



# **Peace Airshed Zone Association**

## **Ambient Air Monitoring Network Summary**

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

February 28, 2018

**Alberta Environment and Parks**

11<sup>th</sup> Floor, Oxbridge Place  
 9820-106 Street  
 Edmonton Alberta T5K 2J6

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

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

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

Company	Facility	LSD	EPEA Approval Number
Advantage Oil & Gas Ltd.	Glacier	05-02-076-13-W6	262479-00-00
Alberta Power (2000) Ltd. (an ATCO company)	Sturgeon	SW-06-069-21-W5	10283-02-02
ATCO Power Canada	Poplar Hill	11-19-073-08-W6	67774-01-01
ATCO Power Canada	Valleyview	SW-06-069-21-W5	147709-01-01
AltaGas Ltd.	Pouce Coupe	03-03-081-13-W6	247673-00-00
	Ante Creek	02-26-068-25-W5	266694-00-00
	Gordondale	16-31-78-11-W6M	287474-00-00
Apache Canada Ltd.	House Mountain	01-08-070-10-W5	10137-02-02
Birchcliff Energy Ltd.	Pouce Coupe	03-22-078-12-W6	252529-00-00
Canadian Natural Resources Limited	Bonanza	11-25-081-11-W6	00000029-01-00
	Progress/Gordondale	01-01-077-10-W6	00010036-02-00
	Gold Creek	13-26-067-05-W6	00010446-02-00
	Teepee Creek	SE-2-074-04-W6	00001635-02-00

<b>Company</b>	<b>Facility</b>	<b>LSD</b>	<b>EPEA Approval Number</b>
	Sturgeon/Valleyview	02-02-069-22-W5	1633-02-00
Canfor Forest Products	Grande Prairie	SW-23-071-06-W6	152645-01-00
Conocophillips Canada Energy Partnership	Wembley	06-19-073-08-W6	00000212-01-00
Devon Canada	NW Belloy (Dunvegan)	16-36-079-03-W6	00009810-02-00
	Eaglesham (South)	02-14-077-25-W5	00047669-01-00
	North Normanville	03-36-079-23-W5	00047455-01-00
	West Culp	05-34-078-25-W6	00136284-00-00
	Cecil	08-15-084-08-W6	00010032-02-00
Encana Corporation	Sexsmith	04-08-075-07-W6	00010002-01-00
Enerplus Resources	Pouce Coupe	SW-06-069-21-W5	1464-02-03
Exshaw Oil Corporation	Spirit River	03-10-077-07-W6	344521-00-00
Grande Prairie Generation Inc.	Northern Prairie Power Project	04-19-073-08-W6	00238762-00-00
Long Run Exploration	Eaglesham	01-25-076-01-W6	00241532-00-00
	Kakut	14-12-075-03-W6	00248469-00-00
	Donnelly	06-01-077-21-W5	00000087-02-00
	Puskwaskau	03-26-074-01-W6	00017524-01-00
Longview Oil Corp.	Sunset House	06-22-070-20-W5	138884-01-00
Penn West Petroleum Ltd.	Tangent	13-29-080-23-W5	00001746-02-00
	Pouce Coupe	16-07-078-11-W6	00000614-01-00

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

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

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

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

**Henry Pirker Station:**

- ◆ The measured ambient air quality was within the AAAQO for the Henry Pirker station, with the exception of one 1-hour PM<sub>2.5</sub> exceedance recorded on January 16 (AEP reference number 333791).
- ◆ All analyzers and meteorological sensors at the Henry Pirker station had an operational uptime greater than 90% for the month of January.

**Evergreen Park Station:**

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

**Smoky Heights Station:**

- ◆ The measured ambient air quality was within the AAAQO for the Smoky Heights station, with the exception of two 1-hour PM<sub>2.5</sub> exceedances recorded on January 23 and 27 (AEP reference numbers 334034 and 334132).
- ◆ All analyzers and meteorological sensors at the Smoky Heights station had an operational uptime greater than 90% for the month of January.

**Beaverlodge Station:**

- ◆ The measured ambient air quality was within the AAAQO for the Beaverlodge station, with the exception of two 1-hour PM<sub>2.5</sub> exceedances, and one 24-hour PM<sub>2.5</sub> exceedance recorded on January 16 (AEP reference number 333790).
- ◆ All analyzers and meteorological sensors at the Beaverlodge station had an operational uptime greater than 90% for the month of January, with the exception of the wind sensor which returned an uptime of 34.4% due to instrument malfunctioning.

**Valleyview Station:**

- ◆ The measured ambient air quality was within the AAAQO for the Valleyview station.
- ◆ All analyzers and meteorological sensors at the Valleyview station had an operational uptime greater than 90% for the month of January, with the exception of the relative humidity sensor which returned an uptime of 2.7% due to instrument malfunctioning.

**Donnelly Station:**

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

**Rycroft-Portable Station:**

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

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

There were six duplicate sites sampled in the month of January: Wanham and Eaglesham (SO<sub>2</sub>), Crooked Creek (O<sub>3</sub>), Smoky Heights and Fitzsimmons (NO<sub>2</sub>), and Girouxville 4 (H<sub>2</sub>S). The passive sample analyses were performed by MAXXAM Analytics Inc.

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

- Monthly average concentrations for SO<sub>2</sub> passives ranged from 0.1 ppb to 0.9 ppb, with a mean of 0.4 ppb.
- Monthly average concentrations for NO<sub>2</sub> passives ranged from 0.4 ppb to 18.8 ppb, with a mean of 3.3 ppb.
- Monthly average concentrations for O<sub>3</sub> passives ranged from 28.7 ppb to 36.8 ppb, with a mean of 33.1 ppb.
- Monthly average concentrations for H<sub>2</sub>S passives ranged from 0.2 ppb to 0.5 ppb, with a mean of 0.3 ppb.

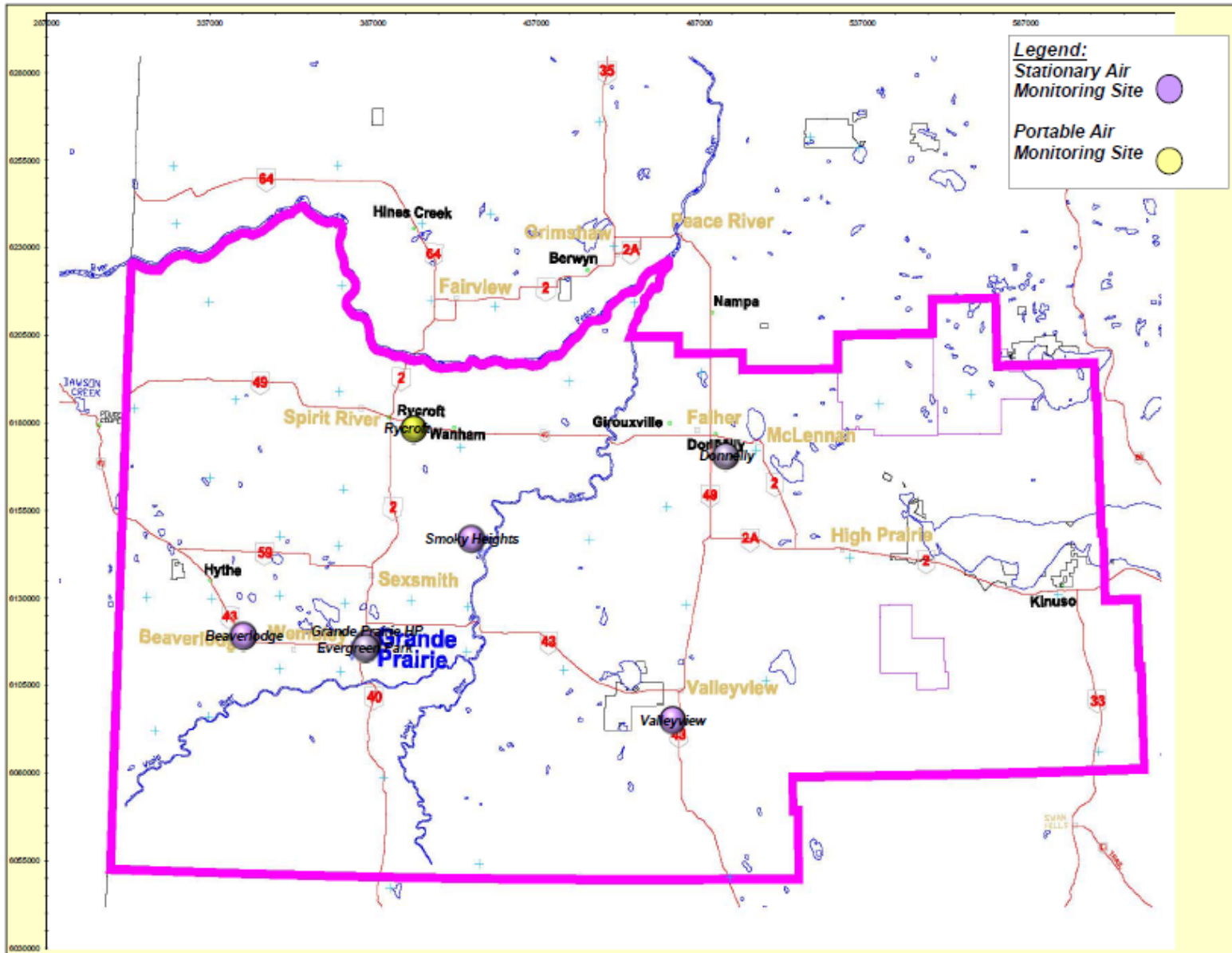
If you have any questions or concerns, please contact Patrick Andersen at 403.505.1041 or the PAZA office at 780.833.4343.

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

Jan-2018 Peace Airshed Zone Association							Maximum Recorded Values				Operational Time (%)	Calibration Date
Pollutant (units)	Objectives		Station	Monthly Average	Exceedence		1-hr		24-hr / 8-hr			
	1-hr	24-hr			1-hr	24-hr	Conc	Day	Conc	Day		
SO <sub>2</sub> (ppb)	172	48	Henry Pirker	0.6	0	0	4.8	Jan-29 20:00	1.5	Jan-01	100.0%	Jan-09
SO <sub>2</sub> (ppb)	172	48	Evergreen Park	0.4	0	0	21.4	Jan-10 13:00	1.3	Jan-10	99.2%	Jan-12
SO <sub>2</sub> (ppb)	172	48	Smoky Heights	0.8	0	0	8.5	Jan-01 08:00	2.9	Jan-01	100.0%	Jan-16
SO <sub>2</sub> (ppb)	172	48	Beaverlodge	0.2	0	0	3.1	Jan-01 04:00	1.6	Jan-01	100.0%	Jan-06
SO <sub>2</sub> (ppb)	172	48	Valleyview	0.7	0	0	31.3	Jan-06 13:00	11.0	Jan-06	100.0%	Jan-27
SO <sub>2</sub> (ppb)	172	48	Donnelly	0.3	0	0	2.2	Jan-29 14:00	1.2	Jan-29	100.0%	Jan-19
SO <sub>2</sub> (ppb)	172	48	Rycroft-Portable	0.4	0	0	4.2	Jan-13 03:00	1.5	Jan-16	100.0%	Jan-08
NO (ppb)			Henry Pirker	17.2	-	-	169.2	Jan-05 11:00	61.8	Jan-05	100.0%	Jan-09
NO <sub>2</sub> (ppb)	159	106	Henry Pirker	19.5	0	0	54.8	Jan-13 18:00	39.1	Jan-04	100.0%	Jan-09
NO <sub>x</sub> (ppb)			Henry Pirker	36.9	-	-	220.1	Jan-03 00:00	96.5	Jan-04	100.0%	Jan-09
NO (ppb)			Beaverlodge	2.4	-	-	71.3	Jan-12 13:00	20.8	Jan-12	98.3%	Jan-06
NO <sub>2</sub> (ppb)	159	106	Beaverlodge	7.9	0	0	37.3	Jan-11 18:00	25.5	Jan-12	98.3%	Jan-06
NO <sub>x</sub> (ppb)			Beaverlodge	10.4	-	-	100.3	Jan-12 13:00	46.2	Jan-12	98.3%	Jan-06
NO (ppb)			Rycroft-Portable	1.1	-	-	19.6	Jan-11 13:00	5.4	Jan-05	100.0%	Jan-08
NO <sub>2</sub> (ppb)	159	106	Rycroft-Portable	5.2	0	0	26.0	Jan-13 03:00	13.6	Jan-12	100.0%	Jan-08
NO <sub>x</sub> (ppb)			Rycroft-Portable	6.3	-	-	33.3	Jan-11 13:00	17.3	Jan-05	100.0%	Jan-08
O <sub>3</sub> (ppb)	82		Henry Pirker	13.9	0	-	39.1	Jan-01 19:00	30.3	Jan-06	100.0%	Jan-09
O <sub>3</sub> (ppb) - 8-hr			Henry Pirker		0				37.8	Jan-07		-
O <sub>3</sub> (ppb)	82		Beaverlodge	23.7	0	-	41.8	Jan-18 20:00	37.1	Jan-02	100.0%	Jan-06
O <sub>3</sub> (ppb) - 8-hr			Beaverlodge		0				40.0	Jan-07		-
O <sub>3</sub> (ppb)	82		Rycroft-Portable	25.0	0	-	43.8	Jan-18 14:00	37.3	Jan-02	100.0%	Jan-08
O <sub>3</sub> (ppb) - 8-hr			Rycroft-Portable		0				41.3	Jan-18		-
CO (ppm)	13		Henry Pirker	0.33	0	-	2.1	Jan-13 19:00	0.8	Jan-13	99.1%	Jan-10
CO (ppm) - 8-hr	5		Henry Pirker		0				1.5	Jan-14		-



## PAZA Monthly Continuous Data Summary – continued

Jan-2018 Peace Airshed Zone Association							Maximum Recorded Values					
							1-hr		24-hr / 8-hr			
THC (ppm)			Henry Pirker	2.1	-	-	3.9	Jan-12 06:00	2.6	Jan-12	100.0%	Jan-11
CH <sub>4</sub> (ppm)			Henry Pirker	2.1	-	-	3.9	Jan-12 06:00	2.6	Jan-12	100.0%	Jan-11
NMHC (ppm)			Henry Pirker	0.0	-	-	0.1	Jan-03 01:00	0.0	Jan-03	100.0%	Jan-11
THC (ppm)			Rycroft-Portable	2.0	-	-	2.4	Jan-22 18:00	2.1	Jan-05	95.8%	Jan-04
CH <sub>4</sub> (ppm)			Rycroft-Portable	2.0	-	-	2.2	Jan-05 11:00	2.1	Jan-05	95.8%	Jan-04
NMHC (ppm)			Rycroft-Portable	0.0	-	-	0.3	Jan-22 18:00	0.0	Jan-22	95.8%	Jan-04
TRS (ppb)			Henry Pirker	0.2	-	-	1.2	Jan-02 19:00	0.4	Jan-02	100.0%	Jan-10
TRS (ppb)			Evergreen Park	0.3	-	-	3.4	Jan-29 19:00	0.9	Jan-12	99.2%	Jan-12
TRS (ppb)			Smoky Heights	0.5	-	-	3.8	Jan-10 22:00	0.8	Jan-05	100.0%	Jan-16
TRS (ppb)			Rycroft-Portable	0.2	-	-	1.0	Jan-01 01:00	0.3	Jan-16	100.0%	Jan-08
H <sub>2</sub> S (ppb)	10	3	Valleyview	0.3	0	0	7.3	Jan-04 21:00	1.6	Jan-04	100.0%	Jan-27
H <sub>2</sub> S (ppb)	10	3	Donnelly	0.1	0	0	1.4	Jan-17 17:00	0.3	Jan-15	100.0%	Jan-19
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	80	30	Henry Pirker	8.3	1	0	82.4	Jan-16 21:00	27.0	Jan-16	98.4%	Dec-20
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	80	30	Evergreen Park	5.1	0	0	48.2	Jan-16 21:00	17.0	Jan-16	98.8%	Dec-07
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	80	30	Smoky Heights	5.8	2	0	124.0	Jan-23 19:00	16.8	Jan-05	96.4%	Dec-15
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	80	30	Beaverlodge	5.8	2	1	115.8	Jan-16 18:00	34.1	Jan-16	99.7%	Jan-08
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	80	30	Rycroft-Portable	3.0	0	0	18.0	Jan-16 18:00	12.2	Jan-16	99.7%	Nov-04
RH (%)			Henry Pirker	71.5	-	-	87.3	Jan-19 21:00	82.3	Jan-16	100.0%	-
RH (%)			Evergreen Park	80.4	-	-	98.3	Jan-17 01:00	93.1	Jan-16	100.0%	-
RH (%)			Beaverlodge	78.3	-	-	100.0	Jan-08 07:00	96.3	Jan-15	98.1%	-
RH (%)			Valleyview	46.1	-	-	67.4	Jan-01 20:00	46.1	Jan-01	2.7%	-
SR (W/m <sup>2</sup> )			Henry Pirker	21.5	-	-	221.2	Jan-29 14:00	43.4	Jan-29	100.0%	-
Temp (°C)			Henry Pirker	-11.1	-	-	5.5	Jan-03 16:00	1.3	Jan-03	100.0%	-
Temp (°C)			Evergreen Park	-11.2	-	-	6.7	Jan-02 16:00	1.0	Jan-06	100.0%	-
Temp (°C)			Smoky Heights	-12.0	-	-	4.4	Jan-18 14:00	0.5	Jan-02	100.0%	-
Temp (°C)			Beaverlodge	-9.8	-	-	6.0	Jan-02 16:00	3.2	Jan-02	100.0%	-
Temp (°C)			Valleyview	-10.8	-	-	5.5	Jan-18 18:00	1.1	Jan-06	100.0%	-
Temp (°C)			Donnelly	-11.8	-	-	3.8	Jan-17 14:00	1.1	Jan-17	100.0%	-
Temp (°C)			Rycroft-Portable	-12.5	-	-	5.6	Jan-17 15:00	0.8	Jan-17	100.0%	-

## PAZA Monthly Continuous Data Summary – continued

Jan-2018		Peace Airshed Zone Association					Maximum Recorded Values						
							1-hr			24-hr / 8-hr			
WSPD s (km/hr)			Henry Pirker	6.0	-	-	29.0	Jan-01 17:00	17.2	Jan-06	92.3%	-	
WSPD s (km/hr)			Evergreen Park	6.7	-	-	50.0	Jan-06 19:00	28.9	Jan-06	97.3%	-	
WSPD s (km/hr)			Smoky Heights	10.9	-	-	43.0	Jan-18 13:00	23.6	Jan-06	98.7%	-	
WSPD s (km/hr)			Beaverlodge	8.5	-	-	38.0	Jan-06 15:00	25.3	Jan-06	34.4%	-	
WSPD s (km/hr)			Valleyview	3.5	-	-	15.0	Jan-09 11:00	11.1	Jan-09	100.0%	-	
WSPD s (km/hr)			Donnelly	8.7	-	-	37.0	Jan-18 15:00	18.5	Jan-06	100.0%	-	
WSPD s (km/hr)			Rycroft-Portable	8.4	-	-	31.0	Jan-16 12:00	19.4	Jan-30	99.7%	-	
WSPD v (km/hr)			Henry Pirker	2.2	-	-	29.0	Jan-01 17:00	16.7	Jan-06	92.3%	-	
WSPD v (km/hr)			Evergreen Park	2.3	-	-	50.0	Jan-06 19:00	28.5	Jan-06	97.3%	-	
WSPD v (km/hr)			Smoky Heights	4.0	-	-	42.0	Jan-18 13:00	23.2	Jan-06	98.7%	-	
WSPD v (km/hr)			Beaverlodge	4.8	-	-	38.0	Jan-06 15:00	24.5	Jan-06	34.4%	-	
WSPD v (km/hr)			Valleyview	0.5	-	-	15.0	Jan-09 11:00	10.8	Jan-09	100.0%	-	
WSPD v (km/hr)			Donnelly	2.0	-	-	37.0	Jan-18 15:00	17.4	Jan-06	100.0%	-	
WSPD v (km/hr)			Rycroft-Portable	2.1	-	-	29.0	Jan-08 08:00	18.9	Jan-30	99.7%	-	
WDIR			Henry Pirker	NW	-	-	-	-	-	-	92.3%	-	
WDIR			Evergreen Park	WNW	-	-	-	-	-	-	97.3%	-	
WDIR			Smoky Heights	WNW	-	-	-	-	-	-	98.7%	-	
WDIR			Beaverlodge	WNW	-	-	-	-	-	-	34.4%	-	
WDIR			Valleyview	NNW	-	-	-	-	-	-	100.0%	-	
WDIR			Donnelly	S	-	-	-	-	-	-	100.0%	-	
WDIR			Rycroft-Portable	W	-	-	-	-	-	-	99.7%	-	

# Continuous Network Equipment Summary

## PAZA – Henry Pirker Station

### General Station Issues:

Parameter	Make	Model	Notes
SO <sub>2</sub>	TEI	43i	No operational issues observed.
NOx/NO/NO <sub>2</sub>	TEI	42i	No operational issues observed.
O <sub>3</sub>	TEI	49i	No operational issues observed.
CO	TEI	48C	Analyzer malfunctioning resulted in an uptime of 99.1%.
THC/CH <sub>4</sub> /NMHC	TEI	55I	Analyzer malfunctioning resulted in an uptime of 98.4%.
TRS	TEI	45C	No operational issues observed.
PM <sub>2.5</sub>	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 due to cold temperatures and precipitation resulted in an uptime of 92.3%.

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**PAZA – Evergreen Park Station**

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**General Station Issues**

<b>Parameter</b>	<b>Make</b>	<b>Model</b>	<b>Notes</b>
SO <sub>2</sub>	TEI	43i	A power disruption at the station resulted in an uptime of 99.2%.
TRS	TEI	43C	A power disruption at the station resulted in an uptime of 99.2%.
PM <sub>2.5</sub>	Sharp	5030	A power disruption at the station and analyzer maintenance resulted in an uptime of 98.8%.
ET	Met One/Gill	083D	No operational issues observed.
RH	Met One/Gill		No operational issues observed.
WS / WD	Met One/ Gill		Intermittent instrument malfunctioning due to cold temperatures and precipitation resulted in an uptime of 97.3%.

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**PAZA – Smoky Heights Station**

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**General Station Issues**

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<b>Parameter</b>	<b>Make</b>	<b>Model</b>	<b>Notes</b>
SO <sub>2</sub>	TEI	43C	No operational issues observed.
TRS	TEI	43i	No operational issues observed.
PM <sub>2.5</sub>	Sharp	5030	Intermittent instrument malfunctioning resulted in an uptime of 96.4%.
ET	Met One	083D	No operational issues observed.
WS / WD	Met One	010C/020C	Intermittent instrument malfunctioning due to cold temperatures and precipitation resulted in an uptime of 98.7%.

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**PAZA – Beaverlodge Station**

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**General Station Issues**

<b>Parameter</b>	<b>Make</b>	<b>Model</b>	<b>Notes</b>
SO <sub>2</sub>	TEI	43CTL	No operational issues observed.
NOx/NO/NO <sub>2</sub>	TEI	42C	Instrument malfunctioning resulted in an uptime of 98.3%.
O <sub>3</sub>	TEI	49C	No operational issues observed.
PM <sub>2.5</sub>	Sharp	5030	Instrument malfunctioning resulted in an uptime of 99.7%.
ET	n/a	n/a	No operational issues observed.
RH	n/a	n/a	Instrument malfunctioning resulted in an uptime of 98.1%.
WS / WD	Met One	50.5H	Instrument malfunctioning resulted in an uptime of 34.4%.

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**PAZA – Valleyview Station**

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**General Station Issues**

<b>Parameter</b>	<b>Make</b>	<b>Model</b>	<b>Notes</b>
SO <sub>2</sub>	TEI	43i	No operational issues observed.
H <sub>2</sub> S	TEI	43A	No operational issues observed.
ET	Gill	Met Pak 3	No operational issues observed.
RH	Gill	Met Pak 3	The relative humidity sensor was not operational, resulting in an uptime of 2.7%.
WS / WD	Gill	Met Pak 3	No operational issues observed.

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**PAZA – Donnelly Station**

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**General Station Issues**

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

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**PAZA – Portable-Rycroft**

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**General Station Issues**

<b>Parameter</b>	<b>Make</b>	<b>Model</b>	<b>Notes</b>
SO <sub>2</sub>	TEI	43i	No operational issues observed.
NOx/NO/NO <sub>2</sub>	TEI	42i	No operational issues observed.
O <sub>3</sub>	TEI	49i	No operational issues observed.
TRS	TEI	43i	No operational issues observed.
THC/CH <sub>4</sub> /NMHC	TEI	55i	Instrument malfunctioning resulted in an uptime of 95.8%.
PM <sub>2.5</sub>	Sharp	5030	Routine analyzer maintenance resulted in at uptime of 99.7%.
ET	Gill	Met Pak 3	No operational issues observed.
WS / WD	Gill	Met Pak 3	Instrument malfunctioning resulted in an uptime of 99.7%.

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PAZA

Henry Pirker Station

Monthly Summary Tables, Graphs and  
Roses

## Hourly Averages

Sulphur Dioxide (SO<sub>2</sub>) - ppb

Henry Pirker - January 2018

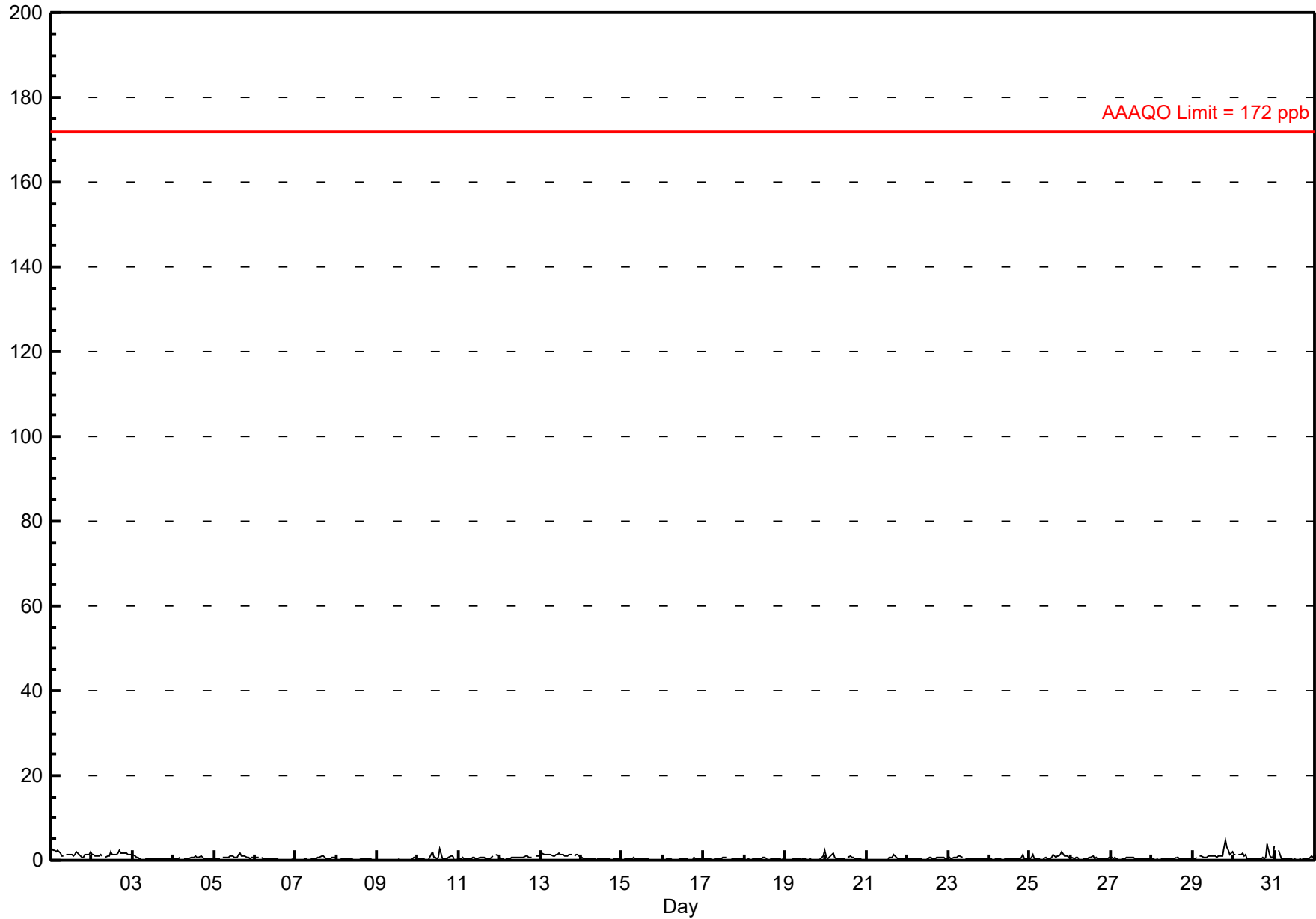
Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 4.8 ppb on Jan 29 20:00	Maximum Daily Average: 1.5 ppb on Jan 1		Hours of Data:	709
Minimum Value: 0 ppb on Jan 12 04:00	Minimum Daily Average: 0.2 ppb on Jan 9		Hours of Missing Data:	35
Maximum Diurnal Average: 0.7 ppb at hour 21	Minimum Diurnal Average: 0.4 ppb at hour 7		Hours of Calibration:	35
Monthly Average: 0.57 ppb	Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.2 Median = 0.4 Q <sub>3</sub> = 0.7 P <sub>90</sub> = 1.2 P <sub>99</sub> = 2.5		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jan	3	2	2	2	2	2	1	1	A	1	1	1	1	1	1	2	1	1	1	1	1	1	1	2	1.5	2.5
2-Jan	1	1	1	1	1	1	1	A	1	1	1	2	1	1	1	2	2	2	2	2	2	1	1	1	1.4	2.4
3-Jan	1	1	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.2
4-Jan	0	0	0	0	1	A	1	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.5	1.0
5-Jan	0	0	0	0	A	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	0	1	1	0.7	1.7
6-Jan	1	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8
7-Jan	0	0	A	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	1	1	1	0.4	1.1
8-Jan	0	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	0.5
9-Jan	A	0	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	1	1	A	0.2	0.8
10-Jan	0	0	0	0	0	0	0	1	2	1	1	0	1	3	0	0	0	0	1	1	1	1	A	0	0.6	2.6
11-Jan	0	0	1	0	0	0	0	0	1	1	0	0	1	1	1	1	1	0	0	1	1	A	1	1	0.6	1.4
12-Jan	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.6	1.0
13-Jan	1	2	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	A	1	1	1	1	1.3	1.7
14-Jan	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	0.6
15-Jan	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.6
16-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	0	0	0	0	0.3	0.6
17-Jan	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	A	0	0	0	0	0	0	0	0	0.3	0.6
18-Jan	0	0	0	0	0	0	0	0	0	0	0	1	1	0	A	0	0	0	0	0	0	0	0	0	0.3	0.6
19-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0.3	2.4
20-Jan	1	0	1	1	2	1	0	0	0	0	0	A	A	1	1	1	1	0	0	0	0	0	0	0	0.5	1.6
21-Jan	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	1	1	1	0	0	0	0	0	0	0.4	1.3
22-Jan	0	0	0	0	0	0	0	0	0	0	A	0	1	1	0	0	1	1	1	1	1	1	0	0	0.4	0.8
23-Jan	0	1	1	1	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.0
24-Jan	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0.3	1.2
25-Jan	0	1	1	0	0	0	0	A	0	1	0	0	0	1	1	1	1	1	1	2	1	1	1	1	0.8	1.9
26-Jan	1	1	0	1	1	0	A	0	0	0	0	1	1	1	0	1	0	0	0	0	0	0	0	1	0.5	1.0
27-Jan	1	0	1	0	0	A	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.5	0.8
28-Jan	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0.3	0.7
29-Jan	0	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	5	3	2	1	2	1.3	4.8
30-Jan	1	1	A	1	1	2	1	1	0	0	0	0	0	0	0	0	0	1	0	1	4	1	1	1	0.9	3.7
31-Jan	3	A	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.6	3.4
	0.7	0.5	0.6	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.6	Diurnal Average
	3.4	2.5	2.4	2.2	2.2	1.8	1.4	1.3	1.9	1.2	1.4	2.0	1.5	2.6	1.5	2.1	2.4	1.7	3.0	4.8	3.7	2.4	1.4	2.4	2.4	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 (SO<sub>2</sub>) - ppb  
Henry Pirker - January 2018



## Hourly Maximums

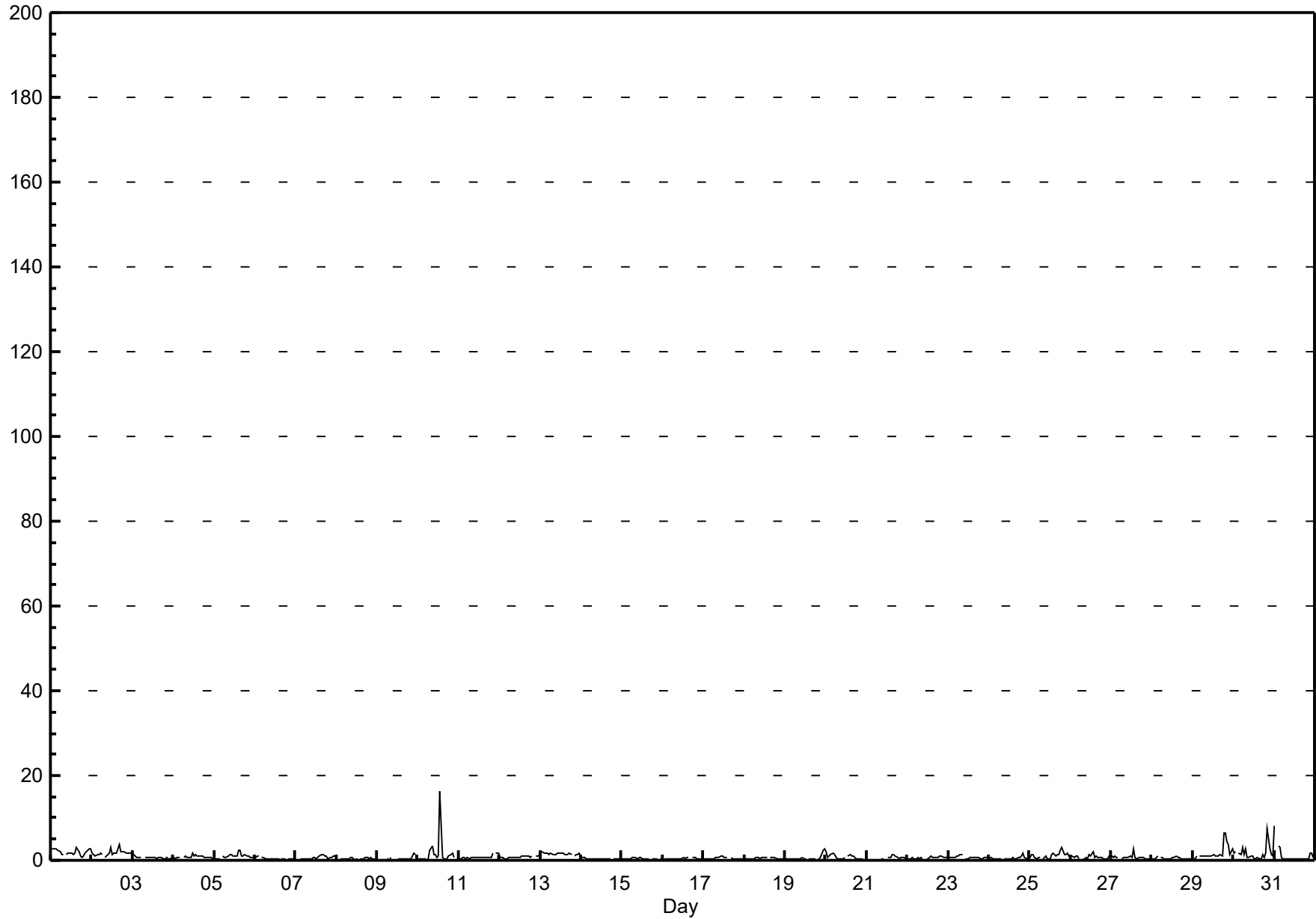
Sulphur Dioxide (SO<sub>2</sub>) - ppb

Henry Pirker - January 2018

Maximum Value: 16.3 ppb on Jan 10 14:00		Maximum Daily Average: 1.9 ppb on Jan 1		Hours in Service: 744																							
Minimum Value: 0 ppb on Jan 15 22:00		Minimum Daily Average: 0.3 ppb on Jan 14		Hours of Data: 709																							
Maximum Diurnal Average: 1.4 ppb at hour 14		Minimum Diurnal Average: 0.6 ppb at hour 7		Hours of Missing Data: 35																							
Monthly Average: 0.82 ppb		Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.3 Q <sub>1</sub> = 0.3 Median = 0.6 Q <sub>3</sub> = 1.0 P <sub>90</sub> = 1.6 P <sub>99</sub> = 3.4		Hours of Calibration: 35																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jan	3	3	3	3	3	2	1	1	A	1	2	2	2	1	2	3	2	1	1	1	2	2	3	3	1.9	3.2	
2-Jan	2	1	1	1	1	2	1	A	1	1	2	3	1	2	2	3	4	2	2	2	2	2	2	2	1.8	3.6	
3-Jan	2	1	1	1	1	1	A	1	1	1	1	1	1	1	0	1	1	1	0	0	1	0	0	1	0.6	1.5	
4-Jan	1	0	1	1	1	A	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	0	0.8	1.6	
5-Jan	0	0	0	0	A	1	1	1	1	1	1	1	1	1	2	3	1	1	1	1	1	1	1	1	1.0	2.5	
6-Jan	1	1	1	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.0	
7-Jan	0	0	A	0	0	0	0	0	0	0	1	1	0	1	1	1	1	1	1	0	1	1	1	1	0.6	1.4	
8-Jan	1	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0.4	0.7	
9-Jan	A	0	0	0	0	0	0	0	0	1	C	C	C	0	0	0	0	0	0	0	0	2	1	A	0.4	1.6	
10-Jan	0	0	0	0	0	0	0	2	4	1	1	1	1	16	1	0	0	0	1	1	2	1	A	0	1.5	16.3	
11-Jan	0	0	1	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	2	A	2	2	0.7	1.6	
12-Jan	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.1	
13-Jan	2	2	2	2	2	1	2	1	1	1	2	2	2	2	1	1	1	2	1	A	1	1	1	2	1.5	2.2	
14-Jan	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	0.8	
15-Jan	0	0	0	0	0	0	1	1	1	0	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.8	
16-Jan	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	A	1	1	1	0	0	0	0	0.4	0.7	
17-Jan	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	A	1	0	0	0	0	0	0	0	0.5	1.1	
18-Jan	0	0	0	0	0	0	0	1	1	0	1	1	1	1	A	1	1	1	1	0	0	0	0	0	0.5	0.8	
19-Jan	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	2	3	0.5	2.7	
20-Jan	2	1	1	1	2	1	1	0	0	0	0	1	A	1	1	1	1	1	1	0	0	0	0	0	0.7	2.2	
21-Jan	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	1	1	1	0	1	1	1	0	0.5	1.3	
22-Jan	0	0	0	1	0	0	1	0	1	0	A	0	0	1	1	1	1	1	1	1	1	1	1	1	0.6	1.0	
23-Jan	1	1	1	1	1	1	1	1	1	A	0	0	0	1	1	1	1	1	1	0	0	1	1	1	0.6	1.3	
24-Jan	0	1	0	0	0	0	0	0	A	0	0	0	0	0	1	0	0	1	1	1	2	1	0	1	0.5	1.8	
25-Jan	1	1	1	1	0	1	1	A	0	1	0	0	0	1	2	1	1	1	2	3	1	1	2	1	1.1	2.9	
26-Jan	1	1	1	1	1	0	A	0	0	1	0	1	1	2	1	1	1	1	1	0	0	0	0	1	0.7	2.0	
27-Jan	1	1	1	1	1	A	0	1	1	1	1	1	1	3	1	0	1	1	1	1	0	0	0	0	0.7	2.6	
28-Jan	0	0	0	1	A	1	1	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0.5	0.9	
29-Jan	0	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6	6	4	4	1	3	1.8	6.4
30-Jan	2	2	A	2	1	3	1	3	1	1	1	0	0	1	0	0	1	1	2	8	3	1	1	1	1.5	7.6	
31-Jan	8	A	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	1	1.1	8.3	
		1.0	0.7	0.8	0.8	0.7	0.7	0.6	0.7	0.7	0.7	0.7	0.8	0.7	1.4	0.8	0.9	0.8	0.8	0.9	0.9	1.1	0.9	0.9	0.9	Diurnal Average	
		8.3	2.7	3.5	3.2	2.5	3.1	1.6	2.6	3.5	1.4	1.8	2.9	1.8	16.3	2.3	3.2	3.6	2.0	6.4	6.4	7.6	3.8	2.7	2.7	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

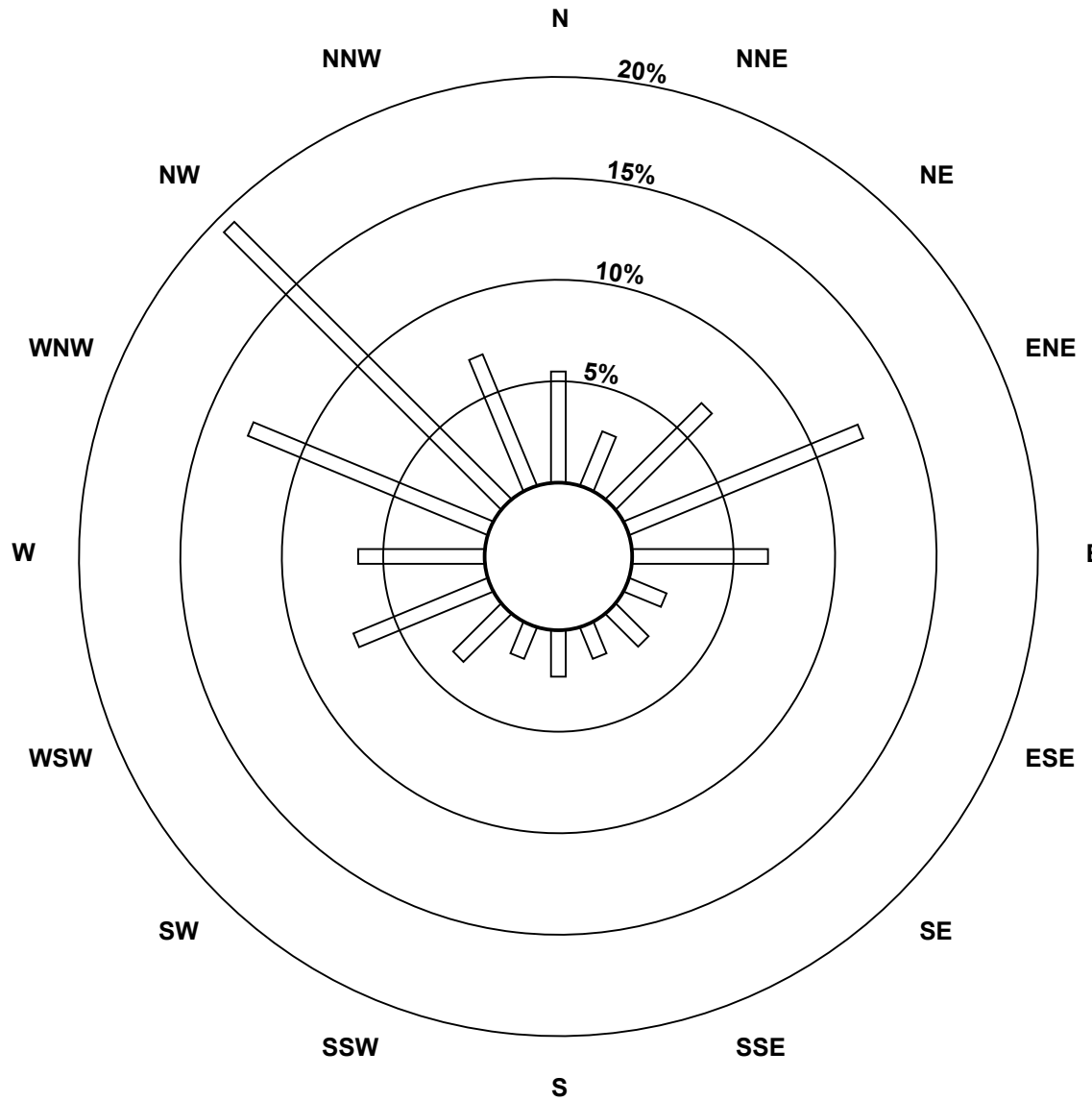
**Hourly Maximums**

**Sulphur Dioxide (SO<sub>2</sub>) - ppb**  
**Henry Pirker - January 2018**

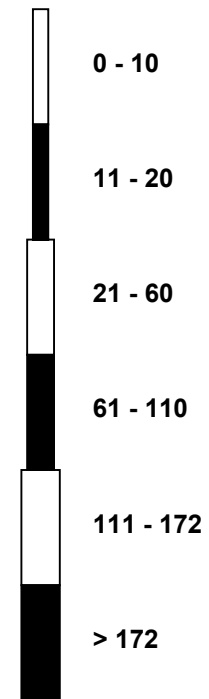


**Pollutant Rose**

**Sulphur Dioxide (SO<sub>2</sub>) - ppb**  
**Henry Pirker - January 2018**

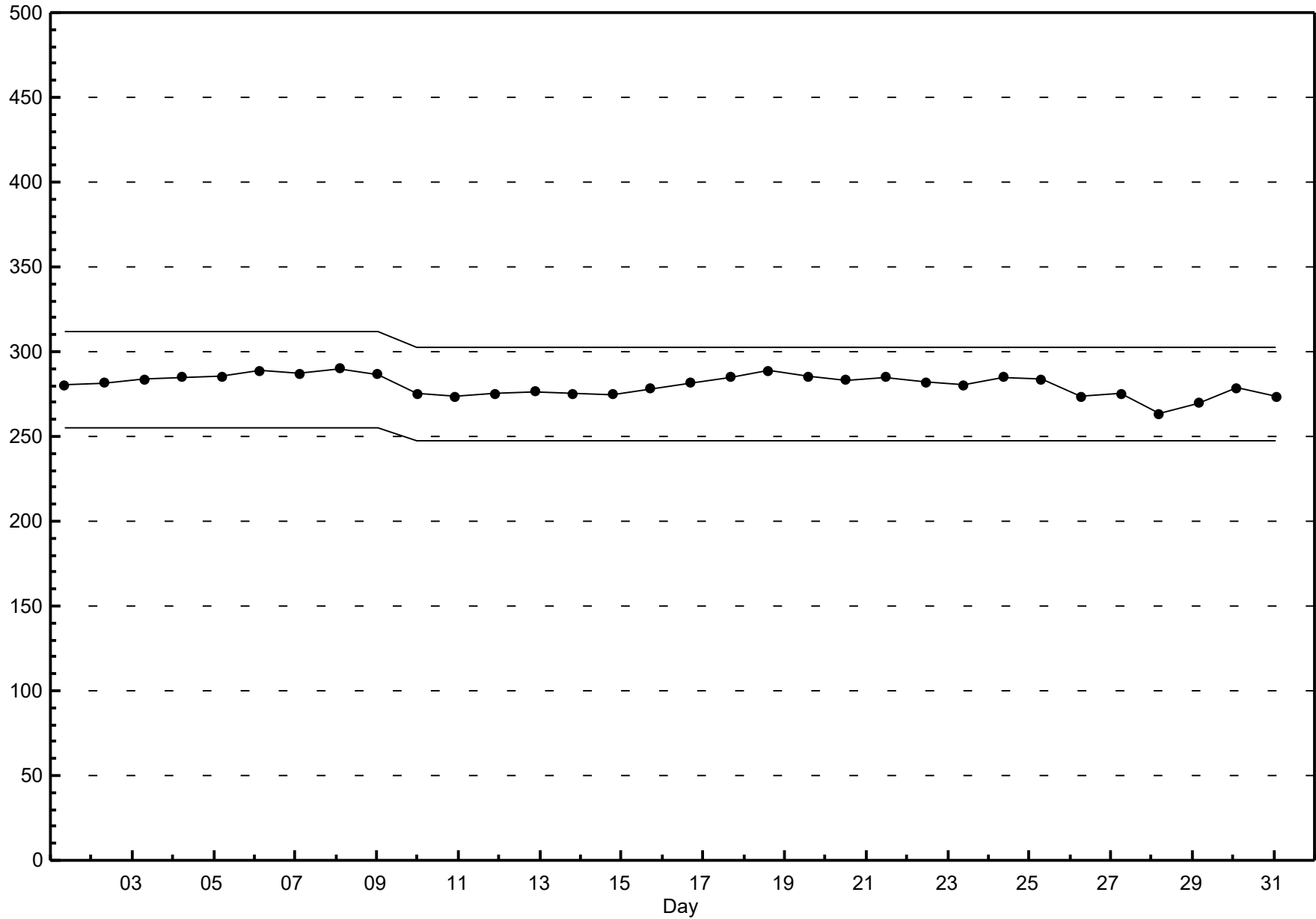


**Pollutant Classes (ppb)**



### Span Responses

Sulphur Dioxide (SO<sub>2</sub>)  
Henry Pirker - January 2018



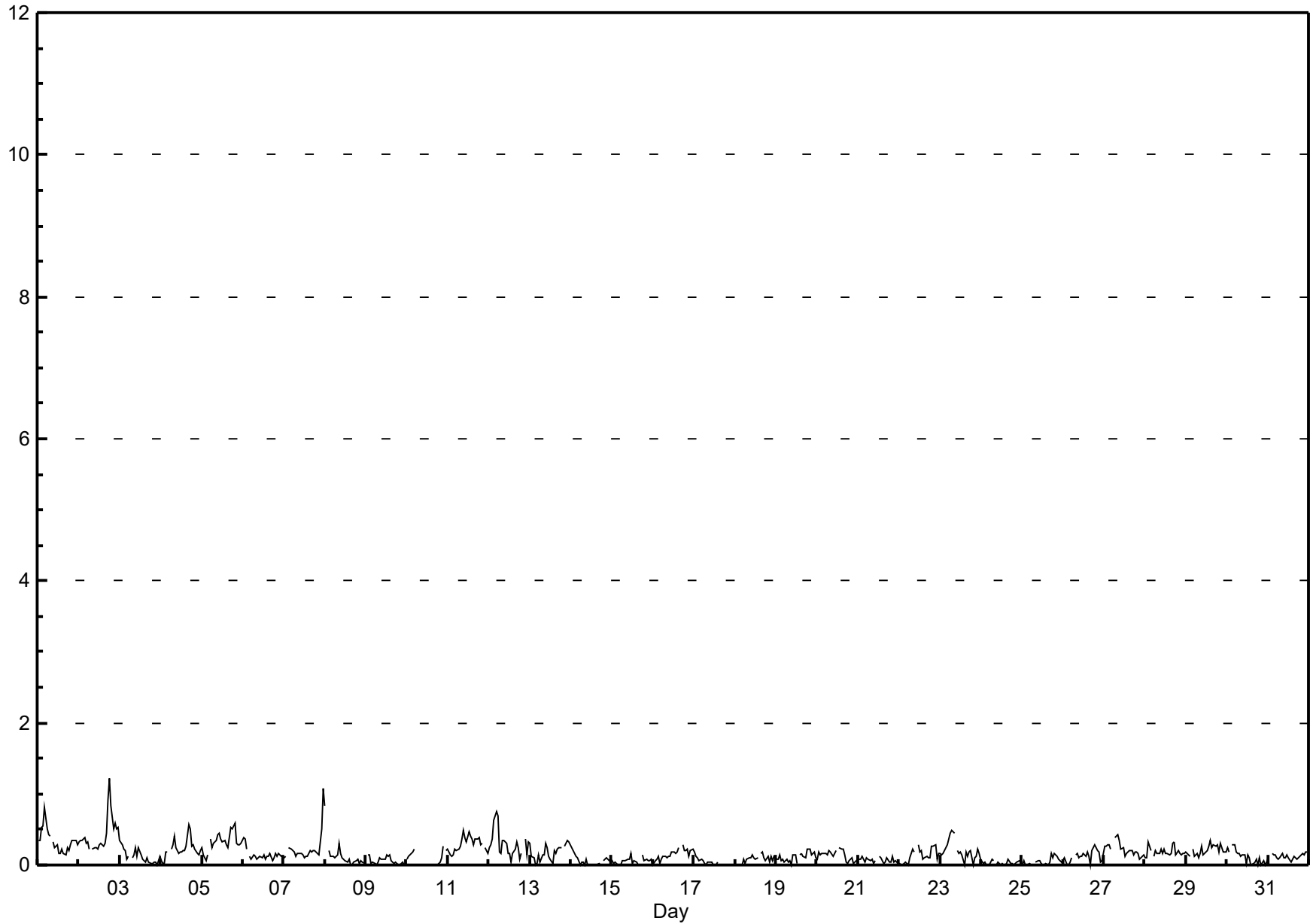


## Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - January 2018

Maximum Value: 1.2 ppb on Jan 2 19:00		Maximum Daily Average: 0.4 ppb on Jan 2		Hours in Service: 744																							
Minimum Value: 0 ppb on Jan 9 07:00		Minimum Daily Average: 0.0 ppb on Jan 24		Hours of Data: 706																							
Maximum Diurnal Average: 0.2 ppb at hour 18		Minimum Diurnal Average: 0.1 ppb at hour 14		Hours of Missing Data: 38																							
Monthly Average: 0.16 ppb		Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.1 Median = 0.1 Q <sub>3</sub> = 0.2 P <sub>90</sub> = 0.3 P <sub>99</sub> = 0.7		Hours of Calibration: 38																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jan	0	0	1	1	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8	
2-Jan	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	1	1	0	1	1	1	0.4	1.2	
3-Jan	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
4-Jan	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0.2	0.6	
5-Jan	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0.3	0.6	
6-Jan	0	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	
7-Jan	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.2	1.1	
8-Jan	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8	
9-Jan	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	
10-Jan	0	0	0	0	0	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	A	A	--	0.3	
11-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0.3	0.5	
12-Jan	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	0.8	
13-Jan	0	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	
14-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.2	
15-Jan	0	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	
16-Jan	0	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	
17-Jan	0	0	0	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	
18-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.2	
19-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.2	
20-Jan	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
21-Jan	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	
22-Jan	0	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	
23-Jan	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5	
24-Jan	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	
25-Jan	0	0	0	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	
26-Jan	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
27-Jan	0	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	
28-Jan	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
29-Jan	0	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	
30-Jan	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
31-Jan	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
		0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	Diurnal Average	
		0.8	0.4	0.5	0.6	0.8	0.7	0.5	0.5	0.4	0.5	0.5	0.4	0.5	0.4	0.4	0.3	0.6	0.9	1.2	0.8	0.5	0.6	0.5	1.1	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

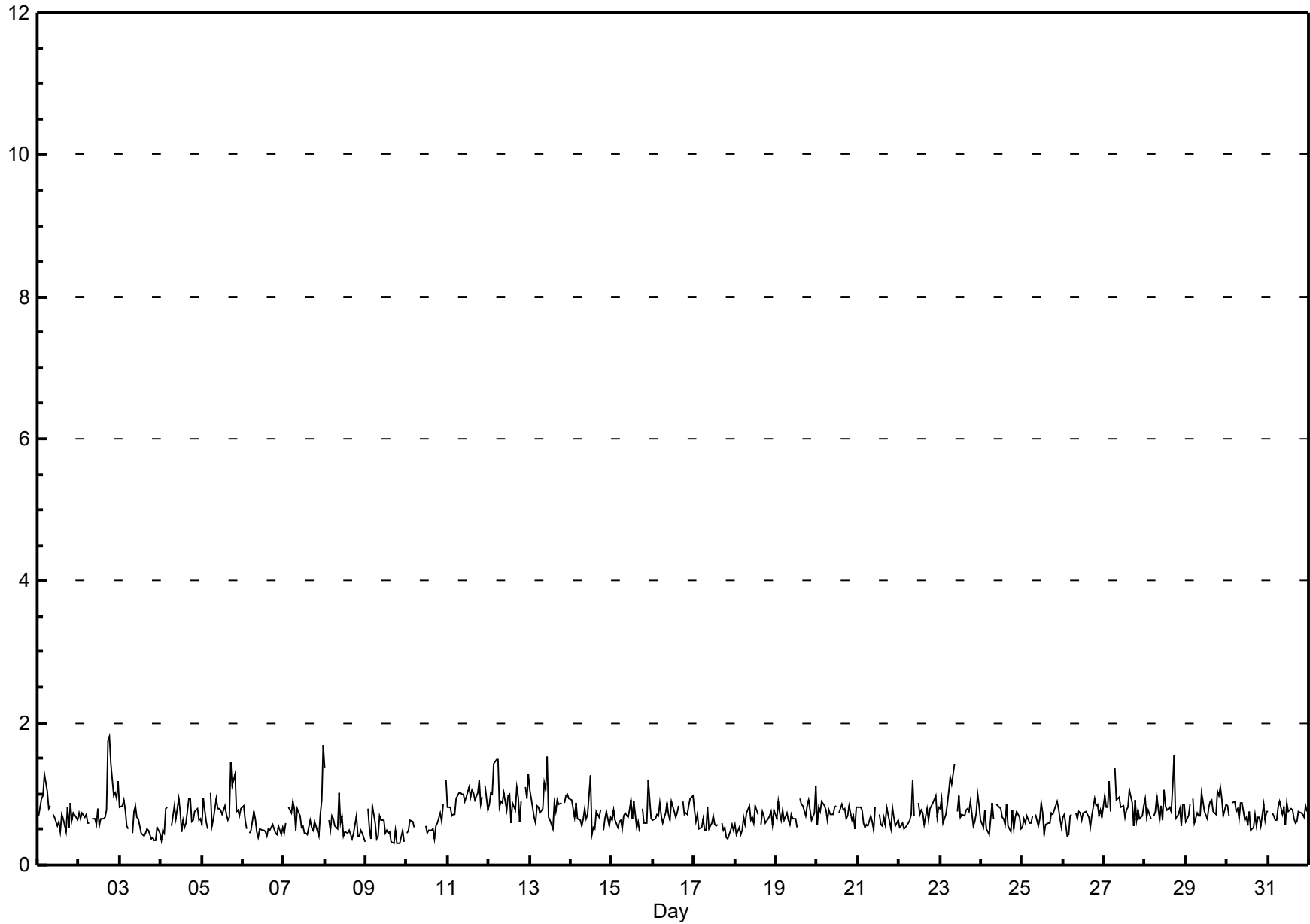


## Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - January 2018

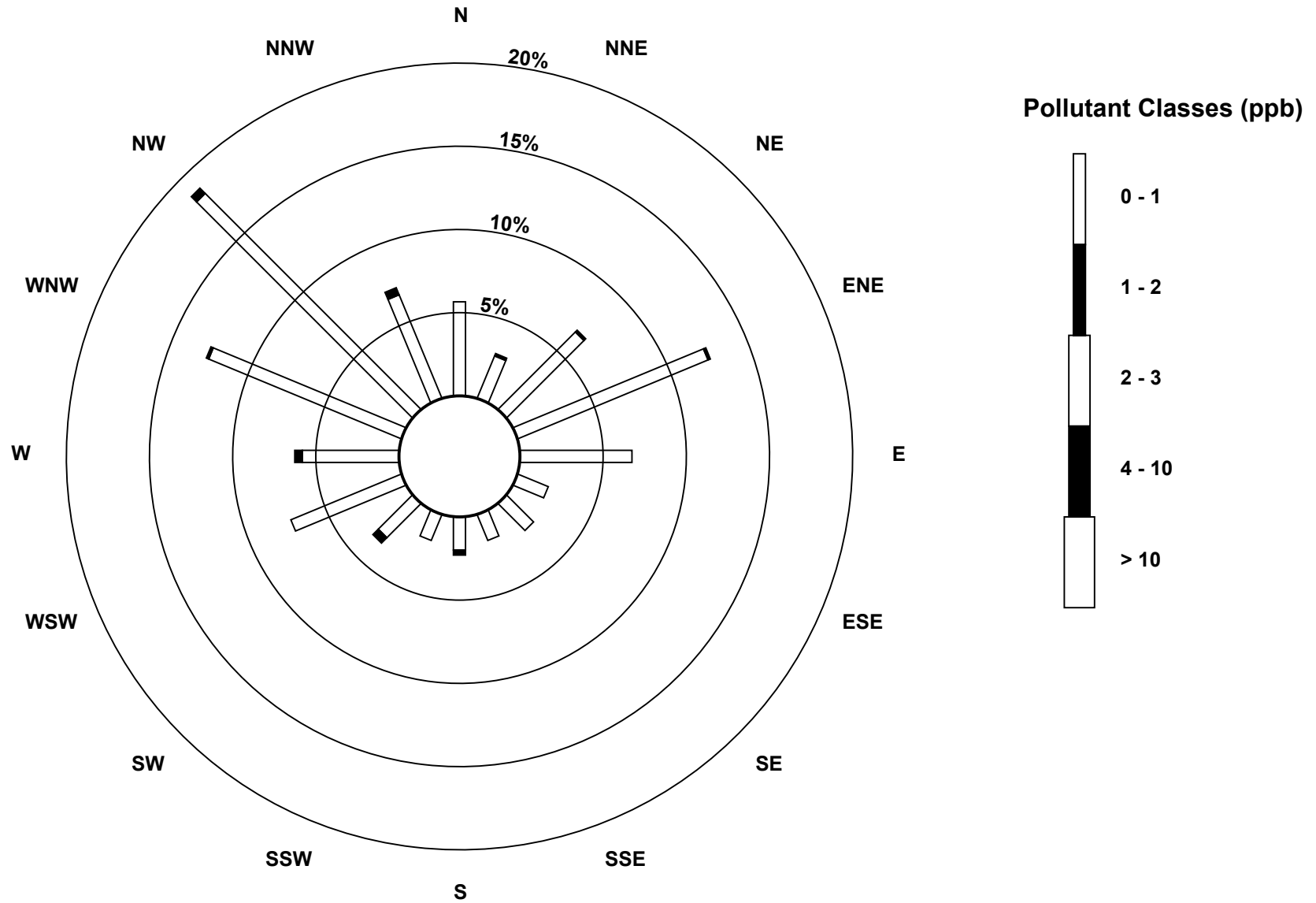
Maximum Value: 1.8 ppb on Jan 2 19:00		Maximum Daily Average: 1.0 ppb on Jan 12		Hours in Service: 744																							
Minimum Value: 0 ppb on Jan 9 21:00		Minimum Daily Average: 0.5 ppb on Jan 9		Hours of Data: 706																							
Maximum Diurnal Average: 0.8 ppb at hour 9		Minimum Diurnal Average: 0.6 ppb at hour 14		Hours of Missing Data: 38																							
Monthly Average: 0.72 ppb		Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 0.5 Q <sub>1</sub> = 0.6 Median = 0.7 Q <sub>3</sub> = 0.8 P <sub>90</sub> = 1.0 P <sub>99</sub> = 1.5		Hours of Calibration: 38																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jan	1	1	1	1	1	1	1	1	A	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	0.7	1.3	
2-Jan	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	0.9	1.8	
3-Jan	1	1	1	1	1	1	A	0	1	1	1	1	0	0	0	0	1	0	0	0	0	0	1	0	0.6	0.9	
4-Jan	0	0	0	1	1	A	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0.7	0.9	
5-Jan	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	
6-Jan	1	1	1	A	0	0	1	1	0	0	1	0	0	0	0	1	0	1	1	0	0	1	0	1	0.5	0.8	
7-Jan	0	1	A	1	1	1	1	0	1	1	1	1	0	0	0	1	1	0	1	1	0	1	1	2	0.7	1.7	
8-Jan	1	A	1	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0.6	1.4	
9-Jan	A	1	1	0	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.8	
10-Jan	0	0	1	1	1	C	C	C	C	C	C	1	0	0	0	1	0	1	1	1	1	1	A	1	--	1.2	
11-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.9	1.2	
12-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1.0	1.5	
13-Jan	1	1	1	1	1	1	1	1	1	1	2	1	1	0	1	1	1	1	1	1	A	1	1	1	0.9	1.5	
14-Jan	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	A	0	1	1	1	0.7	1.3	
15-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	1	1	1	1	1	1	1	0.7	1.2	
16-Jan	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	
17-Jan	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	A	1	0	1	0	0	0	1	0	0.6	0.8	
18-Jan	1	0	1	0	0	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.6	0.8	
19-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.7	1.1	
20-Jan	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9	
21-Jan	1	1	1	1	1	1	1	1	1	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8	
22-Jan	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2	
23-Jan	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	1.4	
24-Jan	1	1	1	1	0	0	1	1	A	1	1	1	1	1	1	1	1	0	1	0	1	1	1	0	0.7	0.9	
25-Jan	1	1	1	1	1	1	1	A	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0.7	0.9	
26-Jan	1	1	0	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9	
27-Jan	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.4	
28-Jan	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	0.8	1.5	
29-Jan	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1	
30-Jan	1	1	A	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0.7	0.9	
31-Jan	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	
		0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.8	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.7	0.8	Diurnal Average	
		1.4	1.0	1.0	1.4	1.5	1.5	1.4	1.1	1.4	1.1	1.5	1.3	1.1	1.0	1.1	1.0	1.1	1.7	1.8	1.4	1.1	1.2	1.1	1.7	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

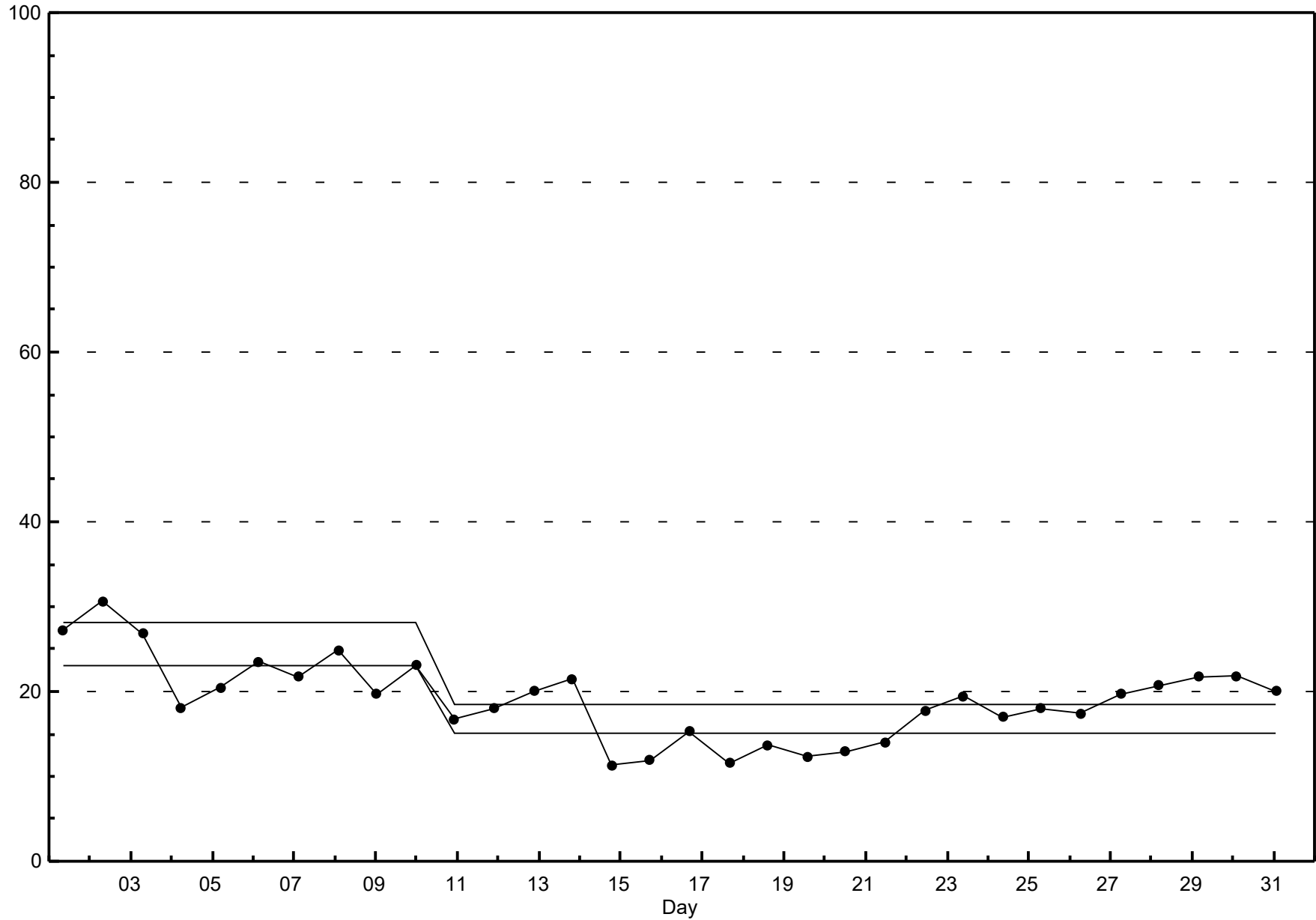


**Pollutant Rose**

**Total Reduced Sulphur (TRS) - ppb**

**Henry Pirker - January 2018**





# Hourly Averages

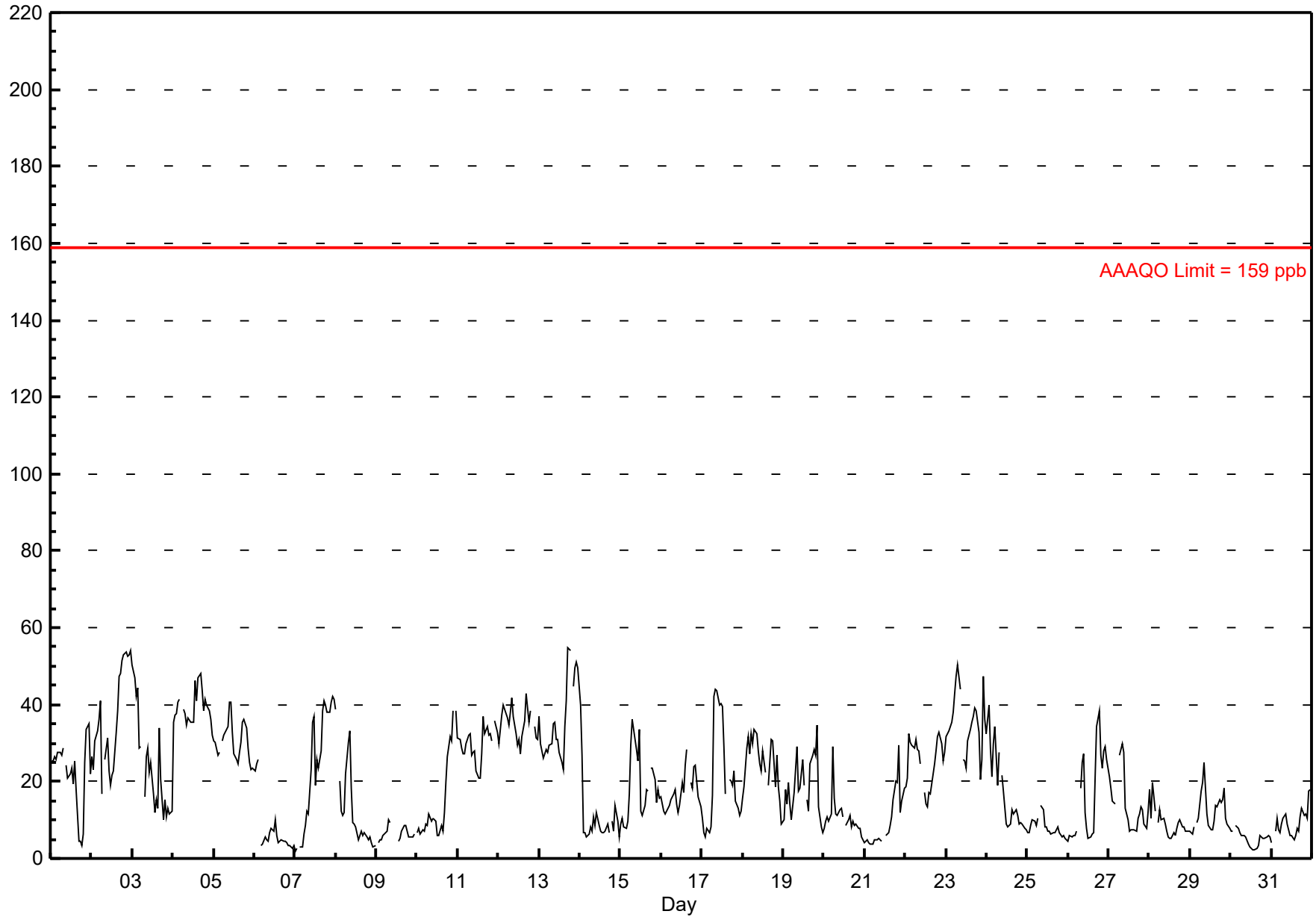
Nitrogen Dioxide (NO<sub>2</sub>) - ppb

Henry Pirker - January 2018

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 54.8 ppb on Jan 13 18:00	Maximum Daily Average: 39.1 ppb on Jan 4		Hours of Data:	708
Minimum Value: 2 ppb on Jan 7 01:00	Minimum Daily Average: 5.2 ppb on Jan 30		Hours of Missing Data:	36
Maximum Diurnal Average: 23.1 ppb at hour 9	Minimum Diurnal Average: 14.6 ppb at hour 14		Hours of Calibration:	36
Monthly Average: 19.45 ppb	Percentiles: P <sub>1</sub> = 2.8 P <sub>10</sub> = 5.7 Q <sub>1</sub> = 7.9 Median = 16.8 Q <sub>3</sub> = 29.3 P <sub>90</sub> = 37.5 P <sub>99</sub> = 52.4		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jan	25	25	26	26	27	28	27	29	A	24	21	22	23	19	25	18	4	4	3	6	25	34	35	22	21.8	35.2
2-Jan	26	23	31	33	36	41	17	A	26	31	23	19	21	23	33	39	47	48	52	53	54	53	53	54	36.3	54.0
3-Jan	50	47	42	44	29	29	A	16	27	29	22	25	17	12	15	13	34	20	10	15	11	13	12	12	23.7	50.3
4-Jan	35	37	38	41	41	A	39	38	35	37	35	35	35	46	41	47	48	43	38	42	40	38	36	32	39.1	48.0
5-Jan	30	30	27	27	A	31	32	33	34	41	41	33	27	26	24	28	30	35	36	34	29	25	23	23	30.4	40.7
6-Jan	23	25	26	A	4	4	6	5	5	7	8	7	10	6	4	5	5	4	4	4	3	3	3	3	7.5	25.6
7-Jan	2	3	A	3	3	6	9	12	12	23	35	37	19	26	23	28	38	41	40	38	38	41	42	41	24.4	42.0
8-Jan	39	A	A	20	12	11	12	22	30	33	18	9	9	8	5	6	7	6	7	6	5	4	3	3	12.3	38.6
9-Jan	A	4	5	5	6	7	7	10	9	C	C	C	C	4	5	7	8	8	7	6	6	5	6	A	6.5	10.1
10-Jan	7	8	6	7	7	9	9	12	10	10	10	10	6	6	8	7	12	20	27	32	31	38	A	38	14.3	38.4
11-Jan	31	31	29	27	27	30	32	33	27	27	28	23	21	27	37	32	34	32	32	32	30	A	36	33	29.6	36.8
12-Jan	30	34	37	40	38	37	35	38	42	37	32	29	31	27	32	36	43	39	35	38	A	34	31	31	35.1	42.9
13-Jan	37	30	26	27	28	28	29	30	35	36	31	31	28	25	23	34	41	55	54	A	45	50	51	50	35.8	54.8
14-Jan	40	27	7	7	6	6	8	7	11	9	12	9	7	7	7	9	7	A	10	7	14	10	6	10.3	39.8	
15-Jan	9	10	8	8	10	17	30	36	34	28	25	33	12	11	14	18	17	A	24	23	20	14	18	16	19.0	36.3
16-Jan	16	12	11	12	13	14	15	17	18	14	12	14	20	17	24	28	A	20	18	24	24	20	16	14	17.2	28.3
17-Jan	10	7	6	8	7	8	16	42	44	44	40	40	40	29	17	A	20	20	19	23	15	13	11	12	21.4	44.1
18-Jan	16	19	29	32	27	32	30	34	32	28	25	23	28	22	A	19	25	31	30	19	27	19	15	9	24.8	33.7
19-Jan	10	18	14	20	14	10	17	23	29	17	18	26	19	A	15	12	25	27	28	27	35	14	8	7	18.8	34.6
20-Jan	8	10	11	10	12	29	16	11	11	13	13	11	A	9	10	11	8	10	9	9	8	8	6	5	10.7	28.9
21-Jan	4	5	4	4	4	4	5	5	5	5	4	A	6	6	7	9	11	15	20	20	30	12	15	18	9.4	29.5
22-Jan	19	21	33	30	30	29	31	28	28	25	A	17	14	13	17	17	22	25	28	32	33	30	25	28	24.9	32.9
23-Jan	32	33	33	36	38	43	47	50	44	A	26	25	24	31	33	35	37	39	38	33	20	26	47	36	35.1	50.2
24-Jan	33	40	28	21	30	34	19	28	A	22	17	9	8	8	9	13	12	13	11	9	9	9	8	7	17.3	39.7
25-Jan	7	7	9	10	10	9	10	A	14	13	8	8	7	7	6	7	7	7	8	7	6	6	5	5	7.9	13.8
26-Jan	4	6	6	6	6	7	A	18	25	27	12	8	5	5	7	7	21	34	38	27	23	28	29	26	16.3	38.3
27-Jan	21	18	15	15	14	A	27	28	30	28	13	10	7	7	7	7	7	10	11	13	13	9	8	12	14.5	29.8
28-Jan	18	11	20	12	A	9	12	10	10	9	7	6	5	5	7	6	8	9	10	8	8	7	7	7	9.2	19.7
29-Jan	7	6	8	A	8	11	17	20	25	18	12	9	8	7	10	14	14	15	14	15	18	10	9	8	12.3	24.8
30-Jan	7	7	A	8	8	7	6	6	6	6	4	3	2	2	2	3	3	6	6	5	5	6	6	6	5.2	8.4
31-Jan	4	A	7	10	7	7	9	10	12	9	7	6	6	5	6	8	7	11	13	11	11	11	18	18	9.3	18.0
20.0 19.0 19.3 18.7 17.3 18.4 20.0 22.7 23.1 21.9 19.0 18.5 16.1 14.6 15.5 17.5 20.1 22.0 22.4 20.7 21.0 19.8 19.7 19.4																								Diurnal Average		
50.3 46.9 42.3 44.3 41.5 42.8 47.4 50.2 44.1 43.6 40.7 40.4 39.6 46.1 41.0 47.2 48.0 54.8 54.1 52.9 53.6 52.6 52.9 54.0																								Diurnal Maximum		

C - Calibration      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb    24-hr 106 ppb





# Hourly Maximums

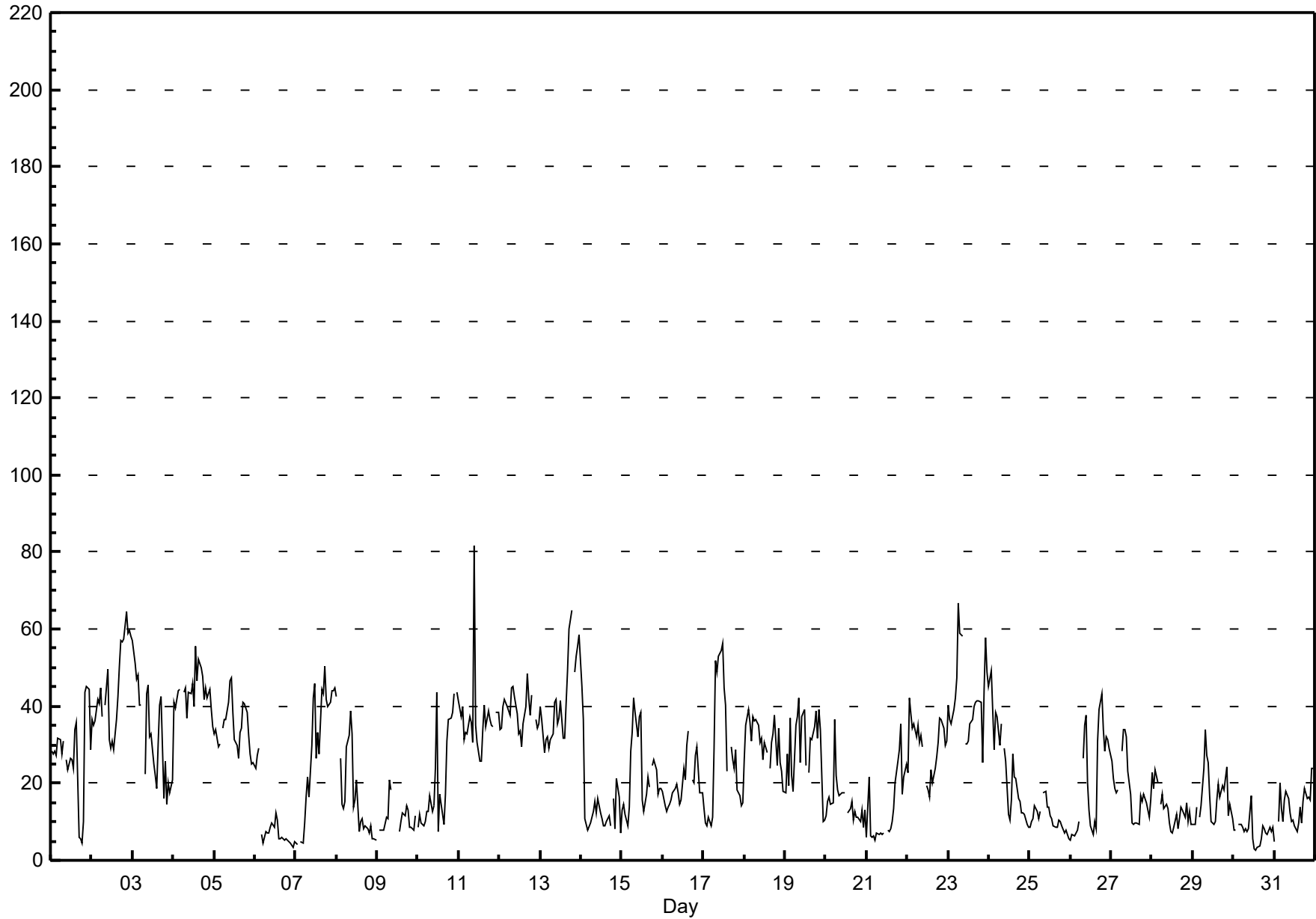
Nitrogen Dioxide (NO<sub>2</sub>) - ppb

Henry Pirker - January 2018

Maximum Value: 81.7 ppb on Jan 11 10:00		Maximum Daily Average: 44.5 ppb on Jan 2		Hours in Service: 744																							
Minimum Value: 3 ppb on Jan 30 14:00		Minimum Daily Average: 7.4 ppb on Jan 30		Hours of Data: 708																							
Maximum Diurnal Average: 29.8 ppb at hour 10		Minimum Diurnal Average: 19.2 ppb at hour 14		Hours of Missing Data: 36																							
Monthly Average: 24.50 ppb		Percentiles: P <sub>1</sub> = 4.3 P <sub>10</sub> = 7.9 Q <sub>1</sub> = 11.4 Median = 23.1 Q <sub>3</sub> = 35.9 P <sub>90</sub> = 43.2 P <sub>99</sub> = 58.7		Hours of Calibration: 36																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jan	28	28	28	27	32	31	28	31	A	26	23	26	26	24	34	36	6	6	4	10	43	45	44	29	26.8	45.1	
2-Jan	37	35	36	42	41	45	37	A	40	50	31	29	31	29	37	42	50	57	57	57	65	59	60	58	44.5	64.5	
3-Jan	57	51	47	48	40	40	A	22	43	45	32	33	25	22	19	30	40	42	16	26	15	20	17	21	32.8	56.9	
4-Jan	41	40	42	44	44	A	44	45	37	44	43	46	40	55	47	52	50	48	42	45	42	44	39	35	43.8	55.5	
5-Jan	33	34	30	30	A	34	37	37	41	47	47	38	31	30	27	33	34	41	40	39	32	27	25	25	34.5	47.2	
6-Jan	24	27	29	A	7	5	8	7	7	8	10	9	12	10	6	5	6	5	6	5	5	4	3	5	9.2	29.2	
7-Jan	4	4	A	5	4	10	17	22	17	30	42	46	26	33	28	44	43	50	42	40	41	44	44	45	29.6	50.4	
8-Jan	42	A	A	26	14	13	15	30	32	39	33	14	16	21	7	10	11	8	9	8	7	9	6	6	5	16.6	42.4
9-Jan	A	8	8	8	8	11	11	21	18	C	C	C	C	8	10	12	11	14	13	9	8	8	12	A	11.0	21.0	
10-Jan	9	12	10	9	10	13	13	17	13	14	24	44	8	17	12	9	17	31	37	37	38	43	A	44	20.8	43.8	
11-Jan	41	37	40	31	33	33	37	36	31	82	35	31	26	26	34	40	35	39	37	35	35	A	38	38	36.9	81.7	
12-Jan	34	34	40	42	40	39	38	45	45	43	38	33	33	29	36	40	49	42	38	43	A	37	34	35	38.5	48.6	
13-Jan	40	37	28	31	32	29	31	33	41	42	35	37	41	32	32	41	49	60	65	A	49	53	56	58	41.4	65.0	
14-Jan	45	37	11	9	8	10	11	13	15	12	16	12	11	9	9	10	11	9	A	16	8	21	16	7	14.2	45.1	
15-Jan	13	15	12	9	14	28	33	42	38	32	37	39	16	13	17	22	19	A	25	26	24	17	19	19	22.9	42.1	
16-Jan	18	14	13	14	14	16	18	19	20	17	14	16	24	21	30	34	A	21	20	27	29	23	18	18	19.8	33.5	
17-Jan	14	10	9	11	9	11	29	52	49	53	54	56	45	40	23	A	29	26	24	29	18	17	14	15	27.7	56.4	
18-Jan	26	35	39	36	31	37	36	36	35	30	32	26	31	28	A	24	30	33	38	25	34	25	23	18	30.8	39.2	
19-Jan	18	28	19	37	22	18	35	37	42	25	37	39	24	A	23	32	31	35	39	32	39	34	10	10	29.0	42.0	
20-Jan	11	15	16	15	15	37	22	18	17	17	18	17	A	12	13	15	10	13	11	11	10	13	9	13	15.2	36.7	
21-Jan	6	22	7	6	6	5	7	7	7	7	7	A	8	8	8	10	13	20	26	29	36	17	22	25	13.3	35.6	
22-Jan	23	42	38	34	35	32	35	31	32	29	A	20	18	16	23	20	24	27	31	37	37	34	30	31	29.5	42.2	
23-Jan	40	37	36	39	42	47	67	59	58	A	30	30	31	35	37	40	41	41	42	41	25	44	58	49	42.1	66.6	
24-Jan	45	49	39	29	38	37	30	35	A	29	26	12	11	15	28	22	21	16	15	12	12	12	9	9	24.0	49.1	
25-Jan	9	10	11	14	13	11	13	A	17	18	14	14	11	11	9	9	8	10	10	9	7	8	7	6	10.8	17.9	
26-Jan	5	7	6	7	8	10	A	27	35	38	20	13	9	7	10	8	31	39	43	34	28	32	31	29	20.8	43.2	
27-Jan	26	21	19	18	18	A	28	34	34	32	23	17	10	9	10	10	9	17	15	17	16	15	11	16	18.5	33.8	
28-Jan	23	19	23	20	A	14	17	14	14	13	10	8	7	9	12	8	11	14	13	11	15	10	13	9	13.3	23.4	
29-Jan	9	9	14	A	11	14	24	34	27	17	10	9	10	16	20	16	19	18	21	24	12	15	11	11	16.8	34.1	
30-Jan	8	8	A	9	9	9	8	8	7	8	17	6	3	3	3	4	6	9	8	7	7	9	7	9	7.4	16.9	
31-Jan	5	A	10	20	13	10	16	18	16	12	10	10	9	8	10	14	10	15	19	16	17	16	24	24	13.9	23.9	
		24.4	24.9	23.7	22.7	21.1	22.5	26.1	28.6	28.8	29.8	26.1	25.3	20.6	19.2	20.3	23.2	24.1	26.9	26.7	25.1	25.6	25.0	23.8	23.8	Diurnal Average	
		56.9	51.0	47.1	48.3	44.2	47.3	66.6	58.9	58.1	81.7	54.5	56.4	44.9	55.5	46.8	52.2	50.4	60.0	65.0	57.4	64.5	59.0	59.7	58.4	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

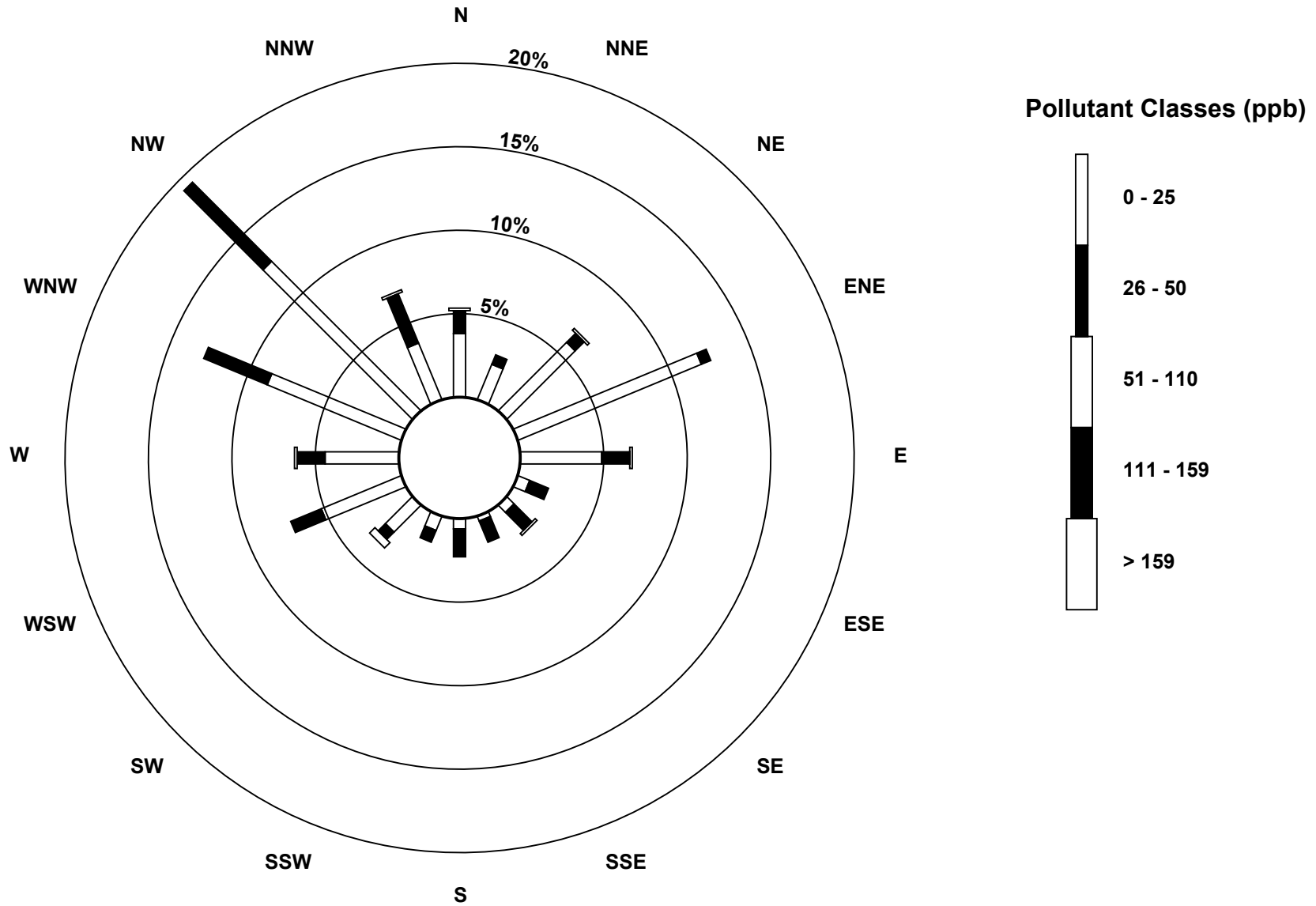
**Hourly Maximums**

**Nitrogen Dioxide (NO<sub>2</sub>) - ppb**  
**Henry Pirker - January 2018**



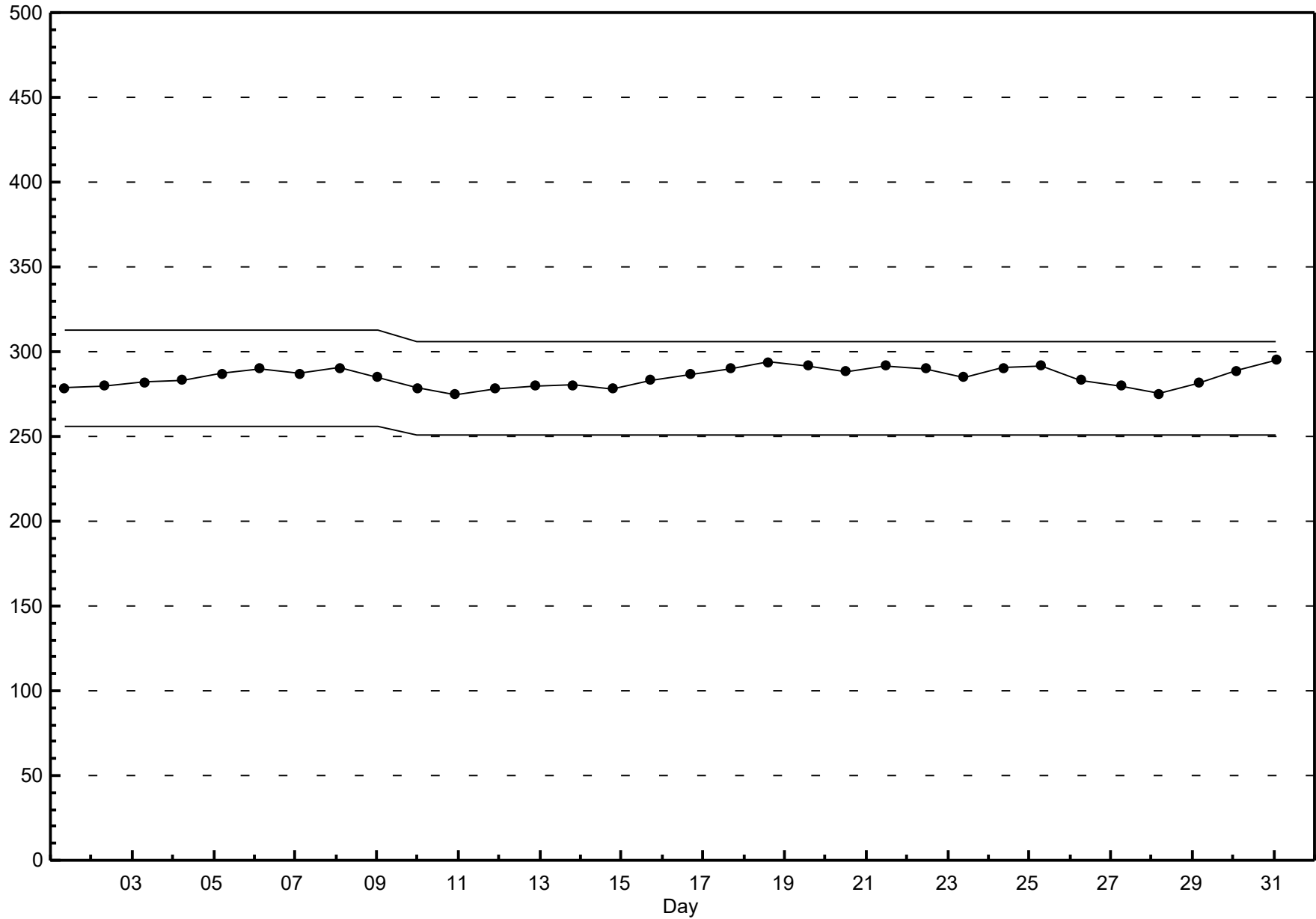
**Pollutant Rose**

**Nitrogen Dioxide (NO<sub>2</sub>) - ppb**  
**Henry Pirker - January 2018**



### Span Responses

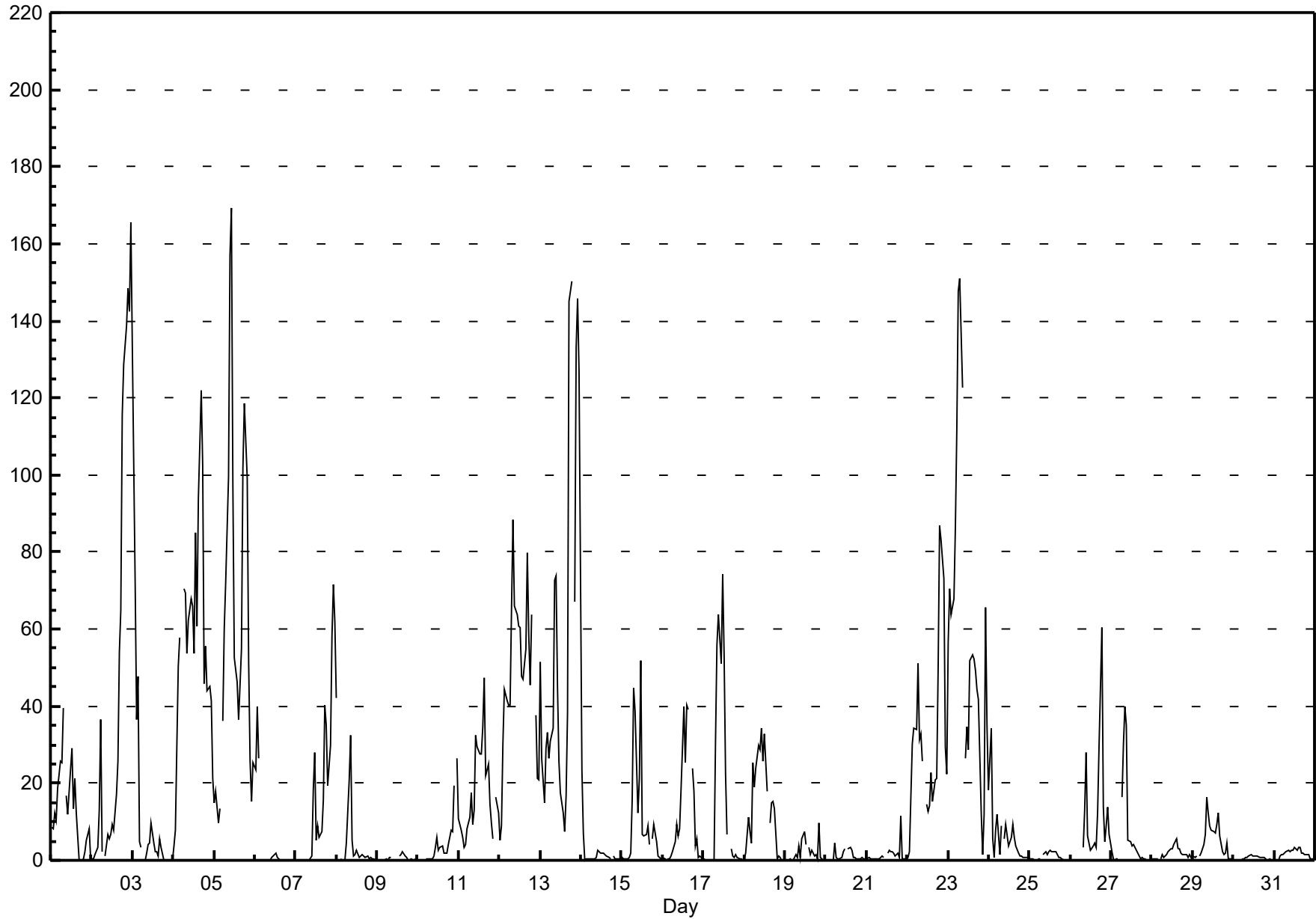
Nitrogen Dioxide (NO<sub>2</sub>)  
Henry Pirker - January 2018



# Hourly Averages

**Nitrogen Oxide (NO) - ppb**  
**Henry Pirker - January 2018**

Maximum Value: 169.2 ppb on Jan 5 11:00		Maximum Daily Average: 61.8 ppb on Jan 5		Hours in Service: 744																						
Minimum Value: 0 ppb on Jan 19 03:00		Minimum Daily Average: 0.5 ppb on Jan 9		Hours of Data: 708																						
Maximum Diurnal Average: 25.2 ppb at hour 9		Minimum Diurnal Average: 9.2 ppb at hour 3		Hours of Missing Data: 36																						
Monthly Average: 17.22 ppb		Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.5 Median = 3.2 Q <sub>3</sub> = 22.5 P <sub>90</sub> = 53.8 P <sub>99</sub> = 147.0		Hours of Calibration: 36																						
				Percent Operational Time: 100.0																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jan	9	8	12	10	19	26	25	40	A	17	12	23	29	14	21	12	0	0	0	0	2	5	8	0	12.8	39.6
2-Jan	0	0	2	3	13	37	2	A	1	7	6	7	9	8	17	26	54	65	116	129	139	149	142	165	47.7	165.4
3-Jan	134	71	36	48	5	4	A	0	2	4	5	10	4	2	2	1	6	3	0	0	0	0	0	0	14.7	133.8
4-Jan	4	8	29	50	58	A	70	69	54	62	68	66	54	85	61	94	122	103	46	56	44	45	42	21	57.0	121.9
5-Jan	15	18	10	13	A	36	60	72	99	157	169	98	53	46	36	46	55	102	119	99	51	26	15	25	61.8	169.2
6-Jan	23	40	26	A	0	0	0	0	0	0	1	1	2	1	0	0	0	0	0	0	0	0	0	0	4.1	40.0
7-Jan	0	0	A	0	0	0	0	0	0	1	18	28	5	9	6	8	16	40	35	20	30	58	72	62	17.7	71.5
8-Jan	42	A	0	0	0	0	4	21	32	5	1	2	3	1	1	2	1	1	1	1	1	0	0	0	5.2	42.1
9-Jan	A	0	0	0	0	0	0	1	1	C	C	C	C	1	1	2	1	1	0	0	0	0	0	A	0.5	2.2
10-Jan	0	0	0	0	0	0	0	0	0	1	3	6	3	3	4	2	2	2	4	8	7	19	A	26	4.0	26.4
11-Jan	11	8	6	3	4	8	11	17	9	13	32	29	28	28	35	47	22	25	14	10	6	A	16	12	17.2	47.3
12-Jan	5	9	30	44	41	40	40	65	88	66	64	61	60	48	47	55	80	59	45	64	A	38	21	21	47.5	88.3
13-Jan	51	27	15	29	33	27	31	34	73	74	45	26	18	12	7	17	39	145	150	A	67	133	146	127	57.6	150.3
14-Jan	24	7	0	0	0	0	0	0	0	1	2	2	2	2	2	1	1	0	A	1	0	0	0	0	2.1	23.5
15-Jan	1	1	0	0	1	2	16	45	39	12	21	52	7	6	7	9	4	A	6	9	5	1	1	1	10.6	51.8
16-Jan	1	1	0	0	0	1	2	5	9	6	8	18	40	26	40	39	A	24	18	4	5	1	1	1	10.9	40.4
17-Jan	0	0	0	0	0	0	0	30	56	64	51	74	53	22	7	A	3	1	1	1	1	0	0	0	15.9	74.1
18-Jan	0	2	11	7	4	25	19	24	30	29	34	26	33	18	A	10	15	15	14	0	1	1	0	0	13.9	34.5
19-Jan	0	0	0	0	0	0	2	1	4	1	5	7	4	A	3	2	3	1	2	0	10	1	0	0	2.0	9.9
20-Jan	0	0	0	0	0	4	1	0	0	1	2	3	A	3	3	3	3	1	1	0	0	0	1	0	1.1	4.3
21-Jan	0	1	0	0	0	0	0	0	1	1	1	A	2	3	2	2	2	1	2	1	12	0	0	1	1.4	11.7
22-Jan	1	2	16	30	34	34	51	31	33	26	A	15	13	14	23	15	21	21	50	87	83	73	29	23	31.5	86.9
23-Jan	57	71	64	68	87	112	148	151	123	A	27	35	29	52	53	52	49	44	42	12	1	12	66	35	60.3	150.8
24-Jan	18	34	6	1	8	12	2	9	A	6	9	4	5	6	9	6	4	2	1	1	1	1	1	1	6.3	34.4
25-Jan	0	0	0	0	0	0	0	A	2	2	2	2	3	2	2	2	1	1	1	0	0	0	0	0	1.0	2.5
26-Jan	0	0	0	0	0	0	A	4	13	28	6	5	3	4	5	4	12	29	60	14	5	9	14	7	9.6	60.3
27-Jan	2	0	0	0	0	A	16	30	40	35	5	5	4	4	3	3	1	0	1	0	0	0	0	0	6.6	39.8
28-Jan	0	0	0	0	A	0	1	1	2	2	3	3	3	4	5	3	3	2	2	1	2	1	1	1	1.8	5.4
29-Jan	1	1	1	A	1	2	4	7	17	12	9	8	8	7	9	12	7	2	1	2	4	0	0	0	5.1	16.5
30-Jan	0	0	A	0	0	0	0	1	1	1	2	1	1	1	1	1	1	1	1	1	0	0	0	0	0.6	1.6
31-Jan	0	A	0	1	1	2	2	2	2	2	3	3	3	3	3	4	2	2	1	1	1	0	0	0	1.7	3.5
		13.3	10.7	9.2	10.8	10.7	12.9	17.6	22.8	25.2	21.9	21.2	21.3	16.4	14.4	13.9	15.9	17.5	23.2	24.4	17.4	16.0	19.2	19.3	17.7	Diurnal Average
		133.8	71.4	63.6	67.7	86.5	111.8	147.6	150.8	122.7	157.1	169.2	98.3	60.3	85.1	60.8	94.0	121.9	145.1	150.3	128.8	138.9	148.6	145.7	165.4	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																								



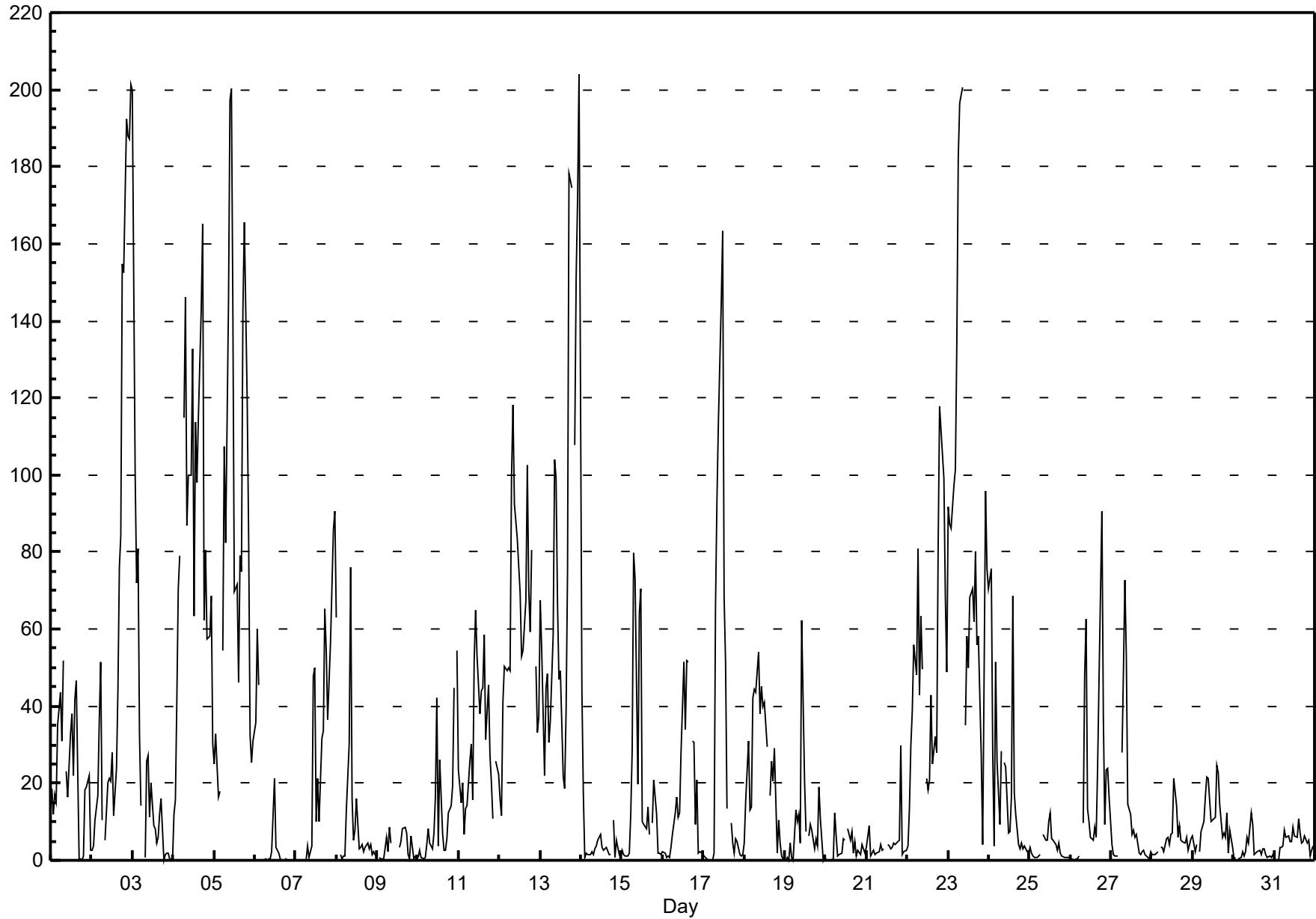
# Hourly Maximums

**Nitrogen Oxide (NO) - ppb**  
**Henry Pirker - January 2018**

Maximum Value: 204.0 ppb on Jan 14 00:00		Maximum Daily Average: 85.5 ppb on Jan 23		Hours in Service: 744																							
Minimum Value: 0 ppb on Jan 19 03:00		Minimum Daily Average: 2.6 ppb on Jan 30		Hours of Data: 708																							
Maximum Diurnal Average: 43.9 ppb at hour 9		Minimum Diurnal Average: 16.4 ppb at hour 3		Hours of Missing Data: 36																							
Monthly Average: 27.78 ppb		Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.7 Q <sub>1</sub> = 2.4 Median = 9.4 Q <sub>3</sub> = 40.8 P <sub>90</sub> = 78.9 P <sub>99</sub> = 195.9		Hours of Calibration: 36																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jan	19	12	17	15	35	43	31	52	A	23	17	33	38	22	42	47	0	1	0	1	18	19	22	3	22.1	51.7	
2-Jan	3	4	10	17	36	51	10	A	5	20	21	20	28	12	24	44	76	84	155	153	192	188	187	201	67.1	201.3	
3-Jan	200	100	72	81	33	14	A	1	26	27	11	20	9	8	5	6	12	16	0	1	2	2	0	0	28.1	200.0	
4-Jan	12	16	41	70	79	A	115	146	87	100	100	133	63	114	98	115	143	165	62	80	57	58	68	30	85.0	165.4	
5-Jan	25	33	16	18	A	54	107	82	146	197	200	144	70	72	46	79	75	143	166	119	84	32	25	31	85.4	200.1	
6-Jan	36	60	46	A	0	0	0	0	0	0	2	21	3	3	2	0	0	0	0	0	0	0	0	0	7.6	60.2	
7-Jan	0	0	A	0	0	0	0	4	1	4	48	50	10	21	10	32	34	65	54	36	57	71	86	91	29.3	90.8	
8-Jan	63	A	1	1	1	1	13	30	76	16	5	8	16	3	3	4	2	3	4	3	4	1	2	1	11.5	76.1	
9-Jan	A	1	0	0	0	6	2	9	5	C	C	C	C	4	5	8	9	7	1	0	6	1	1	A	3.6	8.7	
10-Jan	1	3	1	0	1	4	8	4	3	7	16	42	4	26	7	3	3	5	12	14	20	45	A	55	12.3	54.5	
11-Jan	23	15	20	7	13	14	26	30	16	52	65	53	38	44	45	58	31	45	27	20	11	A	26	22	30.5	64.8	
12-Jan	16	12	41	50	49	50	49	99	118	92	83	76	69	53	54	68	102	70	59	80	A	50	33	37	61.5	118.4	
13-Jan	67	55	22	45	48	30	36	58	104	99	67	47	49	22	19	39	75	178	174	A	108	151	172	204	81.3	204.0	
14-Jan	44	17	1	2	1	1	2	1	3	4	5	7	3	3	3	3	2	1	A	10	1	5	2	1	5.3	43.9	
15-Jan	2	2	1	1	2	12	29	80	73	20	64	70	10	9	8	14	7	A	10	21	12	2	2	2	19.6	79.7	
16-Jan	2	2	1	1	1	3	7	12	16	11	12	28	52	34	52	51	A	31	30	9	21	2	2	2	16.7	51.7	
17-Jan	1	1	0	0	0	0	2	65	93	113	145	163	68	52	13	A	10	5	2	6	5	2	1	1	32.5	163.4	
18-Jan	4	15	31	13	14	42	44	44	54	38	45	40	41	29	A	17	26	21	29	2	10	4	1	0	24.6	54.0	
19-Jan	0	1	0	4	1	0	13	10	12	4	62	21	7	A	6	9	8	3	6	4	19	11	0	1	8.8	62.2	
20-Jan	0	0	0	0	1	12	6	1	2	2	6	5	A	8	5	7	2	5	1	3	2	4	3	2	3.3	12.2	
21-Jan	3	9	1	2	3	1	2	2	4	3	3	A	4	4	3	3	4	4	5	5	30	1	2	3	4.4	29.7	
22-Jan	4	13	30	39	56	48	81	43	64	50	A	21	18	21	43	25	32	28	81	118	111	99	69	49	49.7	118.0	
23-Jan	92	87	86	97	101	134	182	196	201	A	35	58	50	68	71	62	80	56	58	27	4	48	96	76	85.5	200.6	
24-Jan	71	76	28	4	52	26	9	28	A	25	24	7	7	16	68	17	12	4	3	4	3	4	2	2	21.5	75.6	
25-Jan	3	2	1	1	1	1	2	A	7	5	5	10	12	6	5	4	3	4	2	1	1	1	1	1	3.4	12.4	
26-Jan	0	0	0	0	0	1	A	10	48	62	14	10	6	5	8	6	24	47	91	38	9	23	24	16	19.3	90.6	
27-Jan	4	1	1	1	1	A	28	49	73	53	14	12	7	8	6	7	2	2	2	3	2	1	1	2	12.1	72.6	
28-Jan	2	1	2	2	A	4	3	2	6	6	4	7	7	21	14	6	9	5	5	4	6	3	4	6	5.6	21.3	
29-Jan	6	2	4	A	2	8	10	16	22	21	16	10	11	11	25	23	15	6	7	6	12	2	8	3	10.7	24.6	
30-Jan	0	1	A	0	1	2	1	2	6	4	12	9	2	2	2	3	1	3	3	2	1	1	1	1	2.6	12.3	
31-Jan	1	A	0	3	3	4	8	6	6	5	5	9	6	6	11	7	4	5	6	5	5	1	3	4	4.9	10.7	
		23.5	18.6	16.4	16.4	18.4	19.6	28.6	37.4	43.9	36.7	38.2	39.1	24.5	23.5	23.4	25.6	26.7	33.8	35.3	25.9	27.1	27.8	28.1	28.2	Diurnal Average	
		200.0	100.1	86.0	97.4	101.5	134.3	182.5	196.5	200.6	197.4	200.1	163.4	69.8	113.9	98.0	115.0	143.2	178.4	174.4	152.7	192.3	188.0	187.3	204.0	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

**Hourly Maximums**

**Nitrogen Oxide (NO) - ppb**  
**Henry Pirker - January 2018**



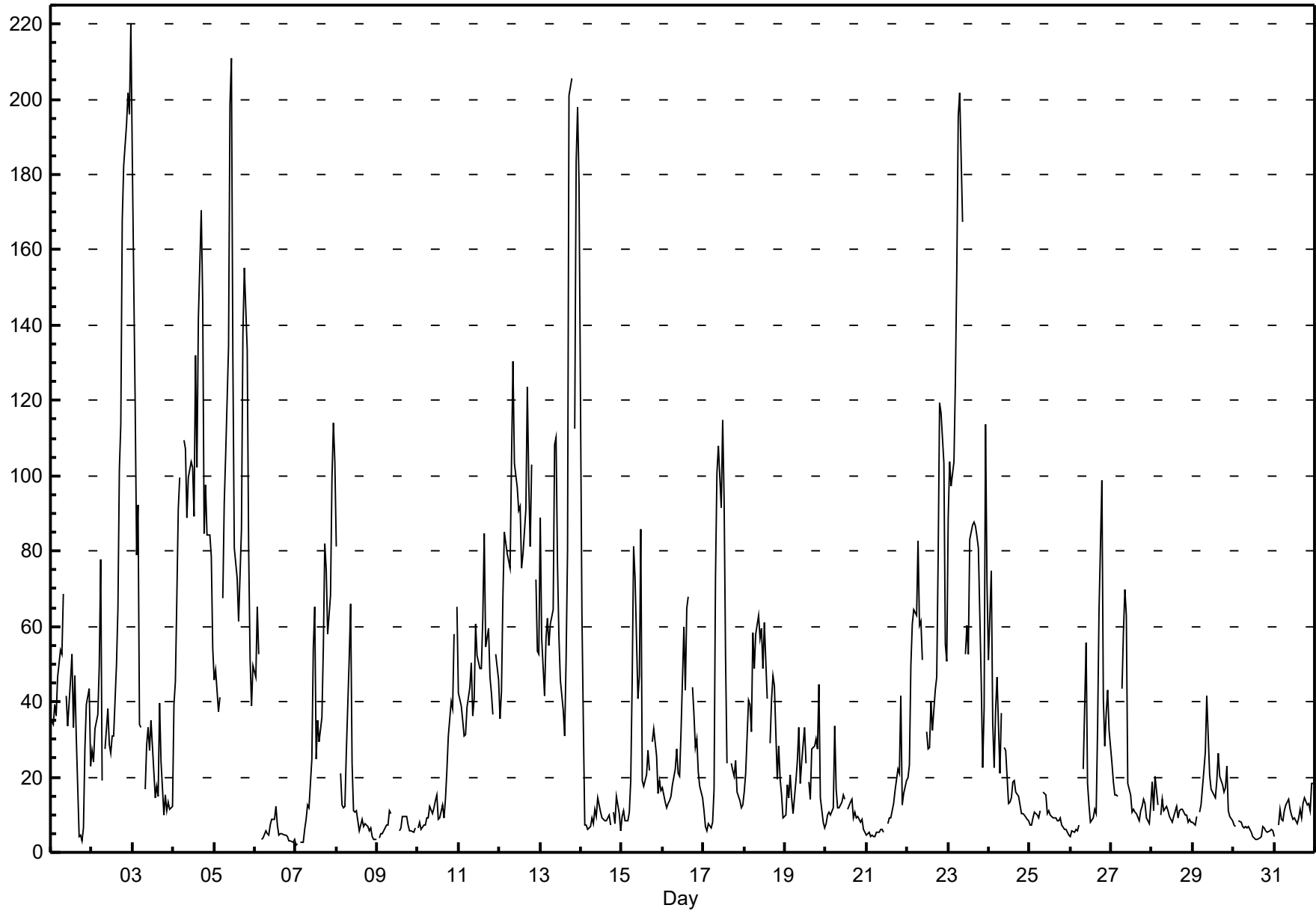


## Hourly Averages

Oxides of Nitrogen (NO<sub>x</sub>) - ppb

Henry Pirker - January 2018

Maximum Value: 220.1 ppb on Jan 3 00:00		Maximum Daily Average: 96.5 ppb on Jan 4		Hours in Service: 744																							
Minimum Value: 2 ppb on Jan 7 01:00		Minimum Daily Average: 5.8 ppb on Jan 30		Hours of Data: 708																							
Maximum Diurnal Average: 48.6 ppb at hour 9		Minimum Diurnal Average: 28.2 ppb at hour 5		Hours of Missing Data: 36																							
Monthly Average: 36.93 ppb		Percentiles: P <sub>1</sub> = 3.2 P <sub>10</sub> = 6.0 Q <sub>1</sub> = 9.4 Median = 19.2 Q <sub>3</sub> = 51.5 P <sub>90</sub> = 91.1 P <sub>99</sub> = 197.6		Hours of Calibration: 36																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jan	35	34	39	36	46	54	53	69	A	42	33	46	53	33	47	31	4	4	3	7	28	39	44	23	34.8	68.6	
2-Jan	27	24	33	37	50	78	19	A	27	38	29	26	31	31	50	65	102	114	168	182	193	202	196	220	84.4	220.1	
3-Jan	185	119	79	92	34	33	A	17	29	33	27	35	21	15	18	15	40	24	10	15	11	13	12	12	38.6	184.7	
4-Jan	39	45	67	91	100	A	109	107	89	100	104	102	89	132	102	142	171	147	85	98	84	84	79	54	96.5	170.6	
5-Jan	46	49	37	41	A	67	93	106	134	199	211	132	81	73	61	74	86	138	155	134	81	51	39	49	92.9	210.9	
6-Jan	47	65	53	A	4	4	6	5	5	7	9	9	12	7	4	5	5	4	4	4	3	3	3	3	11.8	65.3	
7-Jan	2	2	A	3	3	6	9	13	12	25	54	65	25	35	29	36	55	82	75	58	68	99	114	104	42.3	114.1	
8-Jan	81	A	21	13	12	12	27	52	66	24	11	11	11	6	7	9	7	8	7	6	6	4	3	3	17.6	81.1	
9-Jan	A	4	5	5	6	7	7	11	10	C	C	C	C	6	7	9	10	9	7	6	6	5	6	A	7.0	11.0	
10-Jan	7	8	6	7	7	9	9	12	10	12	14	15	9	9	12	9	14	22	31	40	38	58	A	65	18.5	65.1	
11-Jan	42	39	35	31	31	38	44	50	36	41	61	52	49	49	62	85	55	59	47	42	36	A	52	46	47.1	84.5	
12-Jan	35	43	68	85	79	78	76	104	131	103	97	91	92	75	79	91	123	98	81	103	A	73	53	53	83.1	130.5	
13-Jan	89	57	41	57	62	55	61	64	108	110	77	57	46	38	31	51	80	201	205	A	112	183	198	177	94.0	205.4	
14-Jan	64	34	7	7	6	7	9	8	11	9	15	11	9	9	8	8	10	7	A	11	7	15	10	6	12.5	63.8	
15-Jan	10	11	9	8	11	19	46	81	73	41	47	86	19	18	21	27	22	A	30	33	26	16	19	17	29.8	85.6	
16-Jan	17	13	12	13	14	15	18	22	27	21	20	32	60	43	65	68	A	44	36	28	30	21	18	14	28.4	67.9	
17-Jan	11	7	6	8	7	8	17	73	101	108	92	115	93	52	24	A	24	22	20	24	16	14	12	13	37.6	115.0	
18-Jan	16	21	40	39	32	58	49	58	63	57	60	49	61	41	A	29	40	47	44	19	28	19	15	9	39.0	62.7	
19-Jan	10	18	14	20	14	10	19	24	33	18	24	33	24	A	19	14	27	28	30	27	45	14	8	7	21.0	44.7	
20-Jan	8	10	11	10	12	33	17	12	12	13	15	14	A	12	14	14	9	11	9	10	8	9	6	5	11.8	33.5	
21-Jan	5	5	4	4	4	4	5	5	6	6	5	A	8	9	9	11	13	16	22	21	42	12	16	19	11.0	41.6	
22-Jan	20	23	49	61	64	63	83	60	61	51	A	32	27	28	40	32	43	46	78	119	117	103	55	51	56.9	119.2	
23-Jan	89	104	97	104	125	155	196	202	167	A	53	60	53	83	87	88	87	84	81	46	22	38	114	72	95.9	201.7	
24-Jan	51	75	34	23	38	47	21	37	A	28	27	13	13	15	19	19	16	15	13	10	10	10	9	8	23.9	74.7	
25-Jan	7	7	9	10	10	9	11	A	16	15	10	11	10	9	9	9	8	8	9	7	6	6	5	5	9.1	15.8	
26-Jan	4	6	5	6	6	7	A	22	39	56	18	13	8	9	11	10	33	64	99	41	28	37	43	32	26.0	98.9	
27-Jan	24	19	15	15	15	A	44	59	70	63	18	15	11	11	11	10	8	11	12	14	13	9	8	13	21.2	69.9	
28-Jan	19	11	20	13	A	10	14	11	12	11	10	9	8	10	12	9	11	11	12	10	10	8	9	8	11.1	20.2	
29-Jan	8	7	9	A	10	13	22	27	42	31	21	17	15	15	19	26	20	18	16	17	23	11	9	8	17.6	41.6	
30-Jan	7	7	A	9	8	7	7	7	7	7	5	4	4	3	3	4	4	7	6	6	5	6	6	6	5.8	8.5	
31-Jan	4	A	7	11	9	8	11	13	14	11	10	9	9	7	9	12	9	13	15	13	13	11	18	18	11.1	18.5	
		33.6	29.9	28.8	29.7	28.2	31.6	37.9	45.9	48.6	44.1	40.5	40.1	32.8	29.3	29.7	33.7	37.9	45.5	47.1	38.3	37.2	39.2	39.3	37.3	Diurnal Average	
		184.7	118.8	97.3	103.8	124.9	155.2	195.7	201.7	167.5	198.8	210.9	131.9	93.5	131.8	102.4	141.7	170.6	200.8	205.4	182.3	193.2	201.9	197.7	220.1	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

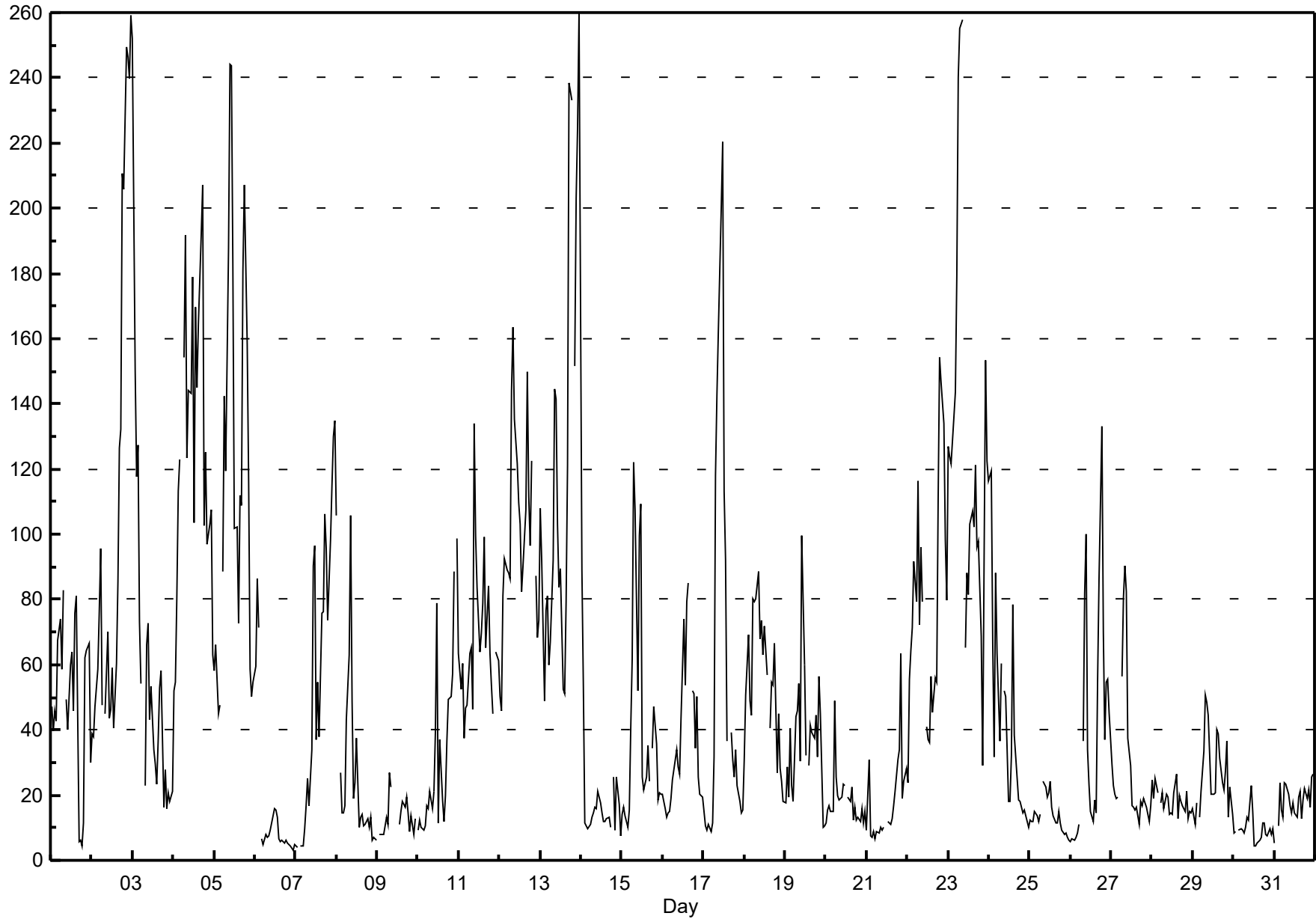


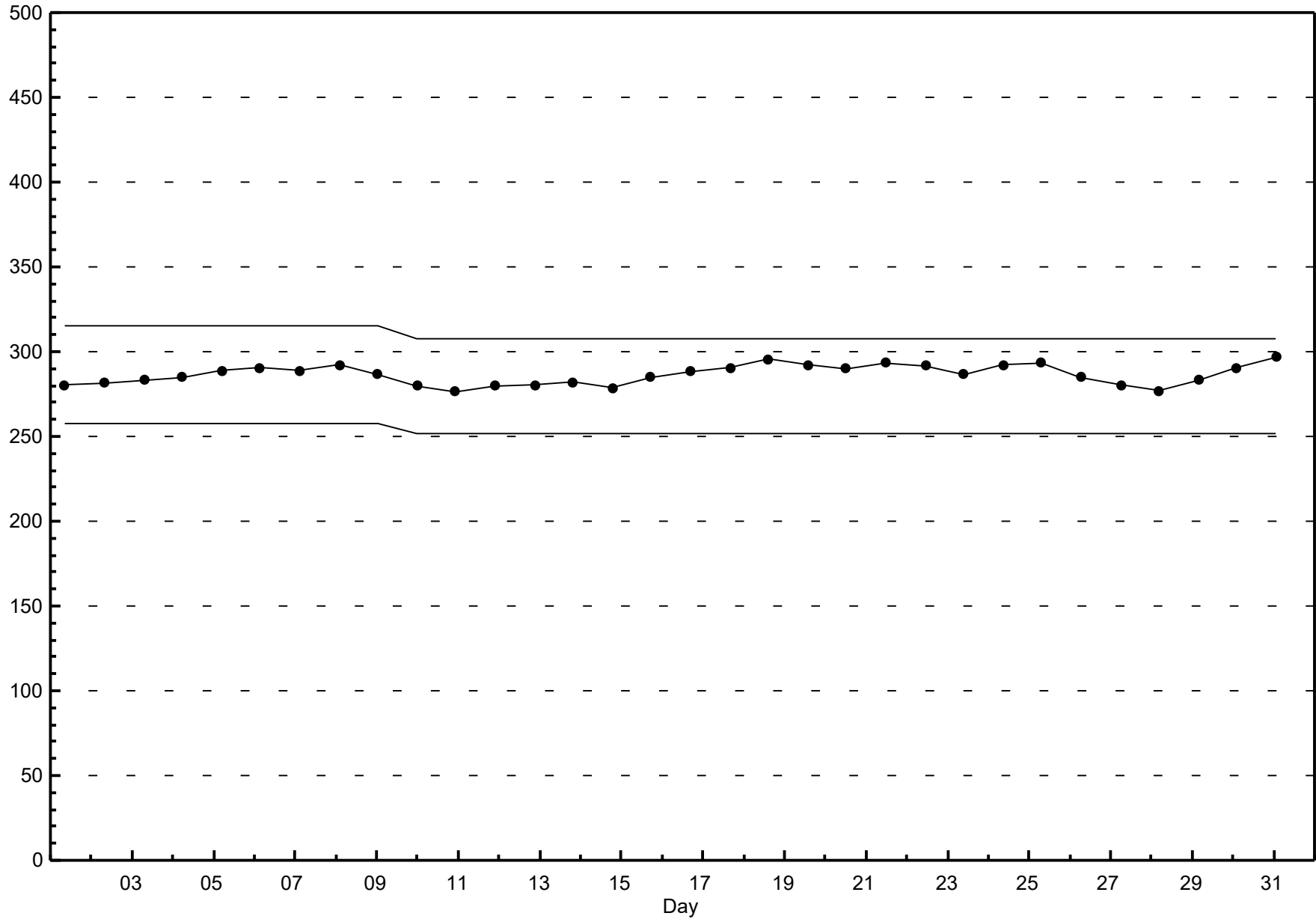
# Hourly Maximums

## Oxides of Nitrogen (NO<sub>x</sub>) - ppb

### Henry Pirker - January 2018

Maximum Value: 259.9 ppb on Jan 14 00:00		Maximum Daily Average: 127.9 ppb on Jan 4		Hours in Service: 744																							
Minimum Value: 3 ppb on Jan 6 23:00		Minimum Daily Average: 9.6 ppb on Jan 30		Hours of Data: 708																							
Maximum Diurnal Average: 71.4 ppb at hour 9		Minimum Diurnal Average: 38.8 ppb at hour 4		Hours of Missing Data: 36																							
Monthly Average: 51.67 ppb		Percentiles: P <sub>1</sub> = 4.5 P <sub>10</sub> = 9.5 Q <sub>1</sub> = 15.0 Median = 31.5 Q <sub>3</sub> = 73.5 P <sub>90</sub> = 121.0 P <sub>99</sub> = 244.4		Hours of Calibration: 36																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jan	47	40	46	43	67	74	59	83	A	49	40	60	64	46	76	81	6	6	4	11	62	64	67	30	48.9	82.9	
2-Jan	39	38	47	58	76	96	48	A	45	70	44	46	59	41	60	86	126	132	210	206	249	246	240	259	109.7	259.2	
3-Jan	252	150	118	127	73	54	A	23	66	73	43	53	34	30	23	37	53	58	17	28	16	21	18	21	60.3	252.2	
4-Jan	52	55	81	113	123	A	154	192	124	144	143	179	104	170	145	164	192	207	103	125	97	103	108	63	127.9	206.9	
5-Jan	58	66	45	48	A	88	142	119	188	244	244	183	102	102	73	112	109	181	207	158	116	59	50	55	119.5	244.1	
6-Jan	60	86	71	A	7	5	8	7	8	9	12	16	15	13	6	6	6	5	6	5	5	4	3	5	16.0	86.3	
7-Jan	5	4	A	5	4	10	17	25	17	34	90	96	37	55	38	76	76	106	96	74	98	115	130	135	58.3	134.9	
8-Jan	106	A	27	15	15	17	43	63	106	49	19	24	37	10	13	14	10	11	13	10	13	6	7	6	27.5	105.7	
9-Jan	A	8	8	8	8	13	11	27	22	C	C	C	C	11	15	18	16	19	14	9	13	8	13	A	13.5	26.7	
10-Jan	9	12	10	9	10	17	16	21	16	21	39	79	11	37	18	12	20	37	49	50	57	88	A	99	32.2	98.5	
11-Jan	64	53	60	38	47	47	63	65	46	134	100	84	64	70	79	99	65	84	64	54	45	A	64	61	67.3	134.0	
12-Jan	50	46	81	92	89	88	87	144	163	135	122	110	103	82	90	107	150	111	97	122	A	87	68	73	100.0	163.5	
13-Jan	108	92	49	77	81	60	67	92	145	142	103	84	90	52	51	80	121	238	233	A	152	203	225	260	121.9	259.9	
14-Jan	89	54	12	11	10	11	13	14	16	16	21	18	14	12	12	13	13	10	A	26	9	26	17	8	19.3	89.2	
15-Jan	14	16	13	10	15	40	62	122	108	52	100	109	25	21	25	35	24	A	35	47	36	19	21	20	42.2	122.2	
16-Jan	20	16	13	15	15	19	24	31	34	29	26	44	74	54	79	85	A	52	51	35	50	26	20	20	36.1	84.9	
17-Jan	15	11	9	11	9	11	32	118	143	163	200	220	113	92	37	A	39	31	26	34	23	18	14	15	60.2	220.4	
18-Jan	31	51	69	49	45	80	79	80	89	68	74	63	72	57	A	41	55	54	67	27	45	28	24	18	55.0	88.6	
19-Jan	18	29	20	41	23	18	44	46	54	30	100	60	32	A	29	42	39	38	44	32	56	45	10	11	37.4	99.7	
20-Jan	11	16	17	15	15	49	26	20	19	20	23	23	A	19	18	22	12	16	12	13	12	16	11	15	18.3	49.1	
21-Jan	9	31	8	7	9	6	9	8	10	9	10	A	12	11	11	13	17	21	31	34	63	19	24	28	17.4	63.4	
22-Jan	24	56	64	71	92	79	116	72	96	79	A	41	37	36	56	45	56	54	111	154	147	134	98	80	78.3	154.4	
23-Jan	127	124	122	136	144	179	240	255	258	A	65	88	81	103	107	102	121	96	98	69	29	93	153	122	126.7	257.9	
24-Jan	116	120	67	32	88	64	37	61	A	52	50	18	18	32	79	38	32	19	18	16	14	15	12	10	43.8	119.6	
25-Jan	12	12	12	15	13	12	14	A	24	22	19	21	24	16	13	12	11	15	12	9	8	8	7	6	13.9	24.4	
26-Jan	6	7	6	7	8	11	A	36	82	100	34	23	15	12	19	14	55	86	133	70	37	54	56	45	39.9	133.2	
27-Jan	30	23	20	19	19	A	56	80	91	82	38	29	17	16	16	16	11	18	17	19	17	16	12	17	29.5	90.5	
28-Jan	25	19	25	21	A	17	21	16	20	19	14	14	14	21	26	13	20	18	17	15	21	13	15	15	18.2	26.3	
29-Jan	16	11	18	A	13	21	33	51	49	45	33	20	20	21	40	39	31	24	22	27	37	13	22	14	26.9	50.7	
30-Jan	8	9	A	9	10	9	8	10	13	13	23	15	4	4	5	6	7	11	11	8	8	10	8	10	9.6	23.1	
31-Jan	5	A	11	24	15	13	24	23	20	17	15	18	15	13	20	21	13	18	22	19	22	16	26	26	18.1	26.4	
		47.5	43.1	39.6	38.8	39.4	41.7	53.5	65.7	71.4	66.2	63.6	63.4	45.1	42.0	42.7	48.3	50.3	59.3	61.2	50.3	51.9	52.5	51.5	51.6	Diurnal Average	
		252.2	150.1	121.8	136.1	143.8	179.3	240.0	255.1	257.9	244.1	243.6	220.4	113.1	169.8	145.0	164.4	192.1	238.2	232.9	205.8	249.4	246.2	239.8	259.9	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									



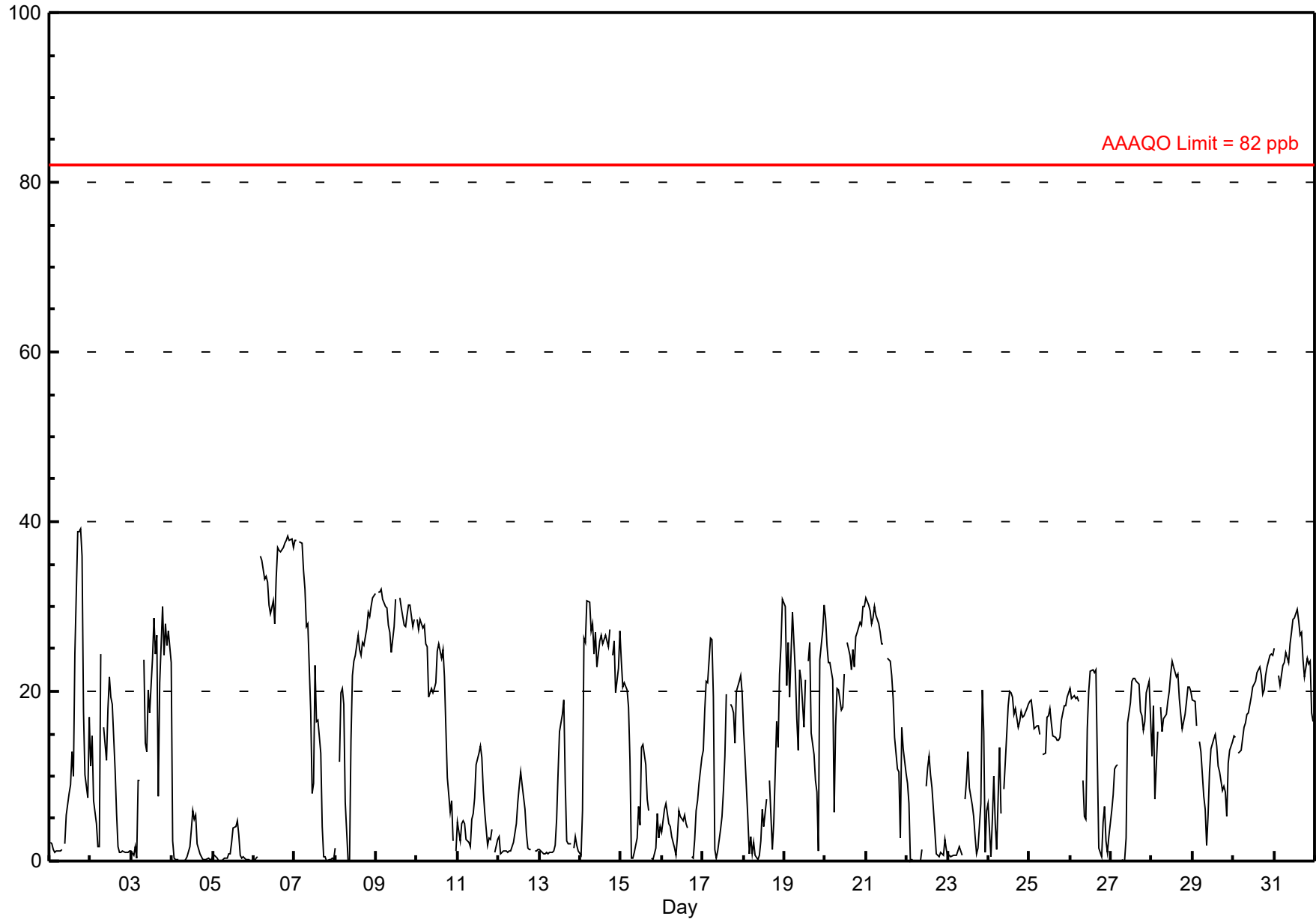


## Hourly Averages

Ozone (O<sub>3</sub>) - ppb

Henry Pirker - January 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 39.1 ppb on Jan 1 19:00      Maximum Daily Average: 30.3 ppb on Jan 6																	Hours in Service: 744 Hours of Data: 710 Hours of Missing Data: 34 Hours of Calibration: 34 Percent Operational Time: 100.0																															
Minimum Value: 0 ppb on Jan 4 07:00      Minimum Daily Average: 1.0 ppb on Jan 5 Maximum Diurnal Average: 18.1 ppb at hour 15      Minimum Diurnal Average: 10.7 ppb at hour 9 Monthly Average: 13.89 ppb      Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.7 Q <sub>1</sub> = 2.7 Median = 14.1 Q <sub>3</sub> = 22.5 P <sub>90</sub> = 28.0 P <sub>99</sub> = 37.8																																																
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-Jan	2	2	1	1	1	1	1	1	A	2	5	8	9	13	10	24	39	39	39	36	18	10	8	17	12.5	39.1																						
2-Jan	11	15	7	4	2	2	24	A	16	12	18	22	19	19	11	6	2	1	1	1	1	1	1	1	8.5	24.3																						
3-Jan	1	1	2	0	10	9	A	24	14	13	20	17	24	29	24	27	8	21	30	24	28	25	27	23	17.4	29.9																						
4-Jan	2	0	0	0	0	A	0	0	0	0	2	4	6	5	5	2	1	0	0	0	0	0	0	0	1.3	6.0																						
5-Jan	1	1	0	0	A	0	0	0	0	1	1	2	4	4	5	3	1	0	1	0	0	0	0	0	1.0	4.8																						
6-Jan	0	0	1	A	36	35	33	34	33	30	29	31	28	33	37	37	37	37	38	38	38	38	38	37	30.3	38.3																						
7-Jan	38	38	A	38	37	34	32	28	28	18	8	9	23	16	17	13	4	0	0	0	0	0	0	0	16.6	37.8																						
8-Jan	1	A	12	20	20	19	7	0	0	14	22	24	24	27	25	24	26	25	27	29	29	30	31	32	20.3	31.6																						
9-Jan	A	32	32	32	31	30	30	28	27	25	28	31	C	C	31	30	28	28	29	30	30	28	28	A	29.3	32.1																						
10-Jan	28	27	28	27	28	26	25	19	20	20	20	21	25	26	24	25	22	16	10	6	7	2	A	1	19.7	28.5																						
11-Jan	5	2	4	5	4	3	2	2	5	6	7	11	13	14	12	8	6	2	3	3	4	A	1	2	5.3	13.6																						
12-Jan	3	1	1	1	1	1	1	1	2	2	4	7	9	10	9	6	3	2	1	1	A	1	1	1	3.1	10.5																						
13-Jan	1	1	1	1	1	1	1	1	1	2	5	10	15	17	19	9	2	2	2	A	2	3	2	1	4.4	18.9																						
14-Jan	1	6	26	26	31	30	27	28	24	27	23	26	27	26	26	27	25	27	A	24	26	20	23	27	24.0	30.6																						
15-Jan	23	21	21	20	18	12	0	0	1	3	6	4	13	14	11	7	6	A	0	0	1	6	3	4	8.6	23.5																						
16-Jan	3	6	7	6	4	4	3	2	1	3	6	5	5	5	4	4	A	0	0	3	6	7	9	12	4.6	12.3																						
17-Jan	13	18	21	21	26	26	19	1	0	1	4	5	8	12	20	A	18	18	17	14	20	21	22	20	15.1	26.3																						
18-Jan	15	12	5	1	3	1	2	1	0	1	2	6	4	7	A	10	5	1	5	17	13	22	25	31	8.3	30.9																						
19-Jan	30	21	26	19	24	29	22	17	13	23	21	16	21	A	24	26	15	12	9	8	1	24	27	30	20.0	30.1																						
20-Jan	29	25	23	23	21	6	16	20	20	18	18	22	A	26	24	22	25	23	26	27	28	28	30	30	23.1	30.0																						
21-Jan	31	30	29	28	29	30	29	28	27	26	26	A	24	24	24	22	19	14	11	11	3	16	13	10	21.8	31.0																						
22-Jan	9	7	0	0	0	0	0	0	0	1	A	9	11	12	10	9	4	1	1	1	1	1	3	1	3.5	12.3																						
23-Jan	1	1	1	1	1	1	1	2	1	A	7	10	13	9	7	5	3	1	2	7	20	15	1	6	4.9	20.1																						
24-Jan	7	0	5	10	4	1	13	6	A	8	12	18	20	20	19	17	18	16	16	18	17	17	18	18	13.1	19.9																						
25-Jan	19	19	17	16	16	16	15	A	13	13	17	17	18	16	15	15	14	14	15	17	18	18	19	20	16.3	19.8																						
26-Jan	20	19	20	19	19	19	A	9	5	5	16	20	22	22	22	23	12	2	1	5	7	2	1	3	12.7	22.5																						
27-Jan	6	8	11	11	11	A	0	0	0	3	16	19	21	22	22	21	21	18	17	15	16	20	21	17	13.7	21.6																						
28-Jan	12	18	7	15	A	18	15	17	17	19	20	22	24	23	22	22	19	17	16	17	19	21	21	20	18.3	23.5																						
29-Jan	19	19	16	A	14	13	8	6	2	5	11	13	14	15	14	11	10	8	9	8	5	12	13	14	11.3	19.1																						
30-Jan	15	15	A	13	13	14	16	16	17	17	19	21	21	21	22	23	22	20	20	22	23	24	24	24	19.3	24.3																						
31-Jan	25	A	22	21	22	23	23	25	23	26	27	28	29	30	28	27	27	24	22	24	23	24	18	16	24.1	29.7																						
																								Diurnal Average	Diurnal Maximum																							
																								12.4	12.6	12.0	13.1	14.8	14.0	12.7	10.9	10.7	11.4	14.0	15.3	17.0	17.8	18.1	16.8	14.7	13.0	12.3	13.5	13.5	14.5	14.3	14.0	Diurnal Average
																								37.7	37.8	31.6	37.6	37.5	35.4	33.2	33.5	32.9	30.2	29.1	30.8	28.7	33.4	36.9	36.6	38.9	38.8	39.1	37.8	38.3	37.8	38.0	37.0	Diurnal Maximum
C - Calibration      A - Automated Daily Zero Span Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb    24-hr na																																																



# Hourly Maximums

Ozone (O<sub>3</sub>) - ppb

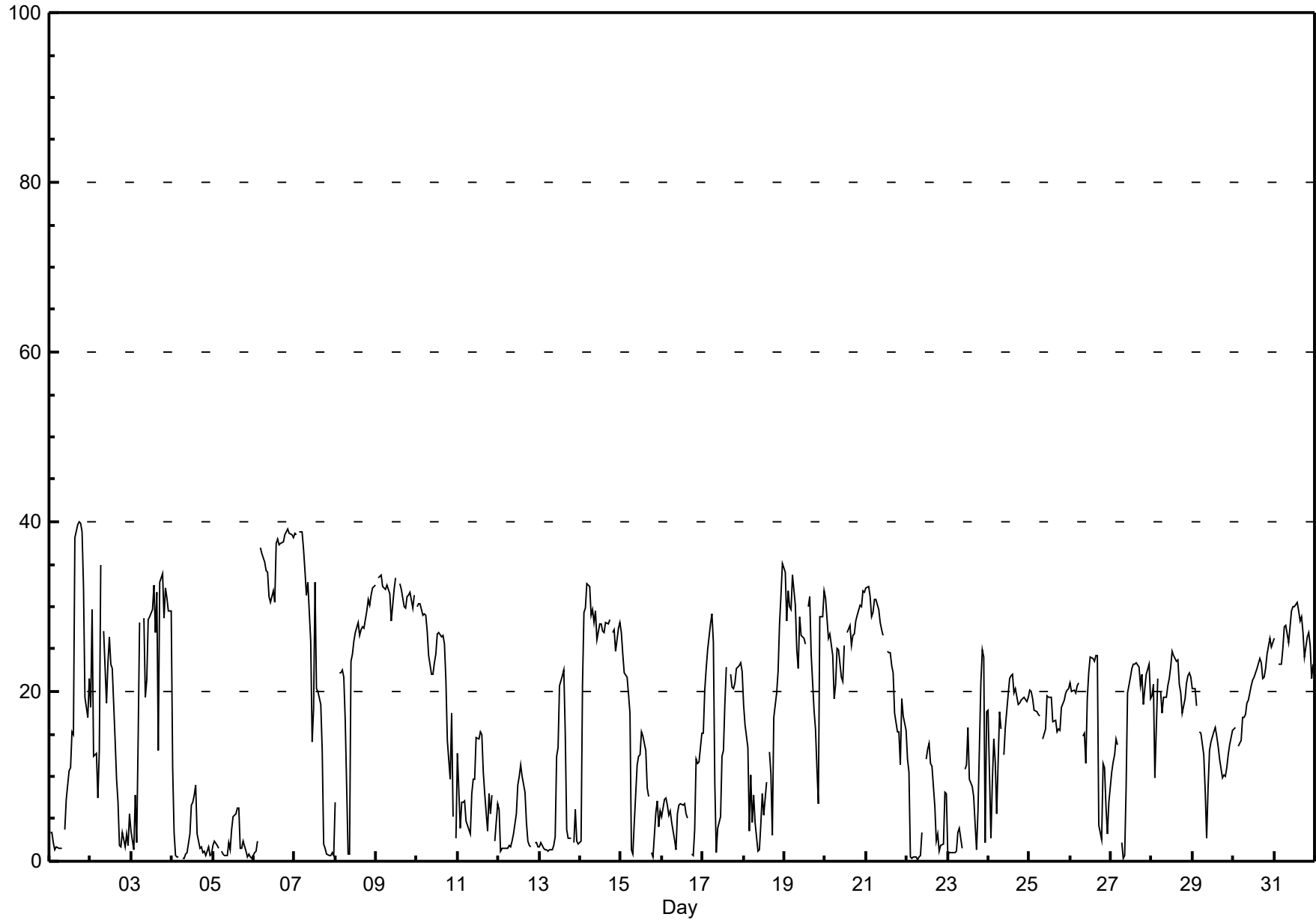
Henry Pirker - January 2018

Maximum Value: 40.0 ppb on Jan 1 18:00		Maximum Daily Average: 31.8 ppb on Jan 9		Hours in Service: 744																							
Minimum Value: 0 ppb on Jan 22 07:00		Minimum Daily Average: 2.2 ppb on Jan 5		Hours of Data: 710																							
Maximum Diurnal Average: 20.3 ppb at hour 15		Minimum Diurnal Average: 13.5 ppb at hour 9		Hours of Missing Data: 34																							
Monthly Average: 16.70 ppb		Percentiles: P <sub>1</sub> = 0.5 P <sub>10</sub> = 1.5 Q <sub>1</sub> = 5.9 Median = 17.8 Q <sub>3</sub> = 26.1 P <sub>90</sub> = 31.1 P <sub>99</sub> = 38.8		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-Jan	3	3	2	1	2	2	2	2	A	4	7	11	11	15	15	38	40	40	40	39	32	19	17	22	15.9	40.0	
2-Jan	18	30	12	13	8	13	35	A	27	19	23	26	23	23	14	10	7	2	2	3	2	3	2	6	13.9	34.9	
3-Jan	3	1	8	2	14	28	A	29	19	21	28	29	30	32	27	32	13	33	34	29	32	31	30	30	23.3	33.9	
4-Jan	11	3	1	0	0	A	0	0	1	1	3	7	7	8	9	3	1	2	1	1	1	2	1	1	2.8	11.1	
5-Jan	2	2	2	2	A	1	1	1	1	2	1	4	5	6	6	6	2	2	2	1	1	1	1	0	2.2	6.3	
6-Jan	1	1	2	A	37	36	35	34	34	31	30	32	30	37	38	37	38	38	38	39	39	39	39	38	31.5	39.1	
7-Jan	39	38	A	39	39	37	34	31	33	26	14	18	33	20	20	18	13	2	2	1	1	1	1	1	20.0	38.9	
8-Jan	7	A	22	22	23	22	17	1	1	23	24	26	27	28	27	27	28	28	30	31	30	31	32	33	23.4	32.6	
9-Jan	A	33	33	34	32	32	33	32	32	28	32	33	C	C	33	32	30	30	31	31	32	30	31	A	31.8	33.8	
10-Jan	30	30	30	29	29	29	27	24	22	22	23	24	27	27	26	27	26	21	14	10	17	5	A	3	22.8	30.4	
11-Jan	13	4	7	7	7	5	4	3	8	10	10	15	14	15	15	10	8	4	8	6	8	A	2	7	8.2	15.2	
12-Jan	6	1	1	1	1	1	2	2	2	3	6	9	10	11	10	8	4	2	2	2	A	2	2	2	4.0	11.3	
13-Jan	2	2	2	1	1	1	1	1	2	3	12	13	21	22	22	15	4	3	3	A	2	6	2	2	6.3	22.5	
14-Jan	2	21	29	30	33	32	29	30	28	30	26	28	28	27	27	28	28	28	A	27	27	25	27	28	26.9	32.8	
15-Jan	27	24	22	22	20	17	1	1	5	11	12	13	15	15	13	9	8	A	1	1	6	7	4	6	11.3	26.9	
16-Jan	5	7	7	7	5	6	5	2	1	6	7	7	7	7	6	5	A	1	1	4	12	12	12	15	6.3	15.1	
17-Jan	15	20	23	25	28	29	26	9	1	4	5	12	13	19	23	A	22	21	20	21	23	23	23	22	18.6	29.2	
18-Jan	19	16	13	4	10	4	8	5	1	1	4	8	5	9	A	13	10	3	17	20	22	28	31	35	12.5	35.0	
19-Jan	34	28	32	30	30	34	30	25	23	29	27	26	26	A	30	31	24	18	16	11	7	29	29	32	26.0	34.1	
20-Jan	31	29	26	27	24	19	21	25	25	22	21	25	A	27	28	25	27	27	28	29	30	30	32	32	26.5	31.9	
21-Jan	32	32	31	29	29	31	31	30	28	27	27	A	25	25	25	23	22	17	15	15	11	19	17	15	24.2	32.4	
22-Jan	12	11	1	0	1	1	0	1	1	3	A	12	13	14	12	11	7	2	3	1	2	2	8	8	5.4	13.8	
23-Jan	1	1	1	1	1	1	3	4	2	A	11	11	16	10	9	8	4	1	6	21	25	24	2	18	7.8	25.0	
24-Jan	18	3	9	14	12	6	18	16	A	12	16	20	22	22	22	20	20	18	19	19	19	19	19	19	16.6	22.1	
25-Jan	20	20	19	18	18	17	17	A	14	16	19	19	19	19	16	17	15	16	15	18	19	20	20	20	18.0	20.4	
26-Jan	21	20	20	20	21	21	A	15	15	11	19	22	24	24	24	24	24	4	3	11	11	6	3	7	16.1	24.3	
27-Jan	10	12	13	14	14	A	2	0	1	9	20	22	23	23	23	23	23	21	22	18	20	22	23	19	16.4	23.5	
28-Jan	20	21	10	22	A	20	17	19	19	21	22	23	25	24	24	24	21	20	17	19	21	22	22	22	20.6	24.7	
29-Jan	20	20	18	A	15	15	12	8	3	9	13	14	15	16	15	14	12	10	10	10	11	12	14	15	13.2	20.4	
30-Jan	16	16	A	14	14	17	17	17	19	19	21	21	22	22	23	24	23	22	22	23	24	26	25	26	20.5	26.3	
31-Jan	26	A	23	23	23	25	28	28	26	28	29	30	30	31	30	28	29	27	24	26	27	25	22	23	26.6	30.5	
15.5		15.6	14.6	15.5	16.9	17.3	15.7	13.6	13.5	15.0	17.2	18.7	19.5	19.9	20.3	19.7	17.8	15.4	14.9	16.2	17.2	17.4	16.5	16.9	Diurnal Average		
38.6		38.4	33.5	38.8	38.9	36.7	35.2	34.2	34.0	31.2	32.0	33.3	32.8	37.4	38.0	38.1	39.6	40.0	39.9	38.9	39.1	38.7	38.5	38.1	Diurnal Maximum		
C - Calibration		A - Automated Daily Zero Span																									



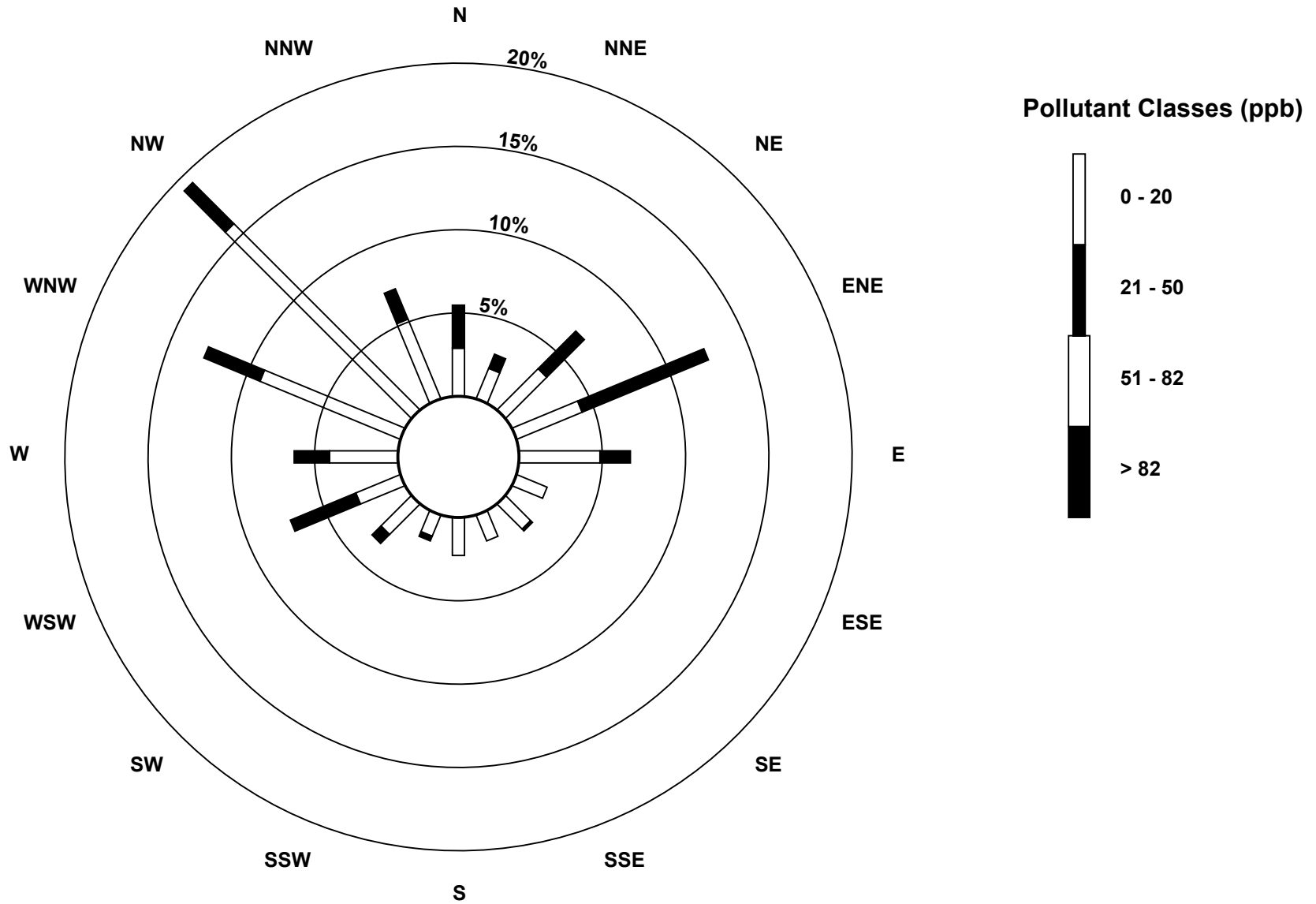
**Hourly Maximums**

**Ozone (O<sub>3</sub>) - ppb**  
**Henry Pirker - January 2018**



**Pollutant Rose**

Ozone (O<sub>3</sub>) - ppb  
Henry Pirker - January 2018



# Eight Hour Running Averages

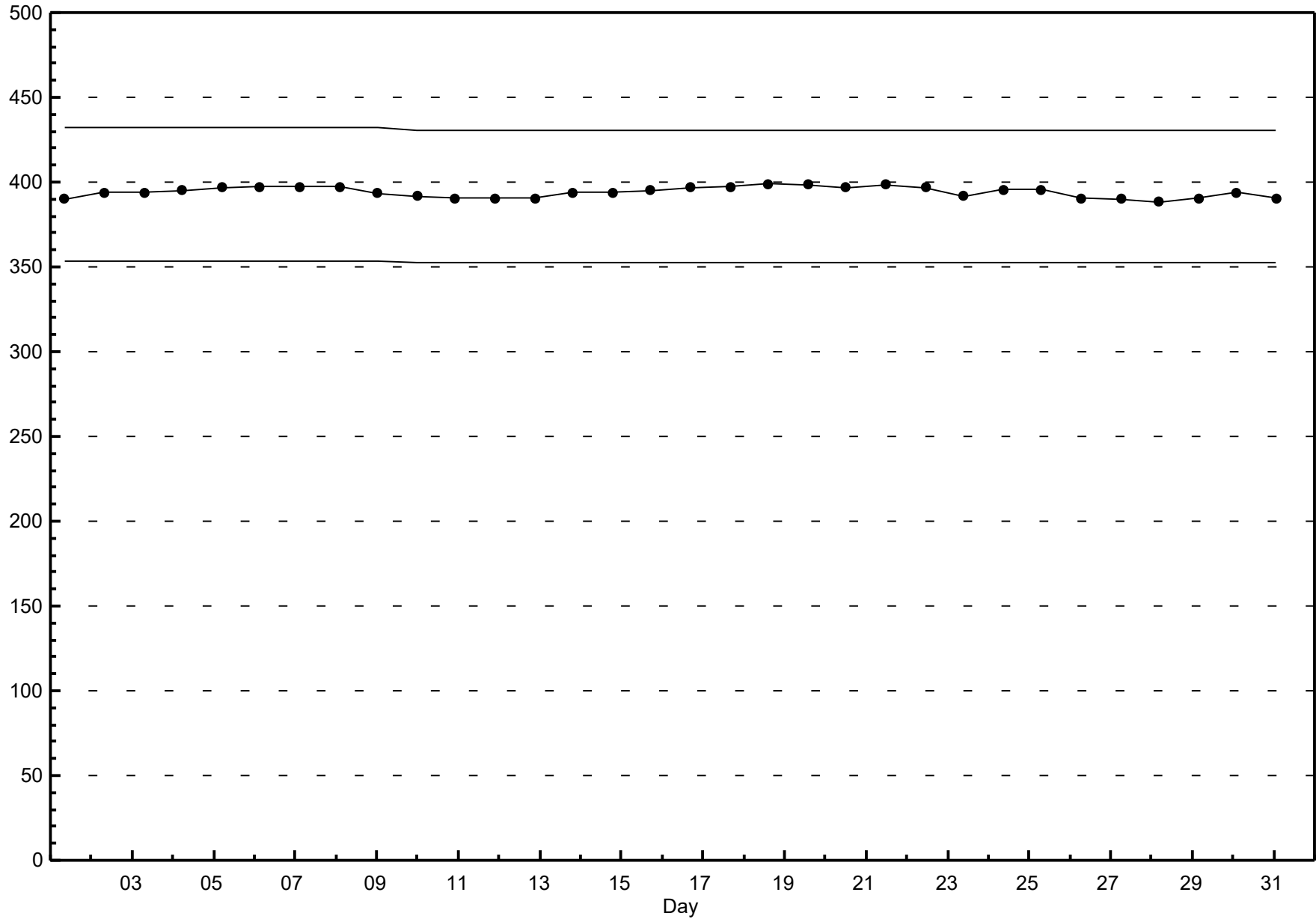
Ozone (O<sub>3</sub>) - ppb

Henry Pirker - January 2018

Maximum Value: 37.8 ppb on Jan 7 03:00		Hours in Service: 744																							
Minimum Value: 0.2 ppb on Jan 4 09:00		Hours of Data: 744																							
Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 1.5 Q <sub>1</sub> = 4.9 Median = 13.6 Q <sub>3</sub> = 21.2 P <sub>90</sub> = 27.0 P <sub>99</sub> = 37.4		Hours of Missing Data: 0																							
		Hours of Calibration: 0																							
		Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Jan	2	2	2	2	2	2	1	1	1	1	2	3	4	6	7	10	14	18	23	26	27	27	27	26	27.2
2-Jan	22	19	15	11	9	8	10	9	10	10	11	14	16	18	17	15	13	12	10	7	5	3	2	1	22.2
3-Jan	1	1	1	1	2	3	3	7	8	10	13	15	17	20	21	21	20	21	22	23	24	23	24	23	23.8
4-Jan	23	20	16	13	10	8	4	0	0	0	0	1	2	2	3	3	3	3	3	3	2	1	1	0	22.7
5-Jan	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2	2	3	2	2	2	2	1	1	0	2.5
6-Jan	0	0	0	0	5	10	15	20	25	29	33	33	32	31	32	32	33	34	35	35	37	37	37	37	37.5
7-Jan	38	38	38	38	38	37	36	35	34	31	28	24	22	20	18	16	13	11	10	9	6	4	2	1	37.8
8-Jan	0	0	2	5	8	10	11	11	11	11	13	13	14	15	17	20	23	25	25	26	27	27	28	29	28.7
9-Jan	29	30	31	31	31	31	31	31	30	29	29	29	28	28	28	28	29	29	29	29	29	29	29	29	31.3
10-Jan	29	29	29	28	28	28	27	26	25	24	23	22	22	22	22	23	23	22	21	19	17	14	12	9	28.8
11-Jan	7	5	4	4	3	3	3	3	3	4	4	5	6	7	9	9	10	9	9	7	6	5	4	3	9.6
12-Jan	2	2	2	2	2	1	2	1	1	1	2	2	3	5	6	6	6	6	6	5	5	3	2	2	6.4
13-Jan	1	1	1	1	1	1	1	1	1	1	2	3	5	7	9	10	10	10	10	10	8	6	3	2	10.0
14-Jan	2	2	6	8	12	15	18	22	25	27	27	27	27	26	26	26	26	26	26	26	26	25	25	25	27.5
15-Jan	24	23	23	23	22	21	18	14	12	9	8	6	5	5	7	8	8	9	8	7	6	5	3	3	24.4
16-Jan	3	3	4	4	5	5	5	4	4	4	3	3	4	4	4	4	5	4	4	3	3	4	4	5	5.4
17-Jan	6	9	11	13	16	18	20	18	17	15	12	10	8	6	7	7	10	12	14	15	17	18	19	19	19.6
18-Jan	18	18	16	15	12	10	7	5	3	2	1	2	2	3	3	4	5	5	7	8	10	12	15	15	18.5
19-Jan	18	20	23	23	25	26	25	24	21	22	21	21	20	19	19	20	21	19	18	17	14	15	15	16	25.7
20-Jan	18	19	21	23	25	23	22	21	19	19	18	18	17	20	21	22	22	23	24	25	25	25	26	27	27.1
21-Jan	28	29	29	29	29	30	30	29	29	28	28	28	27	26	25	24	23	22	20	18	16	15	14	12	29.6
22-Jan	11	10	9	7	7	5	3	2	1	0	0	1	3	5	6	7	8	8	7	6	5	3	2	1	10.9
23-Jan	1	1	1	1	1	1	1	1	1	1	2	3	5	6	7	7	8	7	6	6	7	7	7	7	7.6
24-Jan	7	7	8	8	6	4	6	6	6	7	8	9	11	14	15	16	17	18	18	18	18	17	17	17	18.1
25-Jan	17	18	18	18	18	17	17	17	16	15	15	15	15	16	15	15	16	16	15	15	15	16	16	17	17.9
26-Jan	18	18	19	19	19	19	19	18	16	14	13	13	14	14	15	17	18	17	15	14	12	9	6	4	19.5
27-Jan	3	4	5	6	7	7	7	7	6	5	6	7	9	10	13	15	18	20	20	20	19	19	19	18	20.0
28-Jan	17	17	16	16	16	16	15	15	16	16	17	18	19	20	20	21	21	21	20	19	19	19	19	19	21.3
29-Jan	19	19	19	19	18	17	15	13	11	9	8	9	9	9	10	11	12	12	12	11	10	10	10	10	19.1
30-Jan	11	11	12	12	13	14	14	15	15	15	16	17	18	19	19	20	21	21	21	21	22	22	22	22	22.4
31-Jan	23	23	24	23	23	23	23	23	23	23	24	25	26	26	27	27	28	27	27	26	26	25	23	22	27.7
<div style="display: flex; justify-content: space-between; width: 100%;"> <span>37.6</span><span>37.7</span><span>37.8</span><span>37.8</span><span>37.6</span><span>37.1</span><span>36.3</span><span>34.9</span><span>33.5</span><span>30.6</span><span>32.9</span><span>32.6</span><span>31.6</span><span>31.4</span><span>31.8</span><span>32.2</span><span>32.7</span><span>33.5</span><span>34.6</span><span>35.5</span><span>36.7</span><span>37.3</span><span>37.4</span><span>37.5</span> </div> <p style="text-align: center;">Diurnal Maximums</p>																									

### Span Responses

Ozone (O<sub>3</sub>)  
Henry Pirker - January 2018



# Hourly Averages

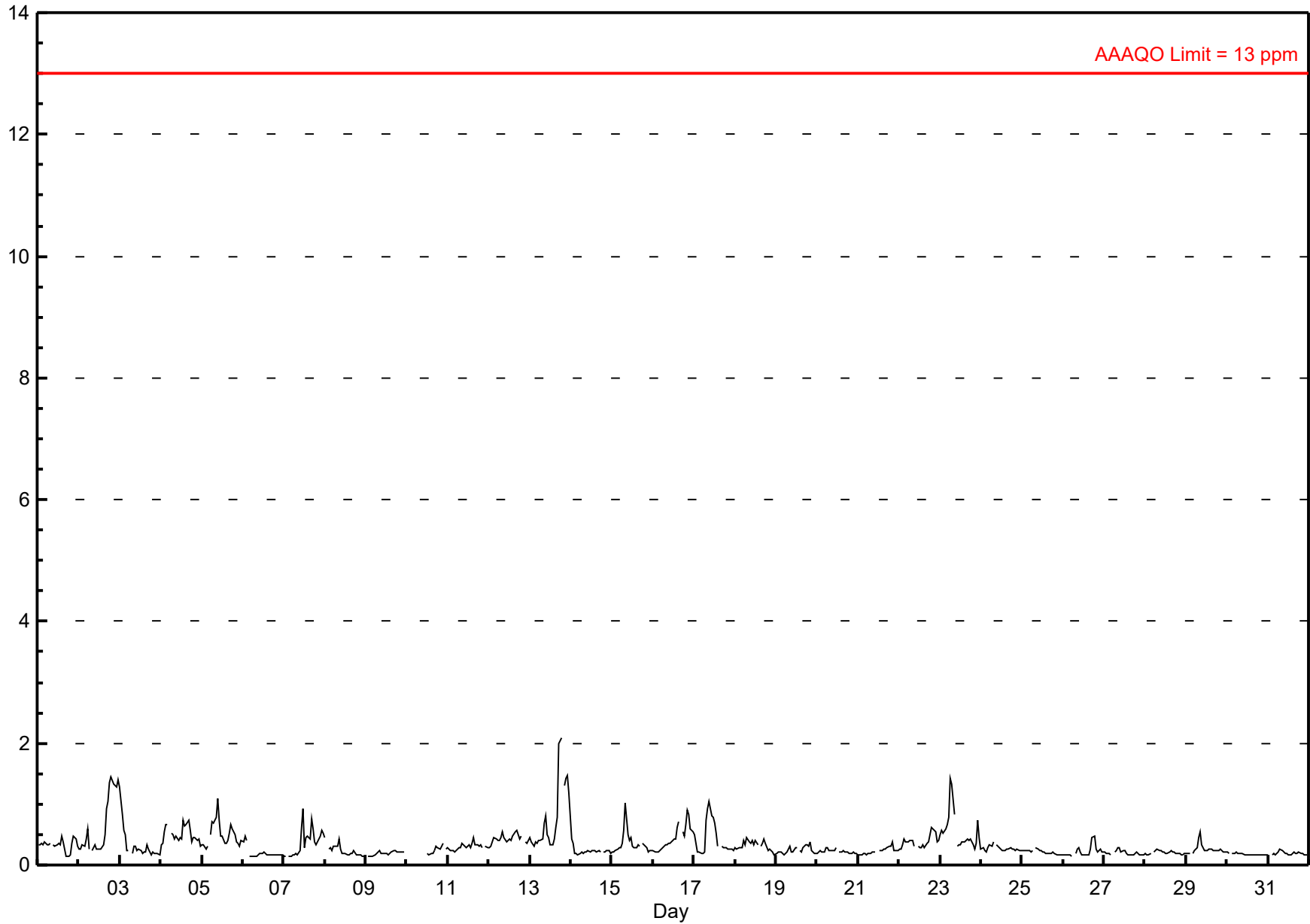
Carbon Monoxide (CO) - ppm

Henry Pirker - January 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 2.08 ppm on Jan 13 19:00	Maximum Daily Average: 0.76 ppm on Jan 13
Minimum Value: 0.1 ppm on Jan 1 19:00	Hours of Data: 700
Maximum Diurnal Average: 0.40 ppm at hour 18	Hours of Missing Data: 44
Monthly Average: 0.331 ppm	Hours of Calibration: 37
Percentiles: P <sub>1</sub> = 0.15 P <sub>10</sub> = 0.17 Q <sub>1</sub> = 0.20 Median = 0.26 Q <sub>3</sub> = 0.38 P <sub>90</sub> = 0.55 P <sub>99</sub> = 1.39	Percent Operational Time: 99.1

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jan	0.3	0.3	0.4	0.3	0.4	0.3	0.3	0.4	A	0.3	0.3	0.3	0.4	0.3	0.5	0.4	0.1	0.1	0.1	0.2	0.3	0.5	0.4	0.3	0.32	0.47	
2-Jan	0.3	0.3	0.3	0.3	0.4	0.6	0.3	A	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.9	1.1	1.4	1.4	1.3	1.3	1.3	1.4	0.65	1.44	
3-Jan	1.3	0.8	0.6	0.5	0.2	0.2	A	0.2	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.33	1.28	
4-Jan	0.3	0.4	0.5	0.7	0.7	A	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.7	0.6	0.7	0.7	0.6	0.4	0.5	0.4	0.4	0.4	0.3	0.50	0.75	
5-Jan	0.3	0.3	0.3	0.3	A	0.5	0.7	0.7	0.8	1.1	0.7	0.5	0.5	0.4	0.4	0.4	0.5	0.7	0.6	0.5	0.4	0.4	0.3	0.4	0.50	1.08	
6-Jan	0.4	0.5	0.4	A	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20	0.47	
7-Jan	0.2	0.2	A	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.6	0.9	0.3	0.5	0.5	0.4	0.7	0.6	0.4	0.3	0.4	0.5	0.6	0.5	0.38	0.91	
8-Jan	0.5	A	0.3	0.3	0.2	0.3	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	0.2	0.2	0.2	0.2	0.1	0.23	0.46	
9-Jan	A	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19	0.24	
10-Jan	N	N	N	N	N	N	C	C	C	C	C	C	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	A	0.3	--	0.36	
11-Jan	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.5	0.3	0.3	0.3	0.3	0.3	0.3	A	0.3	0.3	0.30	0.45	
12-Jan	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.5	0.4	0.5	A	0.4	0.4	0.4	0.43	0.57	
13-Jan	0.5	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.7	0.8	0.5	0.4	0.3	0.3	0.4	0.6	0.8	2.0	2.1	A	1.3	1.4	1.5	1.2	0.76	2.08	
14-Jan	0.4	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	A	0.2	0.2	0.2	0.2	0.2	0.23	0.43	
15-Jan	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.6	1.0	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	A	0.4	0.3	0.3	0.2	0.2	0.2	0.34	1.01	
16-Jan	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.6	0.7	A	0.5	0.5	0.7	0.9	0.8	0.6	0.5	0.44	0.89	
17-Jan	0.5	0.4	0.2	0.2	0.2	0.2	0.2	0.7	0.9	1.0	0.8	0.8	0.7	0.5	0.3	A	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.43	1.03	
18-Jan	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.3	0.4	0.3	A	0.3	0.4	0.4	0.4	0.4	0.2	0.3	0.2	0.2	0.2	0.32	0.45	
19-Jan	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	A	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.2	0.2	0.2	0.25	0.37	
20-Jan	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.3	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23	0.29	
21-Jan	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	0.3	0.3	0.3	0.3	0.4	0.2	0.2	0.2	0.23	0.38	
22-Jan	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	A	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.6	0.6	0.6	0.4	0.4	0.38	0.63
23-Jan	0.5	0.6	0.5	0.6	0.7	0.8	1.4	1.3	0.8	A	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.7	0.5	0.55	1.42	
24-Jan	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.4	A	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.27	0.38	
25-Jan	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	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	0.21	0.27	
26-Jan	0.2	0.2	0.2	0.2	0.2	0.1	A	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.5	0.3	0.2	0.2	0.3	0.2	0.22	0.46	
27-Jan	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20	0.28	
28-Jan	0.2	0.2	0.2	0.2	A	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20	0.26	
29-Jan	0.2	0.2	0.2	A	0.2	0.2	0.3	0.5	0.5	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.26	0.55	
30-Jan	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	0.18	0.21	
31-Jan	0.2	A	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	0.2	0.2	0.2	0.2	0.19	0.27	
	0.32	0.29	0.28	0.28	0.27	0.29	0.33	0.37	0.40	0.36	0.32	0.33	0.29	0.28	0.30	0.32	0.35	0.40	0.40	0.33	0.36	0.36	0.36	0.33		Diurnal Average	
	1.28	0.84	0.57	0.66	0.67	0.78	1.42	1.34	1.01	1.08	0.81	0.91	0.68	0.75	0.64	0.71	0.93	2.00	2.08	1.44	1.33	1.43	1.47	1.40		Diurnal Maximum	

C - Calibration      N - Not Valid      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm      24-hr na



# Hourly Maximums

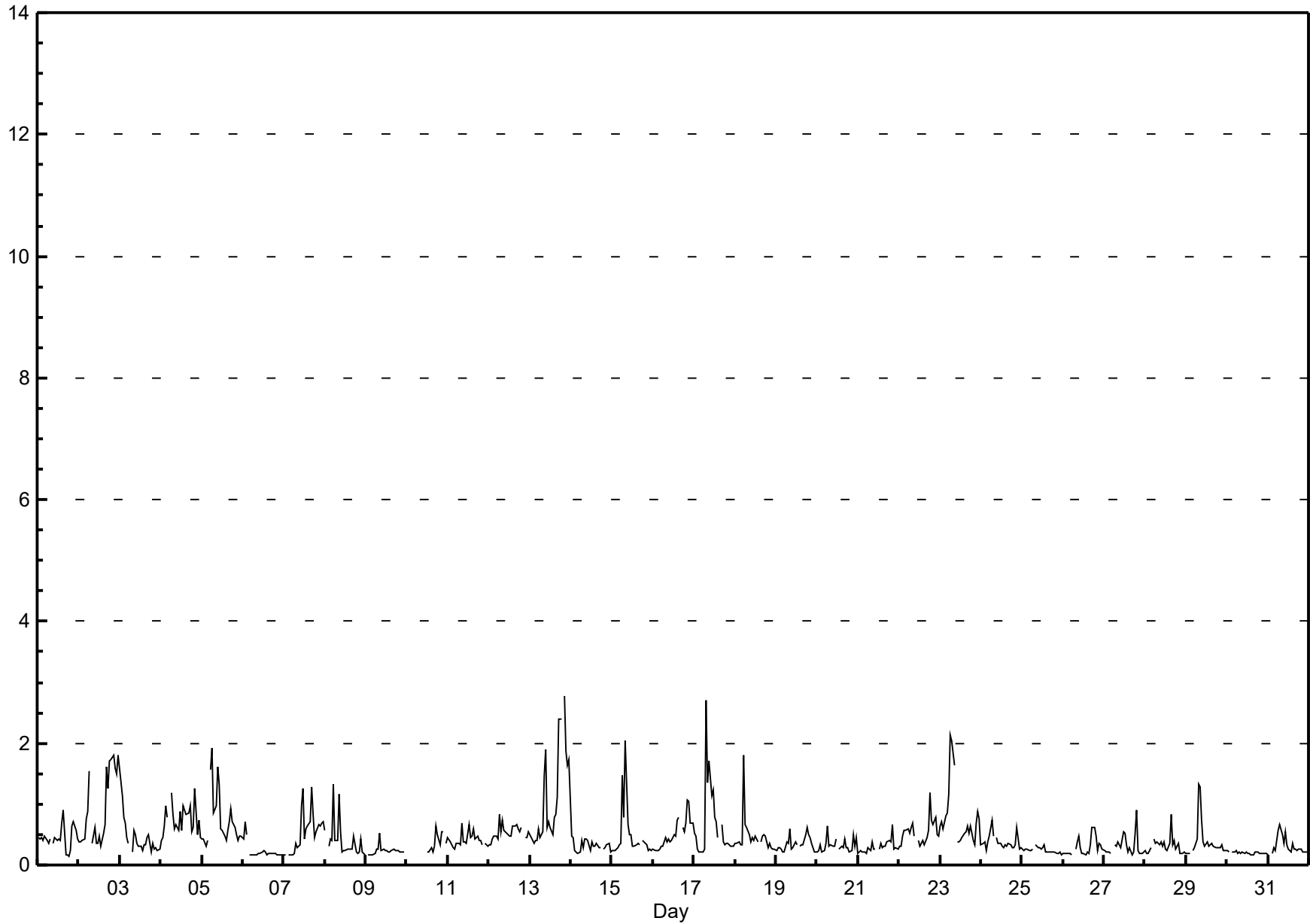
Carbon Monoxide (CO) - ppm

Henry Pirker - January 2018

Maximum Value: 2.78 ppm on Jan 13 21:00		Maximum Daily Average: 1.09 ppm on Jan 13		Hours in Service: 744																																												
Minimum Value: 0.1 ppm on Jan 1 19:00		Minimum Daily Average: 0.20 ppm on Jan 30		Hours of Data: 700																																												
Maximum Diurnal Average: 0.69 ppm at hour 9		Minimum Diurnal Average: 0.34 ppm at hour 3		Hours of Missing Data: 44																																												
Monthly Average: 0.464 ppm		Percentiles: P <sub>1</sub> = 0.16 P <sub>10</sub> = 0.20 Q <sub>1</sub> = 0.25 Median = 0.35 Q <sub>3</sub> = 0.52 P <sub>90</sub> = 0.78 P <sub>99</sub> = 2.03		Hours of Calibration: 37																																												
				Percent Operational Time: 99.1																																												
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Jan	0.5	0.4	0.5	0.4	0.5	0.4	0.4	0.4	A	0.4	0.5	0.4	0.4	0.4	0.7	0.9	0.2	0.2	0.1	0.2	0.6	0.7	0.6	0.4	0.44	0.90																						
2-Jan	0.4	0.4	0.4	0.4	0.8	0.9	1.5	A	0.4	0.6	0.3	0.3	0.5	0.3	0.5	0.7	1.6	1.3	1.7	1.7	1.8	1.6	1.5	1.8	0.93	1.80																						
3-Jan	1.6	1.1	0.8	0.7	0.5	0.4	A	0.2	0.6	0.5	0.4	0.3	0.3	0.2	0.3	0.3	0.5	0.5	0.2	0.4	0.3	0.3	0.2	0.3	0.47	1.58																						
4-Jan	0.4	0.5	0.6	1.0	0.8	A	1.2	0.8	0.6	0.7	0.6	0.9	0.6	1.0	0.9	0.8	0.9	1.0	0.5	0.6	1.3	0.5	0.7	0.4	0.74	1.26																						
5-Jan	0.4	0.4	0.3	0.4	A	1.6	1.9	0.8	1.0	1.6	1.3	0.6	0.6	0.5	0.4	0.6	0.7	0.9	0.7	0.6	0.5	0.4	0.5	0.5	0.75	1.91																						
6-Jan	0.4	0.7	0.5	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	0.23	0.72																						
7-Jan	0.2	0.2	A	0.2	0.2	0.2	0.2	0.4	0.3	0.3	1.0	1.3	0.4	0.6	0.6	0.7	1.3	0.8	0.4	0.5	0.7	0.6	0.7	0.7	0.54	1.28																						
8-Jan	0.6	A	0.3	0.4	0.4	1.3	0.4	0.4	1.2	0.6	0.2	0.2	0.2	0.3	0.3	0.3	0.5	0.2	0.2	0.2	0.2	0.4	0.2	0.2	0.40	1.32																						
9-Jan	A	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.5	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	N	0.24	0.53																						
10-Jan	N	N	N	N	N	N	C	C	C	C	C	C	0.2	0.2	0.3	0.2	0.3	0.6	0.5	0.3	0.5	0.5	A	0.3	--	0.63																						
11-Jan	0.5	0.4	0.3	0.3	0.3	0.4	0.4	0.3	0.7	0.4	0.4	0.4	0.7	0.4	0.5	0.6	0.4	0.5	0.4	0.4	0.3	A	0.3	0.3	0.41	0.69																						
12-Jan	0.3	0.3	0.4	0.5	0.5	0.4	0.8	0.5	0.7	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.6	0.5	0.6	A	0.5	0.5	0.6	0.53	0.84																						
13-Jan	0.5	0.5	0.4	0.4	0.4	0.6	0.5	0.5	1.5	1.9	0.6	0.7	0.6	0.5	0.8	0.8	1.1	2.4	2.4	A	2.8	1.9	1.6	1.7	1.09	2.78																						
14-Jan	0.5	0.5	0.2	0.2	0.2	0.2	0.4	0.3	0.4	0.4	0.4	0.2	0.4	0.3	0.3	0.3	0.3	0.3	A	0.3	0.3	0.3	0.4	0.2	0.32	0.48																						
15-Jan	0.2	0.2	0.2	0.3	0.3	0.4	1.5	0.8	2.1	0.7	0.5	0.5	0.3	0.3	0.3	0.4	0.3	A	0.4	0.4	0.3	0.2	0.3	0.2	0.48	2.05																						
16-Jan	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.7	0.8	A	0.6	0.5	0.7	1.1	1.0	0.7	0.7	0.51	1.07																						
17-Jan	0.5	0.5	0.3	0.2	0.2	0.2	0.3	2.7	1.4	1.7	1.1	1.2	0.8	0.7	0.5	A	0.7	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.67	2.71																						
18-Jan	0.3	0.3	0.4	0.3	0.3	1.8	0.7	0.6	0.5	0.4	0.5	0.4	0.5	0.4	A	0.4	0.5	0.5	0.5	0.3	0.4	0.3	0.3	0.2	0.47	1.80																						
19-Jan	0.2	0.3	0.3	0.3	0.2	0.2	0.4	0.4	0.6	0.3	0.3	0.4	0.3	A	0.3	0.3	0.3	0.5	0.6	0.5	0.4	0.4	0.2	0.2	0.34	0.61																						
20-Jan	0.2	0.2	0.3	0.2	0.2	0.3	0.6	0.3	0.3	0.3	0.3	0.4	A	0.3	0.3	0.3	0.4	0.3	0.3	0.2	0.2	0.5	0.3	0.5	0.33	0.63																						
21-Jan	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.4	0.3	0.3	A	0.3	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.7	0.3	0.3	0.3	0.30	0.67																						
22-Jan	0.3	0.3	0.5	0.6	0.6	0.6	0.5	0.6	0.7	0.5	A	0.4	0.3	0.4	0.4	0.3	0.4	0.6	1.2	0.7	0.7	0.8	0.5	0.5	0.54	1.20																						
23-Jan	0.6	0.7	0.6	0.8	0.9	1.2	2.1	2.0	1.6	A	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.5	0.6	0.4	0.3	0.7	0.9	0.8	0.79	2.13																						
24-Jan	0.3	0.3	0.4	0.2	0.4	0.5	0.7	0.5	A	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.6	0.3	0.3	0.37	0.73																						
25-Jan	0.3	0.2	0.3	0.3	0.2	0.2	0.3	A	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.25	0.34																						
26-Jan	0.2	0.2	0.2	0.2	0.2	0.2	A	0.3	0.4	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.6	0.6	0.5	0.2	0.4	0.3	0.3	0.29	0.62																						
27-Jan	0.2	0.2	0.2	0.2	0.2	A	0.3	0.3	0.4	0.3	0.3	0.5	0.5	0.3	0.2	0.3	0.2	0.2	0.5	0.9	0.2	0.2	0.2	0.2	0.32	0.89																						
28-Jan	0.2	0.2	0.2	0.3	A	0.4	0.4	0.4	0.3	0.4	0.3	0.4	0.3	0.2	0.3	0.8	0.3	0.4	0.3	0.4	0.2	0.2	0.2	0.2	0.32	0.83																						
29-Jan	0.2	0.2	0.2	A	0.2	0.3	0.4	1.3	1.3	0.7	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.40	1.34																						
30-Jan	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	0.20	0.23																						
31-Jan	0.2	A	0.2	0.3	0.2	0.4	0.6	0.7	0.5	0.4	0.5	0.3	0.3	0.2	0.4	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.31	0.66																						
																								0.38	0.36	0.34	0.35	0.34	0.50	0.63	0.61	0.69	0.55	0.45	0.45	0.39	0.37	0.40	0.44	0.48	0.54	0.53	0.44	0.53	0.50	0.44	0.43	Diurnal Average
																								1.58	1.13	0.78	0.97	0.86	1.80	2.13	2.71	2.05	1.91	1.34	1.25	0.78	0.97	0.89	0.90	1.62	2.40	2.40	1.73	2.78	1.86	1.65	1.80	Diurnal Maximum
C - Calibration																								N - Not Valid				A - Automated Daily Zero Span																				

### Hourly Maximums

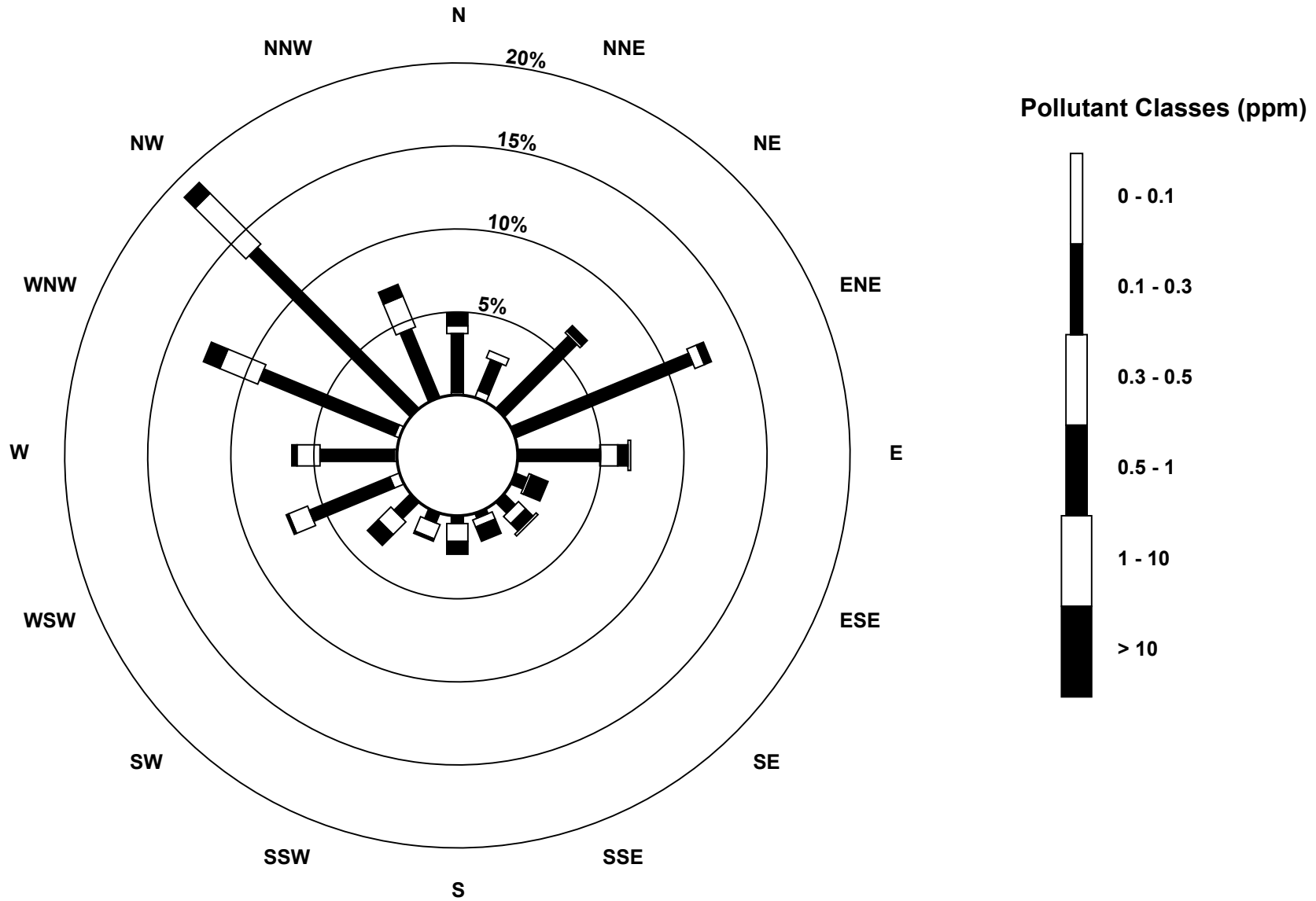
Carbon Monoxide (CO) - ppm  
Henry Pirker - January 2018





**Pollutant Rose**

**Carbon Monoxide (CO) - ppm**  
**Henry Pirker - January 2018**



## Eight Hour Running Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - January 2018

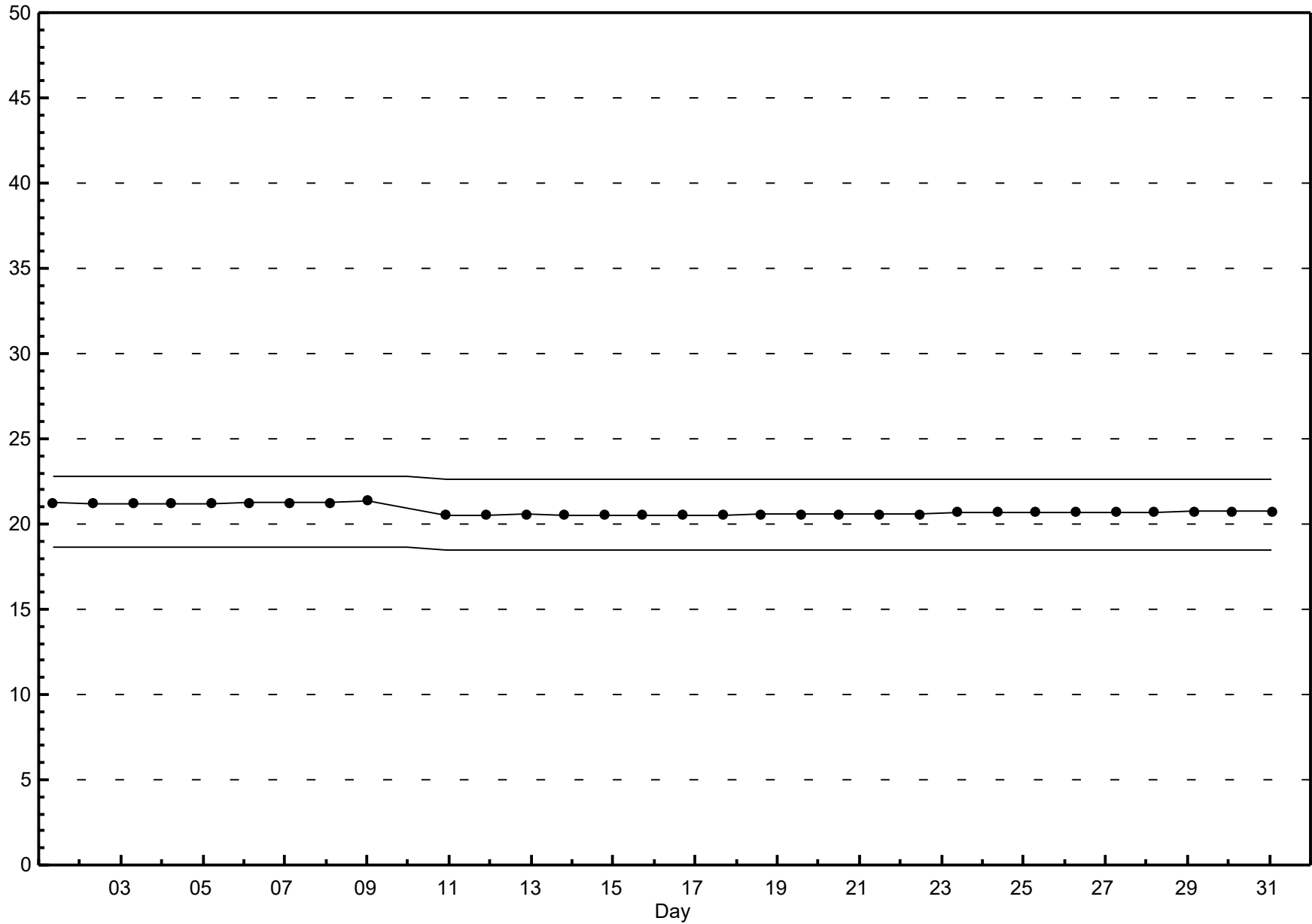
Number of Exceedences (AAAQO): 8-hr: 0	Hours in Service: 744
Maximum Value: 1.47 ppm on Jan 14 00:00	Hours of Data: 728
Minimum Value: 0.15 ppm on Jan 9 06:00	Hours of Missing Data: 16
	Hours of Calibration: 4
	Percent Operational Time: 98.4
Percentiles: P <sub>1</sub> = 0.15 P <sub>10</sub> = 0.18 Q <sub>1</sub> = 0.21 Median = 0.28 Q <sub>3</sub> = 0.38 P <sub>90</sub> = 0.52 P <sub>99</sub> = 1.21	

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-Jan	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	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.39
2-Jan	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.6	0.8	0.9	1.0	1.1	1.3	1.26
3-Jan	1.3	1.3	1.2	1.1	0.9	0.8	0.7	0.6	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.30
4-Jan	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.58
5-Jan	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.5	0.6	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.71
6-Jan	0.4	0.4	0.4	0.4	0.4	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	0.45
7-Jan	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.57
8-Jan	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.47
9-Jan	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22
10-Jan	0.2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.29
11-Jan	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.34
12-Jan	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	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.48
13-Jan	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	0.5	0.5	0.5	0.5	0.7	0.9	0.9	1.1	1.2	1.4	1.5	1.47
14-Jan	1.4	1.2	0.9	0.8	0.7	0.5	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.42
15-Jan	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.48
16-Jan	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.7	0.6	0.67
17-Jan	0.6	0.6	0.6	0.5	0.4	0.4	0.3	0.3	0.4	0.5	0.5	0.6	0.7	0.7	0.7	0.7	0.6	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.73
18-Jan	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	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.38
19-Jan	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.30
20-Jan	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.27
21-Jan	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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	0.28
22-Jan	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	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.47
23-Jan	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.8	0.8	0.9	0.8	0.8	0.8	0.7	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.88
24-Jan	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.40
25-Jan	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	0.2	0.25
26-Jan	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.30
27-Jan	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	0.29
28-Jan	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
29-Jan	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.34
30-Jan	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
31-Jan	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21
1.42 1.28 1.18 1.06 0.93 0.79 0.72 0.80 0.84 0.88 0.85 0.81 0.76 0.71 0.73 0.73 0.64 0.68 0.88 0.94 1.08 1.23 1.38 1.47																									
Diurnal Maximums																									

N - Not Valid  
 Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 5 ppm

### Span Responses

**Carbon Monoxide (CO)**  
**Henry Pirker - January 2018**

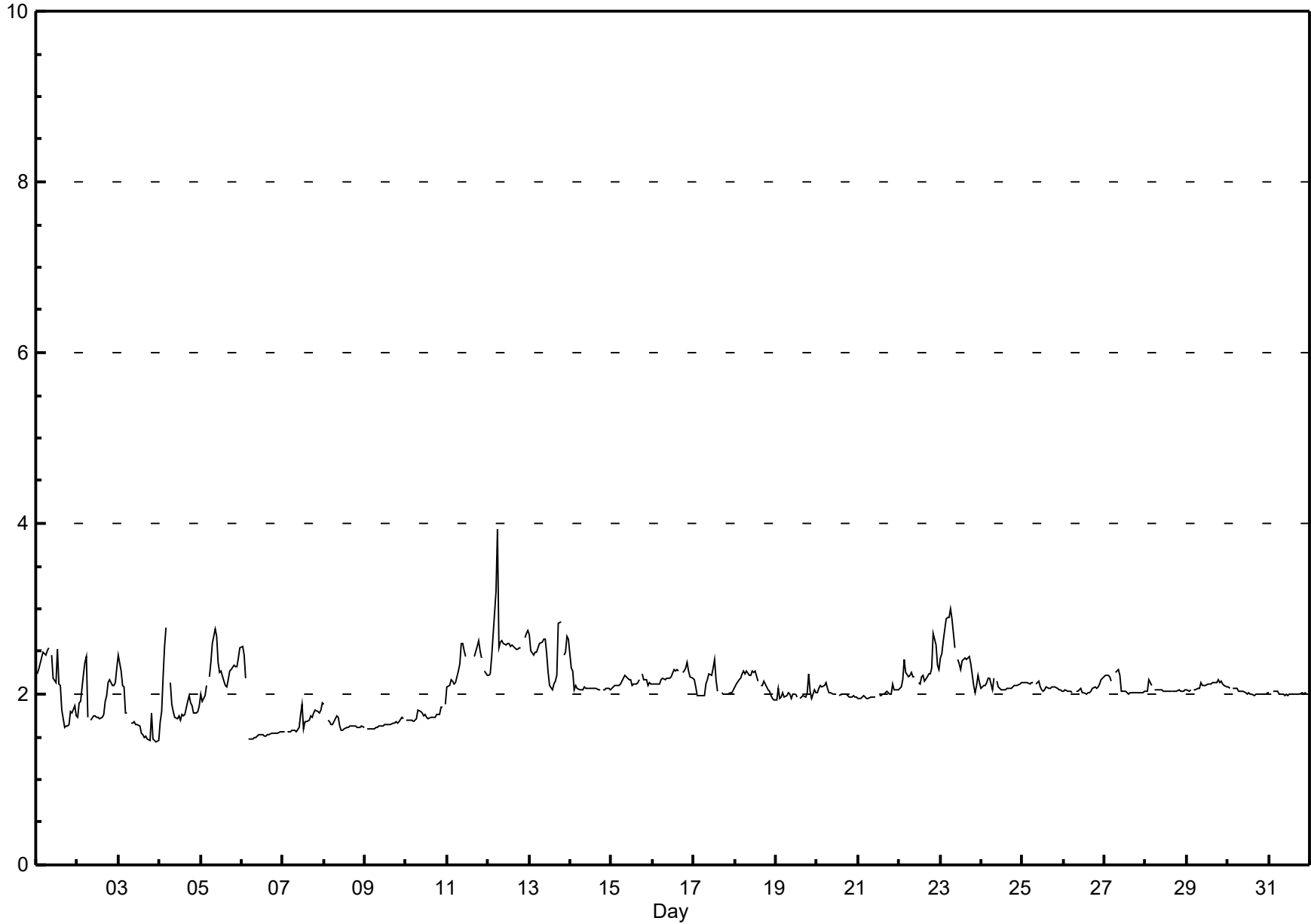


# Hourly Averages

Total Hydrocarbons (THC) - ppm

Henry Pirker - January 2018

Maximum Value: 3.93 ppm on Jan 12 06:00		Maximum Daily Average: 2.64 ppm on Jan 12		Hours in Service: 744																																													
Minimum Value: 1.4 ppm on Jan 3 23:00		Minimum Daily Average: 1.63 ppm on Jan 6		Hours of Data: 708																																													
Maximum Diurnal Average: 2.13 ppm at hour 4		Minimum Diurnal Average: 1.98 ppm at hour 16		Hours of Missing Data: 36																																													
Monthly Average: 2.054 ppm		Percentiles: P <sub>1</sub> = 1.48 P <sub>10</sub> = 1.64 Q <sub>1</sub> = 1.95 Median = 2.05 Q <sub>3</sub> = 2.18 P <sub>90</sub> = 2.43 P <sub>99</sub> = 2.87		Hours of Calibration: 36																																													
				Percent Operational Time: 100.0																																													
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Jan	2.2	2.3	2.3	2.4	2.5	2.4	2.5	2.5	A	2.5	2.2	2.1	2.5	2.1	1.8	1.6	1.6	1.6	1.7	1.8	1.8	1.9	1.7	2.10	2.54																								
2-Jan	1.7	1.9	1.9	2.2	2.4	2.4	1.7	A	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.9	2.0	2.1	2.2	2.1	2.1	2.1	2.3	1.96	2.43																								
3-Jan	2.5	2.3	2.1	2.1	1.8	1.8	A	1.7	1.7	1.7	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.5	1.5	1.8	1.5	1.5	1.4	1.5	1.70	2.45																							
4-Jan	1.7	1.8	2.2	2.6	2.8	A	2.1	1.9	1.8	1.7	1.7	1.7	1.7	1.8	1.7	1.8	1.9	2.0	1.9	1.9	1.8	1.8	1.8	1.9	1.91	2.79																							
5-Jan	2.0	1.9	2.0	2.1	A	2.2	2.4	2.6	2.8	2.7	2.4	2.3	2.3	2.2	2.1	2.1	2.2	2.3	2.3	2.3	2.3	2.3	2.4	2.5	2.28	2.76																							
6-Jan	2.6	2.5	2.2	A	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.63	2.56																							
7-Jan	1.6	1.6	A	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.8	1.9	1.6	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.9	1.9	1.69	1.89																							
8-Jan	1.9	A	1.7	1.7	1.6	1.6	1.7	1.8	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.65	1.88																							
9-Jan	A	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	A	1.64	1.73																							
10-Jan	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.9	A	1.9	1.75	1.88																							
11-Jan	2.1	2.1	2.2	2.1	2.1	2.1	2.3	2.3	2.6	2.6	2.5	2.4	C	C	C	C	2.4	2.6	2.6	2.5	2.4	A	2.3	2.2	2.35	2.63																							
12-Jan	2.2	2.2	2.4	2.7	3.2	3.9	2.5	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.5	2.5	2.5	2.5	2.5	A	2.7	2.7	2.8	2.64	3.93																							
13-Jan	2.7	2.5	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.5	2.2	2.1	2.1	2.1	2.2	2.2	2.8	2.8	A	2.5	2.5	2.7	2.6	2.48	2.85																							
14-Jan	2.3	2.3	2.1	2.1	2.1	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	A	2.0	2.0	2.1	2.1	2.0	2.08	2.30																							
15-Jan	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.2	A	2.2	2.2	2.2	2.1	2.1	2.1	2.14	2.23																							
16-Jan	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	A	2.3	2.3	2.3	2.4	2.3	2.2	2.2	2.21	2.38																							
17-Jan	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.3	2.4	2.2	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.08	2.40																							
18-Jan	2.1	2.1	2.2	2.2	2.2	2.3	2.2	2.3	2.2	2.2	2.3	2.3	2.2	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	1.9	1.9	2.15	2.28																							
19-Jan	1.9	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.2	2.0	1.9	2.0	2.0	2.00	2.23																							
20-Jan	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.02	2.14																							
21-Jan	2.0	2.0	2.0	2.0	2.0	1.9	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	2.1	2.0	2.1	2.0	2.00	2.11																							
22-Jan	2.1	2.1	2.2	2.4	2.3	2.2	2.2	2.3	2.2	2.2	A	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.7	2.6	2.3	2.3	2.25	2.72																							
23-Jan	2.4	2.5	2.6	2.9	2.9	2.9	3.0	2.9	2.5	A	2.4	2.4	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.1	2.0	2.1	2.2	2.1	2.47	3.00																							
24-Jan	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.2	A	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.10	2.19																							
25-Jan	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.09	2.15																								
26-Jan	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.06	2.18																							
27-Jan	2.2	2.2	2.2	2.2	2.2	A	2.3	2.3	2.3	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.10	2.29																							
28-Jan	2.0	2.0	2.2	2.1	A	2.1	2.1	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	2.0	2.0	2.0	2.05	2.16																							
29-Jan	2.0	2.0	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.1	2.1	2.1	2.10	2.17																							
30-Jan	2.1	2.1	A	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.02	2.08																							
31-Jan	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.01	2.04																							
																								2.09	2.08	2.10	2.13	2.13	2.09	2.11	2.08	2.07	2.04	2.03	2.01	1.99	1.98	1.98	2.00	2.04	2.05	2.03	2.03	2.02	2.05	2.06	Diurnal Average		
																								2.70	2.50	2.64	2.89	3.20	3.93	3.00	2.87	2.76	2.69	2.58	2.59	2.59	2.55	2.58	2.55	2.53	2.83	2.85	2.54	2.72	2.65	2.71	2.75	Diurnal Maximum	
C - Calibration																								A - Automated Daily Zero Span																									



# Hourly Maximums

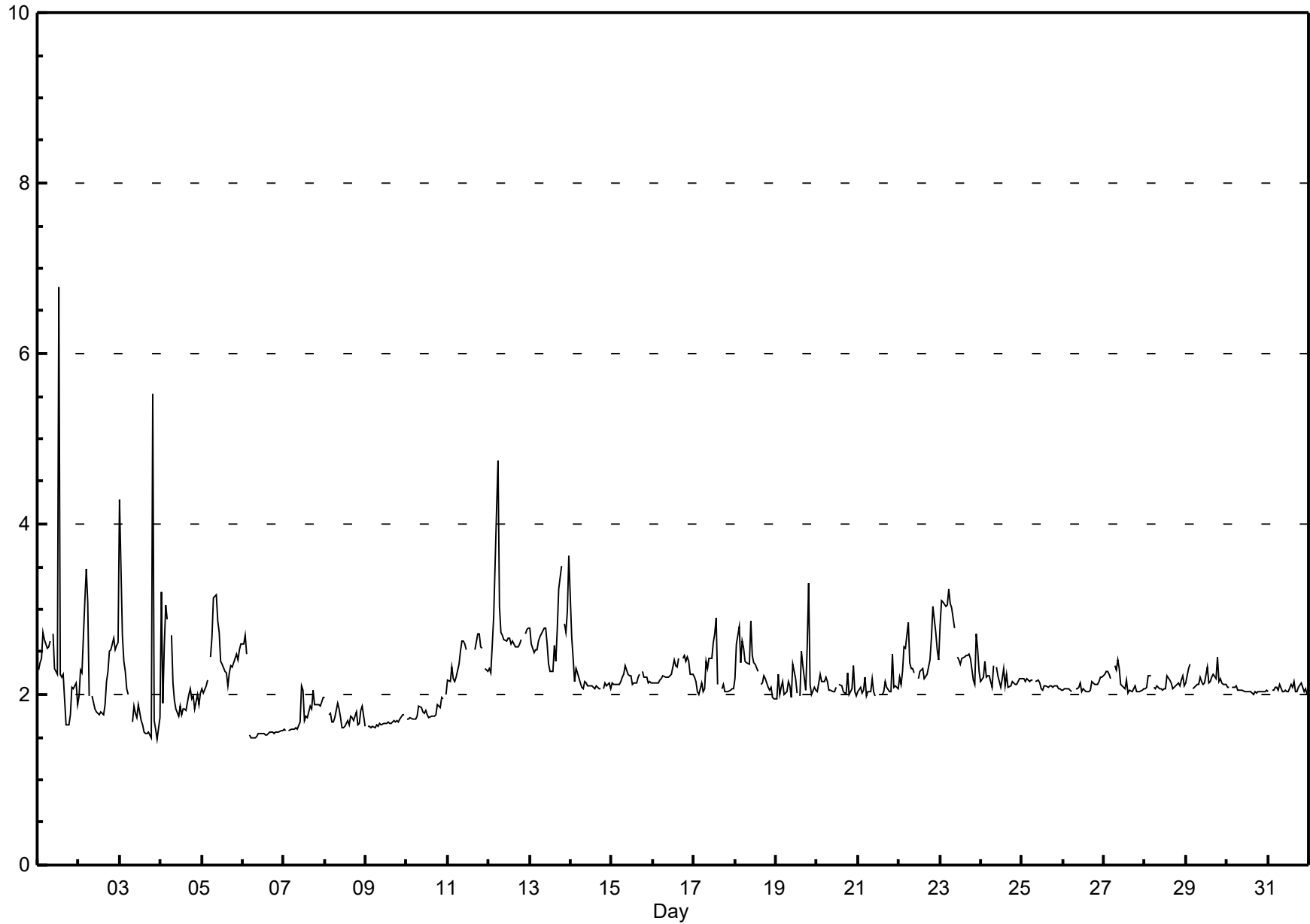
Total Hydrocarbons (THC) - ppm

Henry Pirker - January 2018

Maximum Value: 6.79 ppm on Jan 1 13:00		Maximum Daily Average: 2.80 ppm on Jan 12		Hours in Service: 744																																												
Minimum Value: 1.5 ppm on Jan 3 23:00		Minimum Daily Average: 1.67 ppm on Jan 9		Hours of Data: 708																																												
Maximum Diurnal Average: 2.29 ppm at hour 5		Minimum Diurnal Average: 2.04 ppm at hour 15		Hours of Missing Data: 36																																												
Monthly Average: 2.175 ppm		Percentiles: P <sub>1</sub> = 1.52 P <sub>10</sub> = 1.70 Q <sub>1</sub> = 2.02 Median = 2.12 Q <sub>3</sub> = 2.31 P <sub>90</sub> = 2.63 P <sub>99</sub> = 3.45		Hours of Calibration: 36																																												
Percent Operational Time: 100.0																																																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Jan	2.3	2.4	2.4	2.7	2.6	2.5	2.6	2.6	A	2.7	2.3	2.2	6.8	2.2	2.2	1.6	1.6	1.6	1.8	2.1	2.1	2.1	1.9	2.42	6.79																							
2-Jan	2.0	2.3	2.2	3.1	3.5	3.1	2.0	A	2.0	1.8	1.8	1.8	1.8	1.8	1.9	2.2	2.3	2.5	2.5	2.7	2.5	2.6	2.6	2.29	3.48																							
3-Jan	4.3	2.7	2.4	2.3	2.1	2.0	A	1.7	1.9	1.8	1.7	1.9	1.7	1.7	1.6	1.5	1.5	1.6	1.5	5.5	1.7	1.6	1.5	1.7	2.07	5.52																						
4-Jan	3.2	1.9	2.6	3.1	2.9	A	2.7	2.1	1.9	1.8	1.7	1.9	1.8	1.8	1.8	1.8	2.0	2.1	1.9	2.0	1.8	2.0	1.9	2.0	2.12	3.21																						
5-Jan	2.1	2.0	2.1	2.2	A	2.4	2.7	3.1	3.2	2.9	2.7	2.4	2.3	2.3	2.2	2.1	2.2	2.3	2.3	2.4	2.5	2.4	2.5	2.6	2.44	3.16																						
6-Jan	2.6	2.7	2.5	A	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.68	2.69																						
7-Jan	1.6	1.6	A	1.6	1.6	1.6	1.6	1.6	1.6	1.7	2.1	2.0	1.7	1.7	1.7	1.9	1.8	2.1	1.9	1.9	1.9	1.9	1.9	2.0	1.78	2.10																						
8-Jan	2.0	A	1.8	1.8	1.7	1.7	1.7	1.9	1.8	1.7	1.6	1.6	1.7	1.6	1.7	1.7	1.7	1.7	1.8	1.6	1.7	1.8	1.9	1.6	1.73	1.97																						
9-Jan	A	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	A	1.67	1.76																						
10-Jan	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.8	1.9	1.8	2.0	2.0	A	2.0	1.79	2.00																						
11-Jan	2.2	2.1	2.3	2.2	2.2	2.2	2.3	2.5	2.6	2.6	2.6	2.5	C	C	C	C	2.5	2.7	2.7	2.6	2.5	A	2.3	2.3	2.42	2.71																						
12-Jan	2.3	2.3	2.6	2.9	4.2	4.8	3.0	2.7	2.7	2.6	2.6	2.7	2.7	2.6	2.6	2.6	2.6	2.6	2.6	2.6	A	2.7	2.8	2.8	2.80	4.75																						
13-Jan	2.8	2.6	2.5	2.5	2.5	2.6	2.7	2.7	2.8	2.8	2.6	2.4	2.3	2.3	2.6	2.4	2.8	3.2	3.5	A	2.8	2.7	3.0	3.6	2.72	3.62																						
14-Jan	2.7	2.4	2.1	2.3	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.16	2.68																						
15-Jan	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.2	A	2.3	2.2	2.2	2.1	2.1	2.1	2.18	2.33																						
16-Jan	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.4	2.3	2.3	2.4	A	2.4	2.5	2.4	2.4	2.4	2.2	2.2	2.27	2.47																						
17-Jan	2.2	2.2	2.0	2.0	2.1	2.0	2.1	2.4	2.3	2.4	2.4	2.6	2.7	2.9	2.1	A	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.22	2.90																						
18-Jan	2.2	2.6	2.8	2.4	2.6	2.5	2.4	2.4	2.4	2.9	2.5	2.4	2.3	2.3	A	2.1	2.1	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.32	2.87																						
19-Jan	2.0	2.2	2.0	2.1	2.2	2.0	2.0	2.1	2.1	2.0	2.4	2.2	2.0	A	2.0	2.5	2.3	2.1	2.6	3.3	2.1	2.0	2.1	2.1	2.19	3.31																						
20-Jan	2.0	2.1	2.2	2.1	2.1	2.2	2.2	2.1	2.1	2.0	2.0	2.1	A	2.1	2.1	2.0	2.0	2.0	2.3	2.0	2.1	2.3	2.0	2.0	2.10	2.34																						
21-Jan	2.0	2.1	2.0	2.1	2.2	2.0	2.0	2.0	2.2	2.0	2.0	A	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.5	2.1	2.1	2.1	2.07	2.48																						
22-Jan	2.2	2.1	2.3	2.6	2.5	2.8	2.4	2.3	2.3	2.3	A	2.2	2.3	2.3	2.3	2.2	2.2	2.3	2.4	2.7	3.0	2.7	2.5	2.4	2.40	3.03																						
23-Jan	2.8	3.1	3.1	3.0	3.1	3.2	3.1	3.0	2.8	A	2.4	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.4	2.2	2.1	2.7	2.5	2.3	2.65	3.23																						
24-Jan	2.2	2.2	2.4	2.2	2.2	2.2	2.1	2.3	A	2.3	2.2	2.1	2.2	2.3	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.19	2.39																						
25-Jan	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.12	2.18																						
26-Jan	2.1	2.1	2.1	2.1	2.0	2.0	A	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.09	2.21																						
27-Jan	2.2	2.3	2.3	2.2	2.2	A	2.3	2.3	2.4	2.3	2.1	2.1	2.1	2.2	2.0	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.15	2.41																						
28-Jan	2.1	2.1	2.2	2.2	A	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	2.1	2.1	2.1	2.2	2.2	2.1	2.12	2.22																						
29-Jan	2.1	2.3	2.4	A	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.3	2.1	2.1	2.2	2.2	2.2	2.4	2.2	2.2	2.1	2.1	2.1	2.18	2.44																						
30-Jan	2.1	2.1	A	2.1	2.1	2.1	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	2.0	2.0	2.0	2.1	2.05	2.10																						
31-Jan	2.0	A	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.2	2.0	2.0	2.1	2.1	2.1	2.0	2.1	2.0	2.07	2.16																						
																								2.28	2.21	2.24	2.26	2.29	2.27	2.20	2.21	2.18	2.16	2.13	2.11	2.23	2.09	2.04	2.07	2.08	2.12	2.18	2.26	2.15	2.15	2.15	2.16	Diurnal Average
																								4.29	3.10	3.09	3.11	4.17	4.75	3.08	3.14	3.16	2.87	2.73	2.66	6.79	2.90	2.62	2.56	2.76	3.23	3.51	5.52	3.03	2.73	2.98	3.62	Diurnal Maximum
C - Calibration																								A - Automated Daily Zero Span																								

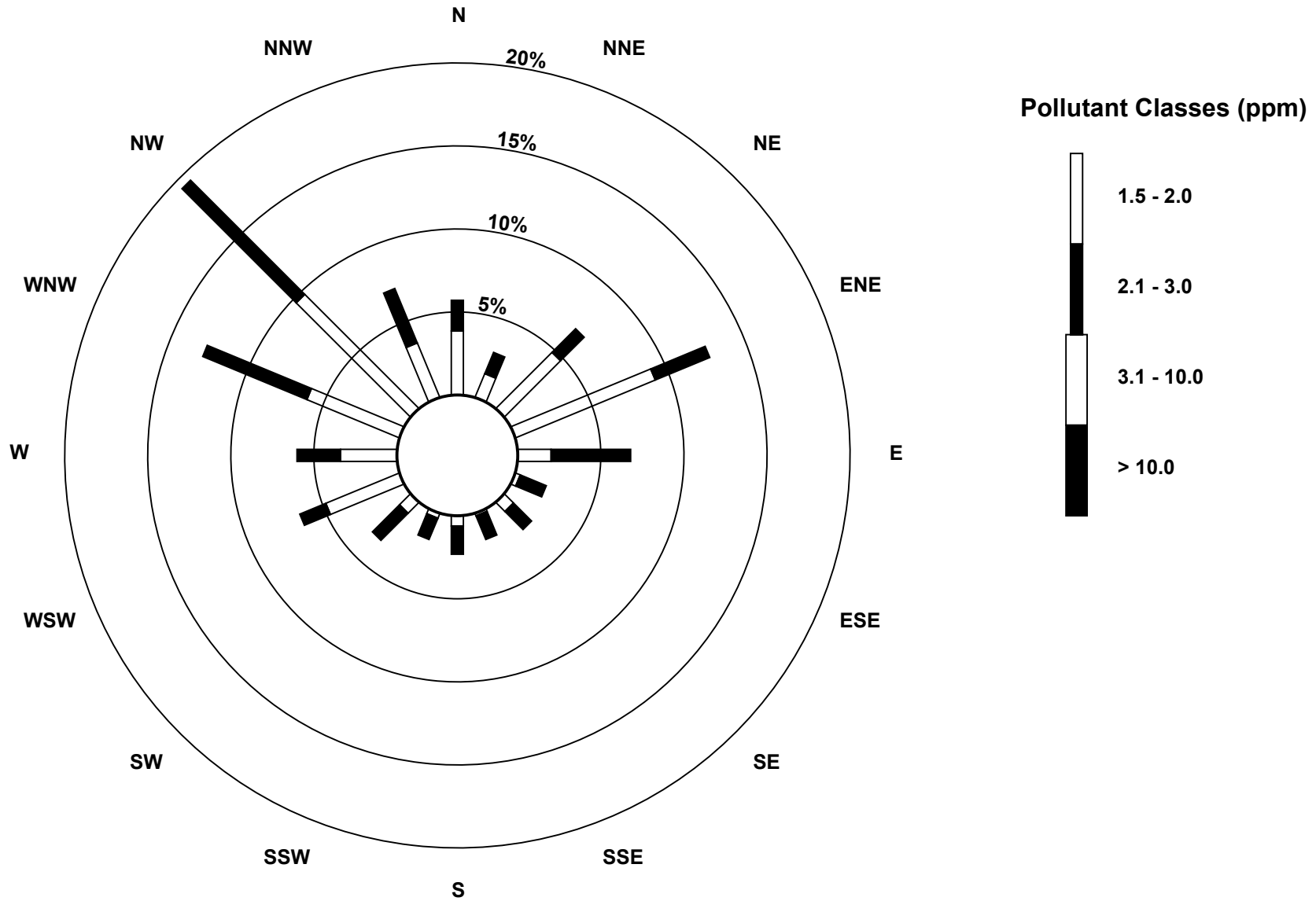
**Hourly Maximums**

**Total Hydrocarbons (THC) - ppm**  
**Henry Pirker - January 2018**



**Pollutant Rose**

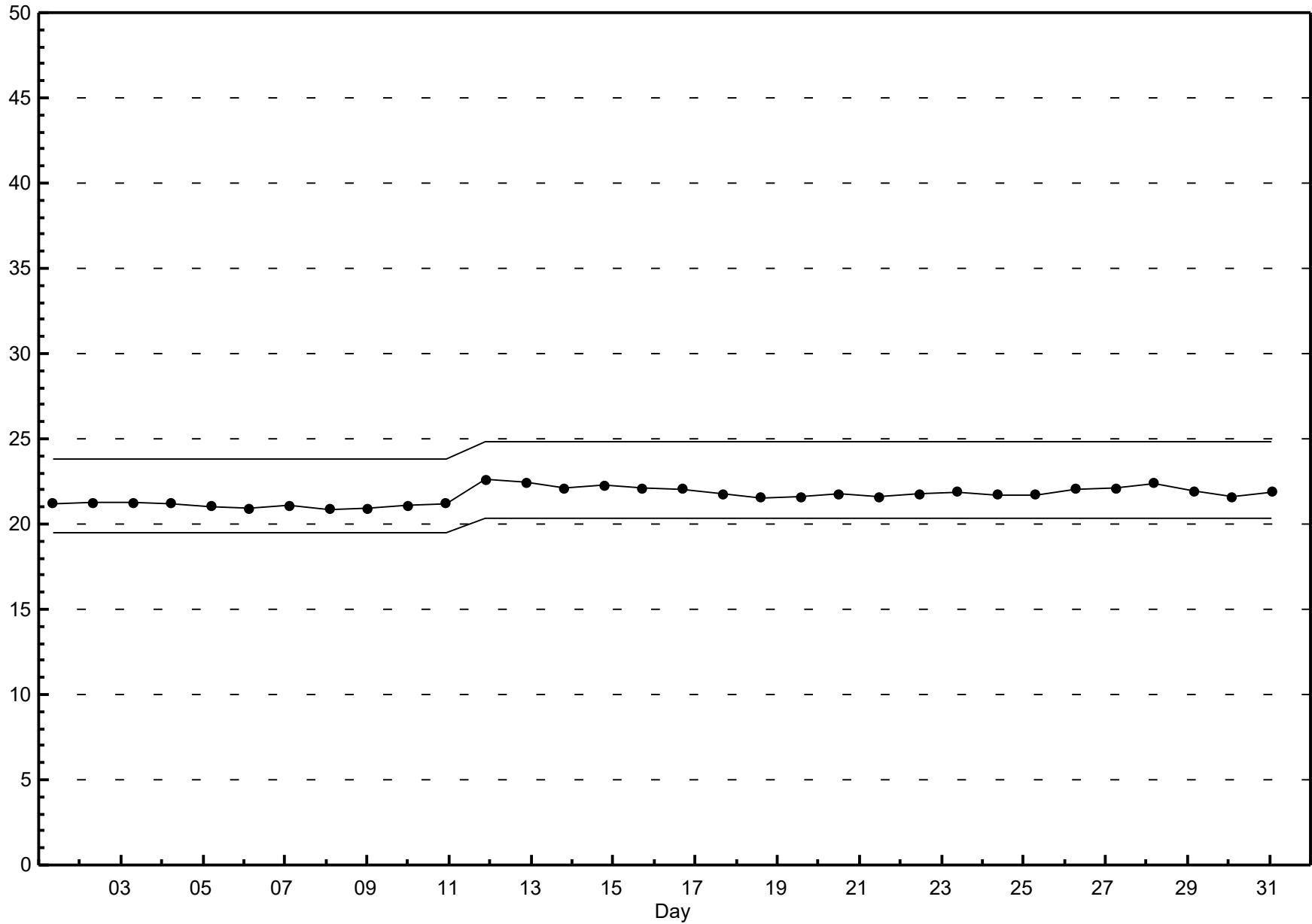
**Total Hydrocarbons (THC) - ppm**  
**Henry Pirker - January 2018**





**Span Responses**

**Total Hydrocarbons (THC)**  
**Henry Pirker - January 2018**

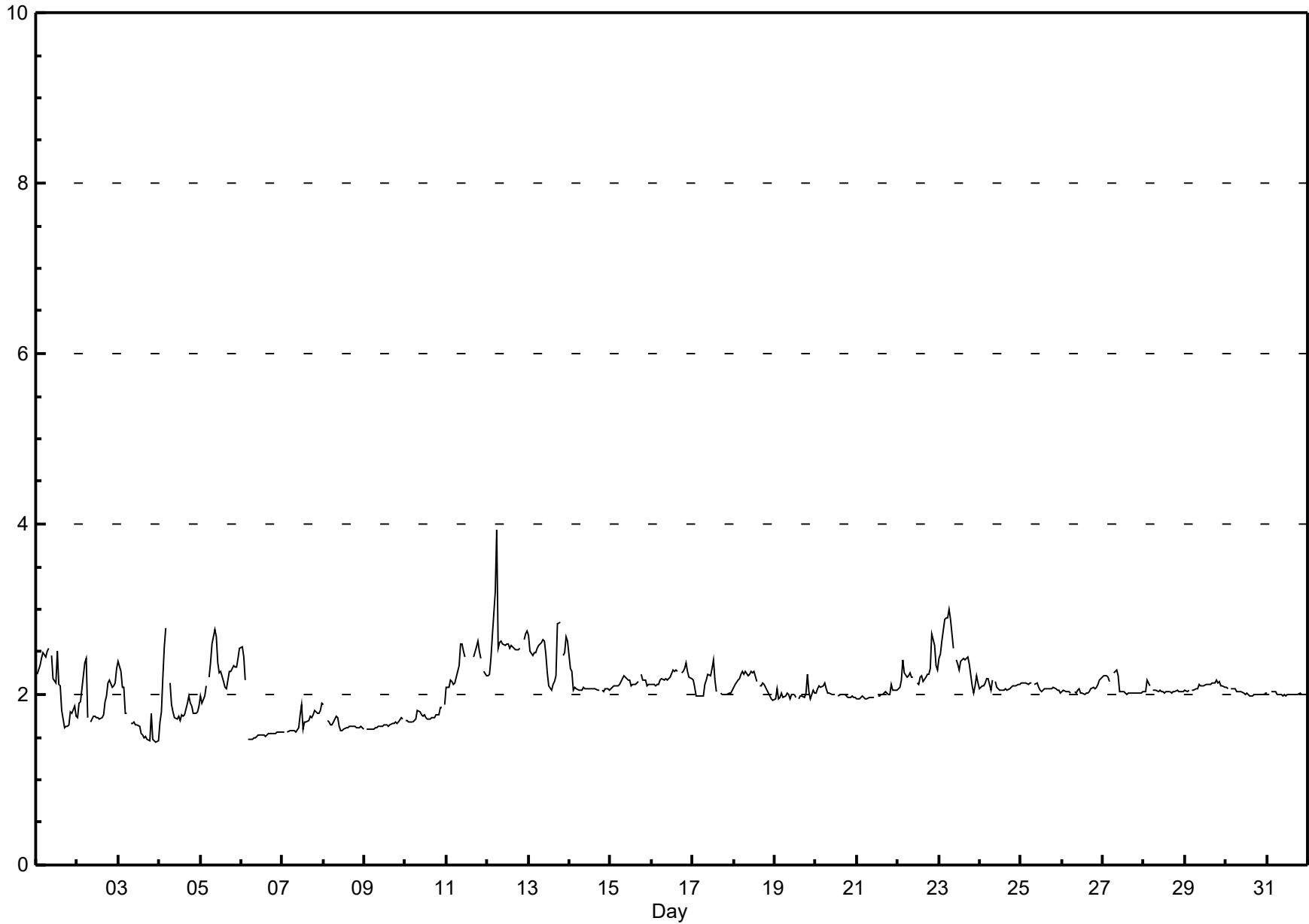


# Hourly Averages

Methane (CH<sub>4</sub>) - ppm

Henry Pirker - January 2018

Maximum Value: 3.93 ppm on Jan 12 06:00 Minimum Value: 1.4 ppm on Jan 3 23:00 Maximum Diurnal Average: 2.13 ppm at hour 4 Monthly Average: 2.052 ppm		Maximum Daily Average: 2.64 ppm on Jan 12 Minimum Daily Average: 1.63 ppm on Jan 6 Minimum Diurnal Average: 1.97 ppm at hour 16 Percentiles: P <sub>1</sub> = 1.48 P <sub>10</sub> = 1.64 Q <sub>1</sub> = 1.95 Median = 2.05 Q <sub>3</sub> = 2.18 P <sub>90</sub> = 2.43 P <sub>99</sub> = 2.87		Hours in Service: 744 Hours of Data: 708 Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0																																												
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Jan	2.2	2.3	2.3	2.4	2.5	2.4	2.5	2.5	A	2.5	2.2	2.1	2.5	2.1	1.8	1.6	1.6	1.6	1.6	1.8	1.8	1.9	1.7	2.10	2.54																							
2-Jan	1.7	1.9	1.9	2.2	2.4	2.4	1.7	A	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.9	2.0	2.1	2.2	2.1	2.1	2.1	2.3	1.95	2.43																							
3-Jan	2.4	2.3	2.1	2.1	1.8	1.8	A	1.7	1.7	1.7	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.5	1.5	1.8	1.5	1.5	1.4	1.5	1.69	2.40																						
4-Jan	1.7	1.8	2.2	2.6	2.8	A	2.1	1.9	1.8	1.7	1.7	1.7	1.7	1.8	1.7	1.8	1.9	2.0	1.9	1.9	1.8	1.8	1.8	1.9	1.91	2.78																						
5-Jan	2.0	1.9	2.0	2.1	A	2.2	2.4	2.6	2.8	2.7	2.4	2.3	2.3	2.2	2.1	2.1	2.2	2.3	2.3	2.3	2.3	2.3	2.4	2.5	2.28	2.75																						
6-Jan	2.6	2.4	2.2	A	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.63	2.56																						
7-Jan	1.6	1.6	A	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.8	1.9	1.6	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.9	1.9	1.69	1.89																						
8-Jan	1.9	A	1.7	1.7	1.6	1.6	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.65	1.88																						
9-Jan	A	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	A	1.64	1.73																						
10-Jan	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.7	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.9	A	1.9	1.75	1.88																						
11-Jan	2.1	2.1	2.2	2.1	2.1	2.1	2.3	2.3	2.6	2.6	2.5	2.4	C	C	C	C	2.4	2.6	2.6	2.5	2.4	A	2.3	2.2	2.34	2.62																						
12-Jan	2.2	2.2	2.4	2.7	3.2	3.9	2.5	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.5	2.6	2.5	2.5	2.5	2.5	A	2.7	2.7	2.8	2.64	3.93																						
13-Jan	2.7	2.5	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.5	2.2	2.1	2.0	2.1	2.2	2.2	2.8	2.8	A	2.5	2.5	2.7	2.6	2.48	2.85																						
14-Jan	2.3	2.3	2.0	2.1	2.1	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	A	2.0	2.0	2.1	2.1	2.0	2.08	2.30																						
15-Jan	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.2	A	2.2	2.2	2.2	2.1	2.1	2.1	2.14	2.23																						
16-Jan	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	A	2.3	2.3	2.3	2.4	2.3	2.2	2.2	2.21	2.38																						
17-Jan	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.3	2.4	2.2	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.08	2.40																						
18-Jan	2.1	2.1	2.2	2.2	2.2	2.3	2.2	2.3	2.2	2.2	2.3	2.3	2.2	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	1.9	1.9	2.15	2.28																						
19-Jan	1.9	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.2	2.0	2.0	2.0	2.00	2.23																						
20-Jan	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.02	2.14																						
21-Jan	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.0	1.99	2.11																						
22-Jan	2.1	2.1	2.2	2.4	2.3	2.2	2.2	2.3	2.2	2.2	A	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.7	2.6	2.3	2.3	2.25	2.72																						
23-Jan	2.4	2.5	2.6	2.9	2.9	2.9	3.0	2.9	2.5	A	2.4	2.4	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.1	2.0	2.1	2.2	2.1	2.46	3.00																						
24-Jan	2.1	2.1	2.1	2.1	2.2	2.2	2.0	2.2	A	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.10	2.19																						
25-Jan	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.09	2.14																						
26-Jan	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.05	2.18																						
27-Jan	2.2	2.2	2.2	2.2	2.2	A	2.3	2.3	2.3	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.10	2.29																						
28-Jan	2.0	2.0	2.2	2.1	A	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.05	2.16																						
29-Jan	2.0	2.0	2.1	A	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.1	2.1	2.1	2.10	2.17																						
30-Jan	2.1	2.1	A	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.02	2.08																						
31-Jan	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.01	2.04																						
																								2.08	2.08	2.09	2.13	2.12	2.13	2.09	2.10	2.08	2.07	2.04	2.03	2.01	1.99	1.98	1.97	2.00	2.03	2.05	2.03	2.02	2.02	2.05	2.06	Diurnal Average
																								2.70	2.50	2.63	2.89	3.20	3.93	3.00	2.87	2.75	2.68	2.57	2.59	2.59	2.55	2.58	2.54	2.52	2.83	2.85	2.54	2.72	2.65	2.71	2.75	Diurnal Maximum
C - Calibration																								A - Automated Daily Zero Span																								



# Hourly Maximums

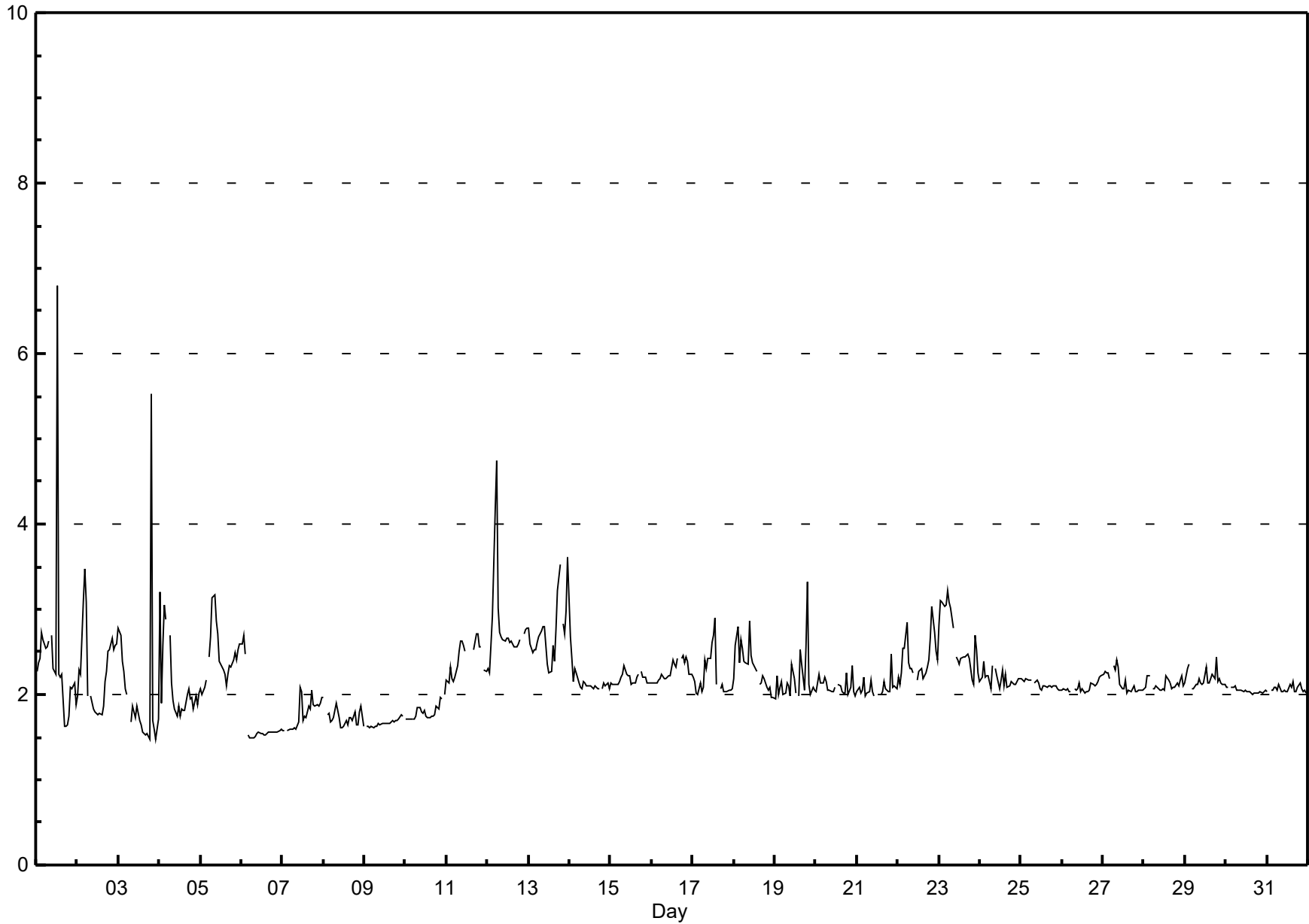
Methane (CH<sub>4</sub>) - ppm

Henry Pirker - January 2018

Maximum Value: 6.79 ppm on Jan 1 13:00		Maximum Daily Average: 2.80 ppm on Jan 12		Hours in Service: 744																							
Minimum Value: 1.5 ppm on Jan 3 23:00		Minimum Daily Average: 1.66 ppm on Jan 9		Hours of Data: 708																							
Maximum Diurnal Average: 2.29 ppm at hour 5		Minimum Diurnal Average: 2.04 ppm at hour 15		Hours of Missing Data: 36																							
Monthly Average: 2.171 ppm		Percentiles: P <sub>1</sub> = 1.53 P <sub>10</sub> = 1.70 Q <sub>1</sub> = 2.02 Median = 2.12 Q <sub>3</sub> = 2.30 P <sub>90</sub> = 2.62 P <sub>99</sub> = 3.45		Hours of Calibration: 36																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jan	2.3	2.4	2.4	2.7	2.6	2.5	2.6	2.6	A	2.7	2.3	2.2	6.8	2.2	2.2	1.6	1.6	1.6	1.7	2.1	2.1	2.1	1.9	2.42	6.79		
2-Jan	2.0	2.3	2.2	3.1	3.5	3.1	2.0	A	2.0	1.8	1.8	1.8	1.8	1.8	1.9	2.1	2.3	2.5	2.5	2.7	2.5	2.6	2.6	2.28	3.48		
3-Jan	2.8	2.7	2.4	2.3	2.1	2.0	A	1.7	1.9	1.8	1.7	1.9	1.7	1.6	1.6	1.5	1.5	1.5	5.5	1.7	1.6	1.5	1.7	2.01	5.52		
4-Jan	3.2	1.9	2.6	3.1	2.9	A	2.7	2.1	1.9	1.8	1.7	1.9	1.8	1.8	1.8	2.0	2.1	1.9	2.0	1.8	2.0	1.9	2.0	2.12	3.21		
5-Jan	2.1	2.0	2.1	2.2	A	2.4	2.7	3.1	3.2	2.9	2.7	2.4	2.4	2.3	2.2	2.1	2.2	2.3	2.3	2.4	2.5	2.4	2.5	2.6	2.43	3.16	
6-Jan	2.6	2.7	2.5	A	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.68	2.69		
7-Jan	1.6	1.6	A	1.6	1.6	1.6	1.6	1.6	1.6	1.7	2.1	2.0	1.7	1.7	1.7	1.9	1.8	2.1	1.9	1.9	1.9	1.9	2.0	1.77	2.09		
8-Jan	2.0	A	1.8	1.8	1.7	1.7	1.7	1.9	1.8	1.7	1.6	1.6	1.7	1.6	1.7	1.7	1.7	1.7	1.8	1.6	1.6	1.8	1.9	1.73	1.96		
9-Jan	A	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	A	1.66	1.76	
10-Jan	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.8	1.9	1.8	2.0	2.0	A	2.0	1.79	2.00	
11-Jan	2.2	2.1	2.3	2.2	2.2	2.2	2.3	2.5	2.6	2.6	2.6	2.5	C	C	C	C	2.5	2.7	2.7	2.6	2.6	A	2.3	2.3	2.42	2.71	
12-Jan	2.3	2.3	2.6	2.9	4.2	4.7	3.0	2.7	2.7	2.6	2.6	2.7	2.7	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	A	2.7	2.8	2.8	2.80	4.75
13-Jan	2.8	2.6	2.5	2.5	2.5	2.6	2.7	2.7	2.8	2.8	2.6	2.4	2.3	2.3	2.6	2.4	2.8	3.2	3.5	A	2.8	2.7	3.0	3.6	2.72	3.62	
14-Jan	2.7	2.4	2.1	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.15	2.67	
15-Jan	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.2	A	2.3	2.2	2.2	2.1	2.1	2.1	2.18	2.34	
16-Jan	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.4	2.4	2.3	2.4	A	2.4	2.5	2.4	2.4	2.4	2.2	2.2	2.27	2.46	
17-Jan	2.2	2.2	2.0	2.0	2.1	2.0	2.1	2.4	2.3	2.4	2.4	2.6	2.7	2.9	2.1	A	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.22	2.91	
18-Jan	2.2	2.6	2.8	2.4	2.6	2.5	2.4	2.4	2.4	2.9	2.5	2.4	2.3	2.3	A	2.1	2.1	2.2	2.2	2.1	2.0	2.1	2.0	2.0	2.32	2.87	
19-Jan	2.0	2.2	2.0	2.1	2.2	2.0	2.0	2.1	2.1	2.0	2.4	2.2	2.0	A	2.0	2.5	2.3	2.1	2.6	3.3	2.1	2.0	2.1	2.0	2.18	3.32	
20-Jan	2.0	2.1	2.2	2.1	2.1	2.2	2.2	2.1	2.0	2.0	2.0	2.1	A	2.1	2.1	2.0	2.0	2.0	2.3	2.0	2.1	2.3	2.0	2.0	2.10	2.34	
21-Jan	2.0	2.1	2.0	2.1	2.2	2.0	2.0	2.0	2.2	2.0	2.0	A	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.5	2.1	2.1	2.1	2.07	2.48	
22-Jan	2.2	2.1	2.3	2.5	2.5	2.8	2.4	2.3	2.3	2.2	A	2.2	2.3	2.3	2.3	2.2	2.2	2.3	2.4	2.7	3.0	2.7	2.5	2.4	2.40	3.03	
23-Jan	2.8	3.1	3.1	3.0	3.1	3.2	3.1	3.0	2.8	A	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.5	2.4	2.2	2.1	2.7	2.5	2.3	2.65	3.23	
24-Jan	2.2	2.2	2.4	2.2	2.2	2.2	2.1	2.3	A	2.3	2.2	2.1	2.2	2.3	2.1	2.2	2.1	2.1	2.2	2.1	2.1	2.2	2.2	2.2	2.19	2.39	
25-Jan	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.12	2.18	
26-Jan	2.1	2.1	2.1	2.1	2.0	2.0	A	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.09	2.21	
27-Jan	2.2	2.3	2.3	2.2	2.2	A	2.3	2.3	2.4	2.3	2.1	2.1	2.1	2.2	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.15	2.41	
28-Jan	2.1	2.1	2.2	2.2	A	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	2.1	2.1	2.1	2.2	2.2	2.1	2.11	2.22	
29-Jan	2.1	2.3	2.4	A	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.3	2.1	2.1	2.2	2.2	2.2	2.4	2.2	2.2	2.1	2.1	2.1	2.18	2.45	
30-Jan	2.1	2.1	A	2.1	2.1	2.1	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	2.0	2.0	2.0	2.0	2.05	2.10	
31-Jan	2.0	A	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.2	2.0	2.0	2.1	2.1	2.1	2.0	2.1	2.0	2.06	2.15	
		2.22	2.21	2.24	2.26	2.29	2.27	2.20	2.20	2.18	2.16	2.13	2.11	2.23	2.09	2.04	2.07	2.08	2.12	2.17	2.26	2.15	2.14	2.15	2.16		Diurnal Average
		3.21	3.10	3.09	3.10	4.18	4.75	3.08	3.13	3.16	2.87	2.72	2.65	6.79	2.91	2.62	2.57	2.76	3.23	3.52	5.52	3.03	2.73	2.98	3.62		Diurnal Maximum
C - Calibration										A - Automated Daily Zero Span																	

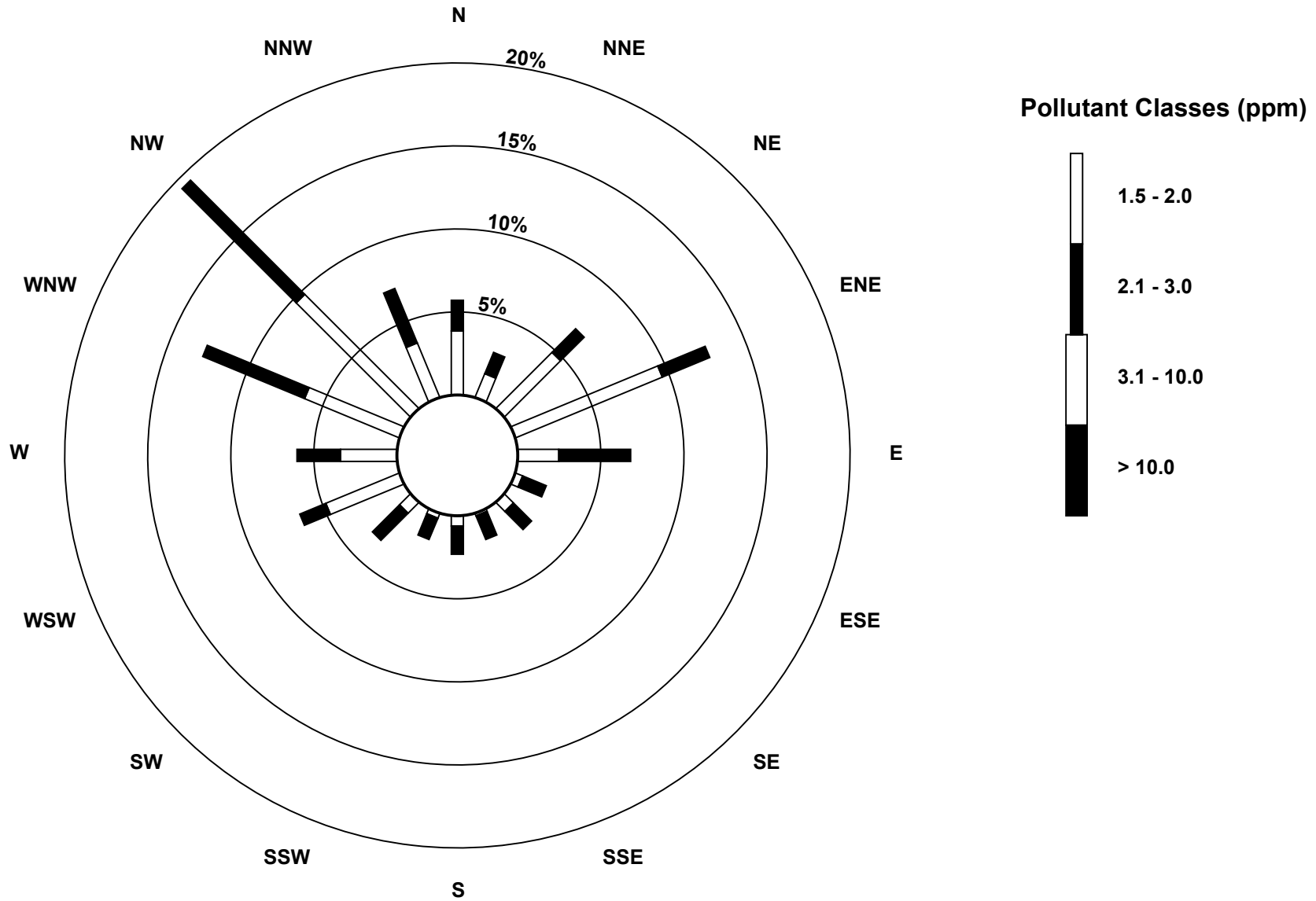
### Hourly Maximums

Methane (CH<sub>4</sub>) - ppm  
Henry Pirker - January 2018



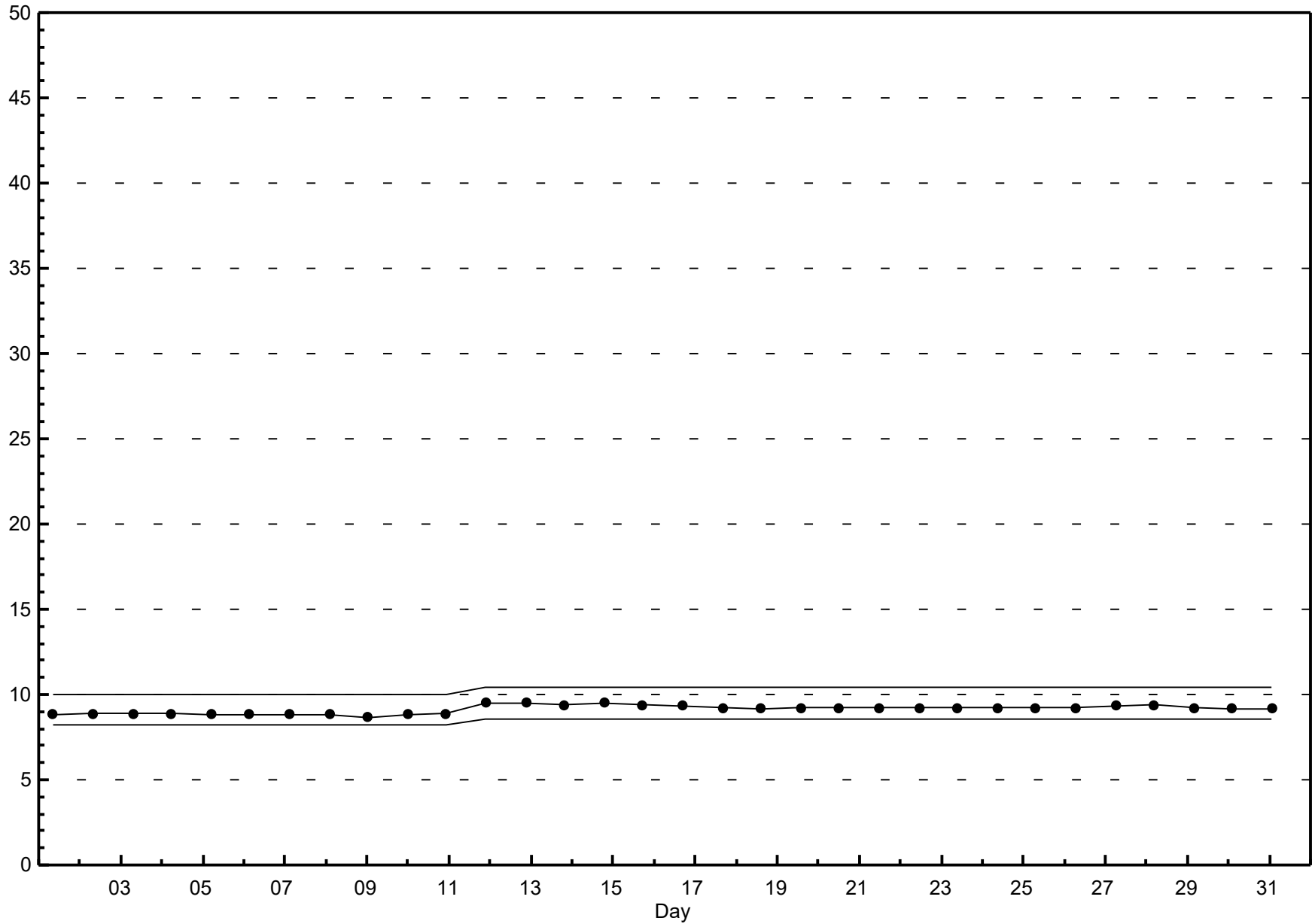
**Pollutant Rose**

**Methane (CH<sub>4</sub>) - ppm**  
**Henry Pirker - January 2018**



### Span Responses

Methane (CH<sub>4</sub>)  
Henry Pirker - January 2018



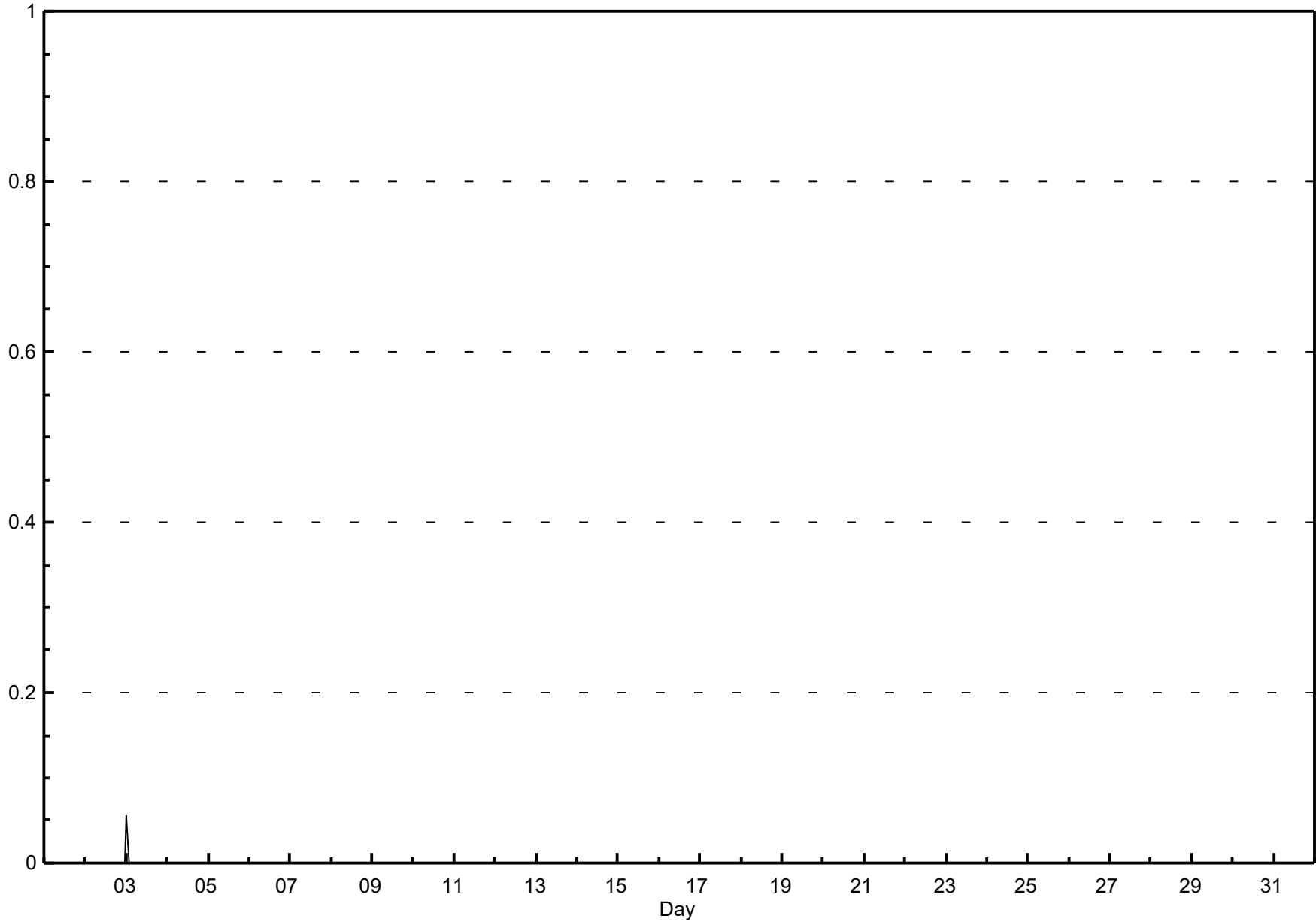
## Hourly Averages

## Non Methane Hydrocarbon (NMHC) - ppm

### Henry Pirker - January 2018

Maximum Value: 0.06 ppm on Jan 3 01:00      Maximum Daily Average: 0.00 ppm on Jan 3 Minimum Value: 0.0 ppm on Jan 2 03:00      Minimum Daily Average: 0.00 ppm on Jan 7 Maximum Diurnal Average: 0.00 ppm at hour 1      Minimum Diurnal Average: 0.00 ppm at hour 9 Monthly Average: 0.000 ppm      Percentiles: P <sub>1</sub> = 0.00 P <sub>10</sub> = 0.00 Q <sub>1</sub> = 0.00 Median = 0.00 Q <sub>3</sub> = 0.00 P <sub>90</sub> = 0.00 P <sub>99</sub> = 0.00																								Hours in Service: 744 Hours of Data: 708 Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
2-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
3-Jan	0.1	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.06
4-Jan	0.0	0.0	0.0	0.0	0.0	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
5-Jan	0.0	0.0	0.0	0.0	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
6-Jan	0.0	0.0	0.0	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
7-Jan	0.0	0.0	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
8-Jan	0.0	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
9-Jan	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
10-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.00	0.00
11-Jan	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	C	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.00
12-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.00
13-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
14-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
15-Jan	0.0	0.0	0.0	0.0	0.0	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
16-Jan	0.0	0.0	0.0	0.0	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
17-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
18-Jan	0.0	0.0	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
19-Jan	0.0	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
20-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
21-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
22-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
23-Jan	0.0	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
24-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
25-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
26-Jan	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
27-Jan	0.0	0.0	0.0	0.0	0.0	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
28-Jan	0.0	0.0	0.0	0.0	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
29-Jan	0.0	0.0	0.0	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
30-Jan	0.0	0.0	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
31-Jan	0.0	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
																								Diurnal Average		
																								Diurnal Maximum		
C - Calibration      A - Automated Daily Zero Span																										



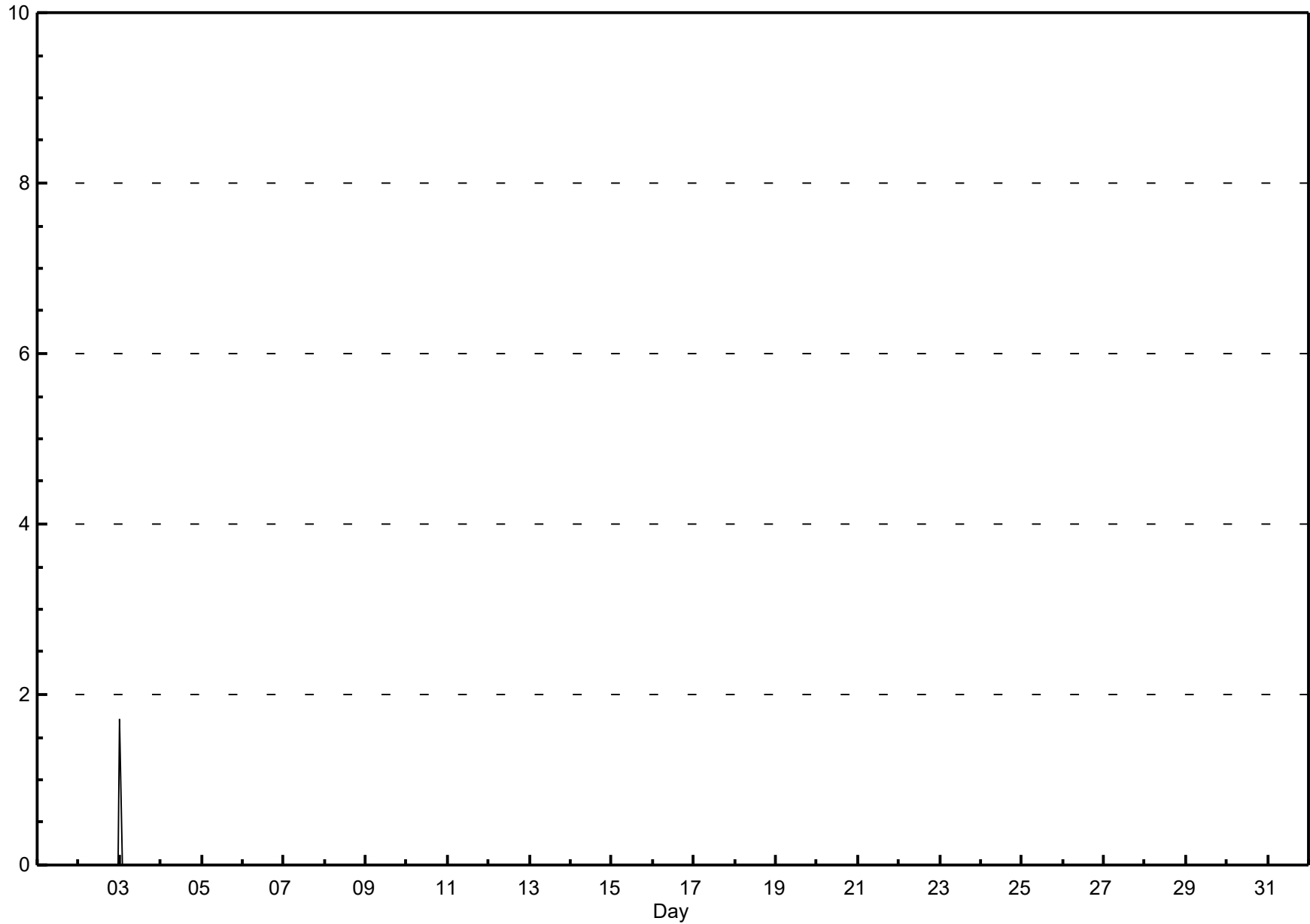


## Hourly Maximums

## Non Methane Hydrocarbon (NMHC) - ppm

### Henry Pirker - January 2018

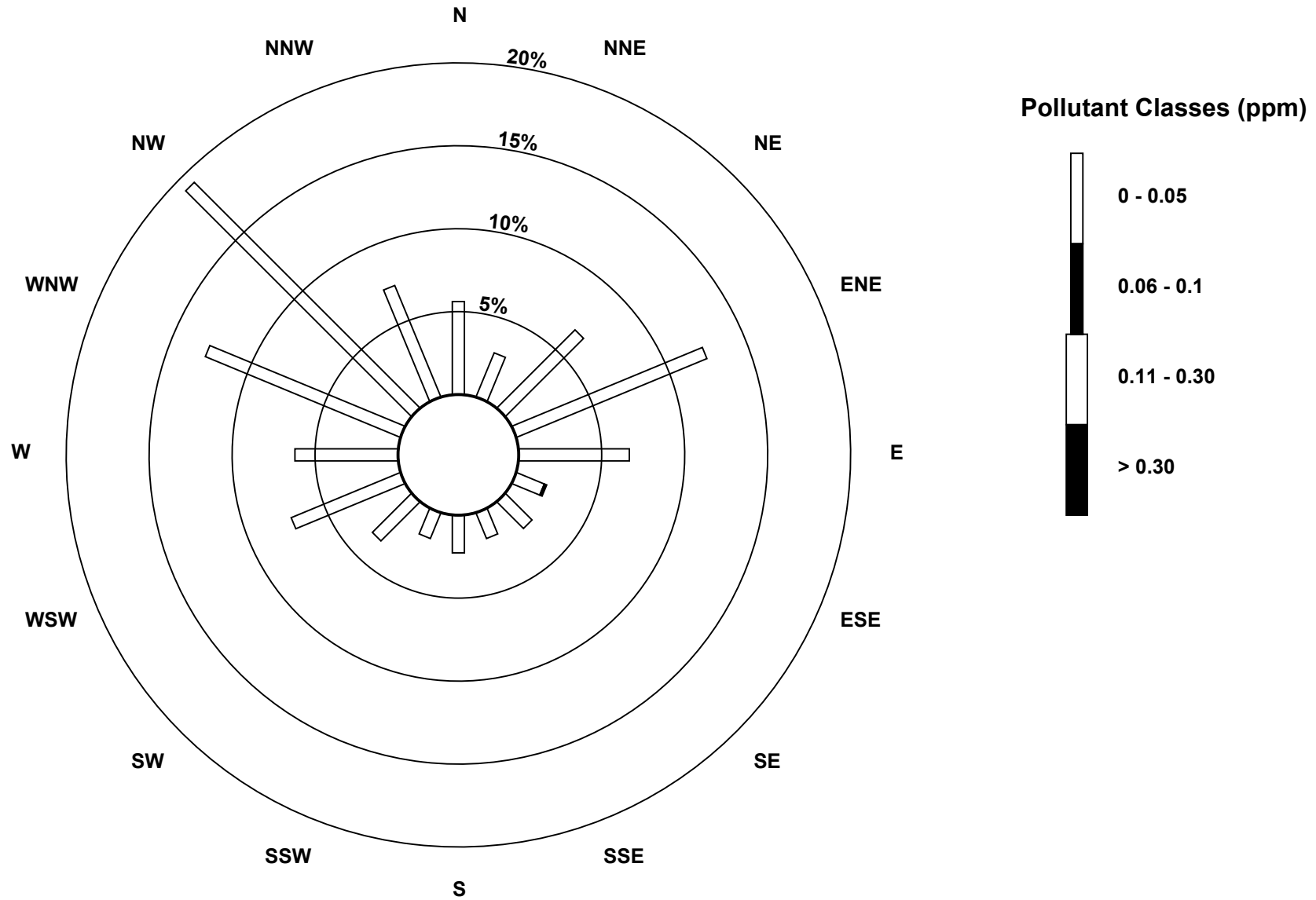
Maximum Value: 1.71 ppm on Jan 3 01:00		Maximum Daily Average: 0.07 ppm on Jan 3		Hours in Service: 744																																														
Minimum Value: 0.0 ppm on Jan 7 06:00		Minimum Daily Average: 0.00 ppm on Jan 30		Hours of Data: 708																																														
Maximum Diurnal Average: 0.06 ppm at hour 1		Minimum Diurnal Average: 0.00 ppm at hour 7		Hours of Missing Data: 36																																														
Monthly Average: 0.003 ppm		Percentiles: P <sub>1</sub> = 0.00 P <sub>10</sub> = 0.00 Q <sub>1</sub> = 0.00 Median = 0.00 Q <sub>3</sub> = 0.00 P <sub>90</sub> = 0.00 P <sub>99</sub> = 0.00		Hours of Calibration: 36																																														
				Percent Operational Time: 100.0																																														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																										
1-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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																							
2-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																							
3-Jan	1.7	0.0	0.0	0.0	0.0	0.0	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	0.07	1.71																							
4-Jan	0.0	0.0	0.0	0.0	0.0	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																							
5-Jan	0.0	0.0	0.0	0.0	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																							
6-Jan	0.0	0.0	0.0	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																							
7-Jan	0.0	0.0	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																							
8-Jan	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																							
9-Jan	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	0.00	0.00																							
10-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.00	0.00																							
11-Jan	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	C	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.00																								
12-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.00																								
13-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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																								
14-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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																								
15-Jan	0.0	0.0	0.0	0.0	0.0	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																								
16-Jan	0.0	0.0	0.0	0.0	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																								
17-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																								
18-Jan	0.0	0.0	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																								
19-Jan	0.0	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																								
20-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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																								
21-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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																								
22-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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																								
23-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																								
24-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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																								
25-Jan	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																								
26-Jan	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																								
27-Jan	0.0	0.0	0.0	0.0	0.0	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																								
28-Jan	0.0	0.0	0.0	0.0	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																								
29-Jan	0.0	0.0	0.0	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																								
30-Jan	0.0	0.0	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																								
31-Jan	0.0	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																								
																								0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Diurnal Average		
																								1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Diurnal Maximum	
C - Calibration																								A - Automated Daily Zero Span																										

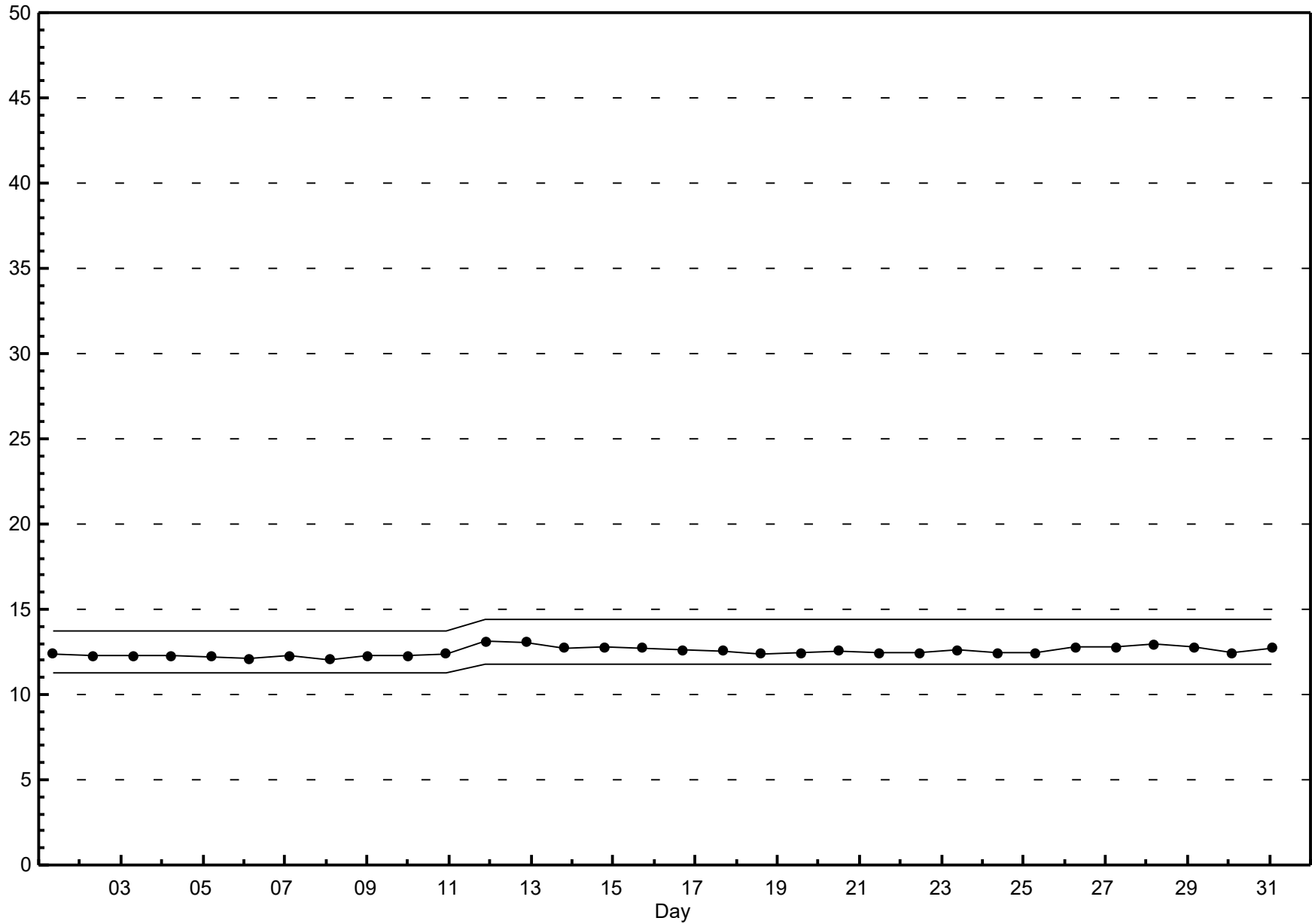


**Pollutant Rose**

**Non Methane Hydrocarbon (NMHC) - ppm**

**Henry Pirker - January 2018**





## Hourly Averages

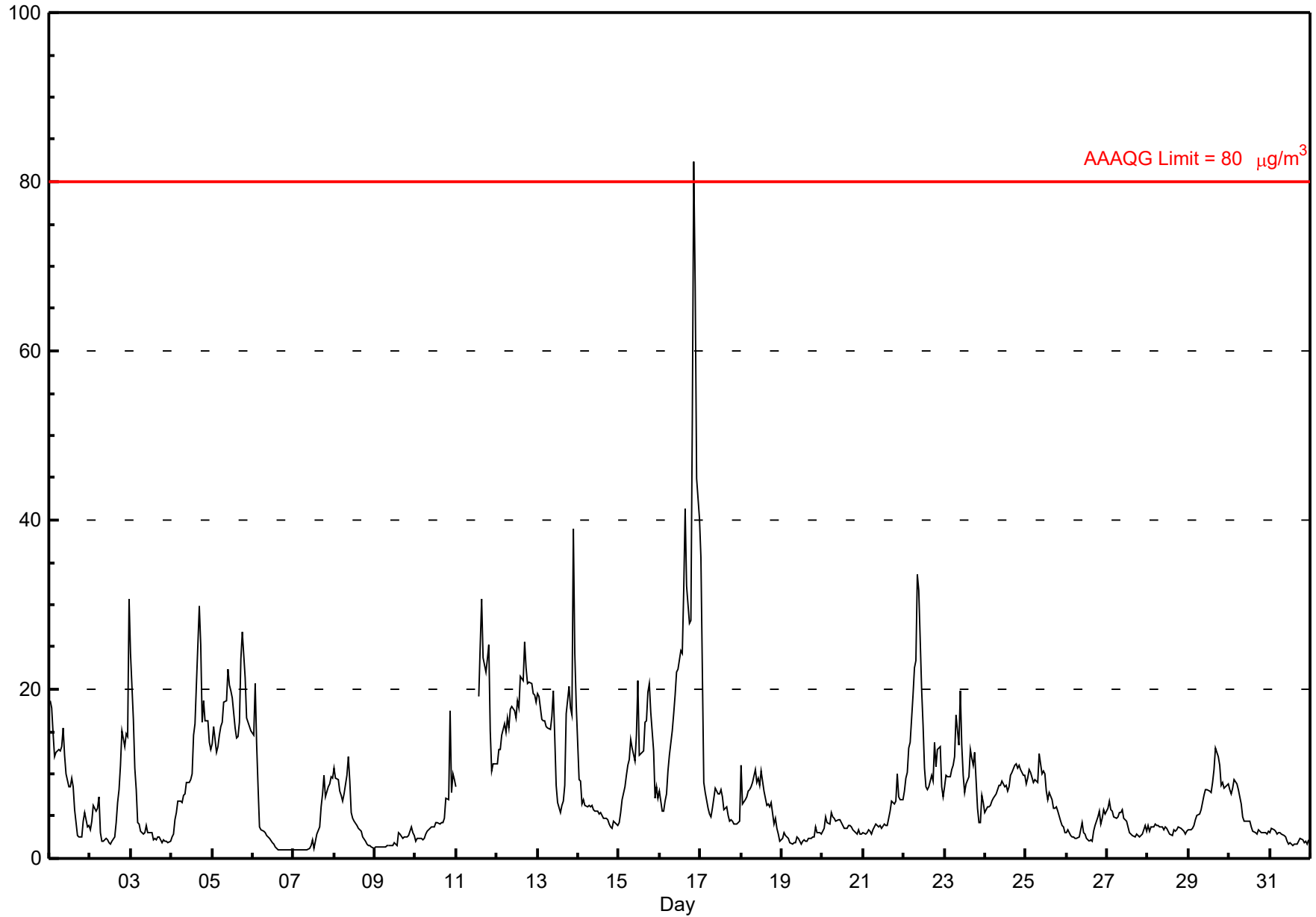
## Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

### Henry Pirker - January 2018

Number of Exceedences: 1-hr: 1 24-hr: 0	Hours in Service: 744
Maximum Value: 82.4 µg/m <sup>3</sup> on Jan 16 21:00	Maximum Daily Average: 27.0 µg/m <sup>3</sup> on Jan 16
Minimum Value: 1 µg/m <sup>3</sup> on Jan 6 18:00	Hours of Data: 732
Maximum Diurnal Average: 10.2 µg/m <sup>3</sup> at hour 21	Hours of Missing Data: 12
Monthly Average: 8.25 µg/m <sup>3</sup>	Hours of Calibration: 0
Minimum Daily Average: 2.0 µg/m <sup>3</sup> on Jan 9	Percent Operational Time: 98.4
Minimum Diurnal Average: 6.9 µg/m <sup>3</sup> at hour 5	
Percentiles: P <sub>1</sub> = 1.0 P <sub>10</sub> = 2.1 Q <sub>1</sub> = 3.1 Median = 5.9 Q <sub>3</sub> = 10.5 P <sub>90</sub> = 17.7 P <sub>99</sub> = 38.1	

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-Jan	19	18	15	12	12	13	13	13	15	12	10	8	8	10	9	6	3	3	3	3	4	5	4	4	9.2	18.7																						
2-Jan	3	4	6	6	6	7	3	2	2	2	2	2	2	3	4	7	8	11	15	13	15	14	31	7.1	30.7																							
3-Jan	24	16	11	8	4	4	3	3	3	4	3	3	3	2	2	3	3	2	2	2	2	2	2	4.8	24.3																							
4-Jan	3	3	5	5	7	7	7	7	8	9	9	9	10	15	16	21	30	25	16	19	16	16	14	13	12.0	29.8																						
5-Jan	14	16	13	13	15	16	16	18	19	22	20	20	19	15	14	14	16	24	27	21	17	16	16	15	17.3	26.8																						
6-Jan	15	21	14	8	4	3	3	3	3	3	2	2	2	1	1	1	1	1	1	1	1	1	1	3.9	20.7																							
7-Jan	1	1	1	1	1	1	1	1	1	1	2	2	1	2	3	4	6	8	10	7	8	9	10	9	3.8	9.8																						
8-Jan	11	10	9	8	7	7	8	10	12	9	5	5	4	4	4	3	3	2	2	2	2	1	1	1	5.4	12.0																						
9-Jan	1	1	1	1	1	1	1	1	2	2	2	2	2	2	3	3	2	2	3	3	3	4	3	3	2.0	3.7																						
10-Jan	2	2	2	2	2	2	3	3	4	4	4	4	4	4	4	4	4	5	7	7	17	8	10	9	5.0	17.5																						
11-Jan	8	N	N	N	N	N	N	N	N	N	N	N	N	19	25	31	24	22	24	25	15	10	11	11	--	30.7																						
12-Jan	11	13	13	15	16	15	17	15	18	18	17	17	19	18	22	21	26	23	21	21	21	20	19	19	17.9	25.7																						
13-Jan	19	19	16	16	16	16	15	15	17	20	14	9	7	5	6	7	9	17	20	18	17	39	24	18	15.9	39.0																						
14-Jan	9	9	6	7	6	6	6	6	6	6	6	6	5	5	5	5	5	5	4	4	4	4	4	4	5.6	9.4																						
15-Jan	4	5	7	8	10	11	12	14	13	11	15	21	12	12	13	16	16	20	21	17	13	7	8	7	12.3	21.0																						
16-Jan	8	6	6	7	8	10	12	15	17	19	22	22	25	24	32	41	32	28	28	52	82	68	45	40	27.0	82.4																						
17-Jan	36	22	9	8	6	5	5	6	7	8	8	8	8	7	6	6	5	4	5	4	4	4	4	4	7.9	35.6																						
18-Jan	11	6	7	7	8	8	8	9	11	9	9	10	8	7	6	6	6	7	4	5	3	3	2	2	7.1	11.0																						
19-Jan	2	3	3	3	2	2	2	2	2	3	2	2	2	2	2	2	2	2	3	3	4	3	3	3	2.4	3.7																						
20-Jan	3	4	5	4	4	5	5	5	4	5	5	4	4	4	4	4	4	4	3	3	3	3	3	3	3.9	5.4																						
21-Jan	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	5	6	7	6	7	10	7	7	7	4.8	10.0																						
22-Jan	8	10	10	13	14	19	23	23	34	32	20	16	11	8	8	9	10	9	14	11	13	13	9	7	14.2	33.6																						
23-Jan	9	10	10	10	11	11	12	17	13	20	13	10	8	9	10	13	12	11	13	6	4	4	7	7	10.3	19.8																						
24-Jan	5	6	6	6	7	7	8	8	9	9	9	8	9	8	8	10	10	11	11	11	11	10	10	10	8.6	11.1																						
25-Jan	9	10	11	10	9	9	9	9	12	10	10	10	8	7	8	7	6	6	6	6	4	4	4	3	7.8	12.4																						
26-Jan	3	3	3	3	3	2	2	2	3	4	3	3	2	2	2	2	3	4	5	6	4	5	6	5	3.4	5.8																						
27-Jan	6	7	6	6	5	5	5	5	5	6	5	4	4	3	3	3	3	3	3	3	3	3	4	3	4.2	6.8																						
28-Jan	4	3	4	4	4	4	4	4	4	3	4	4	3	3	3	3	3	4	4	3	3	3	3	3	3.5	4.1																						
29-Jan	3	3	4	4	5	5	5	6	7	7	8	8	8	8	9	10	13	12	11	9	9	8	9	9	7.5	13.1																						
30-Jan	8	8	8	9	9	8	7	7	5	4	4	4	4	4	3	3	3	3	3	3	3	3	3	3	5.1	9.3																						
31-Jan	3	4	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.4	3.6																						
																								8.6	8.2	7.2	7.1	6.9	7.2	7.4	7.9	8.7	8.9	8.0	7.5	7.0	7.1	7.7	8.6	8.8	9.1	9.5	9.5	10.2	9.8	8.5	8.4	Diurnal Average
																								35.6	22.2	16.5	16.3	16.2	19.3	22.5	23.3	33.6	31.8	22.0	22.4	24.7	24.2	31.8	41.4	32.2	27.8	28.1	51.8	82.4	67.7	45.0	40.2	Diurnal Maximum

N - Not Valid  
 Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m<sup>3</sup> Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m<sup>3</sup>



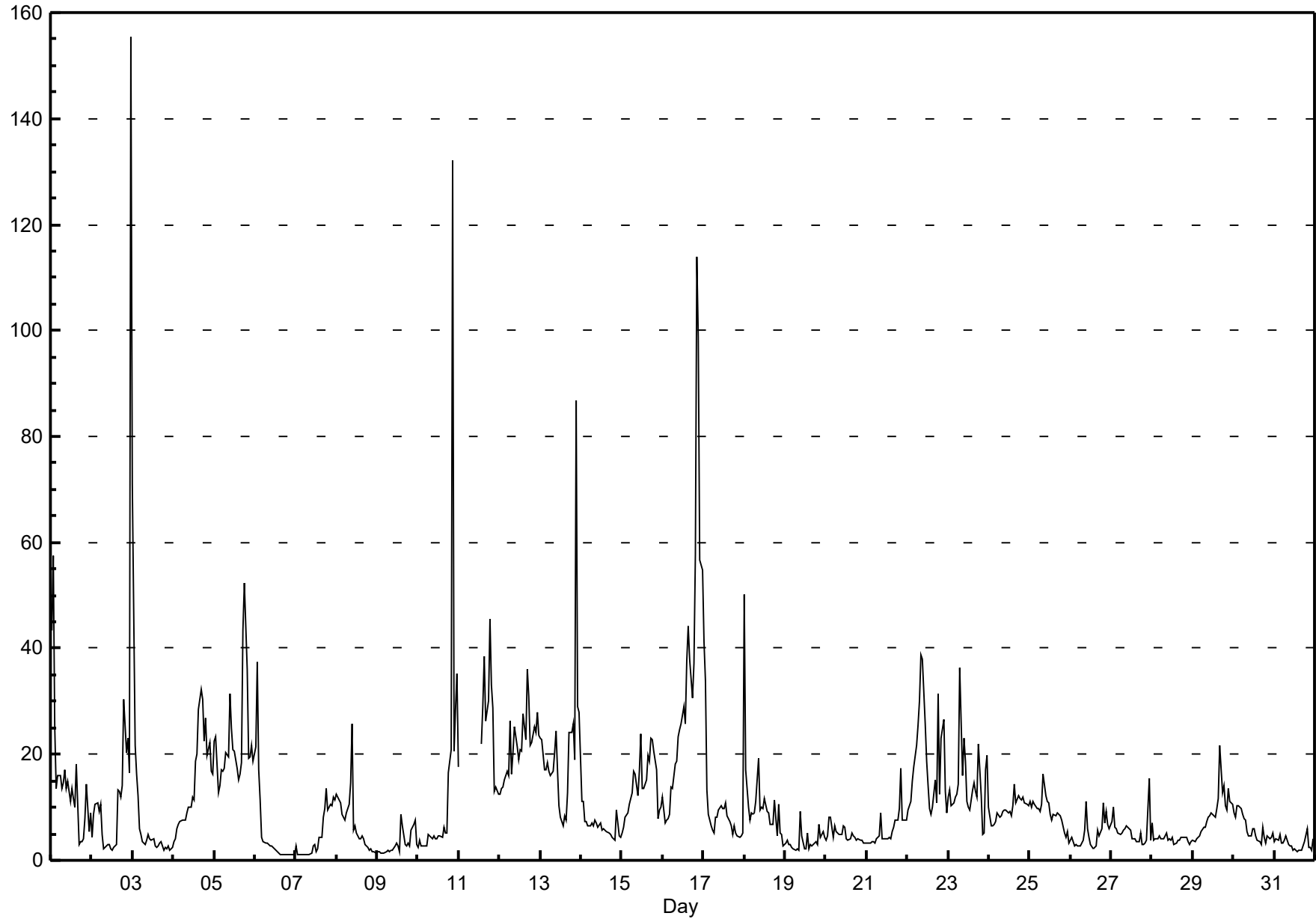
# Hourly Maximums

# Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

## Henry Pirker - January 2018

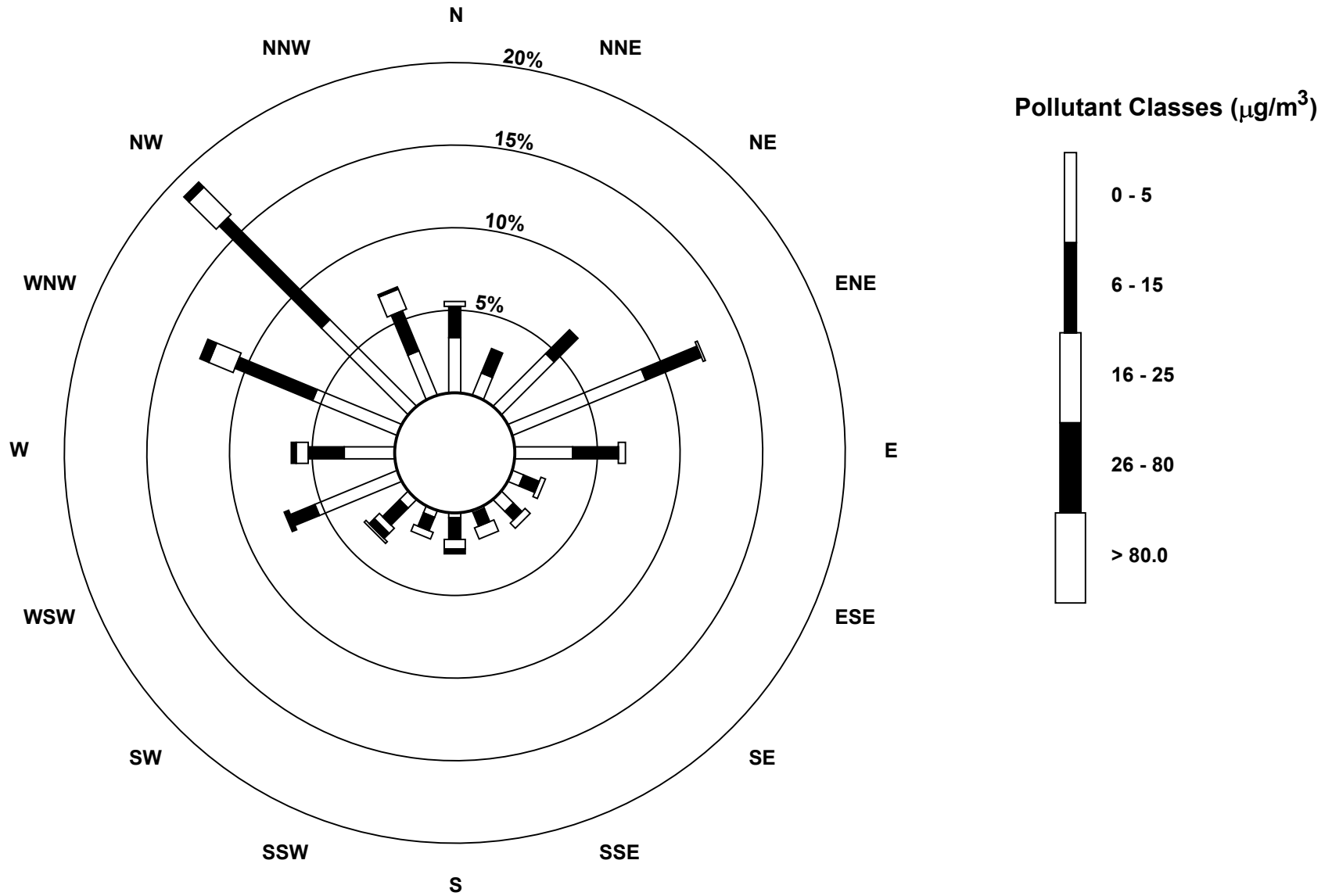
Maximum Value: 155.4 µg/m <sup>3</sup> on Jan 3 00:00 Minimum Value: 1 µg/m <sup>3</sup> on Jan 6 23:00 Maximum Diurnal Average: 17.7 µg/m <sup>3</sup> at hour 21 Monthly Average: 11.11 µg/m <sup>3</sup>		Maximum Daily Average: 33.6 µg/m <sup>3</sup> on Jan 16 Minimum Daily Average: 3.1 µg/m <sup>3</sup> on Jan 31 Minimum Diurnal Average: 7.9 µg/m <sup>3</sup> at hour 5 Percentiles: P <sub>1</sub> = 1.0 P <sub>10</sub> = 2.6 Q <sub>1</sub> = 4.0 Median = 7.6 Q <sub>3</sub> = 13.6 P <sub>90</sub> = 23.0 P <sub>99</sub> = 46.6		Hours in Service: 744 Hours of Data: 732 Hours of Missing Data: 12 Hours of Calibration: 0 Percent Operational Time: 98.4																																												
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Jan	43	58	25	14	16	16	14	15	17	14	15	11	14	12	10	18	3	4	3	4	8	14	5	9	15.0	57.6																						
2-Jan	4	9	11	11	9	11	5	2	2	3	3	2	2	2	3	13	13	12	14	30	20	23	17	155	15.7	155.4																						
3-Jan	71	22	16	12	6	5	3	3	4	5	4	4	4	3	2	3	3	3	2	2	2	3	2	2	7.8	71.2																						
4-Jan	3	4	6	7	7	8	8	8	9	10	10	12	12	19	20	28	32	30	23	27	20	22	17	16	14.9	32.2																						
5-Jan	22	23	13	14	17	17	17	20	19	31	25	21	21	17	15	16	18	44	52	36	19	20	22	19	22.5	52.3																						
6-Jan	21	37	17	12	4	4	3	3	3	3	3	2	2	2	1	1	1	1	1	1	1	1	1	1	5.3	37.4																						
7-Jan	3	1	1	1	1	1	1	1	1	1	3	3	2	2	4	4	8	10	14	10	11	10	12	11	4.8	13.6																						
8-Jan	12	12	11	9	8	8	9	11	15	26	6	6	5	4	4	5	4	3	2	2	2	2	2	1	7.0	25.7																						
9-Jan	1	2	1	1	1	2	2	2	2	2	3	3	3	2	9	7	3	3	3	3	6	7	8	3	3.2	8.8																						
10-Jan	2	4	3	3	3	3	5	5	4	5	4	4	5	5	4	6	5	5	16	21	132	21	29	35	13.6	132.1																						
11-Jan	18	N	N	N	N	N	N	N	N	N	N	N	N	22	29	39	26	30	45	33	29	13	14	12	--	45.4																						
12-Jan	12	13	14	15	17	16	26	16	20	25	21	19	21	20	28	23	36	31	22	22	25	24	28	24	21.7	35.9																						
13-Jan	23	23	17	17	18	17	16	17	20	25	17	10	8	7	8	7	13	24	24	26	19	87	29	28	20.9	86.7																						
14-Jan	11	11	7	7	7	6	7	6	8	7	6	7	6	6	6	6	5	5	4	4	4	9	5	4	6.4	11.1																						
15-Jan	5	6	8	9	11	12	13	17	16	12	17	24	13	14	15	20	19	23	23	21	17	8	9	10	14.2	23.8																						
16-Jan	12	7	7	8	9	14	14	18	19	23	25	26	29	26	38	44	38	31	37	58	114	99	57	55	33.6	113.9																						
17-Jan	41	34	13	9	7	6	5	8	8	10	10	10	10	11	8	7	6	5	7	5	5	4	5	5	9.9	41.2																						
18-Jan	50	17	10	8	9	9	9	11	19	10	10	10	12	9	9	7	7	7	11	5	11	5	5	3	10.9	50.1																						
19-Jan	3	4	3	3	2	2	2	2	2	9	5	2	2	5	2	3	3	3	3	3	7	4	6	4	3.6	9.3																						
20-Jan	4	5	8	8	4	6	5	5	5	5	6	6	4	4	4	5	5	4	4	4	4	4	3	3	4.9	8.2																						
21-Jan	3	3	3	4	3	3	4	5	9	4	4	4	4	4	4	5	6	8	8	10	17	8	8	7	5.8	17.5																						
22-Jan	10	10	11	15	18	22	26	30	39	38	26	19	14	10	9	10	15	11	31	12	23	26	13	9	18.6	38.9																						
23-Jan	12	13	10	11	12	13	14	36	16	23	19	11	10	10	13	15	13	12	22	12	5	5	17	20	14.3	36.3																						
24-Jan	10	7	6	7	7	9	8	8	9	9	10	9	9	8	10	14	11	12	12	11	12	11	11	10	9.6	14.3																						
25-Jan	11	10	11	11	10	10	9	11	16	12	11	11	9	8	9	8	9	9	8	8	5	4	5	3	9.1	16.4																						
26-Jan	4	4	3	3	3	3	3	4	6	11	6	4	3	2	2	3	6	5	6	11	7	9	7	6	4.9	11.0																						
27-Jan	7	10	6	6	5	5	5	6	6	7	6	6	4	4	4	3	4	5	3	3	3	4	15	4	5.5	15.4																						
28-Jan	7	4	4	4	5	4	4	4	5	4	4	4	3	3	4	4	4	4	4	4	4	3	3	3	4.1	7.0																						
29-Jan	4	4	4	4	5	5	6	6	7	8	8	9	8	8	10	12	22	13	14	10	10	14	11	11	8.9	21.8																						
30-Jan	9	8	10	10	10	9	8	7	6	5	5	6	6	5	4	4	3	6	4	3	5	4	4	5	6.1	10.4																						
31-Jan	4	4	4	5	3	3	4	5	3	3	3	2	2	2	2	2	2	3	4	6	2	2	2	4	3.1	5.9																						
																								14.4	12.3	8.9	8.2	7.9	8.2	8.5	9.7	10.5	11.6	9.8	8.9	8.2	8.2	9.4	11.0	11.1	11.8	13.8	13.1	17.7	15.2	11.9	15.7	Diurnal Average
																								71.2	57.6	25.2	17.2	18.4	21.8	26.3	36.3	38.9	38.0	25.8	25.7	29.0	25.7	37.8	44.3	38.0	43.5	52.3	57.6	132.1	98.6	56.8	155.4	Diurnal Maximum
N - Not Valid																																																





**Pollutant Rose**

**Particulate Matter 2.5 (PM<sub>2.5</sub>) -  $\mu\text{g}/\text{m}^3$**   
**Henry Pirker - January 2018**



## Hourly Averages

External Temperature (ET) - °C

Henry Pirker - January 2018

Maximum Value: 5.5 °C on Jan 3 16:00		Maximum Daily Average: 1.3 °C on Jan 3		Hours in Service: 744																							
Minimum Value: -40 °C on Jan 11 07:00		Minimum Daily Average: -34.0 °C on Jan 11		Hours of Data: 744																							
Maximum Diurnal Average: -8.7 °C at hour 15		Minimum Diurnal Average: -12.9 °C at hour 10		Hours of Missing Data: 0																							
Monthly Average: -11.13 °C		Percentiles: P <sub>1</sub> = -38.4 P <sub>10</sub> = -25.8 Q <sub>1</sub> = -18.2 Median = -8.7 Q <sub>3</sub> = -3.4 P <sub>90</sub> = 0.1 P <sub>99</sub> = 4.0		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-Jan	-31	-31	-30	-31	-31	-30	-30	-30	-30	-28	-24	-21	-18	-17	-14	-4	2	1	1	-1	-3	-5	-6	-7	-17.4	1.7	
2-Jan	-8	-6	-6	-5	-5	-4	-1	2	-1	-3	-1	3	4	3	4	3	2	0	-1	-1	0	-2	-2	-3	-1.1	3.7	
3-Jan	-3	-3	-3	-4	-2	-3	0	0	-1	-1	1	2	3	5	4	6	5	5	5	4	4	3	2	0	1.3	5.5	
4-Jan	-2	-3	-4	-3	-4	-5	-6	-7	-7	-7	-6	-2	1	4	2	0	-3	-5	-6	-7	-7	-8	-8	-9	-4.3	3.6	
5-Jan	-8	-8	-8	-8	-8	-7	-7	-8	-8	-9	-7	-3	-3	-3	0	0	-4	-5	-7	-7	-7	-7	-6	-6	-6.0	0.1	
6-Jan	-6	-5	-3	-1	4	3	2	1	1	0	0	2	1	2	2	2	1	1	0	0	1	1	1	1	0.5	3.8	
7-Jan	0	0	1	1	0	-1	-2	-3	-3	-4	-2	-1	0	0	0	-1	-3	-4	-4	-4	-4	-4	-3	-3	-1.7	0.9	
8-Jan	-3	-3	-2	-2	-2	-2	-2	-3	-3	-4	-7	-8	-8	-9	-10	-11	-12	-13	-13	-14	-15	-15	-16	-16	-8.0	-1.9	
9-Jan	-17	-17	-17	-18	-18	-19	-19	-19	-20	-20	-19	-19	-19	-19	-20	-20	-21	-21	-21	-21	-21	-22	-22	-22	-19.6	-16.8	
10-Jan	-22	-23	-24	-25	-25	-26	-26	-27	-27	-27	-27	-27	-26	-26	-26	-26	-26	-26	-28	-30	-31	-32	-33	-34	-27.0	-22.3	
11-Jan	-36	-37	-38	-39	-39	-40	-40	-40	-39	-38	-37	-35	-33	-30	-28	-28	-32	-33	-32	-30	-29	-28	-27	-27	-34.0	-27.4	
12-Jan	-29	-29	-30	-30	-31	-31	-32	-32	-33	-34	-32	-30	-29	-26	-27	-26	-28	-28	-28	-29	-29	-28	-28	-27	-29.4	-25.8	
13-Jan	-25	-24	-22	-21	-20	-20	-19	-19	-19	-19	-13	-6	-3	-1	-2	-2	-2	-3	-4	-4	-3	-3	-2	-2	-10.7	-1.1	
14-Jan	-2	-2	-2	-6	-8	-8	-7	-7	-7	-7	-7	-6	-6	-6	-6	-5	-4	-4	-4	-5	-5	-6	-6	-6	-5.5	-1.7	
15-Jan	-6	-7	-6	-6	-6	-8	-12	-10	-8	-7	-7	-6	-6	-5	-5	-6	-6	-7	-7	-7	-7	-8	-8	-8	-7.0	-5.1	
16-Jan	-8	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-8	-8	-8	-7	-7	-6	-4	-1	0	0	-7.3	0.1	
17-Jan	0	1	2	0	0	0	-2	-3	-4	-4	-3	0	4	1	2	-1	-1	-1	0	-1	-1	0	-1	-2	-0.5	3.6	
18-Jan	-3	-5	-6	-8	-8	-9	-7	-4	-5	-4	-4	-1	-2	0	0	0	-1	-2	-2	-2	-3	-3	-3	-2	-3.4	0.3	
19-Jan	-2	-4	-3	-3	-4	-2	-2	-3	-2	-1	0	1	1	1	1	1	1	0	0	0	0	0	-1	-2	-1.0	1.2	
20-Jan	-2	-3	-4	-4	-5	-5	-5	-5	-5	-5	-5	-4	-3	-3	-3	-4	-5	-6	-7	-7	-6	-6	-6	-6	-4.8	-2.4	
21-Jan	-6	-6	-6	-6	-6	-6	-6	-6	-6	-5	-5	-5	-4	-4	-4	-4	-3	-4	-6	-6	-6	-5	-5	-6	-5.2	-3.4	
22-Jan	-7	-8	-9	-10	-12	-12	-10	-9	-9	-8	-8	-8	-8	-7	-6	-8	-10	-11	-11	-11	-12	-12	-10	-10	-9.4	-5.6	
23-Jan	-13	-13	-13	-12	-13	-14	-14	-14	-16	-18	-16	-12	-10	-10	-11	-12	-12	-12	-11	-8	-5	-6	-9	-9	-11.8	-5.3	
24-Jan	-10	-12	-13	-12	-11	-10	-9	-9	-10	-11	-9	-10	-7	-6	-6	-9	-10	-10	-11	-11	-11	-11	-10	-10	-9.9	-6.0	
25-Jan	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-9	-10	-12	-12	-13	-13	-14	-14	-15	-15	-15	-15	-11.7	-9.5	
26-Jan	-15	-16	-16	-16	-16	-17	-19	-20	-21	-21	-21	-19	-18	-18	-16	-15	-17	-19	-21	-22	-22	-24	-25	-24	-19.0	-15.1	
27-Jan	-24	-23	-22	-22	-22	-22	-23	-22	-22	-21	-19	-18	-17	-17	-17	-17	-18	-18	-18	-18	-18	-18	-19	-19	-19.8	-17.0	
28-Jan	-19	-19	-20	-19	-20	-20	-20	-20	-19	-19	-17	-17	-16	-16	-17	-18	-18	-18	-18	-18	-18	-18	-17	-17	-18.2	-15.8	
29-Jan	-17	-17	-16	-16	-15	-15	-16	-17	-17	-16	-15	-13	-11	-9	-9	-11	-13	-13	-13	-13	-13	-13	-14	-14	-14.0	-9.0	
30-Jan	-14	-15	-15	-15	-15	-15	-16	-17	-18	-18	-18	-18	-18	-18	-17	-18	-18	-18	-18	-19	-19	-20	-20	-21	-17.4	-14.4	
31-Jan	-21	-21	-21	-21	-21	-22	-22	-23	-23	-23	-22	-22	-20	-20	-20	-20	-21	-21	-21	-21	-22	-22	-22	-22	-21.4	-20.0	
		-11.8	-12.2	-12.1	-12.3	-12.3	-12.5	-12.6	-12.6	-12.9	-12.9	-11.9	-10.4	-9.4	-8.9	-8.7	-8.7	-9.6	-10.2	-10.6	-10.7	-10.7	-10.9	-11.0	-11.2	Diurnal Average	
		0.3	1.0	1.5	0.8	3.8	3.2	2.0	1.6	1.2	0.1	1.4	3.1	3.6	4.9	4.4	5.5	4.7	5.4	5.5	4.2	3.5	2.5	2.1	0.6	Diurnal Maximum	



# Hourly Averages

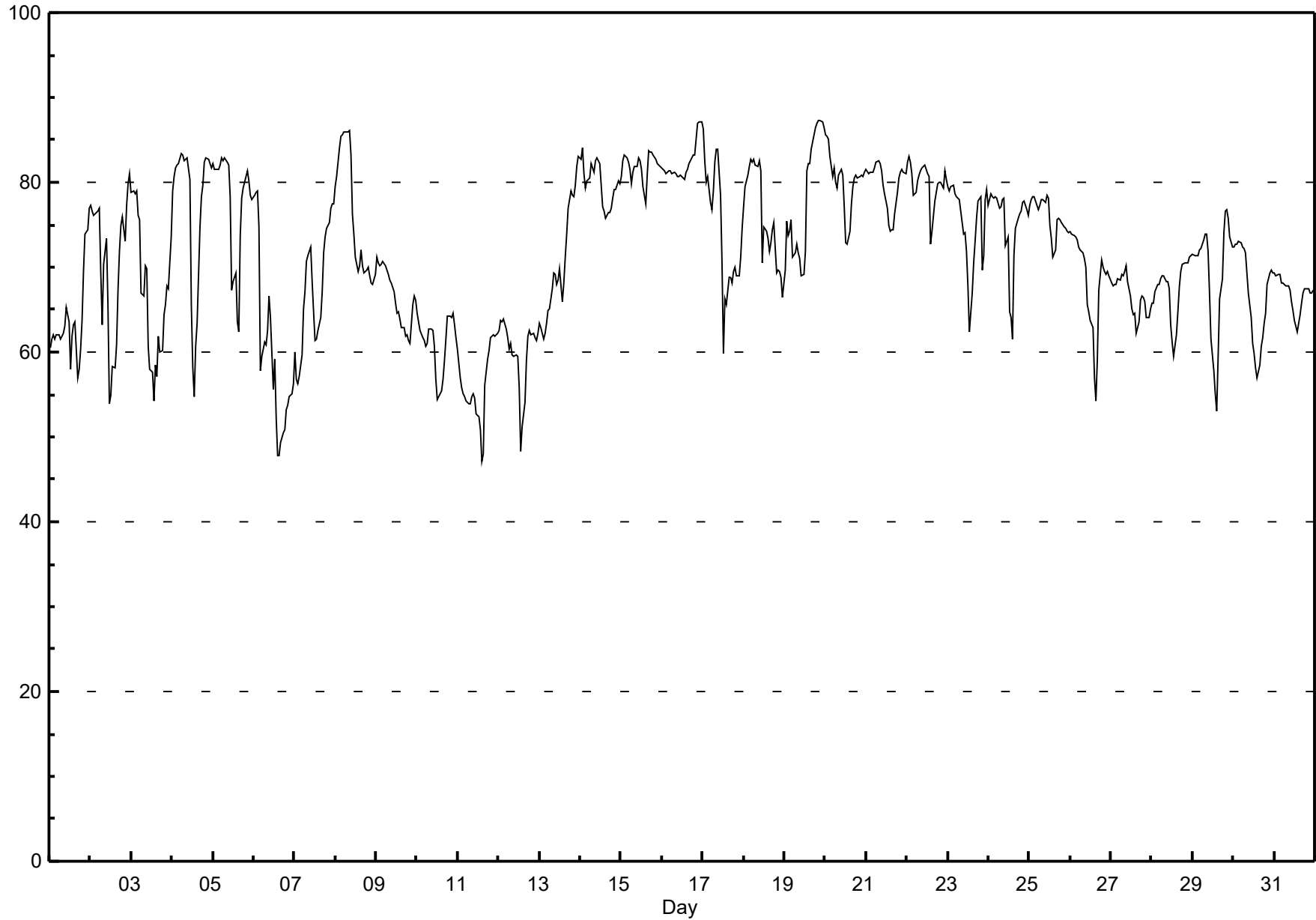
Relative Humidity (RH) - %

Henry Pirker - January 2018

<b>Maximum Value: 87.3 % on Jan 19 21:00</b>																			<b>Maximum Daily Average: 82.3 % on Jan 16</b>					Hours in Service: 744		
<b>Minimum Value: 47 % on Jan 11 15:00</b>																			<b>Minimum Daily Average: 56.1 % on Jan 11</b>					Hours of Data: 744		
<b>Maximum Diurnal Average: 74.3 % at hour 2</b>																			<b>Minimum Diurnal Average: 64.7 % at hour 15</b>					Hours of Missing Data: 0		
<b>Monthly Average: 71.47 %</b>																			Percentiles: P <sub>1</sub> = 50.8 P <sub>10</sub> = 59.7 Q <sub>1</sub> = 64.3 Median = 71.8 Q <sub>3</sub> = 79.4 P <sub>90</sub> = 82.2 P <sub>99</sub> = 86.9					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-Jan	61	61	62	62	62	62	62	62	62	63	65	63	58	62	63	64	57	58	60	64	69	74	74	77	63.6	77.0
2-Jan	77	77	76	76	77	77	69	63	70	73	66	54	55	58	58	61	67	72	75	76	73	77	80	81	70.4	80.9
3-Jan	79	79	79	79	76	76	67	67	70	70	61	58	58	54	59	57	62	60	60	64	66	68	68	74	67.0	79.0
4-Jan	79	81	82	82	82	83	83	83	83	83	80	65	58	55	61	63	75	78	80	82	83	83	82	82	77.0	83.3
5-Jan	82	81	81	82	82	83	83	83	82	82	78	67	68	69	64	62	74	78	79	81	81	80	78	78	77.5	82.9
6-Jan	78	79	79	75	58	60	61	61	63	67	64	56	59	52	48	48	49	51	51	53	54	55	55	56	59.6	79.0
7-Jan	60	57	56	57	60	65	67	71	71	72	68	65	61	61	62	64	67	72	74	75	75	77	77	77	67.2	77.4
8-Jan	79	81	84	85	86	86	86	86	86	83	76	74	71	69	70	72	70	69	70	70	69	68	68	69	76.2	86.1
9-Jan	71	70	70	70	71	70	70	69	69	68	67	66	65	65	64	63	63	62	62	61	61	66	67	66	66.5	71.1
10-Jan	65	64	63	62	61	61	61	63	63	63	61	57	54	55	55	57	59	61	64	64	64	65	63	62	61.0	64.6
11-Jan	60	57	56	55	55	54	54	54	55	55	55	53	52	51	47	48	56	59	60	62	62	62	62	62	56.1	62.2
12-Jan	63	64	64	64	63	62	60	61	60	59	60	59	56	48	51	54	59	62	63	62	62	62	61	62	60.0	63.8
13-Jan	63	63	62	62	63	65	65	67	69	69	68	68	70	66	68	71	74	77	79	78	78	80	82	83	70.5	83.0
14-Jan	83	84	81	79	80	80	82	82	81	83	83	82	80	77	77	76	76	76	77	78	79	79	80	80	79.8	84.2
15-Jan	81	83	83	83	82	82	80	81	82	82	83	83	81	79	78	81	84	84	83	83	83	82	82	82	81.9	83.7
16-Jan	82	81	81	81	81	81	81	81	81	81	81	81	80	80	81	82	82	83	83	83	85	87	87	87	82.3	87.2
17-Jan	86	83	80	81	78	77	79	82	84	84	78	71	60	66	66	69	69	68	69	70	69	69	71	75	74.3	86.3
18-Jan	77	79	81	82	83	82	83	82	82	83	81	70	75	74	73	72	73	74	75	69	70	70	69	66	76.1	82.7
19-Jan	70	76	74	74	76	71	72	73	72	71	69	69	72	81	82	82	84	86	86	87	87	87	87	86	78.1	87.3
20-Jan	86	85	85	83	81	82	80	79	81	82	81	77	73	73	74	77	79	81	81	80	81	81	81	81	80.1	85.7
21-Jan	81	81	81	81	81	82	82	83	82	81	80	79	77	75	74	74	74	76	79	80	81	82	81	81	79.6	82.5
22-Jan	82	83	82	81	78	79	80	81	81	82	82	82	81	81	73	74	78	79	80	80	80	79	81	80	80.0	83.0
23-Jan	80	79	80	80	79	78	78	78	75	74	74	72	68	62	67	70	73	76	78	78	70	71	78	79	74.8	79.6
24-Jan	77	79	78	78	78	78	77	77	78	78	73	74	65	64	62	71	75	76	76	77	78	78	77	76	74.9	78.7
25-Jan	77	78	78	78	77	77	77	78	78	78	78	78	75	73	71	72	76	76	76	75	75	75	74	74	76.0	78.4
26-Jan	74	74	74	73	73	72	72	72	71	70	66	65	64	63	57	54	59	67	71	70	70	69	70	69	68.3	74.2
27-Jan	68	68	68	68	69	69	69	69	69	69	70	68	67	65	64	65	62	63	66	67	67	66	64	65	66.7	70.2
28-Jan	66	66	67	68	68	69	69	69	68	68	67	63	61	60	62	65	68	69	70	70	70	71	71	71	67.4	71.4
29-Jan	71	71	71	71	72	72	73	74	74	72	67	61	58	55	53	59	66	69	74	77	77	76	74	72	69.2	76.8
30-Jan	72	73	73	73	73	72	72	72	69	67	64	61	60	58	57	58	61	62	63	65	68	69	70	69	66.7	73.0
31-Jan	69	69	69	69	68	68	68	68	68	67	66	65	64	62	63	64	66	67	67	67	67	67	67	67	66.9	69.3
	74.2	74.3	74.2	74.1	73.3	73.4	73.0	73.2	73.5	73.5	71.3	67.9	65.9	65.0	64.7	66.1	69.0	70.8	72.0	72.6	72.7	73.3	73.6	73.9	Diurnal Average	
	86.3	85.4	85.1	85.4	85.7	85.9	85.9	85.9	86.1	83.9	82.8	82.5	81.5	81.4	82.3	82.2	83.9	85.6	86.5	87.0	87.3	87.3	87.1	87.2	Diurnal Maximum	

**Hourly Averages**

**Relative Humidity (RH) - %**  
**Henry Pirker - January 2018**

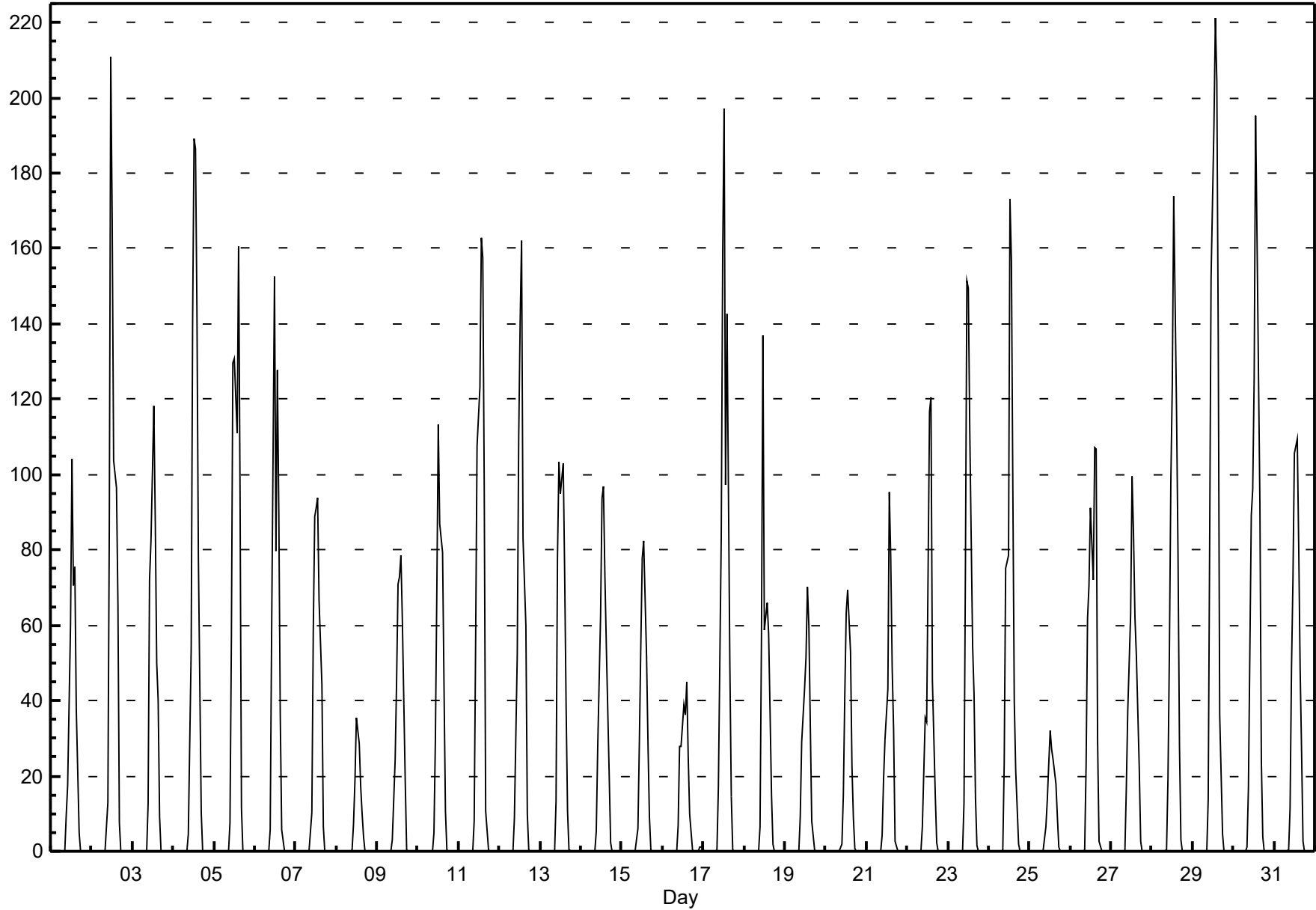


# Hourly Averages

Solar Radiation (SR) - W/m<sup>2</sup>

Henry Pirker - January 2018

Maximum Value: 221.2 W/m <sup>2</sup> on Jan 29 14:00		Maximum Daily Average: 43.4 W/m <sup>2</sup> on Jan 29																				Hours in Service: 744				
Minimum Value: 0 W/m <sup>2</sup> on Jan 1 01:00		Minimum Daily Average: 5.1 W/m <sup>2</sup> on Jan 8																				Hours of Data: 744				
Maximum Diurnal Average: 105.8 W/m <sup>2</sup> at hour 14		Minimum Diurnal Average: 0.0 W/m <sup>2</sup> at hour 4																				Hours of Missing Data: 0				
Monthly Average: 21.50 W/m <sup>2</sup>		Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.0 Q <sub>3</sub> = 21.9 P <sub>90</sub> = 81.6 P <sub>99</sub> = 185.7																				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-Jan	0	0	0	0	0	0	0	0	0	9	18	60	104	70	76	38	5	0	0	0	0	0	0	0	15.8	104.0
2-Jan	0	0	0	0	0	0	0	0	0	13	87	211	168	104	97	65	8	0	0	0	0	0	0	0	31.3	211.1
3-Jan	0	0	0	0	0	0	0	0	0	13	72	82	118	87	50	40	9	0	0	0	0	0	0	0	19.7	118.4
4-Jan	0	0	0	0	0	0	0	0	0	4	54	141	189	187	143	78	10	0	0	0	0	0	0	0	33.6	189.1
5-Jan	0	0	0	0	0	0	0	0	0	8	57	130	131	111	161	96	11	0	0	0	0	0	0	0	29.3	160.5
6-Jan	0	0	0	0	0	0	0	0	0	6	58	153	80	128	90	36	6	0	0	0	0	0	0	0	23.2	152.7
7-Jan	0	0	0	0	0	0	0	0	0	10	59	89	91	94	67	44	6	0	0	0	0	0	0	0	19.2	94.0
8-Jan	0	0	0	0	0	0	0	0	0	1	7	19	35	29	17	10	4	0	0	0	0	0	0	0	5.1	35.4
9-Jan	0	0	0	0	0	0	0	0	0	3	24	45	71	73	78	61	19	0	0	0	0	0	0	0	15.6	78.4
10-Jan	0	0	0	0	0	0	0	0	0	5	30	69	113	87	79	44	11	0	0	0	0	0	0	0	18.3	113.3
11-Jan	0	0	0	0	0	0	0	0	0	8	55	107	123	163	158	97	11	0	0	0	0	0	0	0	30.1	162.8
12-Jan	0	0	0	0	0	0	0	0	0	9	52	110	140	162	83	60	10	0	0	0	0	0	0	0	26.1	162.2
13-Jan	0	0	0	0	0	0	0	0	0	13	78	103	95	103	74	38	11	0	0	0	0	0	0	0	21.5	103.3
14-Jan	0	0	0	0	0	0	0	0	0	6	27	63	94	97	73	55	20	2	0	0	0	0	0	0	18.2	96.7
15-Jan	0	0	0	0	0	0	0	0	0	6	29	55	78	82	52	29	9	0	0	0	0	0	0	0	14.2	82.4
16-Jan	0	0	0	0	0	0	0	0	0	7	28	28	39	36	45	25	10	0	0	0	0	0	0	1	9.2	45.0
17-Jan	0	0	0	0	0	0	0	0	0	17	84	158	197	97	142	49	15	0	0	0	0	0	0	0	31.7	197.3
18-Jan	0	0	0	0	0	0	0	0	0	6	57	137	59	66	57	37	15	2	0	0	0	0	0	0	18.2	136.8
19-Jan	0	0	0	0	0	0	0	0	0	9	29	43	52	70	60	33	8	1	0	0	0	0	0	0	12.7	70.0
20-Jan	0	0	0	0	0	0	0	0	0	2	15	41	63	69	53	23	9	1	0	0	0	0	0	0	11.5	69.3
21-Jan	0	0	0	0	0	0	0	0	0	4	19	30	43	95	78	49	32	3	0	0	0	0	0	0	14.7	95.5
22-Jan	0	0	0	0	0	0	0	0	0	7	35	34	74	117	120	45	15	2	0	0	0	0	0	0	18.7	120.4
23-Jan	0	0	0	0	0	0	0	0	0	13	76	151	150	112	55	41	14	2	0	0	0	0	0	0	25.6	151.4
24-Jan	0	0	0	0	0	0	0	0	0	24	75	78	173	157	96	39	21	2	0	0	0	0	0	0	27.8	173.1
25-Jan	0	0	0	0	0	0	0	0	0	6	14	23	32	27	25	18	9	1	0	0	0	0	0	0	6.5	32.2
26-Jan	0	0	0	0	0	0	0	0	0	23	62	70	91	72	107	107	30	3	0	0	0	0	0	0	23.5	107.3
27-Jan	0	0	0	0	0	0	0	0	0	17	37	63	99	84	62	52	22	3	0	0	0	0	0	0	18.3	99.5
28-Jan	0	0	0	0	0	0	0	0	0	19	53	98	124	174	116	78	28	3	0	0	0	0	0	0	28.9	173.9
29-Jan	0	0	0	0	0	0	0	0	0	14	81	152	193	221	204	136	36	5	0	0	0	0	0	0	43.4	221.2
30-Jan	0	0	0	0	0	0	0	0	1	17	89	96	126	195	163	92	24	4	0	0	0	0	0	0	33.6	195.4
31-Jan	0	0	0	0	0	0	0	0	0	11	49	72	106	109	81	48	27	3	0	0	0	0	0	0	21.1	109.4
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	10.0	48.8	87.5	104.9	105.8	89.1	53.7	15.0	1.2	0.0	0.0	0.0	0.0	0.0	Diurnal Average	
		0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	23.8	89.3	211.1	197.3	221.2	204.5	135.7	36.1	4.7	0.1	0.0	0.0	0.1	1.0	1.1	Diurnal Maximum





## Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	N	N	3	2	0	2	N	1	N	N	2	0	3	3	3	20	29	20	22	10	2	4	5	3	5.5	28.8
Dir	N	N	329	347	190	260	N	225	N	N	175	354	202	165	88	253	250	275	287	305	40	309	350	322	273.6	250.5
2 Spd	2	2	1	2	1	2	7	9	4	6	5	4	3	1	2	2	2	1	0	1	2	1	1	2	2.1	9.4
Dir	274	342	273	280	12	359	289	279	283	322	323	322	307	316	327	329	95	64	41	233	348	235	230	264	304.0	278.6
3 Spd	3	2	2	2	5	5	13	10	3	3	5	7	4	6	6	9	5	9	9	5	7	6	5	3	4.1	12.7
Dir	118	106	192	258	268	258	246	262	240	138	208	227	212	281	318	262	251	254	261	269	315	336	335	287	262.7	246.3
4 Spd	1	1	3	2	1	1	1	3	2	3	3	2	1	1	2	3	2	4	4	3	3	2	3	3	1.6	3.9
Dir	180	248	130	109	95	321	295	317	297	332	301	319	267	175	321	297	319	303	337	325	311	325	311	292	310.6	302.6
5 Spd	3	3	2	0	1	1	1	3	1	1	3	2	3	3	1	2	2	2	3	2	4	3	2	1	1.6	4.2
Dir	343	296	311	313	250	89	218	160	333	9	289	278	336	295	273	296	326	310	326	281	319	325	329	316	309.8	319.3
6 Spd	2	2	3	7	24	25	18	19	19	16	14	12	10	19	22	20	22	23	24	17	22	23	24	19	16.7	25.3
Dir	305	281	246	238	258	249	240	239	234	240	248	250	246	258	259	253	250	245	240	237	259	253	246	267	249.1	249.0
7 Spd	17	20	22	21	14	7	7	5	5	4	2	2	3	2	2	2	1	2	3	2	3	1	1	3	5.0	22.3
Dir	283	267	263	256	250	242	256	306	294	233	158	184	250	90	75	129	99	316	307	316	335	323	191	334	265.8	262.6
8 Spd	2	1	2	2	2	1	2	2	3	7	9	8	5	4	6	7	7	6	6	6	6	6	6	6	4.1	9.0
Dir	27	33	69	87	72	73	281	309	321	19	8	2	48	53	74	65	54	48	49	39	42	42	41	30	37.8	8.1
9 Spd	6	7	7	8	7	8	10	10	10	9	9	11	11	11	11	10	10	9	8	6	6	8	2	3	7.7	11.3
Dir	29	27	14	9	6	354	350	352	349	2	346	341	349	343	343	344	350	355	343	329	341	304	58	86	351.9	340.8
10 Spd	8	8	9	8	8	7	6	6	8	8	8	8	11	11	12	11	10	9	5	4	3	3	8	4	6.4	12.2
Dir	9	6	2	2	358	342	322	311	308	308	295	286	282	286	284	283	274	274	313	318	321	328	355	314	313.1	286.1
11 Spd	4	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	4.0
Dir	324	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	323.9
12 Spd	N	N	N	N	N	N	2	4	4	N	N	N	N	N	N	N	3	1	3	3	N	N	3	4	--	3.9
Dir	N	N	N	N	N	N	198	171	339	N	N	N	N	N	N	N	143	290	316	331	N	N	335	317	--	338.8
13 Spd	2	4	2	2	6	1	1	0	3	4	5	6	5	4	3	2	2	1	1	3	1	2	1	2	0.4	6.5
Dir	189	167	232	213	151	298	333	167	347	344	324	320	294	298	2	114	144	90	125	155	179	344	10	61	302.5	151.0
14 Spd	2	3	8	9	7	7	6	7	3	5	5	6	8	8	8	8	8	7	11	7	7	3	5	8	6.3	10.6
Dir	84	92	73	59	60	69	77	83	64	66	66	70	87	89	87	80	86	85	84	78	72	41	65	74	75.7	84.6
15 Spd	6	6	6	8	7	1	4	3	2	1	1	4	4	4	1	3	3	0	1	2	4	4	3	3	1.0	8.0
Dir	73	75	73	80	83	43	317	5	50	95	202	284	289	316	297	188	166	175	272	314	301	303	298	293	20.9	80.3
16 Spd	4	6	3	3	3	3	4	2	4	5	1	1	3	1	1	1	4	2	6	6	6	4	9	8	2.7	9.5
Dir	310	311	316	313	292	295	331	309	310	296	292	273	305	288	266	240	173	254	292	294	226	183	216	225	272.8	215.7
17 Spd	9	13	12	9	7	7	4	1	3	3	2	3	3	3	3	3	6	6	3	3	5	6	6	3	1.8	12.6
Dir	224	226	220	233	236	215	246	166	153	118	161	146	145	96	62	53	84	78	60	66	68	77	97	78	169.5	226.0
18 Spd	1	1	3	1	2	1	4	1	3	2	2	2	3	4	8	8	6	4	6	8	3	4	6	10	3.1	9.8
Dir	280	329	286	325	291	252	242	173	260	198	191	312	171	207	204	222	235	242	267	258	292	329	287	260	251.0	259.6
19 Spd	6	7	6	5	4	9	6	4	5	5	3	4	5	5	4	5	6	4	2	0	1	4	6	5	4.0	9.3
Dir	274	205	274	278	251	253	283	320	330	306	305	238	287	303	283	275	241	254	305	288	286	320	312	320	279.9	252.7
20 Spd	4	2	3	5	4	2	3	5	4	2	2	2	2	2	3	4	5	6	6	3	5	5	7	8	2.5	7.6
Dir	304	324	305	319	340	17	92	107	110	125	145	144	70	41	67	91	87	83	75	63	72	65	72	77	68.0	76.6
21 Spd	8	9	8	7	7	9	8	9	8	11	12	11	13	12	10	8	7	1	3	1	5	10	6	4	5.6	12.8
Dir	75	72	67	60	66	71	67	69	61	65	78	74	78	79	77	77	75	56	360	348	253	274	240	266	68.4	78.1
22 Spd	3	2	1	1	2	1	3	1	3	2	3	4	5	5	4	2	2	2	1	2	1	0	4	2	1.8	5.0
Dir	305	308	49	95	357	212	316	316	294	311	283	263	248	260	273	305	315	310	279	287	295	51	231	339	288.6	248.3

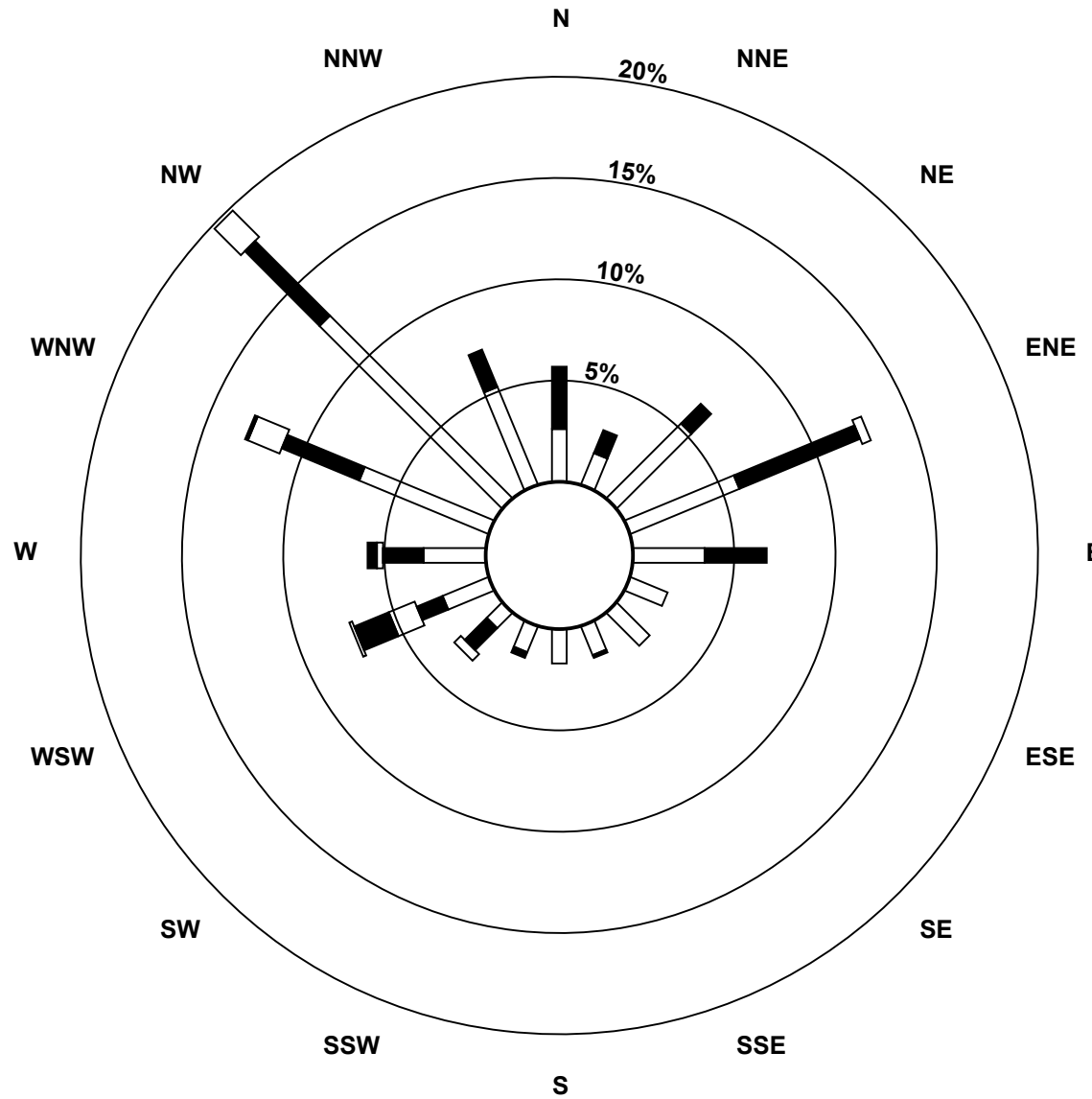
## Hourly Averages

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

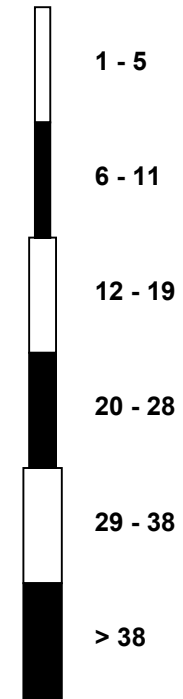
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
23 Spd	0	1	3	2	2	1	3	1	3	N	N	3	4	3	4	4	4	3	2	2	5	2	2	3	0.8	5.2	
Dir	78	60	169	104	137	114	132	98	308	N	N	298	304	292	312	323	303	321	13	42	75	139	11	38	350.3	74.8	
24 Spd	2	1	4	3	1	3	2	4	4	1	3	5	5	4	4	5	7	5	5	6	6	6	4	5	2.8	6.7	
Dir	354	306	306	289	288	6	72	121	69	115	135	80	41	112	25	59	82	49	30	35	28	27	70	54	50.1	82.2	
25 Spd	6	5	4	5	4	5	4	4	6	6	7	8	8	9	15	13	12	12	12	13	14	12	13	12	8.0	14.8	
Dir	32	35	15	345	336	316	310	313	318	329	329	350	358	308	309	314	308	307	306	303	305	304	308	309	318.9	308.8	
26 Spd	11	11	11	10	10	8	8	8	7	6	7	8	10	8	7	7	4	2	N	5	4	N	N	4	7.3	11.3	
Dir	310	306	304	304	302	289	285	289	289	314	306	292	298	293	282	280	271	231	N	295	330	N	N	324	297.4	309.6	
27 Spd	3	3	4	N	N	N	N	N	N	2	2	3	3	4	3	4	N	N	3	4	3	3	4	2	--	4.3	
Dir	319	306	309	N	N	N	N	N	N	4	48	54	93	28	24	341	N	N	33	0	340	319	306	3	--	0.1	
28 Spd	3	2	N	3	5	5	5	5	7	7	7	8	6	6	8	7	5	5	3	5	4	4	5	5	4.9	7.9	
Dir	14	42	N	96	104	109	96	98	96	89	85	78	66	56	74	60	56	39	49	57	54	56	61	64	72.0	77.9	
29 Spd	4	6	5	5	6	6	3	5	3	5	8	8	4	3	4	8	8	6	9	7	12	11	14	13	2.8	14.0	
Dir	54	62	69	61	83	75	82	77	59	69	83	86	92	88	6	337	309	296	301	291	273	311	310	297	357.8	310.2	
30 Spd	12	11	10	10	10	9	8	11	12	12	14	15	14	14	13	13	10	10	11	11	10	10	8	8	11.1	14.9	
Dir	300	286	294	297	301	308	314	309	310	310	303	302	298	298	300	302	299	309	312	311	309	311	309	312	304.0	302.3	
31 Spd	7	6	4	3	5	6	5	6	5	4	5	6	4	4	4	4	4	3	3	4	3	3	3	N	3.6	7.2	
Dir	310	319	322	8	56	59	72	66	57	65	65	72	45	48	48	47	53	40	56	54	42	32	5	N	40.7	310.4	
Spd	2.6	1.8	2.1	1.8	1.6	1.7	2.0	1.4	2.2	2.0	1.6	1.9	1.8	2.1	2.4	2.5	2.2	2.6	3.2	2.7	2.8	3.1	2.7	2.5	Diurnal Average		
Dir	323.5	311.8	309.2	318.1	305.0	298.5	293.9	306.1	320.2	344.1	332.9	328.3	325.4	314.9	324.4	300.7	283.5	299.9	308.8	313.7	318.3	316.1	311.1	312.2			
Spd	17.0	20.0	22.3	21.1	24.4	25.3	17.8	19.2	19.1	15.8	14.0	14.9	14.2	18.9	22.5	20.4	28.8	22.9	23.8	16.8	21.7	22.7	24.5	19.1	Diurnal Maximum		
Dir	282.8	267.0	262.6	255.9	258.1	249.0	240.3	238.9	234.2	239.9	302.9	302.3	298.0	257.5	258.6	253.5	250.5	245.2	240.3	237.5	258.6	253.2	245.7	267.0			
Maximum Speed Value: 29 km/h on Jan 1 17:00																		Minimum Speed Value: 0 km/h on Jan 23 01:00						Hours in Service:		744	
Maximum Daily Speed Average: 16.7 km/h on Jan 6																		Minimum Daily Speed Average: 0.4 km/h on Jan 5						Hours of Data:		687	
Maximum Diurnal Speed Average: 3.2 km/h at hour 19																		Minimum Diurnal Speed Average: 1.4 km/h at hour 8						Hours of Missing Data:		57	
Monthly Average Velocity: 2.18 km/h 313.11 deg																		Speed Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 1.4 Q <sub>1</sub> = 2.5 Median = 4.2 Q <sub>3</sub> = 7.3 P <sub>90</sub> = 10.8 P <sub>99</sub> = 22.7						Percent Operational Time:		92.3	
All monthly, daily, and diurnal averages have been calculated using vector methods																											
N - Not Valid																											
Frequency Distribution																											
		Speed Range (km/h)																									
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																				
North	37	28	2	0	0	0	67																				
NorthEast	63	34	0	0	0	0	97																				
East	44	54	4	0	0	0	102																				
SouthEast	24	1	0	0	0	0	25																				
South	30	0	0	0	0	0	30																				
SouthWest	21	17	6	5	0	0	49																				
West	56	35	9	14	1	0	115																				
NorthWest	121	56	25	0	0	0	202																				
Total	396	225	46	19	1	0	687																				

**Wind Rose**

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



**Wind Speed Classes (km/h)**



# Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Henry Pirker - January 2018

Maximum Speed: 29 km/h on Jan 1 17:00	Maximum Daily Speed Average: 17.2 km/h on Jan 6	Hours in Service: 744
Minimum Speed: 1 km/h on Jan 19 20:00	Minimum Daily Speed Average: 2.6 km/h on Jan 5	Hours of Data: 687
Maximum Diurnal Speed Average: 7.2 km/h at hour 17	Minimum Diurnal Speed Average: 5.3 km/h at hour 1	Hours of Missing Data: 57
Monthly Average Speed: 5.98 km/h	Percentiles: P <sub>1</sub> = 1.2 P <sub>10</sub> = 2.3 Q <sub>1</sub> = 3.0 Median = 4.7 Q <sub>3</sub> = 7.6 P <sub>90</sub> = 10.9 P <sub>99</sub> = 22.9	Percent Operational Time: 92.3

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-Jan	N	N	3	5	1	4	N	3	N	N	4	7	4	4	4	22	29	21	22	10	2	4	5	3	8.3	29.0		
2-Jan	3	2	2	2	2	3	7	10	5	6	5	4	4	2	2	3	3	1	1	2	3	2	2	2	3.2	9.8		
3-Jan	3	3	3	3	5	6	13	10	4	4	6	7	5	7	6	9	6	9	9	6	7	7	6	5	6.1	12.7		
4-Jan	2	1	3	2	1	2	2	3	3	3	3	2	2	2	3	3	2	4	4	4	4	3	3	4	2.7	4.1		
5-Jan	3	4	2	1	3	2	1	3	2	2	3	3	3	3	1	2	3	3	3	2	5	3	3	2	2.6	4.5		
6-Jan	3	3	3	8	25	26	18	19	19	16	14	12	10	19	23	20	22	23	24	17	22	23	25	19	17.2	25.5		
7-Jan	17	20	22	21	14	7	8	6	6	4	2	2	4	3	3	3	2	3	3	2	3	3	2	3	6.8	22.4		
8-Jan	2	1	2	3	2	2	2	3	3	8	9	8	5	5	6	7	7	6	6	7	6	6	6	6	5.0	9.2		
9-Jan	6	7	8	8	7	8	10	10	10	9	9	11	11	11	11	10	10	10	8	6	6	8	6	3	8.6	11.5		
10-Jan	8	8	9	8	8	7	6	6	8	8	8	11	11	12	11	10	10	9	6	4	3	3	10	4	7.9	12.3		
11-Jan	4	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	4.1		
12-Jan	N	N	N	N	N	N	N	3	4	5	N	N	N	N	N	N	N	5	6	3	4	N	N	5	4	7	--	7.4
13-Jan	2	4	3	3	12	1	1	3	3	4	5	7	5	5	3	2	3	2	2	3	1	2	2	2	3.3	11.9		
14-Jan	2	4	8	9	7	7	7	7	3	5	5	6	8	9	8	8	7	11	7	7	7	4	5	8	6.6	10.7		
15-Jan	6	6	6	8	7	3	4	3	3	2	3	4	4	4	2	3	3	1	2	3	4	4	3	3	3.8	8.1		
16-Jan	5	6	4	3	3	4	4	3	4	6	2	2	3	2	2	2	5	3	6	6	6	5	9	8	4.2	9.5		
17-Jan	10	13	12	9	8	7	5	3	4	3	2	4	3	3	3	3	6	6	3	3	5	6	6	3	5.5	12.7		
18-Jan	3	4	4	3	4	3	5	4	4	2	3	4	3	5	9	9	6	5	6	8	4	5	6	10	5.0	10.0		
19-Jan	6	7	6	5	5	10	7	4	6	5	4	4	7	5	4	5	6	5	2	1	1	4	6	5	5.0	9.6		
20-Jan	4	3	3	5	4	2	4	5	4	2	2	2	2	2	3	4	6	6	6	4	5	5	7	8	4.1	7.7		
21-Jan	8	9	8	7	8	9	8	9	8	11	12	11	13	12	10	8	7	4	4	2	7	10	6	4	8.1	12.9		
22-Jan	3	2	2	1	3	2	4	2	3	3	3	5	5	5	4	3	3	3	2	3	2	3	5	3	3.1	5.3		
23-Jan	1	3	3	2	3	2	3	4	3	N	N	3	4	4	4	4	4	3	3	4	5	4	3	3	3.3	5.3		
24-Jan	3	2	4	4	3	4	4	5	4	2	3	5	5	5	4	6	7	5	5	6	7	6	4	5	4.5	6.8		
25-Jan	6	5	5	5	5	5	4	4	6	6	7	8	8	10	15	13	12	12	12	13	14	12	13	12	8.9	14.9		
26-Jan	11	11	11	11	10	8	8	8	7	6	7	8	10	8	8	7	7	2	N	6	4	N	N	4	7.8	11.4		
27-Jan	4	3	4	N	N	N	N	N	N	2	2	3	4	5	4	4	N	N	3	4	3	4	4	2	--	4.5		
28-Jan	4	3	N	3	5	5	5	5	7	8	7	8	7	7	8	7	6	5	4	5	4	4	5	5	5.5	8.0		
29-Jan	4	6	5	5	7	6	4	5	4	5	8	8	5	4	5	8	9	7	10	10	12	11	14	14	7.2	14.2		
30-Jan	13	11	10	10	10	9	8	11	12	12	14	15	14	14	13	13	10	10	11	11	10	10	8	8	11.3	15.0		
31-Jan	7	7	4	4	5	6	6	6	5	5	5	6	4	5	4	4	4	4	3	4	4	3	4	N	4.7	7.3		
	5.3	5.6	5.7	5.7	6.3	5.7	5.7	5.8	5.5	5.6	5.7	6.3	6.0	6.2	6.3	7.0	7.2	6.3	6.3	5.6	5.7	5.8	6.3	5.7		Diurnal Average		
	17.2	20.1	22.4	21.4	24.8	25.5	18.0	19.5	19.3	15.9	14.1	15.0	14.3	19.1	22.7	22.2	29.0	23.1	23.9	17.0	22.2	23.0	24.6	19.4		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 - January 2018

Maximum Value: 98.6 deg on Jan 13 08:00	Hours in Service: 744
Minimum Value: 4.6 deg on Jan 10 12:00	Hours of Data: 687
Percentiles: P <sub>1</sub> = 5.5 P <sub>10</sub> = 8.0 Q <sub>1</sub> = 11.8 Median = 19.1 Q <sub>3</sub> = 39.6 P <sub>90</sub> = 64.7 P <sub>99</sub> = 88.4	Hours of Missing Data: 57
	Hours of Calibration: 0
	Percent Operational Time: 92.3

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Jan	N	N	16	30	84	55	N	60	N	N	71	62	47	55	45	63	8	17	7	30	42	14	16	16	84.3
2-Jan	32	42	92	62	71	55	18	17	57	15	17	15	26	79	12	41	35	70	86	53	44	70	73	49	92.3
3-Jan	41	43	79	83	31	59	6	14	43	37	38	16	40	29	20	17	22	13	14	32	22	27	21	48	83.2
4-Jan	87	71	32	65	66	68	66	14	43	26	46	64	53	57	72	15	24	22	27	20	17	48	31	24	86.9
5-Jan	26	34	31	87	89	76	71	23	63	67	48	67	30	48	61	49	42	51	26	37	22	28	46	68	88.8
6-Jan	40	63	24	18	11	7	9	10	8	7	5	8	8	9	8	7	7	8	7	8	12	8	6	11	62.7
7-Jan	7	7	7	9	10	14	27	18	26	29	48	45	69	56	26	40	62	69	24	51	36	85	81	24	84.7
8-Jan	26	69	36	26	20	74	55	45	47	30	13	18	22	25	16	15	15	19	15	15	19	18	17	17	74.3
9-Jan	18	15	15	12	12	13	9	8	7	9	11	10	7	11	9	10	8	13	14	9	18	6	76	39	76.0
10-Jan	15	12	10	11	11	14	14	10	7	7	11	5	7	6	7	6	8	11	15	7	13	9	33	12	32.7
11-Jan	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	10.4
12-Jan	N	N	N	N	N	N	50	20	36	N	N	N	N	N	N	83	49	14	23	N	N	38	25	74	82.8
13-Jan	62	23	37	27	63	52	42	99	40	48	21	11	19	39	51	34	33	46	57	13	70	19	42	43	98.6
14-Jan	42	27	12	11	14	10	10	10	25	19	12	14	10	12	11	11	10	8	12	10	10	23	22	9	42.1
15-Jan	10	9	10	9	7	71	13	28	24	74	65	16	20	17	75	31	23	76	54	56	15	13	17	22	75.9
16-Jan	9	13	26	29	18	36	17	40	22	12	70	50	23	81	77	79	23	44	10	15	33	37	6	8	81.1
17-Jan	8	7	9	11	22	23	30	61	44	37	62	35	25	38	15	15	10	12	57	21	17	13	17	43	62.4
18-Jan	91	79	49	83	58	89	65	92	45	49	67	79	46	30	18	12	13	21	16	10	30	30	19	13	92.2
19-Jan	19	15	12	16	27	14	32	27	15	17	41	14	43	12	10	22	13	25	21	73	60	13	10	12	73.4
20-Jan	14	27	17	15	13	30	37	18	20	34	54	32	42	28	25	16	14	9	12	20	15	14	11	10	53.9
21-Jan	16	9	13	12	15	9	12	12	12	12	9	9	8	8	9	14	15	88	40	77	84	12	17	23	87.7
22-Jan	25	36	73	78	49	80	37	54	38	52	50	30	20	24	33	40	32	59	62	67	62	85	39	45	85.3
23-Jan	89	85	25	39	37	78	22	78	10	N	N	24	25	30	8	13	19	8	40	59	12	59	71	19	89.1
24-Jan	49	81	42	48	72	23	46	29	20	58	35	20	26	42	25	20	13	24	21	17	13	18	33	22	80.9
25-Jan	15	17	21	13	14	8	28	17	9	8	9	13	11	26	7	6	5	6	5	7	5	5	6	6	28.0
26-Jan	6	5	6	6	6	6	11	8	22	12	11	8	8	10	13	8	33	15	N	10	9	N	N	10	32.7
27-Jan	14	12	13	N	N	N	N	N	N	27	37	35	30	25	27	24	N	N	20	18	28	18	12	39	38.6
28-Jan	15	53	N	41	16	19	17	16	12	12	14	11	17	14	13	18	15	20	23	15	18	21	12	17	53.4
29-Jan	19	13	25	16	15	12	38	19	19	13	12	15	31	51	26	13	19	52	30	42	11	12	10	7	52.5
30-Jan	8	10	8	9	8	7	8	7	6	7	6	7	7	6	8	8	7	6	8	7	6	7	6	7	9.7
31-Jan	8	9	13	55	16	14	14	12	13	16	15	15	19	17	16	17	19	21	20	19	21	34	27	N	55.3
	90.7	84.8	92.3	87.0	88.8	88.5	70.9	98.6	62.6	74.2	70.9	79.2	68.5	81.1	77.2	82.8	61.6	87.7	85.9	76.7	84.1	85.3	81.0	73.7	

N - Not Valid

PAZA

Evergreen Park Station

Monthly Summary Tables, Graphs and  
Roses

## Hourly Averages

## Sulphur Dioxide (SO<sub>2</sub>) - ppb Evergreen Park - January 2018

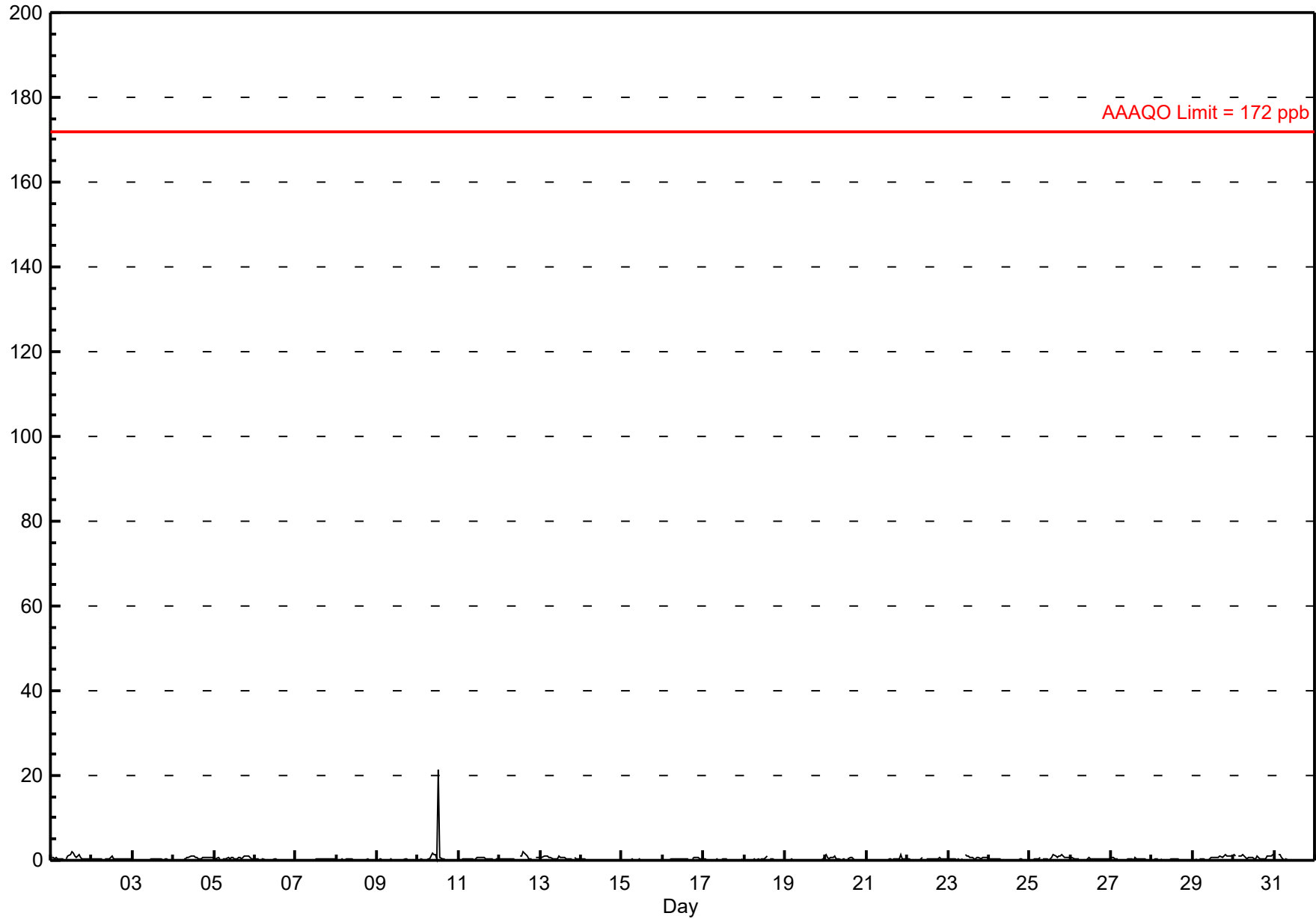
Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 21.4 ppb on Jan 10 13:00	Maximum Daily Average: 1.3 ppb on Jan 10
Minimum Value: 0 ppb on Jan 14 16:00	Hours of Data: 704
Maximum Diurnal Average: 1.1 ppb at hour 13	Hours of Missing Data: 40
Monthly Average: 0.36 ppb	Hours of Calibration: 34
Minimum Daily Average: 0.1 ppb on Jan 15	Percent Operational Time: 99.2
Minimum Diurnal Average: 0.2 ppb at hour 8	
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.1 Median = 0.2 Q <sub>3</sub> = 0.4 P <sub>90</sub> = 0.8 P <sub>99</sub> = 1.5	

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-Jan	1	1	0	1	0	0	0	0	A	0	1	1	2	2	1	1	1	1	0	0	0	0	0	0	0.6	2.1	
2-Jan	0	0	0	0	0	0	0	A	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9	
3-Jan	0	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	0.5	
4-Jan	0	0	0	0	0	A	0	0	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	0.5	0.9	
5-Jan	0	0	1	0	A	0	0	0	1	0	1	1	0	0	1	1	0	1	1	1	1	1	0	0	0.6	1.0	
6-Jan	0	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	
7-Jan	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0.2	0.5	
8-Jan	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
9-Jan	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4	
10-Jan	0	0	0	0	0	0	0	0	2	1	1	0	21	1	0	0	0	0	0	0	0	0	A	0	1.3	21.4	
11-Jan	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	A	0	0	0.4	0.7	
12-Jan	0	0	0	0	0	0	0	0	0	C	C	1	1	2	1	1	0	0	0	0	A	1	1	1	0.6	2.0	
13-Jan	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	A	1	0	0	0	0.5	1.0	
14-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.2	
15-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.3	
16-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	1	1	0	0	0.3	0.8	
17-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	P	P	P	P	P	P	N	0	0	--	0.4
18-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0.2	0.9	
19-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0.1	1.1	
20-Jan	1	1	0	1	1	1	0	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0.4	1.4	
21-Jan	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	2	0	0	0.2	1.5	
22-Jan	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0.3	0.7	
23-Jan	0	0	0	0	0	0	0	0	0	A	1	1	1	1	1	0	0	1	1	0	1	1	1	1	0.5	1.2	
24-Jan	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5	
25-Jan	0	0	0	0	0	0	1	A	0	0	0	0	0	1	1	1	1	1	1	2	1	1	1	1	0.5	1.5	
26-Jan	1	1	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7	
27-Jan	1	1	0	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.3	0.8	
28-Jan	0	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	
29-Jan	0	0	0	A	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.4	
30-Jan	1	1	A	1	1	1	1	1	0	1	1	1	0	0	1	0	0	0	0	0	0	1	1	1	0.8	1.4	
31-Jan	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.5	
	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.4	0.4	1.1	0.4	0.5	0.4	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3		Diurnal Average	
	1.4	1.1	1.5	1.3	1.1	1.3	0.9	0.5	1.8	1.2	1.3	1.5	21.4	1.6	2.0	1.3	1.2	0.9	1.0	1.5	1.5	1.2	1.1	1.4		Diurnal Maximum	

C - Calibration      P - Power Failure      N - Not Valid      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb    24-hr 48 ppb    30-day 11 ppb

**Hourly Averages**

**Sulphur Dioxide (SO<sub>2</sub>) - ppb**  
**Evergreen Park - January 2018**





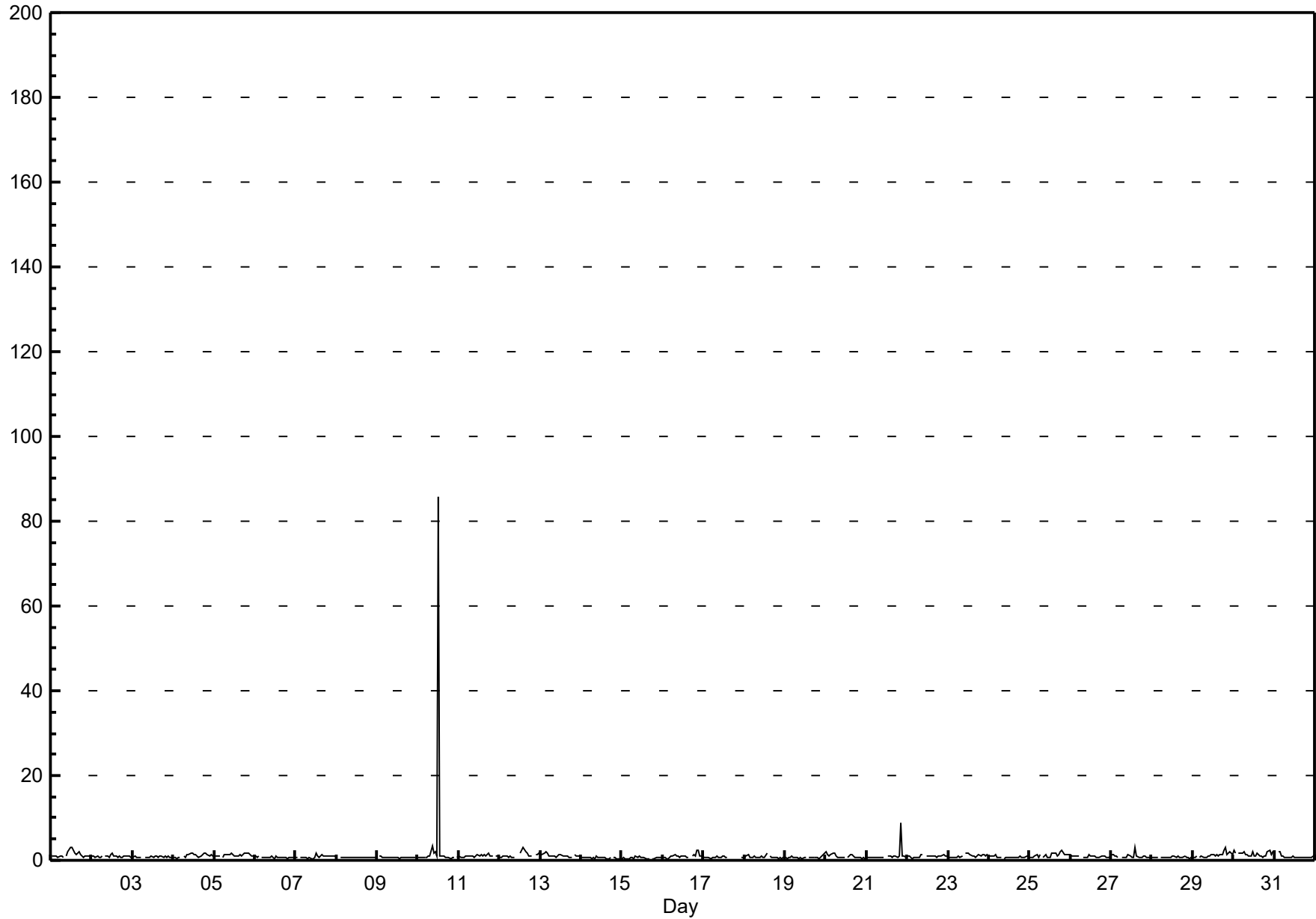
## Hourly Maximums

## Sulphur Dioxide (SO<sub>2</sub>) - ppb Evergreen Park - January 2018

Maximum Value: 85.7 ppb on Jan 10 13:00		Maximum Daily Average: 4.6 ppb on Jan 10		Hours in Service: 744																							
Minimum Value: 0 ppb on Jan 14 23:00		Minimum Daily Average: 0.6 ppb on Jan 15		Hours of Data: 704																							
Maximum Diurnal Average: 3.9 ppb at hour 13		Minimum Diurnal Average: 0.8 ppb at hour 8		Hours of Missing Data: 40																							
Monthly Average: 1.06 ppb		Percentiles: P <sub>1</sub> = 0.4 P <sub>10</sub> = 0.5 Q <sub>1</sub> = 0.6 Median = 0.8 Q <sub>3</sub> = 1.1 P <sub>90</sub> = 1.5 P <sub>99</sub> = 3.0		Hours of Calibration: 34																							
				Percent Operational Time: 99.2																							
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-Jan	1	1	1	1	1	1	1	1	A	1	2	3	3	2	2	1	2	1	1	1	1	1	1	1	1.3	3.0	
2-Jan	1	1	1	1	1	1	1	A	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.7	
3-Jan	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1	
4-Jan	1	1	0	1	1	A	1	1	1	1	2	2	1	1	1	1	1	1	2	2	1	1	1	1	1.1	1.8	
5-Jan	1	1	1	1	A	1	1	1	1	1	2	1	1	1	1	1	1	1	2	2	2	1	1	1	1.2	1.8	
6-Jan	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0	
7-Jan	1	1	A	1	1	1	1	0	1	0	0	1	2	1	1	1	1	1	1	1	1	1	1	1	0.8	1.6	
8-Jan	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	
9-Jan	A	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1	
10-Jan	1	1	1	1	1	1	1	1	3	2	2	1	86	1	1	1	1	1	1	0	1	1	A	1	4.6	85.7	
11-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	A	1	1	1	1.0	1.8	
12-Jan	1	1	1	1	1	1	1	1	1	C	C	2	2	3	2	2	1	1	1	A	1	1	2	1.3	3.1		
13-Jan	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1.1	1.9	
14-Jan	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	0	1	A	1	1	0	0	0	0	0.6	1.1	
15-Jan	0	1	0	0	0	1	1	0	1	1	1	1	1	0	0	0	A	0	0	1	1	1	1	1	0.6	0.9	
16-Jan	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	2	2	1	1	1	1.0	2.4	
17-Jan	1	1	1	1	0	1	1	1	1	1	1	1	1	1	A	P	P	P	P	P	P	N	1	1	--	1.0	
18-Jan	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	1	0	1	0.8	1.6	
19-Jan	1	0	1	1	1	1	1	1	0	1	0	1	1	A	1	1	1	1	1	1	0	1	1	2	0.7	1.8	
20-Jan	2	1	1	1	2	2	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	1	1	0.9	2.1	
21-Jan	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	9	1	1	1	1.1	8.7	
22-Jan	1	1	1	0	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3	
23-Jan	1	1	1	1	1	1	1	1	1	A	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.8
24-Jan	1	1	1	1	1	1	1	1	A	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2	
25-Jan	1	1	1	1	1	1	1	A	1	1	1	1	1	2	2	2	1	1	2	2	1	1	1	1	1.2	2.5	
26-Jan	1	1	1	1	1	1	A	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.5	
27-Jan	1	1	1	1	1	A	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1.0	3.0	
28-Jan	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0.7	1.0	
29-Jan	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	2	1	2	3	1	2	2	1	1	1.3	3.0	
30-Jan	2	2	A	2	2	2	2	1	1	1	1	2	1	1	2	1	1	1	1	1	2	2	1	2	1.5	2.3	
31-Jan	2	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	2.1	
	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.9	0.9	1.0	1.1	3.9	1.1	1.1	1.0	0.9	0.9	0.9	1.0	1.2	1.0	0.9	0.9		Diurnal Average	
	2.3	1.6	2.1	2.1	1.8	1.8	2.0	1.4	3.2	1.9	2.2	3.0	85.7	2.4	3.1	2.0	2.1	1.8	2.3	3.0	8.7	2.3	2.0	2.0		Diurnal Maximum	
C - Calibration		P - Power Failure						N - Not Valid						A - Automated Daily Zero Span													

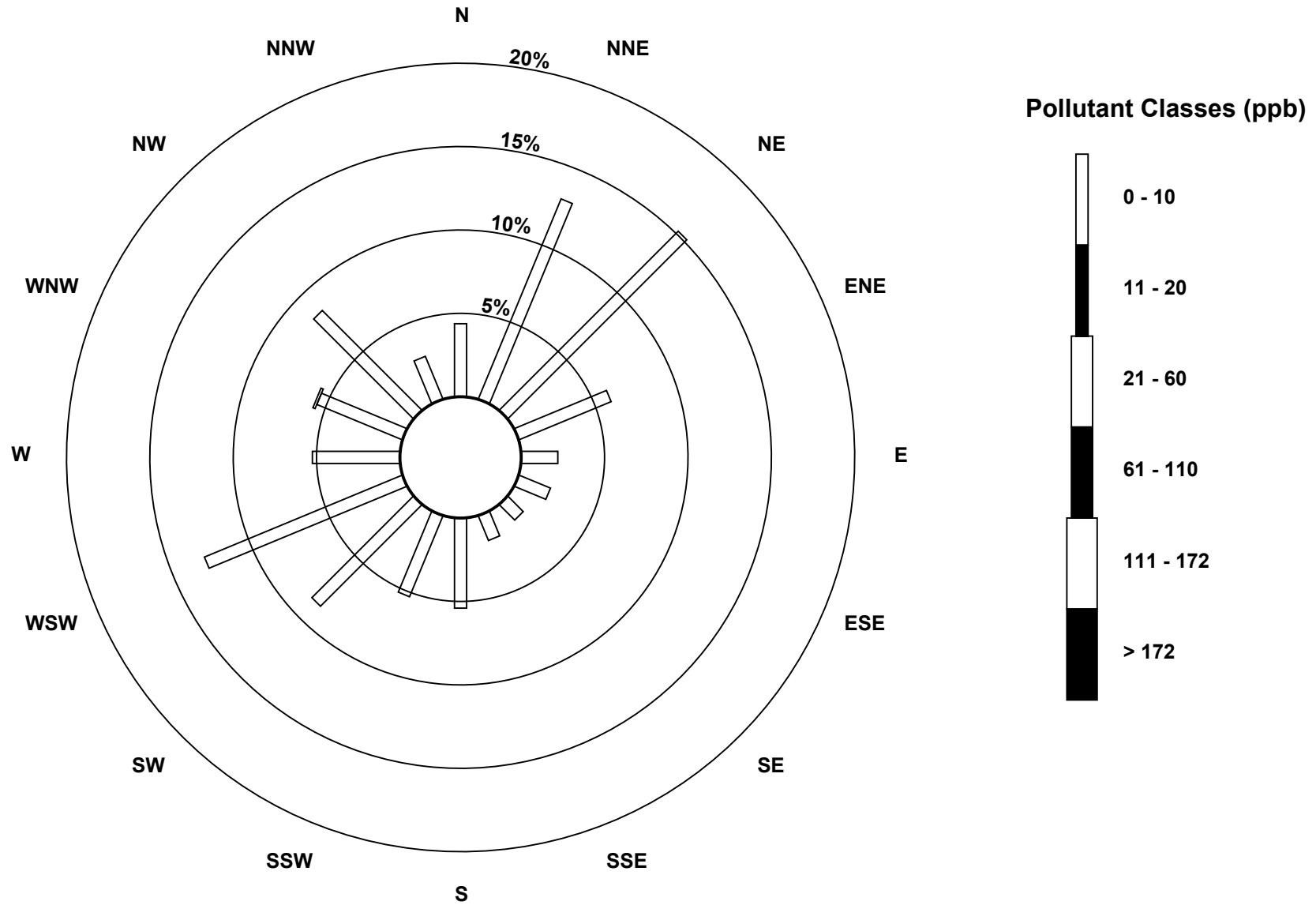
### Hourly Maximums

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Evergreen Park - January 2018



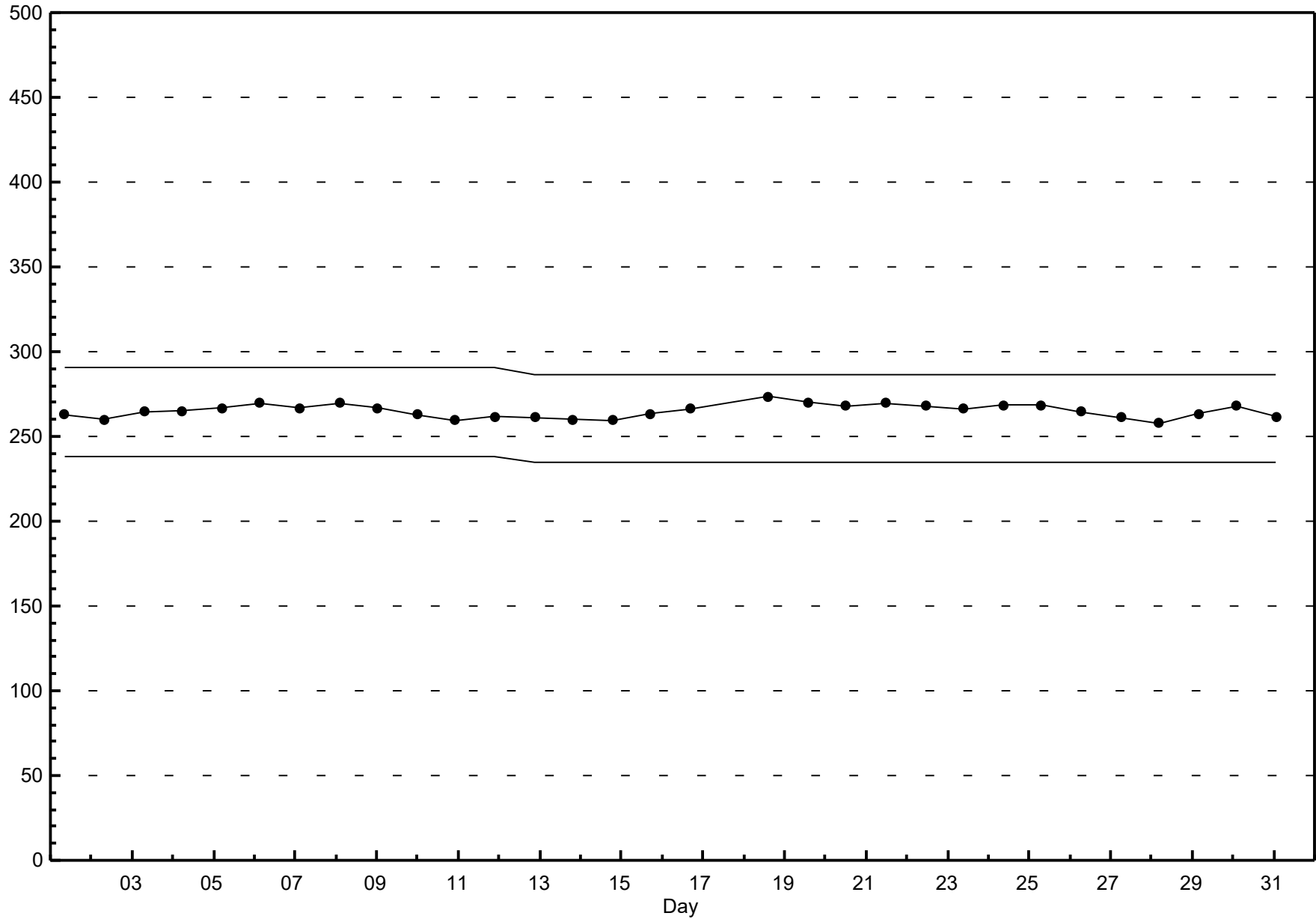
**Pollutant Rose**

**Sulphur Dioxide (SO<sub>2</sub>) - ppb**  
**Evergreen Park - January 2018**



### Span Responses

Sulphur Dioxide (SO<sub>2</sub>)  
Evergreen Park - January 2018

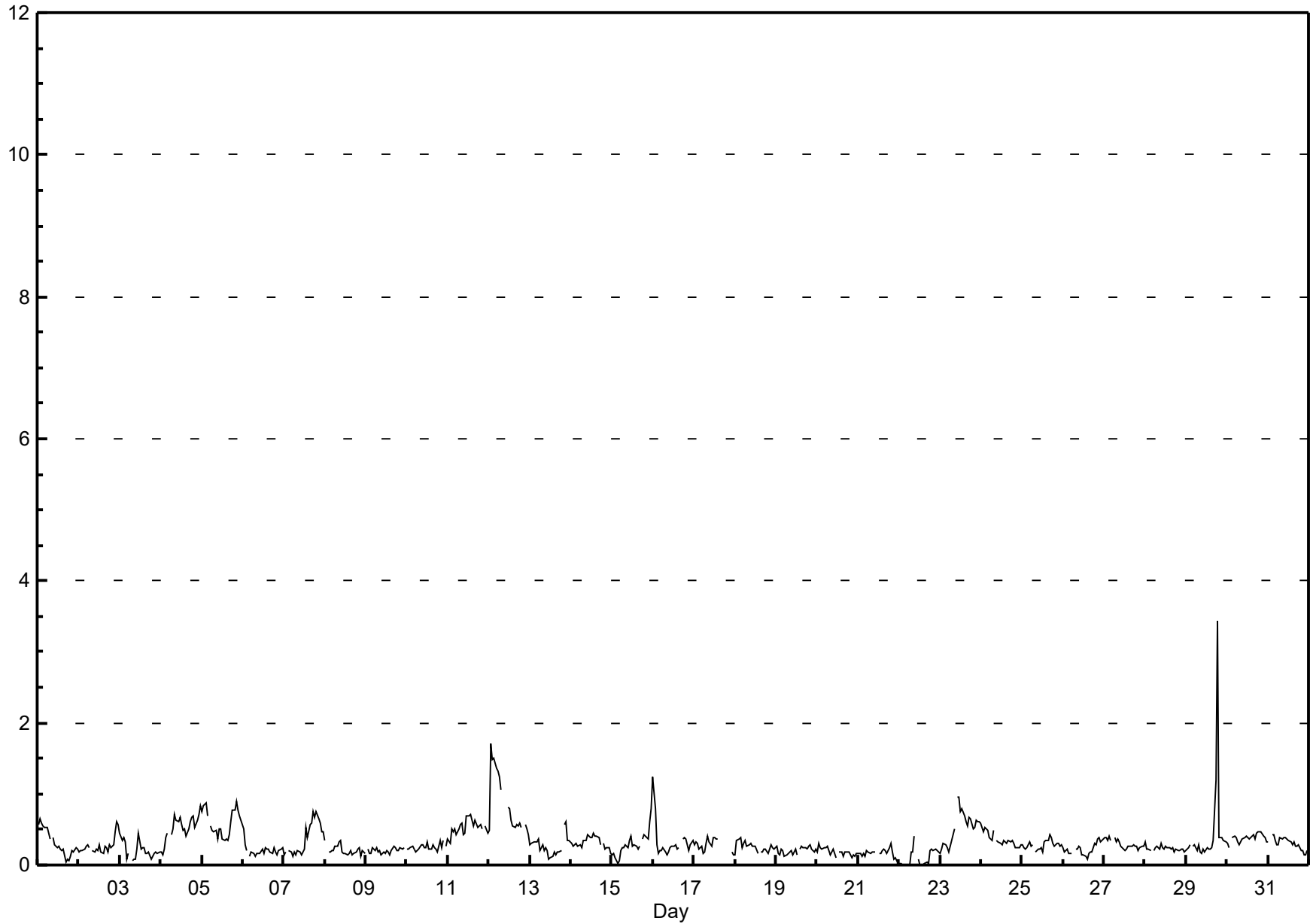


## Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - January 2018

Maximum Value: 3.4 ppb on Jan 29 19:00 Minimum Value: 0 ppb on Jan 22 03:00 Maximum Diurnal Average: 0.4 ppb at hour 19 Monthly Average: 0.32 ppb		Maximum Daily Average: 0.9 ppb on Jan 12 Minimum Daily Average: 0.1 ppb on Jan 22 Minimum Diurnal Average: 0.3 ppb at hour 10 Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.2 Q <sub>1</sub> = 0.2 Median = 0.3 Q <sub>3</sub> = 0.4 P <sub>90</sub> = 0.6 P <sub>99</sub> = 1.2		Hours in Service: 744 Hours of Data: 703 Hours of Missing Data: 41 Hours of Calibration: 35 Percent Operational Time: 99.2																							
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-Jan	1	1	1	1	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
2-Jan	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0.3	0.6
3-Jan	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
4-Jan	0	0	0	0	0	A	0	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1	0.5	0.8
5-Jan	1	1	1	1	A	1	0	0	0	0	1	1	0	0	0	0	0	1	1	1	1	1	1	1	1	0.6	0.9
6-Jan	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
7-Jan	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	0	0	0	0.4	0.8
8-Jan	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
9-Jan	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	0.2	0.3
10-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0.2	0.4
11-Jan	0	0	1	0	1	0	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	A	1	0	0.5	0.7
12-Jan	0	2	1	2	1	1	1	1	C	C	C	1	1	1	1	1	1	1	1	1	1	A	1	0	0.9	1.7	
13-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	0	0	0.3	0.6	
14-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	0.5	
15-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	1	0.3	0.8	
16-Jan	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	1.2	
17-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	P	P	P	P	P	P	N	0	--	0.4	
18-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	0.4	
19-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
20-Jan	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
21-Jan	0	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	
22-Jan	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4	
23-Jan	0	0	0	0	0	0	0	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.5	1.0	
24-Jan	1	0	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6	
25-Jan	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4	
26-Jan	0	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	
27-Jan	0	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	
28-Jan	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
29-Jan	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0	0	0.4	3.4	
30-Jan	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5	
31-Jan	0	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	
	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	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	Diurnal Average		
	1.2	1.7	1.5	1.5	1.4	1.3	1.2	1.1	0.7	0.6	1.0	1.0	0.8	0.8	0.7	0.6	0.6	1.2	3.4	0.8	0.9	0.8	0.7	0.8	Diurnal Maximum		
C - Calibration		P - Power Failure					N - Not Valid					A - Automated Daily Zero Span															

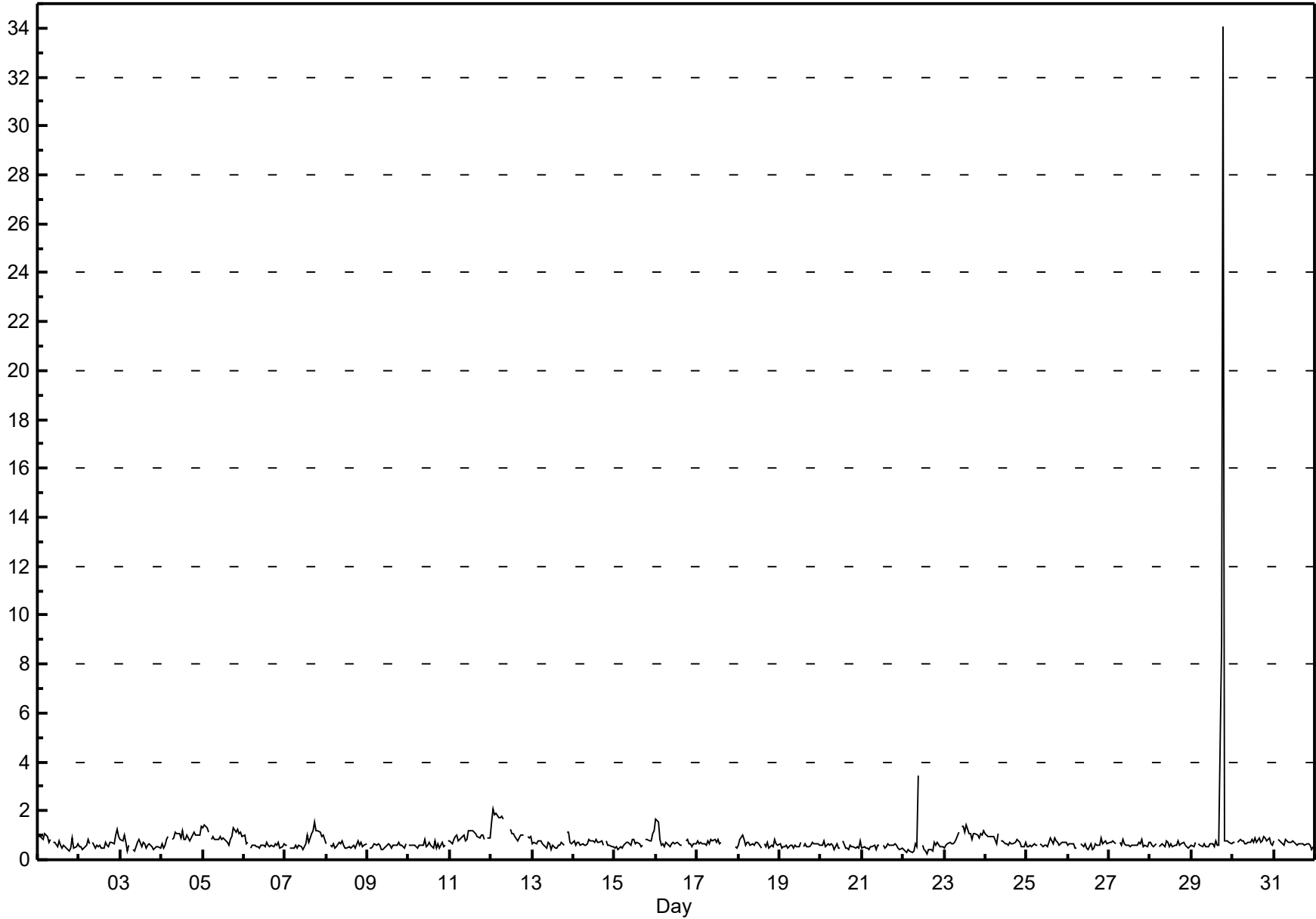


## Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - January 2018

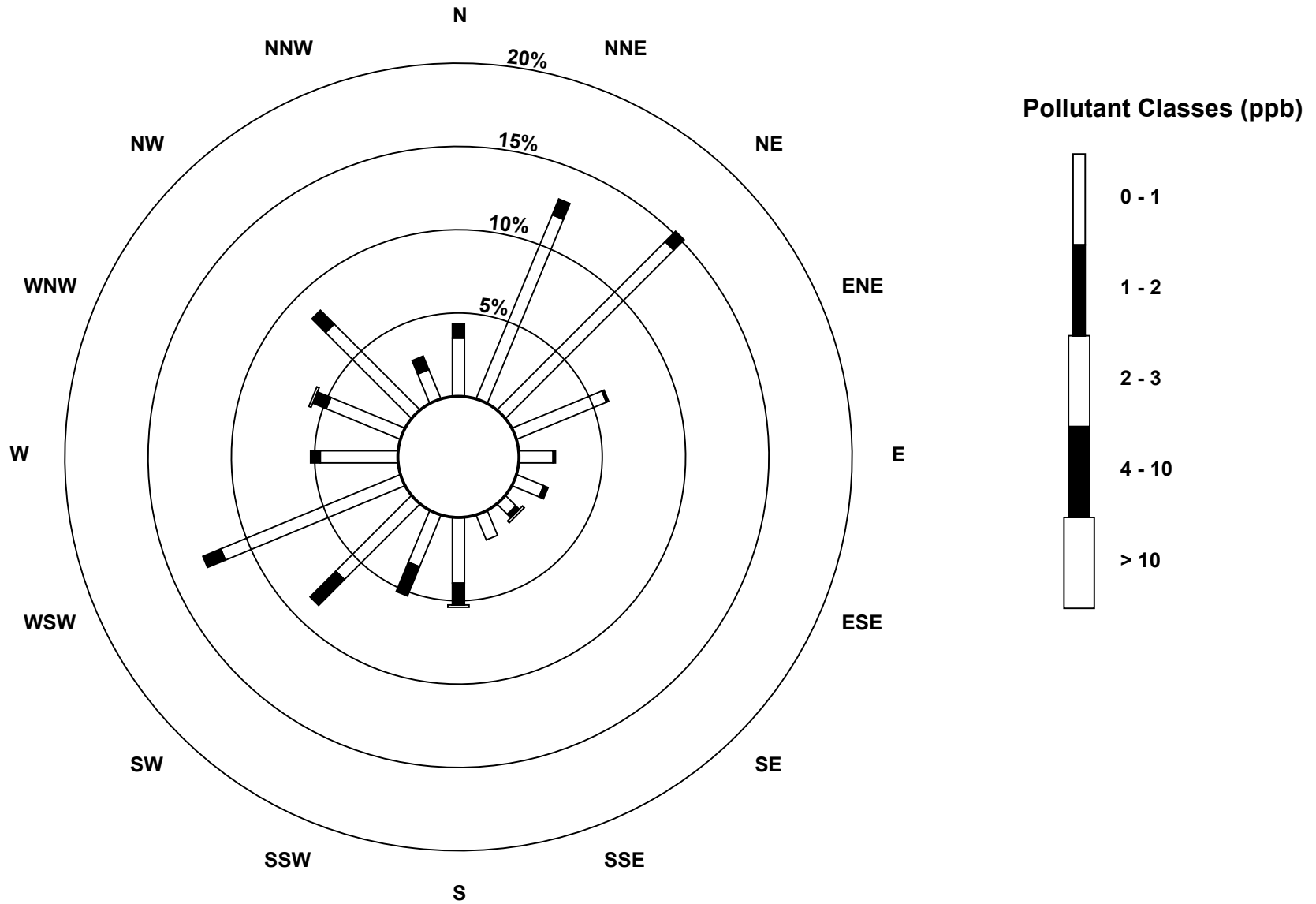
Maximum Value: 34.0 ppb on Jan 29 19:00		Maximum Daily Average: 2.4 ppb on Jan 29		Hours in Service: 744																						
Minimum Value: 0 ppb on Jan 22 15:00		Minimum Daily Average: 0.5 ppb on Jan 21		Hours of Data: 703																						
Maximum Diurnal Average: 1.9 ppb at hour 19		Minimum Diurnal Average: 0.6 ppb at hour 15		Hours of Missing Data: 41																						
Monthly Average: 0.77 ppb		Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 0.5 Q <sub>1</sub> = 0.6 Median = 0.6 Q <sub>3</sub> = 0.8 P <sub>90</sub> = 1.0 P <sub>99</sub> = 1.8		Hours of Calibration: 35																						
				Percent Operational Time: 99.2																						
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-Jan	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0	1	0	0	0	0	1	0	1	1	0.7	1.1
2-Jan	1	1	0	1	1	1	1	A	1	0	1	1	1	0	0	1	1	1	1	1	1	1	1	1	0.7	1.2
3-Jan	1	1	1	1	0	1	A	0	0	1	1	1	1	1	0	1	1	1	0	0	1	1	0	0.6	1.0	
4-Jan	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.4	
5-Jan	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.4	
6-Jan	1	1	1	A	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	1	0.6	1.0	
7-Jan	1	1	A	0	0	0	1	0	1	1	0	1	1	1	1	1	2	1	1	1	1	1	1	0.8	1.5	
8-Jan	1	A	1	1	1	0	1	1	1	1	0	1	0	1	0	1	1	0	1	1	1	1	1	0.6	0.8	
9-Jan	A	1	0	1	1	1	1	1	0	0	1	1	1	0	1	1	1	1	1	1	1	1	1	0.6	0.7	
10-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	A	0.6	0.8	
11-Jan	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	1.2	
12-Jan	2	2	2	2	2	2	2	C	C	C	1	1	1	1	1	1	1	1	1	1	A	1	1	1.3	2.0	
13-Jan	1	1	1	1	1	1	1	1	0	1	1	0	1	1	0	1	1	1	1	A	1	1	1	0.7	1.1	
14-Jan	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	
15-Jan	0	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.7	1.2	
16-Jan	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.7	1.7	
17-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	P	P	P	P	P	P	N	--	0.9	
18-Jan	1	1	1	1	1	1	1	1	1	1	1	1	0	A	1	1	1	1	0	1	1	1	1	0.7	1.0	
19-Jan	1	0	1	1	1	0	1	1	0	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.6	0.7	
20-Jan	1	1	1	1	1	1	1	1	0	1	0	0	A	1	0	0	0	1	1	1	0	1	0	0.6	0.8	
21-Jan	0	1	0	0	0	1	1	1	0	1	1	A	1	0	1	1	1	1	1	1	1	0	0	0.5	0.6	
22-Jan	0	0	0	0	0	0	0	1	1	3	A	1	0	0	0	0	0	0	1	1	1	1	1	0.6	3.4	
23-Jan	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	1.4	
24-Jan	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1	
25-Jan	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9	
26-Jan	1	1	1	1	0	0	A	1	1	1	1	0	0	1	0	1	1	1	1	1	1	1	1	0.6	0.9	
27-Jan	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	0.8	
28-Jan	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0.6	0.8	
29-Jan	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	9	34	1	1	1	1	2.4	34.0	
30-Jan	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0	
31-Jan	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0.7	0.8	
	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.6	0.7	0.7	1.0	1.9	0.8	0.7	0.7	0.7	0.7	Diurnal Average	
	1.7	2.0	1.8	1.9	1.7	1.7	1.8	1.7	1.1	3.4	1.4	1.3	1.2	1.4	1.1	1.1	1.2	8.8	34.0	1.2	1.3	1.1	1.2	1.4	Diurnal Maximum	
C - Calibration		P - Power Failure						N - Not Valid						A - Automated Daily Zero Span												

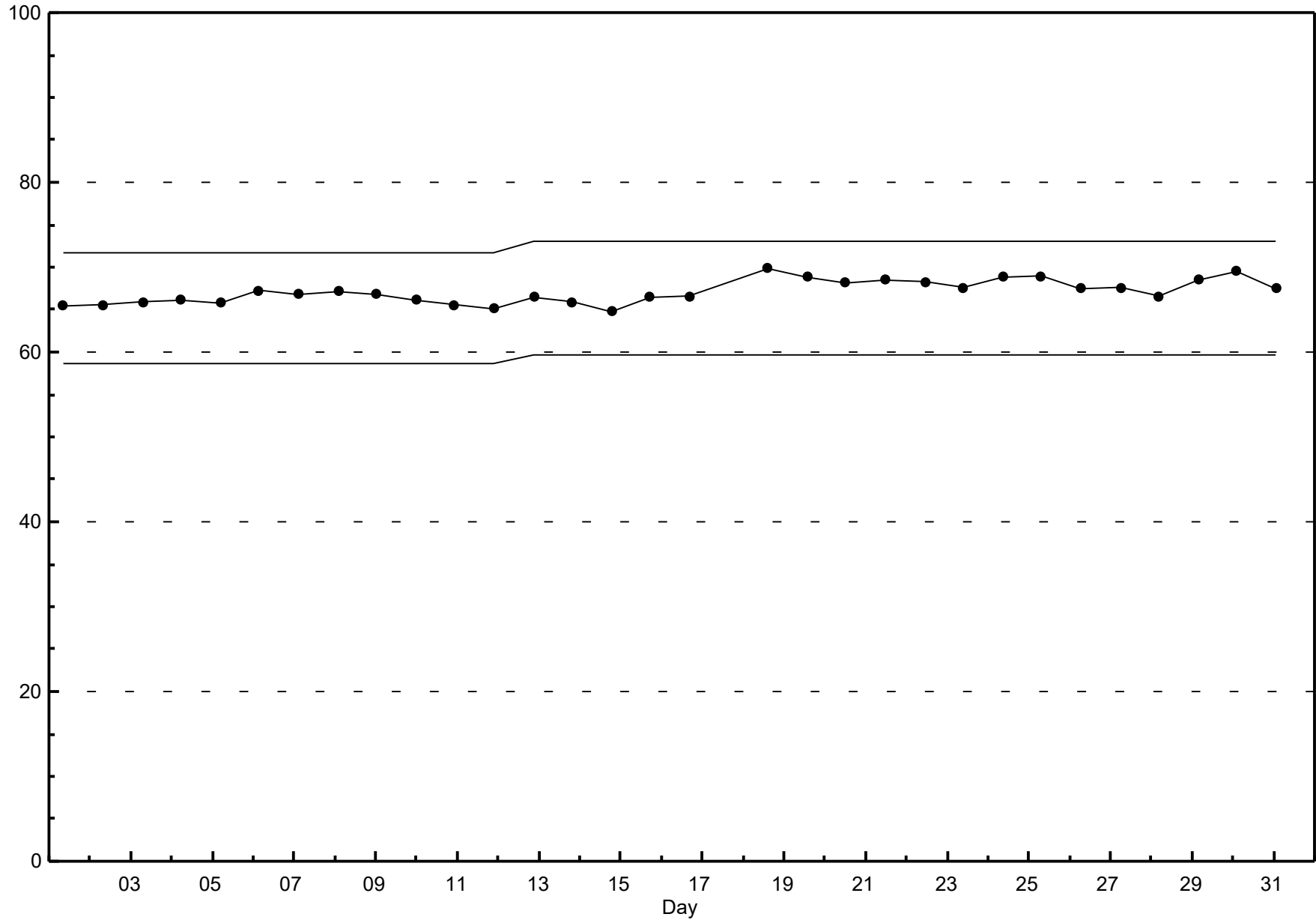




**Pollutant Rose**

**Total Reduced Sulphur (TRS) - ppb**  
**Evergreen Park - January 2018**





## Hourly Averages

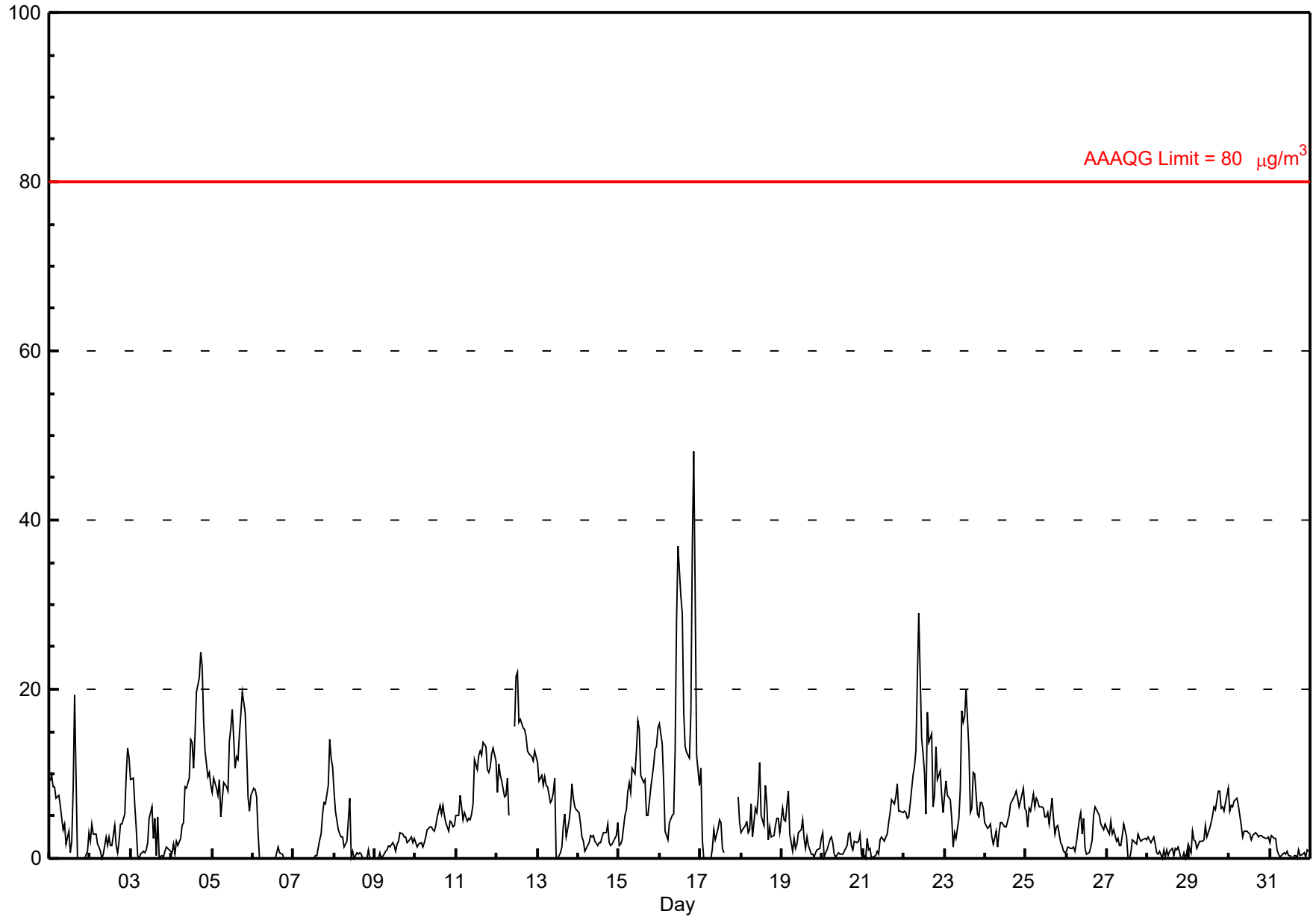
## Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

### Evergreen Park - January 2018

Number of Exceedences: 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 48.2 µg/m <sup>3</sup> on Jan 16 21:00	Maximum Daily Average: 17.0 µg/m <sup>3</sup> on Jan 16
Minimum Value: 0 µg/m <sup>3</sup> on Jan 1 17:00	Hours of Data: 735
Maximum Diurnal Average: 6.6 µg/m <sup>3</sup> at hour 12	Hours of Missing Data: 9
Monthly Average: 5.05 µg/m <sup>3</sup>	Hours of Calibration: 0
Minimum Daily Average: 0.8 µg/m <sup>3</sup> on Jan 31	Percent Operational Time: 98.8
Minimum Diurnal Average: 3.0 µg/m <sup>3</sup> at hour 6	
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.2 Q <sub>1</sub> = 1.3 Median = 3.3 Q <sub>3</sub> = 7.0 P <sub>90</sub> = 12.1 P <sub>99</sub> = 28.9	

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-Jan	9	10	8	8	7	7	6	5	3	4	2	3	1	2	8	19	0	0	0	0	0	0	1	3	4.5	19.4																							
2-Jan	2	4	3	3	2	1	1	0	1	3	2	2	2	2	4	2	1	2	4	4	5	10	13	12	3.4	13.1																							
3-Jan	9	10	6	4	0	0	1	1	1	1	2	5	6	2	5	0	5	0	0	0	1	1	1	1	2.6	9.6																							
4-Jan	1	2	0	2	2	2	4	4	9	8	9	14	14	11	15	20	21	24	23	16	13	10	10	9	10.1	24.4																							
5-Jan	8	10	8	7	9	5	7	9	8	8	14	15	18	11	12	12	15	17	20	17	13	7	6	7	11.0	19.7																							
6-Jan	8	8	7	3	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	1.3	8.4																							
7-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	5	7	6	9	14	12	11	2.9	14.1																							
8-Jan	8	6	3	3	3	3	1	2	5	7	0	1	0	1	1	1	0	0	0	0	1	0	0	0	1.8	8.0																							
9-Jan	0	0	0	1	0	0	1	1	2	1	2	2	1	2	2	3	3	3	3	2	2	3	2	2	1.5	3.1																							
10-Jan	2	1	2	2	1	2	2	3	4	4	3	3	4	5	6	5	6	5	4	3	4	4	4	4	3.5	6.3																							
11-Jan	5	5	7	6	5	5	4	5	5	5	6	12	11	12	13	12	14	13	11	10	11	12	13	11	8.9	13.8																							
12-Jan	8	11	10	9	7	7	9	5	M	M	16	22	22	16	16	15	15	14	13	12	12	12	13	12	12.6	22.1																							
13-Jan	11	9	10	9	10	9	9	7	7	8	10	0	0	1	1	4	5	3	4	6	9	7	6	6	6.2	11.3																							
14-Jan	5	4	3	2	1	1	2	3	3	3	2	2	2	2	3	3	3	4	2	2	2	2	3	4	2.5	5.4																							
15-Jan	2	2	2	5	6	8	9	8	11	10	13	16	15	10	9	9	5	5	7	8	11	13	13	15	8.8	16.3																							
16-Jan	16	13	9	3	3	2	4	5	5	13	28	37	31	29	17	13	13	12	17	37	48	31	12	9	17.0	48.2																							
17-Jan	11	2	0	0	0	0	0	1	3	2	4	5	4	1	1	P	P	P	P	P	P	P	N	7	4	--	10.7																						
18-Jan	3	3	4	4	3	3	6	3	6	5	7	11	5	4	9	6	2	4	2	3	4	5	5	3	4.7	11.3																							
19-Jan	6	5	4	6	8	3	1	2	1	2	3	3	5	2	1	3	1	0	0	1	1	1	1	2	2.6	8.0																							
20-Jan	3	0	1	1	2	2	2	0	0	1	0	1	0	1	1	3	3	1	1	2	2	2	3	1	1.4	3.1																							
21-Jan	1	0	2	1	1	0	0	0	1	0	2	3	2	3	3	4	5	7	6	7	9	6	6	5	3.1	8.8																							
22-Jan	6	6	5	5	6	10	11	13	21	29	14	12	10	5	17	14	15	6	7	13	9	10	7	5	10.8	29.0																							
23-Jan	7	9	8	7	5	1	3	2	5	8	18	16	17	20	13	5	6	10	10	5	5	7	7	6	8.3	20.1																							
24-Jan	4	4	4	4	3	2	3	1	3	4	4	4	4	4	5	6	7	7	8	7	6	7	8	6	4.8	8.3																							
25-Jan	6	4	6	6	8	6	7	7	6	6	6	5	5	5	4	7	5	3	4	4	2	2	1	1	4.7	7.7																							
26-Jan	1	1	1	1	1	1	2	5	5	3	5	1	1	1	1	2	5	6	5	5	4	4	3	4	2.9	6.1																							
27-Jan	3	3	4	3	3	2	2	2	2	3	4	3	0	0	1	2	2	2	3	2	2	2	2	2	2.2	4.4																							
28-Jan	3	2	2	3	2	1	1	1	0	1	0	1	0	1	1	0	1	1	1	0	0	1	0	1	1.0	2.6																							
29-Jan	2	1	3	2	2	1	2	2	2	2	4	3	4	4	5	6	6	8	8	6	6	6	7	8	4.1	8.3																							
30-Jan	6	6	6	7	7	6	5	4	3	3	3	3	3	2	3	3	3	3	3	3	2	2	2	3	3.8	7.1																							
31-Jan	2	3	2	2	1	1	0	0	1	0	1	0	0	0	0	0	0	1	0	1	1	0	1	1	0.8	2.7																							
																								5.0	4.6	4.3	3.8	3.5	3.0	3.4	3.2	4.0	4.8	5.9	6.6	6.0	5.1	5.7	6.2	5.7	5.6	5.8	6.1	6.4	6.0	5.5	5.1	Diurnal Average	
																								15.9	13.5	9.9	9.2	9.7	9.9	10.9	12.6	21.1	29.0	28.1	37.0	31.0	29.0	17.3	19.7	21.4	24.4	22.7	36.7	48.2	31.0	13.3	15.4	Diurnal Maximum	

P - Power Failure    M - Maintenance    N - Not Valid  
 Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m<sup>3</sup>    Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m<sup>3</sup>

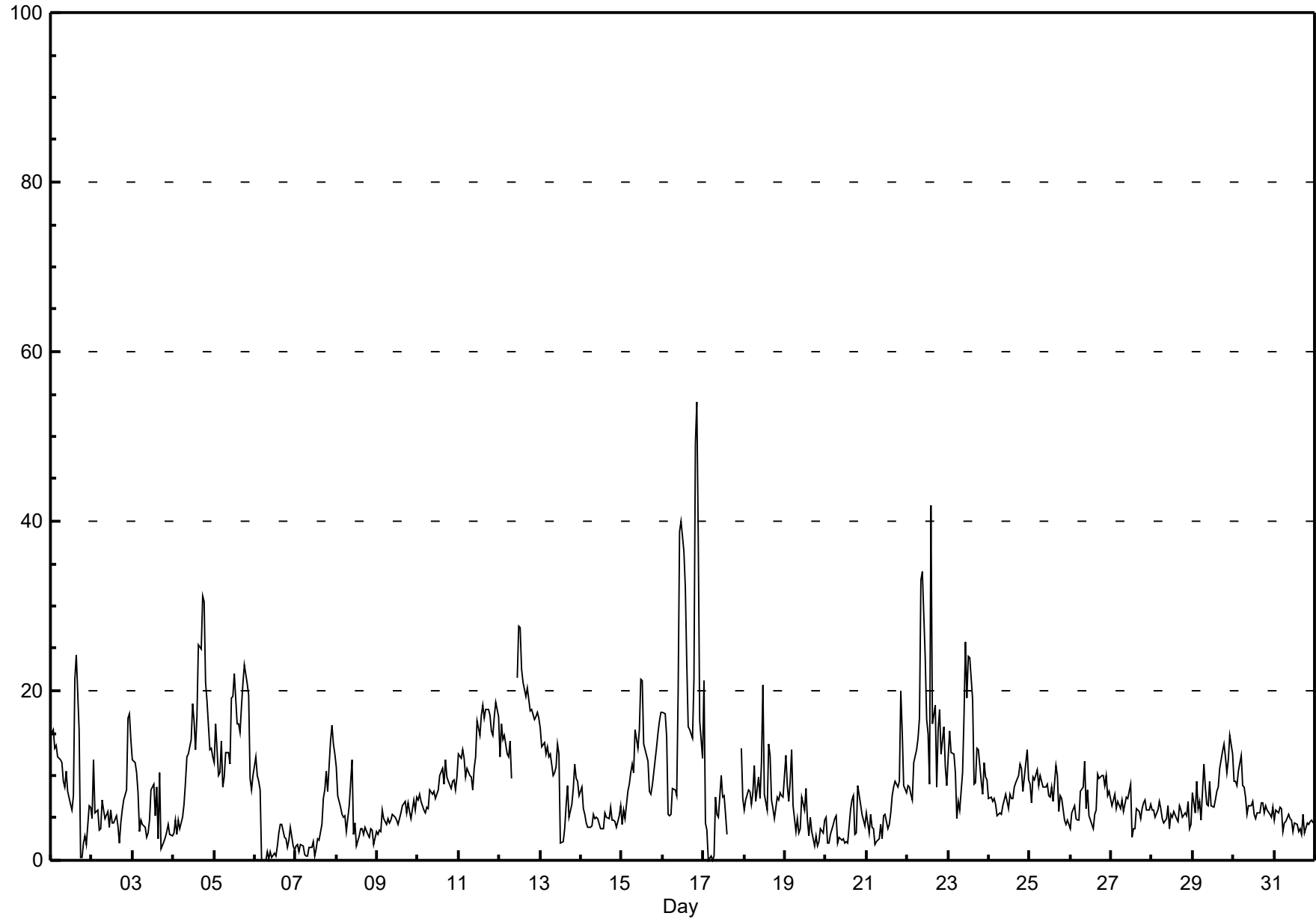


## Hourly Maximums

## Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

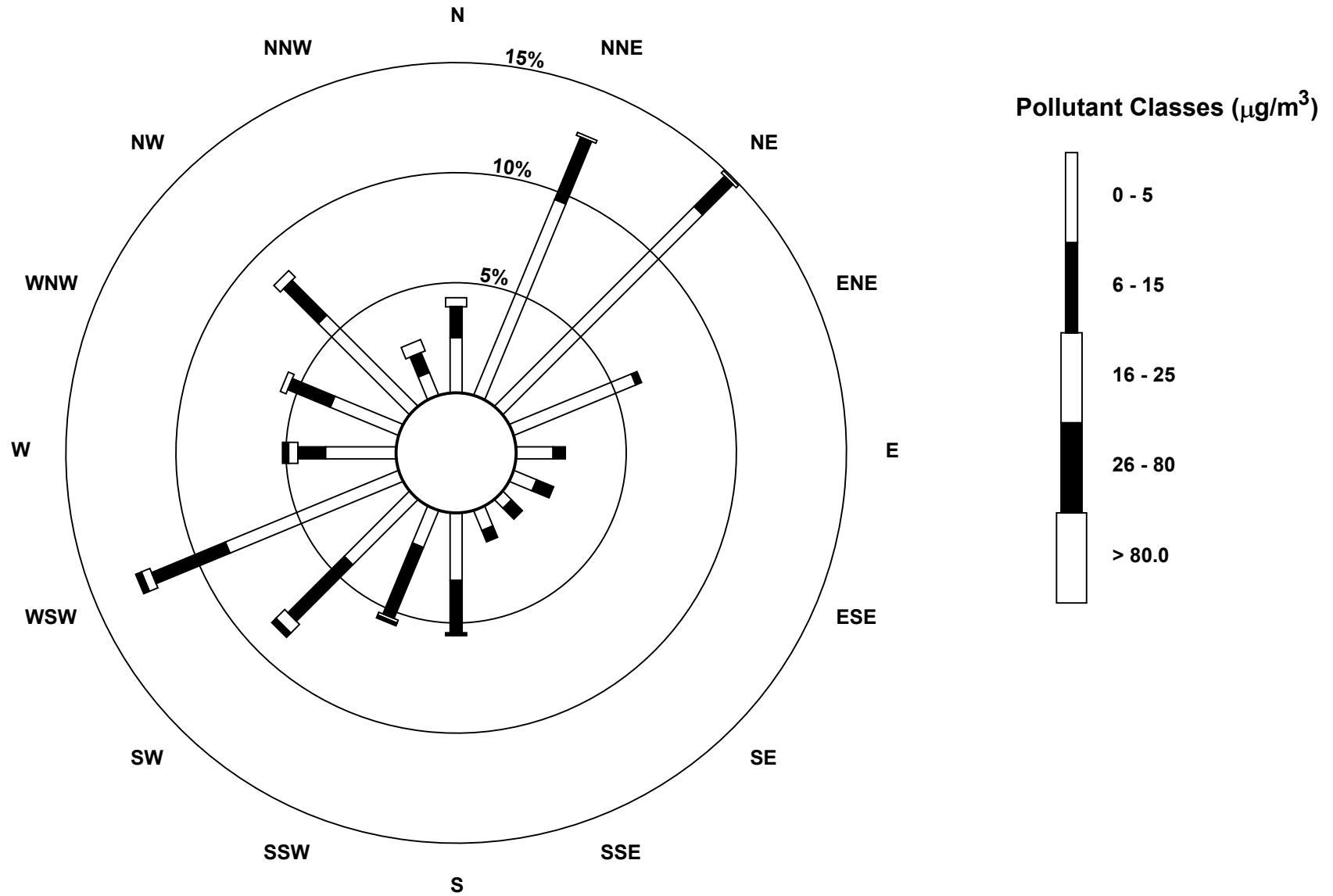
### Evergreen Park - January 2018

Maximum Value: 54.1 µg/m <sup>3</sup> on Jan 16 21:00		Maximum Daily Average: 21.6 µg/m <sup>3</sup> on Jan 16		Hours in Service: 744																							
Minimum Value: 0 µg/m <sup>3</sup> on Jan 6 05:00		Minimum Daily Average: 3.1 µg/m <sup>3</sup> on Jan 6		Hours of Data: 735																							
Maximum Diurnal Average: 10.5 µg/m <sup>3</sup> at hour 12		Minimum Diurnal Average: 6.2 µg/m <sup>3</sup> at hour 6		Hours of Missing Data: 9																							
Monthly Average: 8.78 µg/m <sup>3</sup>		Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 3.0 Q <sub>1</sub> = 4.8 Median = 7.2 Q <sub>3</sub> = 11.3 P <sub>90</sub> = 16.7 P <sub>99</sub> = 35.2		Hours of Calibration: 0																							
				Percent Operational Time: 98.8																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jan	15	15	13	13	12	12	12	9	9	11	8	7	6	8	21	24	15	0	0	2	3	2	6	6	9.6	24.2	
2-Jan	5	12	6	6	4	4	7	6	5	6	4	6	4	4	5	4	2	4	6	7	8	17	17	14	6.8	17.4	
3-Jan	12	12	10	8	3	5	4	4	3	3	5	8	9	5	9	2	10	1	2	3	3	4	3	3	5.5	11.8	
4-Jan	3	5	3	5	4	5	7	9	12	13	14	19	16	13	17	25	25	31	31	21	19	13	13	12	13.9	31.1	
5-Jan	12	16	10	10	14	9	10	13	13	11	19	19	22	16	16	15	18	21	23	21	20	10	8	10	14.8	23.0	
6-Jan	12	10	9	8	0	0	0	1	0	1	0	1	1	2	3	4	4	3	2	1	2	4	2	1	3.1	12.3	
7-Jan	2	2	1	2	2	1	1	0	2	1	2	1	1	3	2	4	7	8	11	8	14	16	14	13	4.9	16.0	
8-Jan	11	8	6	5	5	5	3	6	9	12	3	4	2	3	4	4	3	4	3	3	4	4	2	3	4.8	11.8	
9-Jan	3	3	3	6	5	4	5	4	5	5	5	4	5	6	6	7	6	7	6	5	7	6	7	6	5.2	7.5	
10-Jan	7	8	7	6	6	6	6	8	8	8	7	8	8	10	11	9	12	10	9	8	9	10	8	10	8.3	11.9	
11-Jan	13	12	13	12	10	11	10	10	8	11	12	16	15	17	18	17	18	18	17	15	15	17	19	17	14.2	18.6	
12-Jan	12	16	14	15	13	12	14	10	M	M	22	28	27	23	21	19	20	19	18	18	17	17	17	17	17.6	27.7	
13-Jan	16	13	14	13	13	12	13	10	10	11	14	13	2	2	4	6	9	5	7	8	11	10	9	8	9.7	15.7	
14-Jan	9	6	5	4	4	4	4	5	5	5	5	4	4	4	6	5	5	6	5	5	5	4	5	6	5.0	8.6	
15-Jan	4	6	5	8	9	10	11	10	15	13	15	21	21	14	12	12	8	8	9	10	13	15	16	17	11.9	21.4	
16-Jan	17	17	15	5	5	5	8	8	8	20	39	40	36	32	23	16	15	14	21	49	54	38	16	12	21.6	54.1	
17-Jan	21	4	4	0	1	0	1	7	5	5	10	7	8	5	3	P	P	P	P	P	P	P	N	13	7	--	21.3
18-Jan	6	7	8	8	7	8	11	7	10	7	12	21	8	6	14	12	7	6	5	7	7	8	8	7	8.6	20.6	
19-Jan	12	9	7	9	13	6	3	5	3	4	7	6	8	5	3	5	3	2	3	2	2	4	3	5	5.4	13.0	
20-Jan	5	2	2	3	4	5	5	2	3	2	3	2	2	2	6	7	8	3	3	9	7	5	5	4	4.1	8.7	
21-Jan	6	3	5	4	4	2	2	2	4	3	5	5	4	4	6	8	9	9	9	9	20	15	9	8	6.5	20.1	
22-Jan	9	9	8	7	12	13	14	17	33	34	24	17	15	9	42	16	18	9	15	18	13	16	11	9	16.1	41.8	
23-Jan	12	15	13	13	10	5	7	6	10	17	26	19	24	24	19	9	9	13	13	9	8	12	10	10	13.0	25.7	
24-Jan	7	7	7	7	7	5	6	5	6	7	8	6	8	7	7	9	9	10	11	11	8	10	13	10	8.0	13.0	
25-Jan	9	7	10	10	11	9	10	9	9	9	9	8	7	9	7	11	10	6	8	7	5	4	5	4	7.9	11.3	
26-Jan	4	6	6	5	5	5	8	9	12	6	8	5	5	4	5	6	10	10	10	10	9	10	8	8	7.2	11.8	
27-Jan	6	7	8	6	7	6	7	6	7	7	7	9	3	4	4	6	6	5	6	7	7	6	6	7	6.2	9.0	
28-Jan	6	6	5	6	7	6	5	4	5	6	4	5	5	6	5	5	6	6	5	6	5	7	4	4	5.4	6.9	
29-Jan	8	6	9	6	7	5	11	9	7	6	9	6	6	7	8	9	11	13	14	12	10	12	15	13	9.1	14.7	
30-Jan	9	9	9	11	12	9	9	7	5	6	6	7	5	5	6	6	7	7	6	6	6	5	5	6	7.1	12.4	
31-Jan	5	6	6	6	6	3	4	5	5	5	5	3	4	4	3	4	3	5	3	4	4	5	5	4	4.6	6.2	
		9.0	8.5	7.8	7.4	7.1	6.2	7.1	7.0	7.9	8.6	10.3	10.5	9.4	8.4	10.2	9.5	9.8	8.7	9.4	10.1	10.4	10.1	9.1	8.5	Diurnal Average	
		21.3	17.4	14.6	14.7	14.1	13.0	14.4	16.7	33.0	34.0	38.9	40.1	36.5	32.3	41.8	25.4	24.9	31.1	30.5	49.1	54.1	37.9	18.6	17.4	Diurnal Maximum	
P - Power Failure		M - Maintenance			N - Not Valid																						



**Pollutant Rose**

**Particulate Matter 2.5 (PM<sub>2.5</sub>) - μg/m<sup>3</sup>**  
**Evergreen Park - January 2018**



# Hourly Averages

External Temperature (ET) - °C

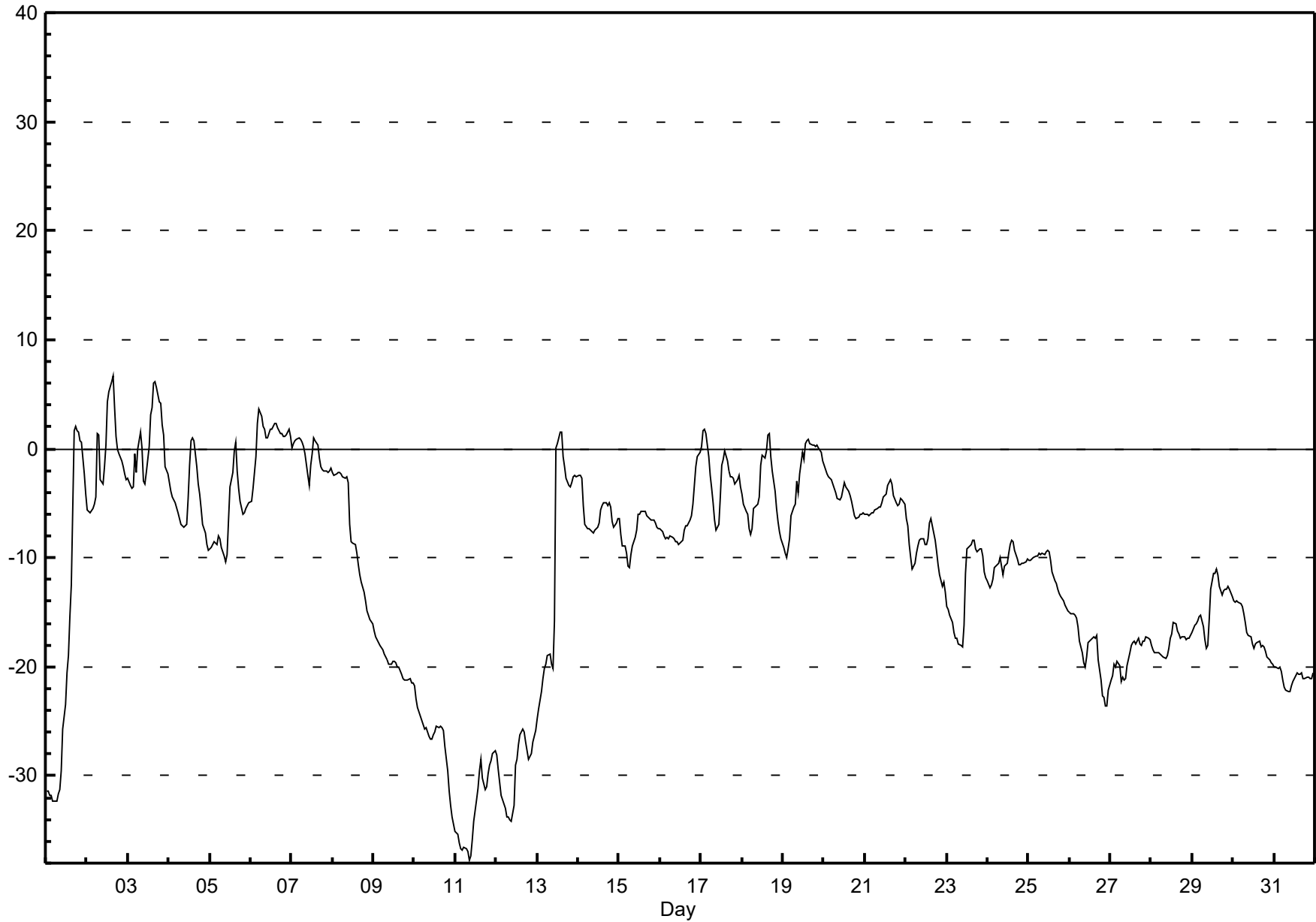
Evergreen Park - January 2018

<b>Maximum Value: 6.7 °C on Jan 2 16:00</b>		<b>Maximum Daily Average: 1.0 °C on Jan 6</b>		Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0																							
<b>Minimum Value: -38 °C on Jan 11 09:00</b> <b>Maximum Diurnal Average: -8.6 °C at hour 16</b> <b>Monthly Average: -11.16 °C</b>		<b>Minimum Daily Average: -33.0 °C on Jan 11</b> <b>Minimum Diurnal Average: -13.3 °C at hour 10</b> Percentiles: P <sub>1</sub> = -36.2 P <sub>10</sub> = -25.6 Q <sub>1</sub> = -18.0 Median = -8.8 Q <sub>3</sub> = -3.5 P <sub>90</sub> = 0.2 P <sub>99</sub> = 3.5																									
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-Jan	-31	-31	-32	-32	-32	-32	-32	-32	-31	-30	-26	-23	-21	-19	-15	-13	2	2	2	1	1	1	-2	-4	-17.9	2.1	
2-Jan	-6	-6	-6	-6	-5	-4	1	1	-3	-3	-2	0	4	5	6	7	4	1	0	0	-1	-2	-2	-3	-0.8	6.7	
3-Jan	-3	-3	-4	-4	-1	-2	0	1	0	-3	-3	-2	0	3	4	6	6	6	4	4	2	1	-2	-2	0.4	6.2	
4-Jan	-3	-4	-4	-5	-5	-6	-6	-7	-7	-7	-7	-5	-1	1	1	1	-2	-3	-4	-5	-7	-8	-9	-9	-4.7	1.0	
5-Jan	-9	-9	-9	-9	-9	-8	-8	-9	-10	-10	-10	-7	-3	-2	0	1	-2	-4	-5	-6	-6	-6	-5	-5	-6.2	0.5	
6-Jan	-5	-4	-2	-1	2	4	3	2	2	1	1	2	2	2	2	2	2	1	1	1	1	1	2	1	1.0	3.6	
7-Jan	0	1	1	1	1	1	1	0	0	-2	-3	-2	0	1	1	0	-1	-2	-2	-2	-2	-2	-2	-2	-0.7	0.9	
8-Jan	-2	-2	-2	-2	-2	-2	-3	-3	-3	-3	-7	-9	-9	-9	-10	-11	-12	-12	-13	-14	-15	-15	-16	-16	-7.9	-2.1	
9-Jan	-17	-17	-18	-18	-18	-18	-19	-19	-19	-20	-20	-20	-19	-20	-20	-20	-21	-21	-21	-21	-21	-21	-21	-22	-19.6	-16.7	
10-Jan	-22	-23	-24	-24	-25	-25	-26	-26	-26	-27	-27	-26	-26	-25	-26	-25	-26	-26	-26	-27	-30	-31	-33	-34	-34	-26.8	-21.7
11-Jan	-35	-35	-36	-37	-37	-37	-37	-37	-38	-37	-36	-34	-32	-31	-30	-28	-30	-31	-31	-30	-29	-29	-28	-28	-33.0	-27.7	
12-Jan	-28	-29	-31	-32	-33	-33	-34	-34	-34	-34	-33	-29	-28	-27	-26	-26	-26	-27	-28	-29	-28	-27	-26	-26	-29.4	-25.7	
13-Jan	-25	-24	-22	-21	-20	-20	-19	-19	-20	-20	-16	0	0	2	2	-1	-2	-3	-3	-4	-3	-3	-2	-3	-10.2	1.6	
14-Jan	-2	-2	-3	-5	-7	-7	-7	-7	-8	-8	-7	-7	-7	-6	-5	-5	-5	-5	-5	-5	-7	-7	-7	-6	-5.9	-2.4	
15-Jan	-6	-8	-9	-9	-10	-11	-11	-10	-9	-8	-8	-6	-6	-6	-6	-6	-6	-6	-6	-7	-7	-7	-7	-7	-7.5	-5.8	
16-Jan	-7	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-9	-8	-8	-7	-7	-7	-7	-6	-5	-3	-2	-1	0	-6.7	-0.3	
17-Jan	0	2	2	1	-1	-2	-4	-5	-7	-7	-7	-4	-2	-1	0	-1	-2	-3	-3	-3	-3	-3	-2	-3	-2.4	1.8	
18-Jan	-4	-5	-6	-6	-7	-8	-7	-5	-5	-5	-4	-2	-1	-1	0	1	1	-1	-2	-4	-5	-7	-8	-8	-4.1	1.4	
19-Jan	-9	-10	-10	-9	-8	-6	-5	-5	-3	-4	-2	0	-1	1	1	1	1	0	0	0	0	0	0	-1	-2.9	0.9	
20-Jan	-1	-2	-2	-3	-3	-3	-4	-4	-4	-4	-5	-4	-4	-3	-4	-4	-4	-5	-6	-6	-6	-6	-6	-6	-4.2	-1.4	
21-Jan	-6	-6	-6	-6	-6	-6	-6	-6	-5	-5	-5	-4	-4	-3	-3	-3	-3	-4	-5	-5	-5	-5	-5	-5	-4.9	-2.9	
22-Jan	-6	-7	-9	-10	-11	-11	-10	-9	-8	-8	-8	-9	-9	-8	-7	-6	-8	-8	-9	-11	-12	-13	-12	-13	-9.3	-6.4	
23-Jan	-14	-15	-15	-16	-17	-17	-17	-18	-18	-18	-16	-11	-9	-9	-9	-8	-8	-9	-9	-9	-9	-10	-11	-12	-12.8	-8.3	
24-Jan	-12	-13	-13	-12	-11	-11	-10	-10	-11	-12	-11	-10	-10	-9	-8	-8	-9	-10	-11	-11	-11	-11	-10	-10	-10.5	-8.4	
25-Jan	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-9	-9	-9	-10	-11	-12	-12	-13	-13	-14	-14	-14	-15	-15	-11.3	-9.3	
26-Jan	-15	-15	-15	-15	-16	-16	-18	-19	-20	-20	-19	-18	-18	-17	-17	-17	-17	-19	-21	-23	-23	-24	-24	-22	-18.6	-15.0	
27-Jan	-21	-21	-20	-20	-19	-20	-21	-21	-21	-21	-20	-19	-18	-18	-18	-18	-17	-18	-18	-18	-18	-17	-17	-17	-19.0	-17.3	
28-Jan	-18	-18	-19	-19	-19	-19	-19	-19	-19	-19	-18	-17	-17	-16	-16	-17	-17	-17	-17	-17	-18	-17	-17	-17	-17.8	-15.9	
29-Jan	-17	-16	-16	-16	-15	-15	-16	-17	-18	-18	-16	-13	-11	-11	-11	-12	-13	-13	-13	-13	-13	-13	-14	-14	-14.3	-11.1	
30-Jan	-14	-14	-14	-14	-14	-14	-15	-16	-17	-17	-17	-18	-18	-18	-18	-18	-18	-18	-18	-19	-19	-19	-20	-20	-17.0	-13.9	
31-Jan	-20	-20	-20	-20	-20	-21	-22	-22	-22	-22	-22	-21	-21	-21	-21	-21	-21	-21	-21	-21	-21	-21	-21	-21	-21.0	-20.0	
		-11.9	-12.1	-12.3	-12.4	-12.4	-12.6	-12.5	-12.6	-13.0	-13.3	-12.6	-10.8	-9.9	-9.2	-8.8	-8.6	-8.8	-9.6	-10.1	-10.4	-10.7	-10.8	-11.1	-11.3	Diurnal Average	
		0.2	1.7	1.8	1.5	2.3	3.6	2.9	2.0	1.8	1.0	1.1	1.8	4.3	5.2	6.2	6.7	6.2	5.7	4.3	4.2	2.1	1.2	1.7	1.2	Diurnal Maximum	



### Hourly Averages

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



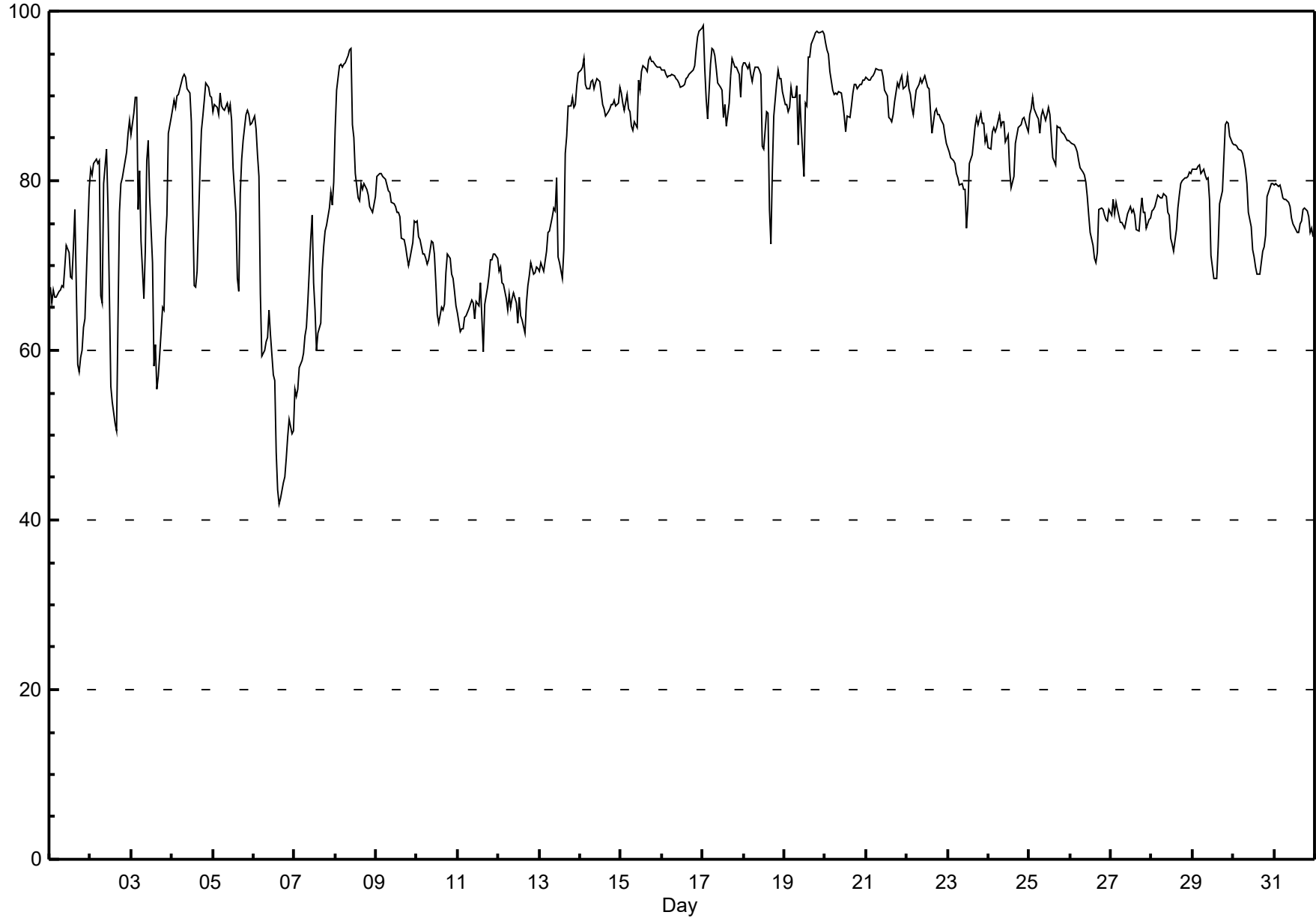
# Hourly Averages

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

Maximum Value: 98.3 % on Jan 17 01:00		Maximum Daily Average: 93.1 % on Jan 16		Hours in Service: 744																						
Minimum Value: 42 % on Jan 6 16:00		Minimum Daily Average: 58.4 % on Jan 6		Hours of Data: 744																						
Maximum Diurnal Average: 83.1 % at hour 1		Minimum Diurnal Average: 75.0 % at hour 16		Hours of Missing Data: 0																						
Monthly Average: 80.40 %		Percentiles: P <sub>1</sub> = 49.8 P <sub>10</sub> = 65.5 Q <sub>1</sub> = 73.1 Median = 81.7 Q <sub>3</sub> = 89.1 P <sub>90</sub> = 92.5 P <sub>99</sub> = 97.5		Hours of Calibration: 0																						
				Percent Operational Time: 100.0																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jan	67	66	67	66	66	67	67	68	68	70	72	72	69	68	72	77	58	58	59	60	63	64	74	79	67.3	79.1
2-Jan	81	81	82	83	82	82	66	66	80	84	77	67	56	54	51	50	64	76	80	80	82	83	86	87	74.2	87.1
3-Jan	85	88	90	90	77	81	73	66	72	82	85	78	70	58	61	55	57	60	65	65	73	76	86	87	74.1	89.8
4-Jan	88	89	89	90	90	92	92	93	92	91	90	87	77	68	67	69	81	86	88	89	92	91	90	90	86.3	92.5
5-Jan	88	89	89	88	90	89	88	88	89	88	89	87	82	76	69	67	79	83	85	88	88	88	87	87	85.0	90.3
6-Jan	88	86	83	81	67	59	60	61	62	65	62	57	56	48	44	42	42	44	45	47	50	52	50	51	58.4	87.7
7-Jan	55	55	55	58	59	60	62	63	66	73	76	68	65	60	62	63	70	72	74	75	77	79	77	80	66.7	79.8
8-Jan	86	91	94	94	93	94	94	95	95	96	87	85	81	78	80	79	80	79	78	77	77	76	78	78	85.1	95.6
9-Jan	81	81	81	81	80	80	79	79	79	78	77	77	76	76	76	73	73	72	71	70	71	73	75	75	76.4	80.8
10-Jan	75	73	73	71	71	71	70	71	73	73	71	68	64	63	65	65	65	69	71	71	69	68	67	65	69.4	75.3
11-Jan	64	62	63	63	64	64	65	65	66	66	64	66	65	68	64	60	65	67	69	71	71	71	71	71	66.0	71.3
12-Jan	69	70	68	68	66	65	67	65	66	67	66	63	66	64	64	62	66	68	69	70	69	69	70	70	66.9	70.3
13-Jan	69	70	69	71	72	74	74	76	77	77	80	71	70	69	72	83	85	89	89	90	89	89	91	93	78.7	92.7
14-Jan	93	93	94	91	91	91	92	92	91	91	92	92	90	89	88	88	88	89	89	89	90	89	89	91	90.5	94.4
15-Jan	90	89	88	90	88	88	87	86	87	86	92	91	93	94	93	93	94	95	94	94	94	93	93	93	91.1	94.6
16-Jan	93	93	93	92	92	92	93	92	92	92	92	91	91	91	92	92	93	93	93	94	95	97	98	98	93.1	98.0
17-Jan	98	93	90	87	94	96	95	95	93	92	91	91	88	89	87	89	92	94	94	93	93	93	90	93	92.1	98.3
18-Jan	94	94	93	94	93	92	93	93	93	93	84	84	88	88	77	73	81	88	92	93	92	92	91	91	89.4	93.9
19-Jan	89	89	88	89	91	90	90	91	84	90	87	81	89	89	94	95	96	97	98	98	97	97	98	97	91.8	97.6
20-Jan	96	95	95	93	91	90	90	90	91	90	89	88	86	88	87	89	90	91	91	91	91	91	92	92	90.8	96.2
21-Jan	92	92	92	92	92	93	93	93	93	93	92	91	90	87	87	87	88	89	92	91	92	92	91	91	91.1	93.2
22-Jan	92	91	90	89	88	91	91	91	92	92	92	92	91	91	88	86	88	89	88	88	87	87	85	84	89.3	92.4
23-Jan	84	83	83	82	82	81	80	80	80	79	79	74	77	82	83	85	86	87	87	88	87	87	85	85	82.7	87.9
24-Jan	84	84	86	86	86	86	88	86	87	87	85	85	81	79	80	81	84	86	86	87	87	88	86	86	85.1	87.8
25-Jan	88	88	90	89	88	87	86	88	88	87	88	89	88	85	83	82	86	86	86	85	85	85	85	85	86.5	89.8
26-Jan	85	84	84	84	83	82	82	81	81	80	78	76	74	72	71	70	72	77	77	77	76	75	75	77	78.0	84.5
27-Jan	76	78	76	77	77	75	75	75	74	75	76	77	76	77	76	74	74	76	78	76	76	74	75	76	75.9	77.9
28-Jan	76	77	77	78	78	78	78	78	78	76	76	73	73	72	74	77	78	80	80	80	80	81	81	81	77.5	81.0
29-Jan	81	81	81	82	82	81	81	81	80	80	78	71	69	69	68	72	77	79	83	87	87	87	85	84	79.4	86.9
30-Jan	84	84	84	84	84	83	82	81	80	76	75	72	71	70	69	69	70	72	72	74	78	79	80	80	77.2	84.2
31-Jan	80	80	79	79	79	78	78	78	77	77	76	75	74	74	74	75	75	77	77	76	76	74	74	73	76.5	79.6
		83.1	82.9	82.8	82.6	81.8	81.7	81.0	80.9	81.5	82.1	81.5	78.6	76.8	75.3	75.1	75.0	77.1	79.4	80.5	81.1	81.8	82.0	82.4	82.9	Diurnal Average
		98.3	95.4	95.0	93.7	93.7	95.6	95.4	94.8	95.4	95.6	92.6	91.7	92.9	93.5	94.5	94.5	96.1	96.9	97.5	97.6	97.5	97.5	97.6	98.0	Diurnal Maximum

**Hourly Averages**

**Relative Humidity (RH) - %  
Evergreen Park - January 2018**





Peace Airshed Zone Association

# Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1 Spd	2	1	2	2	2	2	3	4	2	5	3	4	5	4	5	1	36	36	30	16	11	11	5	0	6.4	35.8	
Dir	196	205	197	201	182	217	190	194	169	215	212	261	210	179	53	350	248	250	257	279	275	280	14	7	250.0	249.7	
2 Spd	0	1	2	3	2	4	11	13	0	4	4	2	6	11	10	5	2	2	0	4	1	5	3	3	3.0	12.5	
Dir	173	125	206	194	190	306	255	241	173	289	305	313	268	252	248	237	42	29	281	187	147	186	177	197	242.6	241.0	
3 Spd	1	2	4	7	7	6	17	13	2	1	1	4	5	2	4	12	8	7	5	6	5	3	0	5	4.4	16.8	
Dir	100	169	198	215	238	242	248	247	274	98	76	188	185	5	270	253	243	229	247	258	308	250	36	214	239.8	248.4	
4 Spd	0	1	1	0	1	1	1	1	2	2	1	0	2	1	4	3	1	2	3	1	1	1	2	1	0.4	3.9	
Dir	88	151	153	169	28	20	190	213	206	32	221	104	326	326	356	2	37	225	339	313	231	216	226	214	314.5	356.4	
5 Spd	1	2	3	1	4	2	1	1	0	1	3	2	3	0	2	2	2	2	1	1	2	1	2	3	0.5	3.5	
Dir	38	202	192	36	220	65	33	221	158	34	189	257	18	91	258	335	31	334	273	232	289	247	230	216	251.7	220.1	
6 Spd	3	5	9	9	24	38	32	30	28	21	23	24	15	23	39	46	49	46	50	38	34	38	40	23	28.5	49.7	
Dir	258	248	244	234	243	240	237	239	233	235	240	246	235	247	248	245	244	241	239	234	242	244	241	238	240.9	238.5	
7 Spd	13	29	32	33	27	26	25	24	8	0	1	1	2	3	2	1	2	1	1	0	3	1	1	1	8.7	32.7	
Dir	242	240	244	244	247	243	242	239	260	170	108	13	164	144	31	121	170	19	186	305	14	41	226	19	242.5	244.2	
8 Spd	3	2	2	1	2	2	0	1	2	11	17	15	13	9	8	10	13	8	12	11	13	12	12	12	7.7	17.3	
Dir	40	30	54	34	36	2	331	303	285	14	24	22	26	43	53	50	40	48	39	45	36	38	37	28	33.5	23.7	
9 Spd	12	13	13	12	16	12	11	9	10	13	11	10	12	12	9	10	11	10	8	7	2	4	4	4	9.9	15.5	
Dir	28	26	25	22	25	18	19	8	13	17	20	17	19	20	19	15	22	21	17	19	27	42	109	89	22.1	24.7	
10 Spd	6	14	12	14	9	9	6	4	9	8	8	13	11	11	11	10	8	3	1	2	N	N	N	N	5.1	14.2	
Dir	29	20	20	19	19	21	25	306	298	300	288	304	296	263	269	254	257	247	267	218	191	N	N	N	315.9	19.9	
11 Spd	N	N	N	N	N	N	N	N	N	N	N	N	3	3	6	6	3	2	3	2	1	1	2	3	--	5.9	
Dir	N	N	N	N	N	N	N	N	N	N	N	N	226	309	228	242	296	284	270	309	128	53	51	36	77	--	242.0
12 Spd	2	2	1	0	N	N	N	N	N	N	N	1	2	6	6	3	2	1	1	0	1	1	3	2	1.3	6.1	
Dir	164	182	202	135	N	N	N	N	N	N	N	196	286	303	236	278	246	353	351	98	188	174	213	265	250	253.4	302.6
13 Spd	4	5	3	1	2	2	1	2	1	2	5	28	18	12	5	2	1	1	3	1	3	0	1	3	2.7	28.5	
Dir	200	195	229	211	210	139	122	181	123	42	261	238	247	280	313	38	192	48	34	171	202	178	48	45	242.4	237.9	
14 Spd	2	4	8	13	11	9	6	6	4	7	8	7	7	6	6	6	6	6	5	2	3	3	5	5	5.8	13.0	
Dir	69	52	55	47	52	54	50	50	45	47	51	50	39	65	35	44	48	58	68	27	337	339	31	42	46.8	46.8	
15 Spd	4	3	4	5	1	2	1	1	0	0	0	1	7	4	3	2	3	1	1	1	0	1	1	1	0.4	6.8	
Dir	43	29	41	43	10	241	275	23	271	216	271	312	258	254	357	94	193	202	258	262	233	146	185	220	320.2	257.7	
16 Spd	3	2	3	3	3	5	3	4	3	4	2	3	2	1	1	2	5	2	4	8	6	3	4	5	2.8	8.4	
Dir	239	318	305	308	253	239	216	232	218	296	269	221	275	199	221	169	198	283	259	247	226	186	212	226	240.1	247.3	
17 Spd	10	21	20	12	1	2	1	3	1	1	1	1	1	3	4	2	1	1	1	1	1	6	2	1	2.0	20.7	
Dir	224	223	216	224	60	158	75	184	57	93	31	167	143	35	39	52	180	180	180	180	112	52	66	2	208.1	222.8	
18 Spd	1	2	3	5	3	2	6	1	5	1	1	5	4	4	3	10	10	6	6	3	1	2	4	1	2.6	10.3	
Dir	204	231	252	255	248	229	229	186	191	74	216	221	218	190	225	225	240	233	227	22	0	349	33	43	231.3	225.3	
19 Spd	1	1	0	1	8	3	5	5	4	4	4	3	4	4	8	9	4	6	3	1	1	2	6	3	2.6	9.4	
Dir	167	183	189	203	201	269	274	307	260	319	314	235	14	309	252	251	236	230	250	255	235	352	330	323	268.4	250.8	
20 Spd	2	0	1	2	1	1	3	2	3	1	0	1	2	4	5	4	4	5	4	2	4	4	4	5	2.2	5.4	
Dir	294	294	314	332	2	343	74	84	120	119	71	15	10	33	36	48	47	54	56	35	55	58	55	62	47.2	35.7	
21 Spd	7	6	7	9	7	8	7	7	8	10	7	8	8	7	5	3	3	1	1	3	9	16	11	4	3.1	15.9	
Dir	63	61	64	60	61	57	60	57	51	55	60	62	61	54	52	31	15	325	277	240	242	256	242	219	51.4	255.7	
22 Spd	2	1	0	1	1	2	2	0	1	1	3	8	7	8	4	1	1	1	2	2	1	2	1	1	1.7	7.5	
Dir	222	141	113	32	14	353	311	309	272	250	243	239	256	278	258	256	302	295	220	238	209	200	119	202	254.3	278.3	



Peace Airshed Zone Association

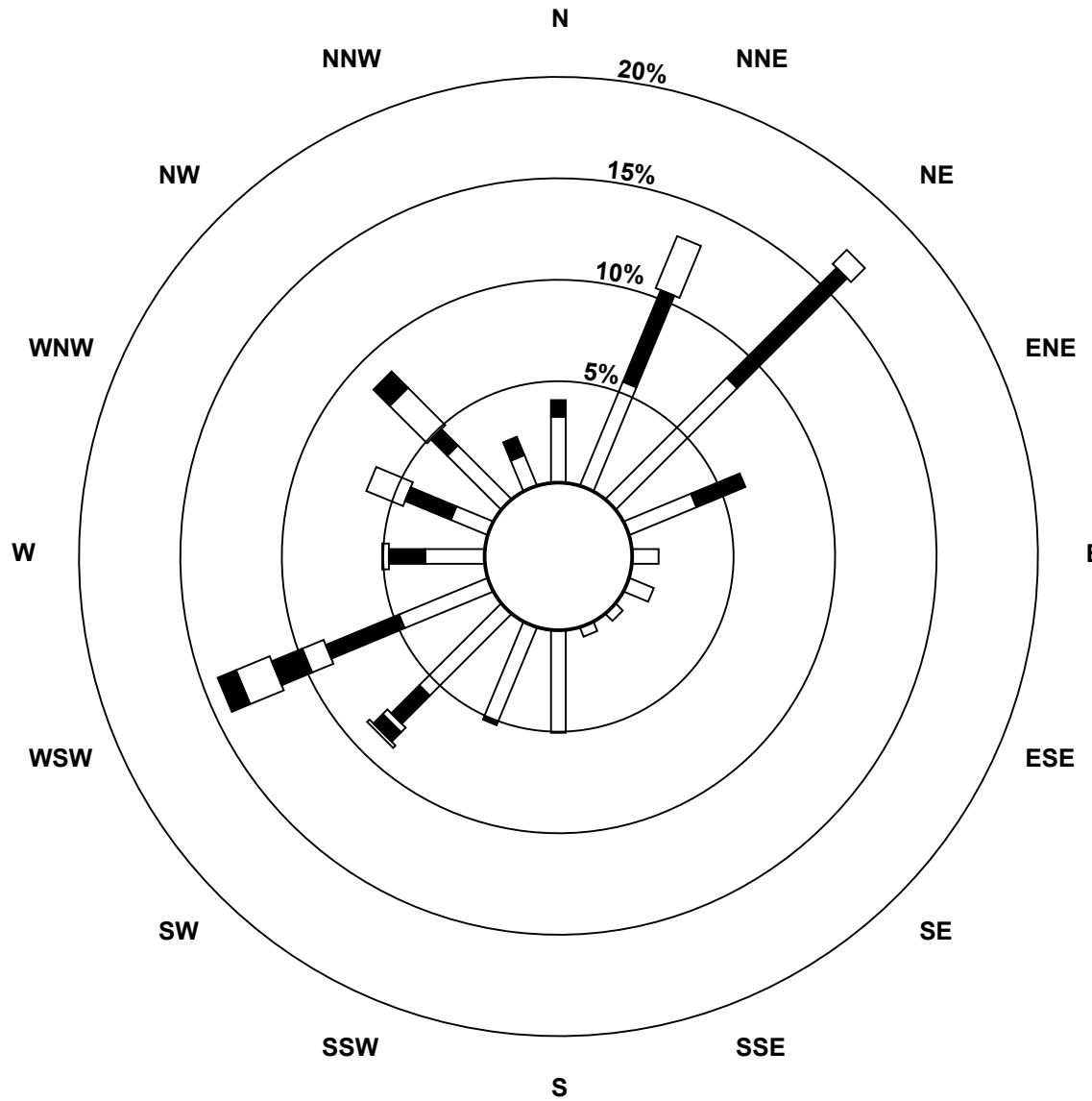
# Hourly Averages

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

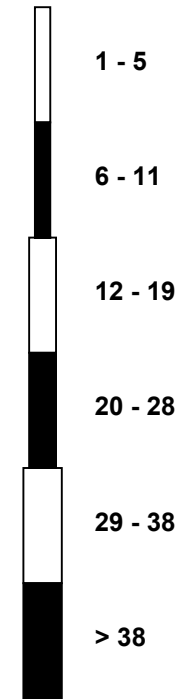
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	1	1	0	1	2	0	0	0	0	1	0	1	2	3	3	3	2	2	2	1	1	2	2	2	0.6	2.9
Dir	205	102	153	25	181	190	31	220	255	211	306	333	345	351	360	11	332	338	31	15	222	209	29	15	351.6	351.2
24 Spd	1	1	0	3	0	2	3	2	6	2	4	7	6	2	6	8	7	6	8	7	8	6	1	5	3.4	8.0
Dir	237	202	324	188	183	36	172	79	46	112	70	46	50	84	22	45	53	40	19	26	24	33	123	29	44.5	19.5
25 Spd	8	7	6	4	2	5	3	5	7	6	4	8	9	11	17	20	13	13	10	13	13	14	13	11	7.8	20.1
Dir	29	38	23	20	357	307	296	321	331	335	359	7	9	298	308	321	293	288	289	298	302	301	294	297	316.9	320.5
26 Spd	10	8	10	12	11	8	6	5	7	4	6	13	15	14	11	7	4	1	1	3	1	1	1	2	6.3	15.1
Dir	281	277	289	304	290	282	275	257	249	281	279	297	307	305	310	312	272	243	217	233	242	209	235	264	288.2	306.7
27 Spd	2	3	0	1	0	1	0	0	0	0	2	3	7	6	7	5	2	3	3	1	1	1	0	1	1.8	7.0
Dir	306	324	17	316	29	77	19	39	60	101	23	30	34	26	23	5	55	35	28	41	79	113	93	59	24.0	34.0
28 Spd	1	2	2	2	3	2	3	2	3	3	5	7	8	9	9	11	7	7	4	7	6	6	8	6	5.0	11.4
Dir	63	57	48	60	70	83	77	52	59	77	52	47	45	53	46	42	47	41	54	54	59	55	60	52	52.8	42.4
29 Spd	5	6	5	5	4	3	1	1	1	2	4	4	3	7	6	7	8	8	8	9	11	10	19	18	3.9	19.2
Dir	48	57	62	50	72	51	92	28	6	35	59	41	2	335	355	9	337	294	287	252	247	309	321	302	333.0	320.6
30 Spd	17	13	8	12	11	12	16	17	15	18	20	25	25	22	21	20	16	12	15	18	17	15	10	9	15.9	25.2
Dir	302	285	298	299	306	311	314	310	308	318	318	315	314	307	314	318	312	310	319	319	321	318	311	315	312.0	314.2
31 Spd	9	7	9	4	8	8	7	6	6	6	7	8	8	8	10	9	6	6	4	2	2	1	0	0	5.0	10.4
Dir	301	311	328	9	29	39	36	38	39	39	40	24	28	36	33	32	42	33	43	30	56	61	152	127	23.1	33.0
Spd	1.4	1.4	1.6	1.7	1.7	2.2	2.7	2.8	1.7	2.0	2.0	2.9	3.3	3.2	3.8	3.2	3.3	3.2	3.1	2.6	2.4	2.5	2.0	1.5	Diurnal Average	
Dir	310.5	281.1	285.5	304.0	288.5	284.7	266.6	264.5	288.1	338.6	335.8	305.5	323.3	307.3	317.5	308.6	278.2	275.0	281.7	280.9	289.1	287.9	298.5	303.4	Diurnal Maximum	
Spd	17.4	29.1	31.7	32.7	26.7	37.6	32.4	30.4	28.2	21.1	22.6	28.5	25.2	23.1	38.9	45.6	49.2	46.4	49.7	37.6	33.7	37.6	39.9	23.2	Diurnal Maximum	
Dir	302.4	240.3	243.6	244.2	246.9	239.6	237.1	238.8	233.3	235.2	239.9	237.9	314.2	246.5	248.4	244.9	243.8	240.9	238.5	233.8	242.5	243.8	241.1	238.2	Diurnal Maximum	
Maximum Speed Value: 50 km/h on Jan 6 19:00																		Minimum Speed Value: 0 km/h on Jan 2 19:00						Hours in Service:		744
Maximum Daily Speed Average: 28.5 km/h on Jan 6																		Minimum Daily Speed Average: 0.4 km/h on Jan 4						Hours of Data:		724
Maximum Diurnal Speed Average: 3.8 km/h at hour 15																		Minimum Diurnal Speed Average: 1.4 km/h at hour 2						Hours of Missing Data:		20
Monthly Average Velocity: 2.30 km/h 295.76 deg																		Speed Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.7 Q <sub>1</sub> = 1.5 Median = 3.7 Q <sub>3</sub> = 7.8 P <sub>90</sub> = 12.9 P <sub>99</sub> = 36.7						Percent Operational Time:		97.3
All monthly, daily, and diurnal averages have been calculated using vector methods																										
N - Not Valid																										
Frequency Distribution																										
		Speed Range (km/h)																								
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																			
North	47	17	13	0	0	0	77																			
NorthEast	92	84	15	0	0	0	191																			
East	35	1	0	0	0	0	36																			
SouthEast	23	0	0	0	0	0	23																			
South	69	4	0	0	0	0	73																			
SouthWest	72	26	6	12	11	5	132																			
West	49	25	12	0	3	1	90																			
NorthWest	45	20	29	8	0	0	102																			
Total	432	177	75	20	14	6	724																			

**Wind Rose**

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



**Wind Speed Classes (km/h)**



# Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Evergreen Park - January 2018

Maximum Speed: 50 km/h on Jan 6 19:00	Maximum Daily Speed Average: 28.9 km/h on Jan 6	Hours in Service: 744
Minimum Speed: -1 km/h on Jan 17 17:00	Minimum Daily Speed Average: 1.9 km/h on Jan 4	Hours of Data: 724
Maximum Diurnal Speed Average: 8.4 km/h at hour 15	Minimum Diurnal Speed Average: 5.1 km/h at hour 24	Hours of Missing Data: 20
Monthly Average Speed: 6.71 km/h	Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 1.4 Q <sub>1</sub> = 2.3 Median = 4.4 Q <sub>3</sub> = 8.5 P <sub>90</sub> = 13.4 P <sub>99</sub> = 37.1	Percent Operational Time: 97.3

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jan	2	1	2	2	2	2	3	5	3	5	5	5	7	6	6	11	36	36	31	17	13	12	6	2	9.2	36.2	
2-Jan	2	2	2	3	2	7	12	13	2	5	4	4	7	11	11	5	2	2	2	5	2	5	4	4	4.9	12.7	
3-Jan	2	5	5	8	7	6	17	13	4	2	4	4	5	3	4	12	8	7	6	6	6	4	1	5	6.0	16.9	
4-Jan	2	2	1	1	1	2	2	3	3	2	1	1	2	1	4	4	2	2	3	2	2	1	2	1	1.9	4.4	
5-Jan	1	2	3	2	5	2	2	1	2	2	4	3	4	1	2	2	3	3	2	3	3	2	4	3	2.5	5.0	
6-Jan	4	5	10	9	24	38	33	31	28	21	23	25	15	23	39	46	50	47	50	38	34	38	40	23	28.9	50.0	
7-Jan	13	29	32	33	27	26	25	24	10	4	2	1	2	4	2	2	4	3	2	2	3	4	1	1	10.6	32.9	
8-Jan	3	2	2	1	2	2	1	2	4	13	18	15	13	10	9	10	13	9	12	11	14	12	12	13	8.5	17.7	
9-Jan	13	13	13	12	16	12	12	10	11	13	12	10	13	12	13	10	10	11	10	9	7	4	4	4	10.6	15.8	
10-Jan	6	14	12	14	10	9	6	5	9	9	8	15	12	12	12	11	11	8	4	2	3	N	N	N	9.2	14.7	
11-Jan	N	N	N	N	N	N	N	N	N	N	N	N	3	3	6	6	4	2	4	3	2	1	2	2	3	--	6.2
12-Jan	3	2	1	1	N	N	N	N	N	N	N	1	3	7	6	4	2	1	1	1	1	1	4	3	2.4	6.9	
13-Jan	4	6	3	2	3	2	2	3	4	2	11	29	19	12	7	3	2	1	3	1	3	1	1	4	5.3	28.6	
14-Jan	2	4	8	13	11	9	6	7	4	7	8	7	7	6	6	6	6	6	6	2	3	3	6	5	6.3	13.3	
15-Jan	4	3	4	5	2	2	1	1	0	0	1	1	7	5	4	3	4	2	1	2	1	1	3	2	2.6	7.4	
16-Jan	3	2	4	3	3	5	4	4	3	5	3	3	2	1	2	3	5	3	4	9	7	4	4	5	3.8	8.7	
17-Jan	11	21	20	12	4	4	2	4	4	3	2	1	4	3	4	2	-1	-1	-1	-1	0	6	4	3	4.5	20.8	
18-Jan	4	4	5	6	4	4	8	6	6	2	2	5	4	5	5	10	10	6	7	4	4	6	5	2	5.2	10.3	
19-Jan	2	1	1	1	8	6	6	5	6	4	6	4	5	5	8	10	4	6	3	1	1	2	6	4	4.4	9.6	
20-Jan	3	0	1	2	1	1	3	3	3	2	1	1	3	4	6	4	4	6	4	2	4	5	4	6	3.0	5.8	
21-Jan	8	7	8	9	8	8	7	7	8	10	8	9	8	8	6	3	4	3	2	4	9	16	11	5	7.3	16.3	
22-Jan	2	3	2	2	2	2	3	2	1	1	3	8	8	9	5	2	2	2	2	4	2	3	1	1	3.1	8.5	
23-Jan	2	3	1	2	2	1	2	3	1	1	2	1	3	3	3	3	3	2	2	2	1	3	3	2	2.1	3.4	
24-Jan	1	2	2	4	2	2	3	4	6	3	4	8	7	3	7	8	8	6	8	7	8	6	2	5	4.9	8.4	
25-Jan	8	7	6	4	2	6	3	5	7	7	4	8	9	12	18	20	13	14	11	14	13	15	14	12	9.7	20.4	
26-Jan	11	8	11	13	11	9	6	5	7	5	7	13	16	15	12	7	4	2	1	4	3	1	1	2	7.2	15.9	
27-Jan	3	3	1	1	0	1	1	0	1	0	2	5	8	7	7	6	2	3	3	1	2	1	1	1	2.5	7.7	
28-Jan	2	3	2	2	3	3	3	3	3	3	5	7	8	10	10	12	8	7	4	8	6	6	9	6	5.4	11.8	
29-Jan	5	6	5	6	5	3	2	2	2	2	4	4	5	7	7	8	10	9	11	11	11	11	20	18	7.4	19.8	
30-Jan	18	13	10	13	12	13	16	17	16	18	21	26	26	23	22	21	16	13	16	19	17	15	11	10	16.6	26.1	
31-Jan	9	7	9	5	8	9	8	7	6	6	7	8	8	9	11	9	6	6	5	3	2	1	1	0	6.3	10.9	
	5.2	6.1	6.2	6.4	6.5	6.7	6.9	6.7	5.6	5.4	6.1	7.7	8.0	7.9	8.4	8.4	8.1	7.3	7.1	6.2	6.0	6.4	6.2	5.1	Diurnal Average		
	18.2	29.2	31.8	32.9	26.9	37.8	32.5	30.6	28.4	21.2	22.7	28.6	26.0	23.4	39.1	45.9	49.5	46.6	50.0	37.9	34.2	37.9	40.2	23.3	Diurnal Maximum		

N - Not Valid  
 All monthly, daily, and diurnal averages have been calculated using scalar methods

# Hourly Standard Deviations

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

Maximum Value: 99.8 deg on Jan 5 14:00		Hours in Service: 744																							
Minimum Value: 0.0 deg on Jan 17 18:00		Hours of Data: 724																							
Percentiles: P <sub>1</sub> = 5.3 P <sub>10</sub> = 13.5 Q <sub>1</sub> = 19.8 Median = 33.1 Q <sub>3</sub> = 59.7 P <sub>90</sub> = 78.7 P <sub>99</sub> = 94.9		Hours of Missing Data: 20																							
		Hours of Calibration: 0																							
		Percent Operational Time: 97.3																							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Jan	18	43	49	39	46	34	53	30	55	48	63	46	60	74	55	83	7	8	11	17	28	18	23	88	
2-Jan	81	52	74	33	53	60	17	19	82	36	46	64	27	16	8	50	51	45	92	58	83	38	57	66	
3-Jan	60	82	52	68	12	42	7	34	62	60	78	36	39	81	55	8	10	7	28	26	25	55	87	40	
4-Jan	81	81	58	74	62	88	95	86	70	41	76	86	56	41	28	29	70	59	22	86	33	75	40	54	
5-Jan	40	52	38	83	75	57	88	66	87	86	66	77	37	100	35	63	38	73	83	88	56	61	74	44	
6-Jan	44	31	9	14	9	5	6	6	6	7	7	8	11	9	7	7	7	6	6	8	9	7	6	6	
7-Jan	10	6	6	6	7	7	6	5	38	81	63	84	63	51	47	54	72	66	76	86	49	84	74	50	
8-Jan	20	23	30	56	25	36	94	82	80	39	14	13	19	26	20	22	15	20	14	17	17	15	15	16	
9-Jan	15	14	15	11	11	20	13	19	18	15	14	19	15	15	18	22	13	14	16	16	14	70	23	27	
10-Jan	42	11	13	11	15	17	15	64	18	22	19	24	30	20	26	12	16	12	44	61	79	N	N	N	
11-Jan	N	N	N	N	N	N	N	N	N	N	N	N	35	27	9	22	29	51	25	55	63	37	32	56	33
12-Jan	65	67	95	76	N	N	N	N	N	N	N	77	52	30	29	44	35	36	57	88	59	81	66	49	42
13-Jan	20	21	39	78	84	54	62	70	80	51	75	5	11	18	49	65	73	53	23	71	56	86	49	30	
14-Jan	63	48	14	15	16	21	20	19	24	23	19	24	23	29	19	21	21	22	26	41	17	15	21	14	
15-Jan	15	16	10	12	39	25	66	41	79	84	81	59	25	46	31	67	44	49	60	78	96	77	69	58	
16-Jan	37	51	33	43	26	21	28	46	42	33	64	18	37	55	42	42	18	46	21	15	30	58	20	22	
17-Jan	21	6	5	11	88	66	55	82	82	76	80	86	75	40	20	22	0	0	0	0	18	19	66	89	
18-Jan	95	65	57	43	68	71	61	99	26	85	59	46	34	51	61	7	14	21	50	48	71	70	43	76	
19-Jan	82	75	92	45	12	59	34	33	62	25	46	62	58	40	16	12	34	18	36	65	65	47	27	60	
20-Jan	36	78	68	28	29	52	39	36	41	49	83	74	39	37	29	27	30	21	28	62	29	22	25	29	
21-Jan	24	22	23	19	22	23	22	19	17	19	24	23	24	26	35	52	58	87	77	38	59	15	14	47	
22-Jan	62	74	81	60	88	71	47	97	70	60	27	21	24	31	33	57	82	64	50	65	77	57	71	79	
23-Jan	73	87	79	78	70	98	82	87	84	81	81	69	45	31	25	20	30	21	43	87	49	77	23	40	
24-Jan	76	81	86	75	90	49	55	59	19	38	38	26	30	56	25	22	26	24	18	23	16	24	56	32	
25-Jan	19	16	18	21	36	22	40	36	25	28	31	22	22	28	16	10	18	16	17	16	14	17	16	18	
26-Jan	16	16	16	15	19	17	21	27	21	31	26	17	20	21	21	19	22	74	70	31	80	63	75	29	
27-Jan	34	35	85	45	51	65	74	61	69	64	49	54	34	33	30	40	37	25	25	40	50	25	33	33	
28-Jan	36	33	27	48	30	32	27	24	19	21	20	21	29	28	27	15	28	25	26	22	24	23	22	23	
29-Jan	26	27	53	34	44	41	71	60	77	35	36	42	57	21	30	30	33	63	48	43	22	32	16	13	
30-Jan	17	17	33	20	20	14	13	13	15	11	14	16	14	19	16	12	14	17	14	10	10	10	18	18	
31-Jan	18	20	13	33	23	27	20	20	27	29	32	23	20	26	21	21	31	23	22	27	30	54	78	65	
	95.0	87.1	94.9	82.9	90.1	98.0	94.6	99.2	86.6	85.5	82.6	86.3	75.0	99.8	61.0	83.0	82.2	87.3	91.8	88.2	95.9	85.8	87.2	88.5	
N - Not Valid																									



PAZA

## Smoky Heights Station

Monthly Summary Tables, Graphs and  
Roses

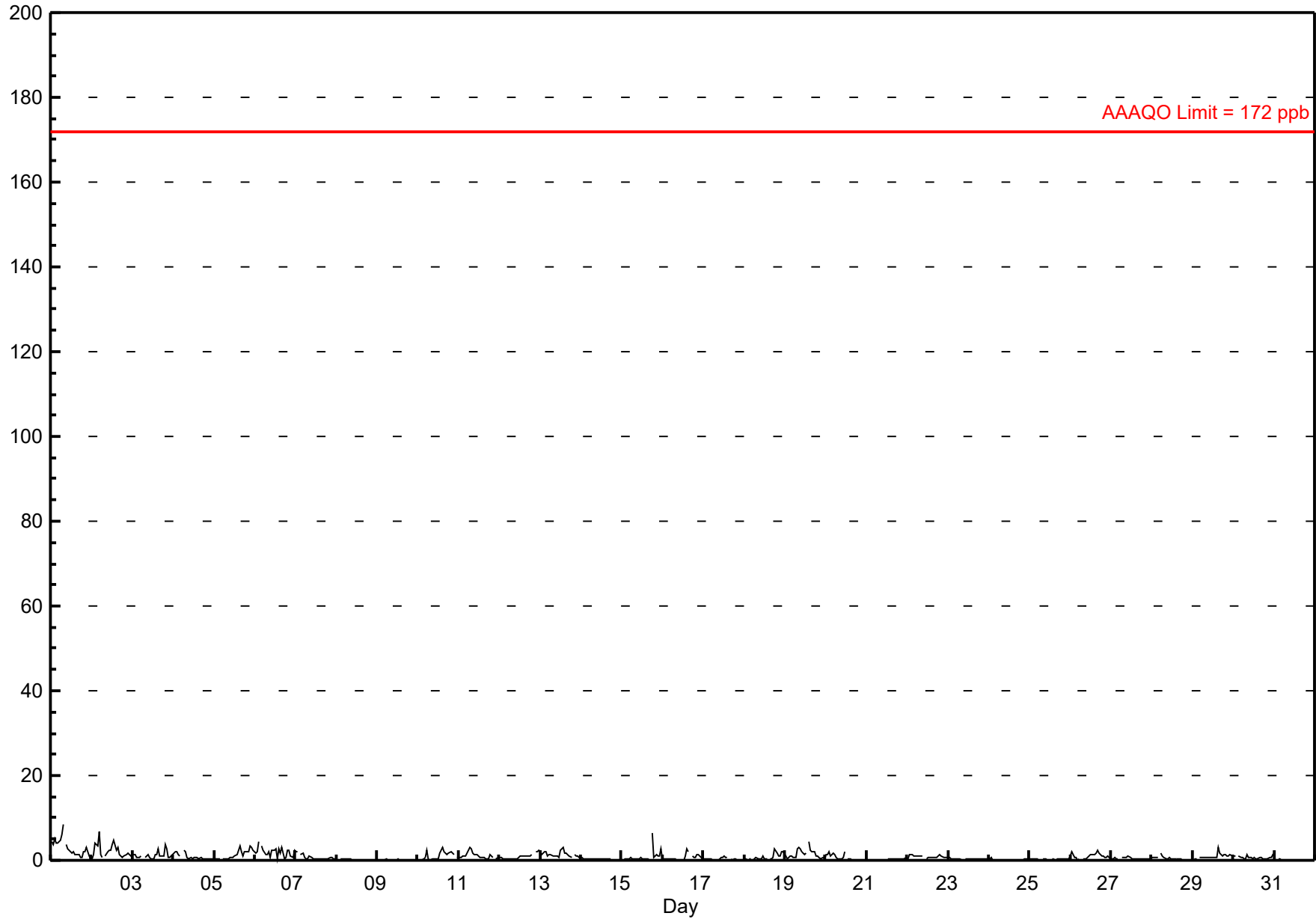
## Hourly Averages

## Sulphur Dioxide (SO<sub>2</sub>) - ppb Smoky Heights - January 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 8.5 ppb on Jan 1 08:00	Maximum Daily Average: 2.9 ppb on Jan 1
Minimum Value: 0 ppb on Jan 25 12:00	Hours of Data: 709
Maximum Diurnal Average: 1.0 ppb at hour 16	Hours of Missing Data: 35
Monthly Average: 0.84 ppb	Hours of Calibration: 35
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.2 Median = 0.5 Q <sub>3</sub> = 1.1 P <sub>90</sub> = 2.1 P <sub>99</sub> = 4.6	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-Jan	4	4	5	4	4	5	6	9	A	4	3	2	2	2	1	1	1	1	1	2	2	3	1	0	2.9	8.5
2-Jan	0	1	4	3	7	1	1	A	1	2	3	2	4	5	2	3	2	1	1	1	1	2	1	1	2.2	6.8
3-Jan	1	1	1	1	1	1	A	1	1	1	1	0	0	1	1	3	1	1	1	4	3	1	1	1	1.2	3.9
4-Jan	2	2	2	1	1	A	2	2	1	0	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0.8	2.2
5-Jan	0	0	0	0	A	0	0	0	0	1	1	1	1	1	2	3	2	1	2	2	2	3	3	2	1.3	3.3
6-Jan	2	2	4	A	3	2	1	1	2	1	2	2	3	0	3	2	3	0	1	2	3	1	1	2	1.9	4.3
7-Jan	2	2	A	1	2	1	0	0	1	1	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0.7	2.1
8-Jan	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
9-Jan	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.3
10-Jan	0	0	0	0	1	2	0	0	0	0	0	0	0	2	3	2	2	2	2	2	2	1	A	1	1.0	2.9
11-Jan	1	1	1	1	1	2	3	3	2	2	1	1	1	1	1	1	0	0	1	1	1	A	0	1	1.1	3.1
12-Jan	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	A	2	2	2	0.9	2.2
13-Jan	2	1	2	2	1	1	1	1	1	1	1	1	2	3	2	2	1	1	1	A	1	1	1	1	1.4	2.9
14-Jan	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	0.6
15-Jan	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	A	6	1	1	1	1	3	0.8	6.4
16-Jan	0	0	0	0	1	0	0	0	0	C	C	C	0	1	3	2	A	1	1	1	1	1	1	0	0.8	2.6
17-Jan	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0.3	1.0
18-Jan	0	0	0	0	0	0	0	1	0	0	1	0	0	0	A	0	0	1	3	2	1	1	2	2	0.7	2.6
19-Jan	1	0	1	1	1	1	1	3	3	3	2	1	2	A	4	2	2	2	1	1	1	0	1	0	1.5	4.3
20-Jan	1	1	2	1	2	1	1	0	0	0	1	2	A	0	0	0	0	0	0	0	0	0	0	0	0.6	1.9
21-Jan	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	0.2	0.5
22-Jan	0	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	1.4
23-Jan	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8
24-Jan	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
25-Jan	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
26-Jan	1	2	1	1	0	0	A	0	0	0	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1.0	2.3
27-Jan	0	0	1	0	1	A	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.9
28-Jan	1	1	1	1	A	2	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.5
29-Jan	0	0	0	A	1	1	1	1	1	1	1	1	1	1	3	2	1	2	1	1	1	1	1	1	0.9	3.0
30-Jan	1	1	A	1	1	1	0	0	1	1	1	0	1	0	0	1	1	0	0	0	0	1	1	2	0.7	1.5
31-Jan	1	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	1.1
	0.9	0.9	1.0	0.8	1.0	0.9	0.8	0.9	0.7	0.8	0.7	0.8	0.8	0.8	1.0	1.0	0.8	0.6	0.9	0.9	0.8	0.8	0.7	0.8		Diurnal Average
	4.4	3.9	5.2	4.0	6.8	4.9	6.3	8.5	3.1	3.8	2.9	2.3	3.6	4.7	4.3	3.3	3.1	1.9	6.4	3.9	2.8	3.2	3.0	2.7		Diurnal Maximum

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



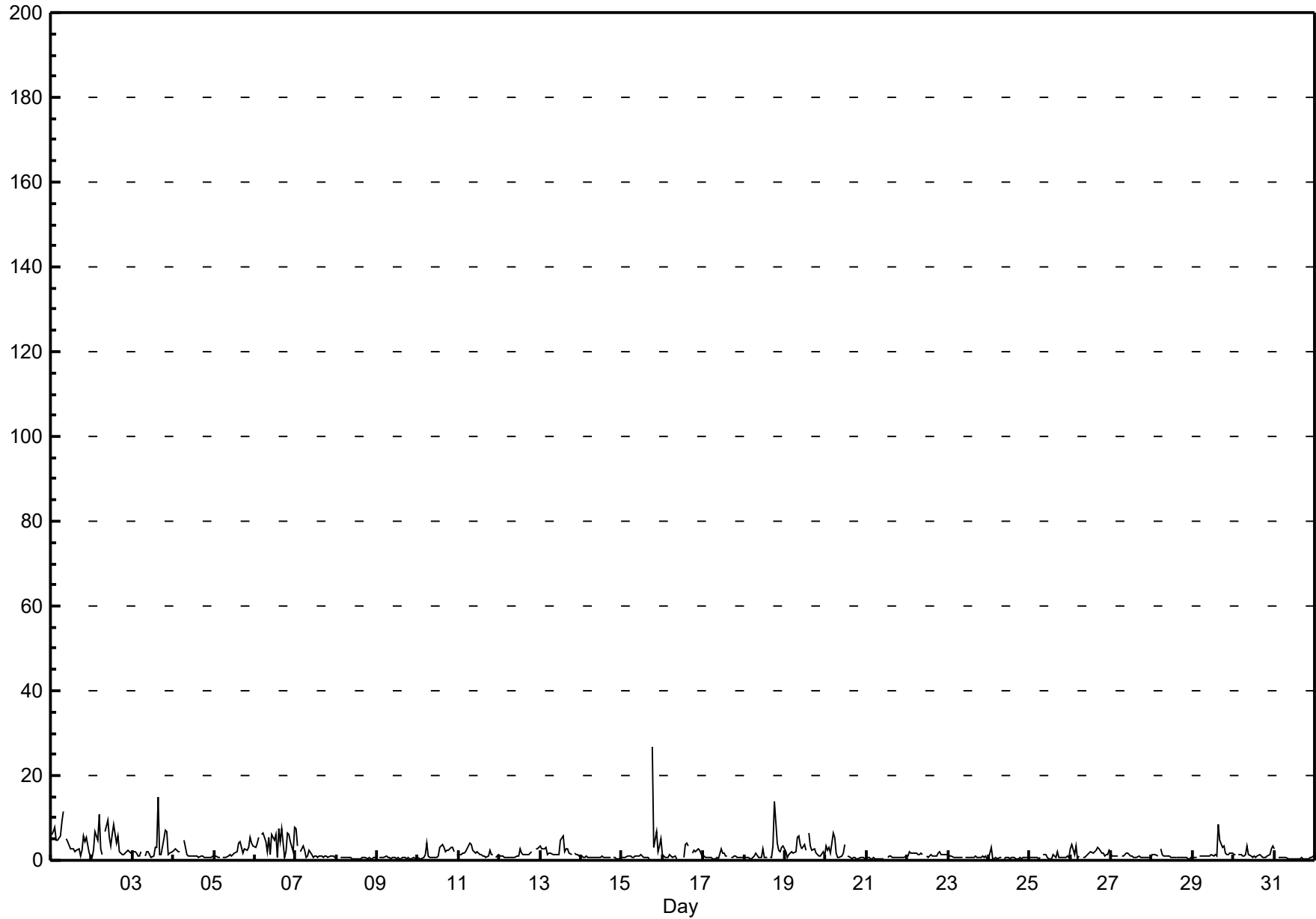
## Hourly Maximums

## Sulphur Dioxide (SO<sub>2</sub>) - ppb Smoky Heights - January 2018

Maximum Value: 26.9 ppb on Jan 15 19:00		Maximum Daily Average: 4.6 ppb on Jan 6		Hours in Service: 744																							
Minimum Value: 0 ppb on Jan 31 15:00		Minimum Daily Average: 0.5 ppb on Jan 9		Hours of Data: 709																							
Maximum Diurnal Average: 2.7 ppb at hour 19		Minimum Diurnal Average: 1.2 ppb at hour 18		Hours of Missing Data: 35																							
Monthly Average: 1.71 ppb		Percentiles: P <sub>1</sub> = 0.4 P <sub>10</sub> = 0.5 Q <sub>1</sub> = 0.6 Median = 1.0 Q <sub>3</sub> = 1.9 P <sub>90</sub> = 3.8 P <sub>99</sub> = 9.0		Hours of Calibration: 35																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jan	6	7	8	5	5	6	9	11	A	5	4	3	3	3	2	2	3	1	2	6	4	5	2	1	4.5	11.4	
2-Jan	1	2	7	5	11	3	1	A	7	9	5	3	6	9	4	6	2	2	1	1	2	2	2	2	4.1	10.9	
3-Jan	2	2	2	1	1	2	A	1	2	2	1	1	1	3	3	15	1	2	5	7	7	1	2	2	2.8	14.8	
4-Jan	2	3	2	2	2	A	5	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.5	4.8	
5-Jan	1	1	1	1	A	1	1	1	1	1	1	1	1	2	2	4	4	3	2	3	2	3	5	4	3	2.1	5.3
6-Jan	3	4	5	A	6	7	4	2	5	1	6	5	6	1	8	4	7	1	2	7	6	4	2	8	4.6	7.9	
7-Jan	8	3	A	2	3	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.6	7.6	
8-Jan	1	A	1	1	1	1	1	1	1	0	0	0	0	1	0	1	1	1	0	1	0	0	1	1	0.6	0.8	
9-Jan	A	1	1	1	1	1	1	1	1	0	1	1	0	1	0	0	1	1	0	1	0	0	1	0	0.5	0.9	
10-Jan	1	0	0	1	1	4	1	1	1	1	1	1	1	3	4	3	2	2	2	3	3	2	A	1	1.7	3.9	
11-Jan	1	1	2	2	2	3	4	4	2	2	2	2	1	1	1	1	1	1	2	2	1	A	1	1	1.7	4.1	
12-Jan	1	1	1	1	1	1	1	1	1	1	1	1	3	2	1	1	1	1	2	2	A	3	3	3	1.4	3.0	
13-Jan	4	3	3	3	2	2	2	1	1	1	1	1	5	6	2	3	3	2	1	A	2	2	1	1	2.2	5.7	
14-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	0	1	0.7	1.0	
15-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	27	3	7	2	3	5	2.7	26.9		
16-Jan	1	1	1	1	1	1	1	1	0	C	C	C	1	4	4	3	A	2	2	2	3	3	2	1	1.7	4.1	
17-Jan	1	1	1	1	1	0	0	0	1	0	3	2	2	1	1	A	1	1	1	1	1	1	1	1	0.8	2.8	
18-Jan	1	1	1	0	0	1	1	2	1	1	1	3	1	1	A	1	1	3	14	4	2	2	3	3	2.0	13.9	
19-Jan	2	1	1	2	2	2	2	6	6	4	3	4	2	A	7	3	2	3	2	1	1	1	2	1	2.5	6.5	
20-Jan	3	2	3	2	6	5	2	1	1	1	2	4	A	1	1	0	1	1	0	0	1	1	1	0	1.7	6.3	
21-Jan	1	1	0	0	1	0	0	0	0	1	0	A	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.0	
22-Jan	1	2	2	2	2	2	1	1	2	1	A	1	1	1	1	1	1	1	1	2	2	1	1	2	1	1.4	2.2
23-Jan	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0.8	1.3	
24-Jan	0	3	0	0	1	0	1	1	A	0	1	1	0	1	1	1	0	0	1	0	1	1	1	1	0.6	2.9	
25-Jan	1	1	1	1	1	0	1	A	1	1	1	0	0	0	1	1	2	1	1	1	1	1	1	1	0.8	1.9	
26-Jan	3	4	1	3	0	1	A	1	1	1	1	2	2	2	2	3	3	2	2	1	1	1	2	1	1.8	3.8	
27-Jan	1	1	1	1	1	A	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.9	
28-Jan	1	1	1	1	A	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0.9	2.7		
29-Jan	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	8	5	3	3	2	1	1	2	2	1.8	8.4	
30-Jan	1	1	A	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	3	3	1.3	3.4	
31-Jan	3	A	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0.6	2.8	
		1.8	1.7	1.7	1.4	1.9	1.8	1.6	1.6	1.6	1.5	1.5	1.5	1.6	1.6	1.9	2.3	1.6	1.2	2.7	1.8	1.8	1.6	1.5	1.7	Diurnal Average	
		7.6	6.9	7.7	4.7	10.9	6.6	9.1	11.4	6.9	9.3	6.3	4.6	6.1	8.6	7.6	14.8	7.5	3.4	26.9	7.1	6.9	5.3	3.9	7.9	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

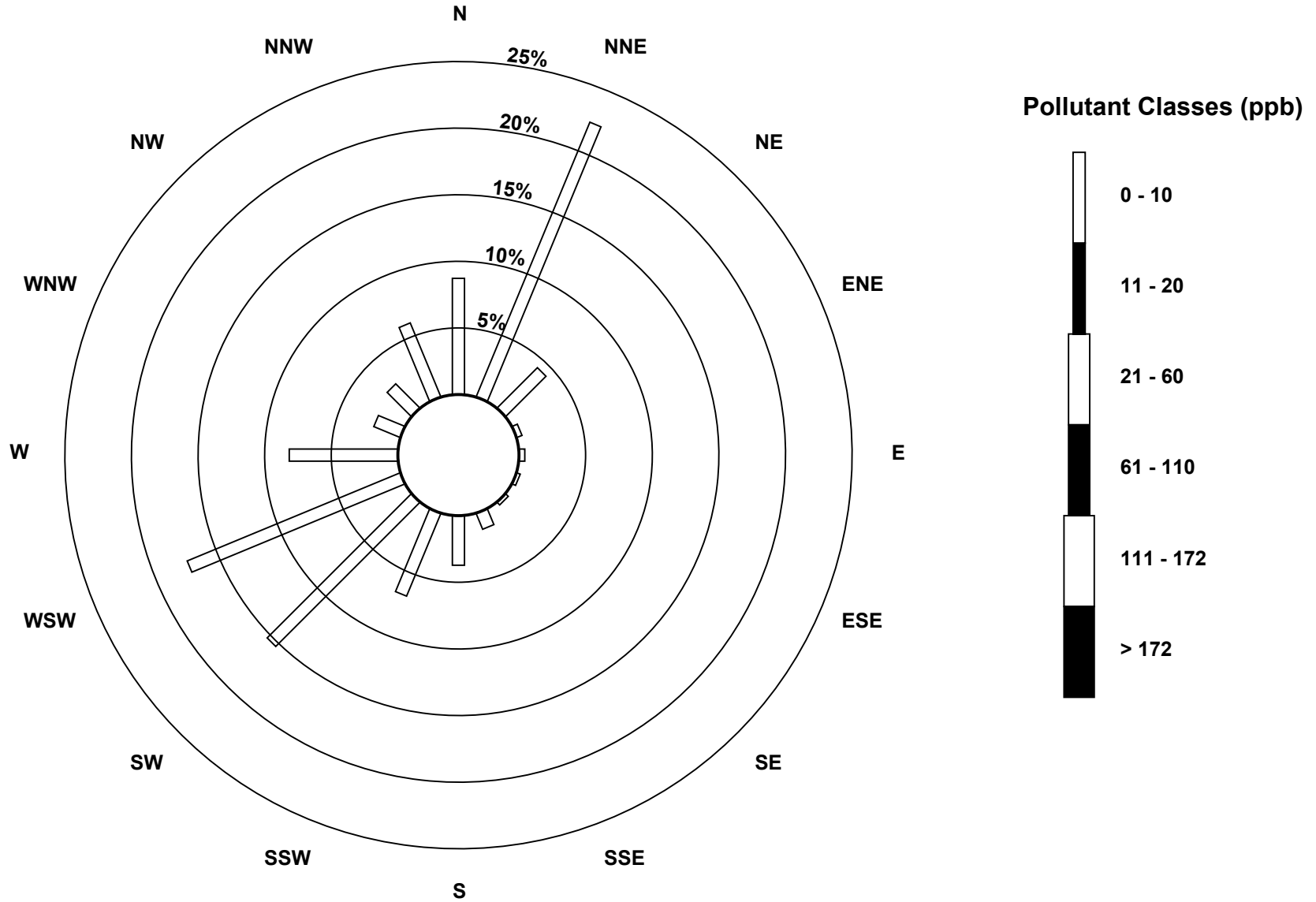
**Hourly Maximums**

**Sulphur Dioxide (SO<sub>2</sub>) - ppb**  
**Smoky Heights - January 2018**



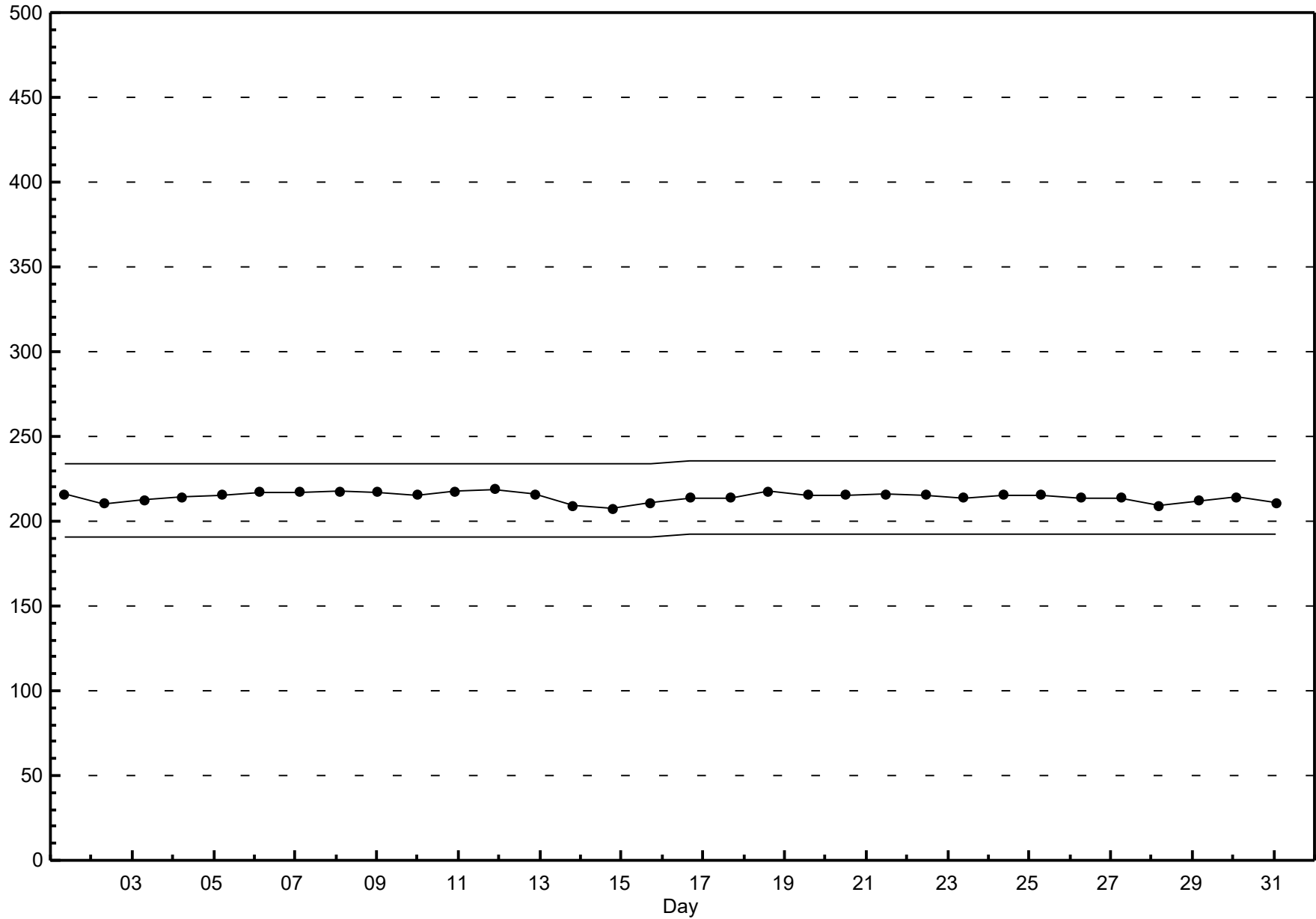
**Pollutant Rose**

**Sulphur Dioxide (SO<sub>2</sub>) - ppb**  
**Smoky Heights - January 2018**



### Span Responses

Sulphur Dioxide (SO<sub>2</sub>)  
Smoky Heights - January 2018



## Hourly Averages

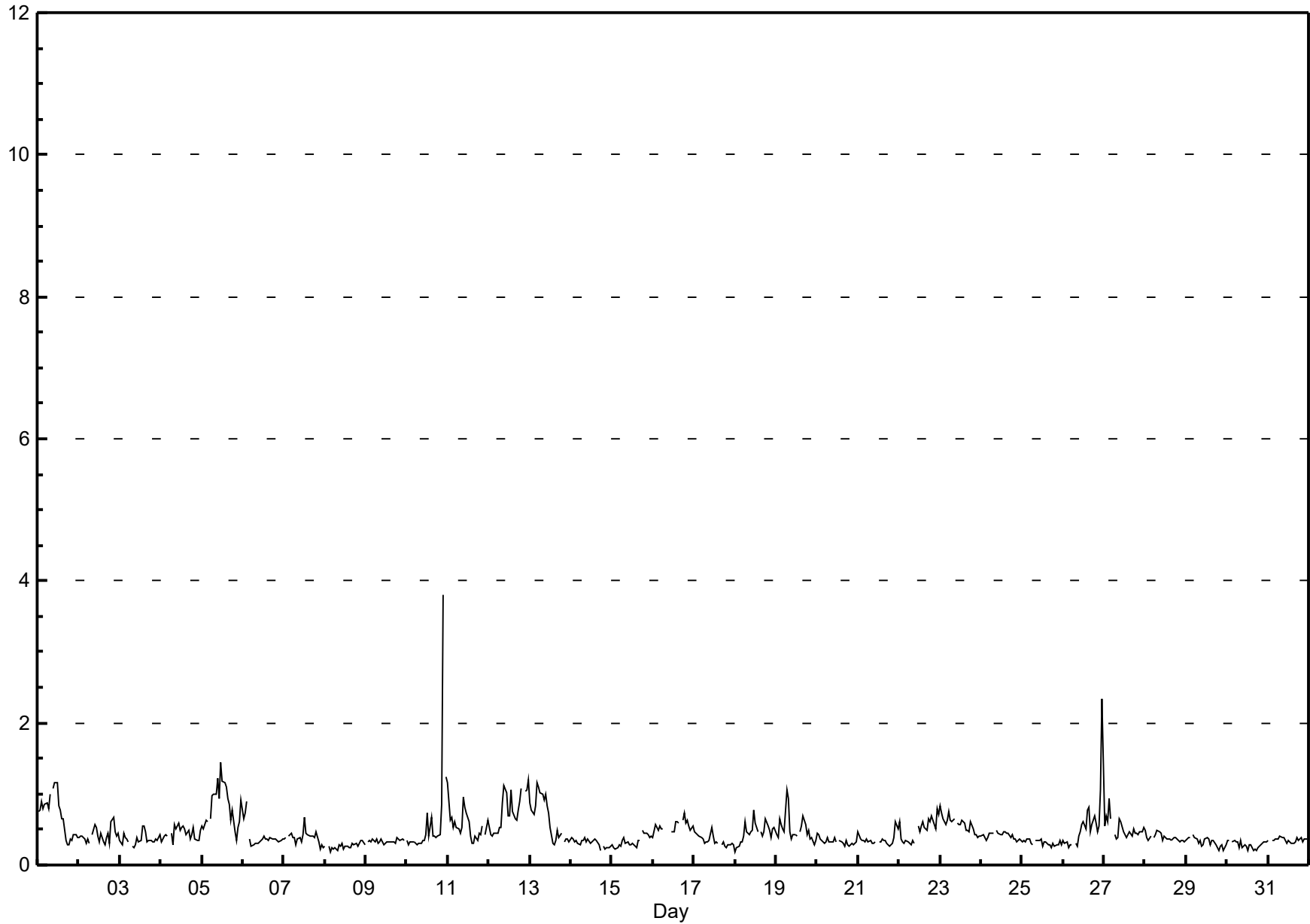
Total Reduced Sulphur (TRS) - ppb

Smoky Heights - January 2018

Maximum Value: 3.8 ppb on Jan 10 22:00		Maximum Daily Average: 0.8 ppb on Jan 5		Hours in Service: 744																						
Minimum Value: 0 ppb on Jan 18 01:00		Minimum Daily Average: 0.3 ppb on Jan 8		Hours of Data: 708																						
Maximum Diurnal Average: 0.5 ppb at hour 24		Minimum Diurnal Average: 0.4 ppb at hour 21		Hours of Missing Data: 36																						
Monthly Average: 0.46 ppb		Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.3 Q <sub>1</sub> = 0.3 Median = 0.4 Q <sub>3</sub> = 0.5 P <sub>90</sub> = 0.7 P <sub>99</sub> = 1.2		Hours of Calibration: 36																						
				Percent Operational Time: 100.0																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jan	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.7	1.2
2-Jan	0	0	0	0	0	0	0	A	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0.4	0.7
3-Jan	0	0	0	0	0	0	A	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0.4	0.6
4-Jan	0	0	0	0	0	A	0	0	1	1	1	0	1	1	0	0	0	0	0	1	0	0	0	0	0.4	0.6
5-Jan	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	0.8	1.4
6-Jan	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.9
7-Jan	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7
8-Jan	0	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	0.3
9-Jan	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
10-Jan	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	4	A	1	0.6	3.8
11-Jan	1	1	1	1	1	1	1	0	1	1	1	1	1	0	0	0	0	0	0	0	1	A	0	1	0.6	1.2
12-Jan	1	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.2
13-Jan	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0.7	1.2
14-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	0.4
15-Jan	0	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
16-Jan	0	1	1	0	1	1	1	C	C	C	C	0	0	1	1	1	A	1	1	1	1	1	0	1	0.6	0.7
17-Jan	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	0.5
18-Jan	0	0	0	0	0	0	1	0	0	0	0	1	1	0	A	0	0	0	1	1	0	0	1	1	0.5	0.8
19-Jan	0	0	1	1	1	0	1	1	0	0	0	0	0	0	A	1	1	1	0	0	0	0	0	0	0.5	1.1
20-Jan	0	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	0.4
21-Jan	0	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
22-Jan	1	0	0	0	0	0	0	0	0	0	0	0	A	1	0	1	1	1	0	1	1	1	1	1	0.5	0.8
23-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	0	0	0	0	0.6	0.8
24-Jan	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
25-Jan	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
26-Jan	0	0	0	0	0	0	A	0	0	0	0	1	1	1	1	1	0	1	1	1	1	0	1	1	0.6	2.3
27-Jan	1	1	1	1	1	A	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.5	0.9
28-Jan	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
29-Jan	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
30-Jan	0	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
31-Jan	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.4
																								Diurnal Average		
																								Diurnal Maximum		

C - Calibration                      A - Automated Daily Zero Span





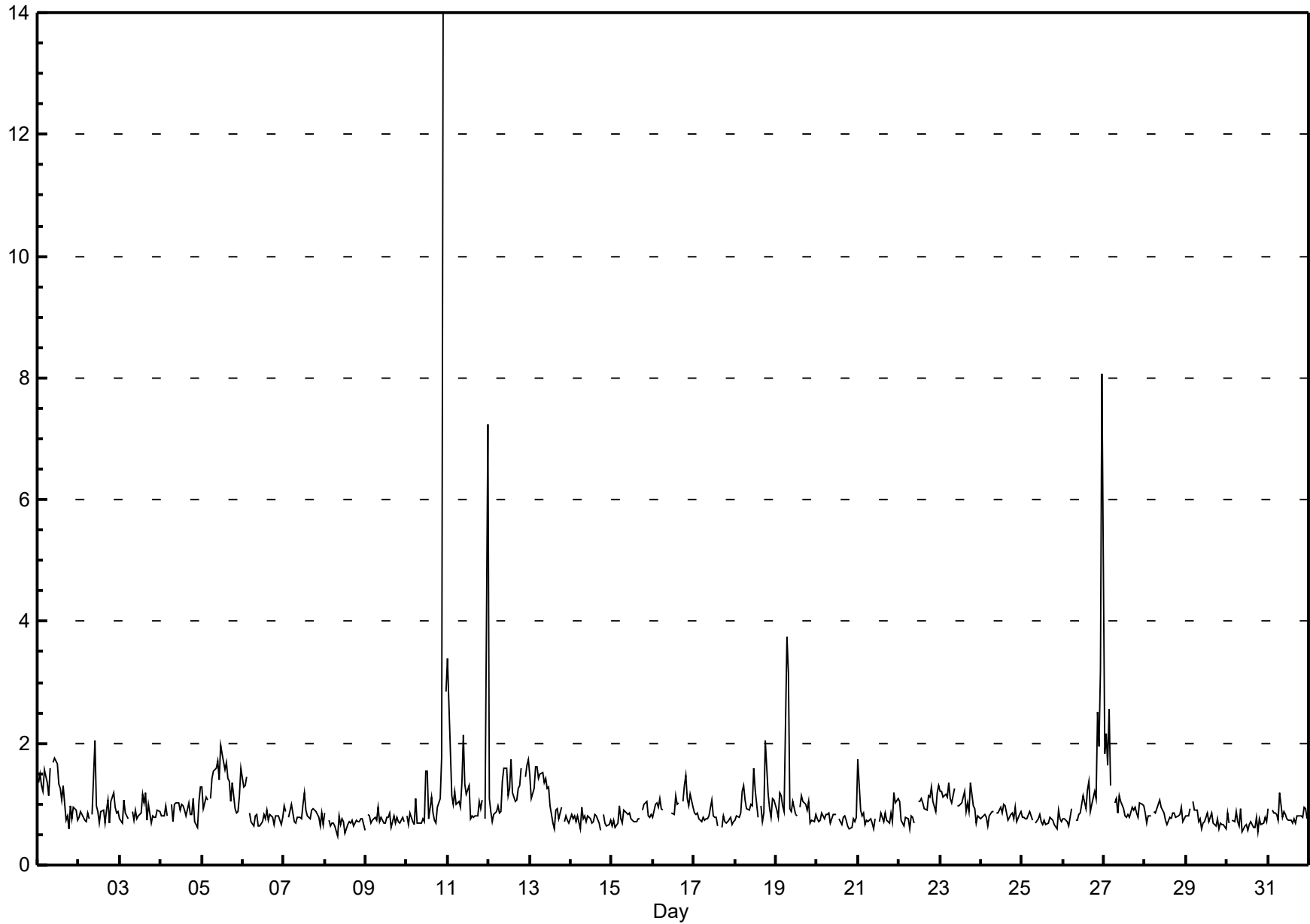
## Hourly Maximums

## Total Reduced Sulphur (TRS) - ppb Smoky Heights - January 2018

Maximum Value: 14.0 ppb on Jan 10 22:00		Maximum Daily Average: 1.6 ppb on Jan 10		Hours in Service: 744																								
Minimum Value: 0 ppb on Jan 8 08:00		Minimum Daily Average: 0.7 ppb on Jan 8		Hours of Data: 708																								
Maximum Diurnal Average: 1.4 ppb at hour 24		Minimum Diurnal Average: 0.8 ppb at hour 17		Hours of Missing Data: 36																								
Monthly Average: 0.97 ppb		Percentiles: P <sub>1</sub> = 0.6 P <sub>10</sub> = 0.7 Q <sub>1</sub> = 0.7 Median = 0.8 Q <sub>3</sub> = 1.0 P <sub>90</sub> = 1.3 P <sub>99</sub> = 3.1		Hours of Calibration: 36																								
				Percent Operational Time: 100.0																								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1-Jan	1	1	1	1	2	1	1	2	A	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1.2	1.7		
2-Jan	1	1	1	1	1	1	1	A	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	2.0		
3-Jan	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		
4-Jan	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	1.3		
5-Jan	1	1	1	1	A	1	1	2	2	2	1	2	2	2	1	1	1	1	1	1	1	1	1	2	1.3	2.0		
6-Jan	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	1.5		
7-Jan	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2		
8-Jan	1	A	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9		
9-Jan	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	0.9		
10-Jan	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	2	14	A	3	1.6	14.0		
11-Jan	3	2	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	A	1	7	1.5	7.2		
12-Jan	1	1	1	1	1	1	1	1	1	2	2	1	1	2	1	1	1	1	1	2	A	1	2	2	1.2	1.7		
13-Jan	1	1	1	2	2	1	1	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1.1	1.6		
14-Jan	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		
15-Jan	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		
16-Jan	1	1	1	1	1	1	1	C	C	C	C	1	1	1	1	1	A	1	1	1	1	1	1	1	1.0	1.5		
17-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.8	1.1		
18-Jan	1	1	1	1	1	1	1	1	1	1	2	1	1	1	A	1	1	1	1	2	1	1	1	1	1.0	2.1		
19-Jan	1	1	1	1	1	1	4	3	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1.1	3.7		
20-Jan	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	0.9		
21-Jan	2	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	1.7		
22-Jan	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	1.3		
23-Jan	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.4		
24-Jan	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0		
25-Jan	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9		
26-Jan	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	3	2	3	8	1.4	8.1		
27-Jan	2	2	2	3	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	2.6		
28-Jan	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1		
29-Jan	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0		
30-Jan	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9		
31-Jan	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	1.2		
		1.1	0.9	0.9	0.9	0.9	0.9	1.0	1.0	0.9	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.8	0.9	0.9	0.9	0.9	0.9	0.9	1.3	1.0	1.4	Diurnal Average
		3.4	2.2	1.6	2.6	1.6	1.4	3.7	3.1	1.6	2.1	1.7	2.0	1.8	1.7	1.7	1.4	1.4	1.3	2.1	1.6	2.5	14.0	3.2	8.1	Diurnal Maximum		
C - Calibration		A - Automated Daily Zero Span																										

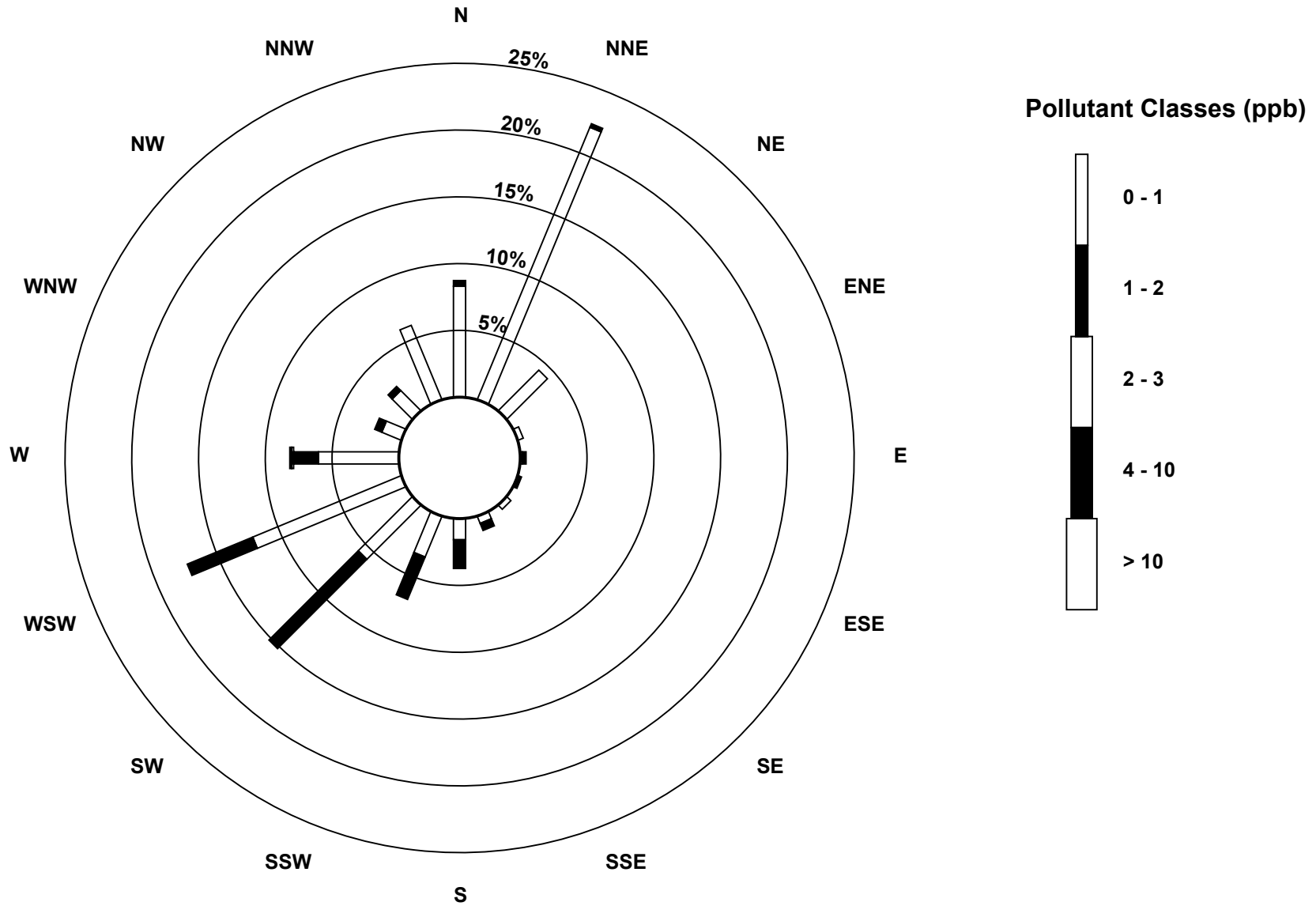
**Hourly Maximums**

**Total Reduced Sulphur (TRS) - ppb**  
**Smoky Heights - January 2018**



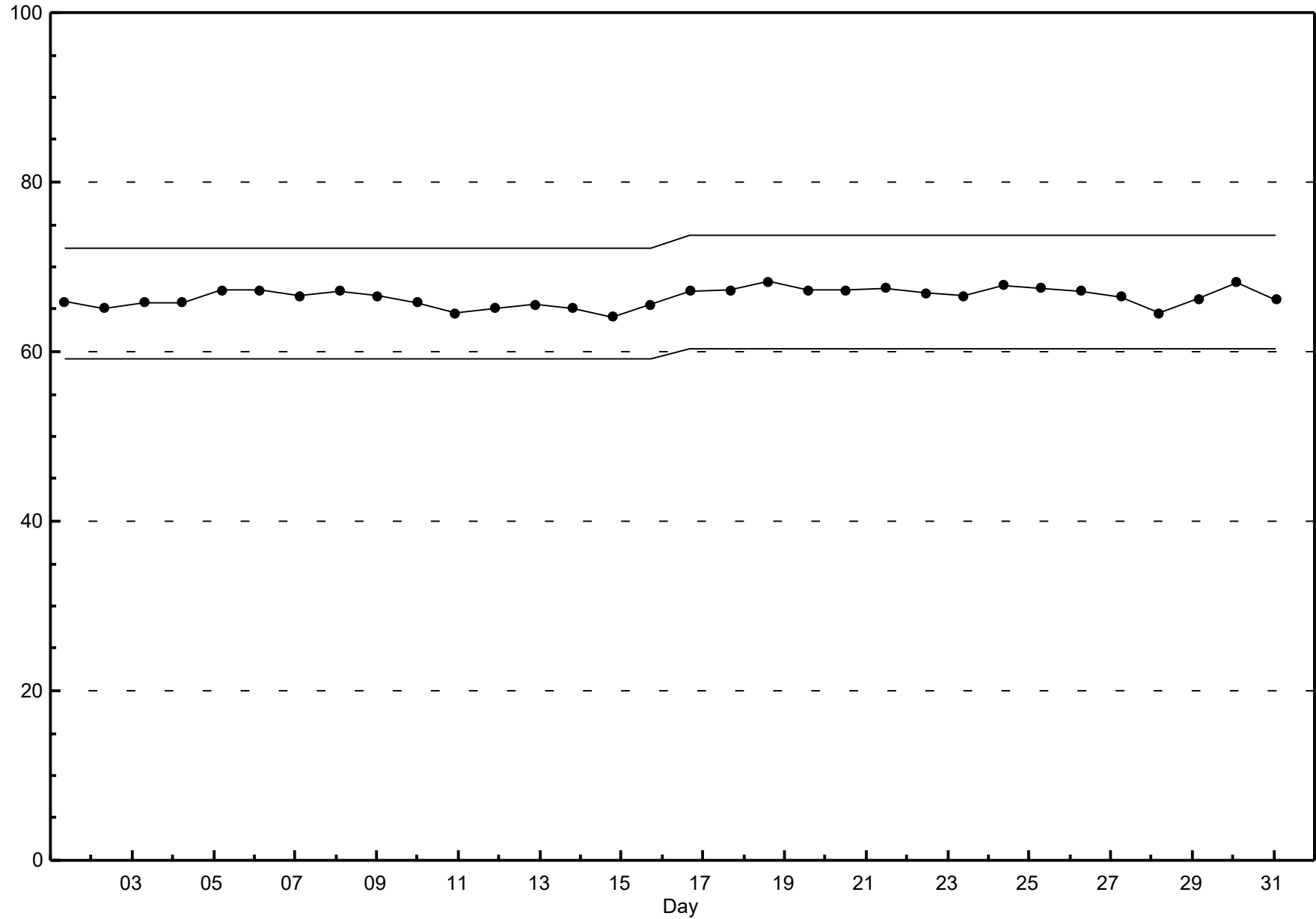
**Pollutant Rose**

**Total Reduced Sulphur (TRS) - ppb**  
**Smoky Heights - January 2018**



**Span Responses**

**Total Reduced Sulphur (TRS)  
Smoky Heights - January 2018**



## Hourly Averages

## Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

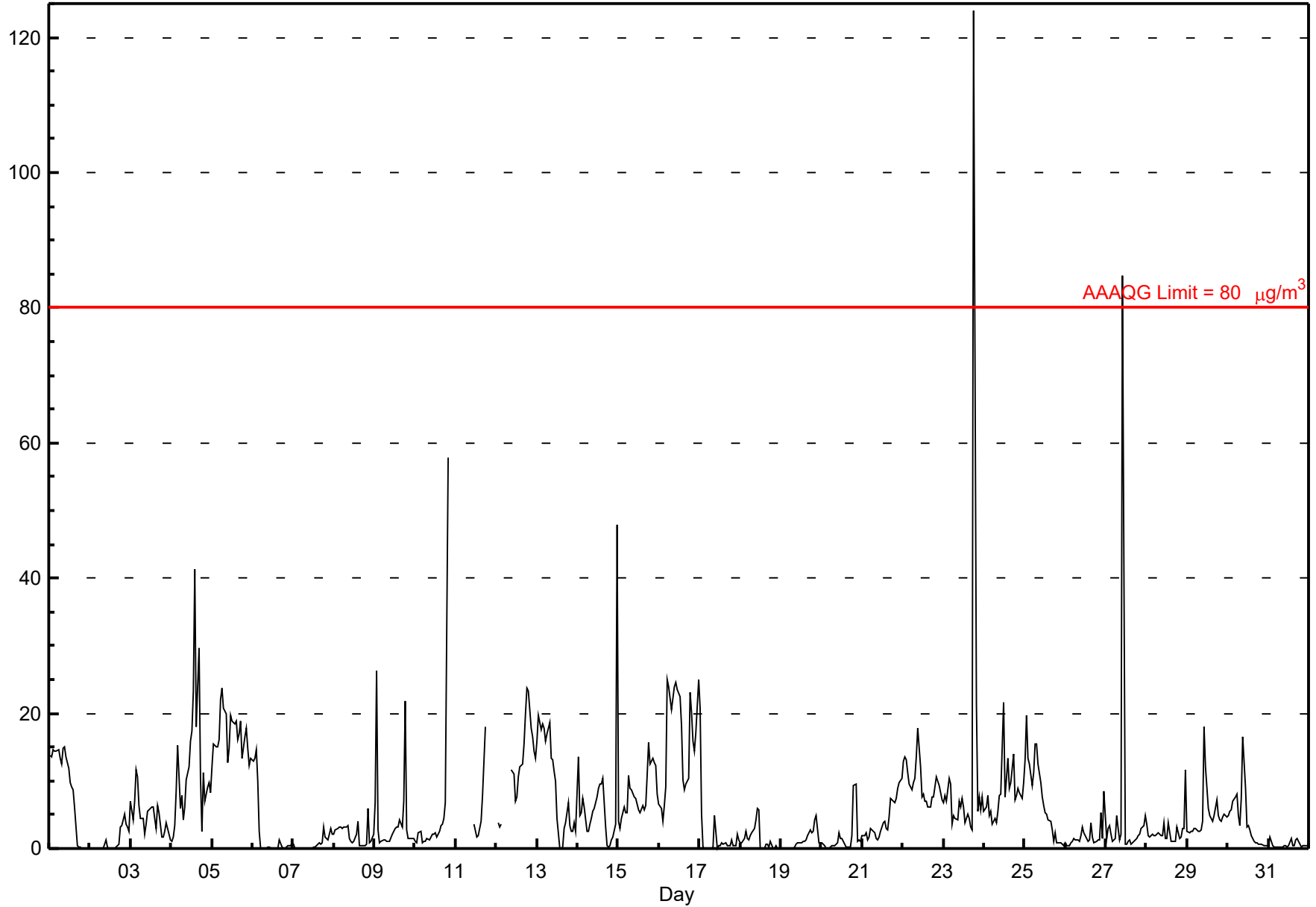
### Smoky Heights - January 2018

Number of Exceedences: 1-hr: 2 24-hr: 0	Hours in Service: 744
Maximum Value: 124.0 µg/m <sup>3</sup> on Jan 23 19:00	Maximum Daily Average: 16.8 µg/m <sup>3</sup> on Jan 5
Minimum Value: 0 µg/m <sup>3</sup> on Jan 1 23:00	Hours of Data: 717
Maximum Diurnal Average: 9.6 µg/m <sup>3</sup> at hour 19	Hours of Missing Data: 27
Monthly Average: 5.83 µg/m <sup>3</sup>	Hours of Calibration: 0
Minimum Daily Average: 0.5 µg/m <sup>3</sup> on Jan 31	Percent Operational Time: 96.4
Minimum Diurnal Average: 4.3 µg/m <sup>3</sup> at hour 16	
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.2 Q <sub>1</sub> = 1.0 Median = 3.1 Q <sub>3</sub> = 8.0 P <sub>90</sub> = 14.9 P <sub>99</sub> = 24.0	

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-Jan	14	14	15	14	14	15	13	12	15	15	14	12	10	9	9	6	0	0	0	0	0	0	0	0	8.4	15.0	
2-Jan	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	3	3	5	4	3	2	1.0	5.1	
3-Jan	7	4	7	12	11	6	5	4	2	4	6	6	6	6	4	3	6	5	2	2	3	4	3	1	4.9	11.6	
4-Jan	1	2	3	9	15	6	8	4	6	10	12	16	17	23	41	18	30	10	3	11	7	9	10	8	11.7	41.4	
5-Jan	12	15	15	15	16	22	24	21	20	13	15	20	19	18	19	16	17	19	13	16	18	15	12	13	16.8	23.7	
6-Jan	13	13	15	10	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	2.4	14.6	
7-Jan	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	3	2	1	2	3	2	0.7	3.2	
8-Jan	2	3	3	3	3	3	3	3	3	1	1	1	1	2	4	0	0	0	1	6	1	1	1	2	2.1	5.9	
9-Jan	7	26	3	1	1	1	1	1	1	1	2	2	3	3	3	4	3	7	22	3	2	2	1	1	4.3	26.3	
10-Jan	1	1	2	3	1	1	1	1	1	2	2	2	2	2	3	4	5	7	58	N	N	N	N	5.0	57.8		
11-Jan	N	N	N	N	N	N	N	N	N	N	N	4	2	2	3	4	8	18	N	N	N	N	N	N	--	18.1	
12-Jan	N	4	3	4	N	N	N	N	N	N	12	11	7	8	11	12	12	15	20	24	23	18	17	14	13	12.6	23.7
13-Jan	16	20	18	18	18	16	17	19	13	13	11	10	4	0	0	0	3	4	7	3	3	3	4	2	9.3	19.7	
14-Jan	14	5	5	7	6	2	2	4	4	5	6	8	9	10	10	10	3	1	0	0	1	2	4	48	6.9	47.8	
15-Jan	4	3	4	6	5	5	11	9	9	8	7	7	6	5	6	6	6	11	16	13	13	13	12	8	8.0	15.7	
16-Jan	7	6	4	6	9	25	24	21	22	24	25	24	23	18	10	9	9	10	23	20	16	14	17	25	16.3	24.9	
17-Jan	21	5	0	0	0	0	0	0	0	5	0	0	0	1	1	1	0	0	0	1	0	0	2	1	1.7	20.7	
18-Jan	1	1	1	2	1	1	2	2	3	4	6	6	0	0	0	1	1	0	1	0	0	0	0	0	1.4	6.0	
19-Jan	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	2	3	2	3	4	5	1	1	1.2	5.0	
20-Jan	1	1	0	0	0	0	0	0	0	1	2	2	1	1	0	0	0	0	2	9	9	1	1	1	1.5	9.5	
21-Jan	2	2	2	1	2	3	3	2	2	1	2	3	4	4	3	3	5	7	7	7	7	9	10	10	4.2	10.3	
22-Jan	13	14	13	11	10	9	10	10	14	18	12	8	8	7	7	6	6	8	8	9	11	9	8	7	9.8	17.8	
23-Jan	7	8	7	10	10	4	5	4	4	7	6	7	6	4	5	4	3	3	124	21	5	8	6	8	11.5	124.0	
24-Jan	6	6	8	5	5	4	4	4	6	8	8	22	8	10	13	9	10	14	7	8	9	8	7	10	8.3	21.7	
25-Jan	13	20	13	13	9	11	16	15	12	10	8	6	5	5	4	4	3	1	2	1	1	1	1	0	7.3	19.7	
26-Jan	1	0	0	1	1	1	1	1	1	2	3	2	2	1	1	4	2	1	1	1	1	5	1	8	1.9	8.5	
27-Jan	2	3	3	2	1	1	5	3	1	2	85	1	1	1	1	1	1	1	2	2	2	3	3	5	5.5	84.8	
28-Jan	4	2	2	2	2	2	2	2	2	2	4	2	1	4	1	1	1	1	3	1	2	3	3	12	2.5	11.7	
29-Jan	3	2	2	3	3	3	2	2	3	4	18	12	6	5	4	4	5	7	5	4	4	5	5	5	4.9	18.0	
30-Jan	5	6	6	7	8	8	5	3	7	17	9	3	3	3	2	1	1	1	1	1	1	0	0	0	4.0	16.5	
31-Jan	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	0	0	0	0	0	0.5	1.8	

6.0	6.2	5.2	5.5	5.3	5.2	5.7	5.2	5.3	6.3	9.2	6.2	5.0	5.1	5.5	4.3	4.8	5.2	9.6	7.5	5.2	4.9	4.6	6.8	Diurnal Average	
20.7	26.3	17.5	18.3	17.8	24.9	23.9	20.7	22.2	23.9	84.8	23.5	22.6	23.3	41.4	17.9	29.7	19.9	124.0	57.8	17.9	16.6	17.1	47.8	Diurnal Maximum	

N - Not Valid  
 Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m<sup>3</sup> Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m<sup>3</sup>



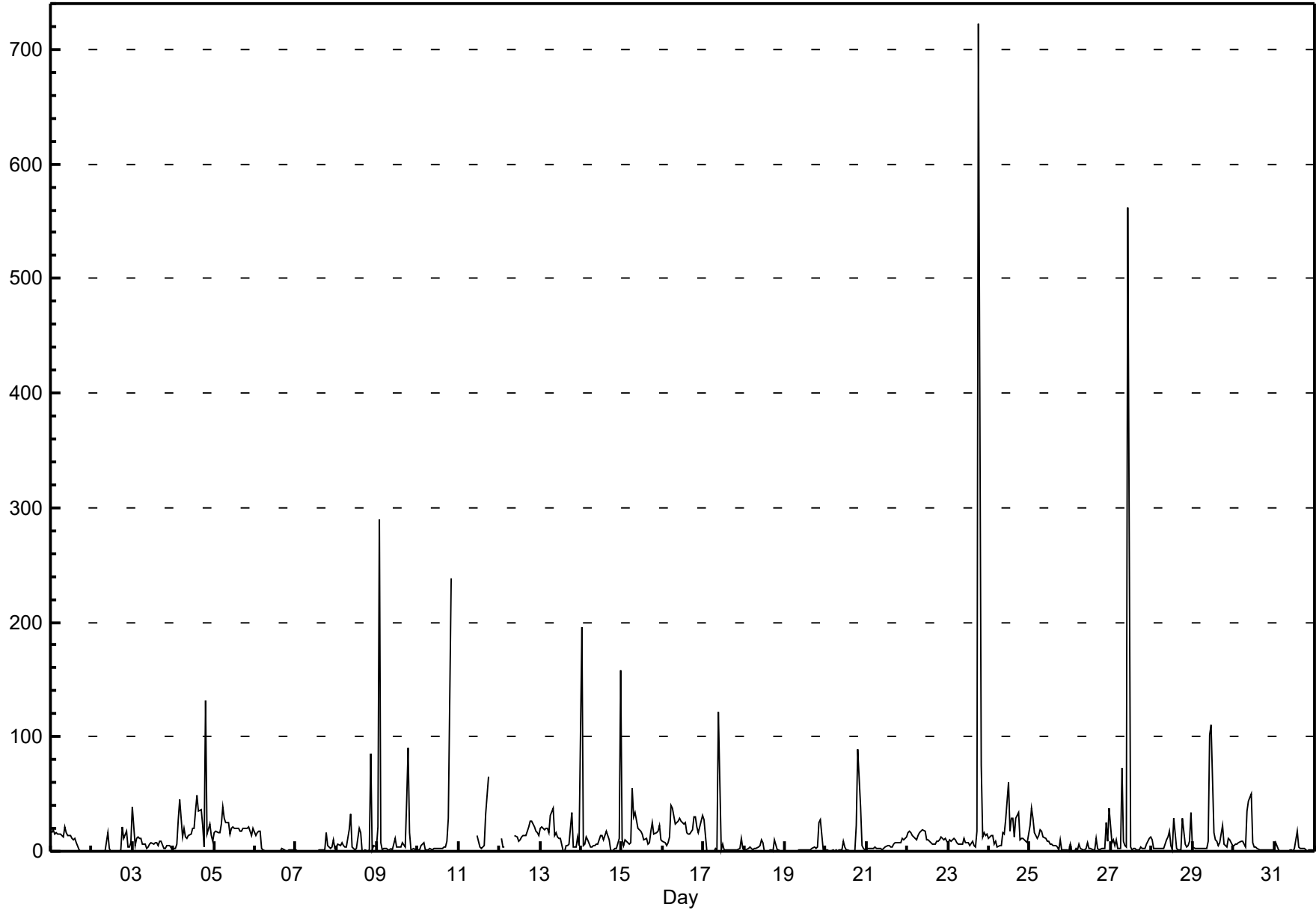
# Hourly Maximums

# Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

## Smoky Heights - January 2018

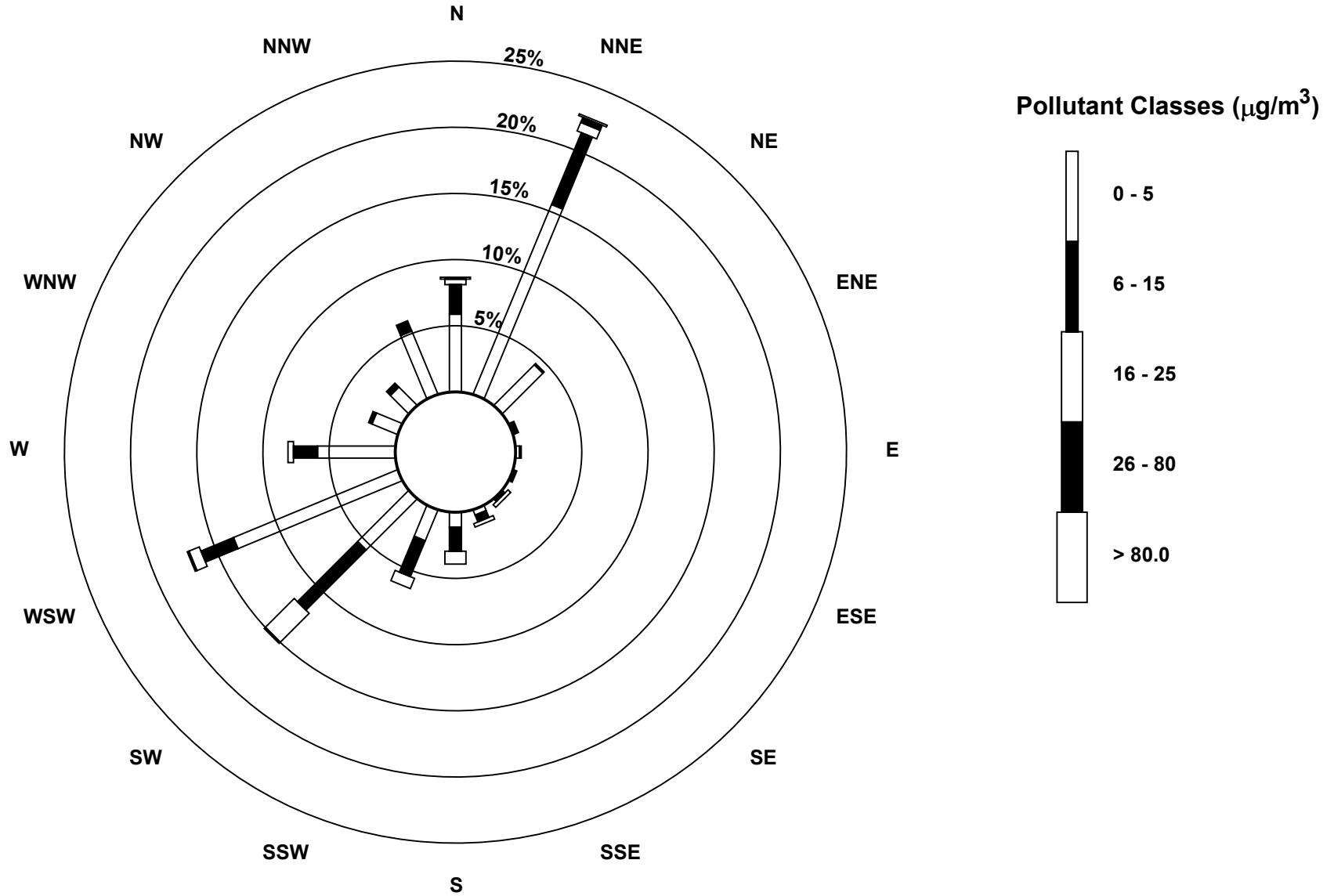
Maximum Value: 723.0 µg/m <sup>3</sup> on Jan 23 19:00		Maximum Daily Average: 41.8 µg/m <sup>3</sup> on Jan 23		Hours in Service: 744																							
Minimum Value: 0 µg/m <sup>3</sup> on Jan 2 03:00		Minimum Daily Average: 2.0 µg/m <sup>3</sup> on Jan 7		Hours of Data: 717																							
Maximum Diurnal Average: 38.0 µg/m <sup>3</sup> at hour 19		Minimum Diurnal Average: 6.6 µg/m <sup>3</sup> at hour 16		Hours of Missing Data: 27																							
Monthly Average: 12.87 µg/m <sup>3</sup>		Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.5 Q <sub>1</sub> = 1.7 Median = 5.6 Q <sub>3</sub> = 14.1 P <sub>90</sub> = 24.4 P <sub>99</sub> = 113.7		Hours of Calibration: 0																							
				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-Jan	16	19	16	16	15	16	14	13	21	17	14	14	11	10	11	8	1	0	0	0	0	0	0	2	9.8	21.4	
2-Jan	0	0	0	0	0	0	0	0	0	16	2	0	0	0	0	0	0	1	22	11	18	4	4	7	3.6	21.7	
3-Jan	39	6	11	13	12	11	7	6	3	4	7	7	7	8	8	5	9	9	2	2	5	5	5	2	8.0	38.8	
4-Jan	2	3	6	27	45	12	20	13	11	14	15	20	20	35	48	35	37	23	4	132	15	24	14	9	24.4	131.6	
5-Jan	16	17	17	16	24	39	29	25	25	15	20	21	20	20	20	17	18	20	20	20	21	18	14	20	20.6	39.3	
6-Jan	13	16	18	18	3	1	0	0	0	0	0	0	0	0	0	0	3	1	0	0	1	1	1	1	3.2	17.8	
7-Jan	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	16	5	2	3	10	3	2.0	15.9	
8-Jan	4	6	5	8	5	3	4	18	33	4	2	1	2	20	16	0	0	1	0	1	85	2	5	3	9.6	84.7	
9-Jan	21	290	7	1	2	2	2	1	2	2	11	4	3	4	4	8	4	44	91	17	2	2	2	3	21.9	289.9	
10-Jan	1	1	6	8	1	1	1	2	2	2	3	3	3	2	3	4	4	8	29	239	N	N	N	N	16.1	238.6	
11-Jan	N	N	N	N	N	N	N	N	N	N	N	14	4	3	4	5	33	65	N	N	N	N	N	N	--	65.2	
12-Jan	N	11	3	4	N	N	N	N	N	N	13	12	9	9	13	13	14	18	21	26	26	21	18	17	14	14.7	26.3
13-Jan	20	21	19	20	20	17	32	38	14	16	13	11	11	0	0	5	5	6	34	4	3	3	13	6	13.8	38.1	
14-Jan	195	6	6	12	10	4	3	5	6	6	7	13	14	10	14	18	10	1	0	1	2	3	11	158	21.5	195.1	
15-Jan	9	6	10	8	6	7	55	30	33	20	19	17	15	9	12	7	8	17	25	15	16	18	23	10	16.5	55.4	
16-Jan	9	7	5	8	12	40	37	24	25	26	29	27	24	26	17	15	16	18	30	30	22	17	21	31	21.5	40.2	
17-Jan	27	14	0	0	0	0	0	3	1	122	1	7	1	2	1	1	1	1	2	2	1	2	11	2	8.4	121.6	
18-Jan	1	1	3	3	2	2	2	3	4	6	10	7	0	0	0	1	1	0	10	1	1	0	0	0	2.5	10.2	
19-Jan	0	0	0	0	0	0	0	0	1	1	1	1	1	1	2	2	2	4	3	4	25	27	2	2	3.3	27.1	
20-Jan	1	1	0	0	1	0	1	0	1	1	9	3	2	2	0	0	0	0	23	90	39	6	2	1	7.7	89.6	
21-Jan	3	2	3	2	2	3	3	3	2	2	2	3	5	5	3	3	7	8	8	7	8	11	10	13	4.9	13.2	
22-Jan	16	18	16	14	13	10	13	16	17	19	18	10	10	9	8	7	7	9	9	9	12	10	11	9	12.1	19.0	
23-Jan	8	9	8	12	10	8	6	7	7	11	7	8	7	5	8	5	4	18	723	75	13	16	14	15	41.8	723.0	
24-Jan	11	14	13	6	9	4	5	5	16	15	28	60	18	29	29	12	29	34	10	11	11	9	8	15	16.7	60.3	
25-Jan	23	38	29	16	11	14	19	18	13	11	9	8	6	7	6	5	4	2	10	1	1	1	1	0	10.6	37.8	
26-Jan	6	0	0	2	1	6	2	2	1	3	7	3	2	2	2	11	3	1	2	2	2	25	8	38	5.5	37.6	
27-Jan	7	10	5	10	2	2	73	9	5	4	562	4	1	2	3	1	1	4	3	3	2	6	11	13	31.0	562.3	
28-Jan	10	2	2	3	2	2	2	3	10	13	18	5	2	29	3	1	1	1	29	6	3	5	8	34	8.1	33.7	
29-Jan	4	3	3	3	3	3	3	3	3	8	102	110	16	10	9	5	7	23	7	5	4	11	10	5	15.0	109.9	
30-Jan	5	6	6	8	8	9	7	4	35	44	51	8	4	3	2	1	1	1	1	1	1	1	1	1	8.6	50.5	
31-Jan	1	8	1	0	0	0	0	0	0	1	1	0	2	18	4	3	3	3	2	0	1	1	1	1	2.1	18.0	
		16.3	17.9	7.3	7.9	7.7	7.5	11.8	8.7	10.0	13.9	32.6	12.9	7.1	9.1	8.1	6.6	7.7	11.2	38.0	24.0	11.6	8.6	8.1	14.4	Diurnal Average	
		195.1	289.9	29.3	27.1	44.9	40.2	73.0	38.1	35.1	121.6	562.3	109.9	24.4	35.4	48.3	35.1	36.9	65.2	723.0	238.6	84.7	27.1	22.9	158.3	Diurnal Maximum	
N - Not Valid																											





**Pollutant Rose**

**Particulate Matter 2.5 (PM<sub>2.5</sub>) - μg/m<sup>3</sup>**  
**Smoky Heights - January 2018**

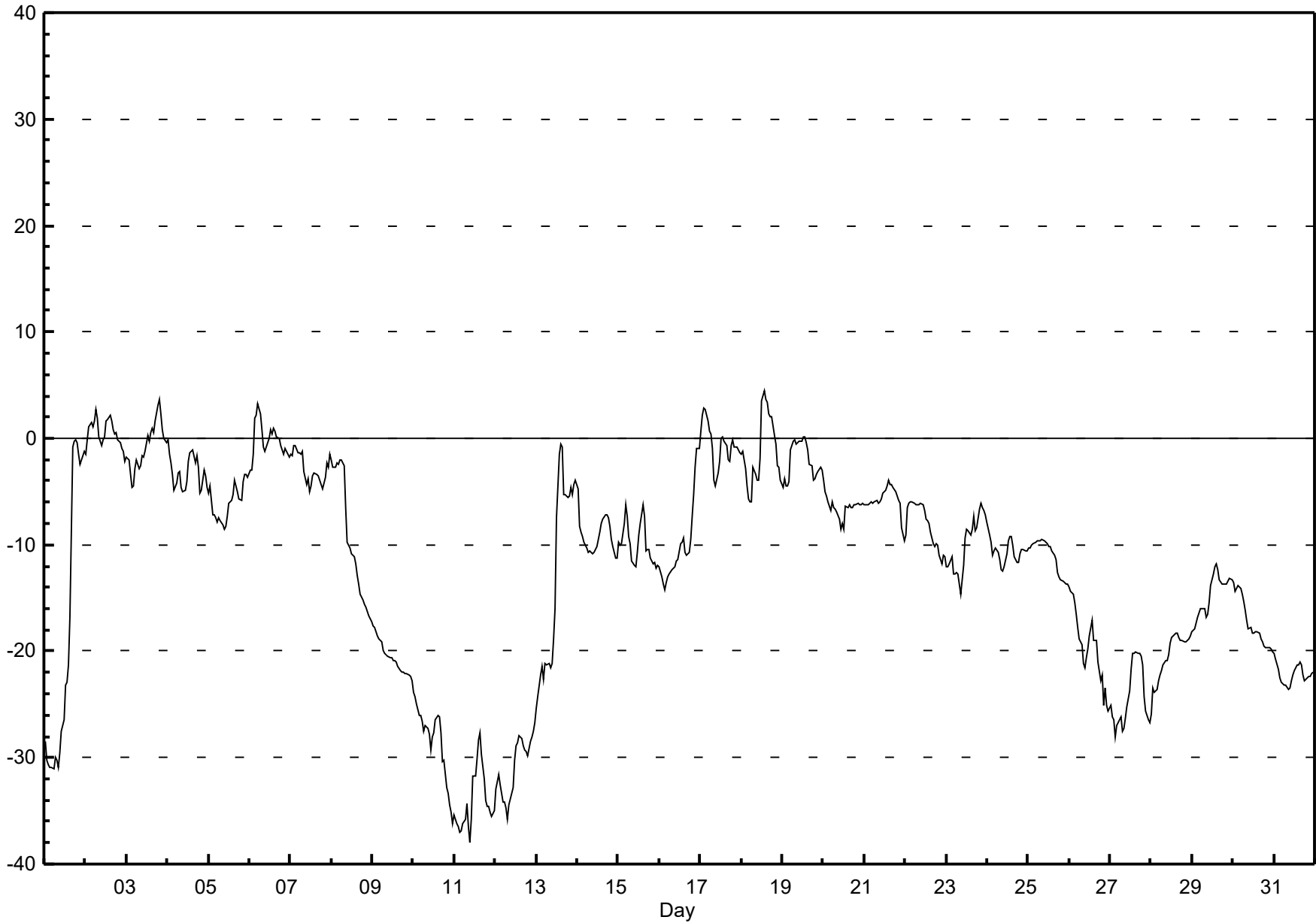


# Hourly Averages

External Temperature (ET) - °C

Smoky Heights - January 2018

<b>Maximum Value: 4.4 °C on Jan 18 14:00</b>		<b>Maximum Daily Average: 0.5 °C on Jan 2</b>		Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0																						
<b>Minimum Value: -38 °C on Jan 11 10:00</b> <b>Maximum Diurnal Average: -10.3 °C at hour 15</b> <b>Monthly Average: -11.98 °C</b>		<b>Minimum Daily Average: -34.1 °C on Jan 11</b> <b>Minimum Diurnal Average: -13.8 °C at hour 10</b> Percentiles: P <sub>1</sub> = -36.2 P <sub>10</sub> = -27.3 Q <sub>1</sub> = -19.8 Median = -9.9 Q <sub>3</sub> = -3.8 P <sub>90</sub> = -0.4 P <sub>99</sub> = 2.9																								
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-Jan	-28	-30	-31	-31	-31	-31	-30	-30	-31	-30	-28	-26	-23	-23	-21	-17	-1	0	0	0	-1	-2	-2	-1	-18.7	-0.2
2-Jan	-1	0	1	1	1	2	3	2	0	-1	0	0	2	2	2	2	1	0	1	0	0	-1	-1	-2	0.5	2.7
3-Jan	-2	-2	-3	-5	-4	-3	-2	-3	-3	-2	-2	-1	0	0	1	1	1	2	3	4	2	1	0	0	-0.8	3.7
4-Jan	0	-1	-2	-3	-5	-4	-3	-3	-5	-5	-5	-4	-2	-1	-1	-1	-2	-2	-3	-5	-5	-3	-4	-5	-3.1	-0.1
5-Jan	-5	-4	-7	-7	-7	-8	-7	-8	-8	-9	-8	-7	-6	-6	-5	-4	-4	-5	-6	-6	-4	-3	-3	-4	-6.0	-3.4
6-Jan	-3	-3	-2	2	2	3	2	1	-1	-1	-1	0	1	0	1	1	0	0	-1	-1	-1	-1	-1	-2	-0.2	3.3
7-Jan	-1	-2	-1	-1	-1	-1	-2	-1	-3	-4	-4	-5	-5	-4	-3	-3	-4	-4	-4	-5	-4	-2	-3	-1	-2.8	-0.7
8-Jan	-2	-3	-3	-2	-2	-2	-2	-3	-7	-10	-10	-11	-11	-12	-13	-14	-15	-15	-16	-16	-16	-17	-17	-17	-9.5	-2.0
9-Jan	-18	-18	-18	-19	-19	-19	-20	-20	-20	-21	-21	-21	-21	-21	-21	-22	-22	-22	-22	-22	-22	-22	-23	-23	-20.6	-17.6
10-Jan	-24	-24	-25	-26	-26	-27	-28	-27	-27	-28	-29	-28	-28	-27	-26	-26	-28	-30	-30	-33	-33	-34	-35	-36	-28.6	-23.8
11-Jan	-35	-36	-36	-37	-37	-36	-36	-34	-36	-38	-36	-32	-32	-30	-28	-28	-30	-32	-34	-35	-35	-35	-36	-35	-34.1	-27.7
12-Jan	-33	-32	-32	-33	-34	-34	-35	-36	-34	-34	-33	-30	-29	-29	-28	-28	-29	-29	-29	-30	-29	-28	-28	-27	-30.9	-26.8
13-Jan	-25	-24	-22	-21	-23	-21	-21	-21	-21	-21	-19	-16	-8	-2	-1	-1	-5	-5	-6	-5	-5	-5	-4	-4	-12.8	-0.5
14-Jan	-5	-8	-9	-9	-10	-10	-11	-11	-11	-11	-11	-10	-9	-9	-8	-8	-7	-7	-7	-8	-9	-10	-11	-11	-9.2	-4.7
15-Jan	-10	-10	-10	-8	-6	-7	-9	-10	-12	-12	-12	-11	-9	-8	-6	-7	-11	-10	-10	-11	-12	-12	-12	-12	-9.9	-6.2
16-Jan	-12	-13	-14	-14	-14	-13	-13	-12	-12	-12	-12	-11	-10	-10	-9	-11	-11	-11	-9	-7	-5	-3	-1	-1	-10.0	-1.0
17-Jan	1	2	3	3	2	1	0	-1	-4	-5	-3	-2	0	0	0	-1	-2	-2	-1	0	-1	-1	-1	-1	-0.6	2.8
18-Jan	-2	-1	-3	-5	-6	-6	-6	-3	-3	-4	-4	-2	4	4	4	3	2	2	2	0	-1	-3	-3	-4	-1.3	4.4
19-Jan	-5	-4	-4	-4	-4	-1	0	0	-1	0	0	0	0	0	0	-1	-2	-3	-4	-4	-3	-3	-3	-3	-2.1	0.2
20-Jan	-4	-5	-5	-6	-7	-6	-6	-7	-7	-8	-9	-8	-9	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6.5	-3.9
21-Jan	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-5	-5	-4	-4	-4	-4	-5	-5	-5	-6	-6	-8	-10	-5.8	-4.0
22-Jan	-9	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-7	-8	-8	-8	-9	-10	-10	-10	-10	-11	-12	-11	-11	-8.1	-5.9
23-Jan	-12	-12	-12	-11	-13	-13	-13	-13	-15	-13	-12	-9	-9	-9	-9	-9	-7	-9	-8	-7	-6	-7	-7	-7	-10.0	-6.1
24-Jan	-8	-9	-10	-11	-11	-10	-11	-11	-12	-12	-12	-11	-10	-9	-9	-10	-11	-12	-12	-11	-10	-10	-11	-11	-10.6	-7.9
25-Jan	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-11	-11	-11	-13	-13	-13	-13	-14	-14	-14	-11.0	-9.6
26-Jan	-14	-14	-15	-15	-17	-18	-19	-19	-21	-22	-21	-20	-19	-17	-19	-19	-19	-21	-23	-22	-25	-23	-25	-26	-19.7	-14.0
27-Jan	-25	-26	-26	-28	-27	-26	-26	-28	-27	-26	-25	-24	-22	-20	-20	-20	-20	-20	-20	-21	-24	-26	-26	-27	-24.3	-20.1
28-Jan	-26	-23	-24	-24	-23	-22	-22	-21	-21	-21	-20	-19	-19	-19	-18	-18	-19	-19	-19	-19	-19	-19	-19	-19	-20.5	-18.3
29-Jan	-18	-18	-17	-17	-16	-16	-16	-16	-16	-17	-17	-16	-14	-13	-12	-12	-12	-13	-14	-14	-14	-14	-13	-13	-14.8	-11.8
30-Jan	-14	-14	-14	-14	-14	-15	-15	-16	-17	-18	-18	-18	-18	-18	-18	-18	-18	-19	-19	-19	-20	-20	-20	-20	-17.4	-13.6
31-Jan	-20	-21	-22	-22	-23	-23	-23	-23	-24	-23	-23	-22	-22	-21	-21	-21	-21	-22	-23	-22	-22	-22	-22	-22	-22.2	-20.3
																								Diurnal Average Diurnal Maximum		
																								-12.2 12.3 -12.4 -12.6 -12.8 -12.6 -12.6 -12.8 -13.6 -13.8 -13.3 -12.4 -11.2 -10.5 -10.3 -10.4 -10.6 -11.1 -11.3 -11.5 -11.7 -11.7 -11.9 -12.1 0.7 2.1 2.8 2.7 2.2 3.3 2.7 1.9 0.1 -0.4 -0.2 0.2 3.5 4.4 3.6 3.4 2.3 2.0 3.1 3.7 2.3 0.8 0.0 -0.4		



## Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1 Spd	11	10	11	8	9	9	13	12	10	12	13	15	16	14	12	10	28	29	33	34	31	26	28	22	14.6	34.3	
Dir	217	220	231	228	221	224	229	216	205	195	184	184	187	184	149	151	255	257	257	258	253	254	265	270	234.2	258.4	
2 Spd	20	20	21	18	21	29	39	30	23	8	7	12	16	16	20	18	12	9	10	8	3	15	14	7	15.7	39.0	
Dir	264	262	269	265	255	264	266	261	256	249	192	240	257	247	245	236	224	210	227	245	263	218	215	213	250.1	266.1	
3 Spd	13	6	6	9	11	7	11	6	8	12	12	10	7	8	12	9	12	14	16	15	6	7	6	11	9.1	16.1	
Dir	231	233	173	200	206	193	187	210	243	212	187	197	214	198	214	199	188	218	236	254	236	167	185	218	210.4	235.8	
4 Spd	6	7	10	4	9	11	14	9	8	8	5	6	7	7	5	4	6	7	7	2	3	9	7	5	6.2	13.5	
Dir	211	204	234	231	248	260	268	265	179	208	217	235	245	263	233	206	242	275	263	245	251	247	245	241	241.4	267.6	
5 Spd	6	6	3	6	4	7	7	7	10	10	8	10	10	10	10	8	9	12	11	10	6	7	6	6	7.4	11.6	
Dir	227	225	118	222	223	216	183	225	222	215	214	220	229	225	226	239	233	246	250	258	264	242	213	199	227.5	246.3	
6 Spd	10	10	12	17	23	30	36	33	22	21	23	25	23	25	28	30	23	26	20	22	22	34	26	24	23.2	36.5	
Dir	210	216	223	227	237	248	252	243	255	249	240	243	240	239	245	252	248	243	240	249	250	251	257	261	245.2	252.1	
7 Spd	26	25	31	30	30	30	28	23	12	19	19	12	15	15	11	9	6	6	7	5	6	4	7	9	15.1	30.8	
Dir	257	259	252	256	261	266	268	271	203	199	217	251	250	258	245	257	235	237	254	257	219	271	257	275	251.9	251.8	
8 Spd	4	2	4	3	2	4	3	13	23	28	20	23	20	16	17	16	14	16	18	15	17	17	16	17	12.3	27.6	
Dir	229	284	257	191	229	280	315	28	20	13	16	15	18	16	16	28	31	25	25	21	19	22	20	11	16.8	13.5	
9 Spd	16	15	17	16	16	14	14	13	13	13	13	13	14	14	12	12	12	11	13	12	9	7	7	10	12.2	17.4	
Dir	12	14	12	18	17	8	351	349	347	349	351	344	339	353	351	2	353	0	14	23	26	32	45	33	4.4	11.6	
10 Spd	10	6	10	10	7	6	7	8	9	7	5	11	8	7	7	5	1	1	1	1	2	8	7	3	3.9	11.4	
Dir	41	40	14	4	348	334	304	283	284	308	197	256	240	252	272	252	245	251	N	N	31	302	270	265	214	294.0	256.1
11 Spd	10	3	6	8	9	7	5	N	N	N	3	2	2	4	5	4	3	5	N	N	1	2	4	N	1.7	9.6	
Dir	264	205	213	225	228	238	239	N	N	N	271	82	98	25	17	32	6	26	N	N	169	36	315	N	262.9	263.7	
12 Spd	N	5	3	5	N	6	5	3	8	N	5	6	6	8	7	5	7	7	10	9	16	11	11	9	7.0	15.9	
Dir	N	232	232	176	N	215	212	175	232	N	244	230	232	227	233	223	244	220	233	228	238	223	225	226	226.7	237.5	
13 Spd	12	10	14	16	14	14	11	10	8	10	10	9	20	24	22	14	3	5	2	2	1	4	3	3	7.5	24.2	
Dir	229	197	200	193	191	188	183	174	194	186	182	186	228	255	259	265	194	23	68	51	342	31	292	257	214.2	255.4	
14 Spd	7	17	12	12	12	15	14	9	13	14	15	12	12	13	12	13	15	14	15	16	13	12	10	6	12.7	16.8	
Dir	23	27	22	17	14	23	23	13	22	22	23	18	21	21	18	15	22	22	23	22	14	22	19	13	20.4	27.5	
15 Spd	3	8	6	7	8	4	5	7	7	9	8	7	6	5	2	5	10	6	4	6	7	6	4	5	1.9	10.0	
Dir	14	22	46	113	153	138	20	21	24	22	20	22	24	20	9	255	259	259	270	247	257	257	274	269	344.5	259.0	
16 Spd	6	7	6	5	6	2	4	2	4	6	4	4	7	11	9	10	11	13	13	15	17	16	12	15	7.7	16.7	
Dir	273	260	245	240	223	159	232	222	154	191	134	144	191	201	231	223	226	237	232	228	219	236	211	219	221.8	218.9	
17 Spd	21	25	27	26	25	28	19	9	17	3	9	9	6	3	4	1	4	7	7	8	8	9	6	4	7.7	27.9	
Dir	237	236	236	241	237	234	230	229	199	218	236	178	178	230	229	296	347	17	11	11	3	13	9	10	240.5	234.3	
18 Spd	4	5	3	3	3	7	13	15	10	11	7	15	42	34	31	23	17	19	21	20	20	14	19	11	14.2	42.3	
Dir	349	275	357	262	224	231	257	254	190	194	198	261	264	260	234	236	238	250	257	244	246	247	238	247	246.6	263.8	
19 Spd	15	17	15	19	16	24	18	17	13	14	11	9	5	8	4	6	7	11	2	6	6	5	8	6	9.8	23.8	
Dir	245	244	256	243	253	263	255	244	252	252	263	259	258	217	239	225	249	272	253	229	253	300	13	7	254.4	262.6	
20 Spd	6	6	7	4	6	8	7	4	4	5	1	6	3	5	9	7	7	8	8	7	7	9	12	10	5.9	11.5	
Dir	9	26	13	17	24	19	20	31	41	340	14	353	276	13	359	359	347	8	38	36	30	39	48	48	19.6	47.8	
21 Spd	11	13	12	13	17	16	18	20	20	15	17	17	14	14	13	13	14	14	9	8	7	9	6	10	11.4	20.2	
Dir	41	44	41	35	35	49	42	46	48	42	42	44	34	36	33	29	28	29	18	17	22	266	207	260	35.2	45.5	
22 Spd	5	2	2	1	3	3	5	7	5	10	16	16	15	16	16	10	9	13	9	7	10	11	6	11	7.6	16.0	
Dir	306	96	169	164	78	124	160	191	205	217	231	232	227	223	228	231	230	220	246	238	200	214	226	242	222.3	232.0	



Peace Airshed Zone Association

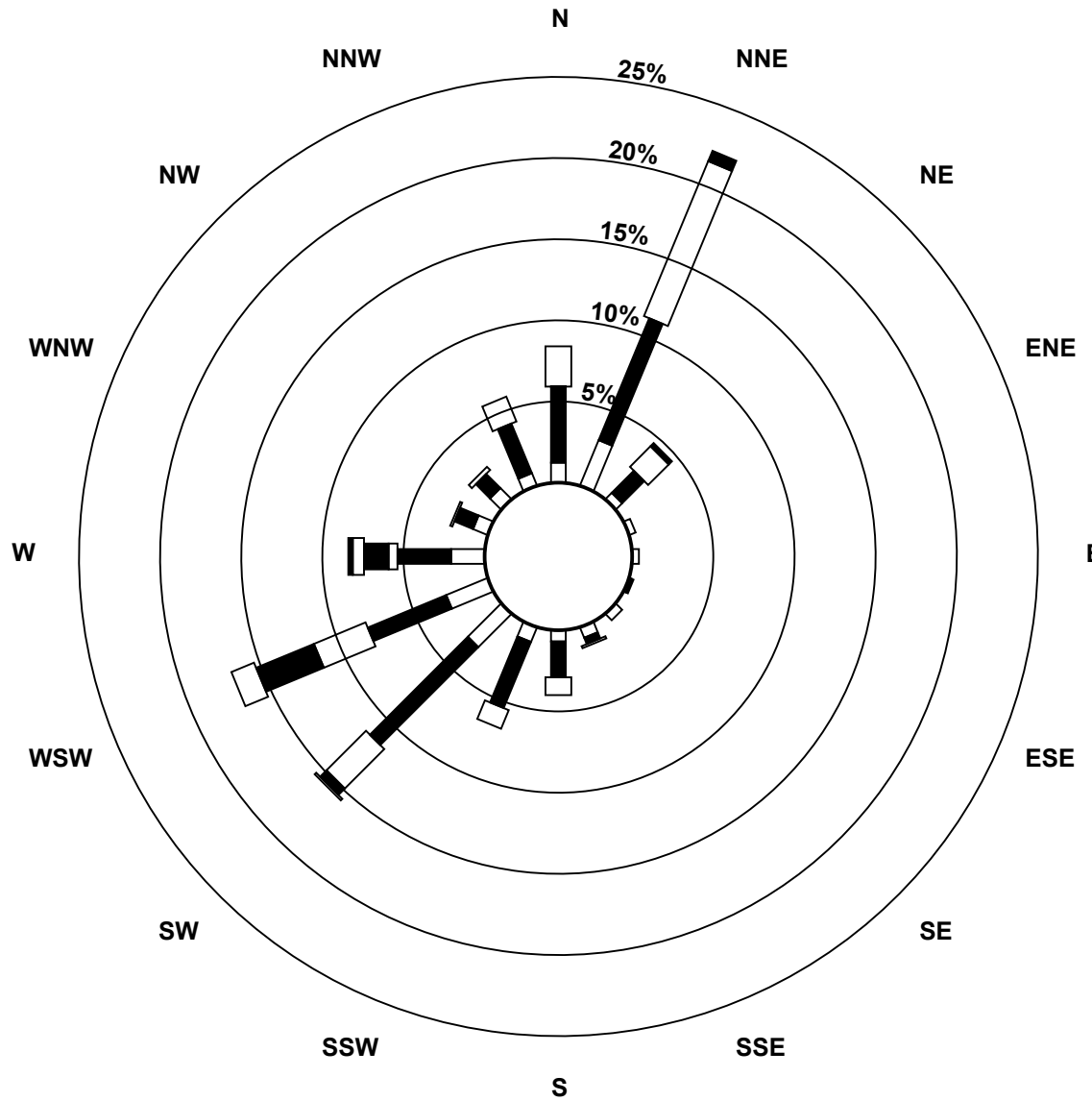
# Hourly Averages

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

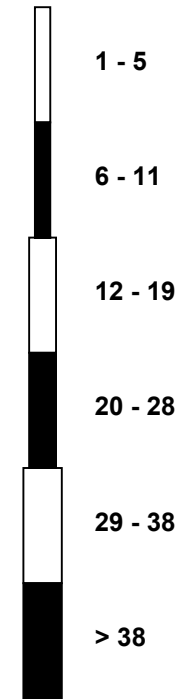
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
23 Spd	10	4	7	6	7	10	10	5	9	9	10	9	9	7	6	6	4	3	5	9	12	13	13	12	2.7	13.3	
Dir	214	216	211	197	221	249	210	226	211	184	194	194	221	227	249	281	309	332	10	10	14	13	14	10	247.0	13.8	
24 Spd	11	12	14	14	11	15	14	13	12	13	9	9	11	13	14	15	15	15	17	14	15	18	17	10	13.3	18.1	
Dir	6	2	9	15	16	25	22	28	23	17	18	16	16	14	8	11	19	10	20	19	14	15	27	25	16.5	15.1	
25 Spd	12	9	11	7	8	10	9	9	8	11	11	9	10	8	9	11	13	14	12	12	11	9	8	8	9.7	13.5	
Dir	19	14	11	355	348	345	353	349	330	339	352	355	355	6	345	348	346	345	353	338	342	329	321	319	348.7	345.0	
26 Spd	8	8	7	6	4	2	5	4	4	5	4	5	3	2	9	10	9	6	7	6	2	3	1	5	3.7	9.7	
Dir	350	342	343	25	28	21	250	260	246	274	271	244	229	257	259	273	275	288	280	294	334	27	292	271	294.0	273.2	
27 Spd	5	2	1	0	1	1	2	4	4	2	3	5	6	8	11	8	4	3	4	4	1	3	5	7	2.4	10.7	
Dir	304	351	239	281	325	2	345	28	347	157	21	29	23	16	13	25	76	26	14	352	354	264	235	243	359.9	12.6	
28 Spd	9	9	4	4	3	4	3	2	2	5	4	7	10	12	15	15	14	14	13	13	14	12	14	13	6.7	15.2	
Dir	275	288	284	193	184	225	250	239	319	39	18	19	23	22	25	25	24	18	17	22	20	18	22	14	11.7	25.4	
29 Spd	14	13	14	13	14	11	10	8	7	7	7	8	7	8	9	13	15	14	12	12	5	7	13	12	9.7	15.0	
Dir	19	20	15	19	28	19	27	24	360	12	11	15	6	11	357	349	351	359	337	329	290	304	326	323	0.1	350.7	
30 Spd	13	7	6	8	10	11	11	6	9	11	8	11	14	11	13	9	8	10	11	7	6	7	10	11	8.9	13.5	
Dir	290	288	284	305	329	318	315	357	14	2	357	338	328	321	320	335	343	326	322	318	339	336	342	344	328.5	328.3	
31 Spd	10	11	13	11	9	10	8	8	8	6	8	8	10	8	8	6	7	9	9	9	8	7	6	6	8.1	13.2	
Dir	346	23	38	47	35	41	32	30	34	35	46	33	24	19	29	30	9	9	10	12	20	10	2	360	24.1	37.8	
Spd	4.8	3.5	3.5	3.2	3.8	5.1	5.7	4.1	2.6	2.1	1.8	2.8	4.6	4.5	4.8	4.0	4.3	4.8	5.2	4.9	3.9	4.4	3.9	4.5	Diurnal Average		
Dir	284.4	289.7	285.2	266.1	268.9	272.7	271.7	279.2	274.2	282.7	262.1	280.6	275.6	279.8	282.8	293.8	293.5	301.9	302.7	301.7	298.0	290.8	295.9	291.9	Diurnal Maximum		
Spd	26.4	25.2	30.8	29.8	30.5	30.1	39.0	32.5	23.5	27.6	22.8	25.2	42.3	34.2	31.0	29.6	28.3	29.1	32.9	34.3	30.8	34.1	27.8	24.0	Diurnal Maximum		
Dir	257.4	235.9	251.8	255.6	260.9	265.7	266.1	242.9	256.0	13.5	240.2	243.3	263.8	259.5	234.2	251.7	254.9	256.7	257.2	258.4	253.1	251.5	265.3	261.4	Diurnal Maximum		
Maximum Speed Value: 42 km/h on Jan 18 13:00		Minimum Speed Value: 0 km/h on Jan 27 04:00										Hours in Service: 744															
Maximum Daily Speed Average: 23.2 km/h on Jan 6		Minimum Daily Speed Average: 1.7 km/h on Jan 27										Hours of Data: 734															
Maximum Diurnal Speed Average: 5.7 km/h at hour 7		Minimum Diurnal Speed Average: 1.8 km/h at hour 11										Hours of Missing Data: 10															
Monthly Average Velocity: 3.97 km/h 285.43 deg		Speed Percentiles: P <sub>1</sub> = 1.0 P <sub>10</sub> = 3.6 Q <sub>1</sub> = 6.1 Median = 9.3 Q <sub>3</sub> = 13.5 P <sub>90</sub> = 18.6 P <sub>99</sub> = 32.0										Percent Operational Time: 98.7															
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	82	86	5	0	0	195																				
NorthEast	14	38	38	2	0	0	92																				
East	6	0	0	0	0	0	6																				
SouthEast	7	3	1	0	0	0	11																				
South	11	33	15	0	0	0	59																				
SouthWest	28	99	46	19	3	0	195																				
West	27	49	22	23	16	2	139																				
NorthWest	11	18	8	0	0	0	37																				
Total	126	322	216	49	19	2	734																				

**Wind Rose**

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



**Wind Speed Classes (km/h)**



# Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

## Smoky Heights - January 2018

Maximum Speed: 43 km/h on Jan 18 13:00	Maximum Daily Speed Average: 23.6 km/h on Jan 6	Hours in Service: 744
Minimum Speed: 1 km/h on Jan 13 21:00	Minimum Daily Speed Average: 4.5 km/h on Jan 27	Hours of Data: 734
Maximum Diurnal Speed Average: 12.0 km/h at hour 7	Minimum Diurnal Speed Average: 9.9 km/h at hour 21	Hours of Missing Data: 10
Monthly Average Speed: 10.89 km/h	Percentiles: P <sub>1</sub> = 2.2 P <sub>10</sub> = 4.3 Q <sub>1</sub> = 6.5 Median = 9.6 Q <sub>3</sub> = 13.6 P <sub>90</sub> = 18.6 P <sub>99</sub> = 32.0	Percent Operational Time: 98.7

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-Jan	11	10	11	8	9	9	14	12	11	12	13	15	16	15	14	13	28	29	33	34	31	26	28	22	17.7	34.3
2-Jan	20	20	21	18	21	29	39	30	24	11	9	12	17	16	20	18	12	10	10	9	3	15	14	8	16.9	39.0
3-Jan	15	10	9	10	12	11	11	6	8	13	12	10	7	9	13	10	12	14	16	15	9	8	7	11	10.7	16.1
4-Jan	6	7	10	5	9	11	14	10	8	8	5	6	7	7	5	4	6	7	7	3	4	9	7	5	7.2	13.6
5-Jan	6	6	4	6	4	7	7	7	11	10	8	10	11	10	11	8	9	12	12	10	7	7	6	7	8.1	11.7
6-Jan	10	10	12	17	23	30	37	33	22	21	23	25	23	25	28	30	23	26	20	22	22	34	26	24	23.6	36.5
7-Jan	27	25	31	30	31	30	28	23	13	19	19	13	15	15	11	10	6	6	8	6	6	4	7	9	16.2	30.9
8-Jan	6	4	4	3	2	5	4	13	23	28	20	23	20	16	17	16	14	16	18	15	17	17	16	17	14.0	27.9
9-Jan	16	15	17	16	16	14	14	13	14	13	13	13	14	14	13	12	12	11	13	12	9	7	7	10	12.8	17.5
10-Jan	10	6	11	10	7	6	7	8	9	7	11	11	9	7	8	7	6	13	N	2	3	8	8	5	7.7	13.3
11-Jan	10	6	7	8	9	7	5	N	N	N	6	5	3	4	5	5	3	6	N	N	5	3	5	N	5.7	10.1
12-Jan	N	5	4	6	N	6	5	9	8	N	5	6	6	8	7	5	8	8	10	9	16	11	11	10	7.7	15.9
13-Jan	12	10	14	16	14	14	11	10	8	10	10	10	22	24	22	14	3	6	4	3	1	4	3	3	10.4	24.3
14-Jan	8	17	12	12	13	15	14	9	13	14	15	12	12	13	12	13	15	14	15	16	13	12	11	6	12.7	16.9
15-Jan	4	8	6	8	8	5	5	7	7	9	8	7	6	5	3	6	10	7	4	6	7	6	4	5	6.3	10.0
16-Jan	6	7	6	6	6	3	4	3	4	6	4	5	7	11	10	11	11	13	13	15	17	16	13	16	8.8	16.9
17-Jan	21	25	27	26	25	28	19	10	17	7	9	9	6	3	4	2	4	7	7	8	8	9	7	4	12.2	27.9
18-Jan	5	6	4	6	7	9	13	18	12	12	8	16	43	34	32	23	17	19	21	20	20	14	19	12	16.1	42.5
19-Jan	15	17	15	19	16	24	18	17	13	14	11	9	5	8	5	7	7	11	5	6	6	5	8	6	11.2	23.8
20-Jan	6	6	7	4	6	8	7	5	4	5	4	6	4	6	9	7	7	8	8	7	7	9	12	10	6.8	11.7
21-Jan	11	13	13	13	17	16	18	20	20	16	17	17	14	14	13	13	14	14	9	8	7	10	7	11	13.5	20.3
22-Jan	6	3	3	3	4	4	5	7	5	10	16	16	15	16	16	10	9	13	9	7	10	12	7	11	9.1	16.1
23-Jan	11	5	7	7	7	10	11	5	9	9	11	9	9	7	6	6	4	3	5	9	12	13	13	12	8.3	13.3
24-Jan	11	12	14	14	11	15	14	13	12	13	9	9	11	13	14	15	15	15	17	15	15	18	17	10	13.5	18.2
25-Jan	12	10	11	7	8	10	9	9	8	11	11	10	11	8	9	11	13	14	12	12	11	9	8	8	10.1	13.6
26-Jan	8	8	7	6	4	2	5	4	4	6	5	5	4	3	9	10	9	6	7	6	4	4	3	7	5.6	9.7
27-Jan	5	4	2	2	2	2	4	4	4	4	4	5	6	8	11	8	4	3	4	4	2	4	5	7	4.5	10.7
28-Jan	9	9	5	5	4	5	3	2	3	5	4	7	10	12	15	15	14	14	13	13	14	12	14	14	9.2	15.2
29-Jan	14	13	14	13	14	11	10	8	7	7	8	7	8	10	13	15	14	13	12	6	9	14	12	12	10.8	15.3
30-Jan	13	7	7	8	10	11	11	7	9	11	8	11	14	11	13	9	8	11	11	8	6	7	10	11	9.7	13.7
31-Jan	10	12	13	11	10	10	8	8	8	6	8	8	10	8	8	7	7	9	9	9	8	7	6	6	8.5	13.4
	10.8	10.2	10.6	10.4	10.9	11.9	12.0	11.0	10.6	10.8	10.2	10.6	11.6	11.6	12.0	10.8	10.6	11.6	11.5	10.7	9.9	10.7	10.3	10.0	Diurnal Average	
	26.6	25.2	30.9	29.9	30.6	30.1	39.0	32.5	23.5	27.9	22.9	25.2	42.5	34.3	32.1	29.7	28.4	29.2	33.0	34.3	30.8	34.2	27.8	24.1	Diurnal Maximum	

N - Not Valid  
 All monthly, daily, and diurnal averages have been calculated using scalar methods



# Hourly Standard Deviations

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

Maximum Value: 88.2 deg on Jan 27 04:00																	Hours in Service: 744									
Minimum Value: 1.8 deg on Jan 13 15:00																	Hours of Data: 734									
Percentiles: P <sub>1</sub> = 2.5 P <sub>10</sub> = 4.3 Q <sub>1</sub> = 6.1 Median = 9.5 Q <sub>3</sub> = 17.6 P <sub>90</sub> = 40.1 P <sub>99</sub> = 81.9																	Hours of Missing Data: 10									
																	Hours of Calibration: 0									
																	Percent Operational Time: 98.7									
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-Jan	21	10	9	8	9	9	15	11	10	10	5	8	10	8	29	40	3	3	3	3	2	3	4	5	40.2	
2-Jan	6	3	3	5	2	4	2	5	3	69	43	5	6	6	7	4	6	4	20	21	53	5	6	33	69.4	
3-Jan	37	73	54	15	16	62	26	26	20	21	9	12	21	18	20	29	7	17	5	5	63	13	16	10	72.8	
4-Jan	27	11	14	55	15	14	8	37	13	11	8	19	7	8	21	12	15	8	10	88	69	9	12	10	87.5	
5-Jan	16	20	53	9	13	20	11	18	13	7	15	8	6	7	12	12	7	7	8	10	13	13	15	30	52.6	
6-Jan	10	15	5	5	6	5	4	3	7	6	7	3	5	3	6	5	4	3	6	4	4	4	3	6	15.2	
7-Jan	5	4	3	3	4	2	4	4	28	3	12	7	4	3	7	9	10	14	19	49	32	23	13	5	49.0	
8-Jan	49	61	19	25	40	12	42	7	5	8	9	7	7	7	7	6	5	4	6	6	5	6	5	6	5	60.6
9-Jan	5	6	5	6	8	11	7	6	9	9	8	9	6	8	10	8	8	8	6	5	5	12	8	10	12.1	
10-Jan	6	7	10	9	8	9	7	7	4	11	55	4	13	15	18	7	19	82	N	78	30	16	30	75	82.2	
11-Jan	20	57	20	8	14	4	15	N	N	N	49	50	66	35	9	22	30	22	N	N	72	32	34	N	71.5	
12-Jan	N	40	25	25	N	6	20	45	9	N	7	11	10	4	9	10	29	12	3	7	4	5	7	11	44.9	
13-Jan	13	16	10	11	7	4	10	9	14	9	11	6	26	4	2	29	46	52	72	60	75	45	38	12	75.0	
14-Jan	30	5	4	6	6	4	5	6	4	4	4	5	5	5	4	7	5	5	4	5	5	9	8	13	30.5	
15-Jan	30	5	29	31	12	41	31	13	6	7	5	8	7	7	42	59	3	15	10	11	9	11	17	11	58.8	
16-Jan	11	10	11	7	6	41	16	41	33	14	35	37	13	17	15	12	11	11	12	6	10	7	20	20	41.0	
17-Jan	3	2	3	3	4	3	7	22	8	85	10	11	15	29	13	29	17	9	10	9	12	11	35	24	85.3	
18-Jan	46	36	53	57	62	34	11	40	31	12	27	17	5	6	15	5	4	4	4	5	7	8	4	13	61.7	
19-Jan	6	6	4	4	10	3	2	5	13	5	7	7	16	12	49	16	11	8	77	38	11	27	15	10	77.4	
20-Jan	19	12	12	43	18	6	8	21	31	20	88	21	43	19	9	10	8	11	12	10	6	6	10	6	88.2	
21-Jan	4	7	5	5	6	8	6	4	5	4	4	5	6	8	5	4	4	4	7	7	9	34	50	28	50.2	
22-Jan	29	46	39	72	23	48	20	21	20	9	6	7	8	8	7	7	11	10	13	14	13	12	43	20	72.3	
23-Jan	13	36	14	23	10	12	12	27	11	20	8	9	8	18	26	8	9	20	14	5	4	5	5	6	36.0	
24-Jan	7	6	5	5	6	3	5	14	6	6	7	9	4	5	6	6	7	6	5	7	4	5	8	10	14.3	
25-Jan	8	9	7	10	8	6	11	10	8	9	10	9	10	11	19	8	6	7	7	7	6	9	7	8	18.7	
26-Jan	10	7	7	21	17	50	23	17	17	17	41	13	43	57	10	4	5	13	11	16	71	42	84	37	84.2	
27-Jan	26	70	70	88	63	67	43	16	19	77	54	8	7	8	7	8	29	10	18	59	83	39	9	10	88.2	
28-Jan	11	10	55	33	48	24	31	57	58	12	11	6	6	5	5	4	4	5	5	5	6	6	5	5	57.5	
29-Jan	4	5	7	6	6	6	8	7	9	8	14	6	11	9	18	10	12	17	12	12	46	39	14	11	45.9	
30-Jan	10	15	22	13	11	7	13	18	10	15	11	9	9	8	8	12	8	12	6	9	14	10	8	7	21.9	
31-Jan	9	22	12	6	6	5	7	6	6	8	7	9	6	6	10	13	10	5	5	5	8	7	10	11	21.8	
49.2	72.8	70.3	88.2	63.4	67.0	42.6	57.5	57.5	85.3	88.2	50.5	65.9	56.8	48.7	58.8	46.1	82.2	77.4	87.5	82.6	45.3	84.2	75.0			
N - Not Valid																										

PAZA

Beaverlodge Station

Monthly Summary Tables, Graphs and  
Roses

# Hourly Averages

## Sulphur Dioxide (SO<sub>2</sub>) - ppb Beaverlodge - January 2018

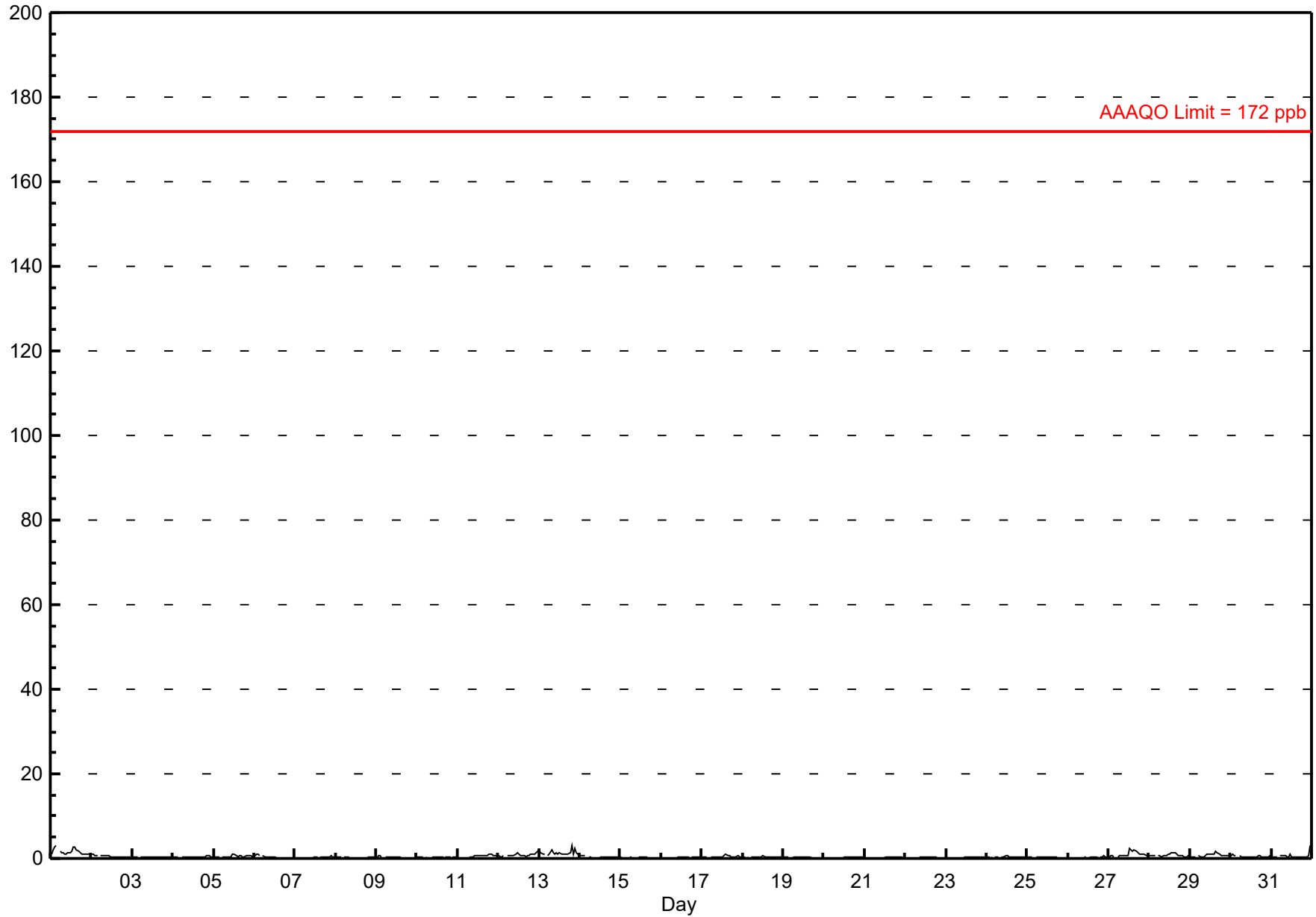
Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 3.1 ppb on Jan 1 04:00	Maximum Daily Average: 1.6 ppb on Jan 1		Hours of Data:	711
Minimum Value: 0 ppb on Jan 8 18:00	Minimum Daily Average: 0.2 ppb on Jan 15		Hours of Missing Data:	33
Maximum Diurnal Average: 0.5 ppb at hour 15	Minimum Diurnal Average: 0.4 ppb at hour 9		Hours of Calibration:	33
Monthly Average: 0.44 ppb	Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.2 Median = 0.3 Q <sub>3</sub> = 0.5 P <sub>90</sub> = 1.0 P <sub>99</sub> = 2.5		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jan	1	2	3	3	A	2	1	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1.6	3.1
2-Jan	1	1	1	1	A	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.0
3-Jan	0	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
4-Jan	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0.4	0.7
5-Jan	0	0	0	0	A	0	0	0	0	0	1	1	1	1	0	1	1	0	0	1	1	1	1	0	0.5	1.1
6-Jan	1	1	1	1	A	1	0	0	0	0	0	0	0	C	C	0	0	0	0	0	0	0	0	0	0.3	1.0
7-Jan	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.2	0.5
8-Jan	0	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-Jan	0	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
10-Jan	0	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
11-Jan	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.5	1.1
12-Jan	1	0	0	1	A	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	2	0.8	1.5
13-Jan	2	1	1	1	A	1	1	2	1	1	1	1	1	1	1	1	1	1	1	3	1	3	1	1	1.3	3.0
14-Jan	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8
15-Jan	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2
16-Jan	0	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
17-Jan	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	1	0	0	0.4	1.0
18-Jan	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
19-Jan	0	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
20-Jan	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
21-Jan	0	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
22-Jan	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
23-Jan	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
24-Jan	0	0	0	0	A	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
25-Jan	0	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-Jan	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0.2	0.5
27-Jan	0	1	1	0	A	1	1	1	1	1	1	1	2	2	2	2	2	1	1	1	1	1	1	1	1.0	2.3
28-Jan	1	1	1	1	A	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	0.7	1.3
29-Jan	0	0	0	0	A	1	0	0	0	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	0.8	1.8
30-Jan	1	1	1	1	A	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0.5	0.8
31-Jan	0	0	0	0	A	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	3	0.6	2.9
	0.4	0.4	0.5	0.4	--	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.4	0.5	0.4	0.5	Diurnal Average	
	1.9	2.0	2.7	3.1	--	1.8	1.4	1.9	1.4	1.2	1.4	1.5	2.3	2.6	2.8	2.1	1.9	1.5	1.4	3.0	1.2	2.5	1.5	2.9	Diurnal Maximum	

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

### Hourly Averages

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Beaverlodge - January 2018



# Hourly Maximums

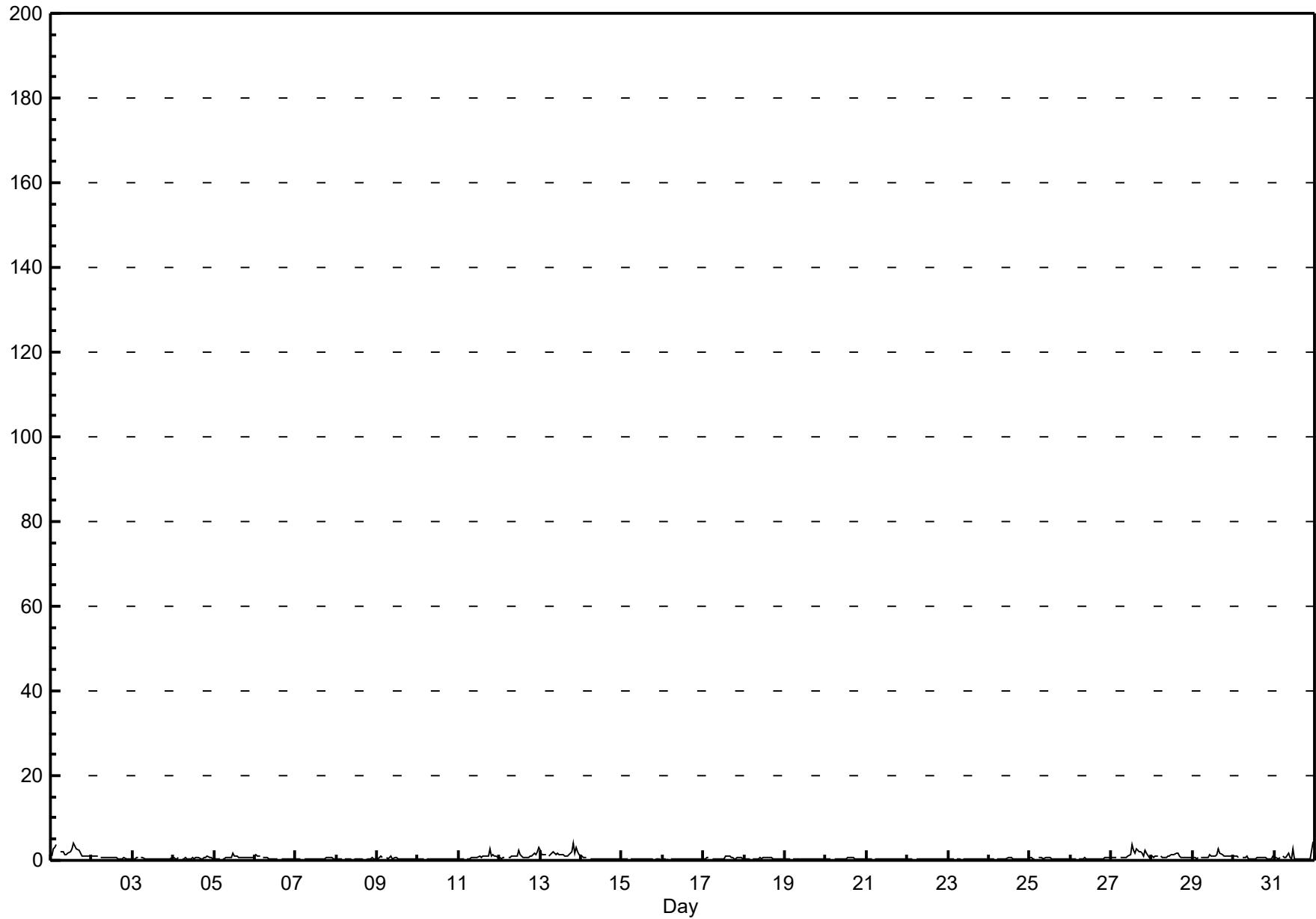
Sulphur Dioxide (SO<sub>2</sub>) - ppb

Beaverlodge - January 2018

Maximum Value: 4.3 ppb on Feb 1 00:00 Minimum Value: 0 ppb on Jan 15 20:00 Maximum Diurnal Average: 0.8 ppb at hour 14 Monthly Average: 0.62 ppb		Maximum Daily Average: 2.0 ppb on Jan 1 Minimum Daily Average: 0.2 ppb on Jan 15 Minimum Diurnal Average: 0.5 ppb at hour 7 Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.2 Q <sub>1</sub> = 0.3 Median = 0.4 Q <sub>3</sub> = 0.7 P <sub>90</sub> = 1.2 P <sub>99</sub> = 2.8		Hours in Service: 744 Hours of Data: 711 Hours of Missing Data: 33 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-Jan	1	3	3	4	A	2	2	2	1	1	2	2	3	4	3	3	2	2	1	1	1	1	1	1	2.0	4.1																							
2-Jan	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	0	0	0	0	0.6	1.2																							
3-Jan	0	0	1	1	A	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	0.7																							
4-Jan	1	0	0	1	A	0	0	1	0	0	1	1	0	1	1	1	0	0	1	1	1	1	1	0	0.6	1.1																							
5-Jan	0	0	0	0	A	0	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.8																							
6-Jan	1	1	1	1	A	1	1	1	0	0	0	0	0	0	C	C	0	0	0	0	0	0	0	0	0.5	1.2																							
7-Jan	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0.3	0.7																							
8-Jan	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.3	0.6																							
9-Jan	0	1	1	1	A	1	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.2																							
10-Jan	0	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																							
11-Jan	0	0	0	0	A	0	0	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	0.8	2.7																							
12-Jan	1	1	1	1	A	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	2	1	2	3	1.1	2.9																							
13-Jan	2	2	1	1	A	1	1	2	2	2	2	1	1	1	1	1	1	2	4	2	3	2	1	1	1.7	3.9																							
14-Jan	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.9																							
15-Jan	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3																							
16-Jan	0	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																							
17-Jan	0	0	1	1	A	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	1	1	1	0	0.5	1.1																							
18-Jan	0	0	0	0	A	0	0	0	0	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0.4	0.7																							
19-Jan	0	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																							
20-Jan	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0.3	0.6																							
21-Jan	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.3	0.5																							
22-Jan	0	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																							
23-Jan	0	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																							
24-Jan	0	0	0	0	A	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0.4	0.8																							
25-Jan	1	1	0	0	A	1	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7																							
26-Jan	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.4	0.7																							
27-Jan	1	1	1	1	A	1	1	1	1	1	1	1	4	2	2	3	2	2	2	1	3	2	1	1	1.4	3.7																							
28-Jan	1	1	1	1	A	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	0.9	1.7																							
29-Jan	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	3	2	1	1	1	1	1	1	1	1.0	2.7																							
30-Jan	1	1	1	1	A	1	1	1	1	0	0	0	0	0	1	1	1	1	1	1	0	0	0	1	0.6	1.2																							
31-Jan	1	1	0	1	A	1	1	1	2	1	0	3	1	0	0	0	0	0	0	0	0	0	2	4	0.9	4.3																							
																								0.6	0.6	0.6	0.6	--	0.5	0.5	0.6	0.6	0.5	0.6	0.8	0.8	0.8	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.7	Diurnal Average		
																								2.5	2.8	3.0	3.7	--	2.2	2.0	2.2	1.9	1.5	1.6	2.6	3.7	4.1	3.4	2.7	2.2	2.0	2.7	3.9	2.5	3.1	2.4	4.3	Diurnal Maximum	
C - Calibration																								A - Automated Daily Zero Span																									

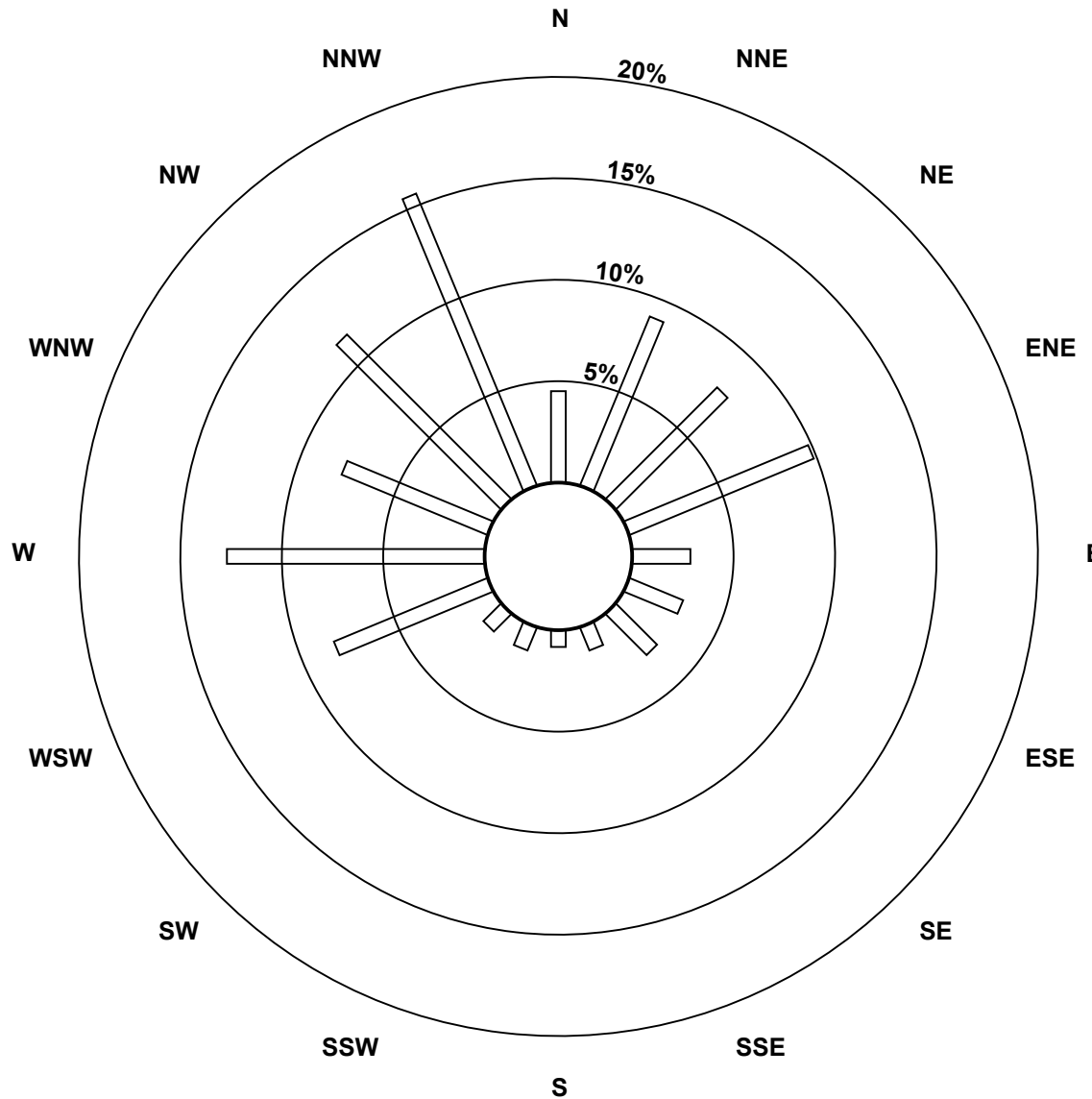
### Hourly Maximums

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Beaverlodge - January 2018

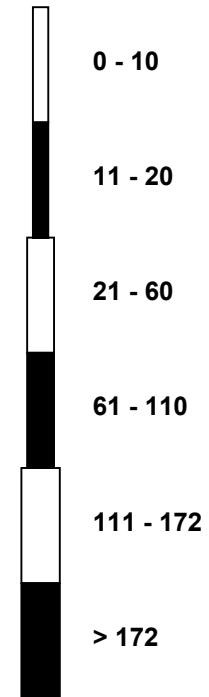


**Pollutant Rose**

**Sulphur Dioxide (SO<sub>2</sub>) - ppb**  
**Beaverlodge - January 2018**

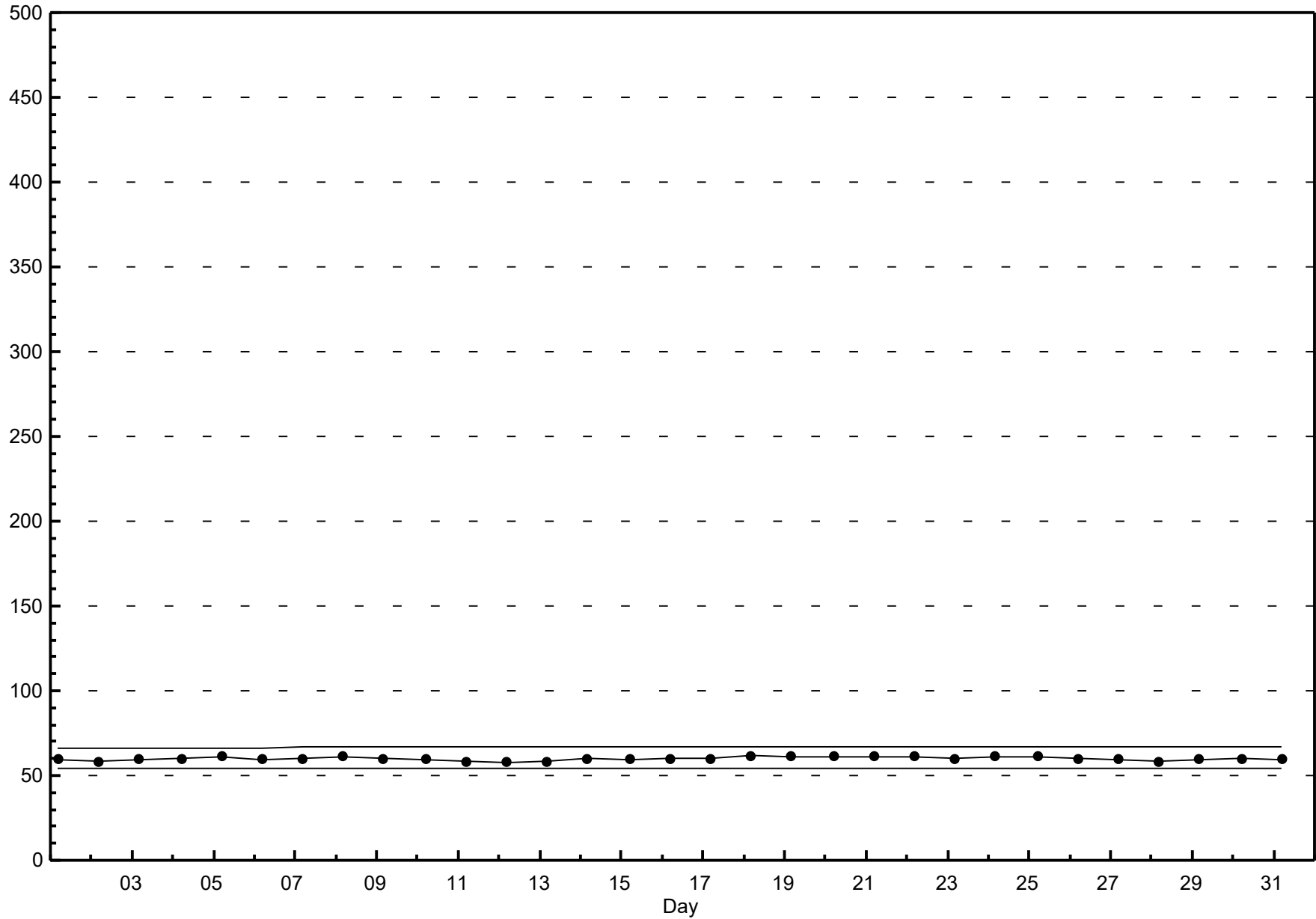


**Pollutant Classes (ppb)**



**Span Responses**

**Sulphur Dioxide (SO<sub>2</sub>)  
Beaverlodge - January 2018**





# Hourly Averages

## Nitrogen Dioxide (NO<sub>2</sub>) - ppb Beaverlodge - January 2018

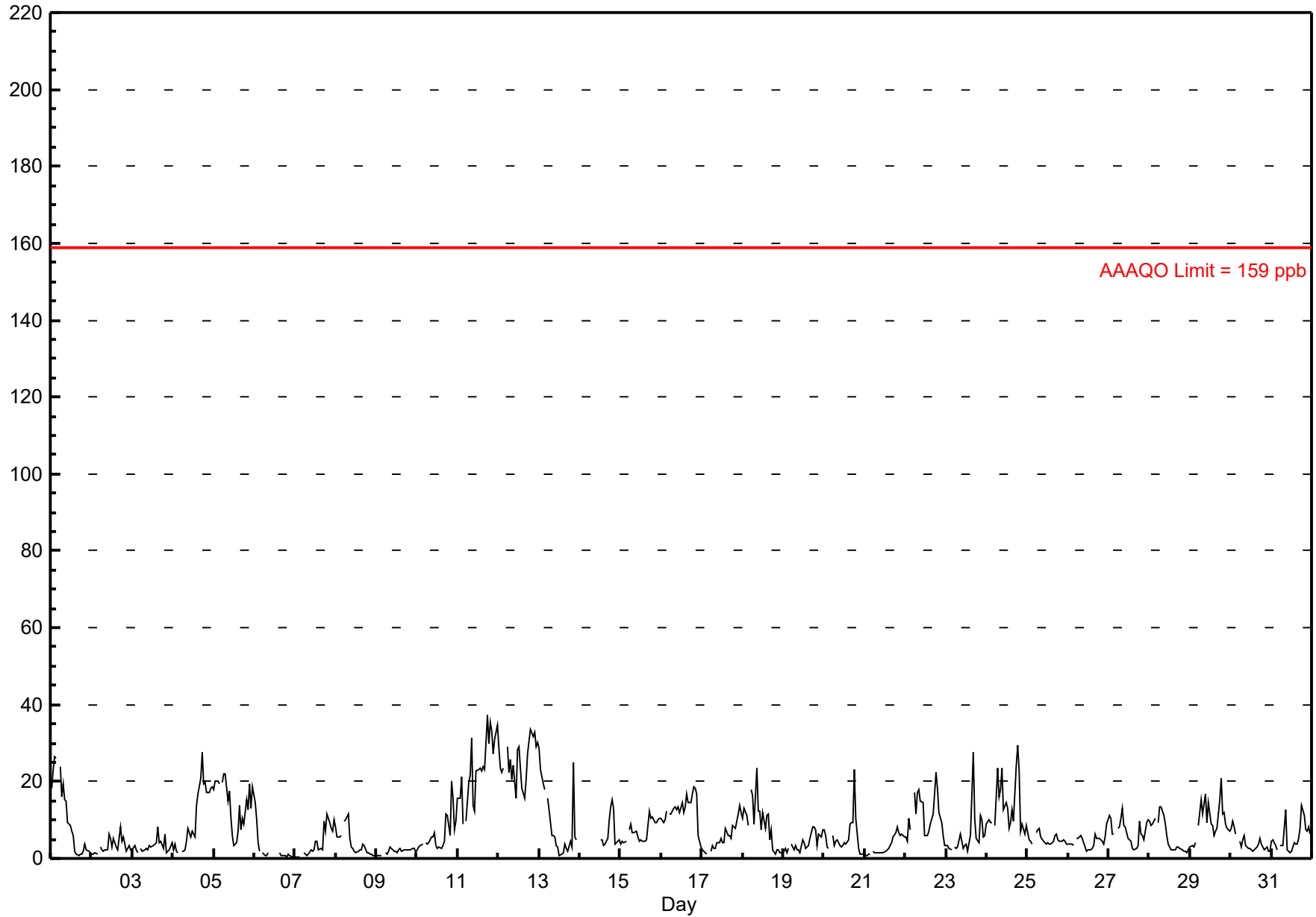
Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 37.3 ppb on Jan 11 18:00	Maximum Daily Average: 25.5 ppb on Jan 12
Minimum Value: 0 ppb on Jan 7 02:00	Hours of Data: 695
Maximum Diurnal Average: 10.7 ppb at hour 19	Hours of Missing Data: 49
Monthly Average: 7.93 ppb	Hours of Calibration: 36
Minimum Daily Average: 1.9 ppb on Jan 9	Percent Operational Time: 98.3
Minimum Diurnal Average: 5.6 ppb at hour 14	
Percentiles: P <sub>1</sub> = 0.6 P <sub>10</sub> = 1.6 Q <sub>1</sub> = 2.7 Median = 5.4 Q <sub>3</sub> = 10.5 P <sub>90</sub> = 18.5 P <sub>99</sub> = 31.0	

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-Jan	18	23	26	26	A	24	16	20	15	15	9	8	7	6	2	1	1	1	1	2	4	2	2	2	10.1	26.5
2-Jan	1	1	2	1	A	3	2	2	2	2	6	5	3	5	3	2	5	8	5	6	2	3	3	2	3.2	8.0
3-Jan	2	3	2	1	A	2	2	2	3	2	3	3	3	4	4	8	4	4	2	6	2	2	2	4	3.2	8.1
4-Jan	2	4	2	1	A	2	2	2	4	8	6	7	6	5	14	17	21	28	19	20	17	17	18	19	10.5	27.6
5-Jan	18	20	20	19	A	20	22	22	15	17	11	6	3	4	7	14	7	11	9	15	13	19	13	18	14.1	22.1
6-Jan	14	10	4	2	A	1	1	1	2	C	C	C	C	C	C	1	1	1	1	1	1	1	0	0	--	14.5
7-Jan	0	0	0	0	A	2	1	1	1	2	2	2	4	4	2	2	2	10	7	11	9	8	7	10	3.9	11.5
8-Jan	8	6	5	6	A	10	10	12	5	3	3	2	2	2	2	2	4	3	2	1	1	1	1	1	3.9	11.6
9-Jan	1	1	1	1	A	2	1	2	3	3	2	2	2	2	2	2	2	2	2	2	2	3	3	2	1.9	2.8
10-Jan	2	3	4	4	A	4	4	4	6	5	7	3	2	3	3	3	5	11	11	6	20	16	8	10	6.2	20.1
11-Jan	16	16	21	9	A	10	20	22	31	14	12	23	23	23	24	23	37	30	36	33	27	31	35	23.4	37.3	
12-Jan	29	24	22	23	A	29	22	26	21	24	16	28	29	24	18	16	21	27	31	34	32	33	29	30	25.5	33.7
13-Jan	29	23	19	18	A	16	13	6	6	6	3	3	1	1	1	4	3	2	4	3	25	6	5	N	8.9	28.7
14-Jan	N	N	N	N	N	N	N	N	N	N	N	N	5	5	3	4	5	10	14	15	13	4	5	5	--	15.3
15-Jan	4	4	4	5	A	7	9	7	7	7	5	5	5	4	4	5	8	12	10	11	9	9	10	10	7.1	12.1
16-Jan	10	9	10	12	A	12	11	13	13	13	14	12	14	12	13	17	15	15	17	19	18	17	6	3	12.8	18.8
17-Jan	2	2	1	1	A	2	3	3	2	4	4	5	4	4	8	6	6	5	9	8	8	11	14	12	5.5	13.8
18-Jan	10	13	11	8	A	18	16	9	24	12	12	8	12	8	11	11	5	7	2	1	2	2	1	1	9.0	23.6
19-Jan	2	3	2	3	A	4	2	3	2	2	1	5	4	3	3	3	5	8	8	7	3	6	6	7	4.1	8.1
20-Jan	8	6	3	3	A	6	3	4	5	3	3	3	4	4	5	9	9	9	23	10	3	1	1	1	5.5	23.0
21-Jan	1	1	1	1	A	2	2	1	2	1	1	1	2	2	3	3	4	5	7	8	7	6	6	5	3.2	8.4
22-Jan	5	4	10	7	A	17	11	17	18	15	15	6	6	6	7	9	12	17	22	18	12	9	6	3	11.0	22.4
23-Jan	3	3	3	2	A	3	2	3	6	5	3	3	4	2	6	16	28	10	5	4	11	10	5	6	6.3	27.6
24-Jan	9	10	9	9	A	8	24	16	18	24	13	15	13	8	9	13	10	24	29	23	7	9	6	8	13.6	29.3
25-Jan	7	5	4	4	A	7	8	8	6	4	4	4	4	4	4	5	6	6	5	5	5	5	4	4	5.0	7.8
26-Jan	4	4	4	3	A	5	5	6	5	4	3	2	2	2	3	4	6	5	5	5	4	4	6	9	4.4	8.9
27-Jan	11	10	6	6	A	8	8	10	13	9	8	5	5	4	3	2	2	3	10	6	6	5	9	10	7.0	13.2
28-Jan	10	9	9	11	A	9	13	13	11	9	6	4	3	2	2	2	3	3	2	2	2	2	2	2	5.7	13.5
29-Jan	3	3	3	4	A	9	15	12	14	17	9	15	9	9	6	7	8	15	21	12	12	9	8	7	9.8	20.8
30-Jan	8	10	8	7	A	5	3	5	6	3	3	2	2	2	2	3	4	5	4	3	2	3	2	2	4.0	9.6
31-Jan	5	5	3	2	A	3	3	3	13	2	2	2	2	4	4	4	5	8	14	11	8	7	8	6	5.4	13.7
	8.1	7.8	7.4	6.7	--	8.3	8.6	8.5	9.3	8.2	6.5	6.5	6.2	5.6	5.9	7.1	7.7	10.2	10.7	10.1	9.4	8.3	7.3	7.9		Diurnal Average
	28.7	23.5	26.5	26.2	--	29.2	23.5	25.9	31.5	24.3	15.8	28.4	29.0	23.6	22.9	23.7	27.6	37.3	30.6	35.6	33.2	32.9	30.8	34.8		Diurnal Maximum

C - Calibration      N - Not Valid      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb      24-hr 106 ppb

### Hourly Averages

Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
Beaverlodge - January 2018



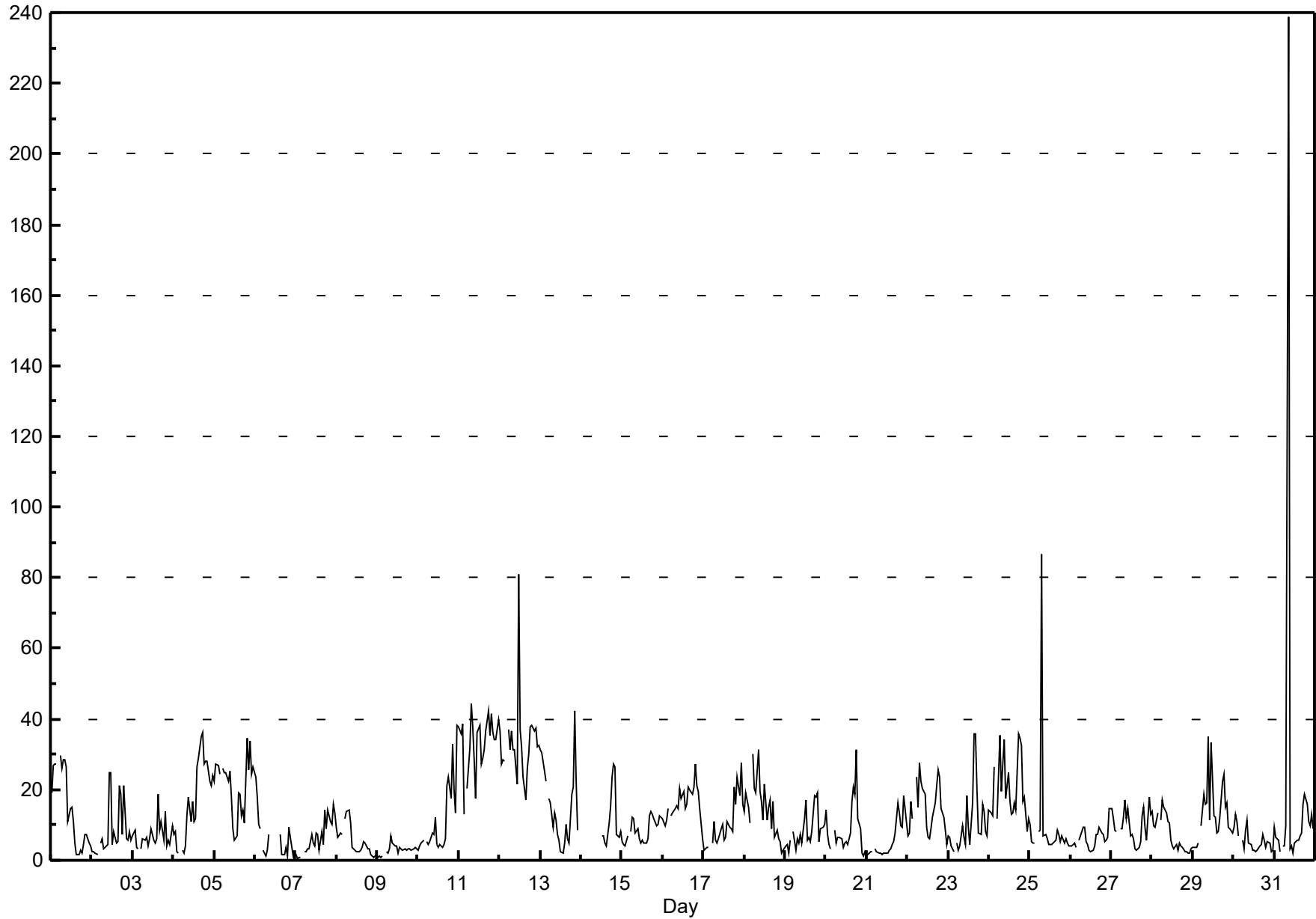
# Hourly Maximums

## Nitrogen Dioxide (NO<sub>2</sub>) - ppb Beaverlodge - January 2018

Maximum Value: 238.6 ppb on Jan 31 09:00		Maximum Daily Average: 33.5 ppb on Jan 12		Hours in Service: 744																							
Minimum Value: 1 ppb on Jan 7 02:00		Minimum Daily Average: 3.0 ppb on Jan 9		Hours of Data: 695																							
Maximum Diurnal Average: 21.2 ppb at hour 9		Minimum Diurnal Average: 8.0 ppb at hour 14		Hours of Missing Data: 49																							
Monthly Average: 12.41 ppb		Percentiles: P <sub>1</sub> = 1.1 P <sub>10</sub> = 2.8 Q <sub>1</sub> = 4.6 Median = 8.4 Q <sub>3</sub> = 16.8 P <sub>90</sub> = 27.4 P <sub>99</sub> = 41.5		Hours of Calibration: 36																							
				Percent Operational Time: 98.3																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jan	19	27	27	27	A	30	26	28	28	26	11	15	15	11	5	1	1	3	2	4	7	7	5	4	14.4	29.8	
2-Jan	2	3	2	1	A	5	6	3	4	5	25	25	4	8	5	5	21	19	7	21	6	6	8	6	8.6	24.9	
3-Jan	7	8	4	3	A	3	6	6	6	4	6	9	6	5	6	19	8	11	6	14	4	6	4	10	6.9	18.5	
4-Jan	7	8	2	2	A	3	2	4	13	18	11	17	11	12	26	29	35	36	27	28	28	23	21	24	16.8	36.2	
5-Jan	22	27	27	24	A	26	25	25	23	25	18	9	6	7	19	19	13	14	11	34	26	34	24	27	21.1	34.5	
6-Jan	23	18	10	9	A	3	1	3	7	C	C	C	C	C	C	7	2	2	4	1	9	6	1	2	--	23.4	
7-Jan	2	1	1	1	A	2	2	3	3	7	5	4	8	7	3	8	4	14	9	14	11	10	16	13	6.5	15.9	
8-Jan	9	7	8	7	A	12	14	14	11	4	3	3	2	3	3	3	5	5	3	3	2	1	1	1	5.4	14.2	
9-Jan	1	1	1	1	A	3	2	3	7	5	4	4	2	4	3	3	3	3	3	3	3	3	4	3	3.0	7.0	
10-Jan	3	4	5	6	A	5	4	5	8	7	12	5	3	5	3	4	6	21	23	17	33	20	13	38	11.0	38.2	
11-Jan	38	36	38	13	A	20	32	44	38	28	17	36	38	27	29	31	37	42	35	42	36	34	34	40	33.3	44.2	
12-Jan	37	27	28	28	A	37	31	37	31	31	21	81	37	32	24	17	26	30	38	38	37	37	32	33	33.5	81.1	
13-Jan	31	31	25	22	A	18	16	9	13	12	7	6	2	2	5	10	6	5	19	21	42	22	9	N	15.2	42.2	
14-Jan	N	N	N	N	N	N	N	N	N	N	N	N	7	7	5	4	11	15	24	27	27	7	6	8	--	27.2	
15-Jan	5	5	4	7	A	8	12	12	8	9	6	5	6	5	5	6	13	14	13	12	10	10	13	12	8.6	13.8	
16-Jan	12	10	11	15	A	12	13	15	16	15	20	17	20	15	16	21	20	19	21	27	21	20	15	6	16.3	27.2	
17-Jan	3	3	3	4	A	5	11	6	5	6	9	10	6	6	11	9	9	8	21	16	24	18	27	16	10.3	27.5	
18-Jan	14	19	15	10	A	30	20	19	31	20	17	11	21	11	15	17	9	17	7	9	6	5	2	3	14.3	31.4	
19-Jan	4	4	2	6	A	8	3	6	5	7	5	12	17	6	6	5	8	19	18	19	5	9	9	10	8.4	19.1	
20-Jan	14	7	4	3	A	9	5	7	7	6	3	5	5	5	8	17	21	19	31	12	9	2	1	2	8.8	31.2	
21-Jan	1	2	2	2	A	3	2	2	2	2	2	2	2	3	3	4	5	8	16	13	10	9	18	11	5.5	18.1	
22-Jan	7	8	17	12	A	24	15	28	22	20	19	9	7	6	9	12	16	21	26	24	15	12	9	4	14.8	27.5	
23-Jan	7	7	4	3	A	5	3	4	10	7	5	18	9	4	16	36	36	20	8	7	16	14	8	7	11.0	35.7	
24-Jan	14	14	13	26	A	12	36	19	27	34	17	25	17	13	13	16	14	36	35	33	17	18	8	12	20.4	35.9	
25-Jan	10	5	5	5	A	8	9	87	7	8	6	4	5	4	5	6	9	7	5	7	5	6	5	4	9.6	86.6	
26-Jan	4	4	5	4	A	6	7	9	9	5	4	3	3	3	4	7	7	9	8	7	5	6	7	15	6.2	14.6	
27-Jan	14	12	8	8	A	9	9	12	17	12	14	7	7	6	3	3	4	5	12	15	9	6	18	13	9.8	18.1	
28-Jan	14	10	9	13	A	12	17	15	13	11	11	6	4	3	5	3	5	4	4	2	3	2	2	3	7.4	17.0	
29-Jan	4	4	3	5	A	10	19	16	16	35	11	33	13	12	8	8	12	23	25	15	16	10	9	8	13.6	34.9	
30-Jan	9	13	11	7	A	6	3	9	11	5	5	3	3	2	3	4	4	7	6	4	5	5	3	3	5.7	13.2	
31-Jan	9	7	6	3	A	4	4	10	239	3	4	2	5	6	6	7	8	16	19	16	11	10	13	9	18.0	238.6	
		11.6	11.0	10.1	9.3	--	11.2	11.9	15.3	21.2	13.0	10.3	13.3	9.7	8.0	9.0	11.1	12.2	15.2	15.6	16.3	14.8	12.2	11.1	11.5	Diurnal Average	
		37.8	35.8	38.5	28.3	--	37.0	35.6	86.6	238.6	34.9	24.7	81.1	38.1	32.0	28.8	35.7	36.6	42.2	37.9	41.7	42.2	37.4	34.0	39.8	Diurnal Maximum	
C - Calibration					N - Not Valid					A - Automated Daily Zero Span																	

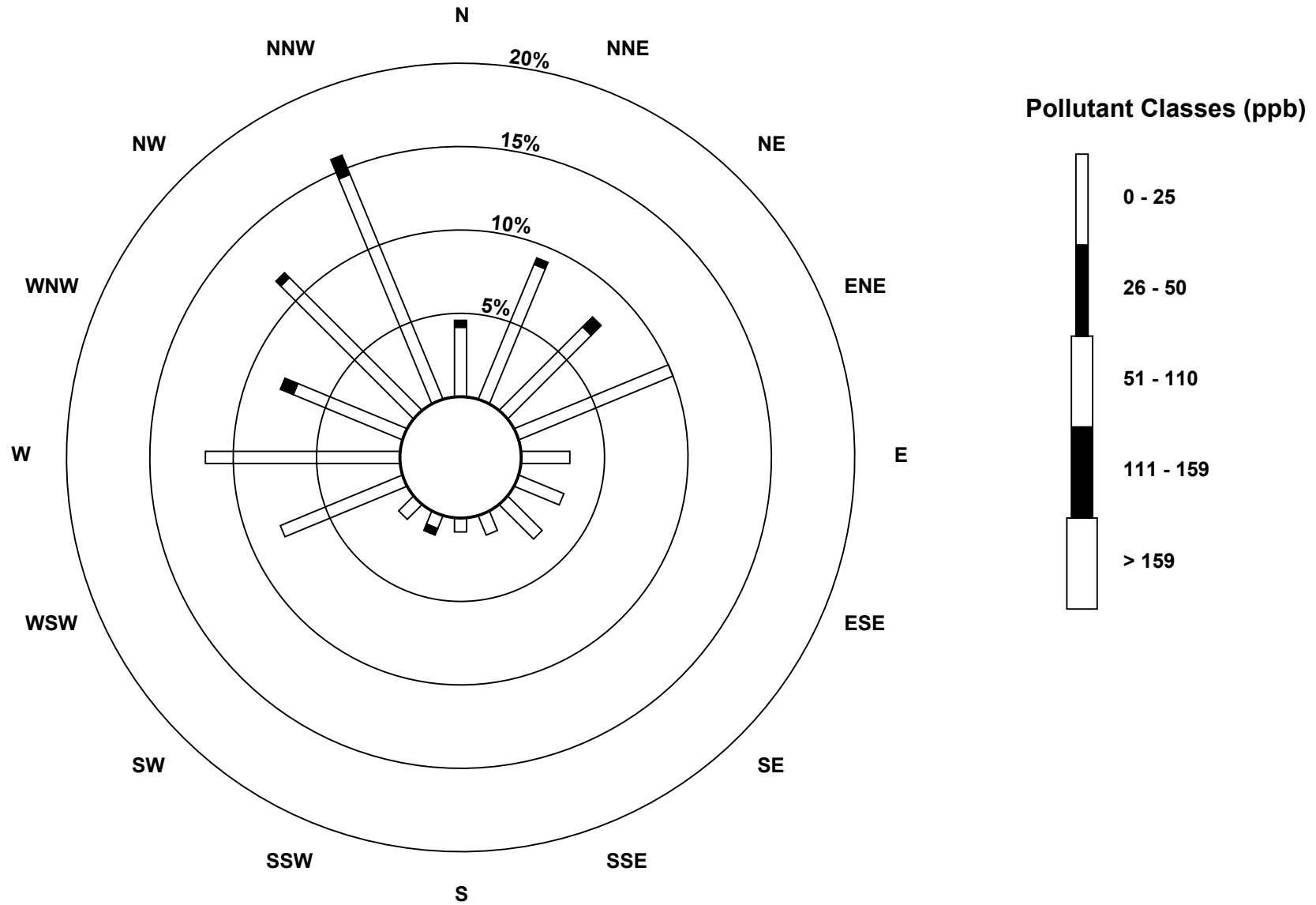
**Hourly Maximums**

**Nitrogen Dioxide (NO<sub>2</sub>) - ppb**  
**Beaverlodge - January 2018**



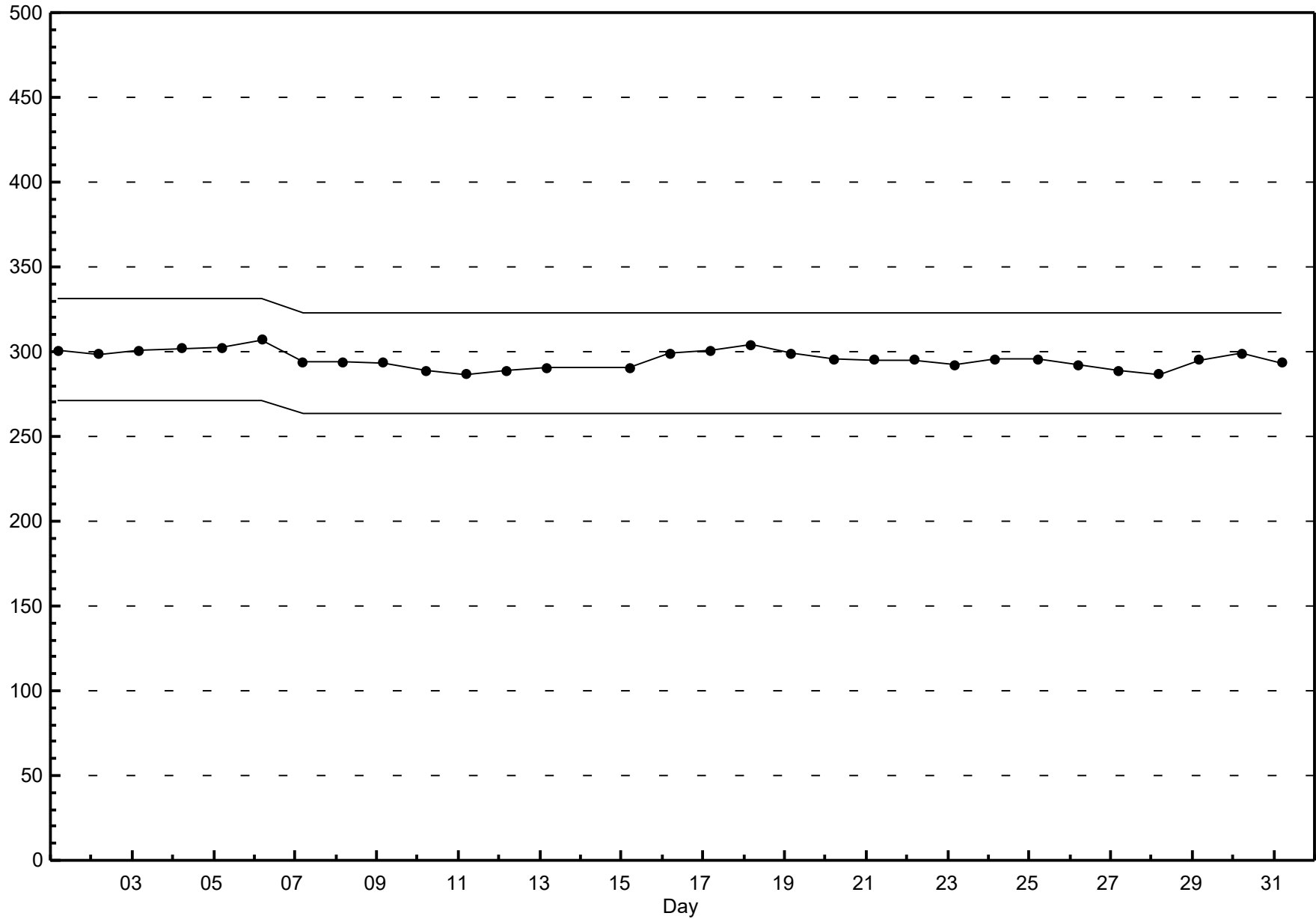
**Pollutant Rose**

**Nitrogen Dioxide (NO<sub>2</sub>) - ppb**  
**Beaverlodge - January 2018**



### Span Responses

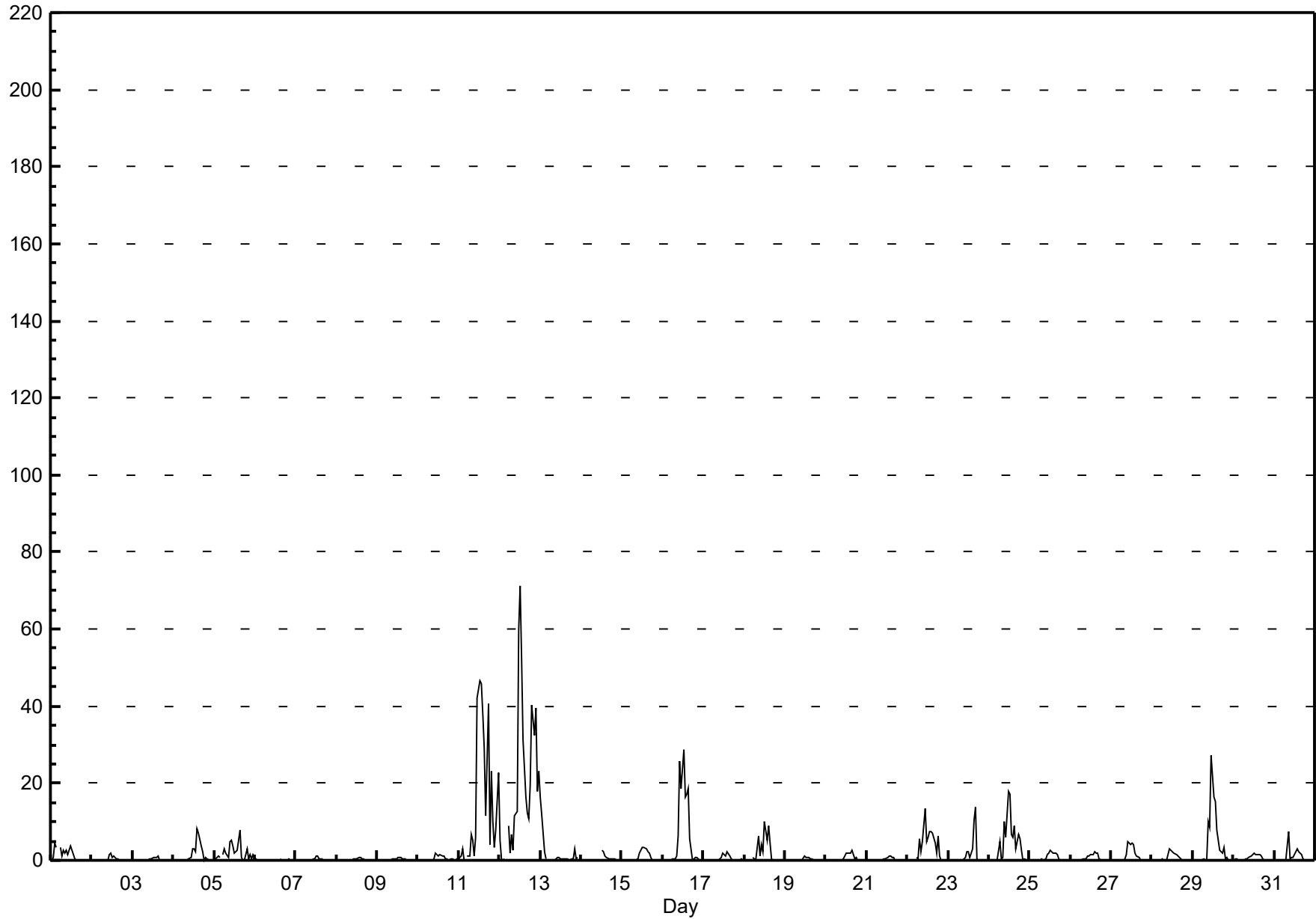
Nitrogen Dioxide (NO<sub>2</sub>)  
Beaverlodge - January 2018



# Hourly Averages

## Nitrogen Oxide (NO) - ppb Beaverlodge - January 2018

Maximum Value: 71.3 ppb on Jan 12 13:00		Maximum Daily Average: 20.8 ppb on Jan 12		Hours in Service: 744																						
Minimum Value: 0 ppb on Jan 1 19:00		Minimum Daily Average: 0.2 ppb on Jan 7		Hours of Data: 695																						
Maximum Diurnal Average: 7.8 ppb at hour 13		Minimum Diurnal Average: 0.2 ppb at hour 4		Hours of Missing Data: 49																						
Monthly Average: 2.41 ppb		Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.2 Q <sub>3</sub> = 1.4 P <sub>90</sub> = 5.6 P <sub>99</sub> = 40.0		Hours of Calibration: 36																						
				Percent Operational Time: 98.3																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jan	0	1	4	3	A	3	1	3	2	2	2	4	2	1	0	0	0	0	0	0	0	0	0	0	1.3	4.5
2-Jan	0	0	0	0	A	0	0	0	0	0	1	2	1	1	1	0	0	0	0	0	0	0	0	0	0.3	1.8
3-Jan	0	0	0	0	A	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0.2	1.2
4-Jan	0	0	0	0	A	0	0	0	0	0	1	3	3	2	8	7	4	2	0	1	0	0	0	0	1.4	8.4
5-Jan	0	0	1	1	A	2	3	2	1	5	5	4	2	3	5	8	1	0	0	3	0	2	0	2	2.1	8.0
6-Jan	0	0	0	0	A	0	0	0	0	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	--	0.4
7-Jan	0	0	0	0	A	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0.2	1.1
8-Jan	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	0.8
9-Jan	0	0	0	0	A	0	0	0	0	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0.2	0.9
10-Jan	0	0	0	0	A	0	0	0	0	0	2	1	1	2	1	1	0	0	0	0	0	0	0	0	0.5	1.9
11-Jan	1	1	3	0	A	1	1	7	5	1	6	42	47	46	38	29	12	41	4	23	10	3	8	23	15.3	46.7
12-Jan	5	0	0	0	A	9	2	7	3	12	13	60	71	53	31	16	12	11	19	40	32	40	18	23	20.8	71.3
13-Jan	16	12	2	1	A	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	3	1	1	N	1.8	16.4
14-Jan	N	N	N	N	N	N	N	N	N	N	N	N	3	2	1	1	1	0	0	0	0	0	0	0	--	2.7
15-Jan	0	0	0	0	A	0	0	0	0	0	2	3	4	3	3	2	2	1	0	0	0	0	0	0	0.9	3.5
16-Jan	0	0	0	0	A	0	0	0	1	6	26	19	29	16	17	19	6	0	0	1	1	0	0	0	6.2	28.6
17-Jan	0	0	0	0	A	0	0	0	0	0	1	2	1	1	2	1	1	0	0	0	0	0	0	0	0.5	2.4
18-Jan	0	0	0	0	A	1	0	0	6	1	4	2	10	5	9	5	0	0	0	0	0	0	0	0	1.9	9.9
19-Jan	0	0	0	0	A	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0.2	1.0
20-Jan	0	0	0	0	A	0	0	0	0	0	0	1	2	2	2	2	2	0	1	0	0	0	0	0	0.5	2.5
21-Jan	0	0	0	0	A	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0.3	1.1
22-Jan	0	0	0	0	A	1	0	6	2	5	13	5	6	8	8	7	5	2	6	1	0	0	0	0	3.3	13.5
23-Jan	0	0	0	0	A	0	0	0	0	0	1	2	2	1	3	10	14	0	0	0	0	0	0	0	1.5	13.6
24-Jan	0	0	0	0	A	0	5	0	1	10	6	18	17	7	6	9	3	7	6	3	0	0	0	0	4.2	17.9
25-Jan	0	0	0	0	A	0	0	0	0	1	1	2	3	2	2	2	1	0	0	0	0	0	0	0	0.7	2.8
26-Jan	0	0	0	0	A	0	0	0	0	1	1	1	1	2	2	2	2	0	0	0	0	0	0	0	0.6	2.1
27-Jan	0	0	0	0	A	0	0	0	0	1	5	4	4	4	2	1	1	0	0	0	0	0	0	0	1.0	4.7
28-Jan	0	0	0	0	A	0	0	0	0	2	3	3	2	2	1	1	1	0	0	0	0	0	0	0	0.7	3.1
29-Jan	0	0	0	0	A	0	0	0	0	10	9	27	16	15	8	5	3	2	3	0	1	0	0	0	4.4	27.3
30-Jan	0	0	0	0	A	0	0	0	0	1	1	2	2	2	1	2	1	0	0	0	0	0	0	0	0.6	2.0
31-Jan	0	0	0	0	A	0	0	0	7	0	1	1	1	3	2	2	1	0	0	0	0	0	0	0	0.9	7.3
		0.8	0.5	0.4	0.2	--	0.6	0.5	0.9	1.0	2.1	3.7	7.3	7.8	6.2	5.3	4.4	2.3	2.2	1.4	2.4	1.6	1.5	0.9	1.6	Diurnal Average
		16.4	11.9	4.5	3.3	--	9.0	4.9	6.9	7.3	11.6	25.8	60.1	71.3	52.8	38.1	29.1	13.6	40.7	19.4	40.4	32.4	39.6	17.9	23.0	Diurnal Maximum
C - Calibration					N - Not Valid					A - Automated Daily Zero Span																





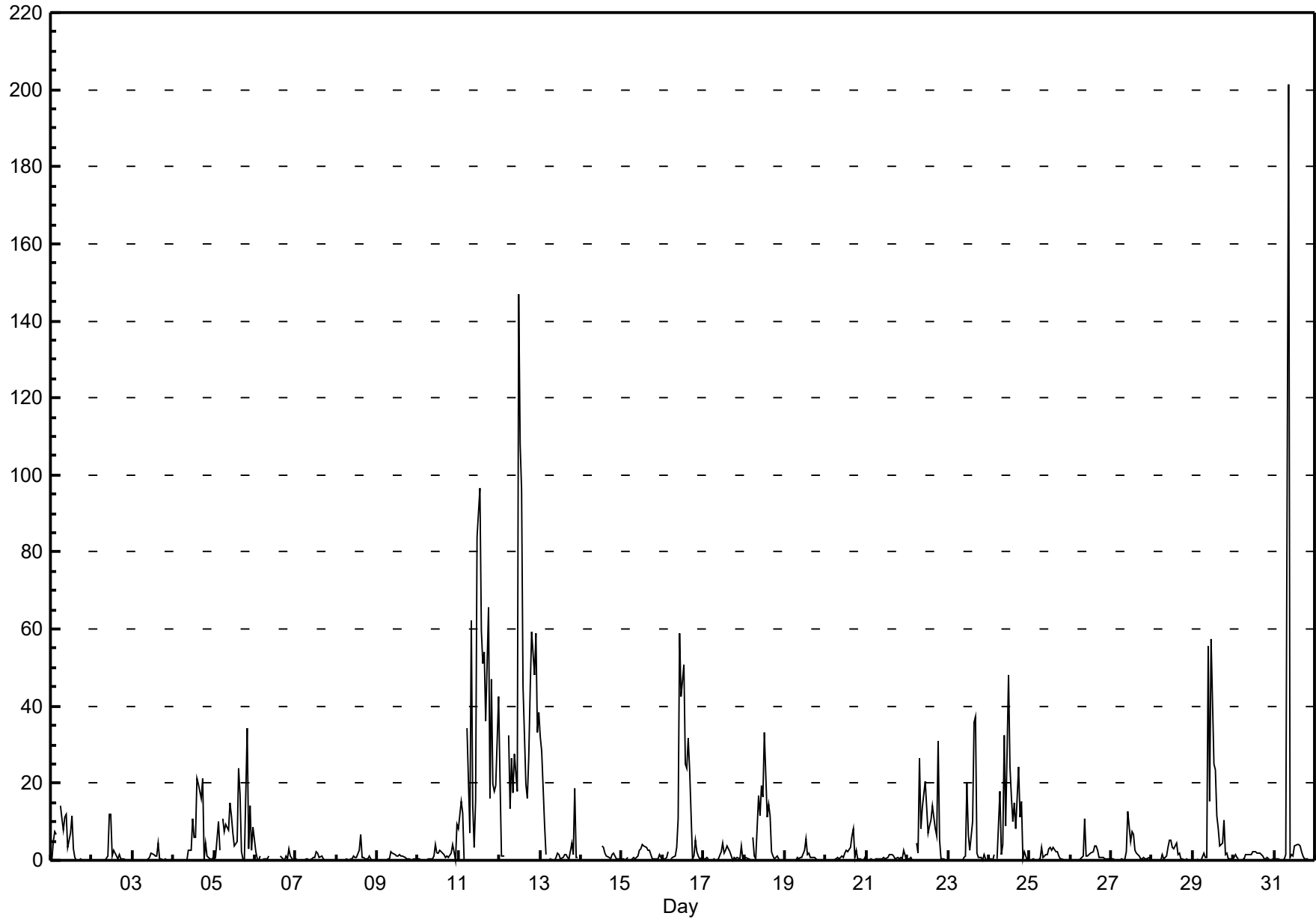
# Hourly Maximums

## Nitrogen Oxide (NO) - ppb Beaverlodge - January 2018

Maximum Value: 201.3 ppb on Jan 31 09:00 Minimum Value: 0 ppb on Jan 23 02:00 Maximum Diurnal Average: 17.4 ppb at hour 12 Monthly Average: 5.88 ppb		Maximum Daily Average: 39.1 ppb on Jan 12 Minimum Daily Average: 0.4 ppb on Jan 7 Minimum Diurnal Average: 0.7 ppb at hour 4 Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.2 Median = 0.7 Q <sub>3</sub> = 3.5 P <sub>90</sub> = 16.2 P <sub>99</sub> = 57.6		Hours in Service: 744 Hours of Data: 695 Hours of Missing Data: 49 Hours of Calibration: 36 Percent Operational Time: 98.3																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jan	0	5	7	7	A	14	11	8	11	12	4	7	12	3	1	0	0	0	0	0	0	0	0	0	0	4.4	14.1
2-Jan	0	0	0	0	A	0	0	0	0	1	12	12	1	3	1	0	1	0	0	0	0	0	0	0	0	1.5	12.0
3-Jan	0	0	0	0	A	0	0	0	0	0	1	2	1	1	1	4	0	0	0	0	0	0	0	0	0	0.6	4.4
4-Jan	0	0	0	0	A	0	0	0	0	3	3	11	6	6	21	20	16	21	1	5	1	0	0	1	5.0	21.2	
5-Jan	2	1	10	3	A	11	7	9	8	15	11	7	4	5	24	17	2	1	0	34	3	14	3	9	8.7	34.3	
6-Jan	2	0	0	1	A	0	0	1	1	C	C	C	C	C	C	1	1	0	1	0	3	1	0	0	--	2.9	
7-Jan	0	0	0	0	A	0	0	0	0	0	1	1	2	2	1	1	0	0	0	0	0	0	0	0	0	0.4	2.2
8-Jan	0	0	0	0	A	0	0	0	0	0	1	1	1	3	7	1	1	0	0	1	0	0	0	0	0	0.8	6.6
9-Jan	0	0	0	0	A	0	0	0	2	2	2	1	1	2	1	1	1	0	0	0	0	0	0	0	0	0.7	2.4
10-Jan	0	0	0	0	A	0	0	0	0	1	4	2	2	3	2	1	1	1	1	2	4	2	0	9	1.6	9.4	
11-Jan	8	15	12	0	A	34	7	62	14	4	15	84	96	60	51	54	36	66	16	47	20	18	19	43	34.0	96.4	
12-Jan	21	1	1	1	A	32	13	27	17	28	18	147	108	96	45	20	16	27	44	59	48	59	33	38	39.1	147.1	
13-Jan	32	28	9	1	A	0	0	0	0	1	2	1	1	1	2	1	1	0	4	2	19	1	1	N	4.9	32.2	
14-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	4	3	2	1	1	1	2	1	0	0	0	--	3.8	
15-Jan	0	0	0	1	A	0	0	1	0	1	3	3	4	4	3	2	3	2	0	0	0	0	2	1	1.4	4.2	
16-Jan	0	0	1	2	A	0	1	1	3	11	59	42	51	25	24	32	24	1	1	5	2	1	0	1	12.5	59.1	
17-Jan	0	0	1	0	A	0	0	0	0	0	2	4	2	2	4	2	1	0	1	0	1	0	4	0	1.2	4.4	
18-Jan	1	1	0	0	A	6	1	0	17	12	19	16	33	11	15	11	2	1	0	1	0	0	0	0	6.5	33.1	
19-Jan	0	0	0	0	A	0	0	1	0	1	1	3	6	1	2	1	1	1	0	0	0	0	0	0	0.8	5.6	
20-Jan	0	0	0	0	A	0	0	1	0	1	1	2	3	2	3	6	8	1	2	0	0	0	0	1	1.4	8.1	
21-Jan	0	0	0	0	A	0	0	0	0	0	1	0	1	1	2	1	1	0	1	0	1	0	3	0	0.6	2.6	
22-Jan	0	0	1	0	A	5	2	27	8	14	21	14	7	9	10	14	8	6	31	5	0	0	0	0	7.9	30.8	
23-Jan	0	0	0	0	A	0	0	0	0	1	1	20	7	2	10	36	37	2	1	1	0	1	0	0	5.2	37.1	
24-Jan	0	0	0	1	A	0	18	1	4	33	9	48	24	16	10	15	8	24	11	15	0	2	0	0	10.6	48.3	
25-Jan	0	0	0	0	A	0	0	3	1	1	2	3	4	3	3	2	2	1	0	0	0	0	0	0	1.2	3.5	
26-Jan	0	0	0	0	A	0	0	1	11	1	1	2	2	2	4	4	3	1	1	1	0	0	0	0	1.5	10.7	
27-Jan	0	0	0	0	A	0	0	0	0	2	13	5	7	7	2	2	1	0	0	1	0	0	1	0	1.9	12.7	
28-Jan	0	0	0	0	A	0	1	0	1	3	5	5	4	3	5	2	2	1	0	0	0	0	0	0	1.5	5.3	
29-Jan	0	0	0	0	A	0	2	1	1	56	15	57	25	24	12	8	4	4	11	1	2	0	0	0	9.8	57.2	
30-Jan	1	1	1	0	A	0	0	1	1	2	2	2	2	2	2	2	2	1	0	0	1	0	0	0	1.1	2.3	
31-Jan	0	0	0	0	A	0	0	1	201	1	1	1	4	4	4	4	2	1	0	0	0	0	0	0	9.9	201.3	
		2.4	1.9	1.5	0.7	--	3.5	2.3	4.9	10.2	7.1	7.9	17.4	14.1	10.2	9.1	8.6	6.0	5.3	4.2	6.0	3.5	3.4	2.2	3.5	Diurnal Average	
		32.2	28.2	12.3	6.6	--	34.4	17.8	62.4	201.3	55.7	59.1	147.1	108.1	96.2	51.1	54.2	37.1	65.7	44.3	59.3	47.9	58.8	33.1	42.6	Diurnal Maximum	
C - Calibration					N - Not Valid					A - Automated Daily Zero Span																	

**Hourly Maximums**

**Nitrogen Oxide (NO) - ppb**  
**Beaverlodge - January 2018**

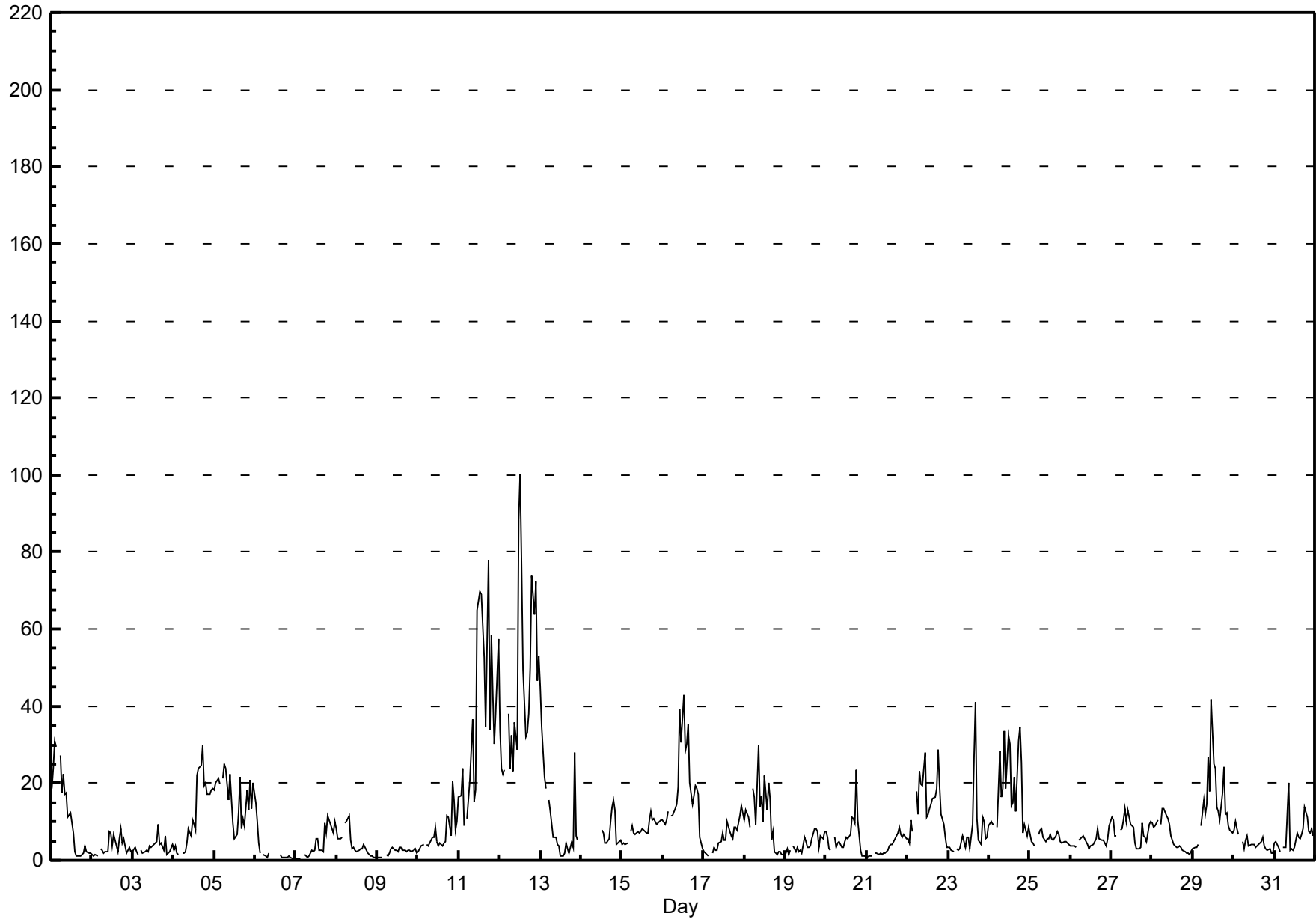


# Hourly Averages

Oxides of Nitrogen (NO<sub>x</sub>) - ppb

Beaverlodge - January 2018

Maximum Value: 100.3 ppb on Jan 12 13:00		Maximum Daily Average: 46.2 ppb on Jan 12		Hours in Service: 744																						
Minimum Value: 0 ppb on Jan 7 02:00		Minimum Daily Average: 2.2 ppb on Jan 9		Hours of Data: 695																						
Maximum Diurnal Average: 14.1 ppb at hour 13		Minimum Diurnal Average: 6.9 ppb at hour 4		Hours of Missing Data: 49																						
Monthly Average: 10.35 ppb		Percentiles: P <sub>1</sub> = 0.6 P <sub>10</sub> = 1.8 Q <sub>1</sub> = 3.2 Median = 6.0 Q <sub>3</sub> = 11.8 P <sub>90</sub> = 23.8 P <sub>99</sub> = 68.6		Hours of Calibration: 36																						
				Percent Operational Time: 98.3																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jan	18	24	31	29	A	27	17	22	17	17	11	12	10	7	2	1	1	1	1	2	4	2	2	2	11.4	30.9
2-Jan	1	1	2	1	A	3	2	2	2	2	8	7	4	7	4	2	6	8	5	6	2	3	3	2	3.5	8.1
3-Jan	2	3	2	1	A	2	2	2	3	2	4	3	4	5	5	9	4	4	3	6	2	2	2	4	3.4	9.3
4-Jan	2	4	2	1	A	2	2	2	4	8	6	10	9	8	22	24	25	30	19	20	17	17	18	19	11.9	29.8
5-Jan	18	20	21	20	A	21	25	24	16	22	16	10	5	7	12	22	8	11	9	18	13	21	14	20	16.2	25.0
6-Jan	15	10	4	2	A	2	1	1	2	C	C	C	C	C	C	2	1	1	1	1	1	1	0	1	--	14.8
7-Jan	0	0	0	0	A	2	1	1	1	2	2	3	5	5	2	3	2	10	7	12	9	8	7	10	4.1	11.5
8-Jan	8	6	5	6	A	10	10	12	5	3	3	3	2	3	3	3	4	3	2	1	1	1	1	1	4.1	11.6
9-Jan	1	1	1	1	A	2	1	2	3	3	3	3	2	3	3	2	3	2	2	2	2	3	3	2	2.2	3.5
10-Jan	2	3	4	4	A	4	4	4	6	6	9	5	4	5	4	5	5	12	11	6	20	16	8	10	6.7	20.3
11-Jan	16	17	24	9	A	11	21	29	37	15	18	65	70	69	61	53	35	78	34	58	43	30	39	57	38.6	77.9
12-Jan	34	24	22	24	A	38	24	32	23	36	29	88	100	76	50	32	33	38	50	74	64	72	47	53	46.2	100.3
13-Jan	45	35	22	18	A	16	13	6	6	6	4	4	1	1	2	4	3	2	5	3	28	6	5	N	10.7	45.0
14-Jan	N	N	N	N	N	N	N	N	N	N	N	N	8	7	5	5	6	10	14	16	13	4	5	5	--	15.6
15-Jan	4	4	4	5	A	7	9	7	7	8	7	7	8	8	7	7	10	13	11	11	9	10	10	10	8.0	12.7
16-Jan	10	9	10	13	A	12	12	13	14	19	39	31	43	28	30	35	20	15	17	19	19	17	6	3	18.9	42.9
17-Jan	2	2	1	1	A	2	3	3	2	4	5	7	5	5	10	7	6	5	9	8	8	12	14	12	5.9	14.0
18-Jan	10	13	11	9	A	19	17	9	30	14	17	10	22	13	20	16	5	7	2	1	2	2	2	1	11.0	30.0
19-Jan	2	3	2	3	A	4	2	3	2	3	2	6	5	3	3	4	6	8	8	7	4	6	6	7	4.3	8.2
20-Jan	8	6	3	3	A	6	3	4	5	4	3	5	6	6	7	11	11	10	24	11	3	1	1	1	6.1	23.6
21-Jan	1	1	1	1	A	2	2	2	2	2	2	2	2	4	4	4	5	6	7	8	7	6	7	5	3.5	8.5
22-Jan	6	5	10	7	A	18	12	23	20	19	28	11	12	14	15	16	16	19	29	19	12	9	6	3	14.3	28.8
23-Jan	3	3	3	2	A	3	2	3	6	5	3	6	6	3	9	27	41	11	5	4	11	10	5	6	7.8	41.1
24-Jan	9	10	9	9	A	8	28	16	19	34	19	33	30	14	15	22	13	31	35	25	7	9	6	8	17.8	34.8
25-Jan	7	5	4	4	A	7	8	8	6	5	6	6	7	6	5	6	7	7	5	5	5	5	4	4	5.7	8.1
26-Jan	4	4	4	3	A	5	5	6	6	5	4	3	4	4	5	5	8	6	5	5	4	4	6	9	5.0	8.9
27-Jan	11	10	6	6	A	8	8	10	13	10	13	9	9	9	4	3	3	3	10	6	6	5	9	10	8.0	13.4
28-Jan	10	9	9	11	A	9	14	13	11	11	9	6	5	4	4	3	4	3	3	2	2	2	2	2	6.4	13.6
29-Jan	3	3	3	4	A	9	16	12	15	27	18	42	25	24	14	13	10	17	24	12	12	9	8	7	14.2	41.9
30-Jan	8	10	8	7	A	5	3	5	6	4	4	4	4	3	4	5	5	6	4	3	2	3	2	2	4.7	10.1
31-Jan	5	5	4	2	A	3	3	3	20	3	3	3	4	7	6	6	7	8	14	11	8	7	8	6	6.3	20.0
		8.9	8.3	7.8	6.9	--	8.9	9.0	9.4	10.3	10.3	10.1	13.9	14.1	11.9	11.3	11.5	10.1	12.4	12.0	12.4	11.0	9.8	8.2	9.5	Diurnal Average
		45.0	34.8	30.9	29.5	--	38.2	28.3	32.4	36.5	35.8	39.3	88.4	100.3	76.3	61.0	52.7	41.1	77.9	49.9	73.9	63.8	72.3	46.7	57.4	Diurnal Maximum
C - Calibration		N - Not Valid				A - Automated Daily Zero Span																				



# Hourly Maximums

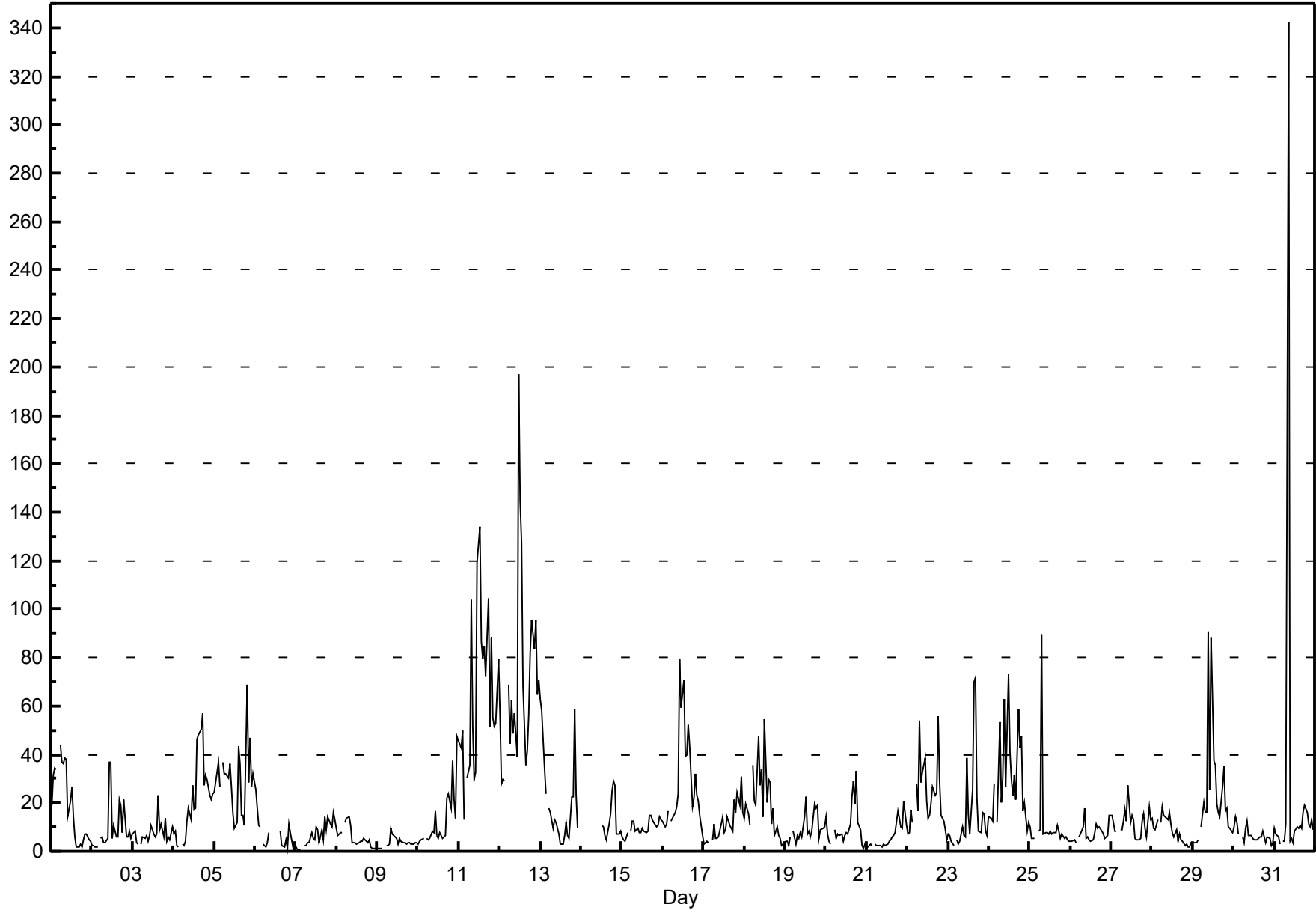
## Oxides of Nitrogen (NO<sub>x</sub>) - ppb

### Beaverlodge - January 2018

Maximum Value: 342.3 ppb on Jan 31 09:00		Maximum Daily Average: 70.7 ppb on Jan 12		Hours in Service: 744																							
Minimum Value: 1 ppb on Jan 7 02:00		Minimum Daily Average: 3.6 ppb on Jan 9		Hours of Data: 695																							
Maximum Diurnal Average: 28.9 ppb at hour 12		Minimum Diurnal Average: 9.9 ppb at hour 4		Hours of Missing Data: 49																							
Monthly Average: 17.77 ppb		Percentiles: P <sub>1</sub> = 1.1 P <sub>10</sub> = 3.2 Q <sub>1</sub> = 5.4 Median = 9.6 Q <sub>3</sub> = 20.4 P <sub>90</sub> = 40.6 P <sub>99</sub> = 98.1		Hours of Calibration: 36																							
				Percent Operational Time: 98.3																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jan	19	31	35	34	A	44	37	36	38	38	14	21	27	14	6	2	2	3	2	4	7	7	5	4	18.7	43.6	
2-Jan	2	3	2	2	A	5	6	4	4	6	37	37	6	11	6	6	21	19	7	21	6	6	8	6	9.9	37.0	
3-Jan	7	8	3	3	A	3	6	6	6	4	7	11	7	6	7	23	9	11	6	14	4	6	4	10	7.5	22.9	
4-Jan	7	8	2	2	A	3	2	4	13	18	13	27	17	18	46	48	50	57	27	31	29	23	21	24	21.4	57.0	
5-Jan	24	28	37	27	A	37	32	32	30	36	26	16	10	12	43	36	15	15	11	69	28	47	27	32	29.1	68.6	
6-Jan	26	18	11	10	A	3	2	3	8	C	C	C	C	C	C	8	2	2	5	1	11	8	1	2	--	25.6	
7-Jan	2	1	1	1	A	3	3	3	3	8	5	5	10	9	3	9	5	14	9	14	11	10	16	13	6.9	16.0	
8-Jan	10	7	8	8	A	12	14	14	11	4	4	4	3	4	4	4	6	5	3	4	2	1	1	1	5.7	14.2	
9-Jan	1	1	1	1	A	3	2	3	9	7	6	5	3	5	4	4	4	3	4	3	3	3	4	4	3.6	9.3	
10-Jan	3	4	5	6	A	5	5	5	8	8	16	7	5	7	5	6	6	22	24	18	37	21	13	47	12.4	47.4	
11-Jan	46	43	50	13	A	30	36	104	52	30	33	119	134	87	80	85	72	105	52	89	55	52	53	79	65.1	134.2	
12-Jan	56	28	29	29	A	69	44	62	49	57	39	197	145	127	68	36	42	56	82	95	83	96	65	70	70.7	197.2	
13-Jan	63	58	35	24	A	18	16	9	13	12	9	7	3	3	7	12	6	5	23	23	59	23	9	N	19.9	63.0	
14-Jan	N	N	N	N	N	N	N	N	N	N	N	N	11	10	7	5	11	16	25	29	27	7	7	8	--	29.1	
15-Jan	6	5	4	7	A	8	12	13	8	9	8	8	10	8	8	9	15	15	13	12	10	11	14	13	9.8	14.7	
16-Jan	12	10	11	17	A	13	14	16	18	24	79	59	70	39	40	52	43	19	22	32	23	21	15	7	28.6	79.2	
17-Jan	3	3	4	4	A	5	11	6	5	6	11	15	8	9	14	11	10	8	21	16	24	19	31	16	11.3	30.9	
18-Jan	14	19	15	10	A	36	21	19	47	27	34	14	55	20	29	29	11	18	7	10	6	5	2	3	19.7	54.6	
19-Jan	4	4	2	6	A	8	3	7	5	8	6	14	23	7	8	6	8	19	18	19	5	9	9	10	9.1	22.7	
20-Jan	14	7	4	3	A	9	5	7	6	7	4	7	8	7	11	23	29	19	34	12	9	2	1	3	10.1	33.5	
21-Jan	1	2	3	2	A	3	2	2	2	2	3	2	3	4	5	6	7	8	17	14	10	10	21	11	6.1	20.5	
22-Jan	7	8	17	12	A	28	17	54	28	33	38	21	13	15	19	27	23	25	56	29	15	12	9	4	22.1	56.0	
23-Jan	7	6	4	3	A	5	3	4	10	7	6	38	15	7	26	70	72	22	9	8	16	15	8	7	16.0	71.9	
24-Jan	14	14	13	28	A	12	53	20	31	63	26	73	41	29	23	31	22	59	43	48	17	20	8	12	30.4	72.8	
25-Jan	10	5	5	5	A	8	9	90	7	8	8	7	8	7	8	8	11	8	6	7	5	6	5	4	10.7	89.8	
26-Jan	4	4	5	4	A	6	7	10	18	6	6	5	4	5	8	11	10	10	8	7	6	6	7	15	7.4	17.7	
27-Jan	15	12	8	8	A	9	9	12	17	13	27	12	15	13	5	5	4	5	12	15	9	6	19	13	11.5	27.1	
28-Jan	14	10	9	13	A	12	18	15	14	13	16	11	7	6	9	4	7	5	4	2	3	2	2	3	8.7	18.4	
29-Jan	4	4	4	5	A	10	20	16	16	90	25	88	37	36	19	16	14	27	35	16	18	10	9	8	23.0	90.5	
30-Jan	10	14	12	7	A	6	4	9	13	7	6	5	5	5	5	6	6	8	6	4	6	5	3	3	6.7	14.5	
31-Jan	9	7	6	3	A	4	4	11	342	4	6	3	8	10	10	11	10	16	19	16	11	10	13	9	23.6	342.3	
		13.8	12.5	11.5	9.9	--	13.8	13.9	19.9	27.8	19.1	17.9	28.9	23.7	18.0	17.8	19.6	17.8	20.1	19.6	22.1	18.0	15.4	13.2	14.8	Diurnal Average	
		63.0	58.2	50.0	34.0	--	69.1	53.3	103.6	342.3	90.5	79.2	197.2	144.9	127.5	79.7	85.1	72.1	104.6	82.0	95.4	83.4	95.6	64.9	79.4	Diurnal Maximum	
C - Calibration					N - Not Valid					A - Automated Daily Zero Span																	

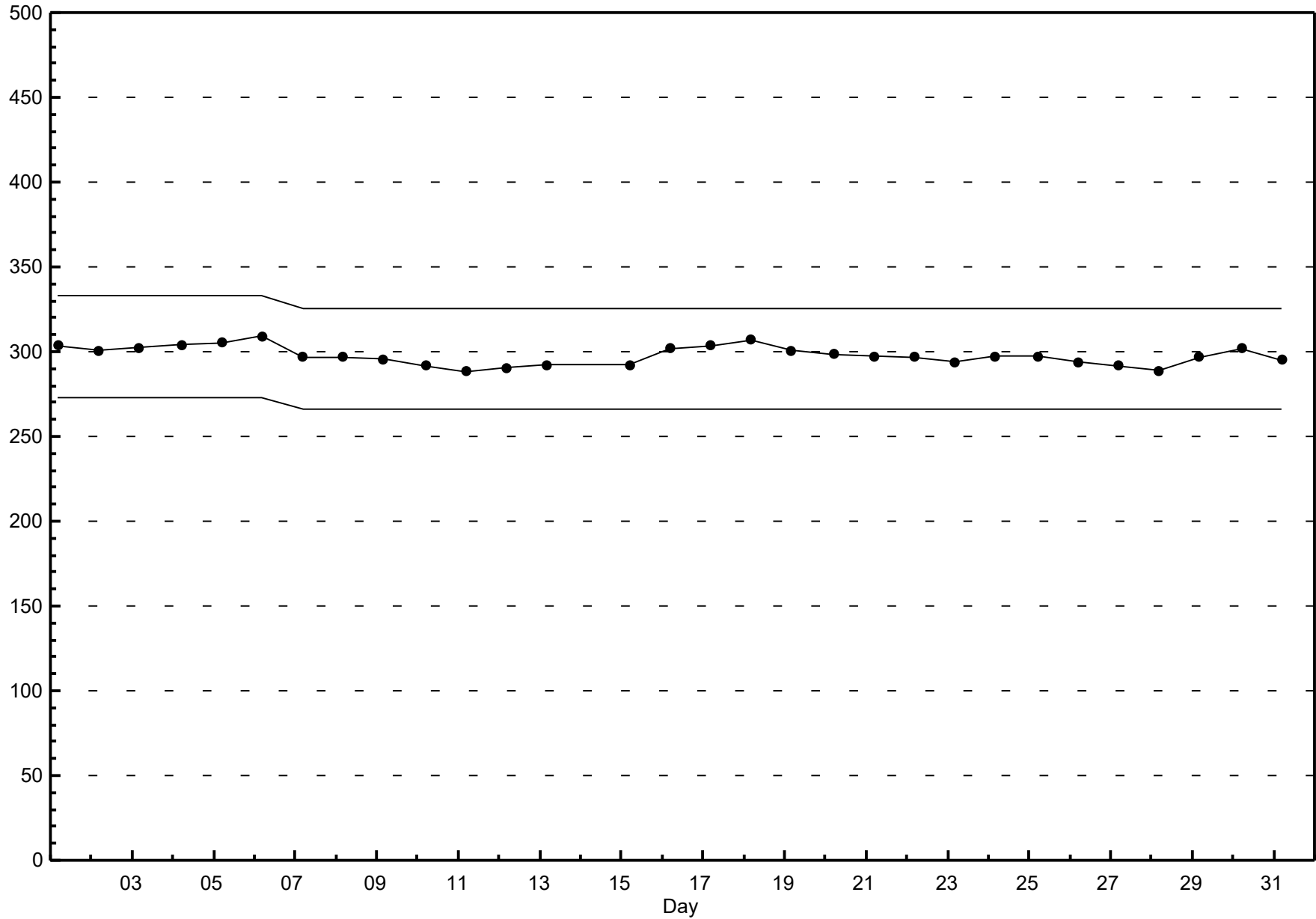
**Hourly Maximums**

**Oxides of Nitrogen (NO<sub>x</sub>) - ppb**  
**Beaverlodge - January 2018**



### Span Responses

Oxides of Nitrogen (NO<sub>x</sub>)  
Beaverlodge - January 2018



## Hourly Averages

Ozone (O<sub>3</sub>) - ppb

Beaverlodge - January 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 41.8 ppb on Jan 18 20:00	Maximum Daily Average: 37.1 ppb on Jan 2
Minimum Value: 1 ppb on Jan 13 00:00	Hours of Data: 710
Maximum Diurnal Average: 25.7 ppb at hour 14	Hours of Missing Data: 34
Monthly Average: 23.73 ppb	Hours of Calibration: 34
Minimum Daily Average: 5.7 ppb on Jan 12	Percent Operational Time: 100.0
Minimum Diurnal Average: 21.9 ppb at hour 9	
Percentiles: P <sub>1</sub> = 0.9 P <sub>10</sub> = 8.5 Q <sub>1</sub> = 16.3 Median = 24.7 Q <sub>3</sub> = 32.5 P <sub>90</sub> = 36.7 P <sub>99</sub> = 40.0	

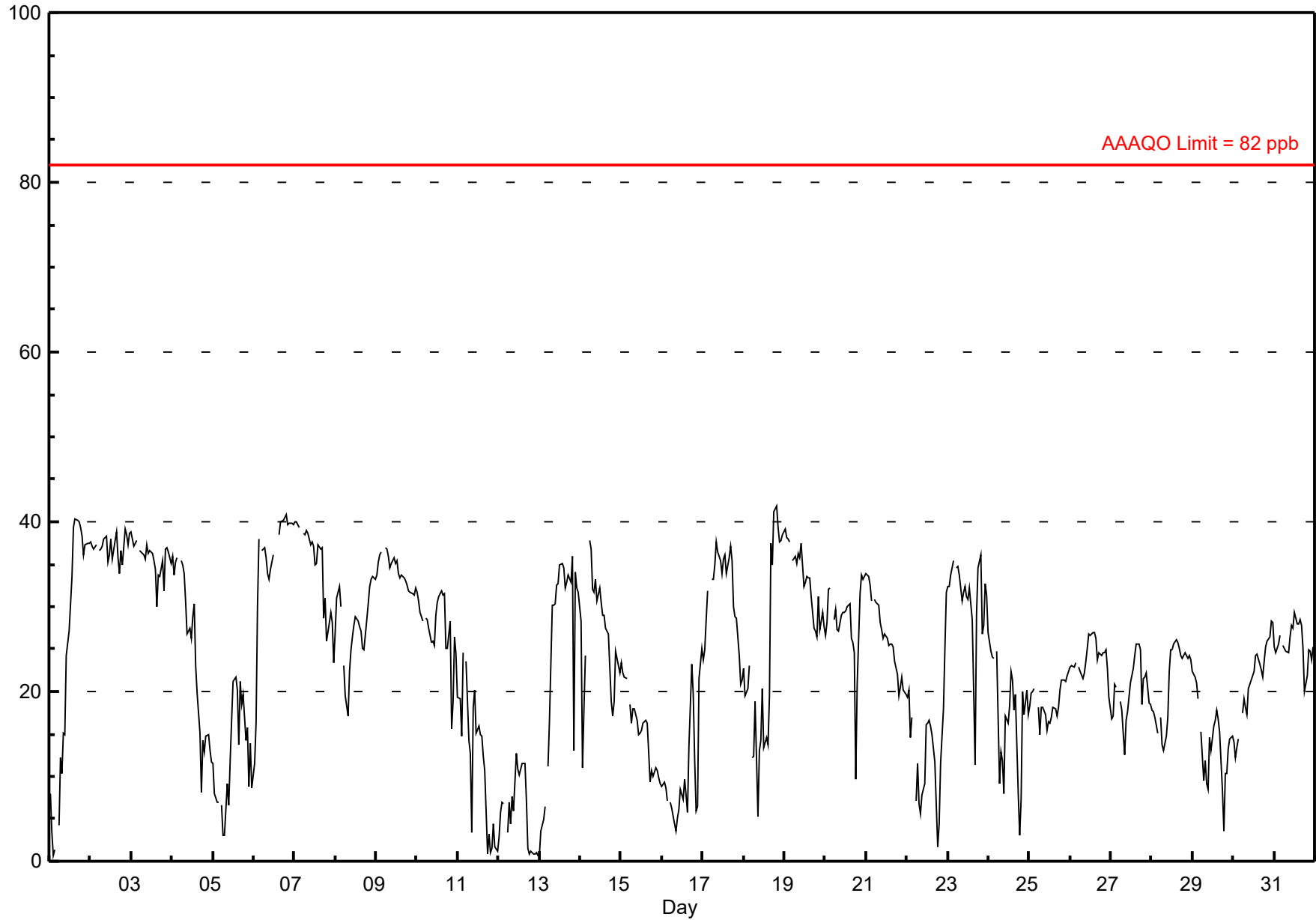
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jan	8	3	1	1	A	4	12	10	15	15	24	27	30	34	39	40	40	40	39	38	36	37	38	37	24.8	40.4
2-Jan	38	37	37	37	A	37	37	37	38	38	35	36	38	36	38	39	36	34	37	35	39	39	37	39	37.1	39.2
3-Jan	39	37	37	38	A	37	37	36	36	37	36	37	36	35	34	30	34	33	35	32	37	37	36	35	35.7	38.9
4-Jan	36	34	35	36	A	35	35	34	31	27	27	26	29	30	23	20	15	8	14	13	15	15	13	12	24.5	35.9
5-Jan	12	8	7	7	A	7	3	3	9	7	12	17	21	22	20	14	21	18	20	14	16	9	14	9	12.5	21.7
6-Jan	12	16	30	38	A	37	37	36	34	33	34	36	C	C	C	38	40	40	40	41	40	40	40	40	35.1	40.8
7-Jan	40	40	40	39	A	39	39	39	39	37	38	37	35	35	37	37	37	29	31	26	28	29	28	23	34.8	40.0
8-Jan	27	31	32	30	A	23	20	17	22	25	26	28	29	28	28	27	25	25	29	30	32	33	34	33	27.6	33.5
9-Jan	34	35	36	36	A	37	37	36	35	35	36	35	35	34	33	34	33	33	33	32	32	31	31	32	34.2	36.9
10-Jan	32	31	29	28	A	29	28	27	26	26	25	29	31	31	32	31	32	25	25	28	16	19	27	24	27.4	31.8
11-Jan	19	19	15	25	A	24	14	13	3	18	20	15	16	15	15	12	11	1	3	1	1	4	2	1	11.7	24.6
12-Jan	3	6	7	7	A	3	7	4	8	6	13	11	10	11	12	12	7	2	1	1	1	1	1	1	5.7	12.7
13-Jan	1	4	5	6	A	11	16	30	30	30	33	33	35	35	35	32	33	34	33	36	13	34	32	32	25.3	35.9
14-Jan	28	11	18	24	A	38	37	32	32	33	31	32	31	29	29	27	27	23	19	17	19	25	23	22	26.4	37.8
15-Jan	23	22	22	22	A	19	16	18	18	17	15	15	15	16	17	16	13	9	11	10	11	11	10	9	15.4	23.3
16-Jan	9	9	9	7	A	7	6	4	3	5	6	8	7	10	8	6	14	23	20	12	6	7	22	25	10.1	25.1
17-Jan	24	25	29	32	A	33	33	35	38	37	36	34	36	36	34	36	37	35	30	29	29	24	21	21	31.4	37.6
18-Jan	23	19	20	23	A	12	12	19	5	13	14	20	13	15	14	19	37	35	41	42	39	38	38	38	24.0	41.8
19-Jan	39	38	38	38	A	35	36	35	36	36	37	32	33	34	33	33	31	27	27	26	31	27	29	28	33.1	39.2
20-Jan	27	28	32	32	A	28	30	27	27	29	29	29	29	30	30	26	26	25	10	21	31	34	33	34	28.2	33.7
21-Jan	34	34	33	31	A	31	31	30	28	27	26	27	26	25	26	26	25	24	22	20	21	22	20	20	26.3	33.9
22-Jan	19	20	15	17	A	7	12	7	6	8	9	16	16	17	16	15	12	7	2	4	12	18	25	32	13.4	31.7
23-Jan	32	32	34	35	A	35	35	34	31	32	32	31	31	32	29	20	11	29	35	36	27	28	33	31	30.6	36.0
24-Jan	27	25	24	24	A	25	9	13	12	8	17	16	18	22	21	18	20	8	3	7	20	17	20	17	17.1	27.0
25-Jan	18	20	20	20	A	18	15	18	18	17	15	16	16	17	18	18	17	18	20	21	21	21	22	22	18.7	22.4
26-Jan	23	23	23	23	A	23	22	21	22	24	25	27	27	27	27	26	24	25	24	25	25	25	23	19	24.0	26.9
27-Jan	17	17	21	20	A	19	18	15	13	17	18	21	22	23	24	26	26	25	18	22	22	22	19	18	20.0	25.6
28-Jan	18	18	17	15	A	17	14	13	15	17	22	25	25	26	26	26	25	24	24	25	24	24	24	24	21.2	26.1
29-Jan	22	22	21	19	A	15	9	12	9	9	15	13	16	17	18	17	15	8	4	10	10	13	14	15	14.1	22.3
30-Jan	14	12	13	14	A	18	19	18	17	20	21	22	22	24	24	23	23	22	24	25	26	26	28	28	21.1	28.3
31-Jan	25	25	26	27	A	25	25	25	25	26	28	27	29	28	28	28	28	25	20	22	25	25	24	25	25.7	29.3
	23.3	22.6	23.4	24.3	--	23.4	22.6	22.6	21.9	22.9	24.5	25.2	25.3	25.7	25.6	25.0	25.0	23.0	22.3	22.6	22.7	23.7	24.5	24.1	Diurnal Average	
	39.9	40.0	39.6	39.3	--	38.7	38.5	39.0	38.7	38.4	37.6	37.2	38.0	36.0	39.4	40.4	40.2	40.1	41.2	41.8	39.6	39.8	39.9	39.6	Diurnal Maximum	

C - Calibration      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb    24-hr na



### Hourly Averages

Ozone (O<sub>3</sub>) - ppb  
Beaverlodge - January 2018



# Hourly Maximums

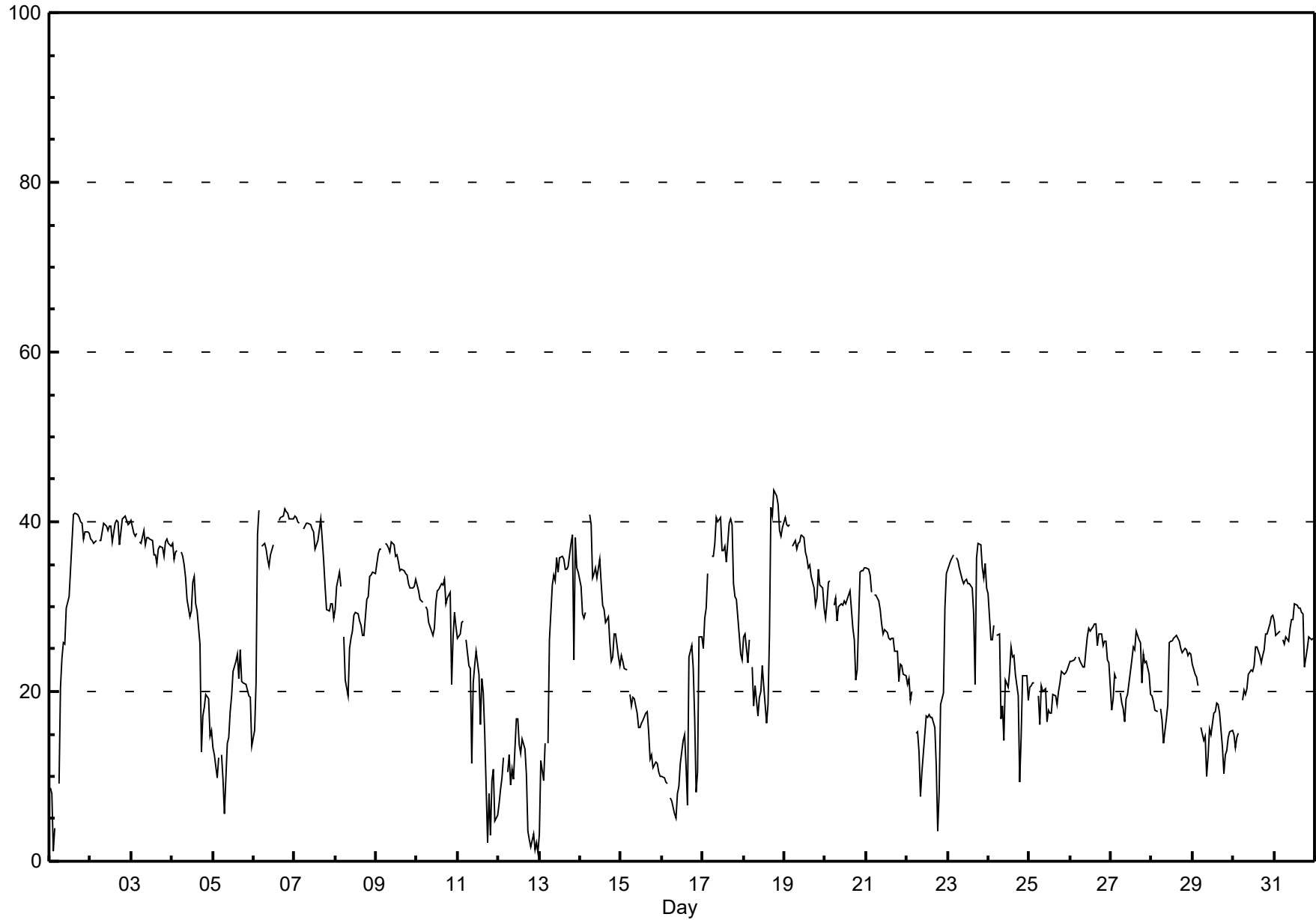
Ozone (O<sub>3</sub>) - ppb

Beaverlodge - January 2018

Maximum Value: 43.7 ppb on Jan 18 19:00		Maximum Daily Average: 39.0 ppb on Jan 2		Hours in Service: 744																							
Minimum Value: 1 ppb on Jan 13 00:00		Minimum Daily Average: 8.8 ppb on Jan 12		Hours of Data: 710																							
Maximum Diurnal Average: 27.9 ppb at hour 16		Minimum Diurnal Average: 25.0 ppb at hour 9		Hours of Missing Data: 34																							
Monthly Average: 26.27 ppb		Percentiles: P <sub>1</sub> = 3.0 P <sub>10</sub> = 12.7 Q <sub>1</sub> = 19.6 Median = 26.6 Q <sub>3</sub> = 34.4 P <sub>90</sub> = 38.5 P <sub>99</sub> = 41.2		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-Jan	9	8	1	4	A	9	20	24	26	26	30	31	34	38	41	41	41	40	40	40	38	39	39	39	28.6	41.1	
2-Jan	38	38	37	38	A	38	38	39	40	40	39	40	40	38	40	40	40	37	39	40	41	40	40	40	39.0	40.8	
3-Jan	40	39	38	39	A	38	37	39	37	38	38	38	38	36	36	35	37	37	37	36	38	38	37	37	37.5	40.2	
4-Jan	38	36	36	37	A	36	36	35	33	31	29	30	33	34	30	29	26	13	17	18	20	19	15	15	28.0	37.5	
5-Jan	13	13	10	12	A	13	10	6	14	15	18	20	22	24	24	22	25	21	21	21	20	19	19	14	17.1	24.9	
6-Jan	15	21	38	41	A	37	37	37	36	35	36	37	C	C	C	40	41	41	41	41	41	40	40	40	36.9	41.5	
7-Jan	41	41	40	40	A	39	39	40	40	40	39	39	37	37	38	40	38	35	32	30	30	30	30	29	36.7	40.6	
8-Jan	30	32	34	32	A	26	21	20	25	26	27	29	29	29	28	28	27	27	31	31	34	34	34	34	29.1	34.2	
9-Jan	35	36	37	37	A	37	37	37	36	38	37	36	36	35	34	34	34	34	34	34	33	32	32	32	33	35.2	37.6
10-Jan	33	32	31	31	A	30	30	28	27	27	28	31	32	32	33	33	33	30	31	32	21	26	29	28	29.8	33.2	
11-Jan	26	27	28	28	A	26	23	23	11	21	23	25	22	16	21	20	15	2	8	3	9	11	5	5	17.4	28.4	
12-Jan	7	8	10	12	A	10	13	9	11	10	17	17	14	13	14	13	10	4	2	2	3	1	2	1	8.8	16.8	
13-Jan	3	12	9	14	A	14	26	33	34	33	36	34	36	36	36	34	34	35	38	38	24	38	35	34	28.9	38.5	
14-Jan	32	29	29	29	A	41	40	33	34	35	33	36	33	30	30	28	29	26	24	24	27	27	24	23	30.2	40.8	
15-Jan	24	24	23	23	A	20	18	19	19	18	16	16	16	17	18	18	15	12	13	11	12	12	11	10	16.6	24.2	
16-Jan	10	10	9	9	A	7	7	6	5	8	9	11	14	15	11	7	24	26	23	17	8	10	26	26	13.0	26.5	
17-Jan	25	29	30	34	A	36	36	37	41	40	40	37	37	37	35	40	40	40	33	31	31	27	24	24	34.0	40.6	
18-Jan	26	27	23	26	A	23	18	21	17	19	20	23	21	16	18	27	42	41	44	43	42	39	38	39	28.4	43.7	
19-Jan	41	40	39	40	A	37	38	37	37	38	38	38	37	36	35	35	34	32	30	31	34	32	32	30	35.7	40.5	
20-Jan	29	30	33	33	A	30	31	28	30	30	30	31	30	31	32	30	27	26	21	22	34	34	34	35	30.1	34.5	
21-Jan	35	34	34	32	A	31	31	31	30	28	27	27	27	26	26	26	26	25	25	21	23	23	22	22	27.5	34.6	
22-Jan	21	22	19	20	A	15	15	13	8	11	15	17	17	17	17	17	16	11	4	8	18	20	30	34	16.7	33.9	
23-Jan	34	35	35	36	A	36	35	35	33	33	33	33	33	33	32	29	21	36	37	37	35	33	35	32	33.6	37.4	
24-Jan	32	26	26	28	A	27	27	17	18	14	21	21	22	25	24	24	22	20	9	15	22	22	22	19	21.9	31.6	
25-Jan	21	21	21	21	A	19	16	21	20	20	16	18	18	17	20	19	19	20	21	22	22	22	23	23	20.0	23.1	
26-Jan	24	24	24	24	A	24	23	23	23	25	26	27	27	28	28	28	25	27	27	25	26	26	24	23	25.2	28.0	
27-Jan	18	19	22	22	A	20	19	18	17	19	20	22	24	25	25	27	26	26	21	24	23	24	22	20	21.8	27.1	
28-Jan	20	19	18	18	A	18	17	14	17	19	26	26	26	26	27	26	26	25	25	25	25	24	25	24	22.3	26.7	
29-Jan	23	22	22	21	A	16	14	15	10	12	16	15	17	18	19	18	17	13	10	12	13	15	15	15	16.1	23.2	
30-Jan	15	13	15	15	A	19	20	20	20	22	23	22	23	25	25	24	23	24	25	27	27	28	29	29	22.3	29.0	
31-Jan	28	27	27	27	A	26	26	26	26	27	28	28	30	30	30	30	29	29	23	25	27	26	26	26	27.4	30.3	
		25.3	25.5	25.8	26.5	--	25.8	25.8	25.2	25.0	25.6	26.9	27.5	27.5	27.3	27.6	27.9	27.8	26.2	25.3	25.4	25.8	26.2	26.5	25.9	Diurnal Average	
		40.6	40.6	40.1	41.3	--	40.8	39.6	39.9	40.6	39.9	40.5	39.5	39.6	37.7	40.8	41.1	41.8	40.7	43.7	43.1	42.0	40.3	40.3	40.3	Diurnal Maximum	
C - Calibration					A - Automated Daily Zero Span																						

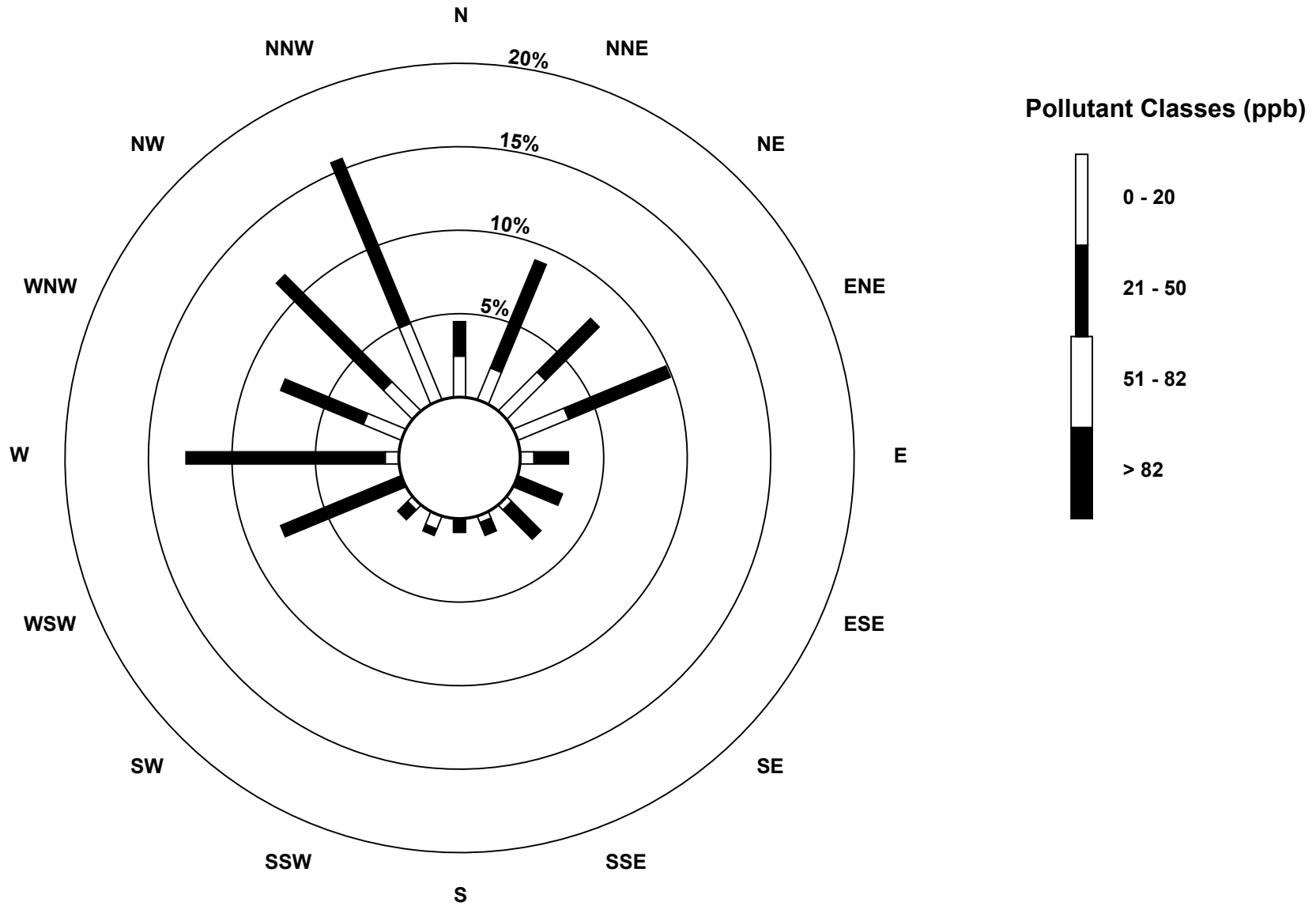
### Hourly Maximums

Ozone (O<sub>3</sub>) - ppb  
Beaverlodge - January 2018



## Pollutant Rose

Ozone ( $O_3$ ) - ppb  
Beaverlodge - January 2018



# Eight Hour Running Averages

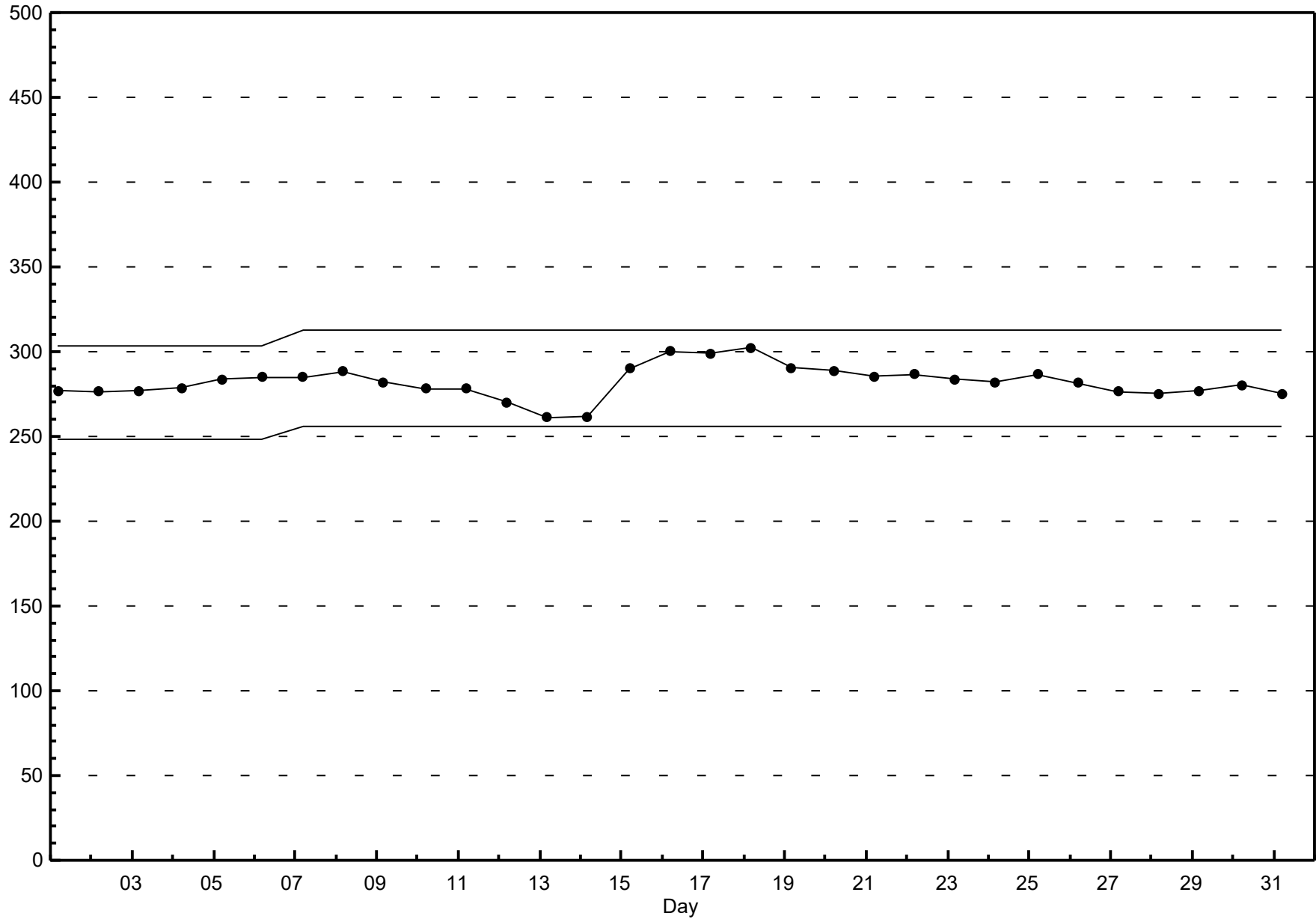
Ozone (O<sub>3</sub>) - ppb

Beaverlodge - January 2018

Maximum Value: 40.0 ppb on Jan 7 00:00																					Hours in Service:	744			
Minimum Value: 0.9 ppb on Jan 13 01:00																					Hours of Data:	738			
Percentiles: P <sub>1</sub> = 2.7 P <sub>10</sub> = 10.1 Q <sub>1</sub> = 16.2 Median = 24.4 Q <sub>3</sub> = 31.4 P <sub>90</sub> = 36.3 P <sub>99</sub> = 39.9																					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-Jan	10	8	6	5	5	5	5	6	7	8	12	15	17	21	24	28	31	34	36	38	38	39	39	38	38.9
2-Jan	38	38	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	36	37	36	37	37	37	37	37.9
3-Jan	37	38	38	38	38	38	38	37	37	37	37	36	36	36	36	35	35	35	34	34	34	34	34	35	38.1
4-Jan	35	35	35	36	36	35	35	35	34	33	32	31	31	30	28	27	25	22	21	19	17	15	14	13	35.7
5-Jan	13	13	12	11	10	9	8	7	6	6	7	8	10	12	14	15	17	18	19	19	18	17	16	15	19.1
6-Jan	14	14	15	18	18	22	25	29	32	35	36	35	35	N	N	N	N	N	N	40	40	40	40	40	40.0
7-Jan	40	40	40	40	40	40	39	39	39	39	38	38	38	37	37	37	37	36	35	33	32	32	31	29	40.0
8-Jan	28	28	28	29	29	28	27	26	25	24	23	23	24	24	25	27	27	27	27	28	28	29	29	30	30.2
9-Jan	31	33	34	34	35	35	35	36	36	36	36	36	36	35	35	35	34	34	34	33	33	33	32	32	36.0
10-Jan	32	32	31	31	31	30	30	29	28	28	27	27	28	28	28	29	30	29	29	29	27	26	25	24	32.0
11-Jan	23	22	21	20	21	22	20	18	16	16	17	15	15	14	14	14	15	13	11	9	7	6	4	3	22.9
12-Jan	2	3	3	4	4	4	5	5	6	6	7	7	8	9	9	10	10	10	8	7	6	4	3	2	10.1
13-Jan	1	1	2	2	3	4	6	10	15	19	22	26	27	30	33	33	33	34	34	34	31	31	31	31	34.0
14-Jan	30	27	26	24	26	26	27	27	27	31	32	34	33	32	31	30	30	29	27	25	24	23	22	22	33.5
15-Jan	21	21	22	22	23	22	21	20	19	19	18	17	17	16	16	16	16	15	14	13	13	12	11	10	22.7
16-Jan	10	10	10	9	9	9	8	7	7	6	6	6	6	6	7	7	8	10	12	12	12	12	13	16	15.9
17-Jan	17	17	19	21	23	27	29	30	32	34	35	35	35	35	35	36	36	35	35	34	33	32	30	28	35.6
18-Jan	27	25	23	23	22	20	19	18	16	15	14	14	14	14	14	18	21	24	27	30	33	36	39	38.6	
19-Jan	39	39	39	38	38	38	38	37	37	36	36	35	35	35	35	34	34	33	31	31	30	30	29	28	39.2
20-Jan	28	28	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	28	26	25	25	25	26	27	29.4
21-Jan	28	29	32	33	33	33	32	32	31	30	29	29	28	28	27	26	26	26	25	24	23	23	22	22	33.0
22-Jan	21	20	19	19	19	17	16	14	12	10	9	9	10	11	12	13	14	13	12	11	10	11	12	14	20.8
23-Jan	16	20	24	27	30	32	34	34	34	33	33	33	32	32	31	30	27	27	27	28	27	27	27	29	33.8
24-Jan	31	30	29	27	27	27	24	21	19	16	15	14	15	15	16	17	18	18	16	15	15	14	14	14	30.7
25-Jan	14	15	18	19	19	19	18	19	19	18	17	17	17	17	17	17	17	17	18	18	19	19	20	20	20.5
26-Jan	21	22	22	22	23	23	23	23	23	23	23	23	24	24	25	26	26	26	26	25	25	25	24	24	25.9
27-Jan	23	22	21	21	20	19	19	18	18	17	17	17	18	18	19	20	22	23	23	23	23	22	21	21	23.1
28-Jan	20	20	19	19	18	17	17	16	15	15	16	18	18	20	21	23	24	25	25	25	25	24	24	24	25.1
29-Jan	24	24	23	23	22	21	19	17	15	13	13	12	12	12	13	14	15	15	13	13	12	12	11	11	23.9
30-Jan	11	12	13	13	14	14	15	16	16	17	18	19	20	21	21	22	23	23	23	23	24	24	25	25	25.3
31-Jan	26	26	26	26	26	26	26	25	25	26	26	26	26	27	27	27	28	28	27	26	25	25	25	24	27.9
40.0 40.0 39.9 39.7 39.7 39.6 39.4 39.3 39.1 38.7 38.4 38.1 37.7 37.3 37.1 37.2 36.9 36.4 36.6 37.7 39.9 39.9 39.9 40.0																								Diurnal Maximums	
N - Not Valid																									

### Span Responses

Ozone (O<sub>3</sub>)  
Beaverlodge - January 2018



## Hourly Averages

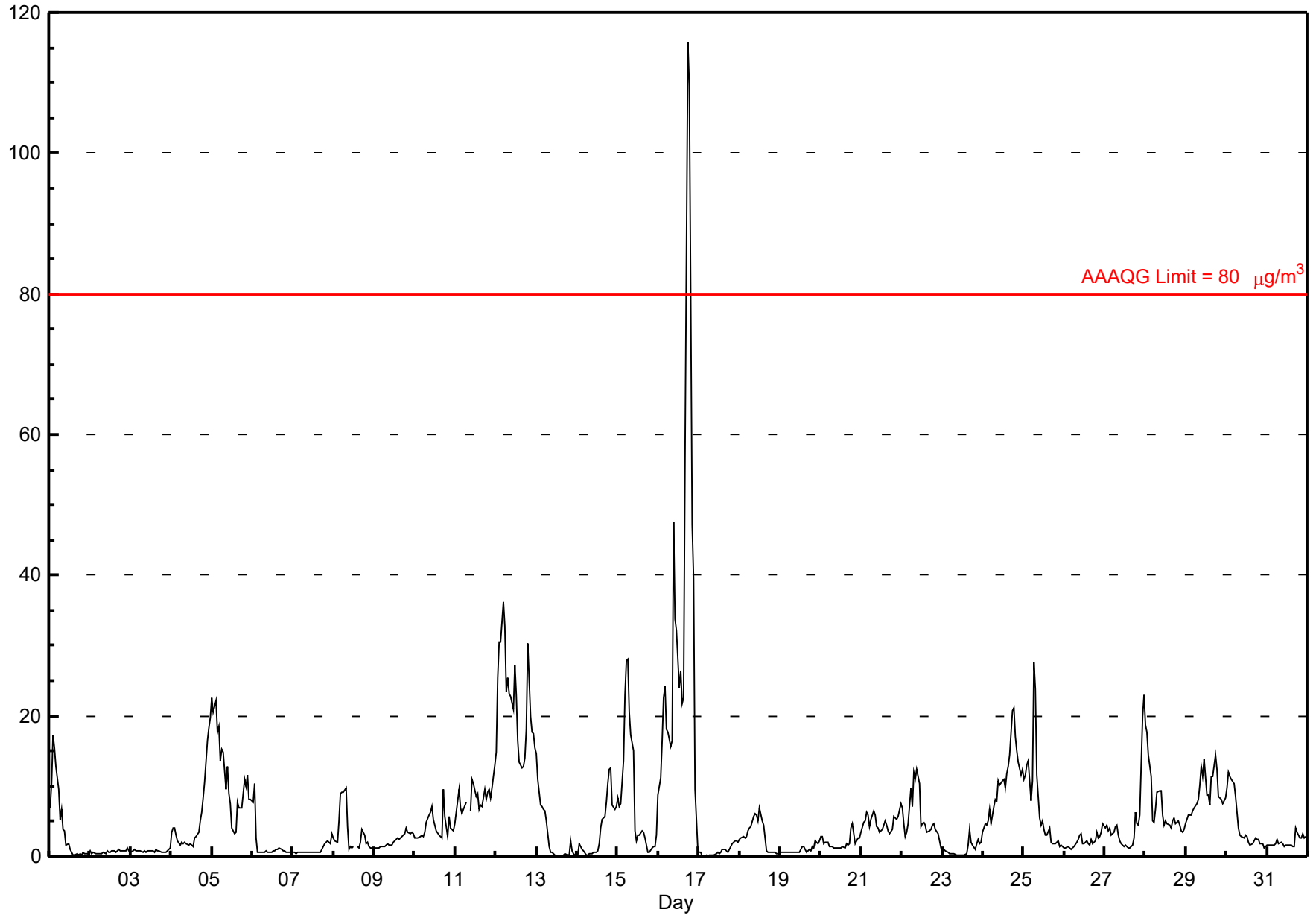
## Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

### Beaverlodge - January 2018

Number of Exceedences: 1-hr: 2 24-hr: 1	Hours in Service: 744
Maximum Value: 115.8 µg/m <sup>3</sup> on Jan 16 18:00	Maximum Daily Average: 34.1 µg/m <sup>3</sup> on Jan 16
Minimum Value: 0 µg/m <sup>3</sup> on Jan 13 13:00	Hours of Data: 741
Maximum Diurnal Average: 8.0 µg/m <sup>3</sup> at hour 18	Hours of Missing Data: 3
Monthly Average: 5.79 µg/m <sup>3</sup>	Hours of Calibration: 1
Minimum Daily Average: 0.7 µg/m <sup>3</sup> on Jan 2	Percent Operational Time: 99.7
Minimum Diurnal Average: 3.8 µg/m <sup>3</sup> at hour 15	
Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.6 Q <sub>1</sub> = 1.1 Median = 2.8 Q <sub>3</sub> = 7.0 P <sub>90</sub> = 13.8 P <sub>99</sub> = 32.4	

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-Jan	7	10	17	16	13	9	5	7	4	4	2	2	1	1	0	0	0	0	0	0	1	0	0	0	4.2	17.2																						
2-Jan	1	0	1	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1																						
3-Jan	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																						
4-Jan	4	4	4	3	2	2	2	2	2	2	2	2	1	3	3	3	5	6	8	11	17	18	20	5.3	19.7																							
5-Jan	23	21	22	18	18	14	15	15	10	13	9	8	4	3	4	8	7	7	7	11	10	12	8	8	11.4	22.6																						
6-Jan	8	10	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.5	10.3																						
7-Jan	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	3	1.0	3.2																							
8-Jan	3	2	2	5	9	9	9	10	4	1	1	1	1	C	1	1	2	4	3	2	2	1	1	1	3.4	9.8																						
9-Jan	1	1	1	1	1	1	1	2	2	2	2	2	2	2	3	3	3	3	3	4	3	3	4	3	2.3	4.0																						
10-Jan	3	3	3	3	3	3	3	5	6	6	7	5	4	4	3	3	3	9	6	3	6	4	4	4	4.2	9.5																						
11-Jan	5	8	9	7	6	7	8	N	N	7	11	10	8	9	7	7	7	10	8	9	10	8	10	13	8.3	13.0																						
12-Jan	15	26	30	31	36	33	23	26	23	23	21	27	23	16	13	13	13	14	18	30	20	18	17	15	21.9	36.1																						
13-Jan	15	11	7	7	7	7	5	1	1	1	0	0	0	0	0	0	0	0	0	0	2	1	0	0	2.8	14.6																						
14-Jan	0	2	1	1	1	0	0	0	0	0	1	1	1	2	4	5	6	8	10	12	13	7	7	7	3.7	12.7																						
15-Jan	8	7	8	14	23	28	28	21	17	15	4	2	3	3	4	4	3	2	1	1	1	1	2	3	8.3	28.1																						
16-Jan	9	11	16	23	24	18	18	16	17	48	34	32	24	27	22	23	56	116	110	79	47	39	10	1	34.1	115.8																						
17-Jan	1	1	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	2	2	2	2	0.8	2.3																						
18-Jan	2	3	3	3	3	4	4	4	6	6	6	5	7	5	4	3	1	1	1	1	1	1	0	0	3.0	6.9																						
19-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1.0	2.2																						
20-Jan	3	3	2	2	2	1	1	1	1	1	1	1	1	1	1	2	2	2	4	5	2	2	3	3	2.0	4.6																						
21-Jan	3	5	5	6	6	4	5	6	6	4	4	4	4	4	5	5	4	3	4	6	6	5	6	7	4.9	7.5																						
22-Jan	7	5	3	3	5	10	7	12	11	12	10	4	5	5	5	4	4	4	4	5	4	3	2	1	5.6	12.3																						
23-Jan	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	2	4	2	2	1	2	2	2	2	1.0	3.9																						
24-Jan	4	5	5	5	7	5	7	8	8	11	10	11	11	10	12	13	14	21	21	17	15	13	12	12	10.6	21.1																						
25-Jan	11	12	13	14	8	11	28	24	12	5	4	5	4	3	3	4	2	2	2	2	2	2	2	2	7.3	27.7																						
26-Jan	1	1	1	1	1	1	1	2	2	3	3	2	2	2	2	2	3	2	2	3	3	3	3	5	2.2	4.7																						
27-Jan	4	4	4	4	3	3	4	4	3	2	2	1	2	1	1	1	2	3	6	5	4	6	20	23	4.8	23.0																						
28-Jan	19	18	14	11	5	5	7	9	9	9	6	5	5	5	4	4	5	5	5	5	4	4	3	4	7.1	18.6																						
29-Jan	5	6	6	6	7	7	7	8	10	13	11	14	9	9	7	11	11	14	12	9	8	8	7	8	8.9	14.4																						
30-Jan	10	12	11	11	10	9	6	4	3	3	3	3	3	2	2	2	2	3	2	3	2	2	1	1	4.6	11.9																						
31-Jan	2	2	2	2	2	2	3	2	2	2	2	2	2	2	2	1	1	4	3	3	3	3	3	3	2.1	4.0																						
																								5.6	6.2	6.4	6.4	6.6	6.3	6.6	6.4	5.4	6.3	5.1	5.0	4.3	4.1	3.8	4.1	5.2	8.0	8.0	7.4	6.1	5.7	5.0	5.1	Diurnal Average
																								22.6	25.5	30.5	30.6	36.1	32.8	28.1	25.5	23.1	47.6	33.8	32.1	24.1	26.5	21.9	22.7	56.4	115.8	109.6	79.4	47.3	39.5	19.9	23.0	Diurnal Maximum

C - Calibration N - Not Valid  
 Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m<sup>3</sup> Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m<sup>3</sup>



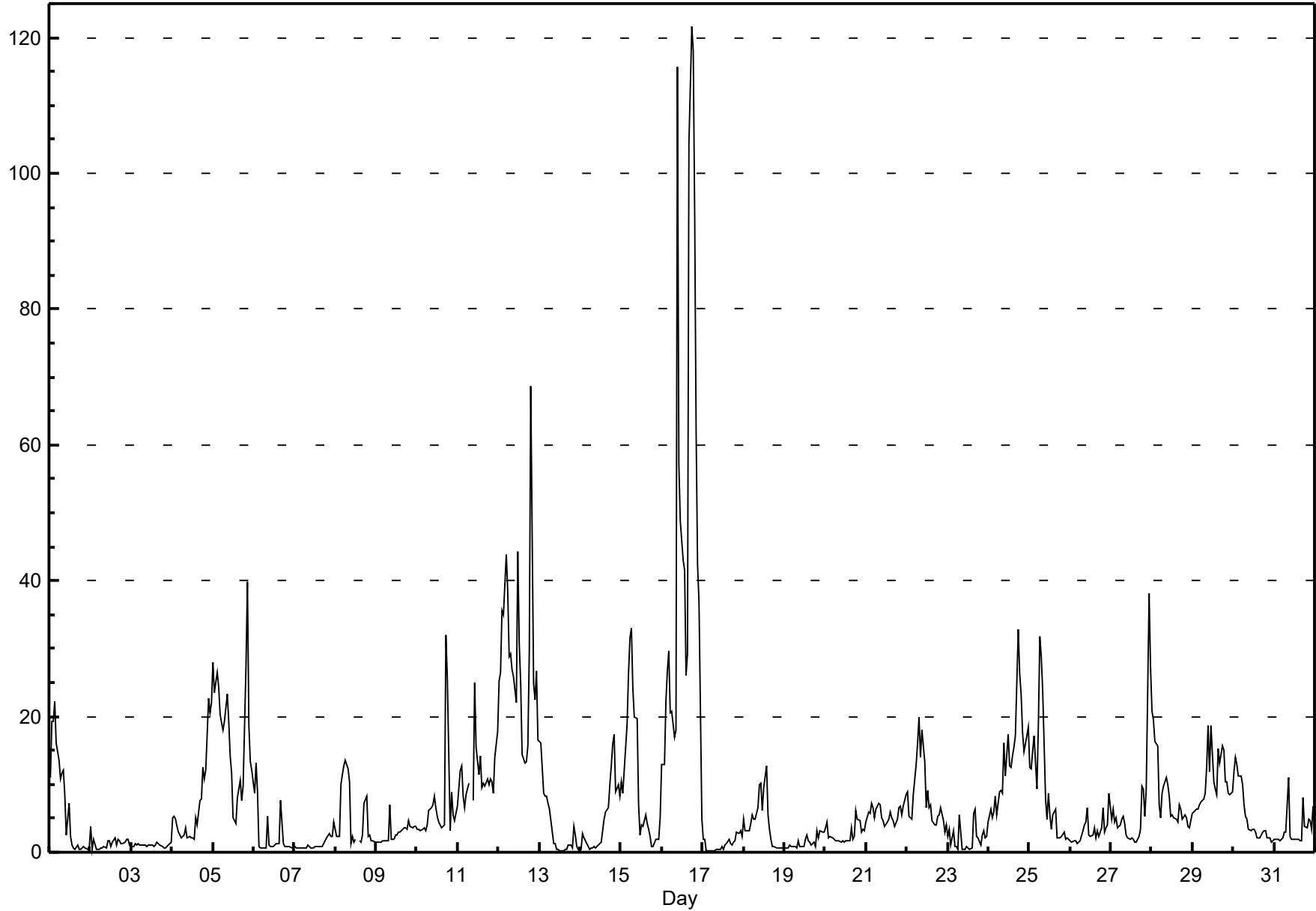


# Hourly Maximums

## Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

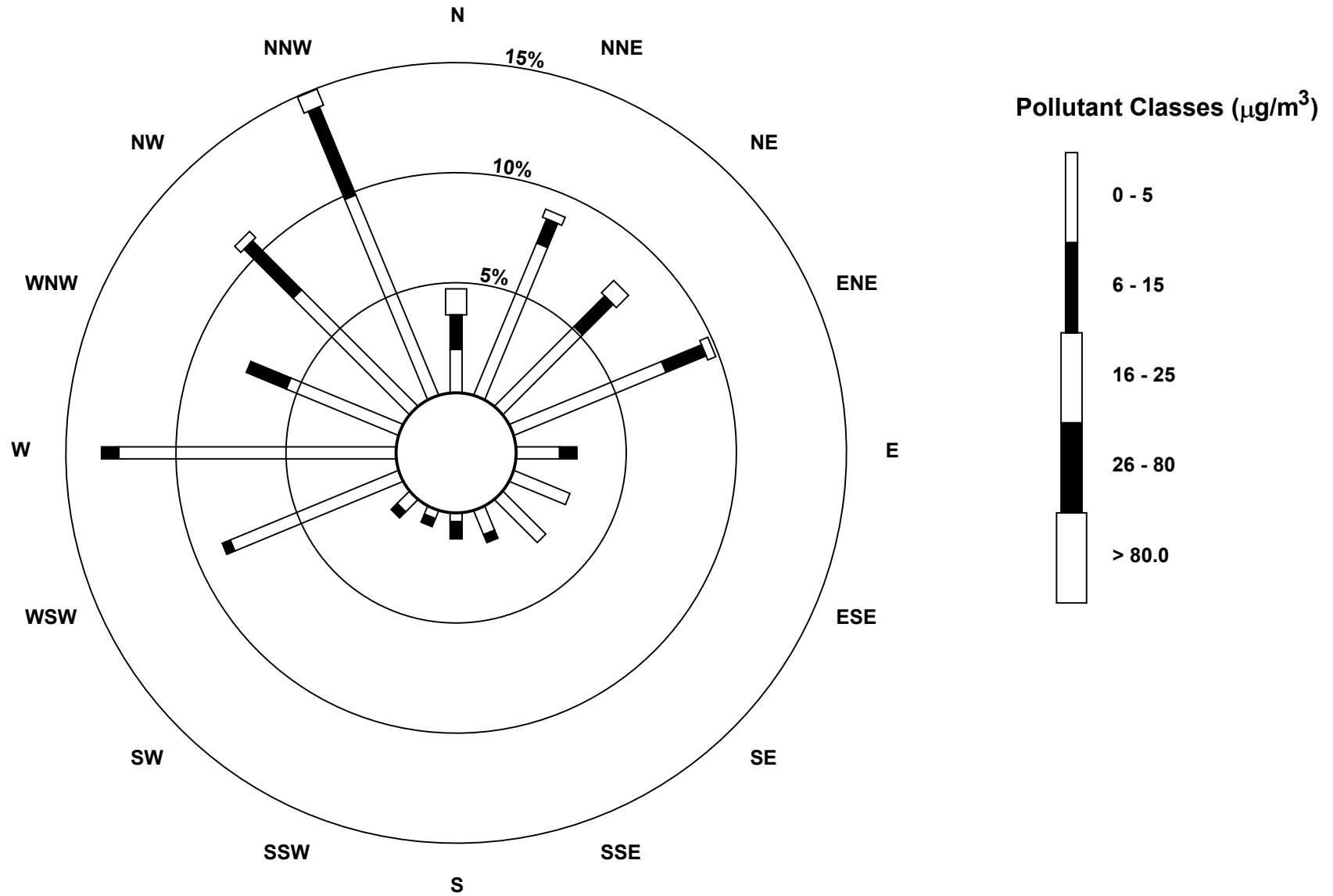
### Beaverlodge - January 2018

Maximum Value: 121.7 µg/m <sup>3</sup> on Jan 16 18:00		Maximum Daily Average: 46.9 µg/m <sup>3</sup> on Jan 16		Hours in Service: 744																							
Minimum Value: 0 µg/m <sup>3</sup> on Jan 13 15:00		Minimum Daily Average: 1.0 µg/m <sup>3</sup> on Jan 3		Hours of Data: 741																							
Maximum Diurnal Average: 10.7 µg/m <sup>3</sup> at hour 20		Minimum Diurnal Average: 5.0 µg/m <sup>3</sup> at hour 15		Hours of Missing Data: 3																							
Monthly Average: 7.88 µg/m <sup>3</sup>		Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.7 Q <sub>1</sub> = 1.6 Median = 3.9 Q <sub>3</sub> = 9.3 P <sub>90</sub> = 19.3 P <sub>99</sub> = 56.2		Hours of Calibration: 1																							
				Percent Operational Time: 99.7																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jan	11	19	19	22	16	14	11	12	12	9	3	7	2	1	1	0	1	0	0	1	1	1	0	1	6.9	22.3	
2-Jan	4	0	2	0	0	0	1	1	1	1	2	2	1	1	2	1	2	2	1	1	1	2	2	1	1.3	3.9	
3-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.4	
4-Jan	5	5	5	4	3	2	2	3	4	2	2	2	2	2	5	4	8	8	12	11	12	23	21	22	7.0	22.7	
5-Jan	28	23	26	24	20	19	18	19	23	19	14	12	5	4	8	9	11	8	10	28	40	19	13	12	17.2	39.8	
6-Jan	9	13	9	1	1	1	1	1	5	1	1	1	1	1	1	1	8	1	1	1	1	1	1	1	2.5	13.2	
7-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	3	2	2	4	1.3	4.4	
8-Jan	3	2	2	10	11	13	14	12	10	1	2	1	2	C	2	1	3	7	8	2	3	2	2	1	5.1	13.7	
9-Jan	1	1	1	1	2	2	2	2	7	2	2	2	3	3	3	3	4	4	3	5	4	4	4	4	2.8	7.0	
10-Jan	3	3	3	3	4	3	4	6	7	7	8	7	5	4	4	4	4	32	26	3	9	6	5	6	6.9	32.0	
11-Jan	7	12	13	8	7	8	10	N	N	8	25	15	11	14	9	10	10	11	10	11	10	9	14	18	11.4	24.9	
12-Jan	25	26	36	35	44	38	29	29	27	26	22	44	31	25	14	13	13	16	30	69	25	23	27	17	28.5	68.7	
13-Jan	16	16	9	8	8	7	6	3	1	1	0	0	0	0	0	0	0	1	1	1	4	3	1	0	3.7	16.4	
14-Jan	0	3	2	2	1	0	1	1	1	1	1	1	1	3	5	6	7	10	13	16	17	9	10	8	4.9	17.3	
15-Jan	10	9	12	19	26	32	33	24	20	20	7	3	4	4	6	4	3	2	1	1	2	2	2	5	10.5	33.0	
16-Jan	13	13	22	27	30	21	21	17	18	116	57	49	43	42	26	29	104	122	118	94	62	42	37	5	46.9	121.7	
17-Jan	2	2	0	0	0	0	0	0	0	1	1	1	1	1	1	2	1	1	1	2	3	3	3	2	1.2	3.1	
18-Jan	5	3	3	3	4	6	5	5	7	10	10	6	10	13	6	3	2	1	1	1	1	1	1	1	4.4	12.6	
19-Jan	1	1	1	1	1	1	1	1	2	1	1	1	2	3	2	1	1	1	1	3	2	3	3	3	1.5	3.1	
20-Jan	4	4	2	2	2	2	2	2	2	1	2	1	2	2	2	4	2	2	6	5	5	3	3	3	2.7	6.1	
21-Jan	4	6	6	7	7	5	6	7	7	5	5	4	4	5	6	5	5	4	5	7	7	6	7	9	5.7	8.5	
22-Jan	9	5	5	5	9	13	16	20	14	18	13	7	9	7	7	5	4	4	5	6	7	5	3	4	8.3	20.0	
23-Jan	2	3	1	3	1	1	0	6	0	0	0	1	1	0	1	6	6	2	2	1	3	3	2	2	2.1	6.3	
24-Jan	4	6	5	6	8	6	9	9	9	16	11	17	13	12	14	15	17	33	26	23	18	15	17	19	13.7	32.8	
25-Jan	12	12	15	17	9	19	32	29	24	8	5	9	6	3	6	6	2	2	2	2	3	2	2	2	9.5	31.8	
26-Jan	2	1	2	2	1	1	2	3	4	4	7	3	2	3	4	2	3	2	4	7	3	4	4	9	3.2	8.8	
27-Jan	5	6	4	5	4	4	5	5	4	2	2	2	2	2	1	1	2	3	10	9	5	9	38	27	6.7	38.1	
28-Jan	21	20	16	16	7	5	9	10	11	10	8	5	6	5	5	4	7	6	5	6	5	4	4	5	8.3	20.8	
29-Jan	6	6	6	6	7	8	8	9	12	19	12	19	10	9	8	15	13	16	15	10	10	9	8	9	10.5	18.6	
30-Jan	12	14	13	11	11	10	7	5	5	3	3	3	3	3	2	2	3	3	3	3	2	2	1	2	5.3	13.9	
31-Jan	2	2	2	2	2	2	3	3	11	2	2	2	2	2	2	2	2	8	4	4	5	5	3	7	3.3	11.0	
		7.4	7.8	7.9	8.2	8.0	7.9	8.3	8.1	8.3	10.2	7.4	7.4	6.0	5.9	5.0	5.3	8.1	10.2	10.6	10.7	8.8	7.0	7.8	6.7	Diurnal Average	
		27.9	26.4	35.7	35.0	43.8	38.4	33.0	29.3	26.9	115.6	57.3	48.7	43.1	41.6	26.2	29.3	104.4	121.7	118.0	93.8	62.2	42.4	38.1	27.1	Diurnal Maximum	
C - Calibration		N - Not Valid																									



**Pollutant Rose**

**Particulate Matter 2.5 (PM<sub>2.5</sub>) - μg/m<sup>3</sup>**  
**Beaverlodge - January 2018**



# Hourly Averages

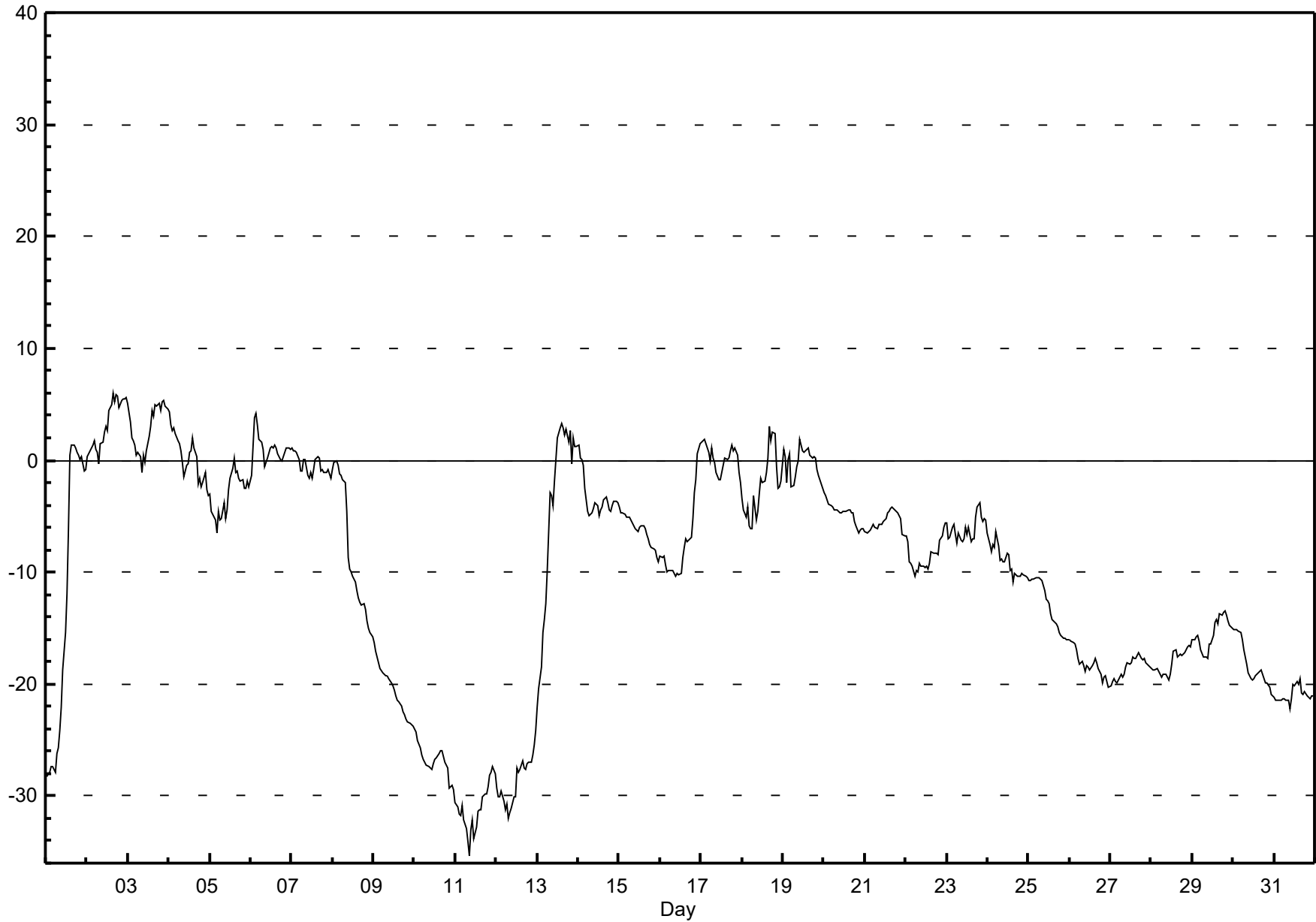
External Temperature (ET) - °C

Beaverlodge - January 2018

Maximum Value: 6.0 °C on Jan 2 16:00		Maximum Daily Average: 3.2 °C on Jan 2		Hours in Service: 744																						
Minimum Value: -35 °C on Jan 11 09:00		Minimum Daily Average: -31.1 °C on Jan 11		Hours of Data: 744																						
Maximum Diurnal Average: -8.8 °C at hour 17		Minimum Diurnal Average: -11.0 °C at hour 10		Hours of Missing Data: 0																						
Monthly Average: -9.83 °C		Percentiles: P <sub>1</sub> = -32.1 P <sub>10</sub> = -25.7 Q <sub>1</sub> = -18.1 Median = -7.0 Q <sub>3</sub> = -1.1 P <sub>90</sub> = 1.2 P <sub>99</sub> = 5.4		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-Jan	-28	-28	-28	-27	-27	-28	-26	-26	-24	-22	-19	-15	-12	-6	1	1	1	1	1	0	0	0	-1	-1	-13.1	1.4
2-Jan	0	1	1	1	2	1	1	0	2	2	3	3	3	4	5	6	5	6	6	5	5	5	5	6	3.2	6.0
3-Jan	5	3	2	2	1	0	1	0	-1	0	0	1	2	3	4	4	5	5	5	4	5	5	5	5	2.8	5.4
4-Jan	4	3	3	3	2	2	2	1	0	-1	0	0	1	1	2	1	0	-2	-2	-2	-2	-1	-3	-3	0.3	4.3
5-Jan	-3	-5	-5	-5	-6	-5	-5	-5	-4	-5	-4	-3	-2	-1	0	-1	-1	-2	-2	-2	-2	-3	-2	-2	-3.1	0.2
6-Jan	-1	1	4	4	3	2	2	1	-1	0	0	1	1	1	1	1	1	0	0	0	1	1	1	1	1.1	4.2
7-Jan	1	1	1	1	0	-1	-1	0	0	-1	-2	-1	-2	-1	0	0	0	-1	-1	-1	-1	-1	-1	-2	-0.5	1.1
8-Jan	-1	0	0	0	-1	-1	-2	-2	-5	-9	-10	-10	-10	-11	-12	-12	-13	-13	-13	-13	-14	-15	-15	-16	-8.3	-0.1
9-Jan	-16	-17	-18	-18	-19	-19	-19	-19	-19	-20	-20	-20	-21	-21	-21	-22	-22	-22	-23	-23	-23	-23	-24	-24	-20.5	-16.3
10-Jan	-24	-24	-25	-26	-26	-27	-27	-27	-27	-28	-28	-27	-27	-27	-26	-26	-26	-26	-27	-27	-29	-29	-29	-29	-26.9	-24.1
11-Jan	-31	-31	-32	-32	-31	-32	-33	-34	-35	-33	-32	-34	-33	-31	-31	-31	-30	-30	-30	-29	-28	-28	-27	-28	-31.1	-27.4
12-Jan	-29	-30	-30	-30	-30	-31	-31	-32	-31	-31	-30	-30	-28	-28	-28	-27	-28	-28	-27	-27	-27	-26	-25	-24	-28.7	-24.1
13-Jan	-22	-20	-18	-15	-14	-13	-10	-3	-3	-4	-2	0	2	3	3	3	2	3	2	3	0	2	1	1	-4.2	3.3
14-Jan	1	0	0	0	-2	-5	-5	-5	-5	-4	-4	-4	-5	-5	-4	-4	-3	-4	-4	-5	-4	-4	-4	-4	-3.4	1.4
15-Jan	-4	-5	-5	-5	-5	-5	-5	-5	-6	-6	-6	-6	-6	-6	-6	-6	-7	-7	-8	-8	-8	-8	-9	-9	-6.2	-4.1
16-Jan	-9	-9	-9	-9	-10	-10	-10	-10	-10	-10	-10	-10	-10	-9	-8	-7	-7	-7	-7	-5	-3	-2	1	2	-7.4	1.5
17-Jan	2	2	2	1	1	0	1	0	0	-1	-2	-2	-1	0	0	0	0	1	1	1	1	0	-1	-2	0.2	1.9
18-Jan	-3	-5	-5	-4	-6	-6	-6	-3	-5	-5	-3	-2	-2	-1	0	3	2	2	2	-1	-3	-2	-2	-2	-2.3	3.1
19-Jan	1	0	-2	0	1	-2	-2	-2	-1	0	2	1	1	1	1	0	0	0	0	0	-1	-1	-2	-3	-0.3	1.9
20-Jan	-3	-3	-4	-4	-4	-4	-4	-4	-4	-5	-5	-5	-5	-5	-4	-4	-5	-5	-5	-6	-6	-6	-6	-6	-4.7	-2.8
21-Jan	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-5	-5	-5	-4	-4	-4	-5	-5	-5	-5	-7	-7	-5.5	-4.1
22-Jan	-7	-7	-9	-9	-9	-10	-10	-10	-9	-9	-9	-10	-9	-10	-9	-8	-8	-8	-8	-8	-7	-7	-6	-6	-8.5	-5.6
23-Jan	-6	-7	-7	-6	-6	-7	-7	-6	-7	-7	-7	-6	-7	-6	-7	-7	-7	-5	-4	-4	-5	-5	-5	-5	-6.1	-3.8
24-Jan	-7	-7	-8	-8	-8	-6	-8	-9	-9	-9	-9	-8	-8	-10	-10	-11	-10	-10	-10	-10	-10	-10	-11	-11	-9.1	-6.3
25-Jan	-11	-11	-11	-11	-11	-11	-11	-11	-11	-12	-12	-13	-13	-14	-14	-15	-15	-15	-15	-16	-16	-16	-16	-16	-13.0	-10.5
26-Jan	-16	-16	-16	-16	-17	-18	-18	-18	-18	-19	-18	-18	-19	-18	-18	-18	-18	-19	-19	-20	-19	-19	-20	-20	-18.2	-16.1
27-Jan	-20	-20	-20	-20	-20	-19	-19	-19	-19	-19	-18	-18	-18	-18	-18	-18	-17	-17	-18	-18	-18	-18	-18	-18	-18.5	-17.2
28-Jan	-19	-19	-19	-19	-19	-19	-19	-19	-19	-20	-19	-18	-17	-17	-17	-18	-17	-17	-17	-17	-17	-17	-17	-17	-18.1	-16.6
29-Jan	-16	-16	-16	-16	-16	-17	-18	-18	-18	-18	-16	-16	-16	-14	-14	-15	-14	-14	-14	-13	-14	-14	-15	-15	-15.5	-13.4
30-Jan	-15	-15	-15	-15	-15	-16	-17	-18	-18	-19	-20	-20	-20	-19	-19	-19	-19	-19	-19	-20	-20	-20	-21	-21	-18.3	-15.1
31-Jan	-21	-21	-21	-21	-21	-21	-21	-21	-21	-22	-21	-20	-20	-20	-20	-20	-21	-21	-21	-21	-21	-21	-21	-21	-21.0	-19.6
		-9.8	-10.1	-10.2	-10.0	-10.4	-10.8	-10.8	-10.7	-10.8	-11.0	-10.6	-10.2	-9.9	-9.3	-8.9	-8.8	-8.8	-9.0	-9.1	-9.2	-9.4	-9.3	-9.5	-9.6	Diurnal Average
		5.0	3.4	3.8	4.2	3.2	1.9	1.6	1.0	1.5	1.6	2.5	3.1	2.6	4.5	5.0	6.0	5.2	5.9	5.8	4.7	5.3	5.4	5.5	5.6	Diurnal Maximum

**Hourly Averages**

**External Temperature (ET) - °C**  
**Beaverlodge - January 2018**



# Hourly Averages

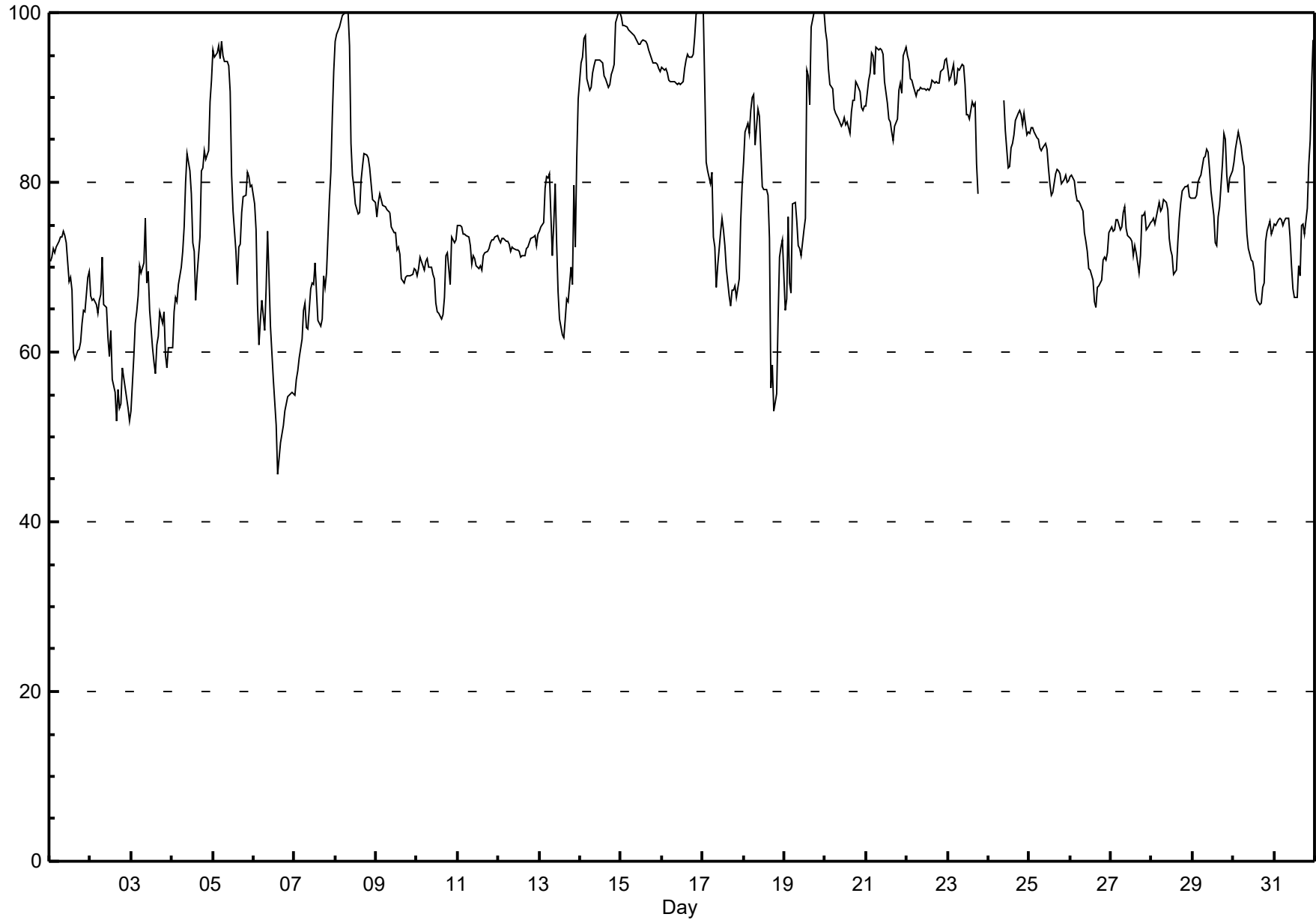
Relative Humidity (RH) - %

Beaverlodge - January 2018

Maximum Value: 100.0 % on Jan 8 07:00		Maximum Daily Average: 96.3 % on Jan 15		Hours in Service: 744																							
Minimum Value: 46 % on Jan 6 15:00		Minimum Daily Average: 59.5 % on Jan 6		Hours of Data: 730																							
Maximum Diurnal Average: 81.0 % at hour 24		Minimum Diurnal Average: 73.8 % at hour 15		Hours of Missing Data: 14																							
Monthly Average: 78.32 %		Percentiles: P <sub>1</sub> = 53.0 P <sub>10</sub> = 64.6 Q <sub>1</sub> = 70.1 Median = 76.5 Q <sub>3</sub> = 88.7 P <sub>90</sub> = 94.5 P <sub>99</sub> = 100.0		Hours of Calibration: 0																							
				Percent Operational Time: 98.1																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jan	71	71	72	72	72	73	73	74	74	74	73	68	69	67	60	59	60	60	61	63	65	65	69	70	68.1	74.3	
2-Jan	67	66	66	66	65	66	67	71	66	65	62	60	63	57	55	52	56	53	54	58	56	55	53	52	60.3	71.2	
3-Jan	53	60	63	65	67	70	69	71	76	68	69	65	60	59	57	61	62	65	63	65	60	58	61	61	63.6	75.8	
4-Jan	61	65	66	66	68	70	72	75	80	83	81	79	73	72	66	69	73	81	82	84	83	84	89	92	75.6	92.0	
5-Jan	96	95	95	96	95	97	95	94	94	94	91	81	77	72	68	72	73	77	78	78	81	81	79	80	84.9	96.5	
6-Jan	78	74	66	61	64	66	63	67	74	69	63	57	54	51	46	47	49	51	53	54	55	55	55	55	59.5	77.5	
7-Jan	55	57	58	59	62	65	66	63	63	68	68	68	70	67	64	63	64	69	68	69	78	81	88	93	67.7	93.0	
8-Jan	97	97	98	99	100	100	100	100	96	85	81	79	77	76	76	80	82	83	83	83	82	80	78	78	87.1	100.0	
9-Jan	76	78	79	78	77	77	77	77	76	75	74	74	72	72	72	69	68	69	69	69	69	69	70	70	73.1	78.7	
10-Jan	69	70	71	70	70	71	71	70	70	69	69	66	65	65	64	64	66	71	72	68	74	73	73	73	69.3	73.6	
11-Jan	75	75	75	74	74	74	74	73	70	71	71	70	70	70	71	72	72	72	73	73	73	73	74	74	72.4	74.9	
12-Jan	73	73	73	73	73	73	73	72	72	72	72	72	72	71	71	71	72	72	73	73	73	74	73	74	72.6	73.9	
13-Jan	74	75	75	79	81	80	81	71	75	80	73	67	64	62	62	64	66	66	70	68	80	72	83	90	73.3	89.8	
14-Jan	94	95	97	97	92	91	91	93	94	94	94	94	94	94	93	92	91	92	93	93	94	99	100	100	94.2	100.0	
15-Jan	100	98	98	98	98	98	98	97	97	97	96	96	97	97	97	96	96	95	95	94	94	94	93	93	96.3	99.5	
16-Jan	94	93	93	93	92	92	92	92	92	92	92	92	92	93	94	95	95	95	95	97	100	100	100	100	94.3	100.0	
17-Jan	100	91	82	81	80	81	74	72	68	70	74	76	74	72	70	67	65	67	67	68	66	69	76	80	74.6	100.0	
18-Jan	82	86	87	86	88	90	90	84	89	88	84	79	79	79	78	73	56	58	53	55	64	71	72	73	77.0	90.3	
19-Jan	65	66	76	68	67	77	78	75	72	72	71	74	76	93	92	89	98	100	100	100	100	100	100	100	83.8	100.0	
20-Jan	98	97	93	92	91	89	88	88	87	87	87	88	87	87	86	88	90	90	92	92	91	89	88	89	89.6	97.8	
21-Jan	89	92	93	95	95	93	96	96	96	96	95	92	89	87	87	86	85	87	87	91	92	91	95	96	91.6	95.9	
22-Jan	95	94	92	92	91	90	91	91	91	91	91	91	91	91	91	92	92	92	92	92	93	93	94	95	92.0	94.9	
23-Jan	93	92	92	94	91	92	93	93	94	94	91	88	88	88	90	89	89	82	79	N	N	N	N	N	90.1	93.9	
24-Jan	N	N	N	N	N	N	N	N	N	90	86	82	82	84	85	86	87	88	88	88	87	88	86	86	--	89.7	
25-Jan	86	86	86	86	85	85	84	84	84	85	84	82	80	78	79	81	81	81	81	80	80	81	80	80	82.5	86.4	
26-Jan	81	81	80	79	78	78	77	77	74	73	72	70	70	68	66	65	68	68	68	71	71	71	72	74	72.9	80.9	
27-Jan	75	74	74	76	76	74	75	76	77	75	74	73	73	71	72	72	69	71	76	76	76	74	75	75	74.2	77.1	
28-Jan	75	76	75	77	78	77	77	78	78	77	73	72	71	69	70	73	76	78	79	80	80	80	78	78	76.0	79.6	
29-Jan	78	78	78	80	80	81	83	83	84	84	81	79	76	73	73	76	77	82	86	85	81	79	80	81	80.0	85.7	
30-Jan	82	84	85	86	84	83	82	77	74	72	71	71	70	67	66	66	66	68	68	73	74	75	74	74	74.7	86.0	
31-Jan	75	75	76	76	76	75	75	76	76	74	70	67	66	66	70	69	75	75	74	77	82	85	92	97	75.8	96.7	
		80.1	80.5	80.6	80.4	80.3	80.9	80.8	80.3	80.5	80.0	78.5	76.5	75.5	74.9	73.8	74.2	74.8	76.1	76.5	77.2	78.4	78.6	80.0	81.0	Diurnal Average	
		100.0	98.4	98.4	98.9	99.7	99.8	100.0	100.0	97.2	96.5	96.3	96.2	96.6	96.8	96.6	96.2	98.3	100.0	100.0	100.0	100.0	100.0	100.0	100.0	Diurnal Maximum	
N - Not Valid																											

**Hourly Averages**

**Relative Humidity (RH) - %  
Beaverlodge - January 2018**





Peace Airshed Zone Association

# Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	1	1	0	1	1	1	3	2	2	2	1	2	1	8	24	28	30	19	7	14	5	7	3	4	5.3	30.4
Dir	101	1	357	55	187	54	43	63	70	66	58	313	19	287	266	258	256	255	255	280	291	249	280	30	268	256
2 Spd	7	8	7	7	6	7	2	1	4	4	6	1	3	2	3	2	2	10	4	0	5	10	9	8	4.0	10.1
Dir	307	317	304	304	270	260	229	132	275	315	287	130	39	297	57	14	4	264	263	321	275	289	287	304	292	264
3 Spd	6	10	1	0	3	4	1	3	4	2	2	1	1	2	4	6	10	11	12	11	7	9	10	12	3.4	11.9
Dir	291	283	358	51	51	65	148	231	64	69	51	269	165	140	242	203	242	237	251	239	268	295	301	299	266	251
4 Spd	12	5	4	3	3	1	2	1	1	3	5	3	1	5	2	1	4	4	6	4	3	1	3	1	1.6	12.4
Dir	307	299	54	77	64	104	75	115	145	61	52	104	92	51	38	142	284	347	293	16	18	3	66	47	18	307
5 Spd	3	2	2	2	5	4	2	3	2	2	2	2	2	3	1	2	1	1	3	0	2	2	2	6	1.5	5.9
Dir	25	347	344	317	3	319	35	35	62	69	63	90	72	64	147	211	256	345	58	322	44	337	2	330	16	330
6 Spd	2	8	20	37	32	24	25	27	15	15	15	24	30	22	38	37	30	27	28	30	36	25	25	22	24.5	37.9
Dir	341	297	274	256	253	249	257	252	250	267	262	261	256	260	267	263	260	261	261	260	259	270	264	270	261	267
7 Spd	24	27	29	21	12	10	17	20	13	2	4	2	4	4	4	3	3	2	4	3	4	3	2	3	5.6	29.4
Dir	277	270	272	273	258	246	257	269	278	256	181	124	72	76	56	70	82	120	79	123	73	65	91	96	269	272
8 Spd	5	6	8	8	4	1	1	4	16	17	17	14	11	13	12	9	7	7	7	8	12	10	10	9	6.2	17.4
Dir	72	108	119	144	147	185	273	336	334	333	333	333	332	328	330	336	337	339	13	33	30	30	35	34	357	333
9 Spd	9	10	12	14	12	8	6	4	2	7	9	11	7	13	12	11	11	11	13	13	11	11	10	10	8.8	14.1
Dir	27	24	25	30	26	25	19	23	11	12	13	342	335	324	322	324	326	327	324	330	335	335	339	347	351	30
10 Spd	8	9	10	10	11	10	9	10	9	7	8	11	7	8	9	9	6	4	5	6	2	1	2	2	7.0	11.0
Dir	352	348	335	332	335	335	335	331	326	334	322	320	322	316	317	318	322	309	336	351	284	12	17	36	331	335
11 Spd	N	N	N	N	N	N	N	N	0	1	1	2	1	1	1	3	1	0	2	2	3	1	2	2	--	2.6
Dir	N	N	N	N	N	N	N	N	191	324	334	325	357	276	335	10	232	301	28	283	49	327	333	317	--	49
12 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
13 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
14 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
15 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
16 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
17 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
18 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
19 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
20 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
21 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
22 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--





Peace Airshed Zone Association

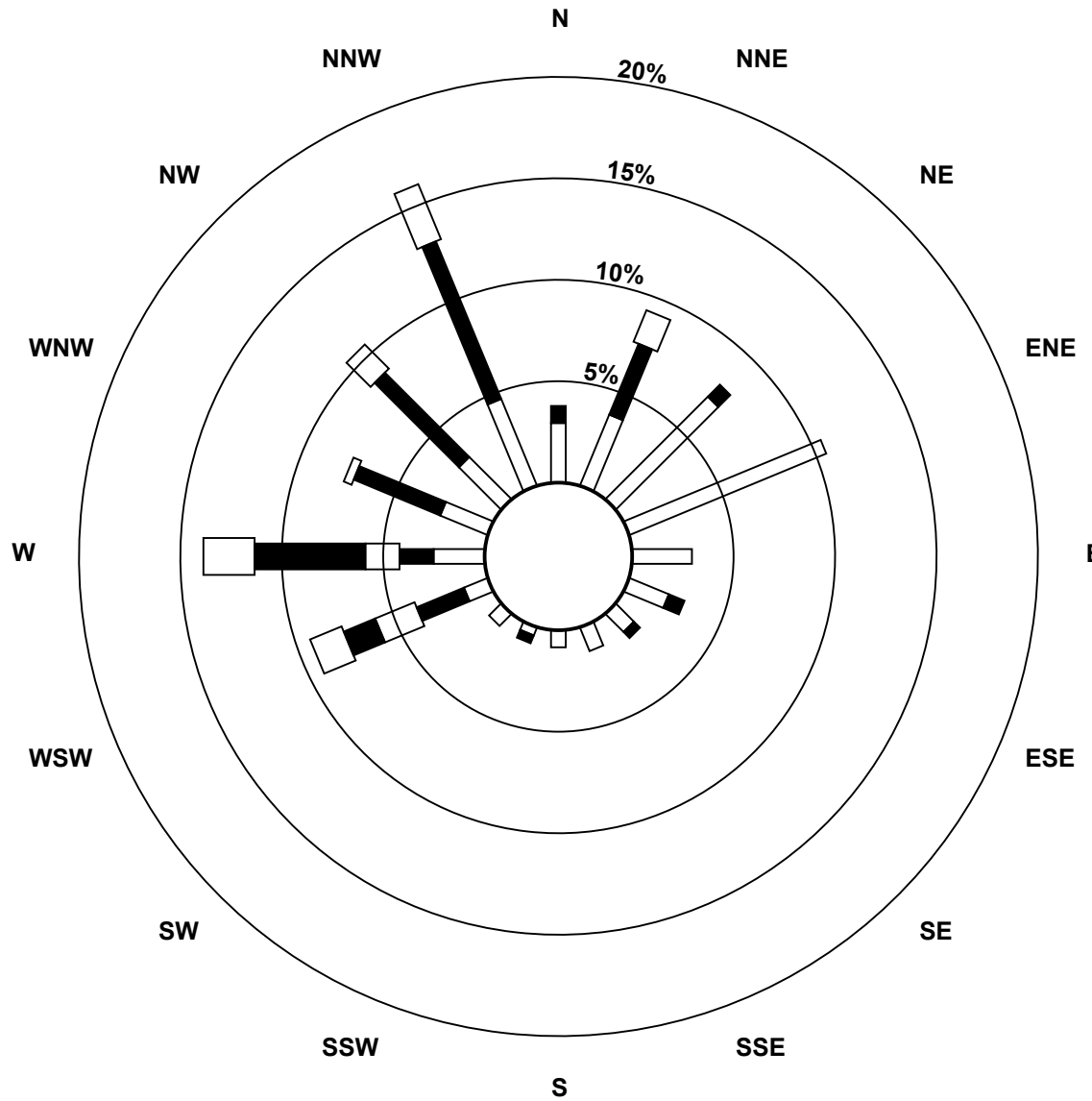
# Hourly Averages

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

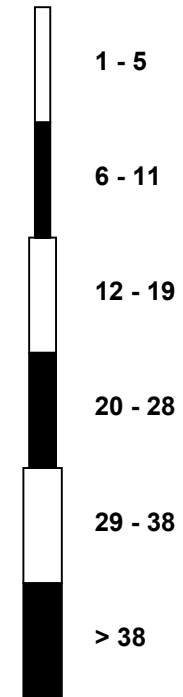
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
23 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
23 Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
24 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
24 Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
25 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
25 Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
26 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
26 Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
27 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
27 Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
28 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
28 Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
29 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
29 Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
30 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
30 Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
31 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
31 Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
Spd	5.1	5.5	5.3	5.5	4.3	3.6	4.1	4.8	3.9	3.7	3.7	4.2	3.5	4.6	7.5	7.3	7.5	6.8	5.3	5.2	4.6	5.0	4.4	4.6	Diurnal Average		
Dir	318	305	303	284	288	280	278	280	303	328	324	308	301	306	290	278	274	274	288	288	297	303	308	321	Diurnal Maximum		
Spd	24.0	27.3	29.4	37.5	32.1	23.6	25.0	27.1	16.0	17.4	17.0	24.1	30.3	22.5	37.9	36.8	30.4	27.1	27.8	29.8	36.3	25.3	25.1	22.1	Diurnal Maximum		
Dir	277	270	272	256	253	249	257	252	334	333	333	261	256	260	267	263	256	261	261	260	259	270	264	270	Diurnal Maximum		
Maximum Speed Value: 38 km/h on Jan 6 15:00																		Minimum Speed Value: 0 km/h on Jan 3 04:00						Hours in Service:		744	
Maximum Daily Speed Average: 24.5 km/h on Jan 6																		Minimum Daily Speed Average: 1.5 km/h on Jan 5						Hours of Data:		256	
Maximum Diurnal Speed Average: 7.5 km/h at hour 15																		Minimum Diurnal Speed Average: 3.5 km/h at hour 13						Hours of Missing Data:		488	
Monthly Average Velocity: 4.83 km/h 295.0 deg																		Speed Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 1.2 Q <sub>1</sub> = 2.2 Median = 5.3 Q <sub>3</sub> = 10.1 P <sub>90</sub> = 19.7 P <sub>99</sub> = 36.8						Percent Operational Time:		34.4	
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	20	11	1	0	0	0	32																				
NorthEast	35	8	4	0	0	0	47																				
East	19	2	0	0	0	0	21																				
SouthEast	12	2	0	0	0	0	14																				
South	5	0	0	0	0	0	5																				
SouthWest	5	4	1	0	0	0	10																				
West	12	13	9	17	10	0	61																				
NorthWest	19	31	16	0	0	0	66																				
Total	127	71	31	17	10	0	256																				

**Wind Rose**

**Wind Speed (WS) (km/h)**  
**Beaverlodge - January 2018**



**Wind Speed Classes (km/h)**



# Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Beaverlodge - January 2018

Maximum Speed: 38 km/h on Jan 6 15:00	Maximum Daily Speed Average: 25.3 km/h on Jan 6	Hours in Service: 744
Minimum Speed: 1 km/h on Jan 11 10:00	Minimum Daily Speed Average: 4.0 km/h on Jan 4	Hours of Data: 256
Maximum Diurnal Speed Average: 11.3 km/h at hour 4	Minimum Diurnal Speed Average: 6.7 km/h at hour 10	Hours of Missing Data: 488
Monthly Average Speed: 8.54 km/h	Percentiles: P <sub>1</sub> = 1.4 P <sub>10</sub> = 2.2 Q <sub>1</sub> = 3.2 Median = 5.9 Q <sub>3</sub> = 10.5 P <sub>90</sub> = 19.8 P <sub>99</sub> = 37.6	Percent Operational Time: 34.4

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-Jan	2	1	1	2	2	2	3	3	3	3	3	4	3	9	25	28	31	19	7	14	6	7	6	5	7.9	30.5
2-Jan	7	8	7	7	6	8	4	3	5	6	6	2	5	3	3	2	5	11	5	5	6	10	9	8	5.8	10.6
3-Jan	6	10	4	4	5	4	2	3	5	4	3	2	2	3	5	6	10	11	12	12	7	9	10	12	6.3	12.1
4-Jan	13	6	5	4	4	4	2	2	2	4	5	3	2	5	3	2	4	5	6	5	4	2	3	2	4.0	12.8
5-Jan	4	4	5	5	9	6	5	4	3	4	3	4	2	3	2	3	2	2	4	3	3	4	5	7	4.0	8.9
6-Jan	3	8	20	38	32	24	26	27	16	15	15	24	31	23	38	38	30	28	28	30	37	26	25	23	25.3	38.4
7-Jan	24	28	30	21	13	10	17	20	13	5	6	3	4	5	4	3	3	3	4	4	4	3	2	4	9.7	29.5
8-Jan	5	6	8	8	4	4	2	5	16	18	17	14	11	14	12	9	7	7	7	8	12	10	10	9	9.3	17.5
9-Jan	9	10	12	14	12	8	6	4	3	7	9	11	7	13	13	11	11	11	13	13	11	11	10	10	9.9	14.1
10-Jan	8	9	10	10	11	10	9	10	9	7	8	11	7	8	9	9	7	4	6	6	3	2	2	2	7.4	11.1
11-Jan	N	N	N	N	N	N	N	N	1	1	2	2	2	2	4	3	2	1	2	3	3	2	2	2	--	4.0
12-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
13-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
14-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
15-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
16-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
17-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
18-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
19-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
20-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
21-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
22-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
23-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
24-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
25-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
26-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
27-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
28-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
29-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
30-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
31-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
	8.1	8.9	10.2	11.3	9.9	8.0	7.6	8.0	7.0	6.7	7.0	7.4	7.0	7.9	10.8	10.5	10.1	9.3	8.6	9.1	8.8	7.8	7.7	7.6	Diurnal Average	
	24.3	27.5	29.5	37.7	32.3	23.9	25.7	27.5	16.3	17.5	17.1	24.3	30.8	22.8	38.4	37.6	30.5	28.1	28.5	30.3	36.8	26.0	25.4	22.6	Diurnal Maximum	

N - Not Valid  
 All monthly, daily, and diurnal averages have been calculated using scalar methods

## Hourly Standard Deviations

Wind Direction (WD) - deg  
Beaverlodge - January 2018

Maximum Value: 96.9 deg on Jan 5 20:00	Hours in Service: 744
Minimum Value: 4.4 deg on Jan 9 04:00	Hours of Data: 256
Percentiles: P <sub>1</sub> = 5.6 P <sub>10</sub> = 8.1 Q <sub>1</sub> = 10.5 Median = 19.2 Q <sub>3</sub> = 55.2 P <sub>90</sub> = 71.1 P <sub>99</sub> = 91.8	Hours of Missing Data: 488
	Hours of Calibration: 0
	Percent Operational Time: 34.4

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-Jan	54	35	79	72	63	67	42	37	58	55	71	44	90	59	11	7	7	8	30	7	28	13	68	28	89.9	
2-Jan	15	8	12	9	15	17	66	92	57	54	43	78	46	47	37	30	64	18	30	91	27	14	13	12	91.8	
3-Jan	27	10	72	85	69	37	64	42	66	80	64	85	85	31	53	14	17	13	12	13	13	9	8	10	85.2	
4-Jan	16	47	20	38	49	69	52	51	66	43	17	28	41	11	60	65	29	49	36	41	59	71	12	55	70.6	
5-Jan	67	67	64	66	52	58	85	55	81	86	69	63	23	24	70	53	63	75	58	97	72	58	72	50	96.9	
6-Jan	78	14	8	9	8	11	17	11	14	12	10	8	13	10	10	14	16	20	18	11	10	14	11	14	77.5	
7-Jan	10	8	6	10	19	30	13	8	11	93	58	52	22	37	19	22	34	42	35	54	15	23	19	35	92.8	
8-Jan	8	9	15	20	26	76	54	19	11	8	7	9	11	11	10	10	11	11	12	15	9	10	10	13	75.8	
9-Jan	10	8	7	4	7	11	9	11	6	6	7	15	13	8	11	14	13	13	8	8	8	9	7	6	15.4	
10-Jan	5	7	6	8	8	8	6	8	10	10	12	10	13	12	11	9	10	14	17	6	71	27	14	24	71.0	
11-Jan	N	N	N	N	N	N	N	N	84	61	42	43	66	59	82	48	80	82	41	45	17	71	36	63	84.4	
12-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	
13-Jan	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	--
14-Jan	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	--
15-Jan	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	--
16-Jan	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	--
17-Jan	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	--
18-Jan	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	--
19-Jan	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	--
20-Jan	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	--
21-Jan	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	--
22-Jan	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	--
23-Jan	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	--
24-Jan	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	--
25-Jan	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	--
26-Jan	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	--
27-Jan	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	--
28-Jan	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	--
29-Jan	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	--
30-Jan	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	--
31-Jan	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	--
	77.5	67.1	78.9	85.1	69.1	75.8	85.5	91.8	84.4	92.8	71.1	85.2	89.9	58.7	82.5	64.7	79.8	81.8	58.4	96.9	72.4	70.8	71.6	62.7		

N - Not Valid

**PAZA**  
**Valleyview Station**  
**Monthly Summary Tables, Graphs and**  
**Roses**

## Hourly Averages

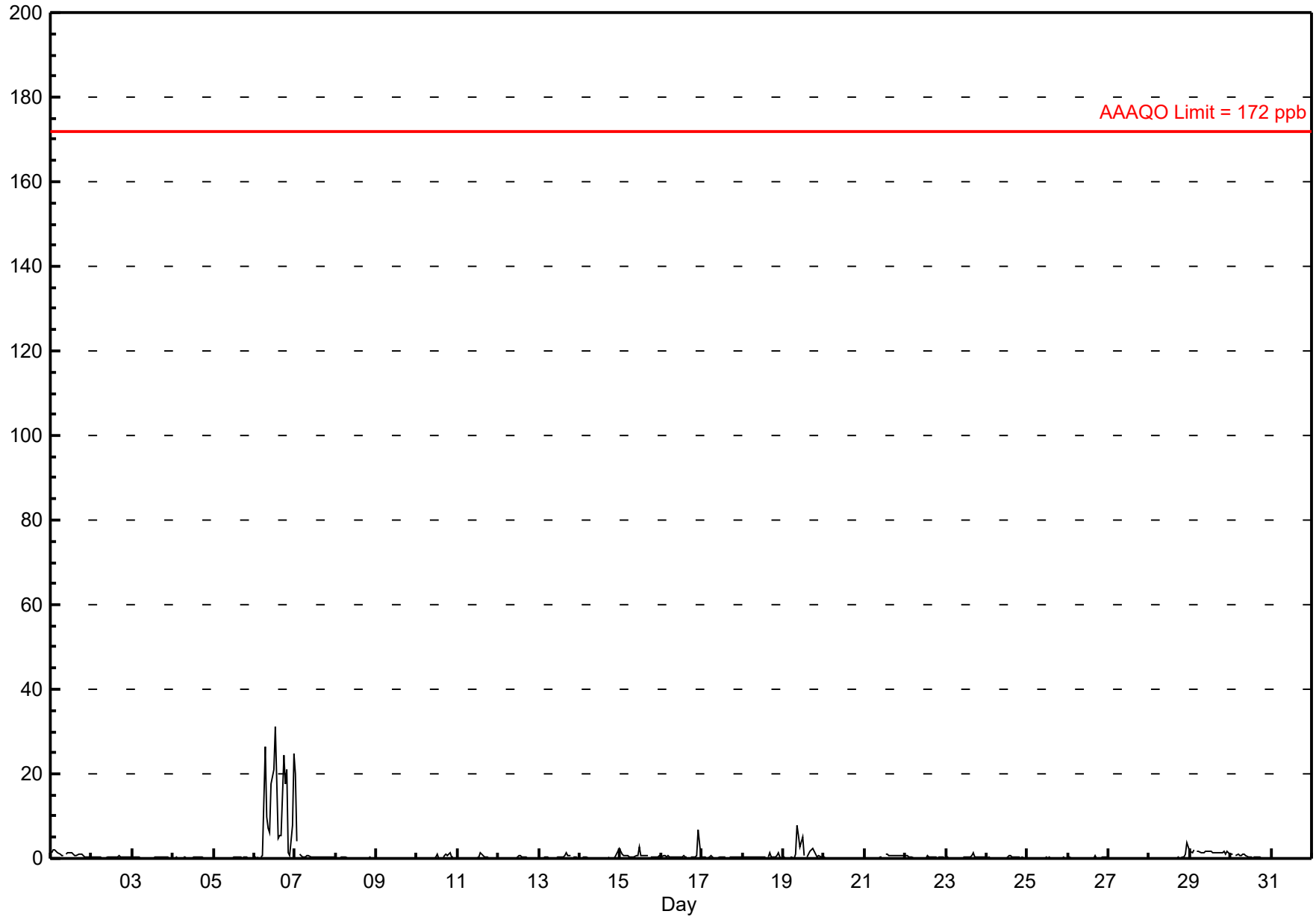
Sulphur Dioxide (SO<sub>2</sub>) - ppb

Valleyview - January 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 31.3 ppb on Jan 6 13:00	Maximum Daily Average: 11.0 ppb on Jan 6
Minimum Value: 0 ppb on Jan 8 13:00	Hours of Data: 709
Maximum Diurnal Average: 1.5 ppb at hour 13	Hours of Missing Data: 35
Monthly Average: 0.74 ppb	Hours of Calibration: 35
Minimum Daily Average: 0.0 ppb on Jan 9	Percent Operational Time: 100.0
Minimum Diurnal Average: 0.3 ppb at hour 4	
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.1 Median = 0.2 Q <sub>3</sub> = 0.4 P <sub>90</sub> = 1.1 P <sub>99</sub> = 19.2	

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-Jan	1	2	2	2	1	1	1	1	A	1	1	2	1	1	1	1	1	1	1	1	0	0	0	0	1.0	2.1
2-Jan	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.3	0.5
3-Jan	0	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
4-Jan	0	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
5-Jan	0	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
6-Jan	0	0	0	A	0	1	26	10	7	6	18	21	31	18	5	5	5	24	18	21	1	1	8	25	11.0	31.3
7-Jan	20	4	A	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.3	19.8
8-Jan	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
9-Jan	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
10-Jan	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	1	1	0	0	A	0	0.3	1.3
11-Jan	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	A	0	0	0.2	1.3
12-Jan	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	A	0	0	0	0.1	0.5
13-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	A	0	0	0	0	0	0.3	1.3
14-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	2	2	0.3	2.3
15-Jan	2	1	1	1	1	0	0	0	1	1	1	3	1	1	1	1	A	0	0	0	0	0	0	1	0.7	2.9
16-Jan	0	1	1	0	1	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0	1	7	0	0.7	6.8
17-Jan	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	0.6
18-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	0	1	1	0	0	0.4	1.4
19-Jan	0	0	0	0	0	0	0	1	8	6	3	5	1	A	0	0	1	2	2	2	1	0	1	0	1.4	7.7
20-Jan	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
21-Jan	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	0.4	1.0
22-Jan	1	1	0	0	0	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
23-Jan	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	1	0	0	0	0	0	0	0	0	0.3	1.2
24-Jan	0	0	0	0	0	0	0	0	A	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0.2	0.8
25-Jan	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
26-Jan	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.1	0.5
27-Jan	0	0	0	0	0	A	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0.1	0.2
28-Jan	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	3	0.4	3.8	
29-Jan	2	1	2	A	2	2	1	1	1	2	2	2	2	2	1	1	1	1	1	1	2	1	2	1	1.5	2.2
30-Jan	1	1	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.2
31-Jan	0	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	0.2
	1.0	0.5	0.3	0.3	0.3	0.3	1.1	0.6	0.7	0.6	0.9	1.2	1.5	1.0	0.5	0.5	0.7	1.2	0.9	1.0	0.3	0.4	0.9	1.2	Diurnal Average	
	19.8	4.2	2.2	1.6	1.8	1.6	26.3	9.9	7.7	6.2	17.6	21.1	31.3	18.4	4.8	5.5	5.5	24.4	17.6	20.9	1.5	1.4	7.9	24.8	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 Maximums

Sulphur Dioxide (SO<sub>2</sub>) - ppb

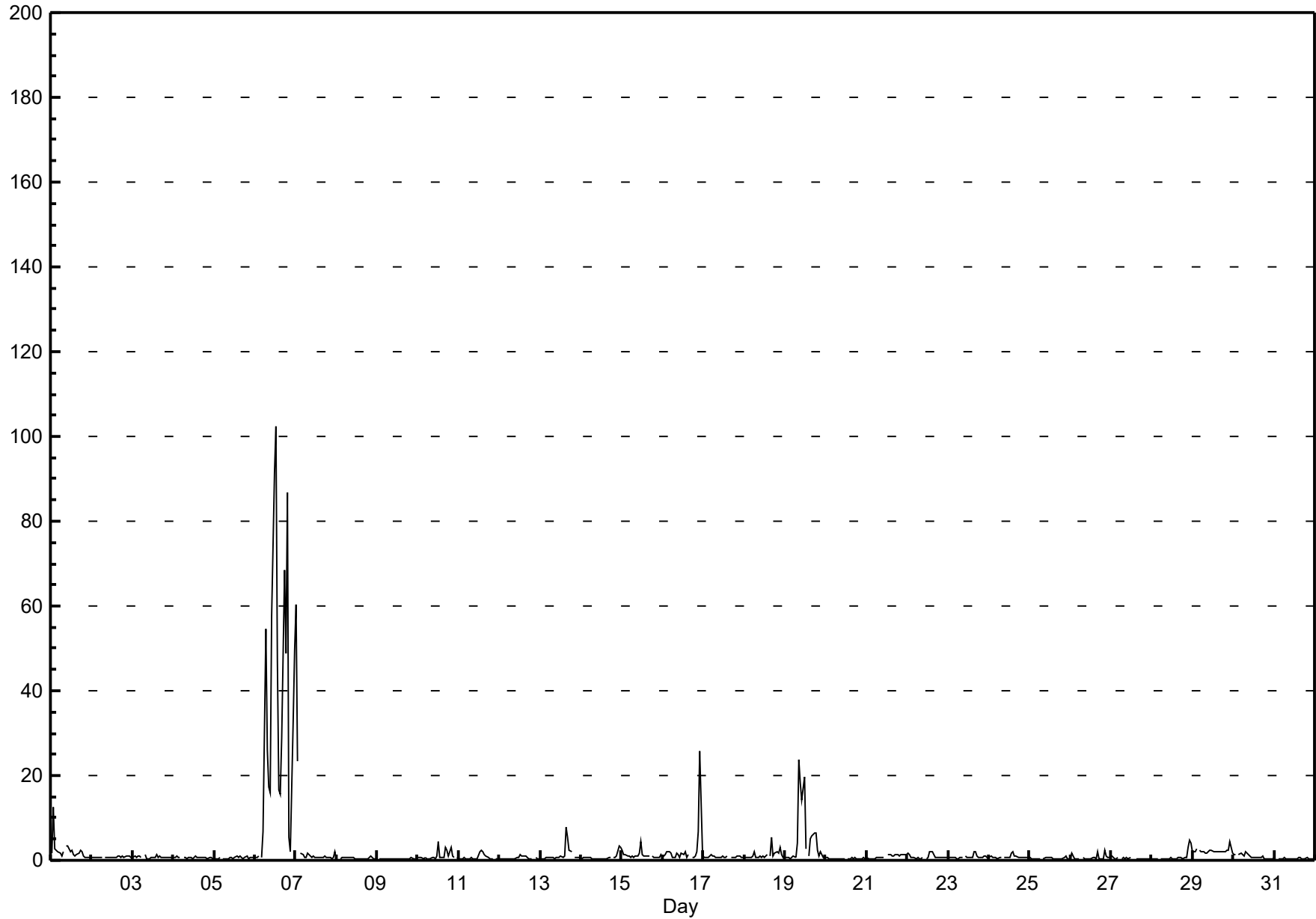
Valleyview - January 2018

Maximum Value: 102.3 ppb on Jan 6 13:00		Maximum Daily Average: 33.8 ppb on Jan 6		Hours in Service: 744																							
Minimum Value: 0 ppb on Jan 11 20:00		Minimum Daily Average: 0.4 ppb on Jan 9		Hours of Data: 709																							
Maximum Diurnal Average: 4.6 ppb at hour 13		Minimum Diurnal Average: 0.8 ppb at hour 4		Hours of Missing Data: 35																							
Monthly Average: 2.26 ppb		Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 0.4 Q <sub>1</sub> = 0.5 Median = 0.6 Q <sub>3</sub> = 1.0 P <sub>90</sub> = 2.2 P <sub>99</sub> = 52.5		Hours of Calibration: 35																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jan	2	13	3	3	2	2	1	2	A	3	3	2	2	1	1	1	2	2	2	1	1	1	1	1	2.2	12.5	
2-Jan	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0	
3-Jan	1	1	1	1	1	1	A	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2	
4-Jan	1	1	1	1	1	A	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1	0	0.6	1.0	
5-Jan	0	0	0	1	A	0	0	1	0	1	1	0	1	1	1	1	1	0	1	1	0	1	1	1	0.6	1.0	
6-Jan	1	1	1	A	1	7	54	26	17	16	58	91	102	47	17	15	29	69	49	87	6	2	33	49	33.8	102.3	
7-Jan	60	23	A	2	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	2	4.5	60.2	
8-Jan	0	A	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0.6	1.1	
9-Jan	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	A	0.4	0.6	
10-Jan	1	1	1	0	1	0	0	0	1	1	0	1	4	1	1	1	3	2	1	3	1	1	A	1	1.1	4.4	
11-Jan	0	0	0	1	0	0	0	1	0	0	0	0	2	2	2	1	1	1	0	0	0	A	0	0	0.7	2.2	
12-Jan	0	0	0	0	0	0	1	0	0	0	1	1	1	1	1	1	1	0	0	0	A	1	0	0	0.6	1.4	
13-Jan	0	1	0	1	1	1	1	1	0	1	1	1	1	1	1	8	6	2	2	A	1	1	1	1	1.3	7.7	
14-Jan	0	1	1	1	1	1	0	0	1	0	1	0	0	0	0	0	1	1	A	1	1	1	3	3	0.8	3.2	
15-Jan	2	1	1	1	1	1	1	1	1	1	2	4	2	1	1	1	A	1	1	1	1	1	1	1	1.2	4.3	
16-Jan	1	1	2	2	2	2	1	1	2	1	1	2	1	2	1	1	A	1	1	1	2	7	26	1	2.6	25.9	
17-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.7	1.2	
18-Jan	1	1	1	1	1	1	2	1	1	1	1	1	1	1	A	1	5	1	2	2	2	3	1	1	1.3	5.4	
19-Jan	1	1	1	0	1	1	1	4	24	18	14	20	3	A	1	5	6	7	7	2	1	2	1	1	5.2	23.8	
20-Jan	1	1	0	0	1	0	0	0	0	0	0	0	A	0	0	1	0	1	0	0	0	0	1	0	0.5	0.6	
21-Jan	1	0	0	0	0	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.5	
22-Jan	2	1	1	1	1	0	1	0	0	1	A	1	1	2	2	2	1	1	1	1	1	1	1	1	0.9	2.2	
23-Jan	1	1	1	1	1	0	0	1	1	A	1	1	1	1	1	2	2	1	1	1	1	1	1	1	0.8	2.2	
24-Jan	1	1	1	1	1	0	1	1	A	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	0.8	2.1	
25-Jan	1	0	0	0	0	0	0	A	0	1	1	1	1	1	0	0	0	0	0	0	1	1	0	0	0.5	1.0	
26-Jan	0	2	0	0	0	0	A	1	0	0	0	0	0	1	1	0	2	0	0	0	2	1	1	1	0.7	2.3	
27-Jan	1	1	0	0	1	A	0	1	0	1	0	1	C	C	C	0	0	0	0	0	1	0	0	0	0.5	0.9	
28-Jan	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	1	1	1	0	1	1	3	5	4	0.9	4.8	
29-Jan	2	2	3	A	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	4	2	2.2	4.4	
30-Jan	1	1	A	1	2	1	1	2	2	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.9	2.1	
31-Jan	1	A	0	0	0	0	1	0	0	0	0	0	0	0	1	1	1	0	0	1	0	0	0	0	0.4	0.6	
		2.8	2.0	0.8	0.8	0.8	0.9	2.6	1.8	2.0	1.9	3.1	4.5	4.6	2.6	1.5	1.8	2.4	3.3	2.6	3.7	1.1	1.2	2.9	2.6	Diurnal Average	
		60.2	23.4	2.7	2.5	2.2	6.6	54.5	26.1	23.8	18.3	57.7	91.5	102.3	47.3	16.7	15.5	28.9	68.6	48.9	86.9	5.5	6.7	32.9	49.4	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									



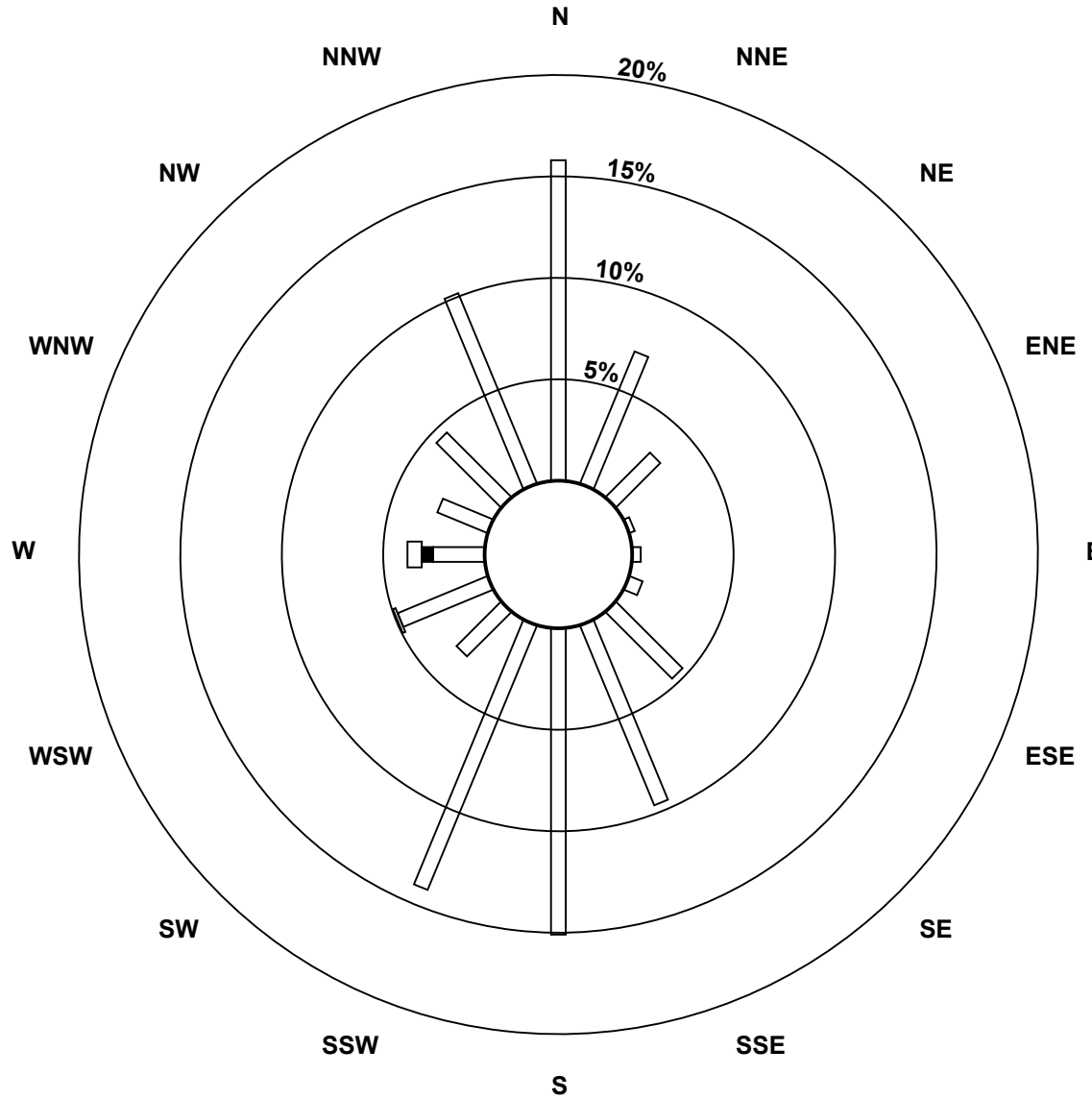
**Hourly Maximums**

**Sulphur Dioxide (SO<sub>2</sub>) - ppb**  
**Valleyview - January 2018**

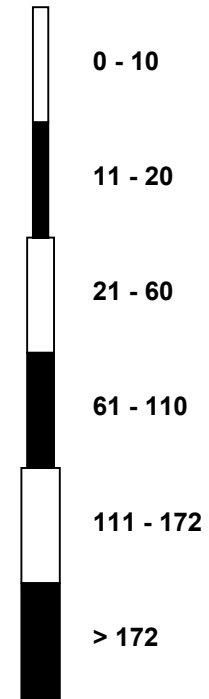


**Pollutant Rose**

**Sulphur Dioxide (SO<sub>2</sub>) - ppb**  
**Valleyview - January 2018**

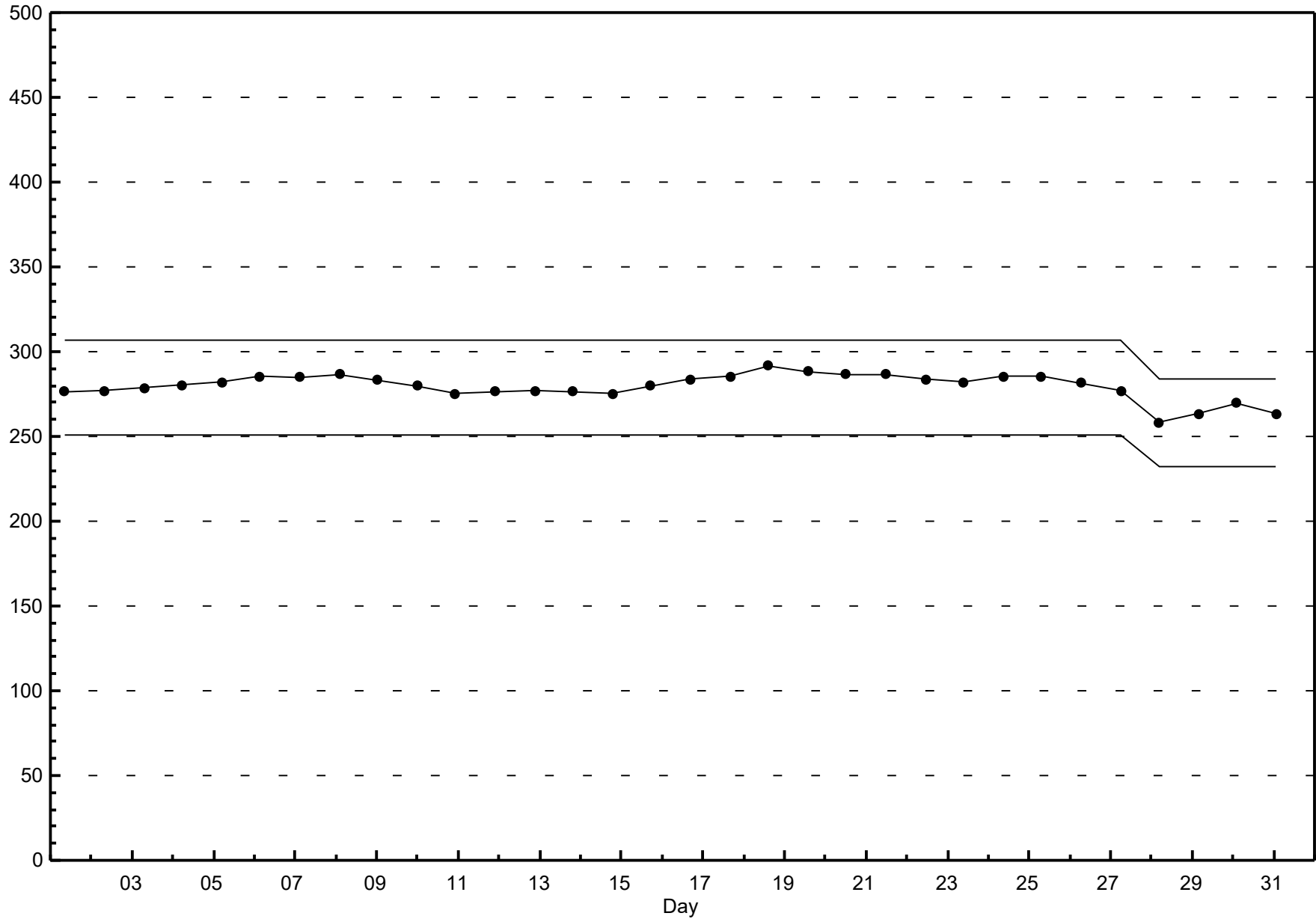


**Pollutant Classes (ppb)**



### Span Responses

Sulphur Dioxide (SO<sub>2</sub>)  
Valleyview - January 2018



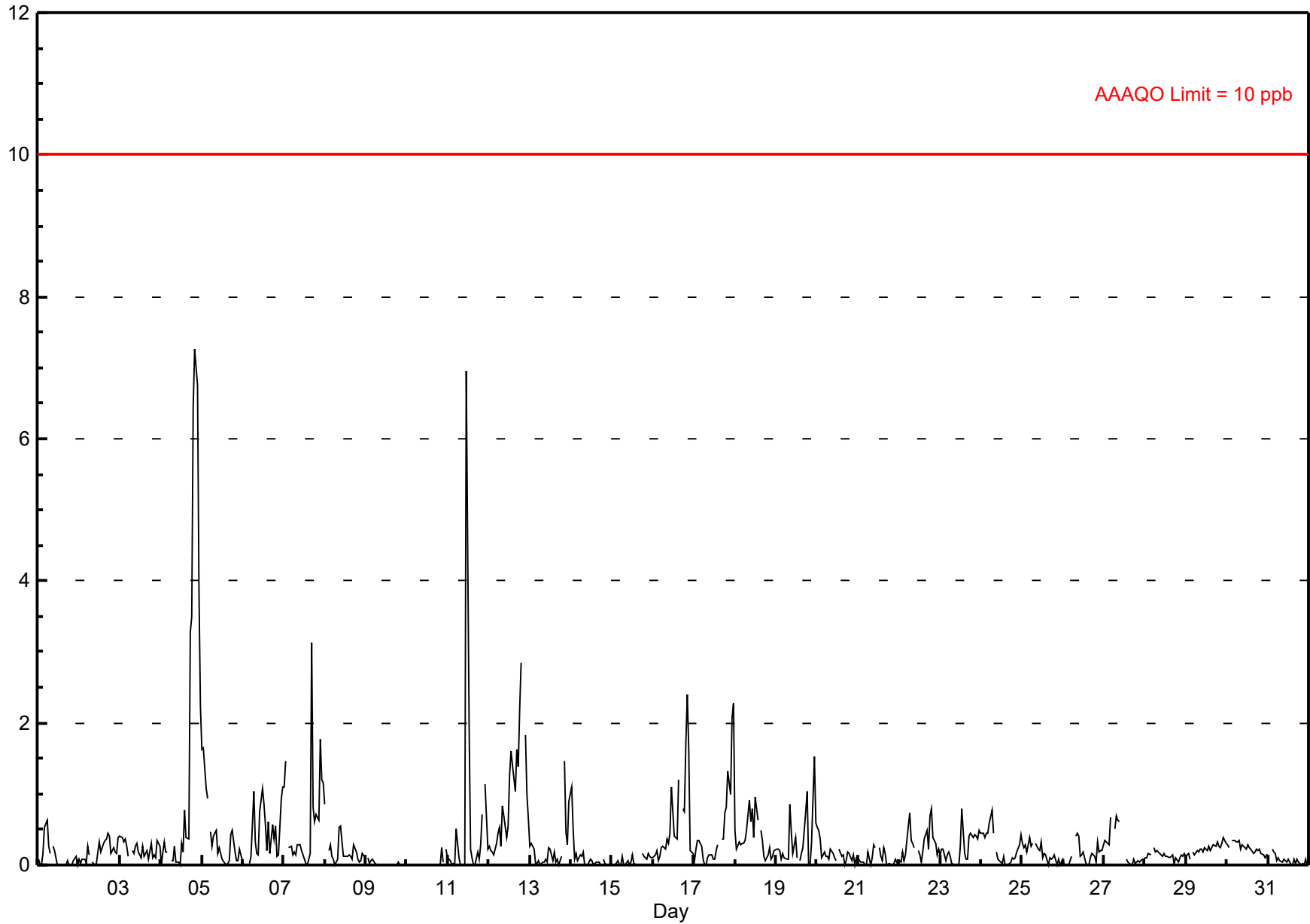
## Hourly Averages

Hydrogen Sulphide (H<sub>2</sub>S) - ppb

Valleyview - January 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 7.3 ppb on Jan 4 21:00      Maximum Daily Average: 1.6 ppb on Jan 4		Hours in Service: 744 Hours of Data: 709 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0																								
Minimum Value: 0 ppb on Jan 1 03:00 Maximum Diurnal Average: 0.6 ppb at hour 21 Monthly Average: 0.32 ppb		Minimum Daily Average: 0.0 ppb on Jan 9 Minimum Diurnal Average: 0.2 ppb at hour 15 Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.1 Median = 0.2 Q <sub>3</sub> = 0.3 P <sub>90</sub> = 0.7 P <sub>99</sub> = 3.1																								
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-Jan	0	0	0	0	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
2-Jan	0	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
3-Jan	0	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
4-Jan	0	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	3	4	6	7	7	4	2	1.6	7.3	
5-Jan	2	2	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.6	
6-Jan	0	0	0	A	0	0	1	0	0	0	1	1	1	0	1	0	1	0	1	0	1	0	1	0.4	1.1	
7-Jan	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	3	1	1	1	1	1	2	1	0.6	3.1	
8-Jan	1	A	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8	
9-Jan	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	
10-Jan	0	0	0	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
11-Jan	0	0	0	0	0	1	0	0	0	0	0	7	2	0	0	0	0	0	0	0	1	A	1	0	0.6	7.0
12-Jan	0	0	0	0	0	0	1	0	1	1	0	1	1	2	1	1	2	1	2	3	A	2	1	1	0.9	2.9
13-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	1	0.2	1.5
14-Jan	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	1.1
15-Jan	0	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
16-Jan	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	A	1	1	2	2	2	0	0	0.6	2.4
17-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	1	1	1	2	2	0.5	2.3
18-Jan	0	0	0	0	0	0	0	0	1	1	1	0	1	0	1	A	0	0	0	0	0	0	0	0	0.4	0.9
19-Jan	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0	2	1	0.3	1.5
20-Jan	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
21-Jan	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
22-Jan	0	0	0	0	0	1	1	0	0	0	0	A	0	0	0	0	0	0	0	1	1	0	0	0	0.3	0.8
23-Jan	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0.2	0.8
24-Jan	0	0	0	0	0	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8
25-Jan	0	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
26-Jan	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
27-Jan	0	0	0	0	1	A	1	1	1	1	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
28-Jan	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
29-Jan	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
30-Jan	0	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
31-Jan	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
																								Diurnal Average	Diurnal Maximum	
																								0.3	1.6	
																								0.3	1.6	
																								0.2	1.1	
																								0.2	0.9	
																								0.2	0.7	
																								0.2	0.6	
																								0.2	1.0	
																								0.2	0.7	
																								0.3	0.9	
																								0.2	0.7	
																								0.2	0.8	
																								0.5	7.0	
																								0.3	2.0	
																								0.2	1.6	
																								0.2	1.4	
																								0.2	1.2	
																								0.3	3.1	
																								0.4	3.3	
																								0.4	3.5	
																								0.5	6.5	
																								0.6	7.3	
																								0.6	6.8	
																								0.5	3.9	
																								0.4	2.3	

C - Calibration      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb    24-hr 3 ppb



## Hourly Maximums

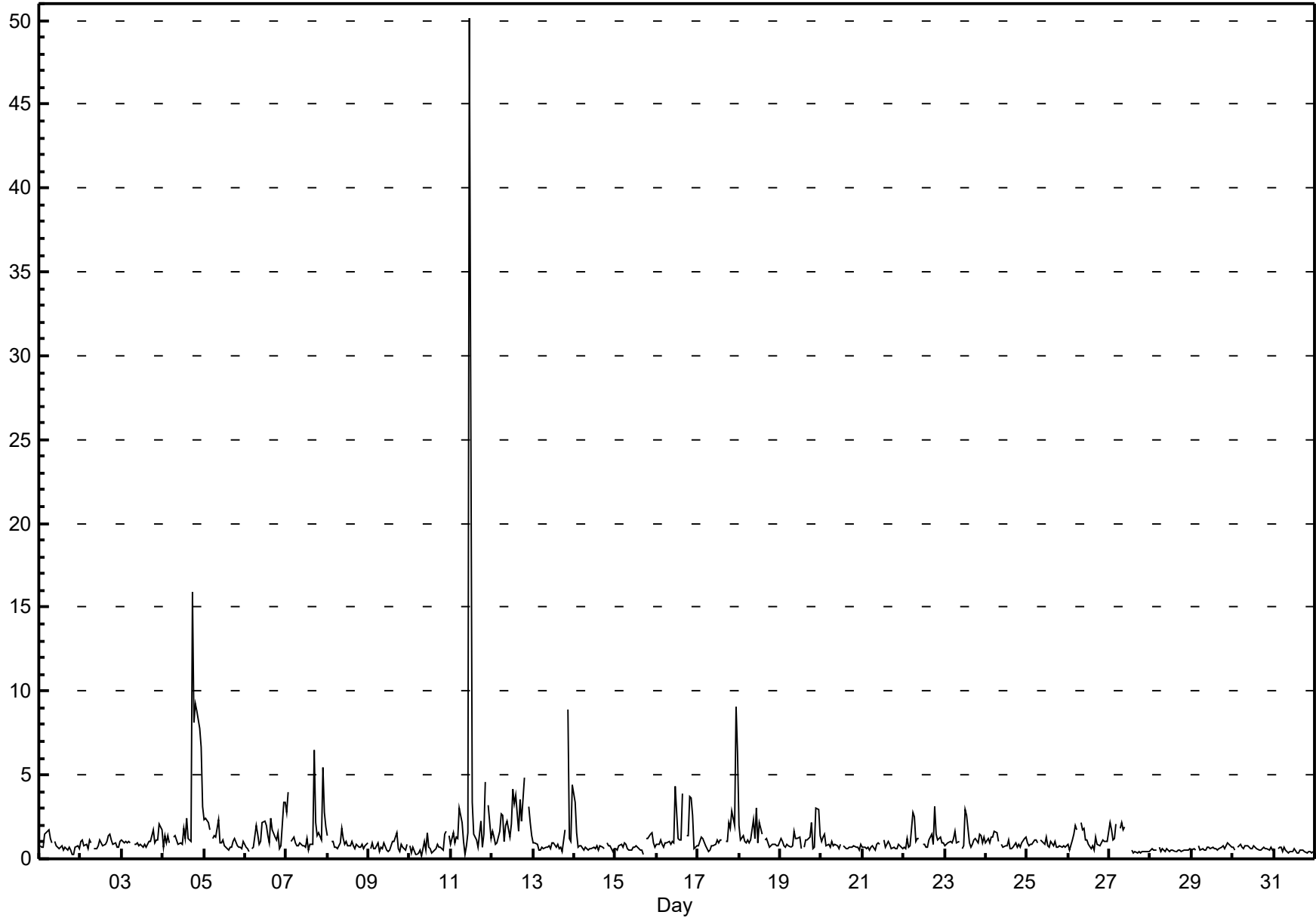
Hydrogen Sulphide (H<sub>2</sub>S) - ppb

Valleyview - January 2018

Maximum Value: 50.1 ppb on Jan 11 12:00		Maximum Daily Average: 3.7 ppb on Jan 11		Hours in Service: 744																							
Minimum Value: 0 ppb on Jan 10 08:00		Minimum Daily Average: 0.5 ppb on Jan 31		Hours of Data: 709																							
Maximum Diurnal Average: 2.7 ppb at hour 12		Minimum Diurnal Average: 0.9 ppb at hour 15		Hours of Missing Data: 35																							
Monthly Average: 1.23 ppb		Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 0.5 Q <sub>1</sub> = 0.7 Median = 0.9 Q <sub>3</sub> = 1.2 P <sub>90</sub> = 2.1 P <sub>99</sub> = 7.7		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-Jan	1	1	1	1	2	2	1	1	A	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	0.8	1.7	
2-Jan	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	1.5	
3-Jan	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	2	2	1.1	2.1	
4-Jan	1	1	1	1	1	A	1	1	1	1	1	1	2	1	2	1	1	16	8	9	9	8	7	3	3.4	15.9	
5-Jan	2	2	2	2	A	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	2.4	
6-Jan	1	1	0	A	1	1	2	1	1	1	2	2	2	1	1	2	2	1	1	2	1	1	3	3	1.5	3.4	
7-Jan	3	4	A	1	1	1	1	1	1	1	1	1	1	1	1	1	7	2	1	2	1	5	3	2	1.8	6.5	
8-Jan	1	A	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.8	
9-Jan	A	1	1	1	1	1	0	1	1	1	0	0	1	1	1	1	2	1	0	1	1	0	1	A	0.7	1.5	
10-Jan	1	0	1	0	0	0	1	0	1	1	2	1	1	0	1	1	1	1	1	1	1	2	A	1	0.7	1.6	
11-Jan	1	2	1	1	1	3	2	1	0	1	2	50	3	1	1	1	1	2	1	1	5	A	3	1	3.7	50.1	
12-Jan	2	1	1	1	2	3	3	1	2	2	1	2	4	3	4	2	4	2	4	5	A	3	2	1	2.3	4.9	
13-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	2	A	9	1	1	4	1.3	8.9	
14-Jan	3	2	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	1	0.8	3.4	
15-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	1	1	1	2	1	1	0.8	1.5	
16-Jan	1	1	1	1	1	1	1	1	1	1	1	4	1	1	1	4	A	1	1	4	4	3	1	1	1.6	4.3	
17-Jan	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	A	1	1	2	2	3	2	9	6	1.7	9.1	
18-Jan	2	1	1	1	1	1	1	1	2	1	3	1	2	1	A	1	1	1	1	1	1	1	1	1	1.3	3.0	
19-Jan	1	1	1	1	1	1	1	1	2	1	1	1	1	1	A	1	1	1	1	2	1	1	3	3	1	1.2	3.0
20-Jan	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	1.4	
21-Jan	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1	
22-Jan	1	1	1	1	1	3	3	1	1	1	A	1	1	1	1	1	1	1	1	3	1	1	1	1	1.2	3.1	
23-Jan	1	1	1	1	1	1	2	1	1	A	1	1	3	3	1	1	1	1	1	1	1	1	1	1	1.2	2.9	
24-Jan	1	1	1	1	1	2	2	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.7	
25-Jan	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	1.3	
26-Jan	1	1	1	1	2	2	A	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	2.1	
27-Jan	2	2	1	1	2	A	2	2	2	2	C	C	C	1	0	0	0	0	0	0	0	0	0	0	1.0	2.2	
28-Jan	1	1	0	0	A	1	0	1	0	1	1	0	1	1	0	0	1	0	0	0	1	0	1	1	0.5	0.7	
29-Jan	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9	
30-Jan	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0.7	0.9	
31-Jan	1	A	1	1	1	0	1	1	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0.5	0.7	
		1.1	1.1	0.9	0.9	1.0	1.1	1.1	0.9	1.1	1.0	1.0	2.7	1.2	1.0	0.9	1.0	1.2	1.5	1.4	1.4	1.7	1.5	1.6	1.4	Diurnal Average	
		3.4	3.9	2.2	1.7	2.1	3.0	2.6	2.1	2.3	2.3	3.0	50.1	4.2	3.2	3.8	3.9	6.5	15.9	8.1	9.3	8.9	7.8	9.1	6.3	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

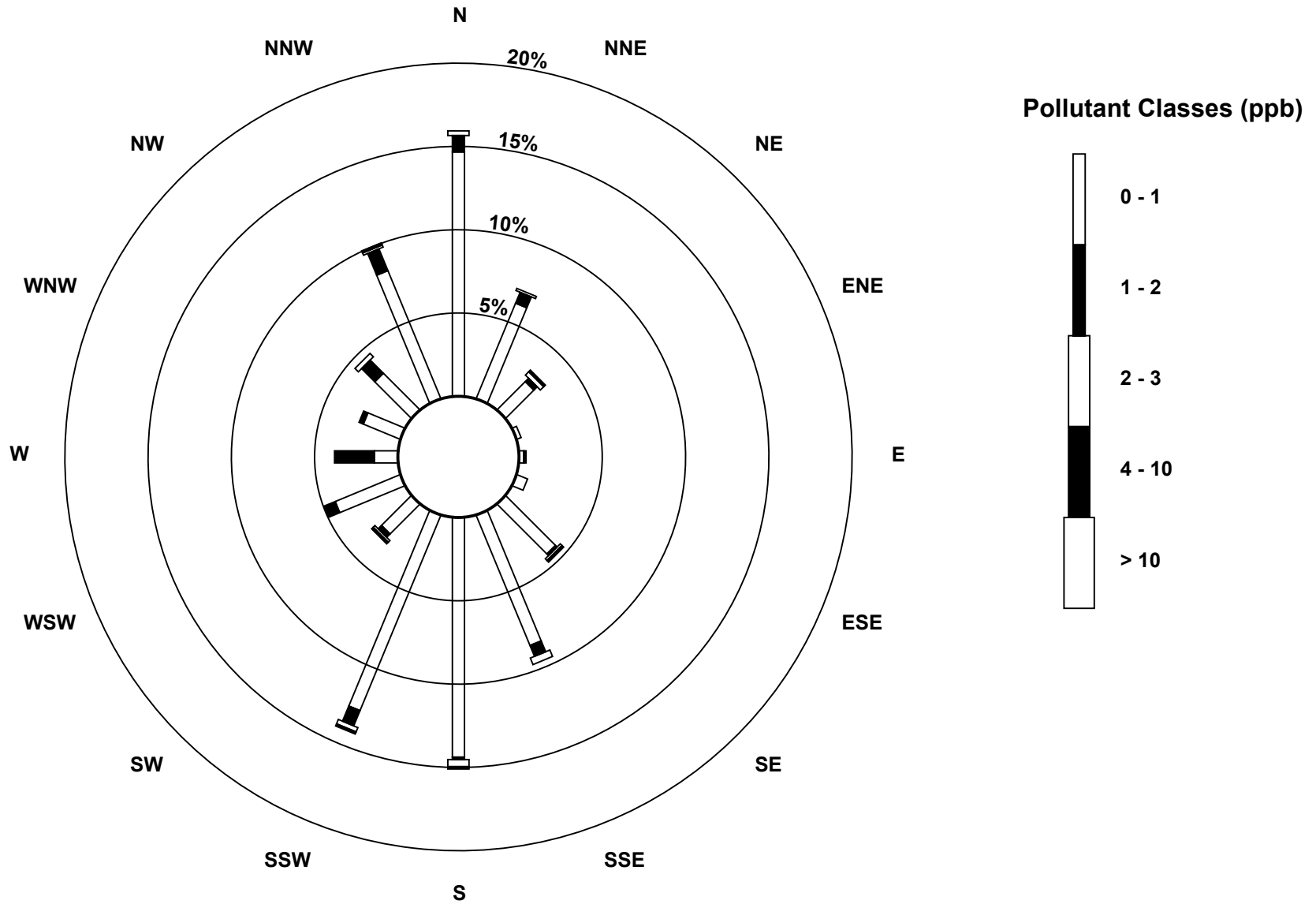
### Hourly Maximums

Hydrogen Sulphide (H<sub>2</sub>S) - ppb  
Valleyview - January 2018



**Pollutant Rose**

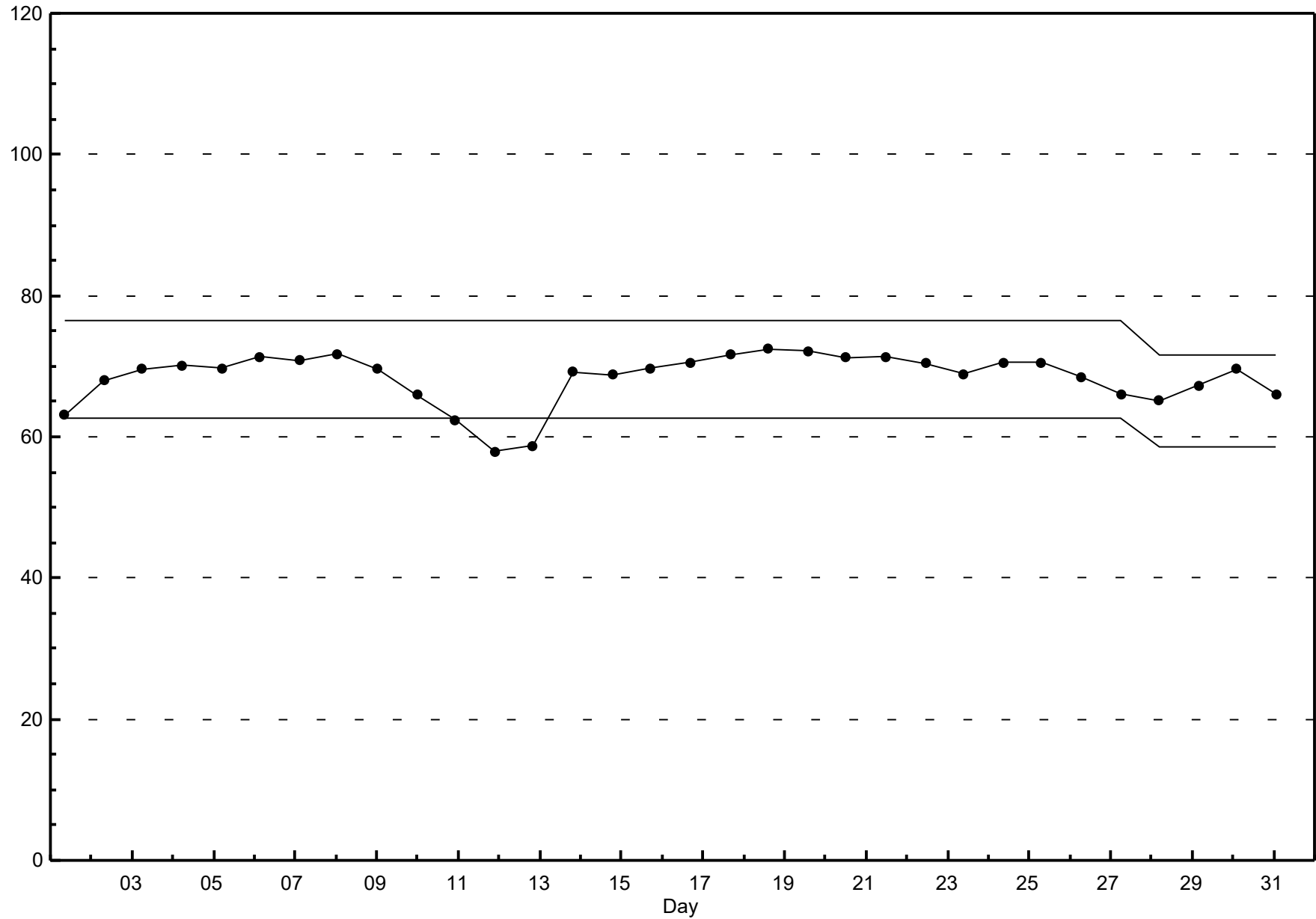
**Hydrogen Sulphide (H<sub>2</sub>S) - ppb**  
**Valleyview - January 2018**





### Span Responses

Hydrogen Sulphide (H<sub>2</sub>S)  
Valleyview - January 2018

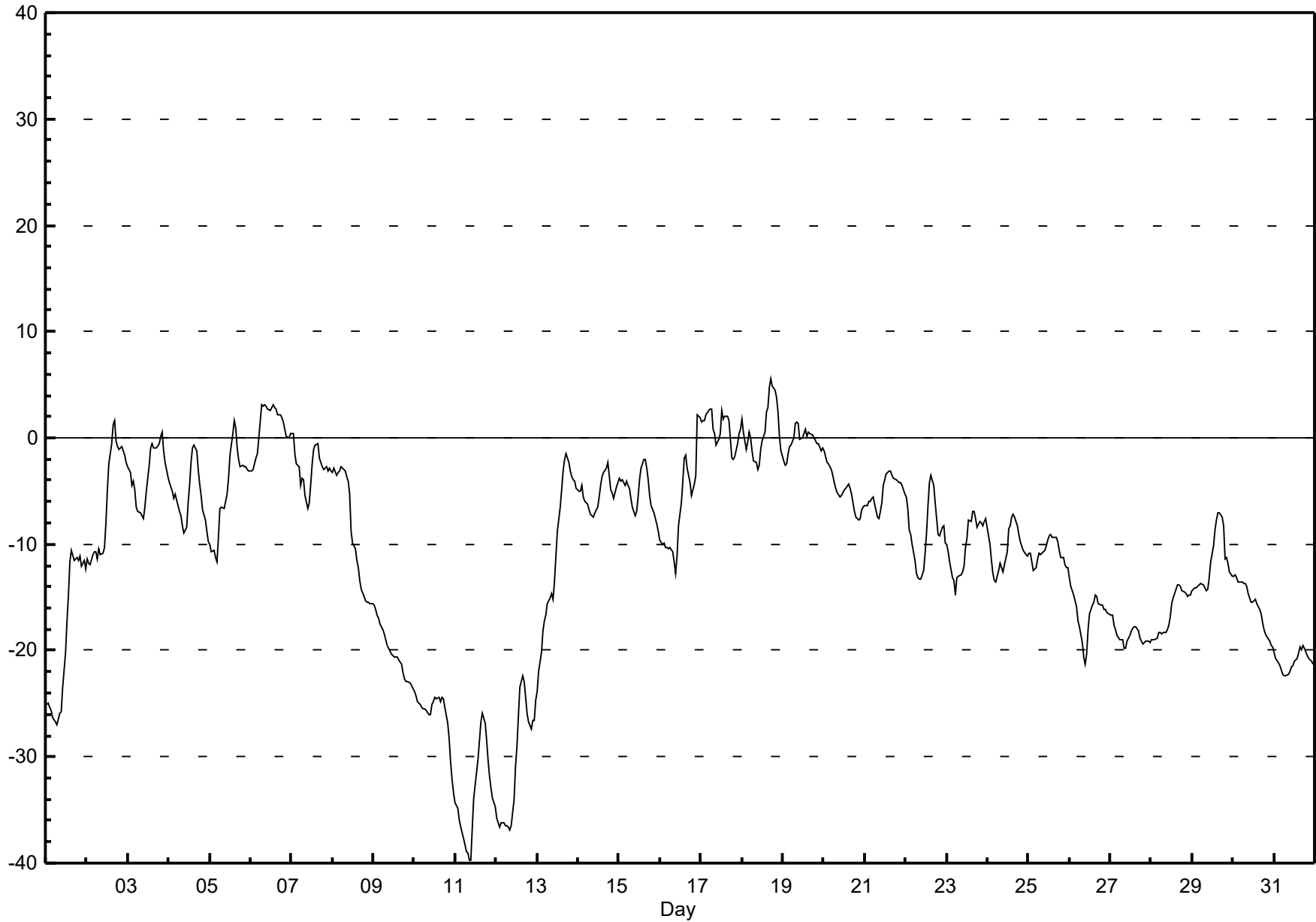


# Hourly Averages

External Temperature (ET) - °C

Valleyview - January 2018

Maximum Value: 5.5 °C on Jan 18 18:00		Maximum Daily Average: 1.1 °C on Jan 6		Hours in Service: 744																						
Minimum Value: -40 °C on Jan 11 09:00		Minimum Daily Average: -33.6 °C on Jan 11		Hours of Data: 744																						
Maximum Diurnal Average: -7.9 °C at hour 16		Minimum Diurnal Average: -13.1 °C at hour 10		Hours of Missing Data: 0																						
Monthly Average: -10.82 °C		Percentiles: P <sub>1</sub> = -36.8 P <sub>10</sub> = -24.5 Q <sub>1</sub> = -16.6 Median = -9.3 Q <sub>3</sub> = -3.3 P <sub>90</sub> = -0.2 P <sub>99</sub> = 3.1		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-Jan	-25	-25	-25	-26	-26	-27	-27	-26	-26	-26	-23	-20	-17	-15	-12	-11	-11	-11	-11	-11	-11	-12	-12	-12	-18.7	-10.5
2-Jan	-11	-12	-12	-11	-11	-11	-11	-10	-11	-11	-10	-8	-5	-2	-1	1	2	0	-1	-1	-1	-1	-2	-2	-5.9	1.6
3-Jan	-3	-3	-4	-4	-5	-6	-7	-7	-7	-8	-6	-5	-3	-1	0	-1	-1	-1	-1	0	0	-1	-2	-4	-3.3	0.5
4-Jan	-4	-5	-5	-6	-5	-6	-7	-7	-8	-9	-8	-6	-4	-2	-1	-1	-1	-3	-4	-5	-7	-8	-9	-10	-5.5	-0.7
5-Jan	-10	-11	-11	-11	-12	-9	-7	-7	-7	-6	-5	-4	-2	0	2	1	-1	-2	-3	-3	-3	-3	-3	-3	-4.9	1.7
6-Jan	-3	-3	-2	-2	-2	0	3	3	3	3	3	3	3	3	3	3	2	2	2	2	1	0	0	0	1.1	3.1
7-Jan	0	0	-2	-2	-3	-4	-4	-4	-5	-7	-6	-4	-2	-1	-1	0	-2	-2	-3	-3	-3	-3	-3	-3	-2.8	0.4
8-Jan	-3	-3	-4	-3	-3	-3	-3	-3	-4	-4	-5	-9	-10	-11	-12	-12	-13	-14	-15	-15	-16	-15	-16	-16	-8.8	-2.7
9-Jan	-16	-16	-17	-17	-18	-18	-18	-19	-20	-20	-20	-21	-21	-21	-21	-21	-21	-22	-23	-23	-23	-23	-23	-24	-20.1	-15.7
10-Jan	-24	-24	-25	-25	-25	-26	-26	-26	-26	-26	-25	-25	-24	-25	-24	-25	-24	-25	-25	-27	-28	-30	-32	-33	-26.1	-23.8
11-Jan	-34	-35	-36	-37	-37	-38	-39	-39	-40	-40	-37	-34	-32	-30	-28	-27	-26	-27	-28	-30	-32	-33	-34	-35	-33.6	-26.0
12-Jan	-36	-36	-37	-36	-36	-36	-36	-37	-37	-37	-34	-31	-29	-26	-23	-22	-23	-24	-26	-27	-27	-27	-25	-30.6	-22.3	
13-Jan	-24	-22	-20	-18	-17	-17	-16	-15	-15	-15	-14	-11	-9	-6	-5	-3	-2	-1	-2	-3	-4	-4	-4	-5	-10.5	-1.5
14-Jan	-5	-5	-4	-6	-6	-6	-7	-7	-7	-7	-7	-6	-6	-5	-4	-3	-3	-2	-4	-5	-5	-6	-5	-4	-5.2	-2.4
15-Jan	-4	-4	-4	-4	-4	-4	-5	-6	-7	-7	-7	-6	-4	-3	-2	-2	-3	-4	-5	-6	-7	-8	-8	-9	-5.1	-2.0
16-Jan	-10	-10	-10	-10	-10	-10	-10	-11	-12	-13	-11	-8	-6	-4	-2	-2	-3	-4	-5	-5	-4	-3	2	2	-6.7	2.2
17-Jan	2	2	2	2	3	3	3	1	0	-1	0	0	3	2	2	2	2	0	-2	-2	-2	-1	0	1	0.9	2.7
18-Jan	2	1	-1	0	0	0	-1	-2	-2	-3	-3	-1	0	0	2	3	5	6	5	4	4	3	0	-1	0.8	5.5
19-Jan	-2	-3	-2	-1	-1	-1	0	1	1	1	0	0	1	0	0	0	0	0	0	0	-1	-1	-1	-1	-0.3	1.5
20-Jan	-1	-2	-2	-2	-3	-3	-4	-5	-5	-6	-5	-5	-5	-5	-4	-5	-5	-6	-7	-8	-8	-8	-7	-7	-4.9	-1.3
21-Jan	-6	-6	-6	-6	-6	-6	-6	-7	-8	-7	-6	-4	-3	-3	-3	-3	-4	-4	-4	-4	-4	-4	-5	-5	-5.0	-3.1
22-Jan	-6	-7	-9	-9	-10	-12	-13	-13	-13	-13	-12	-11	-9	-6	-4	-4	-5	-6	-8	-9	-9	-8	-8	-10	-8.9	-3.5
23-Jan	-10	-11	-12	-13	-13	-15	-13	-13	-13	-13	-12	-10	-10	-8	-8	-7	-7	-8	-8	-8	-8	-8	-8	-8	-10.1	-6.9
24-Jan	-8	-10	-12	-13	-13	-14	-12	-12	-12	-13	-12	-11	-9	-8	-7	-7	-7	-8	-9	-10	-10	-11	-11	-11	-10.4	-7.2
25-Jan	-11	-11	-12	-12	-12	-11	-11	-11	-11	-11	-10	-10	-9	-9	-9	-9	-9	-10	-11	-11	-11	-12	-12	-12	-10.8	-9.1
26-Jan	-13	-14	-15	-15	-16	-17	-18	-19	-21	-21	-20	-18	-17	-16	-15	-15	-15	-16	-16	-16	-16	-16	-16	-17	-16.6	-13.1
27-Jan	-17	-17	-18	-18	-19	-19	-19	-19	-20	-20	-19	-19	-18	-18	-18	-18	-18	-19	-19	-19	-19	-19	-19	-19	-18.6	-16.7
28-Jan	-19	-19	-19	-19	-18	-18	-18	-18	-18	-18	-17	-16	-15	-14	-14	-14	-14	-14	-14	-15	-15	-15	-15	-15	-16.4	-13.8
29-Jan	-14	-14	-14	-14	-14	-14	-14	-14	-14	-14	-13	-12	-10	-9	-8	-7	-7	-7	-8	-11	-11	-12	-13	-13	-11.8	-7.1
30-Jan	-13	-13	-13	-13	-14	-14	-14	-14	-14	-14	-15	-15	-15	-15	-16	-16	-16	-16	-17	-18	-18	-19	-19	-20	-15.7	-12.9
31-Jan	-20	-21	-21	-21	-22	-22	-22	-22	-22	-22	-22	-21	-21	-21	-20	-20	-20	-20	-20	-20	-21	-21	-21	-21	-21.0	-19.5
		-11.3	-11.5	-12.0	-12.1	-12.2	-12.4	-12.3	-12.5	-12.9	-13.1	-12.5	-11.3	-10.0	-9.0	-8.2	-7.9	-8.1	-8.7	-9.5	-10.0	-10.3	-10.6	-10.7	-11.0	Diurnal Average
		1.8	1.6	1.6	2.1	2.6	2.7	3.1	3.0	3.1	3.0	2.7	2.6	2.9	3.1	2.9	2.9	4.7	5.5	4.9	4.4	3.7	2.5	2.2	2.0	Diurnal Maximum



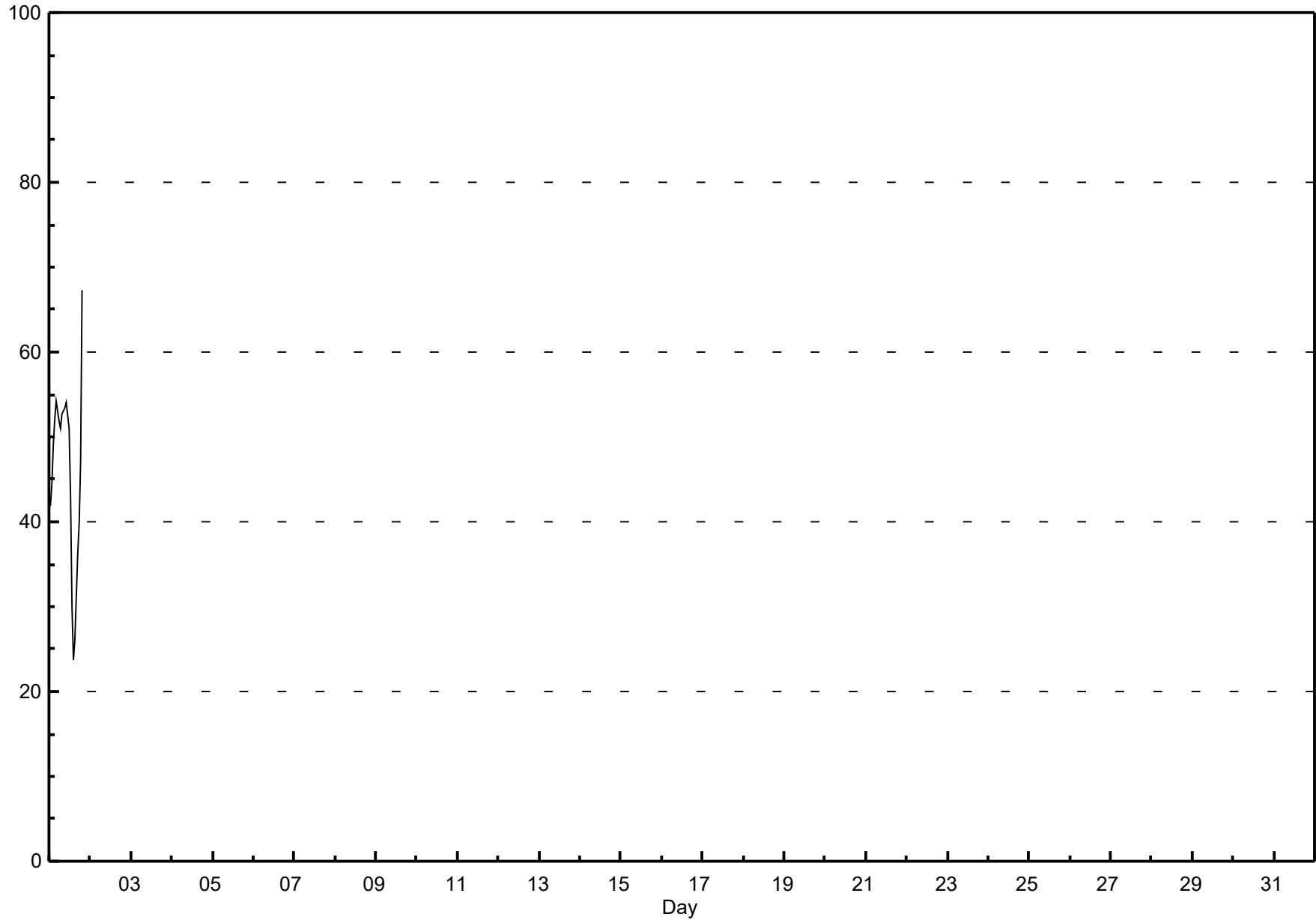
## Hourly Averages

Relative Humidity (RH) - %  
Valleyview - January 2018

Maximum Value: 67.4 % on Jan 1 20:00		Maximum Daily Average: 46.1 % on Jan 1		Hours in Service: 744																							
Minimum Value: 24 % on Jan 1 15:00		Minimum Daily Average: 46.1 % on Jan 1		Hours of Data: 20																							
Maximum Diurnal Average: 67.4 % at hour 20		Minimum Diurnal Average: 23.7 % at hour 15		Hours of Missing Data: 724																							
Monthly Average: 46.10 %		Percentiles: P <sub>1</sub> = 23.7 P <sub>10</sub> = 27.0 Q <sub>1</sub> = 41.2 Median = 51.0 Q <sub>3</sub> = 53.0 P <sub>90</sub> = 47.6 P <sub>99</sub> = 67.4		Hours of Calibration: 0																							
Percentiles: P <sub>1</sub> = 23.7 P <sub>10</sub> = 27.0 Q <sub>1</sub> = 41.2 Median = 51.0 Q <sub>3</sub> = 53.0 P <sub>90</sub> = 47.6 P <sub>99</sub> = 67.4		Percent Operational Time: 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-Jan	42	44	49	52	54	52	51	53	53	53	54	51	43	30	24	26	36	40	47	67	N	N	N	N	46.1	67.4	
2-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
3-Jan	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-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
5-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
6-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
7-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
8-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
9-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
10-Jan	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-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
12-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
13-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
14-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
15-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
16-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
17-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
18-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
19-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
20-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
21-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
22-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
23-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
24-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
25-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
26-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
27-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
28-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
29-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
30-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
31-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
		41.8	44.4	49.0	52.1	54.2	51.8	51.1	52.7	53.1	53.4	54.0	51.0	43.0	30.1	23.7	26.1	36.3	39.8	47.1	67.4	--	--	--	--	Diurnal Average	
		41.8	44.4	49.0	52.1	54.2	51.8	51.1	52.7	53.1	53.4	54.0	51.0	43.0	30.1	23.7	26.1	36.3	39.8	47.1	67.4	--	--	--	--	Diurnal Maximum	

**Hourly Averages**

**Relative Humidity (RH) - %  
Valleyview - January 2018**





Peace Airshed Zone Association

# Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	3	2	2	1	1	0	1	2	2	3	4	3	4	5	3	1	0	2	3	3	4	4	4	3	2.4	4.5
Dir	187	192	199	204	232	203	210	208	213	206	199	183	194	185	185	209	247	222	205	175	176	169	172	152	189	185
2 Spd	1	2	2	2	2	2	2	3	3	1	2	3	3	3	3	2	1	0	1	3	2	2	3	2	2.0	3.5
Dir	170	177	168	173	167	182	186	196	195	238	190	191	175	182	182	195	170	198	202	179	189	200	198	198	186	175
3 Spd	2	2	2	1	1	1	1	2	2	3	3	3	3	1	1	1	0	2	4	2	0	0	0	1	1.5	3.5
Dir	190	197	187	191	218	33	236	204	184	190	182	183	179	184	183	253	201	185	182	173	222	246	285	200	190	182
4 Spd	2	2	1	1	2	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0.4	1.8
Dir	199	197	202	186	196	4	213	239	268	238	141	240	250	252	338	354	155	354	230	204	346	143	179	48	223	196
5 Spd	0	0	0	1	1	1	1	1	1	2	2	2	2	2	2	1	0	1	0	0	0	0	0	1	0.7	2.0
Dir	143	197	168	171	140	198	209	204	205	197	204	203	185	183	177	211	340	245	220	200	333	246	213	192	197	183
6 Spd	1	2	3	2	3	2	6	7	12	14	13	12	12	10	7	2	2	8	6	5	5	9	9	9	6.3	14.1
Dir	201	198	234	164	156	191	271	248	265	263	270	274	269	251	253	257	269	260	259	244	248	266	279	260	263	263
7 Spd	6	5	1	2	2	1	2	1	1	2	3	3	3	2	2	0	1	0	1	0	0	0	0	0	1.0	6.3
Dir	279	276	138	131	163	176	186	207	198	199	201	183	171	182	183	182	305	294	320	193	314	18	258	233	210	279
8 Spd	1	0	1	0	1	0	0	1	0	2	9	15	13	13	13	11	10	9	10	8	7	8	8	9	5.9	14.6
Dir	196	233	189	248	239	134	133	298	281	13	2	7	8	0	5	18	23	17	17	8	2	357	1	1	7	7
9 Spd	8	8	9	11	11	12	12	12	13	13	15	15	13	15	13	12	9	9	6	7	10	10	10	9	10.8	14.9
Dir	10	5	2	1	358	357	351	350	344	345	342	349	345	355	2	5	9	3	336	357	355	358	3	354	342	
10 Spd	8	8	9	8	8	6	4	7	6	3	0	1	2	4	5	4	1	1	2	1	1	1	1	1	3.2	9.2
Dir	10	359	5	15	10	16	16	3	13	15	11	314	311	307	311	313	272	299	322	325	196	175	186	189	356	5
11 Spd	1	1	1	1	0	0	1	0	0	0	0	0	1	3	3	2	1	1	0	0	0	0	0	0	0.2	3.1
Dir	172	171	190	197	183	271	167	179	163	141	151	43	347	353	346	328	349	351	127	204	31	331	154	160	336	346
12 Spd	0	0	0	1	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0.1	1.0
Dir	191	167	163	189	164	179	321	128	1	98	226	159	324	324	360	32	47	316	173	167	191	148	54	197	192	324
13 Spd	0	1	1	3	3	2	1	2	1	1	1	0	1	2	1	2	1	0	0	1	1	0	0	0	0.9	3.3
Dir	188	204	196	187	183	190	178	191	192	168	197	248	178	171	129	153	180	170	25	23	272	40	204	360	182	187
14 Spd	0	3	7	8	4	5	3	4	4	5	4	3	3	3	4	3	4	7	6	6	6	7	9	10	1.4	9.6
Dir	211	35	19	4	4	359	351	353	355	24	11	353	335	354	349	18	13	130	141	150	161	154	156	161	56	161
15 Spd	10	9	7	8	11	10	12	11	12	10	8	9	9	10	8	9	7	5	5	7	4	3	3	2	7.8	12.4
Dir	163	165	155	165	166	167	166	165	168	165	171	170	171	169	171	167	170	178	177	173	177	186	190	197	169	166
16 Spd	1	1	2	2	3	3	3	2	0	2	2	1	2	2	3	1	1	2	1	1	1	2	11	3	1.5	11.0
Dir	211	212	215	203	218	206	191	233	185	224	179	258	190	225	179	333	28	321	347	235	184	192	255	158	220	255
17 Spd	3	3	2	2	3	4	3	2	4	2	1	2	1	3	3	3	0	2	1	1	0	1	2	3	1.1	4.2
Dir	174	176	187	194	227	224	208	176	184	186	189	196	151	341	336	342	13	332	307	351	2	126	167	181	203	184
18 Spd	3	1	0	3	3	1	1	2	1	2	1	1	1	2	0	0	3	4	7	4	2	1	1	1	1.1	7.2
Dir	183	259	162	173	175	212	39	334	271	160	303	249	341	26	82	172	260	242	244	246	215	216	201	175	227	244
19 Spd	0	1	2	2	2	2	1	5	7	7	7	5	2	2	3	3	4	5	4	1	1	1	1	1	2.3	7.3
Dir	201	207	198	193	200	205	195	249	273	283	288	280	287	326	341	254	256	270	267	244	186	312	351	345	268	273
20 Spd	0	0	1	0	1	2	3	2	2	2	2	2	2	3	4	5	5	6	5	4	3	3	4	3	2.7	5.8
Dir	311	90	10	23	341	31	18	23	2	344	336	2	335	347	7	358	1	356	358	355	343	6	19	10	1	356
21 Spd	4	5	3	4	4	4	5	5	5	2	1	4	4	5	7	6	9	11	11	11	11	10	6	5	3.3	11.1
Dir	8	23	21	35	48	44	48	42	47	53	52	149	162	159	163	166	166	164	166	169	166	170	193	165	145	166
22 Spd	2	1	2	0	0	0	0	0	0	0	1	1	2	1	1	1	2	1	0	0	1	2	1	1	0.5	2.2
Dir	188	217	319	38	318	147	251	165	179	193	144	182	172	216	204	325	347	336	198	203	204	197	199	197	215	347

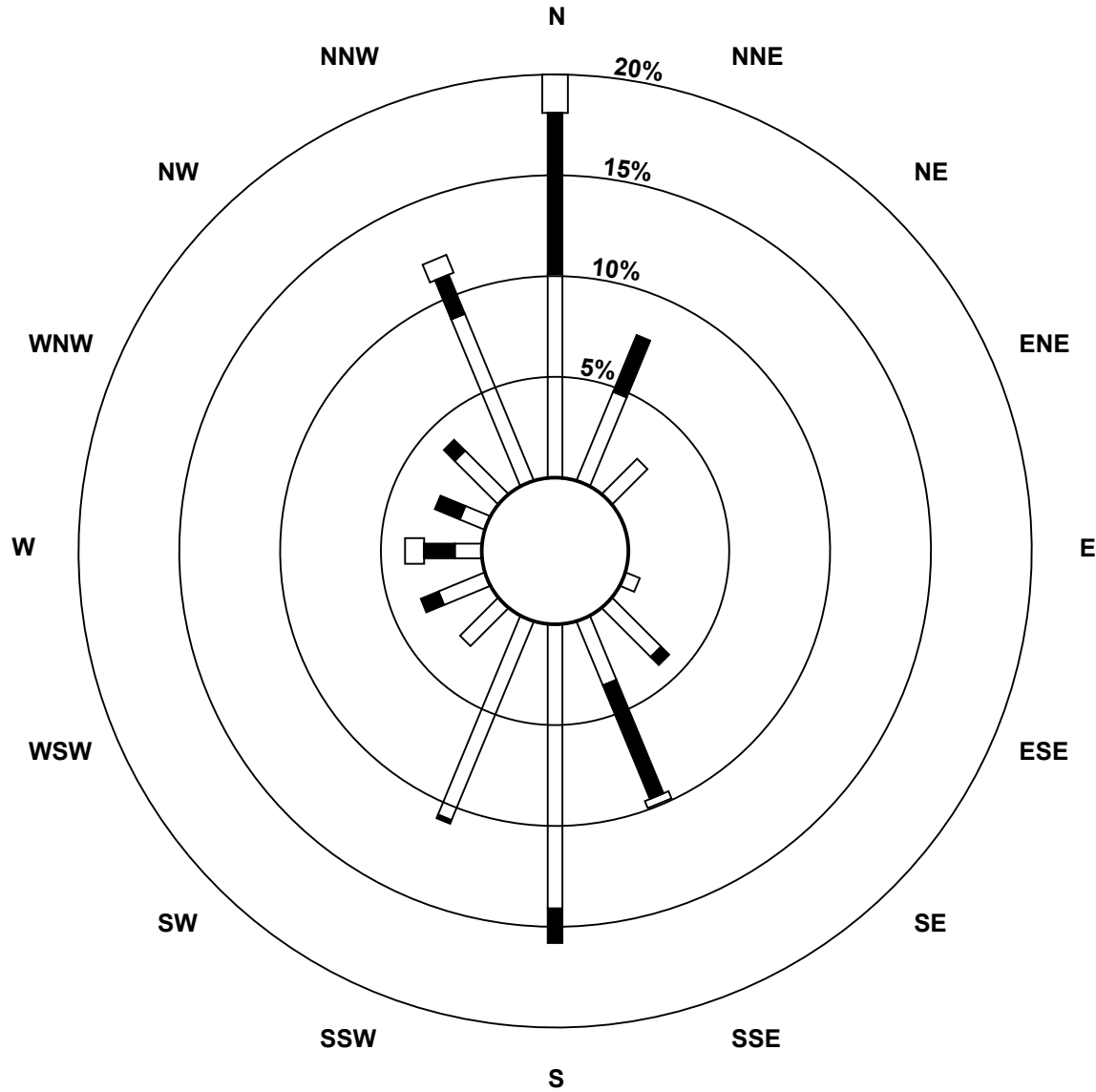
# Hourly Averages

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

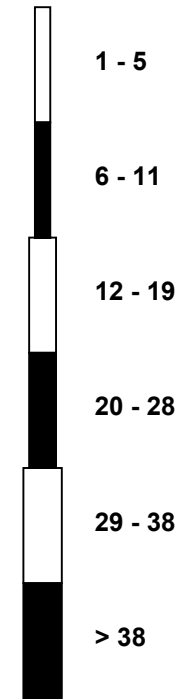
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	1	0	1	0	0	1	3	2	2	2	0	0	1	1	3	1	1	0	2	0	0	0	1	1	0.4	3.1
Dir	208	358	202	185	209	192	201	205	200	202	216	201	318	347	342	333	347	236	332	43	265	64	340	354	276	342
24 Spd	1	1	1	0	0	1	1	1	1	0	2	2	1	3	5	6	7	6	6	5	6	4	2	0	2.4	7.2
Dir	192	205	32	266	350	356	329	347	322	5	334	348	346	342	348	353	4	5	2	339	353	3	348	210	352	4
25 Spd	0	0	0	0	3	2	0	0	0	0	1	3	3	5	8	8	5	5	6	7	3	8	5	2	2.8	8.1
Dir	253	7	141	299	333	353	136	175	156	134	169	2	338	346	338	348	5	23	9	2	345	323	352	8	352	348
26 Spd	2	3	4	1	3	4	1	0	0	0	0	1	2	2	2	1	2	3	2	1	3	2	3	2	1.3	4.0
Dir	350	306	309	7	1	16	273	177	198	162	145	95	47	18	40	353	343	5	7	291	302	312	296	293	341	16
27 Spd	1	0	1	1	2	2	2	2	2	3	3	4	5	5	7	6	7	8	6	5	4	3	3	2	3.4	8.3
Dir	338	336	331	348	342	338	29	346	343	8	346	351	0	5	360	343	347	9	15	17	12	18	31	35	1	9
28 Spd	0	1	1	0	0	0	0	1	1	1	2	2	3	5	5	4	3	3	4	4	5	5	5	5	2.4	5.5
Dir	24	45	140	132	59	33	66	115	161	131	139	126	117	118	127	122	117	126	128	139	144	142	134	144	130	144
29 Spd	5	6	6	5	5	4	9	9	7	8	9	10	11	10	10	8	9	7	1	10	8	8	7	8	4.1	11.0
Dir	143	131	130	140	145	162	160	163	159	157	161	162	166	166	167	163	168	172	41	1	336	292	290	309	165	166
30 Spd	6	7	8	8	6	3	4	4	3	4	7	6	6	7	9	9	10	8	7	5	5	6	6	6	5.5	9.5
Dir	294	307	296	303	316	312	297	324	294	316	357	10	17	354	336	340	329	345	14	9	9	15	23	10	339	329
31 Spd	6	6	6	5	5	6	5	4	2	3	3	3	4	5	5	5	6	4	5	6	5	5	5	6	4.7	6.4
Dir	21	18	20	8	358	2	3	15	11	2	24	359	354	343	343	348	341	353	2	11	13	2	354	354	2	354
Spd	0.2	0.3	0.4	0.3	0.2	0.5	0.2	0.4	0.7	0.6	0.7	0.6	0.5	1.1	1.4	1.5	1.2	1.0	0.7	0.7	0.5	0.6	0.8	0.4	Diurnal Average	
Dir	229	322	349	27	350	360	256	273	262	262	287	302	309	328	342	351	352	347	353	352	339	312	300	328	Diurnal Maximum	
Spd	9.6	8.6	9.2	10.6	11.1	12.5	12.4	11.7	12.6	14.1	14.9	14.8	13.0	14.7	13.5	11.9	10.5	10.9	10.8	10.8	11.1	10.0	11.0	9.6	Diurnal Maximum	
Dir	163	165	5	1	358	357	351	350	344	263	342	342	349	345	355	2	23	164	166	169	166	170	255	161	Diurnal Maximum	
Maximum Speed Value: 15 km/h on Jan 9 11:00																		Minimum Speed Value: 0 km/h on Jan 11 19:00						Hours in Service: 744		
Maximum Daily Speed Average: 10.8 km/h on Jan 9																		Minimum Daily Speed Average: 0.1 km/h on Jan 12						Hours of Data: 744		
Maximum Diurnal Speed Average: 1.5 km/h at hour 16																		Minimum Diurnal Speed Average: 0.2 km/h at hour 1						Hours of Missing Data: 0		
Monthly Average Velocity: 0.54 km/h 327.0 deg																		Speed Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.3 Q <sub>1</sub> = 0.8 Median = 2.2 Q <sub>3</sub> = 5.0 P <sub>90</sub> = 8.4 P <sub>99</sub> = 13.0						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	112	76	16	0	0	0	204																			
NorthEast	43	3	0	0	0	0	46																			
East	4	0	0	0	0	0	4																			
SouthEast	48	11	0	0	0	0	59																			
South	188	36	5	0	0	0	229																			
SouthWest	76	2	0	0	0	0	78																			
West	32	18	5	0	0	0	55																			
NorthWest	57	12	0	0	0	0	69																			
Total	560	158	26	0	0	0	744																			

**Wind Rose**

**Wind Speed (WS) (km/h)**  
**Valleyview - January 2018**



**Wind Speed Classes (km/h)**





# Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Valleyview - January 2018

Maximum Speed: 15 km/h on Jan 9 11:00	Maximum Daily Speed Average: 11.1 km/h on Jan 9	Hours in Service: 744
Minimum Speed: 0 km/h on Jan 11 19:00	Minimum Daily Speed Average: 0.6 km/h on Jan 12	Hours of Data: 744
Maximum Diurnal Speed Average: 4.7 km/h at hour 15	Minimum Diurnal Speed Average: 2.7 km/h at hour 1	Hours of Missing Data: 0
Monthly Average Speed: 3.51 km/h	Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.5 Q <sub>1</sub> = 1.0 Median = 2.3 Q <sub>3</sub> = 5.1 P <sub>90</sub> = 8.5 P <sub>99</sub> = 13.0	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-Jan	3	2	2	1	1	1	1	2	2	3	4	4	4	5	3	1	2	2	3	4	4	4	4	3	2.7	4.6
2-Jan	2	2	2	2	2	2	2	3	3	1	3	3	4	3	3	2	1	0	1	3	2	2	3	2	2.2	3.5
3-Jan	2	2	3	1	1	1	2	2	2	3	3	3	3	1	1	1	0	2	4	2	1	1	1	1	1.8	3.5
4-Jan	2	2	1	1	2	1	0	0	0	1	0	0	2	2	1	1	0	0	0	0	1	0	0	1	0.8	1.9
5-Jan	0	0	0	1	1	1	1	1	1	2	2	2	2	2	2	1	1	1	0	1	1	0	0	1	1.0	2.1
6-Jan	1	2	4	2	3	3	6	7	12	14	13	12	12	11	7	2	2	8	7	6	5	9	9	9	7.0	14.3
7-Jan	6	5	2	2	2	1	2	1	1	2	3	3	3	2	2	1	1	0	1	1	0	1	1	1	1.8	6.5
8-Jan	1	1	1	0	1	0	0	1	1	3	9	15	13	13	13	11	11	9	10	9	8	8	8	9	6.4	14.8
9-Jan	9	8	9	11	11	13	13	12	13	13	15	15	13	15	14	12	9	9	6	7	11	10	10	10	11.1	15.0
10-Jan	8	8	9	9	9	6	4	7	6	4	0	1	2	4	5	4	1	1	2	1	1	1	1	1	3.9	9.3
11-Jan	1	1	1	1	0	0	1	0	0	0	0	0	1	3	3	2	1	1	0	0	0	0	0	0	0.7	3.1
12-Jan	1	1	1	1	0	0	1	0	1	0	0	1	2	1	1	1	0	0	1	1	1	0	0	0	0.6	1.5
13-Jan	0	1	2	3	3	2	1	2	2	1	1	1	1	2	1	2	1	0	1	2	1	1	0	1	1.4	3.4
14-Jan	1	3	7	8	4	5	4	4	4	5	4	3	3	3	3	4	3	4	7	6	6	7	9	10	4.9	9.7
15-Jan	10	9	7	8	11	10	12	12	12	10	9	9	9	10	8	9	7	5	5	7	4	3	3	2	7.9	12.5
16-Jan	1	1	2	2	3	3	3	2	1	3	2	2	3	2	3	2	1	2	1	1	1	3	11	3	2.4	11.2
17-Jan	3	3	2	2	3	4	4	2	4	2	1	2	2	3	3	3	2	2	1	2	1	1	3	3	2.4	4.3
18-Jan	4	2	1	3	3	2	2	2	2	3	2	2	2	2	1	1	4	4	7	4	2	1	1	1	2.4	7.3
19-Jan	0	1	2	2	2	2	1	5	7	7	8	5	2	2	4	4	4	5	4	1	1	2	1	1	3.0	7.6
20-Jan	0	0	1	0	2	2	3	2	2	2	2	2	2	3	4	5	6	6	5	4	3	3	5	4	2.8	5.9
21-Jan	4	5	3	4	4	4	5	5	5	2	1	4	4	5	7	6	9	11	11	11	11	10	8	5	5.9	11.2
22-Jan	2	1	2	1	1	0	0	0	1	1	1	2	2	2	1	2	2	1	0	0	1	2	1	1	1.2	2.4
23-Jan	1	1	1	0	0	1	3	2	2	2	0	0	1	1	3	1	1	1	2	1	1	2	2	1	1.3	3.2
24-Jan	1	1	1	1	1	1	2	2	2	1	2	2	1	3	5	6	7	6	6	5	6	4	3	0	2.9	7.3
25-Jan	0	1	1	1	3	2	0	0	1	0	1	3	3	5	8	8	5	5	6	7	3	8	5	2	3.3	8.3
26-Jan	2	3	4	1	3	4	1	0	0	0	1	1	2	2	2	1	2	4	2	1	3	2	3	2	1.9	4.0
27-Jan	1	0	1	1	2	2	2	2	2	4	3	4	5	6	7	6	7	8	6	5	5	3	3	2	3.7	8.4
28-Jan	1	1	1	0	0	0	0	1	1	1	3	2	3	5	5	4	3	3	4	5	6	5	5	5	2.6	5.6
29-Jan	5	6	6	5	5	4	9	9	8	9	10	10	11	10	10	8	9	7	3	11	8	8	8	8	7.7	11.1
30-Jan	6	7	8	8	6	3	4	4	3	4	7	6	6	8	10	9	10	8	7	5	5	6	6	7	6.4	9.6
31-Jan	6	6	6	5	5	6	5	4	2	3	3	4	4	5	5	6	6	4	5	6	5	5	5	7	4.9	6.5
	2.7	2.7	2.9	2.8	3.0	2.8	3.0	3.1	3.3	3.4	3.6	3.9	4.1	4.5	4.7	4.0	3.8	3.9	3.9	3.8	3.5	3.6	3.8	3.3	Diurnal Average	
	9.7	8.7	9.3	10.8	11.3	12.6	12.6	11.8	12.6	14.3	15.0	14.9	13.1	14.8	13.8	12.0	10.6	11.0	10.9	10.9	11.2	10.1	11.2	9.7	Diurnal Maximum	

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

# Hourly Standard Deviations

Wind Direction (WD) - deg  
Valleyview - January 2018

Maximum Value: 97.4 deg on Jan 3 06:00																		Hours in Service: 744							
Minimum Value: 3.9 deg on Jan 31 17:00																		Hours of Data: 744							
Percentiles: P <sub>1</sub> = 5.9 P <sub>10</sub> = 8.5 Q <sub>1</sub> = 11.0 Median = 19.0 Q <sub>3</sub> = 48.1 P <sub>90</sub> = 72.8 P <sub>99</sub> = 92.4																		Hours of Missing Data: 0							
																		Hours of Calibration: 0							
																		Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Jan	5	7	9	20	29	48	11	11	15	15	11	11	16	9	11	55	91	49	33	20	13	17	14	25	90.9
2-Jan	28	24	19	16	27	32	8	10	19	55	55	16	9	7	6	5	47	50	19	16	31	15	10	13	55.1
3-Jan	11	30	37	76	62	97	66	28	14	12	8	8	10	39	35	50	68	23	9	17	90	85	55	28	97.4
4-Jan	21	12	18	47	35	92	77	90	77	65	69	68	26	31	23	60	63	66	53	80	75	88	50	89	92.4
5-Jan	80	76	69	54	62	26	19	16	33	10	11	11	18	15	16	41	62	57	87	72	76	51	58	25	87.4
6-Jan	36	11	38	29	14	39	23	28	10	8	8	9	9	11	11	17	22	16	22	20	14	10	10	10	39.1
7-Jan	14	27	58	21	12	18	11	10	29	10	10	5	8	9	8	78	66	70	58	95	73	95	93	69	94.9
8-Jan	16	80	32	52	28	61	81	68	88	42	18	9	12	12	11	10	8	11	9	11	11	10	9	10	88.2
9-Jan	10	10	9	9	12	8	9	8	6	7	5	7	8	7	11	8	12	9	7	7	11	9	8	12	12.4
10-Jan	10	10	10	10	9	12	16	13	10	11	31	34	34	16	14	20	43	17	25	39	53	26	23	15	52.5
11-Jan	20	45	27	11	51	72	21	53	28	69	78	85	23	8	8	13	68	55	91	39	76	83	66	67	91.3
12-Jan	42	45	62	38	74	71	86	92	62	78	70	43	50	32	57	79	73	89	62	66	56	65	81	68	92.0
13-Jan	33	23	22	19	8	32	32	16	70	55	40	73	58	15	49	38	45	81	90	39	50	69	70	82	89.8
14-Jan	68	46	12	9	18	13	15	13	16	13	13	16	24	27	14	15	35	13	11	10	9	11	9	8	68.2
15-Jan	8	8	11	8	7	7	7	7	7	6	8	7	8	8	9	8	7	9	8	7	7	10	7	16	16.3
16-Jan	48	34	16	25	10	14	16	25	80	48	21	54	39	47	15	94	85	47	86	43	22	38	14	12	93.5
17-Jan	11	8	14	11	22	20	42	31	11	11	36	17	68	11	15	24	86	52	80	59	88	72	29	12	87.8
18-Jan	12	74	88	43	24	56	86	52	68	50	85	66	90	47	82	46	52	27	10	10	10	11	14	53	89.6
19-Jan	43	10	7	5	9	13	43	11	9	17	19	16	27	23	38	19	13	10	17	21	8	60	59	48	59.6
20-Jan	80	72	42	67	63	16	25	30	13	28	34	48	11	11	12	10	10	8	8	18	14	21	18	16	79.7
21-Jan	19	21	27	12	12	10	10	7	8	50	71	15	11	13	9	10	6	6	8	6	7	6	31	28	70.7
22-Jan	34	30	29	76	73	56	69	79	84	65	76	38	20	50	64	73	60	59	49	79	28	30	25	33	84.3
23-Jan	72	90	58	64	30	16	10	13	10	16	38	67	40	56	15	47	35	70	64	77	72	91	77	63	91.2
24-Jan	62	30	78	97	78	35	64	63	56	75	18	24	11	10	8	14	8	13	9	15	9	10	68	31	96.7
25-Jan	89	75	52	94	55	54	62	28	23	36	29	41	13	35	10	11	10	15	12	12	16	9	24	22	94.4
26-Jan	13	13	15	44	21	9	42	16	40	38	45	45	21	35	22	34	67	15	25	35	37	21	16	39	66.8
27-Jan	29	65	22	30	12	29	43	19	14	13	15	18	19	18	13	16	13	12	11	13	15	13	19	17	65.4
28-Jan	38	44	30	33	73	42	52	35	12	19	14	20	30	15	16	11	12	11	11	14	11	10	10	12	72.5
29-Jan	14	13	10	16	17	15	10	9	9	10	9	7	7	10	8	10	10	10	77	27	21	19	26	18	77.4
30-Jan	13	12	10	11	11	16	16	15	14	27	11	14	13	15	10	8	8	18	10	10	10	13	10	12	26.9
31-Jan	12	10	12	12	9	7	7	11	16	12	21	21	19	14	15	16	4	8	9	11	17	11	10	10	21.3
	89.3	90.4	88.3	96.7	77.7	97.4	85.9	92.0	88.2	78.1	84.8	85.0	89.6	55.7	81.7	93.5	90.9	89.2	91.3	94.5	89.8	94.9	93.0	89.2	

PAZA

Donnelly Station

Monthly Summary Tables, Graphs and  
Roses

## Hourly Averages

Sulphur Dioxide (SO<sub>2</sub>) - ppb

Donnelly - January 2018

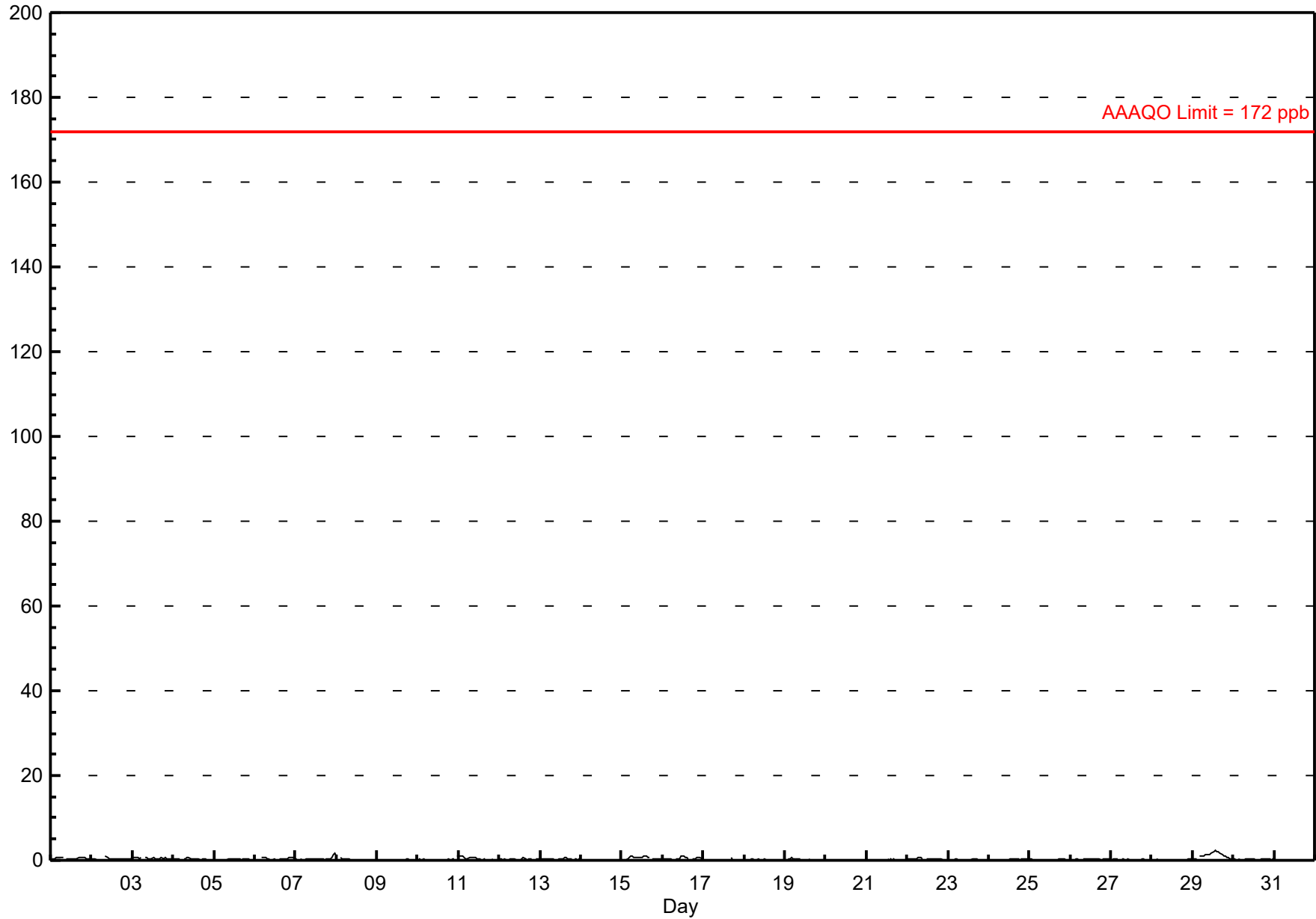
Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 2.2 ppb on Jan 29 14:00	Maximum Daily Average: 1.2 ppb on Jan 29		Hours of Data:	709
Minimum Value: 0 ppb on Jan 5 02:00	Minimum Daily Average: 0.0 ppb on Jan 14		Hours of Missing Data:	35
Maximum Diurnal Average: 0.3 ppb at hour 13	Minimum Diurnal Average: 0.2 ppb at hour 2		Hours of Calibration:	35
Monthly Average: 0.26 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.1 Median = 0.2 Q <sub>3</sub> = 0.3 P <sub>90</sub> = 0.6 P <sub>99</sub> = 1.5		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jan	0	0	1	1	1	1	1	1	A	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0.5	0.8	
2-Jan	0	0	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9	
3-Jan	1	1	1	1	1	1	A	1	1	0	1	0	1	0	0	0	1	1	0	1	0	0	0	0	0.5	0.7	
4-Jan	0	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6	
5-Jan	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5	
6-Jan	0	0	0	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.3	0.8	
7-Jan	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0.4	1.6
8-Jan	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.0	
9-Jan	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
10-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0.2	1.2	
11-Jan	1	1	1	1	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	A	0.4	1.1	
12-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	0	0	0.2	0.5	
13-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	A	0	0	0	0	0.3	0.6	
14-Jan	0	0	0	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	
15-Jan	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	A	0	0	0	0	0	0	0	0.5	1.1	
16-Jan	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	A	0	0	0	0	1	1	1	0	0.4	1.1	
17-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0.1	0.8	
18-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
19-Jan	0	0	0	0	1	0	0	0	0	0	C	C	C	A	0	0	0	0	0	0	0	0	0	0	0.2	0.6	
20-Jan	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	
21-Jan	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
22-Jan	0	0	0	0	0	0	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7	
23-Jan	0	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	
24-Jan	0	0	0	0	0	0	0	0	A	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	
25-Jan	0	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	
26-Jan	0	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	
27-Jan	0	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	0.2	
28-Jan	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5	
29-Jan	1	0	0	A	1	1	1	1	1	1	1	2	2	2	2	2	2	1	1	1	1	1	1	0	1.2	2.2	
30-Jan	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5	
31-Jan	0	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	0.2	
	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	Diurnal Average		
	1.1	1.1	1.0	0.8	0.9	1.0	1.1	1.2	1.2	1.3	1.4	1.8	2.0	2.2	2.2	1.9	1.7	1.3	1.2	0.9	0.7	0.8	1.3	1.6	Diurnal Maximum		

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

### Hourly Averages

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Donnelly - January 2018



## Hourly Maximums

Sulphur Dioxide (SO<sub>2</sub>) - ppb

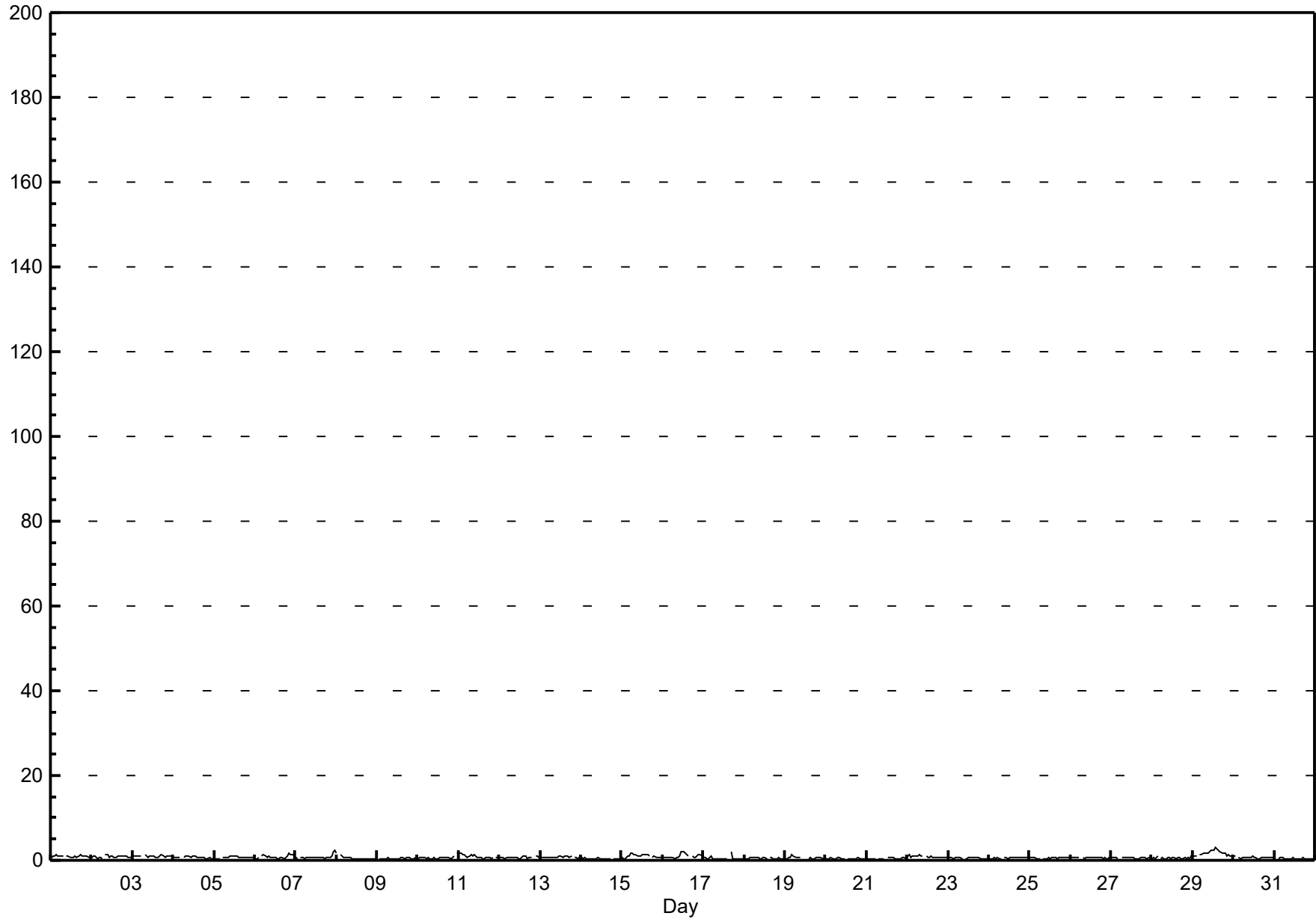
Donnelly - January 2018

Maximum Value: 3.0 ppb on Jan 29 14:00		Maximum Daily Average: 1.7 ppb on Jan 29		Hours in Service: 744																						
Minimum Value: 0 ppb on Jan 21 07:00		Minimum Daily Average: 0.4 ppb on Jan 31		Hours of Data: 709																						
Maximum Diurnal Average: 0.8 ppb at hour 12		Minimum Diurnal Average: 0.6 ppb at hour 20		Hours of Missing Data: 35																						
Monthly Average: 0.70 ppb		Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 0.4 Q <sub>1</sub> = 0.5 Median = 0.6 Q <sub>3</sub> = 0.8 P <sub>90</sub> = 1.1 P <sub>99</sub> = 2.1		Hours of Calibration: 35																						
				Percent Operational Time: 100.0																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jan	1	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	1.5
2-Jan	1	1	1	0	1	1	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.4
3-Jan	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.4
4-Jan	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0.7	1.1
5-Jan	0	0	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.0
6-Jan	0	0	1	A	1	1	1	1	1	1	1	1	0	0	1	1	0	1	1	1	2	1	1	1	0.8	1.8
7-Jan	1	0	A	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	2	2	2	0.8	2.2
8-Jan	2	A	1	1	1	1	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.6	1.6
9-Jan	A	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	1	1	1	0	0	1	A	0.5	0.7
10-Jan	0	1	1	1	1	0	1	0	0	1	0	0	1	1	1	1	1	1	1	0	1	1	A	2	0.6	1.6
11-Jan	2	2	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0	1	A	1	1	0.9	1.6
12-Jan	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	0	1	1	1	1	A	1	1	1	0.7	1.0
13-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	1	0.7	1.1
14-Jan	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	A	0	0	0	0	0	0.5	0.7
15-Jan	1	0	0	1	1	2	2	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1.0	1.6
16-Jan	1	1	1	1	1	1	1	0	1	1	1	2	2	2	1	1	A	1	1	1	1	1	1	1	1.0	2.1
17-Jan	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	A	2	0	0	0	0	0	0	0	0.5	2.1
18-Jan	0	0	0	1	1	1	1	1	1	0	1	1	0	0	A	1	1	0	0	0	1	0	1	0	0.5	0.8
19-Jan	0	0	1	1	1	1	1	1	1	1	C	C	C	A	0	1	0	0	1	1	1	1	0	1	0.6	1.2
20-Jan	1	0	0	1	0	0	0	1	1	0	0	0	A	1	0	0	0	0	0	0	1	0	0	0	0.5	0.6
21-Jan	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	1	0	0	0	0	1	1	0	0.4	0.8
22-Jan	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
23-Jan	1	1	1	0	1	1	1	1	0	A	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0.5	0.7
24-Jan	0	0	0	1	0	1	1	1	A	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8
25-Jan	1	1	1	1	0	0	0	A	0	0	0	1	0	1	1	1	0	1	1	1	1	1	1	1	0.5	0.8
26-Jan	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0.6	0.7
27-Jan	1	1	1	1	0	A	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	0	1	1	0.6	0.7
28-Jan	0	1	0	1	A	0	1	0	0	1	0	1	1	0	1	1	0	0	1	0	1	0	1	0	0.5	1.0
29-Jan	1	1	1	A	1	1	2	2	2	2	3	2	3	3	2	2	2	2	2	2	2	1	1	1	1.7	3.0
30-Jan	1	1	A	1	0	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	0.7	1.1
31-Jan	1	A	0	1	1	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0.4	0.6
		0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.7	0.7	0.6	0.7	Diurnal Average
		1.6	1.6	1.5	1.5	1.4	1.5	1.8	1.6	1.6	1.8	1.9	2.5	2.4	3.0	2.7	2.4	2.1	1.8	1.6	1.5	1.8	1.4	1.9	2.2	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																								

**Hourly Maximums**

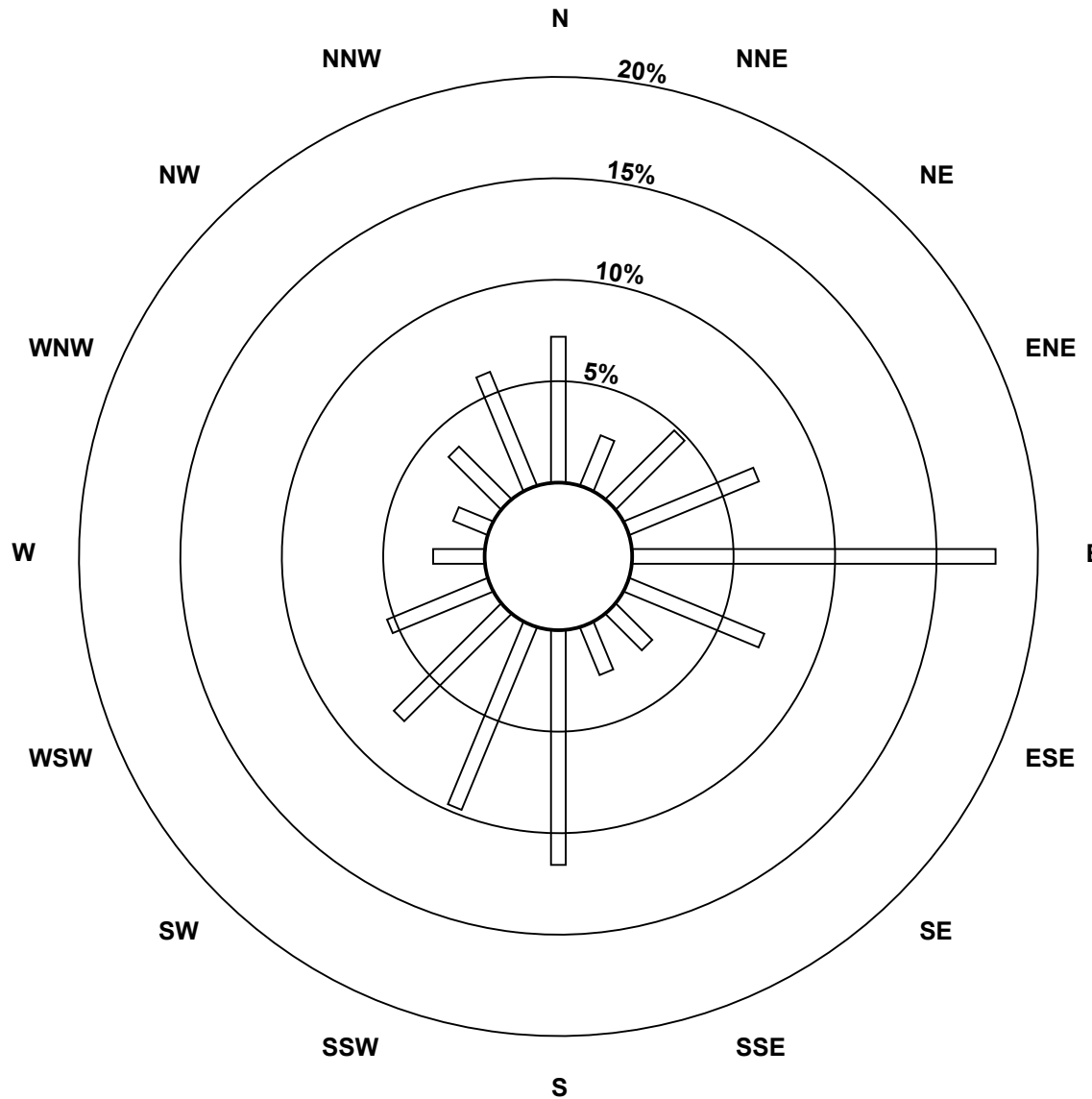
**Sulphur Dioxide (SO<sub>2</sub>) - ppb**

**Donnelly - January 2018**

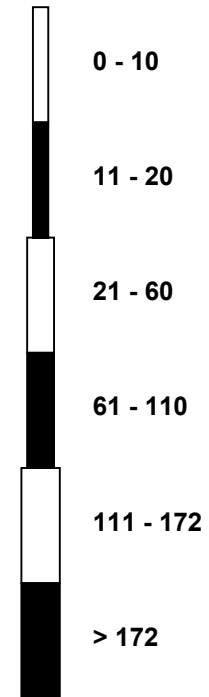


**Pollutant Rose**

**Sulphur Dioxide (SO<sub>2</sub>) - ppb**  
**Donnelly - January 2018**



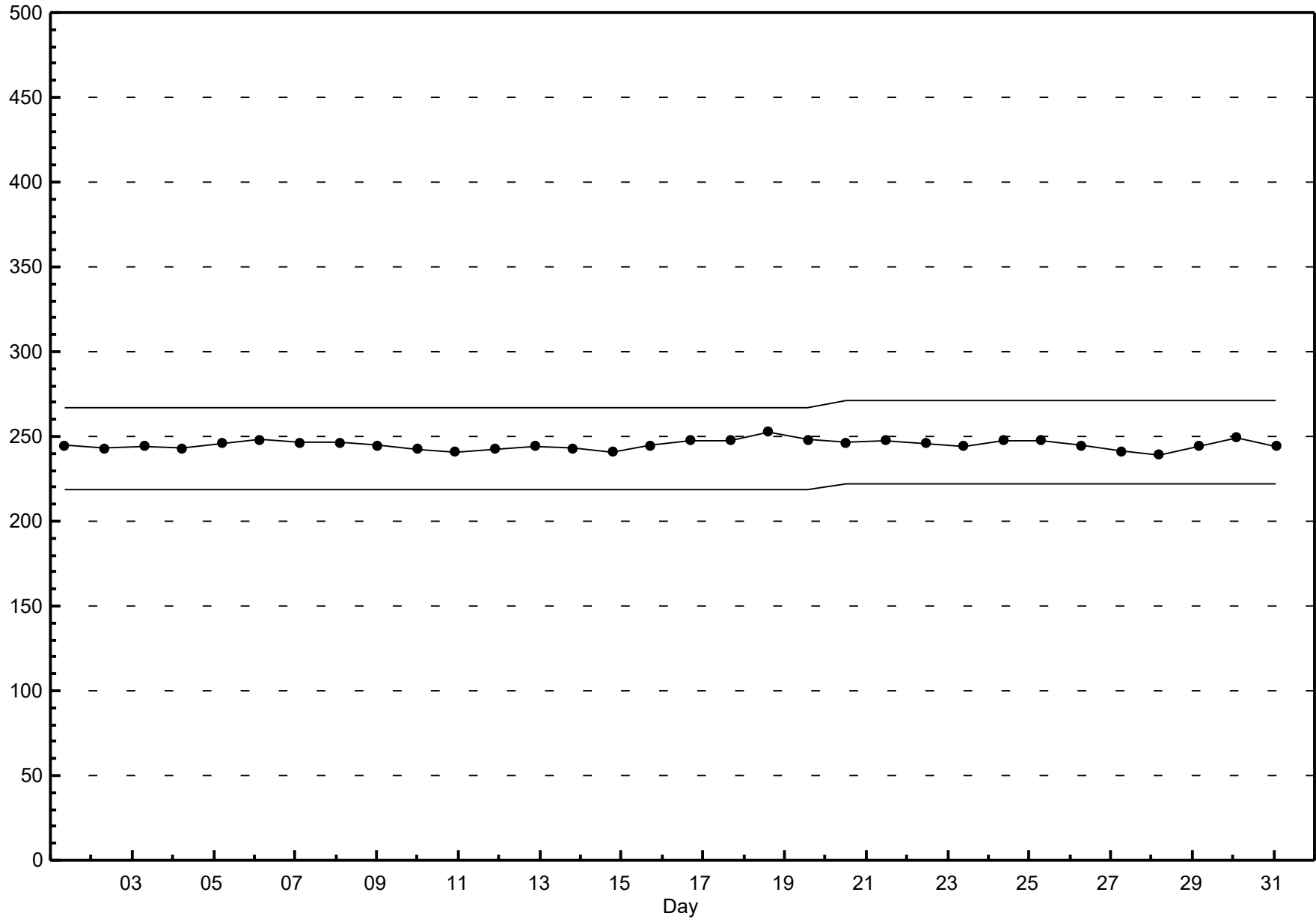
**Pollutant Classes (ppb)**





### Span Responses

Sulphur Dioxide (SO<sub>2</sub>)  
Donnelly - January 2018



## Hourly Averages

Hydrogen Sulphide (H<sub>2</sub>S) - ppb

Donnelly - January 2018

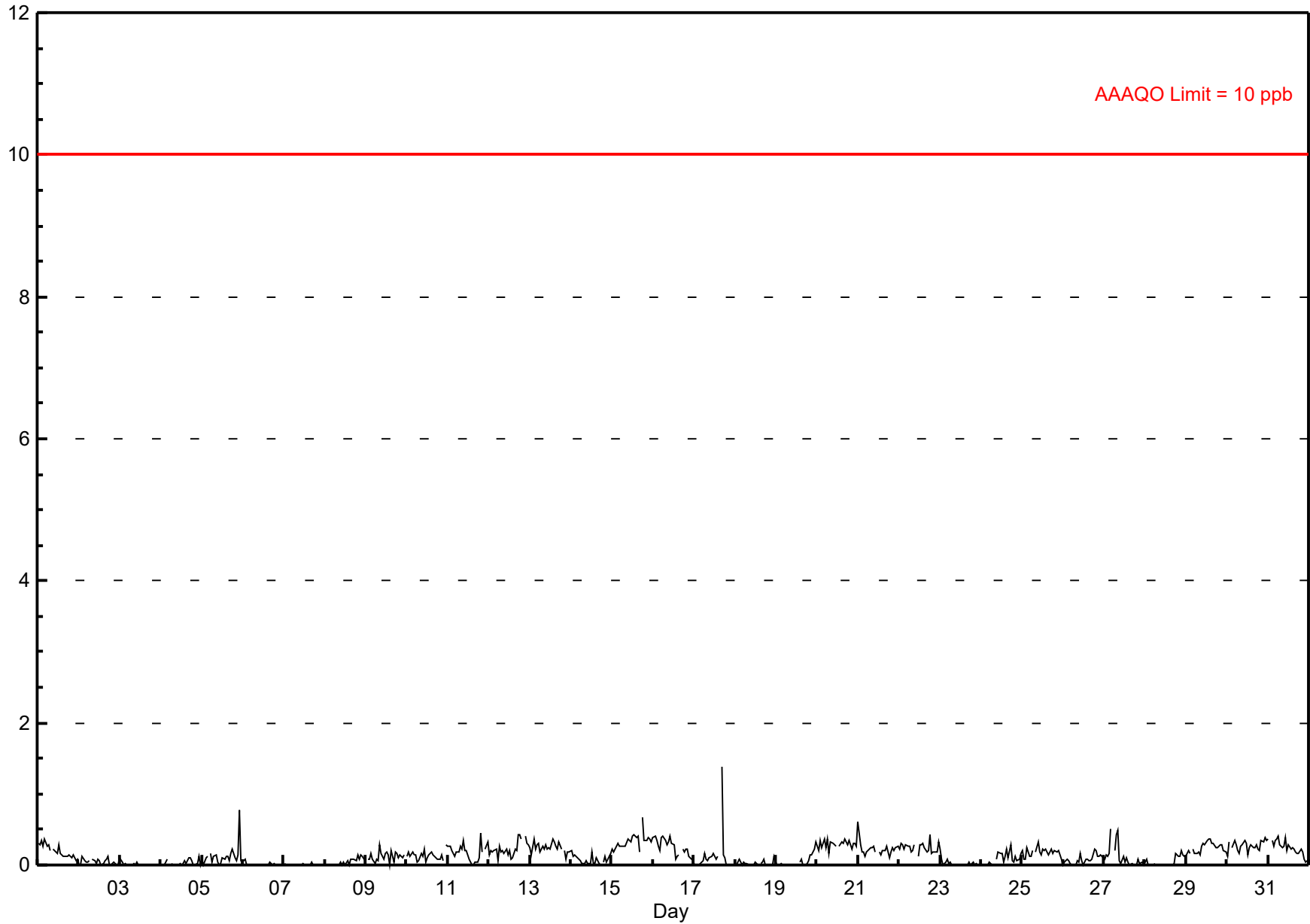
Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 1.4 ppb on Jan 17 17:00	Maximum Daily Average: 0.3 ppb on Jan 15		Hours of Data:	708
Minimum Value: 0 ppb on Jan 2 01:00	Minimum Daily Average: 0.0 ppb on Jan 7		Hours of Missing Data:	36
Maximum Diurnal Average: 0.2 ppb at hour 10	Minimum Diurnal Average: 0.1 ppb at hour 8		Hours of Calibration:	36
Monthly Average: 0.14 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.1 Q <sub>3</sub> = 0.2 P <sub>90</sub> = 0.3 P <sub>99</sub> = 0.4		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jan	0	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
2-Jan	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
3-Jan	0	0	0	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
4-Jan	0	0	0	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
5-Jan	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.1	0.8
6-Jan	0	0	0	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
7-Jan	0	0	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
8-Jan	0	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
9-Jan	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
10-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.3
11-Jan	0	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	0.4
12-Jan	0	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	0.4
13-Jan	0	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
14-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.2
15-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0.3	0.7
16-Jan	0	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
17-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0.1	1.4
18-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
19-Jan	0	0	0	0	0	0	0	0	0	C	C	C	C	A	0	0	0	0	0	0	0	0	0	0	0.1	0.3
20-Jan	0	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
21-Jan	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
22-Jan	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
23-Jan	0	0	0	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
24-Jan	0	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
25-Jan	0	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
26-Jan	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
27-Jan	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
28-Jan	0	0	0	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
29-Jan	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
30-Jan	0	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
31-Jan	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	Diurnal Average
	0.6	0.4	0.4	0.3	0.5	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.3	0.4	0.4	0.4	1.4	0.4	0.7	0.4	0.4	0.4	0.8	0.3	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 (H<sub>2</sub>S) - ppb**  
**Donnelly - January 2018**



## Hourly Maximums

Hydrogen Sulphide (H<sub>2</sub>S) - ppb

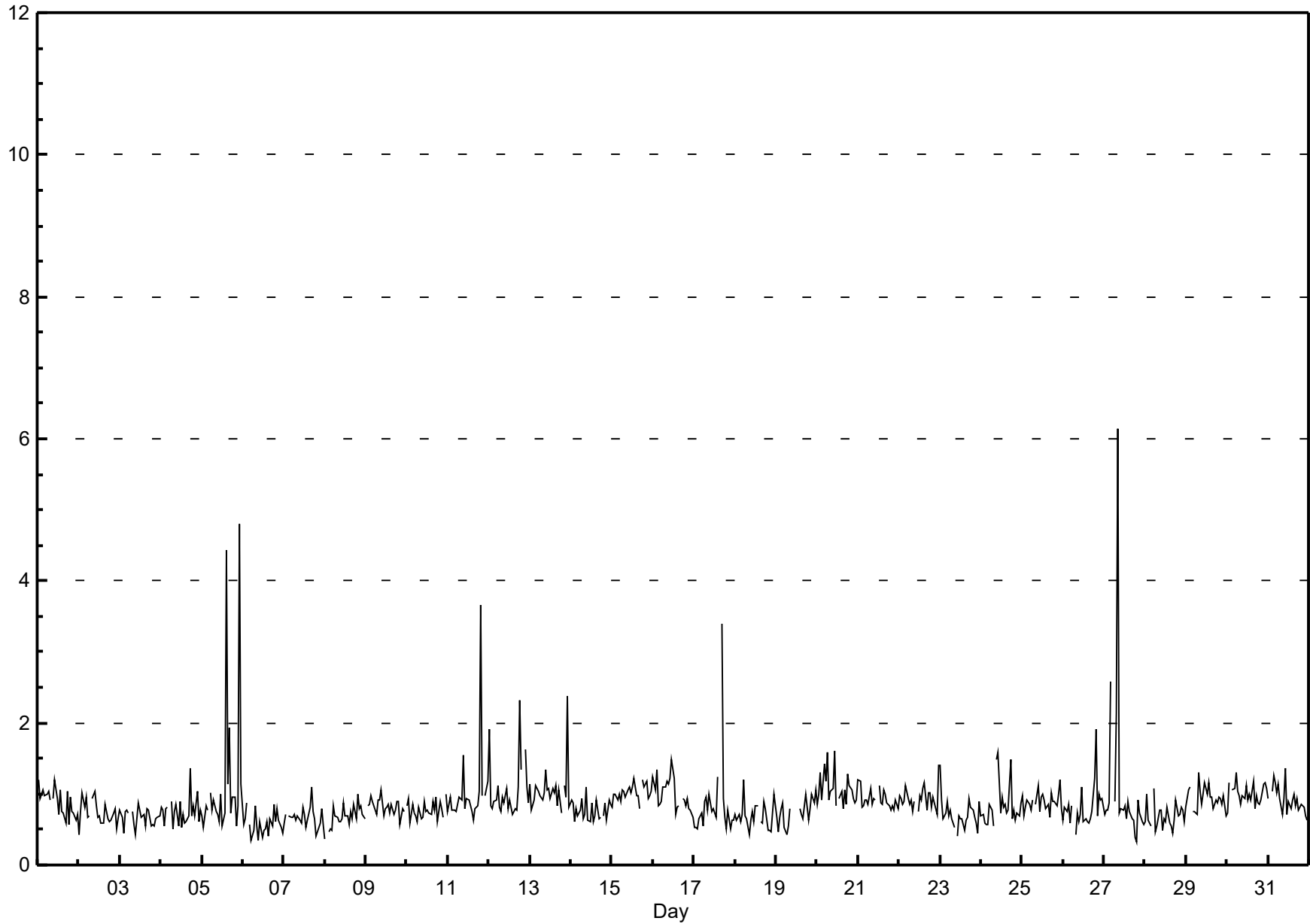
Donnelly - January 2018

Maximum Value: 6.1 ppb on Jan 27 09:00      Maximum Daily Average: 1.2 ppb on Jan 5 Minimum Value: 0 ppb on Jan 27 20:00      Minimum Daily Average: 0.6 ppb on Jan 6 Maximum Diurnal Average: 1.0 ppb at hour 9      Minimum Diurnal Average: 0.8 ppb at hour 21 Monthly Average: 0.86 ppb      Percentiles: P <sub>1</sub> = 0.4 P <sub>10</sub> = 0.6 Q <sub>1</sub> = 0.7 Median = 0.8 Q <sub>3</sub> = 1.0 P <sub>90</sub> = 1.1 P <sub>99</sub> = 2.3																								Hours in Service: 744 Hours of Data: 708 Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jan	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
2-Jan	0	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
3-Jan	1	1	0	1	1	1	A	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
4-Jan	1	1	1	1	1	A	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.4
5-Jan	1	1	1	1	A	1	1	1	1	1	1	1	1	1	4	1	2	1	1	1	1	1	5	1	1.2	4.8
6-Jan	1	1	1	A	1	0	0	1	1	0	1	0	0	1	1	0	1	1	1	1	1	1	1	0	0.6	0.9
7-Jan	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0.7	1.1
8-Jan	0	A	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
9-Jan	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	1.1
10-Jan	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	1.0
11-Jan	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	4	1	A	1	1	1.0	3.7
12-Jan	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	A	2	1	1	1.0	2.3
13-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	2	1	1.1	2.4
14-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.8	1.1
15-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1.0	1.2
16-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1.0	1.5
17-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	3	1	1	1	1	1	1	1	0.8	3.4
18-Jan	1	1	1	1	1	1	1	1	0	1	1	1	1	1	A	1	1	1	1	0	0	0	1	1	0.7	1.2
19-Jan	1	0	1	1	1	1	0	1	1	C	C	C	C	A	1	1	1	1	1	1	1	1	1	1	0.7	1.1
20-Jan	1	1	1	1	1	1	2	1	1	1	2	1	A	1	1	1	1	1	1	1	1	1	1	1	1.1	1.6
21-Jan	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
22-Jan	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	1.4
23-Jan	1	1	1	1	1	1	1	1	1	1	A	0	1	1	0	1	1	1	1	1	1	1	0	1	0.7	1.4
24-Jan	1	1	1	1	1	1	1	1	A	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.6
25-Jan	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	1.2
26-Jan	1	1	1	1	1	1	A	0	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	0.8	1.9
27-Jan	1	1	1	1	3	A	1	2	6	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1.1	6.1
28-Jan	1	1	1	1	A	1	0	1	1	1	0	1	1	1	1	1	0	1	1	1	1	1	1	1	0.7	1.1
29-Jan	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3
30-Jan	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.3
31-Jan	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.4
	0.8	0.8	0.8	0.8	0.9	0.9	0.8	0.9	1.0	0.9	0.9	0.9	0.8	0.8	0.9	0.8	0.9	0.9	0.9	0.9	0.8	0.8	1.0	0.8	Diurnal Average	
	1.9	1.2	1.3	1.3	2.6	1.3	1.6	2.1	6.1	1.5	1.6	1.5	1.2	1.2	4.4	1.2	3.4	1.5	2.3	3.7	1.2	1.6	4.8	1.4	Diurnal Maximum	
C - Calibration      A - Automated Daily Zero Span																										

**Hourly Maximums**

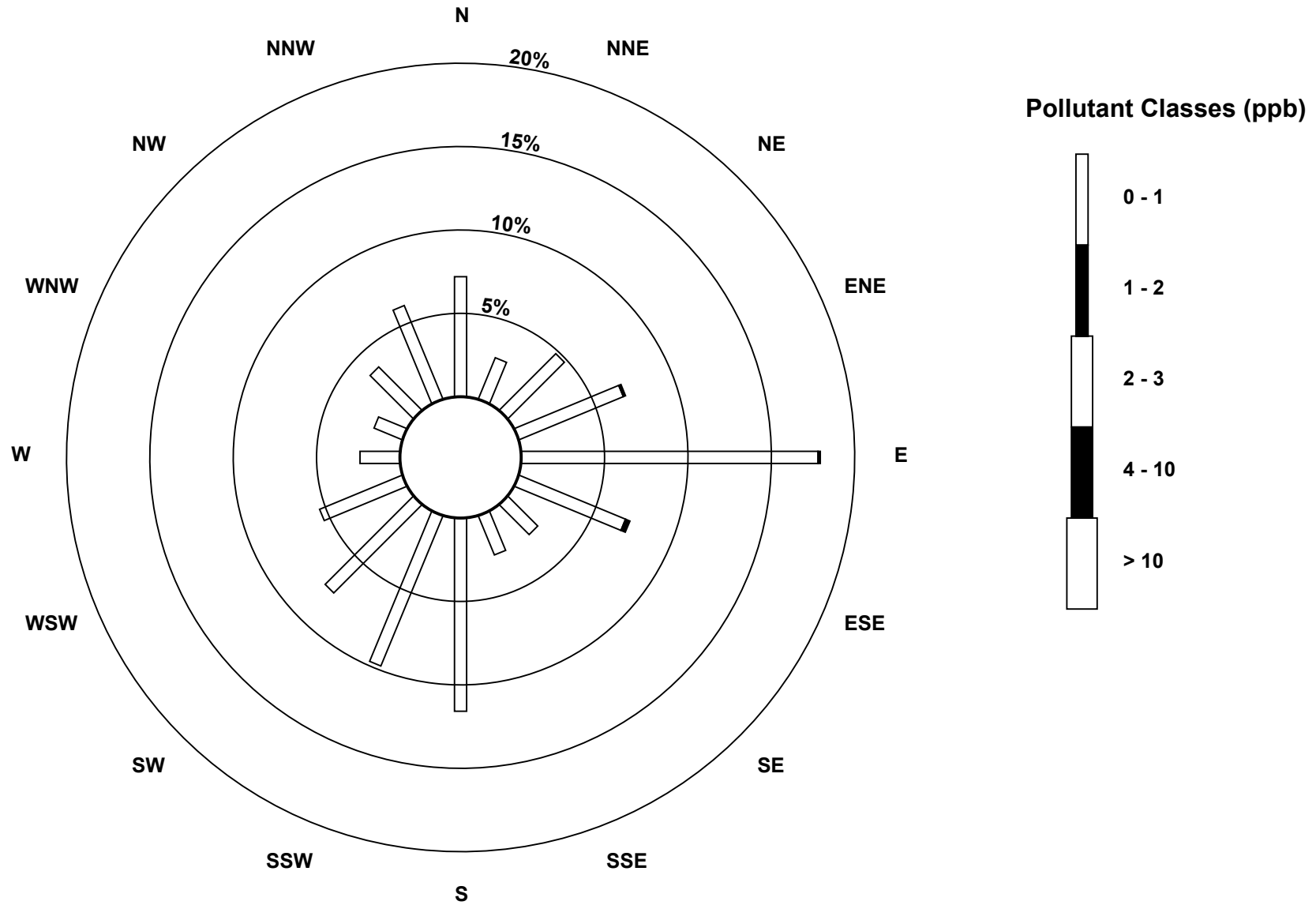
**Hydrogen Sulphide (H<sub>2</sub>S) - ppb**

**Donnelly - January 2018**



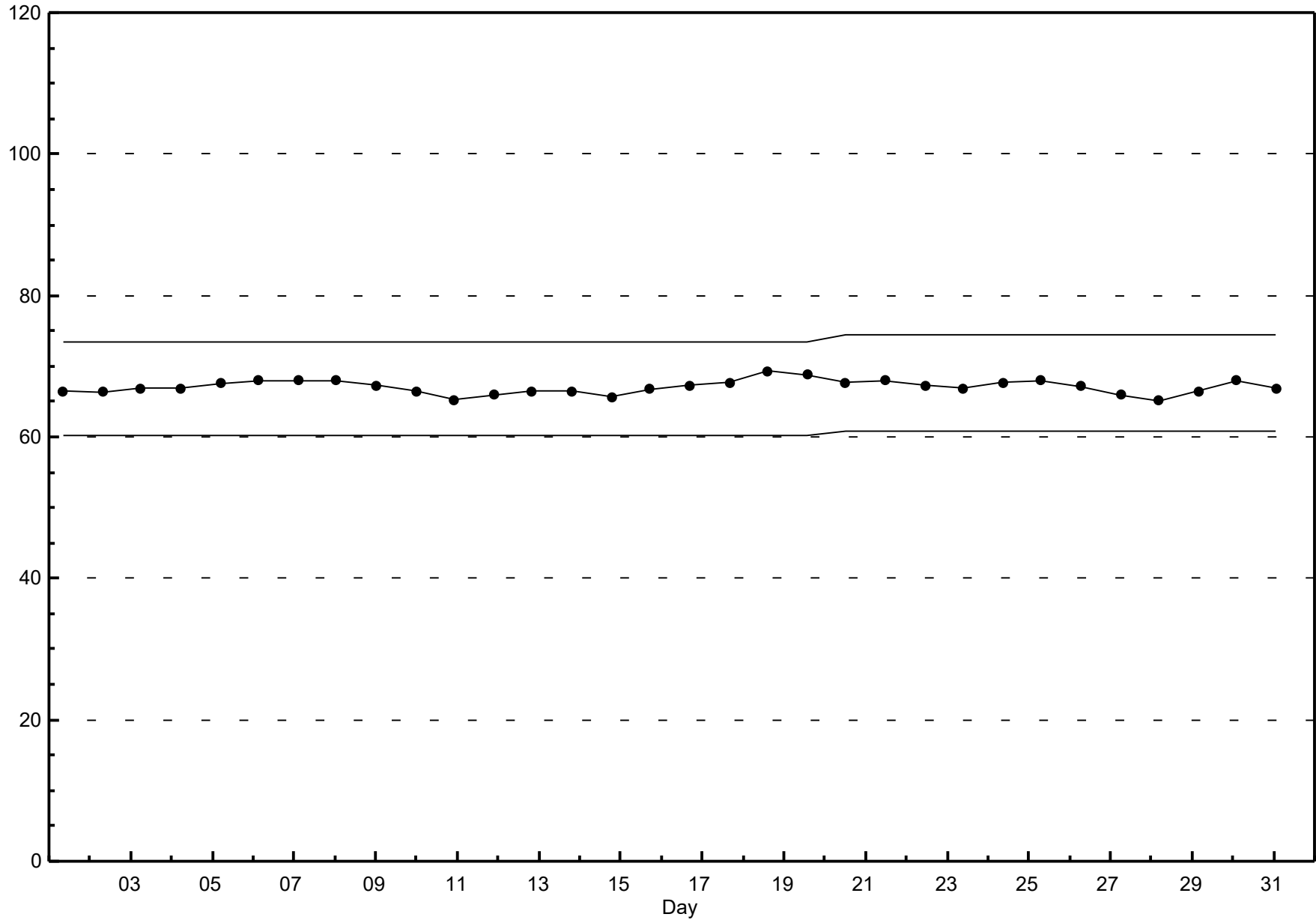
**Pollutant Rose**

**Hydrogen Sulphide (H<sub>2</sub>S) - ppb**  
**Donnelly - January 2018**



### Span Responses

Hydrogen Sulphide (H<sub>2</sub>S)  
Donnelly - January 2018



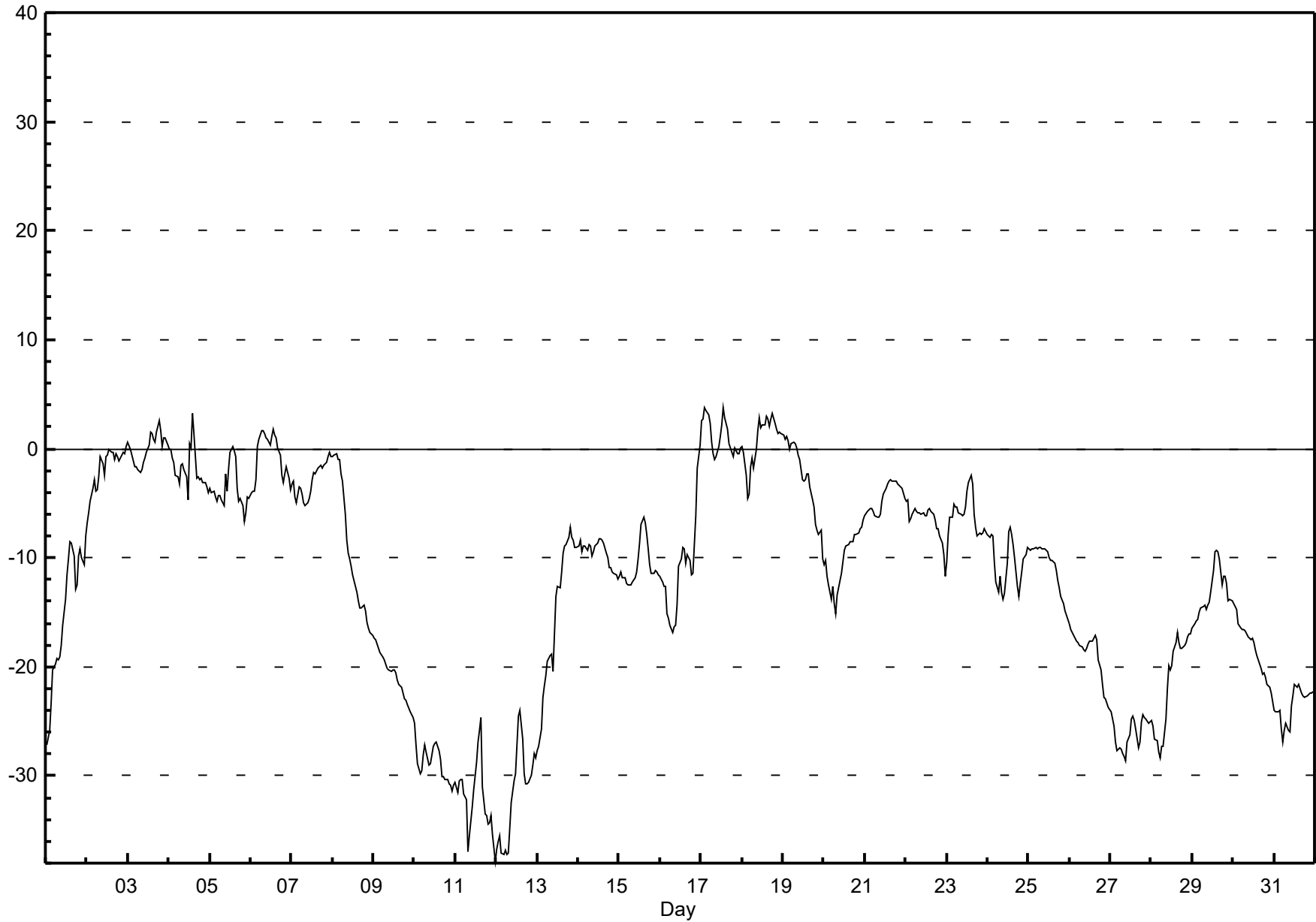
# Hourly Averages

External Temperature (ET) - °C

Donnelly - January 2018

<b>Maximum Value: 3.8 °C on Jan 17 14:00</b>		<b>Maximum Daily Average: 1.1 °C on Jan 17</b>		<b>Hours in Service: 744</b>																						
<b>Minimum Value: -38 °C on Jan 12 00:00</b>		<b>Minimum Daily Average: -32.0 °C on Jan 11</b>		<b>Hours of Data: 744</b>																						
<b>Maximum Diurnal Average: -9.6 °C at hour 15</b>		<b>Minimum Diurnal Average: -13.0 °C at hour 8</b>		<b>Hours of Missing Data: 0</b>																						
<b>Monthly Average: -11.84 °C</b>		<b>Percentiles: P<sub>1</sub> = -36.8 P<sub>10</sub> = -27.1 Q<sub>1</sub> = -19.0 Median = -9.7 Q<sub>3</sub> = -3.5 P<sub>90</sub> = 0.0 P<sub>99</sub> = 2.8</b>		<b>Hours of Calibration: 0</b>																						
				<b>Percent Operational Time: 100.0</b>																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jan	-27	-26	-26	-23	-20	-20	-19	-19	-19	-18	-16	-14	-12	-10	-8	-9	-10	-13	-13	-10	-9	-10	-11	-8	-15.4	-8.0
2-Jan	-7	-6	-5	-4	-3	-4	-4	-4	-3	-1	-1	-2	-1	-1	0	0	-1	0	-1	-1	-1	0	0	0	-1.9	0.2
3-Jan	1	0	-1	-1	-2	-2	-2	-2	-2	-1	-1	0	0	2	1	1	1	2	3	2	0	1	1	0	0.0	2.6
4-Jan	0	0	-1	-1	-2	-3	-3	-1	-1	-2	-3	-5	0	0	3	1	-3	-3	-3	-3	-3	-3	-3	-4	-1.7	3.2
5-Jan	-4	-4	-4	-4	-5	-4	-4	-5	-5	-2	-4	-2	0	0	0	-1	-4	-5	-5	-5	-7	-6	-4	-5	-3.7	0.2
6-Jan	-4	-4	-4	-3	0	1	2	2	1	1	1	0	1	2	1	1	0	-1	-2	-3	-2	-2	-3	-4	-0.8	1.7
7-Jan	-3	-3	-4	-5	-4	-4	-4	-5	-5	-5	-5	-4	-3	-2	-2	-2	-2	-2	-2	-2	-1	-1	0	-1	-2.9	-0.4
8-Jan	-1	-1	-1	-1	-1	-2	-3	-6	-8	-10	-10	-11	-12	-13	-13	-14	-15	-15	-14	-15	-16	-17	-17	-17	-9.6	-0.5
9-Jan	-17	-18	-18	-18	-19	-19	-19	-20	-20	-20	-20	-20	-20	-21	-21	-22	-22	-22	-23	-23	-23	-24	-24	-25	-20.8	-17.4
10-Jan	-25	-27	-29	-30	-30	-28	-27	-28	-29	-29	-28	-27	-27	-27	-28	-28	-30	-30	-30	-30	-31	-31	-31	-31	-28.8	-25.2
11-Jan	-31	-31	-30	-30	-30	-32	-32	-37	-36	-34	-33	-31	-29	-27	-26	-25	-31	-34	-34	-34	-34	-34	-35	-38	-32.0	-24.7
12-Jan	-37	-36	-35	-37	-37	-37	-37	-37	-35	-32	-31	-30	-27	-25	-24	-27	-30	-31	-31	-31	-30	-29	-28	-28	-31.7	-24.0
13-Jan	-28	-27	-26	-23	-22	-21	-19	-19	-19	-20	-17	-14	-13	-13	-11	-10	-9	-9	-8	-7	-8	-8	-9	-9	-15.3	-7.2
14-Jan	-9	-8	-9	-9	-9	-9	-9	-9	-10	-9	-9	-9	-8	-8	-8	-9	-10	-10	-11	-11	-11	-11	-12	-12	-9.6	-8.2
15-Jan	-12	-11	-12	-12	-12	-12	-12	-12	-12	-12	-11	-10	-9	-7	-6	-7	-8	-9	-11	-11	-11	-11	-11	-11	-10.6	-6.3
16-Jan	-12	-12	-13	-13	-15	-16	-16	-17	-16	-16	-14	-11	-10	-9	-9	-11	-10	-10	-12	-11	-9	-6	-2	0	-11.2	0.3
17-Jan	3	3	4	4	3	2	1	0	-1	-1	0	1	2	4	3	2	0	0	0	-1	0	0	0	0	1.1	3.8
18-Jan	0	0	-2	-5	-4	-2	-1	-2	0	2	3	2	2	2	3	3	2	3	2	2	1	2	1	0	0.7	3.3
19-Jan	1	1	1	1	0	0	1	0	0	-1	-1	-3	-3	-2	-2	-3	-5	-5	-7	-7	-8	-7	-10	-2.6	1.3	
20-Jan	-11	-10	-12	-13	-14	-13	-14	-15	-13	-12	-11	-10	-9	-9	-9	-9	-9	-8	-8	-8	-8	-7	-7	-6	-10.2	-6.5
21-Jan	-6	-6	-6	-5	-6	-6	-6	-6	-6	-6	-5	-4	-4	-3	-3	-3	-3	-3	-3	-3	-3	-3	-4	-5	-4.5	-2.9
22-Jan	-5	-5	-7	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-5	-6	-6	-7	-7	-7	-8	-9	-10	-12	-6.6	-4.7
23-Jan	-10	-8	-6	-6	-5	-5	-5	-6	-6	-6	-6	-5	-4	-3	-2	-3	-6	-7	-8	-8	-8	-8	-7	-8	-6.2	-2.4
24-Jan	-8	-8	-8	-8	-10	-12	-13	-12	-13	-14	-13	-10	-8	-7	-8	-9	-10	-13	-14	-12	-11	-10	-10	-9	-10.4	-7.2
25-Jan	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-10	-10	-10	-11	-11	-12	-13	-13	-14	-15	-16	-16	-10.9	-9.0
26-Jan	-16	-17	-17	-17	-18	-18	-18	-18	-18	-19	-18	-18	-18	-18	-17	-17	-17	-19	-20	-22	-23	-23	-23	-24	-18.9	-16.1
27-Jan	-24	-25	-25	-27	-28	-27	-28	-28	-28	-29	-27	-26	-25	-24	-25	-26	-27	-27	-25	-24	-25	-25	-25	-25	-26.0	-24.2
28-Jan	-25	-25	-27	-27	-28	-28	-27	-27	-25	-22	-20	-20	-20	-19	-18	-17	-18	-18	-18	-18	-18	-17	-17	-17	-21.5	-16.8
29-Jan	-17	-16	-16	-16	-15	-15	-14	-14	-15	-14	-13	-11	-9	-9	-9	-10	-13	-12	-12	-12	-12	-14	-14	-14	-13.3	-9.3
30-Jan	-14	-14	-15	-16	-16	-17	-17	-17	-17	-17	-17	-17	-18	-18	-19	-20	-20	-21	-20	-21	-22	-22	-22	-23	-18.4	-14.2
31-Jan	-24	-24	-24	-24	-26	-27	-26	-25	-26	-26	-24	-23	-22	-22	-22	-22	-22	-23	-23	-23	-23	-22	-22	-22	-23.5	-21.5
																								Diurnal Average		
																								Diurnal Maximum		





## Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	6	6	6	5	5	10	8	17	13	19	20	23	23	26	18	11	6	4	2	5	8	8	5	14	8.7	25.7
Dir	82	69	79	144	144	137	153	178	168	169	176	181	179	184	197	219	277	45	139	240	241	221	203	216	180	184
2 Spd	7	13	10	7	6	7	9	10	7	8	14	16	15	13	12	12	15	14	14	6	15	21	18	15	10.9	21.4
Dir	199	234	238	233	288	257	182	181	172	175	184	196	208	229	210	201	186	181	182	184	190	186	187	192	199	186
3 Spd	15	16	14	8	10	13	12	13	17	17	14	13	12	13	13	14	17	13	10	10	7	13	17	16	12.9	17.0
Dir	191	194	201	193	189	183	182	185	185	186	183	195	206	200	189	181	182	183	174	187	200	200	207	204	191	185
4 Spd	16	10	9	5	4	5	4	9	14	7	3	2	1	3	0	2	4	6	5	5	7	8	9	7	3.7	15.6
Dir	208	237	225	237	233	194	172	183	183	172	158	116	136	56	297	102	85	114	117	106	101	104	99	108	163	208
5 Spd	9	12	11	2	4	9	7	4	5	9	3	5	8	9	2	3	4	5	4	5	6	7	5	7	5.3	12.5
Dir	107	103	115	83	144	117	115	90	62	151	103	161	165	167	85	97	81	79	107	94	83	95	91	72	111	103
6 Spd	4	2	5	8	13	13	18	23	30	27	24	16	20	22	27	26	23	21	19	19	20	21	17	16	17.4	30.4
Dir	89	267	269	217	199	202	220	243	246	243	236	233	243	239	247	242	233	228	217	215	229	240	227	218	232	246
7 Spd	15	14	9	6	13	13	11	11	9	10	13	15	13	11	14	11	10	7	8	12	12	11	12	14	10.5	15.1
Dir	226	228	241	232	248	238	208	204	217	199	197	195	189	187	182	178	183	176	174	172	172	169	169	179	198	195
8 Spd	12	12	13	9	5	6	9	12	12	14	16	19	16	14	15	15	15	13	10	16	20	20	15	16	8.5	20.0
Dir	180	178	186	192	181	46	45	23	8	6	1	359	352	345	350	350	352	357	2	46	41	41	44	39	17	41
9 Spd	17	14	14	14	12	14	12	10	12	12	13	12	11	12	13	13	11	11	12	14	16	13	12	13	12.0	16.9
Dir	39	39	34	32	27	29	23	17	7	5	7	11	354	348	338	339	339	345	350	355	358	348	352	357	7	39
10 Spd	10	5	3	3	4	4	3	5	5	5	6	7	9	10	8	8	7	6	10	10	11	12	13	12	5.6	12.5
Dir	353	330	335	274	283	298	289	252	244	242	258	263	259	265	259	262	261	240	223	223	208	206	203	192	246	203
11 Spd	13	13	11	9	9	8	5	4	5	4	4	6	4	6	6	3	0	3	3	4	3	3	0	3	3.9	13.0
Dir	187	186	171	167	166	155	159	75	116	91	87	90	86	93	104	116	242	232	199	69	105	129	112	44	142	186
12 Spd	1	4	4	2	3	5	3	1	4	3	4	3	5	4	4	3	1	1	0	1	0	1	5	1	2.2	5.3
Dir	129	78	177	148	72	90	103	93	104	103	97	100	97	94	105	183	297	76	166	129	279	51	83	68	103	97
13 Spd	2	1	4	1	3	3	1	2	1	2	3	4	9	5	6	10	8	10	11	7	1	3	5	5	2.0	10.7
Dir	65	295	70	267	324	345	5	82	68	58	74	218	216	245	238	236	242	221	200	200	109	220	41	20	225	200
14 Spd	6	4	3	6	4	3	2	3	7	7	8	10	12	10	8	11	15	18	15	16	17	18	17	13	9.3	17.7
Dir	56	37	12	46	49	44	77	90	67	71	87	96	99	99	91	96	99	99	99	101	101	101	100	98	91	99
15 Spd	13	12	13	14	13	13	15	14	14	12	11	11	11	9	10	10	8	10	9	7	8	12	13	13	11.4	14.9
Dir	95	99	102	101	101	101	101	99	100	101	104	103	104	100	101	102	104	111	110	101	110	118	119	119	104	101
16 Spd	11	7	5	7	2	1	2	0	2	2	1	1	3	2	3	2	3	4	5	3	6	6	13	15	2.8	14.9
Dir	117	112	108	125	295	324	92	117	197	54	44	122	223	208	251	200	111	216	231	189	203	182	199	213	177	213
17 Spd	14	14	17	20	21	21	22	16	17	21	17	16	13	8	9	12	9	7	9	12	12	12	13	12	9.5	21.9
Dir	209	196	234	238	225	223	214	209	205	205	194	185	175	159	120	131	119	108	99	99	101	100	101	102	182	214
18 Spd	11	7	5	6	4	8	7	2	16	2	8	16	19	30	37	34	19	19	16	12	10	10	13	14	10.3	37.1
Dir	98	99	87	76	128	176	167	135	215	333	177	174	196	233	219	221	211	221	231	248	266	251	242	249	214	219
19 Spd	13	13	14	12	13	15	17	17	10	6	12	8	6	7	8	7	3	4	8	1	2	3	5	1	7.9	17.3
Dir	235	226	231	229	213	226	235	241	250	261	281	268	257	258	260	263	316	236	255	216	179	152	208	169	240	235
20 Spd	1	2	1	3	1	3	1	3	2	2	2	1	2	3	2	1	2	1	0	1	1	1	1	5	0.4	5.3
Dir	60	153	70	63	133	176	67	74	99	143	198	178	264	276	277	285	340	346	143	343	44	37	49	53	79	53
21 Spd	2	4	9	8	11	10	12	15	13	14	14	15	15	15	13	9	9	10	11	11	8	8	6	10	10.3	14.9
Dir	76	82	73	87	89	85	72	73	78	80	91	94	93	90	91	88	88	94	96	97	100	98	130	120	89	73
22 Spd	7	12	10	12	13	12	12	12	6	5	1	3	4	1	0	2	2	3	3	2	3	3	2	1	3.1	12.9
Dir	145	190	189	181	199	234	229	225	229	245	187	316	30	340	328	57	51	77	87	86	90	100	97	47	196	199

# Hourly Averages

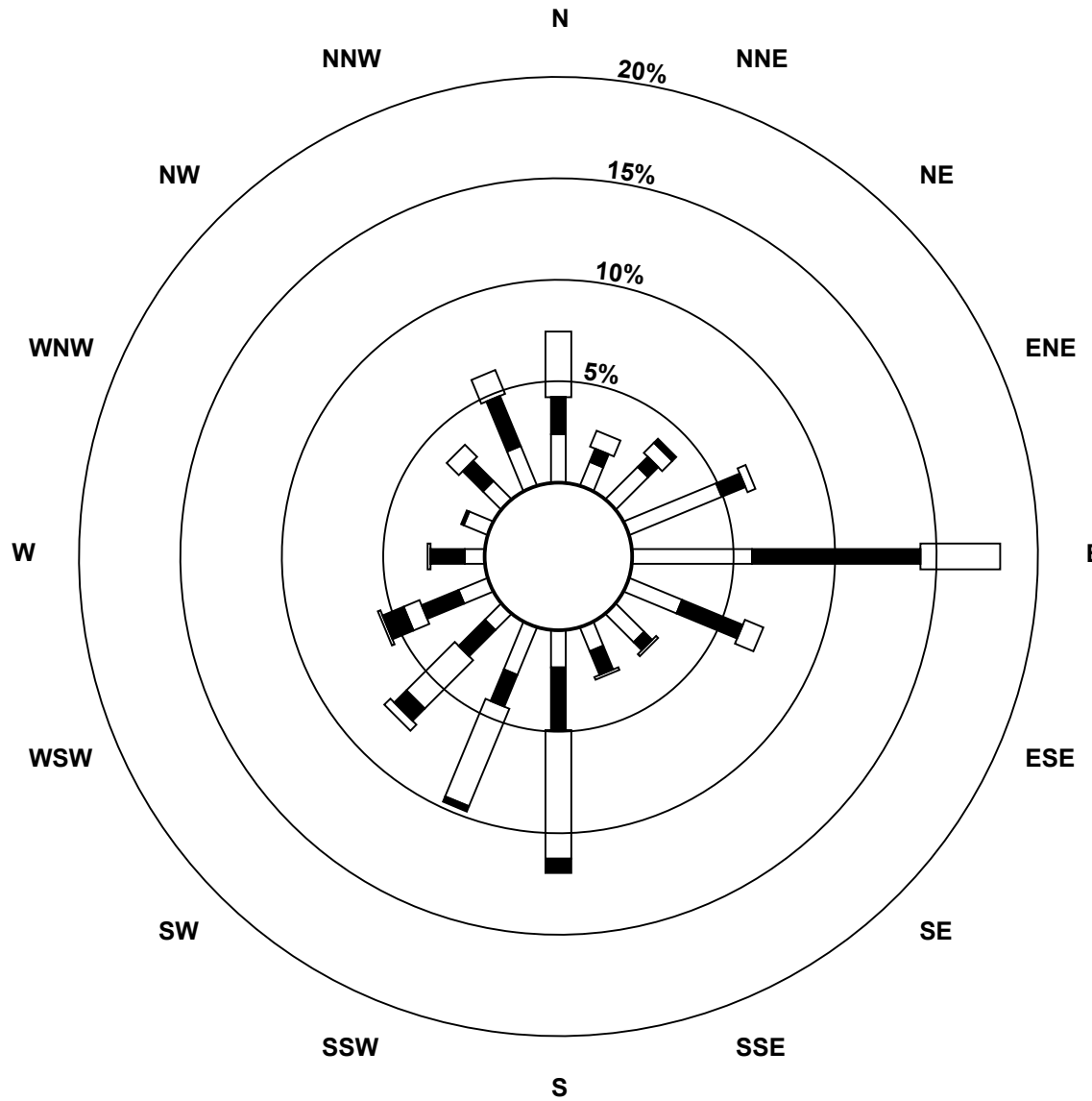
**Wind Speed (km/h)**  
**Wind Direction (deg)**  
**Donnelly - January 2018**

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	4	12	17	17	15	16	17	16	16	16	16	14	12	12	10	4	4	4	4	8	10	6	8	8	9.1	16.9
Dir	191	194	196	190	193	184	189	182	185	188	186	185	180	181	185	157	123	112	86	98	97	91	94	96	173	190
24 Spd	7	9	5	3	3	3	3	2	4	3	5	4	3	5	6	4	1	2	6	6	2	5	3	3	3.2	8.7
Dir	97	96	96	32	256	73	77	79	58	36	59	88	93	86	66	358	210	44	69	53	5	359	5	79	65	96
25 Spd	2	2	4	4	3	4	5	6	4	6	10	11	14	15	13	15	12	10	8	9	9	11	9	10	7.8	14.9
Dir	39	357	5	23	358	342	0	12	3	345	354	359	358	1	357	1	351	348	331	332	324	325	322	320	349	1
26 Spd	12	12	11	13	12	10	12	9	10	9	9	10	10	11	10	8	6	4	3	3	4	5	4	2	6.9	12.7
Dir	316	322	341	342	345	341	341	338	330	329	331	325	325	320	322	317	329	322	354	192	198	201	189	183	327	342
27 Spd	1	2	1	1	1	1	0	1	2	1	0	4	2	2	3	1	3	7	3	2	0	2	5	5	1.1	6.7
Dir	158	107	199	38	77	92	212	63	63	58	123	213	250	282	295	306	208	202	213	299	278	218	211	209	214	202
28 Spd	5	0	3	3	2	2	2	3	2	1	2	3	4	4	6	6	6	5	6	8	9	8	10	9	3.9	9.9
Dir	206	87	179	175	148	71	126	85	137	135	82	67	71	86	93	88	80	79	81	93	96	93	96	94	98	96
29 Spd	10	9	8	7	10	11	11	11	10	11	10	11	10	9	12	9	6	6	3	7	10	12	13	14	5.5	14.0
Dir	98	95	91	88	95	96	100	100	102	99	97	97	90	97	99	100	72	34	57	329	305	315	314	311	77	311
30 Spd	12	11	12	11	6	3	3	4	5	6	5	8	10	10	10	6	5	7	8	5	5	8	11	7	7.1	12.4
Dir	320	330	330	1	351	5	12	337	331	342	349	340	344	341	351	351	18	13	8	15	349	12	4	8	350	330
31 Spd	4	3	3	6	2	2	2	1	2	1	2	5	4	5	3	4	4	4	3	3	2	2	3	4	2.1	5.8
Dir	358	353	359	5	15	192	75	53	38	57	69	69	94	46	358	315	313	340	326	343	0	348	307	287	3	5
Spd	2.4	2.4	2.0	1.6	2.2	2.5	2.8	2.4	2.6	2.2	2.2	2.7	2.5	2.2	2.1	2.0	1.0	1.4	1.8	1.7	1.6	1.9	2.3	2.0	Diurnal Average	
Dir	154	171	182	172	188	175	170	176	185	175	168	168	182	208	211	212	180	159	157	119	131	146	153	158	Diurnal Maximum	
Spd	16.9	15.7	17.5	19.5	20.8	20.9	21.9	22.8	30.4	27.2	24.4	22.8	22.6	29.8	37.1	33.6	23.3	21.4	19.0	19.0	20.4	21.4	18.4	16.3	Diurnal Maximum	
Dir	39	194	234	238	225	223	214	243	246	243	236	181	179	233	219	221	233	228	217	215	229	186	187	218	Diurnal Maximum	
Maximum Speed Value: 37 km/h on Jan 18 15:00		Minimum Speed Value: 0 km/h on Jan 12 21:00										Hours in Service: 744														
Maximum Daily Speed Average: 17.4 km/h on Jan 6		Minimum Daily Speed Average: 0.4 km/h on Jan 20										Hours of Data: 744														
Maximum Diurnal Speed Average: 2.8 km/h at hour 7		Minimum Diurnal Speed Average: 1.0 km/h at hour 17										Hours of Missing Data: 0														
Monthly Average Velocity: 1.98 km/h 172.0 deg		Speed Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 1.9 Q <sub>1</sub> = 3.7 Median = 7.9 Q <sub>3</sub> = 12.3 P <sub>90</sub> = 15.6 P <sub>99</sub> = 25.7										Percent Operational Time: 100.0														
All monthly, daily, and diurnal averages have been calculated using vector methods																										
Frequency Distribution																										
		Speed Range (km/h)																								
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																			
North	29	29	35	0	0	0	93																			
NorthEast	38	11	11	2	0	0	62																			
East	76	82	40	0	0	0	198																			
SouthEast	29	13	6	0	0	0	48																			
South	28	35	71	6	0	0	140																			
SouthWest	25	24	42	18	4	0	113																			
West	18	20	4	0	0	0	42																			
NorthWest	22	17	9	0	0	0	48																			
Total	265	231	218	26	4	0	744																			

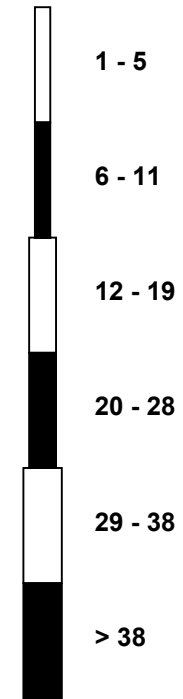
**Wind Rose**

**Wind Speed (WS) (km/h)**

**Donnelly - January 2018**



**Wind Speed Classes (km/h)**



# Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Donnelly - January 2018

Maximum Speed: 37 km/h on Jan 18 15:00	Maximum Daily Speed Average: 18.5 km/h on Jan 6	Hours in Service: 744
Minimum Speed: 0 km/h on Jan 4 15:00	Minimum Daily Speed Average: 2.2 km/h on Jan 20	Hours of Data: 744
Maximum Diurnal Speed Average: 10.0 km/h at hour 14	Minimum Diurnal Speed Average: 7.6 km/h at hour 20	Hours of Missing Data: 0
Monthly Average Speed: 8.69 km/h	Percentiles: P <sub>1</sub> = 0.9 P <sub>10</sub> = 2.4 Q <sub>1</sub> = 4.1 Median = 8.1 Q <sub>3</sub> = 12.3 P <sub>90</sub> = 15.6 P <sub>99</sub> = 25.9	Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jan	6	6	6	5	5	10	9	18	13	19	20	23	23	26	18	11	7	6	4	5	8	8	5	14	11.5	25.7
2-Jan	7	13	10	8	7	7	9	10	7	8	14	16	15	14	12	12	15	14	14	6	15	21	18	15	12.0	21.4
3-Jan	16	16	14	8	10	13	12	13	17	17	14	13	12	13	13	14	17	13	10	10	7	13	17	16	13.2	17.0
4-Jan	16	10	9	6	4	5	5	9	14	8	3	4	3	3	0	3	4	6	5	5	7	8	9	7	6.3	15.6
5-Jan	9	13	12	2	5	9	7	4	6	9	4	6	8	10	4	3	4	6	4	5	6	7	5	7	6.5	12.5
6-Jan	4	5	6	8	13	14	18	23	30	27	25	16	20	22	27	26	23	21	19	19	21	21	17	16	18.5	30.4
7-Jan	15	14	9	6	13	13	11	11	9	11	13	15	13	11	14	11	11	7	9	12	12	11	12	14	11.6	15.2
8-Jan	12	12	13	9	5	6	10	12	12	14	16	19	16	14	15	15	15	13	10	16	20	20	15	16	13.5	20.0
9-Jan	17	14	14	14	12	14	12	10	12	12	13	12	11	12	13	13	11	11	12	14	16	13	12	13	12.9	17.0
10-Jan	10	5	3	3	4	4	3	5	5	5	6	7	9	10	8	8	7	6	10	10	11	12	13	12	7.4	12.5
11-Jan	13	13	11	9	9	8	5	4	5	4	4	6	4	6	6	3	2	3	3	4	3	4	2	3	5.7	13.0
12-Jan	1	4	5	5	3	5	3	2	4	4	4	4	5	5	4	3	1	2	1	2	1	2	5	1	3.1	5.4
13-Jan	2	1	4	4	3	3	2	3	2	2	3	5	9	5	6	10	8	10	11	7	3	5	5	5	4.9	10.7
14-Jan	6	5	4	7	5	3	2	3	7	7	8	10	12	10	8	11	15	18	15	16	17	18	17	13	9.9	17.8
15-Jan	13	12	13	14	13	13	15	14	14	12	11	11	11	9	10	10	8	10	9	7	8	12	13	13	11.5	14.9
16-Jan	11	7	5	8	3	2	2	2	3	3	1	2	4	3	4	4	4	4	5	3	6	7	13	15	5.0	15.0
17-Jan	14	14	18	20	21	21	22	16	17	21	17	16	13	8	9	12	9	7	9	12	12	12	13	12	14.4	21.9
18-Jan	11	7	6	7	5	8	7	4	18	9	10	16	20	30	37	34	19	19	16	12	10	10	13	14	14.3	37.4
19-Jan	14	13	14	12	13	15	17	17	10	6	12	8	6	7	9	8	4	5	8	2	3	5	6	1	8.9	17.4
20-Jan	1	2	1	3	2	4	2	4	2	2	2	1	3	3	2	2	2	1	2	1	1	1	2	5	2.2	5.3
21-Jan	2	4	9	8	12	10	12	15	13	14	14	15	15	15	13	10	9	10	11	11	9	8	6	10	10.6	15.0
22-Jan	7	12	10	12	13	12	13	12	6	5	2	4	4	2	2	3	3	3	3	2	3	3	3	1	5.9	13.1
23-Jan	5	12	17	17	15	16	17	16	16	16	16	14	12	12	10	5	4	4	4	8	10	6	8	9	11.1	17.0
24-Jan	7	9	5	5	4	3	4	3	4	3	5	4	3	5	7	5	1	2	7	6	2	5	3	3	4.3	8.7
25-Jan	2	3	4	4	3	4	5	6	4	6	10	11	14	15	13	15	12	10	8	9	9	11	9	10	8.3	15.0
26-Jan	12	12	11	13	12	11	12	9	10	9	9	10	10	11	10	8	6	4	4	4	4	5	4	2	8.4	12.8
27-Jan	1	2	1	1	2	2	1	1	2	1	1	4	2	2	3	1	3	7	4	3	1	3	5	5	2.3	6.7
28-Jan	5	1	3	3	2	2	2	3	2	2	2	3	4	4	6	6	6	5	6	8	9	8	10	9	4.7	10.0
29-Jan	10	9	8	7	11	12	11	11	10	11	10	11	10	10	12	9	7	6	7	8	11	12	14	14	9.9	14.1
30-Jan	12	11	13	11	6	3	3	4	5	7	6	8	10	10	10	6	5	7	8	5	5	8	11	7	7.6	13.3
31-Jan	4	3	3	6	2	2	2	1	2	1	3	5	4	6	4	4	4	4	3	3	2	2	3	4	3.3	5.9
	8.6	8.5	8.4	7.8	7.6	8.2	8.2	8.6	9.1	8.9	8.9	9.7	9.9	10.0	9.9	9.1	8.0	7.9	7.8	7.6	8.1	9.1	9.3	9.3	Diurnal Average	
	17.0	15.7	17.8	19.6	20.9	20.9	21.9	22.9	30.4	27.3	24.5	22.8	22.6	30.2	37.4	33.8	23.3	21.5	19.0	19.1	20.6	21.4	18.4	16.3	Diurnal Maximum	

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

# Hourly Standard Deviations

Wind Direction (WD) - deg

Donnelly - January 2018

Maximum Value: 95.5 deg on Jan 12 19:00																	Hours in Service: 744					Hours of Data: 744				
Minimum Value: 1.3 deg on Jan 17 07:00																	Hours of Missing Data: 0					Hours of Calibration: 0				
Percentiles: P <sub>1</sub> = 2.2 P <sub>10</sub> = 3.9 Q <sub>1</sub> = 5.6 Median = 9.2 Q <sub>3</sub> = 24.1 P <sub>90</sub> = 52.1 P <sub>99</sub> = 84.9																	Percent Operational Time: 100.0									
Day	Hourly Period Ending At (MST)																								Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jan	10	9	17	26	45	13	35	4	6	3	4	3	3	3	7	14	34	70	65	10	5	12	43	4	69.8	
2-Jan	16	9	5	14	24	26	7	6	6	7	6	5	7	9	8	10	3	4	4	40	11	2	3	4	40.2	
3-Jan	8	5	4	7	7	6	4	12	3	3	6	5	7	3	6	4	3	7	4	8	5	3	3	5	12.4	
4-Jan	4	10	7	23	43	14	27	8	4	52	33	69	54	54	30	45	13	12	12	28	6	8	3	7	68.8	
5-Jan	4	4	14	54	32	14	5	18	16	21	36	57	35	19	54	20	13	17	8	12	11	8	12	11	57.2	
6-Jan	42	71	60	16	10	14	7	8	2	3	4	5	3	3	4	5	2	5	2	3	8	3	5	4	70.6	
7-Jan	4	11	10	11	3	6	6	5	13	8	5	6	2	3	3	2	7	13	7	3	3	4	4	5	13.2	
8-Jan	2	4	4	5	49	13	14	11	5	6	6	4	6	6	5	6	6	8	8	3	4	5	4	4	49.3	
9-Jan	5	6	4	5	6	5	9	10	6	5	6	7	7	11	6	7	6	5	6	5	6	6	9	4	11.2	
10-Jan	7	19	17	38	16	13	15	11	12	12	7	7	8	5	7	10	5	12	9	6	6	3	2	6	37.6	
11-Jan	5	4	5	4	5	4	15	18	28	10	14	7	28	12	24	30	81	21	47	8	36	18	90	33	90.1	
12-Jan	57	27	39	57	46	14	28	62	31	10	9	12	9	9	13	56	45	37	95	53	84	76	26	49	95.5	
13-Jan	50	71	40	91	30	26	56	56	57	67	35	49	7	25	10	8	8	13	4	36	68	68	14	14	90.8	
14-Jan	11	36	24	22	17	14	27	23	5	11	8	7	4	8	10	9	4	3	4	4	3	3	4	6	36.0	
15-Jan	6	6	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	4	7	6	5	5	4	3	7.2	
16-Jan	5	7	5	37	30	45	56	85	45	59	45	52	26	42	47	72	44	31	9	34	11	40	6	5	85.2	
17-Jan	10	8	10	6	3	3	1	6	4	3	6	6	3	13	4	7	3	9	4	4	4	4	4	6	12.6	
18-Jan	6	8	13	20	45	17	9	64	29	80	41	7	20	9	7	7	8	6	4	6	10	5	4	3	79.9	
19-Jan	10	6	3	4	7	4	5	5	5	12	5	14	15	8	14	17	50	65	8	92	71	45	48	87	91.6	
20-Jan	52	67	49	54	54	67	59	48	14	24	45	58	74	20	24	61	23	47	87	30	40	52	72	8	87.1	
21-Jan	14	19	8	16	5	9	4	5	4	5	6	6	6	6	7	9	11	10	7	5	7	5	28	10	27.8	
22-Jan	18	12	9	7	10	7	11	8	17	16	78	48	32	39	82	37	39	20	12	38	31	12	55	79	82.4	
23-Jan	29	7	4	2	5	4	3	3	4	3	2	5	4	3	4	45	21	14	16	6	5	6	7	8	44.6	
24-Jan	7	6	35	82	59	35	36	69	14	27	14	24	35	23	8	28	77	43	7	10	55	8	13	31	81.9	
25-Jan	32	45	16	16	40	10	10	8	16	8	5	5	5	5	5	5	7	8	10	8	9	7	7	6	45.1	
26-Jan	4	8	7	5	6	7	6	9	7	6	7	8	8	7	9	8	8	9	14	79	7	8	6	19	79.3	
27-Jan	64	37	80	19	13	39	80	36	7	28	86	11	13	24	30	56	10	8	29	20	64	69	11	5	85.7	
28-Jan	6	60	23	16	60	17	55	25	56	51	26	25	10	15	12	14	11	10	8	8	7	8	7	7	60.4	
29-Jan	6	8	10	11	6	6	6	6	6	6	7	7	7	10	6	6	28	27	62	21	15	9	7	6	61.6	
30-Jan	8	10	20	9	10	22	15	14	10	14	15	17	9	10	9	12	14	9	6	10	15	7	5	6	22.1	
31-Jan	26	21	29	9	38	18	46	24	24	52	26	10	27	16	29	22	9	13	16	11	22	18	14	10	52.1	
	64.4	71.2	80.1	90.8	60.4	67.2	80.4	85.2	57.1	79.9	85.7	68.8	74.1	54.4	82.4	71.7	81.5	69.8	95.5	91.6	84.3	75.9	90.1	86.6		

PAZA

Portable – Rycroft Station

Monthly Summary Tables, Graphs and  
Roses

## Hourly Averages

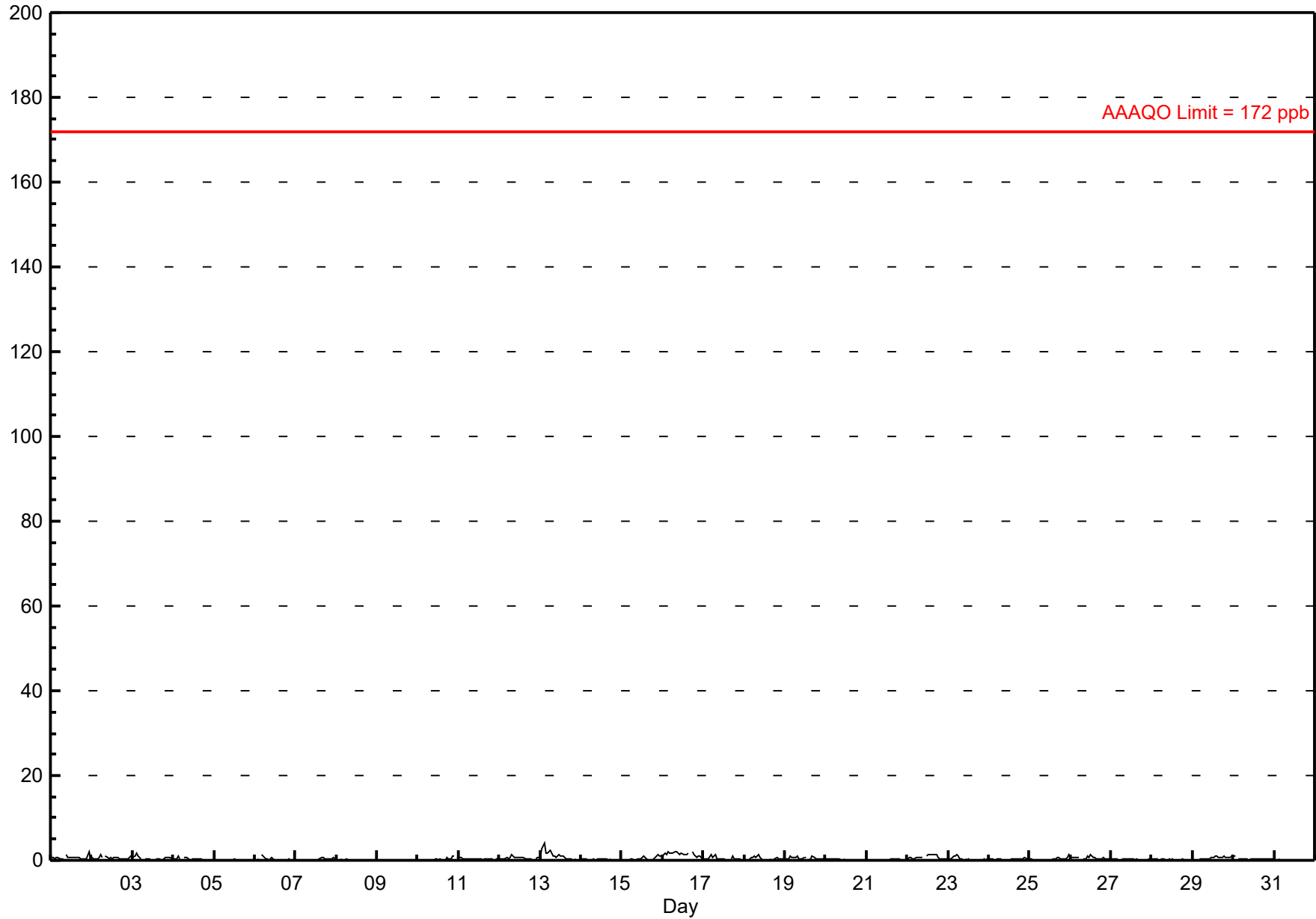
## Sulphur Dioxide (SO<sub>2</sub>) - ppb Portable Rycroft - January 2018

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 4.2 ppb on Jan 13 03:00	Maximum Daily Average: 1.5 ppb on Jan 16
Minimum Value: 0 ppb on Jan 5 02:00	Hours of Data: 708
Maximum Diurnal Average: 0.5 ppb at hour 5	Hours of Missing Data: 36
Monthly Average: 0.38 ppb	Hours of Calibration: 36
Minimum Daily Average: 0.0 ppb on Jan 9	Percent Operational Time: 100.0
Minimum Diurnal Average: 0.3 ppb at hour 19	
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.1 Median = 0.2 Q <sub>3</sub> = 0.5 P <sub>90</sub> = 0.9 P <sub>99</sub> = 2.0	

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-Jan	1	1	1	1	1	0	0	0	A	1	1	1	1	1	1	1	1	0	0	0	0	0	2	0	0.6	2.0
2-Jan	1	0	0	0	1	1	1	A	1	1	0	1	0	1	1	1	0	0	0	0	0	0	1	1	0.5	1.4
3-Jan	1	1	2	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0.5	1.8
4-Jan	0	0	0	1	0	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.0
5-Jan	0	0	0	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
6-Jan	0	0	0	A	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.4
7-Jan	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0.2	0.7
8-Jan	0	A	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
9-Jan	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	0.1
10-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	A	1	0.2	0.9
11-Jan	1	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0.4	0.8
12-Jan	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	A	0	1	1	0.6	1.4
13-Jan	1	3	4	2	2	2	2	1	1	1	1	1	1	1	1	0	0	0	0	A	0	0	0	0	1.1	4.2
14-Jan	0	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
15-Jan	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	A	0	1	1	1	1	1	0.4	1.4
16-Jan	1	2	1	2	2	2	2	2	2	2	1	2	2	1	1	2	A	2	1	1	1	1	1	0	1.5	2.1
17-Jan	0	0	0	0	2	1	1	1	0	0	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0.4	1.5
18-Jan	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	A	0	0	0	0	1	0	1	0	0.4	1.4
19-Jan	0	0	0	1	1	1	1	1	0	0	1	1	1	A	0	0	1	1	0	0	0	0	0	0	0.5	0.9
20-Jan	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
21-Jan	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
22-Jan	0	1	1	0	0	1	1	1	1	1	A	1	1	1	1	1	2	1	1	0	0	0	0	0	0.8	1.5
23-Jan	0	0	0	1	1	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.2
24-Jan	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.2	0.5
25-Jan	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0.3	1.4
26-Jan	1	1	1	1	1	1	A	0	0	0	1	1	1	1	1	0	0	0	0	1	0	0	0	0	0.5	1.2
27-Jan	0	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
28-Jan	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
29-Jan	0	0	0	A	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.2
30-Jan	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.1
31-Jan	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.3	Diurnal Average
	1.1	2.6	4.2	2.1	1.8	2.1	2.5	1.9	2.0	1.7	1.5	1.6	1.5	1.4	1.4	1.5	1.5	2.0	1.5	1.0	1.0	1.4	2.0	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





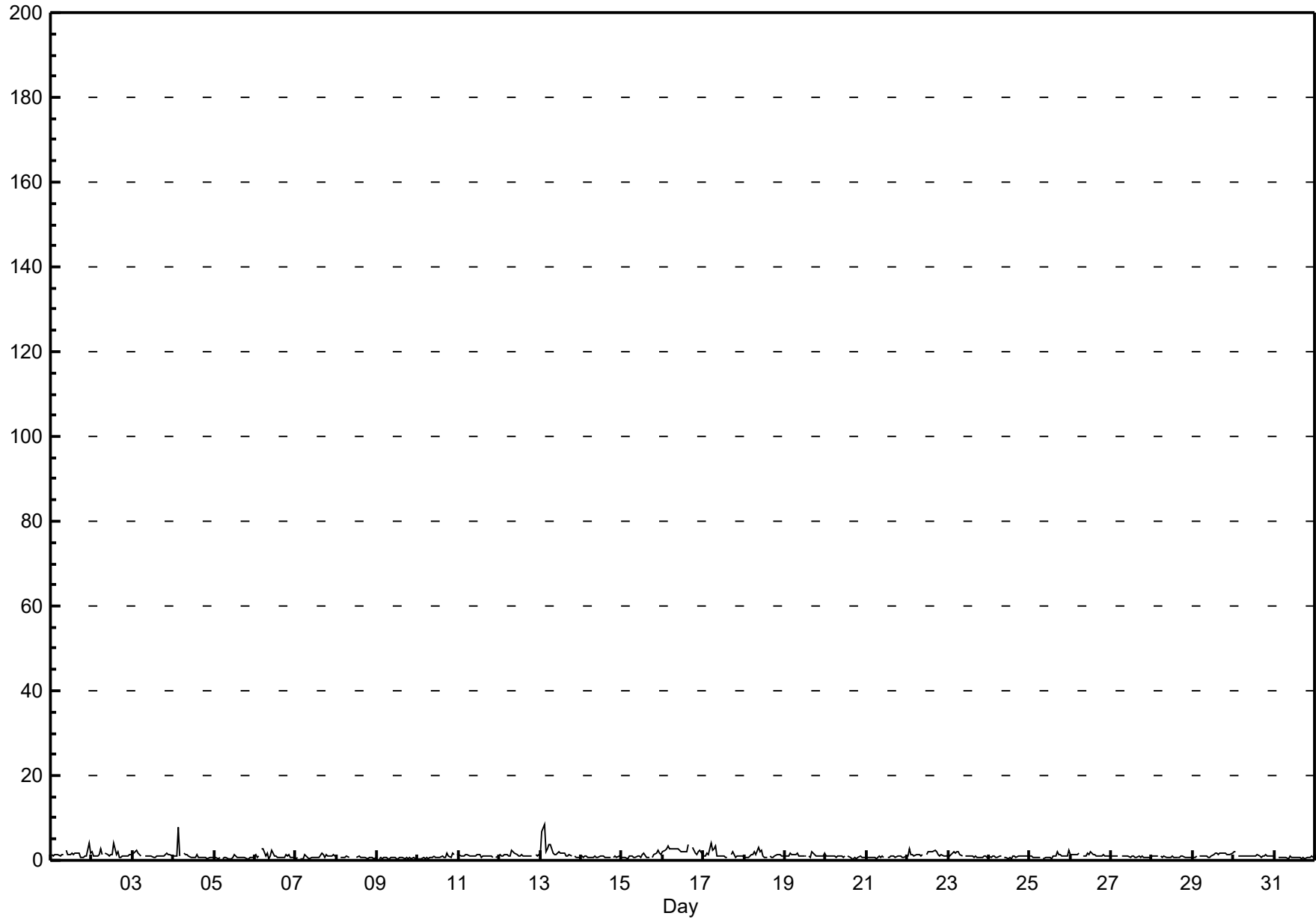
## Hourly Maximums

## Sulphur Dioxide (SO<sub>2</sub>) - ppb Portable Rycroft - January 2018

Maximum Value: 8.3 ppb on Jan 13 03:00      Maximum Daily Average: 2.4 ppb on Jan 16 Minimum Value: 0 ppb on Jan 7 01:00      Minimum Daily Average: 0.6 ppb on Jan 9 Maximum Diurnal Average: 1.3 ppb at hour 4      Minimum Diurnal Average: 0.9 ppb at hour 20 Monthly Average: 1.10 ppb      Percentiles: P <sub>1</sub> = 0.4 P <sub>10</sub> = 0.5 Q <sub>1</sub> = 0.7 Median = 0.9 Q <sub>3</sub> = 1.3 P <sub>90</sub> = 1.8 P <sub>99</sub> = 3.4																								Hours in Service:	744	
																								Hours of Data:	708	
																								Hours of Missing Data:	36	
																								Hours of Calibration:	36	
																								Percent Operational Time:	100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jan	1	1	1	1	1	1	1	1	A	3	1	1	2	1	2	2	2	1	1	1	1	1	4	2	1.4	4.1
2-Jan	2	1	1	1	1	3	1	A	2	1	1	1	1	4	1	2	1	1	1	1	1	1	1	1	1.4	4.0
3-Jan	1	2	2	2	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1.2	2.4
4-Jan	1	1	1	8	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1.2	7.7
5-Jan	1	1	0	1	A	0	1	1	0	0	0	1	1	1	1	1	1	1	1	0	0	1	1	1	0.6	1.3
6-Jan	1	1	1	A	3	3	1	2	0	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	2.7
7-Jan	0	1	A	0	0	1	1	1	0	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	0.9	1.6
8-Jan	1	A	1	1	1	1	1	1	C	C	C	C	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
9-Jan	A	1	1	0	1	1	0	0	1	1	1	1	0	1	1	1	0	1	0	1	0	1	0	A	0.6	0.8
10-Jan	0	0	0	1	0	1	0	1	1	1	1	1	1	1	1	1	1	2	1	1	2	1	A	1	0.8	1.8
11-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1.0	1.4
12-Jan	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.3	2.2
13-Jan	1	7	8	2	3	4	4	2	2	2	2	2	2	2	2	1	1	1	1	A	1	1	1	1	2.1	8.3
14-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.8	1.1
15-Jan	1	1	1	0	1	1	1	1	1	1	1	1	1	2	1	1	1	A	1	1	2	2	2	1	1.0	2.2
16-Jan	2	2	3	3	3	3	3	3	3	3	2	2	2	2	2	4	A	3	2	2	1	2	2	1	2.4	3.6
17-Jan	1	1	2	1	4	2	3	3	1	1	1	1	1	1	1	A	1	2	1	1	1	1	1	1	1.4	4.1
18-Jan	1	1	1	1	1	1	2	1	3	2	2	1	1	1	A	1	1	1	1	1	1	1	1	1	1.2	3.0
19-Jan	1	1	1	2	1	1	1	2	1	1	1	1	1	1	A	1	1	2	1	1	1	1	1	2	1.2	1.9
20-Jan	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	0	1	0	1	1	1	1	1	0.7	1.0
21-Jan	1	1	1	1	1	1	0	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
22-Jan	1	3	1	1	1	1	1	1	1	1	A	1	2	2	2	2	2	2	2	1	1	1	1	1	1.4	2.9
23-Jan	1	1	1	2	2	2	2	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	2.1
24-Jan	1	1	1	1	1	1	1	1	A	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.1
25-Jan	1	1	1	1	1	1	1	A	0	1	1	1	1	0	1	1	2	1	1	1	1	1	2	1	1.0	2.4
26-Jan	1	1	2	1	1	2	A	1	1	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1.3	1.9
27-Jan	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1
28-Jan	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1
29-Jan	1	1	1	A	1	1	1	1	1	1	1	1	1	2	2	1	2	2	2	2	2	1	1	2	1.2	1.7
30-Jan	2	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	2.0
31-Jan	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.0
	1.1	1.2	1.3	1.3	1.3	1.3	1.2	1.2	1.0	1.1	1.1	1.0	1.1	1.1	1.0	1.0	1.0	1.0	1.0	0.9	1.0	1.0	1.1	1.0	Diurnal Average	
	2.1	6.7	8.3	7.7	4.1	3.6	3.6	3.4	3.0	2.7	2.5	2.2	2.1	4.0	1.9	3.6	2.2	2.9	2.4	1.6	1.8	2.2	4.1	2.4	Diurnal Maximum	
C - Calibration      A - Automated Daily Zero Span																										

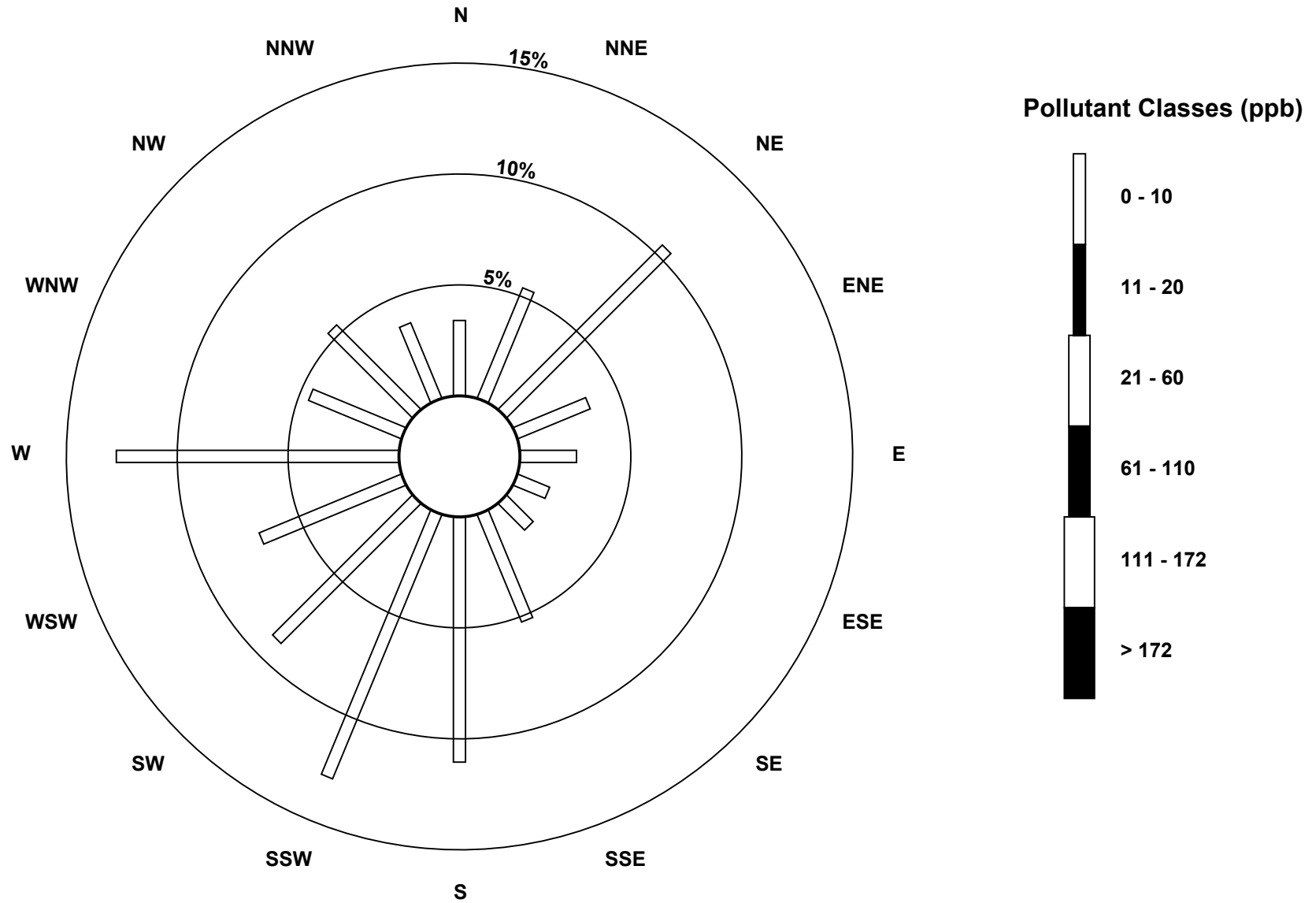
**Hourly Maximums**

**Sulphur Dioxide (SO<sub>2</sub>) - ppb**  
**Portable Rycroft - January 2018**



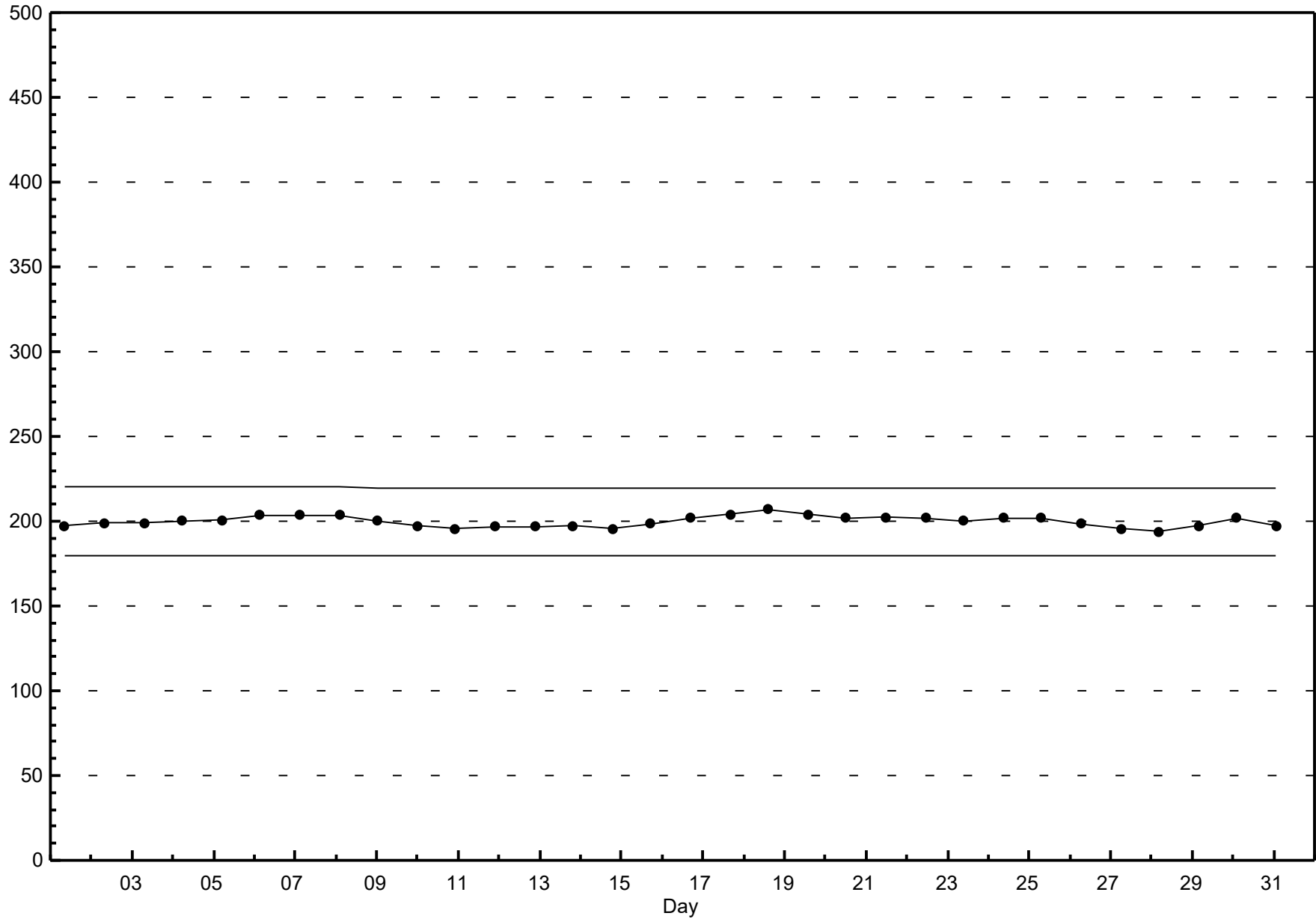
**Pollutant Rose**

**Sulphur Dioxide (SO<sub>2</sub>) - ppb**  
**Portable Rycroft - January 2018**



### Span Responses

Sulphur Dioxide (SO<sub>2</sub>)  
Portable Rycroft - January 2018

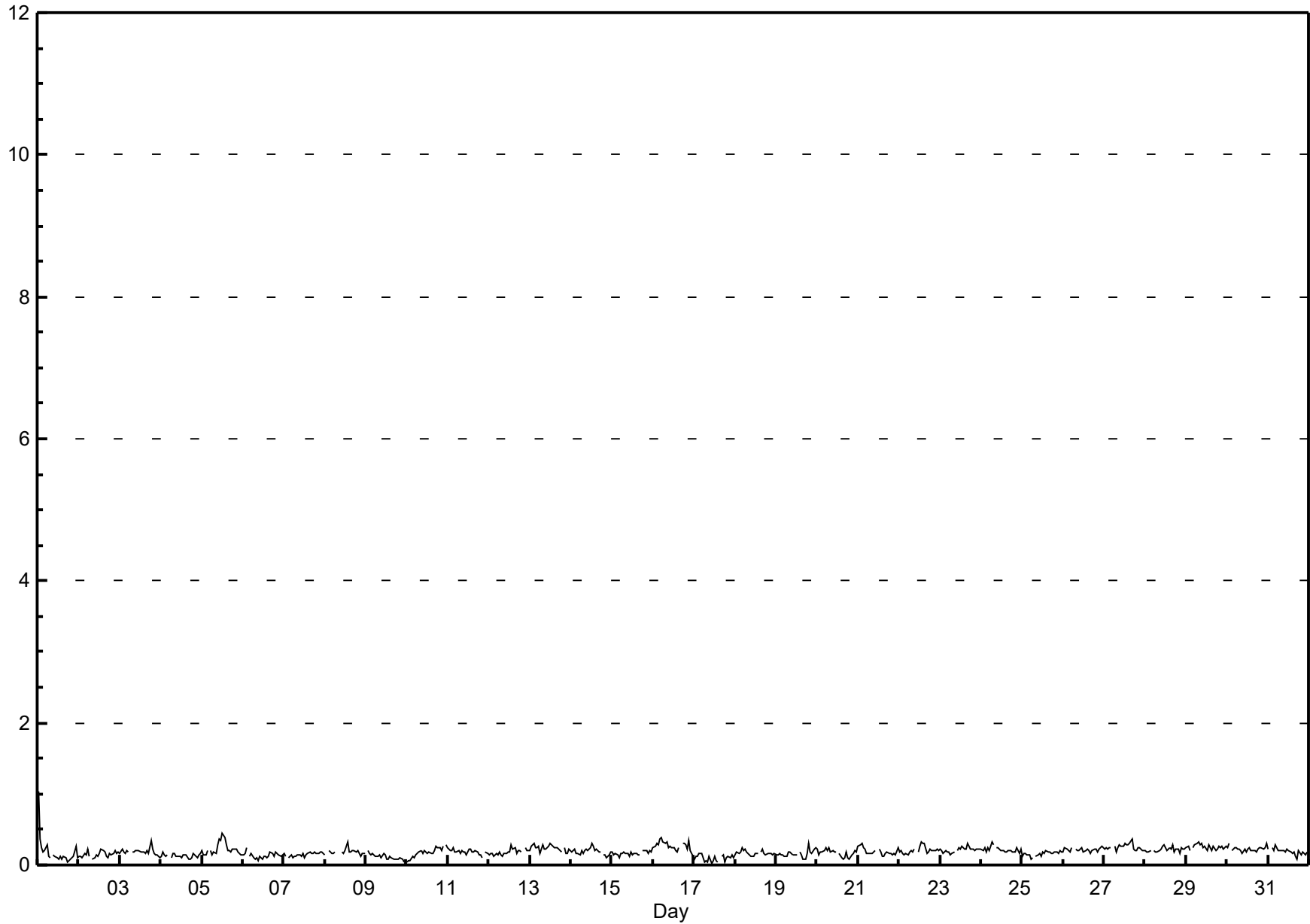


## Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Portable Rycroft - January 2018

Maximum Value: 1.0 ppb on Jan 1 01:00		Maximum Daily Average: 0.3 ppb on Jan 16		Hours in Service: 744																							
Minimum Value: 0 ppb on Jan 17 11:00		Minimum Daily Average: 0.1 ppb on Jan 17		Hours of Data: 709																							
Maximum Diurnal Average: 0.2 ppb at hour 14		Minimum Diurnal Average: 0.2 ppb at hour 18		Hours of Missing Data: 35																							
Monthly Average: 0.19 ppb		Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.1 Median = 0.2 Q <sub>3</sub> = 0.2 P <sub>90</sub> = 0.3 P <sub>99</sub> = 0.4		Hours of Calibration: 35																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jan	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.0	
2-Jan	0	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	0.2	
3-Jan	0	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	
4-Jan	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
5-Jan	0	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	
6-Jan	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
7-Jan	0	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	
8-Jan	0	A	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
9-Jan	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
10-Jan	0	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	
11-Jan	0	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	0.2	
12-Jan	0	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	
13-Jan	0	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	
14-Jan	0	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	
15-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.2	
16-Jan	0	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	
17-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.2	
18-Jan	0	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	0.2	
19-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.3	
20-Jan	0	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	
21-Jan	0	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	
22-Jan	0	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	
23-Jan	0	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	
24-Jan	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
25-Jan	0	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	0.2	
26-Jan	0	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	
27-Jan	0	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	
28-Jan	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
29-Jan	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.3	
30-Jan	0	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	
31-Jan	0	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	
		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Diurnal Average	
		1.0	0.4	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.3	Diurnal Maximum		
C - Calibration		A - Automated Daily Zero Span																									



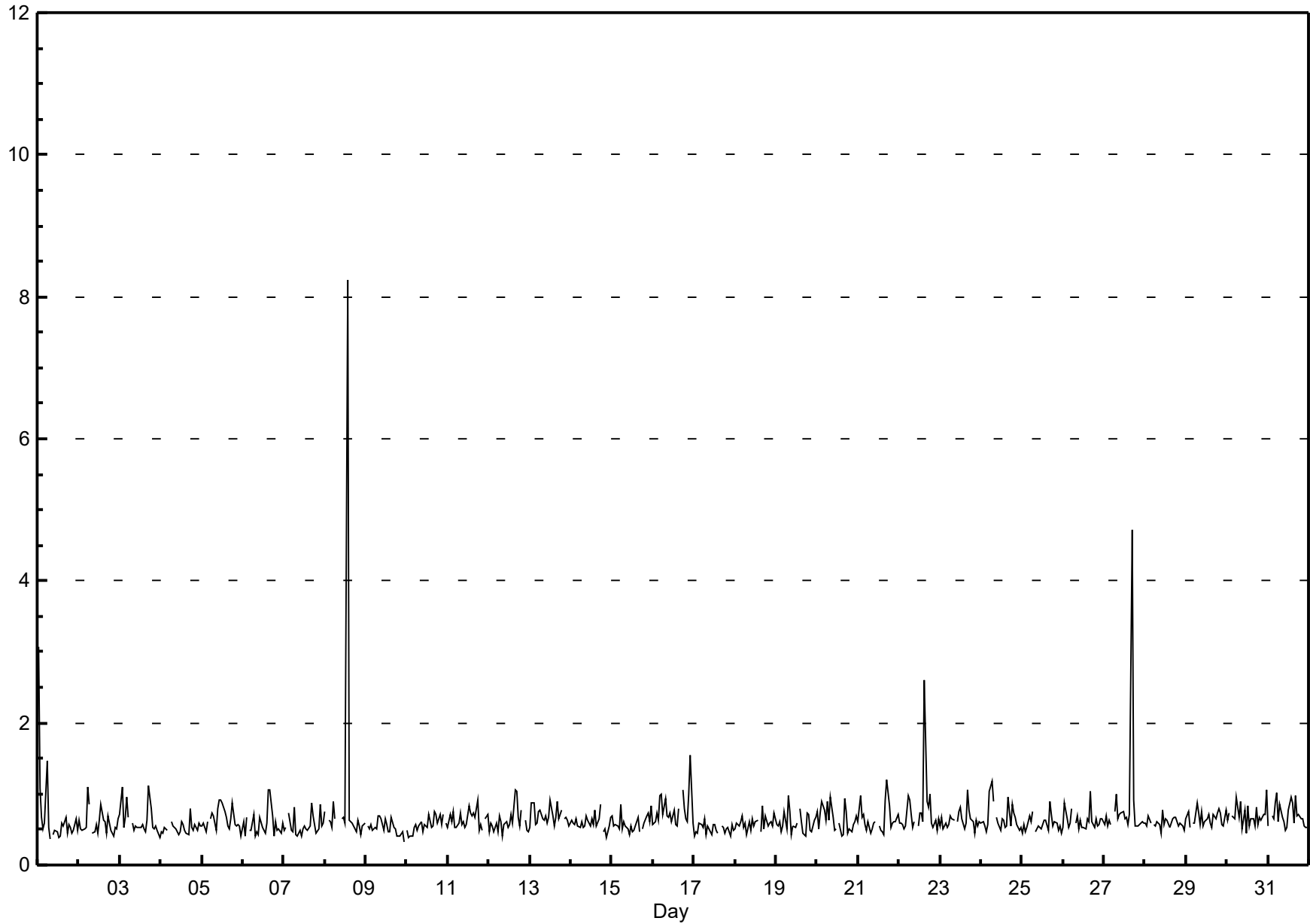
## Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Portable Rycroft - January 2018

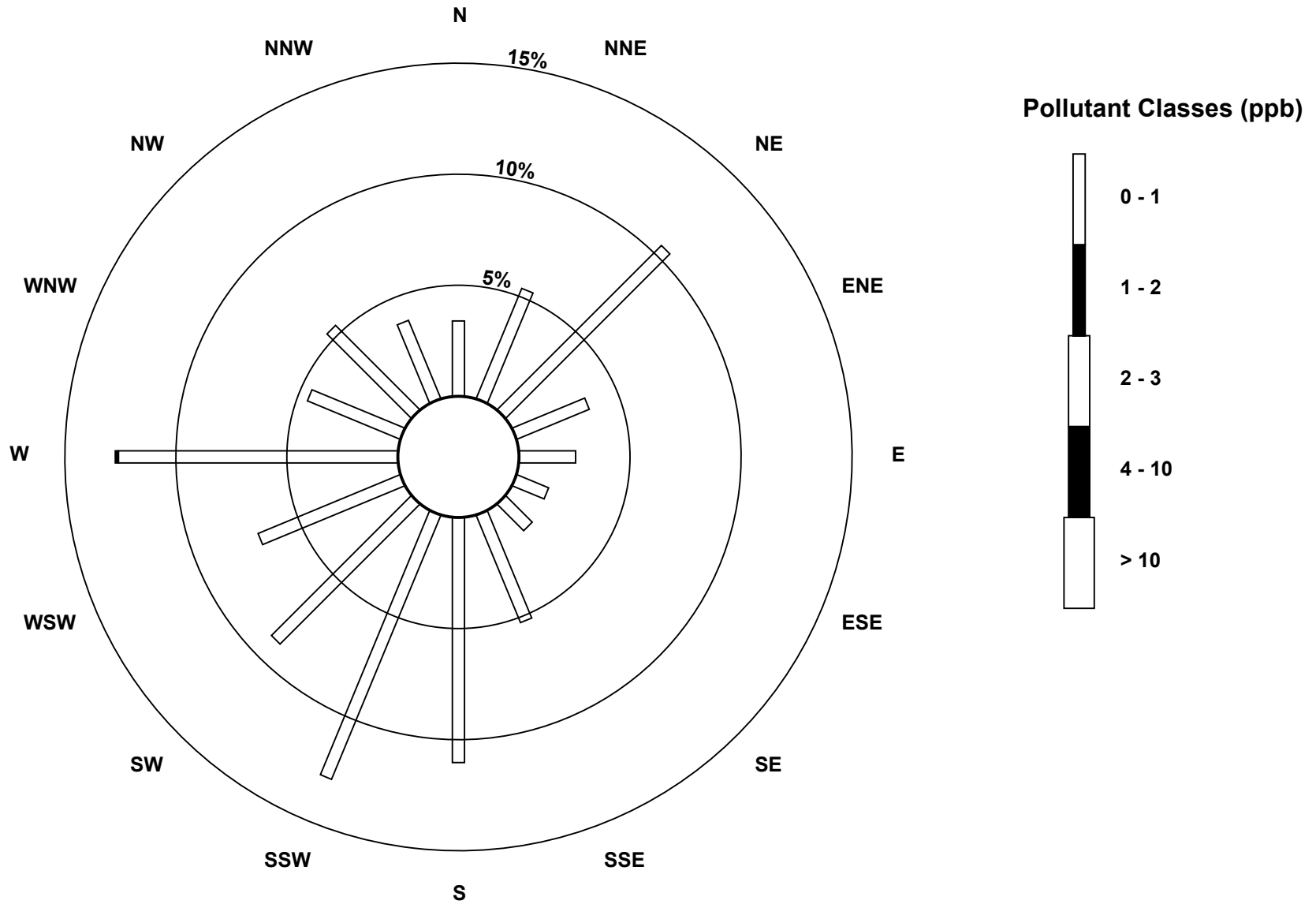
Maximum Value: 8.2 ppb on Jan 8 14:00		Maximum Daily Average: 1.0 ppb on Jan 8		Hours in Service: 744																						
Minimum Value: 0 ppb on Jan 9 23:00		Minimum Daily Average: 0.5 ppb on Jan 17		Hours of Data: 709																						
Maximum Diurnal Average: 0.9 ppb at hour 17		Minimum Diurnal Average: 0.6 ppb at hour 21		Hours of Missing Data: 35																						
Monthly Average: 0.64 ppb		Percentiles: P <sub>1</sub> = 0.4 P <sub>10</sub> = 0.5 Q <sub>1</sub> = 0.5 Median = 0.6 Q <sub>3</sub> = 0.7 P <sub>90</sub> = 0.8 P <sub>99</sub> = 1.0		Hours of Calibration: 35																						
				Percent Operational Time: 100.0																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jan	3	1	1	1	1	1	1	0	A	0	0	0	0	1	1	1	0	1	1	0	0	1	0	0	0.7	3.1
2-Jan	1	1	0	1	1	1	1	A	0	0	1	0	1	1	1	0	1	1	0	0	1	0	1	0	0.6	1.1
3-Jan	1	1	1	1	1	1	A	1	0	1	1	1	1	1	0	1	1	1	1	1	1	1	0	0	0.6	1.1
4-Jan	0	0	1	1	0	A	1	1	1	0	0	0	1	1	0	0	0	1	1	0	1	0	1	1	0.5	0.8
5-Jan	1	1	0	1	A	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0.6	0.9
6-Jan	1	0	1	A	0	0	1	0	0	0	1	1	0	0	1	1	1	1	0	1	0	1	0	1	0.6	1.1
7-Jan	0	1	A	1	0	0	1	0	0	0	0	1	1	1	0	1	1	1	1	0	1	1	1	1	0.6	0.9
8-Jan	1	A	1	1	1	1	1	C	C	C	1	1	1	8	1	1	1	1	0	1	1	0	1	1	1.0	8.2
9-Jan	A	1	1	1	0	1	1	1	1	1	0	1	1	1	0	0	1	1	1	0	0	0	0	0	0.5	0.7
10-Jan	0	0	0	0	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.6	0.7
11-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	A	1	1	0.6	0.9
12-Jan	0	1	1	0	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	A	1	0	0	0.6	1.1
13-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.7	0.9
14-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0	1	0	1	1	0.6	0.9
15-Jan	1	1	1	1	1	1	1	1	1	1	0	1	0	0	1	1	0	A	1	1	1	1	1	1	0.6	0.9
16-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	2	1	0.8	1.5
17-Jan	0	0	0	1	1	1	1	0	1	1	0	1	1	0	0	A	1	1	0	1	1	0	1	0	0.5	0.7
18-Jan	1	1	1	1	1	1	1	0	1	0	1	1	1	1	A	0	1	1	1	1	1	1	1	1	0.6	0.8
19-Jan	1	1	1	0	1	1	1	1	1	0	1	1	1	A	1	1	0	0	1	1	0	0	1	1	0.6	1.0
20-Jan	1	1	1	1	1	1	1	1	1	1	0	1	A	1	0	0	1	1	0	1	0	1	1	1	0.6	1.0
21-Jan	1	1	1	1	1	0	1	0	1	1	1	A	1	0	0	0	1	1	1	1	1	1	1	1	0.6	1.2
22-Jan	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	3	1	1	1	1	1	1	0	1	0.8	2.6
23-Jan	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	1	1	1	0.6	1.1
24-Jan	1	1	1	0	1	1	1	1	A	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	0.7	1.2
25-Jan	0	1	0	1	1	1	1	A	0	1	1	1	1	1	0	1	1	1	1	1	1	0	1	0	0.6	0.9
26-Jan	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.0
27-Jan	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	5	1	1	1	1	1	1	1	0.8	4.7
28-Jan	1	1	1	1	A	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0.6	0.8
29-Jan	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
30-Jan	1	1	A	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1
31-Jan	1	A	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
		0.7	0.6	0.6	0.6	0.6	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.9	0.6	0.7	0.9	0.7	0.6	0.6	0.6	0.6	0.6	0.6	Diurnal Average
		3.1	1.1	0.9	0.9	1.0	1.5	1.2	1.0	1.0	0.8	0.9	0.9	0.9	8.2	0.9	2.6	4.7	1.2	1.0	0.8	0.7	1.0	1.5	1.1	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																								

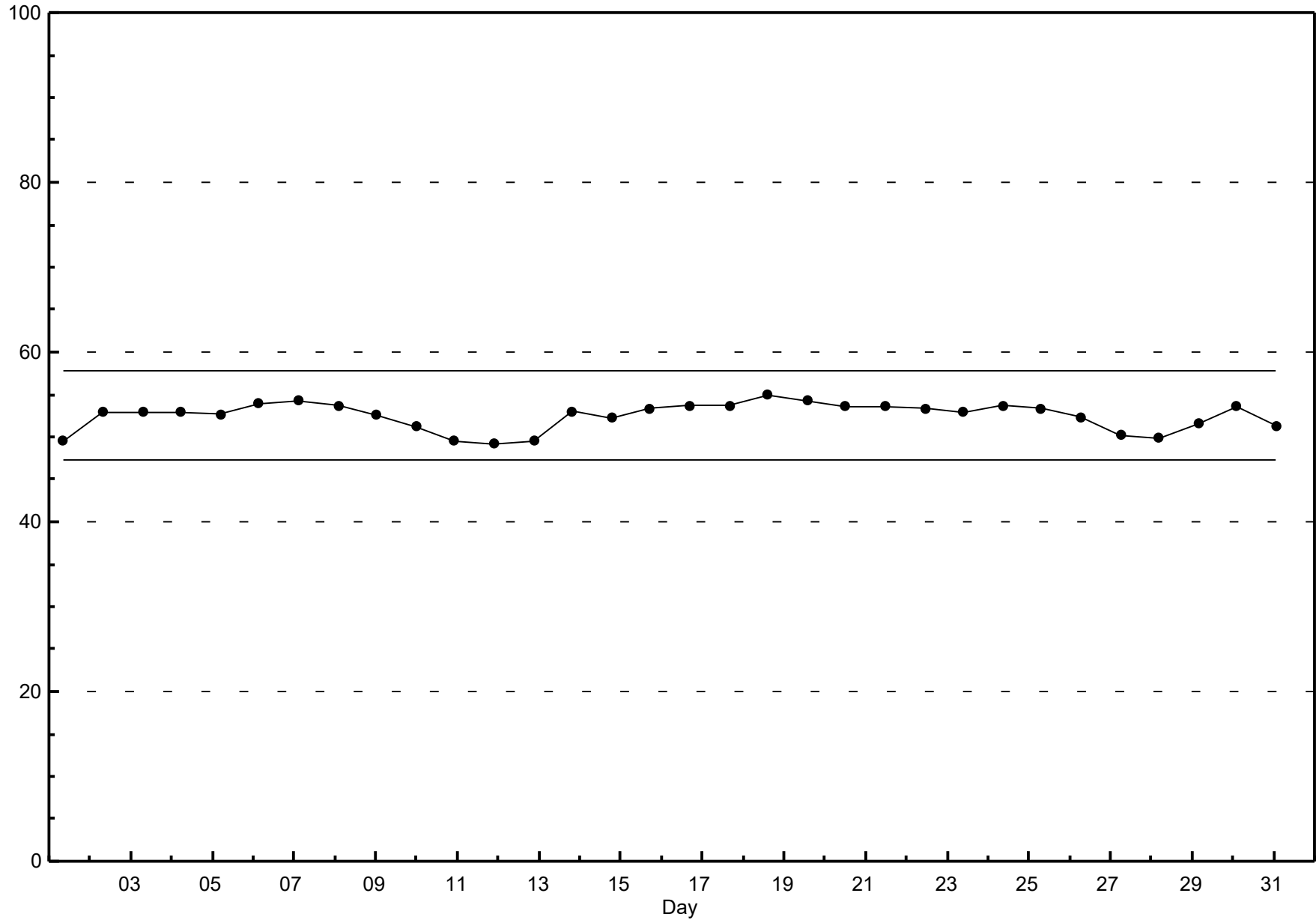




**Pollutant Rose**

**Total Reduced Sulphur (TRS) - ppb**  
**Portable Rycroft - January 2018**





## Hourly Averages

## Nitrogen Dioxide (NO<sub>2</sub>) - ppb Portable Rycroft - January 2018

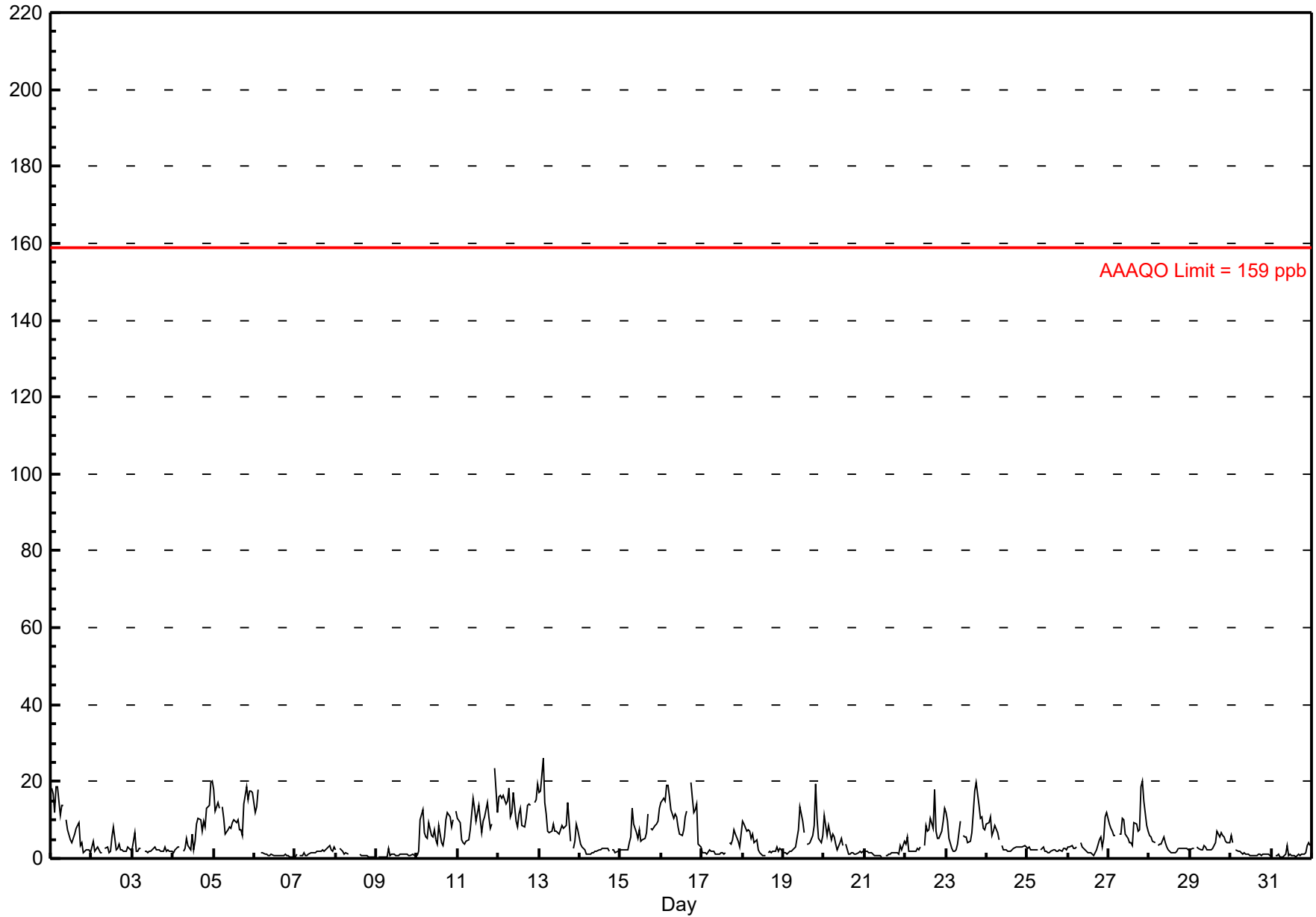
Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 26.0 ppb on Jan 13 03:00	Maximum Daily Average: 13.6 ppb on Jan 12
Minimum Value: 0 ppb on Jan 6 23:00	Hours of Data: 706
Maximum Diurnal Average: 6.8 ppb at hour 2	Hours of Missing Data: 38
Monthly Average: 5.16 ppb	Hours of Calibration: 38
Minimum Daily Average: 0.9 ppb on Jan 9	Percent Operational Time: 100.0
Minimum Diurnal Average: 3.8 ppb at hour 15	
Percentiles: P <sub>1</sub> = 0.4 P <sub>10</sub> = 0.9 Q <sub>1</sub> = 1.7 Median = 3.0 Q <sub>3</sub> = 7.4 P <sub>90</sub> = 12.6 P <sub>99</sub> = 19.5	

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-Jan	18	17	12	19	19	11	14	14	A	10	7	5	4	5	6	8	9	4	4	1	2	2	2	1	8.4	18.7
2-Jan	3	5	2	3	2	2	1	A	3	3	1	2	6	8	2	3	4	2	2	2	2	3	3	2	2.8	8.4
3-Jan	2	7	2	2	3	3	A	2	2	1	2	2	3	3	2	2	2	2	2	3	2	2	2	2	2.3	6.8
4-Jan	2	2	3	3	3	A	2	3	5	3	2	6	2	4	9	10	10	7	10	8	13	14	20	20	7.0	20.3
5-Jan	18	12	14	13	A	14	11	6	7	8	8	9	10	9	10	7	7	6	14	19	15	17	17	17	11.8	18.6
6-Jan	12	13	18	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	2.6	17.8
7-Jan	0	1	A	1	1	2	1	1	1	1	1	2	2	2	2	2	2	2	3	3	2	2	3	1.7	3.3	
8-Jan	2	A	3	2	2	1	1	1	C	C	C	C	C	C	1	1	1	1	1	1	0	0	0	0	--	2.6
9-Jan	A	1	0	1	0	0	1	0	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.9	2.6
10-Jan	1	2	10	13	7	6	5	9	6	6	7	5	4	9	4	3	6	10	12	11	8	10	A	12	7.2	12.9
11-Jan	10	9	5	4	4	4	5	7	11	16	13	10	14	10	7	10	11	14	11	8	9	A	23	12	9.9	23.4
12-Jan	16	16	16	16	14	15	18	11	12	17	10	8	12	13	9	8	10	14	14	14	A	14	15	19	13.6	19.4
13-Jan	17	18	26	15	11	7	7	7	9	7	7	7	6	8	8	8	8	15	5	A	2	5	9	7	9.5	26.0
14-Jan	4	3	3	2	1	1	1	1	2	2	2	2	2	3	3	3	3	2	A	2	2	2	2	2	2.1	3.9
15-Jan	2	2	2	2	2	4	6	13	9	7	5	7	5	5	5	7	11	A	8	7	9	9	10	13	6.6	13.1
16-Jan	15	16	15	19	19	16	13	11	12	11	8	7	6	7	11	12	A	20	16	12	13	14	4	3	12.0	19.7
17-Jan	2	1	2	1	2	2	2	2	1	1	1	2	1	1	1	A	4	4	5	8	6	4	3	6	2.7	7.6
18-Jan	10	9	7	7	7	5	6	4	5	2	2	1	1	1	A	1	2	1	2	2	3	2	3	2	3.7	9.8
19-Jan	1	1	1	2	2	2	3	3	5	7	13	10	7	A	4	4	4	6	9	19	10	5	4	6	5.6	19.4
20-Jan	11	9	6	8	5	6	5	4	2	4	5	3	A	4	1	1	1	1	1	1	1	2	2	2	3.8	11.2
21-Jan	2	2	2	2	2	1	1	1	1	1	0	A	1	1	1	1	1	1	1	1	1	4	2	5	1.5	4.6
22-Jan	4	6	2	2	2	2	2	3	2	3	A	3	9	7	8	10	8	18	7	5	5	7	10	13	5.9	18.1
23-Jan	12	10	5	2	2	2	2	4	10	A	6	6	5	4	4	7	12	18	20	14	11	11	8	8	7.9	19.9
24-Jan	9	9	11	6	7	8	7	5	A	3	2	2	2	2	2	2	3	3	3	3	3	3	3	3	4.4	11.0
25-Jan	3	3	2	2	2	2	2	A	2	3	2	2	2	1	2	2	2	2	2	2	2	3	3	2	2.2	3.0
26-Jan	3	3	3	3	3	3	A	4	3	3	2	2	2	1	1	1	1	2	5	5	3	5	11	12	3.5	12.1
27-Jan	9	8	7	6	6	A	6	6	10	10	6	5	4	4	3	9	9	7	7	19	20	15	8	7	8.4	20.0
28-Jan	6	6	4	4	A	4	4	4	5	4	3	2	2	2	2	2	2	3	3	3	3	3	3	2	3.2	6.0
29-Jan	2	3	3	A	3	3	2	2	3	3	2	2	2	2	3	4	7	6	7	6	5	5	4	4	3.6	7.0
30-Jan	6	4	A	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.5	5.8
31-Jan	1	A	1	1	1	1	0	0	1	3	1	1	1	1	1	1	1	1	1	1	1	4	4	4	1.3	3.9
	6.7	6.8	6.4	5.6	4.6	4.4	4.5	4.6	4.7	4.9	4.3	4.0	4.0	4.1	3.8	4.4	4.9	5.8	5.8	6.1	5.3	5.6	5.9	6.4	Diurnal Average	
	18.4	17.5	26.0	19.0	19.2	16.0	18.2	13.7	11.9	17.2	13.4	9.8	13.7	13.0	10.8	12.4	12.0	19.7	19.9	19.4	20.0	17.4	23.4	20.3	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 (NO<sub>2</sub>) - ppb**  
**Portable Rycroft - January 2018**



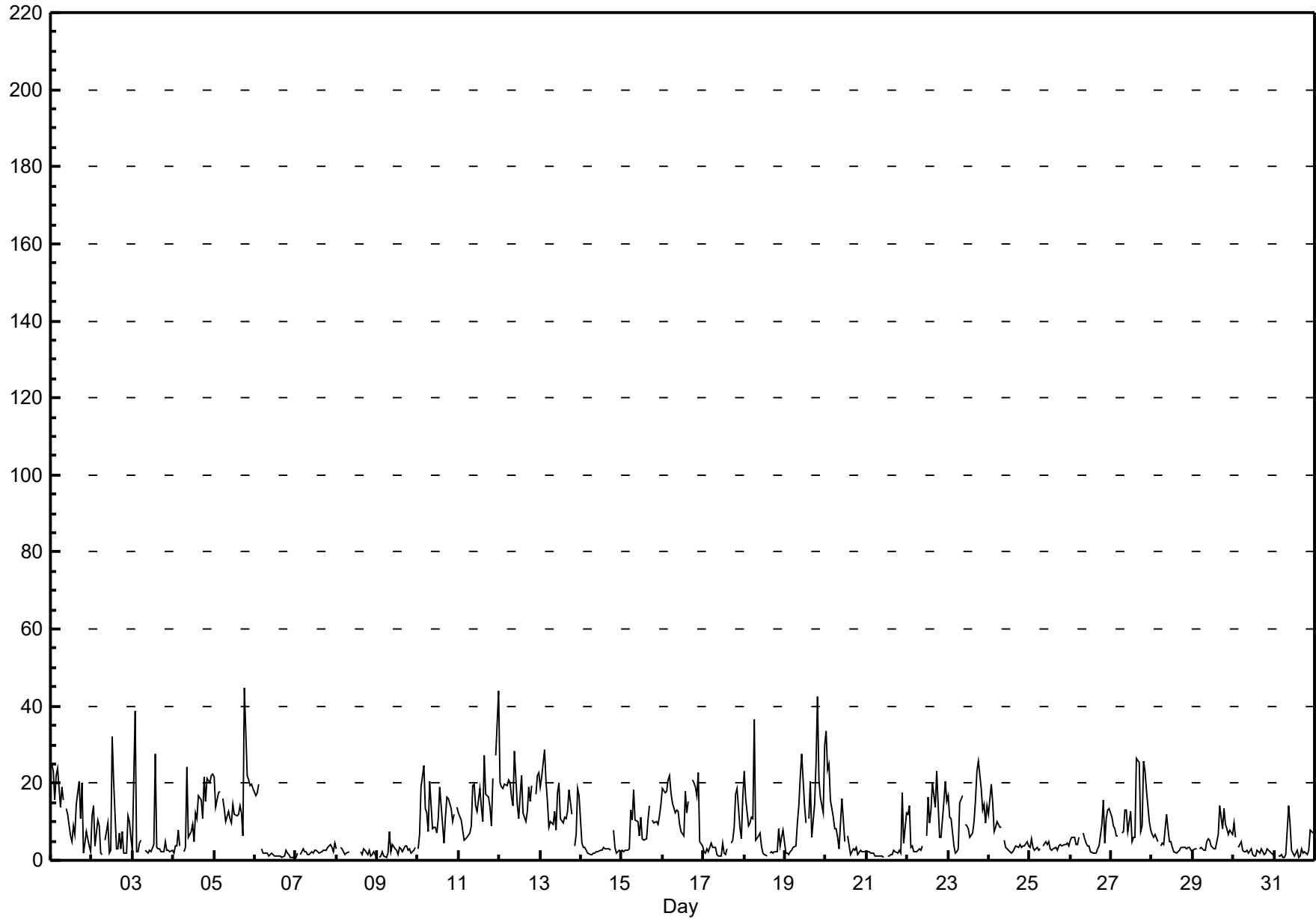
## Hourly Maximums

## Nitrogen Dioxide (NO<sub>2</sub>) - ppb Portable Rycroft - January 2018

Maximum Value: 44.7 ppb on Jan 5 19:00		Maximum Daily Average: 17.9 ppb on Jan 12		Hours in Service: 744																						
Minimum Value: 1 ppb on Jan 7 00:00		Minimum Daily Average: 2.4 ppb on Jan 7		Hours of Data: 706																						
Maximum Diurnal Average: 11.1 ppb at hour 2		Minimum Diurnal Average: 5.6 ppb at hour 15		Hours of Missing Data: 38																						
Monthly Average: 8.24 ppb		Percentiles: P <sub>1</sub> = 0.7 P <sub>10</sub> = 1.7 Q <sub>1</sub> = 2.5 Median = 5.1 Q <sub>3</sub> = 12.5 P <sub>90</sub> = 19.5 P <sub>99</sub> = 31.3		Hours of Calibration: 38																						
				Percent Operational Time: 100.0																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jan	25	23	16	22	24	14	19	16	A	14	12	6	5	9	7	14	20	11	20	2	5	7	4	2	12.9	24.9
2-Jan	12	14	4	10	9	2	1	A	5	10	2	3	32	21	3	3	7	3	8	2	2	11	10	6	7.8	32.1
3-Jan	2	39	2	2	4	5	A	3	2	2	2	2	4	28	3	3	3	2	2	5	3	3	2	3	5.5	38.6
4-Jan	2	4	4	8	4	A	2	3	24	6	8	9	5	12	11	17	16	11	22	15	21	20	22	22	11.6	24.4
5-Jan	22	14	17	18	A	16	13	10	13	11	10	14	12	12	12	14	12	6	45	22	21	20	20	19	16.2	44.7
6-Jan	17	17	20	A	3	2	2	2	1	1	2	1	1	1	1	1	1	1	3	2	2	1	1	1	3.6	19.6
7-Jan	1	2	A	1	3	2	2	1	1	2	2	3	3	2	2	2	3	2	3	3	4	3	2	4	2.4	4.4
8-Jan	3	A	3	3	2	1	2	2	C	C	C	C	C	C	2	1	3	3	2	3	1	2	2	1	--	3.2
9-Jan	A	1	1	2	1	1	2	7	2	4	3	3	2	3	3	2	4	4	3	3	2	3	3	A	2.6	7.4
10-Jan	3	7	19	24	13	12	8	21	8	9	9	7	11	19	9	5	11	16	16	13	10	12	A	14	12.0	24.5
11-Jan	12	10	8	5	6	6	7	9	20	20	14	13	18	14	10	27	17	17	14	9	21	A	27	44	15.1	43.9
12-Jan	20	19	19	20	19	21	20	17	14	28	14	11	17	22	12	10	13	19	15	19	A	17	22	23	17.9	28.4
13-Jan	19	22	29	21	15	9	10	9	13	8	18	20	11	10	11	11	13	18	12	A	4	7	19	17	14.0	28.7
14-Jan	5	4	3	3	2	2	1	2	2	2	2	2	3	3	3	3	3	3	A	8	3	2	3	2	2.8	7.9
15-Jan	3	2	3	3	3	13	11	18	11	10	6	11	5	5	6	10	14	A	10	10	10	9	12	15	8.7	18.4
16-Jan	19	18	18	21	22	17	15	12	13	13	9	8	6	18	12	15	A	21	20	19	17	23	5	4	15.0	22.6
17-Jan	2	2	3	2	4	3	3	3	2	1	1	5	2	1	3	A	5	5	9	17	19	8	5	16	5.3	18.5
18-Jan	23	16	9	10	11	11	36	5	6	7	4	2	1	1	A	2	2	2	2	2	8	4	6	8	7.8	36.5
19-Jan	2	2	1	2	3	3	4	10	14	22	28	14	10	A	11	20	6	15	25	42	21	17	12	30	13.6	42.4
20-Jan	33	23	25	16	11	8	8	6	3	16	10	5	A	6	2	2	3	3	3	2	3	2	2	2	8.5	33.5
21-Jan	2	2	2	2	2	1	1	1	1	1	1	A	1	1	1	1	3	2	2	3	2	17	4	12	2.9	17.5
22-Jan	12	14	3	4	2	2	2	3	2	4	A	6	16	10	13	20	14	23	15	6	6	15	20	15	10.0	23.1
23-Jan	17	11	11	4	2	2	3	15	17	A	9	9	8	6	7	10	16	23	26	19	13	15	10	14	11.5	25.6
24-Jan	12	20	15	7	9	10	8	8	A	5	3	2	2	2	2	3	4	3	4	3	4	4	5	4	6.1	19.6
25-Jan	3	6	3	3	3	3	3	A	4	5	4	5	3	2	3	3	3	4	4	4	4	4	4	4	3.7	5.8
26-Jan	5	6	6	4	4	6	A	7	5	5	4	4	2	2	2	2	3	4	9	16	5	11	13	13	6.0	15.5
27-Jan	11	9	8	6	6	A	7	7	13	13	7	13	5	6	6	26	25	8	9	26	23	18	10	8	11.8	26.4
28-Jan	7	6	7	5	A	4	5	4	12	8	5	5	3	2	2	2	2	3	3	3	3	3	3	3	4.4	11.9
29-Jan	3	3	3	A	3	3	3	3	3	5	6	5	4	3	3	5	7	14	8	14	9	8	7	8	5.7	14.2
30-Jan	10	6	A	4	5	3	2	2	3	2	3	2	1	1	2	2	3	2	2	2	3	2	2	1	2.8	9.7
31-Jan	2	A	1	1	1	1	1	2	14	9	3	2	1	3	1	1	3	2	2	1	3	8	7	7	3.3	14.4
		10.2	11.1	9.0	8.0	6.9	6.3	7.0	7.2	8.2	8.4	6.9	6.5	6.7	7.8	5.6	8.1	8.1	8.1	10.7	9.6	8.3	9.1	8.9	10.6	Diurnal Average
		33.5	38.6	28.7	24.5	23.8	21.0	36.5	20.5	24.4	28.4	27.6	20.1	32.1	27.7	13.2	27.2	25.3	23.1	44.7	42.4	23.1	22.6	27.1	43.9	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																								

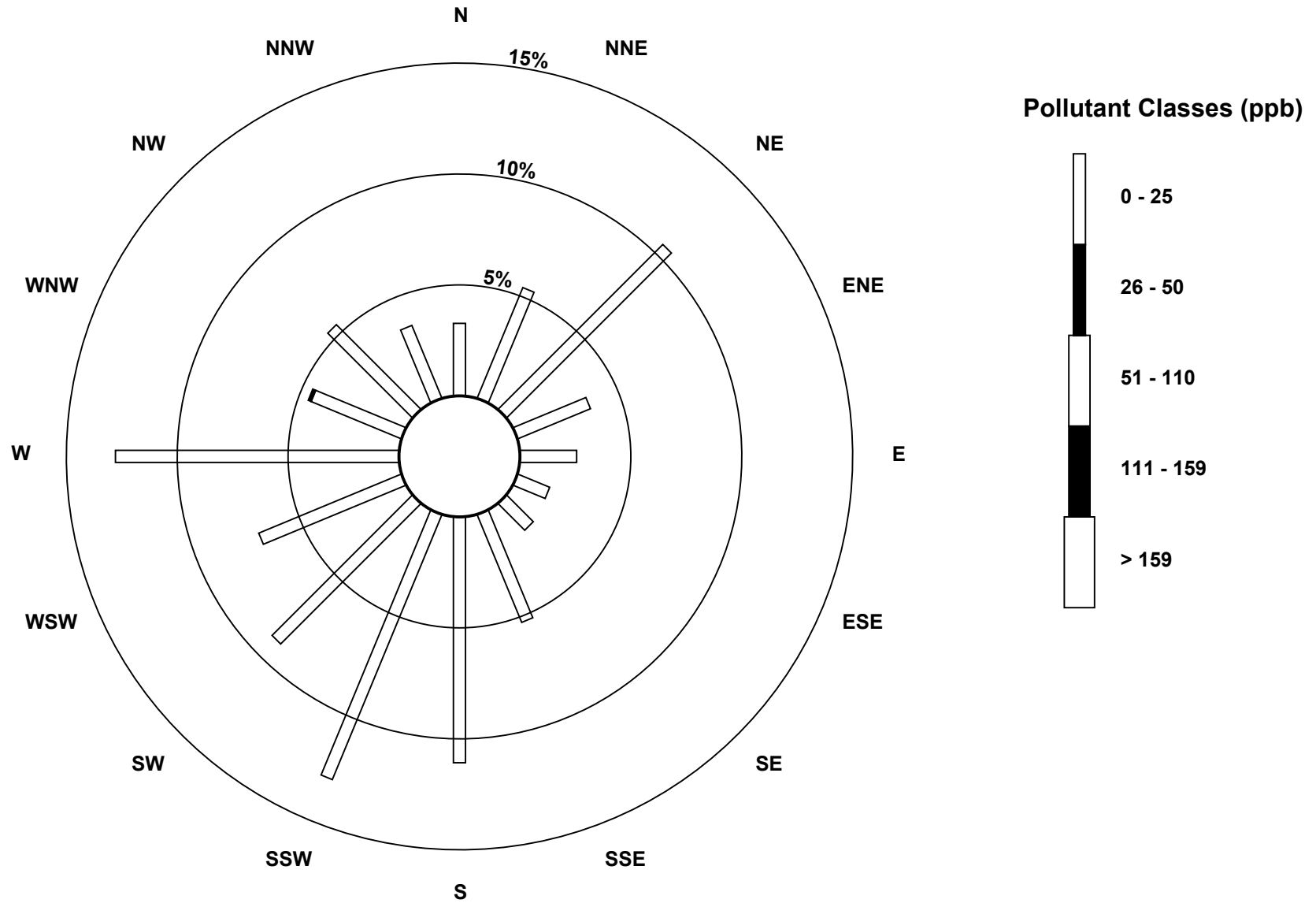
**Hourly Maximums**

**Nitrogen Dioxide (NO<sub>2</sub>) - ppb**  
**Portable Rycroft - January 2018**



**Pollutant Rose**

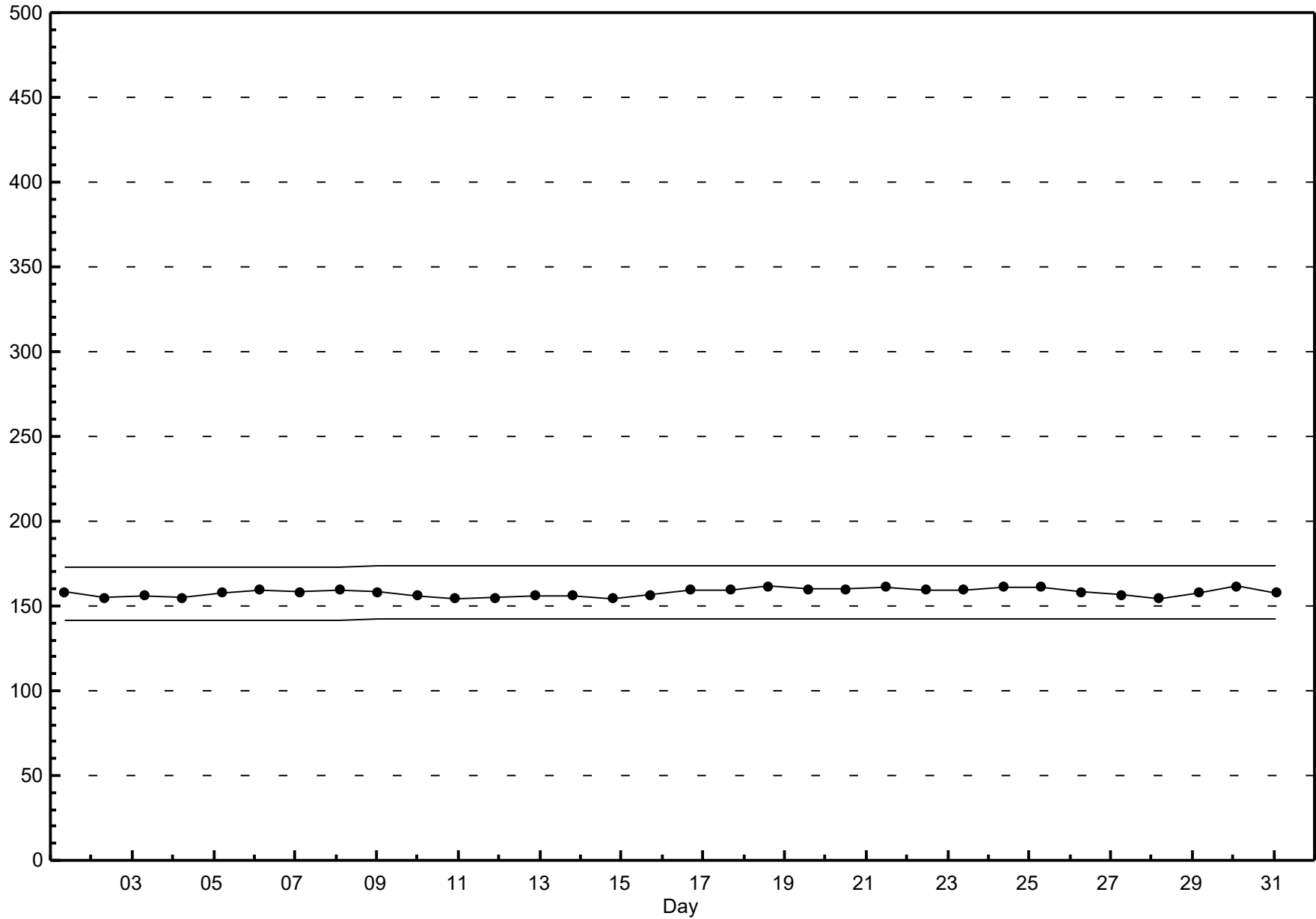
**Nitrogen Dioxide (NO<sub>2</sub>) - ppb**  
**Portable Rycroft - January 2018**





**Span Responses**

**Nitrogen Dioxide (NO<sub>2</sub>)  
Portable Rycroft - January 2018**



## Hourly Averages

## Nitrogen Oxide (NO) - ppb Portable Rycroft - January 2018

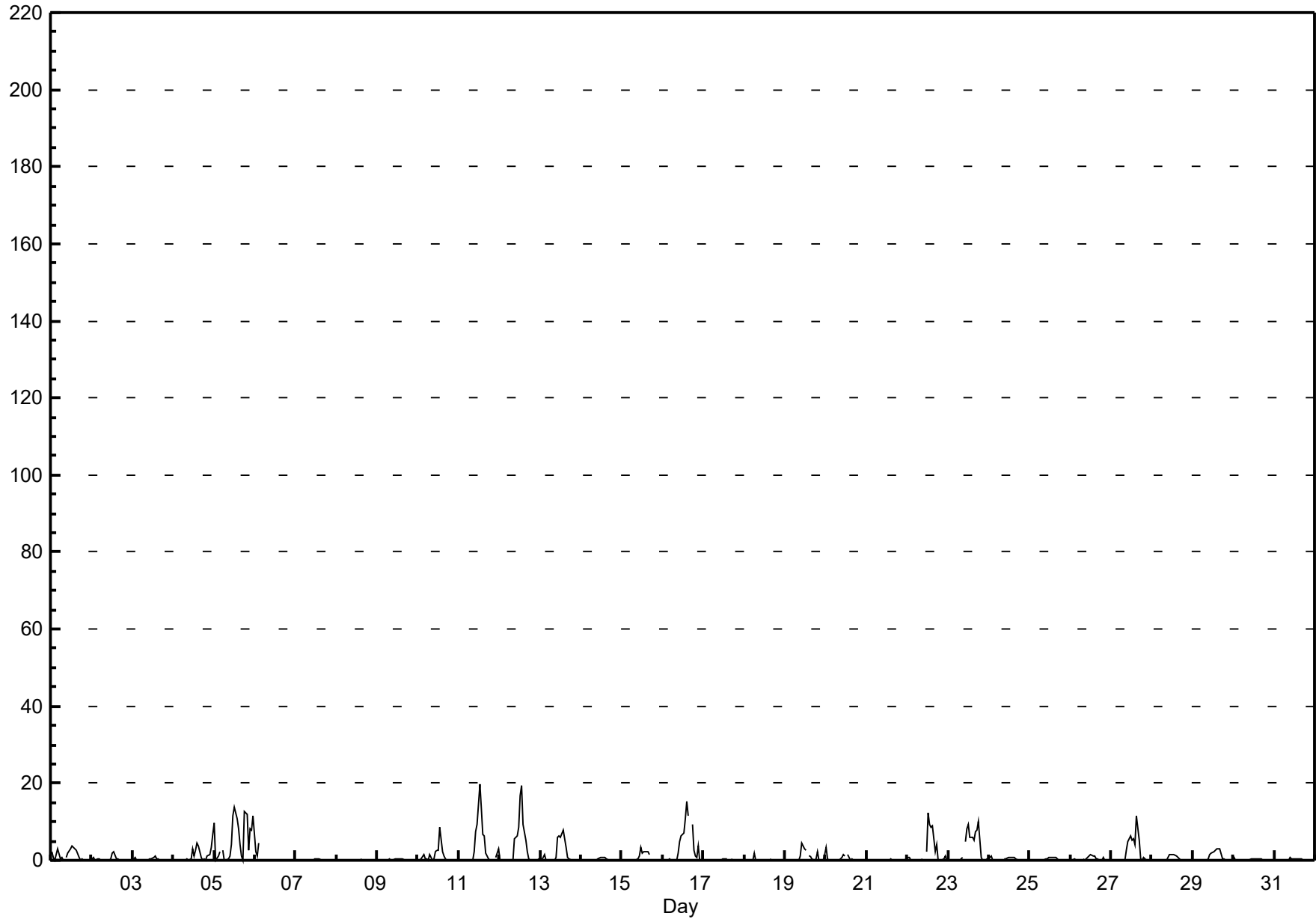
Maximum Value: 19.6 ppb on Jan 11 13:00	Maximum Daily Average: 5.4 ppb on Jan 5	Hours in Service: 744
Minimum Value: 0 ppb on Jan 1 23:00	Minimum Daily Average: 0.1 ppb on Jan 7	Hours of Data: 706
Maximum Diurnal Average: 3.9 ppb at hour 13	Minimum Diurnal Average: 0.1 ppb at hour 9	Hours of Missing Data: 38
Monthly Average: 1.09 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.1 Q <sub>3</sub> = 0.6 P <sub>90</sub> = 3.2 P <sub>99</sub> = 12.2	Hours of Calibration: 38
		Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jan	2	1	0	1	3	0	1	0	A	1	2	3	4	3	3	2	1	0	1	0	0	0	0	0	1.2	3.6
2-Jan	0	1	0	0	0	0	0	A	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0.3	2.3
3-Jan	0	1	0	0	0	0	A	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0.2	1.1
4-Jan	0	0	0	0	0	A	0	0	0	0	0	3	1	3	4	4	1	0	0	0	1	2	3	7	1.3	6.7
5-Jan	10	0	1	2	A	3	0	0	0	1	4	12	14	11	8	4	1	0	13	12	3	8	8	11	5.4	13.6
6-Jan	2	1	4	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	4.4
7-Jan	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
8-Jan	0	A	0	0	0	0	0	0	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	--	0.3
9-Jan	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
10-Jan	0	0	0	1	0	0	0	1	0	0	2	3	3	9	2	1	0	0	0	0	0	0	A	0	1.1	8.6
11-Jan	0	0	0	0	0	0	0	0	0	2	8	9	20	13	7	6	2	0	0	0	0	A	1	3	3.1	19.6
12-Jan	0	0	0	0	0	0	0	0	0	6	6	9	17	19	9	5	2	0	0	0	A	0	0	0	3.3	19.3
13-Jan	0	0	1	0	0	0	0	0	0	1	6	6	6	8	5	3	1	0	0	A	0	0	0	0	1.7	7.8
14-Jan	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	A	0	0	0	0	0	0.2	0.7
15-Jan	0	0	0	0	0	0	0	0	0	0	1	3	2	2	2	2	A	0	0	0	0	0	0	0	0.7	3.4
16-Jan	0	0	0	0	0	0	0	0	0	2	5	6	7	11	15	11	A	9	3	1	1	4	0	0	3.3	15.3
17-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.4
18-Jan	0	0	0	0	0	0	2	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	1.9
19-Jan	0	0	0	0	0	0	0	0	0	1	5	3	3	A	1	1	0	0	0	0	2	0	0	1	0.8	4.7
20-Jan	3	0	0	0	0	0	0	0	0	1	2	1	A	1	0	0	0	0	0	0	0	0	0	0	0.4	3.2
21-Jan	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	0.6
22-Jan	1	1	0	0	0	0	0	0	0	0	A	2	12	9	8	9	2	4	0	0	0	0	1	0	2.2	12.2
23-Jan	0	0	0	0	0	0	0	0	1	A	5	8	9	6	6	5	7	8	10	1	0	0	0	0	2.9	10.0
24-Jan	0	1	0	0	0	0	0	0	A	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.3	1.1
25-Jan	0	0	0	0	0	0	0	A	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0.2	0.8
26-Jan	0	0	0	0	0	0	A	0	0	0	1	1	1	1	1	0	0	0	0	1	0	0	0	0	0.4	1.5
27-Jan	0	0	0	0	0	A	0	0	0	3	5	6	5	6	4	11	5	0	0	1	0	0	0	0	2.1	11.4
28-Jan	0	0	0	0	A	0	0	0	0	1	2	2	2	1	1	1	0	0	0	0	0	0	0	0	0.4	1.6
29-Jan	0	0	0	A	0	0	0	0	0	0	1	2	2	3	3	3	3	0	0	0	0	0	0	0	0.8	3.1
30-Jan	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
31-Jan	0	A	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
	0.7	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.7	2.0	2.9	3.9	3.9	2.9	2.5	1.1	0.8	0.9	0.6	0.2	0.5	0.5	0.8	Diurnal Average	
	9.7	1.1	4.4	2.1	3.1	2.7	1.9	1.4	0.7	5.5	7.5	11.6	19.6	19.3	15.3	11.5	7.4	9.5	12.6	11.8	2.6	8.1	7.9	11.4	Diurnal Maximum	

C - Calibration                      A - Automated Daily Zero Span

**Hourly Averages**

**Nitrogen Oxide (NO) - ppb**  
**Portable Rycroft - January 2018**



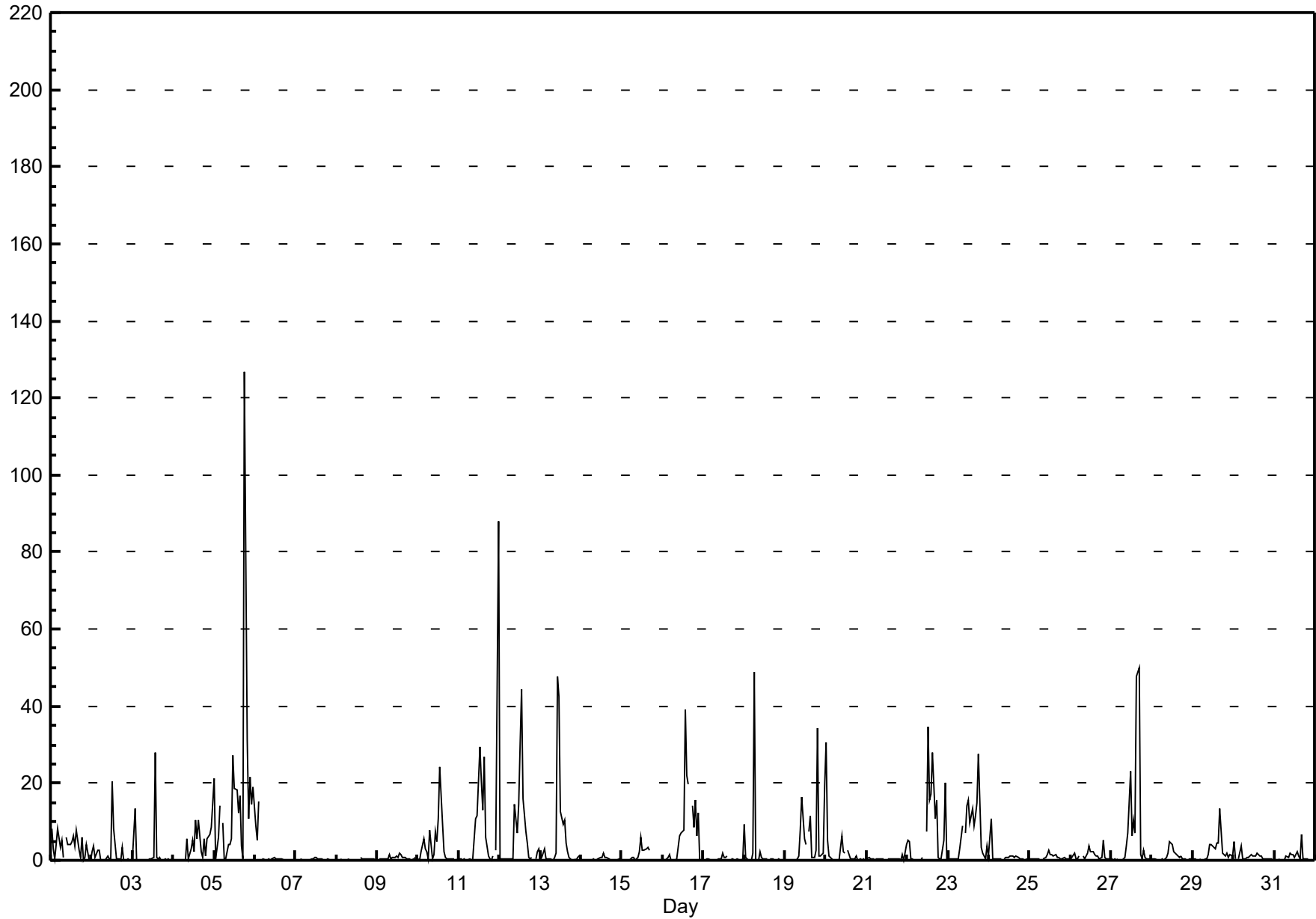
## Hourly Maximums

## Nitrogen Oxide (NO) - ppb Portable Rycroft - January 2018

Maximum Value: 126.6 ppb on Jan 5 19:00		Maximum Daily Average: 16.8 ppb on Jan 5		Hours in Service: 744																							
Minimum Value: 0 ppb on Jan 15 05:00		Minimum Daily Average: 0.2 ppb on Jan 7		Hours of Data: 706																							
Maximum Diurnal Average: 9.3 ppb at hour 14		Minimum Diurnal Average: 0.7 ppb at hour 8		Hours of Missing Data: 38																							
Monthly Average: 3.44 ppb		Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.2 Median = 0.4 Q <sub>3</sub> = 2.4 P <sub>90</sub> = 9.6 P <sub>99</sub> = 42.4		Hours of Calibration: 38																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jan	8	3	0	4	8	4	5	1	A	6	4	4	5	6	4	8	3	1	6	0	1	4	0	0	3.7	8.2	
2-Jan	2	4	1	3	3	0	0	A	0	1	0	0	21	8	0	0	0	0	4	0	0	0	0	0	2.1	20.6	
3-Jan	0	14	0	0	0	0	A	0	0	0	0	0	1	28	1	0	1	0	0	0	0	0	0	0	2.1	27.8	
4-Jan	0	0	0	0	0	A	0	0	6	0	3	5	2	10	5	10	2	1	6	1	6	7	8	15	3.9	14.9	
5-Jan	21	0	6	14	A	10	0	0	4	4	6	27	19	18	12	17	4	0	127	31	11	21	14	19	16.8	126.6	
6-Jan	9	5	15	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1.5	15.1	
7-Jan	0	0	A	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9	
8-Jan	0	A	0	0	0	0	0	0	0	C	C	C	C	C	C	1	0	0	0	0	0	0	0	0	--	0.8	
9-Jan	A	0	0	0	0	0	0	1	0	1	1	1	1	2	1	1	1	0	0	0	0	0	1	A	0.6	2.0	
10-Jan	0	0	2	6	3	2	0	8	0	2	7	5	11	24	9	2	1	0	0	0	0	0	A	0	3.7	24.4	
11-Jan	0	0	0	0	0	0	0	0	0	6	11	12	29	21	13	27	6	1	0	0	1	A	2	88	9.5	88.1	
12-Jan	0	0	0	0	0	0	0	0	0	15	7	15	30	44	16	7	4	1	0	1	A	0	2	3	6.4	44.3	
13-Jan	0	1	3	0	0	0	0	0	1	2	48	42	13	9	10	5	2	1	0	A	0	0	1	1	6.1	47.8	
14-Jan	0	0	0	0	0	0	0	0	0	0	0	1	1	2	1	1	0	0	A	0	0	0	0	0	0.4	2.0	
15-Jan	0	0	0	0	0	0	1	1	0	1	2	6	2	3	3	3	3	A	0	0	0	0	0	0	1.1	5.8	
16-Jan	1	0	0	1	2	0	0	0	0	3	6	7	8	39	22	20	A	14	9	16	6	12	0	0	7.3	39.0	
17-Jan	0	0	0	0	0	0	0	0	0	0	0	2	1	1	1	A	1	0	0	0	0	0	0	0	0.3	1.9	
18-Jan	9	1	0	0	0	2	49	0	0	2	1	0	0	0	A	0	0	0	0	0	0	0	0	0	2.9	48.7	
19-Jan	0	0	0	0	0	0	0	1	1	8	17	6	4	A	7	12	1	1	3	34	1	1	2	19	5.1	34.4	
20-Jan	31	5	1	1	0	0	0	0	0	7	2	2	A	3	0	0	0	0	1	0	0	0	0	0	2.4	30.5	
21-Jan	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	4	0.5	4.0	
22-Jan	5	5	0	0	0	0	0	0	0	1	A	7	35	15	17	28	11	16	1	0	0	5	20	0	7.3	34.7	
23-Jan	0	0	0	0	0	0	0	3	9	A	7	14	16	10	13	9	12	15	28	3	2	1	1	4	6.4	27.6	
24-Jan	1	11	1	0	0	0	0	1	A	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1.0	10.9	
25-Jan	0	0	0	0	0	0	0	A	0	1	1	3	2	2	1	2	1	1	0	0	1	0	0	0	0.7	2.7	
26-Jan	0	1	2	0	0	1	A	1	1	1	2	4	2	2	2	1	1	0	1	5	1	1	0	0	1.3	5.1	
27-Jan	0	0	0	0	0	A	0	0	1	4	7	23	6	10	7	48	50	1	0	2	1	0	0	0	7.1	49.8	
28-Jan	0	0	0	0	A	0	0	0	1	2	5	5	4	2	1	1	1	1	0	0	0	0	0	0	1.1	4.7	
29-Jan	0	0	0	A	0	0	0	0	0	2	4	4	3	3	5	5	14	2	2	1	2	1	2	1	2.2	13.6	
30-Jan	5	0	A	0	4	0	0	0	1	1	1	1	1	1	2	1	1	0	0	0	0	0	0	0	0.9	5.0	
31-Jan	0	A	0	0	0	0	0	1	1	2	1	1	1	2	1	1	7	0	0	0	0	0	0	0	0.9	6.6	
		3.2	1.8	1.2	1.1	0.8	0.8	2.1	0.7	1.0	2.4	5.1	6.9	7.6	9.3	5.3	7.0	4.2	2.0	6.3	3.3	1.2	2.0	1.9	5.3	Diurnal Average	
		30.5	13.6	15.1	14.1	8.2	9.6	48.7	8.0	9.1	14.5	47.8	42.4	34.7	44.3	22.1	47.8	49.8	15.6	126.6	34.4	10.7	21.4	20.3	88.1	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

**Hourly Maximums**

**Nitrogen Oxide (NO) - ppb**  
**Portable Rycroft - January 2018**

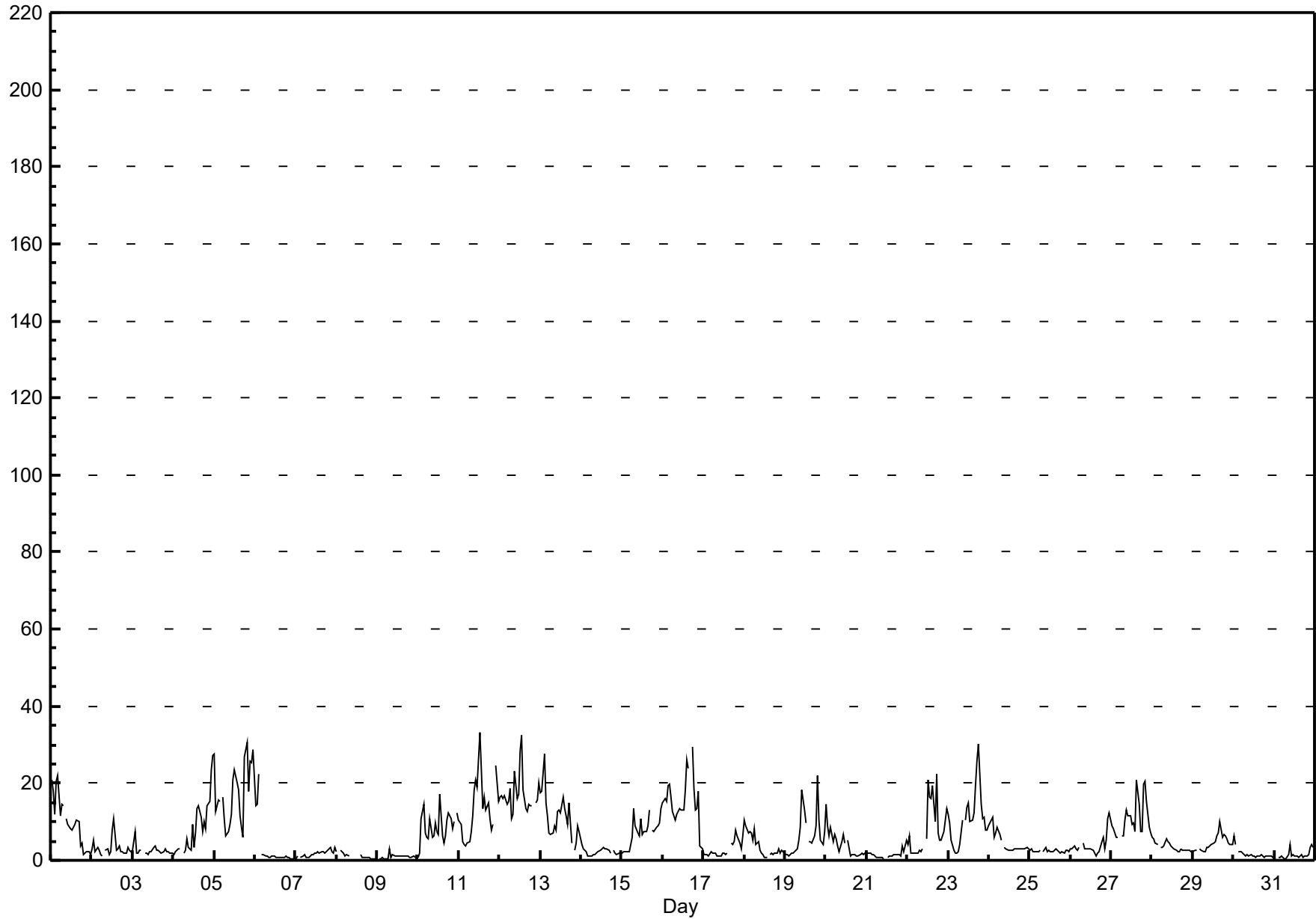


# Hourly Averages

Oxides of Nitrogen (NO<sub>x</sub>) - ppb

Portable Rycroft - January 2018

<b>Maximum Value: 33.3 ppb on Jan 11 13:00</b>		<b>Maximum Daily Average: 17.3 ppb on Jan 5</b>		Hours in Service: 744 Hours of Data: 706 Hours of Missing Data: 38 Hours of Calibration: 38 Percent Operational Time: 100.0																							
<b>Minimum Value: 0 ppb on Jan 6 23:00</b>		<b>Minimum Daily Average: 1.0 ppb on Jan 9</b>																									
<b>Maximum Diurnal Average: 8.1 ppb at hour 14</b>		<b>Minimum Diurnal Average: 4.6 ppb at hour 6</b>																									
<b>Monthly Average: 6.29 ppb</b>		Percentiles: P <sub>1</sub> = 0.5 P <sub>10</sub> = 1.0 Q <sub>1</sub> = 1.8 Median = 3.2 Q <sub>3</sub> = 9.3 P <sub>90</sub> = 15.2 P <sub>99</sub> = 28.3																									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Jan	21	18	12	20	22	12	15	14	A	11	9	8	8	9	9	10	10	4	4	1	2	2	2	1	9.8	21.9	
2-Jan	3	5	2	3	3	2	1	A	3	3	2	2	8	11	2	3	4	2	2	2	2	3	3	2	3.1	10.8	
3-Jan	2	8	2	2	3	3	A	2	2	1	2	2	3	4	3	2	2	2	2	3	2	2	2	2	2.5	7.5	
4-Jan	2	2	3	3	3	A	2	3	6	4	2	9	3	7	13	14	11	7	10	8	14	15	23	27	8.4	27.3	
5-Jan	28	13	16	15	A	16	11	7	8	9	12	21	24	20	18	12	9	6	27	31	18	26	25	29	17.3	30.7	
6-Jan	14	15	22	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	3.0	22.5	
7-Jan	0	1	A	1	1	2	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3	2	2	3	1.7	3.3	
8-Jan	2	A	3	2	2	1	1	1	C	C	C	C	C	C	1	1	1	1	1	1	0	0	0	0	--	2.7	
9-Jan	A	1	1	1	0	0	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1.0	3.0	
10-Jan	1	2	11	14	7	6	5	11	6	6	10	7	7	17	7	4	6	10	12	11	8	10	A	12	8.3	17.2	
11-Jan	10	9	5	4	4	4	5	7	12	18	21	19	33	23	13	16	13	15	11	8	9	A	24	15	13.1	33.3	
12-Jan	16	17	16	17	15	15	19	11	12	23	16	17	28	32	18	14	13	14	14	14	A	15	16	20	17.0	32.4	
13-Jan	18	18	28	15	12	7	7	7	9	8	13	13	12	16	13	12	9	15	5	A	3	5	9	8	11.3	27.8	
14-Jan	4	3	3	2	1	1	1	1	2	2	2	3	3	3	3	3	3	2	A	2	2	2	2	2	2.3	3.9	
15-Jan	2	2	2	2	2	4	6	13	9	7	6	11	7	7	7	9	13	A	8	7	9	9	10	13	7.3	13.3	
16-Jan	15	16	15	19	20	16	13	11	12	13	13	13	13	18	26	24	A	29	19	13	14	18	4	3	15.5	29.4	
17-Jan	2	1	2	1	2	2	2	2	2	1	1	1	2	2	1	2	A	4	4	5	8	6	4	3	6	2.8	7.7
18-Jan	10	9	7	7	7	5	8	4	5	2	2	1	1	1	A	2	2	2	2	2	3	2	3	2	3.9	10.4	
19-Jan	1	1	1	2	2	2	3	3	5	8	18	13	10	A	5	5	5	6	9	22	11	5	4	7	6.4	22.0	
20-Jan	15	9	6	9	5	7	5	4	2	5	7	5	A	5	1	1	1	2	1	1	1	2	2	2	4.2	14.5	
21-Jan	2	2	2	2	2	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	4	2	5	1.5	5.1	
22-Jan	4	6	2	2	2	2	2	3	2	3	A	5	21	16	16	19	10	23	7	5	5	7	11	13	8.2	22.5	
23-Jan	12	10	5	2	2	2	2	4	11	A	11	14	15	10	10	12	20	26	30	15	11	11	8	8	10.9	30.2	
24-Jan	9	11	11	6	7	8	7	5	A	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4.7	11.2	
25-Jan	3	3	2	2	2	2	2	A	2	3	2	3	2	2	2	3	3	2	2	2	2	3	3	2	2.4	3.2	
26-Jan	3	3	4	3	3	3	A	5	3	3	3	3	3	3	2	1	2	2	5	6	3	5	11	12	3.9	12.3	
27-Jan	9	8	7	6	6	A	6	6	11	13	11	11	9	10	8	21	14	8	7	20	21	15	9	7	10.6	20.7	
28-Jan	6	6	4	4	A	4	4	4	6	5	4	4	3	3	3	2	2	3	3	3	3	3	3	2	3.5	6.0	
29-Jan	2	3	3	A	3	3	2	2	3	3	4	4	5	6	7	10	6	7	6	6	5	4	4	4	4.4	10.2	
30-Jan	7	4	A	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.6	6.5	
31-Jan	1	A	1	1	1	1	0	0	1	4	1	2	1	1	1	1	1	1	1	1	1	4	4	4	1.5	3.9	
		7.5	7.0	6.8	5.9	4.8	4.6	4.6	4.7	4.8	5.7	6.3	6.9	7.9	8.1	6.7	6.9	5.9	6.7	6.8	6.8	5.5	6.2	6.4	7.3	Diurnal Average	
		27.7	17.9	27.8	20.3	21.9	16.5	18.6	14.0	12.1	23.0	20.7	20.9	33.3	32.4	26.2	24.0	19.6	29.4	30.2	30.7	20.6	25.7	25.5	28.8	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									



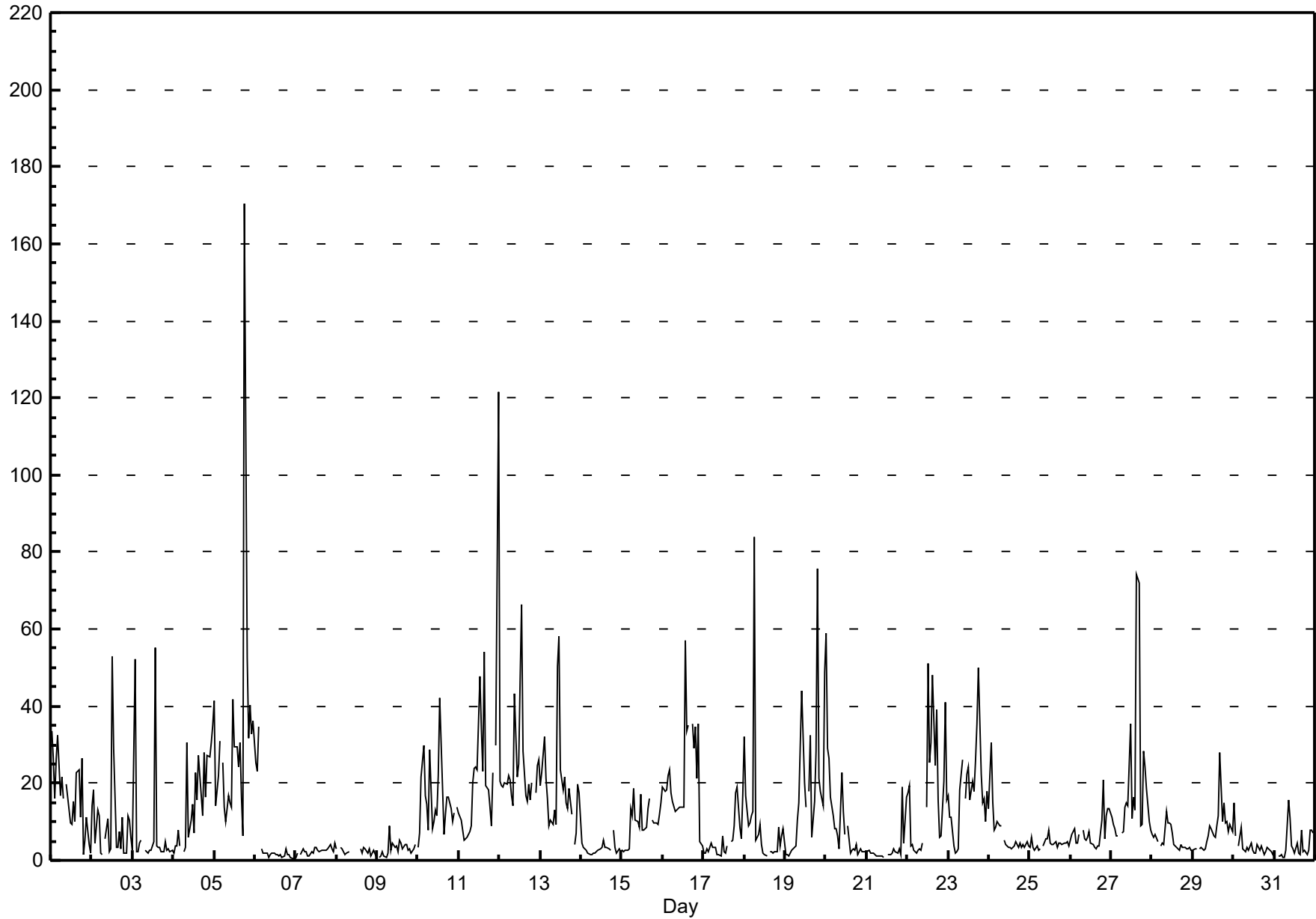
# Hourly Maximums

Oxides of Nitrogen (NO<sub>x</sub>) - ppb

Portable Rycroft - January 2018

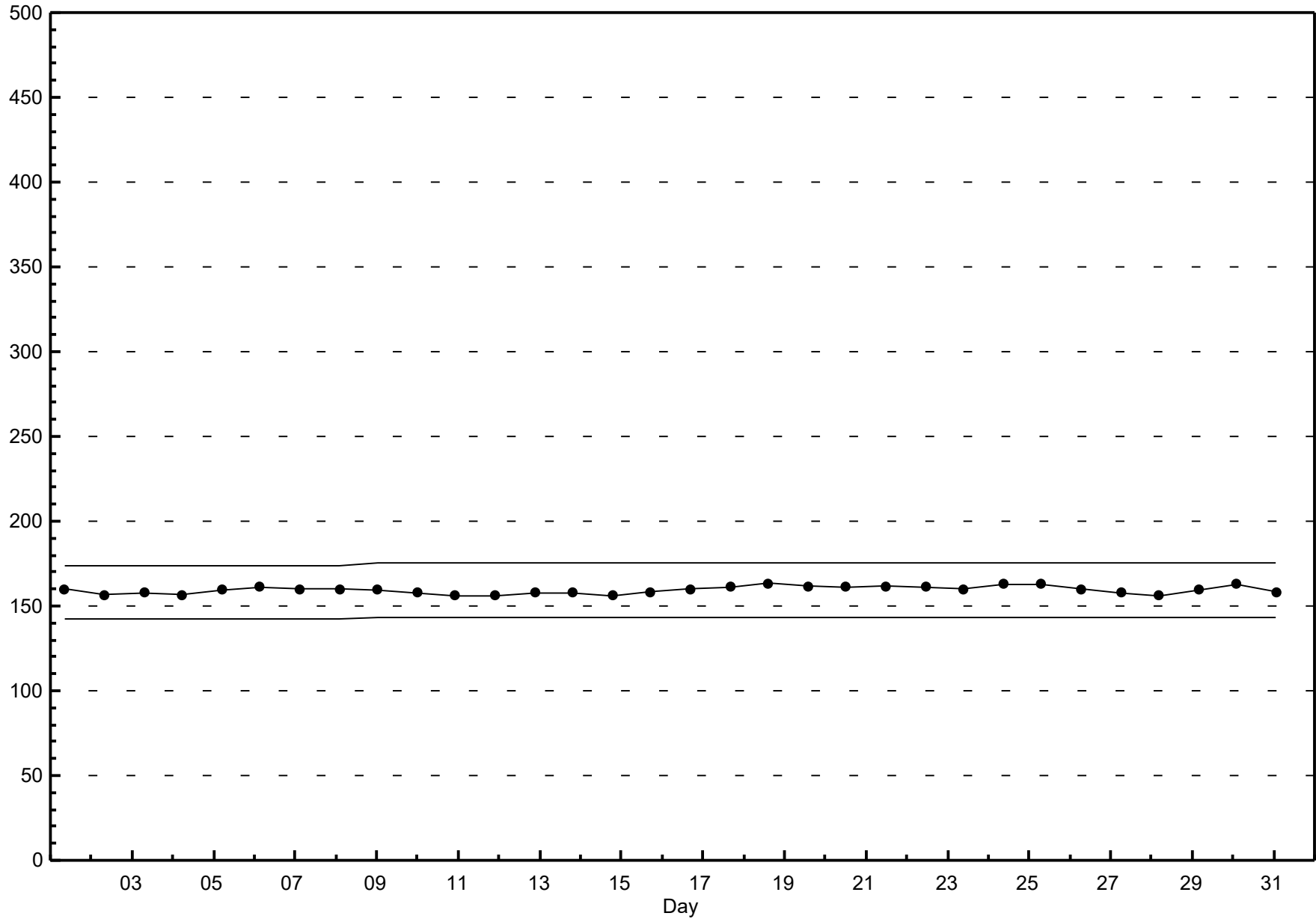
Maximum Value: 170.6 ppb on Jan 5 19:00		Maximum Daily Average: 32.5 ppb on Jan 5		Hours in Service: 744																							
Minimum Value: 0 ppb on Jan 6 23:00		Minimum Daily Average: 2.5 ppb on Jan 7		Hours of Data: 706																							
Maximum Diurnal Average: 16.9 ppb at hour 14		Minimum Diurnal Average: 7.0 ppb at hour 6		Hours of Missing Data: 38																							
Monthly Average: 11.48 ppb		Percentiles: P <sub>1</sub> = 0.8 P <sub>10</sub> = 1.9 Q <sub>1</sub> = 2.8 Median = 6.2 Q <sub>3</sub> = 15.9 P <sub>90</sub> = 26.9 P <sub>99</sub> = 63.5		Hours of Calibration: 38																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jan	33	26	16	26	32	17	21	16	A	20	16	10	9	15	10	23	23	11	26	2	5	11	4	2	16.4	33.4	
2-Jan	14	18	5	13	11	2	1	A	5	11	2	3	53	29	3	3	7	3	11	2	2	12	10	6	9.9	52.8	
3-Jan	2	52	2	2	4	5	A	3	2	2	3	2	5	55	4	3	3	2	2	5	3	3	2	3	7.4	55.2	
4-Jan	2	4	4	8	4	A	2	3	30	6	10	15	7	23	16	27	17	12	28	16	27	27	31	35	15.4	35.0	
5-Jan	41	14	22	31	A	25	14	10	17	15	14	42	30	30	24	31	16	7	171	53	32	40	33	36	32.5	170.6	
6-Jan	25	23	35	A	3	2	2	2	1	2	2	2	1	1	1	1	1	1	3	2	2	1	0	1	4.9	34.8	
7-Jan	1	2	A	1	3	2	2	1	1	2	2	4	3	2	2	2	3	2	3	3	4	3	2	4	2.5	4.4	
8-Jan	3	A	3	3	2	1	2	2	C	C	C	C	C	3	2	3	3	2	3	3	1	2	3	1	--	3.2	
9-Jan	A	1	1	2	1	1	2	9	3	5	3	4	2	5	4	3	4	4	3	3	2	3	4	A	3.1	8.8	
10-Jan	3	7	21	30	17	15	8	29	8	10	13	12	22	42	19	7	12	17	16	13	10	12	A	14	15.5	42.2	
11-Jan	12	10	8	5	6	6	7	9	20	24	24	23	48	34	23	54	19	18	14	9	23	A	30	121	23.9	121.4	
12-Jan	20	20	19	20	20	22	21	17	14	43	22	25	47	67	28	17	15	20	16	20	A	18	25	26	24.4	66.5	
13-Jan	19	23	32	21	16	9	10	9	13	9	50	58	23	18	22	15	13	19	12	A	4	7	20	17	19.2	58.2	
14-Jan	5	3	3	3	2	2	1	2	2	2	2	3	3	5	3	3	3	3	A	8	3	2	3	2	3.0	8.0	
15-Jan	2	2	3	3	3	13	11	19	10	10	9	17	8	8	8	14	16	A	10	10	10	9	12	15	9.7	18.7	
16-Jan	19	18	18	22	24	18	15	13	13	13	14	14	14	57	34	35	A	35	29	35	21	35	5	4	21.9	57.2	
17-Jan	2	2	3	2	4	3	3	3	2	1	1	6	2	2	4	A	5	5	9	18	19	9	6	17	5.6	19.1	
18-Jan	32	17	9	10	11	13	84	5	7	9	4	2	1	1	A	2	2	2	2	2	9	4	6	8	10.6	83.9	
19-Jan	2	2	1	2	3	3	4	10	15	30	44	20	14	A	18	32	6	15	28	76	21	18	14	49	18.6	75.7	
20-Jan	59	29	26	16	11	8	8	6	3	23	13	7	A	9	2	3	3	3	4	2	3	2	2	2	10.6	58.8	
21-Jan	2	3	2	2	2	1	1	1	1	1	1	A	1	1	2	2	3	2	2	3	2	19	4	17	3.2	19.2	
22-Jan	17	19	4	4	2	2	2	3	2	4	A	14	51	25	30	48	25	39	16	6	6	21	41	16	17.3	51.1	
23-Jan	17	11	11	4	2	2	3	18	26	A	16	22	24	16	20	18	26	36	50	22	15	16	10	18	17.5	50.0	
24-Jan	13	30	15	8	9	10	9	9	A	5	4	3	3	3	3	4	5	3	4	3	4	3	5	4	7.0	30.5	
25-Jan	3	6	3	3	4	3	3	A	4	6	6	8	4	4	4	5	4	5	4	4	5	4	5	4	4.3	7.7	
26-Jan	5	7	8	4	4	7	A	8	6	5	6	7	4	4	3	3	4	4	10	21	5	12	13	14	7.2	20.9	
27-Jan	11	9	8	6	6	A	7	7	14	15	14	35	11	16	13	74	72	9	9	28	24	19	10	8	18.6	74.2	
28-Jan	7	6	7	5	A	4	4	4	13	10	10	9	7	4	3	3	3	4	3	3	3	3	3	3	5.3	12.8	
29-Jan	3	3	3	A	3	3	3	3	5	6	9	8	6	6	9	11	28	10	15	10	10	8	9	8	7.8	28.0	
30-Jan	15	7	A	4	9	3	3	2	3	2	4	3	2	2	4	3	4	2	2	2	3	2	2	1	3.6	14.8	
31-Jan	3	A	1	1	2	1	1	3	16	11	4	3	2	5	2	2	8	2	3	2	3	8	8	7	4.0	15.5	
		13.2	12.9	10.1	9.0	7.6	7.0	8.8	7.8	9.2	10.4	11.1	13.1	14.1	16.9	10.8	15.0	11.7	9.9	16.9	12.8	9.3	11.1	10.8	15.4	Diurnal Average	
		58.8	52.0	34.8	31.1	32.4	25.2	83.9	28.9	30.5	43.3	50.5	58.2	52.8	66.5	33.6	74.2	72.0	39.0	170.6	75.7	31.6	40.4	41.0	121.4	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									





### Span Responses

Oxides of Nitrogen (NO<sub>x</sub>)  
Portable Rycroft - January 2018



## Hourly Averages

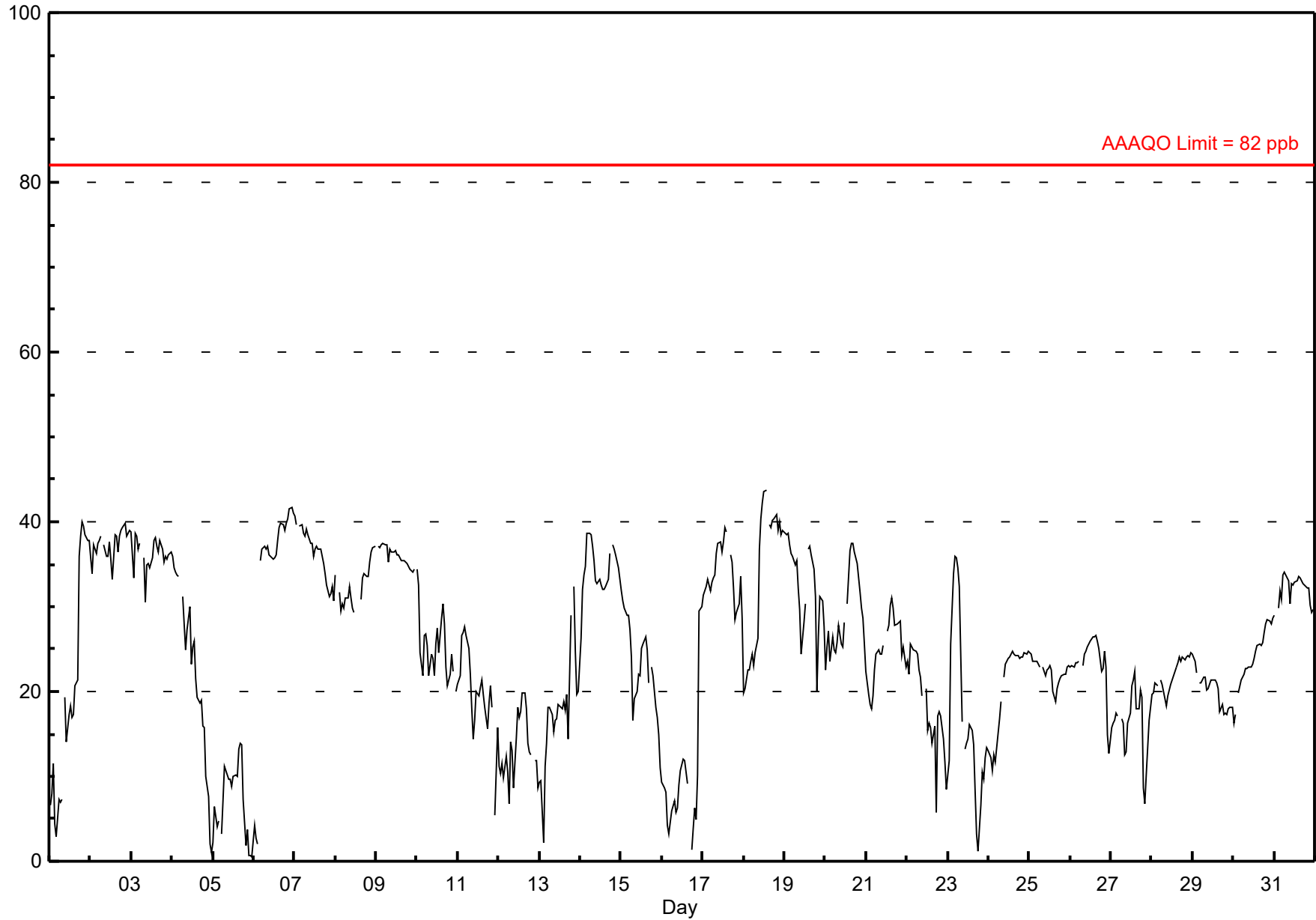
Ozone (O<sub>3</sub>) - ppb

Portable Rycroft - January 2018

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 43.8 ppb on Jan 18 14:00	Maximum Daily Average: 37.3 ppb on Jan 2		Hours of Data:	709
Minimum Value: 0 ppb on Jan 6 00:00	Minimum Daily Average: 7.1 ppb on Jan 5		Hours of Missing Data:	35
Maximum Diurnal Average: 26.7 ppb at hour 17	Minimum Diurnal Average: 22.3 ppb at hour 2		Hours of Calibration:	35
Monthly Average: 24.95 ppb	Percentiles: P <sub>1</sub> = 1.9 P <sub>10</sub> = 10.5 Q <sub>1</sub> = 18.2 Median = 24.6 Q <sub>3</sub> = 33.7 P <sub>90</sub> = 37.4 P <sub>99</sub> = 40.7		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jan	7	8	12	4	3	7	7	7	A	19	14	17	18	17	17	21	21	36	38	40	39	38	38	38	20.3	40.0	
2-Jan	36	34	37	36	37	38	38	A	37	36	36	38	36	33	38	38	36	38	39	39	40	38	39	39	37.3	39.8	
3-Jan	39	33	39	38	37	37	A	36	30	35	35	34	36	38	38	37	36	38	37	35	36	36	36	36	36.2	38.9	
4-Jan	36	35	34	34	33	A	31	28	25	27	30	23	25	26	22	19	19	19	16	16	10	8	2	1	22.5	36.0	
5-Jan	2	6	4	5	A	3	7	11	10	10	10	10	10	10	10	13	14	14	7	2	4	1	1	0	7.1	13.9	
6-Jan	4	3	2	A	35	37	37	37	37	36	36	36	36	36	38	39	40	40	39	40	40	42	42	41	33.5	41.7	
7-Jan	41	40	A	40	40	39	38	39	38	37	37	36	37	37	37	37	36	35	34	33	31	32	32	31	36.3	40.6	
8-Jan	34	A	32	29	30	30	31	31	32	31	30	29	C	C	C	31	33	34	34	33	35	36	37	37	32.5	37.2	
9-Jan	A	37	37	37	37	37	37	35	37	36	37	37	36	36	36	35	35	35	35	35	34	34	34	A	36.0	37.4	
10-Jan	34	33	25	22	27	27	26	22	24	24	22	26	27	25	29	30	28	23	21	22	24	22	A	20	25.3	34.4	
11-Jan	21	22	27	27	28	27	25	22	18	14	17	20	19	21	21	20	18	16	19	21	18	A	5	16	20.0	27.7	
12-Jan	11	10	11	10	12	10	7	14	13	9	15	18	17	18	20	20	18	14	13	13	A	12	12	9	13.3	19.9	
13-Jan	9	10	2	11	14	18	18	17	15	17	17	19	18	18	19	18	20	14	29	A	32	25	20	20	17.4	32.4	
14-Jan	26	32	34	35	39	39	38	37	35	33	33	33	33	32	32	32	33	36	A	37	37	36	35	33	34.4	38.7	
15-Jan	32	31	30	29	29	27	24	17	19	20	22	22	25	26	26	25	21	A	23	22	18	17	15	11	23.1	31.9	
16-Jan	9	9	8	4	3	5	6	7	6	6	9	11	12	12	11	9	A	1	4	6	5	10	29	30	9.3	30.1	
17-Jan	31	32	32	33	32	33	33	34	36	37	38	36	38	39	39	A	36	35	32	29	29	30	34	29	33.8	39.3	
18-Jan	20	20	23	23	24	24	23	25	26	37	40	42	44	44	A	40	39	40	40	41	39	40	39	39	33.5	43.8	
19-Jan	39	38	39	37	36	36	35	35	32	30	24	28	30	A	37	37	36	34	31	20	27	31	31	28	32.7	38.6	
20-Jan	23	25	27	24	26	25	25	26	28	26	25	28	A	30	37	37	38	37	36	35	32	30	29	26	29.2	37.5	
21-Jan	22	20	18	18	20	23	24	25	24	24	25	A	27	28	30	31	30	28	28	28	28	24	25	23	25.0	31.0	
22-Jan	24	22	26	25	25	25	24	23	22	20	A	20	15	16	16	14	16	6	17	18	17	14	12	8	18.4	25.6	
23-Jan	10	12	26	34	36	36	35	32	16	A	13	14	14	16	15	14	8	3	1	7	10	10	12	13	16.9	36.0	
24-Jan	13	12	11	13	12	13	17	19	A	22	23	24	24	24	25	24	24	24	24	24	24	25	24	25	20.4	24.7	
25-Jan	25	24	24	23	24	23	23	A	23	22	23	23	23	23	20	19	20	21	22	22	22	22	23	23	22.4	24.6	
26-Jan	23	23	23	23	23	24	A	23	24	25	25	26	26	26	27	27	26	25	22	23	25	23	15	13	23.4	26.6	
27-Jan	16	16	17	17	17	A	17	16	13	13	16	17	21	21	22	18	18	20	19	9	7	10	17	18	16.3	22.4	
28-Jan	20	20	21	21	A	21	21	20	18	20	20	21	21	22	23	23	24	24	24	24	24	24	25	25	21.9	24.6	
29-Jan	24	24	22	A	21	21	22	22	20	20	21	21	21	21	21	20	18	19	17	17	17	18	18	18	20.2	24.4	
30-Jan	16	17	A	20	21	22	22	23	23	23	23	23	24	25	25	26	25	26	27	28	28	28	28	29	24.0	28.6	
31-Jan	29	A	30	32	31	34	34	34	33	30	33	33	33	33	34	33	33	33	33	32	32	32	30	29	30	32.0	34.1
	22.5	22.3	23.1	24.3	25.9	25.5	25.0	24.7	24.7	24.6	24.9	25.5	25.8	26.0	26.3	26.3	26.7	25.6	25.4	25.0	25.6	24.9	24.5	23.6		Diurnal Average	
	40.6	39.6	38.7	39.5	39.6	38.7	38.5	39.1	38.4	37.5	40.3	42.3	43.5	43.8	38.8	39.6	39.8	40.2	40.4	40.9	40.3	41.6	41.7	41.1		Diurnal Maximum	

C - Calibration      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb    24-hr na



# Hourly Maximums

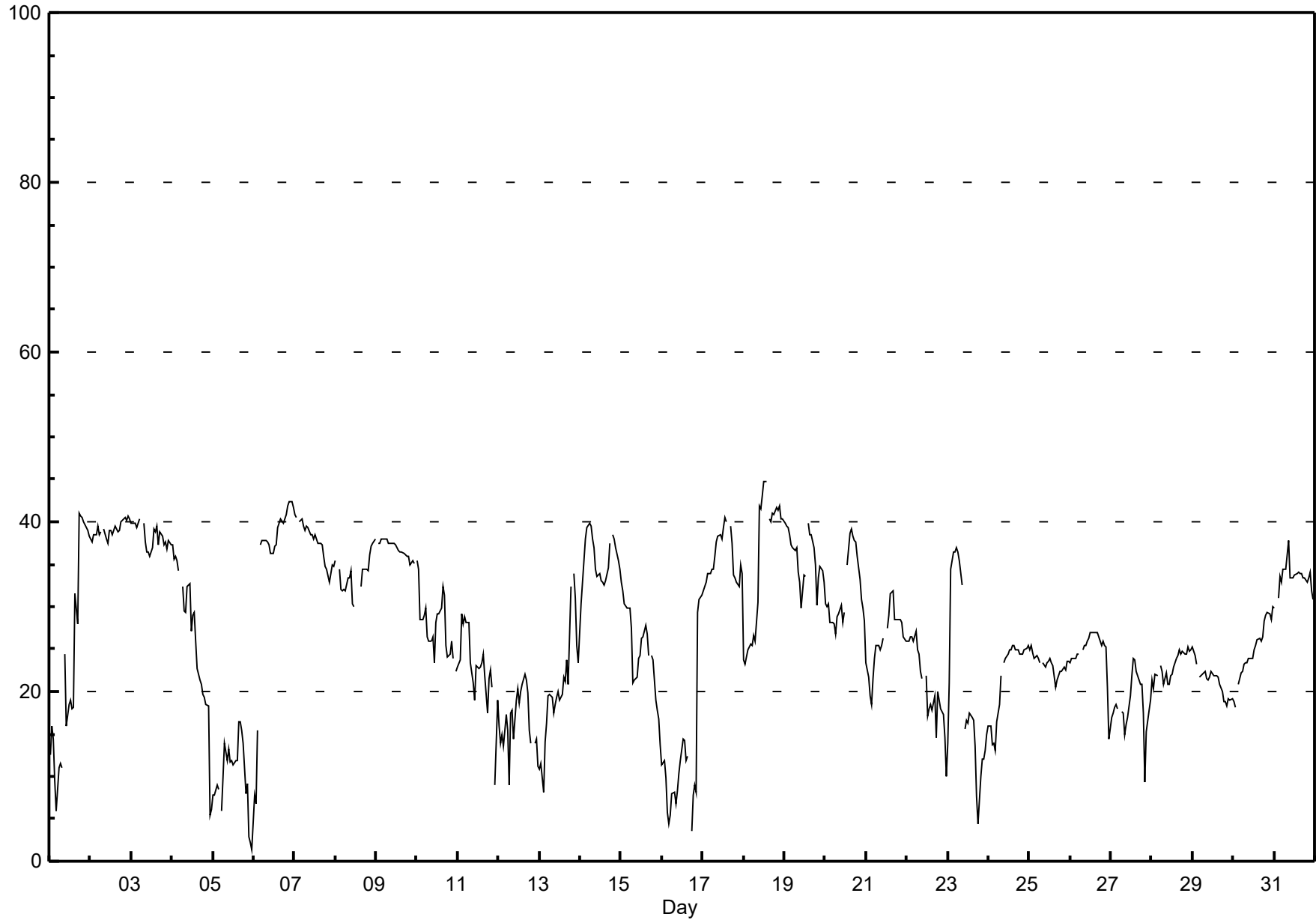
Ozone (O<sub>3</sub>) - ppb

Portable Rycroft - January 2018

Maximum Value: 44.8 ppb on Jan 18 13:00																	Maximum Daily Average: 39.1 ppb on Jan 2																	Hours in Service: 744														
Minimum Value: 1 ppb on Jan 6 00:00																	Minimum Daily Average: 10.1 ppb on Jan 5																	Hours of Data: 709														
Maximum Diurnal Average: 29.0 ppb at hour 17																	Minimum Diurnal Average: 24.8 ppb at hour 1																	Hours of Missing Data: 35														
Monthly Average: 26.97 ppb																	Percentiles: P <sub>1</sub> = 5.3 P <sub>10</sub> = 13.9 Q <sub>1</sub> = 20.9 Median = 26.3 Q <sub>3</sub> = 35.4 P <sub>90</sub> = 39.0 P <sub>99</sub> = 41.8																	Hours of Calibration: 35														
																	Percent Operational Time: 100.0																															
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
1-Jan	13	16	14	9	6	11	11	11	A	24	16	19	19	18	18	31	28	41	41	40	40	40	39	38	23.7	41.0																						
2-Jan	38	38	39	39	40	38	39	A	39	38	38	39	39	38	39	39	39	39	39	40	40	40	40	41	40	39.1	40.6																					
3-Jan	40	40	40	39	40	40	A	40	38	36	36	36	37	39	39	39	37	39	38	37	38	37	38	37	38.3	40.4																						
4-Jan	37	36	36	35	34	A	32	30	29	32	33	27	29	29	26	23	21	21	20	19	18	18	5	6	26.0	37.4																						
5-Jan	8	8	9	8	A	6	10	14	12	13	12	12	11	12	12	16	16	15	14	8	9	3	2	1	10.1	16.4																						
6-Jan	8	7	15	A	37	38	38	38	38	37	36	36	37	37	39	40	40	40	40	41	42	42	42	42	35.3	42.4																						
7-Jan	41	41	A	40	40	39	39	40	39	38	38	38	38	38	37	37	37	36	35	34	33	34	35	35	37.6	40.9																						
8-Jan	35	A	34	32	32	32	32	33	33	34	30	30	C	C	C	32	34	34	34	34	36	37	37	38	33.9	37.9																						
9-Jan	A	37	37	38	38	38	38	37	37	37	37	37	37	37	36	36	36	36	36	36	35	35	35	A	36.8	37.9																						
10-Jan	35	34	28	28	29	30	26	26	26	26	23	28	29	29	30	32	31	25	24	24	26	24	A	22	27.8	35.4																						
11-Jan	23	24	29	28	29	28	28	23	22	21	19	23	23	23	24	22	17	21	22	20	A	9	19	22.7	29.2																							
12-Jan	16	14	15	13	17	15	9	17	18	14	19	20	19	20	21	22	21	20	15	14	A	14	14	11	16.5	22.0																						
13-Jan	11	12	8	14	16	19	20	19	17	18	19	20	19	20	22	21	24	21	32	A	34	31	25	23	20.3	33.9																						
14-Jan	30	33	35	38	39	40	39	38	37	34	33	34	33	33	32	33	34	37	A	38	38	37	35	34	35.6	39.8																						
15-Jan	33	32	30	30	30	30	27	21	21	22	24	24	26	26	28	27	24	A	24	24	19	18	17	14	24.9	32.9																						
16-Jan	11	12	10	6	4	5	8	8	7	8	10	12	14	14	12	12	A	4	8	9	8	29	31	31	12.0	31.4																						
17-Jan	32	32	33	34	34	34	34	36	38	38	38	38	39	40	40	A	39	37	34	33	33	32	35	34	35.7	40.4																						
18-Jan	24	23	25	25	26	25	27	26	30	42	42	43	45	45	A	40	40	41	41	42	41	42	40	40	35.4	44.8																						
19-Jan	40	39	39	38	37	37	37	37	34	33	30	34	34	A	40	38	38	37	35	30	33	35	34	33	35.8	39.9																						
20-Jan	30	30	30	28	28	28	27	29	29	30	28	29	A	35	39	39	38	38	38	36	33	31	30	28	31.8	39.1																						
21-Jan	23	22	19	18	21	24	25	25	25	25	26	A	27	29	31	32	32	28	28	28	28	28	26	26	26.2	31.8																						
22-Jan	26	26	26	26	26	27	25	24	22	21	A	22	17	18	19	18	20	15	20	19	18	17	14	10	20.7	27.1																						
23-Jan	14	21	34	36	37	37	37	35	33	A	16	17	16	18	17	17	14	8	4	10	12	12	13	15	20.5	37.0																						
24-Jan	16	16	14	14	13	16	18	22	A	23	24	24	25	25	25	25	25	25	24	24	24	25	25	25	21.8	25.4																						
25-Jan	25	25	25	24	24	24	23	A	23	23	23	24	24	23	23	21	21	22	22	22	23	23	24	24	23.3	25.4																						
26-Jan	23	24	24	24	24	24	A	25	25	25	26	26	27	27	27	27	27	26	25	26	25	25	20	14	24.8	26.9																						
27-Jan	17	17	18	18	18	A	18	17	15	16	17	19	22	24	24	22	21	21	21	17	9	15	18	19	18.5	23.9																						
28-Jan	21	20	22	22	A	23	22	21	22	21	21	22	22	23	24	24	25	24	25	24	24	25	25	25	23.0	25.2																						
29-Jan	25	24	23	A	22	22	22	22	22	21	22	22	22	22	22	22	21	20	19	19	18	19	19	19	21.3	25.3																						
30-Jan	19	18	A	21	22	22	23	23	23	24	24	24	25	25	26	26	26	26	28	29	29	29	28	30	24.9	30.0																						
31-Jan	30	A	31	33	33	34	34	34	38	33	33	33	34	34	34	34	34	33	33	33	33	34	32	31	33.4	37.7																						
																								24.8	24.9	25.7	26.3	27.5	27.2	26.6	26.7	27.4	27.1	26.5	27.1	27.2	27.6	27.8	28.4	29.0	27.6	27.4	27.2	27.5	27.7	26.4	25.6	Diurnal Average
																								40.9	40.6	39.9	40.0	40.4	40.4	39.5	39.9	39.4	41.9	41.6	43.1	44.8	44.7	39.9	40.4	40.4	41.1	40.9	41.7	41.9	42.4	42.4	41.7	Diurnal Maximum
C - Calibration																								A - Automated Daily Zero Span																								

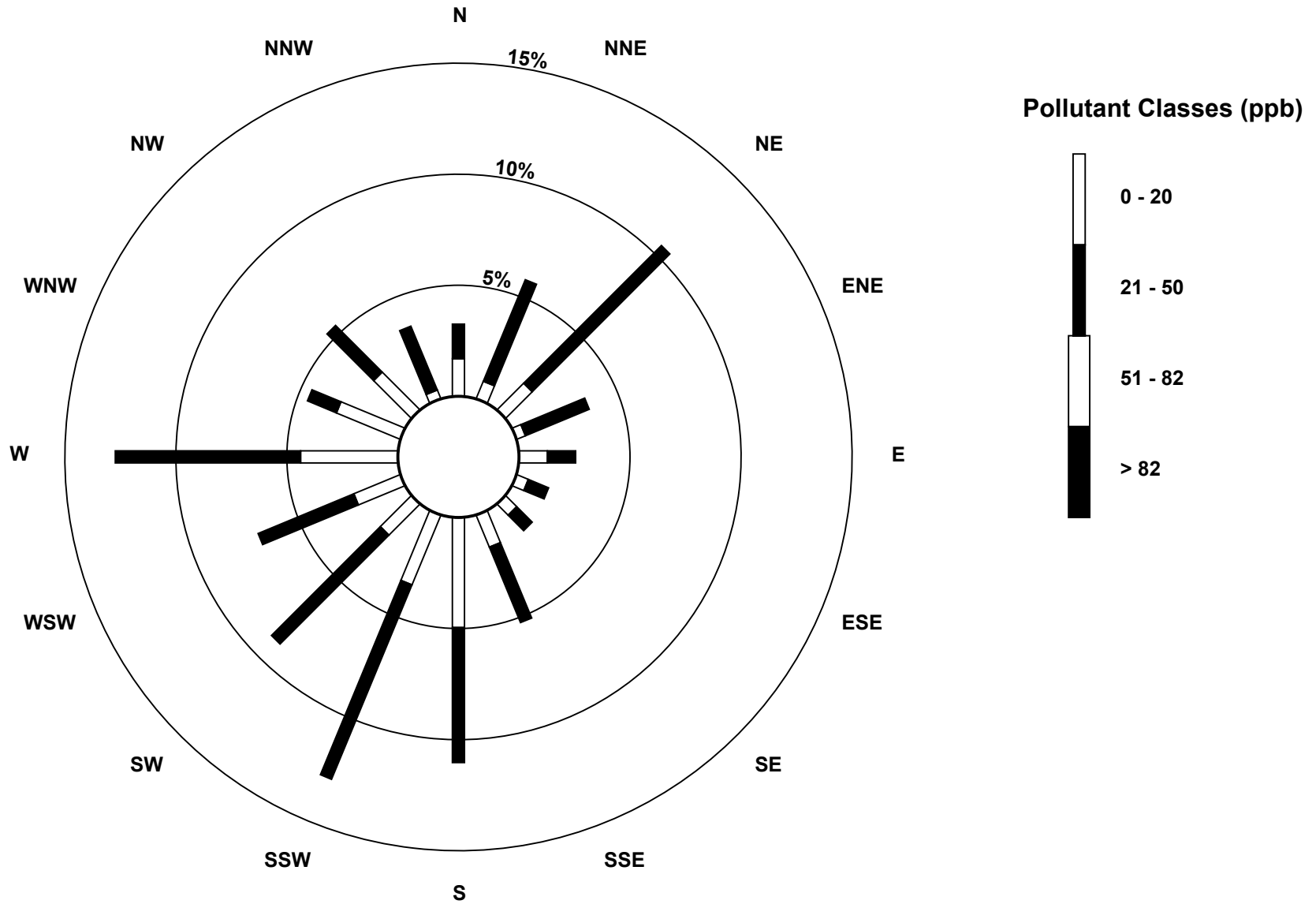
**Hourly Maximums**

**Ozone (O<sub>3</sub>) - ppb**  
**Portable Rycroft - January 2018**



**Pollutant Rose**

**Ozone (O<sub>3</sub>) - ppb**  
**Portable Rycroft - January 2018**



# Eight Hour Running Averages

Ozone (O<sub>3</sub>) - ppb

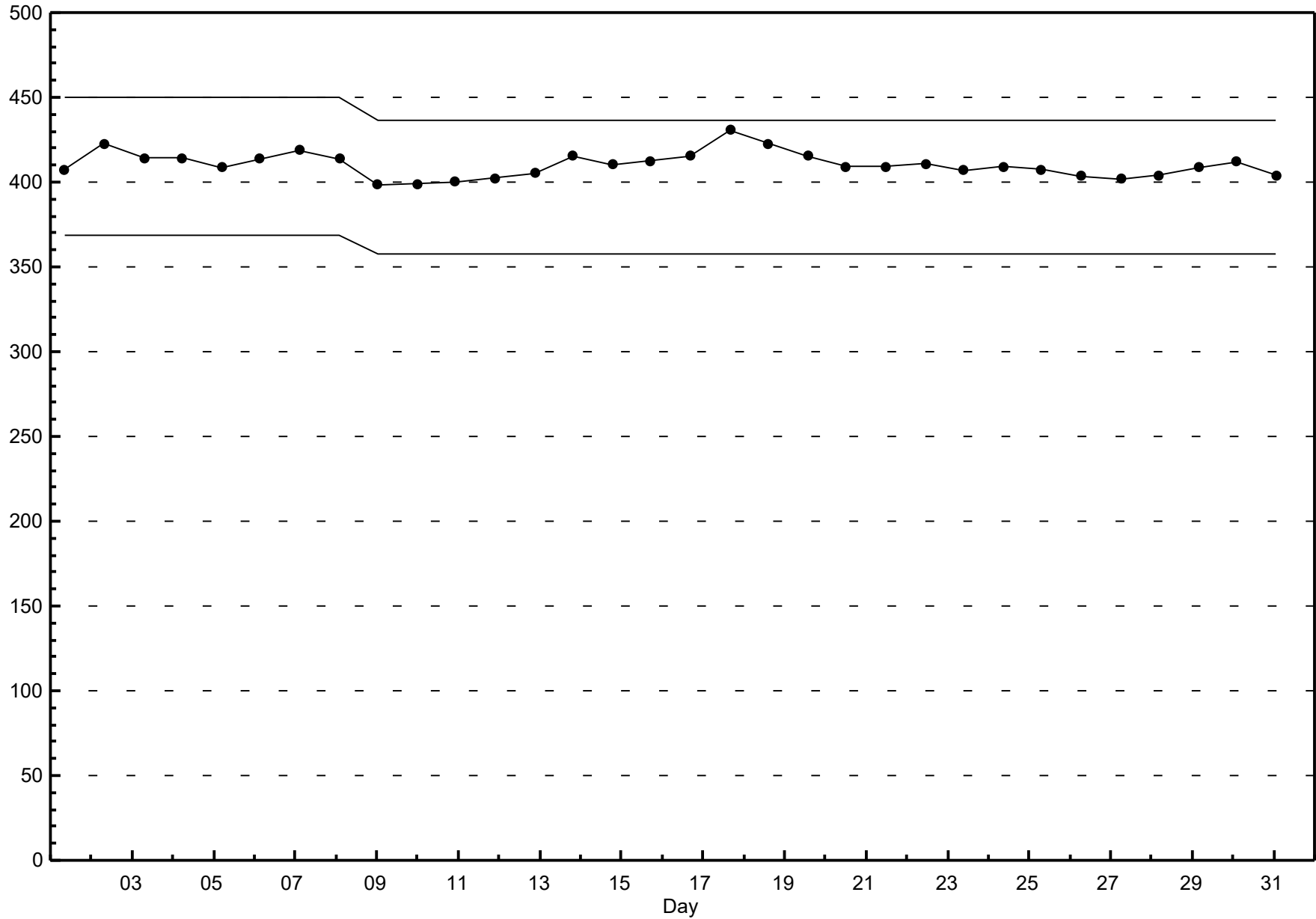
Portable Rycroft - January 2018

Maximum Value: 41.3 ppb on Jan 18 19:00																					Hours in Service:	744			
Minimum Value: 2.1 ppb on Jan 6 03:00																					Hours of Data:	738			
Percentiles: P <sub>1</sub> = 4.7 P <sub>10</sub> = 11.0 Q <sub>1</sub> = 18.3 Median = 24.3 Q <sub>3</sub> = 33.0 P <sub>90</sub> = 36.9 P <sub>99</sub> = 40.4																					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-Jan	16	14	13	12	10	9	8	7	7	9	9	11	13	14	16	18	18	20	23	26	29	31	34	36	36.1
2-Jan	38	38	38	37	37	37	37	37	37	37	37	37	37	36	36	37	36	37	37	37	38	38	39	39	38.6
3-Jan	39	38	38	38	38	38	37	37	36	36	36	35	35	35	35	35	36	37	37	37	37	37	36	36	38.9
4-Jan	36	36	36	35	35	35	34	33	31	30	30	28	27	27	26	25	24	23	21	20	18	16	14	11	36.2
5-Jan	9	8	6	5	4	3	4	6	7	7	8	9	9	10	10	10	11	11	11	10	9	8	7	5	11.2
6-Jan	4	3	2	2	7	12	17	22	27	32	36	36	36	36	36	37	37	37	38	38	39	40	40	40	40.4
7-Jan	40	40	41	41	41	40	40	39	39	39	39	38	38	38	37	37	37	37	36	36	35	34	34	33	40.7
8-Jan	33	32	32	32	31	31	31	31	31	31	31	31	31	31	N	N	N	N	N	N	33	34	34	35	35.0
9-Jan	35	36	36	37	37	37	37	37	37	37	37	37	36	36	36	36	36	36	36	36	35	35	35	35	37.2
10-Jan	35	34	33	31	30	29	27	27	26	24	24	25	25	24	25	26	26	26	26	26	25	25	24	23	34.6
11-Jan	22	22	23	23	24	24	24	25	24	23	22	21	20	19	19	19	19	19	19	19	19	19	17	16	24.7
12-Jan	15	14	13	12	11	11	11	11	11	11	11	12	13	14	15	16	17	17	17	16	16	16	14	13	17.4
13-Jan	12	11	9	9	10	11	11	12	13	14	16	17	17	17	17	18	18	18	19	19	21	22	23	23	22.8
14-Jan	24	26	27	28	29	30	33	35	36	36	36	36	35	34	34	33	33	33	33	34	34	35	35	35	36.2
15-Jan	35	34	34	33	32	31	29	27	26	24	23	22	22	22	22	23	23	24	24	24	23	22	20	18	35.2
16-Jan	16	15	14	11	10	8	7	6	6	6	6	7	8	9	9	9	10	9	9	8	7	7	9	12	16.4
17-Jan	15	19	22	25	29	32	32	33	33	34	35	35	36	36	37	38	38	37	37	35	34	33	32	32	37.6
18-Jan	30	28	27	26	25	24	23	23	23	25	28	30	33	35	37	39	41	41	41	41	40	40	40	40	41.3
19-Jan	40	39	39	39	38	38	37	37	36	35	33	32	31	31	31	31	32	32	33	32	32	32	31	30	39.6
20-Jan	28	27	26	27	27	26	25	25	26	26	25	26	26	27	29	30	32	33	35	36	35	35	34	33	35.6
21-Jan	31	29	26	24	23	22	21	21	22	22	23	24	25	25	26	27	28	28	29	29	29	28	28	27	30.7
22-Jan	26	25	25	25	24	24	24	24	24	24	23	23	21	20	19	18	17	15	15	15	15	15	14	13	26.0
23-Jan	13	14	15	17	19	22	25	28	28	31	29	26	23	20	17	15	14	12	11	10	9	9	8	8	30.7
24-Jan	9	10	11	12	12	12	13	14	14	15	17	18	20	22	23	24	24	24	24	24	24	24	24	24	24.3
25-Jan	24	24	24	24	24	24	24	24	23	23	23	23	23	23	22	22	21	21	21	21	21	21	21	22	24.3
26-Jan	22	22	23	23	23	23	23	23	23	24	24	24	25	25	25	26	26	26	26	25	25	25	23	21	25.9
27-Jan	20	19	18	18	17	16	16	17	16	16	16	16	16	16	17	17	18	18	19	20	19	17	15	15	20.1
28-Jan	15	15	15	17	18	20	20	20	20	20	20	20	20	20	21	21	22	22	23	23	23	24	24	24	24.0
29-Jan	24	24	24	24	23	23	23	22	22	21	21	21	21	21	21	21	21	21	20	20	19	19	18	18	24.1
30-Jan	18	17	18	18	18	19	20	20	21	22	22	22	23	23	24	24	24	25	25	26	26	27	27	27	27.4
31-Jan	28	28	29	29	29	30	31	32	32	32	33	33	33	33	33	33	33	33	33	33	33	32	32	32	33.0
<div style="display: flex; justify-content: space-between;"> <span>40.5</span><span>40.5</span><span>40.7</span><span>40.6</span><span>40.5</span><span>40.1</span><span>39.6</span><span>39.3</span><span>39.0</span><span>38.7</span><span>38.6</span><span>38.1</span><span>37.8</span><span>37.6</span><span>37.4</span><span>38.9</span><span>40.8</span><span>41.3</span><span>41.3</span><span>41.1</span><span>40.4</span><span>39.9</span><span>40.2</span><span>40.4</span> </div> <p style="text-align: center;">Diurnal Maximums</p>																									
N - Not Valid																									



**Span Responses**

**Ozone (O<sub>3</sub>)**  
**Portable Rycroft - January 2018**

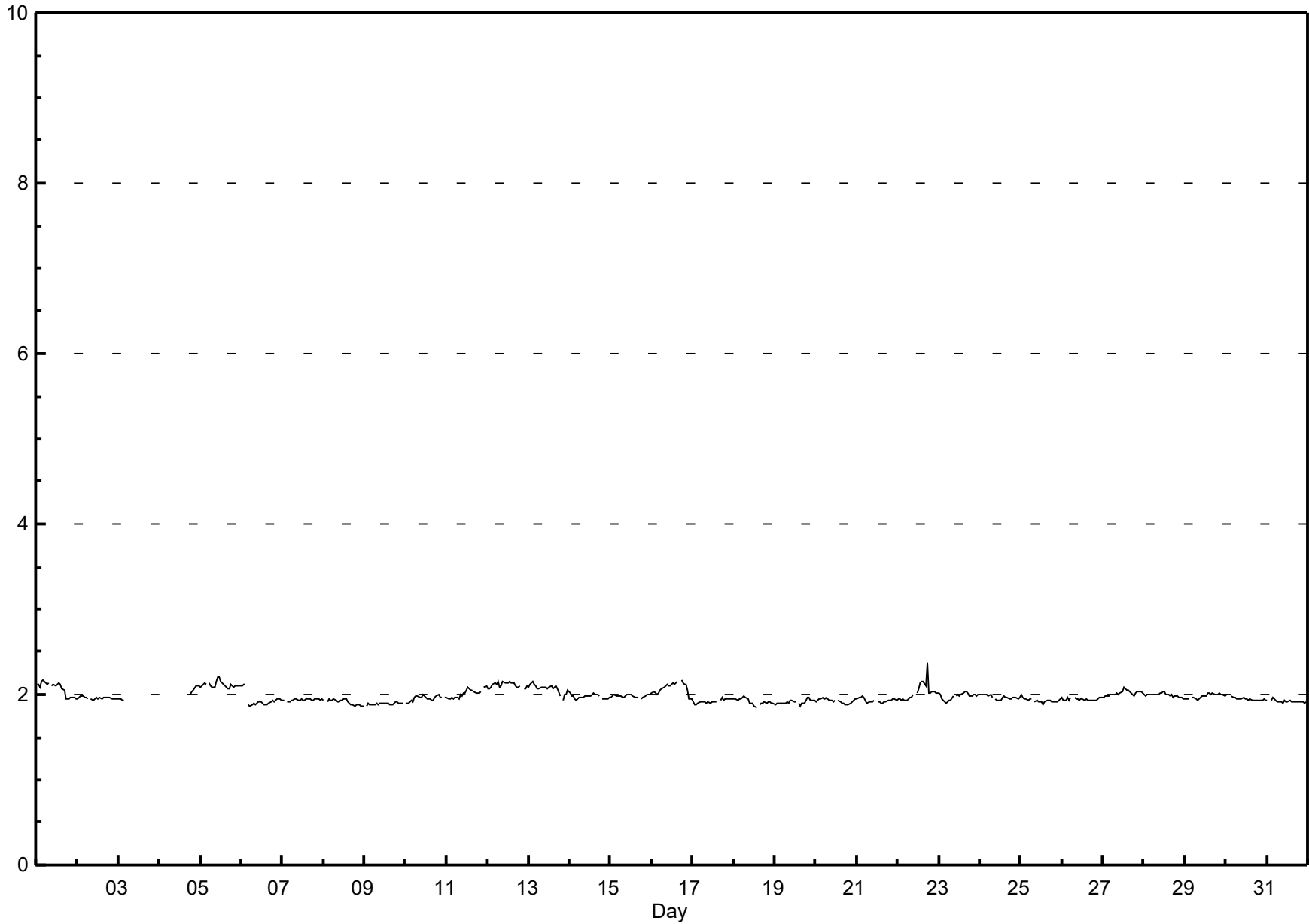


## Hourly Averages

Total Hydrocarbons (THC) - ppm

Portable Rycroft - January 2018

Maximum Value: 2.37 ppm on Jan 22 18:00		Maximum Daily Average: 2.11 ppm on Jan 5		Hours in Service: 744																																													
Minimum Value: 1.8 ppm on Jan 18 14:00		Minimum Daily Average: 1.89 ppm on Jan 9		Hours of Data: 678																																													
Maximum Diurnal Average: 1.99 ppm at hour 14		Minimum Diurnal Average: 1.96 ppm at hour 5		Hours of Missing Data: 66																																													
Monthly Average: 1.977 ppm		Percentiles: P <sub>1</sub> = 1.87 P <sub>10</sub> = 1.90 Q <sub>1</sub> = 1.93 Median = 1.96 Q <sub>3</sub> = 2.01 P <sub>90</sub> = 2.10 P <sub>99</sub> = 2.16		Hours of Calibration: 35																																													
				Percent Operational Time: 95.8																																													
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-Jan	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.07	2.18																						
2-Jan	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	1.9	1.9	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	1.96	1.98																						
3-Jan	1.9	1.9	1.9	1.9	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	1.95																						
4-Jan	N	N	N	N	N	N	N	N	N	N	N	C	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	--	2.11																							
5-Jan	2.1	2.1	2.1	2.1	A	2.1	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	2.1	2.1	2.1	2.1	2.11	2.20																							
6-Jan	2.1	2.1	2.1	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.93	2.12																							
7-Jan	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.94	1.95																							
8-Jan	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.91	1.94																							
9-Jan	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.89	1.91																							
10-Jan	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	1.9	1.9	2.0	2.0	2.0	2.0	2.0	A	2.0	1.95	2.00																							
11-Jan	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.1	2.1	2.01	2.10																							
12-Jan	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.11	2.15																							
13-Jan	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	A	1.9	2.0	2.1	2.1	2.07	2.14																							
14-Jan	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	1.97	2.02																							
15-Jan	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	1.98	2.01																							
16-Jan	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	A	2.2	2.1	2.1	2.1	2.1	1.9	2.0	2.08	2.17																							
17-Jan	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.92	1.96																							
18-Jan	2.0	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	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	1.92	1.99																							
19-Jan	1.9	1.9	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	2.0	2.0	1.9	1.9	1.9	1.91	1.96																							
20-Jan	1.9	1.9	2.0	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.92	1.96																							
21-Jan	2.0	2.0	2.0	2.0	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	1.9	2.0	1.9	1.93	1.98																							
22-Jan	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	A	2.0	2.1	2.1	2.1	2.1	2.1	2.4	2.0	2.0	2.0	2.0	2.0	2.0	2.03	2.37																							
23-Jan	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.98	2.04																							
24-Jan	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.97	2.00																							
25-Jan	2.0	2.0	2.0	1.9	1.9	2.0	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.93	2.00																							
26-Jan	2.0	1.9	1.9	2.0	1.9	2.0	A	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.95	1.97																							
27-Jan	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.02	2.08																							
28-Jan	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.99	2.04																							
29-Jan	2.0	2.0	1.9	A	2.0	2.0	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	1.98	2.03																							
30-Jan	2.0	2.0	A	2.0	2.0	2.0	1.9	1.9	2.0	1.9	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.95	2.00																							
31-Jan	1.9	A	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.92	1.96																							
																								1.98	1.98	1.98	1.98	1.96	1.97	1.98	1.97	1.97	1.98	1.98	1.99	1.99	1.99	1.99	1.98	1.97	1.98	1.97	1.97	1.97	1.97	1.97	1.98	Diurnal Average	
																								2.13	2.13	2.14	2.16	2.18	2.14	2.14	2.14	2.10	2.16	2.20	2.20	2.16	2.15	2.15	2.16	2.11	2.37	2.13	2.11	2.12	2.10	2.11	2.11	Diurnal Maximum	
C - Calibration																								N - Not Valid				A - Automated Daily Zero Span																					



# Hourly Maximums

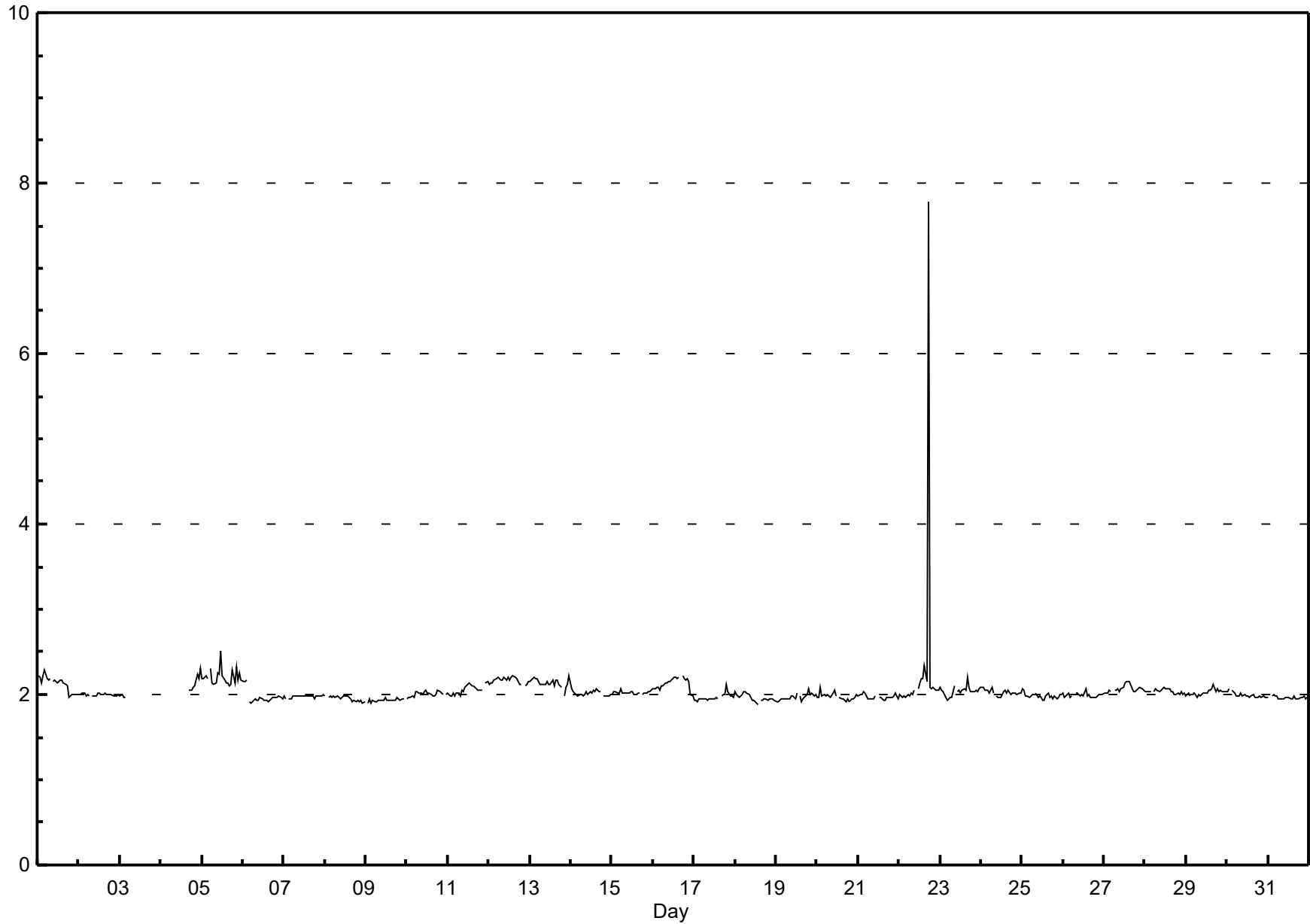
Total Hydrocarbons (THC) - ppm

Portable Rycroft - January 2018

Maximum Value: 7.77 ppm on Jan 22 18:00		Maximum Daily Average: 2.31 ppm on Jan 22		Hours in Service: 744																						
Minimum Value: 1.9 ppm on Jan 18 14:00		Minimum Daily Average: 1.93 ppm on Jan 9		Hours of Data: 678																						
Maximum Diurnal Average: 2.22 ppm at hour 18		Minimum Diurnal Average: 2.01 ppm at hour 5		Hours of Missing Data: 66																						
Monthly Average: 2.035 ppm		Percentiles: P <sub>1</sub> = 1.91 P <sub>10</sub> = 1.94 Q <sub>1</sub> = 1.97 Median = 2.00 Q <sub>3</sub> = 2.06 P <sub>90</sub> = 2.15 P <sub>99</sub> = 2.28		Hours of Calibration: 35																						
				Percent Operational Time: 95.8																						
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-Jan	2.2	2.2	2.1	2.2	2.3	2.2	2.2	2.2	A	2.1	2.2	2.1	2.1	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.12	2.29
2-Jan	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.00	2.02
3-Jan	2.0	2.0	2.0	2.0	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	2.00
4-Jan	N	N	N	N	N	N	N	N	N	N	N	C	C	C	C	C	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.3	--	2.30
5-Jan	2.2	2.2	2.2	2.2	A	2.3	2.1	2.1	2.1	2.2	2.2	2.5	2.2	2.2	2.1	2.1	2.1	2.1	2.3	2.1	2.3	2.2	2.2	2.2	2.20	2.51
6-Jan	2.2	2.2	2.2	A	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	2.0	2.0	2.0	2.0	2.0	2.0	1.97	2.16
7-Jan	2.0	2.0	A	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.98	2.00
8-Jan	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.95	1.99
9-Jan	A	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	A	1.93	1.96
10-Jan	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.00	2.06
11-Jan	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	A	2.1	2.2	2.06	2.15
12-Jan	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	A	2.1	2.1	2.1	2.16	2.22
13-Jan	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.2	2.1	2.1	A	2.0	2.1	2.1	2.2	2.14	2.22
14-Jan	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.02	2.07
15-Jan	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.02	2.07
16-Jan	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	2.2	2.2	2.2	2.2	2.1	2.0	2.0	2.13	2.22
17-Jan	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	A	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	1.97	2.12
18-Jan	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.96	2.04
19-Jan	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	2.0	2.0	A	2.0	2.0	1.9	1.9	2.0	2.0	2.1	2.0	2.0	2.0	2.0	1.97	2.06
20-Jan	2.0	2.0	2.1	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	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.97	2.08
21-Jan	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	A	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.97	2.03
22-Jan	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	2.2	2.2	2.3	2.1	7.8	2.1	2.1	2.1	2.0	2.1	2.31	7.77
23-Jan	2.1	2.1	2.0	2.0	1.9	2.0	2.0	2.0	2.1	A	2.0	2.1	2.0	2.0	2.1	2.1	2.2	2.1	2.0	2.0	2.0	2.1	2.0	2.1	2.04	2.20
24-Jan	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.02	2.09
25-Jan	2.1	2.1	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	1.98	2.07
26-Jan	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.99	2.08
27-Jan	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.07	2.16
28-Jan	2.0	2.0	2.0	2.0	A	2.0	2.1	2.1	2.0	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	2.04	2.09
29-Jan	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	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.03	2.12
30-Jan	2.0	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.99	2.06
31-Jan	2.0	A	2.0	2.0	2.0	2.0	2.0	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	1.96	2.00
		2.03	2.03	2.03	2.03	2.01	2.02	2.02	2.02	2.02	2.02	2.03	2.04	2.04	2.04	2.04	2.04	2.02	2.22	2.02	2.02	2.02	2.02	2.02	2.03	Diurnal Average
		2.22	2.20	2.21	2.23	2.29	2.31	2.18	2.19	2.17	2.25	2.24	2.51	2.21	2.20	2.22	2.34	2.20	7.77	2.28	2.17	2.33	2.24	2.25	2.30	Diurnal Maximum
C - Calibration		N - Not Valid						A - Automated Daily Zero Span																		

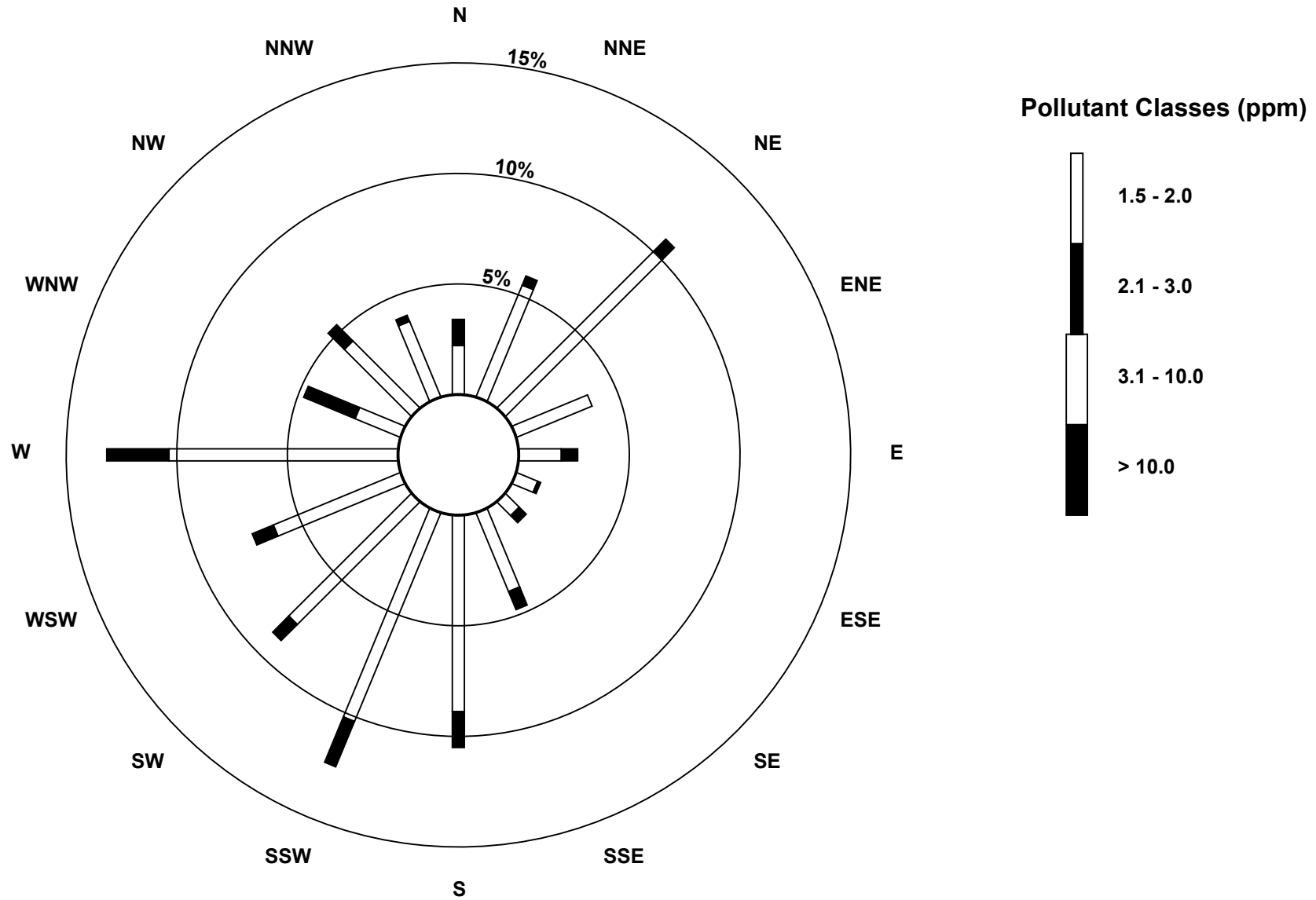
**Hourly Maximums**

**Total Hydrocarbons (THC) - ppm**  
**Portable Rycroft - January 2018**



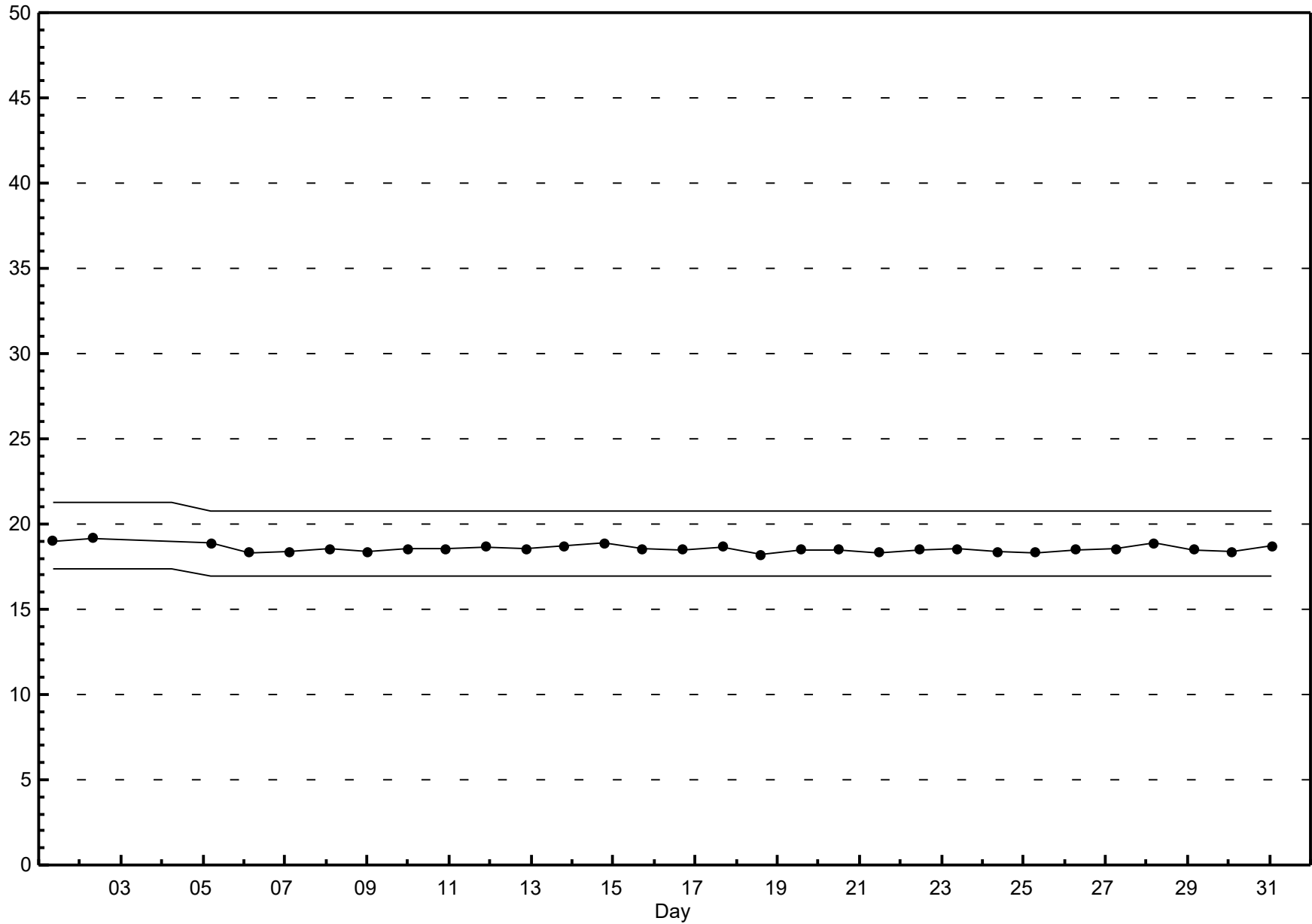
**Pollutant Rose**

**Total Hydrocarbons (THC) - ppm**  
**Portable Rycroft - January 2018**



**Span Responses**

**Total Hydrocarbons (THC)  
Portable Rycroft - January 2018**



# Hourly Averages

Methane (CH<sub>4</sub>) - ppm

Portable Rycroft - January 2018

Maximum Value: 2.19 ppm on Jan 5 11:00	Maximum Daily Average: 2.11 ppm on Jan 5	Hours in Service: 744
Minimum Value: 1.8 ppm on Jan 18 14:00	Minimum Daily Average: 1.89 ppm on Jan 9	Hours of Data: 678
Maximum Diurnal Average: 1.99 ppm at hour 14	Minimum Diurnal Average: 1.96 ppm at hour 5	Hours of Missing Data: 66
Monthly Average: 1.972 ppm	Percentiles: P <sub>1</sub> = 1.86 P <sub>10</sub> = 1.90 Q <sub>1</sub> = 1.92 Median = 1.95 Q <sub>3</sub> = 2.00 P <sub>90</sub> = 2.09 P <sub>99</sub> = 2.15	Hours of Calibration: 35
		Percent Operational Time: 95.8

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-Jan	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	1.9	1.9	1.9	2.0	2.0	2.0	1.9	2.0	1.9	2.07	2.17
2-Jan	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	1.9	1.9	1.9	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.95	1.98
3-Jan	1.9	1.9	1.9	1.9	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	1.95
4-Jan	N	N	N	N	N	N	N	N	N	N	N	C	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	--	2.10	
5-Jan	2.1	2.1	2.1	2.1	A	2.1	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	2.1	2.1	2.1	2.1	2.11	2.19	
6-Jan	2.1	2.1	2.1	A	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.93	2.12	
7-Jan	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.93	1.95	
8-Jan	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.91	1.94	
9-Jan	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.89	1.91	
10-Jan	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	A	2.0	1.95	1.99	
11-Jan	2.0	1.9	1.9	2.0	2.0	2.0	2.0	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	A	2.1	2.1	2.01	2.09	
12-Jan	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.11	2.15	
13-Jan	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	A	1.9	2.0	2.0	2.0	2.0	2.07	2.14	
14-Jan	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	1.9	1.9	2.0	2.0	1.97	2.02	
15-Jan	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	1.9	2.0	2.0	2.0	2.0	2.0	1.98	2.00	
16-Jan	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	A	2.2	2.1	2.1	2.1	2.1	1.9	1.9	2.07	2.16	
17-Jan	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.91	1.96	
18-Jan	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	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	1.91	1.99	
19-Jan	1.9	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	2.0	2.0	1.9	1.9	1.9	1.91	1.96	
20-Jan	1.9	1.9	1.9	1.9	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.92	1.95	
21-Jan	2.0	2.0	2.0	2.0	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	1.9	1.9	1.9	1.93	1.98	
22-Jan	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	A	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.01	2.14	
23-Jan	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.98	2.04	
24-Jan	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.97	2.00	
25-Jan	2.0	2.0	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.93	2.00	
26-Jan	2.0	1.9	1.9	2.0	1.9	2.0	A	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.94	1.97		
27-Jan	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.01	2.08		
28-Jan	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.99	2.04		
29-Jan	2.0	1.9	1.9	A	2.0	2.0	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	1.98	2.02		
30-Jan	2.0	2.0	A	2.0	2.0	2.0	1.9	1.9	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.95	2.00		
31-Jan	1.9	A	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.92	1.96		

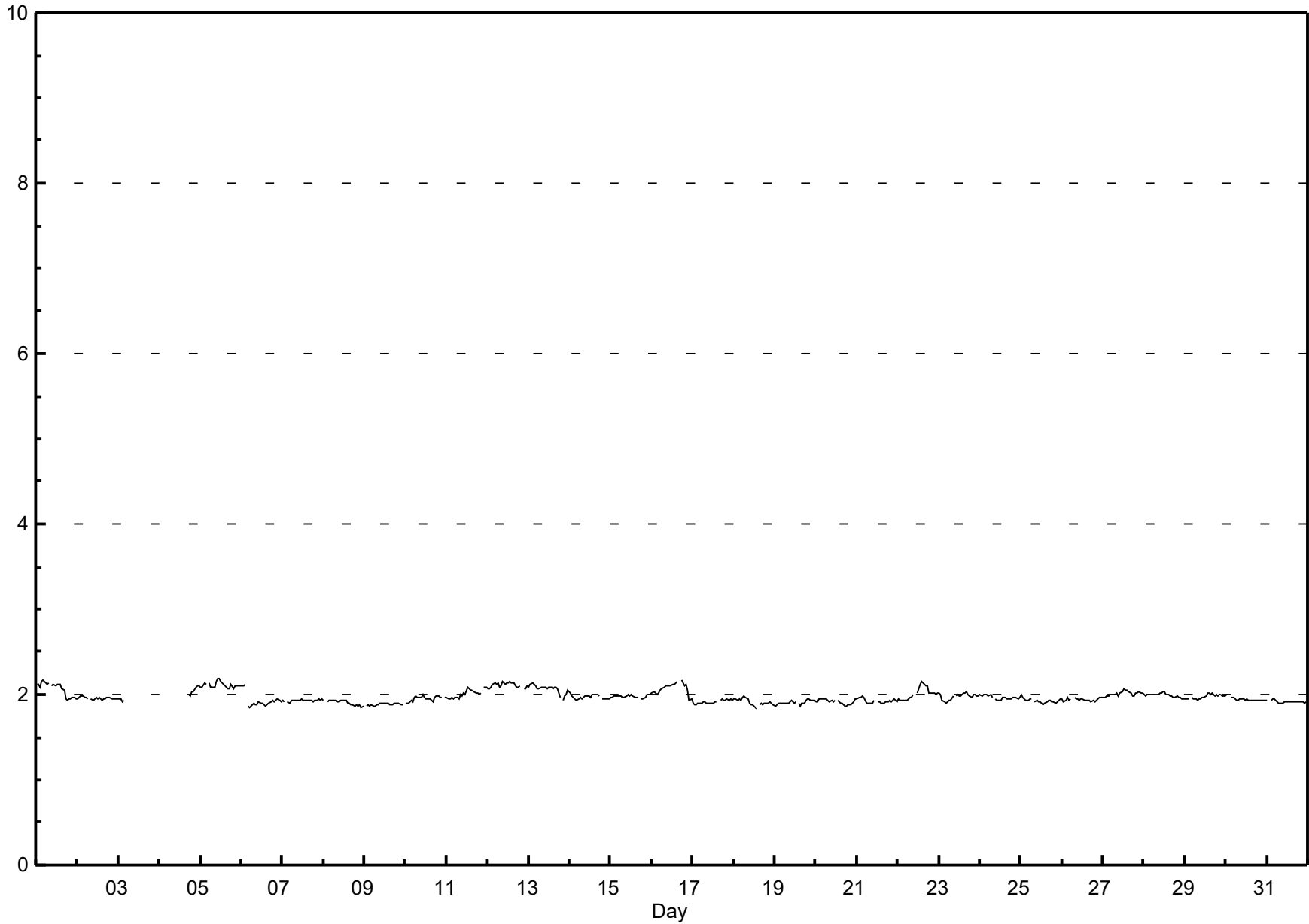
1.98	1.98	1.97	1.97	1.96	1.97	1.97	1.97	1.97	1.96	1.97	1.98	1.98	1.99	1.99	1.98	1.98	1.97	1.97	1.96	1.96	1.96	1.97	1.97	1.97	1.97	Diurnal Average
2.12	2.12	2.14	2.15	2.17	2.13	2.14	2.13	2.10	2.15	2.19	2.19	2.15	2.15	2.14	2.15	2.10	2.16	2.13	2.11	2.11	2.10	2.11	2.10	2.10	Diurnal Maximum	

C - Calibration      N - Not Valid      A - Automated Daily Zero Span



**Hourly Averages**

**Methane (CH<sub>4</sub>) - ppm**  
**Portable Rycroft - January 2018**



# Hourly Maximums

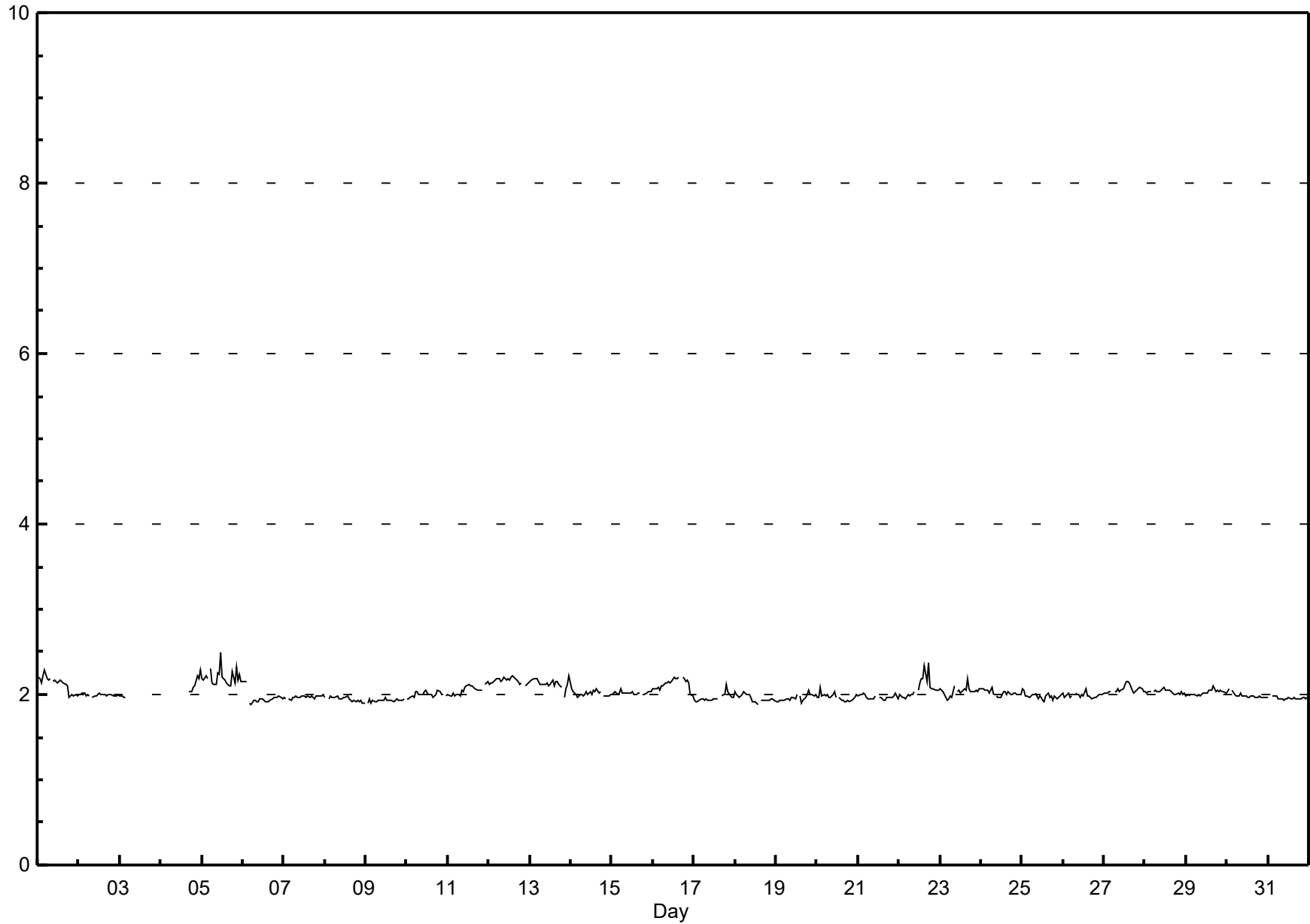
Methane (CH<sub>4</sub>) - ppm

Portable Rycroft - January 2018

Maximum Value: 2.49 ppm on Jan 5 12:00 Minimum Value: 1.9 ppm on Jan 18 14:00 Maximum Diurnal Average: 2.04 ppm at hour 12 Monthly Average: 2.022 ppm		Maximum Daily Average: 2.20 ppm on Jan 5 Minimum Daily Average: 1.93 ppm on Jan 9 Minimum Diurnal Average: 2.00 ppm at hour 5 Percentiles: P <sub>1</sub> = 1.91 P <sub>10</sub> = 1.94 Q <sub>1</sub> = 1.97 Median = 2.00 Q <sub>3</sub> = 2.05 P <sub>90</sub> = 2.15 P <sub>99</sub> = 2.28		Hours in Service: 744 Hours of Data: 678 Hours of Missing Data: 66 Hours of Calibration: 35 Percent Operational Time: 95.8																																													
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-Jan	2.2	2.2	2.1	2.2	2.3	2.2	2.2	2.2	A	2.1	2.2	2.1	2.1	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.12	2.28																						
2-Jan	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.99	2.02																						
3-Jan	2.0	2.0	2.0	2.0	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	1.99																						
4-Jan	N	N	N	N	N	N	N	N	N	N	N	C	C	C	C	C	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.3	--	2.29																							
5-Jan	2.2	2.2	2.2	2.2	A	2.3	2.1	2.1	2.1	2.2	2.2	2.5	2.2	2.2	2.1	2.1	2.1	2.1	2.3	2.1	2.3	2.2	2.2	2.2	2.20	2.49																							
6-Jan	2.1	2.1	2.2	A	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	2.0	2.0	2.0	2.0	2.0	1.9	1.97	2.16																							
7-Jan	2.0	2.0	A	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.97	2.00																							
8-Jan	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.95	1.99																							
9-Jan	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	A	1.93	1.96																							
10-Jan	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	2.0	2.0	2.0	2.0	A	2.0	2.00	2.05																							
11-Jan	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	A	2.1	2.1	2.05	2.15																							
12-Jan	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	A	2.1	2.1	2.1	2.16	2.21																							
13-Jan	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.2	2.1	2.1	A	2.0	2.1	2.1	2.2	2.13	2.22																							
14-Jan	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.01	2.07																							
15-Jan	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.02	2.07																							
16-Jan	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.2	2.2	2.2	2.2	A	2.2	2.2	2.2	2.2	2.1	2.0	2.0	2.12	2.20																							
17-Jan	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	A	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	1.96	2.12																							
18-Jan	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.96	2.04																							
19-Jan	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	A	2.0	1.9	1.9	2.0	2.0	2.1	2.0	2.0	2.0	2.0	1.96	2.05																							
20-Jan	2.0	2.0	2.1	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	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.97	2.08																							
21-Jan	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.0	A	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.97	2.01																							
22-Jan	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	2.2	2.2	2.3	2.1	2.4	2.1	2.1	2.1	2.1	2.0	2.1	2.07	2.37																							
23-Jan	2.1	2.1	2.0	2.0	1.9	1.9	2.0	2.0	2.1	A	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.1	2.0	2.0	2.0	2.1	2.0	2.1	2.04	2.19																							
24-Jan	2.1	2.1	2.0	2.1	2.0	2.0	2.1	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.02	2.09																							
25-Jan	2.1	2.1	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	1.98	2.06																							
26-Jan	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.99	2.06																							
27-Jan	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.06	2.15																							
28-Jan	2.0	2.0	2.0	2.0	A	2.0	2.1	2.0	2.0	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	2.03	2.08																							
29-Jan	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	2.1	2.1	2.0	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.02	2.11																							
30-Jan	2.0	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.99	2.06																							
31-Jan	2.0	A	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	1.9	2.0	1.96	1.99																							
																								2.03	2.03	2.03	2.02	2.00	2.02	2.01	2.01	2.01	2.02	2.02	2.04	2.03	2.04	2.03	2.04	2.02	2.02	2.01	2.01	2.01	2.02	2.02	2.03	Diurnal Average	
																								2.21	2.18	2.21	2.22	2.28	2.31	2.18	2.19	2.16	2.25	2.23	2.49	2.20	2.20	2.21	2.34	2.19	2.37	2.28	2.16	2.32	2.23	2.24	2.29	Diurnal Maximum	
C - Calibration																								N - Not Valid				A - Automated Daily Zero Span																					

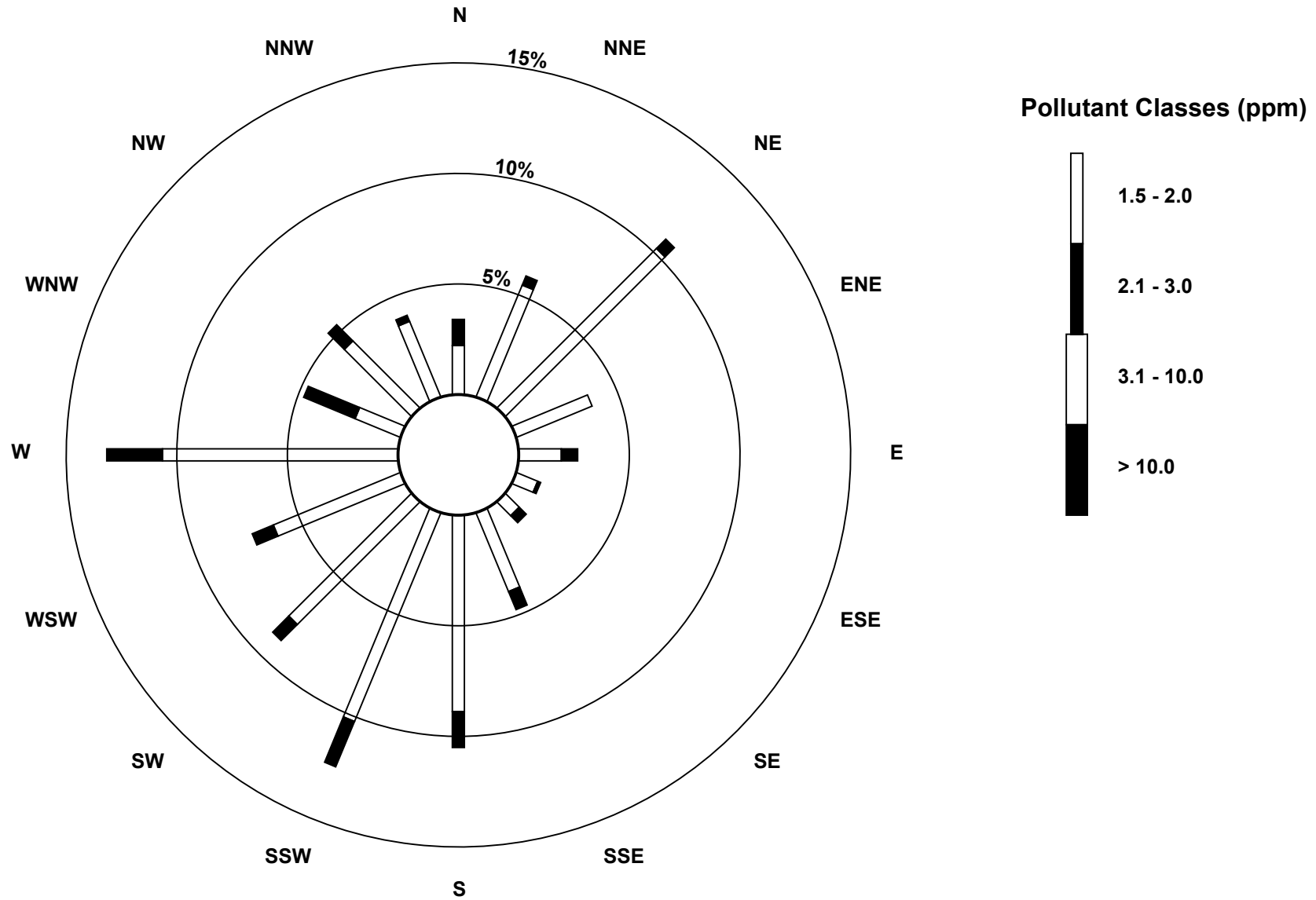
### Hourly Maximums

Methane (CH<sub>4</sub>) - ppm  
Portable Rycroft - January 2018



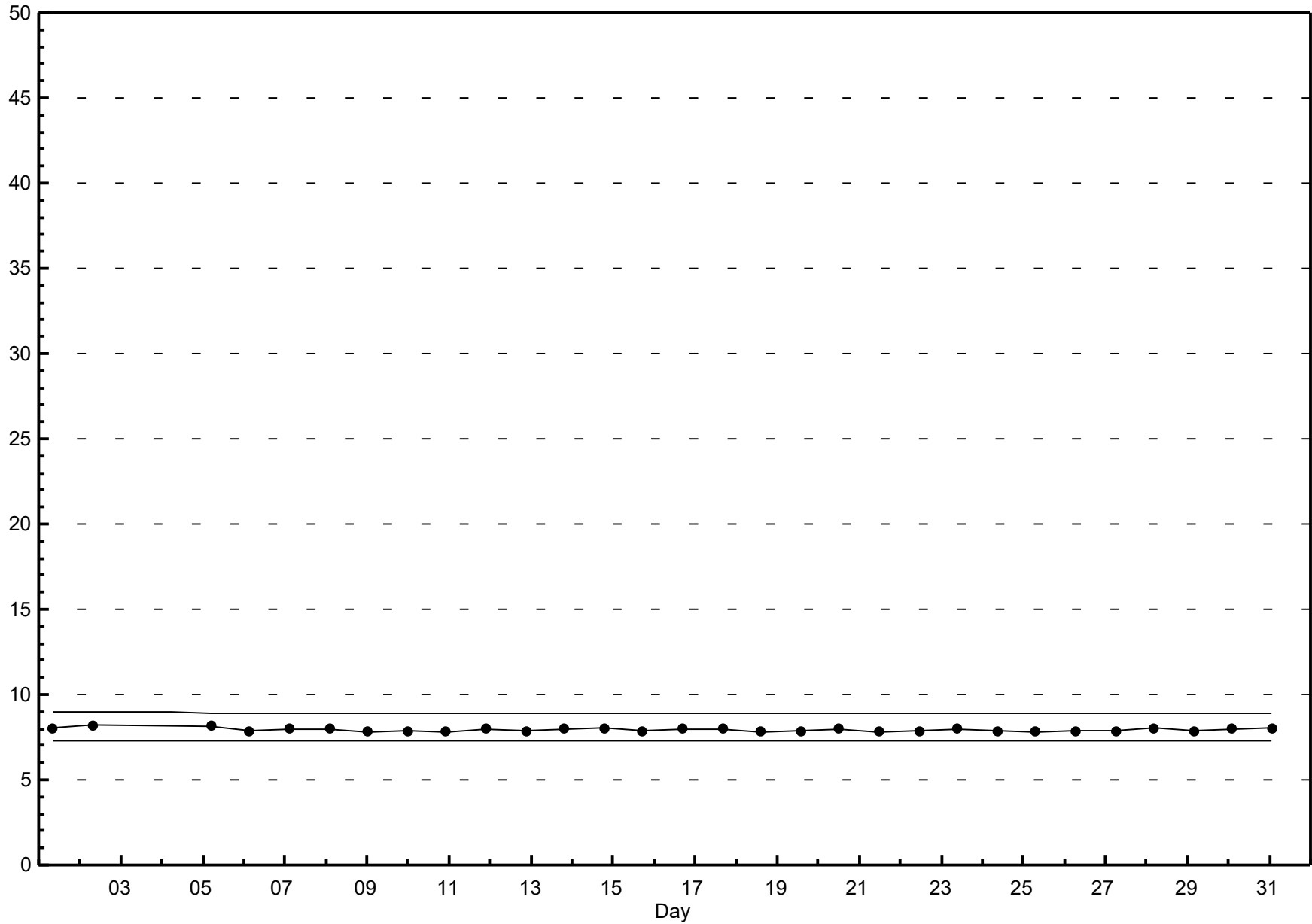
**Pollutant Rose**

**Methane (CH<sub>4</sub>) - ppm**  
**Portable Rycroft - January 2018**



### Span Responses

Methane (CH<sub>4</sub>)  
Portable Rycroft - January 2018

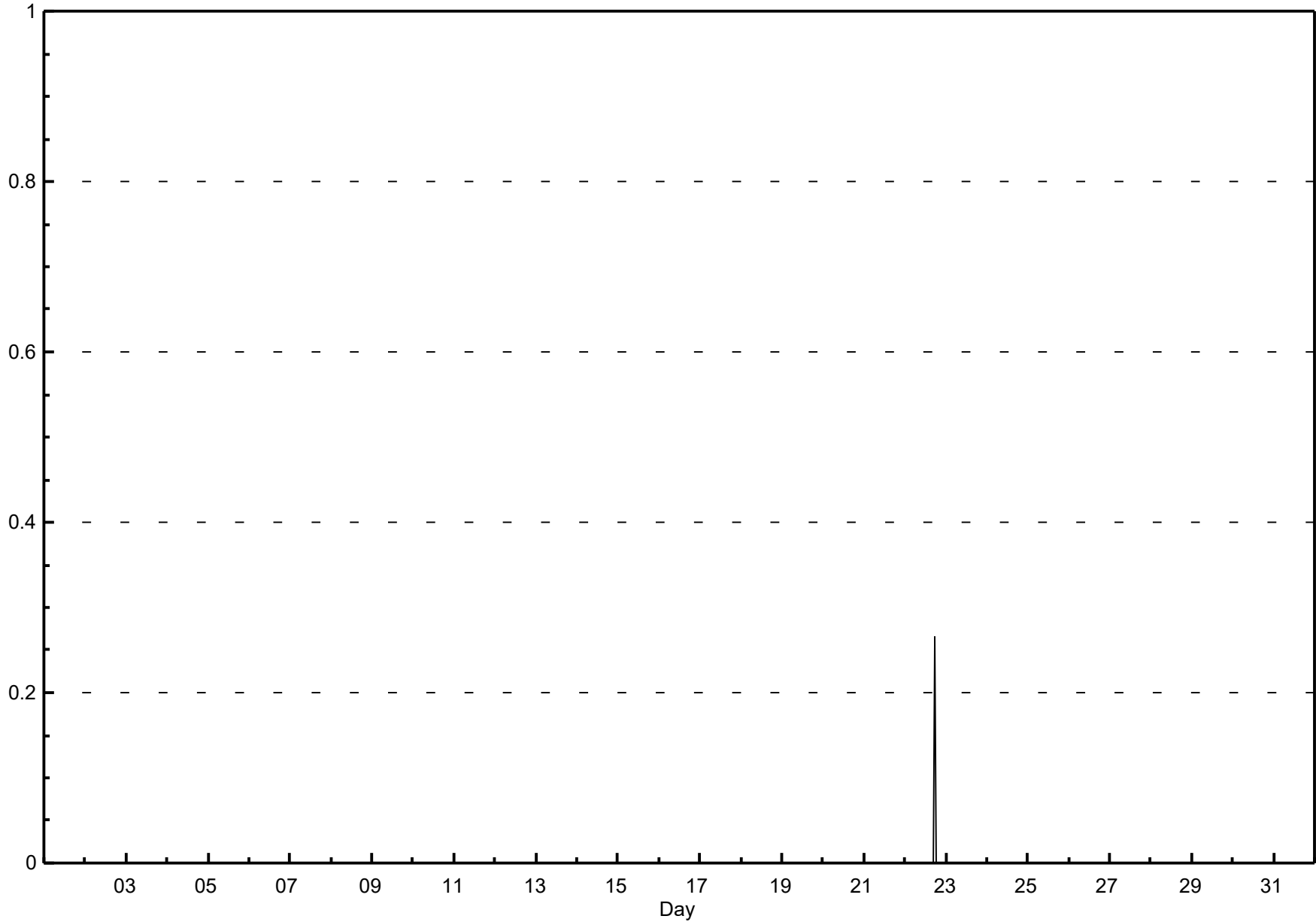


## Hourly Averages

## Non Methane Hydrocarbon (NMHC) - ppm

### Portable Rycroft - January 2018

Maximum Value: 0.27 ppm on Jan 22 18:00		Maximum Daily Average: 0.01 ppm on Jan 22		Hours in Service: 744																																														
Minimum Value: 0.0 ppm on Jan 1 01:00		Minimum Daily Average: 0.00 ppm on Jan 5		Hours of Data: 678																																														
Maximum Diurnal Average: 0.01 ppm at hour 18		Minimum Diurnal Average: 0.00 ppm at hour 12		Hours of Missing Data: 66																																														
Monthly Average: 0.000 ppm		Percentiles: P <sub>1</sub> = 0.00 P <sub>10</sub> = 0.00 Q <sub>1</sub> = 0.00 Median = 0.00 Q <sub>3</sub> = 0.00 P <sub>90</sub> = 0.00 P <sub>99</sub> = 0.00		Hours of Calibration: 35																																														
				Percent Operational Time: 95.8																																														
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-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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																							
2-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																							
3-Jan	0.0	0.0	0.0	0.0	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	0.00																							
4-Jan	N	N	N	N	N	N	N	N	N	N	N	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.00																							
5-Jan	0.0	0.0	0.0	0.0	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																								
6-Jan	0.0	0.0	0.0	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																								
7-Jan	0.0	0.0	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																								
8-Jan	0.0	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																								
9-Jan	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	0.00	0.00																							
10-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.00	0.00																							
11-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.00	0.00	0.00																							
12-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.00	0.00																							
13-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.00																							
14-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.00	0.00	0.00																							
15-Jan	0.0	0.0	0.0	0.0	0.0	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	0.00																							
16-Jan	0.0	0.0	0.0	0.0	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																							
17-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00																							
18-Jan	0.0	0.0	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																							
19-Jan	0.0	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	0.00																							
20-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00																							
21-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00																							
22-Jan	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.01	0.27	0.00																							
23-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.00																							
24-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00																							
25-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00																							
26-Jan	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00																							
27-Jan	0.0	0.0	0.0	0.0	0.0	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	0.00																							
28-Jan	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00																							
29-Jan	0.0	0.0	0.0	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	0.00																							
30-Jan	0.0	0.0	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	0.00																							
31-Jan	0.0	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	0.00																							
																								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Diurnal Average		
																								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	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 - January 2018

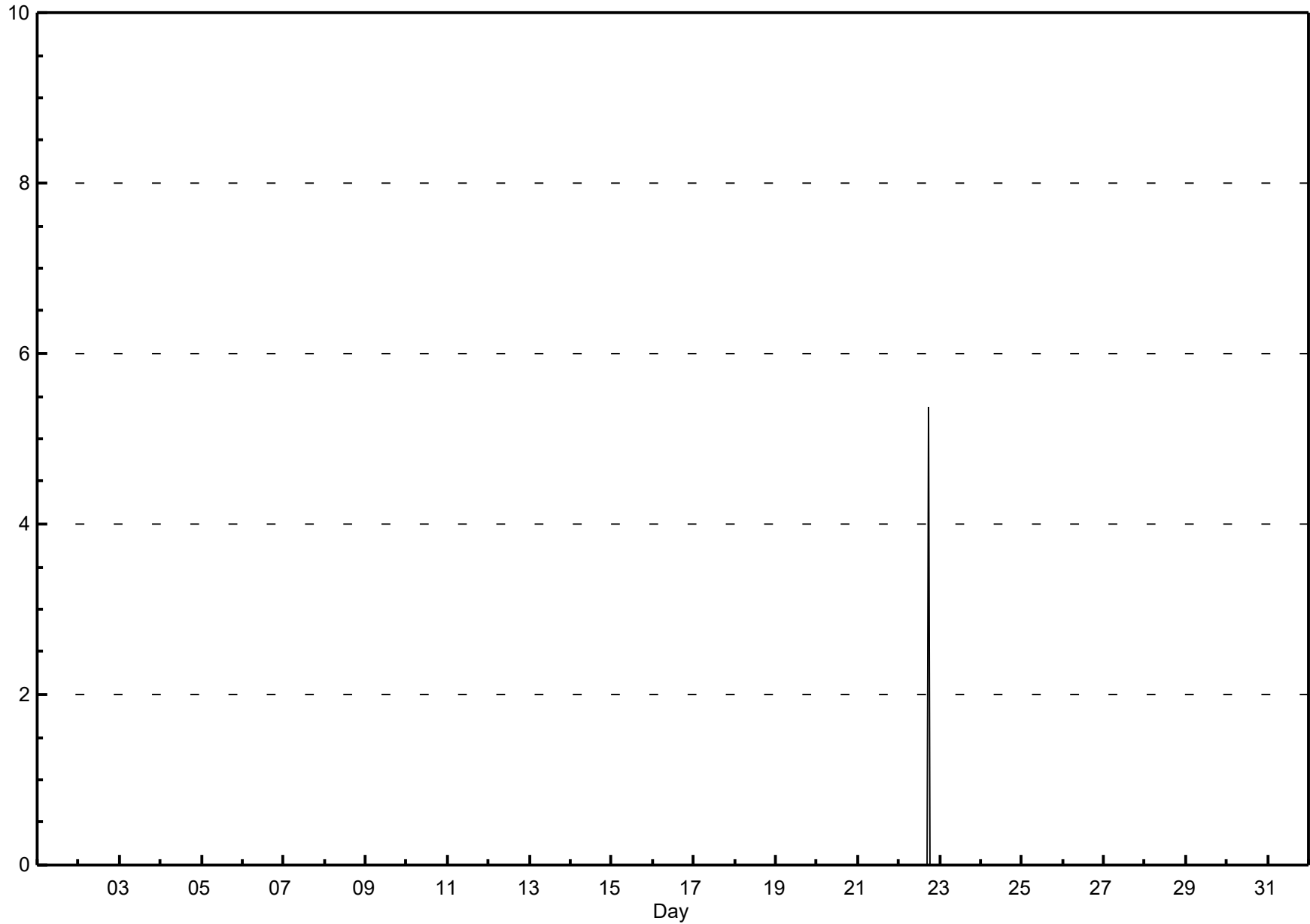
Maximum Value: 5.37 ppm on Jan 22 18:00		Maximum Daily Average: 0.23 ppm on Jan 22		Hours in Service: 744																							
Minimum Value: 0.0 ppm on Jan 2 09:00		Minimum Daily Average: 0.00 ppm on Jan 5		Hours of Data: 678																							
Maximum Diurnal Average: 0.19 ppm at hour 18		Minimum Diurnal Average: 0.00 ppm at hour 6		Hours of Missing Data: 66																							
Monthly Average: 0.008 ppm		Percentiles: P <sub>1</sub> = 0.00 P <sub>10</sub> = 0.00 Q <sub>1</sub> = 0.00 Median = 0.00 Q <sub>3</sub> = 0.00 P <sub>90</sub> = 0.00 P <sub>99</sub> = 0.00		Hours of Calibration: 35																							
				Percent Operational Time: 95.8																							
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-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
2-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
3-Jan	0.0	0.0	0.0	0.0	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	0.00
4-Jan	N	N	N	N	N	N	N	N	N	N	N	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.00
5-Jan	0.0	0.0	0.0	0.0	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	
6-Jan	0.0	0.0	0.0	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	
7-Jan	0.0	0.0	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	
8-Jan	0.0	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	
9-Jan	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
10-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.00	0.00	
11-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.00	
12-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.00	
13-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	
14-Jan	0.0	0.0	0.0	0.0	0.0	0.0	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	
15-Jan	0.0	0.0	0.0	0.0	0.0	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	
16-Jan	0.0	0.0	0.0	0.0	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	
17-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
18-Jan	0.0	0.0	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	
19-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
20-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	
21-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	
22-Jan	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	5.4	0.0	0.0	0.0	0.0	0.0	0.23	5.37	
23-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
24-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
25-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	
26-Jan	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
27-Jan	0.0	0.0	0.0	0.0	0.0	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	
28-Jan	0.0	0.0	0.0	0.0	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	
29-Jan	0.0	0.0	0.0	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	
30-Jan	0.0	0.0	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	
31-Jan	0.0	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	
																		0.19	0.00	0.00	0.00	0.00	0.00	0.00	Diurnal Average		
																		5.37	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**

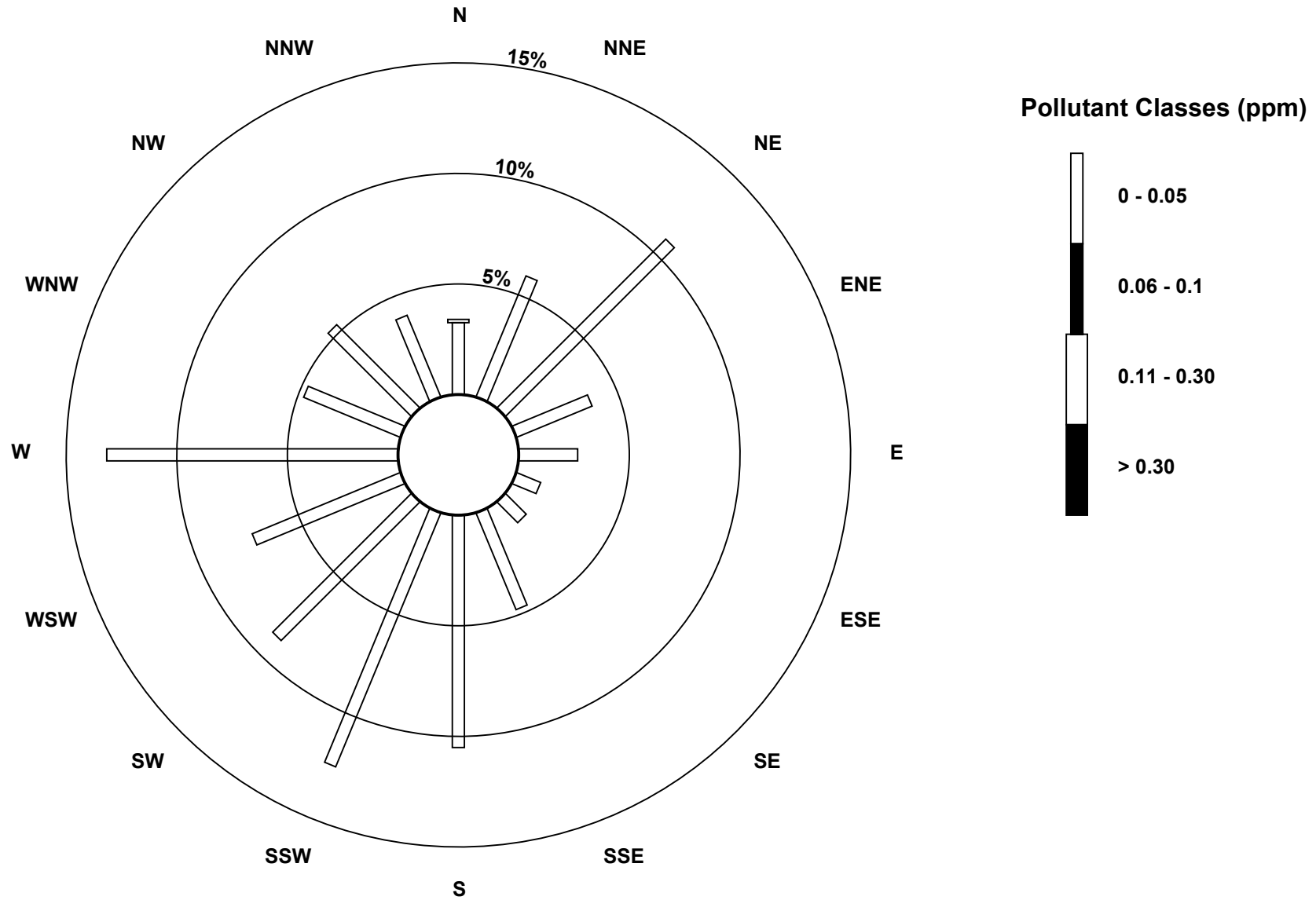
**Non Methane Hydrocarbon (NMHC) - ppm**

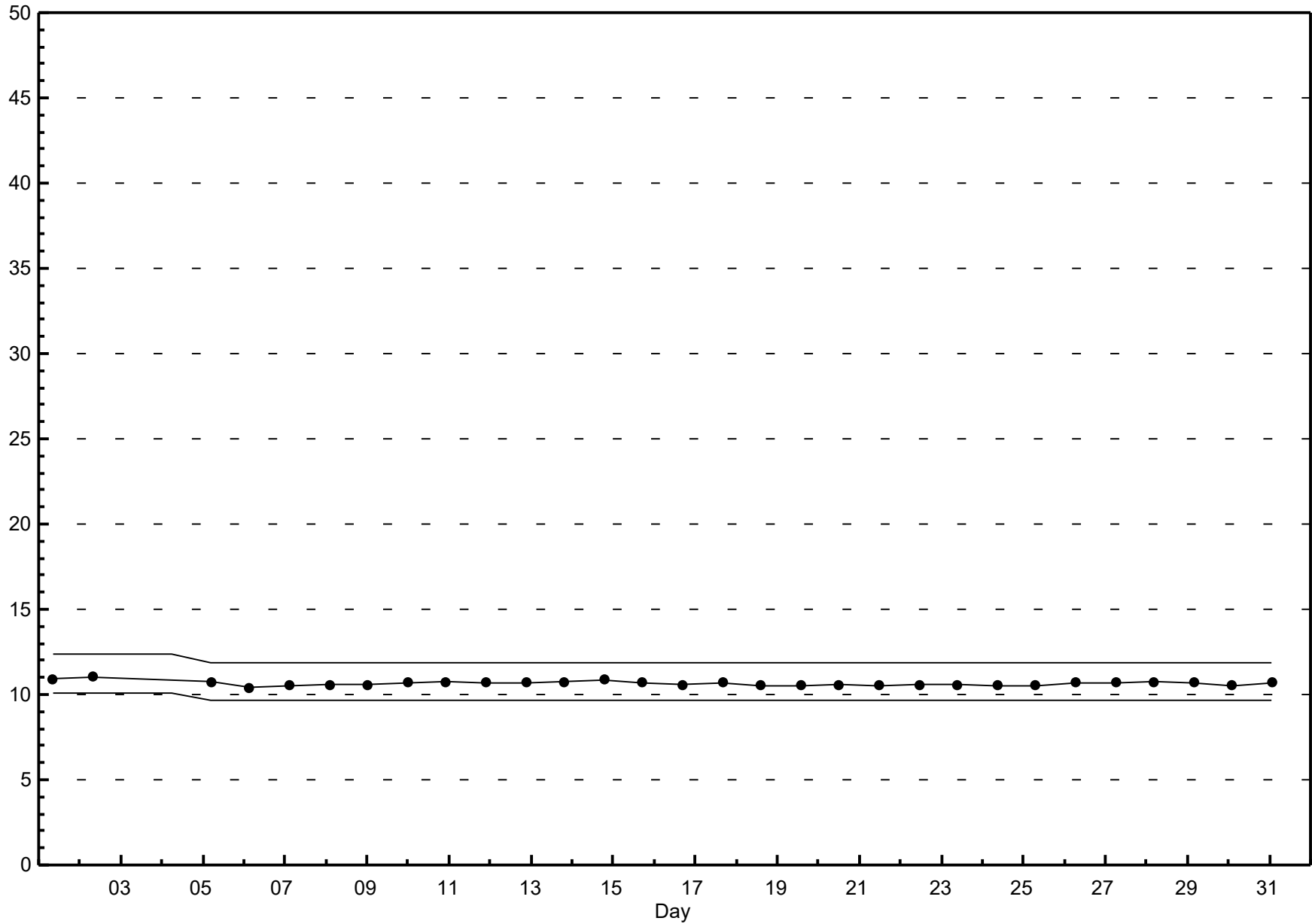
**Portable Rycroft - January 2018**



**Pollutant Rose**

**Non Methane Hydrocarbon (NMHC) - ppm**  
**Portable Rycroft - January 2018**





## Hourly Averages

PM2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

Portable Rycroft - January 2018

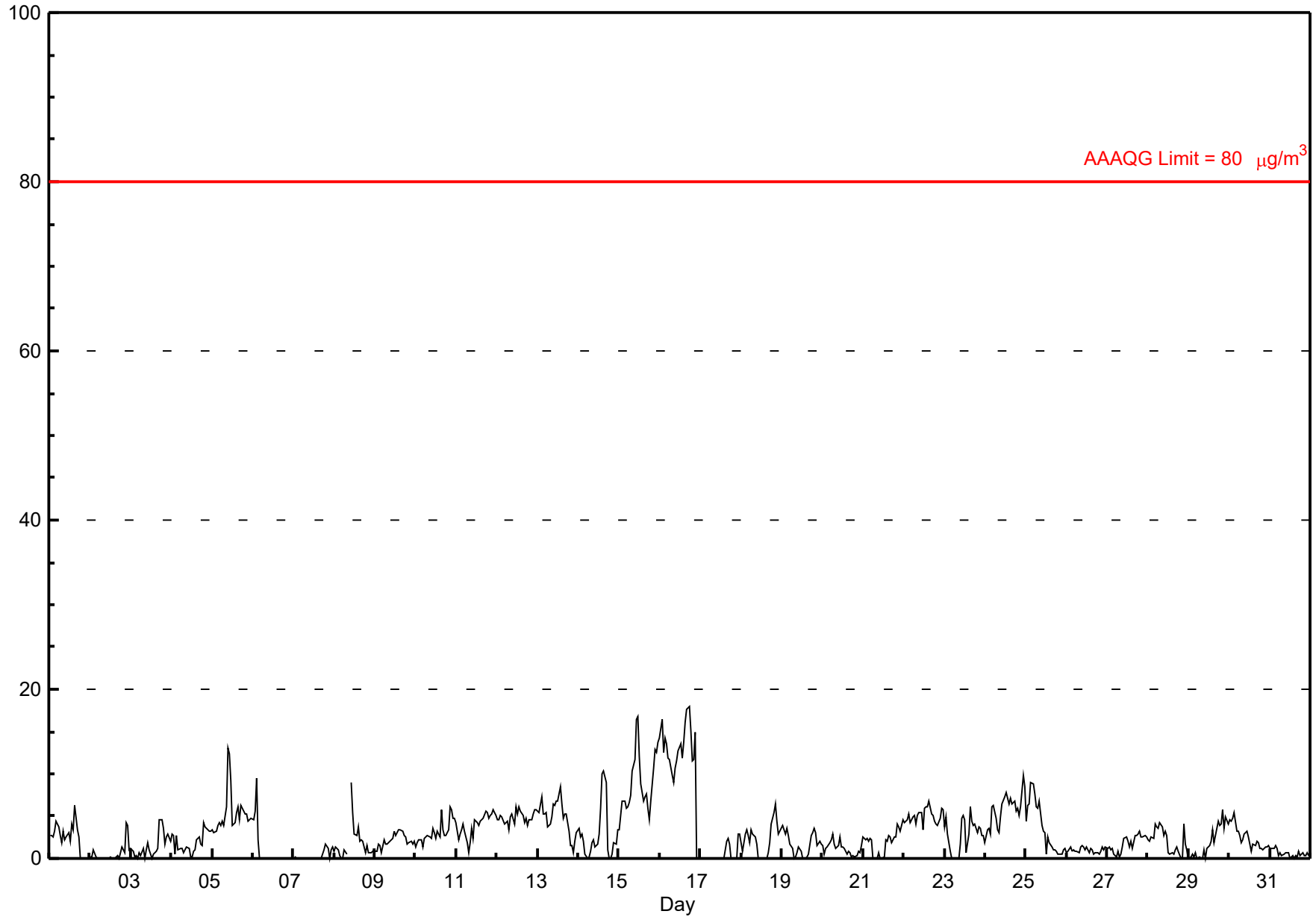
Number of Exceedences: 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 18.0 µg/m <sup>3</sup> on Jan 16 18:00	Maximum Daily Average: 12.2 µg/m <sup>3</sup> on Jan 16
Minimum Value: 0 µg/m <sup>3</sup> on Jan 1 19:00	Hours of Data: 742
Minimum Daily Average: 0.3 µg/m <sup>3</sup> on Jan 7	Hours of Missing Data: 2
Maximum Diurnal Average: 3.5 µg/m <sup>3</sup> at hour 11	Hours of Calibration: 0
Monthly Average: 2.96 µg/m <sup>3</sup>	Percent Operational Time: 99.7
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.7 Median = 2.2 Q <sub>3</sub> = 4.3 P <sub>90</sub> = 6.2 P <sub>99</sub> = 14.1	

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-Jan	3	3	3	3	4	4	3	2	3	2	3	2	4	3	6	3	3	0	0	0	0	0	0	0	2.4	6.3																						
2-Jan	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	4	4	1	0.6	4.3																						
3-Jan	1	1	0	0	0	1	0	1	0	1	2	1	0	1	1	1	1	5	5	4	2	2	3	2	1.4	4.6																						
4-Jan	3	3	0	3	1	1	1	1	1	1	1	0	0	1	1	2	3	2	2	4	4	3	3	3	1.9	4.2																						
5-Jan	3	3	3	4	4	4	4	4	6	13	12	9	4	4	5	6	5	6	6	5	5	4	5	5	5.5	13.0																						
6-Jan	5	6	9	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.9	9.4																						
7-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	1	1	0.3	1.7																						
8-Jan	1	1	1	0	0	0	1	0	M	M	9	5	3	3	4	2	2	2	1	2	1	1	1	1	1.8	8.9																						
9-Jan	1	1	2	1	1	2	2	2	2	2	2	3	3	3	3	3	3	3	2	2	2	2	2	2	2.1	3.5																						
10-Jan	1	2	2	2	1	2	3	3	3	2	4	3	2	3	3	6	3	3	3	3	6	6	5	5	3.1	6.1																						
11-Jan	4	2	3	3	4	3	2	1	2	4	2	5	4	4	4	4	5	6	5	5	5	5	6	5	3.9	5.8																						
12-Jan	5	5	5	5	4	4	4	3	5	5	4	6	5	6	6	5	4	5	4	5	5	5	6	6	4.9	6.2																						
13-Jan	6	5	7	5	5	5	4	4	5	6	6	7	7	8	6	5	5	5	3	1	2	1	2	3	4.8	8.5																						
14-Jan	4	2	3	2	1	0	0	1	2	2	1	2	3	6	10	10	9	1	0	0	0	2	2	3	2.7	10.3																						
15-Jan	3	5	7	7	6	6	7	7	10	12	17	17	12	9	7	7	8	6	5	7	11	13	13	14	8.9	16.7																						
16-Jan	14	16	12	14	14	12	12	10	9	11	11	13	14	12	14	16	18	18	15	12	12	15	0	0	12.2	18.0																						
17-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	0	0	0	0	3	3	0.5	3.0																						
18-Jan	2	1	3	3	3	2	3	3	3	2	0	0	0	0	0	0	1	2	4	5	7	4	3	3	2.2	6.5																						
19-Jan	4	3	3	4	3	2	1	0	0	1	1	1	0	0	0	0	0	0	3	3	4	3	2	2	1.7	3.8																						
20-Jan	2	1	1	1	2	2	3	2	1	2	2	1	1	1	1	1	1	0	0	0	0	1	1	2	1.2	2.8																						
21-Jan	3	2	2	2	2	2	0	0	0	1	0	0	0	2	2	3	3	2	3	3	4	4	3	5	1.9	4.6																						
22-Jan	4	4	5	5	4	5	5	4	5	5	5	3	6	6	6	7	5	5	4	4	4	5	6	6	5.0	6.8																						
23-Jan	4	5	3	1	0	0	0	0	0	2	5	5	5	1	3	6	4	4	4	3	4	4	3	3	2.8	6.1																						
24-Jan	2	3	3	3	6	6	5	3	3	5	6	7	8	7	6	7	6	7	6	6	5	6	10	9	5.7	9.8																						
25-Jan	4	6	6	9	9	8	6	6	7	4	3	3	1	2	2	1	1	1	1	0	1	1	1	1	3.5	9.1																						
26-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.5																						
27-Jan	1	1	1	1	1	0	1	0	0	1	2	2	2	1	2	1	3	3	3	3	3	3	3	3	1.7	3.2																						
28-Jan	2	2	2	2	4	4	4	4	4	3	3	1	0	1	0	1	1	1	0	0	4	2	1	1	2.1	4.3																						
29-Jan	0	0	0	0	1	0	0	0	0	1	0	1	2	2	3	2	3	4	4	4	6	4	5	4	1.9	5.8																						
30-Jan	5	4	5	5	3	3	3	2	2	3	3	3	2	1	2	2	2	2	1	1	1	1	1	1	2.4	5.4																						
31-Jan	1	1	1	1	1	0	1	0	1	1	1	1	0	0	0	0	0	1	0	1	0	0	1	0	0.6	1.5																						
																								2.8	2.9	3.1	3.0	2.7	2.6	2.4	2.1	2.5	3.1	3.5	3.4	2.8	2.9	3.1	3.5	3.3	3.3	2.8	2.8	3.0	3.3	3.0	3.0	Diurnal Average
																								14.2	16.5	12.5	14.3	13.5	11.9	11.6	9.9	10.3	13.0	16.5	16.7	13.5	11.9	13.8	16.2	17.7	18.0	15.1	11.6	11.7	14.9	12.6	13.8	Diurnal Maximum

M - Maintenance  
 Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m<sup>3</sup> Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m<sup>3</sup>

### Hourly Averages

PM2.5 (PM<sub>2.5</sub>) -  $\mu\text{g}/\text{m}^3$   
Portable Rycroft - January 2018



# Hourly Maximums

PM2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

Portable Rycroft - January 2018

Maximum Value: 24.3 µg/m <sup>3</sup> on Jan 5 10:00		Maximum Daily Average: 16.0 µg/m <sup>3</sup> on Jan 16		Hours in Service: 744 Hours of Data: 742 Hours of Missing Data: 2 Hours of Calibration: 0 Percent Operational Time: 99.7																							
Minimum Value: 0 µg/m <sup>3</sup> on Jan 6 12:00 Maximum Diurnal Average: 6.7 µg/m <sup>3</sup> at hour 16 Monthly Average: 5.60 µg/m <sup>3</sup>		Minimum Daily Average: 1.3 µg/m <sup>3</sup> on Jan 7 Minimum Diurnal Average: 4.3 µg/m <sup>3</sup> at hour 8 Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 1.4 Q <sub>1</sub> = 3.0 Median = 5.0 Q <sub>3</sub> = 7.5 P <sub>90</sub> = 9.9 P <sub>99</sub> = 20.1																									
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-Jan	6	6	6	6	9	7	6	5	8	7	6	5	7	9	6	10	10	5	2	0	1	1	2	3	5.5	10.3	
2-Jan	2	2	3	2	1	0	0	1	1	1	1	2	2	4	2	2	2	3	2	4	4	6	6	3	2.5	6.4	
3-Jan	2	3	2	3	2	2	3	3	1	3	4	2	2	2	2	2	2	7	7	5	3	4	4	4	3.2	7.4	
4-Jan	4	4	4	4	4	3	3	3	3	4	4	3	2	2	4	4	4	4	3	6	8	6	6	5	4.0	8.5	
5-Jan	5	5	6	6	6	6	8	7	8	24	21	20	9	7	7	16	7	10	10	7	7	6	7	7	9.2	24.3	
6-Jan	7	9	11	9	0	1	2	1	0	1	1	0	2	0	0	3	1	2	1	0	1	1	1	1	2.3	11.1	
7-Jan	1	1	1	1	1	0	1	1	0	1	2	0	0	0	1	1	1	2	3	3	3	3	3	3	1.3	3.3	
8-Jan	2	3	2	2	1	1	2	3	M	M	12	9	6	6	8	4	7	5	3	5	4	3	3	4	4.3	11.5	
9-Jan	3	3	4	4	4	6	4	4	4	4	5	6	5	6	6	5	5	5	5	5	4	5	4	5	4.6	5.8	
10-Jan	4	6	6	6	4	7	5	5	6	7	7	6	6	6	6	12	12	6	6	9	9	9	8	8	6.9	12.5	
11-Jan	8	6	7	6	7	8	6	5	6	7	6	8	8	8	7	9	8	9	9	8	10	10	10	10	7.8	10.4	
12-Jan	8	10	10	9	9	8	9	7	9	9	9	10	10	11	9	9	8	9	7	8	9	9	9	9	8.9	10.5	
13-Jan	9	8	10	9	8	9	7	7	8	10	10	10	10	12	10	7	9	8	6	4	4	3	4	7	7.8	11.5	
14-Jan	6	4	5	4	3	1	2	3	5	4	4	4	5	9	13	13	12	5	1	2	3	3	5	5	5.1	12.7	
15-Jan	5	8	9	9	8	8	9	10	12	15	20	19	17	12	9	9	11	9	7	13	14	15	14	15	11.6	20.5	
16-Jan	17	22	15	17	17	15	17	13	16	13	15	15	16	18	20	18	20	21	20	15	14	20	12	0	16.0	21.6	
17-Jan	0	2	1	0	0	0	0	0	2	1	1	1	0	0	0	20	16	7	1	0	1	6	11	9	3.3	20.2	
18-Jan	4	4	5	7	6	4	5	5	5	4	2	0	1	0	0	1	2	4	5	8	11	7	6	6	4.2	11.4	
19-Jan	6	5	5	6	4	3	3	1	1	2	4	2	1	0	1	2	2	5	5	6	6	4	4	4	3.3	5.7	
20-Jan	3	2	3	4	4	5	5	3	3	4	4	3	3	5	3	2	2	2	2	2	2	3	4	4	3.2	4.6	
21-Jan	5	6	7	4	5	4	2	2	2	4	1	1	4	5	4	4	4	4	5	4	8	17	7	7	4.9	16.6	
22-Jan	6	6	6	7	6	7	8	6	7	8	7	6	9	7	8	8	7	8	8	6	6	8	9	8	7.1	8.7	
23-Jan	7	7	5	3	1	1	2	2	4	5	8	8	17	4	5	9	8	6	7	5	5	6	4	6	5.7	17.5	
24-Jan	4	5	5	6	8	9	9	6	5	7	9	10	10	9	9	9	8	9	7	8	8	12	12	13	8.2	12.7	
25-Jan	8	9	9	11	11	10	7	8	9	6	5	5	2	6	5	4	3	3	4	2	2	2	3	3	5.8	11.4	
26-Jan	2	3	3	2	3	3	3	2	3	3	3	3	4	3	3	3	3	3	3	3	4	4	3	4	3.1	4.2	
27-Jan	4	4	4	4	3	3	3	3	4	4	5	5	5	5	5	4	5	5	5	6	5	6	5	5	4.4	5.6	
28-Jan	5	6	5	5	7	7	7	7	8	5	7	6	4	3	6	4	3	7	3	4	3	11	9	5	5.7	11.2	
29-Jan	3	4	3	6	5	2	4	4	3	5	4	5	6	5	6	5	8	9	8	7	9	8	8	7	5.6	9.2	
30-Jan	9	7	7	8	7	6	6	4	4	5	6	5	4	4	4	4	4	4	4	3	3	4	4	4	4.9	8.8	
31-Jan	3	4	4	4	3	3	3	3	3	3	3	4	4	3	3	3	2	3	2	3	3	3	3	3	3.1	4.2	
		5.1	5.6	5.6	5.6	5.1	4.8	4.8	4.3	5.0	5.9	6.4	5.9	5.8	5.4	5.5	6.7	6.4	6.1	5.2	5.2	5.6	6.6	6.1	5.7	Diurnal Average	
		17.0	21.6	14.8	17.0	17.0	14.9	17.0	13.4	15.8	24.3	20.7	20.0	17.5	18.1	19.7	20.2	20.5	20.9	20.2	14.8	14.4	20.3	14.1	15.4	Diurnal Maximum	
M - Maintenance																											

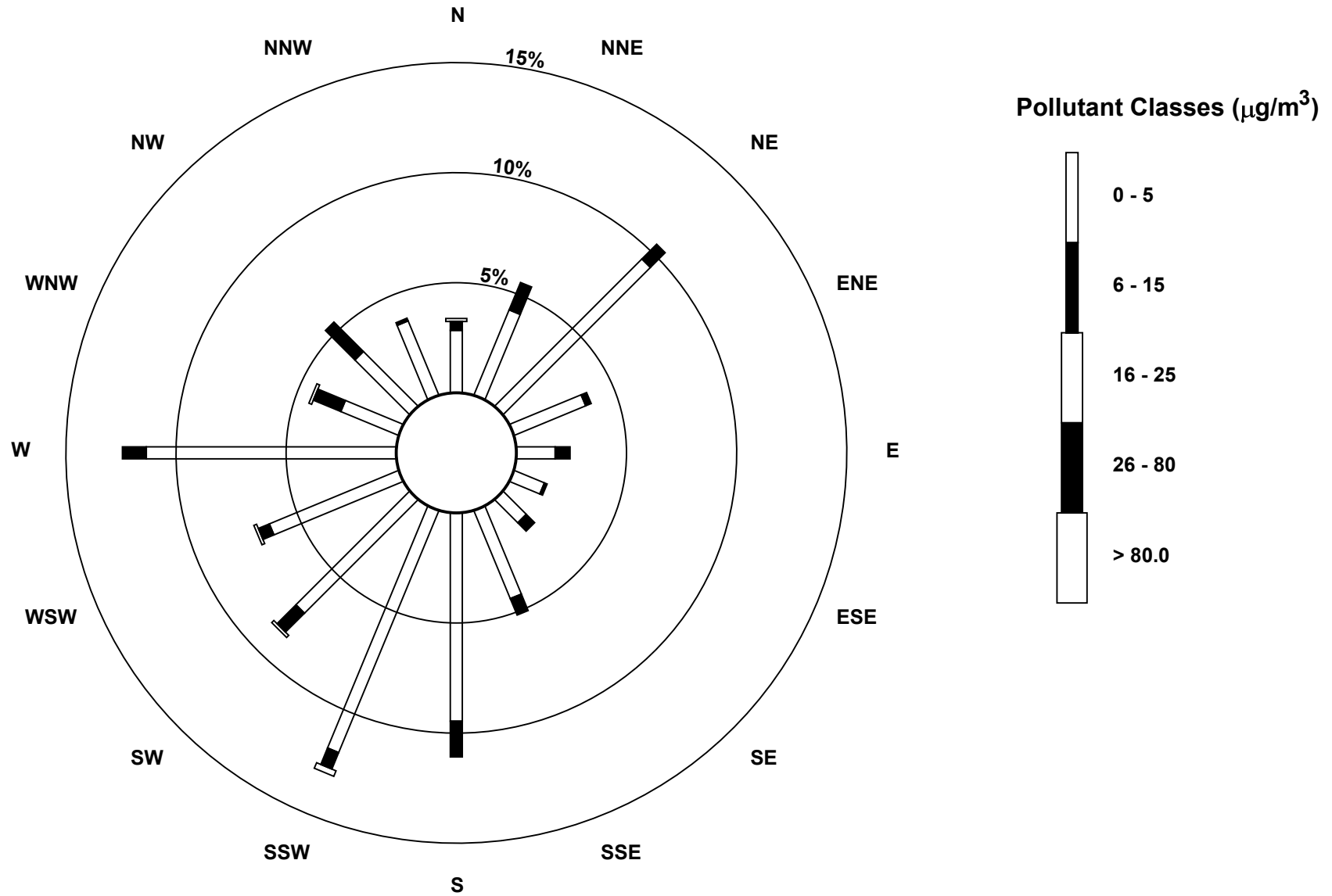
### Hourly Maximums

PM2.5 (PM<sub>2.5</sub>) -  $\mu\text{g}/\text{m}^3$   
Portable Rycroft - January 2018



**Pollutant Rose**

**PM<sub>2.5</sub> (PM<sub>2.5</sub>) -  $\mu\text{g}/\text{m}^3$**   
**Portable Rycroft - January 2018**





# Hourly Averages

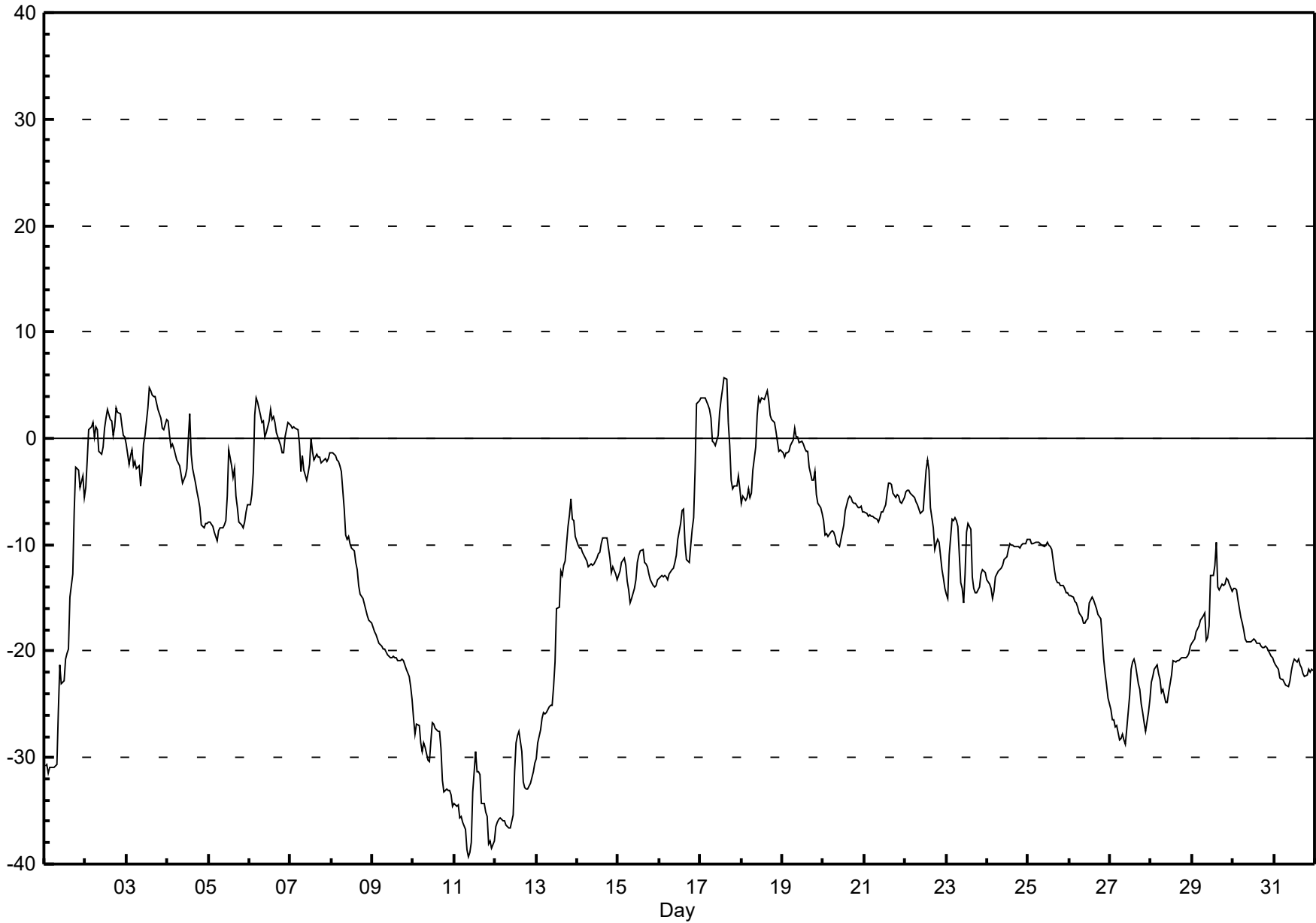
External Temperature (ET) - °C

Portable Rycroft - January 2018

Maximum Value: 5.6 °C on Jan 17 15:00      Maximum Daily Average: 0.8 °C on Jan 17																			Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0							
Minimum Value: -39 °C on Jan 11 09:00      Minimum Daily Average: -35.4 °C on Jan 11 Maximum Diurnal Average: -10.2 °C at hour 15      Minimum Diurnal Average: -14.1 °C at hour 9 Monthly Average: -12.47 °C      Percentiles: P <sub>1</sub> = -37.8 P <sub>10</sub> = -28.2 Q <sub>1</sub> = -20.5 Median = -11.0 Q <sub>3</sub> = -4.3 P <sub>90</sub> = 0.7 P <sub>99</sub> = 3.9																										
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-Jan	-31	-31	-31	-31	-31	-31	-31	-31	-26	-21	-23	-23	-21	-20	-15	-13	-7	-3	-3	-3	-5	-4	-6	-19.0	-2.7	
2-Jan	-5	-2	1	1	2	0	1	1	-1	-2	-1	1	2	3	2	2	0	1	3	2	2	1	0	0	0.6	2.9
3-Jan	-1	-2	-2	-1	-3	-2	-3	-3	-5	-3	-1	0	3	5	5	4	4	4	3	2	2	1	1	2	0.4	4.8
4-Jan	2	0	-1	-1	-1	-2	-2	-3	-3	-4	-4	-3	0	2	-1	-3	-4	-5	-6	-6	-8	-8	-8	-8	-3.2	2.3
5-Jan	-8	-8	-8	-9	-9	-10	-9	-8	-8	-8	-8	-5	-1	-3	-4	-3	-5	-6	-8	-8	-8	-8	-7	-6	-6.9	-1.1
6-Jan	-6	-5	-3	2	4	3	2	2	2	0	0	2	3	2	2	1	1	0	-1	-1	-1	0	1	1	0.4	3.8
7-Jan	1	1	1	1	1	0	-3	-2	-3	-4	-3	-2	0	-1	-2	-2	-2	-2	-2	-2	-2	-2	-2	-1	-1.4	1.2
8-Jan	-1	-1	-2	-2	-2	-3	-3	-7	-9	-9	-9	-10	-10	-11	-12	-12	-14	-15	-15	-16	-17	-17	-17	-17	-9.6	-1.3
9-Jan	-18	-18	-19	-19	-19	-19	-20	-20	-20	-20	-21	-21	-21	-21	-21	-21	-21	-21	-21	-21	-22	-22	-23	-25	-20.5	-17.8
10-Jan	-26	-28	-27	-27	-29	-29	-29	-29	-30	-30	-28	-27	-27	-27	-27	-27	-29	-32	-33	-33	-33	-33	-34	-35	-29.6	-26.3
11-Jan	-34	-35	-34	-36	-36	-36	-37	-39	-39	-39	-38	-33	-29	-31	-31	-32	-34	-34	-35	-36	-38	-38	-38	-38	-35.4	-29.4
12-Jan	-36	-36	-36	-36	-36	-36	-36	-37	-37	-37	-35	-31	-29	-28	-27	-29	-32	-33	-33	-33	-32	-32	-31	-30	-33.3	-27.5
13-Jan	-30	-29	-27	-26	-26	-26	-26	-25	-25	-25	-23	-21	-16	-16	-12	-13	-12	-12	-8	-7	-6	-8	-8	-9	-18.2	-5.7
14-Jan	-10	-10	-10	-11	-11	-12	-12	-12	-12	-12	-12	-11	-11	-11	-10	-9	-9	-9	-10	-11	-13	-12	-13	-13	-11.1	-9.3
15-Jan	-13	-12	-12	-11	-12	-13	-14	-15	-15	-14	-13	-12	-11	-11	-10	-12	-12	-12	-13	-13	-14	-14	-14	-13	-12.7	-10.4
16-Jan	-13	-13	-13	-13	-13	-13	-13	-12	-12	-12	-11	-10	-8	-7	-7	-10	-11	-12	-10	-9	-7	-3	3	4	-9.4	3.5
17-Jan	4	4	4	4	3	3	2	0	0	-1	0	2	4	5	6	6	2	-1	-4	-5	-5	-5	-5	-5	0.8	5.6
18-Jan	-6	-5	-6	-6	-5	-6	-5	-3	-1	2	4	3	4	4	4	4	2	2	1	1	0	-1	-1	-1	-0.4	4.4
19-Jan	-1	-2	-1	-1	-1	-1	0	1	0	0	0	-1	-1	-1	-1	-3	-4	-4	-3	-5	-6	-6	-7	-2.1	1.0	
20-Jan	-8	-9	-9	-9	-9	-9	-9	-9	-10	-10	-10	-9	-8	-7	-6	-5	-6	-6	-6	-6	-6	-6	-6	-7	-7.7	-5.5
21-Jan	-7	-7	-7	-7	-7	-7	-7	-8	-8	-7	-7	-7	-6	-5	-4	-4	-4	-5	-6	-5	-5	-6	-6	-6	-6.3	-4.2
22-Jan	-5	-5	-5	-5	-5	-6	-6	-6	-7	-7	-7	-5	-3	-2	-3	-7	-8	-10	-10	-9	-10	-12	-13	-14	-7.1	-2.1
23-Jan	-15	-15	-11	-8	-8	-7	-8	-8	-14	-14	-16	-13	-9	-8	-9	-13	-14	-15	-15	-14	-13	-12	-12	-13	-11.7	-7.4
24-Jan	-13	-14	-14	-15	-14	-13	-13	-12	-12	-12	-11	-11	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-11.5	-9.6
25-Jan	-9	-9	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-13	-13	-14	-14	-14	-14	-14	-15	-15	-11.4	-9.5
26-Jan	-15	-15	-15	-15	-15	-16	-16	-17	-17	-17	-17	-17	-15	-15	-15	-16	-16	-17	-17	-19	-21	-22	-23	-24	-17.2	-14.7
27-Jan	-25	-26	-26	-27	-27	-28	-28	-28	-28	-29	-27	-24	-22	-21	-21	-21	-23	-24	-25	-26	-27	-28	-26	-25	-25.5	-20.8
28-Jan	-23	-22	-22	-21	-22	-23	-24	-24	-25	-25	-24	-23	-22	-21	-21	-21	-21	-21	-21	-21	-21	-20	-20	-20	-21.9	-19.6
29-Jan	-19	-19	-18	-18	-18	-17	-17	-16	-19	-19	-18	-13	-13	-12	-10	-14	-14	-14	-14	-14	-13	-13	-14	-14	-15.4	-9.8
30-Jan	-14	-14	-14	-15	-17	-17	-18	-19	-19	-19	-19	-19	-19	-19	-19	-19	-20	-20	-20	-20	-20	-20	-20	-21	-18.4	-14.1
31-Jan	-21	-21	-22	-22	-23	-23	-23	-23	-23	-23	-22	-21	-21	-21	-21	-21	-22	-22	-22	-22	-22	-22	-22	-22	-21.9	-20.8
																								Diurnal Average		
																								Diurnal Maximum		

**Hourly Averages**

**External Temperature (ET) - °C**  
**Portable Rycroft - January 2018**





Peace Airshed Zone Association

# Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	3	2	1	2	4	4	4	1	12	5	3	6	5	6	1	4	2	6	9	9	6	6	8	7	2.7	11.8
Dir	275	312	155	281	275	264	236	197	144	172	281	328	313	342	99	270	279	195	203	207	213	201	209	211	225.6	144.4
2 Spd	10	21	25	21	16	7	10	7	3	3	6	6	7	4	4	5	2	5	9	8	9	5	4	4	7.1	24.9
Dir	231	247	251	251	237	211	194	210	315	104	155	201	245	235	198	219	200	174	166	180	191	203	195	207	221.4	251.1
3 Spd	3	3	3	5	7	2	5	5	3	7	6	7	5	3	2	3	7	9	5	4	4	5	7	9	3.9	9.4
Dir	181	217	190	179	195	263	64	105	110	145	133	152	157	171	123	163	178	190	210	226	203	207	209	226	179.1	225.9
4 Spd	8	8	7	2	5	7	8	8	4	7	4	3	3	2	5	2	3	2	4	3	2	3	2	2	1.8	8.2
Dir	217	213	202	326	148	168	168	171	181	175	145	44	176	314	32	10	69	97	56	49	342	299	288	247	174.0	217.3
5 Spd	4	1	2	2	4	3	2	2	3	2	1	3	2	2	4	5	5	2	3	0	1	2	1	3	1.2	4.9
Dir	286	7	262	249	255	239	193	207	183	188	217	263	289	311	5	25	349	95	248	294	266	216	228	306	274.5	25.1
6 Spd	2	4	5	9	12	12	15	13	13	11	11	11	14	17	24	23	16	12	11	9	9	13	25	23	12.8	24.9
Dir	246	188	192	190	213	214	211	212	210	204	204	205	215	224	228	227	223	219	214	213	213	220	227	227	216.7	226.6
7 Spd	22	19	23	24	24	10	8	9	5	5	6	2	5	6	7	7	6	7	7	6	7	10	10	9	8.8	23.9
Dir	229	233	233	232	232	218	197	207	206	201	180	115	172	183	194	176	159	153	163	157	157	166	173	190	204.6	232.3
8 Spd	6	4	3	3	4	8	18	29	19	15	14	14	15	11	14	15	19	16	15	14	17	17	17	16	11.9	28.6
Dir	188	187	132	38	48	42	42	30	16	17	19	343	342	359	338	24	26	16	12	22	23	25	24	17	18.5	29.6
9 Spd	15	13	15	15	17	15	16	13	18	17	19	18	16	16	15	15	12	10	10	12	12	11	13	12	13.9	18.7
Dir	14	7	351	355	352	349	352	334	328	328	329	331	336	334	338	327	310	317	353	346	340	334	311	324	338.4	329.4
10 Spd	12	5	4	5	7	8	9	8	7	6	5	9	13	12	9	6	7	6	7	8	9	8	7	7	6.1	12.7
Dir	330	290	248	233	240	244	238	240	226	204	201	235	258	251	234	226	223	208	198	185	183	183	181	180	227.6	257.8
11 Spd	8	7	7	6	8	6	2	2	3	4	2	2	4	5	6	3	3	4	6	2	4	3	4	4	3.5	7.8
Dir	171	174	170	175	168	164	184	181	208	205	211	225	303	269	271	257	201	166	172	128	183	193	211	198	192.4	168.2
12 Spd	5	4	2	3	2	1	2	3	2	2	1	2	1	4	3	2	1	0	1	1	1	2	1	0	0.8	4.9
Dir	180	187	162	203	205	218	156	136	205	37	33	282	282	283	309	271	240	286	203	170	65	54	180	286	206.6	180.0
13 Spd	0	1	4	2	5	5	3	4	3	1	3	5	3	1	2	1	3	3	4	4	4	2	2	10	0.6	10.3
Dir	324	359	285	286	292	296	174	195	19	211	173	186	36	84	127	113	84	88	103	143	65	62	219	44	90.1	44.4
14 Spd	15	17	13	11	15	15	14	7	13	11	11	12	11	13	9	8	11	11	8	10	8	7	5	6	10.8	17.4
Dir	58	59	68	69	62	62	56	58	40	55	62	59	51	43	52	57	57	50	51	49	48	58	51	50	55.8	58.9
15 Spd	8	10	8	5	2	4	4	3	3	4	2	3	3	2	1	3	0	0	1	2	2	2	2	1	0.3	9.7
Dir	41	50	47	55	323	307	288	226	196	164	212	214	216	180	217	238	271	345	211	169	142	150	123	87	107.8	50.1
16 Spd	2	2	3	2	0	2	3	3	8	6	22	21	10	8	2	5	3	4	3	2	1	9	11	9	1.1	21.7
Dir	282	355	33	222	92	140	142	162	6	42	166	10	349	252	275	284	244	192	198	209	162	229	201	202	225.7	165.9
17 Spd	16	15	14	14	8	9	8	10	11	10	7	4	8	7	4	4	4	4	6	2	3	N	N	4	5.4	16.0
Dir	204	204	232	226	210	208	214	190	189	185	174	139	160	164	151	111	96	83	44	318	356	N	N	345	193.4	203.6
18 Spd	7	3	4	6	4	5	4	7	5	12	16	20	16	18	18	10	10	10	9	8	8	3	2	3	8.2	20.4
Dir	265	195	211	162	187	230	212	190	197	197	202	186	201	196	193	208	207	199	200	208	245	209	200	90	201.2	186.0
19 Spd	2	4	6	7	5	4	5	11	5	7	9	9	9	12	12	5	6	8	7	7	9	13	11	11	6.8	12.6
Dir	114	182	213	222	206	205	219	234	224	236	251	267	271	271	269	216	220	233	241	255	279	286	265	257	247.7	285.7
20 Spd	7	4	3	4	3	2	1	1	1	3	2	4	2	4	1	2	2	2	3	4	6	5	5	9	0.4	9.3
Dir	248	250	241	246	232	243	268	327	304	255	225	262	207	191	162	324	30	62	84	56	40	57	62	40	292.6	40.0
21 Spd	11	13	12	15	16	18	20	20	22	16	24	22	22	22	22	21	16	14	10	12	8	10	5	8	14.0	23.8
Dir	51	46	58	54	47	34	39	48	44	48	48	51	46	48	50	47	41	34	34	42	39	259	288	245	43.5	48.2
22 Spd	9	9	11	6	3	2	5	7	2	3	3	4	5	5	3	3	0	3	7	3	3	2	3	3	1.9	10.8
Dir	239	255	271	262	214	163	158	156	96	160	141	184	272	297	271	270	325	359	45	76	94	254	229	225	232.1	270.7



Peace Airshed Zone Association

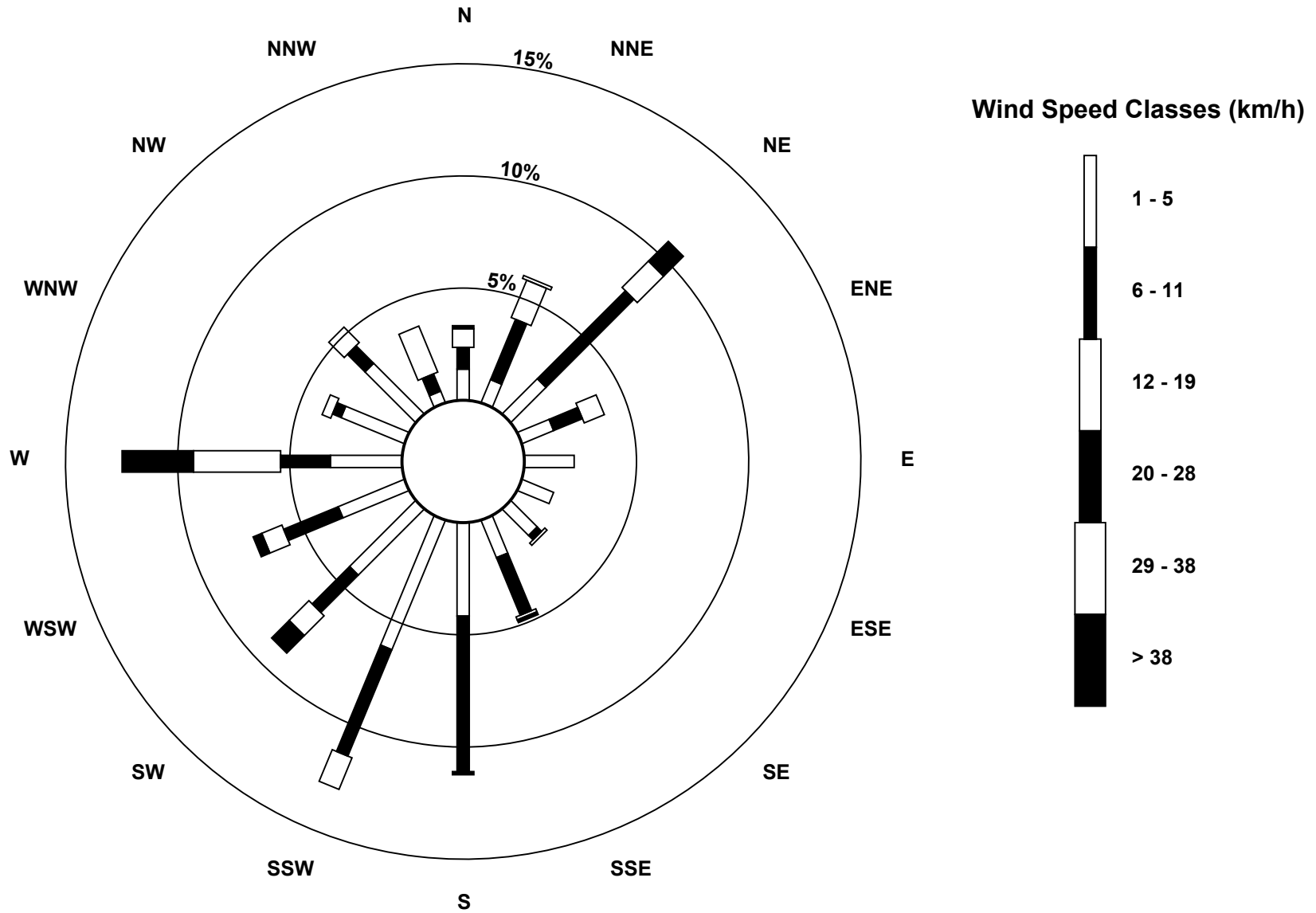
# Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	3	2	5	7	10	11	13	11	4	4	3	3	3	3	4	3	3	3	3	3	5	4	5	6	2.4	12.8
Dir	281	202	200	197	161	161	168	171	214	198	282	270	310	325	321	325	297	249	321	298	318	310	309	269	226.8	167.6
24 Spd	4	4	1	1	2	4	4	4	2	7	8	7	5	9	2	8	9	9	9	9	6	9	11	6	3.3	10.7
Dir	277	248	238	119	179	322	283	356	10	47	30	34	29	13	172	79	21	31	35	22	338	317	306	303	0.9	305.8
25 Spd	7	9	13	12	11	10	11	12	7	9	12	11	13	13	10	25	26	24	17	17	19	20	20	20	13.1	26.1
Dir	344	307	305	300	317	312	310	317	300	290	313	323	328	322	271	263	266	268	265	266	266	266	263	265	285.7	266.5
26 Spd	18	17	17	20	17	18	19	19	21	20	17	16	14	15	15	13	11	7	7	11	10	4	6	8	13.5	21.3
Dir	268	267	258	266	263	259	258	255	260	259	260	260	264	263	266	284	276	280	250	243	238	227	181	174	258.8	260.1
27 Spd	8	8	9	8	7	8	8	7	7	7	5	4	3	6	5	5	4	5	7	7	7	8	8	7	6.0	8.7
Dir	182	179	173	174	174	181	183	182	189	182	200	192	226	268	265	255	214	170	181	182	183	172	172	171	187.6	173.4
28 Spd	7	6	6	4	6	4	2	2	4	6	3	4	6	6	8	9	11	9	8	8	9	5	6	6	3.8	10.6
Dir	168	187	185	138	75	86	49	105	309	19	10	330	352	0	12	29	41	48	45	37	40	49	44	29	40.4	40.7
29 Spd	6	4	9	9	10	5	9	9	8	6	6	7	11	10	6	7	7	14	11	15	18	22	25	18	4.9	25.2
Dir	47	35	31	42	38	32	21	30	30	44	40	20	54	28	353	274	255	272	267	261	271	267	273	266	319.9	273.3
30 Spd	14	16	20	27	25	17	18	20	22	23	23	22	24	22	21	19	20	18	16	17	15	18	16	8	18.9	27.3
Dir	256	263	263	266	264	268	274	276	266	269	268	274	271	275	274	266	266	269	262	262	274	275	280	339	269.8	265.7
31 Spd	9	9	9	10	6	6	6	3	0	2	3	9	5	9	8	7	7	6	2	1	1	2	4	4	4.3	9.6
Dir	16	18	44	54	70	73	69	75	343	54	65	30	47	33	40	40	32	34	88	80	319	257	269	252	39.2	54.3
Spd	2.5	2.6	3.2	3.1	2.6	1.8	1.2	1.4	1.5	1.2	1.2	2.1	2.8	3.2	2.7	2.7	1.9	1.4	1.1	1.6	2.0	3.5	4.2	3.1	Diurnal Average	
Dir	251.4	247.5	247.2	246.0	240.1	245.9	234.1	228.6	278.3	235.7	232.4	305.8	300.5	295.5	279.7	282.1	286.7	264.1	240.6	255.7	276.3	258.0	250.9	256.1	Diurnal Maximum	
Spd	21.8	20.6	24.9	27.3	24.9	18.1	20.5	28.6	21.9	22.8	23.8	22.2	24.0	22.3	23.7	24.8	26.1	23.6	17.2	17.5	18.6	21.7	25.2	22.7	Diurnal Maximum	
Dir	229.2	247.4	251.1	265.7	263.8	259.4	38.9	29.6	43.8	268.6	48.2	274.5	271.3	47.9	227.9	262.7	266.5	267.7	265.1	262.3	266.4	266.8	273.3	226.9	Diurnal Maximum	
Maximum Speed Value: 29 km/h on Jan 8 08:00		Minimum Speed Value: 0 km/h on Jan 15 17:00										Hours in Service: 744														
Maximum Daily Speed Average: 18.9 km/h on Jan 30		Minimum Daily Speed Average: 0.3 km/h on Jan 12										Hours of Data: 742														
Maximum Diurnal Speed Average: 4.2 km/h at hour 23		Minimum Diurnal Speed Average: 1.1 km/h at hour 19										Hours of Missing Data: 2														
Monthly Average Velocity: 2.11 km/h 261.85 deg		Speed Percentiles: P <sub>1</sub> = 0.4 P <sub>10</sub> = 2.1 Q <sub>1</sub> = 3.4 Median = 6.6 Q <sub>3</sub> = 10.8 P <sub>90</sub> = 17.2 P <sub>99</sub> = 24.9										Percent Operational Time: 99.7														
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	16	19	21	1	0	0	57																			
NorthEast	25	63	23	9	1	0	121																			
East	27	4	2	0	0	0	33																			
SouthEast	23	9	1	0	0	0	33																			
South	55	84	9	2	0	0	150																			
SouthWest	58	57	16	10	0	0	141																			
West	54	26	35	27	0	0	142																			
NorthWest	31	13	21	0	0	0	65																			
Total	289	275	128	49	1	0	742																			

**Wind Rose**

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



# Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Portable Rycroft - January 2018

Maximum Speed: 31 km/h on Jan 16 12:00	Maximum Daily Speed Average: 19.4 km/h on Jan 30	Hours in Service: 744
Minimum Speed: 0 km/h on Jan 31 09:00	Minimum Daily Speed Average: 2.4 km/h on Jan 12	Hours of Data: 742
Maximum Diurnal Speed Average: 9.4 km/h at hour 13	Minimum Diurnal Speed Average: 7.4 km/h at hour 20	Hours of Missing Data: 2
Monthly Average Speed: 8.39 km/h	Percentiles: P <sub>1</sub> = 1.2 P <sub>10</sub> = 2.6 Q <sub>1</sub> = 3.9 Median = 6.8 Q <sub>3</sub> = 11.1 P <sub>90</sub> = 17.2 P <sub>99</sub> = 24.8	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-Jan	3	2	2	3	4	4	4	2	12	8	4	6	6	6	5	6	4	6	10	9	6	6	8	7	5.5	12.1
2-Jan	11	21	25	21	16	7	10	7	6	4	6	6	7	5	4	5	3	5	9	8	9	6	5	5	8.8	24.9
3-Jan	5	4	3	5	7	4	6	5	4	8	6	7	5	3	2	3	7	9	6	5	4	5	7	10	5.4	9.6
4-Jan	8	8	8	4	5	7	8	8	5	7	6	4	3	3	5	3	3	2	4	3	3	3	2	3	4.8	8.4
5-Jan	4	2	3	3	4	4	2	2	3	2	2	3	2	4	4	5	5	2	3	2	2	2	2	3	3.0	5.5
6-Jan	4	4	6	9	12	12	15	13	13	11	11	11	14	17	24	23	16	12	11	9	9	13	25	23	13.2	24.9
7-Jan	22	19	23	24	24	10	8	9	5	5	7	4	5	6	7	7	7	7	8	6	7	10	10	9	10.3	24.0
8-Jan	6	4	3	4	4	9	18	29	19	15	14	14	15	12	14	15	19	16	15	14	17	18	17	16	13.7	28.7
9-Jan	15	14	15	15	17	15	16	14	18	17	19	18	16	16	15	15	12	10	10	12	13	11	13	13	14.5	18.7
10-Jan	12	5	4	5	7	8	9	8	7	6	5	9	13	12	9	7	7	6	8	8	9	8	7	7	7.6	12.7
11-Jan	8	7	8	6	8	6	3	2	3	4	2	2	4	5	6	3	3	4	6	2	4	3	4	4	4.5	8.0
12-Jan	5	5	4	3	2	1	2	3	2	3	2	2	1	4	3	2	2	2	1	1	1	2	2	2	2.4	5.1
13-Jan	1	2	4	2	5	5	3	4	3	2	3	6	4	2	3	2	4	3	4	4	4	3	3	11	3.6	10.9
14-Jan	16	18	13	11	15	15	14	7	13	11	11	12	11	13	9	9	11	11	8	10	8	7	5	6	11.0	17.5
15-Jan	8	10	8	5	2	4	5	4	3	4	4	3	3	2	2	3	1	1	1	2	3	2	3	3	3.6	9.8
16-Jan	3	4	4	3	4	3	4	3	11	19	24	31	28	17	3	5	4	4	3	3	2	10	11	9	8.9	31.2
17-Jan	16	15	14	14	8	9	8	10	11	10	7	6	8	7	5	4	4	5	7	3	4	N	N	4	8.2	16.0
18-Jan	8	4	5	6	6	5	5	8	6	12	16	20	16	18	18	10	10	10	9	8	9	4	4	3	9.2	20.4
19-Jan	3	5	6	7	5	4	5	11	6	7	9	9	9	12	13	6	6	9	7	7	9	13	11	11	7.9	12.9
20-Jan	7	5	4	4	3	2	2	1	2	3	3	5	3	4	2	2	2	3	3	5	6	5	5	10	3.8	9.7
21-Jan	11	13	13	15	16	18	21	20	22	16	24	22	22	22	22	21	17	14	10	12	8	11	6	8	16.0	23.9
22-Jan	9	9	11	7	3	3	5	8	3	4	4	6	5	5	3	3	1	3	7	3	3	3	4	4	4.8	11.0
23-Jan	4	4	6	7	10	11	13	12	5	6	4	4	3	3	4	3	4	3	4	4	5	4	5	6	5.5	12.8
24-Jan	4	4	2	2	3	4	5	4	3	7	8	7	7	6	10	9	8	9	9	10	6	9	11	7	6.5	10.8
25-Jan	7	9	13	12	11	10	11	12	7	9	12	11	13	13	11	25	26	24	17	17	19	20	20	20	14.5	26.1
26-Jan	18	17	17	20	17	18	19	19	21	20	17	16	14	16	15	13	11	7	7	11	10	5	6	8	14.3	21.3
27-Jan	8	8	9	8	7	8	8	7	7	7	5	4	4	6	5	5	4	5	7	8	7	8	8	7	6.7	8.8
28-Jan	7	6	6	4	6	4	3	3	6	6	4	4	6	7	8	9	11	9	8	8	9	5	6	6	6.2	10.7
29-Jan	6	5	9	9	10	6	9	9	9	7	6	7	11	10	8	8	7	15	11	16	18	22	25	18	10.9	25.3
30-Jan	15	16	20	27	25	17	18	20	22	23	24	22	24	22	21	19	20	18	16	18	15	18	16	11	19.4	27.5
31-Jan	9	9	9	10	6	6	6	3	0	2	3	9	6	9	9	7	7	7	2	1	1	2	4	4	5.6	9.7
	8.4	8.3	8.8	8.9	8.8	7.8	8.5	8.6	8.3	8.5	8.7	9.4	9.4	9.3	8.7	8.4	7.9	7.7	7.4	7.4	7.4	8.0	8.4	8.3	Diurnal Average	
	21.9	20.6	24.9	27.5	25.1	18.1	20.5	28.7	21.9	22.8	24.2	31.2	28.4	22.4	23.7	24.8	26.1	23.7	17.3	17.5	18.6	21.8	25.3	22.7	Diurnal Maximum	

N - Not Valid  
 All monthly, daily, and diurnal averages have been calculated using scalar methods

# Hourly Standard Deviations

Wind Direction (WD) - deg

Portable Rycroft - January 2018

Maximum Value: 100.2 deg on Jan 16 05:00		Hours in Service: 744																								
Minimum Value: 2.0 deg on Jan 25 23:00		Hours of Data: 742																								
Percentiles: P <sub>1</sub> = 2.2 P <sub>10</sub> = 3.7 Q <sub>1</sub> = 6.1 Median = 12.4 Q <sub>3</sub> = 29.6 P <sub>90</sub> = 53.2 P <sub>99</sub> = 87.5		Hours of Missing Data: 2																								
		Hours of Calibration: 0																								
		Percent Operational Time: 99.7																								
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-Jan	31	31	75	40	36	30	13	60	20	56	30	17	35	25	78	59	66	36	31	6	11	14	4	6	77.6	
2-Jan	18	2	2	5	11	10	7	7	59	46	12	23	10	23	15	14	43	21	10	5	9	21	13	16	59.3	
3-Jan	73	65	59	14	9	52	43	13	35	10	16	5	8	17	41	37	12	5	19	23	14	6	8	14	73.4	
4-Jan	11	9	28	66	18	7	12	6	38	15	49	43	34	79	12	46	13	24	22	34	42	36	41	64	78.9	
5-Jan	34	70	60	39	15	37	58	45	31	19	72	36	54	71	17	10	26	50	25	92	88	41	61	32	91.5	
6-Jan	61	15	27	13	3	7	3	3	3	6	4	3	8	6	4	4	4	4	3	7	10	7	3	3	61.0	
7-Jan	3	4	3	2	3	11	5	4	10	20	13	47	19	15	6	10	11	8	9	10	11	8	8	4	46.6	
8-Jan	9	13	14	42	15	10	6	5	9	6	6	9	6	20	12	12	5	7	4	6	7	7	8	4	42.5	
9-Jan	7	9	6	3	5	8	4	11	3	3	4	5	5	5	4	4	9	8	15	6	6	13	4	11	14.6	
10-Jan	7	21	10	7	6	5	4	6	4	12	4	17	4	4	5	7	7	10	11	5	6	6	5	8	20.8	
11-Jan	5	11	8	8	12	11	39	22	5	11	39	14	10	17	5	27	15	12	7	26	12	15	11	15	39.3	
12-Jan	13	18	61	12	45	45	28	30	21	85	62	45	49	11	12	21	44	93	76	58	58	27	50	78	93.0	
13-Jan	96	53	16	31	13	13	29	16	60	80	49	12	44	61	44	66	15	21	13	21	23	51	24	53	96.5	
14-Jan	6	6	6	6	6	7	7	14	6	6	8	9	11	7	11	10	5	7	4	6	6	5	11	11	13.8	
15-Jan	7	7	7	33	33	10	28	37	17	14	57	13	11	34	38	6	89	78	58	22	38	23	41	75	88.9	
16-Jan	67	72	61	49	100	54	33	16	80	74	30	63	88	59	51	22	33	15	12	57	76	27	9	7	100.2	
17-Jan	3	4	12	8	4	3	9	9	8	9	24	48	10	29	57	21	16	31	29	34	43	N	N	31	56.6	
18-Jan	16	43	13	54	40	21	31	32	33	12	8	4	6	4	6	4	3	3	5	19	35	68	27	67.8		
19-Jan	48	36	10	5	15	16	18	9	18	15	6	6	5	6	14	12	6	11	16	8	11	13	9	8	48.3	
20-Jan	13	33	24	21	20	26	75	70	56	28	36	34	35	20	75	48	52	49	30	17	7	9	38	16	75.2	
21-Jan	8	8	14	6	6	7	5	5	5	5	5	5	5	6	5	4	12	4	3	3	21	31	32	12	31.8	
22-Jan	9	8	11	30	36	59	25	15	50	29	47	37	13	8	14	14	87	53	20	21	19	73	19	23	86.9	
23-Jan	59	74	27	14	12	4	3	17	33	55	41	24	27	13	14	37	38	17	32	17	11	13	22	22	73.9	
24-Jan	26	15	71	58	62	29	32	19	58	12	10	9	9	17	46	76	10	12	11	18	16	12	6	13	75.6	
25-Jan	14	11	5	6	7	5	3	3	15	8	6	3	3	6	50	3	4	4	6	3	4	5	2	3	50.0	
26-Jan	2	3	3	3	3	2	3	2	2	2	3	3	3	5	5	5	4	8	11	6	20	30	13	4	29.6	
27-Jan	5	4	3	3	3	3	2	4	6	5	19	20	20	12	16	13	20	9	9	9	9	5	4	10	20.2	
28-Jan	13	11	12	26	15	26	34	39	55	7	25	11	12	16	16	4	8	9	8	8	7	22	15	16	55.1	
29-Jan	14	21	9	9	10	22	8	18	6	26	19	9	23	8	31	37	21	14	10	12	4	3	4	4	36.8	
30-Jan	4	3	5	6	7	3	9	4	5	4	4	3	4	3	3	4	2	3	2	4	5	5	5	43	43.3	
31-Jan	6	3	15	9	12	9	5	31	77	15	31	7	37	19	22	23	9	9	31	32	46	15	5	15	77.0	
	96.5	73.9	75.1	66.2	100.2	59.0	74.8	70.1	79.9	84.8	72.1	63.2	87.6	78.9	77.6	75.6	88.9	93.0	76.4	91.5	87.6	73.2	67.8	78.1		
N - Not Valid																										

# PAZA

## Monthly Passive Data Summary



## PAZA Passive Results for January 2018

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	Site Legal
<b>Duplicates</b>						
19a	Wanham	0.5				
19b	Wanham	0.4				
21a	Eaglesham	0.3				
21b	Eaglesham	0.2				
29a	Smoky Heights			2.9		
29b	Smoky Heights			3.0		
30a	Fitzsimmons			2.9		
30b	Fitzsimmons			3.3		
37a	Crooked Creek		36.2			
37b	Crooked Creek		31.7			
64a	Girouxville 4				0.4	
64b	Girouxville 4				0.4	
2	Bay Tree	0.3	28.7	0.4		13-16-078-13 W6M
3	Fourth Creek	0.3		1.5		04-13-082-07 W6M
9	Spirit River	0.4		1.7		08-12-079-07 W6M
12	Hythe	0.5		3.8		14-36-072-11 W6M
14	Sylvester	0.2		4.3		08-06-069-12 W6M
16	Beaverlodge	0.5		3.2		15-36-071-10 W6M
18	Saddle Hills	0.9		1.6		04-25-074-07 W6M
19	Wanham	0.5		1.4		16-22-077-03 W6M
21	Eaglesham	0.3		1.4		16-21-079-25 W5M
24	Wembley	0.4		3.8		12-31-070-08 W6M
25	Pinto Creek	0.2		3.1		04-24-069-11 W6M
27	Grande Prairie I	0.6		18.8		08-15-071-06 W6M
29	Smoky Heights	0.8		2.9		04-06-075-02 W6M
30	Fitzsimmons	0.3		2.9		15-36-072-03 W6M
32	Gold Creek	0.5		3.4		06-33-067-05 W6M
35	Jean Cote	0.3		4.6		12-35-079-21 W5M
36	Guy	0.2		1.7	0.2	03-04-076-22 W5M
37	Crooked Creek	0.3	33.9	2.9		16-01-071-26 W5M
39	Clouston Creek	0.4		2.2		12-01-073-22 W5M
40	McLennan	0.3		2.5		03-29-077-19 W5M
42	Sunset House	0.4		1.6		05-32-070-19 W5M
44	Peavine	0.2		1.0		03-05-079-15 W5M
46	Little Smoky	0.3		5.9		12-01-065-21 W5M
47	Kinuso	0.2	36.8	2.5		12-10-073-10 W5M
49	Grande Prairie HP	0.4		4.3		17-26-071-06 W6M
50	East Prairie	0.1		1.3		13-02-072-15 W5M
63	Girouxville 3				0.5	14-02-077-23 W5M
64	Girouxville 4				0.4	4-08-077-22 W5M

\*BDL = Below Detection Level

\*N/S - No sample

## Passive Summary for January 2018

Stats	Sulphur Dioxide SO <sub>2</sub>	Ozone O <sub>3</sub>	Nitrogen Dioxide NO <sub>2</sub>	Hydrogen Sulphide H <sub>2</sub> S
	ppb	ppb	ppb	ppb

Passive Summary for January 2018 (PAZA Zone)				
<b>Mean</b>	<b>0.4</b>	<b>33.1</b>	<b>3.3</b>	<b>0.3</b>
<b>Standard Deviation</b>	<b>0.2</b>	<b>4.1</b>	<b>3.4</b>	<b>0.1</b>
<b>Minimum</b>	<b>0.1</b>	<b>28.7</b>	<b>0.4</b>	<b>0.2</b>
<b>Minimum At</b>	<b>East Prairie (#50)</b>	<b>Bay Tree (#2)</b>	<b>Bay Tree (#2)</b>	<b>Guy (#36)</b>
<b>Maximum</b>	<b>0.9</b>	<b>36.8</b>	<b>18.8</b>	<b>0.5</b>
<b>Maximum At</b>	<b>Saddle Hills (#18)</b>	<b>Kinuso (#47)</b>	<b>Grande Prairie I (#27)</b>	<b>Girouxville 3 (#63)</b>

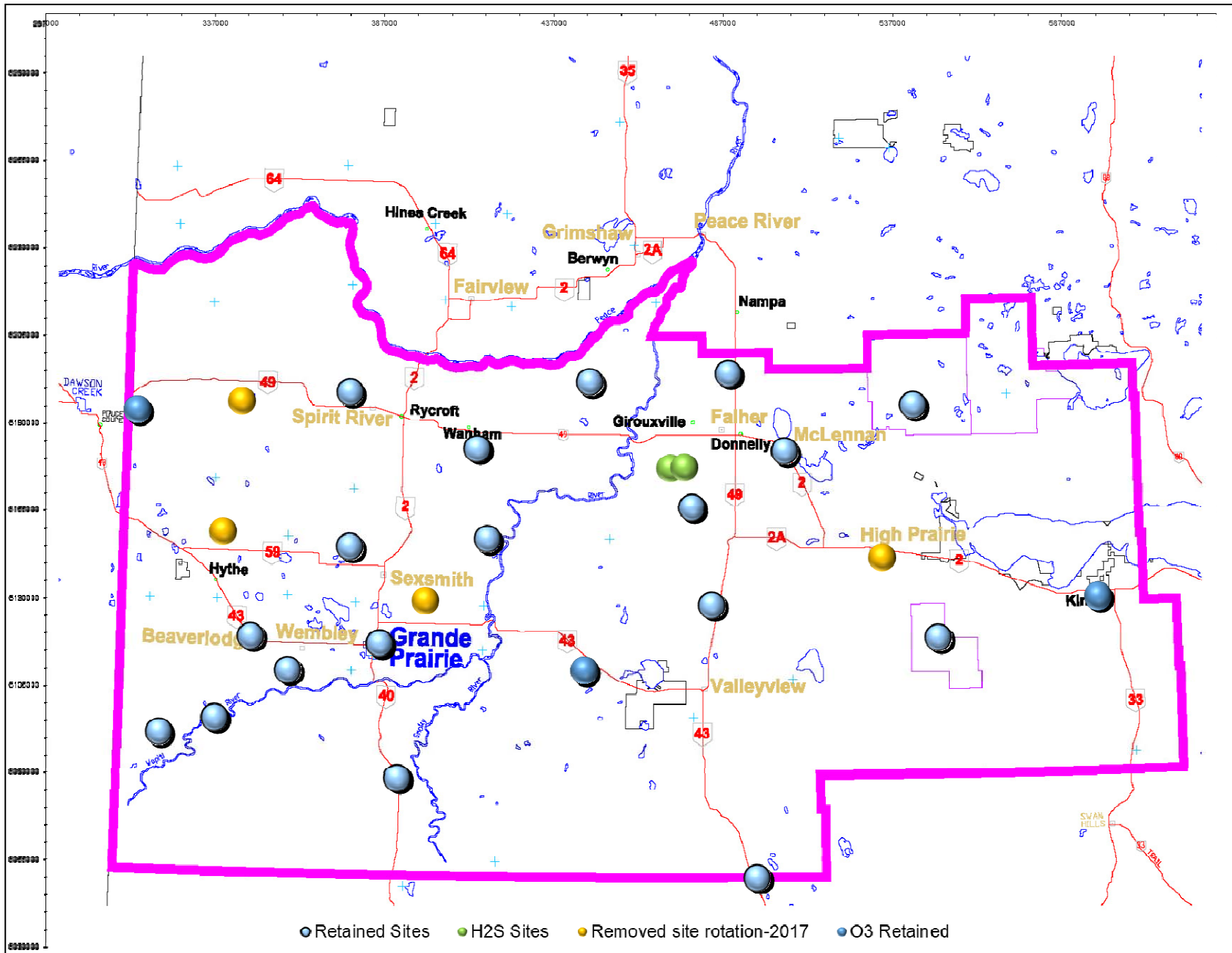
### Comparison between Continuous and Passive monitoring at Beaverlodge (passive #16 Beaverlodge)

	SO <sub>2</sub>	NO <sub>2</sub>
<b>PAZA Beaverlodge station</b>	<b>0.4</b>	<b>7.9</b>
<b>PAZA Beaverlodge passive</b>	<b>0.5</b>	<b>3.2</b>

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

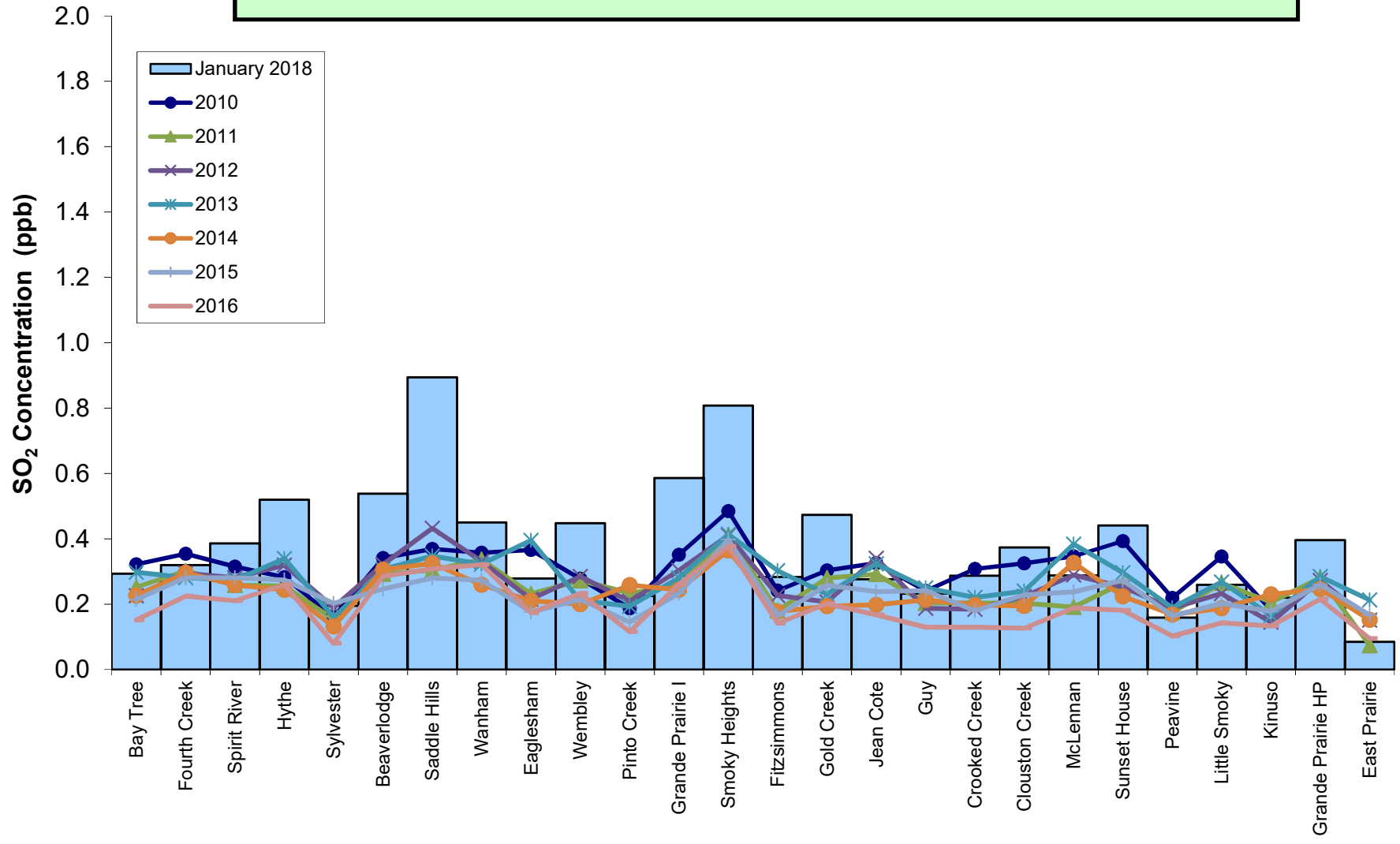
	SO <sub>2</sub>	NO <sub>2</sub>
<b>PAZA Henry Pirker station</b>	<b>0.6</b>	<b>19.5</b>
<b>PAZA Grande Prairie passive</b>	<b>0.6</b>	<b>18.8</b>

# Location of PAZA Passive Monitoring Stations

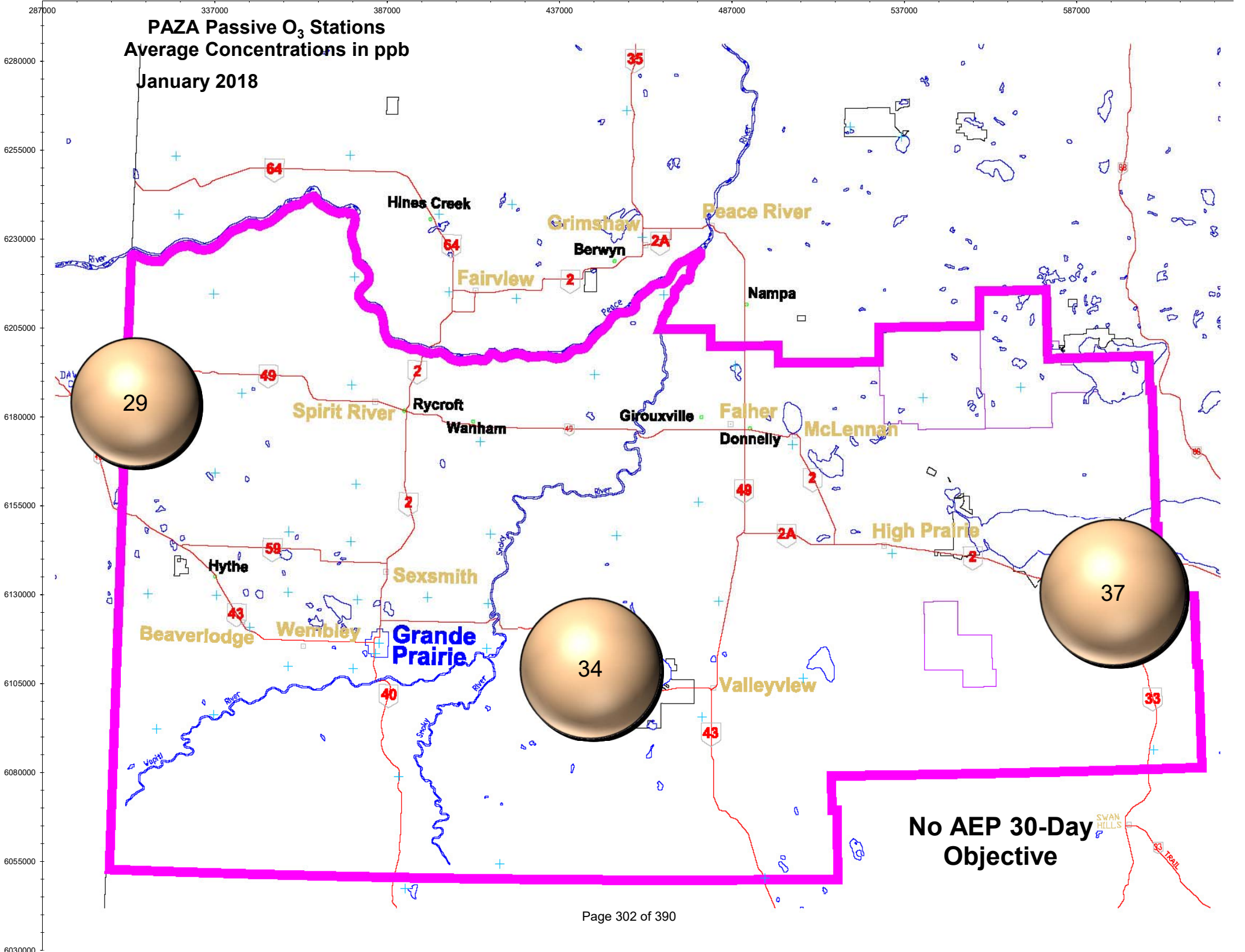




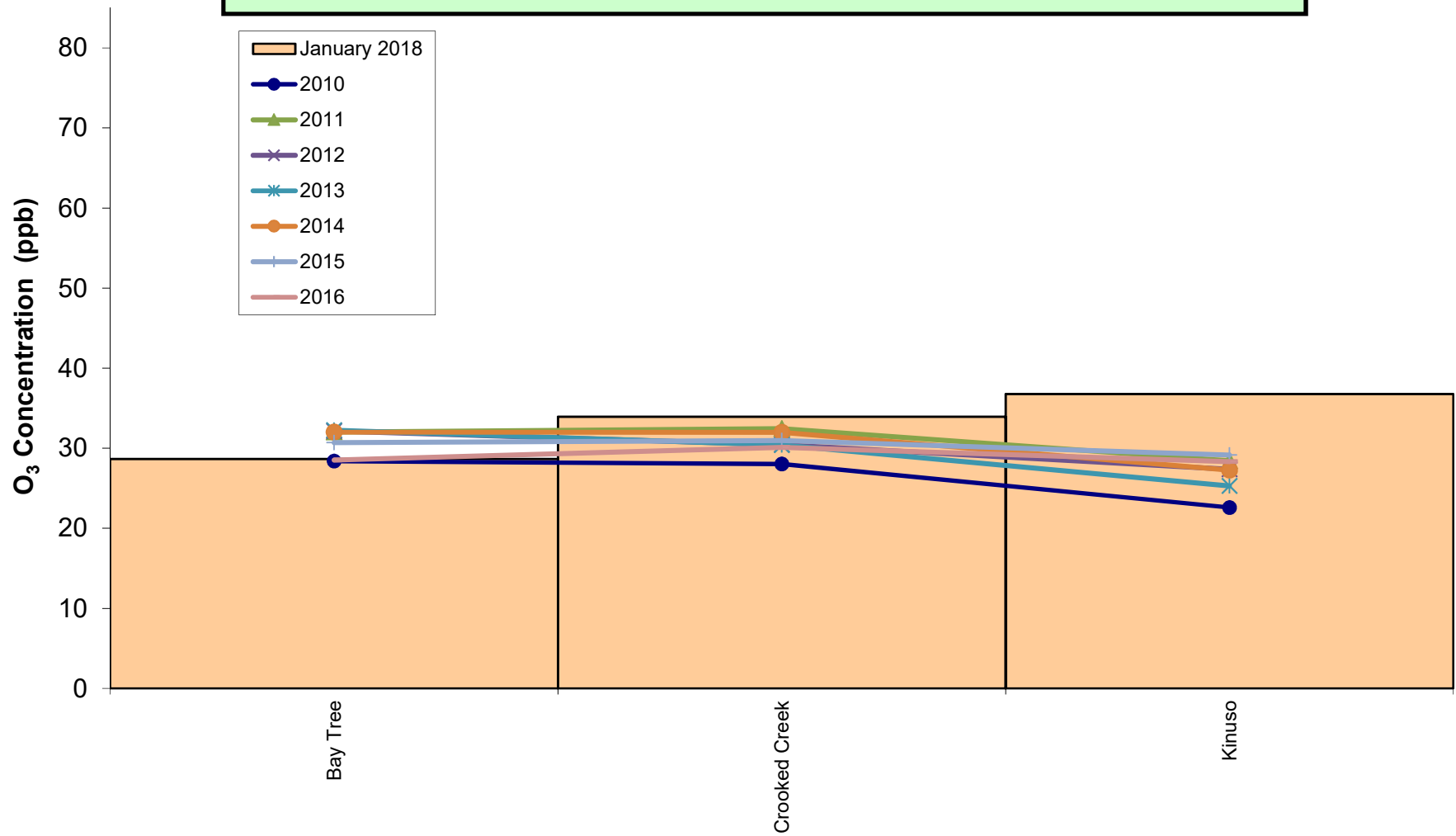
**Alberta Ambient Air Quality Objective - 30-day Objective is 11 ppb**



**PAZA Passive O<sub>3</sub> Stations  
Average Concentrations in ppb  
January 2018**



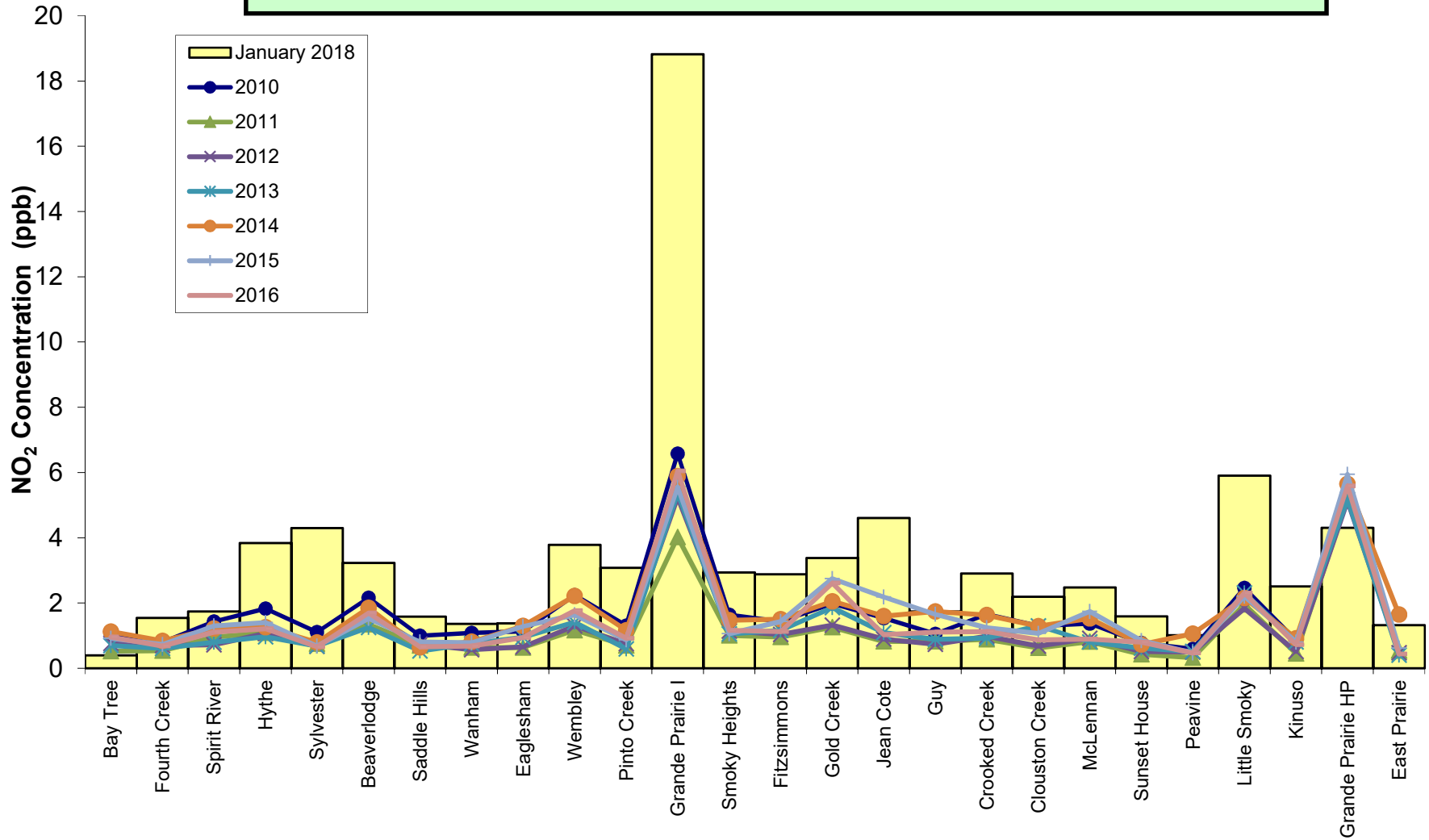
### Alberta Ambient Air Quality Objective - No Annual O<sub>3</sub> Objective



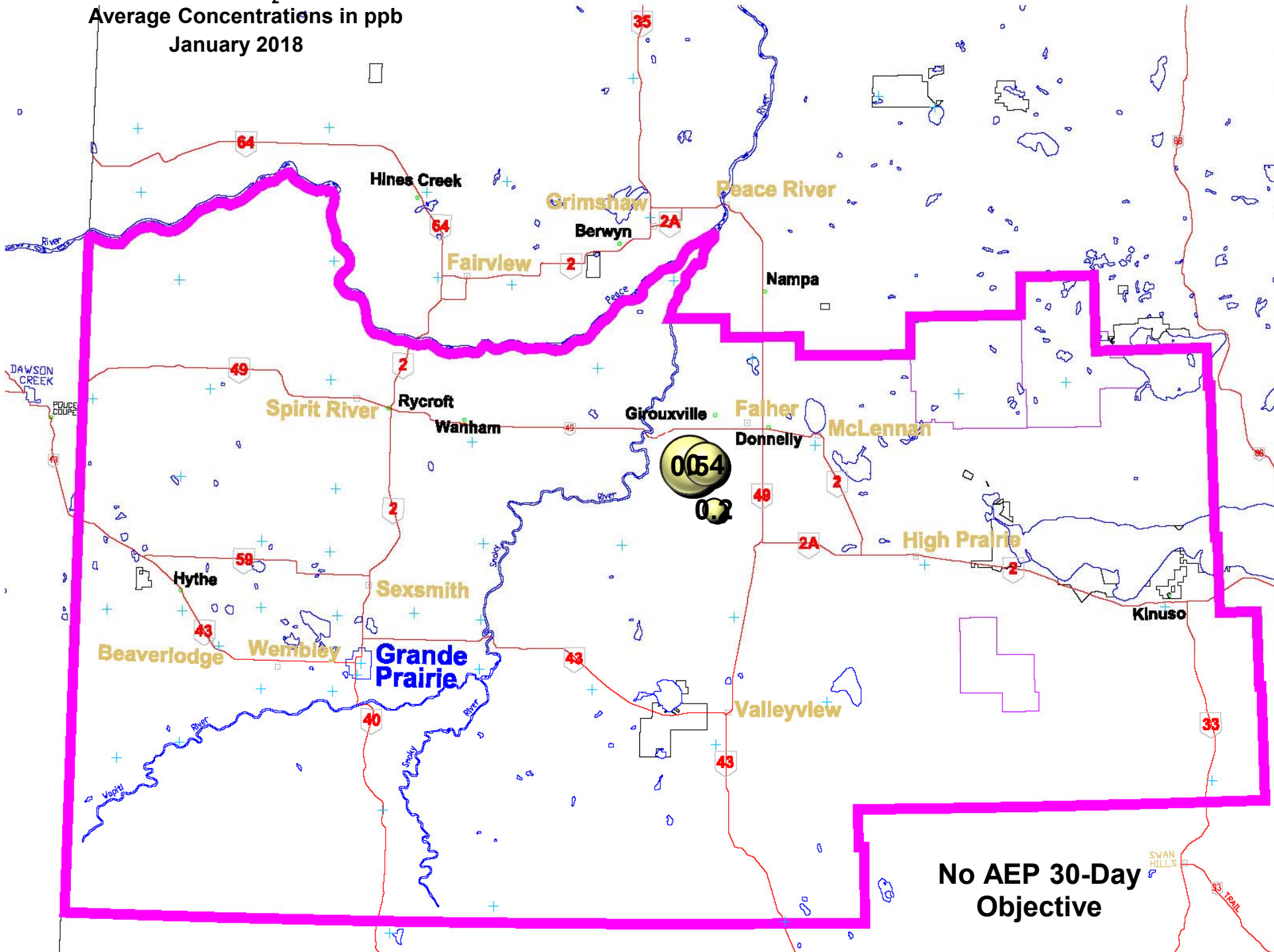




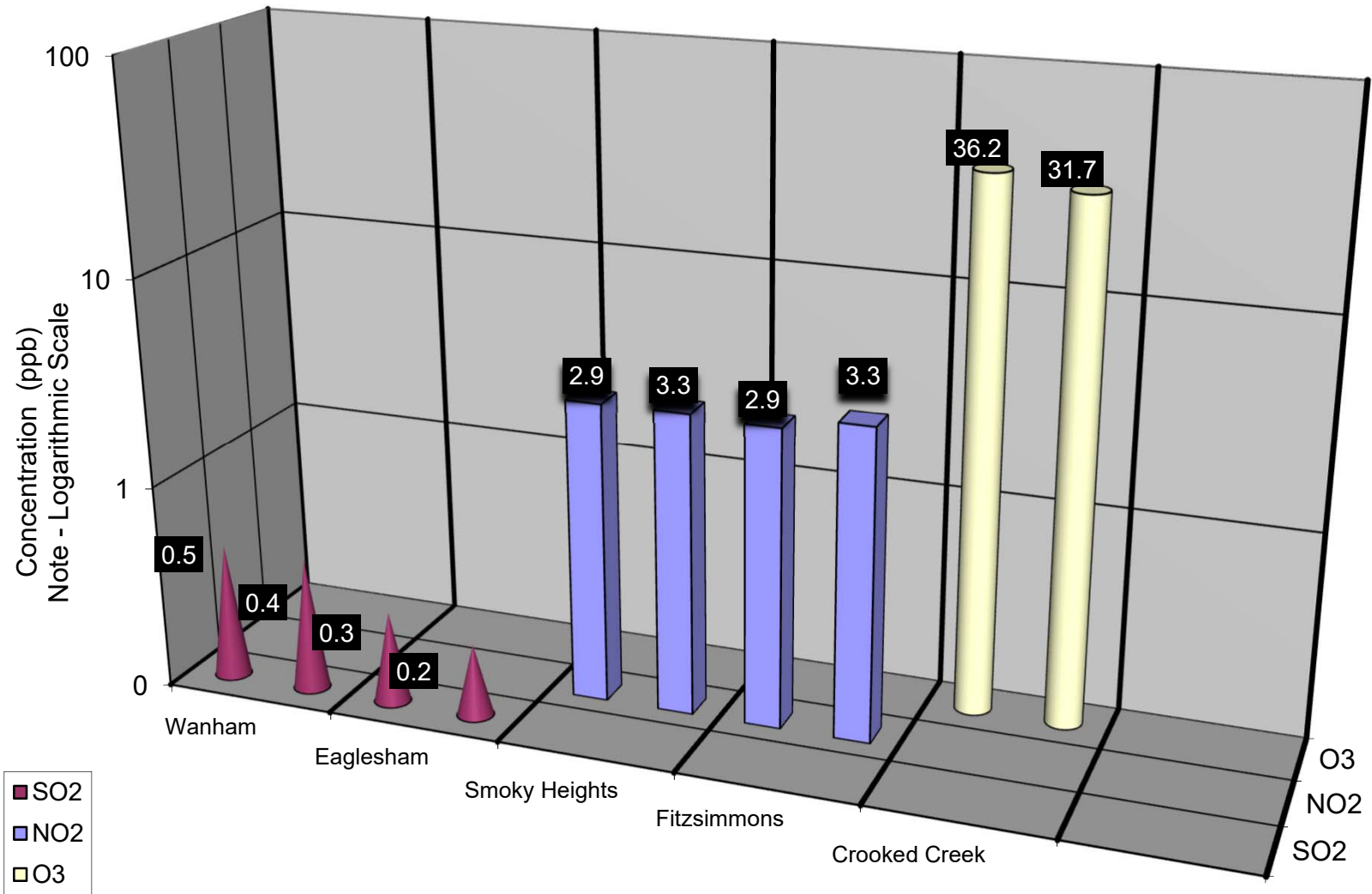
**Alberta Ambient Air Quality Objective - Annual NO<sub>2</sub> Objective is 24 ppb**



**PAZA Passive H<sub>2</sub>S Stations  
Average Concentrations in ppb  
January 2018**



**No AEP 30-Day  
Objective**



Duplicate Summary Chart

# January 2018 Calibration Reports

**PAZA - Henry Pirker Station with the following calibrations:  
SO<sub>2</sub>, NO, NO<sub>2</sub>, NO<sub>x</sub>, O<sub>3</sub>, CO, THC, and TRS**

**PAZA – Evergreen Park Station with the following calibrations:  
SO<sub>2</sub> and TRS**

**PAZA – Smoky Heights Station with the following calibrations:  
SO<sub>2</sub> and TRS**

**PAZA – Beaverlodge Station with the following calibrations:  
SO<sub>2</sub>, NO, NO<sub>2</sub>, NO<sub>x</sub>, O<sub>3</sub>, and PM<sub>2.5</sub>**

**PAZA – Valleyview Station with the following calibrations:  
SO<sub>2</sub> and H<sub>2</sub>S**

**PAZA – Donnelly Station with the following calibrations:  
SO<sub>2</sub> and H<sub>2</sub>S**

**PAZA – Rycroft Station with the following calibrations:  
SO<sub>2</sub>, NO, NO<sub>2</sub>, NO<sub>x</sub>, O<sub>3</sub>, THC, and TRS**

# Calibration Report



AIR QUALITY MONITORING

Parameter SO2

Air Monitoring Network PAZA

## Station Information

Calibration Date	January 9, 2018	Previous Calibration	December 5, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	9:10	End Time (MST)	11:50
Barometric Pressure	923.0 mbar	Station Temperature	20.0 Deg C
Calibrator	Envionics	Serial Number	6586
Cal Gas Conc	49.6 ppm	Cal Gas Cert Date	10/24/2020
		Cal Gas Cylinder #	LL107945
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	10
	Before		After
Calculated slope	0.983501	Calculated slope	0.998785
Calculated intercept	2.709334	Calculated intercept	1.200331
Analyzer make	TEI 43I-TLE	Analyzer serial #	1507864682 (AMU 2006)

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	1.43		1.40	
Coefficient	0.915		0.897	
Pressure	669.8	mm Hg	670.7	mm Hg
Flow	0.441	lpm	0.442	lpm
Lamp intensity	81	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	0.1	N/A
4996	39.97	393.7	393.7	0.9999
4996	20.06	198.4	196.4	1.0100
4996	10.01	99.2	97.0	1.0227
4996	0.00	0.0	0.1	As Found Zero
4996	39.97	393.7	401.1	As Found Span
Average Correction Factor				1.0108

Calculated value of As Found Response: 397.0 ppb      Percent Change of As Found: -0.8%

	before calibration		after calibration	
Auto zero	-0.2	ppb	0.2	ppb
Auto span	283.2	ppb	278.2	ppb

Notes: Span adjustment made

Calibration Performed By: Dmytro Dolotii

# Calibration Summary



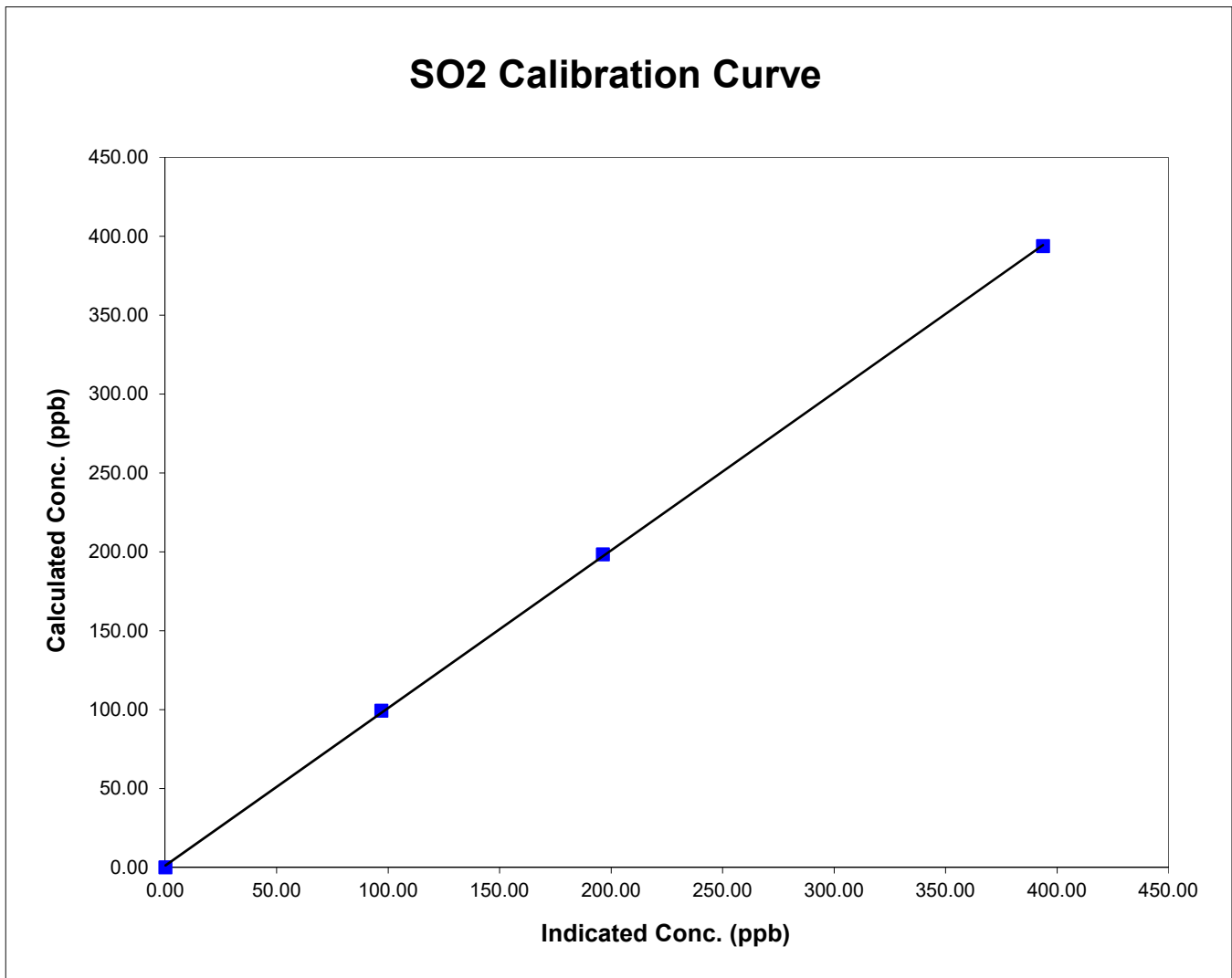
Parameter SO2  
 Air Monitoring Network PAZA

### Station Information

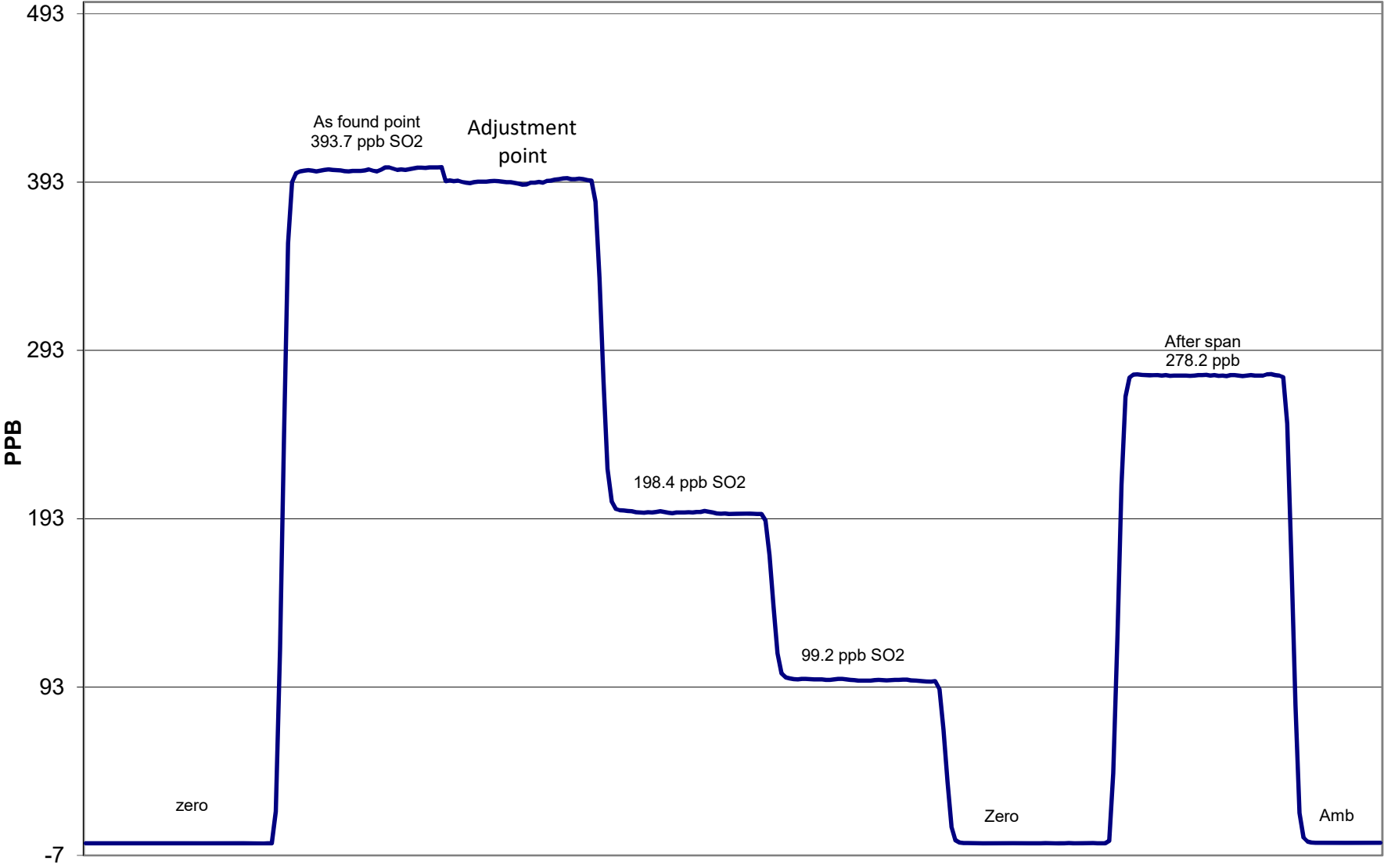
Calibration Date	January 9, 2018	Previous Calibration	December 5, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:10	End Time (MST)	11:50
Analyzer make/model	TEI 43I-TLE	Analyzer serial #	1507864682 (AMU 2006)

### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999945
393.7	393.7	0.9999		
198.4	196.4	1.0100		
99.2	97.0	1.0227		
			Slope	0.998785
			Intercept	1.200331



# SO2 Calibration



January 9, 2018

# Calibration Report

Parameter **NO<sub>x</sub>-NO-NO<sub>2</sub>**  
 Air Monitoring Network **PAZA**



## Station Information

Calibration Date	January 9, 2018	Previous Calibration	December 5, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	<b>Routine</b>	Installation	Removal
Start Time (MST)	9:15	End Time (MST)	12:55
Barometric Pressure	0.923 mbar	Station Temperature	20.0 Deg C
Calibrator	Envionics 6103	Serial Number	6586
NO Cal Gas Conc	51.9 ppm	Cal Gas Expiry Date	10/24/2020
NO <sub>x</sub> Cal Gas Conc	52.0 ppm	Cal Gas Serial #	LL107945

## DACS Information

DACS make	CR3000	DACS serial No.	5408
-----------	--------	-----------------	------

Parameter		NO2	NO <sub>x</sub>	NO
Before	Data Slope	0.997296	0.997892	0.999898
	Data Offset	0.035891	0.466429	0.849130
After	Data Slope	1.000150	1.006410	1.003845
	Data Offset	-0.509825	1.108802	1.535345
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	8.2	mV	8.2	mV
NO <sub>x</sub> bkgnd	8.5	mV	8.5	mV
NO coefficient	1.093		1.093	
NO <sub>x</sub> coefficient	1.000		1.000	
NO2 conv temp	322.1	Deg C	326.6	Deg C
Cooler Temp	2.7	Deg C	2.7	Deg C
PMT Volt	-844.3	mV	-844.4	mV
R Cell Press	210.5	in Hg	210.8	in Hg
Sample Flow	0.548	LPM	0.556	LPM

Notes: No adjustment made



# Calibration Report



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

## Station Information

Calibration Date: **January 9, 2018** Station Location: **Henry Pirker**

## Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	
zero	4996	0.00	0.0	0.0	0.0	0.0	0.1	0.0	N/A	N/A	
1	4996	39.97	412.7	411.9	0.8	409.6	409.8	0.1	1.0077	1.0051	
2	4996	20.06	208.0	207.6	0.4	204.8	203.8	0.6	1.0152	1.0182	
3	4996	10.01	104.0	103.8	0.2	101.3	100.6	0.7	1.0267	1.0317	
AFZ	4996	0.00	0.0	0.0	0.0	0.0	0.1	0.0	0.0000	0.0000	
AFS	4996	39.97	412.7	411.9	0.8	409.6	409.8	0.1	1.0077	1.0051	
									Average Correction Factor	1.0165	1.0184

As Found Concentrations: **NO<sub>x</sub>= 409.2** **NO= 410.5** As Found Percent Change **NO<sub>x</sub>= -0.8%** **NO= -0.3%**

## 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	0.1	0.1	0.0	0.0	0.1	0.0	N/A	N/A	N/A	N/A	
NO point	409.7	409.7	0.0	410.1	409.7	0.3	0.9990	1.0000	N/A	N/A	
300	409.7	110.0	299.6	409.9	110.0	299.8	0.9995	1.0000	0.9996	100.0%	
200	409.7	209.8	199.9	411.2	209.8	200.6	0.9963	1.0000	0.9965	100.4%	
100	409.7	313.8	95.9	411.7	313.8	97.0	0.9952	1.0000	0.9886	101.2%	
							Average Correction Factor	0.9970	1.0000	0.9949	100.5%

## AIC Data

Parameter	Previous calibration				Current calibration			
	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.0	0.1	0.2	ppb	0.0	0.0	0.1	ppb
Auto span	298.2	295.7	2.1	ppb	282.9	281.4	1.4	ppb

Calibration Performed By: Dmytro Dolotii

# Calibration Summary



Parameter NO<sub>2</sub>

Air Monitoring Network PAZA

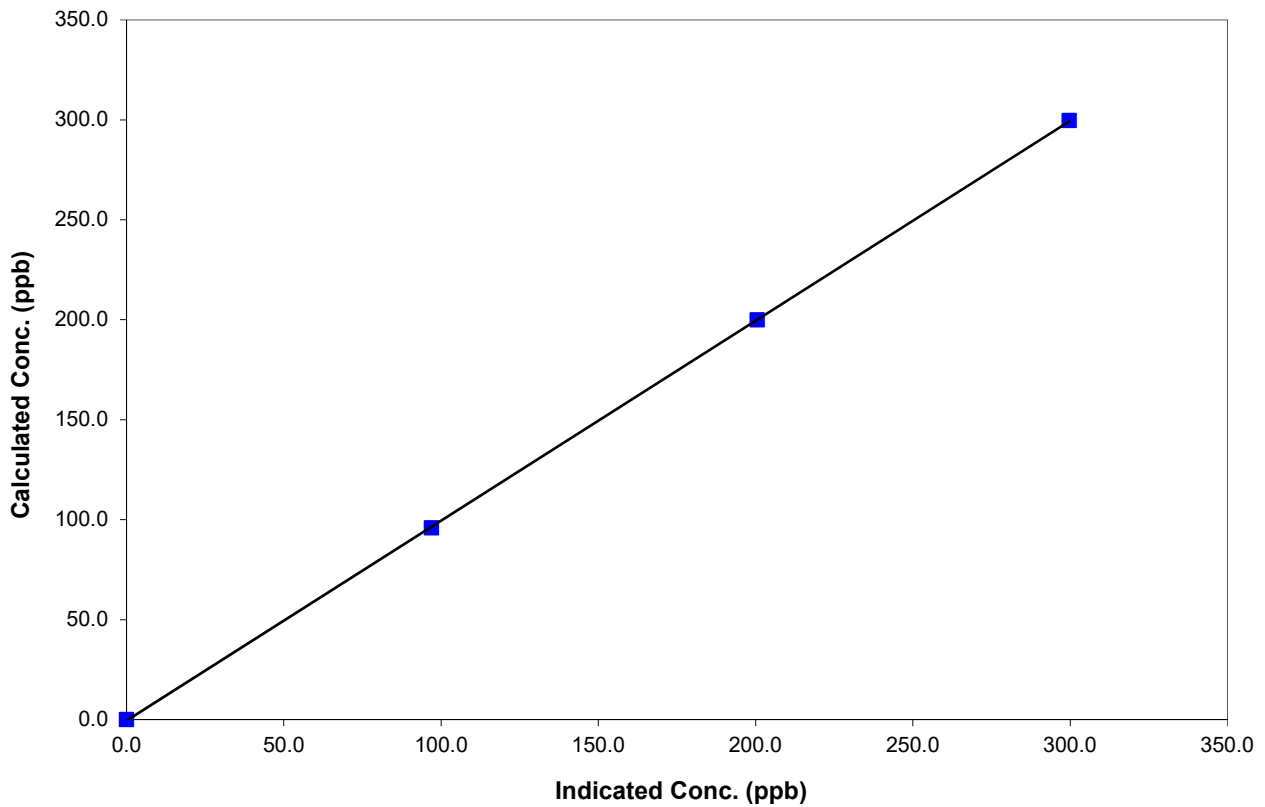
## Station Information

Calibration Date	January 9, 2018	Previous Calibration	December 5, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:15	End Time (MST)	12:55
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	0.999985
299.6	299.8	0.9996		
199.9	200.6	0.9965	Slope	1.000150
95.9	97.0	0.9886		
			Intercept	-0.509825

**NO<sub>2</sub> Calibration Curve**



# Calibration Summary



Parameter NO<sub>x</sub>

Air Monitoring Network PAZA

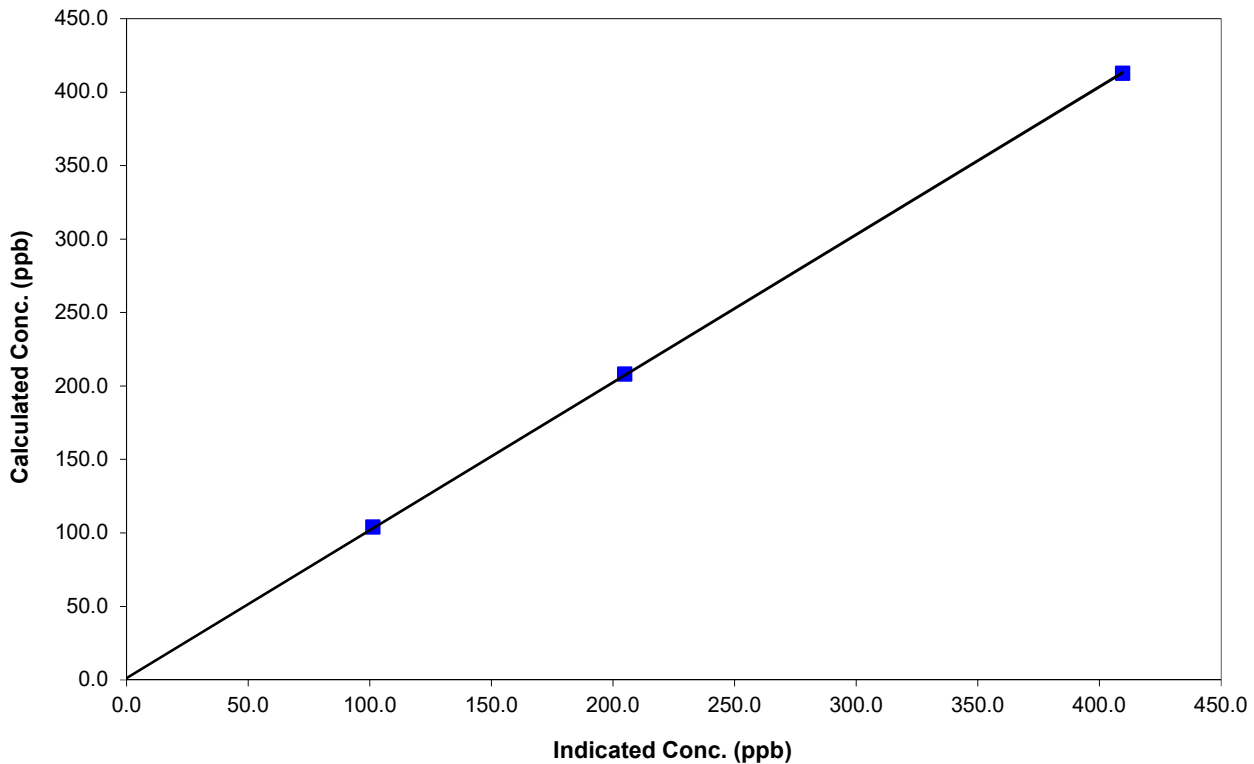
## Station Information

Calibration Date	January 9, 2018	Previous Calibration	December 5, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:15	End Time (MST)	12:55
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	0.999969
412.7	409.6	1.0077		
208.0	204.8	1.0152		
104.0	101.3	1.0267	Slope	1.006410
			Intercept	1.108802

## NO<sub>x</sub> Calibration Curve



# Calibration Summary



Parameter NO  
 Air Monitoring Network PAZA

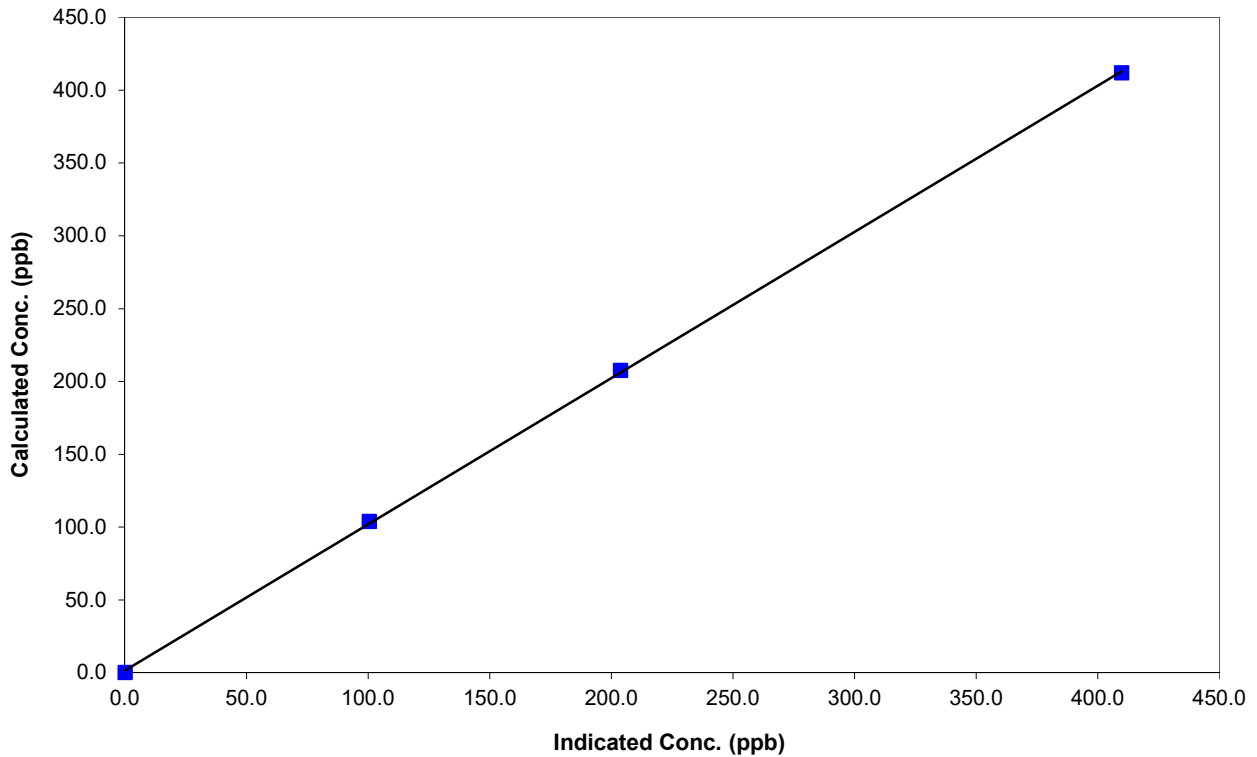
## Station Information

Calibration Date	January 9, 2018	Previous Calibration	December 5, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:15	End Time (MST)	12:55
Analyzer make	42i	Analyzer serial #	906535087

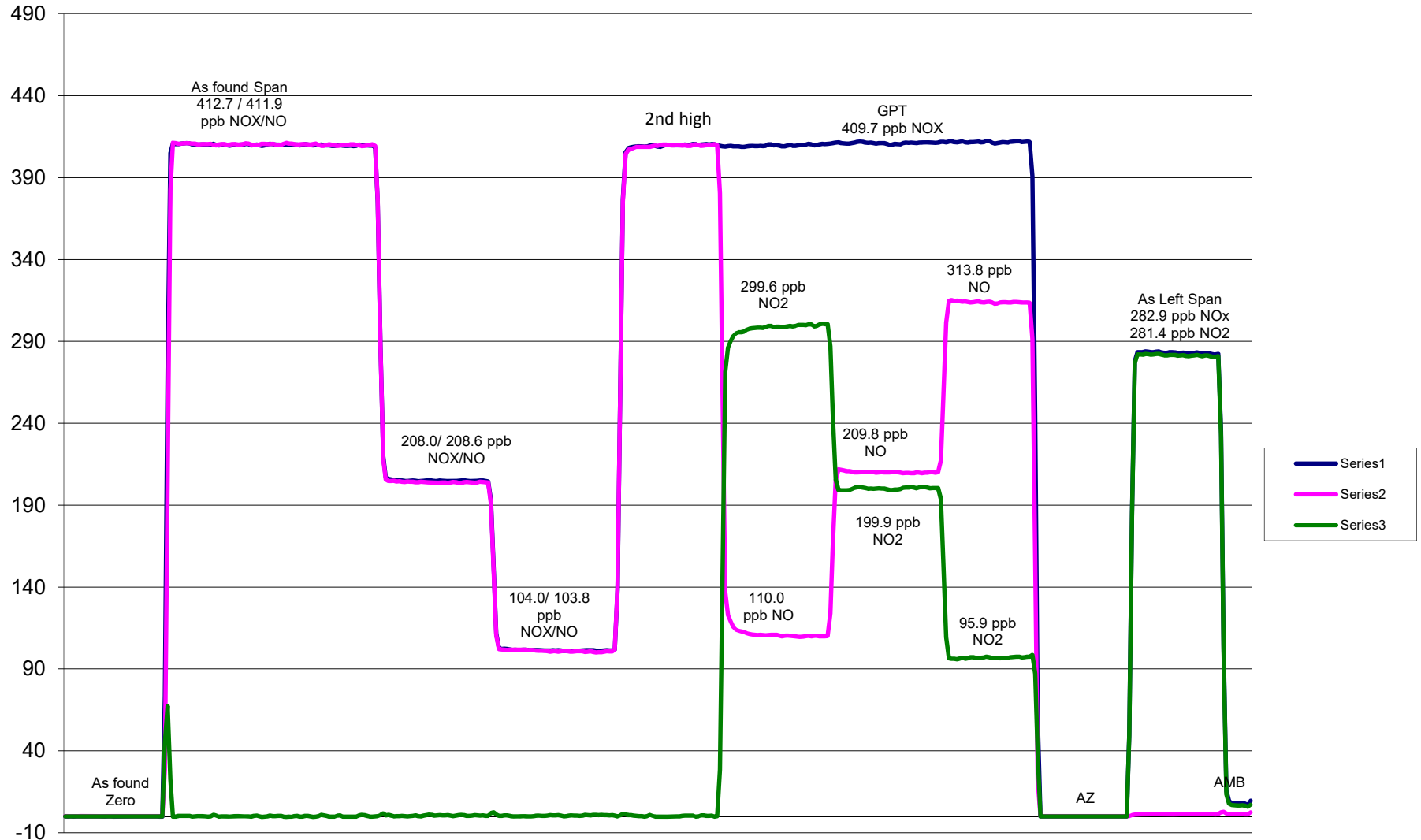
## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999921
411.9	409.8	1.0051		
207.6	203.8	1.0182		
103.8	100.6	1.0317	Slope	1.003845
			Intercept	1.535345

## NO Calibration Curve



# NO<sub>x</sub> Calibration

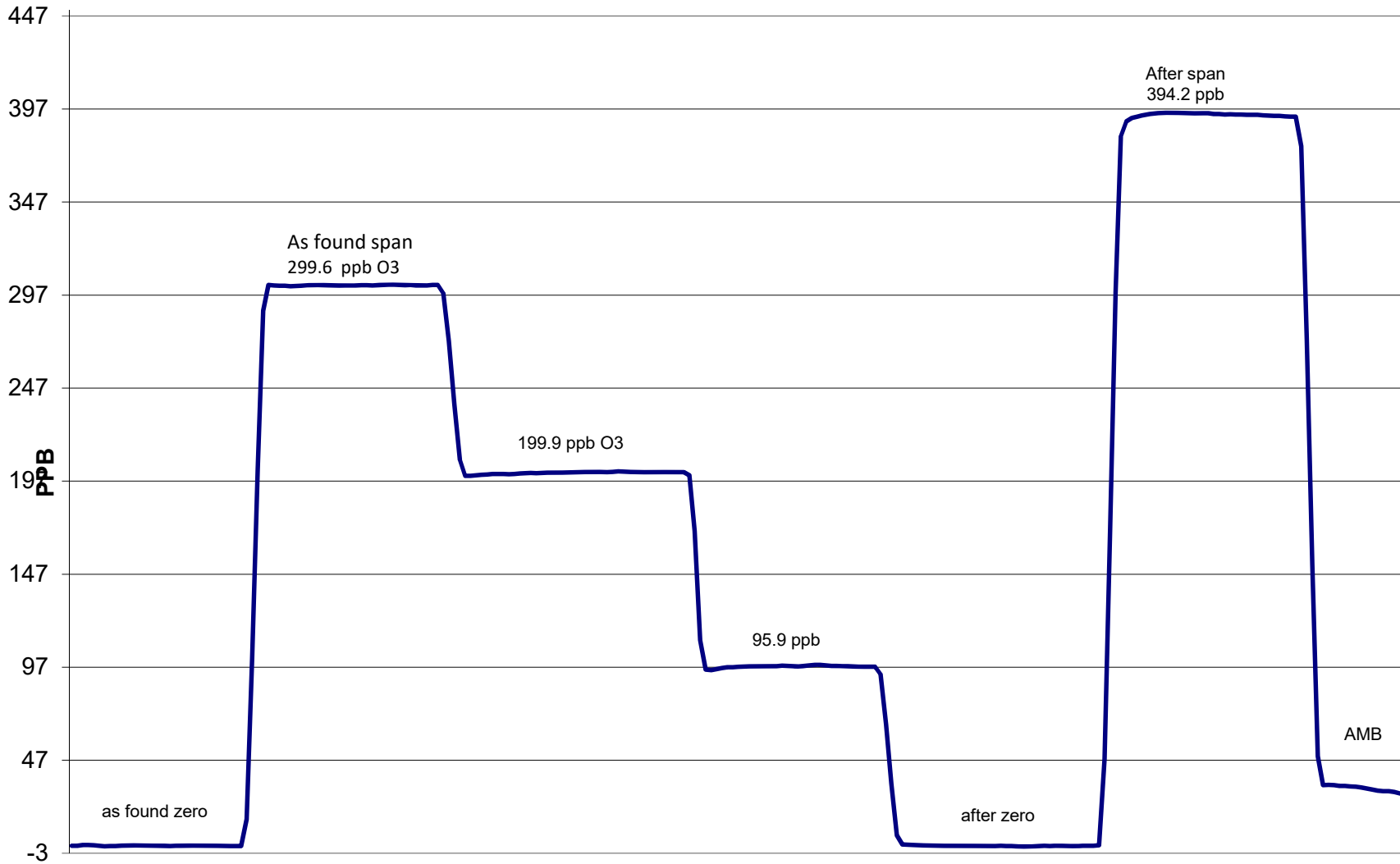


January 9, 2018





# O3 Calibration



January 9, 2018



# Calibration Report



AIR QUALITY MONITORING

Parameter CO

Air Monitoring Network PAZA

## Station Information

Calibration Date	January 10, 2018	Previous Calibration	December 6, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	9:55	End Time (MST)	12:05
Barometric Pressure	0.919 mBar	Station Temperature	23.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	6586
Cal Gas Conc	2906 ppm	Cal Gas Expiry Date	7/7/2023
		Cal Gas Cylinder #	LL109096
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 5 volt	DACS channel #	9
	<b>Before</b>		<b>After</b>
Calculated slope	1.000292	Calculated slope	1.000614
Calculated intercept	-0.189926	Calculated intercept	-0.151604
Analyzer make	Model 48I-TLE	Analyzer serial #	1408761378

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO zero setting	9.434		9.925	
CO span setting	1.080		1.080	
Sample pressure	710.3	mm Hg	701	mm Hg
Sample Flow	0.019	LPM	0.455	LPM

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4997	0.00	0.00	0.01	N/A
4998	69.96	40.12	40.11	1.0002
4998	35.00	20.21	20.60	0.9810
4998	18.32	10.61	10.78	0.9841
4998	0.00	0.00	0.01	As Found Zero
4998	69.96	40.12	40.11	As Found Span
Average Correction Factor				0.9885

Calculated value of As Found Response: 39.918 ppm      Percent Change of As Found: 0.5%

	before calibration		after calibration	
Auto zero	-0.01	ppm	0.01	ppm
Auto span	20.73	ppm	20.54	ppm

Notes: Sample pump was rebuilt

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Calibration Performed By: Dmytro Dolotii

# Calibration Summary



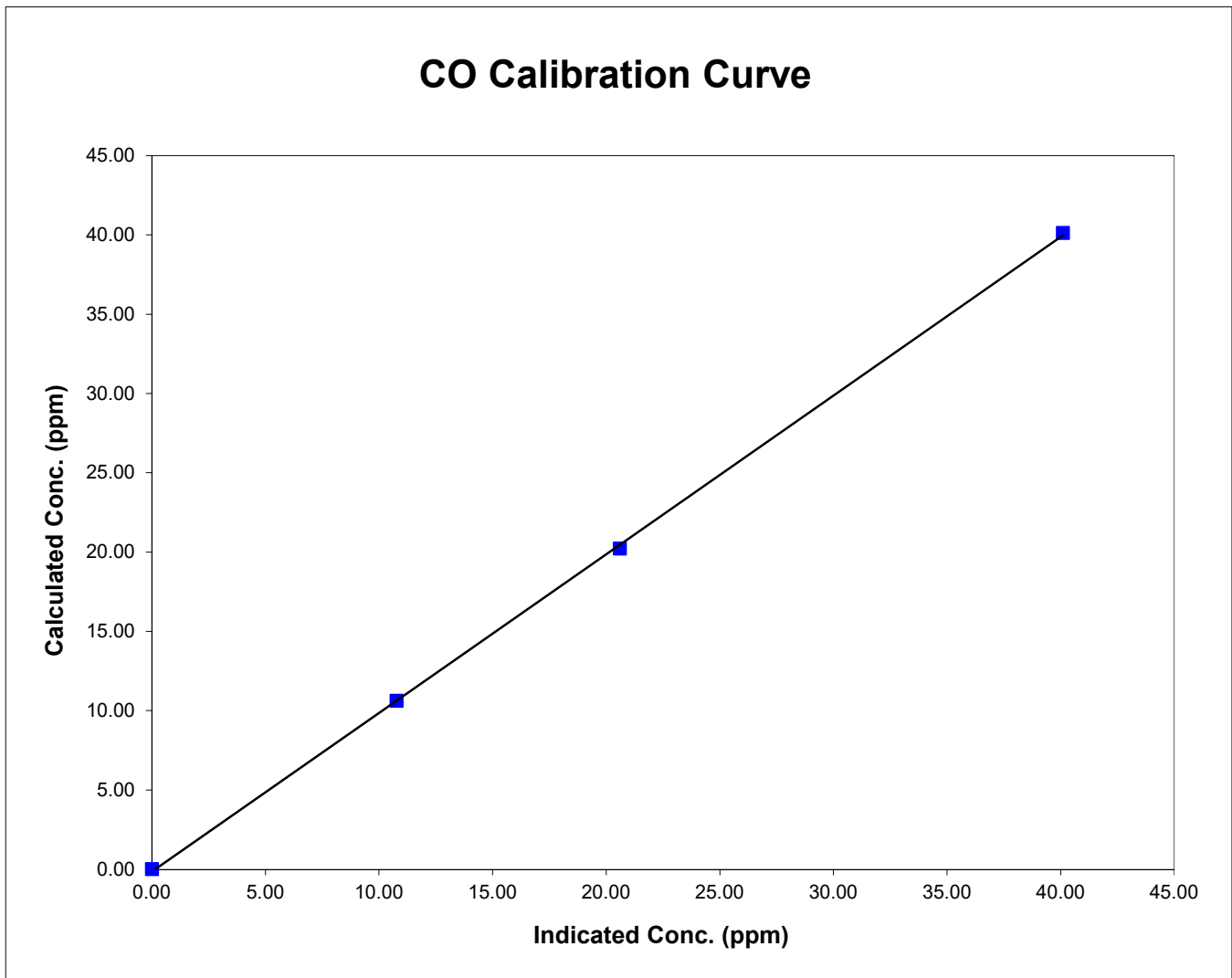
Parameter CO  
 Air Monitoring Network PAZA

### Station Information

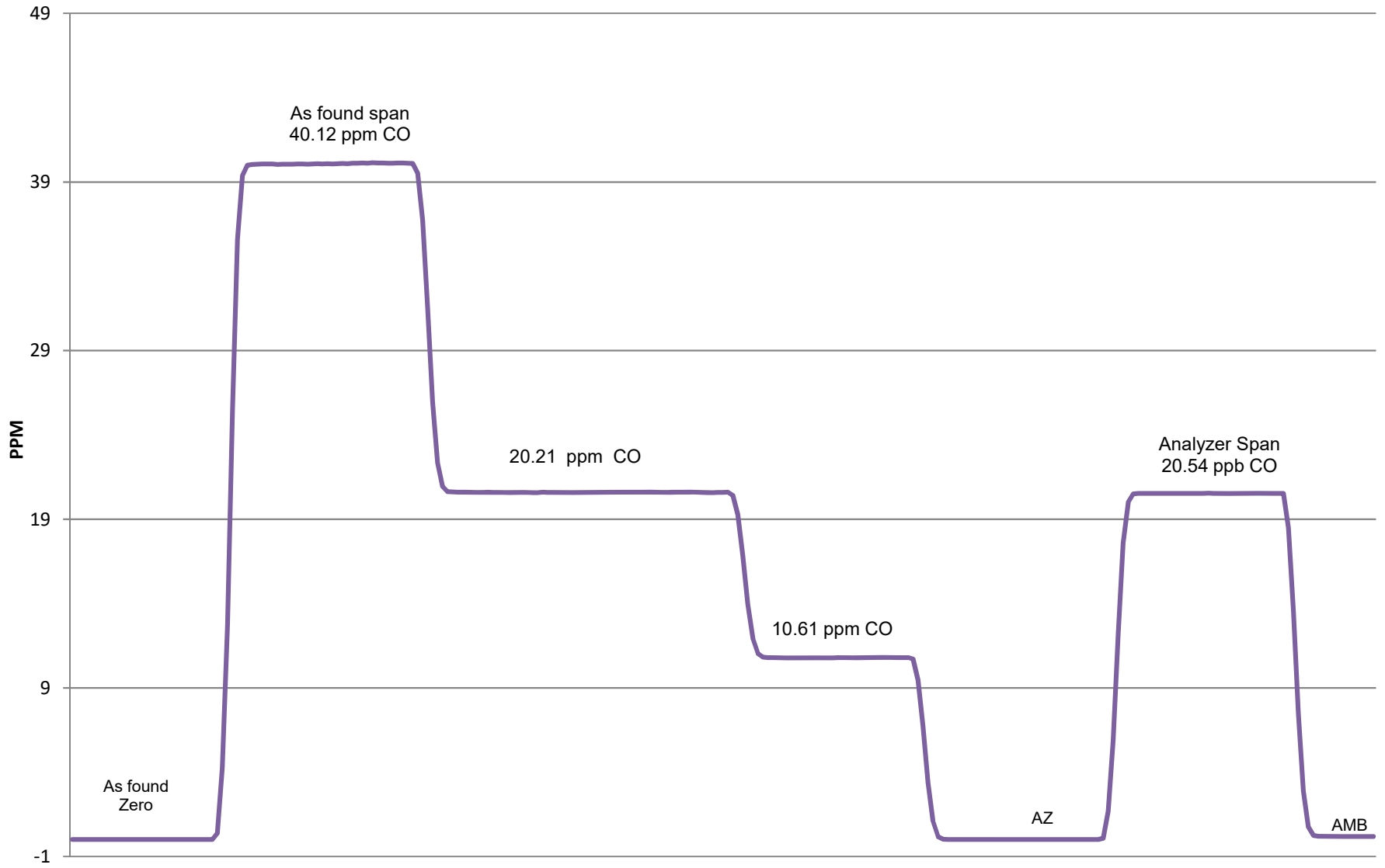
Calibration Date	January 10, 2018	Previous Calibration	December 6, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:55	End Time (MST)	12:05
Analyzer make/model	Model 48I-TLE	Analyzer serial #	1408761378

### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.010	N/A		
40.116	40.106	1.0002	Correlation Coefficient	0.999882
20.209	20.600	0.9810		
10.613	10.784	0.9841	Slope	1.000614
			Intercept	-0.151604



# CO Calibration



January 10, 2018

# Calibration Report



Parameter CH4 / NMHC / THC

Air Monitoring Network PAZA

## Station Information

Calibration Date	January 11, 2018	Previous Calibration	December 6, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:Mair
Start Time (MST)	12:35	End Time (MST)	15:45:00 PM
Barometric Pressure	0.919 mBar	Station Temperature	23.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas CH4 Conc	386 ppm CH4	Cal Gas Expiry Date	7/5/2015
Cal Gas C3H8 Conc	207 569.25 ppm CH4	Cal Gas Cylinder #	LL34318
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 5 volt	DACS channel #	SE 11,12,13

Analyzer make TEI 551 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 <sup>-4</sup>
NMHC cal factor	1.51		1.51	E <sup>-4</sup>
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)
1998	0.00	0.00	0.02	N/A
1998	64.99	12.16	12.16	0.9998
1998	40.97	7.76	7.75	1.0003
1998	15.99	3.06	3.05	1.0049
1998	0.00	0.00	0.02	As Found Zero
1998	70.65	13.18	11.91	As Found Span
Average Correction Factor				1.0017

Calculated value of As Found Response: 11.863 ppm Percent Change of As Found: 10.0%

	Before		After
Calculated slope	0.999245	Calculated slope	1.000644
Calculated intercept	-0.019747	Calculated intercept	-0.004570

## Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	9.15	ppm	9.48	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)
1998	0.00	0.00	0.02	N/A
1998	64.99	17.93	17.95	0.9989
1998	40.97	11.44	11.52	0.9933
1998	15.99	4.52	4.58	0.9879
1998	0.00	0.00	0.02	As Found Zero
1998	70.65	19.44	17.61	As Found Span
Average Correction Factor				0.9934

Calculated value of As Found Response: 17.602 ppm      Percent Change of As Found: 9.5%

	<u>Before</u>		<u>After</u>
Calculated slope	1.000472	Calculated slope	0.999789
Calculated intercept	0.001466	Calculated intercept	-0.040991

**Final Zero/Span Data**

	before calibration		after calibration	
Auto zero	0.02	ppm	0.02	ppm
Auto span	12.62	ppm	12.98	ppm

**THC Calibration Data**

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
1998	0.00	0.00	0.03	N/A
1998	64.99	30.09	30.11	0.9995
1998	40.97	19.19	19.25	0.9972
1998	15.99	7.58	7.61	0.9960
1998	0.00	0.00	0.03	As Found Zero
1998	70.65	32.62	29.49	As Found Span
Average Correction Factor				0.9976

Calculated value of As Found Response: 29.468 ppm      Percent Change of As Found: 9.7%

	<u>Before</u>		<u>After</u>
Calculated slope	1.000694	Calculated slope	1.000248
Calculated intercept	-0.011626	Calculated intercept	-0.036562

**Final Zero/Span Data**

	before calibration		after calibration	
Auto zero	0.02	ppm	0.02	ppm
Auto span	21.76	ppm	22.45	ppm

Notes: Hydrogen cylinder replaced  
Span adjustment made

Calibration Performed By: Dmytro Dolotii

# Calibration Summary

Parameter CH4  
 Air Monitoring Network PAZA



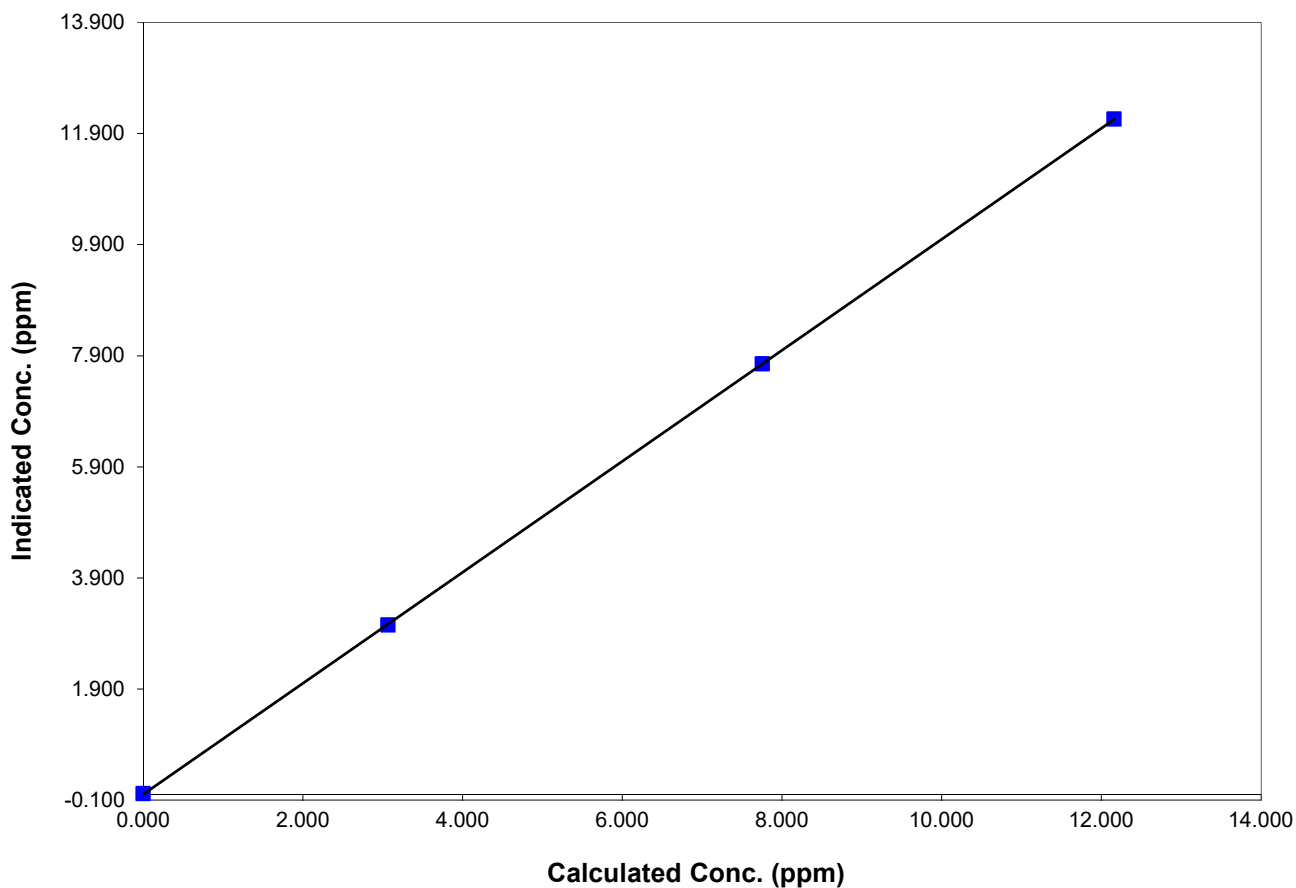
### Station Information

Calibration Date	January 11, 2018	Previous Calibration	December 6, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:35	End Time (MST)	15:45:00 PM
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.018	N/A		
12.160	12.162	0.9998	Correlation Coefficient	0.999994
7.756	7.754	1.0003		
3.065	3.050	1.0049	Slope	1.000644
			Intercept	-0.004570

## CH4 Calibration Data





# Calibration Summary



Parameter THC  
 Air Monitoring Network PAZA

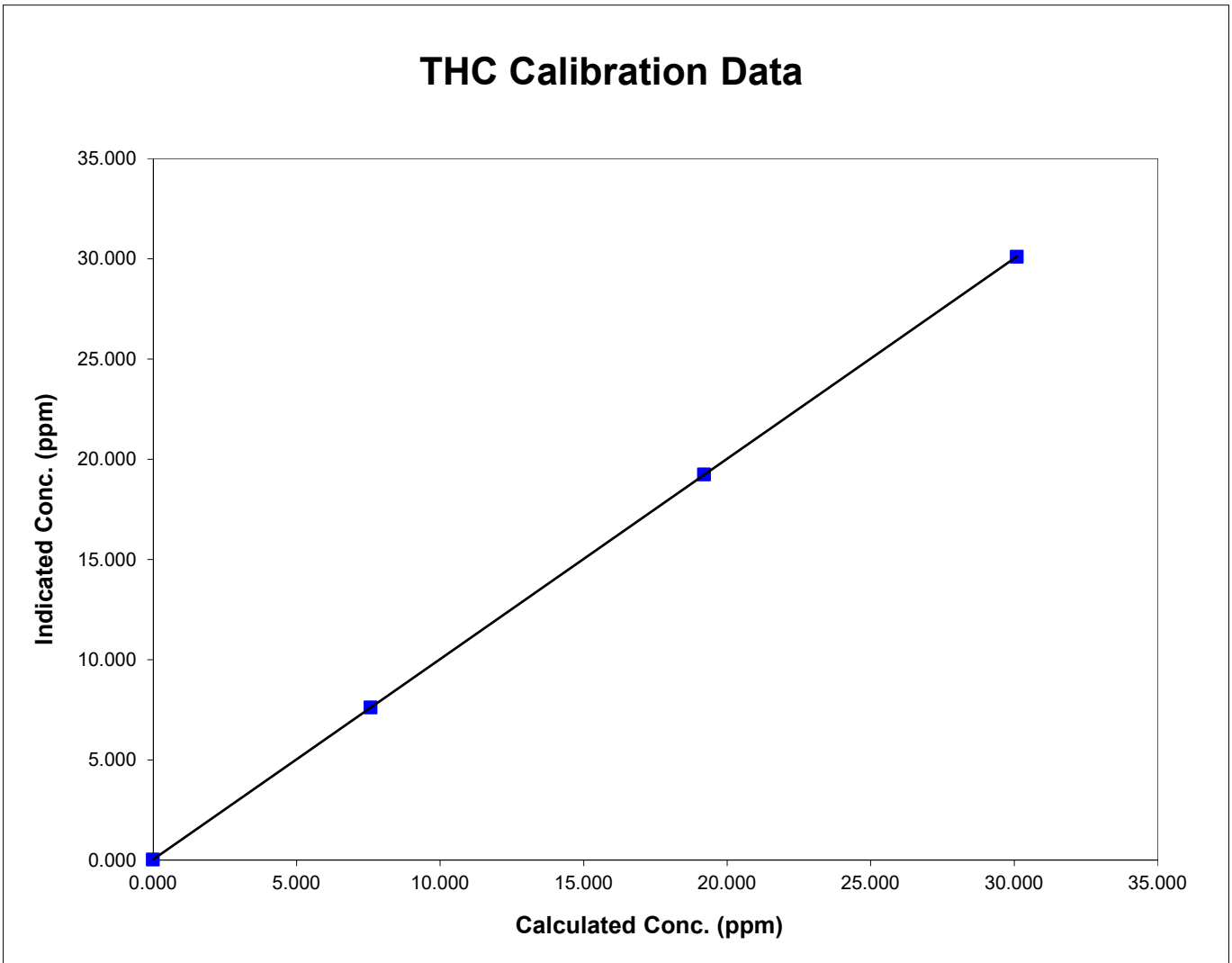
### Station Information

Calibration Date	January 11, 2018	Previous Calibration	December 6, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:35	End Time (MST)	15:45:00 PM
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

### Calibration Data

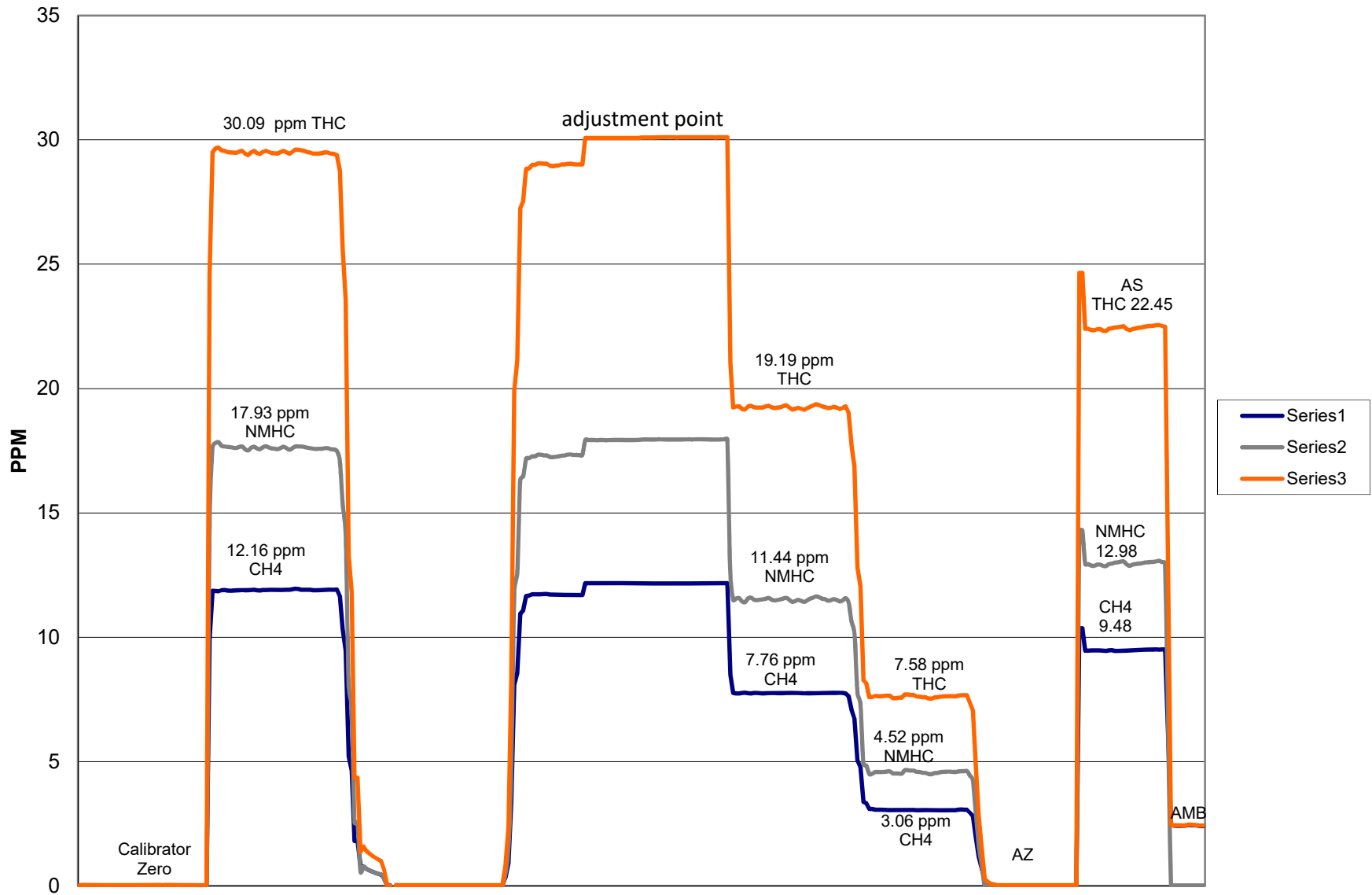
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.032	N/A	Correlation Coefficient	0.999999
30.093	30.109	0.9995		
19.194	19.248	0.9972	Slope	1.000248
7.584	7.614	0.9960		
			Intercept	-0.036562

## THC Calibration Data





### THC/CH<sub>4</sub>/NMHC Calibration



# Calibration Report



Parameter                                                                 
 Air Monitoring Network                                                               

## Station Information

Calibration Date	January 10, 2018	Previous Calibration	December 6, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	5:10	End Time (MST)	11:20
Barometric Pressure	0.919 mBar	Station Temperature	23.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Conc	10.2 ppb	Cal Gas Expiry Date	02/23/2019
		Cal Gas Cylinder #	EY0000380
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	0.992087	Calculated slope	0.988088
Calculated intercept	-0.121324	Calculated intercept	-0.084359
Analyzer make	TEI 45C	Analyzer serial #	630718528

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Coefficient	1.094		1.027	
Background	13.2		18.6	
Pressure	669.4	mm Hg	675.6	mm Hg
Flow	0.426	ccm	0.431	ccm
Lamp Voltage	899	v	822	v

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4997	0.00	0.00	0.70	N/A
4997	39.98	80.96	82.34	0.9832
4998	20.02	40.69	40.76	0.9985
6997	9.98	14.53	14.37	1.0113
4997	0.00	0.00	0.70	As Found Zero
4997	41.20	83.41	77.25	As Found Span
Average Correction Factor				0.9976

Calculated value of As Found Response:                      75.8 ppb      Percent Change of As Found:                      9.1%

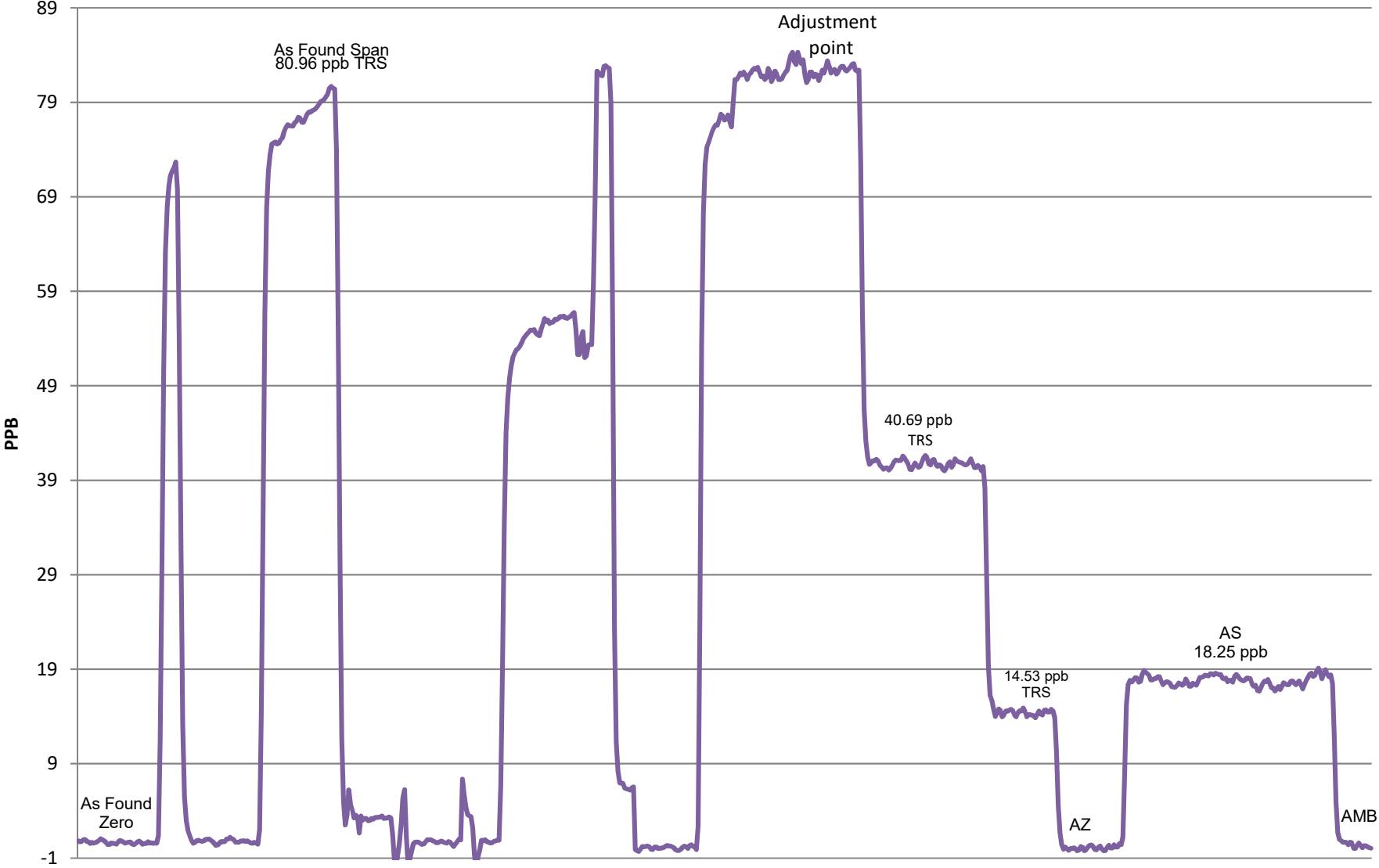
	before calibration		after calibration	
Auto zero	0.64	ppb	0.08	ppb
Auto span	28.67	ppb	18.00	ppb

Notes:                      Replaced perm tube, scrubber materail & lamp.  
                     Perfomed PMT, zero & regular adjustmens.  
                     Perm tube replaced, span will take couple days to settle.

Calibration Performed By:



# TRS Calibration



January 10, 2018

# Calibration Report



Parameter SO<sub>2</sub>  
 Air Monitoring Network PAZA

### Station Information

Calibration Date	January 12, 2018	Previous Calibration	December 18, 2017
Station Number	2	Station Location	Evergreen Park
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	9:50	End Time (MST)	12:05
Barometric Pressure	0.936 ATM	Station Temperature	22.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Concentration	49.6 ppm	Cal Gas Expiry Date	5/4/2019
Correction factor	0.031602	Cal Gas Cylinder #	LL107945
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	6
	<u>Before</u>		<u>After</u>
Calculated slope	0.989160	Calculated slope	0.991249
Calculated intercept	0.302266	Calculated intercept	0.732770
Analyzer make	Teco 43i	Analyzer serial #	701120008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	12.6		12.6	
coefficient	1.246		1.246	
Lamp Voltage	834	volts	835	volts
Chamber Temp	44.8	Deg C	45	Deg C
Perm Gas Temp	44.9	Deg C	45	Deg C
Pressure	676.8	mm Hg	678.1	mm Hg
Sample Flow	0.440	ccm	0.440	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)
4997	0.0	0.00	0.5	N/A
4997	40.01	394.0	397.4	0.9914
4997	19.99	197.6	197.8	0.9990
4997	9.98	98.9	97.9	1.0098
4997	0.0	0.0	0.5	As Found Zero
4997	39.98	393.7	397.4	As Found Span
Average Correction Factor				1.0001

Calculated value of As Found Response: 392.898 ppm      Percent Change of As Found: 0.2%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.6	ppm
Auto span	268.6	ppm	265.2	ppm

Notes: No adjustment

Calibration Performed By: Dmytro Dolotii

# Calibration Summary

Parameter SO2  
 Air Monitoring Network PAZA



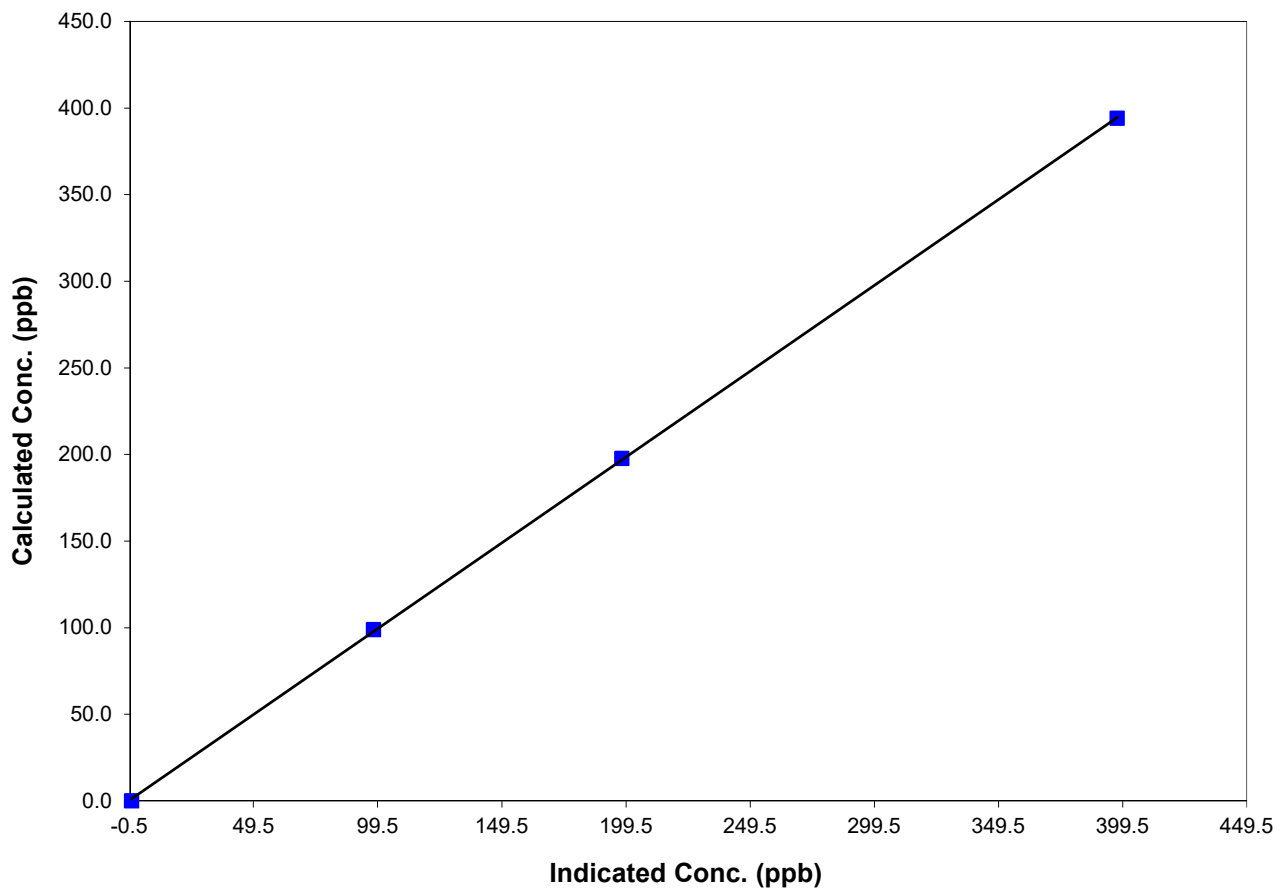
### Station Information

Calibration Date	January 12, 2018	Previous Calibration	December 18, 2017
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	9:50	End Time (MST)	12:05
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

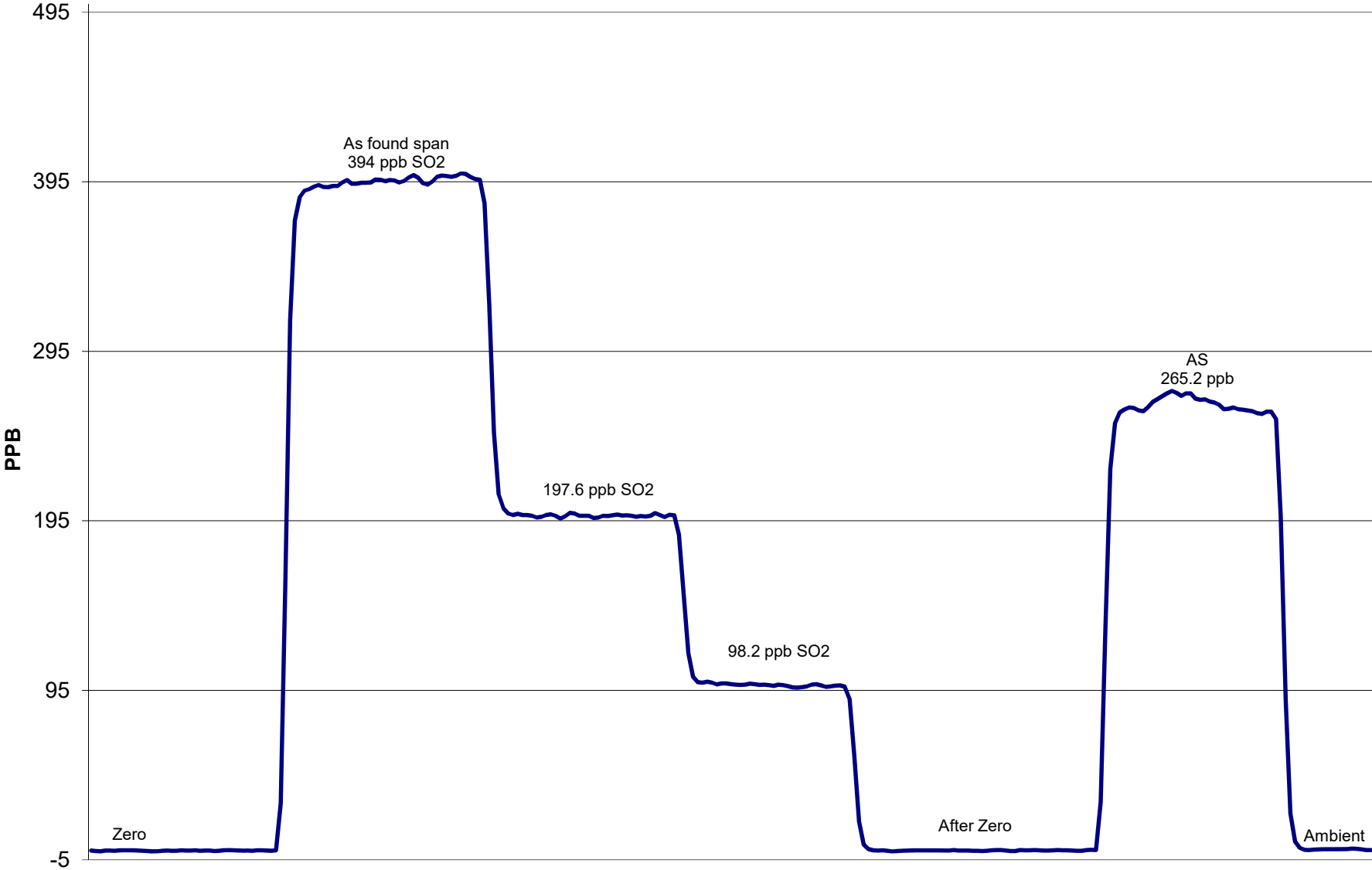
### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A	Correlation Coefficient	0.999956
394.0	397.4	0.9914		
197.6	197.8	0.9990	Slope	0.991249
98.9	97.9	1.0098		
			Intercept	0.732770

## SO2 Calibration Curve



# SO2 Calibration



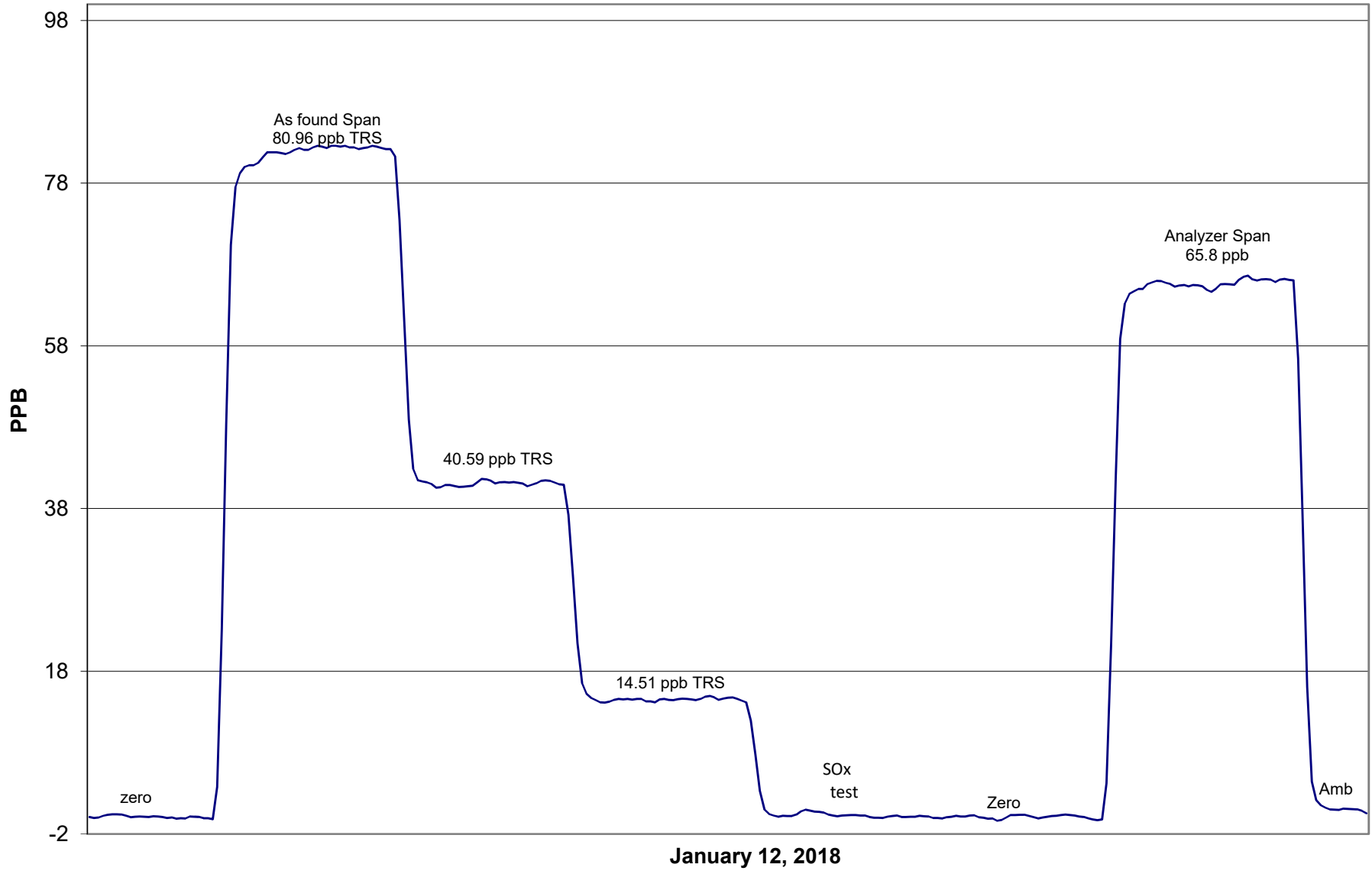
January 12, 2018







# TRS Calibration



# Calibration Report



Parameter SO<sub>2</sub>

Air Monitoring Network PAZA

## Station Information

Calibration Date	January 16, 2018	Previous Calibration	December 21, 2017
Station Number	3	Station Location	Smokey Heights
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	9:10	End Time (MST)	11:45
Barometric Pressure	0.924 ATM	Station Temperature	19.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Concentration	49.6 ppm	Cal Gas Cert Date	10/10/2020
Correction factor	0.031517	Cal Gas Cylinder #	LL104185
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	6
	<u>Before</u>		<u>After</u>
Calculated slope	0.989754	Calculated slope	1.005977
Calculated intercept	-1.052619	Calculated intercept	-0.128308
Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	14		14.2	
coefficient	0.966		0.966	
Lamp Voltage	947	volts	948	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	665.4	mm Hg	674.2	mm Hg
Sample Flow	0.440	lpm	0.444	lpm
Lamp Intensity	87	%	87	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
4996	0.0	0.00	0.7	N/A
4996	39.94	393.38	391.2	1.0056
4996	19.97	197.47	197.0	1.0026
4996	9.99	98.98	97.4	1.0164
4996	0.0	0.00	0.7	As Found Zero
4996	39.94	393.38	391.2	As Found Span
Average Correction Factor				1.0082

Calculated value of As Found Response: 385.411 ppb      Percent Change of As Found: 2.0%

	before calibration		after calibration	
Auto zero	0.8	ppb	0.7	ppb
Auto span	212.9	ppb	213.4	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

# Calibration Summary

Parameter SO2  
 Air Monitoring Network PAZA



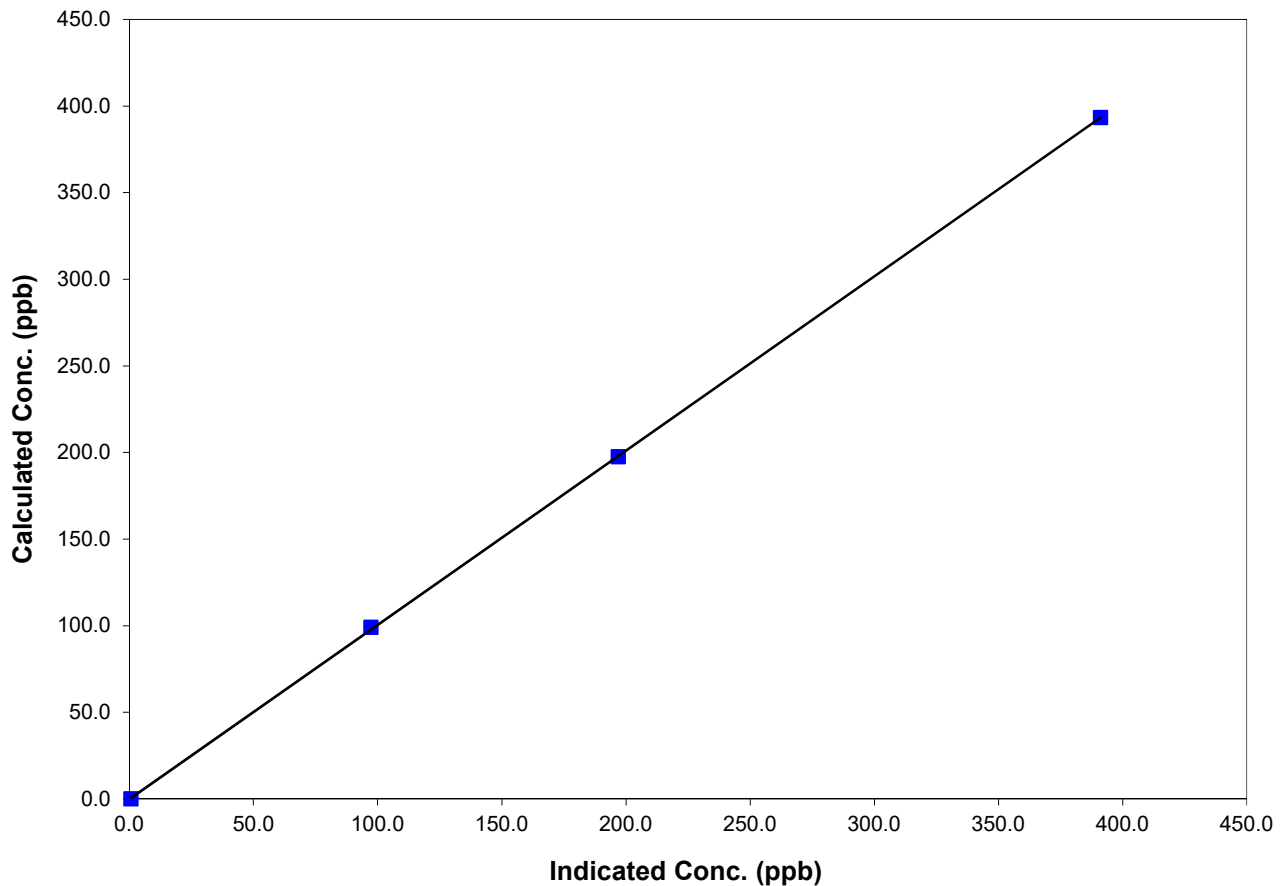
## Station Information

Calibration Date	January 16, 2018	Previous Calibration	December 21, 2017
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	9:10	End Time (MST)	11:45
Analyzer make/model	Teco 43i	Analyzer serial #	701120009

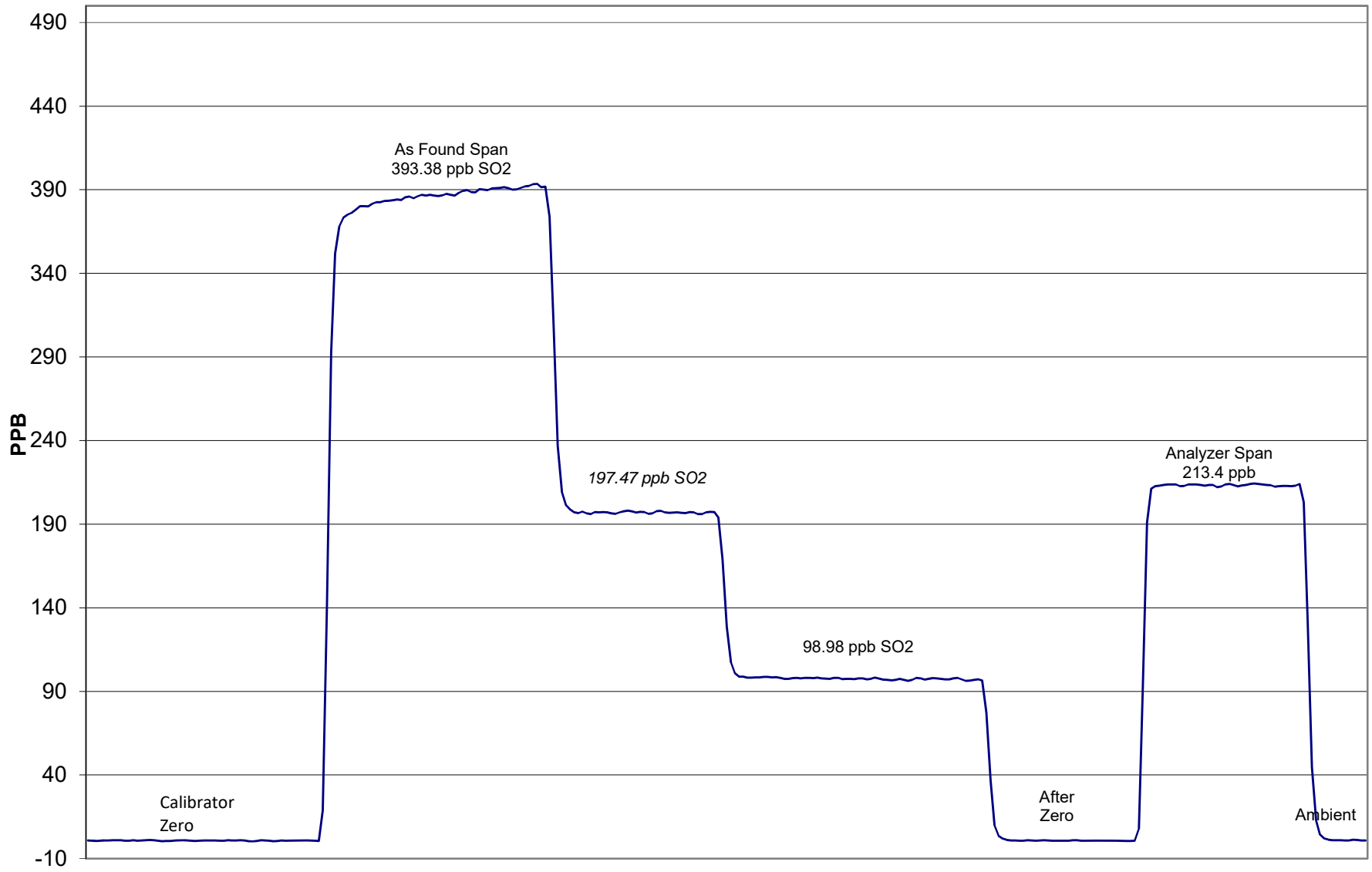
## Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.7	N/A	Correlation Coefficient	0.999977
393.4	391.2	1.0056		
197.5	197.0	1.0026		
99.0	97.4	1.0164		
			Slope	1.005977
			Intercept	-0.128308

## SO2 Calibration Curve



# Smokey Heights SO<sub>2</sub> Calibration



January 16, 2018



# Calibration Summary

Parameter                                                                 
 Air Monitoring Network                                                                 
 TRS  
 PAZA



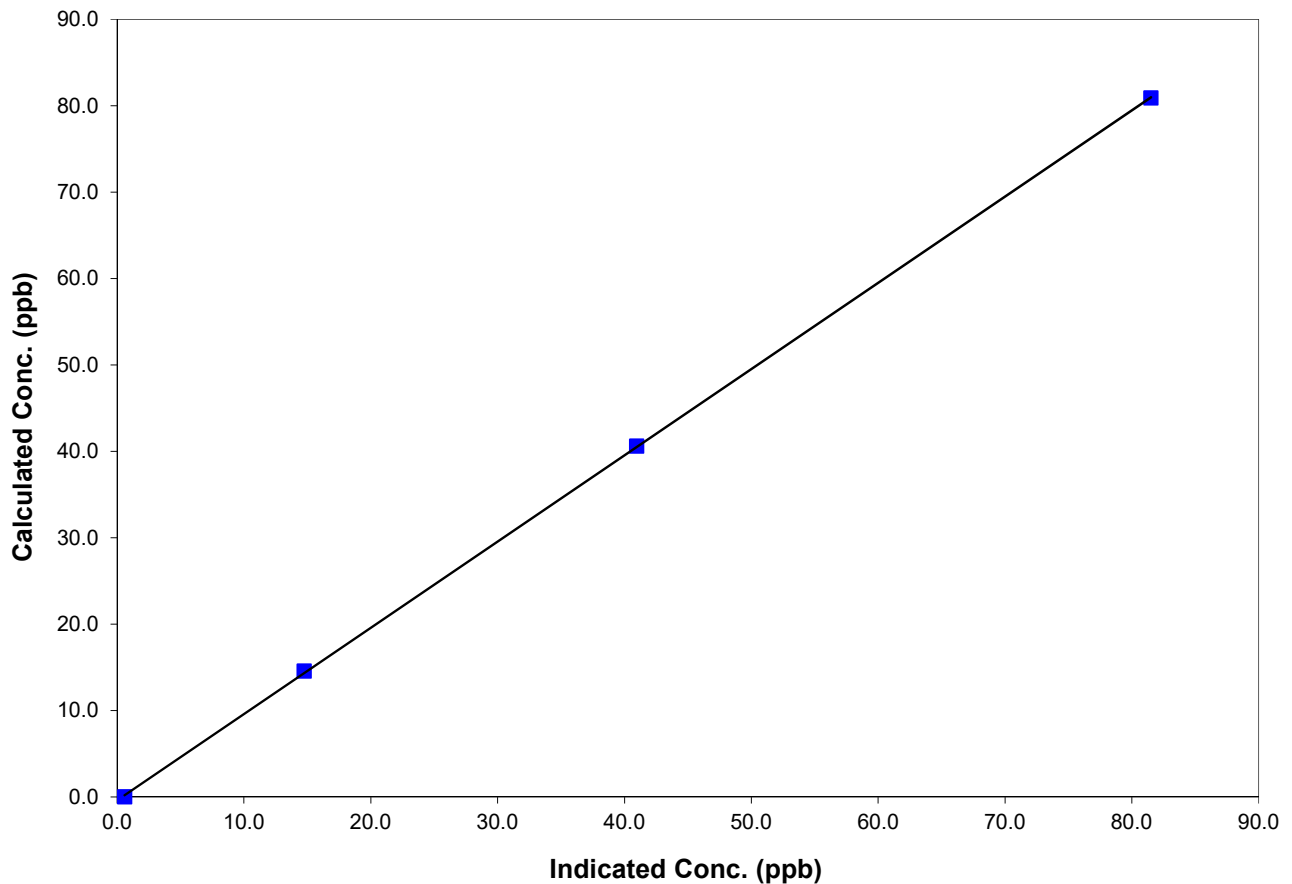
## Station Information

Calibration Date	January 16, 2018	Previous Calibration	December 21, 2017
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	8:00	End Time (MST)	10:35
Analyzer make/model	TEI Model 43I APSAA	Analyzer serial #	1153630151

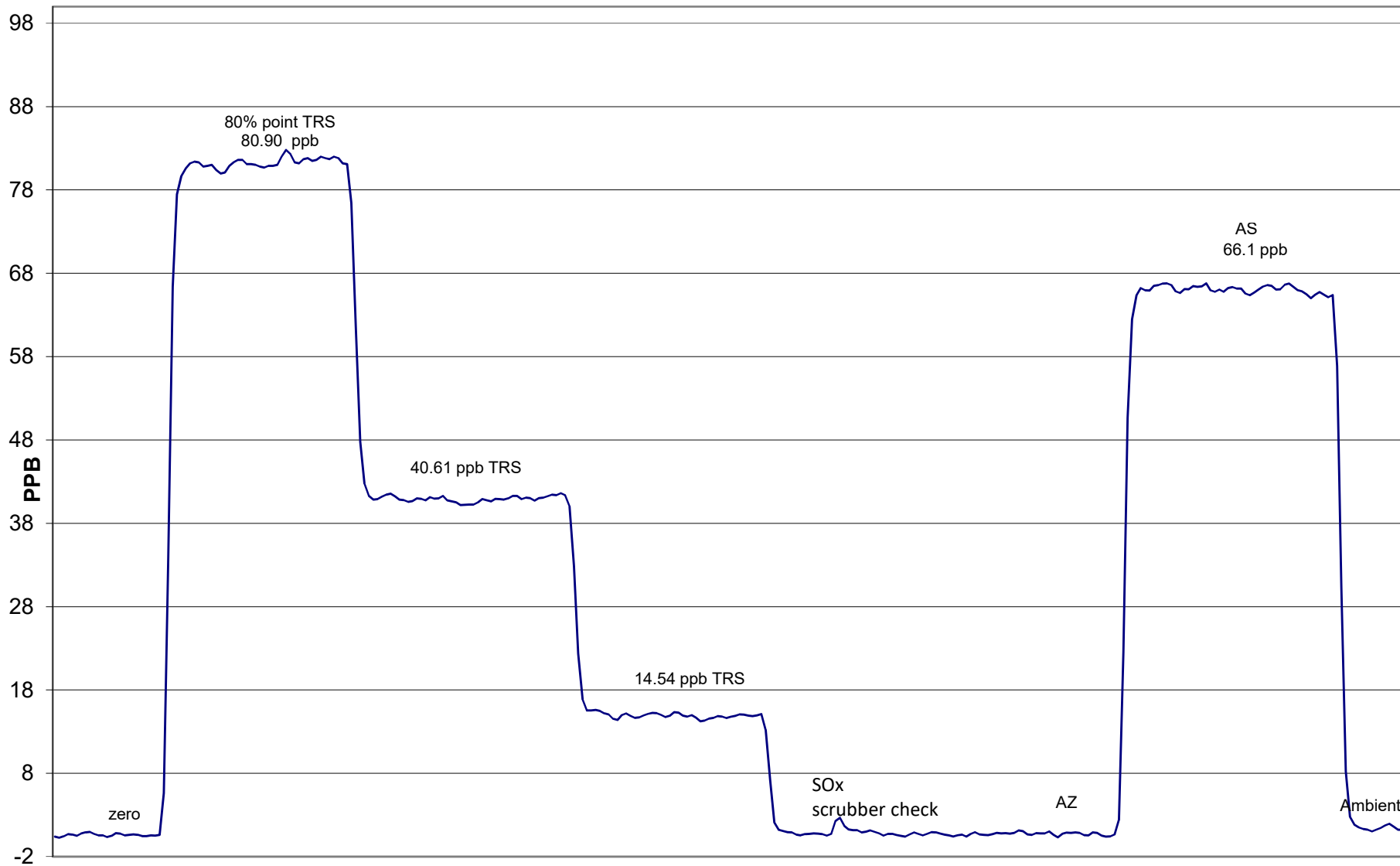
## Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.6	N/A		
80.9	81.5	0.9926	Correlation Coefficient	0.999975
40.6	41.0	0.9915		
14.5	14.8	0.9847	Slope	0.998389
			Intercept	-0.387573

### TRS Calibration Curve



# Smokey Heights TRS Calibration



January 16, 2018



# Calibration Report



Parameter SO2

Air Monitoring Network PAZA

## Station Information

Calibration Date	January 6, 2018	Previous Calibration	December 14, 2017
Station Number	4	Station Location	Beaverlodge
Reason:	<b>Routine</b>	Install	Removal
			Other:
Start Time (MST)	14:10	End Time (MST)	16:05
Barometric Pressure	0.921 atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3016
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	0.988468	Calculated slope	0.998817
Calculated intercept	0.177556	Calculated intercept	0.175073
Analyzer make	TEI Model 43i-TLE	Analyzer serial #	713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.9		2.88	
Coefficient	0.975		0.975	
PMT	-767.8	V	-768.2	V
UV Lamp Voltage	1125	V	1125	V
Chamber Temp	45	Deg C	45.1	Deg C
Pressure	656.2	mm Hg	661.6	mm Hg
Sample Flow	0.482	LPM	0.493	LPM
Lamp Intensity	94	%	94	%

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	0.0	N/A
4995	39.94	83.3	83.3	0.9998
4995	19.97	41.8	41.6	1.0046
4995	9.97	20.9	20.5	1.0197
4995	0.00	0.0	0.0	As found zero
4995	39.94	83.3	83.3	As found span
Average Correction Factor				1.0080

Calculated value of As Found Response: 82.479 ppm      Percent Change of As Found: 1.0%

	before calibration		after calibration	
Auto zero	0.2	ppb	0.2	ppb
Auto span	60.0	ppb	59.7	ppb

Notes: No adjustments needed.

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter SO2  
 Air Monitoring Network PAZA



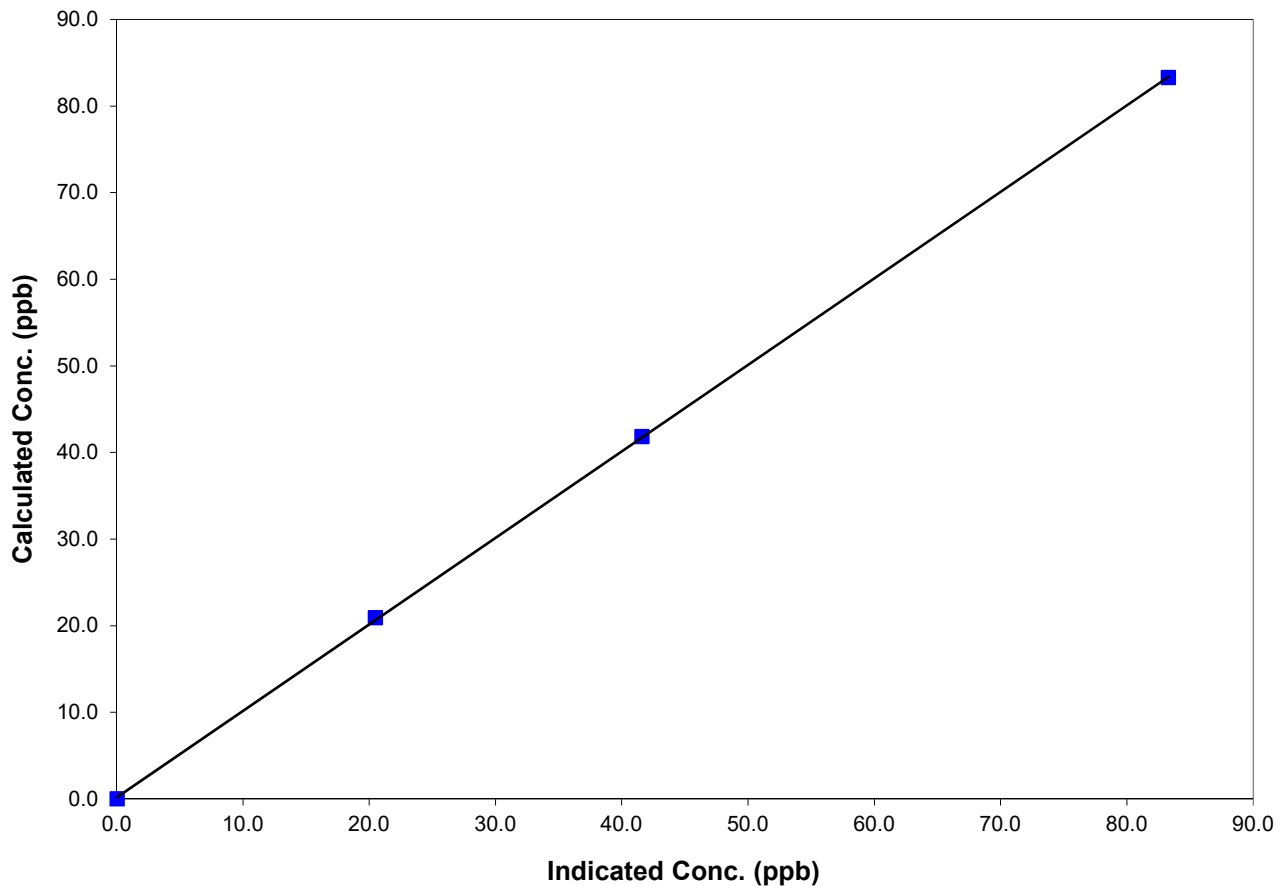
### Station Information

Calibration Date	January 6, 2018	Previous Calibration	December 14, 2017
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	14:10	End Time (MST)	16:05
Analyzer make/model	TEI Model 43i-TLE	Analyzer serial #	713021137

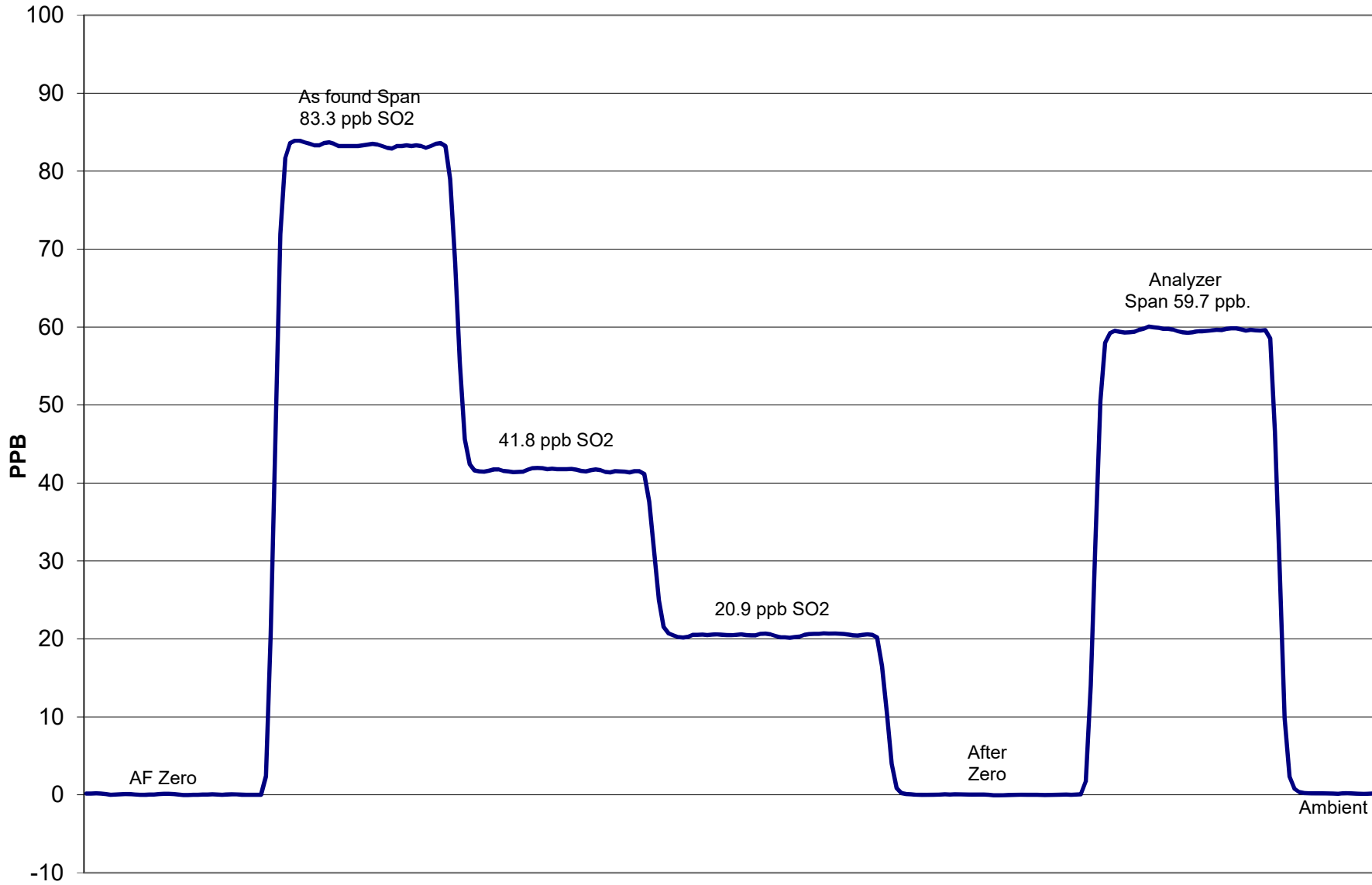
### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
83.3	83.3	0.9998	Correlation Coefficient	0.999966
41.8	41.6	1.0046		
20.9	20.5	1.0197	Slope	0.998817
			Intercept	0.175073

## SO2 Calibration Curve



# SO2 Calibration



January 6, 2018

# Calibration Report

Parameter  
Air Monitoring Network

NO<sub>x</sub>-NO-NO<sub>2</sub>  
PAZA



## Station Information

Calibration Date	January 6, 2018	Previous Calibration	December 14, 2017
Station Number	4	Station Location	Beaverlodge
Reason:	<b>Routine</b>	Installation	Removal
Other:			
Start Time (MST)	9:30	End Time (MST)	14:30
Barometric Pressure	0.921 Atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3016
NO Cal Gas Conc	50.4 ppm	Cal Gas Expiry Date	February 2, 2019
NO <sub>x</sub> Cal Gas Conc	50.5 ppm	Cal Gas Serial #	EY0000751

## DACS Information

DACS make	CR3000	DACS serial No.	5237	
	Parameter	NO2	NOx	NO
Before	Data Slope	1.005465	1.000522	0.998609
	Data Offset	0.284131	1.511070	1.608141
After	Data Slope	1.003338	1.003979	1.001054
	Data Offset	0.209567	0.408329	0.692265
	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	2.7	mV	2.7	mV
NO <sub>x</sub> bkgnd	3.1	mV	3.0	mV
NO coefficient	1.063		1.032	
NO <sub>x</sub> coefficient	0.999		0.999	
NO2 conv temp	326.8	Deg C	324.2	Deg C
PMT Temp	-3.0	Deg C	-3.0	Deg C
PMT Volt	-743.0	mV	-742.6	mV
R Cell Press	206.7	in Hg	204.9	in Hg
Sample Flow	0.685	LPM	0.702	LPM

Notes: Slight span adjust. Calibrate.

# Calibration Report



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

## Station Information

Calibration Date: January 6, 2018 Station Location: Beaverlodge

## Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	
zero	4995	0.00	0.0	0.0	0.0	0.1	0.0	0.1	N/A	N/A	
1	4995	39.94	400.6	399.8	0.8	398.7	399.0	-0.9	1.0048	1.0020	
2	4995	19.97	201.1	200.7	0.4	200.1	199.5	-0.1	1.0051	1.0061	
3	4995	9.97	100.6	100.4	0.2	99.0	98.9	0.1	1.0159	1.0151	
AFZ	4995	0.00	0.0	0.0	0.0	0.1	0.0	0.1	0.0000	0.0000	
AFS	4995	39.94	400.6	399.8	0.8	410.0	410.1	-0.7	0.9770	0.9749	
									Average Correction Factor	1.0086	1.0077

As Found Concentrations: NO<sub>x</sub>= 411.7 NO= 411.1 As Found Percent Change NO<sub>x</sub>= 2.8% NO= 2.8%

## GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.94 ccm

O3 Setpoint (ppb)	Indicated NOx high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency	
0	0.0	0.0	0.0	0.1	0.0	0.1	N/A	N/A	N/A	N/A	
NO point	400.6	400.4	0.2	400.3	400.4	-0.5	1.0007	1.0000	N/A	N/A	
300	400.6	86.6	314.0	399.7	86.6	312.7	1.0022	1.0000	1.0042	99.6%	
200	400.6	184.9	215.7	400.7	184.9	215.2	0.9997	1.0000	1.0020	99.8%	
100	400.6	280.9	119.7	399.7	280.9	118.3	1.0022	1.0000	1.0112	98.9%	
							Average Correction Factor	1.0014	1.0000	1.0058	99.4%

## AIC Data

Parameter	Previous calibration				Current calibration			
	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.0	-0.1	-0.1	ppb	0.0	0.0	0.0	ppb
Auto span	302.2	298.9	2.6	ppb	302.5	300.1	1.8	ppb

Calibration Performed By: Grover Christiansen

# Calibration Summary



Parameter NO<sub>2</sub>

Air Monitoring Network PAZA

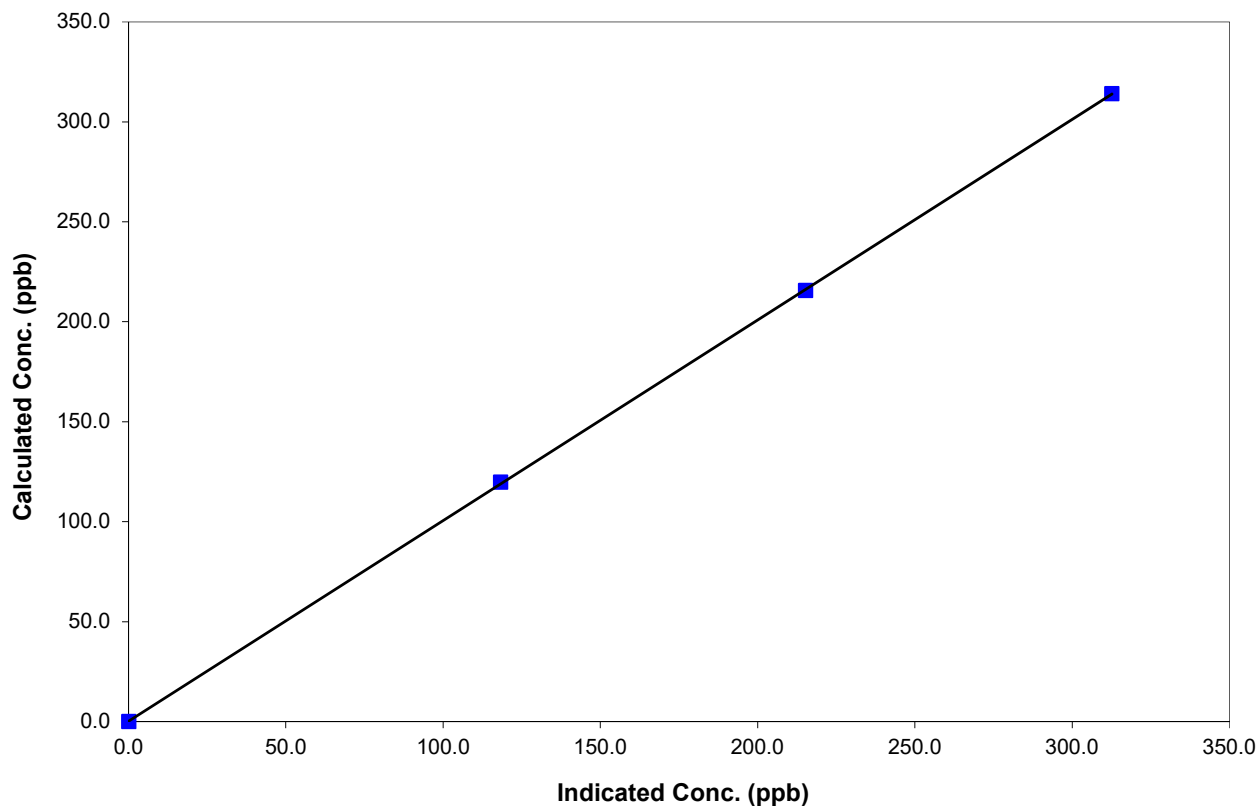
## Station Information

Calibration Date	January 6, 2018	Previous Calibration	December 14, 2017
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	9:30	End Time (MST)	14:30
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	0.999984
314.0	312.7	1.0042		
215.7	215.2	1.0020	Slope	1.003338
119.7	118.3	1.0112		
			Intercept	0.209567

**NO<sub>2</sub> Calibration Curve**



# Calibration Summary



Parameter NO<sub>x</sub>

Air Monitoring Network PAZA

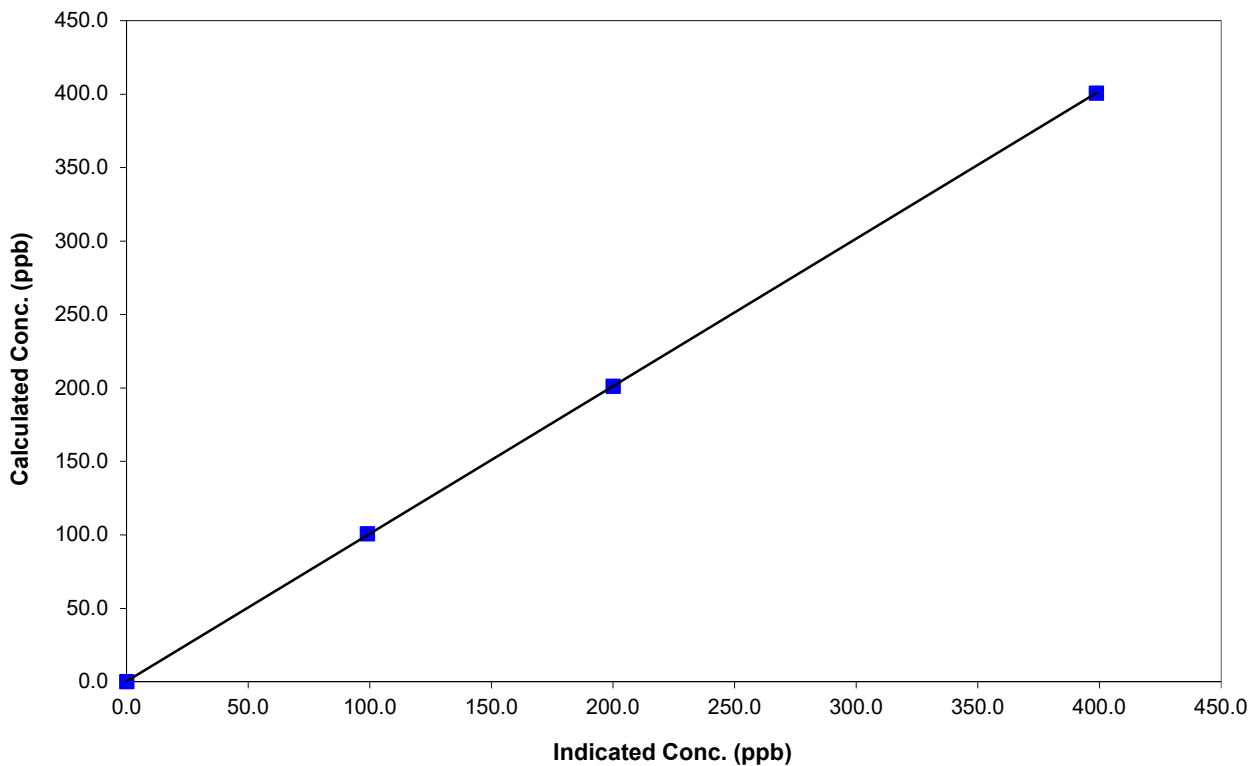
## Station Information

Calibration Date	January 6, 2018	Previous Calibration	December 14, 2017
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	9:30	End Time (MST)	14:30
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	0.999990
400.6	398.7	1.0048		
201.1	200.1	1.0051	Slope	1.003979
100.6	99.0	1.0159		
			Intercept	0.408329

## NO<sub>x</sub> Calibration Curve



# Calibration Summary

Parameter NO

Air Monitoring Network PAZA



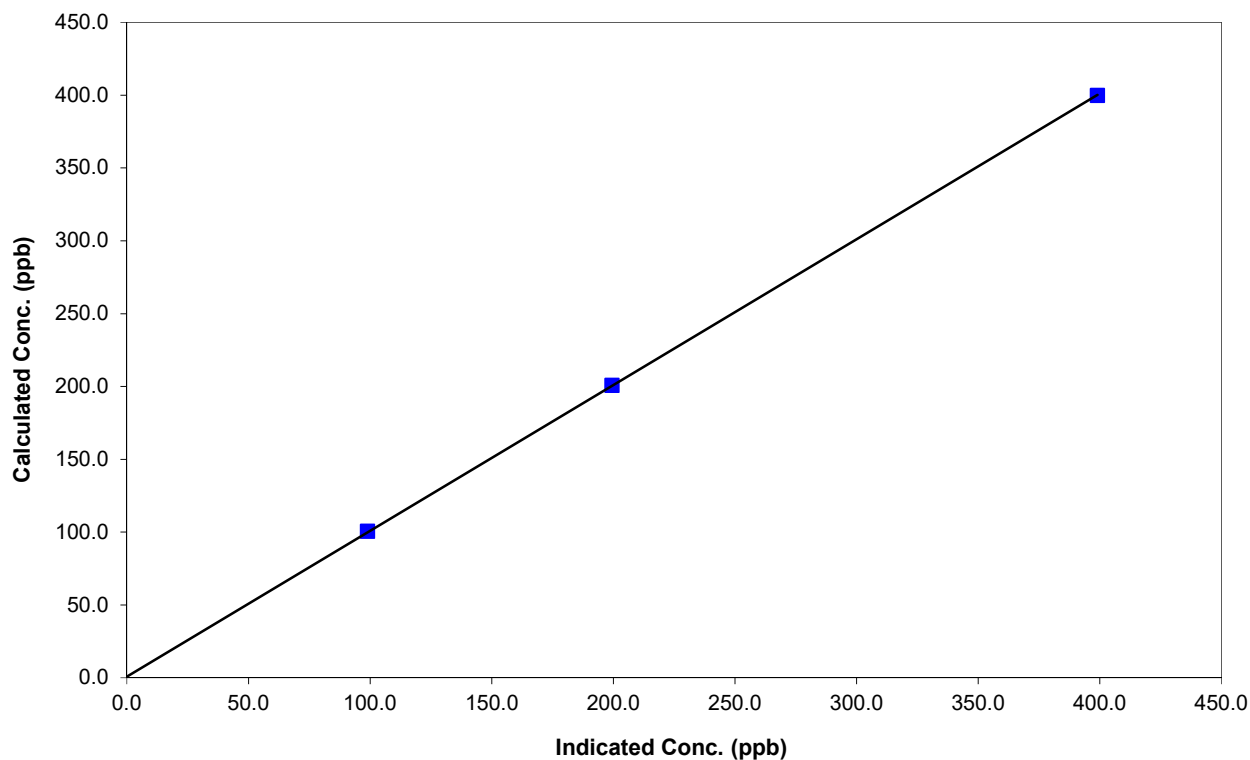
## Station Information

Calibration Date	January 6, 2018	Previous Calibration	December 14, 2017
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	9:30	End Time (MST)	14:30
Analyzer make	TEI 42i	Analyzer serial #	906535068

## Calibration Data

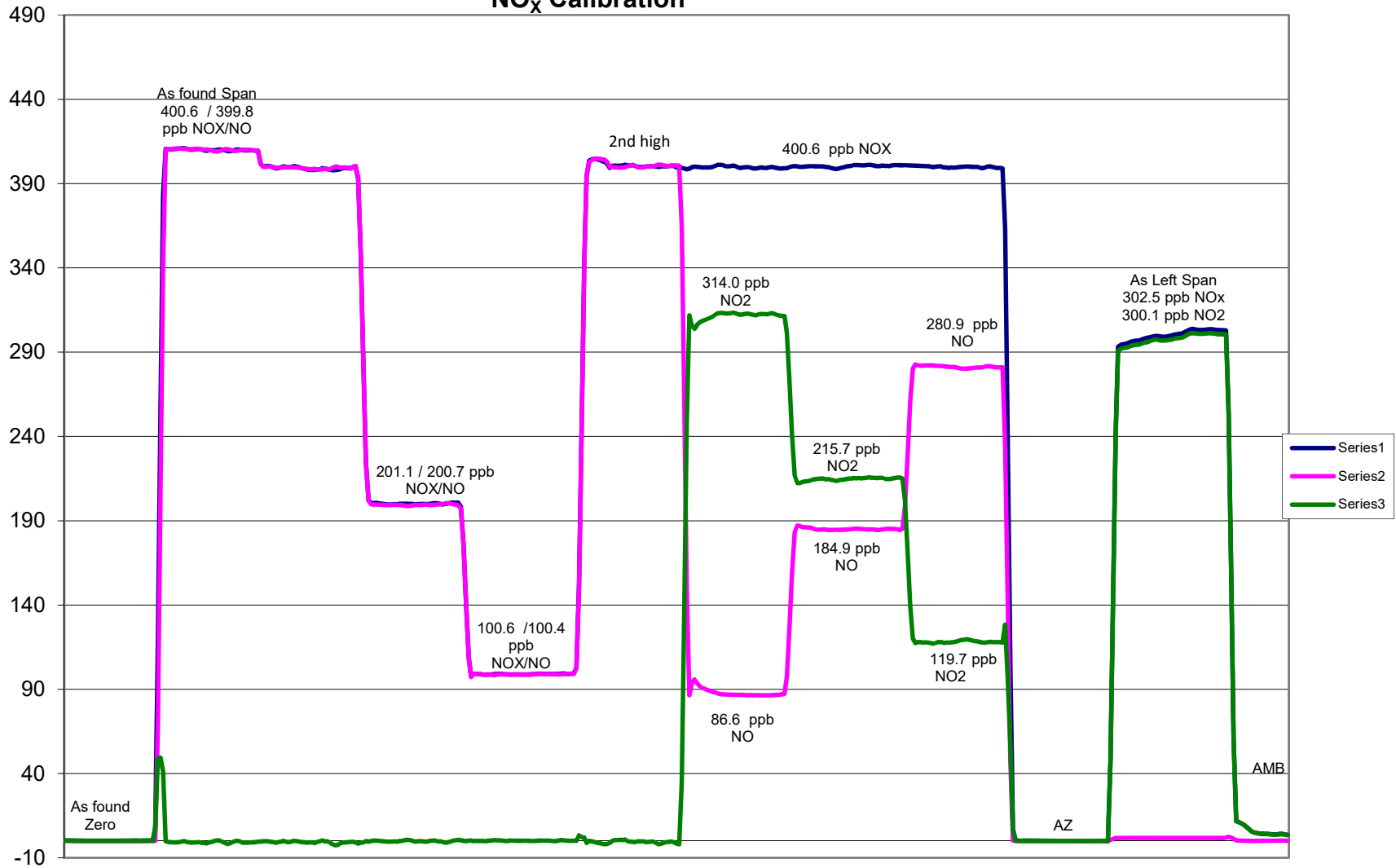
Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999987
399.8	399.0	1.0020		
200.7	199.5	1.0061		
100.4	98.9	1.0151	Slope	1.001054
			Intercept	0.692265

## NO Calibration Curve





# NO<sub>x</sub> Calibration

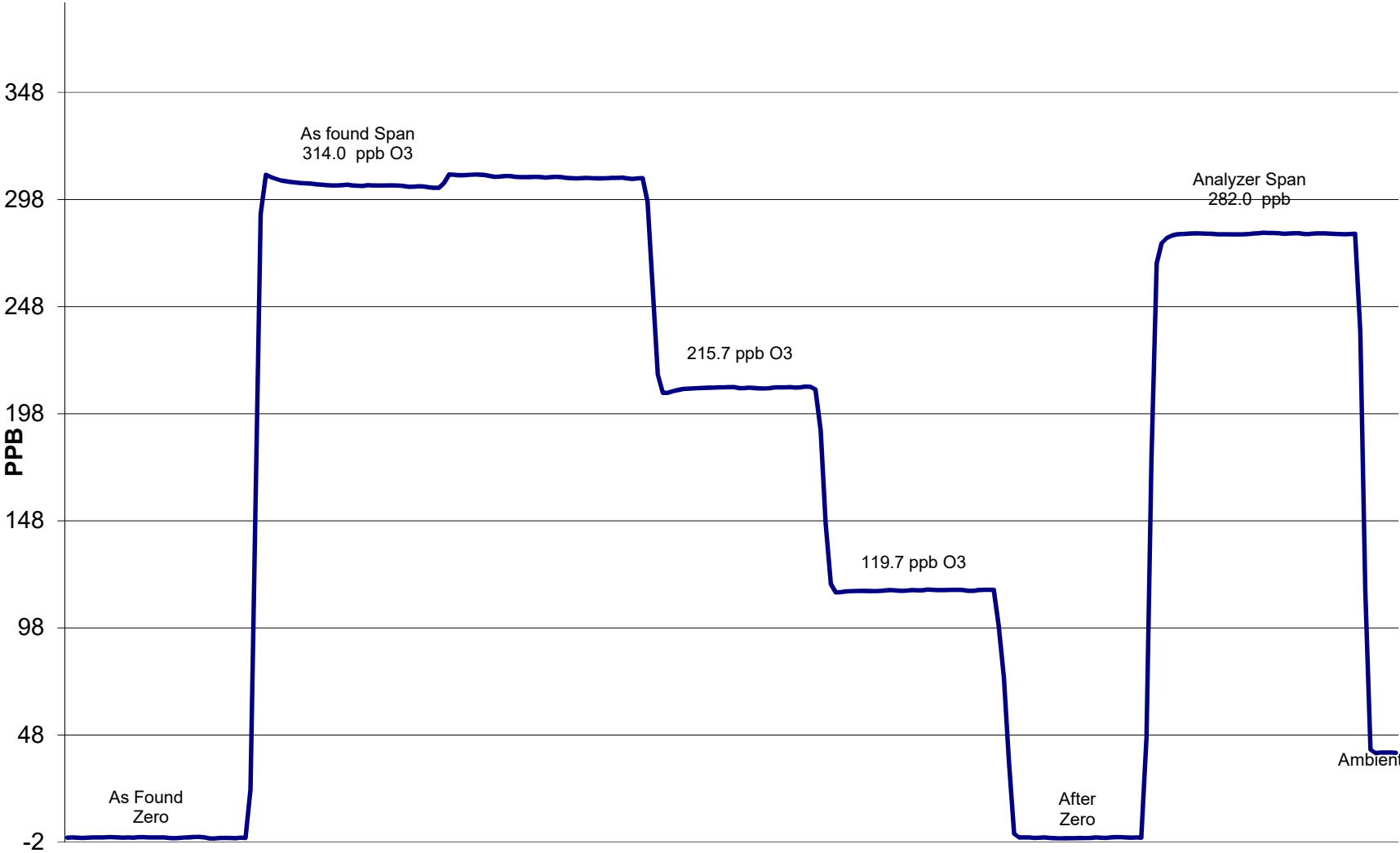


January 6, 2018





# O3 Calibration



January 6, 2018

# SHARP 5030 PM2.5 Calibration



Station: Beaverlodge  
 Location: Agricultural centre  
 Start Time (MST): 13:10:00 AM

Operator: Grover Christiansen  
 Date: January 8 2018  
 End Time (MST): 14:10

**MONITOR INFO / PARAMETER VALUES:**

Make/Model	SHARP 5030	Audit Device Model	Delta cal
Configuration	PM 2.5	AMU S/N	AMU 1789
AMU Number	AMU1969	Serial Number	1612
Serial Number	208	Certification Date	01-Oct-15

**AUDIT / CALIBRATION RESULTS:**

	Ambient Temp. (°C)	Ambient Pres. (mbar)	RH (%)	Leak Check (l/min)	Flow Rate (lpm)	Foil Calibration (ug)	Nephelometer (ug)	Time settings (hh:mm)
Audit values (I)	-9.4	920	27.1	16.67	16.67	7029	0.0	13:02
MEASURED ( AF )	-10.6	920	26.7	16.45	16.35	7023	1.9	13:03
AF Difference (AF-I)	-1.2	0	-0.4	-0.22	-0.32	-6	1.9	0:01
MEASURED ( M )	-10.6	920	26.7	16.45	16.35	7023	0.0	13:03
Adj Difference (M-I)	-1.2	0	-0.4	-0.22	-0.32	0	0.0	0:01
<i>LIMITS</i>	$\pm 4.0^{\circ}C$	<i>13.33 mbar(hPa)</i>	$\pm 2.0\%$	<i>0.8 L/min</i>	$\pm 1.0 L/min$	<i>(+/-5%)</i>	<i>(&lt;+/-2 ug/m3)</i>	$\pm 2 min$

Sample Head Inspect/Cleaning: Heads cleaned

Status of sampling tape: New Roll.

Nozzle Inspection / cleanliness: Clean

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

COMMENTS: Wind picked up with a little rain on the 6th of Jan, also sample tape was almost completely run out - so Sharp was left until the next day (8th) for tape replacement and calibration.

Snowing foil and neph not calibrated.

# Calibration Report



AIR QUALITY MONITORING

Parameter SO2

Air Monitoring Network PAZA

## Station Information

Calibration Date	January 27, 2018	Previous Calibration	December 21, 2017
Station Number	6	Station Location	Valleyview
Reason:	<b>Routine</b>	Install	Removal
		Other:	
Start Time (MST)	11:50	End Time (MST)	14:15
Barometric Pressure	0.929 atm	Station Temperature	22.0 Deg C
Calibrator	EnviroNics	Serial Number	3016
Cal Gas Concentration	49.4 ppm	Cal Gas Exp Date	February 21, 2020
Gas Cylinder Num.	EY0000751		
DACS make	CR3000	DACS serial No.	5409
DACS voltage range	0 - 5 volt	DACS channel #	4
	<u>Before</u>		<u>After</u>
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.999119	Calculated slope	0.998788
Calculated intercept	-0.114440	Calculated intercept	1.766036
Analyzer make	TEI Model 43i - APSCB	Analyzer serial #	701120010

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	7.6		7.6	
Coefficient	0.894		0.843	
UV Lamp Voltage	798	LPM	798	LPM
Chamber Temp	44.8	V	45	V
Perm Gas Temp	45	C	45	C
Pressure	689.3	in Hg	689.3	in Hg
Sample Flow	0.462	LPM	0.463	LPM
Lamp Intensity	90	Hz	91	%

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	0.1	N/A
4995	39.94	391.9	391.4	1.0012
4995	19.97	196.7	194.5	1.0116
4995	9.97	98.4	94.8	1.0379
4995	0.00	0.0	0.1	As found zero
4995	39.94	391.9	413.0	As found span
Average Correction Factor				1.0169

Calculated value of As Found Response: 412.5 ppb      Percent Change of As Found: -5.3%

	before calibration		after calibration	
Auto zero	0.6	ppb	0.1	ppb
Auto span	279.7	ppb	261.0	ppb

Notes: Span adjustment made

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter SO2  
 Air Monitoring Network PAZA

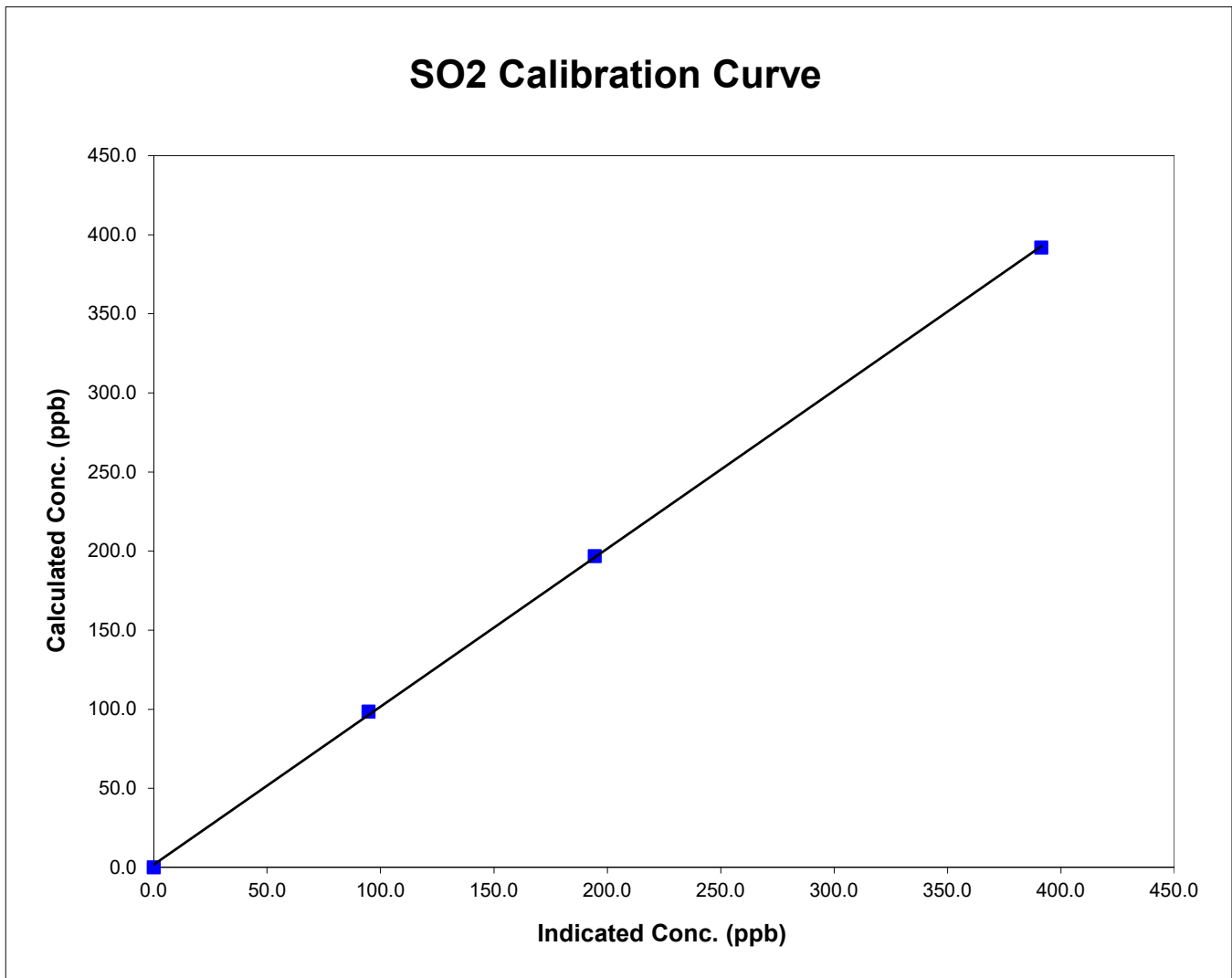


### Station Information

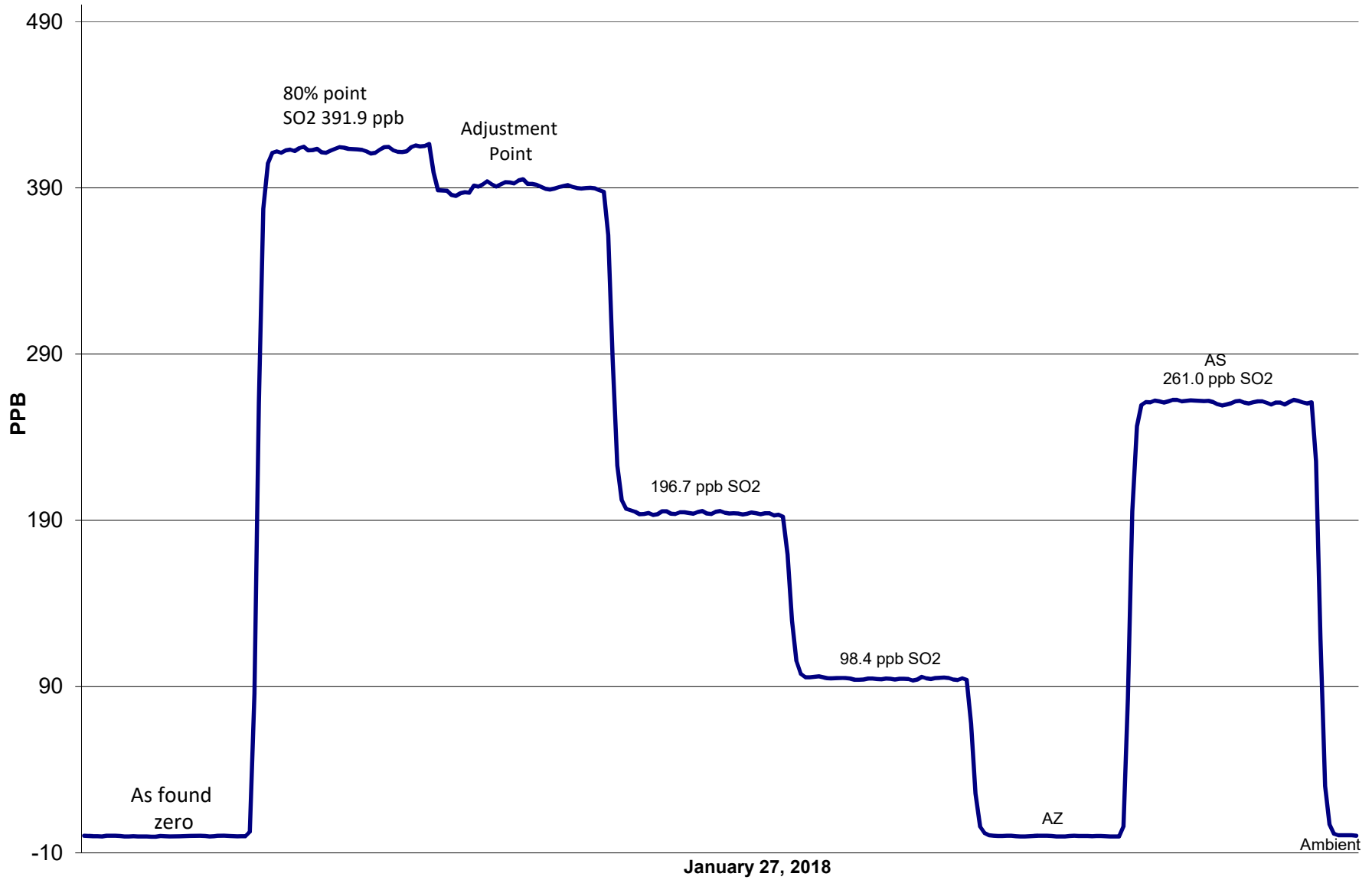
Calibration Date	January 27, 2018	Previous Calibration	December 21, 2017
Station Number	6	Station Location	Valleyview
Start Time (MST)	11:50	End Time (MST)	14:15
Analyzer make/model	TEI Model 43i - APSCB	Analyzer serial #	701120010

### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999901
391.9	391.4	1.0012		
196.7	194.5	1.0116		
98.4	94.8	1.0379	Slope	0.998788
			Intercept	1.766036



### SO2 Calibration

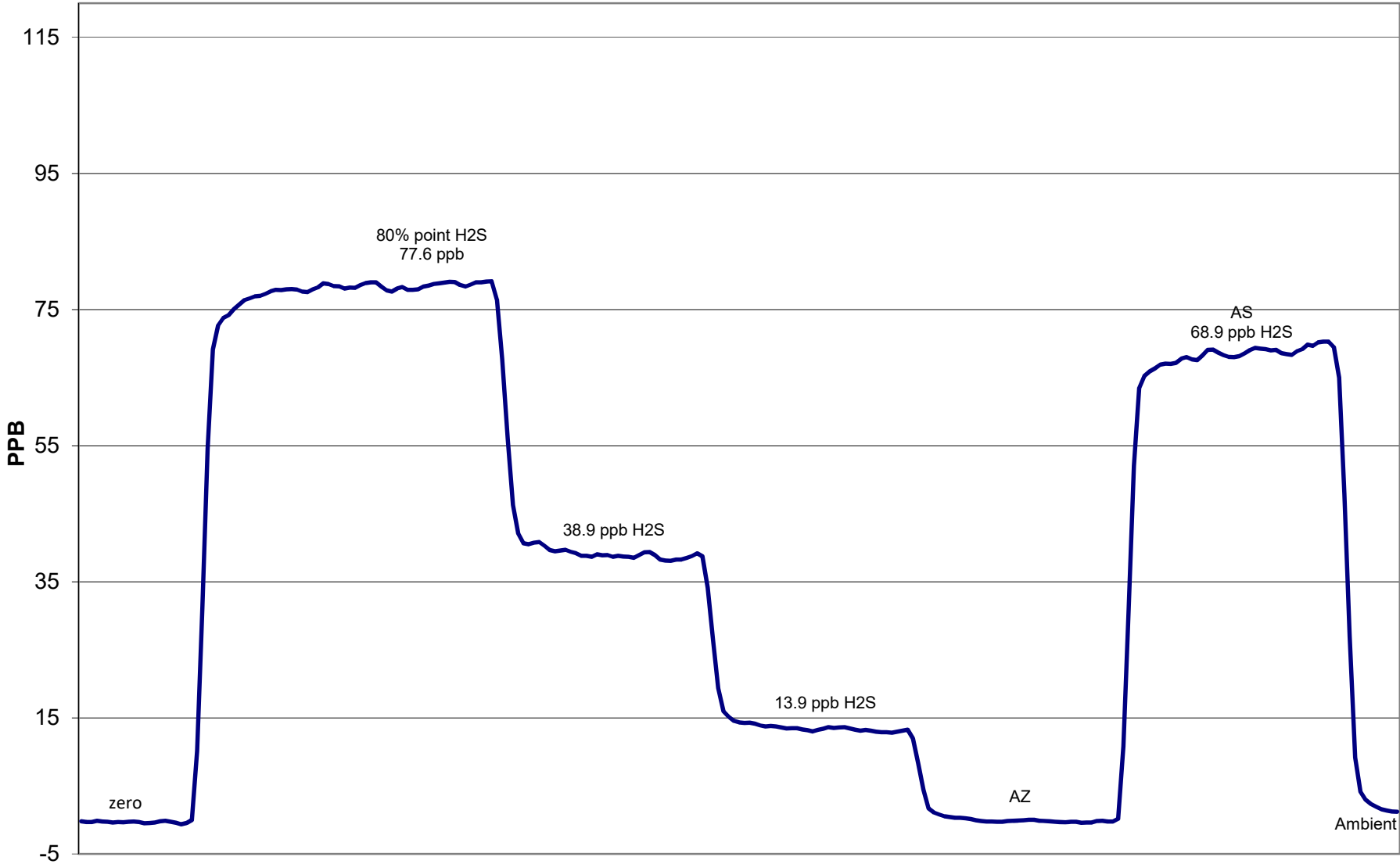








# H2S Calibration



January 27, 2018

# Calibration Report



Parameter SO<sub>2</sub>

Air Monitoring Network PAZA

## Station Information

Calibration Date	January 19, 2018	Previous Calibration	December 19, 2017
Station Number	1	Station Location	Donnelly
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	10:20	End Time (MST)	12:30
Barometric Pressure	0.926 atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Concentration	49.6 ppm	Cal Gas Expiry Date	10/24/2020
Correction factor	0.031477	Cal Gas Cylinder #	LL107945
DACS make	CR1000	DACS serial No.	3980
DACS voltage range	0 - 5 volt	DACS channel #	6
	<u>Before</u>		<u>After</u>
Calculated slope	0.995140	Calculated slope	1.012544
Calculated intercept	-0.054215	Calculated intercept	-0.098492
Analyzer make	Teco 43i	Analyzer serial #	1207452008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	6.8		6.8	
coefficient	1.020		1.020	
Lamp Voltage	857	volts	856	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	664.4	mm Hg	668.3	mm Hg
Sample Flow	0.425	ccm	0.327	ccm
Lamp Intensity	98	%	97	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
4997	0.0	0.00	0.9	N/A
4997	39.96	393.5	389.1	1.0114
4997	19.98	197.5	194.9	1.0134
4997	10.01	99.2	97.1	1.0211
4997	0.0	0.0	0.9	As Found Zero
4997	39.99	393.8	389.1	As Found Span
Average Correction Factor				1.0153

Calculated value of As Found Response: 386.217 ppb      Percent Change of As Found: **1.9%**

	before calibration		after calibration	
Auto zero	0.9	ppb	0.9	ppb
Auto span	241.4	ppb	248.6	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

# Calibration Summary



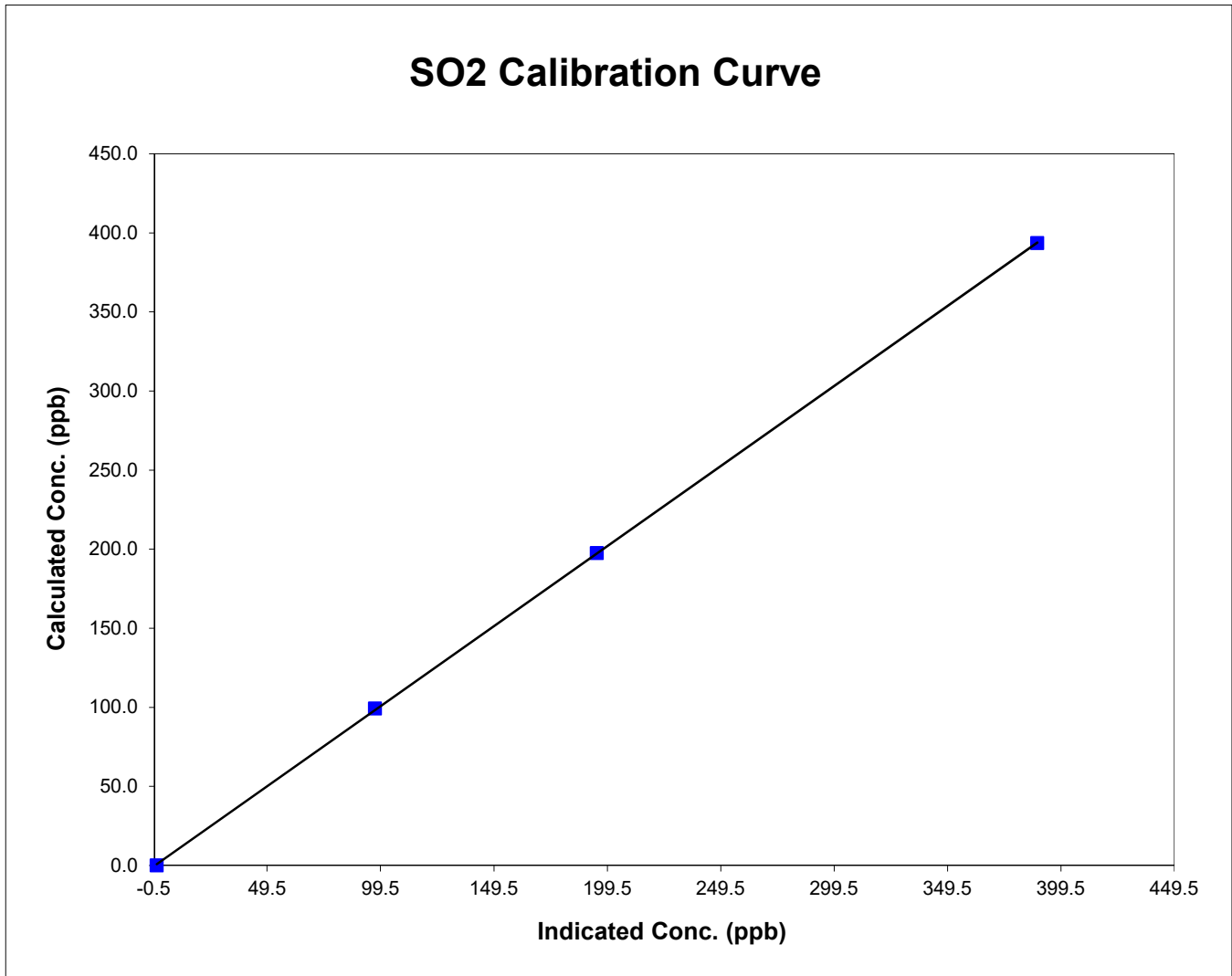
Parameter SO2  
 Air Monitoring Network PAZA

### Station Information

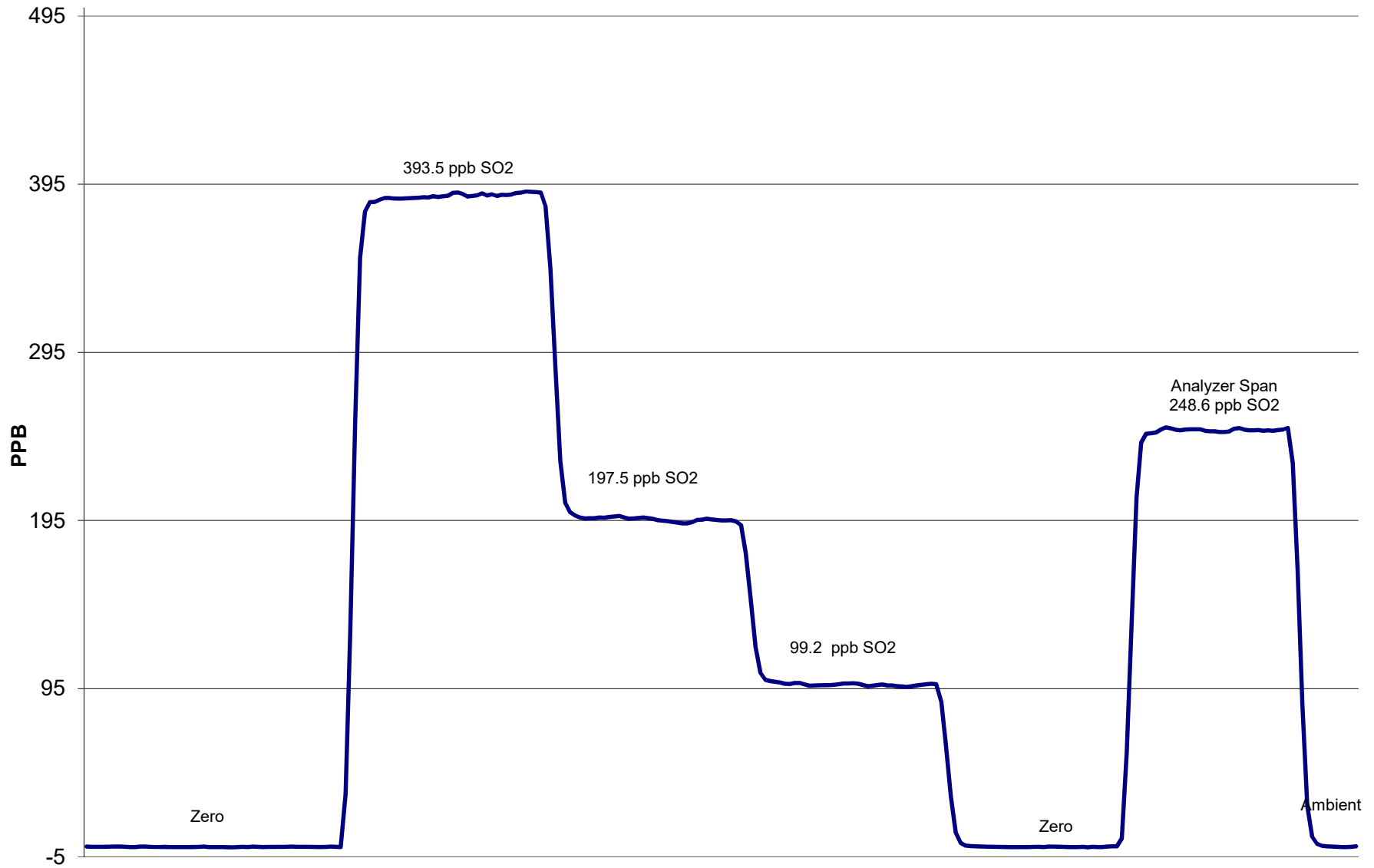
Calibration Date	January 19, 2018	Previous Calibration	December 19, 2017
Station Number	1	Station Location	Donnely
Start Time (MST)	10:20	End Time (MST)	12:30
Analyzer make/model	Teco 43i	Analyzer serial #	1207452008

### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.9	N/A	Correlation Coefficient	0.999979
393.5	389.1	1.0114		
197.5	194.9	1.0134	Slope	1.012544
99.2	97.1	1.0211		
			Intercept	-0.098492



# SO2 Calibration



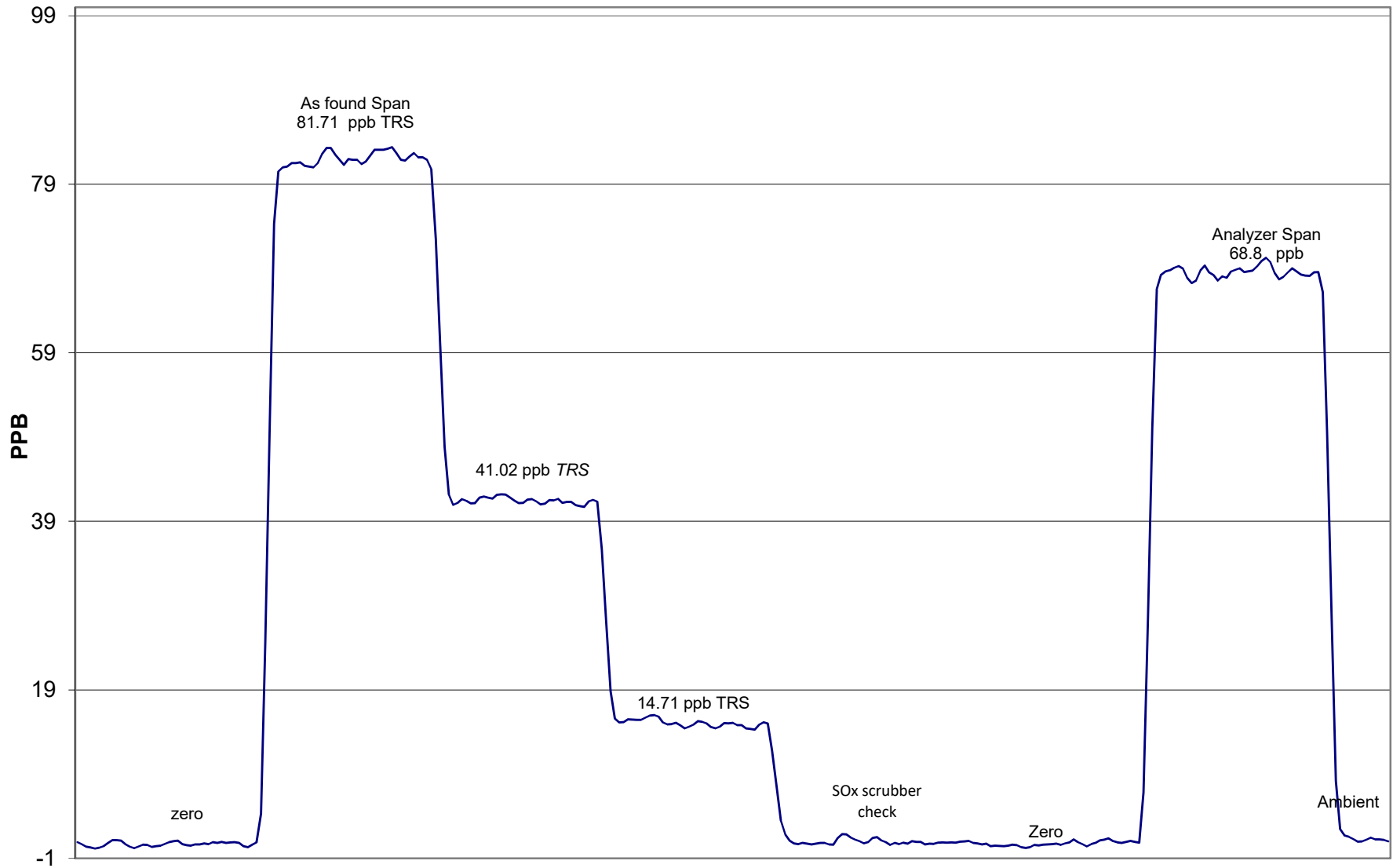
January 19, 2018







# H2S Calibration



December 19, 2017

# Calibration Report



**AIR QUALITY MONITORING**

Parameter SO2  
Air Monitoring Network \_\_\_\_\_

PAZA

## Station Information

Calibration Date	January 8, 2018	Previous Calibration	December 7, 2017
Station Number	10	Station Location	Rycroft
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	9:50	End Time (MST)	12:04
Barometric Pressure	0.919 Atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Concentration	49.6 ppm	Cal Gas Expiry Date	10/24/2020
Gas Cert Reference	LL107945		
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volt	DACS channel #	2
	<u>Before</u>		<u>After</u>
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.002900	Calculated slope	1.010826
Calculated intercept	0.451948	Calculated intercept	0.144431
Analyzer make	TEI 43C	Analyzer serial #	436610005

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	23.8		23.8	
Coefficient	1.042		1.042	
UV Lamp Voltage	899	V	898	V
Chamber Temp	44.6	C	44.9	C
Perm Gas Temp	45	C	45	C
Pressure	668.5	mm Hg	673.5	mm Hg
Sample Flow	0.464	LPM	0.465	LPM
Lamp Intesity	30219	Hz	30627	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	0.9	N/A
4996	39.96	393.6	389.7	1.0099
4996	19.99	197.7	195.0	1.0139
4996	9.98	98.9	96.6	1.0233
4996	0.00	0.0	0.9	As found zero
4996	39.96	393.6	389.7	As found span
Average Correction Factor				1.0157

Calculated value of As Found Response: 390.401 ppb      Percent Change of As Found: 0.8%

	before calibration		after calibration	
Auto zero	0.3	ppb	0.3	ppb
Auto span	201.6	ppb	201.7	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

# Calibration Summary

Parameter SO2  
 Air Monitoring Network PAZA

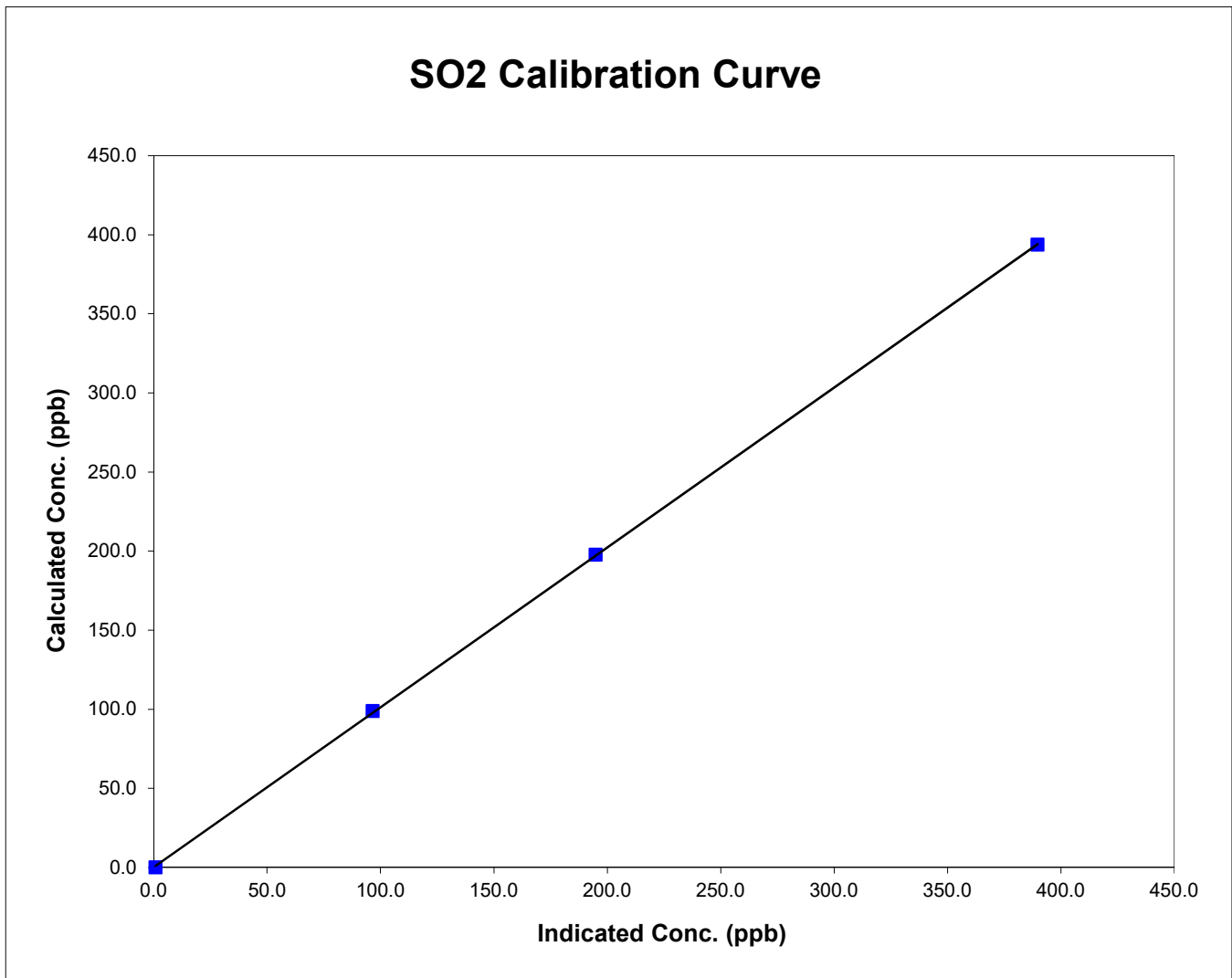


### Station Information

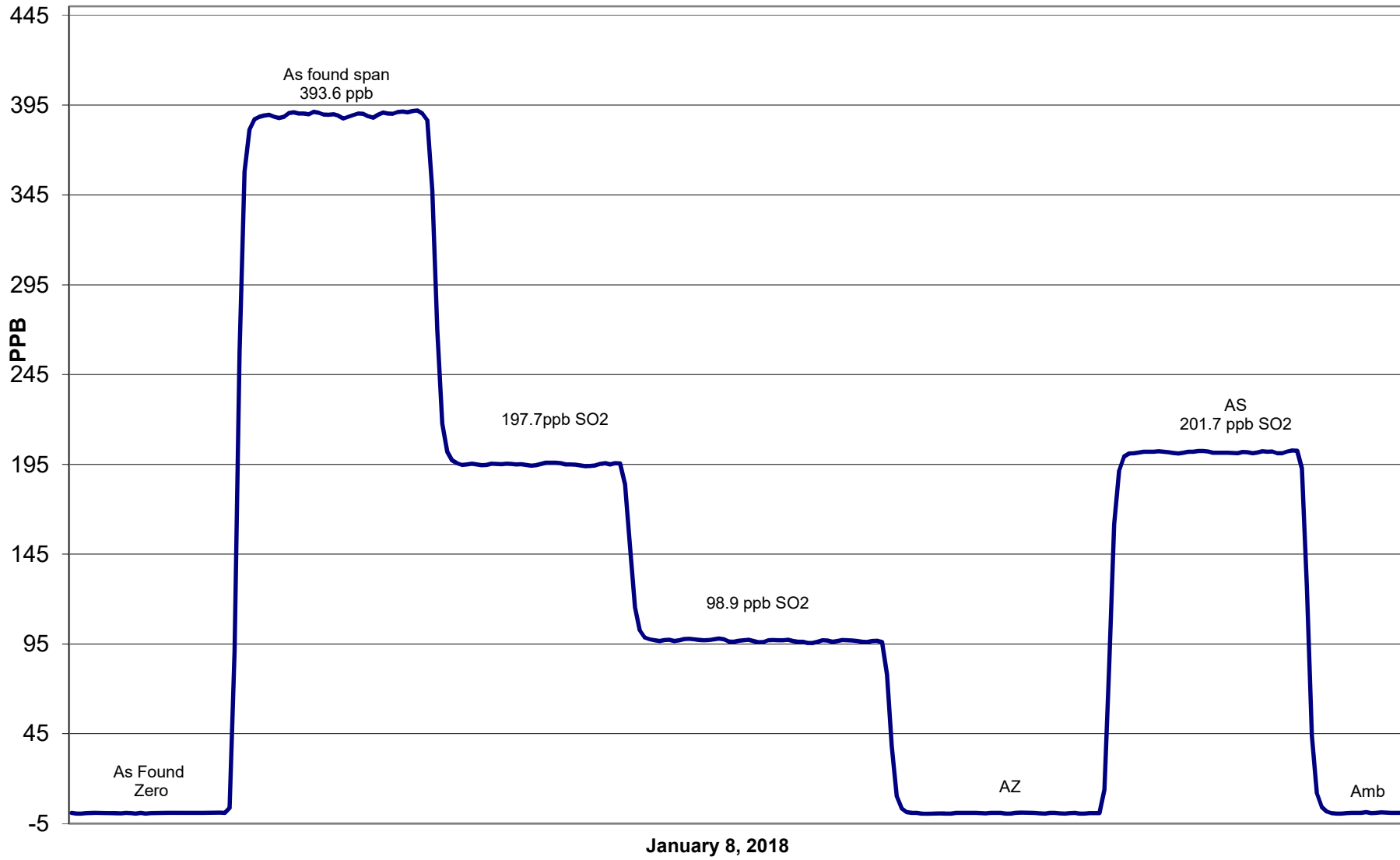
Calibration Date	January 8, 2018	Previous Calibration	December 7, 2017
Station Number	10	Station Location	Rycroft
Start Time (MST)	9:50	End Time (MST)	12:04
Analyzer make/model	TEI 43C	Analyzer serial #	436610005

### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.9	N/A	Correlation Coefficient	0.999969
393.6	389.7	1.0099		
197.7	195.0	1.0139	Slope	1.010826
98.9	96.6	1.0233		
			Intercept	0.144431



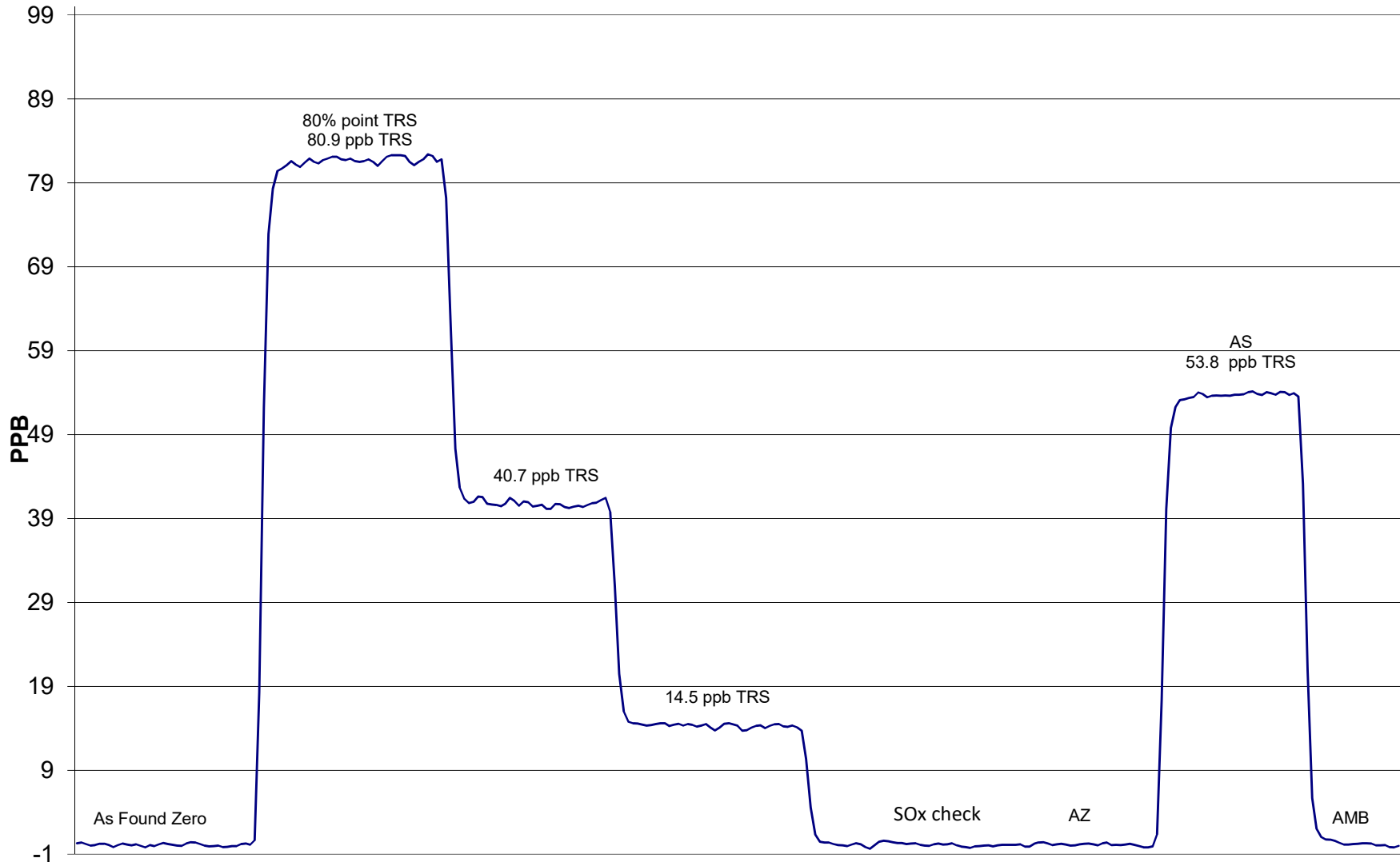
# SO2 Calibration







# TRS Calibration



January 8, 2018





# Calibration Report



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

## Station Information

Calibration Date: January 8, 2018 Station Location: Rycroft

## Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4996	0.00	0.0	0.0	0.0	-0.1	0.0	0.0	N/A	N/A
1	4996	39.96	412.6	411.8	0.8	408.3	406.2	0.5	1.0105	1.0139
2	4996	19.99	207.2	206.8	0.4	205.0	203.7	0.5	1.0109	1.0153
3	4996	9.98	103.7	103.5	0.2	101.7	101.5	0.3	1.0194	1.0197
AFZ	4996	0.00	0.0	0.0	0.0	-0.1	0.0	0.0	0.0000	0.0000
AFS	4996	39.96	412.6	411.8	0.8	363.0	361.1	0.4	1.1366	1.1406
Average Correction Factor									1.0136	1.0163

As Found Concentrations: NO<sub>x</sub>= 364.0 NO= 362.9 As Found Percent Change NO<sub>x</sub>= -11.8% NO= -11.9%

## GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.94 ccm

O3 Setpoint (ppb)	Indicated NOx high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	0.0	0.0	0.0	-0.1	0.0	0.0	N/A	N/A	N/A	N/A
NO point	405.6	405.6	0.0	407.8	405.6	0.2	0.9945	1.0000	N/A	N/A
300	405.6	110.9	294.7	409.1	110.9	296.6	0.9913	1.0000	0.9935	100.7%
200	405.6	208.6	197.0	409.7	208.6	199.1	0.9900	1.0000	0.9898	101.0%
100	405.6	311.6	94.0	409.9	311.6	96.4	0.9896	1.0000	0.9754	102.5%
Average Correction Factor							0.9903	1.0000	0.9862	101.4%

## AIC Data

Parameter	Previous calibration				Current calibration			
	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.4	0.1	0.3	ppb	0.1	0.1	0.1	ppb
Auto span	156.7	154.9	1.2	ppb	159.1	157.6	0.9	ppb

Calibration Performed By: Dmytro Dolotii

# Calibration Summary



Parameter NO<sub>2</sub>

Air Monitoring Network PAZA

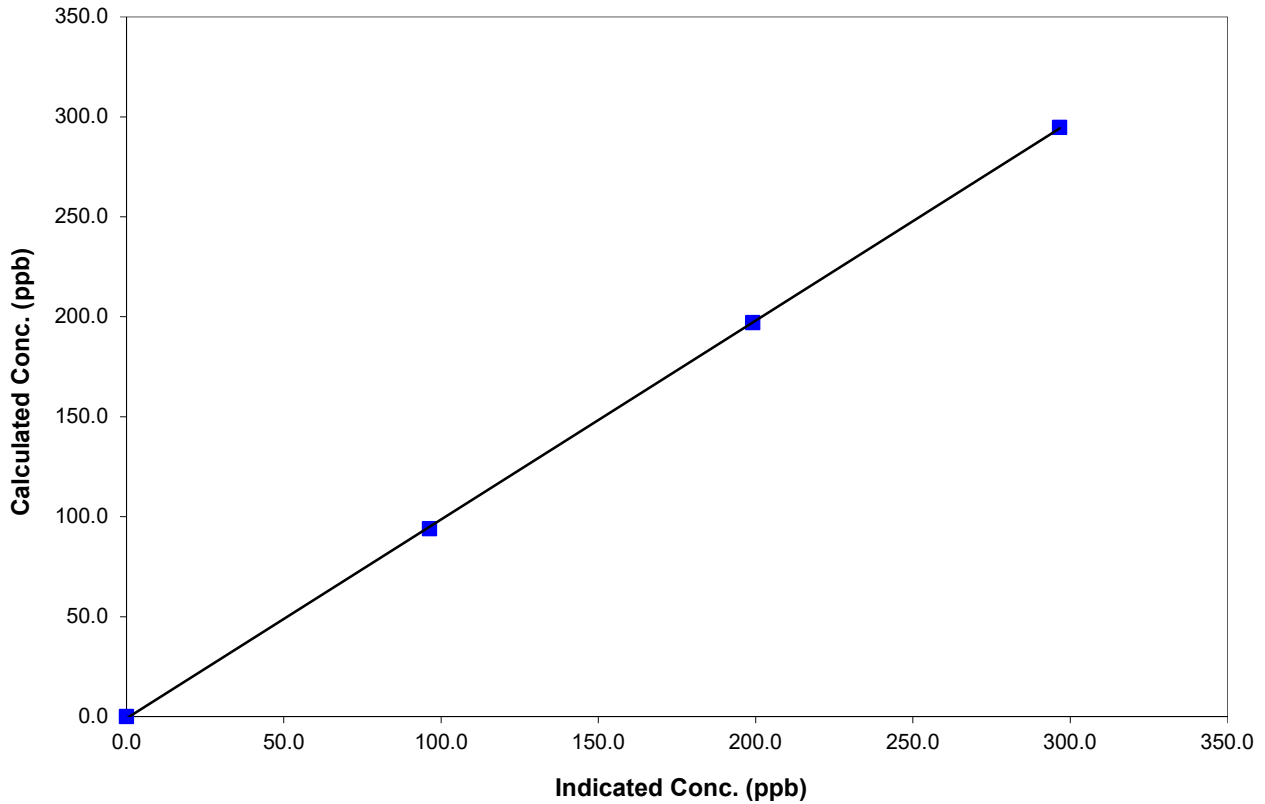
## Station Information

Calibration Date	January 8, 2018	Previous Calibration	December 7, 2017
Station Number	10	Station Location	Rycroft
Start Time (MST)	8:45	End Time (MST)	13:30:00 PM
Analyzer make	TEI 42i	Analyzer serial #	0701120011

## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999960
294.7	296.6	0.9935		
197.0	199.1	0.9898		
94.0	96.4	0.9754	Slope	0.994605
			Intercept	-0.793971

**NO<sub>2</sub> Calibration Curve**



# Calibration Summary



Parameter NO<sub>x</sub>

Air Monitoring Network PAZA

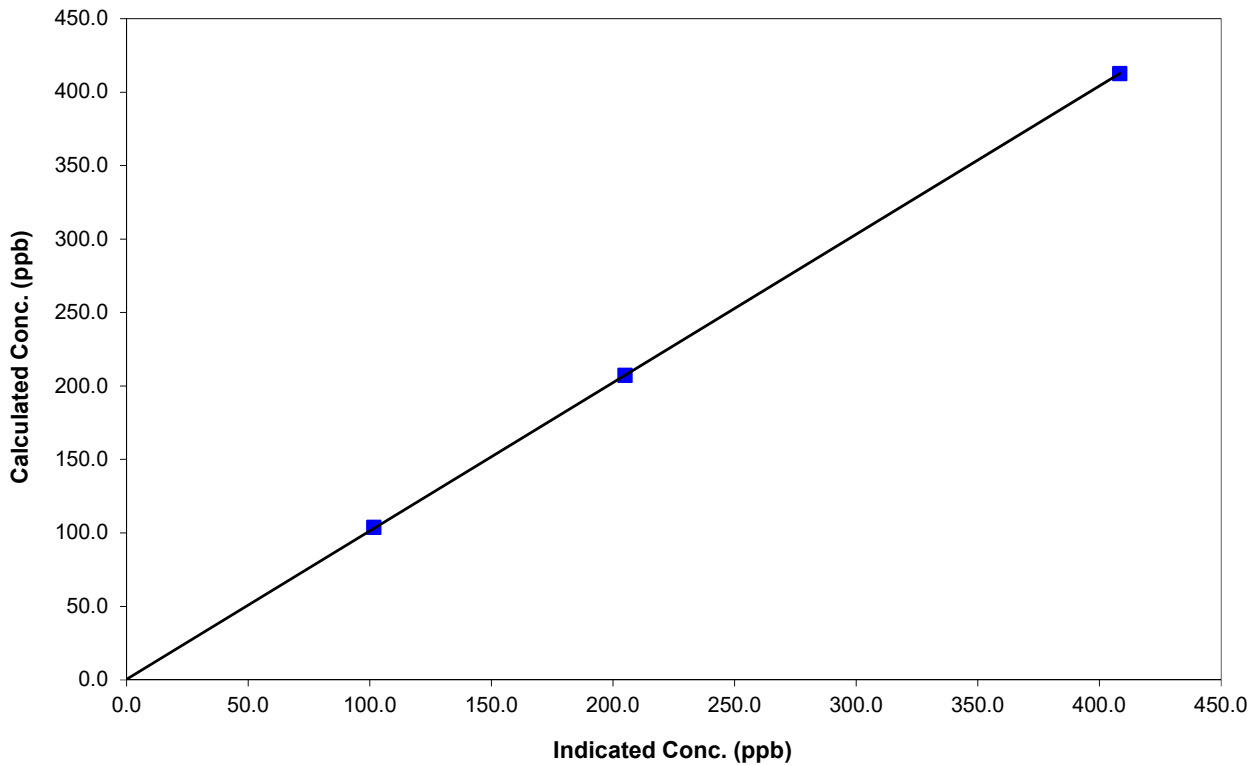
## Station Information

Calibration Date	January 8, 2018	Previous Calibration	December 7, 2017
Station Number	10	Station Location	Rycroft
Start Time (MST)	8:45	End Time (MST)	13:30:00 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	0.999995
412.6	408.3	1.0105		
207.2	205.0	1.0109	Slope	1.009473
103.7	101.7	1.0194		
			Intercept	0.459866

## NO<sub>x</sub> Calibration Curve



# Calibration Summary



Parameter NO  
 Air Monitoring Network PAZA

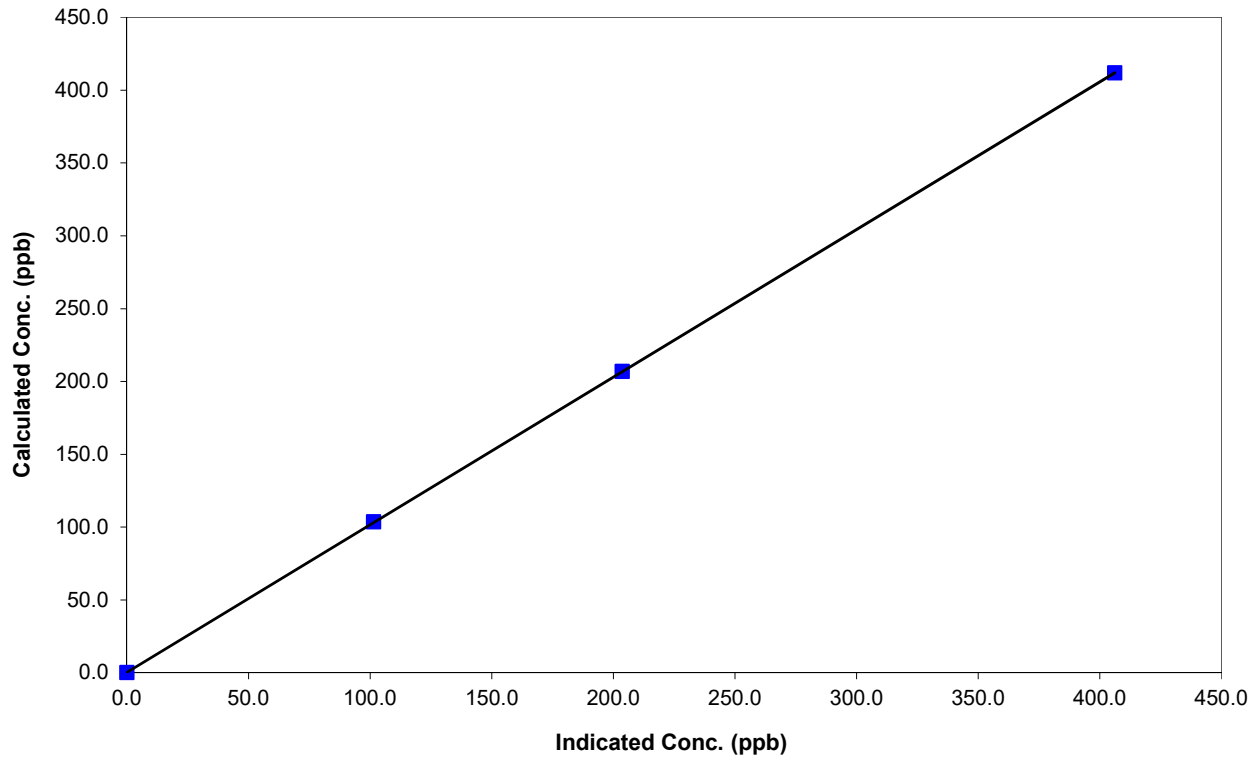
## Station Information

Calibration Date	January 8, 2018	Previous Calibration	December 7, 2017
Station Number	10	Station Location	Rycroft
Start Time (MST)	8:45	End Time (MST)	13:30:00 PM
Analyzer make	TEI 42i	Analyzer serial #	0701120011

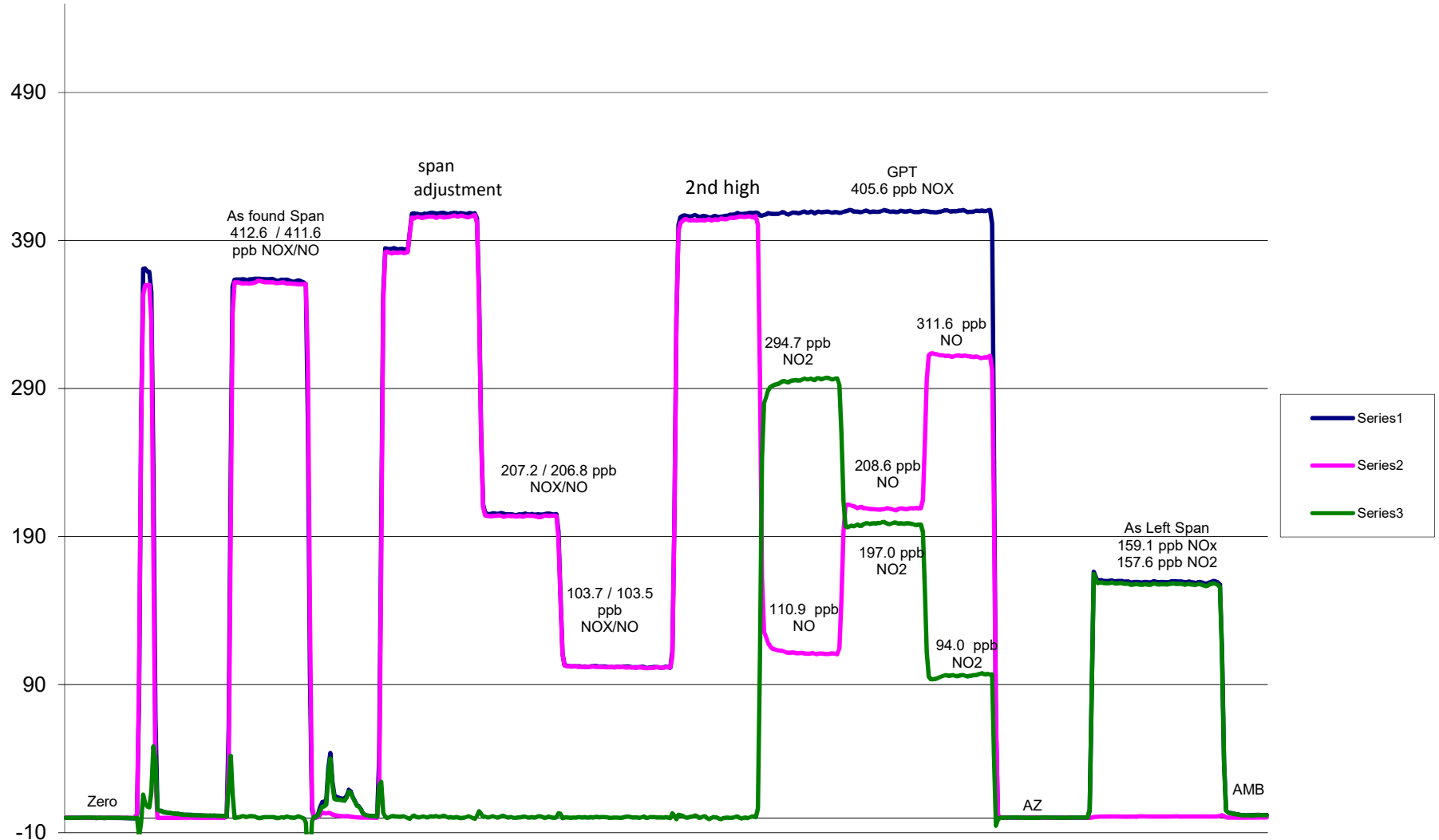
## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999997
411.8	406.2	1.0139		
206.8	203.7	1.0153		
103.5	101.5	1.0197	Slope	1.013588
			Intercept	0.264779

## NO Calibration Curve



# NO<sub>x</sub> Calibration



January 8, 2018

# Calibration Report



AIR QUALITY MONITORING

Parameter 03

Air Monitoring Network PAZA

## Station Information

Calibration Date	January 8 2017	Previous Calibration	December 7 2017
Station Number	10	Station Location	Rycroft
Reason:	<b>Routine</b>	Install	Removal
		Other:	
Start Time (MST)	12:20	End Time (MST)	14:35:00 PM
Barometric Pressure	0.919 atm	Station Temperature	20.0 Deg C
Calibrator	Envionics 6103	Serial Number	6586
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volts	DACS channel #	6
	Before		After
Calculated slope	0.979046	Calculated slope	0.979089
Calculated intercept	-0.021790	Calculated intercept	-0.642722
Analyzer make	TEI Model 49C	Analyzer serial #	49C-0609716240

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	-0.5	ppb	-0.5	ppb
Span	1.004		1.004	
Cell A intensity	57785	Hz	57345	Hz
Cell B intensity	58988	Hz	58987	Hz
Pressure	664.30	in Hg	671.20	in Hg
CellA Flow	0.702	ccm	0.718	ccm
Cell B Flow	0.693	cmm	0.704	cmm

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4996	0.00	0.0	0.6	N/A
4996	0.30	294.7	302.0	0.9758
4996	0.20	197.0	201.1	0.9796
4996	0.10	94.0	97.2	0.9675
4996	0.00	0.0	0.6	As found zero
4996	0.30	294.7	302.0	As found span
Average Correction Factor				0.9743

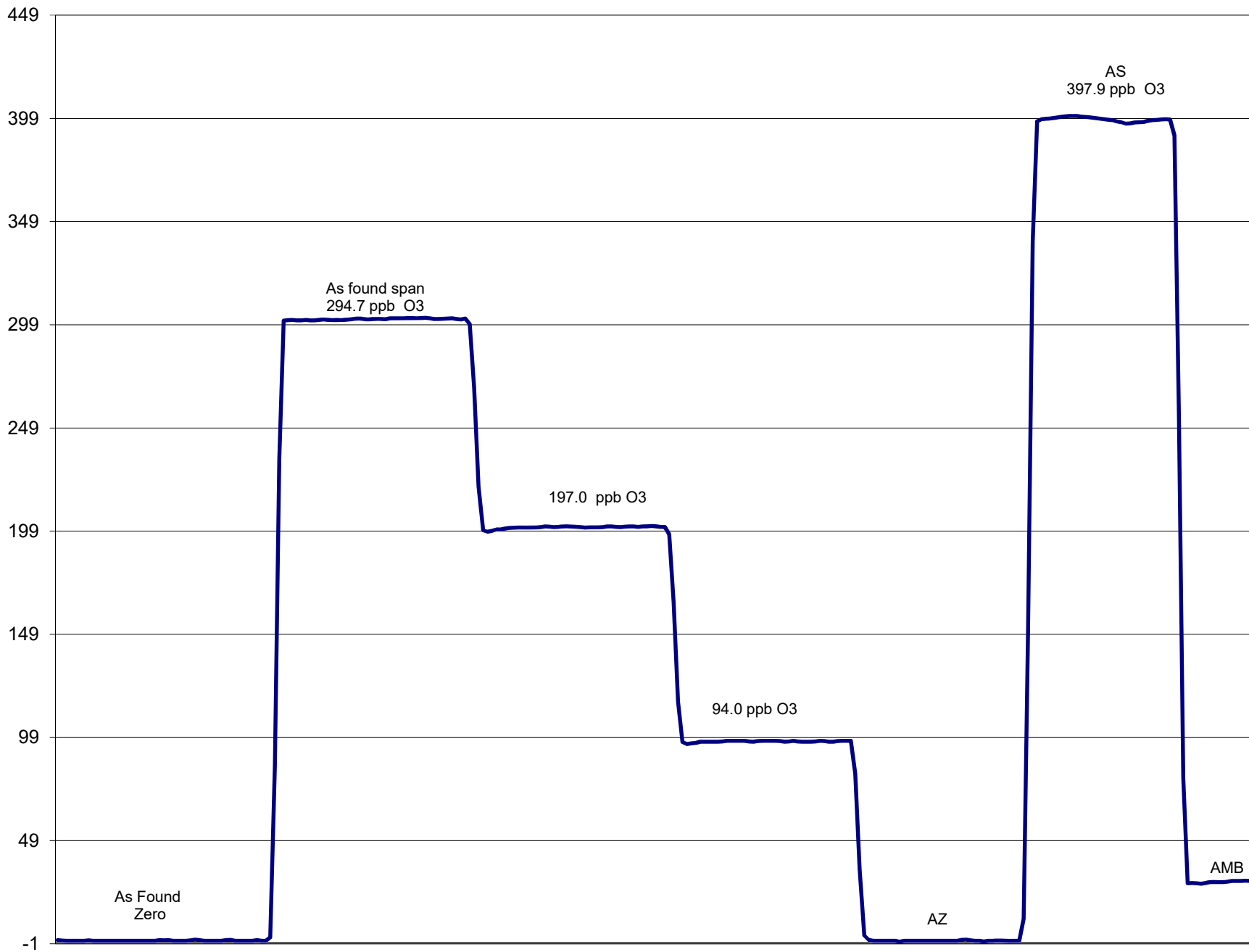
Calculated value of As Found Response: 295.1 ppm      Percent Change of As Found: 0.1%

	before calibration		after calibration	
Auto zero	0.5	ppb	0.5	ppb
Auto span	432.8	ppb	397.9	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii





January 8 2017



# Calibration Report



Parameter CH4 / NMHC / THC

Air Monitoring Network PAZA

## Station Information

Calibration Date	January 4, 2018	Previous Calibration	December 4, 2017
Station Number	1	Station Location	Rycroft
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	13:20:00 PM	End Time (MST)	15:55:00 PM
Barometric Pressure	0.930 atm	Station Temperature	21.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas CH4 Conc	404 ppm CH4	Cal Gas Expiry Date	3/28/2014
Cal Gas C3H8 Conc	201 552.75 ppm CH4	Cal Gas Cylinder #	LL34988
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 5 volt	DACS channel #	SE 12,13,14

Analyzer make TEI 55I-A3PHAA Analyzer serial # 1151980005

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

## CH4 Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
2000	0.00	0.00	0.01	N/A
2000	64.93	12.70	12.83	0.9900
2000	40.97	8.11	8.17	0.9921
2000	15.96	3.20	3.22	0.9923
2000	0.00	0.00	0.01	As Found Zero
2000	64.93	12.70	12.62	As Found Span
Average Correction Factor				0.9915

Calculated value of As Found Response: 12.522 ppm Percent Change of As Found: 1.4%

	Before		After
Calculated slope	0.993050	Calculated slope	0.991061
Calculated intercept	0.006972	Calculated intercept	-0.004071

## Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.02	ppm
Auto span	8.13	ppm	8.12	ppm

### NMHC Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
2000	0.00	0.00	0.00	N/A
2002	64.93	17.36	17.22	1.0084
2000	40.97	11.10	10.90	1.0182
2000	15.96	4.38	4.21	1.0397
2000	0.00	0.00	0.00	As Found Zero
2000	64.93	17.38	17.70	As Found Span
Average Correction Factor				1.0221

Calculated value of As Found Response: 17.711 ppm      Percent Change of As Found: -1.9%

	Before		After
Calculated slope	0.997744	Calculated slope	1.007224
Calculated intercept	0.056362	Calculated intercept	0.068891

#### Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.00	ppm
Auto span	11.03	ppm	10.76	ppm

### THC Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
2000	0.00	0.00	0.01	N/A
2000	64.93	30.08	30.09	0.9999
2000	40.97	19.21	19.07	1.0070
2000	15.96	7.57	7.46	1.0153
2000	0.00	0.00	0.01	As Found Zero
2000	64.93	30.08	30.35	As Found Span
Average Correction Factor				1.0074

Calculated value of As Found Response: 30.257 ppm      Percent Change of As Found: -0.6%

	Before		After
Calculated slope	0.995354	Calculated slope	1.000017
Calculated intercept	0.057100	Calculated intercept	0.057448

#### Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.02	ppm
Auto span	19.16	ppm	18.88	ppm

Notes: Slight span adjustment made  
Hydrogen & nitrogen tanks replaced

Calibration Performed By: Dmytro Dolotii

# Calibration Summary



Parameter CH4  
 Air Monitoring Network PAZA

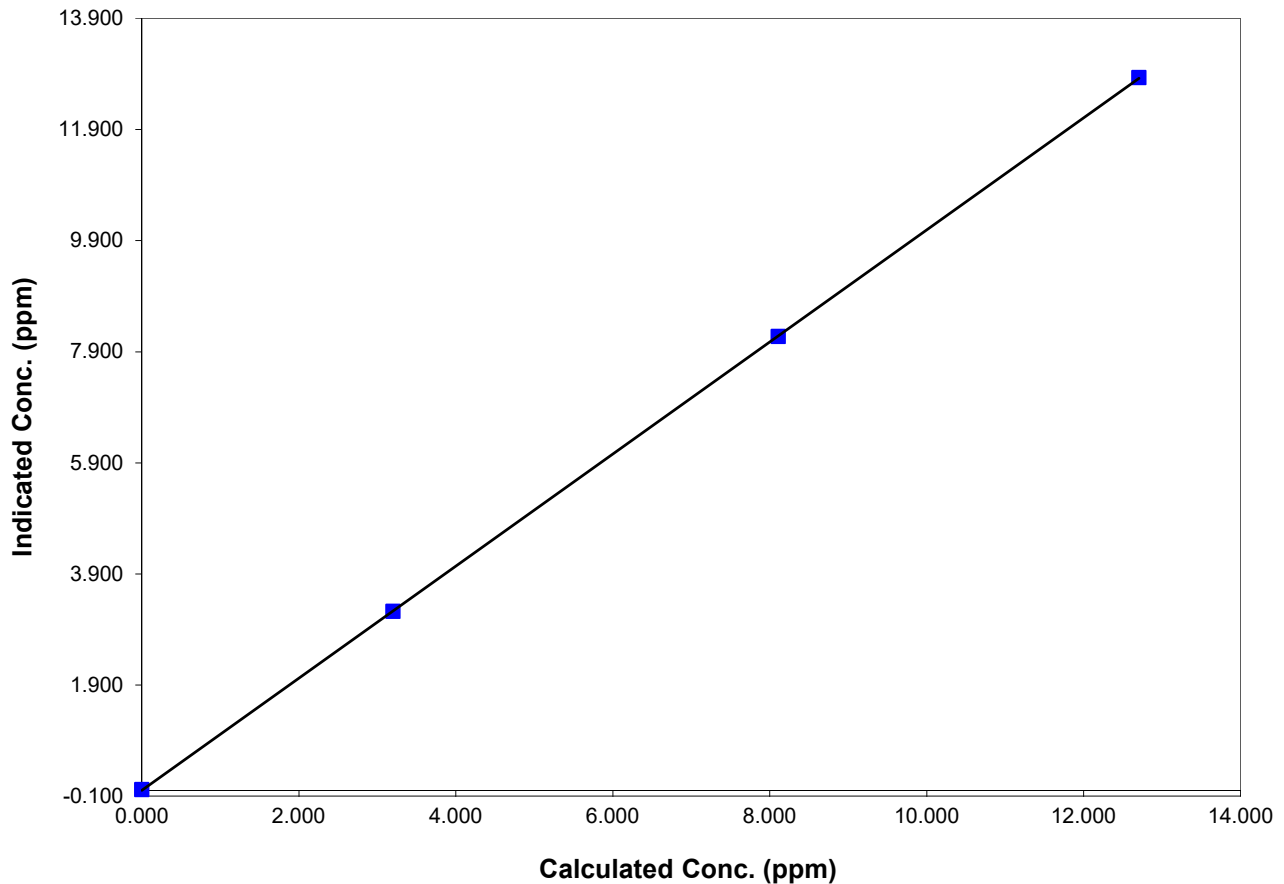
### Station Information

Calibration Date	January 4, 2018	Previous Calibration	December 4, 2017
Station Number	1	Station Location	Rycroft
Start Time (MST)	13:20:00 PM	End Time (MST)	15:55:00 PM
Analyzer make/model	TEI 55I-A3PHAA	Analyzer serial #	1151980005

### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.015	N/A		
12.703	12.832	0.9900	Correlation Coefficient	0.999995
8.110	8.174	0.9921		
3.198	3.223	0.9923	Slope	0.991061
			Intercept	-0.004071

## CH4 Calibration Data





# Calibration Summary



Parameter THC  
 Air Monitoring Network PAZA

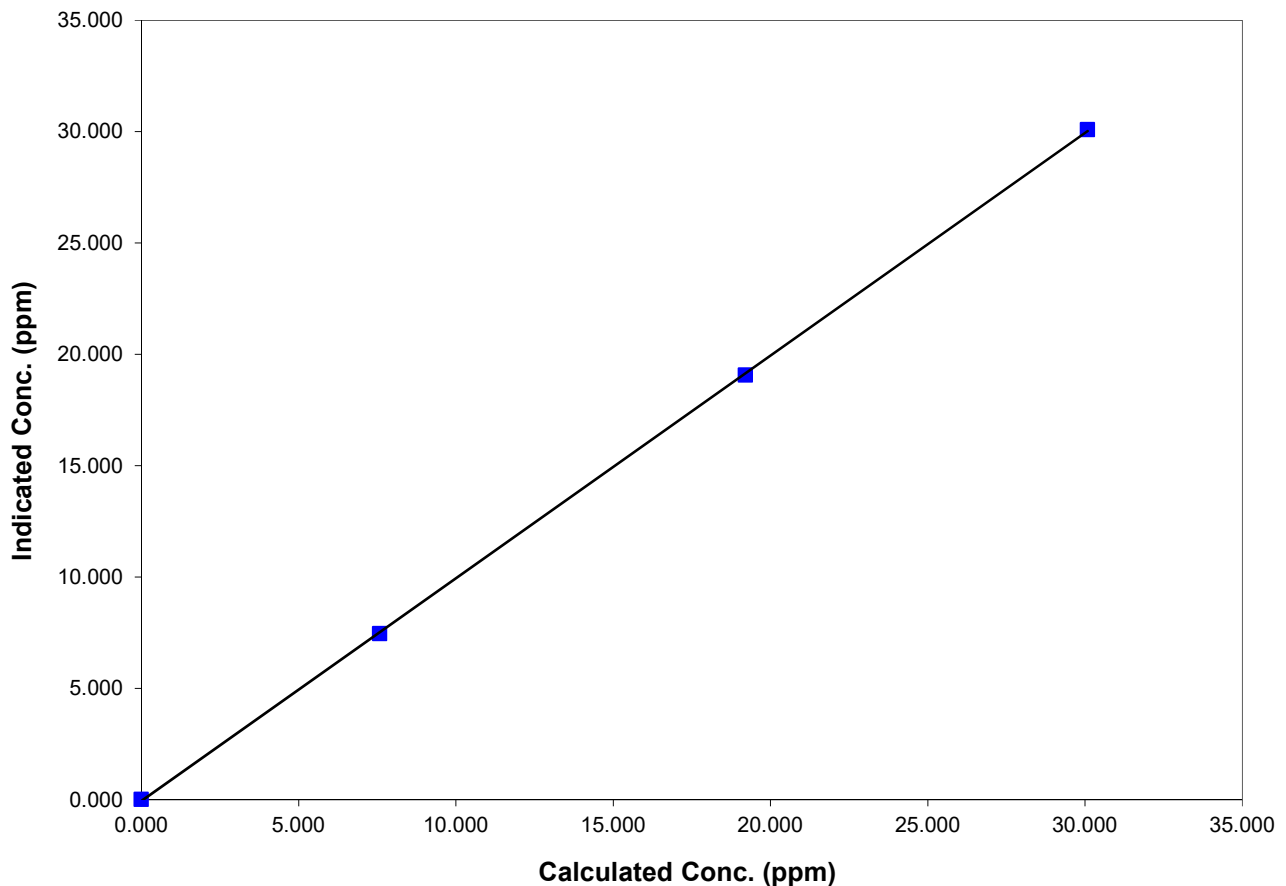
### Station Information

Calibration Date	January 4, 2018	Previous Calibration	December 4, 2017
Station Number	1	Station Location	Rycroft
Start Time (MST)	13:20:00 PM	End Time (MST)	15:55:00 PM
Analyzer make/model	TEI 55I-A3PHAA	Analyzer serial #	1151980005

### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.013	N/A	Correlation Coefficient	0.999966
30.084	30.088	0.9999		
19.206	19.072	1.0070	Slope	1.000017
7.574	7.460	1.0153		
			Intercept	0.057448

## THC Calibration Data



# THC/CH<sub>4</sub>/NMHC Calibration

