



Peace Airshed Zone Association

Ambient Air Monitoring Network Summary

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

March 31, 2017

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

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

Enclosed is the PAZA Ambient Monitoring Network Report for the month of February 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 February, 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 February.

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 February.

Smoky Heights Station:

- ◆ The measured ambient air quality was within the AAAQO for the Smoky Heights station, with the exception of one 1-hour PM_{2.5} exceedance on February 16, 2017 for the hour ending at 00:00 MST. The concentration recorded was 177 µg/m³, greater than the AAAQO of 80 µg/m³. AEP reference #321093.
- ◆ All analyzers and sensors at the Smoky Heights station had an operational uptime greater than 90% for the month of February.
- ◆ The station was audited by AEP on February 21.

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 February.
- ◆ The station was audited by AEP on February 22.

Valleyview Station:

- ◆ The measured ambient air quality was within the AAAQO for the Valleyview station.
- ◆ All analyzers and sensors at the Valleyview station had an operational uptime greater than 90% for the month of February.
- ◆ The station was audited by AEP on February 22.

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 February.

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 February.

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

Changes were made to the passive monitoring network in February. The number of sites was reduced from 46 to 27, and the number of Ozone samples was reduced. There were three duplicate sites sampled in the month of February: Bay Tree, Clairmont Lake, and Girouxville 3 (H₂S). The passive sample analyses were performed by MAXXAM Analytics Inc.

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

- Monthly average concentrations for SO₂ passives ranged from 0.1 ppb to 0.4 ppb, with a mean of 0.2 ppb.
- Monthly average concentrations for NO₂ passives ranged from 0.4 ppb to 11.2 ppb, with a mean of 1.7 ppb.
- Monthly average concentrations for O₃ passives ranged from 41.1 ppb to 47.5 ppb, with a mean of 43.3 ppb.
- Monthly average concentrations for H₂S passives ranged from 0.1 ppb to 0.3 ppb, with a mean of 0.2 ppb.

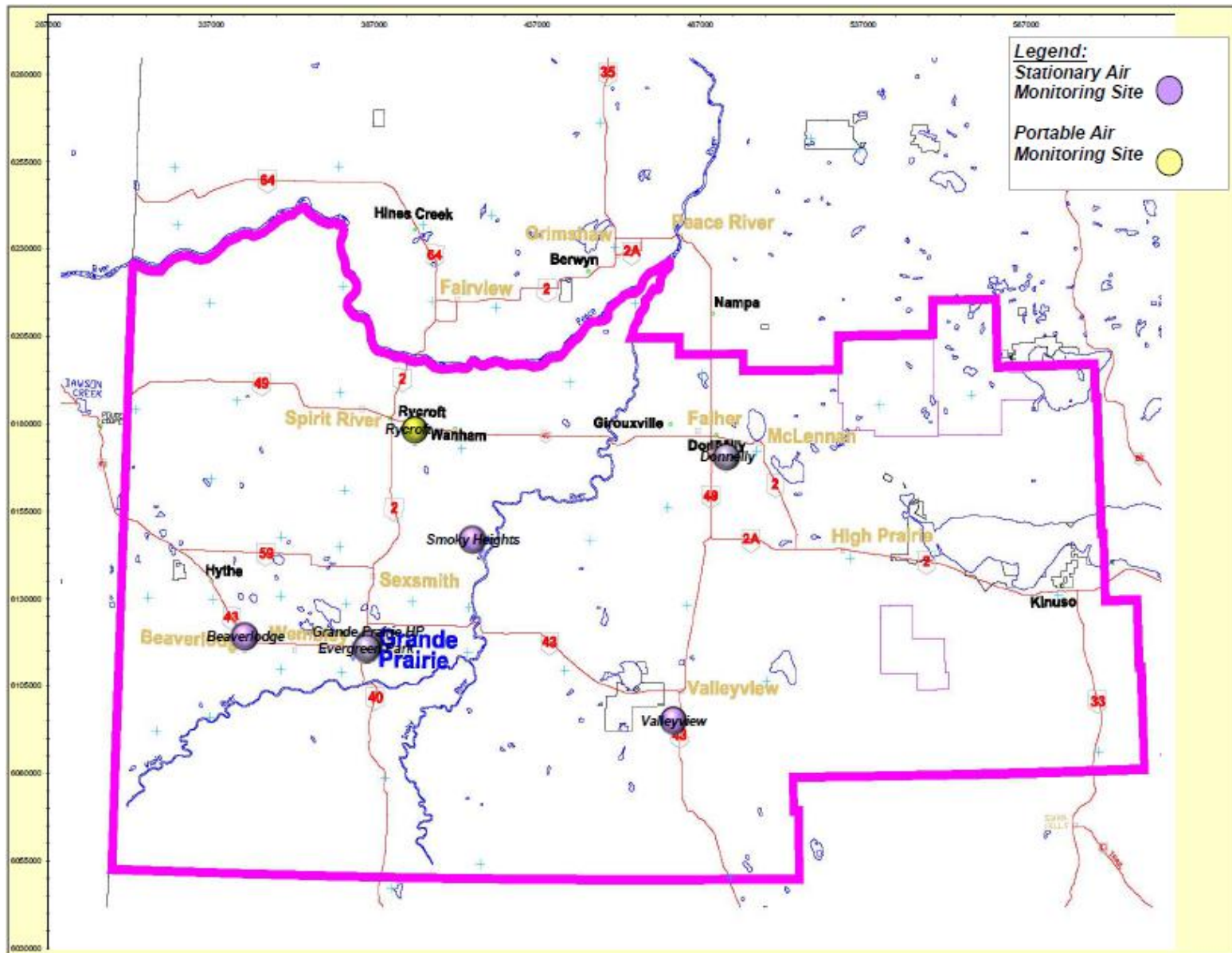
If you have any questions or concerns, please contact Patrick Andersen at 403.505.1041 or the PAZA office at 780.833.4343.

On Behalf of the
Peace Airshed Zone Association



Patrick Andersen, B.Sc.
Program Manager

Location of PAZA Continuous Monitoring Stations



PAZA Monthly Continuous Data Summary

Feb-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	0.3	0	0	3.9	Feb-08 13:00	0.8	Feb-20	100.0%	Feb-14
SO ₂ (ppb)	172	48	Evergreen Park	0.3	0	0	9.4	Feb-12 12:00	1.0	Feb-12	100.0%	Feb-10
SO ₂ (ppb)	172	48	Smoky Heights	0.4	0	0	7.1	Feb-10 23:00	1.1	Feb-10	100.0%	Feb-27
SO ₂ (ppb)	172	48	Beaverlodge	0.4	0	0	7.5	Feb-01 11:00	1.7	Feb-01	100.0%	Feb-15
SO ₂ (ppb)	172	48	Valleyview	1.0	0	0	23.7	Feb-07 16:00	4.7	Feb-11	100.0%	Feb-16
SO ₂ (ppb)	172	48	Donnelly	0.2	0	0	3.1	Feb-21 18:00	0.8	Feb-21	100.0%	Feb-09
SO ₂ (ppb)	172	48	Rycroft-Portable	0.4	0	0	6.1	Feb-23 13:00	1.3	Feb-23	100.0%	Feb-08
NO (ppb)			Henry Pirker	7.4	-	-	112.7	Feb-16 10:00	36.7	Feb-14	100.0%	Feb-14
NO ₂ (ppb)	159	106	Henry Pirker	16.7	0	0	51.1	Feb-08 20:00	31.2	Feb-14	100.0%	Feb-14
NO _x (ppb)			Henry Pirker	24.4	-	-	151.4	Feb-16 10:00	68.4	Feb-14	100.0%	Feb-14
NO (ppb)			Beaverlodge	1.2	-	-	32.9	Feb-06 12:00	7.1	Feb-06	100.0%	Feb-15
NO ₂ (ppb)	159	106	Beaverlodge	5.3	0	0	33.1	Feb-06 08:00	15.2	Feb-06	100.0%	Feb-15
NO _x (ppb)			Beaverlodge	6.6	-	-	51.5	Feb-06 10:00	22.3	Feb-06	100.0%	Feb-15
NO (ppb)			Rycroft-Portable	0.4	-	-	7.0	Feb-27 06:00	1.1	Feb-06	100.0%	Feb-08
NO ₂ (ppb)	159	106	Rycroft-Portable	2.8	0	0	13.6	Feb-27 06:00	5.9	Feb-10	100.0%	Feb-08
NO _x (ppb)			Rycroft-Portable	3.1	-	-	20.7	Feb-27 06:00	6.6	Feb-10	100.0%	Feb-08
O ₃ (ppb)	82		Henry Pirker	21.4	0	-	45.1	Feb-12 17:00	41.5	Feb-11	100.0%	Feb-14
O ₃ (ppb) - 8-hr			Henry Pirker		0				43.8	Feb-12		-
O ₃ (ppb)	82		Beaverlodge	32.4	0	-	46.0	Feb-12 11:00	43.4	Feb-12	100.0%	Feb-15
O ₃ (ppb) - 8-hr			Beaverlodge		0				45.0	Feb-12		-
O ₃ (ppb)	82		Rycroft-Portable	33.6	0	-	48.1	Feb-26 02:00	46.4	Feb-12	100.0%	Feb-08
O ₃ (ppb) - 8-hr			Rycroft-Portable		0				47.4	Feb-12		-
CO (ppm)	13		Henry Pirker	0.26	0	-	1.1	Feb-14 20:00	0.5	Feb-14	100.0%	Feb-13
CO (ppm) - 8-hr	5		Henry Pirker		0				0.7	Feb-15		-

PAZA Monthly Continuous Data Summary – continued

Feb-2017 Peace Airshed Zone Association							Maximum Recorded Values					
							1-hr		24-hr / 8-hr			
THC (ppm)			Henry Pirker	2.1	-	-	4.0	Feb-25 07:00	2.4	Feb-14	96.4%	Feb-13
CH ₄ (ppm)			Henry Pirker	2.1	-	-	4.0	Feb-25 07:00	2.4	Feb-14	96.4%	Feb-13
NMHC (ppm)			Henry Pirker	0.0	-	-	0.0	Feb-22 19:00	0.0	Feb-10	96.4%	Feb-13
THC (ppm)			Rycroft-Portable	1.9	-	-	2.4	Feb-15 10:00	2.0	Feb-01	91.5%	Feb-23
CH ₄ (ppm)			Rycroft-Portable	1.9	-	-	2.0	Feb-06 13:00	2.0	Feb-01	91.5%	Feb-23
NMHC (ppm)			Rycroft-Portable	0.0	-	-	0.4	Feb-15 10:00	0.0	Feb-15	91.5%	Feb-23
TRS (ppb)			Henry Pirker	0.4	-	-	1.2	Feb-14 20:00	0.7	Feb-14	100.0%	Feb-13
TRS (ppb)			Evergreen Park	0.4	-	-	1.1	Feb-15 02:00	0.6	Feb-06	100.0%	Feb-10
TRS (ppb)			Smoky Heights	0.3	-	-	0.8	Feb-07 10:00	0.5	Feb-07	100.0%	Feb-27
TRS (ppb)			Rycroft-Portable	0.3	-	-	1.0	Feb-03 17:00	0.4	Feb-11	96.3%	Feb-07
H ₂ S (ppb)	10	3	Valleyview	0.3	0	0	10.1	Feb-16 02:00	2.0	Feb-16	100.0%	Feb-16
H ₂ S (ppb)	10	3	Donnelly	0.1	0	0	1.4	Feb-27 21:00	0.3	Feb-27	100.0%	Feb-09
PM _{2.5} (µg/m ³)	80	30	Henry Pirker	5.3	0	0	52.0	Feb-06 19:00	11.4	Feb-14	100.0%	Dec-20
PM _{2.5} (µg/m ³)	80	30	Evergreen Park	3.0	0	0	17.4	Feb-10 20:00	7.3	Feb-10	99.7%	Dec-07
PM _{2.5} (µg/m ³)	80	30	Smoky Heights	3.9	1	0	177.2	Feb-16 00:00	10.8	Feb-15	100.0%	Dec-15
PM _{2.5} (µg/m ³)	80	30	Beaverlodge	5.7	0	0	32.5	Feb-06 09:00	15.0	Feb-06	100.0%	Dec-20
PM _{2.5} (µg/m ³)	80	30	Rycroft-Portable	1.8	0	0	22.9	Feb-01 19:00	6.8	Feb-10	99.9%	Nov-04
RH (%)			Henry Pirker	66.4	-	-	86.1	Feb-16 09:00	78.5	Feb-16	100.0%	-
RH (%)			Evergreen Park	71.8	-	-	97.2	Feb-16 07:00	86.0	Feb-25	100.0%	-
RH (%)			Beaverlodge	74.4	-	-	100.0	Feb-16 05:00	93.5	Feb-16	100.0%	-
RH (%)			Valleyview	58.2	-	-	95.7	Feb-19 07:00	84.9	Feb-19	100.0%	-
SR (W/m ²)			Henry Pirker	57.5	-	-	439.0	Feb-28 14:00	110.6	Feb-27	100.0%	-
Temp (°C)			Henry Pirker	-8.3	-	-	12.6	Feb-15 15:00	5.1	Feb-13	100.0%	-
Temp (°C)			Evergreen Park	-8.3	-	-	13.2	Feb-15 16:00	5.4	Feb-13	100.0%	-
Temp (°C)			Smoky Heights	-8.7	-	-	9.9	Feb-15 17:00	4.6	Feb-15	99.9%	-
Temp (°C)			Beaverlodge	-7.8	-	-	10.5	Feb-15 15:00	7.0	Feb-15	100.0%	-
Temp (°C)			Valleyview	-7.3	-	-	16.5	Feb-14 17:00	9.6	Feb-15	100.0%	-
Temp (°C)			Donnelly	-8.2	-	-	12.0	Feb-15 16:00	7.8	Feb-15	100.0%	-
Temp (°C)			Rycroft-Portable	-8.2	-	-	12.4	Feb-14 17:00	5.5	Feb-14	100.0%	-

PAZA Monthly Continuous Data Summary – continued

Feb-2017 Peace Airshed Zone Association							Maximum Recorded Values					
							1-hr		24-hr / 8-hr			
WSPD s (km/hr)			Henry Pirker	7.1	-	-	32.0	Feb-12 17:00	19.5	Feb-11	96.0%	-
WSPD s (km/hr)			Evergreen Park	9.5	-	-	54.0	Feb-12 13:00	32.6	Feb-11	100.0%	-
WSPD s (km/hr)			Smoky Heights	10.9	-	-	46.0	Feb-12 16:00	28.5	Feb-12	99.9%	-
WSPD s (km/hr)			Beaverlodge	9.4	-	-	58.0	Feb-12 15:00	31.4	Feb-11	100.0%	-
WSPD s (km/hr)			Valleyview	4.0	-	-	24.0	Feb-11 14:00	11.7	Feb-11	100.0%	-
WSPD s (km/hr)			Donnelly	10.6	-	-	55.0	Feb-12 06:00	33.5	Feb-12	98.4%	-
WSPD s (km/hr)			Rycroft-Portable	9.2	-	-	33.0	Feb-11 14:00	17.5	Feb-11	100.0%	-
WSPD v (km/hr)			Henry Pirker	4.0	-	-	32.0	Feb-12 17:00	18.9	Feb-11	96.0%	-
WSPD v (km/hr)			Evergreen Park	5.8	-	-	53.0	Feb-12 13:00	31.7	Feb-11	100.0%	-
WSPD v (km/hr)			Smoky Heights	6.1	-	-	46.0	Feb-12 16:00	27.6	Feb-12	99.9%	-
WSPD v (km/hr)			Beaverlodge	4.2	-	-	58.0	Feb-12 15:00	31.0	Feb-11	100.0%	-
WSPD v (km/hr)			Valleyview	1.8	-	-	24.0	Feb-11 14:00	10.7	Feb-11	100.0%	-
WSPD v (km/hr)			Donnelly	6.1	-	-	55.0	Feb-12 06:00	33.1	Feb-12	98.4%	-
WSPD v (km/hr)			Rycroft-Portable	5.0	-	-	32.0	Feb-11 14:00	17.2	Feb-11	100.0%	-
WDIR			Henry Pirker	WSW	-	-	-	-	-	-	96.0%	-
WDIR			Evergreen Park	W	-	-	-	-	-	-	100.0%	-
WDIR			Smoky Heights	WSW	-	-	-	-	-	-	99.9%	-
WDIR			Beaverlodge	WNW	-	-	-	-	-	-	100.0%	-
WDIR			Valleyview	WNW	-	-	-	-	-	-	100.0%	-
WDIR			Donnelly	SSW	-	-	-	-	-	-	98.4%	-
WDIR			Rycroft-Portable	SW	-	-	-	-	-	-	100.0%	-

Continuous Network Equipment Summary

PAZA – Henry Pirker Station

General Station Issues:

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
NOx/NO/NO ₂	TEI	42i	No operational issues observed.
O ₃	TEI	49i	No operational issues observed.
CO	TEI	48C	No operational issues observed.
THC/CH ₄ /NMHC	TEI	55i	Instrument malfunctioning due to low hydrogen and span cylinders resulted in an uptime of 96.4%
TRS	TEI	45C	No operational issues observed.
PM _{2.5}	Sharp	5030	No operational issues observed.
RH	Met One	083D	No operational issues observed.
ET	Met One	083D	No operational issues observed.
SR	Met One	096-1	No operational issues observed.
WS / WD	Met One	010C/020C	Intermittent instrument malfunctioning resulted in an uptime of 96.0%.

PAZA – Evergreen Park Station

General Station Issues

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
PM _{2.5}	Sharp	5030	Routine maintenance resulted in an uptime of 99.7%.
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

The station was audited by AEP on February 21.

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

PAZA – Beaverlodge Station

General Station Issues

The station was audited by AEP on February 22.

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	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.
ET	n/a	n/a	No operational issues observed.
RH	n/a	n/a	No operational issues observed.
WS / WD	Blue Sky	857	No operational issues observed.

PAZA – Valleyview Station

General Station Issues

The station was audited by AEP on February 22.

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	Intermittent instrument malfunctioning, attributed to cold weather and precipitation causing the wind instrument to freeze up, resulted in an uptime of 98.4%

PAZA – Portable-Rycroft

General Station Issues

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
NOx/NO/NO ₂	TEI	42i	No operational issues observed.
O ₃	TEI	49i	No operational issues observed.
TRS	TEI	43i	The analyzer was removed for replacement on Feb 6-7. Maintenance resulted in an uptime of 96.3%.
THC/CH ₄ /NMHC	TEI	55i	Instrument malfunctioning due to low hydrogen and span cylinders resulted in an uptime of 91.5%
PM _{2.5}	Sharp	5030	Routine maintenance resulted in an uptime of 99.9%.
ET	Gill	Met Pak 3	No operational issues observed.
WS / WD	Gill	Met Pak 3	No operational issues observed.

PAZA
Henry Pirker Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

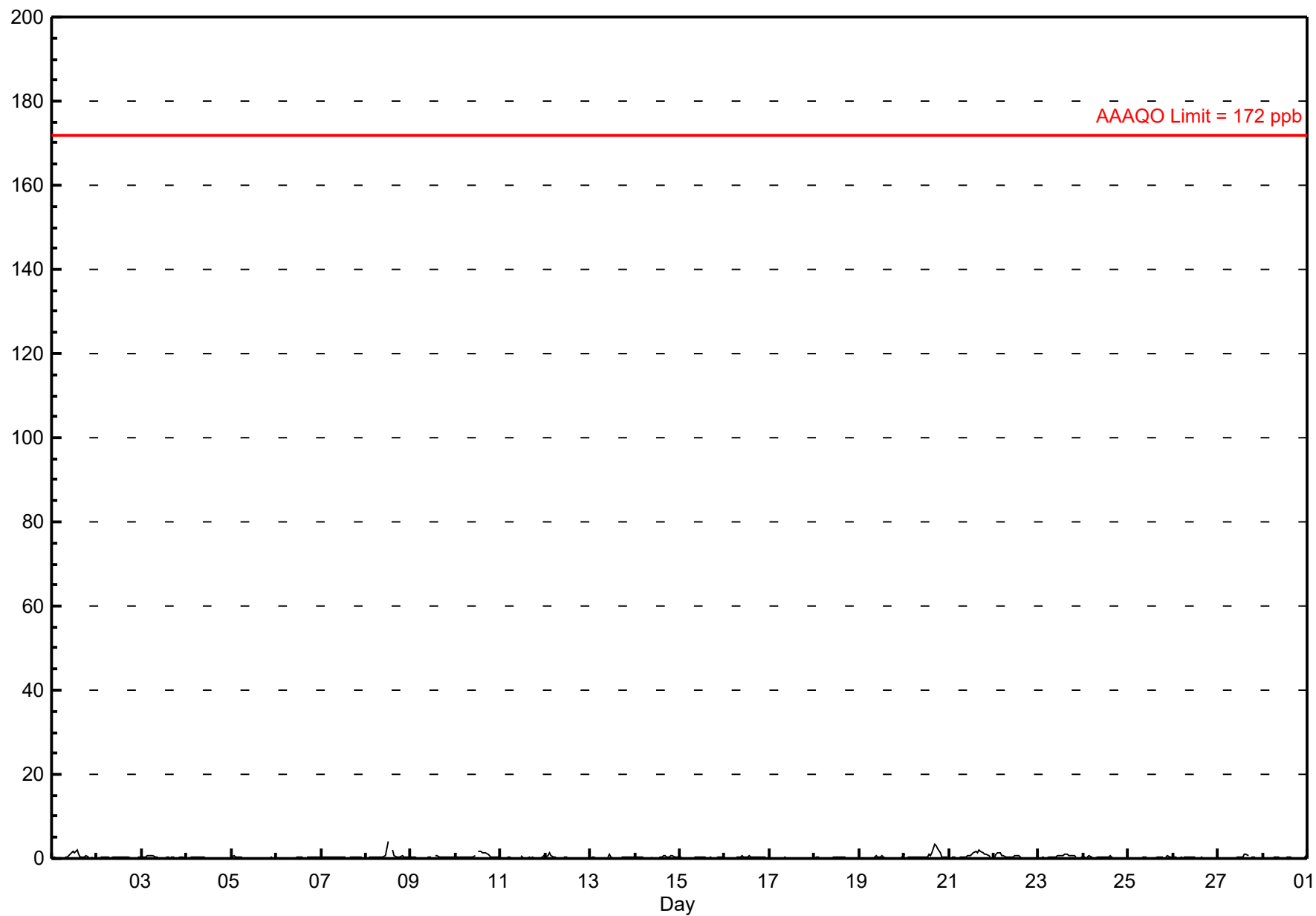
Sulphur Dioxide (SO₂) - ppb

Henry Pirker - February 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 672								
Maximum Value: 3.9 ppb on Feb 8 13:00 Maximum Daily Average: 0.8 ppb on Feb 20																			Hours of Data: 640								
Minimum Value: 0 ppb on Feb 6 01:00 Minimum Daily Average: 0.0 ppb on Feb 17																			Hours of Missing Data: 32								
Maximum Diurnal Average: 0.6 ppb at hour 13 Minimum Diurnal Average: 0.2 ppb at hour 7																			Hours of Calibration: 32								
Monthly Average: 0.31 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.6 P ₉₉ = 1.8																			Percent Operational Time: 100.0								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Feb	0	0	0	0	0	0	0	0	0	1	1	2	1	2	1	0	0	0	1	0	A	0	0	0	0.5	2.0	
2-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.4	
3-Feb	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	0.6	
4-Feb	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.3	
5-Feb	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.8	
6-Feb	0	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	
7-Feb	0	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	
8-Feb	0	0	0	0	0	0	0	0	0	0	1	2	4	A	2	1	0	0	0	1	0	0	0	0	0.6	3.9	
9-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0.3	0.6	
10-Feb	0	0	0	0	0	0	0	0	0	0	1	A	2	2	1	1	1	1	1	0	0	0	0	0	0.6	1.7	
11-Feb	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	1	0.2	0.8		
12-Feb	0	1	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.4	
13-Feb	0	0	0	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1	
14-Feb	0	0	0	0	0	0	0	A	0	0	C	C	C	0	0	1	1	0	0	1	1	0	0	0	0.3	0.6	
15-Feb	0	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	
16-Feb	0	0	0	0	0	A	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.3	0.7	
17-Feb	0	0	0	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	
18-Feb	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4	
19-Feb	0	0	A	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6	
20-Feb	1	A	0	0	0	0	0	0	0	0	0	0	0	1	1	1	4	3	3	1	0	0	0	0	0.8	3.5	
21-Feb	A	0	0	0	0	0	0	0	0	1	1	1	1	1	2	2	2	2	1	1	1	1	0	A	0.8	1.9	
22-Feb	0	1	1	1	1	1	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	A	0	0.5	1.4	
23-Feb	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	A	0	0	0.4	0.9	
24-Feb	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0	0.3	0.6	
25-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	0	0.2	0.7	
26-Feb	0	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	0.5	
27-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	A	0	0	0	0	0	0	0.3	1.1	
28-Feb	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	0.6	
0.2 0.2 0.3 0.3 0.2 0.2 0.2 0.2 0.2 0.3 0.4 0.5 0.6 0.5 0.5 0.4 0.5 0.4 0.4 0.3 0.2 0.2 0.2 0.2																									Diurnal Average		
0.9 0.9 1.4 1.3 0.8 0.6 0.6 0.4 0.4 0.7 1.5 2.2 3.9 2.0 1.9 1.5 3.5 2.9 2.5 1.5 0.9 0.7 0.5 0.8																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																											

Hourly Averages

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



Hourly Maximums

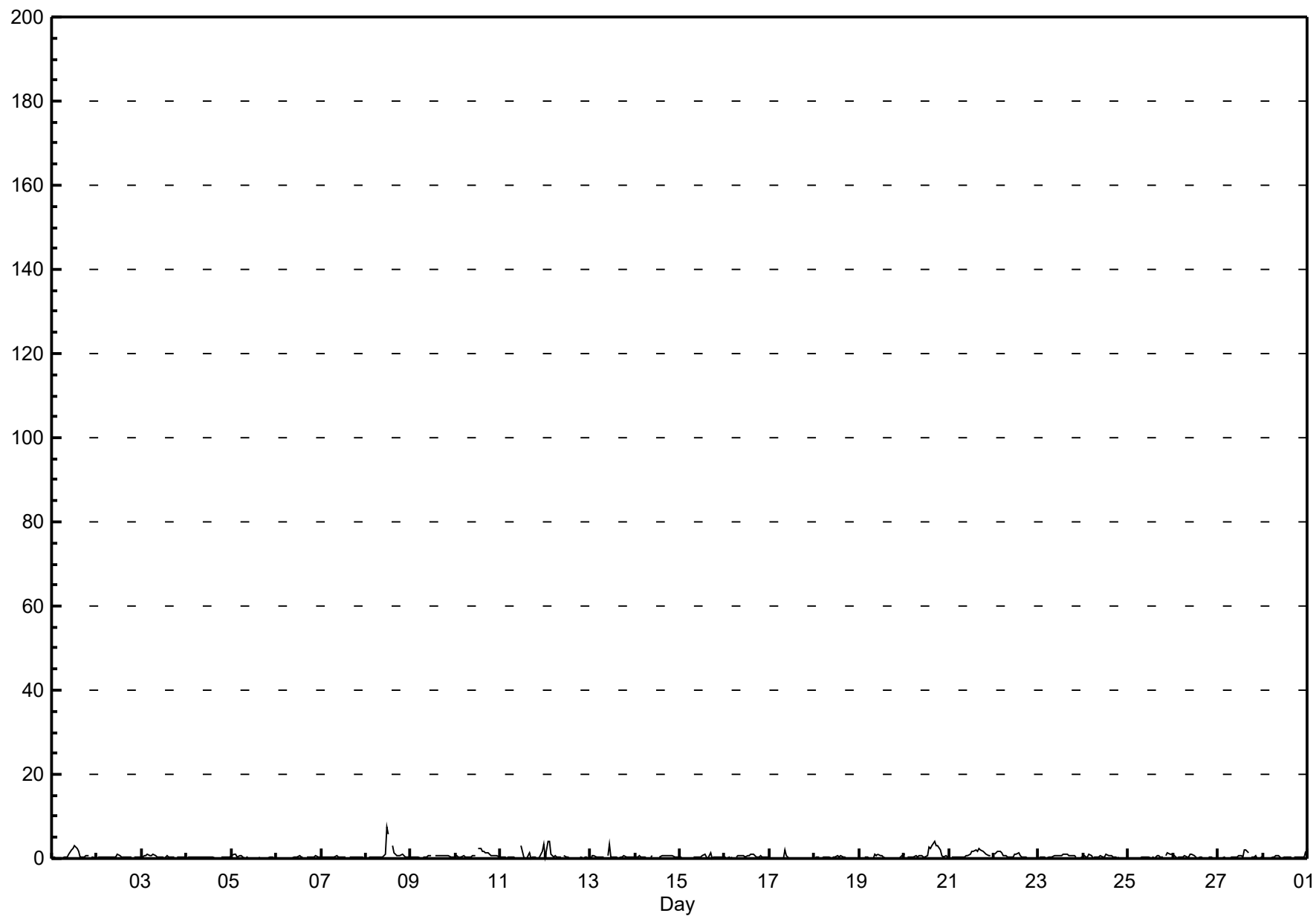
Sulphur Dioxide (SO₂) - ppb

Henry Pirker - February 2017

Maximum Value: 7.3 ppb on Feb 8 12:00																				Maximum Daily Average: 1.3 ppb on Feb 20					Hours in Service: 672	
Minimum Value: 0 ppb on Feb 12 17:00																				Minimum Daily Average: 0.3 ppb on Feb 17					Hours of Data: 640	
Maximum Diurnal Average: 0.9 ppb at hour 13																				Minimum Diurnal Average: 0.3 ppb at hour 6					Hours of Missing Data: 32	
Monthly Average: 0.52 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.2 Q ₁ = 0.2 Median = 0.3 Q ₃ = 0.6 P ₉₀ = 1.0 P ₉₉ = 3.0					Hours of Calibration: 32	
																				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-Feb	0	0	0	0	0	0	0	0	0	1	2	2	3	2	2	0	0	0	1	1	A	0	0	0	0.8	3.2
2-Feb	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	A	0	0	0	0	0.3	0.9
3-Feb	0	1	1	1	1	1	1	1	0	0	0	0	0	1	0	0	0	0	A	0	0	0	0	0	0.4	0.9
4-Feb	0	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	0.5
5-Feb	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	1.0
6-Feb	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0	1	0	0	0.3	0.6
7-Feb	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.4	0.5
8-Feb	0	0	0	0	0	0	0	0	0	0	1	7	6	A	3	1	1	1	1	1	1	0	0	0	1.2	7.3
9-Feb	0	0	0	0	0	0	0	0	0	1	1	1	A	1	1	1	1	1	1	1	1	0	0	0	0.4	0.7
10-Feb	1	0	0	0	1	0	0	0	0	1	1	A	2	2	2	2	1	1	1	1	1	1	1	0	0.8	2.4
11-Feb	0	0	0	0	0	0	0	0	0	0	A	3	0	0	0	1	0	0	0	0	0	0	2	3	0.6	3.5
12-Feb	0	4	4	1	0	1	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.6	4.2
13-Feb	0	1	1	0	0	0	0	0	A	1	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0.5	3.3
14-Feb	0	0	1	0	0	0	0	A	0	1	C	C	C	0	1	1	1	1	1	1	0	0	0	0	0.5	0.7
15-Feb	0	0	0	0	0	0	A	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0.4	1.3
16-Feb	0	0	0	0	0	A	0	1	1	1	1	0	1	1	1	1	1	0	0	1	0	0	0	0	0.5	1.2
17-Feb	0	0	0	0	A	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.2
18-Feb	0	0	0	A	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0.3	0.6
19-Feb	0	0	A	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0.3	1.1
20-Feb	1	A	0	0	0	0	1	0	1	1	0	0	1	3	2	3	4	3	3	2	1	0	1	0	1.3	4.2
21-Feb	A	0	0	0	0	0	0	0	0	1	1	1	2	2	2	2	2	2	2	1	1	1	1	A	1.0	2.2
22-Feb	1	1	2	2	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	A	0	0.7	1.6
23-Feb	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	A	0	0	0	0.5	1.2
24-Feb	1	0	0	1	1	0	0	0	0	1	0	0	1	1	1	1	0	0	0	0	A	0	0	0	0.4	1.2
25-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	A	1	1	1	1	0.4	1.3
26-Feb	1	0	0	0	0	0	1	0	0	1	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0.4	1.1
27-Feb	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2	2	A	0	0	1	0	0	0	0.5	2.0
28-Feb	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	2	0.3	1.6
Diurnal Average																									0.5	
Diurnal Maximum																									3.5	
C - Calibration																									A - Automated Daily Zero Span	

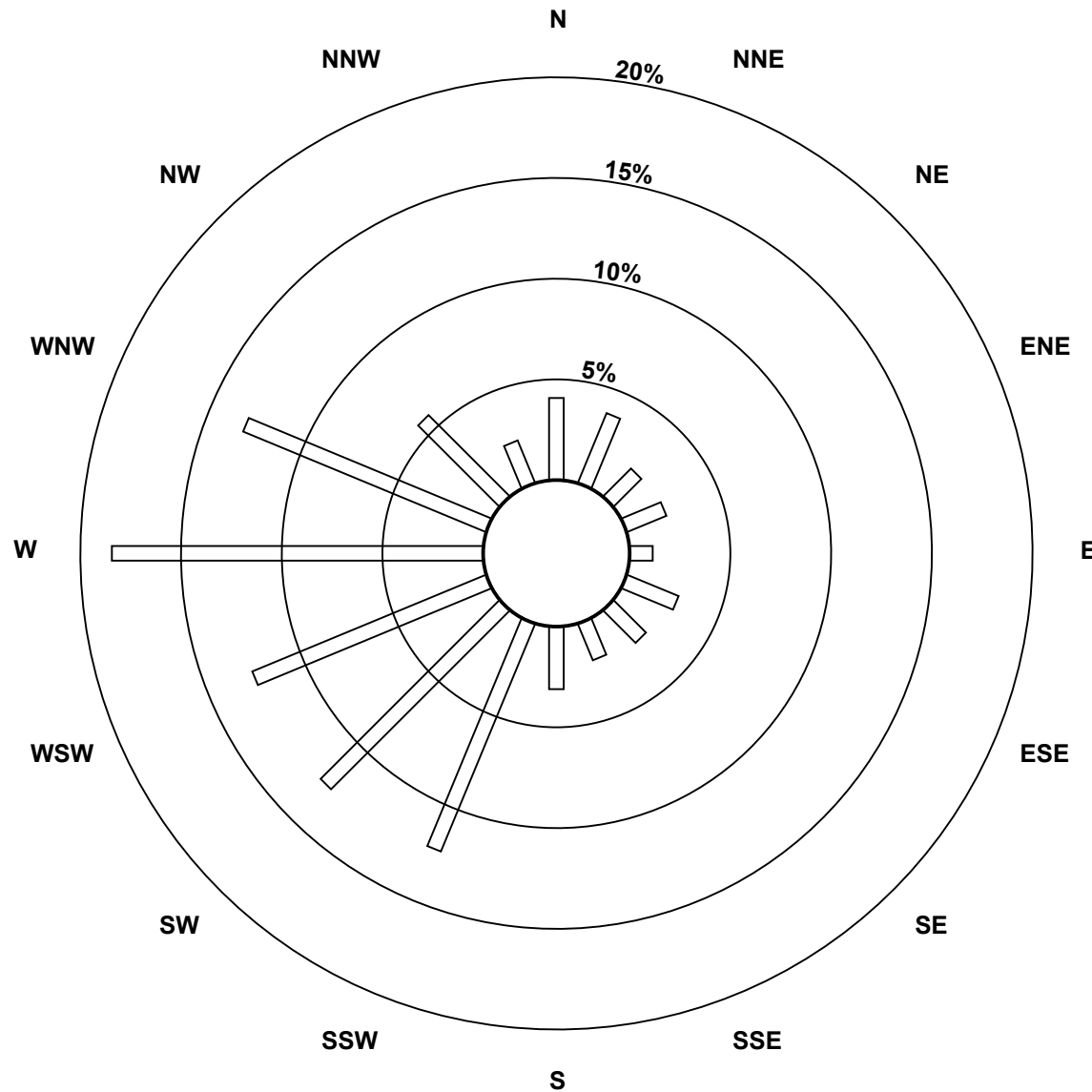
Hourly Maximums

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

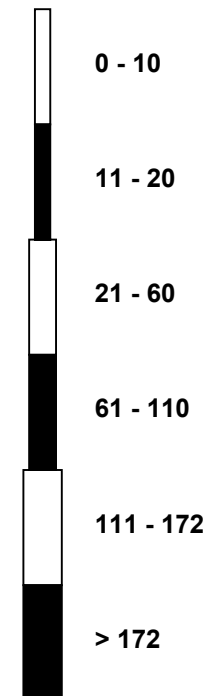


Pollutant Rose

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

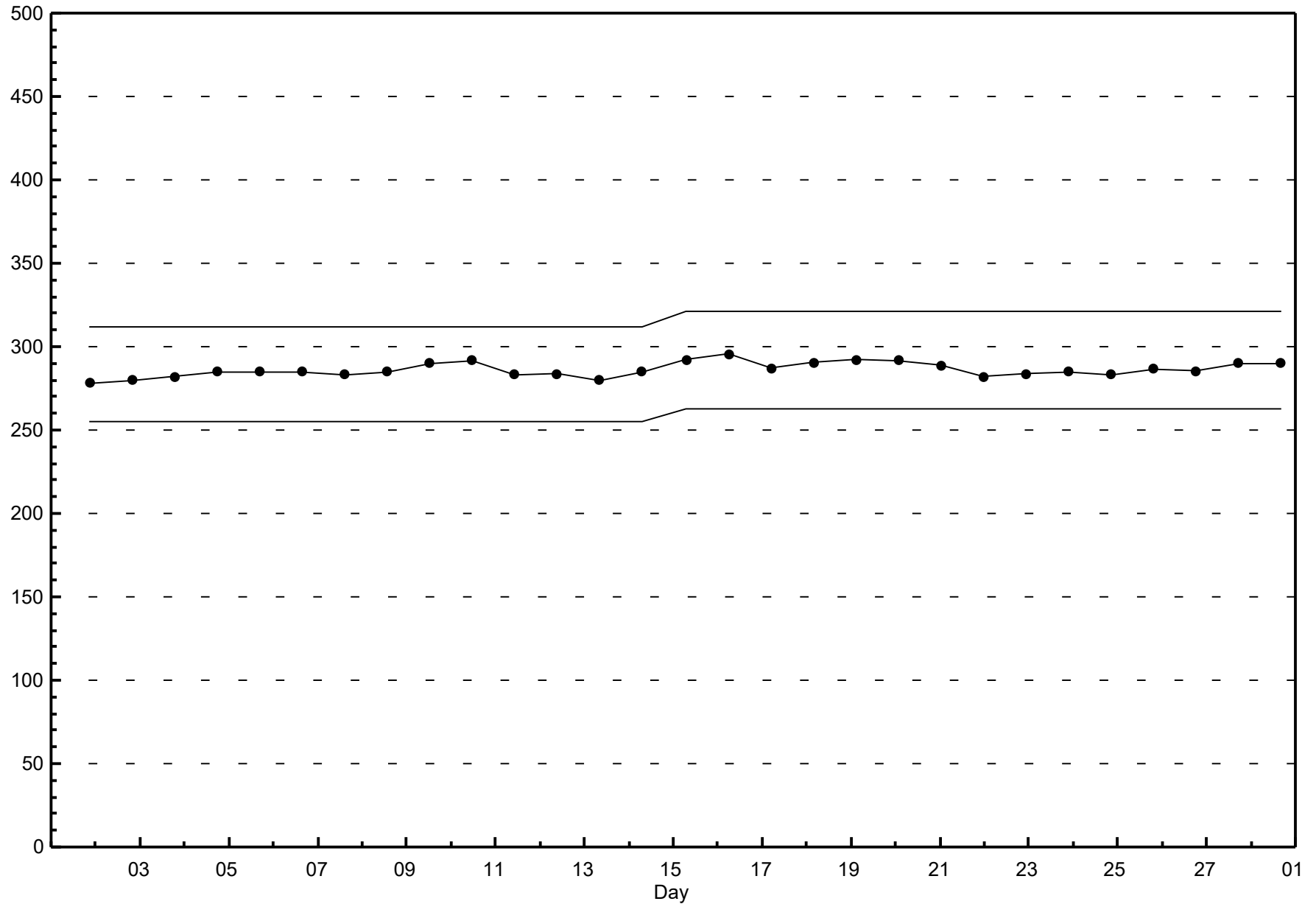


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Henry Pirker - February 2017



Hourly Averages

Total Reduced Sulphur (TRS) - ppb

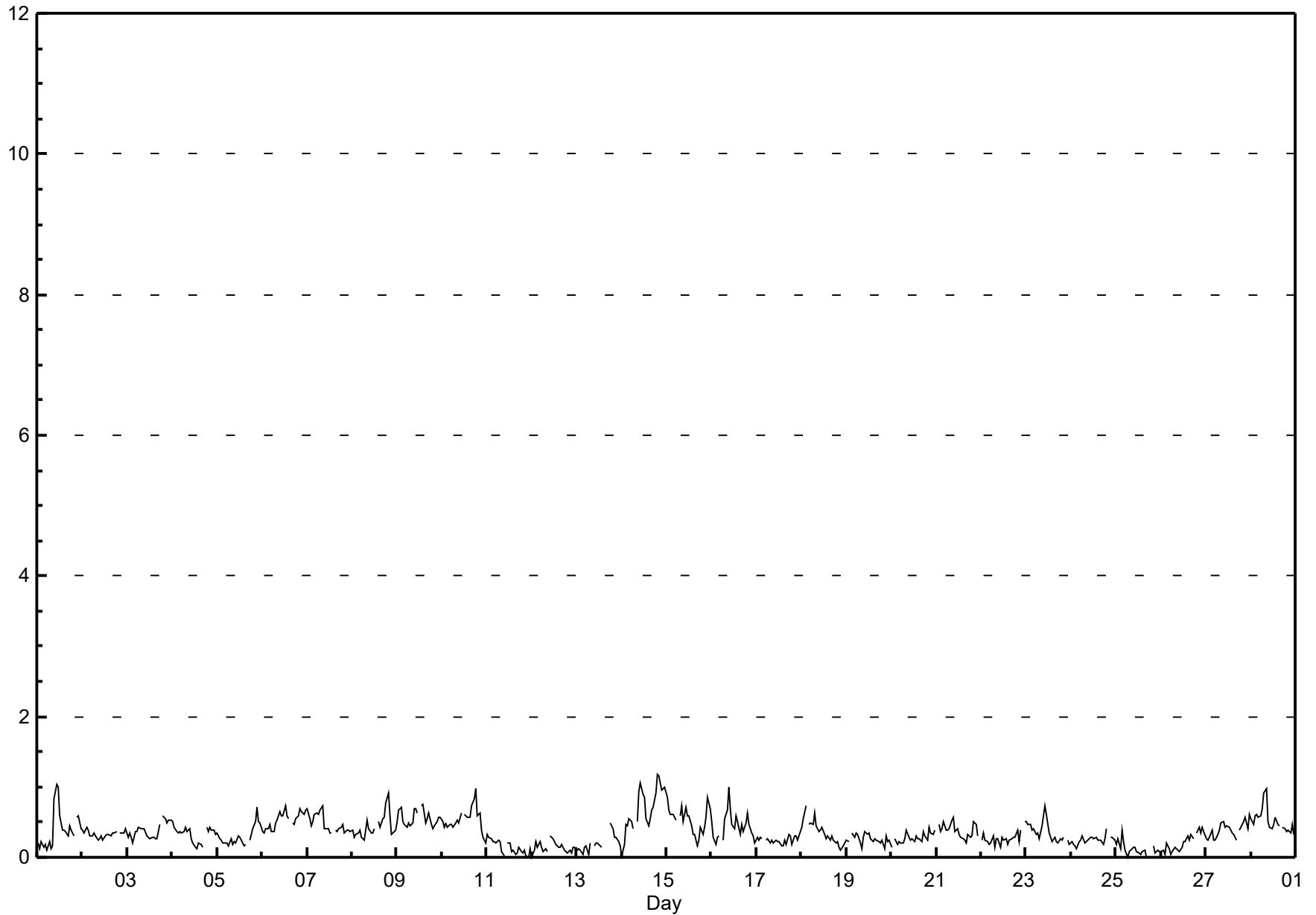
Henry Pirker - February 2017

Maximum Value: 1.2 ppb on Feb 14 20:00																			Maximum Daily Average: 0.7 ppb on Feb 14						Hours in Service: 672	
Minimum Value: 0 ppb on Feb 11 23:00																			Minimum Daily Average: 0.1 ppb on Feb 25						Hours of Data: 639	
Maximum Diurnal Average: 0.4 ppb at hour 11																			Minimum Diurnal Average: 0.3 ppb at hour 16						Hours of Missing Data: 33	
Monthly Average: 0.36 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.3 Q ₃ = 0.5 P ₉₀ = 0.6 P ₉₉ = 1.0						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-Feb	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	A	1	1	0	0.4	1.0
2-Feb	0	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
3-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	0	1	1	0.4	0.6
4-Feb	1	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	0.5
5-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	1	1	0	0.3	0.7
6-Feb	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	A	0	0	1	1	1	1	1	1	0.5	0.7
7-Feb	1	1	0	1	1	1	1	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.5	0.7
8-Feb	0	0	0	0	0	0	0	0	1	0	0	0	0	A	0	0	1	1	1	1	1	0	0	0	0.4	0.9
9-Feb	1	1	1	1	0	0	0	0	0	1	1	1	A	1	1	0	1	1	1	0	0	1	1	1	0.6	0.7
10-Feb	1	0	0	0	0	0	0	0	1	0	1	A	1	1	1	1	1	1	1	1	1	0	0	0	0.5	1.0
11-Feb	0	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
12-Feb	0	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
13-Feb	0	0	0	0	0	0	0	0	A	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0.2	0.5
14-Feb	0	0	0	0	1	1	0	A	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0.7	1.2
15-Feb	1	1	1	1	1	1	A	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	0.5	0.9
16-Feb	1	0	0	0	0	A	0	1	1	1	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0.4	1.0
17-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
18-Feb	0	1	1	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7
19-Feb	0	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
20-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
21-Feb	A	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	A	0.4	0.6
22-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0.3	0.5
23-Feb	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0.4	0.7
24-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.4
25-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.4
26-Feb	0	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
27-Feb	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0	1	1	0	1	0.4	0.6
28-Feb	1	0	1	1	1	1	1	1	1	1	0	0	0	1	0	0	A	0	0	0	0	0	0	0	0.5	1.0
0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.4 0.4 0.4 0.4 0.4 0.4 0.3 0.3 0.3 0.3 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4																								Diurnal Average		
0.9 0.7 0.7 0.6 0.6 0.6 0.7 0.9 1.0 1.0 1.1 1.0 0.8 0.7 0.7 0.6 0.7 0.8 1.0 1.2 1.2 1.0 1.0 1.0																								Diurnal Maximum		
C - Calibration																								A - Automated Daily Zero Span		

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - February 2017



Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

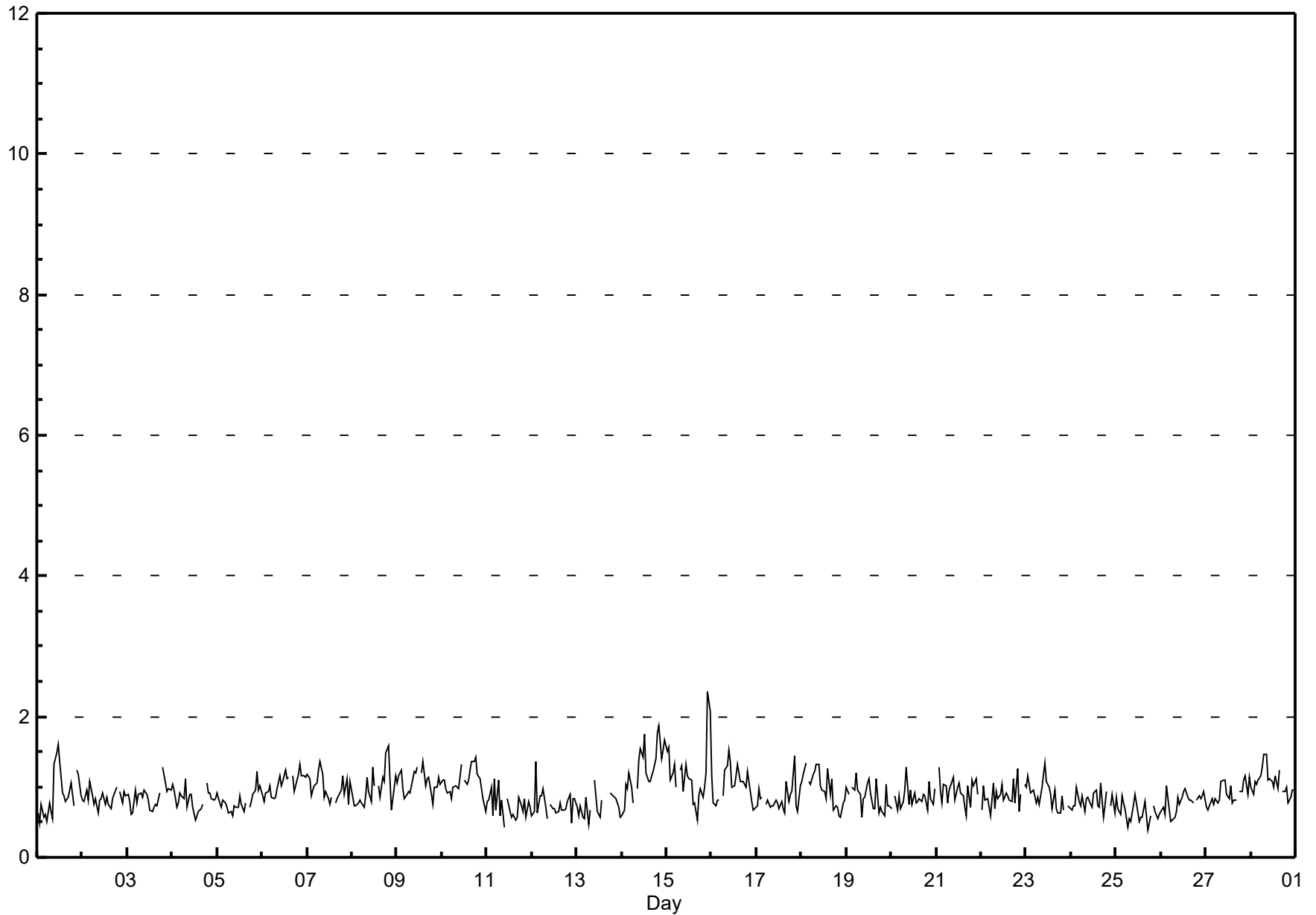
Henry Pirker - February 2017

Maximum Value: 2.4 ppb on Feb 15 23:00																				Maximum Daily Average: 1.2 ppb on Feb 14					Hours in Service: 672	
Minimum Value: 0 ppb on Feb 25 18:00																				Minimum Daily Average: 0.6 ppb on Feb 25					Hours of Data: 639	
Maximum Diurnal Average: 1.0 ppb at hour 11																				Minimum Diurnal Average: 0.8 ppb at hour 6					Hours of Missing Data: 33	
Monthly Average: 0.91 ppb																				Percentiles: P ₁ = 0.5 P ₁₀ = 0.6 Q ₁ = 0.7 Median = 0.9 Q ₃ = 1.0 P ₉₀ = 1.2 P ₉₉ = 1.6					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-Feb	1	0	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	A	1	1	1	0.9	1.6
2-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.8	1.1
3-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.9	1.3
4-Feb	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	1.1
5-Feb	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
6-Feb	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	1.3
7-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1.0	1.4
8-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	2	1	1	1	1	1.0	1.6
9-Feb	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1.1	1.4
10-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.4
11-Feb	1	1	1	1	1	1	1	1	1	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1
12-Feb	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0.8	1.4
13-Feb	1	1	1	1	1	1	0	1	A	1	1	1	1	1	C	C	C	C	1	1	1	1	1	1	0.7	1.1
14-Feb	1	1	1	1	1	1	1	A	1	1	2	1	2	1	1	1	1	1	1	2	2	1	2	2	1.2	1.9
15-Feb	2	2	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1.2	2.4
16-Feb	1	1	1	1	1	A	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.5
17-Feb	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	1.4
18-Feb	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.3
19-Feb	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
20-Feb	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.3
21-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.9	1.3
22-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.9	1.3
23-Feb	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
24-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.0
25-Feb	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	A	1	1	1	1	0.6	0.9
26-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.8	1.0
27-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.9	1.2
28-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1.1	1.5
0.9 0.9 0.9 0.8 0.9 0.8 0.9 0.9 0.9 1.0 1.0 1.0 0.9 0.9 0.9 0.8 0.9 0.9 0.9 0.9 1.0 1.0 0.9 0.9 1.0																									Diurnal Average	
1.5 1.6 1.4 1.2 1.3 1.2 1.3 1.5 1.5 1.5 1.5 1.6 1.7 1.2 1.4 1.3 1.4 1.4 1.5 1.8 1.9 1.4 2.4 2.1																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

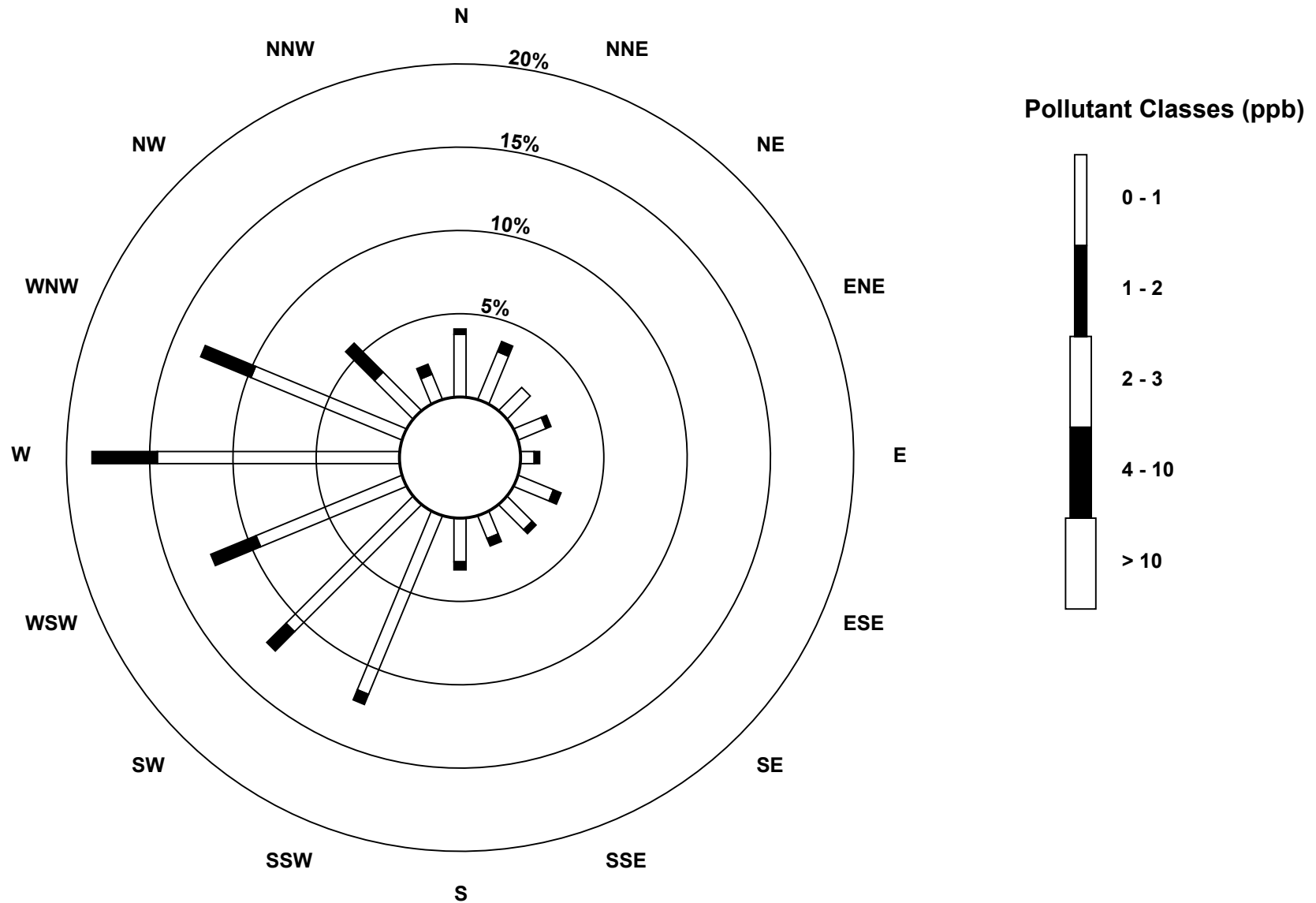
Henry Pirker - February 2017



Pollutant Rose

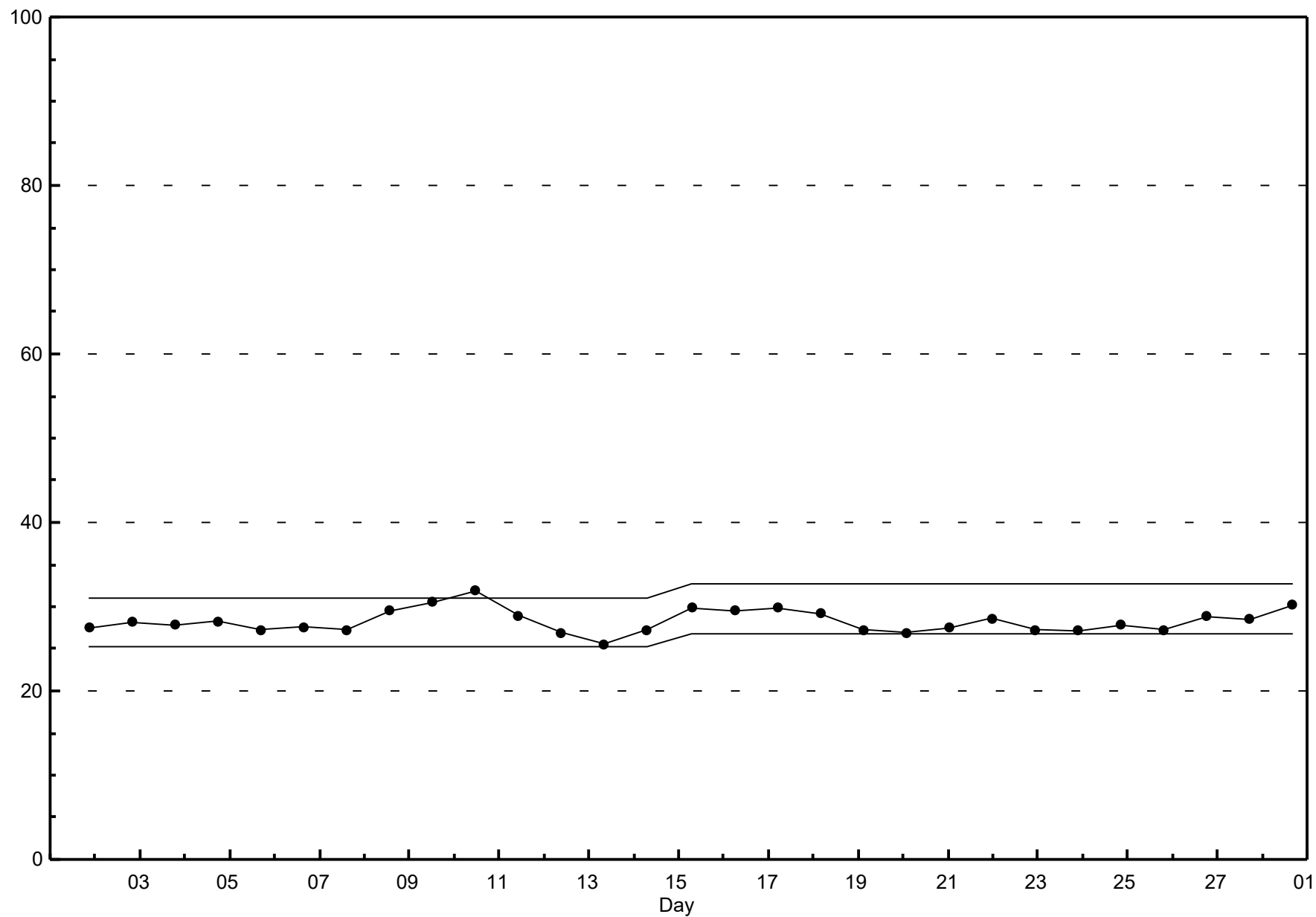
Total Reduced Sulphur (TRS) - ppb

Henry Pirker - February 2017



Span Responses

Total Reduced Sulphur (TRS)
Henry Pirker - February 2017



Hourly Averages

Nitrogen Dioxide (NO₂) - ppb

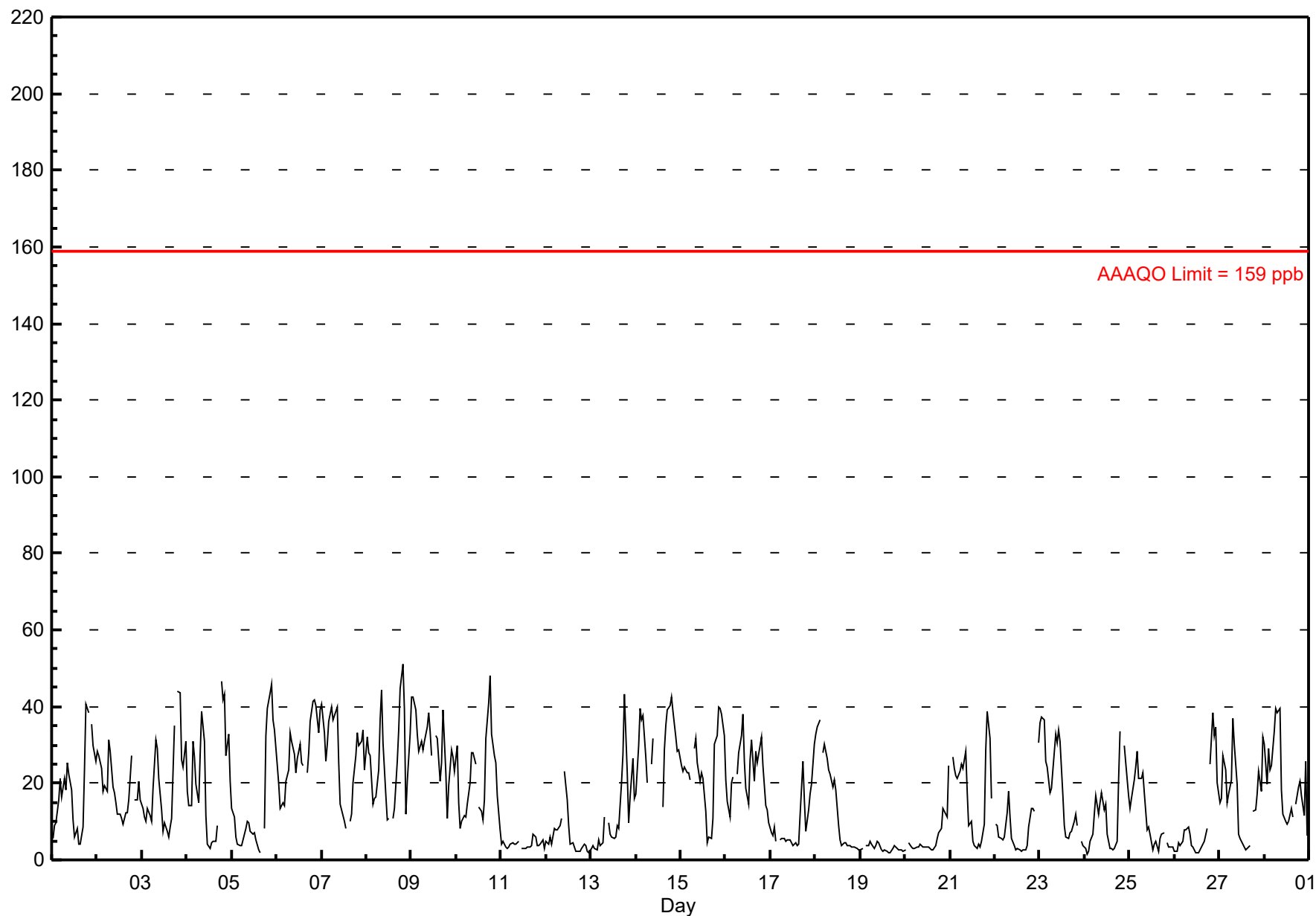
Henry Pirker - February 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 51.1 ppb on Feb 8 20:00 Maximum Daily Average: 31.2 ppb on Feb 14																								Hours in Service: 672 Hours of Data: 639 Hours of Missing Data: 33 Hours of Calibration: 33 Percent Operational Time: 100.0		
Minimum Value: 2 ppb on Feb 24 02:00 Minimum Daily Average: 3.1 ppb on Feb 19 Maximum Diurnal Average: 24.5 ppb at hour 20 Minimum Diurnal Average: 7.8 ppb at hour 16 Monthly Average: 16.69 ppb Percentiles: P ₁ = 2.0 P ₁₀ = 3.2 Q ₁ = 5.1 Median = 13.9 Q ₃ = 26.3 P ₉₀ = 33.9 P ₉₉ = 44.0																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Feb	5	9	10	16	21	17	21	18	25	22	18	10	6	8	4	4	9	23	41	38	A	35	30	26	18.2	40.5
2-Feb	28	27	24	18	19	18	31	28	19	18	15	12	12	11	9	12	12	16	27	A	16	16	21	16	18.5	31.2
3-Feb	13	11	10	13	12	10	19	31	29	21	13	8	10	7	6	9	11	35	A	44	43	26	24	31	19.0	44.1
4-Feb	18	14	14	31	27	20	15	28	39	31	11	4	3	4	5	5	9	A	47	42	43	27	33	20	21.3	46.6
5-Feb	13	11	6	4	4	4	5	8	10	10	7	7	7	5	2	2	A	8	33	40	44	46	36	34	15.0	45.8
6-Feb	25	20	13	15	14	20	23	33	31	28	23	26	30	25	24	A	23	28	36	41	42	40	33	39	27.6	41.8
7-Feb	40	33	26	30	36	40	37	38	40	25	14	12	10	8	A	10	12	20	27	33	30	31	34	24	26.5	40.5
8-Feb	32	28	27	15	16	16	23	37	44	31	17	10	11	A	11	13	26	34	45	51	39	12	21	33	25.7	51.1
9-Feb	43	42	39	33	28	31	29	31	35	38	33	27	A	32	32	20	25	39	23	11	19	29	27	23	30.0	42.6
10-Feb	30	15	8	10	12	11	15	20	28	28	25	A	14	13	10	16	32	41	48	33	27	25	17	8	21.1	48.0
11-Feb	4	5	3	3	3	4	4	4	4	5	A	3	3	3	3	3	4	7	6	4	4	4	5	3	4.0	6.6
12-Feb	5	4	6	4	8	8	8	9	11	A	23	16	9	4	4	3	2	2	2	3	4	4	2	2	6.3	23.2
13-Feb	3	4	3	3	5	4	5	11	A	10	7	6	6	6	9	8	20	28	43	23	10	16	27	16	11.8	43.3
14-Feb	17	30	39	36	38	27	20	A	25	32	C	C	C	C	14	29	35	39	40	43	39	32	28	29	31.2	42.5
15-Feb	25	23	24	23	23	21	A	29	32	25	20	23	21	13	5	6	6	11	30	32	40	40	38	32	23.5	39.8
16-Feb	21	15	11	20	22	A	22	28	32	38	26	19	14	26	31	21	28	26	30	32	25	14	13	10	22.8	38.1
17-Feb	7	6	8	5	A	5	6	6	5	5	5	5	4	5	4	4	11	26	16	8	13	17	20	30	9.6	30.4
18-Feb	33	35	36	A	28	30	26	24	22	19	21	18	9	5	4	4	4	4	4	3	3	3	3	3	14.9	36.4
19-Feb	3	3	A	4	4	5	4	3	4	5	4	3	2	3	2	2	2	3	4	3	3	3	3	2	3.1	4.8
20-Feb	2	A	4	3	3	3	3	3	4	3	3	3	3	3	3	3	4	6	7	8	13	13	11	25	5.9	24.7
21-Feb	A	27	24	22	21	23	25	24	28	18	9	10	5	4	3	4	3	5	9	29	39	32	16	A	17.2	38.7
22-Feb	9	9	6	6	5	6	12	18	11	5	4	3	3	2	2	2	3	4	8	13	13	13	A	31	8.2	30.6
23-Feb	36	37	36	26	24	17	19	24	33	31	34	31	17	9	6	5	7	7	10	12	9	A	5	4	19.1	37.2
24-Feb	3	2	2	5	7	12	17	12	15	18	13	15	7	3	3	3	3	5	21	34	A	30	25	17	11.7	33.6
25-Feb	13	16	21	24	28	21	21	23	17	8	9	7	3	4	5	2	5	7	7	A	4	3	3	3	11.1	28.2
26-Feb	2	2	5	4	5	8	8	9	7	4	3	2	2	2	3	4	5	8	A	25	38	32	35	20	10.1	38.2
27-Feb	15	16	27	23	15	17	21	37	30	20	7	6	4	3	3	3	4	A	13	13	17	23	18	32	15.9	37.0
28-Feb	30	20	29	24	25	33	39	38	39	18	12	10	9	10	14	11	A	15	19	20	17	12	26	6	20.7	39.5
17.6 17.2 17.2 15.5 16.8 16.0 17.7 21.2 23.0 19.1 14.6 11.3 8.6 8.4 8.2 7.8 11.7 17.1 22.9 24.5 22.8 21.4 20.5 19.2																								Diurnal Average		
42.6 42.4 39.5 36.5 37.6 39.8 39.5 38.4 44.4 38.5 34.1 31.1 30.3 32.4 31.8 28.9 35.1 40.9 48.0 51.1 43.6 45.8 38.2 39.3																								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 - February 2017



Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb

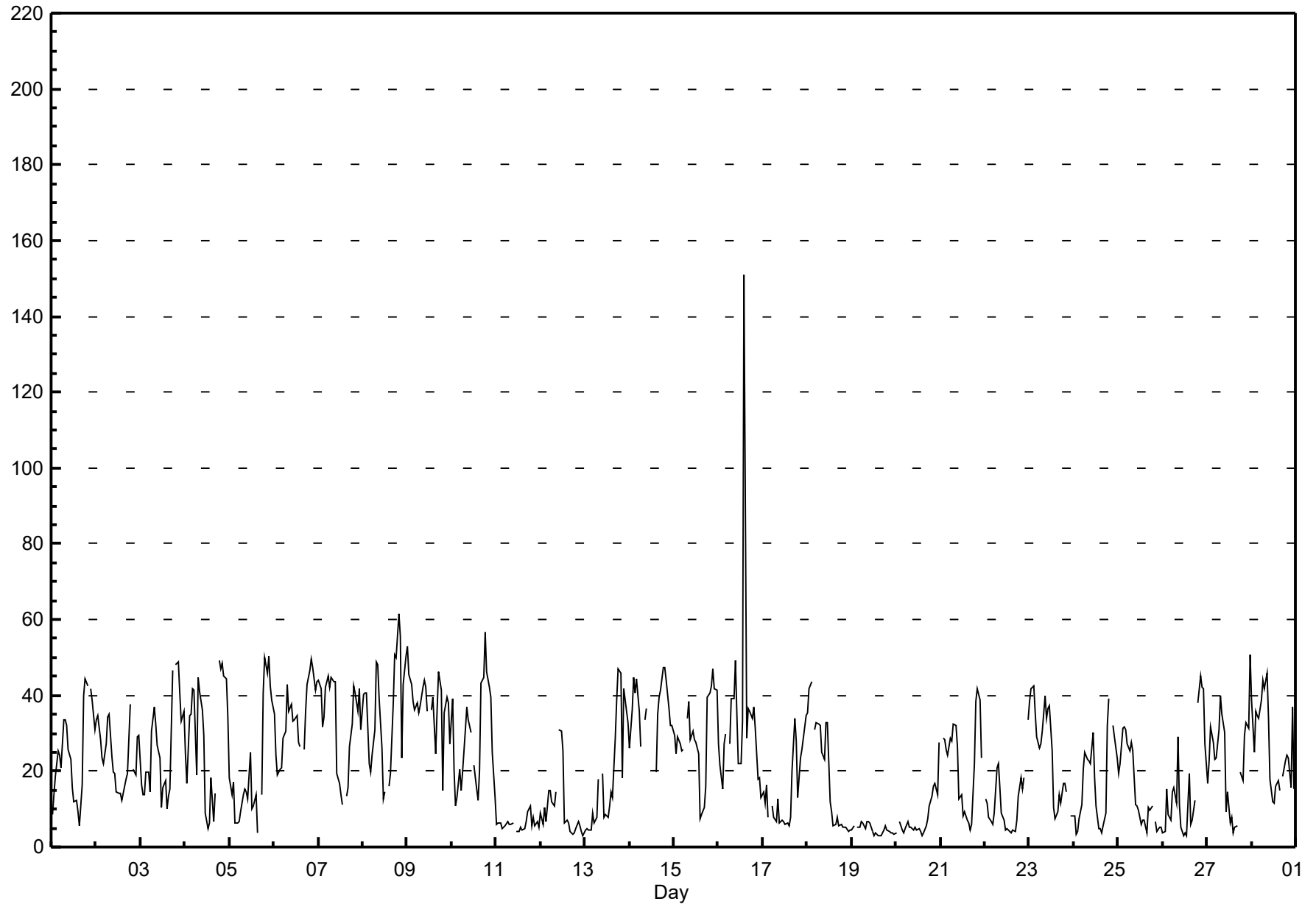
Henry Pirker - February 2017

Maximum Value: 151.1 ppb on Feb 16 15:00																				Maximum Daily Average: 37.8 ppb on Feb 9					Hours in Service: 672	
Minimum Value: 3 ppb on Feb 19 16:00																				Minimum Daily Average: 4.7 ppb on Feb 19					Hours of Data: 639	
Maximum Diurnal Average: 31.1 ppb at hour 20																				Minimum Diurnal Average: 10.9 ppb at hour 16					Hours of Missing Data: 33	
Monthly Average: 22.44 ppb																				Percentiles: P ₁ = 3.1 P ₁₀ = 5.0 Q ₁ = 8.2 Median = 20.2 Q ₃ = 34.5 P ₉₀ = 42.0 P ₉₉ = 48.8					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-Feb	9	14	19	26	24	21	34	33	32	26	23	16	12	12	9	6	16	40	44	43	A	42	39	31	24.7	44.3
2-Feb	33	35	28	24	22	27	34	35	24	20	19	14	14	14	12	16	18	19	38	A	20	19	29	29	23.7	37.5
3-Feb	16	14	14	20	20	15	30	37	32	27	24	11	15	17	10	14	15	47	A	48	49	41	33	36	25.4	49.0
4-Feb	25	17	34	35	42	41	19	45	41	36	29	9	5	6	18	7	14	A	49	47	48	45	44	34	30.1	49.2
5-Feb	18	14	17	6	6	7	9	14	15	15	13	25	10	11	14	4	A	14	41	50	46	50	42	39	20.9	50.3
6-Feb	35	24	19	21	21	29	31	43	36	38	33	34	35	28	27	A	26	36	43	47	50	47	41	44	34.1	49.7
7-Feb	44	42	32	34	42	45	42	45	44	44	19	17	14	11	A	13	16	27	33	42	41	36	42	31	32.8	45.2
8-Feb	40	41	40	22	20	24	31	49	48	39	26	13	14	A	16	20	38	51	50	62	56	23	43	50	35.5	61.6
9-Feb	53	46	43	38	36	38	35	37	42	44	42	36	A	36	39	25	36	46	41	15	35	40	38	27	37.8	52.9
10-Feb	39	20	11	13	21	15	20	31	37	34	30	A	22	15	12	20	43	45	57	46	42	40	25	13	28.2	56.5
11-Feb	6	6	6	5	5	5	7	6	6	6	A	4	4	5	5	5	7	9	11	6	8	6	7	5	6.0	10.9
12-Feb	9	6	10	7	15	15	12	11	15	A	31	31	25	6	7	6	4	3	4	5	7	6	4	3	10.5	31.1
13-Feb	5	5	4	4	9	6	8	18	A	19	8	8	8	11	15	13	29	39	47	46	18	42	36	33	18.7	47.0
14-Feb	26	36	45	41	44	36	27	A	34	36	C	C	C	C	20	35	39	42	47	47	44	36	32	32	36.8	47.3
15-Feb	29	25	29	27	25	26	A	34	38	28	30	28	27	25	7	9	10	16	40	41	43	47	42	41	29.1	46.9
16-Feb	27	22	15	27	30	A	27	39	39	49	35	22	22	33	151	29	36	36	34	37	31	18	18	13	34.4	151.1
17-Feb	14	11	17	8	A	11	8	7	13	6	7	7	6	6	5	8	20	34	28	13	23	26	29	35	14.8	34.7
18-Feb	35	42	43	A	31	33	32	32	25	23	33	33	12	9	6	6	8	5	6	5	5	4	4	4	19.1	43.5
19-Feb	4	6	A	5	5	7	6	5	7	7	6	4	3	4	3	3	3	4	5	5	4	4	4	3	4.7	6.9
20-Feb	4	A	7	4	4	5	7	5	5	5	5	5	5	4	3	4	5	8	11	14	16	17	14	28	7.9	27.7
21-Feb	A	29	28	26	24	29	28	32	32	27	13	14	8	9	7	7	5	6	22	38	42	39	24	A	22.2	41.7
22-Feb	13	11	8	7	6	9	21	22	16	9	7	4	5	4	4	5	4	7	13	18	15	18	A	34	11.3	33.7
23-Feb	38	42	43	36	29	26	27	30	40	34	37	37	25	10	7	9	14	11	17	17	14	A	8	8	24.4	42.7
24-Feb	8	3	4	8	11	21	25	23	23	22	30	18	11	5	5	4	6	9	32	39	A	32	29	24	17.0	39.3
25-Feb	19	22	31	32	31	27	26	28	25	11	11	10	6	7	7	4	10	10	11	A	7	4	5	5	15.1	31.6
26-Feb	4	4	15	9	7	14	16	12	29	11	5	3	4	3	19	6	7	12	A	38	45	42	42	27	16.3	45.1
27-Feb	17	23	32	28	23	24	31	40	35	30	9	15	6	8	4	5	6	A	20	18	30	33	31	51	22.4	50.7
28-Feb	39	25	36	35	34	39	44	42	46	34	18	12	12	16	18	15	A	19	23	24	24	16	37	15	26.9	45.9
22.6 21.6 23.3 20.2 21.8 22.0 23.5 27.9 28.8 25.2 20.9 16.5 12.7 12.2 16.7 10.9 16.8 22.8 29.4 31.1 29.3 28.6 27.5 25.7																									Diurnal Average	
52.9 45.6 44.8 40.5 44.4 45.2 44.0 49.0 48.1 49.3 42.2 37.2 34.5 36.2 151.1 35.2 43.3 50.5 56.5 61.6 55.7 50.3 44.4 50.7																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb

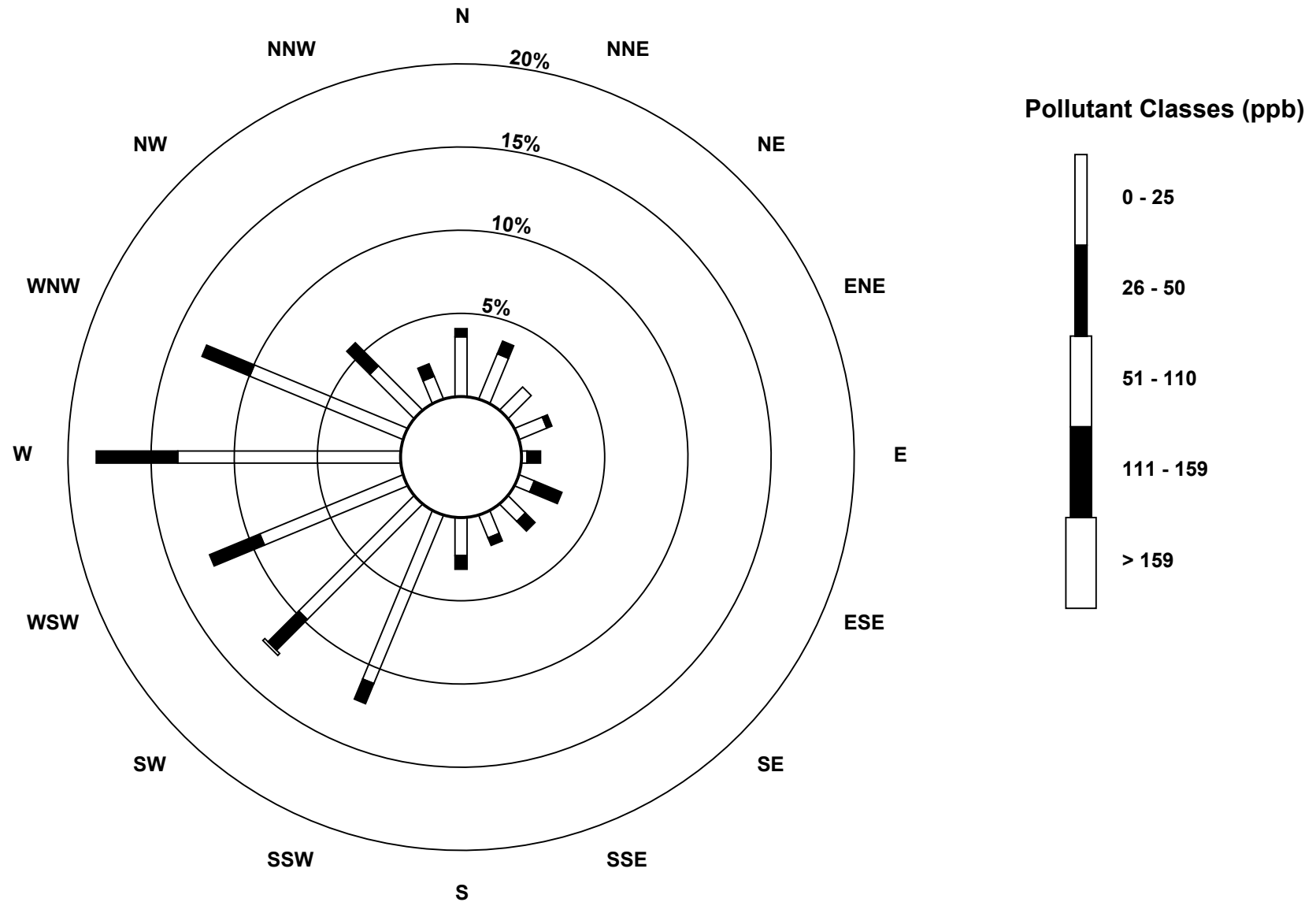
Henry Pirker - February 2017



Pollutant Rose

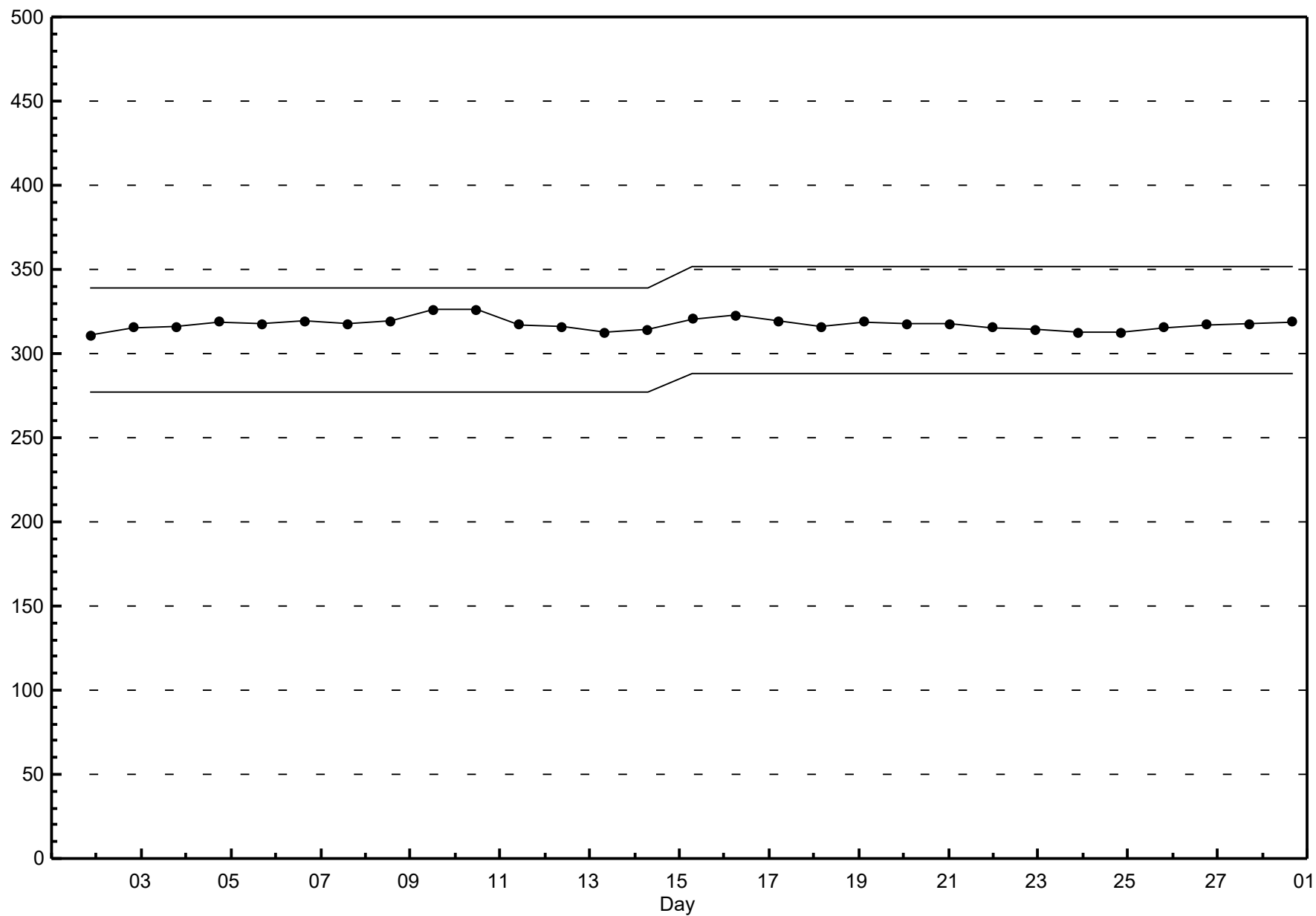
Nitrogen Dioxide (NO₂) - ppb

Henry Pirker - February 2017



Span Responses

Nitrogen Dioxide (NO₂)
Henry Pirker - February 2017



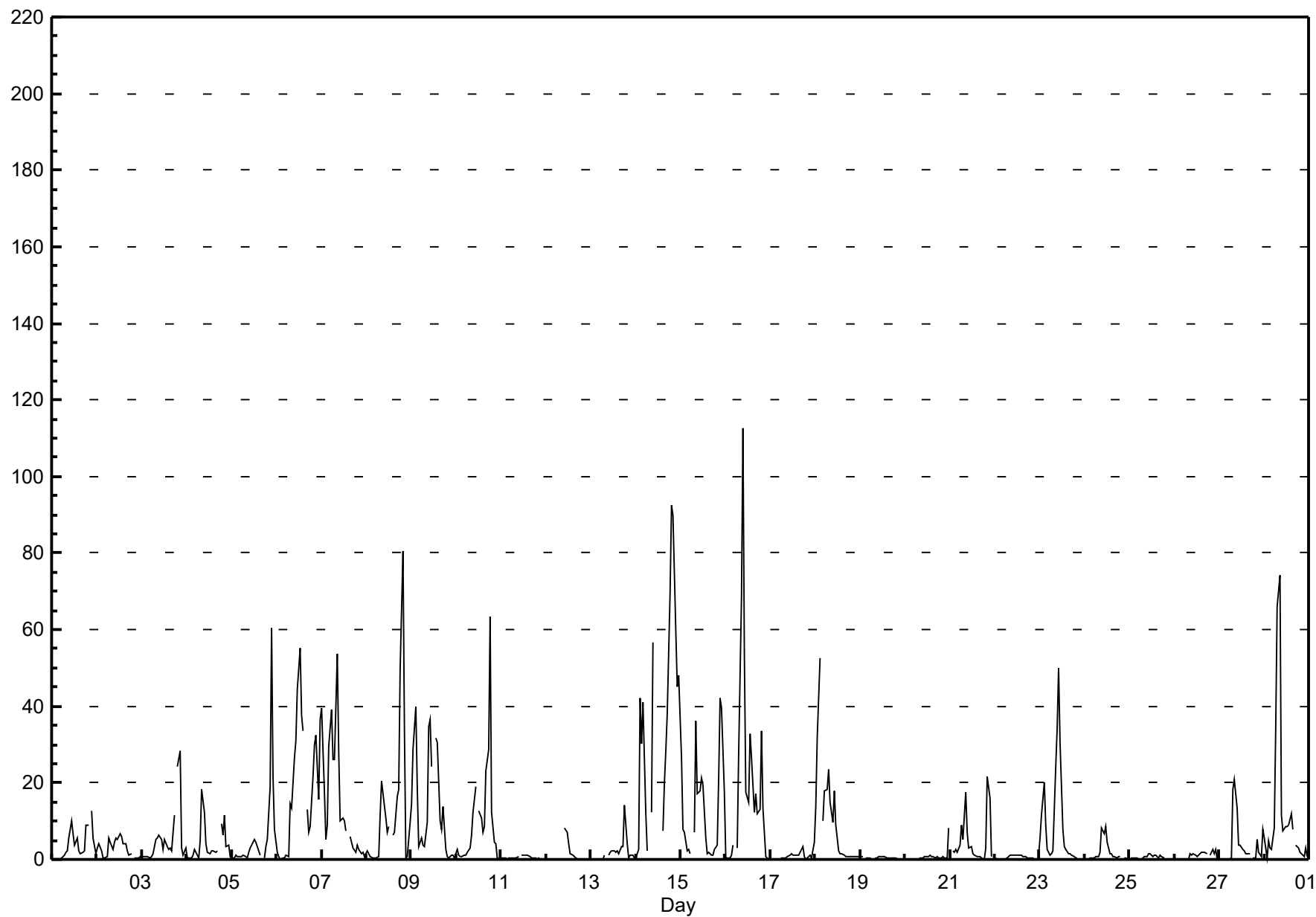
Hourly Averages

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

Maximum Value: 112.7 ppb on Feb 16 10:00																								Hours in Service: 672		
Maximum Daily Average: 36.7 ppb on Feb 14																								Hours of Data: 639		
Minimum Value: 0 ppb on Feb 27 02:00																								Hours of Missing Data: 33		
Maximum Diurnal Average: 15.8 ppb at hour 10																								Hours of Calibration: 33		
Monthly Average: 7.39 ppb																								Percent Operational Time: 100.0		
Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.5 Median = 1.4 Q ₃ = 7.3 P ₉₀ = 23.1 P ₉₉ = 65.6																										
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-Feb	0	0	0	0	0	0	1	2	2	5	10	7	4	5	2	1	2	2	9	9	A	13	6	2	3.6	12.8
2-Feb	3	4	2	0	1	1	6	4	2	4	5	5	7	6	4	4	2	1	1	A	0	0	0	1	2.9	6.7
3-Feb	1	1	1	1	1	1	1	5	6	6	5	3	5	3	3	3	2	12	A	24	28	3	1	3	5.1	28.2
4-Feb	0	0	0	1	3	2	0	5	18	12	4	2	2	2	2	2	2	A	9	6	12	3	4	1	4.1	18.1
5-Feb	0	0	1	1	1	1	1	1	0	2	3	4	5	4	2	1	A	0	3	5	19	60	22	8	6.3	60.5
6-Feb	2	1	0	0	0	1	1	15	13	26	31	45	55	38	33	A	13	7	9	22	30	33	16	36	18.6	55.2
7-Feb	40	18	5	9	29	39	26	26	54	28	10	11	10	7	A	6	5	3	2	4	2	2	2	1	14.7	53.9
8-Feb	2	1	1	0	0	0	1	12	21	17	11	7	8	A	6	7	16	18	50	81	34	0	1	10	13.3	80.7
9-Feb	14	29	40	19	3	5	4	3	10	34	37	24	A	32	30	10	8	14	3	1	1	1	1	0	14.1	40.1
10-Feb	3	1	1	1	1	1	2	3	6	12	19	A	13	11	7	9	23	29	63	12	5	4	1	0	9.8	63.4
11-Feb	0	0	0	0	0	0	0	0	0	1	A	1	1	1	1	1	1	0	0	0	0	0	0	0	0.4	1.2
12-Feb	0	0	0	0	0	0	0	0	0	A	8	7	4	1	1	1	0	0	0	0	0	0	0	0	1.1	8.2
13-Feb	0	0	0	0	0	0	0	1	A	1	2	2	2	2	2	2	3	3	14	4	1	1	1	0	1.9	14.2
14-Feb	0	3	42	30	41	12	2	A	12	57	C	C	C	C	8	20	28	38	70	93	90	60	45	48	36.7	92.6
15-Feb	26	8	7	2	2	1	A	7	36	17	18	21	19	6	2	2	1	1	3	4	21	42	39	18	13.2	42.1
16-Feb	1	0	0	1	4	A	3	28	69	113	54	17	15	33	26	12	17	12	13	34	14	1	0	0	20.3	112.7
17-Feb	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	1	2	3	1	0	1	1	0	4	0.9	4.4
18-Feb	14	32	53	A	10	18	18	23	15	10	18	9	2	1	1	1	1	1	1	1	1	1	1	1	10.0	52.6
19-Feb	1	1	A	1	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.4	0.9
20-Feb	0	A	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	1	1	0	8	0.8	8.1
21-Feb	A	2	2	3	2	4	9	5	18	7	3	3	1	1	1	1	1	0	0	3	22	16	1	A	4.7	21.6
22-Feb	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	A	1	1	0.6	1.3
23-Feb	6	12	20	9	3	1	1	2	24	34	50	30	8	3	2	2	2	1	1	0	1	A	0	0	9.2	49.9
24-Feb	0	0	0	0	0	0	1	1	2	8	7	9	4	2	1	1	1	1	1	1	A	1	0	0	1.8	8.7
25-Feb	0	0	0	1	0	0	0	0	1	1	2	2	1	1	1	0	1	1	0	A	0	0	0	0	0.6	1.6
26-Feb	0	0	0	0	0	0	0	0	1	1	2	1	1	1	2	2	2	1	A	1	3	1	3	0	1.0	2.8
27-Feb	0	0	0	0	0	0	0	18	21	13	4	4	3	2	1	2	1	A	1	0	5	2	1	8	3.8	20.9
28-Feb	6	0	5	3	3	8	34	66	74	12	7	9	9	9	12	8	A	4	3	2	1	1	3	1	12.1	74.0
4.4 4.2 6.7 3.0 3.9 3.6 4.2 8.4 15.1 15.8 12.0 8.7 7.0 6.8 5.8 3.7 5.2 6.0 9.9 11.8 11.2 9.2 5.5 5.6																								Diurnal Average		
39.5 31.6 52.6 30.4 40.9 39.2 33.8 66.0 74.0 112.7 53.6 44.5 55.2 37.5 33.4 19.8 28.3 38.0 69.6 92.6 90.0 60.5 44.9 48.2																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

Hourly Averages

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



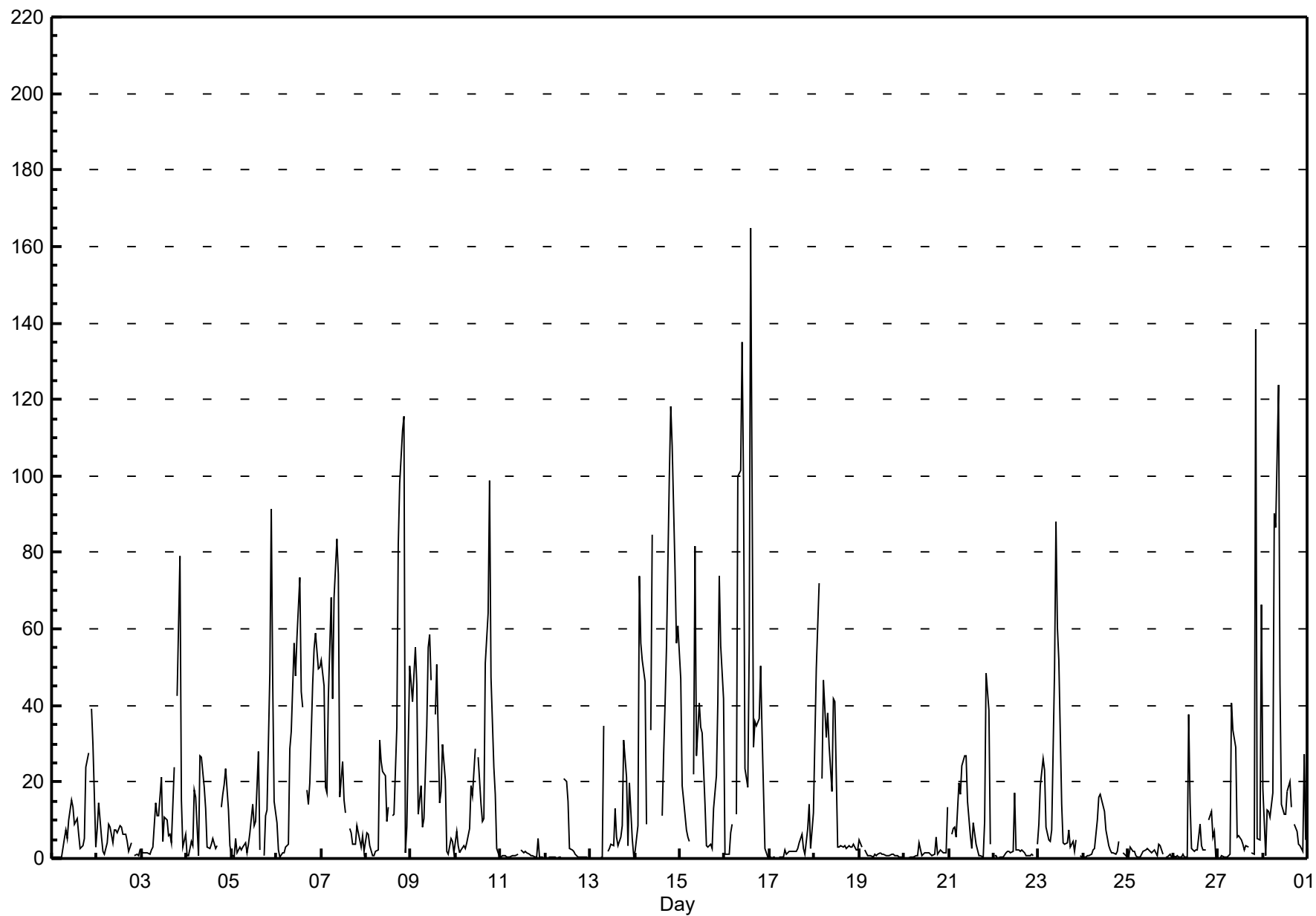
Hourly Maximums

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

Maximum Value: 164.9 ppb on Feb 16 15:00																								Maximum Daily Average: 53.6 ppb on Feb 14				Hours in Service: 672	
Minimum Value: 0 ppb on Feb 27 02:00																								Minimum Daily Average: 1.0 ppb on Feb 11				Hours of Data: 639	
Maximum Diurnal Average: 29.3 ppb at hour 21																								Minimum Diurnal Average: 6.2 ppb at hour 16				Hours of Missing Data: 33	
Monthly Average: 15.03 ppb																								Percentiles: P ₁ = 0.2 P ₁₀ = 0.4 Q ₁ = 1.3 Median = 4.2 Q ₃ = 17.4 P ₉₀ = 46.5 P ₉₉ = 112.8				Hours of Calibration: 33	
																												Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
1-Feb	0	0	0	0	0	0	5	7	5	10	15	14	9	10	6	2	3	5	24	28	A	39	30	3	9.5	39.0			
2-Feb	8	14	5	2	1	4	9	8	4	7	8	7	8	8	6	6	5	2	4	A	1	1	1	2	5.3	14.4			
3-Feb	1	2	1	1	1	2	3	15	11	11	21	5	11	10	6	6	4	24	A	43	79	15	3	6	12.3	79.1			
4-Feb	1	1	4	3	18	16	1	27	26	19	13	3	3	4	5	3	3	A	13	17	19	24	13	3	10.4	26.9			
5-Feb	1	1	5	2	3	2	3	4	1	4	7	14	9	10	28	2	A	1	11	13	49	91	46	15	14.0	91.4			
6-Feb	9	2	1	1	1	3	4	29	33	56	48	58	73	44	40	A	18	14	20	46	55	59	50	50	31.0	73.3			
7-Feb	52	45	19	17	42	68	42	68	84	74	16	25	15	12	A	8	7	4	4	8	7	3	6	2	27.3	83.5			
8-Feb	7	6	3	1	1	2	2	31	25	23	22	10	13	A	11	12	34	82	98	112	115	1	8	50	29.1	115.4			
9-Feb	46	41	55	45	12	19	8	10	35	55	58	47	A	38	51	14	17	30	21	2	1	5	4	2	26.8	58.4			
10-Feb	7	3	1	2	3	2	4	8	19	16	29	A	27	14	10	10	51	64	99	47	24	17	3	0	20.1	98.7			
11-Feb	1	1	1	0	0	1	1	1	1	1	A	2	2	2	1	1	1	1	0	0	5	0	0	0	1.0	5.1			
12-Feb	0	0	0	0	0	0	0	0	0	A	21	20	15	3	2	2	1	0	0	0	0	0	0	0	2.9	20.7			
13-Feb	0	0	0	0	0	0	0	35	A	2	3	4	3	13	6	3	6	9	31	21	3	20	5	1	7.2	34.6			
14-Feb	2	9	74	56	52	46	9	A	34	85	C	C	C	C	11	27	40	55	100	118	108	75	56	61	53.6	118.3			
15-Feb	47	19	15	7	5	4	A	22	82	27	41	34	33	14	3	3	4	2	13	22	41	74	56	42	26.5	81.8			
16-Feb	1	1	1	7	9	A	12	100	101	135	98	23	19	56	165	29	36	35	37	50	33	2	1	0	41.4	164.9			
17-Feb	0	0	0	0	A	0	0	0	2	1	2	2	2	2	2	3	4	6	3	1	8	14	2	12	3.0	14.2			
18-Feb	31	50	72	A	21	47	32	38	29	17	42	41	3	3	3	3	3	2	3	3	3	4	2	2	19.8	71.9			
19-Feb	5	3	A	2	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1.2	4.7			
20-Feb	0	A	0	0	0	0	1	1	4	1	1	2	1	1	1	1	1	6	1	2	2	1	2	14	1.9	13.5			
21-Feb	A	6	8	8	6	20	17	24	27	27	15	6	3	9	4	2	1	1	0	10	49	39	4	A	12.9	48.6			
22-Feb	1	1	0	0	0	0	2	2	2	2	2	17	2	2	2	2	1	1	1	1	1	1	A	4	2.1	17.2			
23-Feb	9	19	26	23	8	5	4	8	49	88	60	52	14	4	4	4	7	3	4	2	5	A	1	0	17.4	87.9			
24-Feb	0	0	1	1	1	2	3	10	16	17	14	12	7	3	2	2	1	1	2	4	A	1	1	0	4.5	16.8			
25-Feb	0	3	2	2	1	0	0	1	2	2	2	2	2	2	2	1	4	3	1	A	0	1	1	0	1.5	3.6			
26-Feb	1	0	1	0	0	1	0	0	38	15	3	2	2	2	9	3	2	2	A	10	12	6	7	0	5.1	37.6			
27-Feb	0	0	1	0	0	1	1	41	34	29	6	6	5	4	2	3	3	A	1	1	138	5	5	66	15.3	138.4			
28-Feb	18	1	13	12	11	17	90	87	124	45	14	11	12	17	20	14	A	9	7	4	3	2	27	5	24.5	123.7			
9.2 8.5 11.5 7.3 7.4 9.8 9.4 21.4 29.2 28.5 21.6 16.2 11.3 11.1 15.0 6.2 10.0 13.9 19.2 21.8 29.3 18.6 12.4 12.7																								Diurnal Average					
51.8 49.6 73.8 56.3 52.0 68.4 90.2 99.8 123.7 135.0 98.1 57.9 73.3 55.8 164.9 29.0 51.0 82.0 99.9 118.3 138.4 91.4 56.4 66.5																								Diurnal Maximum					
C - Calibration A - Automated Daily Zero Span																													

Hourly Maximums

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



Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

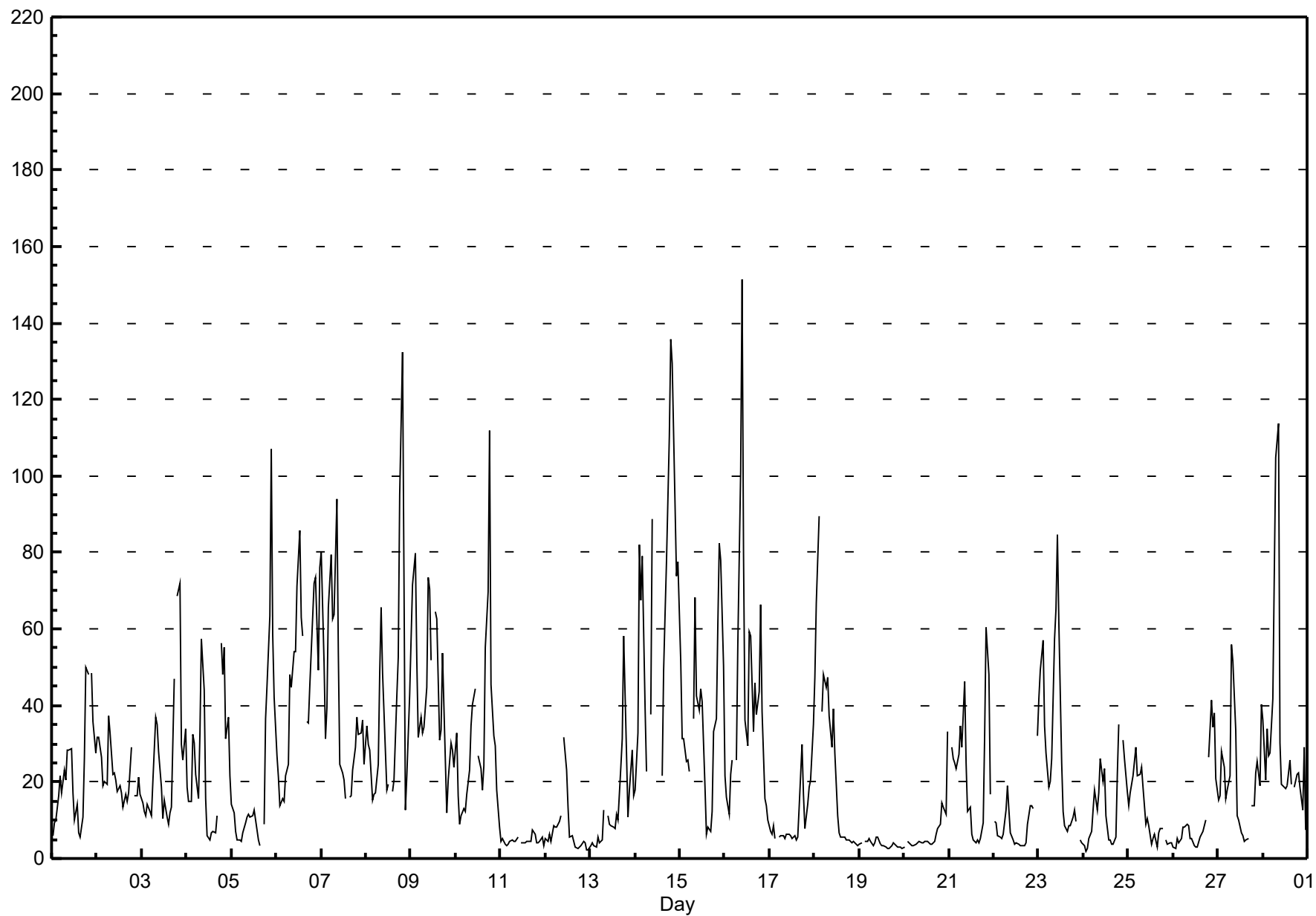
Henry Pirker - February 2017

Maximum Value: 151.4 ppb on Feb 16 10:00																				Maximum Daily Average: 68.4 ppb on Feb 14					Hours in Service: 672	
Minimum Value: 2 ppb on Feb 24 02:00																				Minimum Daily Average: 3.8 ppb on Feb 19					Hours of Data: 639	
Maximum Diurnal Average: 38.4 ppb at hour 9																				Minimum Diurnal Average: 11.7 ppb at hour 16					Hours of Missing Data: 33	
Monthly Average: 24.40 ppb																				Percentiles: P ₁ = 2.7 P ₁₀ = 4.0 Q ₁ = 6.2 Median = 17.1 Q ₃ = 33.2 P ₉₀ = 57.2 P ₉₉ = 110.2					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-Feb	6	9	10	16	22	17	23	20	28	28	29	17	10	14	7	6	11	26	50	48	A	49	36	28	22.2	50.1
2-Feb	32	32	27	19	20	19	37	33	22	22	21	17	19	17	14	17	15	17	29	A	16	16	21	17	21.7	37.1
3-Feb	14	12	11	14	12	11	20	37	35	28	18	11	15	11	9	12	13	47	A	69	72	30	26	34	24.5	72.1
4-Feb	19	15	15	32	30	22	16	33	57	44	16	6	5	7	7	7	11	A	56	48	55	31	37	22	25.7	57.4
5-Feb	14	12	7	5	5	5	7	9	11	12	11	11	13	10	5	3	A	9	36	45	63	107	59	42	21.7	106.9
6-Feb	27	21	14	16	15	22	25	48	45	54	54	71	86	63	58	A	36	35	45	63	72	73	49	76	46.4	85.9
7-Feb	80	51	31	39	66	79	63	64	94	54	25	22	20	16	A	16	17	23	29	37	32	33	36	24	41.4	93.9
8-Feb	35	30	29	15	17	17	25	48	65	48	28	18	19	A	18	21	43	53	95	132	74	13	22	43	39.4	132.3
9-Feb	57	72	80	52	32	37	33	34	45	73	70	52	A	65	63	31	34	54	26	12	20	30	28	24	44.4	79.8
10-Feb	33	16	9	11	13	12	17	23	35	40	45	A	27	23	18	24	55	70	112	46	32	29	18	8	31.1	111.9
11-Feb	5	5	4	3	4	4	5	4	5	6	A	4	4	4	4	4	4	7	6	4	4	4	5	3	4.6	7.3
12-Feb	5	4	6	5	9	8	8	10	11	A	32	23	14	6	6	5	3	3	3	3	5	4	2	2	7.7	31.8
13-Feb	3	4	3	3	6	4	5	13	A	11	9	9	8	8	12	10	24	31	58	27	11	18	28	17	14.0	58.0
14-Feb	18	33	82	67	79	39	23	A	38	89	C	C	C	C	22	49	64	77	110	136	129	92	74	77	68.4	135.6
15-Feb	51	31	31	25	26	23	A	36	68	43	39	44	41	19	6	8	7	12	33	37	61	82	78	50	37.1	82.2
16-Feb	22	16	12	22	26	A	26	56	102	151	80	36	30	59	58	33	46	38	43	66	38	16	14	10	43.4	151.4
17-Feb	7	7	9	5	A	5	6	6	5	6	7	6	5	6	5	5	14	30	17	8	14	19	21	35	10.7	35.1
18-Feb	47	67	90	A	38	48	45	47	37	29	39	28	11	7	5	6	5	5	5	4	4	4	4	4	25.2	89.6
19-Feb	4	4	A	5	4	5	5	3	4	5	6	4	3	3	3	3	2	3	4	4	3	3	3	3	3.8	5.6
20-Feb	3	A	5	4	3	3	4	4	5	4	4	5	4	4	4	4	4	6	8	9	14	13	12	33	6.9	33.2
21-Feb	A	29	26	25	23	27	35	29	46	25	12	14	6	5	4	5	4	5	9	32	61	48	17	A	22.2	60.5
22-Feb	10	9	6	6	5	6	13	19	13	7	5	4	4	4	3	3	4	4	9	14	14	13	A	32	9.0	32.1
23-Feb	42	49	57	35	27	19	20	26	57	65	84	62	25	12	8	7	9	9	11	13	10	A	5	4	28.5	84.5
24-Feb	3	2	3	5	7	13	18	13	17	26	20	24	11	5	5	4	4	6	22	35	A	31	26	18	13.7	35.0
25-Feb	14	17	22	25	29	22	22	24	19	9	11	9	4	5	6	3	7	8	8	A	5	4	4	4	12.1	29.0
26-Feb	3	3	5	4	5	8	8	9	9	5	5	3	3	3	5	6	7	10	A	27	42	34	38	21	11.5	41.6
27-Feb	15	16	28	24	16	18	22	56	52	34	11	10	7	6	4	5	5	A	14	14	22	25	19	40	20.1	55.8
28-Feb	36	20	34	27	28	42	74	105	114	30	19	19	18	19	26	19	A	19	22	22	19	13	29	7	33.1	113.9
22.4 21.8 24.2 18.9 21.0 19.9 22.3 30.0 38.4 35.2 26.9 20.3 15.9 15.4 14.3 11.7 17.2 23.4 33.1 36.7 34.4 31.0 26.3 25.1																								Diurnal Average		
80.3 71.7 89.6 67.3 79.0 79.4 73.7 104.9 113.9 151.4 84.5 71.2 85.9 64.6 62.6 49.0 63.8 77.5 111.9 135.6 129.3 106.9 78.1 77.4																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

Henry Pirker - February 2017



Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

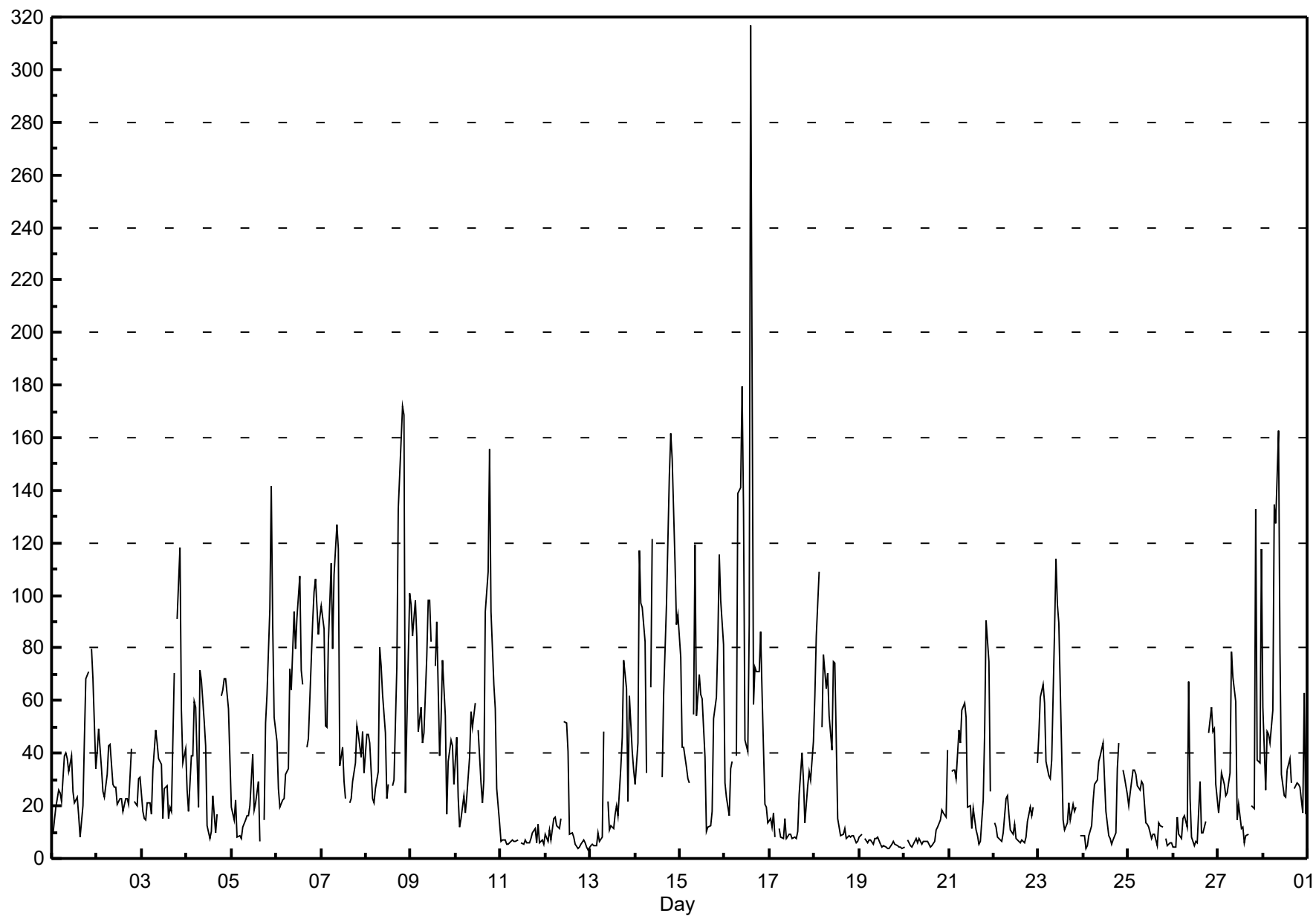
Henry Pirker - February 2017

Maximum Value: 316.9 ppb on Feb 16 15:00																								Maximum Daily Average: 89.7 ppb on Feb 14																								Hours in Service: 672	
Minimum Value: 3 ppb on Feb 13 00:00																								Minimum Daily Average: 5.9 ppb on Feb 19																								Hours of Data: 639	
Maximum Diurnal Average: 57.4 ppb at hour 9																								Minimum Diurnal Average: 17.2 ppb at hour 16																								Hours of Missing Data: 33	
Monthly Average: 37.06 ppb																								Percentiles: P ₁ = 4.2 P ₁₀ = 6.3 Q ₁ = 10.9 Median = 25.8 Q ₃ = 50.4 P ₉₀ = 86.0 P ₉₉ = 160.6																								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-Feb	9	15	19	26	25	22	39	40	38	33	39	26	21	23	16	8	20	45	68	71	A	80	68	34	34.2	80.0																							
2-Feb	41	49	34	26	23	32	43	43	28	27	27	20	23	23	18	23	23	21	42	A	22	20	30	31	29.1	49.3																							
3-Feb	18	15	15	21	21	17	34	49	44	38	36	15	26	28	15	20	18	70	A	91	118	56	36	42	36.6	118.3																							
4-Feb	26	18	39	39	60	57	20	72	68	52	43	12	7	10	24	10	17	A	62	64	68	69	57	38	40.5	71.6																							
5-Feb	20	15	22	8	9	8	12	15	16	16	20	40	19	21	29	6	A	15	52	62	95	142	89	54	34.1	141.6																							
6-Feb	45	27	20	22	23	32	34	72	64	94	80	92	107	71	66	A	42	46	60	90	102	106	85	92	63.9	107.2																							
7-Feb	96	87	50	50	82	112	80	108	127	117	35	43	29	23	A	21	23	29	36	51	47	38	48	33	59.4	127.1																							
8-Feb	47	47	44	23	21	26	33	80	73	62	48	23	28	A	28	30	72	133	146	172	168	25	51	101	64.5	172.0																							
9-Feb	96	85	98	84	48	58	44	48	77	98	98	83	A	73	90	39	53	76	54	17	37	45	43	28	64.0	98.1																							
10-Feb	46	23	12	15	24	17	23	38	56	50	59	A	49	29	21	30	94	109	156	94	66	57	26	13	48.2	155.7																							
11-Feb	7	7	7	5	5	6	7	6	7	7	A	6	6	7	6	6	8	10	12	6	13	6	7	5	7.0	13.2																							
12-Feb	9	6	11	7	15	15	12	11	15	A	52	51	41	9	10	8	5	4	4	5	7	6	4	3	13.7	52.0																							
13-Feb	5	5	5	5	10	7	8	48	A	22	11	13	11	17	20	17	35	46	75	65	22	62	41	34	25.3	75.2																							
14-Feb	28	44	117	97	95	83	33	A	65	122	C	C	C	C	31	62	79	97	145	162	152	112	89	93	89.7	161.6																							
15-Feb	76	42	42	35	30	29	A	55	119	54	70	63	61	39	11	12	13	18	53	61	83	116	98	81	54.8	119.3																							
16-Feb	29	23	16	34	37	A	39	139	141	180	133	45	41	89	317	58	73	71	71	86	63	21	20	13	75.6	316.9																							
17-Feb	15	12	17	8	A	12	8	7	15	8	9	9	8	8	8	10	25	40	30	14	28	33	30	45	17.3	44.6																							
18-Feb	62	85	109	A	50	78	65	70	54	41	75	75	15	12	9	9	11	8	9	8	8	8	6	7	38.0	109.0																							
19-Feb	8	9	A	8	6	7	7	5	7	8	8	6	5	5	4	4	4	6	6	5	5	4	4	4	5.9	9.0																							
20-Feb	4	A	7	5	4	5	8	6	7	6	7	6	6	6	4	5	7	11	12	15	18	18	16	41	9.7	41.0																							
21-Feb	A	33	34	34	30	49	44	57	59	54	20	20	11	19	11	9	5	7	22	48	90	75	26	A	34.3	90.4																							
22-Feb	13	12	8	7	6	10	23	24	17	11	9	13	7	6	6	7	6	8	14	19	16	20	A	36	13.0	36.4																							
23-Feb	47	61	66	59	37	32	30	38	87	114	97	89	40	15	11	13	21	15	21	18	19	A	9	9	41.2	113.8																							
24-Feb	9	4	5	8	12	22	28	30	37	39	44	30	18	8	8	6	7	10	34	44	A	34	31	24	21.4	44.2																							
25-Feb	20	25	34	34	32	28	26	29	28	13	13	12	8	9	9	5	13	13	12	A	7	5	6	6	16.9	33.9																							
26-Feb	4	4	16	9	7	15	16	12	67	23	8	5	6	6	29	9	10	14	A	48	58	48	49	28	21.5	67.4																							
27-Feb	18	23	33	28	24	25	32	79	69	60	14	21	11	12	6	8	9	A	20	19	133	37	36	118	36.4	132.8																							
28-Feb	57	26	48	47	44	56	135	128	163	79	32	24	23	34	38	29	A	27	29	28	27	17	63	17	50.8	162.7																							
31.7 29.7 34.4 27.6 28.9 31.8 32.7 48.5 57.4 52.9 41.8 32.3 24.1 23.1 31.3 17.2 26.6 36.4 47.9 52.4 56.7 46.7 39.6 38.1																								Diurnal Average																									
96.3 87.1 117.3 97.0 95.4 112.0 134.6 138.8 162.7 179.6 133.1 91.7 107.2 89.1 316.9 62.2 94.0 132.6 155.7 172.0 168.4 141.6 98.0 117.9																								Diurnal Maximum																									
C - Calibration A - Automated Daily Zero Span																																																	

Hourly Maximums

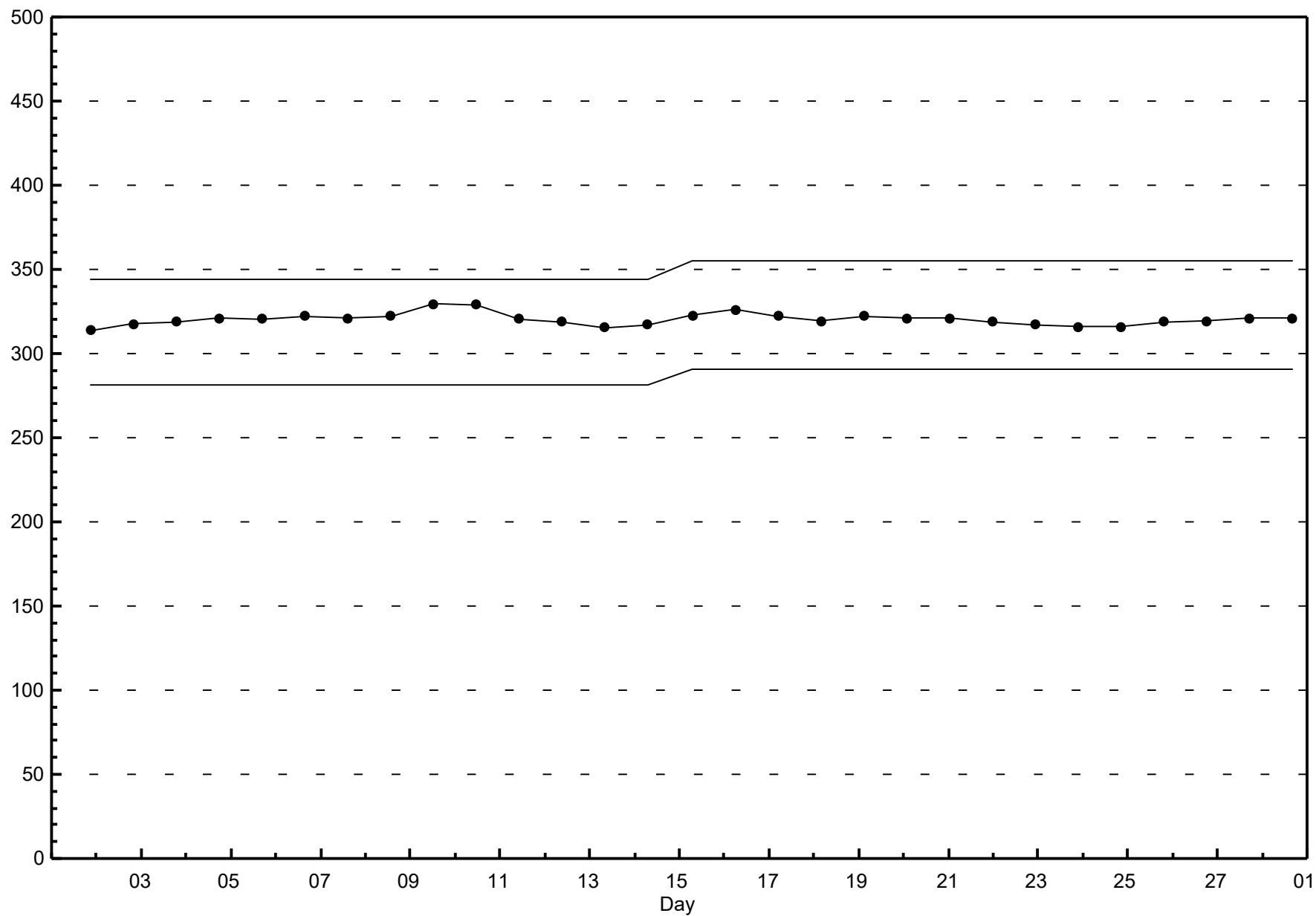
Oxides of Nitrogen (NO_x) - ppb

Henry Pirker - February 2017



Span Responses

Oxides of Nitrogen (NO_x)
Henry Pirker - February 2017



Hourly Averages

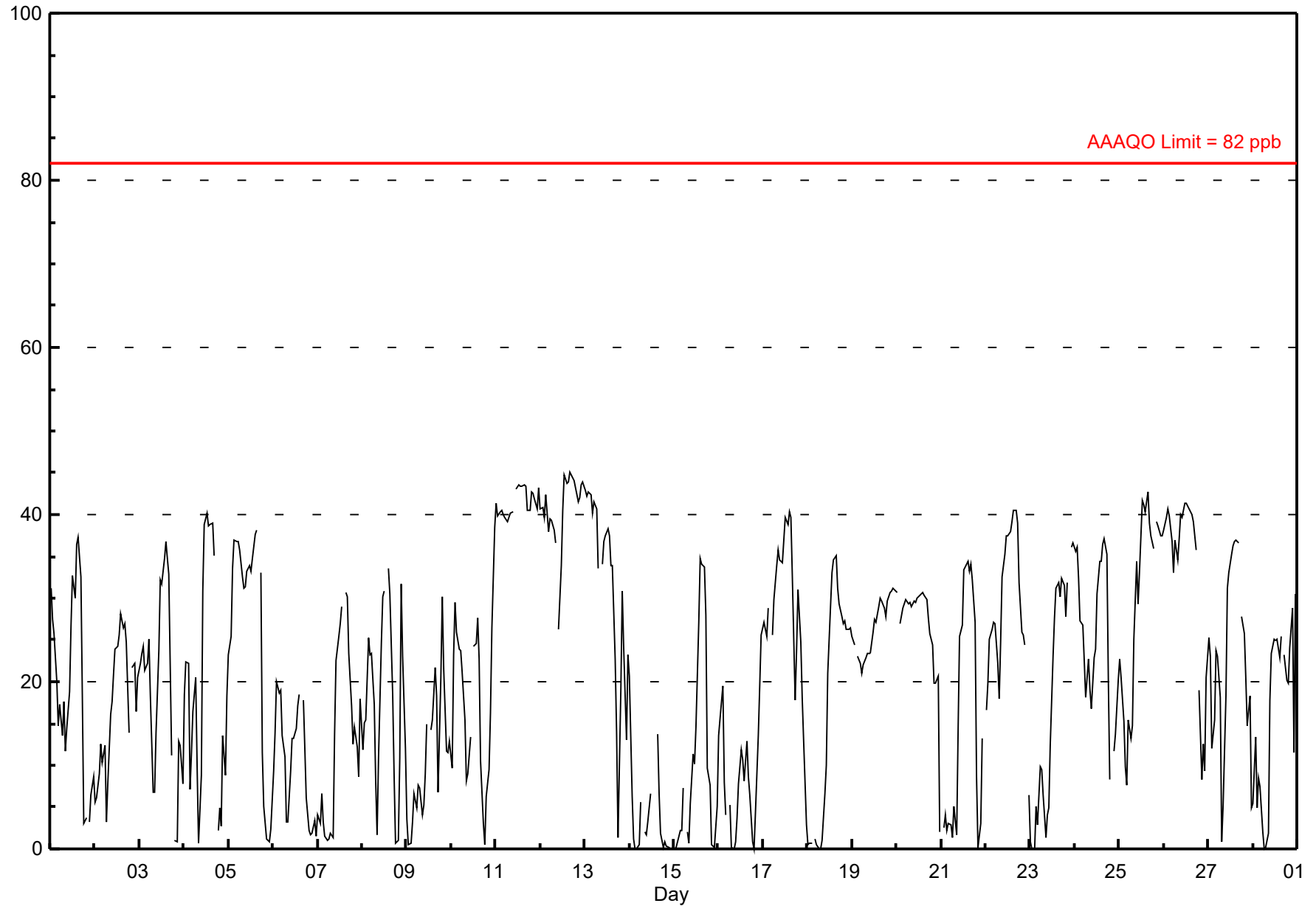
Ozone (O₃) - ppb

Henry Pirker - February 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 45.1 ppb on Feb 12 17:00 Maximum Daily Average: 41.5 ppb on Feb 11																								Hours in Service: 672 Hours of Data: 640		
Minimum Value: 0 ppb on Feb 14 05:00 Minimum Daily Average: 3.6 ppb on Feb 14 Maximum Diurnal Average: 32.8 ppb at hour 16 Minimum Diurnal Average: 13.7 ppb at hour 9 Monthly Average: 21.40 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 1.9 Q ₁ = 9.3 Median = 23.1 Q ₃ = 32.8 P ₉₀ = 39.7 P ₉₉ = 43.8																								Hours of Missing Data: 32 Hours of Calibration: 32 Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Feb	31	27	26	20	15	17	14	18	12	14	19	27	33	30	36	37	32	18	3	4	A	3	7	9	19.6	37.2
2-Feb	6	6	9	13	10	12	3	8	16	18	21	24	24	26	28	27	27	25	14	A	22	22	17	20	17.2	28.2
3-Feb	22	23	24	21	22	25	18	7	7	14	24	32	32	35	37	35	33	11	A	1	1	13	12	8	19.9	36.8
4-Feb	18	22	22	7	11	16	21	10	1	9	31	39	40	39	39	39	35	A	2	5	3	14	9	18	19.6	40.2
5-Feb	23	25	34	37	37	37	36	33	31	31	33	34	33	35	38	38	A	33	11	5	1	1	1	2	25.6	38.2
6-Feb	9	14	20	19	19	14	11	3	3	9	13	13	14	17	18	A	18	12	6	2	2	2	3	2	10.6	20.0
7-Feb	4	3	7	3	2	1	1	2	1	14	23	25	27	29	A	31	30	23	17	12	15	12	9	18	13.4	30.7
8-Feb	12	15	15	25	23	23	17	8	2	11	25	30	31	A	34	30	19	9	1	1	11	32	23	12	17.8	33.6
9-Feb	3	0	1	3	7	5	8	7	4	5	9	15	A	14	15	22	18	7	21	30	22	12	11	13	11.0	30.2
10-Feb	10	23	30	26	24	24	21	15	8	9	13	A	24	25	28	23	11	3	0	6	10	16	26	39	18.0	38.5
11-Feb	41	40	40	41	40	40	39	40	40	40	A	43	43	43	43	43	43	40	41	43	43	42	41	43	41.5	43.5
12-Feb	41	41	40	42	38	39	39	38	37	A	26	34	41	45	44	44	45	44	44	43	42	42	43	44	40.7	45.1
13-Feb	43	42	43	42	40	41	41	34	A	34	37	37	38	37	34	34	23	14	1	19	31	24	13	23	31.6	42.9
14-Feb	21	6	1	0	0	0	6	A	2	2	3	7	C	C	C	14	7	2	0	1	0	0	0	0	3.6	20.7
15-Feb	0	0	1	2	2	7	A	2	1	5	11	10	15	27	35	34	34	28	10	8	1	0	0	5	10.3	34.7
16-Feb	14	16	19	8	4	A	5	0	0	1	4	8	12	11	8	13	9	6	1	0	4	14	19	26	8.8	25.7
17-Feb	27	26	25	29	A	26	30	34	36	35	34	37	40	39	40	40	33	18	24	31	25	18	13	3	28.7	40.3
18-Feb	0	1	1	A	1	0	0	0	1	7	10	21	29	33	35	35	31	29	28	27	27	26	26	27	17.2	35.1
19-Feb	25	24	A	23	22	21	22	23	23	23	23	26	28	27	29	30	30	29	28	30	31	31	31	31	26.5	31.2
20-Feb	31	A	27	29	29	30	29	29	29	30	30	30	30	30	31	30	30	28	26	24	20	20	21	2	26.7	30.7
21-Feb	A	2	4	2	3	3	1	5	2	14	25	27	33	34	34	33	34	32	27	9	0	3	13	A	15.5	34.3
22-Feb	17	20	25	26	27	27	22	18	25	33	35	37	37	38	39	40	41	39	32	26	26	24	A	6	28.7	40.6
23-Feb	1	0	0	5	3	10	10	6	1	4	5	12	23	28	31	32	30	32	32	28	32	A	36	37	17.3	36.6
24-Feb	36	36	32	27	27	23	18	23	19	17	23	24	31	34	34	36	37	35	20	8	A	12	14	20	25.5	37.1
25-Feb	23	20	15	10	8	15	13	15	25	34	29	33	42	41	40	43	39	38	36	A	39	39	38	38	29.2	42.7
26-Feb	38	40	41	40	37	33	37	35	37	40	40	41	41	41	40	40	39	36	A	19	8	13	9	21	33.3	41.3
27-Feb	25	23	12	15	24	23	18	1	5	18	31	33	35	36	37	37	37	A	28	26	21	15	18	5	22.7	37.0
28-Feb	5	13	5	9	8	2	0	0	2	18	23	25	25	25	23	25	A	23	20	20	24	29	12	30	15.9	30.5
																								Diurnal Average		
																								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 - February 2017



Hourly Maximums

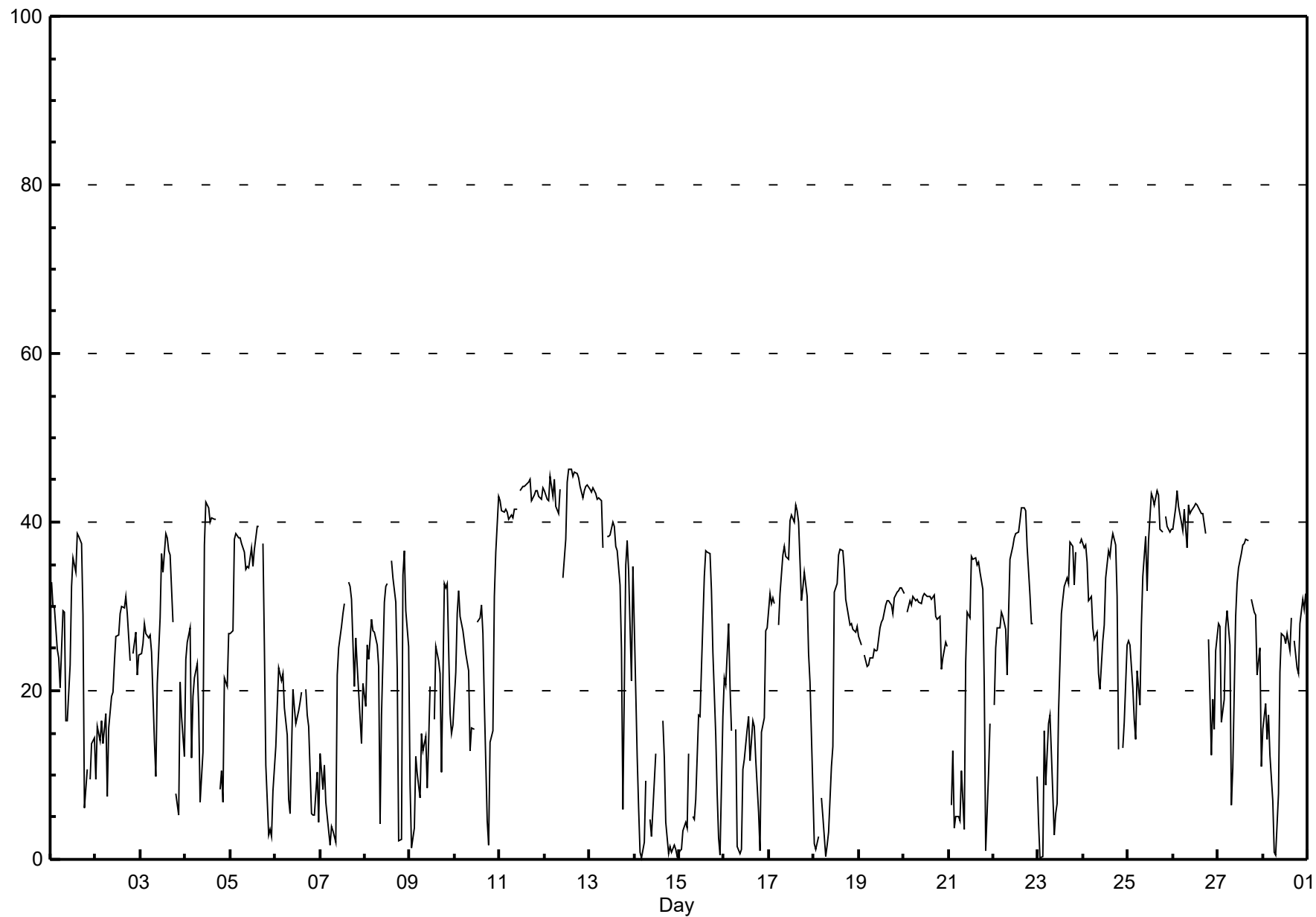
Ozone (O₃) - ppb

Henry Pirker - February 2017

Maximum Value: 46.3 ppb on Feb 12 15:00																								Hours in Service: 672		
Maximum Daily Average: 43.5 ppb on Feb 12																								Hours of Data: 640		
Minimum Value: 0 ppb on Feb 23 02:00																								Hours of Missing Data: 32		
Maximum Diurnal Average: 34.8 ppb at hour 15																								Hours of Calibration: 32		
Monthly Average: 25.31 ppb																								Percent Operational Time: 100.0		
Minimum Daily Average: 6.2 ppb on Feb 14																										
Minimum Diurnal Average: 17.4 ppb at hour 9																										
Percentiles: P ₁ = 0.5 P ₁₀ = 5.5 Q ₁ = 15.8 Median = 27.4 Q ₃ = 36.0 P ₉₀ = 41.4 P ₉₉ = 45.2																										
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-Feb	33	30	30	25	24	20	30	29	16	16	23	32	36	34	39	38	37	29	6	11	A	10	14	14	25.1	38.7
2-Feb	10	16	14	16	14	17	7	16	19	20	23	26	27	29	30	30	31	29	24	A	24	27	22	24	21.5	31.2
3-Feb	24	26	28	27	26	27	25	14	10	21	29	36	34	39	38	37	36	28	A	8	5	21	17	12	24.7	38.7
4-Feb	24	26	27	12	19	22	23	18	7	13	37	42	42	40	41	40	40	A	8	11	7	22	21	27	24.7	42.3
5-Feb	27	27	38	39	38	38	37	36	34	35	35	37	35	37	39	39	A	38	25	11	3	4	3	8	28.8	39.4
6-Feb	13	18	23	21	22	18	15	7	6	20	18	16	18	19	20	A	20	17	16	6	5	5	10	4	14.7	22.7
7-Feb	12	8	11	7	5	2	4	3	2	22	25	28	29	30	A	33	32	31	21	26	23	17	14	21	17.7	32.9
8-Feb	18	25	24	28	27	27	25	23	4	17	31	32	33	A	35	33	30	23	2	2	34	37	29	25	24.6	36.6
9-Feb	9	1	4	12	10	7	15	13	15	8	14	21	A	17	25	24	22	10	33	32	33	17	15	16	16.2	32.7
10-Feb	22	29	32	29	27	26	24	22	13	16	15	A	28	29	30	27	18	5	2	14	15	31	36	43	23.2	43.1
11-Feb	43	41	41	42	41	40	41	40	42	42	A	44	44	44	44	45	45	42	43	44	44	43	43	44	42.7	45.0
12-Feb	44	43	43	45	43	45	42	41	44	A	33	38	45	46	46	45	46	46	45	44	43	44	44	44	43.5	46.3
13-Feb	44	44	44	43	43	43	43	37	A	38	38	38	40	40	37	37	32	25	6	35	38	34	21	35	36.3	44.1
14-Feb	28	12	6	1	0	2	9	A	5	3	6	13	C	C	C	16	12	4	1	1	1	2	1	0	6.2	27.7
15-Feb	1	1	3	4	4	12	A	5	5	7	17	17	23	34	37	36	36	32	25	15	8	2	1	17	14.9	36.6
16-Feb	21	21	28	21	15	A	15	2	1	1	11	12	15	17	12	17	16	12	6	1	15	17	27	27	14.3	28.0
17-Feb	32	30	31	30	A	28	32	36	37	36	36	40	41	40	42	41	40	31	32	34	31	24	21	8	32.8	42.0
18-Feb	2	1	3	A	7	5	0	2	3	11	13	32	33	36	37	37	34	31	29	28	28	27	27	28	19.7	36.7
19-Feb	26	25	A	24	23	23	24	24	25	25	25	27	28	28	30	31	31	30	29	31	32	32	32	32	27.8	32.3
20-Feb	32	A	29	31	30	31	31	31	31	30	31	31	31	31	31	31	31	29	29	29	23	24	26	25	29.5	31.5
21-Feb	A	7	13	4	5	5	5	11	3	23	29	29	36	36	36	35	35	34	32	21	1	10	16	A	19.3	36.0
22-Feb	18	25	27	27	29	29	27	22	29	36	37	38	39	39	40	42	42	41	37	31	28	28	A	10	31.4	41.7
23-Feb	4	0	0	15	9	16	17	13	3	5	7	17	29	31	32	33	33	38	37	33	36	A	38	38	21.1	37.9
24-Feb	37	37	35	31	31	27	26	27	22	20	26	28	33	37	36	38	39	37	31	13	A	13	16	25	29.0	38.6
25-Feb	26	25	20	17	14	22	18	28	34	38	32	38	43	43	42	44	43	39	39	A	41	39	39	39	33.2	43.7
26-Feb	39	42	44	42	40	39	42	37	42	41	41	42	42	42	41	41	41	39	A	26	12	19	15	25	36.3	43.8
27-Feb	28	28	16	19	27	29	25	7	11	29	33	34	36	37	37	38	38	A	31	29	29	22	25	11	27.0	38.0
28-Feb	15	19	14	17	12	7	1	1	8	22	27	26	26	27	25	29	A	26	23	22	28	31	30	32	20.2	31.5
23.4 22.5 23.3 23.3 21.8 22.6 22.3 20.1 17.4 22.1 25.6 30.2 33.3 33.8 34.8 34.7 33.2 28.7 23.5 21.4 22.5 22.3 22.3 23.6																								Diurnal Average		
44.0 43.6 44.1 45.5 43.1 45.0 42.6 41.1 43.9 41.6 41.3 43.8 44.8 46.2 46.3 45.4 46.0 45.8 45.3 44.2 43.8 43.7 44.3 44.4																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

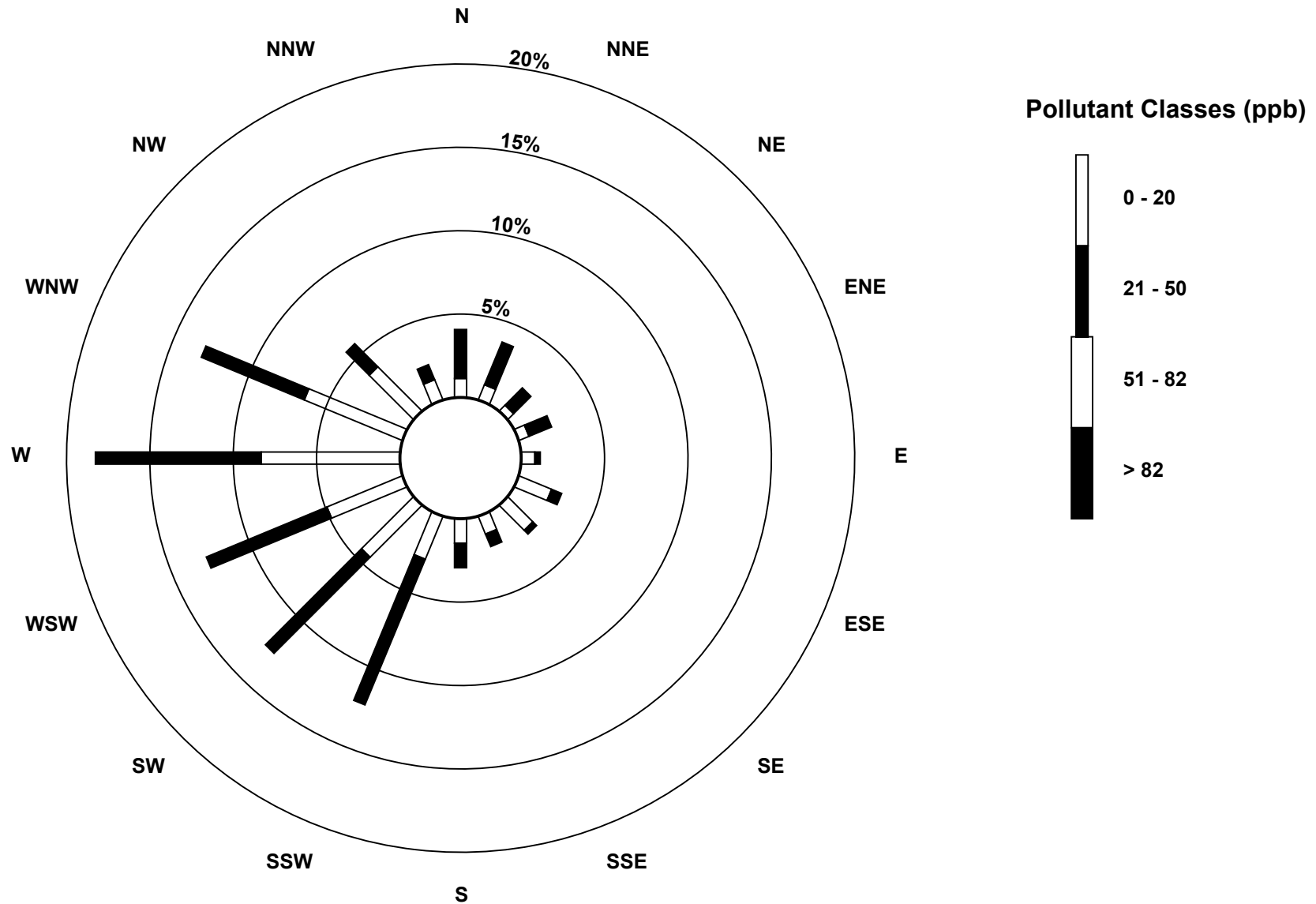
Hourly Maximums

Ozone (O₃) - ppb
Henry Pirker - February 2017



Pollutant Rose

Ozone (O₃) - ppb
Henry Pirker - February 2017



Eight Hour Running Averages

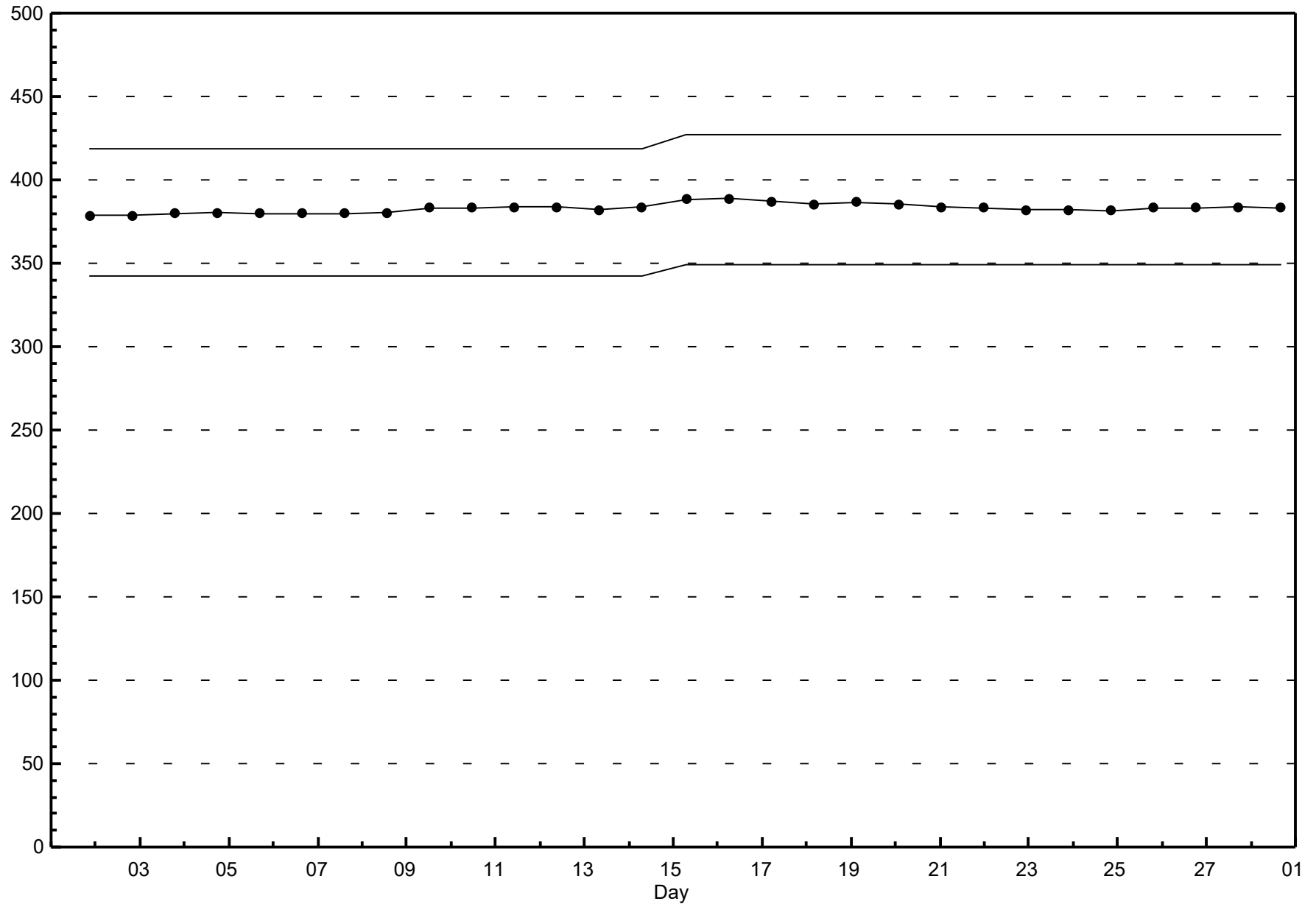
Ozone (O₃) - ppb

Henry Pirker - February 2017

Maximum Value: 43.8 ppb on Feb 12 21:00																								Hours in Service: 672	
Minimum Value: 0.2 ppb on Feb 15 02:00																								Hours of Data: 665	
																								Hours of Missing Data: 7	
Percentiles: P ₁ = 0.6 P ₁₀ = 5.7 Q ₁ = 12.7 Median = 21.3 Q ₃ = 29.8 P ₉₀ = 38.0 P ₉₉ = 42.9																								Hours of Calibration: 7	
																								Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Feb	31	31	30	28	26	25	23	21	19	17	16	17	19	21	24	26	29	29	27	24	23	19	15	11	31.1
2-Feb	7	5	6	7	8	9	8	8	10	11	13	14	16	17	21	23	24	25	24	24	24	23	22	21	25.1
3-Feb	20	20	22	22	22	22	22	20	19	17	17	19	20	21	23	27	30	30	31	26	22	19	15	11	30.6
4-Feb	9	11	12	13	14	15	16	16	14	12	13	17	21	24	26	29	34	37	33	28	23	19	15	12	37.3
5-Feb	11	12	16	20	25	27	31	33	34	34	34	34	34	33	33	34	35	35	32	28	23	18	13	8	34.8
6-Feb	8	6	7	8	11	12	13	14	13	12	11	11	10	11	12	13	15	15	14	13	11	9	6	6	15.2
7-Feb	4	3	3	3	3	3	3	3	2	4	6	9	12	15	17	21	25	27	26	24	22	20	19	17	26.9
8-Feb	15	14	14	15	16	18	19	17	16	16	17	17	18	18	20	23	26	25	22	18	15	17	16	13	25.6
9-Feb	11	10	10	11	10	7	5	4	4	5	6	7	8	9	10	12	14	14	16	18	19	18	18	17	18.6
10-Feb	16	18	19	18	19	20	21	22	21	20	18	16	16	17	17	19	19	18	16	15	13	12	12	14	21.6
11-Feb	18	22	27	32	35	38	40	40	40	40	40	40	41	41	42	42	43	43	43	43	42	42	42	42	43.0
12-Feb	42	42	42	41	41	41	40	40	39	39	37	36	36	37	38	39	40	40	43	44	44	43	43	43	43.8
13-Feb	43	43	43	43	42	42	42	41	40	39	38	38	37	37	36	36	34	32	27	25	24	22	20	19	43.2
14-Feb	18	17	17	15	11	8	7	5	2	2	2	3	3	N	N	N	N	N	N	N	4	3	3	1	18.3
15-Feb	0	0	0	0	1	2	2	2	2	3	4	6	7	10	13	17	21	24	24	24	22	19	14	11	24.2
16-Feb	8	7	8	8	8	9	10	9	7	5	3	3	4	5	5	7	8	9	8	7	7	7	8	10	10.2
17-Feb	12	15	18	21	24	25	27	28	29	31	32	33	34	35	37	38	37	35	34	33	31	28	25	20	37.5
18-Feb	16	14	11	9	5	3	1	1	1	1	3	5	9	13	17	21	25	28	30	31	31	30	29	28	30.9
19-Feb	27	26	26	26	25	24	24	23	23	23	23	23	24	24	25	26	27	28	28	29	29	30	30	30	30.0
20-Feb	30	30	30	30	30	30	29	29	29	29	29	29	30	30	30	30	30	30	29	29	27	26	25	21	30.3
21-Feb	20	16	13	10	8	5	3	3	3	4	7	10	14	18	22	25	29	32	32	30	25	22	19	17	31.8
22-Feb	14	13	12	15	19	22	23	23	24	25	27	28	29	31	33	36	38	38	38	37	35	33	33	28	38.4
23-Feb	22	16	12	9	6	4	4	4	4	5	6	6	9	11	14	17	21	24	28	29	31	31	32	32	32.4
24-Feb	33	34	34	34	33	32	29	28	26	23	22	22	22	24	26	27	30	32	32	30	29	26	23	21	33.8
25-Feb	19	17	16	16	15	16	16	15	15	17	19	22	26	29	33	36	38	38	39	40	39	39	39	38	39.8
26-Feb	38	38	39	39	39	38	38	37	37	37	37	37	38	39	39	40	40	40	40	37	32	28	23	21	40.3
27-Feb	19	17	16	16	18	19	20	18	15	15	17	19	21	22	25	29	33	35	35	34	32	28	26	21	35.1
28-Feb	17	16	14	11	10	8	6	5	5	5	8	10	12	15	18	21	24	24	24	23	23	23	22	23	24.3
43.2 42.9 42.7 42.6 42.5 42.4 42.0 40.7 40.4 40.0 40.0 40.3 40.8 41.3 41.9 42.5 42.9 43.0 42.7 43.7 43.8 43.5 43.5 43.5																									
Diurnal Maximums																									
N - Not Valid																									

Span Responses

Ozone (O₃)
Henry Pirker - February 2017



Hourly Averages

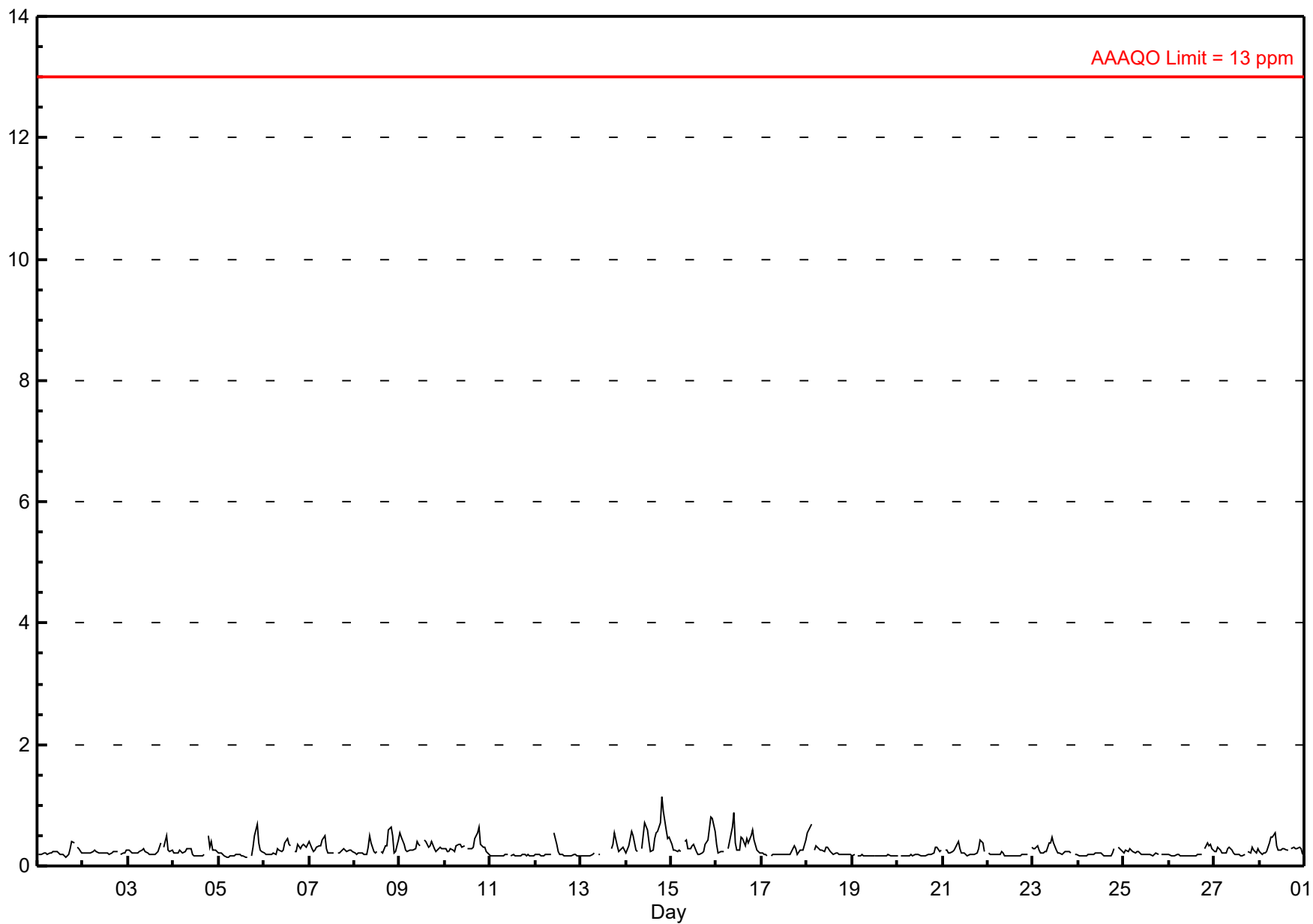
Carbon Monoxide (CO) - ppm

Henry Pirker - February 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 1.14 ppm on Feb 14 20:00 Maximum Daily Average: 0.50 ppm on Feb 14																					Hours in Service: 672 Hours of Data: 638 Hours of Missing Data: 34 Hours of Calibration: 34 Percent Operational Time: 100.0					
Minimum Value: 0.1 ppm on Feb 5 16:00 Maximum Diurnal Average: 0.34 ppm at hour 21 Monthly Average: 0.260 ppm										Minimum Daily Average: 0.17 ppm on Feb 19 Minimum Diurnal Average: 0.21 ppm at hour 16 Percentiles: P ₁ = 0.16 P ₁₀ = 0.17 Q ₁ = 0.18 Median = 0.22 Q ₃ = 0.28 P ₉₀ = 0.40 P ₉₉ = 0.65																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	A	0.3	0.3	0.2	0.23	0.41
2-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.3	0.22	0.26
3-Feb	0.3	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	0.4	A	0.3	0.5	0.3	0.2	0.3	0.25	0.49
4-Feb	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.5	0.3	0.4	0.3	0.3	0.2	0.24	0.49
5-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	A	0.2	0.3	0.5	0.7	0.4	0.3	0.2	0.23	0.70
6-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.4	0.4	0.4	0.3	A	0.2	0.2	0.3	0.3	0.3	0.4	0.3	0.4	0.28	0.44
7-Feb	0.4	0.3	0.2	0.3	0.3	0.3	0.3	0.4	0.5	0.3	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.2	0.28	0.50
8-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.4	0.2	0.2	0.2	A	0.2	0.2	0.3	0.3	0.6	0.6	0.5	0.2	0.2	0.4	0.31	0.65
9-Feb	0.6	0.5	0.4	0.3	0.2	0.3	0.2	0.3	0.3	0.4	0.4	0.3	A	0.4	0.4	0.3	0.3	0.4	0.3	0.2	0.3	0.3	0.3	0.3	0.33	0.55
10-Feb	0.3	0.2	0.2	0.3	0.3	0.2	0.3	0.4	0.4	0.3	0.3	A	0.3	0.3	0.3	0.3	0.5	0.5	0.7	0.3	0.3	0.3	0.2	0.2	0.32	0.65
11-Feb	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	0.18	0.20
12-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.6	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	0.21	0.55
13-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	C	C	C	C	C	0.3	0.4	0.5	0.3	0.2	0.3	0.3	0.3	0.24	0.54
14-Feb	0.2	0.3	0.5	0.6	0.5	0.3	0.2	A	0.3	0.5	0.7	0.6	0.4	0.2	0.3	0.5	0.6	0.6	0.7	1.1	0.9	0.6	0.4	0.5	0.50	1.14
15-Feb	0.4	0.3	0.3	0.2	0.3	0.2	A	0.4	0.4	0.3	0.3	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.6	0.8	0.8	0.6	0.36	0.81
16-Feb	0.3	0.2	0.2	0.2	0.2	A	0.3	0.4	0.7	0.9	0.4	0.3	0.3	0.5	0.5	0.3	0.4	0.4	0.5	0.6	0.4	0.3	0.2	0.2	0.38	0.89
17-Feb	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	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.22	0.42
18-Feb	0.5	0.6	0.7	A	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.28	0.68
19-Feb	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	0.2	0.2	0.17	0.19
20-Feb	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	0.3	0.3	0.2	0.3	0.20	0.31
21-Feb	A	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.2	A	0.25	0.43
22-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.3	0.19	0.30
23-Feb	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.4	0.4	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.26	0.47
24-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	A	0.3	0.3	0.2	0.20	0.31
25-Feb	0.2	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.21	0.28
26-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.3	0.4	0.3	0.4	0.3	0.21	0.37
27-Feb	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.3	0.3	0.2	0.3	0.23	0.31
28-Feb	0.2	0.2	0.2	0.2	0.2	0.4	0.5	0.5	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	A	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.30	0.55
0.25 0.24 0.25 0.23 0.22 0.22 0.23 0.26 0.30 0.28 0.27 0.25 0.23 0.22 0.22 0.21 0.24 0.27 0.33 0.33 0.34 0.30 0.27 0.27																									Diurnal Average	
0.55 0.59 0.68 0.58 0.51 0.38 0.47 0.48 0.65 0.89 0.71 0.59 0.44 0.48 0.46 0.46 0.55 0.58 0.70 1.14 0.89 0.81 0.77 0.57																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm 24-hr na																										

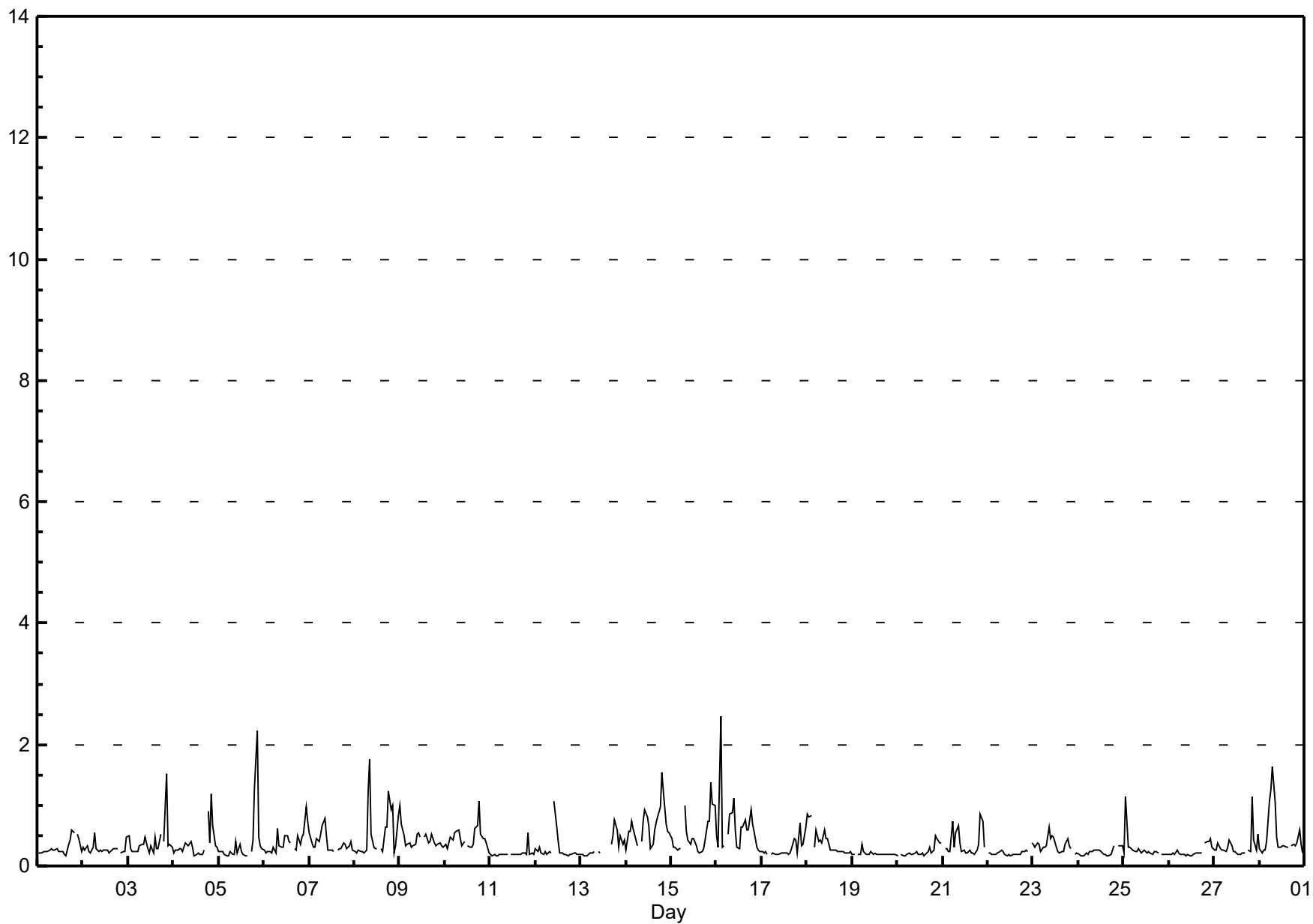
Hourly Averages

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



Hourly Maximums

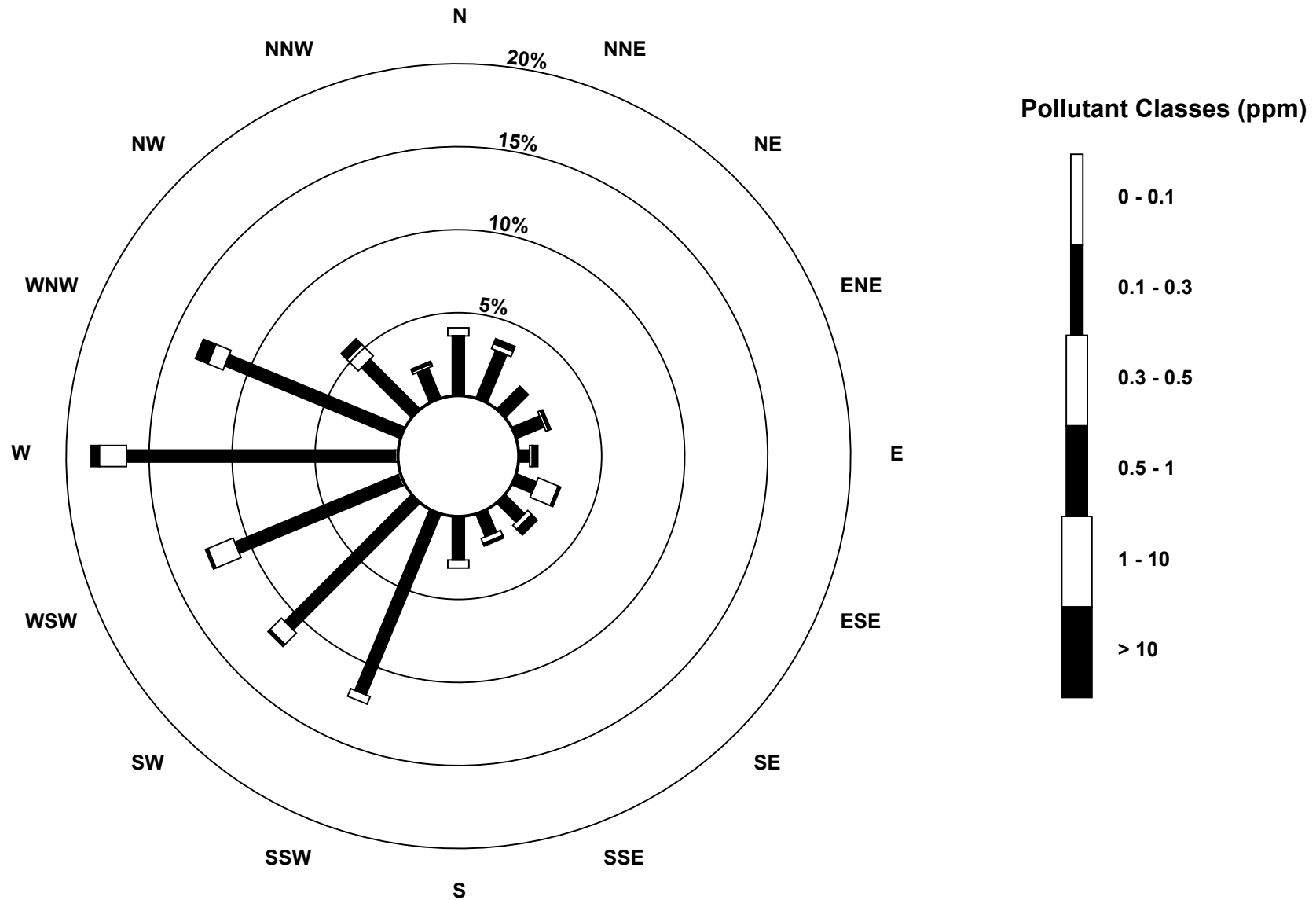
Carbon Monoxide (CO) - ppm
Henry Pirker - February 2017



Pollutant Rose

Carbon Monoxide (CO) - ppm

Henry Pirker - February 2017



Eight Hour Running Averages

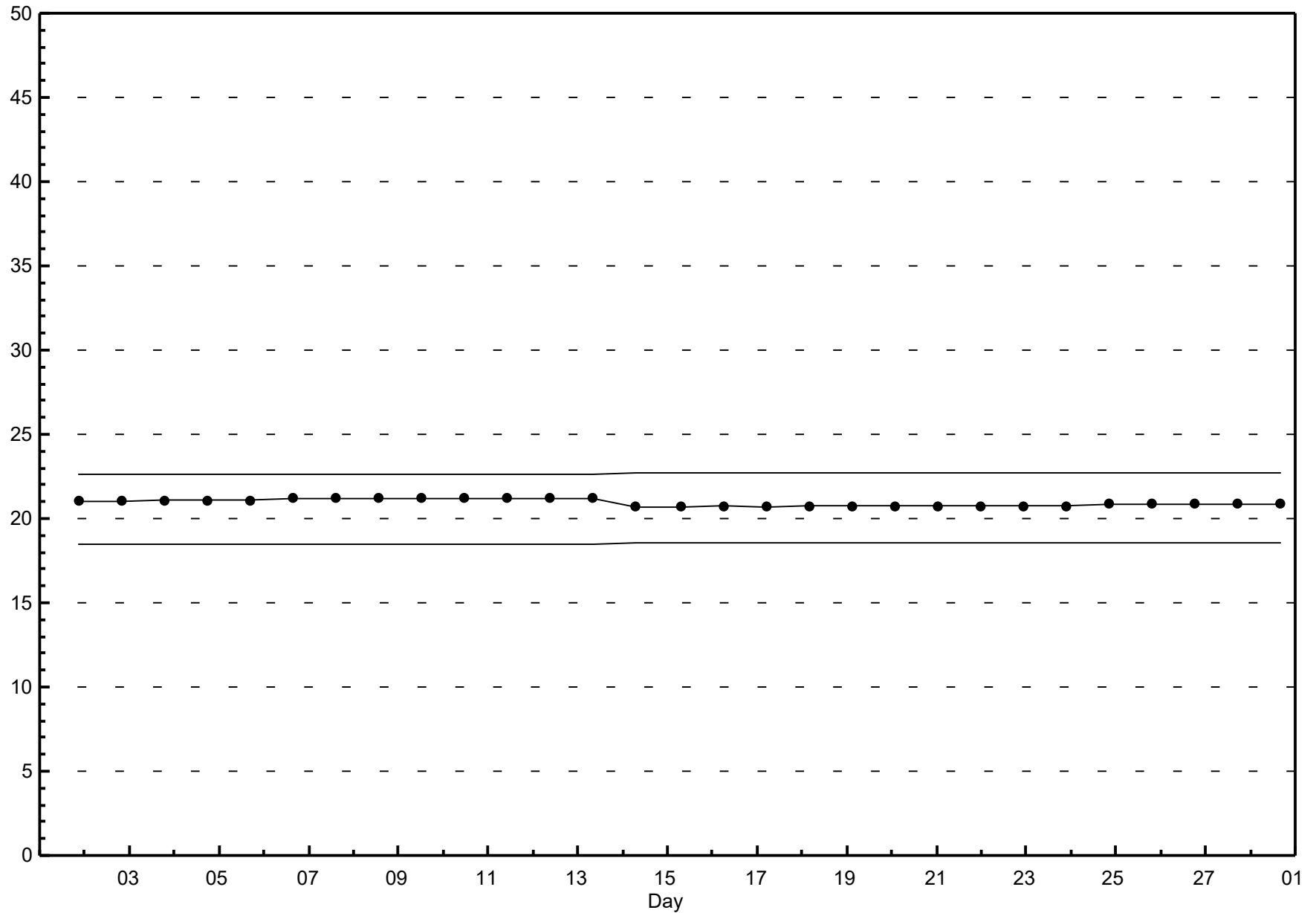
Carbon Monoxide (CO) - ppm

Henry Pirker - February 2017

Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 0.67 ppm on Feb 15 00:00																								Hours in Service: 672 Hours of Data: 663	
Minimum Value: 0.16 ppm on Feb 20 05:00																								Hours of Missing Data: 9 Hours of Calibration: 9	
Percentiles: P ₁ = 0.17 P ₁₀ = 0.17 Q ₁ = 0.19 Median = 0.24 Q ₃ = 0.30 P ₉₀ = 0.37 P ₉₉ = 0.55																									
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-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.30
2-Feb	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	0.2	0.30
3-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.31
4-Feb	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.31
5-Feb	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	0.3	0.3	0.4	0.4	0.36
6-Feb	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.35
7-Feb	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.34
8-Feb	0.3	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	0.3	0.4	0.4	0.4	0.4	0.4	0.41
9-Feb	0.4	0.5	0.4	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.45
10-Feb	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.40
11-Feb	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	0.34
12-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.27
13-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	N	N	N	N	N	N	N	N	N	0.3	0.3	0.3	0.34
14-Feb	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.67
15-Feb	0.7	0.6	0.6	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.65
16-Feb	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.52
17-Feb	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	0.3	0.35
18-Feb	0.3	0.3	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.44
19-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19
20-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.24
21-Feb	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	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	0.3	0.3	0.3	0.27
22-Feb	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	0.28
23-Feb	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.32
24-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.24
25-Feb	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26
26-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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	0.29
27-Feb	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.30
28-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.38
0.65 0.61 0.56 0.48 0.43 0.44 0.44 0.42 0.38 0.42 0.44 0.45 0.45 0.45 0.48 0.46 0.46 0.47 0.47 0.54 0.60 0.65 0.67 0.67																									
Diurnal Maximums																									
N - Not Valid																									
Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 5 ppm																									

Span Responses

Carbon Monoxide (CO)
Henry Pirker - February 2017



Hourly Averages

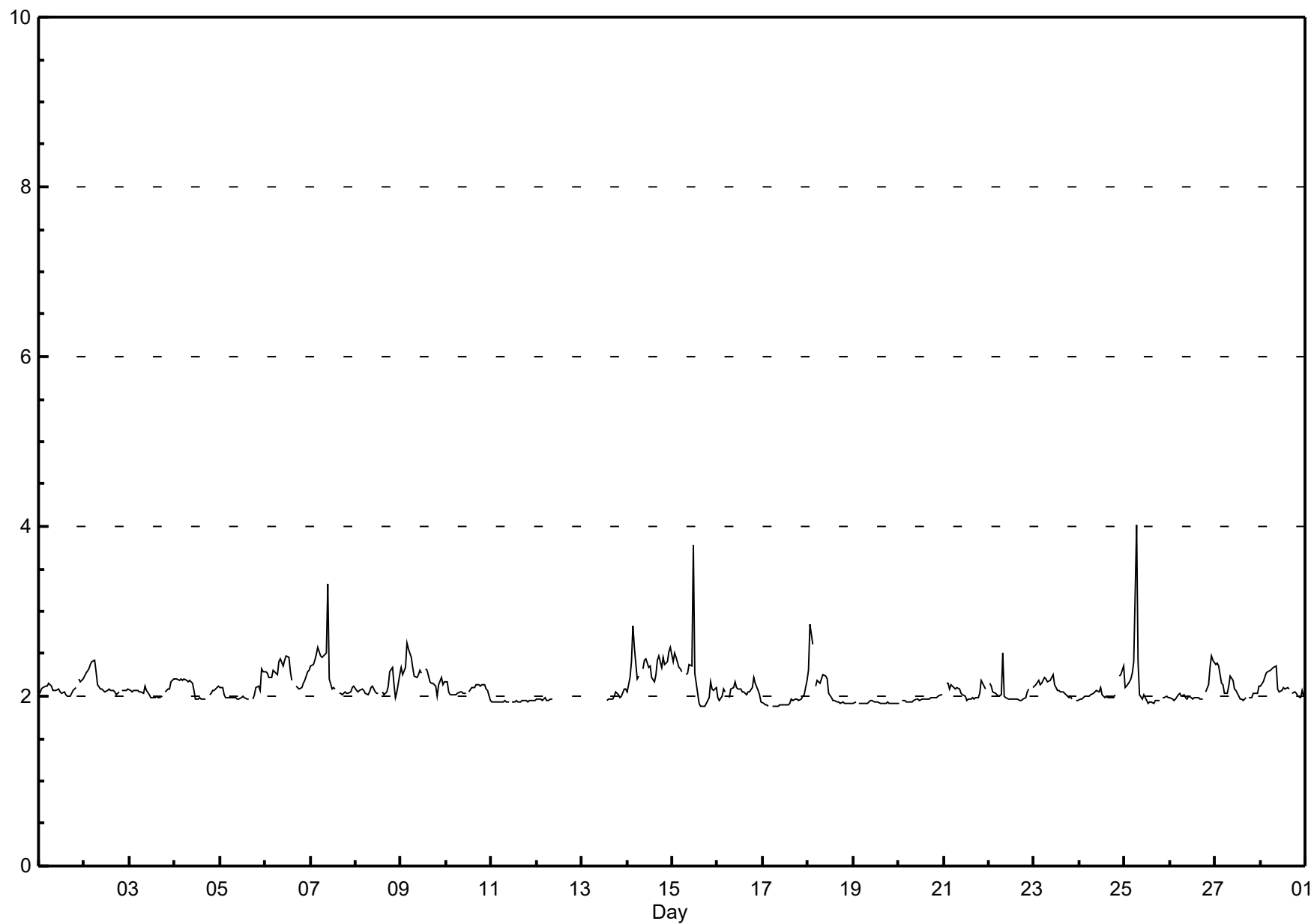
Total Hydrocarbons (THC) - ppm

Henry Pirker - February 2017

Maximum Value: 4.01 ppm on Feb 25 07:00																					Maximum Daily Average: 2.38 ppm on Feb 14				Hours in Service: 672	
Minimum Value: 1.9 ppm on Feb 15 18:00																					Minimum Daily Average: 1.92 ppm on Feb 19				Hours of Data: 617	
Maximum Diurnal Average: 2.17 ppm at hour 7																					Minimum Diurnal Average: 2.00 ppm at hour 16				Hours of Missing Data: 55	
Monthly Average: 2.095 ppm																					Percentiles: P ₁ = 1.89 P ₁₀ = 1.94 Q ₁ = 1.97 Median = 2.05 Q ₃ = 2.15 P ₉₀ = 2.33 P ₉₉ = 2.48				Hours of Calibration: 31	
																									Percent Operational Time: 96.4	
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-Feb	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	A	2.2	2.2	2.2	2.09	2.21
2-Feb	2.2	2.3	2.3	2.4	2.4	2.4	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	A	2.1	2.1	2.1	2.1	2.15	2.42
3-Feb	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.1	2.1	2.1	2.2	2.05	2.20
4-Feb	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	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	2.09	2.21
5-Feb	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.1	2.1	2.1	2.3	2.3	2.04	2.33
6-Feb	2.3	2.3	2.2	2.2	2.3	2.3	2.2	2.4	2.4	2.4	2.4	2.5	2.5	2.3	2.2	A	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.27	2.47
7-Feb	2.4	2.4	2.4	2.5	2.6	2.5	2.5	2.5	2.5	3.3	2.2	2.1	2.1	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.28	3.33
8-Feb	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	A	2.0	2.0	2.0	2.1	2.3	2.3	2.1	2.0	2.0	2.3	2.09	2.34
9-Feb	2.3	2.3	2.3	2.6	2.6	2.5	2.3	2.2	2.2	2.3	2.3	2.3	A	2.3	2.3	2.2	2.2	2.2	2.1	2.0	2.1	2.2	2.1	2.2	2.26	2.62
10-Feb	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	A	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	1.9	2.07	2.18	
11-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.94	1.96	
12-Feb	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	1.98
13-Feb	N	N	N	N	N	N	N	N	N	N	N	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	N	N	N	N	--	2.09
14-Feb	2.1	2.2	2.4	2.8	2.6	2.2	2.2	A	2.3	2.4	2.4	2.3	2.3	2.2	2.2	2.3	2.4	2.5	2.3	2.5	2.4	2.4	2.5	2.6	2.38	2.84
15-Feb	2.4	2.5	2.4	2.3	2.3	2.3	A	2.3	2.3	2.4	2.4	3.8	2.3	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.2	2.1	2.1	2.1	2.24	3.78
16-Feb	2.0	1.9	2.0	2.1	2.0	A	2.0	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.2	2.2	2.1	2.0	1.9	2.06	2.22
17-Feb	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	1.9	2.0	2.0	2.2	1.93	2.18	
18-Feb	2.3	2.8	2.6	A	2.1	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.10	2.84
19-Feb	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.92	1.96
20-Feb	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.96	2.01
21-Feb	A	2.2	2.1	2.1	2.1	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	2.2	2.1	2.1	A	2.05	2.18
22-Feb	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	A	2.1	2.03	2.51
23-Feb	2.1	2.1	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.10	2.25
24-Feb	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.2	2.2	2.4	2.04	2.35
25-Feb	2.1	2.1	2.2	2.2	2.3	2.4	4.0	2.4	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	2.0	2.0	2.0	2.0	2.14	4.01
26-Feb	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.1	2.1	2.3	2.5	2.4	2.05	2.47
27-Feb	2.4	2.4	2.4	2.2	2.1	2.0	2.0	2.1	2.2	2.2	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	2.1	2.10	2.40
28-Feb	2.1	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.4	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.14	2.35
Diurnal Average																										
Diurnal Maximum																										
C - Calibration																										
N - Not Valid																										
A - Automated Daily Zero Span																										

Hourly Averages

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



Hourly Maximums

Total Hydrocarbons (THC) - ppm

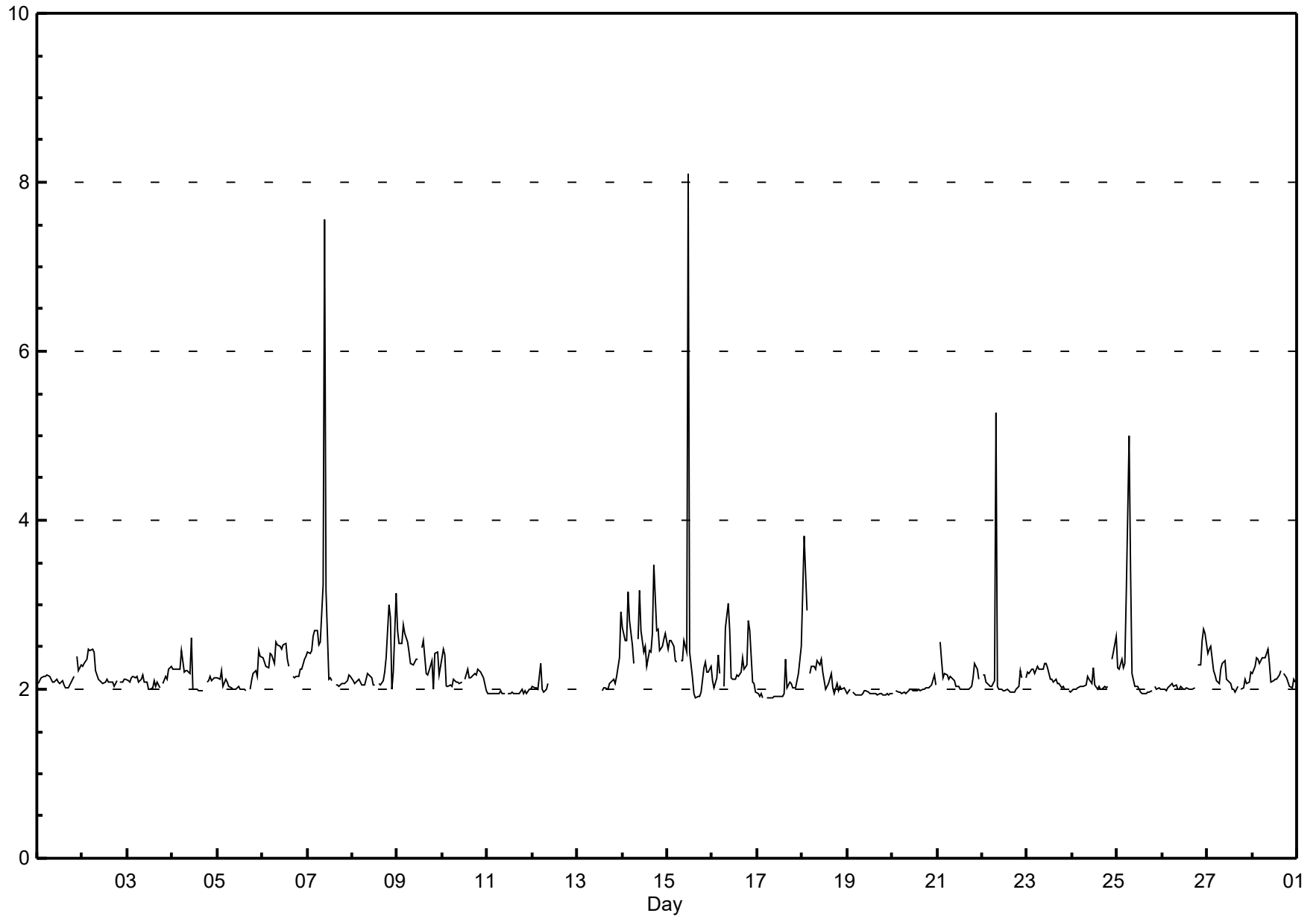
Henry Pirker - February 2017

Maximum Value: 8.10 ppm on Feb 15 12:00																					Maximum Daily Average: 2.65 ppm on Feb 14				Hours in Service: 672	
Minimum Value: 1.9 ppm on Feb 17 09:00																					Minimum Daily Average: 1.95 ppm on Feb 19				Hours of Data: 617	
Maximum Diurnal Average: 2.42 ppm at hour 10																					Minimum Diurnal Average: 2.07 ppm at hour 17				Hours of Missing Data: 55	
Monthly Average: 2.205 ppm																					Percentiles: P ₁ = 1.91 P ₁₀ = 1.97 Q ₁ = 2.01 Median = 2.10 Q ₃ = 2.26 P ₉₀ = 2.52 P ₉₉ = 3.25				Hours of Calibration: 31	
																					Percent Operational Time: 96.4					
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-Feb	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	A	2.4	2.2	2.3	2.12	2.38
2-Feb	2.3	2.3	2.3	2.5	2.5	2.5	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	A	2.1	2.1	2.1	2.1	2.19	2.48
3-Feb	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.0	2.0	2.0	2.1	2.0	2.1	2.0	A	2.1	2.1	2.1	2.2	2.3	2.10	2.28
4-Feb	2.2	2.2	2.2	2.2	2.2	2.5	2.2	2.2	2.2	2.2	2.6	2.0	2.0	2.0	2.0	2.0	2.0	A	2.1	2.1	2.1	2.1	2.1	2.1	2.16	2.61
5-Feb	2.1	2.1	2.2	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.1	2.2	2.2	2.1	2.5	2.4	2.10	2.46
6-Feb	2.4	2.3	2.3	2.3	2.4	2.4	2.3	2.6	2.5	2.5	2.5	2.5	2.5	2.4	2.3	A	2.1	2.1	2.1	2.2	2.2	2.2	2.4	2.4	2.34	2.55
7-Feb	2.4	2.4	2.5	2.6	2.7	2.7	2.5	2.6	3.2	7.6	3.2	2.1	2.1	2.1	A	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.59	7.55
8-Feb	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	A	2.1	2.1	2.1	2.2	2.4	3.0	2.8	2.0	2.2	3.1	2.23	3.14
9-Feb	2.7	2.6	2.6	2.8	2.7	2.6	2.4	2.3	2.3	2.3	2.4	2.4	A	2.5	2.6	2.2	2.2	2.2	2.3	2.0	2.4	2.4	2.2	2.3	2.40	2.76
10-Feb	2.5	2.4	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	A	2.1	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.0	2.15	2.48	
11-Feb	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.96	2.00	
12-Feb	2.0	2.0	2.0	2.0	2.3	2.0	2.0	2.0	2.1	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	2.31
13-Feb	N	N	N	N	N	N	N	N	N	N	N	C	C	C	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.4	2.9	--	2.91
14-Feb	2.7	2.6	2.6	3.2	2.8	2.5	2.3	A	2.6	3.2	2.7	2.4	2.5	2.3	2.5	2.4	2.7	3.5	2.7	2.7	2.5	2.5	2.6	2.7	2.65	3.48
15-Feb	2.5	2.6	2.6	2.5	2.3	2.3	A	2.3	2.3	2.6	2.4	8.1	2.4	2.1	2.0	1.9	1.9	1.9	2.0	2.3	2.3	2.2	2.2	2.3	2.52	8.10
16-Feb	2.1	2.0	2.1	2.4	2.2	A	2.0	2.7	3.0	2.7	2.1	2.1	2.1	2.2	2.2	2.2	2.4	2.2	2.3	2.8	2.7	2.1	2.1	2.0	2.29	3.02
17-Feb	2.0	1.9	2.0	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.4	2.0	2.1	2.1	2.0	2.0	2.1	2.2	2.5	2.01	2.52
18-Feb	3.2	3.8	2.9	A	2.2	2.3	2.3	2.2	2.3	2.3	2.4	2.2	2.0	2.0	2.1	2.2	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.28	3.82
19-Feb	2.0	2.0	A	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.95	2.01
20-Feb	1.9	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.00	2.17
21-Feb	A	2.6	2.3	2.1	2.2	2.2	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	2.1	2.3	2.2	2.1	A	2.12	2.56
22-Feb	2.2	2.2	2.1	2.1	2.0	2.0	2.1	5.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	A	2.1	2.19	5.27
23-Feb	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.3	2.3	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	A	2.0	2.0	2.15	2.31
24-Feb	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.1	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.4	2.4	2.6	2.10	2.62
25-Feb	2.3	2.2	2.3	2.3	2.3	3.1	5.0	3.4	2.2	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.30	5.00
26-Feb	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.3	2.3	2.6	2.7	2.7	2.12	2.72
27-Feb	2.4	2.5	2.5	2.2	2.2	2.1	2.1	2.2	2.3	2.3	2.1	2.1	2.1	2.0	2.0	2.0	2.0	A	2.0	2.0	2.1	2.1	2.1	2.2	2.16	2.51
28-Feb	2.2	2.3	2.4	2.3	2.3	2.4	2.4	2.4	2.5	2.3	2.1	2.1	2.1	2.1	2.2	2.2	A	2.2	2.1	2.1	2.0	2.0	2.1	2.1	2.21	2.48
2.25 2.28 2.25 2.23 2.23 2.24 2.25 2.35 2.24 2.42 2.21 2.35 2.08 2.08 2.07 2.07 2.07 2.11 2.11 2.18 2.20 2.16 2.20 2.27																									Diurnal Average	
3.16 3.82 2.93 3.16 2.81 3.12 5.00 5.27 3.24 7.55 3.16 8.10 2.54 2.49 2.57 2.44 2.67 3.48 2.69 3.00 2.84 2.57 2.72 3.14																									Diurnal Maximum	
C - Calibration N - Not Valid A - Automated Daily Zero Span																										

Hourly Maximums

Total Hydrocarbons (THC) - ppm

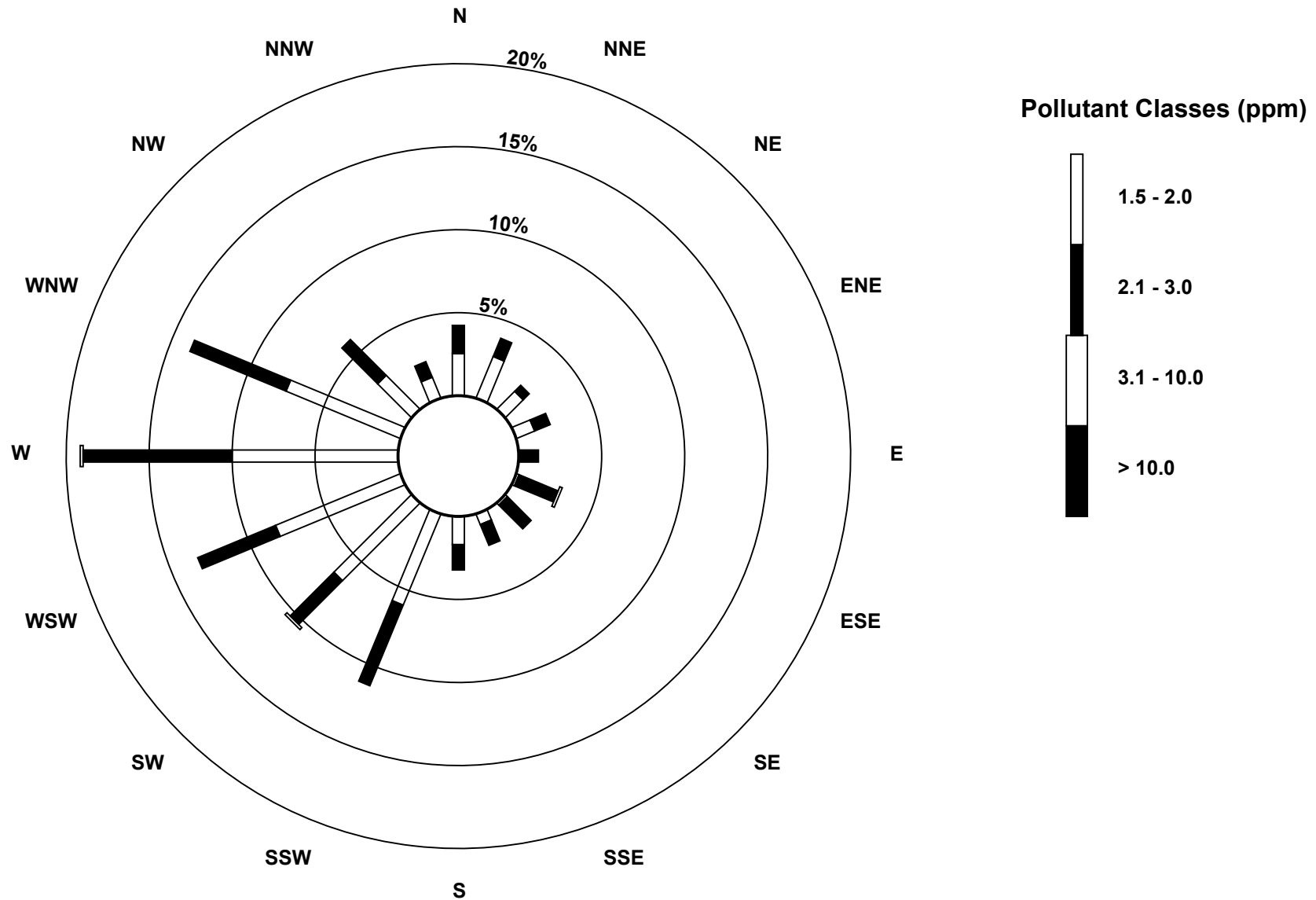
Henry Pirker - February 2017



Pollutant Rose

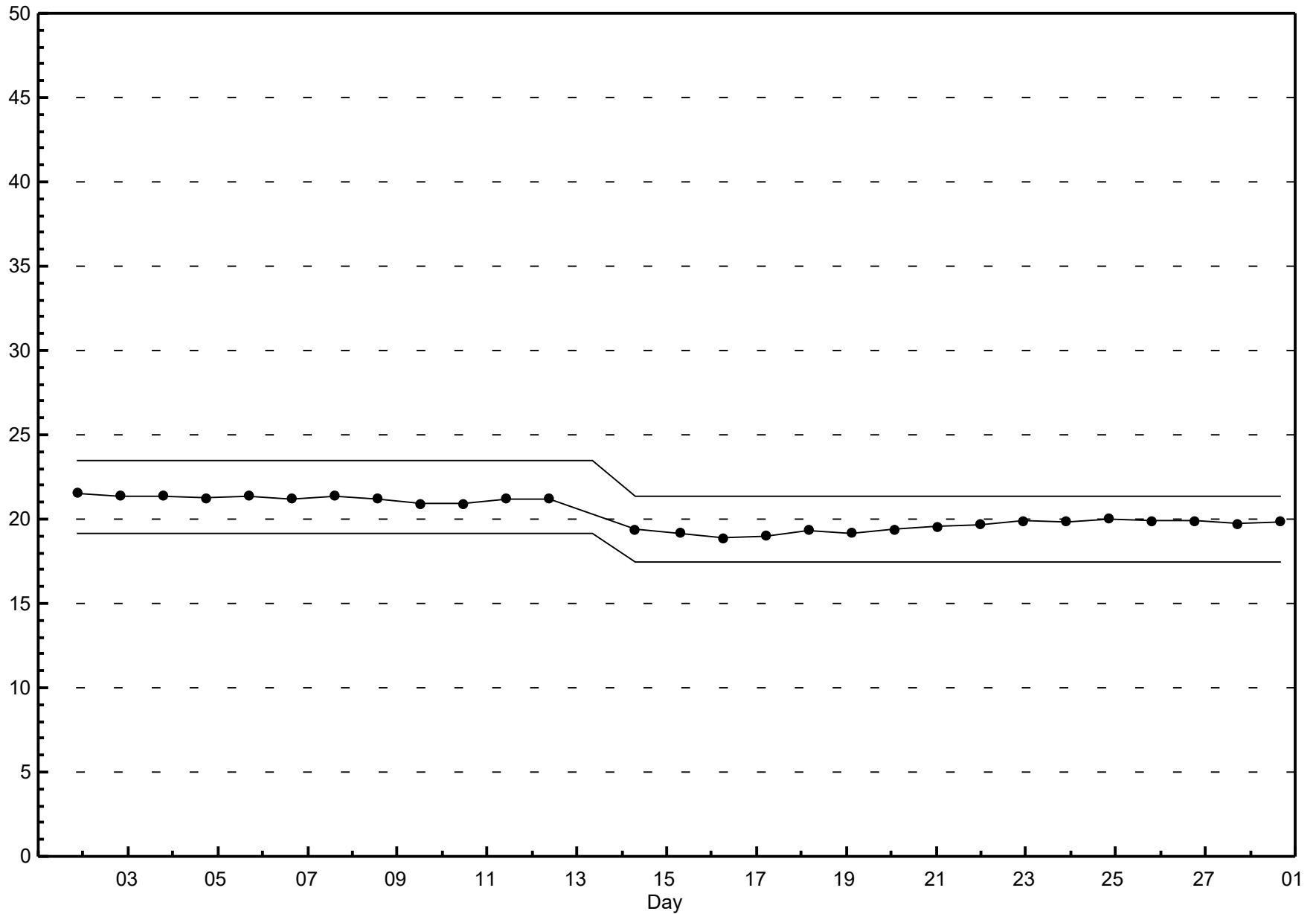
Total Hydrocarbons (THC) - ppm

Henry Pirker - February 2017



Span Responses

Total Hydrocarbons (THC)
Henry Pirker - February 2017



Hourly Averages

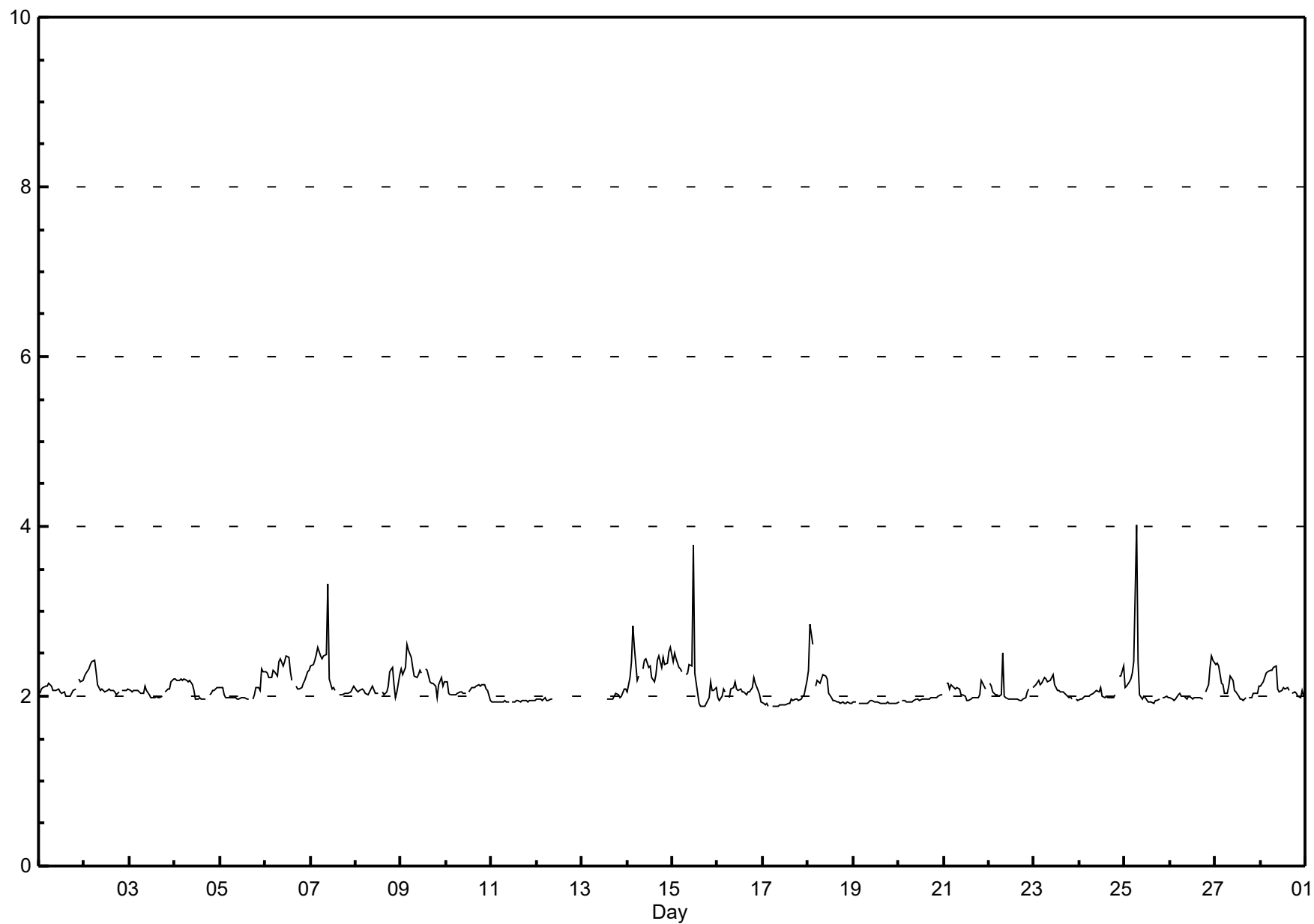
Methane (CH₄) - ppm

Henry Pirker - February 2017

Maximum Value: 4.01 ppm on Feb 25 07:00																					Maximum Daily Average: 2.37 ppm on Feb 14				Hours in Service: 672	
Minimum Value: 1.9 ppm on Feb 15 17:00																					Minimum Daily Average: 1.93 ppm on Feb 19				Hours of Data: 617	
Maximum Diurnal Average: 2.17 ppm at hour 7																					Minimum Diurnal Average: 2.00 ppm at hour 16				Hours of Missing Data: 55	
Monthly Average: 2.094 ppm																					Percentiles: P ₁ = 1.89 P ₁₀ = 1.94 Q ₁ = 1.97 Median = 2.05 Q ₃ = 2.15 P ₉₀ = 2.33 P ₉₉ = 2.47				Hours of Calibration: 31	
																									Percent Operational Time: 96.4	
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-Feb	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	A	2.2	2.2	2.2	2.08	2.21
2-Feb	2.2	2.3	2.3	2.4	2.4	2.4	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	A	2.1	2.1	2.1	2.1	2.15	2.42
3-Feb	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.1	2.1	2.2	2.2	2.05	2.20
4-Feb	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	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	2.09	2.21
5-Feb	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.1	2.1	2.1	2.3	2.3	2.03	2.33
6-Feb	2.3	2.3	2.2	2.2	2.3	2.3	2.2	2.4	2.4	2.4	2.4	2.5	2.5	2.3	2.2	A	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.27	2.47
7-Feb	2.4	2.4	2.4	2.5	2.6	2.5	2.4	2.5	2.5	3.3	2.2	2.1	2.1	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.28	3.33
8-Feb	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	A	2.0	2.0	2.0	2.1	2.3	2.3	2.1	2.0	2.0	2.3	2.09	2.34
9-Feb	2.3	2.3	2.3	2.6	2.5	2.5	2.3	2.2	2.2	2.2	2.3	2.3	A	2.3	2.3	2.2	2.1	2.2	2.1	2.0	2.1	2.2	2.1	2.2	2.26	2.62
10-Feb	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	A	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	1.9	2.07	2.18	
11-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.94	1.96
12-Feb	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	1.98
13-Feb	N	N	N	N	N	N	N	N	N	N	N	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	--	2.09
14-Feb	2.1	2.2	2.4	2.8	2.6	2.2	2.2	A	2.3	2.4	2.4	2.3	2.3	2.2	2.2	2.3	2.4	2.5	2.3	2.5	2.4	2.4	2.5	2.6	2.37	2.84
15-Feb	2.4	2.5	2.4	2.3	2.3	2.3	A	2.3	2.3	2.4	2.3	3.8	2.3	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.2	2.1	2.1	2.1	2.24	3.78
16-Feb	2.0	1.9	2.0	2.1	2.0	A	2.0	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.2	2.2	2.1	2.0	1.9	2.06	2.22
17-Feb	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.2	1.94	2.18
18-Feb	2.3	2.8	2.6	A	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.10	2.84
19-Feb	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.93	1.96
20-Feb	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.96	2.01
21-Feb	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.1	A	2.05	2.18
22-Feb	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	A	2.1	2.03	2.50
23-Feb	2.1	2.1	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.10	2.25
24-Feb	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.2	2.2	2.3	2.04	2.35
25-Feb	2.1	2.1	2.2	2.2	2.3	2.4	4.0	2.4	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	2.0	2.0	2.0	2.0	2.14	4.01
26-Feb	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.1	2.1	2.3	2.5	2.4	2.05	2.47
27-Feb	2.4	2.4	2.4	2.2	2.1	2.0	2.0	2.1	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.1	2.09	2.39
28-Feb	2.1	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.4	2.1	2.0	2.1	2.1	2.1	2.1	2.1	A	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.14	2.35
2.12 2.15 2.15 2.15 2.16 2.13 2.17 2.13 2.12 2.15 2.10 2.13 2.04 2.03 2.01 2.00 2.01 2.02 2.03 2.05 2.07 2.08 2.11 2.13																								Diurnal Average		
2.40 2.84 2.61 2.84 2.58 2.47 4.01 2.50 2.50 3.33 2.45 3.78 2.45 2.31 2.30 2.25 2.43 2.48 2.33 2.46 2.37 2.40 2.53 2.57																								Diurnal Maximum		
C - Calibration N - Not Valid A - Automated Daily Zero Span																										

Hourly Averages

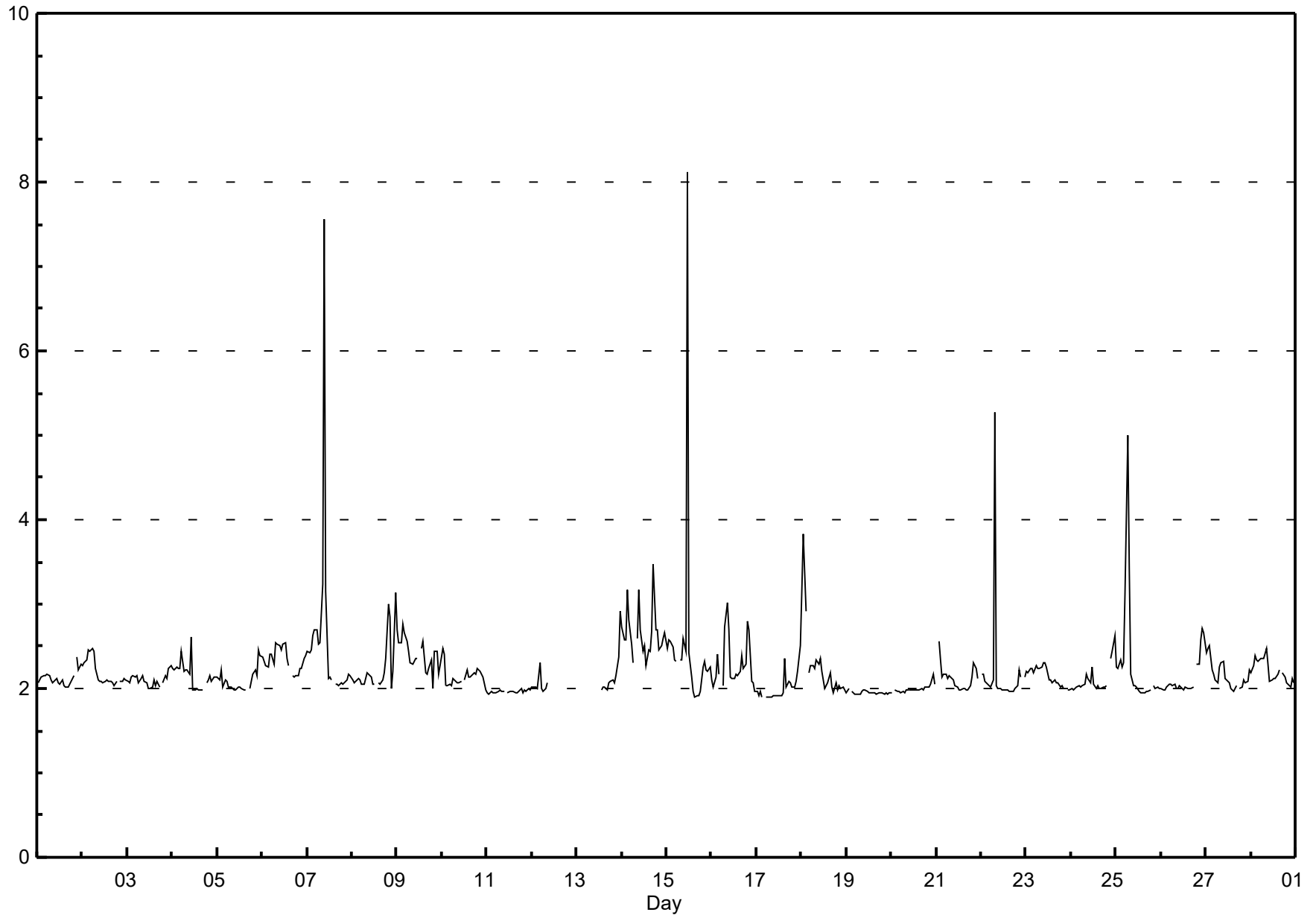
Methane (CH₄) - ppm
Henry Pirker - February 2017



Maximum Value: 8.11 ppm on Feb 15 12:00																								Maximum Daily Average: 2.65 ppm on Feb 14										Hours in Service: 672	
Minimum Value: 1.9 ppm on Feb 17 04:00																								Minimum Daily Average: 1.95 ppm on Feb 19										Hours of Data: 617	
Maximum Diurnal Average: 2.42 ppm at hour 10																								Minimum Diurnal Average: 2.07 ppm at hour 16										Hours of Missing Data: 55	
Monthly Average: 2.203 ppm																								Percentiles: P ₁ = 1.91 P ₁₀ = 1.96 Q ₁ = 2.00 Median = 2.10 Q ₃ = 2.27 P ₉₀ = 2.51 P ₉₉ = 3.25										Hours of Calibration: 31	
																								Percent Operational Time: 96.4											
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-Feb	2.1	2.1	2.1	2.2	2.2	2.2	2.2	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	A	2.4	2.2	2.3	2.12	2.38									
2-Feb	2.3	2.3	2.3	2.5	2.4	2.5	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	A	2.1	2.1	2.1	2.1	2.19	2.47									
3-Feb	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.0	2.0	2.0	2.1	2.0	2.1	2.0	A	2.1	2.1	2.1	2.2	2.3	2.10	2.27									
4-Feb	2.2	2.2	2.2	2.2	2.2	2.4	2.2	2.2	2.2	2.2	2.6	2.0	2.0	2.0	2.0	2.0	2.0	A	2.1	2.1	2.1	2.1	2.1	2.1	2.16	2.61									
5-Feb	2.1	2.1	2.2	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.1	2.2	2.2	2.1	2.5	2.4	2.09	2.45									
6-Feb	2.4	2.3	2.3	2.3	2.4	2.4	2.3	2.5	2.5	2.5	2.5	2.5	2.5	2.4	2.3	A	2.2	2.1	2.1	2.2	2.2	2.2	2.4	2.4	2.34	2.54									
7-Feb	2.4	2.4	2.5	2.6	2.7	2.7	2.5	2.5	3.2	7.6	3.2	2.1	2.1	2.1	A	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.58	7.57									
8-Feb	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.2	2.2	2.1	2.1	2.1	A	2.1	2.1	2.1	2.2	2.4	3.0	2.8	2.0	2.2	3.1	2.23	3.13									
9-Feb	2.7	2.5	2.5	2.8	2.7	2.6	2.4	2.3	2.3	2.3	2.4	2.4	A	2.5	2.6	2.2	2.2	2.2	2.3	2.0	2.4	2.4	2.2	2.3	2.40	2.76									
10-Feb	2.5	2.4	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	A	2.1	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.0	2.14	2.48									
11-Feb	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.96	2.00									
12-Feb	2.0	2.0	2.0	2.0	2.3	2.0	2.0	2.0	2.1	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	2.30									
13-Feb	N	N	N	N	N	N	N	N	N	N	C	C	C	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.4	2.9	--	2.91									
14-Feb	2.7	2.6	2.6	3.2	2.8	2.5	2.3	A	2.6	3.2	2.7	2.4	2.5	2.3	2.5	2.4	2.7	3.5	2.7	2.7	2.5	2.5	2.6	2.7	2.65	3.48									
15-Feb	2.5	2.6	2.6	2.5	2.3	2.3	A	2.3	2.3	2.6	2.4	8.1	2.4	2.1	2.0	1.9	1.9	1.9	2.0	2.2	2.3	2.2	2.2	2.3	2.52	8.11									
16-Feb	2.1	2.0	2.1	2.4	2.2	A	2.0	2.7	3.0	2.7	2.1	2.1	2.1	2.2	2.2	2.2	2.4	2.2	2.3	2.8	2.7	2.1	2.1	2.0	2.29	3.01									
17-Feb	2.0	1.9	2.0	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.4	2.0	2.1	2.1	2.0	2.0	2.1	2.2	2.5	2.01	2.51									
18-Feb	3.2	3.8	2.9	A	2.2	2.3	2.3	2.2	2.3	2.3	2.4	2.2	2.0	2.0	2.1	2.2	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.28	3.82									
19-Feb	2.0	2.0	A	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.95	2.00									
20-Feb	1.9	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	1.99	2.17									
21-Feb	A	2.6	2.3	2.1	2.2	2.2	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	2.1	2.3	2.2	2.1	A	2.12	2.56									
22-Feb	2.2	2.2	2.1	2.0	2.0	2.0	2.1	5.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	A	2.1	2.19	5.27									
23-Feb	2.2	2.2	2.2	2.2	2.2	2.3	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	A	2.0	2.0	2.15	2.31									
24-Feb	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.1	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.4	2.4	2.6	2.10	2.62									
25-Feb	2.3	2.2	2.3	2.3	2.3	3.1	5.0	3.4	2.2	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.30	5.00									
26-Feb	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.3	2.3	2.6	2.7	2.7	2.12	2.71									
27-Feb	2.4	2.5	2.5	2.2	2.2	2.1	2.1	2.2	2.3	2.3	2.1	2.1	2.1	2.0	2.0	2.0	2.0	A	2.0	2.0	2.1	2.1	2.1	2.2	2.16	2.51									
28-Feb	2.2	2.3	2.4	2.3	2.3	2.4	2.4	2.4	2.5	2.3	2.1	2.1	2.1	2.1	2.2	2.2	A	2.2	2.1	2.1	2.0	2.0	2.1	2.1	2.21	2.48									
																								Diurnal Average											
																								Diurnal Maximum											
C - Calibration																								N - Not Valid		A - Automated Daily Zero Span									

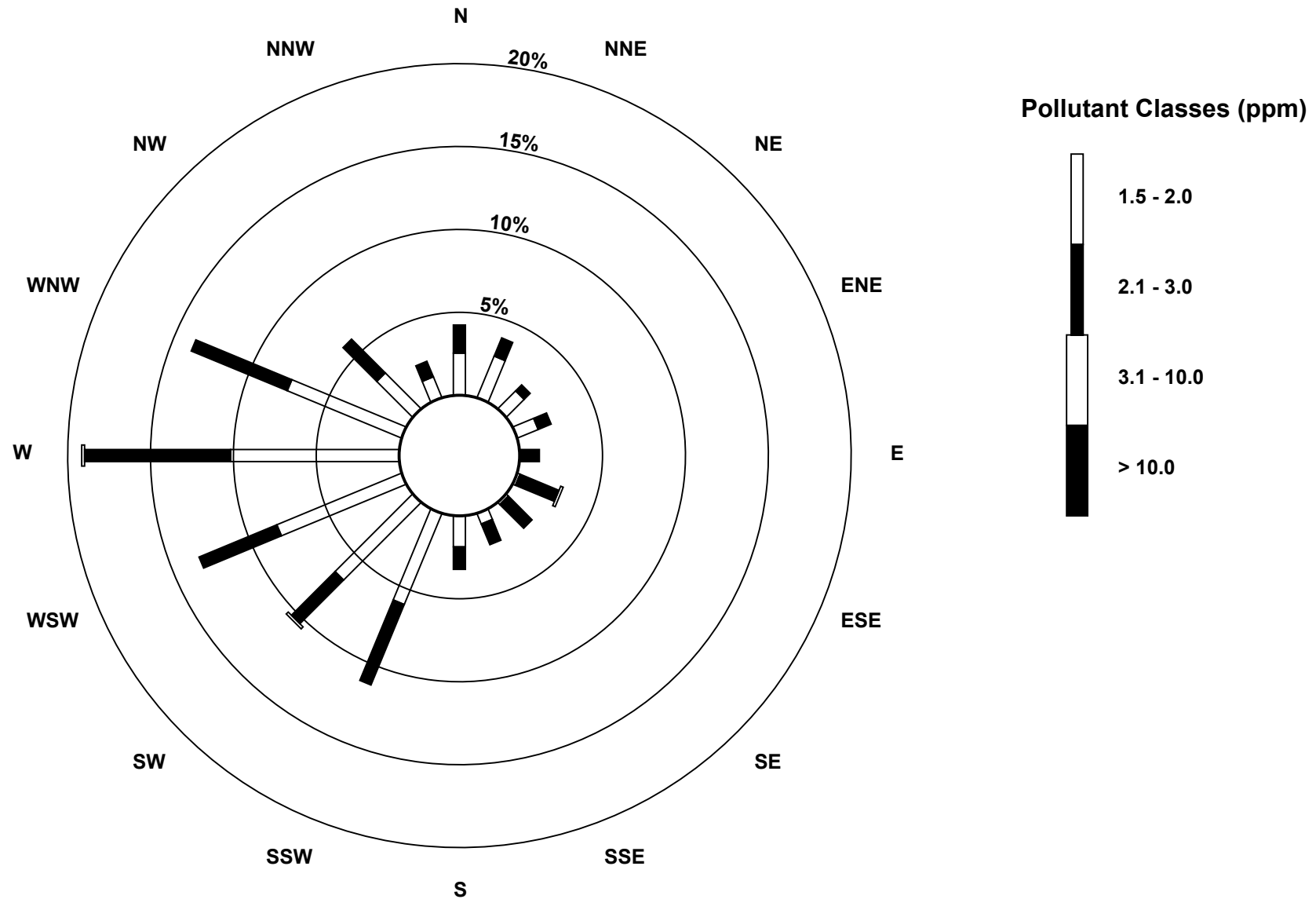
Hourly Maximums

Methane (CH₄) - ppm
Henry Pirker - February 2017



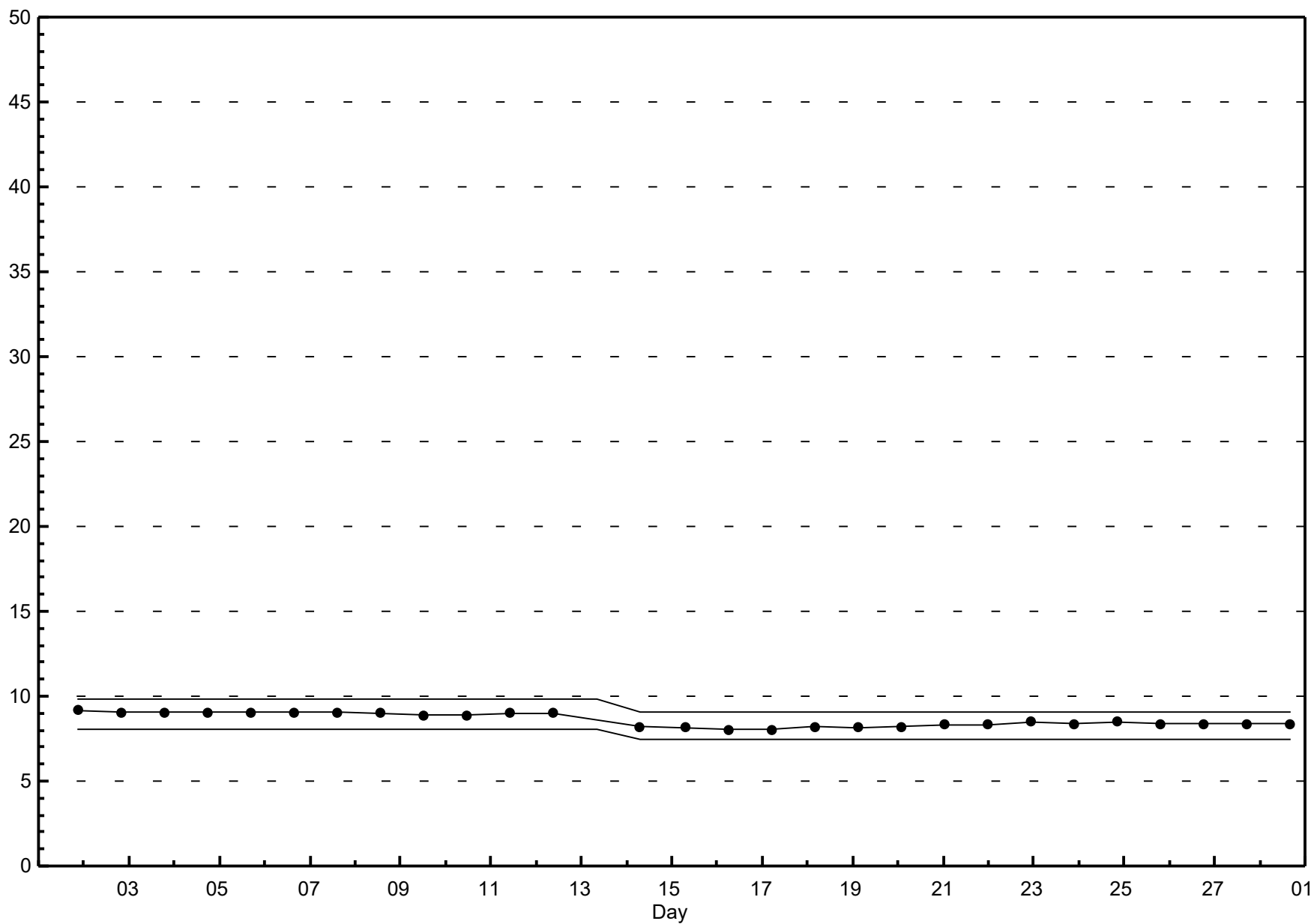
Pollutant Rose

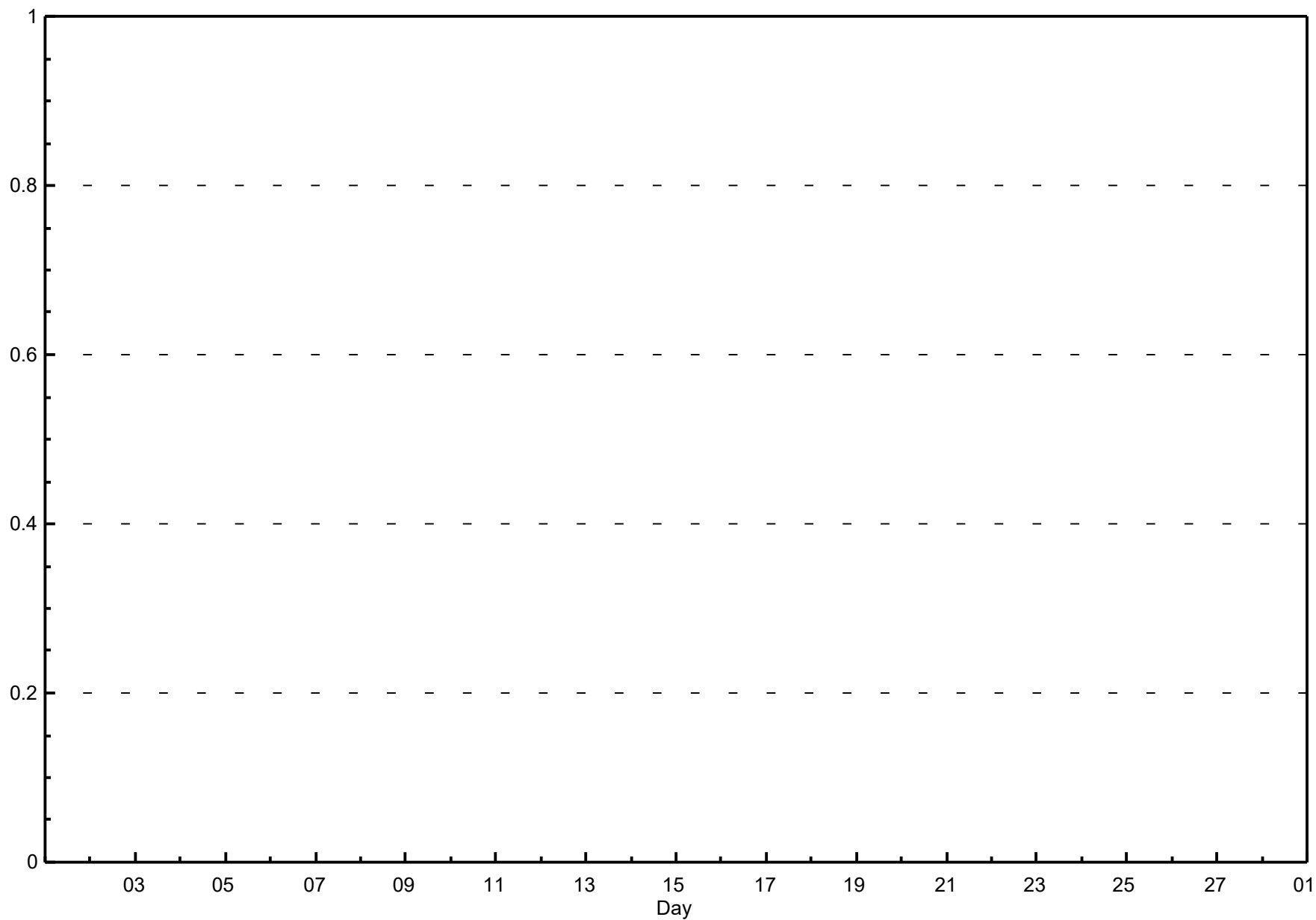
Methane (CH₄) - ppm
Henry Pirker - February 2017



Span Responses

Methane (CH₄)
Henry Pirker - February 2017

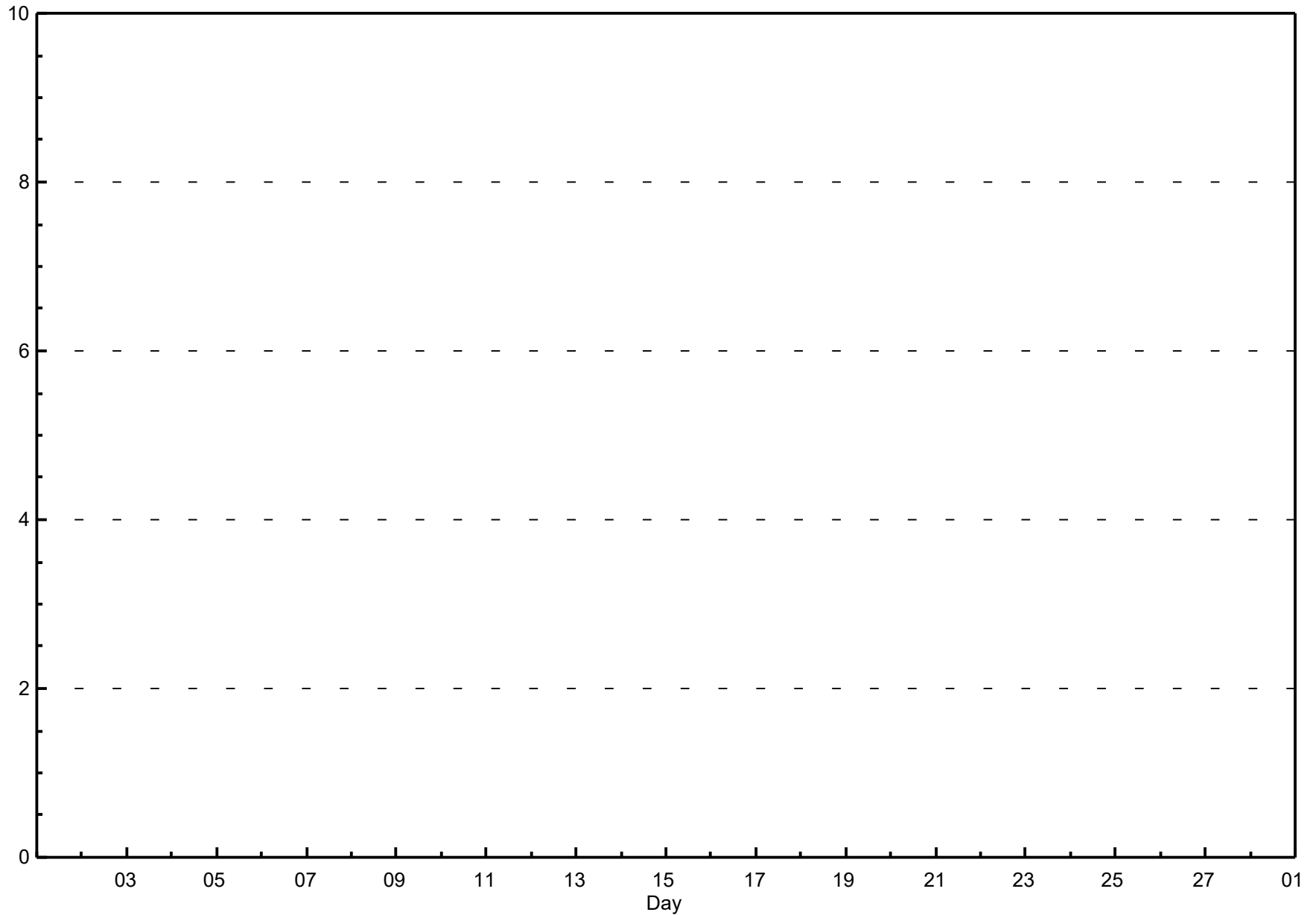




Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

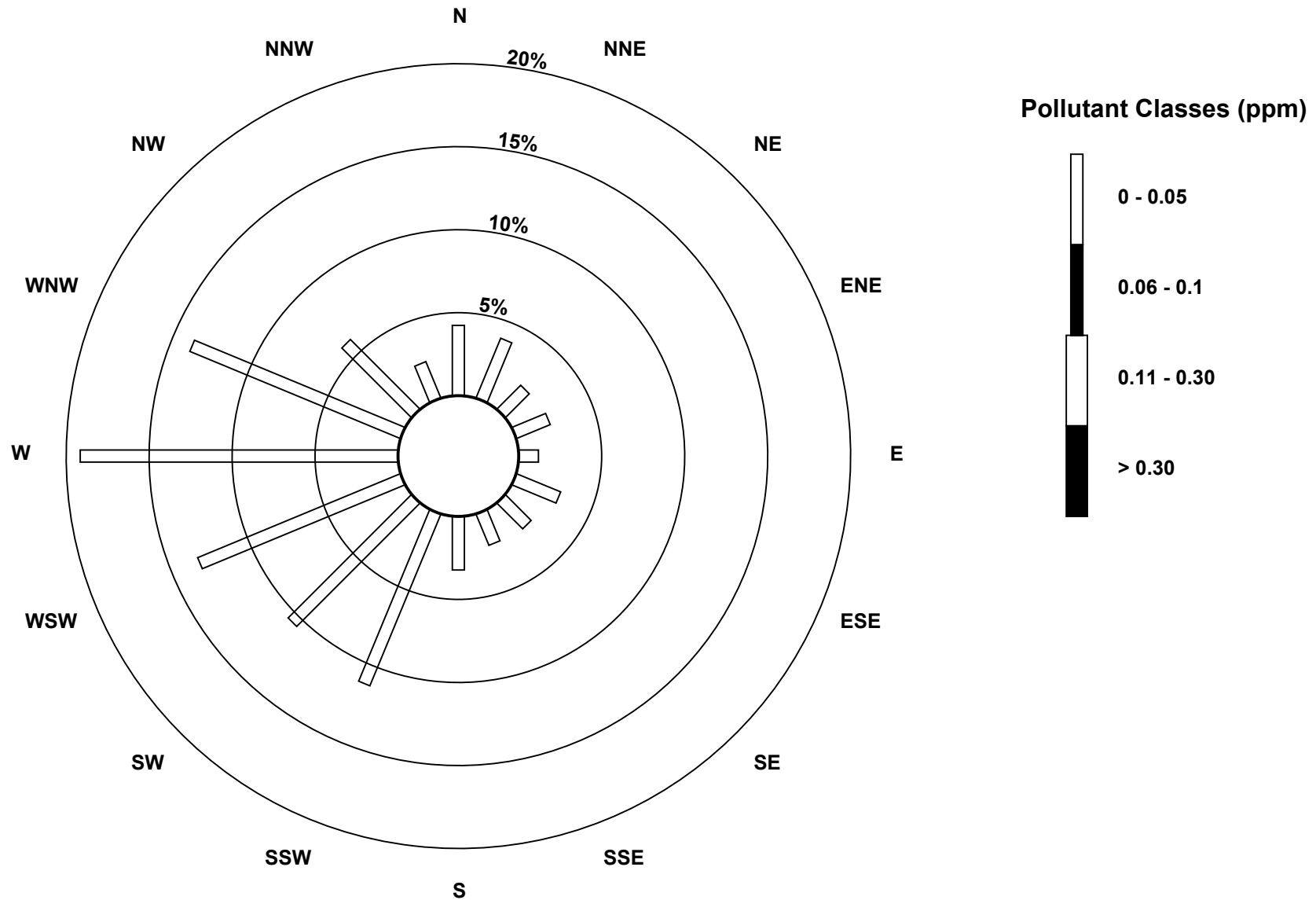
Henry Pirker - February 2017

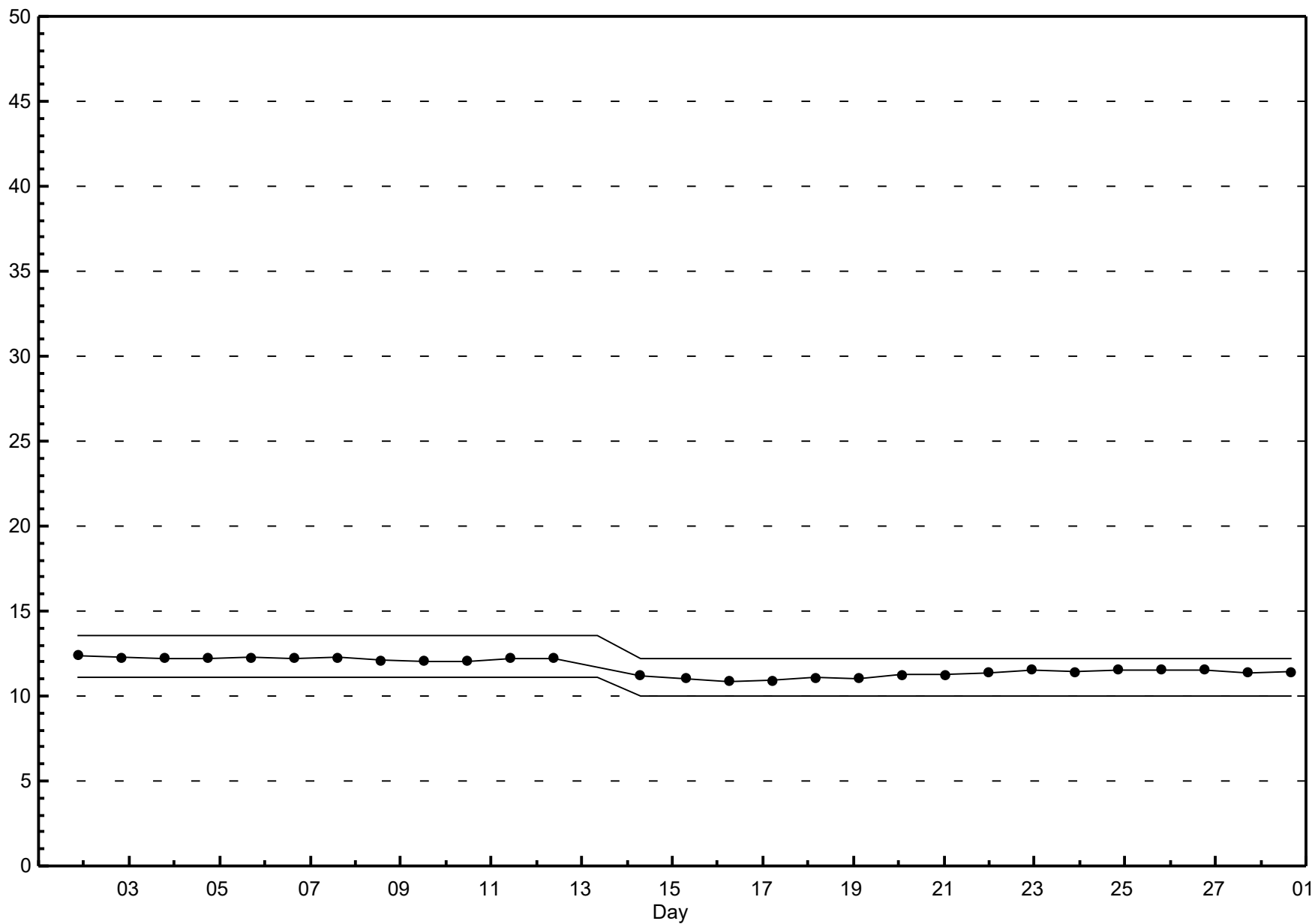


Pollutant Rose

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - February 2017



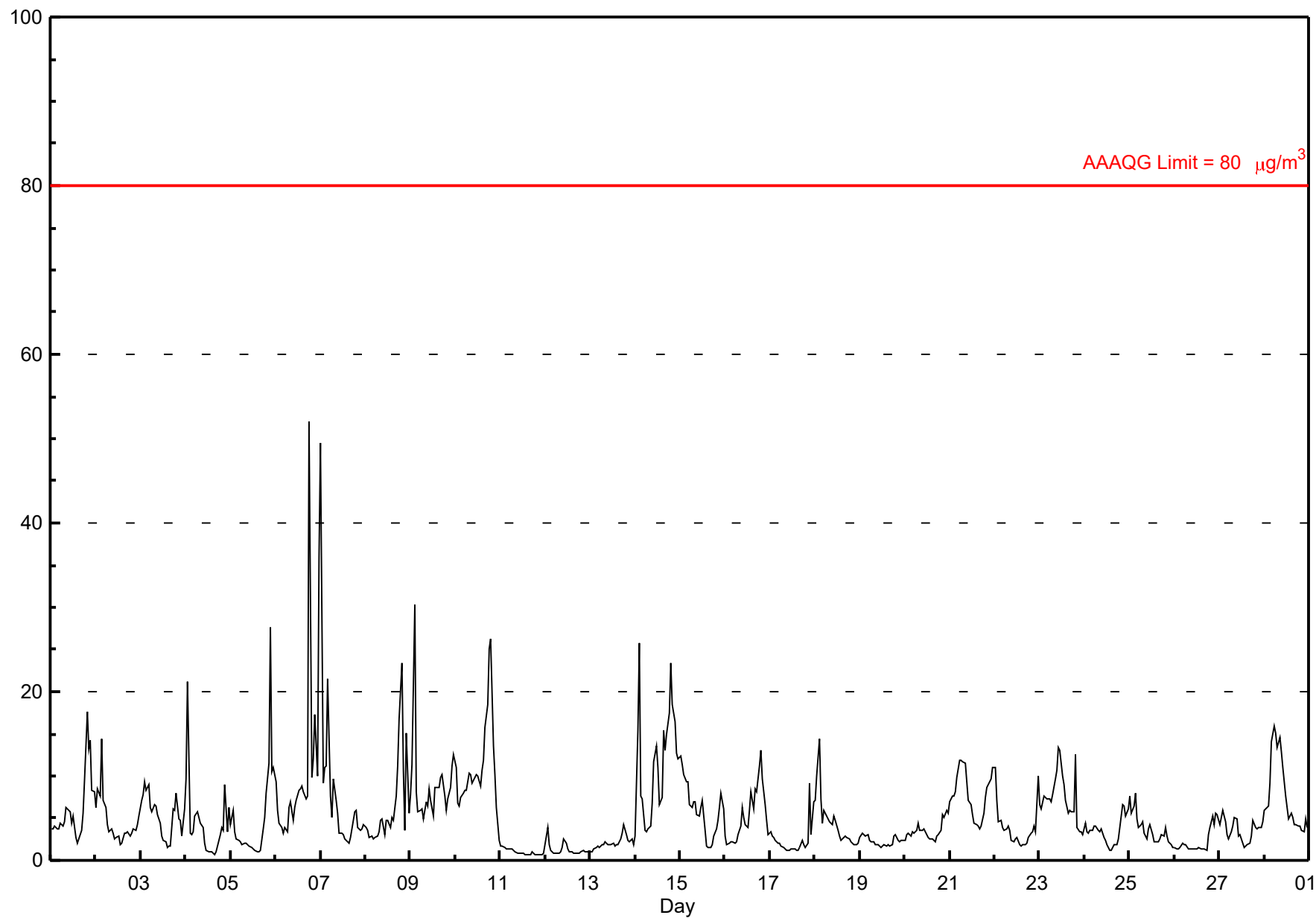


Hourly Averages

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

Henry Pirker - February 2017

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 52.0 µg/m³ on Feb 6 19:00 Maximum Daily Average: 11.4 µg/m³ on Feb 14																								Hours in Service: 672 Hours of Data: 672 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 1 µg/m³ on Feb 11 21:00 Maximum Diurnal Average: 7.6 µg/m³ at hour 19 Monthly Average: 5.34 µg/m³ Minimum Daily Average: 1.0 µg/m³ on Feb 11 Minimum Diurnal Average: 3.4 µg/m³ at hour 14 Percentiles: P ₁ = 0.7 P ₁₀ = 1.4 Q ₁ = 2.2 Median = 3.9 Q ₃ = 7.0 P ₉₀ = 10.4 P ₉₉ = 25.7																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Feb	4	4	4	4	4	4	4	5	6	6	6	4	5	3	2	3	4	6	10	18	13	14	8	8	6.2	17.7
2-Feb	6	8	8	14	7	6	4	3	4	3	3	3	3	2	2	3	3	3	3	3	4	4	4	5	4.6	14.3
3-Feb	7	8	9	8	9	6	6	7	6	5	4	3	2	2	2	2	6	6	8	5	5	3	6	5.3	9.3	
4-Feb	10	21	3	3	3	5	6	5	4	4	2	1	1	1	1	1	2	3	4	4	9	3	6	4.3	21.2	
5-Feb	4	6	3	3	2	2	2	2	2	2	2	1	1	1	1	1	4	5	8	12	28	10	11	4.8	27.6	
6-Feb	9	6	4	4	3	4	3	6	7	5	6	7	8	8	9	8	7	8	52	10	12	17	10	36	10.5	52.0
7-Feb	49	9	11	11	22	8	5	10	7	6	3	3	3	3	2	2	3	4	6	6	4	3	4	4	7.8	49.5
8-Feb	4	4	3	3	3	3	3	3	5	5	3	5	5	4	5	5	8	11	17	23	11	4	15	6	6.4	23.4
9-Feb	8	11	30	8	6	6	6	5	7	7	8	7	5	9	9	9	10	10	8	6	7	9	11	13	8.9	30.3
10-Feb	11	7	6	7	8	8	8	10	10	9	10	10	10	9	11	12	16	18	25	26	14	10	6	2	11.1	26.2
11-Feb	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.7
12-Feb	2	4	2	1	1	1	1	1	1	1	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1.3	3.9
13-Feb	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	3	3	4	3	2	2	3	2	2	2.1	4.3
14-Feb	3	15	26	8	7	3	3	4	4	7	12	14	11	7	7	16	13	15	17	23	18	16	13	12	11.4	25.8
15-Feb	12	11	10	9	9	7	6	7	7	5	5	6	7	3	2	1	2	2	3	4	5	6	8	6	6.0	12.4
16-Feb	3	2	2	2	2	2	2	3	4	6	5	4	4	6	8	6	9	8	11	13	10	7	5	3	5.3	13.1
17-Feb	3	3	3	2	2	2	2	2	1	1	1	1	1	1	1	1	2	2	2	1	2	9	3	7	2.4	9.2
18-Feb	7	10	14	7	4	6	5	5	5	4	5	5	3	3	2	3	3	3	3	2	2	2	2	2	4.5	14.4
19-Feb	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	2	2	2	2	2.3	3.2
20-Feb	2	3	3	3	3	3	4	4	4	4	4	3	3	3	3	2	2	3	3	4	5	5	6	6	3.5	5.9
21-Feb	7	8	8	8	10	12	12	12	11	9	7	7	5	4	4	4	4	4	6	7	9	9	10	11	7.8	11.9
22-Feb	11	7	5	5	4	4	4	4	4	2	2	3	3	2	2	2	2	2	3	3	3	4	3	10	3.8	11.0
23-Feb	7	6	8	7	7	7	7	8	10	11	13	13	10	9	7	6	6	6	6	13	4	3	3	3	7.5	13.4
24-Feb	4	3	3	3	4	4	4	4	3	4	3	2	2	1	1	2	2	2	3	4	7	6	5	6	3.4	6.7
25-Feb	8	6	7	8	5	4	4	5	3	3	4	4	3	2	2	2	3	3	3	4	3	2	2	1	3.7	7.9
26-Feb	2	1	1	2	2	2	2	1	1	1	1	1	1	2	1	1	1	1	3	4	5	4	6	5	2.3	5.5
27-Feb	4	5	6	5	3	3	3	4	5	5	3	3	2	2	2	2	2	3	5	4	4	4	4	5	3.6	5.8
28-Feb	6	6	6	9	14	16	15	13	15	13	11	8	6	5	6	5	4	4	4	4	3	3	5	4	7.8	15.9
7.1 6.5 6.9 5.4 5.4 4.8 4.6 4.9 5.1 4.7 4.7 4.5 4.0 3.4 3.5 3.7 4.0 4.9 7.6 7.5 6.1 6.8 5.6 6.6																								Diurnal Average		
49.5 21.2 30.3 14.3 21.6 15.9 15.1 13.4 14.6 12.9 13.4 13.5 11.1 9.1 10.6 15.5 15.7 18.4 52.0 26.2 18.4 27.6 15.1 35.9																								Diurnal Maximum		
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																										



Hourly Maximums

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

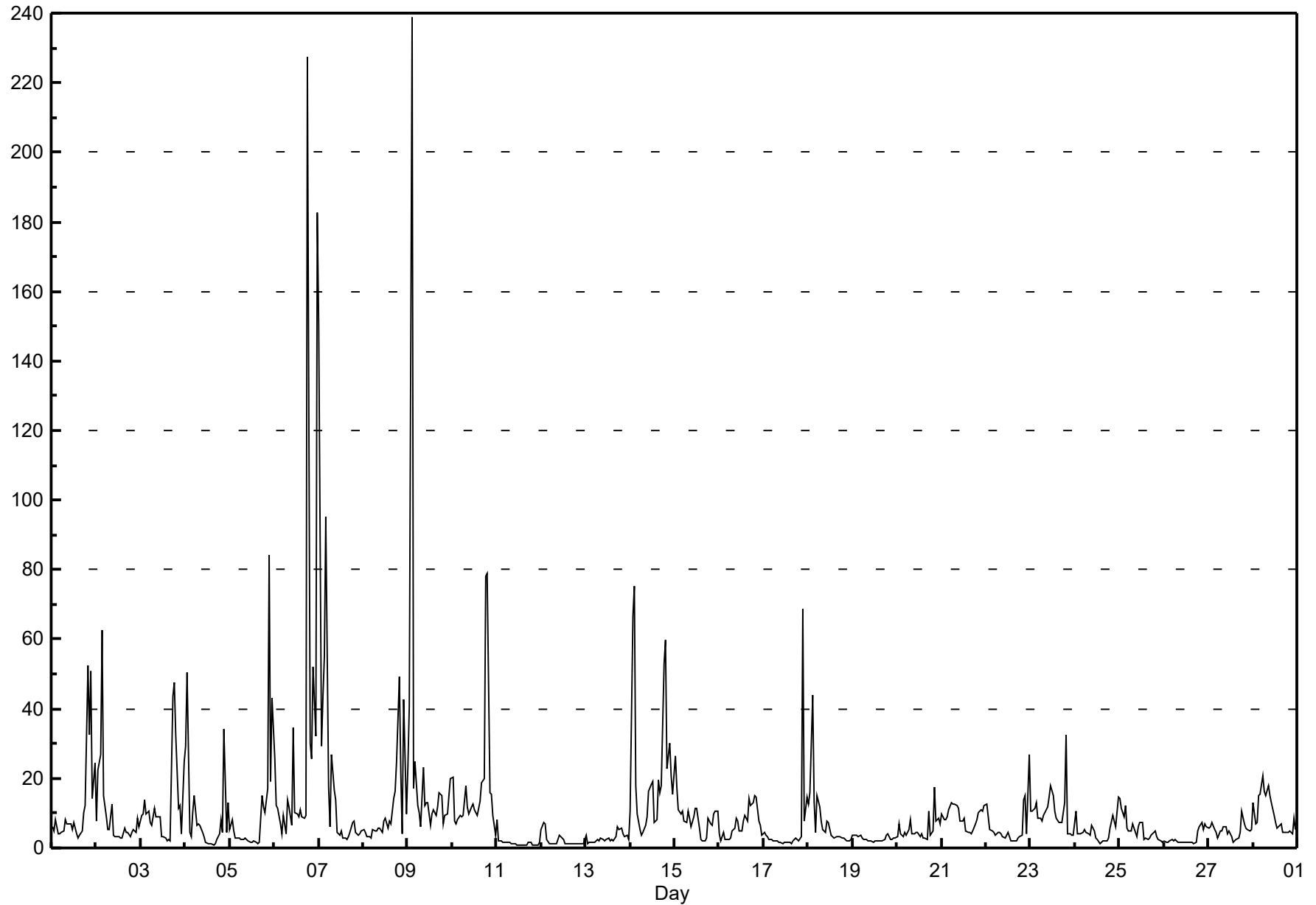
Henry Pirker - February 2017

Maximum Value: 238.6 μg/m ³ on Feb 9 03:00																								Maximum Daily Average: 31.5 μg/m ³ on Feb 6								Hours in Service: 672	
Minimum Value: 1 μg/m ³ on Feb 11 15:00																								Minimum Daily Average: 1.5 μg/m ³ on Feb 11								Hours of Data: 672	
Maximum Diurnal Average: 20.6 μg/m ³ at hour 19																								Minimum Diurnal Average: 4.2 μg/m ³ at hour 14								Hours of Missing Data: 0	
Monthly Average: 9.96 μg/m ³																								Percentiles: P ₁ = 0.9 P ₁₀ = 1.6 Q ₁ = 2.8 Median = 5.2 Q ₃ = 10.4 P ₉₀ = 17.5 P ₉₉ = 77.6								Hours of Calibration: 0	
																								Percent Operational Time: 100.0									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24									
1-Feb	6	5	8	4	4	5	5	8	7	7	7	5	7	4	3	4	5	10	12	52	33	51	14	24	12.1	52.4							
2-Feb	8	23	27	63	15	9	5	5	13	3	3	3	3	3	3	6	5	5	3	5	5	4	9	6	9.7	62.8							
3-Feb	9	10	14	10	11	7	6	11	9	9	9	3	3	3	2	3	2	43	47	33	11	12	4	25	12.4	47.4							
4-Feb	29	51	5	3	10	15	6	7	6	5	3	2	1	1	1	1	1	2	4	8	5	34	5	13	9.1	50.6							
5-Feb	5	8	5	3	3	3	3	2	3	2	2	2	2	2	2	1	2	15	12	10	17	84	19	43	10.4	84.3							
6-Feb	25	12	11	7	4	9	4	14	12	6	34	10	10	9	11	9	9	10	227	30	26	52	32	183	31.5	227.3							
7-Feb	151	29	43	55	95	17	6	27	17	14	4	4	5	3	3	2	3	5	7	8	4	4	4	5	21.5	150.5							
8-Feb	5	4	3	3	3	5	5	5	6	6	5	8	8	6	8	7	14	16	25	49	21	4	43	10	11.2	49.4							
9-Feb	23	41	239	17	25	12	10	6	23	12	13	13	6	10	11	9	12	16	15	7	9	10	15	20	24.0	238.6							
10-Feb	20	8	7	8	9	9	9	18	12	10	12	12	11	9	11	13	19	20	78	79	16	16	9	3	17.5	78.8							
11-Feb	8	2	2	2	1	2	1	2	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	2	1.5	8.2							
12-Feb	5	7	7	2	1	1	1	1	1	3	4	3	3	1	1	1	1	1	1	1	1	1	1	1	2.1	7.5							
13-Feb	4	1	2	2	2	2	3	2	3	2	2	3	3	2	3	2	3	6	5	6	4	3	4	3	2.9	6.0							
14-Feb	11	67	75	18	10	5	4	4	7	9	16	18	19	7	8	20	16	18	53	60	23	30	21	15	22.2	75.3							
15-Feb	26	17	11	10	11	8	7	10	8	6	9	11	11	6	2	2	2	3	9	7	6	10	11	11	8.9	26.4							
16-Feb	4	2	4	2	2	2	3	5	6	8	8	5	5	8	10	8	14	12	13	15	15	8	6	3	7.0	14.9							
17-Feb	4	4	3	2	2	2	2	2	2	1	1	2	2	2	2	1	2	3	2	2	3	69	8	15	5.7	68.9							
18-Feb	13	16	44	13	5	15	12	8	5	5	8	7	4	3	3	3	3	3	3	3	2	2	2	2	7.7	44.1							
19-Feb	3	3	3	3	4	3	3	2	2	2	2	2	2	2	2	2	2	2	4	4	3	3	3	3	2.7	4.1							
20-Feb	3	7	4	3	5	4	5	8	4	4	4	5	3	4	3	3	2	10	4	5	17	8	9	7	5.4	17.3							
21-Feb	10	8	8	9	11	13	12	13	12	12	8	8	9	5	5	5	4	5	7	8	10	11	10	12	8.9	13.2							
22-Feb	12	9	5	5	4	4	4	4	4	3	3	4	4	2	2	2	2	3	3	4	14	15	4	27	6.1	26.8							
23-Feb	11	11	11	13	9	9	8	9	11	12	15	18	15	11	8	7	7	7	13	32	4	4	4	4	10.5	32.5							
24-Feb	11	4	4	4	5	5	4	4	4	6	5	3	3	1	1	2	2	2	3	6	9	8	6	15	4.9	14.8							
25-Feb	14	11	9	12	6	5	5	7	6	3	6	7	7	2	3	2	3	3	4	5	3	2	2	2	5.5	14.3							
26-Feb	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	5	6	7	5	7	6	2.9	7.1							
27-Feb	6	6	7	5	5	3	5	5	6	6	4	5	3	2	2	2	3	4	10	7	6	5	5	5	4.9	10.4							
28-Feb	13	7	7	15	16	21	16	15	18	15	13	9	7	6	6	7	5	5	4	5	5	4	9	5	9.7	20.6							
15.8 13.4 20.4 10.6 9.9 7.0 5.6 7.4 7.4 6.2 7.3 6.2 5.7 4.2 4.2 4.5 5.2 8.3 20.6 16.3 10.0 16.5 9.5 16.8																									Diurnal Average								
150.5 66.6 238.6 62.8 95.1 20.6 16.5 26.8 23.1 15.1 34.4 18.3 18.9 10.6 11.2 19.5 18.8 43.4 227.3 78.8 32.6 84.3 42.6 182.8																									Diurnal Maximum								

Hourly Maximums

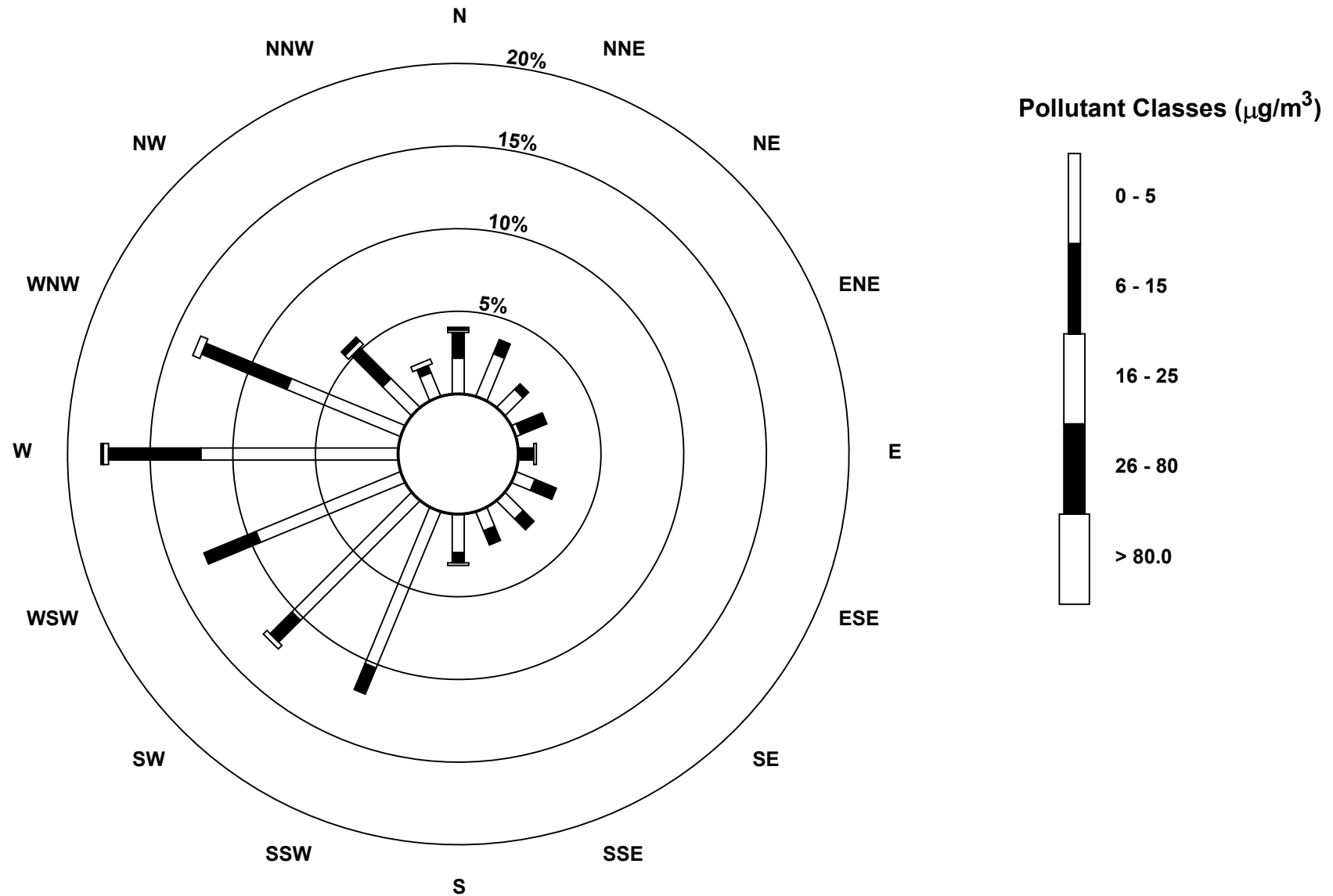
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$

Henry Pirker - February 2017



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Henry Pirker - February 2017



Hourly Averages

External Temperature (ET) - °C

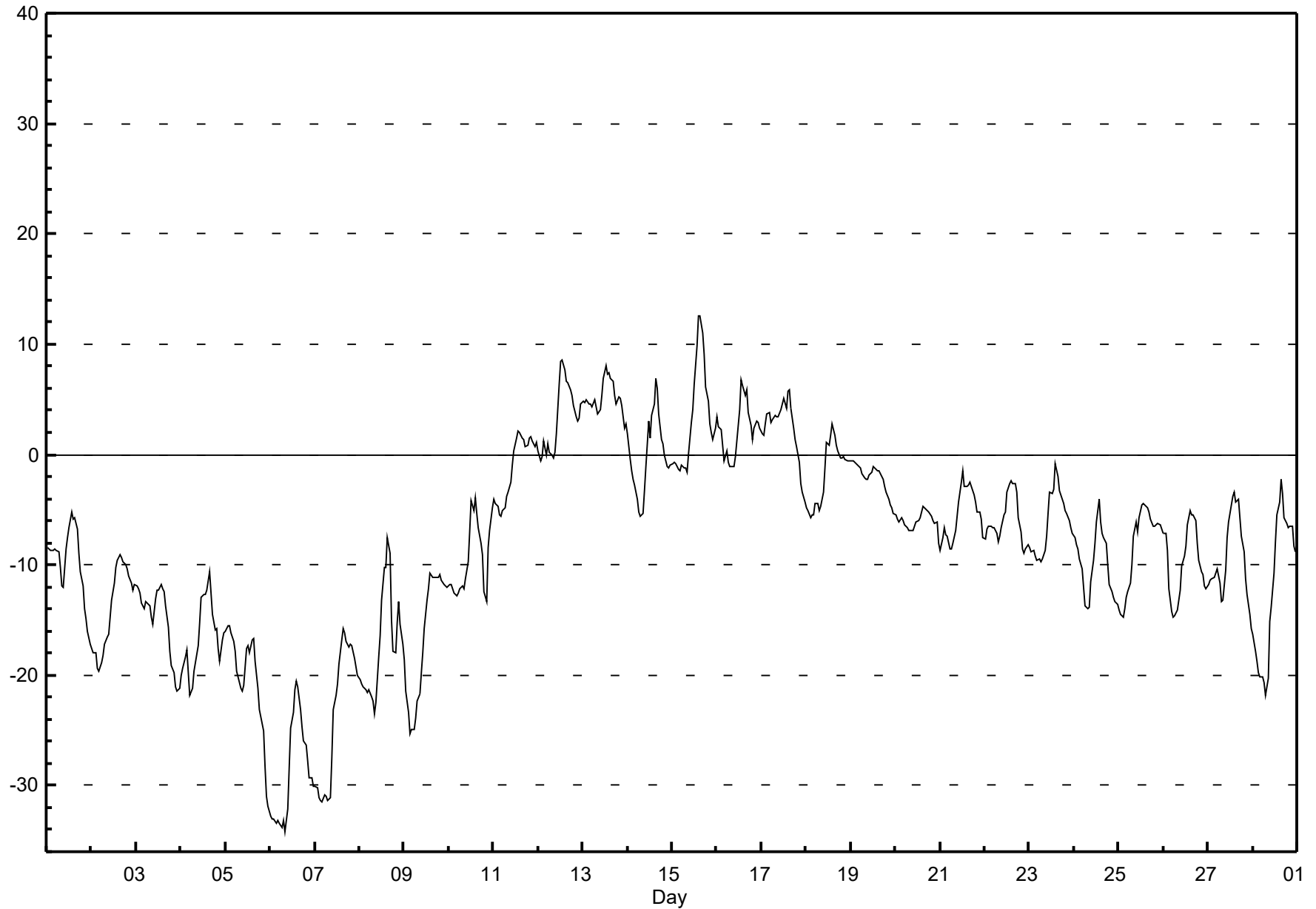
Henry Pirker - February 2017

Maximum Value: 12.6 °C on Feb 15 15:00																				Maximum Daily Average: 5.1 °C on Feb 13					Hours in Service: 672		
Minimum Value: -34 °C on Feb 6 09:00																				Minimum Daily Average: -28.7 °C on Feb 6					Hours of Data: 672		
Maximum Diurnal Average: -3.8 °C at hour 16																				Minimum Diurnal Average: -11.4 °C at hour 8					Hours of Missing Data: 0		
Monthly Average: -8.34 °C																				Percentiles: P ₁ = -33.3 P ₁₀ = -20.8 Q ₁ = -13.7 Median = -7.1 Q ₃ = -1.3 P ₉₀ = 3.2 P ₉₉ = 8.4					Hours of Calibration: 0		
																				Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Feb	-8	-9	-9	-9	-9	-9	-9	-10	-12	-12	-9	-7	-7	-5	-6	-6	-7	-9	-11	-12	-14	-15	-16	-17	-9.8	-5.2	
2-Feb	-18	-18	-18	-19	-20	-19	-18	-17	-17	-16	-15	-13	-12	-10	-10	-9	-9	-10	-10	-10	-11	-12	-12	-12	-13.9	-9.1	
3-Feb	-12	-12	-13	-13	-14	-13	-13	-14	-15	-15	-13	-12	-12	-12	-12	-12	-14	-16	-18	-19	-20	-21	-21	-21	-14.9	-11.8	
4-Feb	-20	-19	-18	-18	-20	-22	-21	-20	-19	-17	-15	-13	-13	-13	-12	-11	-13	-15	-16	-16	-18	-19	-17	-16	-16.6	-10.6	
5-Feb	-16	-15	-15	-16	-17	-18	-20	-21	-21	-21	-21	-18	-17	-18	-17	-17	-19	-21	-23	-24	-25	-28	-31	-32	-20.5	-15.5	
6-Feb	-33	-33	-33	-33	-33	-33	-34	-33	-34	-32	-28	-25	-23	-21	-21	-21	-23	-25	-26	-26	-28	-29	-29	-30	-28.7	-20.6	
7-Feb	-30	-30	-31	-31	-32	-31	-31	-31	-31	-28	-23	-22	-21	-19	-17	-16	-16	-17	-17	-17	-17	-18	-19	-20	-23.6	-15.8	
8-Feb	-20	-21	-21	-21	-22	-21	-22	-22	-23	-23	-18	-16	-13	-10	-10	-8	-9	-15	-18	-18	-15	-13	-15	-17	-17.2	-7.6	
9-Feb	-19	-21	-23	-25	-25	-25	-24	-22	-22	-20	-18	-16	-13	-12	-11	-11	-11	-11	-11	-11	-11	-12	-12	-12	-16.6	-10.8	
10-Feb	-12	-12	-12	-13	-13	-13	-12	-12	-12	-11	-10	-7	-4	-5	-4	-5	-7	-8	-9	-12	-13	-8	-7	-5	-9.4	-3.9	
11-Feb	-4	-4	-5	-5	-6	-5	-5	-4	-3	-3	-1	0	2	2	2	1	1	1	1	2	2	1	1	1	-1.2	2.1	
12-Feb	0	-1	0	1	0	1	0	0	0	0	2	6	8	9	8	7	6	6	5	4	3	3	3	5	3.2	8.6	
13-Feb	5	5	5	5	5	4	5	4	4	4	5	7	8	7	7	7	7	5	5	5	5	4	2	3	5.1	8.1	
14-Feb	2	0	-2	-2	-3	-4	-5	-6	-5	-3	-1	3	1	4	5	7	6	4	1	1	0	-1	-1	-1	-0.1	6.9	
15-Feb	-1	-1	-1	-1	-2	-1	-1	-1	-2	0	3	4	6	10	13	13	11	9	6	5	3	2	1	2	3.2	12.6	
16-Feb	3	2	2	1	-1	0	-1	-1	-1	-1	0	1	4	7	6	5	6	4	3	1	2	3	3	2	2.2	6.8	
17-Feb	2	2	3	4	4	3	3	4	3	3	4	5	5	4	6	6	4	2	1	1	-1	-3	-3	-4	2.4	5.9	
18-Feb	-5	-5	-6	-5	-5	-4	-4	-5	-5	-3	-1	1	1	2	3	2	1	0	0	0	0	0	-1	-1	-1.8	2.7	
19-Feb	-1	-1	-1	-1	-1	-1	-2	-2	-2	-2	-2	-2	-1	-1	-2	-1	-2	-2	-3	-3	-4	-5	-5	-5	-2.1	-0.5	
20-Feb	-5	-6	-6	-6	-6	-6	-7	-7	-7	-7	-6	-6	-6	-6	-5	-5	-5	-5	-5	-6	-6	-6	-6	-8	-6.0	-4.8	
21-Feb	-9	-8	-7	-7	-7	-9	-9	-8	-7	-6	-4	-3	-1	-3	-3	-3	-2	-3	-4	-4	-5	-5	-6	-8	-5.4	-1.5	
22-Feb	-8	-7	-7	-7	-7	-7	-7	-8	-7	-7	-5	-5	-3	-3	-2	-3	-3	-3	-6	-7	-9	-9	-9	-8	-6.0	-2.4	
23-Feb	-8	-9	-9	-9	-10	-10	-10	-9	-9	-7	-5	-3	-4	-3	-1	-2	-3	-4	-4	-5	-5	-6	-7	-7	-6.2	-0.9	
24-Feb	-8	-8	-9	-9	-10	-12	-14	-14	-14	-12	-10	-8	-6	-4	-6	-7	-8	-8	-10	-12	-12	-13	-13	-14	-10.0	-4.1	
25-Feb	-14	-15	-15	-14	-13	-12	-12	-10	-7	-6	-7	-6	-5	-4	-5	-5	-5	-6	-6	-7	-6	-6	-6	-7	-8.3	-4.4	
26-Feb	-7	-7	-9	-12	-14	-15	-15	-14	-13	-12	-10	-9	-8	-6	-5	-5	-5	-6	-8	-10	-11	-11	-12	-12	-9.9	-5.0	
27-Feb	-12	-11	-11	-11	-11	-10	-12	-13	-13	-11	-8	-6	-5	-4	-3	-4	-4	-6	-7	-9	-11	-13	-15	-16	-9.4	-3.5	
28-Feb	-16	-18	-19	-20	-20	-20	-21	-22	-20	-15	-14	-11	-8	-5	-4	-2	-3	-6	-6	-7	-6	-7	-8	-9	-12.0	-2.3	
		-9.7	-10.1	-10.3	-10.7	-11.1	-11.1	-11.4	-11.4	-11.3	-10.1	-8.3	-6.5	-5.2	-4.3	-3.8	-3.8	-4.5	-5.8	-7.0	-7.7	-8.4	-8.8	-9.3	-9.6	Diurnal Average	
		4.8	4.7	4.9	4.6	4.6	4.4	4.9	4.3	3.7	4.1	5.4	6.9	8.5	9.9	12.6	12.5	11.1	9.0	6.1	5.3	5.1	4.4	3.3	4.5	Diurnal Maximum	

Hourly Averages

External Temperature (ET) - °C

Henry Pirker - February 2017



Hourly Averages

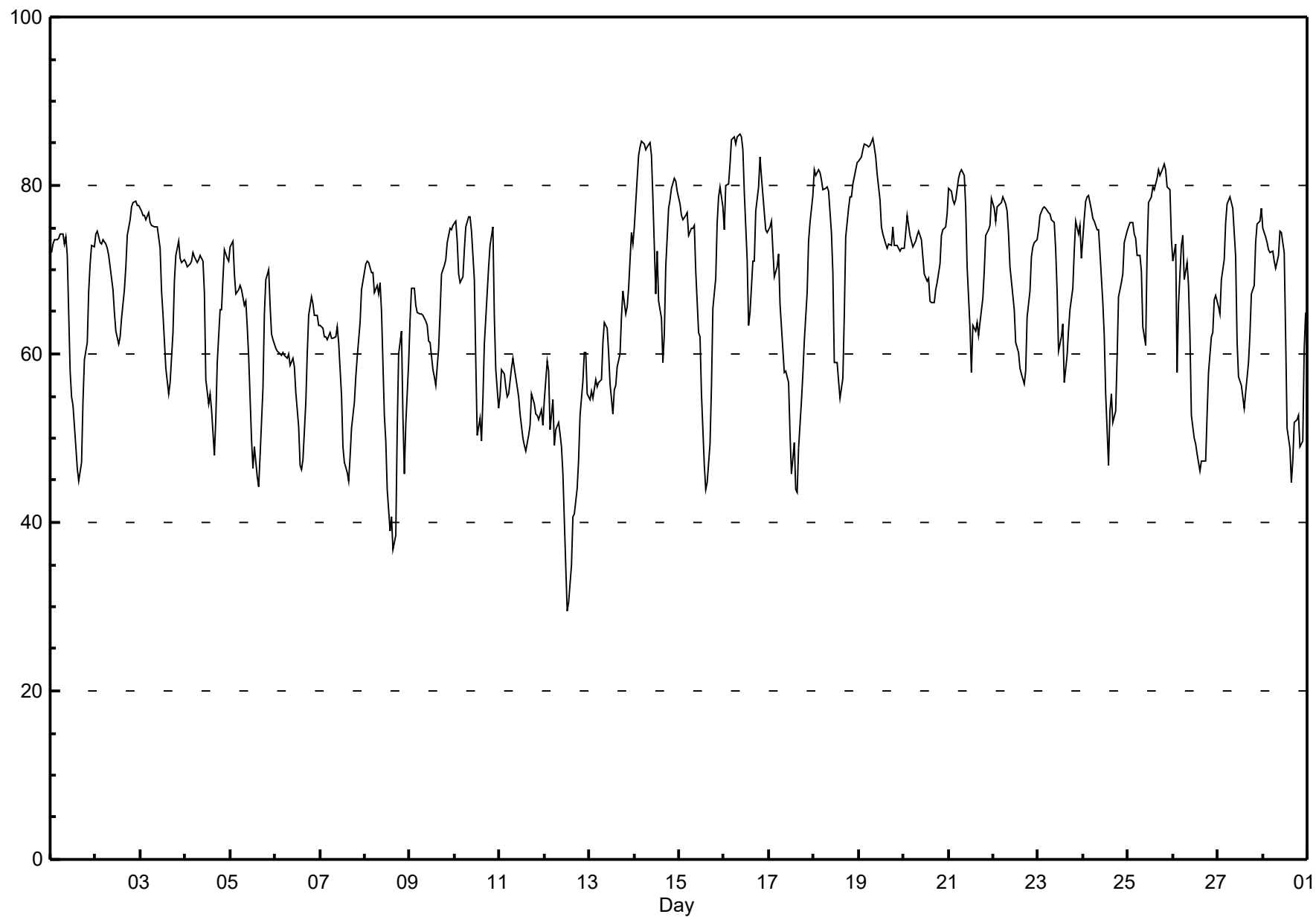
Relative Humidity (RH) - %

Henry Pirker - February 2017

Maximum Value: 86.1 % on Feb 16 09:00																					Maximum Daily Average: 78.5 % on Feb 16					Hours in Service: 672	
Minimum Value: 29 % on Feb 12 13:00																					Minimum Daily Average: 48.4 % on Feb 12					Hours of Data: 672	
Maximum Diurnal Average: 72.3 % at hour 2																					Minimum Diurnal Average: 54.1 % at hour 15					Hours of Missing Data: 0	
Monthly Average: 66.36 %																					Percentiles: P ₁ = 40.6 P ₁₀ = 51.0 Q ₁ = 58.2 Median = 68.2 Q ₃ = 74.8 P ₉₀ = 79.2 P ₉₉ = 85.2					Hours of Calibration: 0	
																										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Feb	72	73	73	74	74	74	74	73	74	72	58	55	54	49	46	45	47	54	59	61	68	71	73	73	64.4	74.2	
2-Feb	74	75	73	73	74	73	72	72	69	68	65	63	61	62	64	68	70	74	76	77	78	78	78	78	71.4	78.2	
3-Feb	77	76	76	76	77	76	75	75	75	75	73	67	65	58	57	55	57	62	69	72	73	71	71	71	70.0	76.9	
4-Feb	71	70	71	71	72	71	71	71	72	71	67	57	54	55	53	48	52	59	65	65	69	72	71	71	65.5	72.4	
5-Feb	73	73	70	67	68	68	68	66	66	63	60	50	46	49	45	44	48	56	65	69	70	66	62	62	61.4	73.3	
6-Feb	61	60	60	60	60	60	59	60	59	59	58	55	51	47	46	47	54	60	65	67	66	65	65	63	58.7	66.8	
7-Feb	63	63	62	62	62	62	62	62	62	63	61	55	49	47	46	45	48	51	54	57	60	64	68	69	58.2	68.7	
8-Feb	71	71	71	70	70	67	68	67	68	65	53	50	44	39	41	37	38	51	60	63	53	46	52	59	57.2	71.0	
9-Feb	64	68	68	66	65	65	65	65	64	63	62	61	58	57	56	61	65	69	70	71	73	75	75	75	65.9	75.2	
10-Feb	76	73	69	68	69	72	75	76	76	75	69	59	50	52	50	55	61	67	70	73	75	64	58	53	66.2	76.3	
11-Feb	55	58	58	56	55	55	58	59	58	56	55	53	50	49	49	50	51	55	54	53	53	52	53	52	54.1	59.5	
12-Feb	55	59	58	51	55	49	51	52	51	49	46	35	29	30	35	41	41	44	47	53	57	60	60	55	48.4	60.1	
13-Feb	55	56	55	57	56	57	57	61	64	63	60	56	53	56	56	59	60	64	68	65	66	68	74	73	60.7	74.4	
14-Feb	75	81	84	85	85	85	84	85	85	84	79	67	72	66	64	59	62	70	77	78	80	81	80	79	77.0	85.2	
15-Feb	78	76	76	76	77	74	75	75	75	70	63	62	55	47	44	45	49	56	65	69	76	79	80	77	67.5	79.9	
16-Feb	75	80	80	83	85	86	85	86	86	86	84	79	71	63	65	71	71	77	80	83	81	77	75	74	78.5	86.1	
17-Feb	75	76	72	69	70	72	66	61	58	58	57	51	46	49	44	44	49	54	58	61	67	73	76	79	61.8	78.9	
18-Feb	82	81	82	82	81	80	80	80	79	74	70	59	59	57	55	57	65	74	77	79	79	80	82	83	73.9	82.7	
19-Feb	83	83	84	85	85	85	85	86	85	83	81	78	75	74	73	73	73	73	75	73	73	73	72	73	78.4	85.5	
20-Feb	73	74	76	74	73	73	73	74	75	74	71	70	69	69	66	66	66	68	69	71	74	75	75	77	71.8	76.6	
21-Feb	80	79	78	78	78	81	82	82	81	77	70	63	58	63	63	64	62	64	67	70	74	75	75	78	72.6	81.8	
22-Feb	77	76	77	78	78	79	78	77	74	70	67	65	61	60	58	58	57	58	64	67	72	73	73	74	69.6	78.6	
23-Feb	75	76	77	77	77	77	77	76	76	72	67	60	62	64	57	60	63	65	68	72	76	74	75	71	70.6	77.4	
24-Feb	76	78	79	79	77	76	76	75	75	72	66	62	55	47	53	55	52	53	59	67	68	70	73	75	67.4	78.9	
25-Feb	75	76	76	74	74	72	72	70	63	61	72	78	79	80	79	81	82	81	82	83	82	80	79	74	75.9	82.5	
26-Feb	71	73	58	66	73	74	69	71	68	62	53	50	49	48	46	47	47	47	53	58	62	62	66	67	60.1	74.0	
27-Feb	66	65	69	71	76	78	79	78	77	72	62	57	56	55	54	55	59	62	67	68	73	76	76	77	67.8	78.6	
28-Feb	75	74	73	72	72	72	71	70	72	75	74	72	62	51	49	45	47	52	52	53	49	50	61	65	62.8	75.0	
71.4 72.3 71.6 71.4 72.0 71.9 71.6 71.5 71.0 69.0 65.1 60.4 57.0 55.2 54.1 54.7 57.1 61.6 65.6 67.8 69.4 69.6 70.7 70.6																										Diurnal Average	
82.9 83.4 84.2 84.8 85.4 85.7 84.9 85.7 86.1 85.8 84.2 79.2 78.7 79.8 79.5 80.9 81.8 81.1 82.0 83.4 81.9 80.9 81.8 82.7																										Diurnal Maximum	

Hourly Averages

Relative Humidity (RH) - %
Henry Pirker - February 2017



Hourly Averages

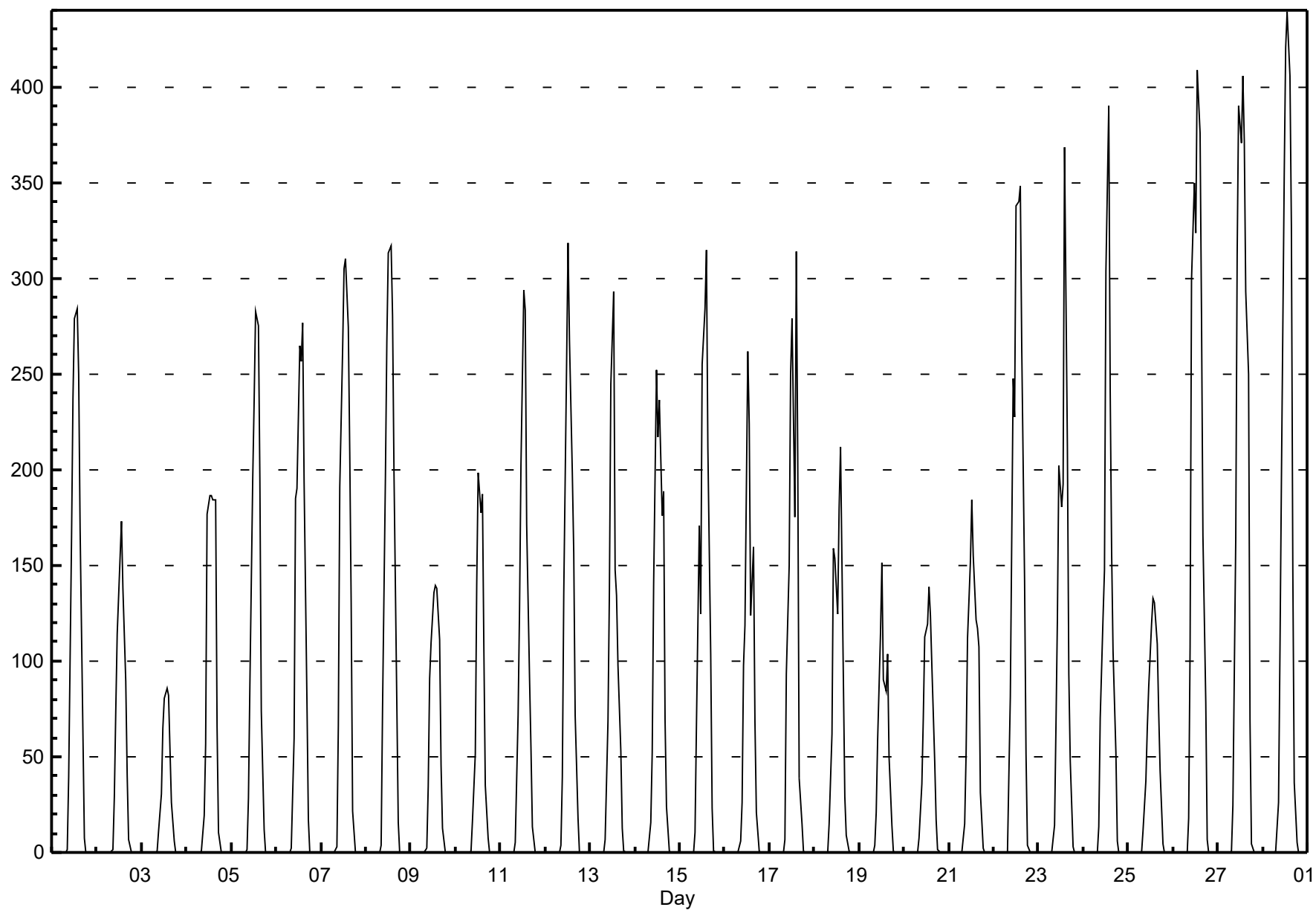
Solar Radiation (SR) - W/m²

Henry Pirker - February 2017

Maximum Value: 439.0 W/m ² on Feb 28 14:00																								Maximum Daily Average: 110.6 W/m ² on Feb 27										Hours in Service: 672	
Minimum Value: 0 W/m ² on Feb 1 01:00																								Minimum Daily Average: 18.4 W/m ² on Feb 3										Hours of Data: 672	
Maximum Diurnal Average: 239.5 W/m ² at hour 13																								Minimum Diurnal Average: 0.0 W/m ² at hour 1										Hours of Missing Data: 0	
Monthly Average: 57.49 W/m ²																								Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 85.6 P ₉₀ = 211.8 P ₉₉ = 389.6										Hours of Calibration: 0	
																								Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24											
1-Feb	0	0	0	0	0	0	0	0	1	39	164	237	279	284	250	169	61	8	0	0	0	0	0	0	62.2	284.0									
2-Feb	0	0	0	0	0	0	0	0	2	29	74	114	153	173	138	89	40	7	0	0	0	0	0	0	34.1	173.2									
3-Feb	0	0	0	0	0	0	0	0	0	11	30	65	81	86	82	54	26	6	0	0	0	0	0	0	18.4	85.9									
4-Feb	0	0	0	0	0	0	0	0	1	19	56	177	186	186	184	184	66	10	0	0	0	0	0	0	44.6	186.5									
5-Feb	0	0	0	0	0	0	0	0	1	29	87	196	237	282	275	196	74	12	0	0	0	0	0	0	57.8	282.4									
6-Feb	0	0	0	0	0	0	0	0	2	59	185	190	265	256	277	194	79	17	0	0	0	0	0	0	63.5	277.0									
7-Feb	0	0	0	0	0	0	0	0	3	67	191	262	305	310	275	209	130	21	0	0	0	0	0	0	73.9	310.1									
8-Feb	0	0	0	0	0	0	0	0	4	76	196	267	313	317	281	199	77	16	0	0	0	0	0	0	72.7	316.8									
9-Feb	0	0	0	0	0	0	0	0	2	34	91	110	136	140	138	111	46	13	0	0	0	0	0	0	34.2	139.7									
10-Feb	0	0	0	0	0	0	0	0	1	16	52	140	199	178	187	106	35	7	0	0	0	0	0	0	38.4	198.5									
11-Feb	0	0	0	0	0	0	0	0	5	71	127	202	294	284	171	92	55	13	0	0	0	0	0	0	54.8	293.5									
12-Feb	0	0	0	0	0	0	0	0	3	40	135	256	319	267	198	157	72	18	0	0	0	0	0	0	61.0	318.7									
13-Feb	0	0	0	0	0	0	0	0	7	69	137	245	293	147	134	98	53	13	1	0	0	0	0	0	49.9	292.8									
14-Feb	0	0	0	0	0	0	0	0	15	52	140	252	217	237	176	188	69	24	1	0	0	0	0	0	57.2	251.9									
15-Feb	0	0	0	0	0	0	0	0	10	66	171	124	255	284	315	212	104	23	1	0	0	0	0	0	65.2	315.0									
16-Feb	0	0	0	0	0	0	0	0	6	26	98	118	262	224	124	159	68	21	1	0	0	0	0	0	46.1	262.0									
17-Feb	0	0	0	0	0	0	0	0	7	93	150	250	279	175	314	207	39	15	1	0	0	0	0	0	63.7	313.9									
18-Feb	0	0	0	0	0	0	0	0	15	62	159	154	125	180	212	89	29	9	1	0	0	0	0	0	43.1	211.9									
19-Feb	0	0	0	0	0	0	0	0	4	21	59	114	152	90	85	104	50	14	0	0	0	0	0	0	28.9	151.6									
20-Feb	0	0	0	0	0	0	0	0	8	36	70	113	119	139	124	98	48	17	2	0	0	0	0	0	32.2	138.8									
21-Feb	0	0	0	0	0	0	0	0	15	51	112	151	184	155	122	117	108	31	2	0	0	0	0	0	43.7	183.9									
22-Feb	0	0	0	0	0	0	0	0	41	82	248	227	338	340	348	264	142	52	4	0	0	0	0	0	86.9	348.4									
23-Feb	0	0	0	0	0	0	0	0	14	66	122	202	181	192	369	212	93	48	3	0	0	0	0	0	62.6	368.6									
24-Feb	0	0	0	0	0	0	0	0	13	70	123	148	303	390	241	157	105	52	6	0	0	0	0	0	67.0	390.3									
25-Feb	0	0	0	0	0	0	0	0	11	38	65	86	119	132	131	109	73	43	4	0	0	0	0	0	33.8	132.4									
26-Feb	0	0	0	0	0	0	0	0	18	108	299	350	323	409	376	281	166	79	7	0	0	0	0	0	100.6	408.7									
27-Feb	0	0	0	0	0	0	0	1	24	163	313	390	371	406	372	293	250	68	5	0	0	0	0	0	110.6	405.6									
28-Feb	0	0	0	0	0	0	0	1	26	106	193	355	421	439	405	328	149	36	5	0	0	0	0	0	102.7	439.0									
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 9.3 57.2 137.3 196.2 239.5 239.4 225.1 167.0 82.4 24.8 1.5 0.0 0.0 0.0 0.0 0.0																								Diurnal Average											
0.0 0.0 0.1 0.0 0.0 0.0 0.1 1.1 40.8 163.3 312.5 389.7 420.9 439.0 405.3 327.6 249.5 78.6 6.7 0.0 0.0 0.0 0.0 0.0																								Diurnal Maximum											

Hourly Averages

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



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	5	6	4	3	3	4	5	6	6	4	5	7	8	6	12	11	8	4	4	4	5	3	5	5	5.1	11.9
Dir	269	274	241	216	226	208	247	232	216	210	209	244	251	222	262	258	255	246	243	263	285	293	281	268	248.7	262.1
2 Spd	N	5	5	N	N	5	3	6	9	9	9	11	9	8	9	7	8	7	5	6	6	4	2	5	5.3	10.9
Dir	N	263	279	N	N	265	252	216	209	209	204	206	207	201	203	209	212	214	237	252	274	299	293	56	223.5	206.3
3 Spd	4	6	3	4	4	4	5	5	5	5	6	9	7	6	5	5	4	3	6	N	N	N	N	N	3.8	9.0
Dir	61	52	12	351	359	8	357	304	290	283	321	347	339	358	22	6	11	299	264	N	N	N	N	N	344.0	347.1
4 Spd	N	5	5	2	3	8	2	3	4	3	9	10	12	12	11	8	8	4	3	4	5	4	5	6	5.4	11.8
Dir	N	273	256	231	191	279	286	279	258	228	250	245	235	226	211	204	245	237	196	244	290	249	264	281	243.6	234.8
5 Spd	6	5	6	6	5	7	6	6	5	8	6	2	6	3	5	5	4	N	2	3	2	N	N	N	3.3	7.6
Dir	294	301	10	10	9	4	25	360	357	326	317	299	252	250	265	248	241	N	340	26	23	N	N	N	328.3	326.0
6 Spd	N	2	7	2	0	4	2	5	1	5	5	3	17	5	2	6	3	N	N	N	N	N	2	3	1.6	16.5
Dir	N	11	144	190	319	350	152	294	226	263	282	235	150	253	242	264	297	N	N	N	N	N	274	320	237.0	149.9
7 Spd	N	N	N	2	2	2	N	1	2	8	8	9	8	9	10	10	11	8	6	7	7	3	4	5	5.7	10.5
Dir	N	N	N	332	230	239	N	309	241	217	222	205	195	207	207	207	198	197	209	227	216	202	195	209	210.0	198.1
8 Spd	4	4	4	5	5	6	3	2	3	5	6	5	6	4	6	5	5	4	2	2	7	9	3	3	3.4	9.2
Dir	235	217	197	197	212	194	229	181	133	122	180	169	188	162	148	162	231	294	282	227	213	239	292	121	198.4	239.4
9 Spd	3	2	2	N	3	3	4	N	N	N	4	6	2	5	4	6	4	3	2	5	4	3	4	3	1.3	5.8
Dir	114	110	311	N	275	231	270	N	N	N	278	284	248	158	189	216	298	281	0	60	94	185	267	289	250.9	284.4
10 Spd	3	7	7	6	6	5	5	4	3	4	2	4	4	5	3	3	2	3	4	5	3	11	9	13	1.2	12.9
Dir	11	52	58	67	61	60	45	0	324	259	245	251	209	252	254	271	305	333	288	275	264	209	235	214	268.2	214.5
11 Spd	21	21	20	16	15	15	18	22	20	18	26	26	27	23	24	28	26	16	13	16	15	15	11	11	18.9	27.7
Dir	213	214	205	199	192	190	202	209	202	207	217	222	218	230	224	219	219	211	194	200	200	200	192	172	209.1	219.2
12 Spd	10	9	7	6	4	7	5	8	2	2	3	3	12	19	18	22	32	31	28	23	16	16	16	19	12.4	31.8
Dir	158	162	176	180	216	194	203	214	197	186	126	142	208	214	223	229	228	230	225	218	211	203	206	215	212.5	228.5
13 Spd	15	13	16	11	7	7	16	10	8	14	18	17	16	14	6	10	3	0	2	5	4	6	5	6	9.2	17.6
Dir	224	215	221	235	230	211	208	205	226	211	210	214	216	232	230	239	248	286	248	265	293	235	191	213	221.7	210.5
14 Spd	1	1	1	2	2	4	4	3	3	1	1	1	6	3	2	1	2	2	1	1	2	2	1	1	1.3	5.8
Dir	211	319	11	72	276	289	271	290	233	23	131	242	291	275	169	173	265	301	339	86	287	304	258	265	279.0	291.4
15 Spd	3	3	4	1	3	4	4	3	3	1	5	4	5	7	13	10	5	5	4	2	2	2	3	3	3.1	13.0
Dir	280	294	305	286	283	304	287	310	277	265	257	262	228	261	233	237	255	249	230	237	124	308	90	32	259.5	232.6
16 Spd	1	4	2	1	4	3	3	1	1	2	2	3	2	2	1	3	3	4	1	4	7	8	8	8	1.7	8.3
Dir	322	304	336	127	300	325	292	223	280	276	268	250	274	107	211	297	130	277	115	156	183	203	193	200	228.2	193.4
17 Spd	8	3	8	12	13	7	15	18	19	16	16	21	21	19	17	13	8	5	6	7	5	4	1	0	10.4	21.1
Dir	249	235	223	229	232	253	229	223	218	217	214	215	218	217	222	239	237	246	259	266	300	275	179	81	228.2	218.0
18 Spd	3	1	2	2	2	2	1	3	3	3	3	4	7	6	7	8	8	10	8	8	8	7	6	6	3.8	9.9
Dir	124	299	325	287	240	309	274	284	280	271	332	41	53	31	18	9	13	32	26	23	16	14	17	15	12.2	31.6
19 Spd	6	6	5	5	5	4	6	7	8	8	8	11	12	12	14	12	11	11	12	11	11	8	7	6	7.3	13.6
Dir	18	19	17	8	1	329	291	279	276	277	269	267	264	261	266	267	272	269	284	293	295	293	293	285	286.2	266.2
20 Spd	5	4	5	6	6	8	8	8	8	8	7	8	9	9	6	6	4	5	2	3	4	3	2	3	4.8	9.1
Dir	285	289	269	289	293	288	275	273	280	281	279	276	278	290	278	275	300	313	350	39	56	49	120	310	288.2	277.6
21 Spd	3	2	0	3	4	3	3	3	2	3	3	2	2	6	5	7	5	2	2	4	2	4	6	6	2.9	6.8
Dir	357	85	157	291	275	273	306	323	299	318	286	248	258	296	299	275	273	286	210	243	236	268	293	283	283.9	274.6
22 Spd	4	5	6	7	8	6	6	8	9	11	13	14	11	13	15	15	12	11	8	6	3	3	1	3	8.2	15.3
Dir	293	263	255	265	269	250	245	243	250	260	265	265	255	248	247	251	264	263	256	277	299	248	202	265	258.2	250.9

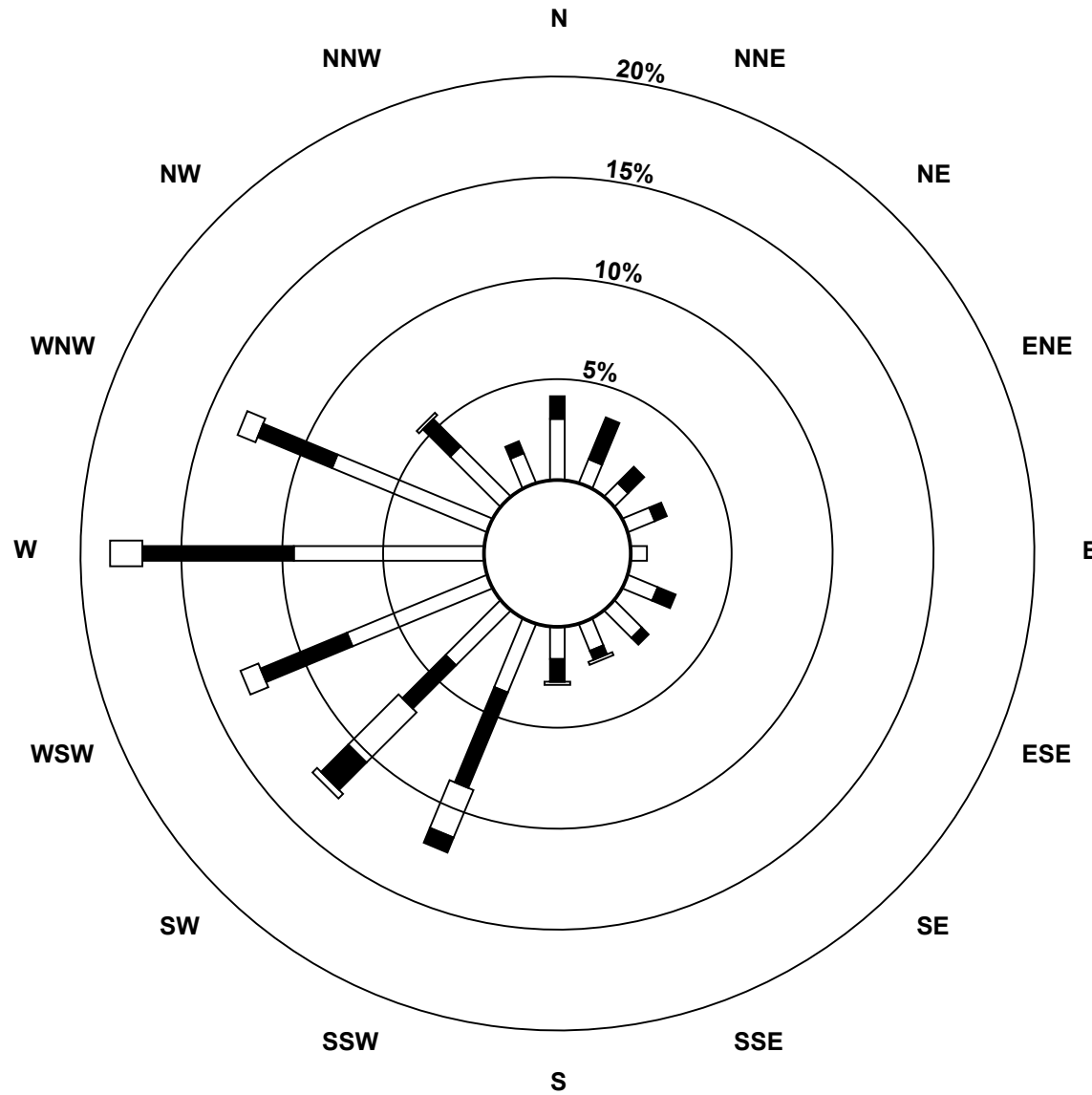
Hourly Averages

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

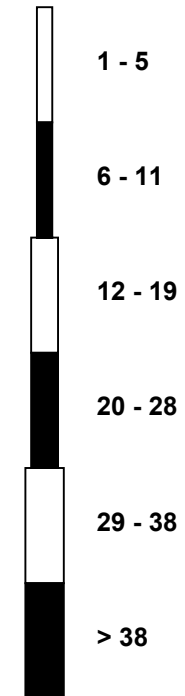
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24								
23 Spd	1	0	1	3	2	3	2	2	2	2	1	2	4	4	6	9	7	8	6	8	9	7	8	8	3.7	9.0						
Dir	251	22	337	281	253	281	290	259	275	252	229	226	200	199	270	281	293	316	306	312	328	314	300	291	289.7	281.1						
24 Spd	8	11	9	5	6	5	5	5	1	3	4	3	4	5	5	5	6	5	4	3	6	6	6	5	2.5	10.7						
Dir	277	278	306	347	334	294	288	280	220	270	257	210	185	223	241	251	251	232	232	142	132	117	111	150	255.1	277.8						
25 Spd	3	1	4	4	3	5	4	4	5	7	6	5	10	13	14	17	11	8	9	9	10	13	12	12	5.7	17.2						
Dir	167	284	126	126	129	129	121	176	211	254	262	266	265	241	241	268	296	309	288	269	275	283	282	288	262.0	267.6						
26 Spd	12	12	9	8	7	7	5	6	6	9	8	10	11	10	9	11	8	6	5	5	6	6	7	6	4.6	12.2						
Dir	282	307	318	271	275	279	273	270	286	273	251	257	252	246	232	220	208	181	153	124	112	112	122	114	250.4	282.2						
27 Spd	3	2	3	3	4	4	4	4	5	8	8	8	8	12	9	13	7	5	5	6	7	6	4	3	4.5	12.6						
Dir	109	111	97	168	197	204	263	277	281	262	281	265	268	259	283	286	326	334	284	269	281	305	264	270	274.1	286.1						
28 Spd	4	11	3	4	1	2	1	4	2	4	4	4	4	2	4	4	6	7	7	7	8	7	4	7	2.6	11.3						
Dir	274	140	251	333	311	4	251	258	74	76	77	61	83	22	352	43	36	38	33	43	50	60	311	8	38.4	140.3						
Spd	2.8	2.2	2.2	2.0	2.4	2.6	3.3	4.3	3.9	4.7	5.3	5.8	6.5	6.8	6.8	7.3	5.6	4.3	3.5	3.0	2.3	3.1	2.7	2.6	Diurnal Average							
Dir	246.8	250.2	249.1	249.1	254.4	259.6	247.8	247.2	240.8	242.9	242.3	239.8	229.7	236.4	238.4	245.8	250.5	256.6	250.8	251.0	256.8	243.8	242.3	246.2	Diurnal Maximum							
Spd	20.8	21.2	19.9	16.2	14.8	15.0	18.4	22.4	19.9	17.6	26.4	25.9	26.6	23.4	23.7	27.7	31.8	31.0	28.4	22.7	16.0	16.0	16.1	18.6	Diurnal Maximum							
Dir	212.8	213.7	205.5	199.0	192.1	189.9	201.7	208.6	202.3	206.8	216.9	221.5	217.7	229.5	223.8	219.2	228.5	230.3	224.7	218.0	211.2	202.9	206.0	214.9								
Maximum Speed Value: 32 km/h on Feb 12 17:00																				Minimum Speed Value: 0 km/h on Feb 6 05:00										Hours in Service:		672
Maximum Daily Speed Average: 18.9 km/h on Feb 11																				Minimum Daily Speed Average: 1.2 km/h on Feb 14										Hours of Data:		645
Maximum Diurnal Speed Average: 7.3 km/h at hour 16																				Minimum Diurnal Speed Average: 2.0 km/h at hour 4										Hours of Missing Data:		27
Monthly Average Velocity: 4.00 km/h 244.73 deg																				Speed Percentiles: P ₁ = 0.5 P ₁₀ = 2.0 Q ₁ = 3.2 Median = 5.2 Q ₃ = 8.0 P ₉₀ = 12.9 P ₉₉ = 26.2										Percent Operational Time:		96.0
All monthly, daily, and diurnal averages have been calculated using vector methods																																
N - Not Valid																																
Frequency Distribution																																
		Speed Range (km/h)																														
Direction		0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																								
North		25	20	0	0	0	0	45																								
NorthEast		13	19	0	0	0	0	32																								
East		15	3	0	0	0	0	18																								
SouthEast		22	9	2	0	0	0	33																								
South		26	18	10	1	0	0	55																								
SouthWest		49	58	35	17	3	0	162																								
West		97	97	24	0	0	0	218																								
NorthWest		53	28	1	0	0	0	82																								
Total		300	252	72	18	3	0	645																								

Wind Rose

Wind Speed (WS) (km/h)
Henry Pirker - February 2017



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Henry Pirker - February 2017

Maximum Speed: 32 km/h on Feb 12 17:00																			Maximum Daily Speed Average: 19.5 km/h on Feb 11							Hours in Service: 672	
Minimum Speed: 1 km/h on Feb 23 02:00																			Minimum Daily Speed Average: 3.0 km/h on Feb 14							Hours of Data: 645	
Maximum Diurnal Speed Average: 9.6 km/h at hour 16																			Minimum Diurnal Speed Average: 5.6 km/h at hour 5							Hours of Missing Data: 27	
Monthly Average Speed: 7.12 km/h																			Percentiles: P ₁ = 1.5 P ₁₀ = 2.9 Q ₁ = 4.0 Median = 5.8 Q ₃ = 8.5 P ₉₀ = 13.2 P ₉₉ = 26.3							Percent Operational Time: 96.0	
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-Feb	5	7	4	3	3	4	5	6	6	4	5	8	8	7	12	11	8	4	4	4	6	3	6	5	5.8	12.1	
2-Feb	N	5	5	N	N	5	3	6	9	10	10	11	9	8	9	7	8	7	5	6	6	4	2	5	6.7	11.0	
3-Feb	4	6	4	4	5	4	5	5	6	6	7	9	7	6	5	5	4	3	6	N	N	N	N	N	5.2	9.3	
4-Feb	N	9	5	3	6	9	8	3	5	4	10	10	12	12	11	8	8	4	4	5	5	8	5	7	7.0	12.0	
5-Feb	6	5	7	6	5	8	6	6	5	8	6	4	6	9	7	5	4	N	3	3	2	N	N	N	5.6	9.1	
6-Feb	N	10	15	9	7	9	7	8	11	7	7	3	22	6	9	7	10	N	N	N	N	N	6	6	8.8	22.4	
7-Feb	N	N	N	8	6	6	N	7	10	8	8	9	8	9	10	10	11	8	7	7	7	4	4	5	7.5	10.7	
8-Feb	4	4	5	5	5	8	4	3	3	5	6	5	6	5	7	6	6	5	3	3	7	9	4	3	5.0	9.4	
9-Feb	3	2	4	N	4	9	8	N	N	N	5	6	5	5	5	6	4	4	4	5	5	3	5	3	4.8	8.5	
10-Feb	3	7	7	6	6	5	5	4	3	4	3	4	4	6	4	4	2	3	4	6	4	11	10	13	5.4	13.1	
11-Feb	21	21	20	16	15	15	18	23	20	18	27	26	27	24	24	28	26	16	14	16	15	15	12	11	19.5	27.9	
12-Feb	10	9	7	6	5	7	5	8	3	4	3	4	12	19	18	23	32	31	29	23	16	16	16	19	13.6	32.1	
13-Feb	15	14	17	11	8	8	16	10	8	14	18	17	16	14	7	10	4	2	3	6	5	6	5	7	10.0	17.8	
14-Feb	2	2	2	2	2	5	4	3	4	3	3	4	6	3	3	2	3	3	2	3	3	3	2	3	3.0	6.0	
15-Feb	3	4	5	2	3	4	4	4	4	2	6	4	6	8	13	10	6	5	5	4	2	4	4	4	4.8	13.4	
16-Feb	4	5	4	3	4	3	3	2	3	4	2	3	2	3	3	5	5	6	2	4	7	8	8	8	4.3	8.3	
17-Feb	8	4	8	12	13	8	15	18	19	16	16	21	21	19	18	13	8	5	6	7	5	4	2	1	11.1	21.2	
18-Feb	3	2	2	3	2	2	2	3	3	3	3	4	7	6	7	8	8	10	8	8	8	7	7	7	5.2	10.1	
19-Feb	6	6	5	5	5	5	6	7	8	9	8	11	12	12	14	12	11	11	12	11	11	8	7	6	8.7	13.7	
20-Feb	5	4	5	6	6	8	8	8	8	8	7	8	9	9	6	6	5	5	3	3	4	3	3	3	6.0	9.2	
21-Feb	3	2	2	3	4	3	3	4	2	4	4	2	3	6	6	7	5	2	2	4	3	4	6	6	3.7	6.9	
22-Feb	5	5	6	7	8	6	6	8	9	11	13	14	11	14	15	15	12	11	8	7	3	3	2	3	8.5	15.4	
23-Feb	1	1	1	4	3	3	3	3	3	2	2	3	4	5	6	9	7	8	6	8	9	7	8	8	4.7	9.3	
24-Feb	8	11	10	6	6	5	5	5	2	3	4	3	4	5	5	5	7	6	4	4	6	6	6	5	5.4	10.7	
25-Feb	3	2	4	4	3	5	4	5	6	8	6	5	11	13	14	17	11	8	9	9	10	13	12	13	8.3	17.3	
26-Feb	12	12	10	8	7	7	6	6	6	9	8	11	11	11	10	12	9	7	5	5	6	6	7	6	8.1	12.2	
27-Feb	3	2	3	3	4	4	4	5	5	8	9	8	9	12	10	13	8	5	5	6	7	6	5	5	6.3	12.9	
28-Feb	6	14	5	7	3	3	2	7	3	4	5	5	4	4	5	5	6	7	7	8	8	7	5	7	5.7	14.1	
6.1 6.4 6.4 5.9 5.6 6.0 6.2 6.7 6.4 6.8 7.4 8.0 9.4 9.2 9.4 9.6 8.5 7.3 6.3 6.7 6.6 6.8 6.1 6.4																								Diurnal Average			
21.0 21.3 20.0 16.3 14.9 15.1 18.5 22.5 20.0 17.7 26.5 26.0 26.8 23.6 23.9 27.9 32.1 31.3 28.7 23.0 16.2 16.1 16.2 18.7																								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 - February 2017

Maximum Value: 92.5 deg on Feb 15 04:00																								Hours in Service: 672	
Minimum Value: 4.8 deg on Feb 26 23:00																								Hours of Data: 645	
Percentiles: P ₁ = 5.3 P ₁₀ = 7.3 Q ₁ = 10.4 Median = 17.4 Q ₃ = 33.6 P ₉₀ = 60.7 P ₉₉ = 88.8																								Hours of Missing Data: 27	
																								Hours of Calibration: 0	
																								Percent Operational Time: 96.0	
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-Feb	14	16	29	23	21	11	11	23	10	12	14	14	17	31	14	8	8	15	20	29	12	43	33	34	43.3
2-Feb	N	25	18	N	N	21	35	14	9	8	9	9	10	9	9	13	11	8	12	6	12	8	19	18	35.2
3-Feb	15	11	27	15	18	19	17	24	7	9	22	14	15	18	15	20	21	28	17	N	N	N	N	N	28.2
4-Feb	N	39	19	31	45	17	50	35	19	36	13	9	12	12	11	11	9	11	12	32	20	39	24	23	50.3
5-Feb	9	9	22	14	21	16	15	20	21	8	17	63	16	44	29	16	12	N	38	22	26	N	N	N	63.5
6-Feb	N	58	82	77	70	61	67	42	85	50	47	23	61	22	53	22	50	N	N	N	N	N	73	44	84.5
7-Feb	N	N	N	71	60	56	N	75	69	11	13	12	10	13	10	9	9	7	16	11	17	45	25	13	75.3
8-Feb	25	14	19	15	18	29	26	63	12	10	15	14	22	35	16	21	19	23	48	62	29	12	65	21	65.0
9-Feb	24	41	40	N	49	47	46	N	N	N	27	13	64	26	39	22	30	55	66	14	39	26	26	34	65.9
10-Feb	32	8	11	15	17	15	20	30	26	26	39	15	26	34	19	18	73	68	34	36	54	16	24	9	73.1
11-Feb	7	6	8	7	6	7	6	7	5	7	6	6	6	8	8	7	7	7	15	7	6	10	13	7	14.7
12-Feb	8	11	23	36	33	16	24	12	67	89	29	41	13	7	10	10	8	7	8	9	8	6	7	7	89.3
13-Feb	8	8	10	15	31	37	22	9	11	10	7	8	7	9	42	10	52	78	45	34	28	24	28	23	78.5
14-Feb	71	39	49	33	57	27	16	45	72	87	88	70	16	44	48	66	68	68	89	91	69	48	87	79	90.5
15-Feb	53	51	28	93	59	44	19	59	51	84	25	38	30	19	16	13	42	20	26	91	46	90	55	39	92.5
16-Feb	87	44	63	87	34	35	45	66	86	72	36	36	58	67	81	71	68	77	70	32	12	6	7	9	87.1
17-Feb	15	21	12	7	12	18	10	7	7	6	7	6	7	5	8	9	9	10	18	18	11	18	53	72	71.8
18-Feb	24	75	19	42	52	48	70	32	42	27	33	28	12	15	14	13	16	12	12	12	13	13	14	12	75.0
19-Feb	14	13	15	17	16	21	13	7	6	6	7	7	8	9	8	8	8	7	9	7	7	9	12	10	21.5
20-Feb	11	27	9	10	10	10	17	9	10	10	15	14	10	12	20	20	21	17	46	15	14	33	60	18	59.8
21-Feb	31	50	81	15	17	27	14	25	25	16	29	30	38	15	27	12	18	57	38	12	26	15	15	10	80.8
22-Feb	16	16	8	8	7	8	7	6	5	9	11	9	10	9	9	9	11	7	11	17	21	30	59	24	59.5
23-Feb	78	76	30	18	37	26	40	39	33	21	46	23	26	24	28	15	14	9	9	11	10	11	7	9	77.6
24-Feb	7	6	34	13	15	14	8	13	61	28	19	36	21	25	25	13	17	24	23	23	6	6	6	17	60.7
25-Feb	22	70	29	6	12	8	16	39	31	17	11	17	11	11	8	8	20	11	8	6	6	7	5	6	69.5
26-Feb	6	9	22	11	14	10	37	13	18	8	9	11	9	12	16	14	17	12	14	10	5	5	5	5	36.7
27-Feb	12	44	29	20	11	21	19	39	18	6	17	13	14	9	20	13	36	22	18	15	20	6	36	47	47.3
28-Feb	33	64	62	30	72	65	84	43	55	17	44	54	30	64	24	33	13	9	9	7	5	15	50	13	84.1
	87.1	75.8	82.1	92.5	71.6	65.1	84.1	75.3	85.8	89.3	87.7	70.5	63.9	66.6	81.1	71.1	73.1	78.5	89.0	91.3	68.7	90.4	86.8	78.8	
N - Not Valid																									

PAZA
Evergreen Park Station
Monthly Summary Tables, Graphs and
Roses

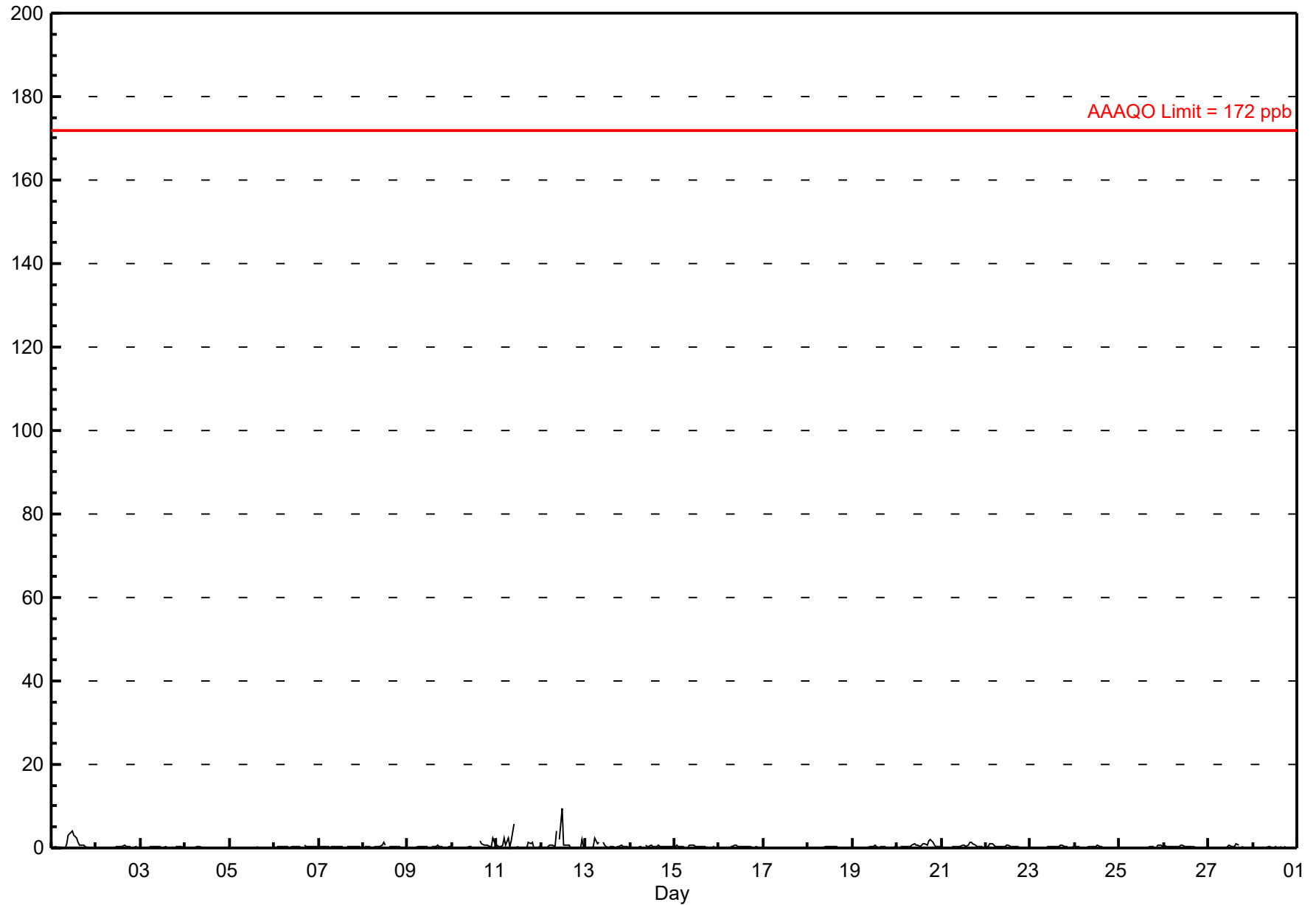
Hourly Averages

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 9.4 ppb on Feb 12 12:00 Maximum Daily Average: 1.0 ppb on Feb 12																								Hours in Service: 672 Hours of Data: 640 Hours of Missing Data: 32 Hours of Calibration: 32 Percent Operational Time: 100.0		
Minimum Value: 0 ppb on Feb 4 16:00 Maximum Diurnal Average: 0.8 ppb at hour 12 Monthly Average: 0.33 ppb												Minimum Daily Average: 0.0 ppb on Feb 5 Minimum Diurnal Average: 0.2 ppb at hour 24 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.4 P ₉₀ = 0.6 P ₉₉ = 2.2														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	0	0	0	0	0	0	0	0	1	3	4	4	3	2	2	1	1	1	0	0	A	0	0	0	1.0	4.0
2-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	A	0	0	0	0	0.2	0.8
3-Feb	0	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
4-Feb	0	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
5-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.4
6-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0.3	0.5
7-Feb	0	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
8-Feb	0	0	0	0	0	0	0	0	0	0	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0.3	1.4
9-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0.2	0.5
10-Feb	0	0	0	0	0	0	0	0	0	0	0	A	C	C	C	2	1	1	1	1	0	0	2	1	0.5	2.3
11-Feb	1	0	0	1	3	1	2	0	2	6	A	0	0	0	0	0	0	1	1	1	0	0	0	0	0.9	5.8
12-Feb	0	0	0	0	1	1	1	0	4	A	2	9	1	1	1	1	0	0	0	0	0	0	2	0	1.0	9.4
13-Feb	0	0	0	0	0	2	1	1	A	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.5	2.4
14-Feb	0	0	0	0	0	0	0	A	1	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0.3	0.6
15-Feb	0	1	1	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
16-Feb	0	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
17-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
18-Feb	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
19-Feb	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
20-Feb	0	A	0	0	0	0	0	0	1	1	1	1	0	1	1	1	1	2	2	1	1	0	0	0	0.7	2.0
21-Feb	A	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	1	0	0	0	0	A	0.5	1.2
22-Feb	0	0	1	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	A	0	0.4	1.0
23-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	A	0	0	0.2	0.7
24-Feb	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0	0.2	0.7
25-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	0	0.2	0.6
26-Feb	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	0.6
27-Feb	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	A	0	0	0	0	0	0	0.2	0.9
28-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.3
0.2 0.2 0.2 0.2 0.2 0.3 0.3 0.3 0.5 0.6 0.5 0.8 0.4 0.4 0.4 0.5 0.4 0.4 0.3 0.3 0.2 0.2 0.3 0.2																								Diurnal Average		
0.8 0.5 1.0 1.0 2.5 2.4 2.3 1.4 4.1 5.8 3.8 9.4 3.0 2.3 1.5 1.6 1.2 1.5 2.0 1.3 0.6 0.5 2.3 0.5																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

Hourly Averages

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



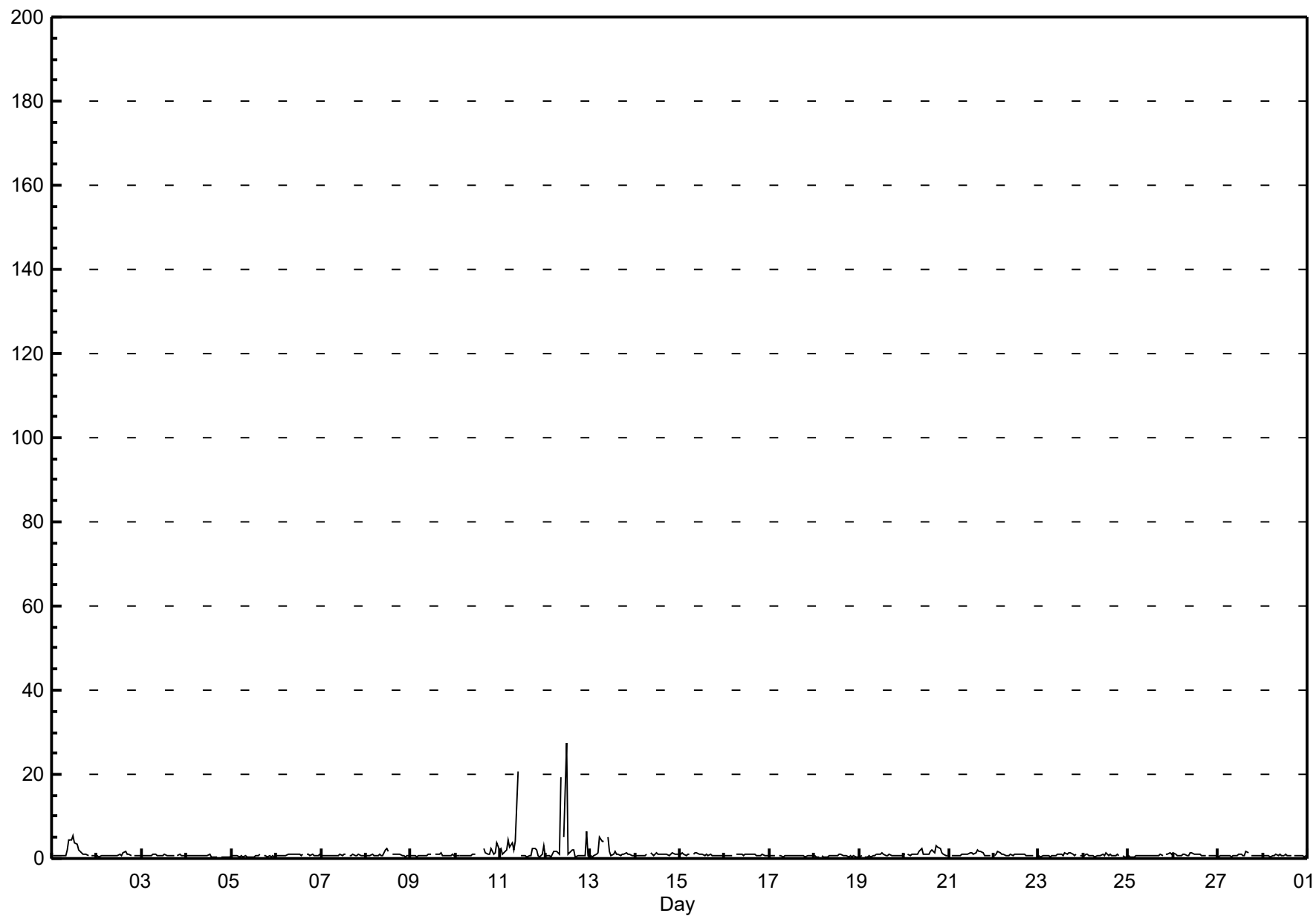
Hourly Maximums

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

Maximum Value: 27.5 ppb on Feb 12 12:00																				Maximum Daily Average: 3.4 ppb on Feb 12					Hours in Service: 672	
Minimum Value: 0 ppb on Feb 6 00:00																				Minimum Daily Average: 0.6 ppb on Feb 5					Hours of Data: 640	
Maximum Diurnal Average: 2.1 ppb at hour 12																				Minimum Diurnal Average: 0.7 ppb at hour 22					Hours of Missing Data: 32	
Monthly Average: 1.03 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.8 Q ₃ = 0.9 P ₉₀ = 1.4 P ₉₉ = 5.1					Hours of Calibration: 32	
																				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-Feb	1	1	1	1	1	1	1	1	2	4	4	5	4	3	2	2	1	1	1	1	A	1	1	1	1.7	5.3
2-Feb	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	A	1	1	1	1	0.8	1.8
3-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.7	0.9
4-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	A	0	0	0	0	0	1	0.6	1.0
5-Feb	1	1	1	1	0	1	0	1	0	0	0	0	0	1	1	1	A	1	1	0	1	0	1	0	0.6	1.0
6-Feb	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	1.0
7-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.8	1.1
8-Feb	1	1	1	1	1	1	1	1	1	1	2	2	2	A	1	1	1	1	1	1	1	0	1	1	0.9	2.5
9-Feb	1	1	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.8	1.4
10-Feb	1	1	1	1	1	1	1	1	1	1	1	A	C	C	C	2	1	1	1	2	1	1	4	2	1.2	3.9
11-Feb	3	1	2	2	4	3	4	2	4	21	A	1	1	1	0	1	1	3	2	2	1	1	1	3	2.6	20.7
12-Feb	1	1	1	1	2	2	2	1	19	A	5	27	1	1	2	2	0	1	1	1	1	1	6	1	3.4	27.5
13-Feb	1	0	1	1	1	5	4	4	A	5	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1.6	5.1
14-Feb	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.4
15-Feb	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
16-Feb	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
17-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0.6	0.8
18-Feb	1	0	0	A	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0.6	1.2
19-Feb	0	1	A	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.3
20-Feb	1	A	1	1	1	1	1	1	2	2	1	1	1	1	2	2	1	3	3	2	1	1	1	1	1.4	2.9
21-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1	1	1	A	1	1.0	1.9
22-Feb	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.9	1.8
23-Feb	1	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.8	1.3
24-Feb	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	0	0.7	1.5
25-Feb	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.7	1.2
26-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.9	1.5
27-Feb	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	A	1	1	1	1	1	1	0.8	1.7
28-Feb	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0	1	0.7	1.0
0.7 0.7 0.8 0.7 0.9 0.9 1.0 1.0 1.7 1.9 1.2 2.1 1.1 1.0 1.0 1.1 0.9 1.0 0.9 0.9 0.8 0.7 1.0 0.8																								Diurnal Average		
2.5 1.2 1.8 2.0 4.4 5.0 4.2 4.2 19.4 20.7 5.2 27.5 3.7 3.3 2.2 2.4 1.7 2.9 2.8 2.3 1.3 1.2 6.5 2.9																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

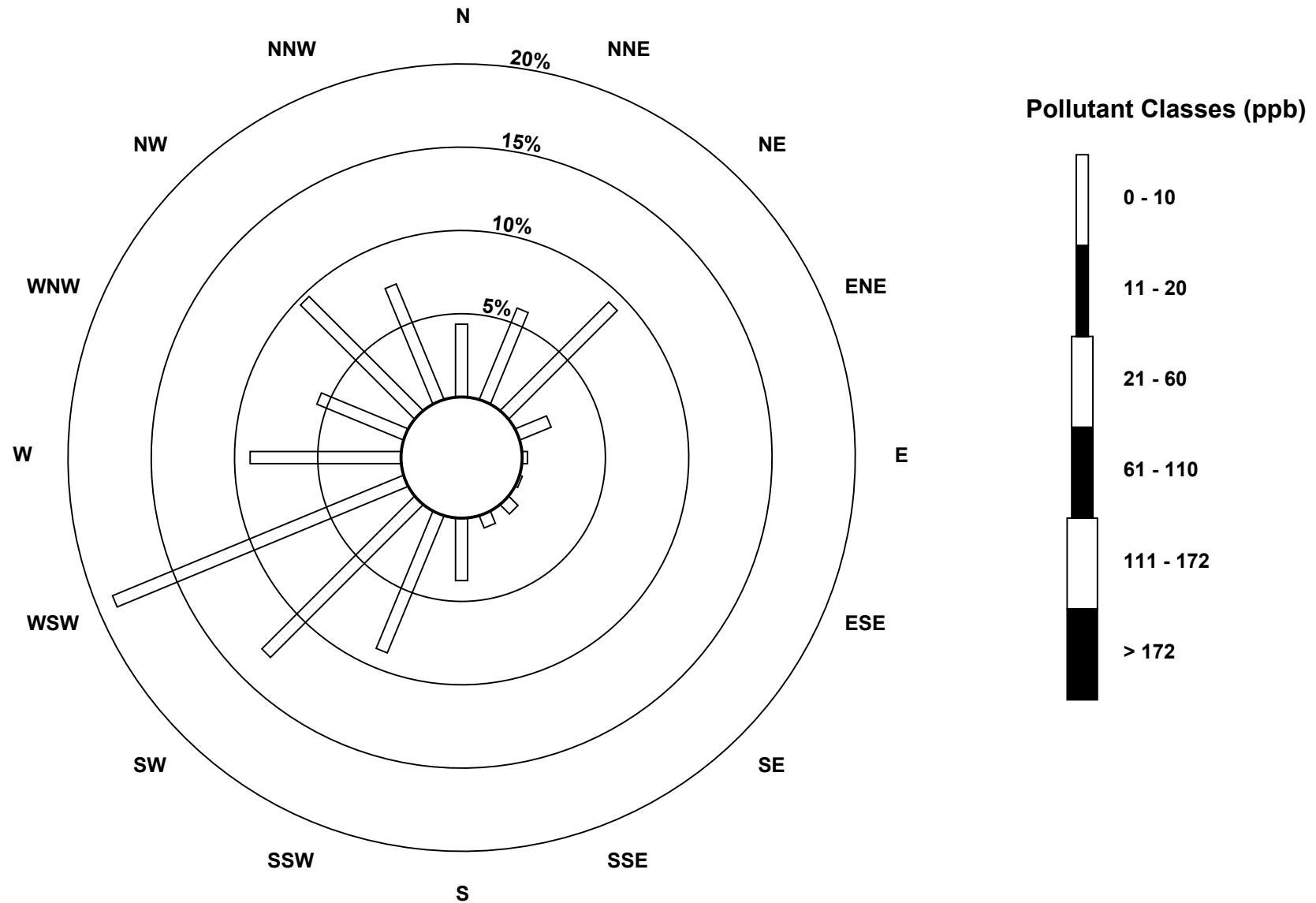
Hourly Maximums

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



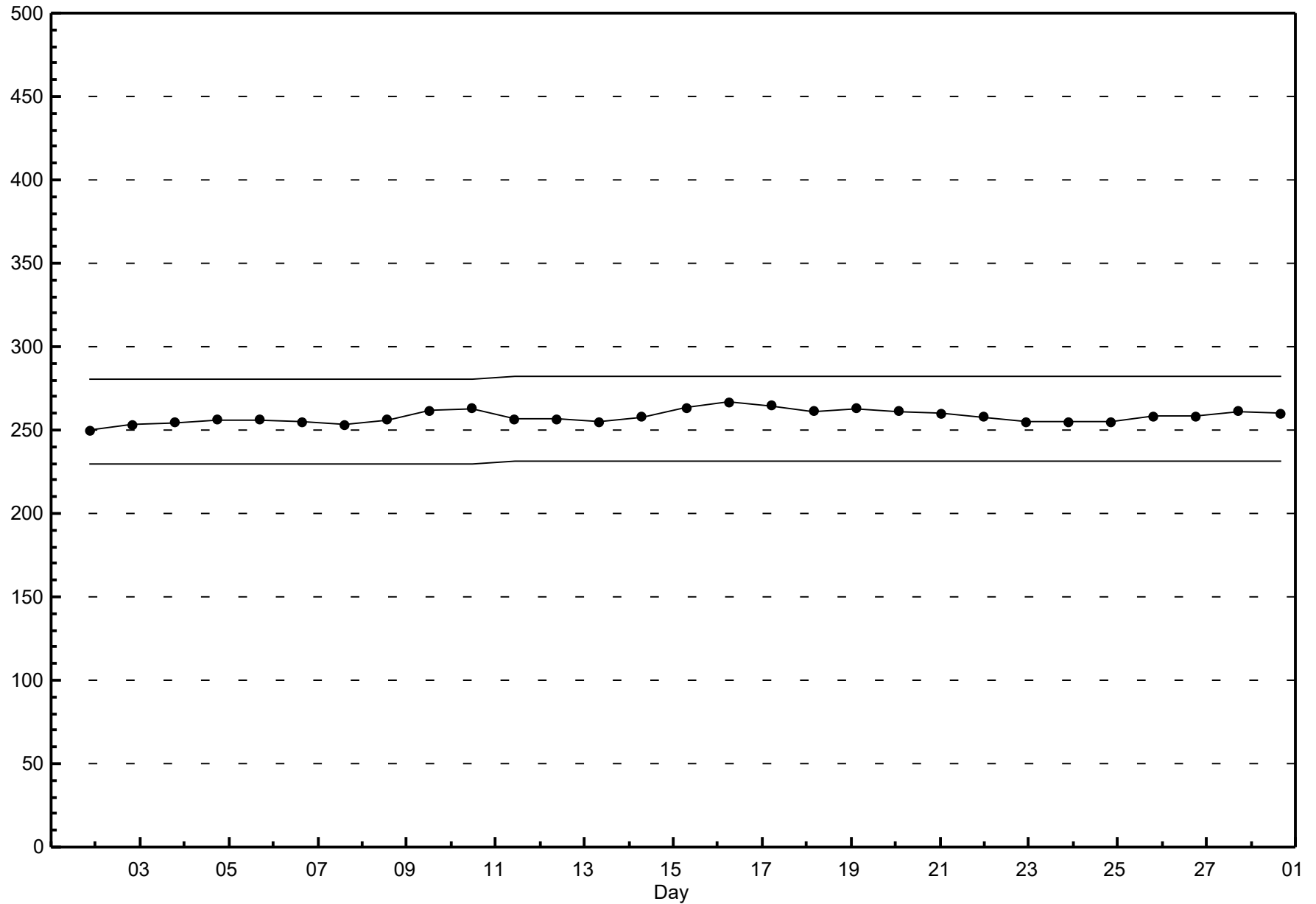
Pollutant Rose

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



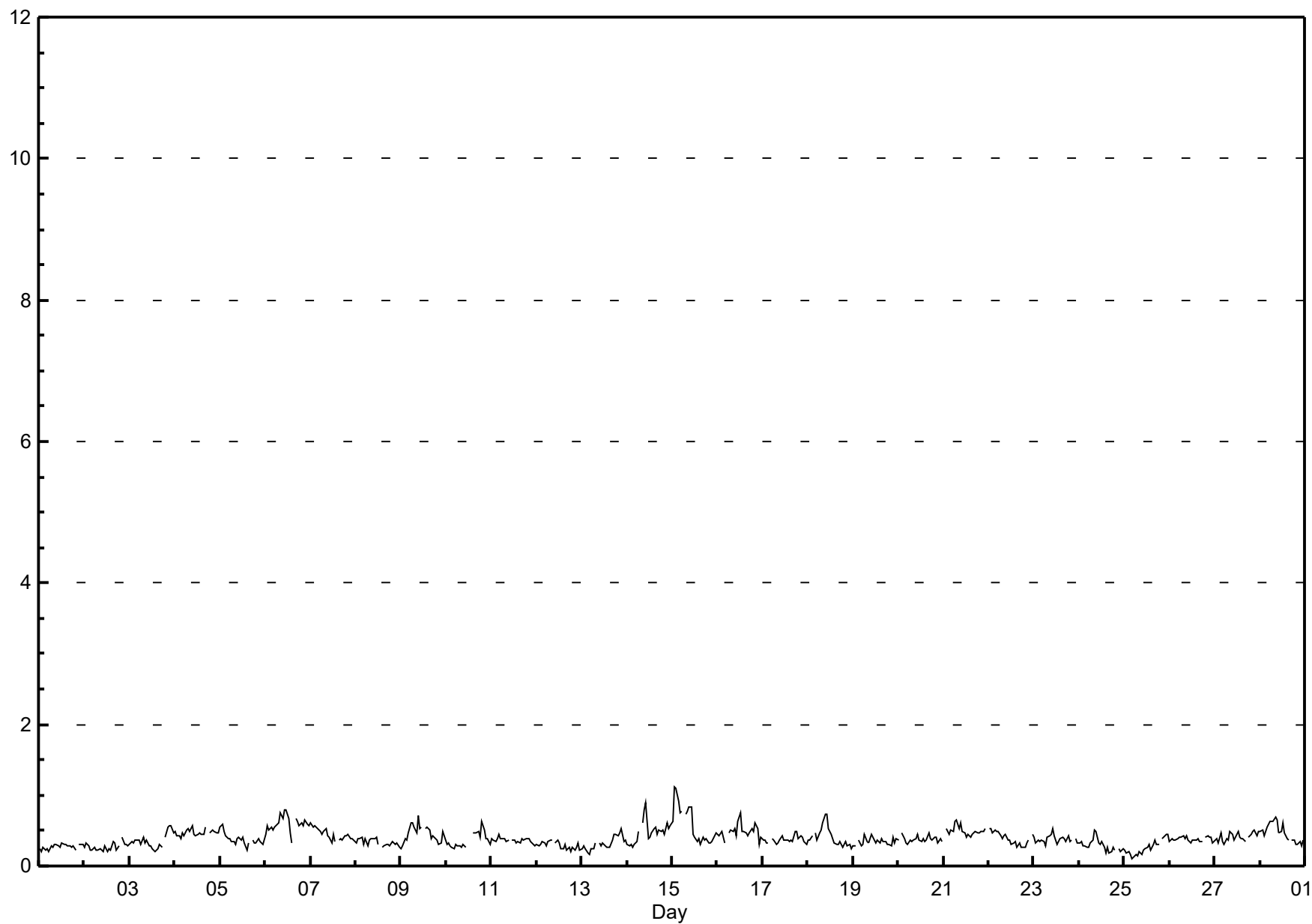
Span Responses

Sulphur Dioxide (SO₂)
Evergreen Park - February 2017



Hourly Averages

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



Hourly Maximums

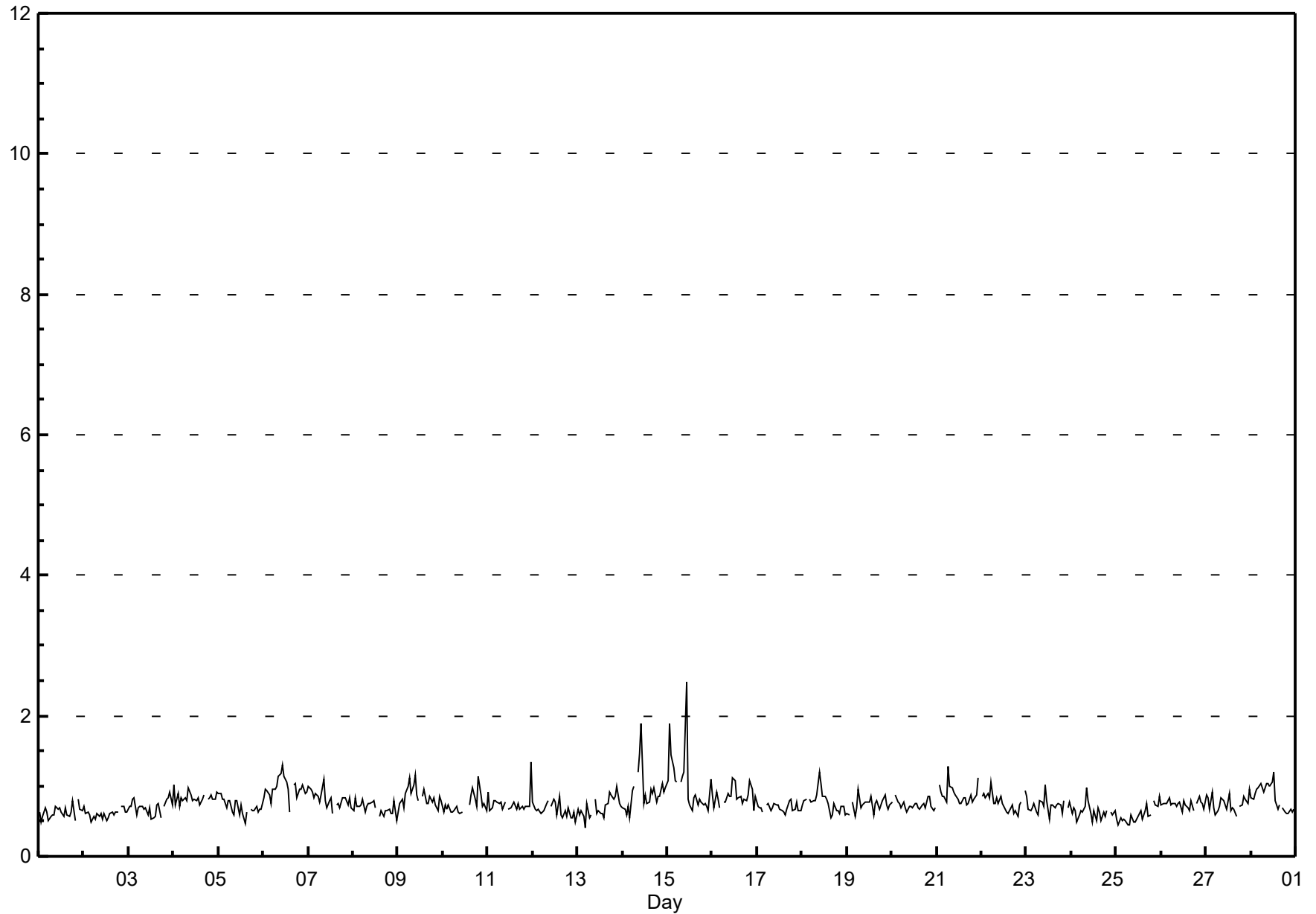
Total Reduced Sulphur (TRS) - ppb

Evergreen Park - February 2017

Maximum Value: 2.5 ppb on Feb 15 11:00																			Maximum Daily Average: 1.0 ppb on Feb 15						Hours in Service: 672		
Minimum Value: 0 ppb on Feb 13 05:00																			Minimum Daily Average: 0.6 ppb on Feb 25						Hours of Data: 641		
Maximum Diurnal Average: 0.9 ppb at hour 11																			Minimum Diurnal Average: 0.7 ppb at hour 15						Hours of Missing Data: 31		
Monthly Average: 0.76 ppb																			Percentiles: P ₁ = 0.5 P ₁₀ = 0.6 Q ₁ = 0.7 Median = 0.7 Q ₃ = 0.8 P ₉₀ = 1.0 P ₉₉ = 1.2						Hours of Calibration: 31		
																									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-Feb	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.6	0.8	
2-Feb	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.6	0.7	
3-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.7	0.9	
4-Feb	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	1.0	
5-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	1	1	1	1	1	1	1	0.7	0.9	
6-Feb	1	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	1.3	
7-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.8	1.1	
8-Feb	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	
9-Feb	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2	
10-Feb	1	1	1	1	1	1	1	1	1	1	1	C	C	C	1	1	1	1	1	1	1	1	1	1	0.7	1.1	
11-Feb	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	1.3	
12-Feb	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	0.7	0.9		
13-Feb	1	1	1	1	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0	
14-Feb	1	1	1	1	1	1	1	A	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.9	
15-Feb	1	2	1	1	1	1	A	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.5	
16-Feb	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.1	
17-Feb	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	0.8	
18-Feb	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2	
19-Feb	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	1.0	
20-Feb	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9	
21-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.9	1.3	
22-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.8	1.1	
23-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.7	1.0	
24-Feb	1	1	1	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	A	1	1	0.6	1.0	
25-Feb	1	0	1	1	1	1	0	0	1	0	0	1	1	1	1	1	1	1	1	A	1	1	1	1	0.6	0.8	
26-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.7	0.9	
27-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.7	1.0	
28-Feb	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	
0.8		0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.9	0.9	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.7	0.8	Diurnal Average		
1.1		1.9	1.4	1.3	1.1	1.1	1.3	1.1	1.2	1.5	2.5	1.1	1.2	1.0	1.0	1.0	1.0	1.0	0.9	1.1	1.1	1.0	1.1	Diurnal Maximum			
C - Calibration		A - Automated Daily Zero Span																									

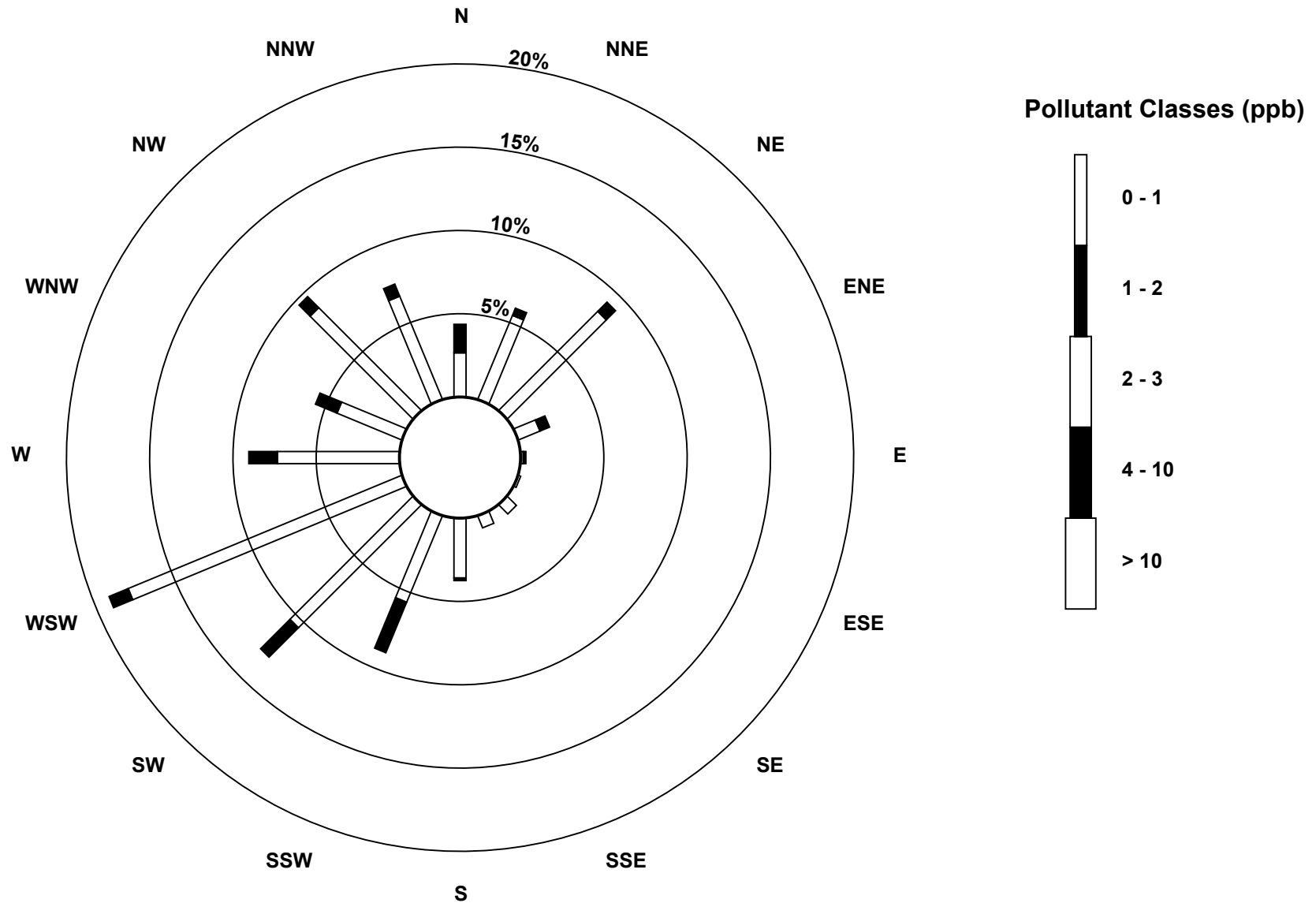
Hourly Maximums

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



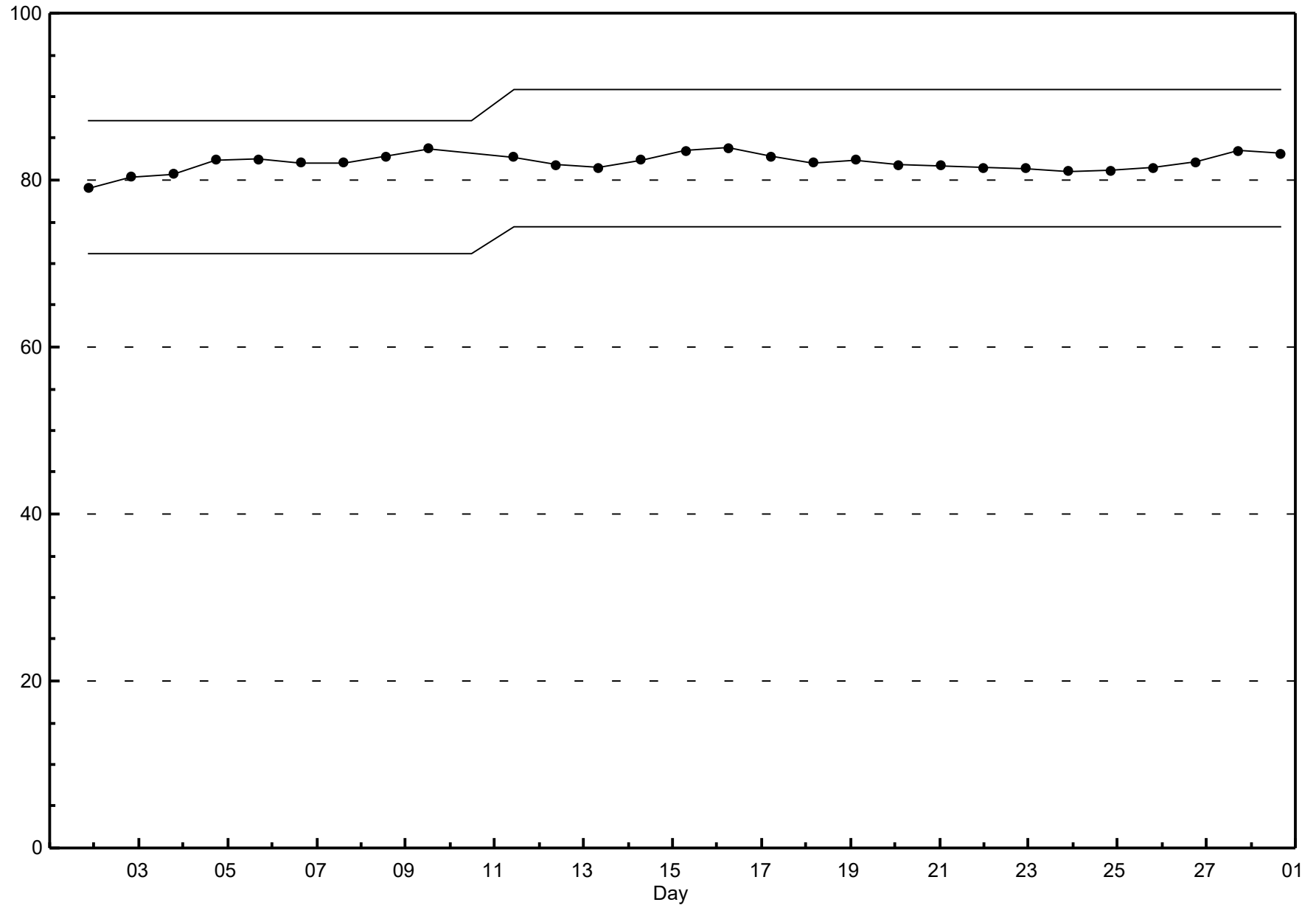
Pollutant Rose

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



Span Responses

Total Reduced Sulphur (TRS)
Evergreen Park - February 2017



Hourly Averages

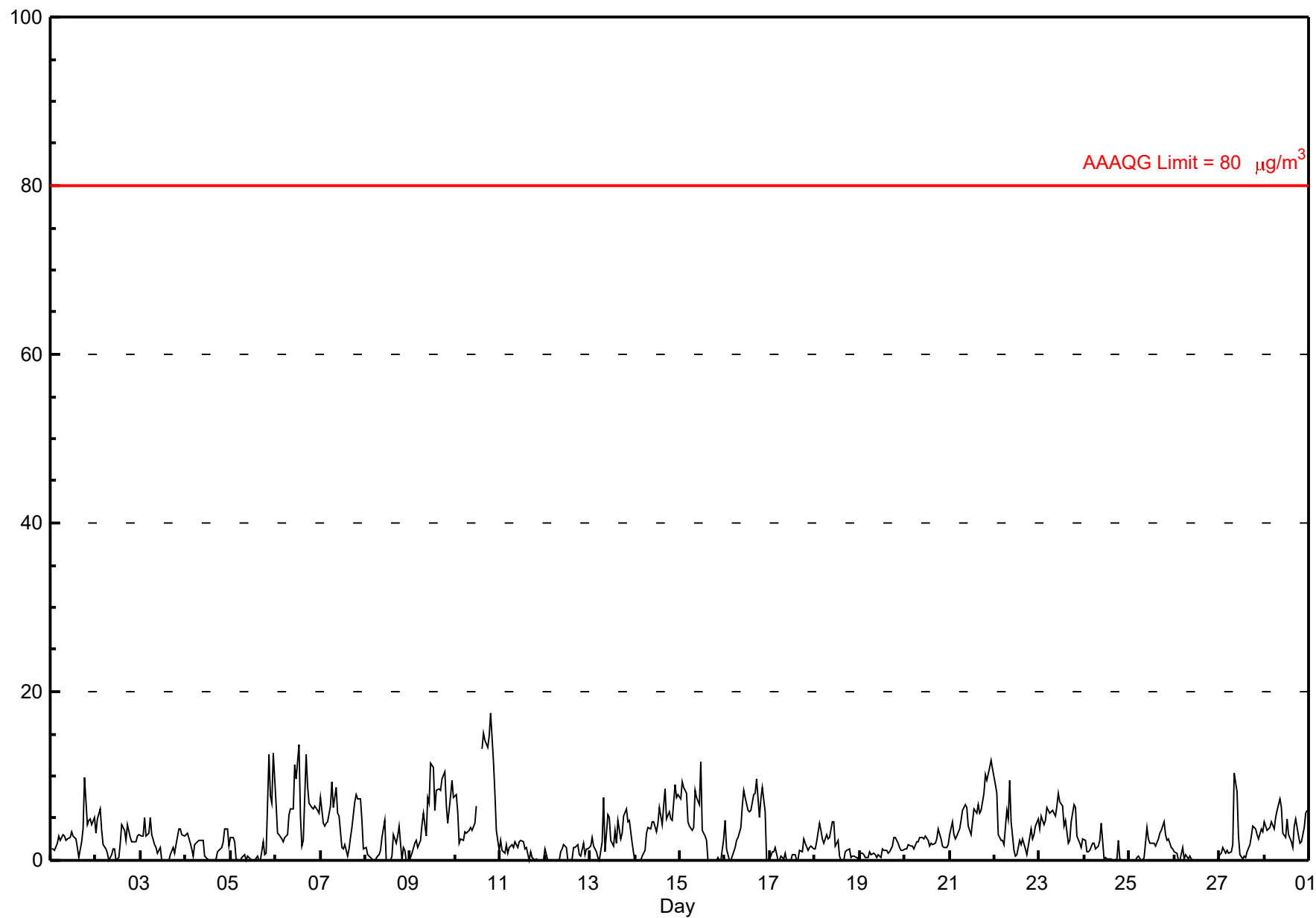
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Evergreen Park - February 2017

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 17.4 µg/m³ on Feb 10 20:00 Maximum Daily Average: 7.3 µg/m³ on Feb 10																								Hours in Service: 672 Hours of Data: 670 Hours of Missing Data: 2 Hours of Calibration: 0 Percent Operational Time: 99.7		
Minimum Value: 0 µg/m³ on Feb 2 08:00 Maximum Diurnal Average: 4.1 µg/m³ at hour 19 Monthly Average: 2.98 µg/m³												Minimum Daily Average: 0.2 µg/m³ on Feb 26 Minimum Diurnal Average: 1.8 µg/m³ at hour 5 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.8 Median = 2.2 Q ₃ = 4.5 P ₉₀ = 7.3 P ₉₉ = 13.2														
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-Feb	1	1	1	2	3	2	3	3	2	2	3	3	3	3	2	0	2	4	10	4	5	5	4	5	3.1	9.9
2-Feb	3	5	6	4	2	1	1	0	1	1	1	0	0	2	4	4	2	4	3	2	2	2	3	3	2.4	6.0
3-Feb	3	3	5	3	3	5	3	2	1	1	2	0	0	0	0	0	1	1	1	2	4	4	3	3	2.1	5.2
4-Feb	3	3	2	1	0	2	2	2	2	2	1	0	0	0	0	0	0	1	1	2	2	4	4	2	1.6	3.8
5-Feb	3	3	2	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2	1	1	13	8	7	13	2.2	12.7
6-Feb	7	3	3	3	2	3	3	5	6	6	11	10	14	5	2	2	13	9	7	6	6	6	6	6	6.0	13.8
7-Feb	7	4	4	4	5	6	9	6	9	6	5	1	1	2	1	1	3	4	7	8	7	7	5	1	4.8	9.4
8-Feb	2	1	1	0	0	0	0	1	1	3	5	0	0	0	0	3	2	3	4	0	1	1	0	0	1.2	4.8
9-Feb	0	1	2	2	1	2	4	6	3	8	7	12	11	6	8	8	8	10	11	7	4	8	10	7	6.1	11.5
10-Feb	8	6	2	2	2	3	3	4	4	4	4	6	M	M	13	15	14	13	15	17	12	8	3	1	7.3	17.4
11-Feb	2	1	1	2	1	2	2	2	2	1	2	2	2	1	1	0	1	0	0	0	0	0	0	0	1.1	2.4
12-Feb	1	0	0	0	0	0	0	0	1	1	2	2	0	0	0	2	1	2	1	0	2	1	1	1	0.8	2.0
13-Feb	2	3	2	1	0	0	2	7	1	5	5	2	2	3	2	5	3	3	5	6	5	5	2	1	3.0	7.5
14-Feb	0	0	0	0	0	1	3	4	4	5	5	3	4	6	4	7	8	5	6	5	5	9	8	8	4.2	9.1
15-Feb	7	9	9	8	5	4	4	4	8	7	7	12	4	3	2	0	0	0	0	0	0	0	0	3	4.0	11.7
16-Feb	5	1	0	0	1	2	2	3	4	6	8	8	6	6	6	8	8	10	5	7	9	6	0	0	4.6	9.6
17-Feb	0	1	1	1	0	0	1	0	1	0	0	0	1	1	0	0	1	1	3	2	1	1	2	1	0.8	2.5
18-Feb	1	2	4	4	3	2	3	2	3	5	5	2	2	0	0	0	1	1	1	0	0	0	0	0	1.8	4.6
19-Feb	1	1	1	0	0	1	1	1	1	0	1	0	1	1	1	1	1	2	3	3	2	2	1	1	1.1	2.7
20-Feb	1	1	2	2	2	1	2	2	3	3	3	3	2	2	2	2	2	3	4	3	2	2	2	2	2.1	3.7
21-Feb	3	5	3	3	3	4	5	6	7	6	4	3	5	6	6	7	6	6	8	10	9	11	12	11	6.1	11.9
22-Feb	9	8	3	2	2	2	6	5	10	5	1	0	1	2	2	2	1	1	2	4	3	3	4	5	3.4	9.5
23-Feb	4	5	4	5	6	6	6	6	5	6	8	7	6	4	5	2	2	5	7	6	3	2	2	3	4.8	8.0
24-Feb	2	1	1	1	2	2	1	2	2	4	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1.0	4.5
25-Feb	0	0	0	0	0	0	0	0	0	4	3	2	2	2	2	2	3	4	5	3	2	2	2	1	1.7	4.6
26-Feb	1	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.5
27-Feb	1	1	2	1	1	1	1	2	10	8	3	1	0	0	0	1	2	3	4	4	3	3	4	3	2.4	10.4
28-Feb	5	4	4	4	5	4	5	6	7	6	3	3	5	3	2	1	4	5	3	2	2	4	6	6	4.1	7.3
3.0 2.7 2.3 2.0 1.8 2.0 2.7 2.9 3.5 3.8 3.5 3.0 2.7 2.2 2.4 2.6 3.2 3.6 4.1 3.7 3.7 3.7 3.1 3.1																								Diurnal Average		
8.9 9.3 8.6 7.9 6.2 6.4 9.4 7.5 10.4 8.2 11.3 11.7 13.8 6.3 13.2 15.2 14.2 13.4 14.8 17.4 12.6 11.0 11.9 12.7																								Diurnal Maximum		
M - Maintenance Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																										

Hourly Averages

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



Hourly Maximums

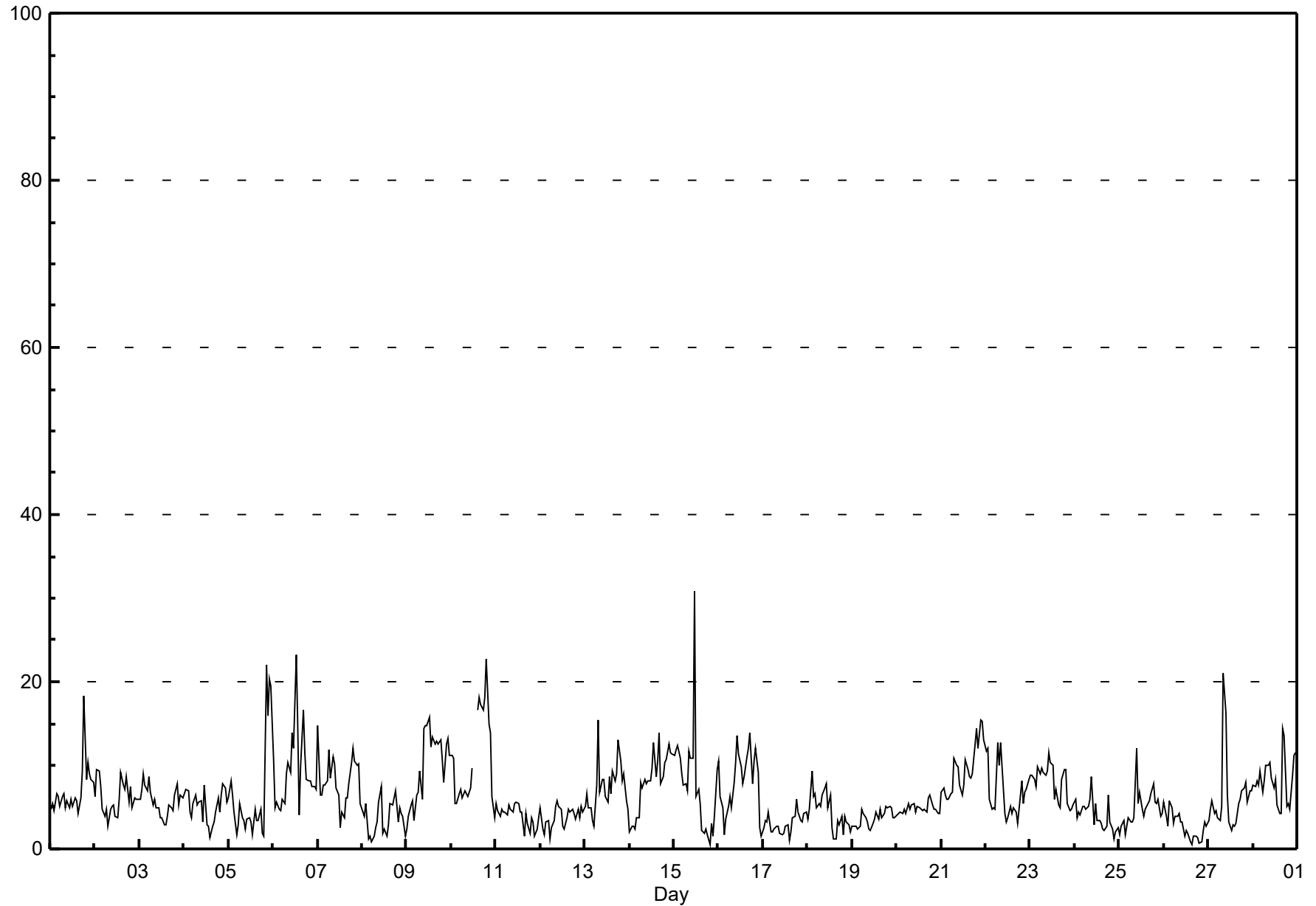
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Evergreen Park - February 2017

Maximum Value: 30.9 μg/m ³ on Feb 15 12:00																				Maximum Daily Average: 10.8 μg/m ³ on Feb 10					Hours in Service: 672	
Minimum Value: 0 μg/m ³ on Feb 15 20:00																				Minimum Daily Average: 2.7 μg/m ³ on Feb 26					Hours of Data: 670	
Maximum Diurnal Average: 7.6 μg/m ³ at hour 10																				Minimum Diurnal Average: 4.9 μg/m ³ at hour 5					Hours of Missing Data: 2	
Monthly Average: 6.32 μg/m ³																				Percentiles: P ₁ = 1.0 P ₁₀ = 2.5 Q ₁ = 3.7 Median = 5.4 Q ₃ = 8.1 P ₉₀ = 11.3 P ₉₉ = 19.4					Hours of Calibration: 0	
																									Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	5	5	5	7	6	5	6	7	5	6	5	6	5	6	6	4	6	9	18	8	10	9	8	8	6.9	18.4
2-Feb	6	10	9	7	5	4	5	3	5	5	5	4	4	6	9	8	7	9	6	7	5	6	6	6	6.1	9.6
3-Feb	6	7	9	8	7	9	7	5	6	5	5	4	4	3	3	4	5	5	5	6	8	5	6	6	5.7	9.1
4-Feb	7	7	7	4	4	5	6	5	6	6	3	8	3	3	1	3	3	4	6	4	6	8	7	6	5.1	7.8
5-Feb	6	8	6	4	2	3	5	4	3	2	4	4	3	2	5	3	3	5	2	2	22	16	20	20	6.4	22.0
6-Feb	11	5	6	5	5	6	5	9	10	9	14	12	23	15	4	10	17	11	8	8	8	7	7	7	9.3	23.3
7-Feb	15	6	6	8	8	8	12	8	11	10	7	6	2	4	4	6	6	8	10	12	11	10	10	5	8.1	14.7
8-Feb	4	4	5	1	1	1	1	3	3	6	7	2	2	1	3	5	5	6	7	3	5	4	4	2	3.7	7.4
9-Feb	2	4	5	6	3	6	7	9	6	14	15	15	16	12	13	12	13	13	13	11	8	13	13	11	10.0	15.7
10-Feb	11	11	5	5	7	7	6	7	7	6	7	10	M	M	17	18	17	17	18	23	15	14	6	4	10.8	22.8
11-Feb	5	5	4	5	4	4	4	5	5	4	5	6	5	4	4	1	4	3	2	4	3	1	2	4	4.0	5.6
12-Feb	5	2	2	3	3	1	2	3	5	6	5	5	3	2	4	5	4	5	4	4	5	4	5	4	3.8	5.8
13-Feb	5	7	5	5	3	3	8	15	7	8	8	6	6	9	7	9	8	9	13	11	8	9	6	5	7.5	15.4
14-Feb	2	3	3	2	4	4	8	7	8	8	8	8	10	13	9	11	14	8	9	10	11	13	12	11	8.1	13.9
15-Feb	11	12	12	11	9	8	8	7	12	11	11	31	6	7	5	2	2	2	2	0	3	1	4	10	7.8	30.9
16-Feb	11	6	5	2	4	5	6	5	8	10	14	11	10	8	9	11	12	14	8	11	12	9	3	1	8.1	14.0
17-Feb	3	3	3	4	2	2	2	3	3	2	2	2	3	3	1	2	4	4	6	4	3	3	4	4	3.0	6.0
18-Feb	4	5	9	6	7	5	5	5	6	7	8	5	6	3	1	1	3	3	4	2	4	3	3	2	4.5	9.3
19-Feb	3	3	3	2	3	5	4	4	3	2	2	3	4	4	4	5	4	4	5	5	5	5	4	4	3.7	5.1
20-Feb	4	4	4	4	5	4	5	5	5	5	4	5	5	5	5	5	4	6	6	5	5	5	4	4	4.8	6.5
21-Feb	7	7	6	6	6	7	7	11	10	10	8	6	8	11	10	9	8	9	13	14	12	15	15	13	9.5	15.4
22-Feb	12	12	6	5	5	5	13	10	13	10	4	3	4	5	4	5	4	3	5	8	5	7	7	8	6.8	12.8
23-Feb	9	9	8	7	10	9	10	9	9	9	12	10	10	6	7	5	5	8	10	10	5	5	5	5	8.0	11.5
24-Feb	6	4	4	4	5	5	5	5	6	9	3	5	3	3	3	2	2	3	6	3	2	1	2	3	4.0	8.6
25-Feb	2	3	3	2	3	4	3	3	4	12	5	7	5	4	5	5	6	7	8	6	5	6	4	4	4.8	12.0
26-Feb	6	4	3	6	5	3	4	4	4	3	3	2	2	2	1	1	1	1	1	1	1	2	3	3	2.7	5.8
27-Feb	3	5	6	4	5	4	3	5	21	16	6	3	2	3	3	3	5	6	7	7	8	6	7	7	6.1	21.0
28-Feb	8	7	8	8	9	7	8	10	10	10	8	7	8	5	4	4	14	14	5	5	5	9	11	12	8.2	14.5
6.3 6.0 5.7 5.1 4.9 4.9 6.0 6.3 7.1 7.6 6.8 7.0 6.0 5.5 5.3 5.7 6.8 7.0 7.4 7.0 7.2 7.0 6.8 6.4																									Diurnal Average	
14.7 12.1 12.3 10.8 9.8 9.0 12.7 15.4 21.0 16.3 14.7 30.9 23.3 14.7 16.6 18.2 17.3 16.7 18.4 22.8 22.0 15.9 20.4 19.5																									Diurnal Maximum	
M - Maintenance																										

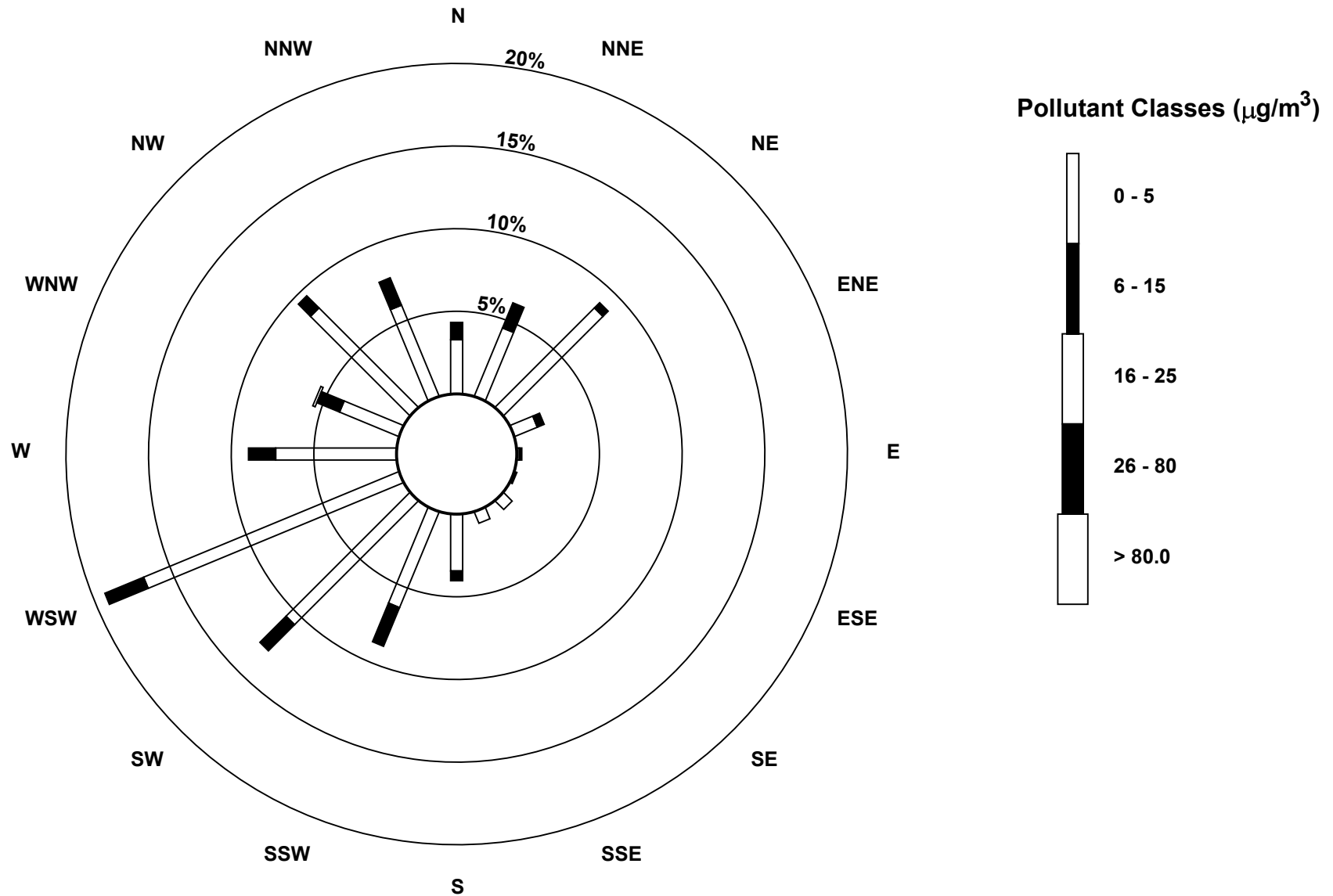
Hourly Maximums

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



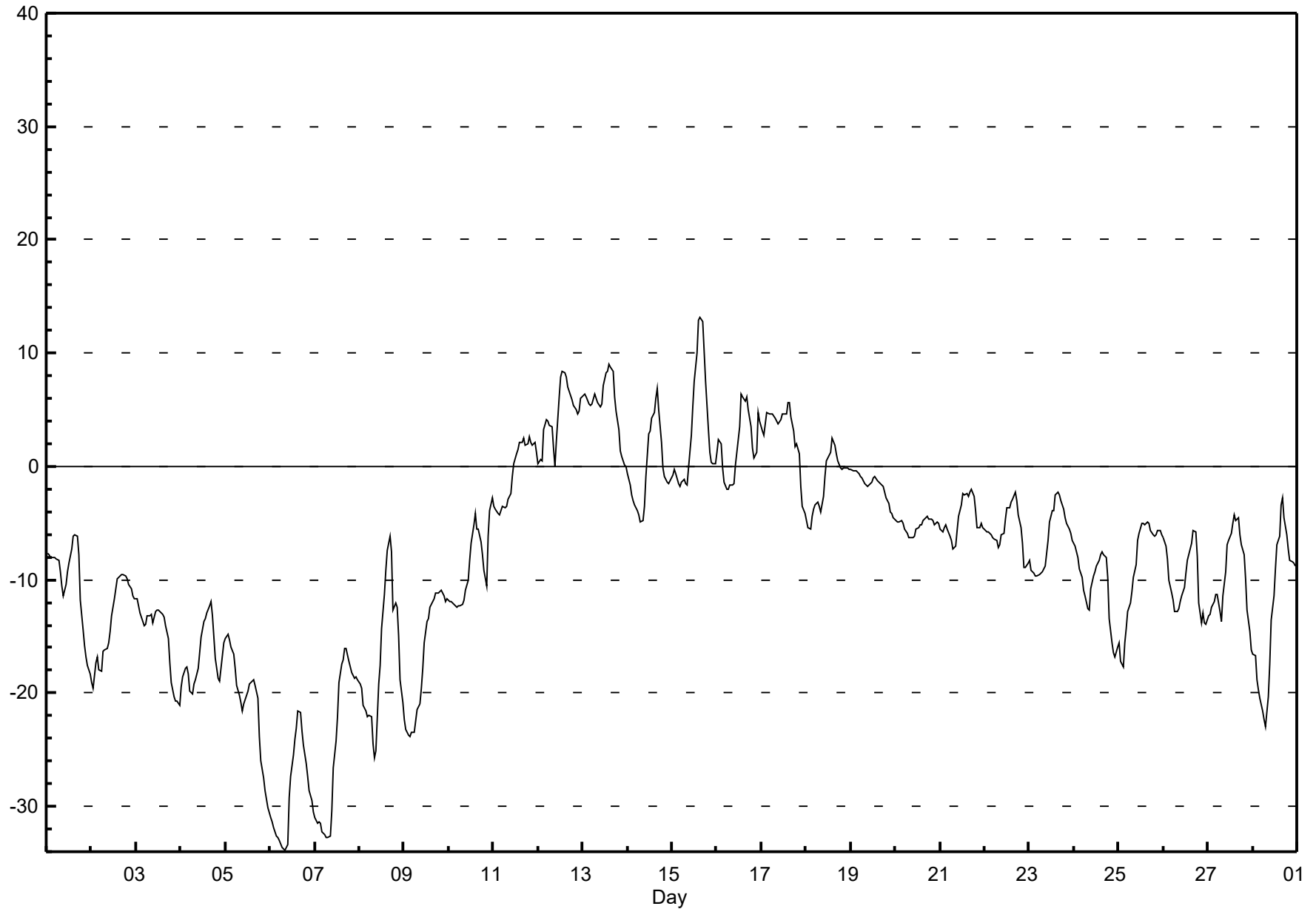
Pollutant Rose

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



Hourly Averages

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



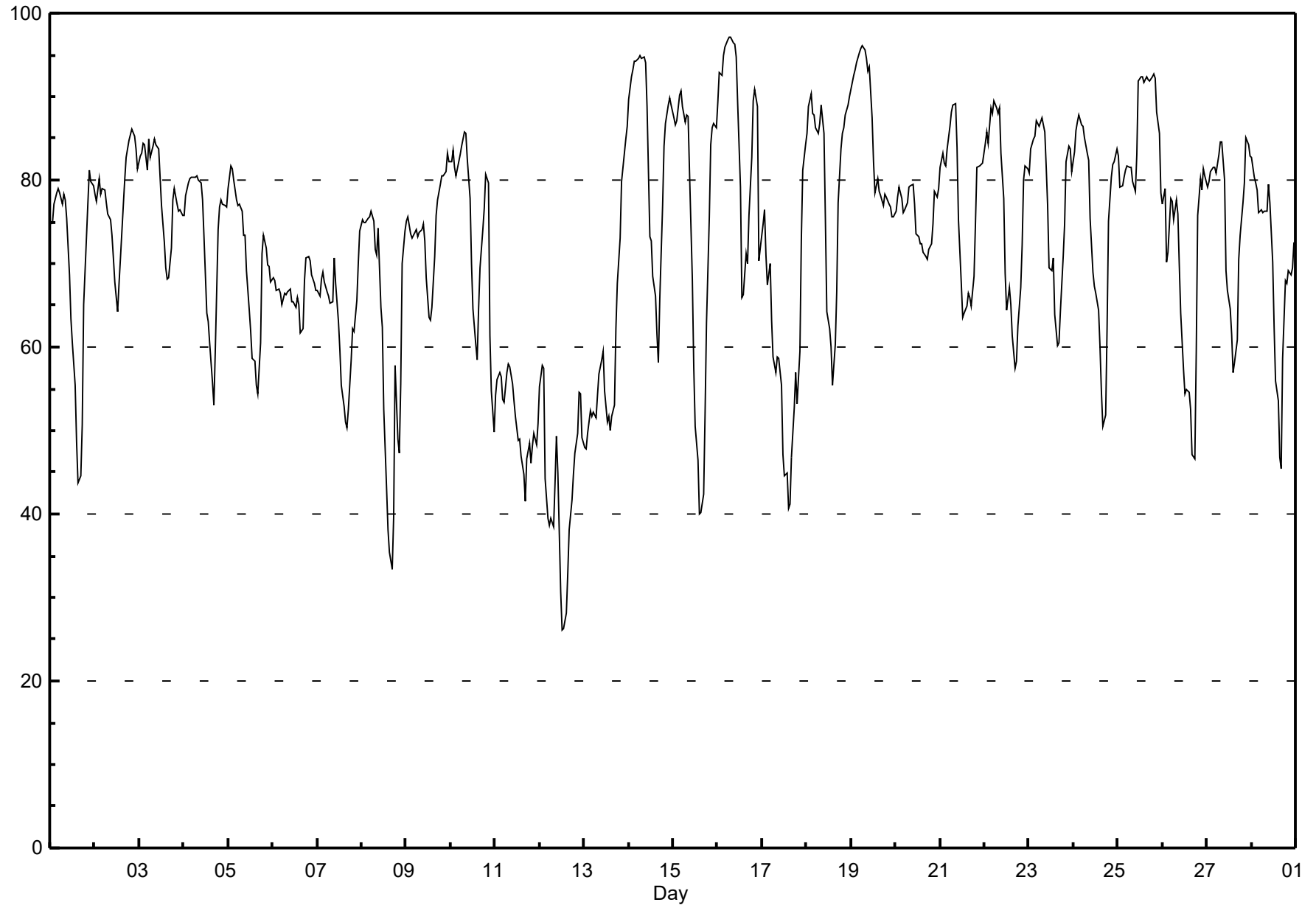
Hourly Averages

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

Maximum Value: 97.2 % on Feb 16 07:00																								Maximum Daily Average: 86.0 % on Feb 25						Hours in Service: 672	
Minimum Value: 26 % on Feb 12 13:00																								Minimum Daily Average: 43.0 % on Feb 12						Hours of Data: 672	
Maximum Diurnal Average: 78.2 % at hour 2																								Minimum Diurnal Average: 58.2 % at hour 16						Hours of Missing Data: 0	
Monthly Average: 71.81 %																								Percentiles: P ₁ = 38.1 P ₁₀ = 51.6 Q ₁ = 63.1 Median = 75.0 Q ₃ = 81.7 P ₉₀ = 88.0 P ₉₉ = 95.9						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-Feb	75	75	77	78	79	78	77	78	78	75	69	63	61	55	49	44	45	51	65	73	77	81	80	79	69.3	81.1					
2-Feb	78	77	80	78	79	79	77	76	75	73	71	68	64	68	71	77	80	83	85	85	86	85	84	81	77.5	86.1					
3-Feb	83	83	84	84	81	85	83	84	85	84	84	80	77	73	69	68	68	72	78	79	77	76	76	76	78.8	85.0					
4-Feb	76	78	80	80	80	80	80	80	80	80	78	73	64	63	60	56	53	60	74	77	78	77	77	77	73.4	80.4					
5-Feb	79	82	81	80	78	77	77	76	73	73	69	64	62	59	58	56	54	60	71	73	72	70	70	68	70.1	81.7					
6-Feb	68	68	67	67	66	65	66	66	67	67	65	66	65	66	65	62	62	68	71	71	70	69	68	67	66.7	70.9					
7-Feb	67	66	68	69	68	67	66	65	65	71	68	63	60	55	53	51	50	53	59	62	62	66	70	74	63.2	73.9					
8-Feb	75	75	75	75	76	76	75	72	71	74	65	62	52	43	38	35	33	40	58	49	47	56	70	74	61.1	76.3					
9-Feb	75	76	73	73	73	74	73	74	74	75	73	68	63	63	65	71	76	78	80	81	81	81	83	82	74.3	83.2					
10-Feb	82	84	82	81	82	83	84	86	86	83	78	70	65	60	59	64	70	74	77	81	80	61	55	50	73.9	85.7					
11-Feb	54	56	57	56	54	53	57	58	58	56	53	52	49	49	47	45	42	47	49	46	48	50	48	51	51.4	57.9					
12-Feb	55	58	57	44	40	39	39	38	44	49	45	31	26	26	28	33	38	42	45	47	50	55	54	49	43.0	57.8					
13-Feb	48	48	50	52	52	52	51	54	57	58	60	55	51	52	50	52	53	62	68	73	80	82	85	86	59.6	86.5					
14-Feb	90	92	93	94	94	95	95	95	95	94	89	73	73	68	66	62	58	66	77	84	87	89	90	89	83.6	94.9					
15-Feb	87	87	87	90	91	89	87	88	88	81	68	58	51	46	40	40	42	52	63	76	84	86	87	86	73.1	90.7					
16-Feb	89	93	93	95	96	97	97	97	97	96	95	89	79	66	66	71	70	76	83	89	91	89	70	72	85.7	97.2					
17-Feb	75	77	71	67	70	63	59	57	59	59	55	47	45	45	41	41	47	53	57	53	59	73	81	84	59.9	84.2					
18-Feb	86	89	90	88	88	86	86	87	89	86	75	64	62	60	56	60	67	77	84	86	86	88	89	90	79.9	90.4					
19-Feb	91	92	93	94	95	96	96	96	95	93	93	87	82	78	80	79	78	77	78	78	77	77	76	76	85.7	96.0					
20-Feb	76	78	79	78	76	76	77	79	79	79	77	74	73	72	72	71	71	70	72	72	75	79	78	79	75.6	79.4					
21-Feb	82	83	82	82	84	87	88	89	89	84	75	68	64	64	65	66	66	65	68	75	82	82	82	82	77.2	89.1					
22-Feb	84	86	84	89	88	90	89	88	89	83	78	69	64	67	65	61	57	58	63	67	72	80	82	81	76.5	89.6					
23-Feb	81	84	85	85	87	86	87	87	86	82	77	69	69	71	64	60	61	64	71	75	82	84	84	81	77.6	87.4					
24-Feb	83	86	87	88	87	86	85	83	82	75	69	67	66	64	60	55	51	52	62	75	80	82	82	84	74.7	87.8					
25-Feb	83	79	79	80	81	82	81	81	80	79	83	92	92	92	92	92	92	92	92	93	92	88	86	78	86.0	92.8					
26-Feb	77	79	70	71	78	77	75	78	76	70	64	57	54	55	55	53	47	47	59	76	80	79	81	81	68.3	81.3					
27-Feb	79	80	81	82	81	81	83	85	85	80	69	67	64	61	57	58	61	71	73	77	80	85	84	83	75.3	85.0					
28-Feb	83	80	80	79	76	77	76	76	76	80	77	70	62	56	54	47	45	59	68	68	69	69	70	73	69.5	82.7					
77.2 78.2 78.1 77.9 77.8 77.7 77.5 77.6 77.7 76.4 72.2 66.7 62.9 60.7 58.7 58.2 58.5 63.1 69.6 72.9 75.1 76.3 76.4 76.2																								Diurnal Average							
90.8 92.9 93.2 94.9 96.0 96.8 97.2 97.1 96.5 96.3 94.8 91.8 92.4 92.4 91.8 92.3 92.1 91.9 92.3 92.8 92.2 89.0 89.9 90.1																								Diurnal Maximum							

Hourly Averages

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



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	5	7	10	8	11	11	12	10	9	13	14	18	15	15	12	14	12	5	3	3	2	1	1	1	8.5	17.7
Dir	249	265	259	261	266	256	251	251	263	262	259	260	257	260	268	277	257	246	204	188	215	210	210	213	257.6	259.5
2 Spd	0	2	6	5	3	4	13	13	14	17	15	18	17	17	15	14	12	8	5	4	3	5	2	2	8.5	18.4
Dir	289	261	265	228	239	250	248	251	250	252	250	251	249	248	250	253	250	237	232	245	283	316	9	47	251.3	250.9
3 Spd	3	4	7	6	5	1	4	4	7	7	9	17	13	14	12	11	9	1	1	0	1	1	3	0	5.2	16.9
Dir	57	55	39	38	31	19	17	11	12	14	15	26	31	33	36	25	23	353	283	251	209	274	240	266	25.6	26.2
4 Spd	1	4	6	8	7	5	4	4	3	6	12	18	17	17	16	16	11	3	3	2	3	4	4	5	7.2	17.7
Dir	233	248	247	238	255	265	265	270	255	251	235	239	253	259	256	261	259	253	198	254	232	252	253	277	251.6	239.4
5 Spd	5	5	11	7	13	17	10	5	6	3	8	4	7	6	7	9	8	3	1	0	0	1	1	0	4.7	16.7
Dir	311	356	39	40	36	37	44	49	44	17	342	21	346	344	331	318	318	321	38	26	245	20	27	31	9.9	37.1
6 Spd	1	0	0	2	0	1	1	1	1	3	2	3	4	8	10	6	5	5	3	2	1	3	0	1	1.7	9.7
Dir	345	202	208	194	194	356	213	308	212	196	274	233	239	326	335	339	286	289	278	231	233	209	195	37	286.5	335.0
7 Spd	1	0	3	3	4	3	4	2	5	9	16	18	14	14	16	18	13	5	5	7	8	11	8	8	8.1	18.3
Dir	192	215	235	240	201	199	198	199	217	222	248	252	259	252	262	251	245	236	222	249	231	258	254	248	243.7	250.6
8 Spd	11	7	3	3	3	5	6	2	1	5	5	10	7	10	11	11	10	6	4	9	8	4	1	1	5.3	11.2
Dir	254	261	246	225	221	227	226	229	252	215	229	189	182	185	194	200	236	227	233	237	244	267	55	166	221.4	254.2
9 Spd	2	2	1	0	1	0	1	1	1	1	5	6	4	11	7	7	4	1	1	1	1	2	3	2	1.1	11.0
Dir	192	196	23	225	196	354	294	287	339	198	3	6	238	201	228	273	340	21	190	120	181	220	298	346	261.2	200.8
10 Spd	2	6	4	2	3	3	5	5	1	1	2	3	4	3	1	4	2	4	2	5	9	19	22	29	2.4	28.5
Dir	47	66	77	85	64	52	40	35	0	328	220	241	245	253	258	345	19	334	304	254	230	226	233	249.2	233.5	
11 Spd	26	34	31	32	32	32	31	32	29	31	46	47	44	37	29	31	40	21	31	32	28	24	26	27	31.7	47.3
Dir	231	235	230	232	230	223	230	234	232	230	243	248	247	249	253	242	246	220	227	228	224	224	215	206	234.0	248.1
12 Spd	19	26	20	29	28	27	27	22	4	6	1	18	53	48	42	29	44	45	37	34	31	32	34	40	28.5	53.0
Dir	204	208	208	228	225	234	226	230	207	223	346	235	235	234	230	243	247	247	240	234	232	226	230	239	232.1	235.5
13 Spd	33	26	28	12	8	22	37	19	18	21	29	30	32	30	19	14	3	2	5	2	1	3	4	3	16.5	37.1
Dir	240	247	242	244	223	223	230	239	234	243	245	248	249	241	240	249	283	297	247	257	36	227	232	223	241.0	230.2
14 Spd	2	0	0	2	1	1	2	3	2	0	1	3	8	5	3	3	3	1	1	1	1	0	0	1	0.9	7.5
Dir	191	195	65	37	11	336	214	242	211	60	45	243	325	295	230	303	339	50	58	40	350	202	57	356	297.0	325.4
15 Spd	1	2	2	2	1	1	1	1	2	1	6	3	9	9	19	35	16	10	6	3	1	0	2	3	4.6	34.7
Dir	314	273	358	347	352	284	336	230	281	218	258	243	256	266	248	239	267	259	258	43	202	261	59	12	257.5	239.4
16 Spd	2	3	1	1	1	1	1	2	1	2	3	4	2	6	7	7	4	6	1	2	2	11	17	14	2.6	17.4
Dir	334	356	31	174	215	265	220	197	192	258	244	255	296	315	335	336	176	270	311	211	211	214	215	213	243.9	215.0
17 Spd	7	5	14	22	23	25	34	32	29	29	32	35	36	32	30	21	11	4	3	7	7	1	3	1	17.9	36.4
Dir	240	261	239	247	252	247	244	244	245	240	241	246	248	248	255	262	262	263	287	296	319	201	193	152	248.8	248.4
18 Spd	2	0	0	1	1	1	1	3	1	1	3	4	6	9	12	15	13	17	14	12	12	11	10	10	6.1	16.5
Dir	205	271	34	208	191	15	57	332	186	225	42	75	41	41	46	39	40	42	42	44	41	45	44	43	42.7	41.8
19 Spd	9	9	7	7	6	5	6	10	8	10	10	12	15	16	18	18	16	16	16	17	19	15	12	11	10.4	18.5
Dir	44	43	42	39	27	16	332	319	306	296	294	294	303	301	312	307	310	315	322	324	328	328	326	328	323.5	327.8
20 Spd	10	5	4	8	9	11	9	12	10	8	10	8	10	10	8	8	6	5	4	2	3	2	1	2	6.3	12.1
Dir	328	334	286	329	330	335	309	317	317	332	314	322	316	335	331	325	316	331	26	35	50	54	125	36	327.5	317.4
21 Spd	2	1	1	1	1	2	2	1	0	1	2	3	5	7	10	9	7	1	1	1	1	0	1	7	2.2	9.6
Dir	6	6	142	8	355	314	314	357	348	14	40	325	247	308	325	324	287	315	211	233	186	286	323	330	316.4	325.1
22 Spd	2	4	7	6	6	5	8	7	11	11	15	17	15	19	22	20	14	16	10	4	4	4	2	1	8.7	22.4
Dir	338	283	289	277	286	266	250	253	249	269	295	270	287	253	251	253	275	310	305	306	307	191	196	223	271.7	251.2

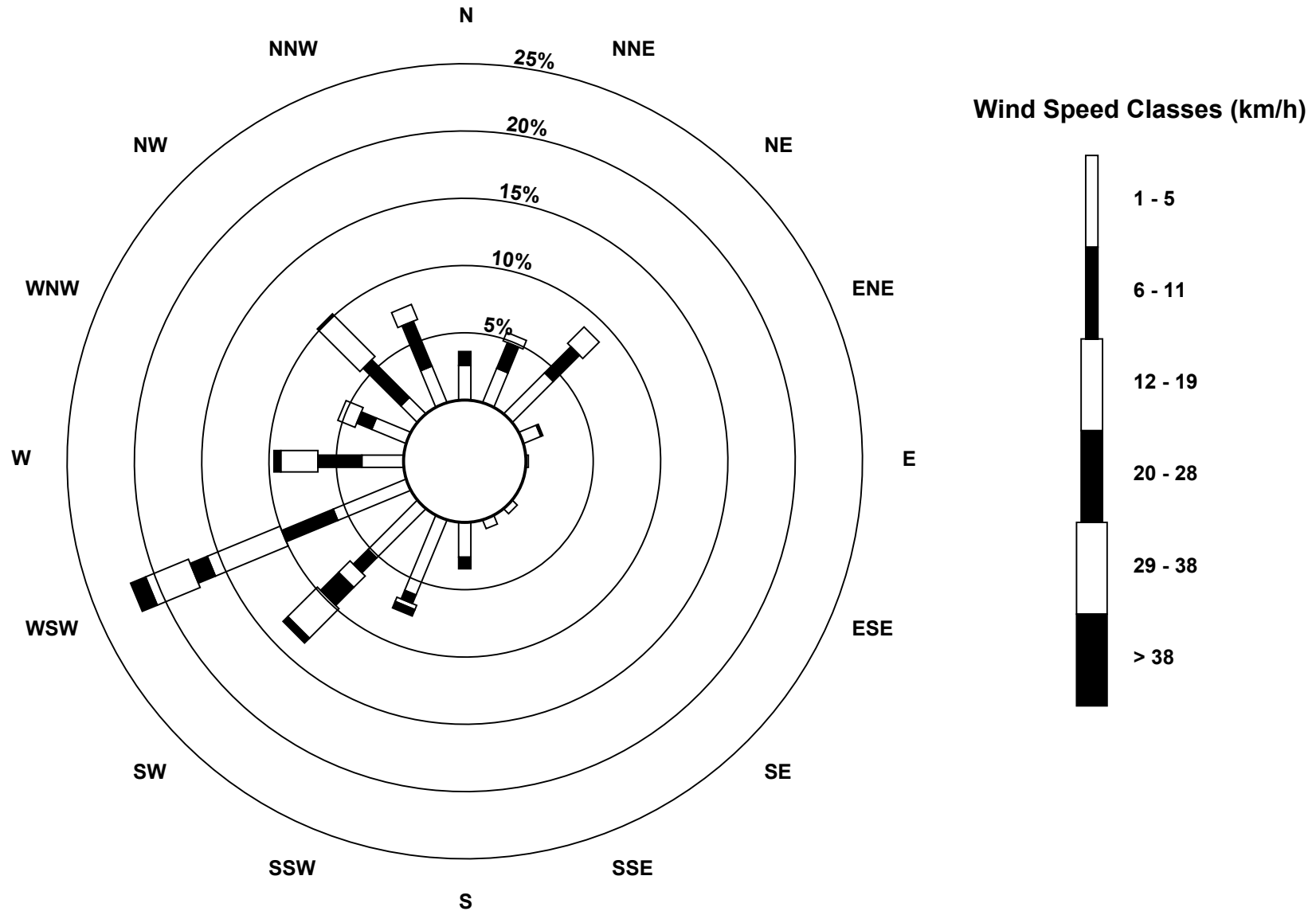
Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24										
23 Spd	0	1	0	0	2	0	2	1	1	1	2	4	6	8	8	16	18	10	3	4	11	12	8	13	3.5	17.6								
Dir	32	185	127	340	174	220	199	45	141	207	232	267	259	261	244	320	326	357	11	349	20	19	343	326	324.7	325.7								
24 Spd	14	18	14	10	6	3	5	7	2	0	4	4	4	2	5	5	8	7	2	0	1	2	4	6	3.4	18.1								
Dir	321	319	336	28	23	350	328	306	274	204	347	240	243	242	258	284	254	260	252	184	178	158	188	195	303.8	319.0								
25 Spd	2	2	1	1	1	3	3	1	1	1	12	12	12	22	22	16	16	7	10	12	12	14	15	19	7.0	22.1								
Dir	181	44	43	171	56	179	176	136	168	22	256	253	259	263	265	287	335	352	326	309	302	311	309	325	291.7	262.7								
26 Spd	19	10	9	10	10	15	8	10	13	12	19	16	16	16	18	18	13	14	7	3	6	5	4	4	8.0	19.1								
Dir	325	358	8	308	314	310	296	316	328	311	305	299	261	261	262	260	244	224	191	165	179	172	188	179	285.5	325.4								
27 Spd	3	1	1	1	1	0	1	2	4	8	9	18	21	19	16	17	17	8	3	1	2	1	3	1	5.3	20.8								
Dir	185	57	41	39	190	316	328	294	266	259	281	317	320	313	320	324	330	20	11	320	289	205	211	215	314.4	320.5								
28 Spd	2	2	2	1	1	1	2	1	0	2	3	5	5	8	9	6	5	6	5	5	4	2	3	7	2.5	9.2								
Dir	280	218	202	197	207	67	202	24	80	21	34	348	347	340	358	30	32	41	41	51	51	44	1	27	17.3	357.6								
Spd	3.7	3.4	3.2	3.7	3.6	4.3	6.1	5.4	4.7	5.8	8.1	9.6	11.4	11.2	10.5	10.3	8.9	4.9	3.5	3.3	3.1	3.5	4.2	4.0	Diurnal Average									
Dir	261.2	263.1	259.2	254.2	256.2	254.7	246.2	258.6	256.9	254.9	265.2	262.6	261.9	262.6	266.3	274.9	277.2	276.0	262.2	264.2	264.0	248.1	242.6	254.9	Diurnal Maximum									
Spd	32.9	34.1	30.7	31.5	32.4	32.3	37.1	32.3	29.5	30.6	46.2	47.3	53.0	47.7	42.4	34.7	44.2	45.4	37.1	33.8	30.9	32.3	33.9	39.8	Diurnal Maximum									
Dir	240.1	235.3	230.4	231.8	230.1	223.2	230.2	234.1	232.4	230.0	242.7	248.1	235.5	234.0	229.9	239.4	246.7	247.0	240.3	233.5	232.2	226.4	230.1	239.2										
Maximum Speed Value: 53 km/h on Feb 12 13:00																				Minimum Speed Value: 0 km/h on Feb 27 06:00										Hours in Service:				672
Maximum Daily Speed Average: 31.7 km/h on Feb 11																				Minimum Daily Speed Average: 0.9 km/h on Feb 14										Hours of Data:				672
Maximum Diurnal Speed Average: 11.4 km/h at hour 13																				Minimum Diurnal Speed Average: 3.1 km/h at hour 21										Hours of Missing Data:				0
Monthly Average Velocity: 5.79 km/h 262.03 deg																				Speed Percentiles: P ₁ = 0.3 P ₁₀ = 0.8 Q ₁ = 2.0 Median = 5.4 Q ₃ = 12.3 P ₉₀ = 22.0 P ₉₉ = 44.0										Percent Operational Time:				100.0
All monthly, daily, and diurnal averages have been calculated using vector methods																																		
Frequency Distribution																																		
Speed Range (km/h)																																		
Direction	0 to 5		5 to 11		11 to 19		19 to 28		28 to 38		> 38		Total																					
North	50		18		2		0		0		0		70																					
NorthEast	50		26		15		0		0		0		91																					
East	4		0		0		0		0		0		4																					
SouthEast	7		0		0		0		0		0		7																					
South	54		10		0		0		0		0		64																					
SouthWest	70		25		14		19		33		9		170																					
West	50		38		50		6		7		1		152																					
NorthWest	29		46		35		4		0		0		114																					
Total	314		163		116		29		40		10		672																					

Wind Rose

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



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Evergreen Park - February 2017

Maximum Speed: 54 km/h on Feb 12 13:00																				Maximum Daily Speed Average: 32.6 km/h on Feb 11						Hours in Service: 672	
Minimum Speed: 0 km/h on Feb 21 09:00																				Minimum Daily Speed Average: 2.9 km/h on Feb 14						Hours of Data: 672	
Maximum Diurnal Speed Average: 15.6 km/h at hour 14																				Minimum Diurnal Speed Average: 6.6 km/h at hour 20						Hours of Missing Data: 0	
Monthly Average Speed: 9.50 km/h																				Percentiles: P ₁ = 0.6 P ₁₀ = 1.4 Q ₁ = 2.6 Median = 6.0 Q ₃ = 12.8 P ₉₀ = 22.3 P ₉₉ = 44.3						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-Feb	5	7	10	8	11	11	12	10	9	13	15	18	16	16	12	16	13	5	3	3	3	2	2	1	9.2	18.2	
2-Feb	1	3	6	6	4	5	14	13	14	17	15	19	18	17	16	14	12	9	5	4	3	5	2	3	9.3	18.6	
3-Feb	3	5	7	6	5	1	4	4	7	7	9	18	14	14	12	11	9	1	1	1	1	2	3	1	6.1	17.5	
4-Feb	1	4	6	8	8	6	5	4	3	6	12	18	18	17	16	16	11	4	3	2	3	4	5	5	7.7	17.9	
5-Feb	6	5	11	7	13	17	10	5	6	4	8	6	8	8	9	11	9	3	1	1	0	1	1	1	6.3	17.0	
6-Feb	2	1	1	2	1	1	2	1	2	3	4	4	5	9	10	7	6	5	3	2	2	3	0	1	3.1	10.1	
7-Feb	1	1	4	4	4	4	4	2	5	9	16	18	14	14	17	19	18	13	5	6	7	8	11	8	8.8	18.5	
8-Feb	11	7	3	3	3	5	6	2	2	5	6	11	7	10	11	11	10	6	4	9	9	6	2	2	6.4	11.3	
9-Feb	2	3	2	2	2	1	1	1	2	2	5	7	5	11	8	9	5	2	2	1	1	3	3	3	3.4	11.2	
10-Feb	3	6	5	3	3	3	5	5	1	1	2	4	4	4	4	5	3	5	6	8	10	19	23	29	6.7	29.1	
11-Feb	26	34	31	32	33	33	31	33	30	31	47	48	44	38	30	32	41	22	32	32	29	24	26	28	32.6	47.6	
12-Feb	19	26	20	29	28	27	27	22	7	9	4	18	54	48	43	30	44	46	37	34	31	32	34	40	29.7	53.6	
13-Feb	33	27	28	12	8	22	37	19	19	21	29	30	33	31	20	14	4	3	6	3	3	4	5	4	17.2	37.4	
14-Feb	3	1	1	2	1	1	2	4	4	3	2	4	8	7	3	4	4	3	2	2	2	2	2	2	2.9	8.1	
15-Feb	2	3	2	2	3	2	2	3	3	2	7	4	10	11	21	35	18	11	6	4	1	2	3	3	6.6	35.0	
16-Feb	5	5	3	4	2	3	3	4	2	4	4	5	3	6	7	10	7	8	3	2	2	11	17	14	5.5	17.5	
17-Feb	8	6	15	22	23	25	34	32	29	29	32	35	37	32	31	22	12	4	3	8	8	2	3	1	18.9	36.7	
18-Feb	2	1	1	1	2	1	2	3	2	2	3	5	7	10	13	15	13	17	14	12	13	12	10	11	7.1	16.9	
19-Feb	10	9	8	7	6	5	6	10	8	10	11	13	15	17	19	18	17	17	17	17	19	15	12	11	12.4	18.9	
20-Feb	10	5	5	8	10	11	10	12	10	9	10	9	11	10	8	8	7	5	4	2	3	3	2	2	7.3	12.4	
21-Feb	2	1	1	1	1	2	3	2	0	1	3	4	6	9	10	9	7	1	1	2	1	1	1	7	3.3	10.1	
22-Feb	2	4	8	6	7	5	8	7	11	12	15	18	17	20	23	21	16	17	10	4	4	4	2	1	10.1	22.8	
23-Feb	1	2	1	2	2	2	2	3	2	2	2	4	6	9	9	16	18	11	3	4	12	12	9	13	6.1	17.9	
24-Feb	14	18	16	10	6	4	6	7	2	1	5	5	4	2	7	6	9	7	2	0	1	2	4	6	6.1	18.3	
25-Feb	3	3	1	1	1	3	5	2	2	2	12	12	13	22	22	17	18	8	10	12	12	14	16	19	9.7	22.5	
26-Feb	20	10	10	11	10	15	9	11	13	13	20	18	16	16	19	18	13	14	7	3	6	5	4	4	11.9	20.0	
27-Feb	3	2	2	1	1	0	3	2	4	8	10	19	21	20	17	17	20	9	3	2	3	2	3	1	7.3	21.4	
28-Feb	3	2	6	2	1	4	2	1	1	3	5	6	8	8	10	7	5	6	5	5	4	2	3	7	4.5	9.8	
7.1 7.2 7.6 7.2 7.2 7.9 9.1 8.0 7.1 8.1 11.2 13.5 15.0 15.6 15.2 15.0 13.2 9.3 7.1 6.6 6.8 7.2 7.5 8.2																									Diurnal Average		
33.1 34.3 30.9 31.7 32.6 32.5 37.4 32.5 29.7 30.8 46.6 47.6 53.6 48.1 42.7 35.0 44.5 45.7 37.4 34.0 31.2 32.5 34.1 40.0																									Diurnal Maximum		
All monthly, daily, and diurnal averages have been calculated using scalar methods																											

Hourly Standard Deviations

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

Maximum Value: 100.0 deg on Feb 16 05:00																								Hours in Service: 672	
Minimum Value: 4.5 deg on Feb 12 00:00																								Hours of Data: 672	
																								Hours of Missing Data: 0	
Percentiles: P ₁ = 5.4 P ₁₀ = 8.2 Q ₁ = 13.1 Median = 23.2 Q ₃ = 54.1 P ₉₀ = 76.6 P ₉₉ = 93.0																								Hours of Calibration: 0	
																								Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Feb	34	15	12	11	15	10	10	8	15	11	11	14	16	13	20	25	13	26	13	18	46	85	80	80	85.0
2-Feb	77	57	14	15	30	31	12	9	10	9	10	8	10	10	11	13	10	10	8	19	25	15	32	14	76.7
3-Feb	17	15	11	10	7	17	18	22	15	11	16	18	20	18	16	16	11	57	61	70	47	59	29	71	70.8
4-Feb	58	19	13	11	22	18	26	26	17	21	8	7	15	14	13	12	15	31	34	52	38	10	30	22	58.4
5-Feb	26	18	17	14	12	13	18	21	17	22	35	54	36	55	46	38	17	31	68	78	87	63	48	80	86.6
6-Feb	75	91	79	72	83	43	73	64	78	12	54	34	20	32	19	26	33	19	27	46	65	44	77	89	91.2
7-Feb	55	88	49	51	49	27	39	42	14	10	8	12	12	13	13	9	8	9	10	26	10	13	10	8	88.0
8-Feb	9	13	26	44	18	8	17	40	74	23	22	10	17	14	12	12	8	16	16	7	10	63	72	71	74.1
9-Feb	77	65	74	90	93	86	73	60	81	75	25	39	56	14	23	31	39	69	70	63	56	46	25	48	92.6
10-Feb	38	14	39	48	50	29	16	19	34	92	41	35	42	28	84	30	43	29	85	73	29	6	7	11	91.9
11-Feb	8	7	7	6	6	6	6	7	7	7	8	7	7	8	9	8	8	12	8	11	6	7	6	4	11.7
12-Feb	8	8	8	7	8	8	5	9	91	84	77	45	9	7	7	15	7	7	7	7	7	5	7	6	90.5
13-Feb	7	7	5	15	23	9	7	7	7	7	6	7	8	6	11	17	41	46	15	54	84	89	63	44	89.0
14-Feb	45	89	99	51	76	70	52	55	79	91	96	54	26	60	49	54	60	73	85	93	46	91	87	84	98.5
15-Feb	79	62	70	53	93	78	87	86	70	54	40	48	35	38	39	8	26	18	18	55	75	79	76	39	93.2
16-Feb	80	57	85	84	100	88	96	79	88	57	63	35	45	20	23	53	53	56	87	52	51	9	5	5	100.0
17-Feb	29	40	11	9	10	7	6	7	7	7	8	7	7	7	10	12	16	22	52	18	19	65	40	59	65.1
18-Feb	60	89	63	53	73	82	60	20	98	73	24	40	35	23	17	13	21	14	15	14	14	15	17	14	98.3
19-Feb	15	18	14	15	17	19	25	9	13	16	18	17	21	17	15	17	18	12	12	10	10	19	18	16	25.5
20-Feb	18	21	22	23	18	15	31	14	16	23	20	34	24	21	25	29	27	24	24	32	35	63	68	25	68.1
21-Feb	22	59	70	39	35	46	30	60	90	67	54	51	32	43	22	24	25	81	87	68	95	90	84	25	95.3
22-Feb	67	35	20	18	21	20	9	10	10	19	17	23	25	18	11	13	26	15	15	14	34	36	63	66	67.0
23-Feb	79	63	70	83	82	93	64	78	53	49	30	27	20	22	26	19	14	27	23	30	12	12	26	11	93.4
24-Feb	11	8	31	20	20	29	21	21	38	71	40	43	39	52	44	47	27	23	72	41	29	48	14	13	71.6
25-Feb	50	72	61	64	58	40	62	62	58	63	15	12	13	10	12	21	30	27	21	15	14	9	10	10	72.0
26-Feb	16	19	16	17	14	17	16	17	10	17	19	27	18	19	18	14	13	17	14	19	10	15	13	8	27.2
27-Feb	21	68	59	47	49	93	67	61	21	12	25	20	15	17	22	19	31	19	28	59	61	82	20	47	92.7
28-Feb	59	40	85	79	74	70	42	58	71	66	56	55	62	24	20	43	42	9	6	9	11	76	37	12	84.6
80.2 91.2 98.5 90.0 100.0 93.4 95.6 86.3 98.3 91.9 96.1 55.1 62.0 59.6 84.1 53.9 60.0 81.3 87.1 93.4 95.3 90.7 87.5 88.5																									

PAZA
Smoky Heights Station
Monthly Summary Tables, Graphs and
Roses

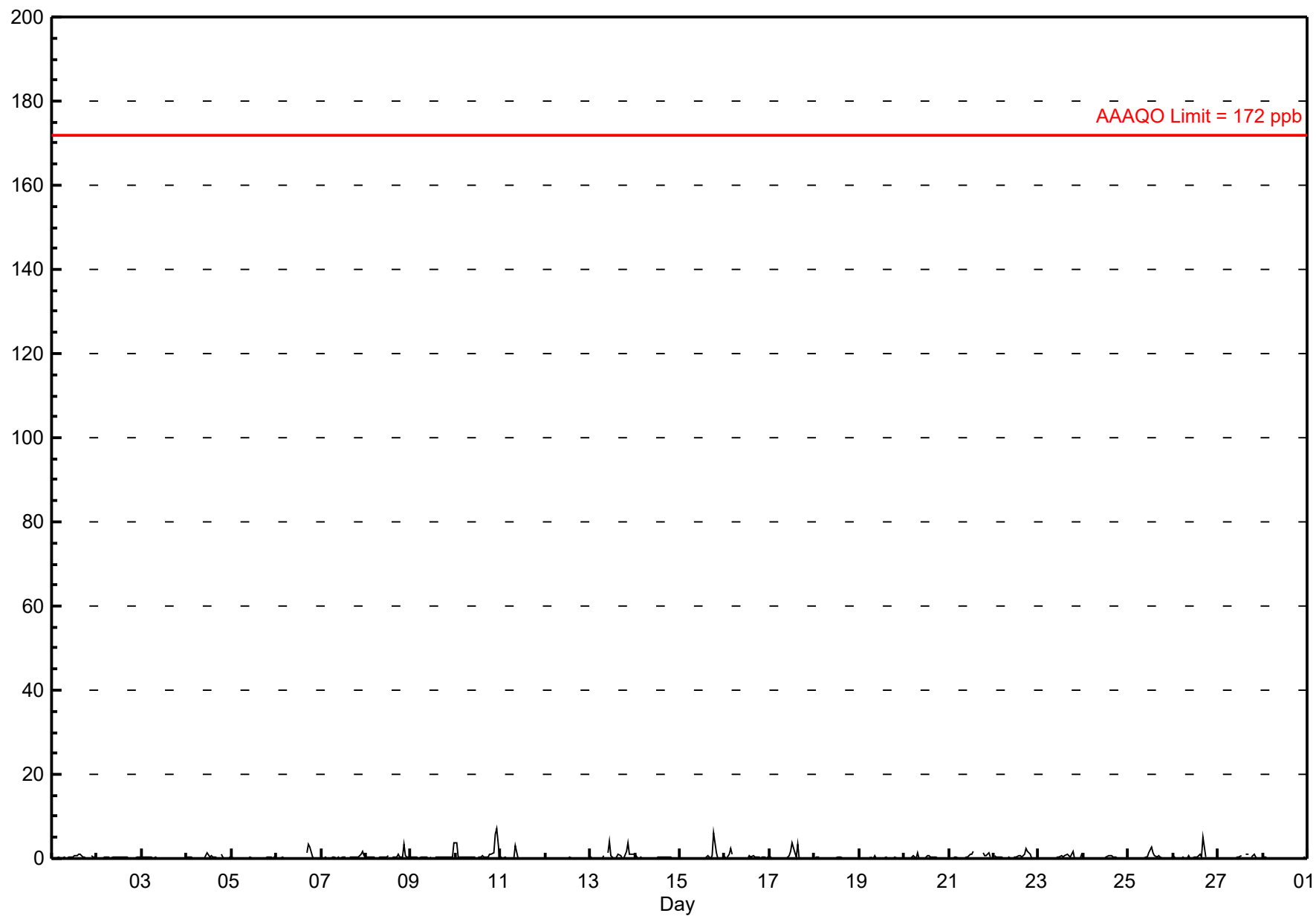
Hourly Averages

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 7.1 ppb on Feb 10 23:00 Maximum Daily Average: 1.1 ppb on Feb 10																				Hours in Service: 672 Hours of Data: 637 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Feb 6 22:00 Maximum Diurnal Average: 0.7 ppb at hour 19 Monthly Average: 0.35 ppb										Minimum Daily Average: 0.1 ppb on Feb 12 Minimum Diurnal Average: 0.1 ppb at hour 7 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.8 P ₉₉ = 3.8																
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-Feb	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	A	1	0	0	0.3	1.1
2-Feb	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.5
3-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.4
4-Feb	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	A	1	0	0	0	0	0	0.3	1.4
5-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.5
6-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	3	3	0	0	0	0	0	0.4	3.4
7-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	2	1	0.3	1.8
8-Feb	0	0	0	0	0	0	0	0	0	0	0	0	1	A	1	0	0	1	0	0	3	1	0	0	0.5	3.4
9-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	4	0	0.4	3.6
10-Feb	4	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0	0	1	1	1	6	7	0	1.1	7.1
11-Feb	0	0	0	0	0	0	0	0	3	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	3.0
12-Feb	0	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
13-Feb	0	0	0	0	0	0	0	1	A	1	4	1	0	0	0	1	1	0	0	2	4	1	1	1	0.8	4.0
14-Feb	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.2	0.9
15-Feb	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	1	6	1	0	0	0	0	0.5	6.1
16-Feb	0	0	1	2	1	A	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0.4	2.3
17-Feb	0	0	0	0	A	0	0	0	0	0	1	2	4	1	0	3	0	0	0	0	0	0	0	0	0.5	3.9
18-Feb	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
19-Feb	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8
20-Feb	0	A	0	0	0	1	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0.3	1.5
21-Feb	A	0	0	0	0	0	0	0	0	0	0	1	1	2	C	C	C	C	1	1	1	1	0	A	0.5	1.5
22-Feb	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	2	2	2	1	0	0	A	0	0.5	2.5
23-Feb	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	0	2	0	0	A	0	1	0.3	1.5
24-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	A	0	0	0	0.1	0.7
25-Feb	0	0	0	0	0	0	0	0	0	0	0	1	3	1	1	0	1	0	0	A	0	0	0	0	0.4	2.6
26-Feb	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	5	0	A	0	0	0	0	0	0.4	5.2
27-Feb	0	0	0	0	0	0	0	0	0	0	0	0	1	C	C	1	1	A	0	1	0	0	0	0	0.3	1.1
28-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.5
0.4 0.1 0.2 0.2 0.2 0.1 0.1 0.2 0.3 0.2 0.3 0.4 0.5 0.5 0.4 0.5 0.6 0.5 0.7 0.4 0.5 0.5 0.5 0.4																								Diurnal Average		
3.6 0.5 1.0 2.3 1.0 0.6 0.3 1.5 3.0 1.4 4.0 1.7 3.9 1.5 1.2 3.5 5.2 3.4 6.1 1.8 3.9 5.6 7.1 3.6																								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
Smoky Heights - February 2017



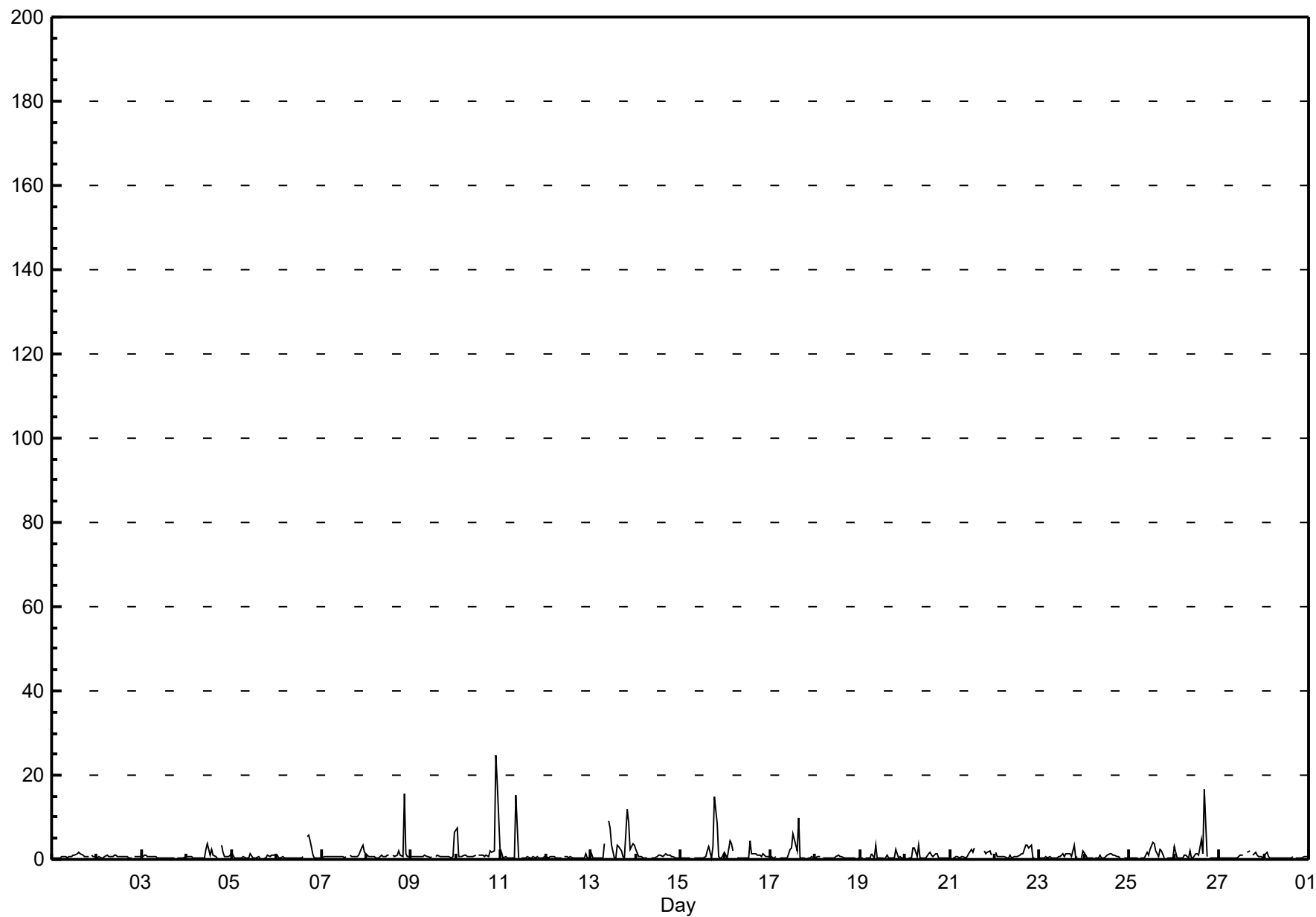
Hourly Maximums

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

Maximum Value: 24.6 ppb on Feb 10 22:00																				Maximum Daily Average: 3.1 ppb on Feb 10					Hours in Service: 672		
Minimum Value: 0 ppb on Feb 18 23:00																				Minimum Daily Average: 0.4 ppb on Feb 18					Hours of Data: 637		
Maximum Diurnal Average: 1.8 ppb at hour 17																				Minimum Diurnal Average: 0.5 ppb at hour 2					Hours of Missing Data: 35		
Monthly Average: 1.08 ppb																				Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.9 P ₉₀ = 2.1 P ₉₉ = 14.9					Hours of Calibration: 35		
																									Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Feb	0	0	0	1	0	1	1	1	0	1	1	1	1	1	2	1	1	1	1	1	A	1	1	1	0.8	1.6	
2-Feb	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	A	1	1	1	1	0.6	1.0	
3-Feb	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	0.5	0.9	
4-Feb	1	1	1	0	0	0	0	0	0	0	2	4	1	2	1	1	1	A	3	2	1	1	1	1	1.1	3.8	
5-Feb	2	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	A	0	0	1	1	1	1	1	0.6	1.8	
6-Feb	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	A	5	6	5	1	0	0	0	0	1.1	5.8	
7-Feb	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	3	3	2	0.9	3.3	
8-Feb	1	1	1	1	1	0	0	1	1	1	1	1	1	A	1	1	1	1	2	1	1	16	1	1	1.5	15.5	
9-Feb	1	1	1	1	1	1	1	1	1	1	0	1	A	1	1	1	1	1	1	1	1	0	1	7	0.9	6.5	
10-Feb	8	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	2	2	2	25	18	2	3.1	24.6
11-Feb	2	0	1	0	0	0	0	0	15	1	A	0	0	0	1	0	0	1	0	1	0	0	0	1	1.1	15.1	
12-Feb	1	0	1	1	1	0	0	0	0	A	1	1	0	1	0	0	0	0	0	0	0	1	0	0	0.4	1.3	
13-Feb	1	0	0	0	0	0	0	4	A	9	8	3	1	0	3	3	2	1	0	12	9	3	4	4	3.0	11.9	
14-Feb	2	1	1	1	0	0	0	A	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0.7	2.5	
15-Feb	0	0	0	0	0	0	A	0	0	0	0	0	0	1	2	3	0	3	15	9	1	0	0	2	1.8	15.0	
16-Feb	1	0	4	4	2	A	0	0	0	0	0	0	0	4	1	1	1	1	1	1	1	1	1	1	1.2	4.4	
17-Feb	1	0	0	1	A	0	0	0	0	0	2	3	6	4	2	10	0	0	0	0	0	0	1	0	1.5	9.9	
18-Feb	0	1	1	A	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0.4	0.9	
19-Feb	0	0	A	0	0	0	1	1	3	0	0	0	0	0	1	0	0	0	0	2	0	1	0	0	0.6	3.3	
20-Feb	0	A	0	0	3	3	1	3	0	0	0	0	1	2	1	1	1	1	0	0	0	0	0	0	0.9	3.3	
21-Feb	A	0	0	1	1	0	1	1	0	1	1	2	2	3	C	C	C	C	2	1	2	2	1	A	1.2	2.8	
22-Feb	2	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	4	4	3	3	0	0	A	0	1.2	3.5	
23-Feb	0	0	0	1	0	1	0	0	0	0	1	1	1	1	1	1	1	1	3	0	1	A	0	2	0.8	3.2	
24-Feb	1	0	0	0	0	0	0	0	1	0	0	1	1	2	1	1	1	1	1	0	A	0	0	0	0.6	1.5	
25-Feb	0	0	0	0	0	0	0	0	0	2	1	2	4	4	2	1	2	2	0	A	0	0	0	0	1.1	4.1	
26-Feb	3	0	0	0	0	1	1	0	2	0	0	1	1	1	5	1	16	1	A	0	0	0	0	0	1.6	16.5	
27-Feb	0	0	0	0	0	0	0	0	0	0	1	1	1	C	C	2	2	A	1	2	1	1	1	0	0.7	2.1	
28-Feb	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	1	1	1	0.5	1.6	
1.2 0.5 0.6 0.6 0.6 0.6 0.5 0.7 1.2 0.8 1.0 1.0 1.1 1.3 1.3 1.3 1.8 1.1 1.7 1.6 1.5 1.7 1.4 1.0																									Diurnal Average		
7.6 1.6 4.3 3.8 2.8 2.6 1.2 3.9 15.1 9.1 7.5 3.8 6.2 4.4 4.8 9.9 16.5 5.8 15.0 11.9 15.5 24.6 17.9 6.5																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											

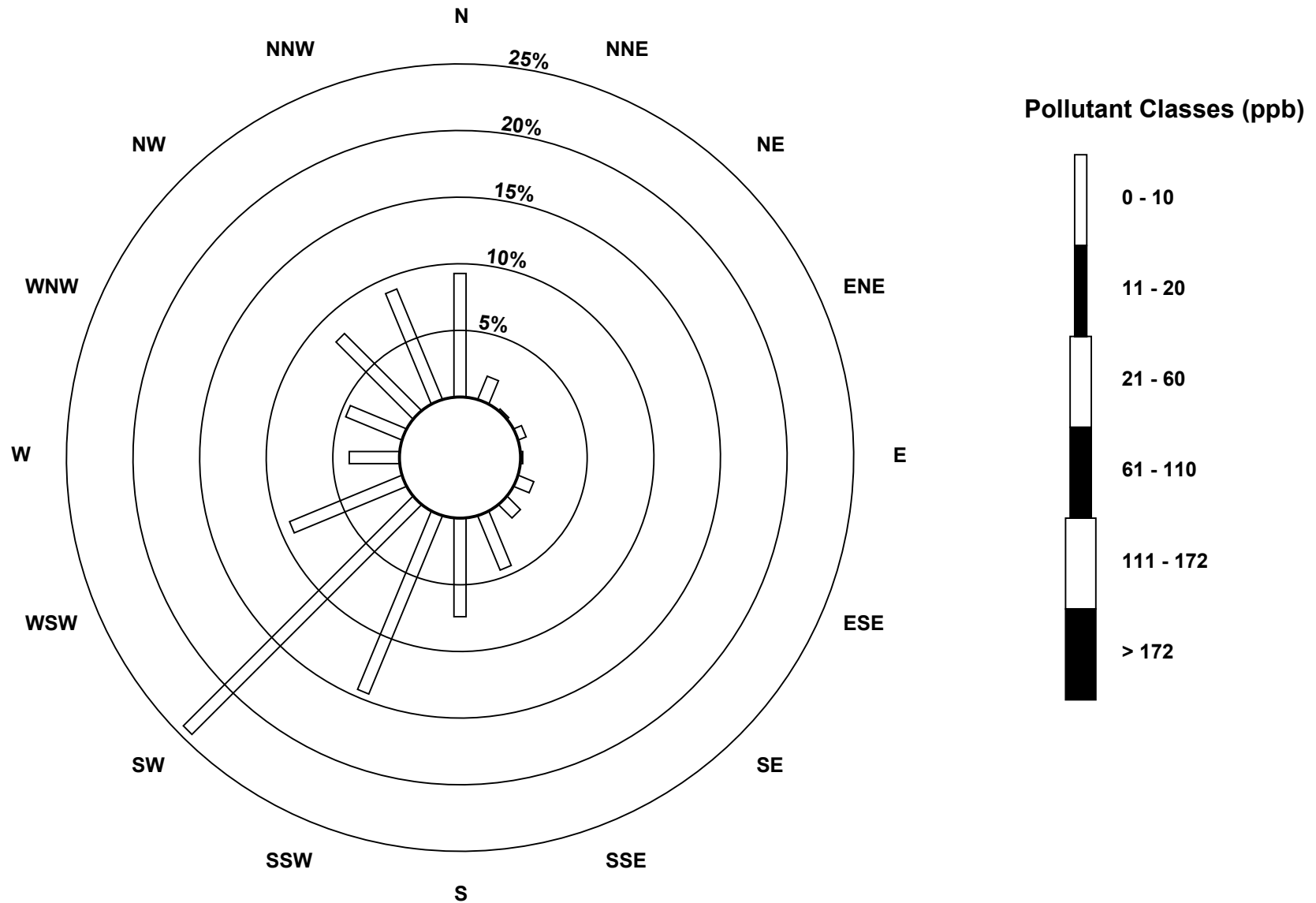
Hourly Maximums

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



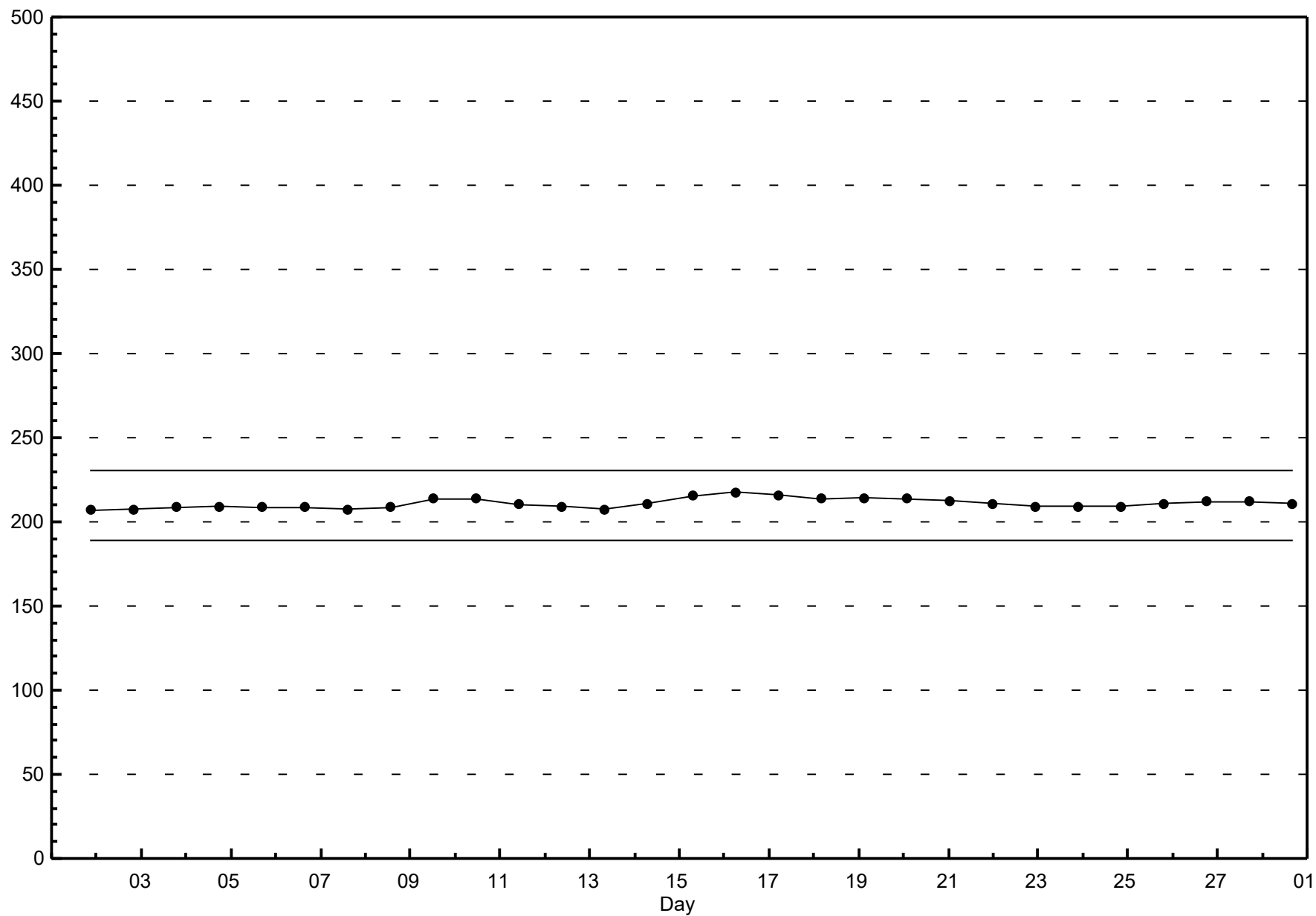
Pollutant Rose

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



Span Responses

Sulphur Dioxide (SO₂)
Smoky Heights - February 2017



Hourly Averages

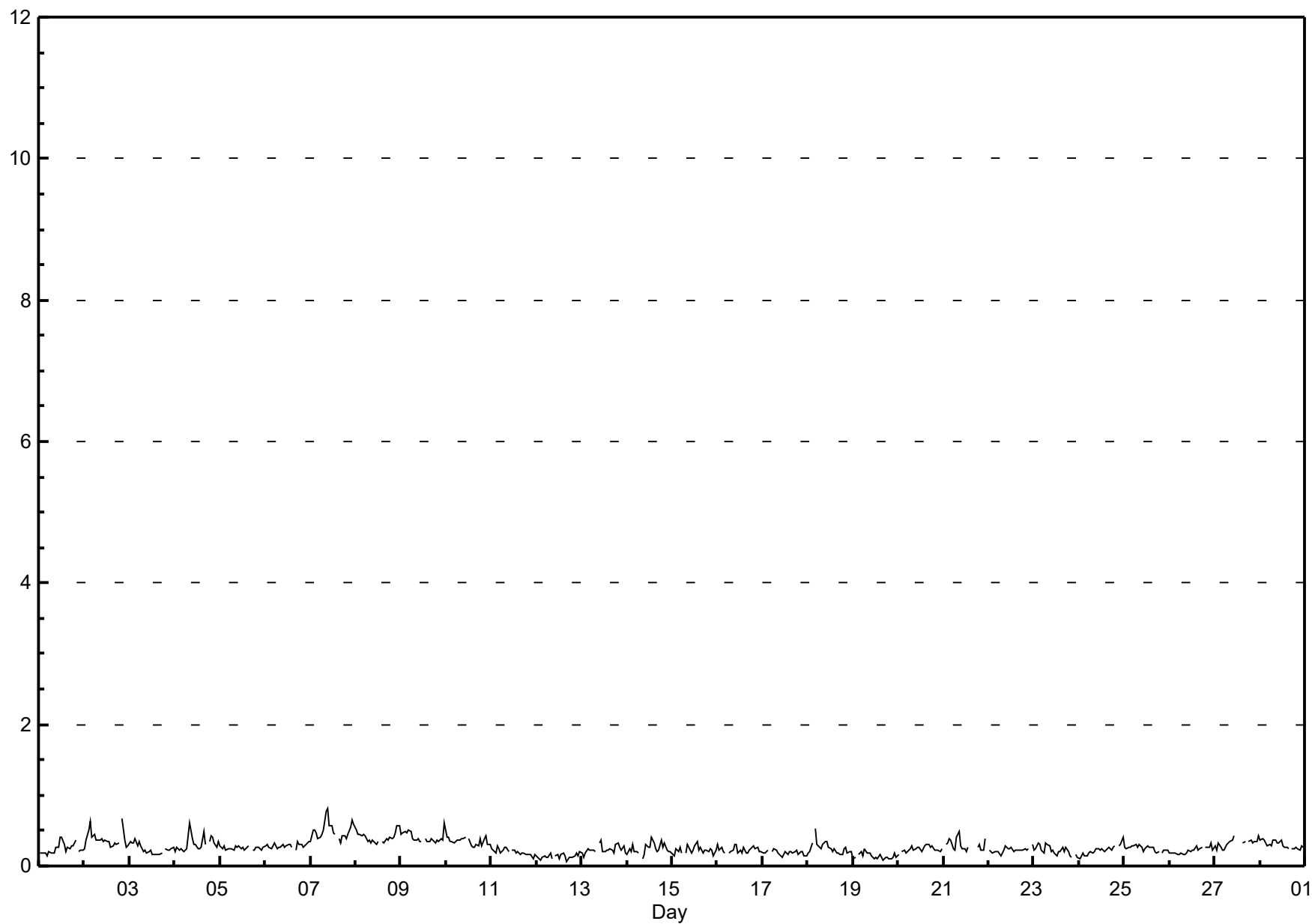
Total Reduced Sulphur (TRS) - ppb

Smoky Heights - February 2017

Maximum Value: 0.8 ppb on Feb 7 10:00																			Maximum Daily Average: 0.5 ppb on Feb 7						Hours in Service: 672				
Minimum Value: 0 ppb on Feb 12 17:00																			Minimum Daily Average: 0.1 ppb on Feb 12						Hours of Data: 635				
Maximum Diurnal Average: 0.3 ppb at hour 10																			Minimum Diurnal Average: 0.2 ppb at hour 17						Hours of Missing Data: 37				
Monthly Average: 0.27 ppb																			Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.2 Median = 0.3 Q ₃ = 0.3 P ₉₀ = 0.4 P ₉₉ = 0.6						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-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.4			
2-Feb	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0.4	0.7			
3-Feb	0	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			
4-Feb	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.6			
5-Feb	0	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			
6-Feb	0	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			
7-Feb	0	1	1	0	0	0	0	1	1	1	1	1	0	0	A	0	0	0	0	0	0	0	1	1	1	0.5	0.8		
8-Feb	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	0.4	0.6			
9-Feb	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0.4	0.6			
10-Feb	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4			
11-Feb	0	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			
12-Feb	0	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			
13-Feb	0	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			
14-Feb	0	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			
15-Feb	0	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			
16-Feb	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3			
17-Feb	0	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			
18-Feb	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5			
19-Feb	0	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			
20-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3			
21-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	A	0.3	0.5			
22-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.3			
23-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.3			
24-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.4			
25-Feb	0	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			
26-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.3			
27-Feb	0	0	0	0	0	0	0	0	0	0	0	C	C	C	C	0	0	A	0	0	0	0	0	0	0.3	0.4			
28-Feb	0	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			
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 0.3 0.2 0.2 0.3 0.3 0.3 0.3 0.3 0.3																								Diurnal Average					
0.5 0.5 0.5 0.6 0.5 0.5 0.4 0.5 0.8 0.8 0.6 0.6 0.5 0.4 0.4 0.5 0.4 0.4 0.4 0.4 0.7 0.5 0.6 0.6																								Diurnal Maximum					
C - Calibration																								A - Automated Daily Zero Span					

Hourly Averages

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



Hourly Maximums

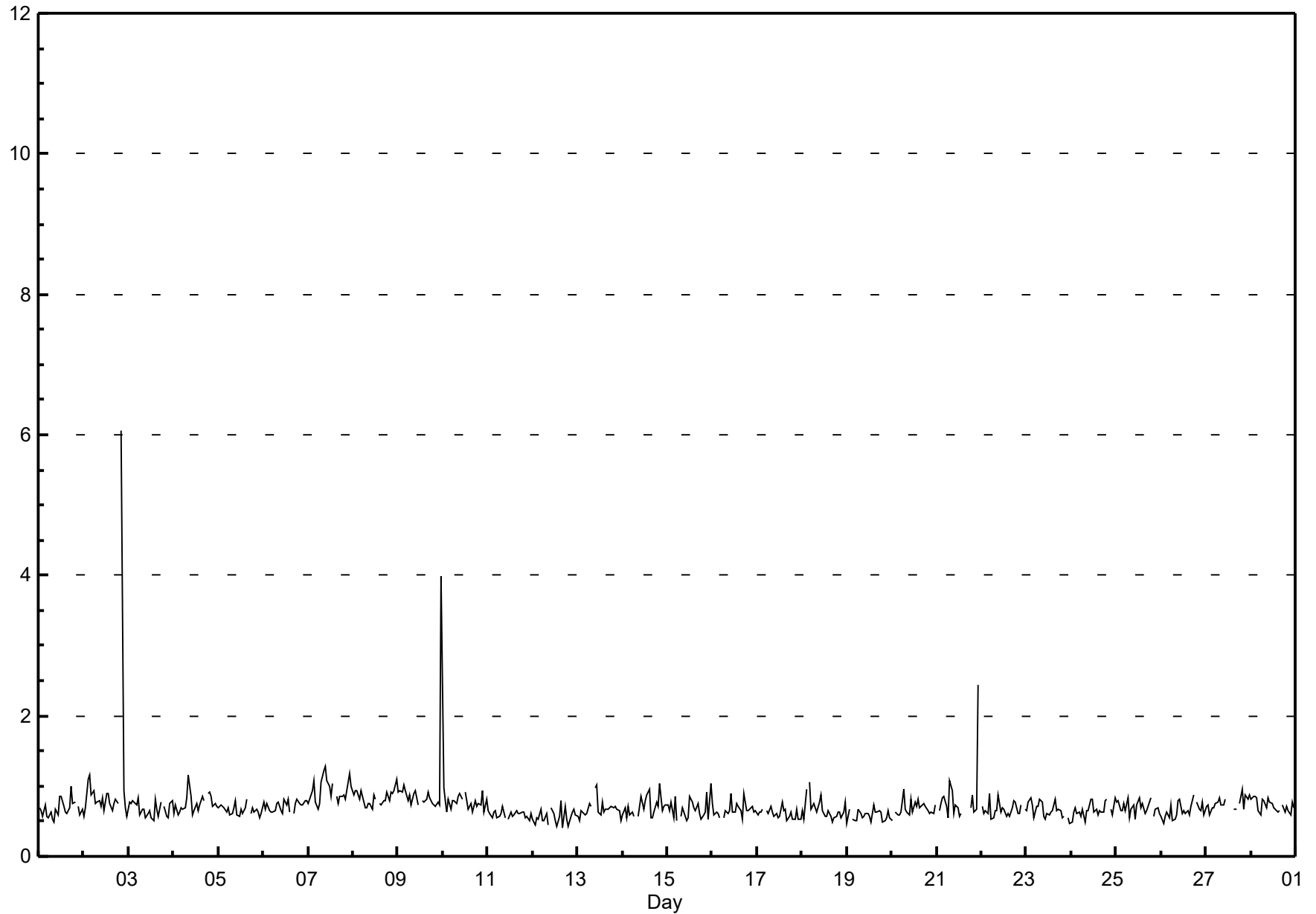
Total Reduced Sulphur (TRS) - ppb

Smoky Heights - February 2017

Maximum Value: 6.1 ppb on Feb 2 21:00																								Hours in Service: 672	
Maximum Daily Average: 1.0 ppb on Feb 2																								Hours of Data: 635	
Minimum Value: 0 ppb on Feb 12 17:00																								Hours of Missing Data: 37	
Maximum Diurnal Average: 0.9 ppb at hour 21																								Hours of Calibration: 37	
Monthly Average: 0.72 ppb																								Percent Operational Time: 100.0	
Minimum Daily Average: 0.6 ppb on Feb 12																									
Minimum Diurnal Average: 0.7 ppb at hour 17																									
Percentiles: P ₁ = 0.5 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.7 Q ₃ = 0.8 P ₉₀ = 0.9 P ₉₉ = 1.2																									
Day	Hourly Period Ending At (MST)																							Daily Average	Daily Maximum
1-Feb	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.7	1.0
2-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	6	1	1	1.0	6.1
3-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.7	0.8
4-Feb	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	1.2
5-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.7	0.8
6-Feb	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
7-Feb	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
8-Feb	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.8	1.1
9-Feb	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	4	1	1.0	4.0
10-Feb	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
11-Feb	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	0.7
12-Feb	1	0	1	1	1	1	1	1	0	A	1	1	1	0	1	1	0	1	1	0	1	1	1	0.6	0.8
13-Feb	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
14-Feb	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
15-Feb	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
16-Feb	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
17-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8
18-Feb	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0.7	1.1
19-Feb	0	1	A	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	1	1	1	1	0.6	0.7
20-Feb	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	1.0
21-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	C	C	C	C	1	1	1	1	2	A	0.8	2.4
22-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.7	0.9
23-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	0.7	0.8
24-Feb	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	0.8
25-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.7	0.8
26-Feb	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.6	0.9
27-Feb	1	1	1	1	1	1	1	1	1	1	C	C	C	C	1	1	A	1	1	1	1	1	1	0.8	1.0
28-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.7	0.9
0.7 0.9 0.7 0.8 0.8																								Diurnal Average	
1.0 0.9 1.1 1.2 1.1 0.9 1.0 1.1 1.2 1.3 1.1 1.0 0.9 1.0 0.9 0.8 0.9 1.0 0.9 1.0 6.1 1.1 2.4 4.0																								Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																									

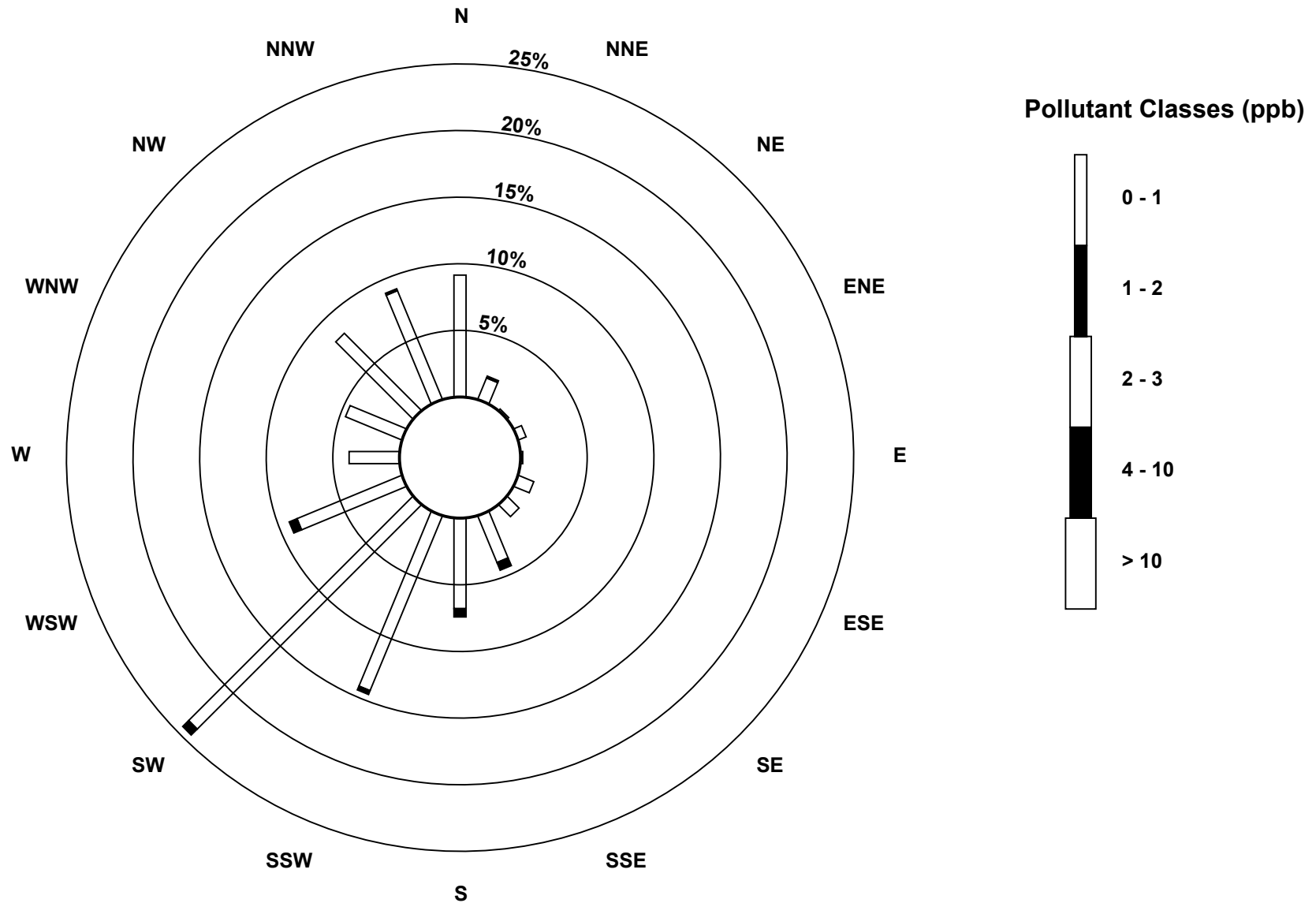
Hourly Maximums

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



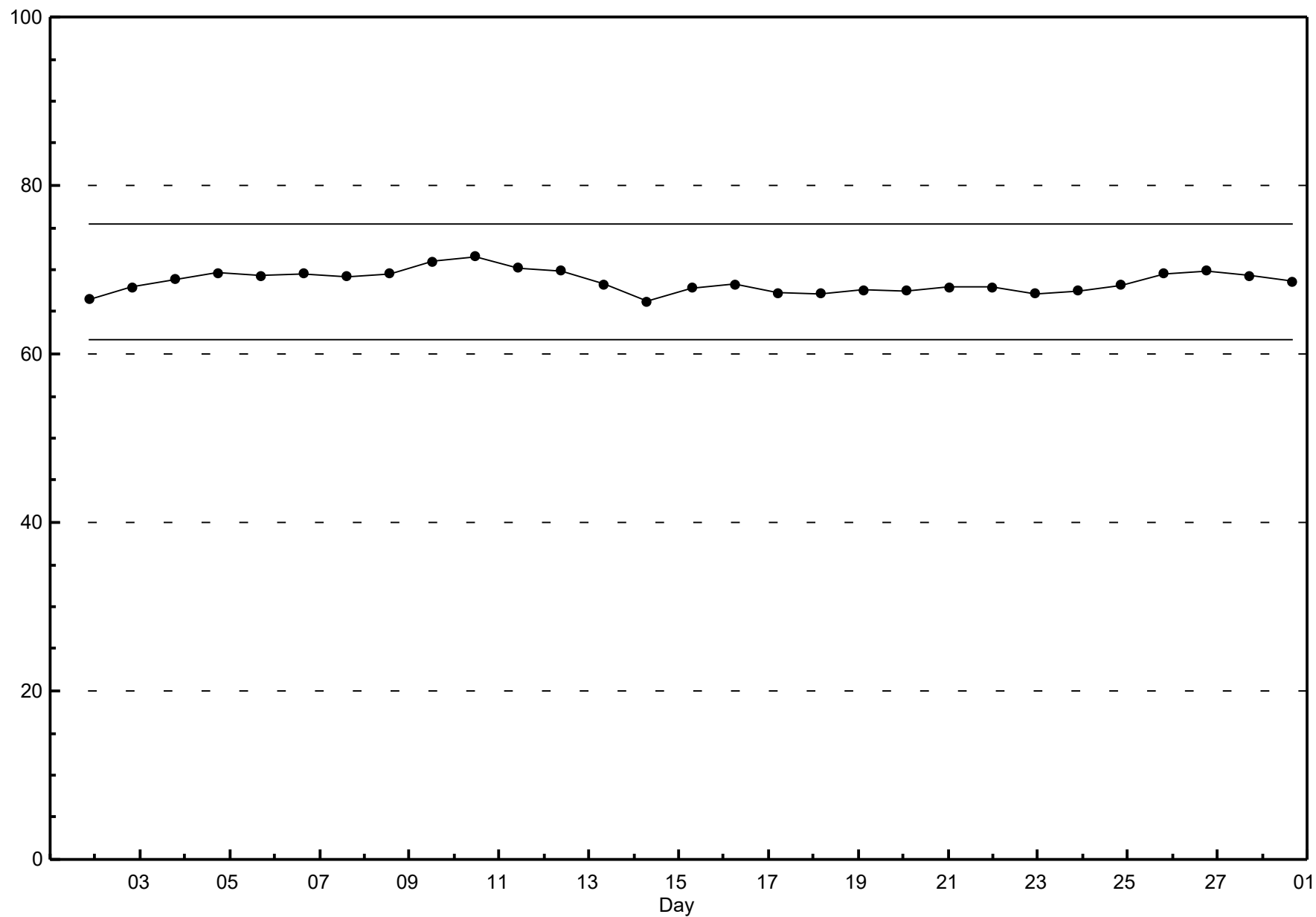
Pollutant Rose

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



Span Responses

Total Reduced Sulphur (TRS)
Smoky Heights - February 2017



Hourly Averages

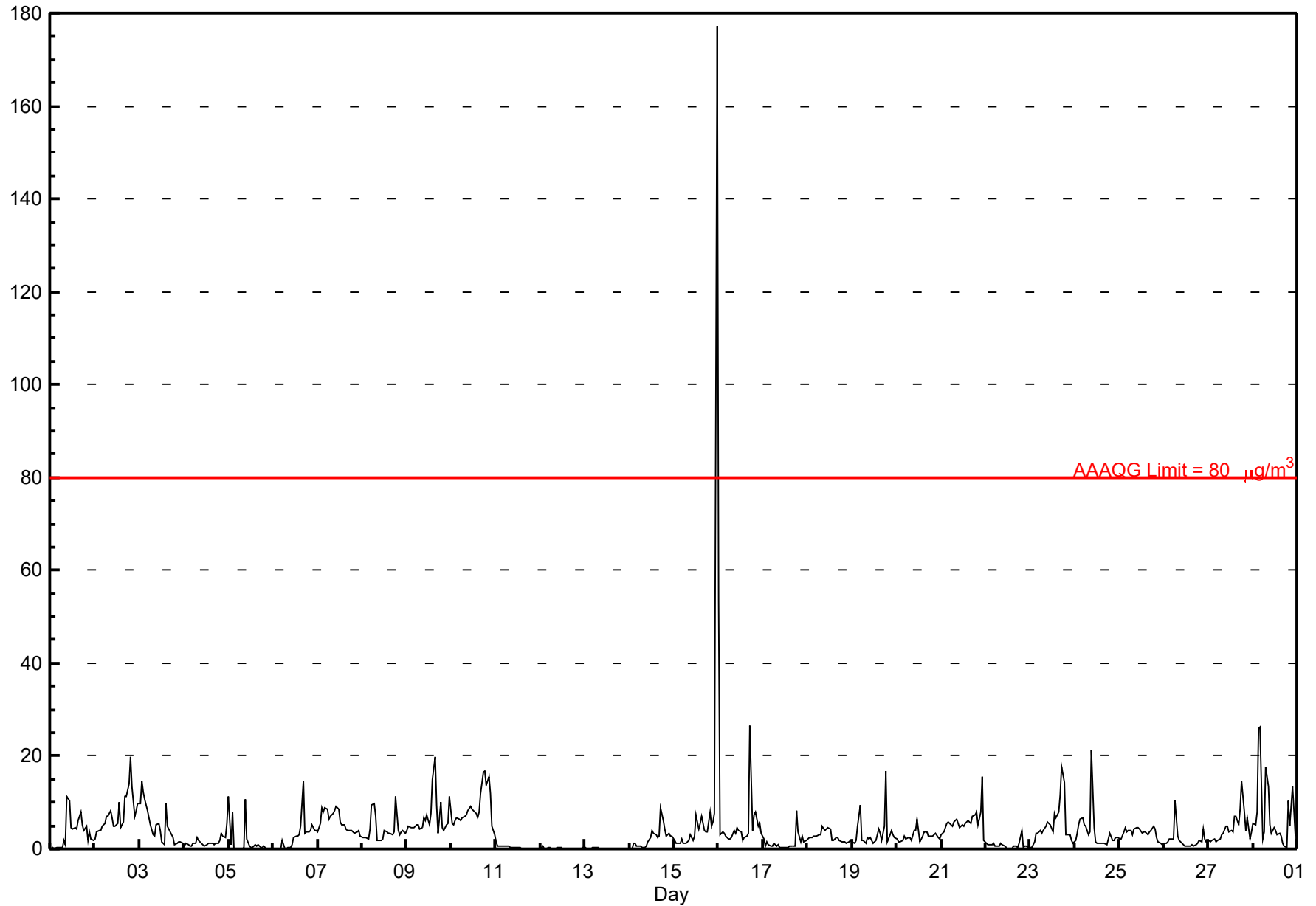
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Smoky Heights - February 2017

Number of Exceedences: 1-hr: 1 24-hr: 0 Maximum Value: 177.2 µg/m³ on Feb 16 00:00 Maximum Daily Average: 10.8 µg/m³ on Feb 15																								Hours in Service: 672 Hours of Data: 672 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 0 µg/m³ on Feb 5 05:00 Maximum Diurnal Average: 8.9 µg/m³ at hour 24 Monthly Average: 3.93 µg/m³												Minimum Daily Average: 0.1 µg/m³ on Feb 13 Minimum Diurnal Average: 2.5 µg/m³ at hour 2 Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 1.0 Median = 2.7 Q ₃ = 4.9 P ₉₀ = 8.0 P ₉₉ = 19.7														
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-Feb	0	0	0	0	0	0	0	2	1	11	10	5	4	5	4	6	8	5	4	5	2	4	2	2	3.4	11.3
2-Feb	2	4	4	4	5	5	7	7	8	7	5	5	5	10	5	6	11	11	14	20	13	7	8	10	7.6	19.9
3-Feb	10	15	12	11	8	7	5	3	3	5	5	4	2	1	10	5	4	3	3	1	1	2	2	1	5.1	14.8
4-Feb	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	2	3	3	2	6	1.6	5.6
5-Feb	11	1	8	0	0	0	0	0	0	11	2	1	0	0	1	1	1	0	0	1	0	0	0	0	1.6	11.4
6-Feb	0	0	0	0	0	2	0	0	0	0	1	3	3	3	3	5	15	3	4	4	4	5	4	4	2.6	14.6
7-Feb	4	5	9	8	9	8	6	7	8	8	9	8	6	5	5	4	4	4	4	4	3	4	4	3	5.9	9.1
8-Feb	2	2	2	2	4	9	10	7	2	2	2	2	4	4	3	3	3	4	11	4	3	4	4	3	4.1	11.2
9-Feb	4	5	4	4	5	5	5	4	5	7	6	7	5	8	15	20	10	3	10	5	4	5	5	11	6.8	20.0
10-Feb	5	5	6	7	6	6	7	7	7	8	9	9	8	8	7	8	12	16	17	14	16	12	5	3	8.7	16.7
11-Feb	1	1	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.5
12-Feb	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
13-Feb	0	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
14-Feb	0	0	1	1	1	0	0	0	0	1	1	2	4	4	3	2	3	9	6	4	3	3	3	3	2.3	9.0
15-Feb	2	1	1	1	2	1	1	1	2	3	2	3	7	4	6	7	4	4	4	8	5	6	7	177	10.8	177.2
16-Feb	54	3	4	3	3	2	2	2	4	3	5	4	4	2	2	3	3	26	4	7	8	5	5	3	6.8	53.5
17-Feb	2	1	1	1	0	1	1	1	1	0	0	0	0	0	0	1	1	1	8	4	2	3	1	2	1.3	8.3
18-Feb	2	2	3	3	3	3	3	3	5	4	4	5	4	2	2	2	2	2	2	1	1	1	2	2	2.6	4.7
19-Feb	2	1	2	5	9	2	2	1	2	2	2	1	2	2	4	3	2	5	17	1	3	4	3	2	3.4	16.7
20-Feb	2	2	1	2	3	2	2	2	2	4	4	6	1	2	3	4	4	3	3	3	3	4	2	2	2.7	6.5
21-Feb	3	4	5	5	6	5	5	6	6	6	5	5	5	6	6	6	6	7	7	8	5	8	16	2	5.9	15.6
22-Feb	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	0	0	1	4	0	1	1	0	0.8	4.1
23-Feb	0	0	1	3	3	4	3	4	5	6	6	5	4	8	7	8	11	18	14	3	3	3	2	1	5.1	17.7
24-Feb	2	3	5	7	7	5	5	3	4	21	5	1	1	1	1	1	1	1	2	3	2	2	3	2	3.7	21.2
25-Feb	2	2	4	5	4	4	4	3	4	4	5	4	3	4	4	3	4	4	5	4	2	1	1	1	3.4	4.7
26-Feb	1	1	1	2	2	2	10	3	2	2	1	1	1	1	1	1	1	1	1	2	2	4	2	2	1.9	10.2
27-Feb	2	2	2	2	1	2	2	3	3	5	5	4	4	4	7	7	5	9	15	8	4	7	2	4	4.4	14.7
28-Feb	5	5	8	26	26	2	4	18	13	5	3	5	4	3	3	3	1	1	0	10	5	13	8	3	7.3	26.3
4.3 2.5 3.2 3.7 4.0 2.9 3.1 3.3 3.2 4.6 3.6 3.3 3.0 3.0 3.7 3.9 4.2 5.0 5.6 4.6 3.5 3.9 3.4 8.9																								Diurnal Average		
53.5 14.8 12.2 26.0 26.3 9.4 10.2 17.8 13.4 21.2 10.2 8.7 8.2 10.0 15.1 20.0 14.6 26.5 16.7 19.9 15.7 13.4 15.6 177.2																								Diurnal Maximum		
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																										

Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Smoky Heights - February 2017



Hourly Maximums

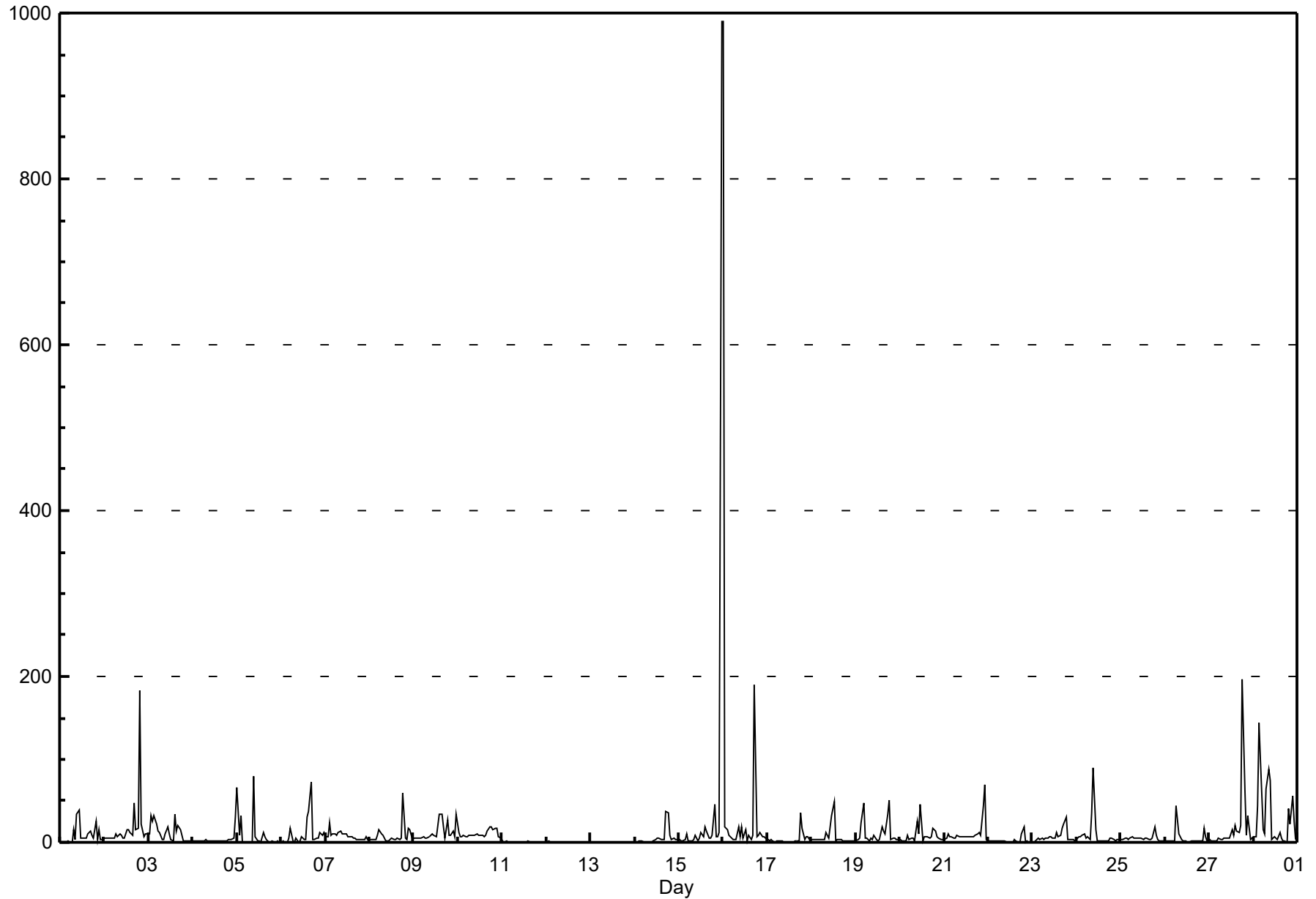
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Smoky Heights - February 2017

Maximum Value: 990.0 μg/m ³ on Feb 16 00:00																					Maximum Daily Average: 57.2 μg/m ³ on Feb 16					Hours in Service: 672	
Minimum Value: 0 μg/m ³ on Feb 6 01:00																					Minimum Daily Average: 0.2 μg/m ³ on Feb 13					Hours of Data: 672	
Maximum Diurnal Average: 40.7 μg/m ³ at hour 1																					Minimum Diurnal Average: 4.5 μg/m ³ at hour 2					Hours of Missing Data: 0	
Monthly Average: 11.84 μg/m ³																					Percentiles: P ₁ = 0.0 P ₁₀ = 0.4 Q ₁ = 1.4 Median = 4.1 Q ₃ = 8.4 P ₉₀ = 18.6 P ₉₉ = 90.9					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-Feb	0	1	0	0	1	1	1	16	4	34	39	6	5	6	6	10	13	9	6	26	3	15	3	4	8.6	38.6	
2-Feb	5	4	5	5	6	6	11	8	11	9	6	6	15	15	11	9	48	15	16	183	22	8	10	10	18.4	182.7	
3-Feb	11	32	26	32	22	14	11	4	3	10	18	10	4	2	34	14	20	16	8	1	2	2	2	2	12.6	34.4	
4-Feb	1	1	1	1	1	2	2	4	2	2	1	1	1	1	1	1	1	2	2	3	4	4	5	31	3.2	30.5	
5-Feb	66	8	33	0	0	0	0	0	0	79	7	1	1	0	12	6	4	0	0	2	0	0	2	0	9.4	79.1	
6-Feb	0	1	0	1	5	16	1	0	4	1	2	7	4	3	30	37	73	4	4	5	5	13	8	11	9.8	72.7	
7-Feb	8	8	23	9	10	10	8	12	14	10	10	10	7	7	6	5	4	4	4	4	4	4	6	3	7.9	23.4	
8-Feb	3	3	3	3	8	16	11	9	4	2	2	3	5	4	4	5	4	5	59	5	3	16	16	4	8.2	59.1	
9-Feb	4	5	6	5	5	6	6	5	7	8	10	8	6	20	33	35	19	5	28	9	9	13	6	35	12.2	34.6	
10-Feb	11	6	7	9	7	7	8	8	8	9	10	9	9	9	8	9	13	18	19	15	17	17	7	5	10.1	19.0	
11-Feb	2	1	1	1	1	1	1	1	1	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0.6	2.4	
12-Feb	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9	
13-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	0.7	
14-Feb	1	1	2	1	1	1	1	0	1	1	2	4	6	5	3	3	3	38	36	9	4	4	4	4	5.6	37.6	
15-Feb	3	2	1	3	10	1	2	2	3	8	2	4	12	7	18	14	6	6	8	46	6	8	12	990	48.9	990.0	
16-Feb	990	18	15	9	6	3	4	3	19	8	18	5	16	2	9	4	9	190	6	9	11	6	7	5	57.2	990.0	
17-Feb	3	1	3	2	1	1	2	1	1	1	0	1	1	1	1	1	1	35	17	3	8	7	2	2	3.9	35.1	
18-Feb	3	3	3	3	3	3	3	3	11	5	18	33	50	2	3	3	3	2	2	2	2	2	2	2	6.9	49.6	
19-Feb	2	3	6	23	47	6	5	1	5	4	8	3	2	3	19	14	9	34	51	4	5	5	4	3	11.1	51.5	
20-Feb	3	2	2	2	9	3	4	4	2	26	11	46	2	8	7	6	6	7	17	14	6	4	4	3	8.2	45.6	
21-Feb	3	5	10	6	6	6	5	8	7	7	6	7	7	7	7	6	6	8	9	12	8	44	69	3	11.0	69.3	
22-Feb	1	1	1	1	1	1	1	1	1	1	1	0	0	0	3	1	1	0	10	18	0	1	1	0	2.1	18.3	
23-Feb	0	1	4	5	4	5	4	4	6	7	6	6	5	13	8	9	17	21	30	4	3	3	3	1	7.0	30.2	
24-Feb	5	7	7	8	10	6	6	4	36	90	16	2	1	1	2	1	2	1	5	5	3	2	3	3	9.4	90.3	
25-Feb	3	3	5	5	4	4	7	5	6	5	5	5	4	4	5	3	4	4	19	9	3	2	1	1	4.9	18.8	
26-Feb	1	1	2	2	2	2	44	10	7	4	2	1	1	1	1	1	1	1	2	2	2	18	7	2	4.9	44.2	
27-Feb	3	2	2	2	2	5	3	3	5	6	5	5	16	8	20	13	12	20	197	63	8	32	3	5	18.3	196.6	
28-Feb	6	6	43	145	101	15	10	64	89	74	4	7	5	4	11	6	2	1	0	41	23	56	25	4	30.9	144.6	
40.7 4.5 7.6 10.2 9.8 5.0 5.8 6.5 9.1 14.7 7.5 6.8 6.5 4.7 9.4 7.7 10.0 14.8 20.5 18.1 5.6 10.3 7.7 40.5																									Diurnal Average		
990.0 32.4 43.4 144.6 100.6 16.3 44.2 64.2 88.9 90.3 38.6 45.6 49.6 20.0 34.4 36.6 72.7 190.0 196.6 182.7 22.7 56.2 69.3 990.0																									Diurnal Maximum		

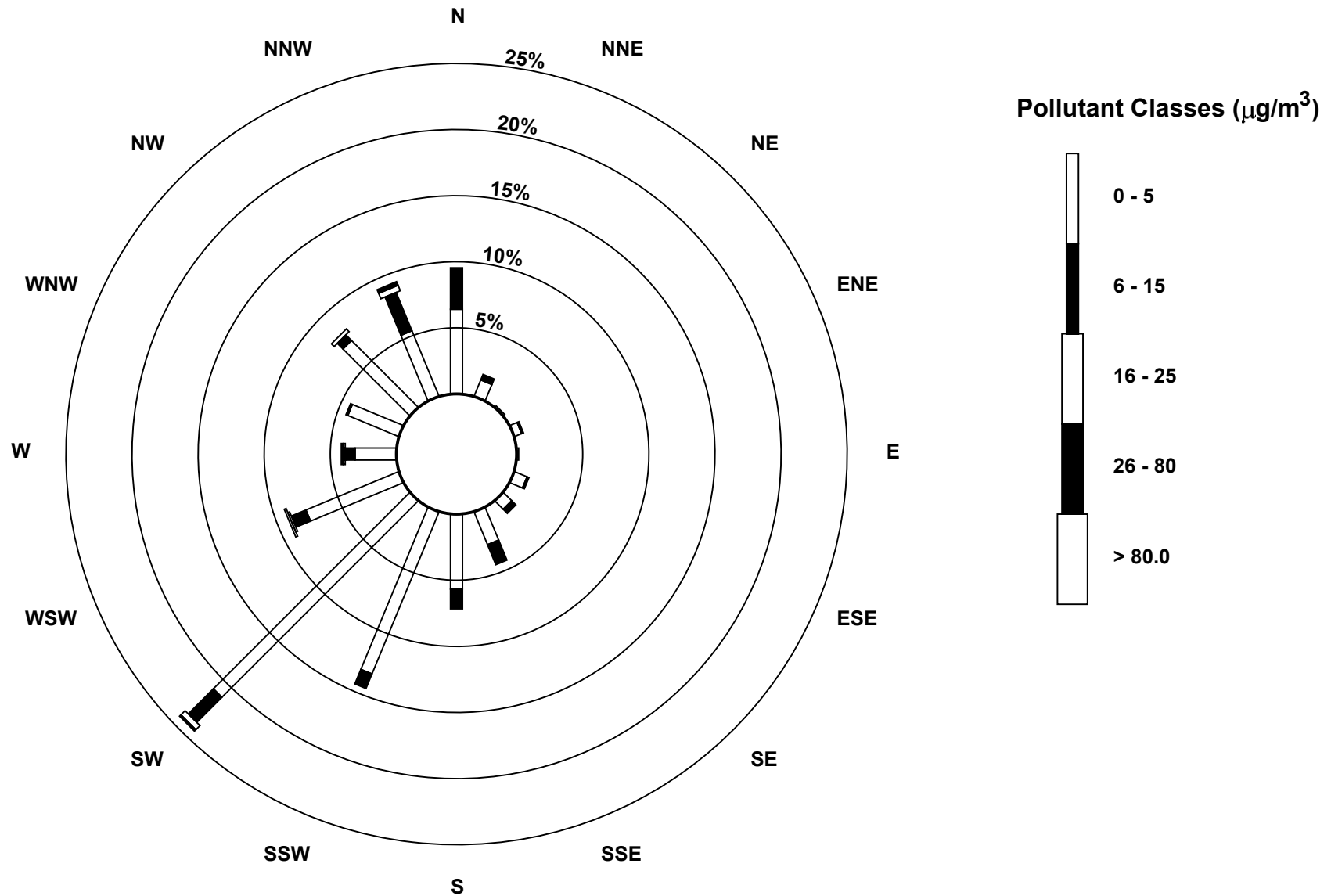
Hourly Maximums

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Smoky Heights - February 2017



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Smoky Heights - February 2017



Hourly Averages

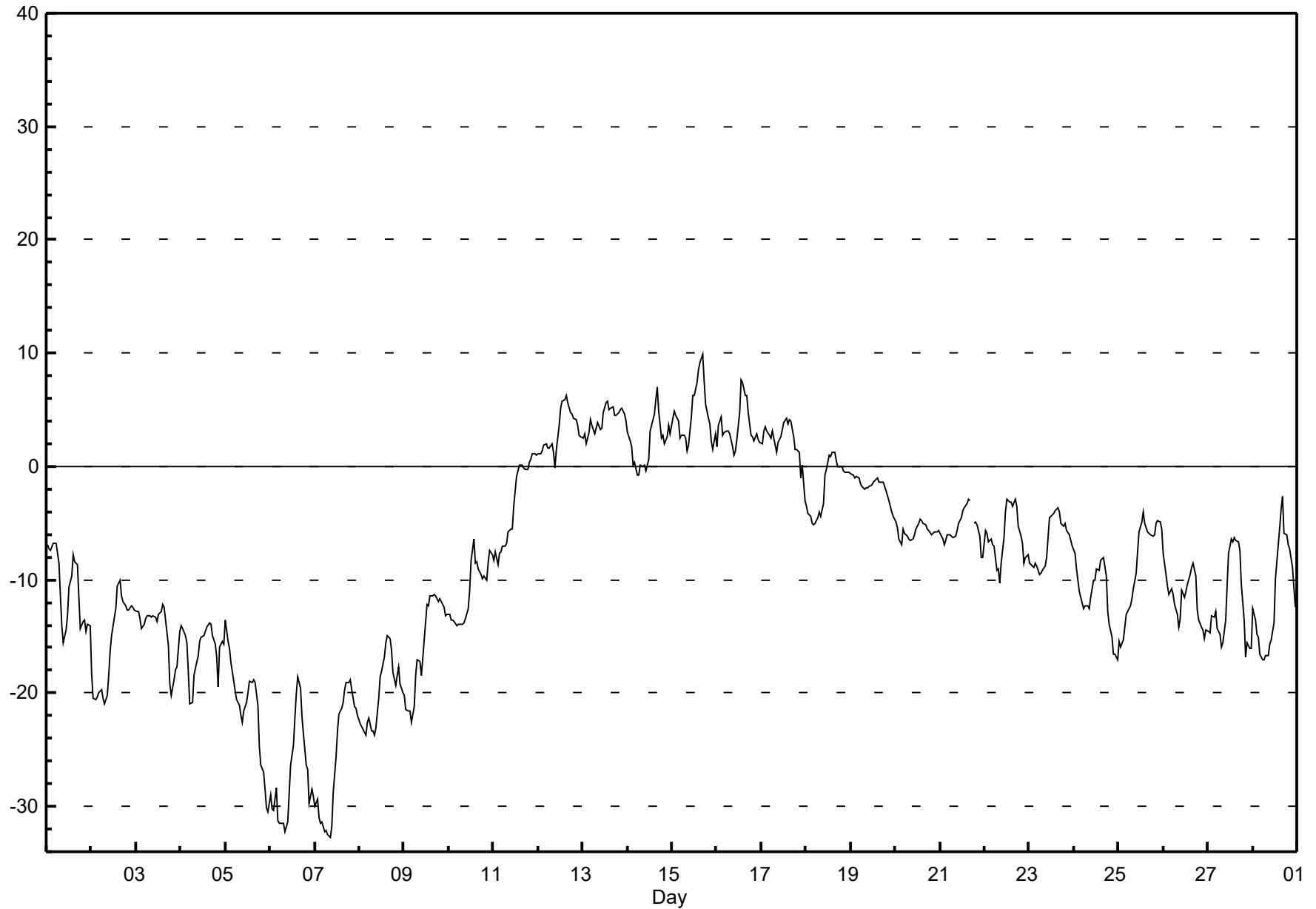
External Temperature (ET) - °C

Smoky Heights - February 2017

Maximum Value: 9.9 °C on Feb 15 17:00		Maximum Daily Average: 4.6 °C on Feb 15		Hours in Service: 672																							
Minimum Value: -33 °C on Feb 7 09:00		Minimum Daily Average: -27.2 °C on Feb 6		Hours of Data: 671																							
Maximum Diurnal Average: -5.3 °C at hour 16		Minimum Diurnal Average: -11.1 °C at hour 9		Hours of Missing Data: 1																							
Monthly Average: -8.74 °C		Percentiles: P ₁ = -31.5 P ₁₀ = -20.9 Q ₁ = -14.7 Median = -8.1 Q ₃ = -0.8 P ₉₀ = 3.2 P ₉₉ = 7.4		Hours of Calibration: 0																							
				Percent Operational Time: 99.9																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Feb	-7	-7	-7	-7	-7	-7	-9	-11	-14	-16	-14	-13	-11	-10	-8	-8	-9	-12	-14	-14	-14	-15	-14	-14	-10.8	-6.7	
2-Feb	-18	-20	-21	-20	-20	-20	-20	-21	-20	-18	-16	-15	-13	-13	-11	-10	-11	-12	-12	-13	-13	-12	-12	-13	-15.6	-10.1	
3-Feb	-13	-13	-13	-14	-14	-13	-13	-13	-13	-13	-13	-14	-13	-13	-12	-12	-14	-16	-19	-20	-19	-18	-18	-15	-14.5	-12.2	
4-Feb	-14	-14	-15	-16	-18	-21	-21	-18	-18	-17	-15	-15	-15	-15	-14	-14	-14	-15	-16	-17	-19	-16	-15	-16	-16.2	-13.8	
5-Feb	-14	-15	-16	-17	-19	-20	-21	-21	-22	-23	-22	-21	-20	-19	-19	-19	-19	-21	-25	-26	-27	-29	-30	-31	-21.4	-13.5	
6-Feb	-29	-30	-30	-28	-31	-32	-32	-31	-32	-31	-29	-26	-25	-22	-20	-19	-20	-22	-24	-26	-27	-30	-28	-29	-27.2	-18.6	
7-Feb	-30	-29	-31	-31	-31	-32	-32	-32	-33	-32	-29	-26	-23	-22	-21	-21	-20	-19	-19	-19	-20	-21	-21	-22	-25.7	-18.9	
8-Feb	-23	-23	-23	-24	-23	-22	-23	-23	-24	-23	-20	-19	-18	-17	-16	-15	-15	-16	-18	-19	-18	-18	-19	-20	-20.0	-15.0	
9-Feb	-20	-21	-22	-22	-23	-21	-18	-17	-17	-18	-17	-15	-12	-12	-11	-11	-11	-12	-12	-12	-12	-13	-13	-13	-15.7	-11.3	
10-Feb	-13	-14	-14	-14	-14	-14	-14	-14	-14	-13	-13	-11	-8	-6	-8	-8	-9	-10	-10	-10	-10	-8	-7	-8	-11.0	-6.3	
11-Feb	-8	-7	-9	-8	-8	-7	-7	-7	-6	-6	-6	-3	-1	0	0	0	0	0	0	0	1	1	1	1	-3.3	1.1	
12-Feb	1	1	1	2	2	2	2	2	1	0	1	4	5	6	6	6	6	5	5	4	4	4	3	3	3.1	6.2	
13-Feb	3	3	2	3	4	4	3	3	4	3	3	5	6	6	5	5	5	5	5	5	5	5	5	4	4.1	5.8	
14-Feb	3	2	2	0	0	-1	-1	0	0	0	0	1	3	4	5	6	7	5	3	3	2	3	4	3	2.2	7.0	
15-Feb	4	5	4	4	3	3	3	3	1	2	4	6	6	7	9	9	10	8	5	4	4	2	2	3	4.6	9.9	
16-Feb	2	4	4	3	3	3	3	3	2	1	1	2	5	8	7	6	6	5	3	3	2	3	2	2	3.5	7.7	
17-Feb	2	3	3	3	3	2	3	2	1	2	3	3	4	4	4	4	4	3	2	2	1	-1	0	-3	2.3	4.3	
18-Feb	-4	-4	-4	-5	-5	-5	-4	-4	-4	-3	-1	0	1	1	1	0	0	0	0	0	-1	-1	0	-1.7	1.3		
19-Feb	-1	-1	-1	-1	-1	-1	-2	-2	-2	-2	-2	-2	-1	-1	-1	-1	-1	-1	-2	-2	-3	-4	-4	-4	-1.8	-0.7	
20-Feb	-5	-5	-6	-7	-6	-6	-6	-6	-7	-6	-6	-6	-5	-5	-5	-5	-5	-6	-6	-6	-6	-6	-6	-6	-5.7	-4.6	
21-Feb	-6	-6	-7	-6	-6	-6	-6	-6	-6	-6	-5	-4	-4	-4	-3	-3	-3	N	-5	-5	-5	-6	-8	-8	-5.5	-2.9	
22-Feb	-6	-6	-7	-6	-7	-7	-9	-9	-10	-9	-6	-4	-3	-3	-3	-4	-3	-4	-5	-6	-7	-9	-8	-8	-6.2	-2.8	
23-Feb	-9	-9	-9	-9	-9	-10	-9	-9	-9	-8	-6	-5	-4	-4	-4	-4	-4	-5	-5	-5	-6	-6	-7	-7	-6.7	-3.6	
24-Feb	-8	-9	-10	-11	-12	-13	-12	-12	-13	-12	-10	-10	-9	-9	-8	-8	-8	-10	-13	-14	-15	-17	-17	-17	-11.5	-7.7	
25-Feb	-15	-16	-15	-14	-13	-13	-12	-12	-11	-9	-8	-6	-5	-4	-5	-6	-6	-6	-6	-6	-5	-5	-5	-6	-8.7	-4.0	
26-Feb	-8	-10	-11	-11	-11	-11	-12	-13	-14	-13	-11	-11	-11	-10	-10	-9	-9	-10	-13	-14	-14	-14	-15	-14	-11.6	-7.6	
27-Feb	-15	-15	-13	-13	-13	-14	-15	-16	-16	-14	-11	-8	-6	-7	-6	-7	-7	-7	-10	-14	-17	-16	-16	-16	-12.1	-6.3	
28-Feb	-13	-14	-15	-15	-17	-17	-17	-17	-17	-16	-15	-14	-10	-8	-5	-4	-3	-6	-6	-7	-7	-9	-11	-12	-11.4	-2.7	
		-9.3	-9.7	-10.1	-10.2	-10.4	-10.7	-10.8	-10.9	-11.1	-10.7	-9.4	-8.1	-6.7	-6.0	-5.5	-5.3	-5.4	-6.6	-7.8	-8.3	-8.7	-9.0	-9.3	-9.5	Diurnal Average	
		4.3	4.9	4.5	3.9	4.2	3.7	3.1	3.4	3.9	3.2	4.3	6.3	6.3	7.7	8.5	9.2	9.9	7.5	5.4	4.7	5.0	5.1	4.7	4.0	Diurnal Maximum	
N - Not Valid																											

Hourly Averages

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



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Smoky Heights - February 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	15	11	11	14	13	9	13	2	6	9	9	10	6	6	4	7	4	5	9	12	14	14	13	12	9.0	15.0
Dir	280	274	272	275	273	288	279	223	231	232	231	232	220	223	247	244	250	238	235	248	262	250	253	247	255.3	280.0
2 Spd	8	7	9	7	10	12	9	8	8	10	8	6	6	5	4	3	4	2	1	2	3	5	5	5	4.0	11.7
Dir	247	205	178	188	188	178	166	163	173	184	176	159	156	134	145	146	120	130	197	325	17	15	11	6	172.6	178.2
3 Spd	7	6	6	6	6	8	7	10	13	12	13	14	16	15	10	12	8	5	6	8	11	5	5	10	7.3	16.4
Dir	356	348	337	337	331	330	333	322	320	336	337	344	351	359	341	350	343	306	244	242	246	226	187	293	326.7	351.0
4 Spd	12	11	12	7	2	2	6	9	9	10	12	14	16	20	21	21	17	15	13	11	5	9	4	5	9.1	21.2
Dir	294	309	314	314	307	170	211	236	237	232	222	211	210	218	217	228	218	221	218	236	212	283	245	304	236.0	217.1
5 Spd	12	14	15	20	16	13	15	12	8	7	10	8	5	3	7	7	4	4	4	6	6	5	4	3	7.0	20.0
Dir	341	357	357	8	10	8	8	1	14	350	336	333	358	17	2	354	326	308	285	266	254	248	245	208	348.9	8.3
6 Spd	N	1	2	4	2	2	3	3	3	0	2	3	2	1	6	7	8	7	6	5	6	2	5	8	2.1	8.4
Dir	N	310	194	258	334	13	343	334	5	103	154	120	122	103	356	354	339	321	317	305	309	165	222	243	315.9	243.0
7 Spd	8	9	8	9	8	10	13	12	6	10	6	5	6	9	17	18	17	16	13	14	11	8	13	9	9.4	18.0
Dir	223	216	166	162	167	178	184	174	188	162	156	156	150	184	210	212	213	219	217	230	234	221	246	234	201.8	212.2
8 Spd	13	14	15	15	18	14	13	15	13	12	13	16	14	12	15	15	12	11	12	11	12	14	15	14	12.6	17.8
Dir	242	237	238	224	232	203	189	185	171	164	172	208	213	224	215	230	232	239	233	222	232	242	241	234	218.3	231.6
9 Spd	15	12	9	7	5	8	8	7	6	2	3	8	10	12	14	12	14	14	10	9	8	7	10	7	4.1	14.8
Dir	226	221	212	170	201	216	224	217	218	357	306	355	356	1	348	342	348	358	343	354	357	348	337	334	316.3	226.1
10 Spd	6	4	4	7	10	10	10	10	10	13	9	5	2	3	9	6	6	9	9	12	15	23	20	20	3.9	22.6
Dir	343	22	352	354	357	1	351	354	354	355	1	2	70	214	228	221	212	236	236	223	214	220	223	220	269.8	220.0
11 Spd	21	24	26	26	25	26	27	26	27	23	23	24	28	33	29	28	32	26	28	25	23	25	23	35	26.3	34.5
Dir	225	217	215	219	222	220	216	213	215	211	213	212	214	216	214	213	216	216	202	199	213	204	211	203	213.3	203.4
12 Spd	38	31	29	22	20	16	23	29	17	4	15	16	24	26	33	46	43	36	43	43	38	32	29	25	27.6	46.4
Dir	203	195	205	199	186	185	193	205	197	152	216	189	191	204	211	221	217	216	216	215	219	217	218	225	208.3	220.7
13 Spd	19	21	22	24	31	21	13	20	28	17	18	27	26	20	15	16	15	16	20	23	25	23	21	19	20.6	31.4
Dir	211	224	235	229	218	219	214	221	229	223	222	227	235	226	199	201	195	198	218	227	223	235	226	208	220.9	217.7
14 Spd	15	15	8	5	6	8	9	11	9	10	10	12	10	7	8	5	4	4	4	3	7	7	5	5	7.0	15.1
Dir	205	184	160	211	219	234	209	205	187	195	198	208	213	190	181	114	137	275	242	251	214	227	207	185	201.0	205.0
15 Spd	12	7	8	4	4	5	3	4	3	4	7	9	13	8	13	9	7	14	8	10	13	6	8	2	5.7	13.6
Dir	169	187	205	306	344	351	328	331	254	203	213	211	219	222	231	225	237	224	231	242	249	191	155	237	224.2	223.9
16 Spd	2	7	10	10	9	8	9	7	3	3	0	3	5	4	4	2	5	8	11	11	12	12	13	14	3.5	13.9
Dir	218	291	353	349	345	340	345	344	324	290	284	142	146	174	258	337	215	263	202	254	233	209	213	232	264.3	231.8
17 Spd	13	20	18	17	17	14	15	8	9	17	26	26	24	26	22	20	16	11	10	7	8	8	9	9	14.4	26.2
Dir	228	235	245	229	233	234	274	232	219	223	224	229	231	223	217	229	231	242	271	289	300	258	289	211	235.5	222.7
18 Spd	10	10	12	8	6	6	6	2	5	4	5	4	7	12	14	17	20	19	17	16	15	15	14	14	5.9	19.9
Dir	234	232	241	231	198	191	236	215	235	233	7	12	359	3	360	12	30	23	11	4	2	7	6	7	353.6	29.6
19 Spd	13	12	12	10	9	10	10	11	10	11	9	8	8	8	3	14	13	11	9	8	11	8	7	7	8.4	14.4
Dir	5	358	351	351	337	332	327	318	320	312	314	312	312	294	306	271	289	284	275	307	279	277	260	265	311.0	271.0
20 Spd	5	9	3	3	3	7	5	6	6	6	4	4	4	4	7	9	8	8	5	1	2	2	3	4	3.6	8.7
Dir	261	267	297	230	291	307	315	327	308	302	326	355	7	7	350	346	347	322	319	217	169	174	214	244	313.2	267.3
21 Spd	4	4	7	6	6	3	5	6	4	5	7	6	6	6	7	8	9	7	5	8	6	5	3	6	4.9	8.9
Dir	239	233	246	238	261	226	229	247	225	197	223	219	226	210	214	219	210	200	236	269	305	325	310	279	236.9	209.7
22 Spd	11	7	4	8	10	8	4	6	11	5	6	4	5	11	18	20	18	15	7	8	8	6	8	8	7.0	20.1
Dir	293	296	258	269	263	287	239	174	208	190	161	119	214	212	211	210	217	230	253	306	292	259	256	252	236.7	209.9

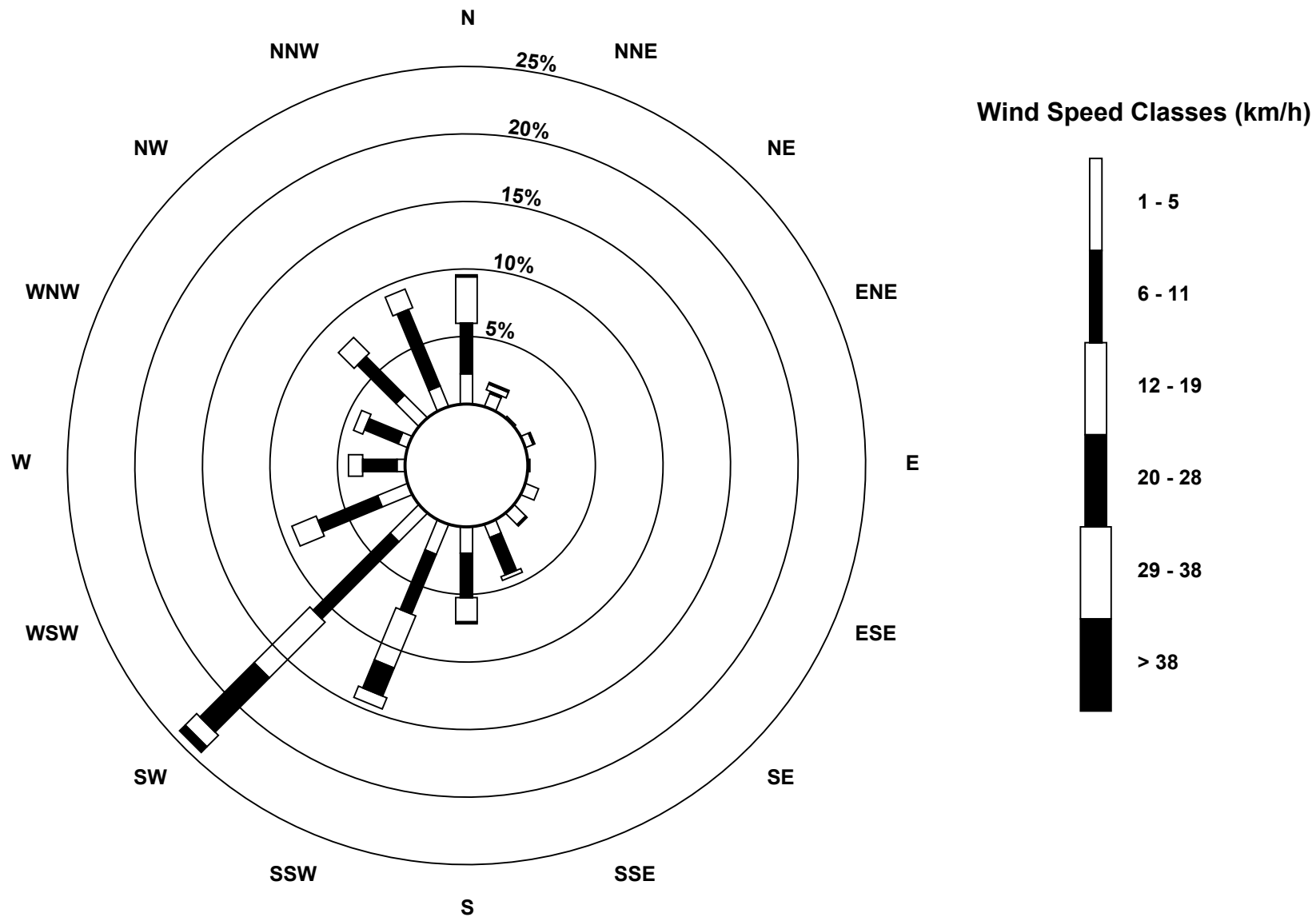
Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Smoky Heights - February 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	8	8	8	3	4	5	6	6	4	5	5	6	7	6	6	6	6	9	13	11	13	14	15	5.0	15.0								
Dir	258	253	251	257	227	214	213	165	192	173	160	164	209	223	233	223	238	232	285	315	315	307	314	313	259.3	313.1								
24 Spd	14	18	14	9	10	9	7	7	8	5	3	7	8	12	14	15	16	14	9	5	8	9	11	10	4.9	18.4								
Dir	324	348	350	0	339	324	331	327	313	344	350	198	206	206	206	221	215	213	224	224	221	218	229	219	260.7	347.5								
25 Spd	12	10	11	11	11	8	10	12	8	9	7	9	7	6	4	10	8	8	9	9	17	17	17	17	4.8	17.0								
Dir	189	199	204	193	177	156	160	164	144	161	184	224	233	192	337	334	324	306	286	279	301	310	298	301	240.6	301.1								
26 Spd	13	12	12	11	9	8	10	9	6	6	4	8	13	16	17	19	17	11	5	3	5	4	5	6	6.0	19.4								
Dir	308	307	313	287	304	310	326	323	287	245	181	204	201	204	214	206	222	211	176	211	206	215	180	158	242.3	205.9								
27 Spd	7	10	7	8	10	8	4	5	5	6	4	2	5	8	9	10	10	8	7	4	8	8	10	11	2.7	11.5								
Dir	162	178	203	203	174	165	176	200	188	228	204	132	5	0	347	343	335	330	336	333	254	237	249	243	242.3	242.8								
28 Spd	9	7	4	8	7	7	9	7	5	5	5	2	1	3	3	1	3	8	6	4	8	11	15	18	3.6	17.9								
Dir	228	177	269	349	339	333	337	343	352	34	75	164	72	104	268	288	59	94	73	18	2	347	340	339	352.3	339.2								
Spd	7.4	6.6	6.1	5.4	5.1	4.2	4.4	4.6	5.0	4.1	4.7	5.7	6.1	6.6	7.3	7.7	7.0	6.9	7.1	7.2	7.9	7.2	7.3	7.5	Diurnal Average									
Dir	242.4	240.3	246.6	248.3	243.3	243.2	244.3	230.1	229.7	224.2	221.0	218.9	222.4	221.0	228.4	236.6	235.5	239.6	238.3	248.8	251.2	245.8	247.6	246.6	Diurnal Maximum									
Spd	37.6	31.3	28.8	25.7	31.4	26.3	27.1	28.9	27.5	23.1	25.7	26.7	28.0	32.6	33.4	46.4	42.8	35.9	43.2	42.7	38.4	32.1	28.6	34.5	Diurnal Maximum									
Dir	202.9	195.4	205.0	219.2	217.7	220.3	215.8	204.5	229.3	211.0	224.3	226.9	213.9	216.1	211.2	220.7	216.8	215.7	215.6	215.3	219.0	217.2	217.7	203.4	Diurnal Maximum									
Maximum Speed Value: 46 km/h on Feb 12 16:00																				Minimum Speed Value: 0 km/h on Feb 6 10:00										Hours in Service:				672
Maximum Daily Speed Average: 27.6 km/h on Feb 12																				Minimum Daily Speed Average: 2.1 km/h on Feb 6										Hours of Data:				671
Maximum Diurnal Speed Average: 7.9 km/h at hour 21																				Minimum Diurnal Speed Average: 4.1 km/h at hour 10										Hours of Missing Data:				1
Monthly Average Velocity: 6.12 km/h 237.96 deg																				Speed Percentiles: P ₁ = 1.1 P ₁₀ = 3.7 Q ₁ = 5.9 Median = 8.8 Q ₃ = 13.4 P ₉₀ = 20.0 P ₉₉ = 35.5										Percent Operational Time:				99.9
All monthly, daily, and diurnal averages have been calculated using vector methods																																		
N - Not Valid																																		
Frequency Distribution																																		
Speed Range (km/h)																																		
Direction	0 to 5		5 to 11		11 to 19		19 to 28		28 to 38		> 38		Total																					
North	22		48		34		1		0		0		105																					
NorthEast	2		0		0		2		0		0		4																					
East	6		2		0		0		0		0		8																					
SouthEast	16		6		0		0		0		0		22																					
South	18		50		21		6		1		0		96																					
SouthWest	32		98		73		49		13		5		270																					
West	15		41		14		0		0		0		70																					
NorthWest	22		54		20		0		0		0		96																					
Total	133		299		162		58		14		5		671																					

Wind Rose

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



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Smoky Heights - February 2017

Maximum Speed: 46 km/h on Feb 12 16:00		Maximum Daily Speed Average: 28.5 km/h on Feb 12		Hours in Service: 672																						
Minimum Speed: 1 km/h on Feb 2 19:00		Minimum Daily Speed Average: 4.5 km/h on Feb 6		Hours of Data: 671																						
Maximum Diurnal Speed Average: 13.3 km/h at hour 16		Minimum Diurnal Speed Average: 8.7 km/h at hour 10		Hours of Missing Data: 1																						
Monthly Average Speed: 10.90 km/h		Percentiles: P ₁ = 2.3 P ₁₀ = 4.4 Q ₁ = 6.3 Median = 8.9 Q ₃ = 13.6 P ₉₀ = 20.1 P ₉₉ = 35.5		Percent Operational Time: 99.9																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Feb	15	11	11	14	13	10	13	6	6	9	9	10	7	6	5	7	4	5	9	12	14	14	13	12	9.8	15.1
2-Feb	8	8	9	8	10	12	9	8	8	10	8	6	6	5	4	4	4	2	1	3	3	5	5	5	6.3	11.8
3-Feb	7	6	6	6	6	8	7	10	13	12	14	15	17	15	10	12	8	5	6	8	11	6	5	10	9.4	16.9
4-Feb	12	11	12	7	5	3	6	9	9	10	12	14	16	21	21	21	17	15	13	11	6	10	8	6	11.5	21.4
5-Feb	12	14	15	20	16	13	15	12	8	8	10	8	5	4	7	7	4	4	5	6	7	5	4	4	8.9	20.1
6-Feb	N	2	3	5	4	3	4	3	5	3	2	3	2	2	6	7	8	7	6	5	6	3	5	9	4.5	9.1
7-Feb	8	9	8	9	8	10	13	12	8	10	6	5	6	10	17	18	17	16	13	14	11	8	13	10	10.8	18.0
8-Feb	13	14	16	15	18	14	13	15	14	12	13	17	14	12	16	15	12	11	12	11	12	14	16	14	13.9	17.9
9-Feb	15	13	11	9	6	8	9	7	6	4	7	8	11	12	14	12	14	10	9	8	7	10	7	7	9.6	15.3
10-Feb	6	4	4	7	10	10	10	10	11	13	9	5	3	3	9	6	7	9	9	12	15	23	20	20	9.8	23.2
11-Feb	21	24	26	26	25	26	27	26	28	23	23	24	28	33	29	28	32	27	28	25	23	26	24	35	26.5	34.6
12-Feb	38	31	29	22	20	16	23	29	17	7	15	16	25	26	33	46	43	36	43	43	38	32	29	25	28.5	46.5
13-Feb	19	21	22	24	31	21	14	20	28	18	18	27	26	21	15	17	15	16	20	24	26	23	21	20	21.1	31.4
14-Feb	16	16	8	5	6	8	9	11	9	10	10	12	11	7	8	6	5	4	4	5	7	8	5	6	8.2	15.9
15-Feb	12	8	8	5	5	5	4	5	4	4	7	10	13	9	13	10	8	14	9	10	14	6	8	4	8.1	14.3
16-Feb	5	8	11	11	9	8	9	7	4	4	3	4	5	4	5	5	8	8	11	11	12	13	14	14	8.0	14.1
17-Feb	13	20	18	17	17	14	16	8	9	17	26	26	24	26	22	20	16	12	10	7	8	8	9	9	15.5	26.3
18-Feb	10	10	12	8	6	7	7	4	6	5	5	5	7	12	14	17	20	19	17	16	16	15	15	14	11.1	20.1
19-Feb	13	12	12	10	9	10	10	11	10	11	9	9	9	8	4	15	13	11	10	8	11	8	7	7	10.0	14.5
20-Feb	5	9	3	3	4	7	5	6	6	6	4	4	4	5	8	9	9	8	5	2	2	2	3	4	5.1	8.9
21-Feb	4	5	7	7	6	4	6	6	4	5	7	6	6	6	7	8	9	7	6	8	6	5	3	6	6.0	8.9
22-Feb	11	7	5	8	10	9	5	6	11	6	6	4	6	11	19	20	18	15	8	8	8	6	8	8	9.3	20.2
23-Feb	7	8	8	8	4	5	5	6	6	4	5	5	6	7	6	6	6	7	10	13	12	13	14	15	7.8	15.1
24-Feb	14	18	14	9	10	9	7	7	8	5	4	8	9	12	14	15	16	14	9	5	8	9	11	10	10.2	18.5
25-Feb	12	10	11	12	11	8	10	12	8	10	7	9	8	11	11	10	8	9	9	10	17	17	17	17	11.0	17.1
26-Feb	14	12	12	11	9	9	10	9	7	6	5	9	13	16	17	19	17	11	6	3	5	4	5	6	9.8	19.5
27-Feb	7	10	8	8	10	8	4	5	6	6	4	3	6	8	10	11	10	8	7	4	9	8	10	12	7.5	11.5
28-Feb	10	8	7	8	7	7	9	7	5	6	5	5	3	4	3	2	3	8	6	5	8	11	15	18	7.1	18.0
12.2		11.8	11.3	10.7	10.5	9.7	9.9	9.9	9.5	8.7	9.1	9.8	10.6	11.3	12.4	13.3	12.5	11.5	10.9	10.6	11.5	11.0	11.3	11.7	Diurnal Average	
37.8		31.4	29.0	25.8	31.4	26.4	27.2	29.1	27.6	23.1	25.8	26.8	28.0	32.6	33.5	46.5	42.9	35.9	43.2	42.8	38.5	32.2	28.7	34.6	Diurnal Maximum	
N - Not Valid																										
All monthly, daily, and diurnal averages have been calculated using scalar methods																										

Hourly Standard Deviations

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

Maximum Value: 98.5 deg on Feb 6 10:00																		Hours in Service: 672							
Minimum Value: 1.7 deg on Feb 11 10:00																		Hours of Data: 671							
Percentiles: P ₁ = 2.6 P ₁₀ = 4.5 Q ₁ = 6.1 Median = 10.1 Q ₃ = 18.0 P ₉₀ = 33.7 P ₉₉ = 77.0																		Hours of Missing Data: 1							
																		Hours of Calibration: 0							
																		Percent Operational Time: 99.9							
Day	Hourly Period Ending At (MST)																								Daily Maximum
1-Feb	5	4	6	6	6	10	5	71	28	12	8	6	23	13	29	9	10	11	6	5	6	3	6	4	71.1
2-Feb	10	25	8	12	12	6	7	12	13	10	18	8	20	17	11	17	10	21	38	46	25	11	8	5	45.9
3-Feb	6	8	7	5	6	7	9	6	5	8	6	18	16	7	8	6	12	16	12	6	4	28	25	14	27.6
4-Feb	4	8	6	16	82	58	20	9	8	15	6	6	4	5	7	4	5	4	4	4	15	26	65	40	81.6
5-Feb	13	6	10	5	7	8	9	9	8	15	6	12	23	17	12	14	17	9	34	17	33	9	14	21	33.6
6-Feb	N	36	84	34	65	36	30	24	65	98	53	33	48	75	9	7	12	5	5	10	6	71	12	15	98.5
7-Feb	9	18	16	6	13	14	6	9	45	7	8	13	11	27	5	4	3	3	3	5	5	9	7	17	44.7
8-Feb	10	5	6	5	6	14	5	5	5	3	8	13	4	5	7	10	6	7	6	11	18	11	9	14	18.1
9-Feb	15	14	30	35	33	18	11	11	14	66	71	14	14	12	6	6	6	5	8	6	11	5	8	16	70.7
10-Feb	13	28	23	13	9	5	6	7	5	5	7	12	59	46	10	12	22	6	14	7	8	12	7	7	58.9
11-Feb	7	3	4	6	9	5	4	2	4	2	2	4	3	3	4	3	2	6	8	6	5	4	5	4	8.5
12-Feb	5	6	8	4	11	9	7	6	19	58	9	10	9	7	4	4	3	3	3	3	4	4	4	5	57.7
13-Feb	4	7	4	3	2	3	8	6	3	9	7	5	4	11	9	16	9	7	4	5	5	5	5	6	16.0
14-Feb	19	18	22	12	9	12	10	11	9	14	15	7	18	13	10	29	35	40	26	47	13	23	17	28	47.4
15-Feb	16	23	15	45	34	54	55	25	73	29	19	21	8	21	10	21	19	9	24	11	28	21	12	62	72.9
16-Feb	92	43	22	20	5	8	7	9	23	45	98	27	36	35	57	78	59	26	15	21	11	5	14	11	97.9
17-Feb	7	4	3	12	3	10	11	18	6	4	3	3	4	4	7	4	3	12	6	12	5	22	26	19	26.1
18-Feb	12	13	2	8	12	17	10	61	37	48	13	23	7	6	5	13	7	6	6	5	5	14	6	5	60.9
19-Feb	5	5	4	6	7	6	8	6	9	8	11	10	13	20	44	10	10	10	6	15	14	13	14	14	44.2
20-Feb	25	12	68	32	40	11	16	10	10	18	19	20	30	16	13	9	11	18	11	58	28	26	16	23	67.9
21-Feb	15	23	13	15	22	45	17	21	17	8	11	15	18	17	16	12	5	10	36	14	11	14	51	32	50.8
22-Feb	8	10	48	23	14	16	44	19	20	37	12	28	45	11	8	7	11	5	42	23	6	15	9	6	48.0
23-Feb	6	6	8	6	23	17	19	10	5	18	15	18	15	10	12	12	11	15	30	6	6	8	8	7	29.7
24-Feb	13	7	7	7	14	6	7	10	11	15	68	21	26	12	9	11	9	3	9	8	7	6	3	11	68.1
25-Feb	7	4	4	5	6	5	6	7	6	10	16	8	10	76	77	8	10	13	18	20	6	5	7	7	77.2
26-Feb	9	6	7	12	11	12	9	10	30	23	24	13	5	6	5	4	5	7	20	11	9	8	13	5	30.1
27-Feb	5	6	7	13	8	4	14	7	23	11	17	32	54	13	20	8	8	9	23	14	21	7	5	5	53.7
28-Feb	21	24	49	18	6	5	5	6	10	34	17	65	77	72	49	64	20	10	7	33	12	8	5	5	76.6
	92.3	42.7	84.3	44.9	81.6	57.9	55.4	71.1	72.9	98.5	97.9	64.8	76.6	76.0	77.2	78.2	59.3	40.2	42.5	58.1	32.5	71.4	65.0	62.1	
N - Not Valid																									

PAZA
Beaverlodge Station
Monthly Summary Tables, Graphs and
Roses

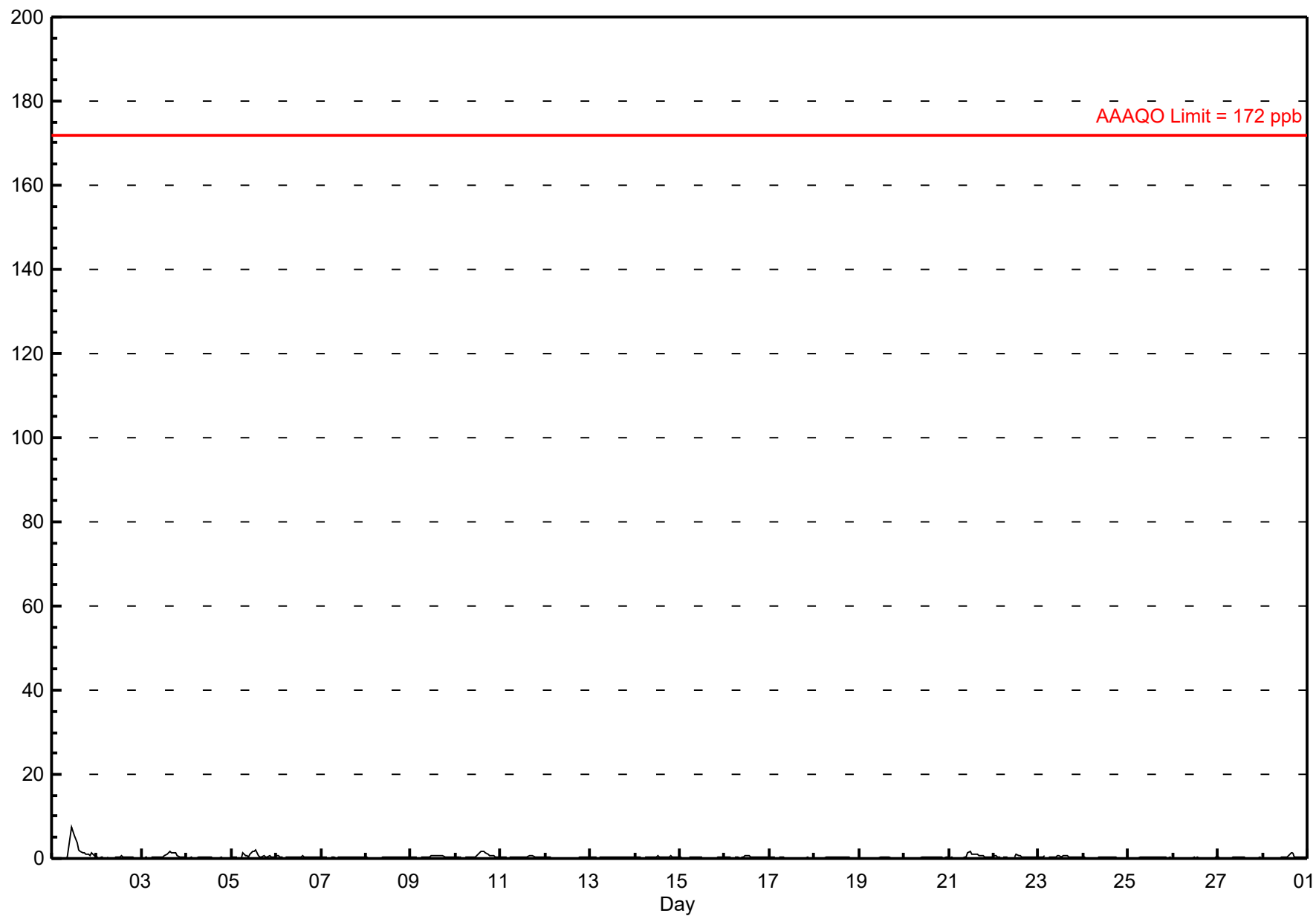
Hourly Averages

Sulphur Dioxide (SO₂) - ppb Beaverlodge - February 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 672							
Maximum Value: 7.5 ppb on Feb 1 11:00										Maximum Daily Average: 1.7 ppb on Feb 1										Hours of Data: 638							
Minimum Value: 0 ppb on Feb 1 03:00										Minimum Daily Average: 0.1 ppb on Feb 26										Hours of Missing Data: 34							
Maximum Diurnal Average: 0.7 ppb at hour 14										Minimum Diurnal Average: 0.2 ppb at hour 6										Hours of Calibration: 34							
Monthly Average: 0.36 ppb										Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.2 Q ₃ = 0.4 P ₉₀ = 0.6 P ₉₉ = 1.6										Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Feb	0	0	0	0	A	0	0	0	0	3	7	6	5	4	2	2	1	1	1	1	1	1	1	0	1.7	7.5	
2-Feb	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	0.5	
3-Feb	0	0	0	0	A	0	0	0	0	0	0	0	1	1	1	2	1	1	1	1	0	0	0	0	0.5	1.6	
4-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
5-Feb	0	0	0	0	A	0	2	1	1	0	1	2	2	2	1	0	0	1	0	1	1	0	0	0	0.7	2.2	
6-Feb	1	1	0	0	A	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0.4	0.6	
7-Feb	0	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	
8-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
9-Feb	0	0	0	0	A	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0.4	0.8	
10-Feb	0	0	0	0	A	0	0	0	0	0	0	1	1	2	2	2	1	1	1	1	1	0	0	0	0.7	1.7	
11-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0.4	0.6	
12-Feb	0	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	
13-Feb	0	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	
14-Feb	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0.4	0.5	
15-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0.2	0.4	
16-Feb	0	0	0	0	A	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0.3	0.6	
17-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
18-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
19-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
20-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
21-Feb	0	0	0	0	A	0	0	0	0	0	1	2	1	1	1	1	1	1	1	0	0	0	0	0	0.6	1.6	
22-Feb	1	1	0	0	A	0	0	0	C	C	C	0	1	1	1	0	0	0	0	0	0	0	0	0	0.4	0.9	
23-Feb	0	0	0	1	A	0	0	0	0	0	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0.4	0.8	
24-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
25-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
26-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
27-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
28-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0.3	1.3	
0.2 0.2 0.2 0.2 -- 0.2 0.2 0.2 0.2 0.3 0.6 0.7 0.6 0.7 0.6 0.5 0.5 0.4 0.3 0.3 0.3 0.3 0.3 0.2																									Diurnal Average		
0.6 0.6 0.4 0.5 -- 0.5 1.5 0.8 0.6 2.8 7.5 6.3 5.4 3.7 2.0 1.8 1.5 1.3 1.2 0.9 0.7 1.5 1.0 0.4																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																											

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - February 2017



Hourly Maximums

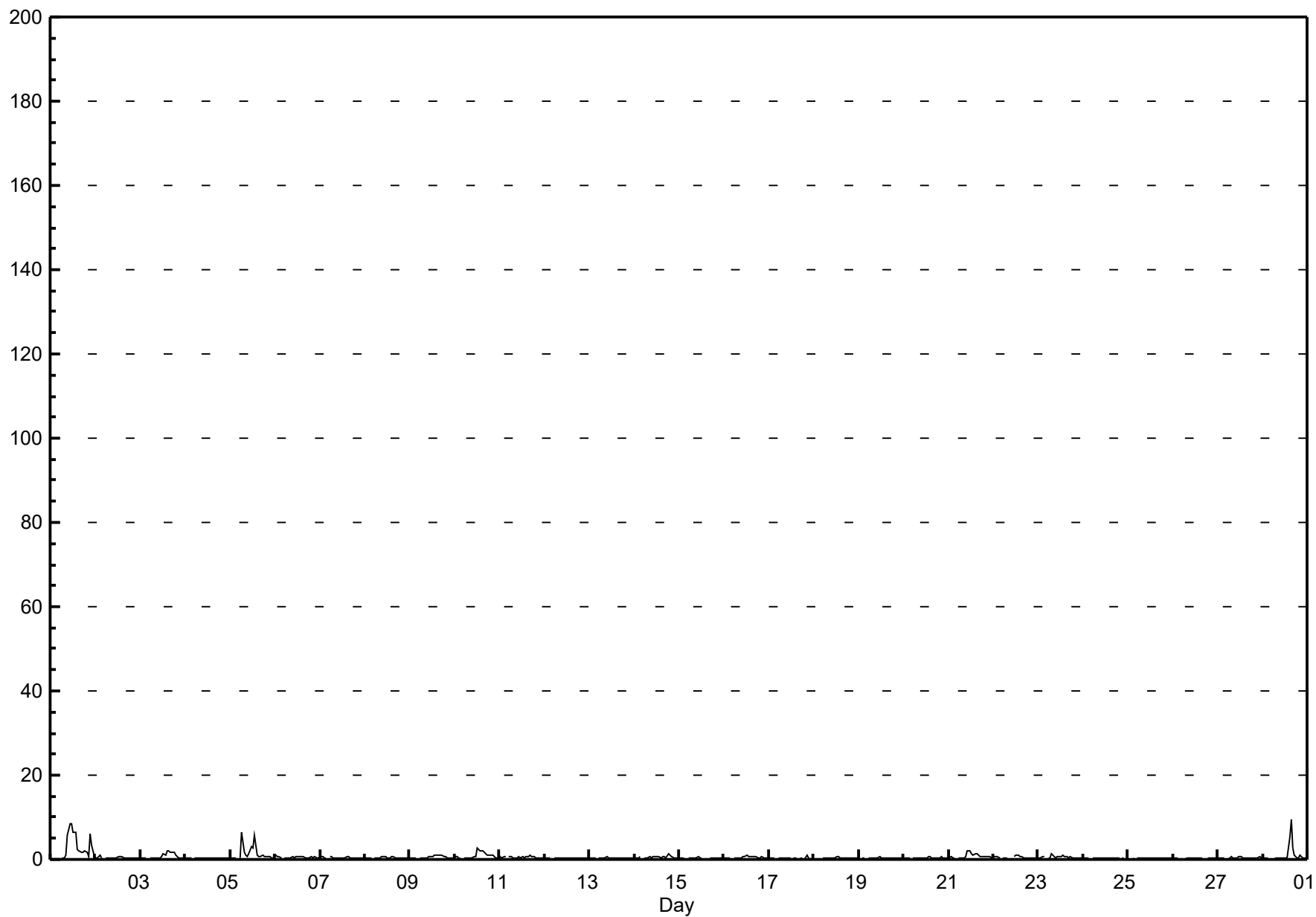
Sulphur Dioxide (SO₂) - ppb

Beaverlodge - February 2017

Maximum Value: 9.3 ppb on Feb 28 16:00																				Maximum Daily Average: 2.6 ppb on Feb 1					Hours in Service: 672	
Minimum Value: 0 ppb on Feb 25 02:00																				Minimum Daily Average: 0.2 ppb on Feb 26					Hours of Data: 638	
Maximum Diurnal Average: 1.0 ppb at hour 14																				Minimum Diurnal Average: 0.3 ppb at hour 6					Hours of Missing Data: 34	
Monthly Average: 0.57 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.4 Q ₃ = 0.5 P ₉₀ = 0.9 P ₉₉ = 6.3					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-Feb	0	0	0	0	A	0	0	0	1	6	9	9	6	6	2	2	2	2	2	2	1	6	3	1	2.6	8.6
2-Feb	0	0	1	0	A	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0.4	0.9
3-Feb	0	0	0	0	A	0	0	0	0	0	0	0	1	1	2	2	2	2	2	1	0	0	0	0	0.7	1.9
4-Feb	0	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
5-Feb	0	0	0	0	A	0	6	2	1	1	1	3	3	6	1	1	1	1	1	1	1	1	0	0	1.3	6.4
6-Feb	1	1	1	0	A	0	0	0	0	1	0	1	1	1	1	1	0	0	0	1	0	1	0	0	0.5	0.9
7-Feb	1	1	0	0	A	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0.4	0.6
8-Feb	0	0	0	0	A	0	0	0	0	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0.3	0.6
9-Feb	1	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0.6	1.0
10-Feb	1	1	0	0	A	0	0	0	0	0	1	1	3	2	2	2	2	1	1	1	1	1	0	0	0.9	2.8
11-Feb	1	0	1	1	A	1	1	0	0	0	1	1	1	0	1	1	1	1	1	0	0	0	0	0	0.6	0.9
12-Feb	0	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-Feb	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
14-Feb	0	0	0	1	A	0	0	0	1	0	1	1	1	1	1	1	0	1	1	1	1	0	0	0	0.5	1.2
15-Feb	0	0	0	0	A	0	0	0	0	0	1	0	0	C	C	C	0	0	0	0	0	0	0	0	0.3	0.6
16-Feb	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0.5	0.9
17-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.3	1.1
18-Feb	0	0	0	0	A	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0.3	0.6
19-Feb	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
20-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	1	0	0	0	0.3	0.6
21-Feb	0	1	0	0	A	0	0	0	0	1	2	2	1	1	1	1	1	1	1	1	1	1	1	0	0.8	2.0
22-Feb	1	1	1	0	A	0	0	0	C	C	C	1	1	1	1	1	0	0	0	0	0	0	0	0	0.5	1.1
23-Feb	0	0	1	1	A	0	0	1	1	0	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0.6	1.2
24-Feb	0	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
25-Feb	0	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
26-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
27-Feb	0	0	0	0	A	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0.3	0.8
28-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	5	9	3	1	0	0	1	0	0	0	1.1	9.3
Diurnal Average																										
Diurnal Maximum																										
C - Calibration A - Automated Daily Zero Span																										

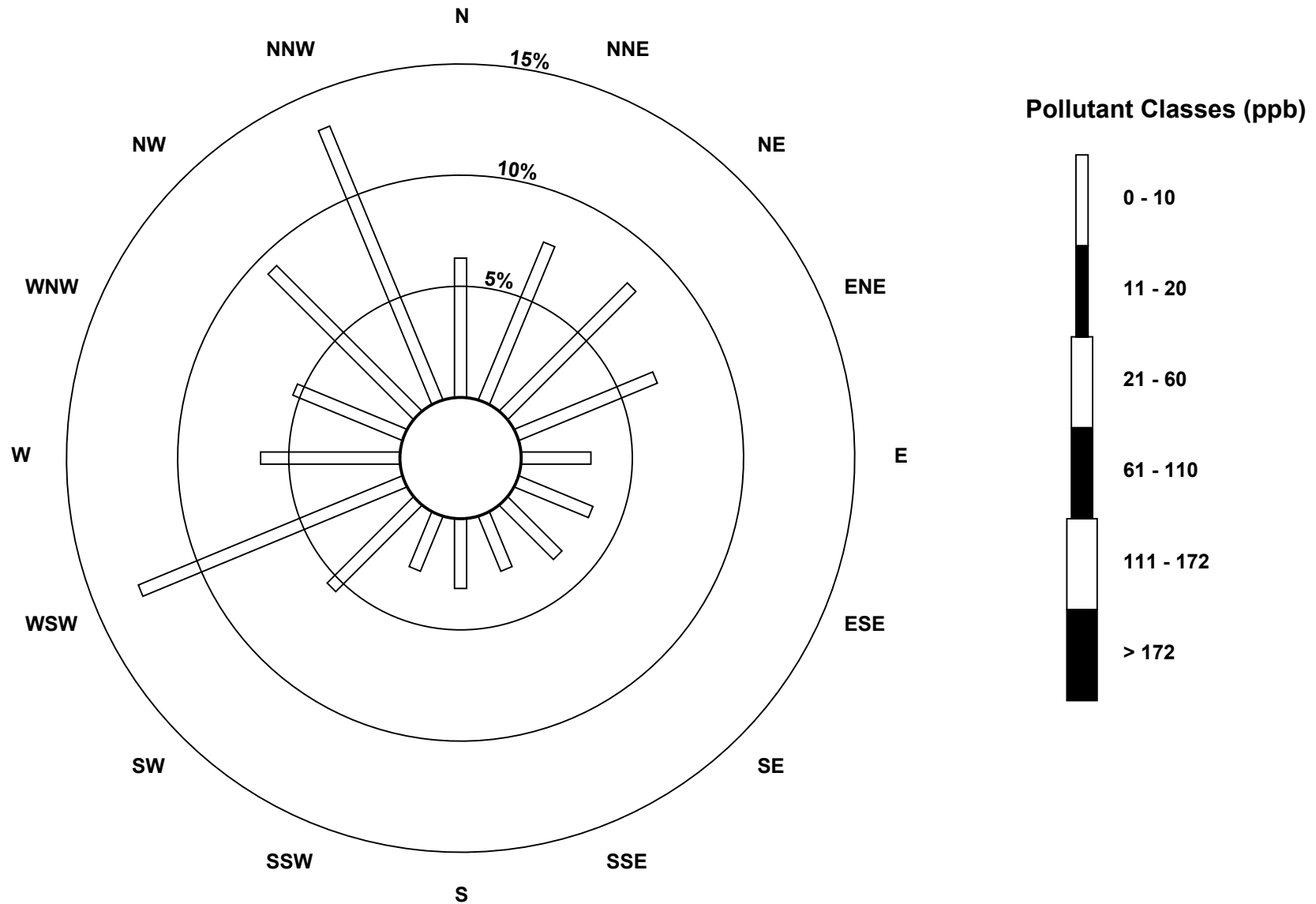
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - February 2017



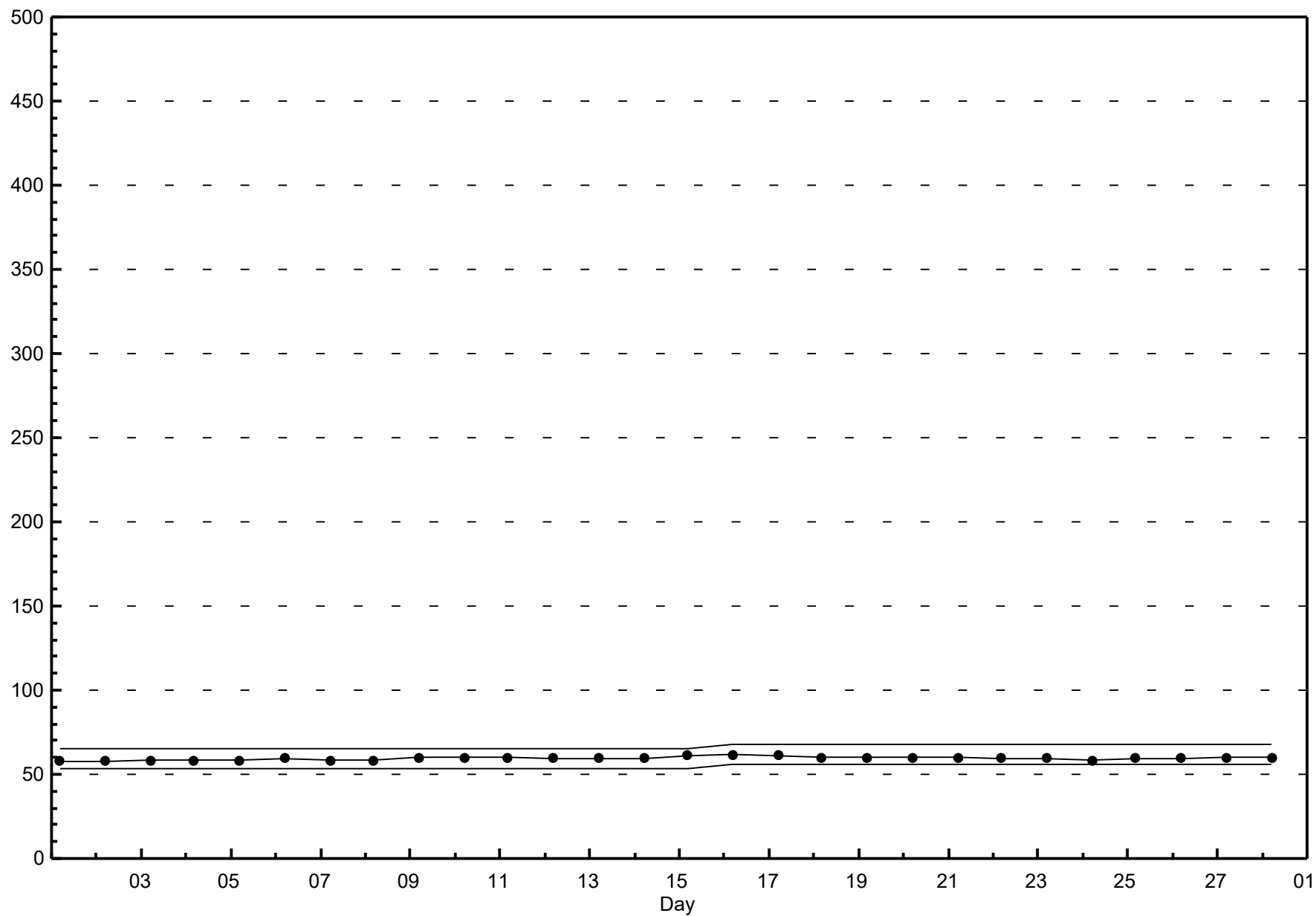
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - February 2017



Span Responses

Sulphur Dioxide (SO₂)
Beaverlodge - February 2017



Hourly Averages

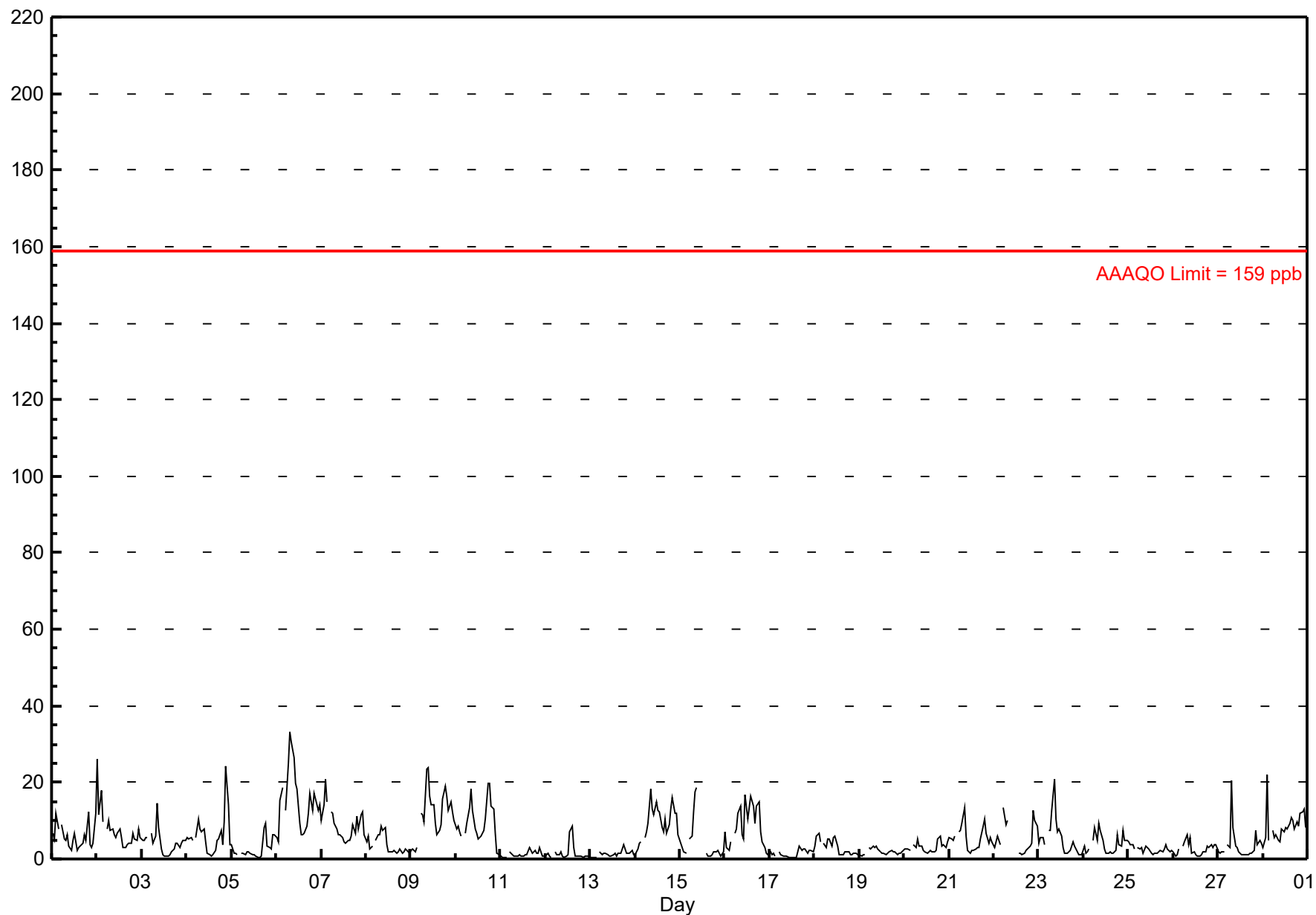
Nitrogen Dioxide (NO₂) - ppb

Beaverlodge - February 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 33.1 ppb on Feb 6 08:00 Maximum Daily Average: 15.2 ppb on Feb 6																				Hours in Service: 672 Hours of Data: 635 Hours of Missing Data: 37 Hours of Calibration: 37 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Feb 17 15:00 Maximum Diurnal Average: 9.4 ppb at hour 9 Monthly Average: 5.34 ppb										Minimum Daily Average: 1.2 ppb on Feb 11 Minimum Diurnal Average: 3.4 ppb at hour 16 Percentiles: P ₁ = 0.5 P ₁₀ = 1.0 Q ₁ = 1.7 Median = 3.6 Q ₃ = 7.3 P ₉₀ = 12.5 P ₉₉ = 23.7																
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-Feb	7	5	12	8	A	9	5	5	6	3	2	5	7	2	3	3	4	6	5	12	4	3	4	12	5.8	12.4
2-Feb	26	12	18	10	A	8	10	8	8	6	5	7	8	6	3	3	4	4	4	7	5	5	8	6	7.8	26.1
3-Feb	5	5	5	6	A	7	4	6	14	8	3	1	1	1	1	1	2	2	4	4	3	4	5	5	4.2	14.5
4-Feb	6	5	6	5	A	6	10	8	7	8	5	2	1	1	1	2	5	5	7	4	10	24	14	4	6.3	24.2
5-Feb	4	2	1	1	A	2	2	1	2	2	1	1	1	1	0	1	1	8	9	3	3	3	6	6	2.6	9.3
6-Feb	6	4	15	19	A	13	25	33	31	26	20	18	9	6	6	7	9	12	17	13	17	16	13	14	15.2	33.1
7-Feb	10	14	21	15	A	12	12	9	8	6	6	6	4	4	5	5	6	9	7	11	8	12	12	6	9.1	21.0
8-Feb	5	6	3	3	A	5	6	6	8	8	8	4	2	2	2	2	2	3	2	2	3	2	2	2	3.7	8.5
9-Feb	2	3	2	3	A	12	12	10	23	24	16	14	14	9	6	8	9	16	19	16	13	15	12	10	11.7	23.8
10-Feb	8	9	7	6	A	7	9	13	18	13	8	7	5	6	7	8	11	20	20	14	13	7	1	1	9.3	19.8
11-Feb	1	0	0	0	A	2	1	1	1	1	1	1	1	1	1	3	2	1	2	2	1	3	1	1	1.2	2.9
12-Feb	1	1	1	0	A	2	1	1	2	1	1	1	1	7	9	3	1	1	1	1	1	1	1	1	1.6	8.7
13-Feb	1	1	0	0	A	2	1	1	2	1	1	1	1	1	1	1	1	2	4	2	2	2	2	1	1.3	3.8
14-Feb	1	3	4	4	A	6	7	9	18	13	11	15	13	12	8	7	10	7	9	13	16	12	12	6	9.5	18.4
15-Feb	4	3	2	1	A	5	6	12	17	19	C	C	C	C	1	1	1	1	2	2	2	2	1	2	4.5	18.8
16-Feb	7	3	2	4	A	7	8	12	14	7	5	17	11	13	16	14	9	14	15	7	5	3	1	1	8.5	16.7
17-Feb	2	1	1	1	A	2	1	1	1	1	0	0	0	0	0	2	3	2	3	3	2	2	2	2	1.5	3.3
18-Feb	3	6	7	4	A	4	3	5	5	3	6	6	3	1	1	1	2	2	2	1	1	2	1	1	3.1	6.8
19-Feb	1	1	1	1	A	3	3	3	3	3	2	2	2	1	1	1	2	2	2	2	1	1	1	2	1.8	3.4
20-Feb	2	3	3	2	A	4	3	5	3	3	2	2	2	2	2	2	2	2	5	6	3	4	3	4	3.1	6.1
21-Feb	5	5	5	6	A	7	7	9	13	6	2	2	2	2	3	3	3	5	9	10	7	4	6	4	5.5	13.4
22-Feb	3	5	6	4	A	14	9	10	C	C	C	C	C	2	1	1	1	2	3	3	4	13	10	9	5.5	13.5
23-Feb	4	6	6	4	A	8	8	13	21	11	7	8	6	3	1	1	2	2	4	3	3	1	1	1	5.3	21.0
24-Feb	3	1	2	3	A	5	8	5	9	7	5	3	2	2	2	1	1	2	6	4	3	7	5	5	4.0	9.1
25-Feb	4	4	4	3	A	3	3	3	2	3	3	3	2	1	2	1	2	2	2	3	4	3	2	2	2.5	4.3
26-Feb	2	1	1	3	A	3	4	7	4	6	2	2	1	1	1	1	2	2	3	3	4	3	4	4	2.7	6.5
27-Feb	2	2	2	2	A	4	3	20	8	3	3	2	1	1	1	1	1	1	2	2	7	4	5	4	3.5	20.4
28-Feb	3	6	22	5	A	7	5	6	5	4	8	7	8	8	9	11	10	8	10	9	12	12	13	8	8.6	22.0
																									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
Beaverlodge - February 2017



Hourly Maximums

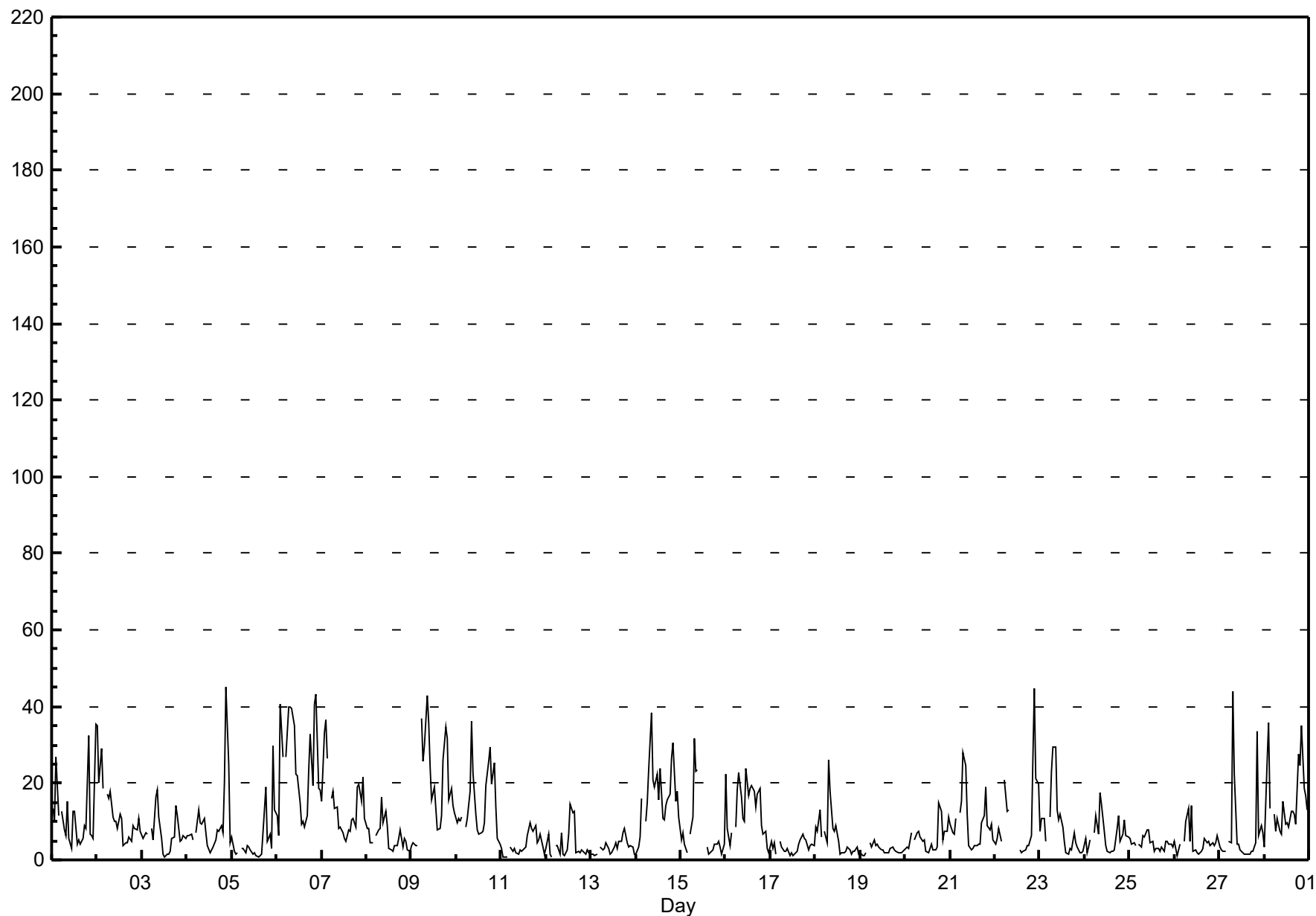
Nitrogen Dioxide (NO₂) - ppb

Beaverlodge - February 2017

Maximum Value: 45.1 ppb on Feb 4 22:00																				Maximum Daily Average: 24.4 ppb on Feb 6					Hours in Service: 672	
Minimum Value: 1 ppb on Feb 11 03:00																				Minimum Daily Average: 2.6 ppb on Feb 19					Hours of Data: 635	
Maximum Diurnal Average: 16.3 ppb at hour 9																				Minimum Diurnal Average: 5.2 ppb at hour 15					Hours of Missing Data: 37	
Monthly Average: 9.28 ppb																				Percentiles: P ₁ = 0.9 P ₁₀ = 1.9 Q ₁ = 3.2 Median = 6.2 Q ₃ = 11.9 P ₉₀ = 22.3 P ₉₉ = 39.2					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-Feb	13	10	27	11	A	13	8	6	15	6	3	13	13	4	5	4	6	9	8	32	7	6	6	35	11.3	35.4
2-Feb	35	20	29	19	A	17	16	18	11	10	10	8	12	11	4	5	5	6	5	9	8	8	11	7	12.3	35.1
3-Feb	6	6	7	7	A	8	5	16	18	11	6	2	1	1	2	2	6	6	14	11	5	5	6	6	6.9	18.4
4-Feb	6	6	7	5	A	7	13	10	9	11	7	4	2	3	3	5	8	7	9	7	20	45	25	4	9.8	45.1
5-Feb	6	2	2	2	A	3	3	2	4	3	3	1	2	1	1	1	2	13	19	5	7	3	30	13	5.5	29.8
6-Feb	12	6	41	27	A	27	40	40	40	35	22	22	15	9	10	9	11	24	33	20	41	43	19	18	24.4	43.2
7-Feb	15	33	37	26	A	16	18	13	14	8	9	7	6	5	8	8	10	11	9	19	20	15	22	11	14.7	36.6
8-Feb	8	8	4	4	A	6	8	8	16	10	13	9	3	3	2	4	4	6	8	3	6	5	3	2	6.2	16.3
9-Feb	4	5	4	4	A	37	26	30	43	36	24	16	19	13	8	8	12	26	35	32	16	19	14	12	19.1	42.8
10-Feb	10	11	10	11	A	9	11	18	36	23	12	8	7	7	7	10	19	26	29	20	26	14	6	4	14.4	36.3
11-Feb	3	1	1	1	A	3	2	3	2	2	3	2	3	3	6	10	8	7	9	5	5	7	3	1	3.9	9.6
12-Feb	3	7	1	1	A	4	4	2	7	2	1	3	7	14	12	13	2	2	2	3	2	1	3	2	4.2	14.4
13-Feb	2	1	1	1	A	3	2	3	4	3	2	2	3	5	3	5	5	7	8	4	4	4	3	1	3.4	8.4
14-Feb	2	3	6	16	A	10	15	24	38	21	19	22	16	24	11	10	14	16	17	26	31	15	18	11	16.8	38.5
15-Feb	5	7	4	2	A	7	11	32	23	23	C	C	C	C	4	2	2	3	4	4	5	3	2	4	7.7	31.7
16-Feb	22	8	4	7	A	9	18	23	16	11	10	24	17	19	19	18	14	17	19	9	7	7	3	2	13.2	23.9
17-Feb	5	3	5	2	A	5	3	2	2	3	1	2	1	2	2	4	5	7	5	5	2	4	4	4	3.4	6.8
18-Feb	9	7	13	6	A	7	5	26	18	8	8	9	5	1	2	2	2	3	3	1	2	2	3	2	6.3	26.2
19-Feb	2	1	1	2	A	5	4	5	4	4	3	3	3	2	2	2	3	3	2	2	2	2	2	2	2.6	5.2
20-Feb	3	3	3	7	A	5	7	8	6	5	5	2	2	3	4	3	3	3	15	13	5	7	8	11	5.7	14.9
21-Feb	9	7	7	11	A	12	15	28	25	12	4	2	3	4	4	4	4	10	11	19	9	8	9	5	9.6	28.1
22-Feb	4	6	8	5	A	21	13	13	C	C	C	C	C	2	2	2	2	4	4	6	26	45	21	20	11.3	44.8
23-Feb	7	11	11	5	A	11	23	30	29	13	10	12	9	5	2	2	3	3	7	4	3	2	2	2	9.0	29.6
24-Feb	6	2	3	5	A	7	11	7	17	14	7	4	2	2	2	2	3	8	12	5	7	11	6	6	6.5	17.3
25-Feb	5	4	4	4	A	4	3	6	6	8	8	5	5	2	3	3	2	3	2	5	5	4	4	3	4.4	8.0
26-Feb	5	1	3	4	A	5	10	13	5	14	2	2	2	1	2	3	6	5	5	4	5	4	4	6	4.8	14.3
27-Feb	3	3	2	2	A	5	4	44	22	4	4	3	2	1	2	2	1	2	2	4	34	6	9	7	7.4	43.9
28-Feb	3	26	36	14	A	12	8	11	7	7	15	9	10	9	13	13	12	9	28	25	35	19	17	13	15.1	35.7
7.6 7.5 10.0 7.5 -- 9.9 10.9 15.7 16.3 11.4 8.1 7.5 6.4 5.8 5.2 5.5 6.2 8.8 11.6 10.8 12.2 11.2 9.3 7.8																									Diurnal Average	
35.1 33.4 40.6 26.8 -- 37.0 39.9 43.9 42.8 35.7 24.3 23.9 18.8 23.8 19.4 17.7 19.3 26.3 34.7 32.4 40.8 45.1 29.8 35.4																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

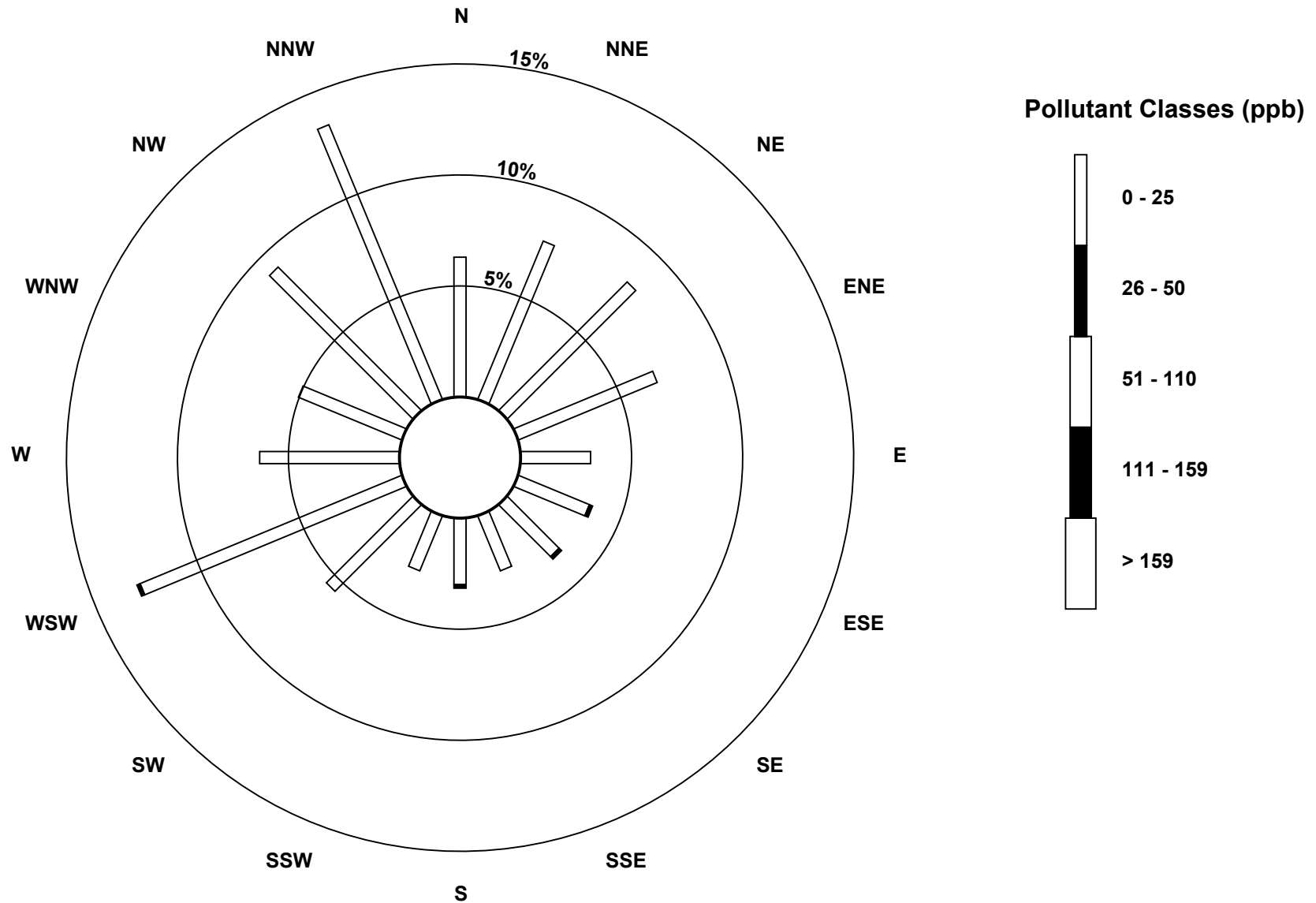
Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - February 2017



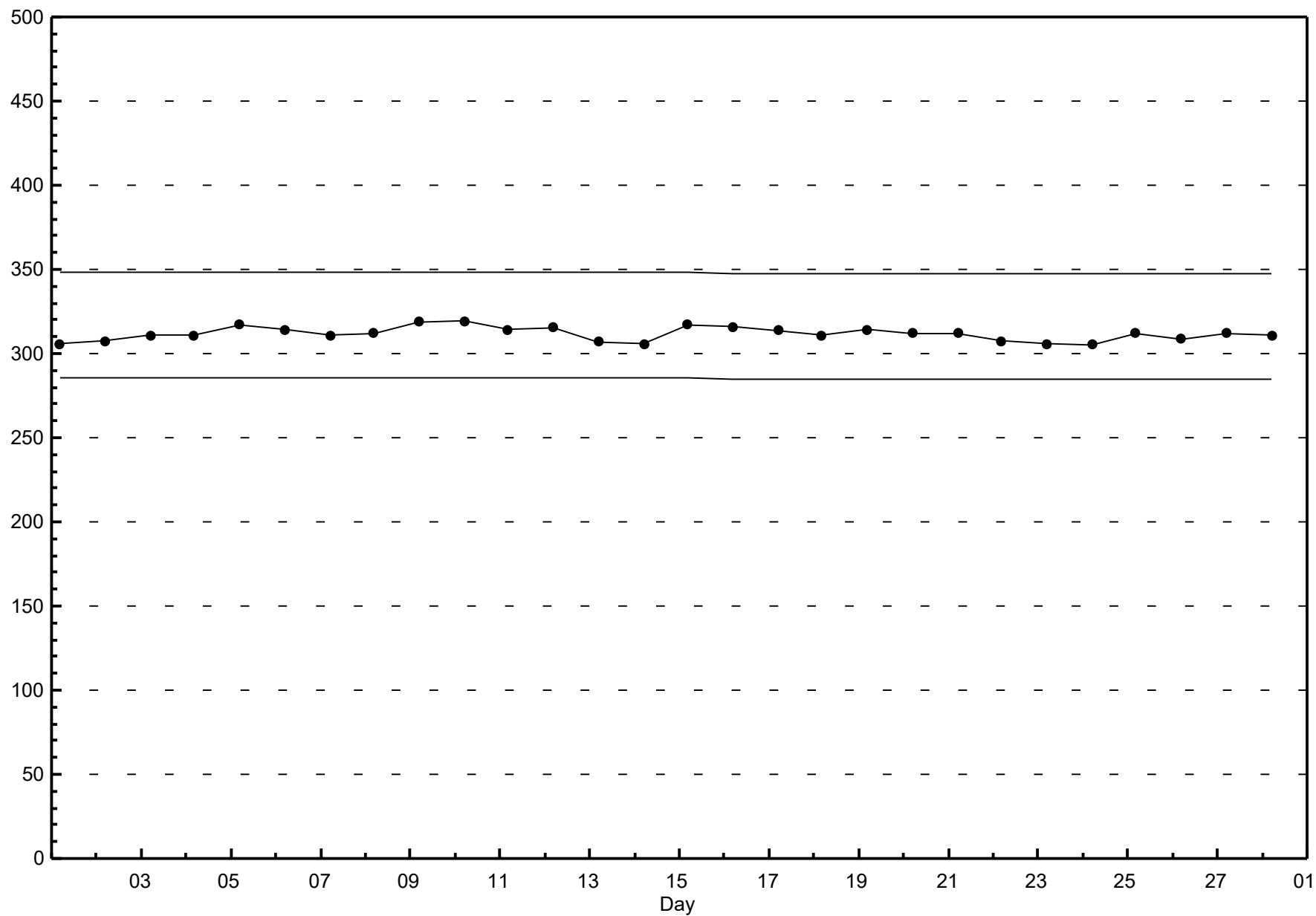
Pollutant Rose

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - February 2017



Span Responses

Nitrogen Dioxide (NO₂)
Beaverlodge - February 2017



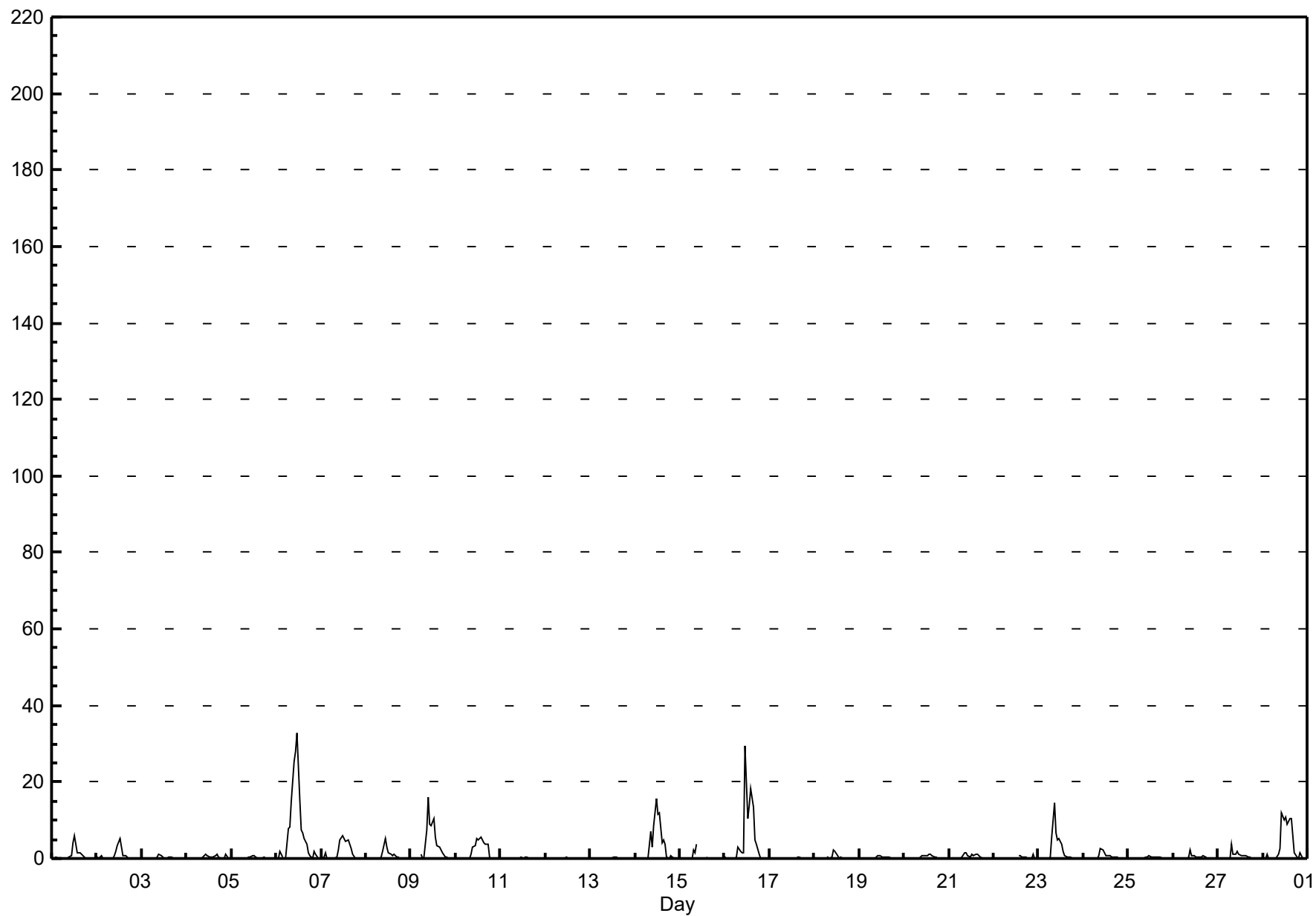
Hourly Averages

Nitrogen Oxide (NO) - ppb Beaverlodge - February 2017

Maximum Value: 32.9 ppb on Feb 6 12:00																				Maximum Daily Average: 7.1 ppb on Feb 6					Hours in Service: 672	
Minimum Value: 0 ppb on Feb 1 08:00																				Minimum Daily Average: 0.1 ppb on Feb 12					Hours of Data: 635	
Maximum Diurnal Average: 5.2 ppb at hour 12																				Minimum Diurnal Average: 0.0 ppb at hour 4					Hours of Missing Data: 37	
Monthly Average: 1.19 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.6 P ₉₀ = 3.5 P ₉₉ = 14.0					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-Feb	0	0	0	0	A	0	0	0	0	0	1	4	6	2	2	1	1	0	0	0	0	0	0	0	0.8	5.8
2-Feb	0	0	1	0	A	0	0	0	0	1	2	3	5	3	1	1	0	0	0	0	0	0	0	0	0.8	5.4
3-Feb	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	1.1
4-Feb	0	0	0	0	A	0	0	0	0	1	1	1	0	0	0	1	1	0	0	0	0	1	0	0	0.3	1.2
5-Feb	0	0	0	0	A	0	0	0	0	0	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0.2	0.6
6-Feb	0	0	2	0	A	0	8	8	15	25	28	33	15	8	7	5	4	2	1	0	2	1	0	0	7.1	32.9
7-Feb	0	0	1	0	A	0	0	0	0	2	5	6	5	5	5	4	3	1	0	0	0	0	0	0	1.6	6.1
8-Feb	0	0	0	0	A	0	0	0	0	2	5	3	1	1	1	1	0	0	0	0	0	0	0	0	0.7	5.1
9-Feb	0	0	0	0	A	1	0	0	7	16	9	9	11	6	4	3	2	1	0	0	0	0	0	0	3.0	15.9
10-Feb	0	0	0	0	A	0	0	0	1	3	3	5	5	6	5	4	4	4	0	0	0	0	0	0	1.8	5.6
11-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
12-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
13-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
14-Feb	0	0	0	0	A	0	0	0	7	3	9	16	12	12	4	5	4	0	0	1	0	0	0	0	3.1	15.6
15-Feb	0	0	0	0	A	0	0	2	2	4	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0.4	3.9
16-Feb	0	0	0	0	A	0	0	3	2	2	2	30	10	14	18	13	5	4	1	0	0	0	0	0	4.5	29.6
17-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
18-Feb	0	0	0	0	A	0	0	1	0	0	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0.3	2.1
19-Feb	0	0	0	0	A	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
20-Feb	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.3	1.0
21-Feb	0	0	0	0	A	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.4	1.4
22-Feb	0	0	0	0	A	0	0	0	C	C	C	C	C	1	1	0	0	0	0	0	0	1	0	0	0.2	1.0
23-Feb	0	0	0	0	A	0	1	5	15	7	5	5	4	2	1	0	0	0	0	0	0	0	0	0	2.0	14.6
24-Feb	0	0	0	0	A	0	0	0	1	3	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0.5	2.7
25-Feb	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
26-Feb	0	0	0	0	A	0	0	0	0	2	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0.3	2.4
27-Feb	0	0	0	0	A	0	0	4	1	1	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0.5	3.6
28-Feb	0	0	1	0	A	0	0	0	1	3	12	10	11	9	10	10	6	2	0	0	1	0	0	0	3.4	11.9
Diurnal Average																										
Diurnal Maximum																										
C - Calibration A - Automated Daily Zero Span																										

Hourly Averages

Nitrogen Oxide (NO) - ppb
Beaverlodge - February 2017



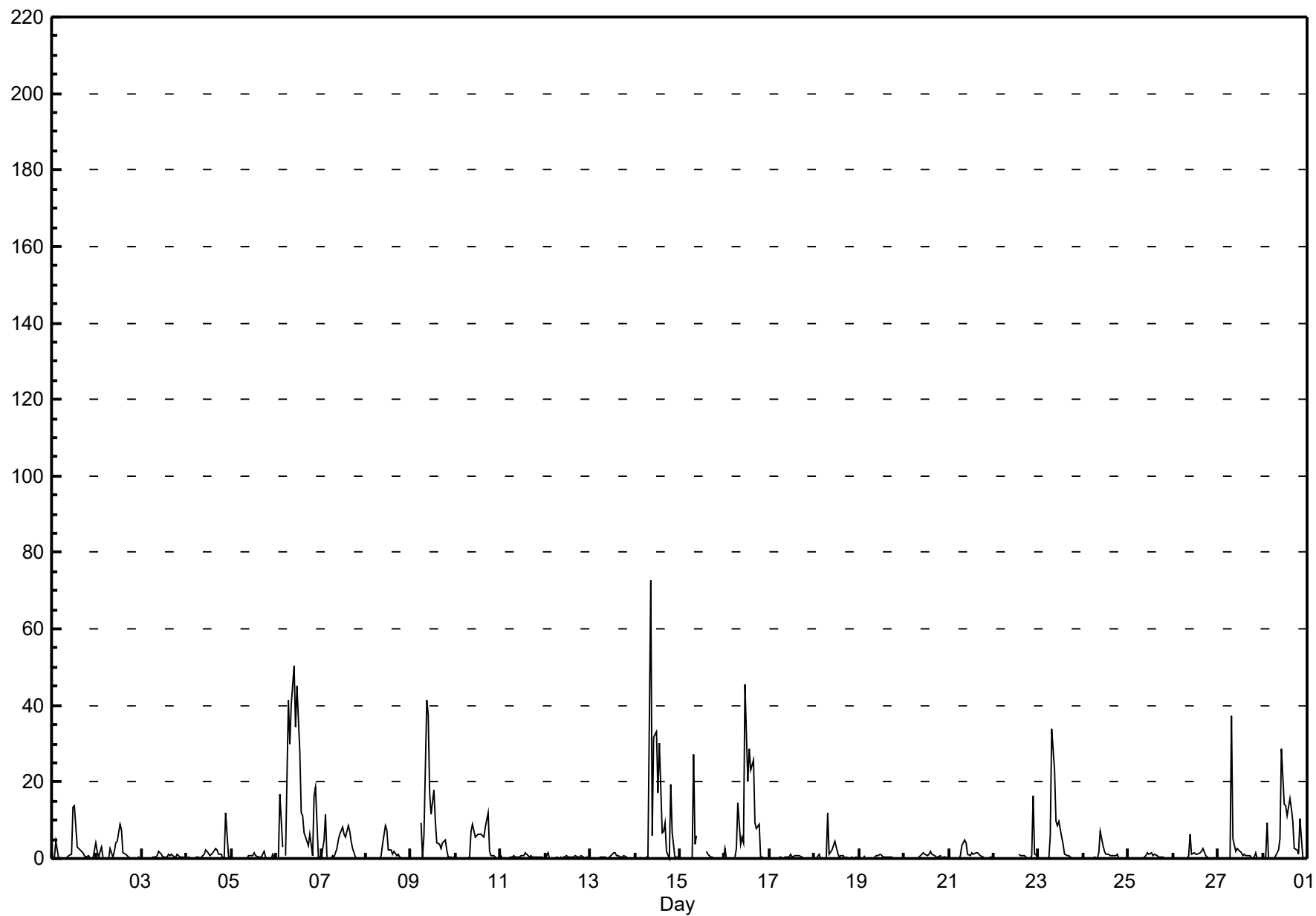
Hourly Maximums

Nitrogen Oxide (NO) - ppb Beaverlodge - February 2017

Maximum Value: 72.7 ppb on Feb 14 09:00																				Maximum Daily Average: 16.1 ppb on Feb 6					Hours in Service: 672	
Minimum Value: 0 ppb on Feb 17 02:00																				Minimum Daily Average: 0.3 ppb on Feb 17					Hours of Data: 635	
Maximum Diurnal Average: 8.4 ppb at hour 12																				Minimum Diurnal Average: 0.3 ppb at hour 4					Hours of Missing Data: 37	
Monthly Average: 2.92 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.4 Q ₃ = 1.5 P ₉₀ = 7.8 P ₉₉ = 41.5					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-Feb	0	0	4	0	A	0	0	0	0	1	1	14	14	3	3	2	1	1	0	1	0	0	0	4	2.2	13.8
2-Feb	2	0	3	0	A	0	0	3	0	2	4	5	9	7	2	1	1	0	0	0	0	0	0	0	1.8	8.8
3-Feb	0	0	0	0	A	0	0	0	1	2	1	0	0	0	1	1	1	0	0	1	0	0	0	0	0.5	1.7
4-Feb	0	0	0	0	A	0	0	0	0	1	2	2	1	1	2	3	2	1	1	0	0	12	1	0	1.3	11.9
5-Feb	0	0	0	0	A	0	0	0	0	1	1	1	2	1	0	0	0	2	0	0	0	0	1	0	0.5	1.9
6-Feb	0	0	17	3	A	1	41	30	40	50	34	45	28	12	11	7	4	3	6	1	16	19	0	0	16.1	50.3
7-Feb	0	5	12	0	A	0	1	0	2	5	7	8	6	6	9	7	5	2	0	0	0	0	0	0	3.3	11.6
8-Feb	0	0	0	0	A	0	0	0	1	4	9	7	2	2	1	2	1	1	0	0	0	0	0	0	1.3	8.5
9-Feb	0	0	0	0	A	9	0	6	41	38	17	12	18	10	4	4	3	4	5	2	0	0	0	0	7.6	41.5
10-Feb	0	0	0	0	A	0	0	0	7	9	6	6	6	6	6	6	8	12	2	1	1	0	0	0	3.4	12.0
11-Feb	1	0	0	0	A	0	0	1	0	0	0	1	1	1	1	0	1	0	0	0	0	0	0	0	0.5	1.4
12-Feb	0	1	0	0	A	0	0	0	0	0	0	1	0	0	0	0	1	1	0	1	0	0	0	0	0.4	1.4
13-Feb	0	0	0	0	A	0	0	0	0	0	0	1	2	1	1	1	0	0	1	0	0	0	0	0	0.4	1.5
14-Feb	0	0	0	0	A	0	0	0	73	6	32	33	17	30	7	7	9	2	0	19	7	0	0	0	10.6	72.7
15-Feb	0	0	0	0	A	0	0	27	4	6	C	C	C	C	2	1	0	0	0	0	0	0	0	0	2.2	27.2
16-Feb	3	0	0	0	A	0	3	15	4	6	4	45	20	29	23	26	9	8	9	0	0	0	0	0	8.9	45.3
17-Feb	0	0	0	0	A	0	0	0	0	0	0	1	0	1	1	1	1	0	0	0	0	0	0	0	0.3	1.1
18-Feb	0	0	1	0	A	0	0	12	1	2	3	5	1	0	1	1	0	0	0	0	0	0	0	0	1.3	11.9
19-Feb	0	0	0	1	A	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.3	1.1
20-Feb	0	0	0	0	A	0	0	0	0	1	1	1	1	1	2	1	1	0	0	1	0	0	0	0	0.5	1.8
21-Feb	0	0	0	0	A	0	1	3	5	4	1	1	2	1	1	1	1	1	1	0	0	0	0	0	1.1	4.8
22-Feb	0	0	0	0	A	0	0	0	C	C	C	C	C	1	1	1	1	0	0	0	1	16	1	1	1.3	16.3
23-Feb	0	0	0	0	A	0	6	34	23	10	8	10	6	4	1	1	1	0	0	0	0	0	0	0	4.5	33.9
24-Feb	0	0	0	0	A	0	0	0	2	7	4	2	1	1	1	1	1	1	1	0	0	0	0	0	1.0	7.1
25-Feb	0	0	0	0	A	0	0	0	0	1	1	1	2	1	1	1	0	0	0	0	0	0	0	0	0.4	1.6
26-Feb	0	0	0	0	A	0	0	0	1	6	1	1	1	1	1	2	3	1	0	0	0	0	0	0	0.9	6.5
27-Feb	0	0	0	0	A	0	0	37	5	2	2	2	1	1	1	1	1	1	0	0	1	0	0	0	2.5	37.1
28-Feb	0	0	9	0	A	0	0	1	2	5	29	14	14	11	16	13	10	3	2	1	10	0	0	0	6.2	28.7
0.3 0.4 1.8 0.3 -- 0.5 2.0 6.1 8.0 6.3 6.6 8.4 6.0 5.0 3.6 3.2 2.3 1.6 1.1 1.1 1.4 1.8 0.3 0.3																									Diurnal Average	
2.5 4.9 16.6 3.2 -- 9.2 41.5 37.1 72.7 50.3 34.2 45.3 28.0 30.3 23.2 25.8 9.6 12.0 8.9 19.2 16.3 18.7 1.3 4.1																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

Nitrogen Oxide (NO) - ppb
Beaverlodge - February 2017



Hourly Averages

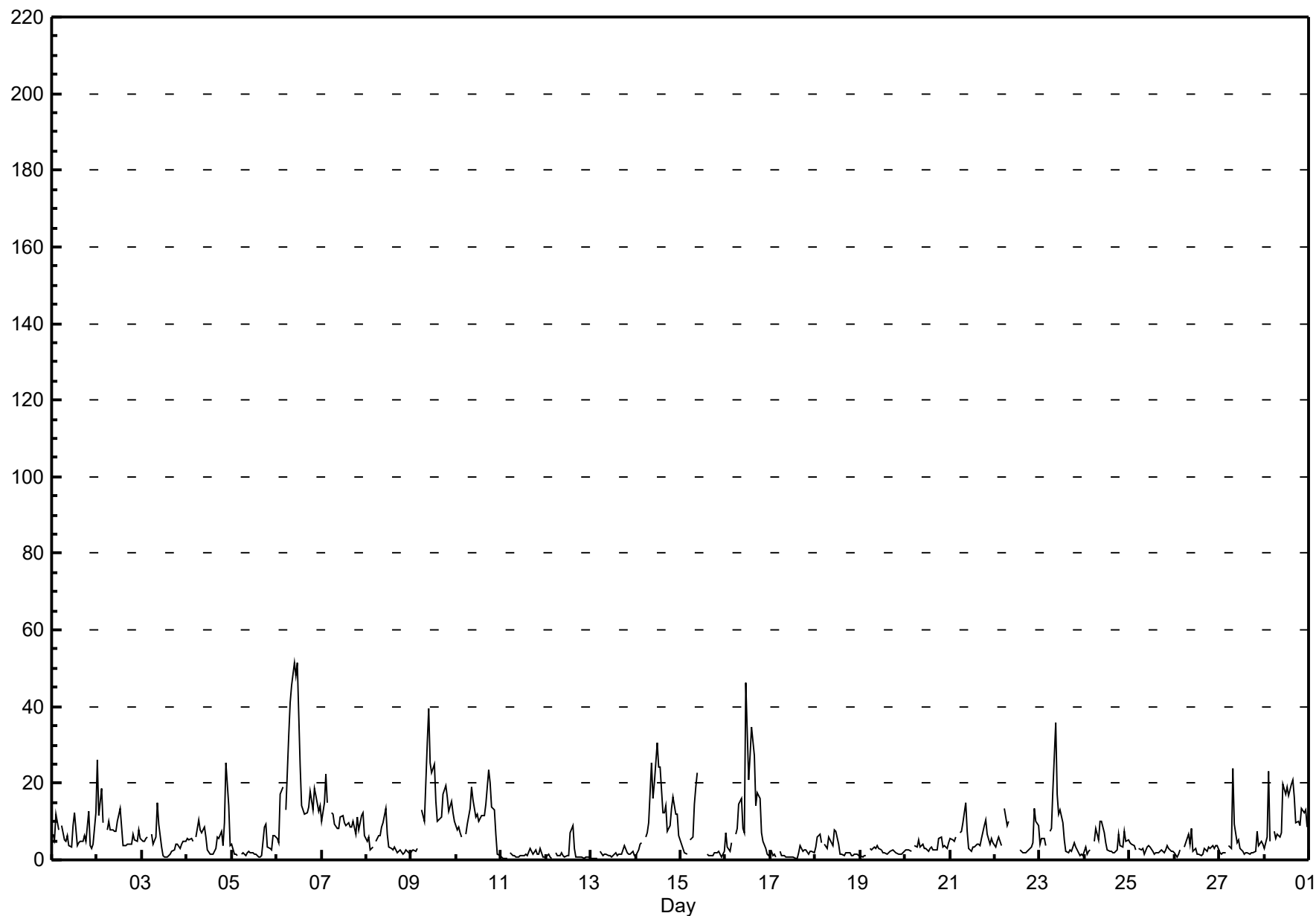
Oxides of Nitrogen (NO_x) - ppb

Beaverlodge - February 2017

Maximum Value: 51.5 ppb on Feb 6 10:00																				Maximum Daily Average: 22.3 ppb on Feb 6					Hours in Service: 672	
Minimum Value: 0 ppb on Feb 12 04:00																				Minimum Daily Average: 1.3 ppb on Feb 11					Hours of Data: 635	
Maximum Diurnal Average: 11.5 ppb at hour 9																				Minimum Diurnal Average: 4.1 ppb at hour 2					Hours of Missing Data: 37	
Monthly Average: 6.55 ppb																				Percentiles: P ₁ = 0.5 P ₁₀ = 1.1 Q ₁ = 2.0 Median = 3.9 Q ₃ = 8.7 P ₉₀ = 14.7 P ₉₉ = 37.4					Hours of Calibration: 37	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	7	5	12	8	A	9	5	5	7	4	3	9	12	4	4	5	5	6	5	13	4	3	4	12	6.6	12.6
2-Feb	26	12	19	10	A	8	10	8	8	7	7	10	13	8	4	4	4	4	4	7	5	5	8	6	8.6	26.3
3-Feb	5	5	6	6	A	7	4	6	15	9	3	1	1	1	1	1	2	3	4	4	3	4	5	5	4.4	14.8
4-Feb	6	5	6	5	A	6	10	8	7	9	6	2	1	1	2	3	6	6	8	4	10	25	14	4	6.6	25.3
5-Feb	4	2	1	1	A	2	2	1	2	2	2	2	2	1	1	1	1	9	9	3	3	3	7	6	2.9	9.4
6-Feb	6	5	17	19	A	13	33	41	46	51	48	51	25	14	13	12	12	14	18	13	19	17	13	14	22.3	51.5
7-Feb	10	15	22	15	A	12	12	9	8	8	11	12	10	9	10	9	9	10	7	11	8	12	12	6	10.7	22.4
8-Feb	5	6	3	3	A	5	6	6	9	10	13	7	3	3	3	3	2	2	3	2	2	3	2	2	4.4	13.3
9-Feb	2	3	2	3	A	13	12	10	31	40	25	23	25	15	10	11	11	17	19	17	13	15	12	10	14.7	39.6
10-Feb	8	9	7	6	A	7	9	13	19	16	11	12	10	12	12	12	14	24	20	14	13	7	1	1	11.1	23.5
11-Feb	1	0	0	0	A	2	1	1	1	1	1	1	1	1	1	3	2	1	2	2	1	3	1	1	1.3	3.0
12-Feb	1	1	1	0	A	2	1	1	2	1	1	1	1	7	9	3	1	1	1	1	1	1	1	1	1.6	8.9
13-Feb	1	1	0	0	A	2	1	1	2	1	1	1	2	2	1	2	2	3	4	2	2	2	2	1	1.4	3.9
14-Feb	1	3	4	4	A	6	7	10	25	16	20	30	24	24	12	12	14	7	9	14	17	12	12	6	12.6	30.5
15-Feb	4	3	2	1	A	5	6	15	19	23	C	C	C	C	2	1	1	1	2	2	2	2	1	2	4.9	22.6
16-Feb	7	3	2	4	A	7	8	15	16	8	7	46	21	27	35	27	14	17	16	7	5	3	2	1	13.0	46.3
17-Feb	2	1	1	1	A	2	1	1	1	1	1	1	1	1	1	2	4	2	3	3	2	2	2	2	1.6	3.7
18-Feb	3	6	7	5	A	4	3	6	5	4	8	8	4	1	2	1	2	2	2	1	1	2	1	1	3.4	7.8
19-Feb	1	1	1	1	A	3	3	3	3	4	3	3	2	2	2	2	2	2	2	2	1	1	1	2	2.0	3.8
20-Feb	2	3	3	2	A	4	3	5	4	4	3	3	2	3	3	3	3	2	5	6	4	4	3	5	3.4	6.1
21-Feb	5	5	5	6	A	7	7	10	15	8	3	2	3	3	4	4	4	6	9	10	7	4	6	4	6.0	14.8
22-Feb	3	5	6	4	A	14	9	10	C	C	C	C	C	3	2	2	2	2	3	3	4	14	10	9	5.8	13.6
23-Feb	4	6	6	4	A	8	8	18	36	17	12	13	10	5	2	2	2	2	4	3	3	1	1	1	7.3	35.6
24-Feb	3	1	2	3	A	5	8	5	10	10	7	4	3	2	2	2	2	3	7	4	3	7	5	5	4.5	10.1
25-Feb	4	4	4	3	A	3	3	3	2	4	4	3	2	1	2	2	2	2	2	3	4	3	2	2	2.7	4.3
26-Feb	2	1	1	3	A	3	4	7	4	8	2	3	2	1	1	2	3	2	3	3	4	3	4	4	3.0	8.1
27-Feb	2	2	2	2	A	4	3	24	9	4	5	3	2	2	2	2	1	2	2	2	7	4	5	4	4.1	24.0
28-Feb	3	6	23	5	A	7	5	7	6	7	20	17	19	17	20	21	16	10	10	9	13	12	13	8	11.9	23.0
4.6 4.1 5.9 4.4 -- 6.0 6.7 8.9 11.5 10.2 8.8 10.3 7.7 6.4 5.8 5.4 5.1 5.8 6.5 5.8 5.7 6.1 5.4 4.5																									Diurnal Average	
26.3 14.8 23.0 19.0 -- 13.6 32.6 41.2 45.6 51.5 48.0 51.3 24.9 27.3 34.6 27.3 16.3 23.5 20.2 16.5 18.8 25.3 14.3 14.3																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Averages

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



Hourly Maximums

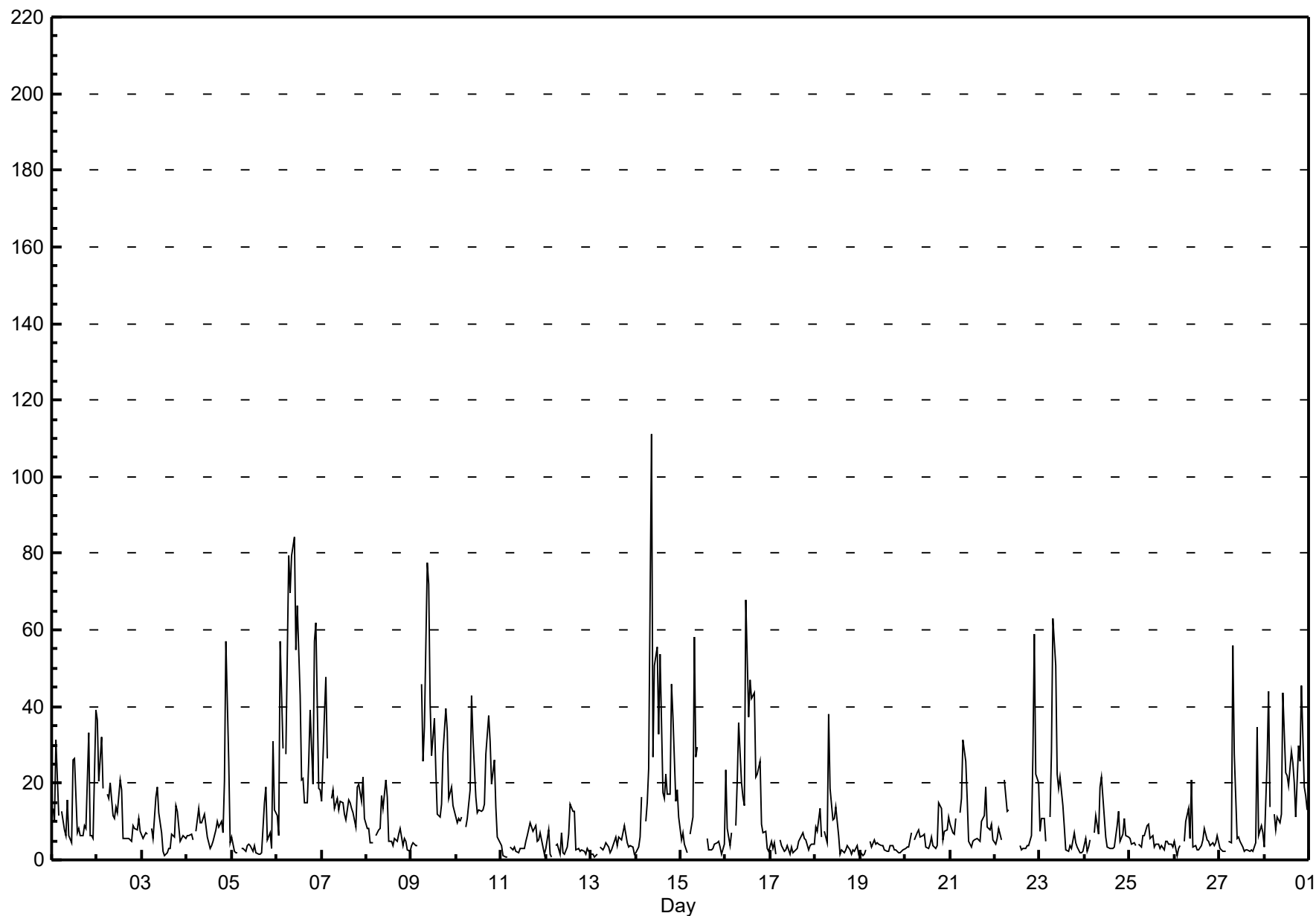
Oxides of Nitrogen (NO_x) - ppb

Beaverlodge - February 2017

Maximum Value: 111.0 ppb on Feb 14 09:00																								Maximum Daily Average: 40.1 ppb on Feb 6				Hours in Service: 672	
Minimum Value: 1 ppb on Feb 11 04:00																								Minimum Daily Average: 2.9 ppb on Feb 19				Hours of Data: 635	
Maximum Diurnal Average: 23.7 ppb at hour 9																								Minimum Diurnal Average: 7.7 ppb at hour 4				Hours of Missing Data: 37	
Monthly Average: 12.00 ppb																								Percentiles: P ₁ = 1.0 P ₁₀ = 2.4 Q ₁ = 3.6 Median = 6.4 Q ₃ = 14.7 P ₉₀ = 27.5 P ₉₉ = 67.3				Hours of Calibration: 37	
																												Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Feb	13	11	31	11	A	13	8	6	16	6	4	26	27	7	8	6	6	9	8	33	6	6	5	39	13.4	39.2			
2-Feb	36	20	32	19	A	17	16	20	11	11	14	12	21	18	5	6	5	6	5	9	8	8	11	7	13.8	36.5			
3-Feb	6	6	7	7	A	8	6	17	19	12	7	2	1	2	3	3	7	6	14	13	5	6	6	6	7.3	19.0			
4-Feb	6	7	7	5	A	7	13	10	10	12	9	6	3	4	5	8	10	8	10	7	21	57	26	4	11.0	56.9			
5-Feb	6	2	2	2	A	3	3	2	4	4	4	2	4	2	1	2	2	15	19	5	7	3	31	13	6.0	30.9			
6-Feb	12	6	57	29	A	27	79	70	80	84	55	66	43	21	21	15	15	26	39	20	57	62	19	18	40.1	84.4			
7-Feb	15	38	48	27	A	16	18	13	16	13	15	15	12	10	16	15	14	12	9	19	20	15	22	11	17.7	47.7			
8-Feb	8	8	4	4	A	6	8	8	17	14	21	16	5	5	4	6	5	7	8	4	6	5	3	2	7.5	20.9			
9-Feb	4	5	4	4	A	46	26	35	78	72	41	27	37	23	12	11	14	28	39	34	16	19	14	13	26.1	77.7			
10-Feb	10	11	10	11	A	9	11	18	43	32	16	12	13	13	13	15	28	38	31	20	26	14	6	4	17.5	43.0			
11-Feb	4	1	1	1	A	3	3	4	2	2	3	3	3	5	6	10	9	8	9	5	5	7	3	1	4.2	9.7			
12-Feb	3	8	1	1	A	4	4	2	7	2	2	3	7	15	13	13	3	3	2	3	2	1	3	2	4.5	14.5			
13-Feb	2	2	1	1	A	3	3	3	5	3	2	3	5	6	4	6	5	7	9	5	4	4	3	1	3.7	9.1			
14-Feb	2	3	6	16	A	10	15	24	111	27	51	56	33	54	18	16	22	17	17	46	37	15	18	11	27.2	111.0			
15-Feb	5	7	4	2	A	7	11	58	27	29	C	C	C	C	6	3	3	3	4	4	5	3	2	4	9.8	58.1			
16-Feb	24	8	4	7	A	9	20	36	20	16	14	68	37	47	42	43	22	22	26	9	7	7	3	2	21.5	68.0			
17-Feb	5	3	5	2	A	5	4	2	3	4	2	3	2	3	3	5	6	7	6	5	3	4	4	4	3.8	7.2			
18-Feb	9	7	13	6	A	7	5	38	19	10	11	14	6	2	3	2	3	4	3	1	2	2	4	2	7.5	38.0			
19-Feb	2	1	1	2	A	5	4	5	4	4	4	4	4	3	2	2	4	4	3	3	2	2	2	2	2.9	5.1			
20-Feb	3	3	3	7	A	5	7	8	6	6	7	3	3	4	6	4	3	4	4	15	13	5	8	8	11	6.2	14.9		
21-Feb	9	7	7	11	A	12	16	31	26	16	5	3	5	5	5	5	5	10	12	19	9	8	9	5	10.5	31.4			
22-Feb	4	6	8	5	A	21	13	13	C	C	C	C	C	4	3	3	3	4	4	6	27	59	22	20	12.5	58.8			
23-Feb	7	11	11	5	A	11	29	63	51	23	19	22	14	9	3	2	4	3	7	4	3	2	2	2	13.3	63.1			
24-Feb	6	2	3	5	A	7	12	7	19	22	11	6	3	3	3	3	3	9	13	5	7	11	6	6	7.4	21.5			
25-Feb	6	4	4	4	A	4	3	6	6	9	9	6	6	3	4	4	3	4	3	5	5	4	4	3	4.8	9.4			
26-Feb	5	1	3	4	A	5	10	13	6	21	3	4	3	3	4	5	8	5	5	4	5	4	4	6	5.6	20.8			
27-Feb	3	3	2	2	A	5	4	56	28	6	6	5	3	2	3	3	2	3	2	5	35	6	9	7	8.7	55.8			
28-Feb	3	26	44	14	A	12	8	11	10	12	44	23	22	19	28	25	20	11	30	26	45	19	17	13	21.0	45.3			
7.8 7.8 11.6 7.7 -- 10.3 12.8 20.7 23.7 17.5 14.5 15.8 12.3 10.7 8.7 8.6 8.3 10.1 12.5 11.8 13.6 12.9 9.5 8.0																								Diurnal Average					
36.5 38.2 57.1 29.2 -- 46.0 79.4 69.7 111.0 84.4 54.9 68.0 43.0 53.8 42.2 43.5 27.5 37.5 39.3 45.7 57.1 62.0 30.9 39.2																								Diurnal Maximum					
C - Calibration A - Automated Daily Zero Span																													

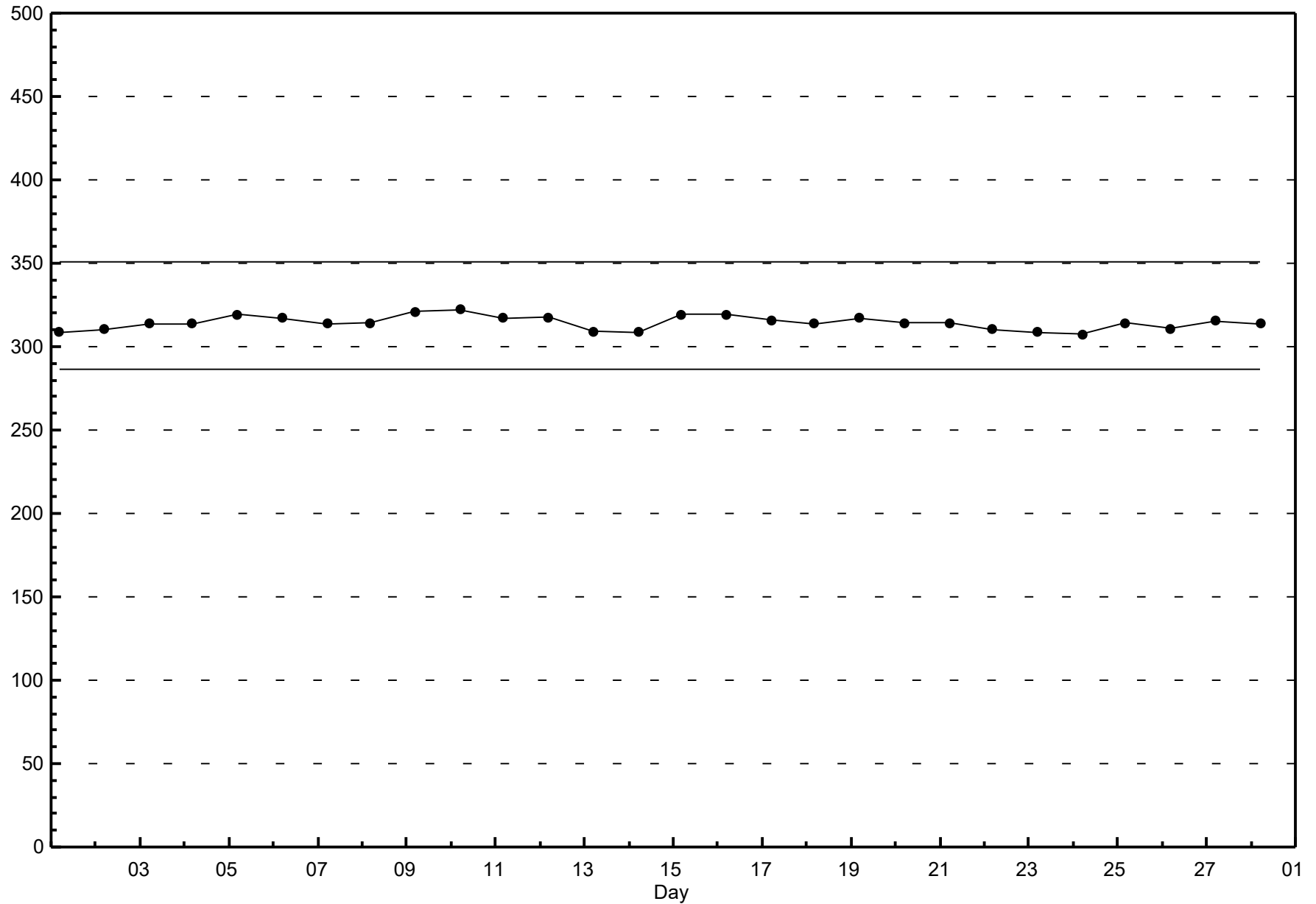
Hourly Maximums

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



Span Responses

Oxides of Nitrogen (NO_x)
Beaverlodge - February 2017



Hourly Averages

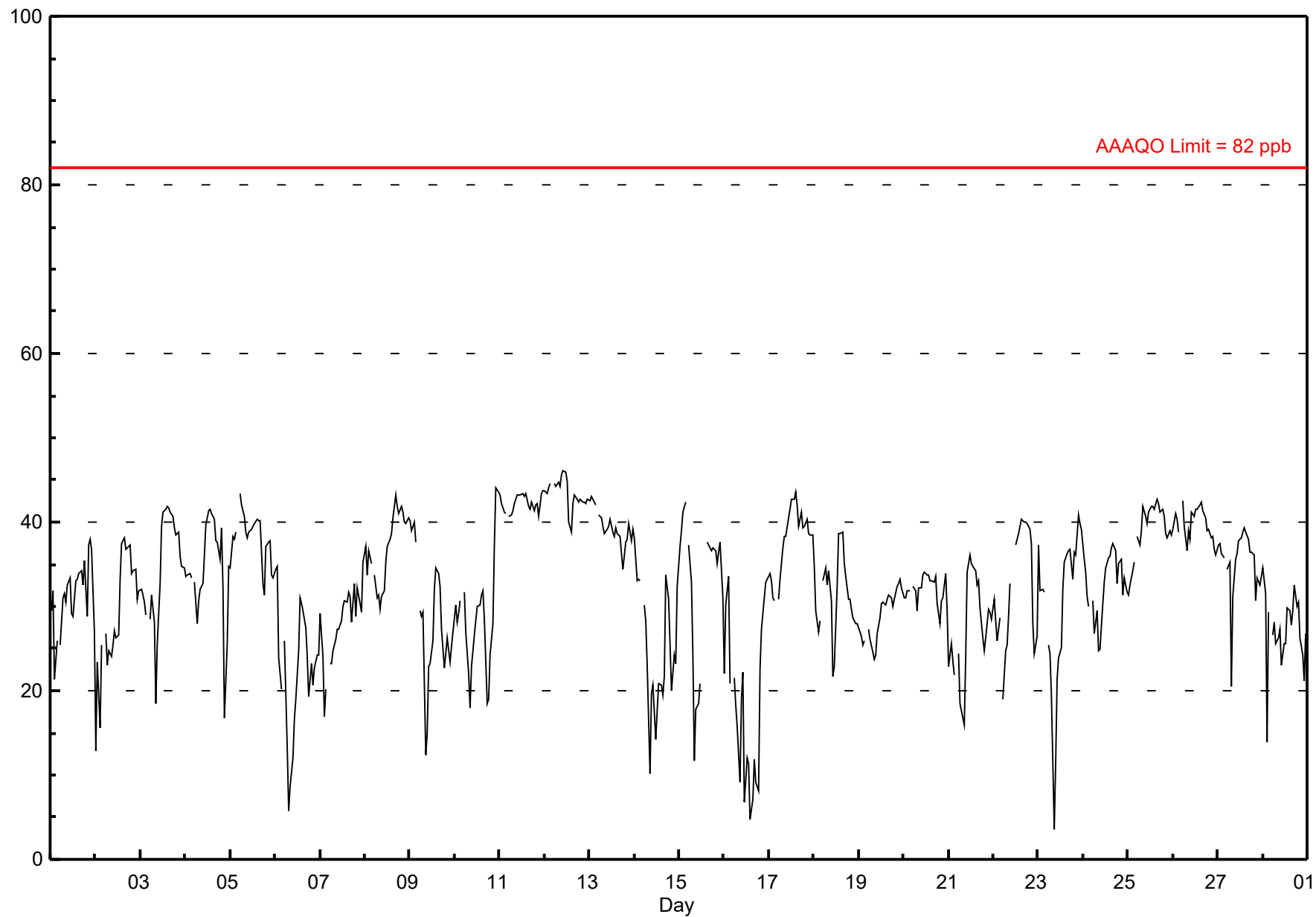
Ozone (O₃) - ppb

Beaverlodge - February 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 46.0 ppb on Feb 12 11:00 Maximum Daily Average: 43.4 ppb on Feb 12																								Hours in Service: 672 Hours of Data: 639 Hours of Missing Data: 33 Hours of Calibration: 33 Percent Operational Time: 100.0		
Minimum Value: 4 ppb on Feb 23 09:00 Maximum Diurnal Average: 35.4 ppb at hour 16 Monthly Average: 32.37 ppb												Minimum Daily Average: 18.7 ppb on Feb 16 Minimum Diurnal Average: 26.2 ppb at hour 9 Percentiles: P ₁ = 8.5 P ₁₀ = 22.0 Q ₁ = 27.9 Median = 33.1 Q ₃ = 38.7 P ₉₀ = 41.5 P ₉₉ = 44.5														
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-Feb	29	32	21	26	A	25	31	31	30	33	33	29	29	33	33	34	34	33	35	29	37	38	37	27	31.4	38.0
2-Feb	13	23	16	25	A	27	23	25	24	25	27	26	27	33	37	38	37	37	37	34	34	34	31	32	29.0	38.2
3-Feb	32	31	30	29	A	28	31	28	19	26	33	39	41	42	42	40	41	41	39	38	39	36	35	35	34.7	41.9
4-Feb	33	34	34	33	A	33	28	31	32	33	36	40	41	41	41	40	38	38	36	39	32	17	26	35	34.4	41.5
5-Feb	35	38	38	39	A	43	42	41	39	38	39	39	40	40	40	40	40	33	31	37	38	38	34	33	38.0	43.3
6-Feb	34	35	24	20	A	26	13	6	9	12	17	19	25	31	30	30	28	24	19	23	21	23	24	24	22.4	34.7
7-Feb	29	24	17	20	A	23	23	25	26	27	27	28	30	31	31	32	31	28	33	29	32	30	29	35	27.9	35.2
8-Feb	37	34	37	35	A	34	31	31	30	31	32	35	37	38	39	40	43	42	41	42	41	40	40	40	37.0	43.2
9-Feb	40	39	40	38	A	30	29	29	12	15	23	23	26	32	35	34	32	27	23	24	26	23	25	27	28.4	40.1
10-Feb	30	28	29	31	A	32	27	22	18	23	27	28	30	30	31	32	29	18	19	24	28	37	44	43	28.7	44.0
11-Feb	43	42	41	41	A	41	41	41	42	43	43	43	43	43	43	42	42	42	41	42	42	41	43	44	42.2	43.8
12-Feb	44	43	44	45	A	45	44	45	44	46	46	46	45	40	39	42	43	43	42	43	42	42	42	43	43.4	46.0
13-Feb	43	43	43	42	A	41	41	40	39	39	39	40	39	38	39	39	38	36	34	38	38	40	38	39	39.4	43.0
14-Feb	38	33	33	33	A	30	28	23	10	20	21	14	18	21	21	19	22	34	31	26	20	24	23	32	25.0	38.1
15-Feb	37	39	41	42	A	37	33	24	12	18	18	21	C	C	C	38	37	37	37	37	35	36	38	31	32.4	42.3
16-Feb	22	30	34	21	A	22	18	16	9	19	22	7	12	11	5	7	12	9	8	22	27	31	33	33	18.7	33.6
17-Feb	34	33	31	31	A	31	33	37	38	38	40	42	43	43	44	42	39	41	39	39	40	39	38	39	38.0	43.6
18-Feb	35	29	27	28	A	33	35	33	34	31	22	23	32	39	39	39	35	33	31	31	30	29	28	28	31.4	38.8
19-Feb	27	27	25	26	A	27	26	25	24	24	27	29	30	30	30	31	31	31	30	31	32	33	33	32	28.8	33.1
20-Feb	31	31	32	32	A	32	32	30	32	32	34	34	34	34	33	33	33	34	30	28	31	31	34	30	32.0	34.1
21-Feb	23	26	24	22	A	24	18	18	16	24	34	36	35	35	34	33	33	30	26	25	26	30	29	28	27.3	36.1
22-Feb	31	28	26	29	A	19	25	25	29	33	C	C	37	39	39	40	40	40	40	39	37	28	24	26	32.2	40.4
23-Feb	37	32	32	32	A	26	24	20	4	12	21	24	25	32	35	36	37	37	33	36	36	41	40	39	30.0	40.8
24-Feb	36	34	31	30	A	31	27	29	25	25	30	33	35	36	36	37	37	37	33	35	36	31	33	32	32.5	37.4
25-Feb	31	33	34	35	A	38	37	39	42	41	40	41	42	42	42	43	42	41	41	41	39	38	39	38	39.1	42.7
26-Feb	39	41	40	39	A	42	39	37	39	38	41	41	42	42	42	42	41	41	39	39	38	38	37	36	39.7	42.5
27-Feb	37	38	36	36	A	34	35	21	31	36	36	38	38	39	39	39	38	37	37	36	31	33	33	34	35.2	39.2
28-Feb	35	32	14	29	A	27	28	26	26	27	23	26	26	30	30	28	30	33	30	31	26	24	21	27	27.2	34.5
33.4 33.3 31.2 31.7 -- 31.5 30.1 28.4 26.2 28.8 30.8 31.3 33.3 34.9 35.1 35.4 35.1 34.1 32.8 33.5 33.4 33.1 33.3 33.7																								Diurnal Average		
43.8 43.4 44.1 44.5 -- 44.6 44.2 44.7 44.3 45.5 46.0 46.0 44.9 43.1 43.6 42.7 43.2 42.7 42.4 42.6 42.4 42.3 44.0 43.8																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na																										

Hourly Averages

Ozone (O₃) - ppb
Beaverlodge - February 2017



Hourly Maximums

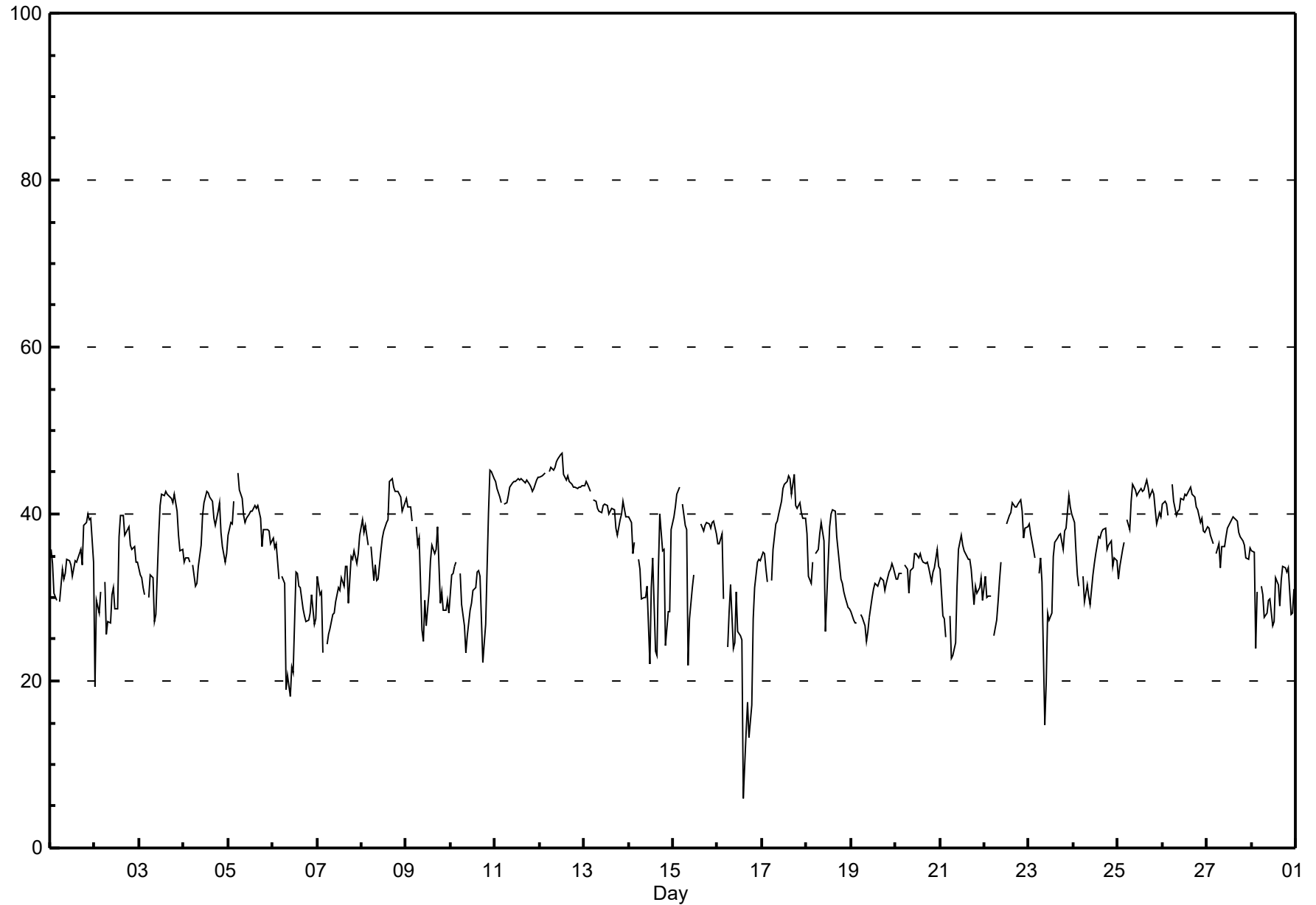
Ozone (O₃) - ppb

Beaverlodge - February 2017

Maximum Value: 47.4 ppb on Feb 12 13:00																				Maximum Daily Average: 44.7 ppb on Feb 12					Hours in Service: 672			
Minimum Value: 6 ppb on Feb 16 15:00																				Minimum Daily Average: 26.5 ppb on Feb 16					Hours of Data: 639			
Maximum Diurnal Average: 37.4 ppb at hour 14																				Minimum Diurnal Average: 31.5 ppb at hour 9					Hours of Missing Data: 33			
Monthly Average: 35.38 ppb																				Percentiles: P ₁ = 18.0 P ₁₀ = 27.5 Q ₁ = 31.4 Median = 35.8 Q ₃ = 40.2 P ₉₀ = 42.9 P ₉₉ = 45.5					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-Feb	36	34	31	30	A	30	33	32	33	35	34	34	33	34	34	35	36	34	39	39	40	39	40	34	34.7	40.1		
2-Feb	19	30	28	31	A	32	26	27	27	30	31	29	29	37	40	40	37	38	38	36	36	36	34	34	32.4	39.9		
3-Feb	33	32	31	30	A	30	33	32	27	28	37	41	42	42	43	42	42	42	41	42	40	37	36	36	36.6	42.7		
4-Feb	34	35	35	34	A	34	31	32	34	36	40	41	43	43	42	42	39	39	40	41	38	36	34	35	37.3	42.7		
5-Feb	37	39	39	41	A	45	43	42	40	39	40	40	40	40	41	41	41	39	36	38	38	38	38	37	39.7	44.9		
6-Feb	37	36	37	32	A	33	32	19	21	18	22	21	33	33	31	31	29	28	27	27	28	30	27	27	28.6	37.0		
7-Feb	33	30	31	23	A	24	26	26	28	28	29	31	31	32	31	34	34	29	35	35	36	34	35	37	31.0	37.4		
8-Feb	39	38	39	36	A	36	32	34	32	32	36	37	38	39	39	44	44	43	43	43	42	42	40	41	38.7	44.2		
9-Feb	42	41	41	39	A	38	36	37	26	25	30	27	31	34	36	35	36	38	29	31	29	28	30	28	33.4	41.9		
10-Feb	33	33	34	34	A	33	29	27	23	25	29	29	31	31	33	33	33	22	25	27	40	45	45	44	32.1	45.3		
11-Feb	44	43	42	41	A	41	41	42	43	44	44	44	44	44	44	44	44	44	44	43	43	43	44	44	43.3	44.5		
12-Feb	44	45	45	45	A	45	46	45	46	46	47	47	47	45	44	45	44	44	43	43	43	43	43	43	44.7	47.4		
13-Feb	43	44	44	43	A	42	42	41	40	40	41	41	41	40	40	41	41	38	37	39	40	42	40	40	40.8	44.0		
14-Feb	40	39	35	37	A	35	33	30	30	30	31	22	31	35	23	23	33	40	36	36	24	28	28	38	32.1	40.0		
15-Feb	40	41	42	43	A	41	39	38	22	28	31	33	C	C	C	39	38	39	39	39	38	39	39	38	37.2	43.2		
16-Feb	36	36	38	30	A	24	28	32	24	25	31	26	25	25	6	14	17	13	17	27	31	34	35	34	26.5	37.6		
17-Feb	35	35	33	32	A	32	36	39	39	40	42	43	44	44	45	44	42	45	41	41	41	40	39	40	39.7	44.7		
18-Feb	38	33	32	34	A	35	36	38	39	37	26	30	39	40	41	40	37	36	32	32	31	30	29	29	34.4	40.6		
19-Feb	28	27	27	27	A	28	28	27	25	26	28	30	31	32	31	32	32	32	31	32	33	33	34	34	29.9	34.0		
20-Feb	32	32	33	33	A	34	33	31	33	33	35	35	35	35	35	34	34	34	34	34	32	33	34	36	33.6	35.7		
21-Feb	33	28	28	25	A	28	23	23	24	31	36	37	36	36	35	35	35	33	29	31	31	31	32	30	30.9	37.4		
22-Feb	32	30	30	30	A	25	27	30	32	34	C	C	39	40	40	41	41	41	41	42	40	37	38	38	35.7	41.7		
23-Feb	39	38	36	35	A	33	35	32	15	20	28	27	28	35	37	37	37	38	36	38	38	42	41	40	34.1	42.3		
24-Feb	39	36	33	31	A	33	30	32	30	29	33	34	35	37	37	38	38	38	36	36	37	34	35	34	34.5	38.9		
25-Feb	32	34	36	37	A	39	38	42	43	43	42	42	43	43	43	44	43	42	43	42	41	39	40	40	40.5	44.0		
26-Feb	41	42	41	40	A	44	42	40	40	41	42	42	42	42	43	43	42	42	41	40	39	39	38	38	41.0	43.5		
27-Feb	39	38	37	36	A	35	37	34	36	36	37	38	39	39	40	40	39	38	37	37	36	35	35	36	37.1	39.7		
28-Feb	36	35	24	31	A	31	30	28	28	30	30	27	27	32	31	29	32	34	34	33	34	28	28	31	30.5	35.5		
36.2 35.8 35.0 34.3 -- 34.3 33.7 33.2 31.5 32.5 34.4 34.4 36.2 37.4 36.5 37.1 37.2 36.5 35.8 36.5 36.4 36.4 36.2 36.2																									Diurnal Average			
44.4 44.5 44.7 45.0 -- 45.1 45.6 45.3 45.5 46.2 46.6 47.1 47.4 44.8 44.6 44.5 44.2 44.7 43.5 43.2 43.1 45.3 45.1 44.5																									Diurnal Maximum			
C - Calibration A - Automated Daily Zero Span																												

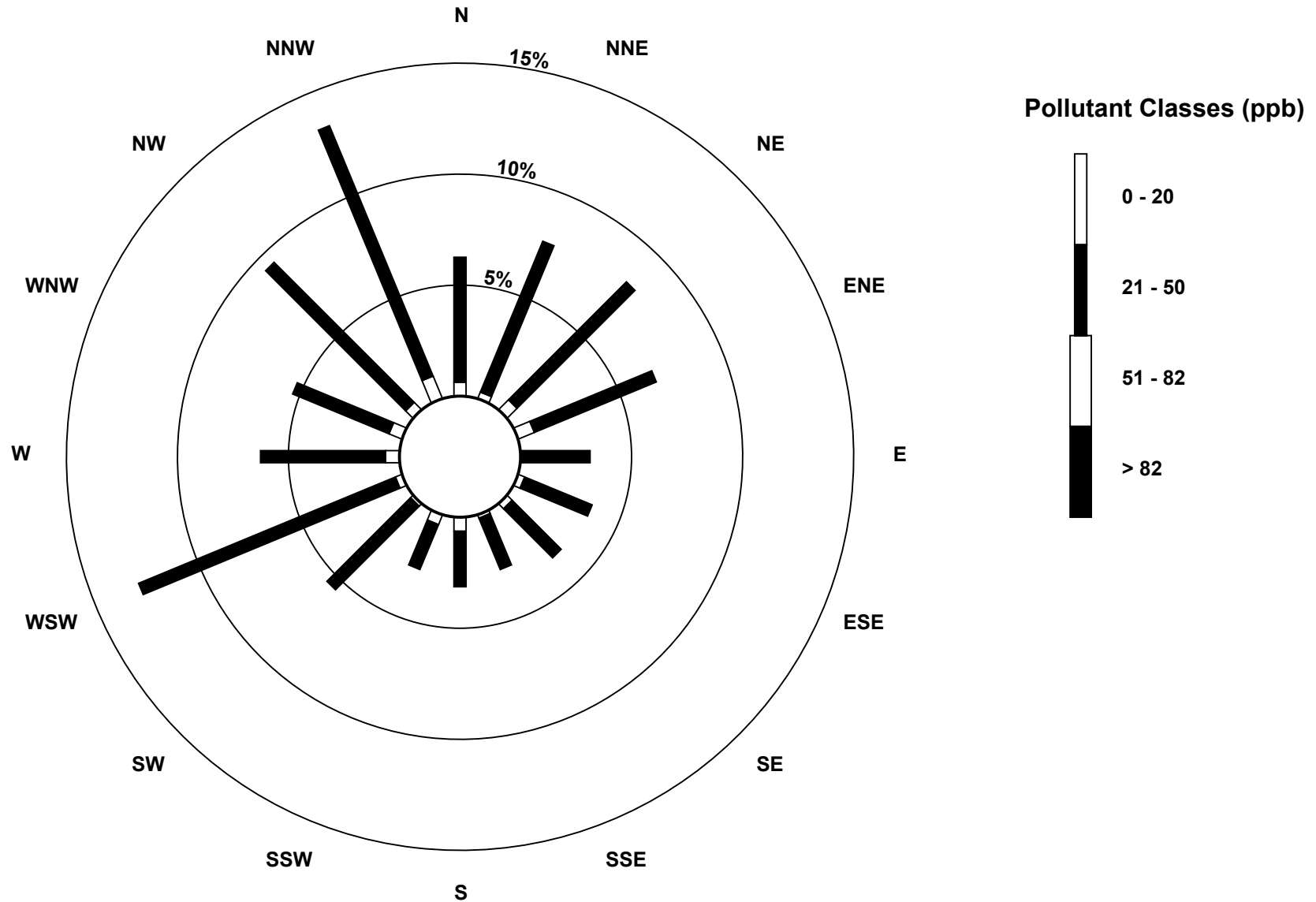
Hourly Maximums

Ozone (O₃) - ppb
Beaverlodge - February 2017



Pollutant Rose

Ozone (O₃) - ppb
Beaverlodge - February 2017



Eight Hour Running Averages

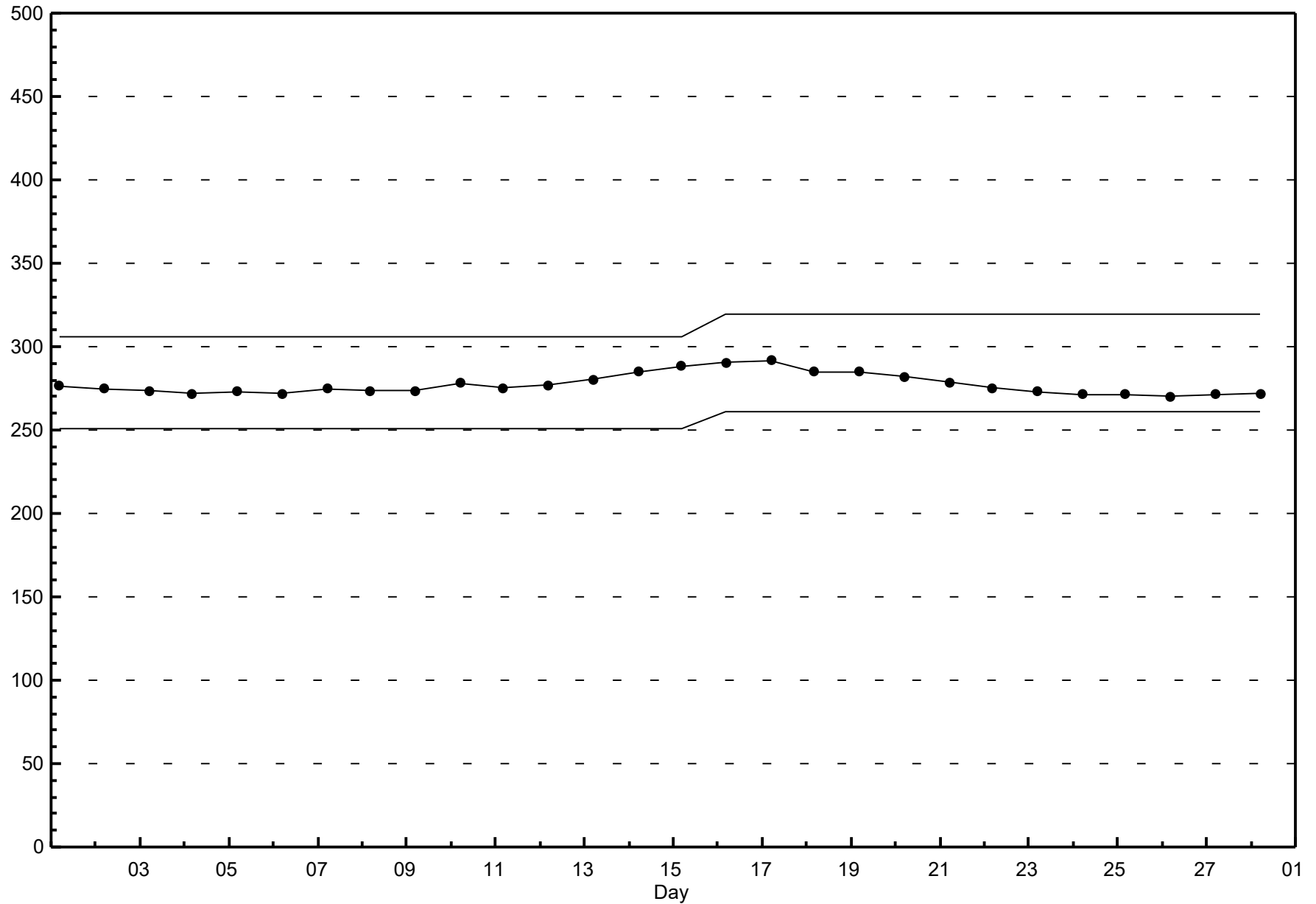
Ozone (O₃) - ppb

Beaverlodge - February 2017

Maximum Value: 45.0 ppb on Feb 12 12:00																								Hours in Service: 672	
Minimum Value: 8.9 ppb on Feb 16 19:00																								Hours of Data: 665	
Percentiles: P ₁ = 14.2 P ₁₀ = 23.7 Q ₁ = 28.0 Median = 32.4 Q ₃ = 37.8 P ₉₀ = 41.1 P ₉₉ = 44.2																								Hours of Missing Data: 7	
																								Hours of Calibration: 7	
																								Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Feb	33	32	30	30	30	29	28	28	28	28	30	31	30	31	32	32	32	32	33	33	34	34	35	34	34.6
2-Feb	31	30	27	27	26	24	22	22	23	24	25	25	26	26	28	30	31	33	34	35	36	36	35	35	36.1
3-Feb	34	33	32	32	31	31	31	30	28	27	28	29	31	32	34	35	38	40	41	41	40	40	39	38	40.9
4-Feb	37	36	35	35	34	34	33	32	32	32	32	33	34	35	37	38	39	39	39	39	38	35	33	32	39.5
5-Feb	32	32	32	32	32	36	39	39	40	40	40	40	40	40	39	39	40	39	38	38	37	37	36	35	40.1
6-Feb	35	35	34	32	31	29	27	23	19	16	15	14	16	16	19	21	24	25	26	26	26	25	24	23	35.0
7-Feb	23	23	23	23	23	23	23	23	23	23	25	26	26	27	28	29	30	30	30	30	31	31	31	31	31.0
8-Feb	32	32	33	34	34	34	35	34	33	33	32	32	33	33	34	35	37	38	39	40	41	41	41	41	41.2
9-Feb	41	40	40	40	40	38	36	35	31	28	25	23	23	24	24	25	28	29	29	29	29	28	27	26	40.8
10-Feb	26	26	27	28	28	29	29	28	27	26	26	25	26	26	26	27	29	28	27	27	26	27	29	30	30.3
11-Feb	32	35	38	40	42	42	42	41	41	41	42	42	42	43	43	43	43	43	43	42	42	42	42	42	42.9
12-Feb	42	43	43	43	43	44	44	44	44	45	45	45	45	44	44	43	43	43	43	42	42	42	43	43	45.0
13-Feb	43	43	43	43	43	42	42	42	41	40	40	40	40	39	39	39	39	39	38	38	38	38	38	38	42.6
14-Feb	38	37	37	37	36	35	34	31	27	25	24	21	20	19	18	18	19	21	22	24	24	25	25	26	37.7
15-Feb	28	29	30	32	34	36	37	36	33	30	26	23	23	21	N	N	N	N	N	N	37	37	37	36	37.5
16-Feb	34	33	33	31	30	28	25	23	21	20	18	16	16	14	13	12	12	11	9	11	13	15	19	22	34.1
17-Feb	25	28	31	32	32	32	32	33	33	34	36	37	38	39	41	41	41	42	42	41	41	41	40	39	41.7
18-Feb	39	37	36	34	34	33	32	31	31	31	31	30	30	31	31	32	32	33	34	35	35	33	32	31	38.8
19-Feb	30	29	28	27	27	27	27	26	26	25	26	26	26	27	27	28	29	30	30	31	31	31	32	32	31.7
20-Feb	32	32	32	32	32	32	32	31	31	32	32	32	32	33	33	33	33	33	33	32	32	32	32	31	33.5
21-Feb	30	29	28	27	27	26	24	22	21	21	22	24	26	27	29	31	33	34	33	31	30	30	29	28	33.7
22-Feb	28	28	28	28	29	27	27	26	26	26	27	N	28	31	34	36	38	39	39	39	39	38	36	34	39.4
23-Feb	34	33	32	31	30	30	30	29	24	21	20	19	19	20	22	24	28	31	32	34	35	36	37	37	37.4
24-Feb	37	37	37	36	36	34	33	31	30	28	28	29	29	30	31	32	34	35	35	36	36	35	35	34	37.3
25-Feb	33	33	33	33	33	34	34	35	37	38	39	40	40	40	41	41	42	42	42	42	41	41	40	40	41.8
26-Feb	40	40	39	39	39	40	40	40	40	39	39	40	40	40	40	41	41	41	41	41	41	40	39	39	41.4
27-Feb	38	38	37	37	37	36	36	34	33	33	33	33	34	34	35	37	38	38	38	38	37	36	35	35	38.2
28-Feb	34	34	31	30	30	29	28	27	26	25	27	26	26	26	27	27	27	28	29	29	30	29	28	28	34.2
42.5 42.6 42.9 43.2 43.4 43.9 44.1 44.2 44.3 44.6 44.8 45.0 45.0 44.5 43.8 43.5 43.3 43.0 42.5 42.3 42.2 42.1 42.5 42.6																									
Diurnal Maximums																									
N - Not Valid																									

Span Responses

Ozone (O₃)
Beaverlodge - February 2017

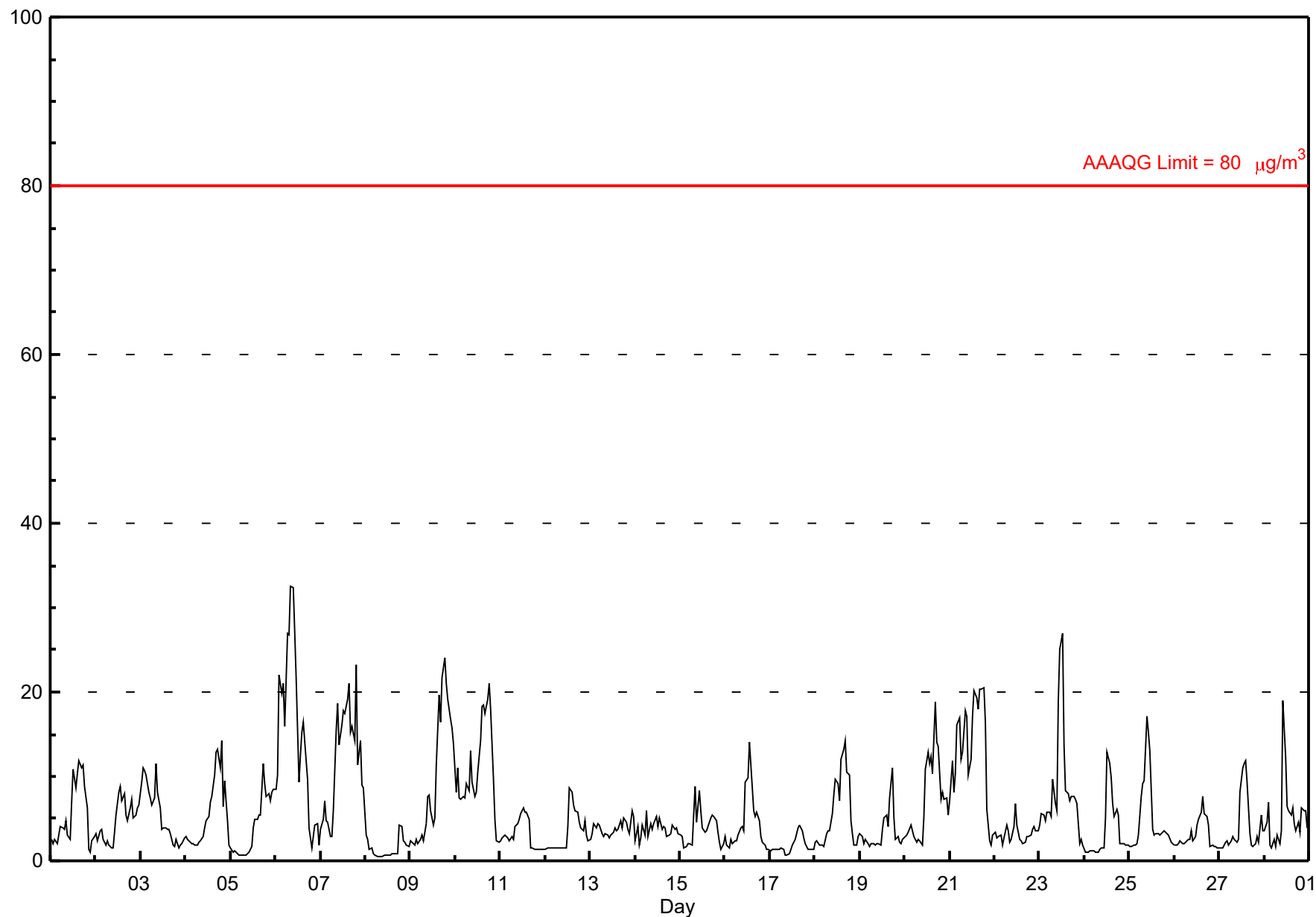


Hourly Averages

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

Beaverlodge - February 2017

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 32.5 µg/m³ on Feb 6 09:00 Maximum Daily Average: 15.0 µg/m³ on Feb 6																								Hours in Service: 672 Hours of Data: 672 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 1 µg/m³ on Feb 8 07:00 Maximum Diurnal Average: 8.5 µg/m³ at hour 16 Monthly Average: 5.74 µg/m³												Minimum Daily Average: 1.4 µg/m³ on Feb 8 Minimum Diurnal Average: 3.4 µg/m³ at hour 1 Percentiles: P ₁ = 0.7 P ₁₀ = 1.5 Q ₁ = 2.1 Median = 3.8 Q ₃ = 7.5 P ₉₀ = 13.2 P ₉₉ = 24.7														
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-Feb	3	2	3	2	3	4	4	4	5	3	3	7	11	9	10	12	11	11	9	6	1	1	2	3	5.3	11.8
2-Feb	3	2	4	4	3	2	2	2	2	2	3	5	8	9	7	8	5	5	6	7	5	5	6	7	4.7	8.8
3-Feb	9	11	11	10	8	8	7	7	12	8	6	4	4	4	4	4	3	2	2	3	2	2	2	3	5.6	11.6
4-Feb	3	3	2	2	2	2	2	2	2	3	4	5	5	7	8	10	13	13	11	14	6	10	5	2	5.6	14.2
5-Feb	2	1	1	1	1	1	1	1	1	1	1	2	4	5	5	5	5	12	9	8	8	7	8	8	4.0	11.6
6-Feb	8	10	22	20	21	16	27	27	33	32	27	22	9	13	15	16	12	10	4	2	3	4	4	2	15.0	32.5
7-Feb	4	5	7	5	5	3	3	6	16	19	14	16	18	18	19	21	15	16	14	23	11	14	9	9	12.0	23.2
8-Feb	3	3	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	4	2	2	2	2	1.4	4.2
9-Feb	2	2	2	3	2	3	3	2	4	8	8	6	4	5	11	20	17	22	24	21	19	17	16	14	9.8	24.0
10-Feb	8	11	8	7	8	8	9	8	13	9	8	8	11	14	18	19	17	19	21	18	10	5	2	2	10.9	21.1
11-Feb	2	3	3	3	3	2	3	3	4	4	5	6	6	6	6	5	2	2	1	1	1	1	1	1	3.1	6.2
12-Feb	1	2	2	2	2	2	2	2	2	2	2	2	4	9	8	7	6	6	5	4	4	5	3	2	3.3	8.7
13-Feb	3	3	4	4	4	4	3	3	3	3	3	3	3	4	4	4	5	4	5	5	4	3	6	5	3.8	5.9
14-Feb	2	4	2	3	4	3	6	3	4	4	4	5	4	5	4	4	4	3	3	3	4	4	4	3	3.8	6.0
15-Feb	3	3	2	2	2	2	2	6	9	5	8	6	4	3	4	4	5	6	5	5	3	2	1	2	3.8	8.8
16-Feb	3	2	2	3	2	2	2	3	4	4	4	9	10	14	11	6	5	6	5	3	2	2	1	1	4.4	14.1
17-Feb	1	1	1	1	1	1	2	1	1	1	1	1	2	3	3	4	4	4	3	2	1	1	1	1	1.8	4.2
18-Feb	2	2	2	2	2	2	3	4	4	6	8	10	9	7	12	13	14	11	10	5	3	2	2	3	5.7	14.3
19-Feb	3	3	2	3	2	2	2	2	2	2	2	2	4	5	6	4	7	11	5	3	3	2	2	3	3.4	11.1
20-Feb	3	3	3	4	4	3	2	3	2	2	5	11	13	12	12	10	19	14	14	7	8	7	7	6	7.3	18.8
21-Feb	7	12	8	10	16	17	12	13	18	17	10	12	17	20	19	18	20	20	21	16	6	2	2	3	13.3	20.5
22-Feb	3	3	3	3	2	3	4	4	2	3	4	7	4	3	2	2	2	3	3	3	4	4	4	4	3.2	6.7
23-Feb	4	6	6	5	6	6	5	10	7	6	19	25	27	14	8	8	7	8	8	7	7	2	3	2	8.5	26.9
24-Feb	1	1	1	1	1	1	1	1	1	2	2	5	13	12	10	7	5	6	5	2	2	2	2	2	3.6	12.9
25-Feb	2	2	2	2	2	3	8	9	10	17	15	13	4	3	3	3	3	3	4	3	3	3	2	2	5.0	17.1
26-Feb	2	2	2	2	2	2	2	3	3	4	2	3	4	5	6	8	6	5	4	2	2	2	2	2	3.1	7.6
27-Feb	2	2	2	2	2	2	2	3	3	2	3	8	11	12	12	9	3	2	2	2	3	2	6	4	4.1	11.8
28-Feb	4	5	7	2	2	3	2	3	2	4	19	12	6	6	5	6	4	4	5	3	6	6	6	4	5.2	18.9
3.4 3.8 4.0 3.9 4.0 3.7 4.3 4.7 5.9 6.1 6.8 7.7 7.9 8.0 8.4 8.5 7.9 8.1 7.5 6.5 4.8 4.3 4.0 3.6																								Diurnal Average		
9.3 11.8 22.1 19.8 21.0 16.9 27.0 26.8 32.5 32.4 27.1 25.1 26.9 20.1 19.3 21.0 20.3 21.7 24.0 23.2 19.1 16.8 15.7 13.9																								Diurnal Maximum		
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																										



Hourly Maximums

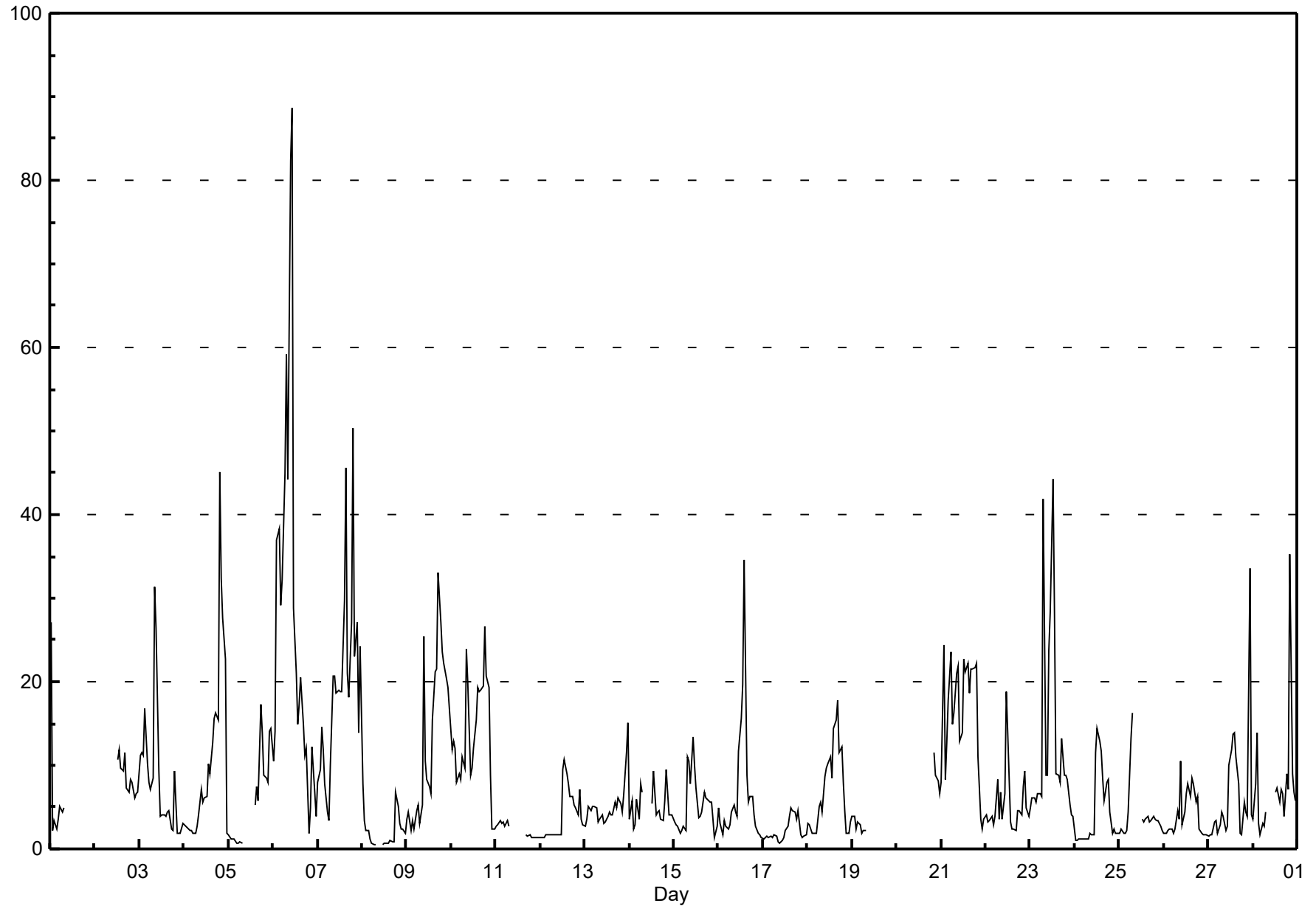
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Beaverlodge - February 2017

Maximum Value: 88.6 μg/m ³ on Feb 6 11:00																								Maximum Daily Average: 27.1 μg/m ³ on Feb 6																								Hours in Service: 672	
Minimum Value: 0 μg/m ³ on Feb 8 08:00																								Minimum Daily Average: 2.2 μg/m ³ on Feb 8																								Hours of Data: 579	
Maximum Diurnal Average: 14.3 μg/m ³ at hour 10																								Minimum Diurnal Average: 5.0 μg/m ³ at hour 5																								Hours of Missing Data: 93	
Monthly Average: 8.41 μg/m ³																								Percentiles: P ₁ = 0.7 P ₁₀ = 1.6 Q ₁ = 2.6 Median = 4.8 Q ₃ = 10.5 P ₉₀ = 20.4 P ₉₉ = 44.9																								Hours of Calibration: 0	
																								Percent Operational Time: 86.2																									
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-Feb	27	2	3	2	4	5	4	5	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	27.1																							
2-Feb	N	N	N	N	N	N	N	N	N	N	N	N	11	12	10	9	11	7	7	8	8	6	7	7	--	11.9																							
3-Feb	11	11	11	17	10	8	7	8	31	26	9	4	4	4	4	4	5	2	2	9	2	2	2	3	8.3	31.3																							
4-Feb	3	3	2	2	2	2	2	3	4	7	6	6	6	10	9	13	16	16	15	45	32	28	23	2	10.7	45.0																							
5-Feb	2	1	1	1	1	1	1	1	N	N	N	N	N	N	5	8	6	17	14	9	8	8	14	14	6.2	17.3																							
6-Feb	10	14	37	38	29	32	45	59	44	82	89	29	21	15	17	21	15	11	12	2	5	12	7	4	27.1	88.6																							
7-Feb	8	9	15	12	8	4	3	10	21	21	19	19	19	19	30	46	21	18	27	50	23	27	14	24	19.4	50.4																							
8-Feb	8	3	2	2	1	1	0	0	N	N	N	0	1	1	1	1	1	1	7	5	3	2	2	2	2.2	7.8																							
9-Feb	4	4	2	3	2	5	5	3	5	25	10	8	8	7	15	21	21	33	27	23	22	20	19	17	13.0	33.0																							
10-Feb	12	13	12	8	9	8	11	10	24	20	9	10	12	15	19	19	19	20	27	21	19	9	2	2	13.7	26.6																							
11-Feb	3	3	3	3	3	3	3	3	N	N	N	N	N	N	N	N	2	1	2	1	1	1	1	1	--	3.4																							
12-Feb	1	1	1	2	2	2	2	2	2	2	2	2	10	11	9	8	6	6	5	5	4	7	4	3	4.0	10.8																							
13-Feb	3	4	5	5	5	5	5	3	4	4	3	3	4	4	4	4	6	5	6	5	4	7	11	15	5.2	15.1																							
14-Feb	4	6	2	3	6	4	8	7	N	N	N	N	5	9	4	4	5	4	3	6	9	4	4	4	5.1	9.5																							
15-Feb	3	3	3	2	2	3	2	11	10	8	13	10	7	4	4	4	7	6	6	6	6	4	1	3	5.3	13.4																							
16-Feb	5	3	2	3	3	2	3	4	5	4	4	12	16	20	35	9	6	6	6	4	3	2	2	1	6.6	34.5																							
17-Feb	1	1	1	1	1	1	2	1	1	1	1	1	2	3	4	5	5	4	4	5	2	1	1	2	2.2	4.8																							
18-Feb	3	3	2	2	2	2	5	6	4	9	10	10	11	9	14	15	18	11	12	8	5	2	2	3	7.0	17.8																							
19-Feb	4	4	2	3	3	2	2	2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	3.9																							
20-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	11.5																							
21-Feb	8	24	8	13	18	23	15	16	21	22	13	14	23	21	22	19	21	21	22	22	11	4	2	4	16.2	24.4																							
22-Feb	4	3	3	4	3	4	8	4	7	4	7	19	14	3	2	2	2	5	5	4	8	9	5	4	5.5	18.8																							
23-Feb	5	6	6	6	7	7	6	42	9	9	24	28	44	28	9	9	8	13	9	9	8	5	4	4	12.7	44.3																							
24-Feb	1	1	1	1	1	1	1	1	2	2	2	11	14	13	12	8	6	8	8	4	2	2	2	2	4.5	14.4																							
25-Feb	2	2	2	2	2	4	13	16	N	N	N	N	4	3	4	4	3	3	4	4	3	3	3	2	4.2	16.4																							
26-Feb	2	2	2	2	2	2	2	5	4	10	3	4	7	8	6	9	8	6	6	2	2	2	2	2	4.1	10.5																							
27-Feb	1	2	2	3	3	2	3	4	4	2	3	10	12	14	14	11	8	2	2	6	4	4	33	4	6.4	33.5																							
28-Feb	4	8	14	3	2	3	3	4	N	N	N	N	7	7	6	7	7	4	9	7	35	9	7	6	7.5	35.2																							
5.3 5.3 5.7 5.6 5.0 5.2 6.3 8.9 11.2 14.3 12.5 10.6 11.3 10.4 10.8 10.8 9.2 9.3 9.9 10.8 9.3 7.3 7.0 5.4																									Diurnal Average																								
27.1 24.4 36.9 38.4 29.1 32.2 45.0 59.2 44.3 82.3 88.6 28.8 44.3 28.4 34.5 45.5 21.5 33.0 27.1 50.4 35.2 27.6 33.5 24.2																									Diurnal Maximum																								
N - Not Valid																																																	

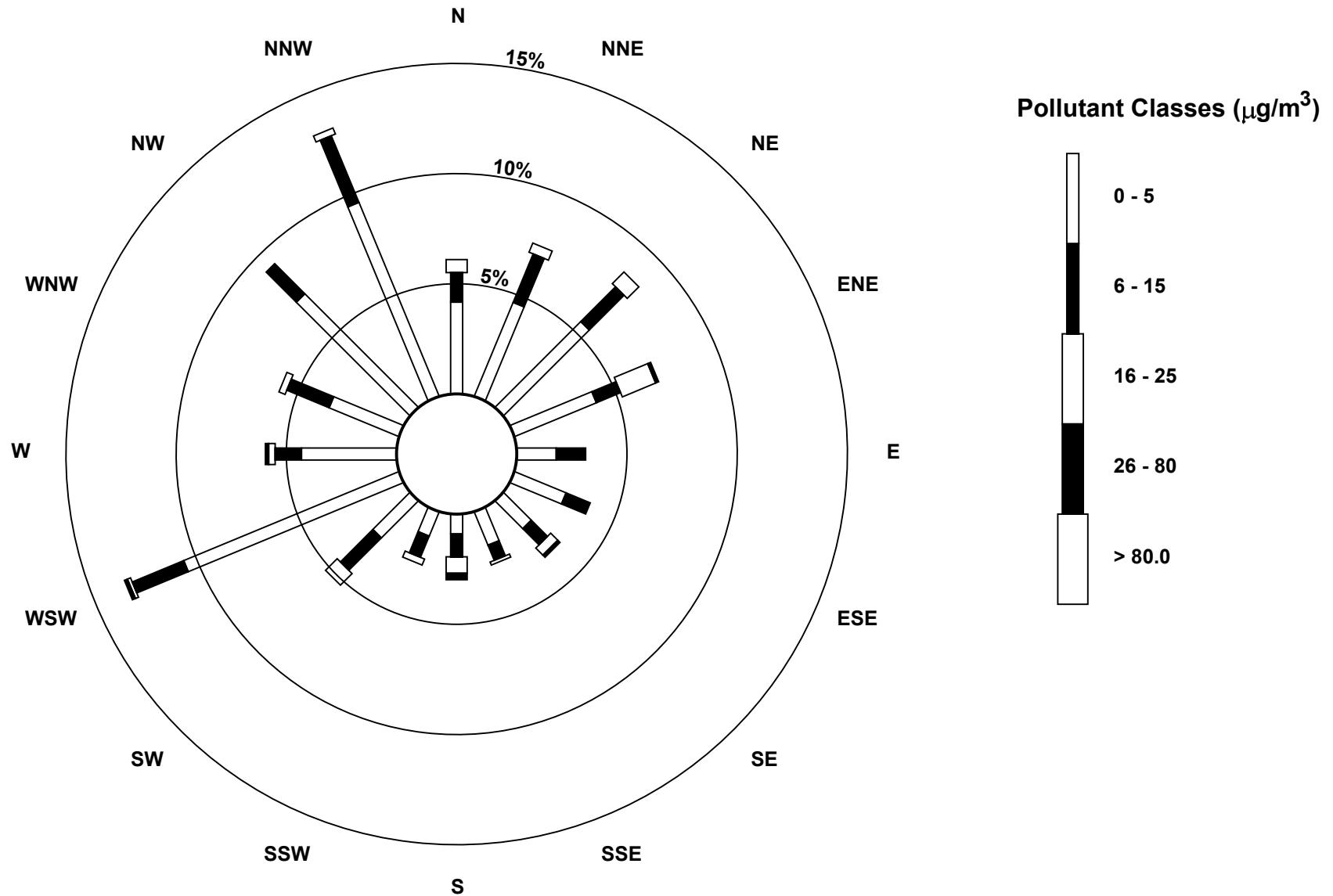
Hourly Maximums

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



Pollutant Rose

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



Hourly Averages

External Temperature (ET) - °C

Beaverlodge - February 2017

Maximum Value: 10.5 °C on Feb 15 15:00																				Maximum Daily Average: 7.0 °C on Feb 15					Hours in Service: 672	
Minimum Value: -31 °C on Feb 6 09:00																				Minimum Daily Average: -26.4 °C on Feb 6					Hours of Data: 672	
Maximum Diurnal Average: -5.4 °C at hour 17																				Minimum Diurnal Average: -10.4 °C at hour 9					Hours of Missing Data: 0	
Monthly Average: -7.84 °C																				Percentiles: P ₁ = -29.6 P ₁₀ = -19.3 Q ₁ = -13.4 Median = -7.6 Q ₃ = -0.9 P ₉₀ = 4.1 P ₉₉ = 8.7					Hours of Calibration: 0	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	-10	-9	-10	-9	-9	-9	-10	-11	-12	-13	-11	-10	-10	-9	-8	-8	-7	-9	-9	-10	-10	-10	-10	-14	-10.0	-7.4
2-Feb	-16	-17	-18	-17	-17	-17	-18	-18	-18	-18	-16	-14	-12	-10	-10	-9	-9	-10	-10	-10	-11	-11	-11	-12	-13.7	-9.2
3-Feb	-12	-12	-12	-13	-13	-13	-13	-14	-14	-14	-14	-14	-14	-14	-14	-14	-15	-15	-15	-16	-16	-17	-18	-18	-14.3	-11.9
4-Feb	-18	-17	-17	-18	-19	-18	-18	-18	-17	-16	-16	-15	-15	-14	-14	-13	-13	-14	-15	-14	-15	-17	-16	-14	-15.9	-13.1
5-Feb	-14	-14	-14	-16	-17	-18	-19	-20	-22	-23	-23	-22	-20	-20	-20	-20	-20	-22	-23	-23	-23	-23	-24	-25	-20.3	-13.5
6-Feb	-25	-25	-27	-28	-29	-28	-30	-31	-31	-31	-29	-27	-26	-25	-24	-23	-23	-24	-25	-25	-25	-25	-25	-25	-26.4	-23.3
7-Feb	-25	-26	-27	-29	-29	-29	-30	-30	-30	-30	-29	-25	-25	-23	-20	-20	-18	-18	-18	-18	-17	-17	-18	-18	-23.8	-17.2
8-Feb	-18	-20	-20	-21	-22	-23	-23	-23	-23	-22	-21	-19	-17	-15	-11	-8	-9	-10	-11	-12	-12	-14	-14	-14	-16.8	-8.2
9-Feb	-14	-15	-15	-17	-17	-17	-18	-17	-19	-18	-16	-16	-14	-13	-13	-12	-12	-11	-11	-11	-12	-12	-12	-12	-14.3	-10.7
10-Feb	-11	-11	-12	-12	-12	-12	-12	-11	-12	-12	-11	-9	-9	-7	-8	-8	-8	-8	-8	-8	-7	-6	-5	-5	-9.4	-5.3
11-Feb	-5	-5	-5	-5	-4	-4	-4	-4	-3	-2	-1	-1	0	0	0	0	0	0	0	0	-1	-1	0	0	-1.8	0.5
12-Feb	0	0	1	3	3	2	1	1	1	3	4	5	6	6	6	6	5	4	4	4	4	4	4	5	3.5	6.2
13-Feb	5	5	5	4	4	4	4	4	4	4	5	7	7	7	8	8	7	7	6	7	7	8	6	7	5.8	8.0
14-Feb	6	2	3	3	2	0	0	-1	-3	-1	1	1	2	5	3	5	6	9	8	7	7	7	6	7	3.5	9.2
15-Feb	9	9	9	9	9	7	6	4	1	3	5	4	9	10	11	10	9	8	7	7	6	6	7	5	7.0	10.5
16-Feb	3	4	5	2	1	2	1	1	-1	1	2	1	3	4	3	3	4	4	3	4	3	3	3	4	2.6	5.3
17-Feb	4	4	4	4	3	3	3	3	2	2	3	4	4	4	4	4	4	3	2	2	1	1	0	0	2.9	4.4
18-Feb	-1	-3	-3	-3	-3	-2	-2	-1	-1	-1	-1	-1	1	1	2	1	1	1	0	0	0	-1	-1	-1	-0.8	1.6
19-Feb	-1	-1	-1	-2	-2	-2	-2	-2	-3	-3	-3	-2	-2	-3	-3	-2	-3	-3	-4	-4	-5	-5	-5	-5	-2.8	-0.9
20-Feb	-5	-5	-5	-6	-7	-7	-8	-8	-8	-7	-7	-7	-7	-6	-5	-5	-5	-5	-5	-5	-6	-7	-6	-6	-6.2	-4.6
21-Feb	-7	-6	-6	-6	-7	-7	-7	-7	-7	-6	-5	-2	-4	-4	-2	-2	-3	-3	-4	-4	-5	-4	-5	-6	-5.0	-1.8
22-Feb	-6	-6	-6	-7	-7	-7	-7	-7	-7	-7	-7	-7	-6	-5	-4	-4	-4	-4	-5	-6	-7	-7	-8	-9	-6.3	-3.9
23-Feb	-8	-8	-9	-9	-9	-9	-9	-9	-9	-9	-7	-6	-6	-4	-3	-3	-3	-4	-4	-5	-6	-7	-7	-8	-6.6	-2.7
24-Feb	-8	-9	-9	-10	-11	-12	-13	-13	-12	-12	-11	-10	-9	-9	-9	-9	-9	-9	-11	-12	-12	-13	-13	-15	-10.9	-8.3
25-Feb	-15	-15	-14	-12	-12	-11	-9	-7	-6	-6	-6	-6	-6	-6	-5	-5	-5	-5	-6	-6	-6	-6	-6	-7	-7.9	-5.3
26-Feb	-7	-8	-9	-11	-12	-12	-13	-13	-13	-13	-12	-11	-10	-9	-8	-7	-7	-8	-9	-10	-10	-11	-12	-11	-10.2	-6.9
27-Feb	-11	-10	-10	-11	-11	-11	-10	-10	-10	-10	-9	-7	-6	-6	-6	-6	-7	-8	-9	-9	-11	-12	-12	-12	-9.4	-6.2
28-Feb	-13	-13	-19	-17	-16	-18	-18	-19	-17	-17	-16	-14	-12	-9	-7	-7	-6	-6	-7	-7	-7	-8	-9	-8	-12.2	-5.9
																									Diurnal Average	
																									Diurnal Maximum	

Hourly Averages

External Temperature (ET) - °C

Beaverlodge - February 2017



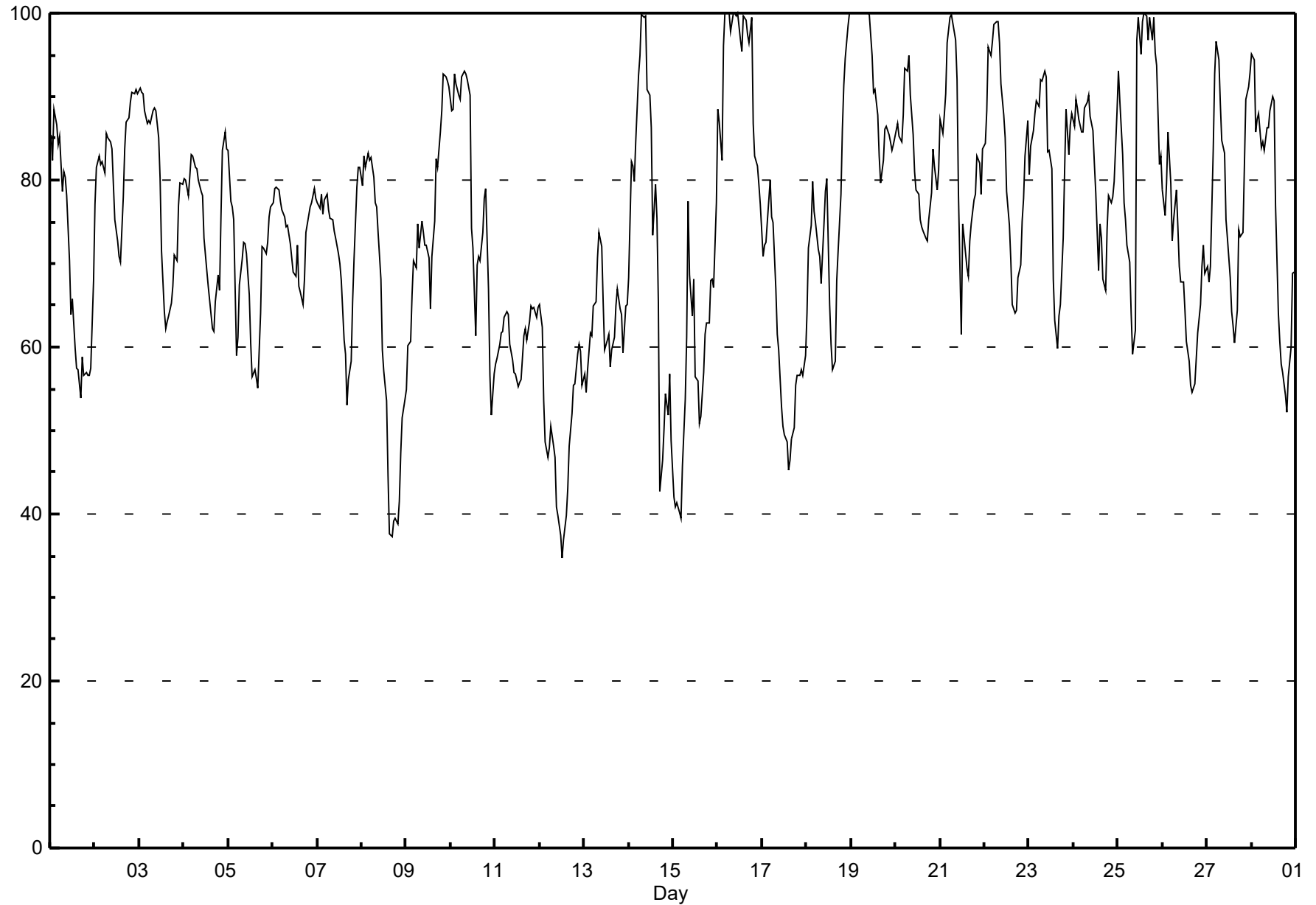
Hourly Averages

Relative Humidity (RH) - %
Beaverlodge - February 2017

Maximum Value: 100.0 % on Feb 16 05:00																				Maximum Daily Average: 93.5 % on Feb 16					Hours in Service: 672	
Minimum Value: 35 % on Feb 12 13:00																				Minimum Daily Average: 49.5 % on Feb 12					Hours of Data: 672	
Maximum Diurnal Average: 81.1 % at hour 7																				Minimum Diurnal Average: 65.0 % at hour 16					Hours of Missing Data: 0	
Monthly Average: 74.41 %																				Percentiles: P ₁ = 39.5 P ₁₀ = 55.9 Q ₁ = 64.0 Median = 75.2 Q ₃ = 85.7 P ₉₀ = 93.0 P ₉₉ = 100.0					Hours of Calibration: 0	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	85	82	89	87	84	85	79	81	80	78	70	64	66	60	57	57	54	59	57	57	57	57	57	68	69.6	88.5
2-Feb	77	82	83	82	82	81	86	85	85	84	79	75	73	71	70	78	84	87	88	89	90	90	91	90	82.6	90.8
3-Feb	91	91	90	88	87	87	87	88	89	88	85	80	72	64	62	63	64	65	67	71	70	77	80	80	78.6	91.0
4-Feb	80	80	78	80	83	83	81	81	80	79	78	73	69	67	66	62	62	65	69	67	76	84	86	84	75.5	85.8
5-Feb	84	77	77	75	59	61	67	70	72	72	71	66	60	56	57	56	55	64	72	72	71	73	76	77	68.5	83.6
6-Feb	77	79	79	79	77	76	76	74	75	72	71	69	68	72	67	67	65	68	74	76	77	77	79	78	73.9	79.1
7-Feb	77	77	78	76	78	78	76	75	75	74	73	71	70	68	61	59	53	56	58	65	70	79	82	81	71.4	81.5
8-Feb	79	83	81	83	82	83	80	77	77	74	68	60	57	54	45	38	37	39	40	39	41	47	52	54	61.2	83.3
9-Feb	55	60	61	66	70	70	75	72	75	74	72	72	71	65	71	75	83	82	86	88	93	92	92	91	75.4	92.7
10-Feb	88	89	93	92	90	90	92	93	93	92	90	74	72	61	70	71	70	74	78	79	67	57	52	57	78.4	93.1
11-Feb	58	59	60	62	62	64	64	64	60	58	57	57	55	56	56	61	62	61	63	65	65	65	63	65	60.9	65.0
12-Feb	65	62	54	49	47	48	51	48	47	41	40	38	35	37	40	43	48	52	55	56	59	60	59	55	49.5	65.1
13-Feb	57	55	57	62	61	65	65	71	74	72	65	60	61	62	58	60	61	65	67	65	64	59	65	65	63.1	73.8
14-Feb	68	82	82	80	85	93	95	100	100	100	91	90	86	73	80	75	65	43	46	50	54	52	57	49	74.8	99.8
15-Feb	42	41	41	40	40	46	54	61	77	69	64	68	56	56	51	52	57	61	63	63	68	68	67	77	57.6	77.4
16-Feb	89	87	82	96	100	100	100	98	100	100	100	100	97	95	100	99	98	96	100	87	83	82	80	77	93.5	100.0
17-Feb	71	72	73	75	80	76	75	67	61	60	53	51	49	49	45	46	49	50	55	57	57	57	57	59	60.1	80.0
18-Feb	64	72	75	80	76	75	72	71	68	75	79	80	65	60	57	58	68	71	78	86	91	95	98	100	75.6	99.9
19-Feb	100	100	100	100	100	100	100	100	100	100	100	95	90	91	88	83	80	82	86	86	85	85	83	84	92.5	100.0
20-Feb	86	87	85	85	88	93	93	95	90	85	81	79	78	75	74	74	73	73	75	79	84	82	79	81	82.3	94.9
21-Feb	87	86	88	90	96	100	100	99	97	92	78	62	75	73	70	69	73	75	78	78	83	82	78	84	83.0	99.9
22-Feb	84	88	96	95	97	99	99	99	96	91	88	85	79	75	70	65	64	64	68	70	75	78	83	87	83.1	98.9
23-Feb	81	84	86	88	90	89	92	92	93	92	83	84	81	68	63	60	64	65	73	81	89	83	87	88	81.5	93.0
24-Feb	86	90	89	87	86	86	89	89	90	88	86	82	79	69	75	73	68	67	74	78	77	78	80	88	81.4	90.1
25-Feb	93	89	83	77	75	72	70	64	59	62	97	100	95	99	100	100	97	99	97	100	95	94	82	83	86.7	100.0
26-Feb	79	76	80	86	80	73	75	79	74	70	68	68	64	61	58	55	55	56	59	62	65	70	72	69	68.8	85.8
27-Feb	70	68	70	84	93	97	94	89	85	83	75	73	68	64	62	60	64	74	73	74	82	90	91	93	78.2	96.7
28-Feb	95	94	86	87	88	84	85	83	86	86	88	90	90	77	64	61	58	57	54	52	56	60	69	69	75.9	95.1
77.5 78.2 78.4 79.7 79.8 80.4 81.1 81.0 80.7 79.0 76.8 73.7 70.8 67.1 65.6 65.0 65.4 66.8 69.7 71.1 73.0 74.0 74.8 76.2																									Diurnal Average	
100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 99.8 100.0 96.8 98.9 100.0 99.6 97.5 99.4 99.5 99.5 95.2 94.5 98.5 99.9																									Diurnal Maximum	

Hourly Averages

Relative Humidity (RH) - %
Beaverlodge - February 2017



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	3	4	5	3	4	2	8	4	8	4	3	1	3	3	2	2	2	4	6	2	1	4	4	1	1.8	8.1
Dir	352	345	265	307	295	321	315	311	309	339	321	171	197	179	95	112	112	54	34	333	332	39	314	77	331	309
2 Spd	1	2	5	1	0	1	3	3	3	4	0	2	3	10	9	9	5	5	5	5	6	6	6	5	2.9	9.6
Dir	106	42	337	23	146	246	55	55	61	39	116	208	277	287	293	296	322	328	344	339	354	342	346	352	332	287
3 Spd	7	6	5	6	8	10	7	6	5	9	10	19	17	12	10	11	8	4	1	5	11	13	8	9	7.7	19.1
Dir	17	24	13	22	41	41	38	351	323	324	14	34	32	26	27	25	22	25	25	322	331	336	326	333	11	34
4 Spd	6	10	12	15	13	14	7	9	6	7	6	10	13	13	12	8	3	2	4	4	8	6	6	8	5.8	15.4
Dir	339	339	328	324	335	331	330	320	316	310	296	245	241	236	225	217	216	86	40	306	327	280	319	343	303	324
5 Spd	11	16	17	17	22	16	9	15	17	12	11	7	4	4	6	5	5	5	5	4	4	3	4	3	8.2	22.4
Dir	346	358	2	24	34	32	41	48	36	17	20	16	23	358	331	30	11	116	90	61	64	81	97	59	27	34
6 Spd	2	0	2	2	1	1	1	1	1	1	2	3	3	5	4	5	2	2	1	5	3	5	2	3	0.7	5.0
Dir	27	283	215	56	68	40	190	142	182	240	68	217	255	234	234	194	126	162	198	38	2	294	297	292	243	234
7 Spd	3	1	1	1	1	5	4	5	5	4	6	2	4	2	1	2	2	1	3	4	6	6	6	6	1.1	6.2
Dir	309	314	279	265	66	51	63	48	43	65	50	129	69	72	72	60	196	59	276	279	274	282	264	295	357	274
8 Spd	8	0	4	2	2	3	3	5	5	6	6	4	4	6	3	10	18	17	13	12	8	1	4	1	3.1	17.8
Dir	277	130	246	83	91	69	160	164	145	169	170	117	76	74	143	230	236	247	243	245	243	62	68	59	217	236
9 Spd	1	3	3	4	3	2	3	2	2	4	6	12	7	2	6	1	6	2	2	4	6	4	5	8	0.8	11.9
Dir	73	120	80	157	118	268	15	8	117	294	331	325	290	220	212	168	6	66	188	193	182	260	20	22	330	325
10 Spd	9	2	6	10	9	9	7	4	4	3	3	2	5	2	4	5	6	3	2	3	9	14	13	26	1.4	25.6
Dir	28	131	165	121	113	112	115	149	309	279	258	153	163	103	74	57	129	129	360	339	268	255	260	257	198	257
11 Spd	28	34	37	34	34	37	35	29	28	33	35	35	35	24	32	44	44	44	31	19	17	18	22	23	31.0	43.8
Dir	256	256	252	248	251	253	254	251	250	253	253	253	256	246	246	240	250	253	255	252	244	226	224	232	249	240
12 Spd	13	14	25	32	30	25	22	10	6	15	29	19	36	56	58	45	35	33	34	34	34	30	28	30	27.9	57.9
Dir	230	228	240	257	258	243	227	220	42	261	245	245	260	258	254	253	248	249	248	255	250	251	250	256	250	254
13 Spd	25	22	18	26	25	23	26	19	13	9	22	26	15	15	22	15	14	12	9	8	2	8	3	5	15.6	26.4
Dir	253	268	259	245	251	245	247	254	251	257	262	266	252	249	266	248	253	254	237	251	244	268	300	229	254	247
14 Spd	3	4	6	3	5	5	2	5	4	3	1	1	7	2	4	4	1	2	5	2	2	3	3	2	1.4	7.2
Dir	262	104	82	126	282	22	244	54	298	69	324	42	192	202	54	155	66	90	106	74	109	133	54	5	75	42
15 Spd	5	3	7	7	7	8	6	2	6	5	2	9	18	22	31	38	34	22	7	3	1	4	5	3	6.2	38.3
Dir	200	193	40	51	55	21	31	331	331	34	292	238	241	247	249	257	261	259	267	271	132	57	45	31	265	257
16 Spd	3	12	13	2	3	10	5	3	4	8	4	2	2	2	1	2	4	4	2	4	9	12	14	12	2.8	13.8
Dir	220	28	20	292	297	315	331	245	1	349	1	201	331	27	5	209	276	60	157	230	233	254	244	260	298	244
17 Spd	7	9	15	15	9	19	20	18	21	19	28	29	29	32	27	15	10	12	12	10	9	8	9	8	14.9	31.9
Dir	270	261	274	286	253	248	249	255	257	253	259	258	258	265	267	280	297	291	292	308	328	335	338	339	270	265
18 Spd	5	4	1	2	1	5	5	5	3	4	2	0	5	9	12	17	11	12	10	10	19	21	18	15	7.6	21.3
Dir	328	49	174	56	51	41	41	32	27	60	182	33	89	86	68	62	35	40	55	54	62	65	58	53	56	65
19 Spd	16	13	10	13	12	9	9	10	10	10	12	14	13	11	11	9	10	11	13	13	11	7	8	6	9.3	15.9
Dir	52	49	34	23	26	349	335	328	326	319	315	307	310	320	315	335	329	344	359	2	2	356	357	339	348	52
20 Spd	6	6	8	8	8	8	7	5	7	8	9	10	10	10	6	5	5	5	3	3	6	5	5	4	6.0	10.3
Dir	354	355	345	344	338	346	323	311	331	337	348	332	323	342	338	12	36	2	316	328	38	35	30	25	347	323
21 Spd	3	5	2	1	2	2	3	3	3	6	3	1	4	3	1	1	3	3	3	2	3	5	9	12	1.6	11.7
Dir	254	289	18	128	360	328	14	333	1	29	42	129	220	249	32	56	182	186	224	231	15	345	9	20	352	20
22 Spd	11	6	6	7	6	5	7	8	8	9	13	13	15	15	12	13	11	8	8	7	4	6	3	4	7.8	14.8
Dir	6	332	311	331	303	297	301	294	302	317	315	303	306	319	314	311	312	351	353	354	344	301	293	51	320	306

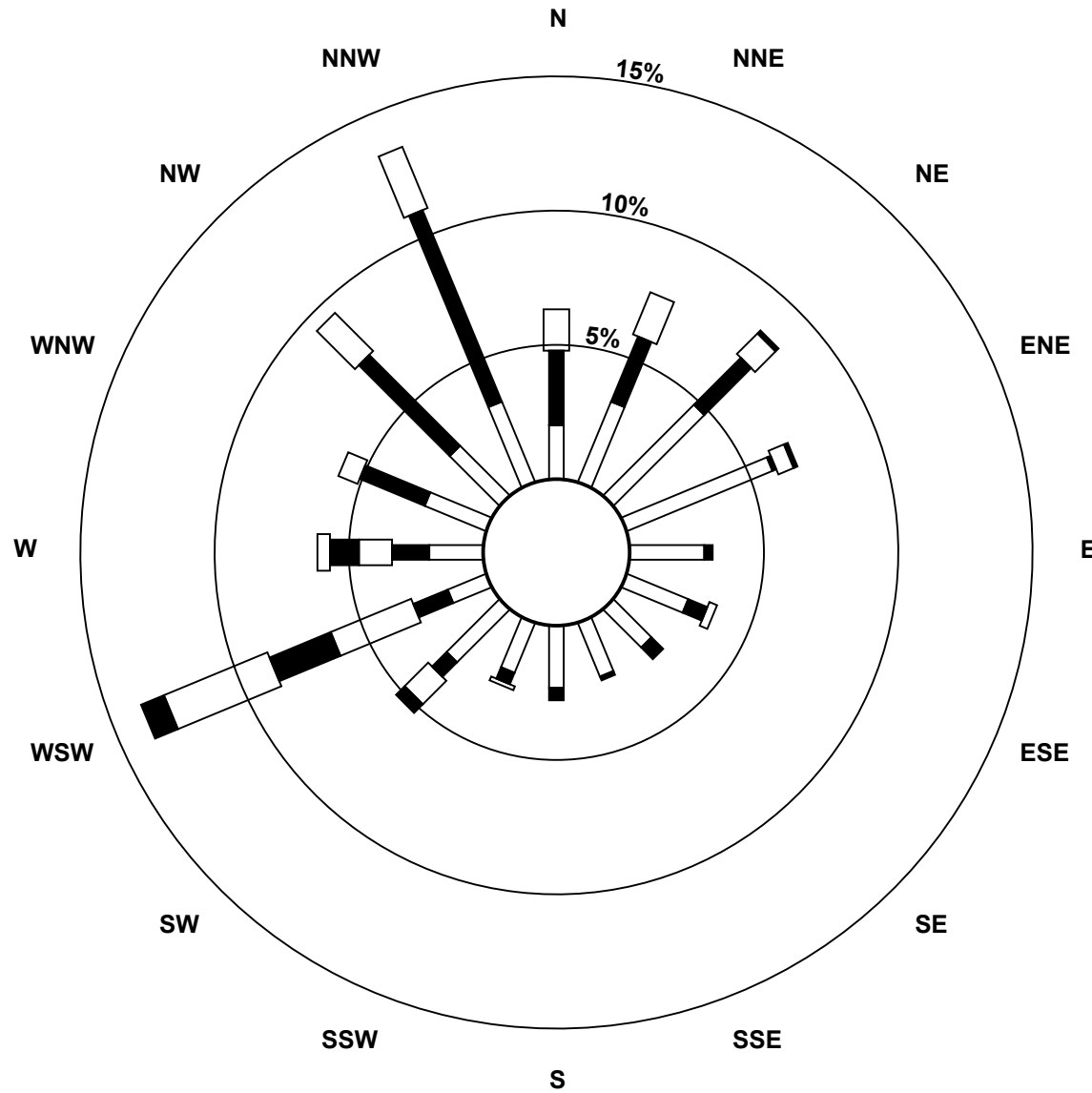
Hourly Averages

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

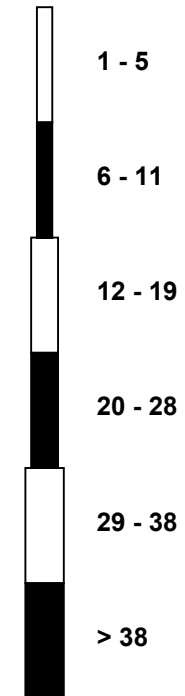
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24								
23 Spd	7	2	1	1	1	1	2	1	1	0	2	4	4	7	11	11	10	9	8	13	14	16	11	11	5.3	16.1						
Dir	28	52	85	154	238	216	50	332	182	184	76	283	280	322	342	344	2	353	335	357	356	357	347	346	349	357						
24 Spd	12	12	12	12	13	10	10	5	3	2	3	4	4	2	3	4	3	4	4	6	5	4	4	3	2.3	13.0						
Dir	334	327	335	337	343	330	330	333	318	190	236	226	213	180	225	215	185	145	97	105	108	96	150	131	328	343						
25 Spd	3	2	4	3	4	4	2	8	10	9	10	9	21	15	12	14	12	11	12	10	11	10	14	13	6.3	21.0						
Dir	81	87	61	95	53	63	177	227	248	283	288	284	275	274	274	309	330	350	2	330	333	330	343	336	312	275						
26 Spd	13	16	11	10	15	11	4	5	7	7	10	10	14	9	12	12	13	11	7	4	3	2	3	5	4.6	15.8						
Dir	343	345	341	320	324	331	332	320	339	307	319	304	291	254	223	220	213	203	192	149	93	114	143	162	294	345						
27 Spd	4	3	1	5	3	3	5	7	7	8	8	11	13	15	17	14	15	12	9	7	8	6	3	6	6.2	16.7						
Dir	150	188	126	47	74	59	336	299	309	315	306	322	318	338	353	348	4	21	15	4	322	28	310	316	344	353						
28 Spd	3	0	2	4	3	2	4	4	3	2	2	2	2	7	10	10	15	13	5	4	3	4	9	10	2.9	14.6						
Dir	35	78	68	62	62	112	106	83	130	149	190	227	225	131	128	128	114	105	74	114	90	303	324	4	99	114						
Spd	3.6	3.4	3.9	3.6	3.6	3.8	3.4	3.2	3.8	4.3	5.6	6.1	7.4	7.0	7.3	6.0	5.1	3.5	3.0	3.2	3.2	3.5	3.4	4.0	Diurnal Average							
Dir	313	317	306	303	310	305	287	289	303	298	286	278	274	272	269	271	274	280	294	301	312	309	311	312	Diurnal Maximum							
Spd	28.3	33.9	36.8	34.3	34.3	37.1	35.2	28.8	28.2	32.5	35.4	34.7	36.5	56.0	57.9	45.0	43.7	43.7	34.1	33.6	33.9	29.7	27.5	29.7	Diurnal Maximum							
Dir	256	256	252	248	251	253	254	251	250	253	253	253	260	258	254	253	250	253	248	255	250	251	250	256								
Maximum Speed Value: 58 km/h on Feb 12 15:00																				Minimum Speed Value: 0 km/h on Feb 18 12:00										Hours in Service:		672
Maximum Daily Speed Average: 31.0 km/h on Feb 11																				Minimum Daily Speed Average: 0.7 km/h on Feb 6										Hours of Data:		672
Maximum Diurnal Speed Average: 7.4 km/h at hour 13																				Minimum Diurnal Speed Average: 3.0 km/h at hour 19										Hours of Missing Data:		0
Monthly Average Velocity: 4.19 km/h 290.9 deg																				Speed Percentiles: P ₁ = 0.5 P ₁₀ = 1.8 Q ₁ = 3.3 Median = 6.0 Q ₃ = 11.5 P ₉₀ = 19.0 P ₉₉ = 37.1										Percent Operational Time:		100.0
All monthly, daily, and diurnal averages have been calculated using vector methods																																
Frequency Distribution																																
Speed Range (km/h)																																
Direction	0 to 5		5 to 11		11 to 19		19 to 28		28 to 38		> 38		Total																			
North	24		52		24		0		0		0		100																			
NorthEast	58		34		17		3		0		0		112																			
East	45		8		2		0		0		0		55																			
SouthEast	36		8		1		0		0		0		45																			
South	31		7		0		0		0		0		38																			
SouthWest	28		12		17		10		2		1		70																			
West	24		20		23		15		30		6		118																			
NorthWest	37		69		28		0		0		0		134																			
Total	283		210		112		28		32		7		672																			

Wind Rose

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



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Beaverlodge - February 2017

Maximum Speed: 58 km/h on Feb 12 15:00																				Maximum Daily Speed Average: 31.4 km/h on Feb 11					Hours in Service: 672	
Minimum Speed: 1 km/h on Feb 21 04:00																				Minimum Daily Speed Average: 3.3 km/h on Feb 6					Hours of Data: 672	
Maximum Diurnal Speed Average: 12.5 km/h at hour 15																				Minimum Diurnal Speed Average: 7.7 km/h at hour 8					Hours of Missing Data: 0	
Monthly Average Speed: 9.43 km/h																				Percentiles: P ₁ = 1.7 P ₁₀ = 2.9 Q ₁ = 4.1 Median = 6.4 Q ₃ = 11.8 P ₉₀ = 19.1 P ₉₉ = 37.3					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-Feb	6	5	6	4	4	3	8	4	8	6	3	3	3	4	3	3	2	4	6	3	2	4	4	2	4.2	8.2
2-Feb	2	5	7	2	2	2	3	3	3	4	2	2	5	10	9	9	5	6	5	5	6	6	6	5	4.7	9.7
3-Feb	7	6	5	6	9	10	7	6	6	9	11	19	18	12	10	11	8	4	2	5	11	13	8	9	8.8	19.2
4-Feb	7	10	12	15	13	14	7	9	6	7	7	10	13	13	12	8	3	2	4	4	8	6	6	8	8.5	15.4
5-Feb	11	16	17	18	23	16	9	15	17	12	11	7	4	5	7	6	5	6	5	4	4	3	5	4	9.5	22.6
6-Feb	2	2	3	3	3	2	2	3	3	3	2	4	4	6	5	5	3	2	3	5	4	5	3	3	3.3	5.6
7-Feb	3	2	2	2	2	5	4	5	5	4	6	2	4	3	2	2	3	2	3	4	6	6	6	6	3.8	6.3
8-Feb	9	3	5	2	3	3	4	5	5	6	6	5	4	6	3	11	18	17	13	12	8	4	5	3	6.6	17.8
9-Feb	4	4	4	4	4	2	4	3	4	5	7	12	8	4	6	3	7	5	4	4	6	4	5	8	5.0	12.1
10-Feb	9	5	7	10	10	9	7	5	5	3	4	2	5	2	4	5	6	5	4	4	10	14	13	26	7.3	25.9
11-Feb	28	34	37	34	34	37	35	29	28	33	36	35	36	24	32	44	44	44	31	19	17	18	22	23	31.4	43.8
12-Feb	13	15	25	32	30	25	22	10	6	16	29	19	37	56	58	45	35	33	34	34	34	30	28	30	29.0	58.1
13-Feb	25	22	19	26	25	23	26	19	13	9	22	26	17	15	22	16	14	12	9	8	5	8	5	5	16.3	26.4
14-Feb	4	4	6	5	6	6	3	5	8	4	4	3	7	5	5	6	4	4	6	5	5	4	4	5	4.9	8.2
15-Feb	6	5	8	8	7	9	7	6	7	5	4	10	18	22	31	38	34	22	9	5	3	5	5	4	11.6	38.4
16-Feb	5	12	13	9	6	10	7	4	7	9	5	4	4	4	4	5	7	5	3	5	9	13	14	12	7.4	13.8
17-Feb	7	9	15	16	9	19	20	18	21	19	28	29	29	32	27	16	10	13	12	10	9	8	9	9	16.4	32.0
18-Feb	5	5	2	2	2	5	5	6	4	6	3	4	6	9	12	17	11	12	11	10	19	21	18	15	8.8	21.3
19-Feb	16	13	10	13	12	9	9	10	10	10	12	14	13	12	12	10	10	11	14	13	11	7	8	7	11.1	16.0
20-Feb	6	6	8	8	8	8	7	5	7	8	10	10	10	10	7	5	5	5	4	3	6	5	5	4	6.8	10.5
21-Feb	5	5	3	1	3	3	5	3	4	6	3	1	5	3	3	3	4	4	3	3	4	5	9	12	4.2	11.8
22-Feb	11	6	6	8	6	5	7	8	8	9	13	13	15	15	12	13	11	8	8	7	5	6	5	5	8.7	15.0
23-Feb	7	3	1	1	2	2	3	2	2	2	2	4	5	8	12	12	11	9	8	13	14	16	11	11	6.7	16.1
24-Feb	12	12	12	12	13	10	10	5	4	3	3	5	5	3	4	5	4	5	4	6	5	4	4	3	6.3	13.0
25-Feb	3	2	4	3	4	4	3	8	10	9	10	9	21	15	12	14	12	11	12	10	11	10	14	13	9.5	21.1
26-Feb	14	16	11	10	15	11	5	6	7	7	10	11	14	10	12	12	13	11	7	4	3	3	3	5	9.1	15.9
27-Feb	5	3	2	5	3	3	6	7	7	8	8	11	13	15	17	14	15	12	10	7	8	6	4	6	8.2	16.9
28-Feb	4	3	6	4	3	3	4	5	3	4	3	3	3	7	10	11	15	13	6	5	6	5	9	10	6.0	14.7
																									Diurnal Average	
																									Diurnal Maximum	
All monthly, daily, and diurnal averages have been calculated using scalar methods																										

Hourly Standard Deviations

Wind Direction (WD) - deg
Beaverlodge - February 2017

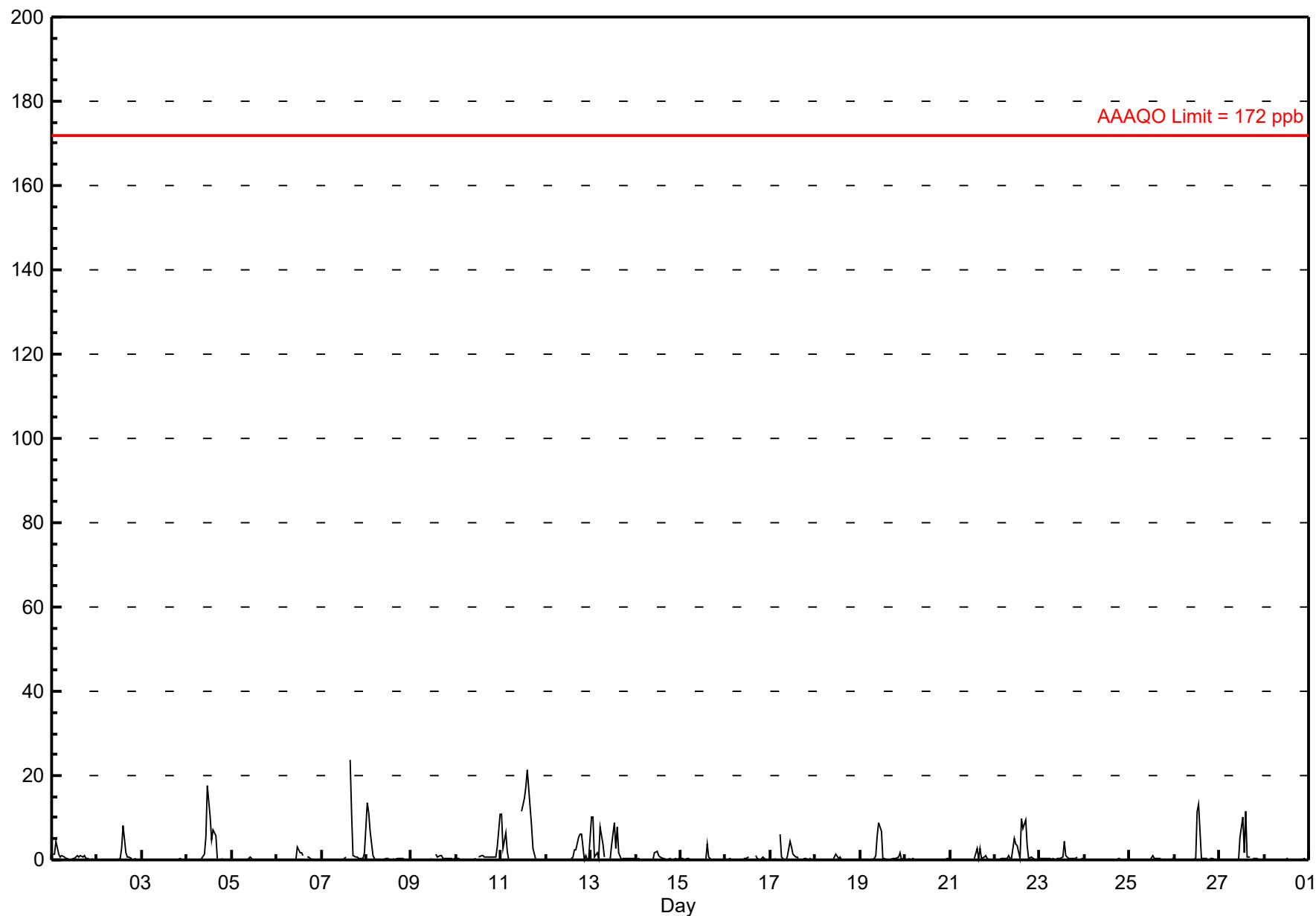
Maximum Value: 100.1 deg on Feb 21 16:00																				Hours in Service: 672					
Minimum Value: 2.8 deg on Feb 11 05:00																				Hours of Data: 672					
																				Hours of Missing Data: 0					
Percentiles: P ₁ = 3.0 P ₁₀ = 4.8 Q ₁ = 7.8 Median = 14.9 Q ₃ = 38.8 P ₉₀ = 69.5 P ₉₉ = 89.9																				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-Feb	63	45	58	28	39	74	9	55	8	42	47	76	23	20	47	32	32	7	6	58	65	15	29	76	76.3
2-Feb	70	87	47	75	93	50	36	9	22	25	83	36	86	10	10	11	16	12	10	8	8	6	7	8	92.5
3-Feb	7	5	5	10	19	5	8	14	13	7	14	4	5	5	5	5	7	6	70	42	4	4	27	5	70.2
4-Feb	6	9	4	3	9	4	19	4	9	12	29	10	6	10	7	7	26	33	23	13	17	30	20	10	32.6
5-Feb	9	5	5	19	6	7	9	8	5	8	4	14	30	60	24	13	17	24	18	11	11	17	37	45	59.8
6-Feb	66	86	64	87	67	94	75	87	84	76	62	36	38	27	15	22	51	38	72	15	46	34	39	26	93.8
7-Feb	36	72	72	71	58	11	17	10	15	16	8	23	19	62	63	15	62	63	27	21	10	6	13	17	72.3
8-Feb	13	89	60	33	42	13	39	17	28	14	17	27	24	8	28	24	4	4	7	7	8	83	24	90	90.0
9-Feb	90	31	30	26	47	54	40	63	74	80	18	11	36	53	21	90	27	69	70	28	10	29	23	7	90.2
10-Feb	12	57	32	9	18	11	14	16	38	32	52	53	21	40	18	15	26	52	74	61	30	19	6	10	74.3
11-Feb	5	3	3	3	3	4	4	3	3	3	3	4	6	6	8	4	3	5	5	7	5	10	6	3	10.3
12-Feb	9	23	7	9	5	9	10	21	45	52	5	16	6	5	4	4	3	4	4	3	3	3	4	4	52.4
13-Feb	4	8	14	4	6	4	3	5	5	11	8	4	26	13	5	21	17	12	28	42	86	15	57	16	85.5
14-Feb	48	54	13	55	49	42	54	36	64	60	83	80	15	79	62	53	81	73	27	74	79	38	48	65	83.4
15-Feb	38	77	9	17	9	20	40	83	44	24	74	28	29	4	5	4	6	8	47	67	73	32	33	52	82.7
16-Feb	76	7	6	82	66	38	87	55	55	33	34	70	86	76	87	91	75	41	63	60	13	13	3	7	90.8
17-Feb	11	6	8	5	20	3	3	7	4	6	3	5	6	4	6	12	9	24	14	10	12	10	6	15	24.1
18-Feb	36	17	63	71	79	10	13	32	41	46	68	86	23	14	13	8	11	11	11	11	6	5	5	6	85.9
19-Feb	4	6	16	7	9	9	5	6	7	5	6	7	9	18	12	10	9	11	7	6	9	9	12	11	17.7
20-Feb	19	10	10	14	12	13	14	10	8	12	11	11	10	17	19	33	8	12	21	35	9	11	8	17	34.9
21-Feb	68	12	46	75	46	40	53	27	29	7	25	57	37	35	72	100	42	35	17	59	39	8	17	6	100.1
22-Feb	9	15	6	13	16	15	8	5	5	8	10	9	8	9	12	9	12	10	5	6	32	23	63	25	62.6
23-Feb	8	70	43	80	53	76	72	77	62	76	30	50	32	23	13	12	17	8	9	6	5	5	7	7	80.3
24-Feb	7	4	6	5	6	7	3	34	79	35	29	24	30	55	28	26	35	20	21	8	15	21	27	15	78.7
25-Feb	17	25	41	24	12	19	50	8	14	11	6	7	8	8	12	11	11	23	9	6	7	7	6	6	49.5
26-Feb	6	8	8	12	7	9	38	23	9	8	11	9	8	25	5	4	4	5	7	32	15	37	39	27	39.4
27-Feb	33	24	52	12	19	20	33	17	17	5	5	10	12	11	9	11	10	6	4	12	9	20	67	25	66.5
28-Feb	33	86	77	10	14	55	40	48	21	61	36	59	56	10	14	12	6	6	61	56	86	53	11	12	86.0
89.9 89.0 76.9 87.0 92.5 93.8 86.6 87.4 83.8 79.9 83.4 85.9 86.0 78.7 86.6 100.1 80.8 73.2 74.3 73.6 85.7 83.4 66.5 90.0																									

PAZA
Valleyview Station
Monthly Summary Tables, Graphs and
Roses

[illegible]

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Valleyview - February 2017



Hourly Maximums

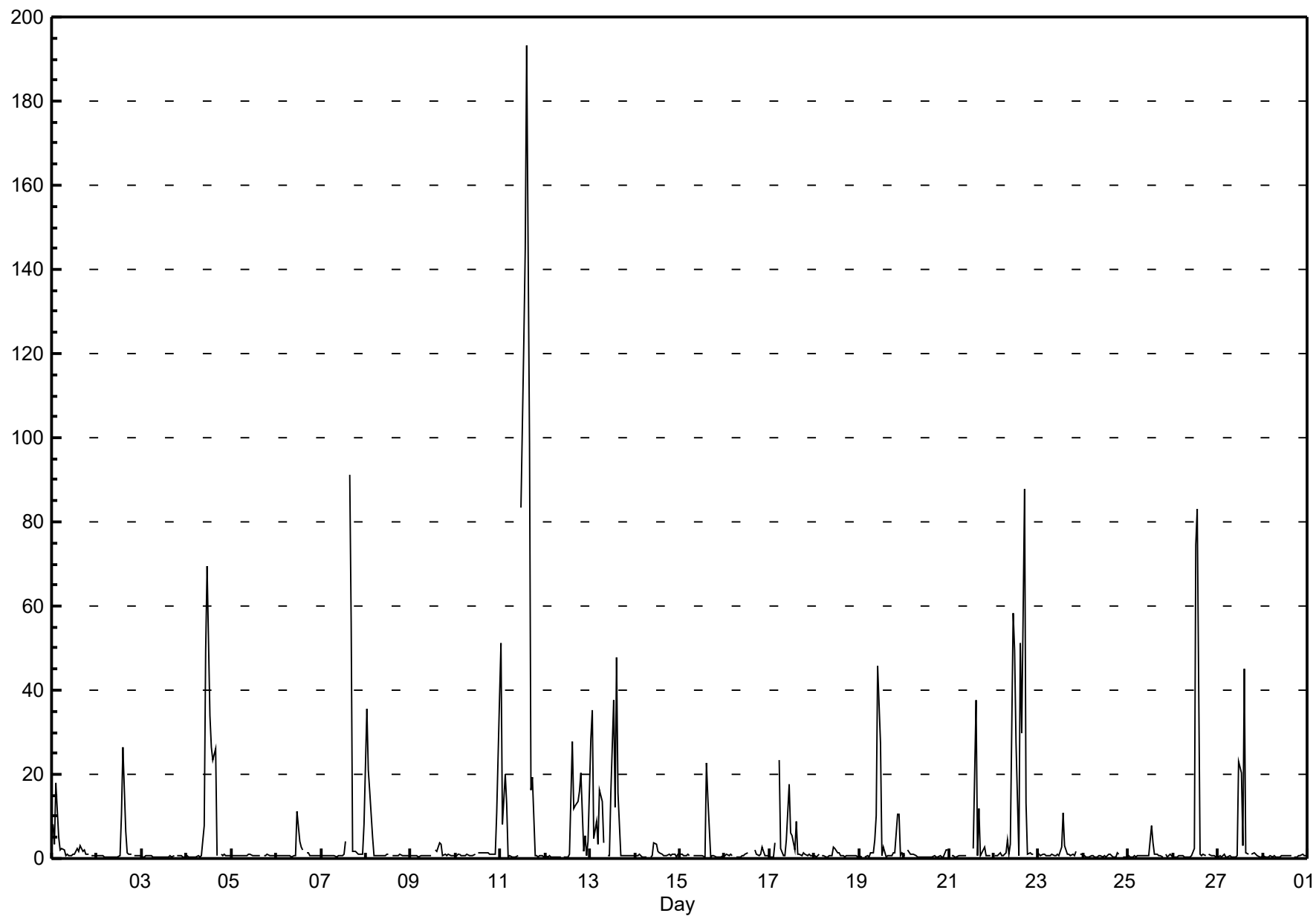
Sulphur Dioxide (SO₂) - ppb

Valleyview - February 2017

Maximum Value: 193.3 ppb on Feb 11 15:00																				Maximum Daily Average: 33.8 ppb on Feb 11					Hours in Service: 672	
Minimum Value: 0 ppb on Feb 19 02:00																				Minimum Daily Average: 0.5 ppb on Feb 3					Hours of Data: 637	
Maximum Diurnal Average: 19.3 ppb at hour 15																				Minimum Diurnal Average: 0.7 ppb at hour 9					Hours of Missing Data: 35	
Monthly Average: 4.76 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.7 Q ₃ = 1.1 P ₉₀ = 10.4 P ₉₉ = 84.7					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-Feb	8	3	18	5	2	2	2	1	1	1	1	1	1	2	2	3	2	2	1	1	A	1	1	1	2.6	18.0
2-Feb	1	1	1	1	1	0	0	0	0	0	0	0	1	10	26	6	1	1	1	A	1	1	1	1	2.4	26.3
3-Feb	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	A	1	1	1	0	0	0.5	0.8
4-Feb	1	0	0	0	0	0	1	0	1	8	49	69	34	26	23	26	1	A	1	1	1	1	1	1	10.7	69.5
5-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.6	1.0
6-Feb	1	1	1	1	1	1	1	1	0	1	1	11	4	3	2	A	1	1	1	1	1	1	1	1	1.4	11.1
7-Feb	1	1	1	1	1	1	1	1	0	1	1	1	1	4	A	91	56	2	2	1	1	1	1	8	7.6	91.1
8-Feb	35	21	16	5	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	3.9	35.5
9-Feb	1	1	1	1	0	1	1	1	1	1	1	1	A	2	2	4	4	1	1	1	1	1	1	1	1.0	3.8
10-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	1	2	1	1	1	1	1	1	1	11	38	3.0	38.4
11-Feb	51	8	20	13	0	1	0	0	0	1	A	83	123	145	193	99	16	19	1	1	0	1	1	0	33.8	193.3
12-Feb	1	0	1	0	0	0	0	0	0	A	0	0	0	1	28	12	13	14	16	20	2	6	1	4	5.3	27.9
13-Feb	28	35	5	9	3	16	14	4	A	1	1	16	38	12	48	16	1	1	1	1	1	1	1	1	10.9	47.7
14-Feb	1	1	1	1	0	0	0	A	0	1	4	3	2	1	1	1	1	1	1	1	1	0	1	1	1.0	3.7
15-Feb	1	1	1	1	1	1	A	1	1	1	1	1	1	0	23	14	0	1	1	0	0	0	0	1	2.2	22.7
16-Feb	1	1	1	1	1	A	0	0	0	1	1	1	1	C	C	C	2	1	1	1	3	1	1	1	0.9	2.9
17-Feb	0	0	0	4	A	23	2	1	1	4	18	6	6	2	9	1	1	1	1	1	1	1	1	1	3.7	23.3
18-Feb	1	0	1	A	1	1	0	0	1	1	3	2	1	1	1	1	0	1	1	1	1	1	0	0	0.8	2.6
19-Feb	1	0	A	0	1	0	1	1	4	10	46	27	1	3	0	1	1	1	1	1	11	10	1	1	5.4	45.7
20-Feb	1	A	2	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2	2	0.7	1.9
21-Feb	A	1	1	0	0	1	1	1	1	1	C	C	C	2	38	1	12	1	2	3	1	1	1	A	3.5	37.8
22-Feb	1	1	1	1	1	1	2	5	1	3	58	49	28	1	51	30	88	13	1	1	1	1	A	2	14.8	87.7
23-Feb	1	1	1	1	1	1	1	1	1	1	1	1	3	11	3	1	1	1	1	1	2	A	1	1	1.5	11.0
24-Feb	1	0	0	0	1	1	0	0	1	1	0	1	0	1	1	1	0	0	1	1	A	0	0	0	0.6	1.5
25-Feb	1	0	0	1	0	1	1	1	1	1	1	1	8	4	1	1	1	1	0	A	1	0	1	1	1.1	7.8
26-Feb	0	0	0	1	1	1	0	0	0	0	1	2	75	83	1	1	1	1	A	1	1	1	1	0	7.5	83.1
27-Feb	0	1	0	1	0	0	1	0	0	0	1	23	20	3	45	1	1	A	1	1	1	1	0	0	4.5	45.0
28-Feb	1	0	0	0	1	0	1	0	0	0	1	1	1	1	1	1	A	1	0	1	1	1	1	1	0.6	0.9
5.1 3.0 2.7 1.8 0.7 2.1 1.2 0.8 0.7 1.5 7.3 11.7 13.5 12.4 19.3 12.1 7.9 2.5 1.5 1.7 1.3 1.2 1.1 2.5																									Diurnal Average	
51.3 35.4 19.9 12.9 3.5 23.3 13.5 4.5 4.2 10.2 58.3 83.3 122.8 144.8 193.3 98.7 87.7 19.3 16.0 20.4 10.6 10.3 11.0 38.4																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

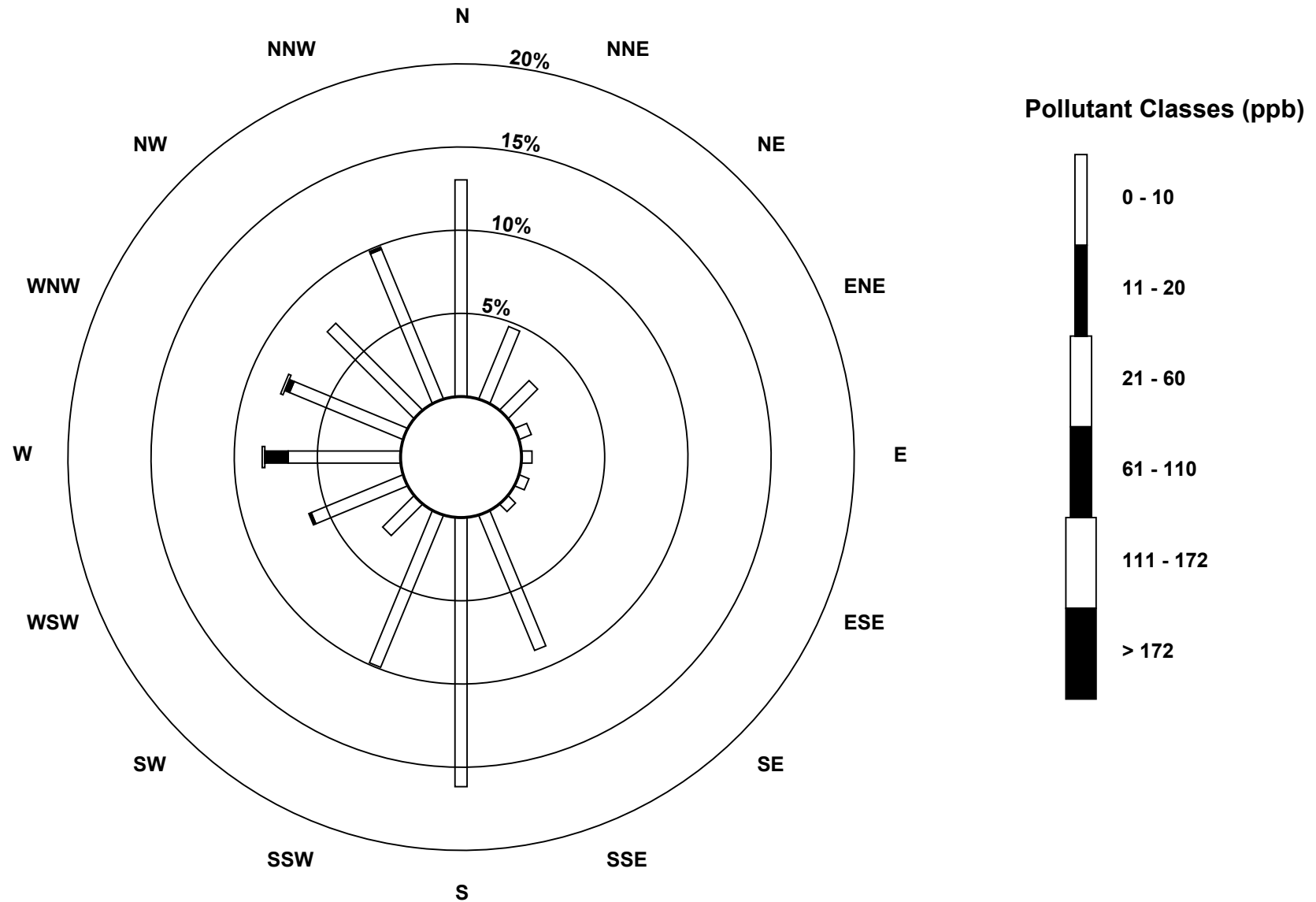
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Valleyview - February 2017



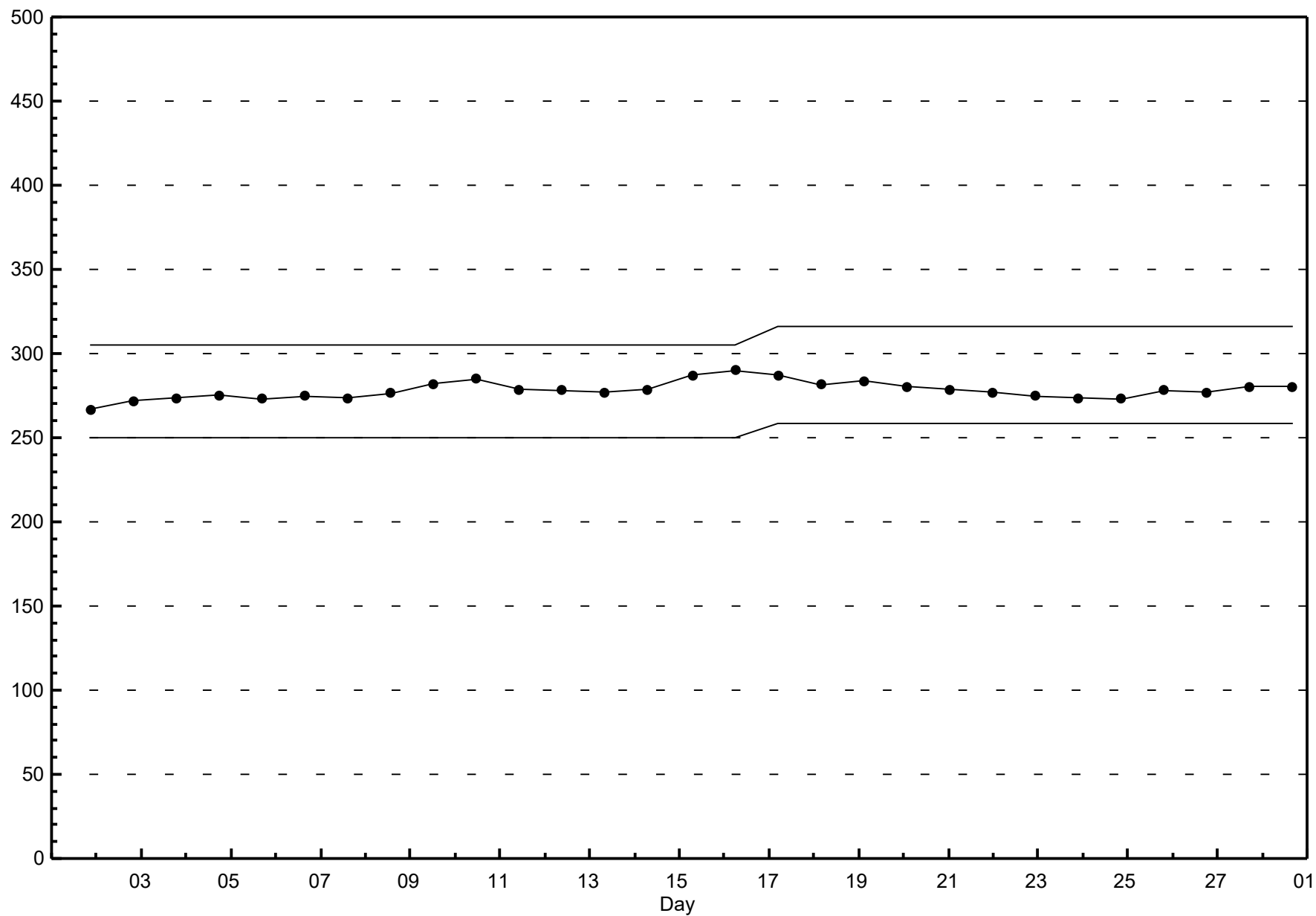
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Valleyview - February 2017



Span Responses

Sulphur Dioxide (SO₂)
Valleyview - February 2017



Hourly Averages

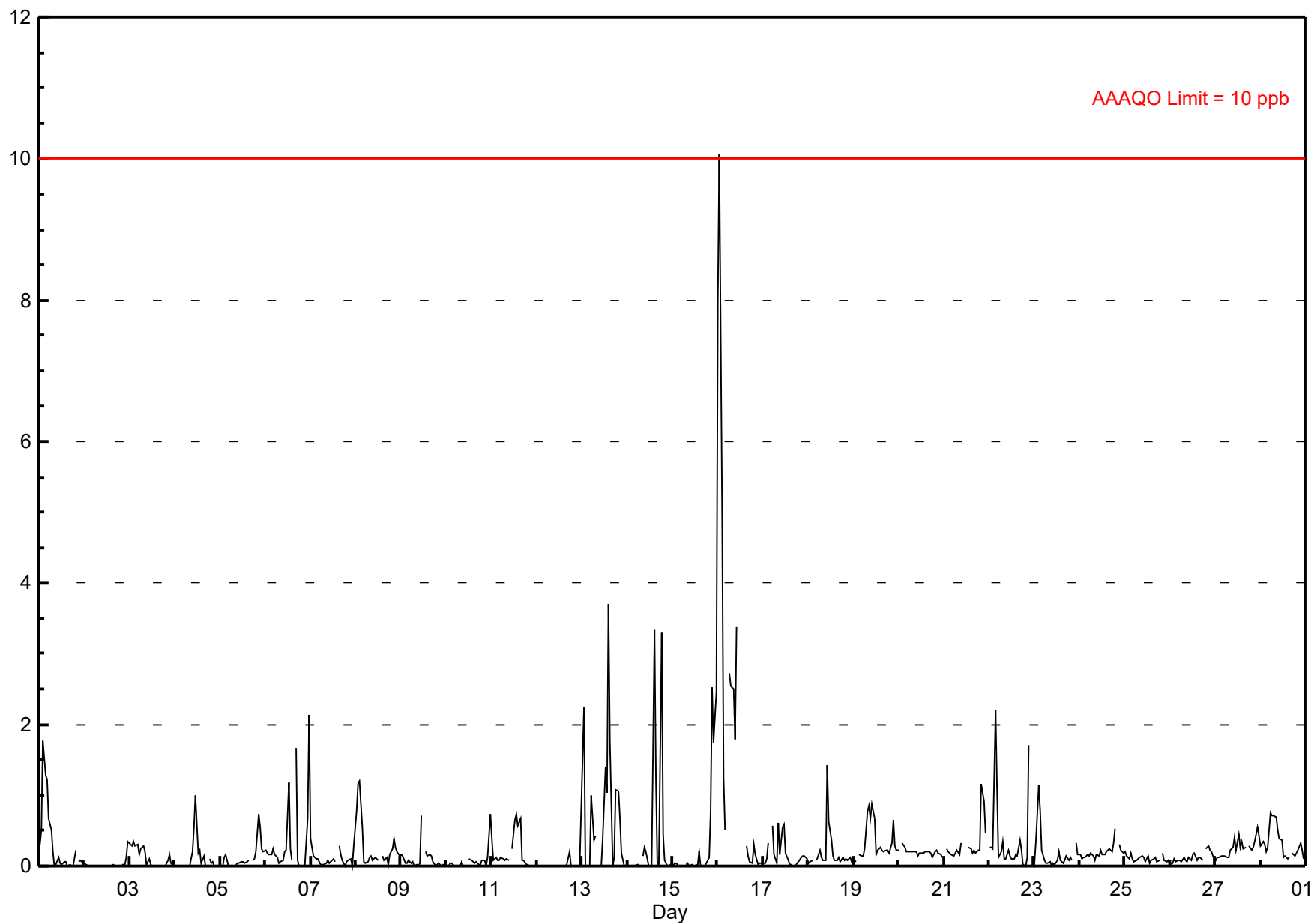
Hydrogen Sulphide (H₂S) - ppb

Valleyview - February 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 672						
Maximum Value: 10.1 ppb on Feb 16 02:00																				Maximum Daily Average: 2.0 ppb on Feb 16		Hours of Data: 636				
Minimum Value: 0 ppb on Feb 1 09:00																				Minimum Daily Average: 0.0 ppb on Feb 12		Hours of Missing Data: 36				
Maximum Diurnal Average: 0.6 ppb at hour 2																				Minimum Diurnal Average: 0.1 ppb at hour 18		Hours of Calibration: 36				
Monthly Average: 0.28 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.6 P ₉₉ = 3.3		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-Feb	0	1	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	1.8
2-Feb	0	0	0	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
3-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.3
4-Feb	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0.1	1.0
5-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	1	0	0.1	0.7
6-Feb	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	A	2	0	0	0	0	0	1	2	0.3	2.1
7-Feb	0	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
8-Feb	1	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.3	1.2
9-Feb	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7
10-Feb	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	0.1	0.7
11-Feb	0	0	0	0	0	0	0	0	0	0	A	0	1	1	1	1	0	0	0	0	0	0	0	0	0.2	0.7
12-Feb	0	0	0	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
13-Feb	2	2	0	0	0	1	0	0	A	0	0	0	1	1	4	2	0	0	1	1	1	0	0	0	0.7	3.7
14-Feb	0	0	0	0	0	0	0	A	0	0	0	0	0	0	3	1	0	0	3	0	0	0	0	0	0.4	3.3
15-Feb	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	2	2	0.4	2.5
16-Feb	8	10	5	1	1	A	3	3	3	2	3	C	C	C	C	0	0	0	0	0	0	0	0	0	2.0	10.1
17-Feb	0	0	0	0	A	1	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
18-Feb	0	0	0	A	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.4
19-Feb	0	0	A	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0.3	0.9
20-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
21-Feb	A	0	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	1	1	0	A	0.3	1.2
22-Feb	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	A	0	0.4	2.2
23-Feb	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	1.1
24-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0.2	0.5
25-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.2
26-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.3
27-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	0	0.3	0.5
28-Feb	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.7
0.5 0.6 0.4 0.3 0.2 0.2 0.2 0.2 0.2 0.2 0.4 0.2 0.2 0.2 0.4 0.2 0.2 0.1 0.3 0.2 0.2 0.3 0.2 0.3																								Diurnal Average		
8.0 10.1 4.9 2.2 1.2 1.0 2.7 2.5 2.5 1.8 3.4 1.0 1.4 1.0 3.7 1.8 1.7 0.2 3.3 1.1 1.2 2.5 1.8 2.5																								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
Valleyview - February 2017



Hourly Maximums

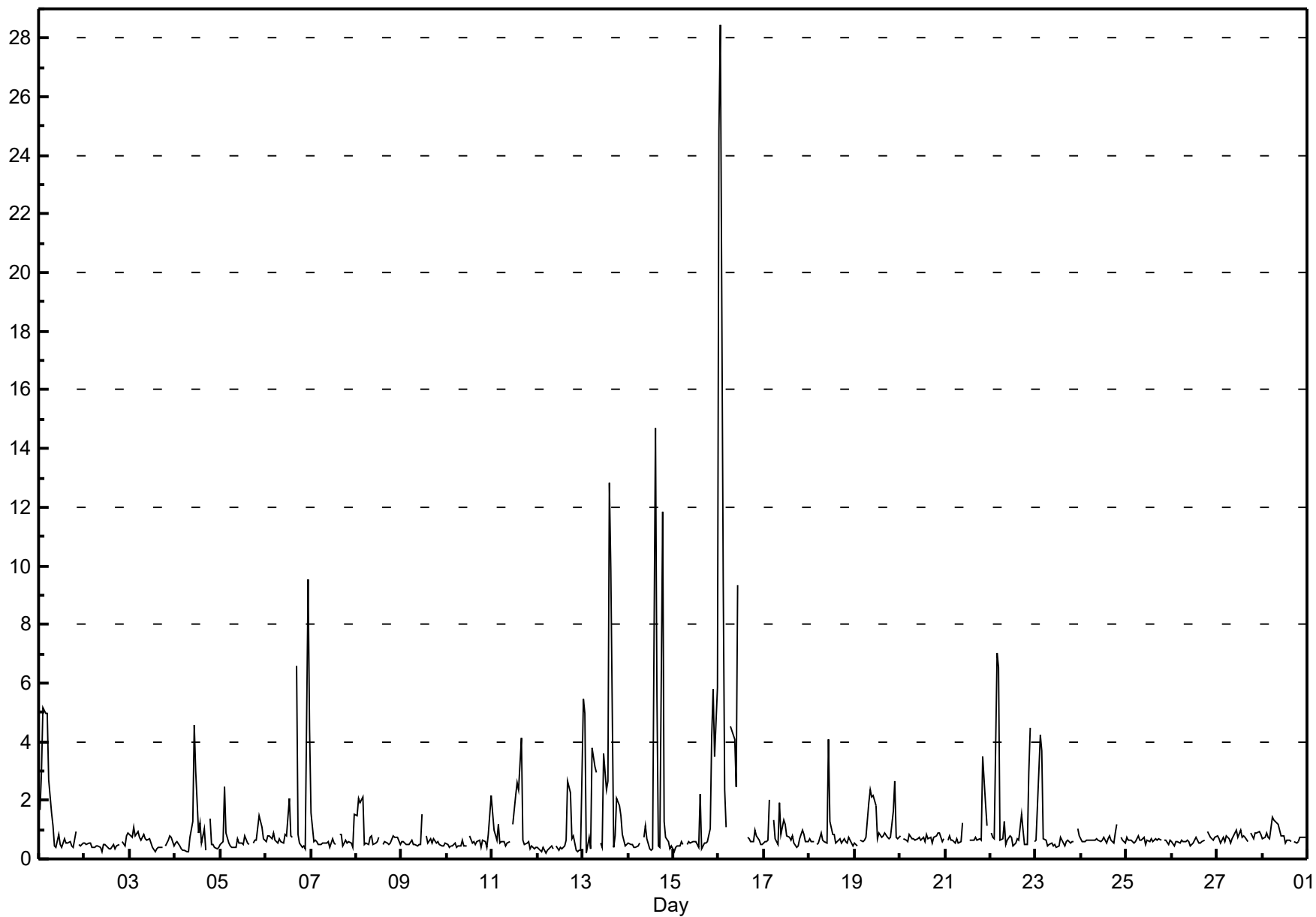
Hydrogen Sulphide (H₂S) - ppb

Valleyview - February 2017

Maximum Value: 28.4 ppb on Feb 16 02:00																								Hours in Service: 672		
Maximum Daily Average: 5.1 ppb on Feb 16																								Hours of Data: 636		
Minimum Value: 0 ppb on Feb 12 05:00																								Hours of Missing Data: 36		
Maximum Diurnal Average: 2.0 ppb at hour 2																								Hours of Calibration: 36		
Monthly Average: 1.10 ppb																								Percent Operational Time: 100.0		
Minimum Daily Average: 0.5 ppb on Feb 2																										
Minimum Diurnal Average: 0.6 ppb at hour 18																										
Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.8 P ₉₀ = 1.9 P ₉₉ = 8.2																										
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-Feb	2	3	5	5	5	3	2	1	0	0	1	1	0	1	1	1	1	0	0	1	A	0	0	1	1.4	5.2
2-Feb	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	1	1	0.5	0.9
3-Feb	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	A	0	1	1	1	0	0.6	1.1
4-Feb	1	1	0	0	0	0	0	0	1	1	5	3	1	1	1	1	0	A	1	1	1	0	0	0	0.9	4.6
5-Feb	1	1	2	1	1	0	0	0	0	0	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.7	2.5
6-Feb	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	A	7	1	1	0	0	0	10	4	1.5	9.5
7-Feb	2	1	1	1	0	0	1	1	1	1	0	1	1	1	A	1	1	0	1	1	1	1	0	2	0.7	1.6
8-Feb	1	2	2	2	0	1	0	1	1	1	1	1	1	A	0	1	1	1	1	1	1	1	0	0	0.8	2.1
9-Feb	1	1	0	0	0	1	0	0	0	0	0	2	A	1	1	1	1	1	1	1	1	0	1	1	0.6	1.5
10-Feb	0	0	0	0	1	0	0	0	1	0	0	A	1	1	1	0	1	1	0	1	1	0	1	2	0.6	2.2
11-Feb	2	1	1	1	1	1	1	0	1	1	A	1	2	3	2	4	1	0	1	1	0	0	0	0	1.0	4.1
12-Feb	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	3	2	1	1	0	0	0	0	0.6	2.7
13-Feb	5	5	0	1	0	4	3	3	A	1	0	4	2	3	13	10	0	1	2	2	1	1	0	1	2.7	12.8
14-Feb	1	0	0	0	0	0	1	A	1	1	1	0	0	0	15	6	0	0	12	1	1	1	0	0	1.9	14.7
15-Feb	0	0	0	0	1	0	A	0	1	1	1	1	1	0	2	0	1	1	1	1	4	6	3	6	1.3	5.9
16-Feb	25	28	9	2	1	A	5	4	4	2	9	C	C	C	C	1	1	1	1	1	1	1	0	5.1	28.4	
17-Feb	1	1	1	2	A	1	1	0	2	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	0.8	2.0
18-Feb	1	1	1	A	0	1	1	1	1	1	4	1	1	1	1	1	1	1	1	1	1	1	0	0.8	4.1	
19-Feb	1	0	A	1	1	1	1	2	2	2	2	2	1	1	1	1	1	1	1	1	2	3	1	1	1.1	2.6
20-Feb	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
21-Feb	A	1	1	1	1	1	1	1	1	1	C	C	C	1	1	1	1	1	1	1	3	2	1	A	0.9	3.5
22-Feb	1	1	1	7	7	1	1	1	1	1	1	1	0	1	1	1	2	1	0	1	3	4	A	1	1.5	7.0
23-Feb	1	2	4	4	1	1	0	0	1	0	1	0	0	1	1	0	1	1	1	1	1	A	1	1	0.9	4.2
24-Feb	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	1.2
25-Feb	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	A	1	1	0	1	0.6	0.8
26-Feb	1	0	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	A	1	1	1	1	1	0.6	0.9
27-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.8	1.0
28-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.8	1.4
1.8 2.0 1.3 1.3 1.0 0.8 0.9 0.9 0.8 0.8 1.3 1.0 0.8 0.8 1.7 1.3 0.9 0.6 1.1 0.8 1.1 1.1 1.0																								Diurnal Average		
24.8 28.4 9.5 7.0 6.5 3.8 4.5 4.4 4.1 2.5 9.4 3.6 2.4 2.7 14.7 9.9 6.6 2.3 11.8 1.8 4.2 5.8 9.5 5.9																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

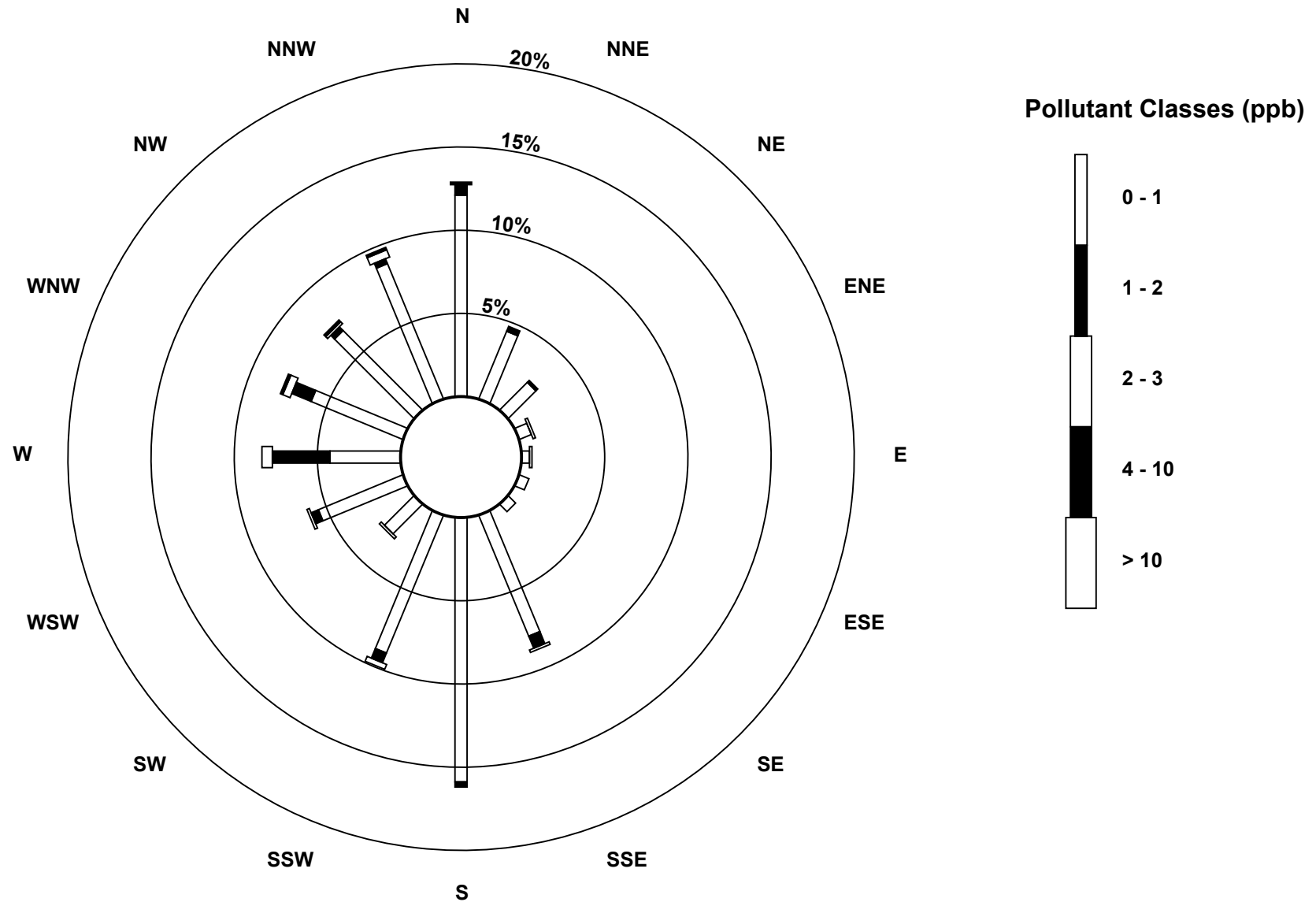
Hydrogen Sulphide (H₂S) - ppb
Valleyview - February 2017



Pollutant Rose

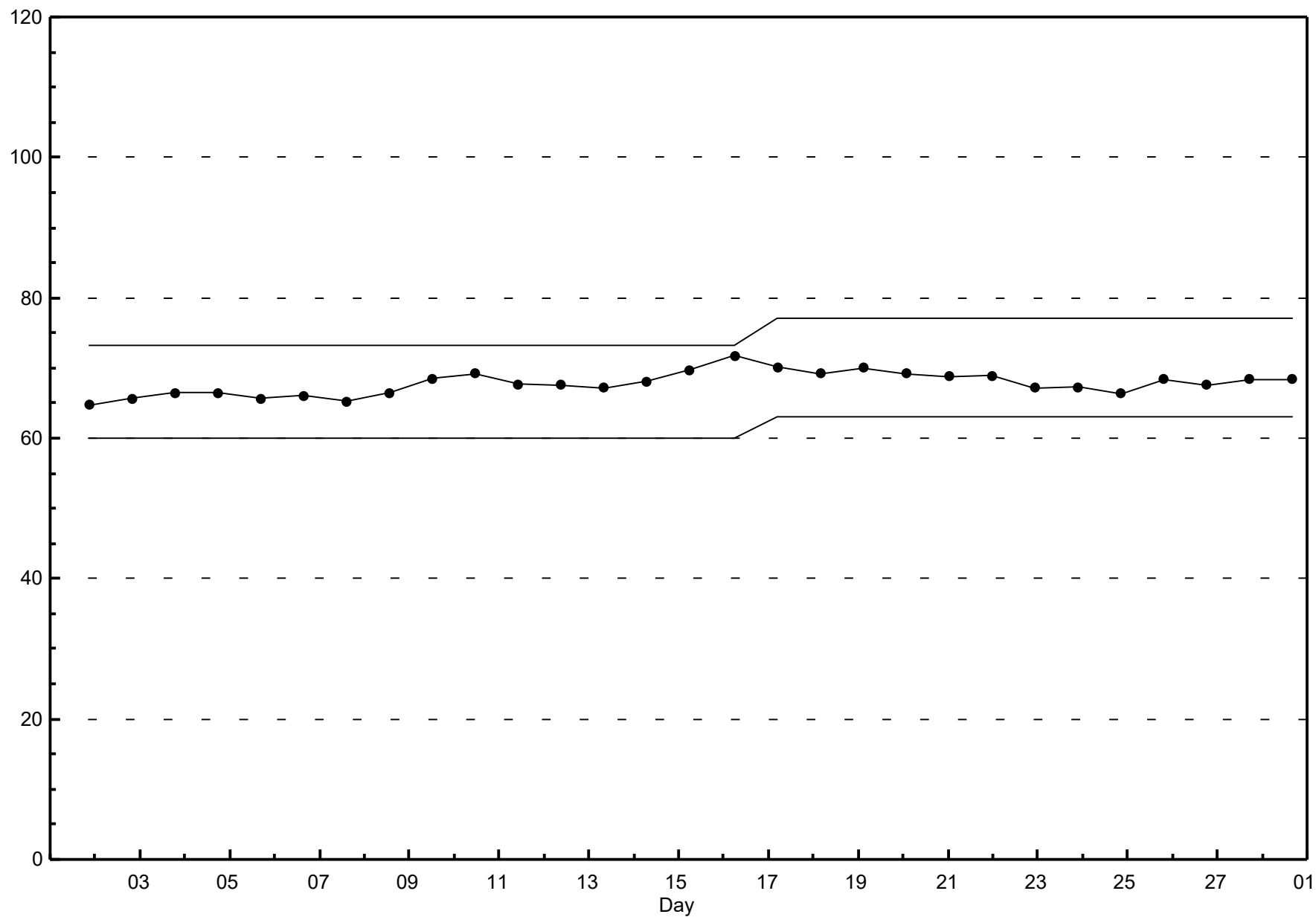
Hydrogen Sulphide (H₂S) - ppb

Valleyview - February 2017



Span Responses

Hydrogen Sulphide (H₂S)
Valleyview - February 2017



Hourly Averages

External Temperature (ET) - °C

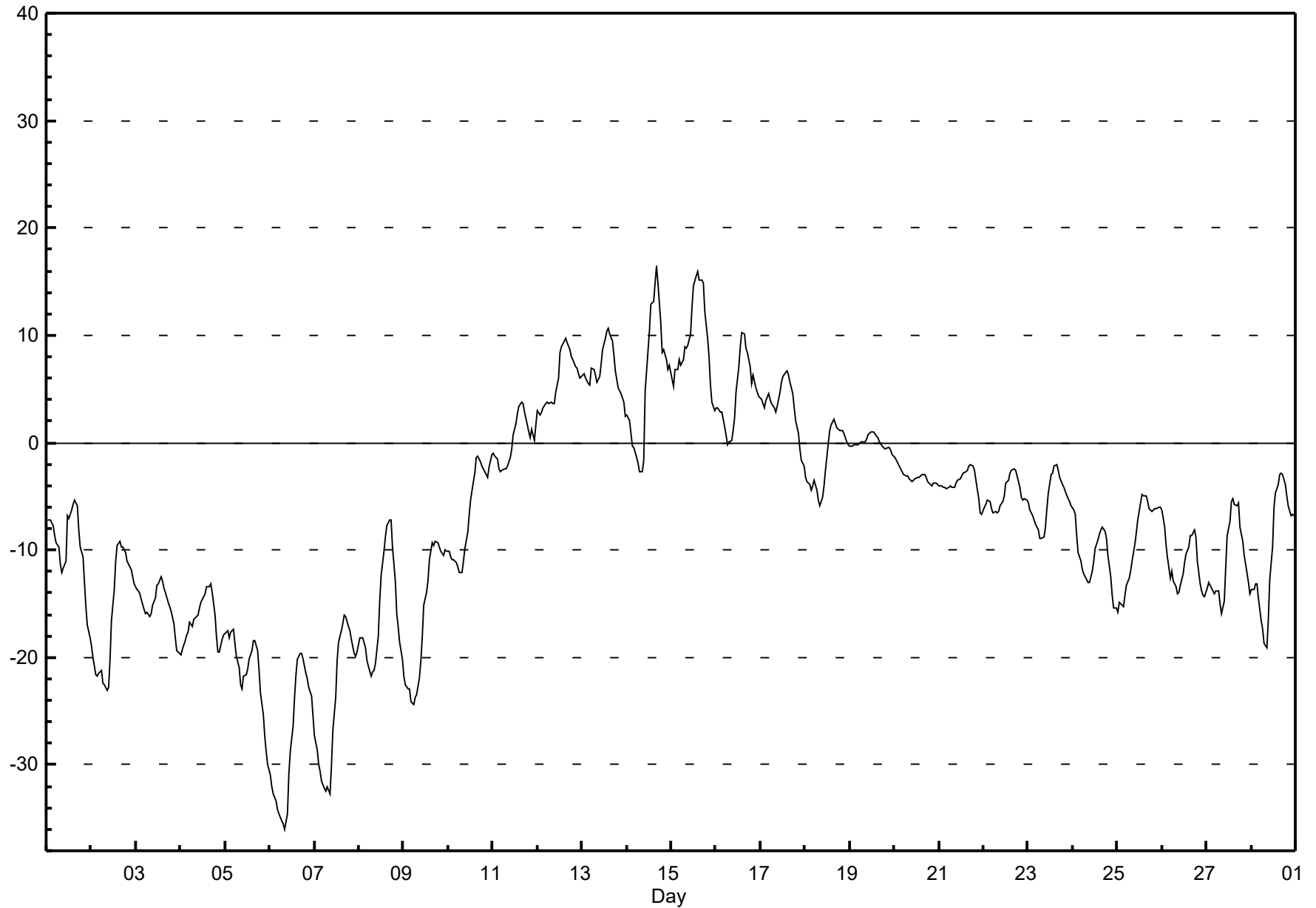
Valleyview - February 2017

Maximum Value: 16.5 °C on Feb 14 17:00																				Maximum Daily Average: 9.6 °C on Feb 15					Hours in Service: 672	
Minimum Value: -36 °C on Feb 6 09:00																				Minimum Daily Average: -27.7 °C on Feb 6					Hours of Data: 672	
Maximum Diurnal Average: -3.0 °C at hour 16																				Minimum Diurnal Average: -10.6 °C at hour 9					Hours of Missing Data: 0	
Monthly Average: -7.25 °C																				Percentiles: P ₁ = -32.8 P ₁₀ = -20.3 Q ₁ = -14.2 Median = -6.2 Q ₃ = -0.2 P ₉₀ = 6.2 P ₉₉ = 14.9					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-Feb	-7	-7	-7	-8	-9	-9	-10	-11	-12	-12	-11	-7	-7	-6	-6	-5	-6	-8	-10	-11	-13	-15	-17	-18	-9.7	-5.3
2-Feb	-19	-20	-22	-22	-21	-21	-22	-23	-23	-23	-20	-17	-14	-11	-10	-9	-10	-10	-10	-11	-11	-12	-12	-13	-16.1	-9.2
3-Feb	-14	-14	-14	-15	-16	-16	-16	-16	-16	-15	-14	-13	-13	-12	-13	-13	-14	-15	-16	-17	-18	-19	-20	-15.2	-12.5	
4-Feb	-20	-19	-18	-18	-18	-17	-17	-16	-16	-16	-15	-15	-14	-14	-13	-13	-13	-14	-16	-18	-20	-20	-18	-18	-16.6	-13.1
5-Feb	-18	-18	-18	-18	-17	-19	-20	-21	-23	-23	-22	-22	-21	-20	-19	-18	-18	-19	-21	-23	-25	-27	-29	-30	-21.2	-17.4
6-Feb	-31	-32	-33	-33	-34	-35	-35	-35	-36	-35	-31	-29	-26	-24	-22	-20	-20	-20	-20	-21	-22	-23	-24	-25	-27.7	-19.6
7-Feb	-27	-29	-30	-31	-32	-32	-33	-32	-33	-30	-27	-24	-20	-19	-17	-17	-16	-16	-17	-17	-18	-20	-20	-19	-24.0	-16.0
8-Feb	-18	-18	-18	-19	-20	-21	-22	-21	-21	-21	-18	-15	-12	-10	-9	-8	-7	-7	-10	-13	-16	-17	-19	-20	-15.8	-7.1
9-Feb	-22	-22	-23	-23	-24	-24	-24	-24	-22	-20	-18	-15	-14	-13	-11	-9	-10	-9	-9	-10	-10	-10	-10	-10	-16.1	-9.1
10-Feb	-10	-11	-11	-11	-11	-12	-12	-12	-11	-10	-8	-7	-5	-4	-3	-1	-1	-2	-2	-2	-3	-3	-2	-1	-6.5	-1.1
11-Feb	-1	-1	-2	-2	-3	-3	-2	-2	-2	-1	-1	1	2	3	3	4	4	3	2	1	0	1	0	2	0.2	3.8
12-Feb	3	3	3	3	4	4	4	4	4	4	5	6	8	9	9	10	9	9	8	8	7	7	6	6	5.9	9.7
13-Feb	6	6	6	6	5	7	7	6	6	6	7	9	10	10	11	10	9	8	7	5	5	5	4	3	6.8	10.6
14-Feb	3	2	1	0	0	-1	-2	-3	-3	-2	5	9	10	13	13	15	17	15	11	8	9	8	7	7	5.9	16.5
15-Feb	6	5	7	7	8	7	8	9	9	9	10	13	15	16	16	15	15	15	12	10	8	5	4	3	9.6	15.9
16-Feb	3	3	3	3	2	1	0	0	0	1	2	5	7	9	10	10	9	8	7	6	6	5	5	4	4.6	10.3
17-Feb	4	4	3	4	5	4	4	3	3	3	5	6	6	6	7	6	6	5	3	2	1	-1	-2	-2	3.5	6.7
18-Feb	-3	-4	-4	-4	-4	-4	-4	-5	-6	-5	-4	-3	0	1	2	2	2	1	1	1	1	1	0	0	-1.6	2.2
19-Feb	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	-1	0	0	-1	-1	0.0	1.1
20-Feb	-1	-2	-2	-2	-3	-3	-3	-3	-3	-4	-4	-3	-3	-3	-3	-3	-3	-3	-4	-4	-4	-4	-4	-4	-3.1	-1.4
21-Feb	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-3	-3	-3	-3	-3	-3	-2	-2	-2	-3	-3	-5	-7	-7	-3.7	-2.1
22-Feb	-6	-6	-5	-6	-6	-7	-6	-7	-6	-6	-5	-5	-4	-3	-3	-3	-2	-3	-3	-4	-5	-5	-5	-5	-4.9	-2.5
23-Feb	-6	-6	-7	-7	-8	-8	-9	-9	-9	-8	-6	-5	-3	-3	-2	-2	-3	-3	-4	-4	-5	-5	-5	-6	-5.5	-2.0
24-Feb	-6	-7	-9	-10	-11	-12	-12	-13	-13	-13	-12	-11	-10	-9	-8	-8	-8	-8	-9	-11	-12	-14	-15	-15	-10.7	-6.2
25-Feb	-16	-15	-15	-15	-14	-13	-13	-12	-11	-9	-8	-7	-6	-5	-5	-5	-6	-6	-6	-6	-6	-6	-6	-6	-9.1	-4.8
26-Feb	-6	-8	-10	-11	-13	-12	-13	-13	-14	-14	-13	-12	-11	-10	-10	-9	-9	-8	-9	-11	-13	-14	-14	-14	-11.3	-6.2
27-Feb	-14	-13	-13	-14	-14	-14	-14	-15	-16	-15	-12	-9	-7	-5	-5	-6	-6	-6	-8	-9	-10	-11	-13	-14	-10.9	-5.2
28-Feb	-14	-14	-13	-13	-14	-17	-17	-19	-19	-17	-13	-10	-6	-5	-4	-3	-3	-3	-4	-5	-6	-7	-7	-7	-9.9	-2.8
-8.5 -8.8 -9.1 -9.4 -9.7 -10.0 -10.3 -10.5 -10.6 -9.9 -8.3 -6.5 -5.1 -4.0 -3.4 -3.0 -3.0 -3.5 -4.6 -5.7 -6.6 -7.4 -8.0 -8.3																									Diurnal Average	
6.2 6.5 6.8 6.9 7.8 7.2 7.7 8.9 8.8 9.1 10.2 12.6 14.6 15.5 15.9 15.1 16.5 14.9 12.2 9.8 8.6 7.7 6.8 7.2																									Diurnal Maximum	

Hourly Averages

External Temperature (ET) - °C

Valleyview - February 2017



Hourly Averages

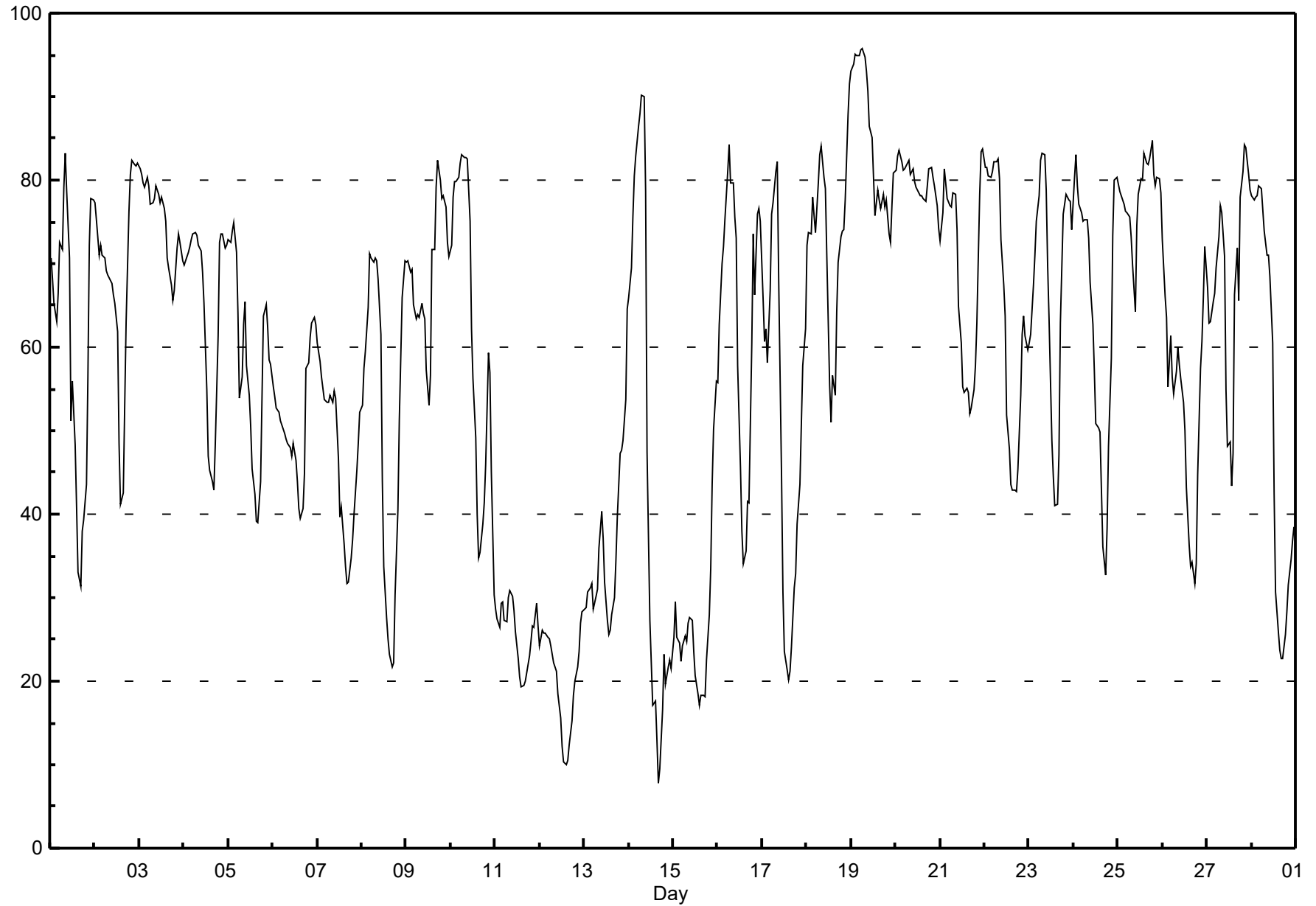
Relative Humidity (RH) - %

Valleyview - February 2017

Maximum Value: 95.7 % on Feb 19 07:00																								Hours in Service: 672		
Maximum Daily Average: 84.9 % on Feb 19																								Hours of Data: 672		
Minimum Value: 8 % on Feb 14 17:00																								Hours of Missing Data: 0		
Maximum Diurnal Average: 67.9 % at hour 9																								Hours of Calibration: 0		
Monthly Average: 58.20 %																								Percent Operational Time: 100.0		
Minimum Daily Average: 20.2 % on Feb 12																										
Minimum Diurnal Average: 42.0 % at hour 16																										
Percentiles: P ₁ = 10.9 P ₁₀ = 25.6 Q ₁ = 41.4 Median = 63.3 Q ₃ = 76.9 P ₉₀ = 80.9 P ₉₉ = 93.8																										
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-Feb	71	68	65	63	66	73	72	79	83	79	71	51	56	48	41	33	31	38	39	44	56	72	78	78	60.6	83.2
2-Feb	77	75	71	72	71	71	69	69	68	68	66	65	62	48	41	43	53	63	76	81	82	82	82	82	68.2	82.3
3-Feb	81	81	80	79	80	79	77	77	78	79	78	77	78	77	75	71	70	67	66	67	72	74	73	70	75.2	81.3
4-Feb	70	70	71	72	73	74	74	73	72	72	69	65	55	47	45	44	43	48	61	73	74	74	72	72	65.1	73.7
5-Feb	73	73	74	75	71	64	54	56	63	65	58	54	50	45	42	39	39	44	54	64	65	62	59	58	58.4	75.0
6-Feb	55	54	53	52	51	51	50	49	49	48	47	48	47	44	41	40	41	45	57	58	61	63	64	63	51.2	63.6
7-Feb	60	58	56	55	54	53	53	54	53	55	54	47	40	41	36	34	32	32	35	37	40	45	48	52	46.9	60.5
8-Feb	53	57	59	65	71	71	70	71	70	68	61	44	34	28	25	23	22	22	30	41	51	59	66	70	51.3	71.2
9-Feb	70	70	69	69	65	63	64	64	65	64	63	57	53	57	72	72	79	82	80	78	78	77	72	71	69.0	82.3
10-Feb	72	78	80	80	80	82	83	83	83	82	75	62	56	49	40	35	35	39	41	46	59	57	45	30	61.4	83.1
11-Feb	29	27	26	29	29	27	27	30	31	30	28	26	23	20	19	20	20	21	23	25	27	26	29	27	25.9	30.9
12-Feb	24	26	26	26	25	25	24	22	22	21	18	16	12	10	10	11	12	15	18	20	22	24	27	28	20.2	28.3
13-Feb	29	29	31	31	32	29	30	31	36	40	37	32	27	26	26	28	30	34	40	47	48	49	54	65	35.8	64.7
14-Feb	66	70	76	80	83	86	88	90	90	79	47	27	22	17	18	13	8	10	17	23	20	22	23	22	45.6	90.1
15-Feb	25	29	25	25	22	24	25	25	27	28	27	24	21	19	17	18	18	18	23	28	34	44	50	56	27.2	56.0
16-Feb	56	63	70	72	75	81	84	80	80	76	73	58	46	38	34	36	42	41	60	74	66	76	77	75	63.8	84.2
17-Feb	66	61	62	58	67	76	77	81	82	68	45	31	24	21	20	21	24	31	33	39	43	51	58	62	50.0	82.3
18-Feb	72	74	74	78	76	74	80	83	84	80	79	71	55	51	57	54	64	70	73	74	74	78	88	92	73.1	91.6
19-Feb	93	94	95	95	95	96	96	95	93	91	86	85	80	76	79	78	77	78	77	78	74	73	77	81	84.9	95.7
20-Feb	81	83	84	82	81	81	82	82	81	81	80	79	79	78	78	78	77	79	81	82	80	79	77	74	80.1	83.5
21-Feb	73	76	81	80	78	77	77	79	78	74	65	61	55	55	55	55	52	53	55	58	63	78	83	84	68.5	83.7
22-Feb	81	81	81	80	81	82	82	83	80	73	68	64	52	48	44	43	43	43	45	54	62	64	61	60	64.7	82.6
23-Feb	61	62	67	71	75	78	82	83	83	79	70	63	49	45	41	41	47	63	76	77	78	78	77	74	67.5	83.2
24-Feb	80	83	79	77	76	75	75	75	73	68	63	57	51	50	50	43	36	33	38	48	59	73	80	80	63.5	83.1
25-Feb	80	79	78	77	76	76	76	73	70	64	75	78	80	80	83	82	82	83	85	81	79	80	80	79	78.1	84.7
26-Feb	73	66	64	55	61	56	54	57	60	58	56	53	50	43	36	34	34	32	34	45	58	61	66	72	53.3	72.8
27-Feb	67	63	63	65	66	69	73	77	76	71	55	48	49	43	47	66	72	66	78	81	84	84	81	79	67.7	84.3
28-Feb	78	78	78	78	79	79	76	74	71	71	69	60	43	31	26	24	23	23	26	28	32	35	37	38	52.3	79.3
64.9 65.3 65.6 65.8 66.5 66.9 67.0 67.7 67.9 65.4 60.1 53.8 48.1 44.1 42.8 42.0 43.1 45.5 50.8 55.3 58.6 62.0 63.7 64.0																								Diurnal Average		
93.0 94.0 95.0 95.0 95.0 95.5 95.7 94.8 93.0 90.7 86.4 85.0 80.3 80.0 83.3 82.0 81.8 82.5 84.7 81.6 84.3 83.8 87.9 91.6																								Diurnal Maximum		

Hourly Averages

Relative Humidity (RH) - %
Valleyview - February 2017



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	5	6	7	5	3	3	4	1	1	0	1	0	1	2	2	2	4	6	5	2	1	1	0	0	2.0	6.5
Dir	284	284	280	285	276	270	272	111	123	168	19	355	357	354	355	323	327	319	305	290	156	174	202	218	296	280
2 Spd	0	1	1	2	1	1	1	1	1	1	1	2	3	2	4	3	2	0	1	0	0	0	1	1	0.6	3.6
Dir	210	189	184	195	189	211	202	206	196	193	172	169	160	192	243	314	9	213	263	156	126	18	339	335	211	243
3 Spd	1	1	0	0	1	1	0	0	2	2	1	1	6	8	11	13	11	7	3	1	0	0	1	1	2.8	12.6
Dir	3	330	347	332	344	346	167	302	0	357	329	347	345	348	353	2	3	348	1	354	186	183	166	157	354	2
4 Spd	1	1	1	1	1	0	1	3	2	1	2	5	7	9	8	6	3	1	1	1	1	2	1	1	1.9	9.3
Dir	166	163	163	160	185	209	226	243	303	239	254	292	287	288	270	299	315	293	186	191	199	190	188	162	266	288
5 Spd	1	0	0	6	10	14	14	12	7	2	1	6	6	4	4	2	2	3	2	2	0	0	0	0	3.9	14.4
Dir	170	332	32	11	4	0	3	1	353	316	343	354	343	347	345	11	359	347	344	332	164	158	194	289	357	3
6 Spd	0	1	0	0	0	0	0	0	0	0	0	1	2	2	2	1	1	4	5	6	2	1	0	0	0.9	5.8
Dir	164	184	42	41	66	168	165	180	178	12	199	5	345	351	356	317	286	336	345	359	33	32	255	202	350	359
7 Spd	1	1	1	0	1	1	1	0	1	2	3	3	2	4	5	6	5	4	5	1	1	1	1	1	1.7	5.8
Dir	181	165	167	189	191	192	192	209	202	200	175	178	179	232	243	292	260	248	251	207	205	201	194	268	226	292
8 Spd	7	7	8	6	2	1	2	3	3	2	3	5	5	4	6	6	5	2	1	0	1	1	0	1	2.1	8.4
Dir	275	280	281	256	166	151	171	173	177	189	186	180	162	165	160	161	167	168	159	238	184	191	216	211	203	281
9 Spd	0	1	0	0	0	0	0	0	0	0	0	0	3	3	3	3	3	7	7	5	5	5	1	1	1.7	7.5
Dir	182	179	172	271	160	25	223	146	139	89	358	356	22	43	25	318	343	2	3	7	4	9	312	311	5	3
10 Spd	1	2	1	1	1	0	1	2	2	2	3	5	5	3	2	3	3	2	2	6	6	3	5	10	1.5	10.2
Dir	351	354	26	38	348	27	37	12	348	360	157	165	163	173	175	163	164	169	174	172	173	184	247	269	188	269
11 Spd	6	9	15	11	10	14	17	15	13	13	11	14	18	24	21	19	17	8	3	3	5	5	3	5	10.7	23.6
Dir	261	258	262	254	256	251	246	245	250	252	257	264	270	277	280	275	264	254	183	180	189	175	177	219	257	277
12 Spd	8	5	8	8	6	5	4	4	3	3	2	3	3	6	15	13	14	19	23	23	19	19	15	10	8.9	22.6
Dir	220	202	215	213	207	198	192	183	183	179	189	182	182	237	246	257	260	262	264	262	255	258	253	254	244	264
13 Spd	5	10	8	6	3	9	5	2	3	4	5	5	10	9	5	1	2	1	1	1	2	2	1	1	3.6	10.1
Dir	267	264	250	249	223	260	253	273	236	219	228	253	278	282	286	348	39	156	198	162	178	192	198	195	255	264
14 Spd	2	1	2	0	1	0	1	0	0	1	3	5	4	2	1	3	3	1	0	0	2	1	3	2	1.5	5.3
Dir	205	207	215	182	194	112	325	131	204	169	172	169	165	184	255	168	169	162	208	196	189	194	175	178	180	169
15 Spd	1	2	3	3	4	2	2	4	4	4	5	6	3	8	9	11	6	3	2	1	0	0	1	0	3.0	10.8
Dir	218	200	209	190	184	186	187	181	178	175	176	183	210	232	256	246	237	206	207	319	354	97	161	313	213	246
16 Spd	1	1	4	2	2	0	0	0	1	1	0	1	2	4	1	1	5	11	3	1	3	2	2	1	1.3	10.8
Dir	315	6	345	24	322	227	219	64	347	293	348	350	345	343	38	58	313	341	7	206	275	206	181	192	334	341
17 Spd	1	1	1	2	14	13	12	4	3	5	9	13	13	13	12	10	8	6	7	0	1	1	1	0	5.6	14.0
Dir	200	215	279	273	277	274	289	295	260	253	272	277	284	287	298	304	331	345	328	263	172	203	163	193	287	277
18 Spd	1	1	1	1	1	0	1	0	0	0	2	3	4	6	8	10	10	8	6	6	5	5	5	6	3.2	10.4
Dir	161	185	181	308	171	174	343	170	161	269	348	26	2	360	17	43	45	53	63	69	66	47	37	16	39	43
19 Spd	5	5	5	4	3	2	2	2	2	4	5	5	7	7	8	8	7	8	6	5	2	3	3	3	3.9	8.4
Dir	17	24	31	24	4	342	308	268	270	267	276	287	311	288	312	323	304	320	314	309	295	296	312	321	318	312
20 Spd	4	3	2	8	7	6	4	2	3	4	4	4	4	5	4	4	4	5	5	4	4	1	1	2	3.8	8.4
Dir	342	352	307	330	332	345	3	356	20	18	5	26	23	13	27	16	9	359	0	1	355	350	340	319	357	330
21 Spd	3	2	2	1	1	0	0	0	0	1	4	5	6	5	7	7	3	3	2	2	1	0	1	1	2.1	7.0
Dir	328	337	11	30	42	165	80	288	267	302	328	338	332	325	317	309	284	294	318	308	302	194	185	189	322	317
22 Spd	0	1	0	4	4	4	5	7	6	6	6	7	7	8	9	9	8	7	4	4	3	3	3	3	4.7	8.9
Dir	217	327	243	279	295	289	290	286	298	291	288	292	304	311	277	271	274	290	289	315	299	295	304	317	291	271

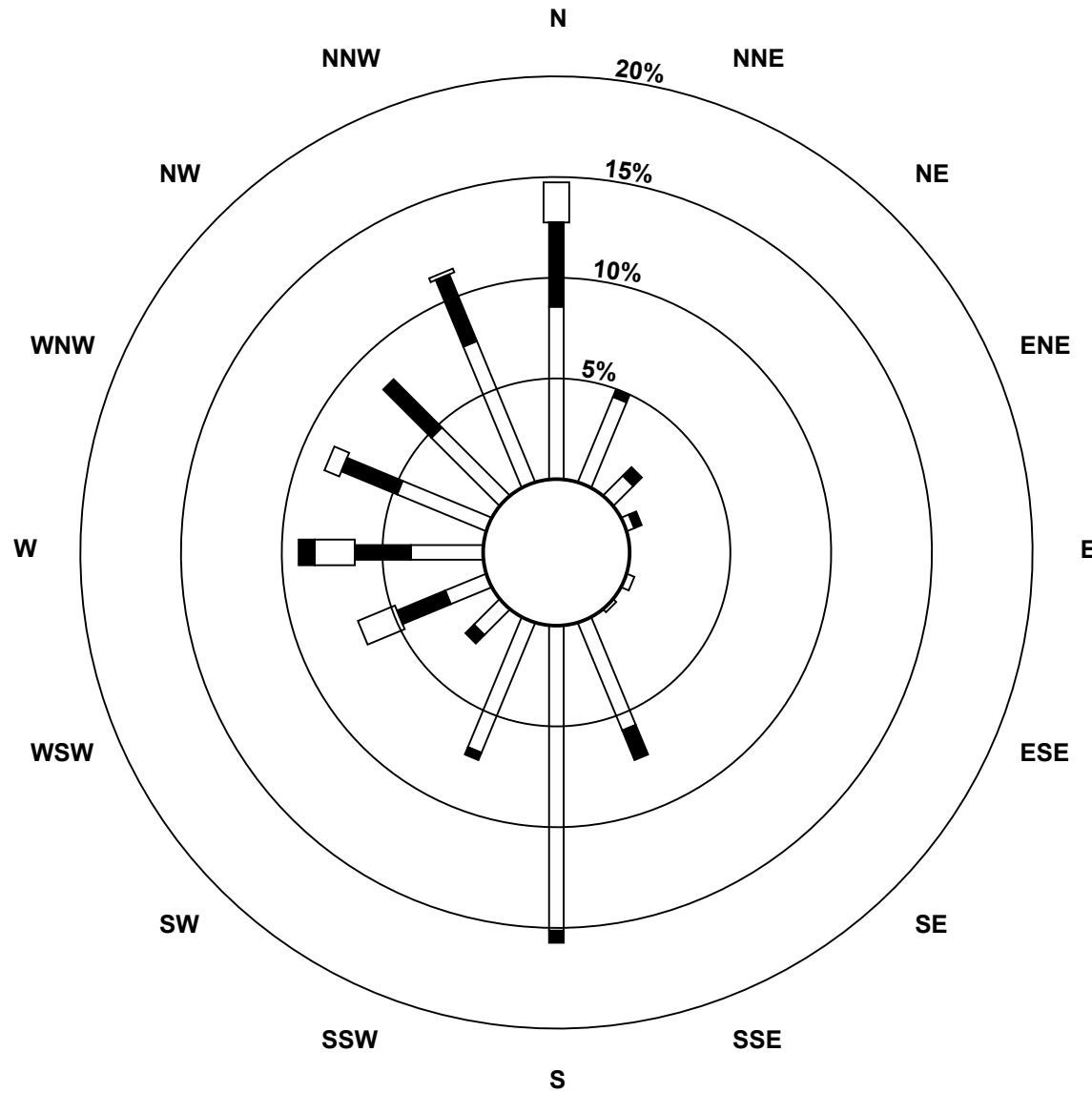
Hourly Averages

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

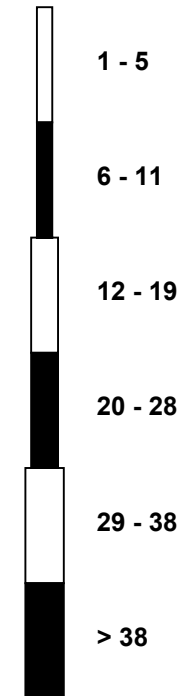
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
23 Spd	2	1	1	0	0	0	0	0	0	1	1	2	1	2	1	2	2	5	3	2	1	2	2	5	0.9	4.8					
Dir	312	288	259	37	163	168	163	189	176	158	182	179	166	6	33	295	348	350	347	346	313	336	276	343	331	343					
24 Spd	6	9	15	15	13	11	9	7	8	8	3	3	2	2	2	2	1	3	0	0	1	0	1	1	4.8	15.2					
Dir	343	352	356	358	0	356	352	341	341	344	356	349	31	350	356	8	333	296	287	206	168	192	193	207	351	356					
25 Spd	1	1	2	2	2	3	2	3	3	1	1	3	3	7	9	12	11	10	8	10	5	6	8	8	2.9	12.0					
Dir	199	196	191	184	178	175	173	173	177	180	181	179	263	296	318	330	1	355	356	338	315	322	320	324	321	330					
26 Spd	11	15	11	9	4	13	13	10	7	4	2	1	1	3	7	7	7	1	0	1	1	2	2	4	4.4	15.3					
Dir	358	8	7	10	343	360	2	11	6	42	37	45	243	295	315	320	333	354	116	149	186	193	178	171	358	8					
27 Spd	5	4	3	1	2	2	1	0	1	0	0	1	2	2	3	3	4	4	5	3	3	1	1	0	0.5	5.3					
Dir	171	174	177	183	171	175	180	249	276	263	2	16	30	10	347	345	8	17	351	335	338	285	316	192	349	351					
28 Spd	0	0	0	0	1	2	0	0	1	2	3	0	5	8	8	7	6	5	2	1	1	1	6	7	2.4	8.2					
Dir	251	97	152	182	347	357	355	204	170	168	175	312	160	168	160	160	162	155	135	122	356	149	159	158	159	160					
Spd	1.3	1.5	1.7	1.6	1.6	2.0	1.8	1.1	1.1	1.1	1.4	1.6	2.2	3.5	3.9	3.5	2.8	2.9	2.2	1.4	1.0	1.0	1.1	1.2	Diurnal Average						
Dir	286	299	292	302	298	302	301	293	288	264	252	266	289	292	295	303	311	319	317	307	266	255	243	265	Diurnal Maximum						
Spd	10.7	15.3	15.2	14.7	14.0	14.1	16.6	14.7	12.7	12.5	11.3	14.3	18.1	23.6	20.6	19.2	16.6	18.9	22.6	22.5	19.3	19.0	15.3	10.4	Diurnal Maximum						
Dir	358	8	356	358	277	251	246	245	250	252	257	264	270	277	280	275	264	262	264	262	255	258	253	254							
Maximum Speed Value: 24 km/h on Feb 11 14:00																				Minimum Speed Value: 0 km/h on Feb 3 07:00					Hours in Service:					672	
Maximum Daily Speed Average: 10.7 km/h on Feb 11																				Minimum Daily Speed Average: 0.5 km/h on Feb 6					Hours of Data:					672	
Maximum Diurnal Speed Average: 3.9 km/h at hour 15																				Minimum Diurnal Speed Average: 1.0 km/h at hour 22					Hours of Missing Data:					0	
Monthly Average Velocity: 1.76 km/h 293.1 deg																				Speed Percentiles: P ₁ = 0.1 P ₁₀ = 0.4 Q ₁ = 1.0 Median = 2.5 Q ₃ = 5.3 P ₉₀ = 9.0 P ₉₉ = 18.9					Percent Operational Time:					100.0	
All monthly, daily, and diurnal averages have been calculated using vector methods																															
Frequency Distribution																															
		Speed Range (km/h)																													
Direction	0 to 5				5 to 11				11 to 19				19 to 28				28 to 38				> 38				Total						
North	97				38				13				0				0				0				148						
NorthEast	34				7				0				0				0				0				41						
East	6				1				0				0				0				0				7						
SouthEast	18				0				0				0				0				0				18						
South	180				16				0				0				0				0				196						
SouthWest	46				9				3				0				0				0				58						
West	43				42				20				6				0				0				111						
NorthWest	61				30				2				0				0				0				93						
Total	485				143				38				6				0				0				672						

Wind Rose

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



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Valleyview - February 2017

Maximum Speed: 24 km/h on Feb 11 14:00																				Maximum Daily Speed Average: 11.7 km/h on Feb 11					Hours in Service: 672	
Minimum Speed: 0 km/h on Feb 3 07:00																				Minimum Daily Speed Average: 1.3 km/h on Feb 6					Hours of Data: 672	
Maximum Diurnal Speed Average: 6.6 km/h at hour 15																				Minimum Diurnal Speed Average: 2.6 km/h at hour 23					Hours of Missing Data: 0	
Monthly Average Speed: 4.00 km/h																				Percentiles: P ₁ = 0.2 P ₁₀ = 0.5 Q ₁ = 1.2 Median = 2.6 Q ₃ = 5.5 P ₉₀ = 9.4 P ₉₉ = 19.0					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-Feb	5	7	7	5	3	3	4	1	1	0	1	0	1	2	2	2	4	6	5	2	1	1	1	0	2.7	6.7
2-Feb	0	1	1	2	1	1	1	1	1	2	1	2	3	2	4	4	2	0	1	1	0	0	1	1	1.3	3.7
3-Feb	1	1	0	0	1	1	0	0	2	2	1	1	6	8	11	13	11	7	3	1	0	0	1	1	3.0	12.8
4-Feb	1	1	1	1	1	0	2	3	2	1	3	5	7	10	9	7	3	1	1	1	1	3	1	1	2.8	9.5
5-Feb	1	0	1	6	11	14	15	12	7	2	1	6	6	4	4	2	2	3	2	2	0	0	0	0	4.2	14.5
6-Feb	0	1	0	0	0	0	0	0	0	1	0	1	2	2	2	1	1	4	5	6	2	1	0	0	1.3	5.8
7-Feb	1	1	1	1	1	1	1	0	1	2	3	4	3	4	5	6	5	4	5	1	1	1	1	2	2.3	6.3
8-Feb	7	7	8	6	2	1	2	3	3	2	3	5	5	4	6	6	5	2	1	0	1	1	0	1	3.4	8.5
9-Feb	1	1	0	1	0	0	1	0	1	0	1	1	3	3	4	3	3	7	8	6	5	5	1	1	2.3	7.6
10-Feb	1	2	2	1	1	1	1	2	2	2	4	5	5	4	2	3	3	3	2	6	6	3	5	10	3.1	10.4
11-Feb	6	9	15	11	10	14	17	15	13	13	11	15	18	24	21	19	17	8	3	3	5	5	3	5	11.7	23.9
12-Feb	8	5	8	8	6	5	4	4	3	3	2	3	3	6	15	14	14	19	23	23	19	19	15	10	10.0	22.8
13-Feb	5	10	8	6	4	10	5	2	3	4	5	6	10	9	6	2	2	2	1	1	2	2	1	1	4.5	10.3
14-Feb	2	1	2	0	1	0	1	1	1	1	3	5	4	2	1	3	3	2	1	1	2	1	3	2	1.8	5.3
15-Feb	1	2	3	3	4	2	2	4	4	4	5	6	4	8	9	11	7	3	2	2	1	2	1	1	3.8	11.0
16-Feb	1	2	4	2	2	1	1	1	1	1	2	1	2	4	1	3	5	11	4	1	5	2	2	1	2.6	11.1
17-Feb	1	1	1	3	14	13	12	4	4	5	9	13	14	13	13	10	8	6	7	1	1	1	1	0	6.5	14.2
18-Feb	1	1	1	1	1	1	1	0	0	1	2	3	5	7	8	11	10	9	7	6	5	5	5	6	4.0	10.5
19-Feb	5	5	5	4	4	3	2	2	2	4	5	6	7	7	8	8	7	8	6	6	3	3	3	3	4.9	8.5
20-Feb	4	3	3	9	7	6	4	3	3	4	4	4	4	5	4	5	4	5	5	4	4	1	2	2	4.1	8.6
21-Feb	3	2	3	1	1	0	0	0	0	1	4	6	6	6	7	7	3	3	2	2	1	0	1	1	2.5	7.2
22-Feb	1	1	1	4	4	4	5	7	6	6	7	7	8	8	9	9	8	7	4	4	3	3	3	3	5.1	9.3
23-Feb	2	1	1	0	0	0	0	0	0	1	2	2	2	2	2	2	2	5	3	2	1	3	2	5	1.8	4.9
24-Feb	6	10	15	15	13	11	9	8	8	8	3	3	2	3	3	2	2	4	1	0	1	0	1	1	5.3	15.4
25-Feb	1	1	2	2	2	3	2	3	3	1	2	3	3	7	9	12	11	10	8	10	6	6	8	9	5.3	12.2
26-Feb	12	16	12	9	4	13	13	10	7	4	3	2	3	5	7	7	7	1	0	1	1	2	2	4	6.1	15.5
27-Feb	5	4	3	1	2	2	1	0	1	1	1	1	2	2	3	3	4	4	6	3	3	1	1	0	2.3	5.6
28-Feb	0	0	0	0	1	3	1	0	1	2	3	1	5	8	8	7	6	5	2	1	1	2	6	7	3.0	8.4
																									Diurnal Average	
																									Diurnal Maximum	
All monthly, daily, and diurnal averages have been calculated using scalar methods																										

Hourly Standard Deviations

Wind Direction (WD) - deg

Valleyview - February 2017

Maximum Value: 98.2 deg on Feb 9 12:00																			Hours in Service: 672						
Minimum Value: 4.0 deg on Feb 15 10:00																			Hours of Data: 672						
																			Hours of Missing Data: 0						
Percentiles: P ₁ = 6.1 P ₁₀ = 8.6 Q ₁ = 11.1 Median = 16.9 Q ₃ = 34.6 P ₉₀ = 67.7 P ₉₉ = 93.7																			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-Feb	14	10	13	11	18	13	36	52	25	50	42	85	17	19	19	35	13	10	8	29	13	17	17	32	84.7
2-Feb	15	14	12	17	17	14	12	16	41	16	28	16	9	41	18	30	20	64	25	17	29	67	35	17	67.1
3-Feb	25	32	53	32	16	58	61	47	12	5	30	60	11	10	8	9	9	15	13	68	85	11	7	35	85.4
4-Feb	13	9	11	9	9	16	41	20	40	41	37	15	23	12	19	22	15	36	9	14	11	10	11	16	41.0
5-Feb	17	61	91	13	8	8	7	10	8	17	44	14	7	12	9	33	24	7	35	78	64	90	25	70	91.4
6-Feb	85	29	88	96	75	68	59	31	71	77	76	18	10	12	16	27	33	15	11	6	10	58	61	33	96.0
7-Feb	22	11	46	67	30	12	16	25	14	12	12	9	33	24	17	22	21	12	9	27	21	18	32	82	82.1
8-Feb	15	10	9	26	11	19	8	8	7	12	17	11	8	14	9	9	7	7	33	40	36	6	22	63	62.8
9-Feb	82	20	64	77	55	90	68	37	52	67	72	98	21	19	50	62	12	10	10	10	10	11	57	63	98.2
10-Feb	30	30	23	52	90	86	71	30	28	36	58	12	10	21	24	14	12	11	18	13	11	12	30	12	89.8
11-Feb	19	14	9	10	9	7	7	7	8	9	9	11	11	9	9	11	10	24	9	10	6	7	9	17	23.8
12-Feb	16	10	10	11	12	10	9	8	9	19	20	9	24	21	14	14	9	9	8	7	7	6	7	8	23.7
13-Feb	13	10	7	13	31	11	18	27	30	18	14	19	12	12	17	59	28	56	27	50	13	16	46	14	58.7
14-Feb	15	27	41	52	67	76	95	96	69	66	12	9	12	11	60	14	13	27	92	40	11	23	12	16	96.5
15-Feb	20	43	27	14	26	15	35	9	9	4	6	5	27	15	18	14	14	20	12	73	85	85	72	94	93.7
16-Feb	83	84	19	28	43	81	94	77	73	89	85	75	47	49	66	73	22	14	56	36	69	22	18	9	93.8
17-Feb	16	14	52	45	10	9	16	11	26	19	9	9	10	11	15	12	14	7	11	81	26	37	17	33	80.5
18-Feb	10	41	27	88	64	70	62	33	55	59	28	20	20	12	13	10	9	12	17	19	23	14	9	12	87.7
19-Feb	8	9	7	12	9	14	17	14	13	14	12	22	12	14	9	14	14	9	14	13	18	14	10	13	21.8
20-Feb	10	16	19	11	8	17	30	30	15	16	16	18	17	16	17	17	16	9	8	11	9	20	20	24	30.2
21-Feb	14	17	22	50	32	77	84	75	84	38	16	17	13	18	14	21	32	17	14	24	31	66	76	18	84.1
22-Feb	64	47	67	15	11	13	13	8	17	16	15	15	24	12	21	18	13	14	11	9	12	9	17	16	66.9
23-Feb	34	72	22	78	57	15	37	78	32	26	40	26	94	34	60	48	30	10	13	25	19	21	36	14	94.0
24-Feb	7	11	9	9	8	10	8	7	15	10	20	20	35	33	32	23	49	14	66	29	20	7	11	7	65.9
25-Feb	9	9	8	16	6	7	8	10	12	38	21	13	36	16	9	11	13	8	6	7	10	10	8	9	38.1
26-Feb	23	9	8	7	20	11	9	12	13	22	26	50	73	58	17	15	13	66	26	29	11	11	12	4	73.3
27-Feb	6	7	7	22	12	7	11	49	42	72	53	35	28	29	9	16	27	25	19	41	14	60	87	69	86.6
28-Feb	68	70	23	15	69	34	93	44	15	45	16	74	48	9	12	12	12	10	9	20	63	93	9	11	93.0
	84.7	83.9	91.4	96.0	89.8	90.3	94.7	96.5	84.1	88.9	84.8	98.2	94.0	58.0	65.9	73.1	49.3	65.5	92.0	80.5	85.4	92.6	86.6	93.7	

PAZA

Donnelly Station

Monthly Summary Tables, Graphs and Roses

Hourly Averages

Sulphur Dioxide (SO₂) - ppb

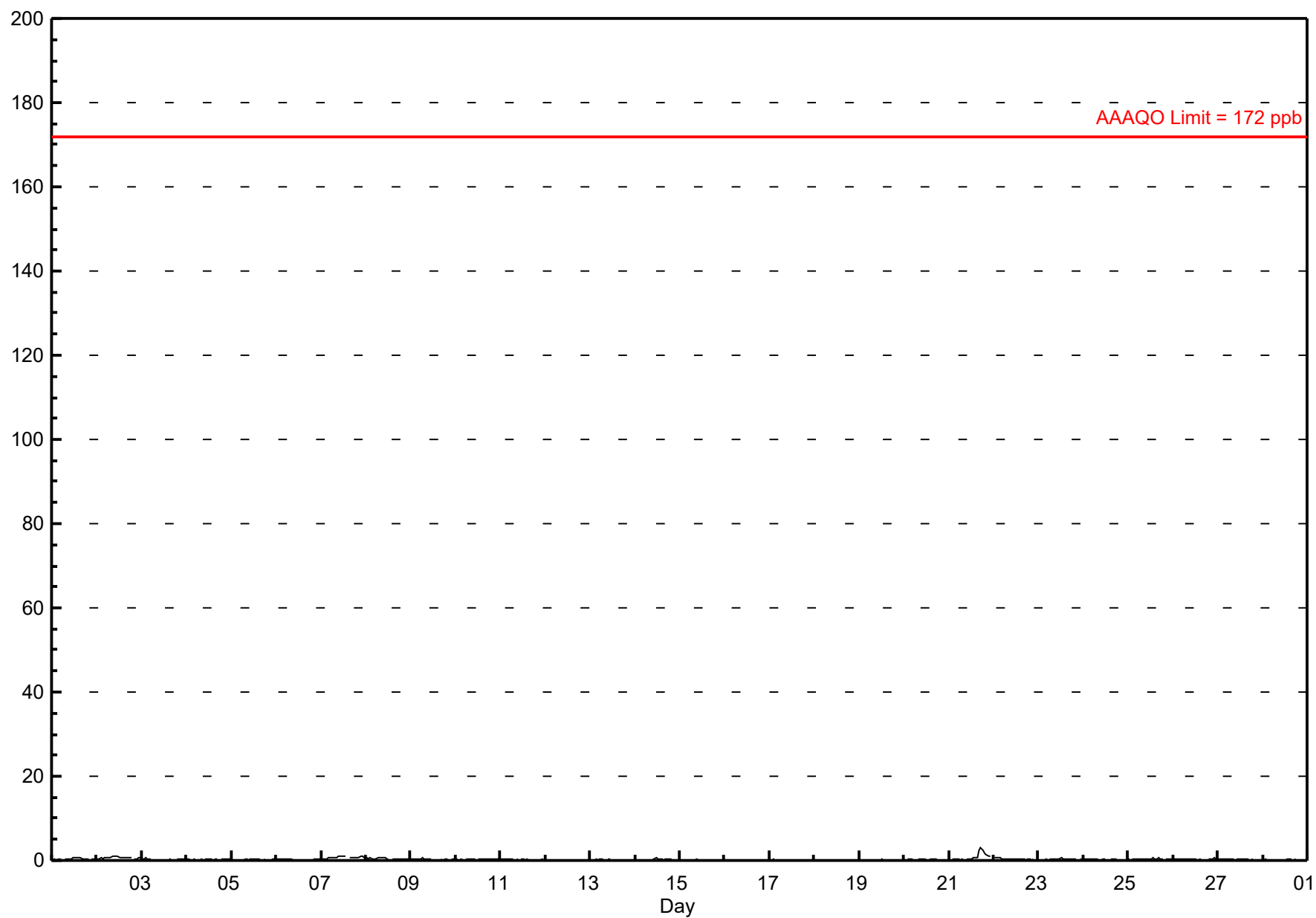
Donnelly - February 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 672							
Maximum Value: 3.1 ppb on Feb 21 18:00																			Maximum Daily Average: 0.8 ppb on Feb 21		Hours of Data: 640					
Minimum Value: 0 ppb on Feb 12 04:00																			Minimum Daily Average: 0.0 ppb on Feb 18		Hours of Missing Data: 32					
Maximum Diurnal Average: 0.3 ppb at hour 18																			Minimum Diurnal Average: 0.2 ppb at hour 2		Hours of Calibration: 32					
Monthly Average: 0.24 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.5 P ₉₉ = 1.1		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-Feb	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	A	0	0	0	0.3	0.7
2-Feb	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0	0	1	1	0.7	1.2
3-Feb	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.5
4-Feb	0	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
5-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.3
6-Feb	0	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
7-Feb	0	0	0	0	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.7	1.2
8-Feb	1	0	1	0	0	0	1	1	1	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0.4	0.6
9-Feb	0	0	0	0	0	0	1	0	0	0	0	0	A	C	C	C	0	0	0	0	0	0	0	0	0.3	0.6
10-Feb	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
11-Feb	0	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
12-Feb	0	0	0	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
13-Feb	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
14-Feb	0	0	0	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
15-Feb	0	0	0	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
16-Feb	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
17-Feb	0	0	0	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
18-Feb	0	0	0	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
19-Feb	0	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
20-Feb	0	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	0.2
21-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	3	2	2	1	1	1	A	0.8	3.1
22-Feb	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.3	0.7
23-Feb	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0	0.3	0.6
24-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.3
25-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	A	0	0	0	0	0.3	0.6
26-Feb	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	0.7
27-Feb	0	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
28-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.4
																								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 - February 2017



Hourly Maximums

Sulphur Dioxide (SO₂) - ppb

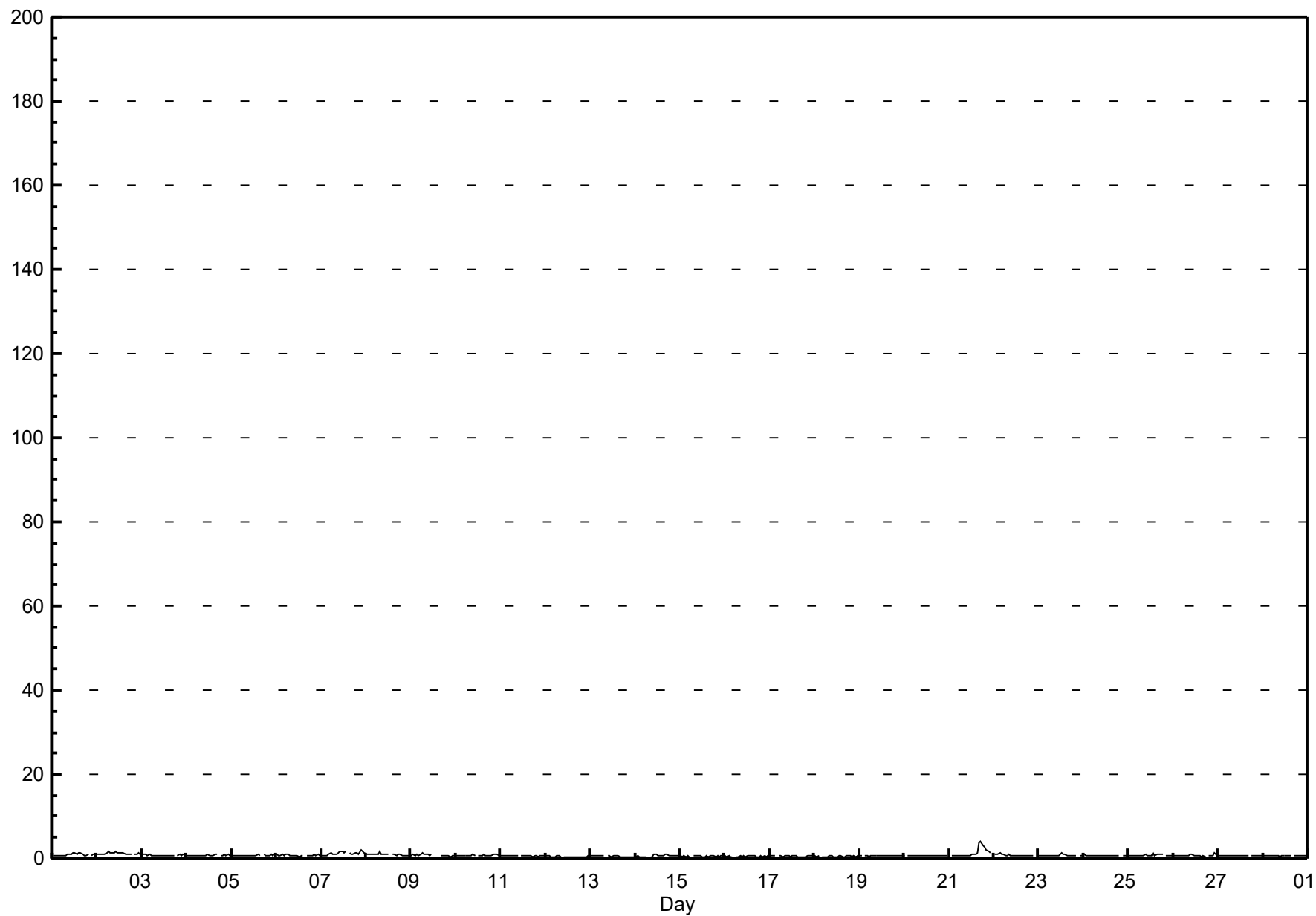
Donnelly - February 2017

Maximum Value: 4.0 ppb on Feb 21 18:00																			Maximum Daily Average: 1.4 ppb on Feb 21						Hours in Service: 672		
Minimum Value: 0 ppb on Feb 13 21:00																			Minimum Daily Average: 0.5 ppb on Feb 12						Hours of Data: 640		
Maximum Diurnal Average: 0.8 ppb at hour 17																			Minimum Diurnal Average: 0.7 ppb at hour 2						Hours of Missing Data: 32		
Monthly Average: 0.74 ppb																			Percentiles: P ₁ = 0.3 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.7 Q ₃ = 0.8 P ₉₀ = 1.1 P ₉₉ = 1.9						Hours of Calibration: 32		
																									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-Feb	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	1.4	
2-Feb	1	1	1	1	1	1	2	1	1	1	2	1	1	1	1	1	1	1	1	A	1	1	1	1	1.2	1.7	
3-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.8	1.0	
4-Feb	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	1.1	
5-Feb	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	1.0	
6-Feb	1	1	1	1	1	1	1	1	1	1	1	0	1	1	A	1	1	1	1	1	1	1	1	1	0.7	1.1	
7-Feb	1	1	1	1	1	1	1	1	1	2	2	2	1	2	A	1	1	1	1	1	1	2	2	1	1.3	1.9	
8-Feb	1	1	1	1	1	1	1	2	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1.0	1.6	
9-Feb	1	1	1	1	1	1	1	1	1	1	1	1	A	C	C	C	1	1	1	1	1	1	1	1	0.8	1.3	
10-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0	
11-Feb	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	1	1	0	1	1	1	0.6	0.8	
12-Feb	1	1	1	0	0	0	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.5	0.7	
13-Feb	1	1	1	1	1	1	1	1	A	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0.5	0.7	
14-Feb	0	1	0	0	0	0	0	A	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.1	
15-Feb	1	0	1	0	1	0	A	1	1	1	1	1	0	0	1	0	1	1	1	0	1	0	1	1	0.5	0.7	
16-Feb	1	0	1	0	0	A	0	0	1	0	1	0	1	1	1	1	1	0	0	1	0	1	1	1	0.5	0.8	
17-Feb	1	1	1	1	A	1	1	0	1	1	1	0	1	1	1	0	0	0	0	0	1	1	1	1	0.6	0.8	
18-Feb	1	0	1	A	0	0	0	0	1	1	0	0	0	1	1	1	0	1	1	1	0	1	1	1	0.5	0.7	
19-Feb	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8	
20-Feb	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8	
21-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	4	3	3	2	2	1	A	1.4	4.0	
22-Feb	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	1.2	
23-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.8	1.3	
24-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	0.9	
25-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.8	1.2	
26-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	A	1	1	1	1	1	0.7	1.4	
27-Feb	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	0.7	
28-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.6	0.8	
0.7		0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.8	0.7	Diurnal Average	
1.1		1.0	1.1	1.2	1.2	1.3	1.5	1.6	1.4	1.5	1.7	1.8	1.4	1.8	1.3	1.4	3.9	4.0	2.9	2.7	1.9	1.9	1.7	1.2		Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

Hourly Maximums

Sulphur Dioxide (SO₂) - ppb

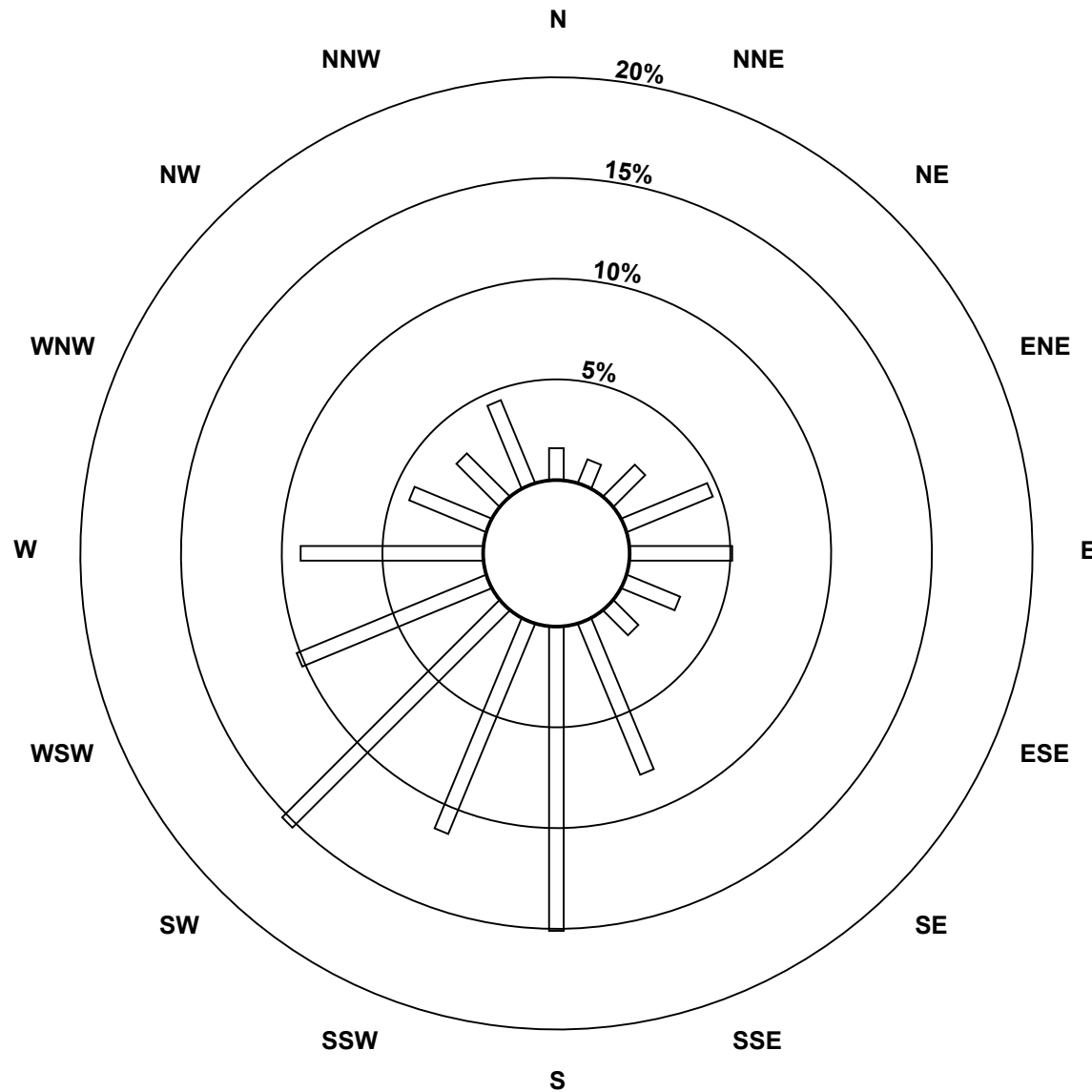
Donnelly - February 2017



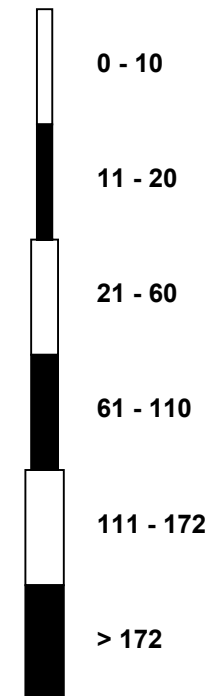
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb

Donnelly - February 2017

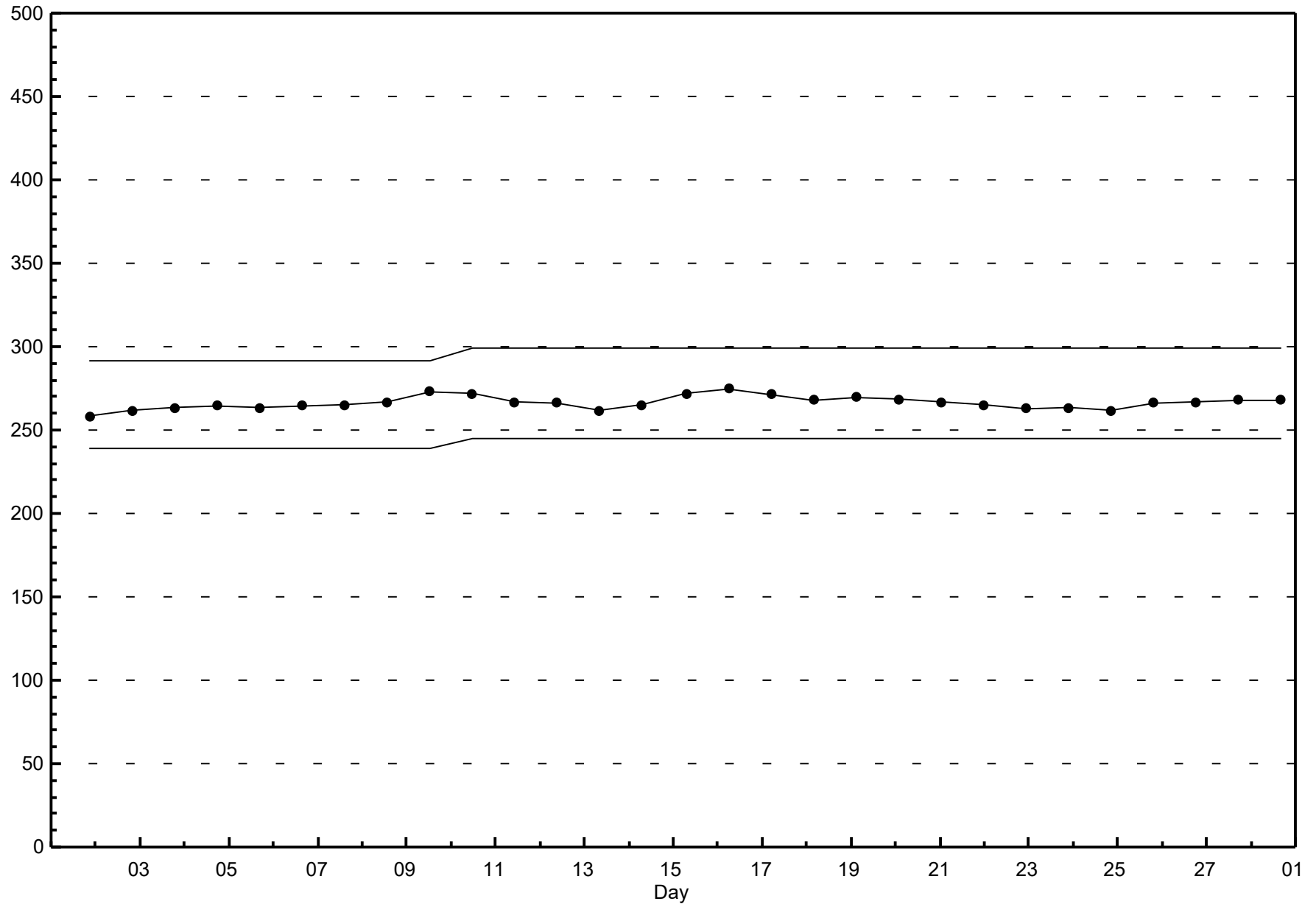


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Donnelly - February 2017



Hourly Averages

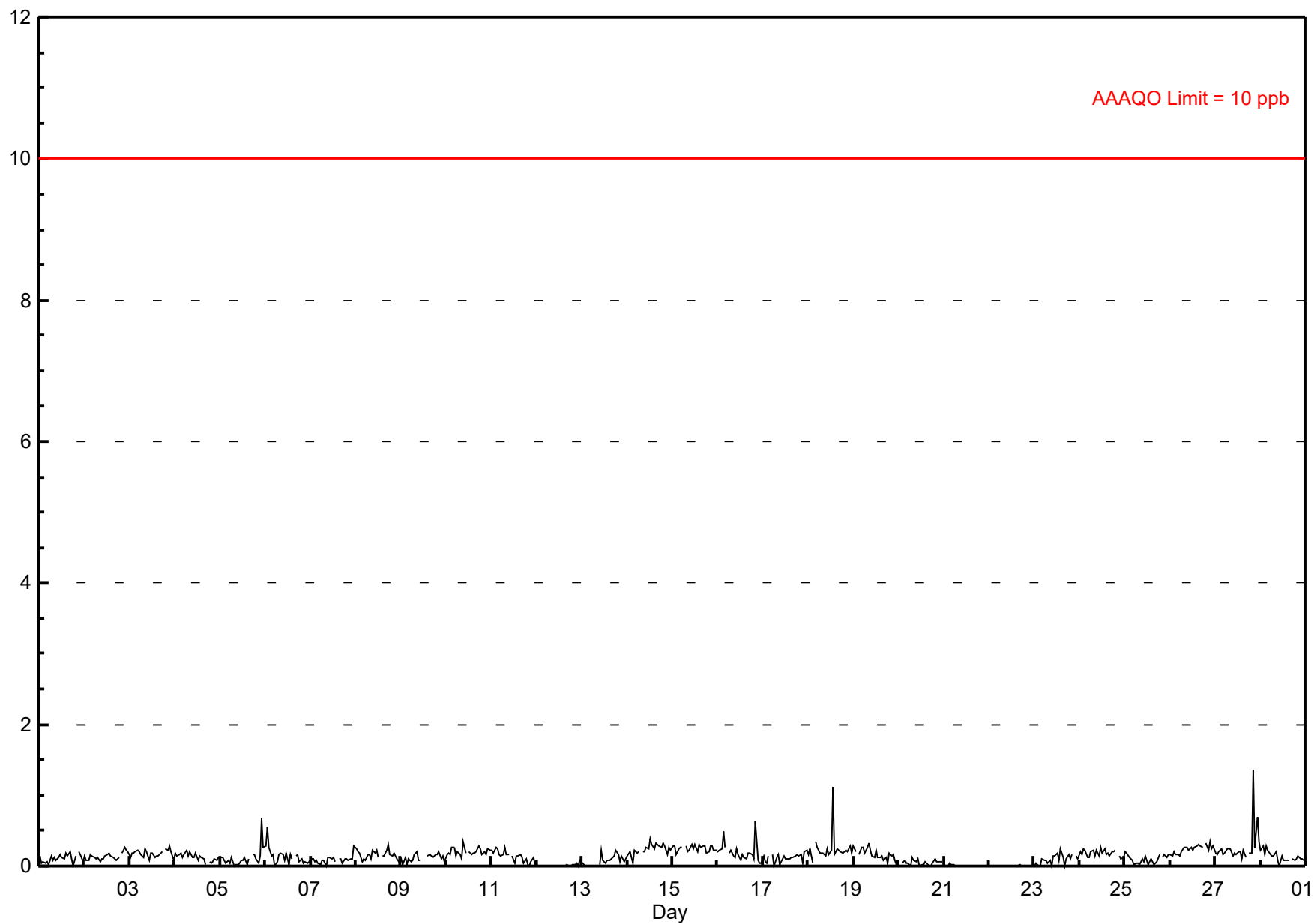
Hydrogen Sulphide (H₂S) - ppb

Donnelly - February 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 1.4 ppb on Feb 27 21:00 Maximum Daily Average: 0.3 ppb on Feb 27																								Hours in Service: 672 Hours of Data: 641 Hours of Missing Data: 31 Hours of Calibration: 31 Percent Operational Time: 100.0		
Minimum Value: 0 ppb on Feb 1 19:00 Maximum Diurnal Average: 0.2 ppb at hour 21 Monthly Average: 0.14 ppb												Minimum Daily Average: 0.0 ppb on Feb 22 Minimum Diurnal Average: 0.1 ppb at hour 6 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.3 P ₉₉ = 0.5														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	0	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
2-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.3
3-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.3
4-Feb	0	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
5-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	0	0.1	0.7
6-Feb	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.6
7-Feb	0	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
8-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.3
9-Feb	0	0	0	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0.1	0.2
10-Feb	0	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
11-Feb	0	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
12-Feb	0	0	0	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
13-Feb	0	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
14-Feb	0	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
15-Feb	0	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	0.3
16-Feb	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.2	0.6
17-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
18-Feb	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.2	1.1
19-Feb	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
20-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
21-Feb	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
22-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.0	0.0
23-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.2
24-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.3
25-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.2
26-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.3
27-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0	1	0	0.3	1.4
28-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.3
																								Diurnal Average		
																								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 - February 2017



Hourly Maximums

Hydrogen Sulphide (H₂S) - ppb

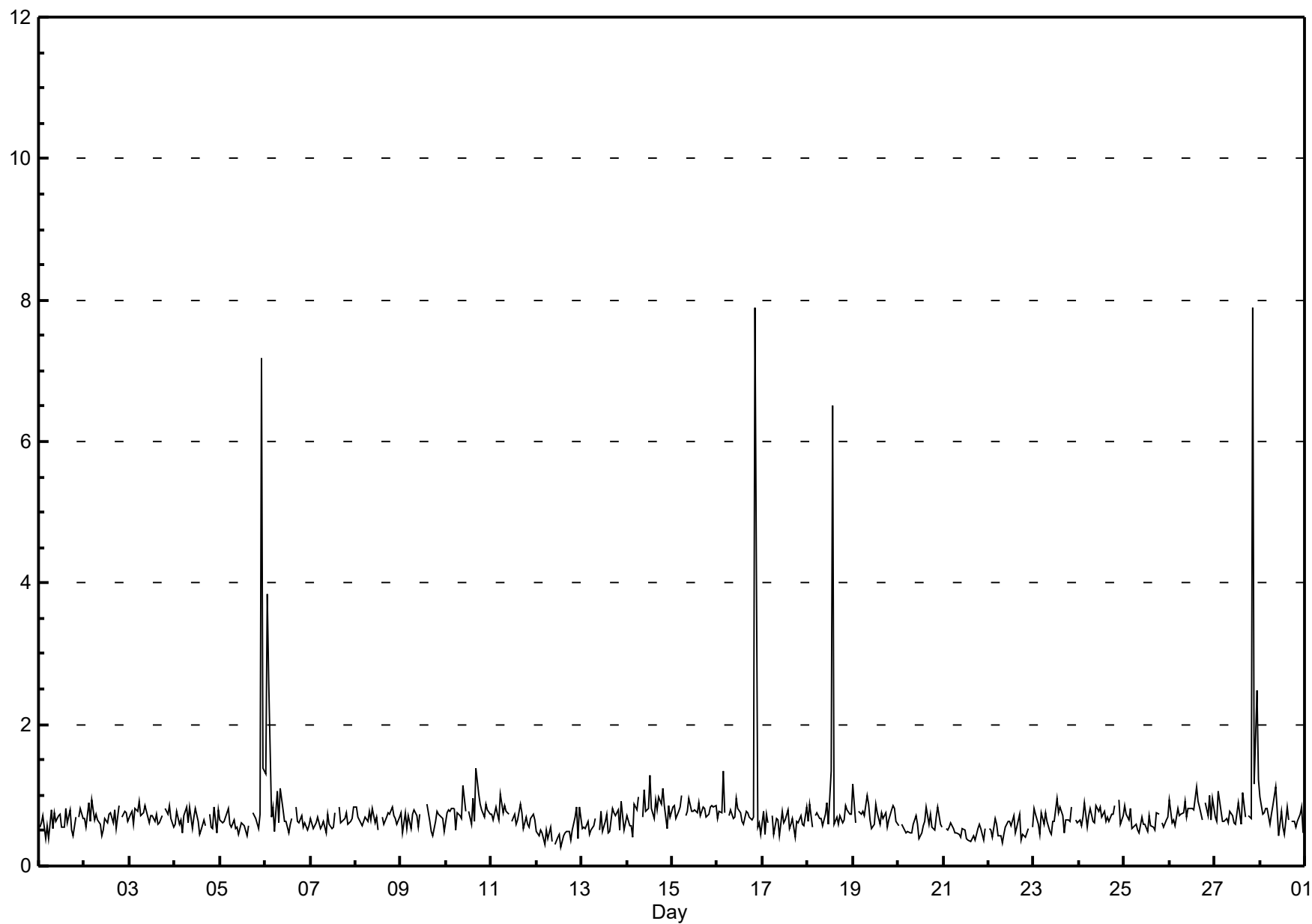
Donnelly - February 2017

Maximum Value: 7.9 ppb on Feb 27 21:00																				Maximum Daily Average: 1.2 ppb on Feb 27					Hours in Service: 672				
Minimum Value: 0 ppb on Feb 12 14:00																				Minimum Daily Average: 0.5 ppb on Feb 21					Hours of Data: 641				
Maximum Diurnal Average: 1.2 ppb at hour 21																				Minimum Diurnal Average: 0.6 ppb at hour 6					Hours of Missing Data: 31				
Monthly Average: 0.73 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.7 Q ₃ = 0.8 P ₉₀ = 0.9 P ₉₉ = 1.5					Hours of Calibration: 31				
																				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-Feb	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	1	1	1	0.6	0.8			
2-Feb	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.7	0.9			
3-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.7	0.9			
4-Feb	1	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1	1	A	1	1	1	1	0	1	0.6	0.8			
5-Feb	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	A	1	1	1	1	1	7	1	0.9	7.2			
6-Feb	1	4	3	1	1	0	1	1	1	1	1	1	0	1	1	A	1	1	1	1	1	1	1	1	0.9	3.8			
7-Feb	1	1	1	1	1	1	1	1	0	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.6	0.8			
8-Feb	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			
9-Feb	1	0	1	1	1	1	1	1	1	1	1	C	C	C	1	1	0	0	1	1	1	1	0	1	0.7	0.9			
10-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.4			
11-Feb	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			
12-Feb	0	0	1	0	0	1	0	1	0	A	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0.5	0.8			
13-Feb	1	1	1	1	0	0	1	1	A	1	1	0	1	1	0	0	1	1	1	1	1	1	1	1	0.6	0.9			
14-Feb	1	1	1	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.3			
15-Feb	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0			
16-Feb	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	8	1	1	0	1.0	7.9			
17-Feb	1	0	1	1	A	1	0	1	1	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0.6	0.8			
18-Feb	1	1	1	A	1	1	1	1	1	1	1	1	1	7	1	1	1	1	1	1	1	1	1	1	1.0	6.5			
19-Feb	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2			
20-Feb	1	A	1	1	0	0	0	0	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8			
21-Feb	A	1	1	1	1	1	0	0	0	0	1	1	0	0	0	0	0	0	1	1	1	0	1	A	0.5	0.6			
22-Feb	1	1	0	1	1	0	0	0	0	1	1	1	1	0	1	1	0	0	0	0	1	A	1	1	0.5	0.7			
23-Feb	1	1	1	0	1	1	1	1	0	0	1	1	1	1	1	0	1	1	1	1	1	A	1	1	0.7	1.0			
24-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	0.9			
25-Feb	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1	1	1	1	A	1	1	1	1	0.6	0.9			
26-Feb	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			
27-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	8	1	2	1	1.2	7.9			
28-Feb	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	1	A	1	1	1	1	1	1	0	0.7	1.1			
0.7 0.8 0.7 0.7 0.7 0.6 0.7 0.7 0.7 0.7 0.7 0.6 0.7 0.9 0.7 0.7 0.7 0.7 0.7 0.7 1.2 0.7 1.0 0.7																									Diurnal Average				
1.3 3.8 2.6 1.4 0.9 1.0 1.1 1.0 1.1 1.1 1.0 0.8 1.3 6.5 1.1 1.0 1.4 1.0 0.9 1.1 7.9 1.2 7.2 1.4																									Diurnal Maximum				
C - Calibration																									A - Automated Daily Zero Span				

Hourly Maximums

Hydrogen Sulphide (H₂S) - ppb

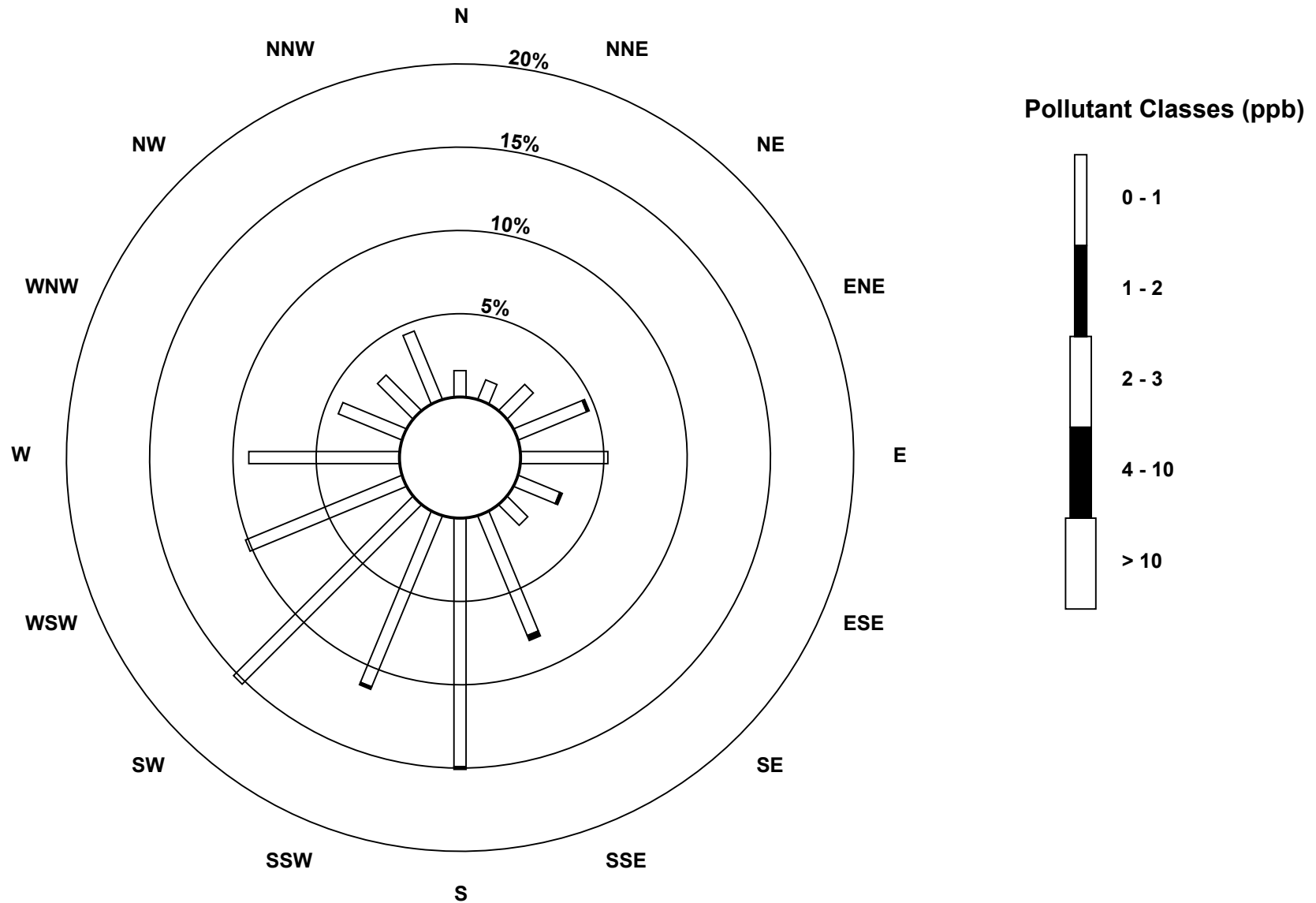
Donnelly - February 2017



Pollutant Rose

Hydrogen Sulphide (H₂S) - ppb

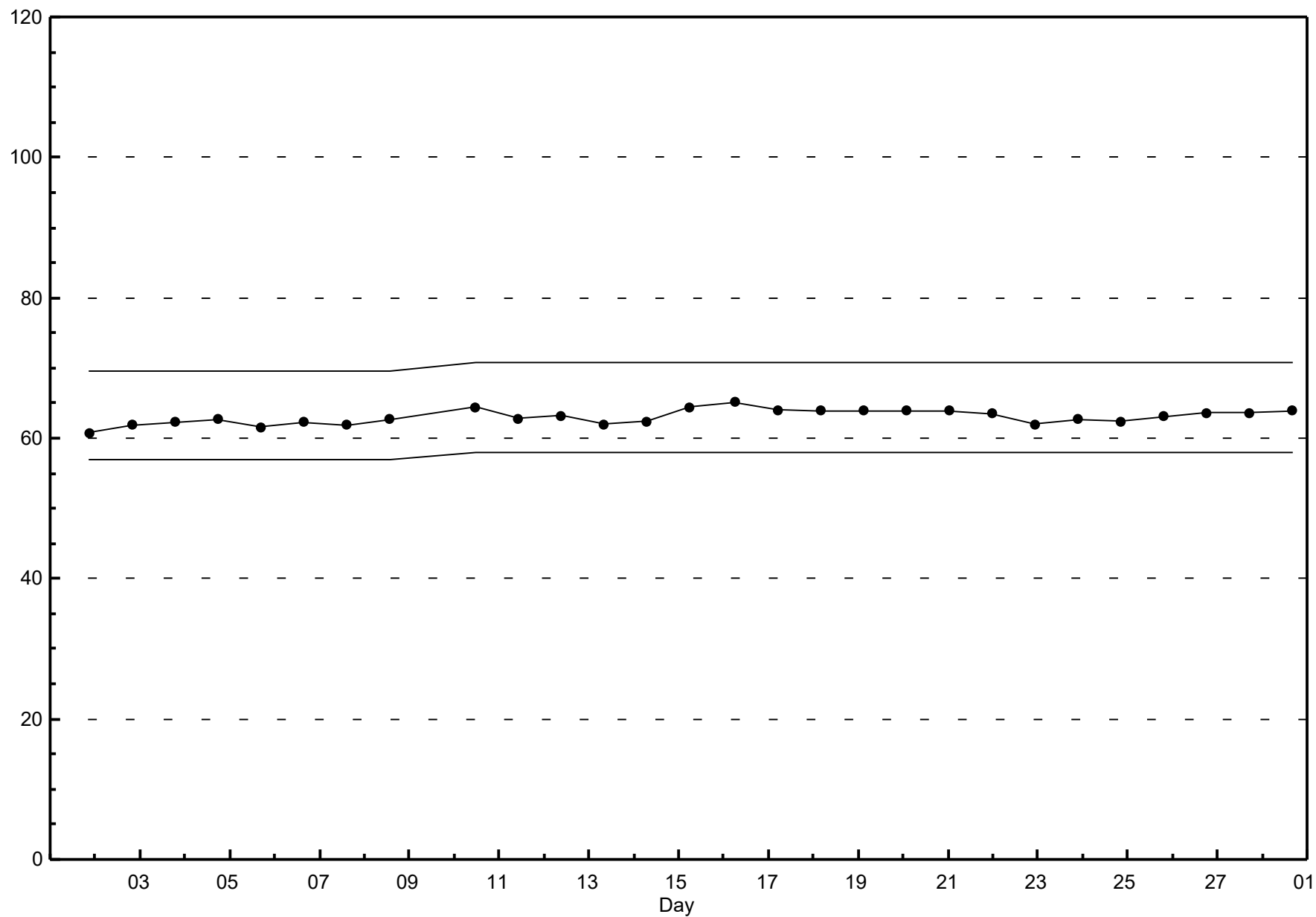
Donnelly - February 2017



Span Responses

Hydrogen Sulphide (H_2S)

Donnelly - February 2017



Hourly Averages

External Temperature (ET) - °C

Donnelly - February 2017

Maximum Value: 12.0 °C on Feb 15 16:00																				Maximum Daily Average: 7.8 °C on Feb 15					Hours in Service: 672			
Minimum Value: -32 °C on Feb 6 05:00																				Minimum Daily Average: -27.1 °C on Feb 6					Hours of Data: 672			
Maximum Diurnal Average: -5.3 °C at hour 16																				Minimum Diurnal Average: -10.3 °C at hour 9					Hours of Missing Data: 0			
Monthly Average: -8.22 °C																				Percentiles: P ₁ = -31.2 P ₁₀ = -20.1 Q ₁ = -14.6 Median = -8.9 Q ₃ = -0.6 P ₉₀ = 4.6 P ₉₉ = 9.9					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-Feb	-8	-9	-11	-12	-13	-14	-14	-15	-15	-15	-13	-12	-11	-10	-9	-8	-8	-12	-14	-14	-13	-14	-15	-16	-12.3	-7.7		
2-Feb	-16	-16	-17	-17	-16	-16	-17	-17	-16	-15	-14	-14	-13	-12	-12	-12	-12	-14	-15	-15	-14	-13	-14	-13	-14.6	-11.6		
3-Feb	-14	-14	-14	-14	-13	-13	-13	-13	-13	-12	-13	-14	-14	-14	-14	-15	-15	-18	-18	-18	-17	-16	-17	-19	-14.7	-12.4		
4-Feb	-19	-19	-19	-21	-21	-19	-18	-18	-17	-16	-16	-15	-15	-14	-14	-14	-14	-15	-16	-16	-16	-16	-17	-16	-16.7	-13.5		
5-Feb	-16	-17	-19	-20	-23	-25	-26	-26	-27	-26	-25	-23	-23	-23	-22	-22	-21	-23	-26	-26	-26	-26	-26	-27	-23.4	-15.7		
6-Feb	-27	-32	-31	-31	-32	-31	-30	-29	-31	-30	-29	-26	-24	-22	-21	-22	-23	-25	-26	-26	-26	-26	-26	-26	-27.1	-20.6		
7-Feb	-27	-27	-27	-25	-25	-25	-26	-26	-28	-27	-25	-24	-23	-21	-19	-18	-18	-18	-19	-19	-21	-21	-19	-18	-22.6	-17.9		
8-Feb	-18	-19	-19	-20	-21	-20	-20	-20	-20	-20	-18	-17	-15	-14	-12	-11	-12	-13	-15	-14	-14	-14	-14	-15	-16.4	-10.8		
9-Feb	-15	-15	-15	-15	-15	-16	-15	-15	-17	-17	-16	-13	-11	-11	-10	-9	-9	-10	-11	-11	-11	-11	-12	-13	-13.1	-9.1		
10-Feb	-14	-13	-12	-15	-17	-17	-13	-12	-12	-11	-10	-10	-8	-7	-6	-6	-8	-11	-11	-11	-12	-9	-6	-6	-10.7	-5.5		
11-Feb	-7	-5	-5	-5	-5	-5	-5	-5	-5	-4	-3	-2	-1	0	1	1	1	1	0	0	-1	0	1	2	-2.1	1.9		
12-Feb	1	1	2	3	4	4	3	2	3	3	3	4	5	6	6	6	6	6	5	5	5	3	4	4	3.9	6.5		
13-Feb	4	4	4	4	3	3	2	3	3	2	4	6	7	8	8	6	5	4	4	5	5	4	4	4	4.4	7.9		
14-Feb	5	5	5	5	5	5	4	4	4	5	5	8	9	11	10	10	10	8	6	7	8	10	9	9	6.8	10.7		
15-Feb	8	8	8	7	8	5	5	5	5	8	9	9	9	9	10	12	12	10	9	7	5	5	6	7	7.8	12.0		
16-Feb	6	6	6	3	3	3	2	3	3	2	4	6	6	6	6	8	6	4	4	3	2	3	3	3	4.1	8.2		
17-Feb	3	4	3	3	3	2	2	2	1	1	2	2	3	4	4	4	4	3	1	1	0	0	-1	-1	2.0	4.4		
18-Feb	-1	-1	-1	-1	-1	-2	-3	-2	-2	-2	-1	-1	0	1	1	1	1	1	0	0	0	0	-1	-1	-0.6	1.5		
19-Feb	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	-1	-2	-2	-2	-2	-2	-2	-2	-3	-3	-3	-3	-4	-1.6	-0.3		
20-Feb	-4	-4	-4	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-6	-6	-6	-5.0	-3.8		
21-Feb	-6	-5	-5	-5	-5	-5	-5	-6	-6	-6	-6	-5	-5	-5	-5	-4	-4	-4	-4	-5	-7	-8	-8	-8	-5.5	-4.0		
22-Feb	-7	-7	-7	-7	-7	-7	-7	-7	-9	-9	-8	-7	-6	-5	-5	-3	-4	-4	-5	-6	-8	-9	-7	-6	-7	-8	-6.8	-3.9
23-Feb	-10	-11	-11	-10	-10	-9	-9	-9	-9	-8	-7	-6	-5	-5	-3	-4	-4	-5	-6	-6	-6	-7	-7	-8	-7.3	-3.4		
24-Feb	-10	-11	-12	-13	-13	-13	-14	-15	-15	-15	-14	-14	-13	-12	-11	-10	-10	-10	-15	-15	-13	-14	-14	-13	-12.7	-9.6		
25-Feb	-13	-13	-13	-12	-12	-11	-10	-10	-9	-8	-8	-8	-8	-8	-7	-7	-7	-7	-7	-7	-8	-7	-9	-9	-9.1	-7.0		
26-Feb	-10	-12	-13	-15	-17	-16	-17	-17	-18	-17	-16	-15	-12	-11	-12	-11	-11	-11	-13	-13	-12	-12	-12	-12	-13.5	-10.2		
27-Feb	-11	-11	-12	-12	-13	-13	-14	-15	-16	-13	-10	-9	-10	-9	-9	-9	-10	-10	-12	-13	-13	-14	-14	-15	-12.0	-8.9		
28-Feb	-15	-15	-16	-17	-15	-15	-15	-15	-16	-15	-11	-10	-8	-6	-5	-5	-5	-5	-8	-9	-10	-11	-12	-12	-11.4	-4.7		
																									Diurnal Average			
																									Diurnal Maximum			

Hourly Averages

External Temperature (ET) - °C

Donnelly - February 2017



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Donnelly - February 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	12	15	9	7	6	3	4	6	3	3	3	4	7	6	4	2	1	3	4	5	7	10	11	10	5.1	15.4
Dir	251	260	248	235	236	196	204	228	211	235	224	242	247	274	281	250	308	177	195	189	189	182	184	193	225	260
2 Spd	9	10	10	11	11	10	12	13	12	10	13	13	10	11	9	5	3	3	4	3	N	N	N	N	8.4	13.0
Dir	189	190	188	188	192	194	189	193	194	204	215	220	227	236	254	280	259	188	187	193	N	N	N	N	206	215
3 Spd	N	N	0	1	2	5	5	3	2	6	13	13	6	8	7	8	6	2	1	1	4	7	9	7	2.9	13.4
Dir	N	N	329	339	349	19	30	40	352	336	345	350	320	322	312	299	313	291	319	258	199	196	195	204	318	345
4 Spd	4	3	2	7	8	7	7	6	9	12	15	16	14	11	12	15	14	12	14	14	10	9	6	5	9.3	16.2
Dir	215	226	197	186	190	221	238	234	219	216	231	235	233	238	232	209	198	202	196	189	194	191	192	252	214	235
5 Spd	7	13	12	10	5	4	1	2	N	N	3	4	6	7	7	5	2	2	3	3	4	4	4	3	2.3	12.6
Dir	352	357	360	357	334	320	276	286	N	N	292	294	275	274	279	275	325	38	105	123	164	153	153	131	327	357
6 Spd	3	1	3	4	4	5	3	1	4	5	6	5	6	5	4	7	5	5	5	2	N	3	4	4	0.9	6.6
Dir	144	105	76	60	60	59	80	93	61	59	38	8	28	25	312	302	267	222	192	226	N	220	213	200	40	302
7 Spd	6	7	7	7	10	9	9	9	8	10	15	15	18	15	16	19	18	13	14	12	8	7	11	11	10.9	18.8
Dir	195	193	192	203	199	187	181	183	190	194	202	197	188	198	222	229	237	219	204	212	204	212	232	239	207	229
8 Spd	11	10	12	12	11	12	14	14	13	14	17	20	18	20	17	18	13	13	15	14	15	15	15	13	13.9	19.9
Dir	238	213	182	192	185	187	180	175	174	173	171	171	171	168	166	168	173	175	175	179	178	182	179	180	178	168
9 Spd	12	15	15	13	10	5	8	4	5	5	5	5	4	7	7	6	3	3	5	0	2	4	3	4	3.7	14.7
Dir	176	172	169	169	157	145	147	128	57	85	85	88	83	64	80	80	58	3	14	108	234	240	219	230	137	172
10 Spd	3	3	1	3	3	3	9	9	8	9	8	8	6	10	10	6	2	4	3	3	1	7	20	16	3.7	19.7
Dir	121	109	170	151	49	48	84	91	94	86	86	91	94	158	174	188	23	62	157	208	236	173	200	216	139	200
11 Spd	16	27	31	28	28	26	27	27	24	24	29	31	28	30	32	31	28	31	26	27	20	21	25	33	26.5	33.0
Dir	203	220	224	223	219	218	220	226	227	223	223	228	234	242	243	238	226	222	214	217	204	197	201	206	222	206
12 Spd	34	33	32	36	48	55	33	33	33	34	35	33	26	26	36	31	36	38	42	34	31	18	22	24	33.1	54.9
Dir	206	207	209	217	226	228	220	210	214	209	217	226	223	217	226	230	229	230	229	235	228	231	229	224	222	228
13 Spd	25	22	20	19	16	15	12	14	15	10	10	9	9	9	10	15	14	17	19	18	17	16	15	14.1	24.5	
Dir	222	230	235	221	211	215	219	227	217	201	173	199	237	249	233	191	191	185	189	194	193	192	194	190	209	222
14 Spd	18	16	16	14	14	15	18	20	21	24	25	19	7	5	6	2	5	6	3	10	11	14	13	15	12.4	25.2
Dir	179	173	166	166	163	166	169	171	168	166	168	160	147	144	171	49	100	103	112	121	123	152	152	153	159	168
15 Spd	18	20	21	12	10	8	11	8	6	9	8	11	11	12	10	28	24	21	20	15	14	15	13	10	11.6	28.4
Dir	157	160	165	166	142	105	109	107	106	144	159	177	178	185	221	226	216	215	216	204	195	183	172	161	180	226
16 Spd	7	8	3	6	8	7	6	8	6	4	2	7	6	4	4	4	6	7	4	5	3	10	12	14	2.8	14.2
Dir	141	163	60	66	86	72	76	94	94	58	340	218	190	252	203	288	293	238	91	183	165	172	174	194	154	194
17 Spd	14	15	17	10	19	21	21	17	16	13	12	13	11	14	14	12	11	10	8	6	5	6	7	6	11.9	20.8
Dir	202	221	227	238	251	252	259	247	247	226	215	217	214	236	256	261	256	243	238	266	243	235	206	219	238	259
18 Spd	5	3	N	2	1	2	2	2	3	5	7	6	8	6	7	8	11	14	15	14	17	16	12	13	6.7	17.4
Dir	206	187	N	162	74	97	116	171	68	69	96	98	86	71	80	69	58	53	54	57	53	58	61	59	68	53
19 Spd	15	15	14	11	8	7	7	2	4	3	3	9	13	15	13	14	12	11	8	5	3	3	5	7	3.3	15.1
Dir	56	54	49	47	56	63	68	54	326	334	315	267	274	268	261	262	269	262	262	284	301	311	288	272	312	54
20 Spd	9	8	7	9	9	10	6	7	10	10	10	9	8	10	9	8	7	7	7	7	9	9	8	9	8.1	10.5
Dir	268	259	263	255	248	256	248	257	257	262	263	266	271	261	292	288	296	284	268	267	257	242	225	241	262	263
21 Spd	7	9	10	9	8	9	9	6	9	13	11	7	12	11	10	9	10	12	9	8	5	4	6	4	8.3	12.7
Dir	253	244	256	252	268	266	262	287	271	269	275	284	273	280	282	287	270	256	256	264	246	233	248	235	265	269
22 Spd	2	5	7	7	5	11	12	11	11	12	14	15	12	14	12	12	11	9	5	8	13	11	9	4	9.4	14.5
Dir	232	218	214	252	257	256	257	251	247	254	260	259	269	263	268	277	279	276	250	235	243	263	262	261	257	259

Hourly Averages

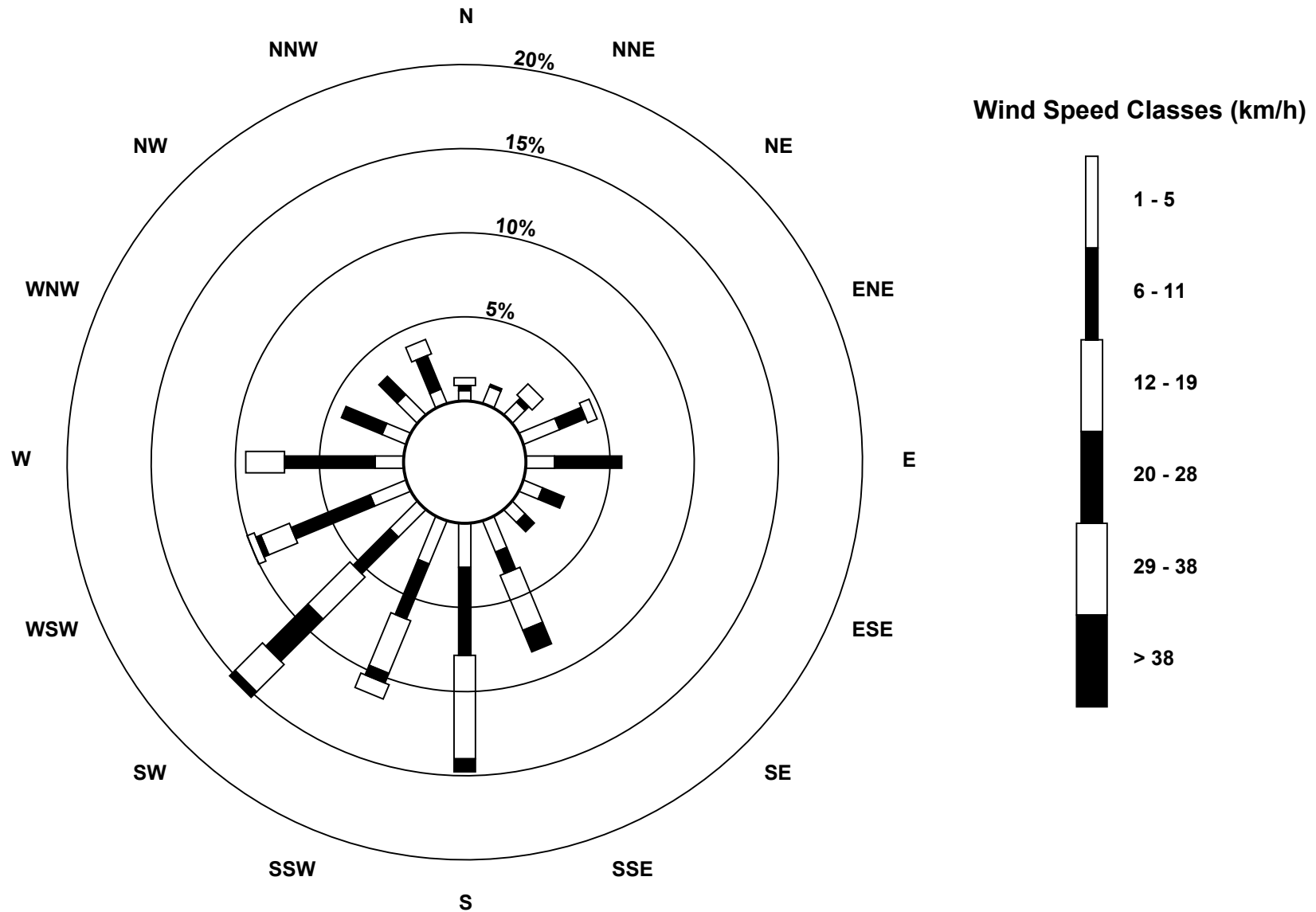
Wind Speed (km/h)
Wind Direction (deg)
Donnelly - February 2017

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	2	3	4	6	5	6	3	7	6	8	7	6	6	5	7	5	5	4	4	4	5	10	11	3.0	11.4									
Dir	226	208	180	192	177	185	175	185	175	184	186	177	214	182	176	177	185	195	266	294	304	320	342	341	206	341									
24 Spd	14	13	11	8	6	8	9	8	7	9	8	6	4	5	3	3	4	2	3	7	13	13	13	16	1.9	15.8									
Dir	340	337	337	329	319	325	324	326	330	332	335	318	315	257	261	163	114	94	102	127	160	166	168	165	314	165									
25 Spd	16	17	18	17	16	15	15	13	12	11	13	12	10	8	8	10	8	8	9	9	7	7	8	16	5.6	18.0									
Dir	162	163	165	170	174	176	178	181	174	184	228	256	300	330	318	301	299	286	268	262	265	298	337	337	218	165									
26 Spd	14	9	8	3	6	13	9	5	3	1	4	7	3	3	7	5	4	4	6	13	21	21	21	21	2.9	21.4									
Dir	333	331	334	314	330	342	341	342	346	177	238	218	171	159	170	165	174	146	136	162	171	170	170	166	184	170									
27 Spd	22	20	18	15	12	11	10	5	5	3	1	1	4	5	5	7	7	5	2	N	3	6	2	3	5.6	21.6									
Dir	165	165	164	165	163	162	159	156	160	160	210	248	262	251	279	267	284	279	284	N	186	203	192	182	182	165									
28 Spd	1	1	1	2	2	3	1	1	2	2	4	7	8	7	7	8	8	7	9	11	11	9	9	6	4.9	10.9									
Dir	209	233	346	25	30	55	63	2	65	125	99	88	88	109	107	87	89	92	94	91	87	80	81	72	87	91									
Spd	6.7	7.0	6.6	6.3	6.3	5.8	5.5	5.6	5.6	5.8	6.3	6.7	6.0	6.3	6.9	7.0	6.0	6.1	5.9	6.1	6.4	6.8	7.3	6.9	Diurnal Average										
Dir	201	204	203	204	207	214	203	205	206	203	214	219	227	232	236	237	233	223	211	205	197	193	194	201											
Spd	33.5	32.5	31.9	36.0	47.7	54.9	33.3	32.8	33.2	34.0	35.2	33.0	28.4	30.2	35.6	31.3	36.4	37.5	42.2	34.3	31.3	21.2	24.6	33.0	Diurnal Maximum										
Dir	206	207	209	217	226	228	220	210	214	209	217	226	234	242	226	238	229	230	229	235	228	170	201	206											
Maximum Speed Value: 55 km/h on Feb 12 06:00																				Minimum Speed Value: 0 km/h on Feb 9 20:00										Hours in Service:				672	
Maximum Daily Speed Average: 33.1 km/h on Feb 12																				Minimum Daily Speed Average: 0.9 km/h on Feb 6										Hours of Data:				661	
Maximum Diurnal Speed Average: 7.3 km/h at hour 23																				Minimum Diurnal Speed Average: 5.5 km/h at hour 7										Hours of Missing Data:				11	
Monthly Average Velocity: 6.14 km/h 211.5 deg																				Speed Percentiles: P ₁ = 0.9 P ₁₀ = 2.8 Q ₁ = 5.0 Median = 8.7 Q ₃ = 13.5 P ₉₀ = 19.8 P ₉₉ = 35.6										Percent Operational Time:				98.4	
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	11		5		7		0		0		0		23																						
NorthEast	20		11		11		0		0		0		42																						
East	18		41		1		0		0		0		60																						
SouthEast	16		9		5		0		0		0		30																						
South	33		54		77		19		0		0		183																						
SouthWest	29		40		37		22		27		3		158																						
West	25		63		25		2		0		0		115																						
NorthWest	16		31		3		0		0		0		50																						
Total	168		254		166		43		27		3		661																						

Wind Rose

Wind Speed (WS) (km/h)

Donnelly - February 2017



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Donnelly - February 2017

Maximum Speed: 55 km/h on Feb 12 06:00																				Maximum Daily Speed Average: 33.5 km/h on Feb 12										Hours in Service: 672	
Minimum Speed: 0 km/h on Feb 3 03:00																				Minimum Daily Speed Average: 4.2 km/h on Feb 6										Hours of Data: 661	
Maximum Diurnal Speed Average: 12.0 km/h at hour 2																				Minimum Diurnal Speed Average: 9.4 km/h at hour 8										Hours of Missing Data: 11	
Monthly Average Speed: 10.56 km/h																				Percentiles: P ₁ = 1.1 P ₁₀ = 3.1 Q ₁ = 5.4 Median = 8.8 Q ₃ = 13.6 P ₉₀ = 20.0 P ₉₉ = 35.7										Percent Operational Time: 98.4	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Feb	12	15	9	7	6	3	5	6	3	3	3	4	7	6	4	2	2	3	4	5	7	10	11	11	6.1	15.4					
2-Feb	9	10	10	11	11	10	12	13	12	10	13	13	10	11	10	5	3	4	4	3	N	N	N	N	9.2	13.1					
3-Feb	N	N	0	1	2	5	5	3	2	6	13	13	7	8	8	8	7	3	1	2	5	7	9	7	5.5	13.4					
4-Feb	4	3	3	7	8	8	7	6	9	12	15	16	14	11	12	15	14	12	14	14	10	9	7	5	9.9	16.3					
5-Feb	7	13	12	10	6	4	1	2	N	N	3	4	6	7	7	5	2	2	3	3	4	4	4	3	5.1	12.7					
6-Feb	3	1	3	4	4	5	3	1	4	5	6	5	6	5	5	7	5	5	5	2	N	3	4	4	4.2	6.7					
7-Feb	6	7	7	7	10	9	9	9	8	10	15	15	18	15	16	19	18	14	14	12	8	7	11	11	11.5	18.9					
8-Feb	11	10	12	12	11	12	14	14	13	14	17	20	18	20	17	18	13	13	15	14	15	15	15	13	14.3	19.9					
9-Feb	12	15	15	13	10	5	8	5	6	5	5	5	4	7	8	7	3	4	5	1	2	4	3	4	6.5	14.7					
10-Feb	3	3	3	3	3	3	9	9	8	9	8	8	6	11	10	6	4	4	3	3	1	7	20	16	6.7	20.3					
11-Feb	16	27	31	28	28	26	27	27	24	24	29	31	28	30	32	31	28	31	26	27	20	21	25	33	27.1	33.1					
12-Feb	34	33	32	36	48	55	34	33	33	34	35	33	26	26	36	31	36	38	42	34	31	18	22	24	33.5	54.9					
13-Feb	25	23	20	19	16	15	12	14	15	10	10	10	9	9	9	11	15	15	17	19	18	17	16	15	15.0	24.5					
14-Feb	18	16	16	14	14	15	18	20	21	24	25	19	8	6	6	3	5	6	3	11	11	14	13	15	13.3	25.2					
15-Feb	18	20	21	12	10	8	11	9	6	9	8	11	11	12	11	28	24	22	20	15	14	15	13	10	14.2	28.5					
16-Feb	7	9	7	6	8	7	6	8	6	4	4	7	6	4	5	5	6	7	6	6	5	10	12	14	6.9	14.3					
17-Feb	14	15	17	10	19	21	21	17	16	13	13	13	11	15	15	13	11	11	8	7	6	7	7	6	12.6	20.9					
18-Feb	5	4	N	2	2	2	4	4	3	5	7	6	8	6	7	8	11	14	15	14	17	16	12	13	8.0	17.4					
19-Feb	15	15	14	11	8	7	7	5	4	3	3	9	14	15	14	14	12	11	8	5	3	3	5	7	8.9	15.1					
20-Feb	9	9	7	9	9	10	6	7	10	10	11	10	8	10	9	8	7	7	7	7	9	9	8	9	8.6	10.6					
21-Feb	7	9	10	9	8	9	9	6	9	13	11	8	12	11	10	9	10	12	9	8	6	5	6	4	8.7	12.9					
22-Feb	3	5	7	8	5	11	12	11	11	12	14	15	13	14	12	13	11	9	6	8	13	11	9	5	9.9	14.6					
23-Feb	4	2	3	4	6	5	6	3	7	6	8	7	7	6	5	7	5	5	7	5	4	5	10	11	5.9	11.4					
24-Feb	14	13	11	8	6	8	9	8	8	10	9	7	5	5	4	3	4	2	3	8	13	13	13	16	8.3	15.8					
25-Feb	16	17	18	17	16	15	15	13	12	11	14	12	10	8	8	10	9	9	9	9	7	8	8	16	12.0	18.1					
26-Feb	14	9	8	3	6	13	9	5	4	1	5	7	3	3	7	5	4	4	7	13	21	21	21	21	9.0	21.4					
27-Feb	22	20	18	15	12	11	10	5	5	3	1	1	5	5	6	7	7	5	2	N	3	6	2	3	7.5	21.6					
28-Feb	1	2	3	3	2	3	2	2	2	3	4	7	8	7	8	8	8	7	9	11	11	9	9	7	5.6	10.9					
11.5 12.0 11.7 10.4 10.5 10.9 10.4 9.4 9.5 9.9 11.0 11.3 10.4 10.6 10.7 10.9 10.2 9.9 9.8 9.9 10.1 10.2 11.0 11.2																									Diurnal Average						
33.6 32.6 32.0 36.2 47.8 54.9 33.6 32.8 33.2 34.1 35.2 33.2 28.4 30.3 35.7 31.4 36.4 37.6 42.2 34.4 31.3 21.2 24.8 33.1																									Diurnal Maximum						
N - Not Valid																															
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg

Donnelly - February 2017

Maximum Value: 84.7 deg on Feb 16 21:00																								Hours in Service: 672	
Minimum Value: 1.1 deg on Feb 26 22:00																								Hours of Data: 661	
Percentiles: P ₁ = 1.8 P ₁₀ = 3.1 Q ₁ = 4.8 Median = 8.0 Q ₃ = 14.8 P ₉₀ = 26.2 P ₉₉ = 67.0																								Hours of Missing Data: 11	
																								Hours of Calibration: 0	
																								Percent Operational Time: 98.4	
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Feb	8	3	8	5	8	16	22	7	17	19	16	14	6	20	18	24	65	9	7	9	6	6	5	6	64.6
2-Feb	4	4	4	4	3	3	3	4	2	5	7	4	6	8	13	14	22	17	11	11	N	N	N	N	22.3
3-Feb	N	N	19	46	27	12	6	13	26	20	6	11	17	9	7	5	10	26	29	44	15	11	6	6	45.6
4-Feb	12	18	34	23	5	13	8	11	10	6	7	7	7	4	5	14	7	4	8	5	4	4	13	24	33.6
5-Feb	8	7	7	7	12	27	30	17	N	N	31	14	20	15	15	28	23	21	11	25	6	7	6	11	31.3
6-Feb	9	23	23	14	6	12	19	16	11	4	12	9	9	12	23	5	27	11	10	32	N	9	10	5	31.9
7-Feb	8	4	3	8	8	6	4	5	6	4	8	6	7	10	7	6	3	16	5	3	3	11	5	3	16.3
8-Feb	8	15	3	8	3	3	2	2	4	2	2	3	4	3	4	6	4	4	3	4	2	2	2	3	15.1
9-Feb	3	4	6	4	14	34	9	35	31	10	10	22	20	14	10	22	26	38	8	67	34	18	18	13	67.4
10-Feb	37	7	63	71	22	22	17	6	8	6	7	7	9	28	8	11	71	21	34	29	48	25	14	3	71.4
11-Feb	7	4	3	2	2	2	3	3	2	3	3	4	2	4	4	2	5	3	6	5	11	5	8	3	11.1
12-Feb	2	4	3	5	3	3	7	3	3	3	3	7	5	5	4	3	3	2	3	3	2	4	4	5	7.1
13-Feb	2	3	4	3	7	3	8	6	4	16	4	21	8	6	8	13	6	8	5	5	2	2	4	6	21.4
14-Feb	5	6	3	3	4	6	3	4	3	2	3	3	47	45	37	51	17	9	18	6	7	6	5	5	51.4
15-Feb	5	4	2	8	11	7	3	14	11	12	16	4	6	6	23	5	4	4	4	12	5	6	5	6	23.3
16-Feb	17	25	65	7	9	5	10	8	10	25	55	19	11	25	41	57	22	24	53	46	85	6	7	8	84.7
17-Feb	7	4	3	4	5	3	5	4	3	6	11	7	6	13	8	10	14	17	7	21	24	19	9	17	23.7
18-Feb	20	16	N	30	67	27	63	65	15	13	13	15	9	10	10	8	5	4	3	4	3	3	4	4	66.9
19-Feb	4	4	4	5	4	4	5	77	13	13	12	15	6	9	7	7	6	4	4	14	11	19	14	15	77.5
20-Feb	6	5	11	8	8	7	18	14	5	7	9	19	13	9	11	10	10	7	9	5	8	7	9	14	18.5
21-Feb	11	12	11	9	8	11	17	15	6	8	8	15	9	11	9	12	9	9	12	12	9	15	13	21	20.9
22-Feb	44	15	14	7	11	8	5	5	5	6	4	6	9	9	9	8	7	10	30	5	11	8	5	21	44.3
23-Feb	13	28	13	21	5	9	7	16	6	5	6	6	24	10	12	7	17	11	60	26	13	10	8	6	60.1
24-Feb	4	6	6	9	8	8	9	5	19	15	15	19	37	24	39	18	6	34	8	14	4	2	2	1	39.3
25-Feb	3	2	3	2	3	3	3	3	3	9	9	12	14	8	11	7	9	5	7	8	16	13	11	5	16.3
26-Feb	5	6	8	19	9	6	6	10	19	29	28	12	38	26	4	6	13	8	20	7	2	1	1	2	37.7
27-Feb	2	2	2	3	3	3	6	21	14	19	29	58	27	19	20	18	9	14	19	N	21	9	13	20	58.3
28-Feb	29	76	64	34	24	13	78	56	31	52	13	10	7	26	16	5	6	7	5	5	5	5	5	12	78.1
44.3 75.7 64.6 71.4 66.9 33.8 78.1 77.5 30.7 51.8 55.4 58.3 47.3 44.6 40.7 57.0 70.8 37.8 60.1 67.4 84.7 25.4 18.4 24.0																									
N - Not Valid																									

PAZA

Portable – Rycroft Station

Monthly Summary Tables, Graphs and
Roses

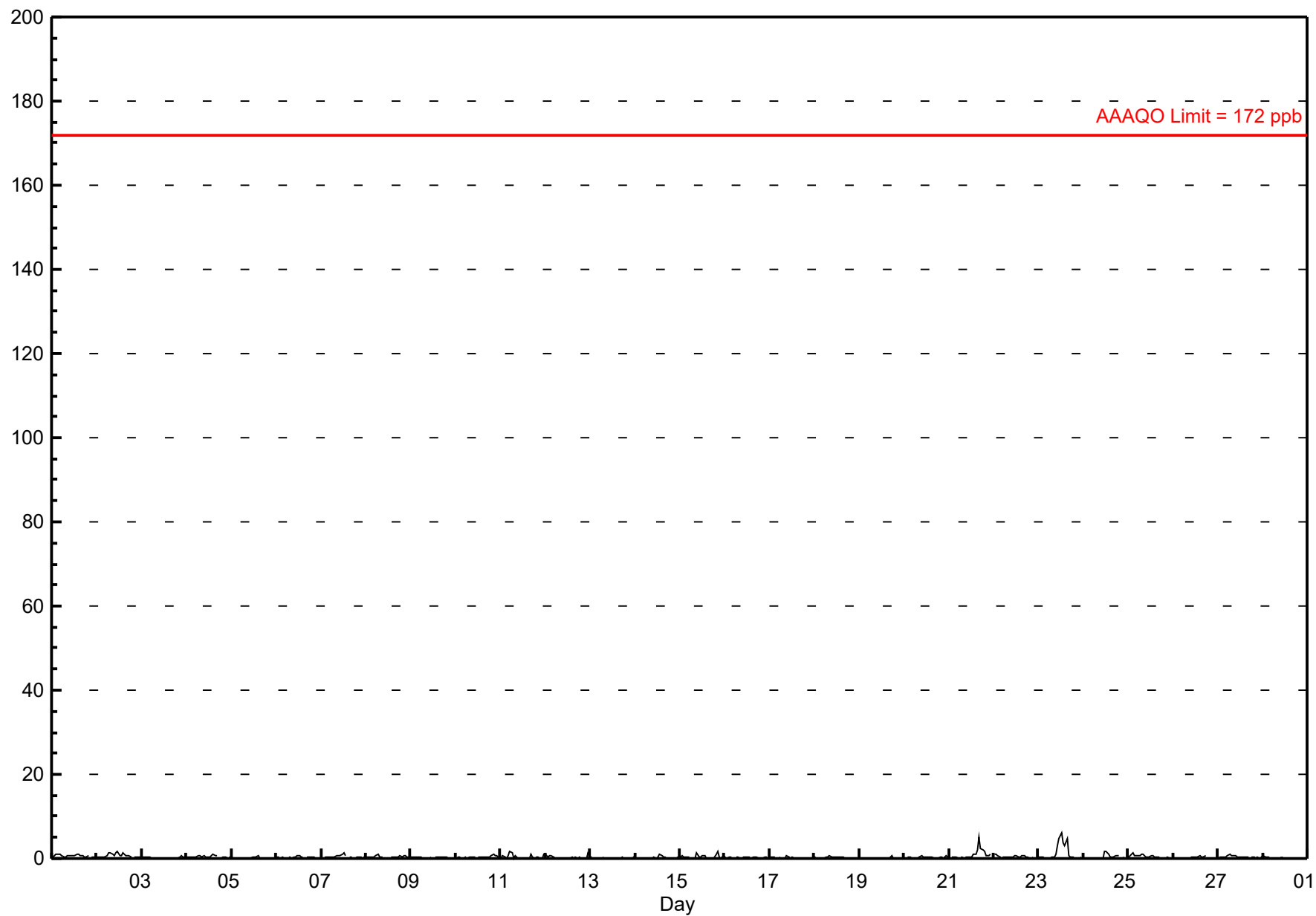
Hourly Averages

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 6.1 ppb on Feb 23 13:00 Maximum Daily Average: 1.3 ppb on Feb 23																								Hours in Service: 672 Hours of Data: 641 Hours of Missing Data: 31 Hours of Calibration: 31 Percent Operational Time: 100.0		
Minimum Value: 0 ppb on Feb 3 10:00 Maximum Diurnal Average: 0.7 ppb at hour 13 Monthly Average: 0.36 ppb												Minimum Daily Average: 0.0 ppb on Feb 19 Minimum Diurnal Average: 0.2 ppb at hour 23 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.4 P ₉₀ = 0.8 P ₉₉ = 2.7														
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-Feb	0	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	0	0	1	A	0	0	0	0.7	1.2
2-Feb	0	0	0	0	0	1	1	1	1	1	1	2	1	1	1	1	1	1	0	A	0	0	0	0	0.7	1.7
3-Feb	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0	0.2	0.7
4-Feb	0	0	0	0	0	0	1	1	0	1	0	0	0	1	1	1	1	A	0	0	0	0	0	0	0.4	0.9
5-Feb	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	0.8
6-Feb	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	A	0	0	0	0	0	0	0	0	0.3	0.6
7-Feb	0	0	0	0	0	0	0	0	1	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0.4	1.2
8-Feb	0	0	0	0	0	1	1	0	0	0	C	C	C	0	0	0	0	0	1	0	1	1	0	0	0.4	1.1
9-Feb	0	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	0.5
10-Feb	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	1	1	1	0	0.3	0.9
11-Feb	0	1	0	0	1	2	2	0	1	0	A	0	0	0	0	0	1	0	0	0	0	0	0	1	0.4	1.6
12-Feb	1	0	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	1.4
13-Feb	0	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
14-Feb	0	0	0	0	0	0	0	A	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0.2	1.0
15-Feb	0	1	0	0	0	0	A	0	0	1	0	0	1	1	0	0	0	0	0	1	2	0	0	1	0.4	1.5
16-Feb	0	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
17-Feb	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
18-Feb	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
19-Feb	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.0	0.8
20-Feb	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.2	0.6
21-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	5	2	2	2	1	1	1	A	0.9	5.1
22-Feb	1	1	1	0	0	0	0	0	0	0	0	1	1	0	0	1	1	0	0	0	0	0	A	0	0.4	1.0
23-Feb	0	0	0	0	0	0	0	0	0	1	3	5	6	4	3	5	1	0	0	0	0	A	0	0	1.3	6.1
24-Feb	0	0	0	0	0	0	0	0	0	0	0	2	2	1	0	0	0	1	1	1	A	0	0	0	0.4	1.6
25-Feb	0	1	1	1	1	1	1	1	1	0	0	0	1	1	0	0	0	0	0	A	0	0	0	0	0.5	1.4
26-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	A	0	0	0	0	0	0	0.2	0.6
27-Feb	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	1.1
28-Feb	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.7
0.3 0.3 0.3 0.3 0.2 0.3 0.3 0.3 0.3 0.3 0.4 0.4 0.6 0.7 0.5 0.5 0.5 0.5 0.3 0.3 0.3 0.3 0.2 0.2 0.3																								Diurnal Average		
1.1 1.0 1.4 1.2 0.9 1.6 1.5 1.3 1.0 1.3 3.1 4.8 6.1 3.8 3.2 4.9 5.1 2.5 2.0 1.7 1.5 0.8 1.0 1.4																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

Hourly Averages

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



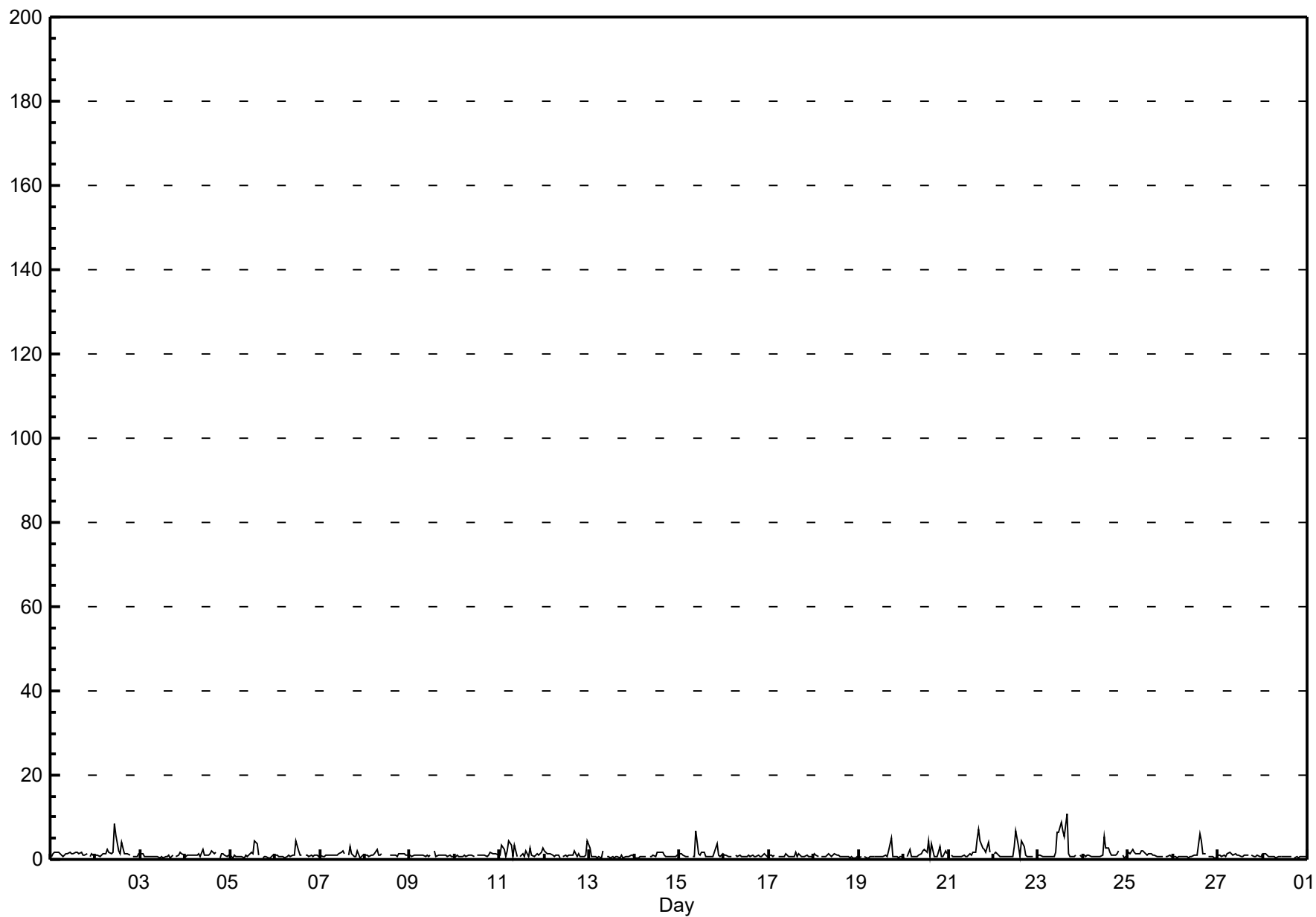
Hourly Maximums

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

Maximum Value: 10.8 ppb on Feb 23 16:00																				Maximum Daily Average: 2.6 ppb on Feb 23					Hours in Service: 672	
Minimum Value: 0 ppb on Feb 18 23:00																				Minimum Daily Average: 0.8 ppb on Feb 28					Hours of Data: 641	
Maximum Diurnal Average: 1.8 ppb at hour 12																				Minimum Diurnal Average: 0.9 ppb at hour 5					Hours of Missing Data: 31	
Monthly Average: 1.20 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.6 Q ₁ = 0.7 Median = 0.9 Q ₃ = 1.2 P ₉₀ = 1.9 P ₉₉ = 6.6					Hours of Calibration: 31	
																									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-Feb	1	1	2	2	2	1	1	1	1	1	2	1	1	2	2	1	2	1	1	1	A	1	1	1	1.3	1.8
2-Feb	1	1	1	1	1	1	2	2	1	2	9	6	2	1	4	1	1	1	1	A	1	1	1	1	1.9	8.6
3-Feb	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	A	1	1	2	1	1	0.8	1.6
4-Feb	1	1	1	1	1	1	1	1	1	3	1	1	1	1	2	1	2	A	0	1	1	1	1	1	1.1	2.5
5-Feb	1	0	1	1	1	1	1	0	1	1	1	2	1	4	4	1	A	0	1	1	0	0	1	1	1.0	4.3
6-Feb	1	1	1	1	1	0	1	1	1	1	1	4	2	1	1	A	1	1	1	1	1	1	1	1	1.0	4.3
7-Feb	1	1	1	1	1	1	1	1	1	1	1	2	2	1	A	1	3	1	1	1	2	0	1	1	1.2	3.1
8-Feb	1	1	1	1	1	1	2	1	1	1	C	C	C	1	1	1	1	1	1	1	1	1	1	1	1.1	2.4
9-Feb	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	0.9	1.9
10-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	2	2	1	1	1	1.0	1.7
11-Feb	1	3	2	1	2	4	3	1	3	1	A	1	1	1	2	1	3	1	1	1	1	1	2	3	1.7	4.4
12-Feb	2	1	1	1	1	1	1	1	0	A	1	1	1	1	1	1	2	1	1	1	1	1	1	4	1.1	4.3
13-Feb	3	1	1	1	0	1	0	2	A	1	1	0	1	0	1	1	0	1	1	1	1	1	1	1	0.8	2.6
14-Feb	0	0	0	1	1	1	1	A	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	0.8	1.8
15-Feb	1	1	1	1	1	1	A	1	1	7	1	1	2	2	1	1	1	1	1	3	4	1	1	1	1.4	6.8
16-Feb	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
17-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	0.8	1.6
18-Feb	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	1	0.8	1.3
19-Feb	1	1	A	1	0	0	1	1	1	1	1	1	1	1	1	1	2	5	1	1	1	0	1	1	0.9	5.1
20-Feb	0	A	1	2	1	1	1	1	1	1	2	2	2	4	1	4	1	1	1	3	1	1	2	1	1.5	4.2
21-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	2	2	5	7	4	3	2	2	4	2	A	2.0	7.2
22-Feb	1	2	1	1	1	1	1	1	1	1	1	3	7	3	1	4	3	1	1	1	1	1	1	1	1.6	6.7
23-Feb	1	1	1	1	1	1	1	1	1	2	6	6	9	7	5	11	1	1	1	1	1	A	1	1	2.6	10.8
24-Feb	1	1	1	1	1	1	1	1	1	1	1	5	3	3	2	1	1	1	1	2	A	1	0	1	1.3	5.4
25-Feb	2	1	2	2	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1.2	2.4
26-Feb	1	1	0	1	1	1	1	1	0	1	1	1	1	1	6	4	1	1	A	1	1	1	0	1	1.2	6.2
27-Feb	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1.0	1.8
28-Feb	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	A	0	1	0	1	1	1	1	0.8	1.5
1.0 1.1 1.0 0.9 0.9 1.0 1.0 0.9 1.0 1.3 1.5 1.8 1.7 1.6 1.7 1.8 1.5 1.2 0.9 1.1 1.0 0.9 0.9 1.1																									Diurnal Average	
2.6 3.4 2.4 2.2 1.9 4.4 3.4 2.0 3.4 6.8 8.6 6.3 8.8 6.6 6.2 10.8 7.2 5.1 2.8 3.2 3.6 4.2 2.0 4.3																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

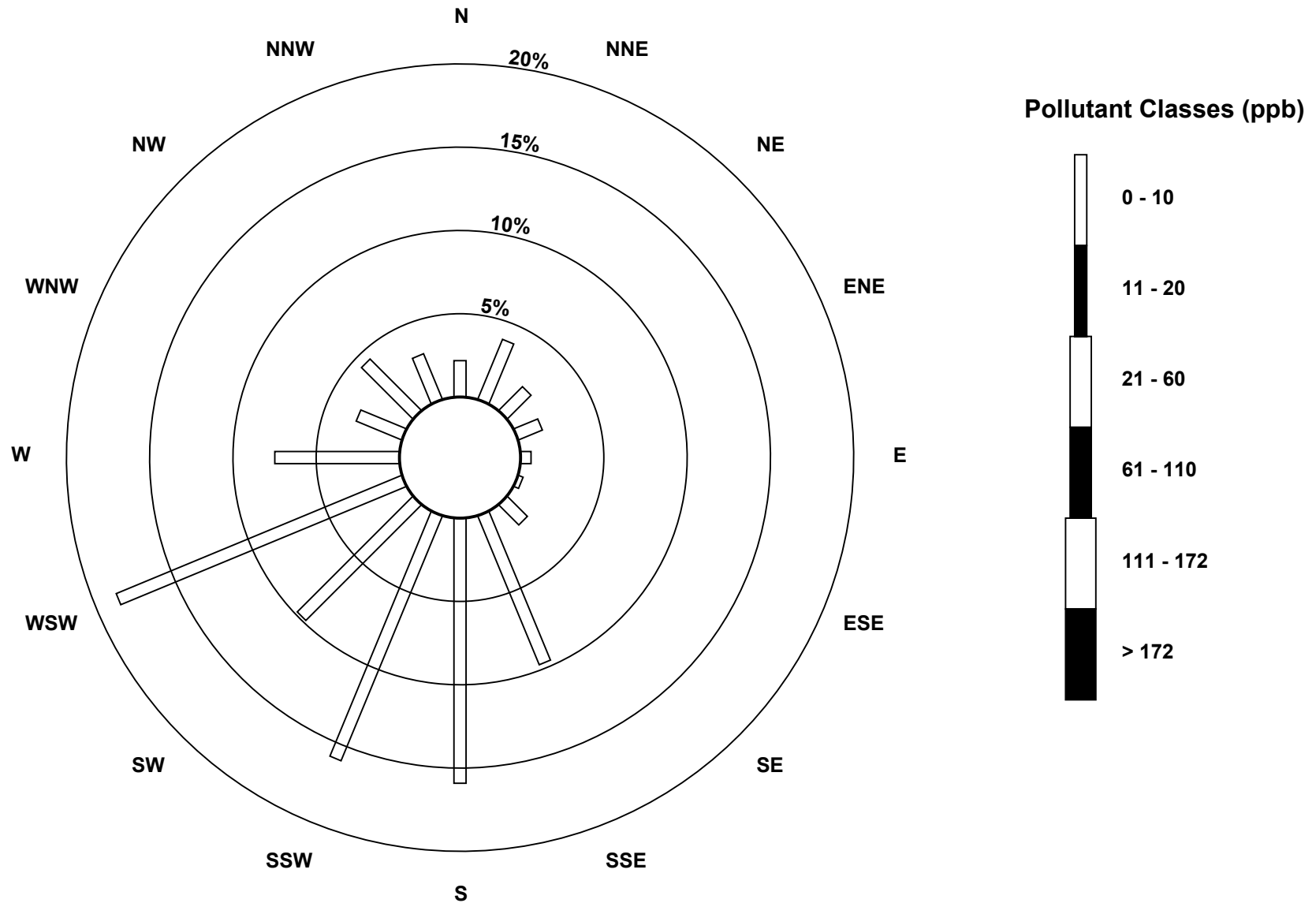
Hourly Maximums

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



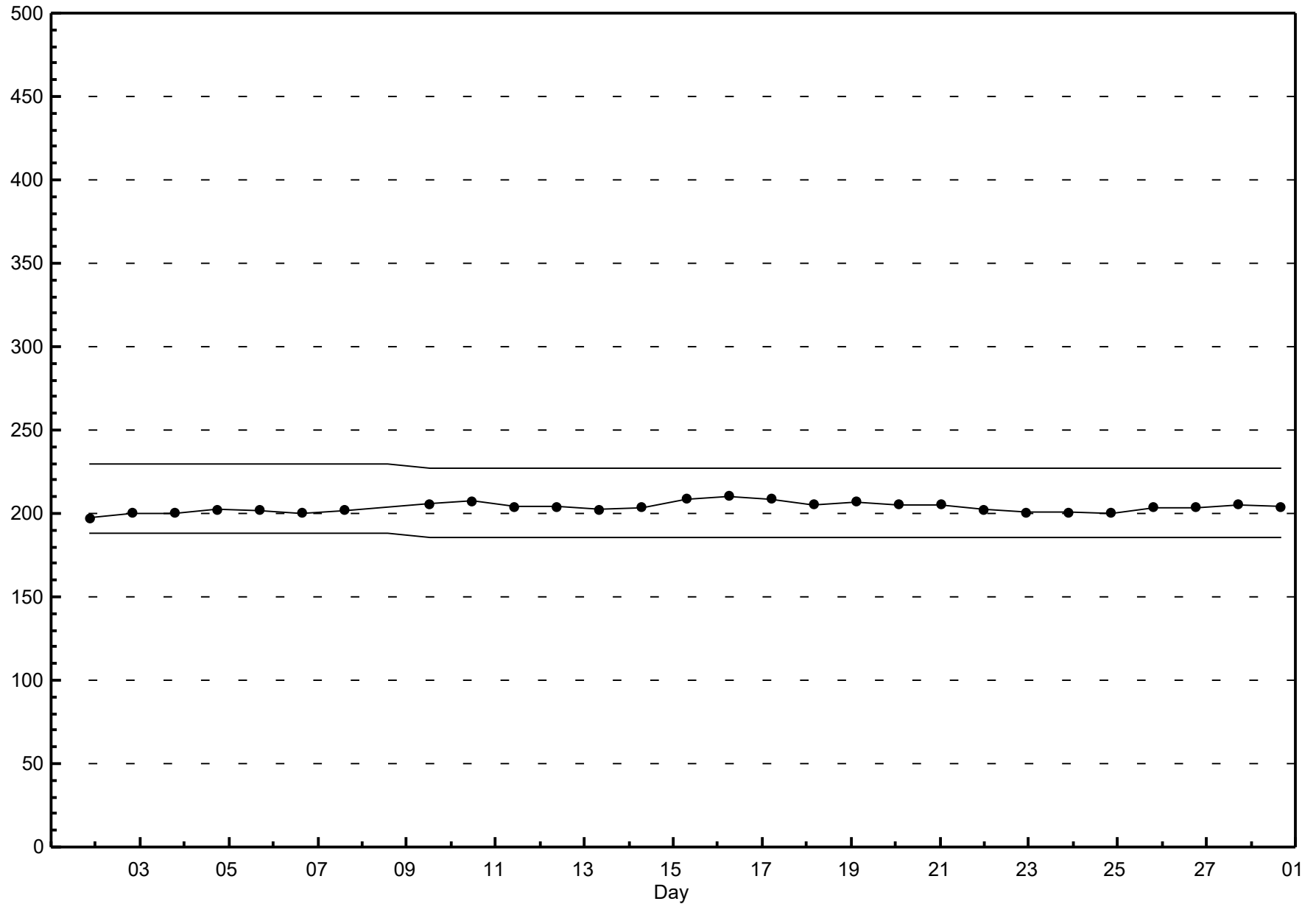
Pollutant Rose

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



Span Responses

Sulphur Dioxide (SO₂)
Portable Rycroft - February 2017



Hourly Averages

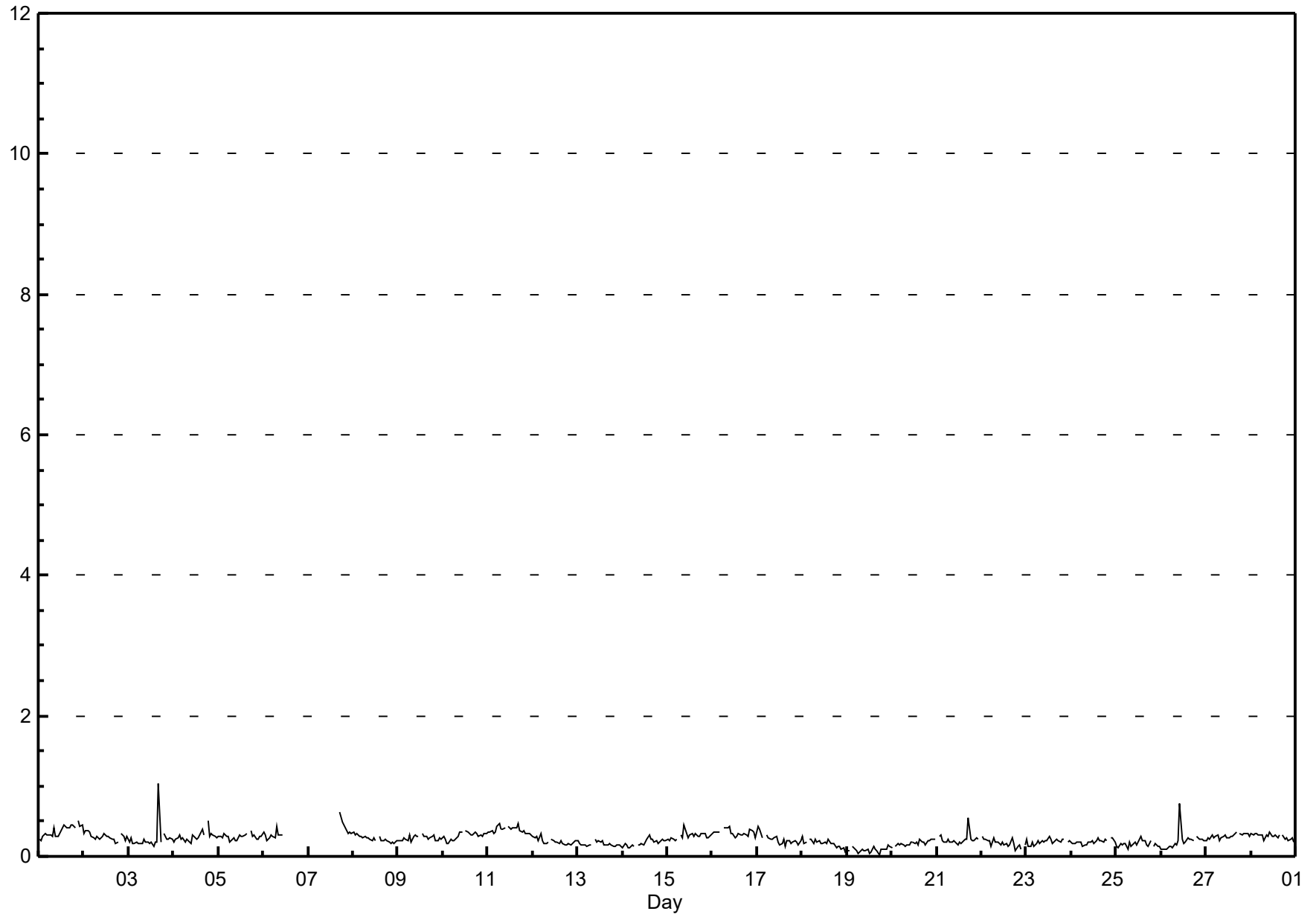
Total Reduced Sulphur (TRS) - ppb

Portable Rycroft - February 2017

Maximum Value: 1.0 ppb on Feb 3 17:00																			Maximum Daily Average: 0.4 ppb on Feb 11						Hours in Service: 672		
Minimum Value: 0 ppb on Feb 19 18:00																			Minimum Daily Average: 0.1 ppb on Feb 19						Hours of Data: 615		
Maximum Diurnal Average: 0.3 ppb at hour 17																			Minimum Diurnal Average: 0.2 ppb at hour 6						Hours of Missing Data: 57		
Monthly Average: 0.25 ppb																			Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.2 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.3 P ₉₉ = 0.5						Hours of Calibration: 32		
																									Percent Operational Time: 96.3		
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-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0.4	0.5	
2-Feb	0	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	
3-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0.3	1.0	
4-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0.3	0.5	
5-Feb	0	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	
6-Feb	0	0	0	0	0	0	0	0	0	0	0	C	C	M	M	M	M	M	M	M	M	M	M	M	--	0.4	
7-Feb	M	M	M	M	M	M	M	M	M	M	M	M	M	M	C	C	C	1	0	0	0	0	0	0	--	0.6	
8-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
9-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.3	
10-Feb	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4	
11-Feb	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5	
12-Feb	0	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	
13-Feb	0	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	0.2	
14-Feb	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
15-Feb	0	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	
16-Feb	0	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	
17-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
18-Feb	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
19-Feb	0	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	
20-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
21-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	0.2	0.6	
22-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.3	
23-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.3	
24-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.3	
25-Feb	0	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	
26-Feb	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.8	
27-Feb	0	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	0.3	
28-Feb	0	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	0.3	
0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.3 0.3 0.2 0.2 0.3 0.3 0.3 0.3 0.3 0.3 0.2 0.2 0.3 0.2																								Diurnal Average			
0.4 0.4 0.4 0.4 0.3 0.4 0.5 0.4 0.4 0.4 0.4 0.8 0.4 0.4 0.4 0.4 0.4 1.0 0.6 0.5 0.5 0.4 0.5 0.4 0.4																								Diurnal Maximum			
C - Calibration				M - Maintenance				A - Automated Daily Zero Span																			

Hourly Averages

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



Hourly Maximums

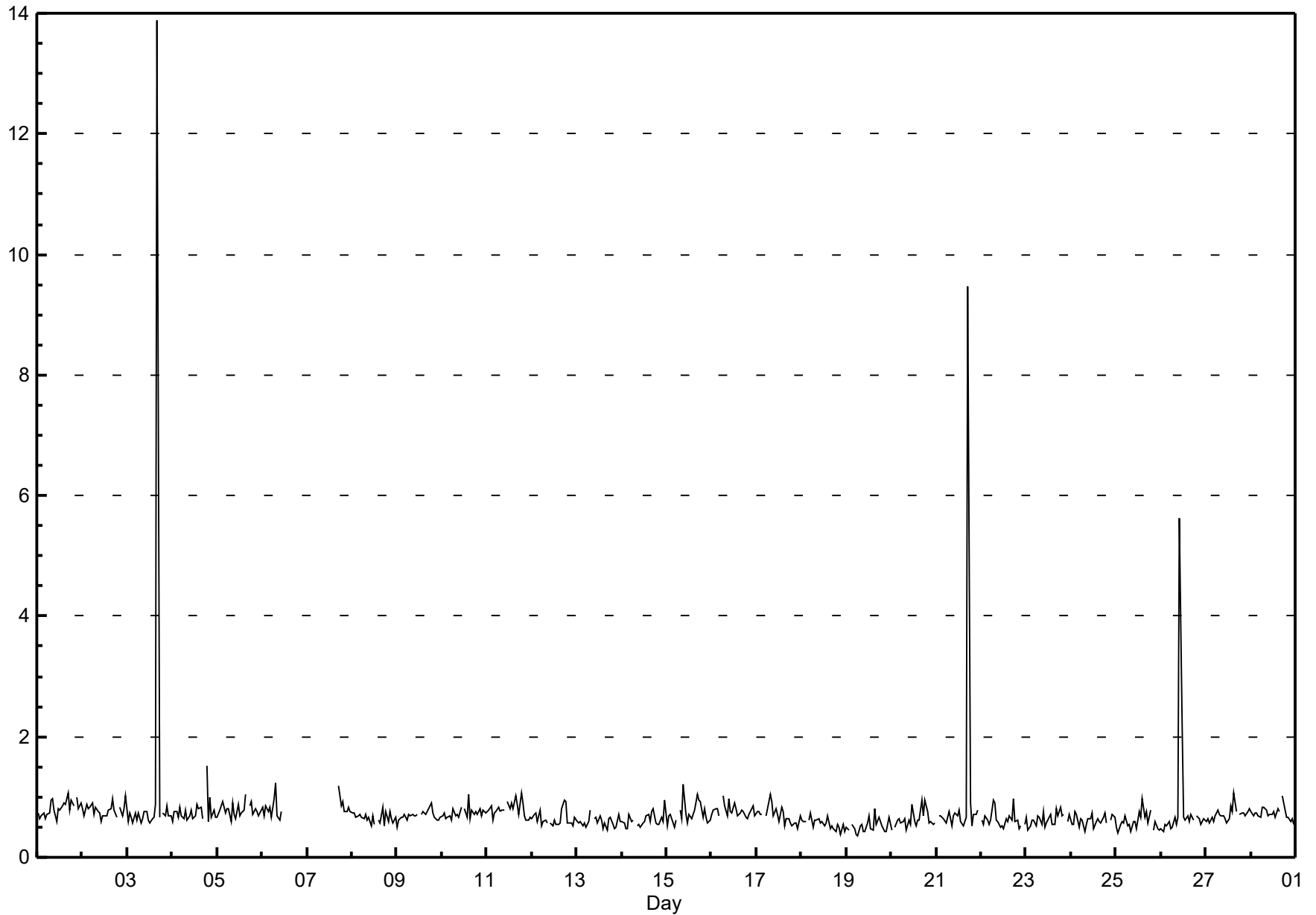
Total Reduced Sulphur (TRS) - ppb

Portable Rycroft - February 2017

Maximum Value: 13.9 ppb on Feb 3 17:00																			Maximum Daily Average: 1.3 ppb on Feb 3						Hours in Service: 672		
Minimum Value: 0 ppb on Feb 19 07:00																			Minimum Daily Average: 0.5 ppb on Feb 19						Hours of Data: 615		
Maximum Diurnal Average: 1.3 ppb at hour 17																			Minimum Diurnal Average: 0.6 ppb at hour 6						Hours of Missing Data: 57		
Monthly Average: 0.73 ppb																			Percentiles: P ₁ = 0.4 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.7 Q ₃ = 0.8 P ₉₀ = 0.9 P ₉₉ = 1.0						Hours of Calibration: 32		
																									Percent Operational Time: 96.3		
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-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.1	
2-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.8	1.0	
3-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	1	A	1	1	1	1	1	1.3	13.9	
4-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	0.8	1.5	
5-Feb	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	1.1	
6-Feb	1	1	1	1	1	1	1	1	1	1	C	C	M	M	M	M	M	M	M	M	M	M	M	M	--	1.2	
7-Feb	M	M	M	M	M	M	M	M	M	M	M	M	M	M	C	C	C	1	1	1	1	1	1	1	--	1.2	
8-Feb	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	0.8	
9-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9	
10-Feb	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	
11-Feb	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	
12-Feb	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	
13-Feb	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0	1	0	1	1	1	0	0	1	1	0.6	0.8	
14-Feb	1	1	0	0	1	1	1	A	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9	
15-Feb	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	1.2	
16-Feb	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0	
17-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0.7	1.1	
18-Feb	1	1	1	A	1	1	0	1	1	1	1	1	1	1	1	0	1	0	0	1	0	0	1	0	0.6	0.7	
19-Feb	1	0	A	1	0	0	0	1	1	0	0	1	1	0	0	1	1	1	1	1	0	0	1	1	0.5	0.8	
20-Feb	0	A	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.0	
21-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	9	1	1	1	1	A	1	1.1	9.5	
22-Feb	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	0	1	A	1	0.6	1.0	
23-Feb	1	0	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	A	1	1	0.6	0.8	
24-Feb	1	1	1	1	0	1	1	0	1	1	1	1	0	1	1	1	1	1	1	1	A	1	1	1	0.6	0.8	
25-Feb	1	0	1	1	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	A	0	1	0	0	0.6	1.0	
26-Feb	0	0	1	1	1	0	0	1	1	1	6	2	1	1	1	1	1	1	A	1	1	1	1	1	0.9	5.6	
27-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.7	1.1	
28-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.7	1.0	
0.6 0.6 0.7 0.7 0.7 0.6 0.7 0.7 0.7 0.7 0.8 0.7 0.7 0.7 0.7 0.7 1.3 1.1 0.8 0.7 0.7 0.6 0.7 0.7																								Diurnal Average			
0.8 0.8 0.9 0.9 0.8 0.9 1.0 1.2 1.0 1.2 5.6 2.2 0.9 0.9 1.0 1.1 13.9 9.5 1.5 0.9 1.0 1.0 0.8 1.0																								Diurnal Maximum			
C - Calibration				M - Maintenance				A - Automated Daily Zero Span																			

Hourly Maximums

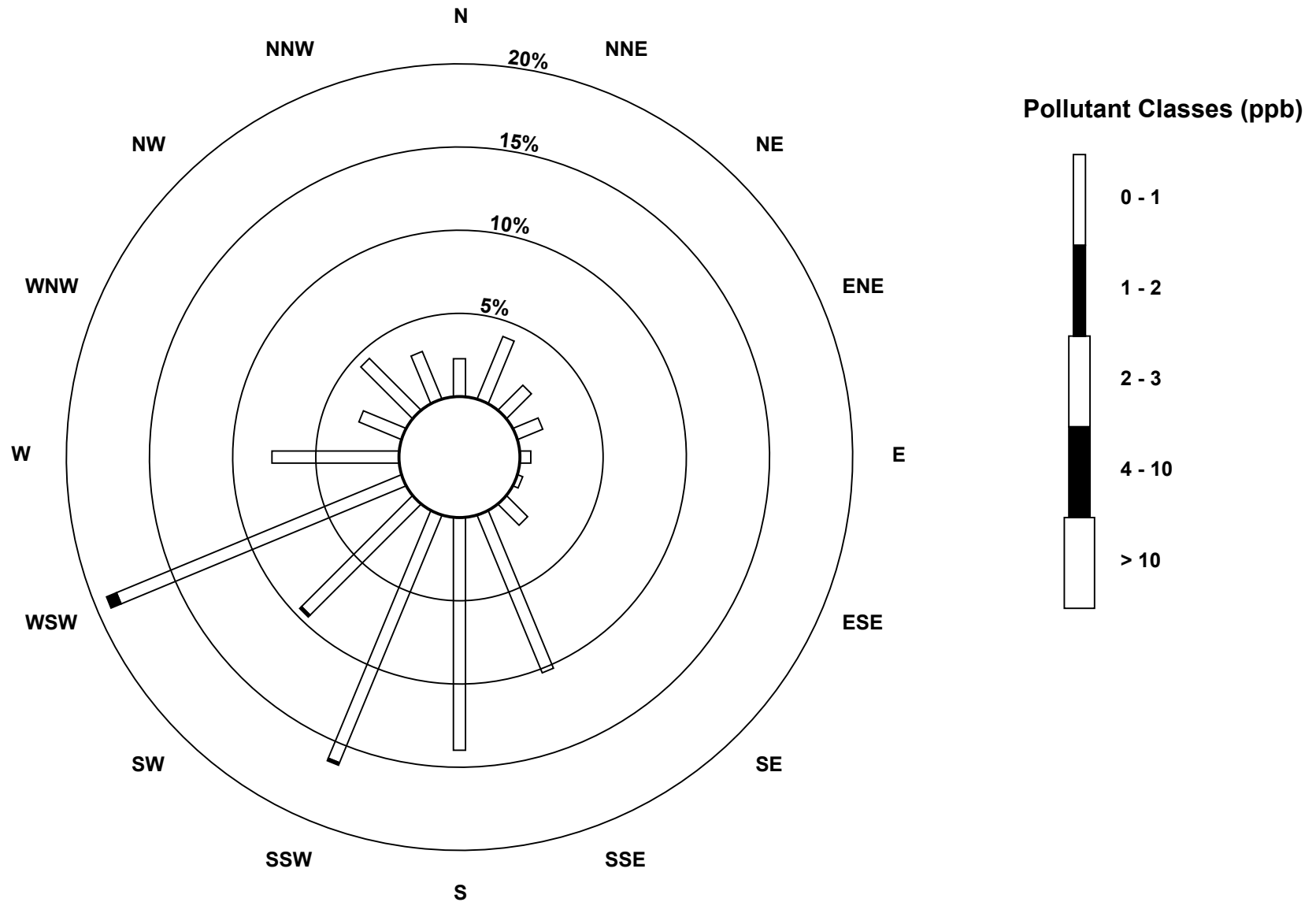
Total Reduced Sulphur (TRS) - ppb
Portable Rycroft - February 2017



Pollutant Rose

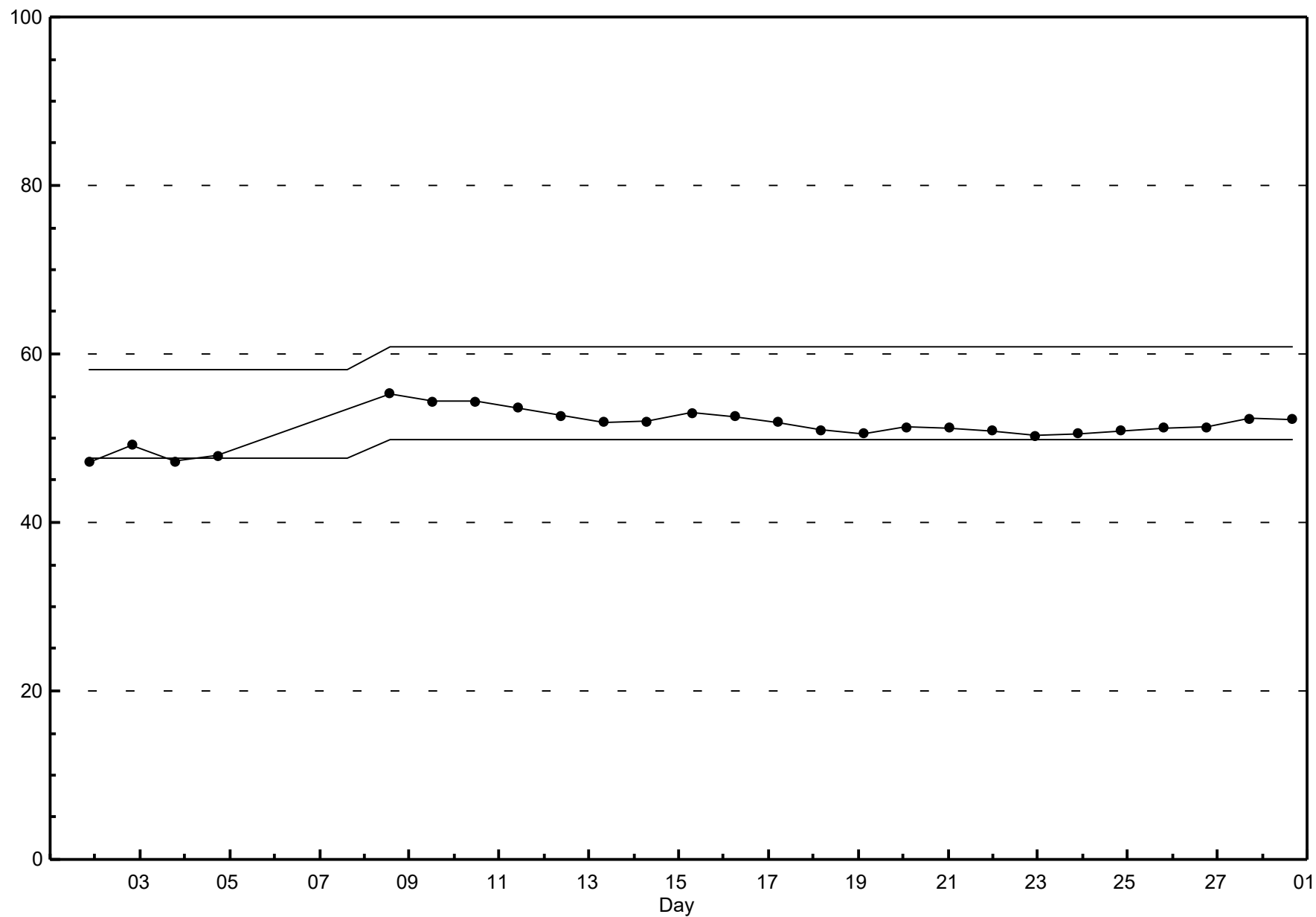
Total Reduced Sulphur (TRS) - ppb

Portable Rycroft - February 2017



Span Responses

Total Reduced Sulphur (TRS)
Portable Rycroft - February 2017



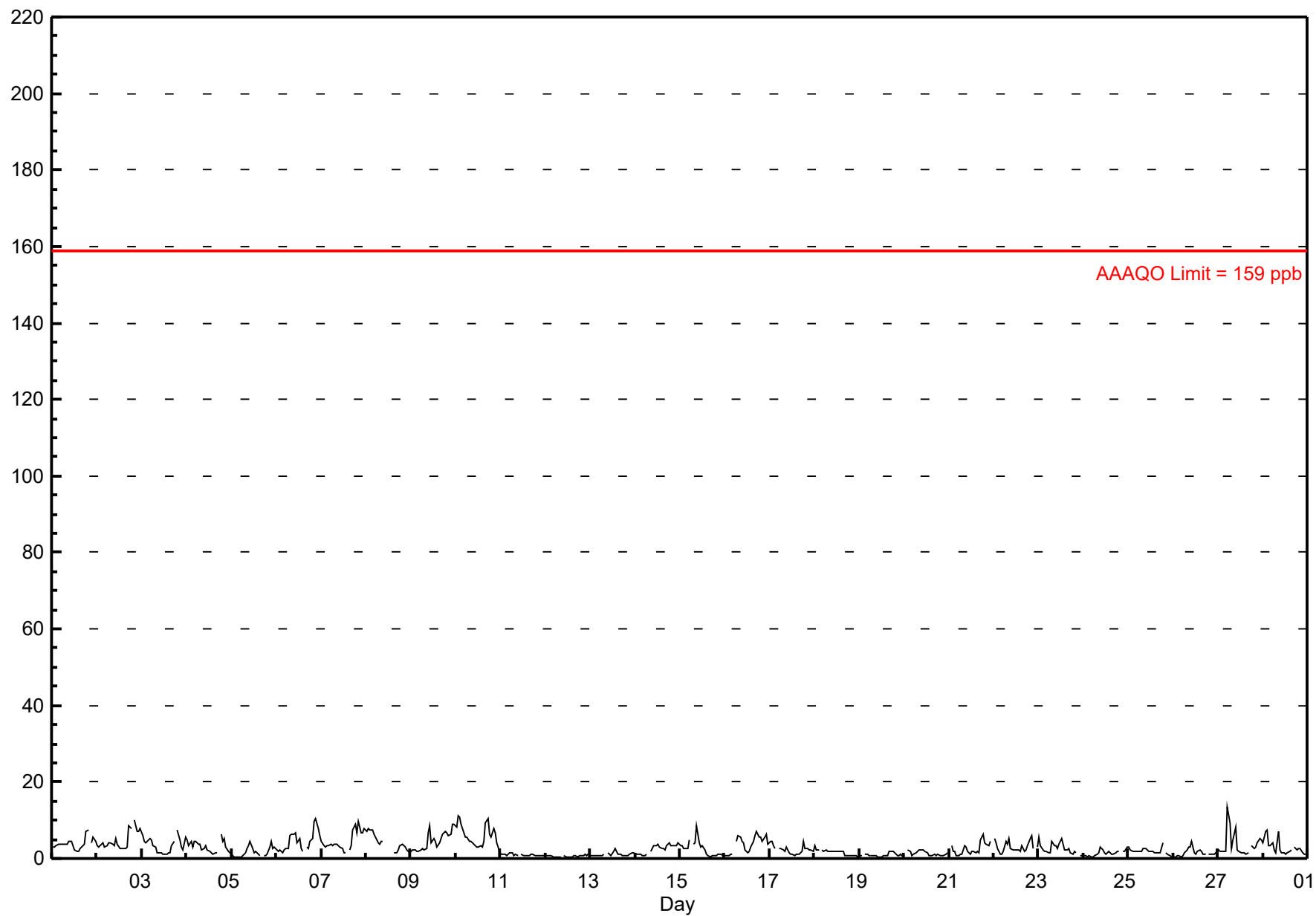
Hourly Averages

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 13.6 ppb on Feb 27 06:00 Maximum Daily Average: 5.9 ppb on Feb 10																								Hours in Service: 672 Hours of Data: 641 Hours of Missing Data: 31 Hours of Calibration: 31 Percent Operational Time: 100.0		
Minimum Value: 0 ppb on Feb 26 01:00 Maximum Diurnal Average: 3.7 ppb at hour 19 Monthly Average: 2.76 ppb												Minimum Daily Average: 0.6 ppb on Feb 12 Minimum Diurnal Average: 1.7 ppb at hour 15 Percentiles: P ₁ = 0.4 P ₁₀ = 0.7 Q ₁ = 1.1 Median = 2.1 Q ₃ = 3.7 P ₉₀ = 5.7 P ₉₉ = 10.0														
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-Feb	3	3	3	4	4	4	4	4	4	5	4	3	2	2	2	3	3	4	7	8	A	4	5	5	3.8	7.5
2-Feb	3	3	4	4	3	3	4	4	4	3	5	4	3	3	2	2	3	9	8	A	10	7	7	8	4.6	10.1
3-Feb	6	4	4	5	5	5	3	3	1	1	2	1	1	1	1	2	3	4	A	7	5	3	2	6	3.3	7.4
4-Feb	5	3	4	3	4	4	4	4	2	3	3	2	2	1	1	1	2	A	6	5	5	3	2	2	3.1	6.5
5-Feb	1	0	0	0	0	0	1	1	2	3	4	2	1	2	1	1	A	1	1	1	3	4	3	3	1.7	4.4
6-Feb	2	2	2	1	2	3	3	6	6	6	7	4	5	3	2	A	3	3	5	5	10	10	8	6	4.5	10.3
7-Feb	4	4	3	3	3	4	3	4	4	3	3	3	2	1	A	2	3	7	9	7	10	7	7	8	4.5	9.6
8-Feb	7	8	7	8	6	5	4	4	5	4	C	C	C	C	C	1	1	2	3	4	4	3	2	2	4.3	7.8
9-Feb	2	2	2	2	2	2	2	2	3	7	9	4	5	4	3	4	5	6	7	7	6	6	9	9	4.6	8.9
10-Feb	8	11	11	9	7	6	6	4	5	4	3	3	3	3	3	4	9	10	6	6	8	7	4	2	5.9	11.1
11-Feb	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.5
12-Feb	1	1	1	1	1	0	1	0	0	A	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0.6	1.1
13-Feb	1	1	1	1	1	1	1	1	A	1	1	1	2	3	2	1	1	1	1	1	1	1	1	1	1.1	2.6
14-Feb	1	1	1	1	1	1	1	A	2	3	3	3	4	3	3	3	2	4	4	3	3	4	3	4	2.5	4.2
15-Feb	3	3	3	3	2	5	A	4	4	9	4	3	3	2	1	1	1	1	1	1	1	1	1	1	2.5	8.7
16-Feb	1	1	1	1	1	A	4	6	6	5	4	2	2	2	3	5	6	7	6	6	4	5	6	4	3.7	7.0
17-Feb	5	5	3	3	A	3	3	2	2	3	1	1	1	1	1	1	1	2	5	3	3	2	2	2	2.3	4.5
18-Feb	3	2	2	A	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1.6	3.5
19-Feb	1	1	A	1	1	1	1	1	1	1	0	1	0	1	1	1	2	2	2	1	1	1	1	1	0.9	2.0
20-Feb	1	A	2	2	1	1	1	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	2	1.3	2.4
21-Feb	A	3	2	2	1	1	1	1	3	3	2	1	2	2	2	2	2	5	6	4	4	3	5	A	2.6	6.5
22-Feb	5	4	3	1	1	2	4	4	5	3	2	2	2	2	2	3	2	2	3	5	6	3	A	3	3.1	5.9
23-Feb	5	3	2	2	2	2	1	4	3	3	2	4	5	4	2	2	3	1	1	2	1	A	1	1	2.5	5.5
24-Feb	1	1	1	1	1	1	1	1	1	3	2	1	1	2	2	1	1	2	2	2	A	2	2	3	1.4	2.9
25-Feb	3	2	2	2	2	2	2	2	3	3	2	2	2	2	2	2	1	1	4	A	2	1	1	0	1.9	4.2
26-Feb	0	0	1	1	0	1	2	2	3	3	4	2	1	2	2	2	1	1	A	1	1	1	1	2	1.5	4.4
27-Feb	2	2	2	2	2	14	9	3	5	8	2	2	2	2	1	1	2	A	3	3	3	4	5	5	3.6	13.6
28-Feb	4	7	7	3	3	4	2	2	7	2	1	1	1	1	2	2	A	3	2	3	3	2	1	1	2.9	7.3
3.0 2.9 2.8 2.4 2.2 2.8 2.7 2.7 3.2 3.5 3.0 2.2 2.1 1.9 1.7 1.9 2.4 3.1 3.7 3.3 3.6 3.2 3.1 2.9																								Diurnal Average		
8.1 11.1 10.8 9.1 6.7 13.6 9.2 6.0 7.2 8.7 8.7 4.2 5.4 4.4 3.1 4.6 9.2 10.3 9.0 7.5 10.1 10.3 8.8 8.9																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb																										

Hourly Averages

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



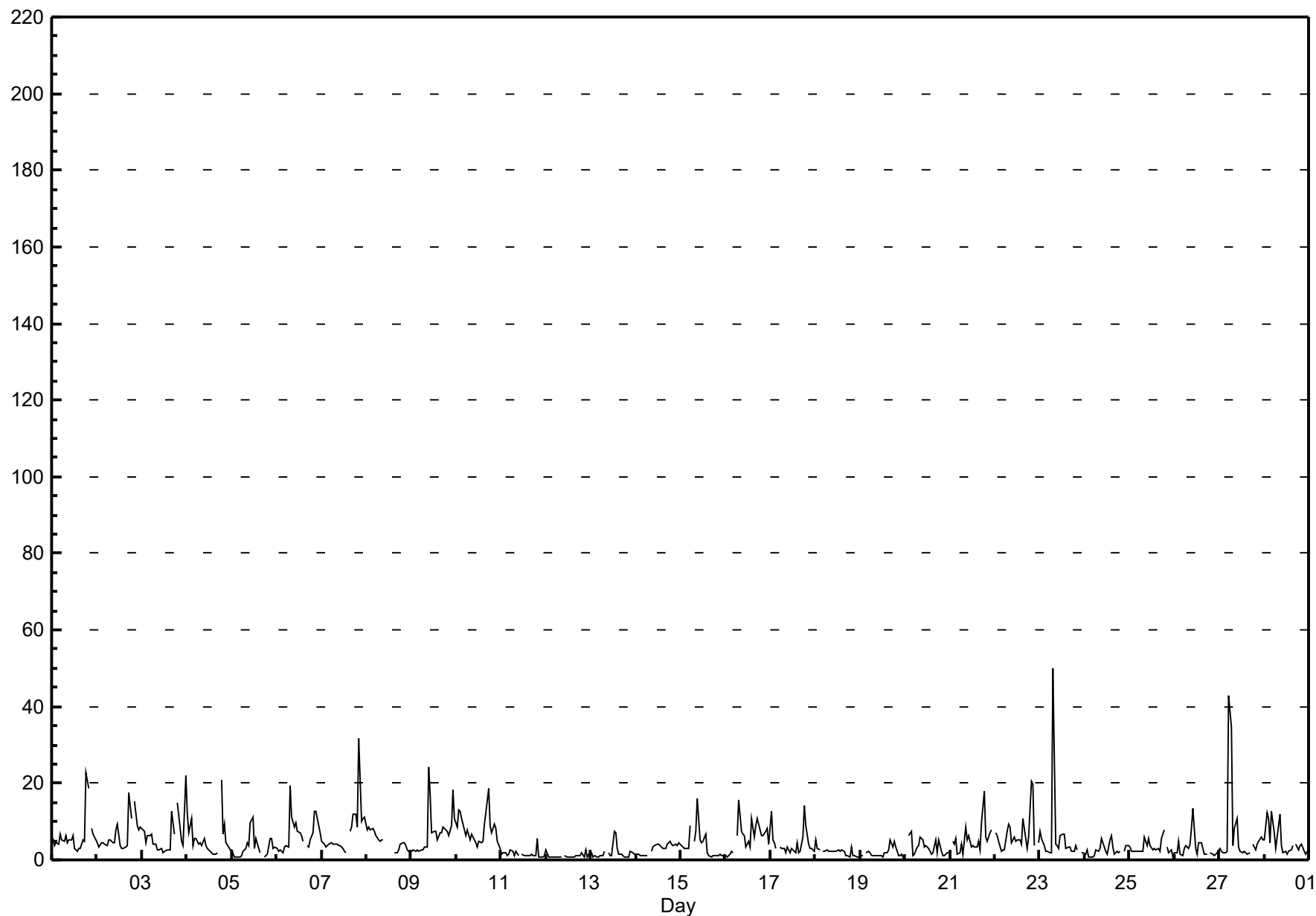
Hourly Maximums

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

Maximum Value: 50.0 ppb on Feb 23 08:00																								Hours in Service: 672		
Maximum Daily Average: 7.9 ppb on Feb 10																								Hours of Data: 641		
Minimum Value: 1 ppb on Feb 12 13:00																								Hours of Missing Data: 31		
Maximum Diurnal Average: 6.8 ppb at hour 19																								Hours of Calibration: 31		
Monthly Average: 4.61 ppb																								Percent Operational Time: 100.0		
Minimum Daily Average: 1.1 ppb on Feb 12																										
Minimum Diurnal Average: 3.3 ppb at hour 4																										
Percentiles: P ₁ = 0.7 P ₁₀ = 1.1 Q ₁ = 2.0 Median = 3.4 Q ₃ = 5.7 P ₉₀ = 8.9 P ₉₉ = 21.1																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	6	4	4	4	7	5	5	6	5	5	5	6	3	2	3	3	5	5	23	18	A	8	7	5	6.3	22.6
2-Feb	4	4	4	4	4	4	5	5	5	5	8	9	4	3	3	3	4	18	11	A	15	9	8	9	6.4	17.7
3-Feb	8	7	4	6	6	7	4	4	3	3	3	2	2	2	3	3	13	7	A	15	8	5	4	22	6.1	22.1
4-Feb	12	7	11	4	5	6	4	5	4	6	4	3	2	2	2	2	2	A	21	7	9	4	3	3	5.5	21.0
5-Feb	3	1	1	1	1	1	2	3	5	4	10	11	3	5	3	2	A	1	1	2	6	6	3	3	3.3	11.2
6-Feb	3	2	3	2	3	4	3	19	11	9	10	8	7	6	5	A	4	4	5	7	13	13	9	7	6.8	19.4
7-Feb	5	4	4	4	4	4	4	4	4	4	4	3	2	2	A	7	9	12	12	9	32	10	11	11	7.1	31.8
8-Feb	8	9	8	8	8	6	5	5	5	5	C	C	C	C	C	2	2	3	4	5	4	4	3	2	5.0	8.6
9-Feb	2	2	2	2	2	2	3	3	3	24	17	7	7	8	5	7	7	9	8	7	6	9	18	11	7.3	24.2
10-Feb	9	13	13	11	8	6	8	5	7	6	5	3	5	5	5	9	12	19	9	7	9	8	5	3	7.9	18.7
11-Feb	1	2	2	1	1	3	2	1	2	1	A	1	1	1	1	1	1	1	1	6	1	1	1	1	1.6	5.7
12-Feb	3	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	2	1	3	1	2	1.1	2.7
13-Feb	2	1	1	1	1	1	1	2	A	2	1	1	7	7	3	2	2	1	1	1	1	2	2	2	1.9	7.4
14-Feb	1	1	1	1	1	1	1	A	2	3	4	4	4	4	3	3	3	4	5	4	4	4	4	4	2.9	4.7
15-Feb	4	4	3	3	3	9	A	5	7	16	5	4	5	7	2	1	1	1	1	1	1	2	1	1	3.8	16.0
16-Feb	1	1	1	2	2	A	6	16	8	7	6	3	5	3	11	6	9	11	8	6	6	8	8	4	6.0	15.8
17-Feb	12	5	4	3	A	3	3	3	2	3	2	3	3	2	5	2	2	6	14	9	4	3	3	2	4.3	14.0
18-Feb	5	3	3	A	2	2	3	2	2	2	2	2	3	2	2	2	1	1	1	3	1	1	1	1	2.2	5.2
19-Feb	1	1	A	2	2	2	1	1	1	1	1	1	1	2	2	3	5	3	5	3	1	1	2	1	1.9	5.1
20-Feb	1	A	6	7	1	1	4	4	6	5	3	4	3	2	2	2	5	2	5	2	1	1	2	2	3.1	7.4
21-Feb	A	5	4	5	1	2	4	2	9	5	6	3	4	3	3	5	3	10	18	6	5	7	8	A	5.4	17.9
22-Feb	7	7	5	2	3	3	8	9	8	5	6	5	5	5	4	11	6	3	6	21	20	4	A	5	6.7	20.5
23-Feb	8	6	4	2	2	2	2	50	4	4	3	6	7	7	3	3	3	2	2	4	3	A	2	2	5.6	50.0
24-Feb	2	2	1	1	1	1	3	2	3	6	3	2	1	5	6	3	2	2	2	2	A	2	4	4	2.6	6.3
25-Feb	4	2	2	2	2	2	2	2	6	4	5	4	3	3	2	3	2	6	8	A	4	2	3	1	3.2	7.7
26-Feb	2	2	5	2	1	3	4	3	4	8	13	3	2	4	4	3	2	2	A	2	1	1	1	2	3.2	13.3
27-Feb	3	2	2	2	2	43	35	4	8	11	3	2	2	2	2	2	2	A	4	3	4	5	6	5	6.7	43.0
28-Feb	5	12	11	4	13	7	3	6	12	4	2	2	1	2	3	4	A	4	2	4	4	2	1	2	4.9	12.7
4.5 4.1 4.1 3.3 3.3 4.9 4.6 6.4 5.0 5.8 5.2 3.9 3.4 3.6 3.4 3.5 4.1 5.2 6.8 6.0 6.3 4.6 4.4 4.3																									Diurnal Average	
12.5 13.2 12.6 10.7 12.7 43.0 34.8 50.0 11.8 24.2 17.2 11.2 7.4 7.6 10.9 10.8 12.6 18.7 22.6 20.5 31.8 12.7 18.1 22.1																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

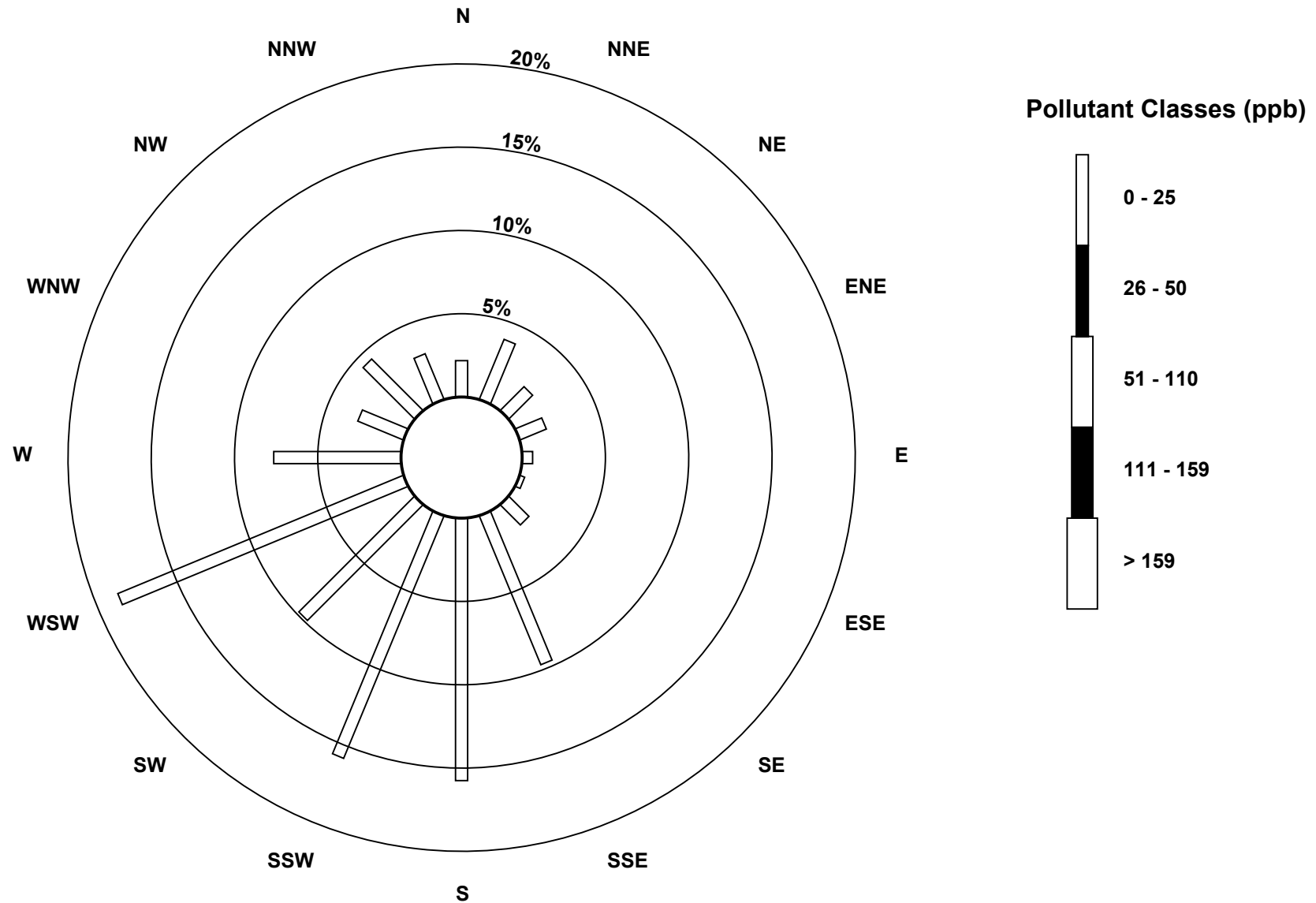
Hourly Maximums

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



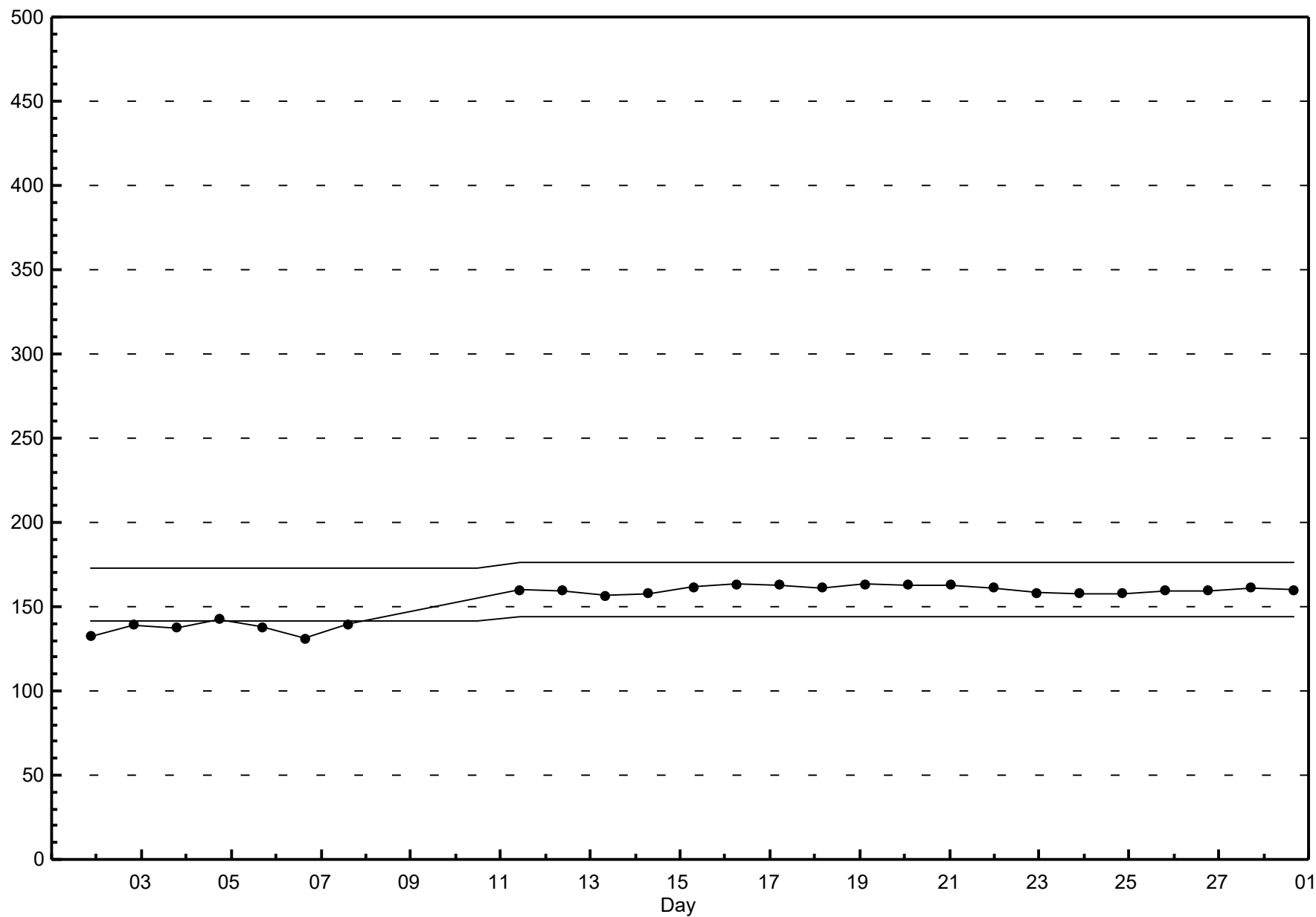
Pollutant Rose

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



Span Responses

Nitrogen Dioxide (NO₂)
Portable Rycroft - February 2017



Hourly Averages

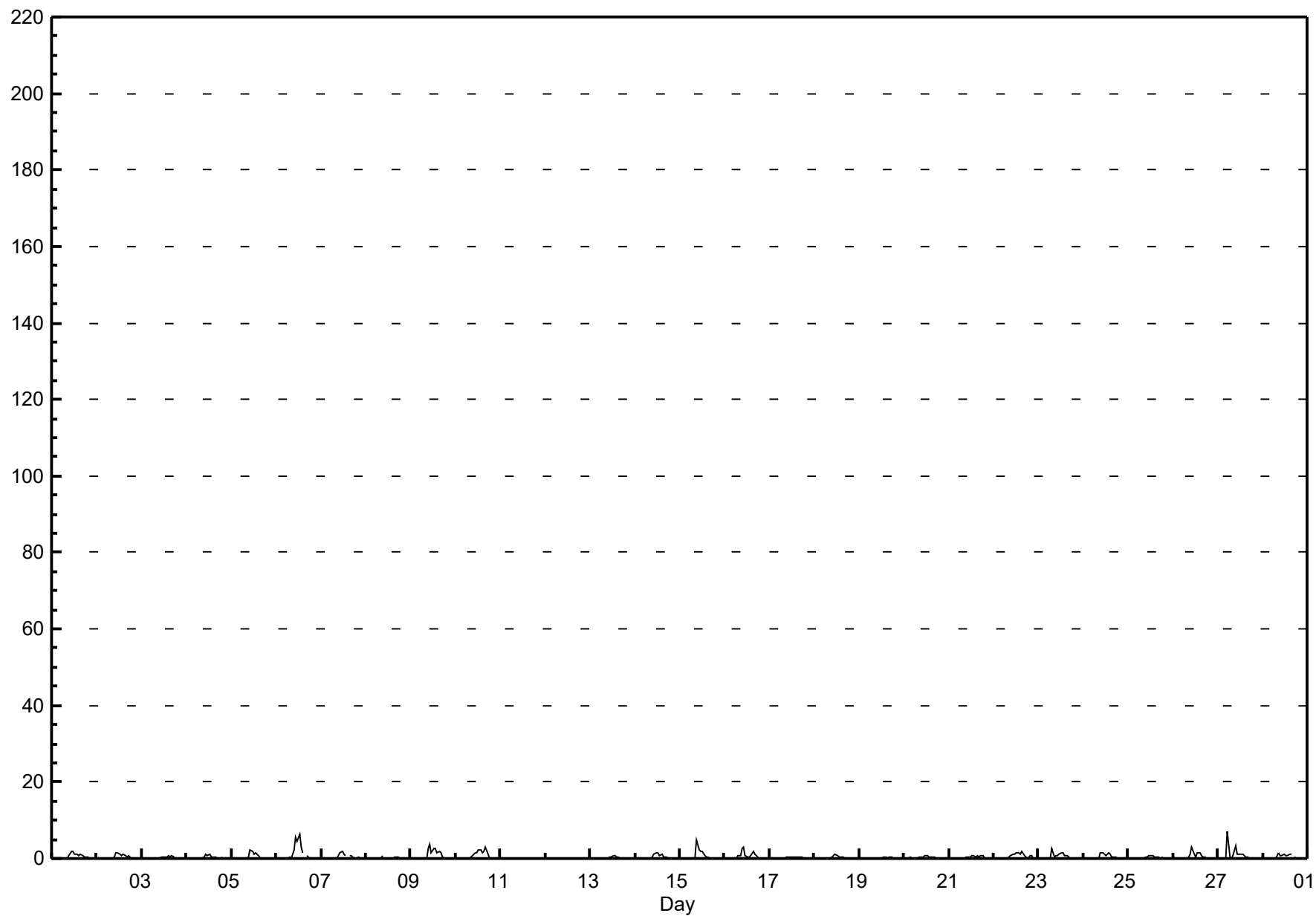
Nitrogen Oxide (NO) - ppb

Portable Rycroft - February 2017

Maximum Value: 7.0 ppb on Feb 27 06:00																				Maximum Daily Average: 1.1 ppb on Feb 6					Hours in Service: 672	
Minimum Value: 0 ppb on Feb 1 02:00																				Minimum Daily Average: 0.1 ppb on Feb 12					Hours of Data: 641	
Maximum Diurnal Average: 1.4 ppb at hour 11																				Minimum Diurnal Average: 0.0 ppb at hour 2					Hours of Missing Data: 31	
Monthly Average: 0.39 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.5 P ₉₀ = 1.1 P ₉₉ = 3.1					Hours of Calibration: 31	
																				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-Feb	0	0	0	0	0	0	0	0	0	1	2	2	1	1	1	1	1	0	0	0	A	0	0	0	0.4	1.8
2-Feb	0	0	0	0	0	0	0	0	0	0	2	2	1	1	1	1	1	1	0	A	0	0	0	0	0.4	1.7
3-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	A	0	0	0	0	0	0.2	0.8
4-Feb	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	A	0	0	0	0	0	0	0.2	1.0
5-Feb	0	0	0	0	0	0	0	0	0	1	2	2	1	2	1	0	A	0	0	0	0	0	0	0	0.4	2.4
6-Feb	0	0	0	0	0	0	0	0	0	2	5	5	6	3	2	A	1	0	0	0	0	0	0	0	1.1	6.2
7-Feb	0	0	0	0	0	0	0	0	0	1	1	2	1	1	A	1	1	1	0	0	1	0	0	0	0.4	1.7
8-Feb	0	0	0	0	0	0	0	0	0	1	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.1	0.8
9-Feb	0	0	0	0	0	0	0	0	0	3	4	2	2	3	2	2	2	1	0	0	0	0	0	0	0.8	3.8
10-Feb	0	0	0	0	0	0	0	0	0	1	1	2	2	2	2	2	3	1	0	0	0	0	0	0	0.7	3.0
11-Feb	0	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
12-Feb	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
13-Feb	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0.2	0.8
14-Feb	0	0	0	0	0	0	0	A	0	0	1	2	1	1	1	1	0	0	0	0	0	0	0	0	0.4	1.6
15-Feb	0	0	0	0	0	0	A	0	0	5	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0.6	4.8
16-Feb	0	0	0	0	0	A	0	1	1	3	3	1	1	0	1	2	1	1	0	0	0	0	0	0	0.6	2.9
17-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
18-Feb	0	0	0	A	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.2	0.9
19-Feb	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
20-Feb	0	A	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8
21-Feb	A	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1	1	0	0	0	0	A	0.3	0.8
22-Feb	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	2	1	0	0	1	1	0	A	0	0.5	1.8
23-Feb	0	0	0	0	0	0	0	3	0	1	1	1	2	1	1	1	0	0	0	0	0	A	0	0	0.5	2.7
24-Feb	0	0	0	0	0	0	0	0	0	1	2	1	1	1	1	1	0	0	0	0	A	0	0	0	0.4	1.7
25-Feb	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	A	0	0	0	0	0.2	0.7
26-Feb	0	0	0	0	0	0	0	0	0	1	3	1	1	1	2	1	0	0	A	0	0	0	0	0	0.5	3.1
27-Feb	0	0	0	0	0	7	0	0	1	3	1	1	1	1	1	1	0	A	0	0	0	0	0	0	0.8	7.0
28-Feb	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	A	1	0	0	0	0	0	0	0.4	1.4
0.0 0.0 0.0 0.0 0.0 0.3 0.0 0.2 0.2 1.0 1.4 1.1 1.1 1.0 0.8 0.7 0.6 0.3 0.1 0.1 0.1 0.0 0.0 0.0																									Diurnal Average	
0.1 0.2 0.2 0.2 0.2 7.0 0.4 2.7 1.4 4.8 5.5 4.6 6.2 2.9 1.6 2.0 3.0 1.2 0.6 0.8 0.6 0.2 0.2 0.2																									Diurnal Maximum	
C - Calibration																									A - Automated Daily Zero Span	

Hourly Averages

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



Hourly Maximums

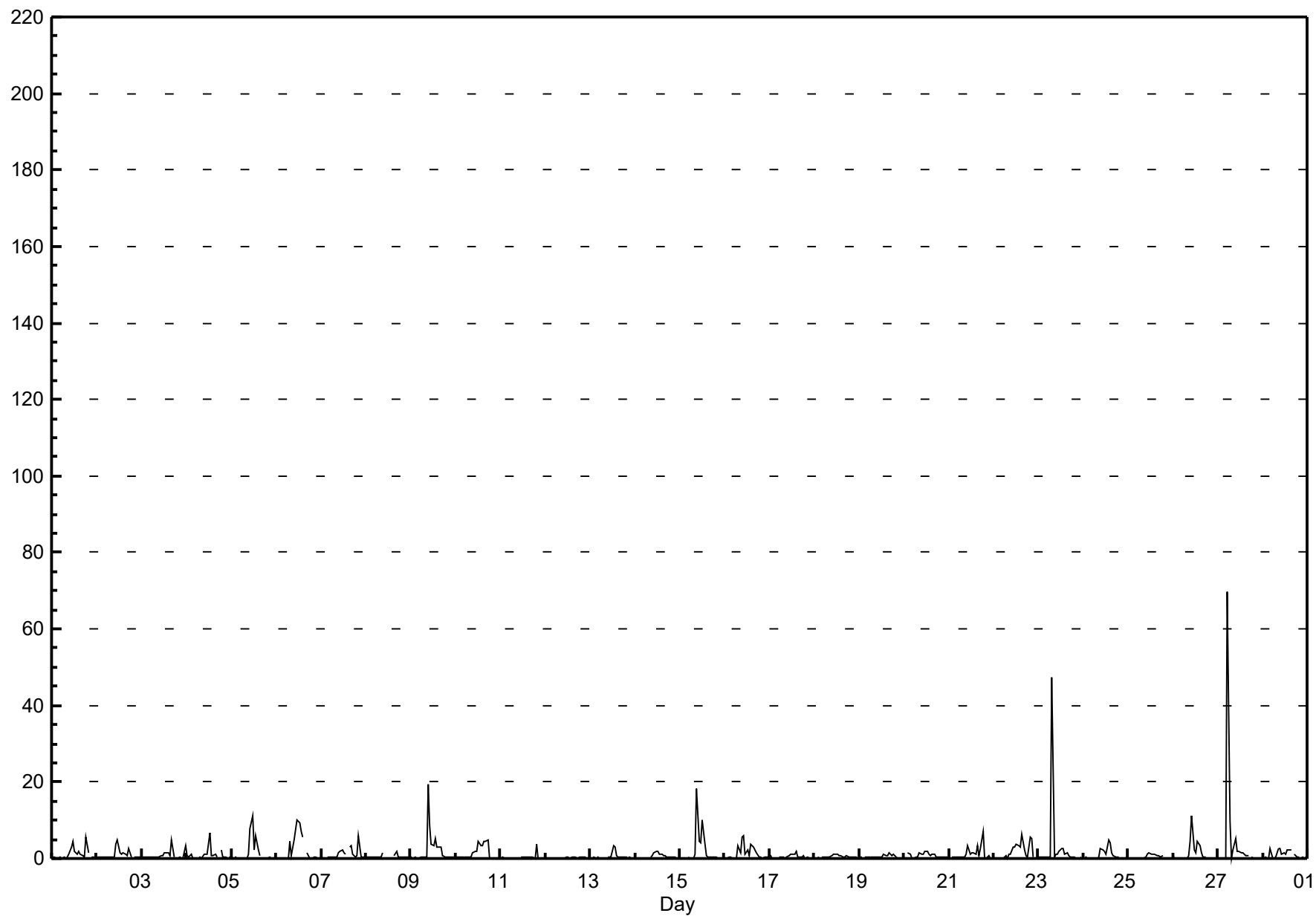
Nitrogen Oxide (NO) - ppb

Portable Rycroft - February 2017

Maximum Value: 69.6 ppb on Feb 27 06:00																								Maximum Daily Average: 4.3 ppb on Feb 27																								Hours in Service: 672	
Minimum Value: 0 ppb on Feb 5 06:00																								Minimum Daily Average: 0.2 ppb on Feb 12																								Hours of Data: 641	
Maximum Diurnal Average: 3.0 ppb at hour 11																								Minimum Diurnal Average: 0.2 ppb at hour 23																								Hours of Missing Data: 31	
Monthly Average: 1.21 ppb																								Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.2 Median = 0.3 Q ₃ = 1.1 P ₉₀ = 3.0 P ₉₉ = 10.9																								Hours of Calibration: 31	
																								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-Feb	0	0	0	0	0	0	0	0	0	1	3	4	2	1	2	1	1	0	6	1	A	0	0	0	1.1	5.7																							
2-Feb	0	0	0	0	0	0	0	0	0	1	4	5	1	1	1	1	1	3	0	A	0	0	0	0	0.9	4.8																							
3-Feb	0	0	0	0	0	0	0	0	0	0	1	1	1	2	2	1	5	0	A	0	0	0	0	3	0.8	5.0																							
4-Feb	1	0	1	0	0	0	0	0	0	1	1	1	7	1	1	1	0	A	2	0	0	0	0	0	0.9	6.9																							
5-Feb	0	0	0	0	0	0	0	0	0	1	8	11	2	6	2	1	A	0	0	0	0	0	0	0	1.5	11.1																							
6-Feb	0	0	0	0	0	0	0	4	1	5	7	10	10	7	6	A	1	1	0	0	0	0	0	0	2.3	9.9																							
7-Feb	0	0	0	0	0	0	0	0	0	1	2	2	2	1	A	3	3	1	1	1	6	0	0	0	1.1	5.9																							
8-Feb	0	0	0	0	0	0	0	0	0	1	C	C	C	C	C	1	2	0	0	0	0	0	0	0	0.4	1.9																							
9-Feb	0	0	0	0	0	0	0	0	0	20	9	4	3	5	3	3	3	1	0	0	0	0	0	0	2.3	19.5																							
10-Feb	0	0	0	0	0	0	0	0	0	1	2	2	5	3	3	5	5	5	0	0	0	0	0	0	1.4	4.9																							
11-Feb	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	4	0	0	0	0	0.4	3.7																							
12-Feb	0	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																							
13-Feb	0	0	0	0	0	0	0	0	A	0	0	0	3	3	1	0	0	0	0	0	0	0	0	0	0.5	3.2																							
14-Feb	0	0	0	0	0	0	0	A	0	1	1	2	2	1	1	1	1	0	0	0	0	0	0	0	0.6	2.0																							
15-Feb	0	0	0	0	0	0	A	0	1	18	5	4	10	4	1	0	0	0	0	0	0	0	0	0	2.0	18.3																							
16-Feb	0	0	0	0	0	A	0	3	2	6	6	1	2	1	4	3	2	1	0	0	0	0	0	0	1.5	5.9																							
17-Feb	1	0	0	0	A	0	0	0	0	0	1	1	1	1	2	1	0	0	1	0	0	0	0	0	0.5	1.7																							
18-Feb	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0.4	1.2																							
19-Feb	0	0	A	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0.4	1.4																							
20-Feb	0	A	1	1	0	0	0	0	2	1	1	2	2	1	1	1	1	0	1	0	0	0	0	0	0.7	2.0																							
21-Feb	A	0	0	0	0	0	0	0	0	1	3	1	2	1	1	3	1	3	7	0	0	1	0	A	1.2	7.2																							
22-Feb	0	0	0	0	0	0	1	0	1	1	3	3	4	3	3	6	2	1	0	6	5	0	A	0	1.8	6.2																							
23-Feb	0	0	0	0	0	0	0	47	0	1	1	2	2	3	1	2	1	0	0	0	0	A	0	0	2.7	47.3																							
24-Feb	0	0	0	0	0	0	0	0	0	3	2	2	1	5	4	1	1	0	0	0	A	0	0	0	1.0	5.0																							
25-Feb	0	0	0	0	0	0	0	0	0	0	1	2	1	1	1	1	1	0	1	A	0	0	0	0	0.5	1.6																							
26-Feb	0	0	0	0	0	0	0	0	1	4	11	2	2	5	3	2	0	0	A	0	0	0	0	0	1.4	11.0																							
27-Feb	0	0	0	0	0	70	10	0	2	5	2	2	2	2	1	1	1	A	0	0	0	0	0	0	4.3	69.6																							
28-Feb	0	0	0	0	2	0	0	0	3	3	1	1	1	2	2	2	A	1	0	0	0	0	0	0	0.9	2.8																							
0.2 0.2 0.3 0.2 0.3 2.8 0.6 2.2 0.6 3.0 3.0 2.5 2.6 2.3 1.8 1.6 1.3 0.9 0.9 0.6 0.6 0.2 0.2 0.3																								Diurnal Average																									
0.8 0.4 1.3 1.2 2.5 69.6 9.6 47.3 2.5 19.5 11.0 11.1 10.2 7.3 5.7 6.2 5.0 4.9 7.2 5.6 5.9 0.8 0.3 3.4																								Diurnal Maximum																									
C - Calibration A - Automated Daily Zero Span																																																	

Hourly Maximums

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



Hourly Averages

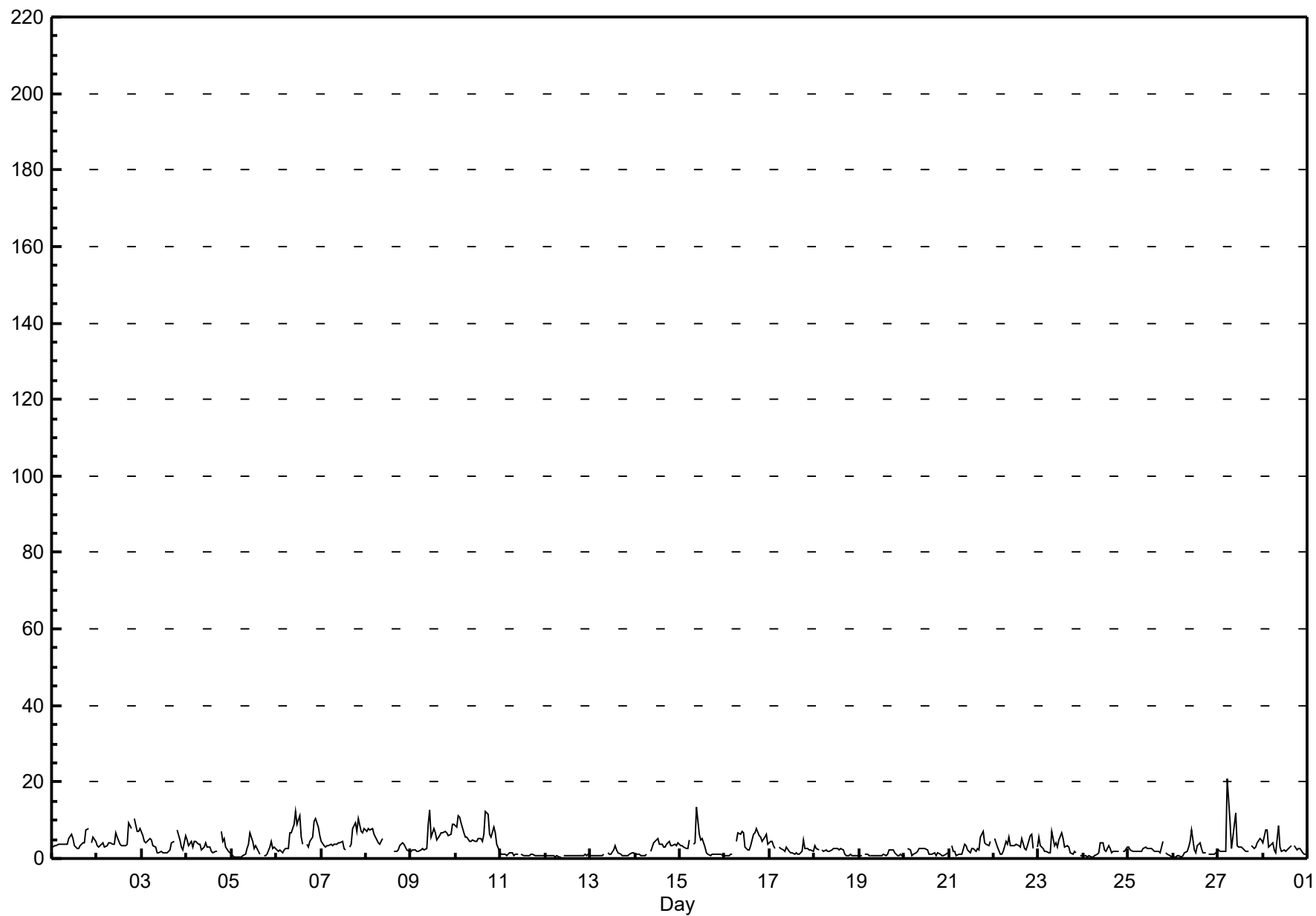
Oxides of Nitrogen (NO_x) - ppb

Portable Rycroft - February 2017

Maximum Value: 20.7 ppb on Feb 27 06:00																				Maximum Daily Average: 6.6 ppb on Feb 10					Hours in Service: 672	
Minimum Value: 0 ppb on Feb 26 01:00																				Minimum Daily Average: 0.7 ppb on Feb 12					Hours of Data: 641	
Maximum Diurnal Average: 4.5 ppb at hour 10																				Minimum Diurnal Average: 2.2 ppb at hour 5					Hours of Missing Data: 31	
Monthly Average: 3.14 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.7 Q ₁ = 1.2 Median = 2.6 Q ₃ = 4.2 P ₉₀ = 6.7 P ₉₉ = 11.2					Hours of Calibration: 31	
																				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-Feb	3	3	3	4	4	4	4	4	4	5	6	5	3	3	3	3	4	4	7	8	A	4	6	5	4.3	7.8
2-Feb	4	3	4	4	3	3	4	4	4	4	7	6	4	3	3	3	4	9	8	A	10	7	7	8	5.1	10.3
3-Feb	6	5	4	5	5	5	3	3	1	2	2	1	2	2	2	2	4	5	A	7	5	3	2	6	3.5	7.4
4-Feb	5	3	5	3	4	4	4	4	2	3	4	3	3	2	2	2	2	A	7	5	5	3	2	2	3.4	6.9
5-Feb	1	0	0	0	0	0	1	1	2	4	7	4	3	4	2	1	A	1	1	1	3	4	3	3	2.0	6.7
6-Feb	2	2	2	1	2	3	3	7	7	9	12	9	11	6	4	A	4	3	5	5	10	10	8	6	5.7	12.5
7-Feb	4	4	3	3	3	4	3	4	4	4	4	4	3	2	A	3	4	8	9	7	10	7	7	8	4.9	10.3
8-Feb	7	8	7	8	6	5	4	4	5	5	C	C	C	C	C	2	2	2	3	4	4	3	2	2	4.4	7.9
9-Feb	2	2	2	2	2	2	2	2	3	9	13	6	8	7	5	6	7	7	7	7	6	6	9	9	5.4	12.5
10-Feb	8	11	11	9	7	6	6	4	5	5	5	4	5	5	5	7	12	12	6	6	8	7	4	2	6.6	12.3
11-Feb	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.5
12-Feb	1	1	1	1	1	0	1	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2
13-Feb	1	1	1	1	1	1	1	1	A	2	1	1	2	3	2	1	1	1	1	1	1	1	1	1	1.2	3.4
14-Feb	1	1	1	1	1	1	1	A	2	3	4	5	5	4	4	3	3	4	4	4	3	4	3	4	2.8	5.0
15-Feb	3	3	3	3	3	5	A	4	4	14	6	5	5	3	2	1	1	1	1	1	1	1	1	1	3.1	13.6
16-Feb	1	1	1	1	1	A	4	7	6	7	7	3	2	2	3	6	7	8	6	6	4	5	6	4	4.3	7.8
17-Feb	5	5	3	3	A	3	3	2	2	3	2	2	2	1	1	1	1	2	5	3	3	2	2	2	2.4	4.7
18-Feb	4	2	2	A	2	2	2	2	2	2	3	3	2	2	3	2	1	1	1	1	1	1	1	1	1.8	3.5
19-Feb	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1	1.0	2.4
20-Feb	1	A	2	2	1	1	1	2	3	2	3	3	2	1	1	1	1	1	1	1	1	1	1	2	1.5	2.7
21-Feb	A	3	2	2	1	1	1	1	4	3	2	1	3	3	2	2	2	6	7	4	4	3	5	A	2.8	7.1
22-Feb	5	4	3	1	1	2	5	4	6	3	3	3	4	3	3	5	3	2	3	6	7	3	A	3	3.6	6.5
23-Feb	6	3	2	2	2	2	2	7	3	4	3	5	7	5	3	3	3	2	1	2	1	A	1	1	3.0	7.1
24-Feb	1	1	1	1	1	0	1	1	1	4	4	2	2	3	3	2	2	2	2	2	A	2	2	3	1.8	4.3
25-Feb	3	2	2	2	2	2	2	2	3	3	3	3	3	2	2	2	2	2	4	A	2	1	1	0	2.1	4.5
26-Feb	0	0	1	1	0	1	2	2	3	4	7	2	2	3	4	3	2	1	A	1	1	1	1	1	1.9	7.5
27-Feb	2	2	2	2	2	21	10	2	6	12	3	3	3	3	2	2	2	A	3	3	3	4	5	5	4.4	20.7
28-Feb	4	7	7	3	3	4	2	2	9	3	2	2	2	2	3	3	A	3	2	3	3	2	1	1	3.2	8.7
3.0 2.9 2.8 2.4 2.2 3.1 2.7 2.9 3.4 4.5 4.4 3.2 3.3 2.9 2.5 2.6 2.9 3.4 3.8 3.4 3.7 3.3 3.1 3.0																									Diurnal Average	
8.1 11.2 10.9 9.2 6.7 20.7 9.8 7.1 8.7 13.6 12.5 8.9 11.4 6.8 4.7 6.5 12.3 11.6 9.2 7.8 10.3 10.5 8.9 9.0																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Averages

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



Hourly Maximums

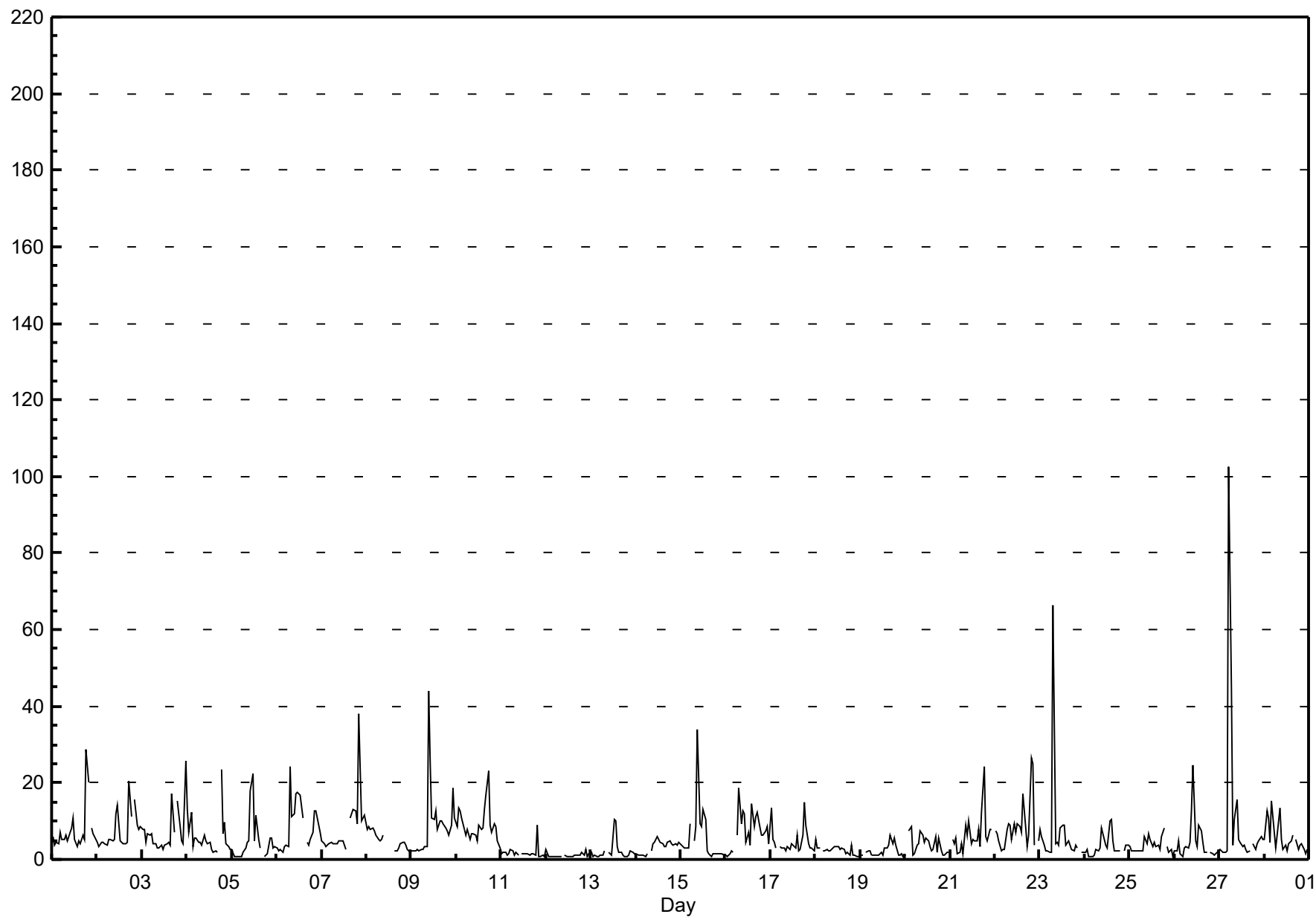
Oxides of Nitrogen (NO_x) - ppb

Portable Rycroft - February 2017

Maximum Value: 102.6 ppb on Feb 27 06:00																				Maximum Daily Average: 10.4 ppb on Feb 27					Hours in Service: 672	
Minimum Value: 1 ppb on Feb 12 08:00																				Minimum Daily Average: 1.1 ppb on Feb 12					Hours of Data: 641	
Maximum Diurnal Average: 8.5 ppb at hour 10																				Minimum Diurnal Average: 3.3 ppb at hour 4					Hours of Missing Data: 31	
Monthly Average: 5.59 ppb																				Percentiles: P ₁ = 0.7 P ₁₀ = 1.1 Q ₁ = 2.1 Median = 3.9 Q ₃ = 6.7 P ₉₀ = 10.9 P ₉₉ = 29.8					Hours of Calibration: 31	
																									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-Feb	6	4	4	4	7	5	5	6	5	6	8	11	5	3	5	4	6	5	29	20	A	8	7	5	7.4	28.8
2-Feb	4	3	4	4	4	4	5	5	5	5	12	14	5	4	4	4	4	21	11	A	16	9	8	9	7.2	20.5
3-Feb	8	8	4	7	6	7	4	4	3	3	4	3	4	4	4	4	17	7	A	15	9	5	4	26	6.9	25.8
4-Feb	13	7	12	3	5	6	4	5	4	6	5	4	5	2	2	2	2	A	23	7	10	4	3	3	6.0	23.5
5-Feb	2	1	1	1	1	1	2	3	5	5	18	22	5	11	5	3	A	1	1	2	6	6	3	3	4.6	22.4
6-Feb	3	2	3	2	3	4	3	24	11	12	17	18	17	14	11	A	4	4	5	7	13	13	9	7	8.9	24.1
7-Feb	5	4	3	4	4	4	4	4	4	5	5	5	4	3	A	11	12	13	13	9	38	10	11	12	8.1	38.2
8-Feb	8	9	8	8	7	6	5	5	5	6	C	C	C	C	C	2	2	3	4	5	5	4	3	2	5.1	8.6
9-Feb	2	2	2	2	2	2	3	3	3	44	26	11	10	13	8	10	10	9	8	7	6	9	18	11	9.3	43.9
10-Feb	9	13	13	11	8	6	8	5	7	7	6	5	9	8	8	13	17	23	9	7	9	8	5	3	9.1	23.1
11-Feb	1	2	2	1	1	3	2	1	2	1	A	2	1	1	2	1	2	1	1	9	1	1	1	1	1.8	9.1
12-Feb	3	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	2	1	3	1	2	1.1	2.8
13-Feb	2	1	1	1	1	1	1	2	A	2	1	1	11	10	3	2	2	1	1	1	1	2	2	2	2.2	10.5
14-Feb	1	1	1	1	1	1	1	A	2	4	5	6	5	5	4	3	3	4	5	4	4	4	4	4	3.3	5.8
15-Feb	4	4	3	3	3	9	A	5	9	34	9	8	13	11	2	1	1	1	1	1	1	2	1	1	5.6	33.8
16-Feb	1	1	1	2	2	A	6	18	9	13	12	5	7	4	15	8	11	12	8	6	6	8	8	4	7.4	18.5
17-Feb	13	5	4	3	A	4	3	3	2	4	3	4	4	3	6	2	3	6	15	9	4	3	3	2	4.7	14.7
18-Feb	5	3	3	A	2	2	3	2	2	3	3	3	3	3	3	3	2	2	1	4	1	1	1	1	2.4	5.2
19-Feb	1	1	A	2	2	2	1	1	1	1	1	2	1	3	3	4	6	4	5	4	1	1	2	1	2.2	6.5
20-Feb	1	A	8	9	1	1	4	4	7	6	4	6	5	3	2	3	6	2	6	2	1	1	2	2	3.7	8.6
21-Feb	A	5	4	5	1	2	4	2	9	6	10	4	5	5	5	8	3	12	24	6	5	8	8	A	6.5	24.4
22-Feb	7	7	5	2	3	3	8	9	9	5	9	7	9	9	7	17	8	3	6	26	25	4	A	5	8.4	26.4
23-Feb	8	6	4	2	2	2	2	67	4	4	4	8	9	9	4	5	4	2	2	4	3	A	2	2	6.9	66.6
24-Feb	2	3	1	1	1	1	3	2	3	8	5	4	3	10	10	5	2	2	2	2	A	2	4	4	3.5	10.3
25-Feb	3	2	2	2	2	2	2	2	6	4	7	5	4	4	3	4	3	6	8	A	3	2	3	1	3.6	8.2
26-Feb	2	2	5	1	1	3	3	3	4	13	24	5	3	9	8	4	2	2	A	2	1	1	1	2	4.5	24.5
27-Feb	3	2	2	2	2	103	45	4	10	16	5	4	3	4	3	2	2	A	4	3	4	5	6	5	10.4	102.6
28-Feb	5	13	11	4	15	7	3	6	13	5	3	4	2	4	5	6	A	5	2	4	4	2	1	2	5.6	15.4
																								Diurnal Average		
																								Diurnal Maximum		
C - Calibration																								A - Automated Daily Zero Span		

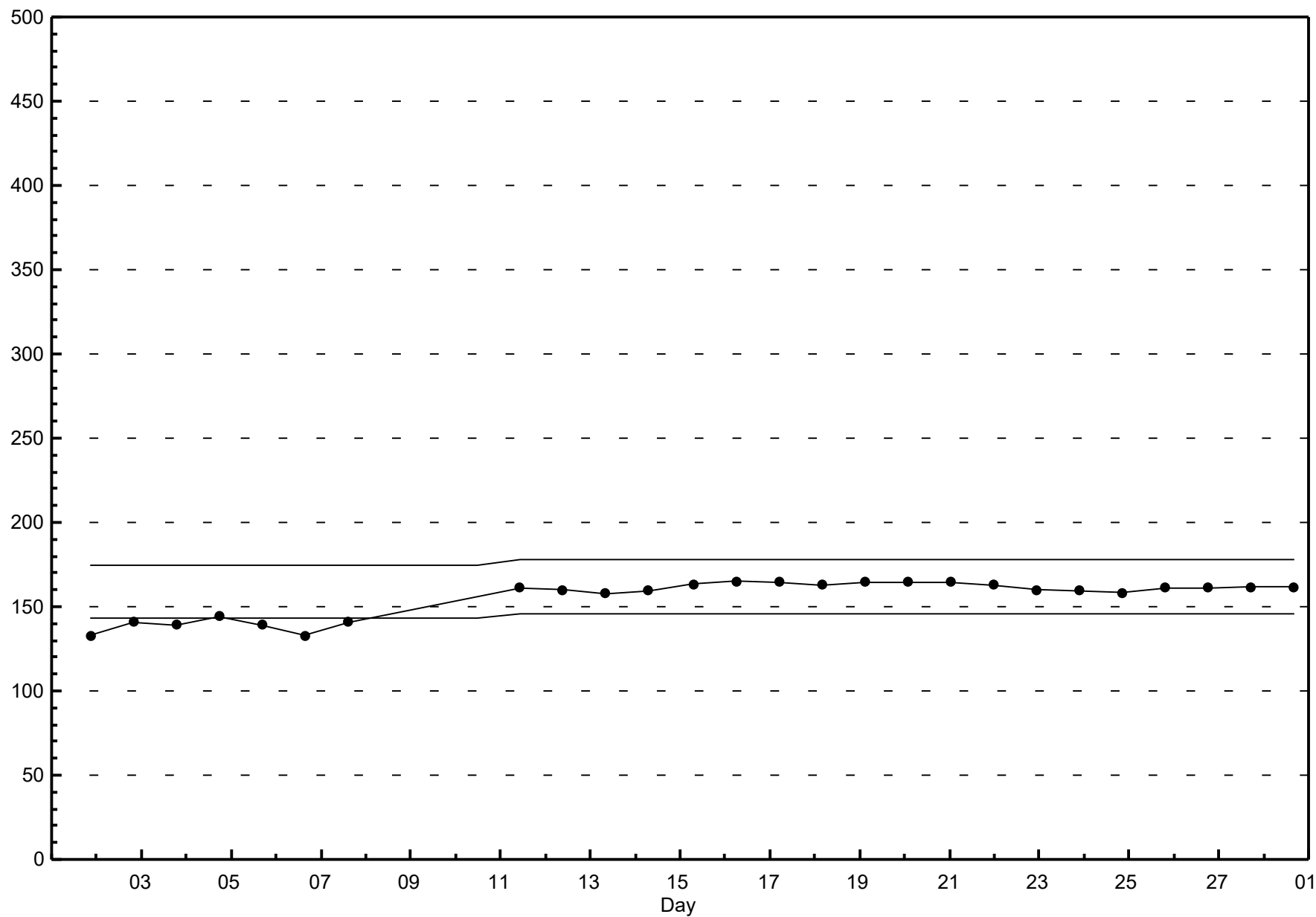
Hourly Maximums

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



Span Responses

Oxides of Nitrogen (NO_x)
Portable Rycroft - February 2017



Hourly Averages

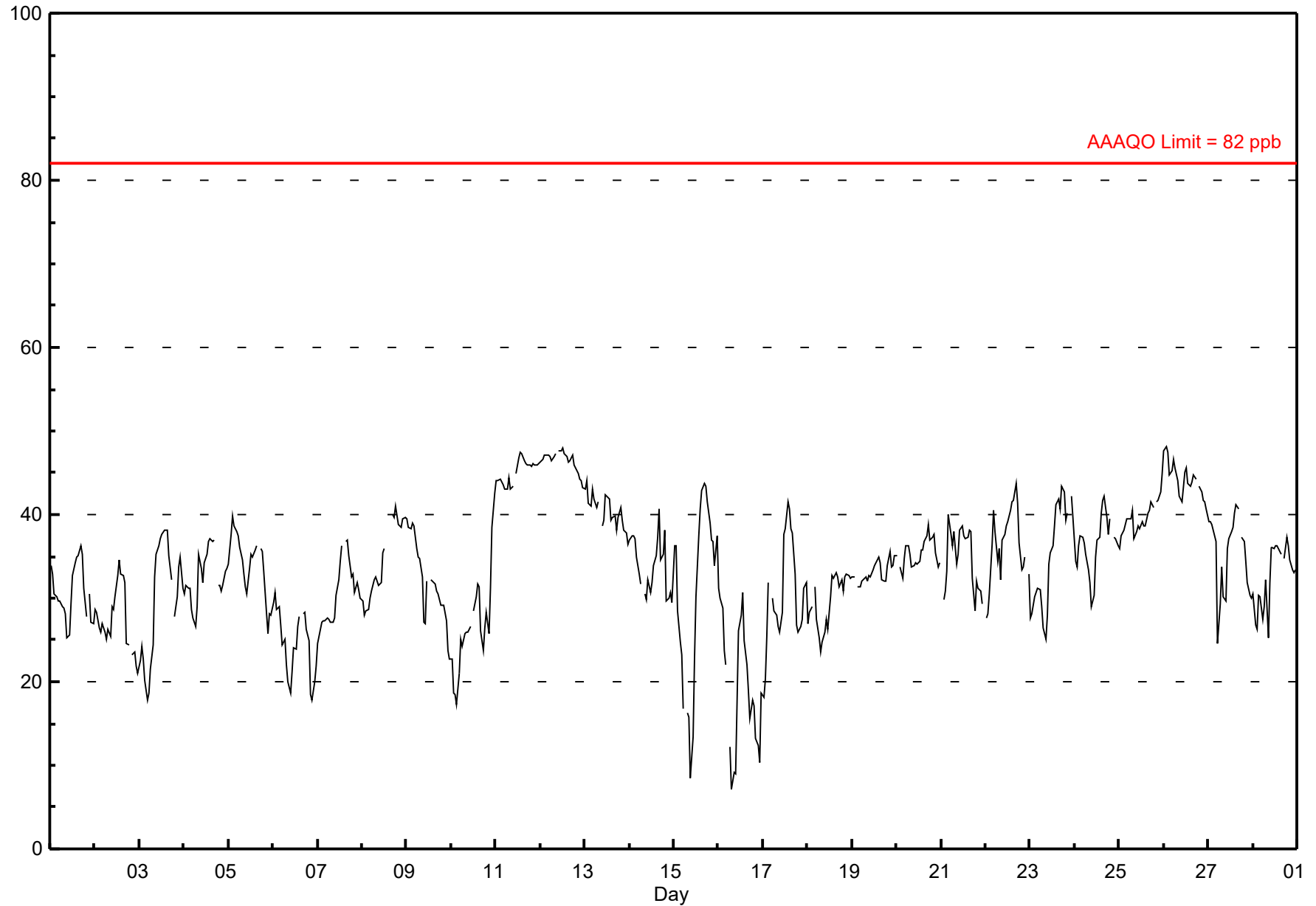
Ozone (O₃) - ppb

Portable Rycroft - February 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 48.1 ppb on Feb 26 02:00 Maximum Daily Average: 46.4 ppb on Feb 12																								Hours in Service: 672 Hours of Data: 641 Hours of Missing Data: 31 Hours of Calibration: 31 Percent Operational Time: 100.0		
Minimum Value: 7 ppb on Feb 16 08:00 Maximum Diurnal Average: 37.7 ppb at hour 16 Monthly Average: 33.61 ppb												Minimum Daily Average: 19.4 ppb on Feb 16 Minimum Diurnal Average: 29.8 ppb at hour 10 Percentiles: P ₁ = 12.3 P ₁₀ = 24.9 Q ₁ = 28.9 Median = 33.8 Q ₃ = 38.5 P ₉₀ = 43.3 P ₉₉ = 47.4														
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-Feb	34	33	31	30	30	30	29	29	28	25	26	29	33	34	35	35	36	35	31	28	A	31	27	27	30.7	36.3
2-Feb	29	28	26	26	27	26	25	26	25	29	29	30	33	35	33	33	32	25	24	A	23	24	22	21	27.4	34.5
3-Feb	23	24	23	20	18	19	22	24	33	35	36	37	38	38	38	38	35	32	A	28	30	34	35	31	30.0	38.2
4-Feb	31	32	31	31	29	28	27	29	35	34	32	34	35	37	37	37	37	A	32	32	31	32	33	34	32.4	37.2
5-Feb	34	38	40	39	38	37	36	35	33	31	30	34	35	35	36	36	A	36	36	33	28	26	28	28	34.0	39.9
6-Feb	29	31	29	29	27	24	25	22	20	19	21	24	24	27	28	A	28	28	26	25	18	18	20	22	24.5	30.7
7-Feb	25	26	27	27	27	28	27	27	27	28	30	32	34	36	A	37	37	35	33	33	31	32	31	30	30.5	37.0
8-Feb	30	28	28	29	30	31	32	32	32	32	32	35	36	A	C	C	40	40	41	39	39	38	40	40	34.4	41.0
9-Feb	39	38	38	39	39	36	35	35	33	27	27	32	A	32	32	32	31	31	29	29	29	27	24	23	32.0	39.5
10-Feb	23	19	19	17	21	25	24	26	26	26	27	A	29	30	32	31	26	24	26	28	26	31	38	43	26.8	42.6
11-Feb	44	44	44	44	44	43	43	44	43	43	A	45	47	47	47	46	46	46	46	46	46	46	46	46	45.1	47.5
12-Feb	46	47	47	47	47	47	46	47	47	A	48	48	48	47	47	46	46	47	46	46	45	44	44	43	46.4	47.9
13-Feb	43	44	41	41	43	42	41	42	A	39	39	42	42	39	40	40	40	38	40	41	39	38	38	37	40.5	44.1
14-Feb	37	37	37	37	35	33	32	A	31	30	32	31	32	34	35	37	41	35	35	38	30	30	31	29	33.8	40.6
15-Feb	36	36	28	25	23	17	A	16	16	9	13	23	30	38	41	43	44	43	41	39	37	37	34	37	30.7	43.7
16-Feb	31	30	29	24	22	A	12	7	9	9	17	26	28	31	25	22	19	16	18	17	13	12	10	19	19.4	31.2
17-Feb	18	20	25	32	A	30	28	28	27	26	28	38	38	41	41	38	38	33	27	26	27	27	31	32	30.4	41.5
18-Feb	27	28	29	A	31	27	25	24	25	26	27	26	30	33	32	33	33	31	32	31	33	33	33	32	29.6	33.0
19-Feb	33	33	A	31	31	32	32	33	32	33	33	33	34	34	35	34	32	32	32	34	36	34	34	35	33.1	35.7
20-Feb	35	A	34	32	35	36	36	35	34	34	34	34	34	36	36	37	38	39	37	37	38	35	34	34	35.4	38.8
21-Feb	A	30	31	33	40	38	36	38	34	35	38	39	38	37	37	38	38	32	28	32	31	31	29	A	34.7	40.0
22-Feb	28	28	31	36	41	38	34	36	32	37	38	39	39	40	41	42	44	41	37	33	34	35	A	33	36.3	43.7
23-Feb	28	28	30	31	31	31	29	26	25	28	34	36	36	39	41	42	41	43	43	39	40	A	42	40	34.9	43.4
24-Feb	34	34	36	37	37	37	35	33	32	29	30	35	37	37	40	42	42	40	38	40	A	37	37	36	36.4	42.2
25-Feb	36	37	38	39	39	40	40	40	37	38	39	38	39	39	39	40	40	41	41	A	42	42	43	45	39.7	45.0
26-Feb	48	48	47	45	45	47	46	44	42	42	42	45	46	44	43	44	45	44	A	43	43	42	42	41	44.2	48.1
27-Feb	39	39	39	38	37	25	29	34	30	30	36	37	38	39	40	41	41	A	37	37	34	32	30	30	35.3	41.3
28-Feb	31	27	26	30	30	27	29	32	25	32	36	36	36	36	36	35	A	35	37	36	35	33	33	33	32.5	37.3
																								Diurnal Average		
																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na																										

Hourly Averages

Ozone (O₃) - ppb
Portable Rycroft - February 2017



Hourly Maximums

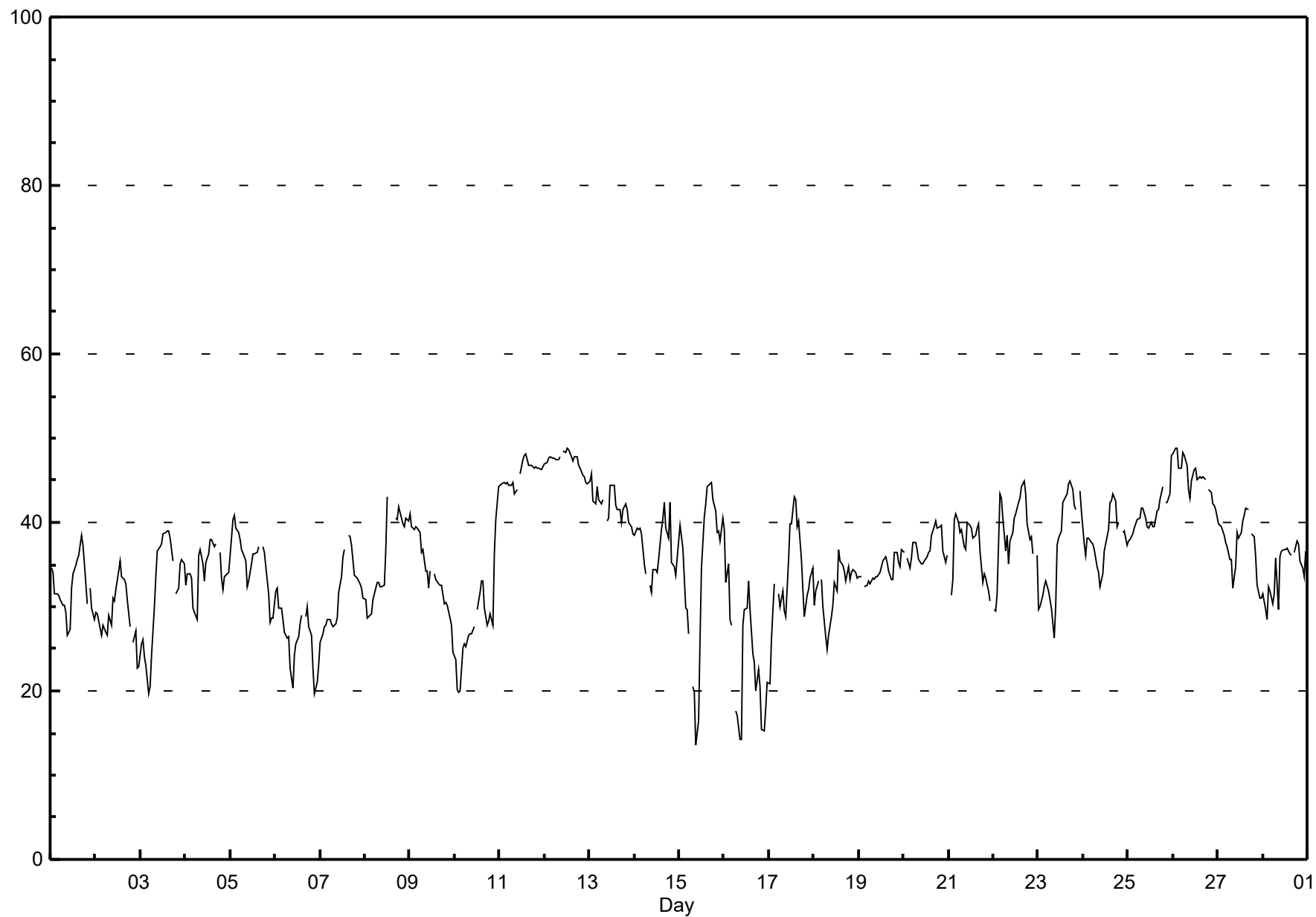
Ozone (O₃) - ppb

Portable Rycroft - February 2017

Maximum Value: 48.9 ppb on Feb 26 02:00																					Maximum Daily Average: 47.2 ppb on Feb 12				Hours in Service: 672	
Minimum Value: 14 ppb on Feb 15 10:00																					Minimum Daily Average: 24.2 ppb on Feb 16				Hours of Data: 641	
Maximum Diurnal Average: 39.0 ppb at hour 16																					Minimum Diurnal Average: 32.0 ppb at hour 10				Hours of Missing Data: 31	
Monthly Average: 35.54 ppb																					Percentiles: P ₁ = 17.0 P ₁₀ = 26.9 Q ₁ = 31.4 Median = 35.7 Q ₃ = 40.1 P ₉₀ = 44.6 P ₉₉ = 48.3				Hours of Calibration: 31	
																									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-Feb	35	34	31	31	31	31	30	30	29	27	27	32	34	35	36	36	38	37	35	30	A	32	30	28	32.3	38.4
2-Feb	29	29	28	27	28	27	27	29	28	31	31	32	34	35	34	33	33	31	28	A	26	27	23	23	29.1	35.4
3-Feb	26	26	24	23	20	21	24	30	34	37	37	37	39	39	39	39	38	35	A	32	32	35	36	35	32.0	39.0
4-Feb	33	34	34	33	30	29	28	36	37	35	33	35	36	38	38	37	37	A	36	33	32	34	34	34	34.2	38.0
5-Feb	36	40	41	39	39	38	37	36	35	32	33	35	36	36	36	37	A	37	36	35	31	28	29	29	35.4	40.8
6-Feb	32	32	30	30	29	27	26	26	23	20	24	26	26	28	29	A	29	30	28	27	23	20	21	23	26.4	32.1
7-Feb	26	27	28	28	28	29	28	28	28	29	32	34	36	37	A	38	38	37	34	34	33	33	32	31	31.6	38.4
8-Feb	31	29	29	29	31	32	33	33	32	32	33	37	43	A	C	C	41	40	42	40	40	40	41	40	35.5	43.0
9-Feb	41	40	39	40	39	39	36	37	34	34	32	34	A	34	33	33	32	33	30	30	30	29	28	25	34.0	40.9
10-Feb	24	20	20	20	25	26	25	27	27	27	28	A	30	32	33	33	30	28	28	29	28	36	40	44	28.6	44.2
11-Feb	44	45	45	45	45	44	44	45	43	44	A	46	48	48	48	47	47	47	46	47	46	46	46	47	45.8	48.1
12-Feb	47	47	48	48	48	48	47	47	48	A	48	48	49	49	48	47	48	48	47	46	46	45	45	45	47.2	48.8
13-Feb	45	46	43	42	44	43	42	43	A	40	41	44	44	44	42	42	42	40	41	42	42	40	40	39	42.2	45.8
14-Feb	38	39	39	39	39	35	34	A	32	32	34	34	34	36	39	40	42	39	38	42	35	35	34	36	36.8	42.3
15-Feb	40	38	37	30	30	27	A	20	20	14	16	26	35	41	42	44	45	45	43	41	39	39	38	40	34.3	44.7
16-Feb	39	33	35	29	28	A	18	17	14	14	28	30	30	33	30	24	23	20	23	21	15	15	18	21	24.2	39.2
17-Feb	21	26	30	33	A	32	30	32	29	29	36	40	40	43	43	40	40	36	32	29	31	32	33	35	33.4	43.1
18-Feb	30	32	33	A	33	30	26	25	27	29	30	33	32	37	35	35	34	33	35	33	34	34	34	33	32.1	36.8
19-Feb	33	33	A	32	33	33	33	33	33	33	34	34	35	36	36	35	34	33	33	37	36	35	35	37	34.2	36.7
20-Feb	36	A	36	35	36	38	38	37	36	35	35	35	36	36	37	38	40	40	39	40	40	37	35	36	36.9	40.1
21-Feb	A	31	33	40	41	40	39	39	37	37	40	40	39	38	38	39	40	37	33	34	33	32	31	A	36.9	41.0
22-Feb	30	30	32	43	43	41	37	38	35	38	39	40	41	42	43	44	45	43	40	38	38	36	A	36	38.8	44.9
23-Feb	30	30	31	32	33	32	31	30	26	30	37	38	39	42	43	43	45	45	44	42	42	A	44	41	37.0	44.9
24-Feb	37	36	38	38	38	37	37	35	34	32	34	37	37	39	42	43	43	43	40	40	A	39	39	37	38.1	43.5
25-Feb	38	38	39	39	40	40	40	42	42	41	40	39	40	40	39	41	42	43	44	A	42	42	43	48	41.0	47.9
26-Feb	48	49	49	46	46	48	48	47	44	43	45	46	46	45	45	45	45	45	A	44	44	42	42	41	45.5	48.9
27-Feb	40	40	39	38	38	37	36	36	32	35	39	38	39	40	41	42	42	A	39	38	36	33	31	31	37.3	41.7
28-Feb	31	30	28	32	32	30	31	36	30	36	37	37	37	37	36	36	A	37	38	37	35	35	34	37	34.3	37.8
34.8 34.6 34.7 34.9 35.0 34.5 33.6 33.8 32.2 32.0 34.1 36.6 37.6 38.5 38.7 39.0 38.9 37.7 36.6 36.2 35.0 34.5 34.6 35.3																									Diurnal Average	
48.2 48.9 48.8 47.8 47.6 48.4 48.0 47.4 47.9 43.9 48.5 48.3 48.8 48.6 48.1 47.3 47.8 47.8 46.8 46.5 46.5 46.5 46.3 47.9																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

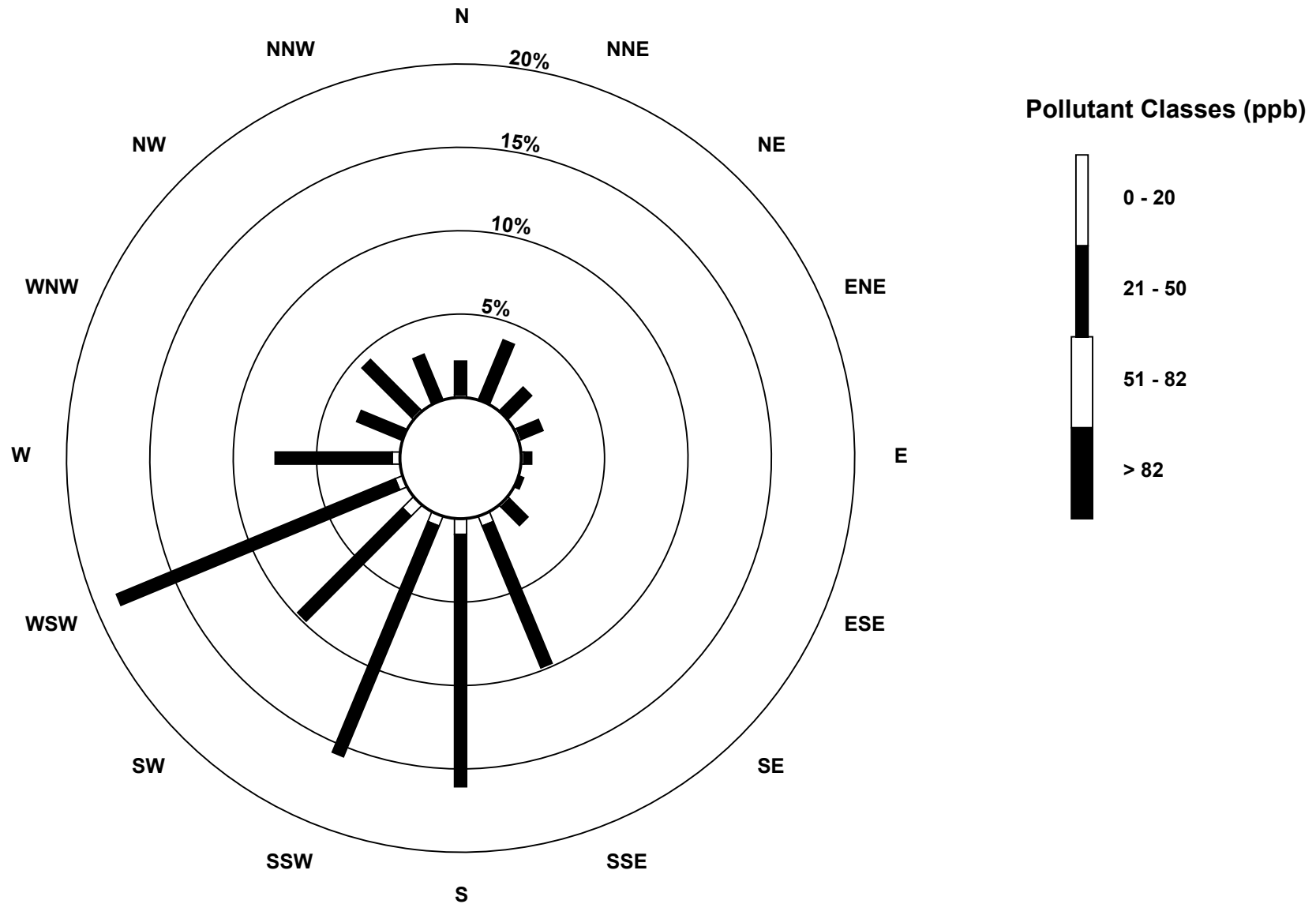
Hourly Maximums

Ozone (O₃) - ppb
Portable Rycroft - February 2017



Pollutant Rose

Ozone (O₃) - ppb
Portable Rycroft - February 2017



Eight Hour Running Averages

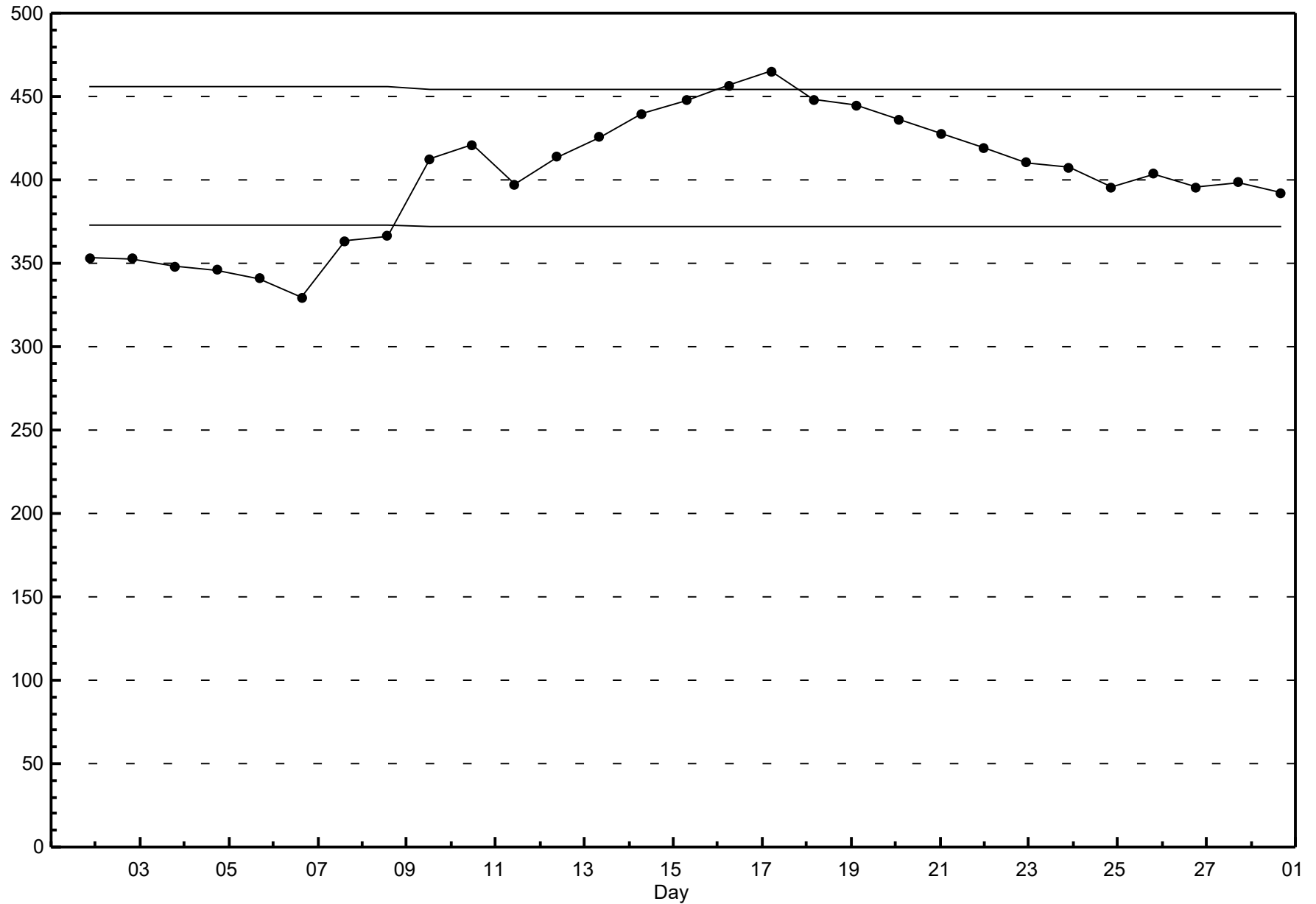
Ozone (O₃) - ppb

Portable Rycroft - February 2017

Maximum Value: 47.4 ppb on Feb 12 15:00																								Hours in Service: 672	
Minimum Value: 14.4 ppb on Feb 16 11:00																								Hours of Data: 666	
Percentiles: P ₁ = 15.5 P ₁₀ = 24.6 Q ₁ = 29.7 Median = 33.6 Q ₃ = 37.7 P ₉₀ = 43.2 P ₉₉ = 47.2																								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-Feb	34	34	33	33	32	32	31	31	30	29	28	28	29	29	30	31	32	33	34	33	34	33	32	31	33.6
2-Feb	30	29	28	28	28	27	27	27	26	26	27	27	28	29	30	31	32	31	30	31	29	28	26	24	31.6
3-Feb	23	23	23	22	22	21	21	22	23	24	26	28	30	33	35	37	37	37	37	35	34	34	33	32	37.0
4-Feb	31	31	31	32	32	31	30	30	30	30	30	31	32	33	34	35	35	36	36	35	35	34	33	33	35.6
5-Feb	32	33	34	35	36	37	37	37	37	36	35	34	34	34	34	34	34	35	35	35	34	33	32	31	37.0
6-Feb	31	30	29	28	28	28	28	27	26	24	23	23	22	23	23	23	24	26	26	27	26	25	23	23	30.5
7-Feb	23	23	23	23	24	25	26	27	27	27	28	28	29	30	31	32	33	35	35	35	34	34	33	33	35.0
8-Feb	32	31	30	30	30	30	30	30	30	31	31	32	33	33	33	N	N	N	N	N	N	39	39	39	39.5
9-Feb	39	39	39	39	39	39	38	37	37	35	34	33	32	32	31	31	30	31	31	31	31	30	29	28	39.4
10-Feb	27	25	24	23	22	21	21	22	22	23	24	25	26	27	28	29	29	28	28	28	28	28	29	30	30.3
11-Feb	33	35	37	39	42	43	44	44	44	44	43	44	44	45	45	46	46	46	46	46	46	46	46	46	46.4
12-Feb	46	46	46	46	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	46	46	46	45	47.4
13-Feb	45	44	44	43	43	43	42	42	42	41	41	41	41	41	41	40	40	40	40	40	40	39	39	39	44.7
14-Feb	38	38	38	38	37	36	36	36	35	34	33	32	31	32	32	33	34	35	35	36	36	35	35	34	38.4
15-Feb	33	33	32	31	30	28	28	26	23	19	17	17	18	21	23	27	30	34	38	40	41	41	40	39	40.7
16-Feb	38	36	34	32	30	30	26	22	19	16	14	15	16	17	19	21	22	23	23	22	20	18	16	16	37.5
17-Feb	15	16	17	19	20	22	25	26	27	28	28	29	30	32	33	35	36	37	37	35	34	32	31	30	36.9
18-Feb	29	28	28	29	29	29	29	27	27	27	26	26	27	28	29	30	31	31	31	32	32	32	32	32	32.3
19-Feb	32	32	32	32	32	32	32	32	32	32	32	32	33	33	33	33	34	33	33	33	34	34	33	34	33.7
20-Feb	34	34	34	34	34	34	35	35	35	35	35	35	35	35	35	35	35	36	36	37	37	37	37	36	37.1
21-Feb	36	35	34	34	34	34	35	35	35	36	37	37	37	37	37	37	38	37	36	35	34	34	33	32	37.5
22-Feb	30	30	30	31	32	33	34	34	34	36	36	37	37	37	38	39	40	41	40	40	39	38	38	37	40.5
23-Feb	34	32	32	31	31	30	30	29	29	29	29	30	31	32	33	35	37	39	40	41	41	41	41	41	41.5
24-Feb	40	39	38	38	37	37	36	36	35	35	34	34	34	34	34	35	37	38	39	39	40	40	39	39	40.2
25-Feb	38	37	37	37	38	38	38	39	39	39	39	39	39	39	39	39	39	39	40	40	40	41	41	42	42.0
26-Feb	43	44	45	45	45	46	46	46	46	45	44	44	44	44	43	43	44	44	44	44	44	43	43	43	46.3
27-Feb	42	41	41	40	39	37	36	35	34	33	32	32	32	34	35	36	38	39	39	39	38	37	36	34	41.9
28-Feb	33	32	31	30	30	29	29	29	28	29	30	31	32	33	34	34	35	36	36	36	36	35	35	35	36.0
46.0 46.1 46.2 46.4 46.5 46.6 46.7 46.8 46.9 47.0 47.1 47.2 47.3 47.3 47.4 47.3 47.2 47.2 47.0 46.7 46.4 46.2 46.0 46.0																									Diurnal Maximums
N - Not Valid																									

Span Responses

Ozone (O₃)
Portable Rycroft - February 2017



Hourly Averages

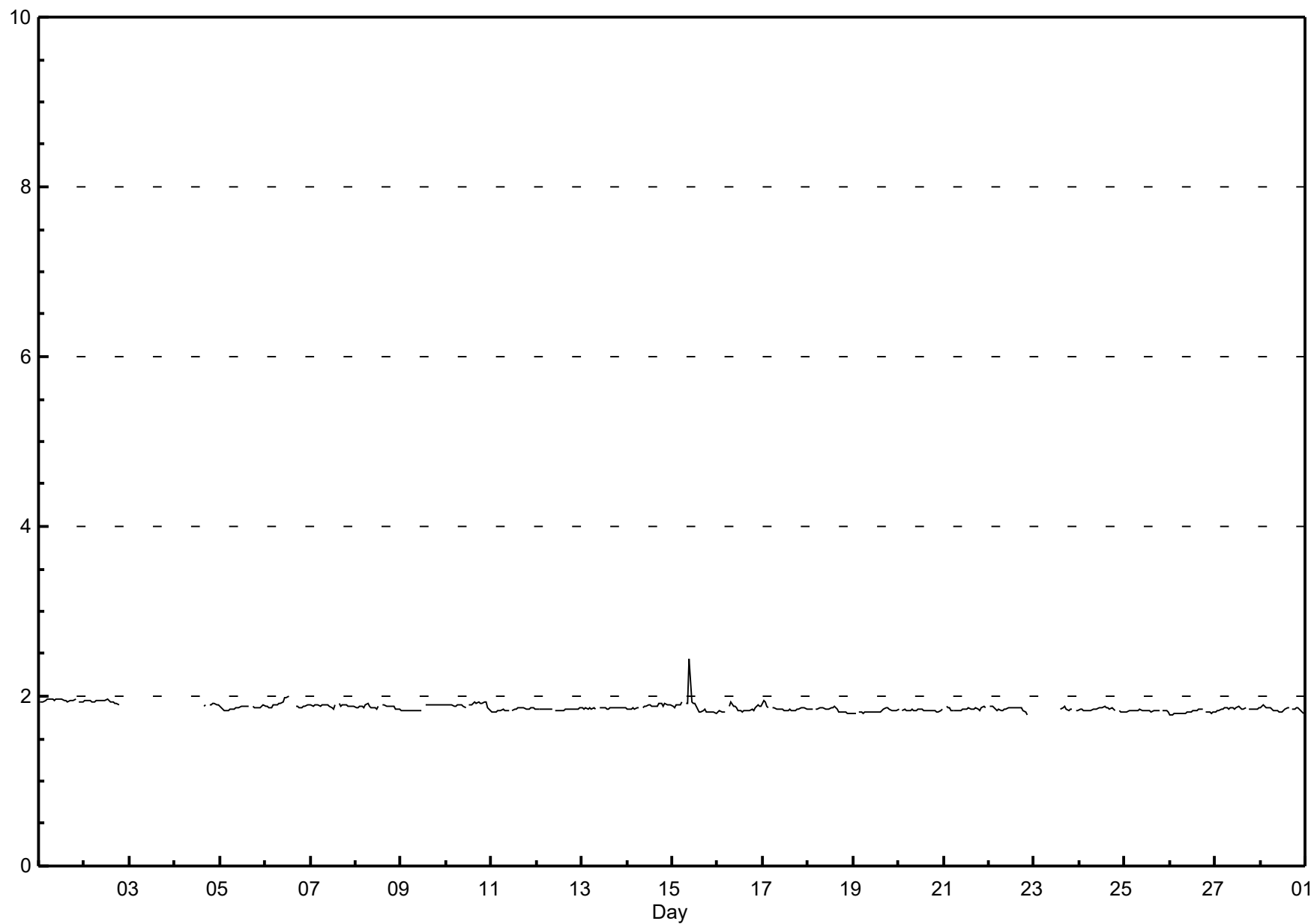
Total Hydrocarbons (THC) - ppm

Portable Rycroft - February 2017

Maximum Value: 2.43 ppm on Feb 15 10:00																				Maximum Daily Average: 1.95 ppm on Feb 1					Hours in Service: 672	
Minimum Value: 1.8 ppm on Feb 22 21:00																				Minimum Daily Average: 1.81 ppm on Feb 26					Hours of Data: 583	
Maximum Diurnal Average: 1.89 ppm at hour 10																				Minimum Diurnal Average: 1.85 ppm at hour 24					Hours of Missing Data: 89	
Monthly Average: 1.863 ppm																				Percentiles: P ₁ = 1.79 P ₁₀ = 1.82 Q ₁ = 1.84 Median = 1.86 Q ₃ = 1.88 P ₉₀ = 1.92 P ₉₉ = 1.97					Hours of Calibration: 32	
																									Percent Operational Time: 91.5	
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-Feb	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	A	1.9	1.9	1.9	1.95	1.97
2-Feb	1.9	2.0	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	N	N	N	N	1.94	1.96
3-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
4-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	--	1.92
5-Feb	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	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.87	1.89
6-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.90	2.00
7-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.89	1.92
8-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.88	1.91
9-Feb	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	1.9	1.9	1.9	1.9	1.86	1.90
10-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.90	1.93
11-Feb	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	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.84	1.86
12-Feb	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	1.9	1.8	1.9	1.9	1.84	1.86
13-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.86	1.87
14-Feb	1.9	1.8	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	1.88	1.91
15-Feb	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	2.4	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.89	2.43
16-Feb	1.8	1.8	1.8	1.8	1.8	A	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.85	1.93
17-Feb	2.0	1.9	1.9	1.9	A	1.9	1.9	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.86	1.95
18-Feb	1.8	1.8	1.8	A	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.84	1.88
19-Feb	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	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.82	1.86
20-Feb	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
21-Feb	A	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	1.8	1.8	1.9	1.9	1.9	A	1.85	1.87
22-Feb	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	1.9	1.8	1.8	1.8	N	N	N	1.85	1.89
23-Feb	N	N	N	N	N	N	N	N	N	N	N	C	C	C	1.8	1.9	1.9	1.8	1.8	1.8	1.8	A	1.8	1.8	--	1.88
24-Feb	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	1.9	1.9	1.8	1.8	A	1.8	1.8	1.8	1.85	1.87
25-Feb	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.83	1.85
26-Feb	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.81	1.85
27-Feb	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	1.9	1.9	1.9	1.9	A	1.9	1.8	1.9	1.9	1.9	1.9	1.85	1.87
28-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	A	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.85	1.89
1.86 1.86 1.86 1.86 1.85 1.86 1.86 1.86 1.86 1.86 1.89 1.87 1.86 1.87 1.87 1.86 1.87 1.87 1.86 1.86 1.86 1.86 1.85																								Diurnal Average		
1.95 1.96 1.95 1.96 1.96 1.97 1.97 1.96 1.95 2.43 1.99 1.98 2.00 1.95 1.94 1.94 1.94 1.95 1.95 1.96 1.93 1.93 1.93 1.93																								Diurnal Maximum		
C - Calibration N - Not Valid A - Automated Daily Zero Span																										

Hourly Averages

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



Hourly Maximums

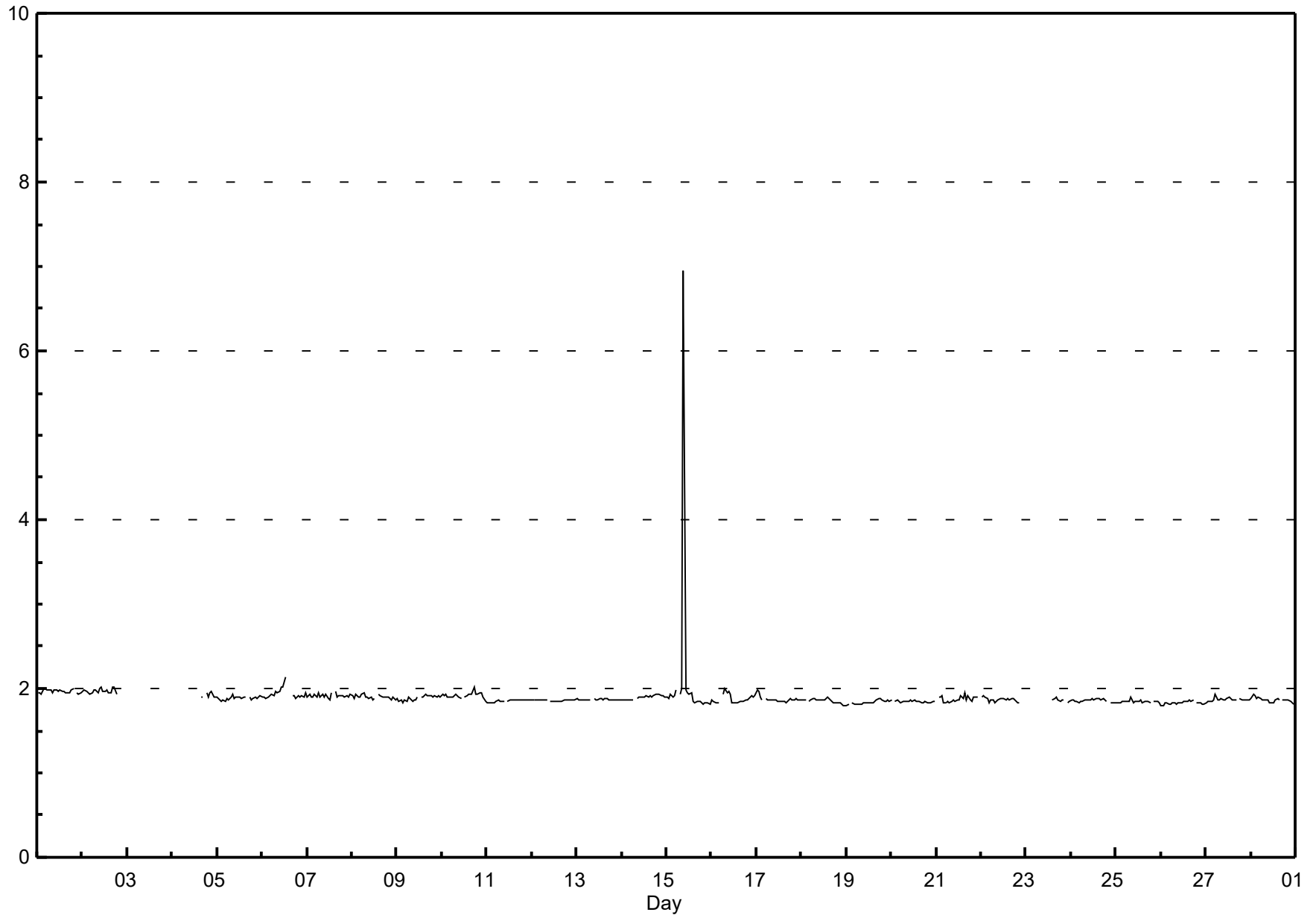
Total Hydrocarbons (THC) - ppm

Portable Rycroft - February 2017

Maximum Value: 6.94 ppm on Feb 15 10:00																				Maximum Daily Average: 2.11 ppm on Feb 15					Hours in Service: 672	
Minimum Value: 1.8 ppm on Feb 18 23:00																				Minimum Daily Average: 1.83 ppm on Feb 26					Hours of Data: 583	
Maximum Diurnal Average: 2.10 ppm at hour 10																				Minimum Diurnal Average: 1.87 ppm at hour 24					Hours of Missing Data: 89	
Monthly Average: 1.890 ppm																				Percentiles: P ₁ = 1.81 P ₁₀ = 1.83 Q ₁ = 1.85 Median = 1.87 Q ₃ = 1.91 P ₉₀ = 1.95 P ₉₉ = 2.01					Hours of Calibration: 32	
																				Percent Operational Time: 91.5						
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-Feb	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	1.9	1.9	1.97	2.00
2-Feb	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	1.9	A	N	N	N	N	1.97	2.01
3-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
4-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1.9	1.9	A	1.9	1.9	1.9	2.0	1.9	1.9	--	1.96
5-Feb	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	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.89	1.94	
6-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.1	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.94	2.14	
7-Feb	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.92	1.96	
8-Feb	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.90	1.95	
9-Feb	1.9	1.8	1.9	1.8	1.9	1.8	1.9	1.9	1.8	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.89	1.93	
10-Feb	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	2.0	1.9	1.9	2.0	2.0	1.9	1.92	2.01	
11-Feb	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	A	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.86	1.87	
12-Feb	1.9	1.9	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	1.9	1.9	1.9	1.9	1.9	1.9	1.86	1.87	
13-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.87	1.88	
14-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.90	1.93	
15-Feb	1.9	1.9	1.9	1.9	1.9	2.0	A	1.9	2.0	6.9	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.11	6.94	
16-Feb	1.9	1.8	1.8	1.8	1.8	A	1.9	2.0	2.0	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.88	2.00	
17-Feb	2.0	2.0	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.87	1.98	
18-Feb	1.9	1.9	1.9	A	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.85	1.89	
19-Feb	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	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.83	1.88	
20-Feb	1.9	A	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.85	1.86	
21-Feb	A	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.8	1.9	1.9	A	1.88	1.95	
22-Feb	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	N	N	1.87	1.92	
23-Feb	N	N	N	N	N	N	N	N	N	N	N	C	C	C	1.9	1.9	1.9	1.9	1.8	1.9	1.9	A	1.8	--	1.89	
24-Feb	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	1.9	1.9	1.9	1.9	1.8	A	1.8	1.8	1.86	1.88	
25-Feb	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	1.9	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.85	1.89	
26-Feb	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.9	A	1.8	1.8	1.8	1.8	1.83	1.87	
27-Feb	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.87	1.93	
28-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.8	1.8	1.87	1.94	
1.88 1.88 1.88 1.88 1.87 1.88 1.88 1.89 1.89 2.10 1.89 1.88 1.89 1.89 1.88 1.89 1.88 1.89 1.88 1.88 1.87 1.88 1.87 1.87 1.87																								Diurnal Average		
1.98 1.98 1.96 2.00 2.00 1.99 1.99 2.00 2.00 6.94 2.02 2.02 2.14 1.98 1.96 1.96 2.01 2.01 1.98 2.00 1.95 1.96 1.94 1.95																								Diurnal Maximum		
C - Calibration N - Not Valid A - Automated Daily Zero Span																										

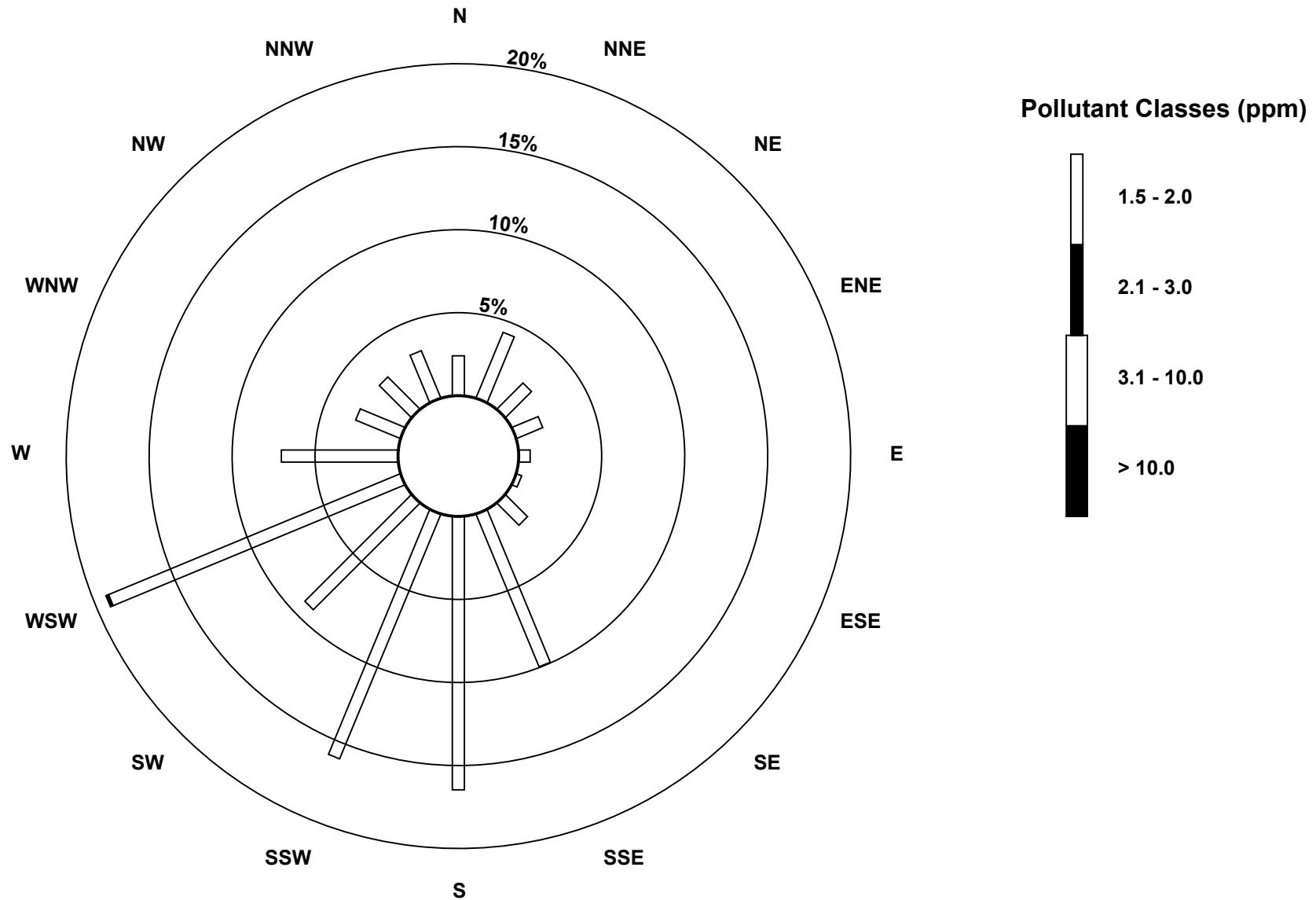
Hourly Maximums

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



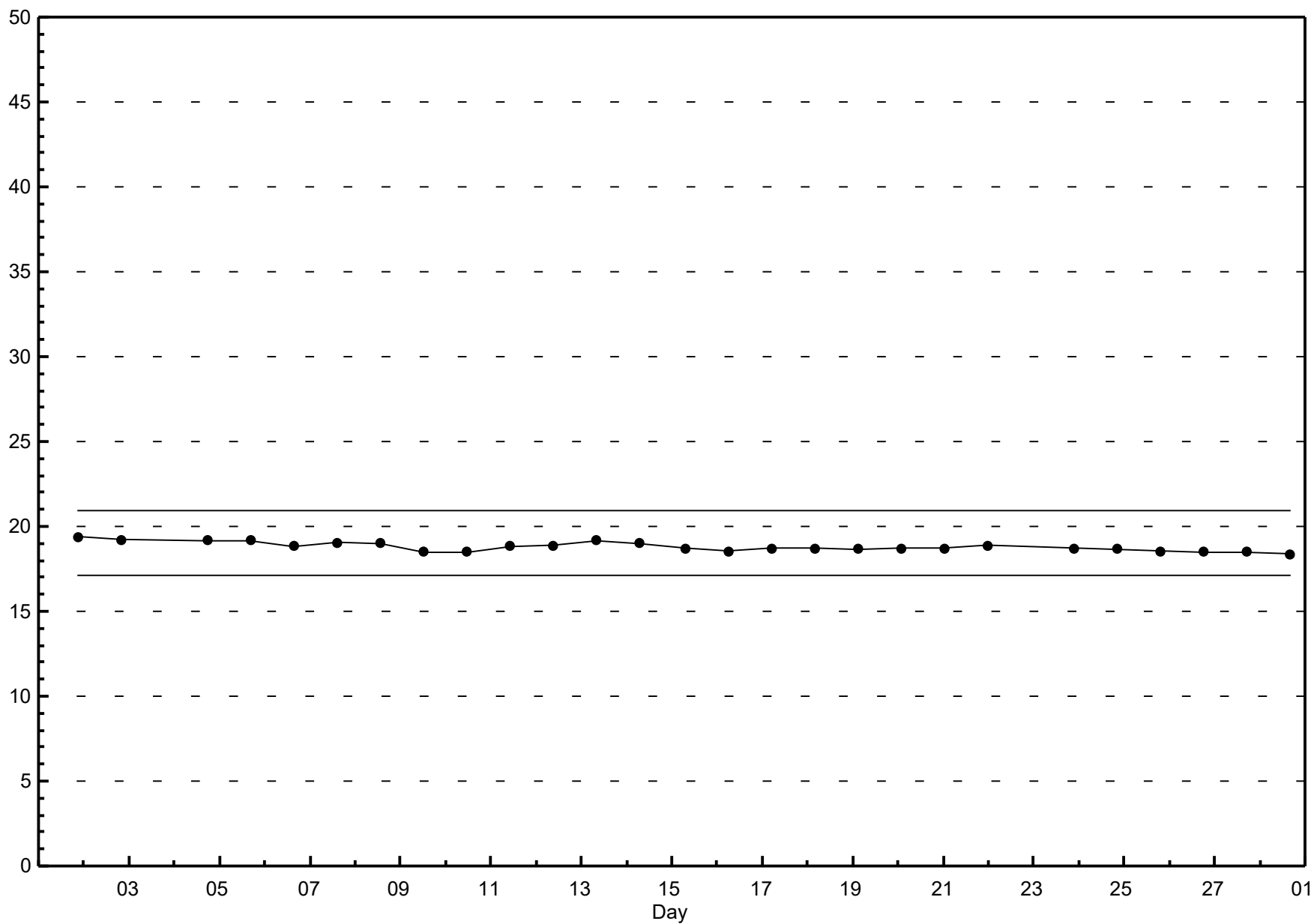
Pollutant Rose

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



Span Responses

Total Hydrocarbons (THC)
Portable Rycroft - February 2017



Hourly Averages

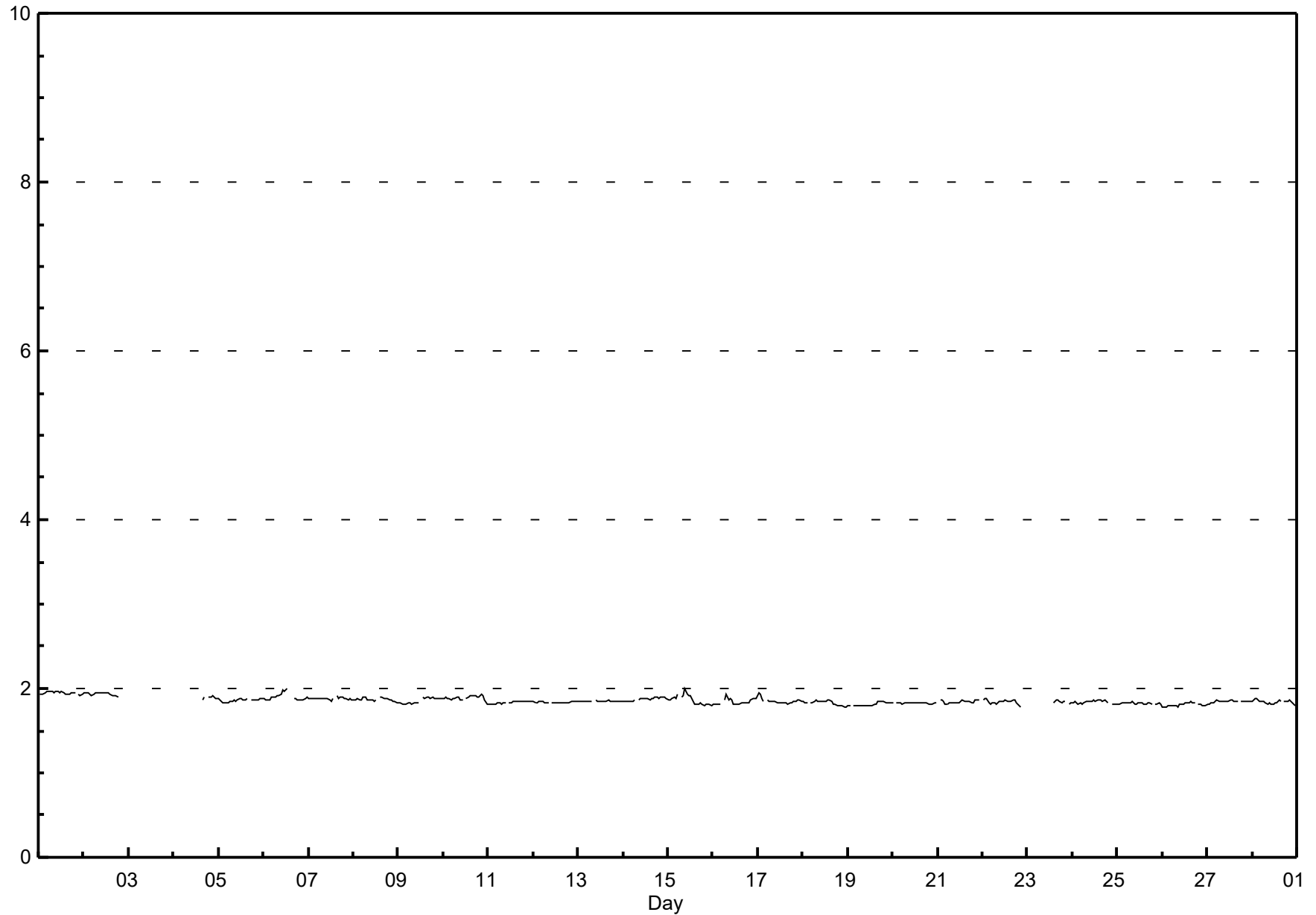
Methane (CH₄) - ppm

Portable Rycroft - February 2017

Maximum Value: 2.00 ppm on Feb 6 13:00																				Maximum Daily Average: 1.95 ppm on Feb 1					Hours in Service: 672				
Minimum Value: 1.8 ppm on Feb 22 21:00																				Minimum Daily Average: 1.81 ppm on Feb 26					Hours of Data: 583				
Maximum Diurnal Average: 1.86 ppm at hour 13																				Minimum Diurnal Average: 1.85 ppm at hour 24					Hours of Missing Data: 89				
Monthly Average: 1.856 ppm																				Percentiles: P ₁ = 1.78 P ₁₀ = 1.81 Q ₁ = 1.83 Median = 1.85 Q ₃ = 1.88 P ₉₀ = 1.91 P ₉₉ = 1.97					Hours of Calibration: 32				
																				Percent Operational Time: 91.5									
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-Feb	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	1.9	1.9	1.9	1.95	1.97			
2-Feb	1.9	2.0	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	N	N	N	N	1.94	1.95			
3-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--			
4-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	--	1.91			
5-Feb	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	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.86	1.89			
6-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.90	2.00			
7-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.88	1.92			
8-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.87	1.90			
9-Feb	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	1.9	1.9	1.9	1.9	1.86	1.89			
10-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.89	1.93			
11-Feb	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	1.8	1.8	1.8	1.83	1.85			
12-Feb	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	1.8	1.8	1.84	1.85			
13-Feb	1.9	1.8	1.9	1.8	1.9	1.8	1.9	1.8	A	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.85	1.86			
14-Feb	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	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.87	1.90			
15-Feb	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.86	1.99			
16-Feb	1.8	1.8	1.8	1.8	1.8	A	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.84	1.93			
17-Feb	1.9	1.9	1.9	1.9	A	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.8	1.85	1.95			
18-Feb	1.8	1.8	1.8	A	1.8	1.8	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.83	1.87			
19-Feb	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.81	1.85			
20-Feb	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			
21-Feb	A	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.9	1.9	A	1.84	1.87			
22-Feb	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	1.9	1.8	1.8	1.8	N	N	N	1.84	1.88			
23-Feb	N	N	N	N	N	N	N	N	N	N	N	C	C	C	1.8	1.9	1.9	1.8	1.8	1.8	1.8	A	1.8	1.8	--	1.87			
24-Feb	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	1.8	1.8	A	1.8	1.8	1.8	1.84	1.87			
25-Feb	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	A	1.8	1.8	1.8	1.8	1.82	1.85			
26-Feb	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	A	1.8	1.8	1.8	1.8	1.8	1.81	1.84			
27-Feb	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.8	1.9	1.9	1.8	1.9	1.9	1.9	1.8	1.8	1.9	A	1.8	1.8	1.8	1.8	1.8	1.9	1.85	1.87			
28-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	A	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.84	1.89			
1.85 1.86 1.85 1.85 1.85 1.85 1.86 1.86 1.86 1.86 1.86 1.86 1.86 1.86 1.86 1.86 1.86 1.86 1.85 1.85 1.85 1.85 1.85																								Diurnal Average					
1.95 1.95 1.94 1.95 1.96 1.97 1.97 1.96 1.94 1.99 1.99 1.97 2.00 1.95 1.94 1.94 1.94 1.94 1.95 1.95 1.93 1.93 1.92 1.93																								Diurnal Maximum					
C - Calibration N - Not Valid A - Automated Daily Zero Span																													

Hourly Averages

Methane (CH₄) - ppm
Portable Rycroft - February 2017



Hourly Maximums

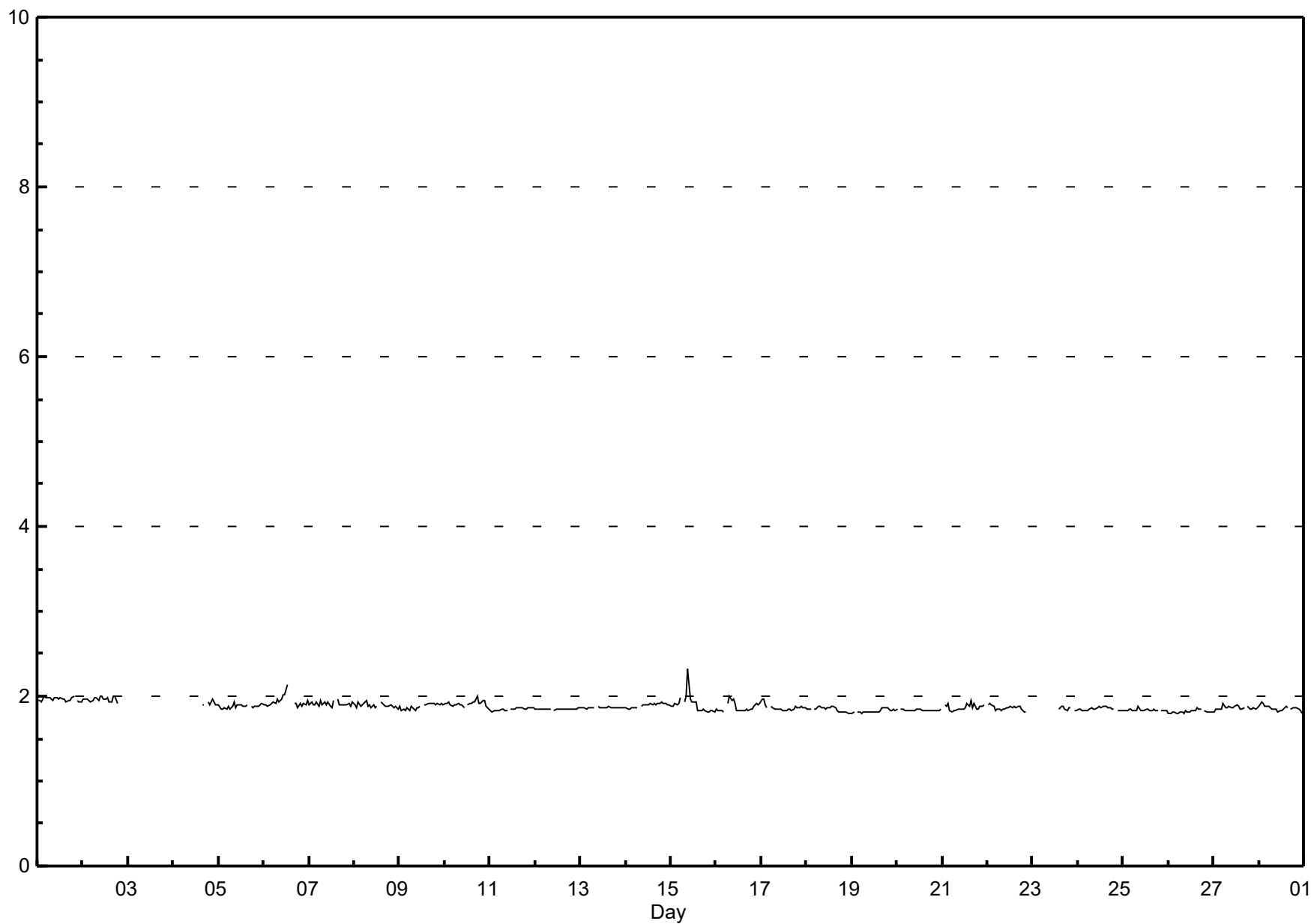
Methane (CH₄) - ppm

Portable Rycroft - February 2017

Maximum Value: 2.33 ppm on Feb 15 10:00																								Hours in Service:	672		
Maximum Daily Average: 1.97 ppm on Feb 2																								Hours of Data:	583		
Minimum Value: 1.8 ppm on Feb 19 00:00																								Hours of Missing Data:	89		
Maximum Diurnal Average: 1.90 ppm at hour 10																								Hours of Calibration:	32		
Monthly Average: 1.876 ppm																								Percent Operational Time:	91.5		
Minimum Daily Average: 1.82 ppm on Feb 26																											
Minimum Diurnal Average: 1.86 ppm at hour 24																											
Percentiles: P ₁ = 1.80 P ₁₀ = 1.83 Q ₁ = 1.84 Median = 1.86 Q ₃ = 1.90 P ₉₀ = 1.95 P ₉₉ = 2.00																											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Feb	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	A	1.9	1.9	1.9	1.96	2.00
2-Feb	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	1.9	A	N	N	N	N	1.97	2.01
3-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
4-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1.9	1.9	A	1.9	1.9	1.9	2.0	1.9	1.9	1.9	--	1.96
5-Feb	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	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.88	1.93	
6-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.1	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.93	2.13	
7-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.91	1.96	
8-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.89	1.95	
9-Feb	1.9	1.8	1.9	1.8	1.9	1.8	1.9	1.9	1.8	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.88	1.92	
10-Feb	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	2.0	1.9	1.9	2.0	2.0	1.9	1.8	1.91	2.01	
11-Feb	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	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.85	1.87	
12-Feb	1.9	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.9	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.85	1.86	
13-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.86	1.88	
14-Feb	1.9	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	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.89	1.93	
15-Feb	1.9	1.9	1.9	1.9	1.9	2.0	A	1.9	2.0	2.3	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.90	2.33	
16-Feb	1.8	1.8	1.8	1.8	1.8	A	1.9	2.0	1.9	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.87	1.99	
17-Feb	2.0	2.0	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.87	1.97	
18-Feb	1.9	1.8	1.8	A	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.84	1.89	
19-Feb	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.83	1.87	
20-Feb	1.8	A	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.84	1.85	
21-Feb	A	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	1.9	1.9	1.8	1.9	1.9	1.9	A	1.87	1.95	
22-Feb	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	N	N	N	1.86	1.91	
23-Feb	N	N	N	N	N	N	N	N	N	N	N	C	C	C	1.9	1.9	1.9	1.9	1.8	1.9	1.9	A	1.8	1.8	--	1.89	
24-Feb	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	1.9	1.9	1.9	1.9	1.8	A	1.8	1.8	1.8	1.85	1.88	
25-Feb	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.84	1.89	
26-Feb	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.9	A	1.8	1.8	1.8	1.8	1.8	1.82	1.86	
27-Feb	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.86	1.92	
28-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.86	1.93	
1.87 1.87 1.87 1.87 1.86 1.87 1.88 1.88 1.88 1.90 1.89 1.87 1.88 1.88 1.87 1.88 1.88 1.88 1.87 1.87 1.87 1.87 1.86 1.86																										Diurnal Average	
1.97 1.97 1.96 2.00 1.99 1.98 1.99 1.99 1.99 2.33 2.02 2.02 2.13 1.98 1.96 1.96 2.00 2.01 1.98 1.99 1.95 1.96 1.94 1.95																										Diurnal Maximum	
C - Calibration N - Not Valid A - Automated Daily Zero Span																											

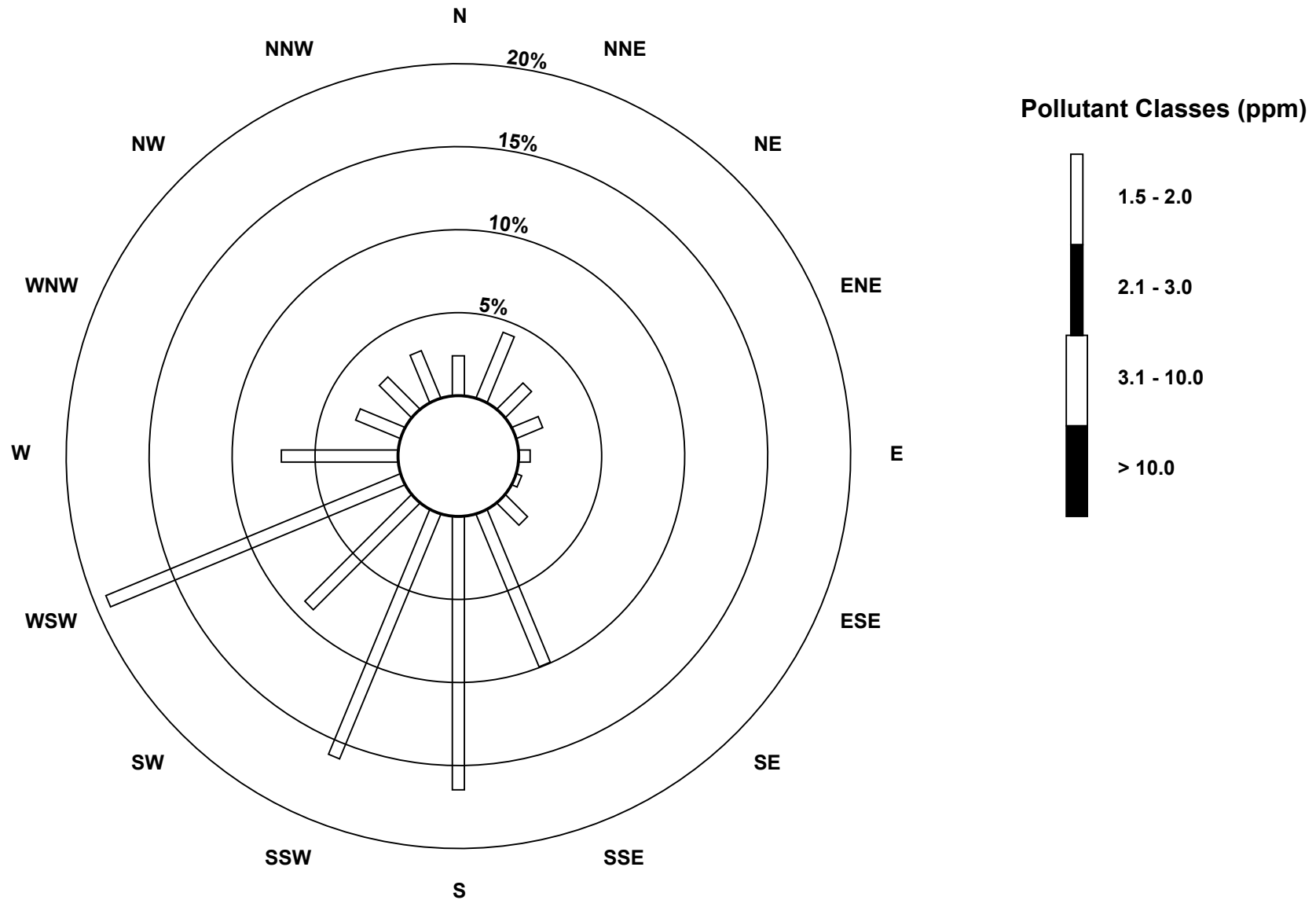
Hourly Maximums

Methane (CH₄) - ppm
Portable Rycroft - February 2017



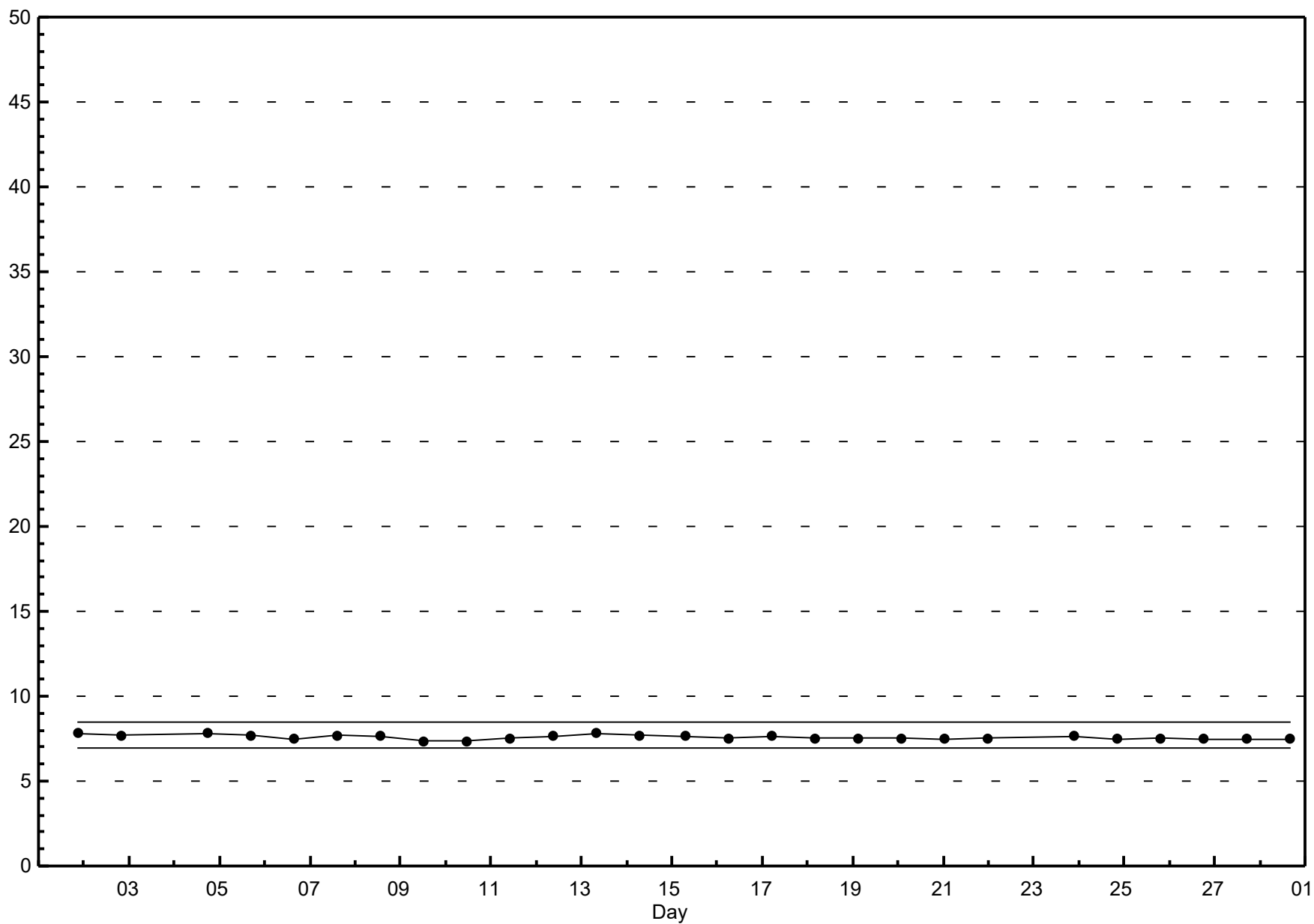
Pollutant Rose

Methane (CH₄) - ppm
Portable Rycroft - February 2017



Span Responses

Methane (CH₄)
Portable Rycroft - February 2017

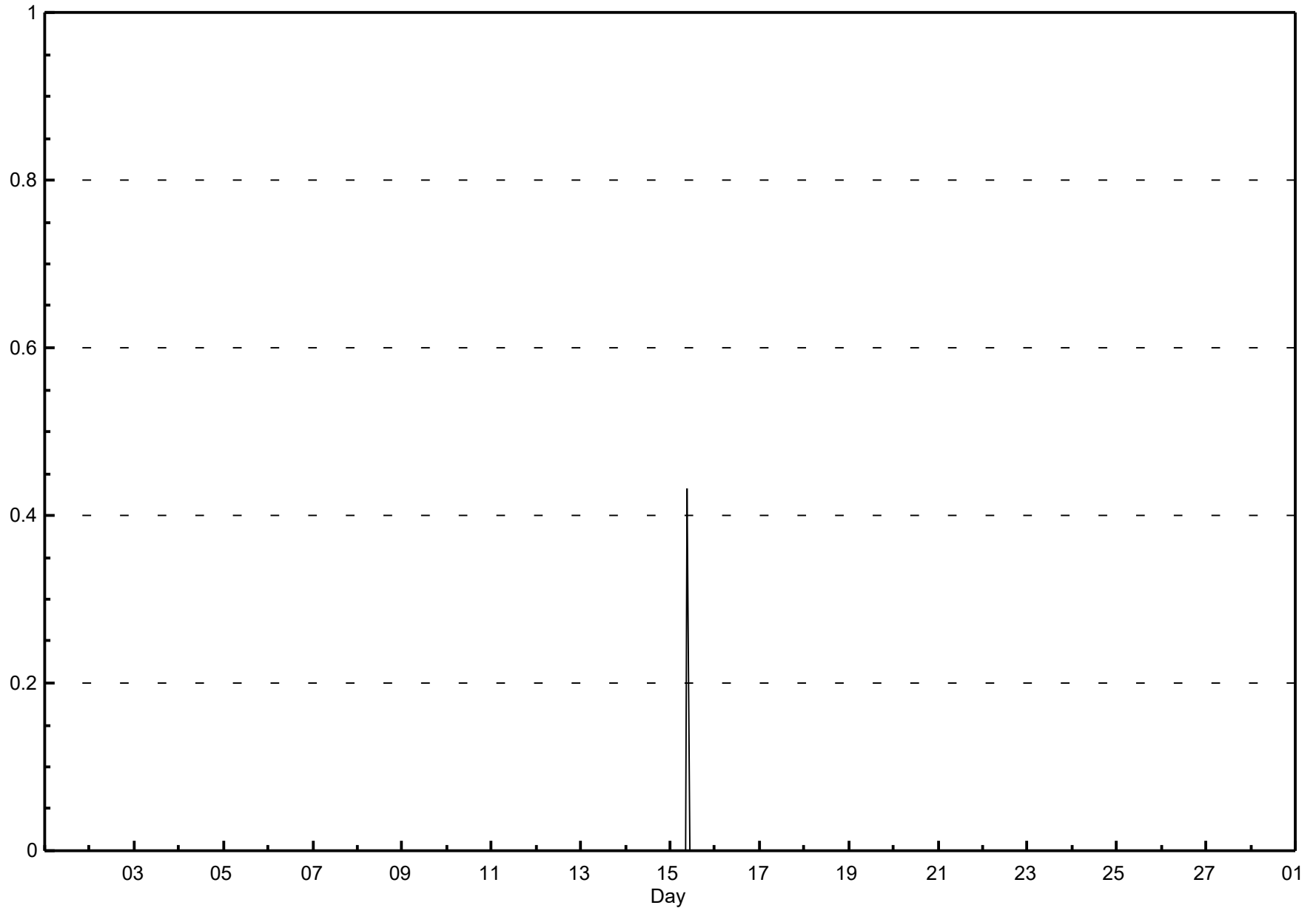


Hourly Averages

Non Methane Hydrocarbon (NMHC) - ppm

Portable Rycroft - February 2017

Maximum Value: 0.43 ppm on Feb 15 10:00																					Maximum Daily Average: 0.02 ppm on Feb 15				Hours in Service: 672		
Minimum Value: 0.0 ppm on Feb 1 01:00																					Minimum Daily Average: 0.00 ppm on Feb 5				Hours of Data: 583		
Maximum Diurnal Average: 0.02 ppm at hour 10																					Minimum Diurnal Average: 0.00 ppm at hour 6				Hours of Missing Data: 89		
Monthly Average: 0.001 ppm																					Percentiles: P ₁ = 0.00 P ₁₀ = 0.00 Q ₁ = 0.00 Median = 0.00 Q ₃ = 0.00 P ₉₀ = 0.00 P ₉₉ = 0.00				Hours of Calibration: 32		
																					Percent Operational Time: 91.5						
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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	
2-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	N	N	N	N	0.00	0.00	
3-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
4-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.00
5-Feb	0.0	0.0	0.0	0.0	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	
6-Feb	0.0	0.0	0.0	0.0	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	0.00	0.00	
7-Feb	0.0	0.0	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	
8-Feb	0.0	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	
9-Feb	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	
10-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.43	
16-Feb	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
17-Feb	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
19-Feb	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
20-Feb	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
21-Feb	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	
22-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N	N	N	0.00	0.00	
23-Feb	N	N	N	N	N	N	N	N	N	N	N	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	--	0.00	
24-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	
25-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	
26-Feb	0.0	0.0	0.0	0.0	0.0	0.0	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	
27-Feb	0.0	0.0	0.0	0.0	0.0	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	
28-Feb	0.0	0.0	0.0	0.0	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	
0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.02 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00																									Diurnal Average		
0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.43 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00																									Diurnal Maximum		
C - Calibration N - Not Valid A - Automated Daily Zero Span																											



Hourly Maximums

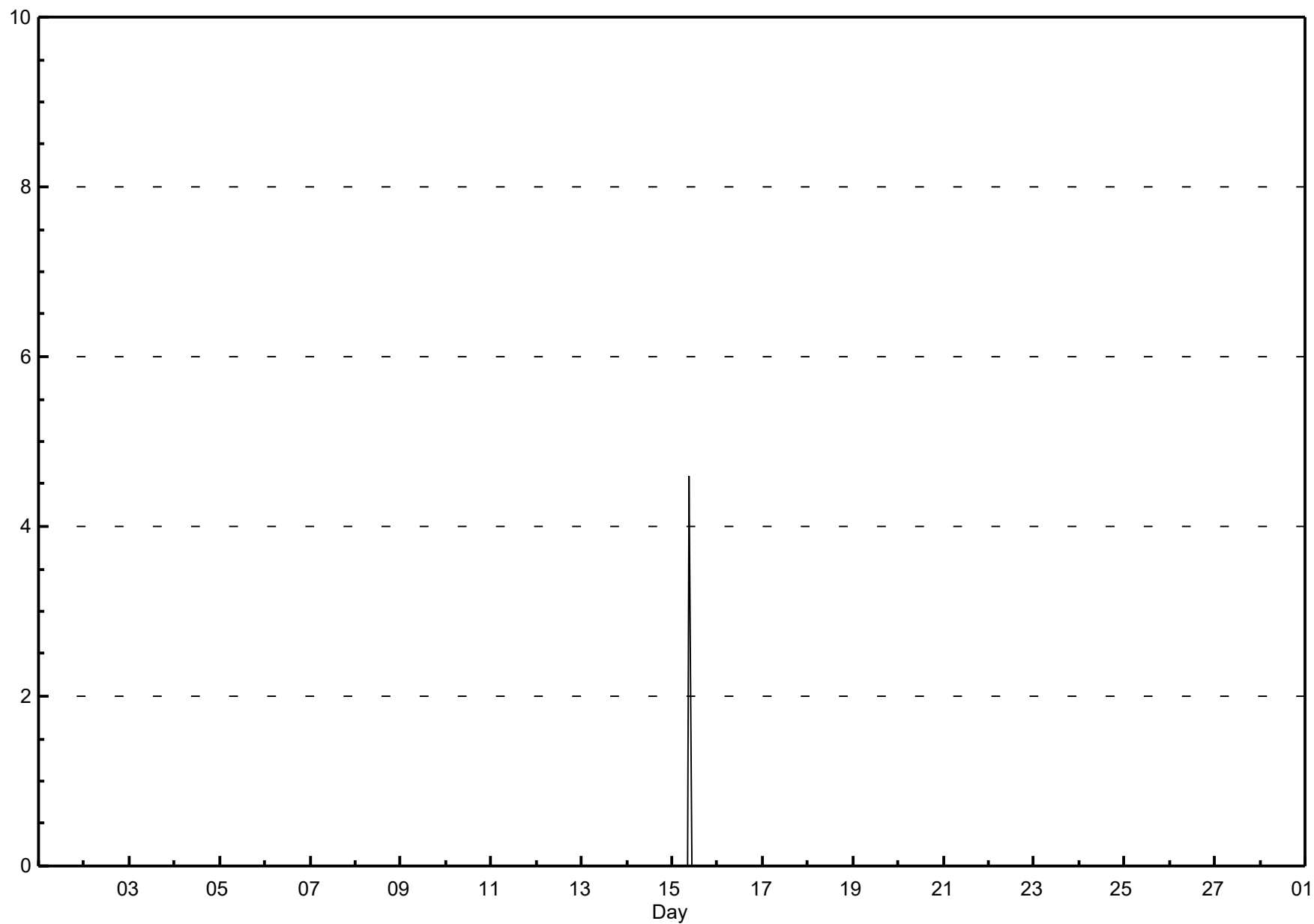
Non Methane Hydrocarbon (NMHC) - ppm

Portable Rycroft - February 2017

Maximum Value: 4.60 ppm on Feb 15 10:00																								Hours in Service: 672		
Maximum Daily Average: 0.20 ppm on Feb 15																								Hours of Data: 583		
Minimum Value: 0.0 ppm on Feb 5 18:00																								Hours of Missing Data: 89		
Maximum Diurnal Average: 0.19 ppm at hour 10																								Hours of Calibration: 32		
Monthly Average: 0.008 ppm																								Percent Operational Time: 91.5		
Minimum Daily Average: 0.00 ppm on Feb 6																										
Minimum Diurnal Average: 0.00 ppm at hour 23																										
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																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
2-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	N	N	N	N	0.0
3-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--
4-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--
5-Feb	0.0	0.0	0.0	0.0	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
6-Feb	0.0	0.0	0.0	0.0	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
7-Feb	0.0	0.0	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
8-Feb	0.0	0.0	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
9-Feb	0.0	0.0	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
10-Feb	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	0.0	0.0
11-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15-Feb	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.20	4.60
16-Feb	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17-Feb	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18-Feb	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19-Feb	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20-Feb	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21-Feb	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N	N	N	0.0	0.0
23-Feb	N	N	N	N	N	N	N	N	N	N	N	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	--	0.0
24-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
25-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
26-Feb	0.0	0.0	0.0	0.0	0.0	0.0	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
27-Feb	0.0	0.0	0.0	0.0	0.0	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
28-Feb	0.0	0.0	0.0	0.0	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 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.19 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00																										Diurnal Average
0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 4.60 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00																										Diurnal Maximum
C - Calibration N - Not Valid A - Automated Daily Zero Span																										

Hourly Maximums

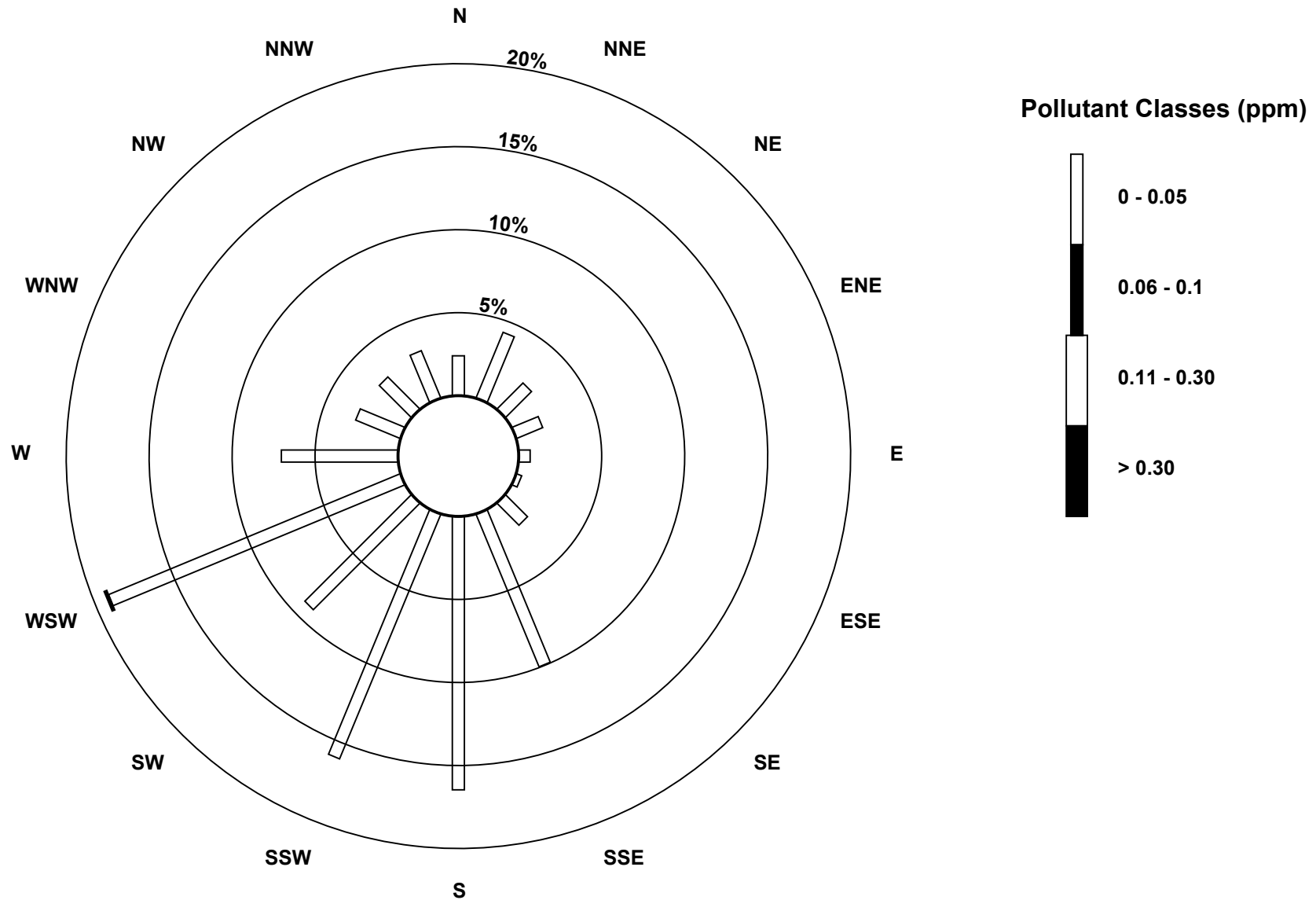
Non Methane Hydrocarbon (NMHC) - ppm
Portable Rycroft - February 2017

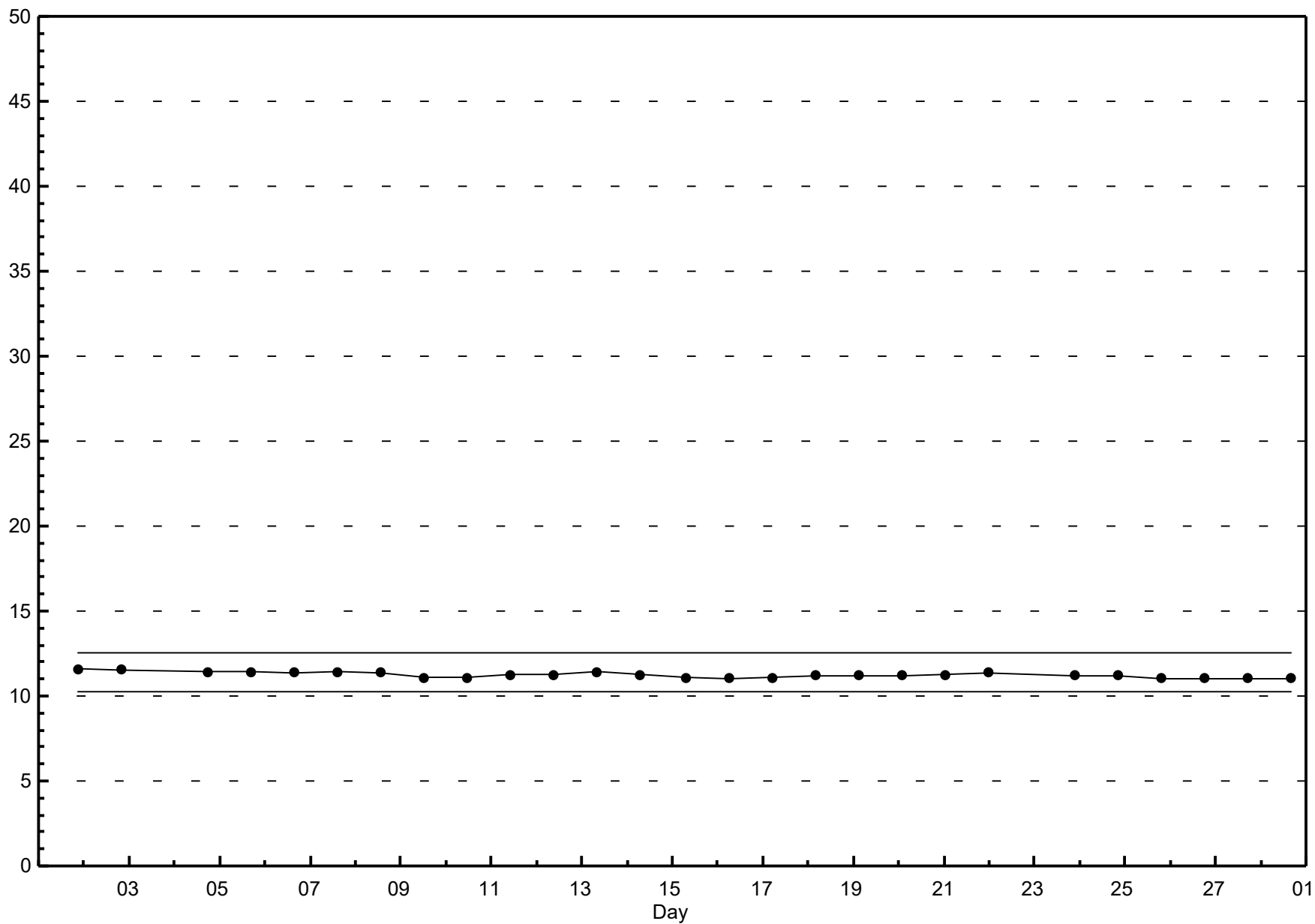


Pollutant Rose

Non Methane Hydrocarbon (NMHC) - ppm

Portable Rycroft - February 2017





Hourly Averages

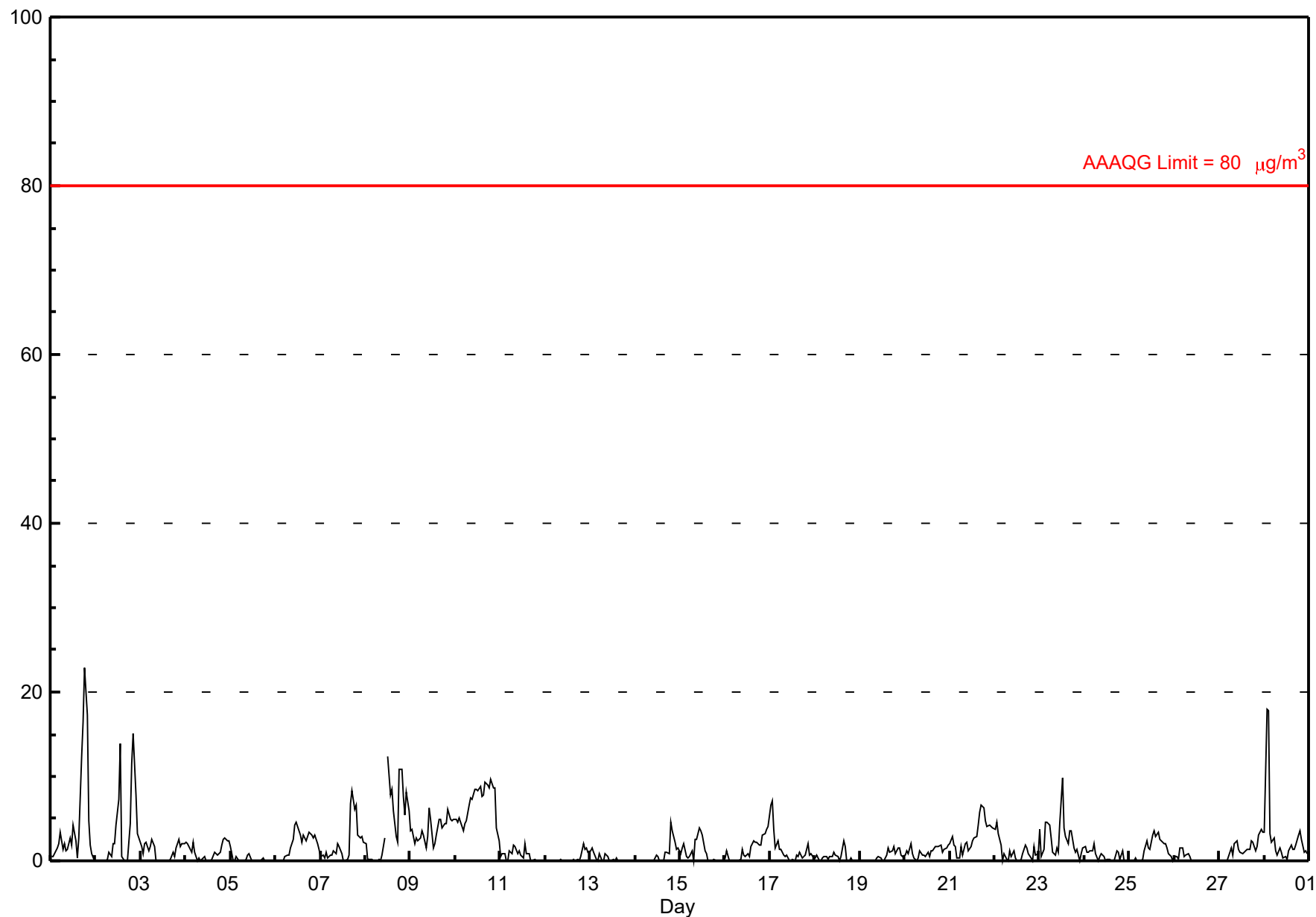
PM2.5 (PM_{2.5}) - µg/m³

Portable Rycroft - February 2017

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 22.9 µg/m³ on Feb 1 19:00 Maximum Daily Average: 6.8 µg/m³ on Feb 10																								Hours in Service: 672 Hours of Data: 671 Hours of Missing Data: 1 Hours of Calibration: 0 Percent Operational Time: 99.9		
Minimum Value: 0 µg/m³ on Feb 2 00:00 Maximum Diurnal Average: 3.2 µg/m³ at hour 20 Monthly Average: 1.77 µg/m³ Minimum Daily Average: 0.2 µg/m³ on Feb 5 Minimum Diurnal Average: 0.9 µg/m³ at hour 8 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.9 Q ₃ = 2.2 P ₉₀ = 4.5 P ₉₉ = 13.6																										
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-Feb	0	0	1	2	2	3	1	2	1	1	3	2	4	2	0	3	12	16	23	17	5	2	1	0	4.4	22.9
2-Feb	0	0	0	0	0	0	0	1	1	2	2	4	7	14	0	0	0	0	4	11	15	8	3	3	3.2	15.1
3-Feb	2	1	2	2	1	2	2	2	0	0	0	0	0	0	0	0	0	1	1	2	3	2	2	2	1.1	2.6
4-Feb	2	2	1	1	2	1	0	0	0	0	1	0	0	0	0	1	1	1	1	2	2	3	2	2	1.1	2.8
5-Feb	2	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.8
6-Feb	0	0	0	0	0	0	1	1	2	3	4	5	4	3	2	3	2	3	3	3	3	3	2	1	2.0	4.6
7-Feb	0	1	0	1	0	1	1	1	1	2	2	1	0	0	0	1	7	8	6	7	3	3	3	2	2.1	8.3
8-Feb	2	0	0	0	0	0	0	0	0	1	3	M	12	8	9	6	3	2	11	11	8	5	8	6	4.1	12.4
9-Feb	4	4	2	3	2	3	3	3	1	3	6	5	1	2	3	5	5	4	4	4	6	5	5	5	3.7	6.3
10-Feb	5	5	5	5	3	4	5	7	8	7	8	8	8	9	8	8	9	9	9	10	9	9	4	2	6.8	9.7
11-Feb	1	1	1	0	0	1	1	2	2	1	1	1	0	2	1	1	0	0	0	0	0	0	0	0	0.6	2.0
12-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	1	0.3	2.1
13-Feb	1	2	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.6
14-Feb	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	5	4	2	1	1	0.7	4.5
15-Feb	1	2	2	1	0	0	1	0	3	3	4	3	3	1	1	0	0	0	0	0	0	0	0	0	1.0	3.9
16-Feb	0	1	0	0	0	0	0	0	0	1	1	0	1	1	2	2	2	2	2	2	3	3	4	4	1.3	4.1
17-Feb	7	7	4	1	2	1	1	1	1	1	0	0	0	0	1	1	1	0	1	1	2	1	1	0	1.4	7.1
18-Feb	0	1	0	0	0	1	0	0	0	1	1	1	1	0	0	2	2	0	0	0	0	0	0	0	0.4	2.3
19-Feb	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	1	2	1	2	1	1	1	0.5	1.6
20-Feb	1	1	1	2	1	0	0	0	1	1	1	1	1	0	1	1	2	2	2	2	1	1	2	2	1.1	2.0
21-Feb	2	3	2	2	0	0	2	1	2	2	1	2	2	3	3	4	6	7	6	5	4	4	4	4	2.9	6.6
22-Feb	4	5	3	2	0	1	0	0	1	1	1	0	0	0	0	1	2	2	1	0	0	2	1	1	1.1	4.6
23-Feb	4	1	1	5	5	4	3	1	1	2	1	4	10	4	3	2	4	4	2	1	1	0	1	2	2.6	9.9
24-Feb	2	1	1	1	1	2	1	0	1	1	1	0	0	0	0	0	0	1	1	0	1	0	0	0	0.6	2.0
25-Feb	0	0	0	0	0	0	0	0	1	2	2	1	3	4	3	3	2	2	2	2	1	1	1	0	1.3	3.6
26-Feb	1	1	0	2	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.6
27-Feb	0	0	0	0	0	1	2	1	2	2	1	1	1	1	1	1	1	2	2	1	2	3	4	3	1.4	3.8
28-Feb	3	18	18	3	2	3	1	1	2	1	0	1	0	1	2	1	1	2	3	4	3	1	1	1	3.0	18.0
1.5 1.9 1.6 1.2 0.9 1.1 1.0 0.9 1.1 1.4 1.6 1.5 2.2 2.0 1.5 1.7 2.3 2.5 3.1 3.2 2.8 2.2 1.8 1.6																								Diurnal Average		
6.6 18.0 17.8 4.6 4.5 4.5 4.8 6.6 7.5 7.3 8.4 8.4 12.4 13.9 8.5 7.7 12.4 16.5 22.9 17.2 15.1 8.6 8.1 5.9																								Diurnal Maximum		
M - Maintenance Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																										

Hourly Averages

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



Hourly Maximums

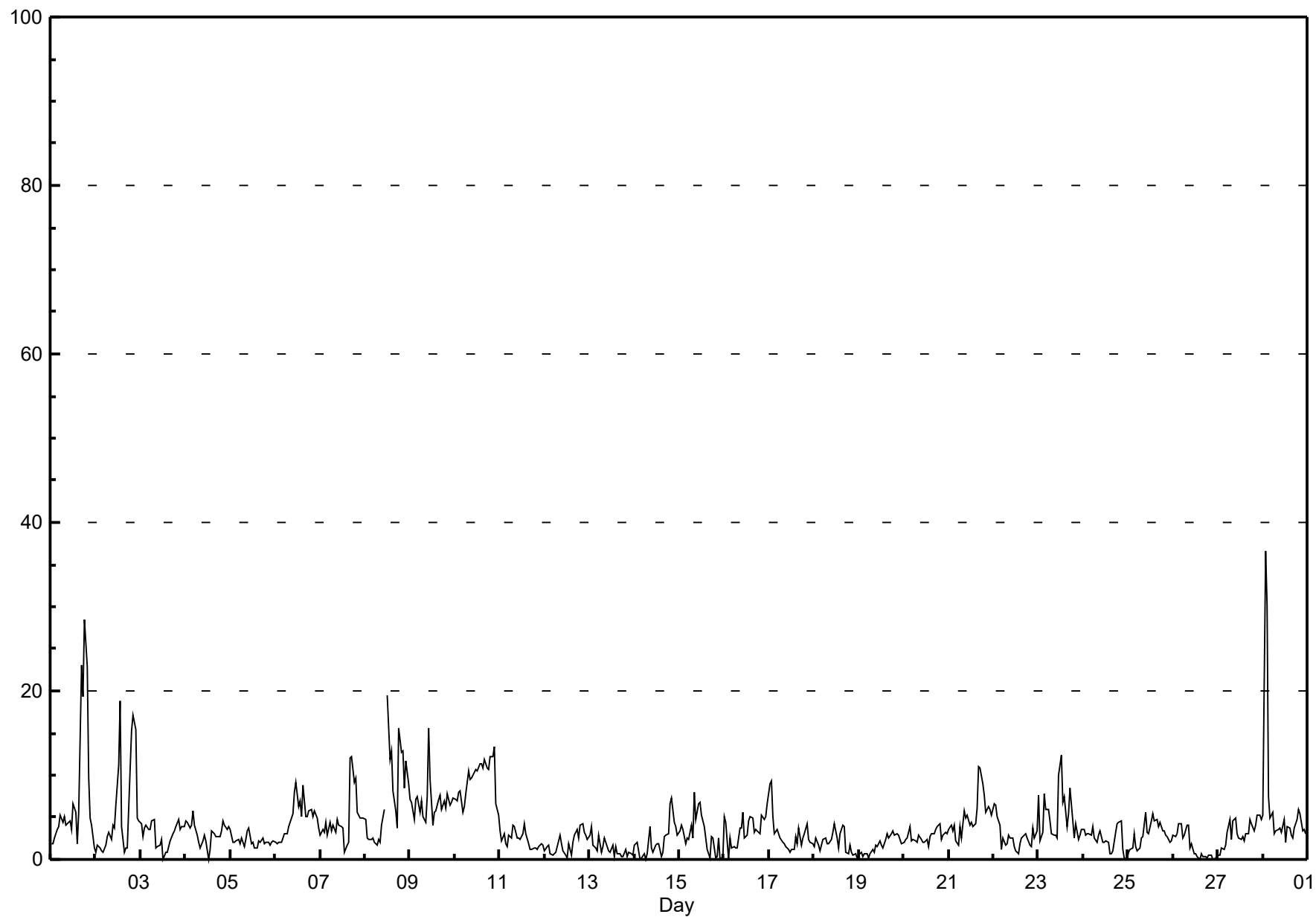
PM2.5 (PM_{2.5}) - µg/m³

Portable Rycroft - February 2017

Maximum Value: 36.6 μg/m ³ on Feb 28 02:00																								Maximum Daily Average: 9.5 μg/m ³ on Feb 10				Hours in Service: 672	
Minimum Value: 0 μg/m ³ on Feb 3 13:00																								Minimum Daily Average: 1.3 μg/m ³ on Feb 13				Hours of Data: 671	
Maximum Diurnal Average: 5.4 μg/m ³ at hour 20																								Minimum Diurnal Average: 2.8 μg/m ³ at hour 5				Hours of Missing Data: 1	
Monthly Average: 3.86 μg/m ³																								Percentiles: P ₁ = 0.0 P ₁₀ = 0.9 Q ₁ = 1.8 Median = 3.0 Q ₃ = 4.6 P ₉₀ = 7.4 P ₉₉ = 19.3				Hours of Calibration: 0	
																								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-Feb	2	2	3	4	4	5	4	5	4	4	5	4	7	6	2	6	23	19	29	23	10	5	4	1	7.4	28.5			
2-Feb	1	2	1	1	1	2	3	3	2	4	4	6	11	19	4	1	1	1	11	15	17	15	5	5	5.7	18.8			
3-Feb	4	3	4	4	4	4	5	5	1	2	2	2	0	1	1	1	2	3	3	4	5	4	4	4	2.9	4.7			
4-Feb	5	4	4	4	6	4	3	2	1	2	3	2	0	1	3	3	3	3	3	3	5	4	4	4	3.1	5.7			
5-Feb	4	2	2	2	2	2	3	2	2	3	4	2	2	1	1	2	2	2	2	2	2	2	2	2	2.2	3.7			
6-Feb	2	2	2	2	3	3	3	4	4	5	8	9	6	7	5	9	5	5	6	6	5	6	5	4	4.8	9.1			
7-Feb	3	3	3	4	3	4	3	4	3	5	4	4	4	1	2	2	12	12	9	10	6	5	5	5	4.9	12.2			
8-Feb	5	3	2	2	3	2	2	2	2	4	6	M	19	12	13	8	6	4	16	13	13	9	12	9	7.2	19.4			
9-Feb	7	7	5	7	7	6	7	5	4	7	16	9	4	6	6	7	8	6	7	6	8	6	7	7	6.9	15.6			
10-Feb	7	7	8	8	6	6	8	10	10	10	10	11	10	11	11	11	12	11	11	12	12	13	7	5	9.5	13.4			
11-Feb	3	2	3	2	2	3	3	4	4	3	3	2	3	4	3	2	1	1	1	1	1	2	2	2	2.4	4.3			
12-Feb	1	2	2	1	1	1	1	2	3	2	1	0	0	2	0	2	3	4	3	4	4	3	3	2	1.9	4.2			
13-Feb	3	4	2	1	1	3	1	2	2	2	1	1	2	0	2	1	1	0	0	1	0	1	1	1	1.3	3.8			
14-Feb	2	2	1	0	0	1	0	1	4	1	1	2	2	2	0	1	3	3	3	7	7	4	4	3	2.2	7.3			
15-Feb	3	4	3	2	3	2	4	3	8	5	7	7	5	4	3	1	0	3	3	0	0	2	0	0	3.0	8.0			
16-Feb	5	4	0	3	1	2	1	1	4	4	6	3	3	5	5	5	3	4	3	3	5	5	5	7	3.6	6.6			
17-Feb	9	9	5	3	4	3	3	2	2	2	1	1	1	1	3	2	4	2	3	3	4	2	2	2	3.0	9.4			
18-Feb	2	2	2	1	2	2	3	2	2	2	3	4	3	1	3	4	4	1	1	2	1	1	1	0	2.0	4.2			
19-Feb	0	1	0	1	1	0	1	1	1	2	1	2	2	1	2	3	3	3	3	3	3	3	2	2	1.7	3.3			
20-Feb	2	2	3	4	2	2	2	2	3	2	2	2	2	1	3	3	3	4	4	4	2	3	3	3	2.7	4.2			
21-Feb	4	4	3	4	2	2	4	3	6	5	5	4	4	4	4	6	11	11	9	8	6	6	6	5	5.2	10.9			
22-Feb	7	7	5	4	1	2	2	2	3	3	3	2	1	1	2	2	3	3	3	2	1	4	3	3	2.7	6.6			
23-Feb	8	2	3	8	6	6	5	3	3	3	2	10	12	7	7	4	5	8	5	3	4	2	3	4	5.1	12.5			
24-Feb	4	3	3	3	3	4	3	2	3	3	2	2	2	2	1	1	1	3	4	4	5	1	0	0	2.4	4.6			
25-Feb	1	1	1	3	2	1	1	3	3	6	3	3	5	6	5	5	4	4	3	3	3	3	2	2	3.0	5.6			
26-Feb	3	3	3	4	4	3	3	4	4	1	2	1	1	0	0	1	0	0	0	0	0	0	0	0	1.6	4.3			
27-Feb	0	1	1	1	2	3	5	2	5	5	3	2	2	3	2	3	3	5	4	3	4	5	5	5	3.1	5.3			
28-Feb	5	37	30	7	5	6	3	3	4	4	3	5	2	4	4	3	3	4	5	6	5	3	4	3	6.5	36.6			
3.6 4.4 3.8 3.2 2.8 3.0 2.9 3.0 3.4 3.6 3.9 3.8 4.2 4.0 3.5 3.5 4.6 4.6 5.4 5.4 5.0 4.3 3.5 3.2																								Diurnal Average					
9.0 36.6 30.2 8.2 7.5 6.3 7.8 10.5 9.5 9.7 15.6 10.7 19.4 18.8 12.9 10.9 23.1 19.3 28.5 22.9 17.1 15.5 11.6 8.9																								Diurnal Maximum					
M - Maintenance																													

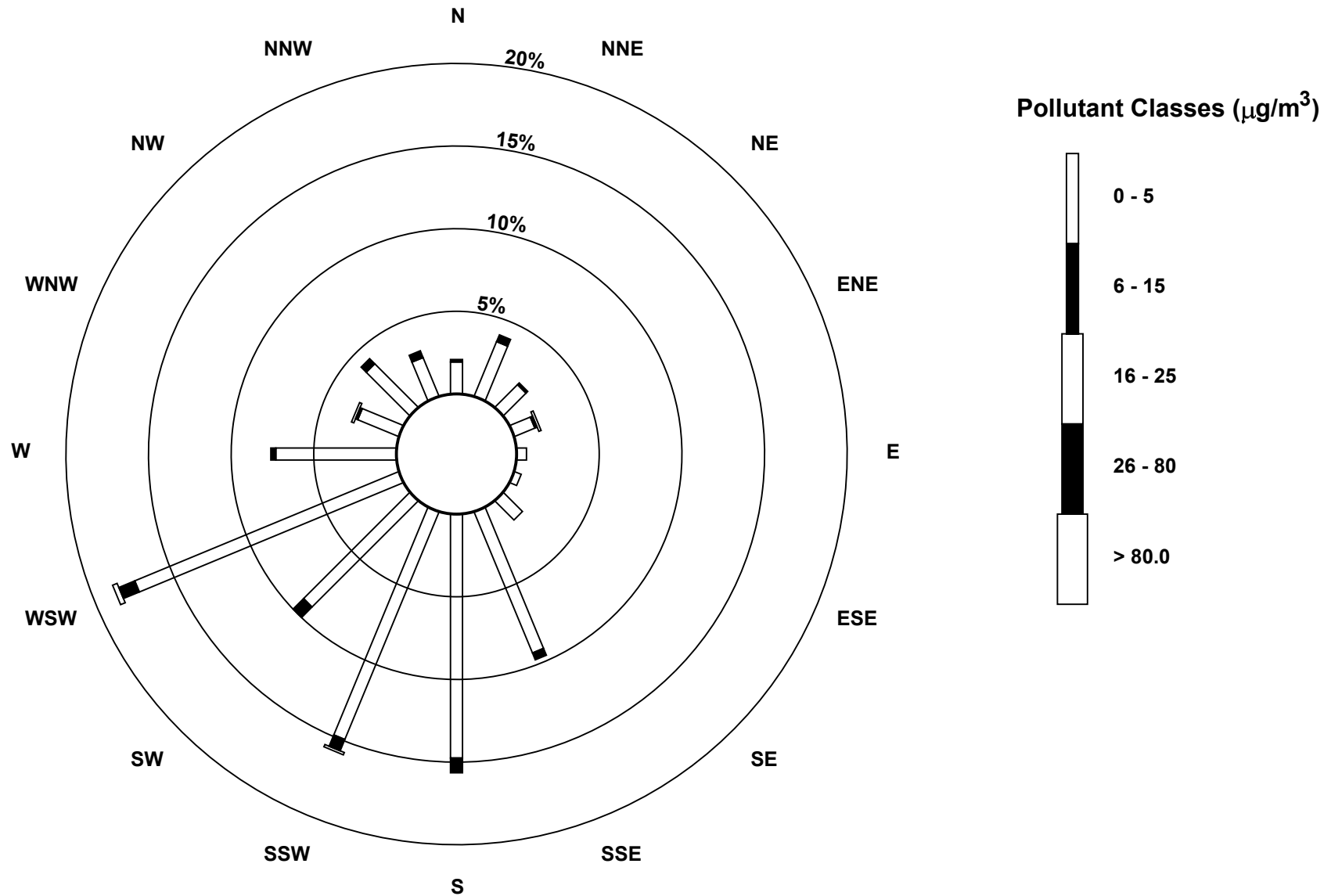
Hourly Maximums

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



Pollutant Rose

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



Hourly Averages

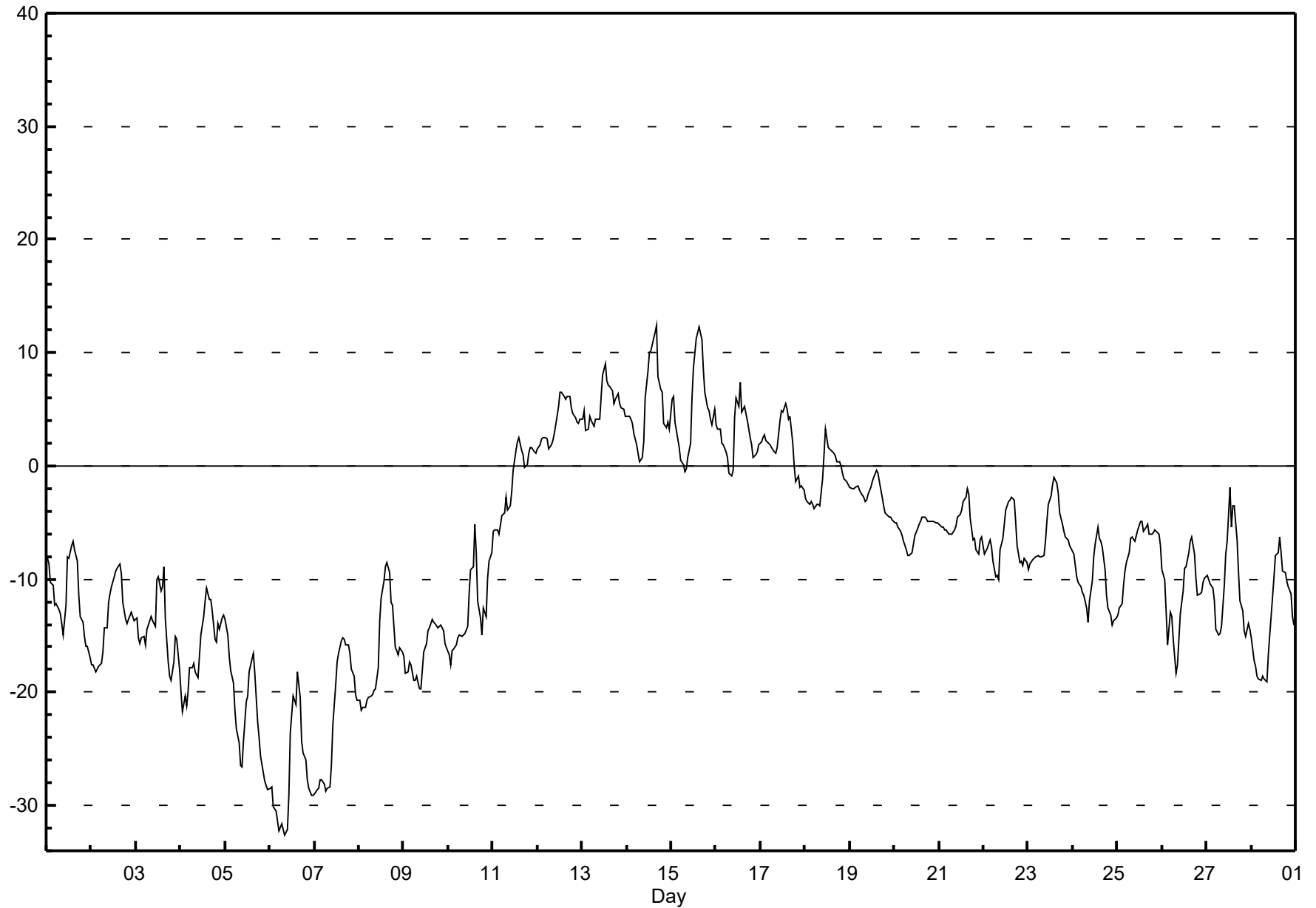
External Temperature (ET) - °C

Portable Rycroft - February 2017

Maximum Value: 12.4 °C on Feb 14 17:00																				Maximum Daily Average: 5.5 °C on Feb 14					Hours in Service: 672	
Minimum Value: -33 °C on Feb 6 09:00																				Minimum Daily Average: -27.2 °C on Feb 6					Hours of Data: 672	
Maximum Diurnal Average: -3.8 °C at hour 16																				Minimum Diurnal Average: -11.0 °C at hour 9					Hours of Missing Data: 0	
Monthly Average: -8.18 °C																				Percentiles: P ₁ = -30.8 P ₁₀ = -19.8 Q ₁ = -14.9 Median = -7.8 Q ₃ = -1.1 P ₉₀ = 4.1 P ₉₉ = 11.1					Hours of Calibration: 0	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	-8	-9	-10	-11	-12	-12	-13	-13	-14	-15	-12	-8	-8	-7	-7	-7	-8	-11	-13	-14	-15	-16	-16	-17	-11.5	-6.6
2-Feb	-18	-18	-18	-18	-18	-17	-16	-14	-14	-12	-11	-11	-10	-9	-9	-9	-9	-12	-14	-14	-14	-13	-13	-14	-13.5	-8.6
3-Feb	-13	-15	-16	-15	-15	-16	-14	-14	-13	-14	-14	-10	-10	-11	-11	-9	-13	-17	-19	-19	-17	-15	-15	-18	-14.3	-8.9
4-Feb	-20	-22	-20	-21	-20	-18	-18	-17	-18	-19	-17	-15	-13	-12	-11	-12	-12	-13	-15	-16	-14	-14	-13	-13	-16.0	-10.8
5-Feb	-14	-15	-17	-18	-19	-22	-23	-25	-26	-27	-24	-21	-20	-18	-17	-17	-18	-23	-24	-26	-27	-28	-28	-29	-21.8	-13.6
6-Feb	-28	-28	-30	-30	-31	-32	-32	-32	-33	-32	-29	-24	-20	-21	-21	-18	-20	-24	-25	-26	-28	-28	-29	-29	-27.2	-18.2
7-Feb	-29	-29	-28	-28	-28	-28	-29	-28	-28	-26	-23	-19	-17	-17	-15	-15	-15	-16	-16	-17	-18	-19	-20	-21	-22.0	-15.2
8-Feb	-21	-22	-21	-21	-21	-20	-20	-20	-20	-20	-18	-14	-12	-10	-9	-9	-9	-12	-12	-16	-16	-17	-16	-16	-16.4	-8.6
9-Feb	-17	-18	-18	-17	-18	-19	-19	-19	-20	-20	-18	-16	-16	-15	-14	-14	-14	-14	-14	-14	-14	-15	-16	-16	-16.4	-13.5
10-Feb	-17	-18	-16	-16	-16	-15	-15	-15	-15	-15	-14	-11	-9	-9	-5	-8	-12	-13	-15	-13	-13	-10	-8	-8	-12.7	-5.2
11-Feb	-6	-6	-6	-6	-5	-4	-4	-3	-4	-4	-2	0	1	2	2	1	1	0	0	1	2	2	1	1	-1.4	2.5
12-Feb	1	2	2	2	3	2	2	2	2	3	4	5	6	7	6	6	6	6	5	5	4	4	4	4	3.9	6.6
13-Feb	4	5	3	3	4	4	4	4	4	4	6	8	9	8	7	7	7	6	6	6	6	5	5	4	5.4	9.0
14-Feb	4	4	4	4	3	2	1	0	1	2	6	8	10	10	11	12	12	8	7	6	4	3	4	3	5.5	12.4
15-Feb	6	6	4	2	2	1	0	0	0	1	2	6	9	11	12	12	11	9	7	5	5	4	4	5	5.1	12.3
16-Feb	4	3	3	2	2	1	1	-1	-1	0	4	6	5	7	5	5	5	4	2	2	1	1	1	2	2.7	7.4
17-Feb	2	2	3	2	2	2	2	1	1	2	4	5	5	6	5	4	4	2	0	-1	-1	-2	-2	-2	1.9	5.5
18-Feb	-3	-3	-3	-3	-3	-4	-3	-3	-4	-1	1	3	2	2	1	1	1	0	0	0	-1	-1	-1	-2	-1.0	3.2
19-Feb	-2	-2	-2	-2	-2	-2	-2	-3	-3	-3	-2	-2	-1	-1	0	-1	-1	-3	-4	-4	-4	-5	-5	-5	-2.6	-0.4
20-Feb	-5	-5	-5	-6	-6	-7	-7	-8	-8	-8	-7	-6	-6	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5.7	-4.5
21-Feb	-5	-5	-5	-6	-6	-6	-6	-6	-6	-5	-5	-4	-4	-3	-3	-2	-2	-5	-7	-6	-7	-8	-7	-6	-5.2	-2.1
22-Feb	-8	-8	-7	-6	-7	-8	-10	-10	-10	-7	-6	-5	-4	-3	-3	-3	-3	-5	-7	-9	-8	-9	-8	-9	-6.8	-2.8
23-Feb	-9	-9	-8	-8	-8	-8	-8	-8	-8	-7	-5	-3	-3	-2	-1	-1	-2	-4	-5	-6	-6	-7	-7	-7	-5.9	-1.0
24-Feb	-8	-9	-10	-10	-11	-11	-11	-13	-14	-12	-10	-8	-7	-5	-6	-7	-7	-9	-11	-13	-13	-14	-14	-13	-10.3	-5.4
25-Feb	-13	-13	-12	-11	-9	-9	-8	-6	-6	-7	-6	-6	-5	-5	-6	-5	-5	-6	-6	-6	-6	-6	-6	-7	-7.2	-4.9
26-Feb	-9	-10	-13	-16	-13	-13	-15	-18	-18	-15	-13	-11	-9	-9	-8	-7	-6	-8	-10	-11	-11	-11	-10	-10	-11.5	-6.3
27-Feb	-10	-10	-10	-11	-12	-14	-15	-15	-14	-11	-8	-7	-2	-5	-4	-4	-7	-9	-12	-13	-15	-15	-14	-14	-10.4	-1.9
28-Feb	-15	-17	-18	-19	-19	-19	-19	-19	-19	-17	-15	-12	-10	-8	-8	-6	-8	-9	-9	-10	-11	-11	-13	-14	-13.5	-6.2
																									Diurnal Average	
																									Diurnal Maximum	

Hourly Averages

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



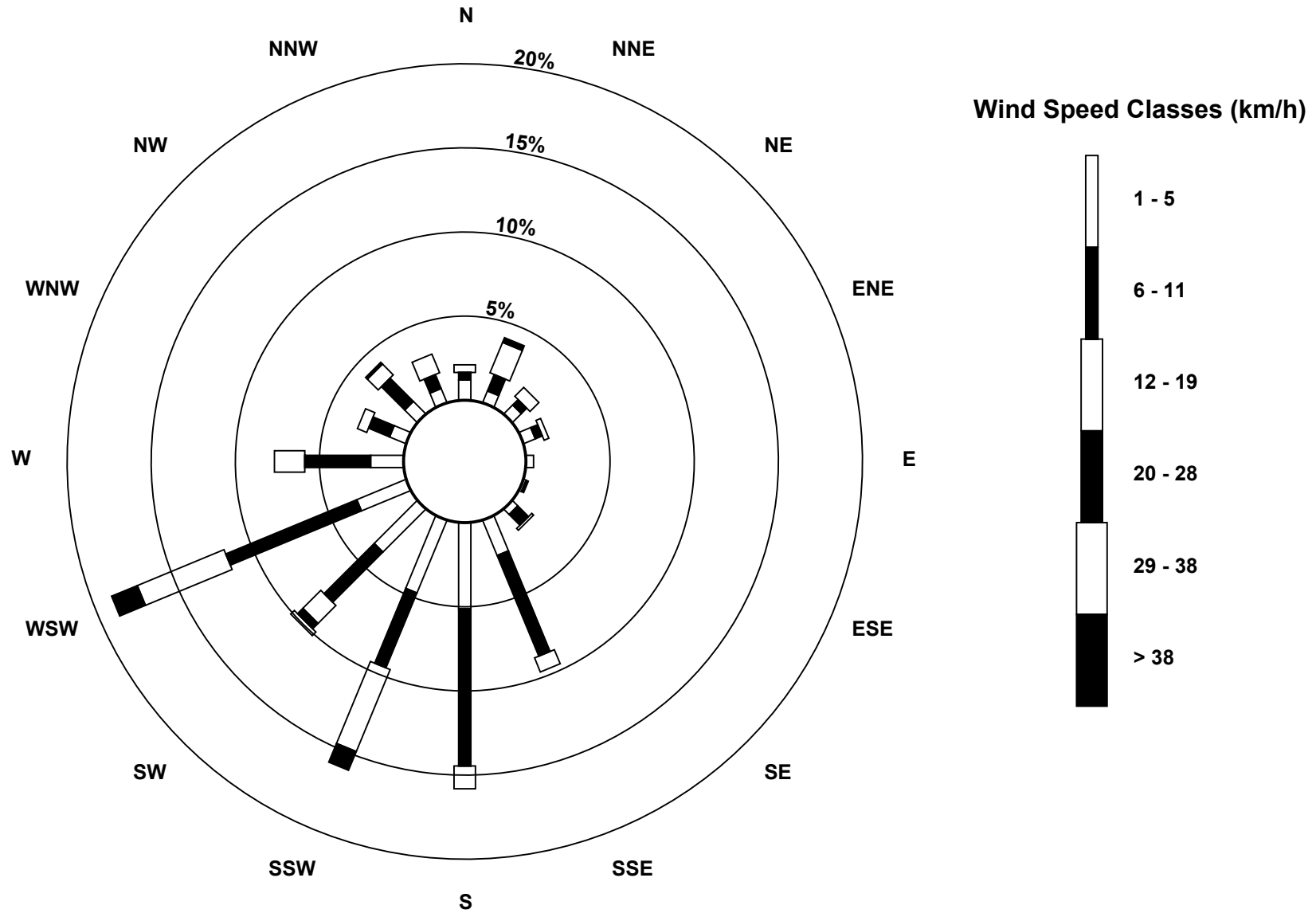
Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Portable Rycroft - February 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	12	9	2	4	11	14	13	7	5	6	5	10	12	11	10	9	6	4	6	10	7	5	7	7	7.2	13.9
Dir	245	241	197	300	250	244	242	234	217	207	238	271	258	256	255	242	228	212	243	240	245	198	178	190	239.6	244.2
2 Spd	10	9	9	9	8	7	7	5	3	13	16	16	14	13	11	5	3	4	6	6	2	2	3	4	6.6	15.8
Dir	192	187	190	187	182	195	201	207	219	254	250	258	263	261	261	269	272	248	240	251	220	232	218	243	232.6	249.6
3 Spd	4	6	1	3	3	6	7	9	13	14	10	6	9	9	7	3	5	6	6	5	4	9	12	8	5.5	14.3
Dir	280	326	324	258	273	262	270	289	317	330	323	304	307	315	318	311	240	225	228	211	206	253	260	248	284.4	329.7
4 Spd	8	11	10	8	6	4	5	5	8	6	7	6	6	6	5	6	5	10	8	6	6	8	11	8	6.2	11.0
Dir	258	262	243	231	224	190	176	207	228	203	188	195	194	214	201	205	211	242	232	196	247	269	274	279	229.6	262.4
5 Spd	11	16	16	15	18	17	12	5	5	4	5	7	5	5	5	3	1	0	4	6	6	6	7	6	3.5	18.3
Dir	0	2	333	341	348	332	320	275	248	240	245	260	246	254	258	264	42	121	168	168	178	165	169	166	309.0	347.8
6 Spd	8	7	5	5	4	5	6	4	5	3	4	4	3	4	6	2	1	5	5	5	7	8	8	8	4.0	8.2
Dir	165	170	172	178	199	176	176	210	175	211	190	260	287	286	320	328	219	190	186	179	183	180	184	175	191.1	174.5
7 Spd	9	9	7	8	7	8	9	8	7	7	8	7	11	15	14	9	18	20	18	16	11	8	3	5	8.4	20.4
Dir	175	173	176	178	190	191	179	176	191	179	171	194	229	234	233	228	257	254	256	257	253	264	250	200	221.1	253.8
8 Spd	6	8	7	7	7	8	6	9	12	11	14	15	16	16	11	12	10	8	12	6	8	9	9	9	9.8	15.9
Dir	190	181	184	181	161	159	177	174	160	168	161	180	182	186	199	192	194	198	189	199	192	184	179	175	180.6	181.5
9 Spd	6	6	8	11	10	8	7	5	2	2	5	5	2	6	6	5	6	3	2	1	0	5	2	5	1.8	11.3
Dir	186	187	173	153	153	161	156	154	170	38	316	322	260	317	329	278	295	353	258	180	168	319	217	169	197.1	153.2
10 Spd	3	3	3	1	5	7	8	8	6	7	5	2	7	4	2	4	3	1	5	9	8	9	9	9	0.5	9.1
Dir	188	192	170	79	38	38	31	39	21	26	28	64	306	329	330	333	350	298	157	157	173	194	196	202	80.4	196.1
11 Spd	13	15	14	12	14	16	18	28	14	14	14	15	30	32	21	14	15	10	13	14	17	22	24	21	17.2	32.5
Dir	203	211	211	208	212	215	216	224	208	207	207	211	229	231	223	205	215	207	204	211	212	205	199	198	212.8	230.6
12 Spd	22	20	19	18	18	16	13	16	14	16	15	15	17	18	17	13	16	24	20	22	20	17	14	14	17.1	24.4
Dir	201	208	201	190	195	197	192	201	207	208	199	203	202	202	205	210	215	219	213	211	207	205	210	216	205.1	219.5
13 Spd	12	13	10	10	11	9	10	13	12	8	7	9	11	19	7	8	9	7	11	14	10	10	11	9	9.9	19.1
Dir	214	213	189	197	206	206	187	197	207	200	200	225	241	243	194	182	185	200	187	191	198	197	192	199	203.9	243.4
14 Spd	9	9	10	9	8	9	7	9	7	13	9	5	6	7	7	6	5	6	8	6	5	4	10	6	7.1	12.7
Dir	190	173	169	160	175	160	165	154	154	146	159	185	131	161	138	128	129	138	135	158	193	182	162	191	159.5	145.6
15 Spd	6	5	7	5	6	5	3	2	3	5	2	5	5	9	13	14	13	13	12	10	12	4	7	8	6.5	13.7
Dir	136	137	161	165	150	233	180	167	168	252	213	177	160	206	201	202	196	182	189	187	185	239	170	148	185.0	201.6
16 Spd	2	7	1	5	1	3	2	4	1	3	0	1	3	3	5	4	4	3	1	3	6	5	5	8	1.4	7.6
Dir	202	174	256	19	82	216	164	269	244	218	67	57	97	340	297	219	355	325	145	173	169	229	207	230	221.2	230.0
17 Spd	8	8	15	17	17	15	9	5	4	5	8	18	21	27	20	17	16	11	7	9	8	6	4	5	11.0	26.9
Dir	230	219	236	237	246	243	232	209	174	162	223	240	244	242	243	265	265	260	264	266	231	215	190	217	240.1	241.9
18 Spd	3	6	7	6	5	5	5	5	5	4	2	5	8	10	13	14	17	14	15	14	18	21	20	19	6.4	20.5
Dir	182	160	158	160	164	188	179	174	175	165	142	18	17	24	28	37	33	37	33	27	29	28	31	33	43.0	28.2
19 Spd	17	15	12	11	9	12	9	10	10	10	13	14	12	12	11	10	16	21	20	20	11	5	9	13	7.8	20.9
Dir	36	26	24	18	358	350	336	308	292	287	279	282	281	264	272	271	256	258	256	245	230	212	232	235	286.3	258.1
20 Spd	11	15	15	13	11	10	14	12	12	8	10	12	12	9	6	6	8	11	10	9	5	3	3	6	9.5	14.8
Dir	245	248	246	257	255	239	249	248	246	237	248	255	255	254	255	244	250	255	261	248	228	218	215	228	247.9	247.7
21 Spd	7	7	6	8	6	3	5	5	5	7	9	9	8	9	11	10	9	7	5	8	12	13	11	10	7.8	13.0
Dir	265	243	267	250	273	280	230	230	242	240	251	254	247	255	260	253	246	250	233	232	237	243	251	242	248.4	242.8
22 Spd	10	10	14	13	9	10	8	12	10	18	21	21	18	20	19	21	18	14	9	11	10	8	9	5	13.1	21.2
Dir	250	251	256	264	237	232	248	239	250	258	257	256	256	249	244	251	256	255	244	249	244	229	231	222	249.4	256.9

Wind Rose

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



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Portable Rycroft - February 2017

Maximum Speed: 33 km/h on Feb 11 14:00																				Maximum Daily Speed Average: 17.5 km/h on Feb 11					Hours in Service: 672	
Minimum Speed: 1 km/h on Feb 9 21:00																				Minimum Daily Speed Average: 4.5 km/h on Feb 16					Hours of Data: 672	
Maximum Diurnal Speed Average: 11.3 km/h at hour 14																				Minimum Diurnal Speed Average: 7.1 km/h at hour 9					Hours of Missing Data: 0	
Monthly Average Speed: 9.16 km/h																				Percentiles: P ₁ = 1.8 P ₁₀ = 3.8 Q ₁ = 5.4 Median = 8.2 Q ₃ = 12.0 P ₉₀ = 15.8 P ₉₉ = 21.6					Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	12	9	2	5	11	14	13	7	5	6	6	10	12	11	10	9	6	4	6	10	7	5	7	7	8.0	13.9
2-Feb	10	9	9	9	8	7	7	6	3	13	16	16	14	13	12	5	3	4	6	6	2	3	3	4	7.9	15.9
3-Feb	4	6	2	3	3	6	7	9	13	14	10	6	9	9	7	3	5	6	7	5	5	9	12	8	7.0	14.3
4-Feb	8	11	10	8	6	5	5	6	8	6	7	6	6	6	5	6	5	10	8	6	6	8	11	9	7.3	11.2
5-Feb	12	17	16	15	18	17	12	6	6	5	5	7	5	5	5	3	2	2	4	6	6	6	7	6	8.0	18.3
6-Feb	8	7	6	6	4	6	6	5	5	3	4	4	3	5	6	3	2	5	5	5	7	8	8	8	5.3	8.2
7-Feb	9	9	7	8	7	8	9	8	7	7	8	7	12	15	14	9	18	20	18	16	11	8	4	5	10.2	20.4
8-Feb	6	8	7	7	8	9	6	9	12	11	15	15	16	16	11	12	10	8	12	6	8	10	9	9	10.1	16.0
9-Feb	6	6	8	11	10	8	8	5	3	2	5	5	3	6	6	6	6	3	2	2	1	5	3	5	5.2	11.4
10-Feb	3	3	3	2	5	7	8	8	6	7	5	3	7	4	3	4	3	2	6	9	8	9	9	9	5.6	9.2
11-Feb	14	15	14	12	14	16	18	28	14	14	14	15	30	33	21	14	15	10	13	14	17	22	24	21	17.5	32.6
12-Feb	22	20	20	18	18	16	13	16	14	16	16	15	17	18	17	13	16	24	20	22	20	17	14	14	17.3	24.4
13-Feb	12	13	11	10	11	9	10	13	12	8	7	9	11	19	7	8	9	7	11	14	10	10	11	9	10.5	19.2
14-Feb	9	10	10	9	9	9	7	10	7	13	9	5	6	7	7	6	5	6	8	7	5	5	10	6	7.7	12.8
15-Feb	6	5	7	6	6	6	5	3	5	6	3	6	5	9	13	14	13	13	12	10	12	5	8	8	7.7	13.8
16-Feb	5	8	5	6	3	3	3	4	3	4	2	2	3	5	7	5	5	4	3	3	6	5	5	8	4.5	7.7
17-Feb	8	8	15	17	17	15	9	5	4	5	8	18	21	27	21	17	16	11	7	9	8	6	5	5	11.8	27.0
18-Feb	3	6	7	6	5	5	5	5	5	4	4	6	8	11	13	14	17	14	15	15	18	21	20	19	10.2	20.6
19-Feb	17	15	12	11	10	12	9	11	10	10	13	14	13	12	11	10	16	21	20	20	11	5	9	13	12.7	20.9
20-Feb	11	15	15	13	11	11	14	12	12	8	10	12	12	10	6	7	8	12	10	9	5	3	3	6	9.7	14.8
21-Feb	7	7	6	8	6	3	5	5	5	7	9	9	9	10	11	10	9	7	5	8	12	13	11	10	8.0	13.1
22-Feb	10	10	14	13	10	10	8	12	10	18	21	21	18	20	20	21	18	14	9	12	10	8	9	5	13.4	21.2
23-Feb	4	4	6	5	5	5	5	4	4	3	4	5	5	4	5	9	13	15	12	11	11	10	11	13	7.3	15.1
24-Feb	14	17	17	12	13	10	7	3	3	4	4	5	5	4	7	4	3	7	8	11	9	9	12	13	8.4	17.0
25-Feb	11	12	10	10	9	8	8	5	3	7	2	4	5	7	11	9	10	11	14	17	16	15	19	20	10.1	20.0
26-Feb	17	16	10	9	10	11	10	5	8	11	11	10	7	17	14	6	3	3	6	11	12	12	11	10	10.0	17.2
27-Feb	11	11	8	6	7	5	3	6	6	5	7	10	5	7	4	1	3	4	4	5	7	7	7	7	6.1	11.1
28-Feb	6	4	5	2	4	4	3	2	4	9	12	8	9	5	10	12	14	14	17	11	12	17	17	18	9.2	18.3
																									Diurnal Average	
																									Diurnal Maximum	
All monthly, daily, and diurnal averages have been calculated using scalar methods																										

Hourly Standard Deviations

Wind Direction (WD) - deg

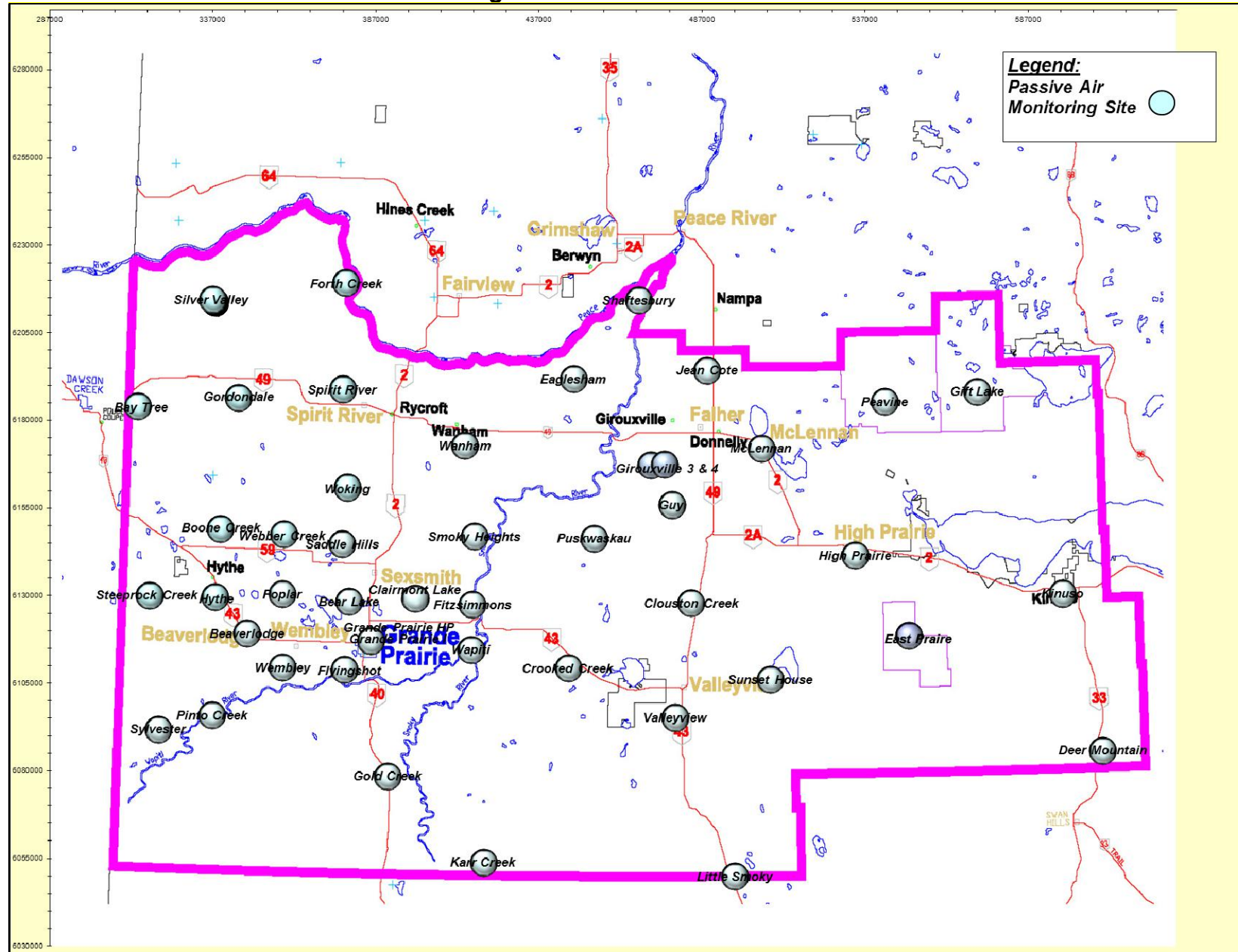
Portable Rycroft - February 2017

Maximum Value: 95.3 deg on Feb 16 11:00																								Hours in Service: 672	
Minimum Value: 1.8 deg on Feb 7 00:00																								Hours of Data: 672	
																								Hours of Missing Data: 0	
Percentiles: P ₁ = 2.3 P ₁₀ = 3.6 Q ₁ = 5.3 Median = 8.5 Q ₃ = 15.8 P ₉₀ = 30.2 P ₉₉ = 80.3																								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-Feb	2	5	54	40	4	3	4	16	6	20	35	10	5	7	3	9	10	7	21	4	6	10	11	12	54.0
2-Feb	3	4	5	3	3	6	8	13	59	12	3	5	4	7	6	21	14	8	11	7	35	17	13	9	58.8
3-Feb	16	10	80	27	10	8	5	5	9	5	9	10	9	5	5	34	15	8	9	6	19	13	3	14	80.4
4-Feb	19	11	6	7	11	25	9	24	10	10	7	7	8	12	8	12	9	11	25	14	16	9	6	15	25.2
5-Feb	23	13	4	4	5	6	8	23	34	12	16	9	5	6	8	32	40	92	13	9	7	8	6	11	91.9
6-Feb	7	12	19	16	14	14	7	33	21	15	16	26	17	23	10	17	51	6	6	10	3	4	6	2	51.4
7-Feb	3	3	4	5	7	7	4	5	7	9	4	6	15	6	6	20	3	2	3	2	5	20	49	17	49.4
8-Feb	12	5	4	4	9	7	8	5	4	9	9	4	5	4	5	5	5	4	4	7	6	6	5	6	12.2
9-Feb	11	11	12	5	5	9	8	15	22	37	31	33	69	24	17	25	22	16	64	72	66	24	25	18	72.3
10-Feb	12	26	57	48	14	11	7	5	10	12	23	57	17	30	37	21	28	59	45	13	15	14	6	4	58.9
11-Feb	6	3	3	5	6	4	5	5	3	3	3	3	6	4	9	4	4	4	4	5	6	3	5	4	8.7
12-Feb	3	3	8	5	7	6	7	4	3	2	6	5	4	6	4	6	5	4	3	2	3	4	4	4	7.6
13-Feb	8	14	9	4	6	3	9	11	4	4	5	16	5	6	17	8	9	6	3	4	5	6	4	6	16.8
14-Feb	8	11	8	10	12	14	16	9	23	6	21	26	15	17	15	13	13	17	11	32	31	19	11	18	31.9
15-Feb	14	15	18	38	36	29	81	58	52	25	56	24	25	28	5	5	7	7	6	9	7	50	25	9	80.9
16-Feb	67	21	86	33	91	26	44	22	79	27	95	70	32	62	63	50	45	56	87	32	10	27	14	12	95.3
17-Feb	15	8	8	3	3	4	5	14	17	5	21	5	4	5	7	2	3	6	6	9	22	15	33	14	33.2
18-Feb	22	9	6	7	8	6	4	10	10	14	61	34	8	11	9	9	6	4	5	8	4	3	3	3	61.1
19-Feb	4	3	4	6	7	4	12	11	7	9	4	6	6	9	11	10	7	3	4	7	9	5	8	5	12.5
20-Feb	9	5	4	7	9	6	7	6	4	8	9	6	10	16	23	17	12	16	14	11	12	7	6	7	22.8
21-Feb	8	7	10	9	16	17	15	7	18	8	7	12	11	12	11	10	10	7	14	5	5	9	7	5	18.3
22-Feb	6	7	3	3	13	4	4	4	4	3	3	4	7	8	6	5	3	6	7	4	12	7	4	11	12.8
23-Feb	9	16	6	15	11	6	6	15	16	15	15	38	14	18	26	9	8	14	10	7	11	11	7	9	38.2
24-Feb	5	11	6	7	7	4	11	33	18	7	7	8	12	28	22	29	17	7	4	6	4	6	5	4	32.6
25-Feb	5	3	3	5	6	10	6	13	57	16	25	37	12	14	6	15	7	4	3	2	3	2	6	7	56.9
26-Feb	8	9	18	18	5	9	16	24	7	3	3	9	17	6	6	29	12	19	22	3	2	3	3	4	28.7
27-Feb	4	3	6	4	6	28	25	25	7	20	24	14	13	7	14	64	16	9	17	14	6	8	7	6	64.4
28-Feb	29	45	51	72	48	33	40	46	21	12	6	18	22	30	14	6	7	10	5	10	6	12	3	3	71.9
66.6 44.5 85.7 71.9 91.4 33.2 80.9 58.2 78.6 37.0 95.3 69.9 68.8 62.1 62.9 64.4 51.4 91.9 86.5 72.3 66.2 50.2 49.4 18.2																									

PAZA

Monthly Passive Data Summary

Location of PAZA Passive Monitoring Stations



PAZA Passive Results for January 2017

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	Site Legal
Duplicates						
2a	Bay Tree	0.2	42.6	1.6		
2b	Bay Tree	0.2	40.0	1.8		
28a	Clairmont Lake	0.3		1.9		
28b	Clairmont Lake	0.4		1.6		
63a	Girouxville 3				0.2	
63b	Girouxville 3				0.3	
2	Bay Tree	0.2	41.3	1.7		13-16-078-13 W6M
4	Gordondale	0.4		1.8		04-34-078-10 W6M
5	Boone Creek	0.2		0.9		16-36-074-11 W6M
9	Spirit River	0.3		1.7		08-12-079-07 W6M
14	Sylvester	0.1		0.6		08-06-069-12 W6M
16	Beaverlodge	0.4		2.8		15-36-071-10 W6M
18	Saddle Hills	0.3		0.6		04-25-074-07 W6M
19	Wanham	0.3		0.7		16-22-077-03 W6M
21	Eaglesham	0.2		0.6		16-21-079-25 W5M
24	Wembley	0.3		1.7		12-31-070-08 W6M
25	Pinto Creek	0.2		0.9		04-24-069-11 W6M
27	Grande Prairie I	0.3		11.2		08-15-071-06 W6M
28	Clairmont Lake	0.3		1.7		09-06-073-04 W6M
29	Smoky Heights	0.3		1.7		04-06-075-02 W6M
32	Gold Creek	0.2		3.1		06-33-067-05 W6M
35	Jean Cote	0.2		0.6		12-35-079-21 W5M
36	Guy	0.2		0.6	0.1	03-04-076-22 W5M
37	Crooked Creek	0.2	47.5	1.5		16-01-071-26 W5M
39	Clouston Creek	0.2		0.9		12-01-073-22 W5M
40	McLennan	0.2		0.9		03-29-077-19 W5M
43	High Prairie	0.1		0.9		16-13-074-17 W5M
44	Peavine	0.1		0.4		03-05-079-15 W5M
46	Little Smoky	0.1		3.5		12-01-065-21 W5M
47	Kinuso	0.1	41.1	0.9		12-10-073-10 W5M
50	East Prairie	0.1		0.8		13-02-072-15 W5M
63	Girouxville 3				0.3	14-02-077-23 W5M
64	Girouxville 4				0.3	4-08-077-22 W5M

*BDL = Below Detection Level

*N/S - No sample

Passive Summary for January 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 February 2017 (PAZA Zone)				
Mean	0.2	43.3	1.7	0.2
Standard Deviation	0.1	3.7	2.1	0.1
Minimum	0.1	41.1	0.4	0.1
Minimum At	Kinuso (#47)	Kinuso (#47)	Peavine (#44)	Guy (#36)
Maximum	0.4	47.5	11.2	0.3
Maximum At	Gordondale (#4)	Crooked Creek (#37)	Grande Prairie I (#27)	Girouxville 4 (#64)

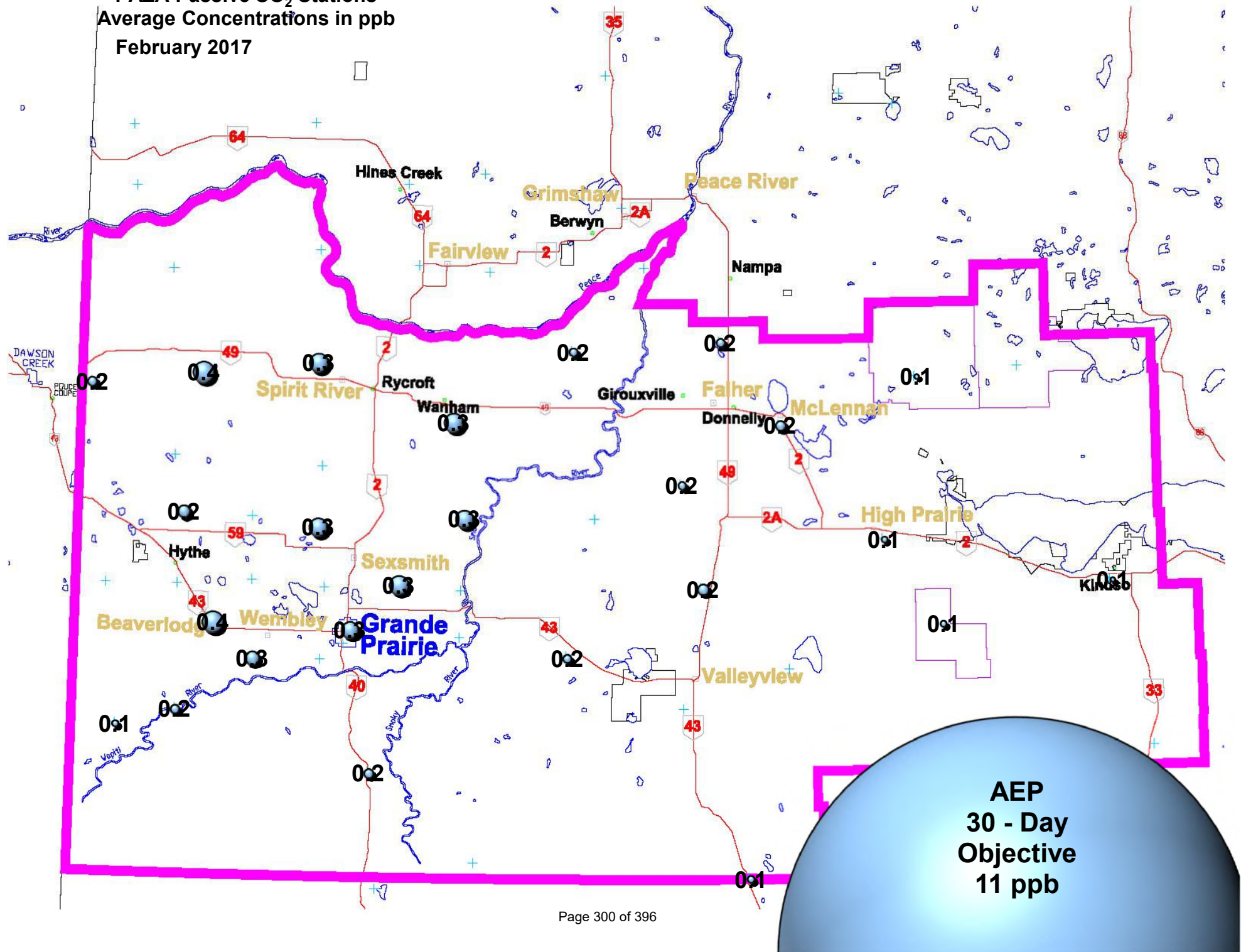
Comparison between Continuous and Passive monitoring at Beaverlodge (passive #16 Beaverlodge)

	SO ₂	NO ₂
PAZA Beaverlodge station	0.4	5.3
PAZA Beaverlodge passive	0.4	2.8

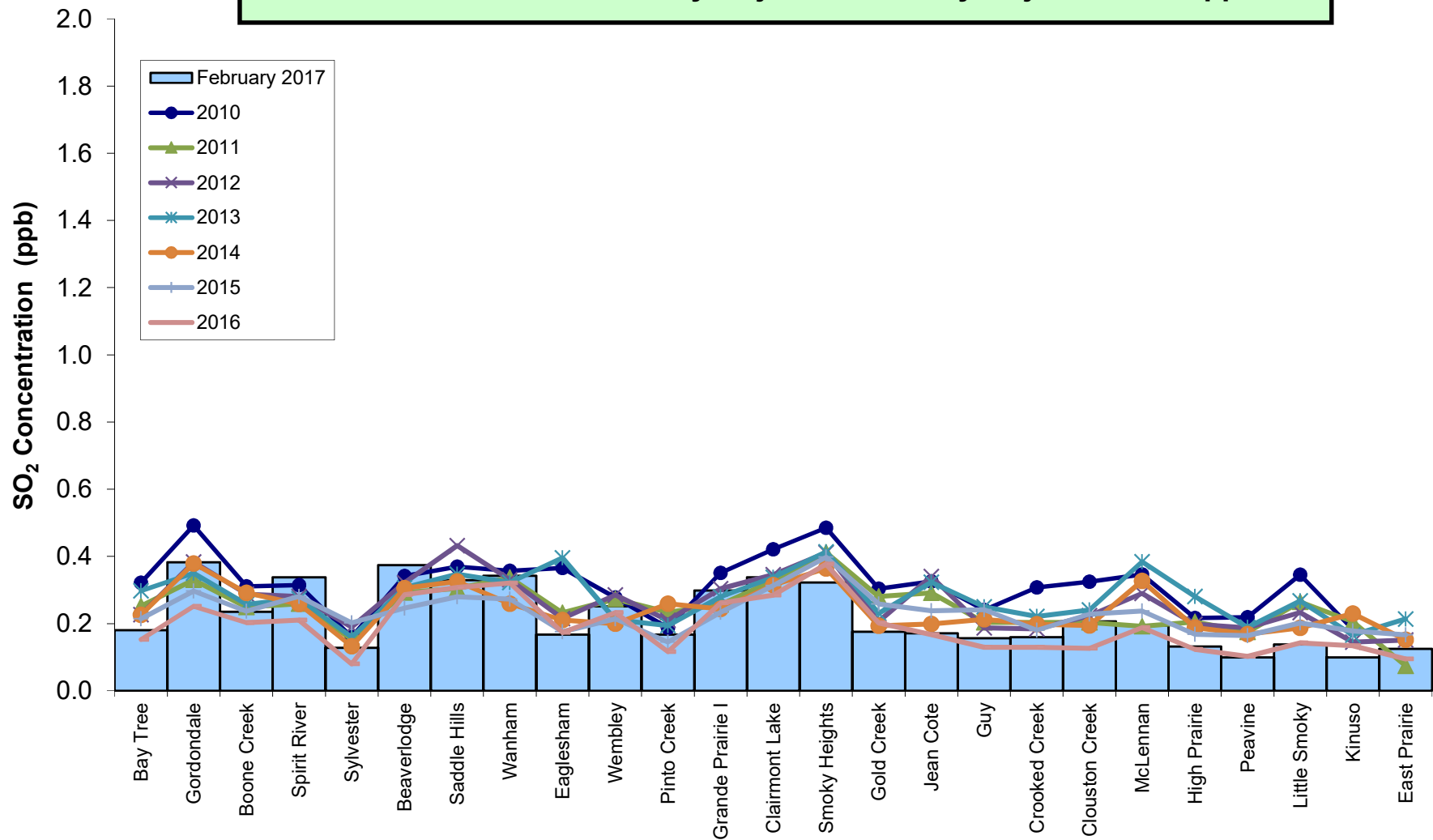
Comparison between Continuous and Passive monitoring at Henry Pirker (passive #49 Grande Prairie HP)

	SO ₂	NO ₂
PAZA Henry Pirker station	0.3	16.7
PAZA Grande Prairie passive	0.3	11.2

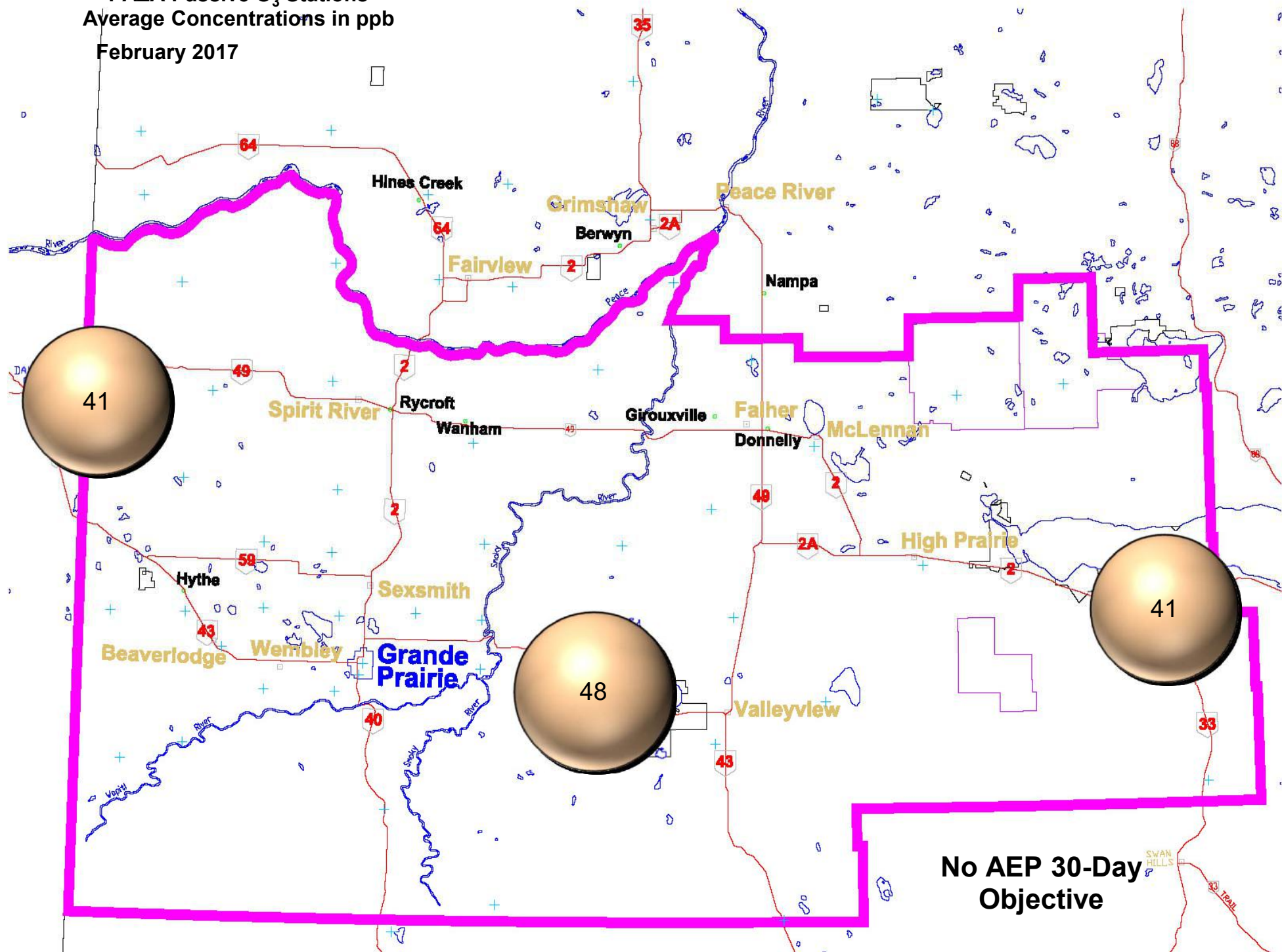
**PAZA Passive SO₂ Stations
Average Concentrations in ppb
February 2017**



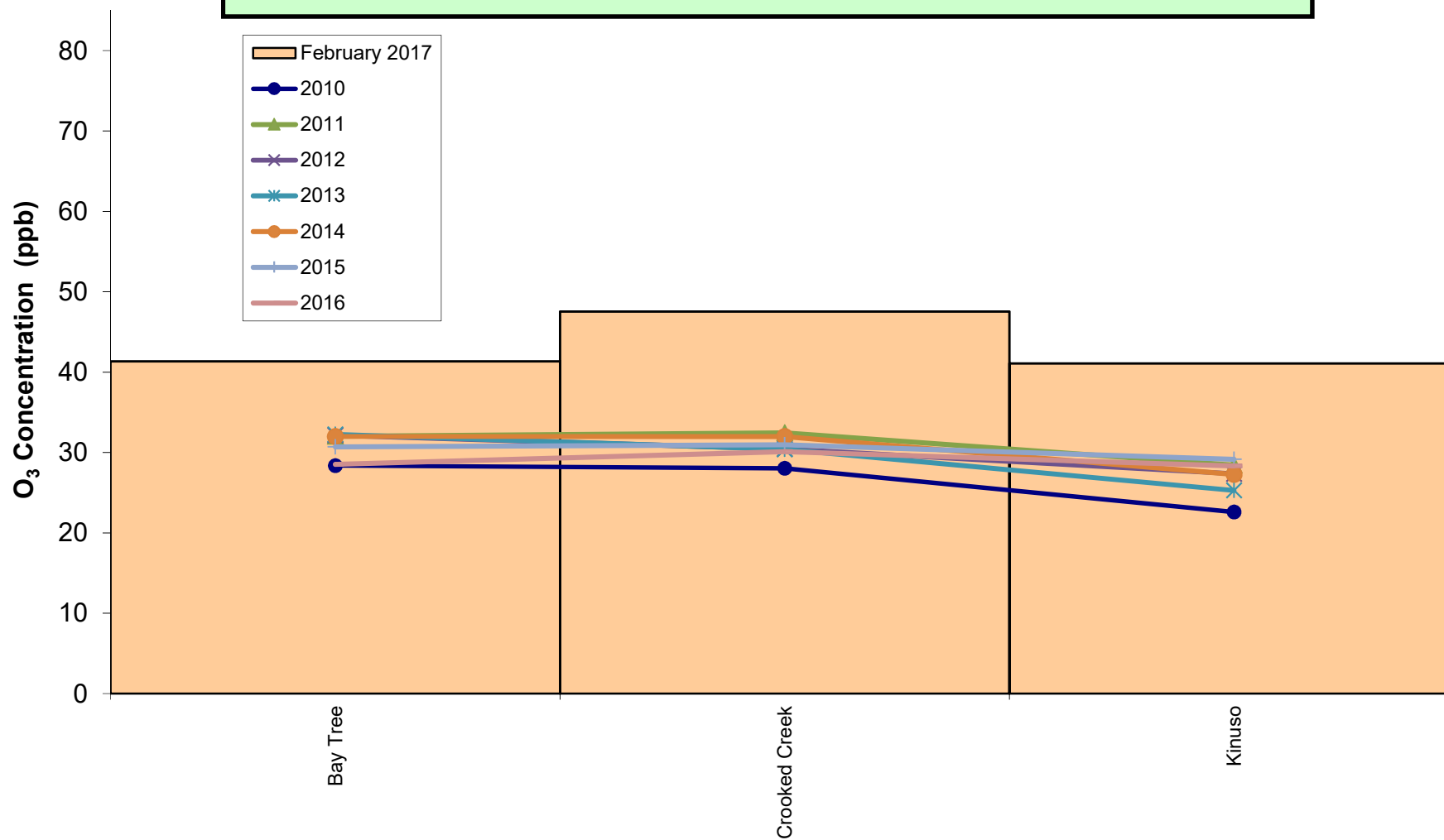
Alberta Ambient Air Quality Objective - 30-day Objective is 11 ppb



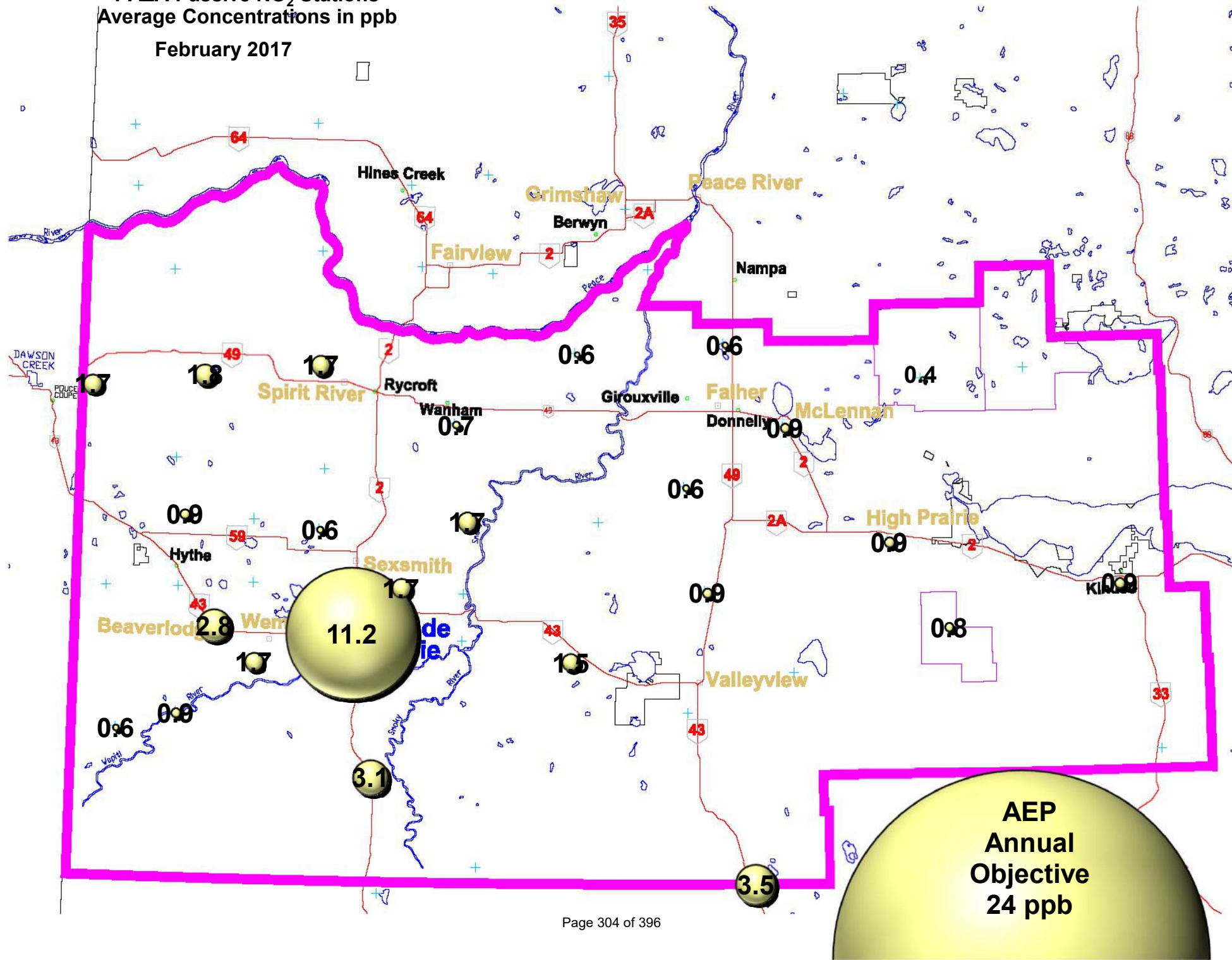
PAZA Passive O₃ Stations
Average Concentrations in ppb
February 2017



Alberta Ambient Air Quality Objective - No Annual O₃ Objective

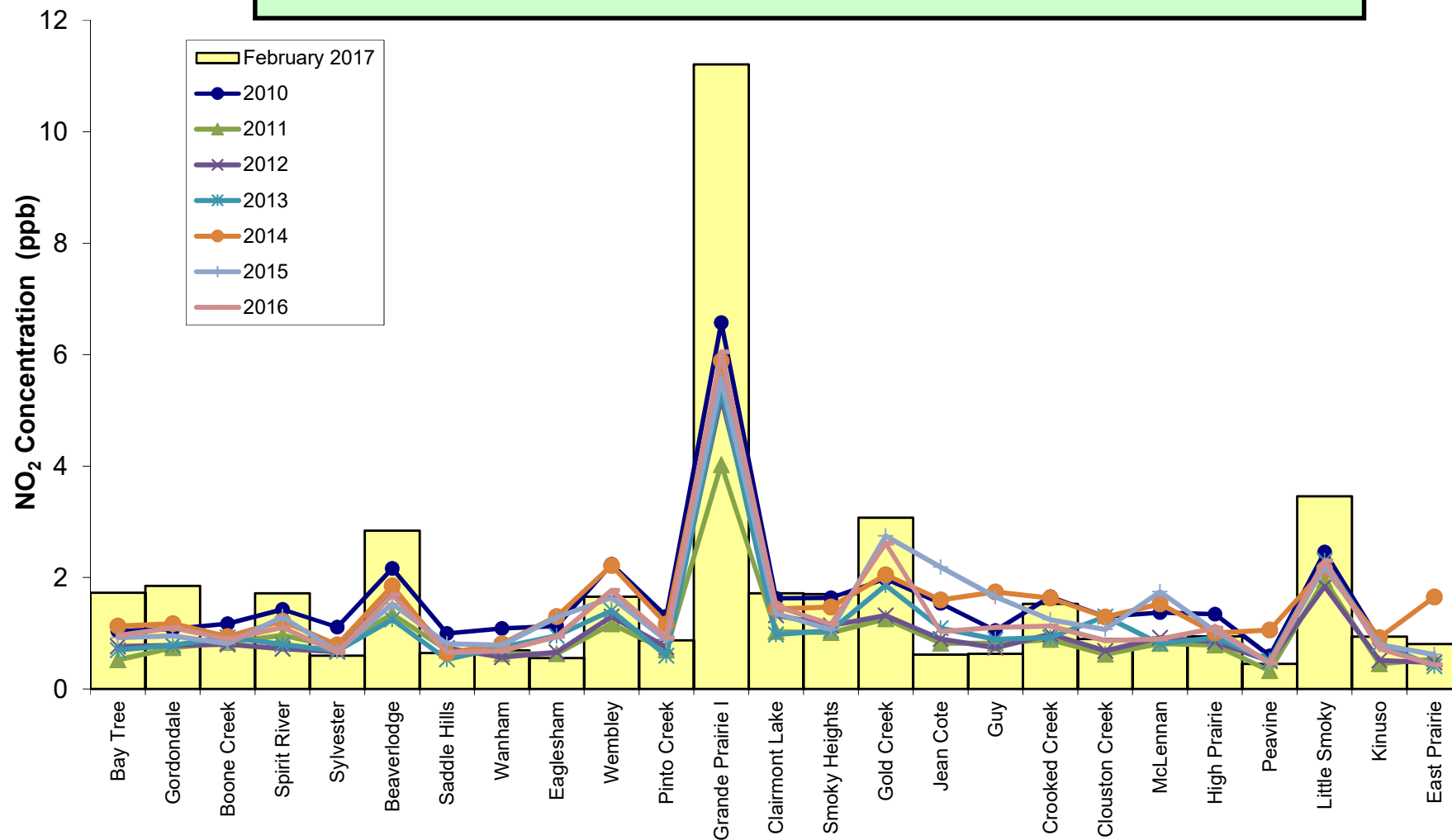


PAZA Passive NO₂ Stations
Average Concentrations in ppb
February 2017

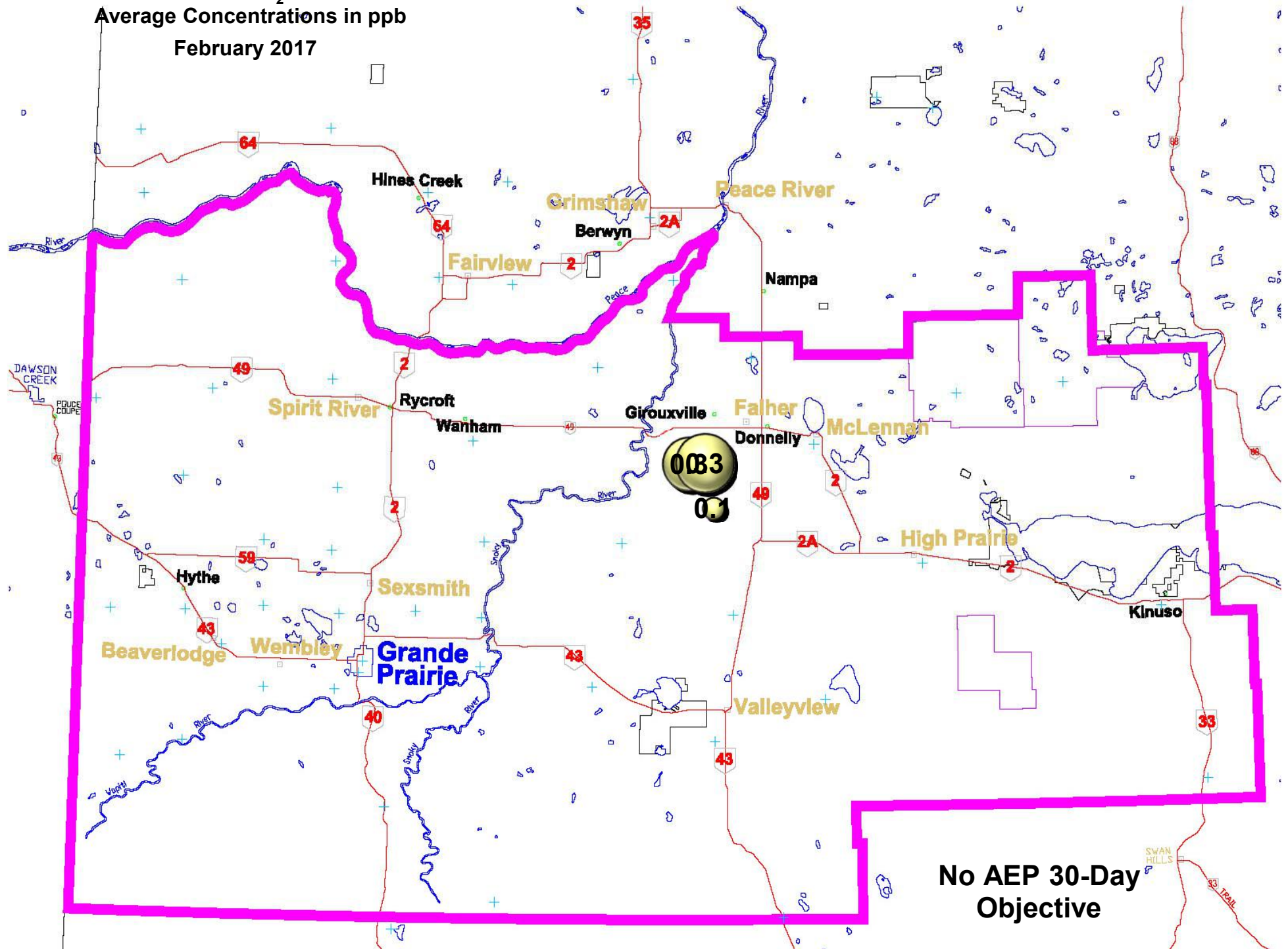


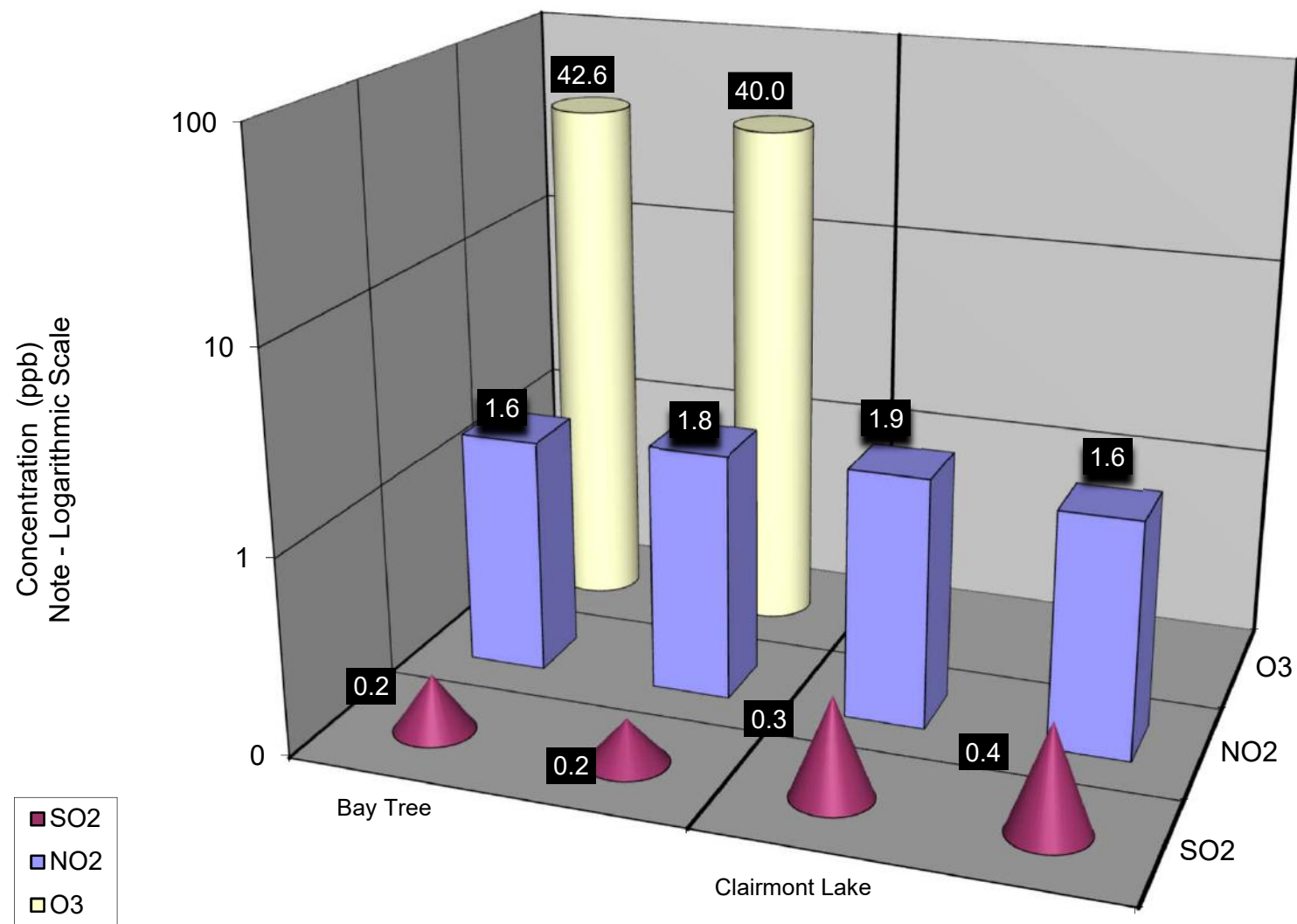
AEP
Annual
Objective
24 ppb

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



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





Duplicate Summary Chart

February 2017 Calibration Reports

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

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

**PAZA – Smoky Heights Station with the following calibrations:
SO₂ and TRS**

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

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

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

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

Calibration Report

Parameter SO2

Air Monitoring Network PAZA



Station Information

Calibration Date	February 14, 2017	Previous Calibration	January 4, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	10:10	End Time (MST)	12:25
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	1.002639
Calculated intercept	1.043761	Calculated intercept	1.231425
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	666.4	mm Hg	665.8	mm Hg
Flow	0.440	lpm	0.447	lpm
Lamp intensity	82	Hz	82	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
4996	0.00	0.0	0.3	N/A
4988	39.91	394.5	393.1	1.0035
4993	19.96	197.9	195.0	1.0146
4997	9.90	98.3	95.4	1.0297
4996	0.00	0.0	0.3	As Found Zero
4996	39.93	394.1	393.1	As Found Span
Average Correction Factor				1.0160

Calculated value of As Found Response: 393.0 ppb Percent Change of As Found: 0.3%

	before calibration		after calibration	
Auto zero	0.2	ppb	0.3	ppb
Auto span	278.7	ppb	288.0	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



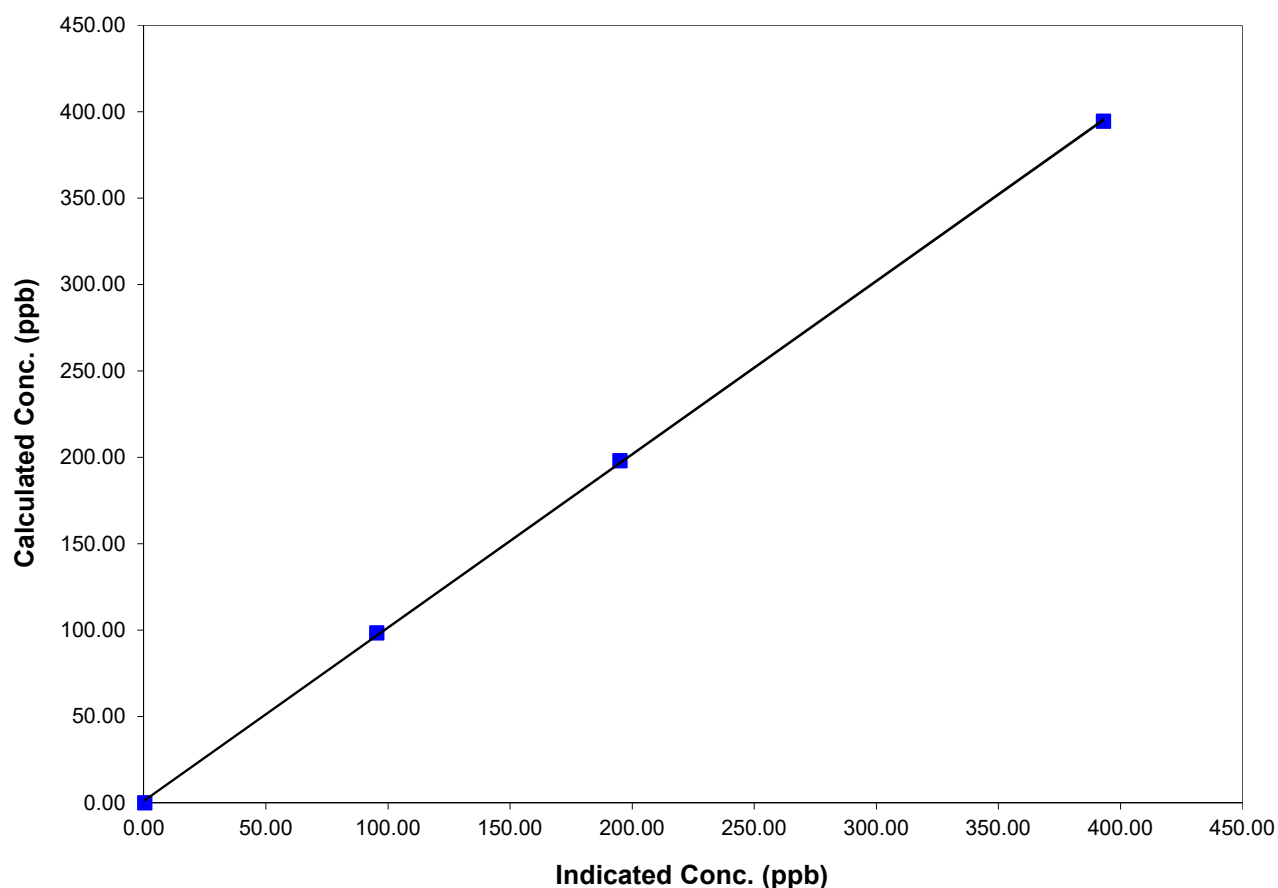
Station Information

Calibration Date	February 14, 2017	Previous Calibration	January 4, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:10	End Time (MST)	12:25
Analyzer make/model	TEI 43I-TLE	Analyzer serial #	1507864682 (AMU 2006)

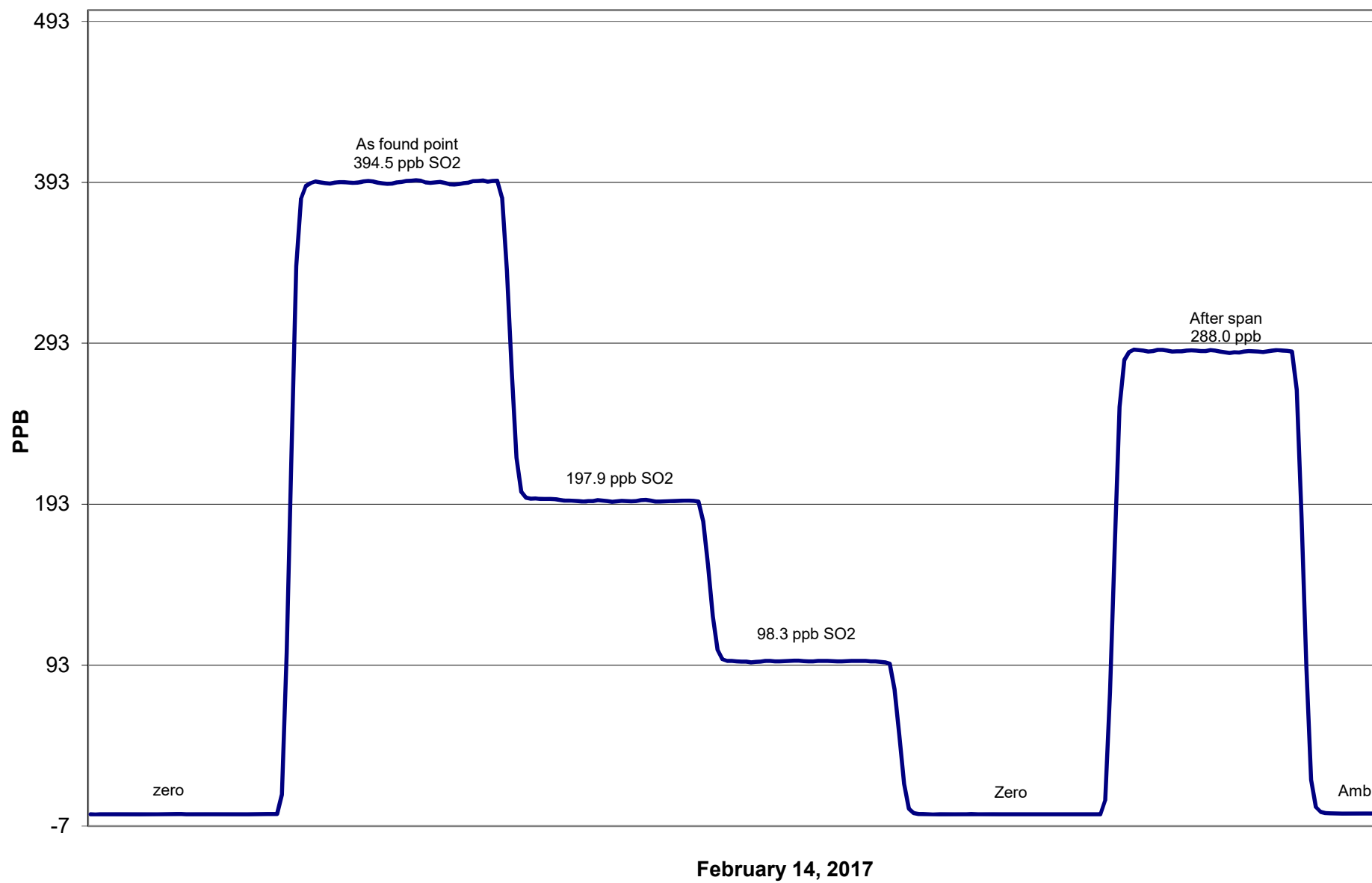
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A	Correlation Coefficient	0.999926
394.5	393.1	1.0035		
197.9	195.0	1.0146		
98.3	95.4	1.0297	Slope	1.002639
			Intercept	1.231425

SO2 Calibration Curve



SO2 Calibration



Calibration Report

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



Station Information

Calibration Date	February 14, 2017	Previous Calibration	January 4, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Installation	Removal
Start Time (MST)	10:10	End Time (MST)	13:40:00 PM
Barometric Pressure	721.000 mm	Station Temperature	23.0 Deg C
Calibrator	Envionics	Serial Number	906535067(AMU 1972)
NO Cal Gas Conc	50.9 ppm	Cal Gas Expiry Date	October 5, 2018
NO _x Cal Gas Conc	51.2 ppm	Cal Gas Serial #	LL103793

DACS Information

DACS make	CR3000	DACS serial No.	5408																																			
	<table border="1"> <thead> <tr> <th>Parameter</th> <th>NO₂</th> <th>NO_x</th> <th>NO</th> </tr> </thead> <tbody> <tr> <td>Before</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Data Slope</td> <td>1.002386</td> <td>1.006190</td> <td>1.001191</td> </tr> <tr> <td>Data Offset</td> <td>-0.120676</td> <td>0.764176</td> <td>0.656805</td> </tr> <tr> <td>After</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Data Slope</td> <td>1.003869</td> <td>1.009723</td> <td>1.002906</td> </tr> <tr> <td>Data Offset</td> <td>-0.141746</td> <td>0.980243</td> <td>0.796101</td> </tr> <tr> <td>Channel #</td> <td>8</td> <td>6</td> <td>7</td> </tr> <tr> <td>Voltage Range</td> <td>0 - 5 VDC</td> <td>0 - 5 VDC</td> <td>0 - 5 VDC</td> </tr> </tbody> </table>	Parameter	NO ₂	NO _x	NO	Before				Data Slope	1.002386	1.006190	1.001191	Data Offset	-0.120676	0.764176	0.656805	After				Data Slope	1.003869	1.009723	1.002906	Data Offset	-0.141746	0.980243	0.796101	Channel #	8	6	7	Voltage Range	0 - 5 VDC	0 - 5 VDC	0 - 5 VDC	
Parameter	NO ₂	NO _x	NO																																			
Before																																						
Data Slope	1.002386	1.006190	1.001191																																			
Data Offset	-0.120676	0.764176	0.656805																																			
After																																						
Data Slope	1.003869	1.009723	1.002906																																			
Data Offset	-0.141746	0.980243	0.796101																																			
Channel #	8	6	7																																			
Voltage Range	0 - 5 VDC	0 - 5 VDC	0 - 5 VDC																																			

Analyzer Information

Analyzer make/model	42i	Analyzer serial #	906535087
Test Point	before	after	
Concentration range	0 - 500 ppb	0 - 500 ppb	
NO offset	6.0 mV	6.0 mV	
NO _x bkgnd	6.5 mV	6.5 mV	
NO coefficient	0.946	0.946	
NO _x coefficient	1.000	1.000	
NO ₂ conv temp	323.9 Deg C	322.8 Deg C	
Cooler Temp	-2.9 Deg C	-2.9 Deg C	
PMT Volt	-844.4 mV	-844.4 mV	
R Cell Press	169.8 in Hg	169.2 in Hg	
Sample Flow	0.615 LPM	0.620 LPM	

Notes: No adjustments made

Calibration Report

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

Station Information

Calibration Date: February 14, 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	4996	0.00	0.0	0.0	0.0	0.5	0.9	0.0	N/A	N/A
1	4989	39.95	406.7	404.3	2.4	402.5	403.3	-0.1	1.0104	1.0027
2	4991	19.90	203.3	202.1	1.2	199.8	199.7	0.0	1.0176	1.0120
3	4993	9.93	101.6	101.0	0.6	98.1	98.3	0.0	1.0363	1.0275
AFZ	4996	0.00	0.0	0.0	0.0	0.5	0.9	0.0	0.0000	0.0000
AFS	4996	39.92	405.9	403.5	0.8	402.5	403.3	-0.1	1.0083	1.0005
Average Correction Factor									1.0215	1.0141

As Found Concentrations: NO_x= 405.2 NO= 403.5 As Found Percent Change NO_x= -0.2% NO= 0.0%

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	0.9	0.9	0.0	0.5	0.9	0.0	N/A	N/A	N/A	N/A
NO point	403.1	403.1	0.0	402.7	403.1	-0.2	1.0010	1.0000	N/A	N/A
300	403.1	62.4	340.7	402.0	62.4	339.3	1.0028	1.0000	1.0042	99.6%
200	403.1	172.9	230.2	403.5	172.9	229.8	0.9989	1.0000	1.0017	99.8%
100	403.1	290.3	112.8	403.8	290.3	112.5	0.9983	1.0000	1.0025	99.7%
Average Correction Factor							1.0000	1.0000	1.0028	99.7%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.5	0.1	0.9	ppb	0.4	0.0	0.9	ppb
Auto span	311.2	308.1	2.8	ppb	318.3	315.4	2.8	ppb

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



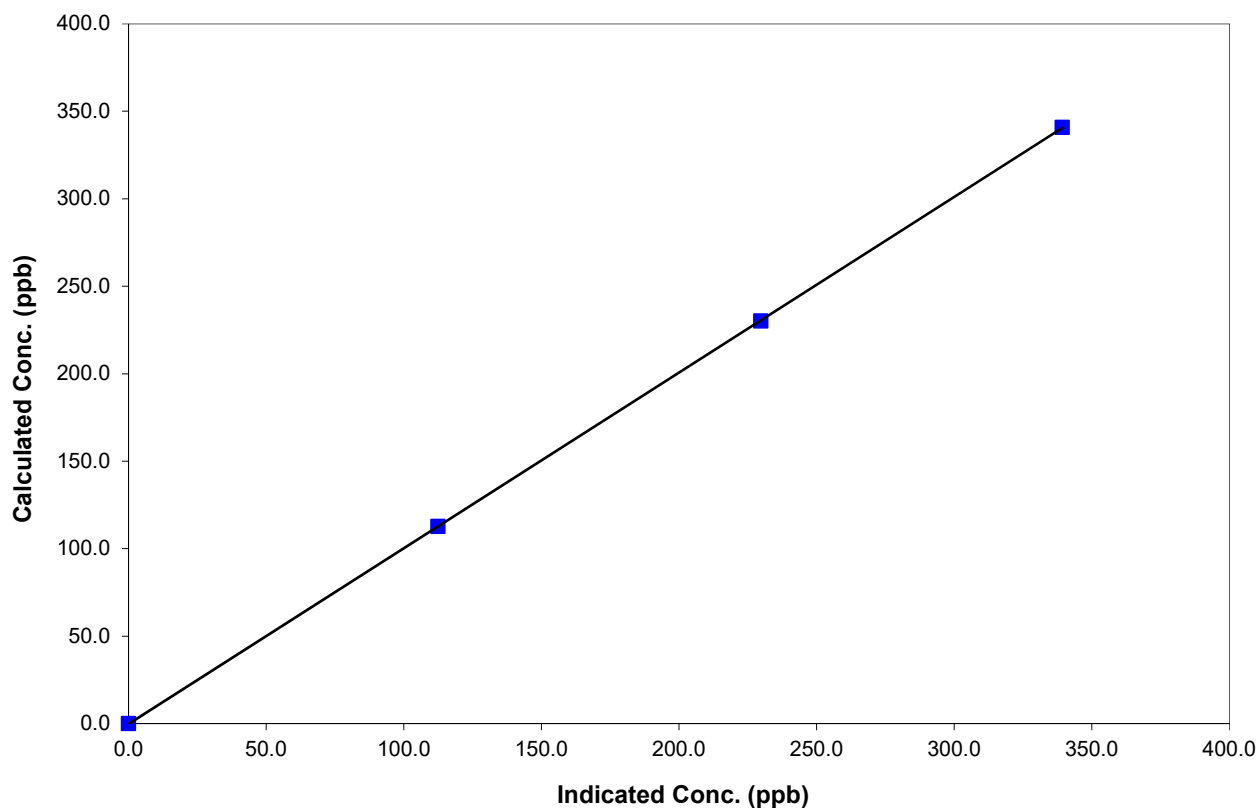
Station Information

Calibration Date	February 14, 2017	Previous Calibration	January 4, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:10	End Time (MST)	13:40:00 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	0.999997
340.7	339.3	1.0042		
230.2	229.8	1.0017		
112.8	112.5	1.0025	Slope	1.003869
			Intercept	-0.141746

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



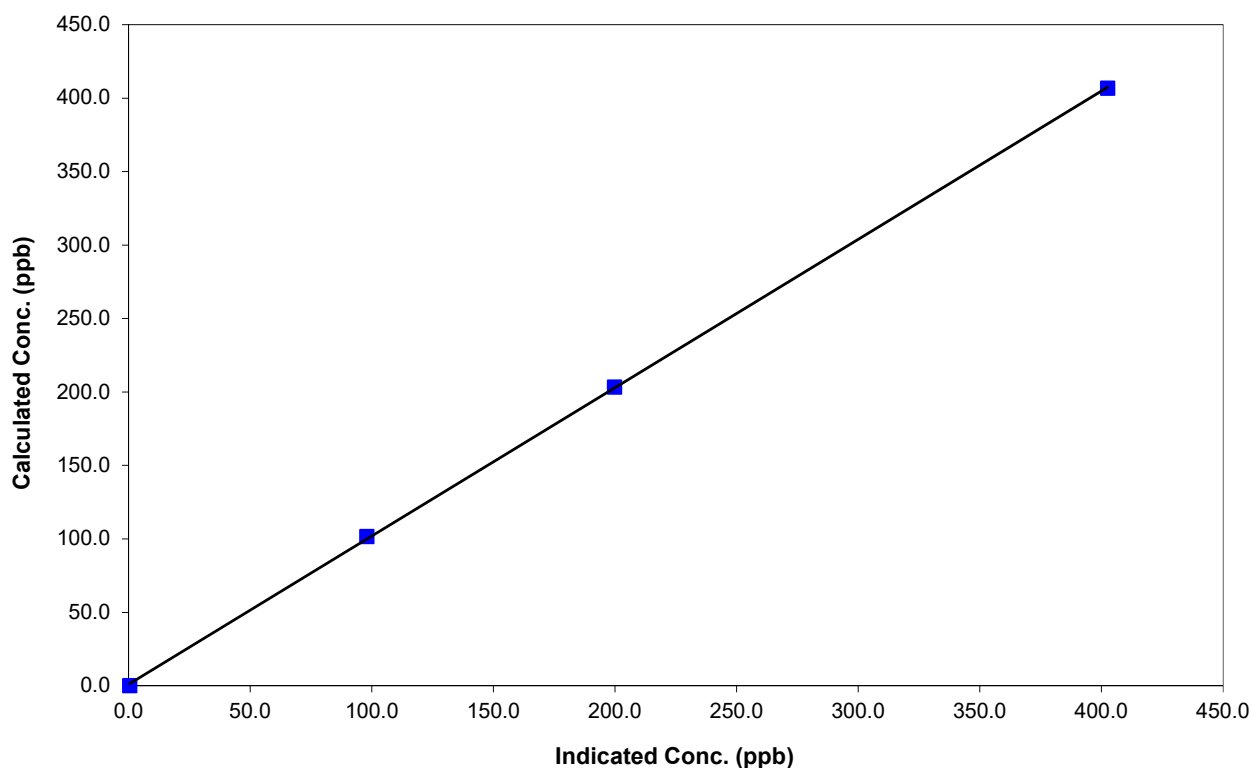
Station Information

Calibration Date	February 14, 2017	Previous Calibration	January 4, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:10	End Time (MST)	13:40:00 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	0.5	N/A	Correlation Coefficient	0.999936
406.7	402.5	1.0104		
203.3	199.8	1.0176		
101.6	98.1	1.0363	Slope	1.009723
			Intercept	0.980243

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



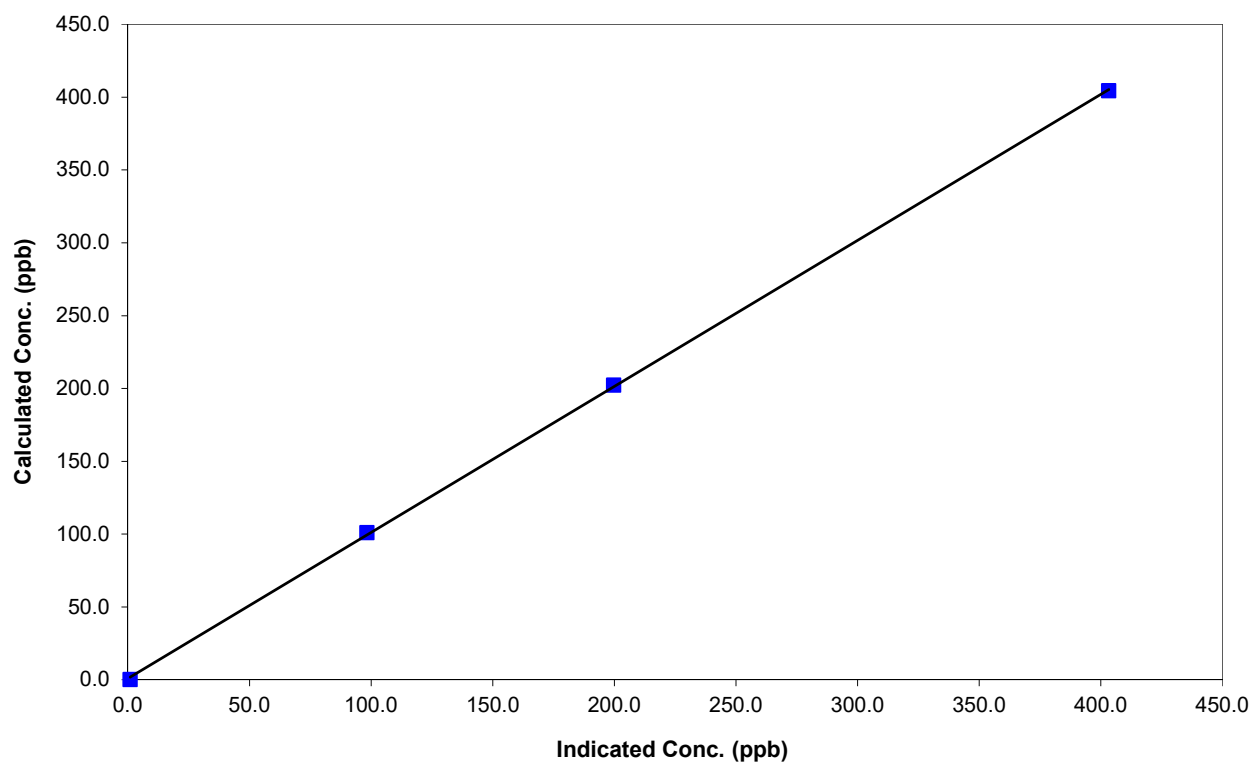
Station Information

Calibration Date	February 14, 2017	Previous Calibration	January 4, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:10	End Time (MST)	13:40:00 PM
Analyzer make	42i	Analyzer serial #	906535087

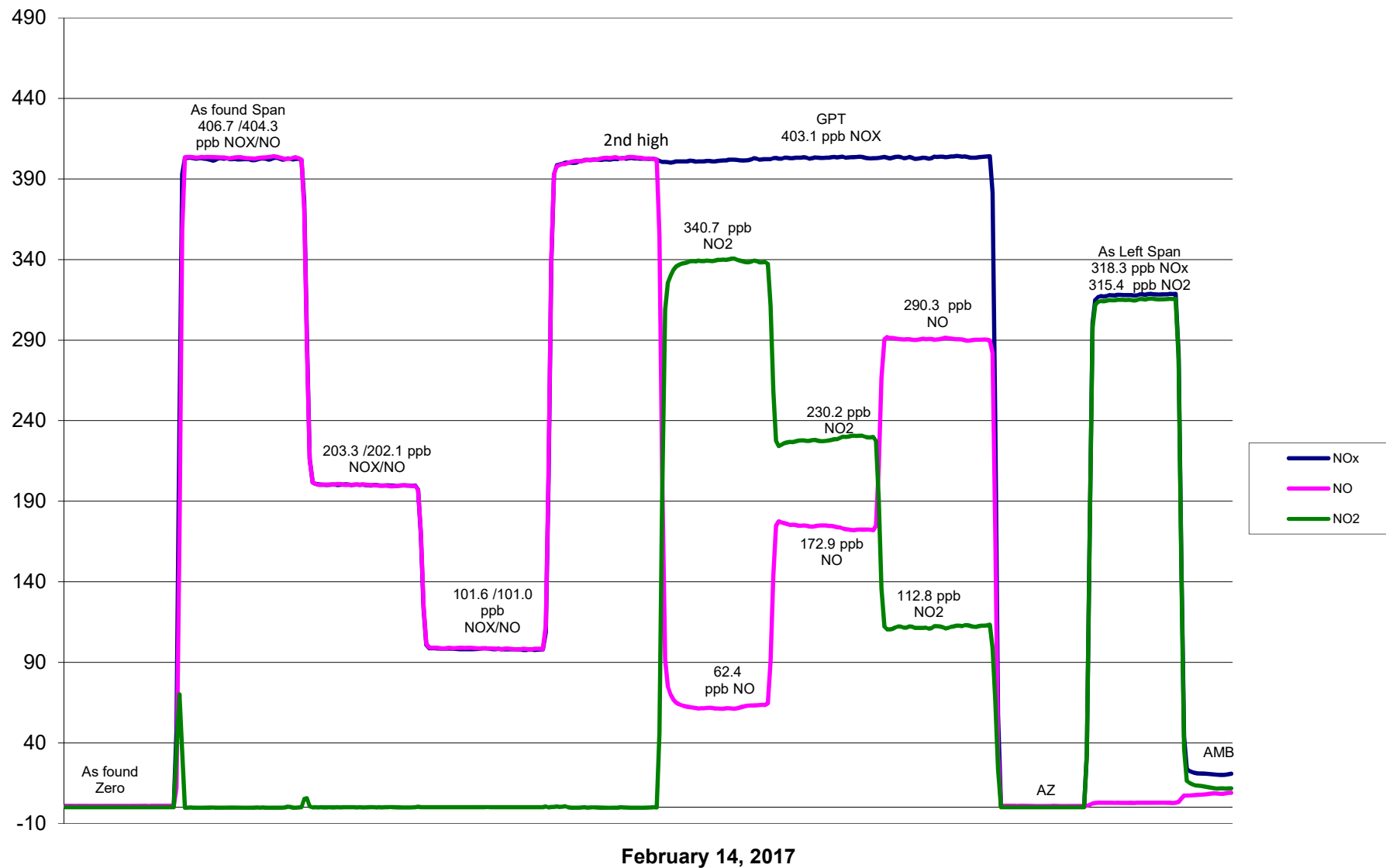
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.9	N/A	Correlation Coefficient	0.999916
404.3	403.3	1.0027		
202.1	199.7	1.0120		
101.0	98.3	1.0275	Slope	1.002906
			Intercept	0.796101

NO Calibration Curve



NO_x Calibration



Calibration Report



AIR QUALITY MONITORING

Parameter 03

Air Monitoring Network PAZA

Station Information

Calibration Date	February 14, 2017	Previous Calibration	January 4, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	

Start Time (MST)	12:50	End Time (MST)	14:55:00 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	0.990054	Calculated slope	1.004073
Calculated intercept	0.258874	Calculated intercept	0.924207

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	71321/78987	mV	70589/77173	mV
Pressure	692	mm Hg	691	mm Hg
Flow A	0.731	ccm	0.731	ccm
Flow B	0.732	ccm	0.732	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)
4997	0.0	0.0	-0.2	N/A
4999	0.3	340.7	339.2	1.0045
4999	0.2	230.2	227.5	1.0120
4998	0.1	112.8	110.8	1.0180
4997	0.0	0.0	-0.2	As found zero
4997	0.3	340.7	339.2	As found span
Average Correction Factor				1.0115

Calculated value of As Found Response: 336.3 ppm Percent Change of As Found: -1.3%

	before calibration		after calibration	
Auto zero	0.0	ppb	0.1	ppb
Auto span	382.4	ppb	386.0	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter O3

Air Monitoring Network PAZA



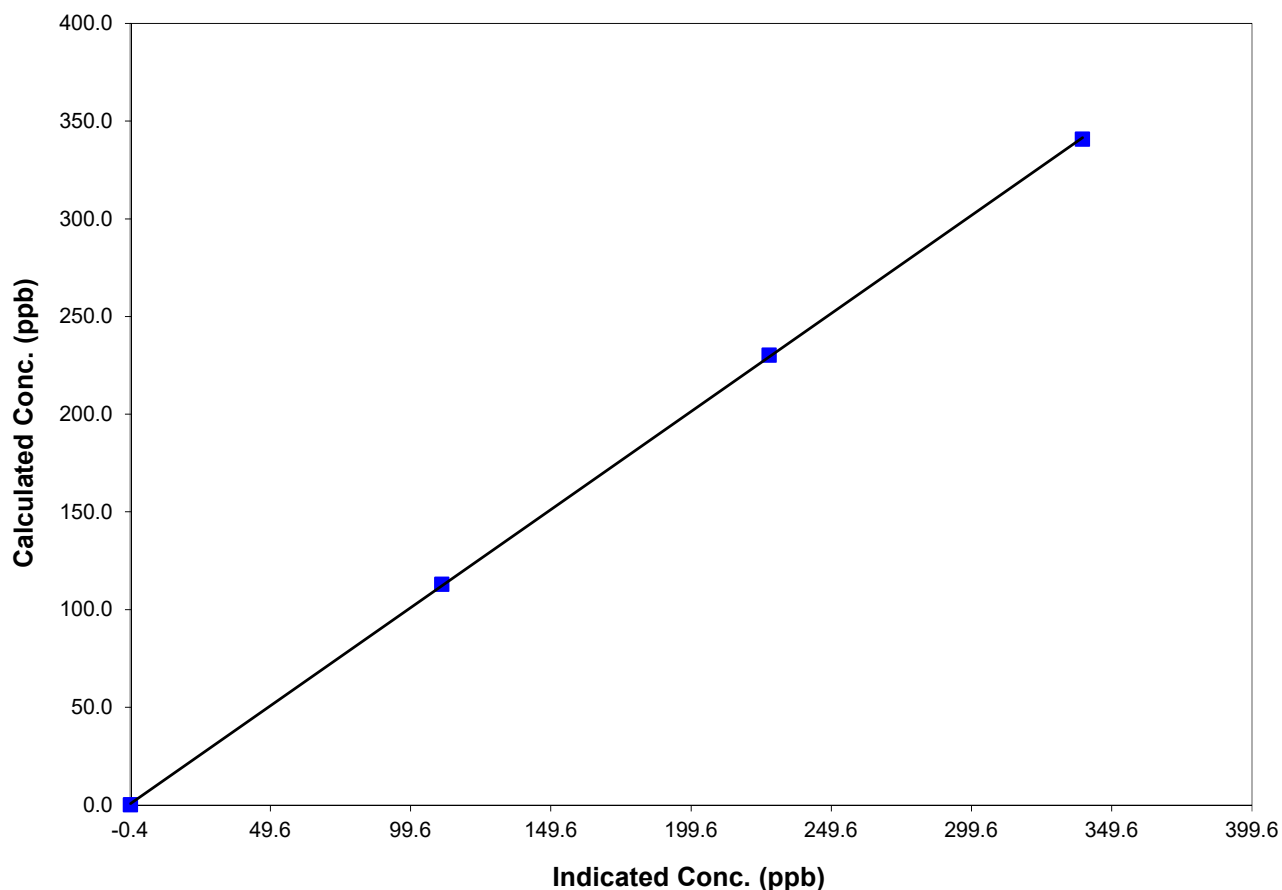
Station Information

Calibration Date	February 14, 2017	Previous Calibration	January 4, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:50	End Time (MST)	14:55:00 PM
Analyzer make/model	Teco 49I	Analyzer serial #	1507964699 (AMU:2015)

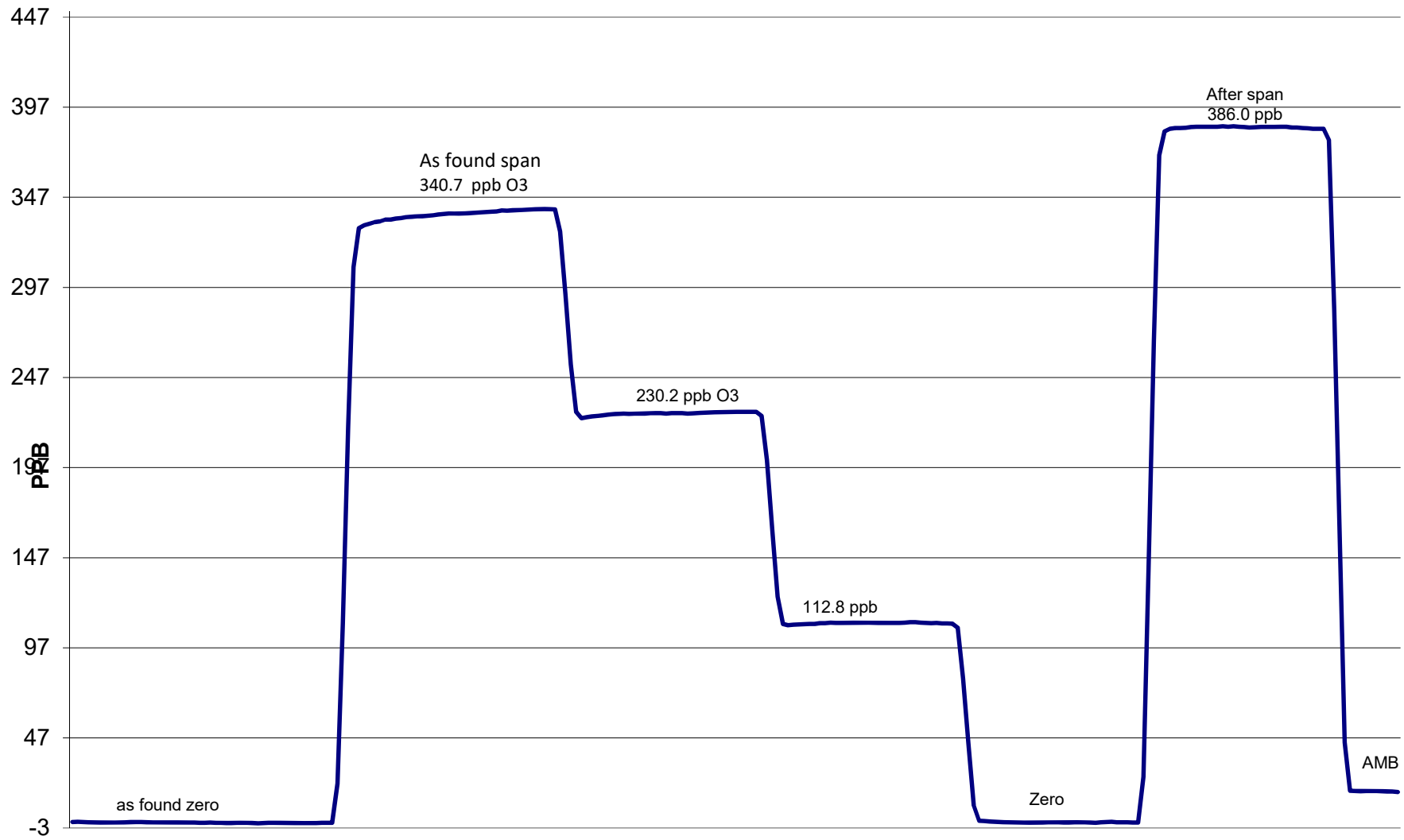
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.2	NA		
340.7	339.2	1.0045	Correlation Coefficient	0.999965
230.2	227.5	1.0120		
112.8	110.8	1.0180	Slope	1.004073
			Intercept	0.924207

O3 Calibration Curve



O3 Calibration



February 14, 2017

Calibration Report

Parameter CO

Air Monitoring Network PAZA



Station Information

Calibration Date	February 13, 2017	Previous Calibration	January 5, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Install	Removal
Start Time (MST)	11:35	End Time (MST)	15:15:00 PM
Barometric Pressure	720.0 mm/hg	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	6586
Cal Gas Conc	2906 ppm	Cal Gas Expiry Date	7/7/2023
DACS make	CR3000	Cal Gas Cylinder #	LL109096
DACS voltage range	0 - 5 volt	DACS serial No.	5408
	Before	DACS channel #	9
Calculated slope	0.997626		After
Calculated intercept	-0.254353	Calculated slope	1.000332
		Calculated intercept	-0.157919
Analyzer make	Model 48I-TLE	Analyzer serial #	1408761378

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO zero setting	7.247		7.728	
CO span setting	1.058		1.067	
Sample pressure	700.4	mm Hg	700.1	mm Hg
Sample Flow	0.449	LPM	0.450	LPM

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.00	0.00	N/A
4993	69.98	40.17	40.21	0.9989
4993	34.95	20.20	20.47	0.9866
4998	17.96	10.41	10.69	0.9729
4993	0.00	0.00	0.41	As Found Zero
4995	69.98	40.15	40.90	As Found Span
Average Correction Factor				0.9861

Calculated value of As Found Response: 40.139 ppm Percent Change of As Found: 0.0%

	before calibration		after calibration	
Auto zero	0.00	ppm	0.00	ppm
Auto span	20.50	ppm	20.64	ppm

Notes: Zero & span adjustment made
Span cylinder changed

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter CO

Air Monitoring Network PAZA



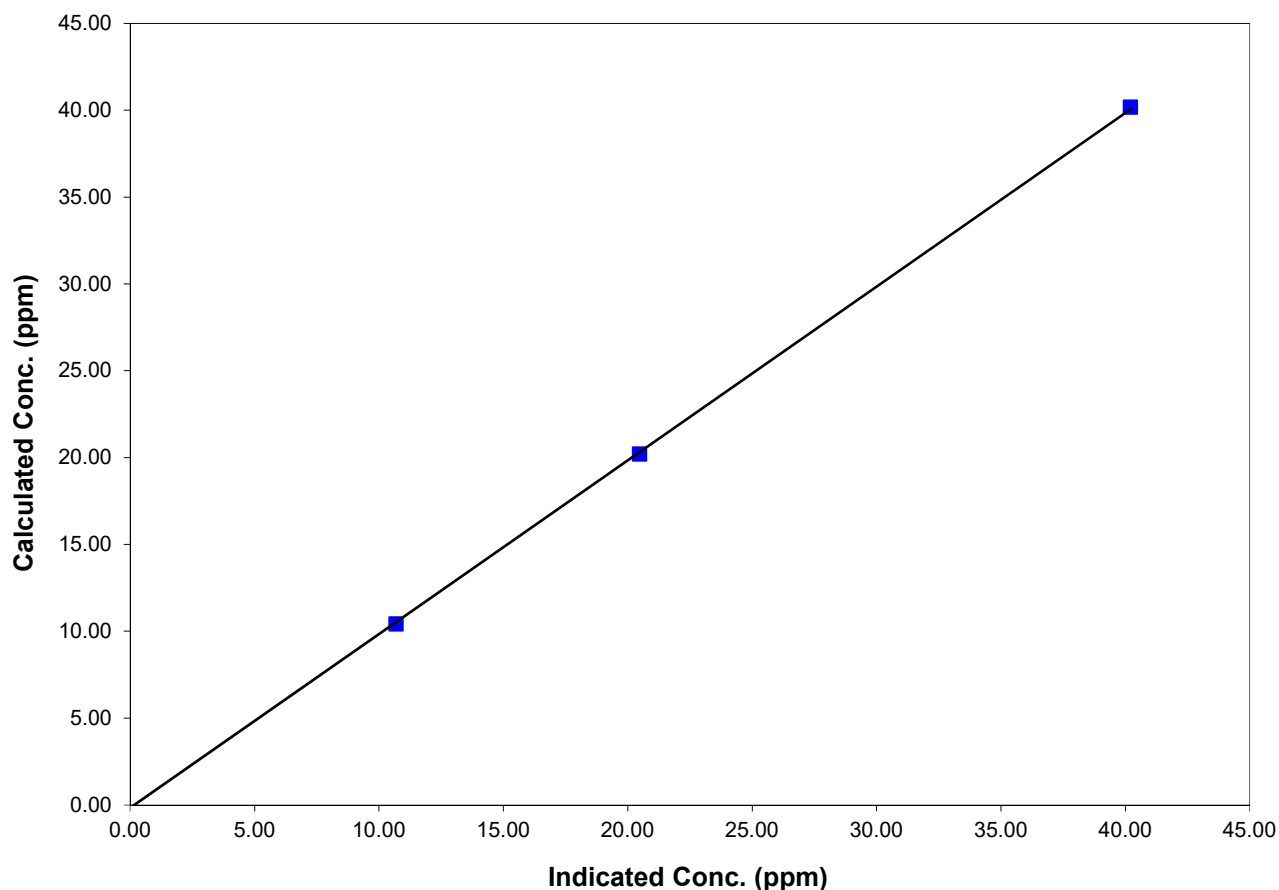
Station Information

Calibration Date	February 13, 2017	Previous Calibration	January 5, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	11:35	End Time (MST)	15:15:00 PM
Analyzer make/model	Model 48I-TLE	Analyzer serial #	1408761378

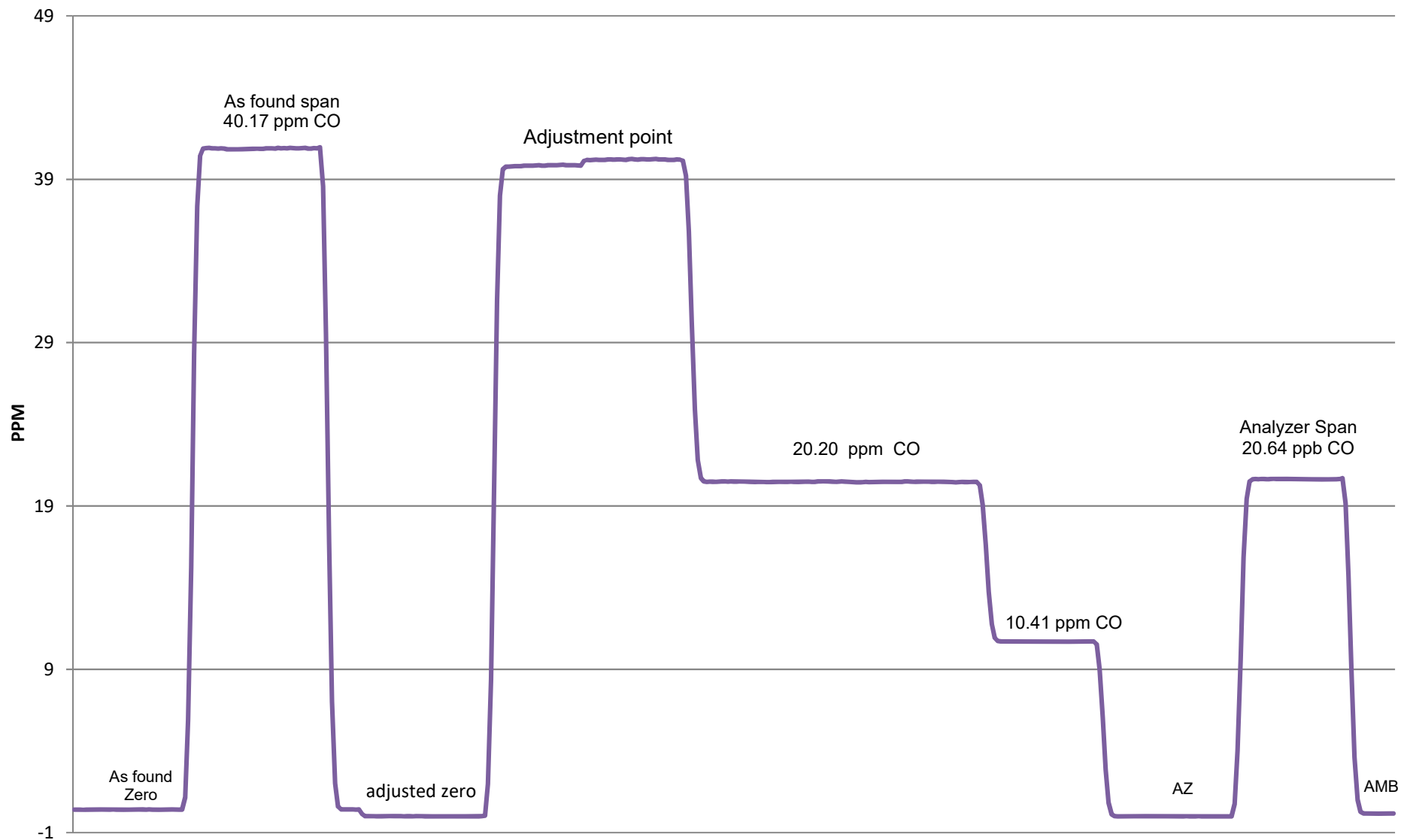
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	-0.002	N/A	Correlation Coefficient	0.999921
40.166	40.212	0.9989		
20.200	20.475	0.9866		
10.405	10.695	0.9729	Slope	1.000332
			Intercept	-0.157919

CO Calibration Curve



CO Calibration



February 13, 2017

Calibration Report

Parameter CH4 / NMHC / THC

Air Monitoring Network

PAZA



Station Information

Calibration Date	February 13, 2017	Previous Calibration	January 7, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Install	Removal
			Other:Mair

Start Time (MST)	10:15	End Time (MST)	12:25
Barometric Pressure	722.00 mm/hg	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 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
1997	68.96	12.88	12.93	0.9967
1998	40.99	7.76	7.77	0.9988
1999	15.97	3.06	3.05	1.0039
1995	0.00	0.00	0.02	As Found Zero
1995	68.93	12.89	12.93	As Found Span
Average Correction Factor				0.9998

Calculated value of As Found Response: 12.873 ppm Percent Change of As Found: 0.1%

	Before		After
Calculated slope	0.998013	Calculated slope	0.997491
Calculated intercept	-0.010679	Calculated intercept	-0.000041

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	8.96	ppm	8.39	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	18.85	1.0083
1998	40.99	11.44	11.41	1.0026
1999	15.97	4.51	4.46	1.0126
1995	0.00	0.00	0.02	As Found Zero
1995	68.93	19.01	18.85	As Found Span
Average Correction Factor				1.0078

Calculated value of As Found Response: 18.745 ppm Percent Change of As Found: 1.4%

	Before		After
Calculated slope	0.999937	Calculated slope	1.007868
Calculated intercept	-0.078522	Calculated intercept	-0.012972

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.02	ppm
Auto span	12.34	ppm	11.39	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
1997	68.96	31.89	31.75	1.0044
1998	40.99	19.20	19.16	1.0022
1999	15.97	7.57	7.49	1.0108
1995	0.00	0.00	0.03	As Found Zero
1995	68.93	31.90	31.75	As Found Span
Average Correction Factor				1.0058

Calculated value of As Found Response: 31.626 ppm Percent Change of As Found: 0.9%

	Before		After
Calculated slope	0.999828	Calculated slope	1.004303
Calculated intercept	-0.082489	Calculated intercept	-0.005310

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.02	ppm
Auto span	21.30	ppm	19.76	ppm

Notes: No adjustment made
Hydrogen & span cylinder changed

Calibration Performed By: Dmytro Doloti

Calibration Summary

Parameter CH4

Air Monitoring Network PAZA



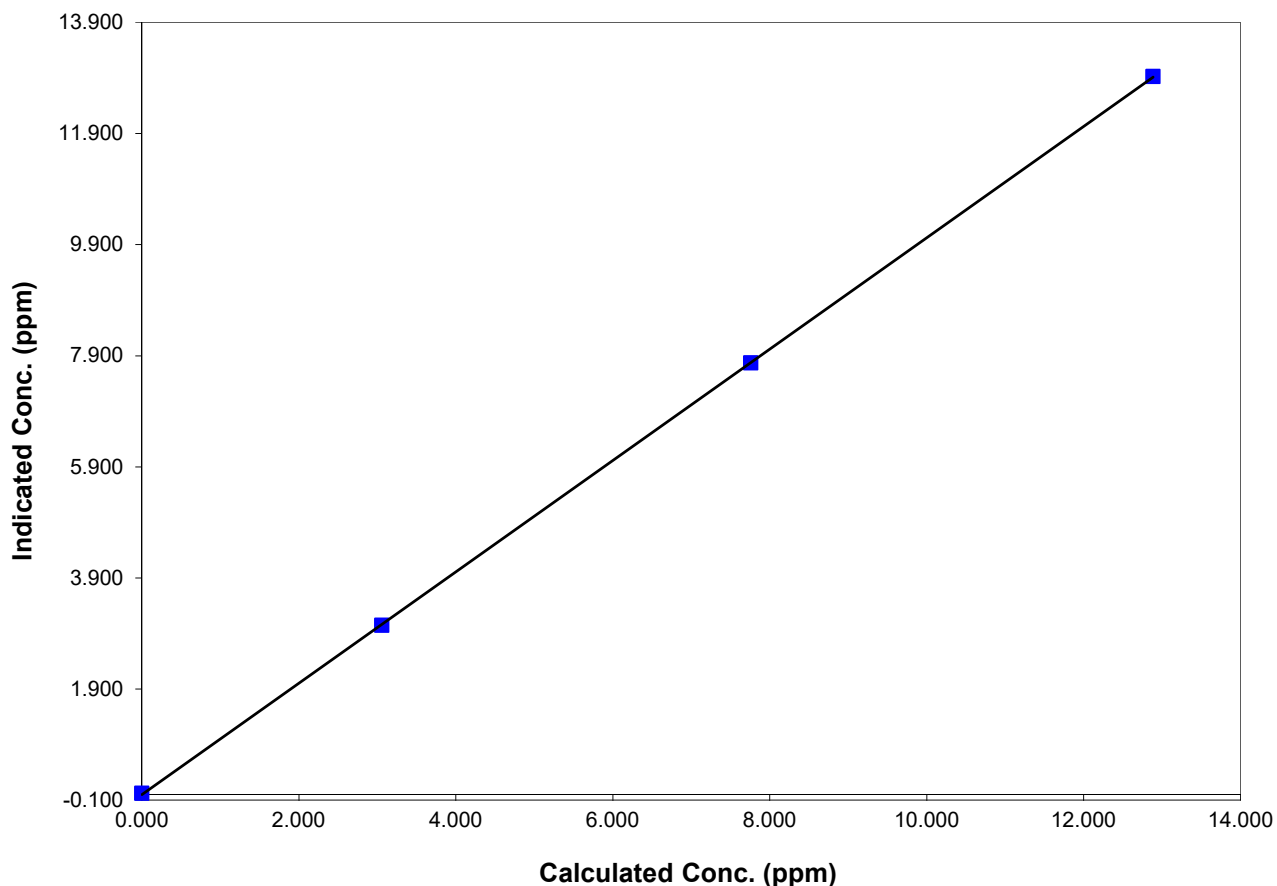
Station Information

Calibration Date	February 13, 2017	Previous Calibration	January 7, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:15	End Time (MST)	12:25
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	0.999990
12.884	12.927	0.9967		
7.760	7.769	0.9988		
3.059	3.048	1.0039	Slope	0.997491
			Intercept	-0.000041

CH4 Calibration Data



Calibration Summary

Parameter NMHC

Air Monitoring Network PAZA



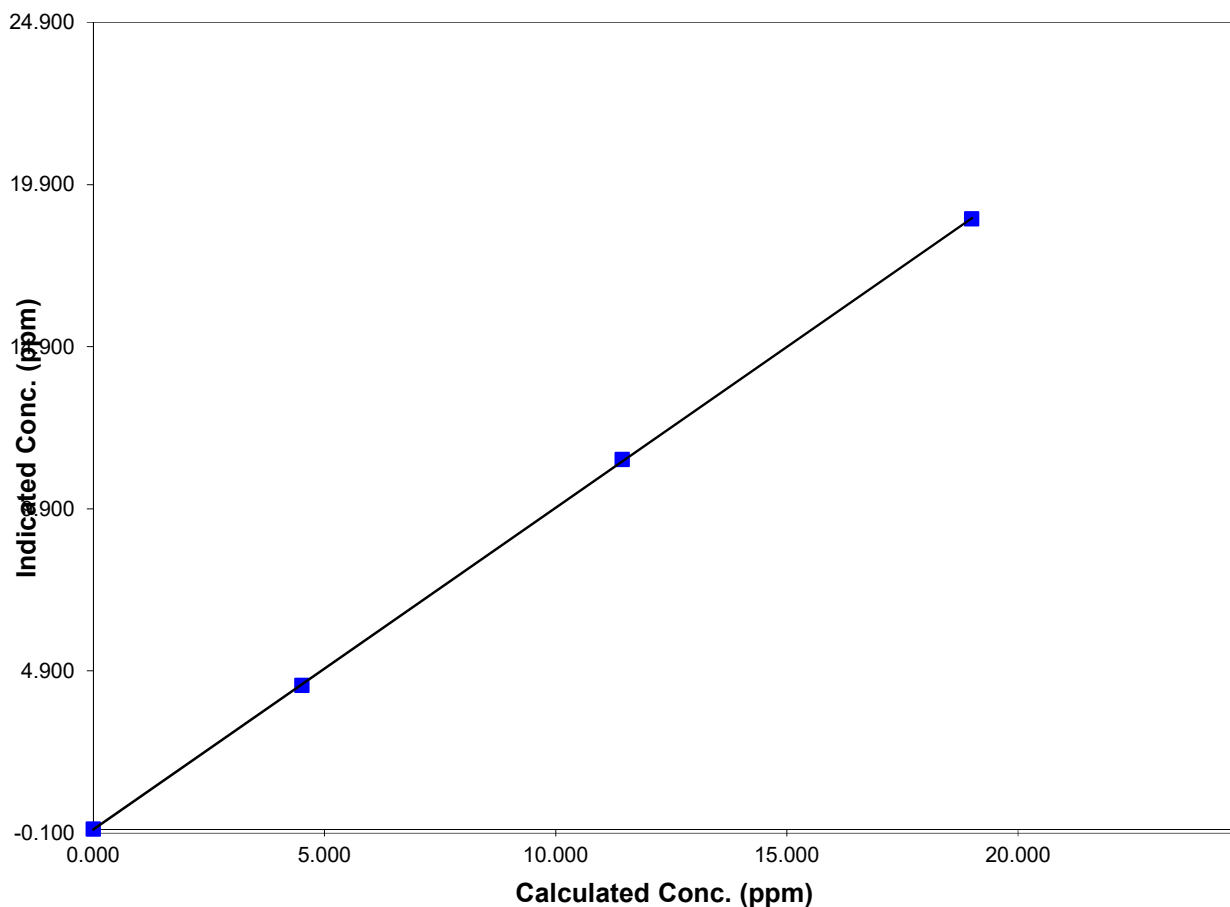
Station Information

Calibration Date	February 13, 2017	Previous Calibration	January 7, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:15	End Time (MST)	12:25
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	0.999981
19.001	18.845	1.0083		
11.444	11.414	1.0026		
4.512	4.456	1.0126	Slope	1.007868
			Intercept	-0.012972

NMHC Calibration Data



Calibration Summary

Parameter THC

Air Monitoring Network PAZA



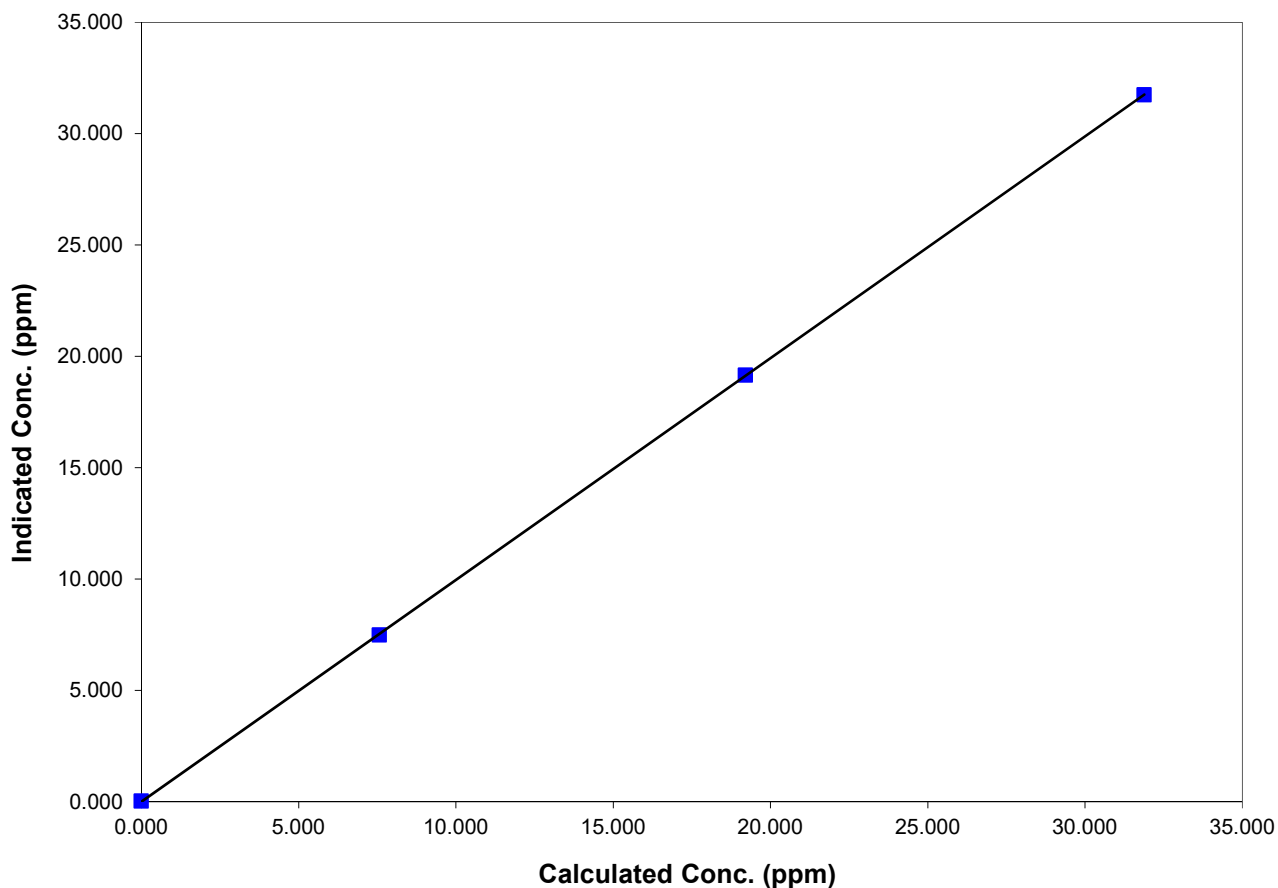
Station Information

Calibration Date	February 13, 2017	Previous Calibration	January 7, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:15	End Time (MST)	12:25
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

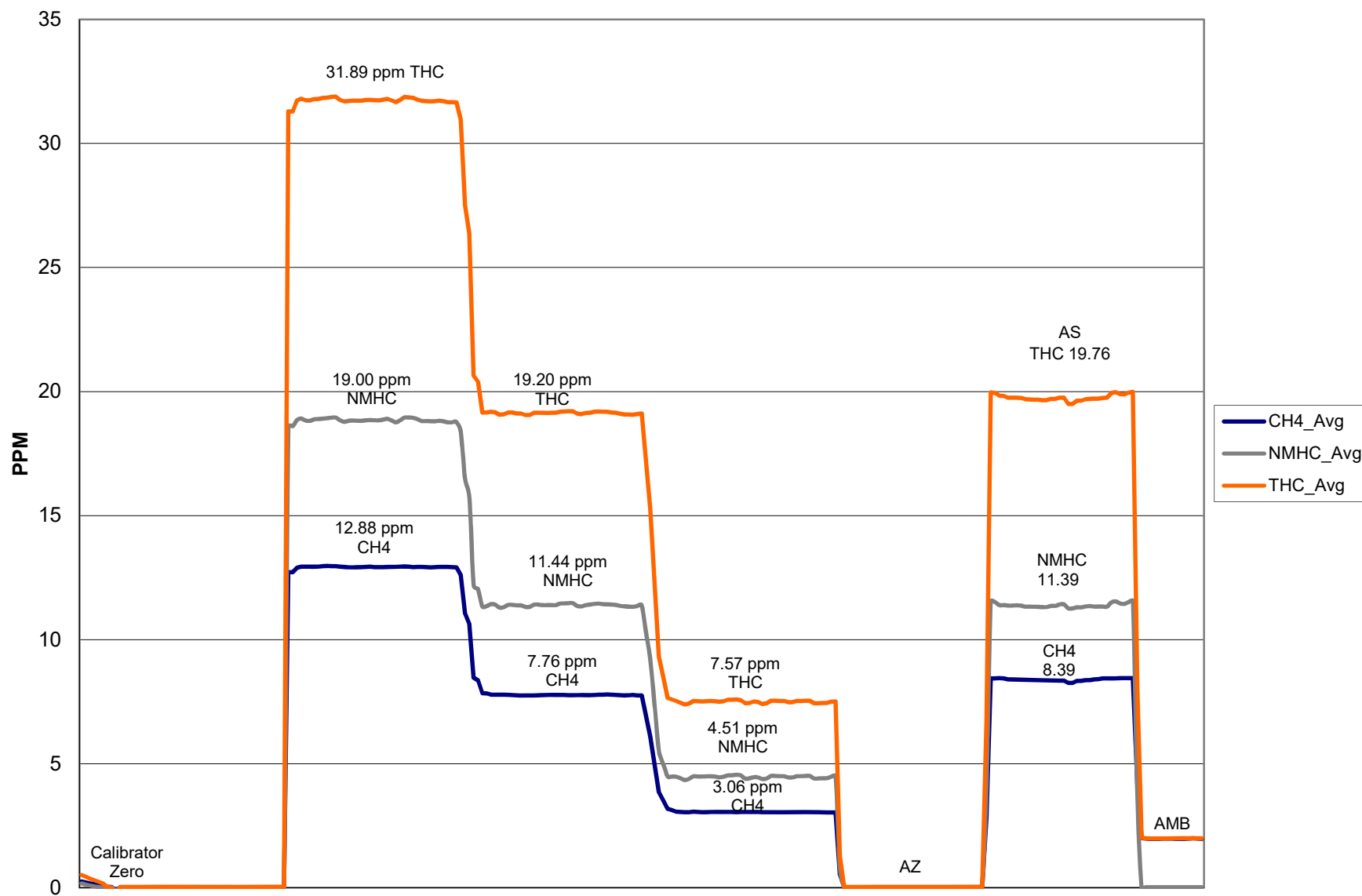
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.033	N/A	Correlation Coefficient	0.999992
31.885	31.746	1.0044		
19.203	19.161	1.0022		
7.571	7.490	1.0108	Slope	1.004303
			Intercept	-0.005310

THC Calibration Data



THC/CH₄/NMHC Calibration



Calibration Report

Parameter TR5

Air Monitoring Network PAZA



Station Information

Calibration Date	February 13, 2017	Previous Calibration	January 5, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	

Start Time (MST)	14:20:00 PM	End Time (MST)	17:40:00 PM
Barometric Pressure	720.00 mm/Hg	Station Temperature	20.0 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	0.983289	Calculated slope	0.975240
Calculated intercept	0.097228	Calculated intercept	1.096552

Analyzer make	TEI 45C	Analyzer serial #	630718528
---------------	---------	-------------------	-----------

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Coefficient	1.010		1.062	
Background	20.7		23.1	
Pressure	666.7	mm Hg	666.6	mm Hg
Flow	0.444	ccm	0.443	ccm
Lamp Voltage	910	V	910	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	0.01	N/A
4991	39.96	81.02	82.62	0.9806
4994	19.92	40.52	39.22	1.0332
6998	10.01	14.56	13.22	1.1017
4998	0.00	0.00	1.63	As Found Zero
4998	39.93	80.84	76.93	As Found Span
Average Correction Factor				1.0385

Calculated value of As Found Response: 74.1 ppb Percent Change of As Found: 8.3%

	before calibration		after calibration	
Auto zero	0.95	ppb	0.07	ppb
Auto span	29.51	ppb	28.31	ppb

Notes: Zero & span adjustment made
Sox scrubber check performed

Calibration Performed By: Dmytro Dolotii

;

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



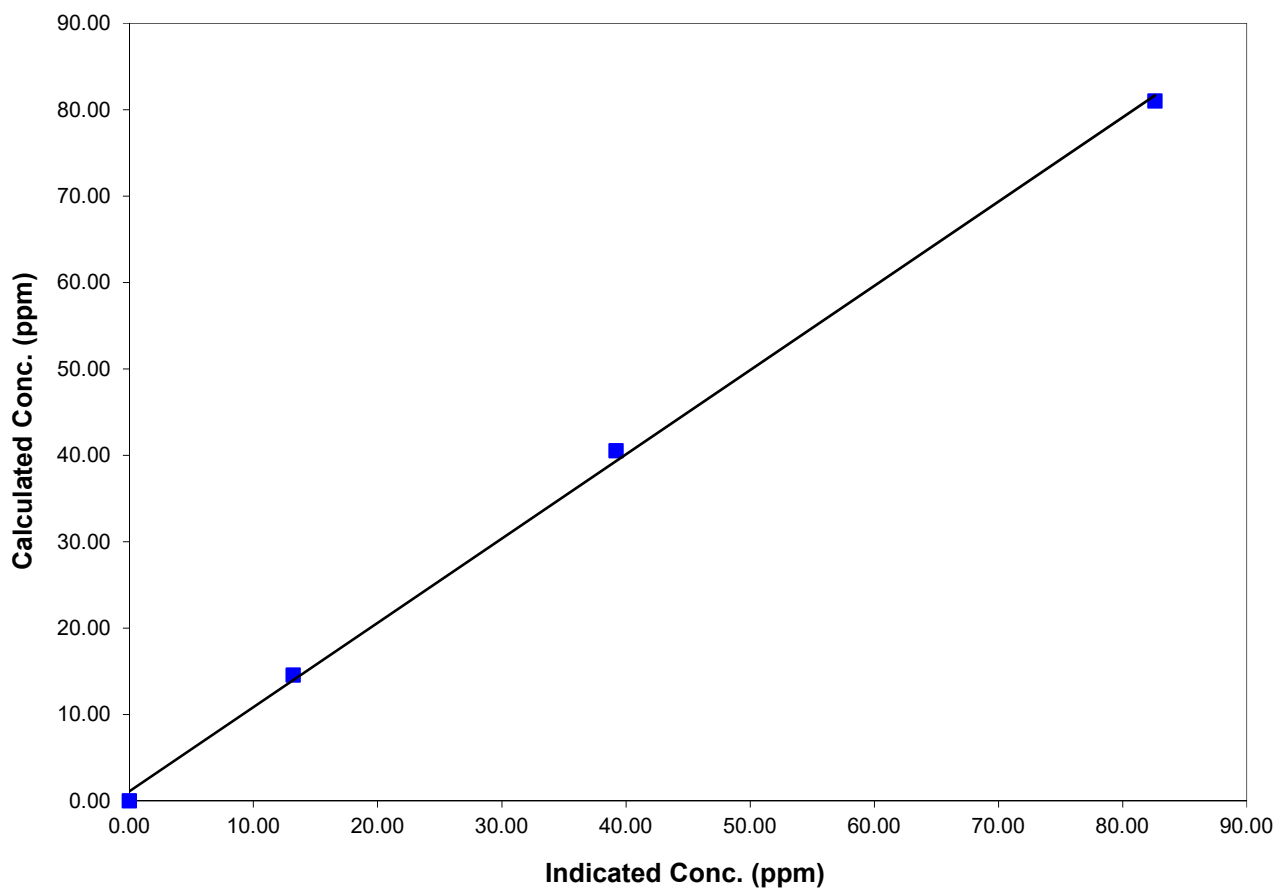
Station Information

Calibration Date	February 13, 2017	Previous Calibration	January 5, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	14:20:00 PM	End Time (MST)	17:40:00 PM
Analyzer make/model	TEI 45C	Analyzer serial #	630718528

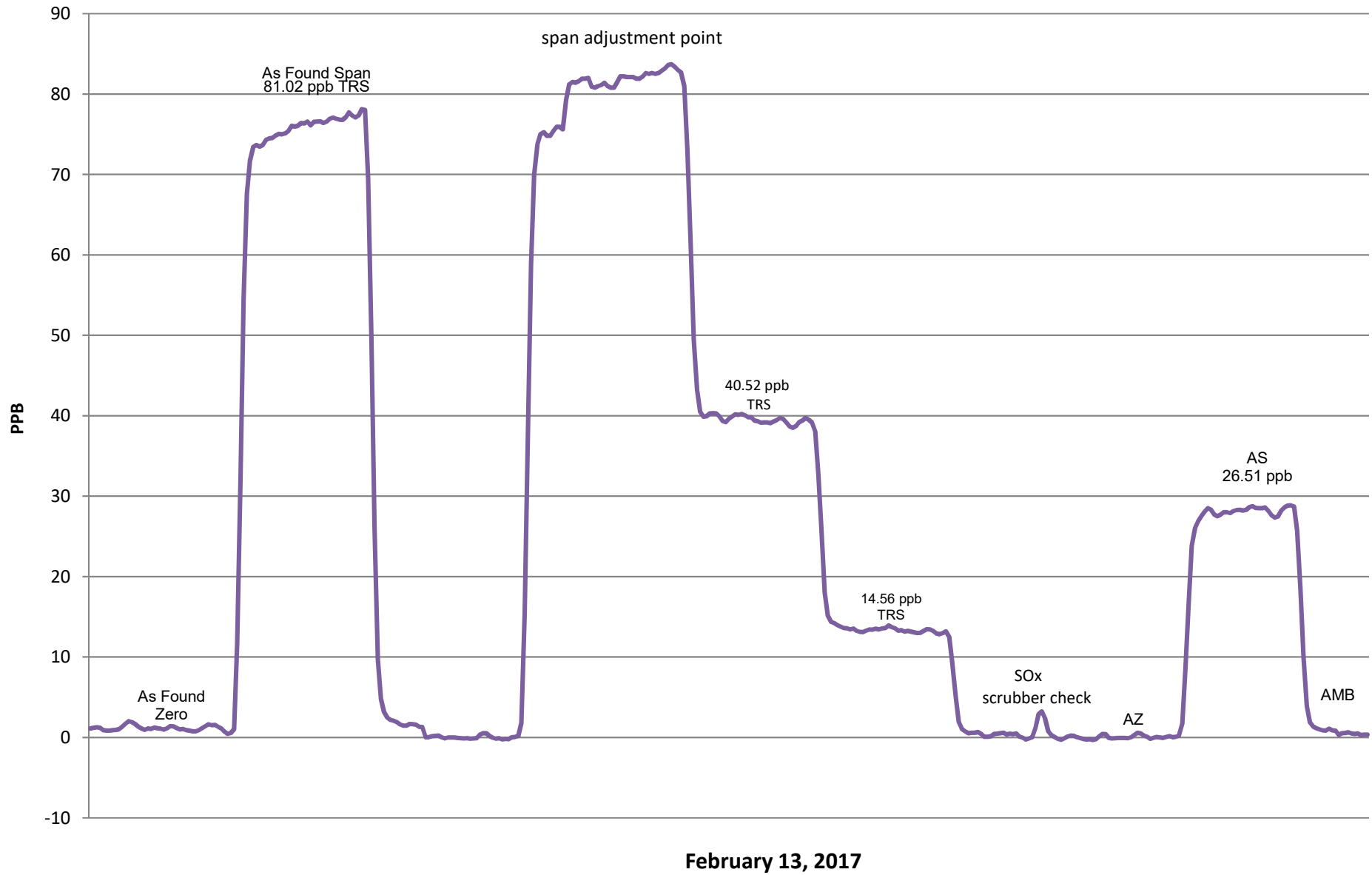
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.005	N/A	Correlation Coefficient	0.999114
81.017	82.617	0.9806		
40.524	39.221	1.0332	Slope	0.975240
14.562	13.218	1.1017		
			Intercept	1.096552

TRS Calibration Curve



TRS Calibration



Calibration Report



Parameter SO₂

Air Monitoring Network PAZA

Station Information

Calibration Date	February 10 2017	Previous Calibration	January 3 2017
Station Number	2	Station Location	Evergreen Park
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	12:48	End Time (MST)	14:45:00 PM
Barometric Pressure	0.906 ATM	Station Temperature	19.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Concentration	49.7 ppm	Cal Gas Expiry Date	10/5/2018
Correction factor	0.030903	Cal Gas Cylinder #	LL103793
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	6
	<u>Before</u>		<u>After</u>
Calculated slope	1.002449	Calculated slope	1.012498
Calculated intercept	1.029704	Calculated intercept	0.479063
Analyzer make	Teco 43i	Analyzer serial #	701120008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	11.7		11.7	
coefficient	1.224		1.224	
Lamp Voltage	836	volts	835	volts
Chamber Temp	45.2	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	658.3	mm Hg	654.2	mm Hg
Sample Flow	0.438	ccm	0.44	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)
4996	0.0	0.00	0.9	N/A
4999	39.95	394.0	389.3	1.0121
4996	19.92	197.4	193.9	1.0180
4997	9.98	99.1	96.0	1.0320
4996	0.0	0.0	0.9	As Found Zero
4996	39.93	394.1	389.3	As Found Span
Average Correction Factor				1.0207

Calculated value of As Found Response: 390.443 ppm Percent Change of As Found: 0.9%

	before calibration		after calibration	
Auto zero	1.0	ppm	1.0	ppm
Auto span	249.5	ppm	261.0	ppm

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



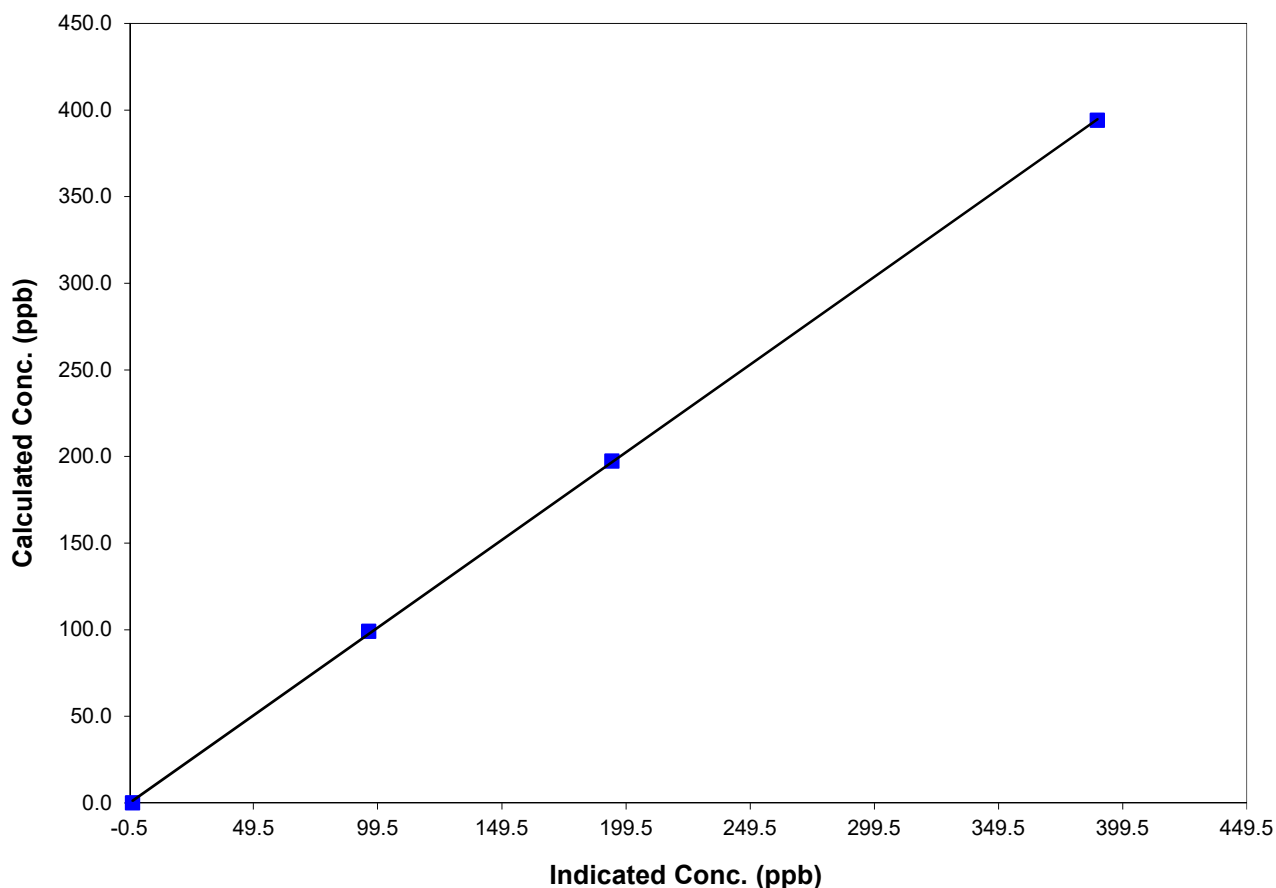
Station Information

Calibration Date	February 10 2017	Previous Calibration	January 3 2017
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	12:48	End Time (MST)	14:45:00 PM
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

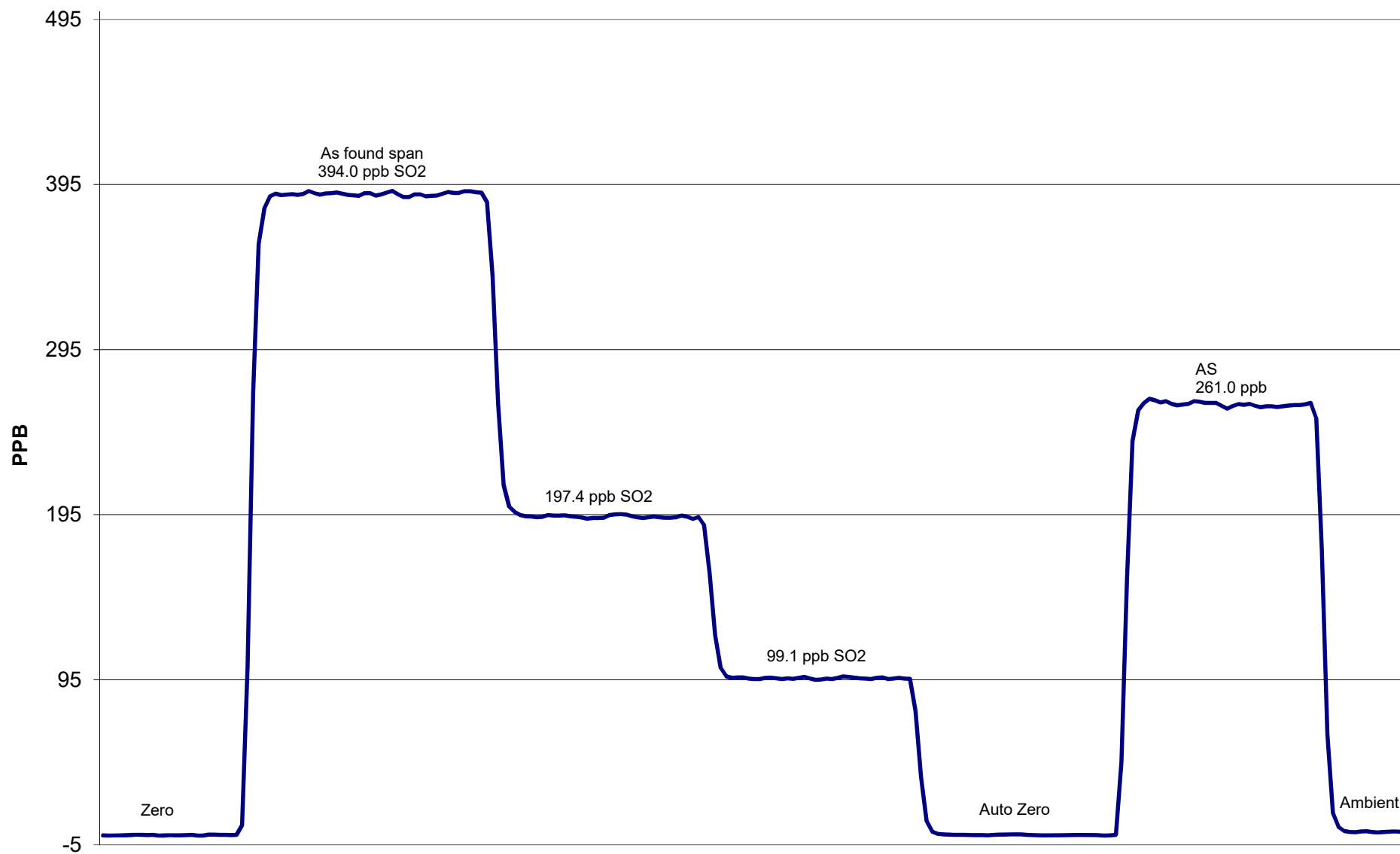
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.9	N/A	Correlation Coefficient	0.999947
394.0	389.3	1.0121		
197.4	193.9	1.0180		
99.1	96.0	1.0320	Slope	1.012498
			Intercept	0.479063

SO2 Calibration Curve



SO2 Calibration



February 10 2017

Calibration Report

Parameter TRS

Air Monitoring Network PAZA



Station Information

Calibration Date	February 10 2017	Previous Calibration	January 3 2017
Station Number	2	Station Location	Evergreen Park
Reason:	Routine	Install	Removal
			Other:
Start Time (MST)	11:05	End Time (MST)	13:45:00 PM
Barometric Pressure	0.906 ATM	Station Temperature	19.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Conc	10.2 ppm	Cal Gas Expiry Date	7/8/2016
Correction factor	0.030903	Cal Gas Cylinder #	LL110781
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
Calculated slope	0.988267	Calculated slope	0.993339
Calculated intercept	0.252788	Calculated intercept	0.018965

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

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	15.6	ppb	15.6	ppb
coefficient	0.940		0.940	
Lamp Voltage	1027	volts	1027	volts
Chamber Temp	44.2	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	641.9	mm Hg	638.2	mm Hg
Sample Flow	0.501	ccm	0.502	ccm
Lamp Intensity	36,566	mv	35,987	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	0.3	N/A
4997	39.98	80.96	81.7	0.9914
4996	19.92	40.51	40.5	1.0007
6998	9.94	14.47	14.3	1.0125
4999	9.98		0.6	Sox Test
4996	0.00	0.00	0.3	As Found Zero
4997	39.93	80.86	81.7	As Found Span
Average Correction Factor				1.0015

Calculated value of As Found Response: 80.63 ppm Percent Change of As Found: **0.3%**

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	80.4	ppm	86.5	ppm

Notes: No adjustment made.
Sox scrubber check performed

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



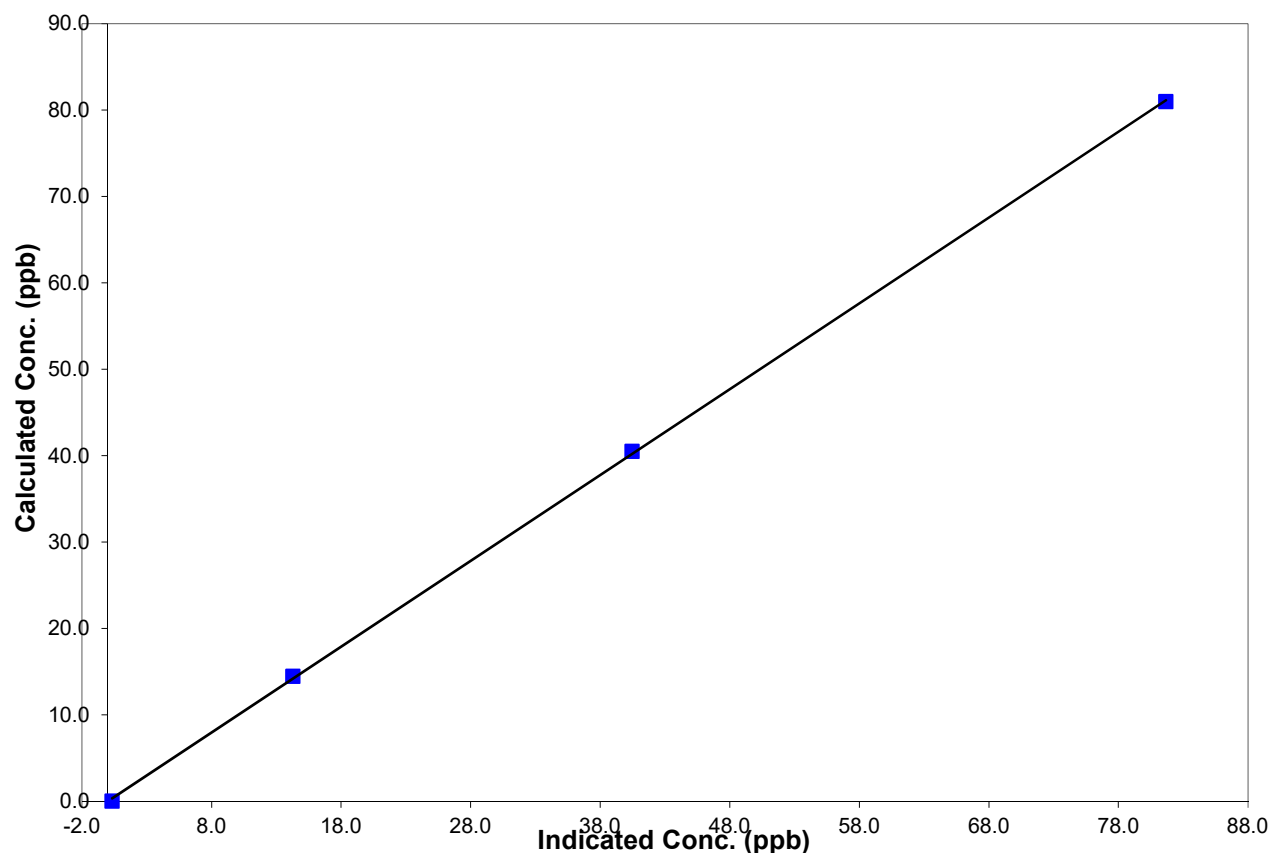
Station Information

Calibration Date	February 10 2017	Previous Calibration	January 3 2017
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	11:05	End Time (MST)	13:45:00 PM
Analyzer make/model	TEI Model 43C	Analyzer serial #	31990000000491

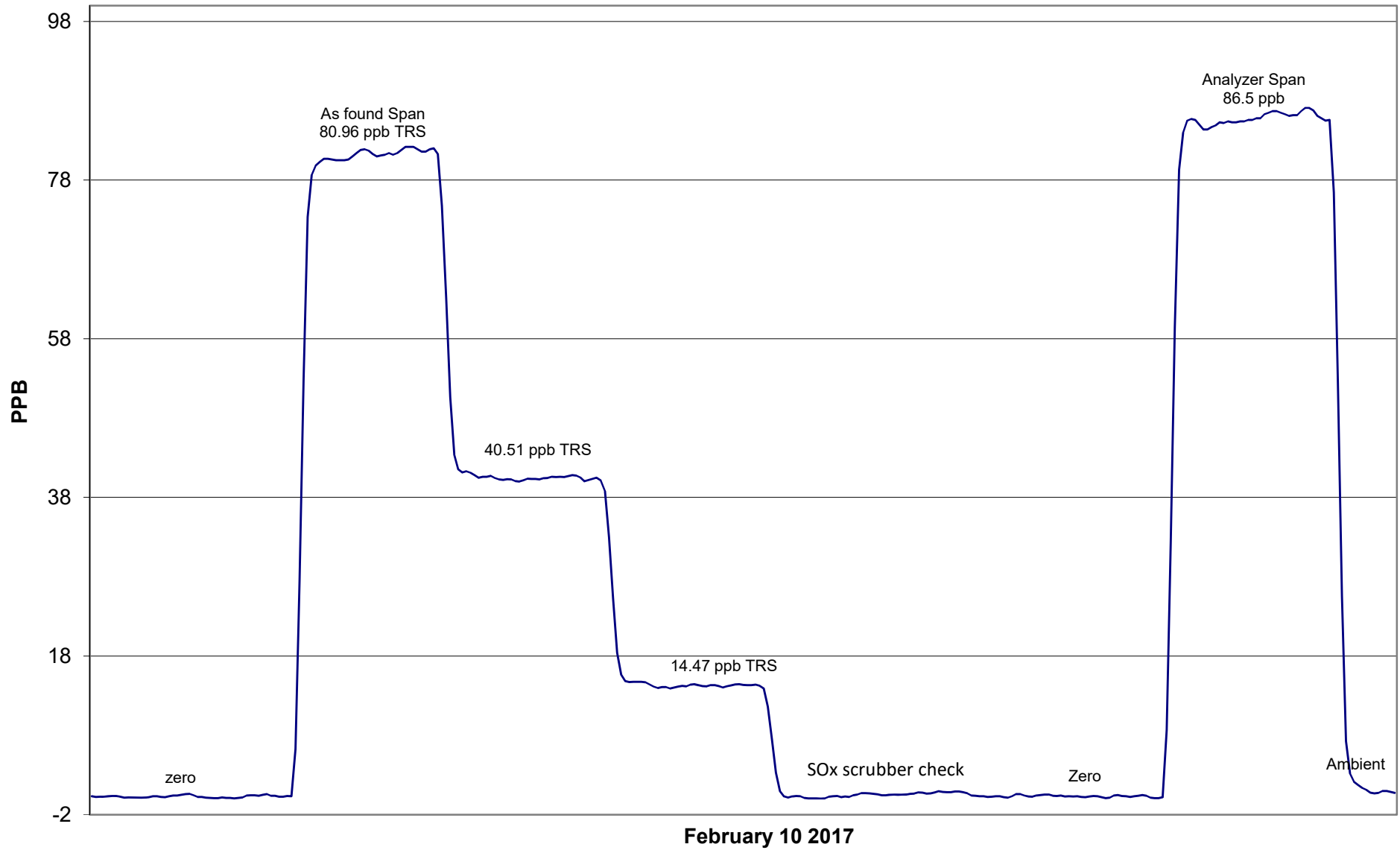
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A	Correlation Coefficient	0.999921
81.0	81.7	0.9914		
40.5	40.5	1.0007		
14.5	14.3	1.0125	Slope	0.993339
			Intercept	0.018965

TRS Calibration Curve



TRS Calibration



Calibration Report



Parameter SO₂

Air Monitoring Network PAZA

Station Information

Calibration Date	February 27, 2017	Previous Calibration	January 12, 2017
Station Number	3	Station Location	Smokey Heights
Reason:	☒ Routine	☐ Install	☐ Removal
			☐ Other:
Start Time (MST)	13:00:00 PM	End Time (MST)	15:05:00 PM
Barometric Pressure	0.922 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	3474
Cal Gas Concentration	49.7 ppm	Cal Gas Cert Date	11/5/2018
Correction factor	0.031341	Cal Gas Cylinder #	LL103793
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	0.999085	Calculated slope	1.004910
Calculated intercept	1.198616	Calculated intercept	1.646590
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	949	volts	946	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	660.2	mm Hg	666.9	mm Hg
Sample Flow	0.442	lpm	0.444	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	0.2	N/A
4994	39.91	394.03	391.3	1.0071
4992	19.92	197.53	194.3	1.0165
4993	9.96	98.94	94.8	1.0436
4997	0.0	0.00	0.2	As Found Zero
4994	39.91	394.03	391.3	As Found Span
Average Correction Factor				1.0224

Calculated value of As Found Response: 391.904 ppm Percent Change of As Found: 0.5%

	before calibration		after calibration	
Auto zero	0.2	ppb	0.2	ppb
Auto span	210.1	ppb	211.3	ppb

Notes: NO adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



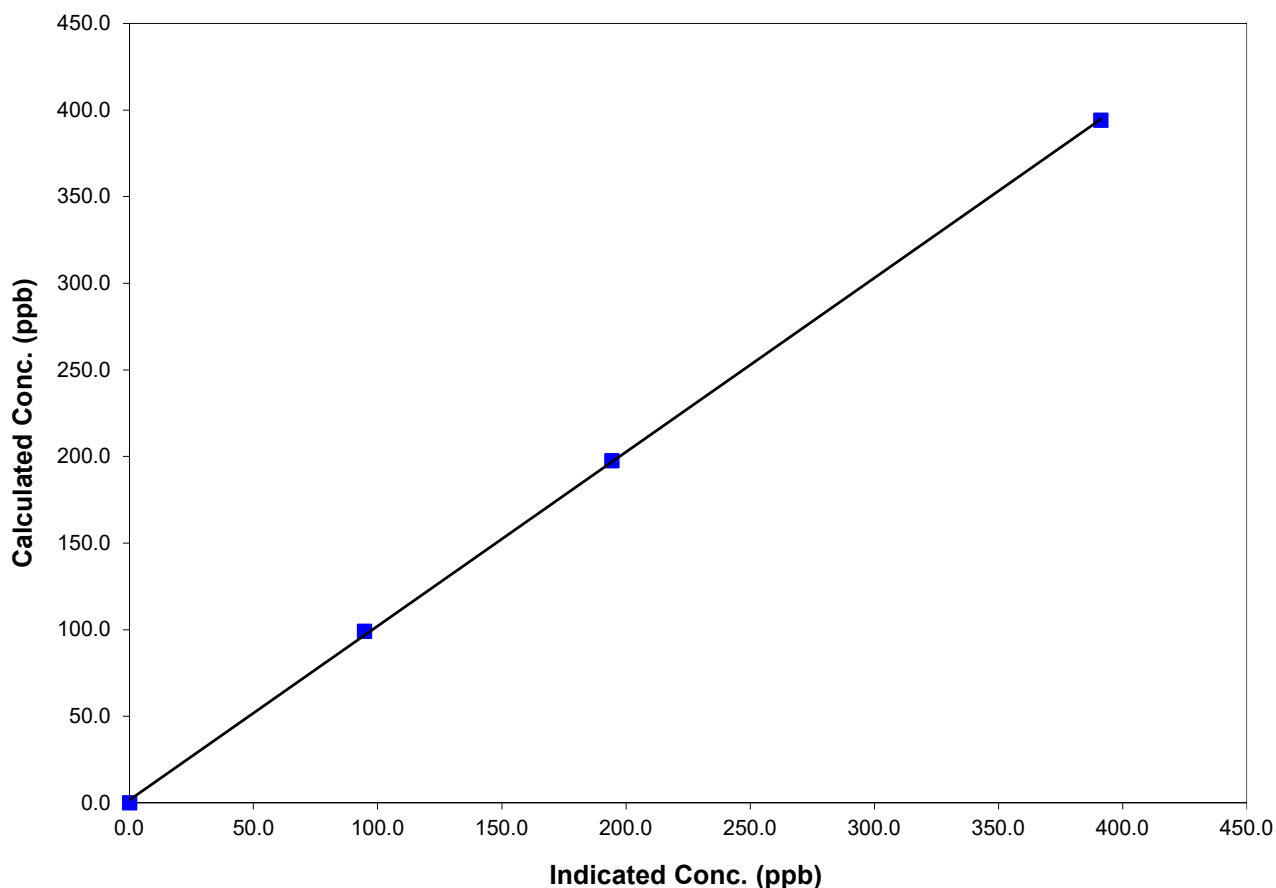
Station Information

Calibration Date	February 27, 2017	Previous Calibration	January 12, 2017
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	13:00:00 PM	End Time (MST)	15:05:00 PM
Analyzer make/model	Teco 43i	Analyzer serial #	701120009

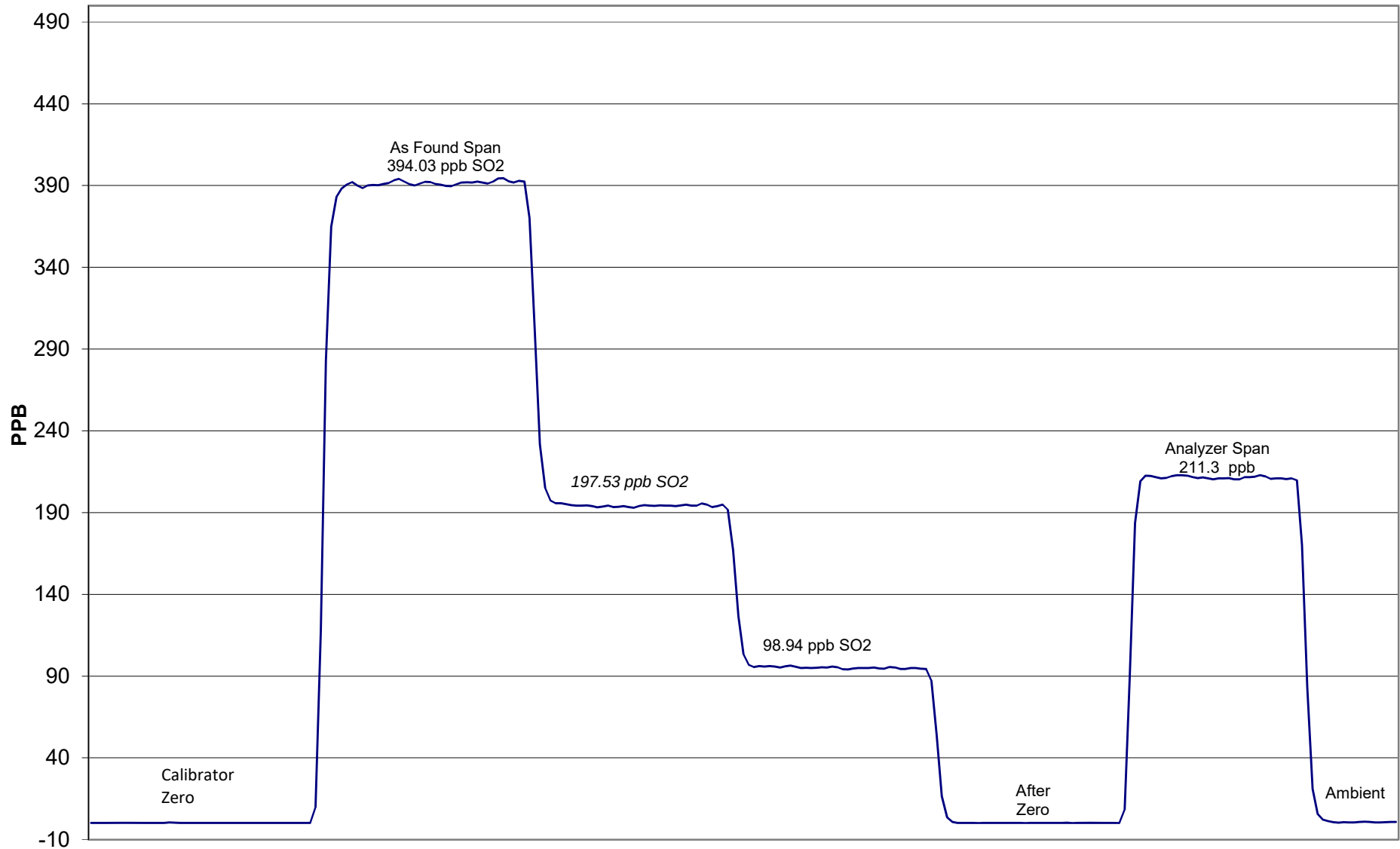
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999900
394.0	391.3	1.0071		
197.5	194.3	1.0165		
98.9	94.8	1.0436	Slope	1.004910
			Intercept	1.646590

SO2 Calibration Curve



Smokey Heights SO₂ Calibration



February 27, 2017

Calibration Report



Parameter TRS

Air Monitoring Network PAZA

Station Information

Calibration Date	February 27, 2017		Previous Calibration	January 12, 2017	
Station Number	3		Station Location	Smokey Heights	
Reason:	Routine	Install	Removal	Other:	
Start Time (MST)	11:30		End Time (MST)	14:25:00 PM	
Barometric Pressure	0.922	ATM	Station Temperature	20.0	Deg C
Calibrator	EnviroNics		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	
	<u>Before</u>			<u>After</u>	
Calculated slope	0.993791		Calculated slope	0.995577	
Calculated intercept	-0.108640		Calculated intercept	0.115031	

Analyzer make TEI Model 43I APSAA Analyzer serial # 1153630151

	before		after	
Concentration range	100	ppb	100	ppb
Background	14.5	ppb	14.2	ppb
coefficient	0.949		0.949	
Lamp Voltage	807	volts	807	volts
Chamber Temp	45.2	Deg C	45	Deg C
Perm Gas Temp	44.9	Deg C	45	Deg C
Pressure	668.8	mm Hg	668.6	mm Hg
Sample Flow	0.419	lpm	0.419	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	0.4	N/A
4989	39.87	80.87	81.4	0.9932
4992	19.96	40.62	40.2	1.0113
6997	9.91	14.43	14.0	1.0290
4990	9.95		0.8	Sox test
4990	0.0	0.00	0.4	As Found Zero
4989	39.87	80.87	82.3	As Found Span
Average Correction Factor				1.0111

Calculated value of As Found Response: 81.27 ppm Percent Change of As Found: -0.5%

	before calibration		after calibration	
Auto zero	0.4	ppm	0.4	ppm
Auto span	69.9	ppm	70.3	ppm

Notes: Sligh span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



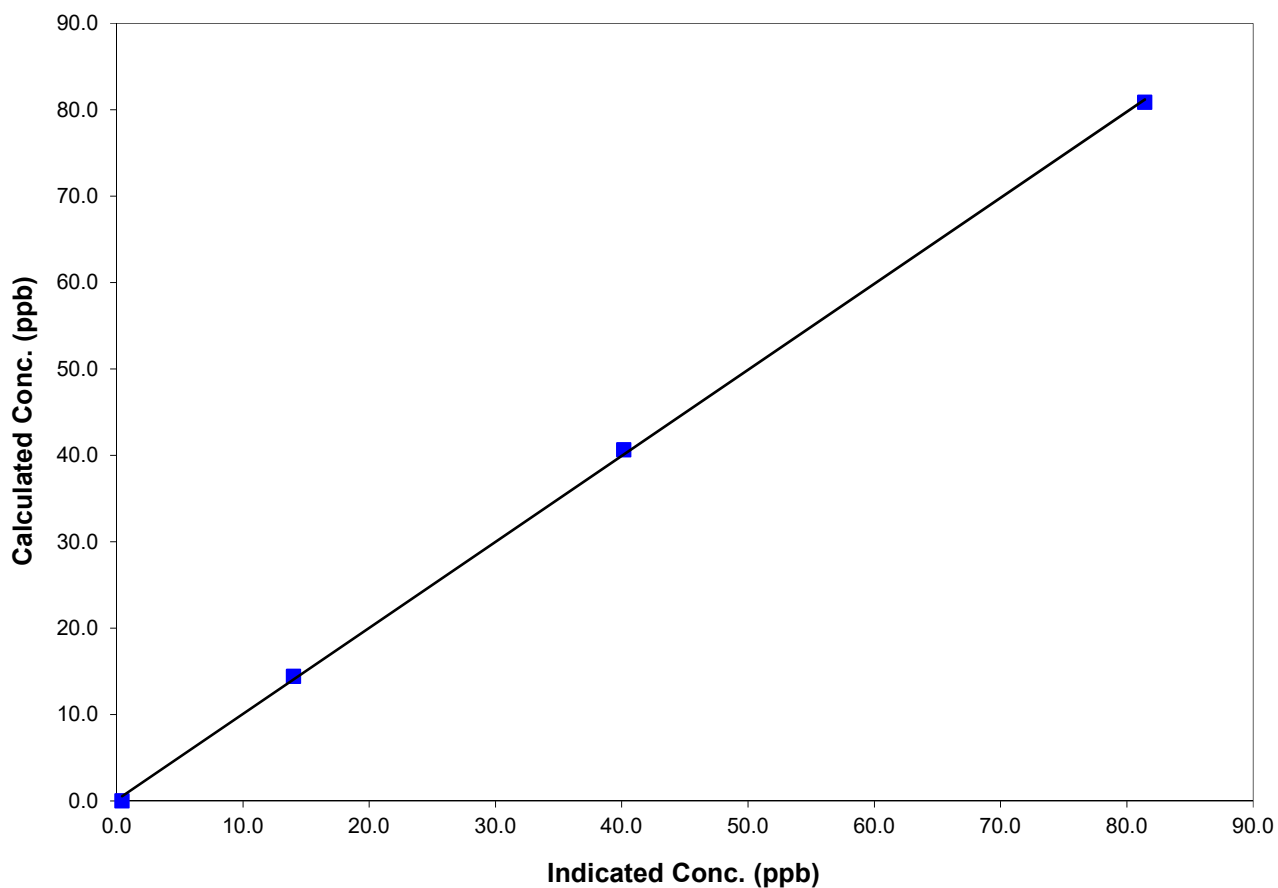
Station Information

Calibration Date	February 27, 2017	Previous Calibration	January 12, 2017
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	11:30	End Time (MST)	14:25:00 PM
Analyzer make/model	TEI Model 43I APSAA	Analyzer serial #	1153630151

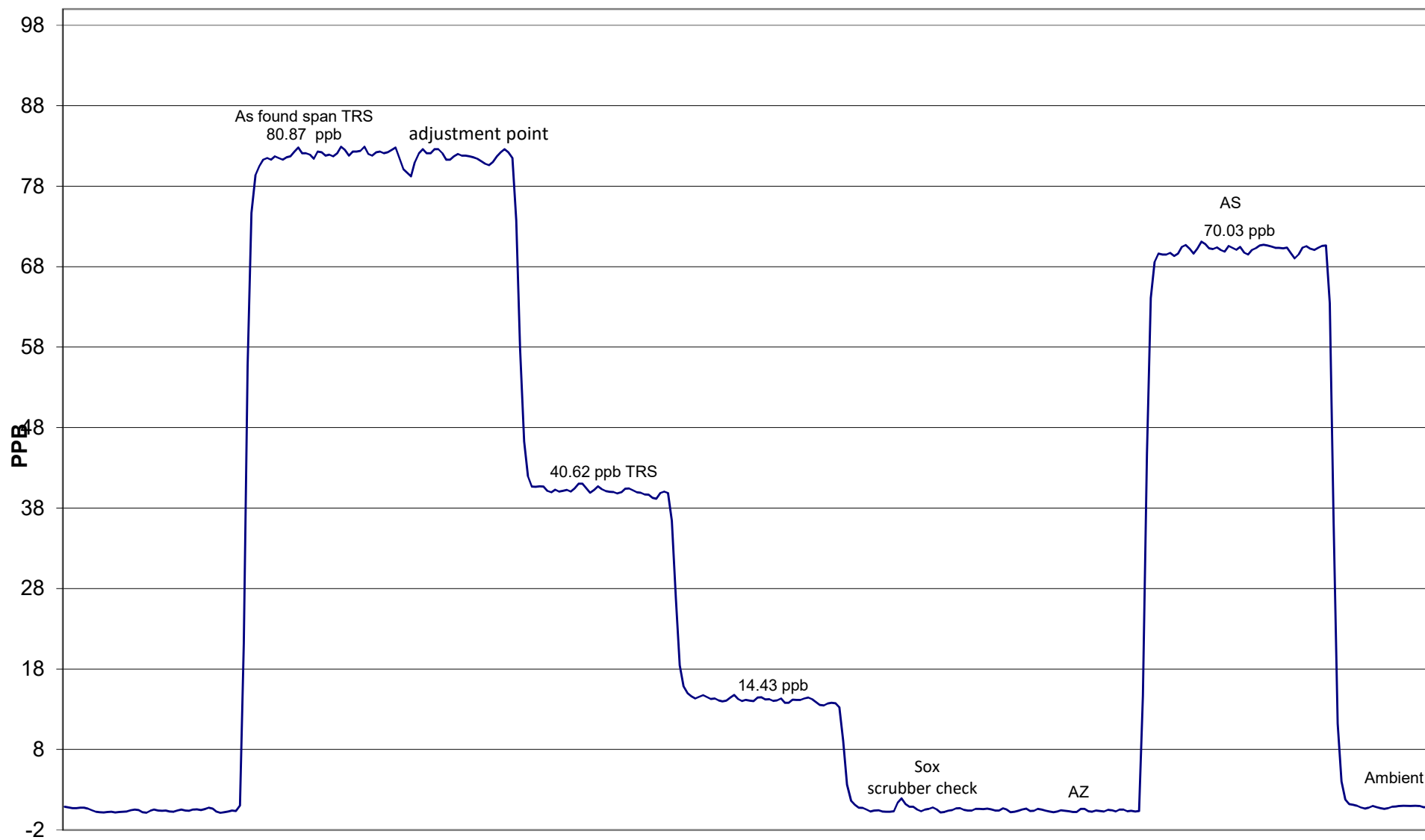
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A	Correlation Coefficient	0.999789
80.9	81.4	0.9932		
40.6	40.2	1.0113		
14.4	14.0	1.0290	Slope	0.995577
			Intercept	0.115031

TRS Calibration Curve



Smokey Heights TRS Calibration



February 27, 2017

Calibration Report

Parameter SO2
Air Monitoring Network

PAZA



Station Information

Calibration Date	February 15, 2017	Previous Calibration	January 9, 2017
Station Number	4	Station Location	Beaverlodge
Reason:	Routine	Install	Removal
Start Time (MST)	13:40:00 PM	End Time (MST)	15:35:00 PM
Barometric Pressure	0.931 atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	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	1.009424	Calculated slope	1.012483
Calculated intercept	-0.262771	Calculated intercept	-0.089298
Analyzer make	TEI Model 43i-TLE	Analyzer serial #	713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.57		2.56	
Coefficient	0.969		0.969	
PMT	-767.4	V	-767.5	V
UV Lamp Voltage	1119	V	1125	V
Chamber Temp	45.2	Deg C	45.2	Deg C
Pressure	647.4	mm Hg	651	mm Hg
Sample Flow	0.445	LPM	0.453	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	0.3	N/A
4992	39.91	83.3	82.4	1.0110
4995	19.90	41.7	41.3	1.0085
4991	9.96	20.9	20.5	1.0224
4989	0.00	0.0	0.3	As found zero
4989	39.84	83.2	82.4	As found span
Average Correction Factor				1.0139

Calculated value of As Found Response: 82.618 ppm Percent Change of As Found: 0.7%

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

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



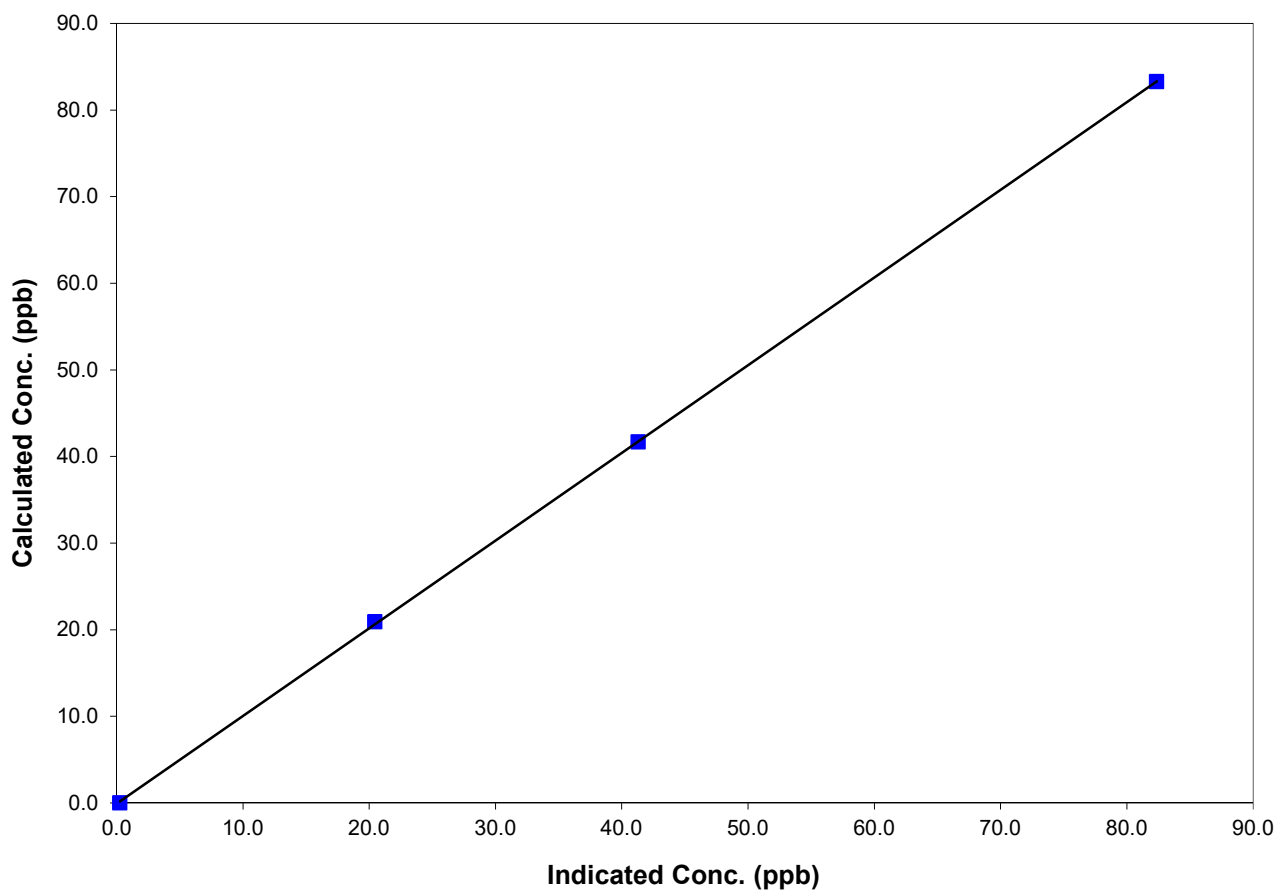
Station Information

Calibration Date	February 15, 2017	Previous Calibration	January 9, 2017
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	13:40:00 PM	End Time (MST)	15:35:00 PM
Analyzer make/model	TEI Model 43i-TLE	Analyzer serial #	713021137

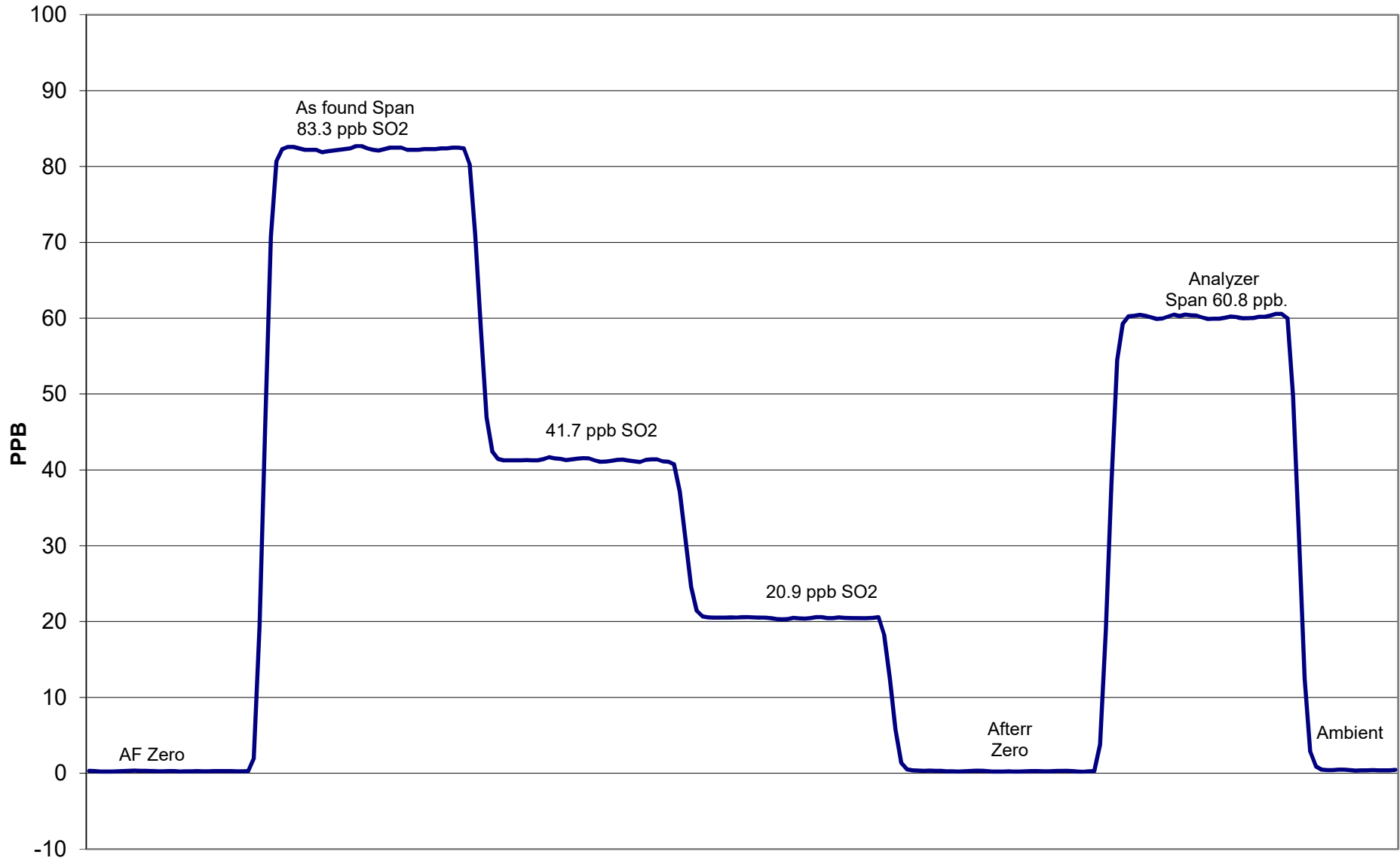
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A	Correlation Coefficient	0.999967
83.3	82.4	1.0110		
41.7	41.3	1.0085		
20.9	20.5	1.0224	Slope	1.012483
			Intercept	-0.089298

SO2 Calibration Curve



SO2 Calibration



February 15, 2017

Parameter

Air Monitoring Network

NO_x-NO-NO₂

PAZA



Station Information

Calibration Date	February 15, 2017		Previous Calibration	January 9, 2017	
Station Number	4		Station Location	Beaverlodge	
Reason:	☒ Routine	☐ Installation	☐ Removal	Other:	
Start Time (MST)	10:00		End Time (MST)	13:30:00 PM	
Barometric Pressure	0.931	Atm	Station Temperature	20.0	Deg C
Calibrator	EnviroNics		Serial Number	3474	
NO Cal Gas Conc	50.9	ppm	Cal Gas Expiry Date	November 5, 2018	
NOx Cal Gas Conc	51.2	ppm	Cal Gas Serial #	LL103793	

DACS Information

DACS make	CR3000	DACS serial No.	5237	
Parameter		NO2	NOx	NO
Before	Data Slope	1.001402	0.999791	0.994245
	Data Offset	0.382145	1.588336	1.564200
After	Data Slope	1.003486	1.009473	1.003767
	Data Offset	0.059743	1.273270	1.251254
Channel #		8	6	7
Voltage Range		0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model	TEI 42i	Analyzer serial #	906535068	
Test Point	before		after	
Concentration range	0-500	ppb	0-500	ppb
NO offset	2.8	mV	2.8	mV
NOx bkgnd	3.3	mV	3.3	mV
NO coefficient	1.183		1.183	
NOx coefficient	0.999		0.999	
NO2 conv temp	324.2	Deg C	324.2	Deg C
PMT Temp	-3.0	Deg C	-3.0	Deg C
PMT Volt	-729.3	mV	-730.0	mV
R Cell Press	180.4	in Hg	180.4	in Hg
Sample Flow	0.644	LPM	0.655	LPM

Notes: No adjustment made

Calibration Report

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



Station Information

Calibration Date: February 15, 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	4993	0.00	0.0	0.0	0.0	-0.1	-0.1	-0.2	N/A	N/A
1	4994	39.91	405.9	403.5	2.4	401.4	401.4	-0.8	1.0114	1.0053
2	4991	19.92	203.5	202.3	1.2	200.0	199.5	-0.4	1.0179	1.0140
3	4997	9.94	101.6	101.0	0.6	98.2	98.4	-0.3	1.0352	1.0271
AFZ	4993	0.00	0.0	0.0	0.0	-0.1	-0.1	-0.2	0.0000	0.0000
AFS	4993	39.92	406.1	403.7	0.8	401.4	401.4	-0.8	1.0118	1.0057
Average Correction Factor									1.0215	1.0155

As Found Concentrations: NO_x= 403.0 NO= 400.8 As Found Percent Change NO_x= -0.8% NO= -0.7%

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	-0.2	N/A	N/A	N/A	N/A
NO point	400.6	400.6	0.0	400.4	400.6	-1.0	1.0006	1.0000	N/A	N/A
300	400.6	60.7	339.9	401.8	60.7	340.1	0.9970	1.0000	0.9994	100.1%
200	400.6	171.7	229.0	402.0	171.7	225.0	0.9966	1.0000	1.0176	98.3%
100	400.6	290.6	110.0	402.6	290.6	111.4	0.9950	1.0000	0.9879	101.2%
Average Correction Factor							0.9962	1.0000	1.0016	99.9%

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	-0.1	ppb
Auto span	320.9	318.2	1.9	ppb	323.4	320.6	1.9	ppb

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



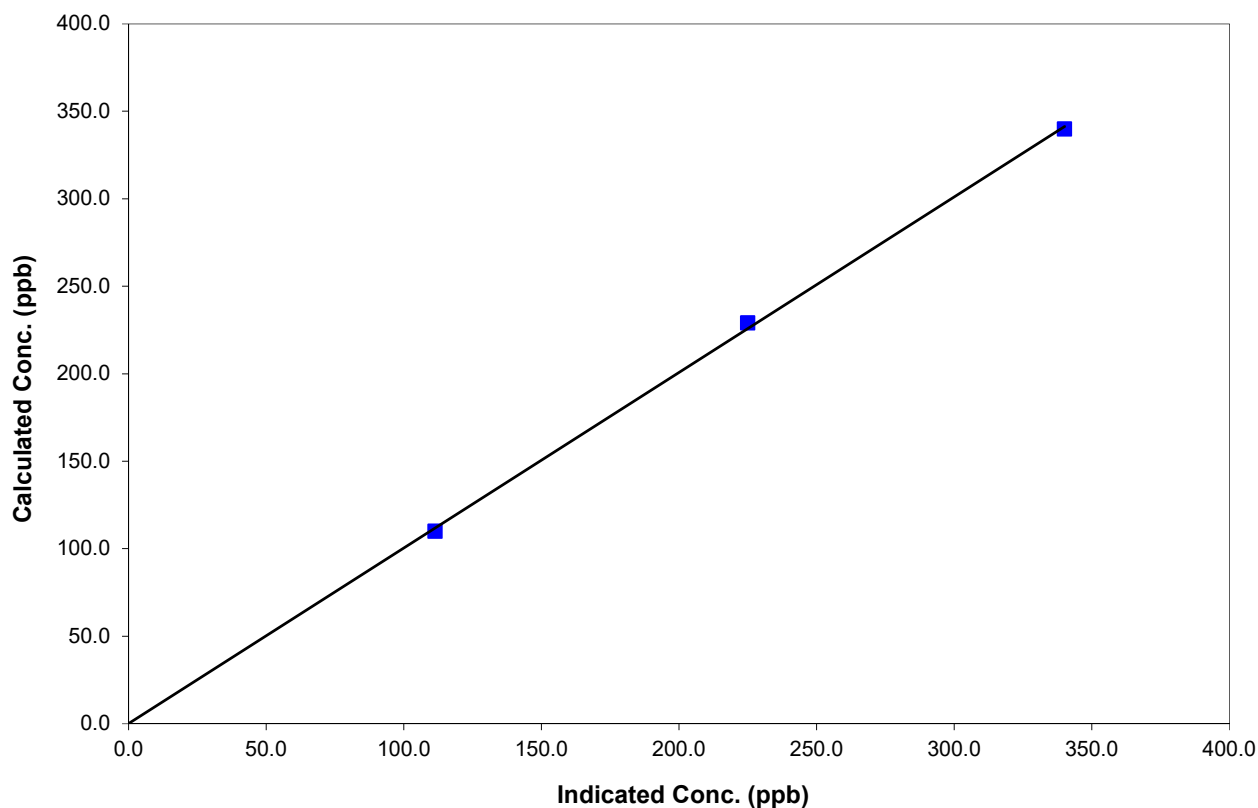
Station Information

Calibration Date	February 15, 2017	Previous Calibration	January 9, 2017
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	10:00	End Time (MST)	13:30:00 PM
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.2	N/A	Correlation Coefficient	0.999768
339.9	340.1	0.9994		
229.0	225.0	1.0176		
110.0	111.4	0.9879	Slope	1.003486
			Intercept	0.059743

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



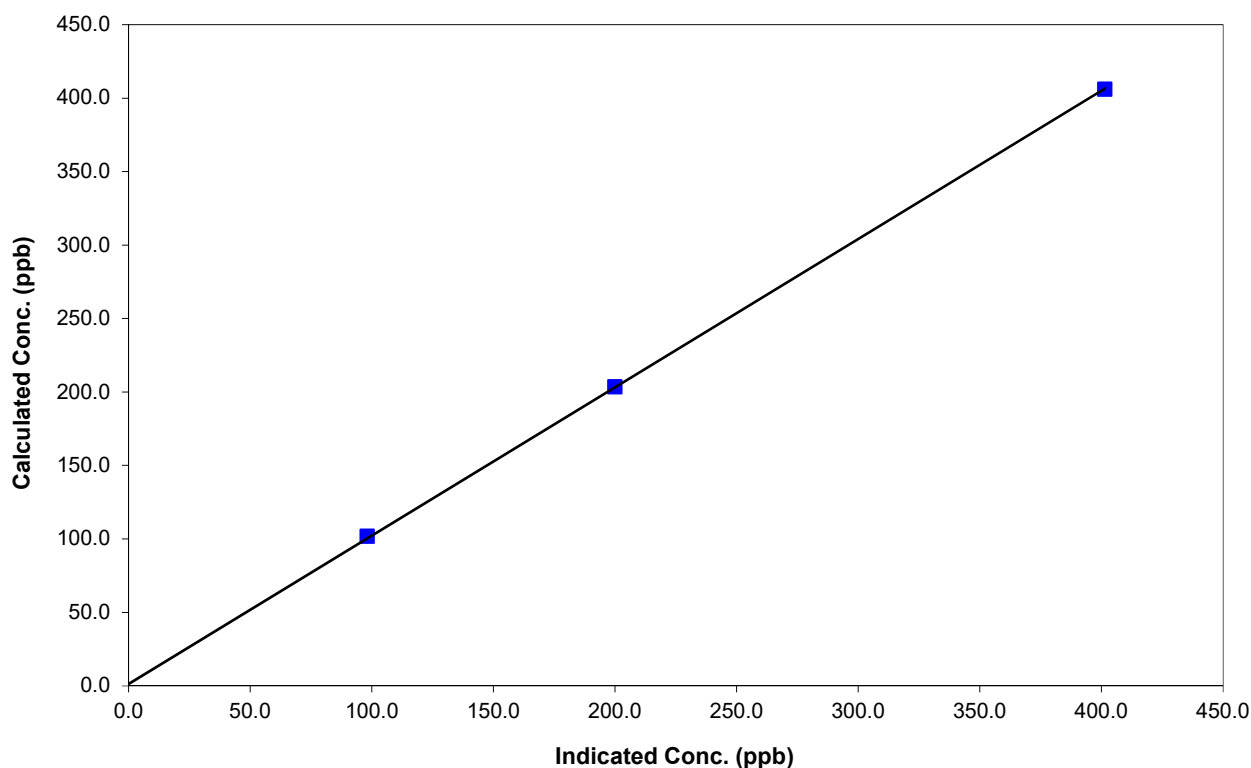
Station Information

Calibration Date	February 15, 2017	Previous Calibration	January 9, 2017
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	10:00	End Time (MST)	13:30:00 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	0.999963
405.9	401.4	1.0114		
203.5	200.0	1.0179		
101.6	98.2	1.0352	Slope	1.009473
			Intercept	1.273270

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



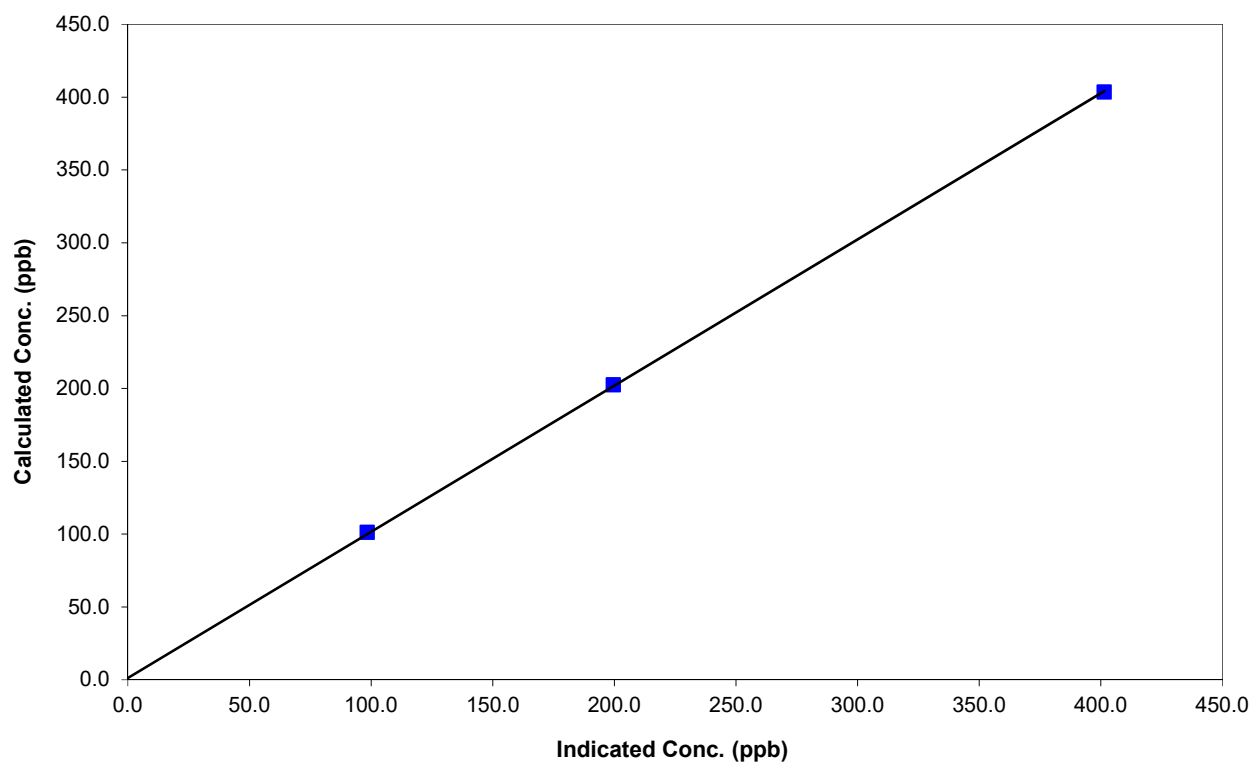
Station Information

Calibration Date	February 15, 2017	Previous Calibration	January 9, 2017
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	10:00	End Time (MST)	13:30:00 PM
Analyzer make	TEI 42i	Analyzer serial #	906535068

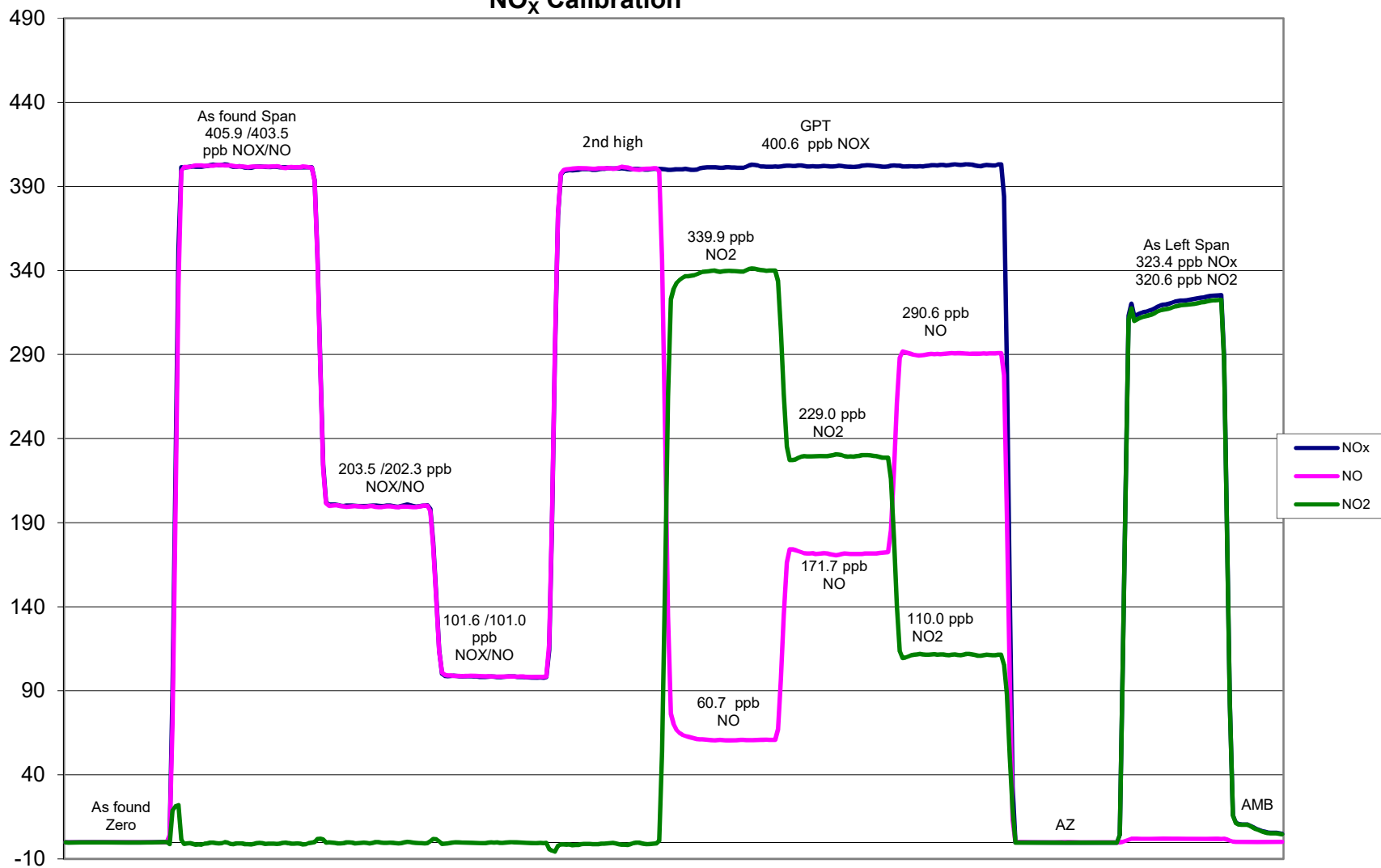
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A	Correlation Coefficient	0.999960
403.5	401.4	1.0053		
202.3	199.5	1.0140		
101.0	98.4	1.0271	Slope	1.003767
			Intercept	1.251254

NO Calibration Curve



NO_x Calibration



February 15, 2017

Calibration Report



Parameter 03

Air Monitoring Network PAZA

Station Information

Calibration Date	February 15, 2017	Previous Calibration	January 9, 2017
Station Number	4	Station Location	Beaverlodge
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	12:25	End Time (MST)	14:30:00 PM
Barometric Pressure	0.931 atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	3474
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	CR3000	DACS serial No.	5237
DACS voltage range	0 - 5 volt	DACS channel #	9
	Before		After
Calculated slope	1.021674	Calculated slope	0.993262
Calculated intercept	-0.014257	Calculated intercept	0.006342

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		1.080	
Lamp temp	53.9	mV	53.8	mV
Lamp Intensity A/B	58970/67902	mV	58978/67588	mV
Pressure	666.3	mm Hg	666.3	mm Hg
Flow A	0.785	LPM	0.785	LPM
Flow B	0.726	LPM	0.726	LPM

Calibration Data

Dilution air flow rate (cc/min)	Calibrator Setting	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5028	0.00	0.0	0.7	N/A
5028	0.30	339.9	343.6	0.9892
5028	0.20	229.0	228.4	1.0028
5028	0.10	110.0	110.8	0.9924
5028	0.00	0.0	0.7	As found zero
5028	0.30	339.9	343.6	As found span
Average Correction Factor				0.9948

Calculated value of As Found Response: 350.4 ppm Percent Change of As Found: 3.1%

	before calibration		after calibration	
Auto zero	0.6	ppb	0.6	ppb
Auto span	276.4	ppb	286.5	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter 03

Air Monitoring Network PAZA



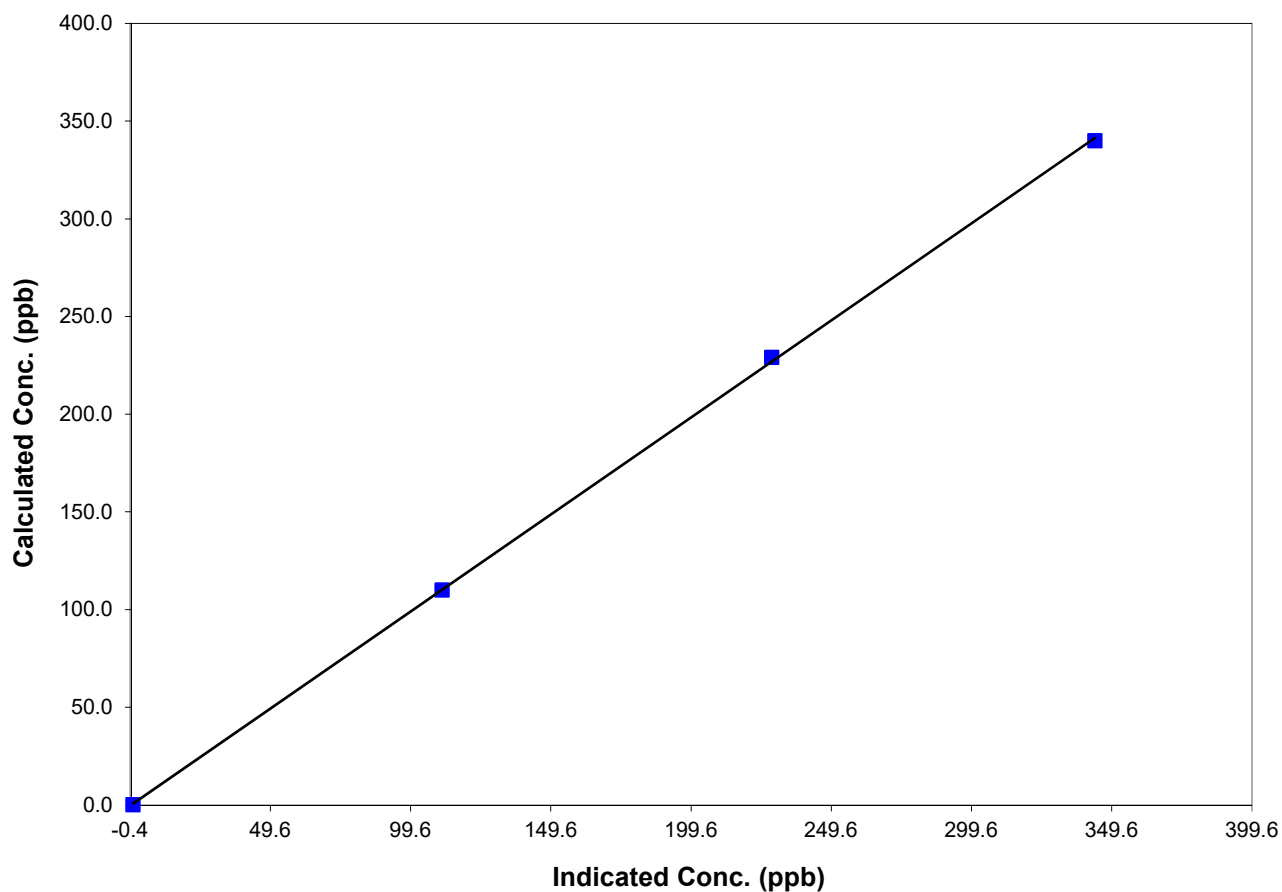
Station Information

Calibration Date	February 15, 2017	Previous Calibration	January 9, 2017
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	12:25	End Time (MST)	14:30:00 PM
Analyzer make/model	Teco 49i	Analyzer serial #	1136451236,AMU 1879

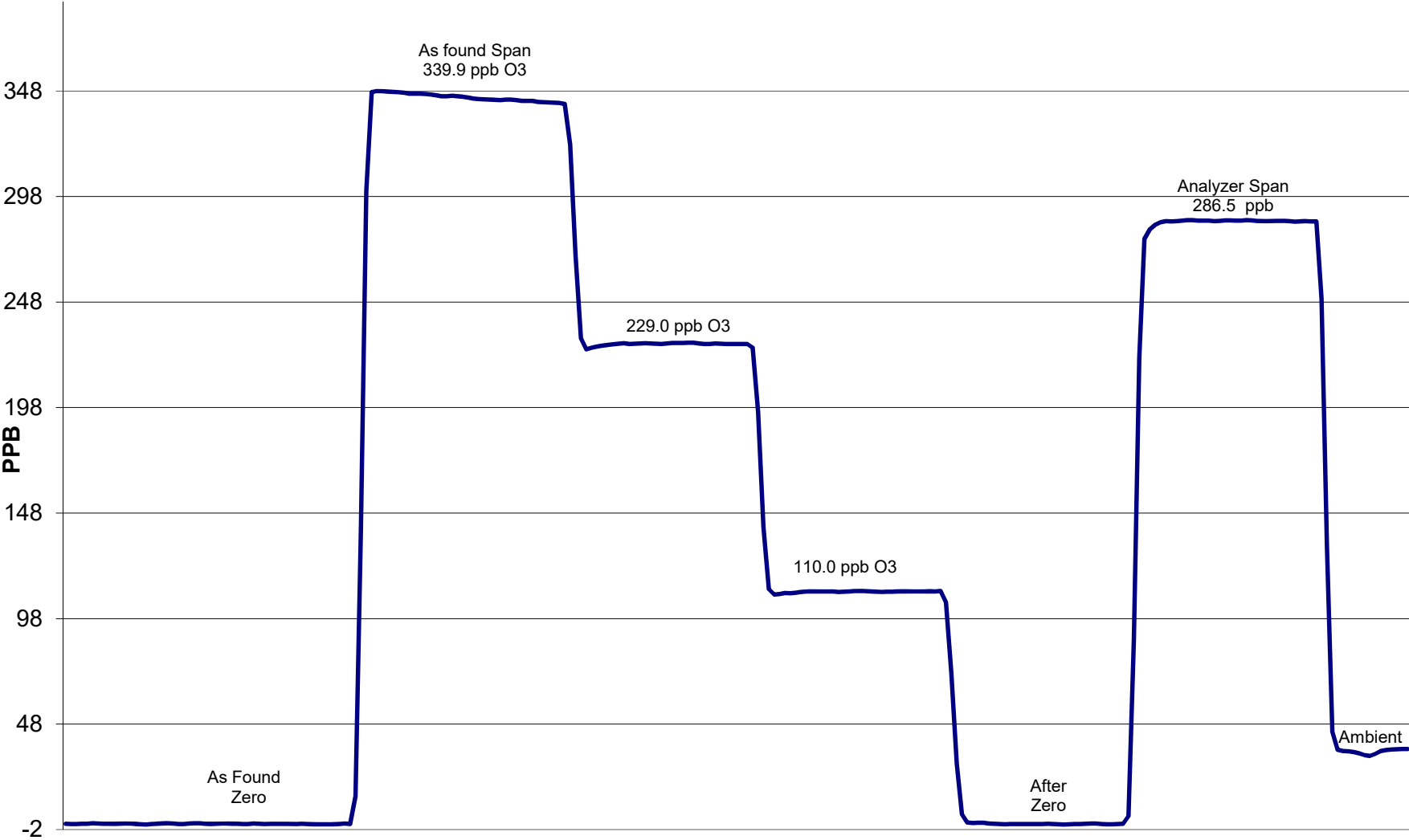
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.7	NA	Correlation Coefficient	0.999891
339.9	343.6	0.9892		
229.0	228.4	1.0028		
110.0	110.8	0.9924	Slope	0.993262
			Intercept	0.006342

O3 Calibration Curve



O3 Calibration



February 15, 2017

Calibration Report

Parameter SO2
Air Monitoring Network

PAZA



Station Information

Calibration Date	February 16 2017	Previous Calibration	December 10 2017
Station Number	6	Station Location	Valleyview
Reason:	Routine	Install	Removal
			Other:
Start Time (MST)	13:20:00 PM	End Time (MST)	15:25:00 PM
Barometric Pressure	0.922 atm	Station Temperature	22.0 Deg C
Calibrator	Envionics	Serial Number	3016
Cal Gas Concentration	49.7 ppm	Cal Gas Exp Date	November 5, 2018
Gas Cylinder Num.	LL103793		
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	1.011987	Calculated slope	1.016362
Calculated intercept	1.415515	Calculated intercept	1.577218
Analyzer make	TEI 43C	Analyzer serial #	609716239

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	16.8		16.9	
Coefficient	1.011		1.011	
UV Lamp Voltage	742	LPM	742	LPM
Chamber Temp	43	V	43	V
Perm Gas Temp	45	C	45	C
Pressure	650.7	in Hg	651.2	in Hg
Sample Flow	0.475	LPM	0.475	LPM
Lamp Intensity	47478	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	0.1	N/A
4999	39.91	393.6	386.7	1.0179
4996	19.96	197.8	191.7	1.0318
4995	9.90	98.3	93.9	1.0465
4995	0.00	0.0	0.1	As found zero
4995	39.93	394.2	386.7	As found span
Average Correction Factor				1.0320

Calculated value of As Found Response: 392.7 ppm Percent Change of As Found: 0.4%

	before calibration		after calibration	
Auto zero	-0.2	ppm	0.1	ppm
Auto span	274.9	ppm	293.5	ppm

Notes: No adjustment made

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



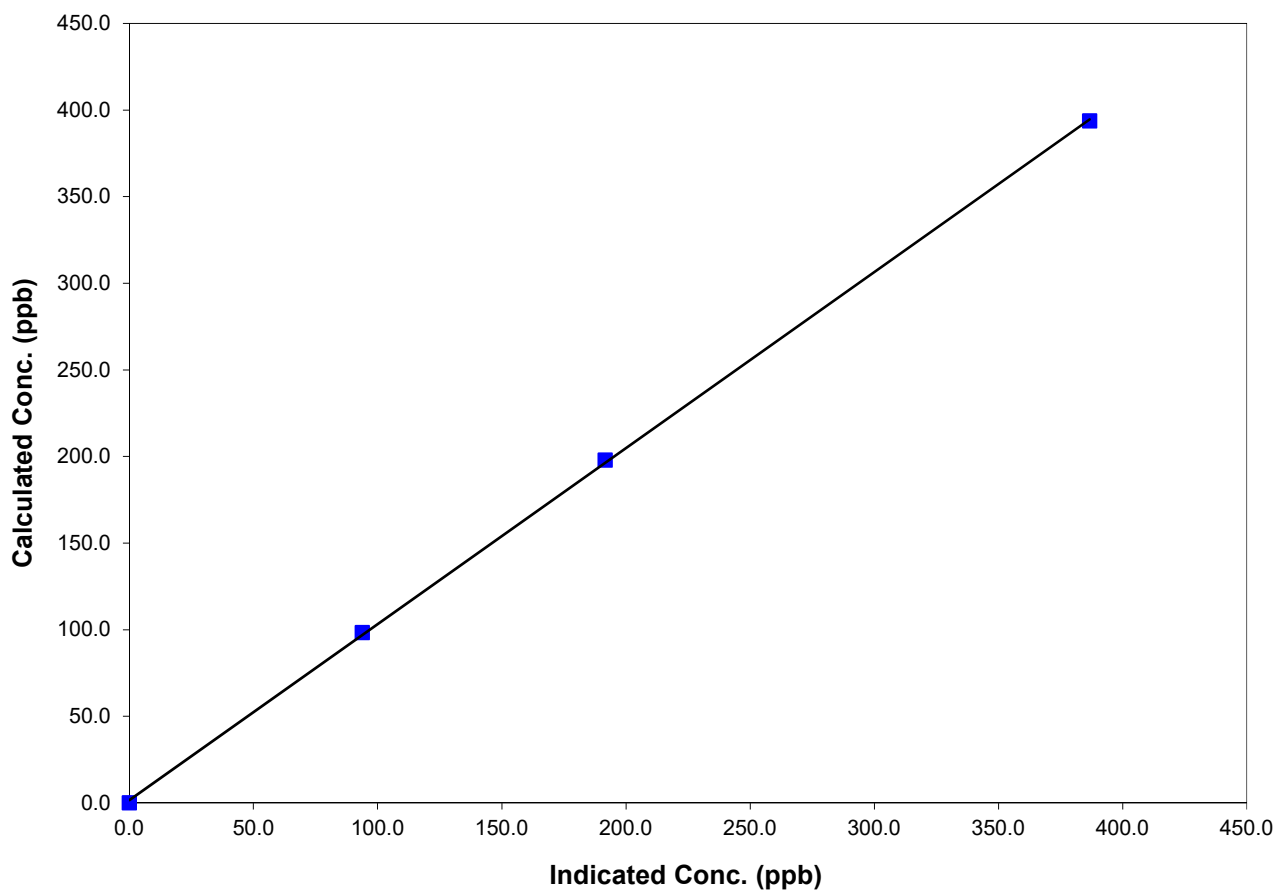
Station Information

Calibration Date	February 16 2017	Previous Calibration	December 10 2017
Station Number	6	Station Location	Valleyview
Start Time (MST)	13:20:00 PM	End Time (MST)	15:25:00 PM
Analyzer make/model	TEI 43C	Analyzer serial #	609716239

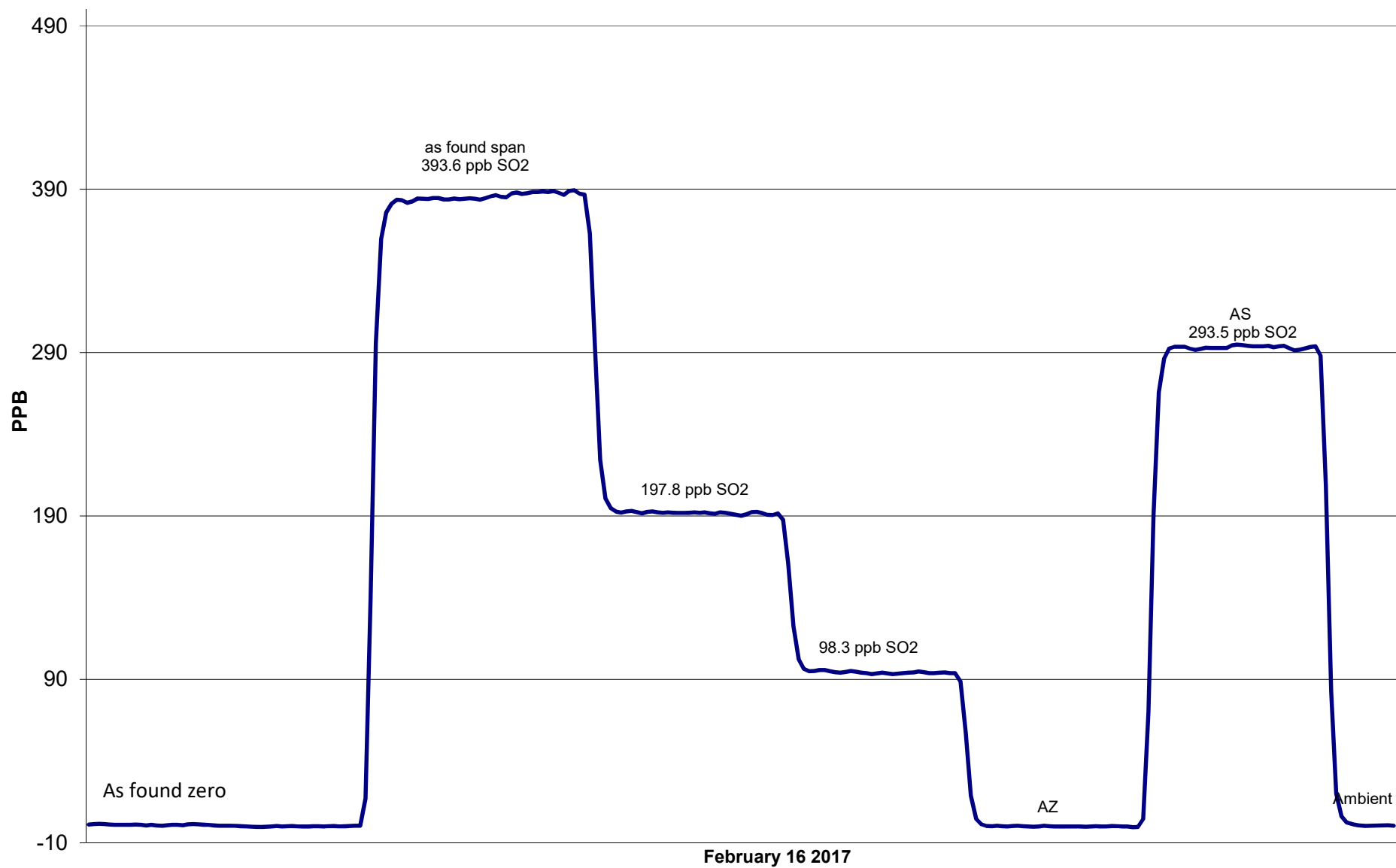
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999916
393.6	386.7	1.0179		
197.8	191.7	1.0318		
98.3	93.9	1.0465	Slope	1.016362
			Intercept	1.577218

SO2 Calibration Curve



SO2 Calibration



Calibration Report



Parameter H2S

Air Monitoring Network PAZA

Station Information

Calibration Date	February 16 2017	Previous Calibration	January 10 2017
Station Number	6	Station Location	Valleyview
Reason:	Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	12:11	End Time (MST)	14:25:00 PM
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	0.997828	Calculated slope	1.002207
Calculated intercept	0.612678	Calculated intercept	0.983673
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	793	V	793	V
Chamber Temp	44.8	c	44.9	c
Perm Oven Temp	44.9	c	45	c
Pressure	505.20	mm Hg	506.20	mm Hg
Sample Flow	0.351	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	-0.5	N/A
4996	39.93	80.9	79.9	1.0117
4996	19.98	40.6	39.2	1.0360
6999	10.01	14.6	13.2	1.1006
4997	9.97		2.8	Sox Test
4996	0.00	0.0	-0.5	As found zero
4996	39.93	80.9	79.9	As found span
Average Correction Factor				1.0494

Calculated value of As Found Response: 80.92 ppm Percent Change of As Found: -0.1%

	before calibration		after calibration	
Auto zero	-0.3	ppm	-0.5	ppm
Auto span	66.7	ppm	72.0	ppm

Notes: No adjustments made
Sox scrubber check performed

Calibration Summary

Parameter H2S

Air Monitoring Network PAZA



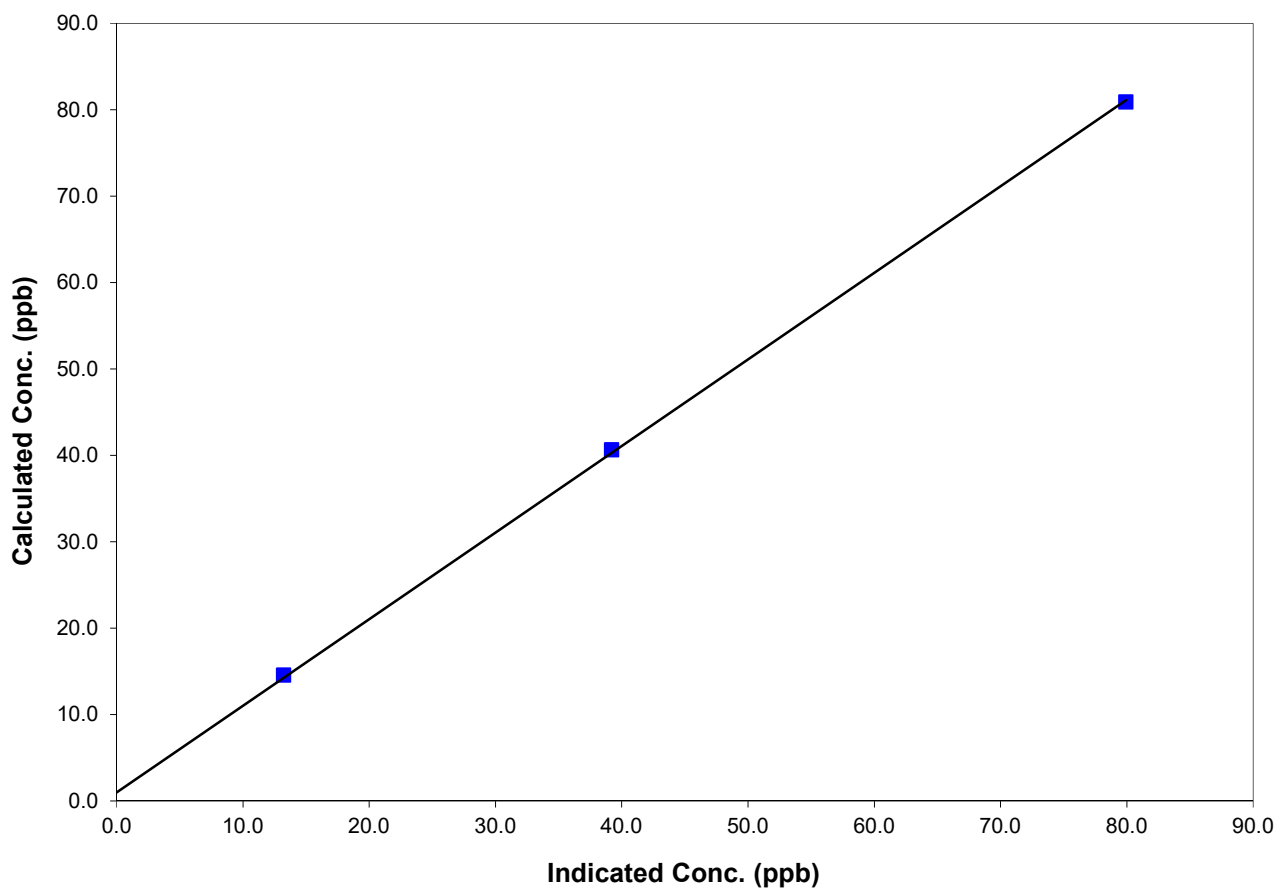
Station Information

Calibration Date	February 16 2017	Previous Calibration	January 10 2017
Station Number	6	Station Location	Valleyview
Start Time (MST)	12:11	End Time (MST)	14:25:00 PM
Analyzer make/model	TEI Model 43i - APSCB	Analyzer serial #	701120010

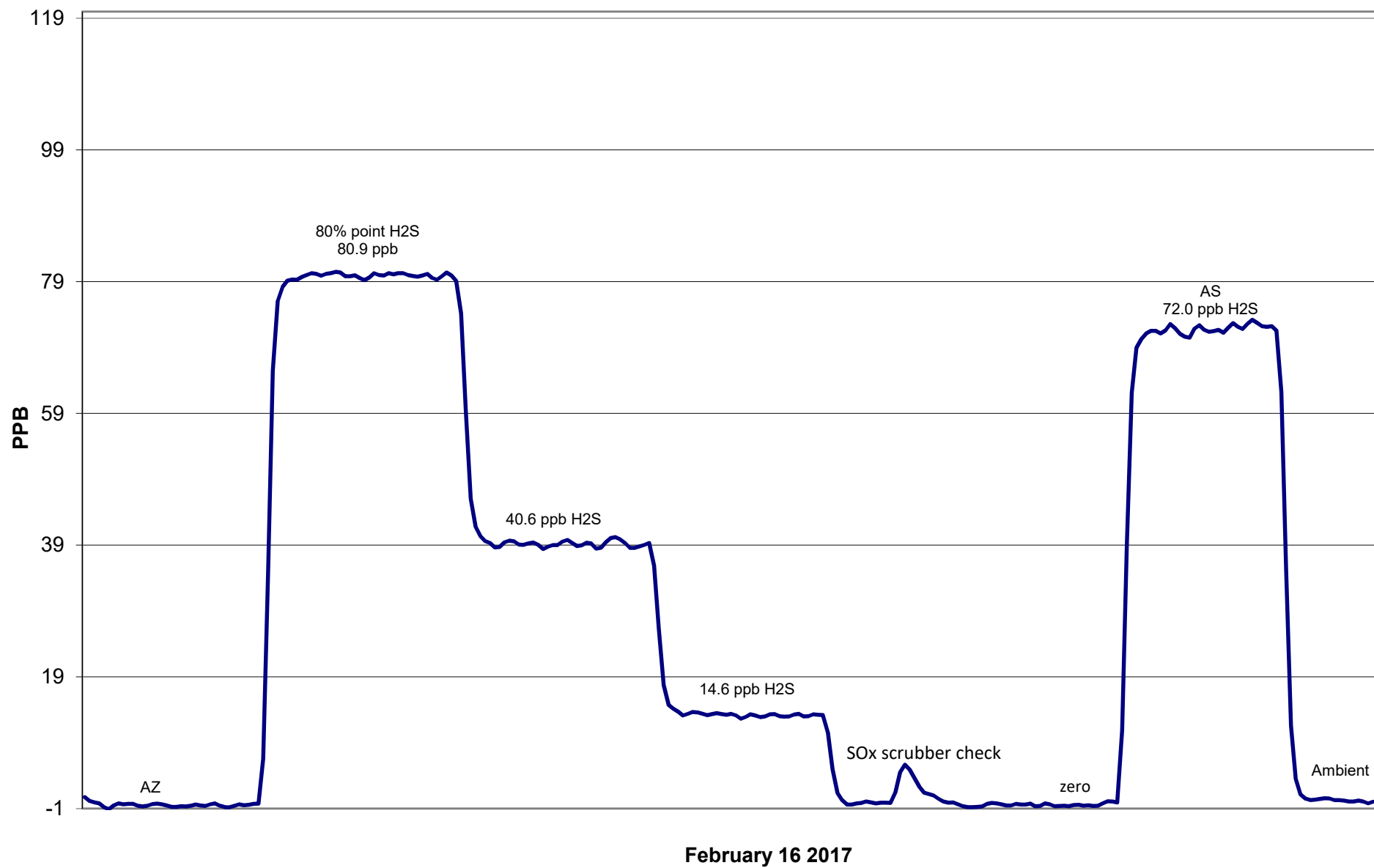
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.5	N/A	Correlation Coefficient	0.999878
80.9	79.9	1.0117		
40.6	39.2	1.0360		
14.6	13.2	1.1006	Slope	1.002207
			Intercept	0.983673

H2S Calibration Curve



H2S Calibration



Calibration Report

Parameter SO₂

Air Monitoring Network PAZA



Station Information

Calibration Date	February 9, 2017	Previous Calibration	January 23, 2017
Station Number	1	Station Location	Donnelly
Reason:	Routine	Install	Removal
			Other:
Start Time (MST)	12:50	End Time (MST)	15:35:00 PM
Barometric Pressure	0.921 mm	Station Temperature	18.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Concentration	49.7 ppm	Cal Gas Expiry Date	11/5/2018
Correction factor	0.031523	Cal Gas Cylinder #	LL103793
DACS make	CR1000	DACS serial No.	3980
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	1.003121	Calculated slope	0.989887
Calculated intercept	-0.447895	Calculated intercept	0.717388
Analyzer make	Teco 43i	Analyzer serial #	1207452008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	6.5		8	
coefficient	0.908		0.908	
Lamp Voltage	869	volts	869	volts
Chamber Temp	45.1	Deg C	45	Deg C
Perm Gas Temp	44.99	Deg C	45	Deg C
Pressure	665.9	mm Hg	665.9	mm Hg
Sample Flow	0.386	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	0.2	N/A
4992	39.91	394.2	397.9	0.9907
4993	19.94	197.7	198.7	0.9951
4991	9.99	99.3	98.5	1.0077
4995	0.0	0.0	1.4	As Found Zero
4995	39.93	394.2	398.3	As Found Span
Average Correction Factor				0.9978

Calculated value of As Found Response: 397.729 ppm Percent Change of As Found: **-0.9%**

	before calibration		after calibration	
Auto zero	1.3	ppm	0.3	ppm
Auto span	265.2	ppm	271.9	ppm

Notes: Zero adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



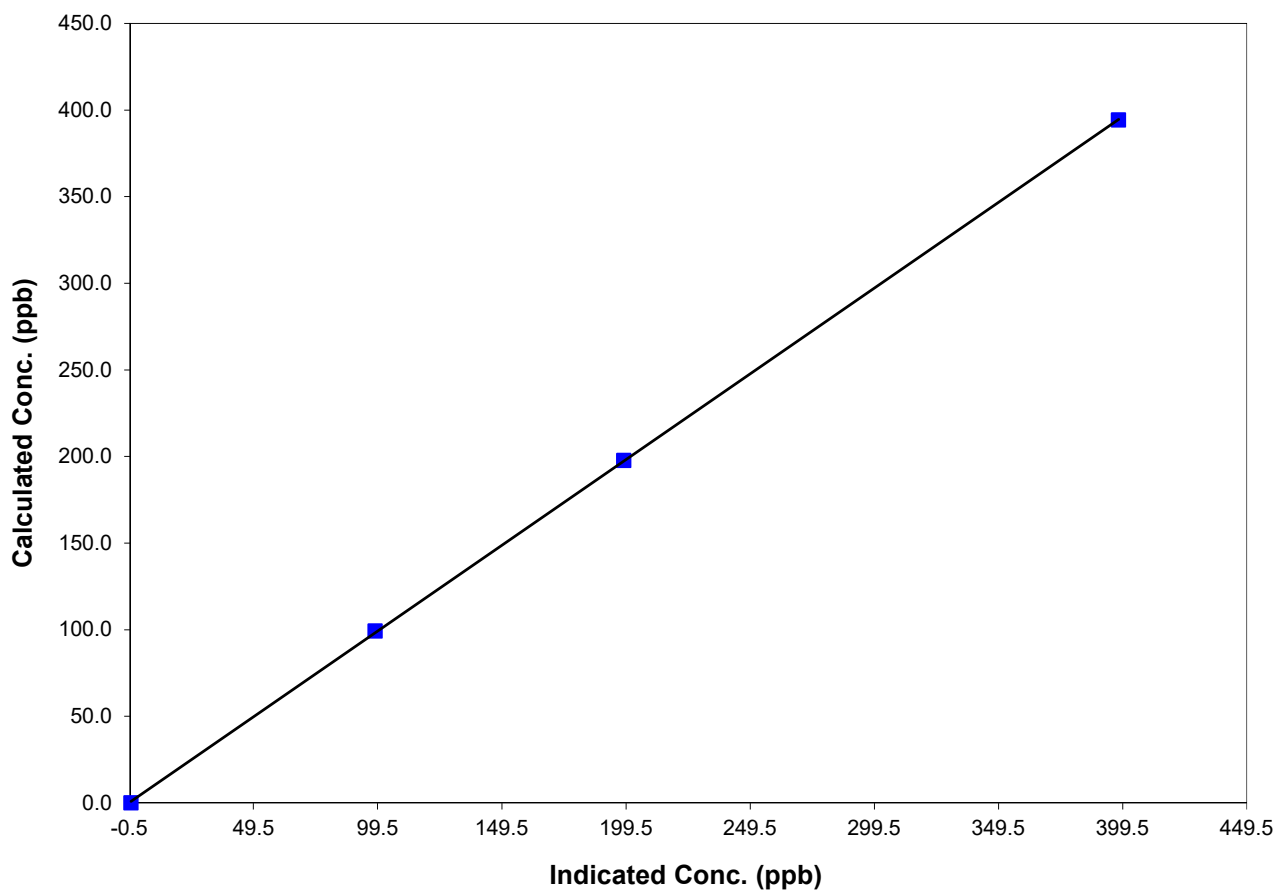
Station Information

Calibration Date	February 9, 2017	Previous Calibration	January 23, 2017
Station Number	1	Station Location	Donnely
Start Time (MST)	12:50	End Time (MST)	15:35:00 PM
Analyzer make/model	Teco 43i	Analyzer serial #	1207452008

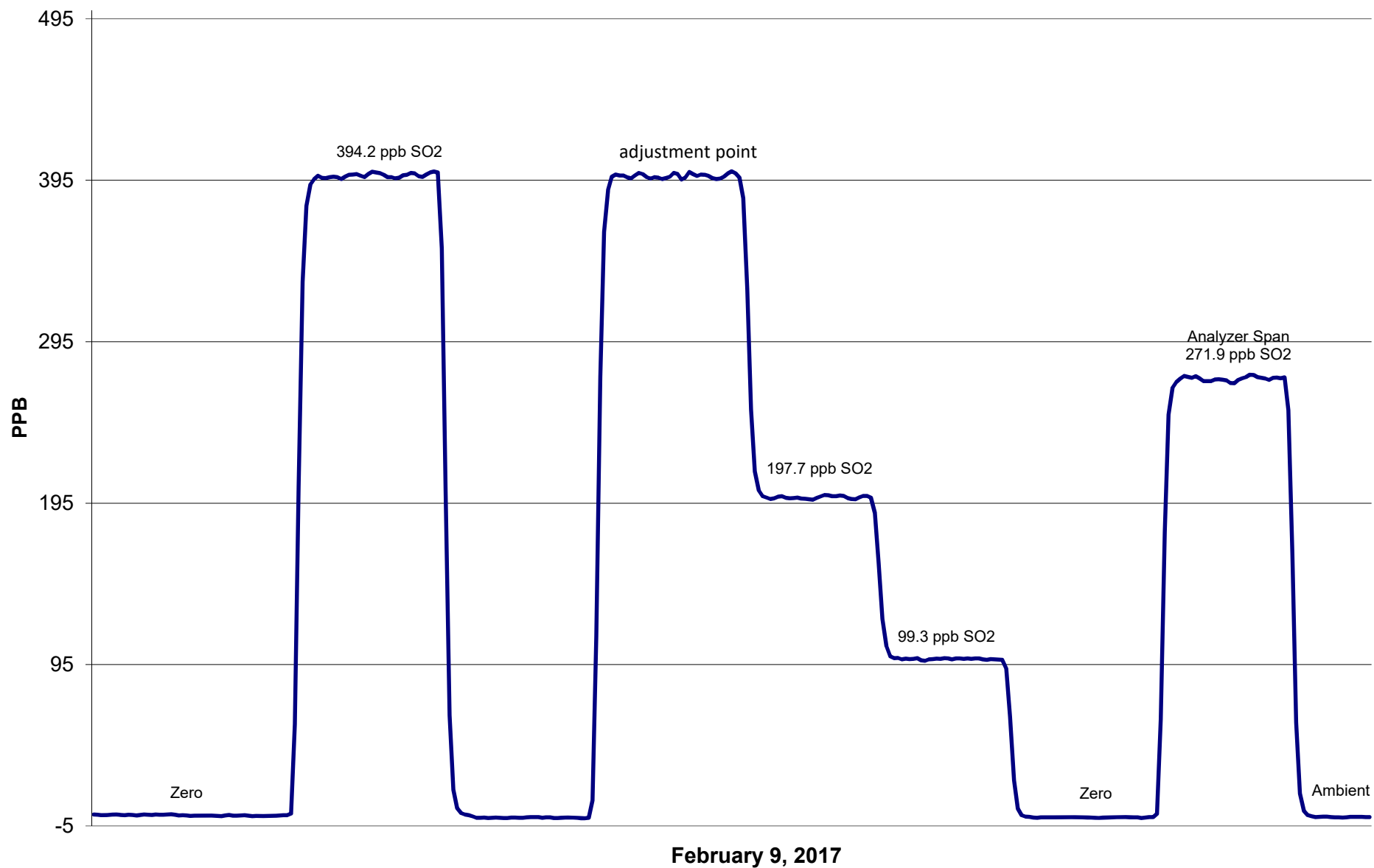
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999974
394.2	397.9	0.9907		
197.7	198.7	0.9951		
99.3	98.5	1.0077	Slope	0.989887
			Intercept	0.717388

SO2 Calibration Curve



SO2 Calibration



Calibration Report



Parameter H2S

Air Monitoring Network PAZA

Station Information

Calibration Date	February 9, 2017	Previous Calibration	January 23, 2017
Station Number	1	Station Location	Donnelly
Reason:	Routine	Install	Removal
Start Time (MST)	11:20	End Time (MST)	14:05:00 PM
Barometric Pressure	0.931 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	0.031865	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	1.008883	Calculated slope	1.007082
Calculated intercept	0.058114	Calculated intercept	0.068589
Analyzer make	Thermo 450i	Analyzer serial #	1207452006

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	16.2	ppb	16.3	ppb
coefficient	1.031		1.031	
Lamp Voltage	811	volts	812	volts
Chamber Temp	45.1	Deg C	45	Deg C
Perm Gas Temp	44.99	Deg C	45	Deg C
Pressure	477.8	mm Hg	475.4	mm Hg
Sample Flow	0.758	lpm	0.756	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
4997	39.98	80.96	80.4	1.0066
4993	19.93	40.55	40.0	1.0138
6997	9.97	14.51	14.3	1.0148
4995	0.00	0.00	0.1	As Found Zero
4995	39.93	80.89	80.4	As Found Span
Average Correction Factor				1.0117

Calculated value of As Found Response: 81.13 ppm Percent Change of As Found: **-0.3%**

	before calibration		after calibration	
Auto zero	0.5	ppm	0.2	ppm
Auto span	63.3	ppm	64.4	ppm

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter H2S

Air Monitoring Network PAZA



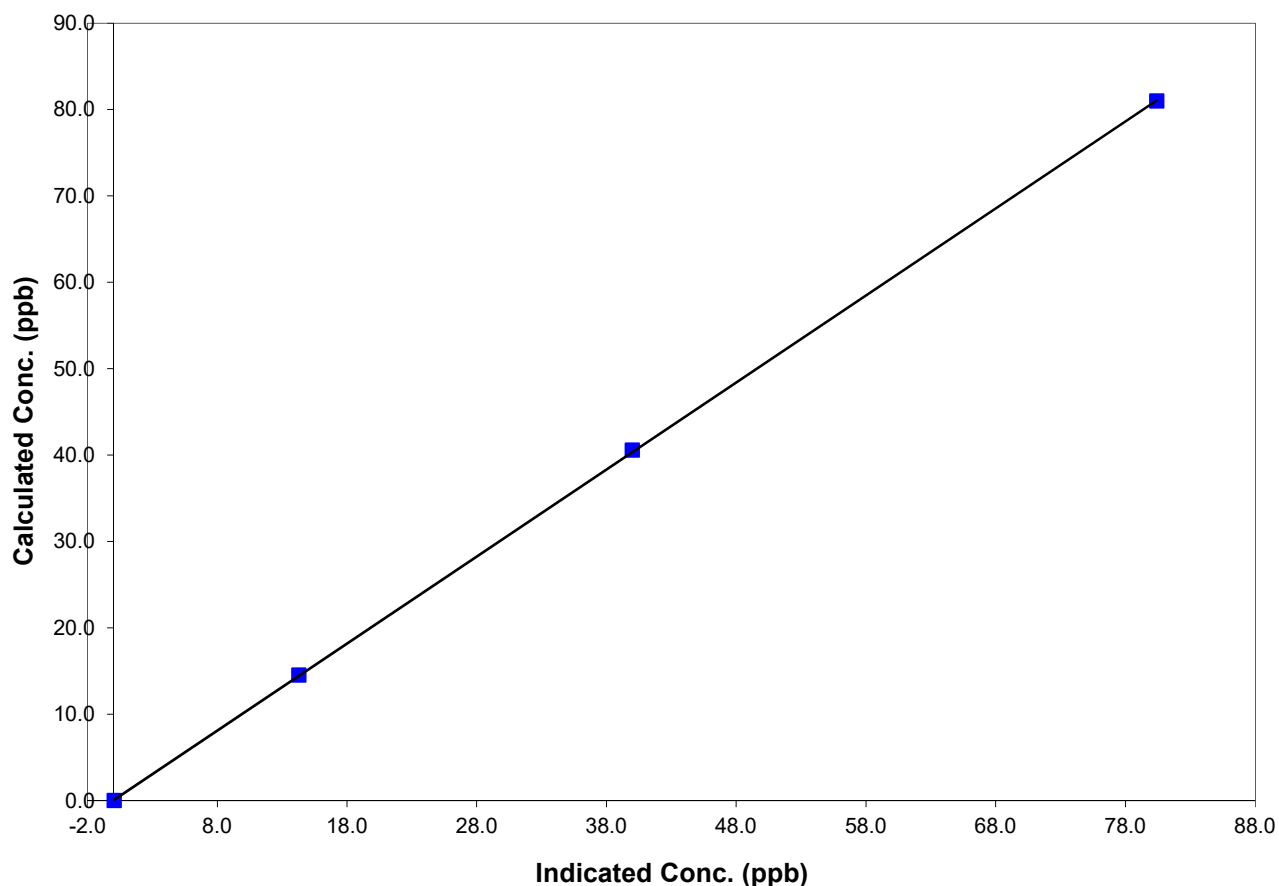
Station Information

Calibration Date	February 9, 2017	Previous Calibration	January 23, 2017
Station Number	1	Station Location	Donnely
Start Time (MST)	11:20	End Time (MST)	14:05:00 PM
Analyzer make/model	Thermo 450i	Analyzer serial #	1207452006

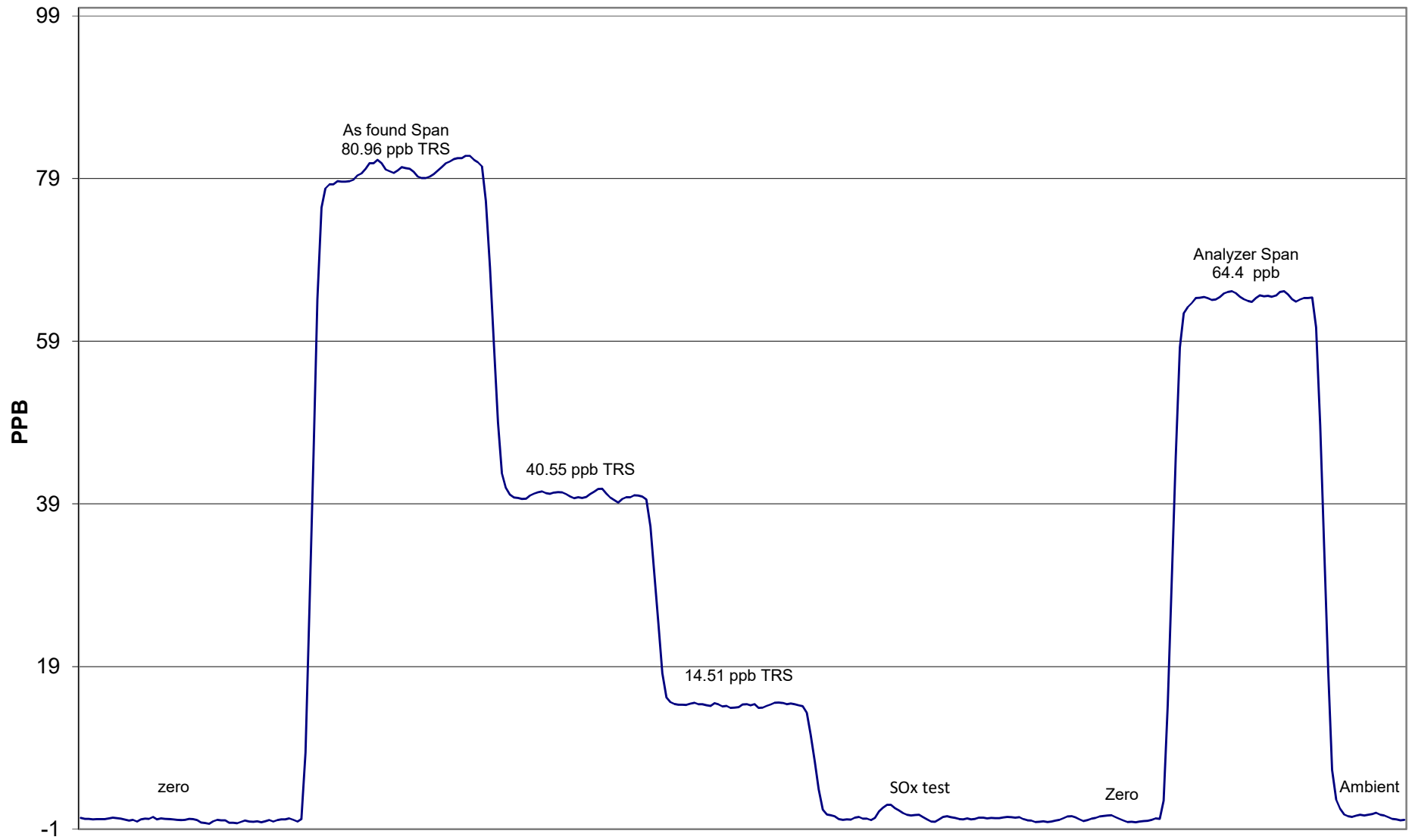
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999981
81.0	80.4	1.0066		
40.6	40.0	1.0138		
14.5	14.3	1.0148	Slope	1.007082
			Intercept	0.068589

TRS Calibration Curve



H2S Calibration



February 9, 2017

Calibration Report

Parameter SO2
Air Monitoring Network PAZA



Station Information

Calibration Date	February 8, 2017	Previous Calibration	January 18, 2017
Station Number	10	Station Location	Rycroft
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	10:50	End Time (MST)	13:20:00 PM
Barometric Pressure	0.929 Atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Concentration	49.8 ppm	Cal Gas Expiry Date	3/10/2017
Gas Cert Reference	LL119493		
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	0.997092	Calculated slope	1.001202
Calculated intercept	0.940311	Calculated intercept	1.697254
Analyzer make	TEI 43C	Analyzer serial #	436610005

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	23.4		23.4	
Coefficient	1.056		1.056	
UV Lamp Voltage	897	V	897	V
Chamber Temp	44.5	C	44.6	C
Perm Gas Temp	45	C	45	C
Pressure	676	mm Hg	674.1	mm Hg
Sample Flow	0.467	LPM	0.467	LPM
Lamp Intesity	30300	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)
4998	0.00	0.0	0.2	N/A
4996	39.90	394.6	393.3	1.0033
4997	19.92	197.7	195.1	1.0137
4999	9.99	99.3	95.5	1.0400
4998	0.00	0.0	0.2	As found zero
4999	39.93	394.6	393.3	As found span
Average Correction Factor				1.0190

Calculated value of As Found Response: 392.854 ppm Percent Change of As Found: 0.5%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	214.2	ppm	202.7	ppm

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



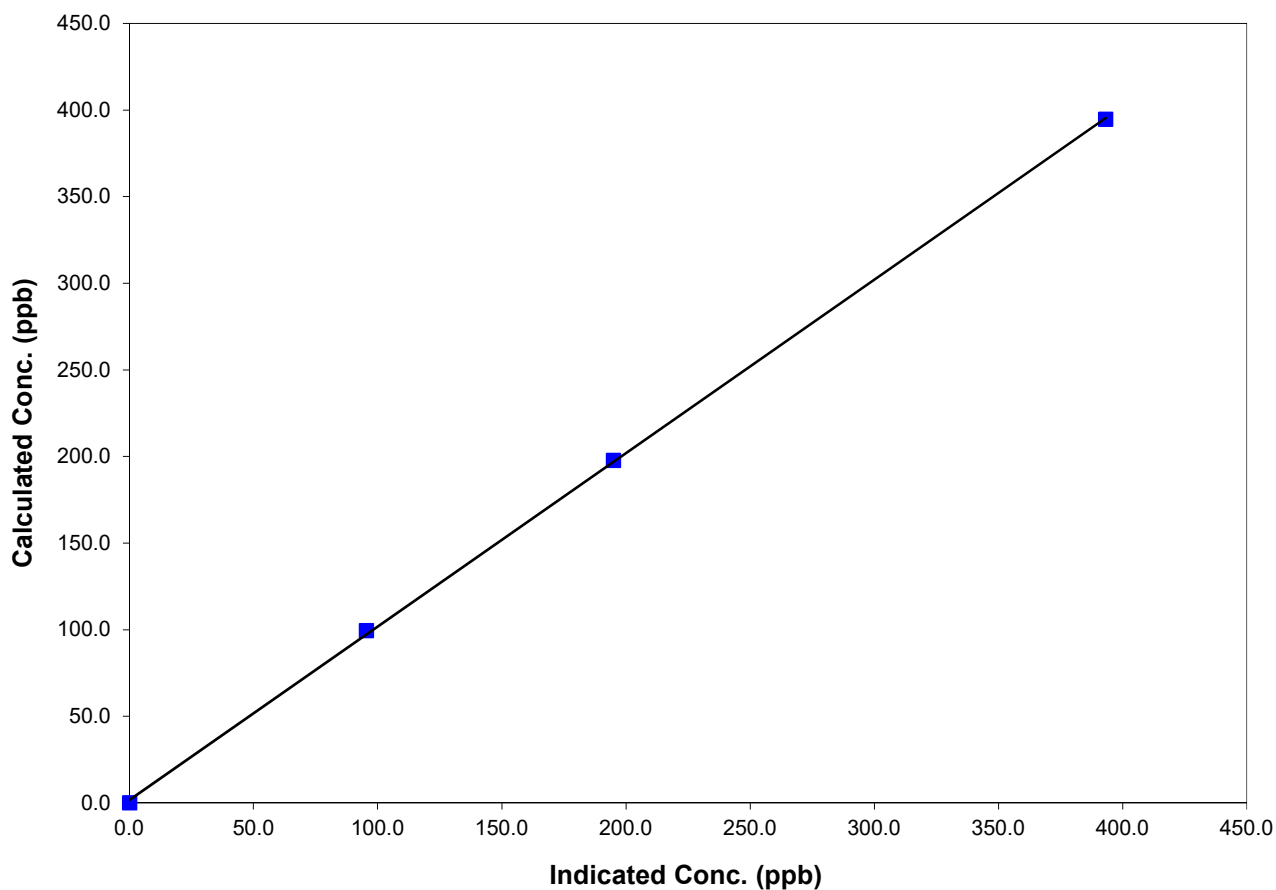
Station Information

Calibration Date	February 8, 2017	Previous Calibration	January 18, 2017
Station Number	10	Station Location	Rycroft
Start Time (MST)	10:50	End Time (MST)	13:20:00 PM
Analyzer make/model	TEI 43C	Analyzer serial #	436610005

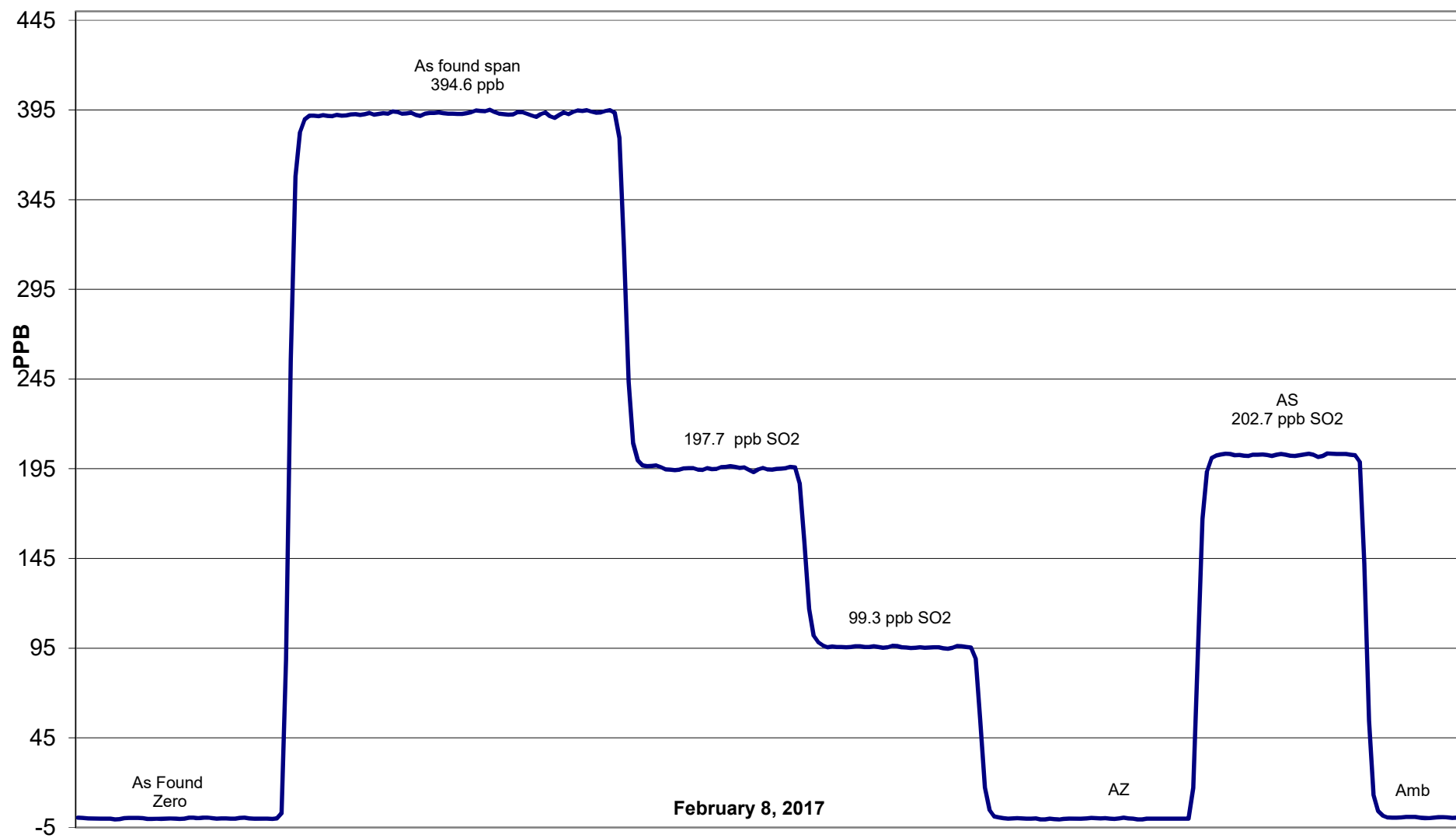
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999895
394.6	393.3	1.0033		
197.7	195.1	1.0137		
99.3	95.5	1.0400	Slope	1.001202
			Intercept	1.697254

SO2 Calibration Curve



SO2 Calibration



Calibration Report

Parameter

NO_x-NO-NO₂

Air Monitoring Network

PAZA



Station Information

Calibration Date	February 8, 2017	Previous Calibration	January 18, 2017		
Station Number	10	Station Location	Rycroft		
Reason:	Routine	Installation	Removal		
Other:					
Start Time (MST)	11:00	End Time (MST)	14:40:00 PM		
Barometric Pressure	0.929	Atm	Station Temperature	20.0	Deg C
Calibrator	Envionics		Serial Number	6586	
NO Cal Gas Conc	50.9	ppm	Cal Gas Expiry Date	March 10, 2017	
NOx Cal Gas Conc	51.2	ppm	Cal Gas Serial #	LL103793	

DACS Information

DACS make	CR3000	DACS serial No.	5407	
Parameter		NO2	NOx	NO
Before	Data Slope	0.997313	0.995820	0.994996
	Data Offset	-0.491947	0.320115	0.137367
After	Data Slope	1.002831	1.004844	0.999778
	Data Offset	0.496798	1.733560	1.414893
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	9.0	mV	5.6	mV
NOx bkgnd	9.2	mV	5.7	mV
NO coefficient	1.478		0.922	
NOx coefficient	0.999		0.999	
NO2 conv temp	323.4	Deg C	326.8	Deg C
PMT Temp	-3.0	Deg C	-3.0	Deg C
PMT Volt	-834.7	mV	-834.7	mV
R Cell Press	169.0	in Hg	170.2	in Hg
Sample Flow	0.836	LPM	0.836	LPM

Notes: Sample pump failed, replaced with the new one.
Span adjustment made.

Calibration Report

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



Station Information

Calibration Date: February 8, 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	4996	0.00	0.0	0.0	0.0	-0.3	-0.1	-0.1	N/A	N/A
1	4995	39.92	405.9	403.6	2.4	403.0	403.0	-1.7	1.0072	1.0014
2	4994	19.96	203.8	202.6	1.2	200.2	200.2	-1.0	1.0181	1.0119
3	4998	9.98	102.0	101.4	0.6	98.5	99.0	-0.5	1.0362	1.0246
AFZ	4996	0.00	0.0	0.0	0.0	-0.3	-0.1	-0.1	0.0000	0.0000
AFS	4999	39.92	405.6	403.2	0.8	403.0	403.0	-1.7	1.0064	1.0006
Average Correction Factor									1.0205	1.0126

As Found Concentrations: NO_x= 401.9 NO= 401.2 As Found Percent Change NO_x= -0.9% NO= -0.5%

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	-0.1	-0.1	0.0	-0.3	-0.1	-0.1	N/A	N/A	N/A	N/A
NO point	401.4	401.4	0.0	401.9	401.4	-1.5	0.9987	1.0000	N/A	N/A
300	401.4	59.6	341.8	401.8	59.6	340.6	0.9991	1.0000	1.0033	99.7%
200	401.4	171.3	230.1	402.0	171.3	228.7	0.9985	1.0000	1.0060	99.4%
100	401.4	288.6	112.8	402.1	288.6	111.5	0.9984	1.0000	1.0120	98.8%
Average Correction Factor							0.9987	1.0000	1.0071	99.3%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.0	0.1	0.0	ppb	-0.1	0.0	0.0	ppb
Auto span	169.3	167.4	1.2	ppb	163.0	161.4	0.8	ppb

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



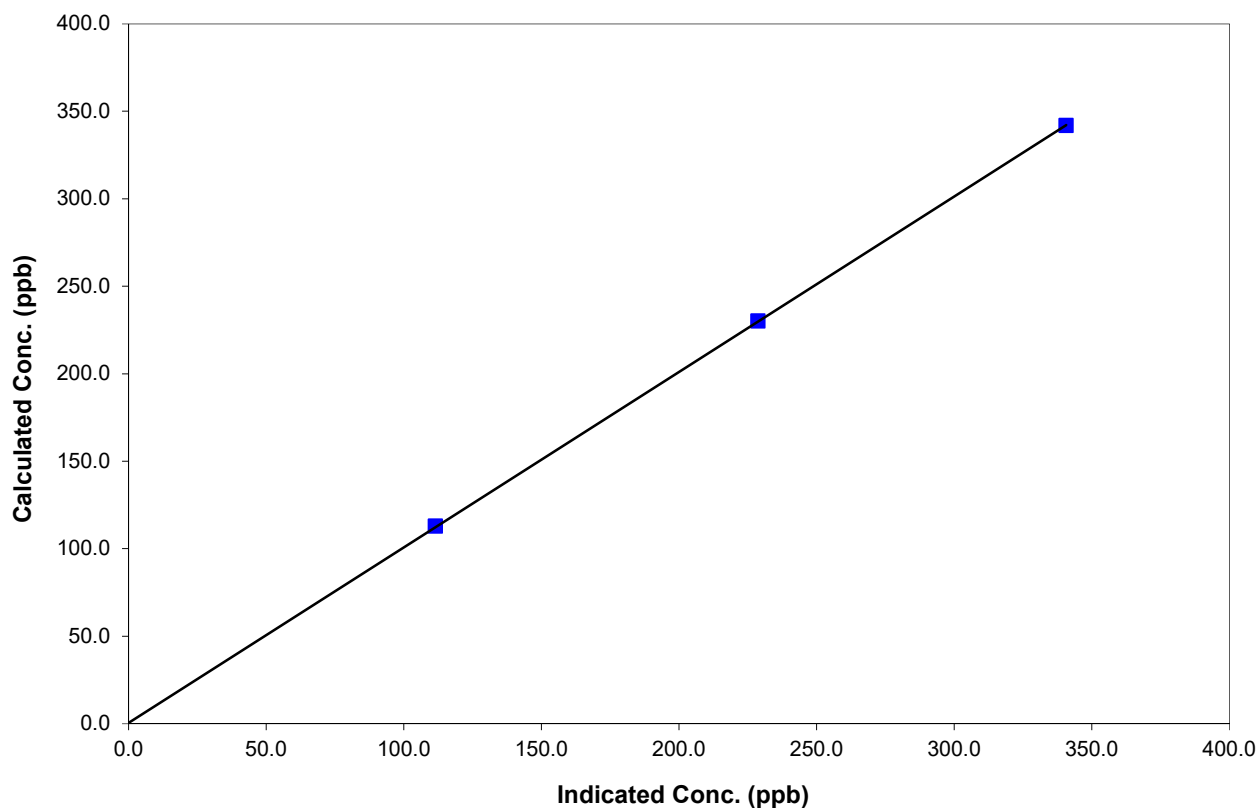
Station Information

Calibration Date	February 8, 2017	Previous Calibration	January 18, 2017
Station Number	10	Station Location	Rycroft
Start Time (MST)	11:00	End Time (MST)	14:40:00 PM
Analyzer make	TEI 42i	Analyzer serial #	0701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A	Correlation Coefficient	0.999991
341.8	340.6	1.0033		
230.1	228.7	1.0060		
112.8	111.5	1.0120	Slope	1.002831
			Intercept	0.496798

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



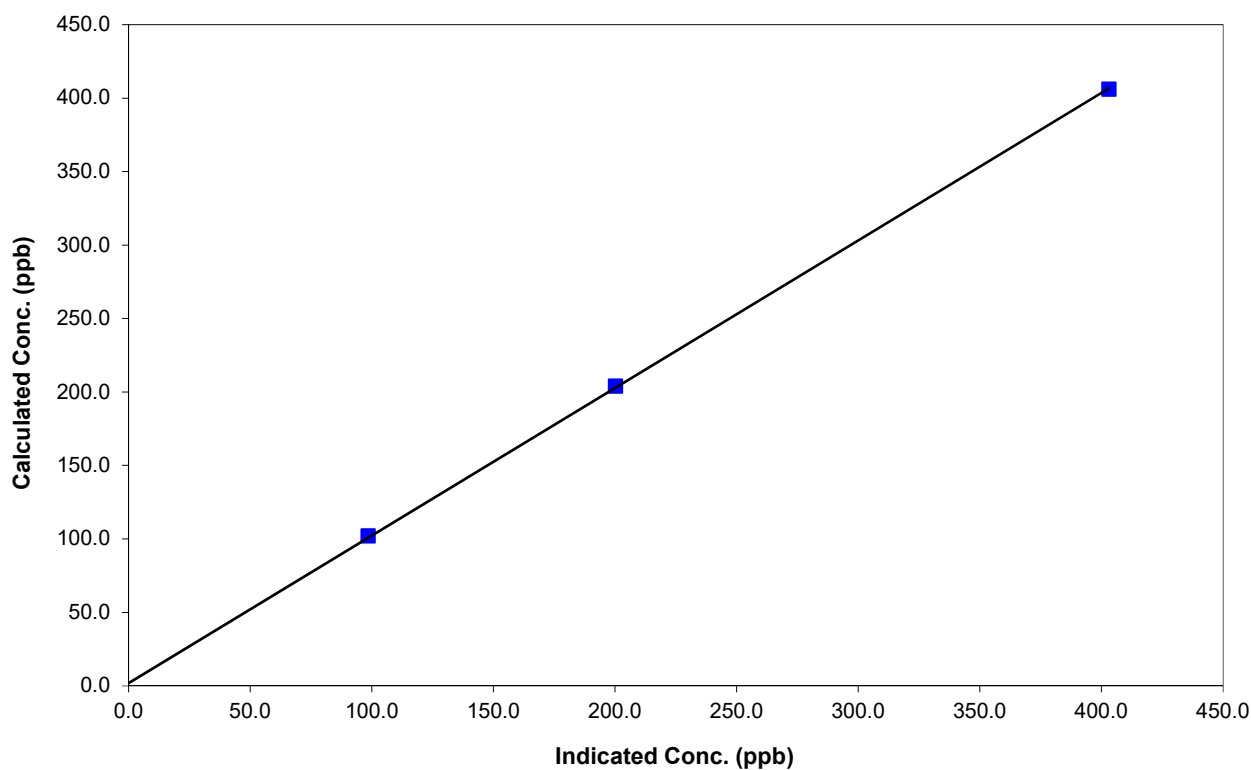
Station Information

Calibration Date	February 8, 2017	Previous Calibration	January 18, 2017
Station Number	10	Station Location	Rycroft
Start Time (MST)	11:00	End Time (MST)	14:40:00 PM
Analyzer make	TEI 42i	Analyzer serial #	0701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.3	N/A	Correlation Coefficient	0.999939
405.9	403.0	1.0072		
203.8	200.2	1.0181		
102.0	98.5	1.0362	Slope	1.004844
			Intercept	1.733560

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



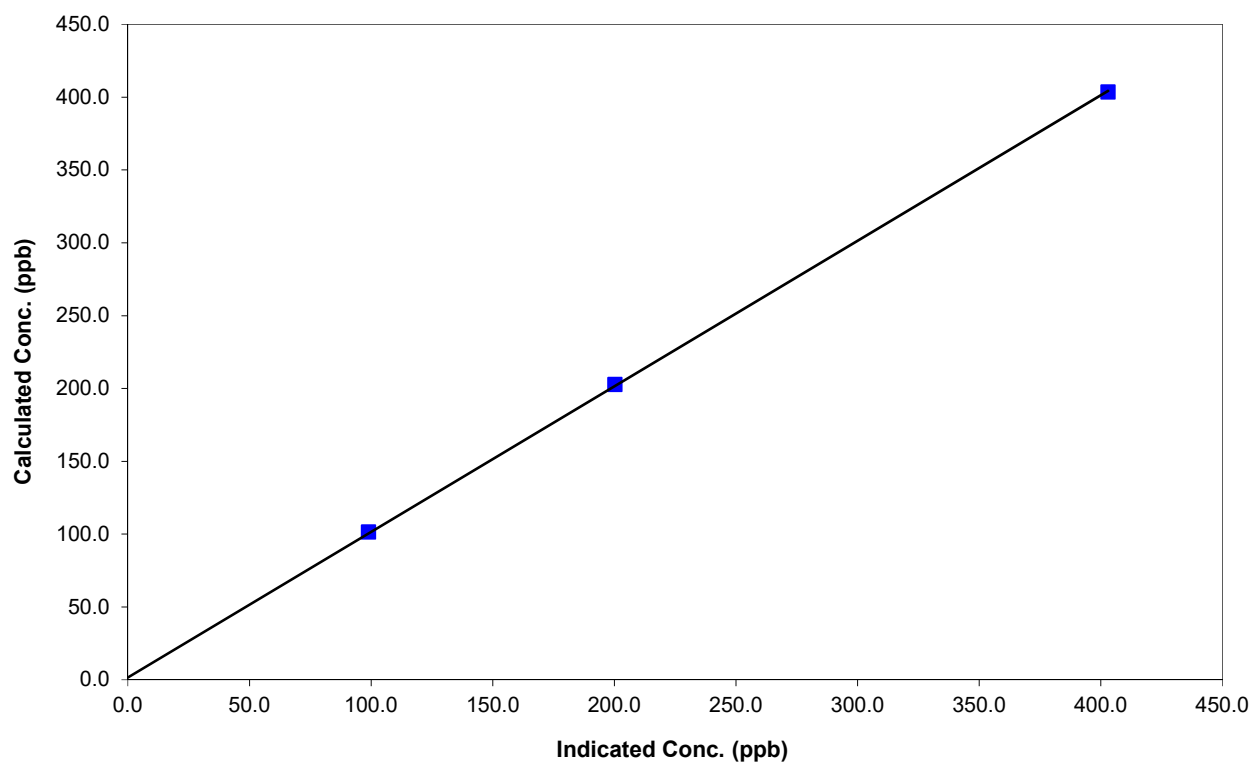
Station Information

Calibration Date	February 8, 2017	Previous Calibration	January 18, 2017
Station Number	10	Station Location	Rycroft
Start Time (MST)	11:00	End Time (MST)	14:40:00 PM
Analyzer make	TEI 42i	Analyzer serial #	0701120011

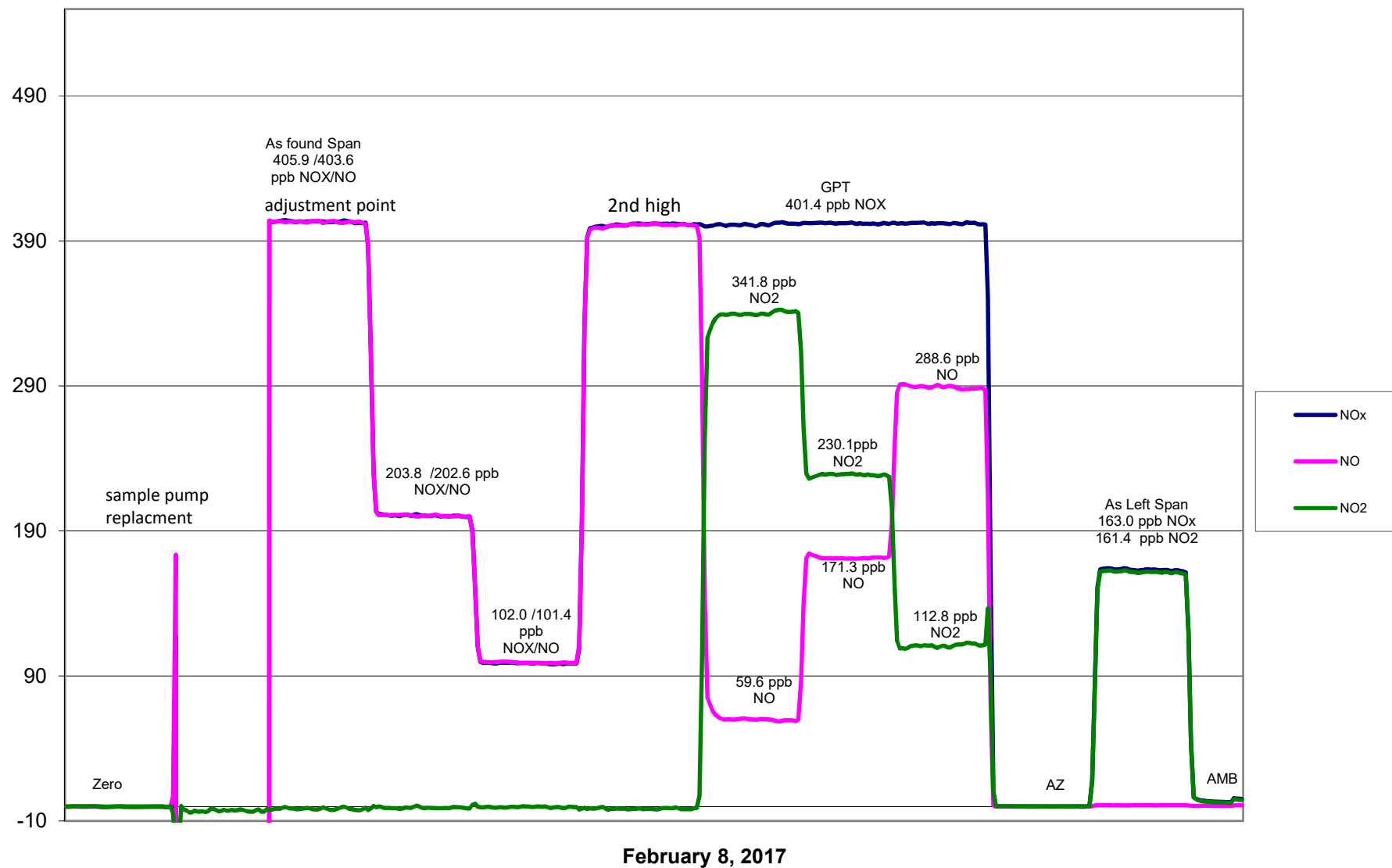
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A	Correlation Coefficient	0.999951
403.6	403.0	1.0014		
202.6	200.2	1.0119		
101.4	99.0	1.0246	Slope	0.999778
			Intercept	1.414893

NO Calibration Curve



NO_x Calibration



Calibration Report



Parameter 03

Air Monitoring Network PAZA

Station Information

Calibration Date	February 8 2017	Previous Calibration	January 18 2017
Station Number	10	Station Location	Rycroft
Reason:	Routine	Install	Removal
		Other:	

Start Time (MST)	13:43:00 PM	End Time (MST)	16:10:00 PM
Barometric Pressure	0.929 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	1.012304	Calculated slope	1.012709
Calculated intercept	-0.044385	Calculated intercept	0.609958

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

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	0.5	ppb	0.6	ppb
Span	1.046		1.181	
Cell A intensity	86207	Hz	86765	Hz
Cell B intensity	106661	Hz	106124	Hz
Pressure	697.40	in Hg	696.20	in Hg
Cell A Flow	0.691	ccm	0.690	ccm
Cell B Flow	0.690	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)
5020	0.00	0.0	0.1	N/A
5020	0.30	341.8	338.0	1.0113
5025	0.20	230.1	225.2	1.0219
5020	0.10	112.8	110.5	1.0211
5020	0.00	0.0	0.1	As found zero
5020	0.30	341.8	303.2	As found span
Average Correction Factor				1.0181

Calculated value of As Found Response: 306.8 ppm Percent Change of As Found: -10.3%

	before calibration		after calibration	
Auto zero	0.3	ppb	0.2	ppb
Auto span	420.1	ppb	404.8	ppb

Notes: Span adjustment made after Nox sample pump replacement

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter 03

Air Monitoring Network PAZA



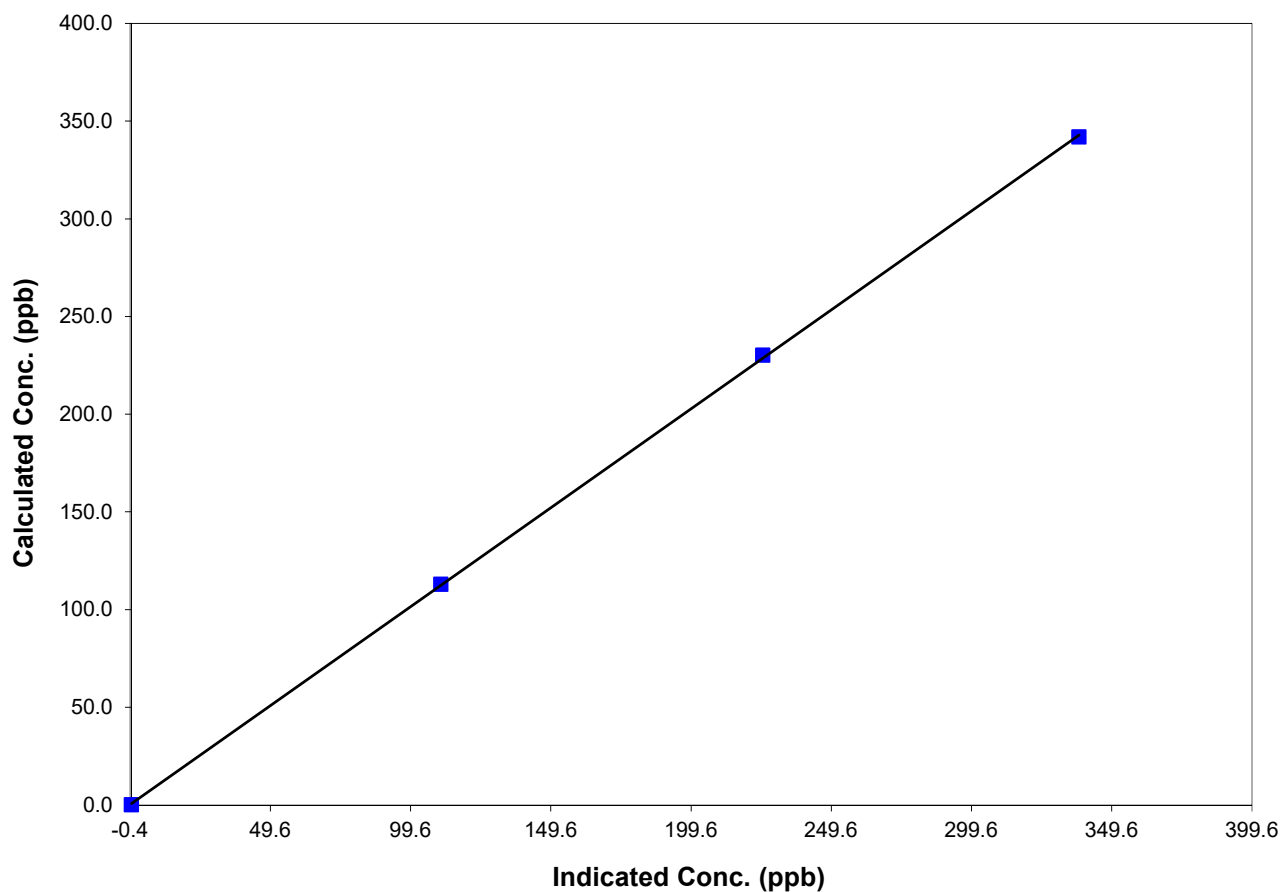
Station Information

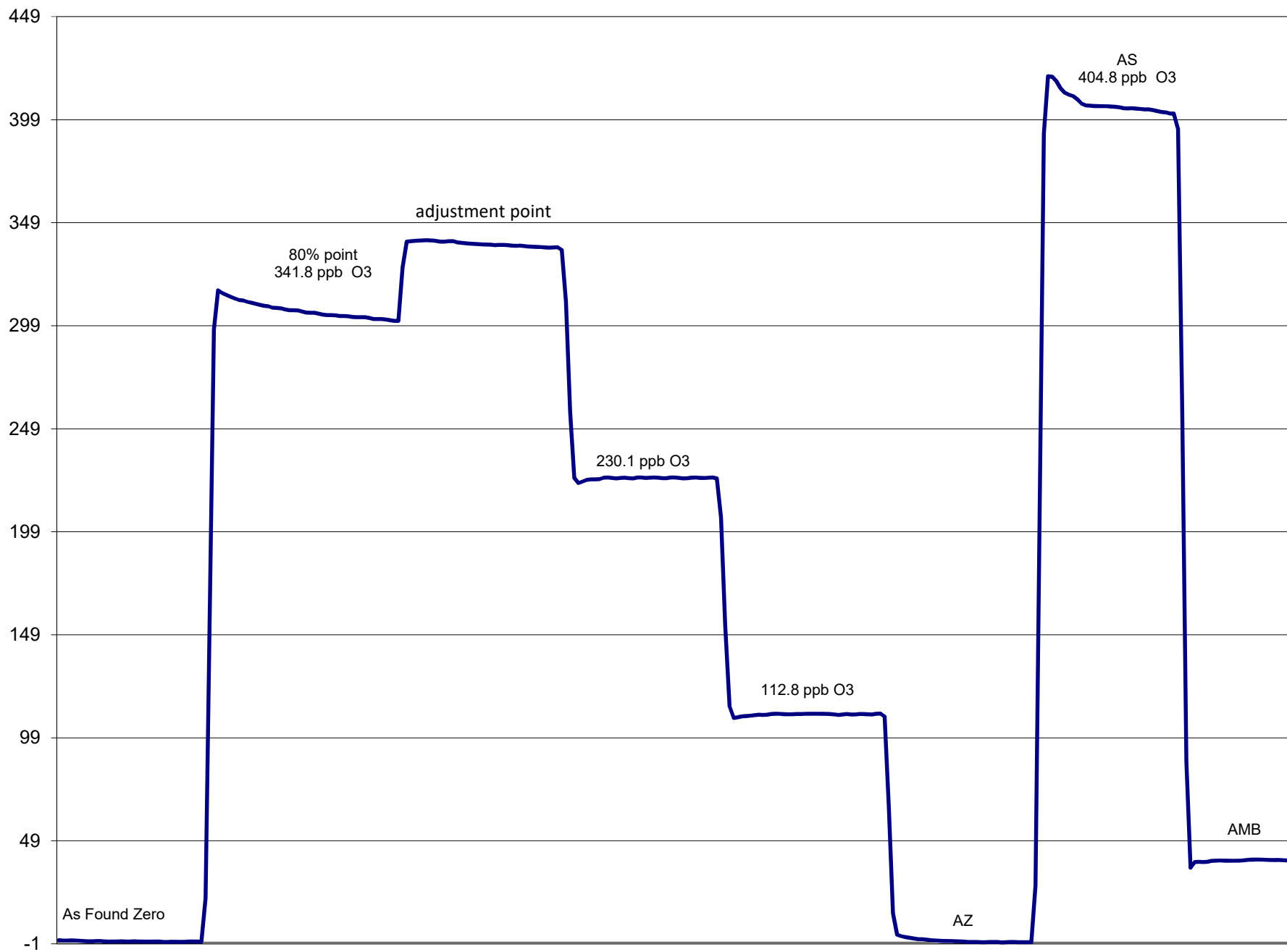
Calibration Date	February 8 2017	Previous Calibration	January 18 2017
Station Number	10	Station Location	Rycroft
Start Time (MST)	13:43:00 PM	End Time (MST)	16:10:00 PM
Analyzer make/model	Model 49-I	Analyzer serial #	1153630156

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	NA	Correlation Coefficient	0.999940
341.8	338.0	1.0113		
230.1	225.2	1.0219		
112.8	110.5	1.0211	Slope	1.012709
			Intercept	0.609958

O3 Calibration Curve





February 8 2017

Calibration Report



Parameter CH4 / NMHC / THC

Air Monitoring Network PAZA

Station Information

Calibration Date	February 6, 2017	Previous Calibration	January 20, 2017
Station Number	1	Station Location	Rycroft
Reason:	Routine	Install	Removal
			Other:

Start Time (MST)	14:10:00 PM	End Time (MST)	16:12:00 PM
Barometric Pressure	725.00 mm/hg	Station Temperature	21.0 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)
1995	0.00	0.00	0.00	N/A
1997	68.96	12.88	12.48	1.0321
1998	40.99	7.76	7.49	1.0360
1999	15.97	3.06	2.91	1.0500
1995	0.00	0.00	0.00	As Found Zero
1995	68.93	12.89	12.48	As Found Span
Average Correction Factor				1.0394

Calculated value of As Found Response: 12.522 ppm Percent Change of As Found: 2.9%

	Before		After
Calculated slope	1.001042	Calculated slope	1.031215
Calculated intercept	0.027502	Calculated intercept	0.024868

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.00	ppm
Auto span	7.66	ppm	7.45	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	0.00	N/A
1997	68.96	19.00	19.30	0.9844
1998	40.99	11.44	11.61	0.9859
1999	15.97	4.51	4.42	1.0218
1995	0.00	0.00	0.00	As Found Zero
1995	68.93	19.01	19.30	As Found Span
Average Correction Factor				0.9974

Calculated value of As Found Response: 19.350 ppm Percent Change of As Found: -1.8%

	Before		After
Calculated slope	0.997659	Calculated slope	0.981260
Calculated intercept	0.093240	Calculated intercept	0.073210

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.00	ppm
Auto span	11.15	ppm	11.41	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	0.00	N/A
1997	68.96	31.89	31.82	1.0021
1998	40.99	19.20	19.10	1.0055
1999	15.97	7.57	7.35	1.0296
1995	0.00	0.00	0.00	As Found Zero
1995	68.93	31.90	31.82	As Found Span
Average Correction Factor				1.0124

Calculated value of As Found Response: 31.877 ppm Percent Change of As Found: 0.1%

	Before		After
Calculated slope	0.998198	Calculated slope	1.000149
Calculated intercept	0.118099	Calculated intercept	0.095349

Final Zero/Span Data

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

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter CH4

Air Monitoring Network PAZA



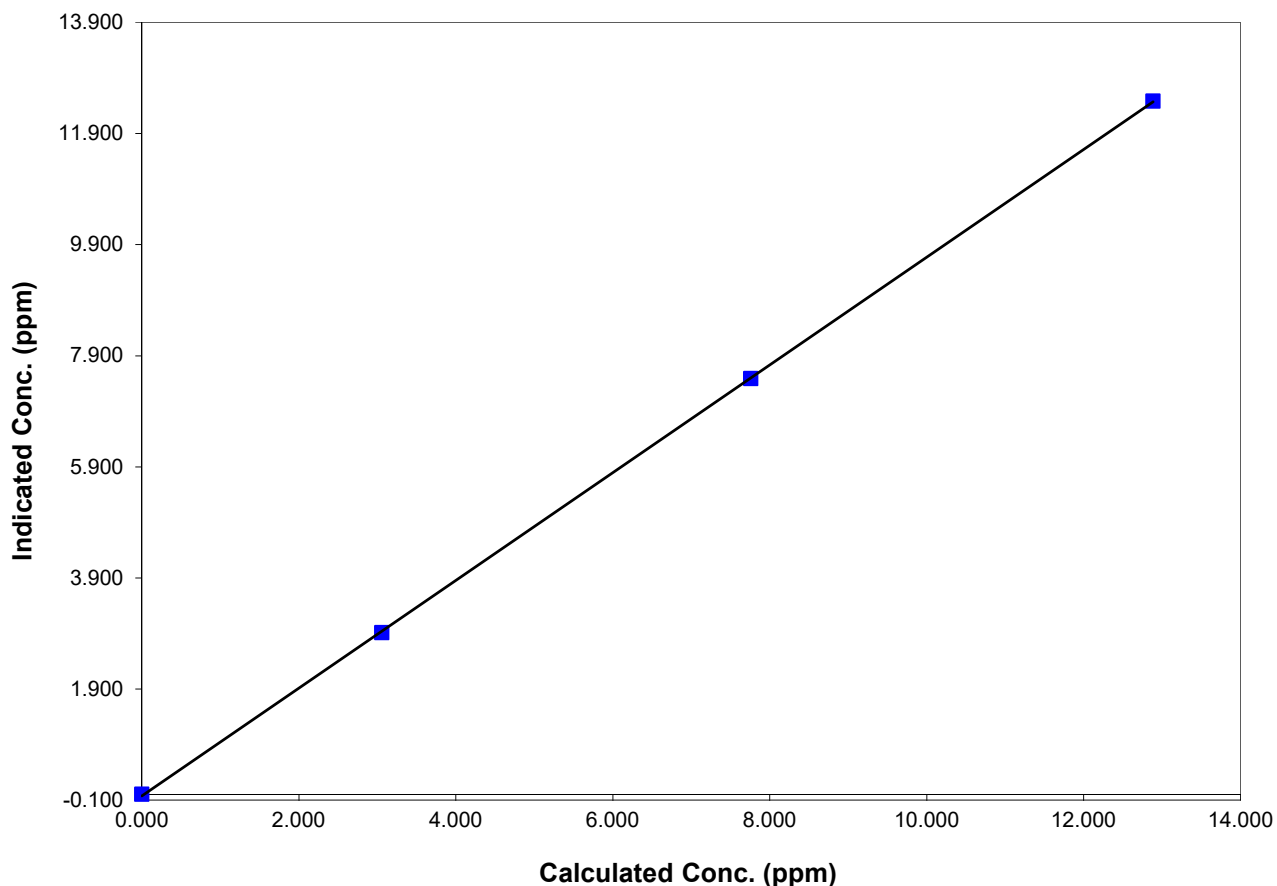
Station Information

Calibration Date	February 6, 2017	Previous Calibration	January 20, 2017
Station Number	1	Station Location	Rycroft
Start Time (MST)	14:10:00 PM	End Time (MST)	16:12:00 PM
Analyzer make/model	TEI 55I-A3PHAA	Analyzer serial #	1151980005

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.002	N/A	Correlation Coefficient	0.999980
12.884	12.483	1.0321		
7.760	7.490	1.0360		
3.059	2.914	1.0500	Slope	1.031215
			Intercept	0.024868

CH4 Calibration Data



Calibration Summary

Parameter NMHC

Air Monitoring Network PAZA



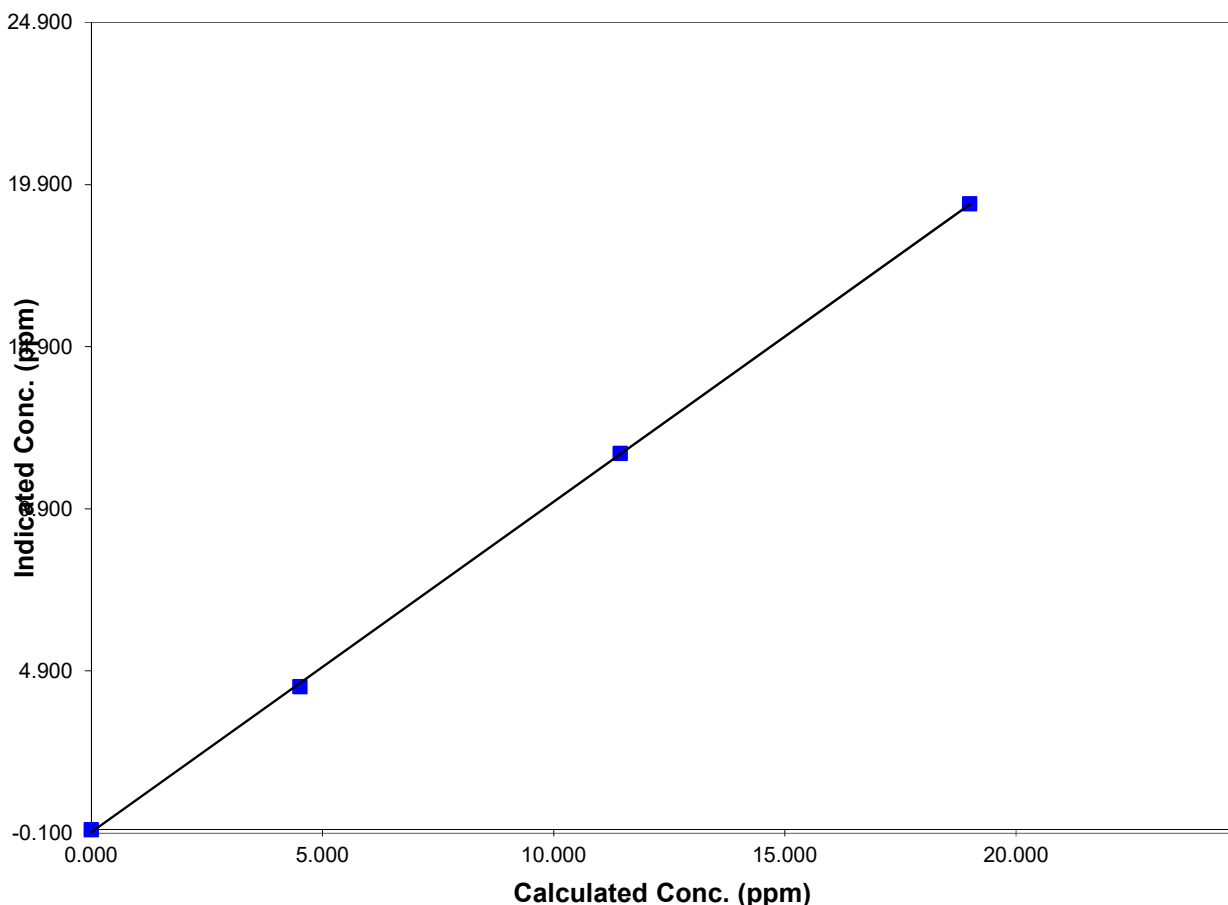
Station Information

Calibration Date	February 6, 2017	Previous Calibration	January 20, 2017
Station Number	1	Station Location	Rycroft
Start Time (MST)	14:10:00 PM	End Time (MST)	16:12:00 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	0.999917
19.001	19.302	0.9844		
11.444	11.607	0.9859		
4.512	4.415	1.0218	Slope	0.981260
			Intercept	0.073210

NMHC Calibration Data



Calibration Summary

Parameter THC

Air Monitoring Network PAZA



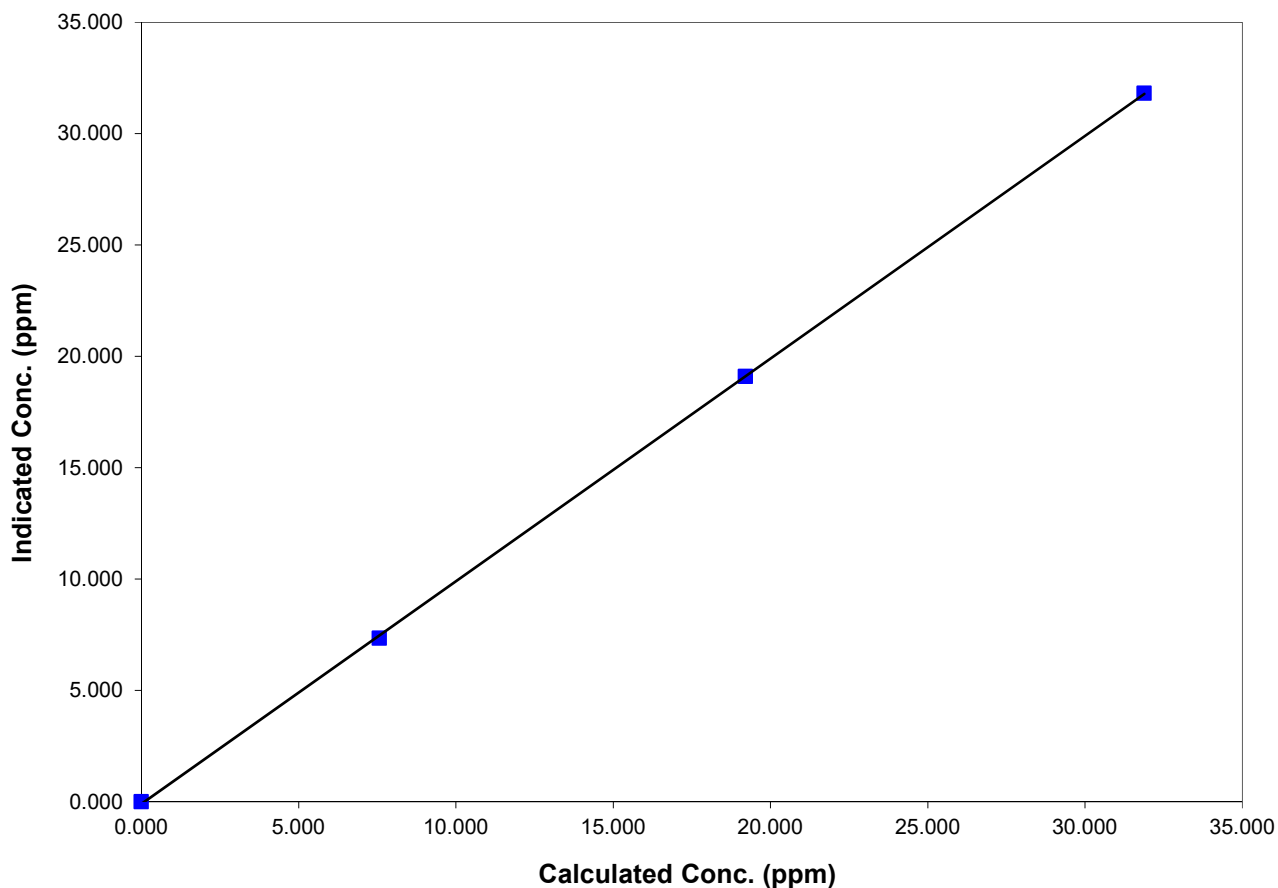
Station Information

Calibration Date	February 6, 2017	Previous Calibration	January 20, 2017
Station Number	1	Station Location	Rycroft
Start Time (MST)	14:10:00 PM	End Time (MST)	16:12:00 PM
Analyzer make/model	TEI 55I-A3PHAA	Analyzer serial #	1151980005

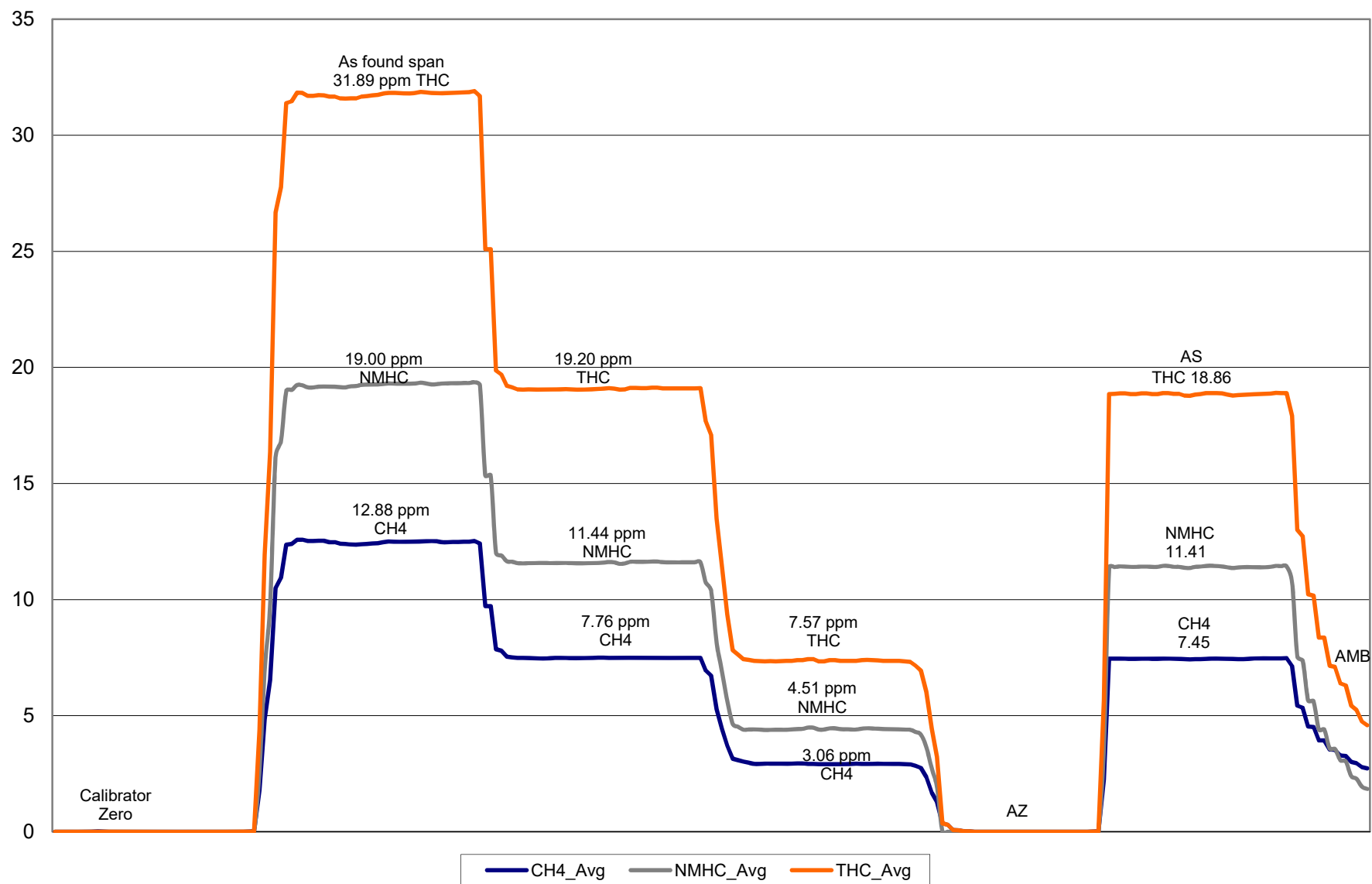
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.001	N/A	Correlation Coefficient	0.999957
31.885	31.817	1.0021		
19.203	19.099	1.0055		
7.571	7.353	1.0296	Slope	1.000149
			Intercept	0.095349

THC Calibration Data



THC/CH₄/NMHC Calibration



Calibration Report



Parameter CH4 / NMHC / THC

Air Monitoring Network PAZA

Station Information

Calibration Date	February 23, 2017	Previous Calibration	February 6, 2017
Station Number	1	Station Location	Rycroft
Reason:	Routine	Install	Removal
			Other:

Start Time (MST)	11:50	End Time (MST)	14:20:00 PM
Barometric Pressure	725.00 mm/hg	Station Temperature	21.0 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)
1995	0.00	0.00	0.04	N/A
1997	68.96	12.88	12.70	1.0145
1998	40.99	7.76	7.72	1.0052
1999	15.97	3.06	2.99	1.0221
1995	0.00	0.00	0.04	As Found Zero
1995	68.93	12.89	12.84	As Found Span
Average Correction Factor				1.0139

Calculated value of As Found Response: 12.836 ppm Percent Change of As Found: 0.4%

	Before		After
Calculated slope	1.001042	Calculated slope	1.014985
Calculated intercept	0.027502	Calculated intercept	-0.025810

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.00	ppm
Auto span	7.66	ppm	7.63	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	0.00	N/A
1997	68.96	19.00	18.76	1.0130
1998	40.99	11.44	11.39	1.0050
1999	15.97	4.51	4.32	1.0453
1995	0.00	0.00	0.00	As Found Zero
1995	68.93	19.01	19.40	As Found Span
Average Correction Factor				1.0211

Calculated value of As Found Response: 19.447 ppm Percent Change of As Found: -2.3%

	Before		After
Calculated slope	0.997659	Calculated slope	1.008829
Calculated intercept	0.093240	Calculated intercept	0.047943

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.00	ppm
Auto span	11.15	ppm	11.15	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	0.04	N/A
1997	68.96	31.89	31.50	1.0124
1998	40.99	19.20	19.10	1.0054
1999	15.97	7.57	7.34	1.0319
1995	0.00	0.00	0.04	As Found Zero
1995	68.93	31.90	32.27	As Found Span
Average Correction Factor				1.0166

Calculated value of As Found Response: 32.292 ppm Percent Change of As Found: -1.2%

	Before		After
Calculated slope	0.998198	Calculated slope	1.010565
Calculated intercept	0.118099	Calculated intercept	0.018949

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.00	ppm
Auto span	18.81	ppm	18.77	ppm

Notes: Nitrogen cylinder replaced
Slight span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter CH4

Air Monitoring Network PAZA



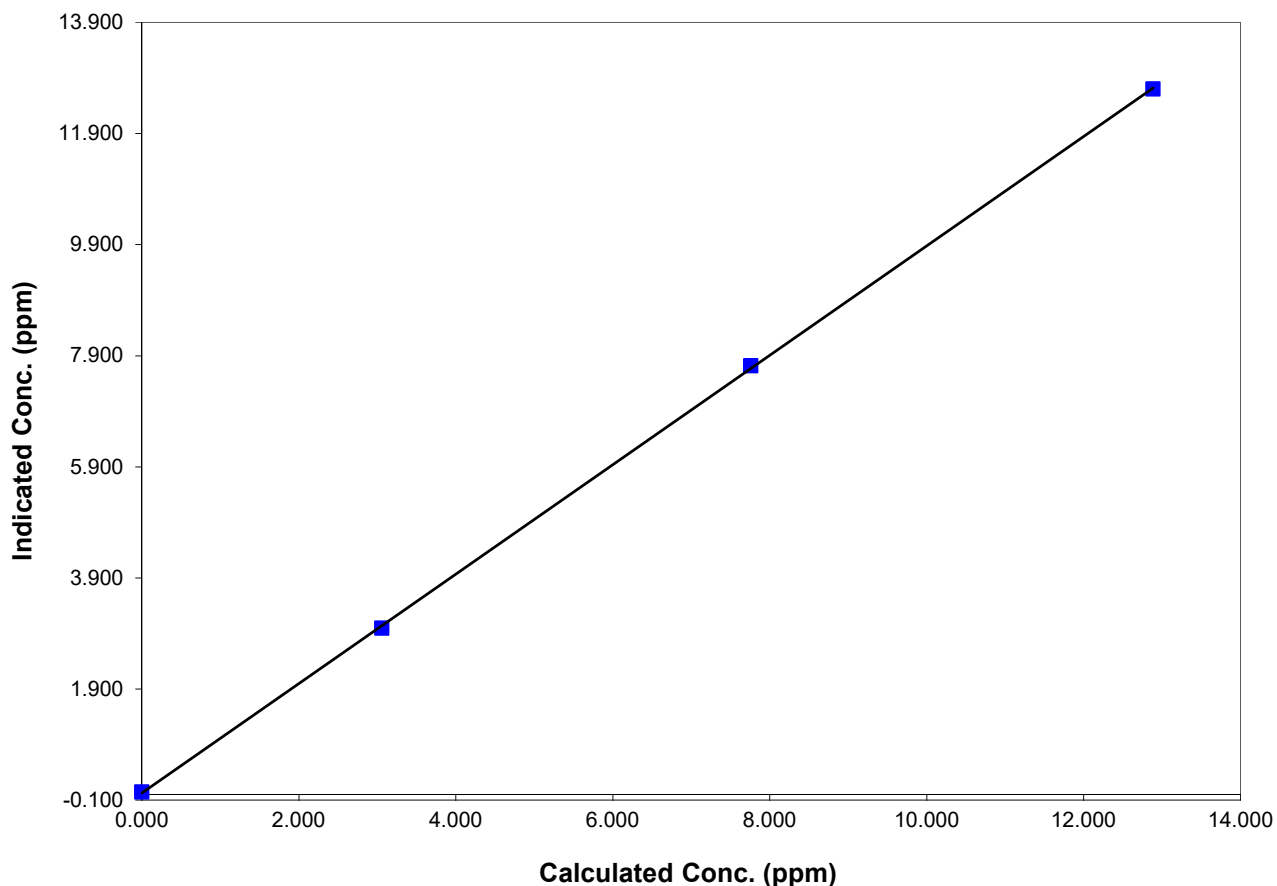
Station Information

Calibration Date	February 23, 2017	Previous Calibration	February 6, 2017
Station Number	1	Station Location	Rycroft
Start Time (MST)	11:50	End Time (MST)	14:20:00 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	0.042	N/A	Correlation Coefficient	0.999944
12.884	12.701	1.0145		
7.760	7.720	1.0052		
3.059	2.993	1.0221	Slope	1.014985
			Intercept	-0.025810

CH4 Calibration Data



Calibration Summary

Parameter NMHC

Air Monitoring Network PAZA



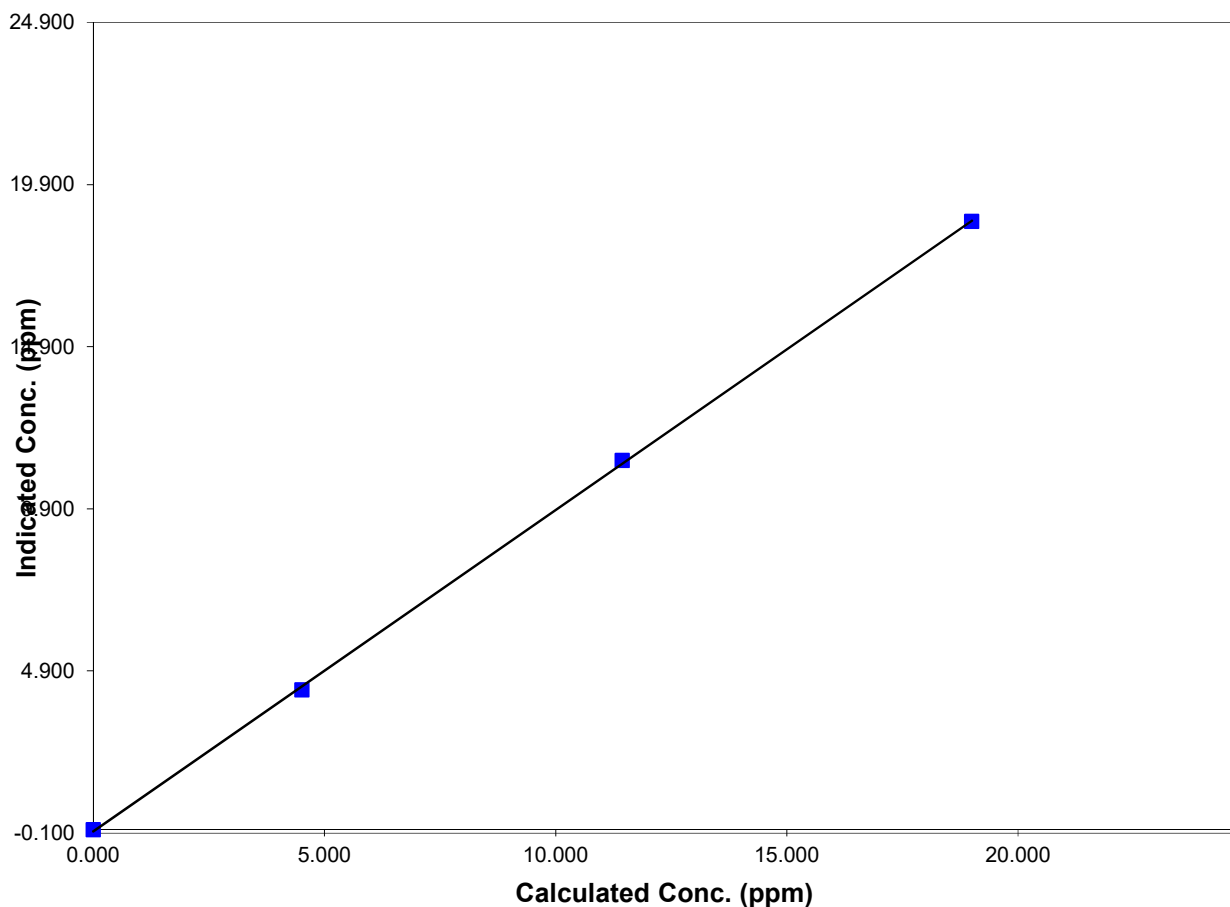
Station Information

Calibration Date	February 23, 2017	Previous Calibration	February 6, 2017
Station Number	1	Station Location	Rycroft
Start Time (MST)	11:50	End Time (MST)	14:20:00 PM
Analyzer make/model	TEI 55I-A3PHAA	Analyzer serial #	1151980005

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.000	N/A		
19.001	18.757	1.0130	Correlation Coefficient	0.999886
11.444	11.387	1.0050		
4.512	4.316	1.0453	Slope	1.008829
			Intercept	0.047943

NMHC Calibration Data



Calibration Summary

Parameter THC

Air Monitoring Network PAZA



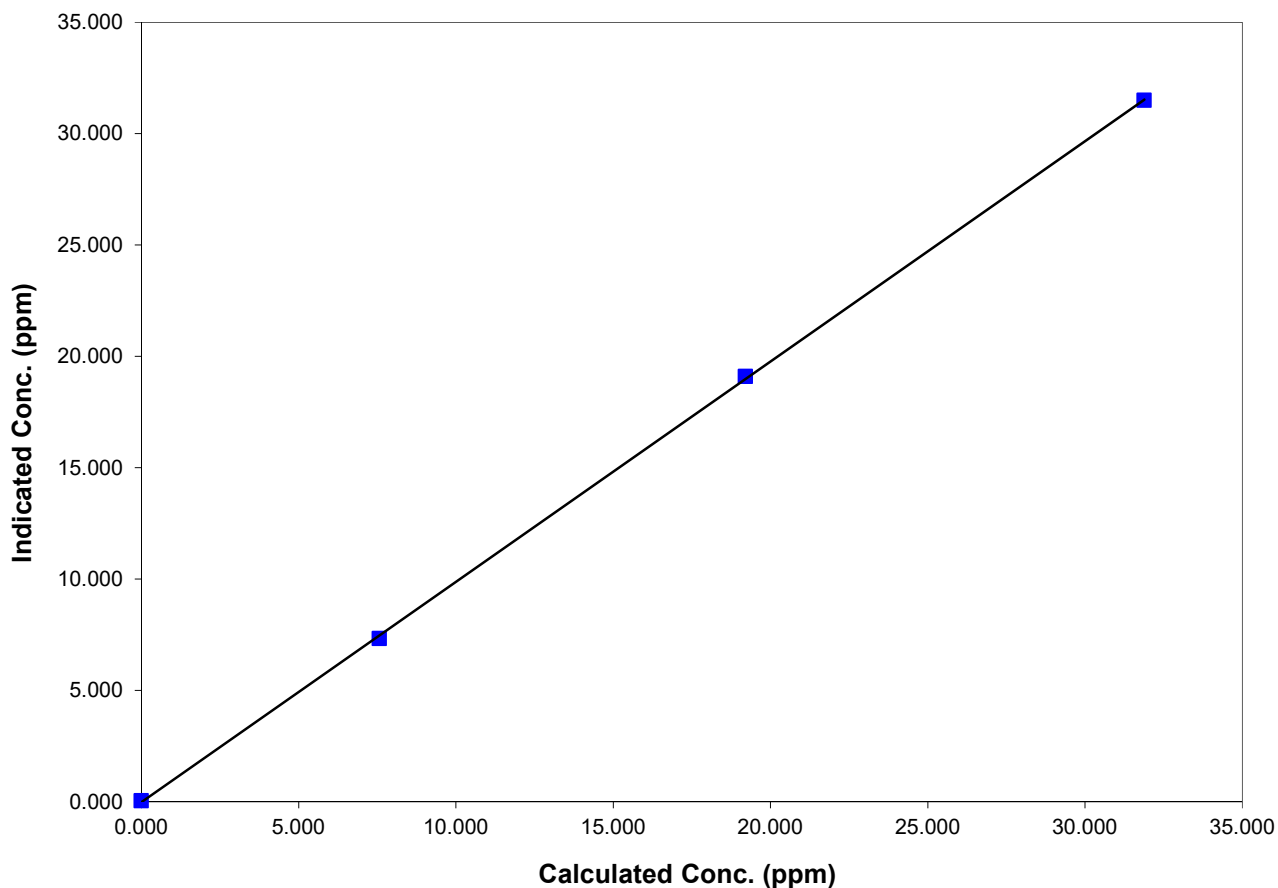
Station Information

Calibration Date	February 23, 2017	Previous Calibration	February 6, 2017
Station Number	1	Station Location	Rycroft
Start Time (MST)	11:50	End Time (MST)	14:20:00 PM
Analyzer make/model	TEI 55I-A3PHAA	Analyzer serial #	1151980005

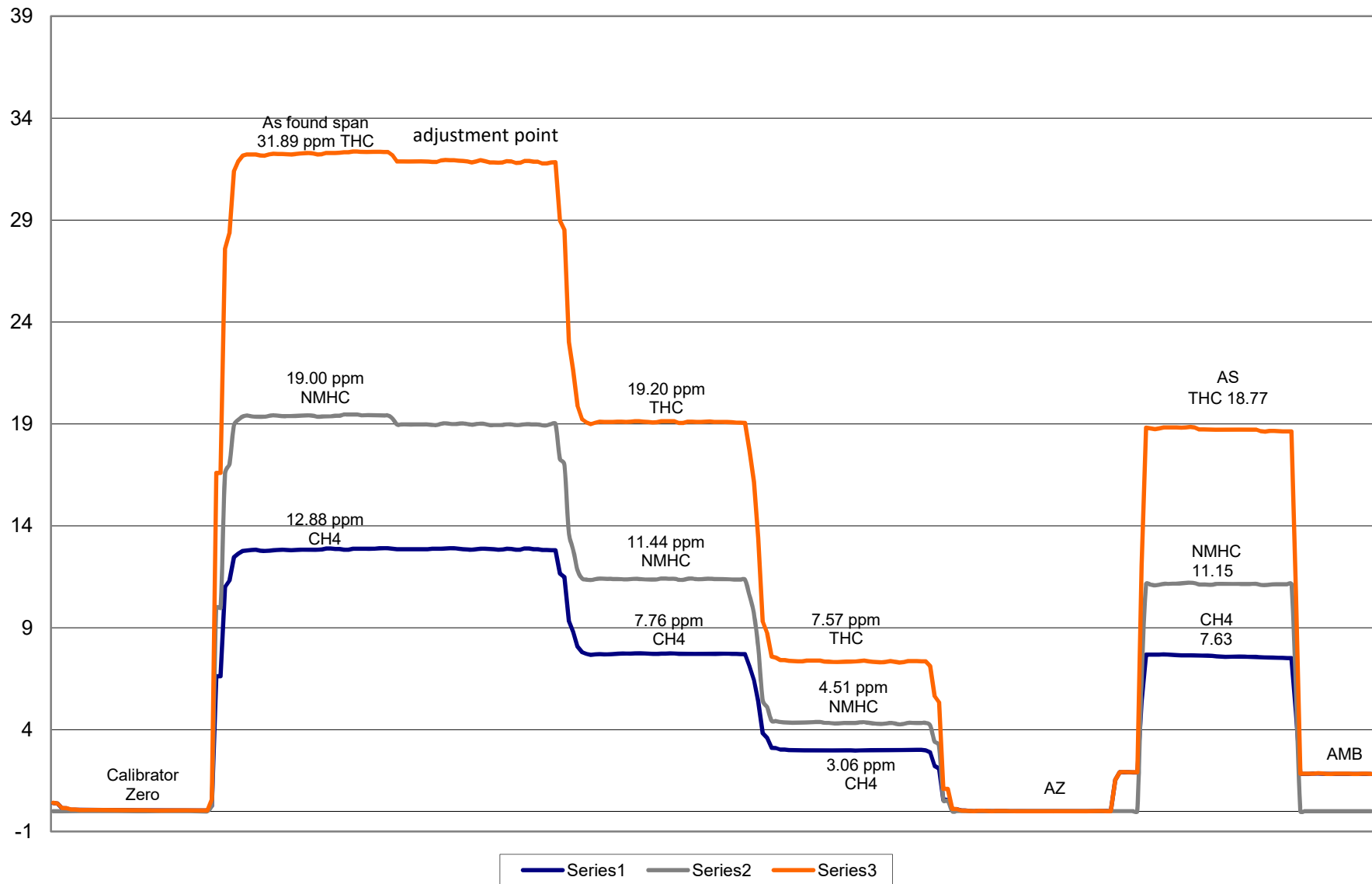
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.040	N/A	Correlation Coefficient	0.999935
31.885	31.495	1.0124		
19.203	19.099	1.0054		
7.571	7.337	1.0319	Slope	1.010565
			Intercept	0.018949

THC Calibration Data



THC/CH₄/NMHC Calibration



Calibration Report

Parameter **TRS**
Air Monitoring Network

PAZA



Station Information

Calibration Date	February 6, 2017	Previous Calibration	January 20, 2017
Station Name	PAZA Rover	Station Location	Rycroft
Reason:	☐ Routine	☒ Install	☐ Removal
		☐ Other:	
Start Time (MST)	14:51:00 PM	End Time (MST)	17:10:00 PM
Barometric Pressure	0.925 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	1.014800	Calculated slope	0.972669
Calculated intercept	0.503917	Calculated intercept	-0.140086
Analyzer make	TEI 43I	Analyzer serial #	1153630152

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background		ppb	13.6	ppb
Coefficient			0.985	
Lamp Voltage		V	787	V
Chamber Temp		C	45.3	C
Perm gas Temp		C	46.44	C
Pressure		mmHg	672.4	mmHg
Sample Flow		lpm	0.391	lpm
Lamp Intensity		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)
4996	0.0	0.0	0.7	N/A
4994	39.94	80.9	83.6	0.9681
4996	19.91	40.5	41.4	0.9770
6993	9.97	14.5	14.5	0.9983
4996	9.97		0.4	Sox Test
4996	0.00	0.0	0.7	As found zero
4996	39.93	80.9	83.6	As found span
Average Correction Factor				0.9811

Calculated value of As Found Response: 84.58 ppm Percent Change of As Found: -4.6%

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

Notes: Slight span adjust

Sox scrubber material replaced

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



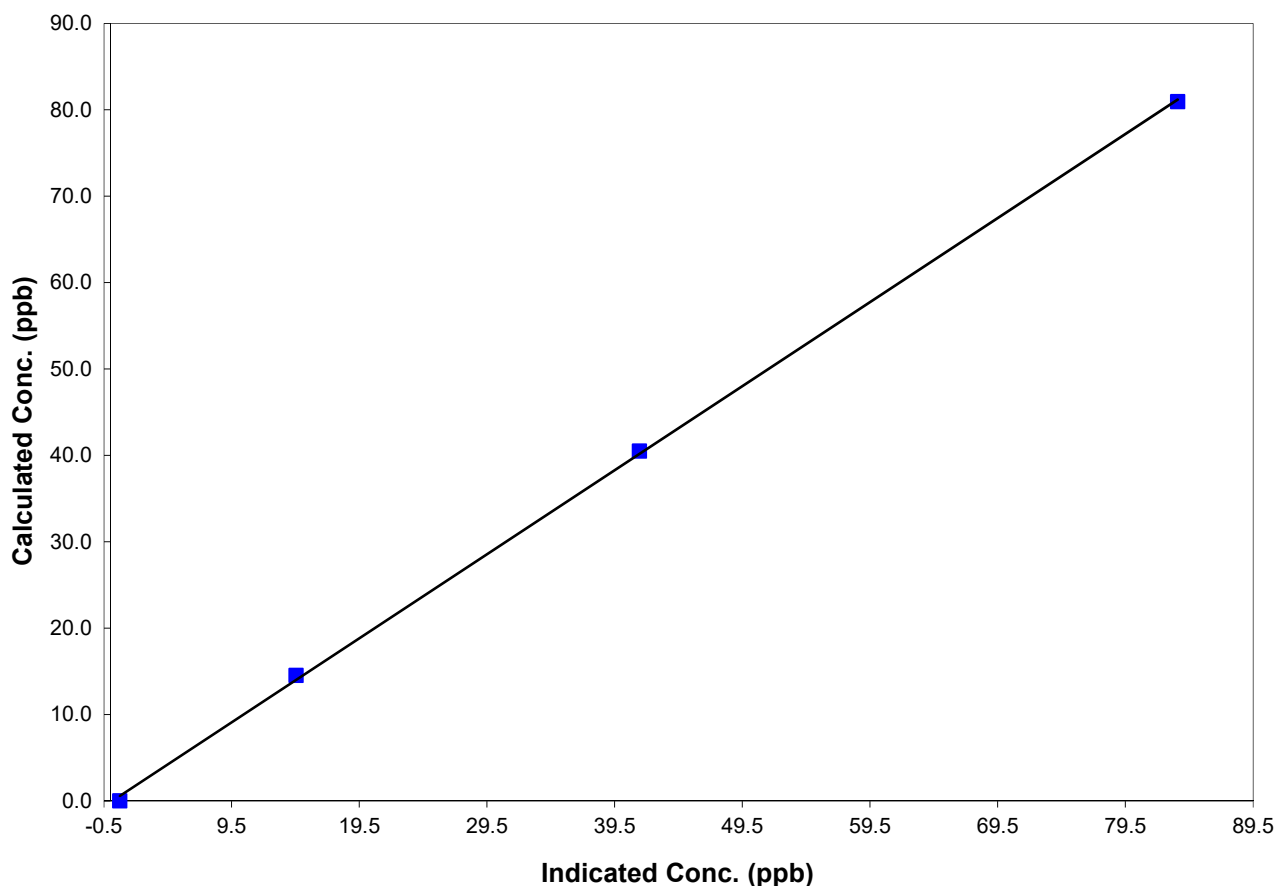
Station Information

Calibration Date	February 6, 2017	Previous Calibration	January 20, 2017
Station Number	PAZA Rover	Station Location	Rycroft
Start Time (MST)	14:51:00 PM	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	0.7	N/A	Correlation Coefficient	0.999797
80.9	83.6	0.9681		
40.5	41.4	0.9770		
14.5	14.5	0.9983	Slope	0.972669
			Intercept	-0.140086

TRS Calibration Curve



TRS Calibration

