.3 11.0 10.0 10.0 10.3 10.5 10.4																									Diurnal Average						
26.8 28.7 33.3 26.5 23.9 23.7 21.2 23.1 22.9 21.4 17.4 22.5 24.0 25.3 24.8 25.3 29.7 31.7 31.9 22.7 25.5 24.7 24.3 23.2																									Diurnal Maximum						
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

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

Maximum Value: 92.0 deg on Mar 2 12:00																			Hours in Service: 744						
Minimum Value: 2.1 deg on Mar 26 02:00																			Hours of Data: 744						
																			Hours of Missing Data: 0						
Percentiles: P ₁ = 3.7 P ₁₀ = 5.0 Q ₁ = 6.4 Median = 8.9 Q ₃ = 16.6 P ₉₀ = 38.7 P ₉₉ = 86.8																			Hours of Calibration: 0						
																			Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Mar	4	4	5	6	6	8	11	7	7	19	10	13	11	7	10	8	16	29	12	8	5	9	7	5	29.2
2-Mar	5	5	7	5	8	7	6	9	8	6	9	92	55	23	42	9	22	7	27	24	5	7	7	16	92.0
3-Mar	10	51	44	40	46	35	20	15	9	23	16	37	13	7	11	7	8	7	7	6	13	5	8	5	50.7
4-Mar	6	6	7	5	6	7	7	12	8	7	10	8	8	7	9	12	15	14	9	8	7	25	29	29	29.4
5-Mar	39	76	21	20	90	88	42	14	10	23	7	5	8	6	13	8	14	6	6	5	6	6	5	6	90.0
6-Mar	4	4	7	7	8	7	5	7	7	5	4	6	5	7	8	5	6	5	5	6	4	5	7	8	7.7
7-Mar	8	6	7	7	6	15	9	5	7	6	9	7	12	8	8	6	6	6	5	7	6	6	4	6	14.5
8-Mar	4	5	5	5	4	5	4	4	7	5	6	7	8	7	7	6	5	5	8	7	6	5	6	6	7.9
9-Mar	6	4	5	5	5	5	6	4	7	8	8	10	7	7	10	15	9	10	5	4	4	6	13	4	15.5
10-Mar	5	9	5	5	3	5	5	4	6	6	5	6	8	7	6	5	7	6	5	7	6	4	8	6	8.7
11-Mar	10	13	18	20	9	4	5	7	6	9	6	11	15	12	9	6	6	6	6	7	6	6	7	5	19.8
12-Mar	6	5	33	7	6	7	8	4	5	7	9	8	8	8	7	9	10	8	4	7	5	5	6	7	33.2
13-Mar	5	5	14	5	8	23	18	7	12	13	8	8	5	6	10	4	17	12	4	6	6	4	4	4	22.6
14-Mar	12	12	8	9	29	21	8	29	18	13	28	70	19	23	25	8	13	7	19	68	30	3	5	7	69.6
15-Mar	42	13	5	4	4	9	5	5	3	6	10	7	4	7	7	14	6	8	63	15	53	69	28	55	69.2
16-Mar	13	54	52	91	23	18	9	11	40	56	25	32	30	14	60	51	38	28	10	16	15	29	29	13	91.4
17-Mar	10	53	39	62	13	22	9	12	16	9	9	8	6	6	6	7	7	4	5	7	15	7	16	42	61.6
18-Mar	19	9	29	43	38	12	6	24	33	68	64	11	10	8	7	11	10	18	10	23	30	68	10	16	68.4
19-Mar	8	46	10	8	51	69	46	9	7	14	8	8	11	10	9	10	8	15	18	15	7	8	6	19	69.2
20-Mar	13	8	20	8	7	17	11	65	12	11	13	13	51	11	13	55	36	39	9	6	18	8	14	15	65.3
21-Mar	8	9	20	25	23	7	7	19	11	9	39	8	12	32	61	18	56	13	6	8	9	8	11	10	61.2
22-Mar	13	51	28	23	7	9	11	7	12	14	10	14	11	12	8	10	7	4	12	4	14	7	12	11	51.1
23-Mar	7	7	8	8	5	28	16	53	47	38	32	32	10	6	8	7	8	12	39	71	39	37	33	23	71.3
24-Mar	25	22	16	21	22	9	19	18	13	11	6	8	13	7	8	12	9	7	6	10	11	5	8	77	76.6
25-Mar	80	45	23	26	50	23	92	88	17	28	51	28	36	10	13	8	5	63	34	9	15	7	8	9	91.9
26-Mar	3	2	5	7	12	9	9	35	27	9	7	31	14	8	13	28	40	16	10	5	7	5	5	4	40.3
27-Mar	5	23	5	6	4	7	6	7	12	12	17	8	13	44	39	43	48	12	12	10	11	41	48	58	57.7
28-Mar	39	18	49	34	8	7	4	7	5	33	15	13	36	12	16	5	10	6	17	15	9	59	18	21	59.1
29-Mar	12	13	7	19	15	10	6	7	15	16	10	17	16	18	9	25	11	48	6	7	12	10	13	12	47.8
30-Mar	15	51	90	36	6	5	6	6	7	10	14	17	27	52	10	4	4	6	3	5	5	26	8	22	90.4
31-Mar	10	7	5	19	19	7	46	51	23	15	9	19	13	12	6	10	8	7	4	7	6	10	5	12	51.0
80.2 75.8 90.4 91.4 90.0 88.3 91.9 87.5 47.5 68.4 63.8 92.0 54.5 51.6 61.2 54.9 55.9 62.9 62.5 71.3 52.8 69.2 48.4 76.6																									

PAZA
Beaverlodge Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

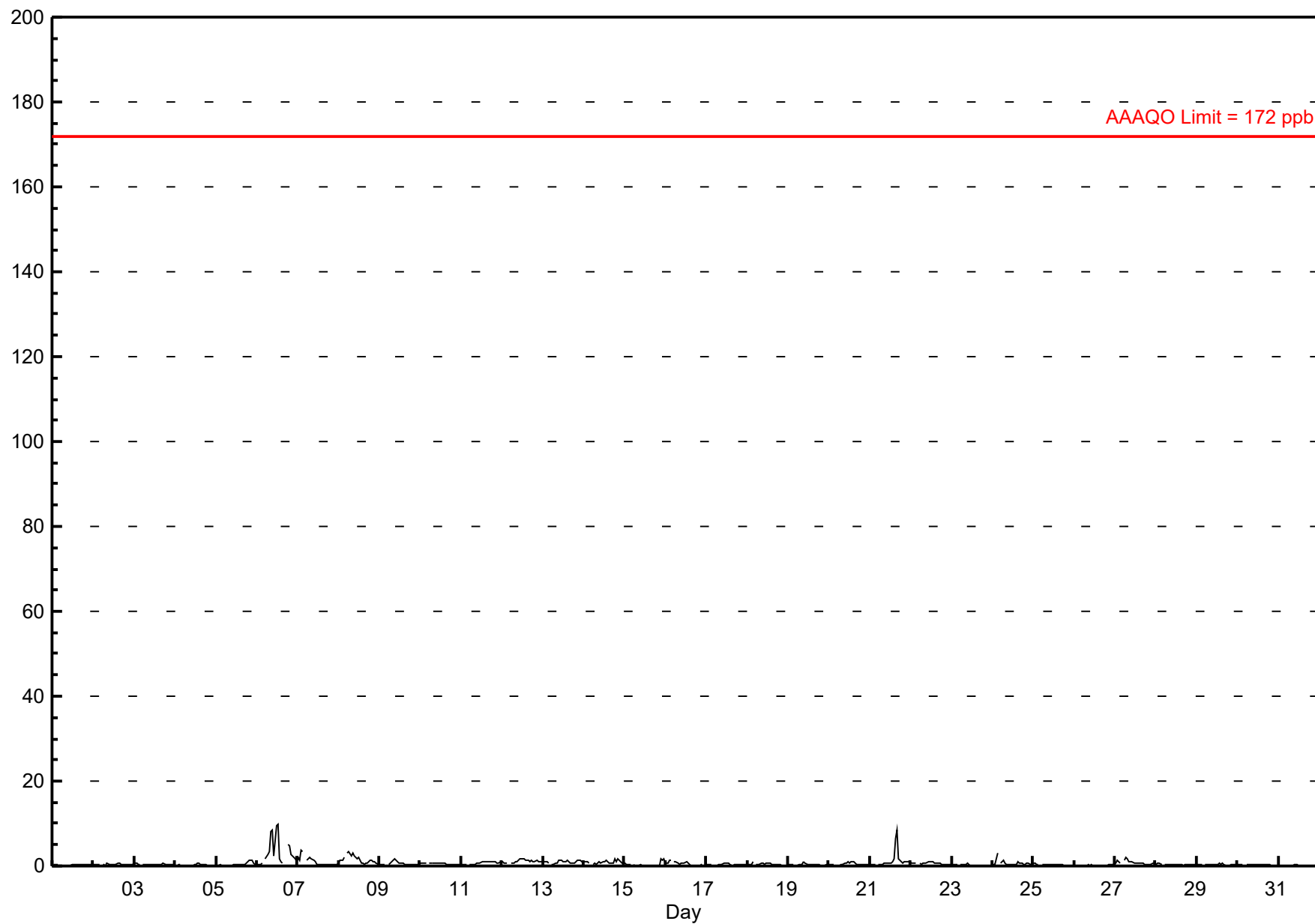
Sulphur Dioxide (SO₂) - ppb

Beaverlodge - March 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 744							
Maximum Value: 9.7 ppb on Mar 6 13:00																				Maximum Daily Average: 3.3 ppb on Mar 6		Hours of Data: 711					
Minimum Value: 0 ppb on Mar 23 19:00																				Minimum Daily Average: 0.1 ppb on Mar 31		Hours of Missing Data: 33					
Maximum Diurnal Average: 0.9 ppb at hour 10																				Minimum Diurnal Average: 0.4 ppb at hour 18		Hours of Calibration: 33					
Monthly Average: 0.63 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.4 Q ₃ = 0.7 P ₉₀ = 1.2 P ₉₉ = 4.3		Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Mar	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5	
2-Mar	0	0	0	0	A	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0.4	0.6	
3-Mar	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.3	0.6	
4-Mar	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0.2	0.6	
5-Mar	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0.4	1.3	
6-Mar	0	0	0	1	A	2	3	4	8	9	2	9	10	2	1	1	C	C	5	5	3	2	2	1	3.3	9.7	
7-Mar	2	1	4	3	A	1	2	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1.1	3.9	
8-Mar	1	1	1	2	A	3	3	2	3	2	2	2	2	1	1	0	1	1	1	1	1	1	1	0	1.5	3.4	
9-Mar	0	0	0	0	A	0	1	1	1	2	1	1	1	1	1	0	0	0	0	0	0	0	0	1	0.6	1.6	
10-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.6	0.8	
11-Mar	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1	
12-Mar	1	1	1	1	A	1	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1.1	1.8	
13-Mar	1	1	1	1	A	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1.0	1.5	
14-Mar	1	1	1	1	A	0	1	0	1	1	1	1	1	1	1	1	1	1	2	1	2	1	1	1	0.9	1.7	
15-Mar	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	0.3	1.6	
16-Mar	1	1	1	1	A	1	1	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.5	1.5	
17-Mar	0	0	0	0	A	0	0	0	0	0	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0.3	0.8	
18-Mar	0	0	0	1	A	0	0	0	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0.4	0.9	
19-Mar	0	0	0	0	A	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9	
20-Mar	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.4	1.0	
21-Mar	0	0	0	0	A	0	0	0	1	1	1	1	1	1	2	6	8	2	1	1	1	1	1	1	1.3	8.4	
22-Mar	1	1	1	1	A	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.7	1.1	
23-Mar	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5	
24-Mar	0	0	2	3	A	1	1	1	0	0	0	0	0	0	0	1	1	1	1	0	1	1	0	0	0.7	2.9	
25-Mar	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7	
26-Mar	0	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	
27-Mar	1	1	1	1	A	1	2	2	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	0.8	2.0	
28-Mar	0	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5	
29-Mar	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0.3	0.7	
30-Mar	0	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	
31-Mar	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
		0.5	0.5	0.6	0.7	--	0.5	0.6	0.6	0.8	0.9	0.7	0.9	0.9	0.6	0.6	0.7	0.7	0.4	0.6	0.6	0.5	0.6	0.5	0.5	Diurnal Average	
		1.9	1.5	3.9	3.4	--	2.9	3.4	3.5	8.0	8.6	2.3	9.3	9.7	1.7	1.7	6.3	8.4	1.8	5.1	4.8	2.9	2.3	1.6	1.6	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																											

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - March 2017



Hourly Maximums

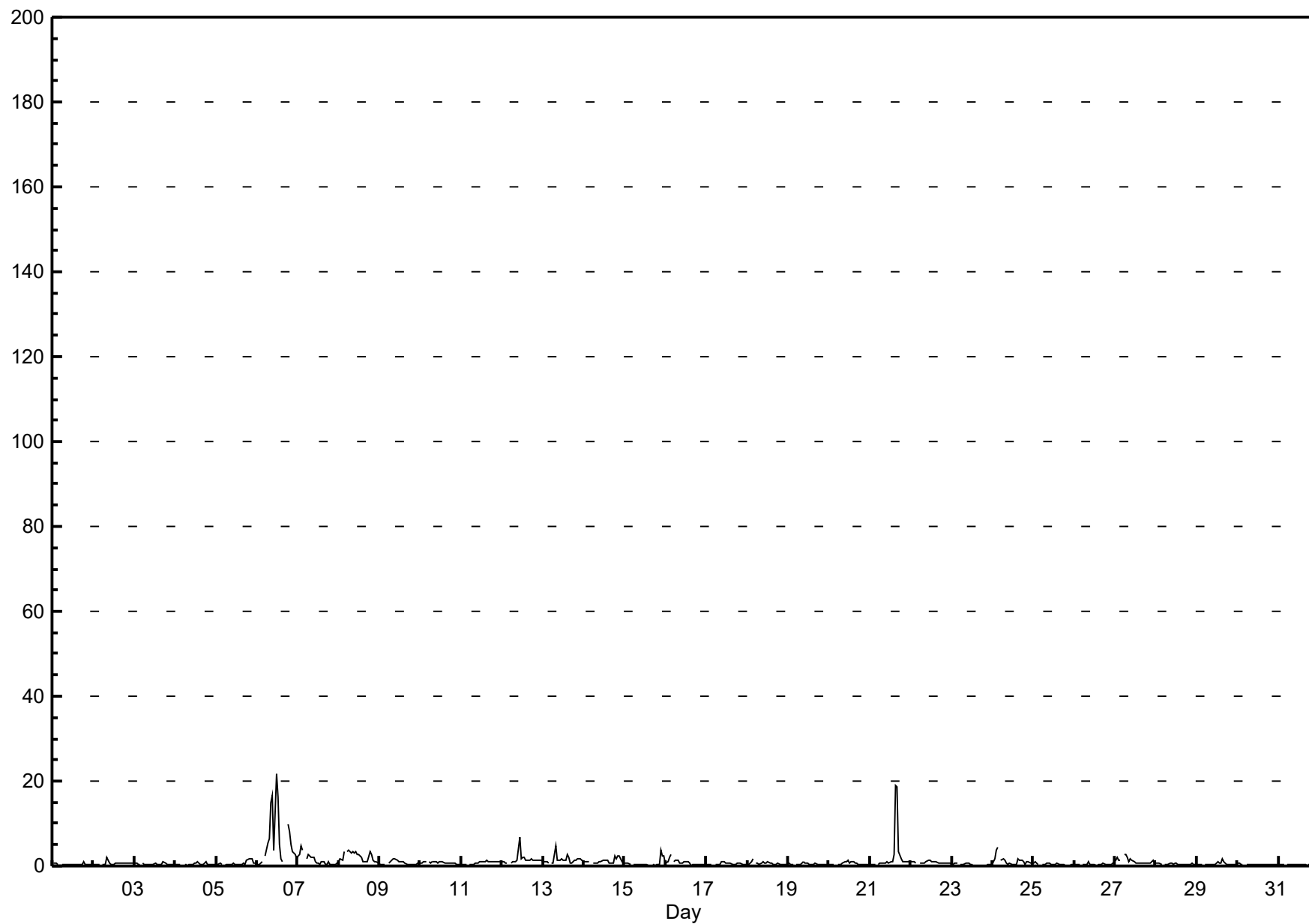
Sulphur Dioxide (SO₂) - ppb

Beaverlodge - March 2017

Maximum Value: 21.8 ppb on Mar 6 12:00																			Maximum Daily Average: 6.1 ppb on Mar 6										Hours in Service: 744	
Minimum Value: 0 ppb on Mar 23 15:00																			Minimum Daily Average: 0.2 ppb on Mar 31										Hours of Data: 711	
Maximum Diurnal Average: 1.5 ppb at hour 12																			Minimum Diurnal Average: 0.6 ppb at hour 24										Hours of Missing Data: 33	
Monthly Average: 0.97 ppb																			Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.5 Q ₃ = 1.0 P ₉₀ = 1.7 P ₉₉ = 6.5										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-Mar	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.4	0.9				
2-Mar	0	0	0	0	A	0	0	0	2	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0.6	1.9				
3-Mar	1	1	0	0	A	1	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0.5	1.0				
4-Mar	0	0	0	0	A	0	0	0	0	0	0	1	1	1	1	0	0	1	1	0	0	0	0	0	0.4	0.9				
5-Mar	0	0	1	0	A	0	0	0	0	0	1	0	1	0	0	0	1	0	1	2	2	2	1	1	0.6	1.8				
6-Mar	0	0	1	1	A	2	5	7	15	17	4	22	16	5	2	1	C	C	10	8	5	4	3	2	6.1	21.8				
7-Mar	2	3	5	4	A	2	3	2	2	2	1	1	1	0	1	1	0	0	1	0	0	0	0	1	1.5	4.6				
8-Mar	1	2	2	3	A	3	4	3	4	3	3	3	3	2	1	1	1	1	3	3	1	1	1	1	2.1	3.8				
9-Mar	0	0	0	0	A	1	1	1	2	2	1	1	1	1	1	1	0	0	0	0	0	0	1	1	0.8	1.8				
10-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0.7	1.0				
11-Mar	0	0	0	0	A	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2				
12-Mar	1	1	1	1	A	1	1	1	1	1	7	2	2	2	1	1	1	2	1	1	1	1	1	1	1.5	6.8				
13-Mar	1	1	1	1	A	1	1	5	1	1	1	2	1	1	3	2	1	1	1	1	2	2	2	1	1.5	4.8				
14-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1.2	2.4				
15-Mar	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2	2	0.6	3.6				
16-Mar	1	1	2	3	A	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.8	2.9				
17-Mar	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	0	0	0	1	1	1	0	0	0	0.5	1.1				
18-Mar	0	0	1	2	A	1	1	0	1	1	1	1	1	1	1	0	0	0	1	0	0	0	0	0	0.6	1.7				
19-Mar	1	0	0	0	A	0	0	0	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0.4	1.0				
20-Mar	0	0	0	0	A	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.6	1.4				
21-Mar	0	0	0	0	A	1	1	1	1	1	1	1	1	1	3	19	19	3	2	1	1	1	1	1	2.6	18.8				
22-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2				
23-Mar	0	0	1	1	A	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7				
24-Mar	0	2	4	4	A	1	2	1	1	1	1	0	0	0	0	2	1	1	1	0	1	1	1	1	1.2	4.4				
25-Mar	1	1	1	1	A	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.4	1.1				
26-Mar	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.3	1.0				
27-Mar	1	2	1	1	A	3	3	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	2.7				
28-Mar	1	1	1	0	A	0	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0.5	0.7				
29-Mar	0	0	0	0	A	0	0	0	0	0	0	0	1	1	1	2	1	0	0	0	0	0	0	0	0.5	1.7				
30-Mar	1	1	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8				
31-Mar	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3				
0.7 0.8 0.9 0.9 -- 0.7 0.9 1.0 1.3 1.4 1.1 1.5 1.3 0.9 0.8 1.3 1.2 0.7 1.1 0.9 0.8 0.8 0.7 0.6																								Diurnal Average						
2.4 2.6 4.6 4.4 -- 3.5 5.5 6.6 14.9 16.7 6.8 21.8 16.4 5.2 2.6 18.8 18.7 3.3 9.7 8.0 4.9 3.6 2.6 2.3																								Diurnal Maximum						
C - Calibration																								A - Automated Daily Zero Span						

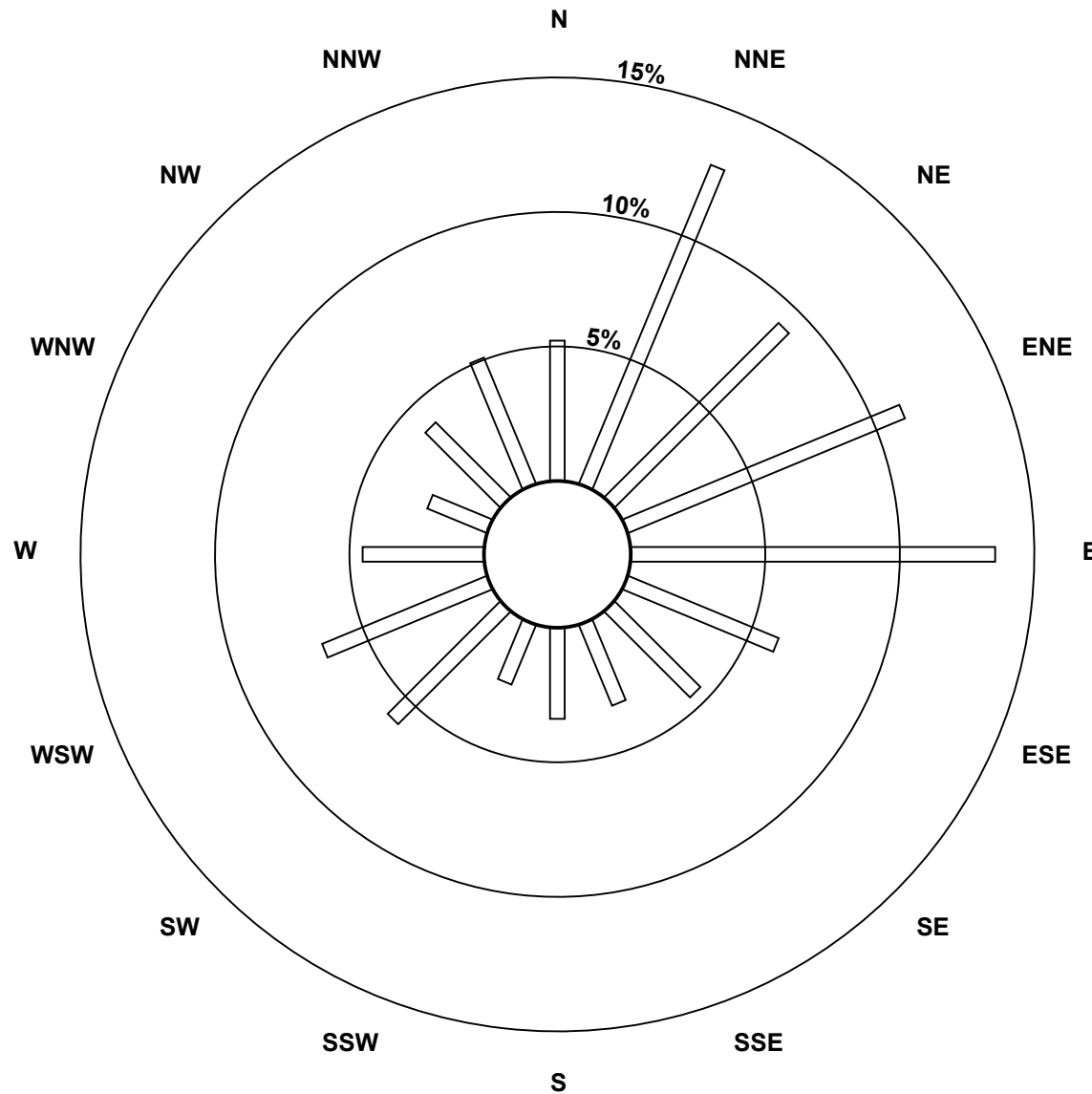
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - March 2017



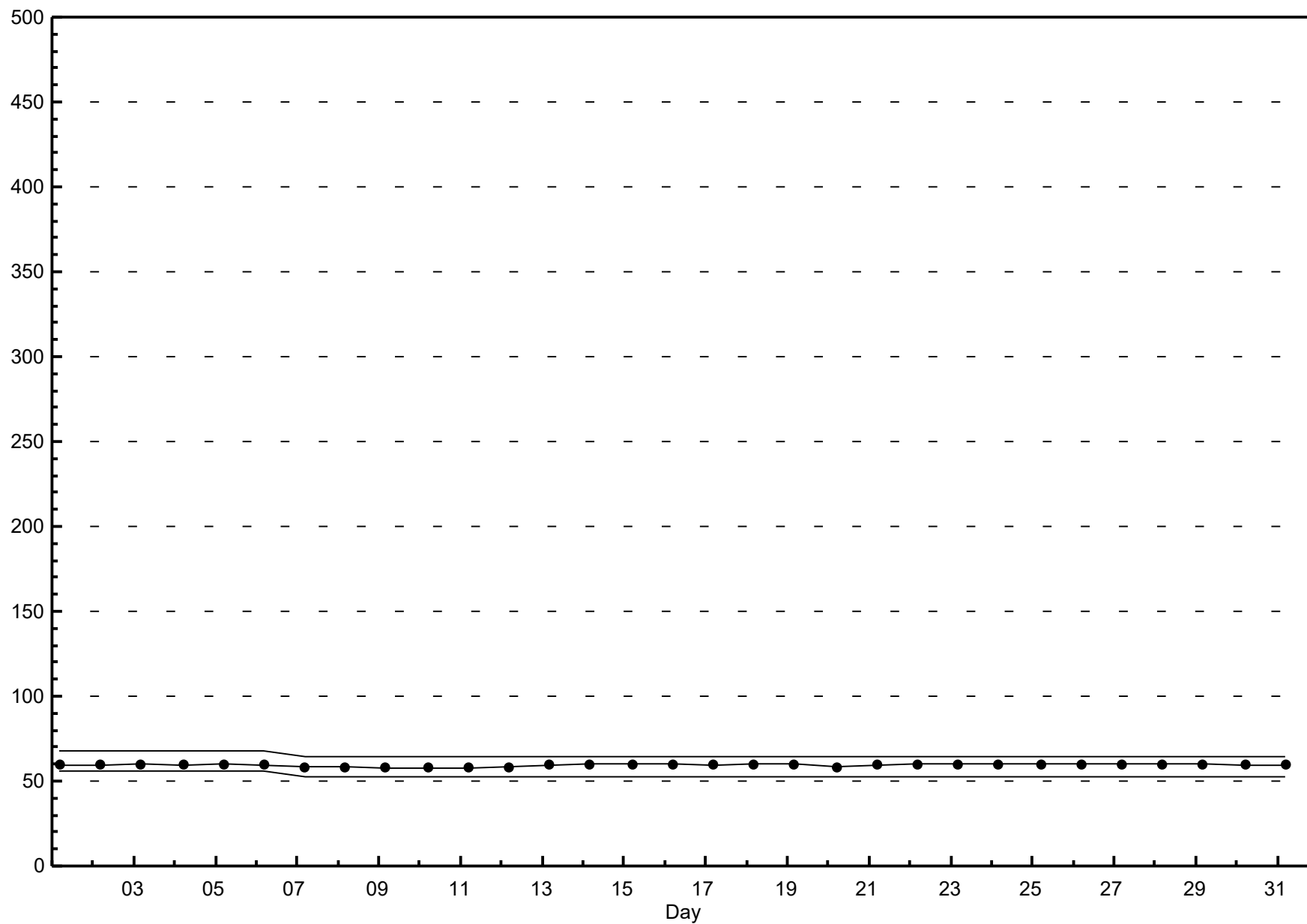
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - March 2017



Span Responses

Sulphur Dioxide (SO₂)
Beaverlodge - March 2017



Hourly Averages

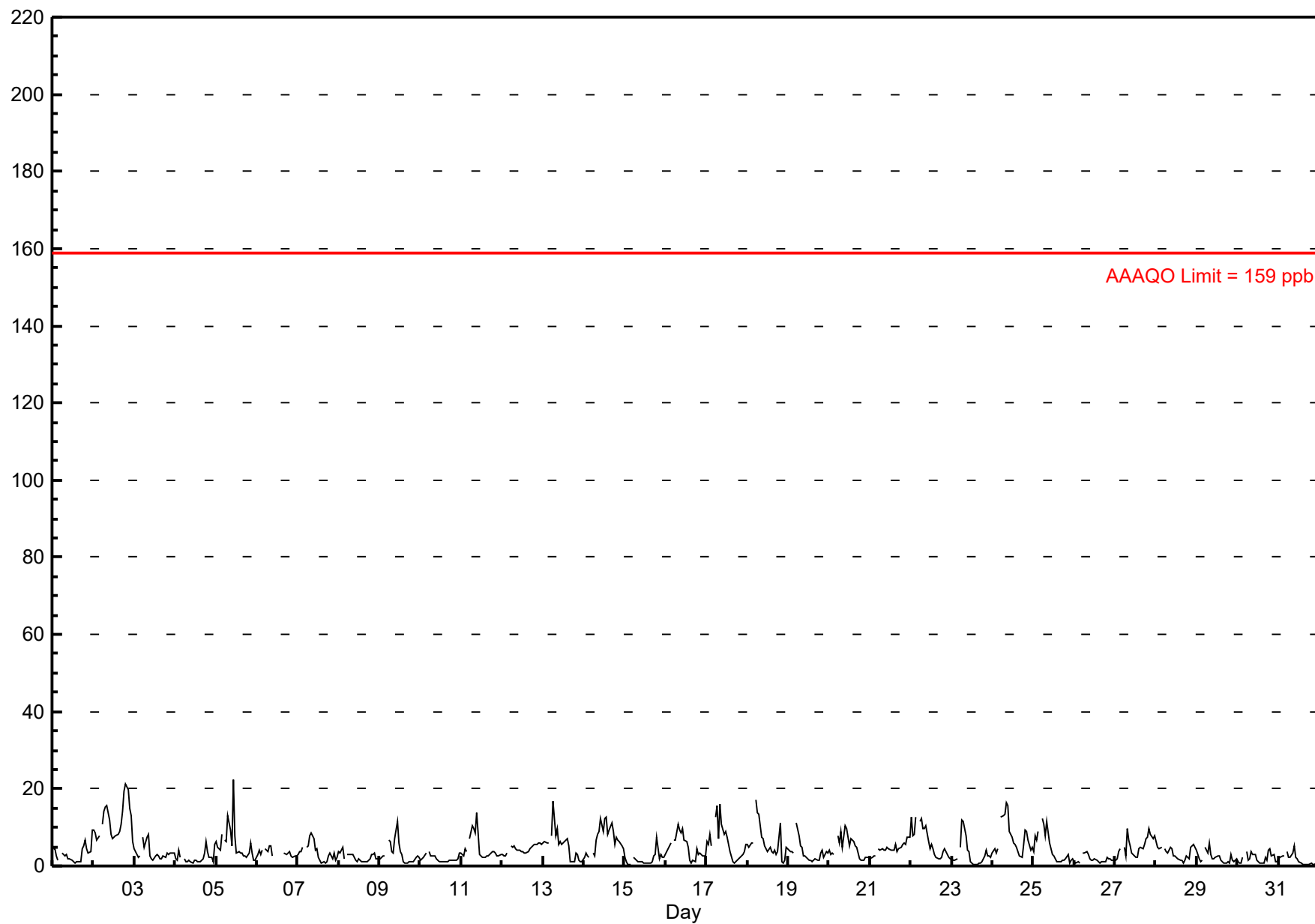
Nitrogen Dioxide (NO₂) - ppb

Beaverlodge - March 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 22.2 ppb on Mar 5 11:00 Maximum Daily Average: 11.7 ppb on Mar 2																				Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 37 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Mar 15 04:00 Minimum Daily Average: 1.6 ppb on Mar 31 Maximum Diurnal Average: 6.9 ppb at hour 8 Minimum Diurnal Average: 2.5 ppb at hour 16 Monthly Average: 4.22 ppb Percentiles: P ₁ = 0.5 P ₁₀ = 1.1 Q ₁ = 1.8 Median = 3.3 Q ₃ = 5.5 P ₉₀ = 8.8 P ₉₉ = 16.3																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Mar	5	5	3	2	A	3	3	3	3	2	2	1	1	1	1	1	5	5	7	5	3	4	9	3.2	9.5	
2-Mar	9	9	7	8	A	11	14	15	16	12	8	7	8	8	9	11	14	19	21	20	15	13	6	11.7	21.2	
3-Mar	5	3	2	3	A	7	5	8	8	3	2	2	3	3	3	2	3	2	3	3	3	3	3	3.4	8.1	
4-Mar	2	1	4	2	A	2	1	1	1	1	1	1	2	1	1	1	2	3	6	4	2	2	1	6	2.2	6.3
5-Mar	7	5	4	8	A	7	6	13	9	5	22	8	3	4	3	3	3	3	2	3	6	4	1	2	5.7	22.2
6-Mar	3	4	3	4	A	5	4	5	5	3	C	C	C	C	C	C	4	3	3	4	3	2	3	3	--	5.3
7-Mar	3	4	4	5	A	5	5	8	9	7	4	5	2	1	1	1	1	1	2	3	2	3	1	2	3.5	8.7
8-Mar	4	3	5	2	A	3	3	3	3	2	2	1	2	1	1	1	1	1	2	3	3	3	2	2	2.3	4.7
9-Mar	2	2	3	3	A	7	6	4	3	7	12	6	4	3	1	1	1	1	1	1	2	3	2	2	3.3	11.7
10-Mar	2	2	2	3	A	4	3	3	3	2	2	1	1	1	1	1	1	2	2	2	2	2	3	1.9	3.6	
11-Mar	3	3	5	4	A	7	10	10	9	14	8	3	2	2	2	3	3	3	4	4	3	3	3	3	4.8	13.8
12-Mar	3	3	3	4	A	5	5	5	5	4	4	4	4	4	3	4	4	5	5	6	6	6	6	6	4.4	6.1
13-Mar	6	7	6	6	A	8	17	8	10	5	6	6	6	7	7	5	1	1	1	3	3	2	1	1	5.3	16.8
14-Mar	2	4	3	2	A	3	2	7	8	9	12	9	12	13	8	9	11	9	5	7	7	6	5	5	7.0	12.8
15-Mar	2	1	1	0	A	2	2	2	1	1	1	1	1	1	1	1	1	3	3	7	2	3	2	2	1.8	7.3
16-Mar	3	5	5	6	A	7	7	11	9	9	10	7	6	5	1	1	2	1	4	3	3	3	3	3	4.9	10.8
17-Mar	6	6	8	5	A	13	16	7	16	11	8	9	7	6	4	1	1	1	1	2	2	3	4	6	6.2	16.0
18-Mar	5	5	6	6	A	17	14	13	7	7	5	4	4	5	4	3	4	3	4	11	1	1	2	5	5.9	17.0
19-Mar	4	4	4	3	A	11	8	5	5	2	2	2	2	1	1	1	2	1	1	3	4	2	4	3	3.4	11.3
20-Mar	4	3	3	3	A	8	6	9	5	10	10	7	5	7	6	5	5	3	2	2	1	2	2	2	4.9	10.4
21-Mar	2	2	3	3	A	5	4	4	4	4	5	4	4	4	4	5	4	5	5	6	6	6	7	7	4.5	7.4
22-Mar	13	8	8	13	A	12	12	10	10	10	6	4	6	5	3	2	2	2	2	4	4	3	2	2	6.2	12.8
23-Mar	2	2	1	2	A	5	12	12	8	4	4	1	1	0	0	1	1	1	1	3	4	3	3	2	3.1	11.8
24-Mar	3	5	3	4	A	13	13	14	17	16	9	7	6	6	5	4	3	2	6	9	9	7	4	5	7.3	16.5
25-Mar	4	8	7	9	A	12	11	8	12	6	4	3	3	2	1	1	1	1	2	2	3	1	1	2	4.4	12.3
26-Mar	1	1	1	1	A	3	3	4	3	2	2	1	2	1	1	1	1	1	1	2	2	2	1	1	1.7	3.9
27-Mar	1	2	4	5	A	5	3	10	7	5	3	2	2	2	5	5	5	5	7	8	10	8	7	8	5.1	9.7
28-Mar	6	5	5	5	A	5	4	3	5	4	2	3	2	2	1	2	1	2	3	2	5	5	5	5	3.5	6.2
29-Mar	4	2	1	1	A	5	3	6	3	2	2	2	3	3	1	1	1	1	1	1	3	2	1	2	2.2	5.9
30-Mar	1	1	1	2	A	4	2	2	4	3	3	2	1	1	1	1	2	1	4	4	3	3	1	1	2.1	4.4
31-Mar	2	2	3	3	A	4	2	2	3	5	2	2	1	1	0	0	0	1	0	1	0	0	1	0	1.6	5.2
3.8 3.6 3.7 4.1 -- 6.6 6.6 6.9 6.7 5.8 5.5 3.9 3.5 3.3 2.7 2.5 2.6 2.8 3.5 4.5 4.1 3.5 3.2 3.5																								Diurnal Average		
12.8 8.8 8.3 12.7 -- 17.0 16.8 15.4 16.5 15.6 22.2 9.0 12.1 12.8 8.3 9.4 11.2 14.1 19.3 21.2 19.9 15.0 13.1 9.5																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb																										

Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - March 2017



Hourly Maximums

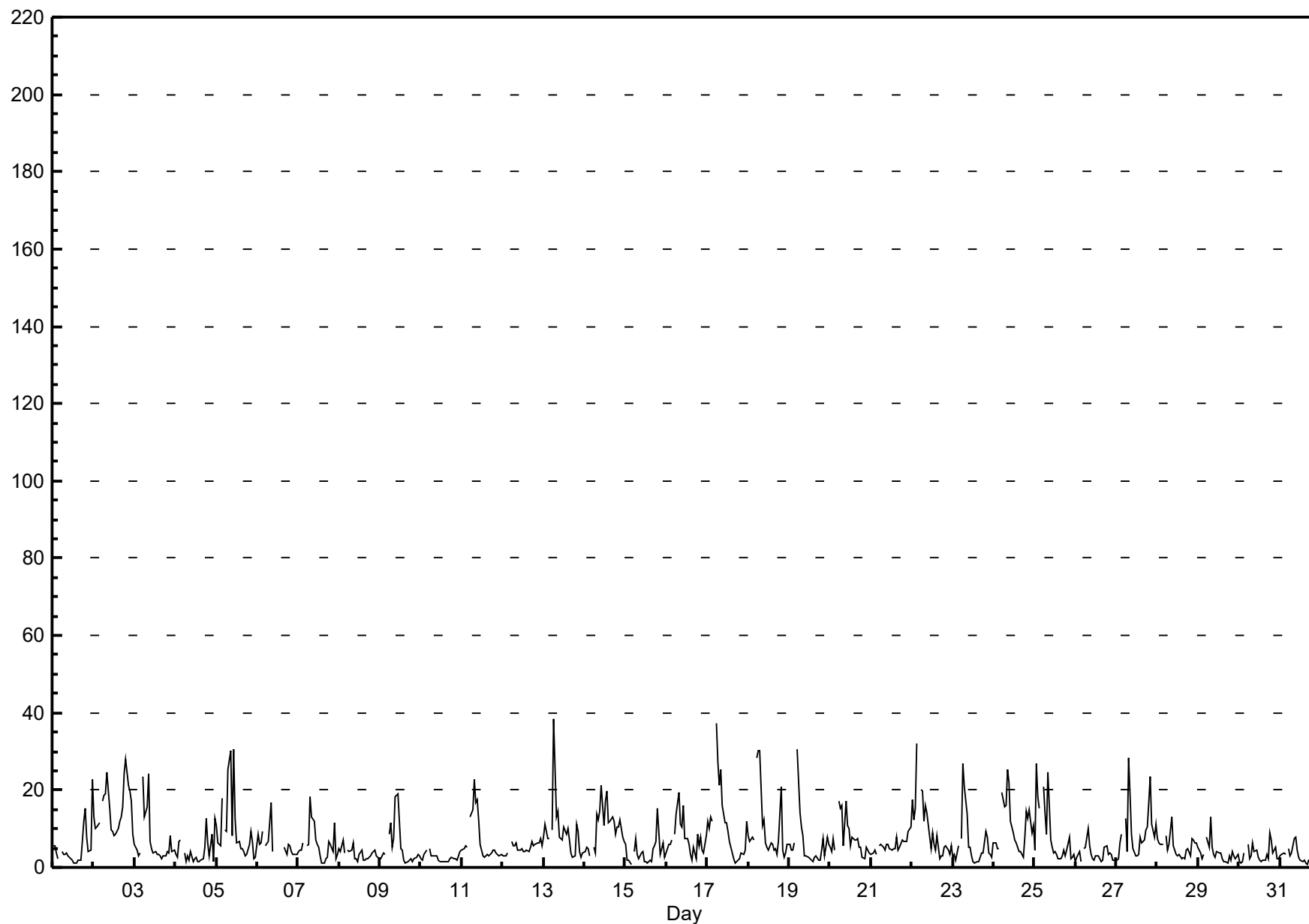
Nitrogen Dioxide (NO₂) - ppb

Beaverlodge - March 2017

Maximum Value: 38.5 ppb on Mar 13 07:00																				Maximum Daily Average: 15.0 ppb on Mar 2										Hours in Service: 744	
Minimum Value: 1 ppb on Mar 15 04:00																				Minimum Daily Average: 2.5 ppb on Mar 10										Hours of Data: 707	
Maximum Diurnal Average: 12.7 ppb at hour 8																				Minimum Diurnal Average: 3.8 ppb at hour 16										Hours of Missing Data: 37	
Monthly Average: 6.83 ppb																				Percentiles: P ₁ = 1.2 P ₁₀ = 1.9 Q ₁ = 3.0 Median = 4.7 Q ₃ = 8.1 P ₉₀ = 14.8 P ₉₉ = 30.2										Hours of Calibration: 37	
																				Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Mar	6	6	4	2	A	4	4	3	4	3	3	2	1	1	1	2	2	7	12	15	8	4	5	23	5.2	22.8					
2-Mar	13	10	10	11	A	17	19	19	25	15	10	9	8	9	10	12	13	16	24	28	21	20	17	8	15.0	27.9					
3-Mar	6	4	3	4	A	23	13	16	24	7	5	4	4	3	3	3	2	3	3	4	4	8	4	5	6.8	24.2					
4-Mar	3	3	7	7	A	4	1	3	2	4	1	2	3	2	1	2	2	5	13	6	3	9	2	13	4.2	12.8					
5-Mar	11	7	5	18	A	10	9	26	30	8	30	13	6	7	5	5	4	3	3	6	9	7	2	3	9.8	30.5					
6-Mar	8	6	6	9	A	5	7	12	17	4	C	C	C	C	C	C	5	3	6	6	4	3	3	4	--	16.8					
7-Mar	4	4	5	6	A	6	6	18	13	12	7	6	5	3	1	1	2	3	7	6	4	12	2	4	5.9	18.4					
8-Mar	5	4	7	4	A	4	4	4	6	2	2	2	3	4	2	2	2	2	3	4	4	4	3	2	3.5	7.2					
9-Mar	2	3	4	3	A	9	12	5	8	18	19	12	5	4	2	1	1	2	2	1	2	3	3	3	5.5	18.9					
10-Mar	2	2	3	5	A	5	3	3	3	3	2	2	2	1	2	2	2	2	3	2	2	2	3	4	2.5	4.7					
11-Mar	5	5	6	5	A	13	15	23	17	17	12	6	3	3	3	3	3	4	5	5	4	3	3	3	7.2	22.9					
12-Mar	3	3	3	4	A	7	5	6	6	4	4	5	4	4	4	4	5	7	5	6	6	6	7	6	5.1	7.4					
13-Mar	8	11	7	7	A	10	39	13	15	8	8	7	11	9	10	7	4	2	3	11	10	4	2	4	9.1	38.5					
14-Mar	4	5	5	3	A	5	4	14	12	15	21	11	17	20	11	12	13	12	8	10	10	12	8	7	10.5	21.3					
15-Mar	6	2	2	1	A	4	8	3	2	4	4	1	2	1	2	2	5	6	7	15	3	5	6	3	4.0	15.2					
16-Mar	4	6	6	7	A	9	14	19	11	10	16	8	7	6	3	2	5	2	9	6	8	5	4	8	7.5	19.3					
17-Mar	12	10	13	12	A	37	27	21	26	16	12	12	9	7	5	2	1	2	2	2	4	3	4	12	10.9	37.2					
18-Mar	8	7	8	7	A	28	30	30	11	12	6	5	5	7	6	4	5	3	7	21	5	2	4	6	9.9	30.3					
19-Mar	6	4	5	6	A	30	14	11	8	3	3	3	2	2	1	2	3	2	2	4	7	3	8	6	6.0	30.4					
20-Mar	5	4	7	4	A	17	15	16	5	17	11	10	6	8	7	7	7	5	5	3	2	5	4	4	7.7	17.2					
21-Mar	4	4	4	3	A	6	6	5	4	6	6	5	5	5	5	8	4	5	7	7	7	7	9	11	5.7	10.6					
22-Mar	17	12	15	32	A	20	20	12	16	14	8	5	9	6	4	8	2	3	3	5	6	5	3	6	10.1	32.1					
23-Mar	2	3	2	6	A	7	27	21	14	5	5	3	2	1	1	2	3	4	4	9	8	4	3	3	6.0	26.7					
24-Mar	6	6	5	5	A	19	16	16	25	22	12	9	7	6	5	4	4	3	8	14	13	15	9	11	10.5	25.2					
25-Mar	4	27	18	15	A	21	14	8	25	7	5	4	4	3	2	2	3	4	3	5	8	2	3	3	8.4	26.8					
26-Mar	2	3	4	1	A	5	5	10	6	3	2	2	3	3	2	1	2	5	6	3	4	3	2	2	3.4	10.1					
27-Mar	2	2	6	9	A	13	4	28	19	9	5	3	3	3	3	8	6	7	10	11	17	23	11	8	9.5	28.3					
28-Mar	7	6	6	6	A	8	5	6	13	6	4	3	3	3	2	2	2	4	5	3	8	7	6	6	5.4	13.1					
29-Mar	5	4	2	3	A	8	5	13	5	3	3	4	4	4	2	1	2	1	3	2	4	3	2	3	3.8	13.0					
30-Mar	2	1	2	4	A	6	2	3	7	4	4	2	2	2	2	2	3	2	9	7	4	5	2	2	3.4	9.1					
31-Mar	3	3	4	3	A	5	3	4	8	8	5	3	2	1	2	1	1	2	2	3	2	1	2	1	2.9	7.9					
5.7 5.7 6.0 6.9 -- 11.8 11.5 12.7 12.4 8.7 7.8 5.3 4.9 4.6 3.9 3.8 3.9 4.3 6.0 7.7 6.7 5.9 4.7 6.0																									Diurnal Average						
17.5 26.8 18.3 32.1 -- 37.2 38.5 30.3 30.0 22.0 30.5 12.5 17.3 19.8 11.4 12.0 13.2 15.7 24.3 27.9 23.5 19.7 17.3 22.8																									Diurnal Maximum						
C - Calibration																									A - Automated Daily Zero Span						

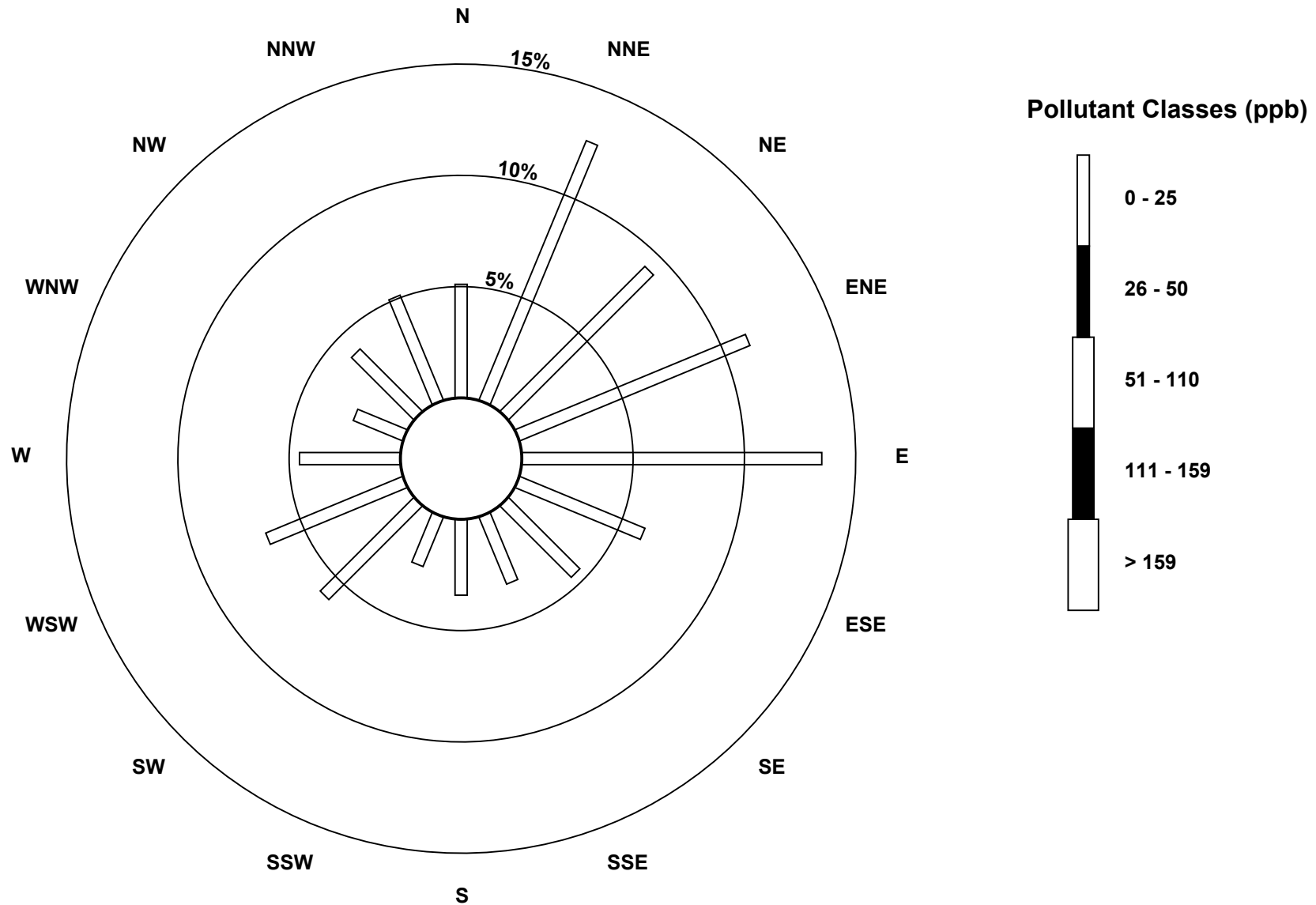
Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - March 2017



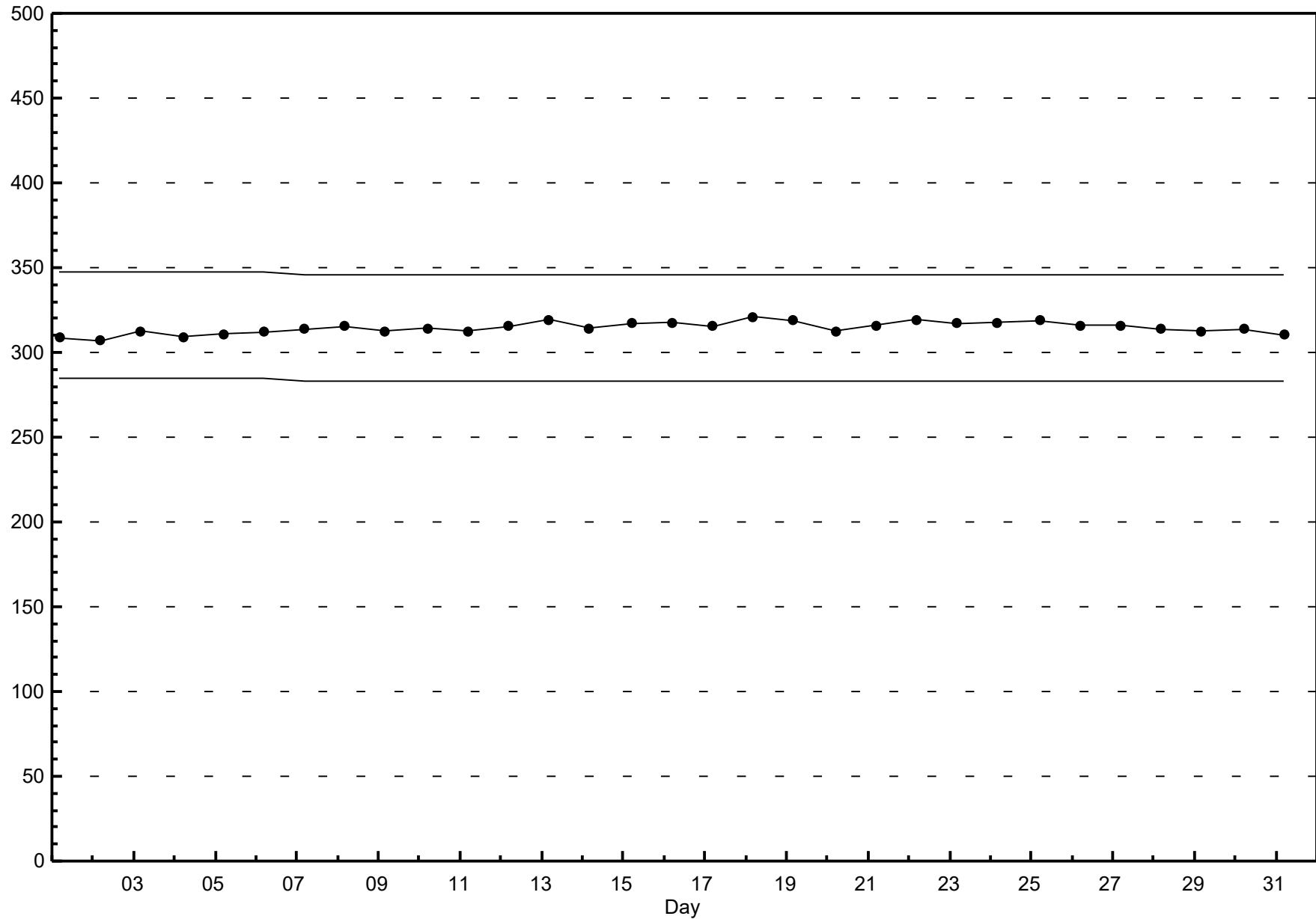
Pollutant Rose

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - March 2017



Span Responses

Nitrogen Dioxide (NO₂)
Beaverlodge - March 2017



Hourly Averages

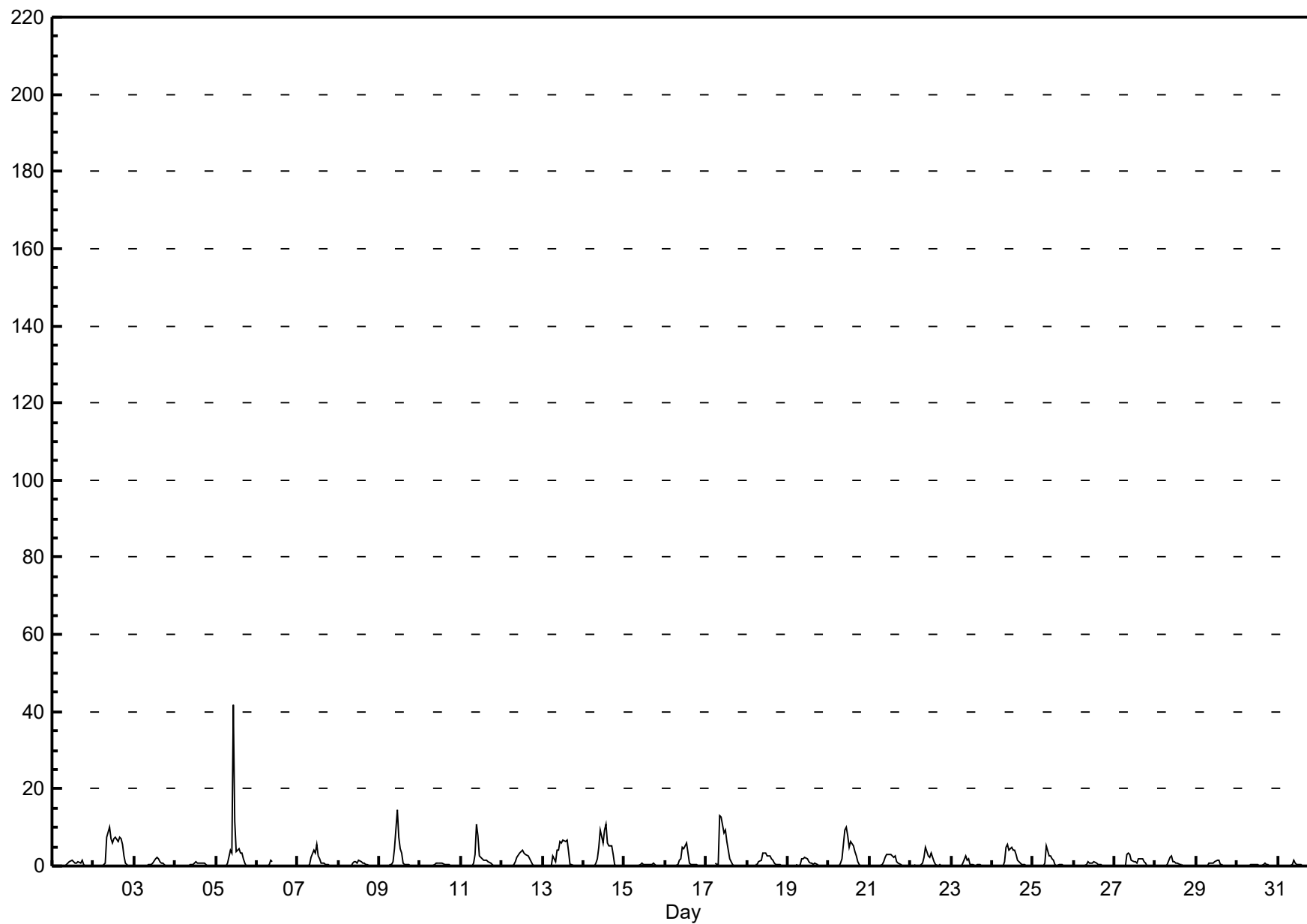
Nitrogen Oxide (NO) - ppb

Beaverlodge - March 2017

Maximum Value: 41.9 ppb on Mar 5 11:00																			Maximum Daily Average: 3.5 ppb on Mar 5										Hours in Service: 744	
Minimum Value: 0 ppb on Mar 1 23:00																			Minimum Daily Average: 0.2 ppb on Mar 30										Hours of Data: 707	
Maximum Diurnal Average: 4.9 ppb at hour 11																			Minimum Diurnal Average: 0.0 ppb at hour 23										Hours of Missing Data: 37	
Monthly Average: 1.09 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.2 Q ₃ = 0.9 P ₉₀ = 3.4 P ₉₉ = 10.6										Hours of Calibration: 37	
																													Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Mar	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	1	1	2	0	0	0	0	0	0	0.4	1.5				
2-Mar	0	0	0	0	A	0	0	1	8	10	7	6	7	8	6	7	7	6	3	1	0	0	0	0	3.3	10.2				
3-Mar	0	0	0	0	A	0	0	0	1	0	0	1	2	2	2	1	1	1	0	0	0	0	0	0	0.5	2.2				
4-Mar	0	0	0	0	A	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0.3	1.0				
5-Mar	0	0	0	0	A	0	0	1	4	3	42	12	4	4	4	3	2	1	0	0	0	0	0	0	3.5	41.9				
6-Mar	0	0	0	0	A	0	0	0	2	1	C	C	C	C	C	C	0	0	0	0	0	0	0	0	--	1.6				
7-Mar	0	0	0	0	A	0	0	0	2	4	3	5	3	2	1	1	0	0	0	0	0	0	0	0	1.0	5.5				
8-Mar	0	0	0	0	A	0	0	0	1	1	1	1	2	1	1	1	0	0	0	0	0	0	0	0	0.4	1.6				
9-Mar	0	0	0	0	A	0	0	0	1	4	14	7	4	3	1	0	0	0	0	0	0	0	0	0	1.6	14.4				
10-Mar	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.2	0.8				
11-Mar	0	0	0	0	A	0	0	1	3	11	8	3	2	2	1	1	1	1	0	0	0	0	0	0	1.5	10.9				
12-Mar	0	0	0	0	A	0	0	0	1	2	3	4	4	3	3	2	2	1	0	0	0	0	0	0	1.2	4.0				
13-Mar	0	0	0	0	A	0	2	1	4	4	6	6	7	6	7	4	0	0	0	0	0	0	0	0	2.1	6.6				
14-Mar	0	0	0	0	A	0	0	1	2	5	9	6	9	11	6	5	5	3	0	0	0	0	0	0	2.7	10.7				
15-Mar	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0.2	0.7				
16-Mar	0	0	0	0	A	0	0	0	1	2	5	4	6	3	1	0	0	0	0	0	0	0	0	0	1.1	6.0				
17-Mar	0	0	0	0	A	1	0	1	13	13	9	9	6	4	2	0	0	0	0	0	0	0	0	0	2.5	13.2				
18-Mar	0	0	0	0	A	0	0	1	2	3	3	3	3	3	2	1	1	0	0	0	0	0	0	0	1.0	3.5				
19-Mar	0	0	0	0	A	0	0	0	2	2	2	2	1	1	1	1	1	0	0	0	0	0	0	0	0.6	2.2				
20-Mar	0	0	0	0	A	0	0	1	2	9	10	8	5	6	5	4	3	1	0	0	0	0	0	0	2.4	10.0				
21-Mar	0	0	0	0	A	0	0	0	1	2	3	3	3	3	2	3	1	1	0	0	0	0	0	0	1.0	3.2				
22-Mar	0	0	0	0	A	0	0	1	2	5	3	2	3	2	1	0	0	0	0	0	0	0	0	0	0.9	4.9				
23-Mar	0	0	0	0	A	0	0	1	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.4				
24-Mar	0	0	0	0	A	0	0	1	5	6	4	5	4	4	3	1	1	0	1	0	0	0	0	0	1.6	5.7				
25-Mar	0	0	0	0	A	0	0	1	5	3	3	2	2	1	0	0	0	0	0	0	0	0	0	0	0.7	5.2				
26-Mar	0	0	0	0	A	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.3	1.1				
27-Mar	0	0	0	0	A	0	0	3	3	3	1	1	1	1	2	2	2	1	1	0	0	0	0	0	0.9	3.4				
28-Mar	0	0	0	0	A	0	0	0	2	3	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.5	2.7				
29-Mar	0	0	0	0	A	0	0	1	1	1	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0.4	1.6				
30-Mar	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0.2	0.6				
31-Mar	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	1.5				
0.0 0.0 0.0 0.0 -- 0.1 0.2 0.5 2.3 3.3 4.9 3.2 2.8 2.5 1.8 1.4 1.0 0.7 0.3 0.1 0.0 0.0 0.0 0.0																									Diurnal Average					
0.1 0.1 0.1 0.2 -- 0.7 2.4 3.0 13.2 12.5 41.9 11.6 9.2 10.7 6.6 7.4 7.0 5.8 2.8 0.8 0.2 0.1 0.1 0.1 0.1																									Diurnal Maximum					
C - Calibration					A - Automated Daily Zero Span																									

Hourly Averages

Nitrogen Oxide (NO) - ppb
Beaverlodge - March 2017



Hourly Maximums

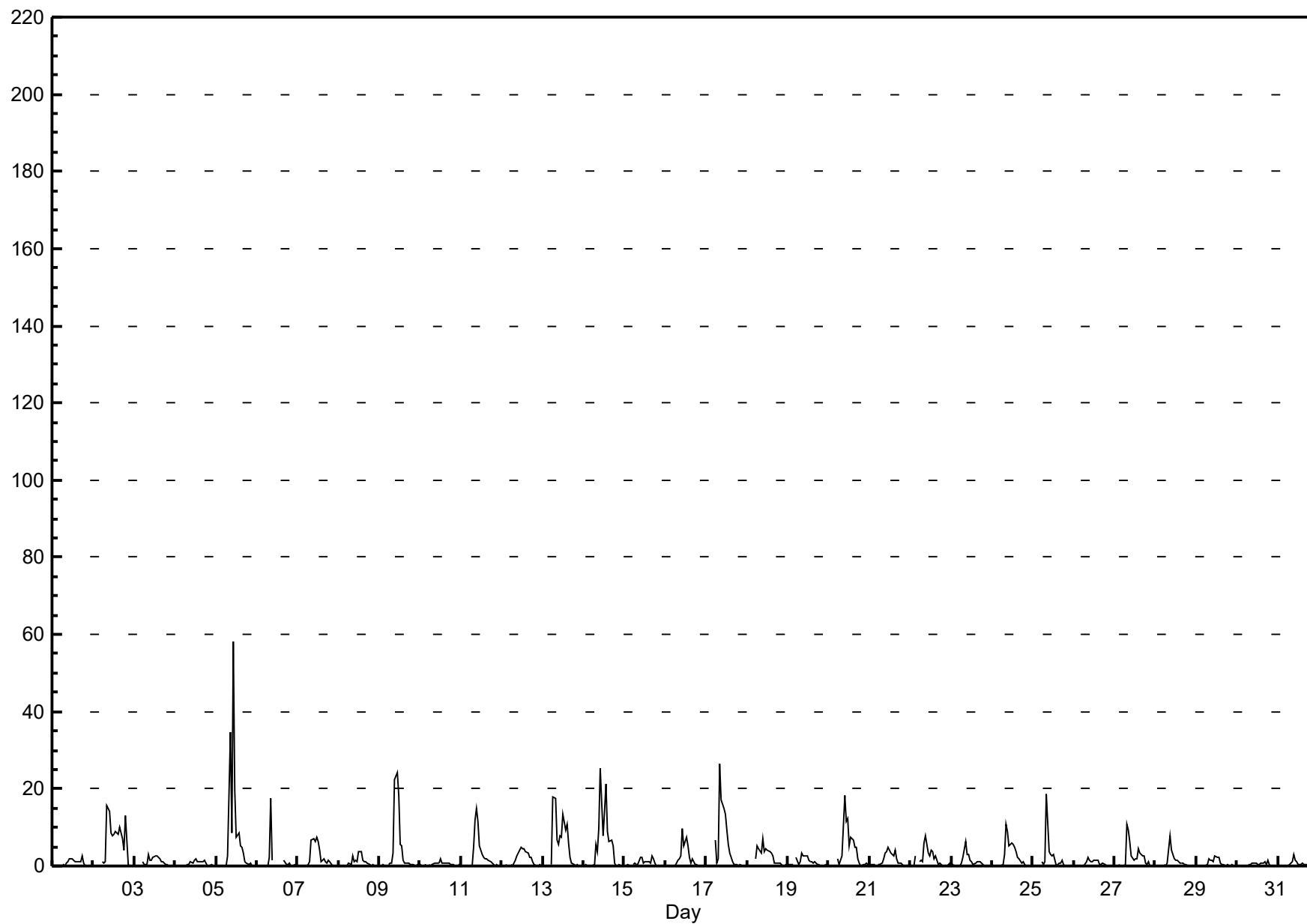
Nitrogen Oxide (NO) - ppb

Beaverlodge - March 2017

Maximum Value: 58.2 ppb on Mar 5 11:00																				Maximum Daily Average: 6.8 ppb on Mar 5										Hours in Service: 744	
Minimum Value: 0 ppb on Mar 6 00:00																				Minimum Daily Average: 0.4 ppb on Mar 30										Hours of Data: 707	
Maximum Diurnal Average: 7.5 ppb at hour 11																				Minimum Diurnal Average: 0.2 ppb at hour 1										Hours of Missing Data: 37	
Monthly Average: 2.10 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.6 Q ₃ = 2.0 P ₉₀ = 5.8 P ₉₉ = 20.5										Hours of Calibration: 37	
																				Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Mar	0	0	0	0	A	0	0	0	1	1	2	2	1	1	1	1	1	3	1	0	0	0	0	0	0.7	2.7					
2-Mar	0	0	0	0	A	1	1	1	16	14	8	8	8	9	8	10	8	7	4	13	0	0	0	0	5.1	15.5					
3-Mar	0	0	0	0	A	1	0	0	3	1	2	2	3	3	2	2	1	1	0	0	0	0	0	0	1.0	3.1					
4-Mar	0	0	0	0	A	0	0	0	0	1	1	2	2	1	1	1	1	1	1	0	0	0	0	0	0.6	1.9					
5-Mar	0	0	0	0	A	0	0	3	35	9	58	20	8	8	5	5	3	1	1	0	1	0	0	0	6.8	58.2					
6-Mar	0	0	0	0	A	0	0	2	17	2	C	C	C	C	C	C	2	0	1	1	0	0	0	0	--	17.4					
7-Mar	0	0	0	0	A	0	0	1	7	7	6	8	6	4	1	2	1	1	1	1	0	0	0	0	2.1	7.6					
8-Mar	0	0	0	0	A	0	1	0	2	1	1	1	4	4	1	1	1	1	0	0	0	0	0	0	0.9	3.6					
9-Mar	0	0	0	0	A	0	1	1	4	22	24	18	6	5	2	1	1	1	0	0	1	0	0	0	3.8	24.1					
10-Mar	0	0	0	1	A	0	0	0	1	1	1	1	2	1	1	1	1	1	0	0	0	0	0	0	0.5	1.8					
11-Mar	0	0	0	0	A	0	0	5	12	15	12	5	3	2	2	2	1	1	1	0	0	1	0	0	2.7	14.8					
12-Mar	0	0	0	0	A	0	0	1	2	3	4	5	4	4	4	3	2	2	1	0	0	0	0	0	1.6	4.7					
13-Mar	0	0	0	0	A	0	18	18	7	6	8	7	13	9	11	6	2	1	0	0	0	0	0	0	4.7	18.0					
14-Mar	0	0	0	0	A	0	0	5	4	10	25	8	14	21	9	6	7	5	1	0	0	0	0	0	5.1	25.4					
15-Mar	0	0	0	0	A	0	1	0	0	2	2	1	1	1	1	1	3	2	1	0	0	0	0	0	0.8	2.7					
16-Mar	0	0	0	0	A	0	0	1	2	3	10	5	7	5	2	1	2	1	1	0	0	0	0	0	1.8	9.9					
17-Mar	0	0	0	0	A	7	1	2	26	17	15	14	9	6	4	1	0	0	0	0	0	0	0	0	4.5	26.4					
18-Mar	0	0	0	0	A	2	5	5	3	7	4	4	4	4	3	2	1	1	1	1	0	0	0	0	2.1	7.0					
19-Mar	0	0	0	0	A	2	0	1	3	3	3	2	2	1	1	1	1	1	0	0	0	0	0	0	1.0	3.4					
20-Mar	0	0	0	0	A	2	0	1	2	18	11	12	5	8	7	5	5	2	1	0	0	0	1	0	3.6	18.2					
21-Mar	0	0	1	0	A	0	0	1	2	4	4	5	4	3	3	4	2	1	1	0	0	0	0	0	1.5	4.7					
22-Mar	0	0	0	3	A	1	2	1	6	8	3	3	4	4	2	3	0	1	0	0	0	0	0	1	1.8	7.9					
23-Mar	0	0	0	0	A	0	1	2	6	3	3	1	1	1	1	1	1	1	1	0	0	0	0	0	1.1	6.5					
24-Mar	0	0	0	0	A	0	0	3	11	9	5	6	6	5	4	2	2	1	1	0	0	0	0	0	2.4	10.7					
25-Mar	0	0	0	0	A	1	0	1	19	4	3	3	3	1	0	1	1	2	1	0	0	0	0	0	1.7	18.5					
26-Mar	0	0	0	0	A	0	0	1	2	2	1	1	2	2	1	1	1	1	1	0	0	0	0	0	0.7	2.1					
27-Mar	0	0	0	0	A	0	0	11	9	6	2	1	2	2	4	3	3	3	1	0	1	0	0	0	2.2	10.7					
28-Mar	0	0	0	0	A	0	0	1	8	4	3	2	1	1	1	1	1	0	0	0	0	0	0	0	1.1	7.8					
29-Mar	0	0	0	0	A	0	0	2	1	1	1	3	2	2	1	0	0	0	0	0	0	0	0	0	0.7	2.6					
30-Mar	0	0	0	0	A	0	0	0	1	1	1	1	1	0	1	1	1	1	1	0	0	0	0	0	0.4	1.4					
31-Mar	0	0	0	0	A	0	0	0	1	3	1	1	1	0	1	0	0	1	0	0	0	0	0	0	0.5	3.0					
0.2 0.2 0.2 0.2 -- 0.7 1.1 2.3 6.8 6.0 7.5 5.0 4.3 3.9 2.8 2.3 1.8 1.4 0.7 0.7 0.2 0.2 0.2 0.2																									Diurnal Average						
0.3 0.3 0.5 2.6 -- 6.8 18.0 17.6 34.7 22.3 58.2 19.8 14.1 21.2 10.7 10.0 8.5 7.2 4.2 13.0 1.1 0.5 0.6 0.6																									Diurnal Maximum						
C - Calibration					A - Automated Daily Zero Span																										

Hourly Maximums

Nitrogen Oxide (NO) - ppb
Beaverlodge - March 2017



Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

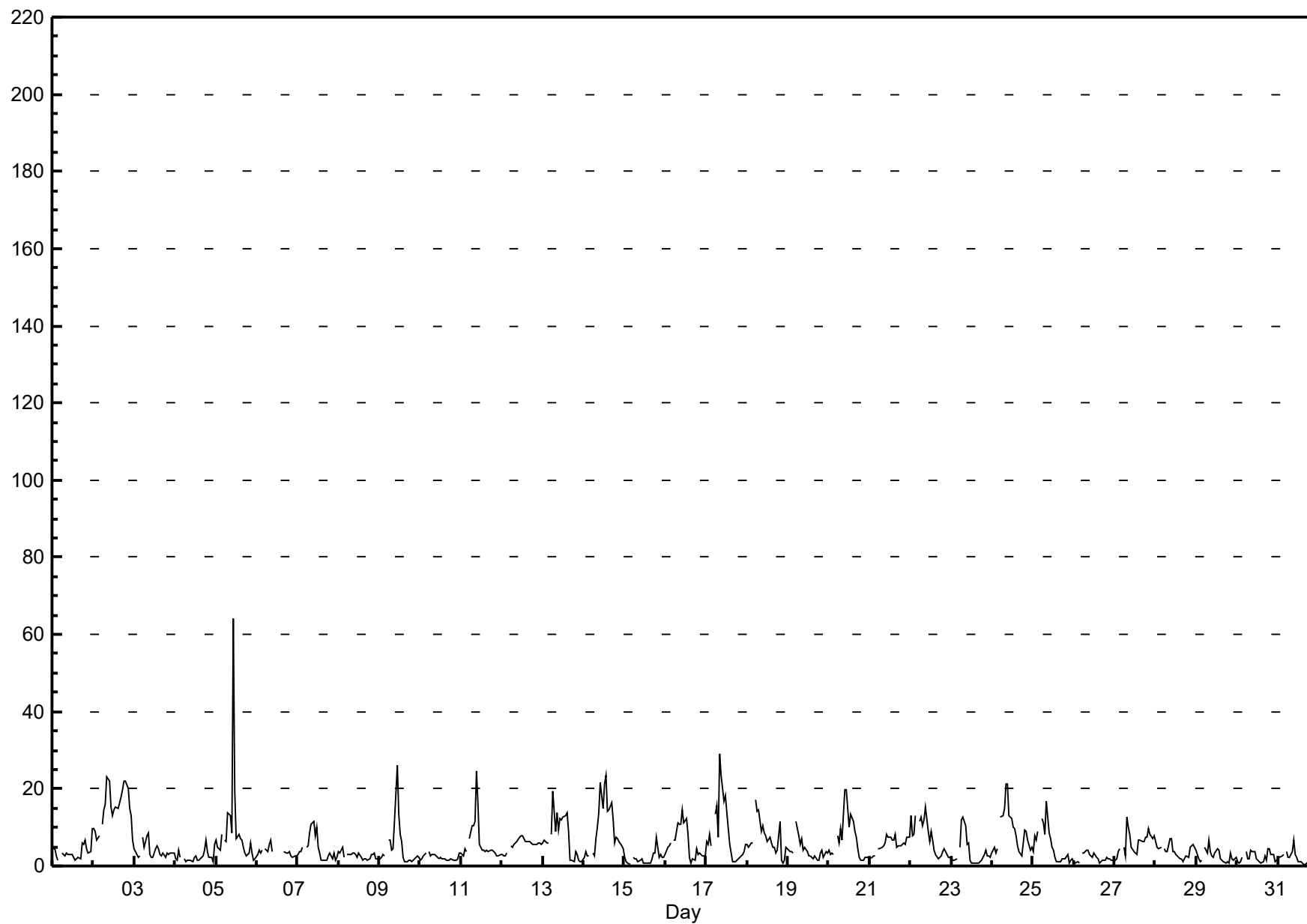
Beaverlodge - March 2017

Maximum Value: 64.1 ppb on Mar 5 11:00																				Maximum Daily Average: 15.0 ppb on Mar 2										Hours in Service: 744	
Minimum Value: 0 ppb on Mar 15 04:00																				Minimum Daily Average: 1.8 ppb on Mar 31										Hours of Data: 707	
Maximum Diurnal Average: 10.4 ppb at hour 11																				Minimum Diurnal Average: 3.2 ppb at hour 23										Hours of Missing Data: 37	
Monthly Average: 5.34 ppb																				Percentiles: P ₁ = 0.6 P ₁₀ = 1.3 Q ₁ = 2.1 Median = 3.6 Q ₃ = 6.7 P ₉₀ = 12.0 P ₉₉ = 22.9										Hours of Calibration: 37	
																				Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Mar	5	5	3	2	A	3	3	3	3	3	3	3	2	2	2	2	2	6	6	7	5	3	4	10	3.7	9.5					
2-Mar	10	9	7	8	A	11	14	16	23	22	15	13	15	15	17	18	20	22	22	20	15	13	7	7	15.0	23.1					
3-Mar	5	3	2	3	A	7	5	8	9	3	2	2	5	5	5	3	3	2	3	3	4	3	3	3	4.0	8.7					
4-Mar	2	1	4	2	A	2	1	1	2	1	1	2	3	2	2	2	3	4	7	4	2	2	1	6	2.5	6.7					
5-Mar	7	5	4	8	A	7	6	14	13	9	64	19	7	8	7	7	5	3	3	3	6	4	1	2	9.2	64.1					
6-Mar	3	4	3	4	A	5	4	6	7	4	C	C	C	C	C	C	4	3	3	4	3	2	3	3	--	6.9					
7-Mar	3	4	4	5	A	5	5	8	11	12	8	10	5	3	2	2	1	2	3	3	2	3	1	2	4.5	11.5					
8-Mar	4	4	5	2	A	3	3	3	4	3	3	2	3	2	2	2	2	1	2	3	3	3	2	2	2.7	4.7					
9-Mar	2	2	3	3	A	7	7	4	4	11	26	13	8	6	2	1	1	1	1	1	1	2	3	2	5.0	26.1					
10-Mar	2	2	2	3	A	4	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2.2	3.6					
11-Mar	3	3	5	4	A	7	10	10	12	25	16	6	4	4	4	4	4	4	4	4	3	3	3	3	6.3	24.6					
12-Mar	3	3	3	4	A	5	5	6	6	6	7	8	8	7	6	6	6	6	5	6	6	6	6	6	5.6	7.7					
13-Mar	6	7	6	6	A	8	19	9	14	9	12	12	13	13	14	9	1	1	1	4	3	2	1	1	7.4	19.3					
14-Mar	2	4	3	2	A	3	3	7	10	14	22	15	21	23	14	14	16	12	6	7	7	6	5	5	9.7	23.5					
15-Mar	2	1	1	0	A	2	2	2	1	1	2	1	1	1	1	1	2	3	3	7	2	3	2	2	2.0	7.4					
16-Mar	3	5	5	6	A	7	7	11	11	11	15	11	12	8	2	1	2	1	5	3	3	3	3	3	6.0	14.5					
17-Mar	6	6	8	5	A	13	16	8	29	23	17	18	14	10	6	1	1	1	2	2	2	3	4	6	8.7	29.2					
18-Mar	5	5	6	6	A	17	14	14	9	10	8	8	6	7	6	5	5	3	4	11	1	1	2	5	7.0	17.2					
19-Mar	4	4	4	3	A	11	8	6	7	4	5	4	3	2	2	2	3	2	2	3	4	2	4	3	4.0	11.5					
20-Mar	4	3	3	3	A	8	6	10	7	20	20	15	10	13	12	9	7	5	2	2	1	2	2	2	7.2	19.8					
21-Mar	2	2	3	3	A	5	4	5	5	6	8	8	7	7	7	8	5	5	5	6	6	6	7	7	5.5	8.0					
22-Mar	13	8	8	13	A	12	13	10	12	15	9	6	9	7	4	3	2	2	2	4	5	3	2	2	7.1	15.1					
23-Mar	2	2	1	2	A	5	12	13	10	6	6	2	1	1	1	1	1	1	1	3	4	3	3	2	3.5	12.6					
24-Mar	3	5	3	4	A	13	13	15	21	21	13	12	10	10	8	5	4	3	6	9	9	7	4	5	8.9	21.4					
25-Mar	4	8	7	9	A	12	11	8	17	9	7	5	4	2	1	1	1	2	2	2	3	1	1	2	5.2	16.7					
26-Mar	1	1	1	1	A	3	3	4	4	3	2	2	3	2	2	1	1	1	1	2	2	2	1	2	2.0	4.2					
27-Mar	1	2	4	5	A	5	3	13	10	8	5	4	3	3	7	7	6	6	8	8	10	8	7	8	6.0	12.7					
28-Mar	6	5	5	5	A	5	4	4	7	7	4	4	3	2	2	2	1	2	3	2	5	5	5	5	4.0	7.0					
29-Mar	4	2	1	1	A	5	3	7	4	2	2	4	4	4	2	1	1	1	1	1	3	2	1	2	2.6	6.8					
30-Mar	1	1	1	2	A	4	2	2	4	4	4	2	2	1	1	1	3	2	5	5	3	3	1	1	2.3	4.6					
31-Mar	2	2	3	3	A	4	2	2	4	7	3	2	1	1	1	1	1	1	1	1	1	0	1	0	1.8	6.8					
3.9 3.7 3.8 4.1 -- 6.7 6.8 7.4 9.1 9.1 10.4 7.2 6.3 5.9 4.6 4.0 3.6 3.6 3.8 4.6 4.2 3.6 3.2 3.6																									Diurnal Average						
12.9 8.8 8.3 12.9 -- 17.2 19.3 16.0 29.2 24.6 64.1 19.4 21.3 23.5 14.7 16.6 17.8 19.9 22.0 22.0 19.9 15.1 13.1 9.5																									Diurnal Maximum						
C - Calibration A - Automated Daily Zero Span																															

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

Beaverlodge - March 2017



Hourly Maximums

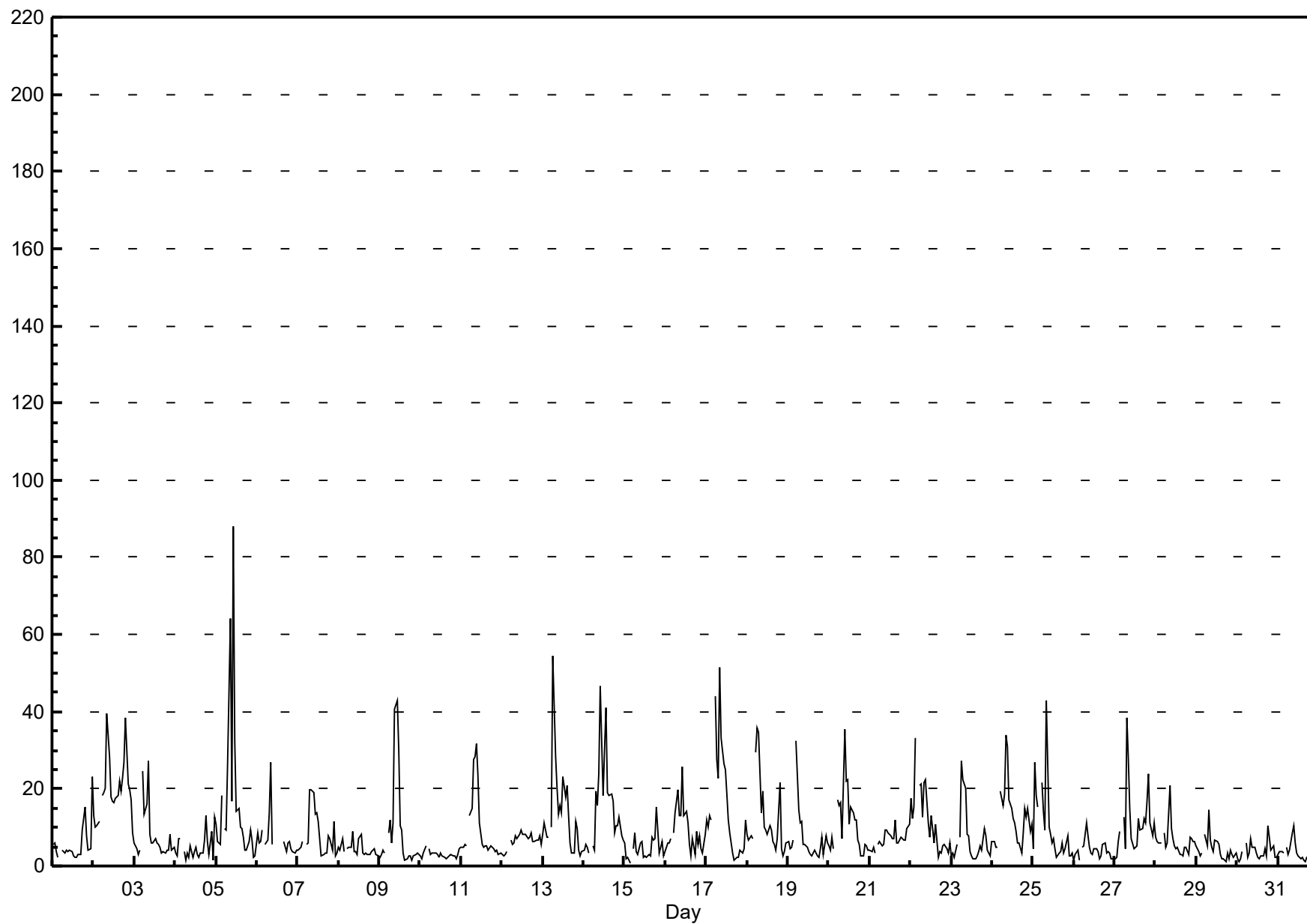
Oxides of Nitrogen (NO_x) - ppb

Beaverlodge - March 2017

Maximum Value: 88.1 ppb on Mar 5 11:00																								Hours in Service: 744		
Maximum Daily Average: 19.7 ppb on Mar 2																								Hours of Data: 707		
Minimum Value: 1 ppb on Mar 15 04:00																								Hours of Missing Data: 37		
Maximum Diurnal Average: 18.8 ppb at hour 9																								Hours of Calibration: 37		
Monthly Average: 8.80 ppb																								Percent Operational Time: 100.0		
Minimum Daily Average: 3.0 ppb on Mar 10																										
Minimum Diurnal Average: 4.7 ppb at hour 23																										
Percentiles: P ₁ = 1.4 P ₁₀ = 2.5 Q ₁ = 3.5 Median = 5.9 Q ₃ = 10.5 P ₉₀ = 19.3 P ₉₉ = 42.5																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Mar	6	6	4	2	A	4	4	4	4	4	4	4	3	2	2	3	3	9	12	15	8	4	5	23	5.8	23.1
2-Mar	13	10	10	12	A	18	19	20	39	28	18	17	16	17	18	22	19	23	27	38	21	20	17	8	19.7	39.4
3-Mar	6	4	3	4	A	24	14	16	27	8	6	6	7	6	6	5	3	4	3	4	4	8	4	5	7.7	27.2
4-Mar	3	3	7	7	A	4	1	3	2	5	2	4	5	3	2	3	3	7	13	6	3	9	2	13	4.8	13.0
5-Mar	11	7	5	18	A	10	9	26	64	17	88	32	14	15	10	10	7	4	4	6	9	7	2	3	16.5	88.1
6-Mar	8	6	6	9	A	5	7	14	27	6	C	C	C	C	C	C	6	4	6	6	4	4	3	4	--	26.7
7-Mar	4	4	5	6	A	6	6	20	20	19	13	14	12	7	3	3	3	3	8	7	4	12	2	4	8.0	19.7
8-Mar	5	4	7	4	A	4	5	5	9	4	4	3	7	8	3	3	3	3	4	4	4	4	3	3	4.4	8.9
9-Mar	2	3	4	3	A	9	12	6	11	41	43	30	10	9	4	2	2	2	3	2	2	3	3	3	9.1	42.9
10-Mar	3	2	3	5	A	5	3	3	3	3	3	2	3	2	2	2	2	3	3	3	2	2	3	4	3.0	5.2
11-Mar	5	5	6	5	A	13	15	28	28	32	23	11	6	5	5	5	4	5	5	5	4	4	3	3	9.8	31.8
12-Mar	3	3	3	4	A	7	6	6	8	7	8	9	8	8	8	7	8	9	6	6	7	7	8	6	6.6	9.4
13-Mar	8	11	8	8	A	10	54	28	20	14	16	14	23	18	21	13	6	3	3	11	10	4	3	4	13.5	54.4
14-Mar	4	5	5	3	A	5	4	19	16	24	47	18	30	41	19	18	19	17	9	11	10	13	8	7	15.3	46.7
15-Mar	6	2	2	1	A	4	8	4	3	6	6	2	3	2	3	2	8	7	7	15	3	5	6	3	4.7	15.3
16-Mar	4	6	6	7	A	9	14	20	13	13	26	13	14	11	6	3	7	3	9	6	8	4	4	8	9.2	25.9
17-Mar	12	10	13	12	A	44	28	23	52	33	26	25	18	12	9	3	1	2	2	2	4	3	4	12	15.3	51.5
18-Mar	8	7	8	7	A	29	36	35	14	19	10	9	8	10	9	6	6	4	7	22	5	3	4	6	11.8	35.6
19-Mar	6	5	5	7	A	33	14	11	11	6	5	5	4	3	2	3	4	2	2	4	7	3	8	6	6.9	32.5
20-Mar	5	4	7	4	A	17	16	17	7	35	22	22	11	15	14	12	12	7	6	3	3	5	5	4	11.0	35.5
21-Mar	4	4	5	4	A	6	6	5	6	9	9	9	8	7	7	12	6	6	8	7	7	7	10	11	7.0	12.0
22-Mar	18	12	15	33	A	21	21	13	22	22	11	7	13	10	6	11	2	4	3	5	6	5	3	6	11.7	33.1
23-Mar	3	3	2	6	A	7	27	22	20	8	8	4	2	2	2	3	4	5	4	10	8	4	3	3	7.0	27.4
24-Mar	6	6	5	5	A	20	16	19	34	31	17	15	12	11	9	6	6	3	9	15	12	15	9	11	12.7	34.1
25-Mar	4	27	18	15	A	21	14	9	43	10	8	6	7	4	2	3	4	6	3	5	8	3	3	3	9.9	43.0
26-Mar	2	3	4	2	A	5	5	11	8	5	3	3	5	5	4	2	2	6	6	3	4	3	2	2	4.1	11.1
27-Mar	2	2	6	9	A	13	4	38	28	15	7	5	5	5	12	9	10	12	11	17	24	11	8	11	11.5	38.5
28-Mar	7	6	6	6	A	9	5	6	21	10	7	5	5	5	3	3	3	5	5	3	8	7	6	6	6.4	20.9
29-Mar	5	4	2	3	A	8	5	15	7	5	4	7	6	6	3	2	2	1	3	2	4	3	2	3	4.4	14.7
30-Mar	2	1	2	4	A	6	2	3	7	5	5	3	2	2	3	3	4	3	11	7	4	5	2	2	3.8	10.5
31-Mar	3	4	4	3	A	5	3	4	9	10	6	3	2	2	2	1	1	2	2	3	2	1	2	1	3.3	10.5
5.7 5.8 6.1 7.0 -- 12.3 12.4 14.6 18.8 14.7 15.2 10.3 9.0 8.5 6.6 6.0 5.6 5.6 6.6 8.2 6.7 6.0 4.7 6.1																								Diurnal Average		
17.6 26.8 18.4 33.1 -- 43.8 54.4 38.5 64.3 40.5 88.1 32.3 30.1 41.1 20.8 21.8 19.4 22.6 26.8 38.3 23.8 19.7 17.3 23.1																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

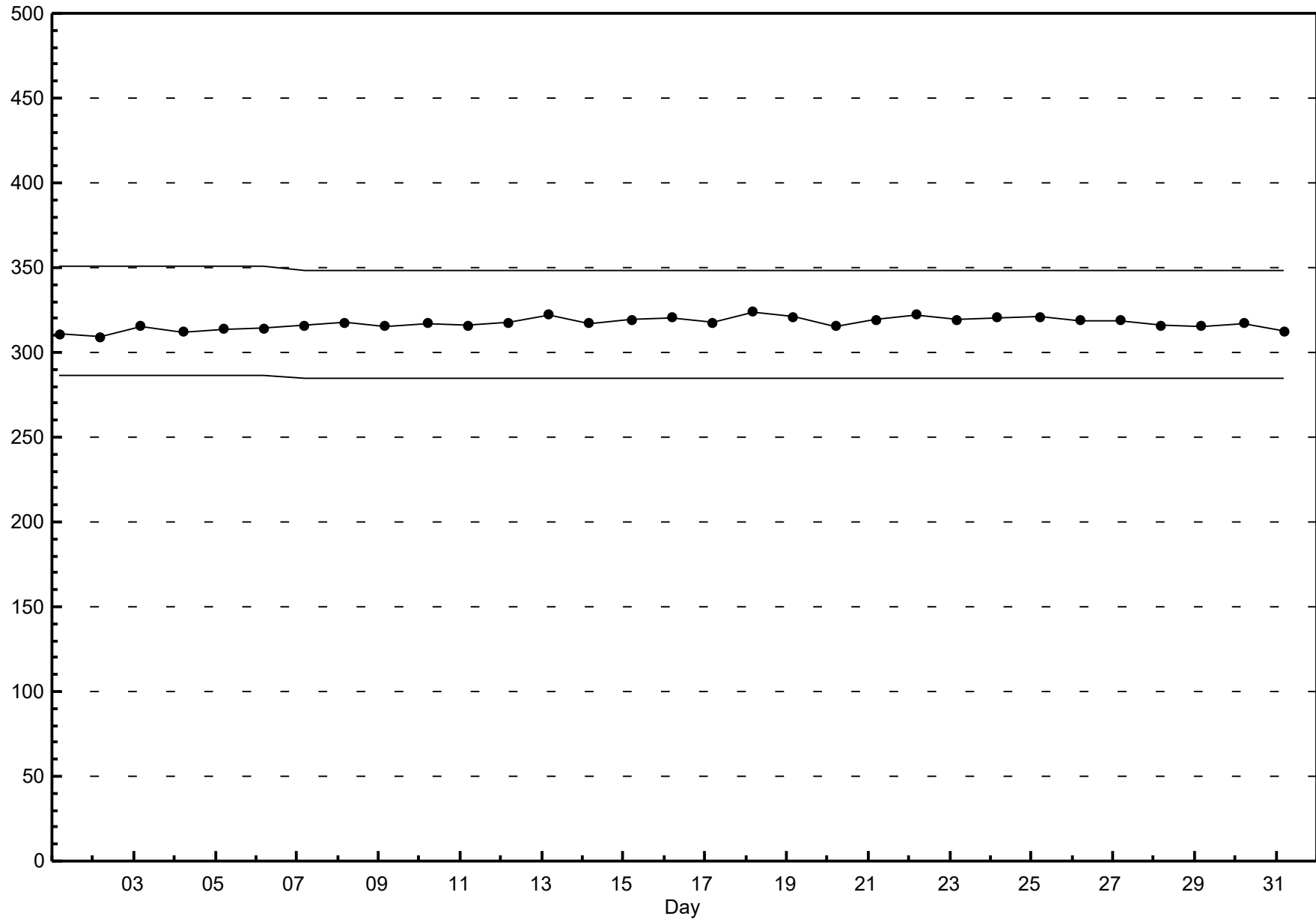
Hourly Maximums

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



Span Responses

Oxides of Nitrogen (NO_x)
Beaverlodge - March 2017



Hourly Averages

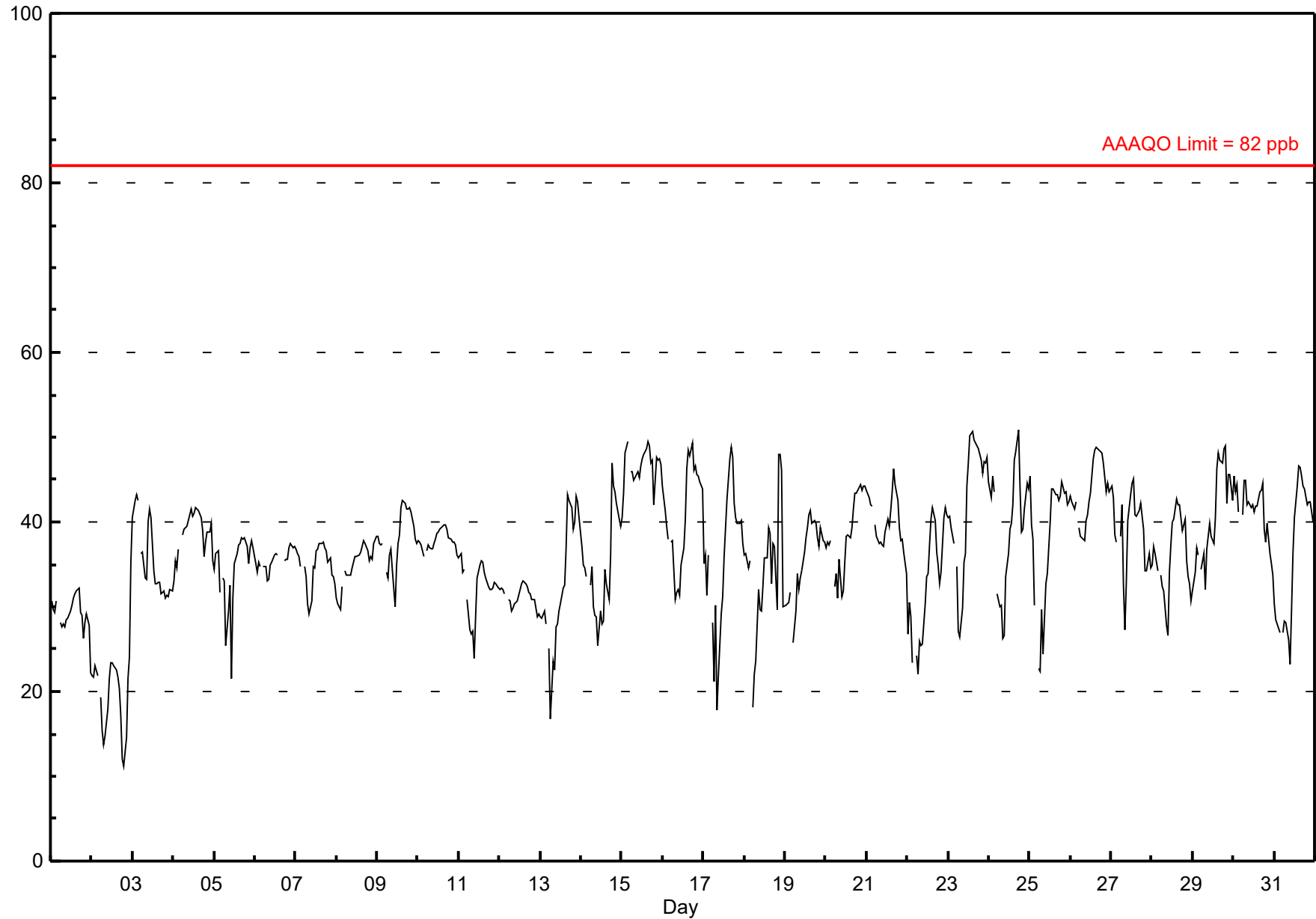
Ozone (O₃) - ppb

Beaverlodge - March 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 50.8 ppb on Mar 24 18:00 Maximum Daily Average: 46.5 ppb on Mar 15																								Hours in Service: 744 Hours of Data: 710 Hours of Missing Data: 34 Hours of Calibration: 34 Percent Operational Time: 100.0		
Minimum Value: 11 ppb on Mar 2 20:00 Minimum Daily Average: 20.1 ppb on Mar 2 Maximum Diurnal Average: 40.6 ppb at hour 16 Minimum Diurnal Average: 30.9 ppb at hour 9 Monthly Average: 36.45 ppb Percentiles: P ₁ = 16.8 P ₁₀ = 28.0 Q ₁ = 32.1 Median = 36.9 Q ₃ = 41.4 P ₉₀ = 45.2 P ₉₉ = 49.3																										
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-Mar	31	30	29	31	A	28	28	28	28	29	29	29	30	31	31	32	32	29	29	26	28	29	28	22	29.0	32.3
2-Mar	22	22	23	22	A	19	15	14	15	18	22	23	23	23	23	22	20	17	12	11	15	21	24	35	20.1	35.3
3-Mar	41	43	43	43	A	36	37	33	33	40	42	40	34	33	33	33	33	32	32	31	31	31	32	32	35.5	43.2
4-Mar	33	35	35	37	A	38	39	39	39	40	41	41	41	42	42	41	41	39	36	38	39	39	40	35	38.7	41.7
5-Mar	34	36	37	32	A	33	33	25	29	33	22	31	35	36	37	37	38	38	38	37	35	37	38	37	34.3	38.2
6-Mar	35	34	35	35	A	35	35	33	33	35	35	36	36	36	C	C	C	35	36	36	37	37	37	37	35.4	37.4
7-Mar	37	36	36	35	A	35	33	30	29	31	35	35	37	37	37	37	38	37	37	35	36	34	34	33	34.9	37.7
8-Mar	31	30	30	32	A	34	34	34	34	35	35	36	36	36	37	37	38	37	37	35	36	36	38	38	35.0	38.3
9-Mar	38	38	37	37	A	34	33	36	37	34	30	35	38	39	42	43	42	41	42	42	41	39	38	37	38.0	42.5
10-Mar	38	38	37	36	A	37	37	37	37	37	38	39	39	39	40	40	40	39	38	38	38	38	37	36	37.9	39.7
11-Mar	36	36	34	34	A	31	27	27	27	24	29	33	35	35	35	34	33	32	32	32	32	33	33	32	32.1	36.2
12-Mar	32	32	32	32	A	31	31	29	30	30	31	31	32	33	33	33	32	32	31	31	31	30	29	29	31.2	33.0
13-Mar	29	29	29	28	A	25	17	24	23	28	28	29	30	32	33	37	43	42	42	39	40	43	42	40	32.7	43.3
14-Mar	37	35	35	34	A	33	35	30	29	29	25	29	28	28	34	33	31	36	47	44	43	42	40	39	34.7	46.9
15-Mar	41	43	48	50	A	46	46	45	45	46	45	47	47	48	49	50	49	47	47	42	48	47	47	47	46.5	49.6
16-Mar	44	41	40	38	A	38	38	31	32	32	31	35	37	40	46	48	48	49	46	47	46	45	45	44	40.9	49.4
17-Mar	35	36	31	36	A	28	21	30	18	22	29	31	36	39	43	47	49	48	42	41	40	40	40	37	35.7	48.8
18-Mar	36	36	35	35	A	18	22	24	32	30	29	32	36	36	39	39	33	37	37	30	48	48	46	30	34.3	48.1
19-Mar	30	30	30	32	A	26	30	34	32	33	34	36	38	39	41	41	40	40	40	38	37	39	38	38	35.5	41.3
20-Mar	37	38	37	38	A	32	34	31	36	31	32	35	38	38	38	39	41	43	43	44	44	44	44	44	38.4	44.4
21-Mar	44	43	42	42	A	40	38	37	38	37	37	39	40	39	41	44	46	44	43	39	38	38	36	34	40.0	46.3
22-Mar	27	30	29	23	A	24	22	26	25	26	30	34	34	37	40	42	40	36	35	33	34	41	42	41	32.6	41.7
23-Mar	41	41	39	38	A	35	27	26	30	35	36	44	47	50	51	50	49	49	49	47	46	47	47	48	42.2	50.7
24-Mar	45	43	45	44	A	31	30	30	26	27	34	36	39	40	42	47	48	51	44	39	39	41	45	44	39.6	50.8
25-Mar	45	40	38	30	A	23	22	30	24	33	34	37	40	44	44	43	43	43	43	45	43	44	42	42	37.9	45.4
26-Mar	43	42	41	42	A	39	38	38	38	40	41	42	43	48	49	49	49	49	48	47	45	44	45	44	43.6	48.8
27-Mar	44	43	39	38	A	38	42	32	27	33	40	43	45	45	41	41	41	42	41	39	34	34	36	35	38.9	45.1
28-Mar	35	37	36	34	A	34	32	32	28	27	34	37	40	40	43	42	42	41	39	40	35	34	33	31	35.9	42.8
29-Mar	32	34	37	36	A	34	36	32	37	38	40	38	37	41	46	48	47	47	49	49	42	46	46	43	40.7	48.9
30-Mar	45	44	44	41	A	41	45	45	42	42	42	42	41	42	42	44	44	45	39	38	40	36	35	34	41.4	45.5
31-Mar	30	29	28	27	A	27	28	28	26	23	30	36	41	44	47	47	45	44	44	42	42	42	41	40	36.2	46.7
36.4 36.3 35.9 35.1 -- 32.4 31.8 31.3 30.9 32.2 33.5 36.0 37.2 38.5 39.9 40.6 40.6 40.1 39.2 37.9 38.2 38.7 38.6 37.4																								Diurnal Average		
45.5 43.6 48.2 49.6 -- 45.9 45.9 45.0 45.3 46.0 45.3 46.6 47.5 50.2 50.7 49.7 49.3 50.8 48.6 48.9 48.1 48.0 47.5 47.7																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na																										

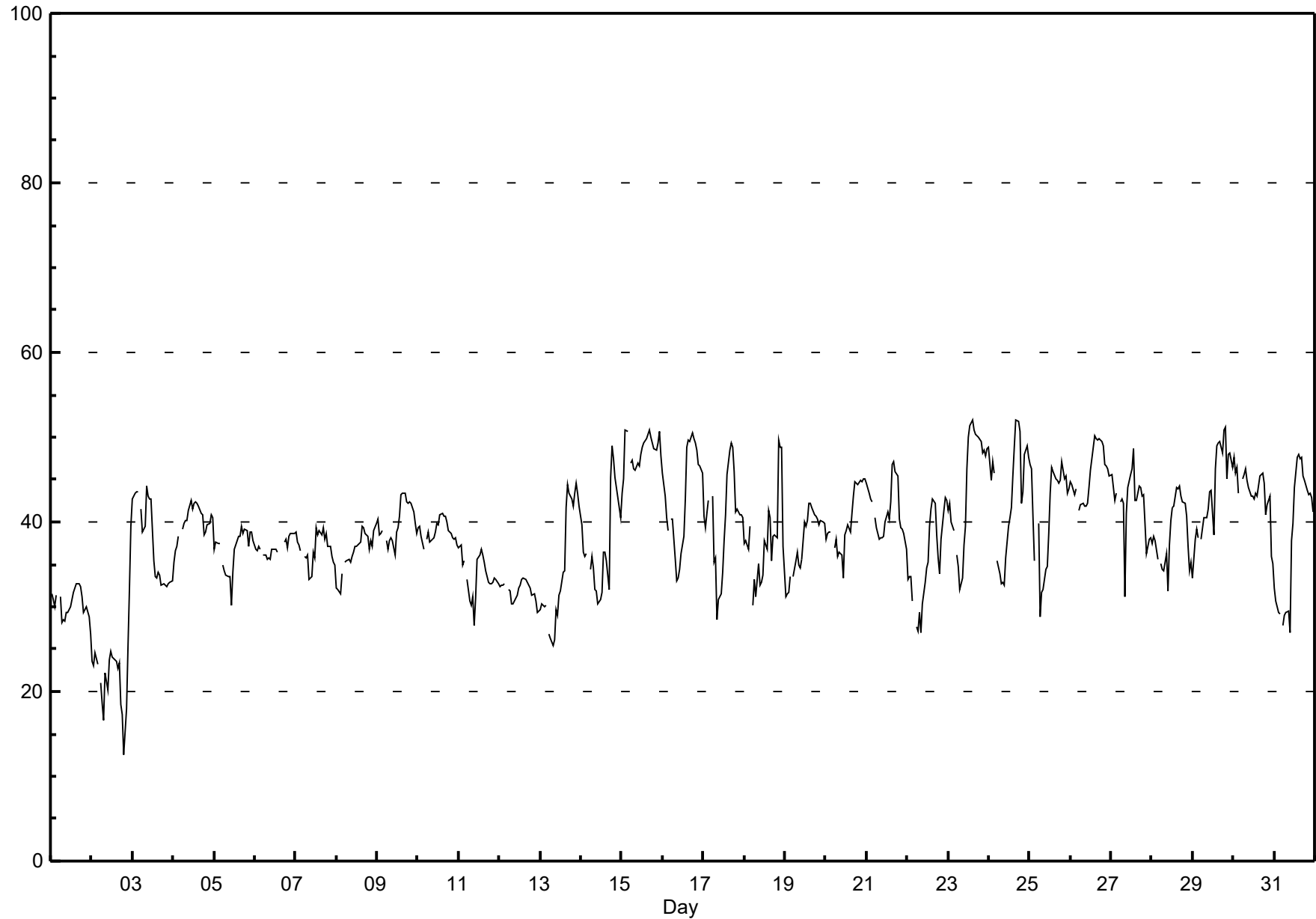
Hourly Averages

Ozone (O₃) - ppb
Beaverlodge - March 2017



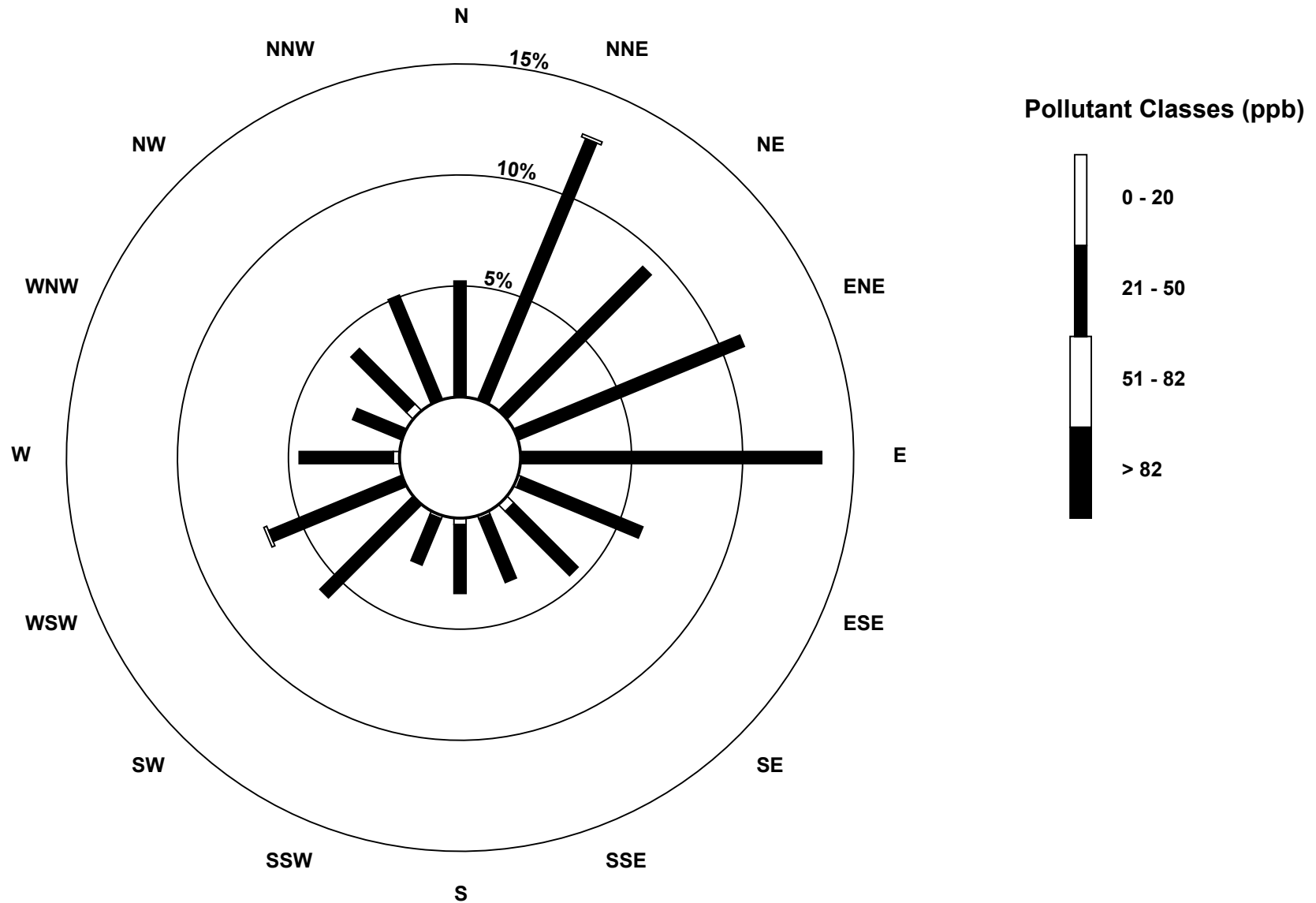
Hourly Maximums

Ozone (O₃) - ppb
Beaverlodge - March 2017



Pollutant Rose

Ozone (O₃) - ppb
Beaverlodge - March 2017



Eight Hour Running Averages

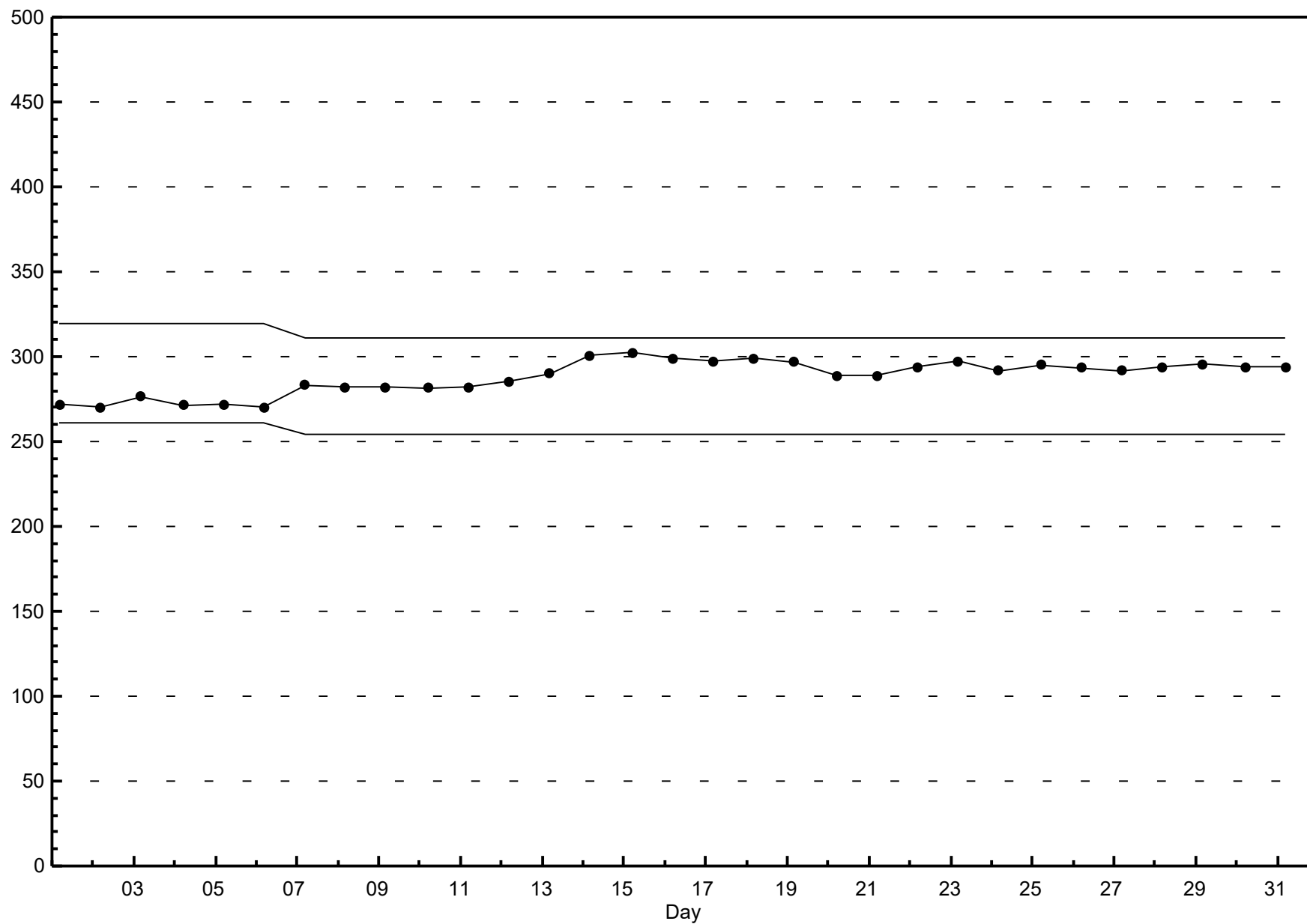
Ozone (O₃) - ppb

Beaverlodge - March 2017

Maximum Value: 49.0 ppb on Mar 23 20:00																								Hours in Service: 744	
Minimum Value: 17.6 ppb on Mar 2 22:00																								Hours of Data: 738	
Percentiles: P ₁ = 18.7 P ₁₀ = 28.8 Q ₁ = 32.4 Median = 36.6 Q ₃ = 40.4 P ₉₀ = 43.8 P ₉₉ = 47.6																								Hours of Missing Data: 6	
																								Hours of Calibration: 6	
																								Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																							Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
1-Mar	28	27	27	27	27	28	29	29	29	29	28	28	29	29	29	30	30	31	31	30	30	30	29	28	30.6
2-Mar	27	26	25	24	24	23	21	20	19	18	18	18	19	19	20	21	22	22	20	19	18	18	18	20	26.7
3-Mar	22	25	29	33	36	38	40	39	38	38	38	37	37	37	36	36	36	35	34	33	32	32	32	32	39.6
4-Mar	32	32	33	33	34	35	36	37	38	38	39	40	40	40	41	41	41	41	40	40	40	39	39	38	41.1
5-Mar	38	37	37	37	36	35	34	33	32	32	30	29	30	31	31	33	34	34	36	37	37	37	37	37	37.5
6-Mar	37	36	36	36	36	36	35	35	34	34	34	35	35	35	35	35	N	N	N	N	N	N	36	36	36.9
7-Mar	36	37	37	37	36	36	36	35	34	33	33	33	33	33	34	35	36	37	37	37	37	36	36	35	36.9
8-Mar	34	34	33	32	32	32	32	32	33	33	34	34	35	35	35	36	36	37	37	37	37	37	37	37	36.8
9-Mar	37	37	37	37	37	37	37	37	36	36	36	35	34	35	35	36	37	38	39	40	41	41	41	40	41.5
10-Mar	40	39	39	38	38	37	37	37	37	37	37	37	38	38	38	38	39	39	39	39	39	39	38	38	39.8
11-Mar	37	37	37	36	36	35	34	32	31	29	28	28	29	30	31	32	32	33	34	34	33	33	33	32	37.5
12-Mar	32	32	32	32	32	32	32	31	31	31	30	30	31	31	31	32	32	32	32	32	32	32	31	31	32.3
13-Mar	30	30	30	29	29	28	27	26	25	25	25	25	25	26	28	30	33	34	36	37	39	40	41	42	41.6
14-Mar	41	40	39	38	38	37	35	34	33	32	31	30	30	29	29	30	30	31	33	35	37	39	40	40	40.8
15-Mar	42	43	43	43	43	44	45	45	46	47	46	46	46	46	47	47	48	48	48	47	47	47	47	47	47.9
16-Mar	46	45	45	44	44	42	41	38	37	35	34	34	34	35	36	38	40	42	44	45	46	47	47	46	47.0
17-Mar	45	43	41	40	39	37	33	31	29	27	26	26	27	28	31	33	37	40	42	43	44	44	43	42	44.6
18-Mar	40	39	38	37	37	34	31	29	29	28	27	27	28	30	32	34	34	35	36	36	37	39	40	39	40.4
19-Mar	38	37	37	37	35	32	30	30	31	31	31	32	33	35	36	37	38	39	39	40	40	40	39	39	39.7
20-Mar	38	38	38	38	38	37	36	35	35	34	33	33	34	34	35	36	37	38	40	41	42	42	43	44	43.6
21-Mar	44	44	44	43	43	43	42	41	40	39	38	38	38	38	39	39	41	41	42	42	42	42	41	40	43.9
22-Mar	37	36	34	32	31	29	27	26	26	25	25	27	28	29	32	33	35	37	37	37	37	38	38	38	37.8
23-Mar	38	38	39	39	40	39	37	35	34	33	32	33	35	37	40	43	45	47	49	49	49	48	48	48	49.0
24-Mar	47	46	46	46	45	43	41	38	36	33	32	31	32	33	34	36	39	42	43	44	44	44	44	44	47.1
25-Mar	44	42	41	40	40	38	35	33	30	29	28	29	30	33	36	37	40	41	42	43	44	43	43	43	43.5
26-Mar	43	43	43	43	42	42	41	41	40	40	40	40	41	42	44	45	46	47	48	48	47	47	46	47.8	
27-Mar	46	45	44	43	42	41	41	39	37	36	36	37	38	39	38	39	41	42	42	42	41	39	39	38	45.6
28-Mar	37	36	36	35	35	35	35	34	33	32	31	32	33	34	35	36	38	40	40	41	40	39	38	37	40.9
29-Mar	36	35	34	34	34	34	34	35	35	36	36	37	37	37	39	41	42	43	44	46	46	47	47	46	46.7
30-Mar	46	45	45	44	44	43	43	44	43	43	43	43	42	43	42	42	42	43	42	42	42	41	40	39	45.8
31-Mar	37	35	34	32	31	30	29	28	28	27	27	28	30	32	34	37	39	42	43	44	44	44	44	43	44.4
47.1 46.4 46.0 45.5 45.5 43.9 44.7 45.5 46.2 46.5 46.1 45.7 45.9 46.2 46.5 47.1 47.6 47.7 48.6 49.0 48.8 48.4 47.9 47.7																									
Diurnal Maximums																									
N - Not Valid																									

Span Responses

Ozone (O₃)
Beaverlodge - March 2017

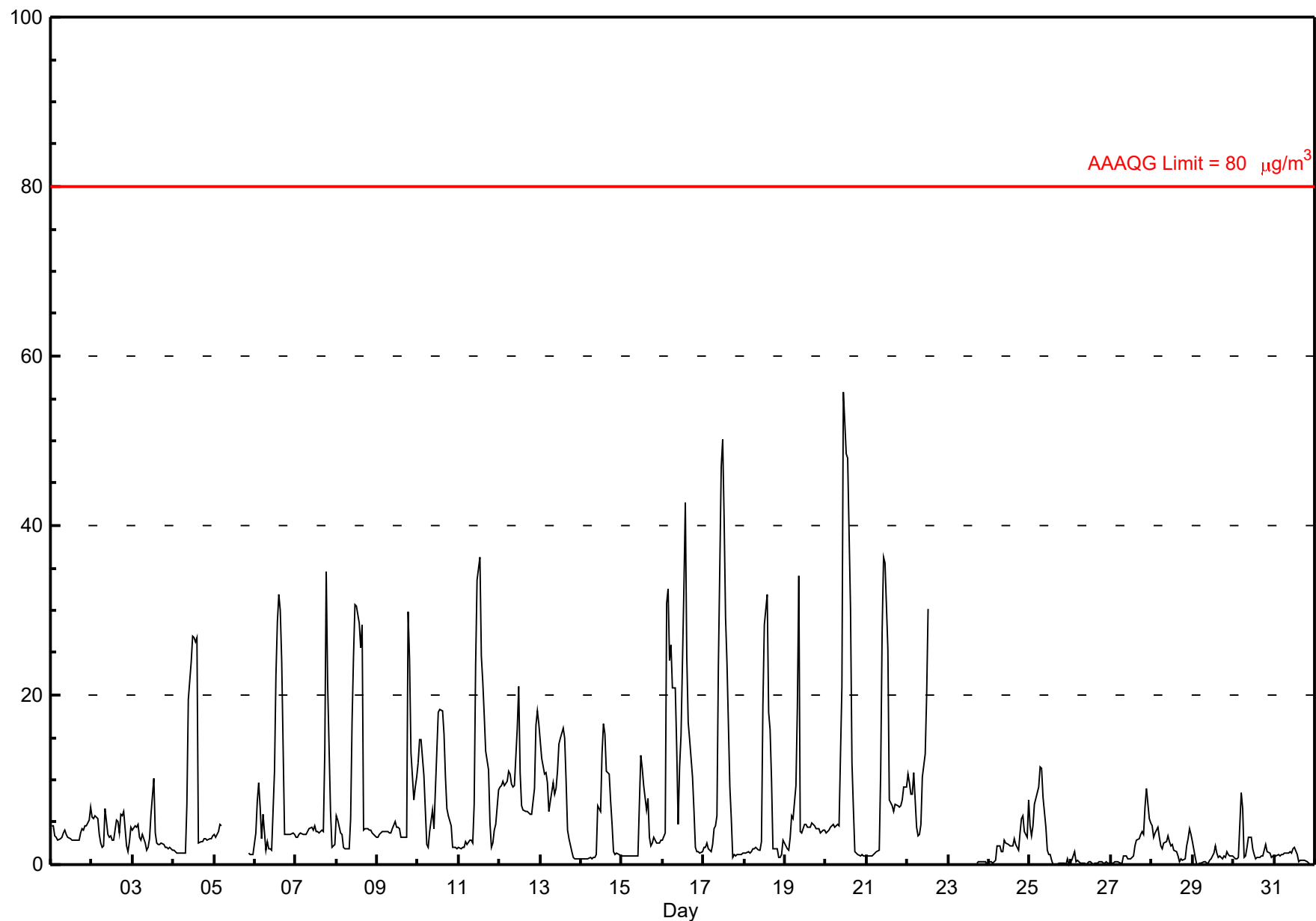


Hourly Averages

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

Beaverlodge - March 2017

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 55.8 µg/m³ on Mar 20 11:00 Maximum Daily Average: 15.1 µg/m³ on Mar 16																				Hours in Service: 744 Hours of Data: 701 Hours of Missing Data: 43 Hours of Calibration: 1 Percent Operational Time: 94.4						
Minimum Value: 0 µg/m³ on Mar 25 16:00 Maximum Diurnal Average: 14.8 µg/m³ at hour 13 Monthly Average: 6.13 µg/m³										Minimum Daily Average: 0.3 µg/m³ on Mar 26 Minimum Diurnal Average: 3.0 µg/m³ at hour 22 Percentiles: P ₁ = 0.0 P ₁₀ = 0.6 Q ₁ = 1.3 Median = 3.3 Q ₃ = 6.6 P ₉₀ = 16.4 P ₉₉ = 40.6																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Mar	5	5	3	3	3	3	3	4	4	4	3	3	3	3	3	3	4	4	4	5	5	5	7	3.8	6.7	
2-Mar	6	5	6	6	4	3	2	2	7	4	3	3	3	3	5	5	4	6	6	6	2	2	3	4	4.1	6.6
3-Mar	4	5	4	5	3	3	4	3	2	2	3	6	10	4	3	2	2	3	2	2	2	2	2	2	3.3	10.2
4-Mar	2	2	1	1	1	1	1	1	7	20	24	27	27	26	27	3	3	3	3	3	3	3	3	3	8.1	27.0
5-Mar	4	3	4	5	5	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1	1	1	1	--	4.8
6-Mar	4	7	10	7	3	6	2	3	2	2	2	11	22	29	32	30	24	4	4	4	4	4	4	4	9.1	31.9
7-Mar	3	3	4	4	4	4	4	4	4	4	4	5	4	4	4	4	4	13	35	21	6	2	2	2	6.1	34.6
8-Mar	6	5	4	4	2	2	2	2	5	17	25	31	31	29	26	28	4	4	4	4	4	4	3	10.3	30.6	
9-Mar	3	4	4	4	4	4	4	4	4	4	5	4	4	4	3	3	3	30	24	13	8	9	10	6.8	29.9	
10-Mar	12	15	15	11	7	2	2	4	6	4	9	13	18	18	18	16	10	7	6	5	2	2	2	2	8.5	18.3
11-Mar	2	2	2	2	3	2	3	3	3	7	23	34	36	25	22	18	13	11	5	2	3	4	5	9	9.9	36.3
12-Mar	9	9	10	9	10	11	11	10	9	9	16	21	11	7	6	6	6	6	6	9	17	18	17	10.4	21.1	
13-Mar	15	13	11	11	10	6	8	10	8	9	11	14	15	16	15	10	4	3	2	1	1	1	1	1	8.0	16.1
14-Mar	1	1	1	1	1	1	1	1	1	1	7	6	13	17	15	11	11	8	5	2	1	1	1	1	4.4	16.6
15-Mar	1	1	1	1	1	1	1	1	1	1	7	13	11	9	7	8	3	2	3	3	3	3	3	3	3.6	12.9
16-Mar	3	4	31	33	24	26	21	21	14	5	12	15	33	43	25	17	15	10	7	2	2	2	1	2	15.1	42.7
17-Mar	2	2	3	2	2	2	4	5	6	23	47	50	41	29	24	9	5	1	1	1	1	1	1	1	11.0	50.2
18-Mar	1	1	2	1	2	2	2	2	2	2	3	19	28	32	18	16	10	2	2	2	1	1	1	3	6.4	31.8
19-Mar	2	2	2	3	6	5	9	19	34	4	4	5	5	4	4	5	5	4	4	4	4	4	4	4	6.1	34.1
20-Mar	4	4	4	4	5	4	5	5	5	21	56	52	48	48	30	12	7	2	1	1	1	1	1	1	13.4	55.8
21-Mar	1	1	1	1	1	1	2	2	11	28	36	36	25	8	7	7	6	7	7	7	7	8	9	9	9.5	36.3
22-Mar	11	10	8	8	11	4	3	4	5	10	13	20	30	M	M	M	M	M	M	M	M	M	M	M	--	30.1
23-Mar	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	C	0	0	0	0	0	0	0	--	0.4
24-Mar	0	0	0	0	1	2	2	1	2	3	3	2	2	2	2	3	2	2	4	5	6	4	3	8	2.5	7.7
25-Mar	5	3	5	7	8	9	12	11	8	4	2	1	1	0	0	0	0	0	0	0	0	0	1	0	3.3	11.6
26-Mar	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.6
27-Mar	0	0	0	0	0	0	0	1	1	1	1	1	1	1	2	3	3	3	4	4	7	9	5	5	2.2	8.9
28-Mar	5	3	4	4	3	2	2	3	3	3	3	2	2	2	1	1	0	1	1	1	2	3	4	4	2.4	4.6
29-Mar	3	1	0	0	0	0	0	0	0	0	0	1	1	2	1	1	1	1	1	1	2	1	1	1	0.8	2.8
30-Mar	1	1	1	1	8	7	1	1	2	3	3	2	1	1	1	1	1	1	2	2	2	1	1	1	1.8	8.4
31-Mar	1	1	1	1	1	1	1	1	1	1	1	2	2	1	0	1	1	1	0	0	0	0	0	0	0.9	2.0
3.8 3.8 4.7 4.6 4.4 4.0 3.8 4.3 5.4 6.8 11.2 13.8 14.8 13.1 10.8 7.9 5.4 3.8 5.1 4.0 3.1 3.0 3.2 3.6 14.6 14.8 30.8 32.6 24.0 25.9 20.9 20.9 34.1 27.5 55.8 52.2 48.4 48.0 31.9 30.0 24.1 13.3 34.6 24.2 13.3 16.5 18.1 16.6																								Diurnal Average	Diurnal Maximum	
C - Calibration M - Maintenance N - Not Valid Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																										



Hourly Maximums

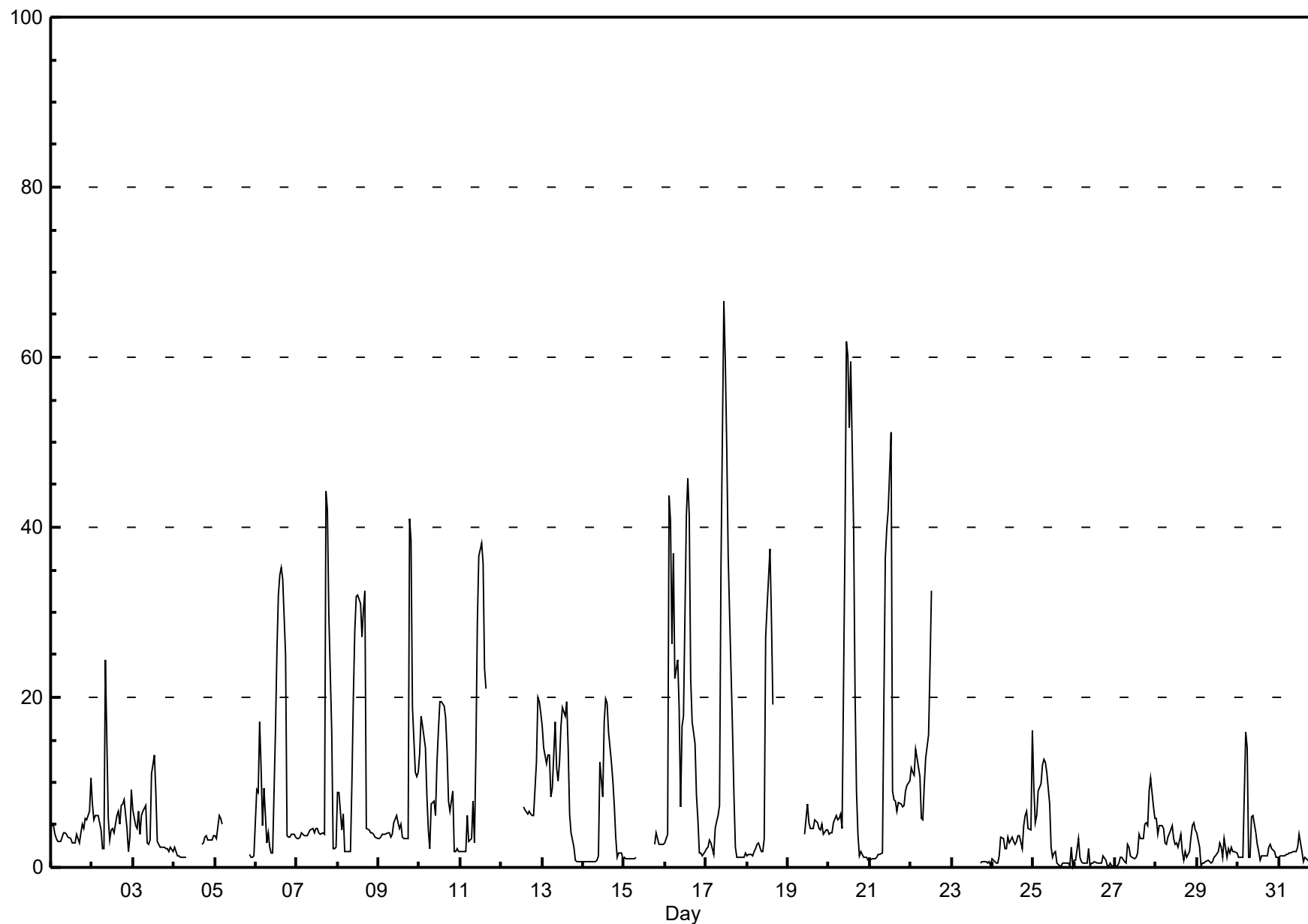
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Beaverlodge - March 2017

Maximum Value: 66.6 μg/m ³ on Mar 17 11:00																				Maximum Daily Average: 19.3 μg/m ³ on Mar 16					Hours in Service: 744				
Minimum Value: 0 μg/m ³ on Mar 24 00:00																				Minimum Daily Average: 0.7 μg/m ³ on Mar 26					Hours of Data: 644				
Maximum Diurnal Average: 17.7 μg/m ³ at hour 13																				Minimum Diurnal Average: 3.7 μg/m ³ at hour 22					Hours of Missing Data: 100				
Monthly Average: 7.56 μg/m ³																				Percentiles: P ₁ = 0.2 P ₁₀ = 0.7 Q ₁ = 1.6 Median = 3.7 Q ₃ = 7.8 P ₉₀ = 19.5 P ₉₉ = 44.3					Hours of Calibration: 1				
																									Percent Operational Time: 86.7				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
1-Mar	5	5	4	3	3	3	4	4	4	4	4	3	3	3	4	3	4	5	5	6	6	7	10	4.3	10.5				
2-Mar	8	6	6	6	5	4	2	2	24	6	3	4	5	4	6	7	5	7	8	8	5	2	4	9	6.1	24.4			
3-Mar	7	5	5	7	4	6	7	7	3	3	3	11	13	9	3	3	2	2	2	2	2	2	2	2	4.7	13.2			
4-Mar	2	2	1	1	1	1	1	1	N	N	N	N	N	N	N	N	3	3	4	4	3	3	3	4	--	3.7			
5-Mar	4	3	6	6	5	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1	1	1	1	--	6.1			
6-Mar	9	9	17	12	5	9	3	4	2	2	2	16	26	32	34	35	34	25	4	4	4	4	4	4	12.4	35.2			
7-Mar	3	3	4	4	4	4	4	4	4	5	4	5	5	4	4	4	4	44	42	30	16	2	2	2	8.6	44.3			
8-Mar	9	9	4	6	2	2	2	2	10	20	28	32	32	31	27	30	33	5	4	4	4	4	4	3	12.8	32.5			
9-Mar	3	4	4	4	4	4	4	4	4	5	6	5	5	5	4	3	3	3	41	38	19	11	11	11	8.6	41.1			
10-Mar	13	18	17	14	8	4	2	8	8	6	12	16	20	20	19	18	14	8	7	9	2	2	2	2	10.3	19.6			
11-Mar	2	2	2	2	6	3	3	8	3	14	29	37	38	36	23	21	N	N	N	N	N	N	N	N	--	38.2			
12-Mar	N	N	N	N	N	N	N	N	N	N	N	N	N	7	7	6	7	6	6	6	12	20	20	18	--	20.0			
13-Mar	17	14	12	13	13	8	9	17	12	10	12	17	19	18	20	14	6	4	2	1	1	1	1	1	10.1	19.5			
14-Mar	1	1	1	1	1	1	1	1	1	1	12	8	17	20	19	16	12	10	7	4	1	2	2	1	5.8	19.8			
15-Mar	1	1	1	1	1	1	1	1	N	N	N	N	N	N	N	N	N	N	3	4	3	3	3	3	--	4.1			
16-Mar	3	4	44	41	26	37	22	24	19	7	17	18	41	46	41	22	17	15	9	6	2	2	1	2	19.3	45.7			
17-Mar	2	2	3	3	1	5	5	6	7	35	67	59	49	37	30	16	8	2	1	1	1	1	1	2	14.5	66.6			
18-Mar	1	1	1	1	2	2	3	3	2	2	3	27	31	37	29	19	N	N	N	N	N	N	N	N	--	37.4			
19-Mar	N	N	N	N	N	N	N	N	N	N	4	8	5	5	5	5	6	5	5	4	5	4	4	4	--	7.5			
20-Mar	4	4	4	5	6	6	6	6	5	38	62	60	52	59	40	21	9	4	1	2	1	1	1	1	16.6	61.9			
21-Mar	1	1	1	1	1	1	1	2	19	36	40	42	51	9	8	8	7	8	8	7	7	9	10	10	12.0	51.1			
22-Mar	12	11	11	14	13	11	6	6	10	13	16	23	33	M	M	M	M	M	M	M	M	M	M	M	--	32.5			
23-Mar	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	C	0	1	1	1	0	1	0	--	0.7			
24-Mar	1	1	0	0	1	4	3	2	2	4	3	4	3	3	3	4	4	2	5	6	7	5	4	16	3.6	16.1			
25-Mar	9	5	6	9	10	12	13	12	11	8	2	1	2	2	0	0	0	0	0	0	0	0	2	0	4.5	12.7			
26-Mar	1	1	3	1	1	0	0	0	2	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0.7	3.4			
27-Mar	0	0	0	1	1	1	0	3	2	1	1	1	1	2	4	3	3	5	5	5	9	10	7	6	3.1	10.5			
28-Mar	6	4	5	5	5	3	3	4	4	5	3	3	3	2	4	2	1	2	1	2	4	5	5	4	3.5	5.8			
29-Mar	4	2	0	0	0	1	1	1	0	1	1	1	2	3	2	1	3	1	2	2	2	2	2	2	1.6	4.1			
30-Mar	1	1	1	1	16	14	1	1	6	6	4	3	2	1	1	1	1	1	2	3	2	2	1	1	3.2	15.9			
31-Mar	1	1	1	1	1	1	2	2	2	2	2	2	4	2	1	1	1	1	1	1	0	0	0	0	1.3	3.9			
4.7 4.3 5.9 5.9 5.3 5.5 4.0 5.0 6.7 9.3 13.1 15.7 17.7 15.2 13.0 10.2 7.5 6.6 6.5 5.8 4.3 3.7 3.8 4.3																								Diurnal Average					
16.6 17.8 43.7 40.6 26.2 36.9 22.2 24.5 24.4 37.9 66.6 60.2 51.6 59.5 41.4 35.2 34.0 44.3 42.1 38.4 18.8 20.0 19.6 18.1																								Diurnal Maximum					
C - Calibration M - Maintenance N - Not Valid																													

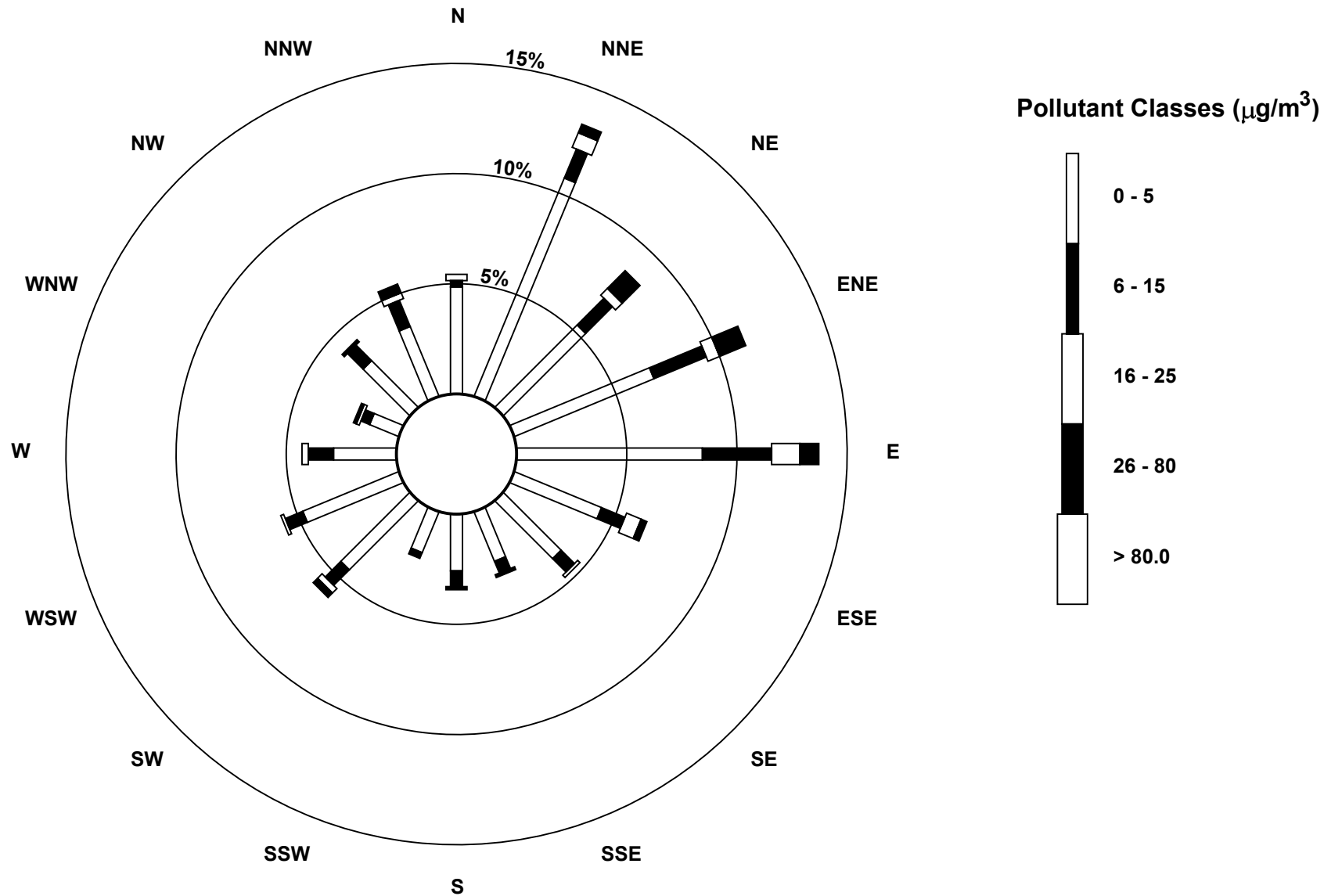
Hourly Maximums

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



Pollutant Rose

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



Hourly Averages

External Temperature (ET) - °C

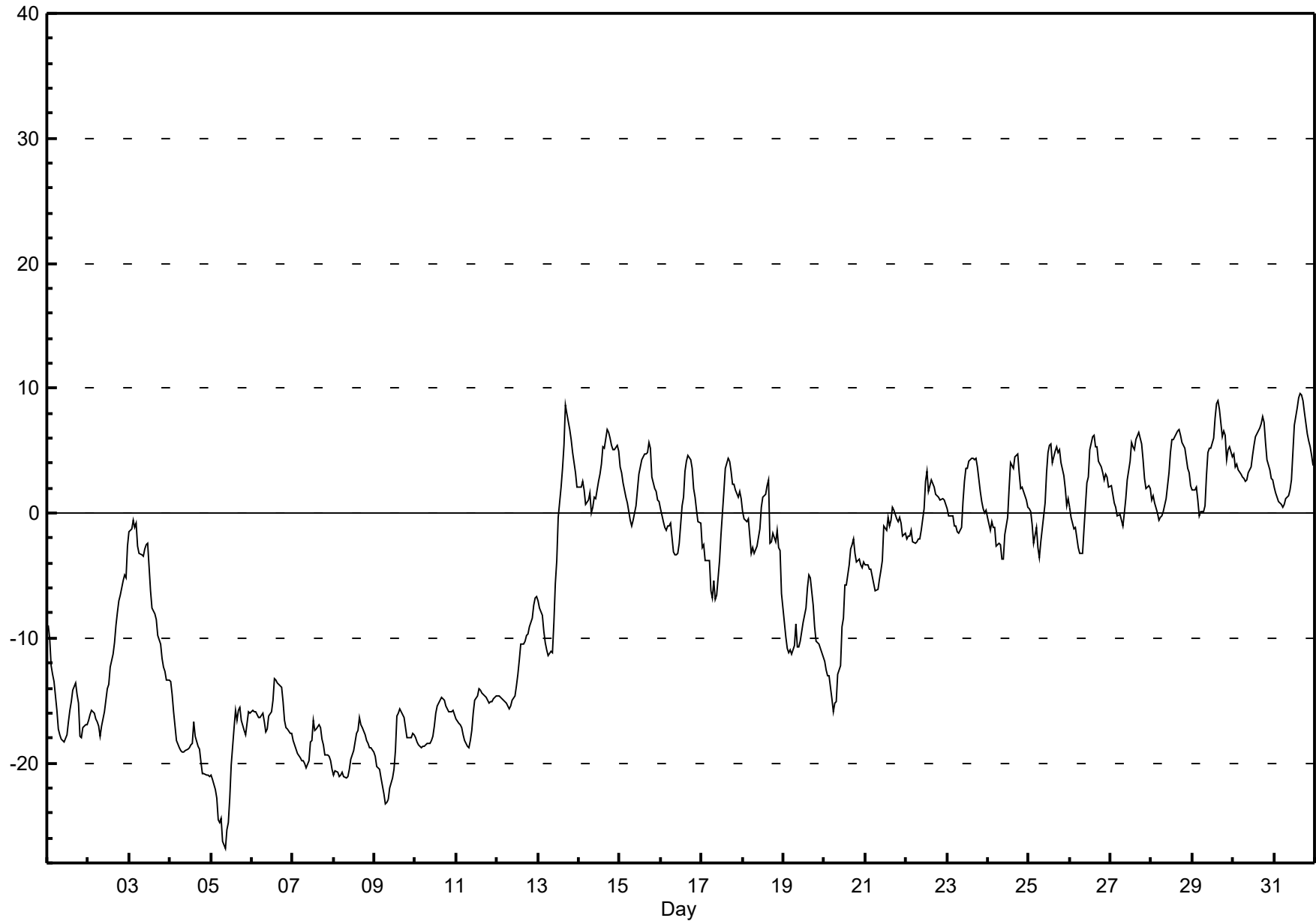
Beaverlodge - March 2017

Maximum Value: 9.6 °C on Mar 31 16:00																				Maximum Daily Average: 4.5 °C on Mar 30					Hours in Service: 744	
Minimum Value: -27 °C on Mar 5 09:00																				Minimum Daily Average: -20.4 °C on Mar 5					Hours of Data: 744	
Maximum Diurnal Average: -2.9 °C at hour 17																				Minimum Diurnal Average: -9.1 °C at hour 8					Hours of Missing Data: 0	
Monthly Average: -5.99 °C																				Percentiles: P ₁ = -23.3 P ₁₀ = -18.6 Q ₁ = -15.7 Median = -2.8 Q ₃ = 2.0 P ₉₀ = 4.9 P ₉₉ = 8.5					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-Mar	-9	-10	-12	-13	-13	-16	-17	-18	-18	-18	-18	-17	-16	-15	-14	-14	-14	-15	-18	-18	-17	-17	-17	-15.5	-9.0	
2-Mar	-17	-16	-16	-16	-16	-17	-17	-18	-17	-16	-15	-14	-12	-11	-10	-9	-8	-7	-7	-5	-5	-5	-3	-12.1	-2.6	
3-Mar	-1	-1	-1	-1	-1	-3	-3	-3	-3	-3	-3	-2	-6	-8	-8	-8	-8	-10	-11	-12	-12	-13	-13	-6.1	-0.6	
4-Mar	-13	-14	-16	-17	-18	-19	-19	-19	-19	-19	-19	-19	-19	-18	-17	-18	-19	-19	-20	-21	-21	-21	-21	-21	-18.6	-13.5
5-Mar	-21	-21	-22	-23	-25	-25	-24	-26	-27	-25	-25	-23	-20	-17	-16	-17	-16	-16	-17	-17	-18	-17	-16	-16	-20.4	-15.5
6-Mar	-16	-16	-16	-16	-16	-16	-16	-17	-17	-17	-16	-16	-15	-13	-13	-14	-14	-14	-15	-17	-17	-17	-18	-18	-15.8	-13.3
7-Mar	-18	-19	-19	-19	-20	-20	-20	-20	-20	-20	-18	-18	-17	-17	-17	-17	-17	-18	-19	-19	-19	-19	-20	-21	-18.8	-16.6
8-Mar	-21	-21	-21	-21	-21	-21	-21	-21	-21	-20	-20	-19	-19	-18	-17	-16	-17	-17	-18	-18	-18	-19	-19	-19	-19.3	-16.4
9-Mar	-19	-20	-20	-20	-21	-22	-23	-23	-23	-22	-21	-21	-19	-16	-16	-16	-16	-16	-17	-18	-18	-18	-18	-18	-19.3	-15.6
10-Mar	-18	-18	-19	-19	-19	-19	-19	-18	-18	-18	-18	-17	-16	-15	-15	-15	-15	-15	-15	-16	-16	-16	-16	-16	-16.9	-14.8
11-Mar	-16	-17	-17	-17	-18	-18	-19	-19	-18	-17	-16	-15	-15	-14	-14	-14	-15	-15	-15	-15	-15	-15	-15	-15	-16.0	-14.0
12-Mar	-15	-15	-15	-15	-15	-15	-15	-16	-15	-15	-15	-14	-13	-12	-10	-10	-10	-10	-10	-9	-8	-7	-7	-7	-12.2	-6.7
13-Mar	-7	-8	-8	-9	-10	-11	-11	-11	-11	-9	-6	-4	0	2	4	5	9	8	7	6	5	4	3	2	-2.1	8.6
14-Mar	2	2	2	2	1	1	2	0	0	1	1	2	3	4	5	5	7	6	6	5	5	5	5	5	3.3	6.7
15-Mar	4	3	2	1	1	0	-1	-1	-1	1	2	3	4	4	5	5	5	6	5	3	2	2	1	1	2.4	5.7
16-Mar	0	-1	-1	-1	-1	-1	-1	-3	-3	-3	-3	-2	1	1	3	4	5	4	4	2	1	0	-1	-1	0.1	4.7
17-Mar	-3	-3	-4	-4	-4	-6	-7	-5	-7	-7	-4	-2	0	2	4	4	4	3	2	2	2	1	2	1	-1.1	4.4
18-Mar	0	0	-1	0	-2	-3	-3	-3	-3	-2	-1	0	1	1	2	3	-2	-2	-2	-2	-1	-3	-3	-7	-1.4	2.6
19-Mar	-9	-10	-11	-11	-11	-11	-11	-9	-11	-11	-10	-9	-8	-8	-6	-5	-5	-7	-9	-10	-10	-11	-11	-12	-9.4	-5.0
20-Mar	-12	-13	-13	-13	-15	-16	-15	-15	-13	-12	-9	-8	-6	-6	-4	-3	-3	-2	-3	-4	-4	-4	-4	-4	-8.4	-2.0
21-Mar	-4	-4	-5	-5	-5	-6	-6	-6	-5	-5	-4	-1	-1	0	-1	-1	0	0	0	-1	0	-1	-2	-2	-2.6	0.4
22-Mar	-2	-2	-2	-1	-2	-2	-2	-2	-2	-1	0	3	3	2	2	3	2	2	1	1	1	1	1	1	0.1	3.4
23-Mar	0	0	0	0	-1	-1	-1	-2	-1	1	3	4	4	4	4	4	4	4	4	2	1	0	0	0	1.4	4.4
24-Mar	0	-1	-1	-1	-1	-3	-2	-3	-4	-4	-2	0	2	4	4	4	4	5	3	2	2	2	1	0	0.5	4.8
25-Mar	0	0	-1	-2	-1	-3	-4	-2	-1	1	3	5	5	6	4	5	5	5	5	4	3	2	1	1	1.7	5.5
26-Mar	1	0	-1	-1	-2	-3	-3	-3	-1	1	2	3	5	6	6	5	5	4	4	3	3	3	3	2	1.7	6.3
27-Mar	2	1	1	0	0	0	-1	-1	0	1	3	4	6	5	5	6	6	6	5	4	3	2	2	2	2.7	6.4
28-Mar	1	1	1	0	-1	0	0	0	1	2	3	5	6	6	6	7	7	6	6	5	4	4	3	2	3.2	6.6
29-Mar	2	2	2	1	0	0	0	1	3	5	5	5	6	8	9	9	8	6	7	6	4	5	5	4	4.3	8.9
30-Mar	5	4	4	3	3	3	3	3	3	3	4	5	5	6	6	7	7	8	7	6	4	3	3	3	4.5	7.7
31-Mar	2	2	1	1	1	0	1	1	1	2	3	5	7	8	9	10	9	9	8	6	6	5	5	4	4.4	9.6
-6.5 -6.9 -7.3 -7.7 -8.2 -8.8 -8.9 -9.1 -8.8 -8.0 -6.9 -5.8 -4.7 -3.9 -3.3 -3.0 -2.9 -3.2 -3.8 -4.7 -5.0 -5.2 -5.5 -5.7																									Diurnal Average	
4.7 3.7 4.0 3.5 3.1 2.9 2.8 2.5 3.0 4.8 5.2 5.2 7.0 8.4 9.3 9.6 9.4 9.0 8.0 6.3 5.7 5.3 5.4 5.0																									Diurnal Maximum	

Hourly Averages

External Temperature (ET) - °C

Beaverlodge - March 2017



Hourly Averages

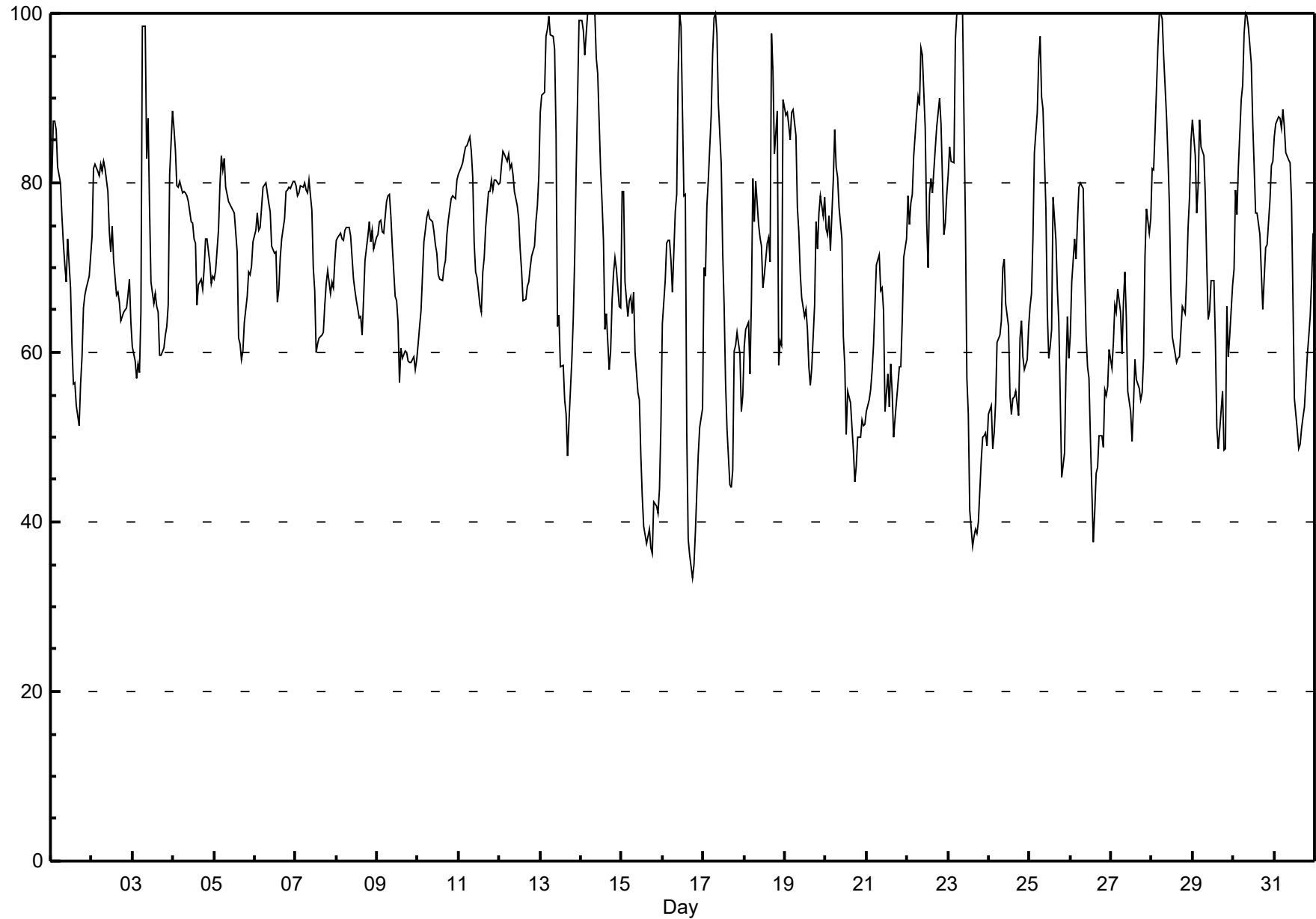
Relative Humidity (RH) - %

Beaverlodge - March 2017

Maximum Value: 100.0 % on Mar 14 05:00																				Maximum Daily Average: 82.7 % on Mar 22					Hours in Service: 744	
Minimum Value: 33 % on Mar 16 18:00																				Minimum Daily Average: 52.7 % on Mar 15					Hours of Data: 744	
Maximum Diurnal Average: 83.0 % at hour 7																				Minimum Diurnal Average: 58.9 % at hour 16					Hours of Missing Data: 0	
Monthly Average: 70.41 %																				Percentiles: P ₁ = 37.5 P ₁₀ = 52.4 Q ₁ = 60.8 Median = 70.9 Q ₃ = 79.5 P ₉₀ = 87.8 P ₉₉ = 100.0					Hours of Calibration: 0	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	80	87	87	86	82	80	76	73	70	68	73	68	61	56	56	54	51	56	60	65	67	68	69	71	69.4	87.4
2-Mar	74	82	82	81	81	82	81	82	82	79	74	72	75	71	67	67	66	64	64	65	65	67	69	64	73.1	82.5
3-Mar	61	59	57	59	58	65	98	98	83	88	77	68	66	67	65	65	60	60	61	62	63	66	81	88	69.7	98.5
4-Mar	86	84	80	80	80	79	79	79	78	78	75	75	73	73	66	68	69	67	70	73	73	71	68	69	74.7	86.4
5-Mar	69	70	74	80	83	81	83	80	78	77	77	77	76	72	62	61	59	60	64	67	69	69	70	73	72.1	83.1
6-Mar	74	76	74	75	77	80	80	79	78	77	73	72	72	66	67	71	73	76	79	79	80	79	80	80	75.7	80.2
7-Mar	80	78	79	80	79	80	79	79	80	77	70	67	60	61	62	62	62	66	68	70	67	68	68	71	71.4	80.3
8-Mar	73	74	74	73	73	74	75	75	74	71	69	67	66	64	64	62	66	71	74	75	73	74	72	74	71.2	75.3
9-Mar	74	75	76	74	74	78	78	79	76	73	67	66	64	56	61	59	60	60	59	59	59	59	58	59	66.8	78.6
10-Mar	61	63	65	73	74	76	77	76	75	74	73	72	69	69	68	70	71	74	76	78	79	78	78	80	72.9	80.3
11-Mar	81	82	82	83	84	84	85	84	81	73	69	69	66	65	70	71	75	79	79	80	79	80	80	80	77.6	85.4
12-Mar	80	82	84	83	83	83	82	82	81	79	77	76	72	70	66	66	68	68	70	71	73	75	77	81	76.2	83.7
13-Mar	88	90	91	97	98	100	97	97	96	86	63	64	58	59	54	53	48	52	59	64	71	81	90	99	77.4	99.7
14-Mar	99	98	95	98	100	100	100	100	100	95	93	82	78	73	63	64	58	60	66	69	71	70	65	65	81.8	100.0
15-Mar	79	79	68	64	66	67	65	67	60	55	54	48	43	39	37	38	39	37	36	42	42	41	44	51	52.7	79.1
16-Mar	63	68	73	73	73	71	67	77	79	93	100	98	78	79	51	38	36	33	35	39	44	48	51	53	63.4	100.0
17-Mar	70	69	77	80	88	95	100	100	98	89	82	72	66	56	51	44	44	46	60	61	62	60	53	55	70.0	100.0
18-Mar	61	63	64	58	66	81	75	80	75	73	73	68	69	73	74	71	98	93	83	88	58	61	61	90	73.1	97.7
19-Mar	88	88	87	85	88	89	86	77	74	69	67	64	65	63	58	56	58	66	75	72	77	78	76	78	74.4	88.6
20-Mar	75	74	76	72	80	86	82	81	77	73	62	58	50	55	54	51	48	45	47	50	50	52	51	52	62.6	86.2
21-Mar	53	54	56	58	61	66	70	72	67	68	65	53	57	54	59	55	50	52	56	58	58	64	71	73	60.5	73.5
22-Mar	79	75	78	79	83	88	90	89	96	95	87	76	70	79	81	79	84	87	88	90	87	74	75	79	82.7	96.0
23-Mar	81	84	82	82	97	100	100	100	100	88	75	57	53	41	37	38	39	39	40	47	50	50	51	49	65.9	100.0
24-Mar	53	54	49	50	54	61	62	64	70	71	66	63	55	53	55	55	55	52	62	64	59	58	59	63	58.6	71.1
25-Mar	65	67	74	84	88	95	97	90	89	77	65	59	61	63	78	73	68	63	55	45	48	58	64	59	70.2	97.3
26-Mar	62	68	73	71	76	79	80	79	70	62	58	57	50	38	41	46	46	50	50	49	56	55	56	60	59.7	80.1
27-Mar	58	61	66	65	67	65	60	66	69	64	55	53	49	54	59	57	56	54	55	59	71	77	74	76	62.1	76.9
28-Mar	82	82	86	96	100	100	99	95	88	83	77	67	62	61	59	59	60	63	65	65	69	75	78	85	77.3	100.0
29-Mar	87	83	77	80	87	84	83	78	70	64	65	68	68	61	51	49	51	55	48	49	65	59	62	68	67.3	87.4
30-Mar	70	79	76	82	90	91	98	100	100	98	94	87	82	76	76	74	69	65	69	72	73	78	82	83	81.8	100.0
31-Mar	86	87	88	88	86	89	87	84	83	82	78	66	55	51	49	49	51	52	54	60	62	64	69	74	70.5	88.7
73.9 75.4 75.8 77.1 80.0 82.2 83.0 82.6 80.5 77.4 72.7 68.1 64.2 61.8 60.0 58.9 59.3 60.2 62.2 64.1 65.2 66.4 67.9 71.1																									Diurnal Average	
99.1 98.0 95.1 97.7 100.0 100.0 100.0 100.0 100.0 98.3 100.0 98.5 81.8 78.7 80.5 78.9 97.7 93.2 88.3 90.0 87.0 81.4 90.2 99.2																									Diurnal Maximum	

Hourly Averages

Relative Humidity (RH) - %
Beaverlodge - March 2017



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	11	11	17	17	17	19	17	19	15	17	16	12	8	7	8	7	6	5	3	5	9	7	6	2	8.0	19.2
Dir	25	16	13	6	0	327	323	321	323	321	320	320	329	346	27	43	28	92	95	94	83	90	92	227	355	327
2 Spd	4	4	5	4	5	4	7	4	4	4	2	4	6	6	4	3	1	2	1	3	6	6	6	5	3.1	6.7
Dir	238	152	163	160	178	186	147	136	307	277	244	180	176	172	200	206	267	208	120	141	126	141	160	117	169	147
3 Spd	7	7	6	6	1	9	7	8	10	12	16	13	14	11	14	17	18	18	15	17	17	11	13	13	7.3	17.9
Dir	120	126	126	89	301	345	310	320	244	230	240	281	345	337	352	8	1	1	353	343	339	332	325	343	336	1
4 Spd	15	16	19	18	17	14	11	10	10	10	12	10	10	10	4	7	9	7	6	6	7	6	5	3	8.2	19.5
Dir	24	40	40	38	28	21	13	6	15	19	26	42	48	44	84	155	119	118	115	86	84	81	65	171	45	40
5 Spd	4	3	1	1	5	3	5	1	2	1	0	1	4	5	3	5	3	5	10	10	14	13	10	6	3.3	14.2
Dir	133	106	101	250	54	45	36	155	121	61	182	259	16	16	173	253	211	27	50	31	23	41	49	14	42	23
6 Spd	3	1	3	5	11	7	7	11	10	10	10	11	10	4	9	11	9	9	10	12	13	13	12	12	7.4	13.1
Dir	250	202	263	318	328	315	11	22	3	14	19	10	14	91	62	77	60	60	26	21	28	30	27	17	21	28
7 Spd	11	7	9	5	10	9	11	2	5	3	4	7	5	14	14	11	12	11	10	13	8	1	5	7	6.3	14.1
Dir	22	22	25	27	13	23	32	43	257	188	122	133	67	37	41	39	98	97	48	36	43	35	26	347	42	37
8 Spd	5	9	10	15	15	13	9	9	8	8	6	8	10	7	8	8	14	14	14	12	14	11	11	8	10.0	15.4
Dir	343	24	22	34	34	34	22	4	6	16	15	14	16	46	50	58	46	43	43	35	38	37	44	57	32	34
9 Spd	13	9	11	13	13	15	11	11	14	10	2	6	5	3	15	19	20	23	21	23	27	28	27	26	13.1	28.2
Dir	43	42	33	26	29	23	9	16	15	16	215	259	249	123	94	75	59	58	50	49	64	68	65	66	50	68
10 Spd	23	23	24	24	22	22	22	21	22	21	21	21	20	18	19	17	16	17	17	16	14	9	3	7	18.0	24.3
Dir	65	66	68	68	72	75	78	76	80	80	82	83	86	84	85	76	82	70	71	65	67	41	42	8	73	68
11 Spd	8	10	9	9	5	3	1	3	4	0	1	6	10	10	15	17	18	17	17	24	24	23	22	19	10.5	24.0
Dir	10	15	20	16	14	15	278	6	26	234	298	60	68	73	87	82	66	51	55	63	69	68	73	78	59	63
12 Spd	19	17	18	18	18	15	13	13	15	15	15	16	14	15	13	12	11	13	16	14	12	16	12	7	14.1	18.8
Dir	80	83	91	97	98	95	92	95	102	109	112	111	112	105	90	78	64	77	85	87	86	91	96	107	94	80
13 Spd	7	7	6	6	3	4	2	2	2	2	2	5	3	4	1	3	36	30	21	8	17	16	16	14	5.4	36.1
Dir	138	151	137	165	176	49	189	221	50	46	38	55	130	85	63	23	268	256	249	248	227	229	233	221	234	268
14 Spd	16	8	6	3	5	6	2	4	3	2	5	2	3	2	6	2	4	8	8	12	13	14	11	6	3.6	15.8
Dir	230	222	205	168	102	62	129	122	136	229	280	264	278	132	180	146	115	93	100	113	102	118	126	164	141	230
15 Spd	26	21	29	25	23	23	22	22	24	20	15	21	22	22	18	20	16	5	1	4	7	8	8	9	13.6	29.4
Dir	284	286	264	251	252	249	253	265	254	246	230	233	236	242	246	241	234	233	110	89	87	69	75	71	251	264
16 Spd	8	9	8	10	7	16	14	8	2	3	5	1	3	4	20	24	11	21	11	5	6	2	2	3	1.3	24.4
Dir	85	80	80	85	108	91	113	220	179	21	233	225	89	75	246	264	262	278	279	259	240	180	78	23	228	264
17 Spd	2	4	1	4	2	1	4	9	3	2	3	3	2	1	5	17	23	23	33	30	22	9	5	1	6.8	32.7
Dir	253	19	322	71	77	273	5	26	318	260	231	285	308	330	82	83	81	82	90	93	99	90	83	145	81	90
18 Spd	2	1	2	2	2	4	4	11	9	9	10	10	12	10	11	16	11	N	13	8	20	16	10	12	5.7	19.7
Dir	192	138	234	277	56	312	1	311	358	343	347	353	339	341	355	332	286	N	126	268	259	252	270	335	315	259
19 Spd	13	12	10	8	4	4	3	5	10	9	12	13	16	16	12	8	13	17	14	8	8	10	9	8	8.8	17.3
Dir	332	335	354	14	24	326	31	344	20	3	11	2	13	22	22	14	1	12	3	328	317	297	283	285	355	12
20 Spd	5	3	4	6	1	2	2	4	3	2	1	2	2	4	4	4	7	9	9	15	23	23	23	29	6.4	29.5
Dir	311	304	38	32	17	26	99	116	98	233	188	233	66	61	56	52	44	80	76	81	93	93	96	96	82	96
21 Spd	27	26	21	22	24	25	21	13	8	10	4	1	5	3	6	6	2	1	6	9	9	10	12	5	8.8	26.6
Dir	97	97	97	95	94	95	94	94	89	111	147	103	71	41	33	135	109	339	17	23	22	338	327	346	83	97
22 Spd	6	3	3	2	8	7	8	3	1	5	3	1	1	4	M	9	11	14	13	13	14	14	9	2	4.2	14.4
Dir	315	9	15	272	306	56	279	342	187	316	331	37	78	204	M	80	88	63	45	45	46	52	81	278	40	52

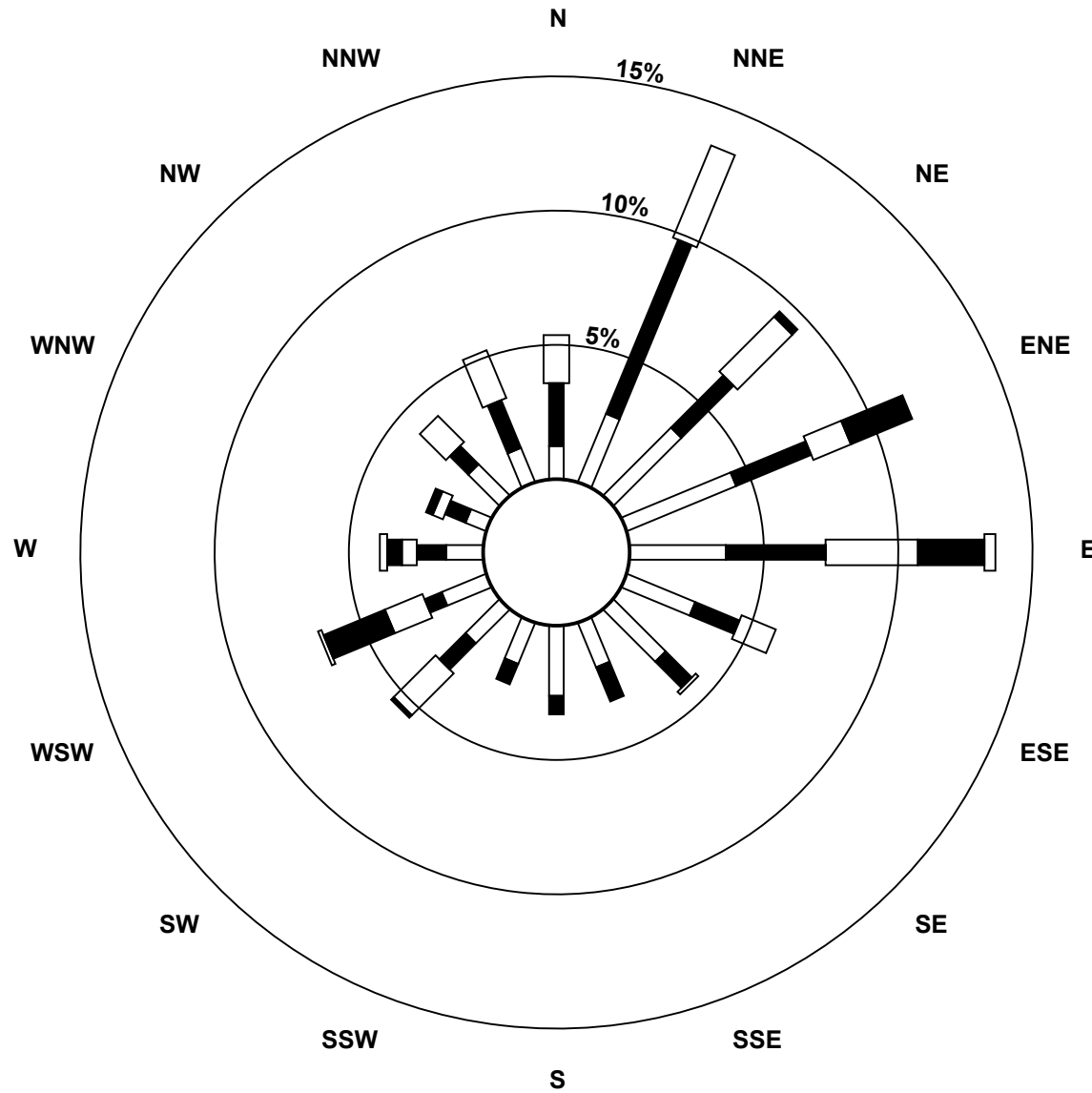
Hourly Averages

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

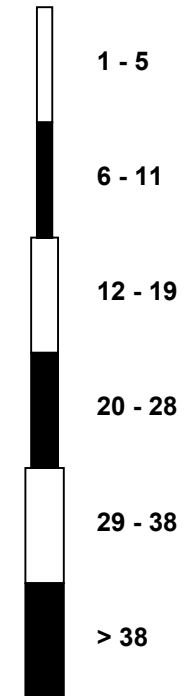
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
23 Spd	3	2	1	5	8	6	4	2	3	2	3	18	24	26	24	24	20	14	12	12	4	4	6	6	6.8	25.7	
Dir	24	49	302	238	283	352	288	299	55	77	75	237	238	239	245	244	243	254	254	218	217	63	57	75	246	239	
24 Spd	4	6	9	8	7	3	4	6	4	5	2	5	2	2	10	13	10	7	6	5	3	2	5	4	2.8	13.1	
Dir	73	91	82	86	118	145	217	194	251	282	11	35	324	57	13	16	25	22	154	103	92	37	31	57	57	16	
25 Spd	4	2	3	3	7	9	6	4	2	3	2	3	5	5	5	3	6	8	5	13	11	12	2	7	1.0	13.1	
Dir	78	74	247	240	29	300	56	100	40	68	127	62	87	329	356	297	161	166	209	281	275	260	165	197	270	281	
26 Spd	12	12	8	6	5	5	3	2	1	2	3	6	4	4	5	8	8	8	9	13	11	3	14	7	1.8	14.0	
Dir	228	229	231	248	205	188	183	73	135	73	89	148	98	77	83	89	69	63	42	33	33	321	28	14	67	28	
27 Spd	11	12	7	4	2	5	10	4	2	4	3	3	3	6	5	4	4	4	3	1	7	9	7	4	2.7	11.9	
Dir	24	22	330	338	1	26	24	0	141	60	154	89	97	106	123	137	145	139	87	137	178	116	94	137	73	22	
28 Spd	5	4	2	2	3	3	5	6	2	4	4	4	4	6	5	4	6	4	3	5	2	1	2	2	1.4	6.2	
Dir	78	135	163	83	87	63	57	64	134	182	105	183	176	221	246	10	6	325	107	95	212	52	122	104	104	6	
29 Spd	2	8	11	7	4	1	4	2	2	1	4	8	8	6	3	4	6	9	7	9	16	10	11	13	3.2	15.6	
Dir	147	233	238	219	52	113	43	147	64	73	100	129	111	99	41	115	109	106	50	29	23	42	60	23	71	23	
30 Spd	15	12	9	10	12	12	16	15	14	16	15	14	14	15	13	14	11	8	6	5	5	7	8	8	6.7	15.9	
Dir	7	14	1	327	327	348	350	337	325	305	304	296	288	272	245	224	217	211	200	197	212	215	220	217	297	305	
31 Spd	5	5	2	4	3	2	3	1	3	3	9	11	16	17	17	20	14	15	14	18	27	10	16	16	8.7	26.9	
Dir	186	216	181	148	136	87	68	108	154	182	210	181	218	231	256	243	229	236	225	248	252	270	275	257	235	252	
Spd	3.3	3.7	3.1	3.3	3.8	4.1	3.5	2.9	2.3	1.9	0.9	0.6	1.1	1.2	1.6	1.9	2.3	3.9	4.9	5.3	4.7	4.4	4.4	3.1	Diurnal Average		
Dir	37	50	45	49	41	33	33	13	10	0	357	358	21	33	38	50	54	55	62	52	56	61	59	52	Diurnal Maximum		
Spd	26.6	26.1	29.4	24.7	23.9	24.6	22.4	21.7	24.4	20.8	20.9	21.0	23.9	25.7	24.3	24.4	36.1	29.6	32.7	29.7	26.9	28.2	26.9	29.5	Diurnal Maximum		
Dir	97	97	264	251	94	95	253	265	254	80	82	83	238	239	245	264	268	256	90	93	252	68	65	96			
Maximum Speed Value: 36 km/h on Mar 13 17:00																		Minimum Speed Value: 0 km/h on Mar 11 10:00						Hours in Service: 744			
Maximum Daily Speed Average: 18.0 km/h on Mar 10																		Minimum Daily Speed Average: 1.0 km/h on Mar 28						Hours of Data: 742			
Maximum Diurnal Speed Average: 5.3 km/h at hour 20																		Minimum Diurnal Speed Average: 0.6 km/h at hour 12						Hours of Missing Data: 2			
Monthly Average Velocity: 2.89 km/h 44.0 deg																		Speed Percentiles: P ₁ = 0.7 P ₁₀ = 2.2 Q ₁ = 3.8 Median = 7.8 Q ₃ = 13.3 P ₉₀ = 18.6 P ₉₉ = 27.2						Percent Operational Time: 99.7			
All monthly, daily, and diurnal averages have been calculated using vector methods																											
M - Maintenance 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	21	51	37	0	0	0	109																				
NorthEast	47	53	44	11	0	0	155																				
East	50	47	38	29	4	0	168																				
SouthEast	40	22	5	0	0	0	67																				
South	27	16	0	0	0	0	43																				
SouthWest	23	20	23	12	0	0	78																				
West	20	17	13	13	3	0	66																				
NorthWest	18	18	19	1	0	0	56																				
Total	246	244	179	66	7	0	742																				

Wind Rose

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



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Beaverlodge - March 2017

Maximum Speed: 36 km/h on Mar 13 17:00																				Maximum Daily Speed Average: 18.5 km/h on Mar 10										Hours in Service: 744	
Minimum Speed: 1 km/h on Mar 11 10:00																				Minimum Daily Speed Average: 4.4 km/h on Mar 28										Hours of Data: 742	
Maximum Diurnal Speed Average: 13.0 km/h at hour 21																				Minimum Diurnal Speed Average: 7.3 km/h at hour 11										Hours of Missing Data: 2	
Monthly Average Speed: 9.86 km/h																				Percentiles: P ₁ = 1.8 P ₁₀ = 3.3 Q ₁ = 4.8 Median = 8.5 Q ₃ = 13.6 P ₉₀ = 19.5 P ₉₉ = 27.2										Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Mar	11	12	17	17	17	20	17	19	16	17	16	12	9	8	8	7	6	5	4	5	9	7	7	3	11.2	19.6					
2-Mar	4	4	6	5	5	5	7	5	4	4	3	4	6	6	4	3	3	3	3	4	6	6	7	6	4.7	6.9					
3-Mar	7	8	6	6	4	10	16	8	10	12	16	16	14	11	14	17	18	18	15	17	18	12	13	13	12.4	18.2					
4-Mar	16	16	20	18	17	14	12	10	10	10	12	10	10	10	5	7	9	7	6	6	7	7	6	4	10.3	19.6					
5-Mar	4	3	2	3	5	3	5	2	3	2	3	2	5	6	6	6	5	5	10	10	14	14	10	10	5.7	14.2					
6-Mar	5	5	7	6	11	7	8	11	10	10	10	11	10	5	9	11	9	10	11	12	13	13	12	12	9.6	13.1					
7-Mar	11	7	9	5	10	10	11	7	6	3	5	7	6	14	14	12	12	11	10	13	9	4	5	7	8.6	14.3					
8-Mar	6	9	10	15	15	13	9	9	9	8	6	8	10	8	10	9	14	14	14	12	14	12	11	8	10.6	15.4					
9-Mar	13	9	11	13	13	15	11	11	14	10	2	7	6	4	15	20	20	23	21	23	27	28	27	26	15.4	28.3					
10-Mar	23	23	24	24	22	22	22	21	22	21	21	21	20	18	19	17	16	17	18	16	15	9	5	7	18.5	24.3					
11-Mar	8	10	9	9	5	4	2	4	4	1	2	7	10	10	15	17	18	17	17	24	24	23	22	20	11.7	24.1					
12-Mar	19	17	18	18	18	15	13	13	15	15	15	16	14	15	13	12	11	13	16	14	12	16	12	7	14.5	18.9					
13-Mar	9	7	6	6	4	4	3	3	4	3	3	5	4	5	3	7	36	30	21	9	17	16	16	14	9.8	36.2					
14-Mar	16	9	6	6	6	7	4	6	4	3	6	3	4	5	8	4	5	8	8	12	14	14	11	8	7.3	15.8					
15-Mar	28	21	30	25	23	23	23	22	25	21	15	21	22	22	19	20	16	5	2	5	7	8	8	9	17.5	29.8					
16-Mar	8	9	9	10	8	16	14	8	4	5	6	4	4	4	22	25	11	21	11	6	6	2	2	5	9.2	24.6					
17-Mar	6	7	5	5	3	6	5	9	5	4	4	4	3	3	5	17	23	23	33	30	22	9	5	3	9.9	32.8					
18-Mar	2	2	2	3	3	7	6	11	10	9	10	10	12	11	11	17	19	N	22	9	20	16	12	12	10.2	21.6					
19-Mar	13	12	11	9	4	5	5	5	11	10	12	14	16	16	12	9	13	17	14	9	8	10	9	9	10.6	17.4					
20-Mar	6	3	4	6	3	2	3	4	4	2	2	2	2	4	4	4	7	9	9	15	23	23	23	30	8.1	29.5					
21-Mar	27	26	21	22	24	25	21	13	8	11	6	2	5	4	8	6	3	2	6	9	9	11	12	5	11.8	26.6					
22-Mar	6	4	6	5	8	7	9	5	2	5	4	2	2	5	M	10	11	14	13	13	14	14	10	3	7.6	14.5					
23-Mar	4	3	3	6	9	6	4	4	3	3	3	19	24	26	24	24	20	14	12	12	5	4	6	6	10.1	25.7					
24-Mar	6	6	9	8	8	5	5	6	5	5	2	5	3	4	10	13	10	8	7	5	3	4	6	5	6.2	13.2					
25-Mar	4	5	4	9	8	11	6	4	5	4	3	3	6	10	8	6	6	8	8	13	11	12	3	8	6.9	13.3					
26-Mar	13	12	8	7	6	6	6	4	4	3	4	6	4	4	5	8	8	9	10	13	12	6	14	10	7.4	14.3					
27-Mar	11	13	8	6	4	5	10	7	3	4	3	3	3	6	6	5	5	5	4	4	11	9	7	4	6.1	12.7					
28-Mar	5	4	3	3	4	3	5	6	3	5	5	5	5	6	6	5	7	5	4	5	4	3	3	2	4.4	6.9					
29-Mar	2	9	11	8	4	4	6	5	3	2	4	9	8	6	5	4	7	9	7	10	16	10	11	13	7.1	15.7					
30-Mar	15	13	10	10	12	12	16	16	14	16	15	14	14	15	13	14	11	8	6	5	5	7	8	8	11.5	16.0					
31-Mar	6	5	4	5	3	3	3	2	3	4	10	11	16	18	18	21	14	15	14	19	27	10	16	16	10.9	27.3					
10.1 9.5 9.6 9.5 9.2 9.5 9.1 8.4 7.8 7.4 7.3 8.4 8.9 9.3 10.6 11.5 12.1 11.9 11.4 11.6 13.0 10.9 10.3 9.4																									Diurnal Average						
27.9 26.1 29.8 24.8 24.0 24.7 22.5 21.8 24.5 20.9 21.0 21.1 24.0 25.7 24.5 24.6 36.2 29.8 32.8 29.7 27.3 28.3 26.9 29.5																									Diurnal Maximum						
M - Maintenance N - Not Valid																															
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg

Beaverlodge - March 2017

Maximum Value: 95.5 deg on Mar 17 03:00																									Hours in Service: 744
Minimum Value: 2.1 deg on Mar 9 04:00																									Hours of Data: 742
Percentiles: P ₁ = 2.7 P ₁₀ = 4.6 Q ₁ = 7.0 Median = 14.9 Q ₃ = 38.9 P ₉₀ = 61.1 P ₉₉ = 89.9																									Hours of Missing Data: 2
																									Hours of Calibration: 0
																									Percent Operational Time: 99.7
Day	Hourly Period Ending At (MST)																								Daily Maximum
1-Mar	9	7	8	6	11	12	5	6	6	7	8	13	15	26	10	17	16	22	35	23	8	10	16	62	61.9
2-Mar	31	23	27	32	9	22	17	39	33	49	48	22	11	19	22	36	93	63	77	43	13	11	23	32	92.9
3-Mar	18	12	17	17	92	30	60	23	20	12	9	34	8	10	7	11	8	10	7	5	8	11	5	8	92.0
4-Mar	21	8	6	6	5	8	4	7	5	5	6	9	9	8	50	18	7	8	8	13	9	12	10	26	49.7
5-Mar	13	16	41	70	14	9	7	77	44	78	90	82	46	44	72	33	51	24	6	12	4	11	15	62	90.2
6-Mar	61	78	76	36	15	18	33	14	8	8	6	5	8	53	18	10	15	9	17	3	3	3	3	6	77.5
7-Mar	5	6	7	13	5	5	4	90	22	38	19	10	31	8	6	11	16	9	16	7	33	86	24	10	89.9
8-Mar	24	9	10	4	5	3	8	5	5	4	10	5	5	39	40	44	5	5	8	5	5	4	8	11	44.3
9-Mar	3	6	9	2	3	3	6	3	3	18	52	12	19	57	12	10	6	4	4	5	9	4	5	3	57.0
10-Mar	3	3	3	4	4	6	5	5	5	6	5	5	6	6	6	6	7	5	4	5	12	16	49	5	48.7
11-Mar	5	4	3	3	41	44	69	45	50	81	56	25	13	13	10	9	6	6	6	4	4	4	3	4	80.7
12-Mar	4	4	5	4	3	6	4	4	6	4	6	4	5	5	7	5	11	12	4	5	7	4	8	18	18.3
13-Mar	41	20	18	16	48	28	69	73	60	68	68	13	53	57	93	68	4	6	4	25	14	8	6	5	93.1
14-Mar	4	56	27	61	40	21	48	44	45	67	40	39	40	78	43	66	33	7	13	8	12	7	6	37	78.3
15-Mar	23	6	10	5	4	5	4	5	5	8	6	9	4	10	8	5	5	8	80	37	13	7	27	14	80.5
16-Mar	4	7	11	20	28	7	16	18	69	55	49	83	40	26	60	8	14	9	16	29	15	43	61	44	82.8
17-Mar	80	62	95	45	54	91	38	6	57	83	61	77	59	58	31	5	6	5	4	2	8	12	9	77	95.5
18-Mar	43	56	41	61	76	57	53	20	22	18	21	8	11	11	9	16	68	N	87	26	4	3	46	10	87.2
19-Mar	6	10	27	25	29	56	63	56	28	16	16	16	10	6	7	26	13	5	16	11	40	16	7	14	63.2
20-Mar	14	62	12	6	74	40	53	17	52	46	58	40	26	8	10	13	13	6	7	7	4	3	3	2	74.5
21-Mar	3	3	3	3	3	3	4	7	9	17	66	80	25	56	47	15	33	54	9	6	9	23	17	48	79.6
22-Mar	35	38	60	70	30	8	46	78	83	17	41	71	80	47	M	12	6	5	8	7	5	6	46	70	83.4
23-Mar	54	66	93	40	28	22	15	51	23	25	29	23	3	3	7	6	5	5	5	11	62	16	12	13	93.5
24-Mar	60	28	7	12	32	50	25	17	25	36	56	18	86	47	8	6	6	37	27	15	22	54	56	28	85.7
25-Mar	14	80	36	83	47	37	31	17	88	46	51	55	25	61	61	92	23	11	47	10	6	7	50	36	91.9
26-Mar	26	14	12	47	34	17	58	79	71	25	45	18	11	18	10	9	14	14	9	10	14	72	15	62	78.9
27-Mar	7	26	32	44	59	55	3	56	38	9	41	11	15	7	23	40	32	26	47	84	49	11	6	37	84.1
28-Mar	21	21	41	32	27	23	11	11	48	29	57	35	37	18	21	44	27	40	68	12	64	75	58	23	74.7
29-Mar	39	61	15	35	23	77	56	62	64	66	27	20	8	17	50	14	12	18	7	12	6	15	16	10	76.6
30-Mar	4	8	17	13	6	12	4	7	8	5	5	7	10	8	16	9	11	11	7	9	15	14	17	15	17.2
31-Mar	36	21	58	26	25	36	16	49	30	30	25	14	9	20	18	11	19	8	17	54	10	11	8	7	57.7
	79.8	79.5	95.5	83.2	92.0	90.8	69.3	89.9	88.1	83.3	90.2	82.8	85.7	78.3	93.1	91.9	92.9	63.3	87.2	84.1	64.0	85.7	61.2	76.9	
M - Maintenance N - Not Valid																									

PAZA
Valleyview Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

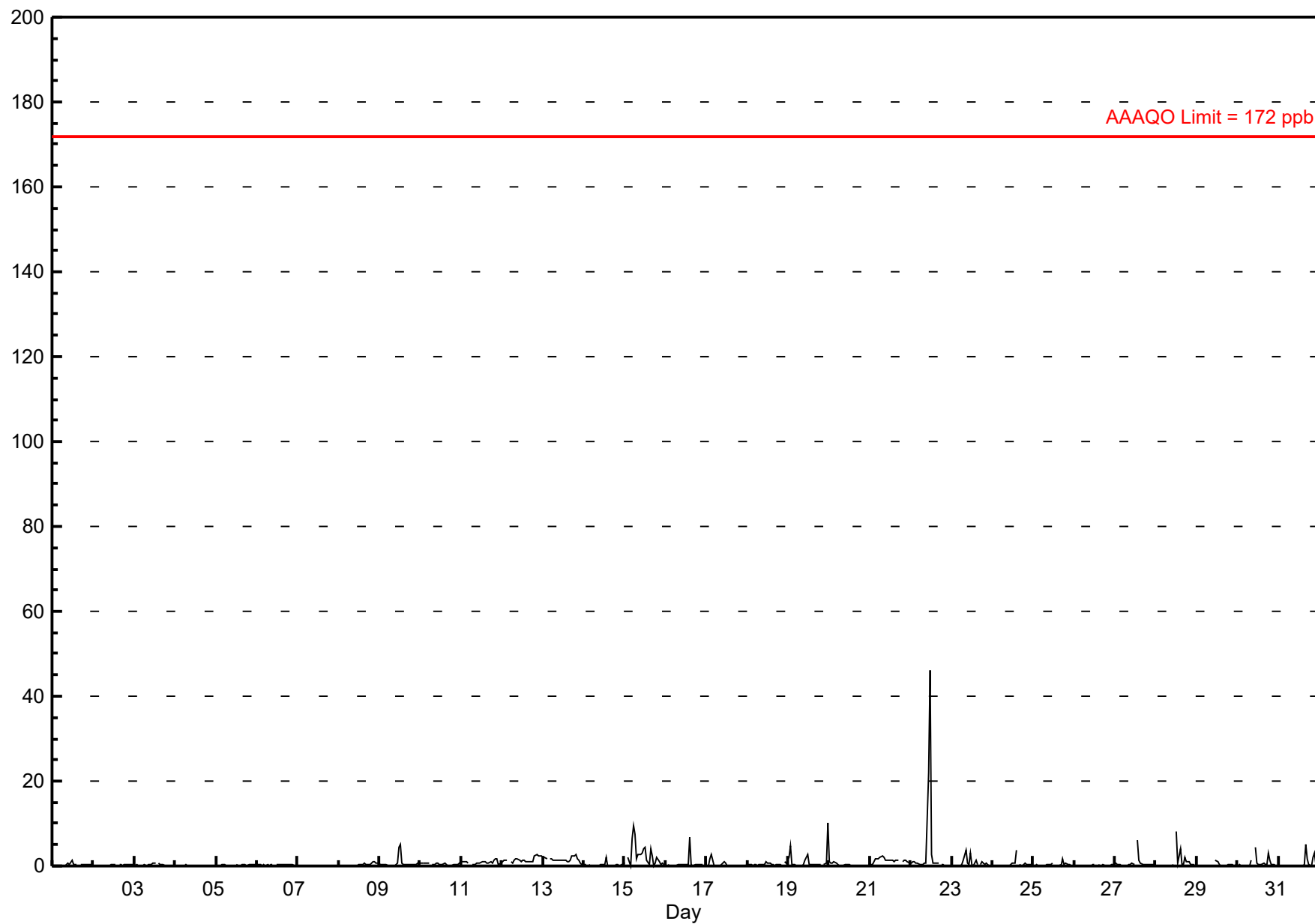
Sulphur Dioxide (SO₂) - ppb

Valleyview - March 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 46.2 ppb on Mar 22 12:00 Maximum Daily Average: 3.5 ppb on Mar 22																				Hours in Service: 744 Hours of Data: 710 Hours of Missing Data: 34 Hours of Calibration: 34 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Mar 2 09:00 Maximum Diurnal Average: 2.6 ppb at hour 12 Monthly Average: 0.68 ppb										Minimum Daily Average: 0.1 ppb on Mar 4 Minimum Diurnal Average: 0.4 ppb at hour 8 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.6 P ₉₀ = 1.4 P ₉₉ = 6.5																
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-Mar	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	A	0	0	0	0	0	0	0	0	0.3	1.4
2-Mar	0	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
3-Mar	0	0	0	0	0	0	0	0	0	0	0	1	1	A	1	0	0	0	0	0	0	0	0	0	0.2	0.8
4-Mar	0	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
5-Mar	0	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
6-Mar	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
7-Mar	0	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
8-Mar	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	1	1	1	1	1	0.3	1.0
9-Mar	0	0	0	0	0	0	0	A	0	0	1	4	5	1	0	0	0	0	0	0	0	1	1	1	0.7	5.0
10-Mar	1	1	1	1	1	1	A	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0.4	0.8
11-Mar	1	1	1	1	1	A	0	0	0	1	1	1	1	1	1	1	1	1	1	1	2	2	0	1	0.9	1.7
12-Mar	1	1	1	1	A	1	1	1	2	2	1	1	1	1	1	1	1	1	1	2	3	2	2	2	1.4	2.7
13-Mar	2	2	2	A	2	2	1	1	1	1	1	1	1	1	1	1	1	2	2	3	2	1	1	0	1.5	2.6
14-Mar	0	0	A	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0.3	1.9
15-Mar	1	A	2	0	7	9	7	2	3	3	3	4	5	1	0	4	2	0	1	2	1	0	1	0	2.5	9.4
16-Mar	A	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	A	0.5	6.8
17-Mar	0	0	2	3	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0.3	2.6
18-Mar	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	A	1	1	0.4	1.1
19-Mar	2	5	0	0	0	0	0	0	0	0	1	3	0	0	0	0	0	0	0	0	A	0	1	10	1.1	10.3
20-Mar	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.3	0.9
21-Mar	0	0	1	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1.3	2.3
22-Mar	1	1	1	1	1	0	0	1	1	1	22	46	3	1	1	1	1	A	0	0	0	0	0	0	3.5	46.2
23-Mar	0	0	0	0	0	0	0	1	4	1	0	3	0	0	1	0	A	0	1	1	1	0	0	0	0.6	3.9
24-Mar	0	0	0	0	0	0	0	0	0	0	0	1	1	1	4	A	0	0	0	1	0	0	0	0	0.4	3.8
25-Mar	0	0	0	0	0	0	0	0	0	0	0	1	C	C	C	0	0	2	0	1	0	0	0	0	0.3	1.6
26-Mar	0	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	0.5
27-Mar	1	0	0	0	0	0	0	0	0	0	1	0	A	6	1	1	0	0	0	0	0	0	0	0	0.6	6.0
28-Mar	0	0	0	0	0	0	0	0	0	0	0	A	8	1	4	0	0	2	1	1	0	0	0	0	0.8	8.2
29-Mar	0	0	0	0	0	0	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0.2	1.2
30-Mar	0	0	0	0	0	0	0	0	1	A	5	1	0	0	0	1	0	0	3	1	0	0	0	0	0.7	4.5
31-Mar	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	5	2	0	0	2	3	0	0	0.6	5.1
0.4 0.5 0.5 0.4 0.5 0.6 0.5 0.4 0.6 0.5 1.5 2.6 1.2 0.7 0.9 0.5 0.6 0.5 0.5 0.6 0.6 0.5 0.4 0.7																								Diurnal Average		
2.0 4.9 2.2 2.6 6.6 9.4 7.3 2.3 3.9 2.7 22.2 46.2 8.2 6.0 6.8 4.1 5.1 2.2 3.2 2.6 2.7 3.0 2.3 10.3																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Valleyview - March 2017



Hourly Maximums

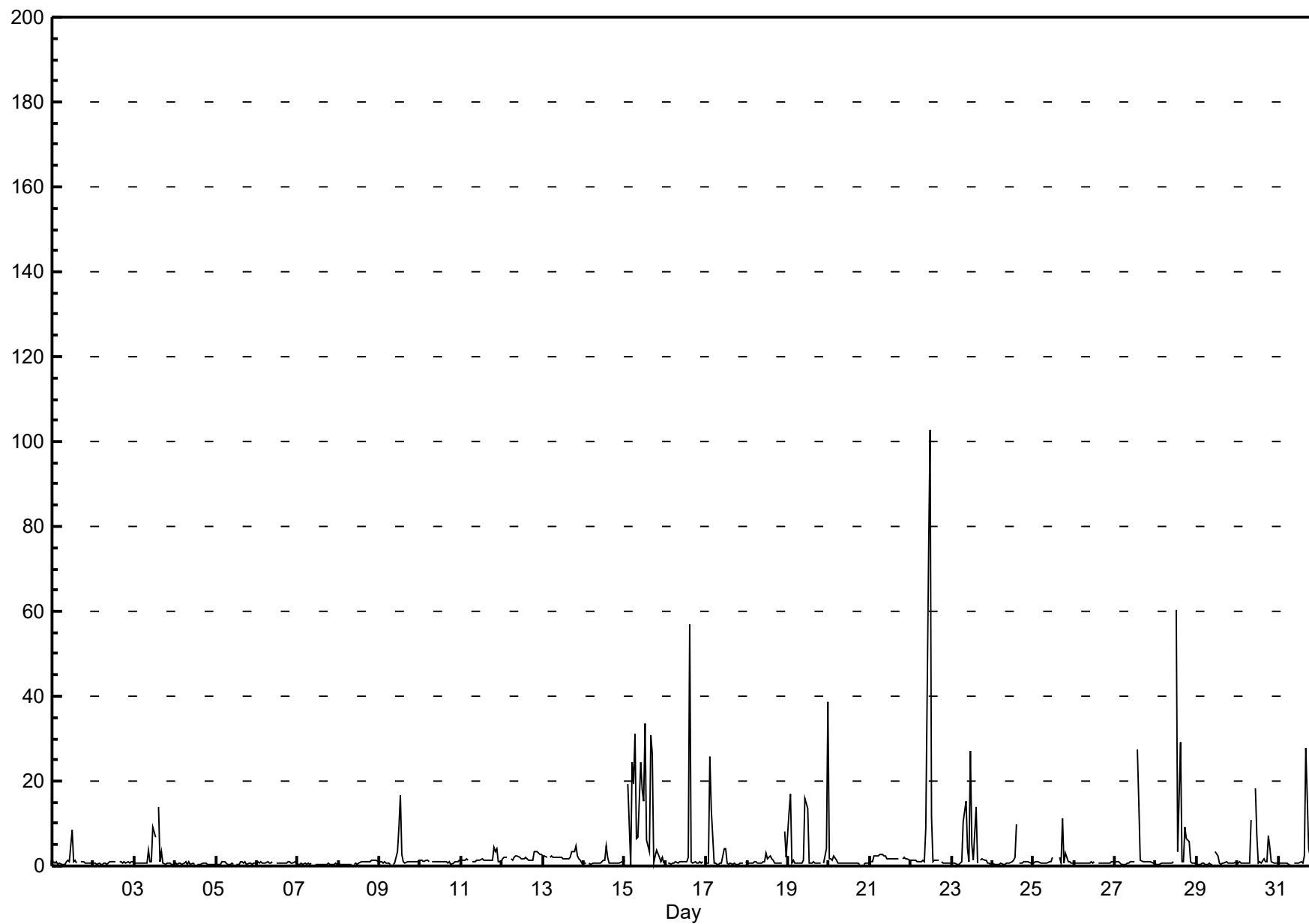
Sulphur Dioxide (SO₂) - ppb

Valleyview - March 2017

Maximum Value: 102.7 ppb on Mar 22 12:00																				Maximum Daily Average: 12.2 ppb on Mar 15					Hours in Service: 744	
Minimum Value: 0 ppb on Mar 17 16:00																				Minimum Daily Average: 0.5 ppb on Mar 7					Hours of Data: 710	
Maximum Diurnal Average: 7.7 ppb at hour 12																				Minimum Diurnal Average: 1.3 ppb at hour 22					Hours of Missing Data: 34	
Monthly Average: 2.47 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.8 Q ₃ = 1.4 P ₉₀ = 3.4 P ₉₉ = 29.5					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-Mar	1	1	1	0	1	0	0	0	1	1	1	9	1	1	1	A	1	1	1	1	1	1	1	1	1.2	8.6
2-Mar	1	1	0	1	0	0	1	1	0	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.7	0.9
3-Mar	1	1	1	1	1	1	1	1	4	1	1	9	7	A	14	1	3	1	0	1	1	1	0	0	2.1	13.9
4-Mar	1	0	1	1	0	1	1	0	1	0	1	0	A	0	0	0	1	1	1	0	0	0	0	0	0.6	1.0
5-Mar	0	0	0	1	1	1	1	0	0	1	0	A	0	0	1	1	1	1	0	1	1	0	1	1	0.7	1.0
6-Mar	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1
7-Mar	1	1	1	0	1	0	1	0	1	A	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0.5	0.8
8-Mar	1	0	0	0	0	0	0	0	A	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.5
9-Mar	1	1	1	1	1	1	0	A	0	1	3	9	17	3	1	1	1	1	1	1	1	1	1	1	2.1	16.6
10-Mar	1	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	1.4
11-Mar	1	1	1	2	1	A	1	1	1	1	1	1	2	1	1	1	1	1	1	4	3	4	1	1	1.7	4.4
12-Mar	2	2	2	2	A	2	1	2	2	2	2	2	2	2	2	1	1	1	2	4	3	3	3	3	2.1	3.5
13-Mar	3	2	2	A	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	5	2	2	1	1	2.2	4.8
14-Mar	1	1	A	1	0	1	1	1	1	1	1	1	1	5	2	1	1	1	1	1	1	1	1	1	1.0	4.8
15-Mar	1	A	19	0	24	19	31	6	7	24	18	15	34	6	3	31	27	1	2	4	2	1	2	1	12.2	33.7
16-Mar	A	1	1	1	1	1	1	1	1	1	1	1	1	2	57	1	1	1	1	1	1	1	1	A	3.4	57.0
17-Mar	1	1	26	13	1	1	0	0	1	1	4	4	1	0	1	0	1	0	0	0	1	1	A	1	2.5	25.7
18-Mar	1	1	1	1	1	1	1	1	1	1	1	3	2	2	2	1	1	1	1	1	1	A	8	2	1.4	8.1
19-Mar	13	17	1	1	1	1	1	1	1	1	16	13	1	1	1	1	1	1	1	1	A	1	4	39	5.0	38.6
20-Mar	2	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	0	1	1	1	0.9	2.3
21-Mar	1	1	2	2	2	2	3	3	2	2	2	2	2	2	2	2	2	2	A	2	2	2	2	1	1.9	2.8
22-Mar	1	1	1	1	1	1	1	1	1	9	74	103	12	1	1	1	1	A	1	1	1	1	1	1	9.4	102.7
23-Mar	1	1	1	1	0	1	1	11	15	4	1	27	5	1	14	1	A	1	2	1	1	1	1	0	4.0	27.2
24-Mar	1	0	0	0	0	1	0	0	1	1	1	1	1	2	10	A	1	1	1	1	1	1	1	1	1.1	9.7
25-Mar	1	1	1	1	1	1	1	1	1	1	1	2	C	C	C	2	1	11	1	3	1	1	1	1	1.5	11.1
26-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.7	1.1
27-Mar	1	1	1	1	0	0	0	1	1	1	1	1	A	28	15	1	1	1	1	1	1	1	1	1	2.6	27.6
28-Mar	0	1	1	1	1	1	1	1	1	1	1	A	60	4	29	1	1	9	6	6	1	1	1	1	5.4	60.3
29-Mar	1	1	1	1	1	0	0	1	0	0	A	3	2	1	1	1	1	1	1	1	1	1	1	1	0.8	3.3
30-Mar	1	1	1	1	1	1	1	1	11	A	18	7	1	1	1	2	1	1	7	4	1	1	1	1	2.7	18.2
31-Mar	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	2	28	16	4	1	9	9	1	4	3.6	27.7
1.3 1.4 2.3 1.3 1.6 1.4 1.8 1.3 2.0 2.2 5.4 7.7 5.7 2.5 5.7 2.1 2.7 2.1 1.5 1.6 1.4 1.3 1.3 2.3																									Diurnal Average	
12.7 17.1 25.7 13.4 24.3 19.4 31.1 10.6 15.1 24.3 74.3 102.7 60.3 27.6 57.0 30.8 27.7 16.4 7.1 5.9 8.9 9.1 8.1 38.6																									Diurnal Maximum	
C - Calibration																									A - Automated Daily Zero Span	

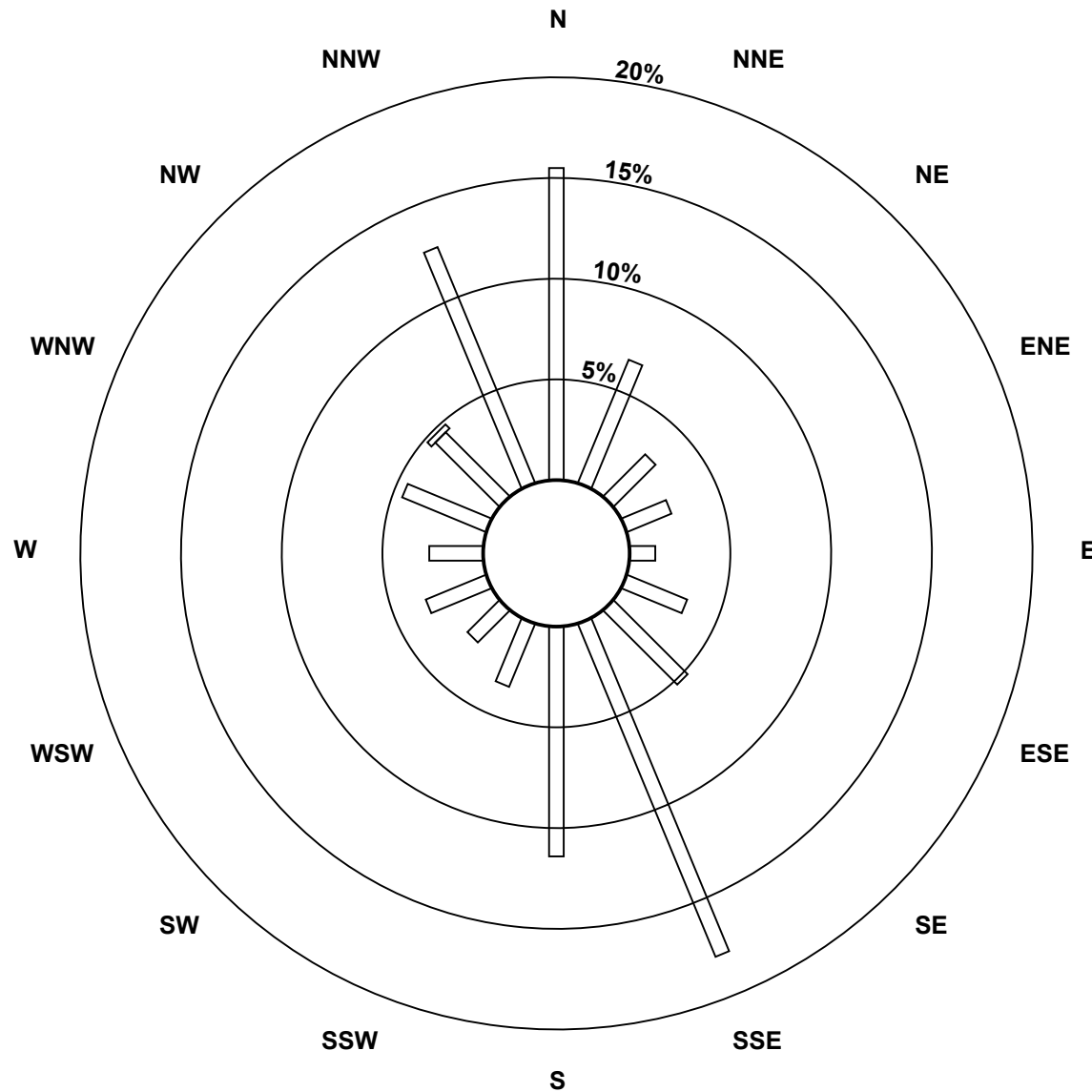
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Valleyview - March 2017

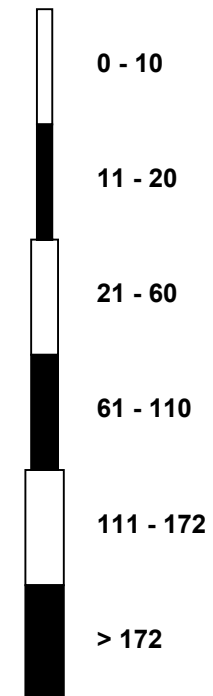


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Valleyview - March 2017

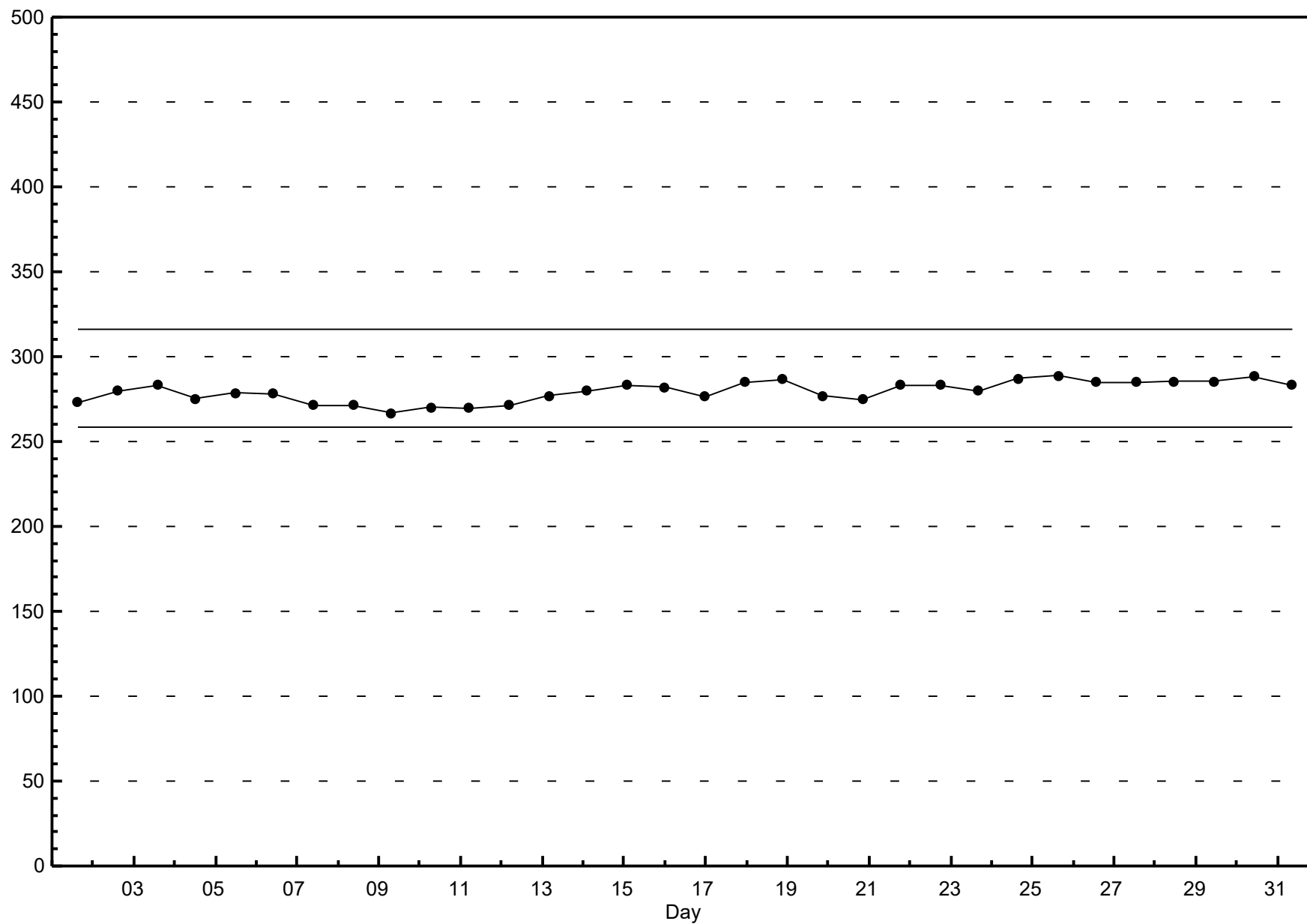


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Valleyview - March 2017



Hourly Averages

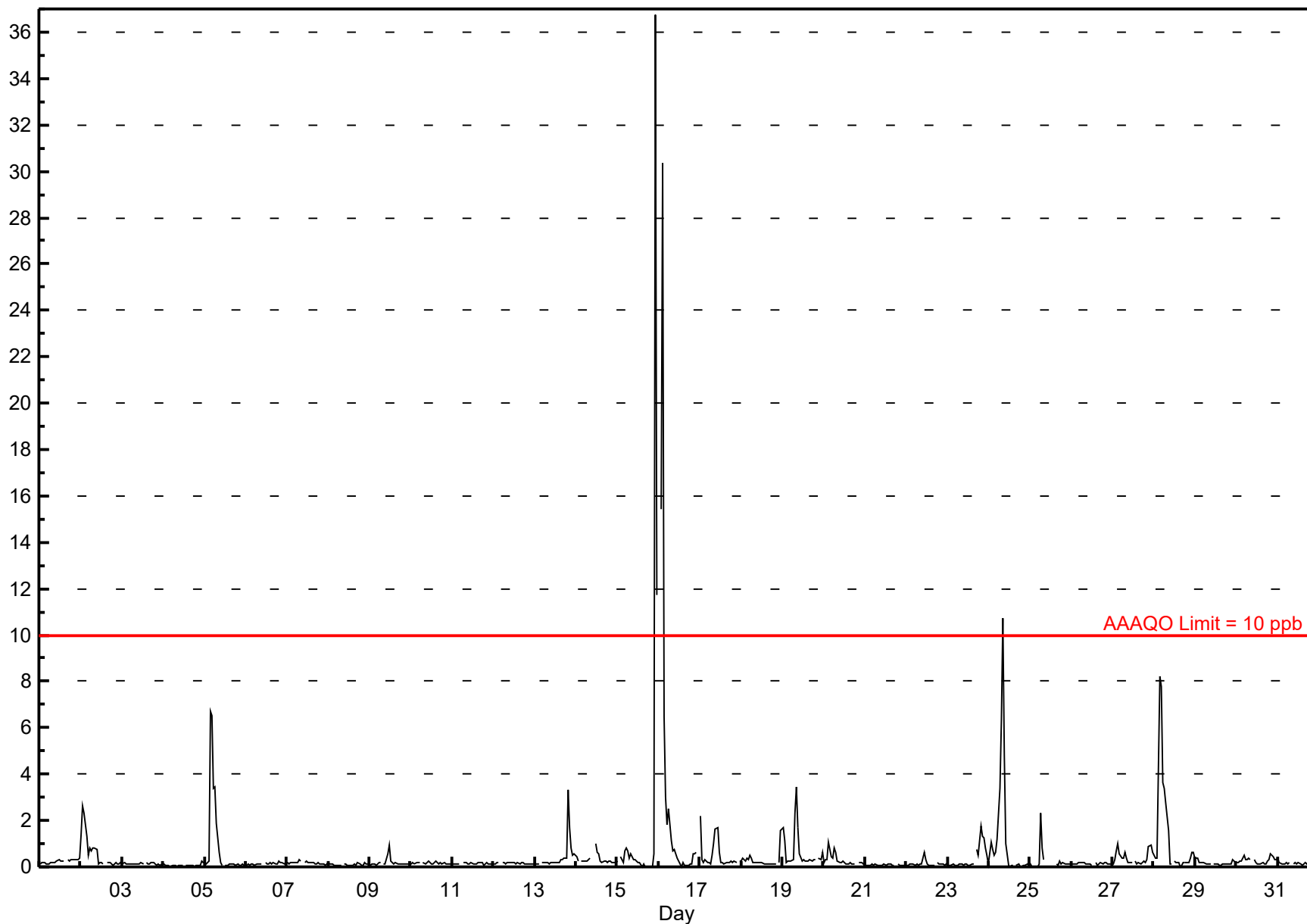
Hydrogen Sulphide (H₂S) - ppb

Valleyview - March 2017

Number of Exceedences (AAAQO): 1-hr: 5 24-hr: 0 Maximum Value: 36.7 ppb on Mar 15 23:00 Maximum Daily Average: 3.0 ppb on Mar 16																				Hours in Service: 744 Hours of Data: 706 Hours of Missing Data: 38 Hours of Calibration: 38 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Mar 4 05:00 Maximum Diurnal Average: 1.5 ppb at hour 23 Monthly Average: 0.51 ppb																				Minimum Daily Average: 0.1 ppb on Mar 4 Minimum Diurnal Average: 0.1 ppb at hour 17 Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.7 P ₉₉ = 7.6						
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-Mar	0	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
2-Mar	1	3	2	1	0	1	1	1	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.6	2.6
3-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.2
4-Mar	0	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
5-Mar	0	0	0	7	7	3	3	2	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1.1	6.7
6-Mar	0	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
7-Mar	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
8-Mar	0	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
9-Mar	0	0	0	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.0
10-Mar	0	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	0.2
11-Mar	0	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
12-Mar	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2
13-Mar	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	1	0	1	0.5	3.3
14-Mar	0	0	A	0	0	0	0	0	0	C	C	1	1	1	0	0	0	0	0	0	0	0	0	0	0.3	1.0
15-Mar	0	A	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	37	12	2.4	36.7
16-Mar	A	15	30	6	3	2	3	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	A	3.0	30.3
17-Mar	2	0	0	0	0	0	0	0	1	2	2	1	0	0	0	0	0	0	0	0	0	0	A	0	0.5	2.2
18-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	2	0.3	1.6
19-Mar	2	1	0	0	0	0	0	2	3	2	1	0	0	0	0	0	0	0	0	0	A	0	0	1	0.7	3.4
20-Mar	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.3	1.1
21-Mar	0	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
22-Mar	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.6
23-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	2	1	1	1	0	0.4	1.8
24-Mar	0	1	1	1	1	1	3	6	11	5	1	0	0	0	0	A	0	0	0	0	0	0	0	0	1.4	10.7
25-Mar	0	0	0	0	0	0	2	1	0	C	C	C	C	0	A	0	0	0	0	0	0	0	0	0	0.3	2.3
26-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.2
27-Mar	0	0	1	1	1	0	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	1	0.4	1.0
28-Mar	0	0	0	8	8	4	3	3	2	0	0	A	0	0	0	0	0	0	0	0	0	0	1	1	1.4	8.2
29-Mar	0	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
30-Mar	0	0	0	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.3	0.5
31-Mar	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
0.3 0.8 1.3 1.0 0.8 0.5 0.7 0.7 0.8 0.5 0.3 0.3 0.2 0.1 0.1 0.1 0.1 0.2 0.2 0.3 0.3 0.3 1.5 0.7																									Diurnal Average	
2.2 15.4 30.3 8.2 7.8 3.7 3.4 6.3 10.7 4.8 1.7 1.0 0.6 0.5 0.3 0.3 0.3 0.3 0.7 0.5 3.3 1.7 1.3 36.7 11.7																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																										

Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Valleyview - March 2017



Hourly Maximums

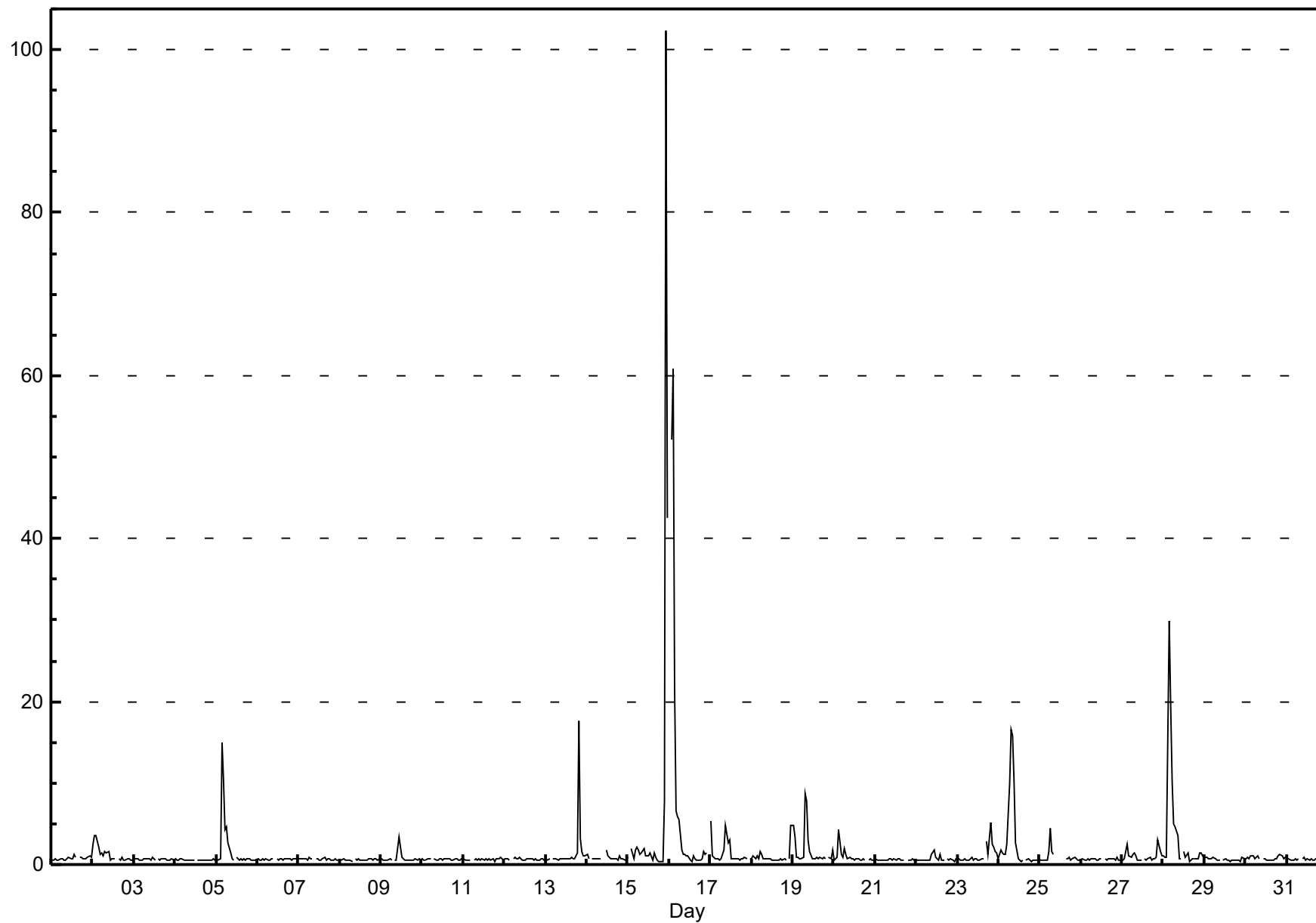
Hydrogen Sulphide (H₂S) - ppb

Valleyview - March 2017

Maximum Value: 102.4 ppb on Mar 15 23:00																				Maximum Daily Average: 7.6 ppb on Mar 16					Hours in Service: 744				
Minimum Value: 0 ppb on Mar 15 19:00																				Minimum Daily Average: 0.6 ppb on Mar 4					Hours of Data: 706				
Maximum Diurnal Average: 4.2 ppb at hour 23																				Minimum Diurnal Average: 0.6 ppb at hour 16					Hours of Missing Data: 38				
Monthly Average: 1.51 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.7 Q ₃ = 0.8 P ₉₀ = 1.6 P ₉₉ = 18.6					Hours of Calibration: 38				
																									Percent Operational Time: 100.0				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Mar	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	1.2			
2-Mar	2	3	4	2	1	1	1	2	1	2	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1.2	3.6			
3-Mar	1	1	1	1	1	0	1	1	1	1	1	1	1	A	1	0	1	1	1	1	1	1	1	1	0.6	0.9			
4-Mar	1	1	1	1	1	1	0	1	1	1	0	1	A	1	1	1	1	0	1	1	0	1	1	1	0.6	0.8			
5-Mar	1	1	1	15	10	4	5	3	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	2.1	15.0			
6-Mar	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8			
7-Mar	1	1	1	1	1	1	1	1	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9			
8-Mar	1	1	1	1	1	1	1	1	A	1	0	1	1	0	0	1	1	1	1	0	1	1	1	1	0.6	0.8			
9-Mar	1	1	1	1	0	1	1	A	0	0	3	2	1	1	1	1	1	1	1	1	1	1	1	1	0.8	3.3			
10-Mar	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0.6	0.8			
11-Mar	1	1	1	1	1	A	1	1	1	1	0	1	0	1	0	1	1	1	0	1	1	1	1	1	0.6	0.8			
12-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9			
13-Mar	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	18	3	2	1	1	1.6	17.7			
14-Mar	1	1	A	1	1	1	1	1	1	C	C	2	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.7			
15-Mar	1	A	2	1	2	2	2	1	1	2	1	1	1	2	0	1	1	0	0	0	0	8	102	43	7.6	102.4			
16-Mar	A	52	61	21	6	6	5	2	1	1	1	1	0	1	1	0	1	1	1	2	1	1	A	1	7.6	60.9			
17-Mar	5	1	1	1	1	1	1	1	2	5	3	3	1	1	1	1	1	1	1	1	1	A	1	1	1.3	5.3			
18-Mar	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	5	0.9	4.9			
19-Mar	5	3	1	1	1	1	1	9	8	3	2	1	1	1	1	1	1	1	1	1	A	1	1	2	1.9	8.8			
20-Mar	1	1	1	4	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.9	4.3			
21-Mar	1	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	A	1	0	1	1	0	0.6	0.7			
22-Mar	1	1	1	1	1	0	0	0	1	1	2	1	1	0	1	1	1	A	1	1	1	1	0	1	0.7	1.7			
23-Mar	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	A	3	1	5	2	2	2	1	1.2	5.1			
24-Mar	1	2	1	1	1	2	10	17	16	10	3	1	0	0	0	A	1	1	1	0	0	0	0	1	3.1	16.5			
25-Mar	1	1	0	1	0	2	5	2	1	C	C	C	C	1	A	1	1	1	1	1	1	1	1	1	1.0	4.5			
26-Mar	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	0.8			
27-Mar	1	1	2	3	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	3	2	1	1.1	3.0			
28-Mar	1	1	1	30	20	10	5	5	4	1	1	A	2	1	1	0	1	1	1	1	1	1	1	1	3.9	29.9			
29-Mar	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	0	0	1	1	0	0	1	0	1	0.6	0.9			
30-Mar	1	1	1	1	1	1	1	1	1	A	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0.8	1.3			
31-Mar	1	1	1	0	1	1	0	1	A	1	1	0	1	1	1	1	1	1	1	0	1	1	1	1	0.7	1.1			
1.1 2.6 2.9 3.0 1.9 1.5 1.7 1.8 1.7 1.4 1.0 0.9 0.7 0.7 0.7 0.6 0.6 0.7 0.7 1.3 0.8 1.1 4.2 2.3																									Diurnal Average				
5.3 52.2 60.9 29.9 19.5 10.2 10.0 16.5 15.8 10.3 3.3 3.0 1.5 1.5 1.4 1.4 0.9 2.8 1.4 17.7 3.2 7.9 102.4 42.6																									Diurnal Maximum				
C - Calibration A - Automated Daily Zero Span																													

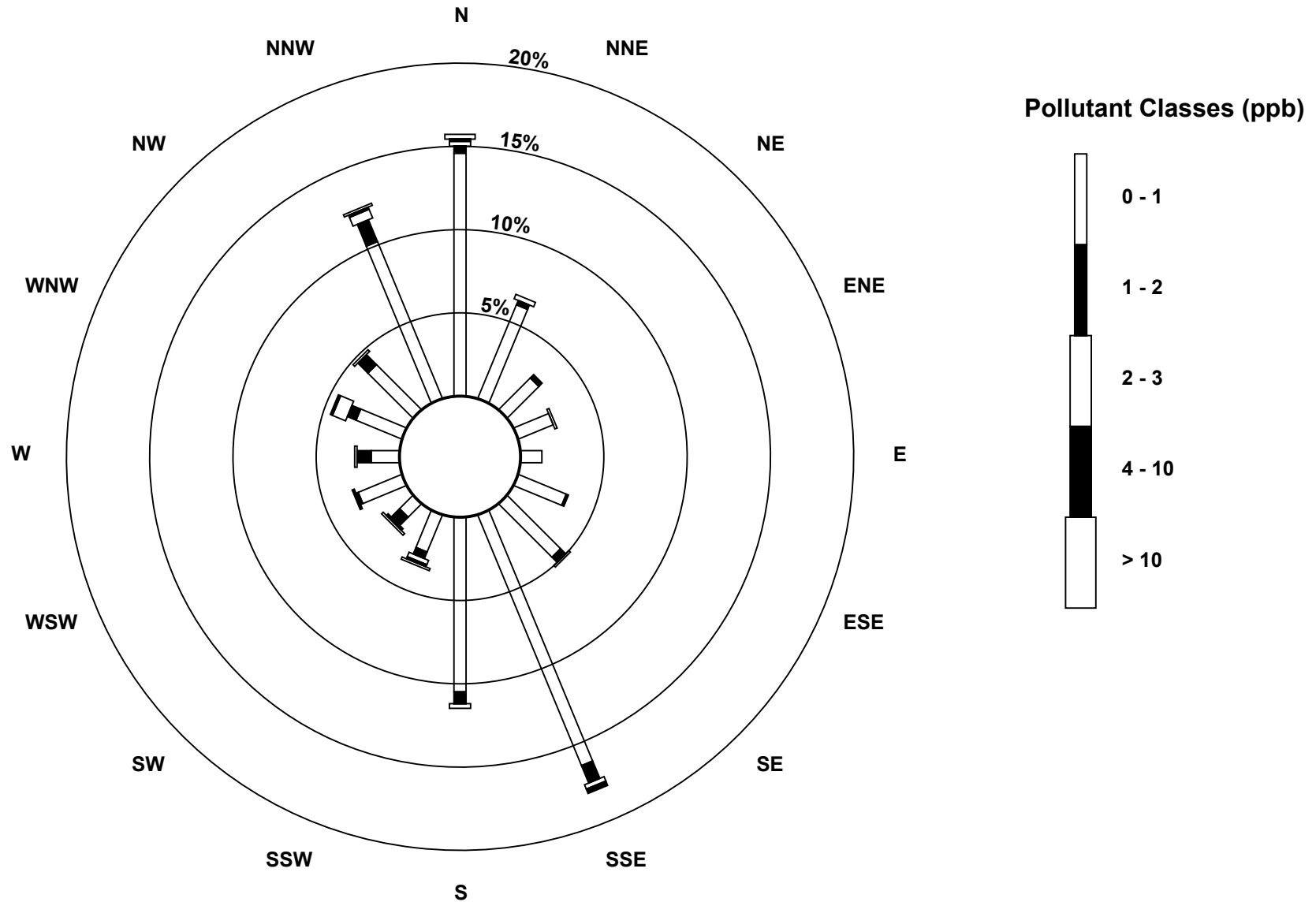
Hourly Maximums

Hydrogen Sulphide (H₂S) - ppb
Valleyview - March 2017



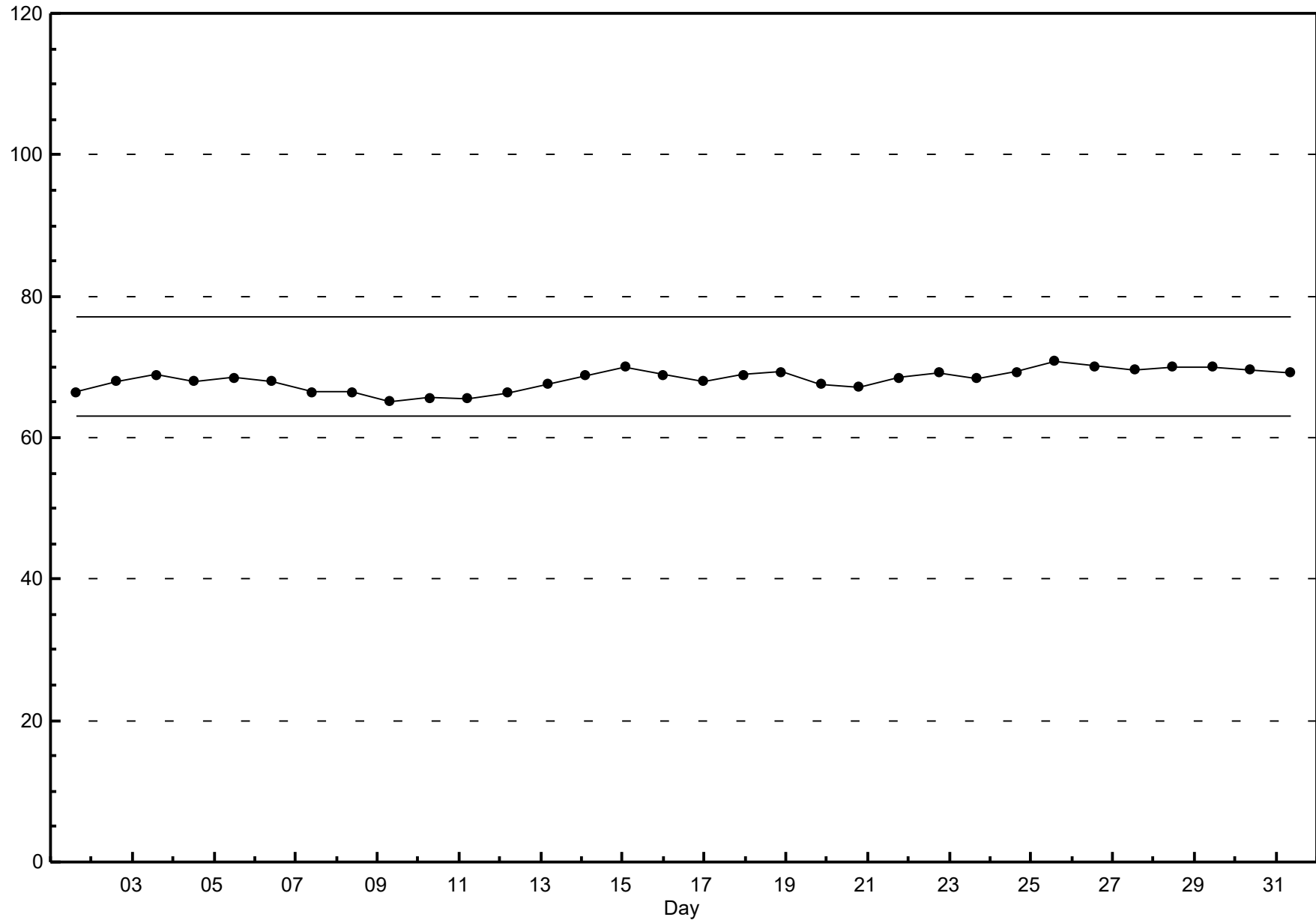
Pollutant Rose

Hydrogen Sulphide (H₂S) - ppb
Valleyview - March 2017



Span Responses

Hydrogen Sulphide (H_2S)
Valleyview - March 2017



Hourly Averages

External Temperature (ET) - °C

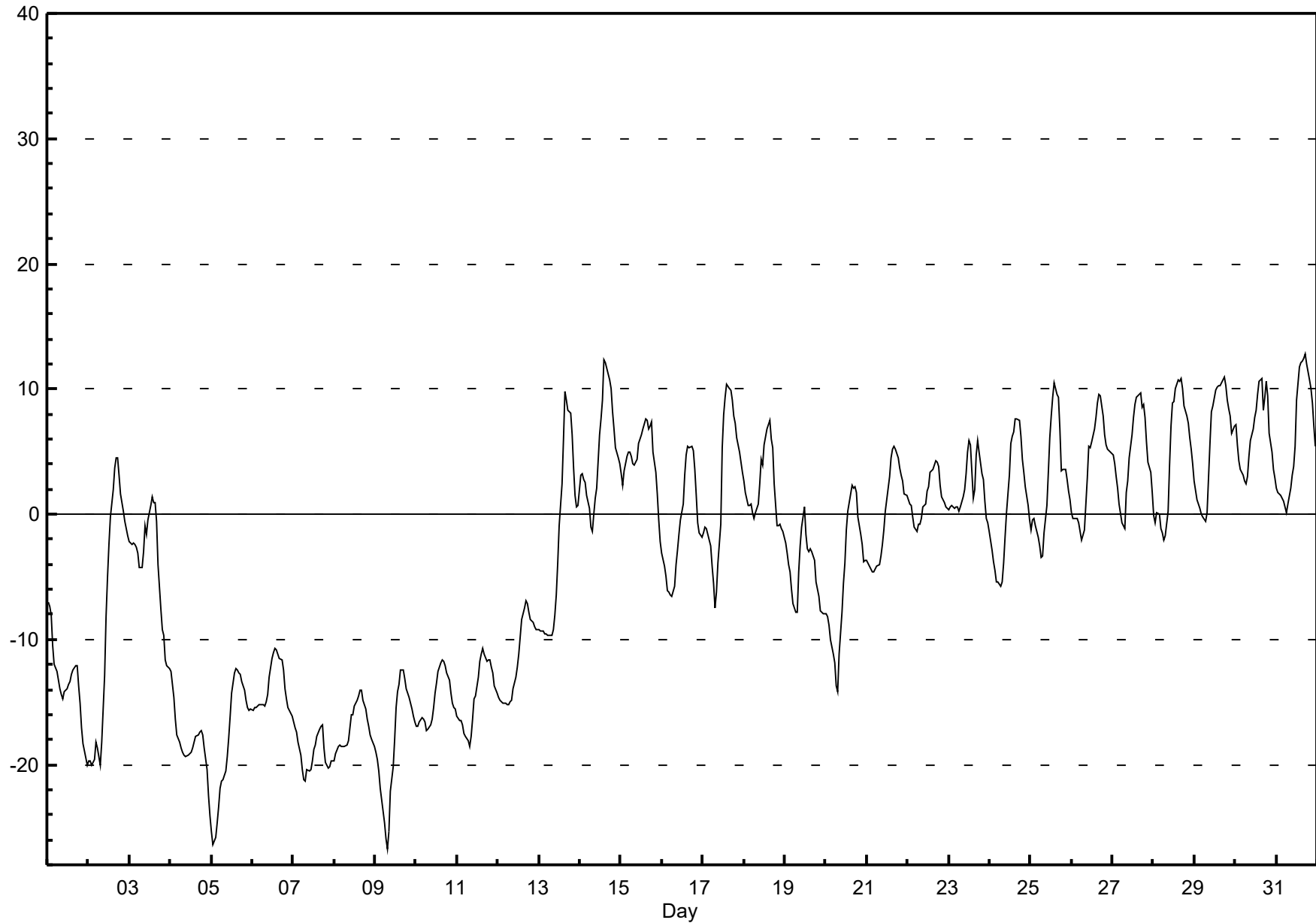
Valleyview - March 2017

Maximum Value: 12.8 °C on Mar 31 18:00																				Maximum Daily Average: 6.3 °C on Mar 30										Hours in Service: 744	
Minimum Value: -27 °C on Mar 9 08:00																				Minimum Daily Average: -19.0 °C on Mar 7										Hours of Data: 744	
Maximum Diurnal Average: 0.6 °C at hour 16																				Minimum Diurnal Average: -8.6 °C at hour 8										Hours of Missing Data: 0	
Monthly Average: -4.18 °C																				Percentiles: P ₁ = -24.7 P ₁₀ = -18.1 Q ₁ = -13.6 Median = -1.4 Q ₃ = 3.6 P ₉₀ = 7.7 P ₉₉ = 11.9										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-Mar	-7	-7	-8	-10	-12	-13	-13	-14	-14	-15	-14	-14	-13	-13	-12	-12	-12	-14	-15	-17	-18	-19	-20	-13.4	-7.0						
2-Mar	-20	-20	-20	-20	-18	-19	-19	-20	-18	-13	-8	-5	-2	0	2	4	4	4	3	2	0	-1	-1	-2	-7.7	4.5					
3-Mar	-2	-2	-2	-2	-3	-3	-4	-4	-3	-1	-2	0	1	1	1	1	-1	-4	-8	-9	-10	-12	-12	-12	-3.9	1.4					
4-Mar	-13	-14	-15	-16	-18	-18	-19	-19	-19	-19	-19	-19	-19	-19	-18	-18	-18	-17	-17	-18	-19	-20	-23	-24	-18.2	-12.5					
5-Mar	-25	-26	-26	-25	-23	-22	-21	-21	-21	-19	-18	-16	-14	-13	-12	-12	-13	-13	-13	-14	-15	-15	-16	-16	-17.9	-12.3					
6-Mar	-16	-15	-15	-15	-15	-15	-15	-15	-15	-14	-13	-12	-11	-11	-11	-11	-11	-12	-12	-14	-15	-15	-16	-16	-13.8	-10.7					
7-Mar	-17	-17	-17	-18	-19	-20	-21	-21	-20	-20	-20	-20	-19	-18	-18	-17	-17	-17	-19	-20	-20	-20	-20	-20	-19.0	-16.6					
8-Mar	-20	-19	-19	-18	-19	-19	-18	-18	-18	-17	-16	-16	-15	-15	-15	-14	-14	-15	-16	-16	-17	-18	-18	-19	-17.0	-14.0					
9-Mar	-19	-20	-20	-22	-23	-25	-26	-27	-25	-22	-20	-18	-15	-14	-14	-12	-12	-13	-14	-14	-15	-16	-16	-17	-18.3	-12.4					
10-Mar	-17	-17	-17	-16	-16	-17	-17	-17	-17	-16	-15	-14	-14	-13	-12	-12	-12	-12	-13	-13	-14	-15	-15	-16	-14.9	-11.6					
11-Mar	-16	-16	-17	-17	-17	-18	-18	-19	-18	-16	-15	-14	-13	-12	-11	-11	-11	-12	-12	-12	-12	-13	-14	-14	-14.5	-10.8					
12-Mar	-15	-15	-15	-15	-15	-15	-15	-15	-15	-14	-13	-12	-11	-10	-8	-7	-7	-7	-8	-8	-9	-9	-9	-9	-11.6	-6.9					
13-Mar	-9	-9	-9	-10	-10	-10	-10	-10	-9	-8	-6	-4	-1	2	6	10	9	8	8	6	4	2	1	1	-2.0	9.8					
14-Mar	3	3	3	3	2	0	-1	-1	0	1	2	6	8	9	12	12	11	11	10	8	7	5	5	4	5.1	12.4					
15-Mar	3	2	3	5	5	5	5	4	4	4	6	6	6	7	8	8	7	7	7	5	3	2	0	-2	4.5	7.6					
16-Mar	-3	-4	-5	-6	-6	-6	-7	-6	-4	-3	-2	0	1	3	5	5	5	5	5	4	1	-1	-1	-2	-0.9	5.4					
17-Mar	-1	-1	-1	-2	-3	-4	-6	-8	-6	-4	-1	5	8	9	10	10	10	9	8	7	6	5	4	3	2.5	10.4					
18-Mar	3	2	1	1	1	0	0	0	1	2	4	4	6	7	7	7	6	5	2	-1	-1	-1	-1	-1	2.2	7.5					
19-Mar	-2	-3	-4	-5	-6	-7	-8	-8	-5	-3	-1	1	-2	-3	-3	-3	-3	-4	-5	-6	-7	-8	-8	-8	-4.5	0.6					
20-Mar	-8	-8	-9	-10	-11	-12	-14	-14	-11	-8	-6	-4	-1	0	2	2	2	2	2	0	-2	-2	-4	-4	-4.9	2.3					
21-Mar	-4	-4	-4	-5	-5	-4	-4	-4	-3	-2	-1	0	2	3	4	5	5	5	5	4	3	3	2	2	0.1	5.4					
22-Mar	1	1	1	0	-1	-1	-1	-1	0	1	1	2	2	3	4	4	4	4	4	2	1	1	1	1	1.3	4.3					
23-Mar	0	1	1	0	1	1	0	1	1	2	3	5	6	6	1	2	5	6	5	3	3	1	0	-1	2.2	5.9					
24-Mar	-1	-3	-4	-4	-5	-5	-6	-5	-4	-2	0	3	6	6	7	8	8	7	6	4	3	2	1	0	0.9	7.6					
25-Mar	-1	0	0	-1	-2	-2	-3	-3	-2	1	3	6	8	9	10	10	9	7	4	4	4	3	2	1	2.7	10.4					
26-Mar	0	0	0	0	-1	-1	-2	-1	1	3	5	5	6	7	8	9	10	9	8	6	6	5	5	5	3.8	9.6					
27-Mar	5	4	3	2	1	-1	-1	-1	2	3	4	6	8	9	9	9	10	9	9	8	6	4	3	2	4.7	9.7					
28-Mar	0	-1	0	0	-1	-1	-2	-2	0	4	7	9	9	10	11	11	11	10	9	8	7	6	5	4	4.7	10.8					
29-Mar	3	1	1	0	0	0	-1	0	3	6	8	9	10	10	10	10	11	11	10	9	8	8	7	7	5.9	11.0					
30-Mar	7	6	4	4	3	3	2	3	5	6	7	8	8	10	11	11	8	9	11	9	7	5	4	3	6.3	10.8					
31-Mar	2	2	1	1	1	1	0	1	2	3	4	5	9	12	12	12	13	13	12	11	10	9	7	5	6.2	12.8					
																									Diurnal Average						
																									Diurnal Maximum						

Hourly Averages

External Temperature (ET) - °C

Valleyview - March 2017



Hourly Averages

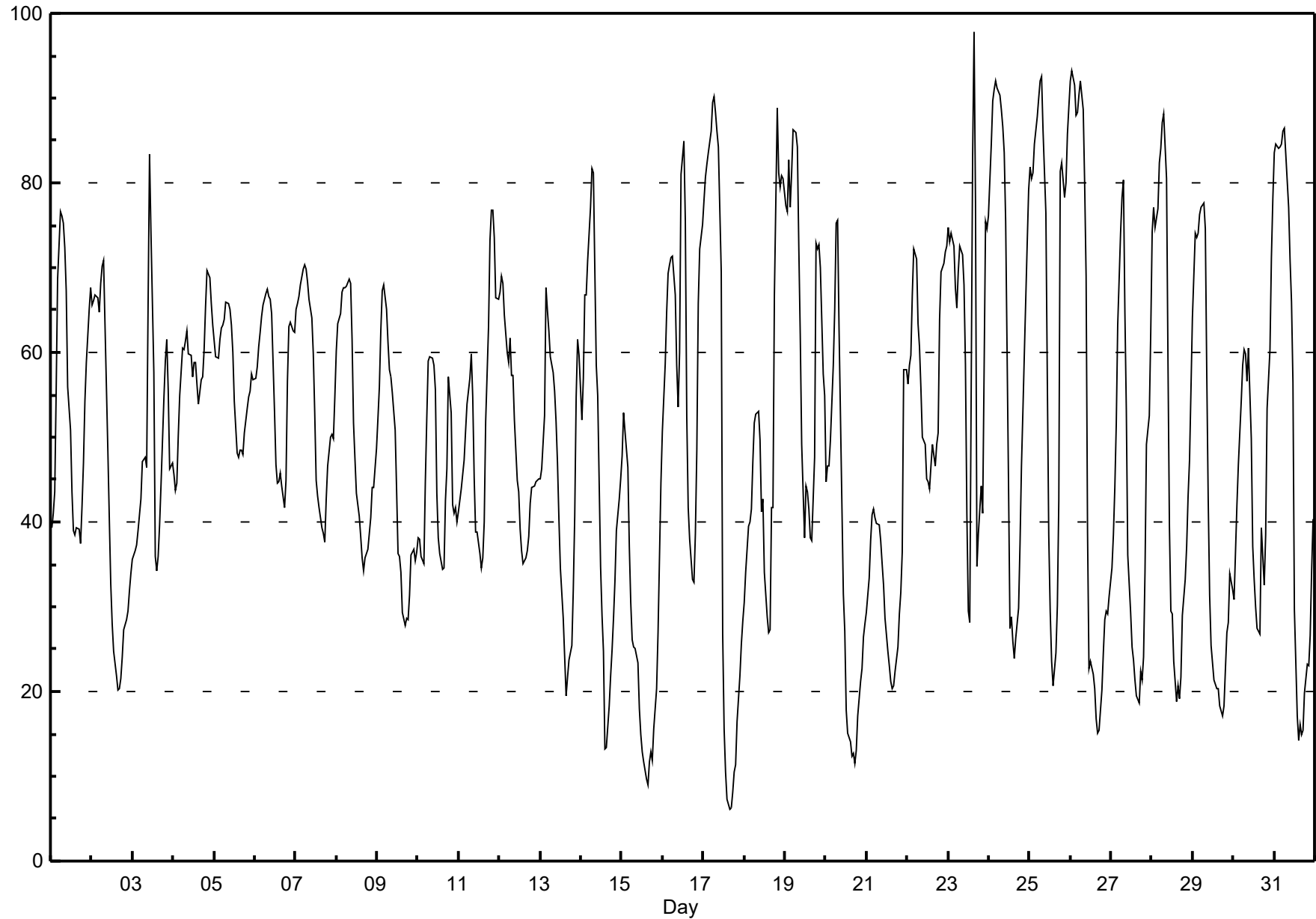
Relative Humidity (RH) - %

Valleyview - March 2017

Maximum Value: 97.8 % on Mar 23 16:00																								Maximum Daily Average: 67.3 % on Mar 25								Hours in Service: 744			
Minimum Value: 6 % on Mar 17 16:00																								Minimum Daily Average: 25.9 % on Mar 15								Hours of Data: 744			
Maximum Diurnal Average: 69.0 % at hour 7																								Minimum Diurnal Average: 31.0 % at hour 16								Hours of Missing Data: 0			
Monthly Average: 50.28 %																								Percentiles: P ₁ = 10.5 P ₁₀ = 22.7 Q ₁ = 35.2 Median = 49.2 Q ₃ = 66.0 P ₉₀ = 77.6 P ₉₉ = 92.0								Hours of Calibration: 0			
																																Percent Operational Time: 100.0			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24											
1-Mar	39	41	44	55	69	77	76	75	72	67	56	51	44	39	39	39	39	37	42	47	54	59	65	68	53.9	76.6									
2-Mar	66	66	67	66	65	68	70	71	63	48	40	33	28	25	22	20	20	22	24	27	29	30	32	34	43.1	70.8									
3-Mar	36	37	37	39	41	43	47	48	46	66	83	74	58	36	34	36	40	44	55	59	61	56	46	47	48.7	83.3									
4-Mar	46	44	45	50	55	61	60	61	63	60	60	57	59	59	56	54	57	57	60	65	70	69	66	63	58.1	69.7									
5-Mar	61	59	59	61	63	63	64	66	66	65	63	60	54	48	48	48	48	48	51	53	55	55	57	57	57.3	66.0									
6-Mar	57	58	61	62	64	66	67	67	67	66	65	53	47	45	45	46	44	42	45	57	63	64	63	62	57.3	67.4									
7-Mar	65	66	67	68	70	70	70	68	66	64	60	53	45	43	42	39	39	38	43	47	50	50	50	55	55.3	70.4									
8-Mar	60	63	65	67	68	68	68	69	68	61	52	48	43	41	38	36	34	36	37	39	41	44	44	49	51.5	68.6									
9-Mar	52	56	62	67	68	65	61	58	57	55	51	44	36	36	34	29	28	29	28	31	36	37	35	36	45.6	67.9									
10-Mar	38	38	36	35	45	52	59	59	59	59	56	43	38	36	34	35	42	46	57	53	42	41	42	40	45.3	59.4									
11-Mar	41	44	46	47	51	54	57	60	55	45	39	39	36	35	36	40	52	63	73	77	77	73	67	66	53.0	76.9									
12-Mar	67	69	68	64	60	59	62	57	57	52	45	44	39	37	35	36	37	38	42	44	44	45	45	45	49.6	69.0									
13-Mar	45	46	52	68	65	62	60	58	55	52	47	40	34	29	24	20	22	24	25	32	41	55	61	60	44.9	67.7									
14-Mar	52	57	67	67	71	77	82	81	70	59	55	35	29	25	13	13	18	22	25	29	33	39	43	45	46.1	81.6									
15-Mar	48	53	51	47	37	30	26	25	25	23	18	15	13	12	10	9	12	13	12	16	20	27	36	45	25.9	52.9									
16-Mar	51	59	65	69	70	71	71	67	59	54	60	81	85	75	52	42	38	33	33	39	48	66	72	75	59.8	85.0									
17-Mar	78	81	82	84	86	90	90	88	86	84	70	27	16	11	7	6	6	8	11	11	17	22	26	28	46.4	90.1									
18-Mar	31	34	39	40	42	47	52	53	53	50	41	43	34	29	27	27	42	42	67	89	81	79	81	81	50.1	88.7									
19-Mar	77	77	83	77	81	86	86	84	72	62	49	38	44	44	41	38	38	48	73	72	73	70	57	55	63.6	86.2									
20-Mar	45	47	47	50	59	65	75	76	63	42	32	27	18	15	14	12	13	12	13	17	21	23	26	28	34.9	75.6									
21-Mar	29	33	38	41	42	41	40	40	38	35	33	29	25	23	21	20	21	22	25	29	32	36	58	58	33.7	58.0									
22-Mar	56	59	60	67	72	71	63	61	56	50	49	45	45	44	47	49	47	49	50	64	69	70	72	73	57.8	72.6									
23-Mar	75	73	74	73	68	65	69	73	72	68	59	41	30	28	83	98	78	35	39	44	41	58	75	75	62.1	97.8									
24-Mar	76	85	90	91	92	91	90	89	87	84	75	44	28	29	26	24	26	30	37	47	53	60	73	79	62.7	92.0									
25-Mar	82	81	81	85	88	90	92	93	86	76	57	38	29	24	21	25	30	43	81	82	78	80	86	89	67.3	92.6									
26-Mar	92	93	92	88	88	90	92	89	80	69	39	23	24	22	20	17	15	15	20	25	29	30	29	31	50.4	93.2									
27-Mar	35	38	44	52	63	74	78	80	65	53	36	29	25	24	21	19	19	19	22	21	24	34	49	53	42.6	80.3									
28-Mar	74	77	75	77	82	84	87	88	80	59	40	29	29	24	19	21	19	22	29	33	37	43	47	56	51.3	88.2									
29-Mar	64	74	74	74	76	77	78	75	58	43	31	25	21	21	20	20	18	17	18	23	27	28	34	32	42.9	77.6									
30-Mar	31	36	42	47	54	58	60	60	57	61	50	37	33	30	27	27	39	36	33	38	53	60	71	78	46.7	78.2									
31-Mar	83	85	84	84	85	86	86	83	77	71	66	56	30	17	14	16	15	15	20	23	23	27	34	40	50.9	86.5									
56.5 59.0 61.1 63.3 65.7 67.8 69.0 68.4 63.8 58.2 50.8 42.0 36.1 32.3 31.3 31.0 32.1 32.5 38.4 43.1 46.2 49.8 53.1 55.2																								Diurnal Average											
92.0 93.2 91.6 91.1 92.0 91.1 92.1 92.6 86.6 84.2 83.3 80.9 85.0 75.4 83.1 97.8 77.7 63.0 81.3 88.7 81.2 80.1 85.8 89.0																								Diurnal Maximum											

Hourly Averages

Relative Humidity (RH) - %
Valleyview - March 2017



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	2	0	2	8	8	9	11	12	11	9	7	8	9	8	7	5	4	4	3	2	3	2	0	0	4.9	12.1
Dir	159	121	10	4	3	0	360	349	1	344	315	297	305	313	332	333	341	11	58	25	341	341	339	350	344	349
2 Spd	0	0	1	1	0	0	0	0	0	3	8	8	8	6	5	7	5	5	5	6	8	7	6	7	3.9	8.1
Dir	186	207	25	27	308	137	331	223	166	174	171	171	167	166	172	169	170	163	168	169	168	171	171	171	169	171
3 Spd	8	8	6	4	2	3	2	1	9	16	7	2	2	2	6	5	7	14	12	10	9	12	10	13	2.8	16.1
Dir	172	168	169	170	175	180	199	204	320	333	326	195	157	200	242	237	355	8	14	21	17	357	5	7	350	333
4 Spd	16	19	18	19	18	18	17	16	12	13	9	10	10	9	9	8	7	5	2	1	0	0	0	0	9.6	18.7
Dir	14	12	7	0	359	351	349	342	348	350	359	352	344	342	342	340	342	345	6	353	334	246	151	162	355	12
5 Spd	0	0	0	2	0	0	0	2	1	2	3	4	7	5	9	12	12	9	8	7	8	7	7	7	4.5	11.7
Dir	215	109	311	1	168	77	350	14	28	3	340	339	343	325	350	346	347	3	6	6	9	11	4	13	356	347
6 Spd	5	5	6	6	5	6	5	6	5	5	4	6	9	9	11	11	11	10	8	10	10	10	9	8	7.5	11.0
Dir	14	16	15	16	10	17	9	6	13	12	0	4	4	9	9	3	10	13	17	5	4	3	360	4	8	3
7 Spd	7	8	8	6	6	5	2	2	6	8	7	7	7	10	11	13	13	10	9	6	6	6	6	7	7.3	13.4
Dir	2	4	356	0	3	354	338	346	6	352	351	355	6	350	345	345	343	353	347	356	11	10	9	5	355	345
8 Spd	8	7	8	8	7	5	4	3	4	5	5	10	12	12	14	13	11	11	9	7	5	5	4	5	7.4	13.7
Dir	359	5	15	19	11	15	11	7	9	14	351	339	340	341	343	358	6	13	17	14	16	358	5	13	1	343
9 Spd	4	2	2	1	1	0	1	1	1	0	2	4	5	9	14	7	10	10	7	5	4	5	6	3	2.8	14.3
Dir	12	27	356	349	355	27	186	171	160	189	356	347	323	336	341	12	27	28	16	36	136	128	130	125	17	341
10 Spd	3	4	5	7	6	5	6	6	5	6	6	8	9	7	7	7	7	7	7	7	9	9	6	8	5.7	9.5
Dir	106	115	115	118	116	80	65	67	73	69	74	118	123	114	114	113	123	117	127	161	155	161	159	163	118	123
11 Spd	6	4	4	5	3	0	0	0	0	2	1	5	5	6	5	4	6	6	1	0	2	6	8	7	2.0	8.4
Dir	164	163	166	168	166	155	157	82	156	156	353	345	52	59	57	62	25	17	62	59	90	131	128	122	101	128
12 Spd	6	4	4	4	6	5	3	5	8	8	9	12	13	12	11	10	10	8	9	9	12	14	15	13	8.5	15.3
Dir	128	124	122	130	128	133	137	153	159	157	159	161	164	166	162	152	153	147	149	152	161	165	165	165	155	165
13 Spd	13	11	11	11	11	11	11	11	12	11	10	7	8	6	5	1	4	5	1	0	1	1	1	3	6.1	13.1
Dir	166	167	167	166	170	168	169	170	169	170	171	169	169	168	163	149	331	335	287	281	175	198	200	165	170	166
14 Spd	4	3	3	2	2	0	1	0	0	1	1	1	4	4	10	11	9	7	6	6	3	5	7	7	3.3	11.2
Dir	179	191	186	173	174	221	189	184	246	332	347	156	346	321	152	160	166	165	165	159	169	171	170	172	168	160
15 Spd	8	6	9	12	8	5	6	6	3	2	5	6	7	4	1	5	5	1	0	1	2	0	0	2	3.2	12.2
Dir	173	173	288	304	277	266	281	283	268	261	292	284	288	297	346	300	271	332	89	144	148	177	357	342	277	304
16 Spd	0	0	1	1	0	1	2	2	2	1	1	0	2	3	6	5	8	5	1	2	3	1	1	2	1.1	8.2
Dir	314	231	353	343	133	327	332	340	336	48	145	160	212	210	285	340	347	1	97	168	356	302	34	168	329	347
17 Spd	2	3	2	2	0	0	0	1	0	1	2	3	2	2	1	3	3	3	1	4	7	6	5	4	1.8	7.3
Dir	175	168	255	159	267	225	232	332	310	335	346	166	132	122	139	143	109	79	118	150	140	142	147	146	143	140
18 Spd	2	1	0	2	1	0	2	4	3	1	1	5	5	5	6	9	9	9	19	18	12	5	4	3	3.4	19.4
Dir	163	171	167	156	168	234	178	176	170	186	28	332	335	324	326	352	353	6	329	317	321	287	253	274	323	329
19 Spd	4	3	1	2	0	1	1	0	1	2	4	7	13	12	9	9	8	8	11	4	11	8	7	7	4.8	13.2
Dir	285	295	62	9	15	339	330	210	164	3	340	325	3	359	4	3	360	347	6	339	321	314	296	287	342	3
20 Spd	8	6	7	4	1	0	0	1	2	2	3	1	3	4	2	1	3	3	2	2	3	2	1	4	0.2	7.8
Dir	294	300	298	276	279	2	218	179	168	162	159	137	164	170	180	149	46	63	55	57	65	55	85	153	237	294
21 Spd	6	6	6	8	8	8	6	7	7	9	10	12	11	11	9	8	7	5	6	6	5	6	5	3	7.2	12.2
Dir	160	155	156	154	144	140	150	142	145	159	163	165	165	167	162	159	160	146	131	140	139	159	152	138	154	165
22 Spd	2	2	0	0	1	2	2	3	3	2	3	4	6	5	10	10	8	9	5	4	3	3	2	3	2.5	10.5
Dir	136	157	154	258	235	165	177	148	132	307	316	320	337	335	340	341	358	358	6	344	5	30	35	358	350	340

Hourly Averages

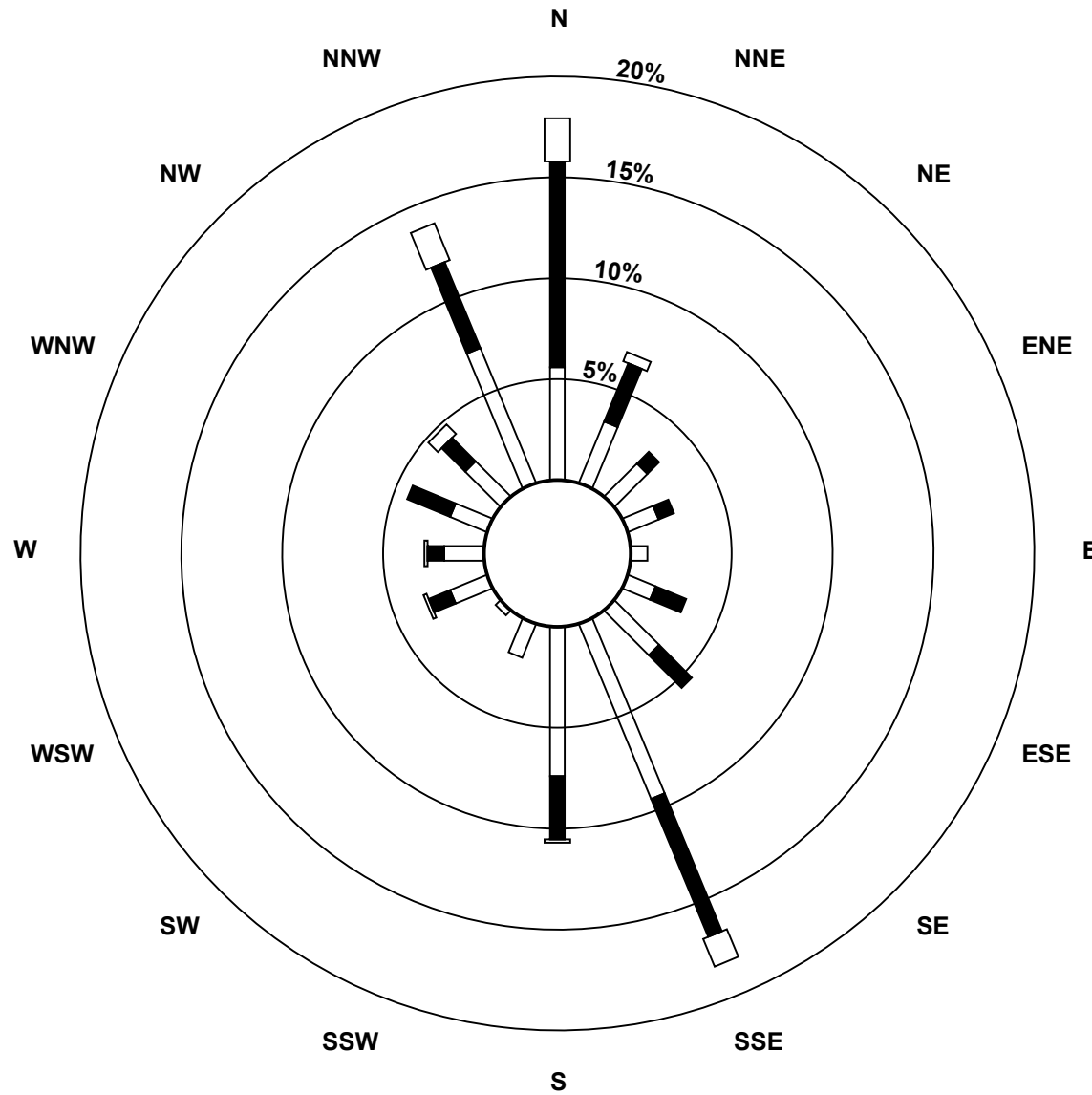
Wind Speed (km/h)
Wind Direction (deg)
Valleyview - March 2017

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	2	1	1	2	2	4	4	3	6	5	5	3	8	10	9	3	2	2	2	1	0	1	0	1	1.3	9.6
Dir	13	110	57	49	100	131	211	201	253	245	242	294	323	331	292	107	152	320	315	292	199	142	180	195	282	331
24 Spd	0	1	2	1	2	0	1	0	0	0	1	3	4	4	7	8	8	9	9	6	1	2	1	1	2.2	9.3
Dir	340	348	338	333	334	293	304	294	213	196	159	155	109	322	335	340	342	344	356	7	314	346	141	200	346	344
25 Spd	1	3	2	1	1	0	1	1	2	1	3	1	2	2	1	4	4	8	10	1	1	2	3	2	1.1	10.0
Dir	178	178	170	168	177	31	313	5	239	146	248	219	11	359	6	203	235	267	302	129	203	183	176	172	241	302
26 Spd	2	2	2	2	1	0	0	2	1	1	0	5	7	7	6	4	6	5	8	6	4	3	2	3	1.6	8.1
Dir	159	161	158	178	172	152	204	180	178	160	179	337	340	337	339	9	47	56	50	52	50	42	100	166	34	50
27 Spd	3	1	1	1	0	1	2	0	1	2	2	2	4	2	3	4	4	5	2	3	1	1	0	0	0.8	4.6
Dir	170	195	317	244	156	147	294	124	169	168	195	250	231	323	333	345	337	349	28	354	303	275	228	164	306	349
28 Spd	1	0	2	1	1	0	0	1	1	3	2	2	3	1	4	9	7	5	6	5	3	1	1	0	1.7	9.5
Dir	166	217	169	259	157	220	283	286	156	172	185	252	263	312	320	242	239	272	289	292	311	152	227	167	256	242
29 Spd	1	1	1	1	2	2	1	1	2	4	3	3	2	5	5	7	6	5	6	7	3	1	5	2	1.5	7.3
Dir	185	172	172	152	165	188	180	163	161	160	156	10	36	338	357	10	5	46	55	48	55	45	335	27	36	10
30 Spd	0	4	4	1	1	1	0	1	2	4	6	6	6	5	4	7	12	9	1	0	1	2	2	2	2.3	11.5
Dir	41	7	19	344	235	172	68	204	246	256	275	326	344	345	339	319	312	332	277	208	201	159	176	178	318	312
31 Spd	2	4	4	3	3	2	4	3	3	4	4	6	5	5	9	12	12	8	7	5	6	4	1	1	3.6	11.8
Dir	188	165	167	176	175	179	171	169	167	166	167	167	178	178	243	245	260	249	245	243	259	271	13	184	217	260
Spd	0.8	0.7	0.4	0.7	0.5	0.6	0.5	0.2	0.2	0.4	0.5	1.0	1.5	2.3	2.9	2.4	3.3	3.7	2.9	1.6	0.9	0.5	0.7	0.8	Diurnal Average	
Dir	138	120	38	28	64	49	353	7	7	340	276	309	343	338	335	343	350	5	9	17	28	94	118	127	Diurnal Maximum	
Spd	16.2	18.7	17.6	18.6	18.1	18.1	16.5	15.5	12.1	16.1	10.4	12.2	13.2	12.4	14.3	13.4	12.5	13.6	19.4	17.6	12.3	14.3	15.3	13.3	Diurnal Maximum	
Dir	14	12	7	0	359	351	349	342	348	333	163	165	3	341	341	345	343	8	329	317	161	165	165	7		
Maximum Speed Value: 19 km/h on Mar 18 19:00								Minimum Speed Value: 0 km/h on Mar 2 07:00												Hours in Service:				744		
Maximum Daily Speed Average: 9.6 km/h on Mar 4								Minimum Daily Speed Average: 0.2 km/h on Mar 27												Hours of Data:				744		
Maximum Diurnal Speed Average: 3.7 km/h at hour 18								Minimum Diurnal Speed Average: 0.2 km/h at hour 9												Hours of Missing Data:				0		
Monthly Average Velocity: 0.93 km/h 2.0 deg								Speed Percentiles: P ₁ = 0.1 P ₁₀ = 0.5 Q ₁ = 1.6 Median = 4.2 Q ₃ = 7.3 P ₉₀ = 10.2 P ₉₉ = 17.6												Percent Operational Time:				100.0		
All monthly, daily, and diurnal averages have been calculated using vector methods																										
Frequency Distribution																										
Speed Range (km/h)																										
Direction	0 to 5		5 to 11		11 to 19		19 to 28		28 to 38		> 38		Total													
North	77		106		30		0		0		0		213													
NorthEast	34		15		0		0		0		0		49													
East	16		4		0		0		0		0		20													
SouthEast	59		39		0		0		0		0		98													
South	122		51		17		0		0		0		190													
SouthWest	37		6		1		0		0		0		44													
West	26		19		1		0		0		0		46													
NorthWest	49		29		5		1		0		0		84													
Total	420		269		54		1		0		0		744													

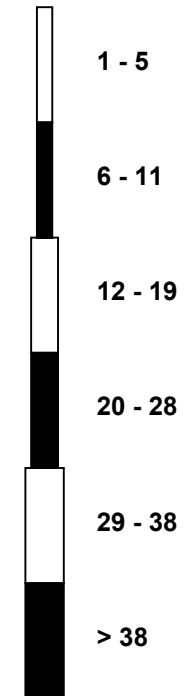
Wind Rose

Wind Speed (WS) (km/h)

Valleyview - March 2017



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Valleyview - March 2017

Maximum Speed: 20 km/h on Mar 18 19:00																			Maximum Daily Speed Average: 9.9 km/h on Mar 4										Hours in Service: 744	
Minimum Speed: 0 km/h on Mar 4 22:00																			Minimum Daily Speed Average: 2.3 km/h on Mar 27										Hours of Data: 744	
Maximum Diurnal Speed Average: 7.6 km/h at hour 17																			Minimum Diurnal Speed Average: 3.3 km/h at hour 7										Hours of Missing Data: 0	
Monthly Average Speed: 5.06 km/h																			Percentiles: P ₁ = 0.2 P ₁₀ = 0.8 Q ₁ = 1.9 Median = 4.4 Q ₃ = 7.4 P ₉₀ = 10.5 P ₉₉ = 17.7										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Mar	2	1	2	8	8	9	11	13	12	9	7	8	10	8	7	5	4	4	3	2	3	2	0	0	5.8	12.6				
2-Mar	0	0	1	1	1	0	0	0	0	3	8	8	8	6	5	7	5	5	5	6	8	8	6	7	4.2	8.1				
3-Mar	8	9	6	4	3	3	2	2	10	16	7	3	2	3	6	5	9	14	12	11	9	12	10	13	7.4	16.3				
4-Mar	16	19	18	19	18	18	17	16	12	13	10	10	10	9	9	8	7	5	2	1	0	0	0	0	9.9	18.9				
5-Mar	0	0	0	2	1	0	0	2	1	2	3	5	7	5	10	12	12	9	8	8	8	7	7	7	4.9	11.8				
6-Mar	5	5	6	6	5	6	5	6	5	5	4	7	9	10	11	11	11	10	8	10	10	10	9	8	7.6	11.2				
7-Mar	7	8	8	6	6	6	2	2	6	8	7	7	7	10	11	14	13	10	9	6	6	6	6	8	7.5	13.6				
8-Mar	8	7	8	8	7	5	4	3	4	5	6	10	12	12	14	13	11	11	9	7	5	5	4	5	7.7	13.8				
9-Mar	4	2	2	2	1	0	1	1	1	1	2	4	5	10	14	9	10	11	8	5	4	6	6	4	4.6	14.4				
10-Mar	3	4	5	7	7	6	7	6	5	6	7	8	10	7	7	8	7	7	7	7	9	9	6	8	6.8	9.7				
11-Mar	6	4	4	5	3	0	0	0	0	3	2	5	5	6	6	5	7	6	2	0	2	6	8	7	3.9	8.5				
12-Mar	6	4	4	4	6	5	3	5	8	8	10	12	13	12	11	11	10	8	9	10	12	14	15	13	8.9	15.4				
13-Mar	13	11	12	11	11	11	11	11	12	11	10	7	9	6	5	2	4	6	1	1	1	1	1	3	7.2	13.3				
14-Mar	4	3	3	3	2	0	1	0	0	1	1	2	4	5	10	11	9	7	6	7	3	5	7	7	4.3	11.3				
15-Mar	8	6	12	12	8	5	7	6	3	2	6	7	7	4	2	6	6	1	0	1	2	0	1	2	4.8	12.4				
16-Mar	0	0	1	2	0	1	2	2	2	1	1	1	3	4	6	5	8	5	1	2	3	2	2	2	2.4	8.2				
17-Mar	2	3	4	2	1	1	0	1	0	2	2	3	3	3	2	4	3	4	2	4	7	6	5	4	2.9	7.4				
18-Mar	2	1	1	2	1	0	2	4	3	2	3	6	5	5	6	9	9	20	18	12	5	4	3	5.3	19.8					
19-Mar	4	4	1	3	1	2	1	1	1	2	4	10	13	12	9	10	8	8	11	5	11	8	7	7	5.9	13.3				
20-Mar	8	6	7	4	2	1	0	1	2	2	3	2	4	4	3	2	4	4	2	2	3	2	1	4	3.0	8.0				
21-Mar	6	6	6	8	9	8	7	7	7	9	11	12	11	12	9	8	7	6	6	6	5	6	5	3	7.4	12.3				
22-Mar	3	2	0	1	1	2	2	3	3	2	4	5	6	5	11	10	8	9	5	4	3	3	2	3	4.1	10.5				
23-Mar	2	1	1	2	3	4	4	3	7	6	5	5	8	11	13	4	2	2	2	2	1	1	0	1	3.8	13.2				
24-Mar	1	1	2	1	2	1	1	0	0	0	1	3	6	5	8	8	8	9	9	6	2	2	1	1	3.3	9.4				
25-Mar	1	3	2	1	1	1	1	1	2	2	3	2	2	2	2	5	4	9	10	1	1	2	3	2	2.7	10.1				
26-Mar	2	2	2	2	1	1	1	2	1	1	2	5	7	8	6	5	6	5	8	6	4	3	3	3	3.6	8.3				
27-Mar	3	1	1	1	0	1	3	1	1	2	3	3	4	3	4	4	4	5	3	3	1	2	1	0	2.3	4.7				
28-Mar	1	0	2	1	1	1	1	1	1	3	3	3	3	3	5	10	7	6	6	5	3	1	1	1	2.8	9.7				
29-Mar	1	1	1	1	2	2	1	1	2	4	3	3	3	5	6	7	6	6	6	7	4	2	5	2	3.3	7.4				
30-Mar	2	4	4	2	1	1	1	1	3	4	6	7	7	6	5	8	12	9	2	0	1	2	2	2	3.7	11.9				
31-Mar	2	4	4	3	3	2	4	3	3	4	4	6	5	5	10	12	12	8	7	5	7	5	2	2	5.0	12.2				
4.2 4.0 4.2 4.3 3.7 3.3 3.3 3.4 3.8 4.4 4.7 5.7 6.7 6.7 7.4 7.5 7.6 7.0 6.1 5.1 4.9 4.6 4.3 4.3 Diurnal Average																														
16.4 18.9 17.8 18.8 18.3 18.3 16.7 15.6 12.3 16.3 10.5 12.3 13.3 12.4 14.4 13.6 12.6 13.8 19.8 17.8 12.5 14.4 15.4 13.3 Diurnal Maximum																														
All monthly, daily, and diurnal averages have been calculated using scalar methods																														

Hourly Standard Deviations

Wind Direction (WD) - deg

Valleyview - March 2017

Maximum Value: 89.2 deg on Mar 19 08:00																			Hours in Service: 744						
Minimum Value: 4.2 deg on Mar 7 17:00																			Hours of Data: 744						
																			Hours of Missing Data: 0						
Percentiles: P ₁ = 5.2 P ₁₀ = 7.5 Q ₁ = 9.9 Median = 15.9 Q ₃ = 39.1 P ₉₀ = 63.1 P ₉₉ = 84.7																			Hours of Calibration: 0						
																			Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Mar	17	42	11	10	7	8	8	17	8	10	18	15	15	13	18	19	13	19	28	14	17	15	58	74	74.4
2-Mar	46	46	31	28	62	80	75	30	83	53	7	8	8	8	10	8	12	7	7	5	6	6	7	6	83.5
3-Mar	6	5	16	8	35	14	12	23	50	10	31	25	55	37	18	16	57	8	9	13	14	16	8	6	57.2
4-Mar	8	8	9	8	8	8	8	6	10	7	13	13	6	7	7	8	9	15	25	18	87	59	49	44	86.5
5-Mar	84	83	85	46	65	74	27	22	24	21	12	9	7	22	15	7	9	8	6	8	8	9	7	10	84.9
6-Mar	12	18	11	11	11	11	13	8	11	12	15	19	14	16	13	12	11	12	11	7	7	8	7	7	19.0
7-Mar	7	8	8	5	9	13	16	52	11	12	10	16	20	11	7	10	4	7	5	4	10	9	9	8	52.3
8-Mar	7	6	7	8	10	10	9	7	7	14	24	4	4	7	8	11	12	8	9	8	10	10	6	7	23.8
9-Mar	6	14	21	38	49	80	13	11	13	68	16	6	17	13	7	44	14	11	12	36	20	9	11	20	80.2
10-Mar	20	12	15	11	14	28	20	15	19	16	24	13	12	18	19	17	13	11	8	10	11	9	9	10	28.3
11-Mar	9	10	9	7	13	50	20	38	52	19	82	15	20	19	27	29	32	25	45	51	34	12	7	7	82.4
12-Mar	11	10	9	11	10	10	11	13	11	12	12	11	9	10	10	12	12	15	12	11	11	7	7	7	14.6
13-Mar	8	9	7	9	8	8	7	7	8	6	7	8	8	8	10	72	44	12	55	85	24	33	25	16	84.8
14-Mar	9	11	6	16	11	30	70	41	60	52	36	83	12	34	28	9	9	8	7	8	8	8	7	6	82.5
15-Mar	7	7	55	11	16	20	14	15	37	48	17	24	15	35	52	25	45	66	51	14	12	59	61	48	66.3
16-Mar	74	78	54	54	80	78	45	63	50	76	22	84	34	28	30	15	7	21	47	18	47	55	79	45	83.9
17-Mar	11	15	57	39	63	65	67	61	63	18	13	53	37	63	78	28	42	27	58	11	8	10	10	13	77.9
18-Mar	14	53	44	12	13	60	15	7	10	82	76	8	8	12	14	12	6	10	12	8	9	22	16	15	82.1
19-Mar	16	42	43	32	80	76	72	89	54	45	25	47	8	8	12	13	11	9	11	25	12	10	13	11	89.2
20-Mar	11	12	11	15	65	81	48	16	27	28	21	80	25	21	53	81	28	21	28	20	12	16	75	13	81.4
21-Mar	9	9	8	9	11	10	12	14	11	12	10	8	9	10	13	15	12	15	10	11	11	12	17	18	18.2
22-Mar	18	15	47	70	50	37	11	14	16	59	25	26	10	22	6	6	13	8	13	17	19	11	26	40	70.3
23-Mar	49	62	61	37	34	12	34	40	17	13	24	51	15	28	57	40	65	76	60	78	89	25	57	21	88.5
24-Mar	66	77	32	64	24	66	36	74	82	85	62	30	50	38	12	7	9	6	6	14	81	51	59	39	84.9
25-Mar	38	12	23	42	49	89	54	72	45	78	45	81	32	19	64	32	38	32	14	67	22	9	10	16	88.7
26-Mar	14	16	13	10	14	84	51	19	39	44	79	8	4	12	12	35	17	19	14	11	8	7	43	15	84.0
27-Mar	19	24	40	32	53	32	69	77	31	18	57	62	34	62	38	17	22	8	26	20	22	70	65	63	76.8
28-Mar	33	52	13	54	50	59	77	70	17	28	47	49	30	68	51	18	22	26	26	17	44	34	43	58	76.7
29-Mar	28	32	27	15	23	22	44	23	18	11	16	31	63	33	27	11	11	18	9	13	34	67	13	79	78.9
30-Mar	76	32	12	45	43	48	82	53	26	27	24	24	20	20	42	33	13	12	54	20	40	57	13	8	81.9
31-Mar	14	7	8	6	10	6	7	9	10	12	9	8	12	23	23	14	16	21	14	9	11	20	65	64	65.3
84.3 82.7 84.9 70.3 79.9 88.7 81.9 89.2 83.5 84.9 82.4 83.9 63.1 67.6 77.9 80.9 64.9 76.4 59.6 84.8 88.5 69.8 79.5 78.9																									

PAZA

Donnelly Station

Monthly Summary Tables, Graphs and Roses

Hourly Averages

Sulphur Dioxide (SO₂) - ppb

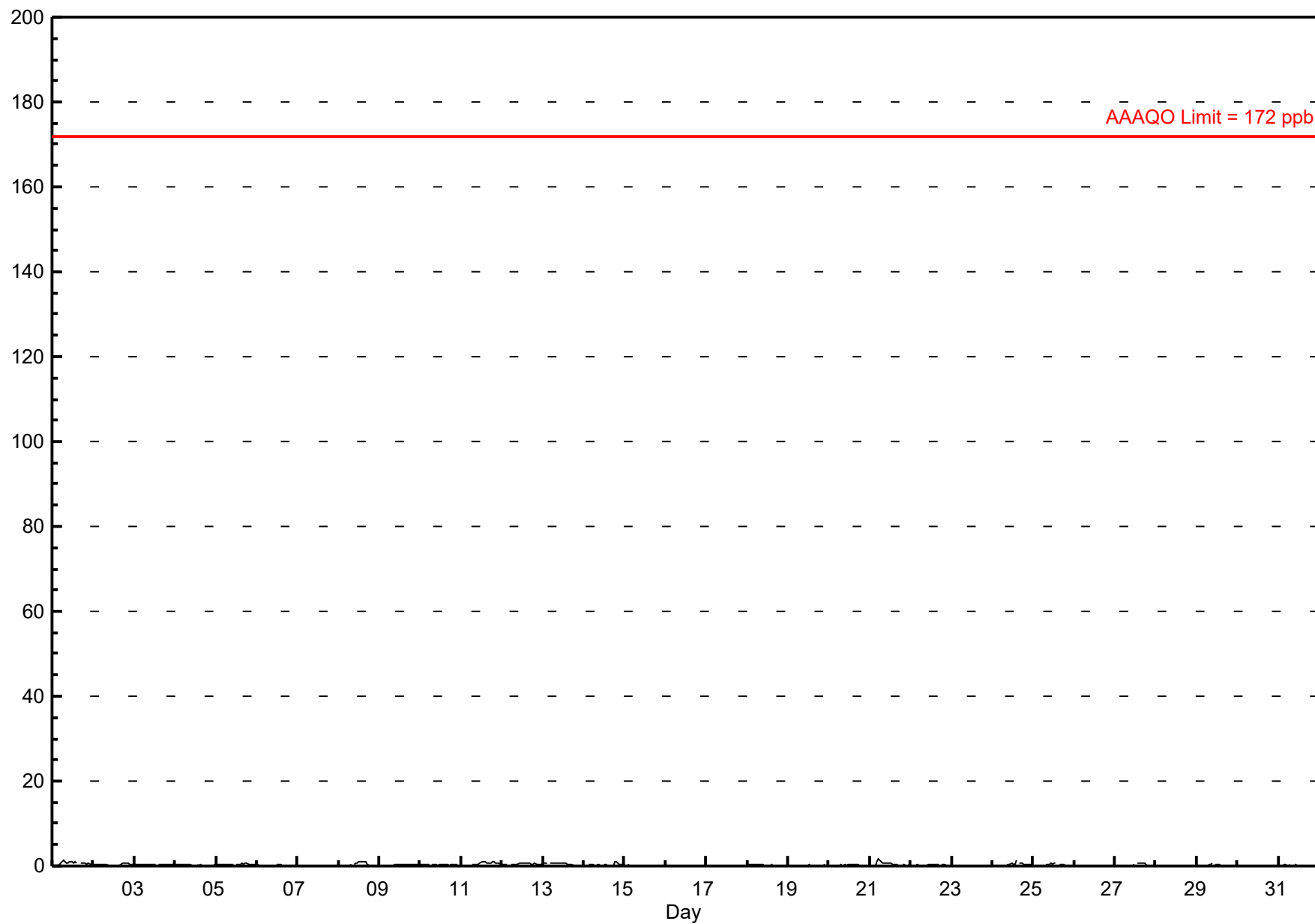
Donnelly - March 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 744									
Maximum Value: 1.6 ppb on Mar 21 06:00																			Maximum Daily Average: 0.6 ppb on Mar 1					Hours of Data: 709				
Minimum Value: 0 ppb on Mar 14 16:00																			Minimum Daily Average: 0.0 ppb on Mar 30					Hours of Missing Data: 35				
Maximum Diurnal Average: 0.3 ppb at hour 14																			Minimum Diurnal Average: 0.1 ppb at hour 4					Hours of Calibration: 35				
Monthly Average: 0.22 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.6 P ₉₉ = 1.1					Percent Operational Time: 100.0				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1-Mar	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	1	0	0	0.6	1.2		
2-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	1	1	1	0	0	0	0.4	0.7		
3-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.3	0.4		
4-Mar	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3		
5-Mar	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	1	0	1	1	0	0	0	0	0	0.3	0.6		
6-Mar	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3		
7-Mar	0	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		
8-Mar	0	0	0	0	0	0	0	0	A	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.4	1.1		
9-Mar	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4		
10-Mar	0	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		
11-Mar	0	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0.5	1.2		
12-Mar	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	1	0	0	1	0	1	0	0	0.5	0.8		
13-Mar	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.5	0.8		
14-Mar	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0.3	1.1		
15-Mar	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3		
16-Mar	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.0	0.1		
17-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2		
18-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0.2	0.5		
19-Mar	0	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		
20-Mar	0	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		
21-Mar	0	0	0	0	1	2	1	1	1	1	1	1	1	0	0	0	0	0	A	0	0	0	0	0	0.4	1.6		
22-Mar	0	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		
23-Mar	0	0	0	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		
24-Mar	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	A	1	1	0	0	0	0	0	0	0.3	1.2		
25-Mar	0	0	0	0	0	0	0	0	0	0	1	0	1	1	A	0	0	0	0	0	0	0	0	0	0.2	0.7		
26-Mar	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0	0	0	0	0	0	0	0	0	0.1	0.1		
27-Mar	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	0	0	0	0	0	0	0	0.2	0.8		
28-Mar	0	0	0	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		
29-Mar	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7		
30-Mar	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0		
31-Mar	0	0	0	0	0	0	0	0	A	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0.1	0.2		
																									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

Donnelly - March 2017



Hourly Maximums

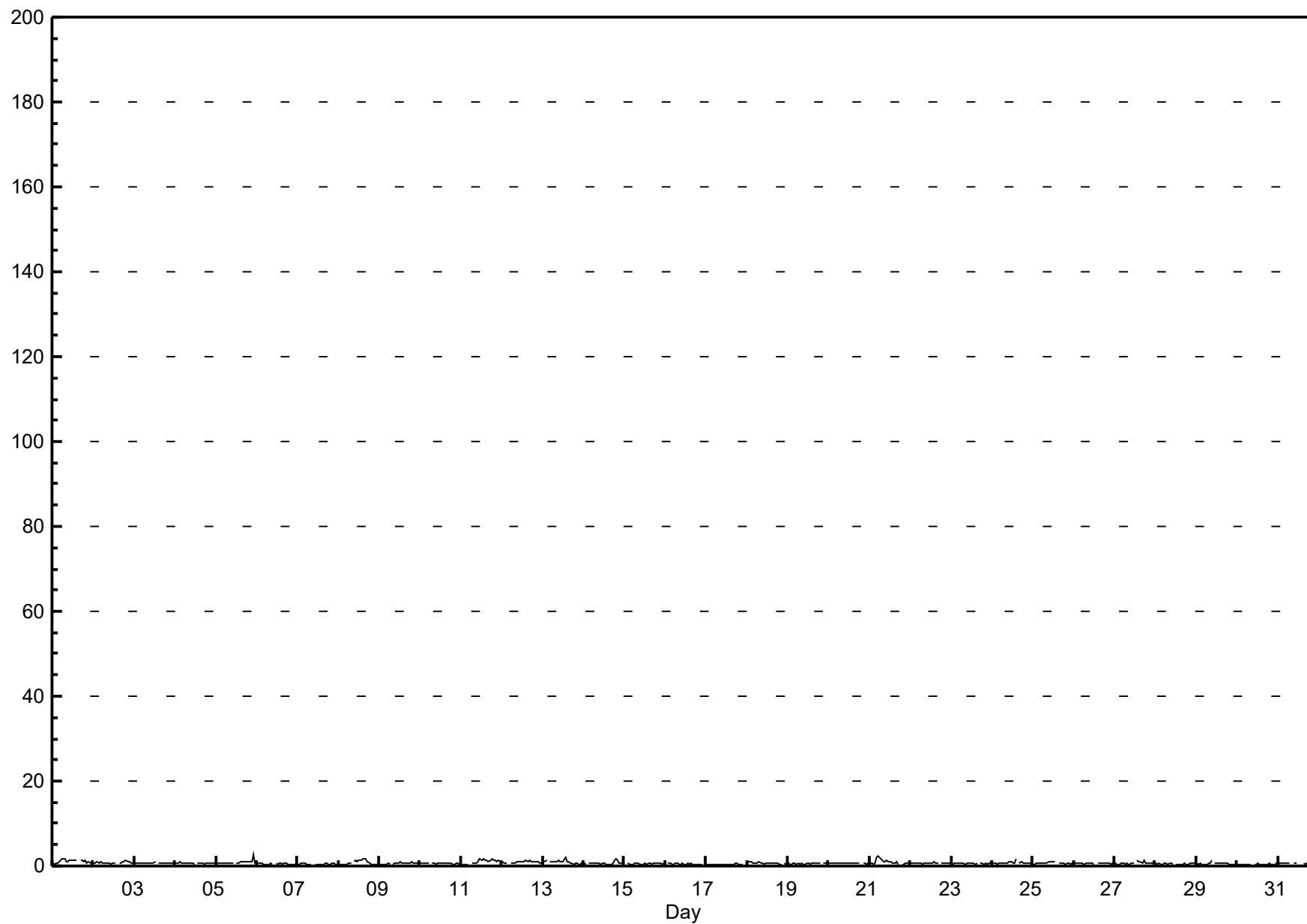
Sulphur Dioxide (SO₂) - ppb

Donnelly - March 2017

Maximum Value: 2.6 ppb on Mar 5 23:00																			Maximum Daily Average: 1.1 ppb on Mar 1										Hours in Service: 744	
Minimum Value: 0 ppb on Mar 30 05:00																			Minimum Daily Average: 0.4 ppb on Mar 30										Hours of Data: 709	
Maximum Diurnal Average: 0.8 ppb at hour 15																			Minimum Diurnal Average: 0.6 ppb at hour 2										Hours of Missing Data: 35	
Monthly Average: 0.67 ppb																			Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.7 P ₉₀ = 1.1 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-Mar	1	0	1	1	1	2	2	2	1	1	1	2	1	1	1	A	1	1	1	1	1	1	1	1	1.1	1.8				
2-Mar	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	1.3				
3-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.7	1.0				
4-Mar	1	1	1	1	1	1	1	1	1	1	1	0	A	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9				
5-Mar	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	3	1	0.8	2.6				
6-Mar	1	1	1	1	0	0	0	0	1	0	A	1	0	1	1	0	1	1	0	0	0	0	0	0	0.5	0.7				
7-Mar	0	0	1	1	1	0	0	0	0	A	0	0	0	0	0	0	1	1	0	0	1	1	0	0	0.5	0.7				
8-Mar	0	0	1	0	0	0	1	0	A	1	1	1	1	1	2	2	2	1	1	0	0	0	0	0	0.8	1.6				
9-Mar	0	0	0	0	0	1	0	A	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9				
10-Mar	1	1	1	1	1	1	A	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0.6	0.8				
11-Mar	0	0	0	0	0	A	1	1	1	1	1	2	1	2	1	1	1	1	2	1	1	1	1	1	1.0	1.7				
12-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3				
13-Mar	1	1	1	A	1	1	1	1	1	1	1	1	1	2	1	1	1	1	0	1	1	0	0	1	1.0	1.9				
14-Mar	1	1	A	1	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	2	1	1	1	1	0.7	1.7				
15-Mar	1	A	1	0	0	0	1	1	1	0	0	0	1	0	1	1	0	1	1	1	1	1	0	1	0.5	0.7				
16-Mar	A	1	1	1	0	0	1	1	0	0	1	0	0	1	1	1	0	0	0	0	0	0	0	A	0.5	0.6				
17-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	A	1	0.4	0.6				
18-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	A	1	0	0.6	1.1				
19-Mar	1	0	0	1	1	0	1	0	1	1	0	1	1	0	1	1	1	1	1	1	A	1	1	1	0.5	0.7				
20-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	1	0.6	0.7				
21-Mar	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	0	A	0	0	1	1	1	0.9	2.4				
22-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.6	0.9				
23-Mar	0	1	1	1	1	1	1	1	0	1	1	1	1	1	0	1	A	1	1	0	1	0	1	1	0.5	0.6				
24-Mar	1	1	1	0	1	1	1	1	1	1	1	1	1	1	2	A	1	1	1	1	1	1	1	1	0.8	1.9				
25-Mar	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	1	1	0	1	0.7	1.1				
26-Mar	0	1	1	1	1	1	0	1	1	1	1	1	0	A	1	1	1	1	1	1	1	1	0	1	0.6	0.7				
27-Mar	1	0	0	0	1	1	1	1	0	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.7	1.3				
28-Mar	1	0	1	1	0	1	1	0	1	1	0	A	0	0	0	0	0	1	0	0	1	1	1	1	0.5	0.7				
29-Mar	1	0	1	0	1	0	1	1	1	1	A	1	1	1	1	1	1	1	1	0	0	0	0	0	0.6	1.2				
30-Mar	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0.4	0.6				
31-Mar	0	1	1	1	1	1	1	1	A	1	1	1	C	C	C	1	0	1	1	0	0	1	0	0	0.6	0.8				
0.6		0.6	0.6	0.6	0.6	0.7	0.6	0.7	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.7	0.6	Diurnal Average					
1.1		1.2	1.3	0.9	2.1	2.4	1.9	1.6	1.2	1.4	1.5	1.7	1.5	1.9	1.9	1.6	1.6	1.3	1.7	1.7	1.4	1.2	2.6	1.0	Diurnal Maximum					
C - Calibration		A - Automated Daily Zero Span																												

Hourly Maximums

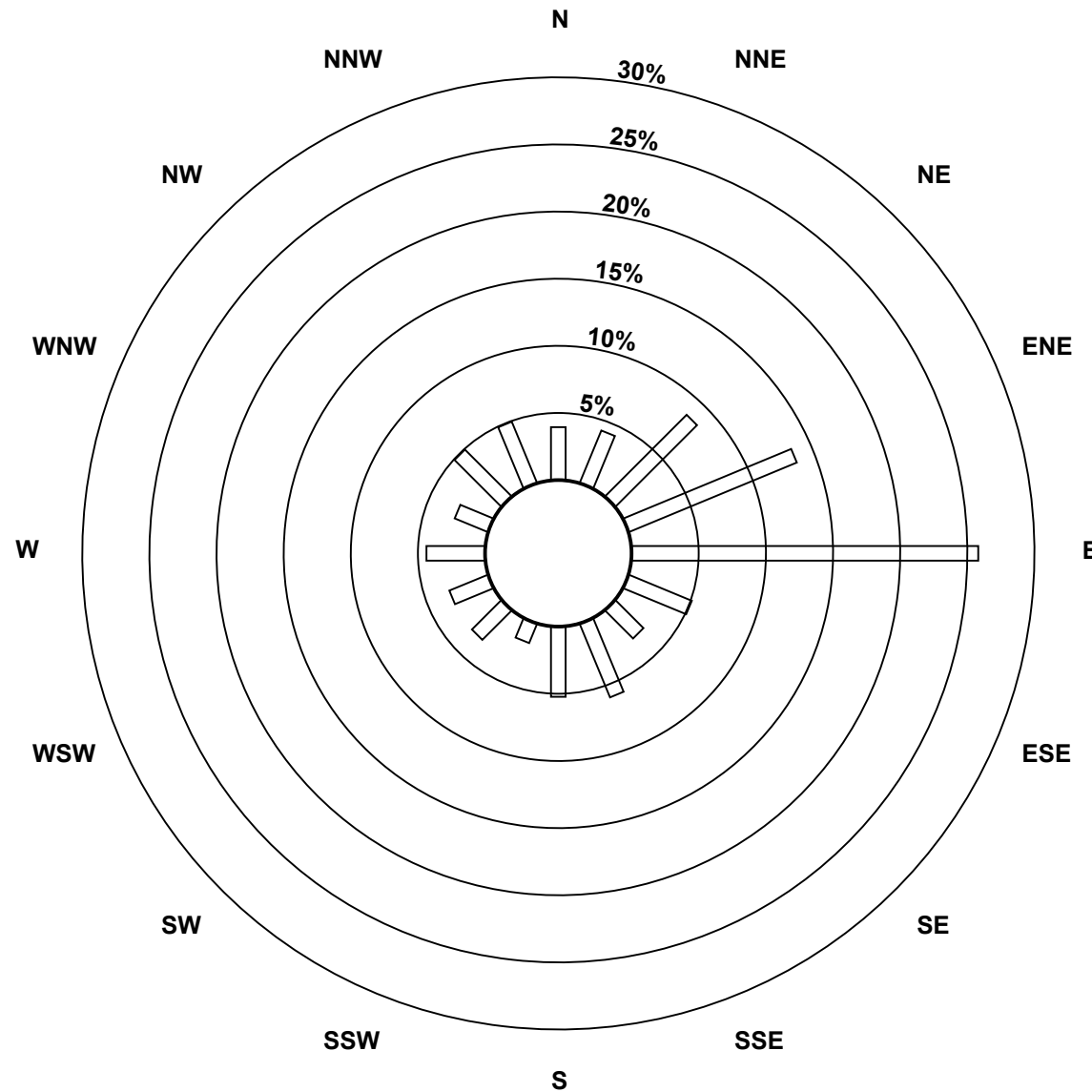
Sulphur Dioxide (SO₂) - ppb
Donnelly - March 2017



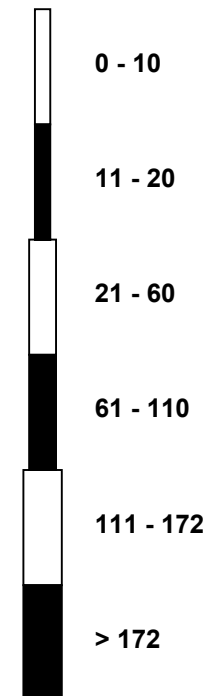
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb

Donnelly - March 2017



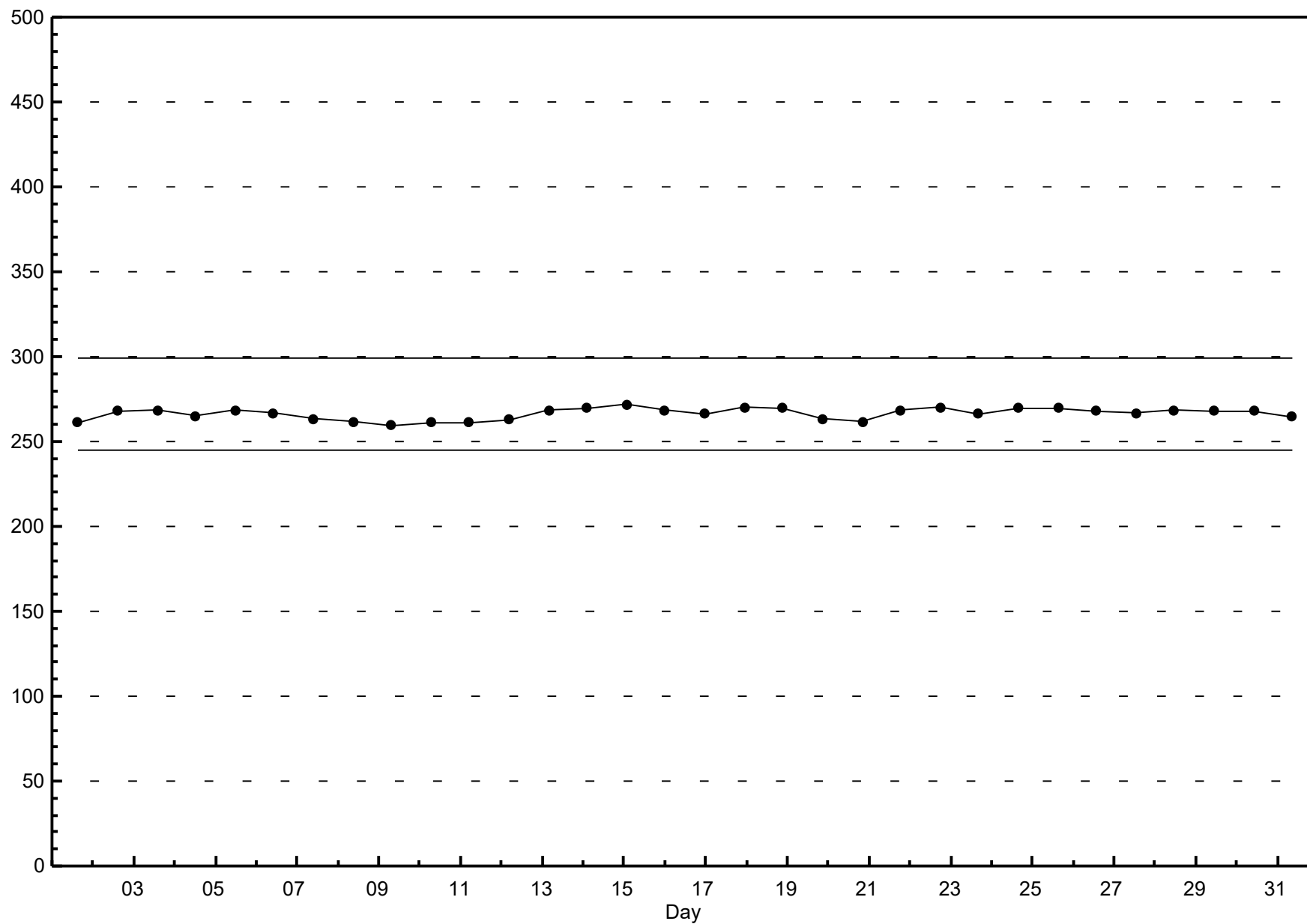
Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)

Donnelly - March 2017



Hourly Averages

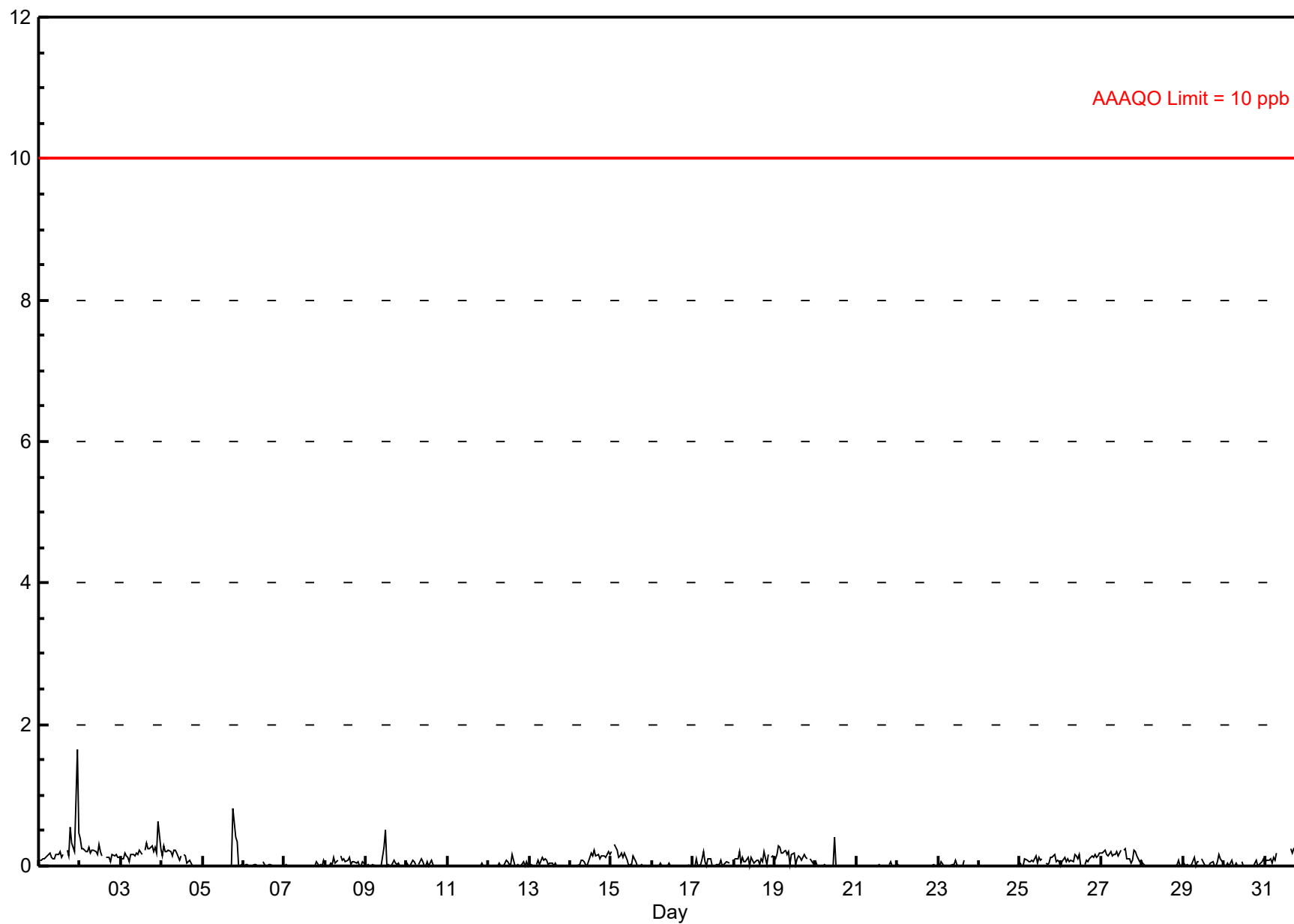
Hydrogen Sulphide (H₂S) - ppb

Donnelly - March 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 744							
Maximum Value: 1.7 ppb on Mar 1 23:00																			Maximum Daily Average: 0.3 ppb on Mar 1		Hours of Data: 707					
Minimum Value: 0 ppb on Mar 4 22:00																			Minimum Daily Average: 0.0 ppb on Mar 11		Hours of Missing Data: 37					
Maximum Diurnal Average: 0.1 ppb at hour 23																			Minimum Diurnal Average: 0.0 ppb at hour 13		Hours of Calibration: 37					
Monthly Average: 0.07 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.1 P ₉₀ = 0.2 P ₉₉ = 0.4		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-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0	0	2	0	0.3	1.7
2-Mar	0	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
3-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0.2	0.6
4-Mar	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
5-Mar	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0.1	0.8
6-Mar	0	0	0	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
7-Mar	0	0	0	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
8-Mar	0	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	0.1
9-Mar	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.5
10-Mar	0	0	0	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
11-Mar	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
12-Mar	0	0	0	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
13-Mar	0	0	0	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
14-Mar	0	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
15-Mar	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
16-Mar	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.0	0.0
17-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
18-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0.1	0.2
19-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.3
20-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.0	0.4
21-Mar	0	0	0	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
22-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.0	0.0
23-Mar	0	0	0	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
24-Mar	0	0	0	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
25-Mar	0	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
26-Mar	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0	0	0	0	0	0	0	0	0	0.1	0.2
27-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2
28-Mar	0	0	0	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
29-Mar	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
30-Mar	0	0	0	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
31-Mar	0	0	0	0	0	0	0	0	A	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.2	0.3
		0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1		Diurnal Average	
		0.4	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.5	0.2	0.2	0.2	0.3	0.2	0.2	0.8	0.4	0.3	0.2	1.7	0.5	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																								
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																										

Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Donnelly - March 2017



Hourly Maximums

Hydrogen Sulphide (H₂S) - ppb

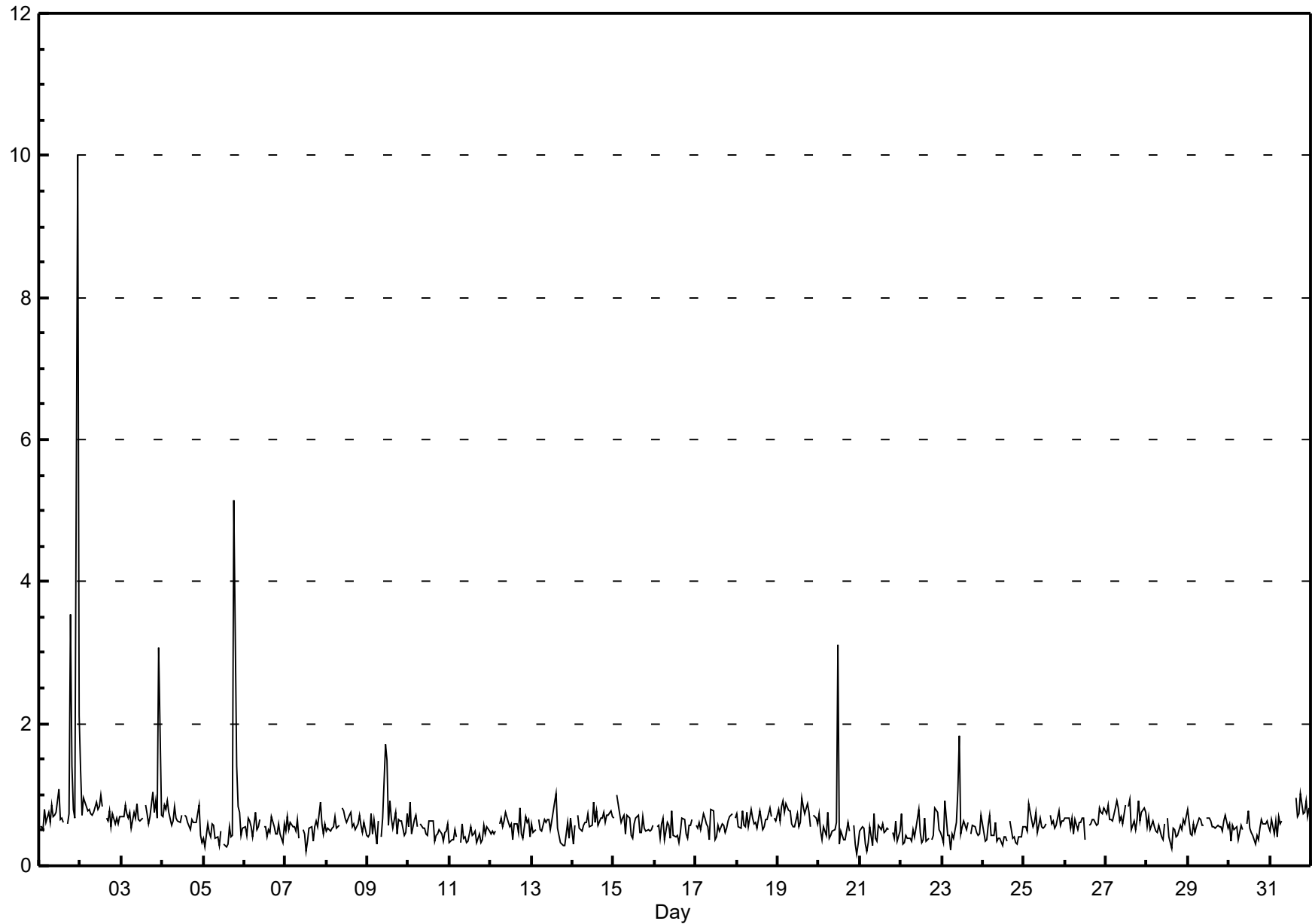
Donnelly - March 2017

Maximum Value: 10.0 ppb on Mar 1 23:00																				Maximum Daily Average: 1.3 ppb on Mar 1										Hours in Service: 744									
Minimum Value: 0 ppb on Mar 20 23:00																				Minimum Daily Average: 0.4 ppb on Mar 11										Hours of Data: 707									
Maximum Diurnal Average: 0.9 ppb at hour 23																				Minimum Diurnal Average: 0.5 ppb at hour 13										Hours of Missing Data: 37									
Monthly Average: 0.62 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 = 1.7										Hours of Calibration: 37									
																				Percent Operational Time: 100.0																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Mar	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	4	1	1	1	10	2	1.3	10.0												
2-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.8	1.3												
3-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	3	1	0.8	3.1													
4-Mar	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	0	0.7	0.9													
5-Mar	0	0	1	0	0	1	1	0	0	0	0	A	0	0	0	1	0	0	5	1	1	1	0	1	0.7	5.1													
6-Mar	1	0	1	1	1	0	1	1	1	1	A	1	1	0	1	0	1	1	0	0	1	0	0	1	0.5	0.7													
7-Mar	0	1	1	1	1	1	0	1	0	A	1	0	0	0	1	1	0	1	1	1	1	1	0	1	0.5	0.9													
8-Mar	0	1	0	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	1	1	1	0	1	0	0.6	0.8													
9-Mar	0	0	1	0	1	0	1	A	0	1	2	1	1	1	1	1	1	0	1	1	1	0	0	1	0.7	1.7													
10-Mar	1	1	0	1	1	1	A	1	1	1	0	0	1	1	1	0	0	0	1	0	0	0	0	1	0.5	0.9													
11-Mar	0	0	0	1	0	A	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0.4	0.6													
12-Mar	0	0	0	0	A	1	1	1	1	1	1	1	1	0	1	1	0	1	0	0	1	1	1	0	0.6	0.8													
13-Mar	1	0	1	A	1	1	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	0	1	0.6	1.0													
14-Mar	0	1	A	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9													
15-Mar	1	A	1	1	1	1	1	0	1	1	0	0	1	1	1	0	0	1	1	0	0	0	1	1	0.6	1.0													
16-Mar	A	1	1	0	1	1	0	1	1	0	1	0	0	0	0	0	1	1	0	0	1	1	1	A	0.5	0.8													
17-Mar	1	1	1	0	1	1	1	1	0	1	1	0	0	1	0	1	1	0	1	1	1	1	A	1	0.6	0.8													
18-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.6	0.8													
19-Mar	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													
20-Mar	1	0	0	1	0	1	0	0	0	1	1	3	0	0	0	0	0	1	0	A	1	0	0	0	0.6	3.1													
21-Mar	0	1	1	0	0	0	1	0	1	0	0	1	1	1	0	0	1	1	A	0	0	1	0	0	0.5	0.7													
22-Mar	1	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	0	A	0	0	1	1	1	0	0.5	0.8													
23-Mar	0	0	1	0	0	0	0	0	1	1	2	0	1	1	1	1	A	0	1	1	0	0	0	1	0.6	1.8													
24-Mar	1	0	0	1	1	0	0	1	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	1	0.4	0.7													
25-Mar	1	1	0	1	1	1	1	1	0	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.6	0.9													
26-Mar	1	1	1	1	1	0	1	1	1	1	1	0	A	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8													
27-Mar	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9													
28-Mar	1	1	0	1	1	0	0	1	0	0	1	A	1	0	0	1	1	0	0	1	1	1	1	1	0.5	0.7													
29-Mar	1	0	0	1	0	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	1	1	1	0.6	0.8													
30-Mar	1	0	1	1	1	0	0	1	1	A	1	1	1	0	0	0	0	0	1	1	1	1	1	1	0.5	0.8													
31-Mar	0	1	0	1	0	1	1	1	A	1	C	C	C	C	C	1	1	1	1	1	1	1	1	1	0.7	1.0													
0.6 0.5 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.7 0.7 0.5 0.6 0.6 0.6 0.5 0.6 0.8 0.6 0.6 0.6 0.9 0.6																									Diurnal Average														
1.3 0.9 1.0 0.9 0.8 0.9 0.9 0.9 0.9 0.8 1.1 1.8 3.1 1.0 0.9 1.0 0.9 0.7 0.9 5.1 1.4 0.9 0.9 10.0 2.1																									Diurnal Maximum														
C - Calibration																									A - Automated Daily Zero Span														

Hourly Maximums

Hydrogen Sulphide (H₂S) - ppb

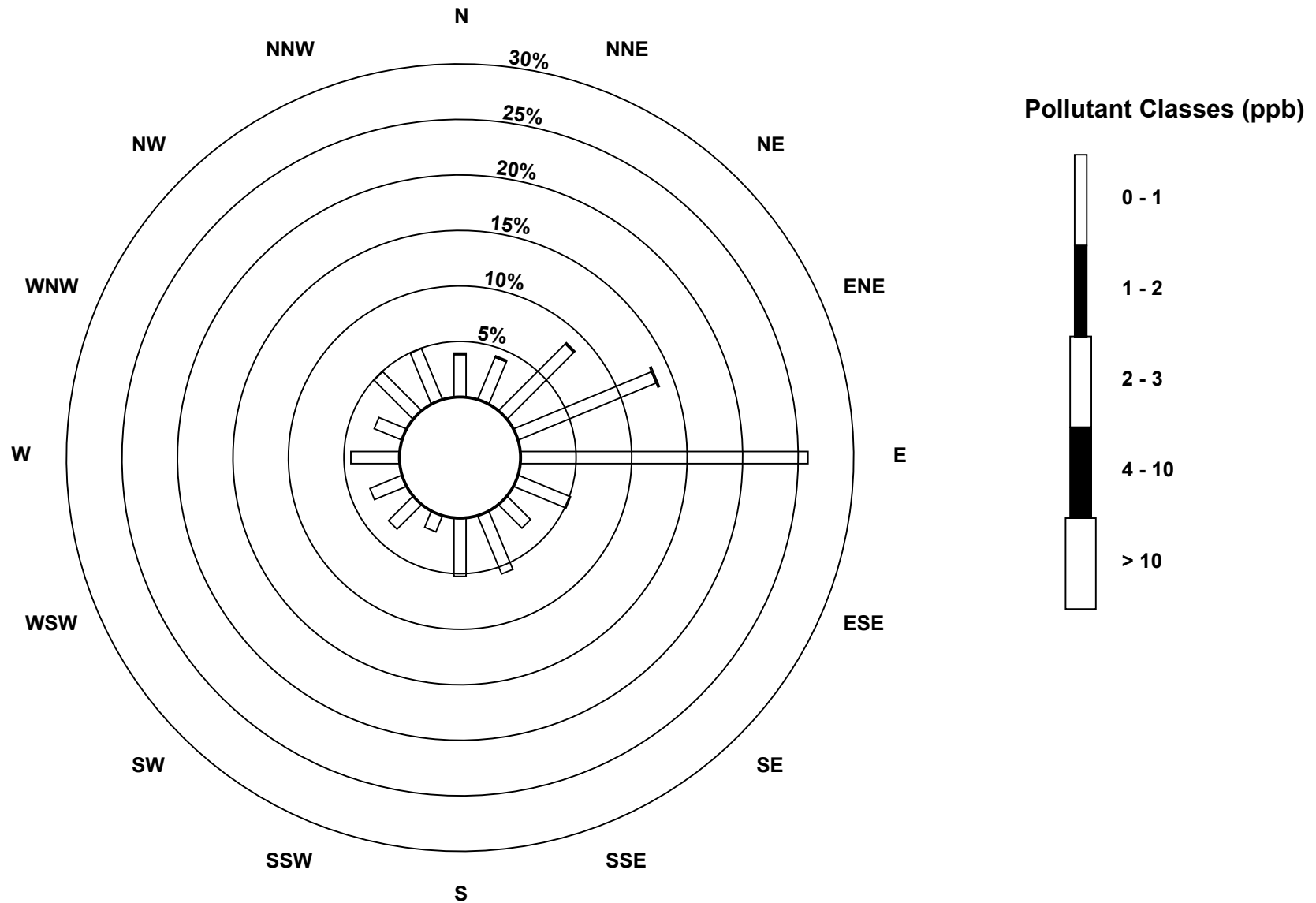
Donnelly - March 2017



Pollutant Rose

Hydrogen Sulphide (H₂S) - ppb

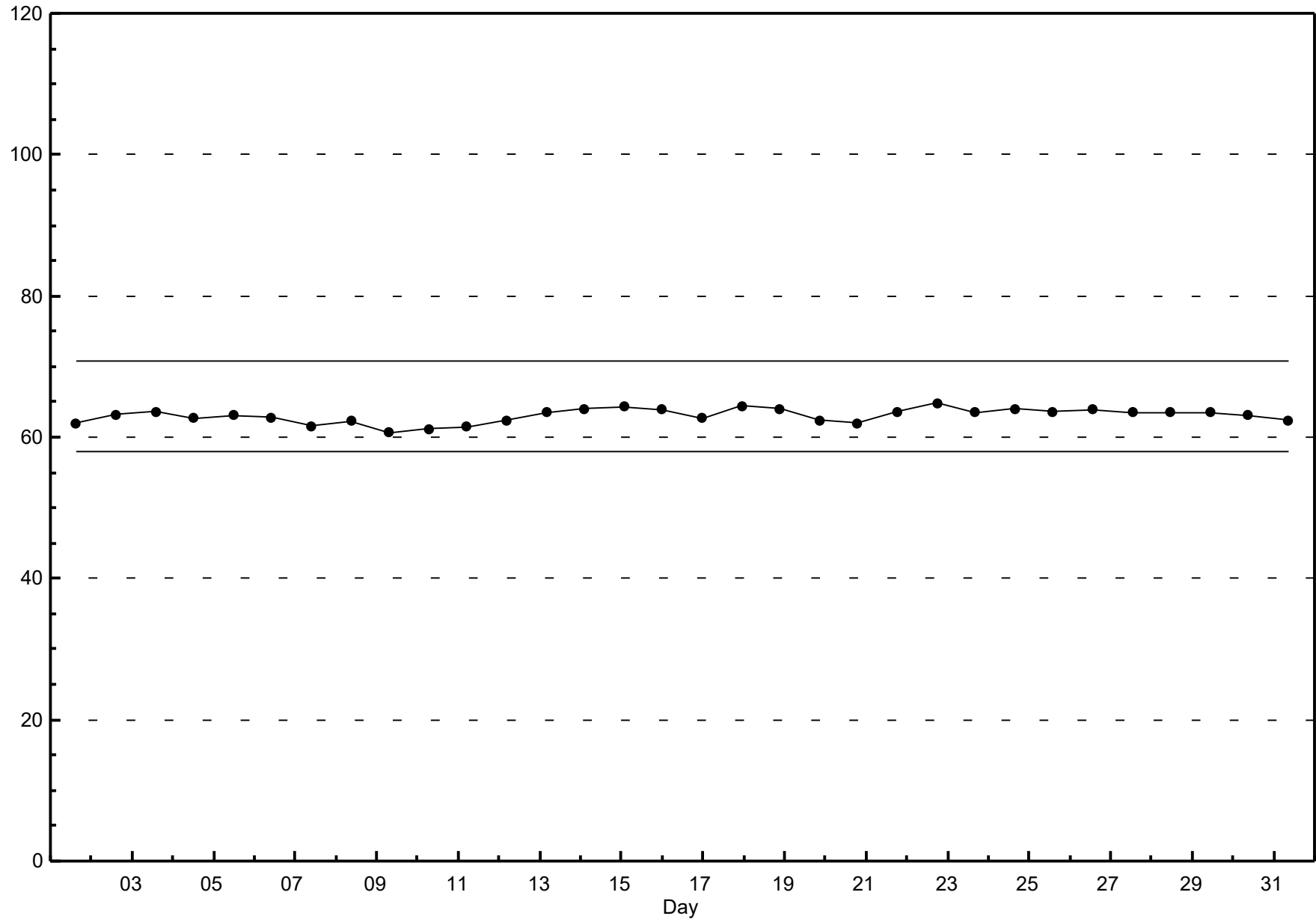
Donnelly - March 2017



Span Responses

Hydrogen Sulphide (H_2S)

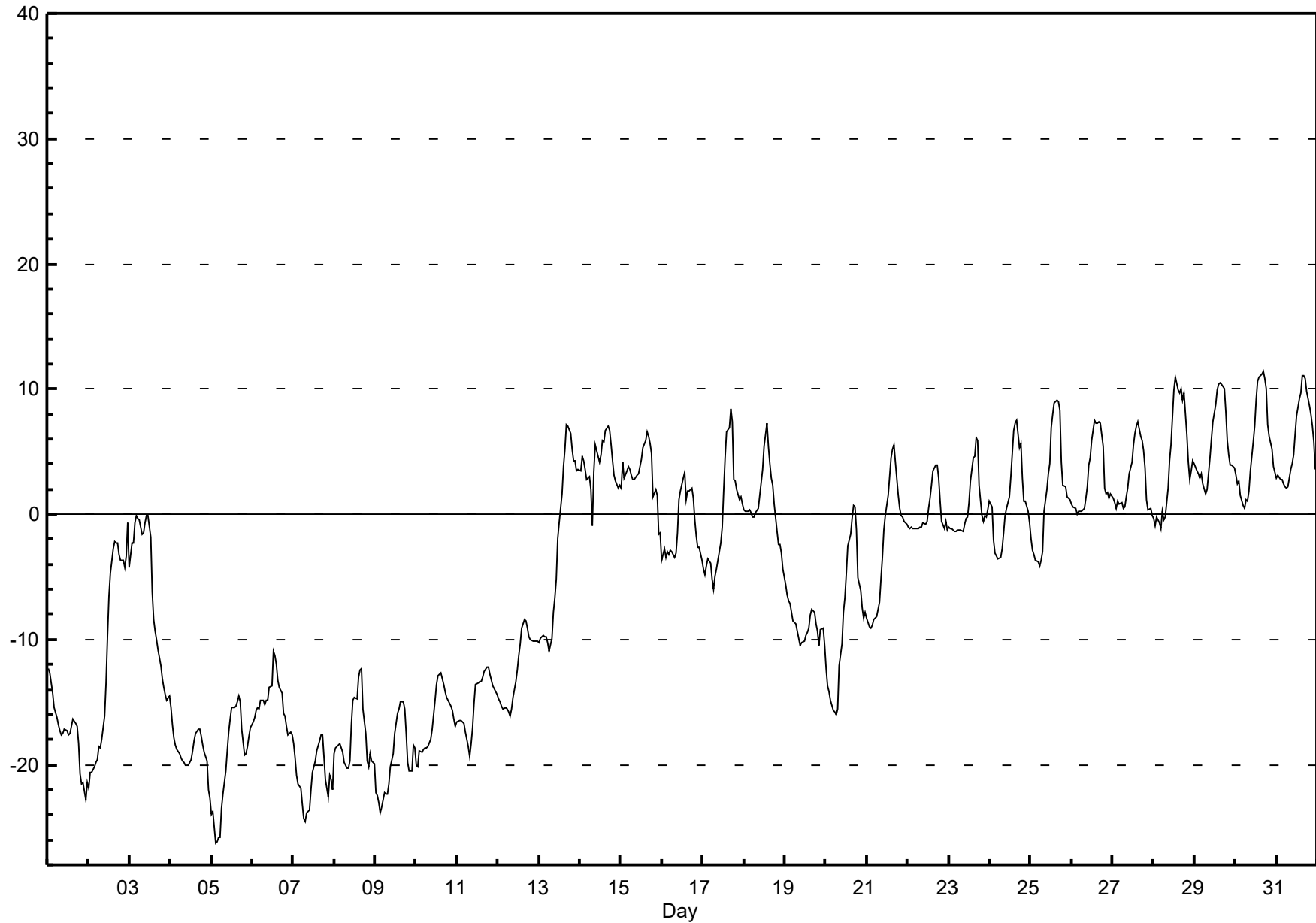
Donnelly - March 2017



Hourly Averages

External Temperature (ET) - °C

Donnelly - March 2017



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	7	14	13	11	10	10	13	14	8	8	8	11	14	12	8	5	7	5	2	3	3	3	2	3	4.9	14.3
Dir	63	53	55	48	26	20	23	26	24	22	307	287	280	281	288	303	351	19	51	85	89	100	71	93	11	280
2 Spd	4	6	8	7	12	10	13	12	14	13	13	11	11	9	8	7	10	9	8	13	20	15	15	16	10.7	20.2
Dir	76	61	85	85	86	90	88	84	91	87	90	90	88	90	87	80	90	92	95	104	112	109	121	130	96	112
3 Spd	7	11	11	23	23	24	24	9	13	24	12	12	18	12	9	12	13	10	8	10	9	9	9	15	2.3	24.0
Dir	99	136	141	160	160	164	164	245	248	251	205	232	282	318	333	334	345	356	338	355	357	5	12	1	237	164
4 Spd	18	18	18	16	15	15	14	13	10	12	14	15	14	11	9	7	4	6	7	6	5	2	0	4	9.2	18.2
Dir	3	350	346	347	350	348	343	341	325	337	344	349	346	334	329	320	305	255	245	273	259	276	139	116	338	350
5 Spd	3	3	0	2	0	1	2	3	4	4	5	6	4	7	8	7	6	4	1	6	6	6	7	10	3.0	9.8
Dir	142	152	35	89	253	30	264	57	52	44	46	44	28	328	324	323	324	322	353	29	31	40	49	46	20	46
6 Spd	6	5	7	10	8	5	6	8	7	8	9	12	7	7	7	9	8	5	6	8	11	10	13	12	6.9	12.6
Dir	51	56	45	39	44	70	65	59	64	57	57	41	53	43	351	324	330	340	338	14	5	12	20	20	29	20
7 Spd	10	3	2	3	3	4	1	3	7	4	8	8	10	11	10	10	9	6	4	1	1	4	3	5	4.3	11.3
Dir	26	354	344	2	333	329	343	5	354	320	334	316	299	303	305	302	301	292	307	258	54	69	60	41	329	303
8 Spd	13	16	11	13	14	14	9	10	13	13	7	6	5	4	7	5	0	5	3	1	4	4	3	3	6.8	16.0
Dir	26	30	37	44	46	52	61	58	49	50	63	86	79	20	54	73	240	291	272	102	71	57	64	76	48	30
9 Spd	5	5	4	5	4	6	7	4	4	5	7	4	4	7	7	8	7	8	9	7	9	9	11	9	4.8	10.7
Dir	58	59	62	61	73	76	69	69	72	62	50	54	359	324	322	320	325	352	22	53	63	62	73	77	41	73
10 Spd	7	7	8	8	10	13	12	10	11	10	11	12	13	12	10	11	11	10	11	12	12	11	10	8	10.4	13.3
Dir	67	70	76	75	71	65	68	73	72	68	74	72	73	76	76	78	77	78	81	80	81	84	88	89	75	65
11 Spd	8	8	7	7	7	5	6	5	5	6	7	5	6	6	8	7	4	1	5	5	9	11	10	11	5.5	11.2
Dir	90	89	89	88	88	85	87	88	85	93	92	70	54	29	338	328	327	45	86	73	76	68	76	78	72	78
12 Spd	11	9	10	10	11	10	10	10	11	12	11	13	13	14	14	10	9	9	11	10	11	11	12	12	10.9	13.9
Dir	81	82	85	85	88	85	88	88	88	91	93	89	90	90	91	89	77	81	86	89	90	90	90	89	88	90
13 Spd	12	9	11	15	13	11	8	8	14	16	11	7	24	25	24	20	16	16	15	16	16	17	15	15	12.4	25.3
Dir	90	93	103	106	105	109	103	109	118	122	109	131	164	163	166	167	165	176	183	187	186	182	182	186	150	163
14 Spd	14	12	13	12	14	14	5	4	12	10	6	7	10	12	10	12	11	11	9	8	7	5	9	8	7.9	14.3
Dir	178	160	153	152	169	162	122	93	157	151	59	76	90	88	85	89	87	99	102	94	92	95	107	111	121	178
15 Spd	9	18	14	17	17	21	21	21	23	22	17	17	16	12	8	4	8	9	7	10	8	8	4	5	10.6	22.8
Dir	125	161	225	236	213	222	210	217	221	231	224	229	231	233	260	229	179	178	133	121	143	142	120	141	207	221
16 Spd	4	5	5	6	5	8	9	9	11	10	10	10	8	8	11	9	10	8	8	3	2	3	3	4	4.1	10.8
Dir	73	78	84	89	87	88	98	91	87	85	89	91	91	132	106	166	247	244	254	277	322	44	86	46	99	87
17 Spd	5	5	3	2	2	4	4	1	1	2	4	4	4	5	6	9	6	7	6	10	11	11	10	12	4.6	12.2
Dir	60	28	52	323	78	168	223	266	83	65	65	57	53	55	61	54	62	78	79	86	88	89	90	89	76	89
18 Spd	12	12	12	10	10	9	9	10	6	7	5	4	4	1	7	10	11	12	24	26	19	22	19	17	2.3	26.4
Dir	88	88	90	87	88	86	87	90	86	93	91	39	67	341	301	309	301	294	269	264	262	257	260	266	285	264
19 Spd	13	12	11	13	11	9	9	6	9	10	10	10	8	10	8	9	9	10	10	11	12	17	12	12	9.4	16.8
Dir	262	257	257	262	265	255	257	281	328	331	315	305	295	320	307	295	325	330	279	270	249	269	295	314	286	269
20 Spd	8	2	6	2	1	2	4	4	0	5	1	5	6	6	6	7	7	6	7	8	10	11	13	13	3.8	12.9
Dir	305	289	263	257	229	163	157	144	289	168	90	91	86	88	131	129	101	82	83	88	88	87	89	90	100	90
21 Spd	13	12	11	13	15	16	16	16	13	13	12	13	11	9	9	10	9	9	9	9	10	11	9	8	11.5	16.1
Dir	89	88	85	87	86	88	88	89	92	89	90	95	90	84	99	109	90	74	79	81	85	91	86	83	88	88
22 Spd	7	8	7	7	7	6	4	1	3	2	5	5	4	5	8	6	5	8	7	5	4	2	5	7	2.4	8.1
Dir	86	84	83	79	81	84	76	67	103	104	35	352	317	296	322	322	302	292	275	360	51	67	90	86	38	84

Hourly Averages

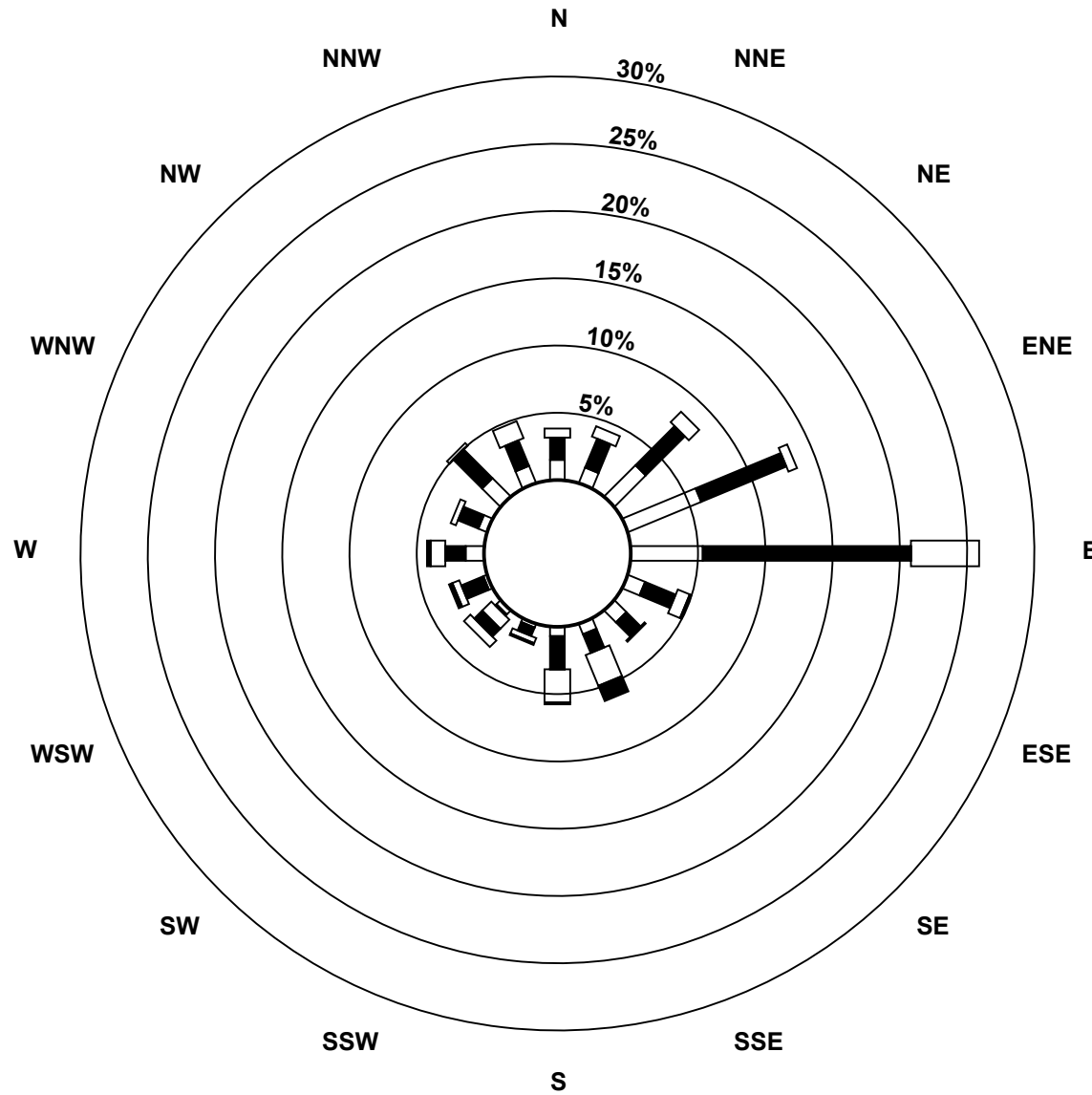
Wind Speed (km/h)
Wind Direction (deg)
Donnelly - March 2017

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																																																																																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																																																																																								
23 Spd	7	7	9	11	11	10	10	9	3	3	2	8	8	6	4	4	3	8	10	5	5	6	10	11	3.8	11.3																																																																																						
Dir	86	66	68	66	67	75	79	91	80	94	211	205	224	254	314	330	30	44	327	45	89	99	108	122	78	122																																																																																						
24 Spd	10	8	5	5	6	8	8	10	11	12	14	11	11	9	10	10	9	8	9	6	5	5	7	3	8.1	13.6																																																																																						
Dir	130	121	77	89	92	90	83	96	89	91	90	86	80	77	78	80	82	81	88	81	74	108	95	92	90	90																																																																																						
25 Spd	3	4	6	4	4	3	4	5	4	6	3	3	3	8	4	5	8	5	12	1	5	6	10	12	1.6	11.8																																																																																						
Dir	56	58	54	92	59	64	65	58	84	110	91	81	137	179	229	322	338	342	237	177	154	201	164	170	126	237																																																																																						
26 Spd	12	10	10	9	10	10	11	12	12	11	9	12	11	5	5	8	10	8	7	8	10	8	7	6	3.9	12.5																																																																																						
Dir	176	175	178	173	171	171	168	170	170	167	163	176	192	186	306	353	16	3	15	43	41	50	63	62	152	176																																																																																						
27 Spd	4	5	6	5	4	6	6	3	1	6	2	5	5	5	5	8	9	5	2	3	3	3	4	4	1.2	9.4																																																																																						
Dir	25	49	52	75	82	86	85	89	143	41	340	8	311	316	276	254	258	274	268	71	114	86	125	105	38	258																																																																																						
28 Spd	3	4	5	5	5	7	8	4	8	6	6	4	6	5	5	3	3	0	2	3	1	3	10	5	3.4	10.1																																																																																						
Dir	105	79	93	86	90	109	113	98	155	152	174	141	110	92	54	55	48	78	259	88	148	176	183	183	121	183																																																																																						
29 Spd	4	4	3	5	10	10	11	11	10	10	7	7	6	3	5	6	9	12	7	6	7	6	7	8	2.2	11.5																																																																																						
Dir	179	134	106	130	162	168	173	177	185	196	189	189	211	205	6	2	37	28	17	25	45	56	41	41	128	28																																																																																						
30 Spd	7	5	3	5	5	3	3	2	3	4	2	4	3	2	6	10	9	7	2	8	8	11	11	12	0.7	11.7																																																																																						
Dir	55	63	62	49	50	72	88	322	30	16	356	337	319	351	257	267	277	276	260	173	167	177	176	172	193	172																																																																																						
31 Spd	12	14	13	16	15	16	15	17	18	18	19	20	20	17	16	27	34	33	32	30	29	26	17	13	17.9	33.6																																																																																						
Dir	168	163	167	165	165	163	161	164	168	167	163	166	169	170	189	214	229	221	226	224	224	222	213	177	193	229																																																																																						
Spd	4.4	4.6	4.0	4.3	4.6	4.8	4.8	3.8	3.6	3.4	3.2	2.5	1.3	1.0	1.3	1.3	1.7	1.1	0.8	1.6	2.8	2.8	4.0	4.3	Diurnal Average																																																																																							
Dir	85	89	88	95	101	108	108	98	108	105	93	90	112	80	14	334	341	354	270	93	103	107	105	99	Diurnal Maximum																																																																																							
Spd	17.9	18.2	17.9	22.6	23.2	24.0	23.9	20.6	22.8	23.8	18.7	19.7	23.7	25.3	24.0	27.4	33.6	32.7	31.8	30.1	29.4	25.7	19.1	17.0	Diurnal Maximum																																																																																							
Dir	3	350	346	160	160	164	164	217	221	251	163	166	164	163	166	214	229	221	226	224	224	222	260	266																																																																																								
Maximum Speed Value: 34 km/h on Mar 31 17:00																									Hours in Service: 744																																																																																							
Maximum Daily Speed Average: 17.9 km/h on Mar 31																									Hours of Data: 744																																																																																							
Maximum Diurnal Speed Average: 4.8 km/h at hour 6																									Hours of Missing Data: 0																																																																																							
Minimum Speed Value: 0 km/h on Mar 5 03:00																									Percent Operational Time: 100.0																																																																																							
Minimum Daily Speed Average: 0.7 km/h on Mar 5																																																																																																																
Minimum Diurnal Speed Average: 0.8 km/h at hour 19																																																																																																																
Monthly Average Velocity: 2.63 km/h 94.4 deg																																																																																																																
Speed Percentiles: P ₁ = 0.7 P ₁₀ = 3.1 Q ₁ = 5.1 Median = 8.2 Q ₃ = 11.2 P ₉₀ = 14.8 P ₉₉ = 25.5																																																																																																																
All monthly, daily, and diurnal averages have been calculated using vector methods																																																																																																																
Frequency Distribution																																																																																																																
<table><tr><th rowspan="2">Direction</th><th colspan="6">Speed Range (km/h)</th><th rowspan="2">Total</th></tr><tr><th>0 to 5</th><th>5 to 11</th><th>11 to 19</th><th>19 to 28</th><th>28 to 38</th><th>> 38</th></tr><tr><td>North</td><td>16</td><td>28</td><td>15</td><td>0</td><td>0</td><td>0</td><td>59</td></tr><tr><td>NorthEast</td><td>47</td><td>63</td><td>17</td><td>0</td><td>0</td><td>0</td><td>127</td></tr><tr><td>East</td><td>62</td><td>151</td><td>57</td><td>1</td><td>0</td><td>0</td><td>271</td></tr><tr><td>SouthEast</td><td>16</td><td>17</td><td>10</td><td>0</td><td>0</td><td>0</td><td>43</td></tr><tr><td>South</td><td>6</td><td>28</td><td>36</td><td>10</td><td>0</td><td>0</td><td>80</td></tr><tr><td>SouthWest</td><td>7</td><td>7</td><td>11</td><td>7</td><td>5</td><td>0</td><td>37</td></tr><tr><td>West</td><td>14</td><td>24</td><td>13</td><td>6</td><td>0</td><td>0</td><td>57</td></tr><tr><td>NorthWest</td><td>18</td><td>44</td><td>8</td><td>0</td><td>0</td><td>0</td><td>70</td></tr><tr><td>Total</td><td>186</td><td>362</td><td>167</td><td>24</td><td>5</td><td>0</td><td>744</td></tr></table>																									Direction	Speed Range (km/h)						Total	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	North	16	28	15	0	0	0	59	NorthEast	47	63	17	0	0	0	127	East	62	151	57	1	0	0	271	SouthEast	16	17	10	0	0	0	43	South	6	28	36	10	0	0	80	SouthWest	7	7	11	7	5	0	37	West	14	24	13	6	0	0	57	NorthWest	18	44	8	0	0	0	70	Total	186	362	167	24	5	0	744		
Direction	Speed Range (km/h)						Total																																																																																																									
	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38																																																																																																										
North	16	28	15	0	0	0	59																																																																																																									
NorthEast	47	63	17	0	0	0	127																																																																																																									
East	62	151	57	1	0	0	271																																																																																																									
SouthEast	16	17	10	0	0	0	43																																																																																																									
South	6	28	36	10	0	0	80																																																																																																									
SouthWest	7	7	11	7	5	0	37																																																																																																									
West	14	24	13	6	0	0	57																																																																																																									
NorthWest	18	44	8	0	0	0	70																																																																																																									
Total	186	362	167	24	5	0	744																																																																																																									

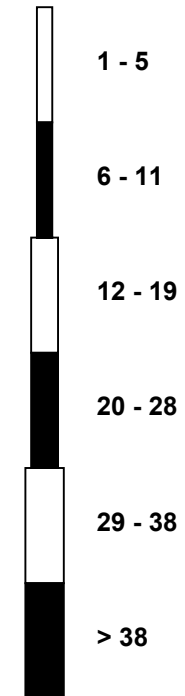
Wind Rose

Wind Speed (WS) (km/h)

Donnelly - March 2017



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Donnelly - March 2017

Maximum Speed: 34 km/h on Mar 31 17:00																				Maximum Daily Speed Average: 20.4 km/h on Mar 31										Hours in Service: 744	
Minimum Speed: 0 km/h on Mar 5 05:00																				Minimum Daily Speed Average: 4.4 km/h on Mar 5										Hours of Data: 744	
Maximum Diurnal Speed Average: 9.5 km/h at hour 10																				Minimum Diurnal Speed Average: 8.3 km/h at hour 3										Hours of Missing Data: 0	
Monthly Average Speed: 8.96 km/h																				Percentiles: P ₁ = 1.2 P ₁₀ = 3.5 Q ₁ = 5.4 Median = 8.4 Q ₃ = 11.3 P ₉₀ = 14.7 P ₉₉ = 25.0										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Mar	7	14	13	11	10	10	13	14	8	8	8	11	14	12	8	6	8	5	2	3	3	3	2	3	8.1	14.4					
2-Mar	4	6	8	7	12	11	13	12	14	13	14	11	11	9	8	7	10	9	8	13	20	15	15	16	11.2	20.2					
3-Mar	9	12	12	23	23	24	24	14	13	24	13	15	18	12	9	12	13	10	8	10	9	9	9	15	14.2	24.0					
4-Mar	18	18	18	16	15	15	14	13	10	13	14	15	14	11	9	7	4	6	8	6	5	2	0	4	10.7	18.3					
5-Mar	3	3	1	2	0	2	2	3	4	4	5	6	4	7	8	7	6	4	1	7	6	6	7	10	4.4	9.8					
6-Mar	6	5	7	11	8	5	6	8	7	8	9	12	7	7	8	9	8	5	6	8	11	10	13	12	8.1	12.6					
7-Mar	10	3	2	3	3	4	1	4	7	4	9	8	10	11	11	10	9	6	4	2	1	4	3	5	5.6	11.4					
8-Mar	13	16	11	13	14	14	10	10	13	13	7	6	6	4	7	5	4	5	3	1	4	4	3	3	8.0	16.0					
9-Mar	5	5	4	5	4	6	7	4	4	5	7	4	4	7	8	8	8	9	7	9	9	11	9	9	6.5	10.8					
10-Mar	7	7	8	8	10	13	12	10	11	10	11	13	13	12	10	11	11	10	11	12	12	11	10	8	10.5	13.3					
11-Mar	8	8	7	7	7	5	6	5	5	6	7	6	6	6	8	7	4	3	5	5	9	11	10	11	6.8	11.3					
12-Mar	11	9	10	10	11	10	10	10	11	12	11	13	13	14	14	10	9	9	11	11	11	11	12	12	11.0	14.0					
13-Mar	13	9	11	15	13	11	8	8	15	16	12	9	24	25	24	20	16	16	15	16	16	17	15	15	15.0	25.4					
14-Mar	14	12	13	12	14	14	7	4	12	10	6	8	10	12	10	12	11	11	9	8	7	5	10	8	9.9	14.3					
15-Mar	9	18	15	17	18	21	21	21	23	22	18	17	16	12	9	7	8	9	7	10	8	8	4	5	13.4	22.9					
16-Mar	4	5	5	6	5	8	9	9	11	10	10	10	8	9	11	12	10	8	8	3	3	4	4	4	7.3	12.3					
17-Mar	5	5	3	3	2	4	5	2	1	2	4	4	4	5	6	9	6	7	6	10	11	11	10	12	5.8	12.2					
18-Mar	12	12	12	10	10	9	9	10	6	7	5	4	4	3	8	10	11	12	24	26	20	22	19	17	11.8	26.5					
19-Mar	13	13	12	13	12	9	9	7	9	10	10	10	9	10	9	10	9	10	10	11	12	17	12	12	10.7	16.9					
20-Mar	8	2	6	3	1	2	4	4	0	5	3	6	6	6	6	7	7	6	7	8	10	11	13	13	5.9	13.0					
21-Mar	13	12	11	13	15	16	16	16	13	13	12	13	11	9	10	10	9	9	9	9	10	11	9	8	11.6	16.1					
22-Mar	7	8	7	7	7	6	4	2	4	2	5	5	4	6	8	6	6	8	7	6	4	2	5	7	5.6	8.2					
23-Mar	7	7	9	11	11	10	10	9	3	3	3	9	8	6	5	5	3	8	11	6	5	7	10	11	7.4	11.3					
24-Mar	10	9	5	5	6	8	8	11	11	12	14	11	11	9	10	10	9	8	9	6	5	6	8	3	8.4	13.6					
25-Mar	3	4	6	5	4	3	4	5	4	7	4	4	4	9	6	5	8	5	12	4	6	8	10	12	5.8	12.4					
26-Mar	12	10	10	9	10	10	11	12	12	11	9	12	12	6	9	9	10	8	7	8	10	8	7	6	9.6	12.5					
27-Mar	4	5	6	5	4	6	6	5	3	6	3	5	5	5	6	8	9	5	2	3	3	3	5	4	5.0	9.5					
28-Mar	4	5	5	5	5	7	8	4	9	6	6	5	6	5	5	4	3	2	3	3	1	3	10	5	5.0	10.2					
29-Mar	6	6	3	5	10	10	11	11	10	10	8	7	7	6	6	7	9	12	7	6	7	6	8	8	7.7	11.6					
30-Mar	7	5	4	5	5	3	3	5	4	4	3	4	3	4	7	10	9	8	4	8	8	11	11	12	6.1	11.8					
31-Mar	12	14	14	16	15	16	15	17	18	18	19	20	20	17	17	28	34	33	32	30	29	26	17	13	20.4	33.9					
8.5 8.6 8.3 9.1 9.2 9.4 9.3 8.6 8.8 9.5 8.6 9.1 9.4 9.0 9.1 9.3 9.1 8.6 8.6 8.6 8.9 9.0 9.0 9.1																									Diurnal Average						
18.0 18.3 18.0 22.7 23.2 24.0 23.9 20.7 22.9 24.0 18.8 19.8 23.8 25.4 24.0 28.0 33.9 32.8 31.9 30.1 29.4 25.7 19.1 17.1																									Diurnal Maximum						

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

Hourly Standard Deviations

Wind Direction (WD) - deg

Donnelly - March 2017

Maximum Value: 90.4 deg on Mar 30 08:00																			Hours in Service: 744						
Minimum Value: 1.9 deg on Mar 5 05:00																			Hours of Data: 744						
																			Hours of Missing Data: 0						
Percentiles: P ₁ = 2.5 P ₁₀ = 4.0 Q ₁ = 5.7 Median = 8.5 Q ₃ = 16.2 P ₉₀ = 34.0 P ₉₉ = 78.8																			Hours of Calibration: 0						
																			Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Mar	6	3	3	7	7	6	6	7	14	14	13	11	8	9	23	25	11	13	10	21	23	13	13	43	43.0
2-Mar	15	21	8	5	4	5	4	6	5	5	5	6	6	5	11	11	7	6	6	9	3	5	9	4	20.6
3-Mar	36	30	34	3	3	2	3	43	9	9	19	41	8	17	12	6	7	10	10	8	10	6	14	7	42.8
4-Mar	7	7	5	5	6	5	5	5	10	8	5	9	8	8	9	10	19	10	12	8	9	10	65	4	65.5
5-Mar	21	14	76	9	2	61	30	35	9	7	8	11	8	13	8	6	11	15	29	10	4	7	6	4	75.9
6-Mar	10	7	7	6	9	12	7	6	6	7	9	9	16	18	38	12	12	28	36	24	5	5	4	4	38.1
7-Mar	3	17	13	14	18	14	24	23	10	16	8	11	9	8	10	7	5	7	24	53	50	6	6	9	52.8
8-Mar	3	2	5	3	4	4	5	5	4	3	12	17	35	33	19	22	83	10	21	47	18	7	16	12	83.0
9-Mar	5	4	5	4	8	7	6	18	17	7	12	24	28	11	9	11	11	8	12	10	3	2	5	6	28.2
10-Mar	4	6	8	6	6	3	5	4	5	5	6	6	5	6	8	6	7	7	6	6	5	5	4	4	8.3
11-Mar	6	6	6	6	6	9	6	5	6	8	9	22	12	14	20	9	13	81	11	9	8	3	6	6	81.0
12-Mar	7	8	6	5	5	6	5	5	5	4	7	6	5	5	5	8	7	7	6	6	6	4	5	5	8.0
13-Mar	7	7	6	7	6	5	8	15	13	7	36	40	5	4	3	3	5	3	3	4	3	4	4	3	39.6
14-Mar	5	9	8	10	4	5	42	16	16	17	26	19	6	6	6	4	5	9	7	5	6	9	13	14	42.0
15-Mar	17	9	22	15	12	7	3	5	3	6	7	7	6	17	20	46	13	8	15	6	5	7	32	13	46.0
16-Mar	16	7	10	6	6	4	7	5	4	6	5	6	8	28	11	42	13	15	12	19	45	32	24	15	44.7
17-Mar	8	24	54	40	27	19	25	50	44	22	16	16	25	22	15	5	6	9	6	5	4	4	4	4	54.4
18-Mar	4	4	4	6	5	6	7	5	9	8	15	22	26	84	25	10	6	9	10	4	5	5	5	5	84.2
19-Mar	4	7	12	7	8	7	6	16	16	12	13	13	19	15	17	17	16	15	7	7	7	7	16	8	19.2
20-Mar	7	31	17	40	44	46	9	12	53	10	66	19	15	13	23	15	19	9	8	4	4	4	3	4	66.1
21-Mar	4	4	6	4	4	4	4	4	5	7	7	8	9	12	14	14	13	6	6	5	6	4	7	7	13.9
22-Mar	8	8	9	7	7	10	11	77	17	26	15	19	24	26	15	20	25	12	14	29	16	28	8	6	76.6
23-Mar	6	8	7	9	6	5	7	8	30	26	47	15	15	20	45	34	59	9	26	34	10	8	4	6	59.2
24-Mar	4	15	13	8	7	7	16	8	4	5	4	6	9	7	9	9	9	6	6	9	6	42	14	53	53.2
25-Mar	27	13	10	23	22	36	20	15	15	13	22	27	46	14	47	28	14	18	39	83	44	42	5	5	82.7
26-Mar	4	6	4	5	3	4	5	7	6	6	9	8	21	32	71	20	13	13	12	5	4	8	4	9	71.4
27-Mar	25	7	9	7	9	7	7	80	78	18	49	29	27	38	53	23	9	9	32	15	32	17	17	16	79.9
28-Mar	25	23	5	12	7	10	6	9	12	12	15	32	14	36	17	18	15	77	59	56	55	79	7	8	78.8
29-Mar	73	59	7	16	8	6	3	4	7	9	17	25	38	70	49	35	13	7	6	9	7	7	22	8	73.2
30-Mar	9	14	39	12	16	39	14	90	16	23	54	40	48	82	41	24	18	16	45	7	6	7	6	7	90.4
31-Mar	3	3	2	3	3	2	3	3	5	3	5	5	6	7	17	11	8	5	3	3	3	3	6	5	17.3
73.2 58.5 75.9 40.5 43.9 61.4 42.0 90.4 77.7 26.3 66.1 40.5 47.5 84.2 71.4 46.0 83.0 81.0 59.0 82.7 55.0 78.8 65.5 53.2																									

PAZA

Portable – Rycroft Station

Monthly Summary Tables, Graphs and
Roses

Hourly Averages

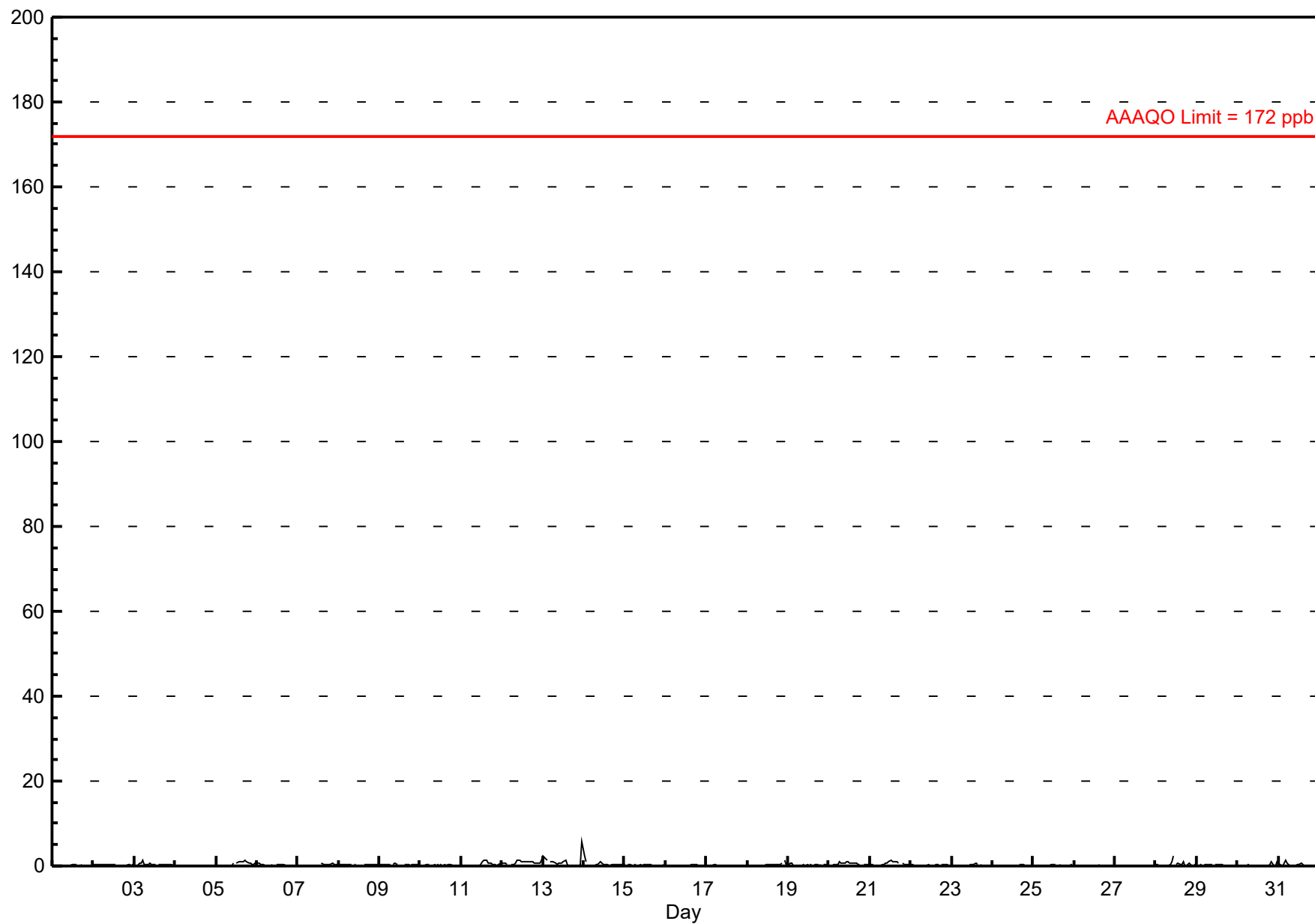
Sulphur Dioxide (SO₂) - ppb

Portable Rycroft - March 2017

Number of Exceedences (AAAQO): Maximum Value: 5.8 ppb on Mar 14 00:00																				1-hr: 0 Maximum Daily Average: 0.9 ppb on Mar 13		Hours in Service: 744 Hours of Data: 697				
Minimum Value: 0 ppb on Mar 1 05:00 Maximum Diurnal Average: 0.5 ppb at hour 24 Monthly Average: 0.27 ppb																				Minimum Daily Average: 0.0 ppb on Mar 27 Minimum Diurnal Average: 0.1 ppb at hour 8 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.7 P ₉₉ = 1.4		Hours of Missing Data: 47 Hours of Calibration: 38 Percent Operational Time: 98.8				
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-Mar	0	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
2-Mar	0	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
3-Mar	0	0	0	1	1	1	0	0	0	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.4	1.4
4-Mar	0	0	0	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
5-Mar	0	0	0	P	0	0	0	0	0	0	1	A	1	1	1	1	1	1	1	1	1	0	0	1	0.5	1.2
6-Mar	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
7-Mar	0	0	0	0	0	0	0	0	0	A	0	C	C	C	1	0	0	1	0	0	1	1	0	0	0.3	0.6
8-Mar	0	0	0	0	0	0	0	0	0	A	0	M	M	M	M	0	0	0	0	0	0	0	0	0	0.4	0.5
9-Mar	0	0	0	0	0	0	0	A	1	1	0	M	M	D	D	0	0	0	0	0	0	0	0	0	0.3	0.5
10-Mar	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
11-Mar	0	0	0	0	0	A	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	1	0.4	1.4
12-Mar	1	1	1	0	A	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.4
13-Mar	2	2	1	A	1	1	1	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	6	0.9	5.8
14-Mar	2	1	A	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.4
15-Mar	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
16-Mar	A	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.3
17-Mar	0	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
18-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	1	0.3	1.5
19-Mar	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.6
20-Mar	0	0	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	A	0	0	0	0	0.5	1.2
21-Mar	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	A	1	0	0	0	0	0.5	1.2
22-Mar	0	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
23-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0.1	0.6
24-Mar	0	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
25-Mar	0	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
26-Mar	0	0	0	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
27-Mar	0	0	0	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
28-Mar	0	0	0	0	0	0	0	0	0	1	2	A	0	1	0	0	1	0	0	1	0	0	0	0	0.4	2.5
29-Mar	0	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	0.5
30-Mar	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.1	0.9
31-Mar	1	0	0	1	1	1	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.3	1.4
0.3 0.3 0.2 0.2 0.2 0.2 0.2 0.1 0.2 0.3 0.4 0.3 0.4 0.4 0.4 0.3 0.3 0.3 0.2 0.2 0.2 0.2 0.2 0.5																									Diurnal Average	
2.4 1.9 1.3 0.8 1.4 1.4 1.0 0.7 0.7 1.2 2.5 1.2 1.2 1.4 1.4 1.4 1.1 1.2 0.9 0.8 0.9 0.6 1.5 5.8																									Diurnal Maximum	
C - Calibration		P - Power Failure						D - DAS Failure						M - Maintenance						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 - March 2017



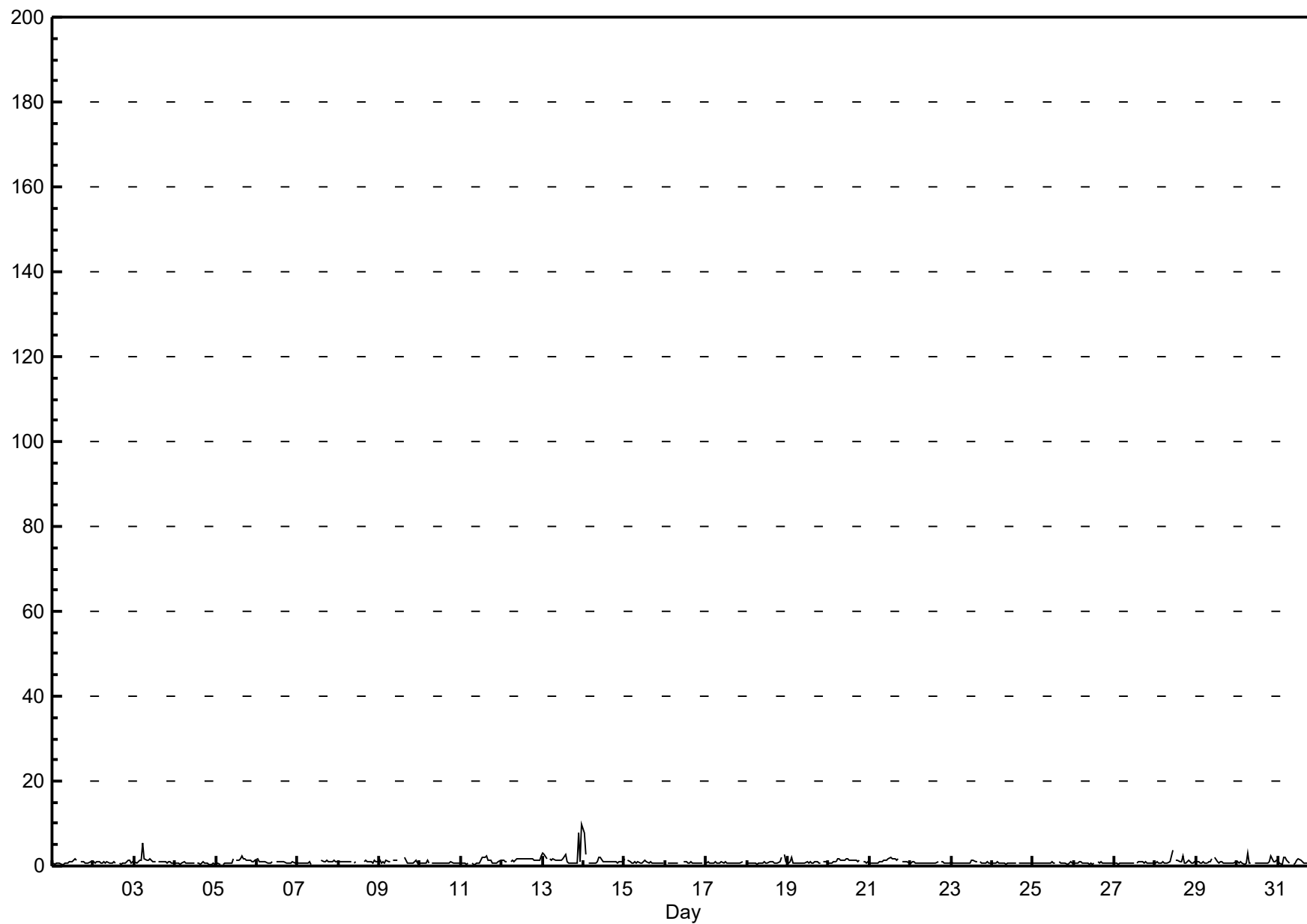
Hourly Maximums

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

Maximum Value: 9.9 ppb on Mar 14 00:00																			Maximum Daily Average: 2.0 ppb on Mar 13										Hours in Service: 744	
Minimum Value: 0 ppb on Mar 5 05:00																			Minimum Daily Average: 0.6 ppb on Mar 24										Hours of Data: 697	
Maximum Diurnal Average: 1.2 ppb at hour 24																			Minimum Diurnal Average: 0.8 ppb at hour 8										Hours of Missing Data: 47	
Monthly Average: 0.96 ppb																			Percentiles: P ₁ = 0.4 P ₁₀ = 0.6 Q ₁ = 0.6 Median = 0.8 Q ₃ = 1.1 P ₉₀ = 1.5 P ₉₉ = 3.0										Hours of Calibration: 38	
																													Percent Operational Time: 98.8	
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-Mar	1	0	1	1	1	0	1	1	1	1	1	1	1	2	1	A	1	1	1	1	1	1	1	1	0.8	1.7				
2-Mar	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	1.3				
3-Mar	1	1	1	1	1	5	2	1	1	2	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1.2	5.3				
4-Mar	1	1	1	0	1	1	1	1	1	1	1	1	A	1	1	0	1	1	1	1	1	0	1	0	0.6	1.1				
5-Mar	1	1	0	P	0	1	1	1	1	1	2	A	1	2	2	2	2	2	1	1	1	1	1	1	1.2	2.4				
6-Mar	2	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	1.9				
7-Mar	1	1	1	1	1	1	1	1	0	A	1	C	C	C	1	1	1	1	1	1	1	1	1	1	0.9	1.3				
8-Mar	1	1	1	1	1	1	1	1	A	A	1	M	M	M	D	M	1	1	1	1	1	1	1	1	1.0	1.2				
9-Mar	1	1	1	1	1	1	1	A	1	1	1	M	M	M	D	D	2	1	1	1	1	1	1	1	1.0	2.0				
10-Mar	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2				
11-Mar	1	1	1	0	1	A	1	0	0	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1.0	2.3				
12-Mar	1	1	1	1	A	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	1	2	1	2	1.5	2.3				
13-Mar	3	3	2	A	2	2	2	1	1	1	1	1	2	3	1	1	1	1	1	1	1	8	1	10	2.0	9.9				
14-Mar	8	3	A	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.4	7.7				
15-Mar	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.8				
16-Mar	A	1	1	1	1	1	1	1	C	C	C	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	1.1				
17-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1				
18-Mar	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	2	A	A	1	0.9	2.7				
19-Mar	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.9	2.2				
20-Mar	1	1	1	1	1	2	2	1	1	1	2	2	1	1	1	1	1	1	1	A	1	1	1	1	1.2	1.8				
21-Mar	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	1	2	A	1	1	1	1	1	1.2	1.9				
22-Mar	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	1.1				
23-Mar	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				
24-Mar	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.6	1.0				
25-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0	1	1	1	0.7	1.1				
26-Mar	1	1	1	1	1	1	1	1	1	0	1	0	1	A	1	1	1	1	1	1	1	1	1	1	0.7	1.1				
27-Mar	1	1	0	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.6	1.0				
28-Mar	1	1	1	1	1	1	1	1	1	3	4	A	1	1	1	1	2	1	1	1	1	1	1	1	1.1	3.9				
29-Mar	1	1	1	1	1	1	1	1	1	2	A	2	1	1	1	1	1	1	1	1	1	1	1	1	0.9	2.1				
30-Mar	1	1	1	1	0	1	3	1	1	A	1	1	1	1	1	1	1	1	1	1	2	1	1	1	0.9	3.0				
31-Mar	2	1	1	2	2	2	1	1	A	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1.0	2.0				
		1.2	0.9	0.9	0.8	0.9	1.0	0.9	0.8	0.8	1.0	1.1	1.0	1.1	1.1	1.1	1.1	1.0	0.9	0.8	0.8	0.9	1.1	0.9	1.2	Diurnal Average				
		7.7	2.8	2.2	2.0	2.0	5.3	3.0	1.4	1.3	2.5	3.9	2.1	1.9	2.7	2.2	2.4	2.3	1.8	1.8	1.4	2.3	7.8	2.7	9.9	Diurnal Maximum				
C - Calibration		P - Power Failure				D - DAS Failure				M - Maintenance				A - Automated Daily Zero Span																

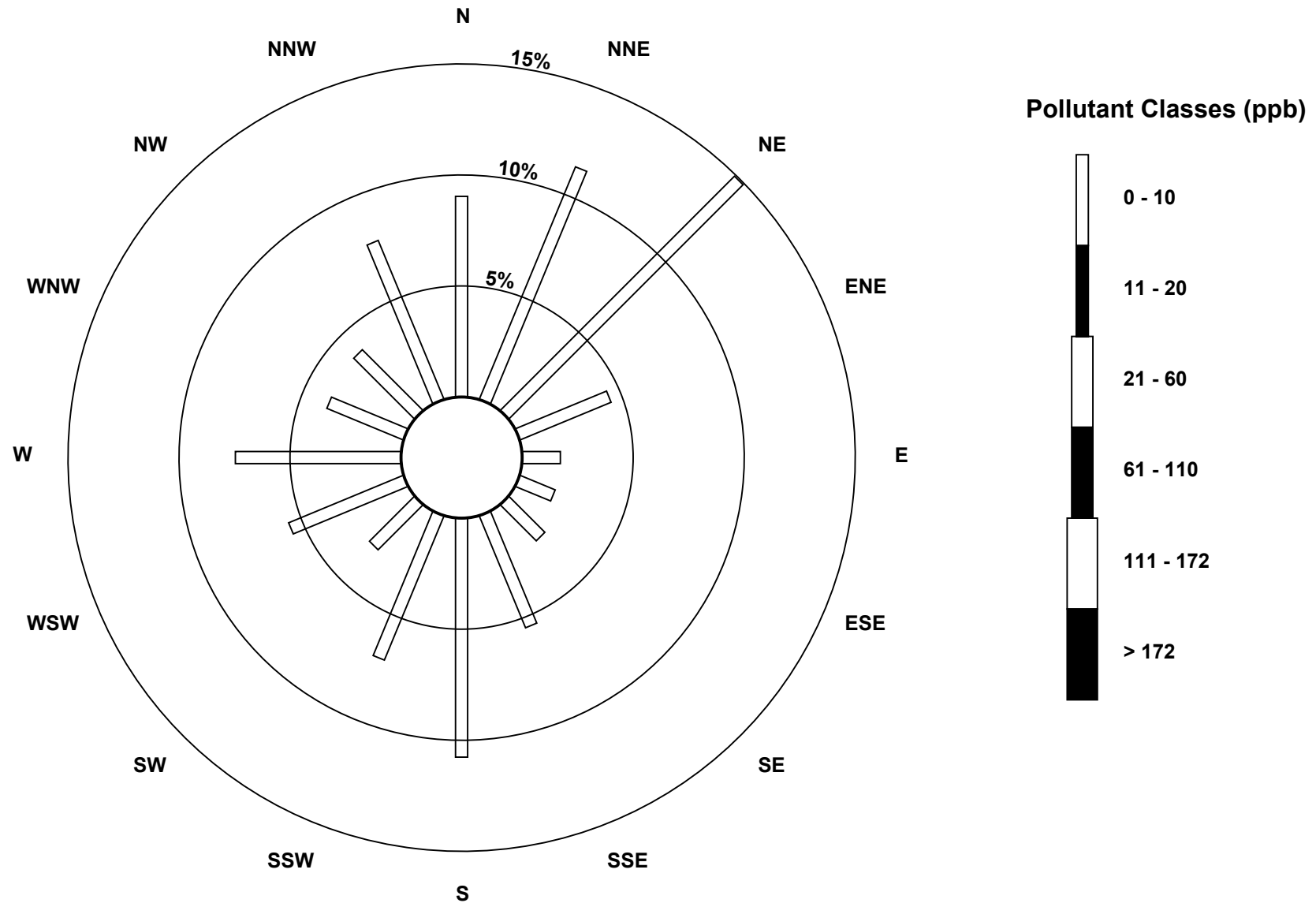
Hourly Maximums

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



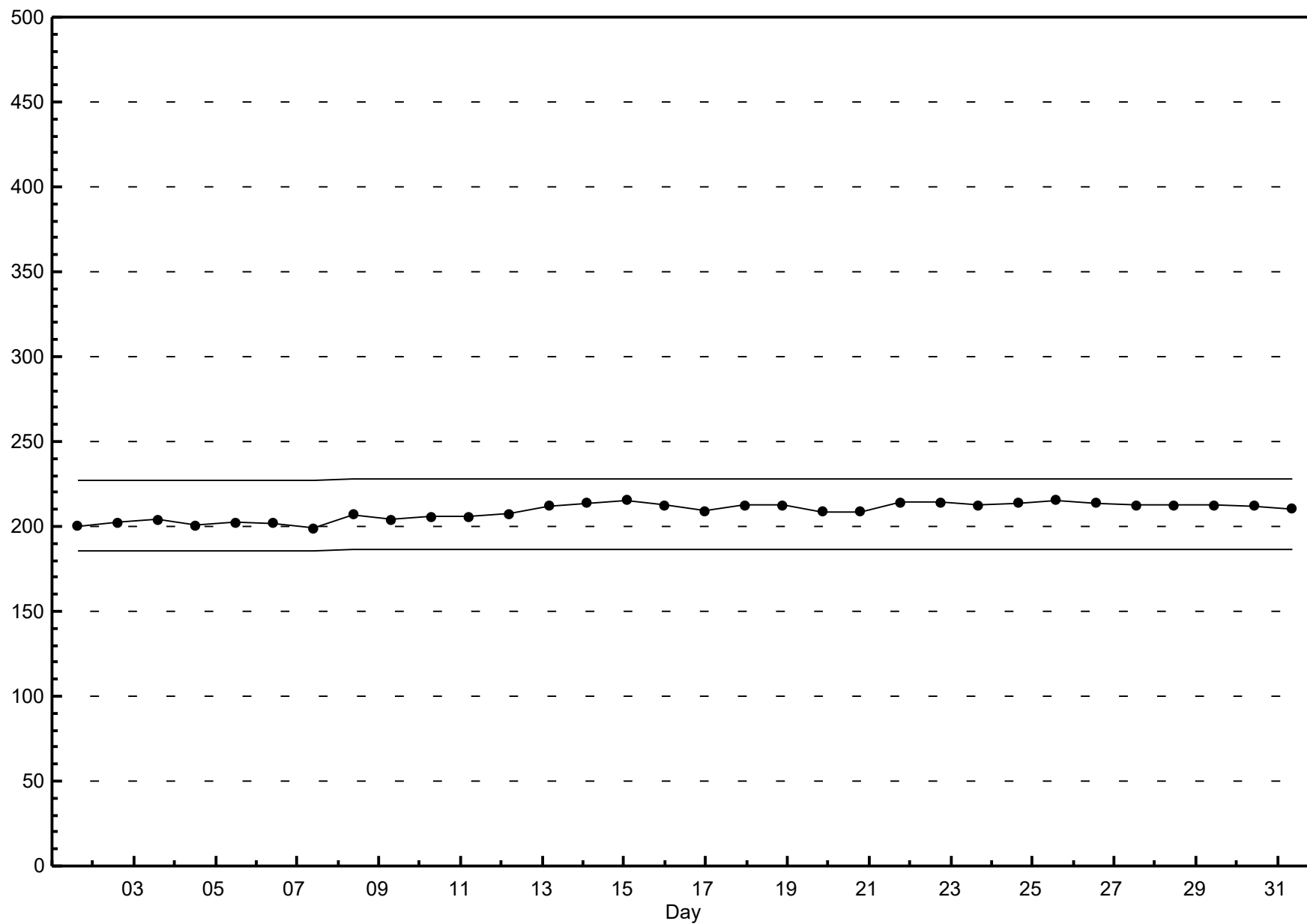
Pollutant Rose

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



Span Responses

Sulphur Dioxide (SO₂)
Portable Rycroft - March 2017



Hourly Averages

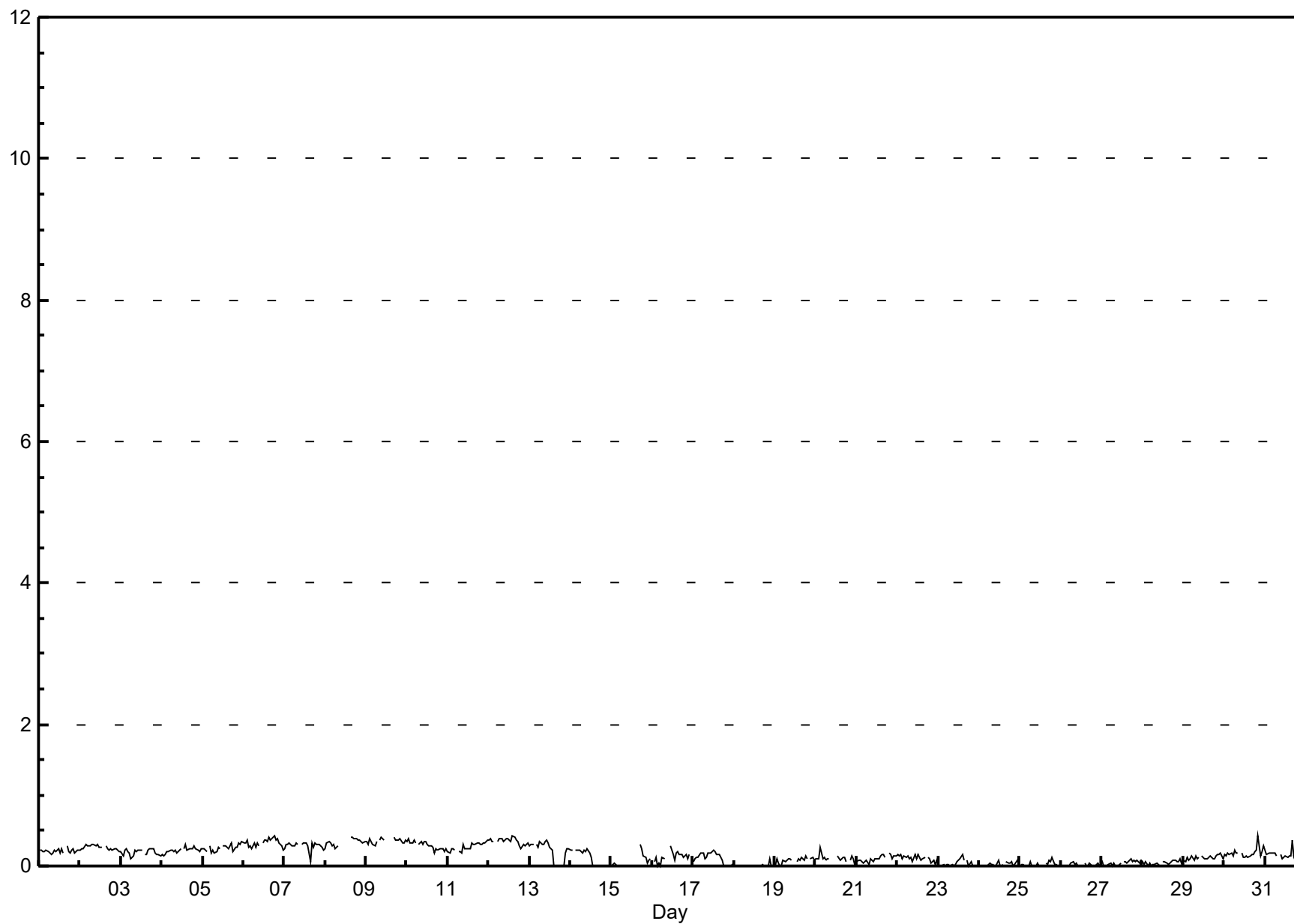
Total Reduced Sulphur (TRS) - ppb

Portable Rycroft - March 2017

Maximum Value: 0.4 ppb on Mar 12 15:00																			Maximum Daily Average: 0.4 ppb on Mar 9																			Hours in Service: 744	
Minimum Value: 0 ppb on Mar 13 15:00																			Minimum Daily Average: 0.0 ppb on Mar 18																			Hours of Data: 689	
Maximum Diurnal Average: 0.2 ppb at hour 17																			Minimum Diurnal Average: 0.1 ppb at hour 8																			Hours of Missing Data: 55	
Monthly Average: 0.16 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.3 P ₉₉ = 0.4																			Hours of Calibration: 47	
																																						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-Mar	0	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													
2-Mar	0	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	0.3													
3-Mar	0	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													
4-Mar	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3													
5-Mar	0	0	0	P	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4													
6-Mar	0	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													
7-Mar	0	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	0.3													
8-Mar	0	0	0	0	0	0	0	0	A	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0.3	0.4													
9-Mar	0	0	0	0	0	0	0	A	0	0	0	M	M	D	D	M	0	0	0	0	0	0	0	0	0.4	0.4													
10-Mar	0	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													
11-Mar	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4													
12-Mar	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.4													
13-Mar	0	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													
14-Mar	0	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													
15-Mar	0	0	0	0	0	0	0	0	0	0	0	C	C	C	C	C	C	0	0	0	0	0	0	0	0.1	0.3													
16-Mar	A	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.3													
17-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2													
18-Mar	0	0	0	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-Mar	0	0	0	0	0	0	0	0	0	0	0	M	M	0	0	0	0	0	0	0	0	A	0	0	0.1	0.2													
20-Mar	0	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	A	0	0	0	0	0.1	0.3													
21-Mar	0	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													
22-Mar	0	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	0.2													
23-Mar	0	0	0	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													
24-Mar	0	0	0	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													
25-Mar	0	0	0	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													
26-Mar	0	0	0	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													
27-Mar	0	0	0	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													
28-Mar	0	0	0	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													
29-Mar	0	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													
30-Mar	0	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													
31-Mar	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4													
																								Diurnal Average	Diurnal Maximum														
C - Calibration				P - Power Failure				D - DAS Failure				M - Maintenance				A - Automated Daily Zero Span																							

Hourly Averages

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



Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

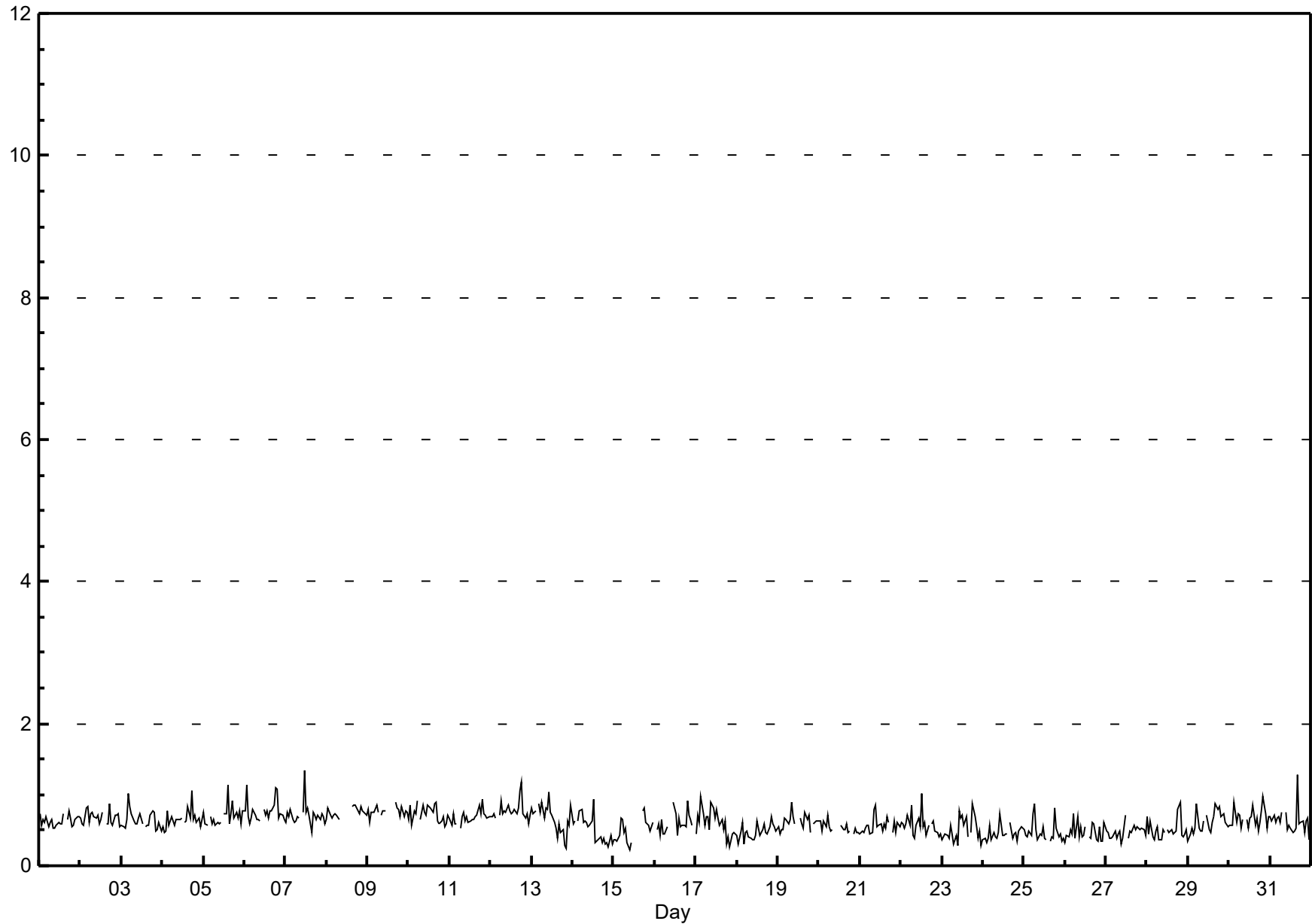
Portable Rycroft - March 2017

Maximum Value: 1.3 ppb on Mar 7 12:00																			Maximum Daily Average: 0.8 ppb on Mar 12										Hours in Service: 744	
Minimum Value: 0 ppb on Mar 15 10:00																			Minimum Daily Average: 0.5 ppb on Mar 24										Hours of Data: 689	
Maximum Diurnal Average: 0.7 ppb at hour 17																			Minimum Diurnal Average: 0.6 ppb at hour 3										Hours of Missing Data: 55	
Monthly Average: 0.61 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: 47	
																													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-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.6	0.8				
2-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.7	0.9				
3-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	1	1	0	0.6	1.0				
4-Mar	1	0	0	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1				
5-Mar	1	1	1	P	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1				
6-Mar	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1				
7-Mar	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0.7	1.3				
8-Mar	1	1	1	1	1	1	1	1	A	1	C	C	C	C	C	1	1	1	1	1	1	1	1	1	0.8	1.0				
9-Mar	1	1	1	1	1	1	1	A	1	1	M	M	D	D	D	M	1	1	1	1	1	1	1	1	0.8	0.9				
10-Mar	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9				
11-Mar	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9				
12-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2				
13-Mar	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0	0	1	1	1	0.7	1.0				
14-Mar	1	1	A	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.5	0.9				
15-Mar	0	0	0	0	1	1	0	1	0	0	0	C	C	C	C	C	C	1	1	1	1	0	1	1	0.5	0.8				
16-Mar	A	1	1	0	1	0	0	1	C	C	C	1	1	0	1	1	1	1	1	1	1	1	1	A	0.6	0.9				
17-Mar	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0.6	1.0				
18-Mar	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	1	1	1	1	0	0.5	0.7				
19-Mar	1	0	1	1	1	1	1	1	1	1	1	M	M	1	1	1	1	1	1	0	A	1	1	1	0.6	0.9				
20-Mar	1	1	0	1	1	1	1	0	1	C	C	C	C	1	1	1	1	0	0	A	0	1	0	0	0.5	0.7				
21-Mar	0	0	0	1	1	1	0	0	1	1	1	1	1	0	1	1	1	1	A	0	1	0	1	1	0.6	0.9				
22-Mar	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	0	1	A	1	1	0	0	0	0	0.6	1.0				
23-Mar	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1	0	A	0	1	1	1	0	0	0	0.5	0.9				
24-Mar	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	A	1	0	0	0	0	0	1	1	0.5	0.7				
25-Mar	1	0	0	0	0	1	1	1	0	0	0	1	0	0	A	0	0	0	1	1	0	0	0	0	0.5	0.9				
26-Mar	0	0	0	1	0	1	0	1	0	1	0	0	1	A	0	0	1	1	0	0	1	0	0	1	0.5	0.7				
27-Mar	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	1	1	1	1	1	1	0	0	0.5	0.7				
28-Mar	1	0	1	0	0	0	1	0	0	0	0	A	1	0	1	0	0	0	1	1	0	0	0	1	0.5	0.9				
29-Mar	0	0	1	0	1	1	1	0	0	1	A	1	1	0	1	1	1	1	1	1	1	1	1	1	0.6	0.9				
30-Mar	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0.7	1.0				
31-Mar	1	1	1	1	1	1	1	1	A	1	1	1	1	0	0	1	1	1	1	1	0	1	1	0	0.6	1.3				
0.6 0.6 0.6 0.6 0.6 0.7 0.6 0.6 0.6 0.6 0.6 0.7 0.7 0.6 0.6 0.6 0.7 0.7 0.7 0.6 0.6 0.6 0.6 0.6																									Diurnal Average					
0.8 1.1 0.8 1.0 1.0 0.9 0.9 0.8 0.9 1.0 1.0 1.3 1.0 0.8 1.1 0.9 1.3 1.1 1.2 1.1 1.0 0.8 0.8 0.9																									Diurnal Maximum					
C - Calibration P - Power Failure D - DAS Failure M - Maintenance A - Automated Daily Zero Span																														

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

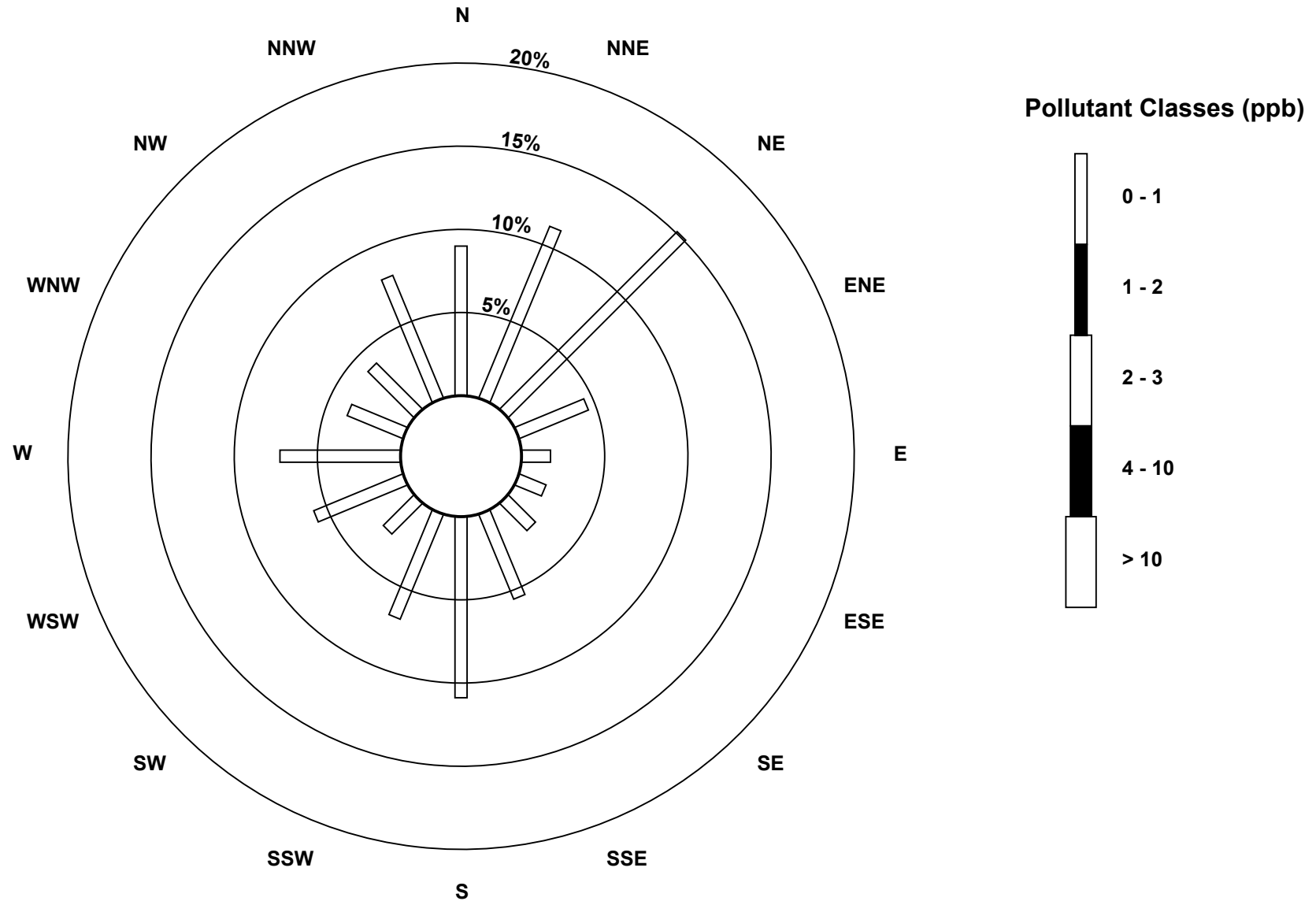
Portable Rycroft - March 2017



Pollutant Rose

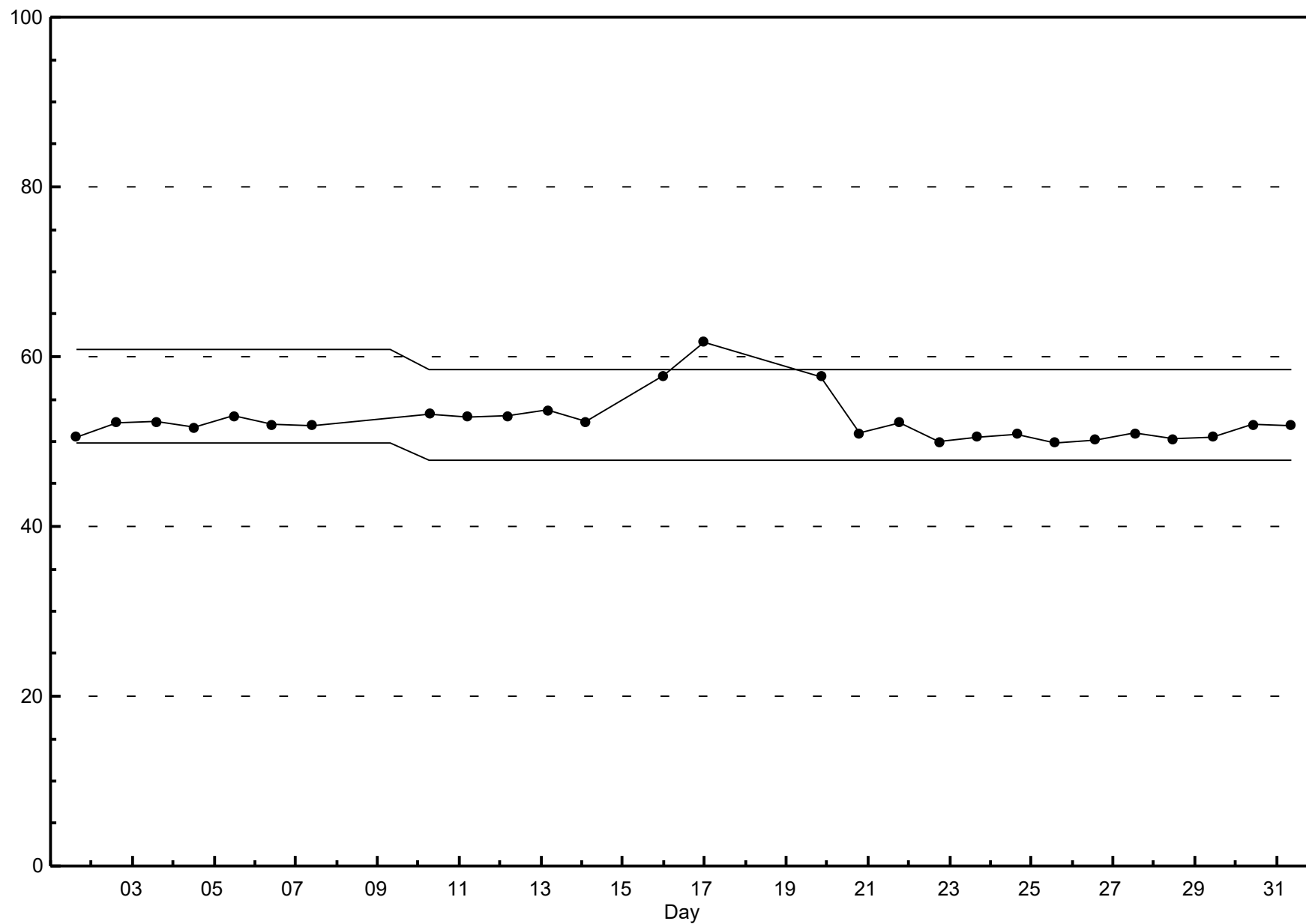
Total Reduced Sulphur (TRS) - ppb

Portable Rycroft - March 2017



Span Responses

Total Reduced Sulphur (TRS)
Portable Rycroft - March 2017



Hourly Averages

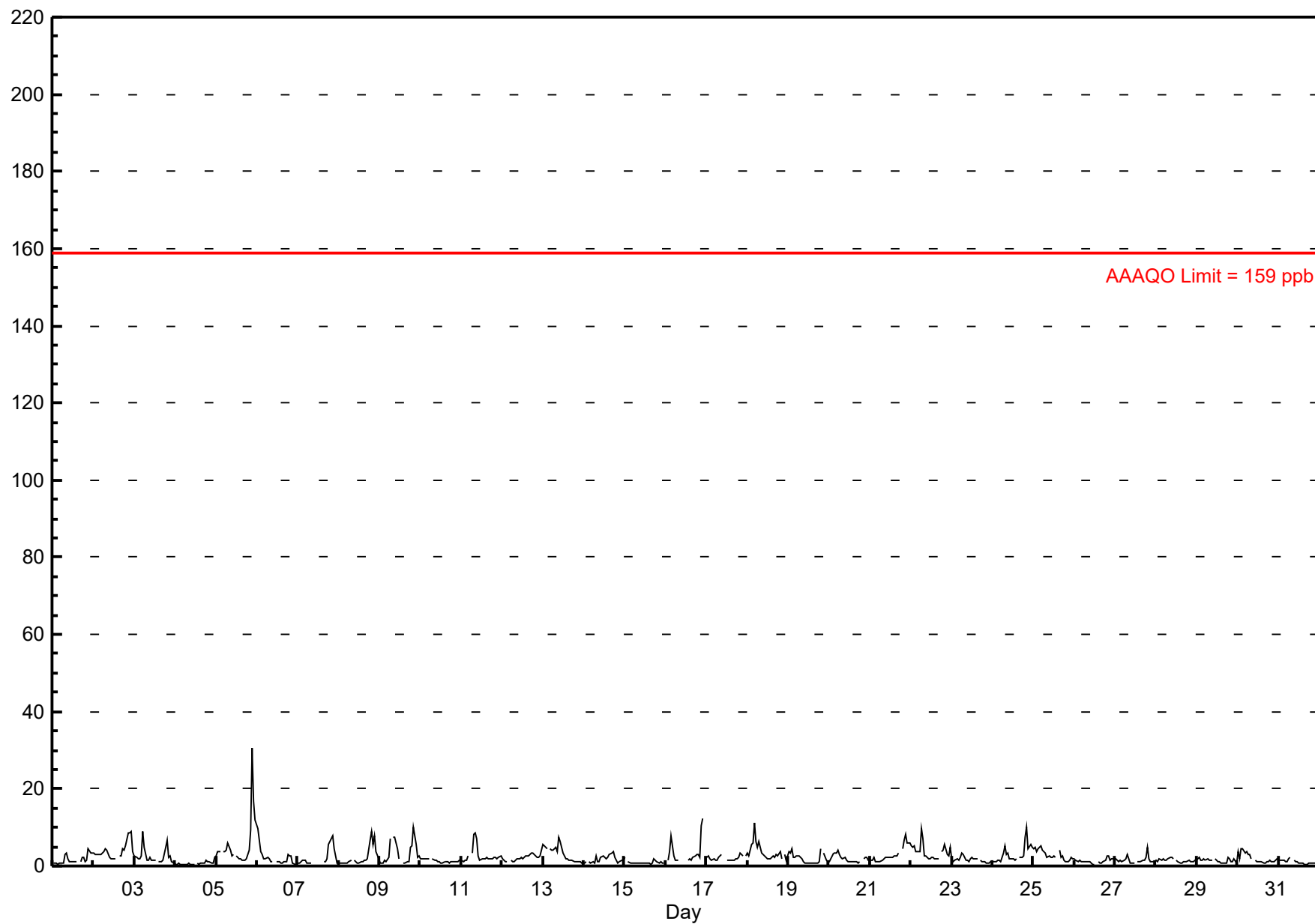
Nitrogen Dioxide (NO₂) - ppb

Portable Rycroft - March 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 744						
Maximum Value: 30.7 ppb on Mar 5 22:00																				Maximum Daily Average: 5.5 ppb on Mar 5		Hours of Data: 698				
Minimum Value: 0 ppb on Mar 4 07:00																				Minimum Daily Average: 0.7 ppb on Mar 4		Hours of Missing Data: 46				
Maximum Diurnal Average: 3.9 ppb at hour 22																				Minimum Diurnal Average: 1.4 ppb at hour 15		Hours of Calibration: 41				
Monthly Average: 2.33 ppb																				Percentiles: P ₁ = 0.5 P ₁₀ = 0.8 Q ₁ = 1.1 Median = 1.7 Q ₃ = 2.7 P ₉₀ = 4.6 P ₉₉ = 9.9		Percent Operational Time: 99.3				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	1	1	1	1	1	1	1	3	3	2	1	1	1	1	1	A	1	2	2	1	2	4	4	3	1.7	4.5
2-Mar	3	3	3	3	3	3	4	5	4	2	2	2	2	2	A	3	3	5	4	5	9	8	9	4	3.9	8.9
3-Mar	3	2	2	2	3	9	5	1	2	2	2	2	2	A	1	1	1	2	5	7	2	3	1	1	2.6	9.1
4-Mar	0	1	1	0	1	0	0	0	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	2	0.7	2.1
5-Mar	2	4	4	P	4	4	4	6	4	3	3	A	3	2	2	1	2	1	2	4	9	31	17	12	5.5	30.7
6-Mar	10	7	4	3	2	2	2	2	1	1	A	1	1	1	1	1	1	1	3	3	2	1	1	1	2.2	9.7
7-Mar	1	1	1	2	1	1	1	1	1	A	1	C	C	C	C	1	1	2	6	6	8	5	2	1	2.1	7.8
8-Mar	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	2	7	9	6	8	4	2	2.3	9.1
9-Mar	1	1	1	2	1	2	7	A	7	7	4	2	D	D	1	1	1	1	5	5	10	6	2	3	3.3	10.0
10-Mar	2	2	2	2	2	2	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.3	2.0
11-Mar	2	1	2	2	3	A	3	8	9	7	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.8	8.6
12-Mar	2	2	1	1	A	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	2	2	3	4	2.2	4.3
13-Mar	6	5	4	A	4	4	4	5	4	7	6	5	3	2	2	2	1	1	1	1	1	1	1	1	3.2	7.4
14-Mar	1	1	A	1	1	1	1	3	1	1	2	2	2	2	2	3	3	4	2	1	1	1	1	2	1.8	3.9
15-Mar	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	0.9	2.2
16-Mar	A	1	4	8	5	2	2	2	C	C	C	C	C	2	2	2	2	2	3	3	2	11	12	A	--	12.1
17-Mar	2	3	2	1	2	2	2	2	2	3	M	M	2	1	1	1	2	2	2	2	3	3	A	3	2.0	3.4
18-Mar	4	3	5	6	11	6	5	6	4	3	2	2	2	2	2	3	2	3	3	4	2	A	3	1	3.7	11.4
19-Mar	4	3	4	2	2	3	3	2	2	1	1	1	1	1	1	1	1	1	1	4	A	3	2	1	1.9	4.4
20-Mar	1	2	3	3	3	4	3	2	2	2	2	1	1	1	1	1	1	1	1	A	2	2	2	2	1.9	4.0
21-Mar	1	2	2	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	A	5	7	8	6	6	2.9	8.3
22-Mar	5	5	5	4	4	4	10	7	3	3	2	2	2	2	2	2	2	A	4	4	6	3	3	5	3.8	9.8
23-Mar	2	1	2	2	1	2	3	3	2	1	1	2	2	2	2	2	A	1	1	1	1	1	1	1	1.6	3.2
24-Mar	1	1	1	1	2	1	3	5	3	3	2	2	2	2	2	A	2	2	3	8	10	5	6	5	3.1	10.1
25-Mar	4	5	4	4	5	4	4	4	2	2	2	2	2	2	A	4	2	2	1	1	1	1	2	2	2.9	5.4
26-Mar	2	1	1	1	1	1	1	1	1	1	1	0	0	A	1	1	1	1	1	3	3	1	2	2	1.3	2.8
27-Mar	2	2	1	1	1	1	2	3	2	1	1	1	A	1	1	1	1	2	2	5	2	1	1	1	1.6	4.7
28-Mar	1	1	2	1	2	1	1	2	2	2	2	A	1	1	1	1	1	1	1	2	1	1	1	1	1.4	2.4
29-Mar	2	2	2	2	2	2	2	2	2	2	1	A	2	1	1	1	1	1	2	2	1	1	2	1	1.4	2.1
30-Mar	4	2	4	5	3	4	3	3	2	A	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2.0	4.5
31-Mar	2	1	1	1	1	1	2	2	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.2
2.4 2.2 2.3 2.2 2.4 2.4 2.7 2.9 2.5 2.4 1.8 1.6 1.6 1.5 1.4 1.5 1.5 1.8 2.4 3.2 3.3 3.9 3.1 2.4																								Diurnal Average		
9.7 6.8 5.4 7.8 11.4 9.1 9.8 8.3 8.6 7.4 6.2 4.9 3.4 2.4 2.5 4.2 3.3 4.6 6.5 9.1 10.1 30.7 16.8 11.9																								Diurnal Maximum		
C - Calibration		P - Power Failure					D - DAS Failure					M - Maintenance					A - Automated Daily Zero Span									
Alberta Ambient Air Quality Objectives (AAAQO):		1-hr 159 ppb					24-hr 106 ppb																			

Hourly Averages

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



Hourly Maximums

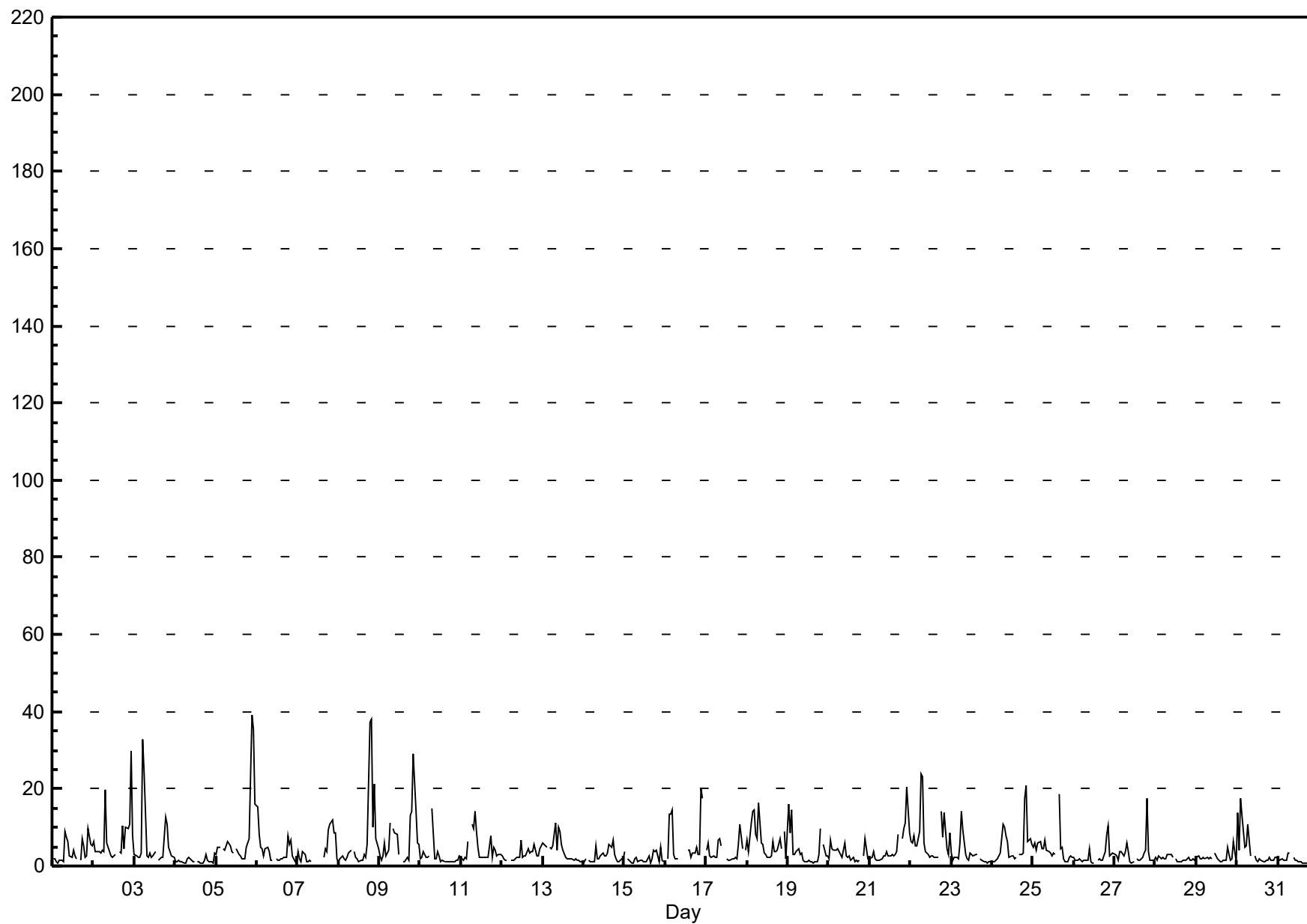
Nitrogen Dioxide (NO₂) - ppb

Portable Rycroft - March 2017

Maximum Value: 39.1 ppb on Mar 5 22:00																				Maximum Daily Average: 8.5 ppb on Mar 5										Hours in Service: 744	
Minimum Value: 1 ppb on Mar 26 12:00																				Minimum Daily Average: 1.4 ppb on Mar 4										Hours of Data: 698	
Maximum Diurnal Average: 7.1 ppb at hour 20																				Minimum Diurnal Average: 2.0 ppb at hour 15										Hours of Missing Data: 46	
Monthly Average: 4.22 ppb																				Percentiles: P ₁ = 0.7 P ₁₀ = 1.2 Q ₁ = 1.6 Median = 2.6 Q ₃ = 4.6 P ₉₀ = 9.1 P ₉₉ = 28.6										Hours of Calibration: 41	
																														Percent Operational Time: 99.3	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Mar	2	2	1	1	2	1	1	9	7	6	3	2	4	3	2	A	2	7	5	2	3	10	6	5	3.7	9.7					
2-Mar	6	4	4	4	3	4	4	20	6	4	3	2	3	3	A	4	3	10	4	10	10	11	30	8	6.9	29.9					
3-Mar	3	3	2	2	3	33	24	3	2	4	2	3	4	A	2	2	2	2	12	11	5	4	3	2	5.8	32.9					
4-Mar	1	1	1	1	1	1	1	2	2	2	1	1	A	1	1	1	1	2	3	2	1	1	1	3	1.4	3.2					
5-Mar	3	5	5	P	4	4	5	6	5	4	3	A	4	3	3	2	2	2	5	7	23	39	35	16	8.5	39.1					
6-Mar	15	8	5	4	3	4	5	4	1	2	A	2	2	1	2	2	2	2	8	6	7	3	1	1	3.9	15.1					
7-Mar	4	2	1	4	3	1	1	2	1	A	3	C	C	C	C	2	5	4	9	11	12	8	9	2	4.4	12.0					
8-Mar	1	2	2	2	1	2	3	4	A	4	2	2	1	1	2	3	2	6	37	38	10	21	7	5	6.9	38.1					
9-Mar	3	1	3	6	2	4	11	A	10	9	8	3	D	D	1	1	2	2	13	14	29	14	6	6	7.0	29.0					
10-Mar	2	2	4	2	2	3	A	15	2	2	4	2	1	1	1	1	1	1	1	1	1	1	1	3	2.4	14.8					
11-Mar	2	2	2	2	6	A	11	10	14	9	5	2	2	2	2	2	2	8	2	5	4	3	3	3	4.5	14.3					
12-Mar	2	2	1	1	A	2	1	1	2	2	2	7	2	2	3	4	3	4	4	6	3	3	4	5	2.9	6.6					
13-Mar	6	6	5	A	5	5	5	11	4	10	9	6	4	2	2	2	2	2	1	2	2	2	1	1	4.1	11.1					
14-Mar	1	2	A	1	1	1	1	5	2	2	3	4	3	3	3	6	5	7	3	2	1	1	2	2	2.6	6.7					
15-Mar	4	A	2	1	1	1	2	2	1	2	1	1	1	1	3	1	2	4	4	4	1	5	1	1	2.0	4.7					
16-Mar	A	2	13	14	15	3	2	2	C	C	C	C	C	4	4	2	3	3	5	3	3	20	18	A	--	20.1					
17-Mar	4	6	3	2	3	2	2	7	7	5	M	M	2	2	2	2	2	2	2	6	11	4	A	4	3.8	11.0					
18-Mar	7	4	11	14	14	8	7	16	6	6	3	3	2	2	2	6	4	4	4	7	4	A	9	2	6.4	16.3					
19-Mar	16	9	14	3	3	4	5	3	3	1	1	1	1	1	1	1	1	1	3	10	A	6	3	2	4.1	15.9					
20-Mar	2	7	5	4	4	5	4	3	2	6	3	2	2	2	2	1	1	1	1	A	3	7	5	2	3.2	7.1					
21-Mar	2	2	4	2	2	1	2	2	3	3	4	3	3	3	3	3	4	8	A	7	10	11	21	9	4.7	20.7					
22-Mar	6	6	8	5	5	9	24	23	6	4	3	2	3	3	2	2	2	A	14	7	14	4	3	9	7.2	23.7					
23-Mar	3	2	2	2	2	6	14	9	3	2	2	3	3	3	3	3	A	2	1	1	1	1	1	1	3.1	14.1					
24-Mar	1	1	2	2	3	4	11	10	8	6	2	3	3	2	2	A	3	3	3	17	21	6	7	5	5.5	20.9					
25-Mar	5	6	4	6	6	5	5	7	4	4	3	3	4	3	A	19	5	5	2	1	1	2	3	2	4.5	18.8					
26-Mar	2	2	1	2	1	1	1	2	2	5	1	1	1	A	1	2	2	1	4	8	10	2	3	3	2.5	10.4					
27-Mar	3	3	2	4	4	3	4	6	4	1	1	1	A	2	1	1	2	3	4	18	4	1	1	1	3.2	17.6					
28-Mar	2	2	3	2	2	2	2	3	3	3	2	A	2	1	1	1	1	1	1	2	2	2	2	2	1.9	2.9					
29-Mar	2	3	2	2	2	2	2	2	2	2	2	A	3	2	1	1	1	1	5	3	1	2	6	1	2.2	6.3					
30-Mar	14	4	17	13	5	5	11	7	3	A	3	2	1	2	1	1	1	1	1	2	2	2	2	2	4.4	17.3					
31-Mar	2	2	2	2	1	1	3	4	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.4	3.5					
4.2 3.3 4.4 3.8 3.7 4.2 5.8 6.6 4.1 3.9 2.9 2.5 2.3 2.1 2.0 2.8 2.3 3.4 5.5 7.1 6.6 6.6 6.5 3.7																								Diurnal Average							
15.9 8.7 17.3 14.1 14.6 32.9 24.4 23.1 14.3 10.2 9.1 6.6 4.4 4.0 4.3 18.8 4.7 10.3 37.1 38.1 29.0 39.1 35.5 15.9																								Diurnal Maximum							
C - Calibration				P - Power Failure				D - DAS Failure				M - Maintenance				A - Automated Daily Zero Span															

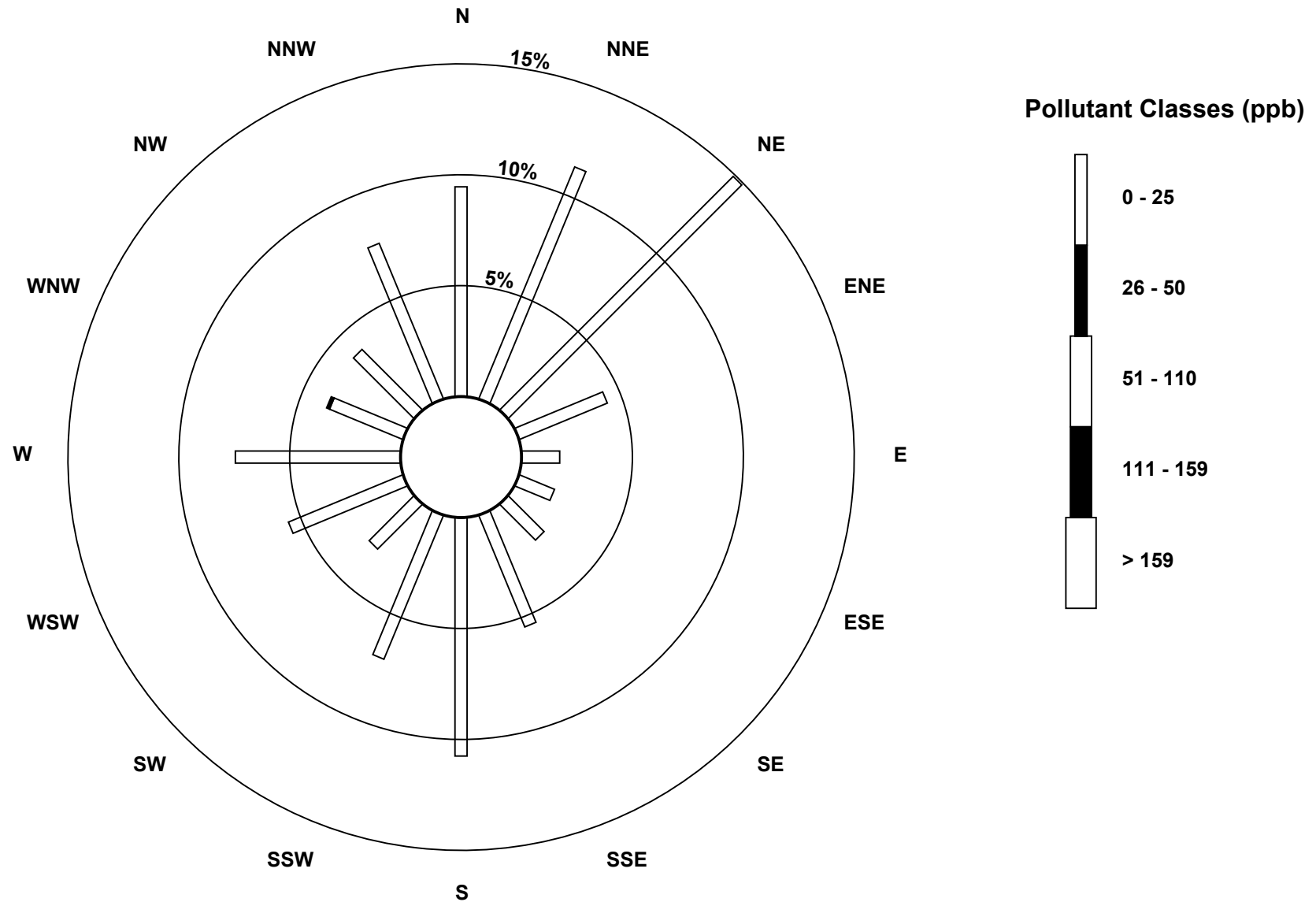
Hourly Maximums

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



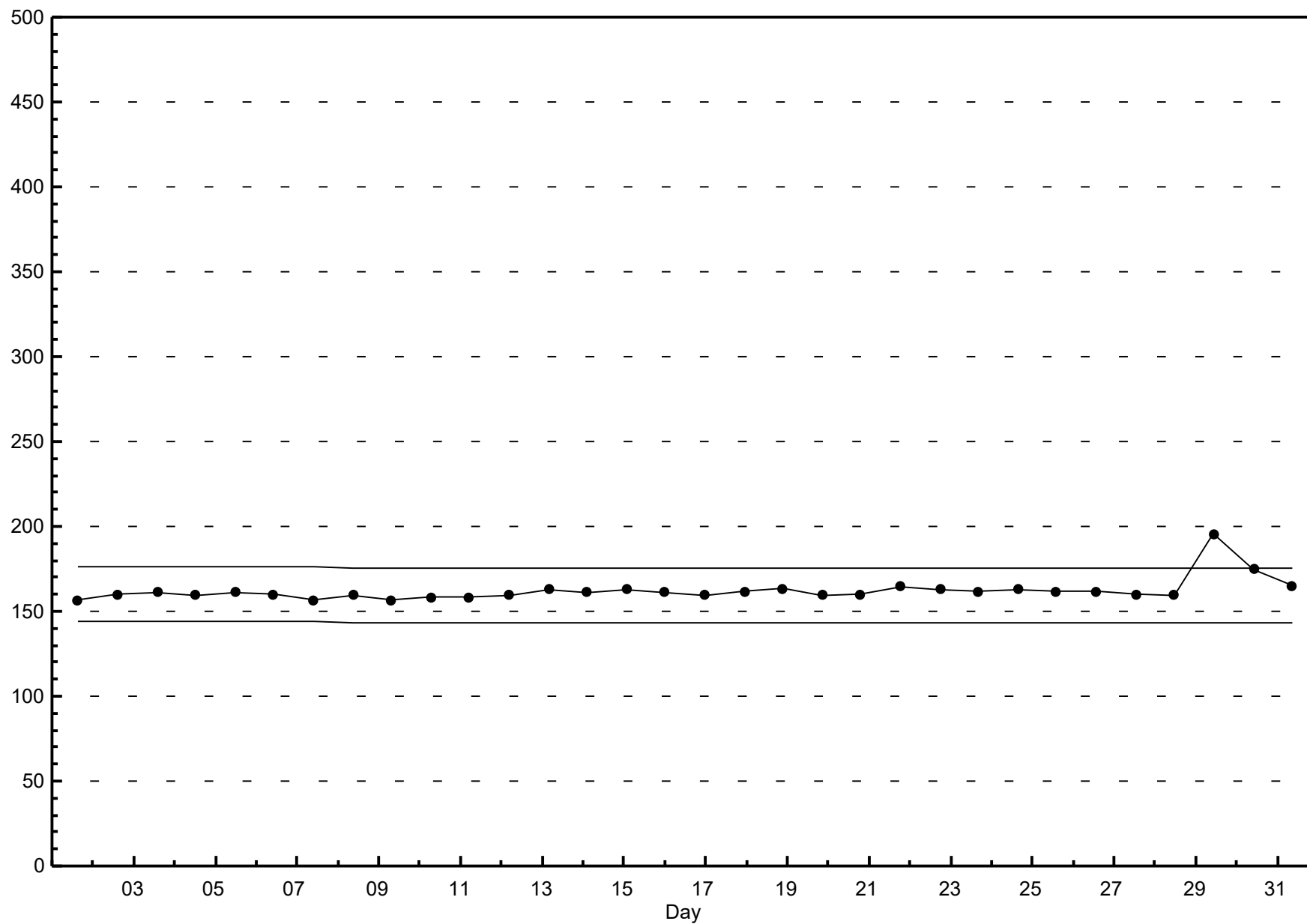
Pollutant Rose

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



Span Responses

Nitrogen Dioxide (NO₂)
Portable Rycroft - March 2017



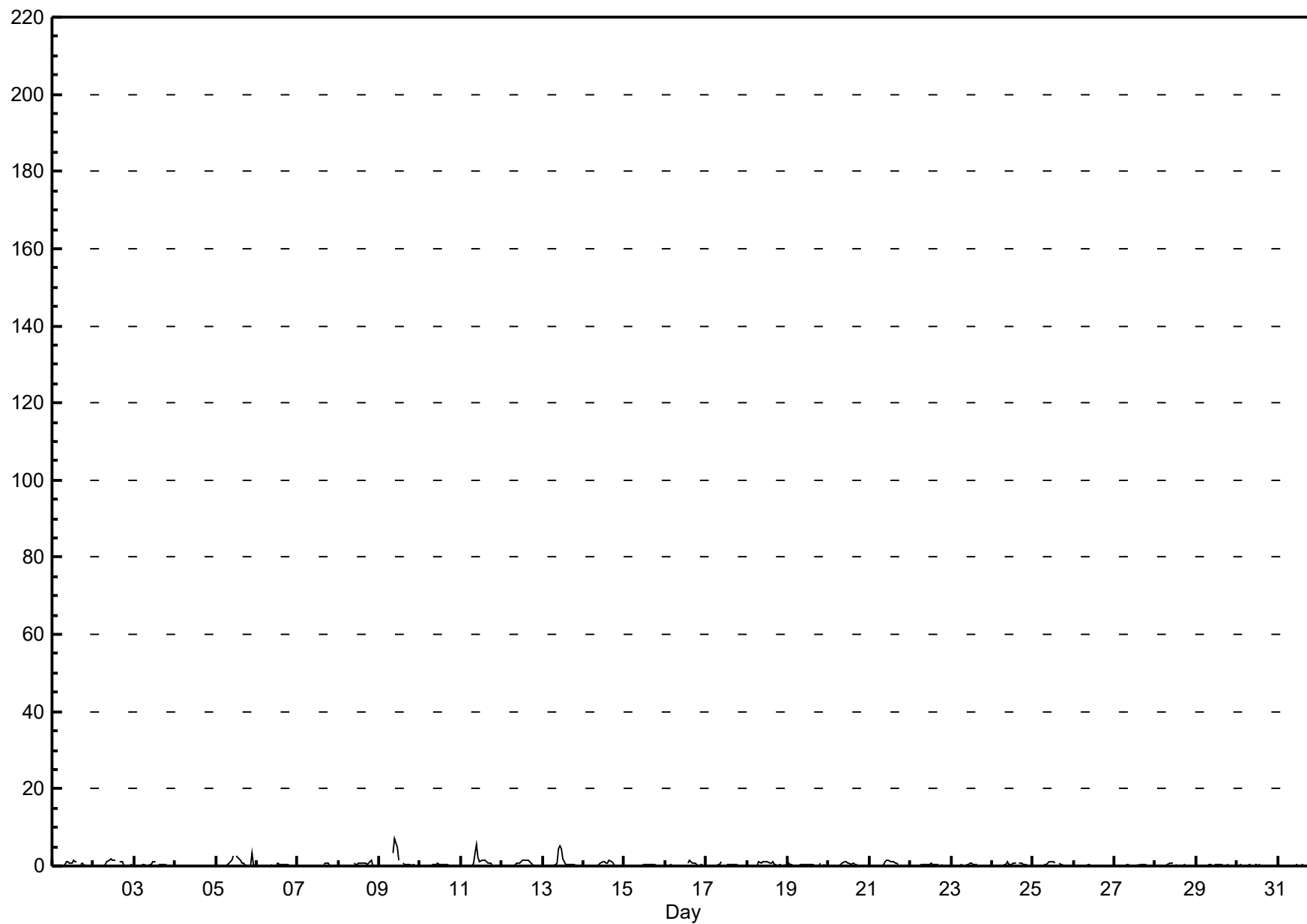
Hourly Averages

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

Maximum Value: 7.1 ppb on Mar 9 10:00																				Maximum Daily Average: 0.9 ppb on Mar 9										Hours in Service: 744									
Minimum Value: 0 ppb on Mar 1 01:00																				Minimum Daily Average: 0.1 ppb on Mar 4										Hours of Data: 698									
Maximum Diurnal Average: 1.2 ppb at hour 10																				Minimum Diurnal Average: 0.0 ppb at hour 5										Hours of Missing Data: 46									
Monthly Average: 0.35 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.4 P ₉₀ = 1.0 P ₉₉ = 2.9										Hours of Calibration: 41									
																				Percent Operational Time: 99.3																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Mar	0	0	0	0	0	0	0	1	1	1	1	2	2	2	1	A	0	1	0	0	0	0	0	0	0.4	1.6													
2-Mar	0	0	0	0	0	0	0	0	1	1	2	2	2	2	A	1	1	1	0	0	0	0	0	0	0.6	1.9													
3-Mar	0	0	0	0	0	0	0	0	0	0	0	1	1	A	0	0	0	0	0	0	0	0	0	0	0.3	1.1													
4-Mar	0	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													
5-Mar	0	0	0	P	0	0	0	0	1	2	3	A	3	2	2	1	1	0	0	0	0	3	0	0	0.8	3.3													
6-Mar	0	0	0	0	0	0	0	0	0	0	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0.2	0.6													
7-Mar	0	0	0	0	0	0	0	0	0	A	0	C	C	C	C	1	1	1	1	0	0	0	0	0	0.2	0.7													
8-Mar	0	0	0	0	0	0	0	0	A	1	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0.4	1.4													
9-Mar	0	0	0	0	0	0	0	A	3	7	5	2	D	D	1	0	1	0	0	0	0	0	0	0	0.9	7.1													
10-Mar	0	0	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9													
11-Mar	0	0	0	0	0	A	0	1	3	5	2	1	1	1	1	1	1	1	0	0	0	0	0	0	0.9	5.5													
12-Mar	0	0	0	0	A	0	0	0	0	1	1	1	1	2	2	1	1	1	0	0	0	0	0	0	0.5	1.6													
13-Mar	0	0	0	A	0	0	0	0	1	4	5	5	2	0	0	0	0	0	0	0	0	0	0	0	0.9	5.4													
14-Mar	0	0	A	0	0	0	0	0	0	0	1	1	1	1	1	2	1	1	0	0	0	0	0	0	0.4	1.6													
15-Mar	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4													
16-Mar	A	0	0	0	0	0	0	0	C	C	C	C	C	1	1	1	1	1	0	0	0	0	0	A	--	1.4													
17-Mar	0	0	0	0	0	0	0	0	1	1	M	M	0	0	0	0	1	0	0	0	0	0	A	0	0.3	1.0													
18-Mar	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	A	0	0	0.5	1.2													
19-Mar	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0.2	0.6													
20-Mar	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	A	0	0	0	0	0.3	1.3													
21-Mar	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	A	0	0	0	0	0	0.4	1.3													
22-Mar	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	A	0	0	0	0	0	0	0.2	0.7													
23-Mar	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	A	0	0	0	0	0	0	0	0.2	0.9													
24-Mar	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	A	1	1	0	0	1	0	0	0	0.3	1.0													
25-Mar	0	0	0	0	0	0	0	0	1	1	1	1	1	1	A	1	0	0	0	0	0	0	0	0	0.4	1.3													
26-Mar	0	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													
27-Mar	0	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													
28-Mar	0	0	0	0	0	0	0	0	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9													
29-Mar	0	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	0.5													
30-Mar	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3													
31-Mar	0	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													
0.1 0.0 0.0 0.0 0.0 0.0 0.1 0.2 0.6 1.2 1.1 0.9 0.9 0.7 0.6 0.6 0.5 0.4 0.2 0.2 0.1 0.2 0.1 0.0																									Diurnal Average														
0.6 0.2 0.3 0.3 0.1 0.3 0.3 1.0 3.3 7.1 5.4 4.6 2.8 1.9 1.6 1.6 1.2 1.1 1.2 1.4 0.5 3.3 0.4 0.1																									Diurnal Maximum														
C - Calibration				P - Power Failure				D - DAS Failure				M - Maintenance				A - Automated Daily Zero Span																							

Hourly Averages

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



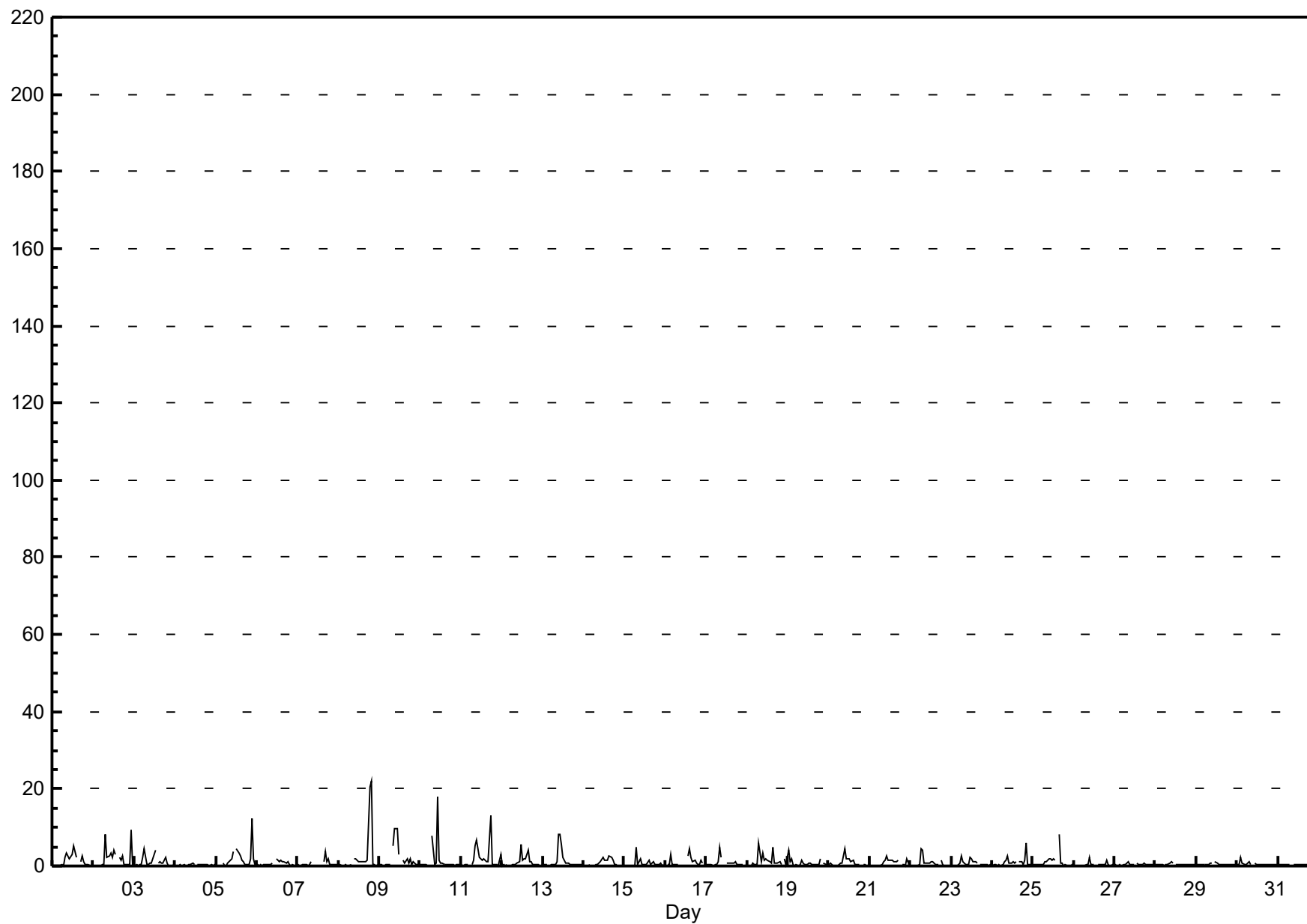
Hourly Maximums

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

Maximum Value: 22.0 ppb on Mar 8 20:00																				Maximum Daily Average: 2.5 ppb on Mar 8										Hours in Service: 744									
Minimum Value: 0 ppb on Mar 23 02:00																				Minimum Daily Average: 0.3 ppb on Mar 4										Hours of Data: 698									
Maximum Diurnal Average: 2.6 ppb at hour 11																				Minimum Diurnal Average: 0.2 ppb at hour 5										Hours of Missing Data: 46									
Monthly Average: 0.98 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.2 Median = 0.3 Q ₃ = 1.0 P ₉₀ = 2.2 P ₉₉ = 9.5										Hours of Calibration: 41									
																				Percent Operational Time: 99.3																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Mar	0	0	0	0	0	0	0	2	3	3	2	3	5	4	2	A	1	3	1	0	0	0	0	0	1.4	5.2													
2-Mar	0	0	0	0	0	0	0	8	2	2	3	2	4	3	A	2	1	3	1	0	0	0	9	1	1.9	9.4													
3-Mar	0	0	0	0	0	2	4	0	0	1	1	2	4	A	1	1	1	1	2	1	0	0	0	0	1.0	4.4													
4-Mar	0	0	0	0	0	0	0	0	0	0	1	1	A	0	0	0	0	1	0	0	0	0	0	0	0.3	0.7													
5-Mar	0	0	0	P	1	0	0	1	1	2	4	A	4	3	3	1	1	1	0	0	2	12	2	0	1.8	12.2													
6-Mar	0	0	0	0	0	0	0	0	0	1	A	2	2	1	1	1	1	1	1	0	0	0	0	0	0.6	2.0													
7-Mar	0	0	0	0	0	0	0	0	1	A	2	C	C	C	C	1	4	1	2	0	0	0	1	0	0.8	3.8													
8-Mar	0	0	0	0	0	0	0	0	A	2	2	1	1	1	1	1	1	1	21	22	0	0	0	0	2.5	22.0													
9-Mar	0	0	0	0	0	0	0	A	5	10	10	3	D	D	1	1	2	1	2	1	1	0	0	0	1.8	9.8													
10-Mar	0	0	0	0	0	0	A	8	0	1	18	2	1	1	1	1	0	0	0	0	0	0	0	0	1.5	18.1													
11-Mar	0	0	0	0	0	A	0	1	5	7	4	2	2	2	1	1	1	13	0	0	0	0	0	3	2.0	13.0													
12-Mar	0	0	0	0	A	0	0	0	1	1	1	5	2	2	2	4	1	1	1	0	0	0	0	0	1.0	5.5													
13-Mar	0	0	0	A	0	0	0	0	1	8	8	6	2	1	1	1	1	0	0	0	0	0	0	0	1.4	8.3													
14-Mar	0	0	A	0	0	0	0	0	0	1	1	2	2	1	1	3	2	2	0	0	0	0	0	0	0.8	2.7													
15-Mar	0	A	0	0	0	0	0	5	0	2	0	0	0	0	1	0	1	1	0	0	0	1	0	0	0.7	5.0													
16-Mar	A	0	0	3	0	0	0	0	C	C	C	C	C	3	5	2	1	1	1	0	0	1	1	A	--	4.6													
17-Mar	0	0	0	0	0	0	0	1	5	2	M	M	1	1	1	1	1	1	0	0	0	0	A	0	0.8	5.0													
18-Mar	0	0	0	1	1	0	0	6	1	3	2	2	1	1	1	5	1	1	1	1	1	A	2	0	1.3	5.9													
19-Mar	4	1	2	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	2	A	1	0	0	0.8	4.2													
20-Mar	0	1	0	0	0	0	0	1	1	4	2	2	2	1	2	1	1	0	0	A	0	0	0	0	0.8	4.5													
21-Mar	0	0	0	0	0	0	0	0	1	2	2	2	1	2	1	1	1	2	A	0	0	0	2	0	0.8	2.4													
22-Mar	0	0	0	0	0	0	4	4	1	1	1	1	1	1	0	0	A	2	0	0	0	0	0	0	0.8	4.5													
23-Mar	0	0	0	0	0	1	3	1	0	0	0	2	2	1	1	1	A	0	0	0	0	0	0	0	0.7	2.6													
24-Mar	0	0	0	0	0	0	0	1	2	3	1	1	1	1	1	A	1	1	1	2	6	0	0	0	1.0	6.0													
25-Mar	0	0	0	0	0	0	0	1	1	2	2	2	2	1	A	8	1	1	0	0	0	0	0	0	1.0	8.4													
26-Mar	0	0	0	0	0	0	0	0	0	2	0	0	0	A	0	1	0	0	0	1	0	0	0	0	0.4	2.2													
27-Mar	0	0	0	0	0	0	0	1	1	0	0	0	A	1	0	1	0	1	1	0	0	0	0	0	0.4	1.0													
28-Mar	0	0	0	0	0	0	0	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.1													
29-Mar	0	0	0	0	0	0	0	0	1	1	A	1	1	0	0	0	0	0	1	0	0	0	0	0	0.4	1.3													
30-Mar	0	0	2	1	0	0	1	1	1	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	2.1													
31-Mar	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4													
0.3 0.2 0.3 0.3 0.2 0.3 0.6 1.6 1.4 2.2 2.6 1.8 1.6 1.2 1.1 1.4 0.9 1.3 1.3 1.2 0.5 0.7 0.7 0.3																									Diurnal Average														
4.2 1.0 2.1 3.0 0.6 2.4 4.5 8.3 5.2 9.6 18.1 5.7 5.2 3.9 4.6 8.4 3.8 13.0 20.7 22.0 6.0 12.2 9.4 2.9																									Diurnal Maximum														
C - Calibration				P - Power Failure				D - DAS Failure				M - Maintenance				A - Automated Daily Zero Span																							

Hourly Maximums

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



Hourly Averages

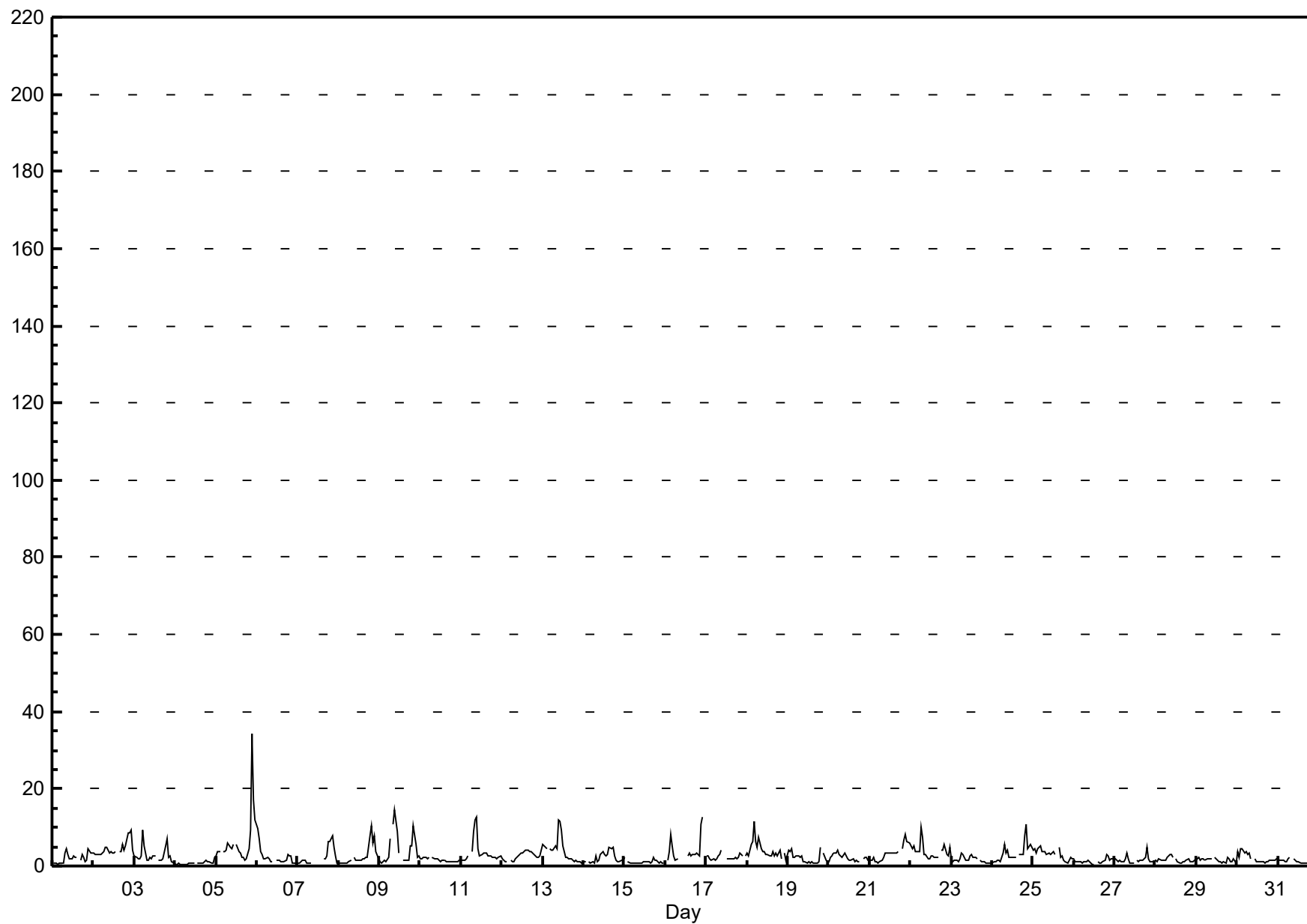
Oxides of Nitrogen (NO_x) - ppb

Portable Rycroft - March 2017

Maximum Value: 34.5 ppb on Mar 5 22:00																				Maximum Daily Average: 6.4 ppb on Mar 5										Hours in Service: 744									
Minimum Value: 0 ppb on Mar 4 06:00																				Minimum Daily Average: 0.8 ppb on Mar 4										Hours of Data: 698									
Maximum Diurnal Average: 4.1 ppb at hour 22																				Minimum Diurnal Average: 1.9 ppb at hour 15										Hours of Missing Data: 46									
Monthly Average: 2.65 ppb																				Percentiles: P ₁ = 0.5 P ₁₀ = 0.9 Q ₁ = 1.2 Median = 2.0 Q ₃ = 3.3 P ₉₀ = 5.0 P ₉₉ = 12.1										Hours of Calibration: 41									
																				Percent Operational Time: 99.3																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Mar	1	1	1	0	1	1	1	3	4	3	2	2	3	2	2	A	2	3	2	1	2	4	4	3	2.1	4.5													
2-Mar	3	3	3	3	3	3	4	5	5	3	4	3	3	4	A	4	4	6	4	5	9	9	9	4	4.5	9.4													
3-Mar	3	2	2	2	3	9	5	1	2	2	2	3	3	A	2	2	2	2	5	7	2	3	1	1	2.8	9.5													
4-Mar	0	1	1	0	0	0	0	0	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	2	0.8	2.1													
5-Mar	3	4	4	P	4	4	4	6	5	4	5	A	5	4	3	2	2	2	2	4	9	34	17	12	6.4	34.5													
6-Mar	10	7	4	3	2	2	2	2	1	1	A	2	2	1	1	1	1	2	3	3	2	1	1	1	2.4	9.8													
7-Mar	1	1	1	2	1	1	1	1	1	A	1	C	C	C	C	2	2	3	6	6	8	5	3	1	2.3	7.9													
8-Mar	1	1	1	1	1	1	1	1	A	2	1	1	1	2	2	2	2	2	8	11	6	8	4	2	2.7	10.5													
9-Mar	1	1	1	2	1	2	7	A	11	15	9	3	D	D	1	1	2	1	5	5	10	6	2	3	4.3	14.7													
10-Mar	2	2	2	2	2	2	A	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1.5	2.2													
11-Mar	2	1	2	2	3	A	4	9	12	13	5	3	3	3	3	3	3	3	2	2	2	2	2	3	3.7	12.8													
12-Mar	2	2	1	1	A	1	1	1	2	2	3	3	3	4	4	4	4	4	4	3	2	2	3	4	2.7	4.3													
13-Mar	6	5	4	A	4	4	4	5	4	12	12	9	5	2	2	2	2	2	1	1	1	1	1	1	4.0	11.8													
14-Mar	1	1	A	1	1	1	1	3	1	2	3	4	3	3	3	5	5	5	2	2	1	1	1	2	2.2	4.7													
15-Mar	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1.1	2.3													
16-Mar	A	1	4	8	5	2	2	2	C	C	C	C	C	3	3	3	3	3	3	3	2	11	13	A	--	12.5													
17-Mar	2	3	2	2	2	2	2	2	3	4	M	M	2	2	2	2	2	2	2	2	3	3	A	3	2.3	4.0													
18-Mar	4	3	5	6	12	6	5	7	4	4	4	3	3	3	3	4	3	3	3	4	2	A	3	1	4.1	11.6													
19-Mar	4	4	5	2	2	3	3	2	2	1	1	1	1	1	1	1	1	1	1	5	A	3	2	1	2.1	5.0													
20-Mar	1	2	3	3	3	4	3	3	2	3	3	2	2	2	2	1	1	1	1	A	2	2	2	1	2.2	4.0													
21-Mar	1	1	2	1	1	1	1	2	2	3	4	3	3	3	3	3	3	4	A	5	7	8	6	6	3.3	8.3													
22-Mar	5	5	5	4	4	4	10	8	3	3	2	2	3	3	2	2	2	A	4	4	6	3	3	5	3.9	10.0													
23-Mar	2	1	1	2	1	2	3	3	2	2	1	3	3	2	2	2	A	2	1	1	1	1	1	1	1.7	3.3													
24-Mar	1	1	1	1	2	1	3	5	3	4	2	2	2	2	2	A	3	3	3	8	11	5	6	5	3.4	10.7													
25-Mar	4	5	3	4	5	4	4	4	3	4	3	3	4	3	A	5	2	3	1	1	1	1	2	2	3.1	5.3													
26-Mar	2	1	1	1	1	1	1	1	1	1	1	0	1	A	1	1	1	1	1	3	3	1	2	2	1.3	2.8													
27-Mar	2	2	1	1	1	1	2	3	2	1	1	1	A	1	1	1	2	2	2	5	2	1	1	1	1.6	4.8													
28-Mar	1	1	2	1	2	1	1	2	3	3	2	A	2	1	1	1	1	1	1	2	1	1	1	1	1.5	3.1													
29-Mar	2	2	2	2	2	2	2	2	2	2	A	2	1	1	1	1	1	1	2	2	1	1	2	1	1.5	2.2													
30-Mar	4	2	5	5	3	4	3	3	2	A	2	1	1	1	1	1	1	1	1	2	1	1	1	2	2.1	4.6													
31-Mar	2	1	1	1	1	1	2	2	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	2.3													
2.4 2.2 2.3 2.2 2.4 2.4 2.7 3.1 3.1 3.5 2.8 2.4 2.4 2.1 1.9 2.1 2.0 2.2 2.6 3.4 3.4 4.1 3.2 2.4																								Diurnal Average															
9.8 6.9 5.5 8.1 11.6 9.5 10.0 8.9 12.1 14.7 11.6 9.5 5.5 3.9 4.0 5.0 4.5 5.7 7.7 10.5 10.7 34.5 17.3 12.1																								Diurnal Maximum															
C - Calibration				P - Power Failure				D - DAS Failure				M - Maintenance				A - Automated Daily Zero Span																							

Hourly Averages

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



Hourly Maximums

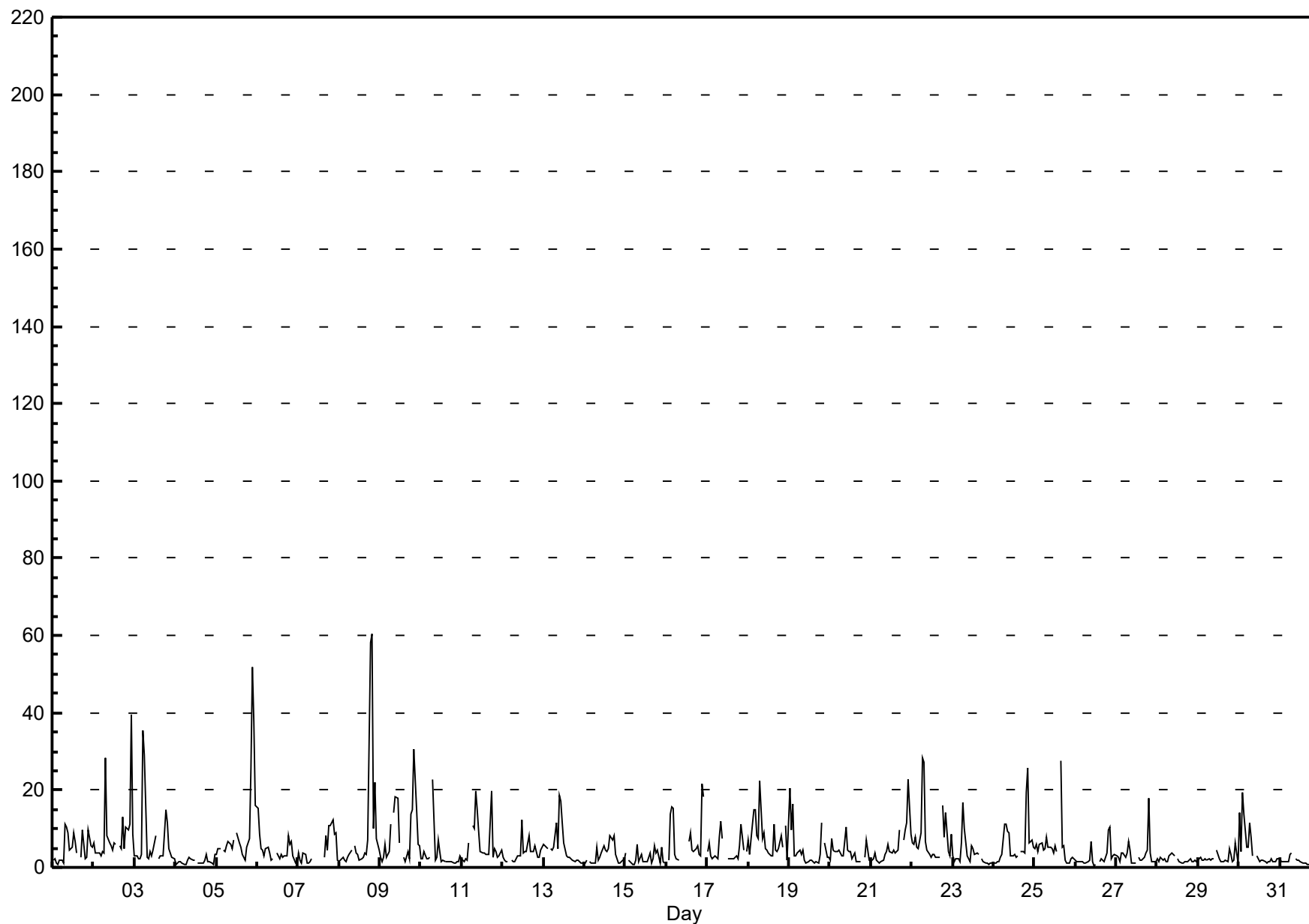
Oxides of Nitrogen (NO_x) - ppb

Portable Rycroft - March 2017

Maximum Value: 60.6 ppb on Mar 8 20:00																				Maximum Daily Average: 10.2 ppb on Mar 5					Hours in Service: 744		
Minimum Value: 1 ppb on Mar 26 12:00																				Minimum Daily Average: 1.5 ppb on Mar 31					Hours of Data: 698		
Maximum Diurnal Average: 8.2 ppb at hour 20																				Minimum Diurnal Average: 3.0 ppb at hour 15					Hours of Missing Data: 46		
Monthly Average: 5.03 ppb																				Percentiles: P ₁ = 0.8 P ₁₀ = 1.3 Q ₁ = 1.8 Median = 3.1 Q ₃ = 5.5 P ₉₀ = 10.8 P ₉₉ = 27.9					Hours of Calibration: 41		
																				Percent Operational Time: 99.3							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Mar	2	2	1	1	2	2	1	11	10	9	5	5	9	7	4	A	3	10	6	2	3	10	5	5	4.9	11.1	
2-Mar	6	4	4	4	3	4	4	28	8	6	6	5	6	6	A	6	5	13	5	10	10	11	39	9	8.8	39.4	
3-Mar	3	3	2	2	3	36	29	3	2	4	3	4	8	A	2	3	3	3	15	11	5	4	3	2	6.7	35.6	
4-Mar	1	1	1	2	1	1	1	2	2	2	2	2	A	1	1	1	1	2	3	2	1	1	1	3	1.5	3.4	
5-Mar	3	5	5	P	4	4	5	7	6	5	7	A	9	6	5	3	3	2	5	7	26	52	38	16	10.2	51.7	
6-Mar	15	9	5	4	3	5	5	4	2	2	A	4	3	2	3	3	3	3	8	6	7	3	1	1	4.4	15.5	
7-Mar	4	2	1	4	3	1	1	2	2	A	6	C	C	C	C	3	8	4	11	11	12	9	9	2	4.9	12.2	
8-Mar	1	2	3	2	2	2	3	5	A	6	4	3	2	2	3	4	3	7	58	61	10	22	7	5	9.4	60.6	
9-Mar	3	2	3	6	3	4	11	A	14	18	18	6	D	D	3	2	4	2	14	15	30	15	6	6	8.7	30.4	
10-Mar	2	2	4	2	2	3	A	23	2	3	7	4	1	2	2	1	1	1	1	1	1	1	1	3	3.2	22.7	
11-Mar	2	2	2	2	6	A	11	10	20	15	9	4	4	4	3	3	3	20	2	5	4	3	3	5	6.2	19.9	
12-Mar	2	2	1	1	A	2	1	2	2	3	3	12	4	4	4	8	4	4	4	6	3	3	4	5	3.7	12.3	
13-Mar	6	6	5	A	5	4	5	12	5	19	17	11	6	3	2	3	2	2	2	2	2	2	1	1	5.3	18.5	
14-Mar	1	2	A	1	1	1	1	5	2	3	4	6	4	4	5	8	7	8	3	2	1	1	2	2	3.3	8.4	
15-Mar	4	A	2	1	1	1	2	6	1	3	2	1	1	1	4	1	2	6	4	4	1	5	2	1	2.5	6.0	
16-Mar	A	2	14	16	15	3	2	2	C	C	C	C	C	7	9	4	4	5	6	3	3	22	18	A	--	21.7	
17-Mar	4	6	3	2	3	2	2	8	12	7	M	M	2	2	2	2	2	3	2	6	11	4	A	4	4.4	12.1	
18-Mar	7	3	11	15	15	8	7	22	7	9	5	5	4	3	3	11	4	4	5	8	5	A	11	2	7.6	22.4	
19-Mar	20	10	17	3	3	4	5	3	5	2	1	1	2	2	1	1	1	1	3	11	A	6	3	2	4.7	20.4	
20-Mar	2	7	5	4	4	4	4	3	3	10	4	4	4	2	4	1	2	1	2	A	3	7	4	2	3.8	10.3	
21-Mar	2	2	4	2	1	1	1	2	3	4	6	4	4	4	4	4	4	10	A	7	10	11	23	9	5.3	22.7	
22-Mar	6	6	8	5	5	9	28	27	7	5	4	3	3	3	3	3	3	A	16	8	14	4	3	9	7.8	28.4	
23-Mar	3	1	2	2	2	6	17	10	3	2	2	6	5	3	4	3	A	2	1	1	1	1	1	1	3.5	16.8	
24-Mar	1	1	1	2	3	3	11	11	9	9	3	3	3	3	3	A	4	4	4	19	26	6	7	5	6.2	25.7	
25-Mar	5	6	4	6	6	5	5	8	5	5	5	4	5	4	A	27	5	6	2	1	1	2	3	2	5.3	27.4	
26-Mar	2	1	1	2	1	1	1	1	2	7	1	1	1	A	2	2	2	2	4	10	10	2	3	3	2.7	10.3	
27-Mar	3	3	2	4	4	3	4	7	5	1	1	1	A	2	2	2	3	4	5	18	4	2	1	1	3.4	18.1	
28-Mar	2	1	3	2	2	2	2	3	4	3	3	A	2	1	1	1	2	2	2	2	2	2	2	2	2.0	3.6	
29-Mar	2	3	2	2	2	2	2	2	2	2	2	A	5	2	2	2	1	2	2	5	3	1	2	6	1	2.4	6.5
30-Mar	14	4	20	14	5	5	12	8	3	A	3	2	1	2	2	1	1	2	1	2	2	2	2	2	2	4.8	19.5
31-Mar	2	2	2	2	1	1	3	4	A	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1.5	3.6	
4.4 3.4 4.5 3.9 3.7 4.3 6.2 8.0 5.3 5.9 4.9 4.2 3.8 3.2 3.0 4.0 3.1 4.5 6.6 8.2 7.0 7.2 7.0 3.7																									Diurnal Average		
20.4 9.5 19.5 15.7 15.1 35.6 28.9 28.4 19.9 18.5 17.9 12.3 9.0 6.9 9.0 27.4 8.3 19.7 58.2 60.6 30.4 51.7 39.4 16.2																									Diurnal Maximum		
C - Calibration P - Power Failure D - DAS Failure M - Maintenance A - Automated Daily Zero Span																											

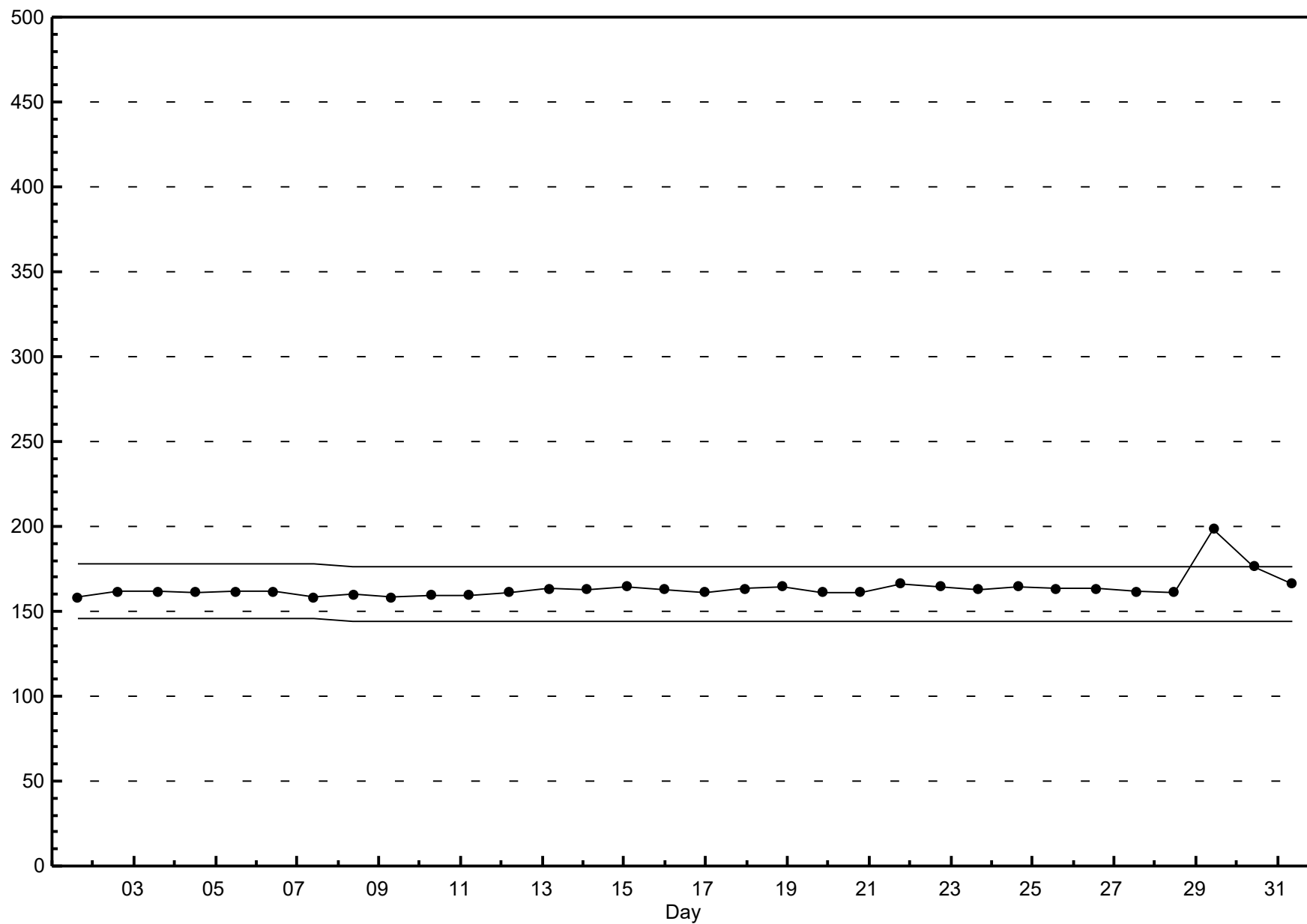
Hourly Maximums

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



Span Responses

Oxides of Nitrogen (NO_x)
Portable Rycroft - March 2017



Hourly Averages

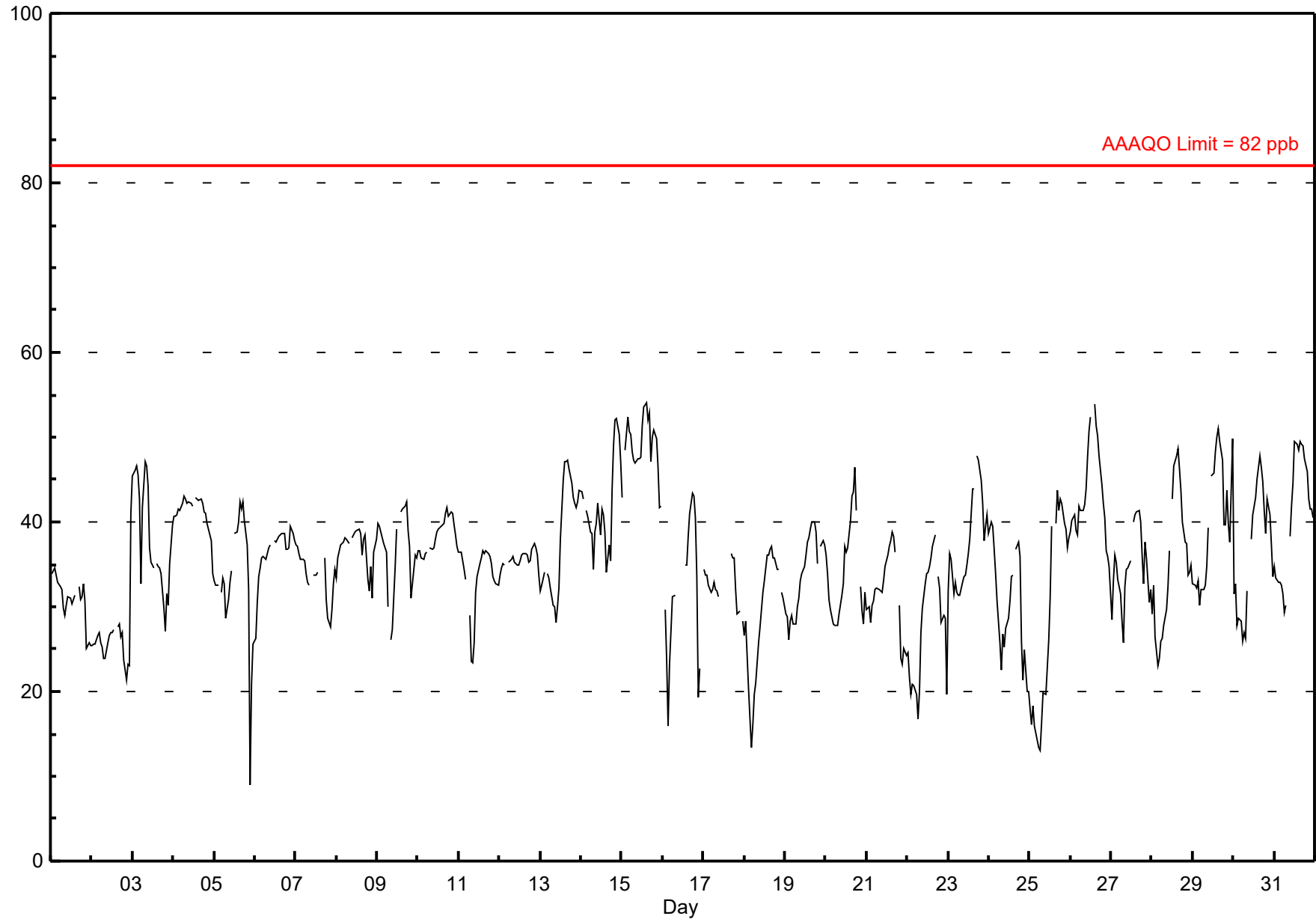
Ozone (O₃) - ppb

Portable Rycroft - March 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 54.1 ppb on Mar 15 15:00 Maximum Daily Average: 48.8 ppb on Mar 15																								Hours in Service: 744 Hours of Data: 695 Hours of Missing Data: 49 Hours of Calibration: 46 Percent Operational Time: 99.6			
Minimum Value: 9 ppb on Mar 5 22:00 Minimum Daily Average: 26.3 ppb on Mar 2 Maximum Diurnal Average: 41.3 ppb at hour 16 Minimum Diurnal Average: 31.2 ppb at hour 8 Monthly Average: 35.38 ppb Percentiles: P ₁ = 16.0 P ₁₀ = 26.0 Q ₁ = 31.2 Median = 35.6 Q ₃ = 39.9 P ₉₀ = 44.9 P ₉₉ = 52.1																											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Mar	34	34	35	34	33	32	32	30	29	30	31	31	30	31	31	A	32	31	31	33	31	25	26	25	30.9	34.6	
2-Mar	25	26	26	27	27	26	25	24	24	26	27	27	27	27	A	28	28	26	27	24	21	23	23	41	26.3	41.0	
3-Mar	45	46	47	46	43	33	42	47	47	44	37	35	35	A	35	35	35	34	30	27	32	30	35	40	38.1	47.0	
4-Mar	41	41	41	41	41	42	43	43	42	42	42	42	A	43	43	43	43	42	41	41	40	38	38	34	41.2	43.1	
5-Mar	33	33	33	P	32	33	33	29	31	33	34	A	39	39	40	42	42	42	40	37	32	9	21	26	33.2	42.4	
6-Mar	26	31	34	35	36	36	36	36	37	37	A	38	38	38	38	38	39	39	37	37	37	39	39	38	36.4	39.5	
7-Mar	37	37	36	36	36	35	34	33	33	A	34	34	34	34	C	C	C	36	31	29	28	30	33	34	33.6	37.3	
8-Mar	33	36	37	38	38	38	38	37	A	38	38	39	39	39	39	36	38	38	33	32	35	31	37	38	36.7	39.1	
9-Mar	40	39	39	38	37	36	30	A	26	27	35	39	D	D	41	42	42	42	39	37	31	34	36	36	36.6	42.4	
10-Mar	37	37	36	36	36	36	A	37	37	37	38	39	39	39	39	40	40	41	42	41	41	40	39	37	38.4	41.7	
11-Mar	36	37	35	34	33	A	29	24	23	26	32	34	35	36	37	36	37	36	36	35	34	33	33	33	33.2	36.6	
12-Mar	34	35	35	35	A	35	35	36	36	35	35	35	35	36	36	36	36	36	35	35	37	37	37	36	34	35.5	37.5
13-Mar	32	33	34	A	34	33	32	30	30	28	30	32	38	45	47	47	47	46	45	43	42	42	42	44	38.1	47.4	
14-Mar	44	43	A	41	41	39	39	34	39	40	42	39	42	41	39	34	37	35	44	49	52	52	50	47	41.8	52.2	
15-Mar	43	A	48	52	51	50	48	47	47	47	47	48	51	54	54	52	53	47	50	51	50	46	42	42	48.8	54.1	
16-Mar	A	30	24	16	23	27	31	31	C	C	C	C	C	35	35	38	41	43	43	41	33	19	23	A	--	43.4	
17-Mar	34	34	34	33	32	32	33	32	32	31	C	C	C	C	C	C	36	36	36	32	29	29	A	28	--	36.3	
18-Mar	27	28	20	17	13	16	20	21	26	28	30	32	33	36	36	37	37	36	36	34	34	A	32	31	28.7	37.2	
19-Mar	29	29	26	28	29	28	28	30	31	33	34	35	36	38	38	39	40	40	39	35	A	37	38	37	33.8	39.9	
20-Mar	36	34	31	30	28	28	28	28	29	31	33	37	36	37	40	43	44	46	41	A	32	30	28	32	34.0	46.4	
21-Mar	30	30	28	30	31	32	32	32	32	32	33	35	36	37	38	39	38	36	A	30	24	23	25	24	31.6	38.8	
22-Mar	25	22	20	21	21	20	17	20	27	30	33	34	34	35	36	37	39	A	34	32	28	29	29	20	27.8	38.6	
23-Mar	32	36	36	31	33	32	31	31	33	34	34	35	36	38	44	44	A	48	47	45	42	38	40	41	37.4	47.9	
24-Mar	39	40	39	37	34	31	26	23	27	25	28	29	31	34	34	A	37	38	36	26	21	25	20	20	30.3	40.0	
25-Mar	18	16	18	16	14	13	13	16	20	20	23	26	31	39	A	40	44	41	43	42	40	39	37	38	28.2	43.8	
26-Mar	39	40	41	39	39	42	41	41	42	44	48	51	52	A	54	51	50	48	44	42	40	37	36	35	43.3	53.9	
27-Mar	29	33	36	35	33	31	28	26	32	34	35	35	A	40	41	41	41	40	36	33	38	36	30	32	34.6	41.4	
28-Mar	29	32	26	23	24	26	26	28	30	32	37	A	43	47	48	49	46	44	40	38	37	34	34	35	35.1	48.7	
29-Mar	33	32	32	33	30	32	32	33	35	39	A	45	46	48	50	51	49	47	40	40	44	40	38	50	40.0	50.9	
30-Mar	32	33	28	29	28	26	27	26	32	A	38	41	42	43	45	48	46	45	41	39	43	41	37	34	36.6	47.9	
31-Mar	35	33	33	33	33	32	29	30	A	38	42	45	50	49	48	50	49	49	47	46	43	41	42	40	40.7	49.5	
33.5 33.6 32.9 32.5 32.0 31.8 31.3 31.2 32.4 33.7 35.1 36.6 38.0 39.1 41.0 41.3 40.9 40.3 38.8 36.9 35.7 33.6 33.8 34.8																								Diurnal Average			
45.4 46.0 48.4 52.4 50.6 50.4 48.3 47.3 46.9 47.4 47.7 50.6 52.3 53.6 54.1 52.1 52.9 49.0 50.1 50.9 52.1 52.2 50.4 49.8																								Diurnal Maximum			
C - Calibration P - Power Failure D - DAS Failure A - Automated Daily Zero Span																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na																											

Hourly Averages

Ozone (O₃) - ppb
Portable Rycroft - March 2017



Hourly Maximums

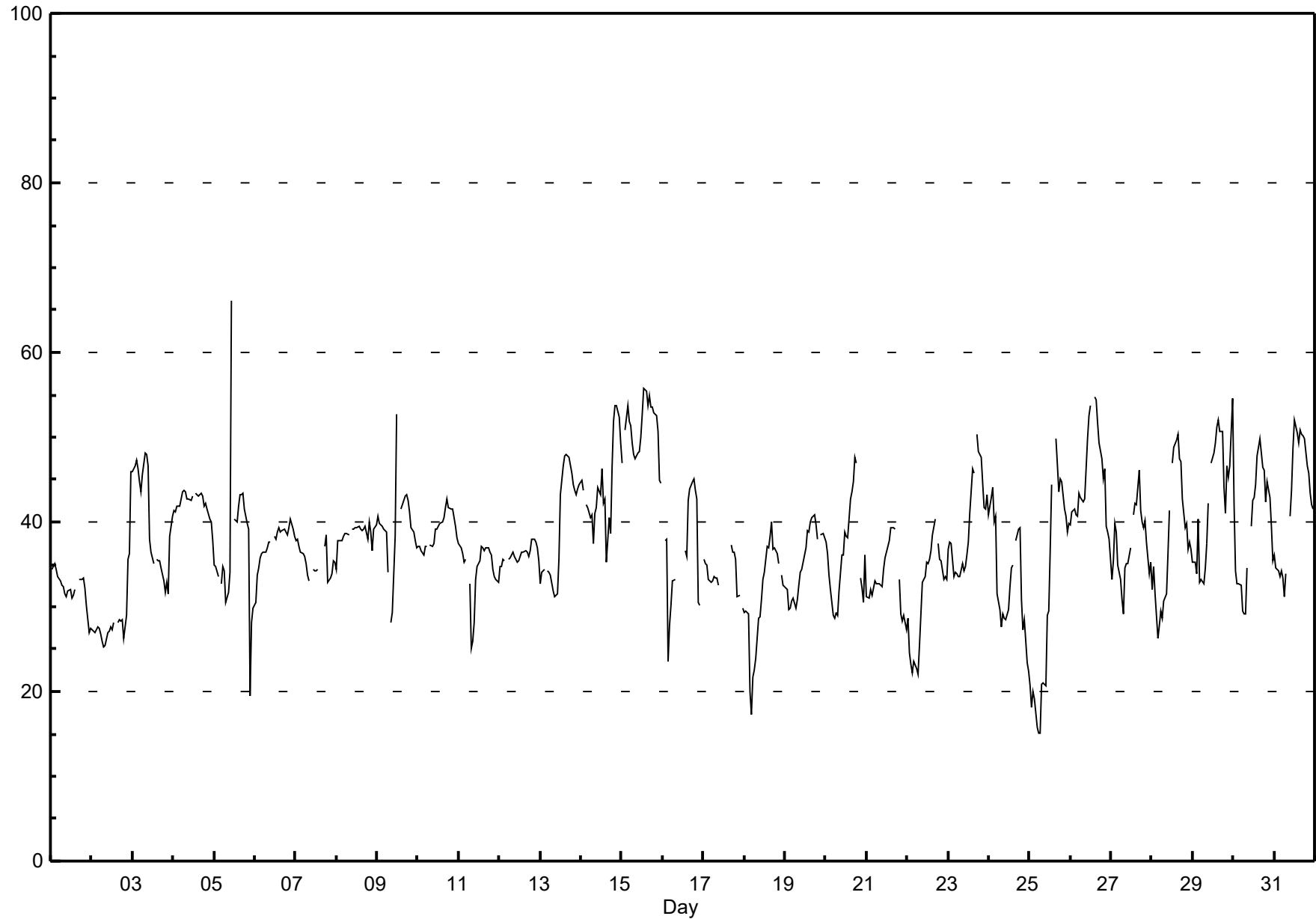
Ozone (O₃) - ppb

Portable Rycroft - March 2017

Maximum Value: 66.1 ppb on Mar 5 11:00																								Maximum Daily Average: 50.9 ppb on Mar 15																								Hours in Service: 744	
Minimum Value: 15 ppb on Mar 25 07:00																								Minimum Daily Average: 28.8 ppb on Mar 2																								Hours of Data: 695	
Maximum Diurnal Average: 42.9 ppb at hour 16																								Minimum Diurnal Average: 33.2 ppb at hour 8																								Hours of Missing Data: 49	
Monthly Average: 37.53 ppb																								Percentiles: P ₁ = 20.1 P ₁₀ = 29.0 Q ₁ = 33.2 Median = 37.1 Q ₃ = 41.9 P ₉₀ = 47.1 P ₉₉ = 54.2																								Hours of Calibration: 46	
Percent Operational Time: 99.6																																																	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																							
1-Mar	34	35	35	34	33	33	33	32	32	31	32	32	31	31	32	A	33	33	33	33	32	30	27	27	32.2	35.1																							
2-Mar	27	27	27	28	27	27	26	25	25	27	27	28	27	28	A	28	28	28	28	26	29	36	36	46	28.8	46.0																							
3-Mar	46	47	47	46	45	44	46	48	48	47	38	36	35	A	36	35	35	35	33	32	33	31	38	41	40.0	48.2																							
4-Mar	41	41	42	42	42	44	44	44	43	43	43	43	A	43	43	43	43	43	42	42	42	40	40	38	42.2	43.7																							
5-Mar	35	35	34	P	33	35	34	30	32	34	66	A	40	40	42	43	43	43	42	40	39	19	28	30	37.2	66.1																							
6-Mar	31	34	35	36	36	36	36	37	38	38	A	38	38	39	39	39	39	39	39	38	39	40	39	38	37.5	40.3																							
7-Mar	38	38	37	37	36	36	35	34	33	A	34	34	34	34	C	C	C	37	39	33	33	34	35	35	35.3	38.5																							
8-Mar	34	38	38	38	38	39	39	39	A	39	39	39	39	39	39	39	39	39	38	40	39	37	39	40	38.6	40.0																							
9-Mar	41	40	40	39	39	39	34	A	28	29	38	53	D	D	42	42	43	43	43	41	39	39	38	37	39.4	52.8																							
10-Mar	37	37	37	36	37	37	A	37	37	37	39	39	40	40	40	41	42	43	42	42	41	41	39	38	39.1	42.6																							
11-Mar	38	37	36	35	36	A	33	25	26	28	33	35	35	37	37	37	37	37	36	36	34	34	33	33	34.3	37.5																							
12-Mar	35	35	36	35	A	36	36	36	36	36	35	35	36	37	37	37	36	36	37	38	38	38	37	35	36.1	38.0																							
13-Mar	33	34	34	A	34	34	34	32	31	31	32	36	43	47	48	48	48	48	46	44	44	43	44	44	39.6	48.0																							
14-Mar	45	44	A	42	42	40	41	38	41	42	44	43	46	42	43	35	41	39	46	52	54	54	52	49	44.1	53.7																							
15-Mar	47	A	51	54	52	51	49	48	47	48	48	50	53	56	55	54	55	54	54	53	53	51	45	44	50.9	55.7																							
16-Mar	A	38	38	23	28	30	33	33	C	C	C	C	C	37	36	43	44	45	45	44	43	31	31	30	A	--	45.0																						
17-Mar	36	35	35	33	33	33	33	33	33	33	C	C	C	C	C	C	37	36	36	36	31	31	A	30	--	37.3																							
18-Mar	29	29	29	20	17	22	23	24	29	29	31	33	34	37	37	38	40	37	37	36	35	A	34	33	31.0	40.0																							
19-Mar	32	32	30	30	31	31	30	31	33	34	34	36	37	39	39	40	41	41	40	38	A	38	39	38	35.3	40.9																							
20-Mar	38	36	34	32	29	29	29	29	32	36	36	39	38	38	43	44	45	48	47	A	33	32	30	36	36.2	47.6																							
21-Mar	31	31	32	31	32	33	33	33	32	32	34	36	37	38	39	39	39	39	39	A	33	29	28	29	27	33.5	39.4																						
22-Mar	29	25	23	22	24	23	22	25	29	33	34	35	35	36	37	39	40	A	37	36	35	33	34	33	31.2	40.4																							
23-Mar	37	38	37	34	34	34	34	34	35	34	35	36	38	41	46	46	A	50	48	48	44	42	41	43	39.5	50.4																							
24-Mar	41	43	44	40	41	32	30	28	29	29	28	30	32	35	35	A	38	39	39	31	27	28	23	22	33.2	44.1																							
25-Mar	21	18	20	19	16	15	15	21	21	21	29	30	37	44	A	50	47	44	45	45	42	41	39	40	31.2	49.9																							
26-Mar	40	41	41	41	41	43	43	42	43	46	50	53	54	A	55	54	52	49	47	45	46	39	39	38	45.3	54.7																							
27-Mar	33	35	40	39	35	33	31	29	35	35	35	37	A	41	42	42	46	41	40	39	40	38	34	35	37.2	46.1																							
28-Mar	32	35	31	26	28	29	29	31	31	36	41	A	47	49	50	50	47	47	43	39	40	37	38	37	38.0	50.4																							
29-Mar	35	35	34	40	33	33	33	34	37	42	A	47	48	49	51	52	51	51	44	41	47	45	47	55	42.8	54.6																							
30-Mar	42	34	33	33	33	30	29	29	35	A	40	42	43	44	48	50	48	47	46	42	45	43	40	35	39.5	49.8																							
31-Mar	36	35	34	33	34	33	31	34	A	41	44	49	52	51	49	51	50	50	50	47	46	43	42	42	42.5	52.0																							
35.8 35.4 35.4 34.5 33.9 33.8 33.2 33.2 34.0 35.4 37.8 38.7 39.6 40.4 42.2 42.9 42.4 42.0 41.4 39.7 39.1 37.2 37.0 37.4																								Diurnal Average																									
46.9 46.6 50.9 53.7 51.9 51.4 49.3 48.2 47.9 48.1 66.1 52.8 53.8 55.7 55.4 54.3 54.9 53.5 53.5 53.0 53.7 53.7 52.4 54.6																								Diurnal Maximum																									
C - Calibration				P - Power Failure				D - DAS Failure				A - Automated Daily Zero Span																																					

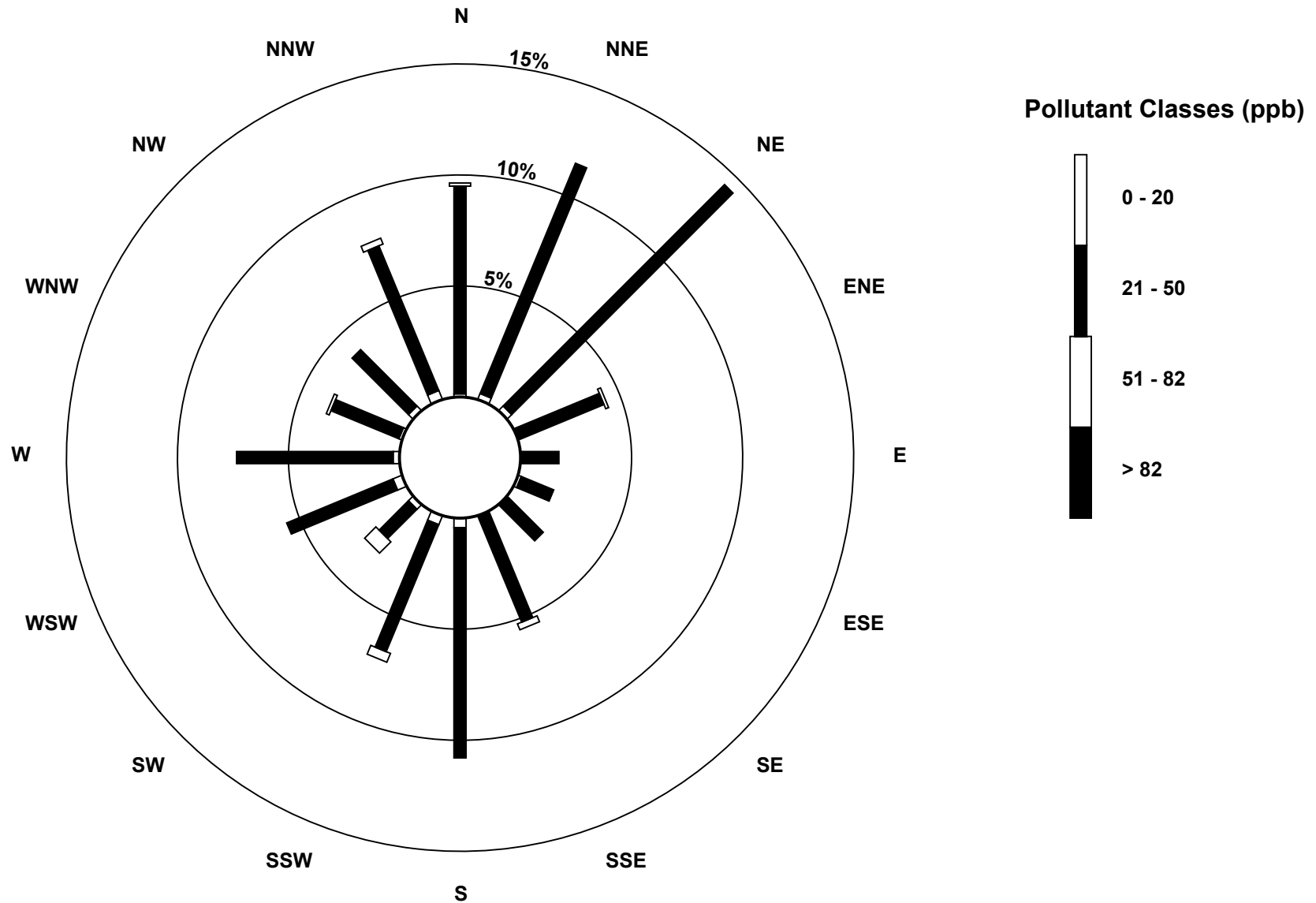
Hourly Maximums

Ozone (O₃) - ppb
Portable Rycroft - March 2017



Pollutant Rose

Ozone (O₃) - ppb
Portable Rycroft - March 2017



Eight Hour Running Averages

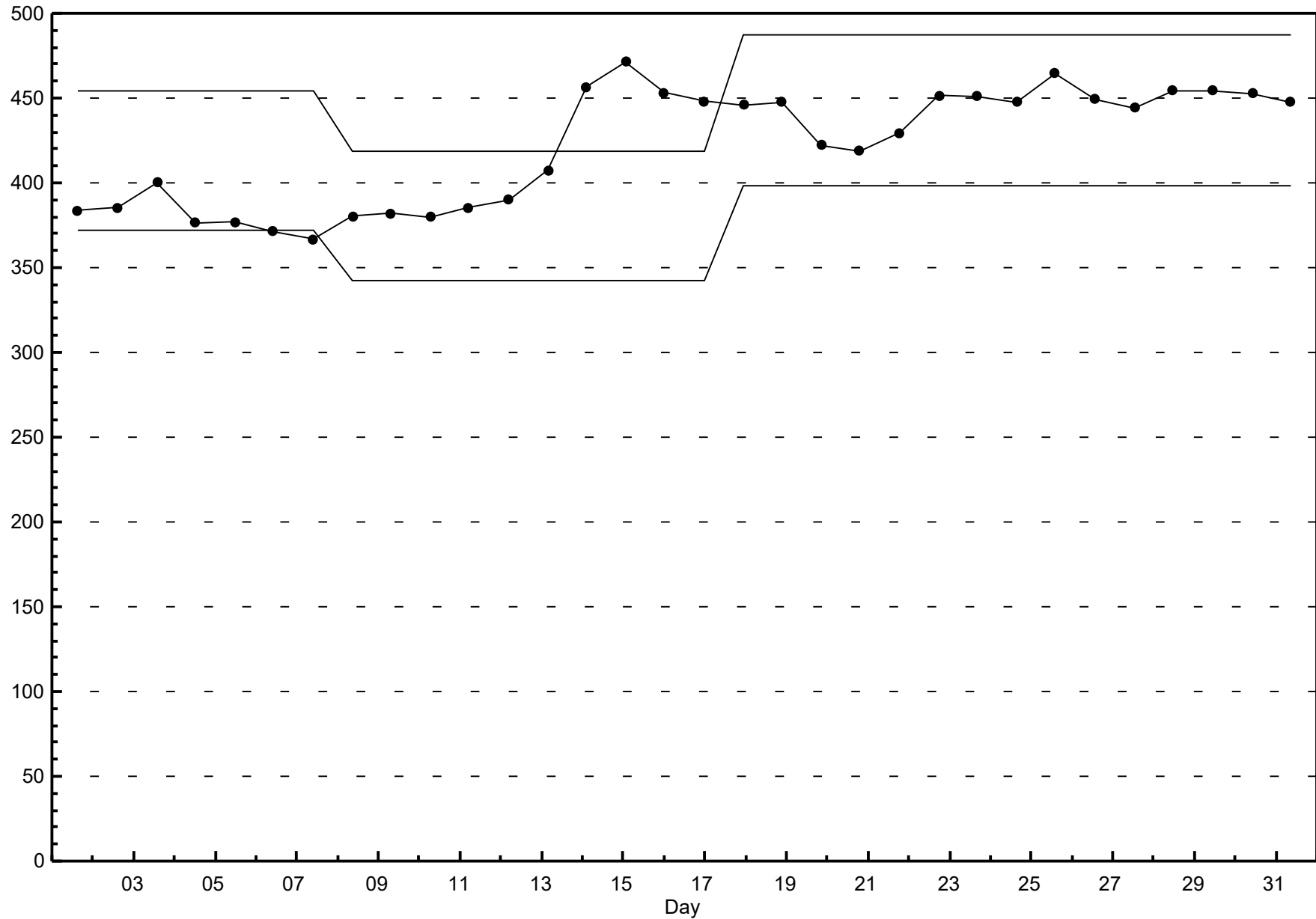
Ozone (O₃) - ppb

Portable Rycroft - March 2017

Maximum Value: 51.5 ppb on Mar 15 20:00																								Hours in Service: 744
Minimum Value: 15.7 ppb on Mar 25 08:00																								Hours of Data: 718
Percentiles: P ₁ = 18.1 P ₁₀ = 27.6 Q ₁ = 31.7 Median = 35.3 Q ₃ = 39.3 P ₉₀ = 43.5 P ₉₉ = 50.4																								Hours of Missing Data: 26
																								Hours of Calibration: 26
																								Percent Operational Time: 100.0
Day	Hourly Period Ending At (MST)																							Daily Maximum
1-Mar	35	35	34	34	34	33	33	33	32	32	31	31	31	30	31	31	31	31	31	31	31	30	29	34.6
2-Mar	28	28	27	26	26	26	26	26	25	25	26	26	26	26	26	27	27	27	27	26	25	25	27	28.4
3-Mar	29	31	34	37	39	40	43	43	44	43	42	41	40	41	40	38	36	35	34	33	32	32	33	43.6
4-Mar	34	34	36	38	39	40	41	42	42	42	42	42	42	42	42	42	42	42	42	42	41	41	40	42.5
5-Mar	38	37	36	35	34	34	33	32	32	32	32	32	33	34	35	37	38	40	41	40	39	36	31	40.6
6-Mar	29	28	27	27	27	30	32	34	35	36	36	37	37	37	38	38	38	38	38	38	38	38	38	38.2
7-Mar	38	38	38	37	37	37	36	36	35	35	34	34	34	34	33	N	N	N	N	N	N	N	31	37.8
8-Mar	32	32	32	34	35	36	37	37	37	38	38	38	38	38	38	38	38	38	37	36	35	35	35	38.5
9-Mar	35	36	36	37	37	38	37	37	35	33	33	33	N	N	35	38	40	41	41	39	39	38	37	40.8
10-Mar	37	36	35	35	36	36	36	36	36	36	37	37	38	38	39	39	40	40	40	41	41	40	40	40.6
11-Mar	40	39	38	37	36	36	35	33	31	29	29	29	29	30	31	32	34	35	36	36	36	35	34	39.6
12-Mar	34	34	34	34	34	34	34	35	35	35	35	35	35	36	36	36	36	36	36	36	36	36	36	36.3
13-Mar	35	35	35	35	34	34	33	33	32	32	31	31	32	33	35	37	39	42	43	45	45	44	44	45.3
14-Mar	43	43	43	42	42	42	41	40	39	39	39	39	39	39	39	39	39	39	39	40	41	43	46	45.9
15-Mar	47	48	49	49	49	49	49	49	49	49	49	48	48	49	50	51	51	51	51	52	51	50	48	51.5
16-Mar	47	44	41	36	32	29	28	26	26	25	N	N	N	N	N	N	N	N	39	39	39	37	35	46.9
17-Mar	34	32	31	30	30	32	33	33	33	32	32	N	N	N	N	N	N	N	N	N	N	33	32	33.8
18-Mar	31	30	28	26	23	21	21	20	20	20	21	23	26	28	30	32	34	35	35	36	36	35	34	35.8
19-Mar	33	32	31	30	29	29	29	28	29	29	30	31	32	33	34	35	37	37	38	38	38	38	38	38.4
20-Mar	37	37	35	35	34	33	31	30	29	29	29	30	31	32	34	36	38	40	41	41	41	39	36	41.1
21-Mar	34	32	30	30	30	30	31	31	31	31	32	32	33	34	34	35	36	37	37	36	35	33	29	37.0
22-Mar	27	25	24	23	22	22	21	20	21	22	23	25	27	29	31	33	35	35	35	35	34	33	30	35.4
23-Mar	29	30	30	30	31	31	31	33	33	33	32	33	33	34	36	37	38	40	42	43	44	43	43	44.0
24-Mar	42	41	40	39	38	37	36	33	32	30	29	28	27	28	29	29	31	33	34	33	32	29	28	42.4
25-Mar	25	23	21	19	18	17	16	16	16	16	17	18	20	24	25	28	32	35	38	40	41	41	41	41.3
26-Mar	40	40	40	39	39	39	40	40	41	41	42	43	45	46	47	49	50	51	50	49	47	46	42	50.5
27-Mar	39	37	36	35	34	34	33	31	32	32	32	32	32	33	35	37	38	39	39	39	38	37	36	39.3
28-Mar	34	33	32	31	29	28	27	27	27	28	29	32	35	38	41	43	45	45	44	44	42	40	38	45.1
29-Mar	37	35	34	34	33	33	32	32	32	33	33	35	37	40	42	45	47	48	47	46	46	44	43	48.2
30-Mar	41	39	38	36	35	33	31	29	29	28	29	31	33	36	38	41	43	43	44	44	44	43	41	43.9
31-Mar	39	38	37	36	35	34	33	32	32	33	34	35	38	40	43	46	46	48	48	49	48	47	45	48.5
46.9 48.2 48.9 49.3 49.1 48.9 48.6 48.6 49.2 49.0 48.9 48.3 48.3 48.7 49.5 50.1 50.8 50.8 51.1 51.5 51.3 50.4 48.9 47.6																								
Diurnal Maximums																								
N - Not Valid																								

Span Responses

Ozone (O₃)
Portable Rycroft - March 2017



Hourly Averages

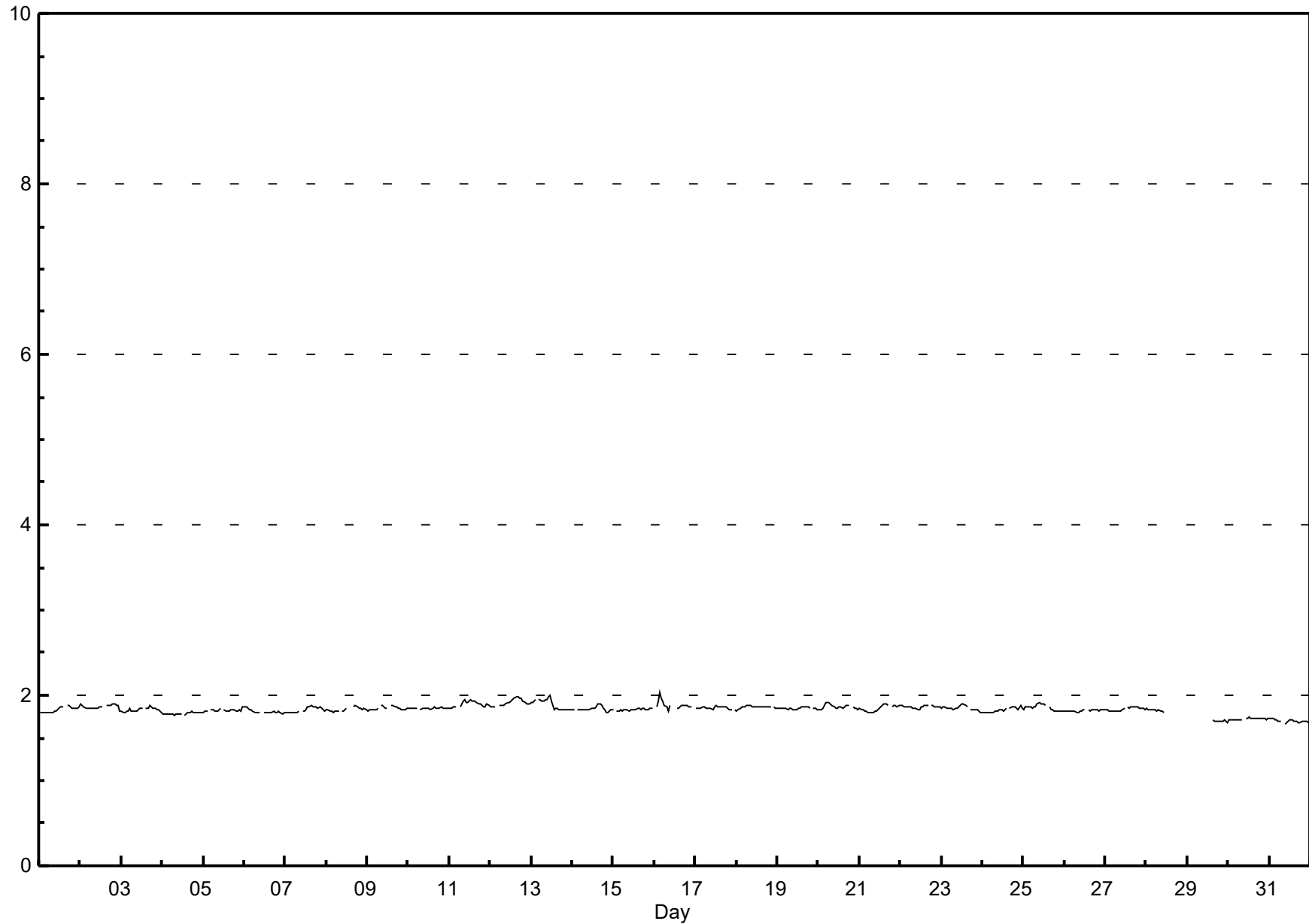
Total Hydrocarbons (THC) - ppm

Portable Rycroft - March 2017

Maximum Value: 2.03 ppm on Mar 16 04:00																				Maximum Daily Average: 1.91 ppm on Mar 12				Hours in Service: 744		
Minimum Value: 1.7 ppm on Mar 31 10:00																				Minimum Daily Average: 1.70 ppm on Mar 31				Hours of Data: 677		
Maximum Diurnal Average: 1.85 ppm at hour 13																				Minimum Diurnal Average: 1.82 ppm at hour 24				Hours of Missing Data: 67		
Monthly Average: 1.836 ppm																				Percentiles: P ₁ = 1.70 P ₁₀ = 1.78 Q ₁ = 1.81 Median = 1.84 Q ₃ = 1.86 P ₉₀ = 1.89 P ₉₉ = 1.97				Hours of Calibration: 39		
																				Percent Operational Time: 96.2						
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-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	A	1.9	1.9	1.9	1.8	1.9	1.8	1.8	1.9	1.83	1.88
2-Mar	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.87	1.91
3-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	A	1.9	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.83	1.88
4-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.79	1.81
5-Mar	1.8	1.8	1.8	P	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.82	1.86
6-Mar	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.81	1.86
7-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.83	1.87
8-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	C	C	C	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.83	1.87
9-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.9	1.9	1.9	1.8	D	D	1.9	1.9	1.9	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.85	1.89
10-Mar	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.8	1.85	1.86
11-Mar	1.8	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.90	1.95
12-Mar	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.91	1.98
13-Mar	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.89	2.00
14-Mar	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.84	1.91
15-Mar	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.83	1.85
16-Mar	A	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.8	1.9	C	C	C	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.89	2.03
17-Mar	1.9	1.9	1.8	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	A	1.8	1.8	1.85	1.88
18-Mar	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.86	1.88
19-Mar	1.8	1.8	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.8	1.8	1.8	1.85	1.87
20-Mar	1.8	1.8	1.8	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	A	1.9	1.9	1.8	1.8	1.86	1.92
21-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.85	1.90
22-Mar	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.86	1.89
23-Mar	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.85	1.90
24-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.8	1.83	1.87
25-Mar	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	A	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.85	1.91
26-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.82	1.83
27-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	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	1.8	1.8	1.8	1.84	1.86
28-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	N	N	N	N	N	N	N	N	N	N	N	N	--	1.84
29-Mar	N	N	N	N	N	N	N	N	N	N	N	N	N	C	C	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	--	1.71
30-Mar	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	A	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.72	1.74
31-Mar	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	A	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.70	1.73
1.83 1.83 1.83 1.83 1.83 1.83 1.83 1.83 1.84 1.84 1.84 1.84 1.85 1.85 1.85 1.85 1.85 1.85 1.85 1.84 1.84 1.83 1.83 1.83 1.82																								Diurnal Average		
1.91 1.92 1.94 2.03 1.97 1.94 1.94 1.94 1.94 1.94 1.95 1.99 2.00 1.94 1.95 1.97 1.98 1.98 1.97 1.96 1.94 1.92 1.90 1.91 1.91																								Diurnal Maximum		
C - Calibration				P - Power Failure				D - DAS Failure				N - Not Valid				A - Automated Daily Zero Span										

Hourly Averages

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



Hourly Maximums

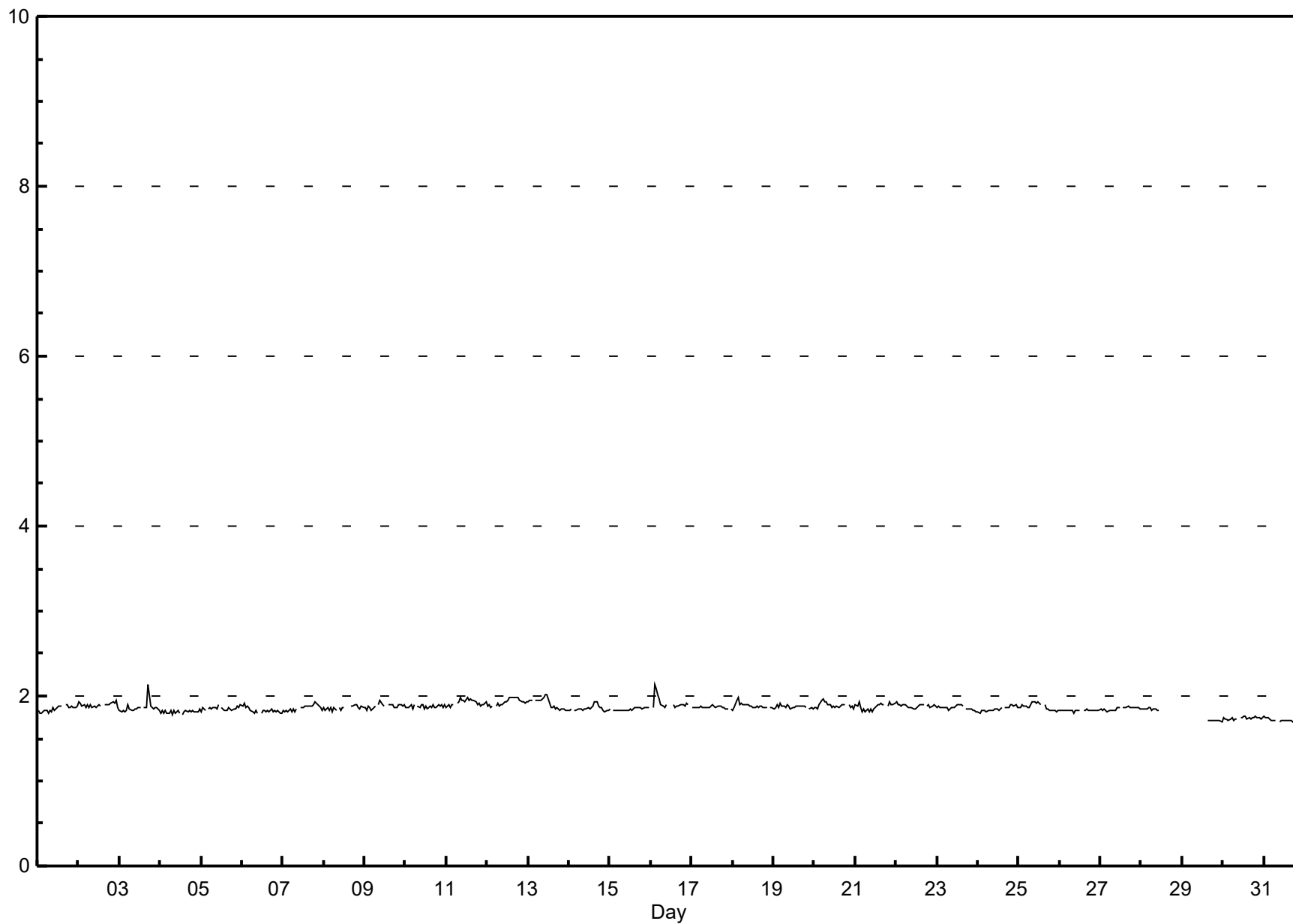
Total Hydrocarbons (THC) - ppm

Portable Rycroft - March 2017

Maximum Value: 2.14 ppm on Mar 3 18:00																				Maximum Daily Average: 1.93 ppm on Mar 12					Hours in Service: 744		
Minimum Value: 1.7 ppm on Apr 1 00:00																				Minimum Daily Average: 1.71 ppm on Mar 31					Hours of Data: 677		
Maximum Diurnal Average: 1.87 ppm at hour 18																				Minimum Diurnal Average: 1.84 ppm at hour 24					Hours of Missing Data: 67		
Monthly Average: 1.858 ppm																				Percentiles: P ₁ = 1.71 P ₁₀ = 1.80 Q ₁ = 1.83 Median = 1.86 Q ₃ = 1.88 P ₉₀ = 1.92 P ₉₉ = 1.98					Hours of Calibration: 39		
																									Percent Operational Time: 96.2		
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-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.85	1.89
2-Mar	1.9	1.9	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	2.0	1.9	1.9	1.90	1.95
3-Mar	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	A	1.9	1.9	1.9	2.1	1.9	1.9	1.8	1.9	1.9	1.8	1.86	2.14	
4-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.81	1.85	
5-Mar	1.8	1.9	1.8	P	1.8	1.9	1.8	1.9	1.9	1.8	1.9	A	1.9	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.85	1.90	
6-Mar	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.83	1.92	
7-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.86	1.94	
8-Mar	1.9	1.8	1.9	1.8	1.9	1.8	1.9	1.8	A	1.9	1.8	1.9	1.9	C	C	C	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.86	1.90	
9-Mar	1.9	1.8	1.9	1.9	1.8	1.9	1.9	A	1.9	2.0	1.9	1.9	D	D	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.88	1.95	
10-Mar	1.9	1.9	1.9	1.9	1.8	1.9	A	1.9	1.9	1.9	1.9	1.8	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.87	1.90	
11-Mar	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.92	1.99	
12-Mar	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.93	1.99	
13-Mar	1.9	1.9	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.91	2.01	
14-Mar	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.86	1.93	
15-Mar	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.85	1.87	
16-Mar	A	1.9	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.92	2.13	
17-Mar	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	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	A	1.8	1.87	1.89	
18-Mar	1.8	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.89	1.97	
19-Mar	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.8	1.87	1.92	
20-Mar	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	1.9	1.9	A	1.9	1.9	1.8	1.89	1.96	
21-Mar	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.88	1.94	
22-Mar	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.88	1.93	
23-Mar	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	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.86	1.91	
24-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.85	1.91	
25-Mar	1.9	1.9	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	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.87	1.93	
26-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.83	1.85	
27-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.85	1.88	
28-Mar	1.8	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8	A	N	N	N	N	N	N	N	N	N	N	N	N	--	1.86	
29-Mar	N	N	N	N	N	N	N	N	N	N	N	N	N	C	C	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	--	1.72	
30-Mar	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	A	1.7	1.7	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.7	1.7	1.7	1.74	1.76	
31-Mar	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	A	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.71	1.75	
1.85 1.85 1.86 1.86 1.86 1.86 1.85 1.85 1.86 1.86 1.86 1.86 1.87 1.86 1.86 1.87 1.86 1.87 1.86 1.86 1.85 1.85 1.85 1.84																								Diurnal Average			
1.94 1.94 2.13 2.08 2.01 1.96 1.95 1.95 1.97 1.98 2.01 2.01 1.99 1.98 1.99 1.99 1.99 2.14 1.98 1.95 1.93 1.93 1.95 1.93																								Diurnal Maximum			
C - Calibration P - Power Failure D - DAS Failure N - Not Valid A - Automated Daily Zero Span																											

Hourly Maximums

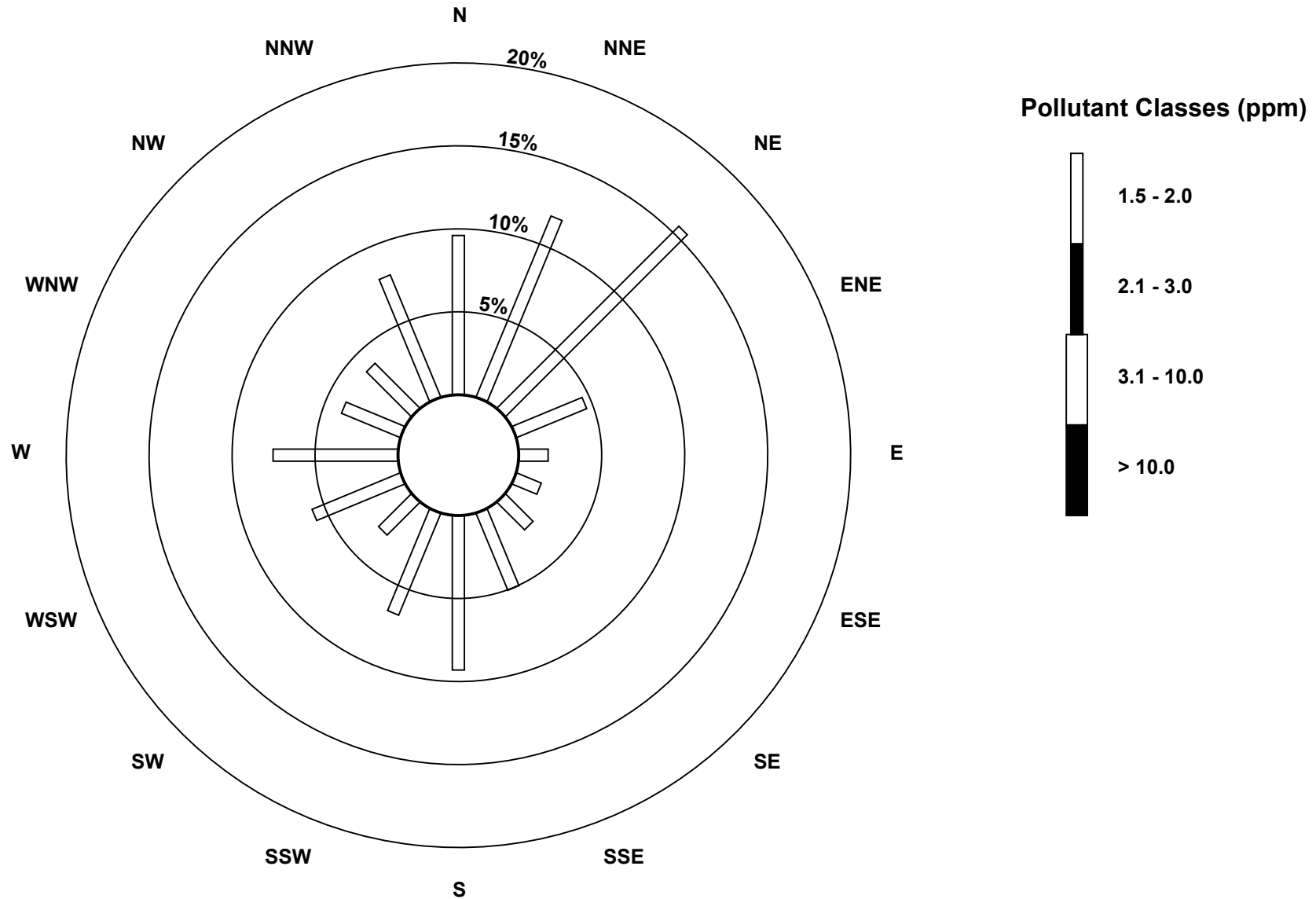
Total Hydrocarbons (THC) - ppm
Portable Rycroft - March 2017



Pollutant Rose

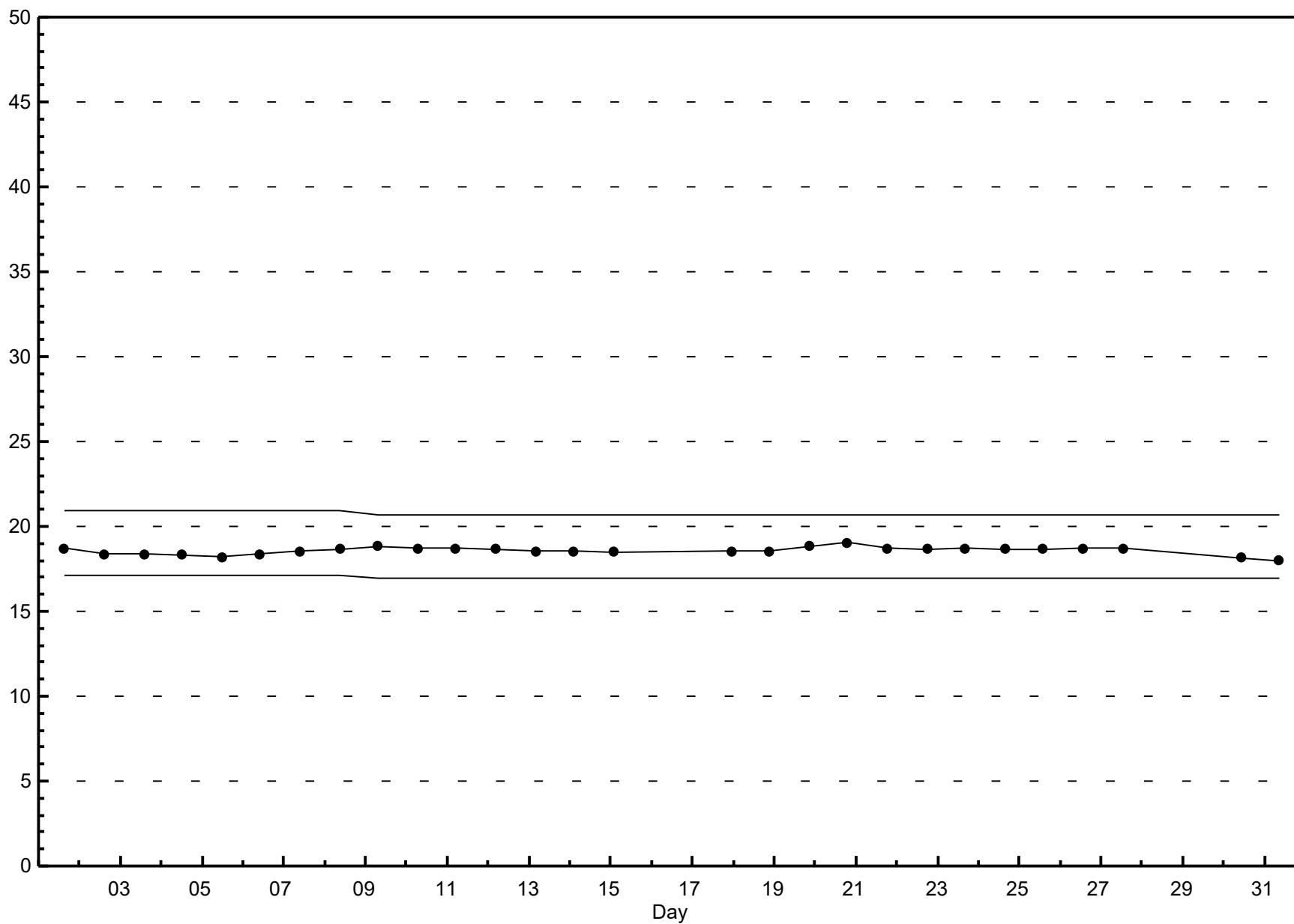
Total Hydrocarbons (THC) - ppm

Portable Rycroft - March 2017



Span Responses

Total Hydrocarbons (THC)
Portable Rycroft - March 2017



Hourly Averages

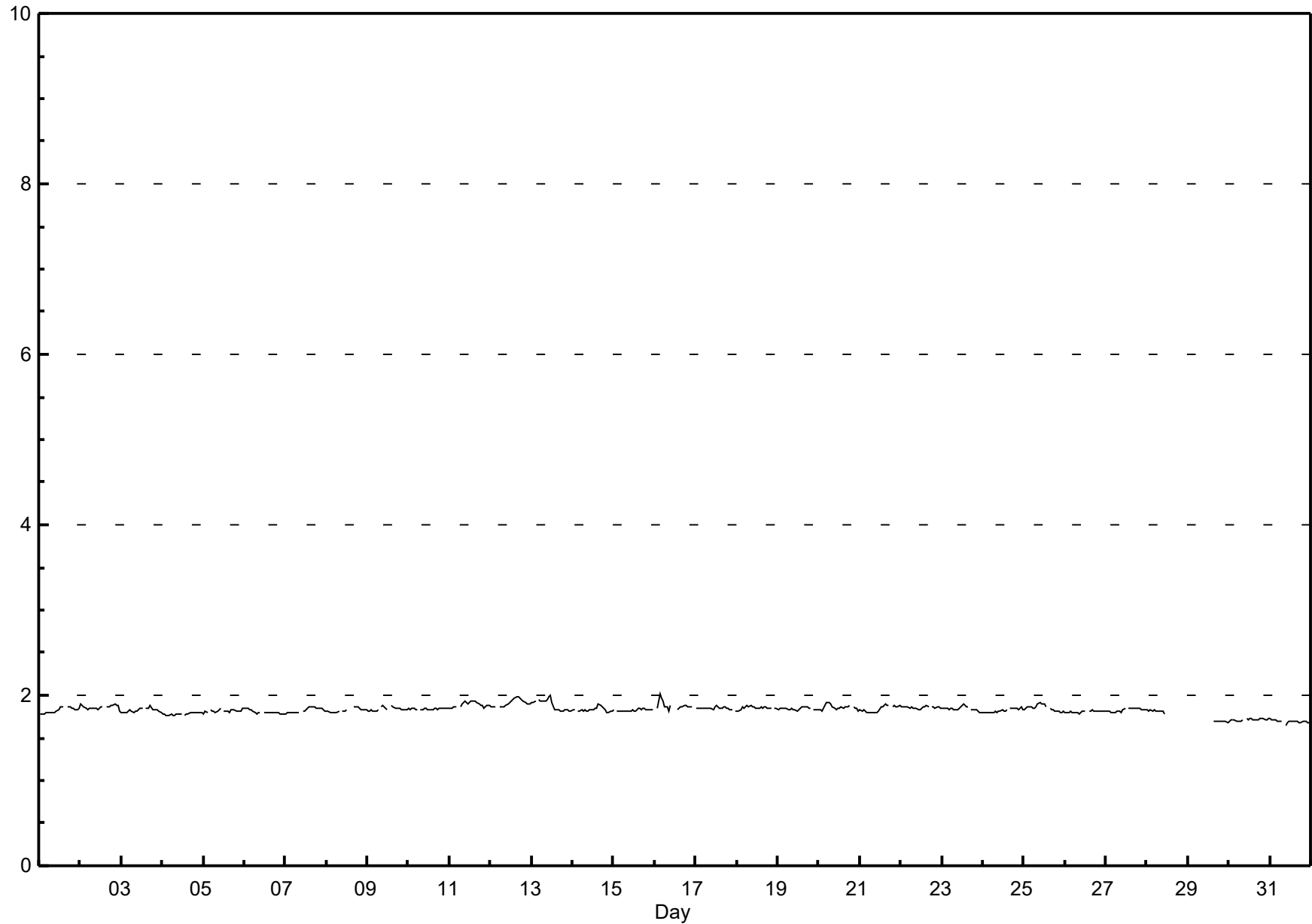
Methane (CH₄) - ppm

Portable Rycroft - March 2017

Maximum Value: 2.03 ppm on Mar 16 04:00																				Maximum Daily Average: 1.91 ppm on Mar 12				Hours in Service: 744		
Minimum Value: 1.6 ppm on Mar 31 10:00																				Minimum Daily Average: 1.69 ppm on Mar 31				Hours of Data: 677		
Maximum Diurnal Average: 1.84 ppm at hour 13																				Minimum Diurnal Average: 1.82 ppm at hour 24				Hours of Missing Data: 67		
Monthly Average: 1.829 ppm																				Percentiles: P ₁ = 1.69 P ₁₀ = 1.77 Q ₁ = 1.81 Median = 1.83 Q ₃ = 1.86 P ₉₀ = 1.88 P ₉₉ = 1.97				Hours of Calibration: 39		
																				Percent Operational Time: 96.2						
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-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	A	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.82	1.87
2-Mar	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.86	1.90
3-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.82	1.87
4-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.78	1.80
5-Mar	1.8	1.8	1.8	P	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.82	1.85
6-Mar	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.80	1.85
7-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.8	1.8	1.8	1.82	1.87
8-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	C	C	C	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.82	1.87
9-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.9	1.9	1.8	1.8	D	D	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.84	1.88
10-Mar	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.84	1.85
11-Mar	1.8	1.8	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.89	1.94
12-Mar	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.91	1.98
13-Mar	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.89	1.99
14-Mar	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.83	1.90
15-Mar	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.83	1.84
16-Mar	A	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.8	1.9	C	C	C	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.88	2.03
17-Mar	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	A	1.8	1.85	1.87
18-Mar	1.8	1.8	1.8	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.8	1.85	1.87
19-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.8	A	1.8	1.8	1.8	1.84	1.86
20-Mar	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.8	1.9	1.9	1.9	1.9	A	1.9	1.8	1.8	1.8	1.86	1.92
21-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.84	1.90
22-Mar	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.86	1.88
23-Mar	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.84	1.89
24-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.8	1.82	1.87
25-Mar	1.8	1.8	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.85	1.91
26-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.81	1.82
27-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.9	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.83	1.85
28-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	N	N	N	N	N	N	N	N	N	N	N	N	--	1.83
29-Mar	N	N	N	N	N	N	N	N	N	N	N	N	N	C	C	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	--	1.70
30-Mar	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	A	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.72	1.73
31-Mar	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	A	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.69	1.73
1.82 1.82 1.82 1.82 1.83 1.82 1.82 1.82 1.83 1.83 1.83 1.84 1.84 1.84 1.84 1.84 1.84 1.84 1.83 1.83 1.83 1.82 1.82 1.82																									Diurnal Average	
1.91 1.92 1.94 2.03 1.96 1.94 1.93 1.93 1.94 1.95 1.98 1.99 1.94 1.95 1.97 1.98 1.98 1.97 1.95 1.93 1.91 1.90 1.90 1.90																									Diurnal Maximum	
C - Calibration					P - Power Failure					D - DAS Failure					N - Not Valid					A - Automated Daily Zero Span						

Hourly Averages

Methane (CH₄) - ppm
Portable Rycroft - March 2017



Hourly Maximums

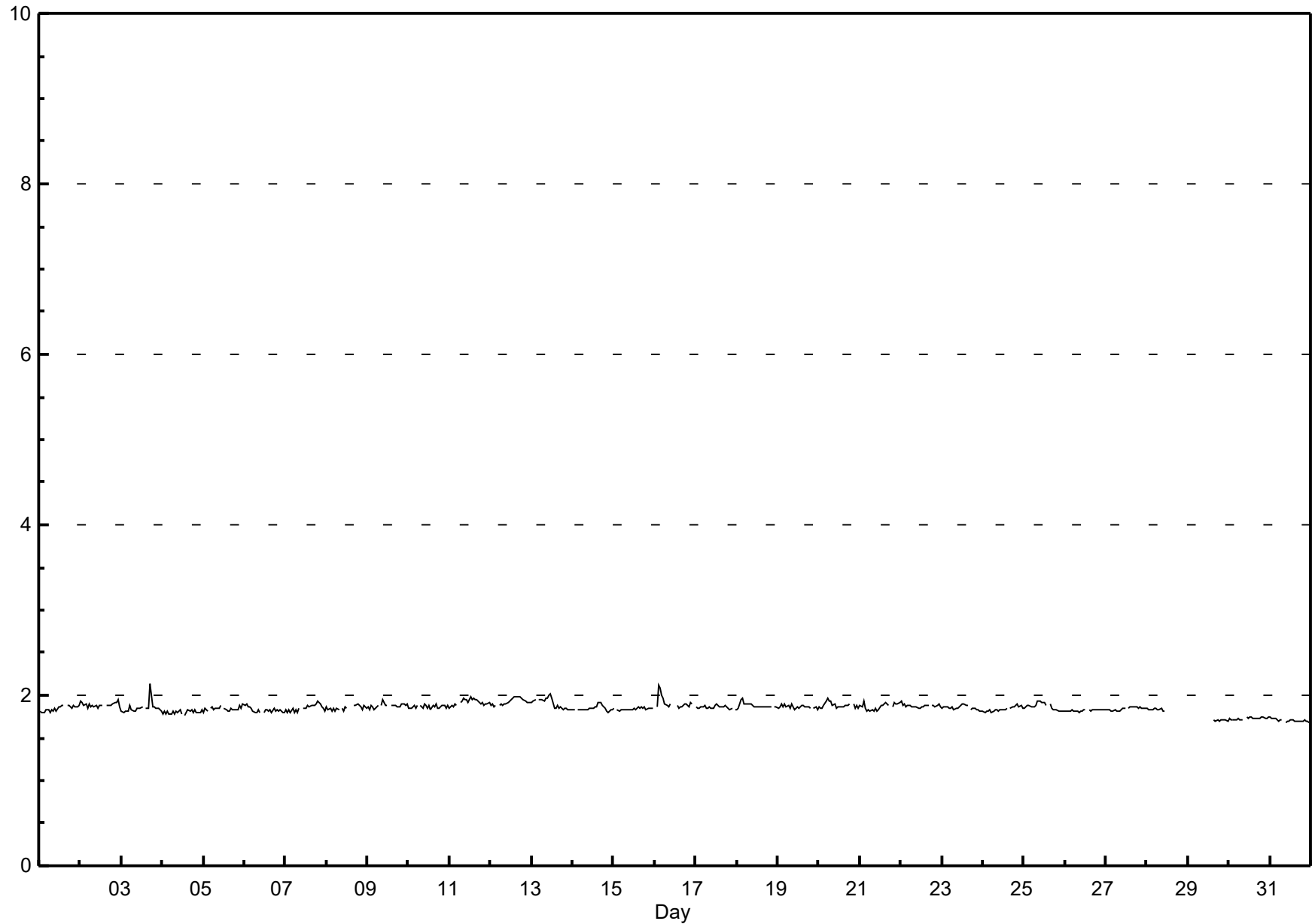
Methane (CH₄) - ppm

Portable Rycroft - March 2017

Maximum Value: 2.14 ppm on Mar 3 18:00																				Maximum Daily Average: 1.92 ppm on Mar 12					Hours in Service: 744				
Minimum Value: 1.7 ppm on Apr 1 00:00																				Minimum Daily Average: 1.71 ppm on Mar 31					Hours of Data: 677				
Maximum Diurnal Average: 1.86 ppm at hour 18																				Minimum Diurnal Average: 1.84 ppm at hour 24					Hours of Missing Data: 67				
Monthly Average: 1.851 ppm																				Percentiles: P ₁ = 1.69 P ₁₀ = 1.80 Q ₁ = 1.83 Median = 1.85 Q ₃ = 1.88 P ₉₀ = 1.91 P ₉₉ = 1.98					Hours of Calibration: 39				
																				Percent Operational Time: 96.2									
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-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.85	1.89			
2-Mar	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.89	1.95			
3-Mar	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	A	1.9	1.9	1.9	2.1	1.9	1.9	1.8	1.9	1.8	1.8	1.85	2.14			
4-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.80	1.84			
5-Mar	1.8	1.8	1.8	P	1.8	1.9	1.8	1.9	1.8	1.8	1.9	A	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.9	1.84	1.90			
6-Mar	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.83	1.90			
7-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.85	1.94			
8-Mar	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.8	A	1.8	1.8	1.9	1.8	C	C	C	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.8	1.85	1.90			
9-Mar	1.9	1.8	1.9	1.9	1.8	1.9	1.9	A	1.9	1.9	1.9	1.9	D	D	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.88	1.95			
10-Mar	1.9	1.8	1.9	1.9	1.8	1.9	A	1.9	1.8	1.9	1.9	1.8	1.9	1.8	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.87	1.90			
11-Mar	1.8	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	2.0	1.9	1.9	2.0	1.9	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.92	1.98			
12-Mar	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.92	1.99			
13-Mar	1.9	1.9	1.9	A	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.90	2.01			
14-Mar	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.85	1.92			
15-Mar	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.84	1.87			
16-Mar	A	1.9	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	C	C	C	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.92	2.12			
17-Mar	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	A	1.8	1.86	1.89			
18-Mar	1.8	1.8	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.88	1.97			
19-Mar	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.8	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.8	1.9	1.8	1.87	1.90			
20-Mar	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	1.9	A	1.9	1.9	1.9	1.8	1.88	1.96			
21-Mar	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.87	1.94			
22-Mar	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.88	1.93			
23-Mar	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.8	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.86	1.90			
24-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.84	1.90			
25-Mar	1.9	1.9	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	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.87	1.93			
26-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.82	1.84			
27-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	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	1.8	1.8	1.8	1.84	1.87			
28-Mar	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	A	N	N	N	N	N	N	N	N	N	N	N	N	--	1.85			
29-Mar	N	N	N	N	N	N	N	N	N	N	N	N	N	C	C	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	--	1.71			
30-Mar	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	A	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.73	1.75			
31-Mar	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	A	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.71	1.74			
1.84 1.84 1.86 1.85 1.85 1.85 1.85 1.84 1.85 1.86 1.85 1.85 1.86 1.86 1.86 1.86 1.86 1.86 1.85 1.85 1.85 1.85 1.85 1.84																									Diurnal Average				
1.93 1.94 2.12 2.08 2.01 1.96 1.95 1.94 1.97 1.97 2.00 2.01 1.98 1.96 1.98 1.99 1.98 2.14 1.97 1.95 1.93 1.92 1.95 1.92																									Diurnal Maximum				
C - Calibration					P - Power Failure					D - DAS Failure					N - Not Valid					A - Automated Daily Zero Span									

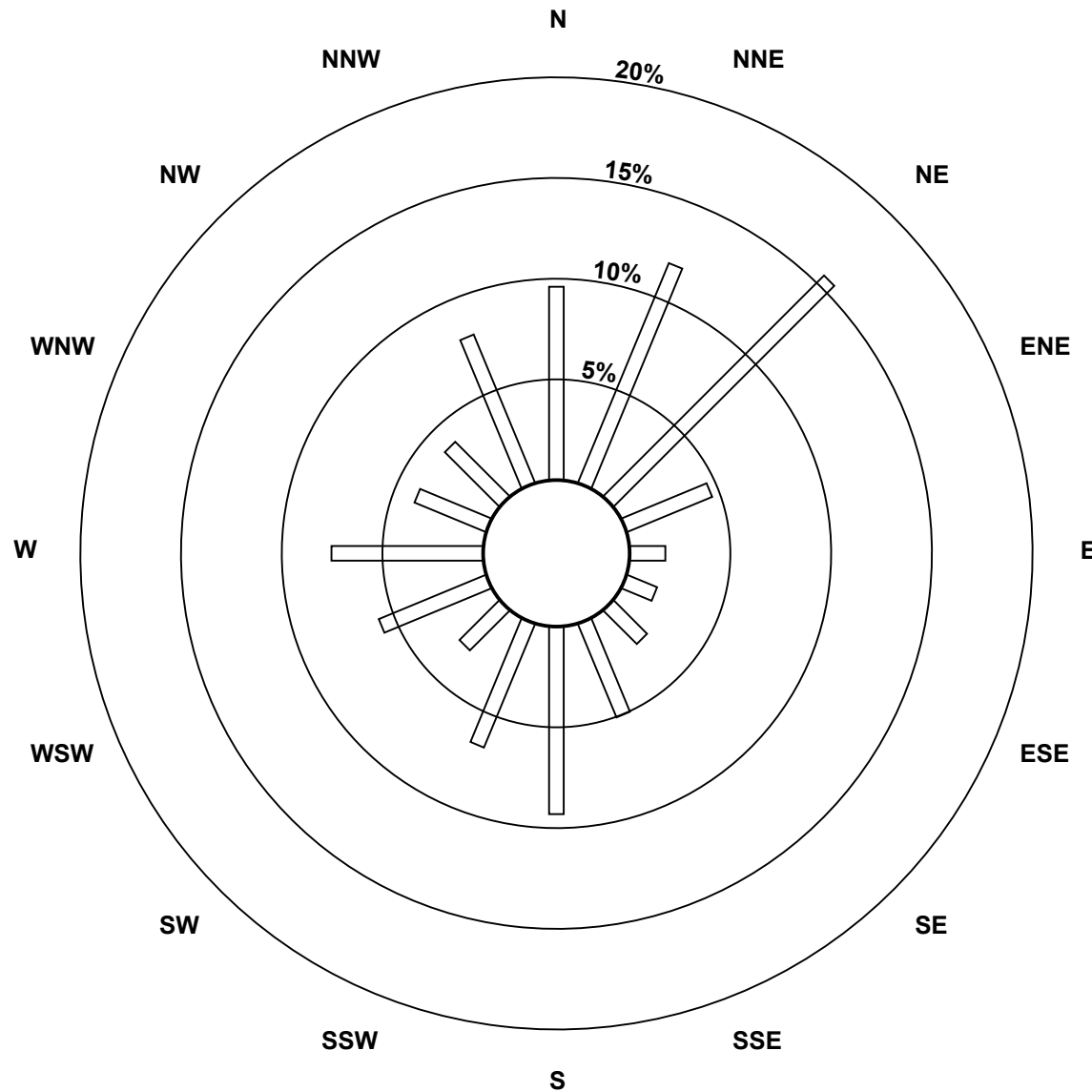
Hourly Maximums

Methane (CH₄) - ppm
Portable Rycroft - March 2017

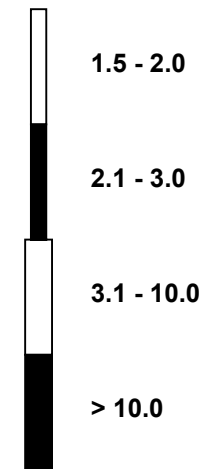


Pollutant Rose

Methane (CH₄) - ppm
Portable Rycroft - March 2017

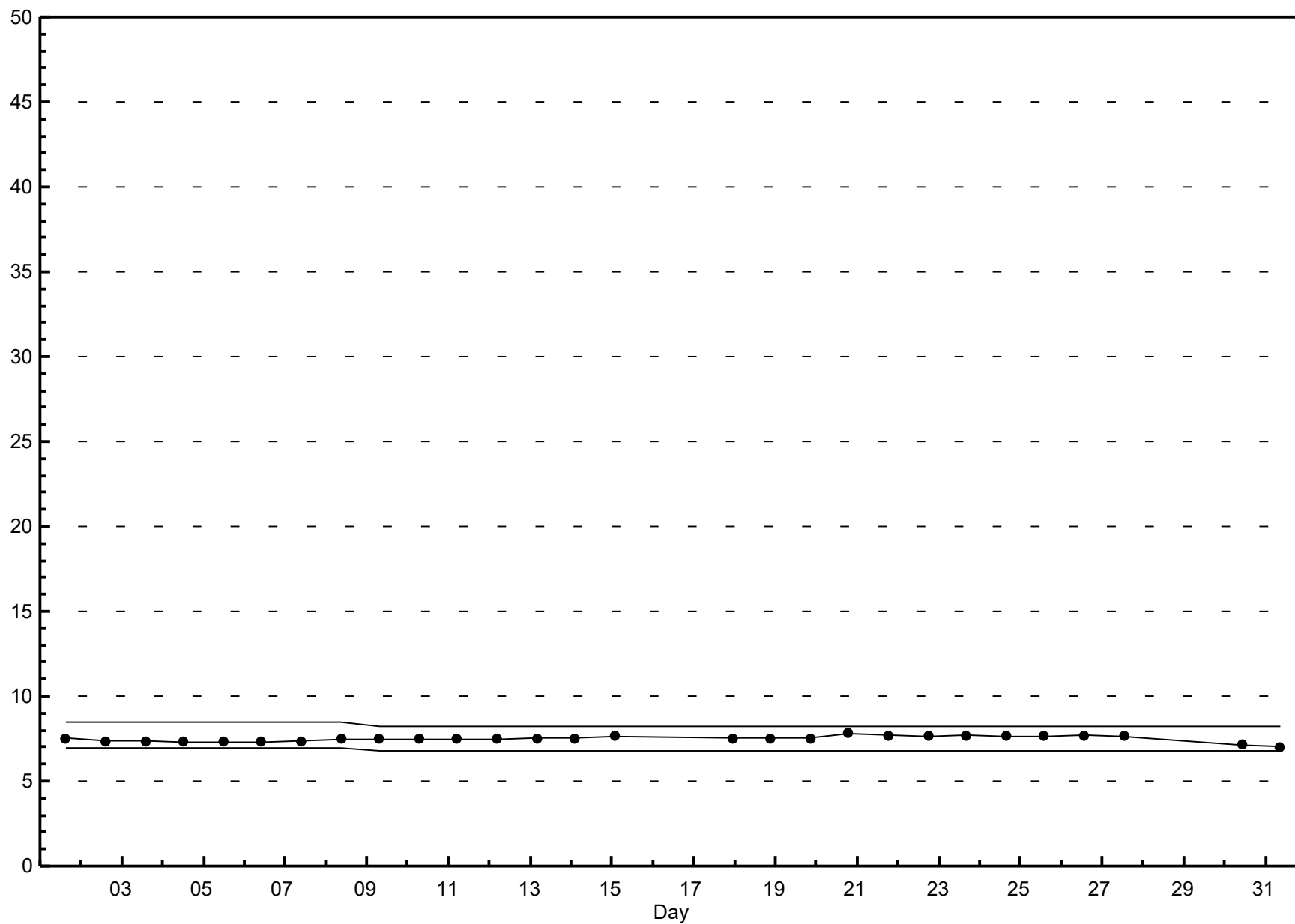


Pollutant Classes (ppm)



Span Responses

Methane (CH₄)
Portable Rycroft - March 2017

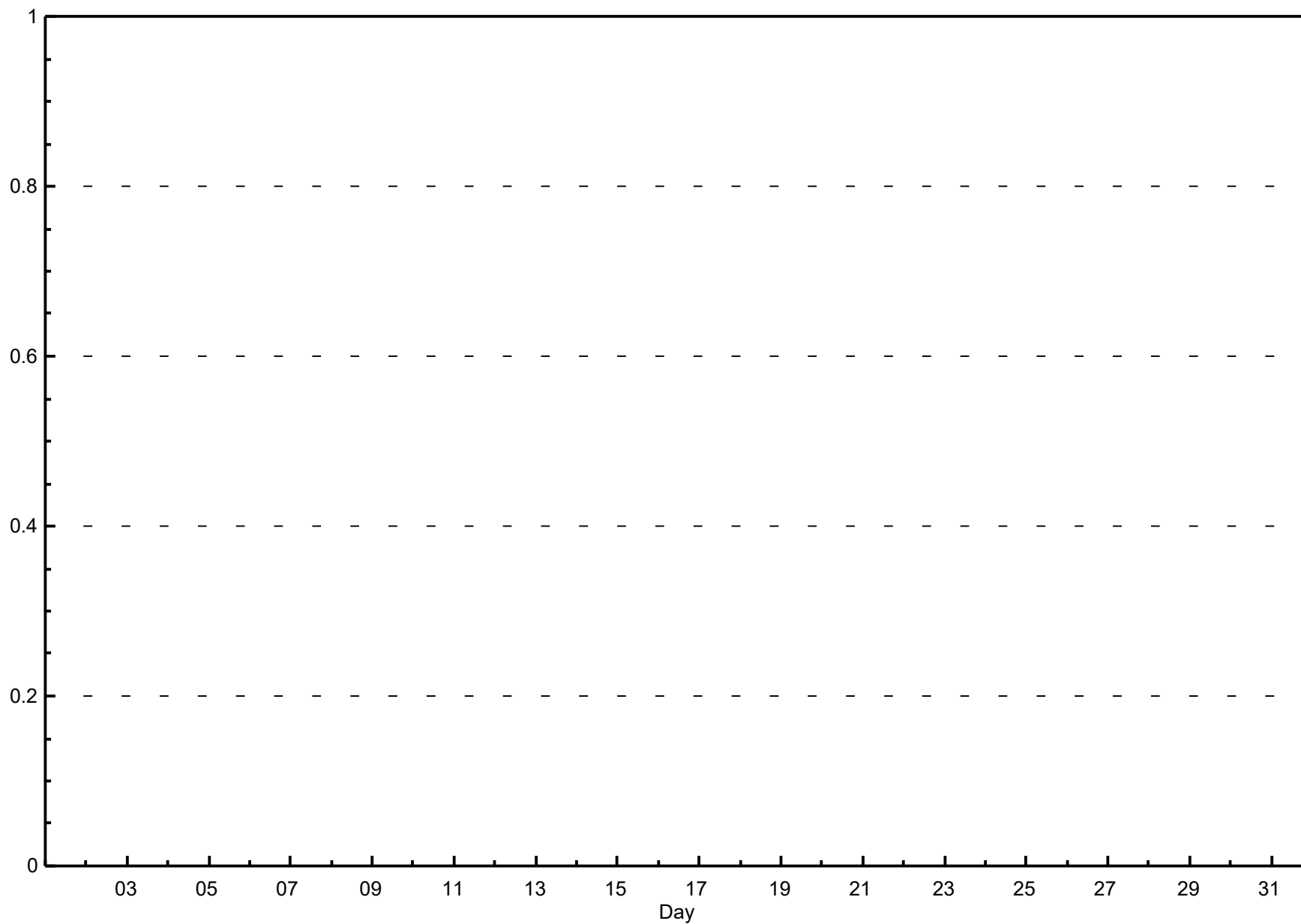


Hourly Averages

Non Methane Hydrocarbon (NMHC) - ppm

Portable Rycroft - March 2017

Maximum Value: 0.00 ppm on Mar 15 18:00																					Maximum Daily Average: 0.00 ppm on Mar 13				Hours in Service: 744	
Minimum Value: 0.0 ppm on Mar 1 01:00																					Minimum Daily Average: 0.00 ppm on Mar 1				Hours of Data: 677	
Maximum Diurnal Average: 0.00 ppm at hour 17																					Minimum Diurnal Average: 0.00 ppm at hour 5				Hours of Missing Data: 67	
Monthly Average: 0.000 ppm																					Percentiles: P ₁ = 0.00 P ₁₀ = 0.00 Q ₁ = 0.00 Median = 0.00 Q ₃ = 0.00 P ₉₀ = 0.00 P ₉₉ = 0.00				Hours of Calibration: 39	
																					Percent Operational Time: 96.2					
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-Mar	0.0	0.0	0.0	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
2-Mar	0.0	0.0	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
3-Mar	0.0	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
4-Mar	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
5-Mar	0.0	0.0	0.0	P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
6-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
9-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	D	D	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
15-Mar	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	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	A	0.00	0.00
17-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
19-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
20-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
21-Mar	0.0	0.0	0.0	0.0	0.0	0.0	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
22-Mar	0.0	0.0	0.0	0.0	0.0	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
23-Mar	0.0	0.0	0.0	0.0	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
24-Mar	0.0	0.0	0.0	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
25-Mar	0.0	0.0	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
26-Mar	0.0	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
27-Mar	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
28-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	N	N	N	N	N	N	N	N	N	N	N	N	--	0.00
29-Mar	N	N	N	N	N	N	N	N	N	N	N	N	N	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.00
30-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
31-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	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				P - Power Failure				D - DAS Failure				N - Not Valid				A - Automated Daily Zero Span										



Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

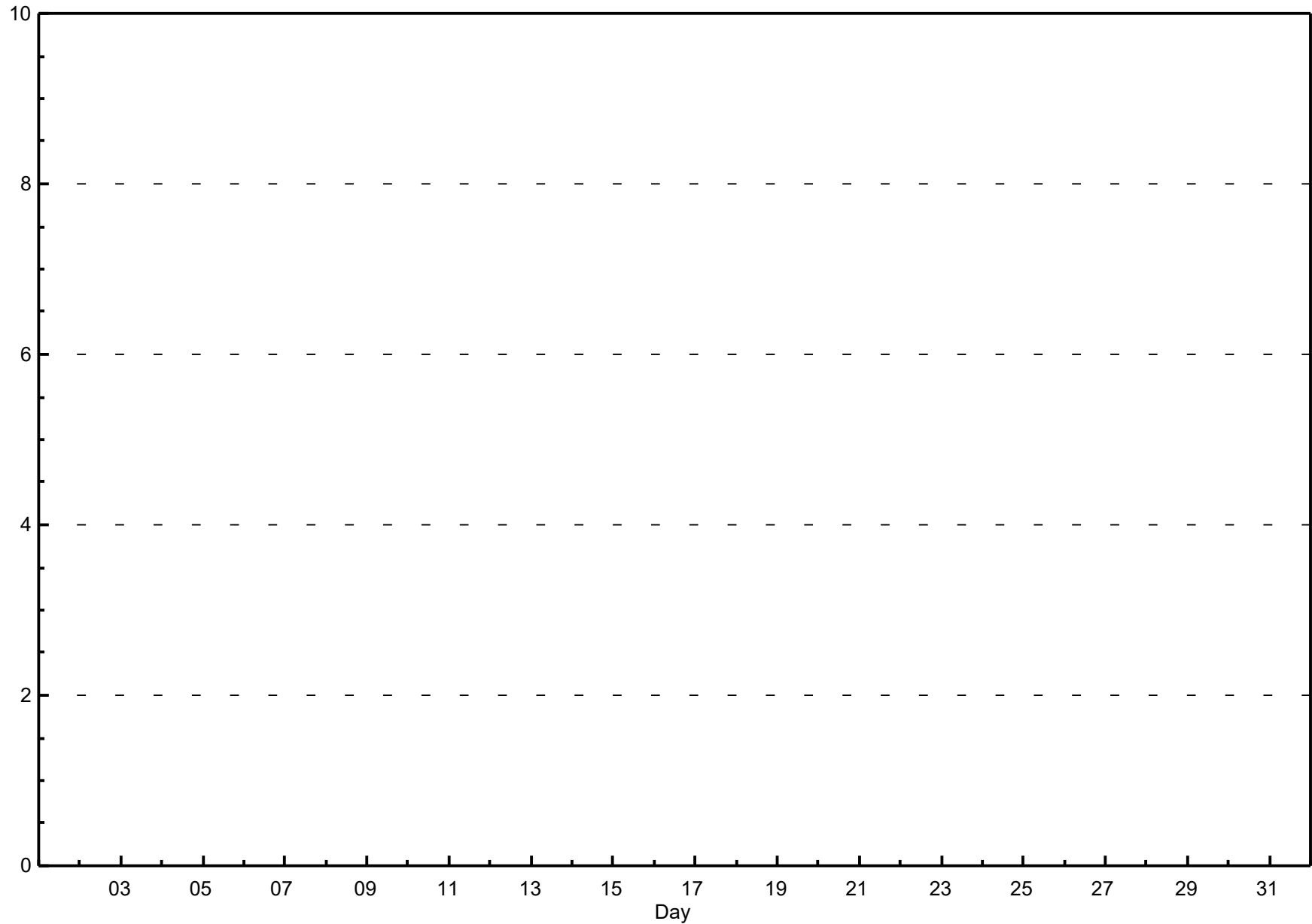
Portable Rycroft - March 2017

Maximum Value: 0.00 ppm on Mar 15 18:00																					Maximum Daily Average: 0.00 ppm on Mar 18				Hours in Service: 744	
Minimum Value: 0.0 ppm on Mar 1 03:00																					Minimum Daily Average: 0.00 ppm on Mar 21				Hours of Data: 677	
Maximum Diurnal Average: 0.00 ppm at hour 18																					Minimum Diurnal Average: 0.00 ppm at hour 21				Hours of Missing Data: 67	
Monthly Average: 0.000 ppm																					Percentiles: P ₁ = 0.00 P ₁₀ = 0.00 Q ₁ = 0.00 Median = 0.00 Q ₃ = 0.00 P ₉₀ = 0.00 P ₉₉ = 0.00				Hours of Calibration: 39	
																					Percent Operational Time: 96.2					
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-Mar	0.0	0.0	0.0	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
2-Mar	0.0	0.0	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
3-Mar	0.0	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
4-Mar	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
5-Mar	0.0	0.0	0.0	P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
6-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
9-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	D	D	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
15-Mar	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	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	A	0.00	0.00
17-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
19-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
20-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
21-Mar	0.0	0.0	0.0	0.0	0.0	0.0	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
22-Mar	0.0	0.0	0.0	0.0	0.0	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
23-Mar	0.0	0.0	0.0	0.0	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
24-Mar	0.0	0.0	0.0	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
25-Mar	0.0	0.0	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
26-Mar	0.0	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
27-Mar	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
28-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	N	N	N	N	N	N	N	N	N	N	N	N	--	0.00
29-Mar	N	N	N	N	N	N	N	N	N	N	N	N	N	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.00
30-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
31-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	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				P - Power Failure				D - DAS Failure				N - Not Valid				A - Automated Daily Zero Span										

Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

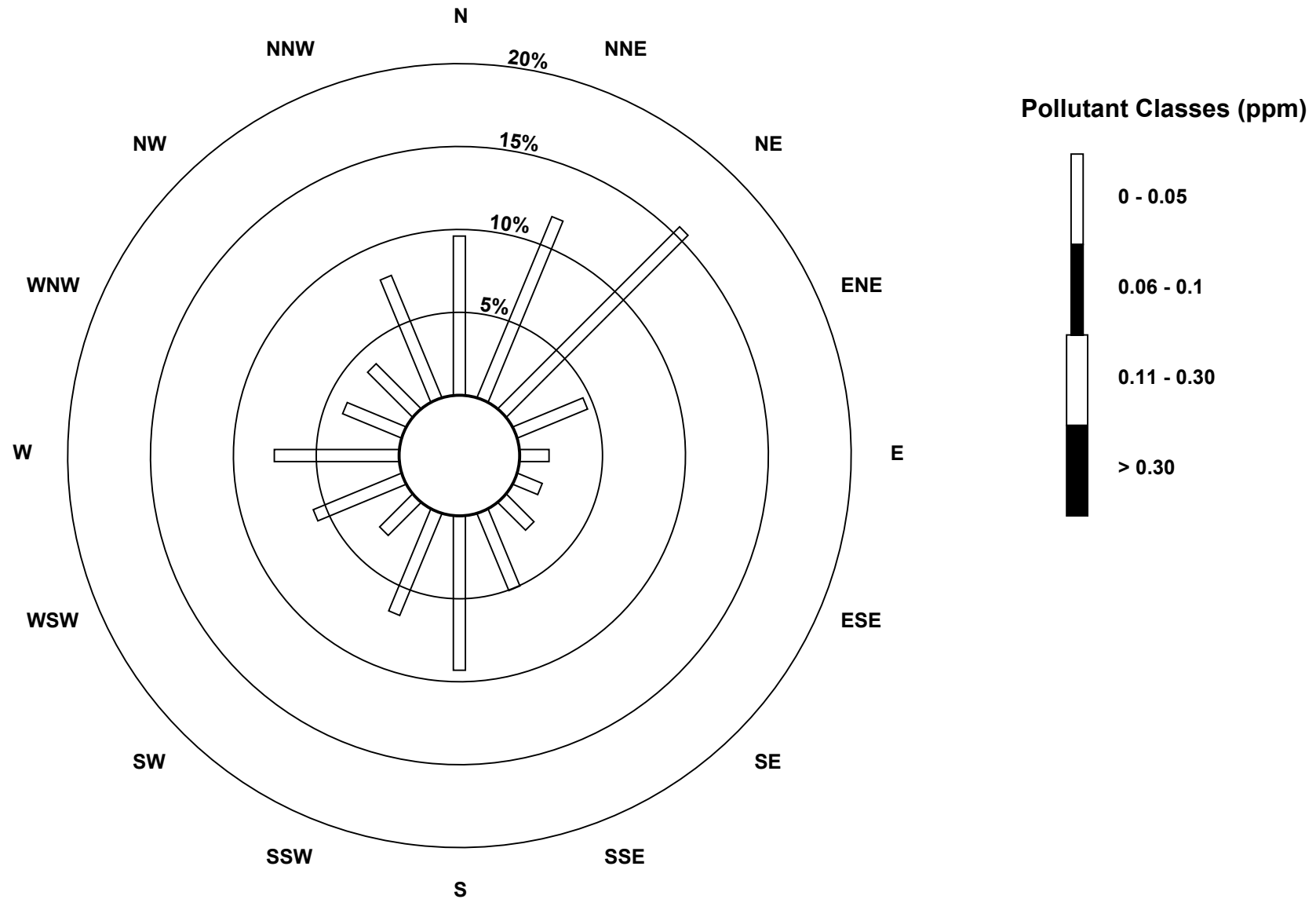
Portable Rycroft - March 2017

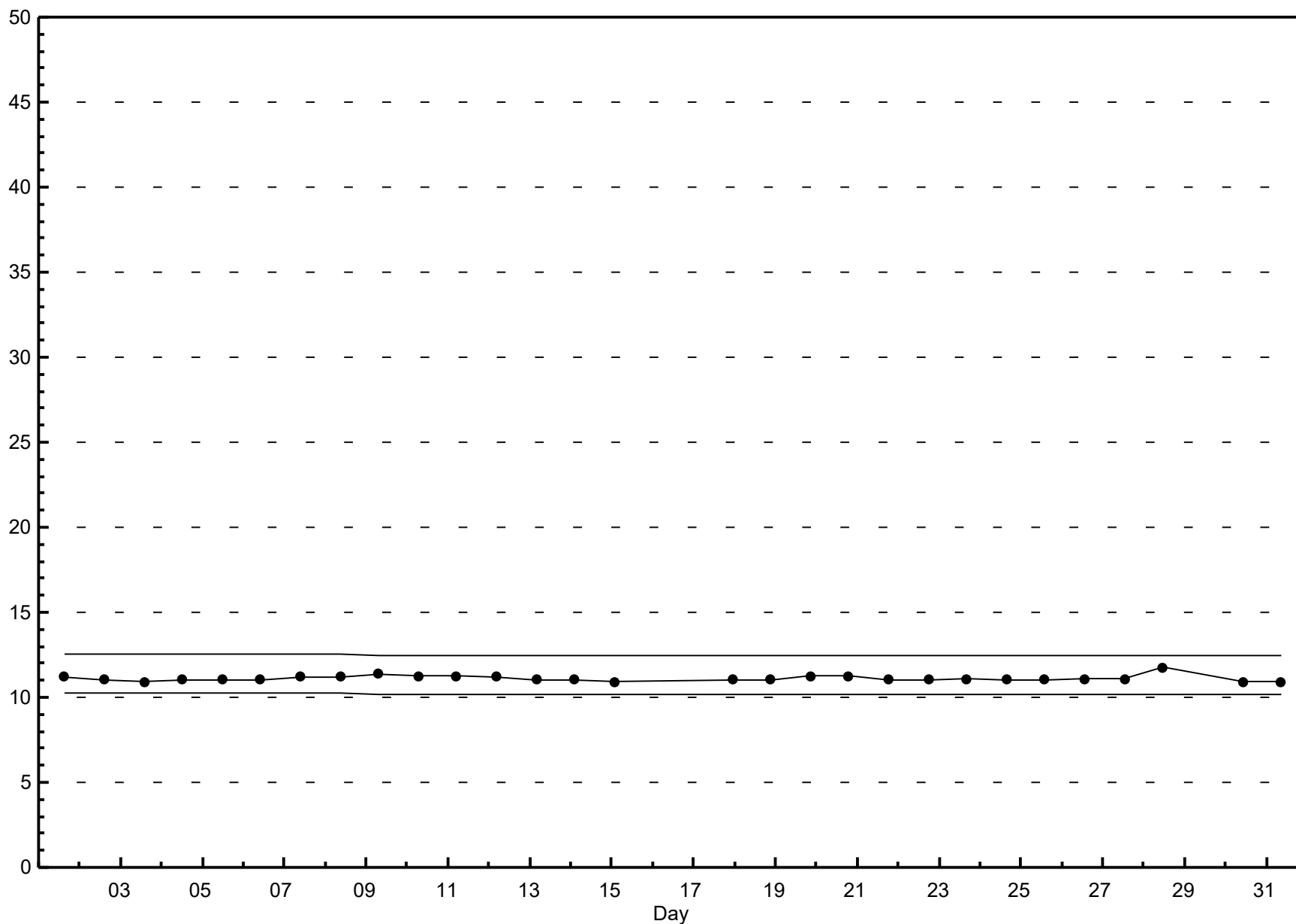


Pollutant Rose

Non Methane Hydrocarbon (NMHC) - ppm

Portable Rycroft - March 2017





Hourly Averages

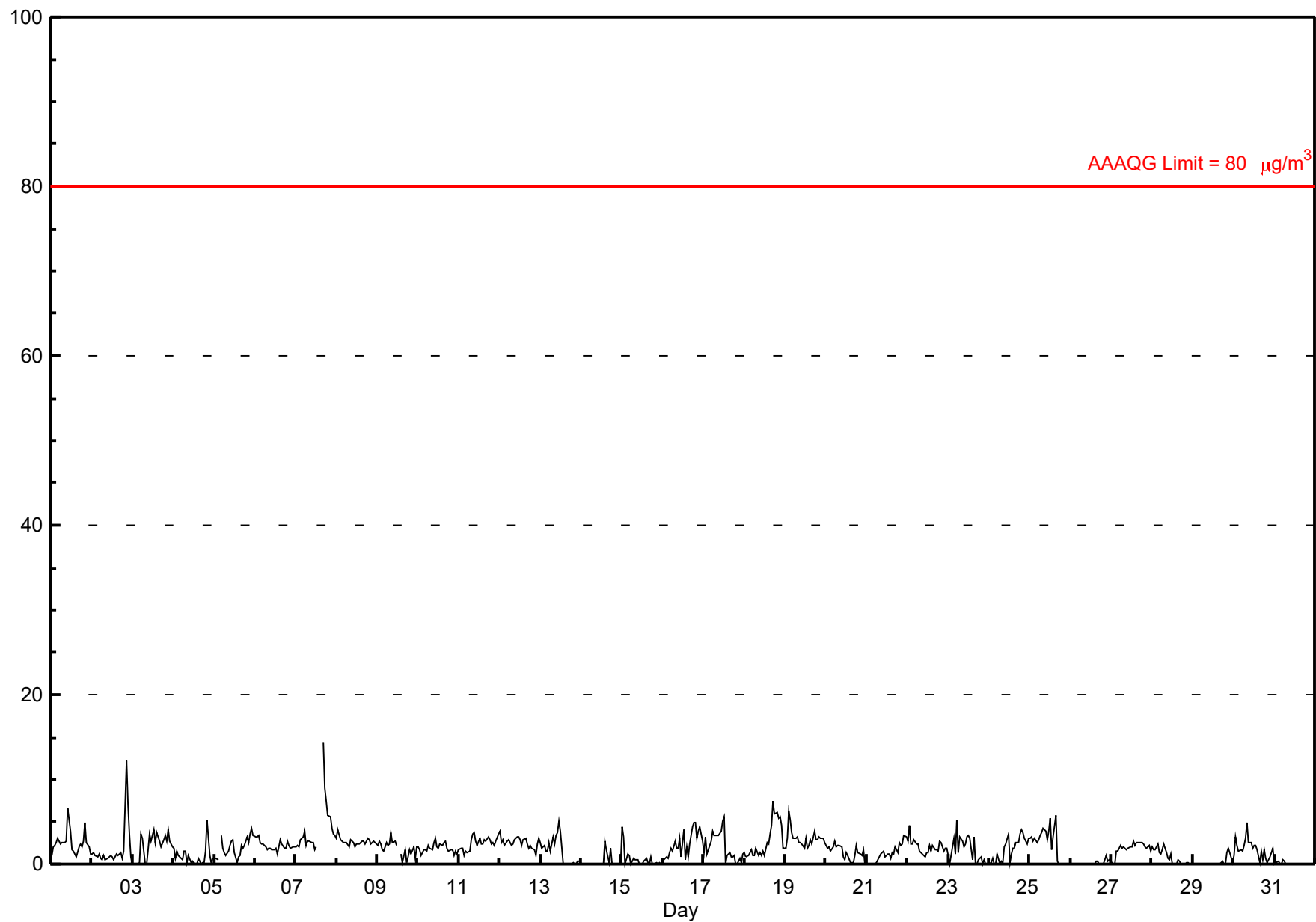
PM2.5 (PM_{2.5}) - µg/m³

Portable Rycroft - March 2017

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 14.3 µg/m ³ on Mar 7 17:00																								Hours in Service: 744 Hours of Data: 738 Hours of Missing Data: 6 Hours of Calibration: 3 Percent Operational Time: 99.6			
Minimum Value: 0 µg/m ³ on Mar 3 01:00 Maximum Diurnal Average: 2.3 µg/m ³ at hour 21 Monthly Average: 1.75 µg/m ³												Minimum Daily Average: 0.1 µg/m ³ on Mar 31 Minimum Diurnal Average: 1.2 µg/m ³ at hour 14 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.4 Median = 1.7 Q ₃ = 2.6 P ₉₀ = 3.3 P ₉₉ = 6.3															
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Mar	1	2	2	3	3	2	3	3	3	3	7	4	2	2	1	1	2	2	2	3	5	2	2	1	2.5	6.7	
2-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	12	7	4	1	1.8	12.2		
3-Mar	0	0	0	0	0	4	3	0	0	2	4	3	4	2	4	3	3	2	3	3	4	3	2	2.1	4.1		
4-Mar	2	1	1	1	1	1	2	2	0	1	0	0	0	0	1	0	0	0	2	5	1	0	1	0.9	5.2		
5-Mar	1	1	0	P	3	2	1	1	2	2	3	3	1	0	1	1	2	2	2	3	3	4	4	3	2.0	4.2	
6-Mar	3	3	3	3	2	2	2	2	2	2	2	2	2	1	2	3	2	2	2	3	2	2	2	2	2.2	3.3	
7-Mar	2	2	2	3	3	4	2	3	3	3	3	2	2	C	C	C	14	9	7	6	6	4	4	3	4.1	14.3	
8-Mar	3	4	3	3	3	3	3	2	3	3	3	2	2	2	3	3	2	3	3	2	2	3	2	2	2.6	4.0	
9-Mar	2	3	2	2	1	2	2	2	4	2	3	2	D	D	1	0	2	0	1	2	1	2	1	2	1.8	3.7	
10-Mar	2	2	1	2	2	2	2	2	2	2	3	2	2	2	2	3	3	2	2	2	2	1	2	1	1.9	3.0	
11-Mar	2	2	2	1	1	1	2	3	3	4	3	2	3	2	3	3	3	3	2	2	2	3	4	2.4	3.7		
12-Mar	4	3	3	2	3	3	3	2	2	3	3	3	3	2	3	3	2	2	2	2	2	1	2	3	2.5	3.9	
13-Mar	3	2	2	2	2	2	2	3	2	3	4	5	4	0	0	0	0	0	0	0	0	0	0	0	1.5	5.1	
14-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	0	2	0	0	0	0	0	0	0.3	2.6	
15-Mar	4	3	0	1	1	0	0	1	1	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0.6	4.4	
16-Mar	0	1	1	1	1	2	2	3	2	2	3	1	4	0	2	1	2	4	5	5	3	4	4	3	2.3	4.9	
17-Mar	1	3	1	2	3	4	3	3	3	3	4	5	6	0	1	1	1	1	1	0	0	1	0	1	2.1	5.6	
18-Mar	1	1	1	1	2	1	1	2	1	1	1	2	1	2	2	4	5	8	6	6	5	6	5	2	2.8	7.5	
19-Mar	2	3	6	5	4	3	3	3	3	3	2	2	3	2	2	3	2	4	3	3	3	3	3	3	3.0	6.2	
20-Mar	2	2	2	1	2	3	2	2	2	2	1	0	1	1	0	0	0	1	2	1	1	1	2	0	1.4	2.7	
21-Mar	0	0	0	0	0	0	0	1	1	1	2	1	1	1	1	1	1	2	1	3	2	2	3	3	1.2	3.4	
22-Mar	3	5	2	2	3	2	2	2	1	1	1	1	1	2	2	2	2	2	2	3	2	2	2	2	2.0	4.6	
23-Mar	1	0	1	3	1	5	1	3	3	2	2	3	3	3	1	3	0	0	0	1	0	1	0	0	1.6	5.3	
24-Mar	0	0	1	0	0	1	0	0	0	2	2	4	0	1	2	2	3	3	4	4	4	3	2	3	1.7	4.0	
25-Mar	3	3	3	3	3	3	3	4	4	4	3	4	5	2	3	6	0	0	0	0	0	0	0	0	2.3	5.7	
26-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.1	1.0	
27-Mar	0	0	0	2	1	2	2	2	2	2	2	2	2	3	2	3	3	3	3	2	2	2	2	2	1.8	2.8	
28-Mar	2	2	2	2	1	1	2	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.8	2.4	
29-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0.2	1.9	
30-Mar	1	3	2	2	2	1	2	3	5	3	3	2	2	2	2	0	1	1	2	1	0	1	1	2	1.8	4.9	
31-Mar	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5	
																										Diurnal Average	Diurnal Maximum
C - Calibration P - Power Failure D - DAS Failure 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 Averages

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



Hourly Maximums

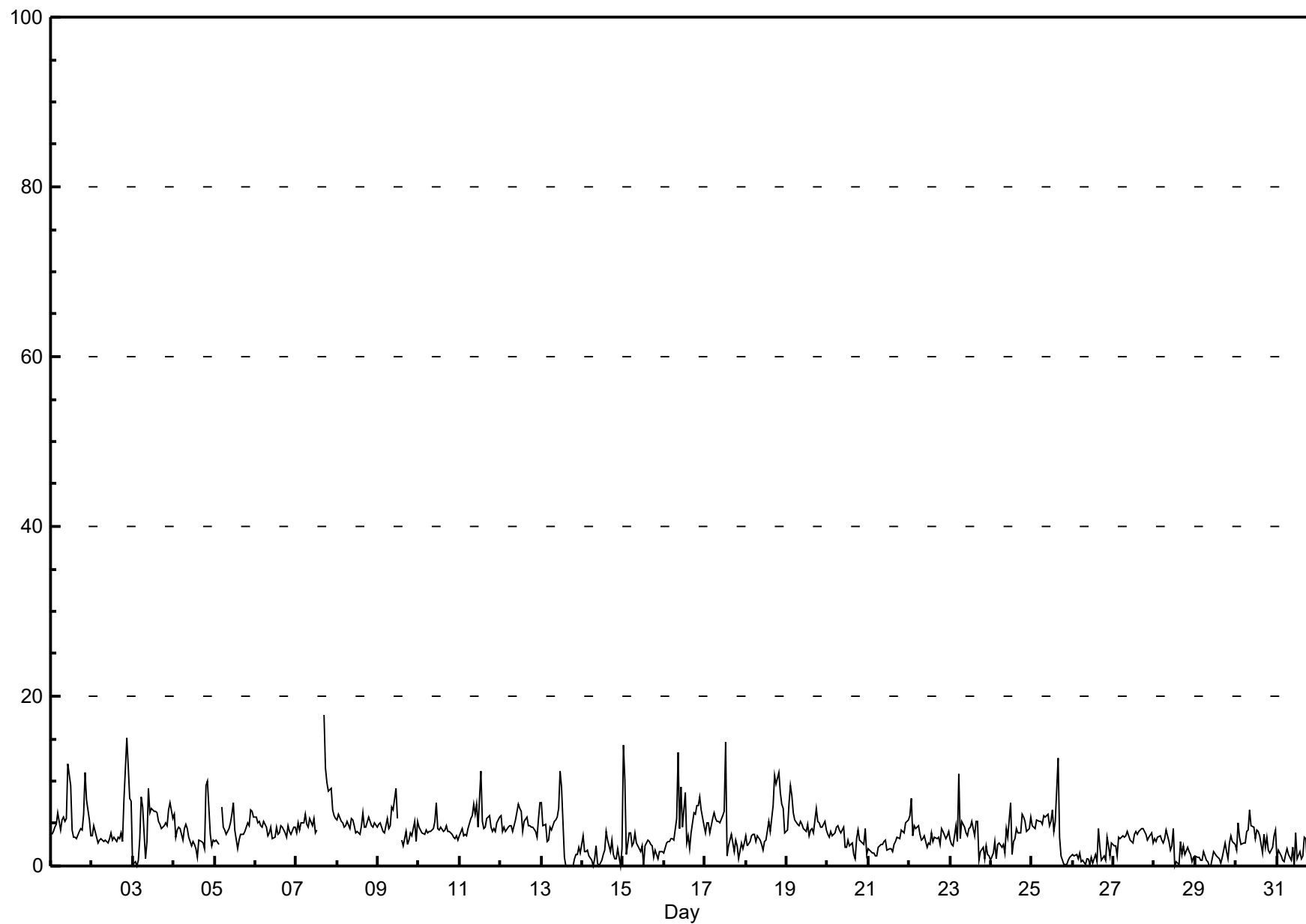
PM2.5 (PM_{2.5}) - µg/m³

Portable Rycroft - March 2017

Maximum Value: 17.7 μg/m³ on Mar 7 17:00																				Maximum Daily Average: 6.6 μg/m³ on Mar 7					Hours in Service: 744	
Minimum Value: 0 μg/m³ on Mar 3 03:00																				Minimum Daily Average: 1.3 μg/m³ on Mar 26					Hours of Data: 738	
Maximum Diurnal Average: 4.4 μg/m³ at hour 12																				Minimum Diurnal Average: 3.1 μg/m³ at hour 15					Hours of Missing Data: 6	
Monthly Average: 3.86 μg/m³																				Percentiles: P ₁ = 0.0 P ₁₀ = 1.1 Q ₁ = 2.4 Median = 3.8 Q ₃ = 4.8 P ₉₀ = 6.3 P ₉₉ = 11.3					Hours of Calibration: 3	
																				Percent Operational Time: 99.6						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	4	4	5	5	6	4	5	6	5	6	12	9	4	3	3	3	4	4	4	6	11	8	5	3	5.5	12.0
2-Mar	4	5	4	3	3	3	3	3	3	3	3	4	3	3	3	3	3	4	3	8	15	12	8	8	4.7	15.0
3-Mar	0	0	0	1	3	8	7	1	3	9	6	7	6	6	6	5	5	4	5	5	5	7	7	6	4.7	9.2
4-Mar	6	3	4	5	4	3	4	5	4	3	2	3	3	2	1	3	3	3	2	10	10	4	2	3	3.9	10.0
5-Mar	3	3	3	P	7	5	4	4	4	5	6	8	4	2	3	4	4	4	4	5	5	7	6	6	4.6	7.5
6-Mar	6	5	5	5	5	5	5	4	4	5	3	3	5	4	4	5	5	4	3	5	4	4	5	5	4.4	5.8
7-Mar	4	5	4	5	5	6	5	5	6	5	6	4	4	C	C	C	18	12	10	9	9	7	6	6	6.6	17.7
8-Mar	6	6	5	5	5	5	5	4	6	5	5	4	4	4	5	6	5	5	6	5	5	4	5	5	4.9	6.2
9-Mar	5	5	5	4	4	6	4	5	7	7	9	6	D	D	3	2	4	2	3	4	4	5	3	5	4.6	9.2
10-Mar	5	4	4	4	4	4	4	4	4	5	7	4	4	5	4	4	5	4	4	4	3	3	4	3	4.2	7.5
11-Mar	4	4	4	4	4	4	6	6	7	6	7	5	11	5	4	5	6	6	5	4	4	4	5	6	5.2	11.2
12-Mar	6	4	5	4	5	5	5	4	5	5	7	7	6	4	5	6	5	5	5	5	4	3	6	8	5.1	7.5
13-Mar	8	5	5	3	3	5	4	5	5	6	7	11	9	1	0	0	0	0	0	1	1	1	2	2	3.5	11.2
14-Mar	4	2	2	2	1	1	0	1	2	0	0	1	1	2	4	3	2	3	1	1	1	2	0	2	1.5	4.2
15-Mar	14	10	1	4	4	2	3	4	3	2	2	2	0	2	3	3	3	2	1	2	1	2	2	2	3.1	14.3
16-Mar	1	3	3	3	3	3	3	6	13	4	9	5	9	3	4	2	4	6	6	7	7	8	7	5	5.1	13.3
17-Mar	4	5	5	4	6	6	6	5	5	5	6	7	15	1	2	4	3	2	3	2	1	3	2	3	4.3	14.6
18-Mar	4	2	3	4	4	4	3	4	3	3	2	3	3	5	4	6	7	11	10	11	9	7	7	4	5.0	11.0
19-Mar	4	7	9	8	6	5	5	5	5	5	4	4	5	4	4	4	4	7	5	5	5	5	5	4	5.3	9.5
20-Mar	4	3	4	4	4	5	5	4	4	5	2	2	3	2	3	1	1	3	4	3	3	3	4	1	3.2	4.7
21-Mar	2	2	1	2	1	1	2	3	3	3	3	2	2	2	2	3	3	3	3	4	4	4	5	5	2.7	5.4
22-Mar	6	8	4	5	4	5	4	3	3	4	2	3	3	4	3	3	3	3	3	4	4	3	4	4	3.8	8.0
23-Mar	3	3	2	5	3	11	3	5	5	4	4	4	5	5	4	5	5	1	2	2	1	2	1	1	3.6	10.8
24-Mar	1	2	3	1	2	3	2	3	2	4	3	8	1	3	3	4	4	4	6	6	5	4	4	6	3.5	7.5
25-Mar	5	5	4	6	5	5	5	6	6	6	5	5	7	4	5	13	3	1	1	0	0	1	1	1	4.1	12.7
26-Mar	1	1	1	1	2	1	1	0	1	1	0	1	0	1	1	4	2	1	1	1	3	2	1	3	1.3	4.5
27-Mar	2	2	1	3	3	4	3	4	4	4	3	3	4	4	4	4	4	4	4	4	3	3	4	3	3.4	4.3
28-Mar	3	3	3	4	3	3	3	4	3	2	2	4	0	0	0	3	1	2	1	2	2	1	1	1	2.2	4.3
29-Mar	1	1	1	1	1	2	1	0	0	0	1	2	1	1	1	0	1	3	2	1	3	3	3	3	1.3	3.5
30-Mar	2	5	3	3	3	3	4	4	7	5	4	3	4	4	4	2	4	2	3	2	2	2	4	4	3.4	6.5
31-Mar	1	2	1	1	1	1	2	1	1	2	0	4	1	2	1	1	3	3	1	1	2	0	1	0	1.4	3.8
3.9 3.9 3.4 3.5 3.7 4.1 3.7 3.8 4.3 4.1 4.3 4.4 4.3 3.1 3.1 3.7 3.9 3.8 3.6 4.1 4.3 4.0 3.9 3.7																									Diurnal Average	
14.3 10.2 9.5 8.3 7.0 10.8 6.9 6.0 13.3 9.2 12.0 11.2 14.6 6.4 6.3 12.7 17.7 11.6 9.8 11.0 15.0 11.6 7.9 7.6																									Diurnal Maximum	
C - Calibration P - Power Failure D - DAS Failure																										

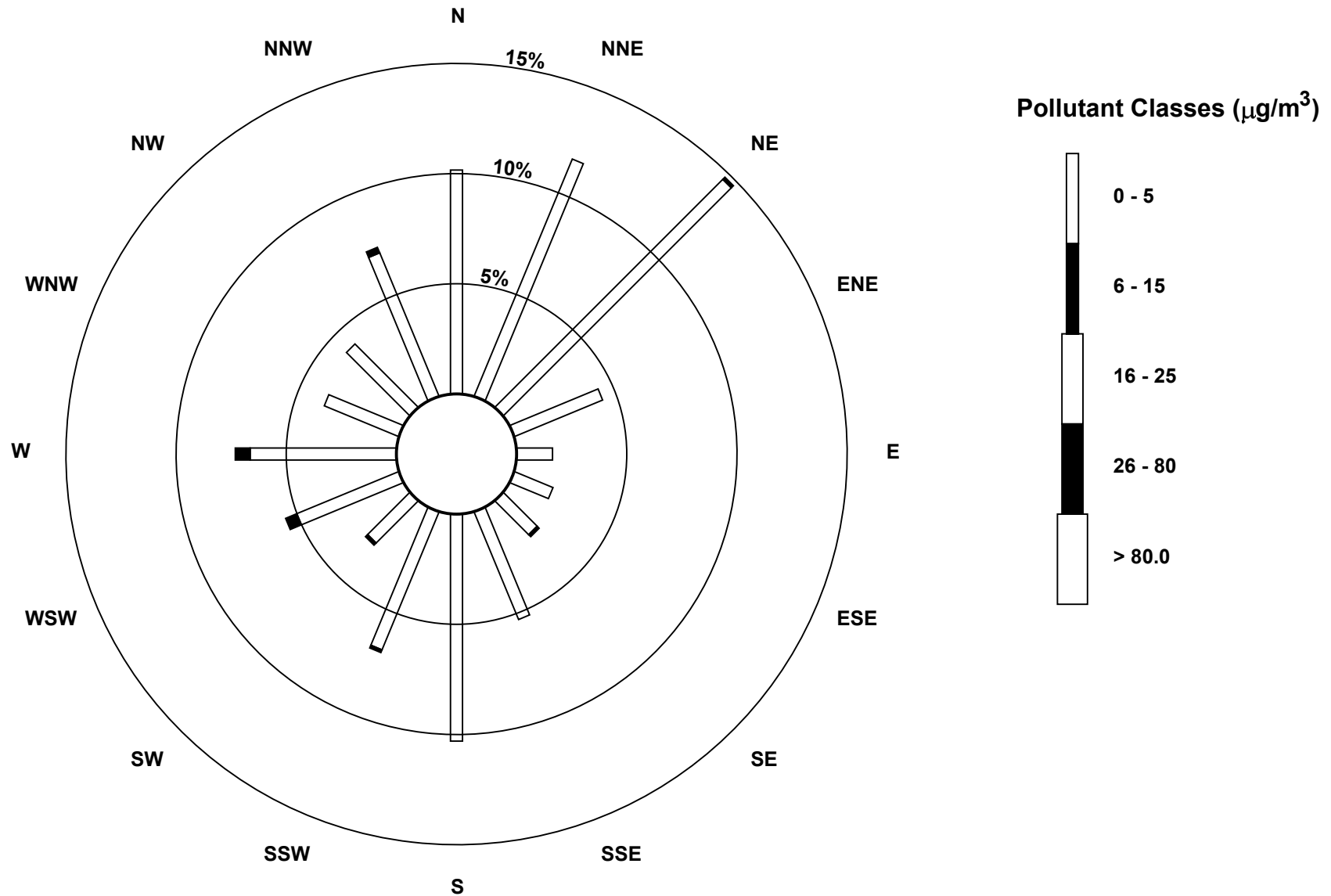
Hourly Maximums

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



Pollutant Rose

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



Hourly Averages

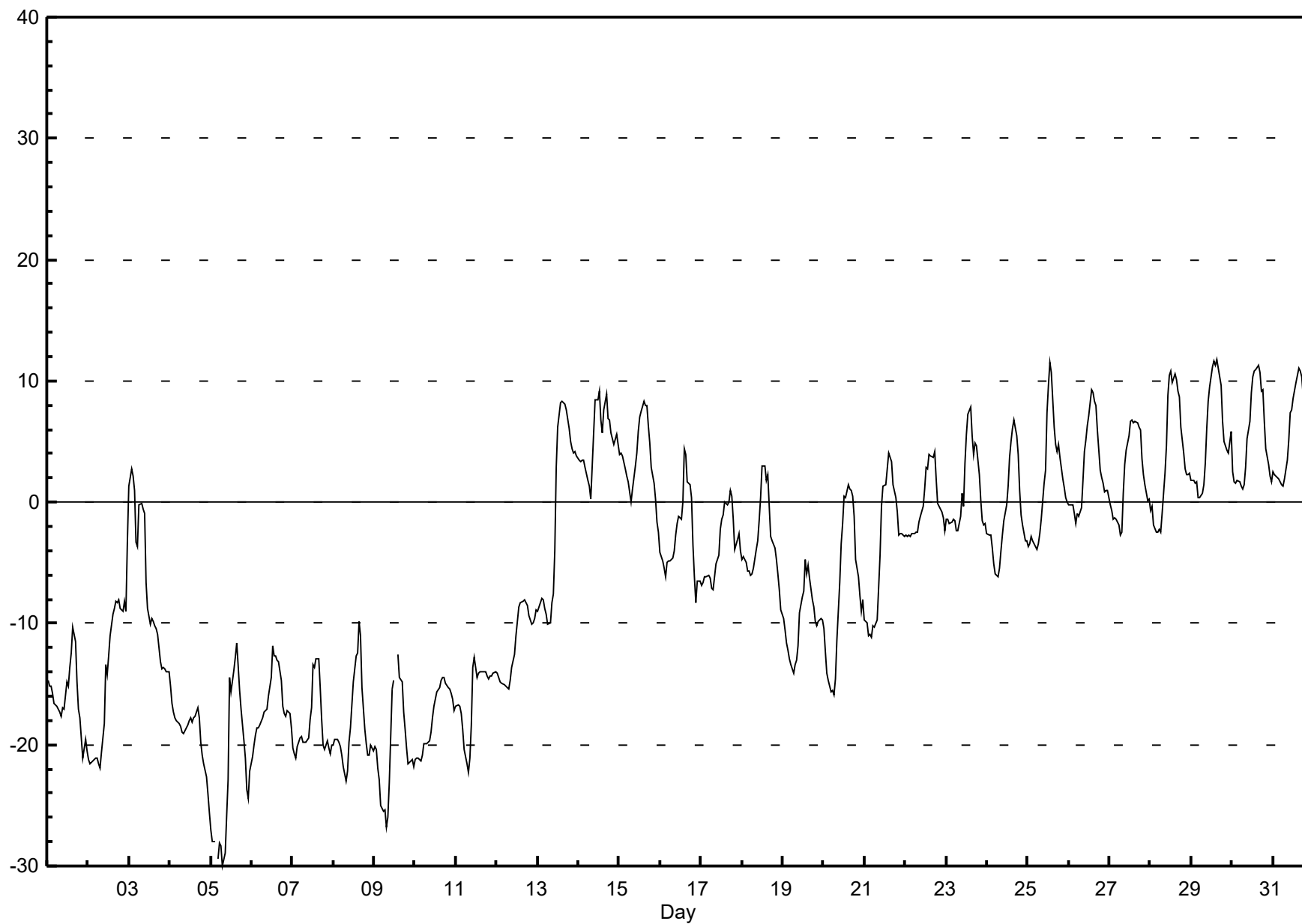
External Temperature (ET) - °C

Portable Rycroft - March 2017

Maximum Value: 11.8 °C on Mar 29 16:00																								Maximum Daily Average: 5.6 °C on Mar 29				Hours in Service: 744	
Minimum Value: -30 °C on Mar 5 08:00																								Minimum Daily Average: -21.8 °C on Mar 5				Hours of Data: 741	
Maximum Diurnal Average: -1.1 °C at hour 16																								Minimum Diurnal Average: -10.0 °C at hour 7				Hours of Missing Data: 3	
Monthly Average: -6.14 °C																								Percentiles: P ₁ = -27.0 P ₁₀ = -20.0 Q ₁ = -14.8 Median = -4.3 Q ₃ = 1.9 P ₉₀ = 6.2 P ₉₉ = 11.1				Hours of Calibration: 0	
																								Percent Operational Time: 99.6					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Mar	-15	-15	-15	-16	-17	-17	-17	-17	-18	-17	-17	-15	-15	-14	-12	-10	-12	-15	-17	-18	-19	-21	-20	-21	-16.2	-10.3			
2-Mar	-21	-22	-22	-21	-21	-21	-22	-22	-21	-18	-13	-14	-13	-11	-9	-9	-8	-8	-9	-9	-8	-9	-3	-3	-14.3	-3.3			
3-Mar	1	3	2	1	-3	-4	0	0	-1	-1	-7	-9	-10	-10	-10	-10	-10	-11	-13	-14	-14	-14	-14	-14	-6.7	2.8			
4-Mar	-15	-17	-17	-18	-18	-18	-18	-19	-19	-19	-18	-18	-18	-18	-18	-18	-17	-18	-20	-21	-22	-23	-24	-26	-19.0	-15.2			
5-Mar	-27	-28	-28	P	-29	-28	-28	-30	-29	-26	-23	-14	-16	-14	-13	-12	-14	-16	-17	-20	-21	-24	-24	-22	-21.8	-11.6			
6-Mar	-21	-20	-19	-19	-19	-18	-18	-17	-17	-17	-16	-14	-12	-13	-13	-13	-13	-15	-17	-17	-18	-17	-17	-19	-16.6	-11.8			
7-Mar	-20	-21	-21	-20	-19	-19	-20	-20	-20	-19	-18	-17	-13	-14	-13	-13	-15	-18	-20	-20	-20	-20	-21	-20	-18.4	-12.9			
8-Mar	-20	-20	-20	-20	-20	-21	-22	-23	-22	-20	-19	-17	-15	-13	-12	-10	-11	-15	-19	-20	-21	-21	-20	-20	-18.3	-9.9			
9-Mar	-20	-20	-22	-23	-25	-25	-25	-27	-26	-23	-15	-15	D	D	-13	-14	-15	-17	-19	-20	-22	-21	-21	-22	-20.5	-12.6			
10-Mar	-21	-21	-21	-21	-21	-20	-20	-20	-20	-19	-18	-17	-16	-16	-15	-15	-14	-14	-15	-15	-15	-16	-16	-17	-17.7	-14.4			
11-Mar	-17	-17	-17	-17	-19	-20	-22	-22	-21	-18	-14	-13	-14	-14	-14	-14	-14	-14	-14	-15	-14	-14	-14	-14	-16.1	-12.8			
12-Mar	-14	-14	-15	-15	-15	-15	-15	-15	-15	-14	-13	-11	-10	-9	-8	-8	-8	-8	-9	-9	-10	-10	-10	-9	-11.6	-8.1			
13-Mar	-9	-9	-8	-8	-9	-9	-10	-10	-8	-8	-4	3	6	8	8	8	8	8	6	5	4	4	4	4	-0.6	8.3			
14-Mar	3	3	3	3	3	2	1	0	3	6	8	8	9	7	6	8	9	7	7	6	5	5	6	5	5.1	9.2			
15-Mar	4	4	4	3	2	2	1	0	1	3	4	6	7	7	8	8	8	6	5	3	2	0	-2	-2	3.5	8.3			
16-Mar	-4	-5	-5	-6	-5	-5	-5	-5	-4	-3	-2	-1	-1	0	4	4	2	1	0	-4	-6	-8	-7	-7	-2.9	4.4			
17-Mar	-7	-7	-6	-6	-6	-6	-7	-7	-6	-5	-4	-2	-1	-1	0	0	0	1	1	-1	-4	-3	-3	-4	-3.6	1.0			
18-Mar	-5	-5	-5	-6	-6	-6	-6	-5	-4	-3	-2	0	3	3	2	2	0	-3	-3	-4	-5	-6	-7	-9	-3.3	3.0			
19-Mar	-10	-10	-12	-12	-13	-13	-14	-13	-13	-12	-9	-8	-7	-5	-6	-5	-6	-8	-9	-10	-10	-10	-10	-10	-9.8	-4.7			
20-Mar	-10	-12	-14	-15	-16	-16	-16	-15	-11	-7	-3	-2	0	0	1	1	1	0	-1	-5	-6	-8	-9	-8	-7.0	1.4			
21-Mar	-10	-10	-11	-11	-11	-10	-10	-10	-7	-4	0	1	1	3	4	4	3	1	0	-1	-3	-3	-3	-3	-3.7	4.0			
22-Mar	-3	-3	-3	-3	-3	-3	-2	-2	-2	-1	0	1	3	3	4	4	4	4	2	0	0	-1	-1	-2	-0.2	4.1			
23-Mar	-1	-1	-2	-2	-1	-2	-2	-2	-1	1	0	3	6	7	8	5	4	5	5	2	0	-2	-2	-2	1.1	7.8			
24-Mar	-3	-3	-3	-4	-5	-6	-6	-5	-4	-3	-2	0	1	4	5	6	7	5	4	1	-1	-2	-3	-3	-0.8	6.8			
25-Mar	-4	-3	-3	-3	-4	-4	-3	-3	-1	2	3	7	10	12	11	6	5	4	5	4	2	1	0	0	1.8	11.6			
26-Mar	0	0	0	-1	-2	-1	-1	-1	2	4	5	6	7	9	9	8	8	6	3	2	2	1	1	1	2.8	9.3			
27-Mar	0	-1	-1	-1	-1	-2	-3	-2	1	3	4	5	7	7	6	7	7	6	6	4	2	1	0	0	2.3	6.8			
28-Mar	-1	0	-2	-3	-2	-2	-2	-1	2	5	9	10	11	10	11	10	9	9	6	4	3	2	2	2	3.8	10.8			
29-Mar	2	2	2	2	0	0	1	1	3	6	8	10	11	12	11	12	11	10	7	5	5	4	4	6	5.6	11.8			
30-Mar	3	2	2	2	2	1	1	1	3	5	7	9	10	11	11	11	11	9	9	7	4	3	2	2	5.3	11.2			
31-Mar	2	2	2	2	2	1	1	2	3	5	7	8	9	10	10	11	11	10	9	7	5	4	4	4	5.5	11.1			
																									Diurnal Average				
																									Diurnal Maximum				
P - Power Failure D - DAS Failure																													

Hourly Averages

External Temperature (ET) - °C
Portable Rycroft - March 2017



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	18	12	17	14	15	16	14	11	12	10	8	10	14	8	5	3	2	4	4	4	3	4	4	4	6.5	17.5
Dir	23	9	12	358	342	346	342	338	335	342	333	269	252	257	252	307	19	18	70	75	73	52	43	44	346.7	23.1
2 Spd	4	6	7	8	6	7	5	4	6	8	8	9	10	8	8	10	8	6	2	3	4	4	3	4	4.8	10.2
Dir	31	50	46	47	57	43	50	56	32	26	12	27	17	35	18	23	37	24	110	220	196	136	211	139	38.5	23.0
3 Spd	18	23	17	12	6	11	20	9	8	10	33	32	20	18	18	16	14	10	5	6	7	8	16	22	7.9	32.8
Dir	168	164	156	158	204	249	249	209	201	252	274	266	257	268	285	280	270	263	242	268	324	51	27	22	252.1	274.4
4 Spd	22	25	22	18	15	17	15	15	15	15	13	13	13	13	10	7	4	7	3	3	2	4	4	4	9.7	25.1
Dir	19	346	348	347	336	343	345	341	345	352	357	7	12	29	28	41	95	18	70	89	153	154	164	176	0.2	345.8
5 Spd	5	7	8	7	7	6	6	8	7	4	3	3	6	9	9	9	6	7	6	3	3	2	3	4	1.1	9.5
Dir	176	185	176	183	173	185	192	190	185	201	216	295	317	346	347	12	49	72	60	41	9	284	211	215	185.8	11.6
6 Spd	3	3	5	5	8	9	8	8	13	18	16	14	14	14	15	13	10	10	8	7	11	12	8	8	9.1	18.5
Dir	199	268	317	295	296	309	341	9	33	29	17	14	10	5	8	6	9	6	352	345	13	17	4	2	2.5	28.6
7 Spd	7	7	7	7	7	9	9	7	12	11	10	11	8	5	5	3	4	5	1	0	2	6	9	10	5.6	11.7
Dir	345	346	322	339	356	18	43	30	29	22	16	15	3	327	9	300	260	268	246	337	277	6	15	23	3.5	29.1
8 Spd	6	12	15	16	14	13	10	8	7	9	11	12	10	7	4	3	3	3	4	4	1	3	5	4	7.3	16.4
Dir	38	23	24	22	22	21	10	6	4	20	23	6	359	9	357	3	355	331	296	326	315	316	2	339	10.3	22.2
9 Spd	6	4	4	5	2	2	3	3	4	4	5	8	D	D	11	13	11	12	6	6	3	6	6	9	4.5	13.2
Dir	8	15	355	1	347	251	283	196	185	195	10	7	D	D	21	34	38	35	19	17	360	336	16	44	18.0	34.5
10 Spd	11	14	12	9	8	16	16	15	18	17	21	26	28	27	27	25	22	18	17	16	13	11	5	6	16.5	27.9
Dir	55	50	47	53	53	44	43	48	47	49	42	39	43	43	42	41	40	54	58	57	57	56	58	41	46.8	42.6
11 Spd	4	6	5	2	2	1	2	3	3	2	4	8	15	18	20	18	17	12	8	9	8	6	13	16	7.4	20.1
Dir	27	40	52	59	15	107	197	211	237	268	326	17	37	36	43	53	54	60	44	24	19	34	37	46	39.9	43.2
12 Spd	17	19	18	16	13	13	11	9	9	9	8	8	8	9	9	7	6	5	6	11	12	14	12	12	10.0	18.8
Dir	50	52	55	49	54	59	61	59	63	76	93	97	89	114	127	117	115	103	78	56	48	48	41	55	65.9	52.2
13 Spd	9	7	7	6	6	4	2	6	6	5	3	1	7	12	19	17	17	14	14	12	11	11	11	13	7.1	19.3
Dir	63	79	118	108	99	124	150	140	132	270	311	177	175	198	190	189	188	185	191	184	177	176	182	186	172.8	189.7
14 Spd	11	17	17	15	13	8	10	6	10	5	3	3	3	15	15	10	8	5	6	9	9	3	12	14	5.3	17.4
Dir	187	182	178	181	182	177	171	180	139	125	103	10	42	36	33	17	53	24	135	150	162	152	146	148	146.1	182.4
15 Spd	13	27	11	14	17	19	16	13	13	14	12	8	7	8	6	8	6	6	5	3	3	4	2	2	7.6	26.9
Dir	207	244	217	202	196	185	196	202	204	209	205	206	223	231	225	201	293	349	29	69	95	77	141	166	209.2	244.2
16 Spd	1	2	2	3	4	8	9	8	10	3	6	6	3	5	3	7	6	7	1	1	3	5	5	9	1.9	10.4
Dir	143	165	222	265	28	53	52	65	50	69	21	12	58	29	275	334	291	314	321	38	195	244	250	273	1.0	50.5
17 Spd	11	5	5	7	5	10	8	5	1	4	6	7	9	13	15	18	16	16	12	10	8	8	9	7	5.2	18.2
Dir	263	236	290	284	285	278	273	264	297	319	346	360	44	53	50	37	38	39	54	42	12	52	39	9	14.4	37.1
18 Spd	4	3	1	2	2	4	5	6	7	7	6	7	8	8	10	13	30	25	15	20	16	12	15	7	8.8	30.4
Dir	7	35	330	233	277	256	256	254	270	255	271	286	295	293	279	266	263	248	248	249	239	234	244	224	258.2	262.6
19 Spd	11	8	5	4	1	3	6	9	11	15	12	9	12	12	14	18	19	21	19	16	17	20	20	12	11.9	21.1
Dir	240	251	268	288	308	288	286	278	271	276	285	272	267	282	292	289	281	268	263	251	246	257	261	275	269.5	268.0
20 Spd	8	10	4	5	6	6	6	5	4	3	7	4	8	13	8	10	9	8	11	11	11	8	2	9	3.1	12.7
Dir	276	256	240	200	188	174	159	164	167	25	1	32	6	16	38	78	86	88	57	51	49	46	84	46	55.4	16.5
21 Spd	4	5	4	7	7	13	13	12	8	9	9	3	5	4	3	6	10	10	5	5	6	6	6	3	4.8	12.7
Dir	41	37	20	42	38	46	43	52	40	27	0	60	110	64	55	18	18	32	10	327	267	255	256	254	28.0	46.3
22 Spd	1	2	2	2	2	2	1	5	5	7	6	2	5	5	7	4	3	8	5	3	4	2	3	1	2.8	8.3
Dir	205	221	337	59	332	224	333	47	307	309	346	300	355	349	359	315	344	3	3	3	8	329	7	314	344.7	2.8

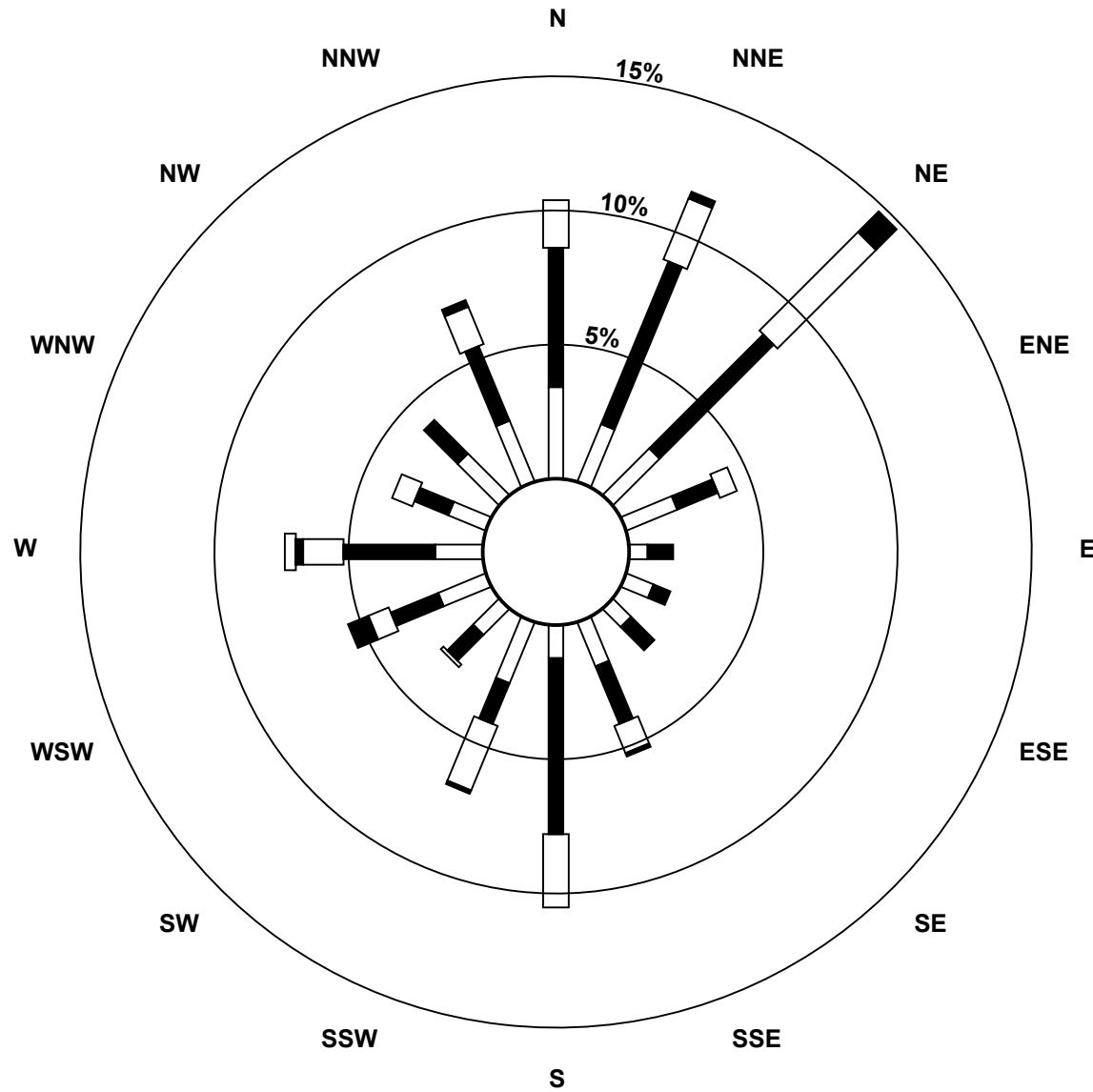
Hourly Averages

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

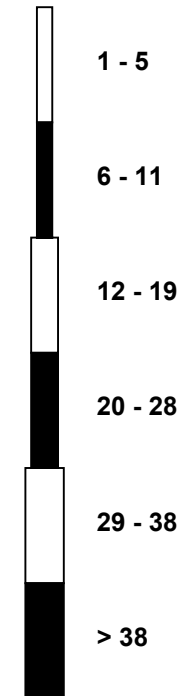
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
23 Spd	4	11	15	15	16	6	10	5	2	2	5	4	7	7	6	9	3	4	5	7	7	7	6	7	2.9	16.4					
Dir	31	35	40	44	47	271	318	329	356	330	229	253	353	2	352	4	350	47	114	136	144	170	156	153	32.6	46.5					
24 Spd	8	7	8	6	4	4	4	3	5	7	8	9	11	11	10	10	9	10	3	4	3	4	5	5	2.8	11.3					
Dir	151	148	171	173	9	28	44	330	345	32	33	35	26	29	12	10	8	32	33	254	240	196	206	170	35.5	29.1					
25 Spd	4	5	2	2	1	2	2	5	4	2	4	6	8	6	9	12	8	5	7	6	9	11	9	10	1.3	11.7					
Dir	194	174	188	211	32	108	52	3	15	309	76	6	359	353	6	280	222	219	146	142	171	173	185	186	189.9	279.6					
26 Spd	10	11	11	10	7	11	12	12	12	8	9	10	9	7	10	14	13	11	10	9	6	9	6	4	1.7	13.6					
Dir	182	180	181	175	186	194	176	171	184	205	214	214	215	305	332	342	3	17	10	15	47	39	46	0	198.2	341.7					
27 Spd	4	6	11	8	9	7	6	5	7	5	7	6	5	7	5	3	3	3	3	2	3	3	5	3	3.7	10.6					
Dir	274	300	338	322	330	318	312	308	343	357	358	332	318	333	341	341	352	280	314	338	137	142	167	164	326.2	338.4					
28 Spd	3	2	3	3	6	6	8	9	5	4	1	7	2	6	6	9	7	6	6	9	9	6	7	9	4.6	9.0					
Dir	194	122	58	171	168	160	157	164	158	150	83	10	119	233	170	203	208	199	188	188	188	188	193	171	177.3	188.1					
29 Spd	7	6	10	10	7	10	8	7	6	7	4	7	6	7	10	11	11	12	9	9	4	4	9	7	0.7	12.4					
Dir	187	163	163	166	182	165	169	175	179	183	213	269	311	350	334	356	2	20	18	14	41	48	17	40	47.7	19.7					
30 Spd	6	7	7	8	7	9	8	9	12	12	11	6	7	6	7	9	10	3	3	5	9	9	9	10	5.5	12.1					
Dir	273	284	257	248	243	262	269	265	271	282	279	319	348	277	259	257	266	259	209	180	169	165	169	172	252.5	271.5					
31 Spd	12	12	12	10	11	9	8	10	12	13	14	14	16	18	19	20	17	16	16	13	12	13	17	12	13.3	20.3					
Dir	171	181	184	181	170	178	180	170	164	162	167	188	190	196	197	199	205	202	195	201	198	196	194	203	188.1	198.6					
Spd	0.6	0.1	1.1	0.7	0.9	0.7	0.8	0.2	1.0	2.0	3.5	3.8	3.6	4.4	4.3	4.0	2.9	2.7	1.2	0.6	0.8	0.8	0.3	1.2	Diurnal Average						
Dir	93.2	127.9	50.5	55.2	18.6	341.1	325.1	9.8	16.2	345.0	339.5	342.8	354.0	358.8	0.8	353.5	346.0	5.1	42.1	45.6	157.4	122.3	122.0	86.5	Diurnal Maximum						
Spd	22.5	26.9	21.6	18.2	16.5	18.7	20.2	14.8	17.6	18.5	32.8	32.0	27.9	27.4	27.0	24.6	30.4	25.2	19.1	19.7	16.5	20.2	19.7	21.6	Diurnal Maximum						
Dir	18.7	244.2	347.7	346.7	195.6	185.0	249.0	341.5	47.3	28.6	274.4	265.6	42.6	42.7	41.9	41.1	262.6	247.7	262.9	248.7	245.6	257.1	260.6	21.9							
Maximum Speed Value: 33 km/h on Mar 3 11:00																				Minimum Speed Value: 0 km/h on Mar 7 20:00					Hours in Service:					744	
Maximum Daily Speed Average: 16.5 km/h on Mar 10																				Minimum Daily Speed Average: 0.7 km/h on Mar 22					Hours of Data:					742	
Maximum Diurnal Speed Average: 4.4 km/h at hour 14																				Minimum Diurnal Speed Average: 0.1 km/h at hour 2					Hours of Missing Data:					2	
Monthly Average Velocity: 1.45 km/h 2.40 deg										Speed Percentiles: P ₁ = 0.8 P ₁₀ = 2.8 Q ₁ = 4.7 Median = 7.6 Q ₃ = 11.4 P ₉₀ = 15.9 P ₉₉ = 26.8										Percent Operational Time:					99.7						
All monthly, daily, and diurnal averages have been calculated using vector methods																															
D - DAS 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	36		83		34		4		0		0		157																		
NorthEast	34		66		59		8		0		0		167																		
East	18		13		0		0		0		0		31																		
SouthEast	15		20		3		0		0		0		38																		
South	24		64		42		3		0		0		133																		
SouthWest	21		19		12		1		0		0		53																		
West	26		43		19		9		3		0		100																		
NorthWest	29		32		2		0		0		0		63																		
Total	203		340		171		25		3		0		742																		

Wind Rose

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



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Portable Rycroft - March 2017

Maximum Speed: 33 km/h on Mar 3 11:00																				Maximum Daily Speed Average: 16.7 km/h on Mar 10										Hours in Service: 744	
Minimum Speed: 1 km/h on Mar 16 01:00																				Minimum Daily Speed Average: 4.2 km/h on Mar 22										Hours of Data: 742	
Maximum Diurnal Speed Average: 11.1 km/h at hour 16																				Minimum Diurnal Speed Average: 7.1 km/h at hour 21										Hours of Missing Data: 2	
Monthly Average Speed: 8.86 km/h																				Percentiles: P ₁ = 1.7 P ₁₀ = 3.2 Q ₁ = 5.2 Median = 7.8 Q ₃ = 11.6 P ₉₀ = 16.0 P ₉₉ = 26.9										Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Mar	18	12	17	15	15	16	14	11	12	10	8	11	14	8	5	4	3	4	4	4	3	4	4	4	4	9.2	17.5				
2-Mar	5	6	7	8	6	7	5	5	6	8	8	10	10	9	8	10	8	6	3	3	4	6	5	5	5	6.6	10.5				
3-Mar	18	23	17	12	6	11	20	10	8	12	33	32	20	18	18	16	14	10	5	6	7	8	16	22	15.2	33.1					
4-Mar	23	25	22	18	15	17	15	15	15	15	13	14	13	13	10	7	5	7	3	3	2	4	4	5	5	11.9	25.2				
5-Mar	5	7	8	7	7	6	6	8	7	4	3	4	6	9	9	10	7	7	6	3	3	3	3	4	4	5.9	9.5				
6-Mar	4	3	5	5	8	9	9	8	13	19	16	14	14	14	14	15	13	10	10	8	7	11	12	8	8	10.4	18.5				
7-Mar	8	7	8	7	7	9	9	7	12	11	10	11	8	5	5	3	4	5	2	2	3	6	9	10	6	6.9	11.8				
8-Mar	6	12	15	16	14	13	10	8	7	9	11	12	11	7	4	3	3	3	4	4	2	4	5	5	5	7.9	16.4				
9-Mar	7	5	4	5	3	2	3	3	5	4	5	8	D	D	11	13	11	12	6	6	4	6	6	9	9	6.2	13.2				
10-Mar	11	14	13	9	8	16	16	15	18	17	22	26	28	27	27	25	22	18	17	16	13	11	5	7	7	16.7	28.1				
11-Mar	4	6	5	2	2	2	2	3	3	2	5	8	15	19	20	18	18	13	9	9	8	6	13	16	6	8.7	20.2				
12-Mar	17	19	18	16	13	13	11	9	10	10	8	9	9	10	9	8	6	5	6	11	12	14	12	12	12	11.1	18.8				
13-Mar	9	7	7	6	6	4	3	6	7	5	3	3	7	12	19	17	17	14	14	12	11	11	11	13	13	9.4	19.4				
14-Mar	11	17	17	16	13	8	10	7	10	6	4	4	4	15	15	10	9	6	6	9	9	3	12	14	14	9.7	17.4				
15-Mar	16	27	12	14	17	19	17	13	13	14	12	9	7	8	6	8	7	6	5	3	3	4	3	2	2	10.1	27.2				
16-Mar	1	2	2	3	4	8	9	8	11	5	6	7	4	5	4	8	6	7	1	2	3	5	6	10	5	5.3	11.3				
17-Mar	11	5	5	8	5	10	8	6	2	4	6	7	10	13	16	18	16	16	12	10	8	8	10	7	7	9.2	18.4				
18-Mar	4	3	2	2	2	4	5	6	7	7	7	7	8	8	11	14	31	25	16	20	16	12	15	7	7	9.9	30.8				
19-Mar	11	9	5	5	2	4	6	10	12	15	12	10	12	12	14	18	19	21	19	16	17	20	20	12	12	12.5	21.3				
20-Mar	8	10	5	5	6	6	6	5	4	5	7	6	9	13	10	10	9	8	11	11	11	8	3	10	10	7.7	13.0				
21-Mar	4	5	5	7	7	13	13	12	8	10	9	5	6	6	6	7	10	10	5	5	6	6	6	3	3	7.3	12.8				
22-Mar	2	2	3	3	3	3	4	5	6	7	7	3	5	5	7	4	4	8	5	3	4	3	3	4	4	4.2	8.4				
23-Mar	4	11	15	15	16	11	11	6	2	3	6	5	7	7	6	9	6	5	5	7	8	7	7	7	7	7.7	16.5				
24-Mar	8	7	8	7	6	4	5	3	5	7	8	9	11	12	10	10	9	10	5	4	4	4	5	5	5	6.9	11.6				
25-Mar	4	5	3	3	2	3	3	6	5	3	5	7	8	7	9	15	9	8	7	6	9	11	9	10	10	6.5	14.6				
26-Mar	10	11	11	10	7	11	12	13	12	8	9	10	9	7	10	14	14	11	10	9	6	9	6	4	4	9.7	13.7				
27-Mar	5	6	11	8	9	7	6	6	7	5	7	6	6	7	5	3	4	3	3	2	3	4	5	3	3	5.5	10.8				
28-Mar	3	2	4	3	6	7	9	9	5	5	3	7	4	6	7	9	7	6	6	9	9	6	7	9	9	6.1	9.1				
29-Mar	7	6	10	10	7	10	8	7	6	7	5	8	7	8	11	11	12	13	9	9	5	6	10	8	8	8.2	12.6				
30-Mar	6	7	8	8	7	9	8	9	12	12	11	7	8	7	7	9	10	3	3	5	9	9	10	10	10	8.1	12.2				
31-Mar	12	12	12	10	11	9	8	10	12	13	15	14	17	19	19	20	18	16	16	13	12	13	17	12	12	13.7	20.4				
8.4 9.4 9.1 8.5 7.8 8.7 8.7 7.9 8.4 8.4 9.2 9.3 10.0 10.6 10.8 11.1 10.6 9.5 7.5 7.5 7.1 7.5 8.4 8.3																									Diurnal Average						
22.7 27.2 21.6 18.3 16.6 18.7 20.5 14.9 17.7 18.5 33.1 32.0 28.1 27.5 27.0 24.7 30.8 25.4 19.2 19.8 16.5 20.2 19.8 21.7																									Diurnal Maximum						
D - DAS Failure																															
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg

Portable Rycroft - March 2017

Maximum Value: 91.7 deg on Mar 16 19:00																									Hours in Service: 744
Minimum Value: 2.4 deg on Mar 8 08:00																									Hours of Data: 742
Percentiles: P ₁ = 2.8 P ₁₀ = 4.5 Q ₁ = 6.4 Median = 10.9 Q ₃ = 20.9 P ₉₀ = 39.5 P ₉₉ = 79.0																									Hours of Missing Data: 2
																									Hours of Calibration: 0
																									Percent Operational Time: 99.7
Day	Hourly Period Ending At (MST)																								Daily Maximum
1-Mar	3	6	7	14	4	4	8	6	4	6	10	35	5	14	22	25	35	14	21	9	24	26	22	21	35.5
2-Mar	21	18	10	8	9	9	13	20	15	7	10	13	12	27	15	13	15	17	61	21	24	63	58	19	63.2
3-Mar	8	5	4	15	11	15	11	10	11	27	8	3	7	13	5	7	8	5	10	16	22	14	4	4	27.2
4-Mar	8	6	4	6	7	6	6	6	3	5	6	16	7	13	10	31	34	11	23	25	23	11	16	16	34.1
5-Mar	10	6	5	6	10	11	11	6	6	14	11	27	10	3	4	6	26	14	14	26	31	66	23	23	66.4
6-Mar	38	40	12	7	5	7	15	11	6	4	5	5	6	5	6	5	4	4	6	4	12	4	4	6	39.6
7-Mar	8	12	12	8	5	8	7	8	8	8	7	7	8	25	24	33	17	7	65	89	37	12	5	7	89.0
8-Mar	17	7	7	3	4	4	3	2	7	4	4	4	7	14	14	16	28	21	14	21	26	41	5	20	40.6
9-Mar	6	7	8	5	71	31	24	18	20	11	56	14	D	D	9	3	15	8	9	5	26	15	5	13	70.6
10-Mar	5	6	9	11	10	4	5	5	5	7	5	5	6	5	5	6	4	11	6	5	7	5	12	6	11.9
11-Mar	7	11	6	9	19	62	8	11	17	19	31	8	8	7	6	11	11	10	11	10	7	5	5	5	62.4
12-Mar	6	5	5	4	5	6	5	5	7	16	16	19	20	27	18	20	20	16	18	8	5	5	7	8	26.7
13-Mar	9	15	10	13	18	14	46	23	19	10	23	68	22	4	5	4	3	4	4	4	7	7	5	8	67.9
14-Mar	5	5	4	7	3	5	4	29	8	25	42	67	59	5	6	6	32	49	19	11	8	35	5	4	66.7
15-Mar	28	11	9	3	5	4	9	4	4	3	5	10	11	17	18	14	37	9	9	32	10	32	75	47	74.8
16-Mar	80	47	46	30	20	7	7	8	30	83	21	29	51	40	54	17	12	16	92	74	12	20	18	11	91.7
17-Mar	6	34	33	20	21	10	9	52	71	29	15	12	26	11	15	12	7	5	9	13	10	15	15	24	71.1
18-Mar	16	14	88	29	41	13	9	6	7	7	20	15	17	13	10	17	10	8	8	4	8	7	10	12	88.0
19-Mar	7	21	25	20	50	20	12	11	13	7	12	17	18	15	10	7	10	7	5	4	3	4	3	10	49.8
20-Mar	8	4	38	17	12	8	6	9	24	63	9	41	29	12	36	15	12	12	14	4	3	10	49	13	62.9
21-Mar	28	11	31	5	13	6	3	6	19	12	10	72	30	68	79	49	15	11	9	10	9	6	6	40	79.0
22-Mar	79	31	45	50	53	40	82	27	26	16	8	34	18	19	13	39	58	10	13	28	20	46	56	80	82.2
23-Mar	28	5	3	4	5	77	23	26	39	62	14	26	14	13	15	16	70	32	12	9	7	12	16	15	76.9
24-Mar	6	8	15	10	54	18	60	33	9	14	8	9	8	13	8	9	11	8	86	8	16	11	24	28	85.7
25-Mar	11	9	43	65	66	45	61	21	40	64	62	32	14	18	9	46	28	52	7	9	6	7	6	5	66.3
26-Mar	3	6	4	7	13	9	5	9	4	10	5	5	8	25	16	7	11	3	5	13	17	9	16	45	45.2
27-Mar	19	10	12	10	10	13	10	18	9	20	18	22	21	22	27	22	50	23	16	52	16	19	13	38	52.4
28-Mar	18	22	22	75	19	13	9	4	14	26	75	17	76	25	55	14	7	7	11	5	5	4	9	7	76.0
29-Mar	7	11	3	6	11	3	3	6	7	10	34	32	31	30	13	12	11	10	7	4	29	51	31	36	51.2
30-Mar	29	7	33	8	6	16	14	4	3	7	12	24	33	33	23	16	10	29	21	17	4	11	5	4	33.2
31-Mar	4	5	3	5	4	5	5	7	3	4	12	8	16	9	6	5	9	6	5	3	8	5	5	3	15.9
80.5 47.4 88.0 74.6 70.6 76.9 82.2 52.3 71.1 82.7 74.7 72.3 76.0 67.9 79.0 49.3 69.6 52.3 91.7 89.0 36.9 66.4 74.8 79.9																									
D - DAS Failure																									

PAZA

Monthly Passive Data Summary

This map displays the Peace River region, including the Peace River, Spirit River, and various creeks and lakes. It shows the locations of numerous monitoring sites, marked with black dots and labeled with names such as Silver Valley, Forth Creek, Spirit River, Rycroft, Wapiti, and others. The map also includes a legend for 'Passive Air Monitoring Site' and a scale bar.

PAZA Passive Results for March 2017

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	Site Legal
Duplicates						
4a	Gordondale	0.4				
4b	Gordondale	0.4				
5a	Boone Creek			0.6		
5b	Boone Creek			0.6		
9a	Spirit River			0.7		
9b	Spirit River			0.7		
18a	Saddle Hills	0.5				
18b	Saddle Hills	0.5				
37a	Crooked Creek		37.4			
37b	Crooked Creek		40.1			
36a	Guy				0.1	
36b	Guy				0.1	
2	Bay Tree	0.3	37.6	0.9		13-16-078-13 W6M
4	Gordondale	0.4		1.1		04-34-078-10 W6M
5	Boone Creek	0.5		0.6		16-36-074-11 W6M
9	Spirit River	0.3		0.7		08-12-079-07 W6M
14	Sylvester	0.3		0.3		08-06-069-12 W6M
16	Beaverlodge	0.5		1.2		15-36-071-10 W6M
18	Saddle Hills	0.5		0.3		04-25-074-07 W6M
19	Wanham	0.3		0.5		16-22-077-03 W6M
21	Eaglesham	0.3		0.5		16-21-079-25 W5M
24	Wembley	0.3		0.9		12-31-070-08 W6M
25	Pinto Creek	0.3		0.6		04-24-069-11 W6M
27	Grande Prairie I	0.5		7.8		08-15-071-06 W6M
28	Clairmont Lake	0.4		0.8		09-06-073-04 W6M
29	Smoky Heights	0.3		0.8		04-06-075-02 W6M
32	Gold Creek	0.4		2.0		06-33-067-05 W6M
35	Jean Cote	0.3		0.6		12-35-079-21 W5M
36	Guy	0.3		0.5	0.1	03-04-076-22 W5M
37	Crooked Creek	0.3	38.8	0.5		16-01-071-26 W5M
39	Clouston Creek	0.3		0.6		12-01-073-22 W5M
40	McLennan	0.2		0.7		03-29-077-19 W5M
43	High Prairie	0.3		0.8		16-13-074-17 W5M
44	Peavine	0.3		0.7		03-05-079-15 W5M
46	Little Smoky	0.4		2.5		12-01-065-21 W5M
47	Kinuso	0.3	29.4	1.1		12-10-073-10 W5M
50	East Prairie	0.3		1.0		13-02-072-15 W5M
63	Girouxville 3				0.2	14-02-077-23 W5M
64	Girouxville 4				0.1	4-08-077-22 W5M

*BDL = Below Detection Level

*N/S - No sample

Passive Summary for March 2017

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

Passive Summary for March 2017 (PAZA Zone)				
Mean	0.3	35.3	1.1	0.1
Standard Deviation	0.1	5.1	1.5	0.0
Minimum	0.2	29.4	0.3	0.1
Minimum At	McLennan (#40)	Kinuso (#47)	Sylvester (#14)	Guy (#36)
Maximum	0.5	38.8	7.8	0.2
Maximum At	Beaverlodge (#16)	Crooked Creek (#37)	Grande Prairie I (#27)	Girouxville 3 (#63)

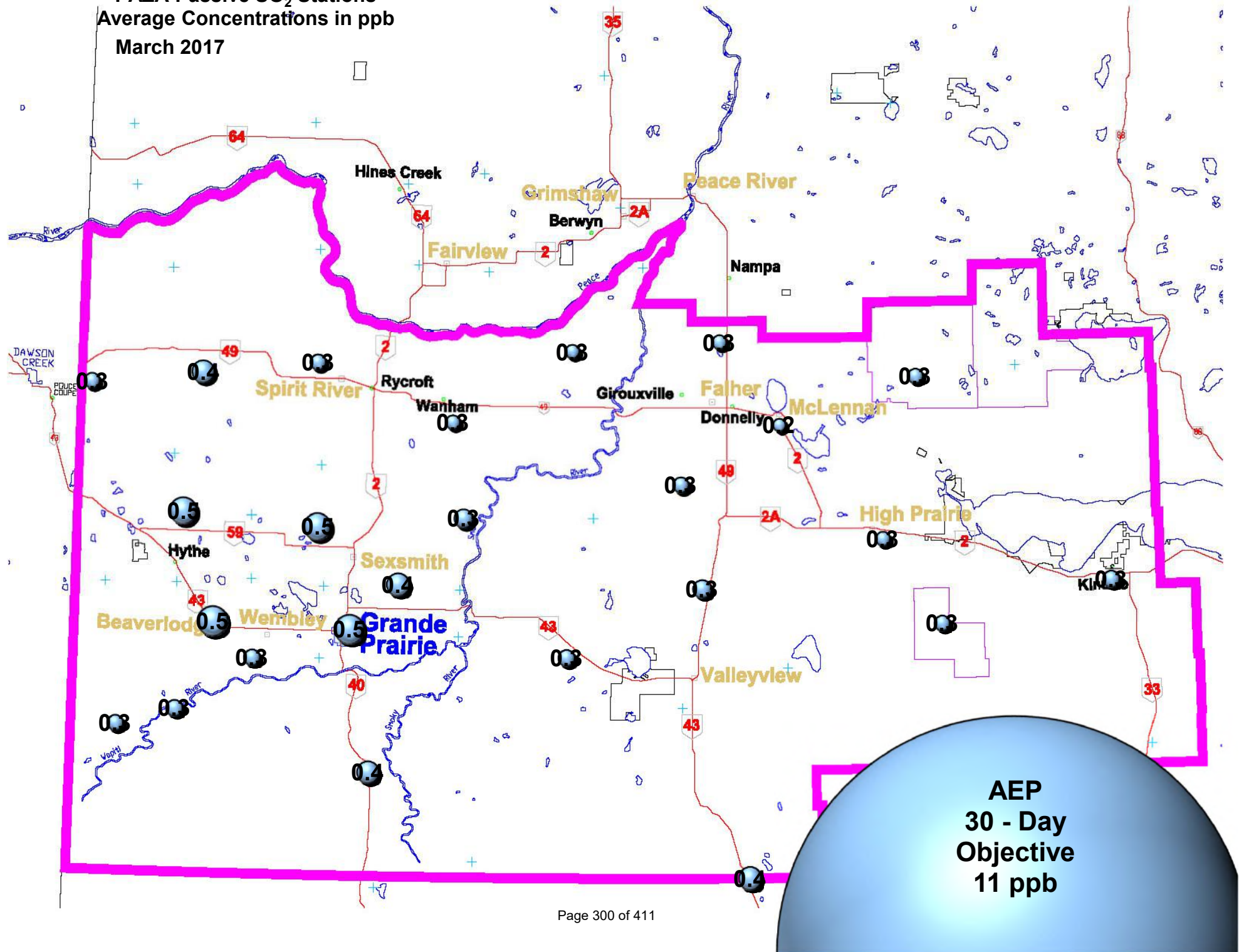
Comparison between Continuous and Passive monitoring at Beaverlodge (passive #16 Beaverlodge)

	SO ₂	NO ₂
PAZA Beaverlodge station	0.6	4.2
PAZA Beaverlodge passive	0.5	1.2

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

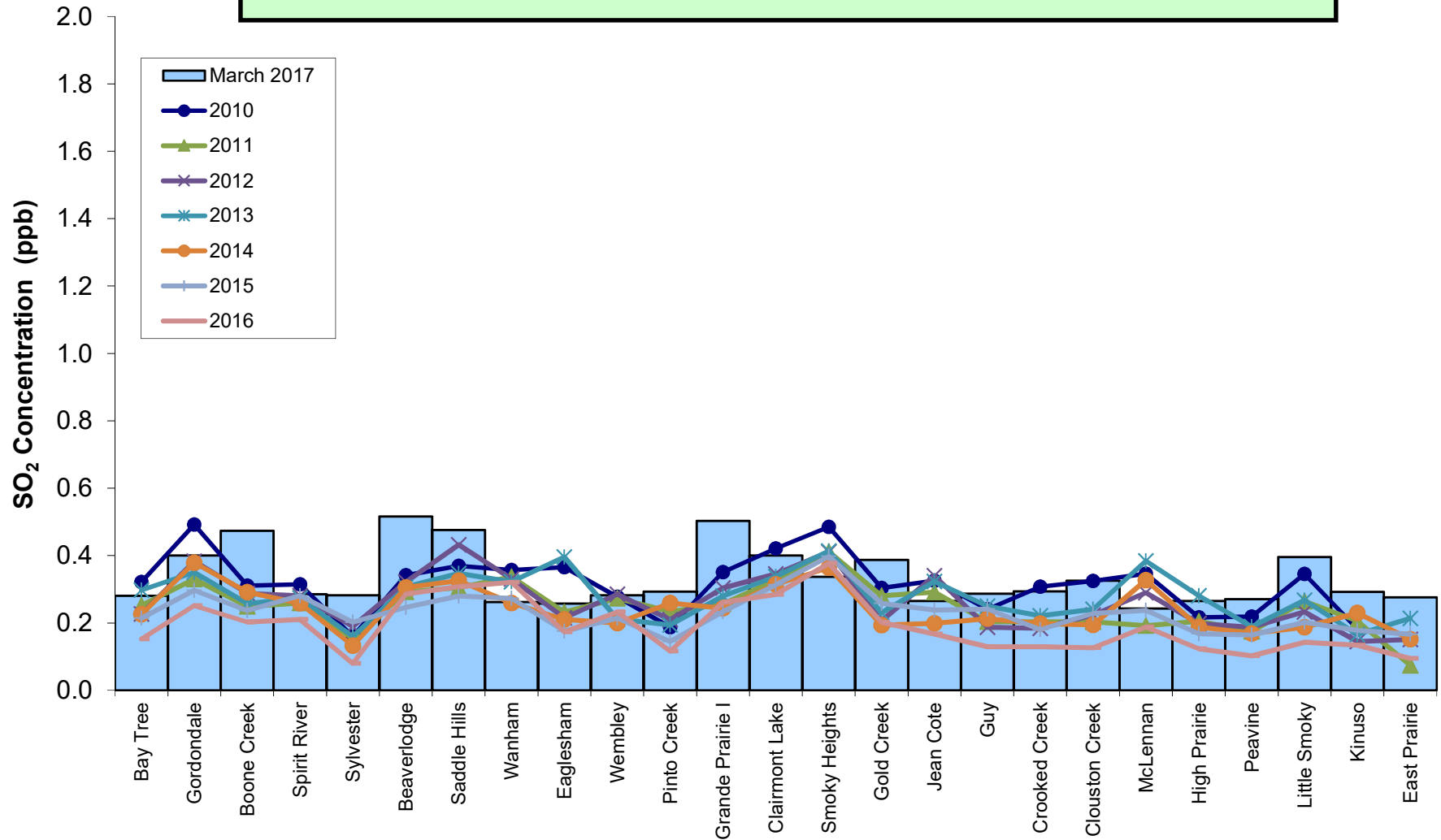
	SO ₂	NO ₂
PAZA Henry Pirker station	0.4	12.0
PAZA Grande Prairie passive	0.5	7.8

PAZA Passive SO₂ Stations
Average Concentrations in ppb
March 2017

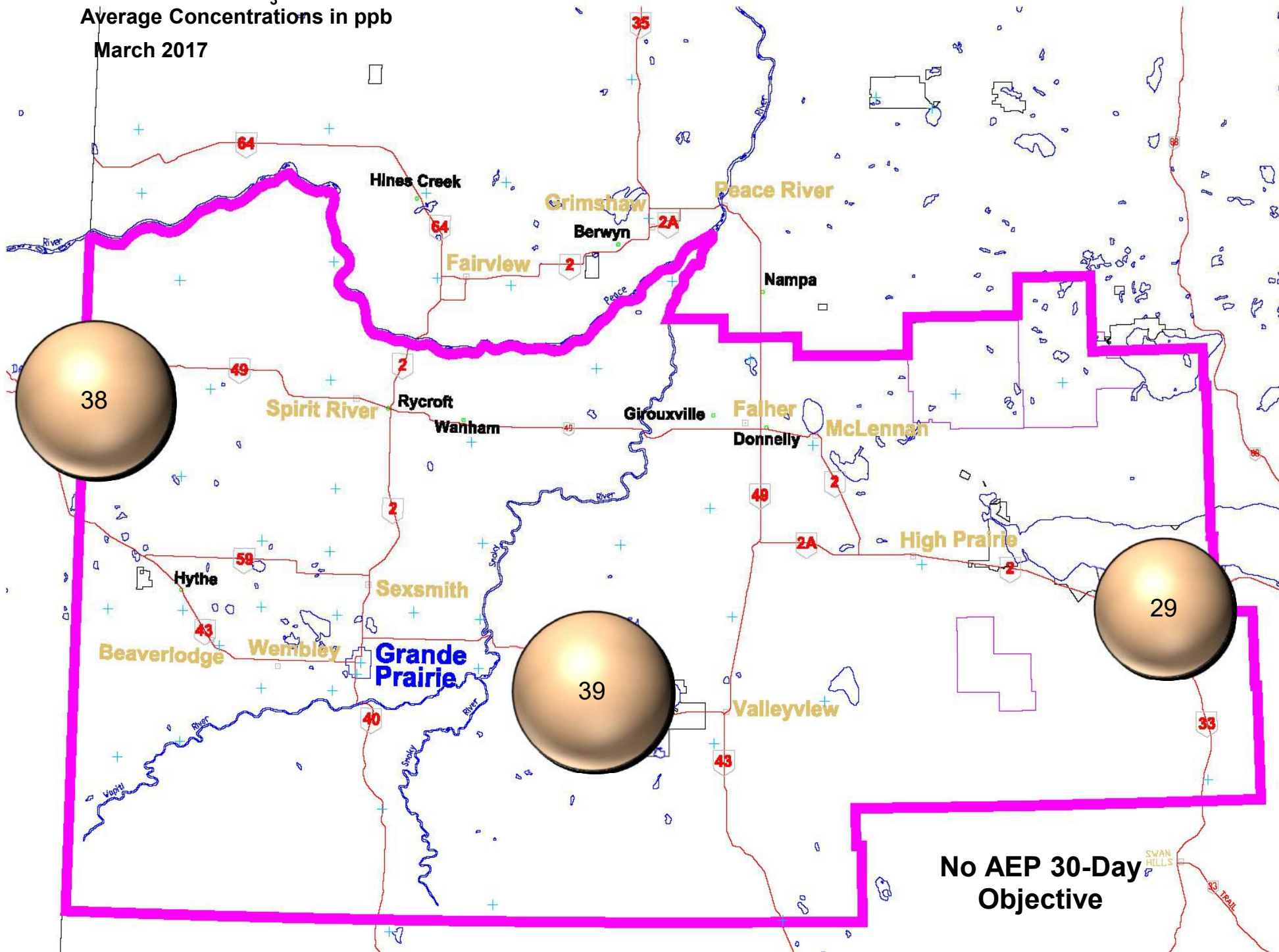


AEP
30 - Day
Objective
11 ppb

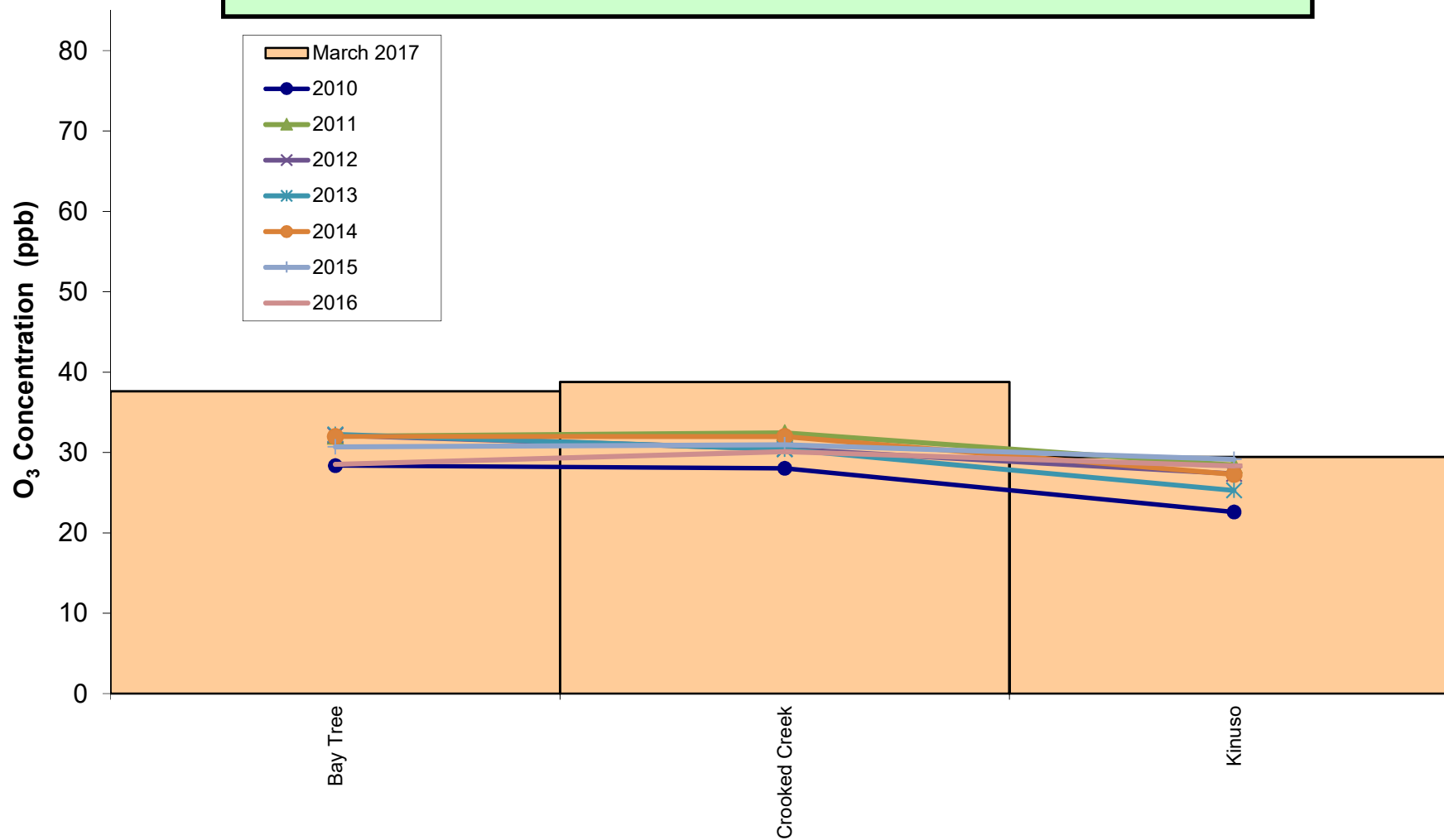
Alberta Ambient Air Quality Objective - 30-day Objective is 11 ppb



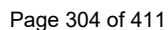
PAZA Passive O₃ Stations
Average Concentrations in ppb
March 2017



Alberta Ambient Air Quality Objective - No Annual O₃ Objective

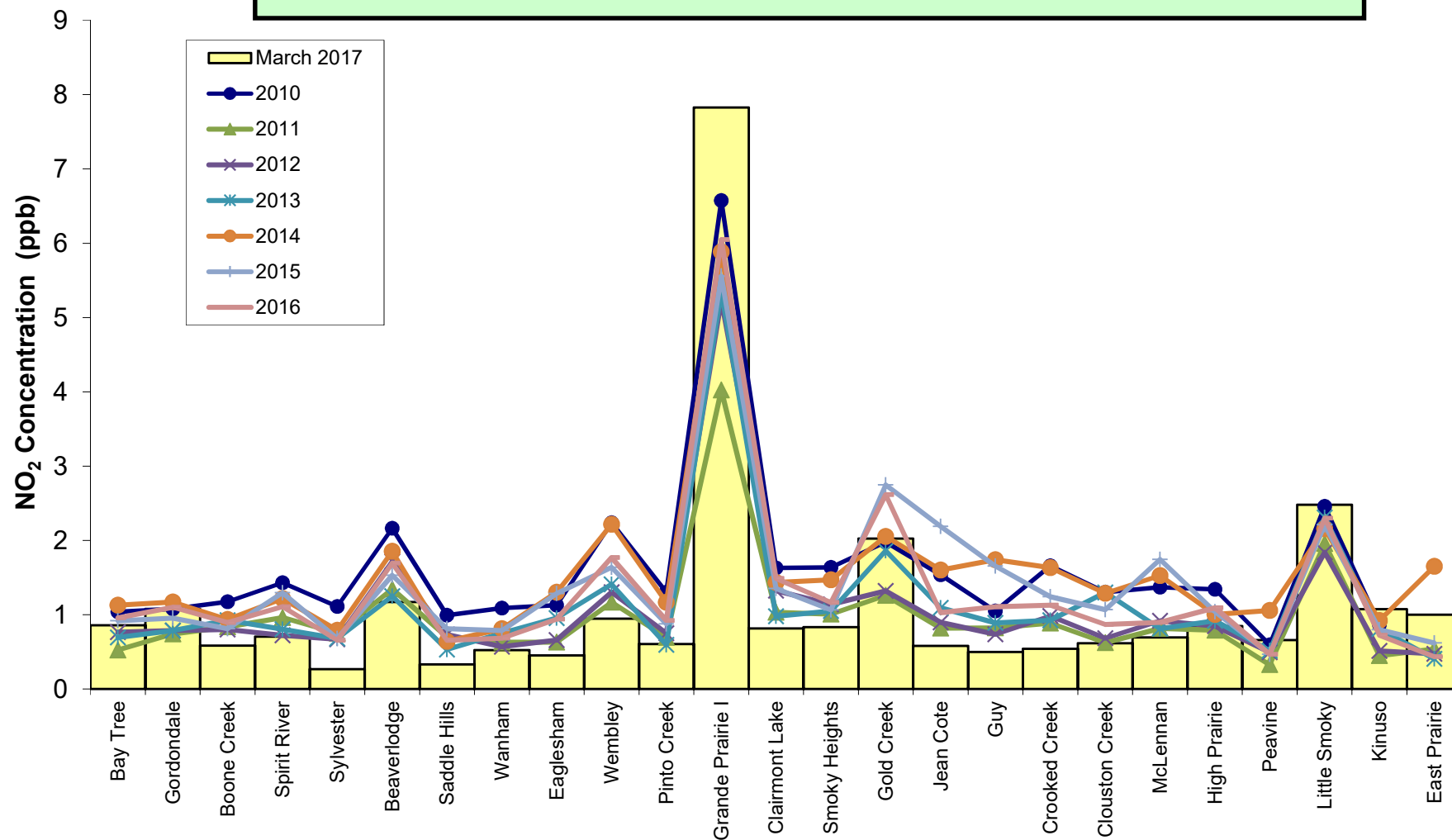


March 2017

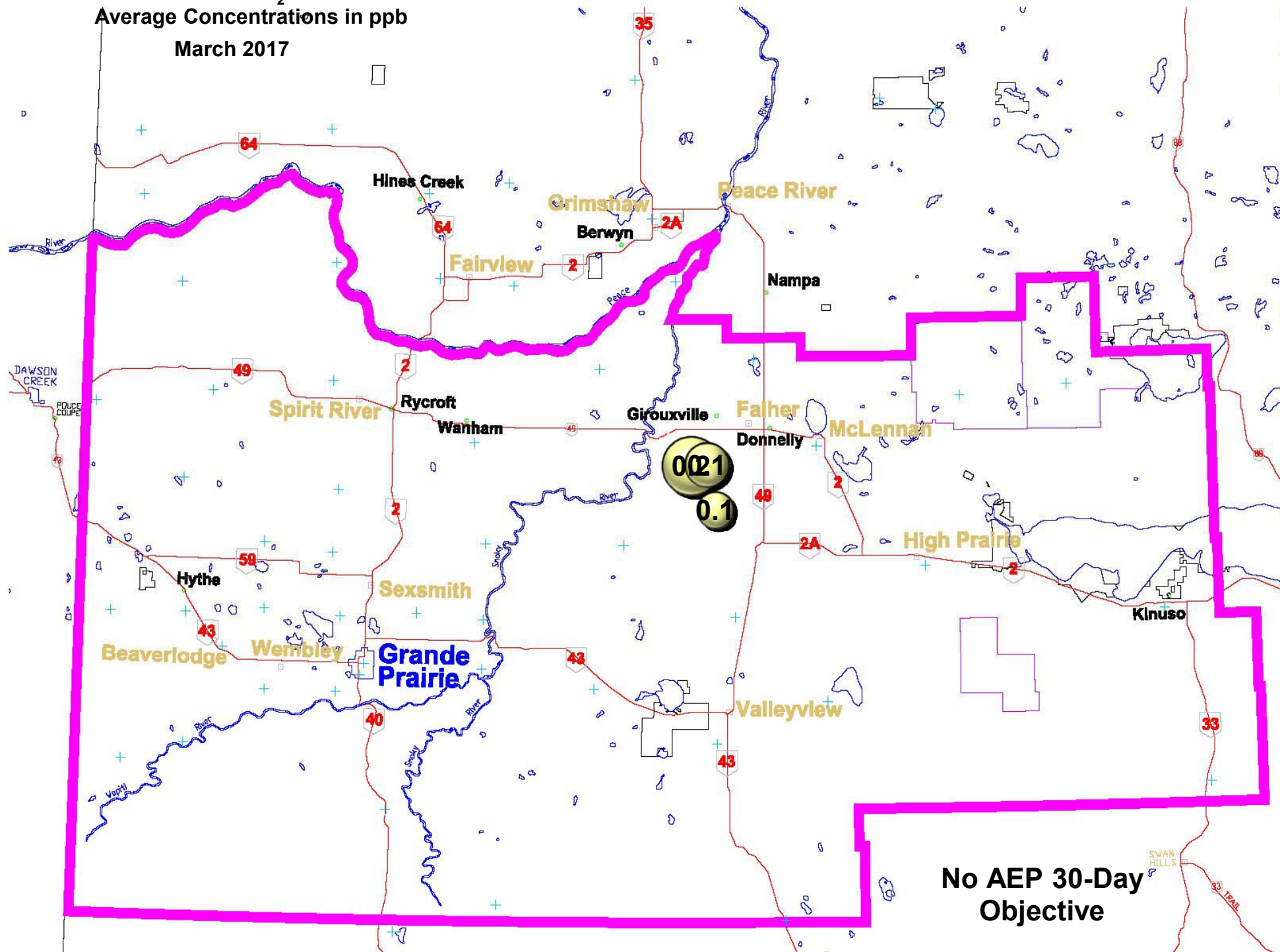


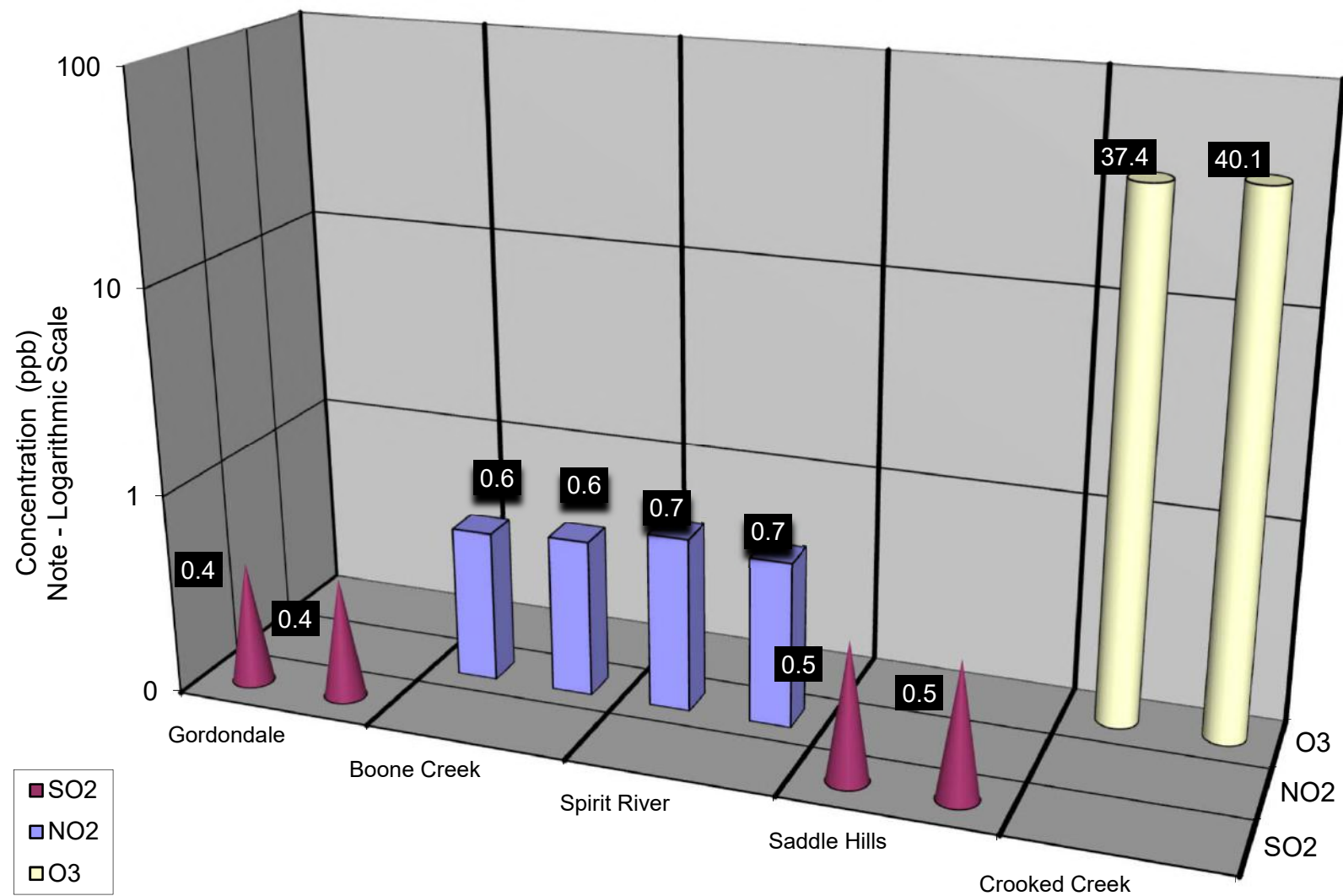
AEP
Annual
Objective
24 ppb

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



**PAZA Passive H₂S Stations
Average Concentrations in ppb
March 2017**





Duplicate Summary Chart

March 2017 Calibration Reports

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

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

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

**PAZA – Beaverlodge Station with the following calibrations:
SO₂, NO, NO₂, NO_x, O₃ and PM_{2.5}**

**PAZA – Valleyview Station with the following calibrations:
SO₂ and H₂S**

**PAZA – Donnelly Station with the following calibrations:
SO₂ and H₂S**

**PAZA – Rycroft Station with the following calibrations:
SO₂, NO, NO₂, NO_x, O₃, THC, TRS, and PM_{2.5}**

Calibration Report

Parameter SO2

Air Monitoring Network PAZA



Station Information

Calibration Date	March 2, 2017	Previous Calibration	February 14, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	9:50	End Time (MST)	12:10
Barometric Pressure	721.000 mm	Station Temperature	23.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Conc	49.7 ppm	Cal Gas Cert Date	October 5, 2018
		Cal Gas Cylinder #	LL103793
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	10
	Before		After
Calculated slope	0.997920	Calculated slope	0.983184
Calculated intercept	1.043761	Calculated intercept	2.580842
Analyzer make	TEI 43I-TLE	Analyzer serial #	1507864682 (AMU 2006)

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	1.43		1.43	
Coefficient	0.920		0.920	
Pressure	671.0	mm Hg	671.1	mm Hg
Flow	0.442	lpm	0.443	lpm
Lamp intensity	82	Hz	82	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
4941	0.00	0.0	0.1	N/A
4987	40.01	395.6	401.1	0.9862
4967	20.05	199.8	199.1	1.0038
4944	10.06	100.9	97.4	1.0361
4941	0.00	0.0	0.1	As Found Zero
4987	40.01	395.6	401.1	As Found Span
Average Correction Factor				1.0087

Calculated value of As Found Response: 401.2 ppb Percent Change of As Found: -1.4%

	before calibration		after calibration	
Auto zero	0.2	ppb	0.1	ppb
Auto span	278.7	ppb	287.1	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



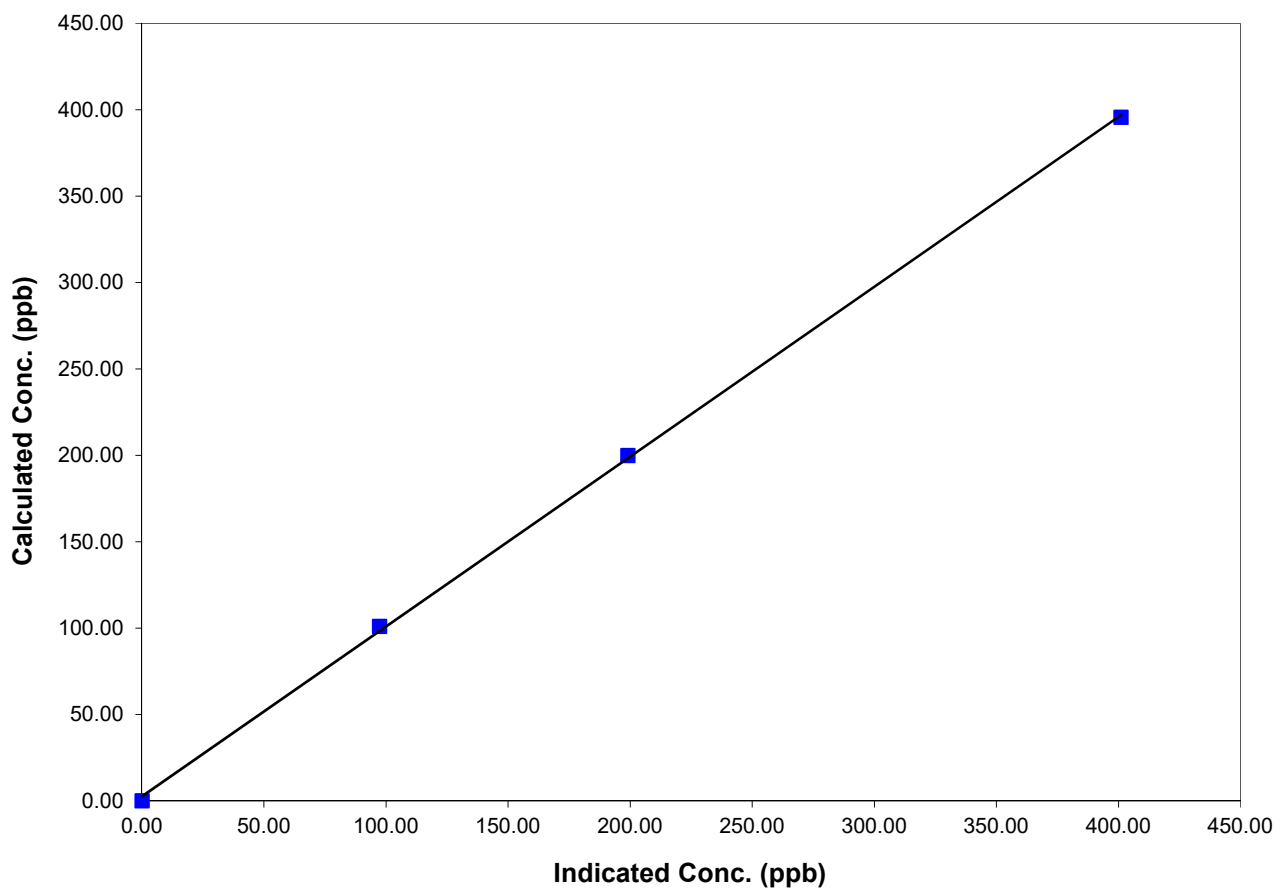
Station Information

Calibration Date	March 2, 2017	Previous Calibration	February 14, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:50	End Time (MST)	12:10
Analyzer make/model	TEI 43I-TLE	Analyzer serial #	1507864682 (AMU 2006)

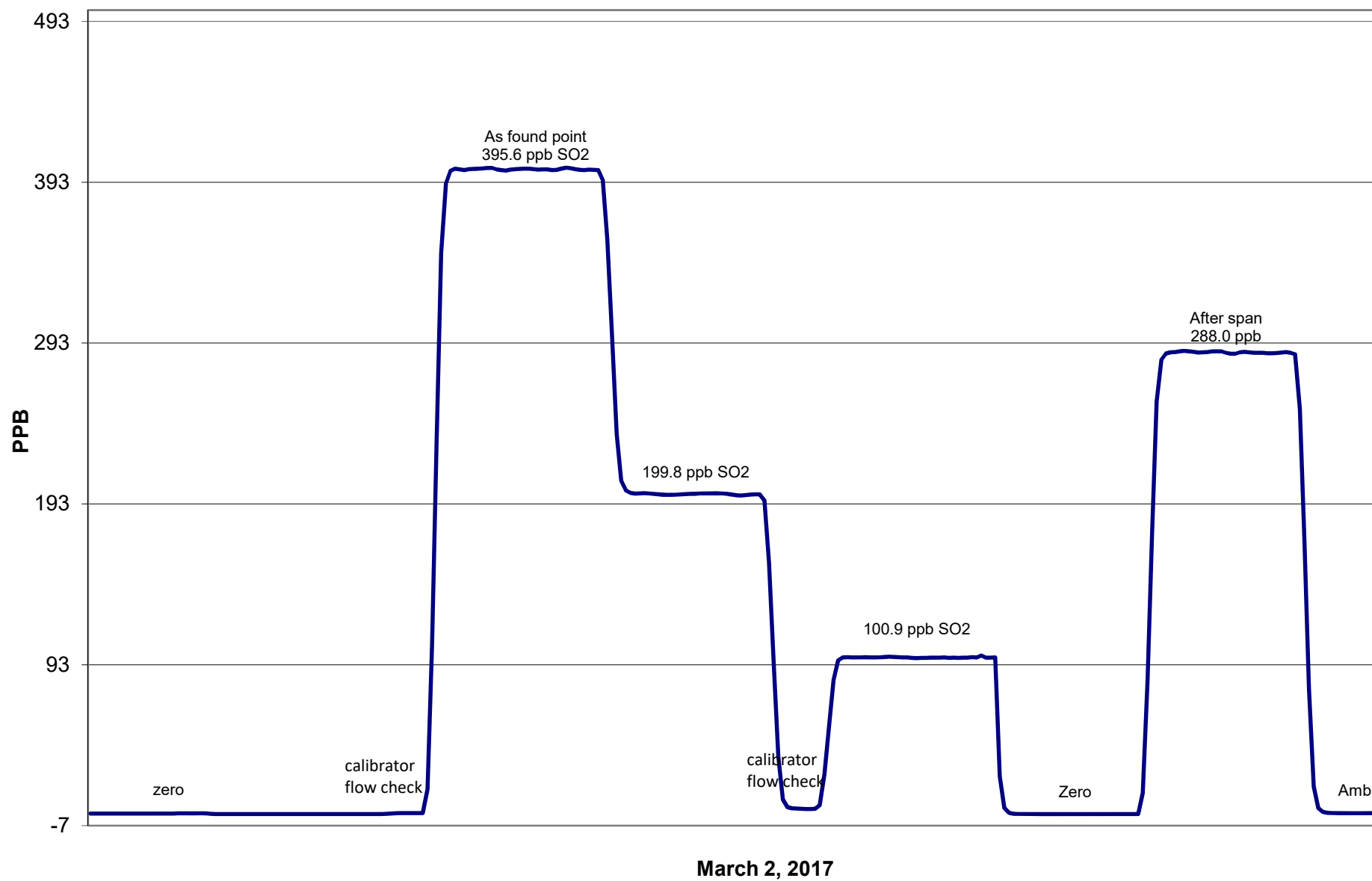
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999787
395.6	401.1	0.9862		
199.8	199.1	1.0038		
100.9	97.4	1.0361	Slope	0.983184
			Intercept	2.580842

SO2 Calibration Curve



SO2 Calibration



Parameter

Air Monitoring Network

PAZA



Calibration Date	March 2, 2017		Previous Calibration	February 14, 2017	
Station Number	1		Station Location	Henry Pirker	
Reason:	Routine	Installation	Removal	Other:	
Start Time (MST)	9:55		End Time (MST)	13:25:00 PM	
Barometric Pressure	721.000	mm	Station Temperature	23.0	Deg C
Calibrator	Envionics		Serial Number	906535067(AMU 197%)	
NO Cal Gas Conc	50.9	ppm	Cal Gas Expiry Date	October 5, 2018	
NOx Cal Gas Conc	51.2	ppm	Cal Gas Serial #	LL103793	

DACS make		CR3000		DACS serial No.		5408	
	Parameter	NO2	NOx	NO			
Before	Data Slope	1.003869	1.009723	1.002906			
	Data Offset	-0.141746	0.980243	0.796101			
After	Data Slope	1.005044	0.990175	0.983540			
	Data Offset	0.368667	2.486730	2.207633			
Channel #		8	6	7			
Voltage Range		0 - 5 VDC	0 - 5 VDC	0 - 5 VDC			

Analyzer make/model	42i	Analyzer serial #	906535087	
Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	6.0	mV	6.0	mV
NOx bkgnd	6.5	mV	6.5	mV
NO coefficient	0.946		0.946	
NOx coefficient	1.000		1.000	
NO2 conv temp	322.4	Deg C	322.6	Deg C
Cooler Temp	-2.9	Deg C	-2.9	Deg C
PMT Volt	-844.4	mV	-844.4	mV
R Cell Press	170.7	in Hg	170.8	in Hg
Sample Flow	0.620	LPM	0.620	LPM

Notes: No adjustments made

Calibration Report

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

Station Information

Calibration Date: March 2, 2017 Station Location: Henry Pirker

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4941	0.00	0.0	0.0	0.0	0.4	0.8	0.0	N/A	N/A
1	4987	40.01	407.5	405.1	2.4	410.6	411.4	-0.1	0.9925	0.9847
2	4967	20.05	205.8	204.6	1.2	203.6	203.5	0.0	1.0112	1.0055
3	4944	10.06	104.0	103.4	0.6	99.8	100.3	0.0	1.0414	1.0305
AFZ	4941	0.00	0.0	0.0	0.0	0.4	0.8	0.0	0.0000	0.0000
AFS	4987	40.01	407.5	405.1	0.8	410.6	411.4	-0.1	0.9925	0.9847
Average Correction Factor									1.0150	1.0069

As Found Concentrations: NO_x= 415.1 NO= 412.5 As Found Percent Change NO_x= 1.9% NO= 1.8%

GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.93 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	0.8	0.8	0.0	0.4	0.8	0.0	N/A	N/A	N/A	N/A
NO point	407.0	407.0	0.0	406.5	407.0	-0.2	1.0012	1.0000	N/A	N/A
300	407.0	61.4	345.6	405.5	61.4	343.8	1.0037	1.0000	1.0053	99.5%
200	407.0	173.5	233.5	406.1	173.5	231.8	1.0022	1.0000	1.0072	99.3%
100	407.0	291.7	115.3	406.5	291.7	113.9	1.0013	1.0000	1.0130	98.7%
Average Correction Factor							1.0024	1.0000	1.0085	99.2%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.4	0.0	0.9	ppb	0.5	0.0	1.0	ppb
Auto span	318.3	315.4	2.8	ppb	318.8	315.7	2.9	ppb

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



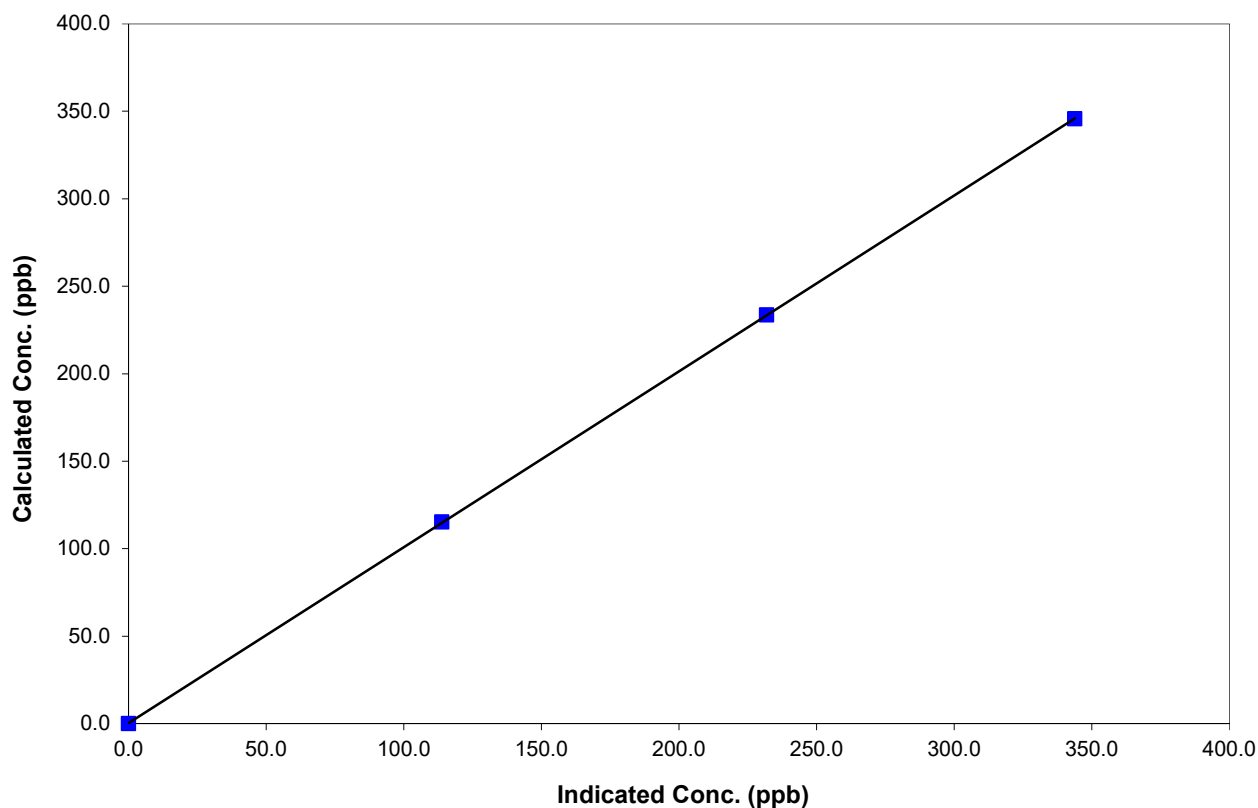
Station Information

Calibration Date	March 2, 2017	Previous Calibration	February 14, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:55	End Time (MST)	13:25:00 PM
Analyzer make	42i	Analyzer serial #	906535087

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999992
345.6	343.8	1.0053		
233.5	231.8	1.0072		
115.3	113.9	1.0130	Slope	1.005044
			Intercept	0.368667

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



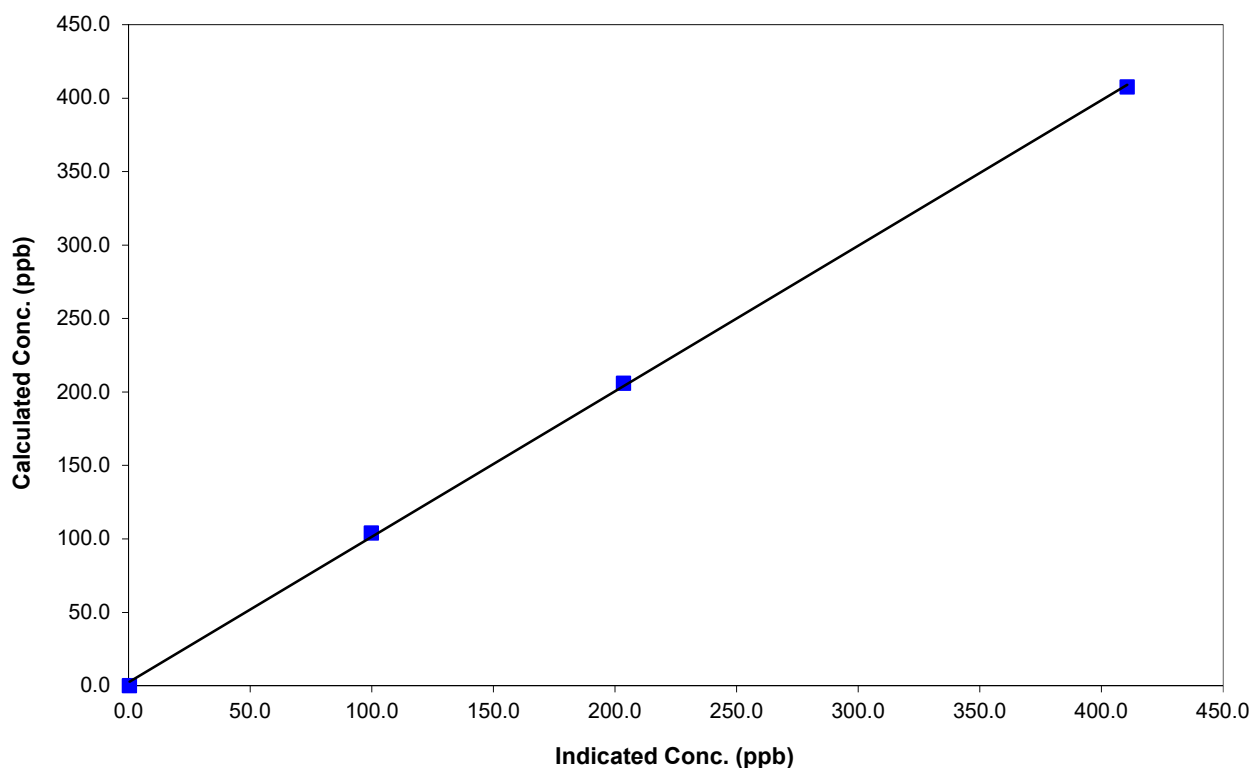
Station Information

Calibration Date	March 2, 2017	Previous Calibration	February 14, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:55	End Time (MST)	13:25:00 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	0.999770
407.5	410.6	0.9925		
205.8	203.6	1.0112		
104.0	99.8	1.0414	Slope	0.990175
			Intercept	2.486730

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



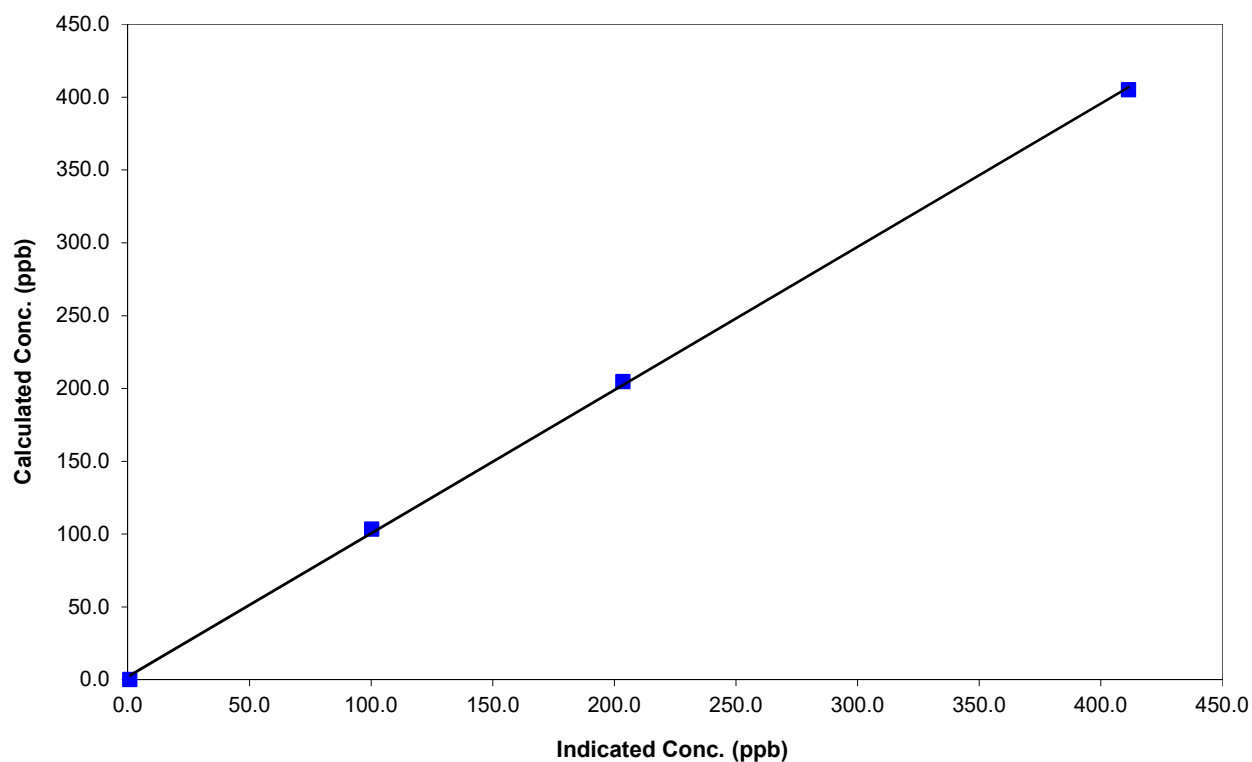
Station Information

Calibration Date	March 2, 2017	Previous Calibration	February 14, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:55	End Time (MST)	13:25:00 PM
Analyzer make	42i	Analyzer serial #	906535087

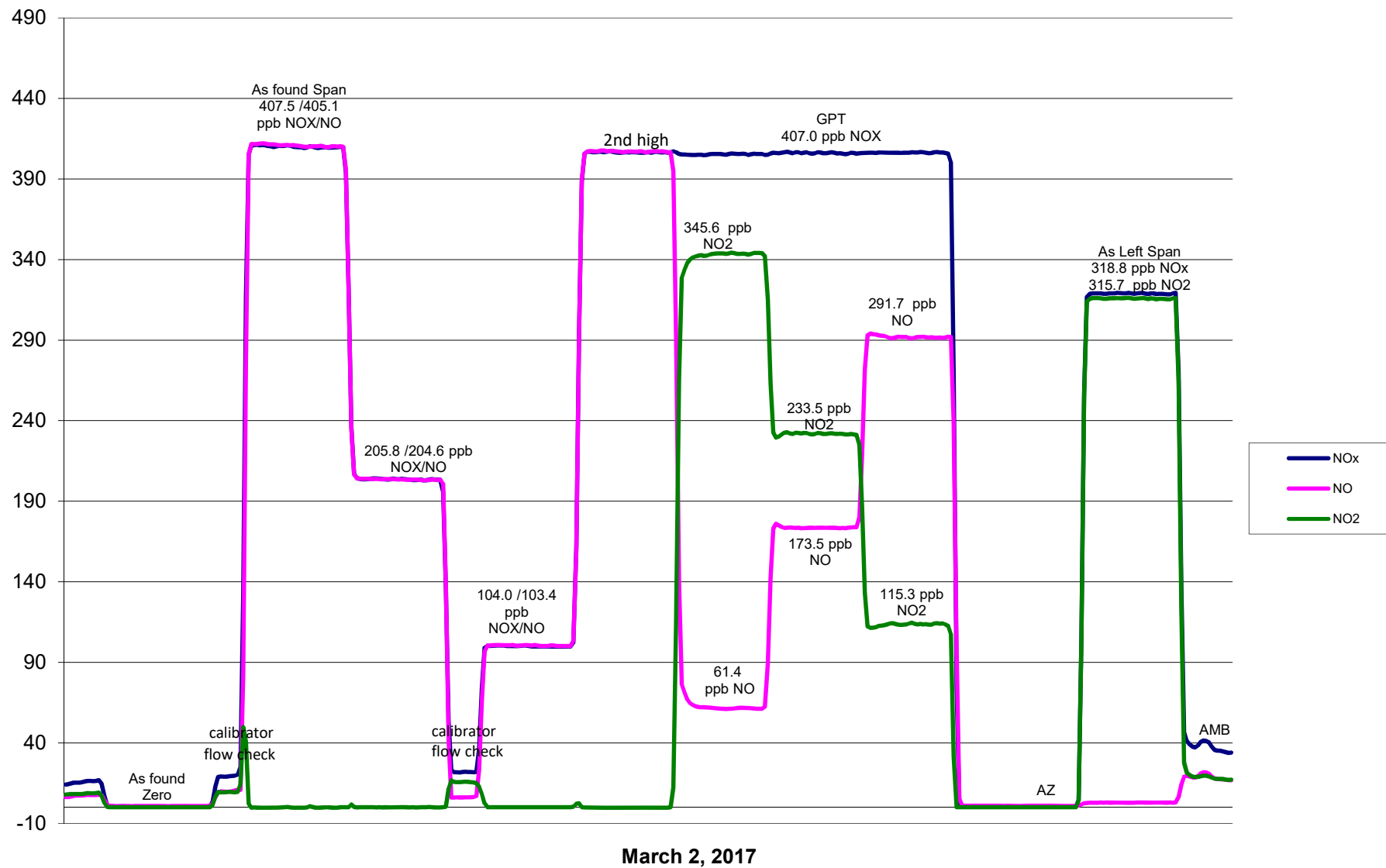
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.8	N/A	Correlation Coefficient	0.999736
405.1	411.4	0.9847		
204.6	203.5	1.0055		
103.4	100.3	1.0305	Slope	0.983540
			Intercept	2.207633

NO Calibration Curve



NO_x Calibration



Calibration Report

Parameter 03

Air Monitoring Network PAZA



Station Information

Calibration Date	March 2, 2017	Previous Calibration	February 14, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Install	Removal
		Other:	

Start Time (MST)	12:10	End Time (MST)	15:05:00 PM
Barometric Pressure	721.000 mm	Station Temperature	23.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA

DACS make	CR3000	DACS serial No.	5237
DACS voltage range	0 - 5 volt	DACS channel #	9
	Before		After
Calculated slope	1.004073	Calculated slope	1.000414
Calculated intercept	0.924207	Calculated intercept	2.168275

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

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	0.20	ppb	0.20	ppb
slope	1.017		1.017	
Lamp temp	53.6	mV	53.7	mV
Lamp Intensity A/B	71570/78342	mV	71589/78173	mV
Pressure	692.5	mm Hg	691	mm Hg
Flow A	0.732	ccm	0.736	ccm
Flow B	0.734	ccm	0.735	ccm

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4981	0.0	0.0	-0.1	N/A
4990	0.3	345.6	344.8	1.0023
4979	0.2	233.5	230.2	1.0144
4984	0.1	115.3	110.5	1.0434
4981	0.0	0.0	-0.1	As found zero
4990	0.3	345.6	338.4	As found span
Average Correction Factor				1.0200

Calculated value of As Found Response: 340.8 ppm Percent Change of As Found: -1.4%

	before calibration		after calibration	
Auto zero	0.1	ppb	-0.2	ppb
Auto span	386.0	ppb	388.8	ppb

Notes: Span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter O3

Air Monitoring Network PAZA



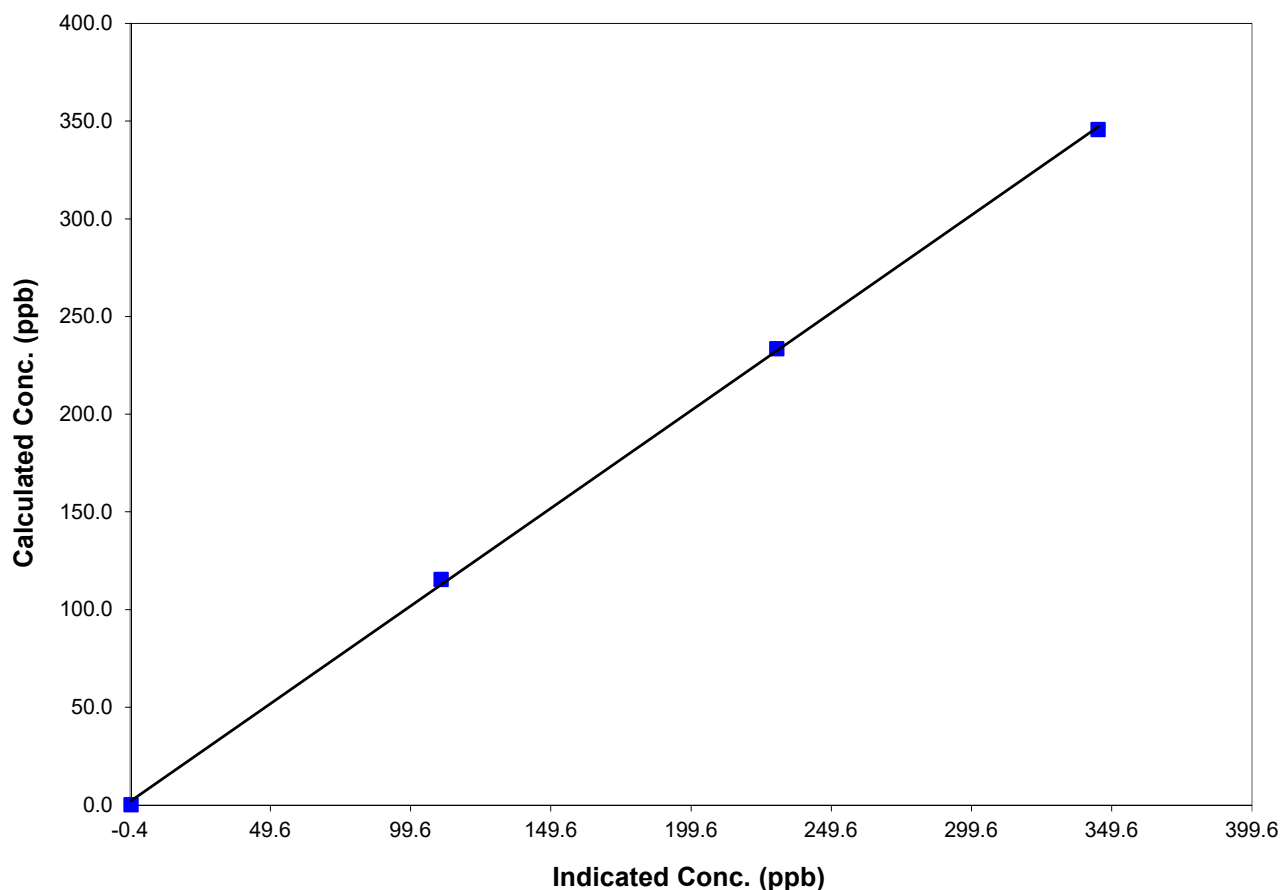
Station Information

Calibration Date	March 2, 2017	Previous Calibration	February 14, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:10	End Time (MST)	15:05:00 PM
Analyzer make/model	Teco 49I	Analyzer serial #	1507964699 (AMU:2015)

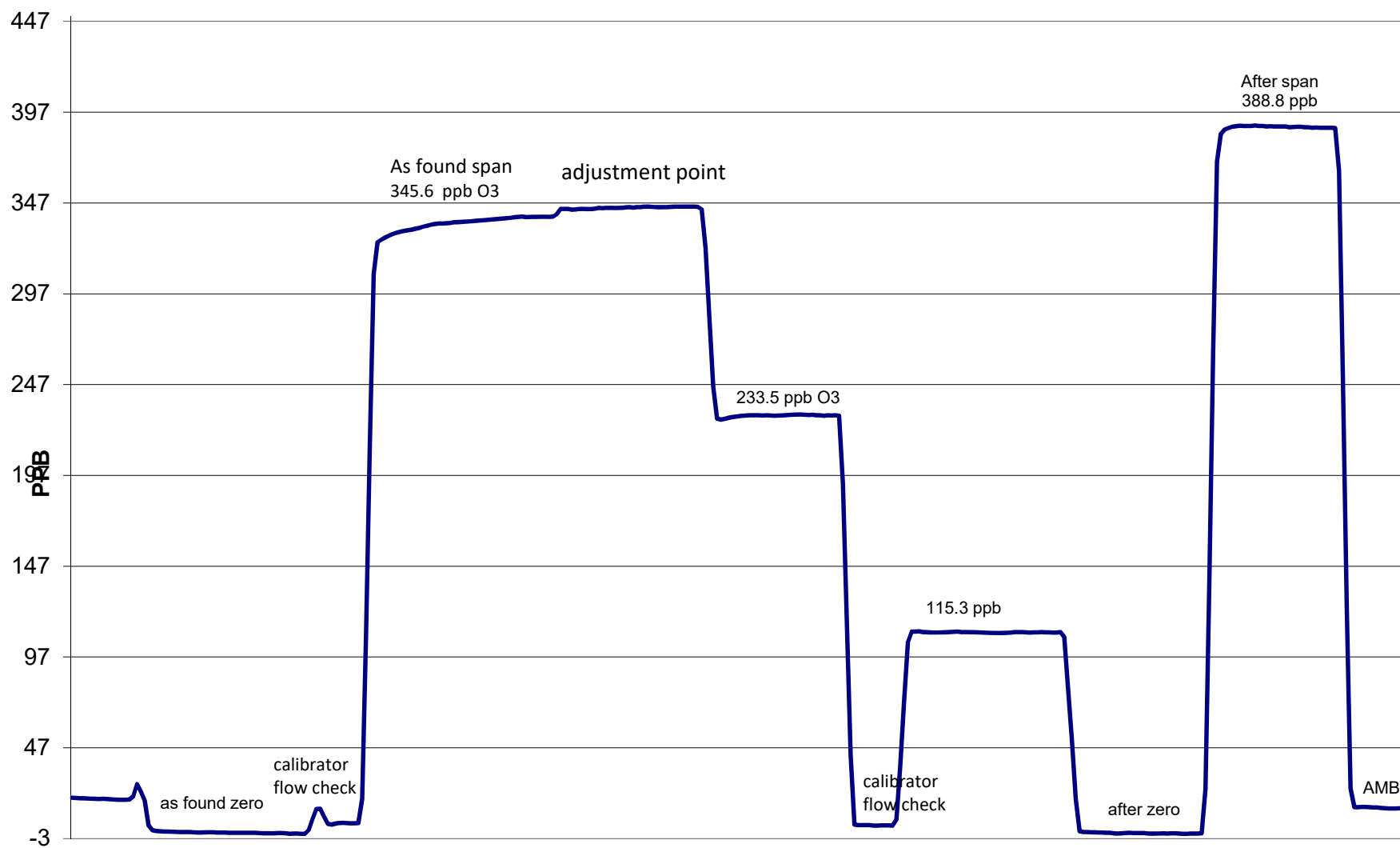
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	NA		
345.6	344.8	1.0023	Correlation Coefficient	0.999782
233.5	230.2	1.0144		
115.3	110.5	1.0434	Slope	1.000414
			Intercept	2.168275

O3 Calibration Curve



O3 Calibration



March 2, 2017

Calibration Report

Parameter CO

Air Monitoring Network PAZA



Station Information

Calibration Date	March 3, 2017	Previous Calibration	February 13, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	12:35	End Time (MST)	16:05:00 AM
Barometric Pressure	724.0 mm/hg	Station Temperature	23.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	6586
Cal Gas Conc	2906 ppm	Cal Gas Expiry Date	7/7/2023
		Cal Gas Cylinder #	LL109096
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 5 volt	DACS channel #	9
	Before		After
Calculated slope	1.000332	Calculated slope	0.990514
Calculated intercept	-0.157919	Calculated intercept	-0.165560
Analyzer make	Model 48I-TLE	Analyzer serial #	1408761378

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO zero setting	7.820		8.141	
CO span setting	1.067		1.082	
Sample pressure	688.4	mm Hg	686.3	mm Hg
Sample Flow	0.442	LPM	0.441	LPM

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.00	0.00	N/A
5003	70.35	40.30	40.72	0.9896
5002	34.89	20.13	20.70	0.9724
5001	18.01	10.43	10.77	0.9678
4995	0.00	0.00	0.16	As Found Zero
5003	70.35	40.30	40.64	As Found Span
Average Correction Factor				0.9766

Calculated value of As Found Response: 40.327 ppm Percent Change of As Found: -0.1%

	before calibration		after calibration	
Auto zero	0.00	ppm	-0.04	ppm
Auto span	20.64	ppm	20.87	ppm

Notes: Zero & span adjustments made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter CO

Air Monitoring Network PAZA



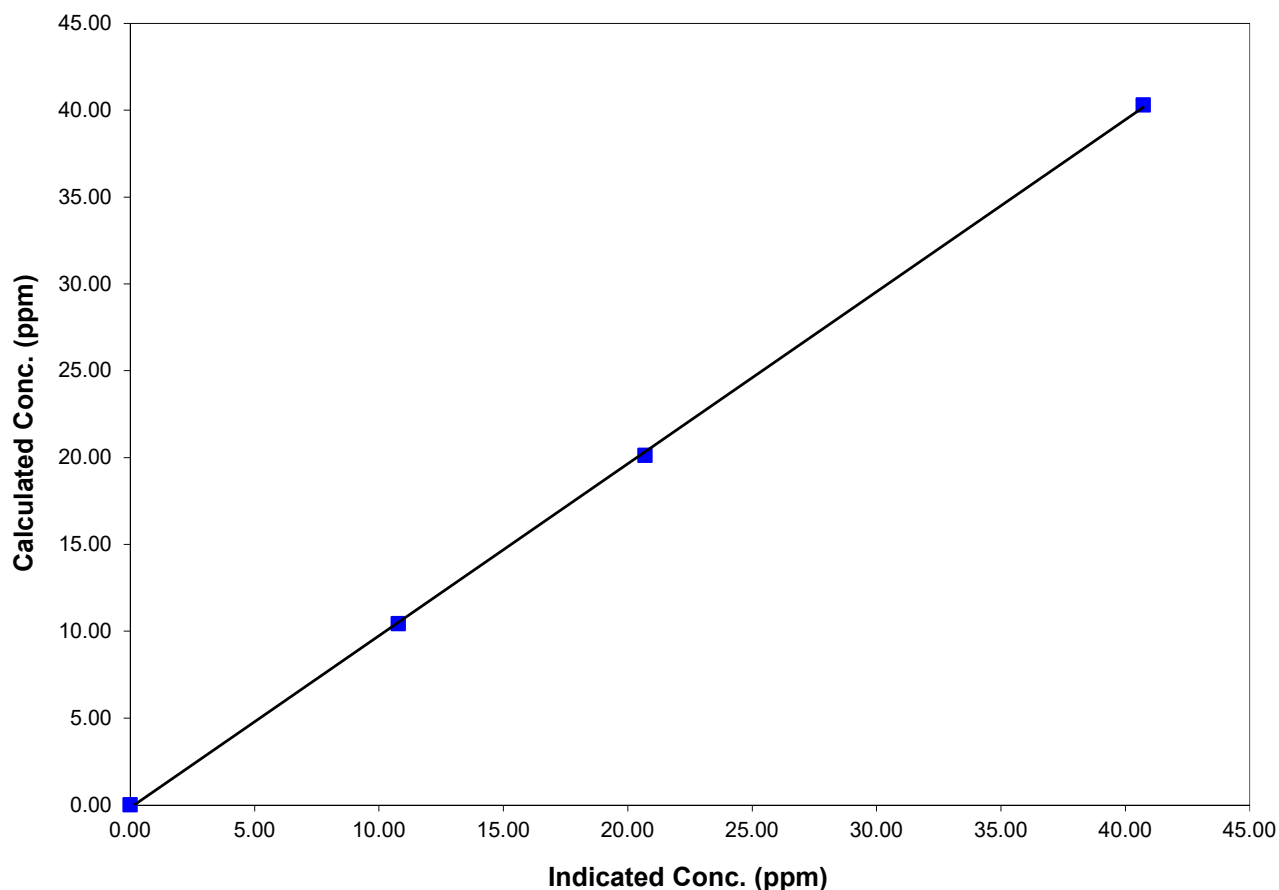
Station Information

Calibration Date	March 3, 2017	Previous Calibration	February 13, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:35	End Time (MST)	16:05:00 AM
Analyzer make/model	Model 48I-TLE	Analyzer serial #	1408761378

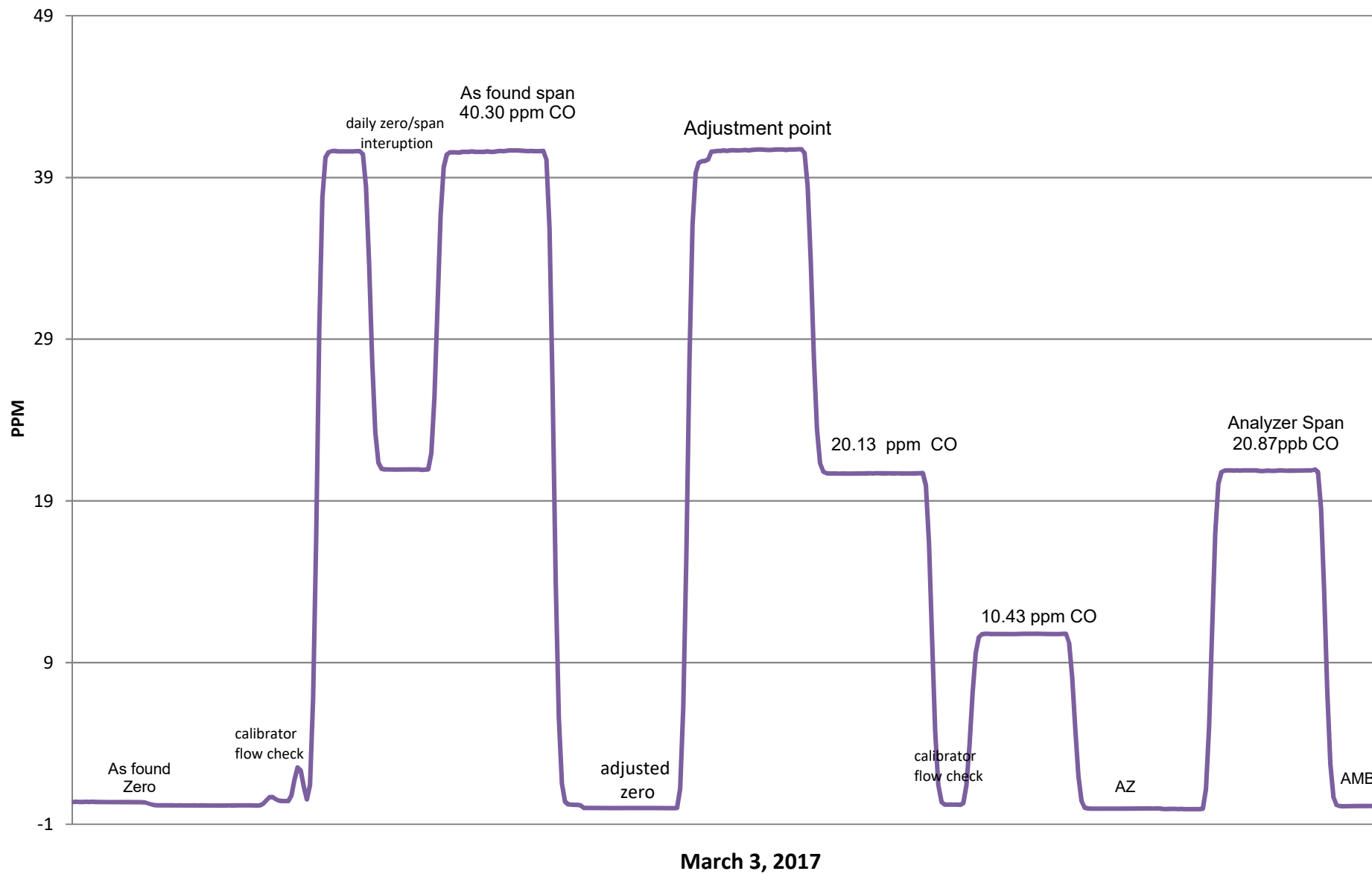
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.005	N/A	Correlation Coefficient	0.999896
40.296	40.721	0.9896		
20.130	20.701	0.9724		
10.428	10.774	0.9678	Slope	0.990514
			Intercept	-0.165560

CO Calibration Curve



CO Calibration



Calibration Report



Parameter CH4 / NMHC / THC

Air Monitoring Network PAZA

Station Information

Calibration Date	March 3, 2017	Previous Calibration	February 13, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Install	Removal
			Other:Mair

Start Time (MST)	15:00:00 PM	End Time (MST)	17:35:00 PM
Barometric Pressure	724.00 mm/hg	Station Temperature	23.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas CH4 Conc	386 ppm CH4	Cal Gas Expiry Date	7/5/2015
Cal Gas C3H8 Conc	207 569.25 ppm CH4	Cal Gas Cylinder #	LL34318
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 5 volt	DACS channel #	SE 11,12,13

Analyzer make	TEI 55I	Analyzer serial #	1134650658
---------------	---------	-------------------	------------

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

CH4 Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
1995	0.00	0.00	0.02	N/A
1998	68.96	12.88	12.93	0.9957
2001	40.93	7.74	7.79	0.9937
1999	15.97	3.06	3.05	1.0039
1995	0.00	0.00	0.02	As Found Zero
1995	68.93	12.89	12.60	As Found Span
Average Correction Factor				0.9978

Calculated value of As Found Response: 12.548 ppm Percent Change of As Found: 2.7%

	Before		After
Calculated slope	0.997491	Calculated slope	0.995851
Calculated intercept	-0.000041	Calculated intercept	-0.003053

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	8.39	ppm	8.69	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)
1995	0.00	0.00	0.02	N/A
1997	68.96	19.00	19.04	0.9978
2001	40.93	11.41	11.56	0.9870
1999	15.97	4.51	4.46	1.0110
1995	0.00	0.00	0.02	As Found Zero
1995	68.93	19.01	18.35	As Found Span
Average Correction Factor				0.9986

Calculated value of As Found Response: 18.459 ppm Percent Change of As Found: 2.9%

	Before		After
Calculated slope	1.007868	Calculated slope	0.995718
Calculated intercept	-0.012972	Calculated intercept	-0.003622

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.02	ppm
Auto span	11.39	ppm	11.92	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)
1995	0.00	0.00	0.03	N/A
1998	68.96	31.87	31.95	0.9975
2001	40.93	19.15	19.33	0.9906
1999	15.97	7.57	7.50	1.0098
1995	0.00	0.00	0.03	As Found Zero
1995	68.93	31.90	30.92	As Found Span
Average Correction Factor				0.9993

Calculated value of As Found Response: 31.017 ppm Percent Change of As Found: 2.8%

	Before		After
Calculated slope	1.004303	Calculated slope	0.996124
Calculated intercept	-0.005310	Calculated intercept	0.001669

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.02	ppm
Auto span	19.76	ppm	20.60	ppm

Notes: Slight span adjustment made

Calibration Performed By: Dmytro Doloti

Calibration Summary

Parameter CH4

Air Monitoring Network PAZA



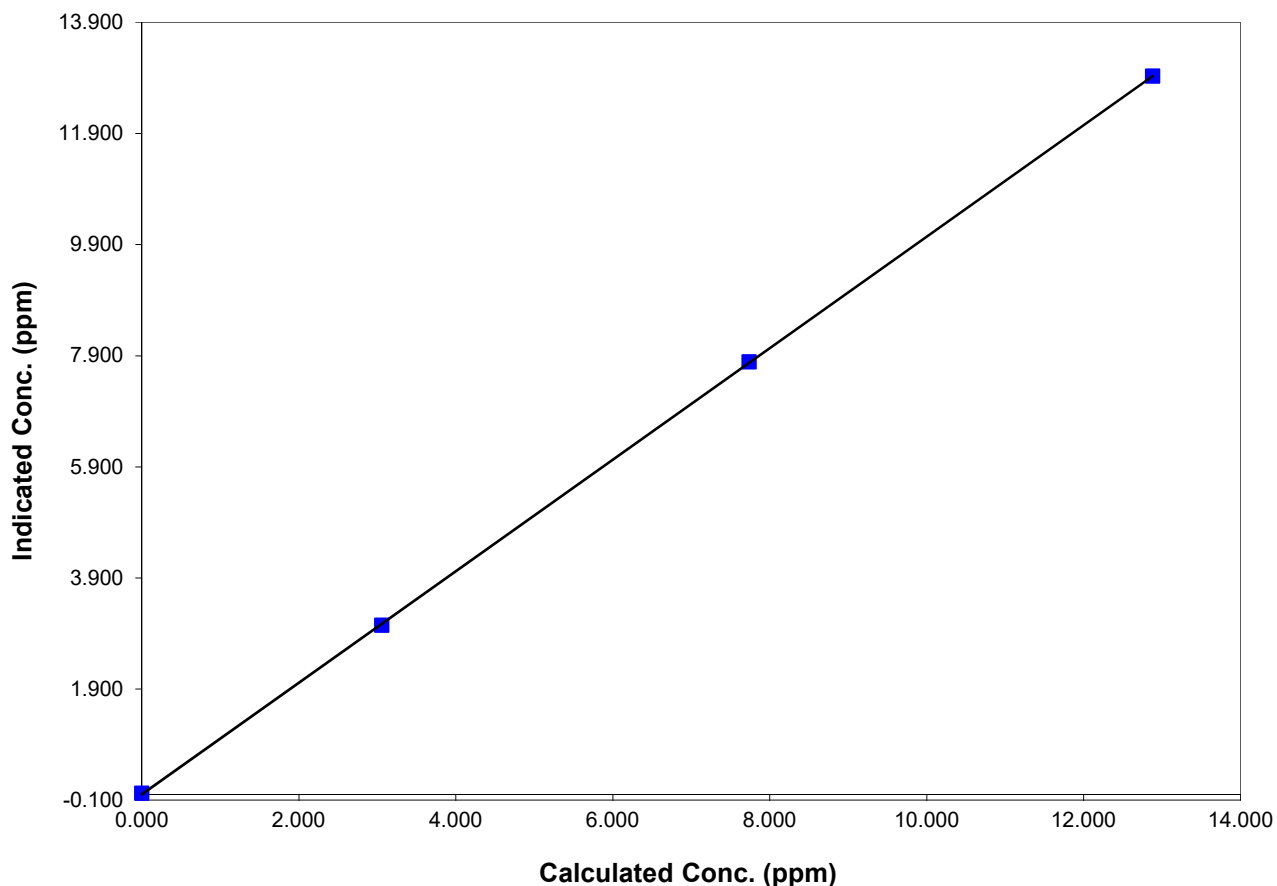
Station Information

Calibration Date	March 3, 2017	Previous Calibration	February 13, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	15:00:00 PM	End Time (MST)	17:35:00 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	0.999987
12.878	12.933	0.9957		
7.737	7.786	0.9937		
3.059	3.047	1.0039	Slope	0.995851
			Intercept	-0.003053

CH4 Calibration Data



Calibration Summary

Parameter NMHC

Air Monitoring Network PAZA



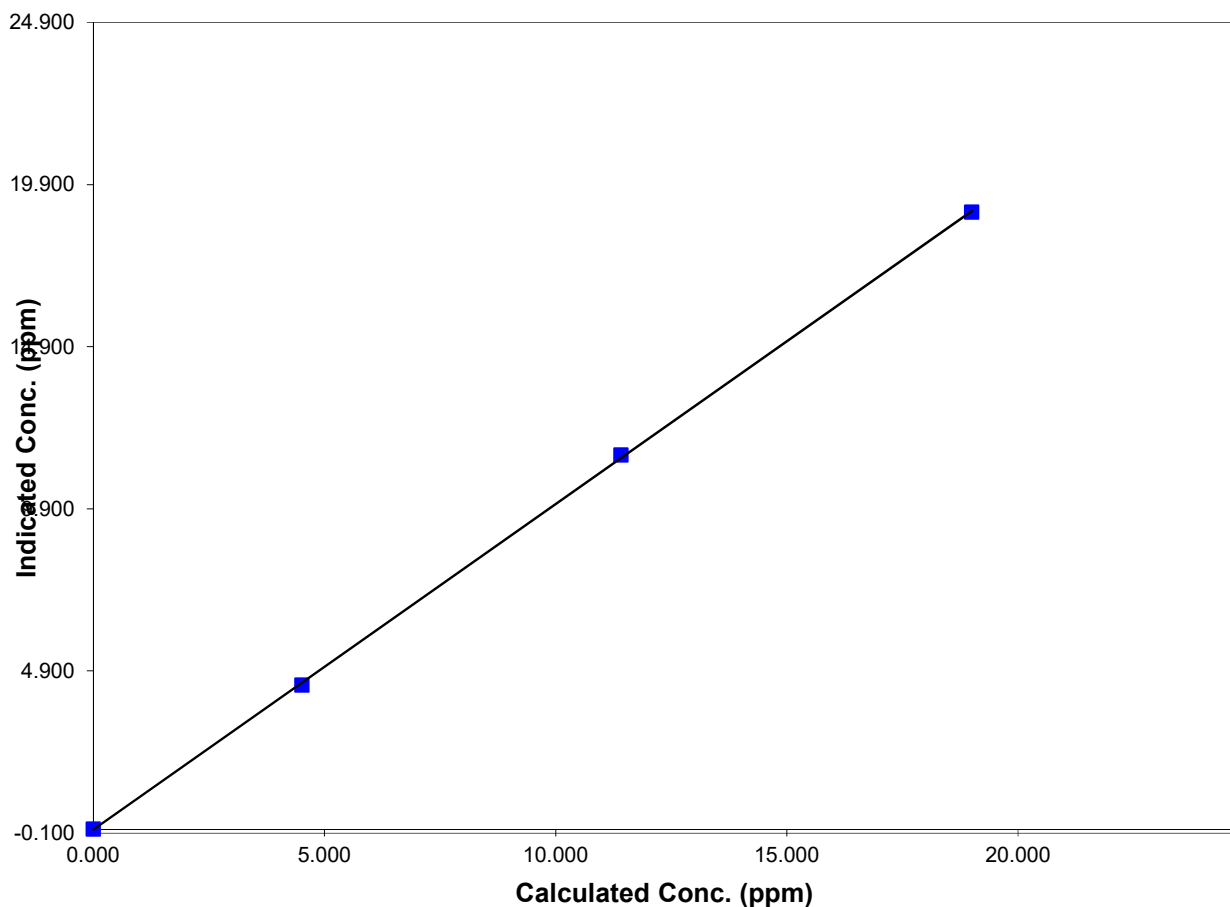
Station Information

Calibration Date	March 3, 2017	Previous Calibration	February 13, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	15:00:00 PM	End Time (MST)	17:35:00 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	0.999919
19.001	19.044	0.9978		
11.410	11.561	0.9870		
4.512	4.463	1.0110	Slope	0.995718
			Intercept	-0.003622

NMHC Calibration Data



Calibration Summary

Parameter THC

Air Monitoring Network PAZA



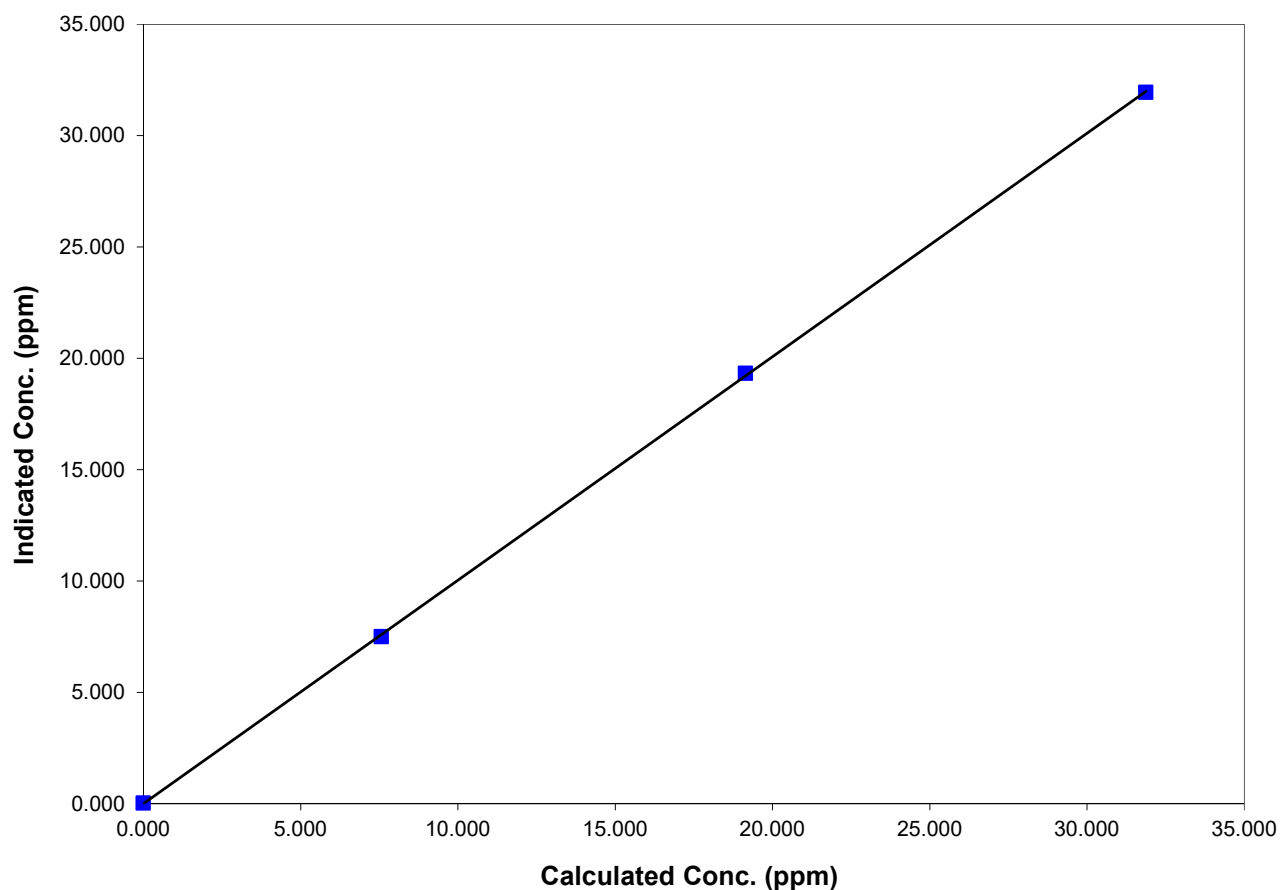
Station Information

Calibration Date	March 3, 2017	Previous Calibration	February 13, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	15:00:00 PM	End Time (MST)	17:35:00 PM
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

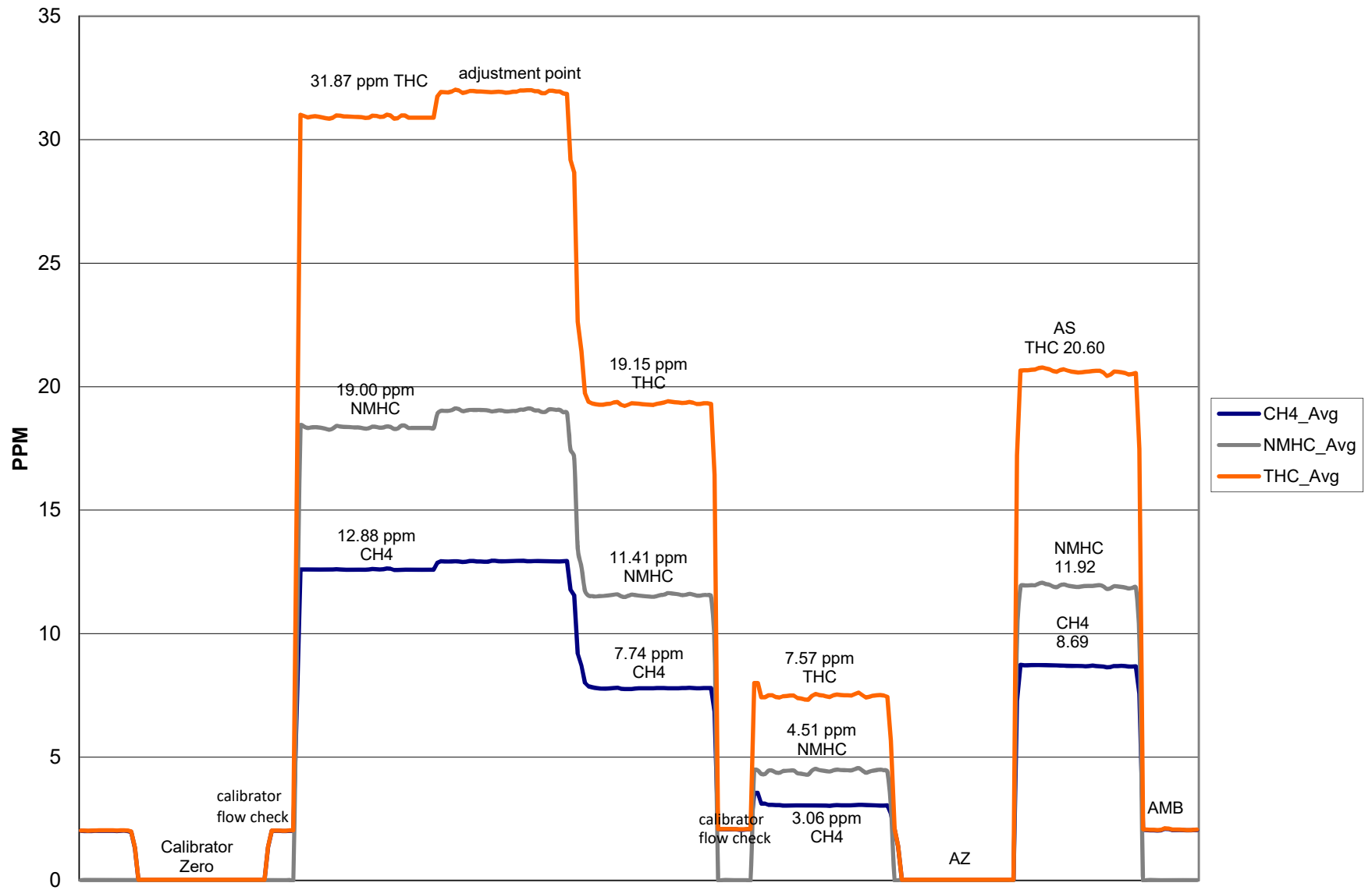
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.033	N/A	Correlation Coefficient	0.999957
31.870	31.951	0.9975		
19.148	19.329	0.9906		
7.571	7.498	1.0098	Slope	0.996124
			Intercept	0.001669

THC Calibration Data



THC/CH₄/NMHC Calibration



Calibration Report

Parameter TR5

Air Monitoring Network PAZA



Station Information

Calibration Date	March 3, 2017	Previous Calibration	February 13, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	10:15	End Time (MST)	13:32:00 PM
Barometric Pressure	724.00 mm/Hg	Station Temperature	23.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Conc	10.2 ppb	Cal Gas Expiry Date	02/23/2019
		Cal Gas Cylinder #	EY0000380
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	0.975240	Calculated slope	0.984327
Calculated intercept	1.096552	Calculated intercept	-0.863971
Analyzer make	TEI 45C	Analyzer serial #	630718528

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Coefficient	1.062		0.984	
Background	23.4		21.6	
Pressure	651.7	mm Hg	657.0	mm Hg
Flow	0.436	ccm	0.439	ccm
Lamp Voltage	911	V	911	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)
4998	0.00	0.00	10.63	N/A
4993	39.98	81.02	82.63	0.9806
4994	19.92	40.52	42.10	0.9625
6998	10.01	14.56	6.42	2.2666
4998	0.00	0.00	-0.09	As Found Zero
4998	39.93	80.84	83.85	As Found Span
Average Correction Factor				1.4032

Calculated value of As Found Response: 83.0 ppb Percent Change of As Found: -2.6%

	before calibration		after calibration	
Auto zero	0.07	ppb	7.19	ppb
Auto span	28.31	ppb	29.69	ppb

Notes: Span adjustment made
Leak check performed

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



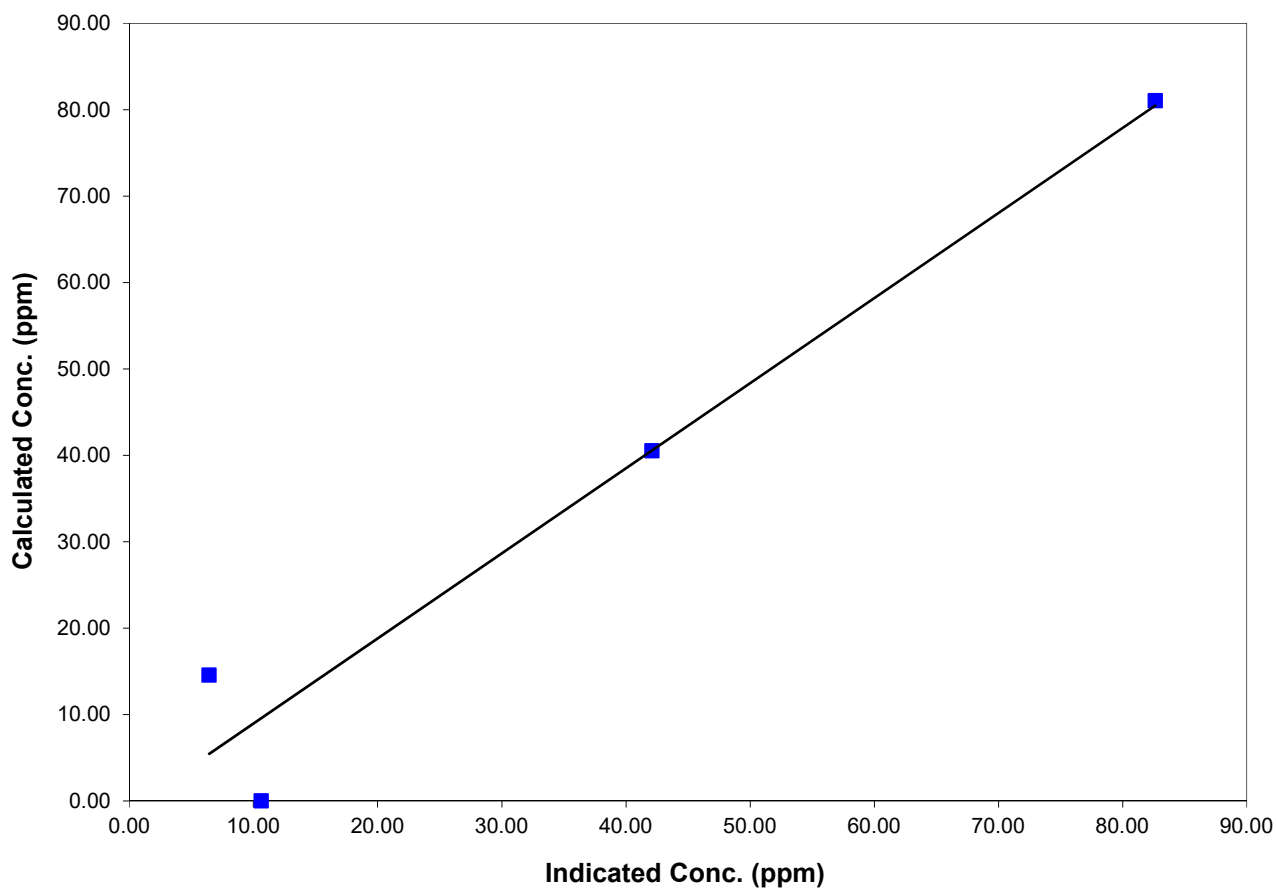
Station Information

Calibration Date	March 3, 2017	Previous Calibration	February 13, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:15	End Time (MST)	13:32:00 PM
Analyzer make/model	TEI 45C	Analyzer serial #	630718528

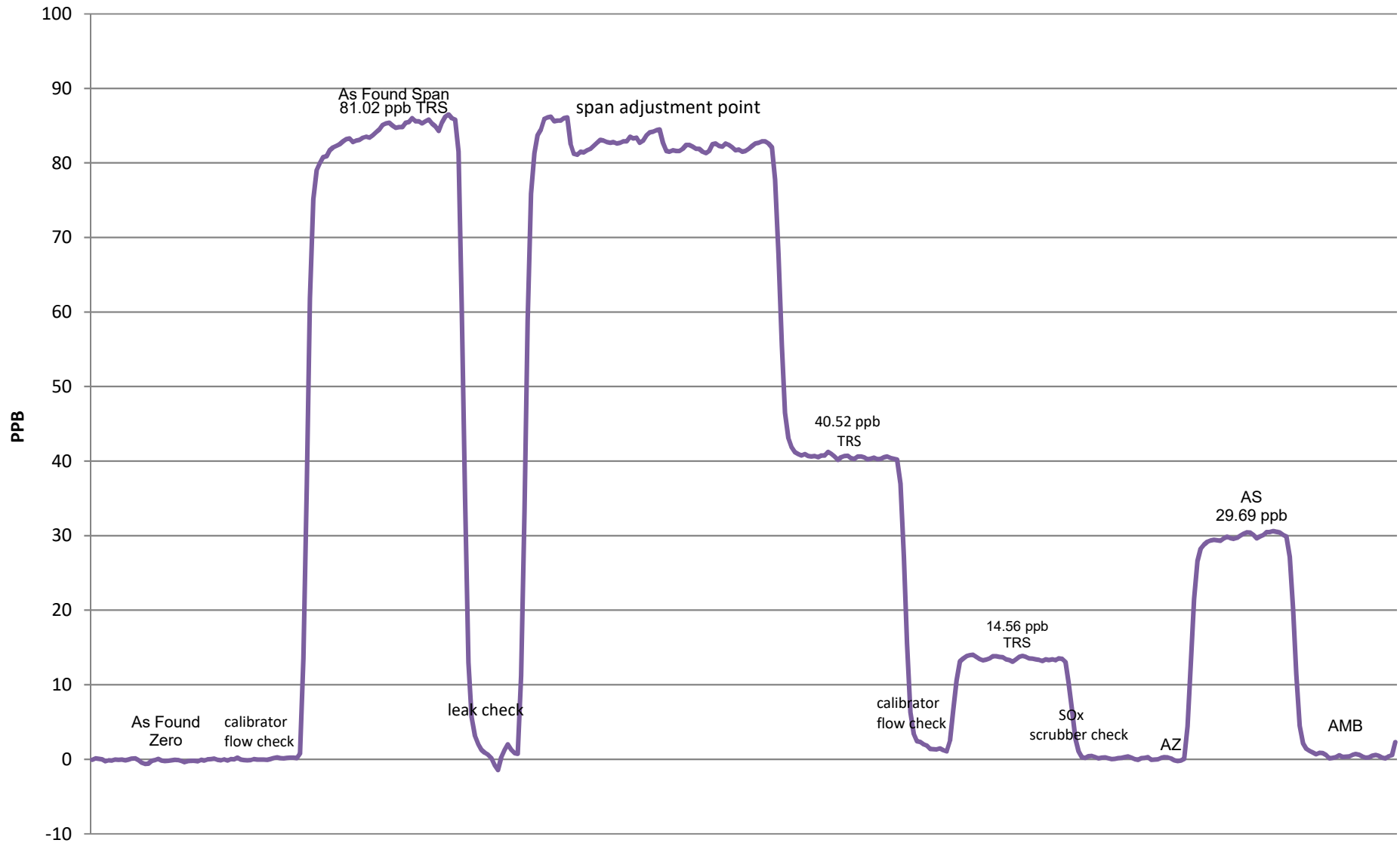
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	10.634	N/A	Correlation Coefficient	0.953696
81.025	82.628	0.9806		
40.524	42.102	0.9625		
14.562	6.425	2.2666	Slope	0.984327
			Intercept	-0.863971

TRS Calibration Curve



TRS Calibration



March 3, 2017

Calibration Report

Parameter TRS

Air Monitoring Network PAZA



Station Information

Calibration Date	March 21, 2017	Previous Calibration	March 3, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	10:15	End Time (MST)	16:55:00 PM
Barometric Pressure	724.00 mm/Hg	Station Temperature	23.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Conc	10.2 ppb	Cal Gas Expiry Date	02/23/2019
		Cal Gas Cylinder #	EY0000380
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	1.052210	Calculated slope	0.988098
Calculated intercept	-5.115758	Calculated intercept	0.534966
Analyzer make	TEI 45C	Analyzer serial #	630718528

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Coefficient	0.984		1.017	
Background	21.6		16.9	
Pressure	658	mm Hg	653.4	mm Hg
Flow	0.437	ccm	0.436	ccm
Lamp Voltage	911	V	911	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)
4998	0.00	0.00	0.06	N/A
4993	39.98	81.02	81.75	0.9911
4994	19.92	40.52	40.03	1.0123
6998	10.01	14.56	13.74	1.0600
4998	0.00	0.00	-0.08	As Found Zero
4998	39.93	80.84	80.68	As Found Span
Average Correction Factor				1.0211

Calculated value of As Found Response: 79.9 ppb Percent Change of As Found: 1.2%

	before calibration		after calibration	
Auto zero	0.13	ppb	-0.26	ppb
Auto span	29.85	ppb	27.34	ppb

Notes: Mirror assembly replaced
Lamp & Voltages adjusted
Zero/span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



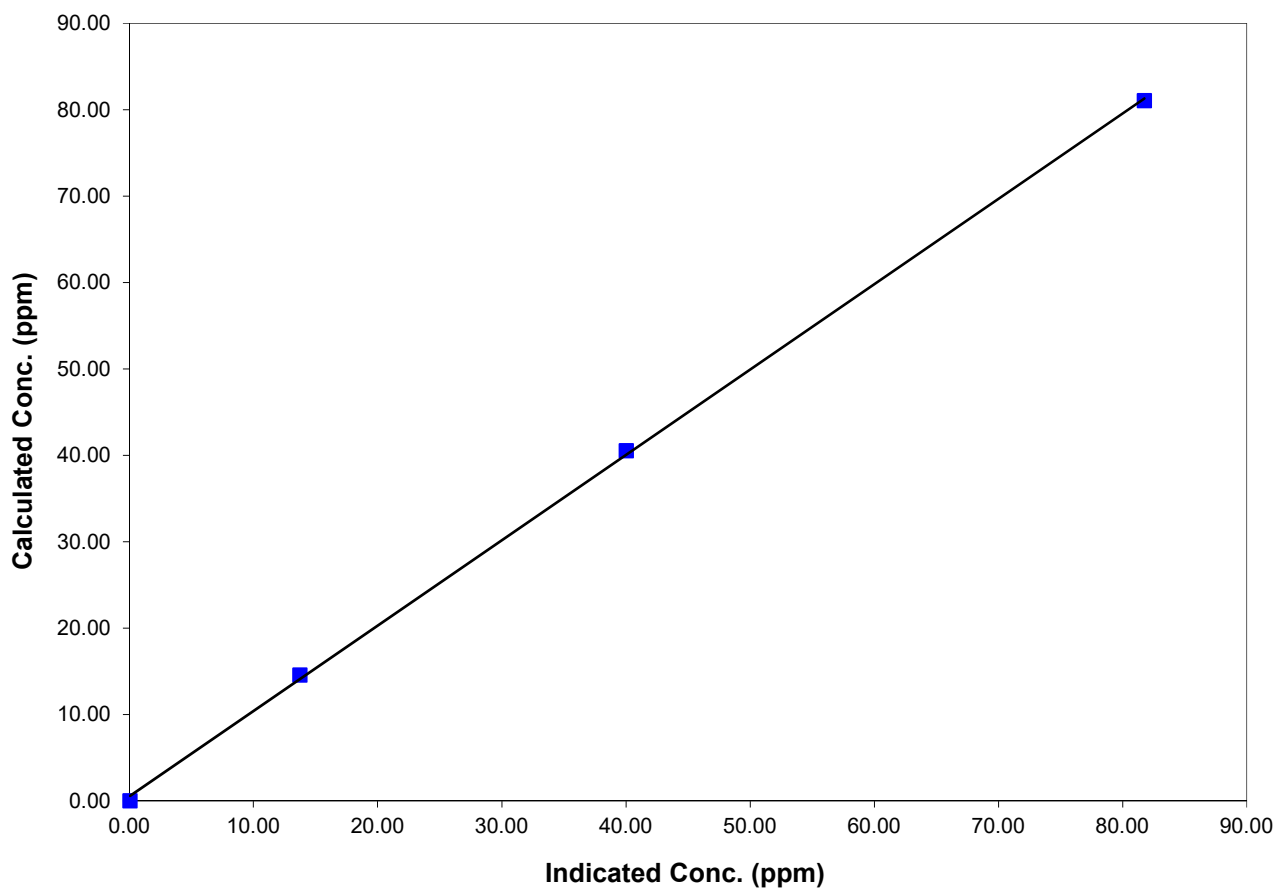
Station Information

Calibration Date	March 21, 2017	Previous Calibration	March 3, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:15	End Time (MST)	16:55:00 PM
Analyzer make/model	TEI 45C	Analyzer serial #	630718528

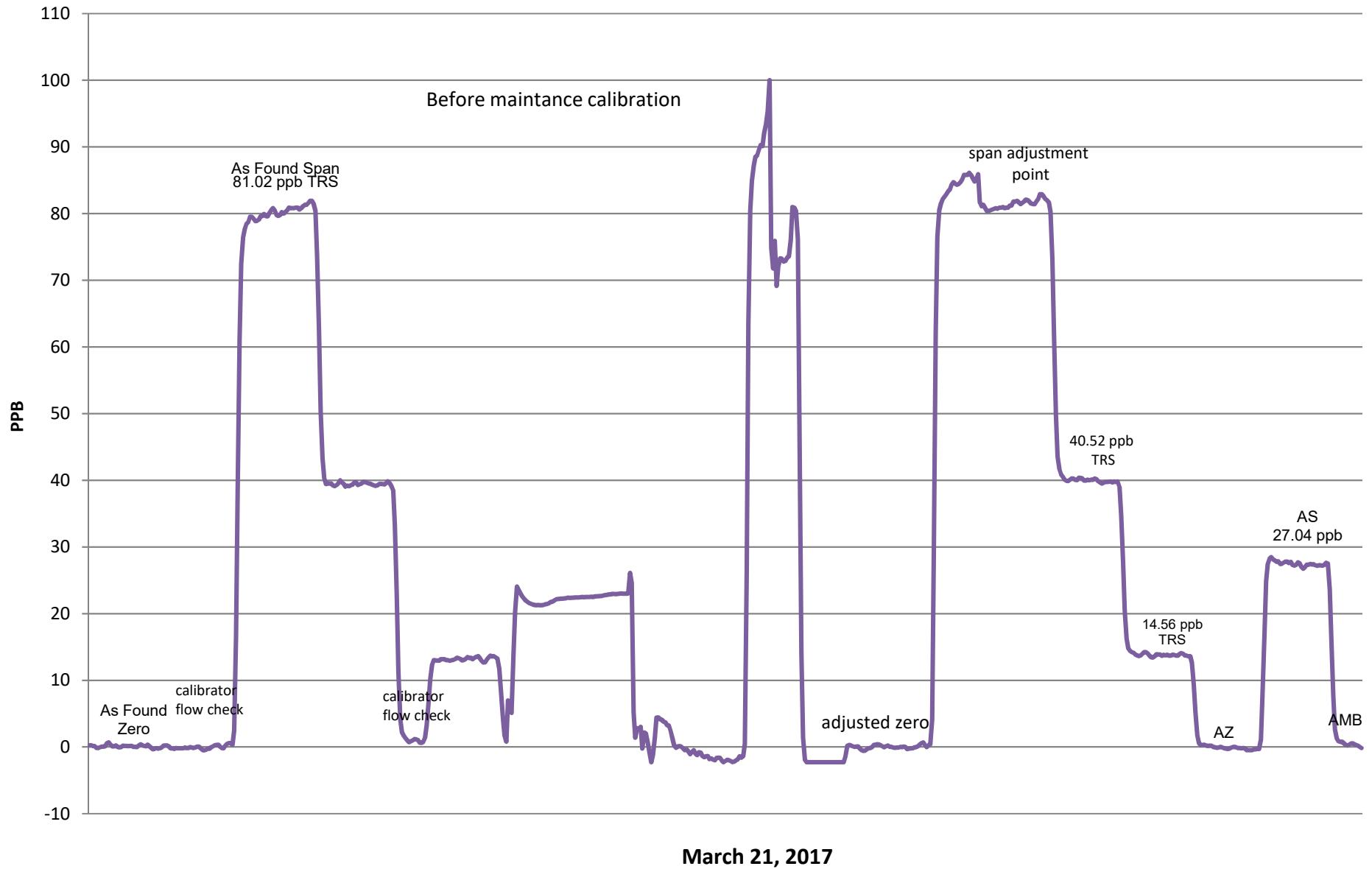
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.063	N/A	Correlation Coefficient	0.999781
81.025	81.750	0.9911		
40.524	40.033	1.0123		
14.562	13.738	1.0600	Slope	0.988098
			Intercept	0.534966

TRS Calibration Curve



TRS Calibration



Calibration Report



Parameter SO₂

Air Monitoring Network PAZA

Station Information

Calibration Date	March 13 2017	Previous Calibration	February 10 2017
Station Number	2	Station Location	Evergreen Park
Reason:	Routine	Install	Removal
			Other:
Start Time (MST)	10:33	End Time (MST)	13:50:00 PM
Barometric Pressure	0.917 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Concentration	50 ppm	Cal Gas Expiry Date	8/2/2019
Correction factor	0.031171	Cal Gas Cylinder #	LL105132
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	1.012498	Calculated slope	0.991197
Calculated intercept	0.479063	Calculated intercept	1.853052
Analyzer make	Teco 43i	Analyzer serial #	701120008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	11.6		12.1	
coefficient	1.224		1.272	
Lamp Voltage	833	volts	835	volts
Chamber Temp	44.9	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	665.9	mm Hg	664.1	mm Hg
Sample Flow	0.441	ccm	0.441	ccm
Lamp Intensity	89	%	89	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4941	0.0	0.00	0.9	N/A
4963	40.05	400.3	403.8	0.9913
4956	20.22	203.2	200.3	1.0142
4977	10.04	100.7	97.9	1.0286
4941	0.0	0.0	0.9	As Found Zero
4963	39.93	400.3	386.8	As Found Span
Average Correction Factor				1.0114

Calculated value of As Found Response: 391.211 ppm Percent Change of As Found: 2.3%

	before calibration		after calibration	
Auto zero	1.0	ppm	0.9	ppm
Auto span	261.0	ppm	269.6	ppm

Notes: Span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



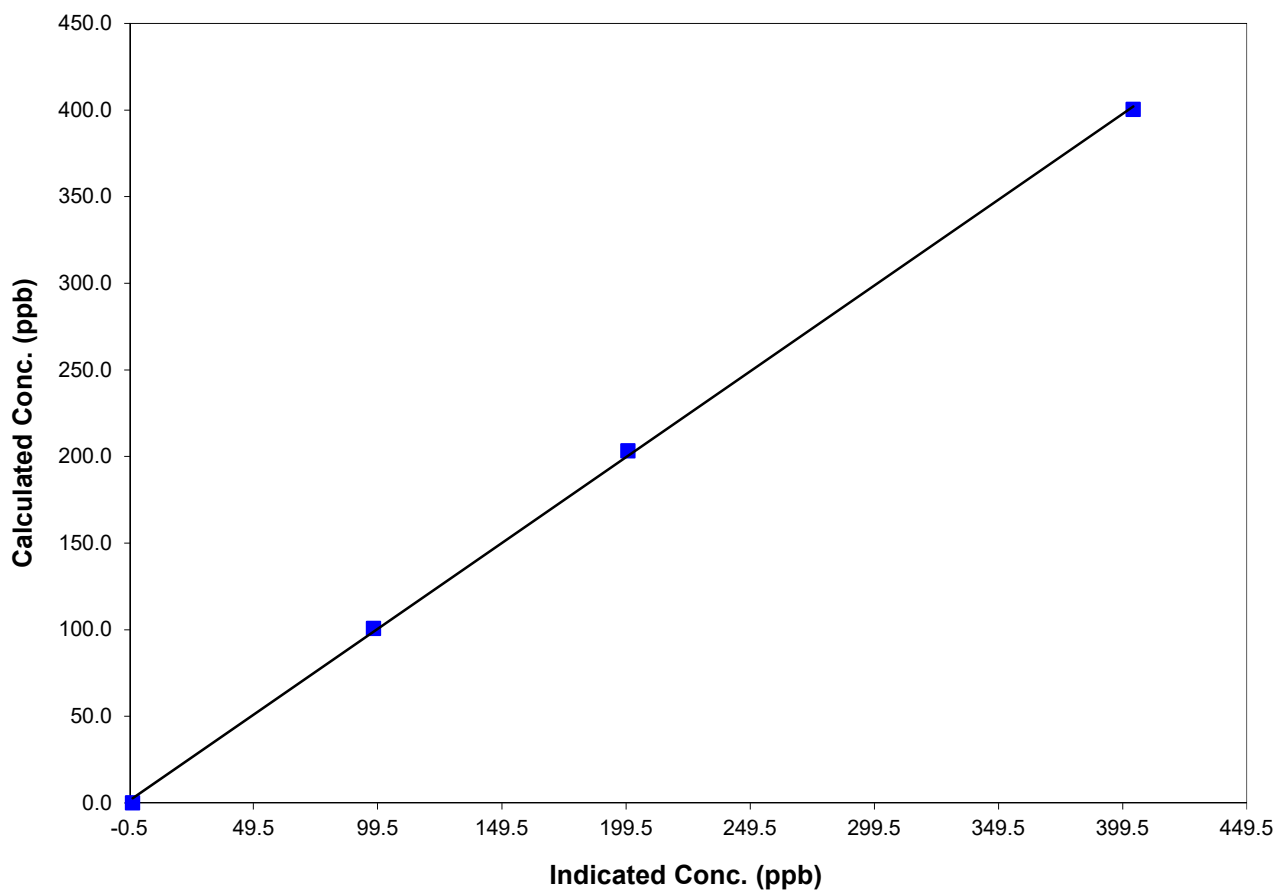
Station Information

Calibration Date	March 13 2017	Previous Calibration	February 10 2017
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	10:33	End Time (MST)	13:50:00 PM
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

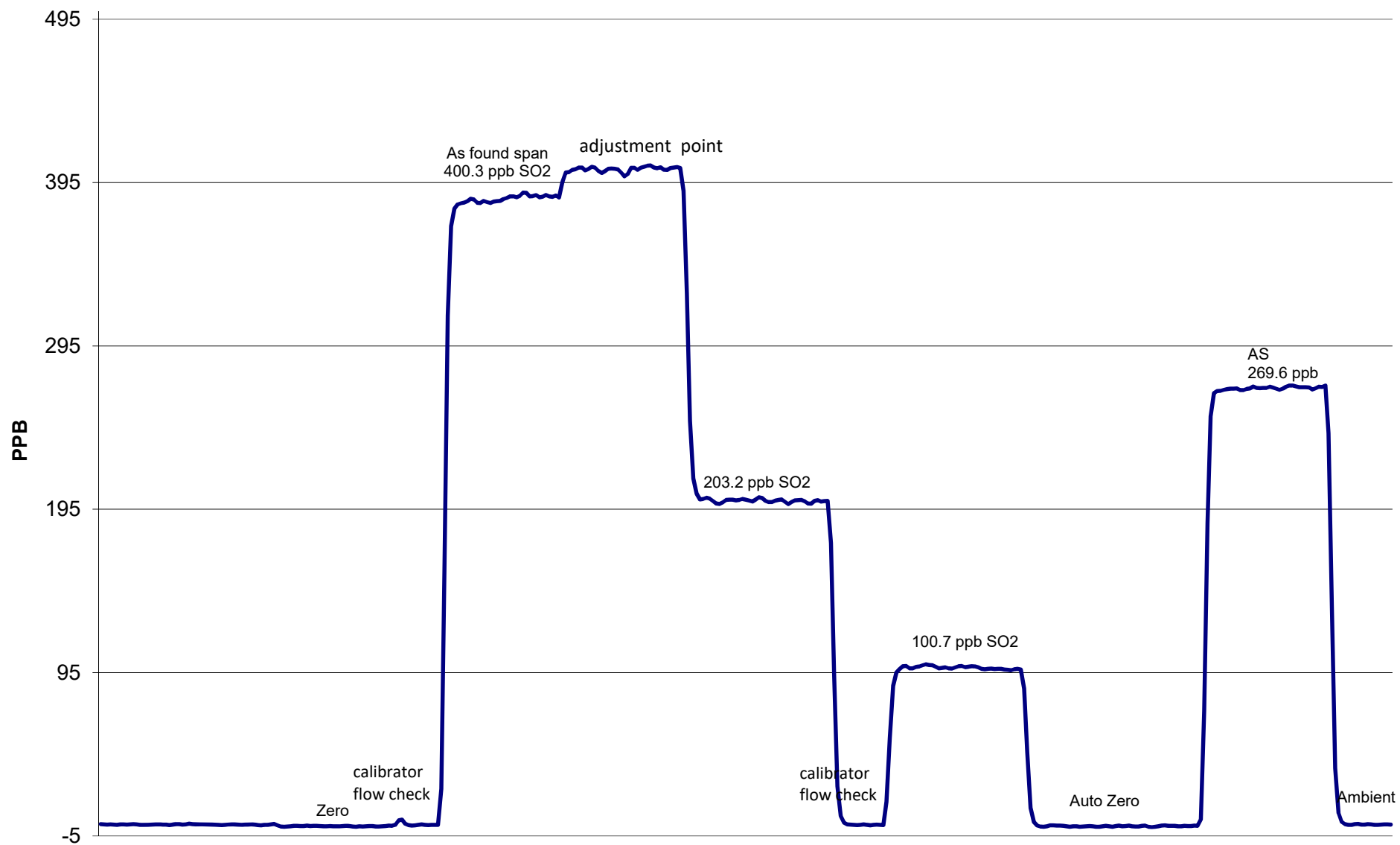
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.9	N/A	Correlation Coefficient	0.999751
400.3	403.8	0.9913		
203.2	200.3	1.0142		
100.7	97.9	1.0286	Slope	0.991197
			Intercept	1.853052

SO2 Calibration Curve



SO2 Calibration



March 13 2017

Calibration Report



Parameter TRS

Air Monitoring Network PAZA

Station Information

Calibration Date	March 13 2017	Previous Calibration	February 10 2017
Station Number	2	Station Location	Evergreen Park
Reason:	Routine	Install	Removal
			Other:
Start Time (MST)	8:55	End Time (MST)	12:05
Barometric Pressure	0.918 ATM	Station Temperature	20.0 Deg C
Calibrator	Envionics	Serial Number	6586
Cal Gas Conc	10.2 ppm	Cal Gas Expiry Date	02/23/2019
Correction factor	0.031205	Cal Gas Cylinder #	EY0000380
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
Calculated slope	0.993339	Calculated slope	1.012176
Calculated intercept	0.018965	Calculated intercept	0.021875

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

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	15.6	ppb	15.5	ppb
coefficient	0.940		0.940	
Lamp Voltage	1027	volts	1025	volts
Chamber Temp	44.3	Deg C	44.2	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	651.1	mm Hg	650.4	mm Hg
Sample Flow	0.495	ccm	0.493	ccm
Lamp Intensity	35,987	mv	36,611	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	0.5	N/A
5011	40.19	81.16	80.4	1.0099
4999	20.19	41.03	40.3	1.0189
6991	10.12	14.74	14.1	1.0467
4998	9.98		1.0	Sox Test
4996	0.00	0.00	0.5	As Found Zero
5011	40.19	81.16	80.4	As Found Span
Average Correction Factor				1.0252

Calculated value of As Found Response: 79.36 ppm Percent Change of As Found: 2.2%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.5	ppm
Auto span	86.5	ppm	84.3	ppm

Notes: No adjustments made
Sox scrubber check performed

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



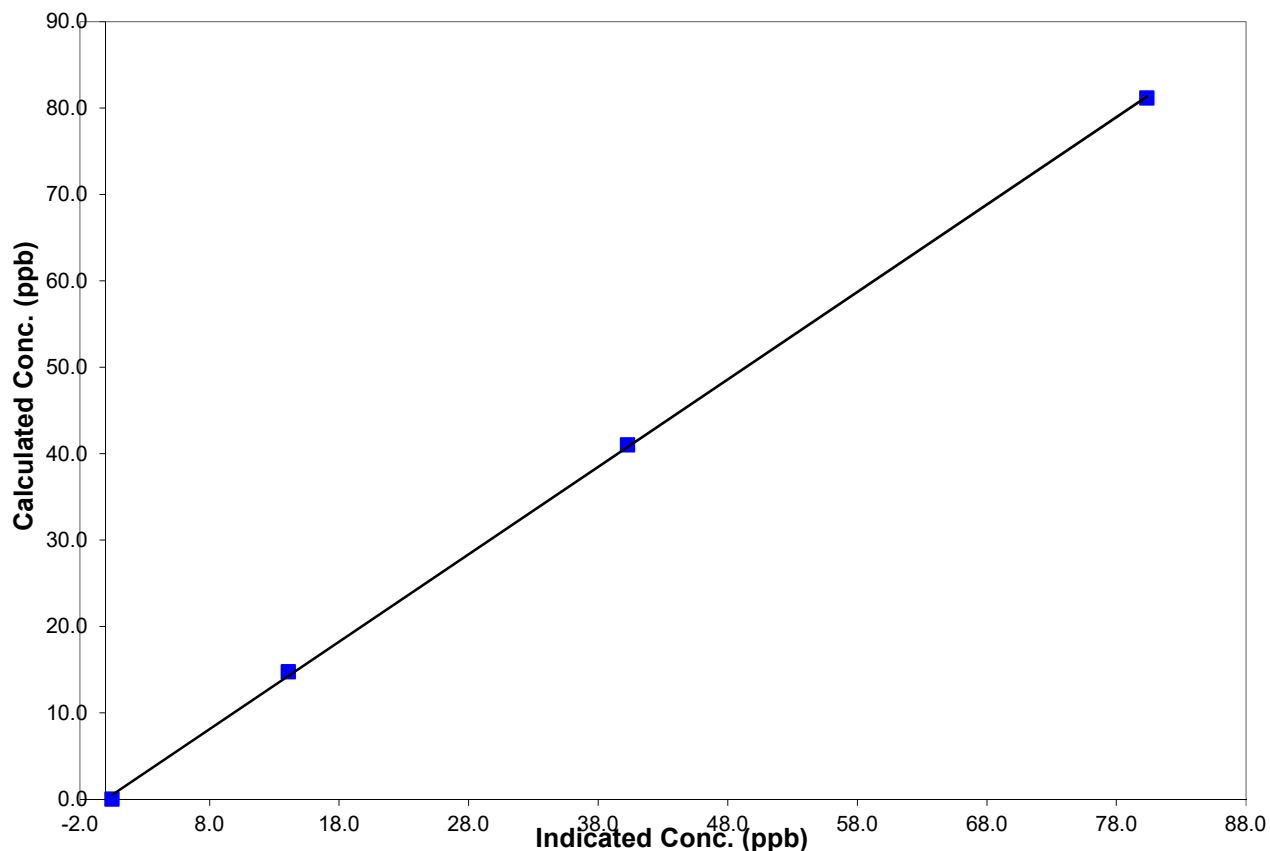
Station Information

Calibration Date	March 13 2017	Previous Calibration	February 10 2017
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	8:55	End Time (MST)	12:05
Analyzer make/model	TEI Model 43C	Analyzer serial #	31990000000491

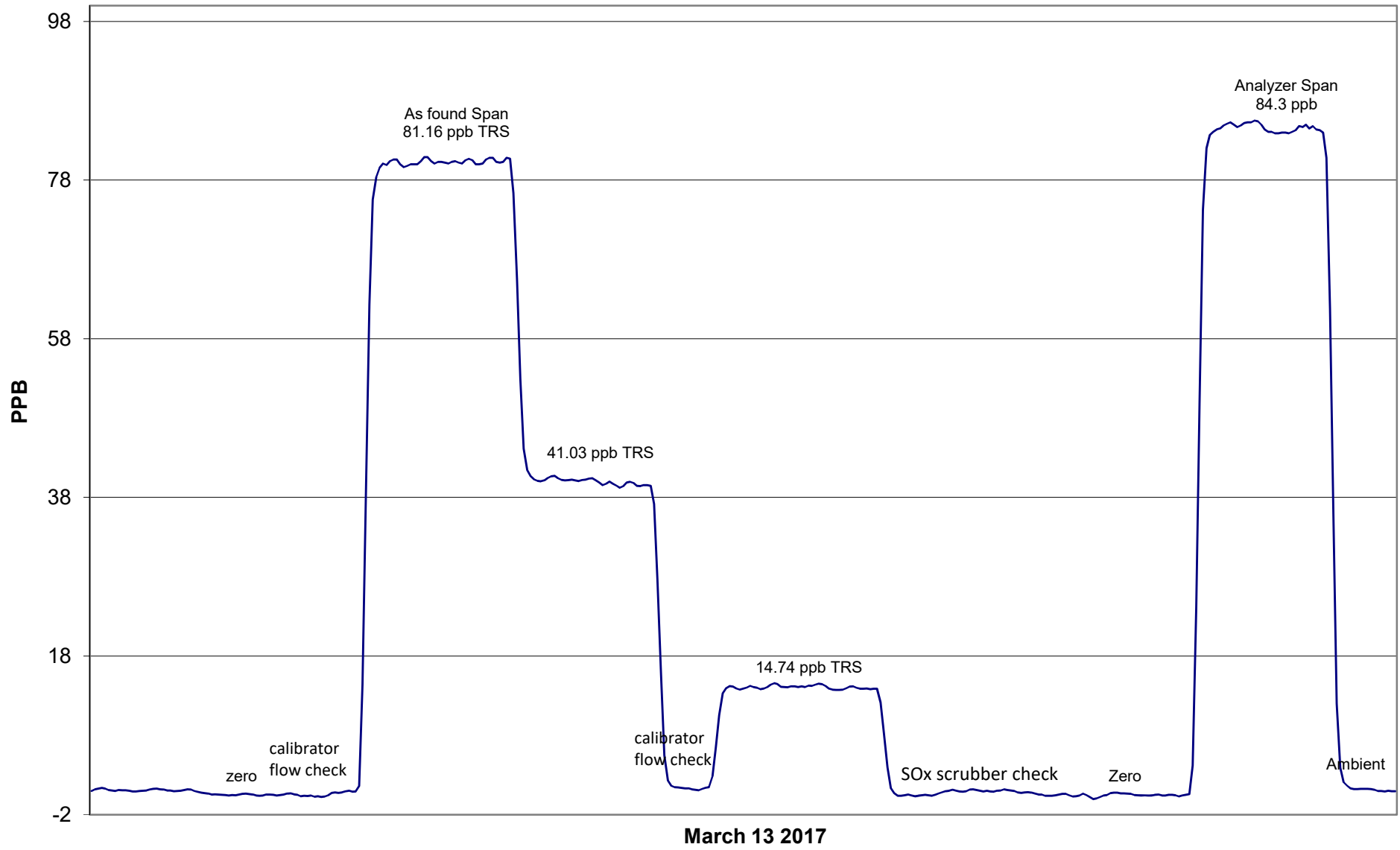
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A	Correlation Coefficient	0.999847
81.2	80.4	1.0099		
41.0	40.3	1.0189		
14.7	14.1	1.0467	Slope	1.012176
			Intercept	0.021875

TRS Calibration Curve



TRS Calibration



AB TEOM PM2.5 Calibration



STATION: Evergreen Park
 LOCATION: PAZA - Grande Prairie

OPERATOR: Grover Christiansen/Dmytro
 DATE: 13-Mar-17

MONITOR INFO / PARAMETER VALUES:

Make/Model	TEOM AB
Configuration	PM2.5
Serial Number	24634
Site Number	2
Inlet Type	PM 10 / SCC
FAdj. Main Setting	1.000
FAdj. Aux. Setting	1.000
T-Case Indicated / Set Point	40/40
T-Air Indicated / Set Point	40/40
T-Cap Indicated / Set Point	40/40
Splitter Assembly Alignment (cm)	15.5

(vs. specified depth of 15.5 cm from top of flow tube to top of concentric 1/2 in. tube)

RECENT CALIBRATION AND AUDIT HISTORY

Previous Audit	
Previous Calibration	7-Dec-16

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

* capacity test or pump on timed test utilized to verify pump integrity

"FAIL" indicates that pump requires service.

LEAK CHECK	Indicated Flow (lpm)	
	Main	Auxiliary
PUMP ON	0.000	0.002
PUMP OFF	0.000	0.001
NET	0.000	0.001
LIMITS	<0.15	<0.60

	Ambient Temp. (^o C)	Ambient Pres. (atm)	Ko *	Bypass flow (lpm)	Sample flow (lpm)
SET POINT (S)	na	na	16147	13.67	3.000
INDICATED (I)	2.7	0.917	16147	13.69	3.000
MEASURED (AF)	2.2	0.917	16147	13.95	2.950
MEASURED (M)	2.2	0.917	16250	13.95	2.950
DIFFERENCE (M-I)	-0.5	0.000	0.6%	0.28	-0.05
LIMITS	± 2^o C	± 0.005 atm	± 2.5 %	± 1.0 L/min	± 0.2 L/min

As Found Data
 Adjusted Data

Ko Audit Filter data

Weight:

0.11014

Serial #:

CVK 2123

COMMENTS: Pass.

Sample Head Inspection/Cleaning:

Large In Line Filter Inspection & Or Cleaning:

Calibration Report



Parameter SO₂

Air Monitoring Network PAZA

Station Information

Calibration Date	March 27, 2017	Previous Calibration	February 27, 2017
Station Number	3	Station Location	Smokey Heights
Reason:	Routine	Install	Removal
			Other:
Start Time (MST)	12:35	End Time (MST)	14:35
Barometric Pressure	0.922 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Concentration	50 ppm	Cal Gas Cert Date	2/8/2019
Correction factor	0.031341	Cal Gas Cylinder #	LL105132
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	1.004910	Calculated slope	0.993691
Calculated intercept	1.646590	Calculated intercept	2.148091
Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	14.2		14.1	
coefficient	0.955		0.955	
Lamp Voltage	946	volts	946	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	666.4	mm Hg	666.9	mm Hg
Sample Flow	0.446	lpm	0.445	lpm
Lamp Intensity	88	%	88	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4997	0.0	0.00	0.0	N/A
4996	39.96	396.75	398.3	0.9962
4997	19.98	199.12	196.8	1.0118
4997	9.96	99.46	96.1	1.0355
4997	0.0	0.00	0.0	As Found Zero
4996	39.96	396.75	398.3	As Found Span
Average Correction Factor				1.0145

Calculated value of As Found Response: 401.881 ppm Percent Change of As Found: -1.3%

	before calibration		after calibration	
Auto zero	0.2	ppb	0.0	ppb
Auto span	210.1	ppb	210.4	ppb

Notes: Lamp voltage & intensity moving around by 4 volts. May need new lamp or socket soon.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



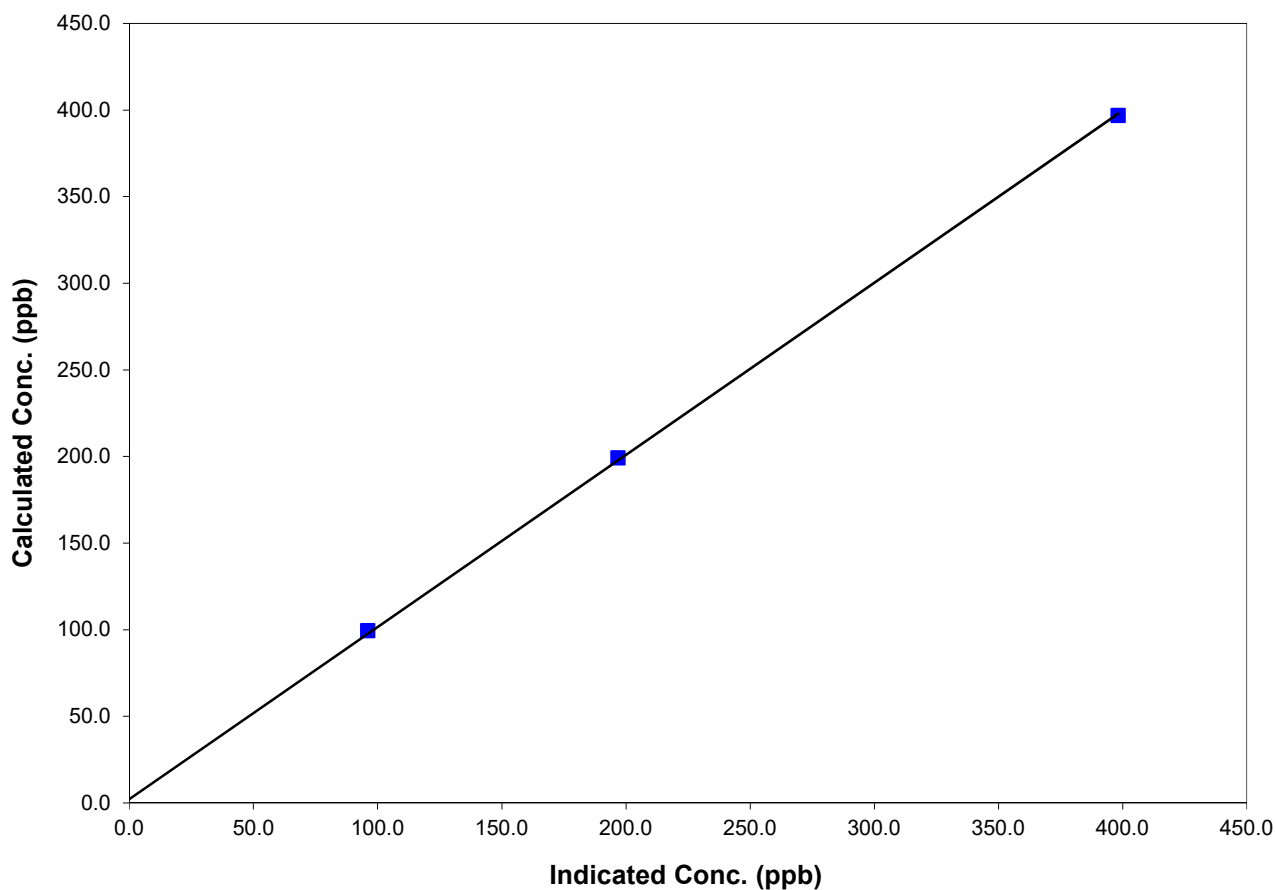
Station Information

Calibration Date	March 27, 2017	Previous Calibration	February 27, 2017
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	12:35	End Time (MST)	14:35
Analyzer make/model	Teco 43i	Analyzer serial #	701120009

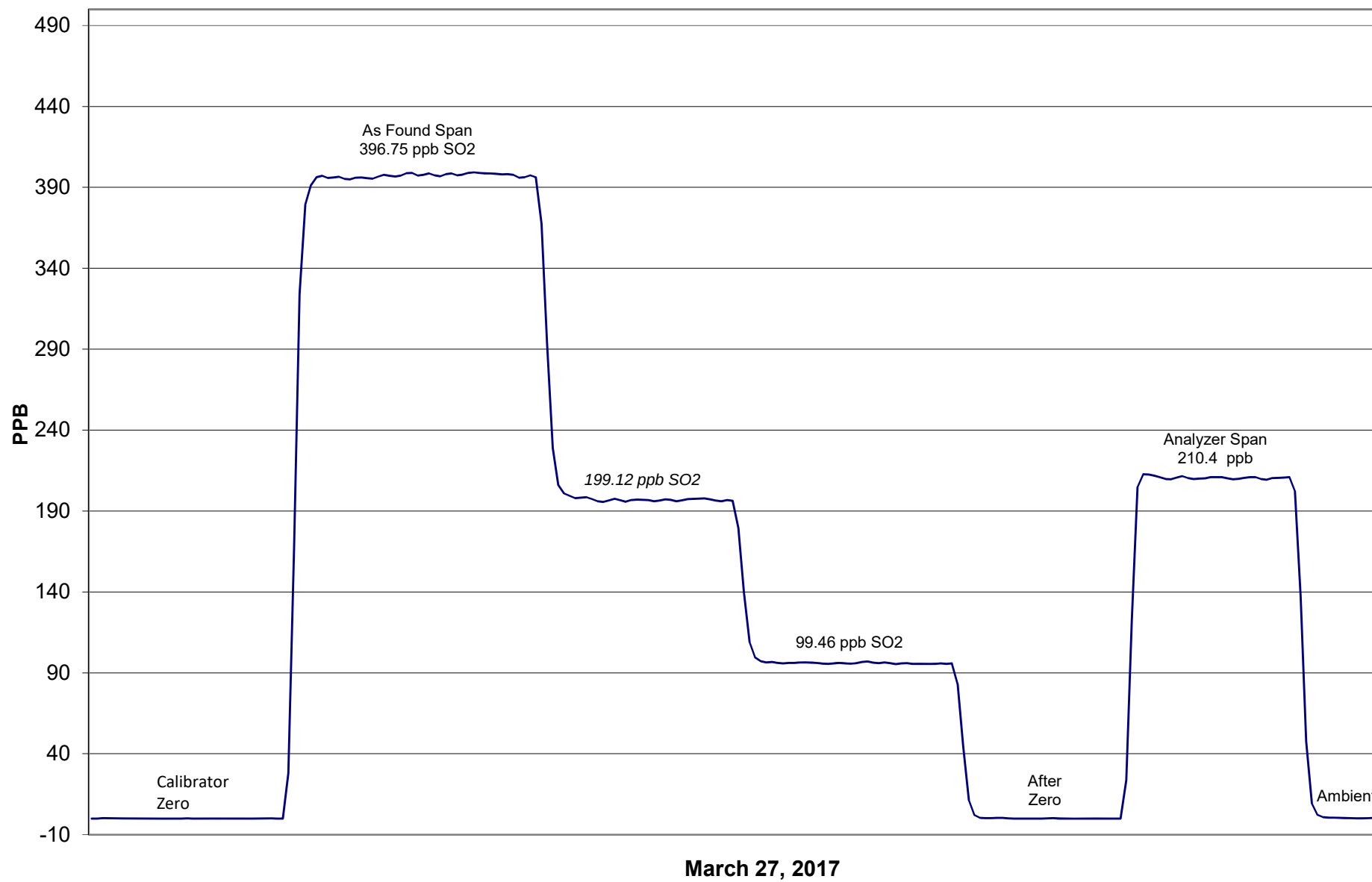
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999869
396.7	398.3	0.9962		
199.1	196.8	1.0118		
99.5	96.1	1.0355	Slope	0.993691
			Intercept	2.148091

SO2 Calibration Curve



Smokey Heights SO₂ Calibration



Calibration Report



Parameter TRS

Air Monitoring Network PAZA

Station Information

Calibration Date	March 27, 2017	Previous Calibration	February 27, 2017
Station Number	3	Station Location	Smokey Heights
Reason:	Routine	Install	Removal
			Other:
Start Time (MST)	10:40	End Time (MST)	13:15
Barometric Pressure	0.922 ATM	Station Temperature	20.0 Deg C
Calibrator	Envionics	Serial Number	3474
Cal Gas Conc	10.2 ppm	Cal Gas Expiry Date	7/8/2016
Correction factor	0.031341	Cal Gas Cylinder #	BLM00586
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
Calculated slope	0.995577	Calculated slope	1.003439
Calculated intercept	0.115031	Calculated intercept	1.090945

Analyzer make TEI Model 43I APSAA Analyzer serial # 1153630151

	before		after	
Concentration range	100	ppb	100	ppb
Background	14.3	ppb	14.9	ppb
coefficient	0.934		0.981	
Lamp Voltage	805	volts	805	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	670.1	mm Hg	670.1	mm Hg
Sample Flow	0.422	lpm	0.421	lpm
Lamp Intensity	90	mv	90	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)
4990	0.0	0.00	-0.1	N/A
4996	39.96	80.94	80.2	1.0087
4996	19.97	40.61	38.1	1.0656
6997	9.91	14.43	12.9	1.1149
4990	9.95		-0.1	Sox test
4990	0.0	0.00	-0.1	As Found Zero
4996	39.96	80.94	75.9	As Found Span
Average Correction Factor				1.0631

Calculated value of As Found Response: 75.81 ppm Percent Change of As Found: 6.3%

	before calibration		after calibration	
Auto zero	0.4	ppm	-0.1	ppm
Auto span	70.3	ppm	70.2	ppm

Notes: Slight span adjustment made. Run adjustment point.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



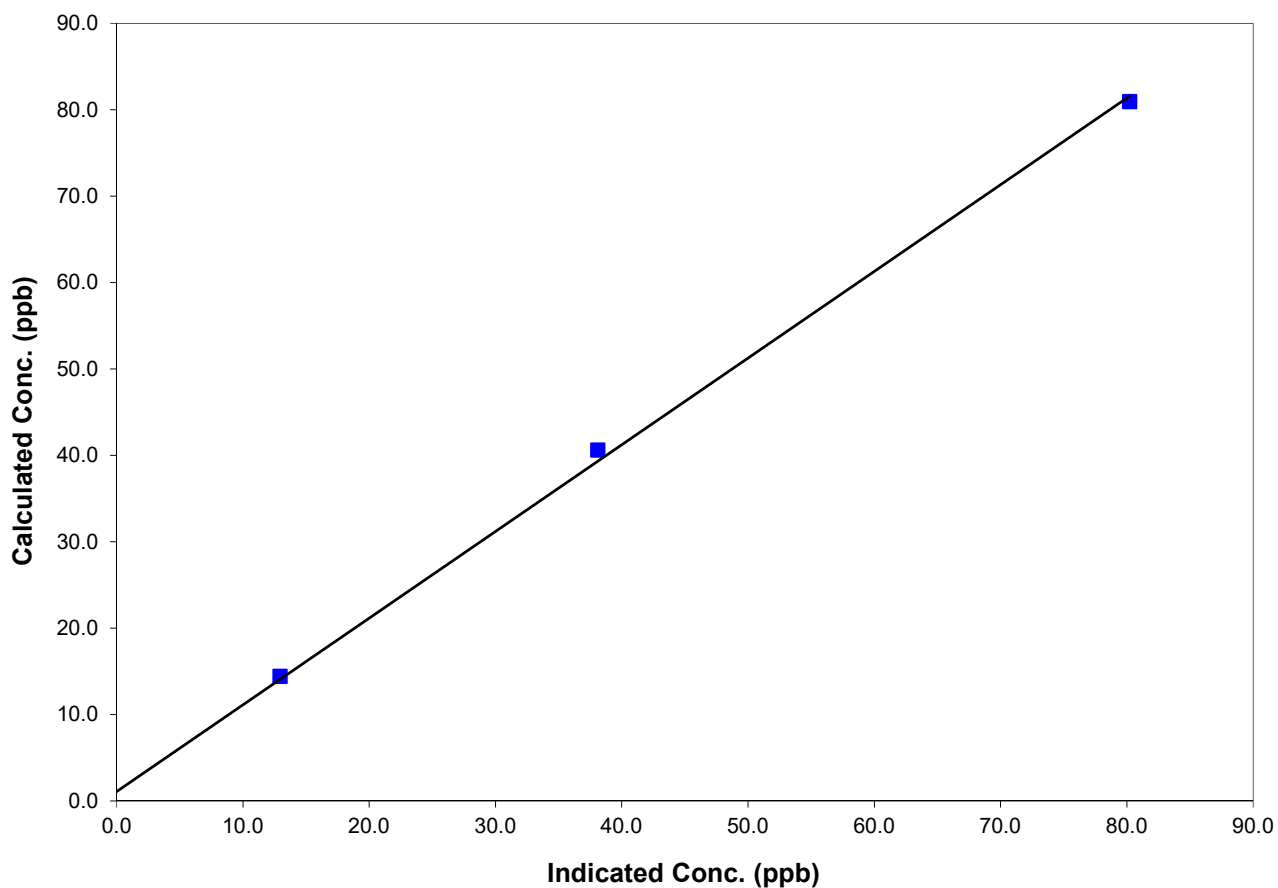
Station Information

Calibration Date	March 27, 2017	Previous Calibration	February 27, 2017
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	10:40	End Time (MST)	13:15
Analyzer make/model	TEI Model 43I APSAA	Analyzer serial #	1153630151

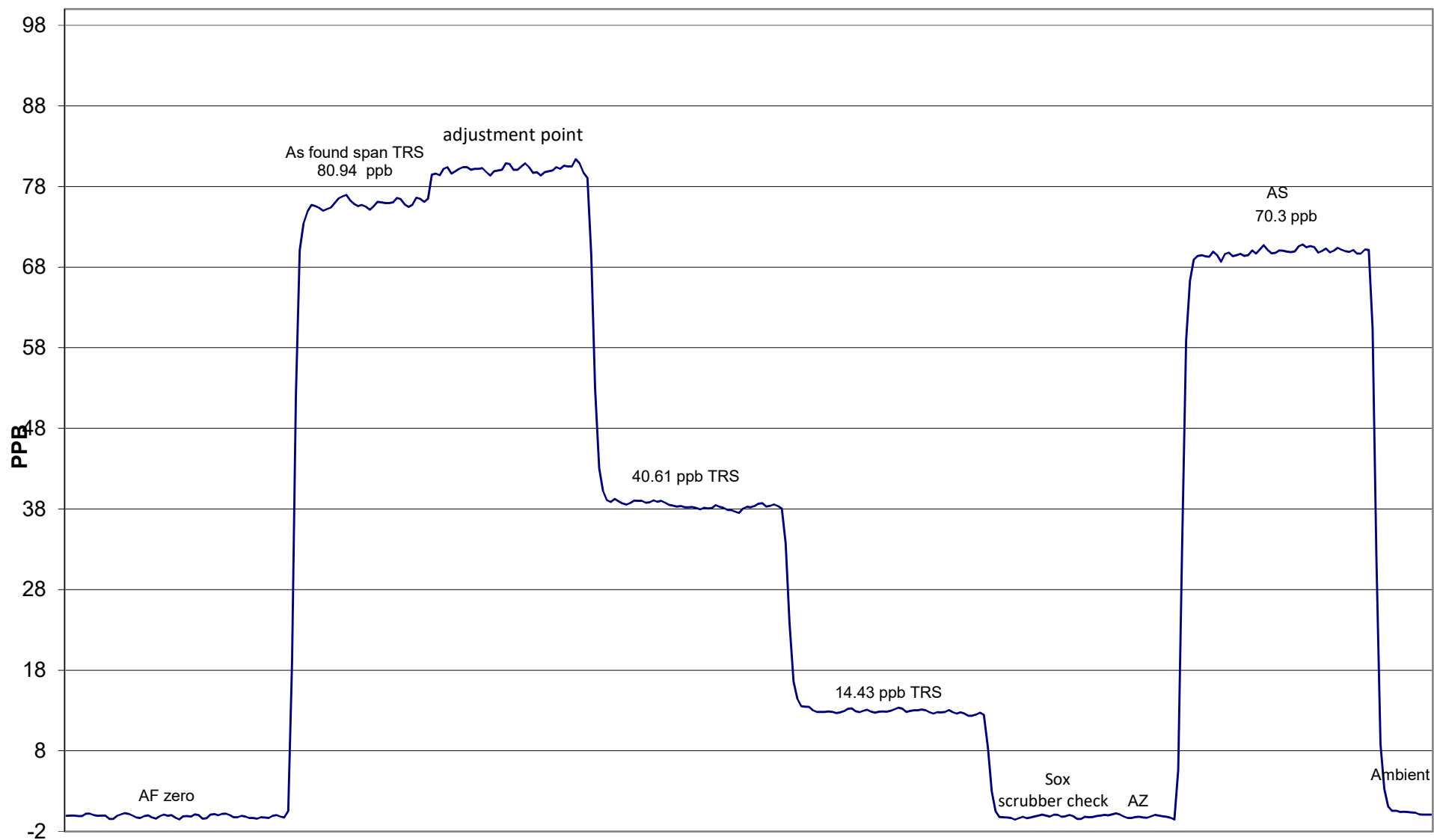
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A	Correlation Coefficient	0.999173
80.9	80.2	1.0087		
40.6	38.1	1.0656		
14.4	12.9	1.1149	Slope	1.003439
			Intercept	1.090945

TRS Calibration Curve



Smokey Heights TRS Calibration



March 27, 2017

SHARP 5030 PM2.5 Calibration



Station: Smokey Heights
 Location: Smokey Heights
 Start Time (MST): 13:15

Operator: Grover Christiansen
 Date: March 27 2017
 End Time (MST): 14:10

MONITOR INFO / PARAMETER VALUES:

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

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

AUDIT / CALIBRATION RESULTS:

	Ambient Temp. (°C)	Ambient Pres. (mbar)	RH (%)	Leak Check (l/min)	Flow Rate (lpm)	Foil Calibration (ug)	Nephelometer (ug)	Time settings (hh:mm)
Audit values (I)	6.0	924	37.2	16.67	16.67	7006	0.0	13:54
MEASURED (AF)	6.3	920	36.1	16.50	16.40	7094	1.9	13:53
AF Difference (AF-I)	0.3	-4	-1.1	-0.17	-0.27	88	1.9	#####
MEASURED (M)	6.3	920	36.1	16.50	16.40	7094	0.0	13:54
Adj Difference (M-I)	0.3	-4	-1.1	-0.17	-0.27	0	0.0	0:00
LIMITS	± 4.0 °C	13.33 mbar(hPa)	± 2.0%	0.8 L/min	± 1.0 L/min	(+/-5%)	(<+/-2 ug/m3)	±2 min

Sample Head Inspect/Cleaning: Heads cleaned

Status of sampling tape: Full roll

Nozzle Inspection / cleanliness: Clean

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

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

Zero'd well, calibration looks good.

Calibration Report

Parameter SO2
Air Monitoring Network

PAZA



Station Information

Calibration Date	March 5, 2017	Previous Calibration	February 15, 2017
Station Number	4	Station Location	Beaverlodge
Reason:	Routine	Install	Removal
			Other:
Start Time (MST)	16:10:00 PM	End Time (MST)	18:20:00 PM
Barometric Pressure	0.908 atm	Station Temperature	20.0 Deg C
Calibrator	Envionics	Serial Number	3474
Cal Gas Concentration	10.5 ppm	Cal Gas Expiry Date	1/12/2019
Gas Cert Reference	FF16108		
DACS make	CR3000	DACS serial No.	5237
DACS voltage range	0 - 5 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.012483	Calculated slope	1.009429
Calculated intercept	-0.089298	Calculated intercept	-0.233715
Analyzer make	TEI Model 43i-TLE	Analyzer serial #	713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.55		2.56	
Coefficient	0.969		0.969	
PMT	-767.5	V	-767.5	V
UV Lamp Voltage	1125	V	1125	V
Chamber Temp	44.8	Deg C	45	Deg C
Pressure	659.8	mm Hg	667	mm Hg
Sample Flow	0.45	LPM	0.457	LPM
Lamp Intensity	96	%	96	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4989	0.00	0.0	0.4	N/A
4992	39.91	83.3	82.8	1.0061
4995	19.90	41.7	41.5	1.0034
4991	9.96	20.9	20.8	1.0076
4989	0.00	0.0	0.4	As found zero
4989	39.84	83.2	82.8	As found span
Average Correction Factor				1.0057

Calculated value of As Found Response: 83.333 ppm Percent Change of As Found: -0.2%

	before calibration		after calibration	
Auto zero	0.2	ppb	0.1	ppb
Auto span	60.8	ppb	59.4	ppb

Notes: No adjustment made

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



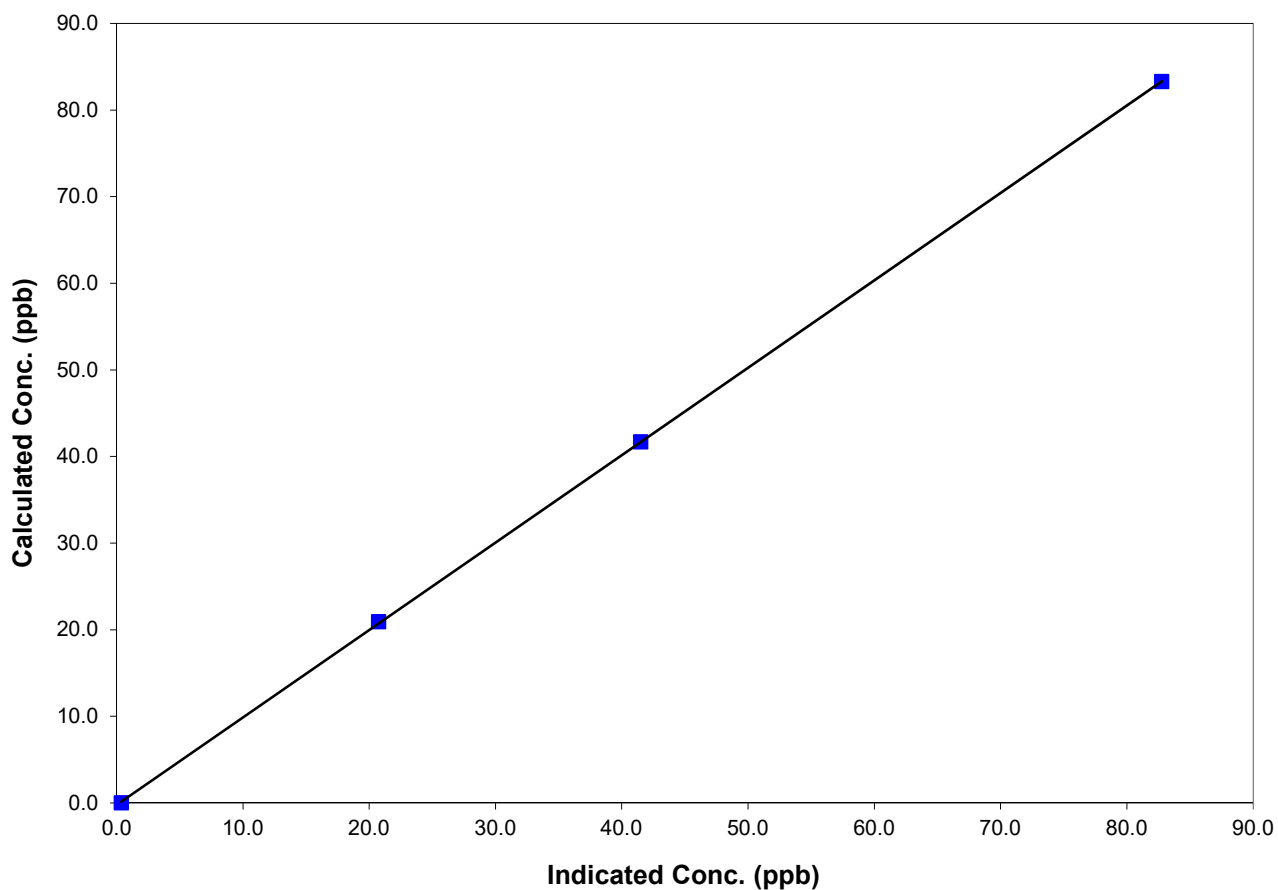
Station Information

Calibration Date	March 5, 2017	Previous Calibration	February 15, 2017
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	16:10:00 PM	End Time (MST)	18:20:00 PM
Analyzer make/model	TEI Model 43i-TLE	Analyzer serial #	713021137

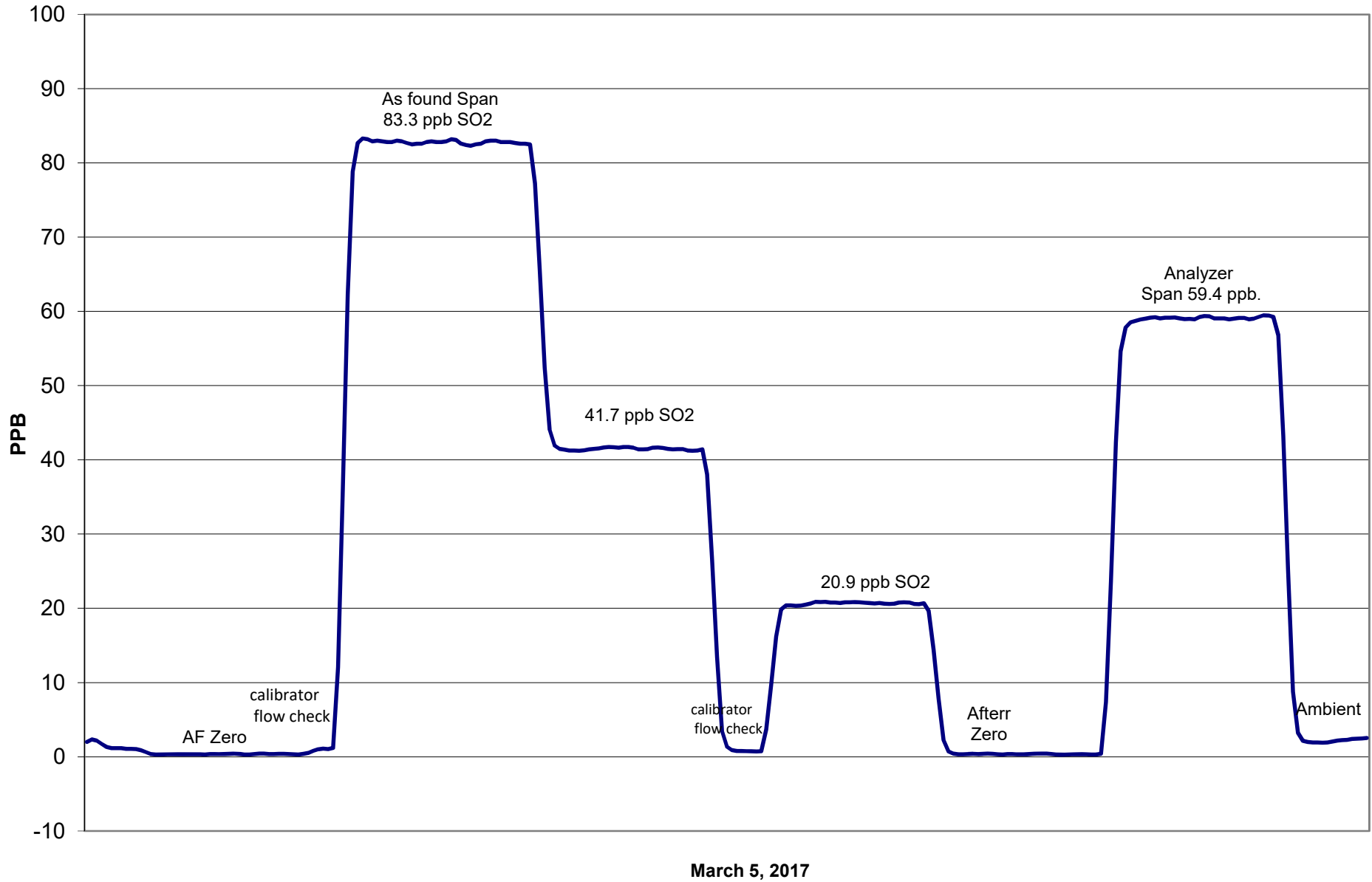
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A	Correlation Coefficient	0.999984
83.3	82.8	1.0061		
41.7	41.5	1.0034		
20.9	20.8	1.0076	Slope	1.009429
			Intercept	-0.233715

SO2 Calibration Curve



SO2 Calibration



Calibration Report

Parameter
Air Monitoring Network

NO_x-NO-NO₂
PAZA



Station Information

Calibration Date	March 6, 2017	Previous Calibration	February 15, 2017
Station Number	4	Station Location	Beaverlodge
Reason:	Routine	Installation	Removal
Start Time (MST)	10:00	End Time (MST)	15:50:00 PM
Barometric Pressure	0.908	Atm	Station Temperature
Calibrator	EnviroNics	Serial Number	3474
NO Cal Gas Conc	48.6	ppm	Cal Gas Expiry Date
NOx Cal Gas Conc	48.9	ppm	Cal Gas Serial #
			LL105132

DACS Information

DACS make	CR3000	DACS serial No.	5237
	Parameter	NO2	NOx
Before	Data Slope	1.003486	1.009473
	Data Offset	0.059743	1.273270
After	Data Slope	1.002539	1.005262
	Data Offset	-0.205421	1.762431
	Channel #	8	6
	Voltage Range	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model	TEI 42i	Analyzer serial #	906535068
Test Point	before		after
Concentration range	0-500	ppb	0-500
NO offset	2.8	mV	2.9
NOx bkgnd	3.3	mV	3.4
NO coefficient	1.183		1.216
NOx coefficient	0.999		0.999
NO2 conv temp	321.6	Deg C	324.2
PMT Temp	-3.0	Deg C	-3.0
PMT Volt	-729.3	mV	-730.0
R Cell Press	184.6	in Hg	185.8
Sample Flow	0.651	LPM	0.660

Notes: Span adjustment made

Calibration Report

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



Station Information

Calibration Date: March 6, 2017 Station Location: Beaverlodge

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4973	0.00	0.0	0.0	0.0	-0.1	-0.1	-0.3	N/A	N/A
1	4984	39.99	389.2	386.8	2.4	386.2	386.5	-1.1	1.0080	1.0010
2	4981	20.02	195.8	194.6	1.2	192.4	192.2	-0.6	1.0176	1.0125
3	4990	10.01	97.9	97.3	0.6	93.9	94.3	-0.5	1.0424	1.0323
AFZ	4973	0.00	0.0	0.0	0.0	-0.1	-0.1	-0.3	0.0000	0.0000
AFS	4993	39.92	387.9	385.5	0.8	375.3	375.6	-1.2	1.0335	1.0264
Average Correction Factor									1.0227	1.0153

As Found Concentrations: NO_x= 380.3 NO= 378.3 As Found Percent Change NO_x= -2.0% NO= -1.9%

GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.93 ccm

O3 Setpoint (ppb)	Indicated NOx high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	-0.1	-0.1	0.0	-0.1	-0.1	-0.3	N/A	N/A	N/A	N/A
NO point	386.5	386.5	0.0	386.0	386.5	-1.3	1.0012	1.0000	N/A	N/A
300	386.5	44.3	342.2	386.4	44.3	341.1	1.0002	1.0000	1.0032	99.7%
200	386.5	153.4	233.0	387.3	153.4	233.0	0.9977	1.0000	1.0001	100.0%
100	386.5	273.5	113.0	387.7	273.5	113.4	0.9969	1.0000	0.9960	100.4%
Average Correction Factor							0.9983	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	-0.3	-0.3	0.0	ppb
Auto span	323.4	320.6	1.9	ppb	322.6	319.8	1.9	ppb

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



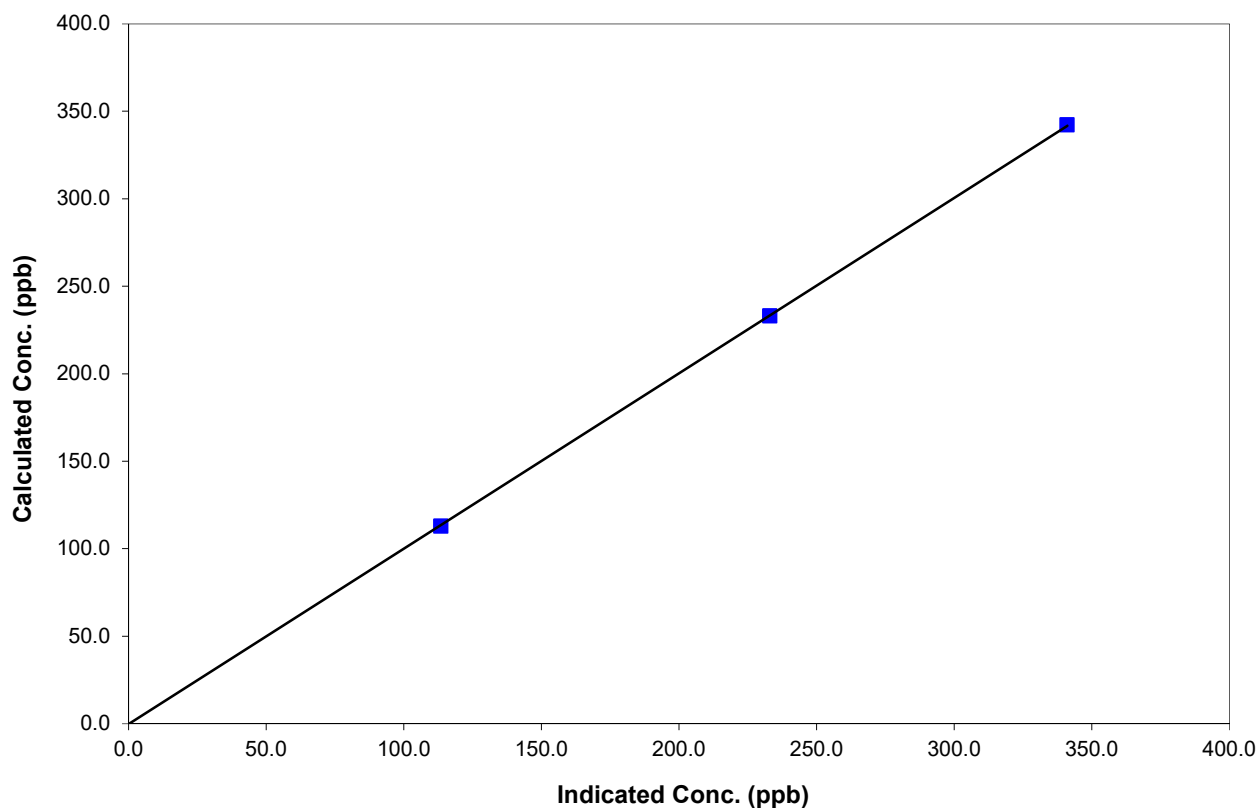
Station Information

Calibration Date	March 6, 2017	Previous Calibration	February 15, 2017
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	10:00	End Time (MST)	15:50:00 PM
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.3	N/A	Correlation Coefficient	0.999988
342.2	341.1	1.0032		
233.0	233.0	1.0001	Slope	1.002539
113.0	113.4	0.9960		
			Intercept	-0.205421

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



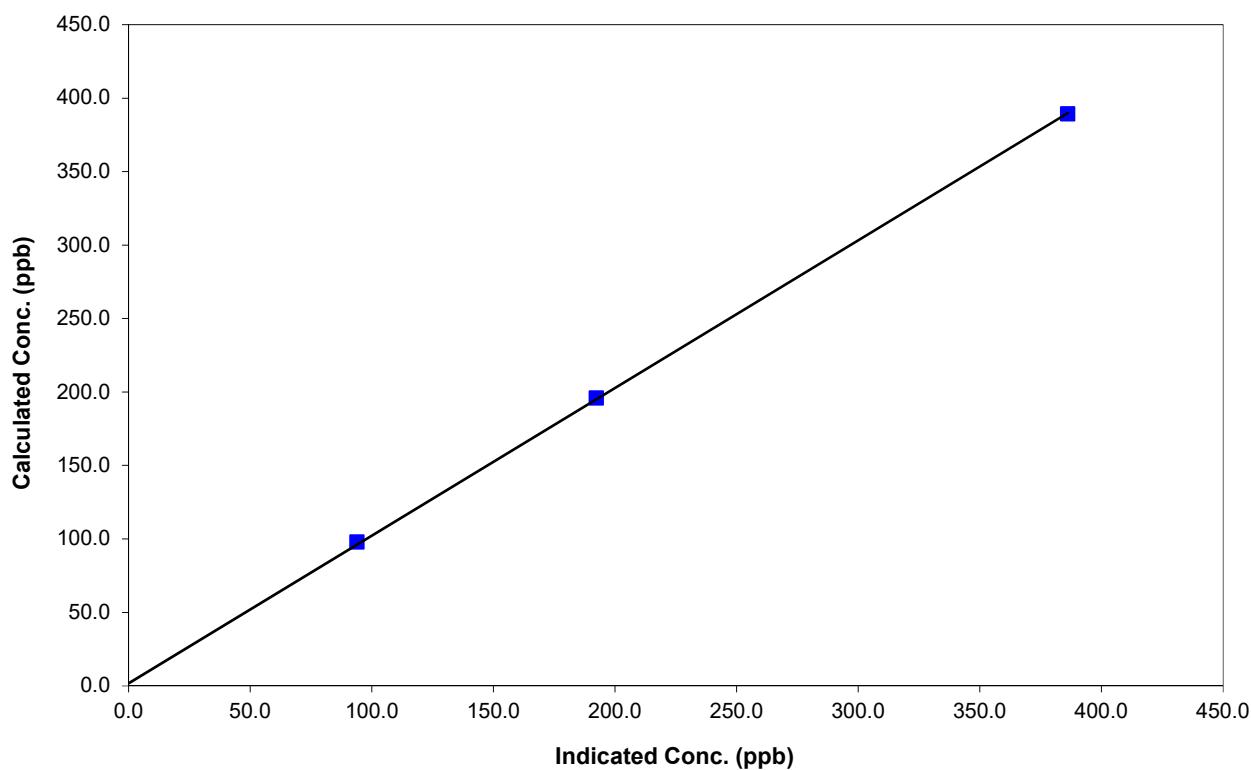
Station Information

Calibration Date	March 6, 2017	Previous Calibration	February 15, 2017
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	10:00	End Time (MST)	15:50:00 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	0.999922
389.2	386.2	1.0080		
195.8	192.4	1.0176		
97.9	93.9	1.0424	Slope	1.005262
			Intercept	1.762431

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



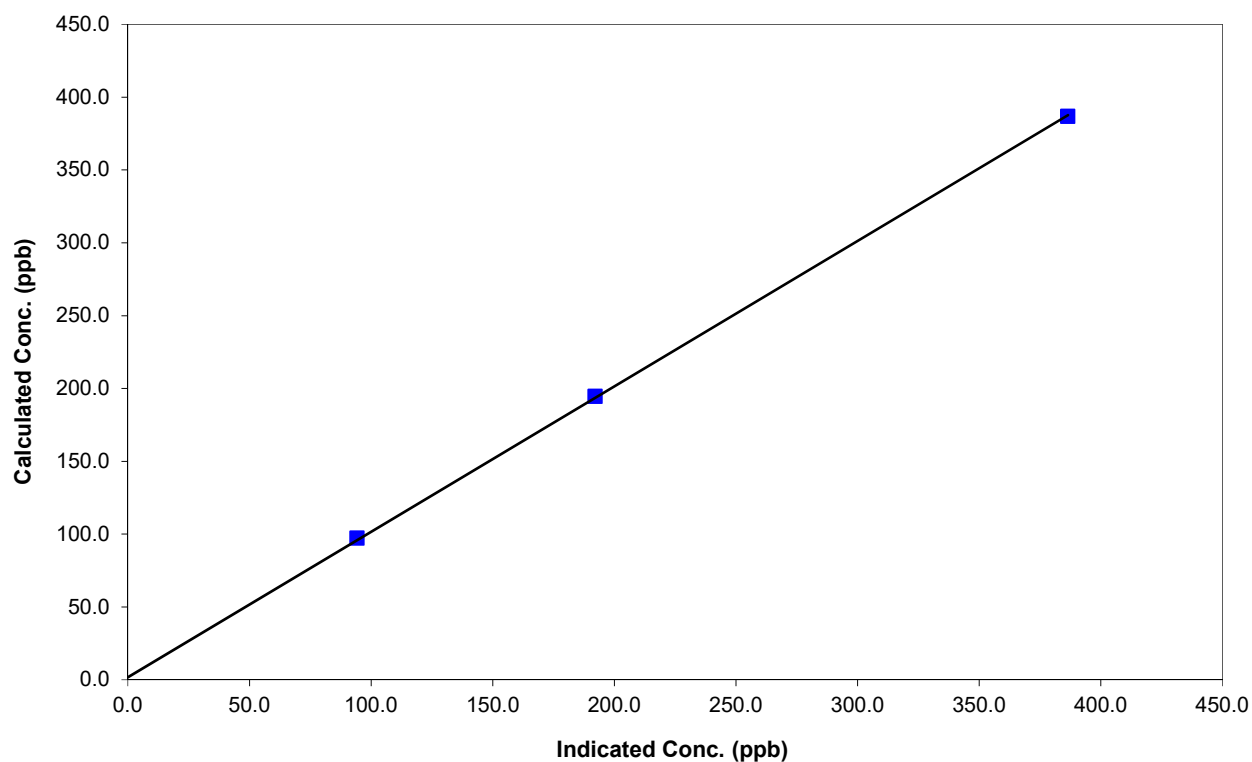
Station Information

Calibration Date	March 6, 2017	Previous Calibration	February 15, 2017
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	10:00	End Time (MST)	15:50:00 PM
Analyzer make	TEI 42i	Analyzer serial #	906535068

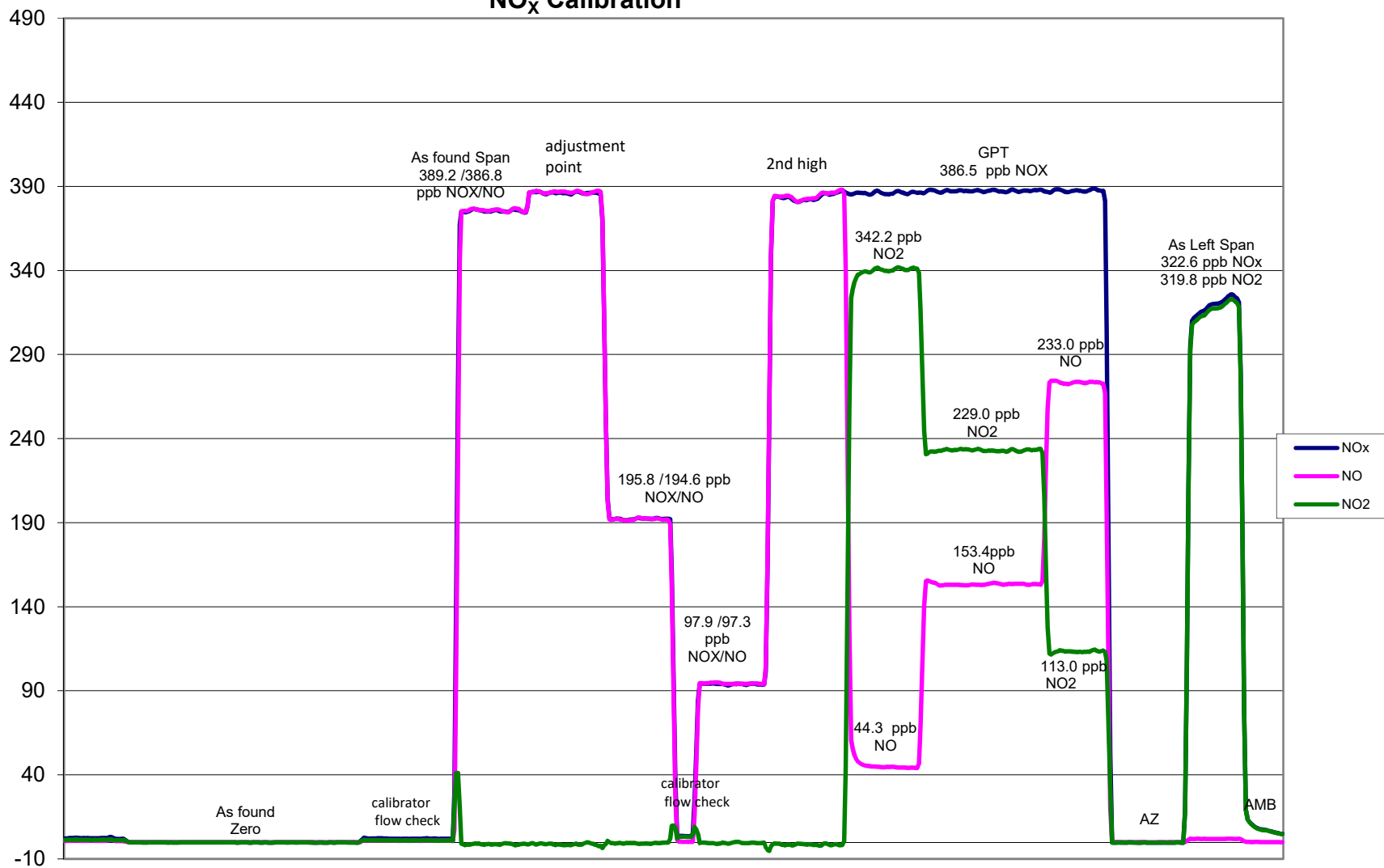
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A	Correlation Coefficient	0.999923
386.8	386.5	1.0010		
194.6	192.2	1.0125		
97.3	94.3	1.0323	Slope	0.998816
			Intercept	1.675758

NO Calibration Curve



NO_x Calibration



March 6, 2017

Calibration Report



Parameter 03

Air Monitoring Network PAZA

Station Information

Calibration Date	March 6, 2017	Previous Calibration	February 15, 2017
Station Number	4	Station Location	Beaverlodge
Reason:	Routine	Install	Removal
Start Time (MST)	14:15:00 PM	End Time (MST)	17:05:00 PM
Barometric Pressure	0.908 atm	Station Temperature	20.0 Deg C
Calibrator	Envionics	Serial Number	3474
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	CR3000	DACS serial No.	5237
DACS voltage range	0 - 5 volt	DACS channel #	9
	Before		After
Calculated slope	0.993262	Calculated slope	1.010085
Calculated intercept	0.006342	Calculated intercept	0.085947

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

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-0.30	ppb	-0.30	ppb
slope	1.080		1.141	
Lamp temp	53.8	mV	53.8	mV
Lamp Intensity A/B	58694/67408	mV	58978/67588	mV
Pressure	676.7	mm Hg	677.5	mm Hg
Flow A	0.794	LPM	0.796	LPM
Flow B	0.735	LPM	0.736	LPM

Calibration Data

Dilution air flow rate (cc/min)	Calibrator Setting	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5018	0.00	0.0	0.5	N/A
5015	0.30	342.2	339.2	1.0089
5020	0.20	229.0	226.2	1.0122
5016	0.10	113.0	111.1	1.0174
5018	0.00	0.0	0.5	As found zero
5018	0.30	342.2	322.4	As found span
Average Correction Factor				1.0128

Calculated value of As Found Response: 319.7 ppm Percent Change of As Found: -6.6%

	before calibration		after calibration	
Auto zero	0.6	ppb	0.7	ppb
Auto span	286.5	ppb	283.0	ppb

Notes: Span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter O3

Air Monitoring Network PAZA



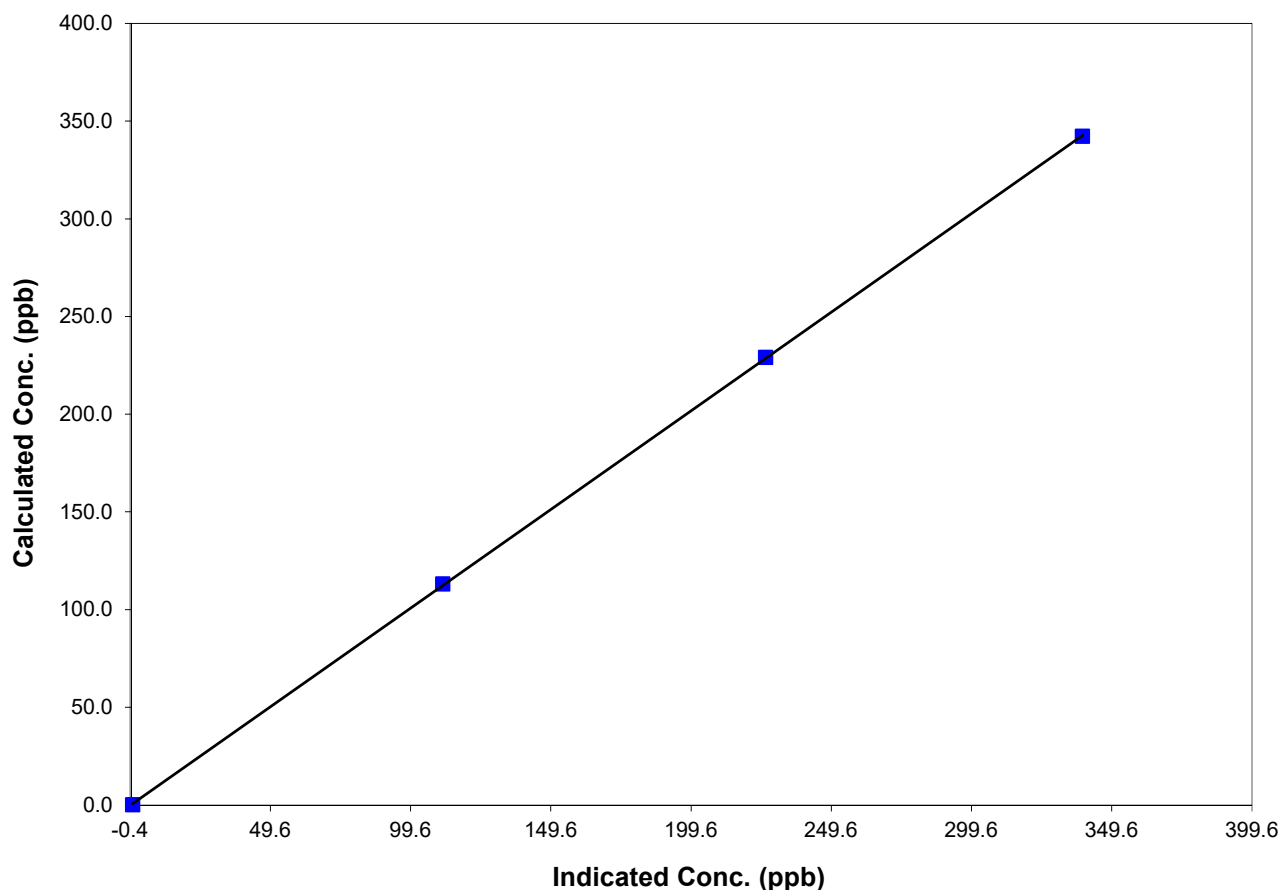
Station Information

Calibration Date	March 6, 2017	Previous Calibration	February 15, 2017
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	14:15:00 PM	End Time (MST)	17:05:00 PM
Analyzer make/model	Teco 49i	Analyzer serial #	1136451236,AMU 1879

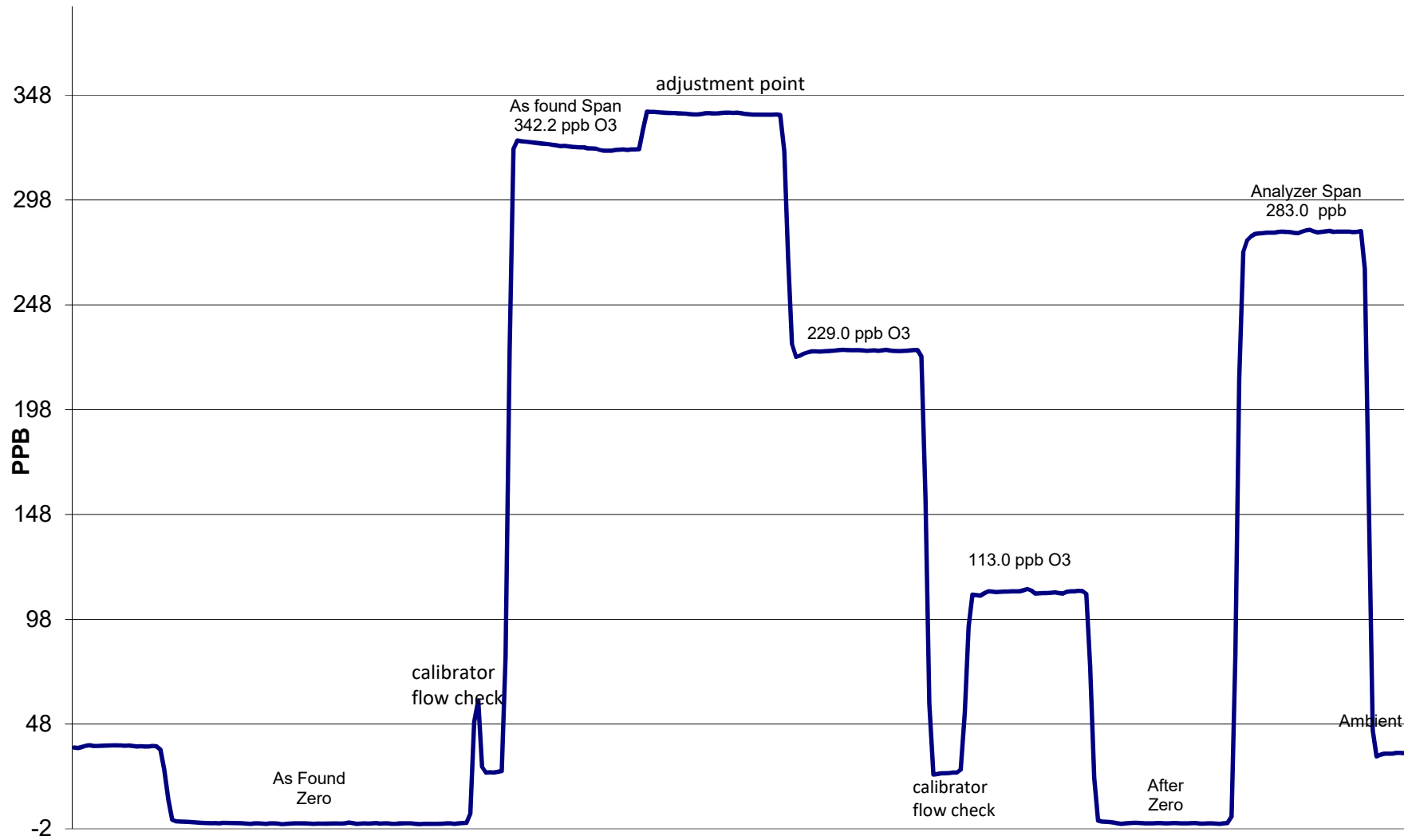
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	NA	Correlation Coefficient	0.999980
342.2	339.2	1.0089		
229.0	226.2	1.0122		
113.0	111.1	1.0174	Slope	1.010085
			Intercept	0.085947

O3 Calibration Curve



O3 Calibration



March 6, 2017

SHARP 5030 PM2.5 Calibration



Station: Beaverlodge
 Location: Agricultural centre
 Start Time (MST): 16:30

Operator: Grover Christiansen
 Date: March 23 2017
 End Time (MST): 17:30

MONITOR INFO / PARAMETER VALUES:

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

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

AUDIT / CALIBRATION RESULTS:

	Ambient Temp. (°C)	Ambient Pres. (mbar)	RH (%)	Leak Check (l/min)	Flow Rate (lpm)	Foil Calibration (ug)	Nephelometer (ug)	Time settings (hh:mm)
Audit values (I)	4.3	924	37.2	16.67	16.67	7181	0.0	16:47
MEASURED (AF)	5.1	917	35.1	16.40	16.10	7030	1.9	16:47
AF Difference (AF-I)	0.8	-7	-2.1	-0.27	-0.57	-151	1.9	0:00
MEASURED (M)	5.1	917	35.1	16.40	16.10	7030	0.0	16:47
Adj Difference (M-I)	0.8	-7	-2.1	-0.27	-0.57	0	0.0	0:00
LIMITS	± 4.0 °C	13.33 mbar(hPa)	± 2.0%	0.8 L/min	± 1.0 L/min	(+/-5%)	(<+/-2 ug/m3)	±2 min

Sample Head Inspect/Cleaning: Heads cleaned

Status of sampling tape: Half roll

Nozzle Inspection / cleanliness: Clean

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

COMMENTS: New detector was installed March 22 2017 and allowed stabilize over night. Calibration went well.

Calibration Report

Parameter SO2
Air Monitoring Network

PAZA



Station Information

Calibration Date	March 25 2017	Previous Calibration	February 16 2017
Station Number	6	Station Location	Valleyview
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	11:45	End Time (MST)	14:50
Barometric Pressure	0.922 atm	Station Temperature	22.0 Deg C
Calibrator	Envionics	Serial Number	6586
Cal Gas Concentration	50 ppm	Cal Gas Exp Date	February 18, 2019
Gas Cylinder Num.	LL105132		
DACS make	CR3000	DACS serial No.	5409
DACS voltage range	0 - 5 volt	DACS channel #	4
	<u>Before</u>		<u>After</u>
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.016362	Calculated slope	0.992129
Calculated intercept	1.577218	Calculated intercept	2.329120
Analyzer make	TEI 43C	Analyzer serial #	609716239

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	16.9		16.7	
Coefficient	1.011		1.021	
UV Lamp Voltage	743	LPM	742	LPM
Chamber Temp	43	V	43	V
Perm Gas Temp	45	C	45	C
Pressure	669.3	in Hg	667.5	in Hg
Sample Flow	0.482	LPM	0.481	LPM
Lamp Intensity	47418	Hz	47223	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	0.4	N/A
4998	39.97	396.7	398.9	0.9944
4998	19.98	199.1	196.6	1.0128
4998	10.01	99.9	96.0	1.0412
4995	0.00	0.0	0.4	As found zero
4998	39.97	396.7	395.0	As found span
Average Correction Factor				1.0161

Calculated value of As Found Response: 402.6 ppm Percent Change of As Found: -1.5%

	before calibration		after calibration	
Auto zero	0.1	ppm	0.5	ppm
Auto span	293.5	ppm	288.8	ppm

Notes: Slight span adjustment made. Run adjustment point.
Daily span sequence started at the end of manual after zero, let it go.

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



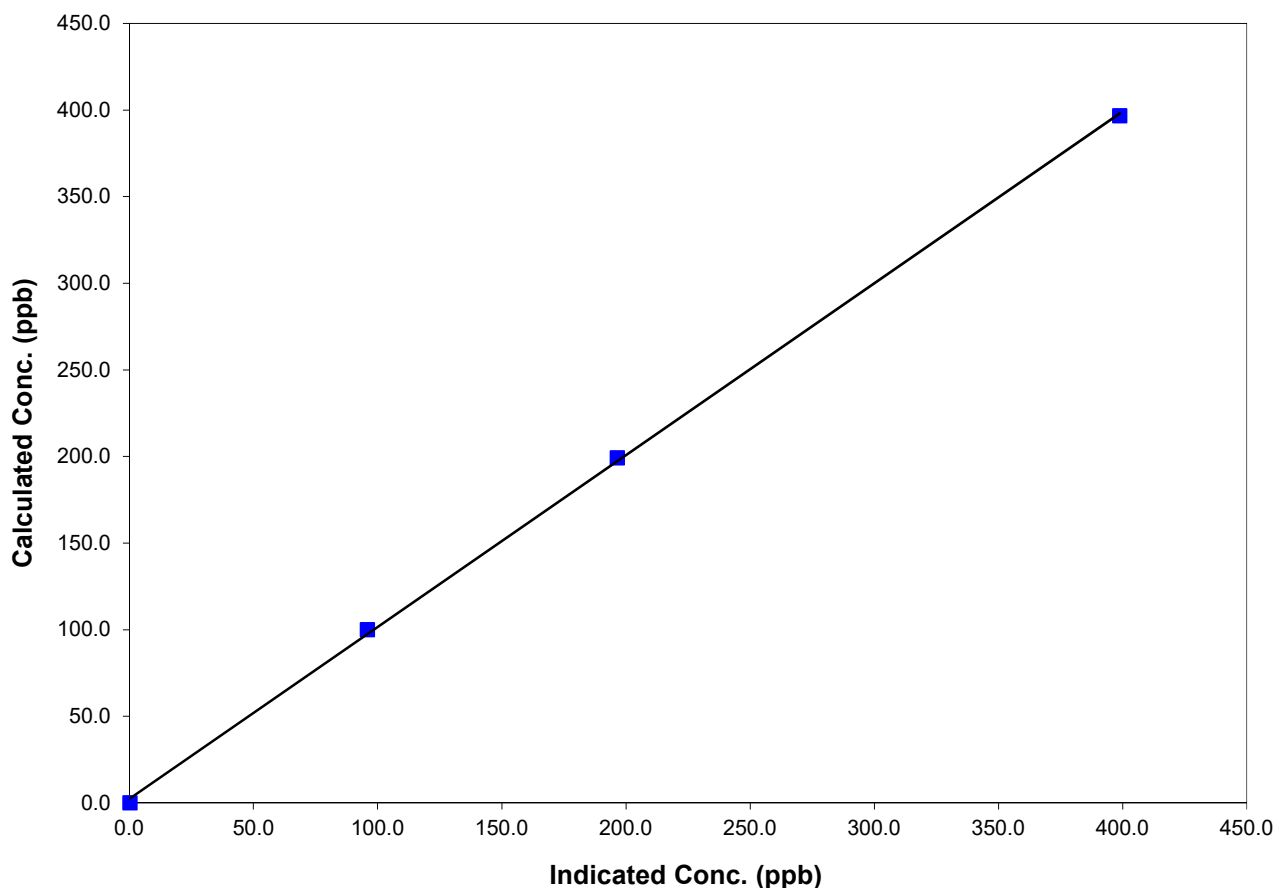
Station Information

Calibration Date	March 25 2017	Previous Calibration	February 16 2017
Station Number	6	Station Location	Valleyview
Start Time (MST)	11:45	End Time (MST)	14:50
Analyzer make/model	TEI 43C	Analyzer serial #	609716239

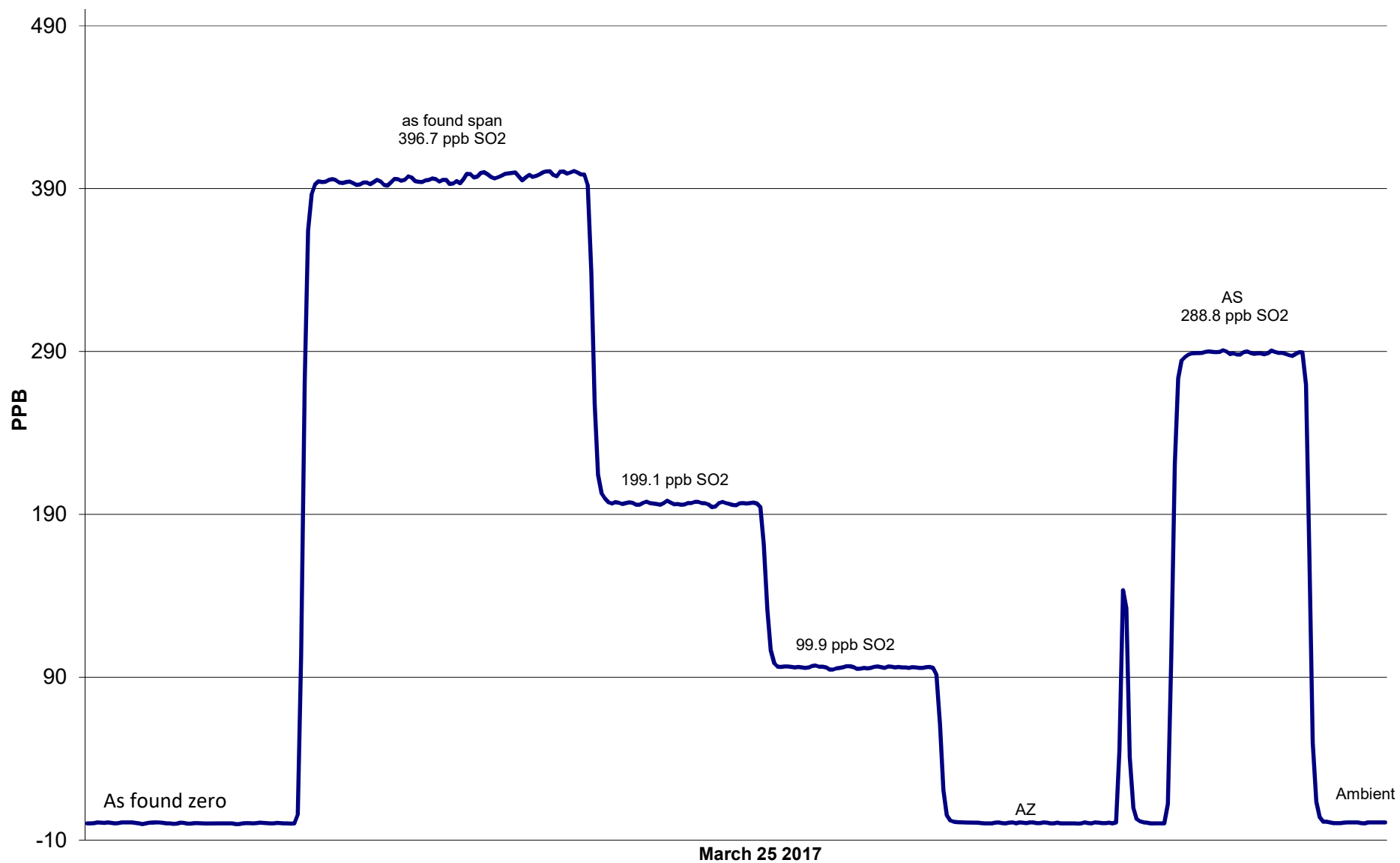
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A	Correlation Coefficient	0.999792
396.7	398.9	0.9944		
199.1	196.6	1.0128		
99.9	96.0	1.0412	Slope	0.992129
			Intercept	2.329120

SO2 Calibration Curve



SO2 Calibration



Calibration Report



Parameter H2S

Air Monitoring Network PAZA

Station Information

Calibration Date	March 25 2017	Previous Calibration	February 16 2017
Station Number	6	Station Location	Valleyview
Reason:	Routine	Install	Removal
Start Time (MST)	9:30	End Time (MST)	12:52
Barometric Pressure	0.925 atm	Station Temperature	22.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Concentration	10.2 ppm	Cal Gas Expiry Date	July 03 2016
Gas Cert Reference	LL110781		
DACS make	CR3000	DACS serial No.	5409
DACS voltage range	0 - 5 volt	DACS channel #	9
	<u>Before</u>		<u>After</u>
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.002207	Calculated slope	0.985232
Calculated intercept	0.983673	Calculated intercept	0.503835
Analyzer make	TEI Model 43i - APSCB	Analyzer serial #	701120010

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	9.6	ppb	9.6	ppb
Coefficient	0.861		0.861	
Lamp Voltage	794	V	793	V
Chamber Temp	44.8	c	44.9	c
Perm Oven Temp	44.9	c	45	c
Pressure	518.40	mm Hg	506.20	mm Hg
Sample Flow	0.359	ccm	0.352	lpm
Lamp Intensity	91	%	91	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4996	0.00	0.0	0.1	N/A
4996	39.97	81.0	82.0	0.9874
4996	19.98	40.6	40.2	1.0117
6996	10.01	14.6	13.9	1.0451
4997	9.97		0.6	Sox Test
4996	0.00	0.0	0.5	As found zero
4996	39.93	80.9	79.6	As found span
Average Correction Factor				1.0147

Calculated value of As Found Response: 80.28 ppm Percent Change of As Found: 0.7%

	before calibration		after calibration	
Auto zero	-0.5	ppm	0.5	ppm
Auto span	72.0	ppm	71.7	ppm

Notes: Slight adjustment made span. Slight adjustment zero.
 Sox scrubber check was not performed
 All points used for calibration were checked with Bios after calibrator had settled in.
 Entered wrong dilution flow for last point, corrected and settled in.

Calibration Summary

Parameter H2S

Air Monitoring Network PAZA



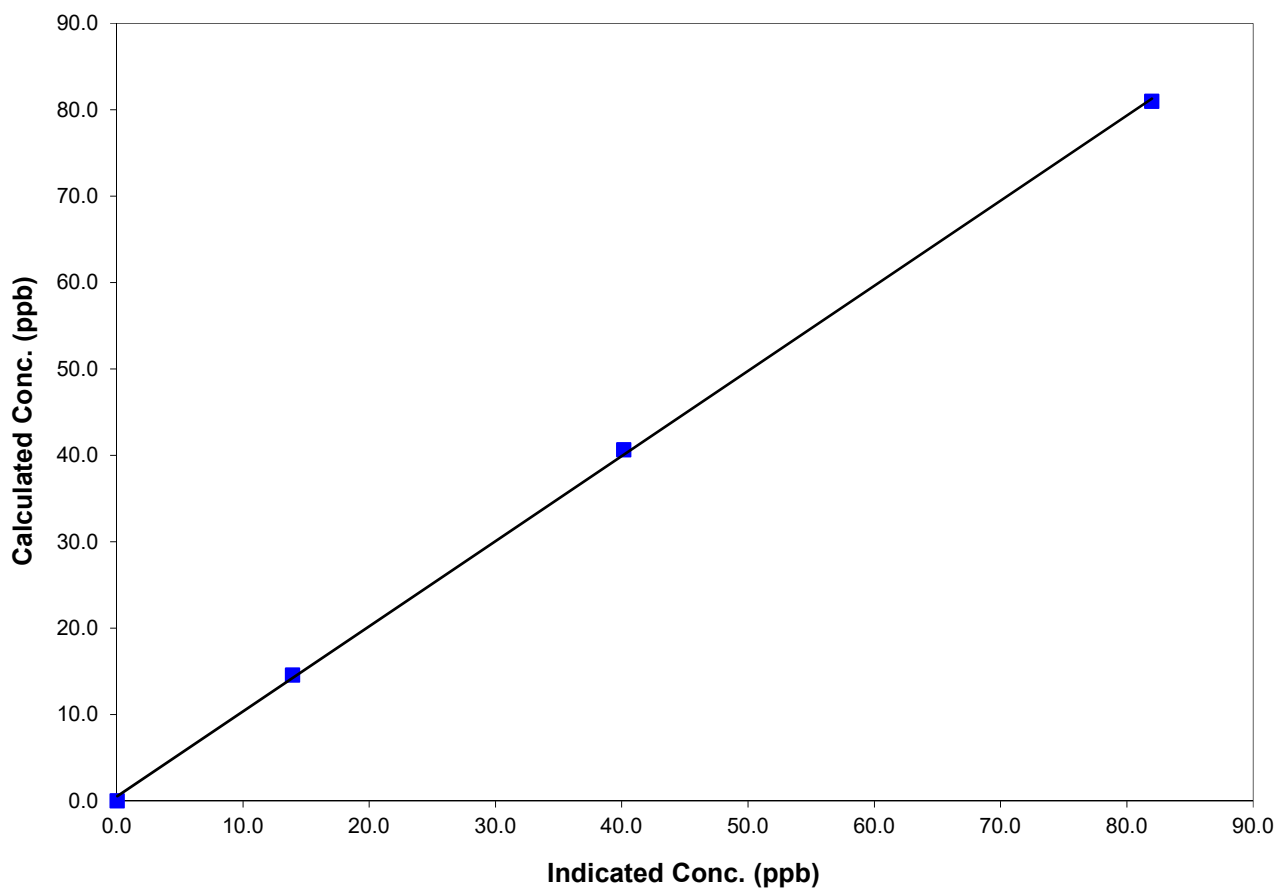
Station Information

Calibration Date	March 25 2017	Previous Calibration	February 16 2017
Station Number	6	Station Location	Valleyview
Start Time (MST)	9:30	End Time (MST)	12:52
Analyzer make/model	TEI Model 43i - APSCB	Analyzer serial #	701120010

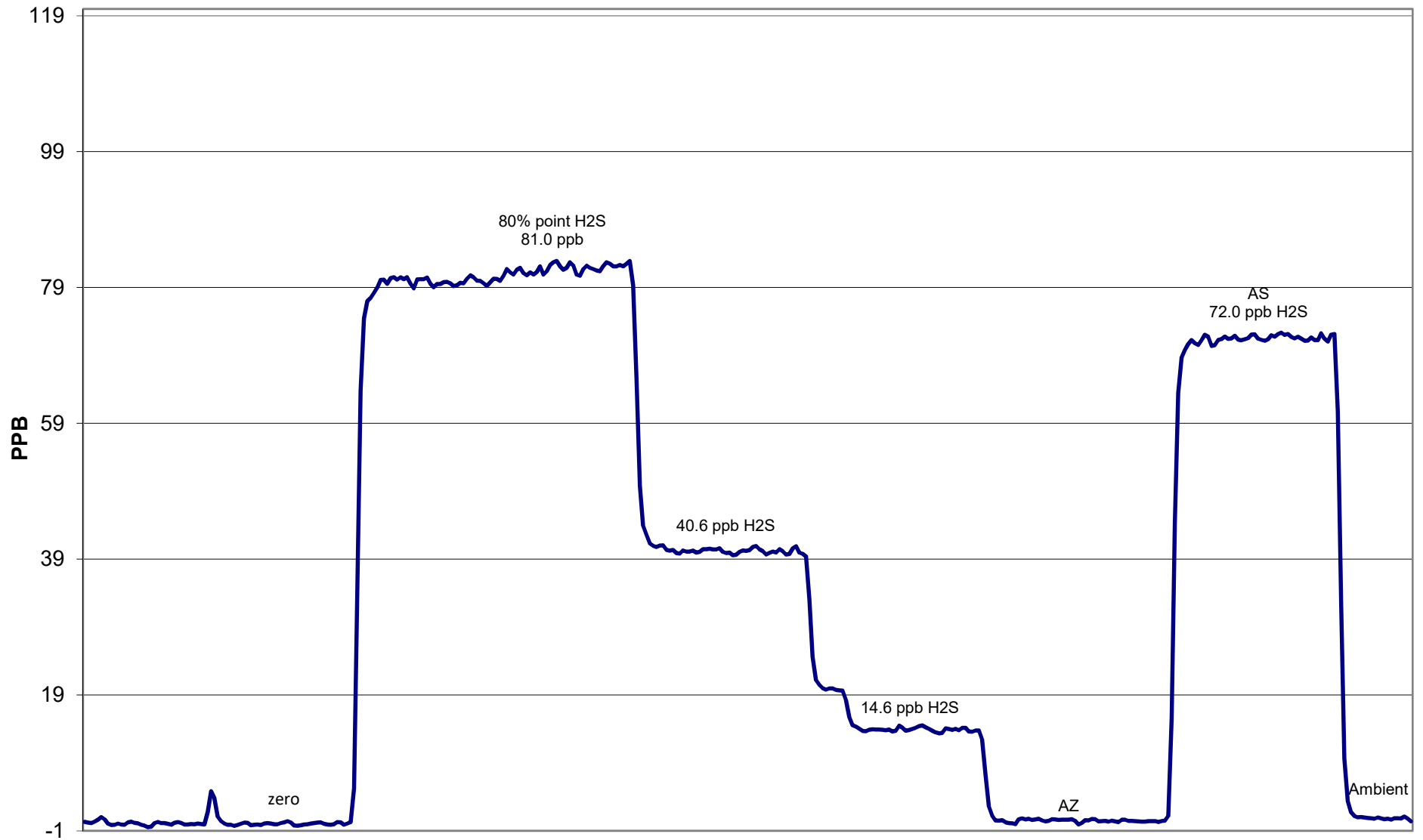
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999777
81.0	82.0	0.9874		
40.6	40.2	1.0117		
14.6	13.9	1.0451	Slope	0.985232
			Intercept	0.503835

H2S Calibration Curve



H2S Calibration



March 25 2017

Calibration Report

Parameter SO₂

Air Monitoring Network PAZA



Station Information

Calibration Date	March 31, 2017	Previous Calibration	February 9, 2017
Station Number	1	Station Location	Donnelly
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	12:10	End Time (MST)	15:00
Barometric Pressure	0.921 mm	Station Temperature	18.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Concentration	50 ppm	Cal Gas Expiry Date	2/8/2019
Correction factor	0.031523	Cal Gas Cylinder #	LL105132
DACS make	CR1000	DACS serial No.	3980
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	0.989887	Calculated slope	0.989678
Calculated intercept	0.717388	Calculated intercept	3.611122
Analyzer make	Teco 43i	Analyzer serial #	1207452008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	8		8	
coefficient	0.908		0.916	
Lamp Voltage	869	volts	869	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	665.9	mm Hg	665.9	mm Hg
Sample Flow	0.388	ccm	0.388	ccm
Lamp Intensity	97	%	97	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.00	-0.4	N/A
4996	39.96	396.7	399.1	0.9942
4997	19.97	199.0	195.0	1.0208
4996	9.99	99.8	94.6	1.0550
4995	0.0	0.0	-0.4	As Found Zero
4996	39.96	396.7	387.2	As Found Span
Average Correction Factor				1.0233

Calculated value of As Found Response: 384.398 ppm Percent Change of As Found: **3.1%**

	before calibration		after calibration	
Auto zero	0.3	ppm	-0.4	ppm
Auto span	271.9	ppm	268.7	ppm

Notes: Span adjustments made.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



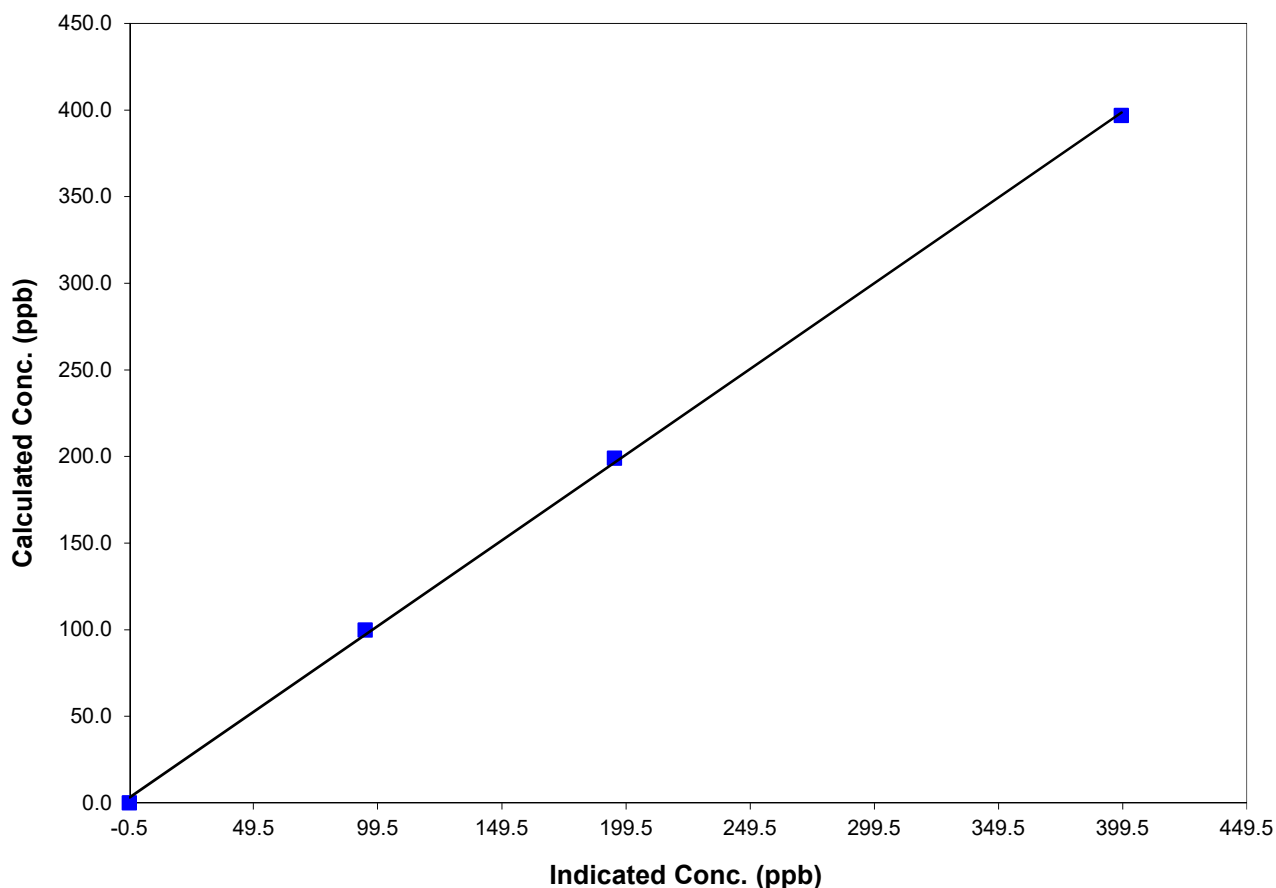
Station Information

Calibration Date	March 31, 2017	Previous Calibration	February 9, 2017
Station Number	1	Station Location	Donnelly
Start Time (MST)	12:10	End Time (MST)	15:00
Analyzer make/model	Teco 43i	Analyzer serial #	1207452008

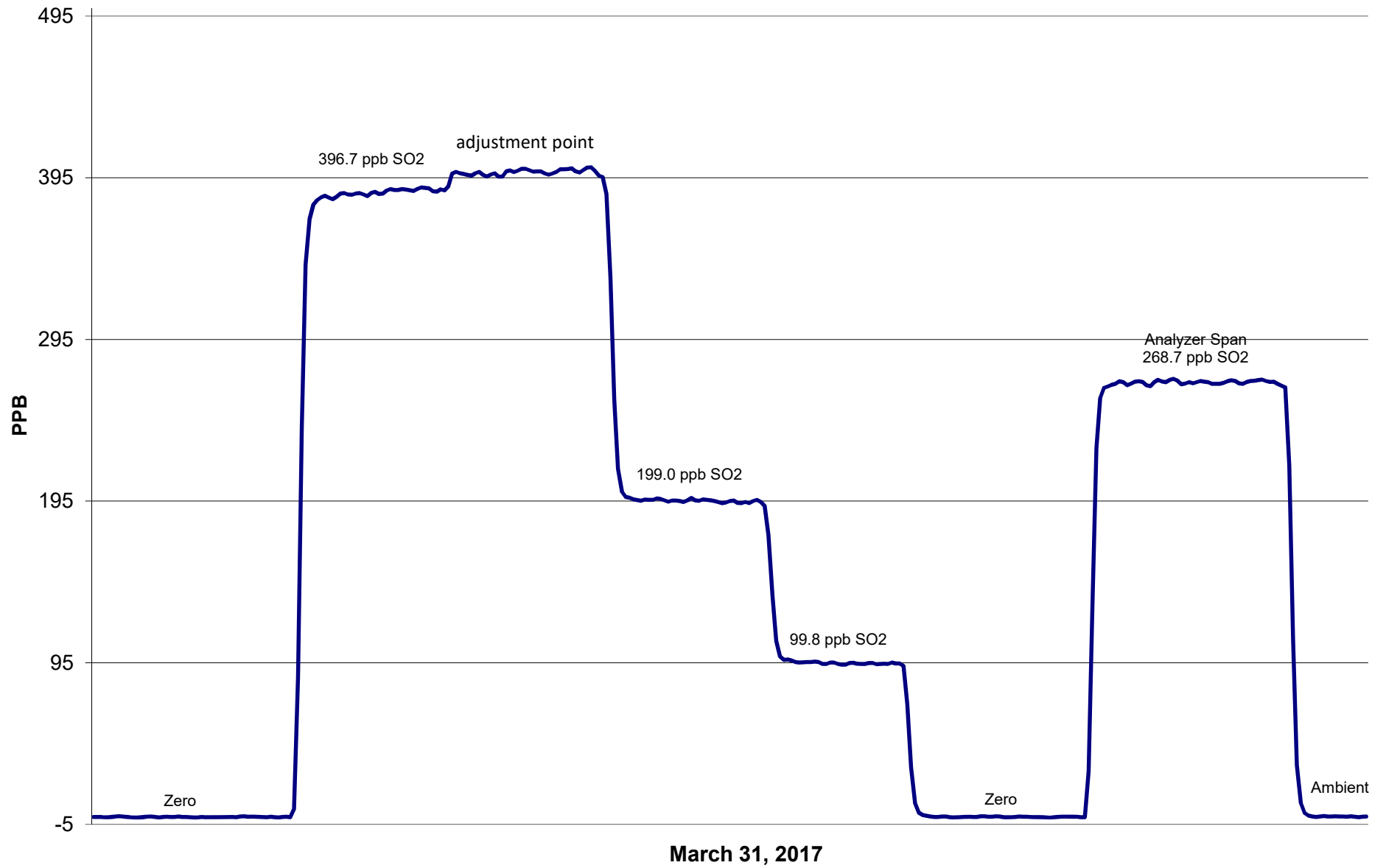
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.4	N/A	Correlation Coefficient	0.999695
396.7	399.1	0.9942		
199.0	195.0	1.0208		
99.8	94.6	1.0550	Slope	0.989678
			Intercept	3.611122

SO2 Calibration Curve



SO2 Calibration



Calibration Report



Parameter H2S

Air Monitoring Network PAZA

Station Information

Calibration Date	March 31, 2017	Previous Calibration	February 9, 2017
Station Number	1	Station Location	Donnelly
Reason:	Routine	Install	Removal
Start Time (MST)	10:00	End Time (MST)	13:13
Barometric Pressure	0.928 mm	Station Temperature	18.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Conc	10.2 ppm	Cal Gas Expiry Date	7/8/2016
Correction factor	0.031762	Cal Gas Cylinder #	LL103793
DACS make	CR1000	DACS serial No.	3980
DACS voltage range	0 - 5 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
Calculated slope	1.007082	Calculated slope	0.992341
Calculated intercept	0.068589	Calculated intercept	0.293702
Analyzer make	Thermo 450i	Analyzer serial #	1207452006

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	16.3	ppb	16.6	ppb
coefficient	1.031		1.073	
Lamp Voltage	812	volts	809	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	486.4	mm Hg	486.4	mm Hg
Sample Flow	0.756	lpm	0.78	lpm
Lamp Intensity	90	mv	90	mv

Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.00	0.1	N/A
4996	39.96	80.94	81.5	0.9936
4996	19.96	40.59	40.3	1.0066
6997	9.99	14.54	14.1	1.0335
4995	0.00	0.00	0.2	As Found Zero
4996	39.96	80.94	78.0	As Found Span
Average Correction Factor				1.0113

Calculated value of As Found Response: 78.46 ppm Percent Change of As Found: **3.1%**

	before calibration		after calibration	
Auto zero	0.2	ppm	0.0	ppm
Auto span	64.4	ppm	66.0	ppm

Notes: Span adjustment made.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter H2S

Air Monitoring Network PAZA



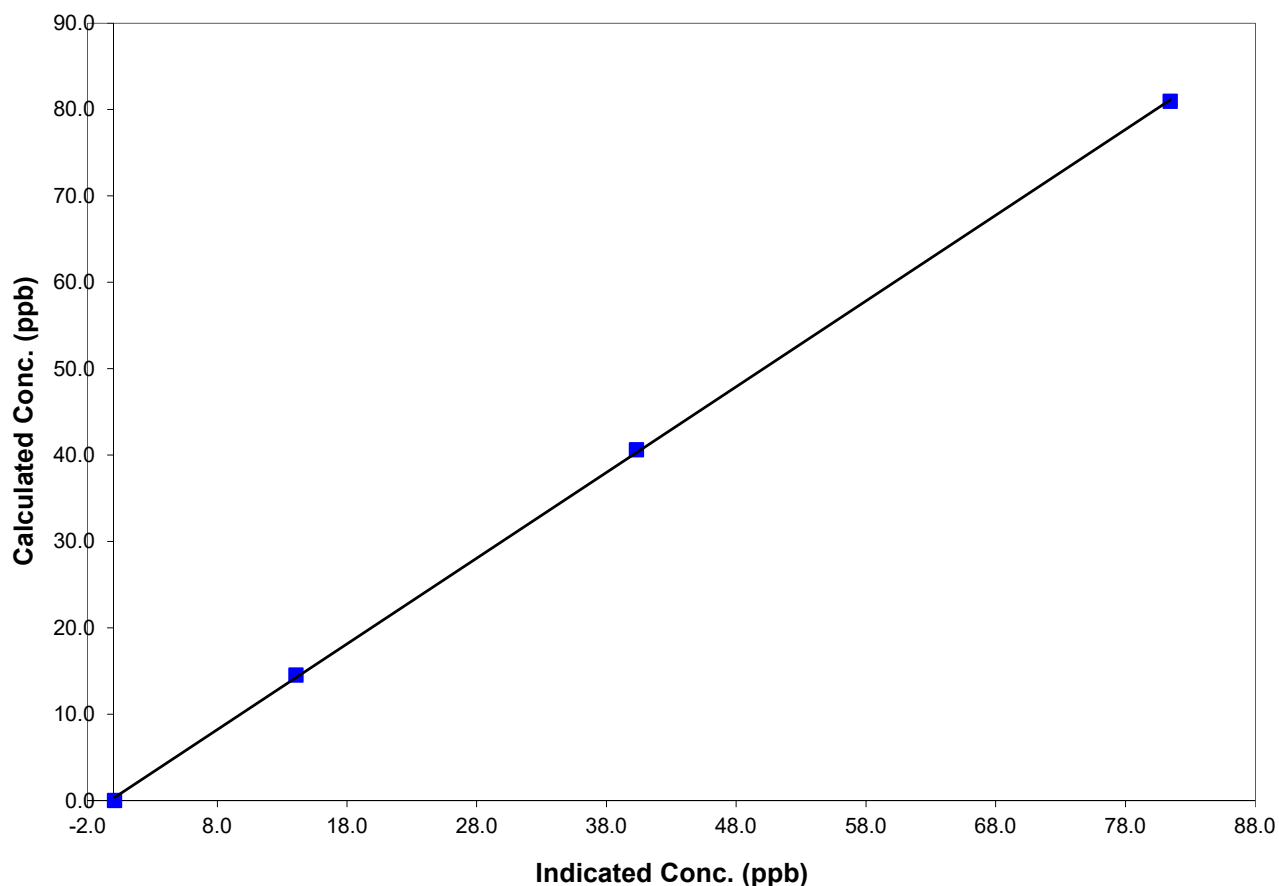
Station Information

Calibration Date	March 31, 2017	Previous Calibration	February 9, 2017
Station Number	1	Station Location	Donnelly
Start Time (MST)	10:00	End Time (MST)	13:13
Analyzer make/model	Thermo 450i	Analyzer serial #	1207452006

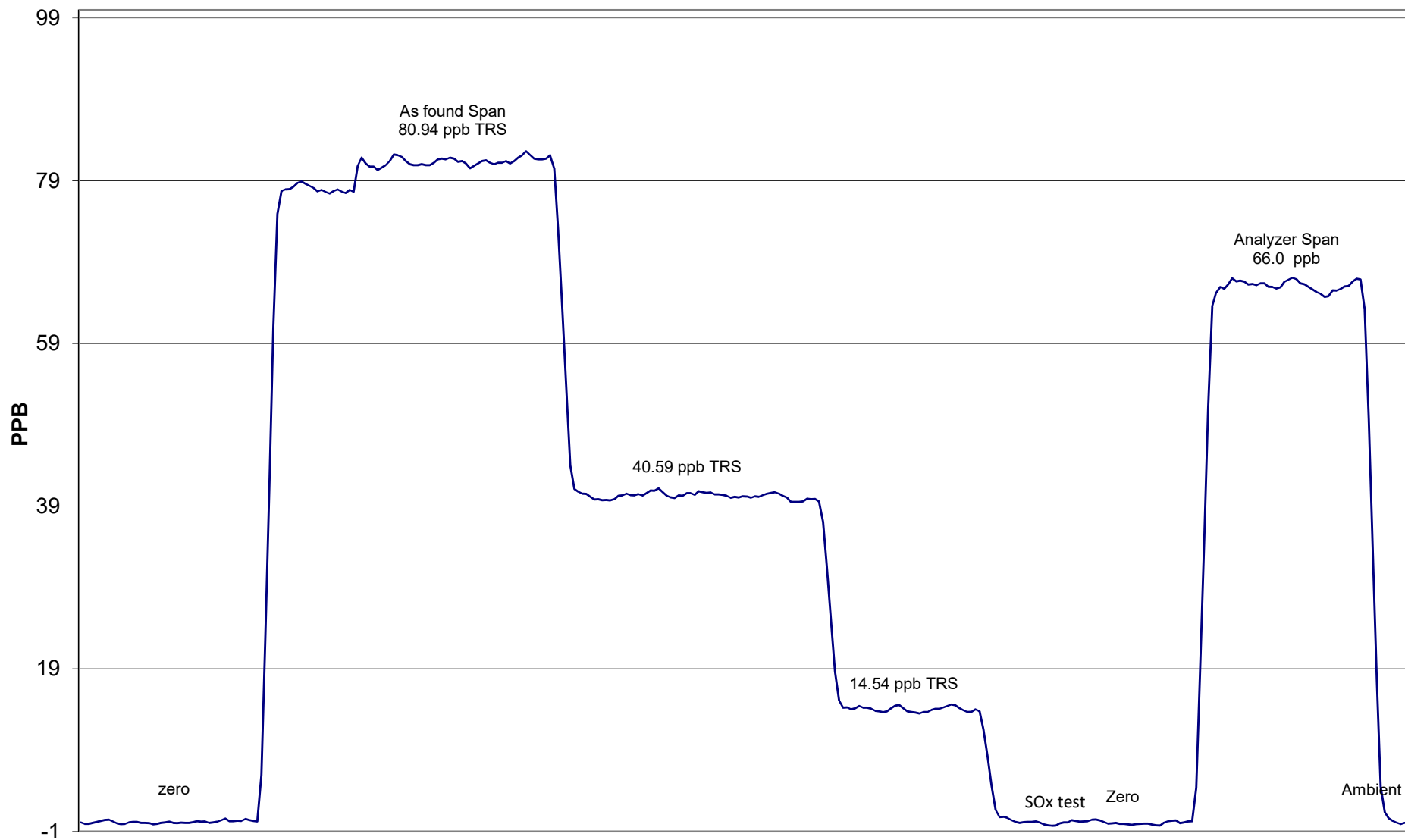
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999910
80.9	81.5	0.9936		
40.6	40.3	1.0066		
14.5	14.1	1.0335	Slope	0.992341
			Intercept	0.293702

TRS Calibration Curve



H2S Calibration



March 31, 2017

Calibration Report

Parameter SO2
Air Monitoring Network PAZA



Station Information

Calibration Date	March 7, 2017	Previous Calibration	February 8, 2017
Station Number	10	Station Location	Clairmont
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	11:00	End Time (MST)	13:50:00 PM
Barometric Pressure	0.939 Atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Concentration	50 ppm	Cal Gas Expiry Date	8/2/2019
Gas Cert Reference	LL105132		
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volt	DACS channel #	2
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.001202	Calculated slope	0.984799
Calculated intercept	1.697254	Calculated intercept	3.408187
Analyzer make	TEI 43C	Analyzer serial #	436610005

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	23.7		24.2	
Coefficient	1.056		1.102	
UV Lamp Voltage	897	V	897	V
Chamber Temp	44.4	C	44.4	C
Perm Gas Temp	45	C	45	C
Pressure	684.5	mm Hg	685.6	mm Hg
Sample Flow	0.471	LPM	0.471	LPM
Lamp Intensity	30315	Hz	30316	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4932	0.00	0.0	0.1	N/A
4959	40.14	401.5	406.1	0.9887
4968	20.30	203.5	201.0	1.0125
4931	10.07	101.9	96.8	1.0525
4932	0.00	0.0	0.1	As found zero
4959	40.14	401.5	383.4	As found span
Average Correction Factor				1.0179

Calculated value of As Found Response: 385.434 ppm Percent Change of As Found: 4.0%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	202.7	ppm	207.9	ppm

Notes: Span adjustments made

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



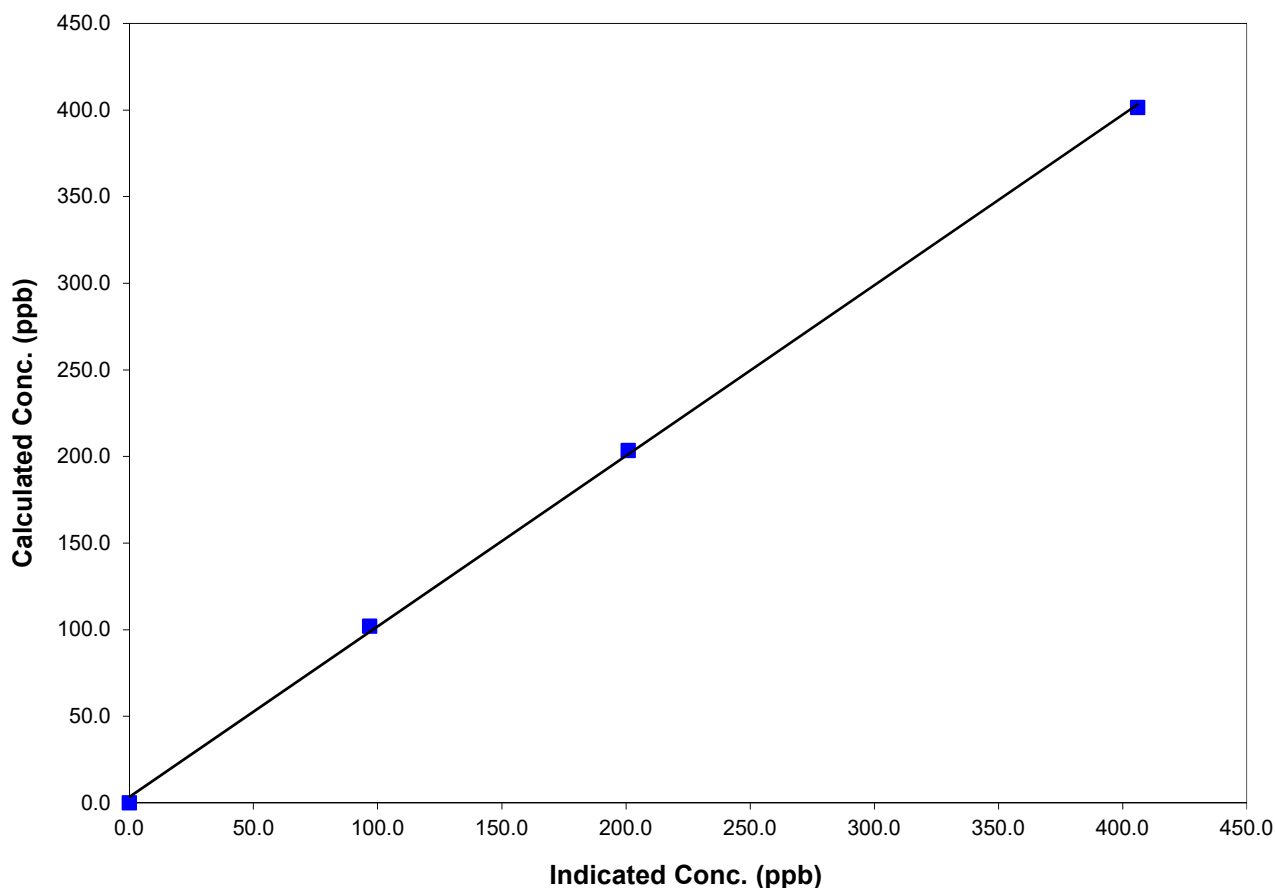
Station Information

Calibration Date	March 7, 2017	Previous Calibration	February 8, 2017
Station Number	10	Station Location	Clairmont
Start Time (MST)	11:00	End Time (MST)	13:50:00 PM
Analyzer make/model	TEI 43C	Analyzer serial #	436610005

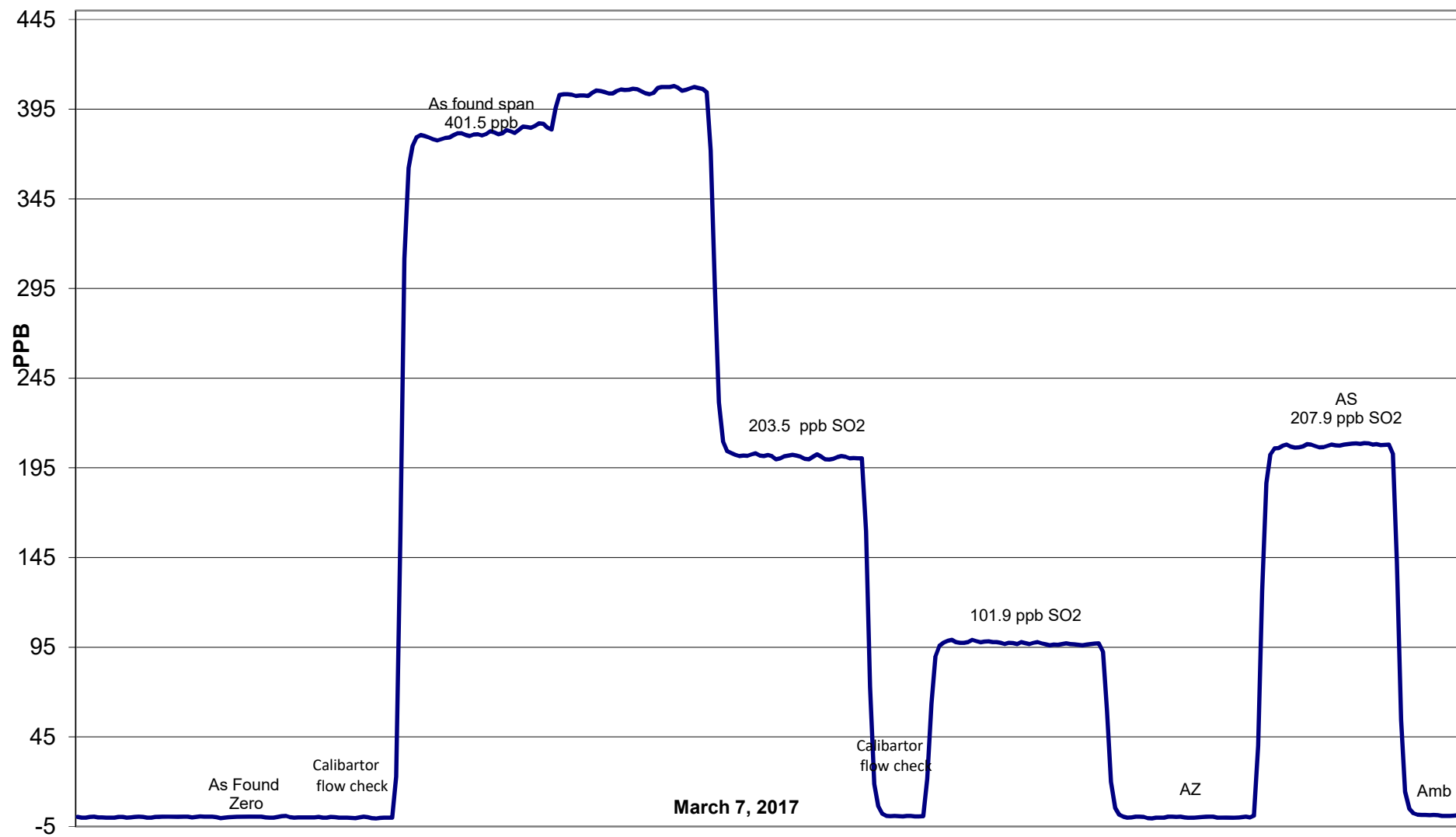
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999659
401.5	406.1	0.9887		
203.5	201.0	1.0125		
101.9	96.8	1.0525	Slope	0.984799
			Intercept	3.408187

SO2 Calibration Curve



SO2 Calibration



Calibration Report

Parameter
Air Monitoring Network

NO_x-NO-NO₂
PAZA



Station Information

Calibration Date	March 7, 2017	Previous Calibration	February 8, 2017
Station Number	10	Station Location	Rycroft
Reason:	Routine	Installation	Removal
Start Time (MST)	11:00	End Time (MST)	15:05:00 PM
Barometric Pressure	0.939 Atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
NO Cal Gas Conc	48.6 ppm	Cal Gas Expiry Date	August 2, 2019
NOx Cal Gas Conc	48.9 ppm	Cal Gas Serial #	LL105132

DACS Information

DACS make	CR3000	DACS serial No.	5407
-----------	--------	-----------------	------

Parameter		NO2	NOx	NO
Before	Data Slope	1.002831	1.004844	0.999778
	Data Offset	0.496798	1.733560	1.414893
After	Data Slope	0.993252	1.000424	0.995944
	Data Offset	-0.367524	2.351947	2.519440
Channel #		8	6	7
Voltage Range		0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model	TEI 42i	Analyzer serial #	0701120011
---------------------	---------	-------------------	------------

Test Point	before		after	
Concentration range	0-500	ppb	0-500	ppb
NO offset	5.6	mV	5.7	mV
NOx bkgnd	5.7	mV	5.8	mV
NO coefficient	0.922		0.939	
NOx coefficient	0.999		1.000	
NO2 conv temp	325.8	Deg C	325.9	Deg C
PMT Temp	-3.0	Deg C	-3.0	Deg C
PMT Volt	-835.1	mV	-834.7	mV
R Cell Press	170.2	in Hg	171.4	in Hg
Sample Flow	0.851	LPM	0.851	LPM

Notes: Span adjustments made

Calibration Report

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



Station Information

Calibration Date: March 7, 2017 Station Location: Rycroft

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4932	0.00	0.0	0.0	0.0	0.2	-0.2	0.2	N/A	N/A
1	4959	40.14	392.6	390.2	2.4	391.5	390.6	-0.9	1.0030	0.9991
2	4968	20.30	199.0	197.8	1.2	195.0	194.4	-0.4	1.0207	1.0172
3	4931	10.07	99.7	99.0	0.6	95.0	94.9	-0.1	1.0495	1.0437
AFZ	4932	0.00	0.0	0.0	0.0	0.2	-0.2	0.2	0.0000	0.0000
AFS	4959	40.14	392.6	390.2	0.8	383.7	383.0	-1.1	1.0232	1.0189
Average Correction Factor									1.0244	1.0200

As Found Concentrations: NO_x= 387.1 NO= 384.5 As Found Percent Change NO_x= -1.4% NO= -1.5%

GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.93 ccm

O3 Setpoint (ppb)	Indicated NOx high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	-0.2	-0.2	0.0	0.2	-0.2	0.2	N/A	N/A	N/A	N/A
NO point	385.8	385.8	0.0	386.7	385.8	-1.2	0.9976	1.0000	N/A	N/A
300	385.8	40.9	344.9	390.1	40.9	347.5	0.9890	1.0000	0.9927	100.7%
200	385.8	152.5	233.3	390.0	152.5	235.4	0.9892	1.0000	0.9910	100.9%
100	385.8	273.7	112.1	389.3	273.7	113.4	0.9910	1.0000	0.9888	101.1%
Average Correction Factor							0.9898	1.0000	0.9908	100.9%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.0	0.1	0.0	ppb	-0.3	-0.2	-0.3	ppb
Auto span	169.3	167.4	1.2	ppb	161.5	160.1	0.6	ppb

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



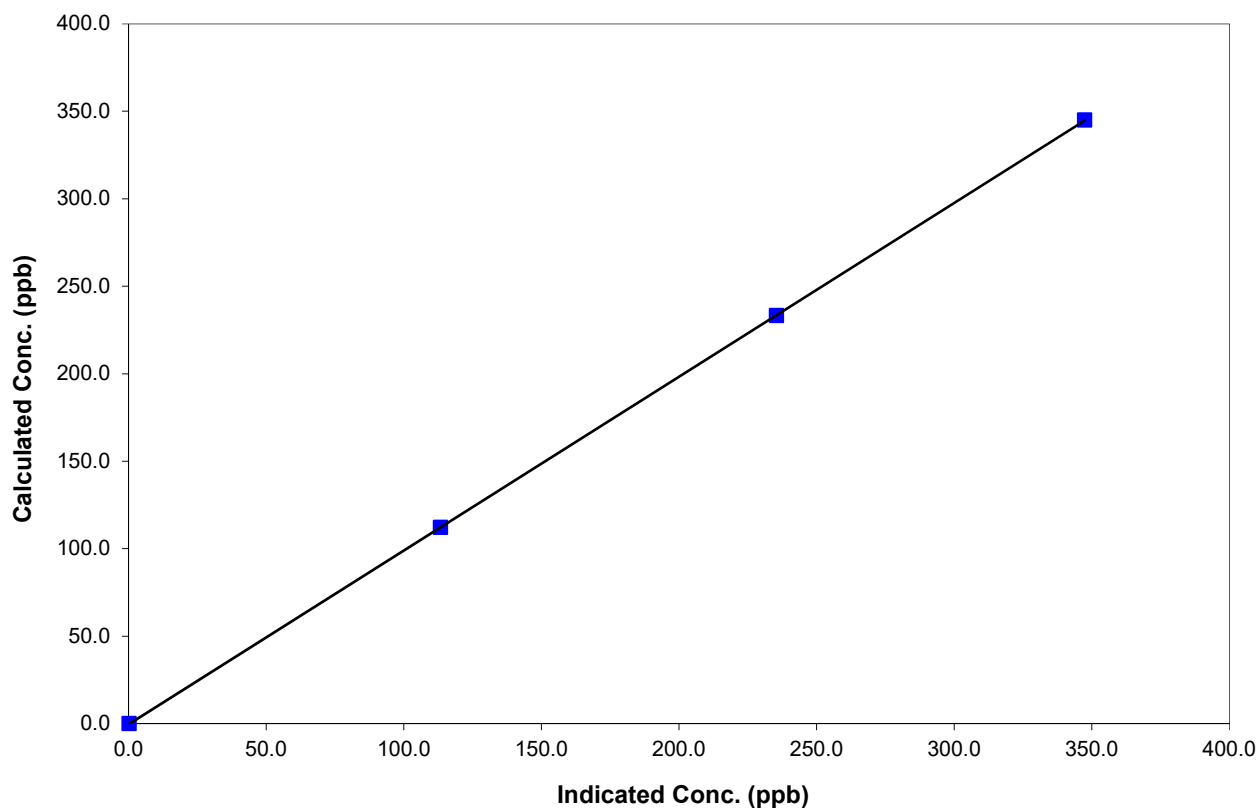
Station Information

Calibration Date	March 7, 2017	Previous Calibration	February 8, 2017
Station Number	10	Station Location	Rycroft
Start Time (MST)	11:00	End Time (MST)	15:05:00 PM
Analyzer make	TEI 42i	Analyzer serial #	0701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999999
344.9	347.5	0.9927		
233.3	235.4	0.9910		
112.1	113.4	0.9888	Slope	0.993252
			Intercept	-0.367524

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



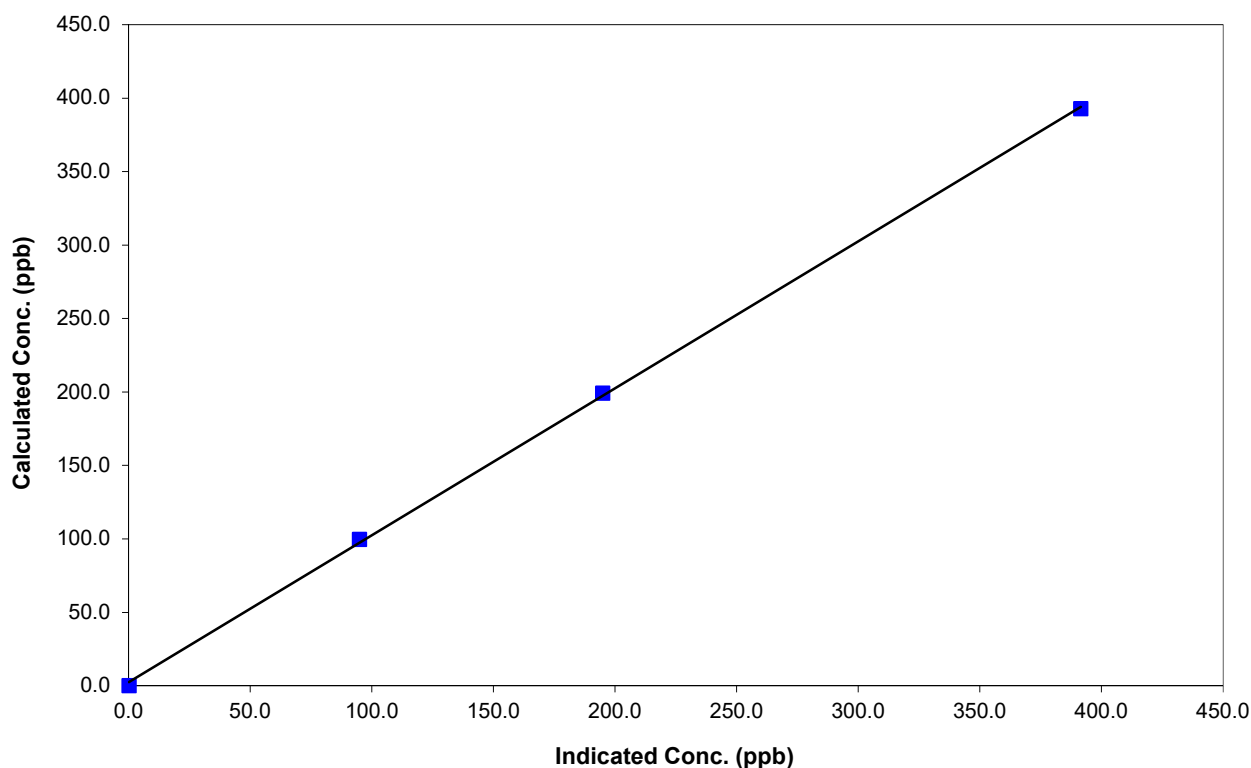
Station Information

Calibration Date	March 7, 2017	Previous Calibration	February 8, 2017
Station Number	10	Station Location	Rycroft
Start Time (MST)	11:00	End Time (MST)	15:05:00 PM
Analyzer make	TEI 42i	Analyzer serial #	0701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999806
392.6	391.5	1.0030		
199.0	195.0	1.0207		
99.7	95.0	1.0495	Slope	1.000424
			Intercept	2.351947

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



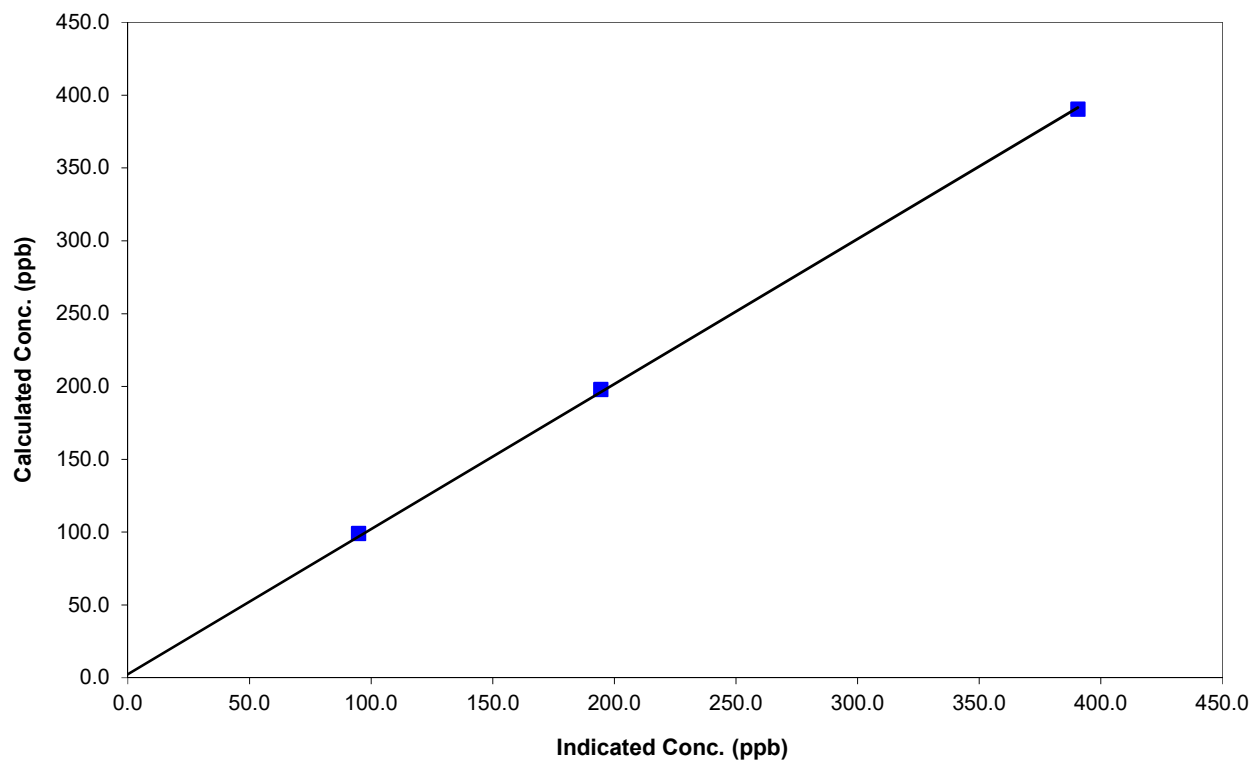
Station Information

Calibration Date	March 7, 2017	Previous Calibration	February 8, 2017
Station Number	10	Station Location	Rycroft
Start Time (MST)	11:00	End Time (MST)	15:05:00 PM
Analyzer make	TEI 42i	Analyzer serial #	0701120011

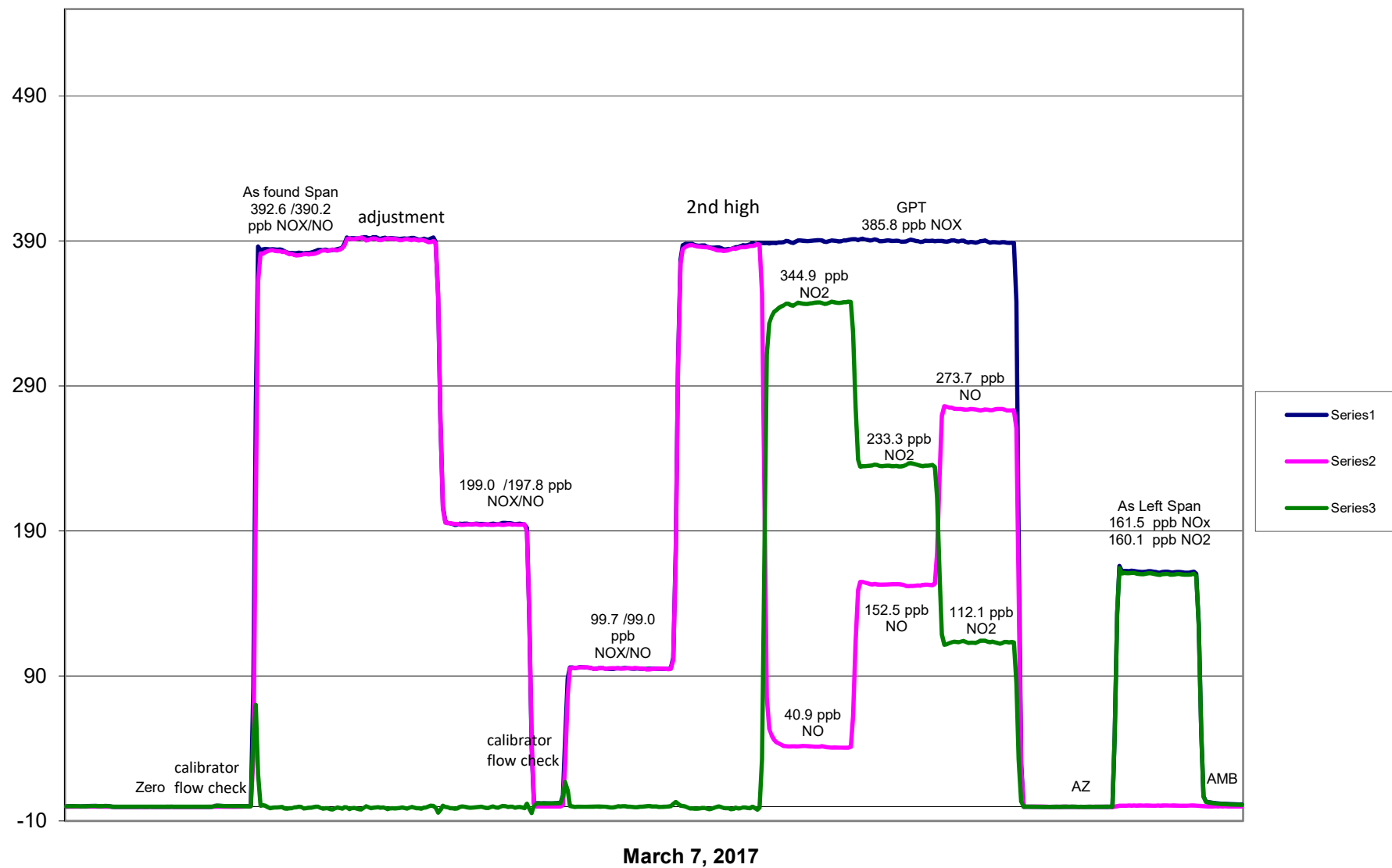
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.2	N/A	Correlation Coefficient	0.999835
390.2	390.6	0.9991		
197.8	194.4	1.0172		
99.0	94.9	1.0437	Slope	0.995944
			Intercept	2.519440

NO Calibration Curve



NO_x Calibration



Calibration Report



Parameter 03

Air Monitoring Network PAZA

Station Information

Calibration Date	March 7 2017	Previous Calibration	February 8 2017
Station Number	10	Station Location	Rycroft
Reason:	Routine	Install	Removal
		Other:	

Start Time (MST)	13:45:00 PM	End Time (MST)	16:24:00 PM
Barometric Pressure	0.939 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	1.012709	Calculated slope	1.005870
Calculated intercept	0.609958	Calculated intercept	-0.427906

Analyzer make	Model 49-I	Analyzer serial #	1153630156
---------------	------------	-------------------	------------

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	0.6	ppb	0.7	ppb
Span	1.181		1.224	
Cell A intensity	89466	Hz	89123	Hz
Cell B intensity	104835	Hz	104567	Hz
Pressure	705.60	in Hg	706.10	in Hg
Cell A Flow	0.696	ccm	0.696	ccm
Cell B Flow	0.692	cmm	0.691	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)
5005	0.00	0.0	-0.1	N/A
5008	0.30	344.9	344.0	1.0025
5012	0.20	233.3	230.4	1.0125
5010	0.10	112.1	113.6	0.9865
5005	0.00	0.0	-0.1	As found zero
5008	0.30	344.9	330.7	As found span
Average Correction Factor				1.0005

Calculated value of As Found Response: 335.6 ppm Percent Change of As Found: -2.7%

	before calibration		after calibration	
Auto zero	0.2	ppb	-0.1	ppb
Auto span	404.8	ppb	387.8	ppb

Notes: Span adjustment

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter O3

Air Monitoring Network PAZA



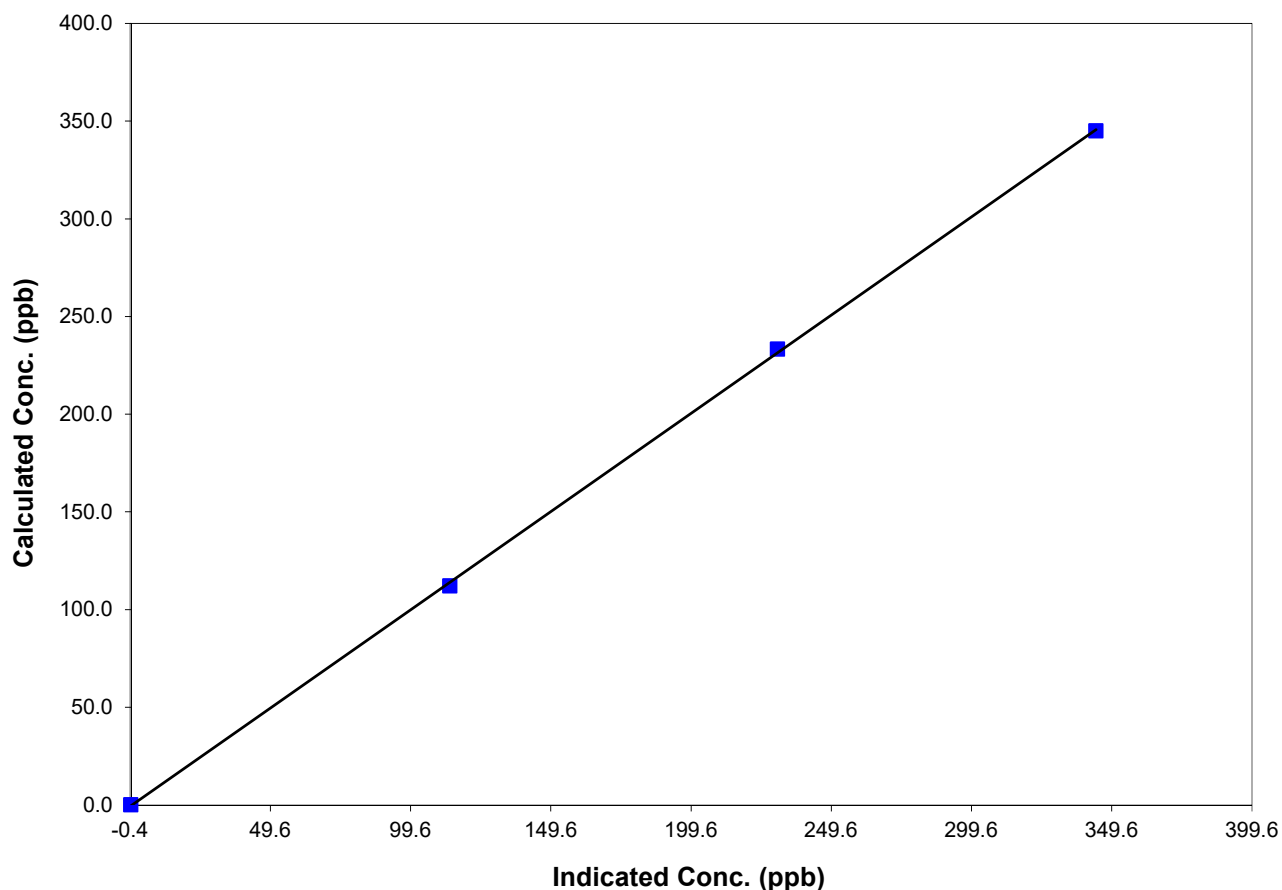
Station Information

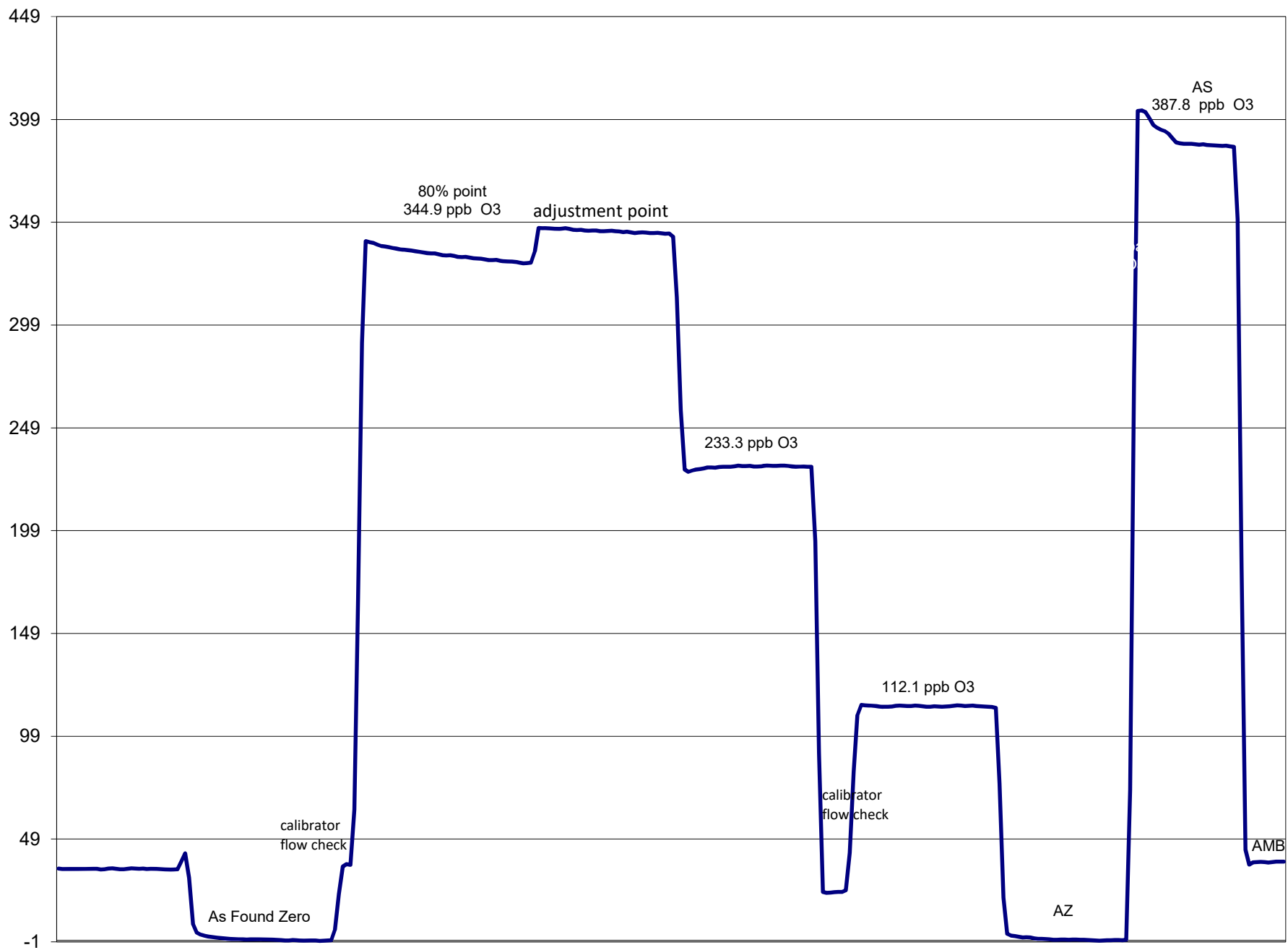
Calibration Date	March 7 2017	Previous Calibration	February 8 2017
Station Number	10	Station Location	Rycroft
Start Time (MST)	13:45:00 PM	End Time (MST)	16:24:00 PM
Analyzer make/model	Model 49-I	Analyzer serial #	1153630156

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	NA	Correlation Coefficient	0.999883
344.9	344.0	1.0025		
233.3	230.4	1.0125		
112.1	113.6	0.9865	Slope	1.005870
			Intercept	-0.427906

O3 Calibration Curve





March 7 2017

Calibration Report



Parameter 03

Air Monitoring Network PAZA

Station Information

Calibration Date	March 17 2017	Previous Calibration	March 7 2017
Station Number	10	Station Location	Rycroft
Reason:	Routine	☐ Install	☐ Removal
		☐ Other:	

Start Time (MST)	11:05	End Time (MST)	15:25:00 PM
Barometric Pressure	0.939 atm	Station Temperature	18.0 Deg C
Calibrator	Envionics 6103	Serial Number	6586

DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volts	DACS channel #	6
	Before		After
Calculated slope	1.006130	Calculated slope	1.003925
Calculated intercept	-0.447714	Calculated intercept	-1.102725

Analyzer make	Model 49-I	Analyzer serial #	1153630156
---------------	------------	-------------------	------------

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	0.6	ppb	0.2	ppb
Span	1.224		1.281	
Cell A intensity	84852	Hz	86862	Hz
Cell B intensity	104026	Hz	106702	Hz
Pressure	698.70	in Hg	640.30	in Hg
Cell A Flow	0.692	ccm	0.690	ccm
Cell B Flow	0.691	cmm	0.690	cmm

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5065	0.00	0.0	0.1	N/A
5071	0.30	345.0	344.1	1.0027
5071	0.20	230.0	230.5	0.9978
5071	0.10	112.1	114.1	0.9822
5005	0.00	0.0	0.1	As found zero
5008	0.30	345.0	374.1	As found span
Average Correction Factor				0.9942

Calculated value of As Found Response: 375.8 ppm Percent Change of As Found: 8.9%

	before calibration		after calibration	
Auto zero	-0.1	ppb	0.5	ppb
Auto span	387.8	ppb	430.2	ppb

Notes: Zero & span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter 03

Air Monitoring Network PAZA



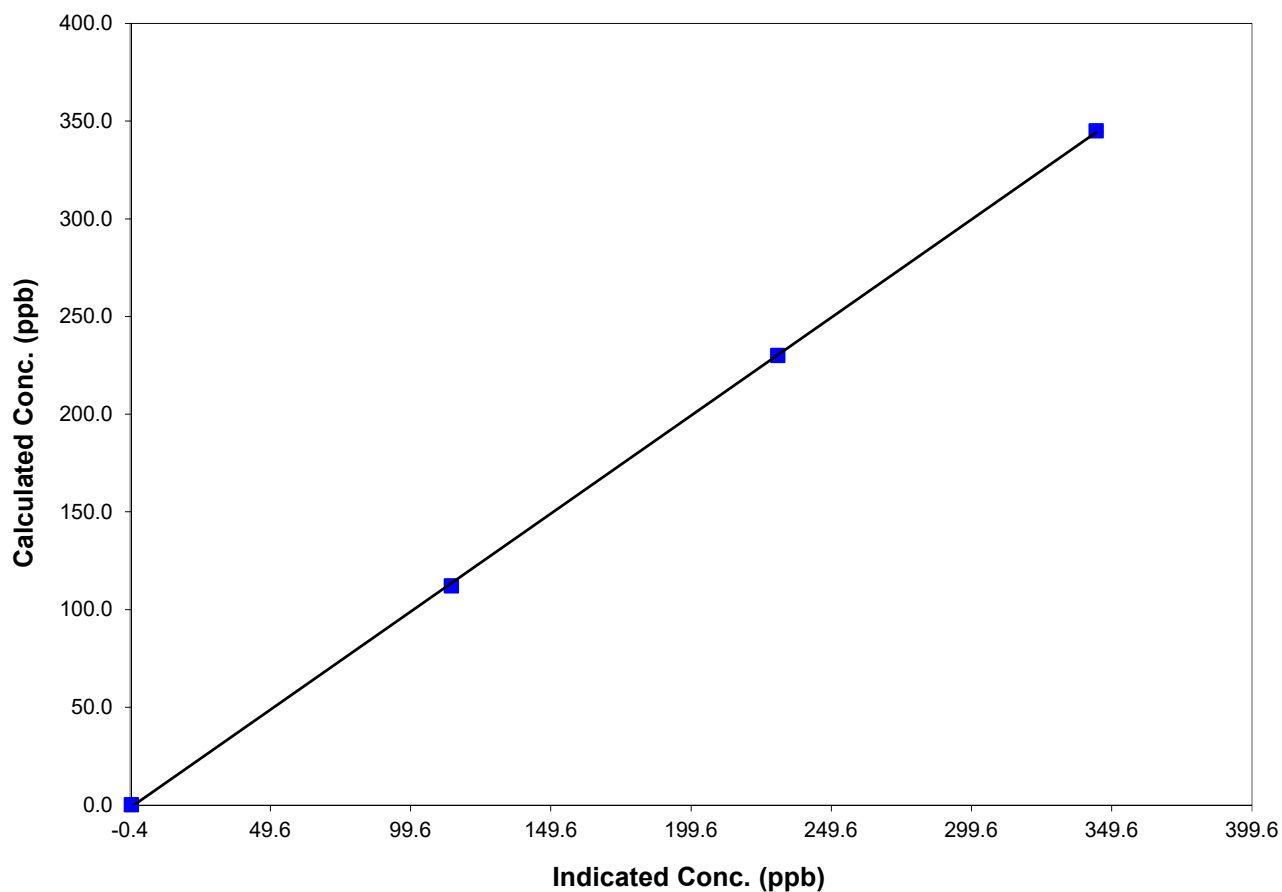
Station Information

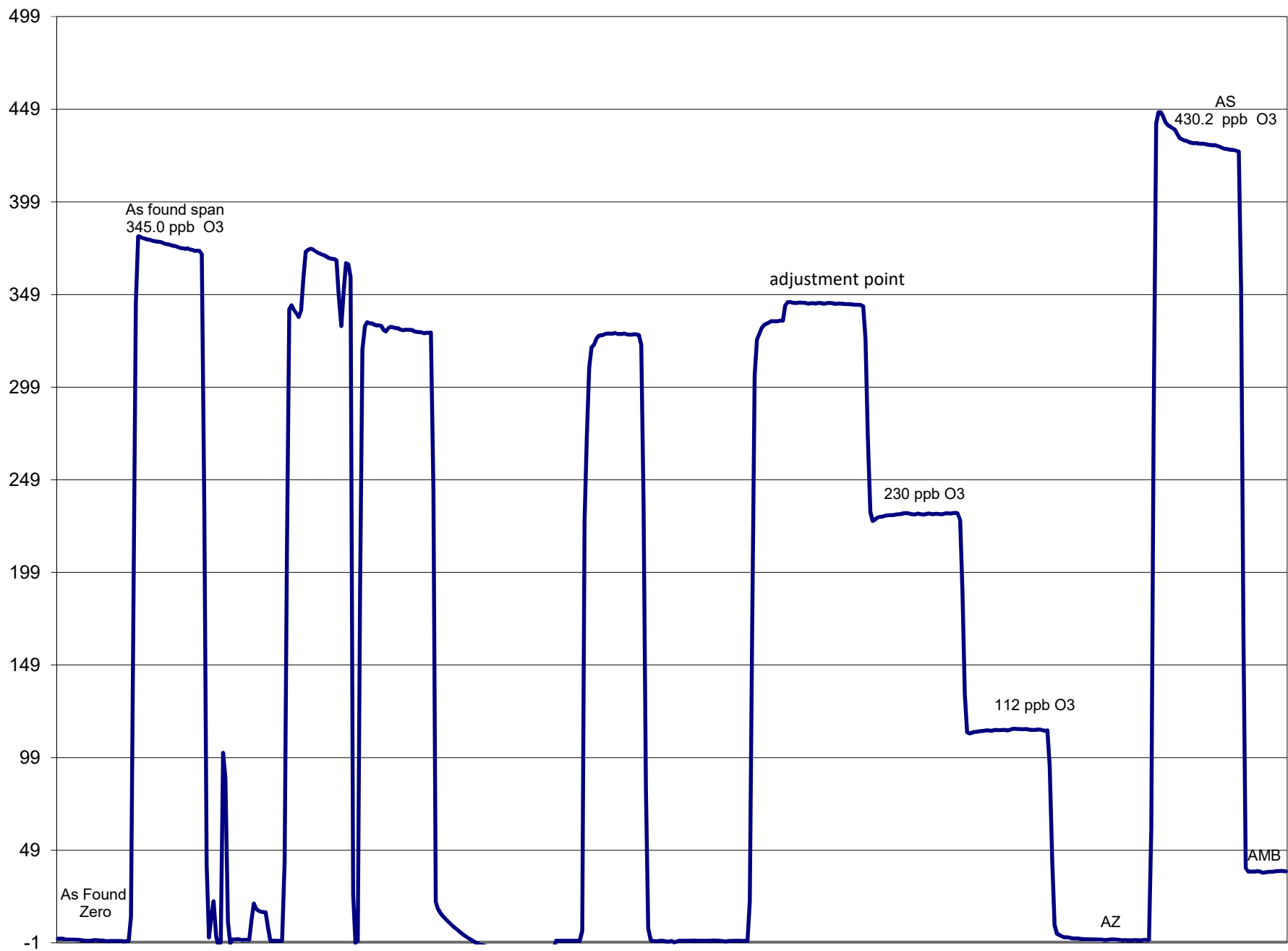
Calibration Date	March 17 2017	Previous Calibration	March 7 2017
Station Number	10	Station Location	Rycroft
Start Time (MST)	11:05	End Time (MST)	15:25:00 PM
Analyzer make/model	Model 49-I	Analyzer serial #	1153630156

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	NA	Correlation Coefficient	0.999947
345.0	344.1	1.0027		
230.0	230.5	0.9978		
112.1	114.1	0.9822	Slope	1.003925
			Intercept	-1.102725

O3 Calibration Curve





March 17 2017

Calibration Report



Parameter CH4 / NMHC / THC

Air Monitoring Network PAZA

Station Information

Calibration Date	March 8, 2017	Previous Calibration	February 6, 2017
Station Number	1	Station Location	Rycroft
Reason:	Routine	Install	Removal
			Other:

Start Time (MST)	13:20:00 PM	End Time (MST)	15:55:00 PM
Barometric Pressure	942.00 atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas CH4 Conc	386 ppm CH4	Cal Gas Expiry Date	3/28/2014
Cal Gas C3H8 Conc	207 569.25 ppm CH4	Cal Gas Cylinder #	LL34318
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 5 volt	DACS channel #	SE 12,13,14

Analyzer make TEI 55I-A3PHAA Analyzer serial # 1151980005

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

CH4 Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
1999	0.00	0.00	0.00	N/A
2001	68.72	12.82	12.65	1.0135
1998	40.14	7.60	7.64	0.9951
2002	16.49	3.15	2.99	1.0562
1999	0.00	0.00	0.00	As Found Zero
2001	68.93	12.85	12.65	As Found Span
Average Correction Factor				1.0216

Calculated value of As Found Response: 13.061 ppm Percent Change of As Found: -1.6%

	Before		After
Calculated slope	1.031215	Calculated slope	1.007008
Calculated intercept	0.024868	Calculated intercept	0.033425

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.00	ppm
Auto span	7.45	ppm	7.59	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)
1999	0.00	0.00	0.00	N/A
1997	68.72	18.94	19.09	0.9919
1998	40.14	11.21	11.45	0.9795
2002	16.49	4.65	4.35	1.0701
1999	0.00	0.00	0.00	As Found Zero
2001	68.93	18.96	19.09	As Found Span
Average Correction Factor				1.0138

Calculated value of As Found Response: 18.807 ppm Percent Change of As Found: 0.8%

	Before		After
Calculated slope	0.981260	Calculated slope	0.982982
Calculated intercept	0.073210	Calculated intercept	0.126906

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.00	ppm
Auto span	11.41	ppm	11.24	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)
1999	0.00	0.00	0.00	N/A
2001	68.72	31.72	31.78	0.9981
1998	40.14	18.81	19.08	0.9859
2002	16.49	7.80	7.36	1.0605
1999	0.00	0.00	0.00	As Found Zero
2001	68.93	31.81	31.78	As Found Span
Average Correction Factor				1.0148

Calculated value of As Found Response: 31.872 ppm Percent Change of As Found: -0.2%

	Before		After
Calculated slope	1.000149	Calculated slope	0.990724
Calculated intercept	0.095349	Calculated intercept	0.163289

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.00	ppm
Auto span	18.86	ppm	18.81	ppm

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter CH4

Air Monitoring Network PAZA



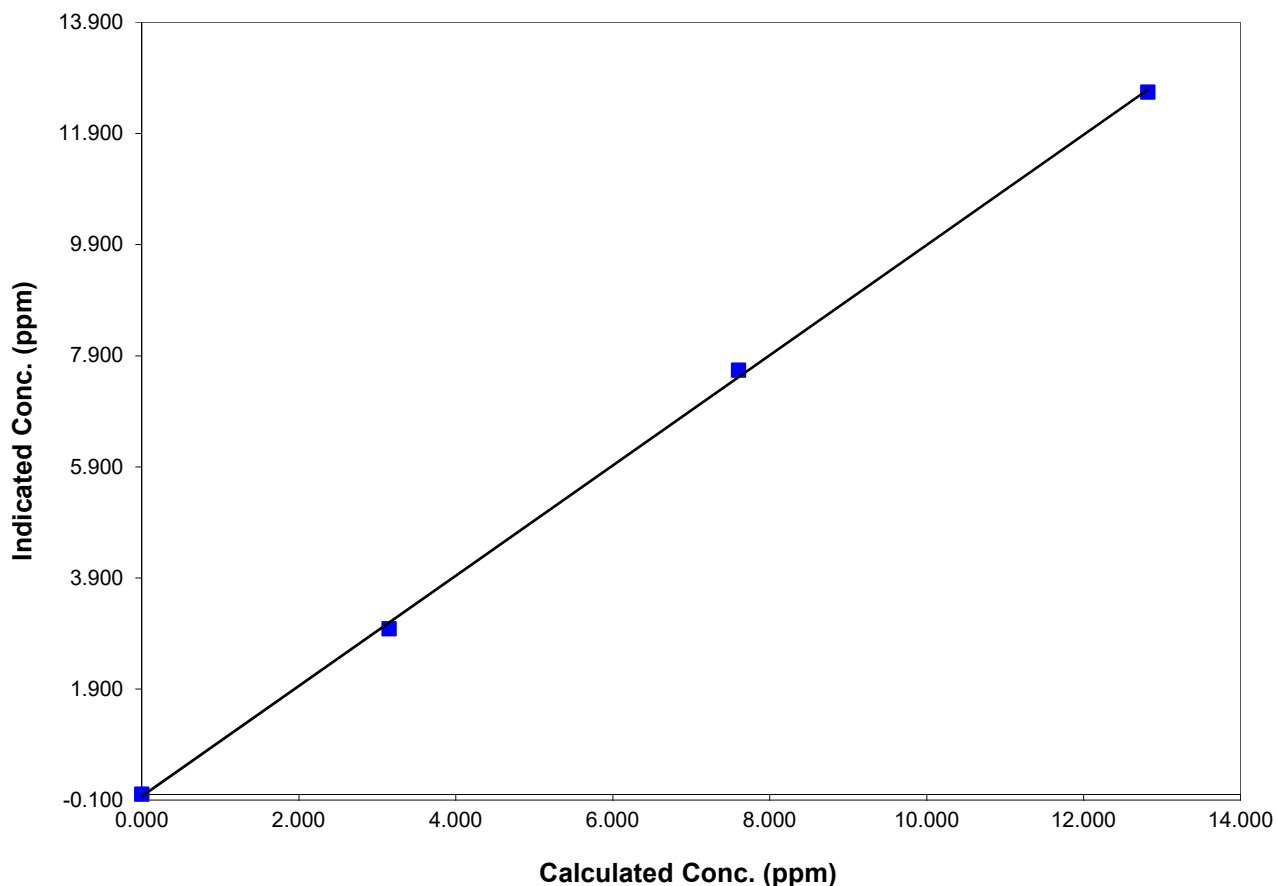
Station Information

Calibration Date	March 8, 2017	Previous Calibration	February 6, 2017
Station Number	1	Station Location	Rycroft
Start Time (MST)	13:20:00 PM	End Time (MST)	15:55:00 PM
Analyzer make/model	TEI 55I-A3PHAA	Analyzer serial #	1151980005

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.004	N/A	Correlation Coefficient	0.999654
12.816	12.646	1.0135		
7.602	7.640	0.9951		
3.153	2.986	1.0562	Slope	1.007008
			Intercept	0.033425

CH4 Calibration Data



Calibration Summary

Parameter NMHC

Air Monitoring Network PAZA



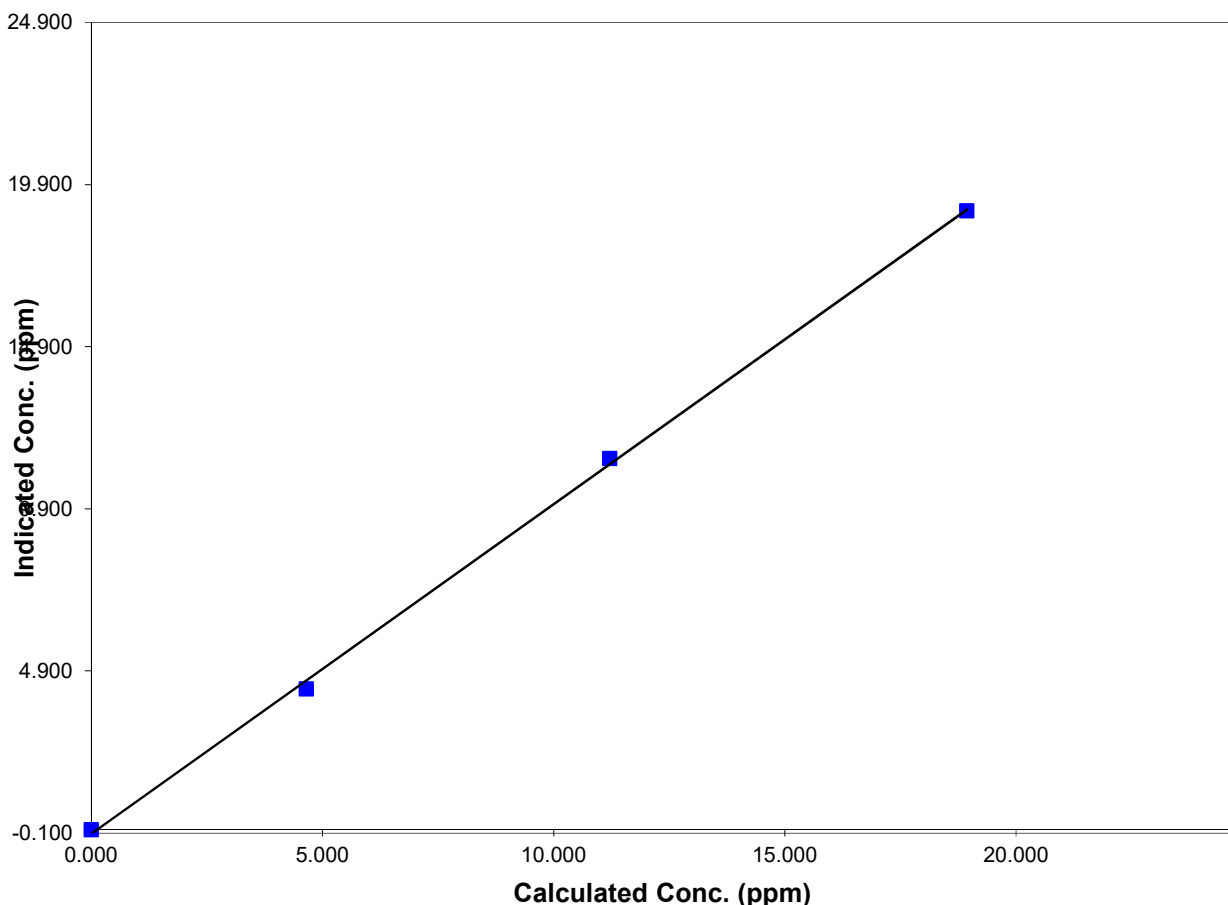
Station Information

Calibration Date	March 8, 2017	Previous Calibration	February 6, 2017
Station Number	1	Station Location	Rycroft
Start Time (MST)	13:20:00 PM	End Time (MST)	15:55:00 PM
Analyzer make/model	TEI 55I-A3PHAA	Analyzer serial #	1151980005

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.001	N/A	Correlation Coefficient	0.999462
18.937	19.092	0.9919		
11.211	11.446	0.9795		
4.650	4.346	1.0701	Slope	0.982982
			Intercept	0.126906

NMHC Calibration Data



Calibration Summary

Parameter THC

Air Monitoring Network PAZA



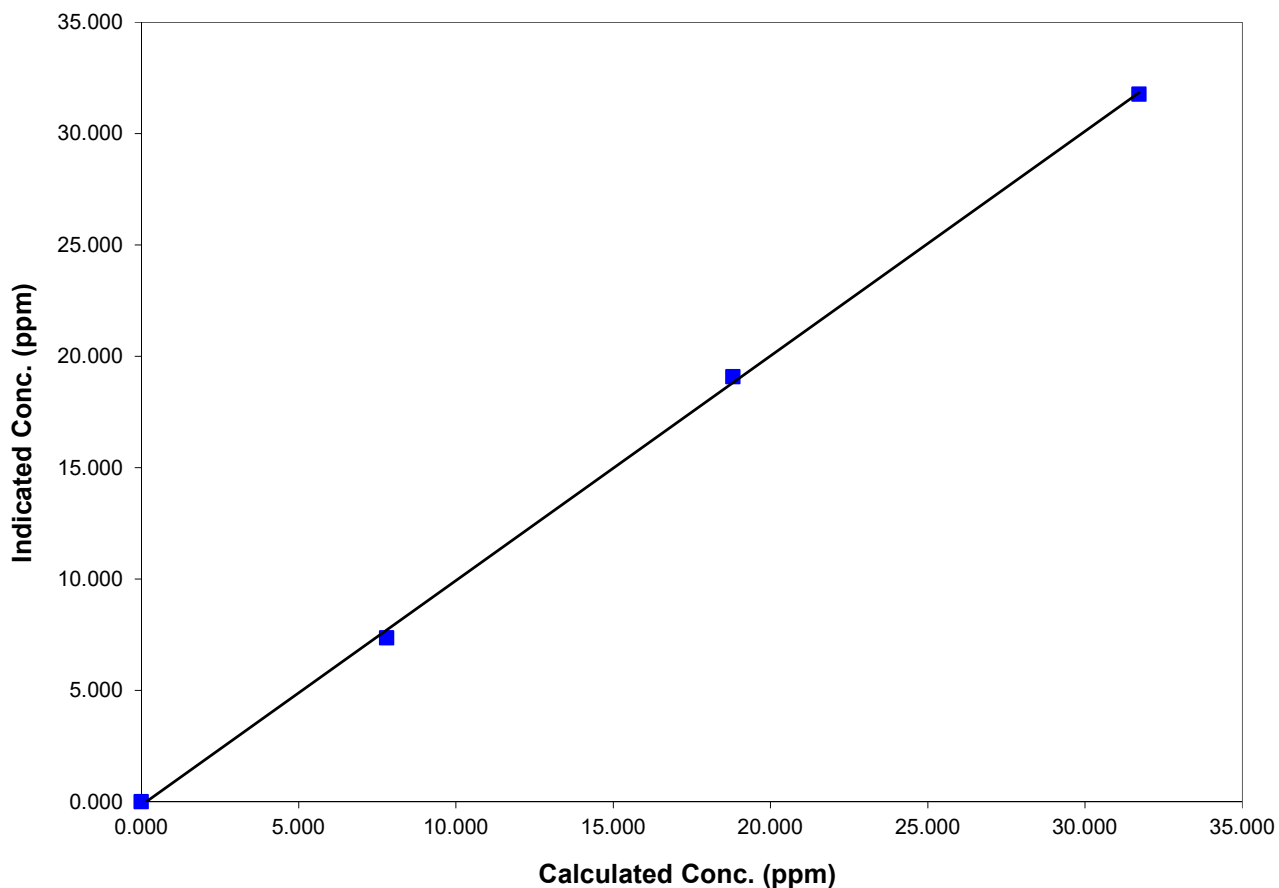
Station Information

Calibration Date	March 8, 2017	Previous Calibration	February 6, 2017
Station Number	1	Station Location	Rycroft
Start Time (MST)	13:20:00 PM	End Time (MST)	15:55:00 PM
Analyzer make/model	TEI 55I-A3PHAA	Analyzer serial #	1151980005

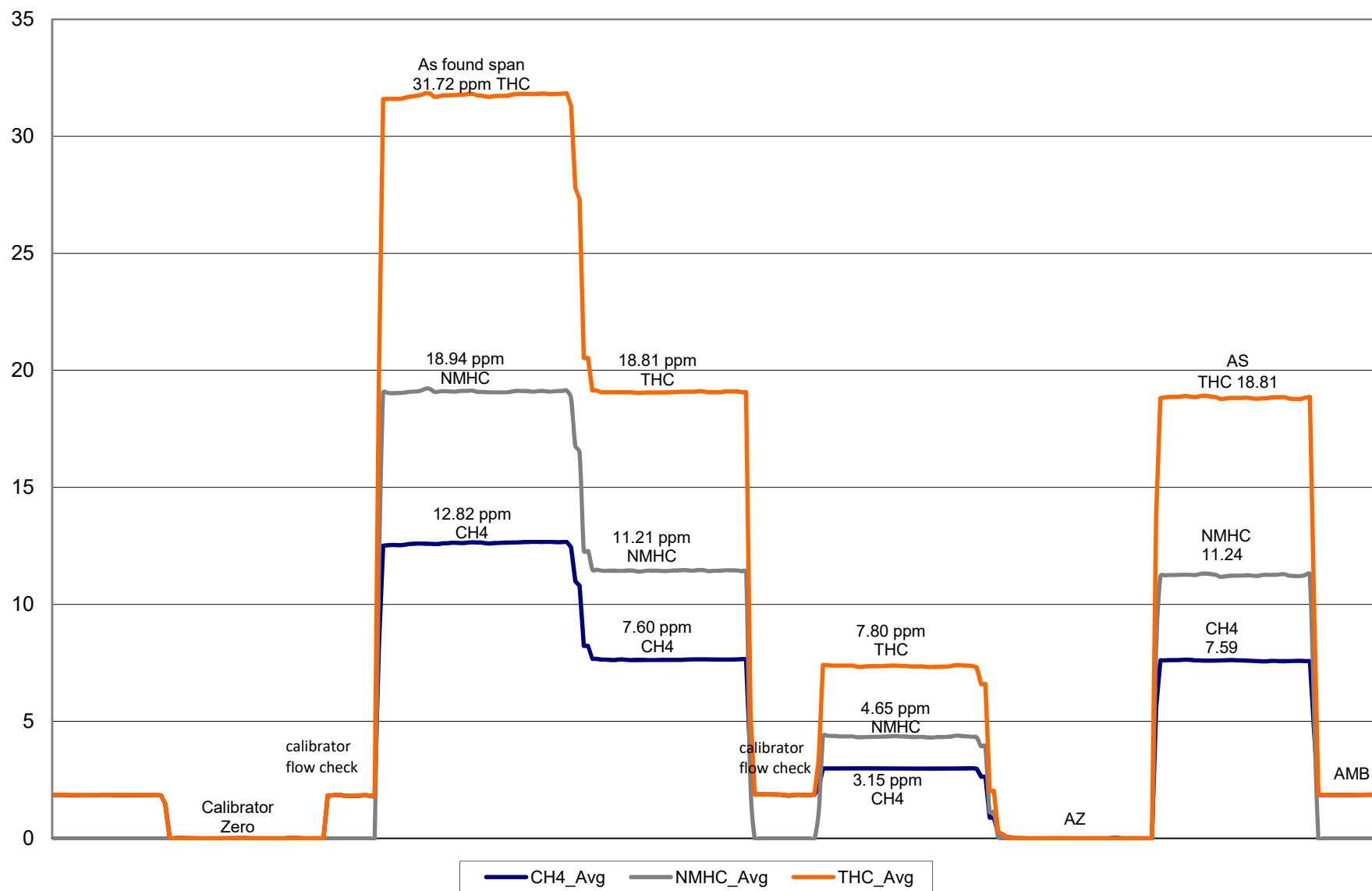
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.004	N/A		
31.717	31.776	0.9981	Correlation Coefficient	0.999612
18.813	19.083	0.9859		
7.804	7.359	1.0605	Slope	0.990724
			Intercept	0.163289

THC Calibration Data



THC/CH₄/NMHC Calibration



Calibration Report



Parameter CH4 / NMHC / THC

Air Monitoring Network PAZA

Station Information

Calibration Date	March 29, 2017	Previous Calibration	March 8, 2017
Station Number	1	Station Location	Rycroft
Reason:	Routine	Install	Removal
			Other:

Start Time (MST)	12:10	End Time (MST)	15:10
Barometric Pressure	0.922 atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas CH4 Conc	404 ppm CH4	Cal Gas Expiry Date	3/28/2014
Cal Gas C3H8 Conc	201 552.75 ppm CH4	Cal Gas Cylinder #	LL34989
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 5 volt	DACS channel #	SE 12,13,14

Analyzer make TEI 55I-A3PHAA Analyzer serial # 1151980005

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

CH4 Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
1999	0.00	0.00	0.00	N/A
1999	68.97	13.47	12.65	1.0655
1999	39.98	7.92	7.64	1.0369
1999	16.99	3.40	2.99	1.1404
1999	0.00	0.00	0.00	As Found Zero
1999	68.97	13.47	12.65	As Found Span
Average Correction Factor				1.0809

Calculated value of As Found Response: 12.764 ppm Percent Change of As Found: 5.3%

	Before		After
Calculated slope	1.007008	Calculated slope	1.054531
Calculated intercept	0.033425	Calculated intercept	0.064078

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.00	ppm
Auto span	7.45	ppm	7.59	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)
1999	0.00	0.00	0.00	N/A
1999	68.97	18.44	19.09	0.9656
1999	39.98	10.84	11.45	0.9469
1999	16.99	4.66	4.35	1.0719
1999	0.00	0.00	0.00	As Found Zero
1999	68.97	18.44	19.09	As Found Span
Average Correction Factor				0.9948

Calculated value of As Found Response: 18.894 ppm Percent Change of As Found: -2.5%

	Before		After
Calculated slope	0.982982	Calculated slope	0.953209
Calculated intercept	0.126906	Calculated intercept	0.169811

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.00	ppm
Auto span	11.41	ppm	11.24	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)
1999	0.00	0.00	0.00	N/A
1999	68.97	31.91	31.78	1.0042
1999	39.98	18.76	19.08	0.9831
1999	16.99	8.06	7.36	1.0957
1999	0.00	0.00	0.00	As Found Zero
1999	68.97	31.91	31.78	As Found Span
Average Correction Factor				1.0277

Calculated value of As Found Response: 31.641 ppm Percent Change of As Found: 0.8%

	Before		After
Calculated slope	0.990724	Calculated slope	0.992801
Calculated intercept	0.163289	Calculated intercept	0.232642

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.00	ppm
Auto span	18.86	ppm	18.81	ppm

Notes: Nitrogen & Hydrogen cylinders ran out. Replace cylinders and calibrate.
 Had to restart cal, noticed cylinder concentrations were incorrect. Applied corrected values to cal sheet. Re start calibration. Daily span cylinder needs to be replaced by next week.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter CH4

Air Monitoring Network PAZA



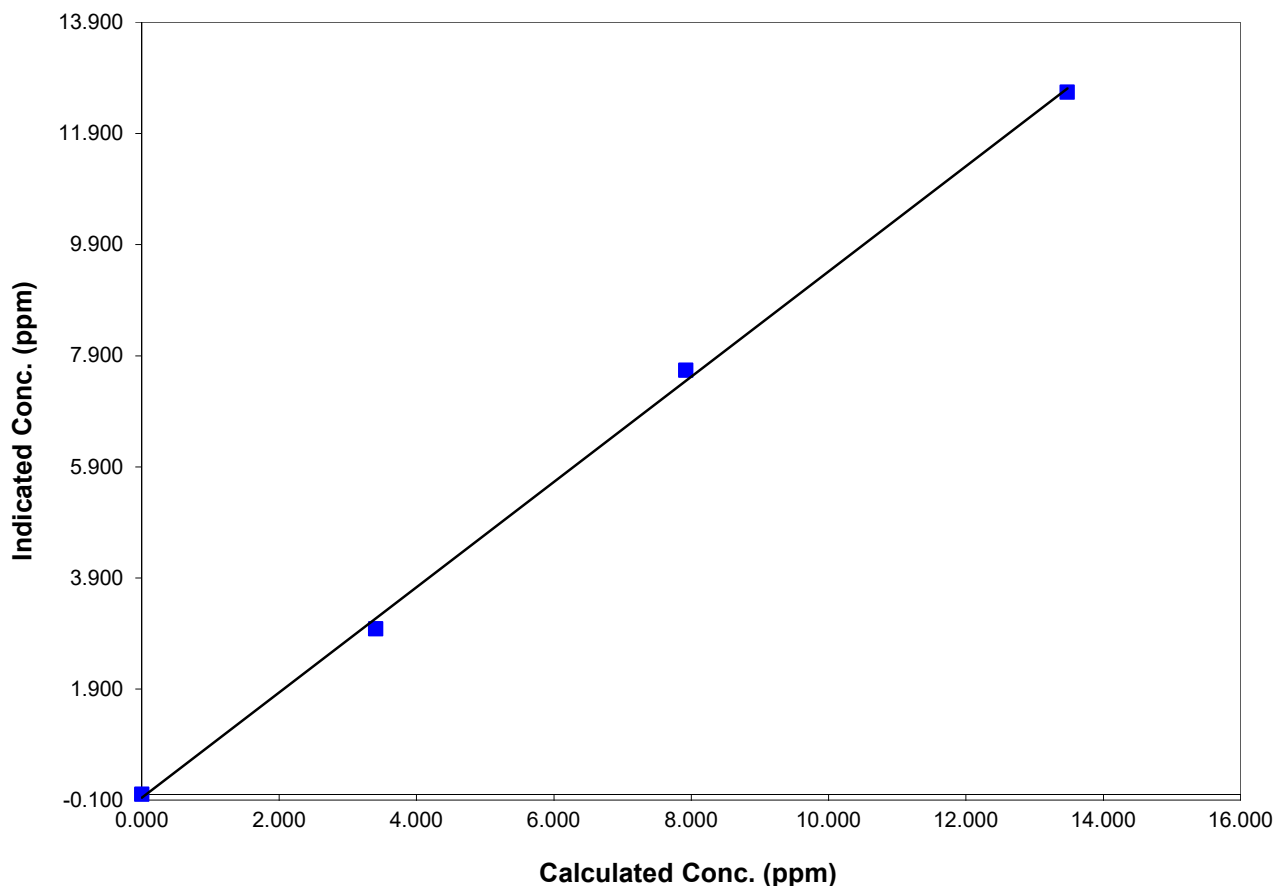
Station Information

Calibration Date	March 29, 2017	Previous Calibration	March 8, 2017
Station Number	1	Station Location	Rycroft
Start Time (MST)	12:10	End Time (MST)	15:10
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	0.004	N/A	Correlation Coefficient	0.999150
13.474	12.646	1.0655		
7.922	7.640	1.0369		
3.405	2.986	1.1404	Slope	1.054531
			Intercept	0.064078

CH4 Calibration Data



Calibration Summary

Parameter NMHC

Air Monitoring Network PAZA



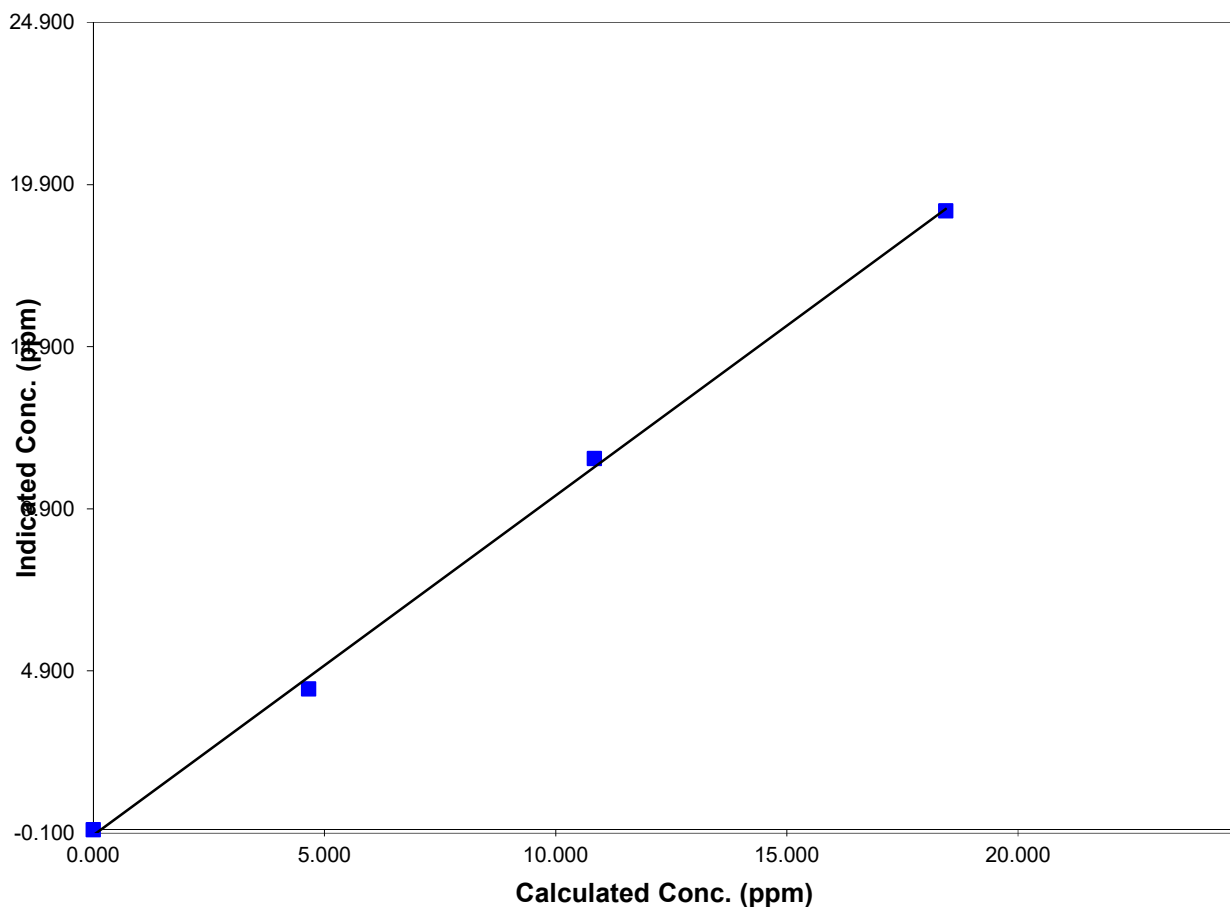
Station Information

Calibration Date	March 29, 2017	Previous Calibration	March 8, 2017
Station Number	1	Station Location	Rycroft
Start Time (MST)	12:10	End Time (MST)	15:10
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	0.998892
18.435	19.092	0.9656		
10.838	11.446	0.9469		
4.658	4.346	1.0719	Slope	0.953209
			Intercept	0.169811

NMHC Calibration Data



Calibration Summary

Parameter THC

Air Monitoring Network PAZA



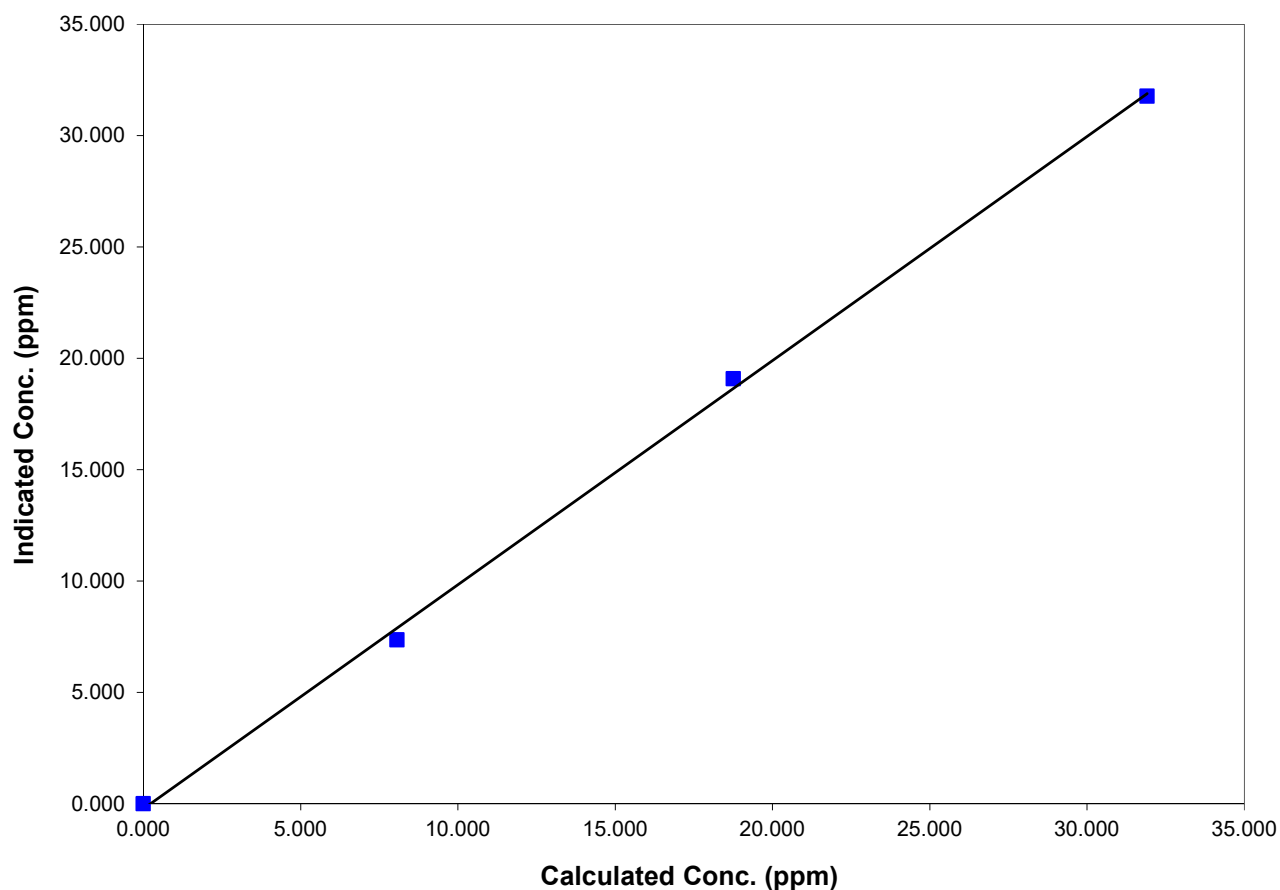
Station Information

Calibration Date	March 29, 2017	Previous Calibration	March 8, 2017
Station Number	1	Station Location	Rycroft
Start Time (MST)	12:10	End Time (MST)	15:10
Analyzer make/model	TEI 55I-A3PHAA	Analyzer serial #	1151980005

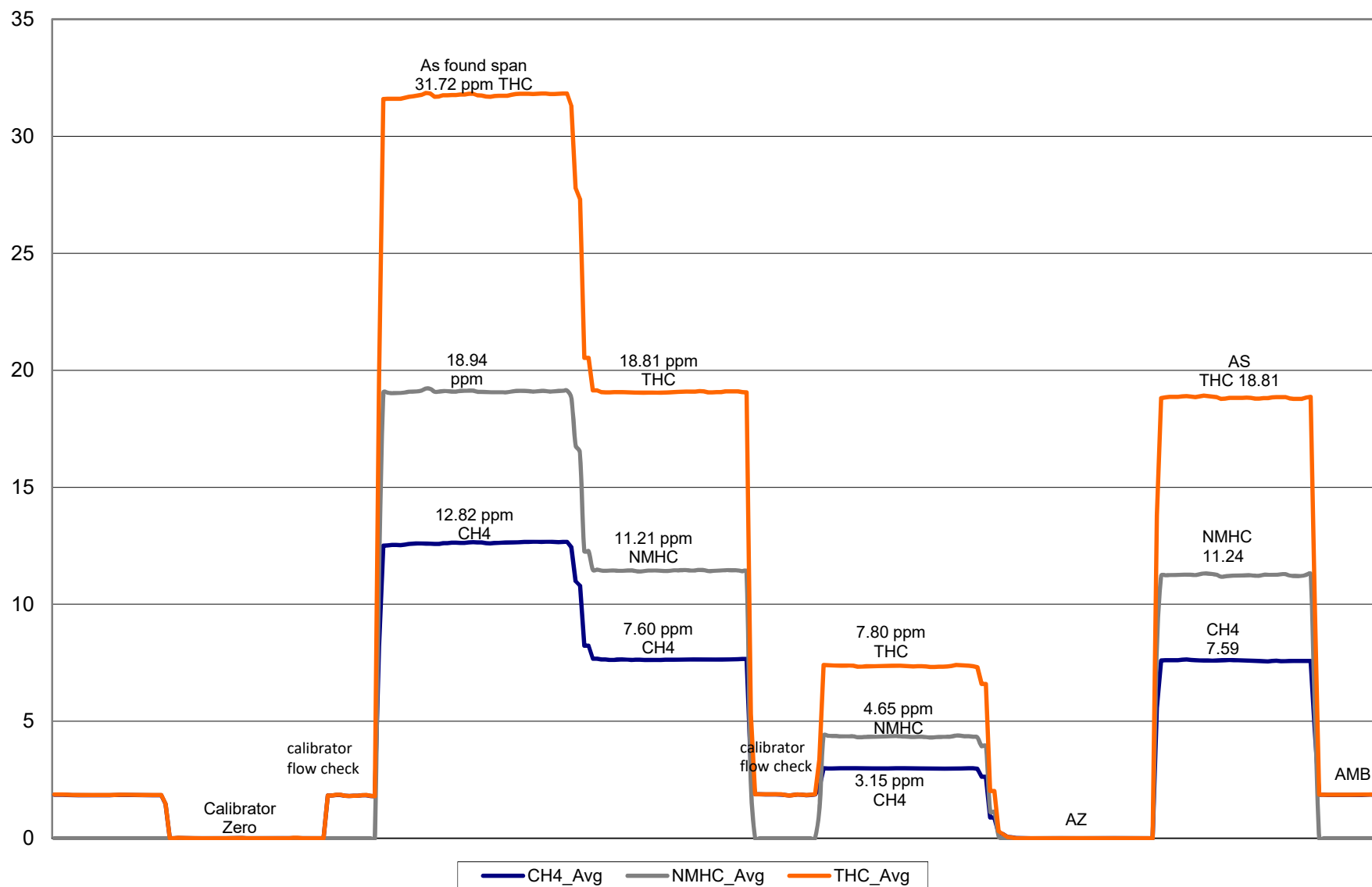
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.004	N/A	Correlation Coefficient	0.999087
31.909	31.776	1.0042		
18.760	19.083	0.9831		
8.063	7.359	1.0957	Slope	0.992801
			Intercept	0.232642

THC Calibration Data



THC/CH₄/NMHC Calibration



Calibration Report

Parameter TRS
Air Monitoring Network PAZA



Station Information

Calibration Date	March 8, 2017	Previous Calibration	February 6, 2017
Station Name	PAZA Rover	Station Location	Rycroft
Reason:	☐ Routine	☒ Install	☐ Removal
		☐ Other:	
Start Time (MST)	10:50 PM	End Time (MST)	14:50:00 PM
Barometric Pressure	0.942 Atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Concentration	10.2 ppm	Cal Gas Expiry Date	02/23/2019
Gas Cert Reference	EY0000380		
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volt	DACS channel #	1
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.972669	Calculated slope	0.991813
Calculated intercept	-0.140086	Calculated intercept	0.479580
Analyzer make	TEI 43I	Analyzer serial #	1153630152

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	13.7	ppb	12.2	ppb
Coefficient	0.985		0.985	
Lamp Voltage	787	V	787	V
Chamber Temp	45.1	C	45	C
Perm gas Temp	45	C	45	C
Pressure	676.7	mmHg	676.7	mmHg
Sample Flow	0.390	lpm	0.389	lpm
Lamp Intensity	86	Hz	88	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5033	0.0	0.0	0.2	N/A
5033	40.14	80.7	81.3	0.9928
5033	20.32	41.0	40.2	1.0202
6998	10.12	14.7	13.9	1.0565
4970	9.97	20.0	0.5	Sox Test
5033	0.00	0.0	-0.7	As found zero
5033	40.14	80.7	79.3	As found span
Average Correction Factor				1.0232

Calculated value of As Found Response: 77.69 ppm Percent Change of As Found: 3.7%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.5	ppm
Auto span	69.2	ppm	54.0	ppm

Notes: Zero adjustment made
Sox scrubber check performed

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



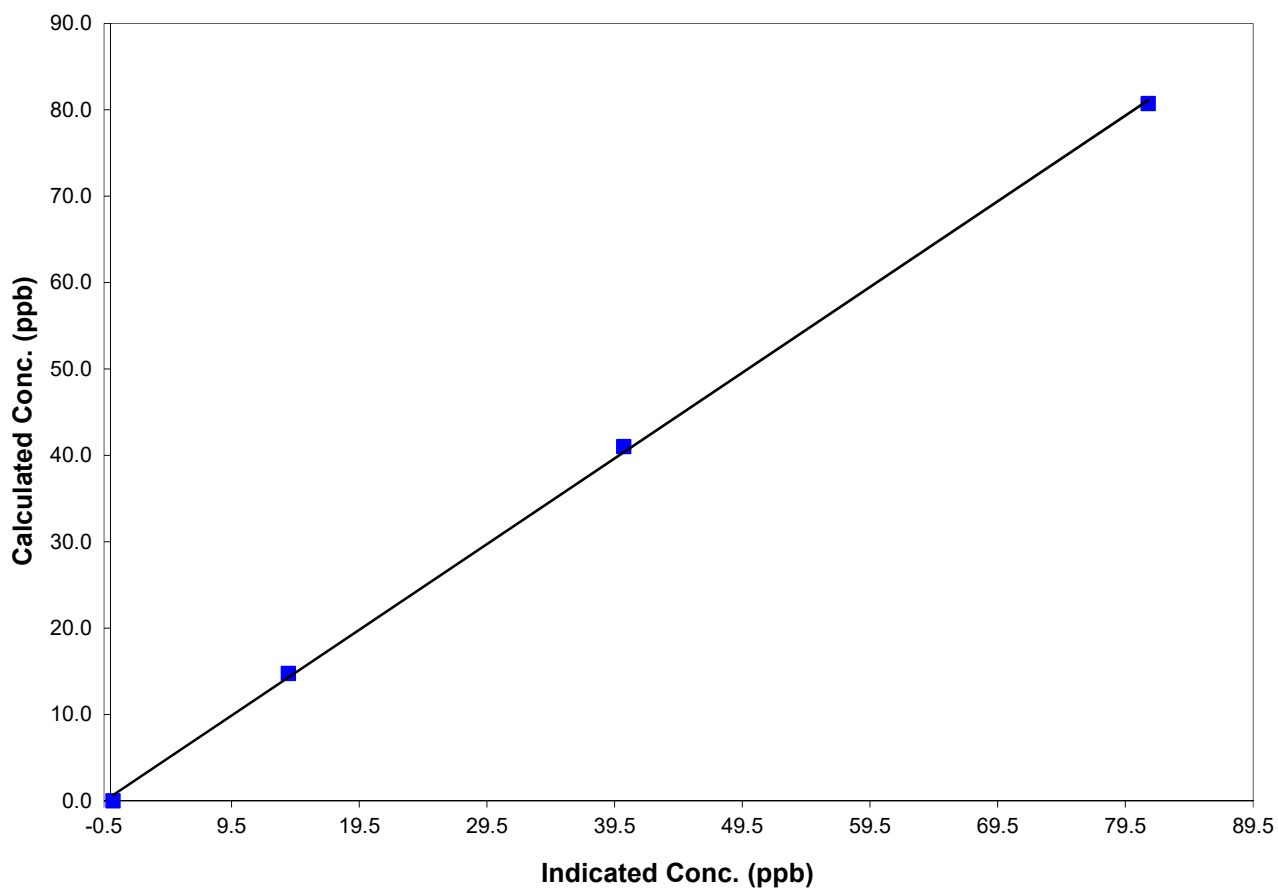
Station Information

Calibration Date	March 8, 2017	Previous Calibration	February 6, 2017
Station Number	PAZA Rover	Station Location	Rycroft
Start Time (MST)	22:50	End Time (MST)	14:50:00 PM
Analyzer make/model	TEI 43I	Analyzer serial #	1153630152

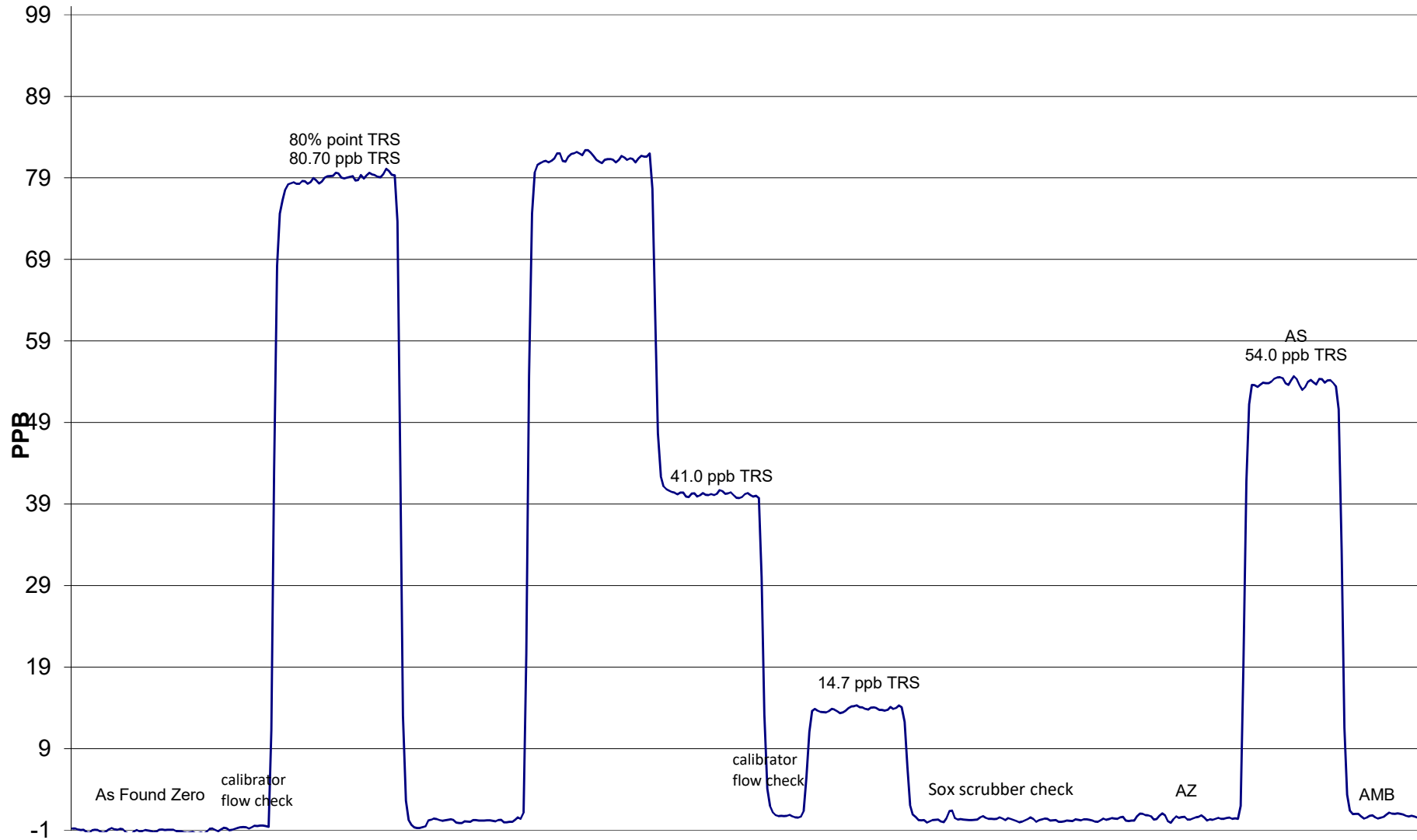
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999668
80.7	81.3	0.9928		
41.0	40.2	1.0202		
14.7	13.9	1.0565	Slope	0.991813
			Intercept	0.479580

TRS Calibration Curve



TRS Calibration



March 8, 2017

Calibration Report

Parameter **TRS**
Air Monitoring Network

PAZA



Station Information

Calibration Date	March 15, 2017	Previous Calibration	March 8, 2017
Station Name	PAZA Rover	Station Location	Rycroft
Reason:	☐ Routine	☐ Install	☐ Removal
		☒ Other:	Troubleshooting
Start Time (MST)	10:30 AM	End Time (MST)	17:10:00 PM
Barometric Pressure	0.942 Atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Concentration	10.2 ppm	Cal Gas Expiry Date	02/23/2019
Gas Cert Reference	EY0000380		
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volt	DACS channel #	1
	<u>Before</u>		<u>After</u>
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.972669	Calculated slope	0.982758
Calculated intercept	-0.140086	Calculated intercept	0.552166
Analyzer make	TEI 43I	Analyzer serial #	1153630152

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	12.2	ppb	14.5	ppb
Coefficient	0.985		1.175	
Lamp Voltage	787	V	782	V
Chamber Temp	45	C	45	C
Perm gas Temp	45	C	45	C
Pressure	665.3	mmHg	660.9	mmHg
Sample Flow	0.385	lpm	0.385	lpm
Lamp Intensity	88	Hz	88	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5033	0.0	0.0	0.5	N/A
5033	40.14	80.7	82.1	0.9825
5033	20.32	41.0	40.2	1.0199
6998	10.12	14.7	13.7	1.0732
			#DIV/0!	Sox Test
5033	0.00	0.0	0.5	As found zero
5033	40.14	80.7	82.1	As found span
Average Correction Factor				1.0252

Calculated value of As Found Response: 79.25 ppm Percent Change of As Found: 1.8%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.5	ppm
Auto span	69.2	ppm	64.4	ppm

Notes: Zero & span adjustment made
Sox scrubber check performed
New oxydizer installed

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



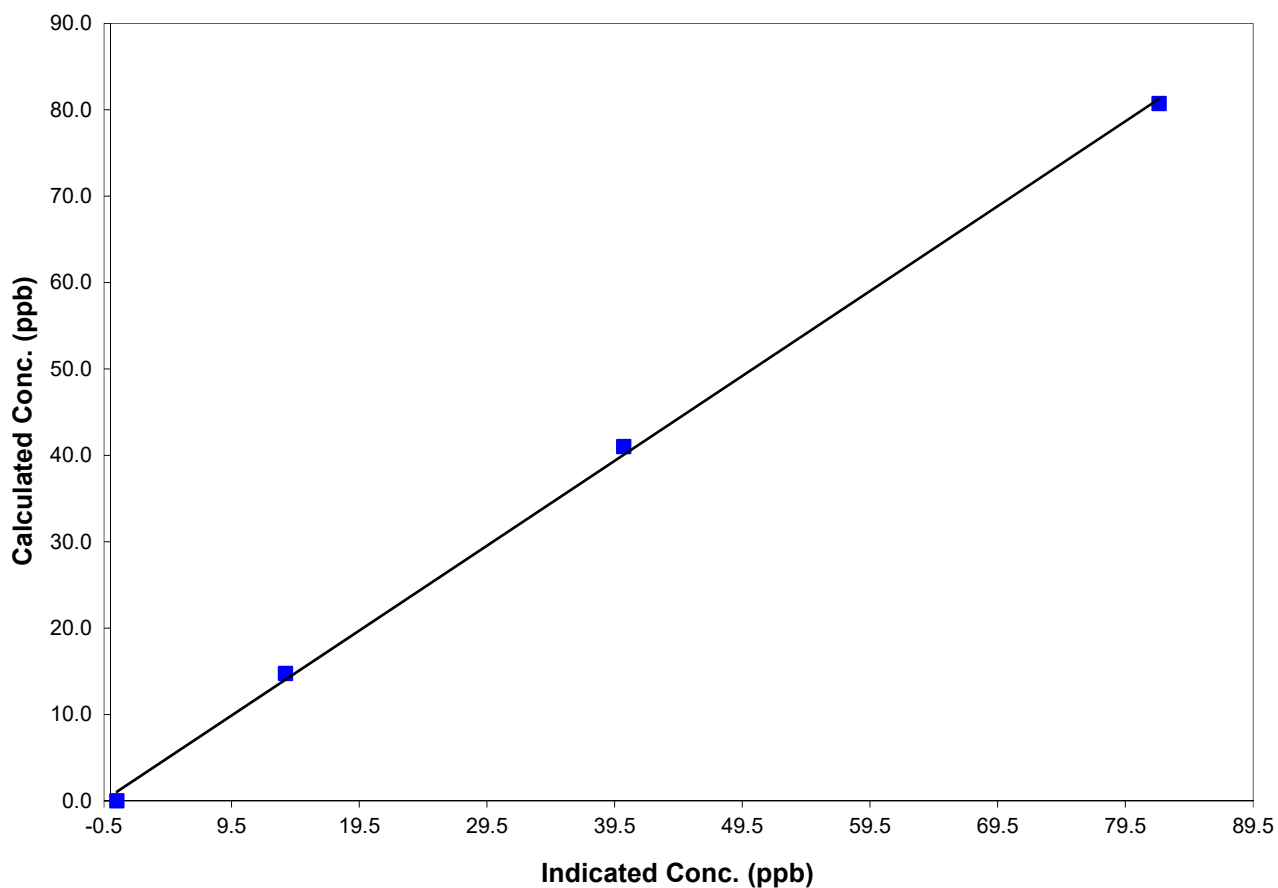
Station Information

Calibration Date	March 15, 2017	Previous Calibration	March 8, 2017
Station Number	PAZA Rover	Station Location	Rycroft
Start Time (MST)	10:30	End Time (MST)	17:10:00 PM
Analyzer make/model	TEI 43I	Analyzer serial #	1153630152

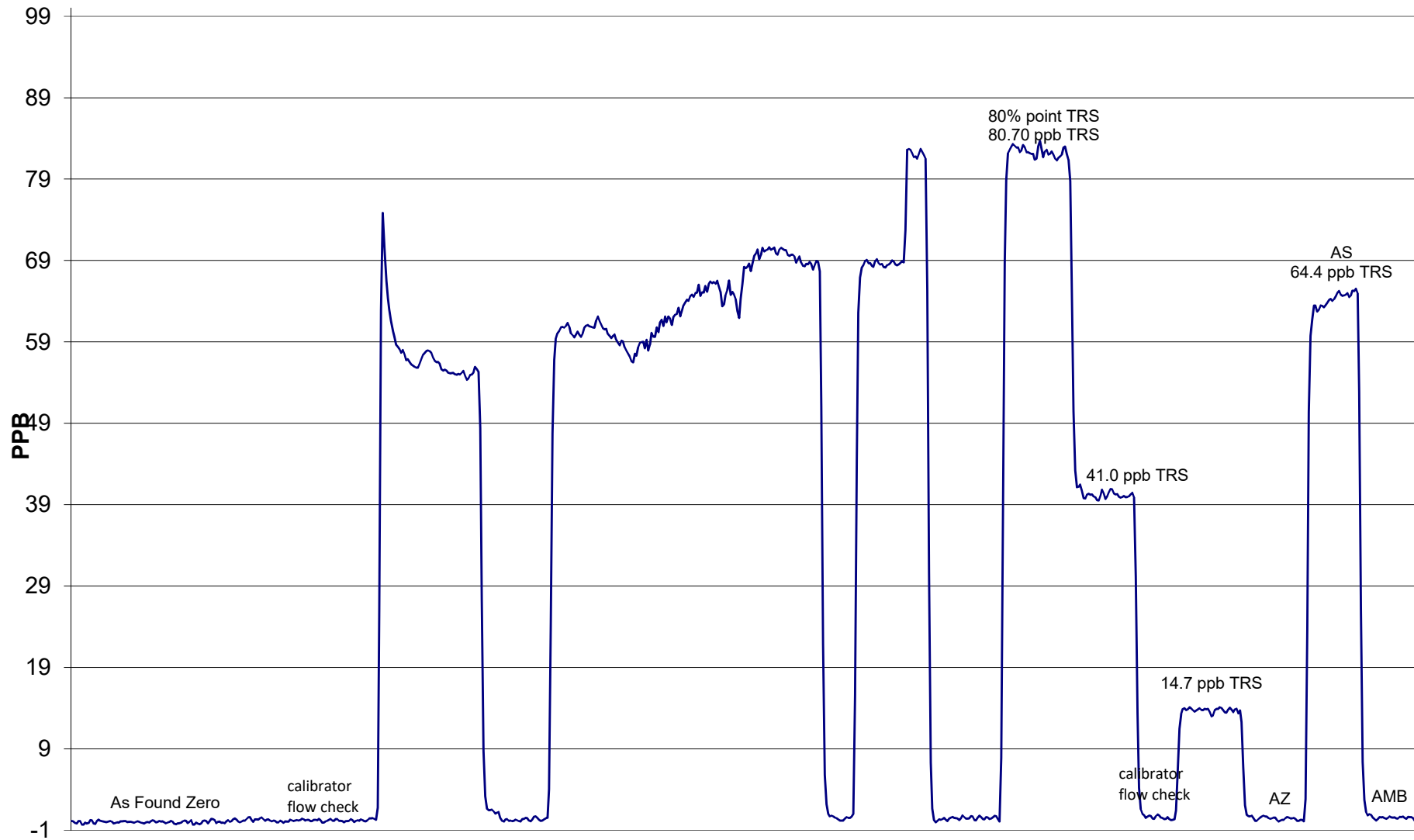
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A	Correlation Coefficient	0.999251
80.7	82.1	0.9825		
41.0	40.2	1.0199		
14.7	13.7	1.0732	Slope	0.982758
			Intercept	0.552166

TRS Calibration Curve



TRS Calibration



March 15, 2017

Calibration Report

Parameter **TRS**
Air Monitoring Network

PAZA



Station Information

Calibration Date	March 20, 2017	Previous Calibration	March 15, 2017
Station Name	PAZA Rover	Station Location	Rycroft
Reason:	☐ Routine	☐ Install	☐ Removal
		☒ Other:	Troubleshooting
Start Time (MST)	9:40 AM	End Time (MST)	12:25
Barometric Pressure	0.942 Atm	Station Temperature	19.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Concentration	10.2 ppm	Cal Gas Expiry Date	02/23/2019
Gas Cert Reference	EY0000380		
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volt	DACS channel #	1
	<u>Before</u>		<u>After</u>
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.982758	Calculated slope	0.992398
Calculated intercept	0.552166	Calculated intercept	0.986663
Analyzer make	TEI 43I	Analyzer serial #	1153630152

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	14.3	ppb	12.07	ppb
Coefficient	1.175		1.043	
Lamp Voltage	787	V	787	V
Chamber Temp	45	C	45	C
Perm gas Temp	45	C	45	C
Pressure	683.8	mmHg	684.1	mmHg
Sample Flow	0.394	lpm	0.394	lpm
Lamp Intensity	88	Hz	88	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5027	0.0	0.0	0.2	N/A
5011	40.14	81.1	81.3	0.9969
5010	19.97	40.5	38.7	1.0456
6981	10.03	14.6	13.0	1.1227
			#DIV/0!	Sox Test
5027	0.00	0.0	0.2	As found zero
5011	40.14	81.1	91.0	As found span
Average Correction Factor				1.0551

Calculated value of As Found Response: 89.85 ppm Percent Change of As Found: -10.8%

	before calibration		after calibration	
Auto zero	0.5	ppm	0.0	ppm
Auto span	64.4	ppm	51.5	ppm

Notes: Span adjustment made
Skipped on the Sox scrubber check-new oxydizer just been installed with the new scrubber material.

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



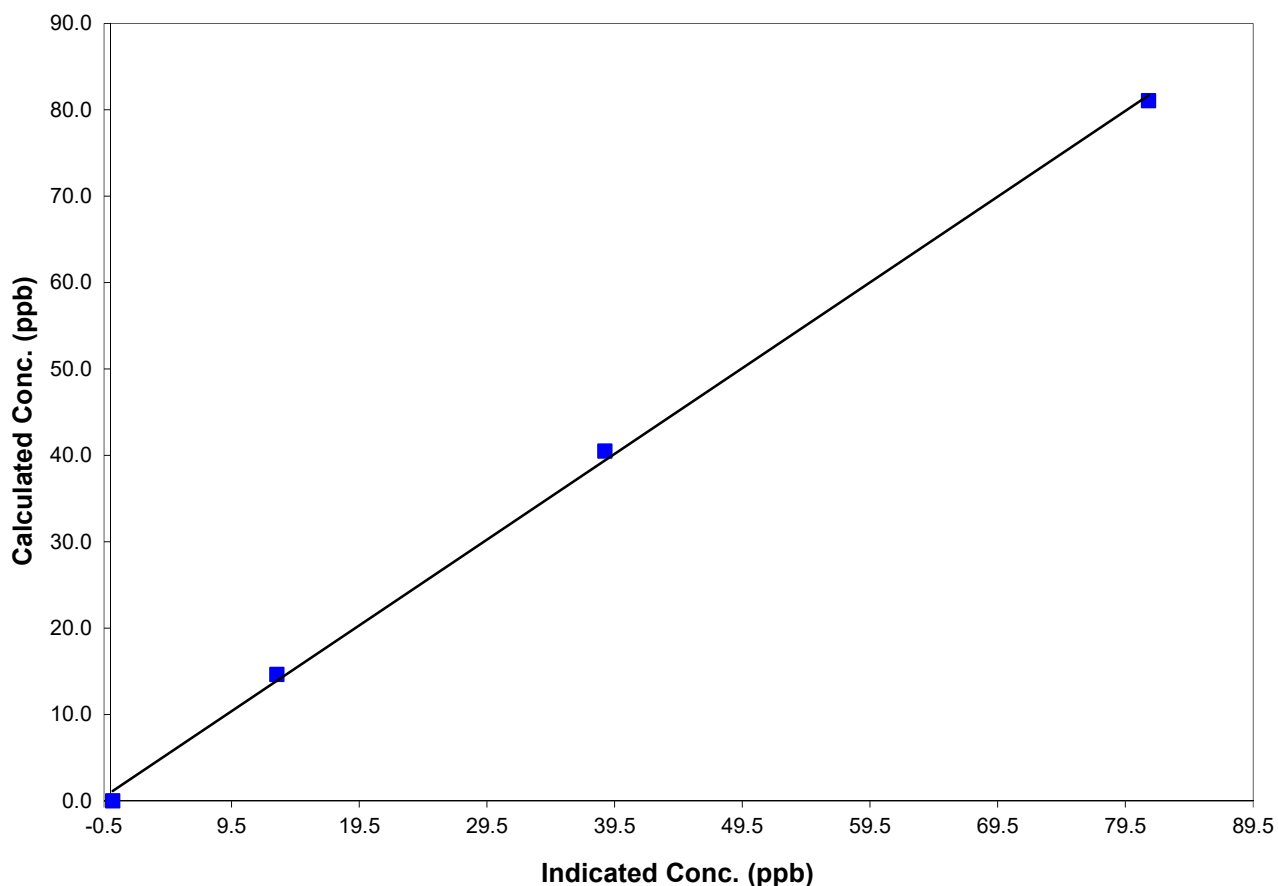
Station Information

Calibration Date	March 20, 2017	Previous Calibration	March 15, 2017
Station Number	PAZA Rover	Station Location	Rycroft
Start Time (MST)	9:40	End Time (MST)	12:25
Analyzer make/model	TEI 43I	Analyzer serial #	1153630152

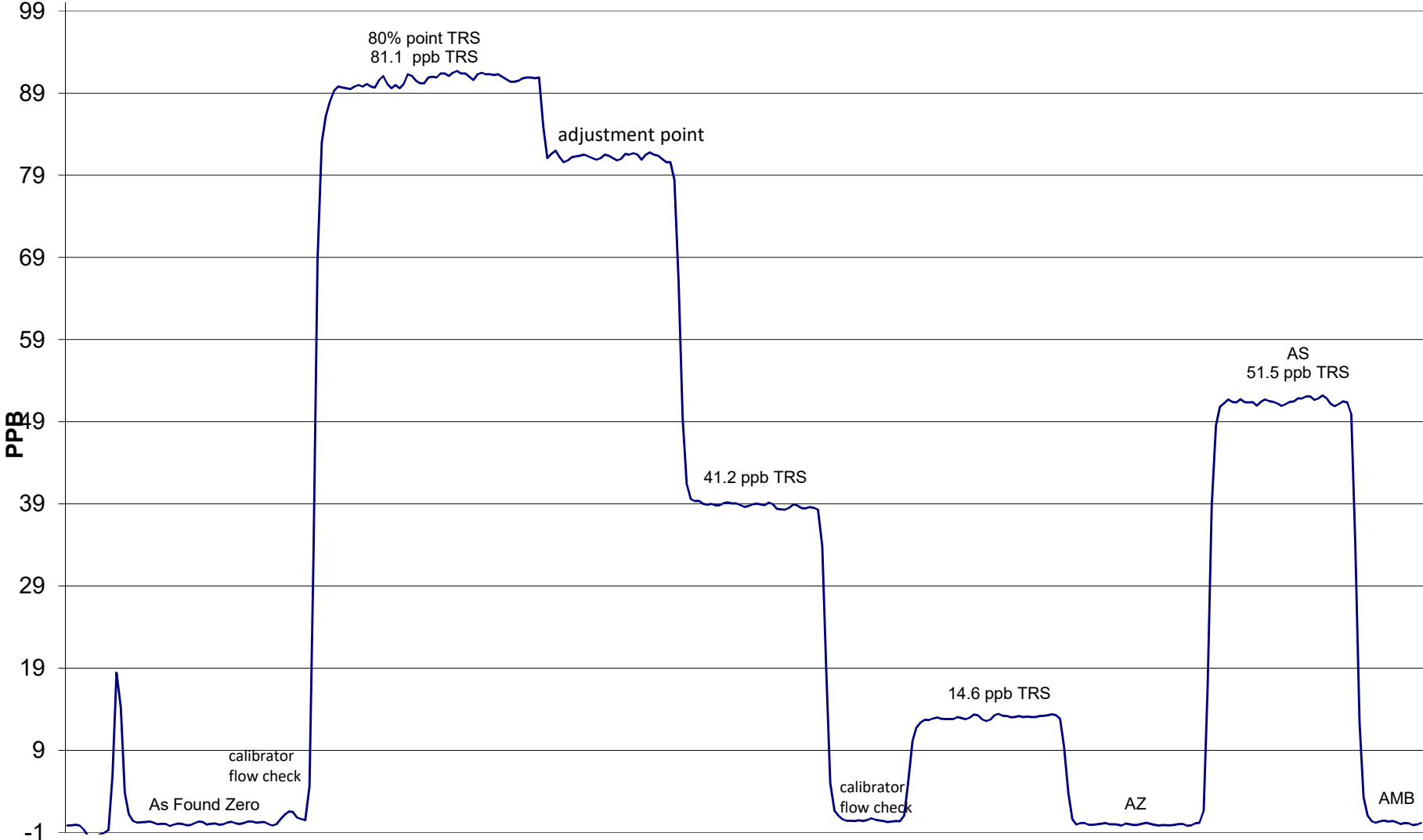
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999102
81.1	81.3	0.9969		
40.5	38.7	1.0456		
14.6	13.0	1.1227	Slope	0.992398
			Intercept	0.986663

TRS Calibration Curve



TRS Calibration



March 20, 2017

AB TEOM PM2.5 Calibration



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

OPERATOR: Dmytro Dolotii, Grover Christi
 DATE: 7-Mar-17

MONITOR INFO / PARAMETER VALUES:

Make/Model	TEOM AB
Configuration	PM2.5
Serial Number	140AB245710304
Site Number	10
Inlet Type	PM 10 / SCC
FAdj. Main Setting	1.000
FAdj. Aux. Setting	0.990
T-Case Indicated / Set Point	40/40
T-Air Indicated / Set Point	40/40
T-Cap Indicated / Set Point	40/40
Splitter Assembly Alignment (cm)	15.5

(vs. specified depth of 15.5 cm from top of flow tube to top of concentric 1/2 in. tube)

RECENT CALIBRATION AND AUDIT HISTORY

Previous Audit	
Previous Calibration	4-Nov-16

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

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

LEAK CHECK	Indicated Flow (lpm)	
	Main	Auxiliary
PUMP ON	0.008	0.022
PUMP OFF	0.000	0.010
NET	0.008	0.012
LIMITS	<0.15	<0.60

	Ambient Temp. (^o C)	Ambient Pres. (atm)	Ko *	Bypass flow (lpm)	Sample flow (lpm)
SET POINT (S)	na	na	12122	13.67	3.000
INDICATED (I)	-15.8	0.942	12122	13.68	3.000
MEASURED (AF)	-16.4	0.942	12122	13.66	2.900
MEASURED (M)	-16.4	0.942	12177	13.66	3.000
DIFFERENCE (M-I)	-0.6	0.000	0.5%	-0.01	0.00
LIMITS	± 2^o C	± 0.005 atm	± 2.5 %	± 1.0 L/min	± 0.2 L/min

As Found Data
 Adjusted Data

Ko Audit Filter data Weight: 0.11251 Serial #: CVK 3316

COMMENTS: Pass

Full audit was performed.

Span adjustment done using hardware adjustment.

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