



Peace Airshed Zone Association

Ambient Air Monitoring Network Summary

**Continuous Ambient Air Quality Monitoring Program
Monthly Report
January 2016**

February 23rd, 2016

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

RE: Peace Airshed Zone Association (PAZA) – January 2016 Ambient Air Report

Enclosed is the PAZA Ambient Monitoring Network Report for the month of **January 2016**.

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

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

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

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

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

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

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 the PM_{2.5} analyzer, which recorded 1 24-hour exceedence of the guideline of 30 µg/m³;
 - o January 9 33.9 µg/m³ Alberta Environment Reference # 307194
- ♦ All analyzers and 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 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 the PM_{2.5} analyzer, which recorded two (2) 1-hour exceedences of the guideline of 80 µg/m³;
 - o January 4 2300h 213.9 µg/m³ Alberta Environment Reference # 307063
 - o January 28 1800h 146.6 µg/m³ Alberta Environment Reference # 307421
- ◆ All analyzers and 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.
- ◆ All analyzers and sensors at the Beaverlodge station had an operational uptime greater than 90% for the month of January.

Valleyview Station:

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

Falher Station:

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

Passive Monitoring - 46 Stations throughout the PAZA zone:

There were five duplicate sites sampled in the month of January: Gordondale, Steeprock Creek, Woking, Sunset House and Girouxville 3. The passive sample analyses were performed by MAXXAM Analytics Inc.

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

- Monthly average concentrations for SO₂ passives ranged from 0.1 ppb to 1.2 ppb, with a mean of 0.4 ppb.
- Monthly average concentrations for NO₂ passives ranged from 1.0 ppb to 18.2 ppb, with a mean of 3.4 ppb.
- Monthly average concentrations for O₃ passives ranged from 14.4 ppb to 39.5 ppb, with a mean of 18.9 ppb.
- Monthly average concentrations for H₂S passives were 0.5 ppb at all locations.

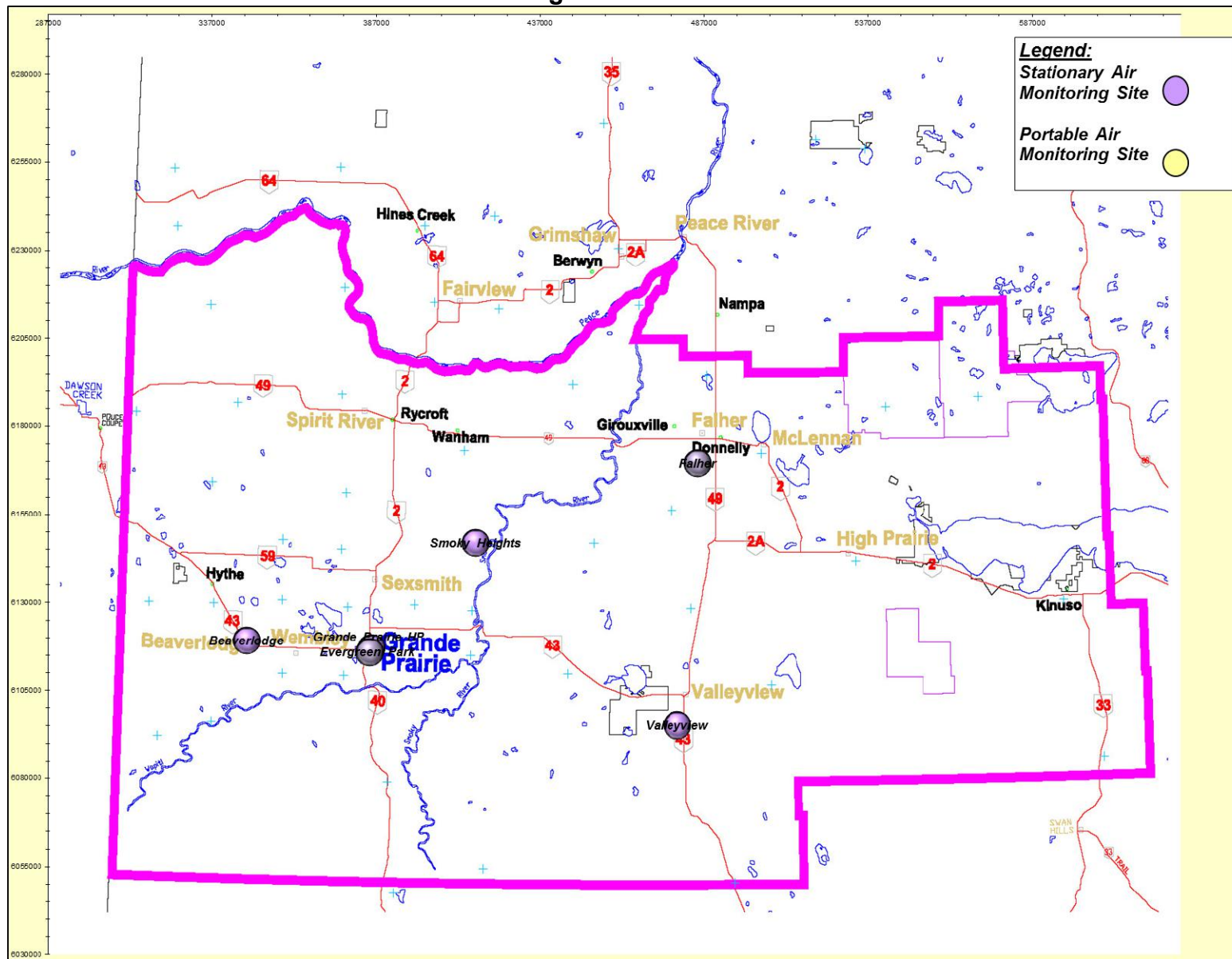
If you have any questions or concerns, please contact Patrick Andersen at 403.505.1041 or the PAZA office at 780.833.4343.

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-2016Peace Airshed Zone Association							Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
Pollutant (units)	Objectives		Station	Monthly Average	Exceedence		Conc	Day	Conc	Day	Operational Time (%)
	1-hr	24-hr			1-hr	24-hr					
SO ₂ (ppb)	172	48	Henry Pirker	0.6	0	0	15.7	Jan-09 07:00	5.4	Jan-09	100%
SO ₂ (ppb)	172	48	Evergreen Park	0.5	0	0	12.1	Jan-09 12:00	2.5	Jan-09	100%
SO ₂ (ppb)	172	48	Smoky Heights	0.8	0	0	54.7	Jan-29 03:00	5.8	Jan-09	100%
SO ₂ (ppb)	172	48	Beaverlodge	1.2	0	0	24.6	Jan-21 09:00	10.2	Jan-21	100%
SO ₂ (ppb)	172	48	Valleyview	0.4	0	0	10.8	Jan-26 16:00	2.7	Jan-29	100%
SO ₂ (ppb)	172	48	Falher	0.2	0	0	2.2	Jan-18 00:00	0.8	Jan-17	100%
SO ₂ (ppb)	172	48	Portable	-	0	0	-	-	-	-	-
NO (ppb)			Henry Pirker	14.9	0	0	193.4	Jan-12 11:00	61.6	Jan-12	100%
NO ₂ (ppb)	159	106	Henry Pirker	19.8	0	0	56.4	Jan-12 11:00	36.2	Jan-04	100%
NO _x (ppb)			Henry Pirker	34.7	0	0	251.1	Jan-12 11:00	97.7	Jan-12	100%
NO (ppb)			Beaverlodge	1.7	0	0	36.9	Jan-09 13:00	8.0	Jan-18	100%
NO ₂ (ppb)	159	106	Beaverlodge	7.5	0	0	27.0	Jan-18 22:00	17.1	Jan-22	100%
NO _x (ppb)			Beaverlodge	9.2	0	0	52.2	Jan-09 13:00	24.3	Jan-18	100%
NO (ppb)			Portable	-	0	0	-	-	-	-	-
NO ₂ (ppb)	159	106	Portable	-	0	0	-	-	-	-	-
NO _x (ppb)			Portable	-	0	0	-	-	-	-	-
O ₃ (ppb)	82		Henry Pirker	10.4	0	-	39.8	Jan-28 16:00	26.1	Jan-29	100%
O ₃ (ppb) - 8-hr			Henry Pirker		0				38.3	Jan-29	
O ₃ (ppb)	82		Beaverlodge	23.7	0	-	44.8	Jan-01 16:00	43.3	Jan-01	100%
O ₃ (ppb) - 8-hr			Beaverlodge		0				43.9	Jan-01	
O ₃ (ppb)	82		Portable	-	0	-	-	-	-	-	-
O ₃ (ppb) - 8-hr			Portable		-				-		
CO (ppm)	13		Henry Pirker	0.36	0	-	1.8	Jan-12 11:00	0.7	Jan-12	100%
CO (ppm) - 8-hr	5		Henry Pirker		0				1.1	Jan-12	

PAZA Monthly Continuous Data Summary – continued

Jan-2016Peace Airshed Zone Association							Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
THC (ppm)			Henry Pirker	2.2	-	-	2.8	Jan-03 03:00	2.6	Jan-24	96%
CH ₄ (ppm)			Henry Pirker	2.2	-	-	2.8	Mar-03 03:00	2.6	Jan-24	96%
NMHC (ppm)			Henry Pirker	0.0	-	-	0.1	Jan-29 11:00	0.0	Jan-01	96%
THC (ppm)			Portable	-	-	-	-	-	-	-	-
TRS (ppb)			Henry Pirker	0.5	-	-	2.4	Jan-20 17:00	0.9	Jan-21	100%
TRS (ppb)			Evergreen Park	0.6	-	-	2.9	Jan-21 04:00	1.5	Jan-25	99%
TRS (ppb)			Smoky Heights	0.2	-	-	1.6	Jan-13 11:00	0.6	Jan-10	100%
TRS (ppb)			Portable	-	-	-	-	-	-	-	-
H ₂ S (ppb)	10	3	Valleyview	0.4	0	0	4.5	Jan-10 19:00	0.9	Jan-20	100%
H ₂ S (ppb)	10	3	Falher	0.2	0	0	5.7	Jan-30 08:00	1.0	Jan-30	100%
PM _{2.5} (µg/m3)	80	30	Henry Pirker	13.3	0	1	49.2	Jan-04 19:00	33.9	Jan-09	100%
PM _{2.5} (µg/m3)	80	30	Evergreen Park	7.7	0	0	38.4	Jan-25 12:00	27.8	Jan-09	100%
PM _{2.5} (µg/m3)	80	30	Smoky Heights	10.6	2	0	213.9	Jan-04 23:00	27.0	Jan-09	100%
PM _{2.5} (µg/m3)	80	30	Beaverlodge	9.9	0	0	51.6	Jan-08 00:00	30.2	Jan-21	100%
PM _{2.5} (µg/m3)	80	30	Portable	-	-	-	-	-	-	-	-
RH (%)			Henry Pirker	71.7	-	-	86.8	Jan-26 10:00	82.3	Jan-22	100%
RH (%)			Evergreen Park	80.9	-	-	98.9	Jan-13 22:00	92.6	Jan-22	100%
RH (%)			Beaverlodge	77.9	-	-	100.0	Jan-22 16:00	97.2	Jan-22	100%
RH (%)			Valleyview	74.3	-	-	94.0	Jan-13 22:00	88.8	Jan-13	100%
SR (W/m ²)			Henry Pirker	24.5	-	-	273.6	Jan-09 14:00	52.8	Jan-29	100%
Temp (°C)			Henry Pirker	-10.2	-	-	7.9	Jan-28 14:00	2.8	Jan-27	100%
Temp (°C)			Evergreen Park	-10.2	-	-	8.0	Jan-28 15:00	3.0	Jan-27	100%
Temp (°C)			Smoky Heights	-10.6	-	-	5.7	Jan-28 15:00	3.4	Jan-28	100%
Temp (°C)			Beaverlodge	-7.7	-	-	6.6	Jan-28 13:00	3.7	Jan-27	100%
Temp (°C)			Valleyview	-9.5	-	-	10.4	Jan-28 15:00	5.0	Jan-28	100%
Temp (°C)			Falher	-11.9	-	-	5.8	Jan-28 15:00	2.1	Jan-28	100%
Temp (°C)			Portable	-	-	-	-	-	-	-	-

PAZA Monthly Continuous Data Summary – continued

Jan-2016Peace Airshed Zone Association							Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
WSPD s (km/hr)			Henry Pirker	4.4	-	-	37.0	Jan-18 21:00	12.1	Jan-28	100%
WSPD s (km/hr)			Evergreen Park	5.9	-	-	52.0	Jan-28 22:00	22.0	Jan-28	100%
WSPD s (km/hr)			Smoky Heights	10.0	-	-	42.0	Jan-26 20:00	21.7	Jan-26	100%
WSPD s (km/hr)			Beaverlodge	7.2	-	-	48.0	Jan-28 21:00	22.7	Jan-28	100%
WSPD s (km/hr)			Valleyview	2.7	-	-	22.0	Jan-29 01:00	7.3	Jan-28	100%
WSPD s (km/hr)			Falher	9.8	-	-	44.0	Jan-29 00:00	24.0	Jan-28	95%
WSPD s (km/hr)			Portable	-	-	-	-	-	-	-	-
WSPD v (km/hr)			Henry Pirker	0.9	-	-	31.0	Jan-18 21:00	11.1	Jan-28	100%
WSPD v (km/hr)			Evergreen Park	1.7	-	-	52.0	Jan-28 22:00	20.5	Jan-28	100%
WSPD v (km/hr)			Smoky Heights	3.5	-	-	42.0	Jan-26 20:00	20.5	Jan-26	100%
WSPD v (km/hr)			Beaverlodge	1.9	-	-	48.0	Jan-28 21:00	20.5	Jan-28	100%
WSPD v (km/hr)			Valleyview	0.6	-	-	22.0	Jan-29 01:00	7.1	Jan-14	100%
WSPD v (km/hr)			Falher	0.8	-	-	43.0	Jan-29 00:00	18.0	Jan-28	95%
WSPD v (km/hr)			Portable	-	-	-	-	-	-	-	-
WDIR			Henry Pirker	WSW	-	-	-	-	-	-	100%
WDIR			Evergreen Park	WSW	-	-	-	-	-	-	100%
WDIR			Smoky Heights	SW	-	-	-	-	-	-	100%
WDIR			Beaverlodge	WNW	-	-	-	-	-	-	100%
WDIR			Valleyview	WSW	-	-	-	-	-	-	100%
WDIR			Falher	WSW	-	-	-	-	-	-	95%
WDIR			Portable	-	-	-	-	-	-	-	-

Continuous Network Equipment Summary

PAZA – Henry Pirker Station

General Station Issues

Routine monthly calibrations were performed on January 4th (CO, THC, TRS) and 5th (SO₂, NO_x, O₃).

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
NO _x /NO/NO ₂	TEI	42i	No operational issues observed.
O ₃	TEI	49i	No operational issues observed.
CO	TEI	48C	No operational issues observed.
THC/CH ₄ /NMHC	TEI	55i	Hydrogen cylinder expired on January 3 rd , replaced January 4 th .
TRS	TEI	45C/43C	No operational issues observed.
PM _{2.5}	Sharp	5030	1 24-hour exceedance of the AAAQG recorded Ref #307194
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	Wind system reported 2 hours of invalid data.

PAZA – Evergreen Park Station

General Station Issues

Routine monthly calibration performed on January 11th (SO₂, TRS).

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
TRS	TEI	43C	Optical block replaced January 13 th .
PM _{2.5}	Sharp	5030	Filter replaced January 13 th .
ET	Met One/Gill	083D	No operational issues observed.
RH	Met One/Gill		No operational issues observed.
WS / WD	Met One/ Gill		No operational issues observed.

PAZA – Smoky Heights Station

General Station Issues

Routine monthly calibration performed on January 26th (SO₂, TRS).

Parameter	Make	Model	Notes
SO ₂	TEI	43C	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
PM _{2.5}	Sharp	5030	Two 1-hour exceedences recorded. Reference #307063, 307421
ET	Met One	083D	No operational issues observed.
WS / WD	Met One	010C/020C	No operational issues observed.

PAZA – Beaverlodge Station

General Station Issues

Routine monthly calibrations performed on January 15th (O₃, NO_x) and 19th (SO₂).

Parameter	Make	Model	Notes
SO ₂	TEI	43CTL	No operational issues observed.
NO _x /NO/NO ₂	TEI	42C	No operational issues observed.
O ₃	TEI	49C	No operational issues observed.
PM _{2.5}	Sharp	5030	No operational issues observed.
ET	n/a	n/a	No operational issues observed.
RH	n/a	n/a	No operational issues observed.
WS / WD	Blue Sky	857	No operational issues observed.

PAZA – Valleyview Station

General Station Issues

Routine monthly calibrations were performed on January 20th (SO₂ & H₂S).

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

PAZA – Falher Station

General Station Issues

Routine monthly calibrations were performed on January 27th (SO₂ & H₂S).

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
H ₂ S	Thermo	450i	No operational issues observed.
ET	Gill	RM Young 5103	No operational issues observed.
WS / WD	Gill	RM Young 5103	Wind head frozen January 24 th -25 th .

PAZA – Portable-Clairmont

General Station Issues

Routine monthly calibrations were performed on January 24th (SO₂, NO_x, O₃) and 25th (THC, TRS). Station was relocated on January 5th.

Parameter	Make	Model	Notes
SO ₂	TEI	43i	Manifold cleaning during January 25 th calibration period.
NO _x	TEI	42i	Manifold cleaning during January 25 th calibration period.
O ₃	TEI	49C	Manifold cleaning during January 25 th calibration period.
TRS	TEI	39C	No operational issues observed.
THC	TEI	51C	No operational issues observed.
PM _{2.5}	Sharp	5030	Manifold cleaning during January 25 th calibration period.
ET	Gill	Met Pak 3	No operational issues observed.
WS / WD	Gill	Met Pak 3	No operational issues observed.

PAZA
Henry Pirker Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

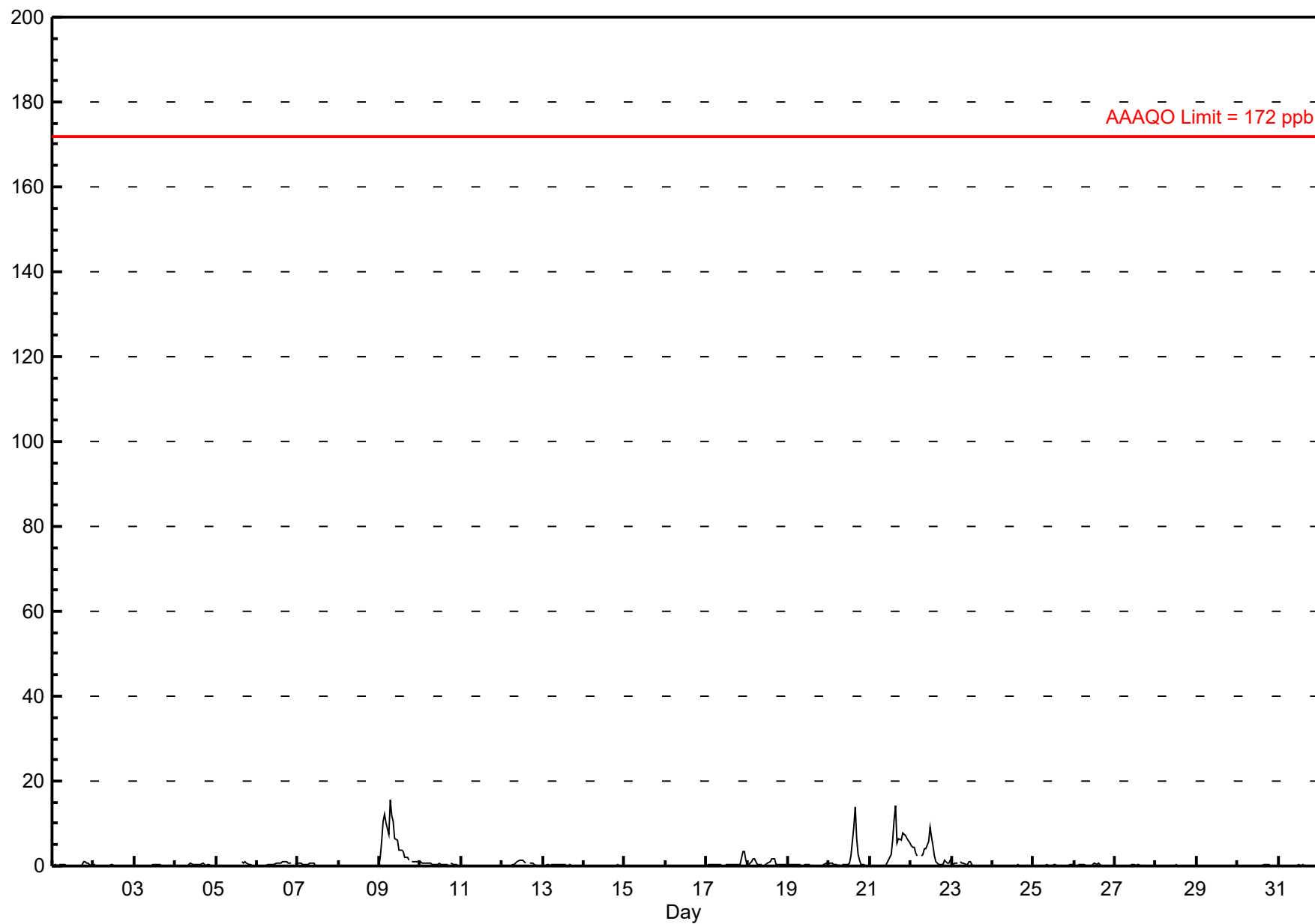
Sulphur Dioxide (SO₂) - ppb

Henry Pirker - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 744							
Maximum Value: 15.7 ppb on Jan 9 07:00																				Maximum Daily Average: 5.4 ppb on Jan 9		Hours of Data: 705					
Minimum Value: 0 ppb on Jan 1 10:00																				Minimum Daily Average: 0.0 ppb on Jan 29		Hours of Missing Data: 39					
Maximum Diurnal Average: 1.3 ppb at hour 16																				Minimum Diurnal Average: 0.4 ppb at hour 24		Hours of Calibration: 39					
Monthly Average: 0.62 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.4 P ₉₀ = 1.0 P ₉₉ = 10.3		Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jan	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0.3	1.1	
2-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	
3-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	
4-Jan	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	A	0.2	0.6	
5-Jan	0	0	0	0	0	0	0	0	0	C	C	C	C	C	C	1	1	1	1	0	0	0	A	0	--	0.9	
6-Jan	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	A	1	1	0.5	1.1	
7-Jan	1	1	1	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.6	
8-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	0.0	0.2	
9-Jan	2	6	10	12	10	8	16	12	10	6	6	4	4	4	3	2	2	1	A	1	1	1	1	1	5.4	15.7	
10-Jan	1	1	1	1	1	1	1	0	0	0	0	1	0	0	0	0	0	A	1	0	0	0	0	0	0.5	0.9	
11-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	0.3	
12-Jan	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	A	1	1	1	0	0	0	0	0	0.5	1.3	
13-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	0.2	0.5	
14-Jan	0	0	0	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	
15-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	
16-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	0.0	0.1	
17-Jan	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	3	3	1	0.6	3.3	
18-Jan	0	0	1	2	2	1	0	0	0	A	0	0	1	1	2	2	2	0	0	0	0	0	0	0	0	0.8	1.9
19-Jan	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.2	0.6	
20-Jan	1	1	1	0	0	0	0	A	0	0	0	0	1	3	9	14	7	3	1	0	0	0	0	0	1.8	14.0	
21-Jan	0	0	0	0	0	0	A	0	0	0	1	1	3	6	11	14	5	6	6	8	7	7	6	5	3.8	14.1	
22-Jan	5	4	4	3	2	A	2	3	4	4	6	9	7	5	2	1	0	0	0	0	1	1	1	1	3.0	9.3	
23-Jan	1	0	1	1	A	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9	
24-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	0.2	
25-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	
26-Jan	0	A	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0.2	0.8	
27-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	
28-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	0.4	
29-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	0.0	0.0	
30-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	0.1	0.3	
31-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	0.0	0.3	
0.4 0.5 0.7 0.7 0.6 0.4 0.8 0.6 0.6 0.5 0.6 0.7 0.7 0.8 1.1 1.3 0.7 0.5 0.4 0.5 0.5 0.5 0.4																								Diurnal Average			
4.7 5.9 10.4 12.2 10.2 7.6 15.7 11.8 10.5 6.4 6.2 9.3 6.7 6.3 10.9 14.1 6.6 6.4 6.1 7.6 7.3 7.3 6.4 5.4																								Diurnal Maximum			
C - Calibration A - Automated Daily Zero Span																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																											

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Henry Pirker - January 2016



Hourly Maximums

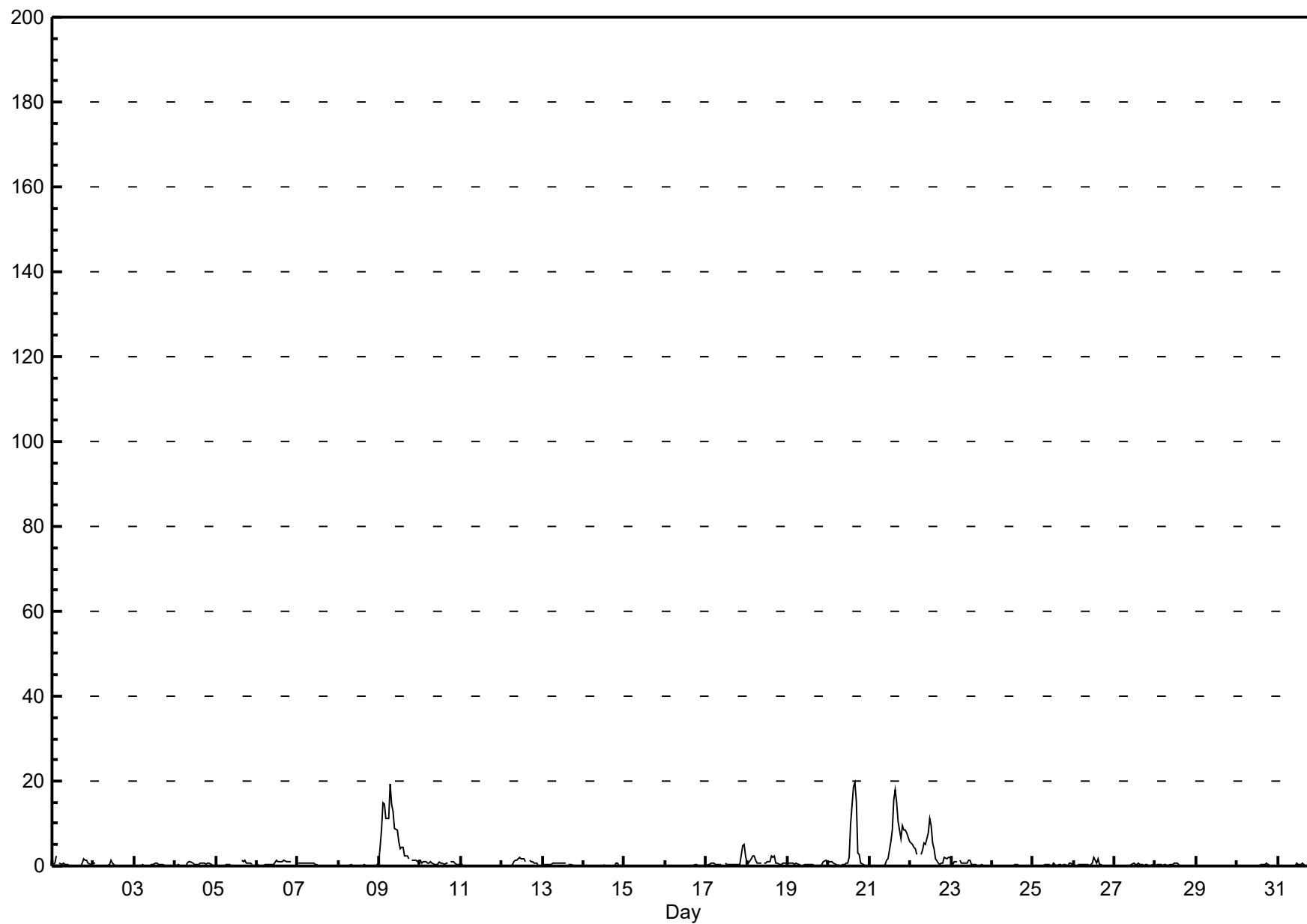
Sulphur Dioxide (SO₂) - ppb

Henry Pirker - January 2016

Maximum Value: 19.7 ppb on Jan 20 16:00																				Maximum Daily Average: 6.9 ppb on Jan 9					Hours in Service: 744	
Minimum Value: 0 ppb on Jan 29 11:00																				Minimum Daily Average: 0.0 ppb on Jan 29					Hours of Data: 705	
Maximum Diurnal Average: 1.8 ppb at hour 15																				Minimum Diurnal Average: 0.6 ppb at hour 24					Hours of Missing Data: 39	
Monthly Average: 0.93 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.3 Q ₃ = 0.6 P ₉₀ = 1.6 P ₉₉ = 15.0					Hours of Calibration: 39	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jan	0	1	2	A	1	0	1	0	0	0	0	0	0	0	0	0	0	1	2	1	1	1	0	0	0.6	2.3
2-Jan	1	1	A	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.4
3-Jan	0	A	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0.2	0.6
4-Jan	A	0	0	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	0	1	1	0	0	A	0.4	1.0
5-Jan	0	0	0	0	0	0	0	0	0	C	C	C	C	C	C	1	1	1	1	1	1	0	A	0	--	1.4
6-Jan	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	A	1	1	0.6	1.3
7-Jan	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	0.7
8-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	0.1	0.7
9-Jan	4	8	15	15	11	11	19	15	13	9	8	6	4	4	4	2	2	2	A	1	1	1	1	1	6.9	19.2
10-Jan	1	1	1	1	1	1	1	1	0	0	0	1	1	1	0	1	1	A	1	1	1	0	0	0	0.7	1.3
11-Jan	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.5
12-Jan	0	0	0	0	0	0	0	1	1	1	2	2	2	2	1	A	1	1	1	1	1	0	0	0	0.7	2.1
13-Jan	0	0	0	0	0	0	1	1	1	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0.4	0.7
14-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	1	0	0	0	0.1	0.6
15-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	0.2
16-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
17-Jan	0	0	0	1	1	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	5	5	2	0.9	5.0
18-Jan	1	1	2	2	2	1	1	1	1	A	1	1	1	1	2	2	2	1	1	0	0	1	1	1	1.1	2.4
19-Jan	1	1	1	1	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0.4	1.4
20-Jan	1	1	1	1	0	0	0	A	0	0	1	1	2	10	19	20	15	3	3	1	0	0	0	0	3.4	19.7
21-Jan	0	0	0	0	0	0	A	0	0	0	1	2	6	8	16	18	15	11	7	9	8	8	8	6	5.4	18.0
22-Jan	5	5	5	4	3	A	3	4	5	5	8	11	9	5	4	2	1	0	1	1	2	2	2	2	3.8	11.2
23-Jan	1	0	1	1	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.4
24-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
25-Jan	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0.2	0.5
26-Jan	0	A	0	0	0	0	0	0	0	0	0	1	2	1	2	0	0	0	0	0	0	0	0	0	0.4	1.9
27-Jan	A	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	A	0.2	0.6
28-Jan	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	A	0	0.2	0.8
29-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	0.0	0.2
30-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0.1	0.5
31-Jan	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	A	0	0	0	0	0.1	0.7
0.6 0.7 1.0 0.9 0.7 0.6 1.0 0.9 0.9 0.8 1.0 1.1 1.2 1.3 1.8 1.7 1.4 0.8 0.6 0.7 0.7 0.7 0.7 0.6																									Diurnal Average	
5.3 8.3 14.9 14.5 11.3 11.3 19.2 14.6 12.8 8.9 8.5 11.2 9.4 10.0 18.6 19.7 15.2 10.7 6.6 9.4 8.4 8.4 7.8 5.7																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

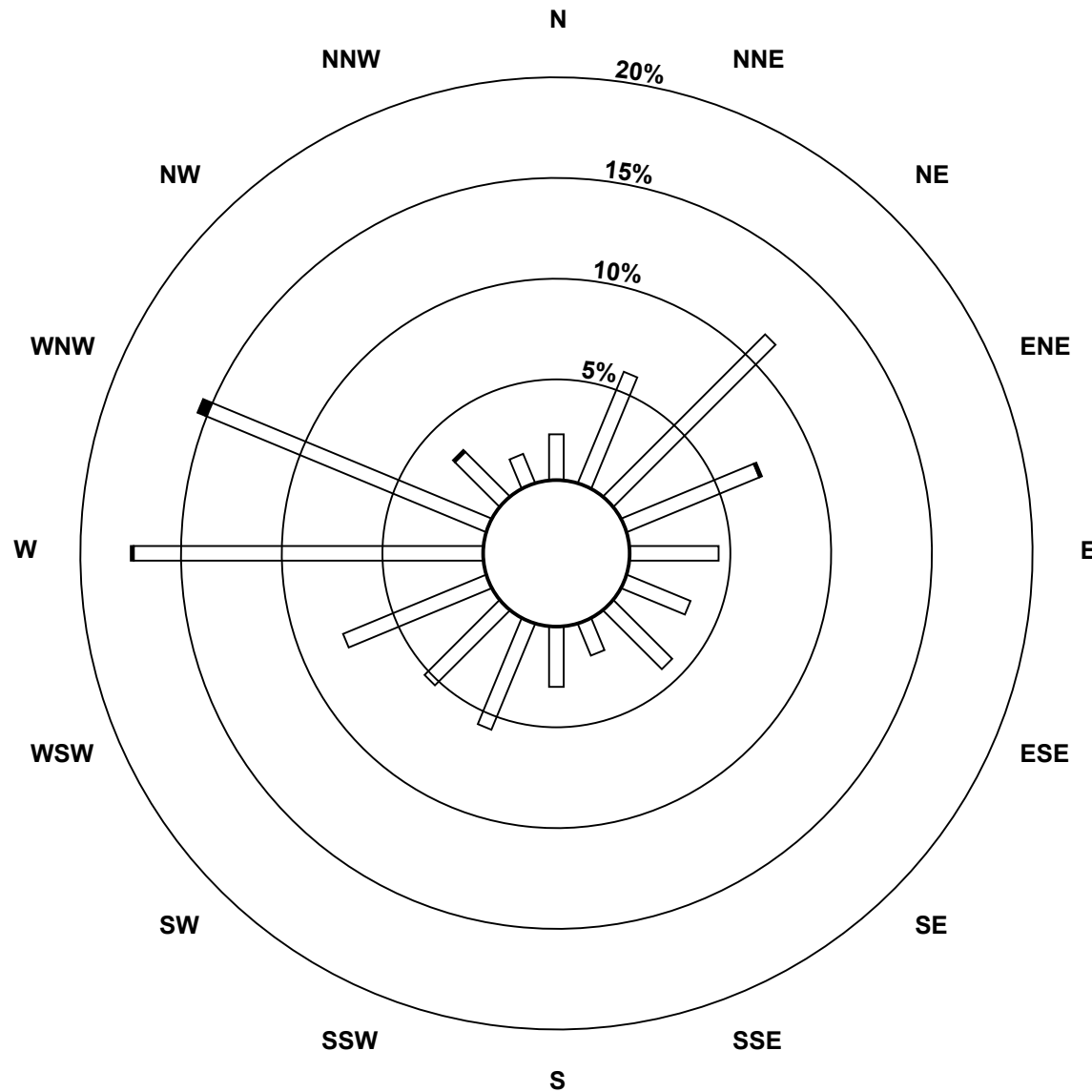
Sulphur Dioxide (SO₂) - ppb
Henry Pirker - January 2016



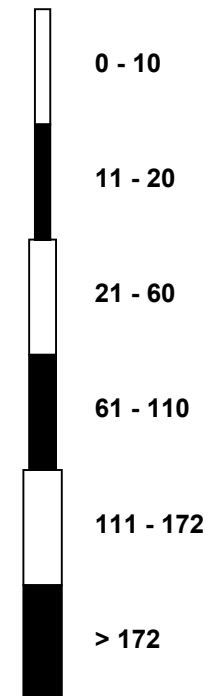
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb

Henry Pirker - January 2016

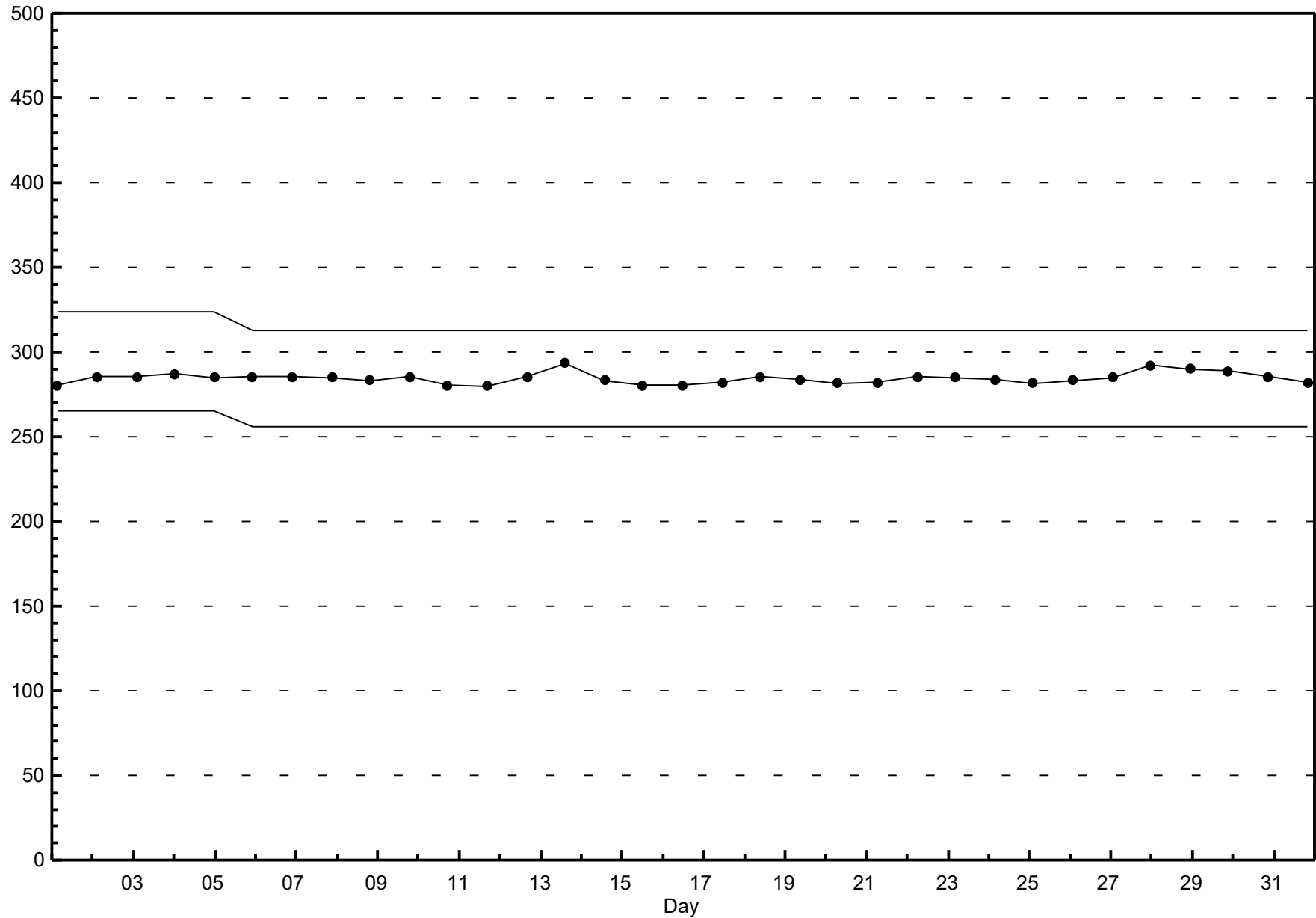


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Henry Pirker - January 2016



Hourly Averages

Total Reduced Sulphur (TRS) - ppb

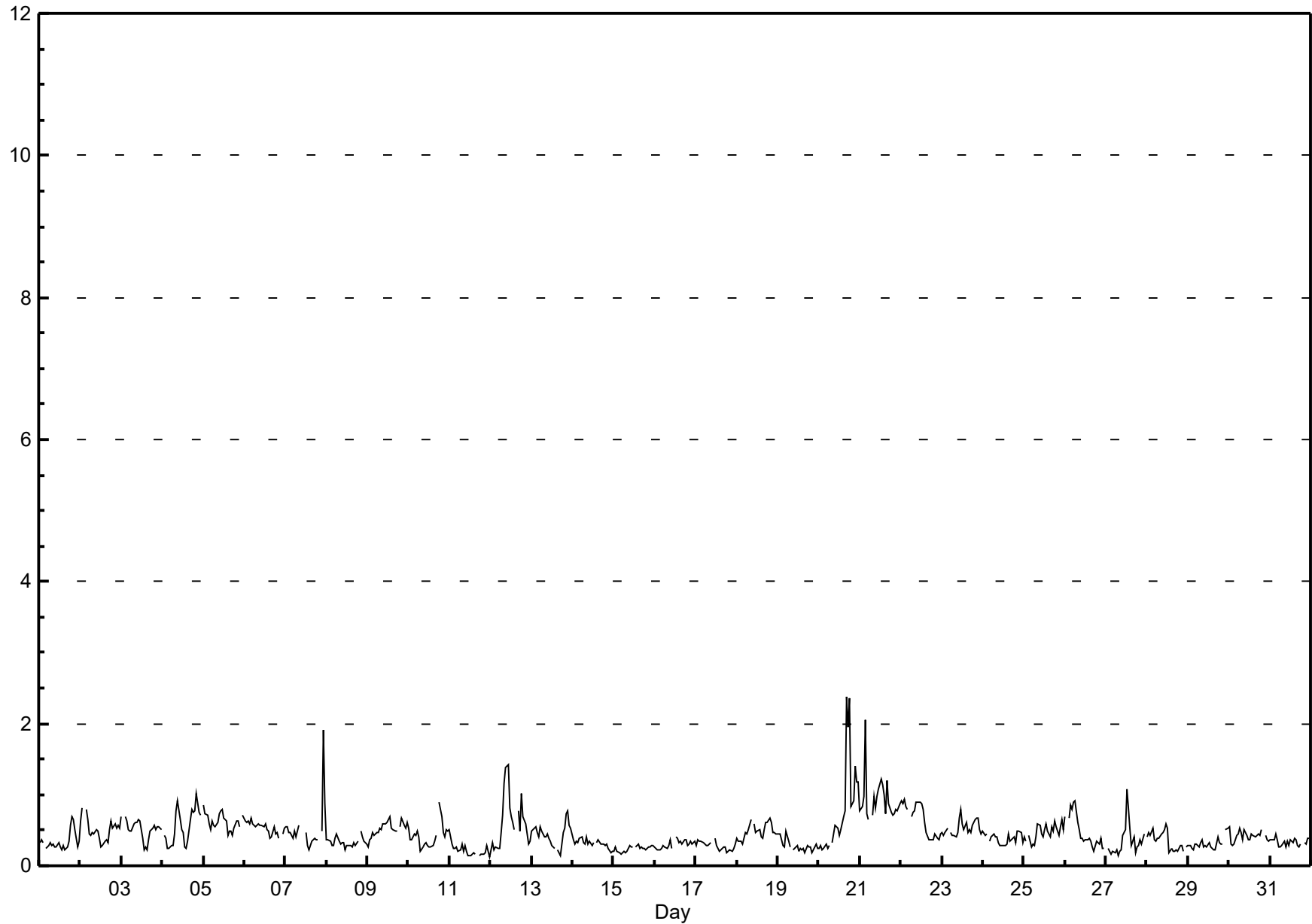
Henry Pirker - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 744						
Maximum Value: 2.4 ppb on Jan 20 17:00																				Maximum Daily Average: 0.9 ppb on Jan 21		Hours of Data: 708				
Minimum Value: 0 ppb on Jan 12 00:00																				Minimum Daily Average: 0.2 ppb on Jan 11		Hours of Missing Data: 36				
Maximum Diurnal Average: 0.5 ppb at hour 19																				Minimum Diurnal Average: 0.4 ppb at hour 16		Hours of Calibration: 36				
Monthly Average: 0.45 ppb																				Percentiles: P ₁ = 0.2 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.4 Q ₃ = 0.5 P ₉₀ = 0.7 P ₉₉ = 1.4		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	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0.3	0.7
2-Jan	1	1	A	1	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0.5	0.8
3-Jan	1	A	1	1	1	0	0	1	1	1	1	1	0	0	0	0	0	1	1	1	1	1	1	1	0.5	0.7
4-Jan	A	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	A	0.5	1.0
5-Jan	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	A	1	0.6	0.9
6-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	0	0	0	A	0	1	0.5	0.7
7-Jan	1	1	0	0	0	0	0	0	1	C	C	C	0	0	0	0	0	0	0	0	A	0	2	1	0.5	1.9
8-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	0.3	0.5
9-Jan	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	0	0	A	1	1	1	1	1	0.5	0.7
10-Jan	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	0	0	1	0	0.4	0.9
11-Jan	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.5
12-Jan	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	A	1	0	1	1	1	0	0	0	0.6	1.4
13-Jan	0	1	1	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0	0	1	1	1	1	1	0.4	0.8
14-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.3	0.4
15-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
16-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
17-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	0.3	0.4
18-Jan	0	0	0	0	0	0	0	1	1	A	1	0	0	0	1	0	1	1	1	1	1	0	0	0	0.5	0.7
19-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	0.3	0.5
20-Jan	0	0	0	0	0	0	0	A	0	1	1	1	0	1	1	1	2	2	2	1	1	1	1	1	0.8	2.4
21-Jan	1	1	1	2	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	2.1
22-Jan	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.7	0.9
23-Jan	0	0	0	1	A	0	0	0	0	0	1	1	1	1	1	0	1	0	1	1	1	1	1	0	0.5	0.8
24-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	0.4	0.5
25-Jan	0	0	A	0	0	0	0	0	1	1	0	0	1	1	0	0	1	0	1	1	0	1	1	1	0.5	0.6
26-Jan	1	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.9
27-Jan	A	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	A	0.4	1.1
28-Jan	0	0	0	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0.4	0.6
29-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	0.3	0.5
30-Jan	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0.4	0.6
31-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	0.3	0.4
0.5 0.4 0.4 0.5 0.4 0.4 0.4 0.4 0.5 0.5 0.5 0.5 0.5 0.4 0.4 0.4 0.5 0.4 0.5 0.5 0.5 0.5 0.5 0.5																									Diurnal Average	
0.9 0.9 1.0 2.1 0.8 0.9 0.9 0.8 1.2 1.4 1.4 1.1 1.2 1.1 1.0 0.8 2.4 2.0 2.4 0.8 1.0 1.4 1.9 1.2																									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

Total Reduced Sulphur (TRS) - ppb

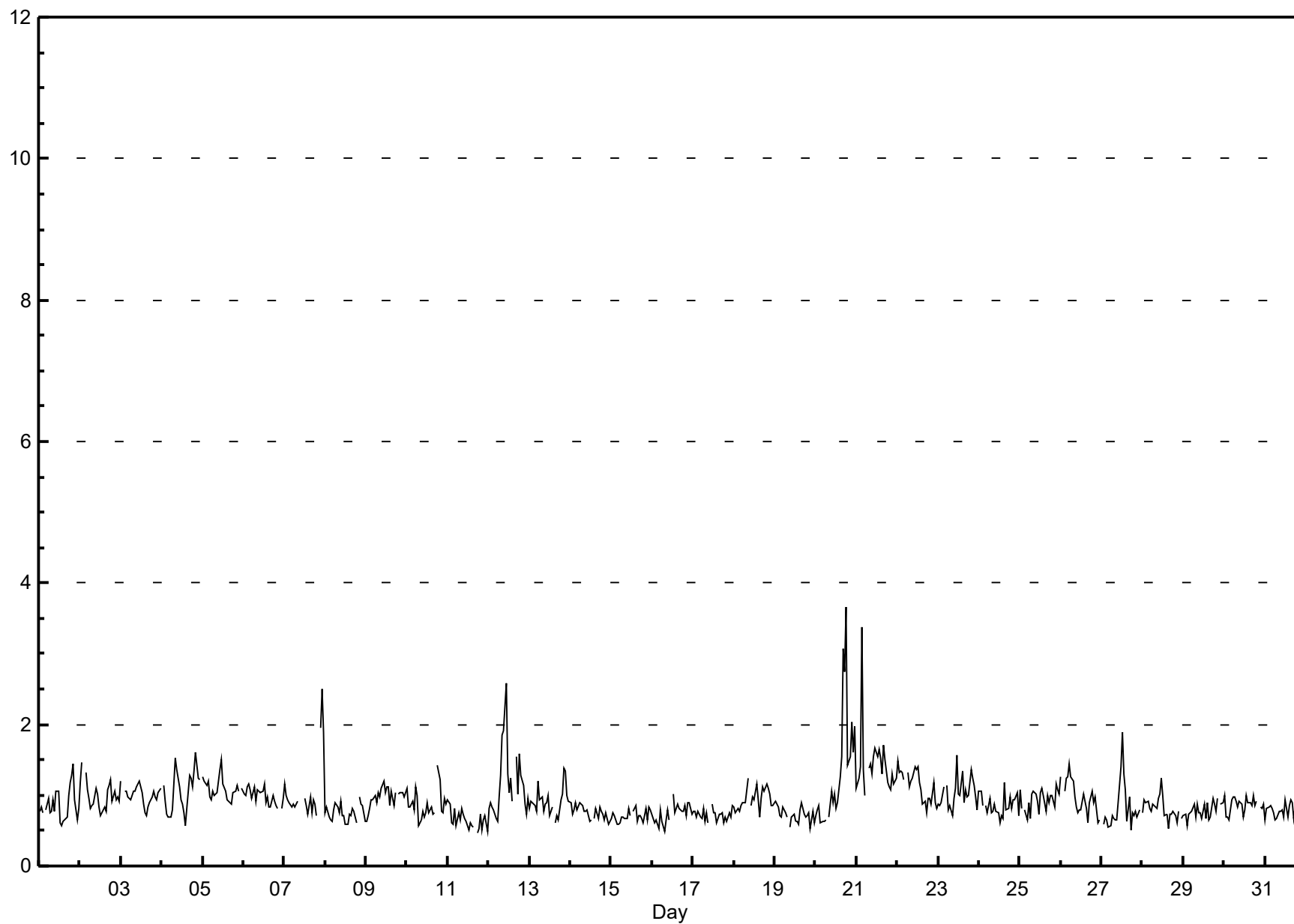
Henry Pirker - January 2016



Maximum Value: 3.7 ppb on Jan 20 19:00																				Maximum Daily Average: 1.4 ppb on Jan 21										Hours in Service: 744	
Minimum Value: 0 ppb on Jan 11 18:00																				Minimum Daily Average: 0.6 ppb on Jan 11										Hours of Data: 708	
Maximum Diurnal Average: 1.0 ppb at hour 19																				Minimum Diurnal Average: 0.8 ppb at hour 16										Hours of Missing Data: 36	
Monthly Average: 0.93 ppb																				Percentiles: P ₁ = 0.5 P ₁₀ = 0.6 Q ₁ = 0.7 Median = 0.9 Q ₃ = 1.0 P ₉₀ = 1.3 P ₉₉ = 1.8										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	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.4					
2-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	1.5					
3-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	1.0	1.2					
4-Jan	A	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	2	1	1	A	1.1	1.6					
5-Jan	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	A	1	1.1	1.5					
6-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	1.2					
7-Jan	1	1	1	1	1	1	1	1	1	C	C	C	1	1	1	1	1	1	1	1	A	2	2	2	1.1	2.5					
8-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.0					
9-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	1.0	1.2					
10-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	0.9	1.4					
11-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0	1	1	1	1	1	0	0.6	0.9					
12-Jan	1	1	1	1	1	1	1	1	2	2	3	1	1	1	1	A	2	1	2	1	1	1	1	1	1.2	2.6					
13-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	0.9	1.4					
14-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.8	0.9					
15-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					
16-Jan	1	1	1	1	1	1	1	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0					
17-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	0.9					
18-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	0.9	1.2					
19-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	0.7	0.9					
20-Jan	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	2	3	3	4	1	2	2	2	2	1.4	3.7					
21-Jan	1	1	1	3	1	1	A	1	1	1	2	2	2	2	2	1	2	2	1	1	1	1	1	1	1.4	3.4					
22-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	1.1	1.5					
23-Jan	1	1	1	1	A	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.6					
24-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	1.2					
25-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	0.9	1.2					
26-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	1.0	1.4					
27-Jan	A	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	A	0.8	1.9					
28-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	1.2					
29-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	0.8	1.0					
30-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.9	1.0					
31-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	0.8	1.0					
																									Diurnal Average	Diurnal Maximum					
																									0.9	1.5					
																									0.9	1.5					
																									0.9	1.4					
																									1.0	3.4					
																									0.8	1.4					
																									0.9	1.4					
																									0.9	1.3					
																									0.9	1.4					
																									0.9	1.8					
																									1.0	1.9					
																									1.0	2.6					
																									1.0	1.7					
																									0.9	1.9					
																									0.9	1.7					
																									0.9	1.5					
																									0.8	1.5					
																									1.0	3.1					
																									0.9	2.8					
																									1.0	3.7					
																									1.0	1.4					
																									1.0	1.6					
																									1.0	2.0					
																									1.0	2.5					
																									0.9	2.0					
																									C - Calibration	A - Automated Daily Zero Span					

Hourly Maximums

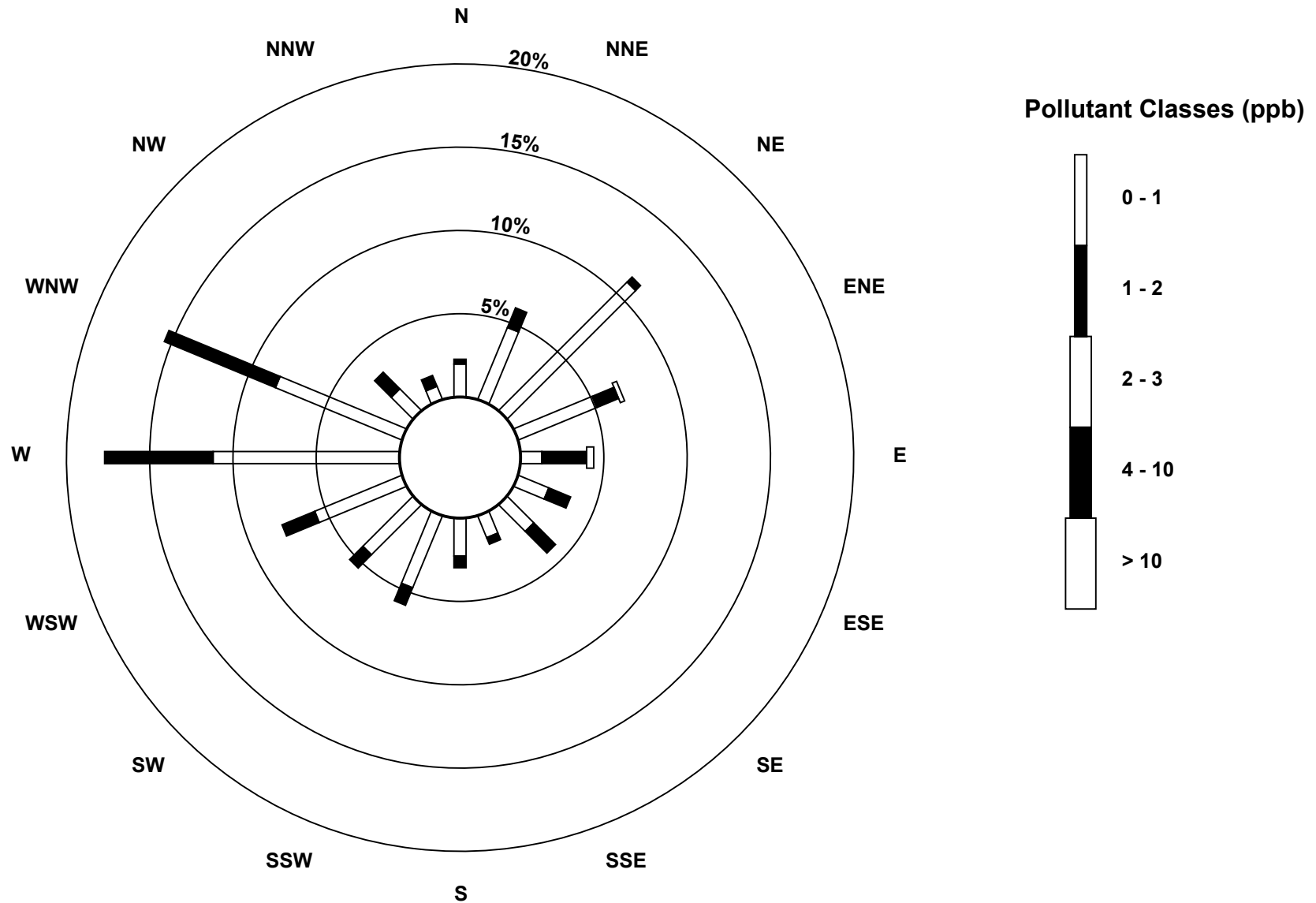
Total Reduced Sulphur (TRS) - ppb
Henry Pirker - January 2016



Pollutant Rose

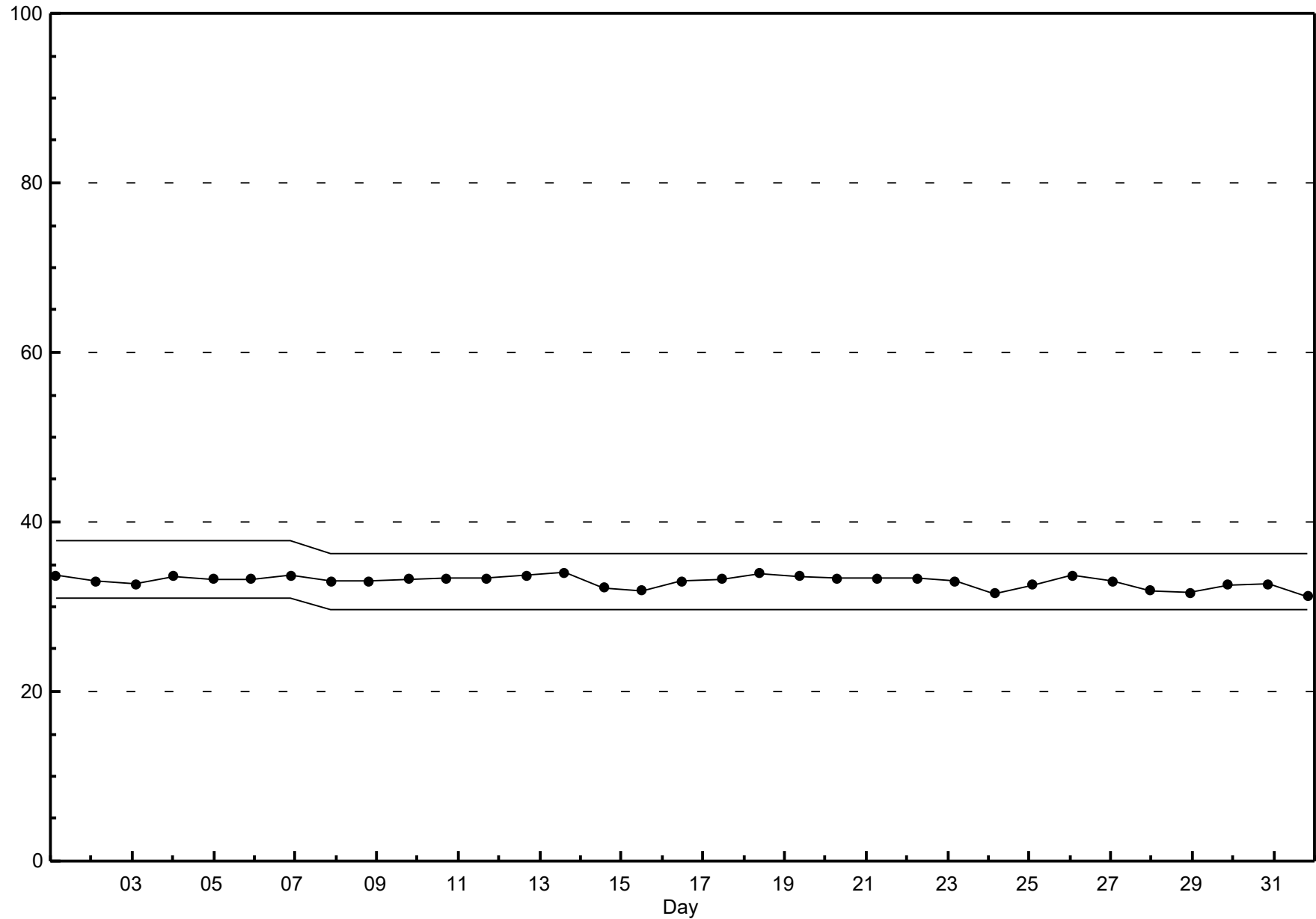
Total Reduced Sulphur (TRS) - ppb

Henry Pirker - January 2016



Span Responses

Total Reduced Sulphur (TRS)
Henry Pirker - January 2016



Hourly Averages

Nitrogen Dioxide (NO₂) - ppb

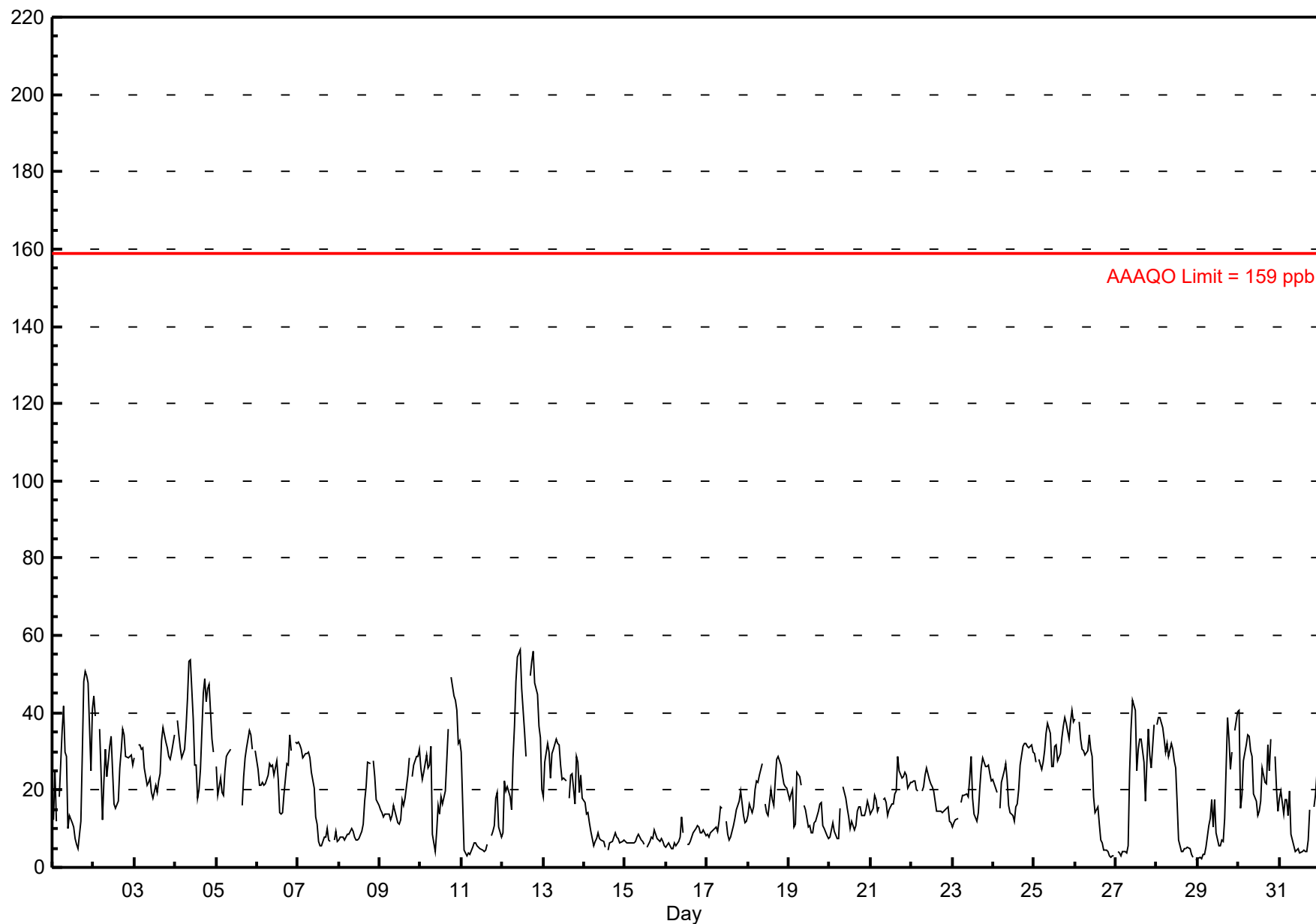
Henry Pirker - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 56.4 ppb on Jan 12 11:00 Maximum Daily Average: 36.2 ppb on Jan 4																								Hours in Service: 744 Hours of Data: 705 Hours of Missing Data: 39 Hours of Calibration: 39 Percent Operational Time: 100.0		
Minimum Value: 2 ppb on Jan 29 00:00 Minimum Daily Average: 7.0 ppb on Jan 15 Maximum Diurnal Average: 25.0 ppb at hour 20 Minimum Diurnal Average: 14.0 ppb at hour 15 Monthly Average: 19.77 ppb Percentiles: P ₁ = 2.9 P ₁₀ = 6.2 Q ₁ = 10.1 Median = 18.3 Q ₃ = 28.3 P ₉₀ = 34.3 P ₉₉ = 49.2																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jan	12	25	12	A	18	36	42	30	29	10	13	12	10	8	6	5	12	30	48	51	49	48	25	41	24.8	50.7
2-Jan	44	39	A	36	24	12	22	31	23	31	34	25	16	15	17	26	30	36	34	29	28	29	29	26	27.8	44.4
3-Jan	28	A	32	32	31	31	26	21	22	23	19	18	21	19	22	24	33	36	32	31	29	28	30	34	27.1	36.0
4-Jan	A	38	34	31	28	31	36	44	53	54	39	26	26	18	20	25	45	49	43	46	47	33	30	A	36.2	53.5
5-Jan	26	19	23	20	18	25	29	30	31	C	C	C	C	C	C	16	24	28	31	35	34	31	A	30	--	35.3
6-Jan	25	21	21	22	21	21	24	27	26	27	24	28	23	14	14	14	19	27	26	34	30	A	32	32	24.1	34.4
7-Jan	32	32	31	29	29	30	30	28	25	21	13	11	7	6	6	8	8	10	7	7	A	7	9	7	17.0	32.3
8-Jan	7	8	8	7	8	8	8	10	9	8	7	7	7	9	11	17	21	27	27	A	28	24	18	16	13.1	27.7
9-Jan	15	14	13	14	14	14	12	13	16	15	12	11	12	17	16	18	24	28	A	23	27	29	29	31	18.1	30.8
10-Jan	26	23	25	29	26	27	32	9	4	9	16	14	18	16	20	28	36	A	49	45	43	41	32	33	26.0	49.3
11-Jan	30	5	4	3	4	3	5	6	6	6	5	5	4	4	5	6	A	8	9	11	18	19	10	8	8.1	29.9
12-Jan	9	22	20	21	18	15	28	36	48	54	56	46	41	35	29	A	49	53	56	48	45	36	33	20	35.7	56.4
13-Jan	18	27	32	30	23	29	30	33	32	32	27	23	23	22	A	18	24	24	16	29	27	20	24	18	25.3	33.0
14-Jan	17	14	14	11	9	6	7	7	9	8	7	7	5	A	5	6	7	8	9	8	7	6	7	7	8.2	16.8
15-Jan	7	6	6	6	7	6	7	8	9	7	7	6	A	5	7	8	8	10	8	8	7	7	7	6	7.0	9.7
16-Jan	5	6	6	5	5	6	6	7	8	13	9	A	6	6	7	8	9	10	11	10	9	9	10	8	7.7	13.2
17-Jan	8	8	9	9	10	10	10	12	16	15	A	12	9	7	8	11	13	15	16	17	20	13	11	12	11.8	19.6
18-Jan	14	16	14	16	20	22	22	24	27	A	16	14	13	20	18	16	22	28	29	26	24	22	21	20	20.2	28.6
19-Jan	18	19	20	10	11	25	24	21	A	16	15	10	11	9	9	12	12	14	16	17	11	10	8	7	14.2	24.7
20-Jan	8	10	12	9	7	7	15	A	21	18	15	13	10	12	10	11	15	16	16	13	13	15	17	16	13.0	20.9
21-Jan	14	15	19	18	15	16	A	18	18	17	13	15	16	16	19	20	29	25	23	24	25	24	21	22	19.1	28.6
22-Jan	22	22	22	20	20	A	20	21	24	26	23	22	21	20	17	14	15	15	14	14	15	16	12	12	18.5	25.7
23-Jan	11	12	12	13	A	17	19	19	19	18	23	29	18	14	12	14	20	26	28	26	26	26	24	22	19.5	28.6
24-Jan	23	21	19	A	15	22	25	27	23	16	14	13	12	16	16	20	26	31	32	32	31	31	32	30	22.9	32.2
25-Jan	29	27	A	28	25	27	30	35	37	35	26	26	31	32	28	30	34	36	39	37	33	38	41	38	32.3	40.7
26-Jan	38	A	37	33	31	30	29	30	34	30	29	18	14	16	11	7	6	5	4	4	3	3	3	3	18.3	38.2
27-Jan	A	4	4	3	4	4	4	6	25	36	43	41	25	31	33	33	27	17	27	36	29	26	37	A	22.5	43.3
28-Jan	37	39	39	36	33	30	32	29	32	31	27	26	17	7	4	4	5	5	5	5	3	3	A	2	19.6	38.9
29-Jan	2	3	2	3	3	5	11	13	17	10	17	9	6	6	7	7	13	39	33	25	30	A	35	40	14.6	40.2
30-Jan	41	15	19	28	32	34	34	30	29	19	17	13	14	17	26	22	21	32	25	33	A	29	20	14	24.5	40.8
31-Jan	18	20	14	18	17	13	20	9	5	4	4	5	4	4	4	4	4	7	15	A	16	19	24	23	11.8	24.2
20.2 18.3 18.0 18.6 17.6 18.8 21.3 21.1 22.6 21.0 19.8 17.4 15.3 14.5 14.0 15.1 20.3 23.2 24.4 25.0 24.4 22.0 21.8 19.9																								Diurnal Average		
44.4 39.3 38.7 36.3 33.2 35.5 41.8 43.7 53.4 54.4 56.4 46.4 40.6 35.2 33.3 33.3 49.4 53.3 56.0 50.7 49.4 47.6 40.7 41.2																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb																										

Hourly Averages

Nitrogen Dioxide (NO₂) - ppb

Henry Pirker - January 2016



Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb

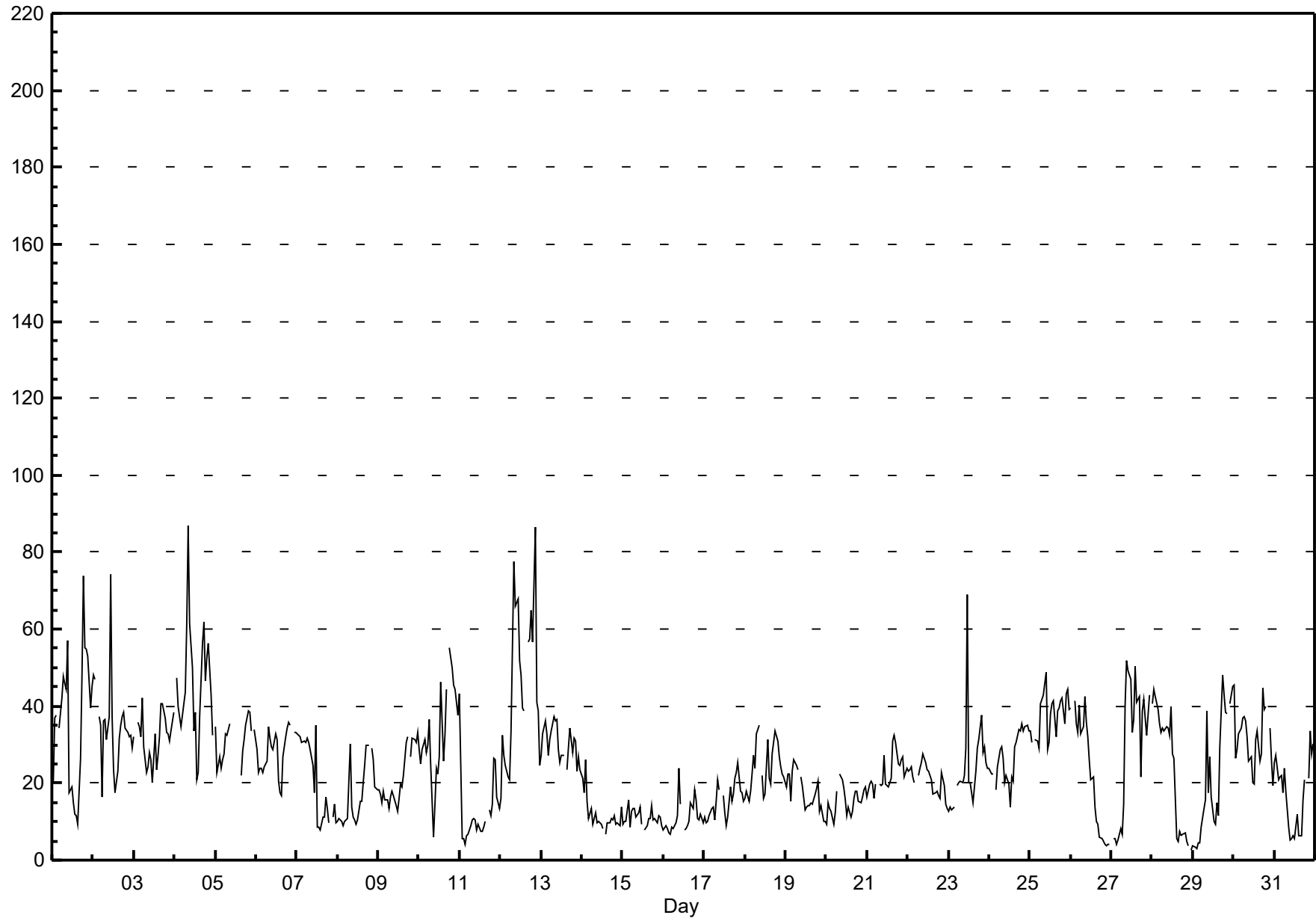
Henry Pirker - January 2016

Maximum Value: 86.8 ppb on Jan 4 09:00																				Maximum Daily Average: 45.7 ppb on Jan 4					Hours in Service: 744	
Minimum Value: 3 ppb on Jan 29 00:00																				Minimum Daily Average: 11.1 ppb on Jan 15					Hours of Data: 705	
Maximum Diurnal Average: 30.0 ppb at hour 19																				Minimum Diurnal Average: 18.7 ppb at hour 15					Hours of Missing Data: 39	
Monthly Average: 24.78 ppb																				Percentiles: P ₁ = 4.0 P ₁₀ = 9.2 Q ₁ = 14.0 Median = 23.3 Q ₃ = 33.2 P ₉₀ = 41.2 P ₉₉ = 67.1					Hours of Calibration: 39	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jan	20	37	38	A	34	42	48	46	45	57	17	19	15	12	11	9	27	48	74	55	55	53	39	45	36.8	73.8
2-Jan	48	47	A	37	35	16	36	36	31	37	74	37	24	18	23	32	35	37	38	34	33	32	32	29	35.0	74.4
3-Jan	32	A	36	35	32	42	30	23	24	28	26	20	33	23	27	32	40	41	37	33	33	31	34	38	31.7	42.0
4-Jan	A	47	40	37	35	41	44	61	87	61	50	33	38	21	23	37	56	62	46	53	56	43	32	A	45.7	86.8
5-Jan	35	23	27	24	26	27	33	33	35	C	C	C	C	C	C	22	29	31	35	39	38	34	A	34	--	38.7
6-Jan	29	23	24	24	23	24	26	35	32	29	29	33	31	20	17	17	27	32	34	36	35	A	33	33	28.0	35.9
7-Jan	33	33	32	30	31	31	32	31	29	25	18	35	9	8	8	11	11	17	13	10	A	11	15	10	20.9	35.0
8-Jan	10	11	10	9	10	10	11	30	14	11	10	9	10	15	15	20	25	30	30	A	29	26	19	18	16.7	30.1
9-Jan	18	17	15	18	16	16	14	16	18	17	14	13	16	20	19	22	31	32	A	27	32	31	30	33	21.0	33.1
10-Jan	29	25	29	31	28	30	36	25	6	15	24	22	27	46	26	33	44	A	55	50	45	44	41	38	32.6	55.3
11-Jan	43	6	6	4	6	7	9	10	11	10	8	9	8	7	8	10	A	13	11	15	27	26	16	13	12.4	43.4
12-Jan	16	32	27	25	22	21	33	55	78	66	68	52	48	39	39	A	57	57	65	57	86	41	39	25	45.5	86.4
13-Jan	27	33	36	33	27	32	34	37	36	37	29	25	27	27	A	23	29	34	28	32	31	23	27	23	30.0	37.1
14-Jan	21	18	26	15	11	13	9	11	12	10	10	9	8	A	7	10	10	11	11	11	9	10	9	14	11.9	25.9
15-Jan	9	10	10	16	9	13	13	13	11	12	14	9	A	8	9	11	11	14	11	11	10	11	11	9	11.1	15.6
16-Jan	8	9	8	7	7	9	8	10	11	24	15	A	8	8	9	10	15	13	18	16	11	11	12	10	11.1	24.0
17-Jan	11	10	10	11	14	14	11	15	21	18	A	17	12	9	11	19	15	17	21	23	25	18	18	15	15.5	25.4
18-Jan	16	18	15	18	22	27	24	33	35	A	22	16	17	31	21	20	28	31	34	31	27	24	22	22	24.1	35.0
19-Jan	19	22	23	15	23	26	25	24	A	22	19	13	14	14	14	15	14	17	19	21	13	14	10	10	17.6	26.0
20-Jan	9	15	13	13	9	12	18	A	22	21	19	16	12	14	11	13	16	18	18	15	15	16	18	19	15.3	22.3
21-Jan	16	20	20	20	16	20	A	20	19	20	27	20	19	20	21	31	32	31	25	24	26	27	22	24	22.6	32.4
22-Jan	23	23	24	22	20	A	22	24	25	28	25	24	23	22	21	17	18	18	17	16	23	19	15	13	21.0	27.7
23-Jan	13	14	13	14	A	20	20	20	20	22	29	69	20	20	15	19	23	29	31	38	28	29	25	24	24.1	69.1
24-Jan	24	22	22	A	18	24	29	29	26	20	22	20	14	21	20	29	31	34	34	35	34	35	35	34	26.7	35.3
25-Jan	33	30	A	31	31	29	40	42	43	49	29	31	38	41	41	32	39	40	41	42	35	43	45	39	37.6	48.9
26-Jan	39	A	42	36	33	40	33	35	43	36	32	26	21	22	14	10	9	6	6	5	4	4	4	4	21.9	42.6
27-Jan	A	6	6	4	5	8	7	15	40	52	49	47	33	37	50	41	42	22	39	42	37	32	43	A	29.8	51.9
28-Jan	41	44	43	39	35	33	34	34	35	34	32	40	28	27	5	5	7	6	7	7	5	4	A	3	23.8	44.3
29-Jan	4	3	3	4	4	9	13	16	39	17	27	16	10	9	15	11	29	48	43	38	38	A	41	45	21.1	48.0
30-Jan	45	27	29	33	34	37	37	36	32	26	27	20	20	31	34	26	27	45	39	40	A	34	26	20	31.5	45.5
31-Jan	25	27	21	22	22	18	24	18	9	5	5	6	5	12	6	6	6	16	21	A	21	33	28	30	16.9	33.4
24.1 22.4 22.3 21.6 21.3 23.0 25.0 27.7 29.7 27.9 26.6 24.4 20.3 20.8 18.7 19.8 26.1 28.3 30.0 29.5 29.7 26.2 25.6 23.2																								Diurnal Average		
48.1 47.2 42.5 39.2 35.5 42.3 47.8 61.2 86.8 65.9 74.4 69.1 48.0 46.3 50.3 41.2 56.6 61.9 73.8 56.7 86.4 53.0 44.6 45.3																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb

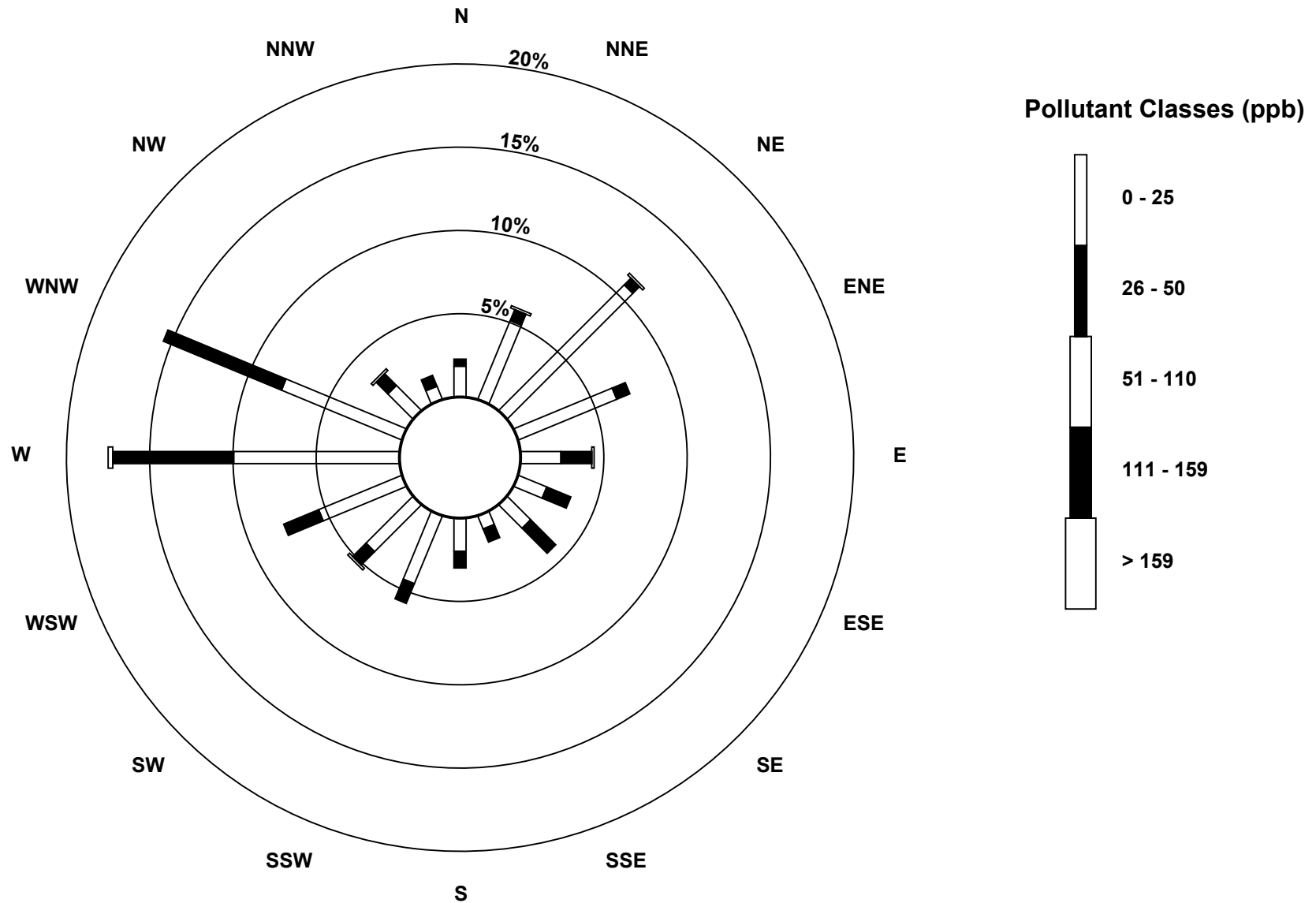
Henry Pirker - January 2016



Pollutant Rose

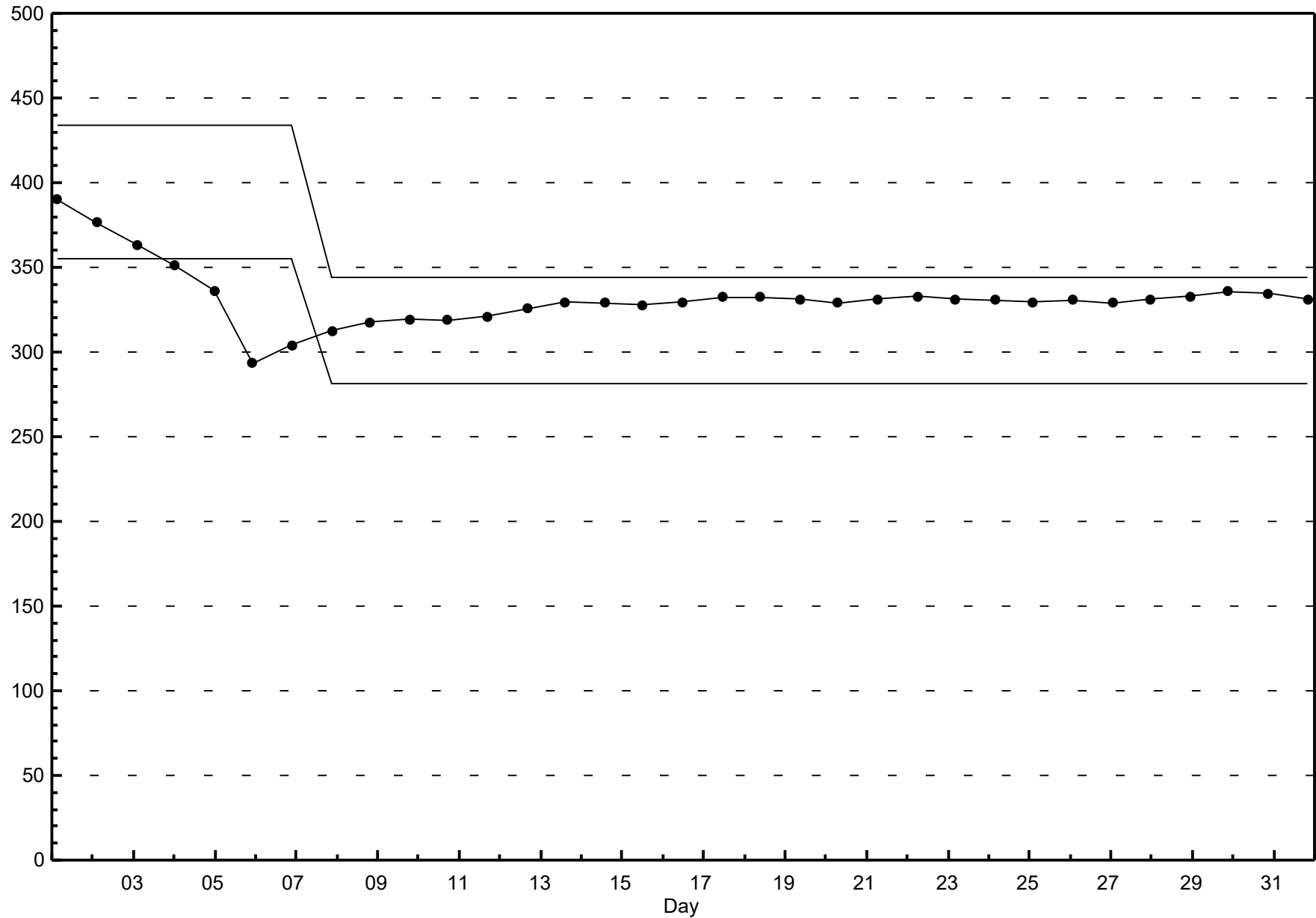
Nitrogen Dioxide (NO₂) - ppb

Henry Pirker - January 2016



Span Responses

Nitrogen Dioxide (NO₂)
Henry Pirker - January 2016



Hourly Averages

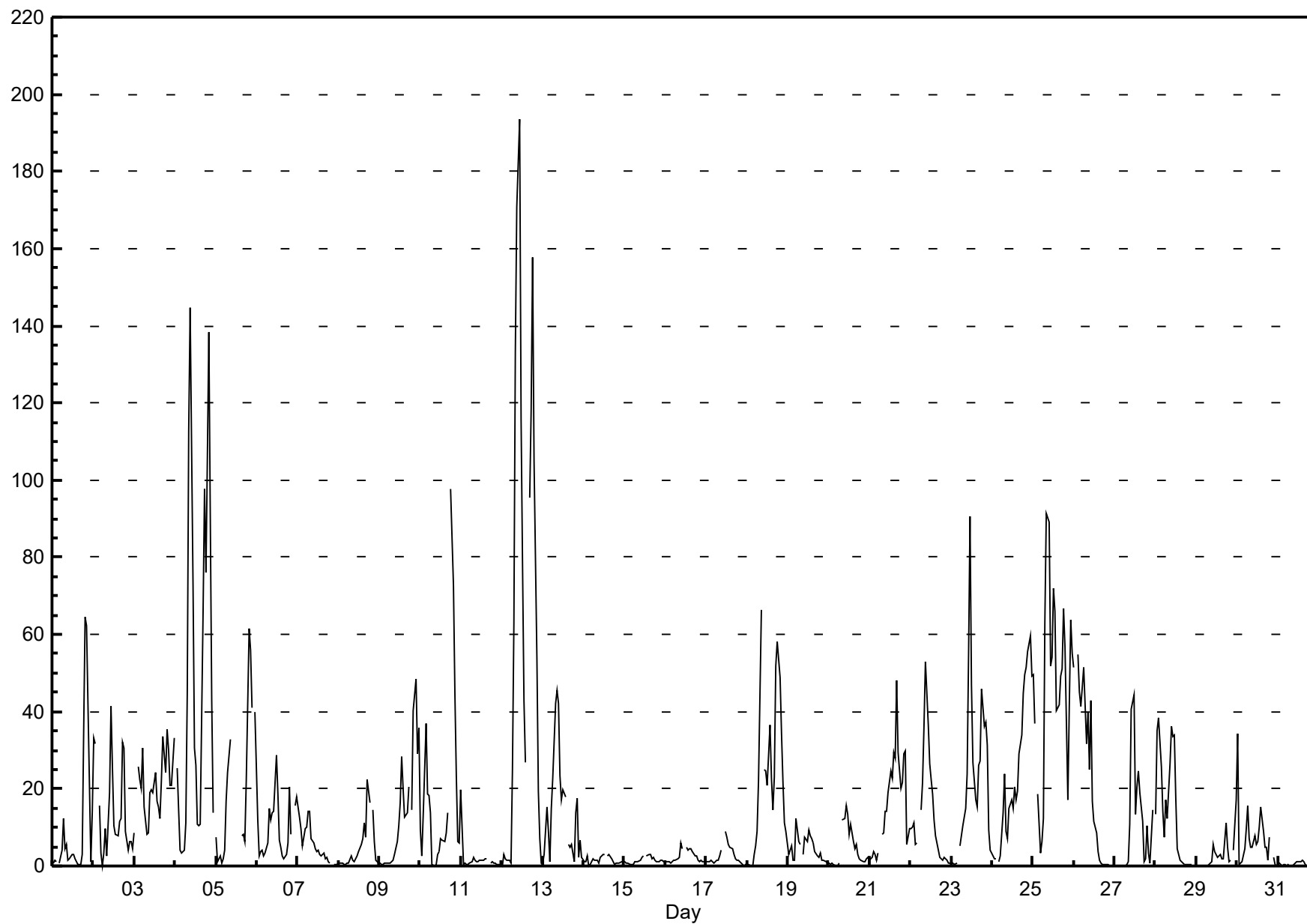
Nitrogen Oxide (NO) - ppb

Henry Pirker - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 193.4 ppb on Jan 12 11:00 Maximum Daily Average: 61.6 ppb on Jan 12																								Hours in Service: 744 Hours of Data: 705 Hours of Missing Data: 39 Hours of Calibration: 39 Percent Operational Time: 100.0			
Minimum Value: 0 ppb on Jan 20 06:00 Minimum Daily Average: 0.5 ppb on Jan 31 Maximum Diurnal Average: 25.8 ppb at hour 20 Minimum Diurnal Average: 4.8 ppb at hour 5 Monthly Average: 14.85 ppb Percentiles: P ₁ = 0.1 P ₁₀ = 0.4 Q ₁ = 1.2 Median = 5.0 Q ₃ = 19.0 P ₉₀ = 41.8 P ₉₉ = 110.3																											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Jan	1	2	1	A	1	4	12	5	5	1	2	3	3	2	1	1	0	3	35	64	62	42	1	14	11.5	64.4	
2-Jan	33	32	A	16	3	0	3	10	3	19	41	25	10	8	8	11	12	32	30	9	4	6	6	5	14.2	41.3	
3-Jan	9	A	26	22	20	31	15	8	9	19	20	19	24	17	15	12	22	34	24	35	30	21	21	33	21.2	35.5	
4-Jan	A	26	15	4	3	4	11	45	113	145	73	31	26	11	11	11	66	98	76	107	138	43	14	A	48.5	144.7	
5-Jan	8	1	3	1	2	4	17	24	33	C	C	C	C	C	C	8	8	6	22	61	56	41	A	40	--	61.5	
6-Jan	12	3	4	4	3	3	6	15	12	14	14	29	19	7	5	2	2	3	6	21	8	A	16	18	9.7	28.6	
7-Jan	15	12	10	5	10	10	14	14	7	6	5	4	4	3	2	3	2	2	1	1	A	0	0	1	5.7	15.4	
8-Jan	1	1	1	0	0	1	1	3	1	1	2	3	4	5	7	11	7	22	16	A	15	6	1	1	4.8	22.3	
9-Jan	1	1	1	1	1	1	1	1	2	3	6	10	16	28	20	13	14	21	A	14	40	48	29	36	13.3	48.4	
10-Jan	9	3	13	37	19	18	14	0	0	0	3	4	7	7	6	8	14	A	98	73	45	23	6	6	18.0	97.9	
11-Jan	20	1	1	0	0	1	1	2	2	1	1	2	2	2	2	2	A	1	1	1	1	1	0	0	1.8	19.7	
12-Jan	0	3	2	2	1	1	25	63	133	171	193	116	78	43	27	A	95	118	158	105	54	19	7	1	61.6	193.4	
13-Jan	1	3	15	9	1	15	23	42	46	42	23	17	20	18	A	6	5	6	1	14	17	2	7	2	14.5	45.6	
14-Jan	1	1	2	0	0	2	2	2	2	1	2	3	3	A	2	3	2	1	0	1	1	1	1	1	1.5	3.1	
15-Jan	1	1	1	0	0	1	1	1	1	2	2	3	A	3	3	3	2	2	1	1	1	2	2	1	1.5	3.1	
16-Jan	1	1	1	1	1	1	2	2	2	6	4	A	5	4	4	5	4	2	3	2	1	2	1	1	2.4	6.1	
17-Jan	1	1	1	1	1	1	1	2	3	4	A	9	7	6	5	4	3	2	1	1	1	0	0	0	2.5	8.9	
18-Jan	0	0	0	0	3	5	9	22	66	A	25	25	21	37	23	14	23	52	58	49	34	22	11	9	22.1	66.3	
19-Jan	3	4	5	2	2	12	7	6	A	3	8	6	9	8	7	6	4	3	2	3	1	1	1	1	4.5	12.4	
20-Jan	1	0	1	0	0	0	1	A	12	12	16	13	8	11	6	5	5	3	2	1	1	1	2	2	4.5	15.5	
21-Jan	1	2	4	3	2	3	A	8	9	14	14	19	25	23	29	28	48	29	20	22	29	30	6	10	16.4	48.1	
22-Jan	10	10	11	6	6	A	15	22	36	53	37	26	22	19	12	8	4	2	2	1	2	1	1	1	13.3	53.0	
23-Jan	0	1	1	1	A	5	8	10	15	24	55	91	47	27	17	15	26	27	46	36	37	31	9	4	23.2	90.6	
24-Jan	4	2	2	A	1	3	14	24	9	7	15	17	15	21	17	19	29	34	45	50	52	55	60	49	23.6	59.6	
25-Jan	50	37	A	19	3	6	12	63	91	89	52	54	72	66	40	42	49	51	67	57	17	42	64	55	47.8	91.4	
26-Jan	52	A	55	45	42	46	52	32	40	25	43	17	12	9	4	1	1	0	0	0	0	0	0	0	20.7	54.9	
27-Jan	A	0	0	0	0	0	0	0	1	11	41	44	13	20	25	19	11	1	2	10	3	1	15	A	10.0	44.5	
28-Jan	14	35	38	26	14	7	17	12	26	36	33	34	18	5	1	1	1	0	0	0	0	0	A	0	13.9	38.5	
29-Jan	0	0	0	0	0	0	0	0	1	1	6	4	2	2	3	2	2	11	5	1	2	A	4	17	2.8	17.0	
30-Jan	34	0	1	1	4	10	16	7	5	5	8	6	6	10	15	9	5	5	1	7	A	2	0	0	6.9	34.5	
31-Jan	0	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	A	0	1	0	0	0.5	1.3	
9.7 6.3 7.3 7.1 4.8 6.5 9.9 14.8 22.8 24.7 25.7 21.8 17.3 14.5 11.1 9.2 15.6 19.1 24.2 25.8 22.6 15.4 9.8 10.6 51.5 36.9 54.9 45.1 41.5 46.3 51.6 63.1 133.2 170.7 193.4 116.1 78.2 66.0 40.4 41.6 95.5 118.4 157.9 106.6 138.4 55.5 63.9 55.3																										Diurnal Average	Diurnal Maximum
C - Calibration A - Automated Daily Zero Span																											

Hourly Averages

Nitrogen Oxide (NO) - ppb
Henry Pirker - January 2016



Hourly Maximums

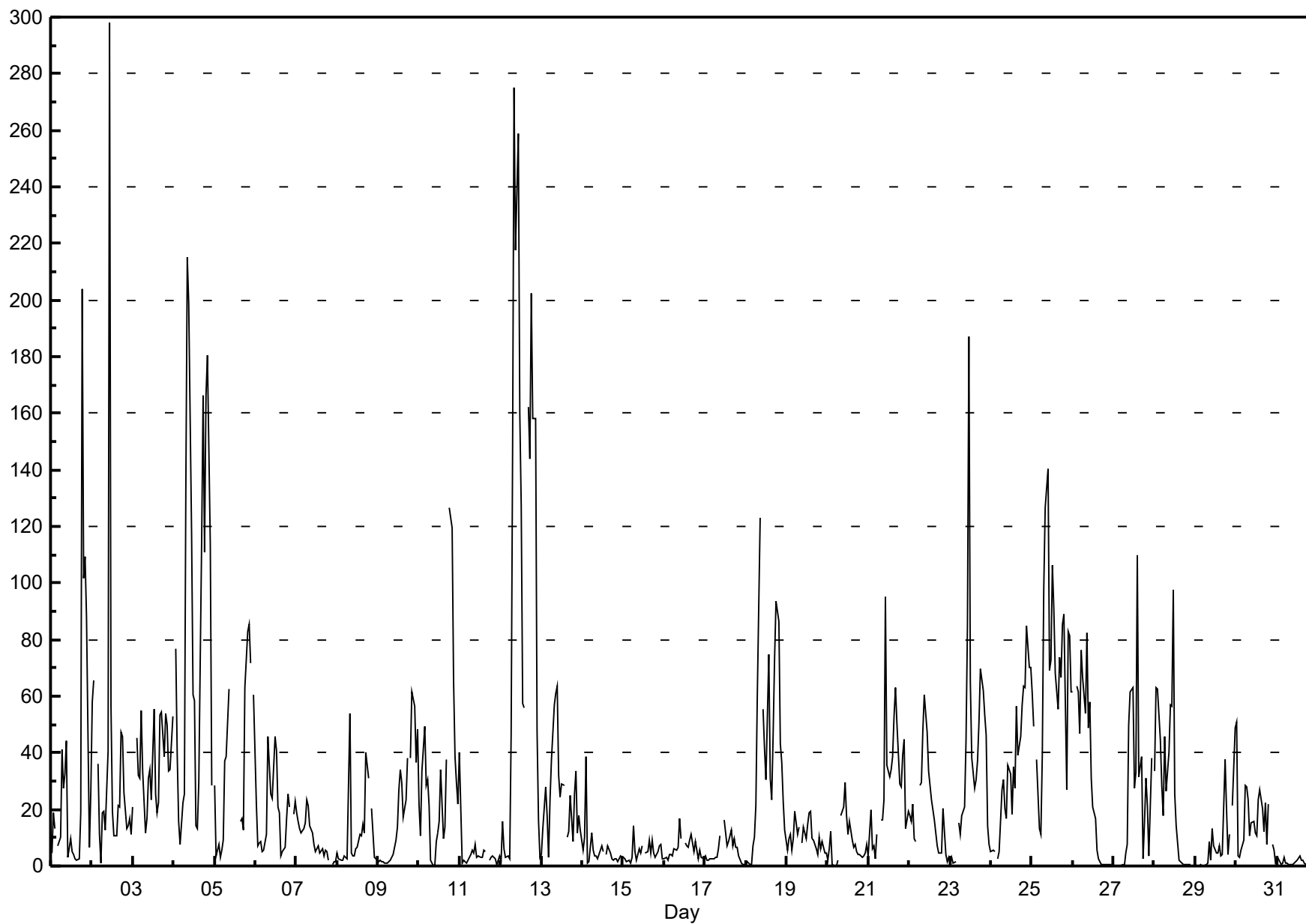
Nitrogen Oxide (NO) - ppb

Henry Pirker - January 2016

Maximum Value: 298.0 ppb on Jan 2 11:00																					Maximum Daily Average: 98.7 ppb on Jan 12										Hours in Service: 744	
Minimum Value: 0 ppb on Jan 20 06:00																					Minimum Daily Average: 2.4 ppb on Jan 31										Hours of Data: 705	
Maximum Diurnal Average: 50.2 ppb at hour 11																					Minimum Diurnal Average: 8.8 ppb at hour 5										Hours of Missing Data: 39	
Monthly Average: 26.72 ppb																					Percentiles: P ₁ = 0.2 P ₁₀ = 1.5 Q ₁ = 3.8 Median = 12.5 Q ₃ = 33.6 P ₉₀ = 63.2 P ₉₉ = 201.2										Hours of Calibration: 39	
																					Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24								
1-Jan	5	19	13	A	7	10	41	28	32	44	3	9	5	4	3	2	2	19	204	102	109	88	6	26	34.0	204.1						
2-Jan	58	66	A	36	11	1	19	19	13	41	298	57	19	11	11	21	21	47	46	26	13	14	17	11	38.1	298.0						
3-Jan	21	A	45	32	31	55	34	12	17	31	34	24	56	25	19	22	53	55	39	54	50	34	34	53	36.0	55.5						
4-Jan	A	77	40	16	8	23	26	133	215	199	117	61	58	14	13	30	115	166	111	166	180	114	29	A	86.9	215.1						
5-Jan	28	4	8	3	6	9	37	39	63	C	C	C	C	C	C	16	17	13	63	83	86	72	A	61	--	85.5						
6-Jan	22	7	8	9	5	5	11	46	36	25	24	46	40	21	19	3	5	7	17	25	21	A	18	23	19.3	46.0						
7-Jan	19	16	13	12	13	15	23	22	14	12	8	5	6	7	5	6	4	5	5	2	A	1	2	1	9.4	23.4						
8-Jan	4	2	2	2	3	3	3	54	4	4	3	6	7	11	11	15	12	40	31	A	20	12	3	2	11.1	54.1						
9-Jan	2	2	1	1	1	1	1	2	3	4	9	14	27	34	30	18	23	38	A	38	61	57	36	48	19.7	61.3						
10-Jan	22	11	34	49	29	30	22	2	0	1	9	12	16	34	10	14	38	A	126	120	66	38	29	22	31.8	126.4						
11-Jan	40	1	2	2	1	2	4	6	4	7	3	3	3	3	5	5	A	2	3	4	3	3	1	4	4.8	40.4						
12-Jan	2	16	6	3	3	3	47	146	275	217	259	160	127	57	56	A	162	144	202	158	158	48	17	3	98.7	275.3						
13-Jan	4	13	28	18	3	23	38	57	61	63	32	24	29	28	A	10	12	25	8	25	34	12	18	13	25.2	63.3						
14-Jan	5	10	39	1	1	12	6	3	4	2	4	7	5	A	4	7	5	2	2	2	2	2	4	3	5.8	38.8						
15-Jan	3	2	1	2	1	3	14	5	2	6	5	7	A	5	5	9	4	9	5	3	5	7	8	3	5.0	14.1						
16-Jan	3	3	2	4	4	4	6	5	7	17	10	A	8	7	7	9	11	5	9	6	3	6	3	3	6.1	16.7						
17-Jan	3	2	2	3	3	2	3	3	6	10	A	16	12	7	8	13	7	10	7	6	4	1	0	1	5.6	16.3						
18-Jan	1	1	0	1	7	10	21	60	123	A	55	41	31	75	31	23	46	73	94	86	43	36	23	13	39.0	123.1						
19-Jan	6	10	11	5	10	19	11	14	A	8	14	10	15	19	19	10	9	6	4	10	6	8	5	5	10.2	19.2						
20-Jan	2	6	12	1	0	0	2	A	18	21	29	18	11	16	9	7	8	5	4	4	3	3	4	8	8.3	29.3						
21-Jan	4	20	6	7	3	11	A	16	16	23	95	35	32	34	39	53	63	51	29	28	39	45	13	19	29.6	94.9						
22-Jan	18	16	22	10	8	A	29	30	48	60	48	34	28	23	20	16	7	5	5	5	20	4	2	3	20.0	60.3						
23-Jan	1	3	1	1	A	15	11	18	21	44	85	187	65	38	27	31	37	51	70	62	54	46	14	8	38.7	187.1						
24-Jan	5	6	5	A	3	5	27	31	20	17	35	32	18	35	27	56	39	46	57	63	63	85	70	70	35.5	85.0						
25-Jan	61	49	A	38	13	11	39	98	126	140	69	73	106	91	68	55	74	67	85	89	27	83	81	61	69.8	140.1						
26-Jan	62	A	64	61	47	76	67	54	82	49	58	31	21	17	5	2	1	1	1	1	1	0	0	0	30.5	82.4						
27-Jan	A	0	0	0	0	1	0	5	8	50	62	63	27	33	110	32	38	3	16	31	21	4	38	A	24.6	110.1						
28-Jan	34	63	63	45	29	18	46	27	40	57	57	98	25	14	2	1	1	1	1	1	0	0	A	0	27.1	97.5						
29-Jan	0	0	0	0	0	0	0	1	8	2	13	7	5	5	7	4	4	38	20	4	11	A	22	49	8.7	48.6						
30-Jan	51	4	3	6	9	28	28	23	11	15	16	12	11	23	27	20	12	22	8	22	A	8	5	1	15.9	50.7						
31-Jan	2	2	1	1	3	1	1	0	1	1	1	2	2	4	2	2	1	0	1	A	2	19	7	2	2.4	18.9						
16.8 14.9 14.9 12.7 8.8 13.3 20.6 31.9 42.6 40.4 50.2 37.7 28.1 24.1 20.7 17.1 27.8 31.8 42.3 42.3 38.1 29.3 17.6 17.7																									Diurnal Average							
61.5 76.9 63.6 61.4 46.7 76.2 66.7 145.9 275.3 217.4 298.0 187.1 127.0 90.9 110.1 56.4 162.2 166.3 204.1 166.4 180.4 113.5 81.3 70.1																									Diurnal Maximum							
C - Calibration A - Automated Daily Zero Span																																

Hourly Maximums

Nitrogen Oxide (NO) - ppb
Henry Pirker - January 2016



Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

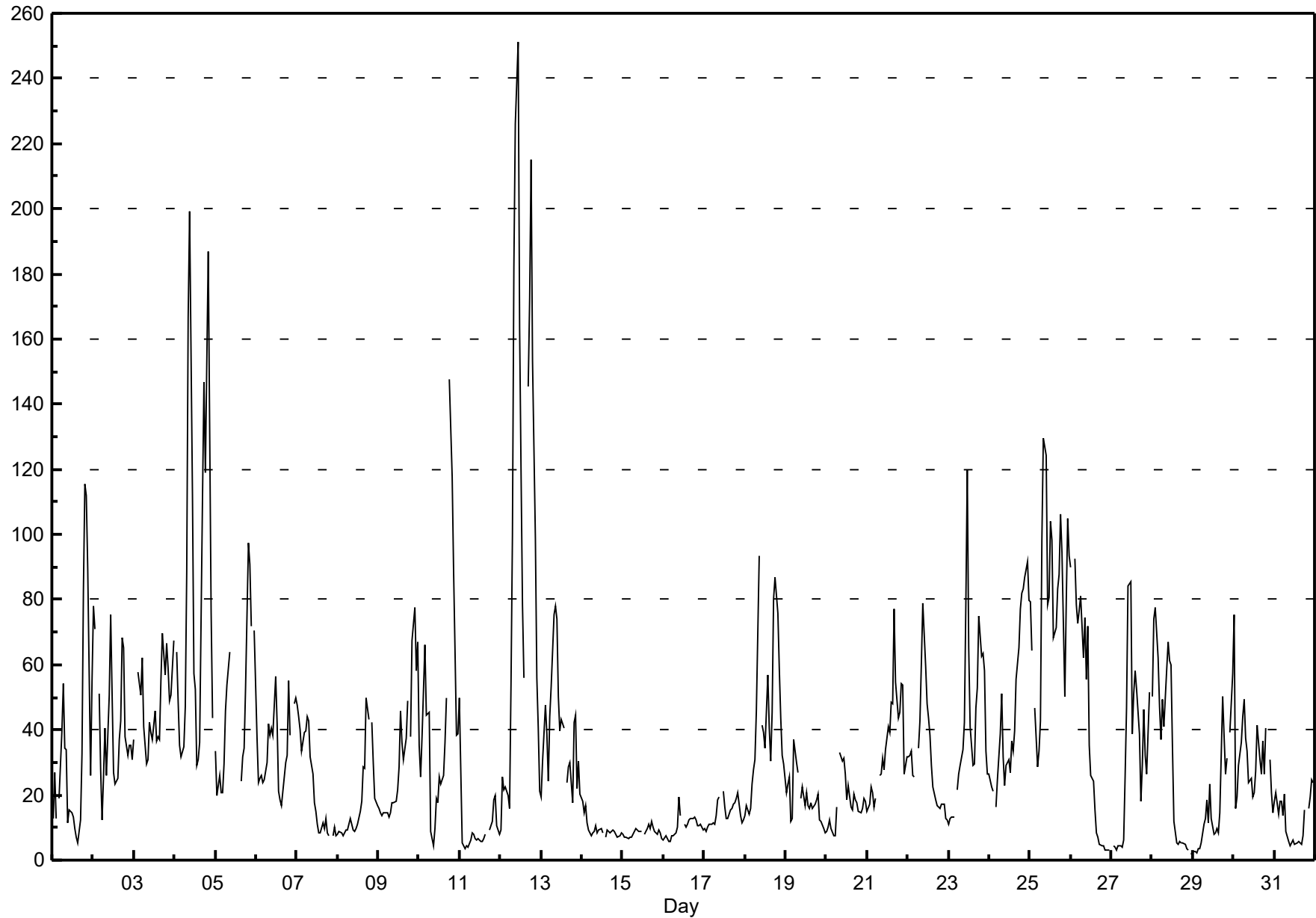
Henry Pirker - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 251.1 ppb on Jan 12 11:00 Maximum Daily Average: 97.7 ppb on Jan 12																								Hours in Service: 744 Hours of Data: 705 Hours of Missing Data: 39 Hours of Calibration: 39 Percent Operational Time: 100.0			
Minimum Value: 2 ppb on Jan 29 00:00 Minimum Daily Average: 8.6 ppb on Jan 15 Maximum Diurnal Average: 51.0 ppb at hour 20 Minimum Diurnal Average: 22.4 ppb at hour 5 Monthly Average: 34.72 ppb Percentiles: P ₁ = 3.0 P ₁₀ = 7.4 Q ₁ = 12.2 Median = 25.9 Q ₃ = 45.6 P ₉₀ = 75.7 P ₉₉ = 167.2																											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Jan	13	27	13	A	19	40	54	34	34	11	15	14	13	10	7	5	12	32	83	115	112	89	26	55	36.4	115.4	
2-Jan	78	71	A	51	28	12	26	40	26	51	75	50	27	23	25	37	43	68	65	38	32	35	35	31	42.1	77.8	
3-Jan	37	A	58	54	51	62	41	29	31	42	39	37	46	36	38	37	55	70	57	67	59	49	51	67	48.4	69.7	
4-Jan	A	64	49	35	32	35	47	88	167	199	112	57	53	29	31	36	111	147	119	153	187	76	44	A	85.0	199.2	
5-Jan	34	20	26	21	20	29	46	54	64	C	C	C	C	C	C	24	32	34	53	97	91	72	A	70	--	97.2	
6-Jan	37	24	25	26	24	25	30	42	38	40	38	57	42	21	19	17	21	30	32	55	39	A	48	50	33.8	56.5	
7-Jan	48	44	40	34	39	40	44	43	32	27	18	15	11	8	8	11	10	13	8	7	A	7	10	7	22.8	47.6	
8-Jan	8	9	8	7	8	9	9	13	11	9	9	10	11	15	18	28	28	50	43	A	42	30	19	17	18.0	49.7	
9-Jan	16	15	14	15	15	15	13	14	18	18	18	22	29	46	36	31	38	49	A	38	67	77	58	67	31.6	77.5	
10-Jan	35	25	38	66	45	45	45	9	4	10	19	18	25	23	26	36	50	A	148	118	88	64	38	39	44.1	147.8	
11-Jan	50	5	4	4	4	4	6	9	8	7	6	7	6	6	6	8	A	9	10	12	19	20	11	8	9.9	49.6	
12-Jan	9	25	22	22	20	16	54	100	182	226	251	163	119	78	56	A	145	172	215	153	99	56	40	21	97.7	251.1	
13-Jan	19	30	48	39	24	44	53	75	78	74	50	40	43	40	A	24	29	30	17	42	45	22	31	20	39.9	78.1	
14-Jan	18	15	17	12	9	7	8	9	11	8	9	10	9	A	7	9	8	9	9	9	8	7	8	8	9.8	18.1	
15-Jan	8	7	7	7	7	7	8	9	10	9	9	9	A	8	10	11	10	12	10	9	8	9	8	7	8.6	11.9	
16-Jan	6	8	7	6	6	8	7	9	10	19	13	A	11	10	11	12	13	13	13	12	10	11	11	9	10.2	19.4	
17-Jan	9	9	10	11	11	12	11	14	18	19	A	21	16	13	13	16	16	17	18	19	21	14	12	12	14.4	21.0	
18-Jan	14	17	14	16	23	28	31	46	93	A	41	39	35	57	41	30	46	80	87	76	59	43	32	29	42.5	93.5	
19-Jan	21	23	25	12	13	37	30	27	A	19	23	17	21	17	16	18	16	17	19	20	12	12	10	8	18.8	37.1	
20-Jan	9	10	12	10	7	8	16	A	33	31	31	26	19	23	16	15	20	18	17	15	14	16	19	18	17.6	33.0	
21-Jan	15	17	22	21	16	19	A	26	27	31	28	34	41	39	49	48	77	55	43	45	54	54	26	32	35.6	77.1	
22-Jan	32	32	34	26	26	A	35	43	60	79	60	48	44	38	29	22	19	17	16	16	17	17	13	12	31.9	79.1	
23-Jan	11	13	13	13	A	22	26	29	34	42	78	120	65	41	29	30	47	53	75	63	64	58	34	26	42.8	119.9	
24-Jan	26	23	21	A	16	25	39	51	32	23	29	31	27	36	34	40	56	65	77	82	83	87	92	80	46.7	91.6	
25-Jan	79	64	A	47	29	33	43	98	129	124	78	81	104	98	68	71	83	88	106	94	50	80	105	93	80.3	129.4	
26-Jan	90	A	93	79	72	77	81	62	75	56	72	35	26	24	15	8	7	5	5	4	3	3	3	3	39.0	92.6	
27-Jan	A	4	4	3	4	4	4	6	26	47	84	85	39	51	58	52	39	18	29	46	32	27	52	A	32.5	85.3	
28-Jan	50	74	77	62	47	37	49	41	58	67	61	60	35	12	5	5	6	5	5	5	4	3	A	2	33.5	77.4	
29-Jan	2	3	2	3	4	5	11	13	18	11	23	13	8	8	10	8	14	50	38	27	31	A	39	57	17.4	57.2	
30-Jan	75	16	19	29	36	44	50	37	33	24	25	19	21	27	41	31	26	37	26	41	A	31	21	15	31.5	75.4	
31-Jan	18	21	14	18	18	14	20	9	6	4	5	6	5	5	6	5	5	7	15	A	16	19	25	24	12.4	24.7	
30.0 24.6 25.4 25.7 22.4 25.4 31.3 36.0 45.5 45.8 45.6 39.4 32.7 29.1 25.1 24.3 36.0 42.4 48.7 51.0 47.1 37.5 31.7 30.7 90.0 74.2 92.6 78.6 72.5 76.6 80.9 99.8 182.1 226.3 251.1 163.3 119.3 98.1 68.4 71.5 145.4 172.5 214.9 153.4 186.8 89.5 104.9 93.4																										Diurnal Average	Diurnal Maximum
C - Calibration A - Automated Daily Zero Span																											

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

Henry Pirker - January 2016



Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

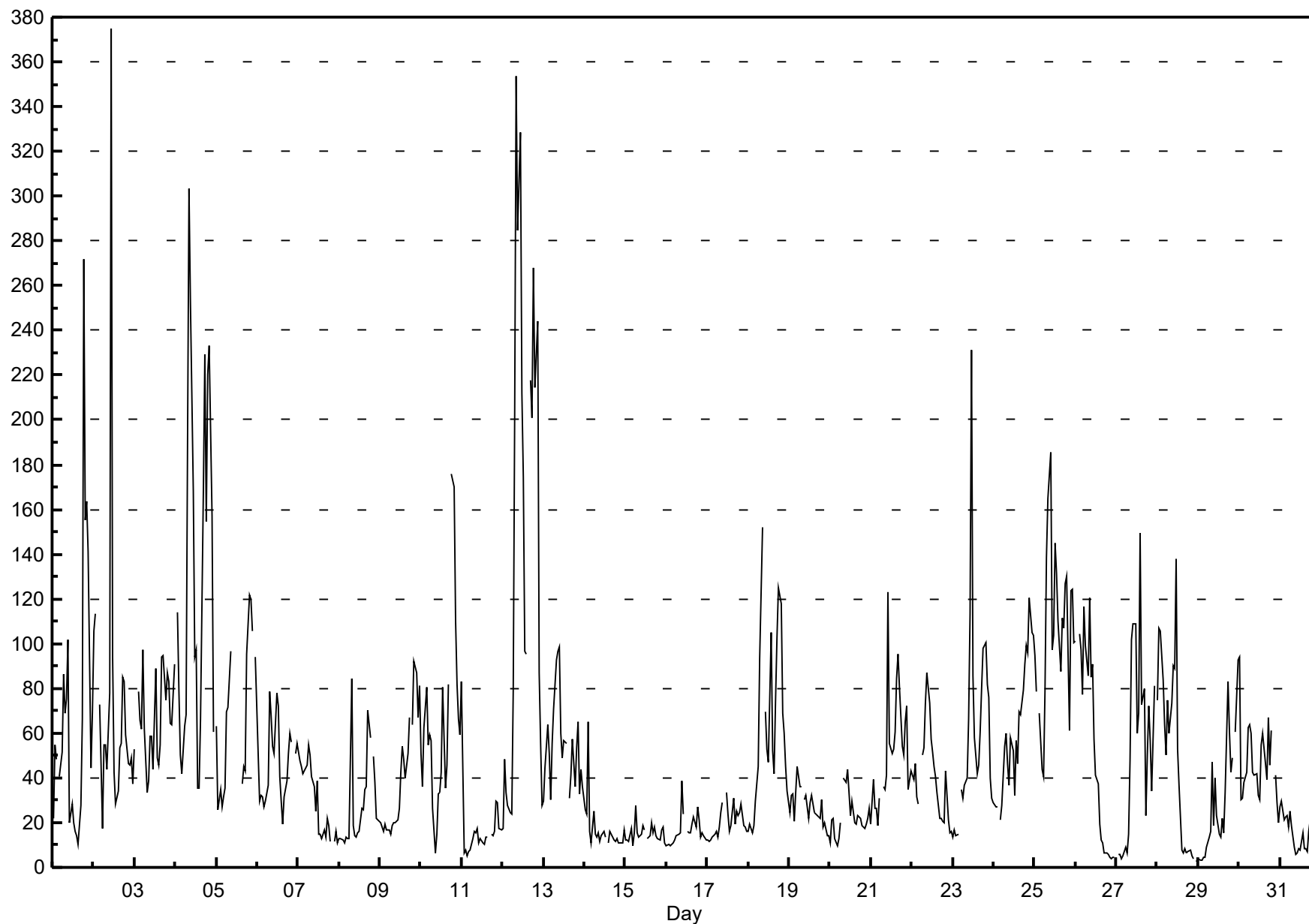
Henry Pirker - January 2016

Maximum Value: 374.5 ppb on Jan 2 11:00																					Maximum Daily Average: 144.1 ppb on Jan 12				Hours in Service: 744	
Minimum Value: 3 ppb on Jan 29 00:00																					Minimum Daily Average: 15.3 ppb on Jan 15				Hours of Data: 705	
Maximum Diurnal Average: 76.1 ppb at hour 11																					Minimum Diurnal Average: 29.6 ppb at hour 5				Hours of Missing Data: 39	
Monthly Average: 50.79 ppb																					Percentiles: P ₁ = 4.3 P ₁₀ = 12.2 Q ₁ = 18.1 Median = 36.6 Q ₃ = 66.4 P ₉₀ = 101.1 P ₉₉ = 265.5				Hours of Calibration: 39	
																					Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jan	22	55	49	A	41	52	87	69	75	102	20	29	20	16	14	10	27	66	272	155	164	141	45	69	69.5	271.9
2-Jan	106	113	A	73	45	17	55	55	44	78	375	94	43	28	34	53	55	85	83	59	46	45	49	38	72.8	374.5
3-Jan	53	A	79	66	62	97	62	34	39	59	59	44	89	49	46	55	94	95	74	87	83	64	64	91	67.0	97.2
4-Jan	A	114	79	50	42	63	69	190	303	252	168	94	97	36	35	66	169	229	155	220	233	157	61	A	131.1	303.1
5-Jan	63	26	35	27	32	36	70	71	96	C	C	C	C	C	C	37	45	43	95	122	120	106	A	94	--	121.6
6-Jan	51	30	32	32	27	30	37	79	67	54	51	78	72	41	29	20	32	38	51	60	56	A	51	56	46.6	78.7
7-Jan	52	48	45	42	44	46	55	50	41	36	25	38	15	15	13	17	13	22	18	11	A	12	16	11	29.8	54.9
8-Jan	13	13	12	11	13	13	13	85	18	14	13	16	16	26	26	35	36	70	58	A	49	38	22	21	27.4	84.5
9-Jan	20	18	16	19	17	17	15	18	20	20	21	27	43	54	48	40	51	67	A	64	92	87	67	81	40.1	92.1
10-Jan	51	36	62	80	55	59	57	27	6	15	33	34	43	80	36	46	82	A	176	170	110	82	66	60	63.7	176.0
11-Jan	83	7	8	5	7	8	13	16	15	18	11	13	11	10	13	13	A	15	14	16	30	29	17	17	16.9	83.3
12-Jan	17	48	33	28	25	24	79	202	354	285	329	212	174	96	95	A	218	201	268	215	244	87	55	28	144.1	353.6
13-Jan	30	44	64	51	30	55	71	93	97	99	60	49	57	56	A	31	41	57	36	53	65	33	43	36	54.4	98.8
14-Jan	26	24	65	16	11	25	15	14	16	12	14	16	13	A	11	16	14	12	12	13	11	11	11	17	17.1	65.0
15-Jan	12	12	11	18	10	16	28	16	13	15	18	17	A	13	14	20	15	18	14	13	12	17	18	11	15.3	27.7
16-Jan	10	10	10	10	11	12	14	15	16	39	24	A	16	16	15	19	22	18	27	21	14	16	14	12	16.6	38.7
17-Jan	12	12	12	14	15	16	14	18	25	29	A	33	24	16	19	31	19	25	23	25	28	19	18	16	20.1	33.2
18-Jan	16	19	15	19	30	37	45	93	152	A	70	53	47	105	52	42	74	102	125	118	69	60	45	34	61.9	152.0
19-Jan	25	32	33	20	33	45	36	36	A	30	32	22	29	33	28	25	24	23	22	30	18	20	14	14	27.1	45.3
20-Jan	11	21	22	13	9	13	20	A	40	38	44	33	23	30	20	19	23	23	22	19	18	19	22	27	22.9	43.6
21-Jan	19	39	26	26	18	31	A	36	35	41	123	55	51	53	60	84	95	80	54	50	65	72	35	43	51.9	122.9
22-Jan	41	39	46	31	29	A	50	54	74	87	73	57	51	45	41	34	22	22	20	20	43	22	16	16	40.6	87.0
23-Jan	14	17	14	15	A	35	31	37	40	66	113	231	86	58	42	46	60	80	98	100	82	76	40	31	61.3	231.3
24-Jan	29	27	27	A	21	28	54	60	47	37	58	52	32	57	46	70	68	79	90	99	96	120	105	104	61.2	120.2
25-Jan	94	79	A	69	44	40	79	138	165	185	97	104	145	132	110	87	111	107	127	130	61	124	124	100	106.7	185.4
26-Jan	101	A	104	97	77	117	99	86	120	85	90	57	42	37	19	12	11	6	6	6	5	4	4	4	51.8	120.5
27-Jan	A	6	6	4	5	9	7	15	48	102	109	109	60	69	150	73	80	23	50	72	57	34	81	A	53.1	149.6
28-Jan	75	107	106	84	64	50	75	60	73	90	89	138	53	37	7	6	8	7	7	8	5	4	A	3	50.2	138.1
29-Jan	4	3	3	4	4	9	14	16	47	19	40	23	15	14	22	15	34	83	61	43	49	A	61	93	29.4	92.9
30-Jan	94	30	31	38	43	62	64	60	42	41	42	32	30	55	60	46	39	67	45	61	A	41	29	20	46.7	94.0
31-Jan	27	30	21	22	23	18	25	18	9	6	6	8	8	15	8	8	7	16	21	A	22	52	34	32	19.1	52.3
40.4 36.5 36.8 33.9 29.6 36.0 45.0 58.6 71.2 67.3 76.1 61.0 48.4 44.5 38.5 35.8 53.1 59.4 70.9 71.1 67.1 54.9 42.3 40.6																									Diurnal Average	
105.9 113.8 105.5 97.0 77.3 116.7 99.5 202.0 353.6 284.8 374.5 231.3 174.5 131.7 149.6 87.3 217.5 229.2 271.9 220.3 243.8 157.4 124.2 103.7																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

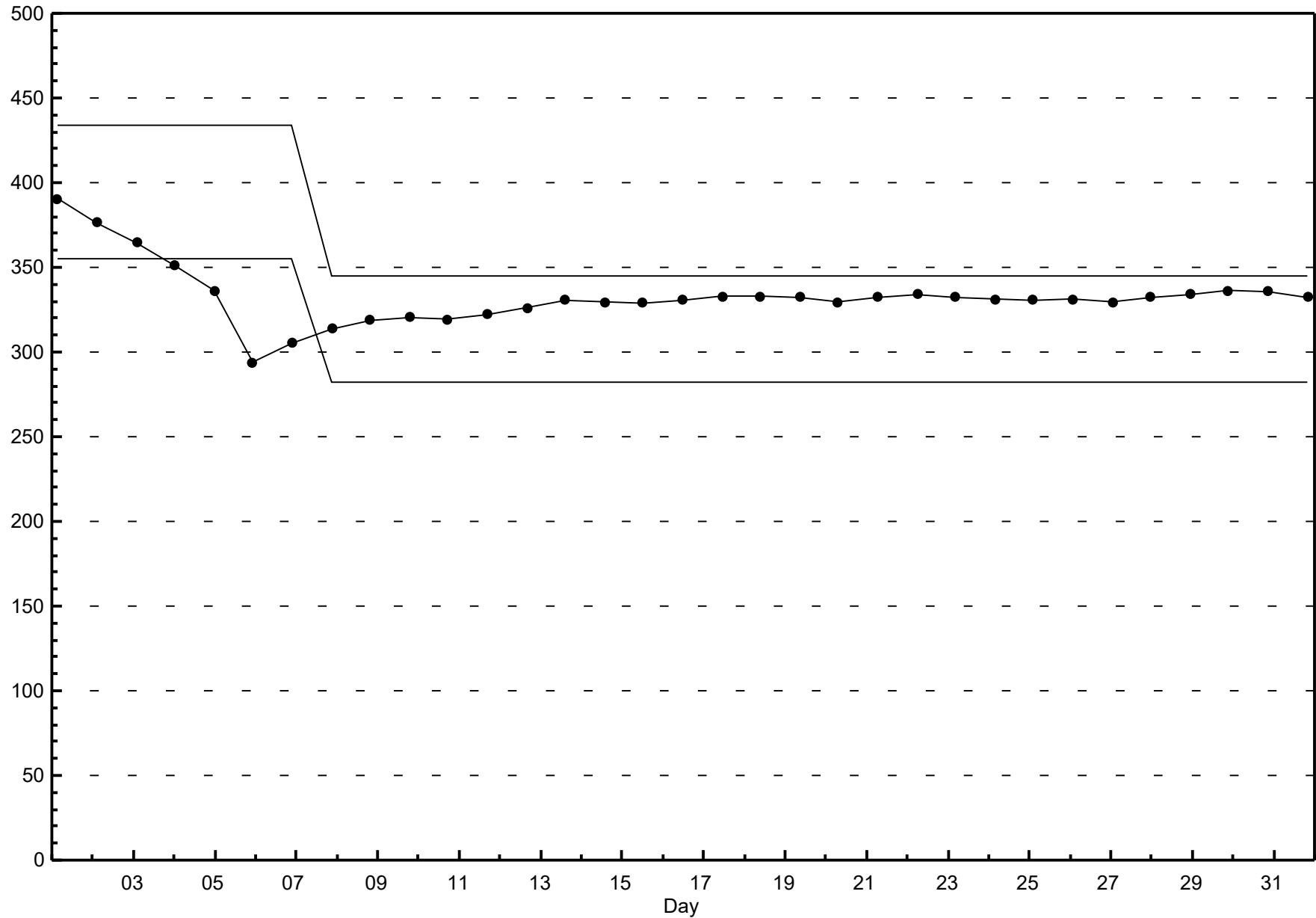
Oxides of Nitrogen (NO_x) - ppb

Henry Pirker - January 2016



Span Responses

Oxides of Nitrogen (NO_x)
Henry Pirker - January 2016



Hourly Averages

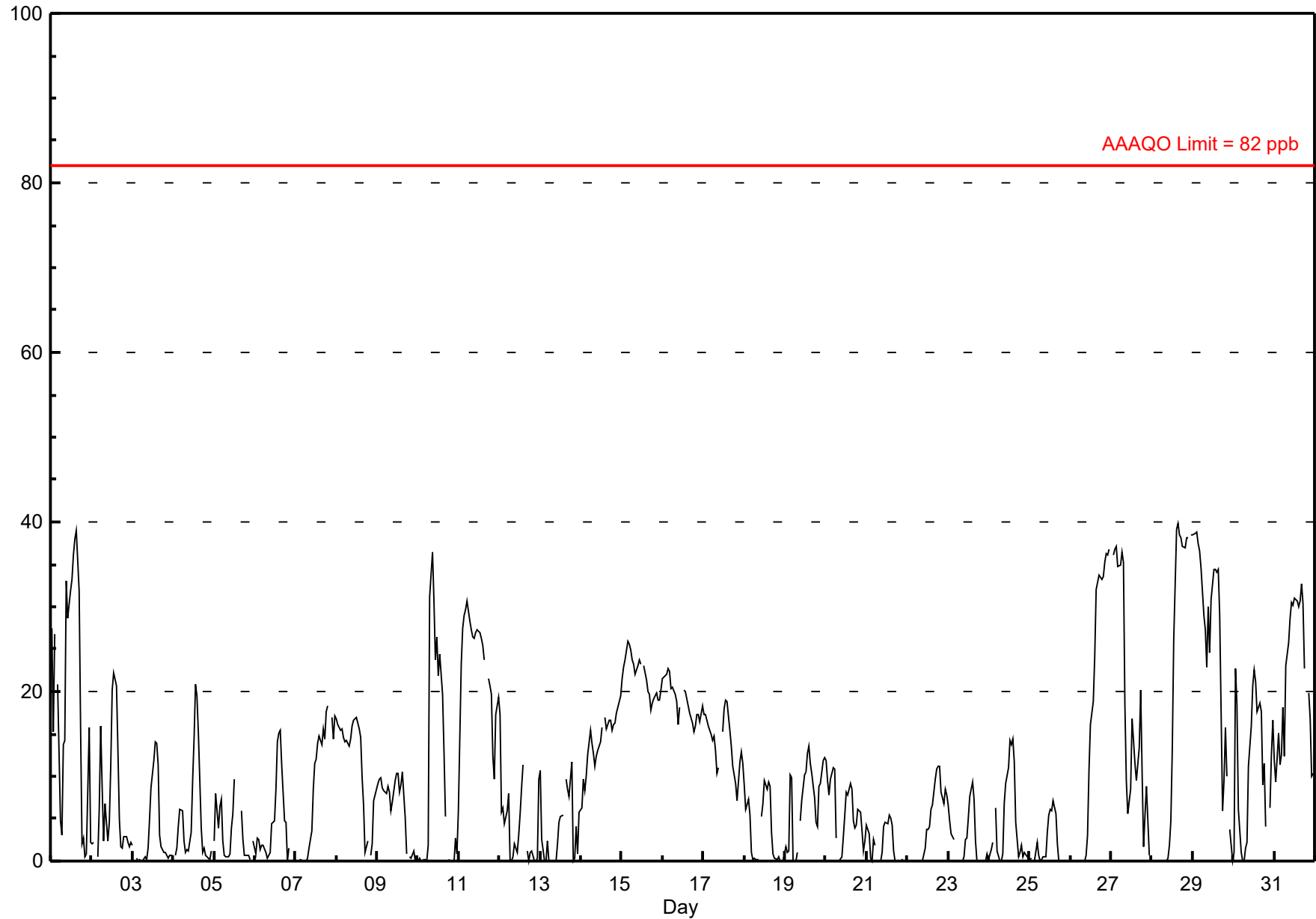
Ozone (O₃) - ppb

Henry Pirker - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 39.8 ppb on Jan 28 16:00 Maximum Daily Average: 26.1 ppb on Jan 29																				Hours in Service: 744 Hours of Data: 708 Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Jan 3 07:00 Minimum Daily Average: 1.7 ppb on Jan 25 Maximum Diurnal Average: 17.5 ppb at hour 15 Minimum Diurnal Average: 7.4 ppb at hour 21 Monthly Average: 10.38 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 1.1 Median = 7.7 Q ₃ = 16.6 P ₉₀ = 26.8 P ₉₉ = 38.4																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jan	27	15	27	A	21	5	3	14	14	33	29	32	33	36	38	39	32	16	2	3	1	1	16	2	19.0	38.9
2-Jan	2	2	A	1	6	16	9	2	7	2	5	11	20	22	21	13	5	2	2	3	3	2	2	2	6.9	22.3
3-Jan	2	A	0	0	0	0	0	0	0	2	5	9	12	14	14	11	3	2	1	1	1	0	1	1	3.4	14.1
4-Jan	A	1	2	4	6	6	2	1	1	1	3	10	14	21	19	15	4	1	1	1	0	0	1	A	5.3	20.8
5-Jan	2	8	4	6	7	2	1	1	0	1	4	6	10	C	C	C	6	3	1	1	1	0	A	2	3.2	9.7
6-Jan	1	3	3	1	2	2	1	0	1	1	4	5	9	14	15	15	11	5	5	0	2	A	0	0	4.3	15.4
7-Jan	0	0	0	0	0	0	0	0	2	4	8	11	12	14	15	14	16	14	18	18	A	17	14	17	8.4	18.2
8-Jan	17	16	15	16	15	14	14	14	14	16	17	17	17	16	15	10	7	1	2	A	1	2	7	9	11.7	16.9
9-Jan	9	10	10	9	8	8	9	8	6	7	10	10	10	8	9	10	5	1	A	0	0	1	0	0	6.5	10.5
10-Jan	0	0	0	0	0	0	2	31	37	31	24	26	22	24	20	13	5	A	0	0	0	0	3	1	10.4	36.5
11-Jan	6	23	27	29	30	31	28	27	26	26	27	27	27	26	25	24	A	21	21	20	12	10	17	19	23.1	30.6
12-Jan	17	6	6	4	6	8	0	0	1	2	1	3	6	9	11	A	1	0	1	1	0	0	0	10	4.1	17.2
13-Jan	11	3	0	0	2	0	0	0	0	0	2	5	5	5	A	10	8	8	12	0	0	4	1	6	3.5	11.6
14-Jan	6	10	8	10	12	15	14	13	11	12	13	14	16	A	17	16	17	17	15	16	16	17	19	19	14.1	19.4
15-Jan	21	23	24	26	26	25	24	23	22	23	24	23	A	23	21	20	20	18	19	19	20	19	19	20	21.8	26.0
16-Jan	21	22	22	23	22	20	20	20	19	16	18	A	20	20	19	18	17	16	15	16	17	17	16	18	19.0	22.7
17-Jan	17	17	17	16	15	14	15	13	10	11	A	15	18	19	19	15	14	11	10	9	7	12	13	11	13.9	19.0
18-Jan	9	6	7	5	1	0	0	0	0	A	5	7	10	8	9	9	3	1	0	0	0	0	0	0	3.6	9.6
19-Jan	2	1	1	10	10	0	0	1	A	5	7	10	10	13	14	11	10	7	5	4	9	9	12	12	7.1	13.6
20-Jan	12	10	8	10	11	11	3	A	0	0	3	5	8	8	9	8	5	4	4	6	6	4	1	2	6.0	11.8
21-Jan	4	3	0	0	3	2	A	0	0	1	4	4	4	5	5	4	1	0	0	0	0	0	0	0	1.8	5.5
22-Jan	0	0	0	0	0	A	0	0	0	0	2	4	4	4	6	7	10	11	11	11	8	7	8	8	4.3	11.2
23-Jan	7	5	3	3	A	0	0	0	0	1	3	3	5	8	9	7	2	0	0	0	0	0	0	1	2.4	9.3
24-Jan	0	1	2	A	6	1	0	0	1	7	9	11	14	14	14	12	5	0	1	2	0	1	1	0	4.5	14.4
25-Jan	0	0	A	0	2	1	0	0	1	1	3	5	6	6	7	6	2	0	0	0	0	0	0	0	1.7	7.1
26-Jan	0	A	0	0	0	0	0	0	0	1	3	11	16	19	24	32	33	34	33	34	35	36	36	37	16.7	36.8
27-Jan	A	36	37	37	35	35	36	35	18	10	6	8	17	14	12	10	13	20	10	2	5	9	1	A	18.5	37.1
28-Jan	0	0	0	0	0	0	0	0	0	0	2	5	13	26	39	40	38	38	37	37	38	38	A	38	17.0	39.8
29-Jan	38	39	39	37	37	35	29	27	23	30	25	31	34	34	34	34	29	6	10	16	10	A	4	0	26.1	38.8
30-Jan	1	23	18	6	1	0	0	1	2	11	16	21	22	21	18	19	18	9	12	4	A	6	13	17	11.2	22.8
31-Jan	12	9	15	11	13	18	12	23	26	29	30	30	31	31	30	31	33	30	23	A	20	17	10	10	21.5	32.7
8.5 10.0 10.2 9.1 9.9 9.0 7.4 8.5 8.1 9.4 10.4 12.7 14.9 16.7 17.5 16.3 12.4 9.8 9.0 7.7 7.4 7.9 7.4 9.1																								Diurnal Average		
38.4 38.6 38.8 37.5 36.7 34.9 36.4 35.3 36.5 33.0 30.4 31.9 34.4 36.2 39.1 39.8 38.4 38.2 37.2 36.9 38.1 38.2 36.1 38.5																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na																										

Hourly Averages

Ozone (O₃) - ppb
Henry Pirker - January 2016



Hourly Maximums

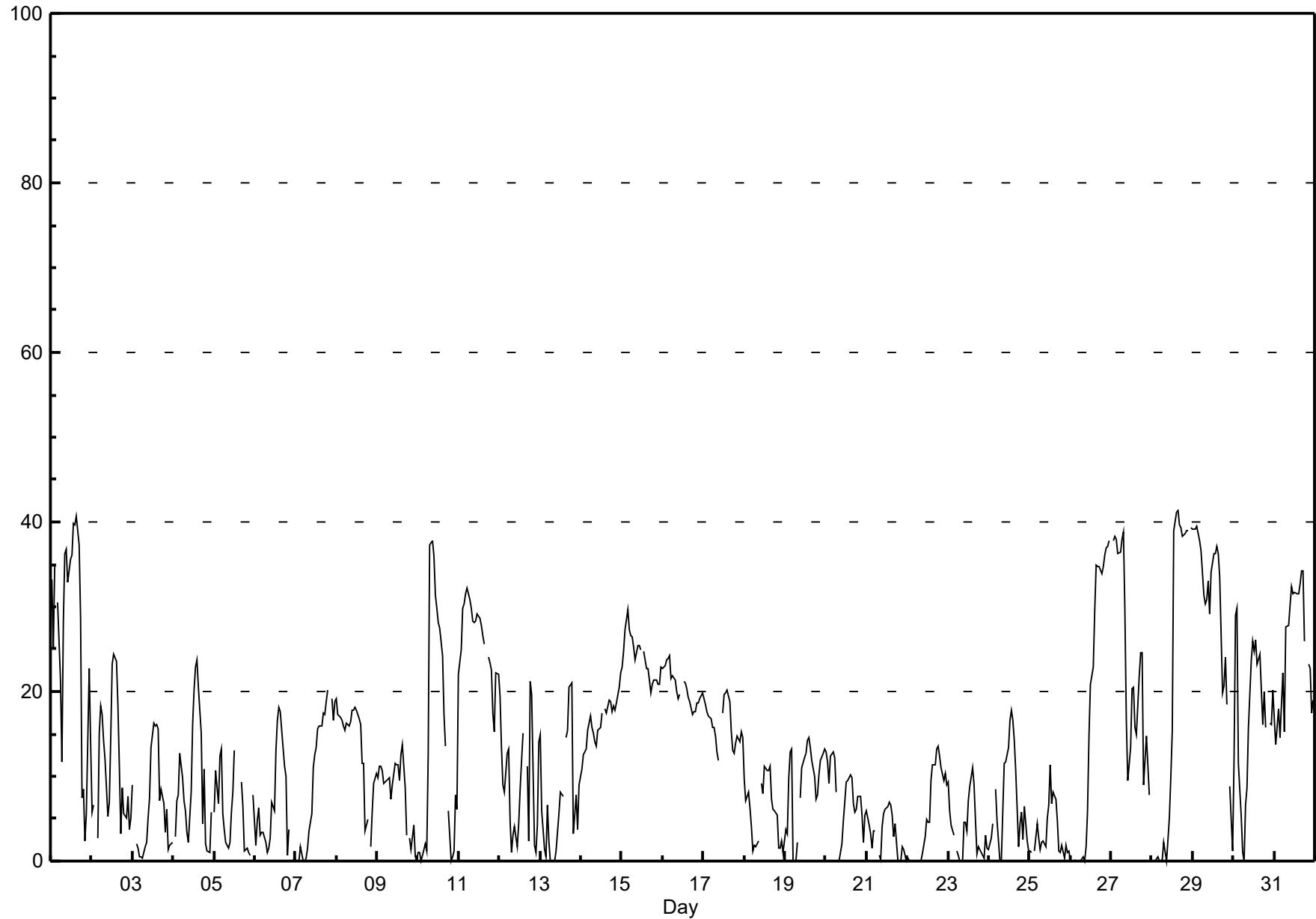
Ozone (O₃) - ppb

Henry Pirker - January 2016

Maximum Value: 41.3 ppb on Jan 28 16:00																					Maximum Daily Average: 30.1 ppb on Jan 29					Hours in Service: 744	
Minimum Value: 0 ppb on Jan 7 01:00																					Minimum Daily Average: 3.2 ppb on Jan 21					Hours of Data: 708	
Maximum Diurnal Average: 20.0 ppb at hour 15																					Minimum Diurnal Average: 9.8 ppb at hour 21					Hours of Missing Data: 36	
Monthly Average: 13.22 ppb																					Percentiles: P ₁ = 0.0 P ₁₀ = 1.0 Q ₁ = 3.8 Median = 11.4 Q ₃ = 19.8 P ₉₀ = 30.2 P ₉₉ = 39.4					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	33	25	35	A	31	21	12	28	36	37	33	36	40	40	41	37	29	7	9	2	6	23	14	26.5	40.7		
2-Jan	6	7	A	3	15	18	17	14	12	5	7	15	23	24	24	18	11	3	9	6	5	8	4	5	11.2	24.5	
3-Jan	9	A	2	2	0	1	0	2	2	5	7	13	16	16	16	16	7	8	7	3	6	1	2	2	6.3	16.2	
4-Jan	A	3	7	8	13	10	7	6	3	2	8	16	20	23	24	21	15	4	11	2	1	1	6	A	9.6	23.7	
5-Jan	6	11	7	12	13	6	4	2	2	2	6	8	13	C	C	C	9	6	1	1	1	1	A	8	6.0	13.3	
6-Jan	2	5	6	3	3	3	2	1	2	3	7	6	13	17	18	18	16	11	10	1	4	A	0	0	6.5	18.1	
7-Jan	0	0	0	2	0	0	0	2	4	6	11	13	13	16	16	16	17	17	19	20	A	19	17	19	9.8	20.2	
8-Jan	19	17	17	17	16	15	16	16	16	18	18	18	18	17	16	11	12	4	5	A	2	6	9	10	13.6	19.1	
9-Jan	10	11	11	11	9	9	10	10	7	9	12	11	11	10	13	14	9	3	A	3	1	4	1	0	8.2	13.7	
10-Jan	1	1	0	1	2	1	13	37	38	36	31	30	28	28	24	17	14	A	6	0	1	1	8	6	14.1	37.8	
11-Jan	22	25	30	30	32	32	31	30	28	28	28	29	29	28	27	26	A	24	23	22	18	15	22	22	26.1	32.2	
12-Jan	19	13	9	8	13	13	5	1	3	4	2	4	8	12	15	A	11	2	21	20	2	1	4	14	9.0	21.2	
13-Jan	15	6	1	1	7	2	0	0	0	1	3	6	8	8	A	15	15	21	21	3	5	8	4	9	6.9	21.1	
14-Jan	11	12	13	13	15	17	16	15	14	14	15	16	17	A	18	17	19	19	18	18	18	19	21	22	16.4	22.2	
15-Jan	23	25	27	30	27	27	26	25	24	25	26	25	A	25	23	23	21	20	21	21	21	21	21	23	23.9	29.7	
16-Jan	23	23	24	24	24	22	22	21	20	19	20	A	21	21	20	19	19	17	18	18	19	19	19	20	20.4	24.2	
17-Jan	19	18	18	17	17	16	16	15	13	12	A	18	20	20	20	19	15	13	13	14	15	14	15	15	16.1	20.1	
18-Jan	10	7	8	6	4	1	2	2	2	A	9	8	11	11	11	11	7	6	6	5	1	2	2	1	5.8	11.2	
19-Jan	4	3	10	13	13	0	0	2	A	7	11	12	13	14	15	13	12	10	7	8	10	12	13	13	9.4	14.5	
20-Jan	13	12	9	12	13	12	8	A	0	2	5	7	9	9	10	10	7	6	6	8	8	5	2	5	7.8	12.9	
21-Jan	6	4	3	2	4	4	A	1	0	4	6	6	6	7	7	5	3	4	0	0	0	2	1	0	3.2	6.9	
22-Jan	0	0	0	0	0	A	0	0	0	1	3	5	5	5	9	11	11	13	14	12	11	10	10	9	5.6	13.6	
23-Jan	9	6	4	3	A	1	1	0	0	5	5	4	7	9	11	9	5	1	2	1	1	0	3	2	3.8	11.0	
24-Jan	1	3	4	A	8	5	0	0	6	11	12	13	17	18	17	14	11	2	4	6	3	6	2	1	7.1	17.9	
25-Jan	1	1	A	1	4	3	1	2	2	2	5	7	11	7	8	7	5	1	1	2	0	2	1	1	3.3	11.4	
26-Jan	0	A	0	0	0	0	0	1	0	2	6	15	21	23	30	35	35	35	34	35	36	37	37	38	18.2	37.8	
27-Jan	A	38	38	38	36	36	38	39	29	17	9	13	20	21	16	15	22	25	25	9	12	15	8	A	23.6	38.7	
28-Jan	0	0	0	1	0	0	0	2	0	3	5	10	15	39	41	41	40	39	38	39	39	39	A	39	18.7	41.3	
29-Jan	39	39	39	39	38	37	31	30	31	33	29	34	36	36	37	36	34	20	21	24	18	A	9	1	30.1	39.5	
30-Jan	12	29	30	12	5	1	0	7	9	16	24	26	25	26	23	24	20	16	20	16	A	16	16	20	17.1	29.8	
31-Jan	17	14	18	15	19	22	15	28	28	30	32	32	32	31	32	33	34	34	26	A	23	23	18	19	24.9	34.2	
11.4 12.4 12.8 11.1 12.7 11.2 9.8 11.3 11.1 11.9 13.1 15.2 17.5 19.2 20.0 19.2 16.4 13.8 13.7 11.2 9.8 10.7 10.2 11.7																									Diurnal Average		
39.2 39.1 39.5 38.7 37.7 36.6 38.0 38.7 37.8 36.7 32.9 35.6 36.3 39.9 41.1 41.3 39.7 39.3 38.3 38.6 39.1 39.0 37.1 39.4																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											

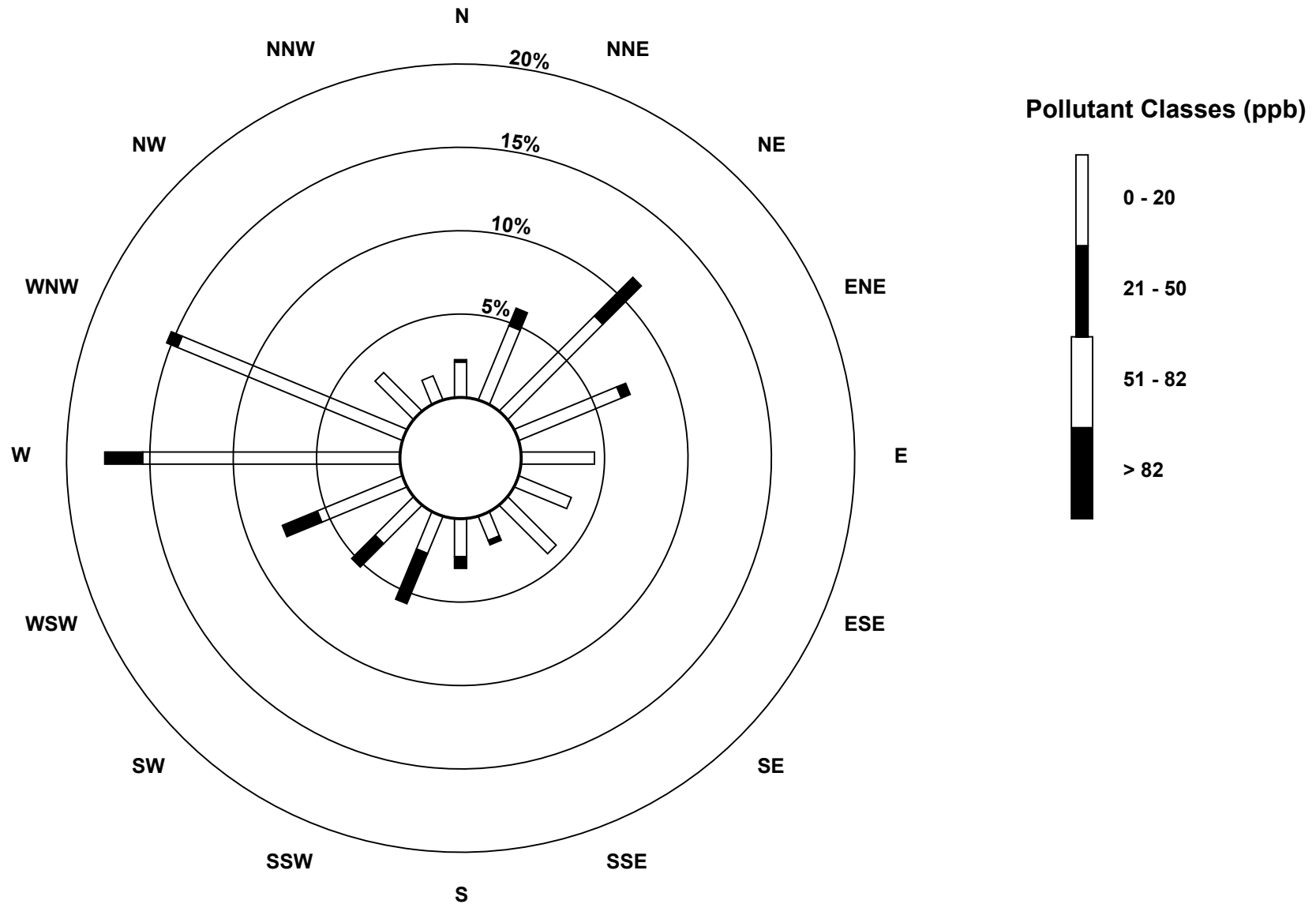
Hourly Maximums

Ozone (O₃) - ppb
Henry Pirker - January 2016



Pollutant Rose

Ozone (O_3) - ppb
Henry Pirker - January 2016



Eight Hour Running Averages

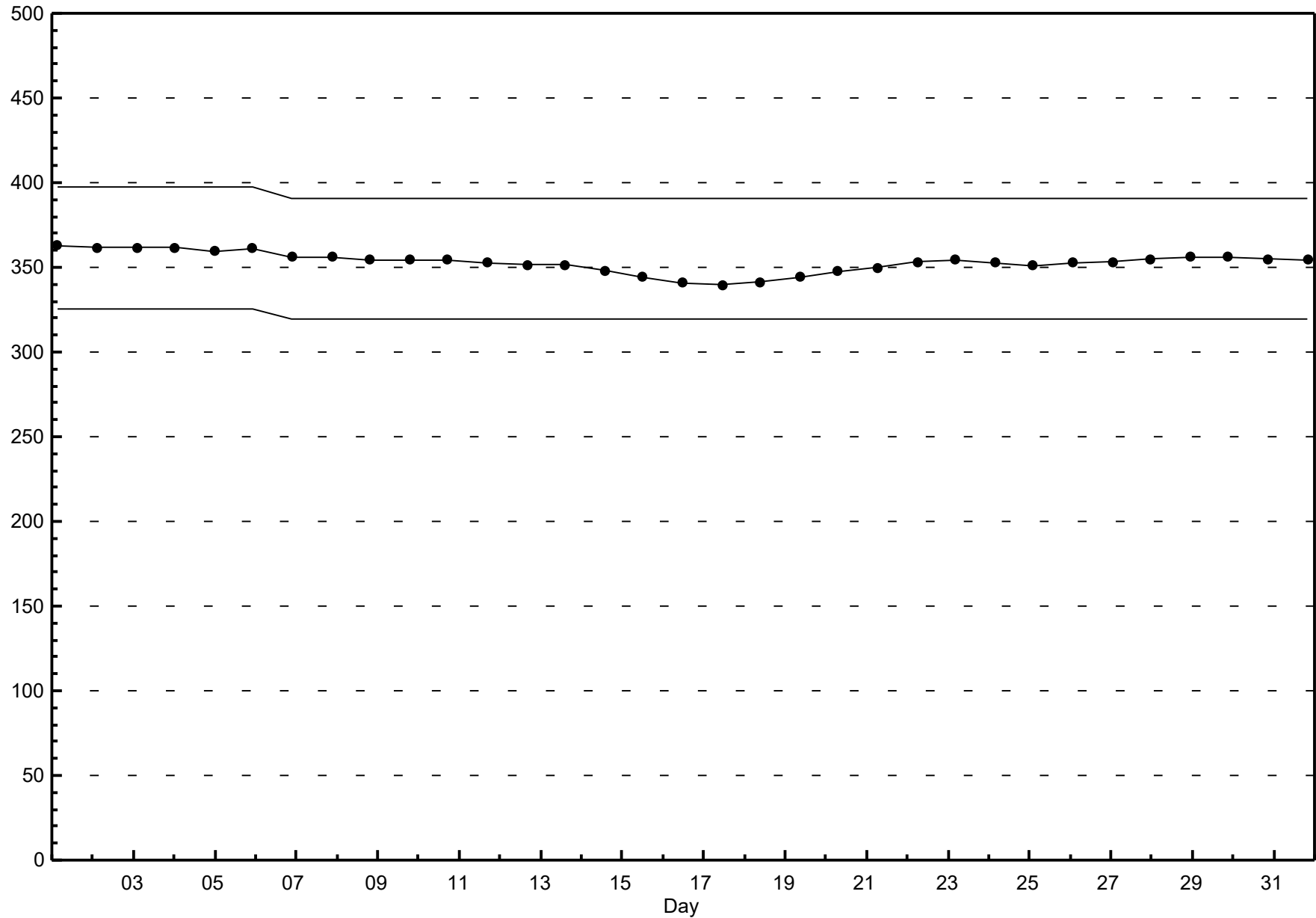
Ozone (O₃) - ppb

Henry Pirker - January 2016

Maximum Value: 38.3 ppb on Jan 29 04:00																								Hours in Service: 744	
Minimum Value: 0.0 ppb on Jan 7 03:00																								Hours of Data: 738	
																								Hours of Missing Data: 6	
Percentiles: P ₁ = 0.0 P ₁₀ = 0.6 Q ₁ = 2.8 Median = 7.7 Q ₃ = 15.9 P ₉₀ = 25.2 P ₉₉ = 37.9																								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	30	31	30	30	28	23	19	16	14	17	17	19	20	24	29	32	34	32	28	25	21	16	14	9	34.0
2-Jan	5	4	4	3	4	6	5	5	6	6	6	7	9	10	11	13	12	12	12	11	9	6	4	2	12.6
3-Jan	2	2	2	2	1	1	1	0	0	0	1	2	3	5	7	8	9	9	8	7	6	4	2	1	8.7
4-Jan	1	1	1	1	2	3	3	3	3	3	3	4	5	7	9	11	11	11	11	10	8	5	3	1	11.0
5-Jan	1	2	2	3	4	5	4	4	4	3	3	3	3	3	3	N	N	N	N	N	N	2	2	2	4.5
6-Jan	1	1	1	1	2	2	2	2	2	1	2	2	3	4	6	8	9	10	10	9	8	8	5	3	9.8
7-Jan	1	1	0	0	0	0	0	0	0	0	2	3	5	6	8	10	12	13	14	15	15	16	16	16	16.3
8-Jan	17	17	16	16	16	16	15	15	15	15	15	15	16	16	16	15	14	12	10	10	7	5	4	4	16.8
9-Jan	4	6	7	7	8	9	9	9	8	8	8	8	8	9	9	9	9	8	8	6	5	4	3	1	8.9
10-Jan	0	0	0	0	0	0	0	4	9	13	16	19	22	25	27	25	21	19	16	12	9	5	3	1	26.8
11-Jan	1	4	7	11	15	19	22	25	28	28	28	28	28	27	27	26	26	25	25	23	21	19	18	17	28.1
12-Jan	17	15	13	12	11	11	8	6	4	3	3	3	2	3	4	5	5	4	4	4	3	2	0	1	17.2
13-Jan	3	3	3	3	3	3	3	1	0	0	0	1	1	2	2	4	5	6	8	7	6	6	5	5	7.5
14-Jan	5	5	4	6	7	9	10	11	12	12	13	13	14	13	14	14	15	15	16	16	16	16	17	17	17.1
15-Jan	18	18	19	21	22	23	23	24	24	24	24	24	23	23	23	22	22	21	21	20	20	19	19	19	24.0
16-Jan	19	20	20	21	21	21	21	21	21	20	20	19	19	19	19	19	19	19	18	18	17	17	17	17	21.4
17-Jan	17	17	17	17	17	16	16	16	15	14	13	13	14	14	15	15	16	16	15	14	13	12	11	11	17.1
18-Jan	10	10	9	9	8	7	5	4	3	2	2	3	4	6	7	7	7	7	6	5	4	3	2	1	10.3
19-Jan	0	0	0	2	3	3	3	3	3	4	5	5	5	7	9	10	10	10	10	9	9	9	8	9	10.4
20-Jan	9	9	9	10	10	11	9	9	7	6	5	5	4	4	5	5	6	6	6	7	6	6	5	4	10.6
21-Jan	4	4	3	3	2	2	2	2	1	1	1	2	2	3	3	4	4	4	3	2	2	1	0	0	3.9
22-Jan	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3	4	6	7	8	8	9	9	9	9.2
23-Jan	9	8	7	6	6	5	3	2	1	1	0	0	1	2	3	4	5	5	4	4	3	2	1	0	8.9
24-Jan	0	0	0	1	1	2	2	1	2	2	3	4	5	7	9	10	11	10	9	8	6	4	3	1	10.7
25-Jan	1	1	1	0	1	1	1	0	1	1	1	2	2	3	4	4	5	4	4	3	2	2	1	0	4.5
26-Jan	0	0	0	0	0	0	0	0	0	0	0	1	3	6	9	13	17	21	25	28	30	33	34	35	34.7
27-Jan	35	35	36	36	36	36	36	36	34	30	27	23	21	18	15	12	11	12	13	12	11	10	9	9	36.3
28-Jan	7	4	2	2	1	0	0	0	0	0	0	0	2	6	11	16	20	25	30	34	37	38	38	38	38.2
29-Jan	38	38	38	38	38	38	37	35	33	32	30	29	29	29	30	31	31	28	27	25	22	20	15	11	38.3
30-Jan	7	9	10	9	8	7	6	6	6	5	5	6	9	12	14	16	18	18	17	15	14	12	11	11	18.2
31-Jan	10	10	11	12	12	13	13	14	16	18	20	23	25	27	29	30	31	31	30	30	28	26	23	20	30.7
37.9 38.0 38.2 38.3 38.1 37.6 36.5 35.9 33.7 32.1 30.3 29.5 29.2 29.2 29.8 31.8 34.0 31.8 29.8 33.6 36.7 38.2 38.1 37.9																									
Diurnal Maximums																									
N - Not Valid																									

Span Responses

Ozone (O₃)
Henry Pirker - January 2016



Hourly Averages

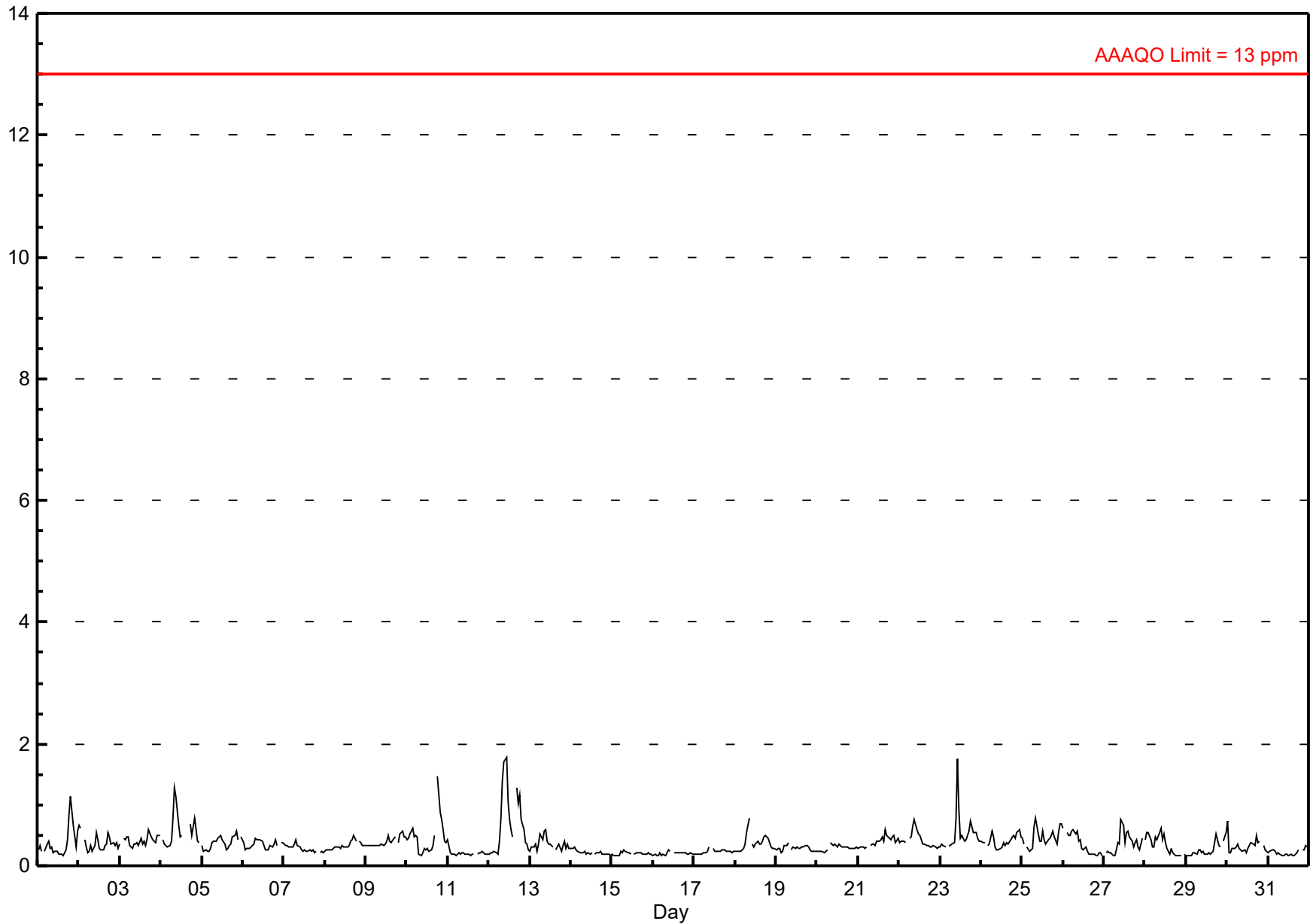
Carbon Monoxide (CO) - ppm

Henry Pirker - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 1.77 ppm on Jan 12 11:00 Maximum Daily Average: 0.70 ppm on Jan 12																				Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 37 Percent Operational Time: 100.0						
Minimum Value: 0.2 ppm on Jan 29 04:00 Maximum Diurnal Average: 0.45 ppm at hour 11 Monthly Average: 0.356 ppm										Minimum Daily Average: 0.20 ppm on Jan 15 Minimum Diurnal Average: 0.28 ppm at hour 5 Percentiles: P ₁ = 0.17 P ₁₀ = 0.20 Q ₁ = 0.23 Median = 0.32 Q ₃ = 0.42 P ₉₀ = 0.54 P ₉₉ = 1.28																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	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	0.2	0.3	0.2	A	0.2	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.8	1.1	0.9	0.7	0.3	0.6	0.39	1.14
2-Jan	0.7	0.6	A	0.4	0.3	0.2	0.2	0.3	0.2	0.3	0.5	0.4	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.4	0.4	0.3	0.4	0.3	0.37	0.66
3-Jan	0.4	A	0.4	0.4	0.5	0.5	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.3	0.4	0.3	0.4	0.6	0.5	0.4	0.4	0.4	0.5	0.5	0.41	0.60
4-Jan	A	0.4	0.4	0.3	0.3	0.3	0.4	0.8	1.3	1.1	0.7	0.5	0.5	C	C	C	C	0.7	0.5	0.6	0.8	0.4	0.4	A	0.58	1.28
5-Jan	0.3	0.2	0.3	0.2	0.2	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.4	0.5	0.5	0.6	0.4	A	0.5	0.38	0.56
6-Jan	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.3	0.3	0.4	0.4	0.3	A	0.4	0.4	0.34	0.46
7-Jan	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.3	0.2	0.3	0.2	0.2	A	0.2	0.2	0.2	0.28	0.43
8-Jan	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	0.4	0.4	0.5	0.4	A	0.4	0.4	0.3	0.3	0.33	0.49
9-Jan	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.4	0.5	0.4	0.4	0.4	0.5	A	0.4	0.5	0.6	0.5	0.5	0.39	0.58
10-Jan	0.4	0.5	0.5	0.6	0.5	0.5	0.5	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.5	A	1.5	0.9	0.8	0.6	0.4	0.4	0.46	1.46
11-Jan	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	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21	0.42
12-Jan	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.8	1.4	1.7	1.8	1.0	0.8	0.6	0.5	A	1.3	1.0	1.2	0.8	0.6	0.4	0.3	0.3	0.70	1.77
13-Jan	0.2	0.3	0.3	0.3	0.2	0.4	0.5	0.4	0.6	0.6	0.4	0.3	0.3	0.3	A	0.3	0.3	0.4	0.2	0.3	0.4	0.3	0.4	0.3	0.36	0.60
14-Jan	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	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22	0.30
15-Jan	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20	0.25
16-Jan	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20	0.27
17-Jan	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	A	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.23	0.31
18-Jan	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.8	A	0.4	0.3	0.4	0.4	0.3	0.3	0.4	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.37	0.79
19-Jan	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.4	A	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.29	0.37
20-Jan	0.2	0.2	0.2	0.2	0.2	0.2	0.3	A	0.4	0.3	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.29	0.39
21-Jan	0.3	0.3	0.3	0.3	0.3	0.3	A	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.5	0.4	0.6	0.5	0.5	0.4	0.5	0.5	0.4	0.5	0.39	0.60
22-Jan	0.4	0.4	0.4	0.4	0.4	A	0.4	0.5	0.6	0.8	0.6	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.42	0.75
23-Jan	0.3	0.4	0.3	0.3	A	0.3	0.3	0.4	0.4	0.8	1.8	0.9	0.4	0.5	0.4	0.4	0.5	0.6	0.7	0.6	0.5	0.5	0.4	0.4	0.53	1.77
24-Jan	0.4	0.4	0.4	A	0.3	0.4	0.6	0.5	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.5	0.5	0.4	0.5	0.6	0.5	0.40	0.60
25-Jan	0.4	0.3	A	0.3	0.2	0.3	0.3	0.6	0.8	0.5	0.4	0.4	0.6	0.4	0.4	0.4	0.5	0.5	0.6	0.5	0.4	0.6	0.7	0.7	0.47	0.77
26-Jan	0.6	A	0.6	0.5	0.5	0.6	0.6	0.5	0.6	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	0.35	0.61
27-Jan	A	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.8	0.7	0.4	0.5	0.6	0.5	0.4	0.3	0.4	0.4	0.3	0.3	0.5	A	0.37	0.76
28-Jan	0.4	0.5	0.5	0.4	0.3	0.3	0.5	0.4	0.5	0.6	0.4	0.5	0.4	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.35	0.62
29-Jan	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.4	0.3	0.3	A	0.4	0.5	0.26	0.54
30-Jan	0.7	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.3	0.3	0.4	0.3	0.3	0.5	0.4	0.4	A	0.3	0.3	0.2	0.32	0.73
31-Jan	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	0.3	A	0.3	0.3	0.3	0.3	0.22	0.34
0.33 0.30 0.30 0.30 0.28 0.29 0.34 0.37 0.44 0.43 0.45 0.38 0.34 0.33 0.30 0.30 0.37 0.40 0.44 0.41 0.39 0.35 0.34 0.33																								Diurnal Average		
0.73 0.62 0.55 0.63 0.50 0.58 0.60 0.79 1.41 1.70 1.77 1.04 0.76 0.60 0.58 0.46 1.28 1.02 1.46 1.14 0.91 0.67 0.69 0.69																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm 24-hr na																										

Hourly Averages

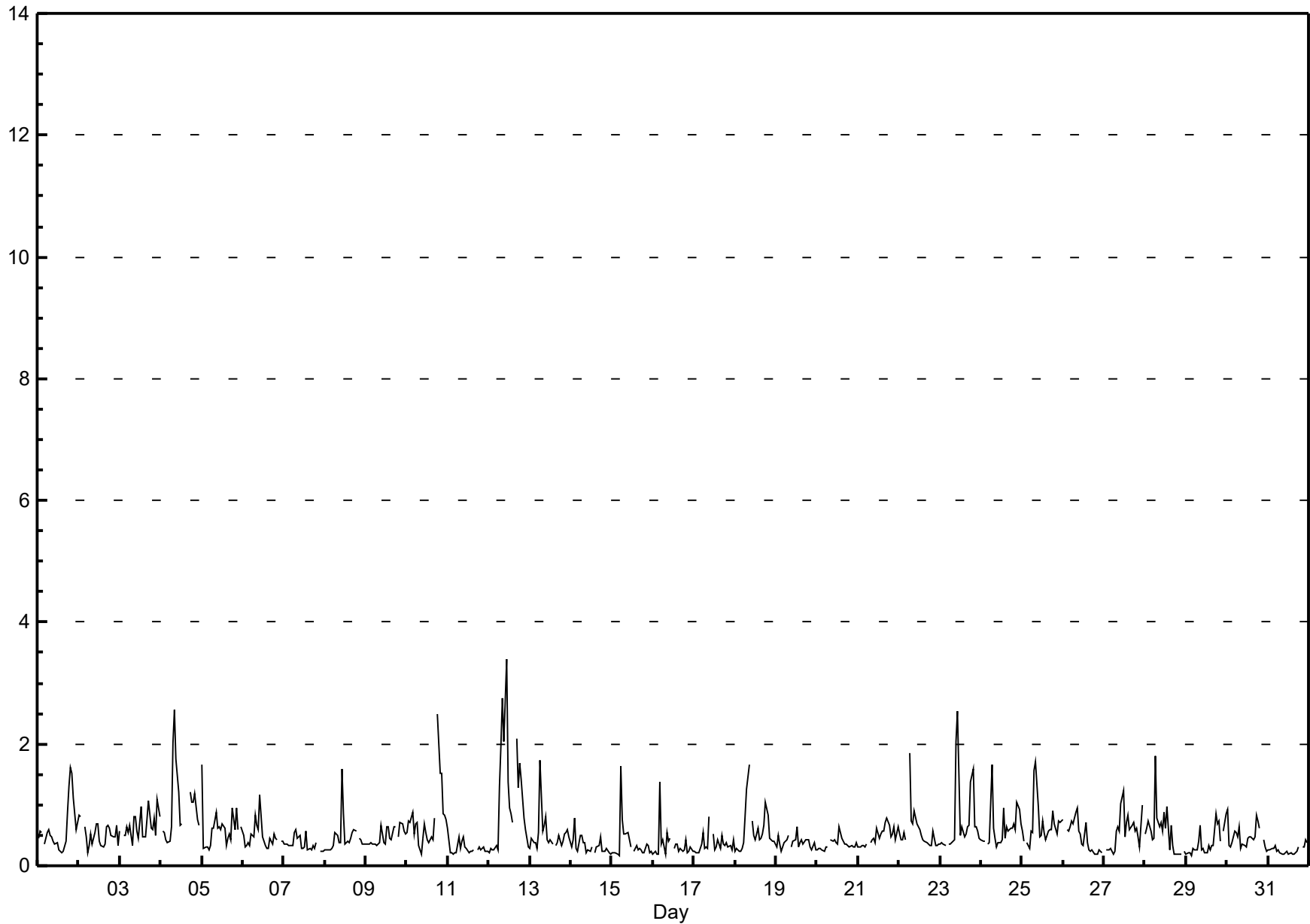
Carbon Monoxide (CO) - ppm
Henry Pirker - January 2016



Hourly Maximums

Carbon Monoxide (CO) - ppm

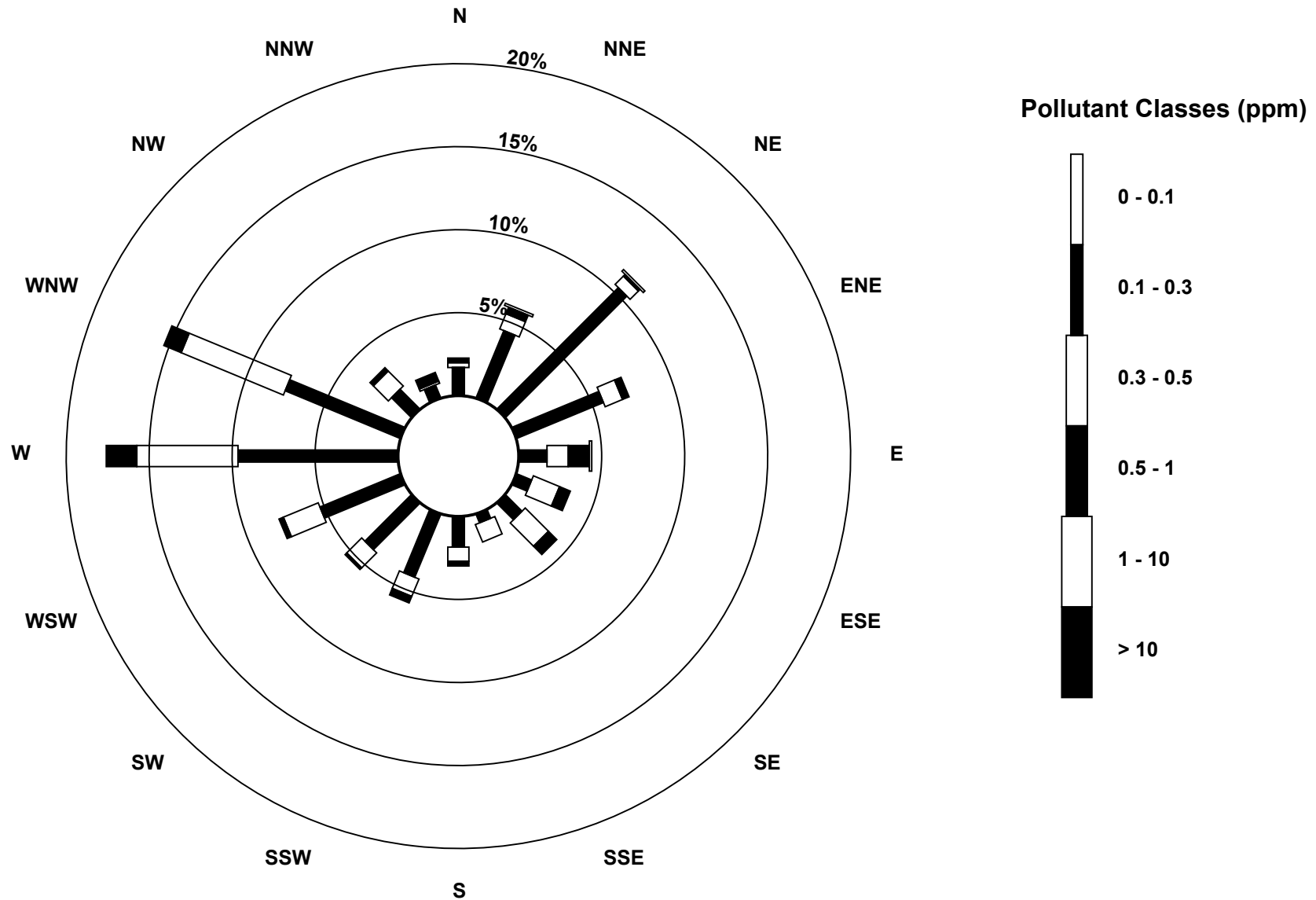
Henry Pirker - January 2016



Pollutant Rose

Carbon Monoxide (CO) - ppm

Henry Pirker - January 2016



Eight Hour Running Averages

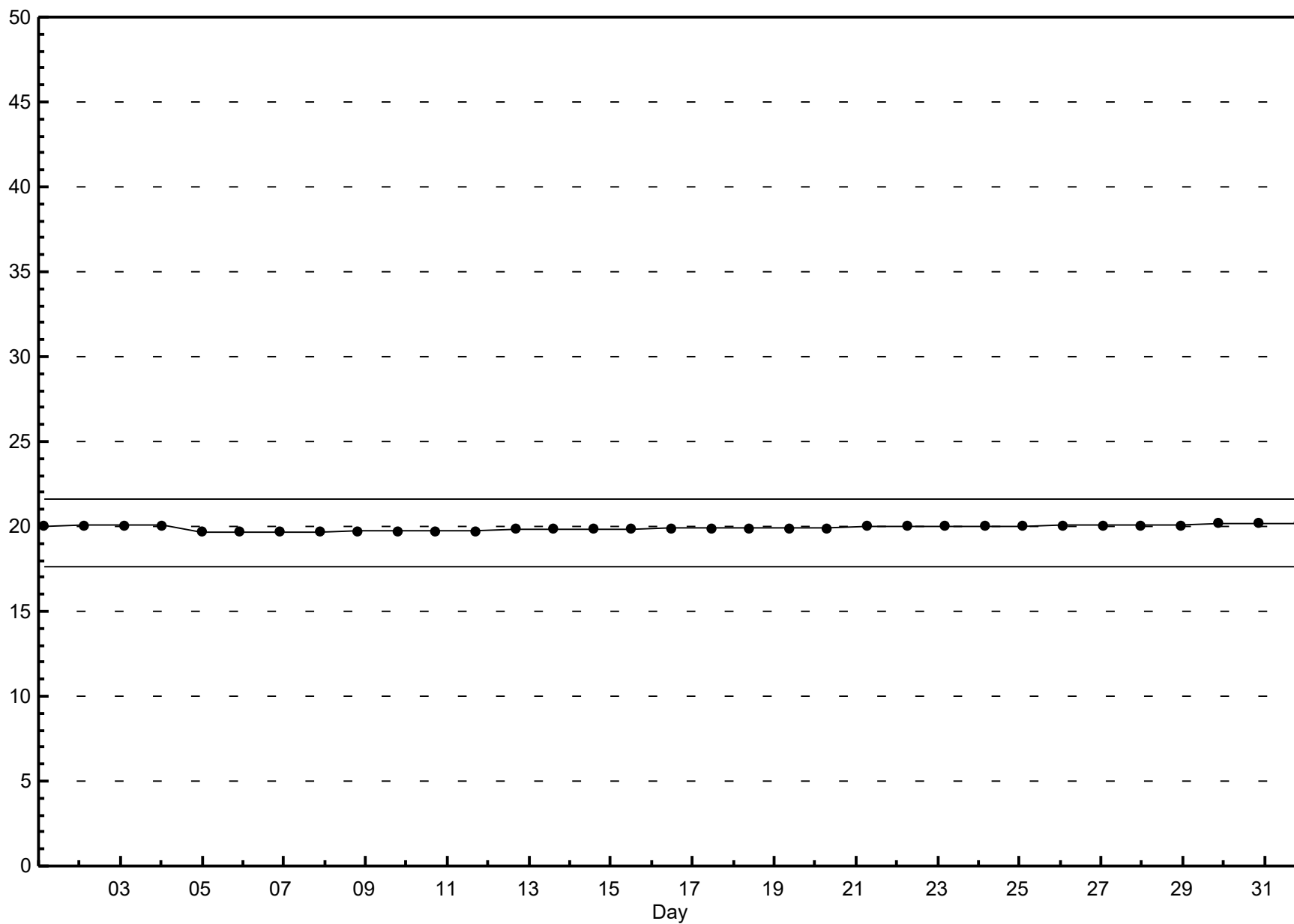
Carbon Monoxide (CO) - ppm

Henry Pirker - January 2016

Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 1.11 ppm on Jan 12 16:00																								Hours in Service: 744	
Minimum Value: 0.17 ppm on Jan 29 04:00																								Hours of Data: 737	
Percentiles: P ₁ = 0.18 P ₁₀ = 0.20 Q ₁ = 0.24 Median = 0.33 Q ₃ = 0.42 P ₉₀ = 0.51 P ₉₉ = 0.90																								Hours of Missing Data: 7	
																								Hours of Calibration: 7	
																								Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Jan	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	0.3	0.4	0.5	0.6	0.6	0.6	0.64
2-Jan	0.7	0.7	0.7	0.6	0.5	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	0.4	0.4	0.4	0.4	0.4	0.71
3-Jan	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.47
4-Jan	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.7	0.7	0.7	0.7	0.8	N	N	N	N	N	N	N	0.6	0.6	0.80
5-Jan	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.53
6-Jan	0.5	0.4	0.4	0.4	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	0.3	0.3	0.4	0.45
7-Jan	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	0.2	0.2	0.2	0.2	0.2	0.2	0.37
8-Jan	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.41
9-Jan	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	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.48
10-Jan	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.5	0.6	0.6	0.7	0.7	0.7	0.71
11-Jan	0.7	0.6	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.70
12-Jan	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.6	0.8	0.9	1.0	1.1	1.1	1.1	1.1	1.0	0.9	0.9	0.8	0.8	0.8	0.7	1.11
13-Jan	0.6	0.5	0.4	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	0.3	0.3	0.60
14-Jan	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	0.2	0.2	0.2	0.2	0.2	0.2	0.32
15-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
16-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
17-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	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26
18-Jan	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.45
19-Jan	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	0.3	0.3	0.3	0.3	0.3	0.37
20-Jan	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.34
21-Jan	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.48
22-Jan	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.57
23-Jan	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.71
24-Jan	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.52
25-Jan	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.4	0.5	0.5	0.5	0.54
26-Jan	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.59
27-Jan	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.52
28-Jan	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.46
29-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	0.4	0.39
30-Jan	0.5	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	0.4	0.4	0.4	0.4	0.4	0.46
31-Jan	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.33
0.70 0.71 0.70 0.60 0.59 0.59 0.58 0.55 0.55 0.65 0.84 0.94 1.01 1.06 1.07 1.11 1.09 0.99 0.90 0.86 0.84 0.81 0.79 0.73																									
Diurnal Maximums																									
N - Not Valid																									
Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 5 ppm																									

Span Responses

Carbon Monoxide (CO)
Henry Pirker - January 2016



Hourly Averages

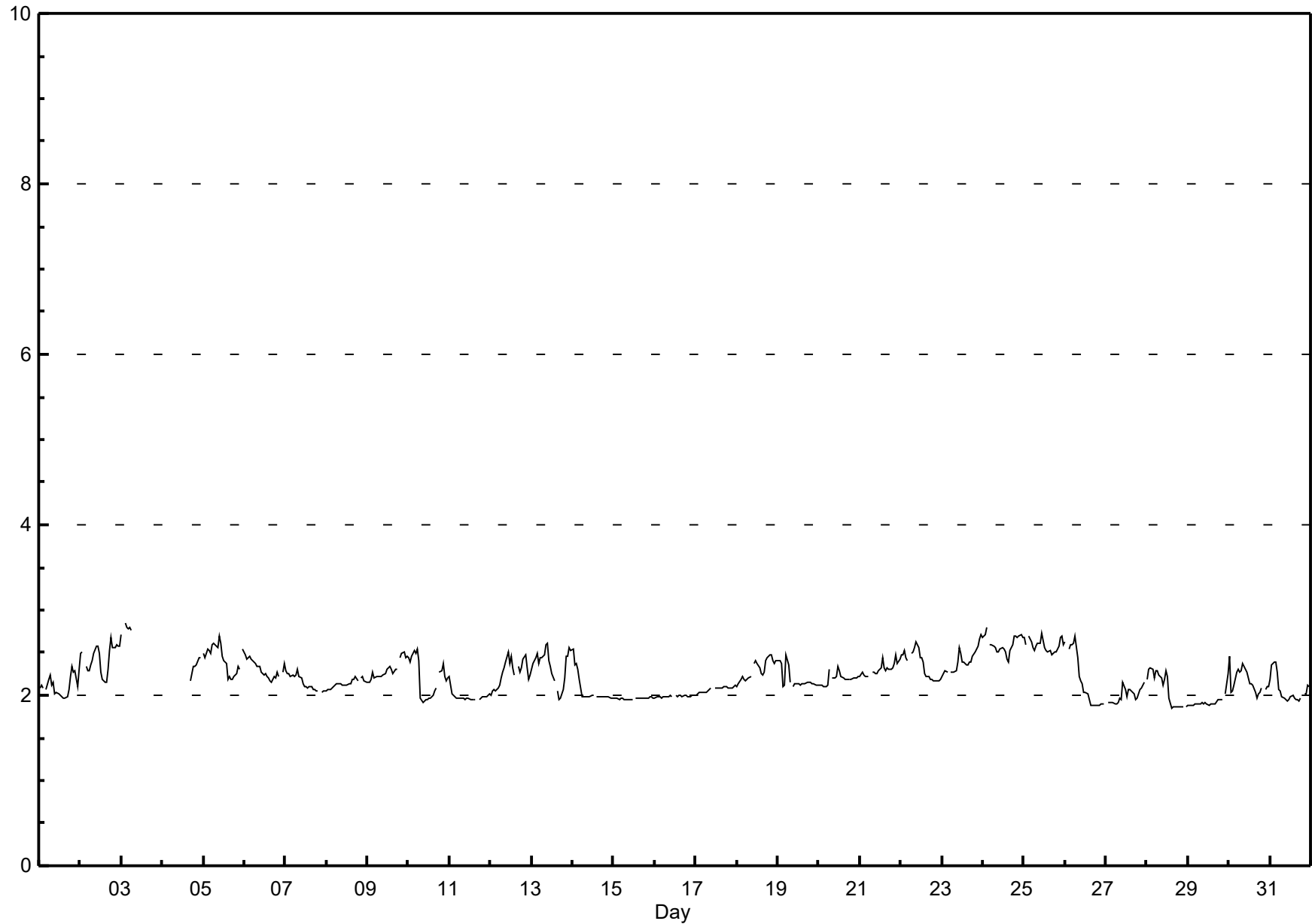
Total Hydrocarbons (THC) - ppm

Henry Pirker - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 2.84 ppm on Jan 3 03:00 Maximum Daily Average: 2.60 ppm on Jan 24																								Hours in Service: 744 Hours of Data: 679 Hours of Missing Data: 65 Hours of Calibration: 37 Percent Operational Time: 96.2		
Minimum Value: 1.9 ppm on Jan 28 15:00 Minimum Daily Average: 1.92 ppm on Jan 29 Maximum Diurnal Average: 2.29 ppm at hour 1 Minimum Diurnal Average: 2.11 ppm at hour 16 Monthly Average: 2.216 ppm Percentiles: P ₁ = 1.86 P ₁₀ = 1.96 Q ₁ = 2.01 Median = 2.19 Q ₃ = 2.38 P ₉₀ = 2.54 P ₉₉ = 2.72																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jan	2.1	2.1	2.1	A	2.1	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2.3	2.3	2.1	2.3	2.11	2.33	
2-Jan	2.5	2.5	A	2.3	2.3	2.3	2.4	2.4	2.5	2.6	2.6	2.5	2.3	2.2	2.1	2.2	2.3	2.5	2.7	2.6	2.6	2.6	2.6	2.43	2.67	
3-Jan	2.7	A	2.8	2.8	2.8	2.8	2.8	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	2.84	
4-Jan	N	N	N	N	N	N	N	N	N	N	N	C	C	C	C	C	2.2	2.3	2.3	2.3	2.4	2.4	2.4	A	--	2.44
5-Jan	2.5	2.4	2.6	2.5	2.5	2.6	2.6	2.6	2.6	2.7	2.6	2.5	2.4	2.4	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	A	2.43	2.69	
6-Jan	2.5	2.4	2.4	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.2	2.3	2.2	2.2	2.2	2.1	2.2	2.2	2.3	2.2	A	2.3	2.31	2.48	
7-Jan	2.3	2.2	2.3	2.2	2.2	2.2	2.2	2.3	2.2	2.2	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	2.15	2.30	
8-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	2.2	2.2	2.2	A	2.2	2.2	2.2	2.2	2.14	2.22	
9-Jan	2.1	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	A	2.4	2.5	2.5	2.4	2.5	2.30	2.50
10-Jan	2.4	2.4	2.5	2.5	2.5	2.5	2.4	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.1	A	2.3	2.3	2.4	2.2	2.2	2.20	2.54	
11-Jan	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	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	1.98	2.23	
12-Jan	2.0	2.0	2.1	2.0	2.1	2.1	2.2	2.3	2.3	2.4	2.5	2.4	2.5	2.3	2.2	A	2.3	2.3	2.3	2.4	2.5	2.3	2.2	2.2	2.26	2.52
13-Jan	2.3	2.4	2.4	2.5	2.4	2.4	2.4	2.5	2.6	2.6	2.4	2.3	2.3	2.2	A	2.1	1.9	2.0	2.1	2.2	2.5	2.5	2.6	2.5	2.35	2.61
14-Jan	2.5	2.4	2.4	2.3	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.06	2.54	
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	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.96	1.99	
16-Jan	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.99	2.00	
17-Jan	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.07	2.11	
18-Jan	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	2.4	2.4	2.4	2.3	2.3	2.2	2.3	2.4	2.4	2.5	2.5	2.4	2.4	2.4	2.30	2.47
19-Jan	2.4	2.4	2.4	2.1	2.1	2.5	2.4	2.2	A	2.1	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	2.19	2.48
20-Jan	2.1	2.1	2.1	2.1	2.1	2.1	2.3	A	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.19	2.34
21-Jan	2.2	2.3	2.2	2.2	2.2	2.2	A	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.5	2.4	2.4	2.31	2.47
22-Jan	2.5	2.5	2.5	2.4	2.4	A	2.5	2.5	2.6	2.6	2.6	2.4	2.4	2.4	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.36	2.62
23-Jan	2.2	2.3	2.3	2.3	A	2.3	2.3	2.3	2.3	2.4	2.6	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.6	2.7	2.7	2.40	2.71
24-Jan	2.7	2.7	2.8	A	2.6	2.6	2.6	2.6	2.5	2.5	2.5	2.6	2.6	2.5	2.4	2.4	2.5	2.6	2.7	2.7	2.7	2.7	2.7	2.7	2.60	2.79
25-Jan	2.7	2.6	A	2.7	2.6	2.6	2.5	2.6	2.6	2.6	2.7	2.6	2.6	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.7	2.7	2.6	2.59	2.73
26-Jan	2.6	A	2.5	2.6	2.6	2.6	2.7	2.4	2.2	2.2	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.16	2.70	
27-Jan	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	A	2.00	2.15
28-Jan	2.2	2.3	2.3	2.3	2.2	2.3	2.3	2.2	2.2	2.1	2.2	2.3	2.2	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.08	2.32
29-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	1.9	1.9	1.9	1.9	1.9	1.9	A	2.0	2.3	1.92	2.25
30-Jan	2.5	2.0	2.0	2.1	2.3	2.3	2.3	2.3	2.4	2.3	2.3	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	A	2.1	2.1	2.1	2.16	2.46
31-Jan	2.2	2.4	2.4	2.4	2.3	2.1	2.1	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	A	2.0	2.0	2.1	2.1	2.07	2.40
2.29 2.23 2.26 2.26 2.24 2.25 2.27 2.22 2.22 2.22 2.24 2.22 2.20 2.17 2.13 2.11 2.13 2.15 2.18 2.21 2.24 2.24 2.24 2.25																								Diurnal Average		
2.71 2.71 2.84 2.80 2.78 2.80 2.77 2.59 2.62 2.69 2.73 2.64 2.55 2.53 2.51 2.52 2.52 2.59 2.69 2.70 2.68 2.69 2.71 2.71																								Diurnal Maximum		
C - Calibration N - Not Valid A - Automated Daily Zero Span																										

Hourly Averages

Total Hydrocarbons (THC) - ppm
Henry Pirker - January 2016



Hourly Maximums

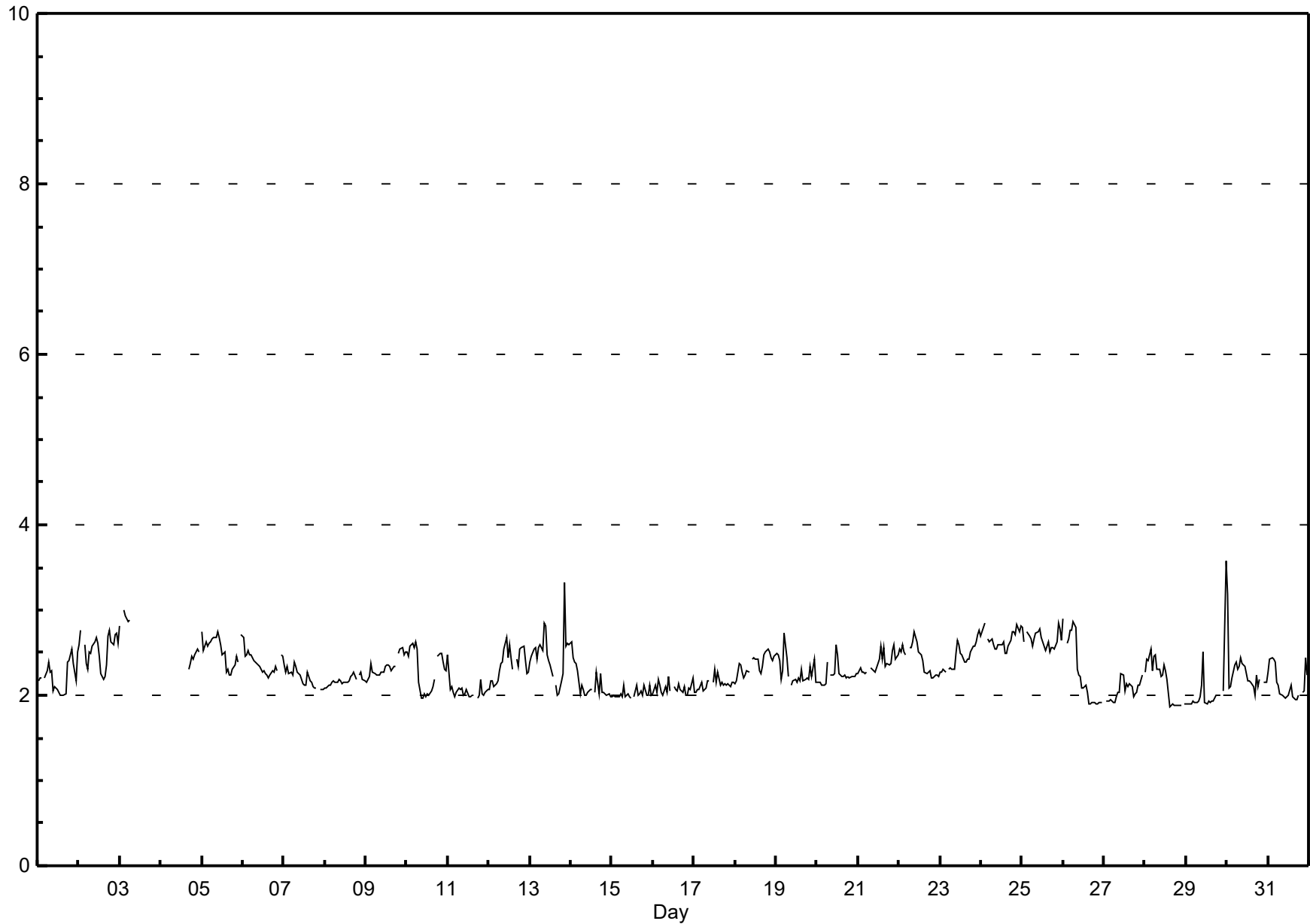
Total Hydrocarbons (THC) - ppm

Henry Pirker - January 2016

Maximum Value: 3.58 ppm on Jan 30 00:00																				Maximum Daily Average: 2.66 ppm on Jan 24				Hours in Service: 744		
Minimum Value: 1.9 ppm on Jan 28 15:00																				Minimum Daily Average: 2.02 ppm on Jan 15				Hours of Data: 679		
Maximum Diurnal Average: 2.40 ppm at hour 1																				Minimum Diurnal Average: 2.18 ppm at hour 16				Hours of Missing Data: 65		
Monthly Average: 2.291 ppm																				Percentiles: P ₁ = 1.89 P ₁₀ = 1.99 Q ₁ = 2.10 Median = 2.25 Q ₃ = 2.47 P ₉₀ = 2.63 P ₉₉ = 2.90				Hours of Calibration: 37		
																								Percent Operational Time: 96.2		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jan	2.2	2.2	2.2	A	2.2	2.3	2.4	2.3	2.3	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.4	2.4	2.5	2.5	2.4	2.2	2.5	2.22	2.54	
2-Jan	2.6	2.8	A	2.6	2.4	2.3	2.5	2.5	2.6	2.6	2.7	2.6	2.5	2.3	2.2	2.2	2.4	2.7	2.8	2.6	2.6	2.7	2.7	2.6	2.54	2.77
3-Jan	2.8	A	3.0	2.9	2.9	2.9	2.9	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	3.01
4-Jan	N	N	N	N	N	N	N	N	N	N	N	C	C	C	C	C	2.3	2.4	2.5	2.4	2.5	2.5	2.5	A	--	2.54
5-Jan	2.7	2.5	2.6	2.6	2.6	2.6	2.7	2.7	2.7	2.7	2.7	2.6	2.5	2.5	2.3	2.3	2.2	2.2	2.3	2.4	2.5	2.4	A	2.7	2.52	2.75
6-Jan	2.7	2.5	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.3	2.3	2.3	2.3	A	2.5	2.5	2.37	2.68
7-Jan	2.4	2.3	2.3	2.3	2.3	2.2	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.3	2.2	2.2	2.1	2.1	2.1	A	2.1	2.1	2.1	2.20	2.39
8-Jan	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.2	2.2	2.1	2.1	2.2	2.1	2.2	2.2	2.2	2.3	2.2	A	2.2	2.3	2.2	2.2	2.17	2.28
9-Jan	2.2	2.2	2.2	2.4	2.3	2.3	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.3	A	2.5	2.5	2.6	2.5	2.5	2.33	2.56
10-Jan	2.5	2.5	2.6	2.6	2.6	2.6	2.5	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	A	2.5	2.5	2.5	2.4	2.3	2.3	2.29	2.62
11-Jan	2.5	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	A	2.0	2.0	2.2	2.0	2.0	2.0	2.1	2.05	2.47
12-Jan	2.1	2.2	2.2	2.1	2.1	2.2	2.3	2.4	2.4	2.5	2.7	2.4	2.6	2.4	2.3	A	2.4	2.3	2.5	2.6	2.6	2.4	2.3	2.3	2.36	2.68
13-Jan	2.4	2.5	2.5	2.6	2.4	2.6	2.6	2.5	2.8	2.8	2.5	2.4	2.4	2.2	A	2.1	2.0	2.0	2.2	2.3	3.3	2.6	2.6	2.6	2.47	3.33
14-Jan	2.6	2.4	2.4	2.4	2.3	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.1	A	2.0	2.3	2.0	2.3	2.0	2.0	2.0	2.0	2.0	2.0	2.14	2.62
15-Jan	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	A	2.0	2.1	2.0	2.0	2.1	2.0	2.1	2.0	2.0	2.1	2.0	2.02	2.12
16-Jan	2.0	2.1	2.0	2.2	2.1	2.0	2.0	2.1	2.0	2.2	2.1	A	2.1	2.1	2.0	2.1	2.1	2.0	2.1	2.0	2.0	2.1	2.1	2.2	2.08	2.22
17-Jan	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	A	2.1	2.3	2.1	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.13	2.31
18-Jan	2.1	2.2	2.4	2.4	2.3	2.2	2.2	2.3	2.3	A	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.5	2.5	2.5	2.5	2.4	2.4	2.5	2.36	2.54
19-Jan	2.5	2.5	2.4	2.2	2.3	2.7	2.4	2.2	A	2.1	2.2	2.2	2.1	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.3	2.2	2.4	2.1	2.28	2.72
20-Jan	2.1	2.1	2.1	2.1	2.1	2.1	2.4	A	2.2	2.2	2.3	2.6	2.5	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.24	2.60
21-Jan	2.3	2.3	2.3	2.3	2.3	2.3	A	2.3	2.3	2.3	2.3	2.3	2.4	2.6	2.4	2.6	2.3	2.4	2.3	2.4	2.5	2.6	2.4	2.5	2.37	2.60
22-Jan	2.5	2.5	2.6	2.5	2.5	A	2.6	2.6	2.6	2.7	2.6	2.5	2.5	2.5	2.4	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.43	2.74
23-Jan	2.3	2.3	2.3	2.3	A	2.3	2.3	2.3	2.3	2.5	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.4	2.5	2.6	2.6	2.6	2.7	2.8	2.45	2.76
24-Jan	2.7	2.8	2.8	A	2.7	2.6	2.7	2.6	2.5	2.6	2.6	2.6	2.6	2.6	2.5	2.5	2.6	2.6	2.7	2.7	2.7	2.8	2.7	2.8	2.66	2.84
25-Jan	2.8	2.6	A	2.7	2.7	2.7	2.6	2.7	2.7	2.7	2.8	2.7	2.6	2.6	2.5	2.6	2.5	2.6	2.6	2.5	2.6	2.9	2.8	2.6	2.66	2.85
26-Jan	2.9	A	2.6	2.7	2.8	2.8	2.9	2.8	2.3	2.2	2.2	2.1	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.24	2.90
27-Jan	A	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.3	2.2	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.2	A	2.05	2.25
28-Jan	2.3	2.4	2.4	2.5	2.3	2.5	2.5	2.3	2.3	2.2	2.2	2.4	2.3	2.2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.16	2.54
29-Jan	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.5	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	A	2.1	3.6	2.05	3.58
30-Jan	3.2	2.1	2.1	2.2	2.4	2.4	2.3	2.3	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.2	2.1	2.2	A	2.1	2.2	2.2	2.26	3.18
31-Jan	2.3	2.4	2.4	2.4	2.4	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	A	2.0	2.1	2.4	2.2	2.13	2.44
2.40 2.30 2.33 2.34 2.32 2.32 2.35 2.30 2.29 2.30 2.32 2.29 2.27 2.24 2.19 2.18 2.18 2.23 2.25 2.28 2.33 2.31 2.32 2.36																									Diurnal Average	
3.18 2.79 3.01 2.93 2.90 2.86 2.88 2.79 2.84 2.81 2.78 2.68 2.63 2.63 2.53 2.63 2.57 2.69 2.77 2.74 3.33 2.85 2.77 3.58																									Diurnal Maximum	
C - Calibration N - Not Valid A - Automated Daily Zero Span																										

Hourly Maximums

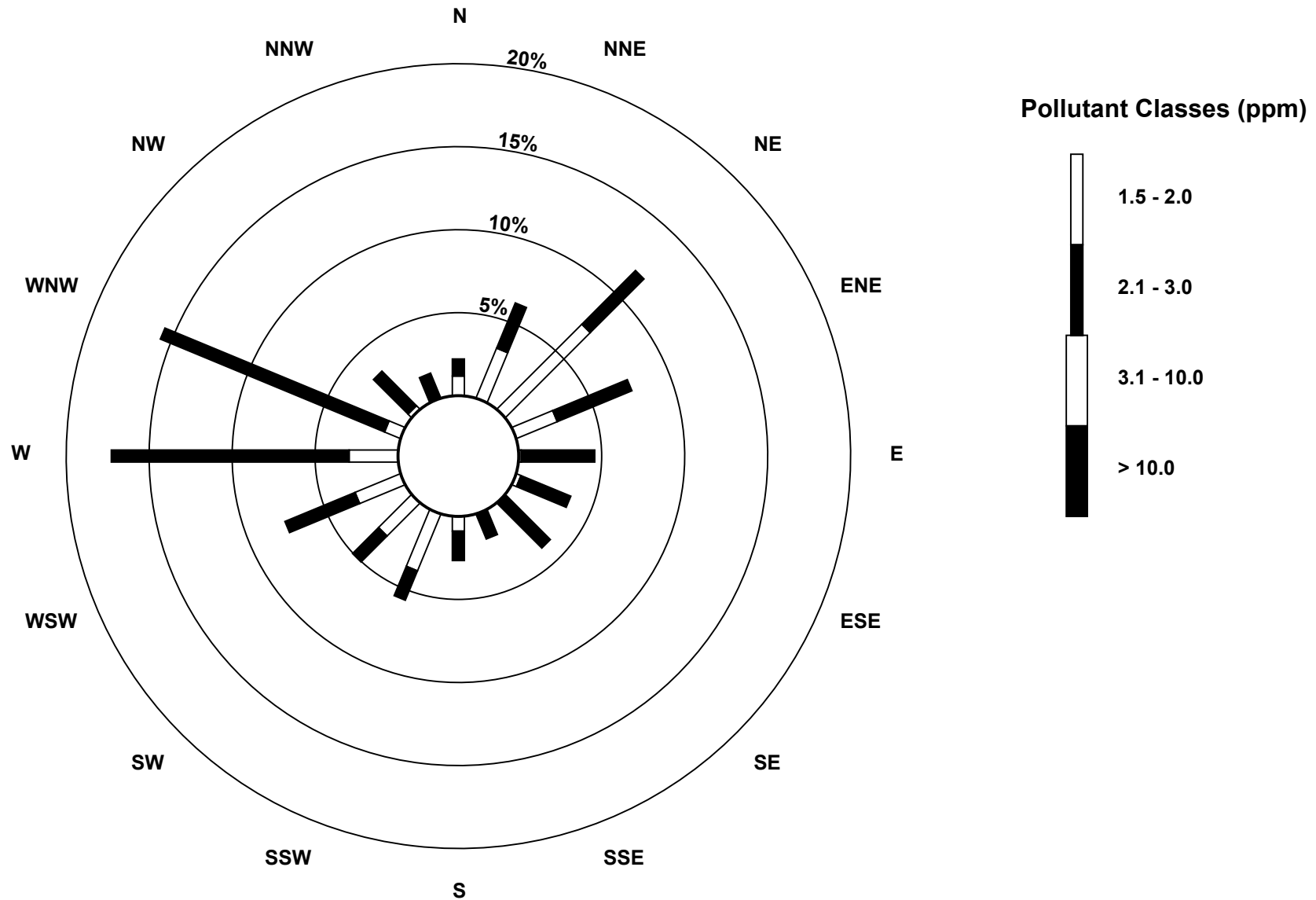
Total Hydrocarbons (THC) - ppm
Henry Pirker - January 2016



Pollutant Rose

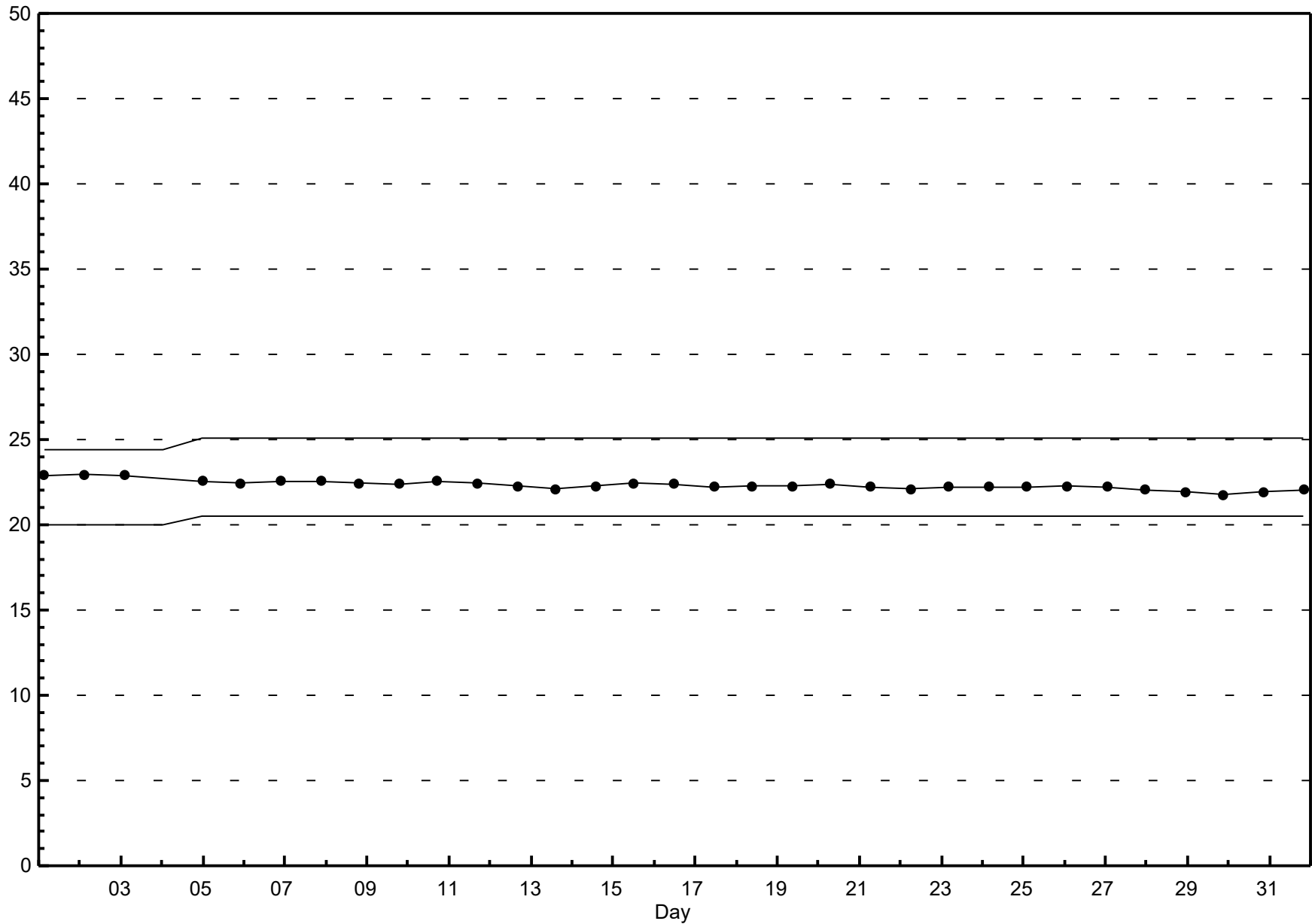
Total Hydrocarbons (THC) - ppm

Henry Pirker - January 2016



Span Responses

Total Hydrocarbons (THC)
Henry Pirker - January 2016



Hourly Averages

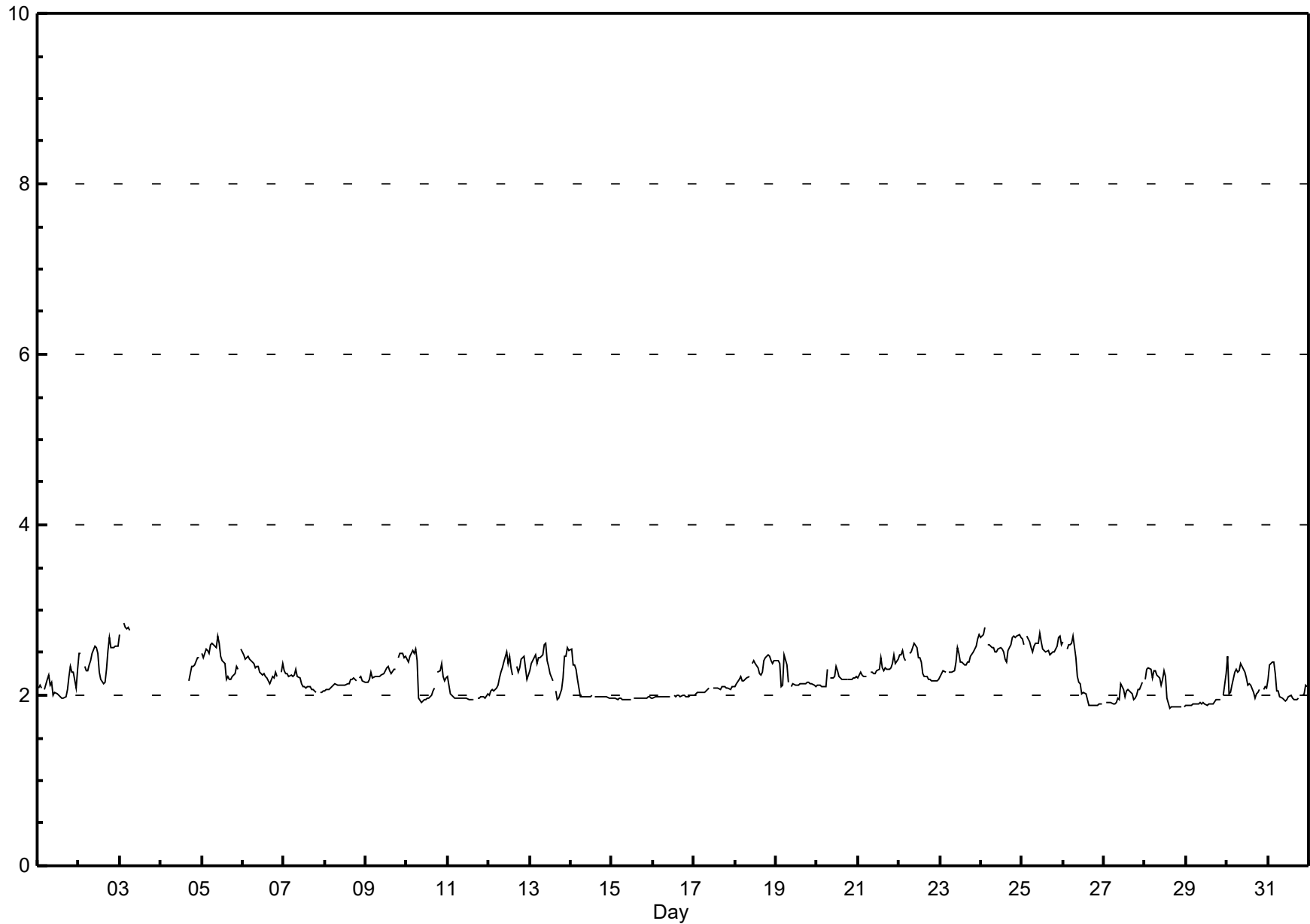
Methane (CH₄) - ppm

Henry Pirker - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 2.84 ppm on Jan 3 03:00 Maximum Daily Average: 2.60 ppm on Jan 24																				Hours in Service: 744 Hours of Data: 679 Hours of Missing Data: 65 Hours of Calibration: 37 Percent Operational Time: 96.2						
Minimum Value: 1.9 ppm on Jan 28 15:00 Maximum Diurnal Average: 2.29 ppm at hour 1 Monthly Average: 2.214 ppm										Minimum Daily Average: 1.92 ppm on Jan 29 Minimum Diurnal Average: 2.11 ppm at hour 16 Percentiles: P ₁ = 1.86 P ₁₀ = 1.96 Q ₁ = 2.01 Median = 2.19 Q ₃ = 2.38 P ₉₀ = 2.54 P ₉₉ = 2.72																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jan	2.1	2.1	2.1	A	2.1	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2.3	2.3	2.1	2.3	2.11	2.33	
2-Jan	2.5	2.5	A	2.3	2.3	2.3	2.4	2.4	2.5	2.6	2.6	2.5	2.3	2.2	2.1	2.2	2.3	2.5	2.7	2.6	2.6	2.6	2.6	2.43	2.67	
3-Jan	2.7	A	2.8	2.8	2.8	2.8	2.8	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	2.84	
4-Jan	N	N	N	N	N	N	N	N	N	N	N	C	C	C	C	C	2.2	2.3	2.3	2.3	2.4	2.4	2.4	A	--	2.44
5-Jan	2.5	2.4	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.7	2.6	2.5	2.4	2.4	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	A	2.43	2.69	
6-Jan	2.5	2.4	2.4	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.2	2.3	2.2	2.2	2.2	2.1	2.2	2.2	2.3	2.2	A	2.3	2.31	2.48	
7-Jan	2.3	2.2	2.3	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	A	2.0	2.0	2.15	2.30	
8-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	2.2	2.2	2.2	A	2.2	2.2	2.2	2.2	2.14	2.22	
9-Jan	2.1	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	A	2.4	2.5	2.5	2.4	2.5	2.29	2.50
10-Jan	2.4	2.4	2.5	2.5	2.5	2.5	2.4	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.1	A	2.3	2.3	2.4	2.2	2.2	2.20	2.54	
11-Jan	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	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	1.98	2.23	
12-Jan	2.0	2.0	2.1	2.0	2.1	2.1	2.2	2.3	2.3	2.4	2.5	2.4	2.5	2.3	2.2	A	2.3	2.3	2.3	2.4	2.5	2.3	2.2	2.2	2.26	2.51
13-Jan	2.3	2.4	2.4	2.5	2.4	2.4	2.4	2.5	2.6	2.6	2.4	2.3	2.3	2.2	A	2.1	1.9	2.0	2.1	2.2	2.5	2.5	2.6	2.5	2.34	2.61
14-Jan	2.5	2.4	2.4	2.3	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.06	2.54	
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	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.96	1.99	
16-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	2.0	2.0	2.0	1.99	2.00	
17-Jan	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.07	2.11	
18-Jan	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	2.4	2.4	2.4	2.3	2.3	2.2	2.3	2.4	2.4	2.5	2.5	2.4	2.4	2.29	2.47
19-Jan	2.4	2.4	2.4	2.1	2.1	2.5	2.4	2.2	A	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	2.19	2.47
20-Jan	2.1	2.1	2.1	2.1	2.1	2.1	2.3	A	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.19	2.34
21-Jan	2.2	2.3	2.2	2.2	2.2	2.2	A	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.5	2.4	2.4	2.30	2.47
22-Jan	2.5	2.5	2.5	2.4	2.4	A	2.5	2.5	2.6	2.6	2.6	2.4	2.4	2.4	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.36	2.62
23-Jan	2.2	2.3	2.3	2.3	A	2.3	2.3	2.3	2.3	2.4	2.6	2.5	2.4	2.4	2.3	2.4	2.4	2.4	2.5	2.5	2.5	2.6	2.7	2.7	2.40	2.71
24-Jan	2.7	2.7	2.8	A	2.6	2.6	2.6	2.6	2.5	2.5	2.5	2.6	2.5	2.5	2.5	2.4	2.4	2.5	2.6	2.7	2.7	2.7	2.7	2.7	2.60	2.79
25-Jan	2.7	2.6	A	2.7	2.6	2.6	2.5	2.6	2.6	2.6	2.7	2.6	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.7	2.7	2.6	2.58	2.73
26-Jan	2.6	A	2.5	2.6	2.6	2.6	2.7	2.4	2.2	2.2	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.16	2.70	
27-Jan	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	A	2.00	2.15
28-Jan	2.2	2.3	2.3	2.3	2.2	2.3	2.3	2.2	2.2	2.1	2.2	2.3	2.2	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.08	2.32
29-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	1.9	1.9	1.9	1.9	1.9	1.9	A	2.0	1.92	2.25	
30-Jan	2.5	2.0	2.0	2.1	2.3	2.3	2.3	2.3	2.4	2.3	2.3	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	A	2.1	2.1	2.1	2.16	2.46
31-Jan	2.2	2.4	2.4	2.4	2.3	2.1	2.1	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	A	2.0	2.0	2.1	2.1	2.06	2.40
2.29 2.23 2.26 2.26 2.24 2.25 2.26 2.21 2.22 2.22 2.24 2.22 2.19 2.17 2.13 2.11 2.13 2.15 2.18 2.21 2.24 2.23 2.23 2.25																								Diurnal Average		
2.71 2.71 2.84 2.80 2.78 2.80 2.76 2.58 2.62 2.69 2.73 2.63 2.55 2.53 2.51 2.52 2.52 2.59 2.69 2.69 2.68 2.69 2.71 2.71																								Diurnal Maximum		
C - Calibration N - Not Valid A - Automated Daily Zero Span																										

Hourly Averages

Methane (CH₄) - ppm
Henry Pirker - January 2016



Hourly Maximums

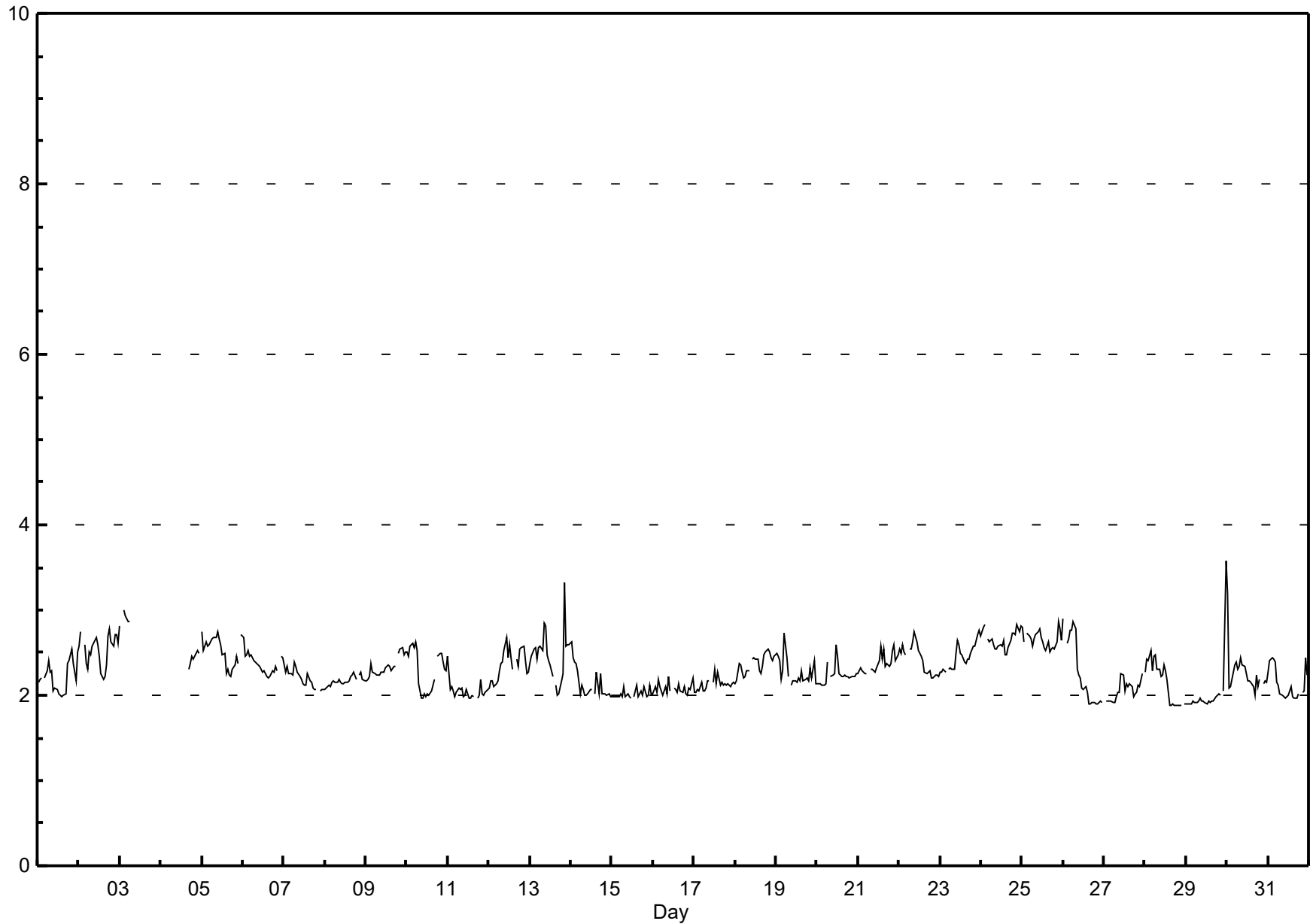
Methane (CH₄) - ppm

Henry Pirker - January 2016

Maximum Value: 3.57 ppm on Jan 30 00:00																					Maximum Daily Average: 2.66 ppm on Jan 24				Hours in Service: 744	
Minimum Value: 1.9 ppm on Jan 28 15:00																					Minimum Daily Average: 2.01 ppm on Jan 15				Hours of Data: 679	
Maximum Diurnal Average: 2.40 ppm at hour 1																					Minimum Diurnal Average: 2.18 ppm at hour 17				Hours of Missing Data: 65	
Monthly Average: 2.288 ppm																					Percentiles: P ₁ = 1.89 P ₁₀ = 1.99 Q ₁ = 2.09 Median = 2.25 Q ₃ = 2.47 P ₉₀ = 2.63 P ₉₉ = 2.90				Hours of Calibration: 37	
																					Percent Operational Time: 96.2					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jan	2.2	2.2	2.2	A	2.2	2.3	2.4	2.3	2.3	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.4	2.4	2.4	2.5	2.5	2.4	2.2	2.5	2.22	2.54
2-Jan	2.6	2.8	A	2.6	2.4	2.3	2.5	2.5	2.6	2.6	2.7	2.6	2.5	2.3	2.2	2.2	2.4	2.7	2.8	2.6	2.6	2.7	2.7	2.6	2.53	2.77
3-Jan	2.8	A	3.0	2.9	2.9	2.9	2.9	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	3.00
4-Jan	N	N	N	N	N	N	N	N	N	N	N	C	C	C	C	C	2.3	2.4	2.5	2.4	2.5	2.5	2.5	A	--	2.53
5-Jan	2.7	2.5	2.6	2.6	2.6	2.6	2.7	2.7	2.7	2.7	2.7	2.6	2.5	2.5	2.3	2.3	2.2	2.2	2.3	2.4	2.5	2.4	A	2.7	2.52	2.75
6-Jan	2.7	2.5	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.3	2.3	2.3	2.3	A	2.5	2.4	2.37	2.68
7-Jan	2.4	2.3	2.3	2.3	2.3	2.2	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.3	2.2	2.2	2.1	2.1	2.1	A	2.1	2.1	2.1	2.20	2.39
8-Jan	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.2	2.2	2.2	2.1	2.1	2.2	2.1	2.2	2.2	2.2	2.3	2.2	A	2.2	2.3	2.2	2.2	2.17	2.28
9-Jan	2.2	2.2	2.2	2.4	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.3	A	2.5	2.5	2.6	2.5	2.5	2.33	2.56
10-Jan	2.5	2.5	2.6	2.6	2.6	2.6	2.5	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	A	2.5	2.5	2.5	2.4	2.3	2.3	2.29	2.62
11-Jan	2.5	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	A	2.0	2.0	2.2	2.0	2.0	2.0	2.1	2.05	2.46
12-Jan	2.1	2.2	2.2	2.1	2.1	2.2	2.3	2.4	2.4	2.5	2.7	2.4	2.6	2.4	2.3	A	2.4	2.3	2.5	2.6	2.6	2.4	2.3	2.3	2.36	2.68
13-Jan	2.4	2.5	2.5	2.6	2.4	2.6	2.6	2.5	2.8	2.8	2.5	2.4	2.4	2.2	A	2.1	2.0	2.0	2.2	2.3	3.3	2.6	2.6	2.6	2.47	3.32
14-Jan	2.6	2.4	2.4	2.4	2.3	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.1	A	2.0	2.3	2.0	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.13	2.62
15-Jan	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	A	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.0	2.01	2.12
16-Jan	2.0	2.1	2.0	2.2	2.1	2.0	2.0	2.1	2.0	2.2	2.1	A	2.1	2.1	2.0	2.1	2.1	2.0	2.1	2.0	2.0	2.1	2.1	2.2	2.08	2.22
17-Jan	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	A	2.1	2.3	2.1	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.13	2.30
18-Jan	2.1	2.2	2.4	2.4	2.3	2.2	2.2	2.3	2.3	2.2	A	2.4	2.4	2.4	2.3	2.3	2.3	2.5	2.5	2.5	2.5	2.4	2.4	2.5	2.36	2.54
19-Jan	2.5	2.5	2.4	2.2	2.3	2.7	2.4	2.2	A	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.3	2.2	2.4	2.1	2.27	2.72
20-Jan	2.1	2.1	2.1	2.1	2.1	2.1	2.4	A	2.2	2.2	2.3	2.6	2.5	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.24	2.59
21-Jan	2.3	2.3	2.3	2.3	2.2	2.3	A	2.3	2.3	2.3	2.3	2.3	2.4	2.6	2.4	2.5	2.3	2.4	2.3	2.4	2.5	2.6	2.4	2.5	2.37	2.60
22-Jan	2.5	2.5	2.6	2.5	2.5	A	2.5	2.5	2.6	2.7	2.6	2.5	2.5	2.5	2.4	2.3	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.42	2.74
23-Jan	2.3	2.3	2.3	2.3	A	2.3	2.3	2.3	2.3	2.5	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.4	2.5	2.6	2.6	2.6	2.7	2.8	2.45	2.76
24-Jan	2.7	2.8	2.8	A	2.7	2.6	2.7	2.6	2.5	2.5	2.6	2.6	2.6	2.6	2.5	2.5	2.6	2.6	2.7	2.7	2.7	2.8	2.7	2.8	2.66	2.84
25-Jan	2.8	2.6	A	2.7	2.7	2.7	2.6	2.7	2.7	2.7	2.8	2.7	2.6	2.6	2.5	2.6	2.5	2.5	2.6	2.5	2.6	2.9	2.8	2.6	2.66	2.86
26-Jan	2.9	A	2.6	2.7	2.8	2.8	2.9	2.8	2.3	2.2	2.2	2.1	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.24	2.90
27-Jan	A	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.2	2.2	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.2	A	2.05	2.25
28-Jan	2.3	2.4	2.4	2.5	2.3	2.5	2.5	2.3	2.3	2.2	2.2	2.4	2.3	2.2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.16	2.53
29-Jan	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	1.9	1.9	2.0	2.0	2.0	2.0	A	2.1	3.6	2.01	3.57
30-Jan	3.2	2.1	2.1	2.2	2.4	2.4	2.3	2.3	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.2	2.1	2.2	A	2.1	2.2	2.2	2.26	3.19
31-Jan	2.3	2.4	2.4	2.4	2.4	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	A	2.0	2.1	2.4	2.2	2.13	2.44
2.40 2.29 2.33 2.33 2.32 2.32 2.35 2.30 2.29 2.29 2.30 2.28 2.26 2.24 2.18 2.18 2.18 2.23 2.25 2.28 2.33 2.31 2.32 2.36																									Diurnal Average	
3.19 2.79 3.00 2.93 2.91 2.86 2.87 2.79 2.84 2.81 2.78 2.68 2.63 2.64 2.53 2.63 2.56 2.69 2.77 2.74 3.32 2.86 2.77 3.57																									Diurnal Maximum	
C - Calibration N - Not Valid A - Automated Daily Zero Span																										

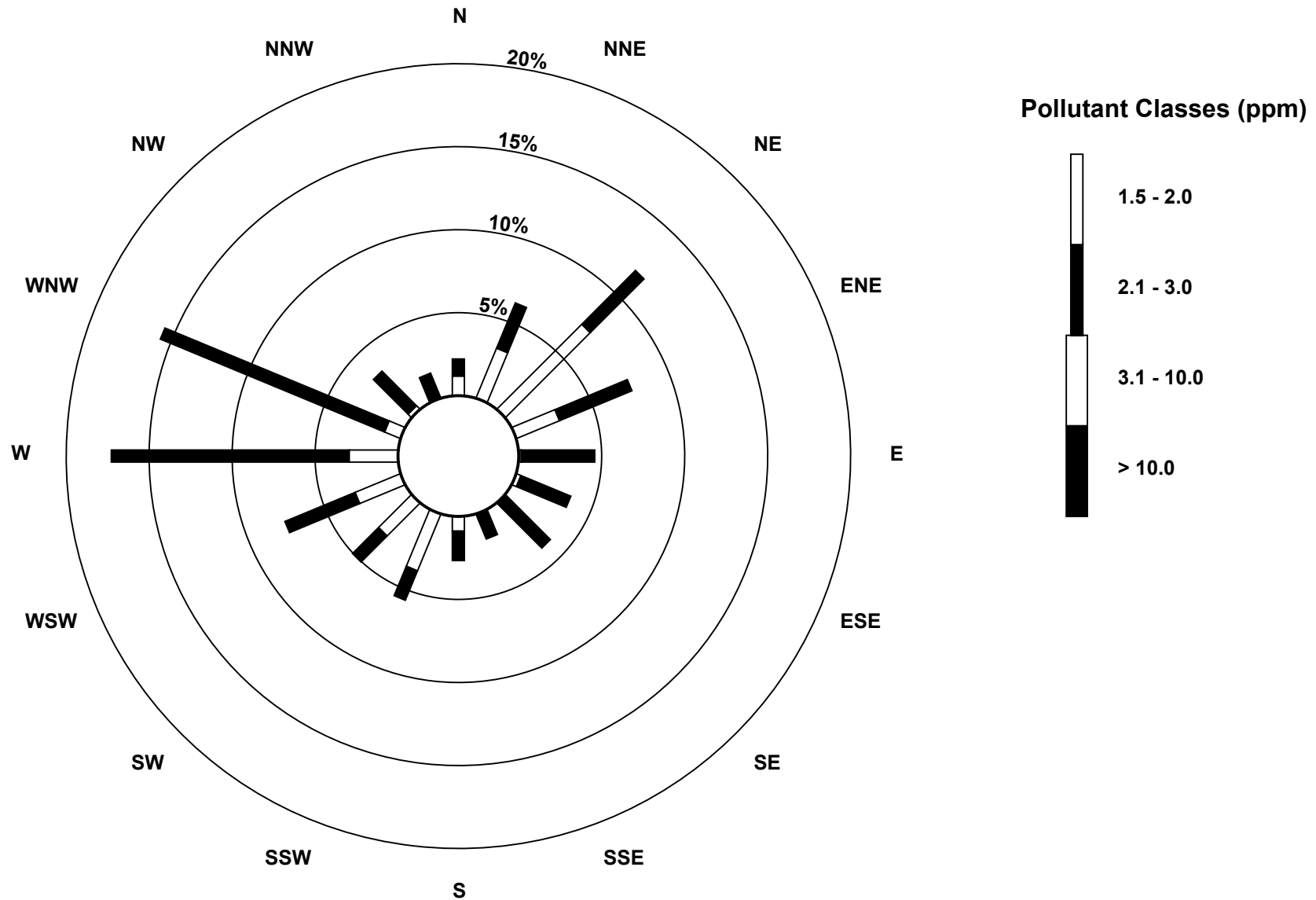
Hourly Maximums

Methane (CH₄) - ppm
Henry Pirker - January 2016



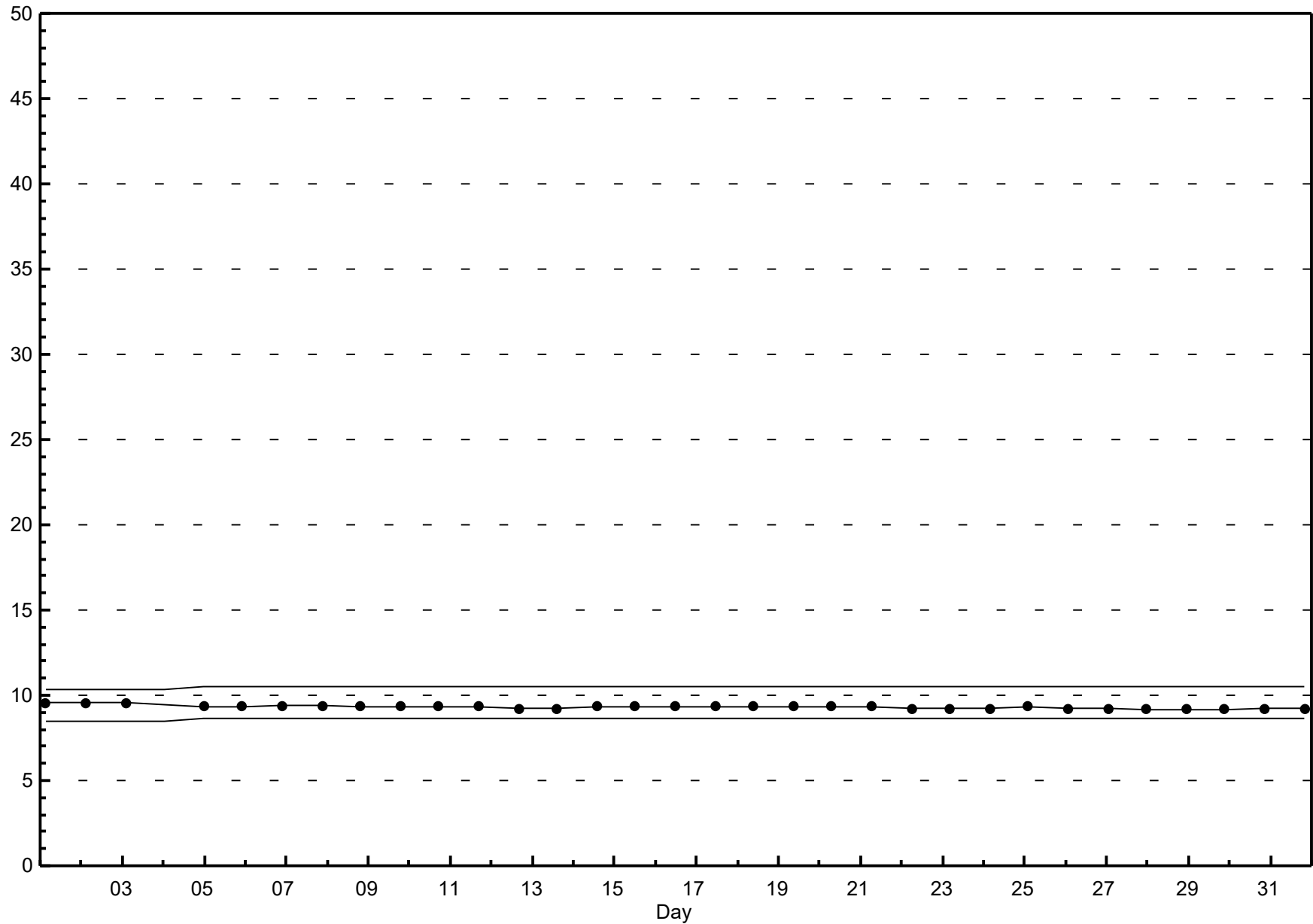
Pollutant Rose

Methane (CH₄) - ppm
Henry Pirker - January 2016



Span Responses

Methane (CH₄)
Henry Pirker - January 2016

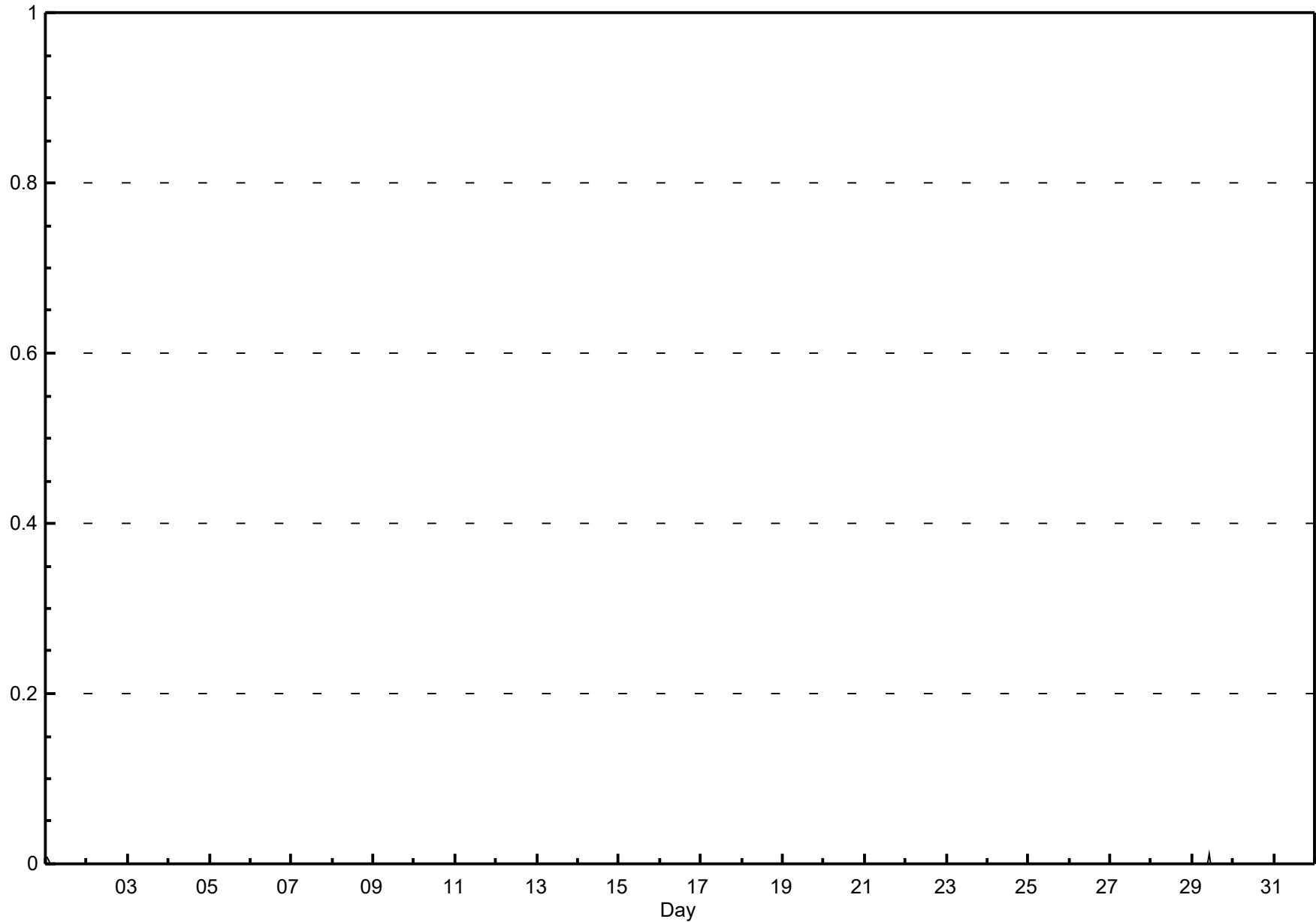


Hourly Averages

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 0.01 ppm on Jan 29 11:00 Maximum Daily Average: 0.00 ppm on Jan 1																				Hours in Service: 744 Hours of Data: 679 Hours of Missing Data: 65 Hours of Calibration: 37 Percent Operational Time: 96.2						
Minimum Value: 0.0 ppm on Jan 1 05:00 Maximum Diurnal Average: 0.00 ppm at hour 11 Monthly Average: 0.000 ppm										Minimum Daily Average: 0.00 ppm on Jan 2 Minimum Diurnal Average: 0.00 ppm at hour 8 Percentiles: P ₁ = 0.00 P ₁₀ = 0.00 Q ₁ = 0.00 Median = 0.00 Q ₃ = 0.00 P ₉₀ = 0.00 P ₉₉ = 0.00																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	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	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01
2-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
3-Jan	0.0	A	0.0	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	--	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	--	0.00
5-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
6-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
7-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
8-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
9-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
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	A	0.0	0.0	0.0	0.0	0.0	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	A	0.0	0.0	0.0	0.0	0.0	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	A	0.0	0.0	0.0	0.0	0.0	0.0	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	A	0.0	0.0	0.0	0.0	0.0	0.0	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	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
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	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
16-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
17-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
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
19-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
20-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
21-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
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	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	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.00	0.00
28-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
29-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	0.01
30-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
31-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
0.00 0.00																									Diurnal Average	
0.01 0.01 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 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

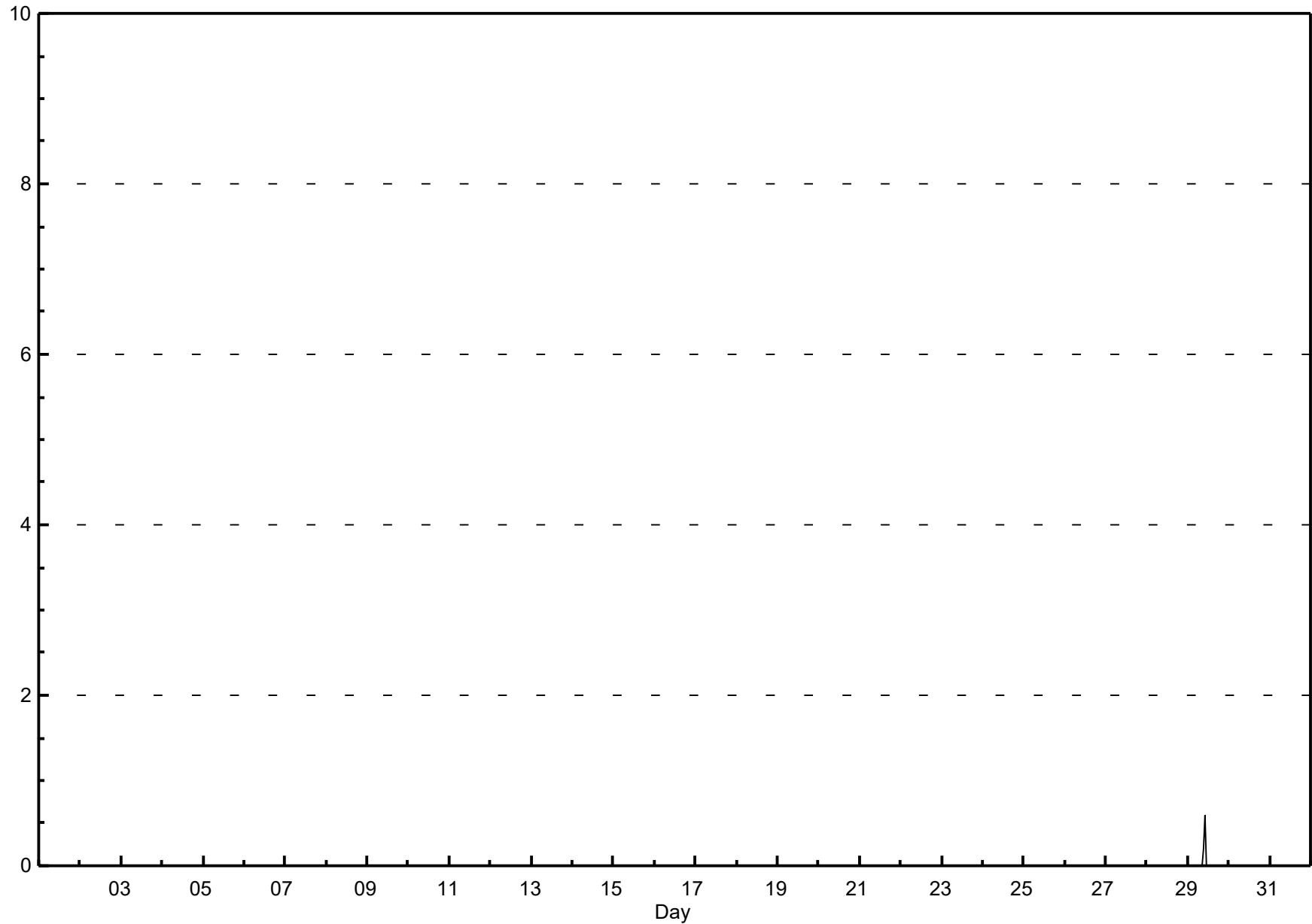
Henry Pirker - January 2016

Maximum Value: 0.60 ppm on Jan 29 11:00																				Maximum Daily Average: 0.04 ppm on Jan 29					Hours in Service: 744	
Minimum Value: 0.0 ppm on Jan 1 13:00																				Minimum Daily Average: 0.00 ppm on Jan 8					Hours of Data: 679	
Maximum Diurnal Average: 0.02 ppm at hour 11																				Minimum Diurnal Average: 0.00 ppm at hour 8					Hours of Missing Data: 65	
Monthly Average: 0.002 ppm																				Percentiles: P ₁ = 0.00 P ₁₀ = 0.00 Q ₁ = 0.00 Median = 0.00 Q ₃ = 0.00 P ₉₀ = 0.00 P ₉₉ = 0.00					Hours of Calibration: 37	
																				Percent Operational Time: 96.2						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-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	0.01
2-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
3-Jan	0.0	A	0.0	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	--	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	--	0.00
5-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
6-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
7-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
8-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
9-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
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	A	0.0	0.0	0.0	0.0	0.0	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	A	0.0	0.0	0.0	0.0	0.0	0.0	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	A	0.0	0.0	0.0	0.0	0.0	0.0	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	A	0.0	0.0	0.0	0.0	0.0	0.0	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	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
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	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
16-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
17-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
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
19-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
20-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
21-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
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	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	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.00	0.00
28-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
29-Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.04	0.60
30-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
31-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
0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.01 0.02 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00																								Diurnal Average		
0.01 0.01 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.20 0.60 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00																								Diurnal Maximum		
C - Calibration N - Not Valid A - Automated Daily Zero Span																										

Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

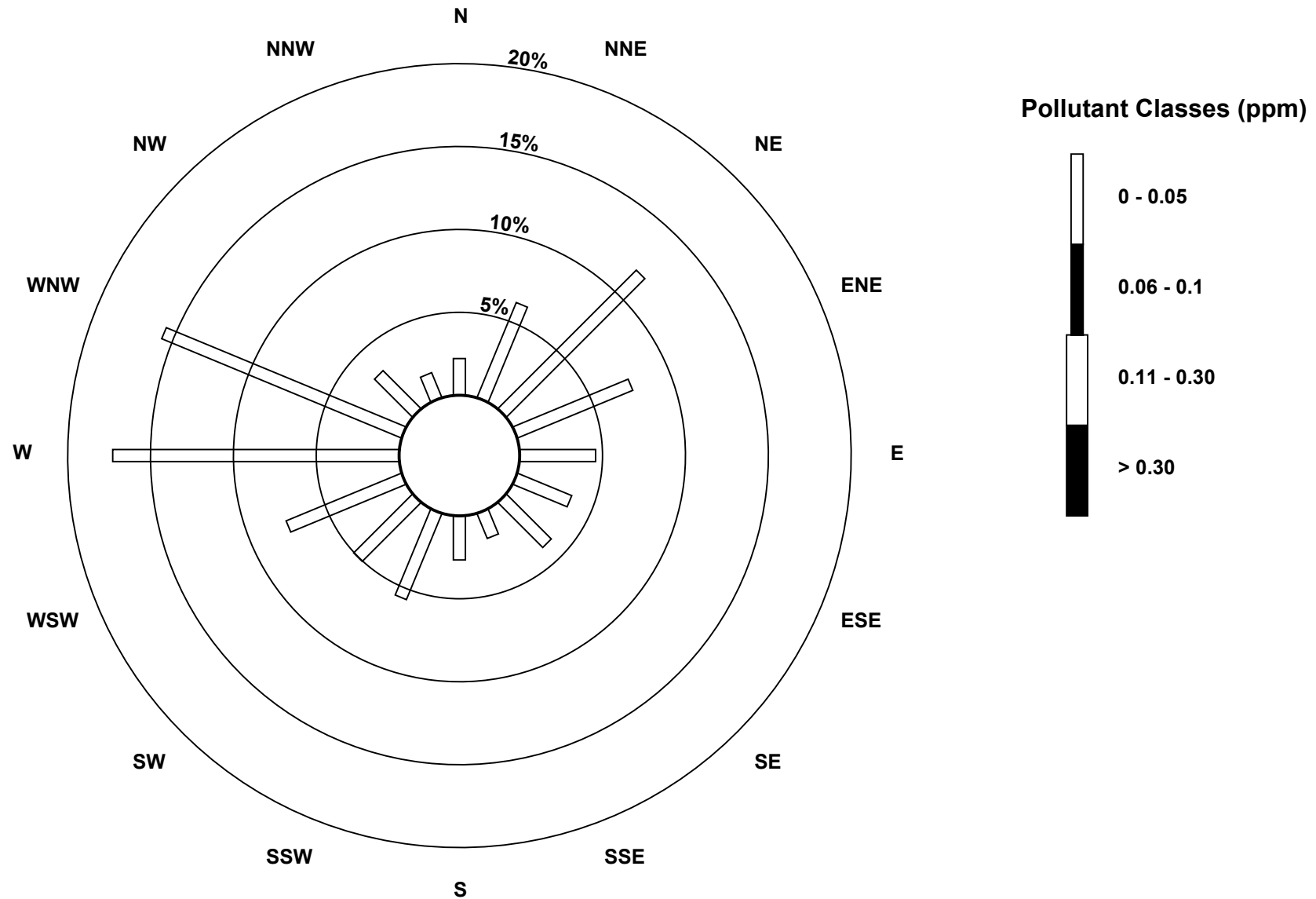
Henry Pirker - January 2016

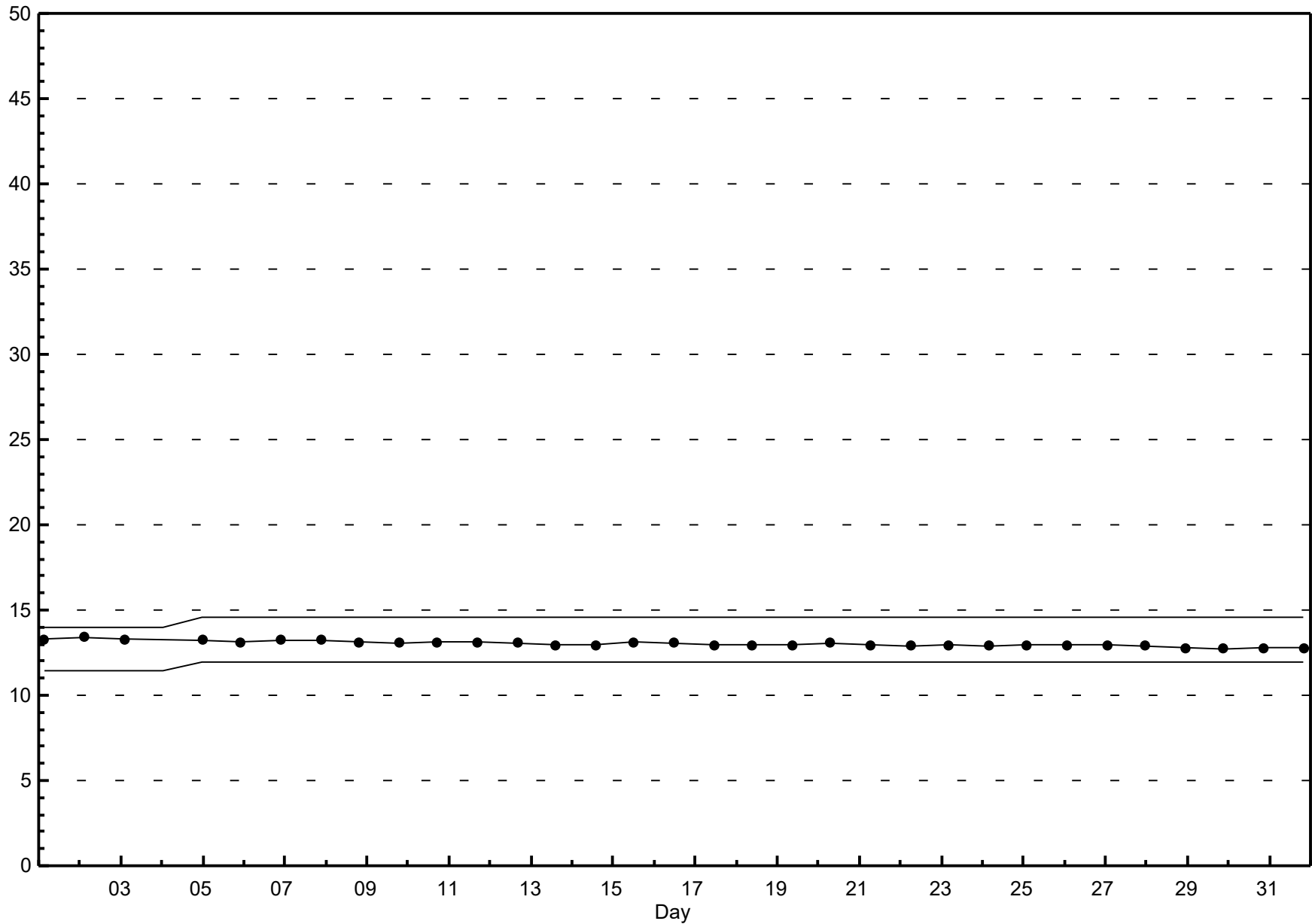


Pollutant Rose

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - January 2016



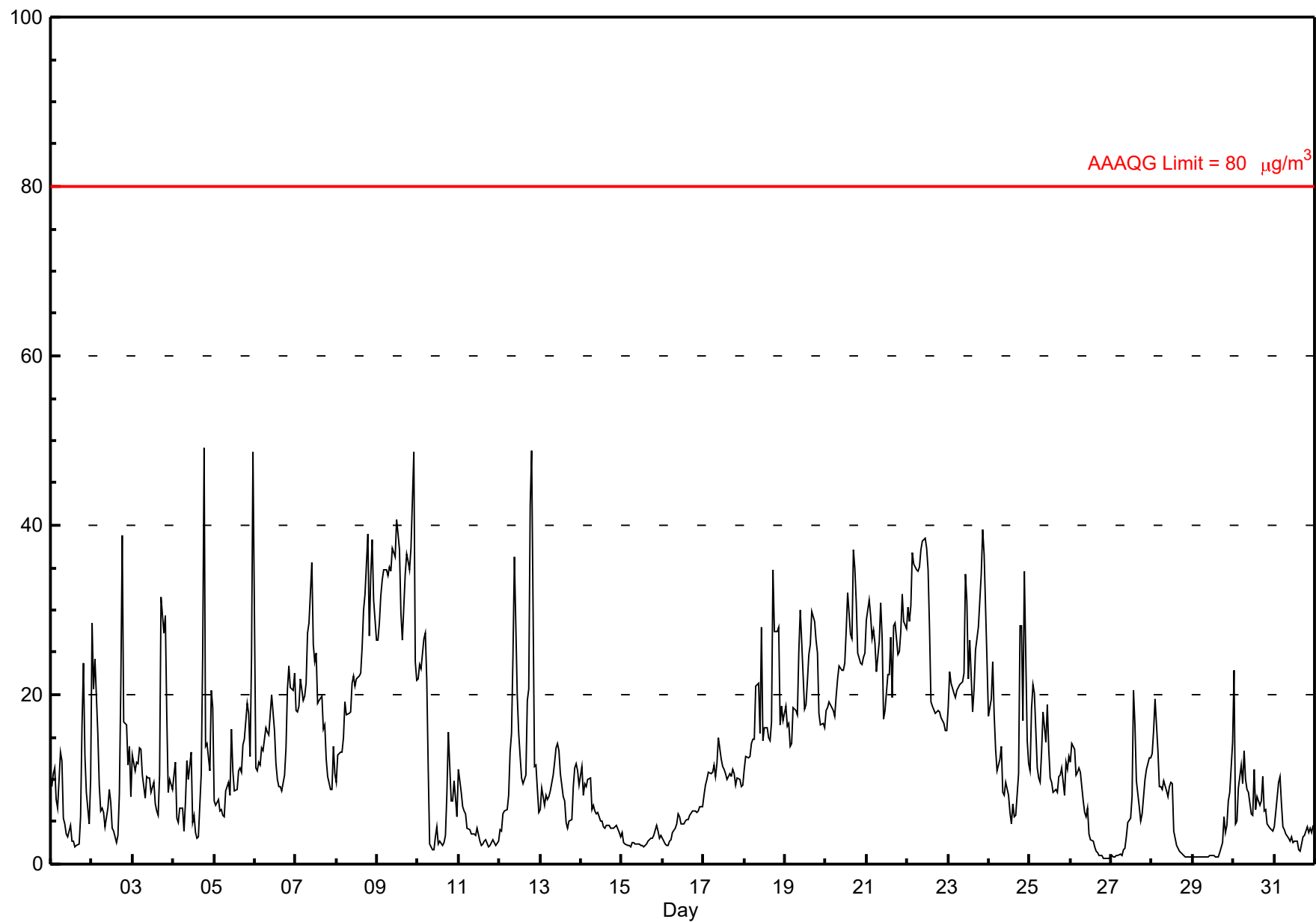


Hourly Averages

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

Henry Pirker - January 2016

Number of Exceedences: 1-hr: 0 24-hr: 1 Maximum Value: 49.2 µg/m³ on Jan 4 19:00 Maximum Daily Average: 33.9 µg/m³ on Jan 9																								Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 1 µg/m³ on Jan 26 21:00 Maximum Diurnal Average: 17.9 µg/m³ at hour 19 Monthly Average: 13.31 µg/m³ Minimum Daily Average: 2.6 µg/m³ on Jan 29 Minimum Diurnal Average: 10.1 µg/m³ at hour 16 Percentiles: P ₁ = 0.8 P ₁₀ = 2.4 Q ₁ = 5.1 Median = 10.6 Q ₃ = 19.2 P ₉₀ = 28.1 P ₉₉ = 38.3																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jan	9	11	11	8	7	13	12	5	5	4	3	5	3	3	2	2	2	6	16	24	13	8	5	10	7.8	23.8
2-Jan	29	21	24	15	9	6	7	6	4	7	9	7	4	4	3	3	8	21	39	17	17	12	14	8	12.2	38.8
3-Jan	13	11	12	12	14	14	10	8	10	10	10	8	10	7	6	6	11	32	27	29	18	8	10	9	12.7	31.6
4-Jan	10	12	5	5	7	7	4	7	12	10	13	5	6	4	3	3	11	25	49	14	14	11	21	18	11.5	49.2
5-Jan	8	7	8	6	6	6	6	9	10	8	16	11	9	9	11	11	11	14	15	19	18	13	24	49	12.6	48.6
6-Jan	11	11	12	12	14	13	16	16	15	18	20	16	12	10	9	9	9	11	14	21	23	21	21	22	14.8	23.4
7-Jan	18	18	19	22	19	20	21	27	29	36	26	24	25	19	19	20	16	16	12	10	9	9	14	11	19.1	35.5
8-Jan	10	13	13	13	15	19	18	18	18	21	22	21	22	22	23	26	30	32	39	27	34	38	31	26	23.0	39.0
9-Jan	26	28	32	34	35	35	34	35	35	37	36	41	39	37	30	27	34	37	36	35	37	49	24	22	33.9	48.7
10-Jan	22	23	23	27	27	22	11	2	2	2	3	4	2	3	2	3	3	8	16	7	7	10	8	6	10.2	27.3
11-Jan	11	8	7	6	6	4	4	3	4	4	3	4	3	2	2	3	3	2	2	3	3	3	2	3	4.0	11.1
12-Jan	4	4	6	6	7	8	13	15	25	36	20	15	13	10	9	11	19	21	42	49	12	12	9	6	15.5	48.8
13-Jan	6	9	7	8	8	8	9	11	12	14	14	13	11	8	7	5	4	5	5	9	11	12	11	9	9.0	14.2
14-Jan	11	8	10	9	10	10	6	7	6	6	6	5	5	4	4	5	5	4	4	4	4	5	4	3	6.1	11.5
15-Jan	4	3	2	2	2	2	2	3	2	2	2	2	2	2	2	3	3	3	3	3	4	4	3	3	2.8	4.5
16-Jan	3	2	2	2	3	3	4	4	5	6	6	5	5	5	5	5	6	6	6	6	6	6	7	7	4.8	6.8
17-Jan	8	9	10	11	11	11	12	10	12	15	12	12	11	11	10	11	10	11	11	9	10	10	9	9	10.6	15.0
18-Jan	11	13	13	13	14	15	15	21	21	15	28	15	16	16	15	15	17	35	28	28	28	17	19	17	18.4	34.7
19-Jan	19	16	17	14	14	19	18	18	25	30	26	18	19	22	25	26	30	29	26	25	18	16	17	16	20.9	30.0
20-Jan	18	19	19	19	18	18	20	22	23	23	23	24	28	32	27	27	37	35	31	25	24	23	24	25	24.3	37.1
21-Jan	29	31	29	27	28	26	23	26	31	27	17	18	22	22	27	20	28	28	25	25	28	32	29	28	26.0	31.9
22-Jan	30	29	30	37	35	35	35	35	37	38	38	37	35	28	19	19	18	18	18	18	17	17	16	16	27.3	38.4
23-Jan	18	23	21	20	20	21	21	21	21	23	34	31	22	26	18	21	25	27	28	34	40	37	30	24	25.2	39.5
24-Jan	17	20	24	18	14	11	12	14	8	8	10	8	6	5	7	6	6	11	28	28	17	35	15	12	14.1	34.6
25-Jan	11	18	21	20	11	10	10	13	18	14	19	13	10	10	8	9	8	10	11	11	8	12	11	13	12.6	21.2
26-Jan	12	14	14	11	11	11	11	7	6	6	7	4	3	3	2	2	1	1	1	1	1	1	1	1	5.4	14.2
27-Jan	1	1	1	1	1	1	1	2	2	3	5	5	8	20	16	10	7	5	6	8	10	11	13	13	6.3	20.5
28-Jan	13	16	20	13	9	9	9	10	9	8	9	10	9	4	2	2	2	1	1	1	1	1	1	1	6.7	19.5
29-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	6	4	5	7	8	14	2.6	14.3
30-Jan	23	5	5	9	12	9	13	10	9	8	6	6	11	6	8	7	8	10	6	6	5	4	4	4	8.1	22.8
31-Jan	4	6	10	10	7	4	4	4	3	3	3	3	3	3	2	2	2	3	3	4	4	4	4	4	4.2	10.3
13.3 13.2 13.8 13.2 12.7 12.6 12.3 12.6 13.5 14.3 14.5 12.6 12.0 11.5 10.5 10.1 12.1 15.1 17.9 16.3 14.3 14.4 13.1 13.2																								Diurnal Average		
30.4 31.2 31.8 36.8 35.4 34.8 34.6 35.1 37.2 38.1 38.4 40.7 39.0 37.1 29.7 26.5 37.1 36.6 49.2 48.8 39.5 48.7 31.2 48.6																								Diurnal Maximum		
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																										

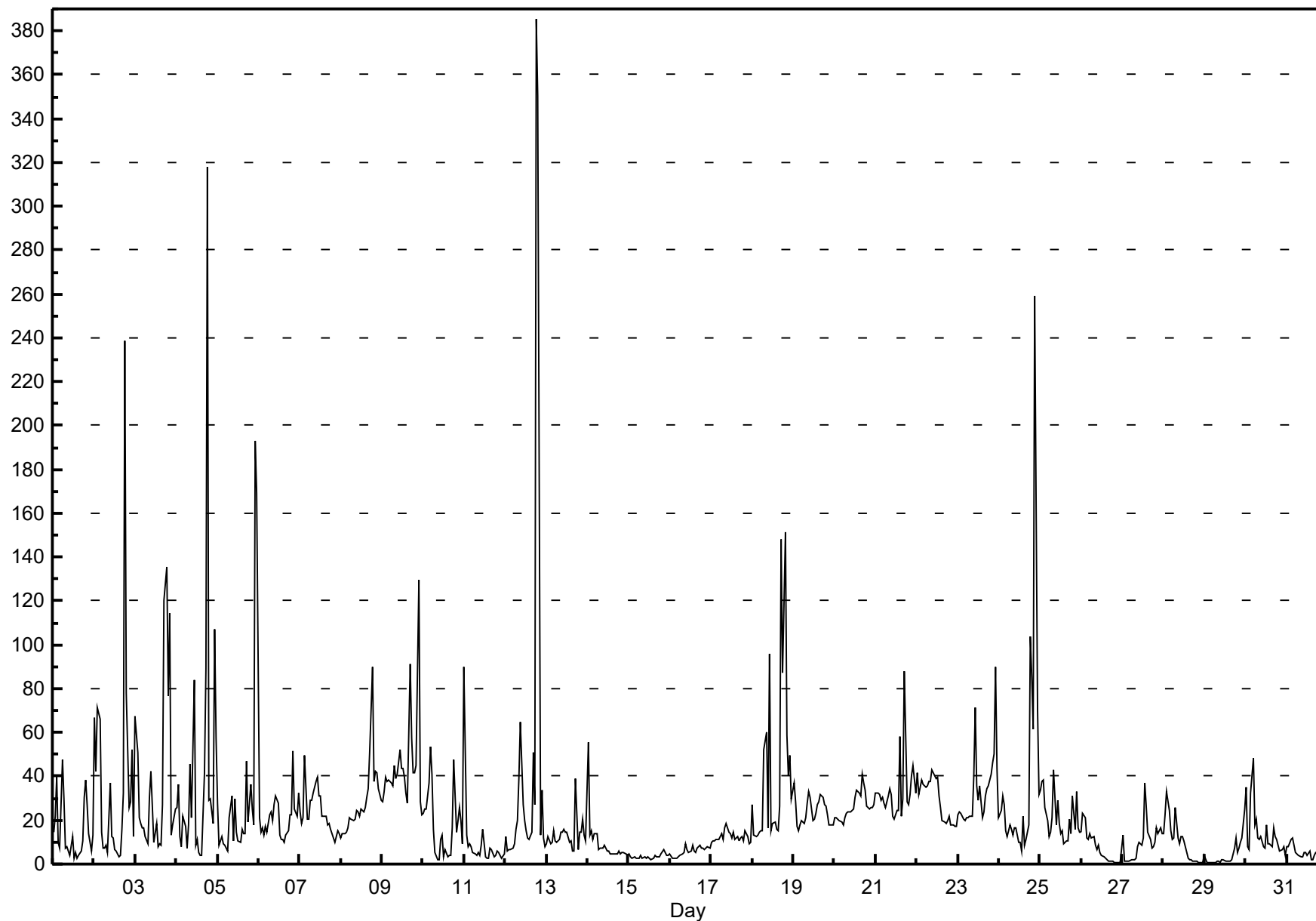


Hourly Maximums

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

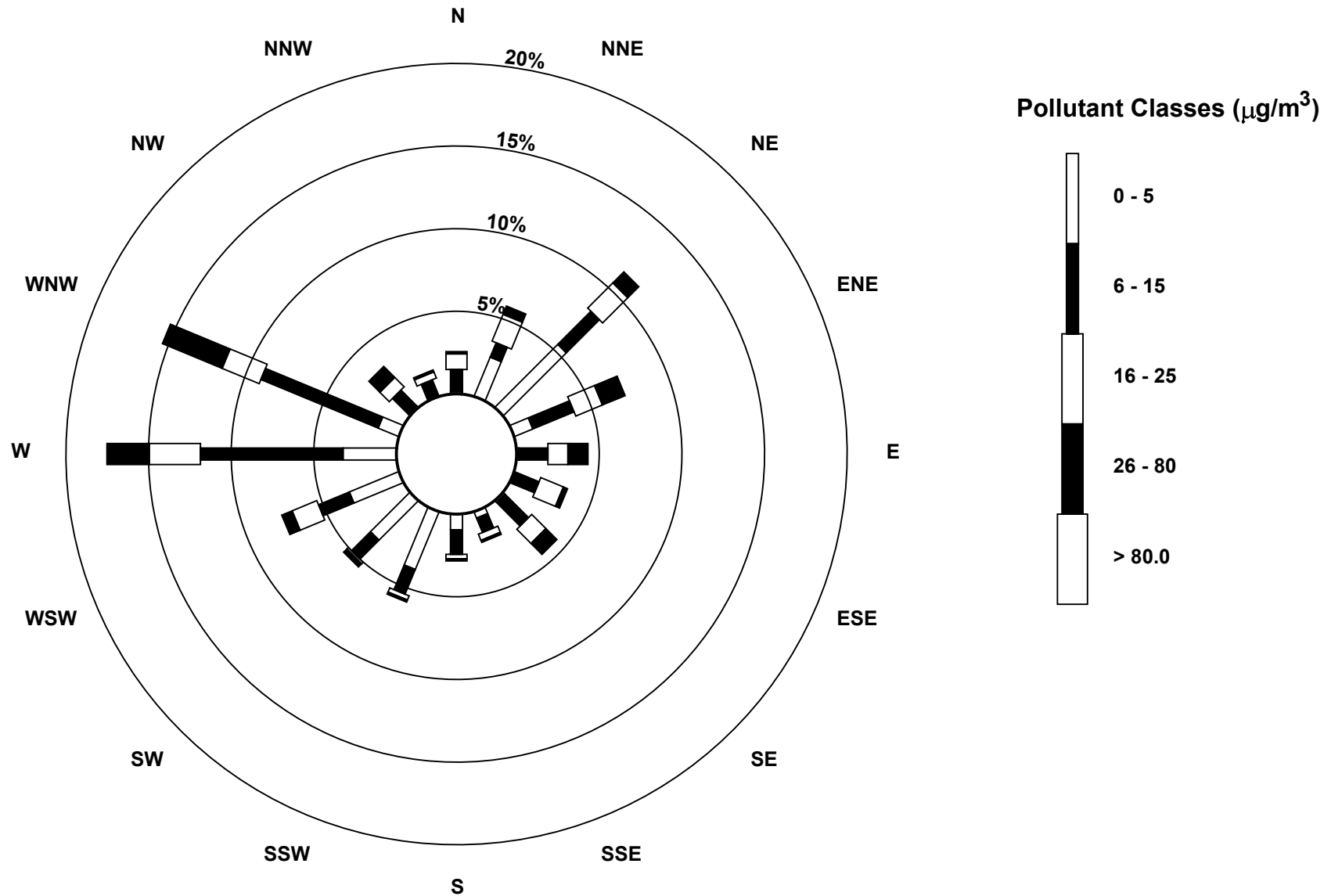
Henry Pirker - January 2016

Maximum Value: 385.2 μg/m ³ on Jan 12 19:00																					Maximum Daily Average: 48.6 μg/m ³ on Jan 12				Hours in Service: 744	
Minimum Value: 1 μg/m ³ on Jan 26 22:00																					Minimum Daily Average: 3.5 μg/m ³ on Jan 15				Hours of Data: 744	
Maximum Diurnal Average: 57.2 μg/m ³ at hour 19																					Minimum Diurnal Average: 12.0 μg/m ³ at hour 16				Hours of Missing Data: 0	
Monthly Average: 22.61 μg/m ³																					Percentiles: P ₁ = 0.8 P ₁₀ = 3.2 Q ₁ = 7.5 Median = 14.7 Q ₃ = 27.3 P ₉₀ = 41.5 P ₉₉ = 147.0				Hours of Calibration: 0	
																					Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jan	15	22	40	10	8	47	30	7	8	6	4	12	3	5	2	4	6	11	30	38	27	14	6	13	15.3	47.3
2-Jan	67	42	71	66	14	7	7	9	5	37	13	12	6	6	3	4	16	32	239	78	26	29	53	12	35.6	238.8
3-Jan	67	51	21	19	16	16	13	9	31	42	27	10	19	8	9	9	27	120	136	77	114	13	18	25	37.4	135.6
4-Jan	26	36	12	8	22	17	7	18	46	21	84	9	11	5	4	4	42	90	318	29	30	19	107	57	42.5	317.8
5-Jan	28	9	12	9	8	7	6	21	31	10	30	15	11	10	16	14	14	47	19	37	25	18	193	169	31.6	192.8
6-Jan	21	15	16	13	17	15	22	24	20	27	31	28	13	11	11	10	13	15	22	23	51	25	22	32	20.8	51.3
7-Jan	24	19	21	49	20	21	29	29	33	38	39	31	31	22	22	22	18	18	16	14	10	12	15	14	23.6	49.4
8-Jan	12	14	14	14	17	21	20	20	21	24	24	22	25	24	25	30	34	51	90	38	43	42	34	29	28.6	89.8
9-Jan	29	33	40	38	39	37	35	45	39	41	52	43	43	40	32	28	91	57	42	42	45	130	28	23	44.6	129.5
10-Jan	23	25	25	37	54	41	16	6	2	2	11	13	3	7	3	4	4	17	48	15	20	25	20	9	17.8	53.6
11-Jan	90	13	8	10	8	5	5	4	5	4	9	16	3	2	3	8	6	3	4	6	5	4	3	4	9.5	90.2
12-Jan	12	6	7	6	7	10	16	20	39	65	27	20	15	12	11	14	51	27	385	351	13	34	12	8	48.6	385.2
13-Jan	9	13	9	10	15	11	10	11	14	14	16	14	15	10	11	6	6	39	6	15	15	20	13	10	13.0	39.2
14-Jan	56	13	15	11	14	14	7	7	8	7	8	6	6	5	5	5	5	5	6	5	5	6	5	4	9.4	55.7
15-Jan	5	3	3	3	3	3	3	4	3	3	2	3	3	2	3	4	3	3	3	4	6	5	4	4	3.5	6.5
16-Jan	5	3	3	2	3	3	4	5	5	9	7	5	6	8	6	6	7	8	7	7	7	7	8	7	5.7	9.3
17-Jan	10	10	11	11	11	12	14	11	16	19	15	14	12	15	11	12	11	12	12	11	15	13	10	10	12.4	18.8
18-Jan	27	13	13	13	15	15	15	52	60	16	96	16	19	19	16	15	27	148	87	152	59	40	49	30	42.2	151.6
19-Jan	37	28	17	15	18	20	19	21	28	33	31	20	21	23	27	28	32	30	27	26	22	18	18	18	24.1	36.8
20-Jan	21	21	20	20	19	18	21	23	24	24	25	25	30	33	33	31	41	37	34	26	25	26	26	27	26.2	40.7
21-Jan	32	33	32	29	31	28	26	31	34	32	22	21	24	25	58	22	30	88	28	27	32	40	45	32	33.4	87.8
22-Jan	42	32	35	39	36	35	35	37	38	43	40	39	40	31	26	20	19	18	20	22	18	18	17	17	29.9	42.7
23-Jan	22	24	23	21	20	21	21	22	22	41	71	35	29	36	21	24	31	35	36	41	46	50	90	44	34.4	90.0
24-Jan	21	25	31	27	15	13	18	16	13	16	17	10	10	6	22	8	11	18	104	85	62	259	71	32	37.9	258.8
25-Jan	34	37	38	26	20	13	15	21	43	18	29	18	14	15	9	10	11	20	14	31	16	33	17	15	21.5	42.7
26-Jan	15	23	21	12	11	14	12	13	9	7	9	5	4	3	2	2	2	1	1	1	1	1	1	1	7.1	22.9
27-Jan	13	1	1	2	1	2	2	2	2	8	10	9	12	37	27	14	11	7	8	10	16	14	16	14	10.0	37.1
28-Jan	14	23	33	24	15	11	12	25	12	9	13	13	11	8	2	2	2	2	1	1	1	1	1	1	9.9	32.9
29-Jan	4	1	1	1	1	1	1	1	1	1	2	2	2	1	1	1	2	7	12	5	7	10	12	25	4.2	25.0
30-Jan	35	8	6	32	48	18	20	12	11	12	8	7	18	9	9	8	16	13	11	9	6	7	8	4	14.0	48.3
31-Jan	8	8	11	12	9	5	4	4	3	3	5	5	4	6	2	2	4	5	5	13	6	11	5	6	6.2	12.7
26.5 19.4 19.7 19.0 17.3 16.1 15.0 17.1 20.2 20.4 25.0 16.1 14.8 14.3 14.0 12.0 19.1 31.8 57.2 39.9 25.0 30.4 29.8 22.5																									Diurnal Average	
90.2 51.2 71.2 66.3 53.6 47.3 35.5 52.0 60.1 64.9 95.8 43.4 43.3 39.6 58.2 31.0 91.4 147.9 385.2 350.5 114.2 258.8 192.8 169.2																									Diurnal Maximum	



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Henry Pirker - January 2016



Hourly Averages

External Temperature (ET) - °C

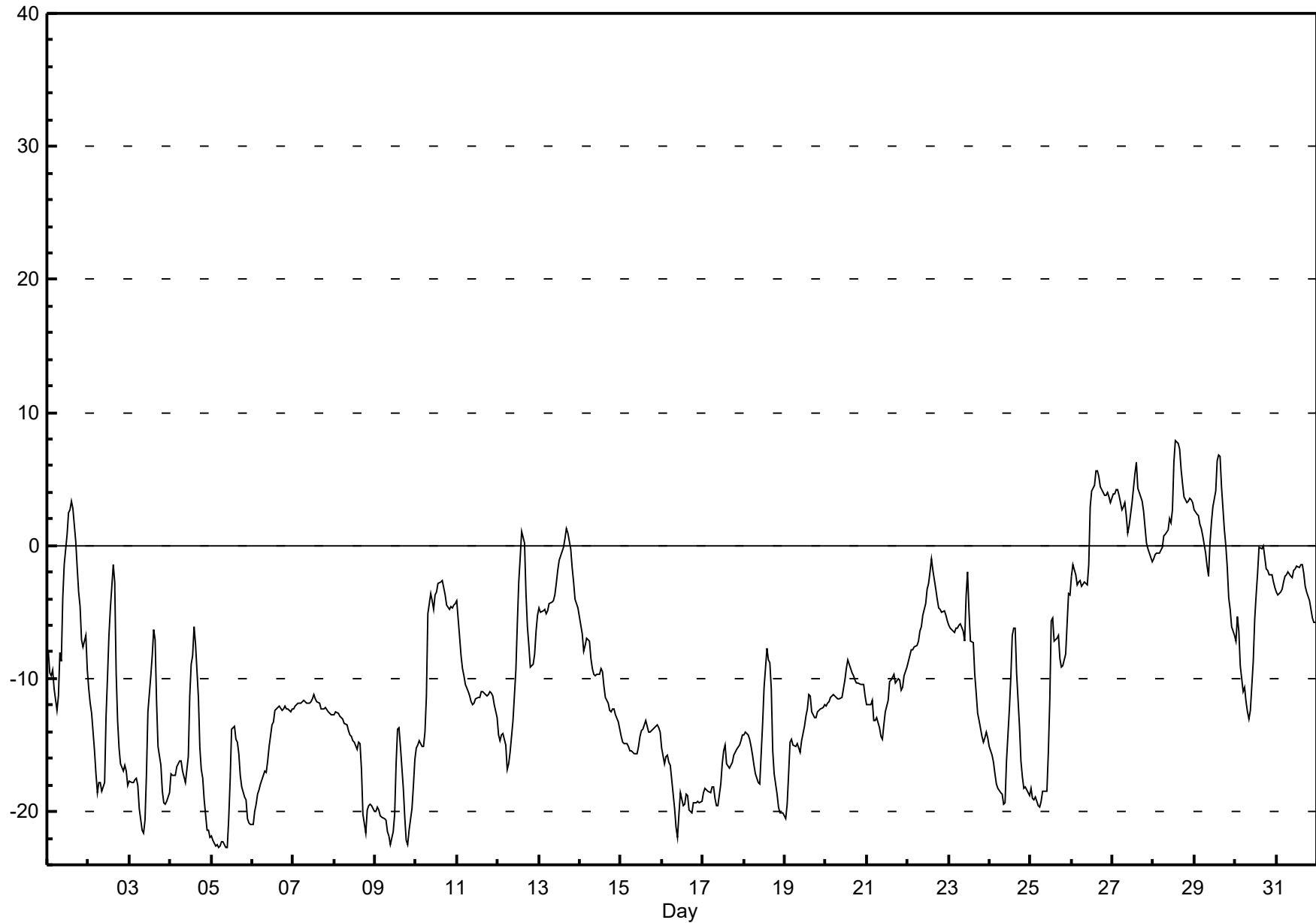
Henry Pirker - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 7.9 °C on Jan 28 14:00 Maximum Daily Average: 2.8 °C on Jan 27																				Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0						
Minimum Value: -23 °C on Jan 5 05:00 Maximum Diurnal Average: -6.0 °C at hour 15 Monthly Average: -10.19 °C										Minimum Daily Average: -19.6 °C on Jan 5 Minimum Diurnal Average: -12.3 °C at hour 9 Percentiles: P ₁ = -22.5 P ₁₀ = -19.3 Q ₁ = -15.6 Median = -11.6 Q ₃ = -4.6 P ₉₀ = 0.5 P ₉₉ = 6.2																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jan	-8	-10	-10	-9	-11	-12	-11	-8	-9	-4	-1	1	2	3	3	0	-2	-3	-5	-7	-8	-7	-9	-5.1	3.3	
2-Jan	-11	-12	-13	-15	-17	-19	-18	-18	-18	-18	-13	-10	-7	-5	-1	-3	-10	-13	-15	-16	-17	-16	-17	-18	-13.3	-1.5
3-Jan	-18	-18	-18	-18	-17	-18	-20	-21	-22	-21	-17	-12	-10	-8	-6	-7	-12	-15	-17	-18	-19	-19	-19	-19	-16.2	-6.4
4-Jan	-17	-17	-17	-17	-17	-16	-16	-17	-17	-18	-16	-11	-9	-8	-6	-7	-11	-15	-17	-17	-19	-21	-21	-22	-15.5	-6.1
5-Jan	-22	-22	-23	-22	-23	-23	-22	-22	-23	-23	-21	-18	-14	-14	-15	-15	-16	-17	-18	-19	-19	-21	-21	-21	-19.6	-13.6
6-Jan	-21	-20	-19	-19	-18	-18	-17	-17	-17	-16	-15	-13	-13	-12	-12	-12	-12	-12	-12	-12	-12	-12	-13	-12	-15.0	-12.1
7-Jan	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-11	-12	-12	-12	-12	-12	-12	-12	-12	-13	-13	-13	-12.0	-11.2
8-Jan	-13	-13	-13	-13	-13	-13	-13	-13	-14	-14	-14	-15	-15	-15	-15	-15	-17	-20	-22	-20	-20	-19	-20	-20	-15.7	-12.5
9-Jan	-20	-20	-20	-20	-20	-21	-21	-21	-22	-23	-22	-20	-16	-14	-14	-15	-18	-20	-22	-22	-21	-20	-18	-16	-19.4	-13.7
10-Jan	-15	-15	-15	-15	-15	-14	-11	-5	-4	-4	-5	-4	-4	-3	-3	-3	-3	-4	-4	-5	-5	-5	-4	-4	-7.0	-2.6
11-Jan	-4	-7	-8	-9	-10	-10	-11	-11	-12	-12	-12	-12	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-12	-13	-10.6	-4.2
12-Jan	-14	-15	-14	-14	-15	-17	-16	-16	-14	-13	-9	-6	-3	-1	1	0	-4	-6	-7	-9	-9	-8	-6	-5	-9.2	1.0
13-Jan	-5	-5	-5	-5	-5	-5	-4	-4	-4	-4	-3	-2	-1	0	0	1	1	1	0	-2	-3	-4	-4	-5	-2.8	1.3
14-Jan	-6	-7	-8	-7	-7	-7	-9	-9	-10	-10	-10	-10	-9	-9	-11	-11	-12	-12	-12	-12	-12	-13	-13	-14	-10.0	-6.0
15-Jan	-14	-15	-15	-15	-15	-15	-15	-16	-16	-16	-15	-14	-14	-14	-13	-14	-14	-14	-14	-14	-14	-13	-14	-14	-14.4	-13.2
16-Jan	-15	-16	-16	-16	-16	-17	-18	-20	-21	-22	-20	-19	-20	-19	-19	-19	-20	-20	-19	-19	-19	-19	-19	-19	-18.6	-15.2
17-Jan	-19	-18	-18	-18	-19	-18	-18	-19	-20	-20	-18	-16	-15	-15	-16	-17	-17	-16	-16	-16	-15	-15	-15	-14	-17.0	-14.3
18-Jan	-14	-14	-14	-15	-15	-16	-17	-17	-18	-18	-16	-13	-11	-8	-9	-9	-11	-15	-17	-19	-20	-20	-20	-20	-15.2	-7.8
19-Jan	-21	-19	-17	-15	-15	-15	-15	-15	-15	-16	-15	-14	-13	-12	-11	-11	-12	-13	-13	-13	-12	-12	-12	-12	-14.1	-11.2
20-Jan	-12	-12	-12	-11	-11	-11	-11	-11	-12	-11	-11	-10	-9	-9	-9	-10	-10	-10	-10	-10	-10	-10	-11	-9	-10.7	-8.6
21-Jan	-12	-12	-12	-12	-13	-13	-13	-14	-14	-15	-14	-12	-12	-10	-10	-10	-10	-10	-10	-10	-11	-11	-10	-9	-11.6	-9.1
22-Jan	-9	-8	-8	-8	-8	-8	-7	-6	-6	-5	-4	-3	-3	-2	-1	-2	-3	-4	-5	-5	-5	-5	-6	-6	-5.2	-1.0
23-Jan	-6	-6	-6	-6	-6	-6	-6	-6	-6	-7	-4	-2	-5	-7	-7	-10	-11	-13	-13	-14	-15	-14	-14	-15	-8.6	-2.0
24-Jan	-15	-16	-16	-17	-18	-18	-19	-19	-19	-19	-16	-12	-10	-7	-6	-6	-10	-14	-16	-17	-18	-18	-19	-19	-15.2	-6.2
25-Jan	-18	-19	-19	-19	-20	-20	-19	-18	-18	-19	-16	-12	-6	-5	-7	-7	-7	-8	-9	-9	-8	-6	-4	-4	-12.3	-3.6
26-Jan	-2	-1	-2	-3	-3	-3	-3	-3	-3	-3	-1	3	4	5	6	6	5	4	4	4	4	4	3	1.1	5.6	
27-Jan	4	4	4	4	4	3	3	3	2	1	2	3	4	5	6	4	4	3	3	1	0	0	-1	-1	2.8	6.2
28-Jan	-1	-1	-1	-1	0	0	1	1	1	2	2	3	6	8	8	7	6	5	4	3	3	4	3	3	2.7	7.9
29-Jan	3	2	2	2	1	1	-1	-2	-2	0	2	3	4	6	7	7	4	1	0	-2	-4	-5	-6	-7	0.7	6.8
30-Jan	-7	-5	-6	-9	-11	-11	-12	-13	-13	-12	-9	-6	-4	-2	0	0	0	-1	-2	-2	-2	-2	-3	-3	-5.6	-0.1
31-Jan	-3	-4	-4	-3	-3	-2	-2	-2	-2	-2	-2	-2	-2	-2	-1	-1	-2	-3	-4	-4	-5	-5	-6	-6	-3.0	-1.4
-11.2 -11.4 -11.4 -11.6 -11.8 -12.0 -12.1 -12.0 -12.3 -12.0 -10.5 -8.6 -7.2 -6.4 -6.0 -6.4 -7.8 -9.3 -10.1 -10.5 -10.9 -11.0 -10.9 -11.1 Diurnal Average 3.9 3.9 4.2 4.2 3.8 2.7 2.9 3.2 2.2 2.0 1.8 3.3 6.3 7.9 7.7 7.3 5.7 4.6 3.9 3.7 3.8 4.0 3.7 3.2 Diurnal Maximum																										

Hourly Averages

External Temperature (ET) - °C

Henry Pirker - January 2016



Hourly Averages

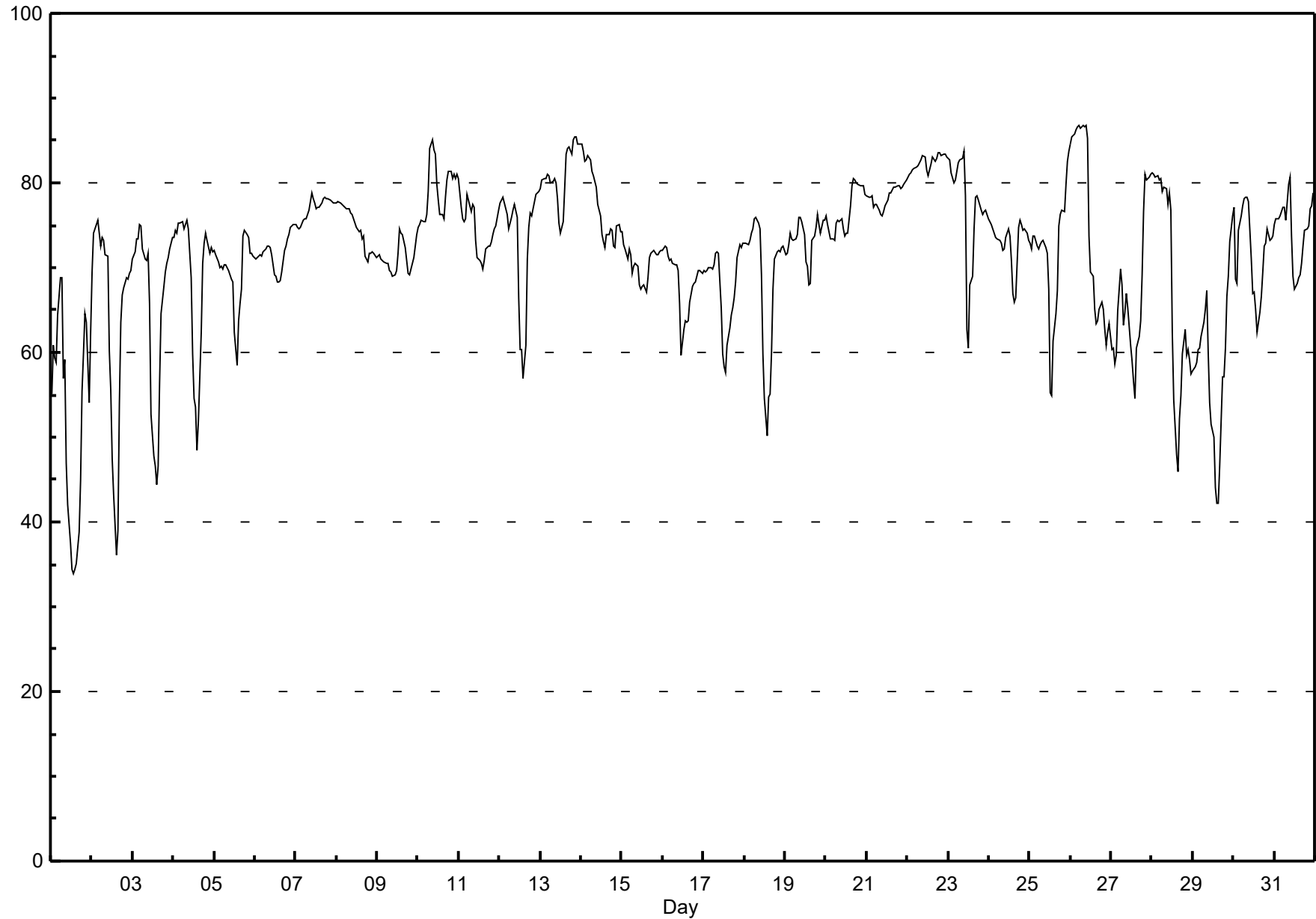
Relative Humidity (RH) - %

Henry Pirker - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 86.8 % on Jan 26 10:00 Maximum Daily Average: 82.3 % on Jan 22																								Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 34 % on Jan 1 14:00 Maximum Diurnal Average: 75.0 % at hour 9 Monthly Average: 71.68 %												Minimum Daily Average: 52.5 % on Jan 1 Minimum Diurnal Average: 63.5 % at hour 15 Percentiles: P ₁ = 38.8 P ₁₀ = 60.1 Q ₁ = 69.0 Median = 73.3 Q ₃ = 77.2 P ₉₀ = 80.8 P ₉₉ = 86.0														
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	55	61	59	59	64	69	69	57	59	47	42	38	34	34	34	35	39	45	55	60	65	64	54	62	52.5	68.9
2-Jan	70	74	75	76	74	72	74	73	72	71	60	56	47	43	36	39	54	64	67	68	69	69	69	70	64.2	75.7
3-Jan	71	72	73	73	75	75	72	71	71	72	66	53	48	47	44	47	56	65	68	70	70	71	72	74	65.6	75.0
4-Jan	74	74	74	75	75	75	75	75	76	75	69	60	55	54	48	52	62	70	73	74	73	72	72	72	68.9	75.6
5-Jan	72	71	71	70	70	70	70	70	70	69	69	68	62	58	64	66	67	74	74	74	74	72	72	71	69.5	74.4
6-Jan	71	71	71	71	71	72	72	73	73	72	71	69	69	68	68	69	69	72	72	73	74	75	75	75	71.6	75.1
7-Jan	75	75	75	75	76	76	76	76	77	79	78	78	77	77	77	78	78	78	78	78	78	78	78	78	77.0	78.9
8-Jan	78	78	78	77	77	77	77	77	76	76	76	75	75	74	74	73	74	71	71	72	72	72	72	71	74.7	77.8
9-Jan	71	71	71	71	71	71	71	70	69	69	69	70	72	75	74	74	72	71	69	69	70	71	73	74	71.1	74.6
10-Jan	75	75	76	75	75	76	79	84	85	84	83	80	78	76	76	76	78	80	81	81	80	81	80	81	79.1	85.0
11-Jan	80	77	76	75	76	79	77	77	77	77	73	71	71	70	70	71	72	73	73	73	74	75	75	77	74.5	80.5
12-Jan	78	78	78	78	76	75	75	76	77	78	76	66	60	60	57	61	71	75	76	76	78	79	79	79	73.4	78.9
13-Jan	79	80	81	81	81	81	80	80	81	80	78	75	74	75	79	83	84	84	83	85	85	85	85	85	81.1	85.4
14-Jan	85	84	83	83	83	83	81	81	80	80	77	76	74	73	72	74	74	75	74	73	72	75	75	74	77.5	84.6
15-Jan	74	73	72	71	72	72	69	70	71	70	68	67	68	68	67	69	71	72	72	72	72	71	72	72	70.6	74.2
16-Jan	72	73	72	71	71	71	70	70	70	70	66	60	63	64	64	64	66	68	68	68	69	70	70	69	68.2	72.5
17-Jan	70	69	70	70	70	70	70	72	72	72	65	60	58	58	61	63	64	65	66	68	71	73	72	73	67.6	72.9
18-Jan	73	73	73	73	74	75	76	76	75	75	69	60	55	50	55	55	60	67	71	72	72	72	72	73	68.5	75.9
19-Jan	72	72	73	74	73	73	73	74	76	76	75	74	71	70	68	68	73	74	75	76	75	74	76	76	73.4	76.4
20-Jan	76	75	74	73	73	73	75	76	75	76	75	74	74	74	77	80	81	80	80	80	80	80	80	79	76.6	80.5
21-Jan	79	78	78	78	77	77	77	77	76	76	77	77	78	79	79	79	80	80	80	80	79	79	80	80	78.4	80.4
22-Jan	81	81	81	81	82	82	82	82	83	83	83	81	81	82	82	83	83	83	84	84	83	83	83	83	82.3	83.6
23-Jan	83	83	81	80	80	81	82	83	83	84	78	63	61	68	69	75	78	79	78	77	76	77	77	76	77.1	83.7
24-Jan	76	75	75	74	74	73	73	73	72	72	74	75	74	71	67	66	66	75	76	75	74	75	74	73	72.9	75.7
25-Jan	73	72	74	74	73	72	73	73	73	72	72	68	55	55	61	65	67	75	76	77	77	80	83	84	71.7	83.7
26-Jan	85	85	86	86	87	87	87	87	87	87	85	74	69	69	65	63	64	65	66	65	63	61	62	63	74.9	86.8
27-Jan	60	60	59	60	65	70	68	63	65	67	65	61	59	57	55	61	62	64	69	77	81	80	81	81	66.2	81.1
28-Jan	81	81	81	81	80	81	79	79	79	77	79	77	62	54	48	46	52	55	60	63	60	60	59	58	68.0	81.3
29-Jan	58	58	59	60	61	62	64	65	67	60	54	52	50	44	42	42	47	57	57	60	67	69	73	76	58.5	76.1
30-Jan	77	69	68	74	76	77	78	78	78	78	71	67	67	65	62	65	67	70	73	73	75	73	73	74	72.0	78.3
31-Jan	75	76	76	76	77	77	77	76	80	81	74	69	67	68	69	69	71	73	74	75	75	77	77	79	74.4	80.7
74.1 74.0 73.9 74.1 74.5 74.9 74.9 74.6 75.0 74.3 71.5 67.5 64.8 63.9 63.5 64.8 67.8 70.8 72.3 73.1 73.6 73.9 74.0 74.5																								Diurnal Average		
84.6 85.4 85.8 86.3 86.5 86.7 86.5 86.8 86.6 86.8 85.2 81.5 80.9 81.6 82.2 83.4 84.0 84.2 83.5 85.0 85.4 85.4 84.6 84.6																								Diurnal Maximum		

Hourly Averages

Relative Humidity (RH) - %
Henry Pirker - January 2016



Hourly Averages

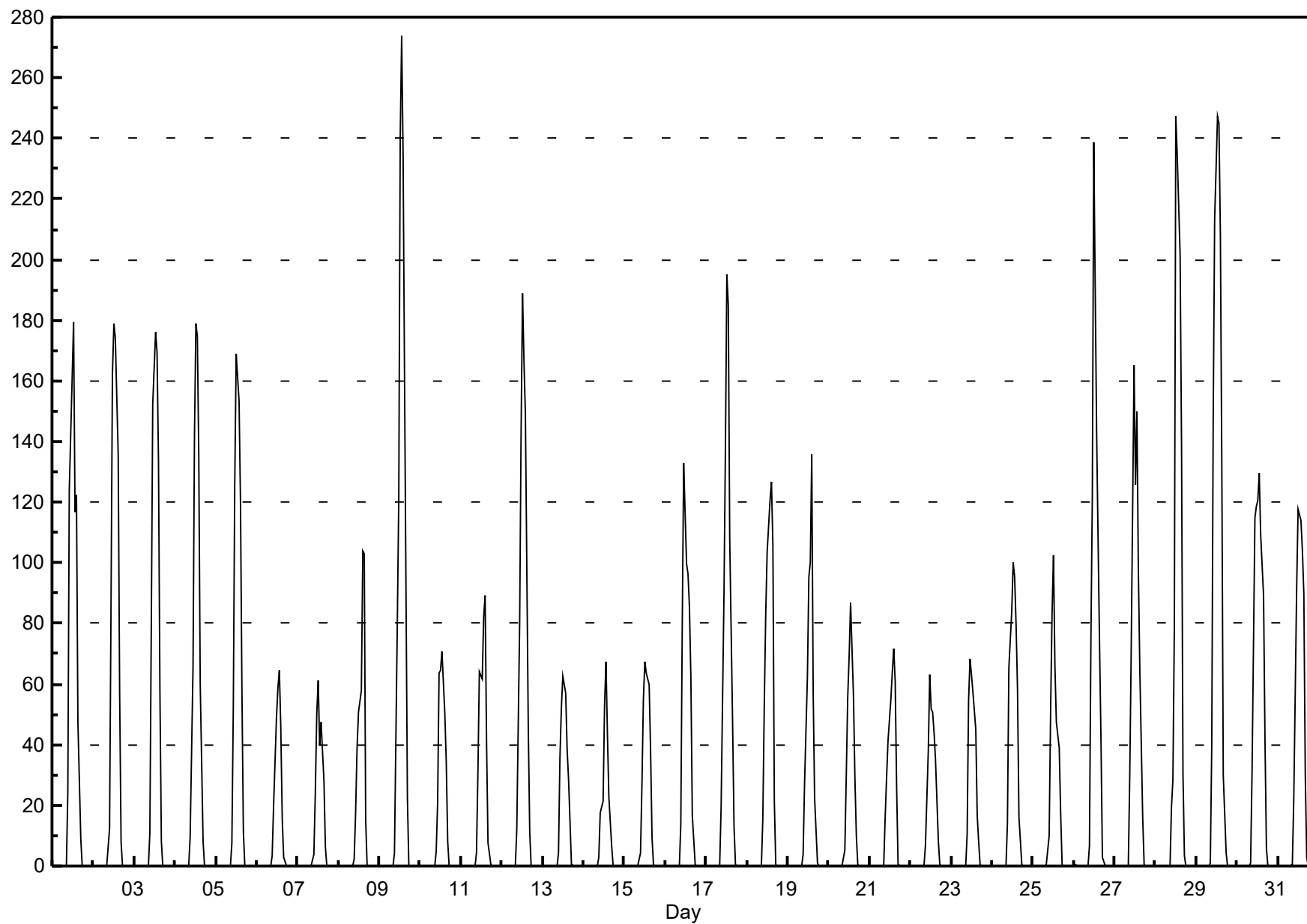
Solar Radiation (SR) - W/m²

Henry Pirker - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 273.6 W/m ² on Jan 9 14:00 Maximum Daily Average: 52.8 W/m ² on Jan 29																								Hours in Service: 744 Hours of Data: 744		
Minimum Value: 0 W/m ² on Jan 1 01:00 Minimum Daily Average: 9.8 W/m ² on Jan 14 Maximum Diurnal Average: 123.3 W/m ² at hour 13 Minimum Diurnal Average: 0.0 W/m ² at hour 3 Monthly Average: 24.45 W/m ² Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 25.2 P ₉₀ = 94.4 P ₉₉ = 230.8																								Hours of Missing Data: 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	0	0	0	0	0	0	0	0	0	25	124	161	179	117	122	48	9	0	0	0	0	0	0	0	32.7	179.3
2-Jan	0	0	0	0	0	0	0	0	0	13	85	162	179	174	136	57	8	0	0	0	0	0	0	0	33.9	178.8
3-Jan	0	0	0	0	0	0	0	0	0	11	79	153	176	170	134	57	8	0	0	0	0	0	0	0	32.8	176.0
4-Jan	0	0	0	0	0	0	0	0	0	9	65	141	179	175	136	60	8	0	0	0	0	0	0	0	32.3	179.1
5-Jan	0	0	0	0	0	0	0	0	0	7	52	126	169	153	120	57	11	0	0	0	0	0	0	0	29.0	168.7
6-Jan	0	0	0	0	0	0	0	0	0	3	20	49	59	65	45	15	3	0	0	0	0	0	0	0	10.8	64.7
7-Jan	0	0	0	0	0	0	0	0	0	4	24	50	61	40	48	28	6	0	0	0	0	0	0	0	10.9	61.1
8-Jan	0	0	0	0	0	0	0	0	0	2	17	39	51	58	104	103	15	0	0	0	0	0	0	0	16.2	103.9
9-Jan	0	0	0	0	0	0	0	0	0	4	81	121	240	274	234	161	22	0	0	0	0	0	0	0	47.4	273.6
10-Jan	0	0	0	0	0	0	0	0	0	5	21	64	65	71	50	34	8	0	0	0	0	0	0	0	13.2	70.7
11-Jan	0	0	0	0	0	0	0	0	0	4	31	64	62	82	89	41	8	0	0	0	0	0	0	0	15.9	89.3
12-Jan	0	0	0	0	0	0	0	0	0	12	80	143	189	167	149	46	11	0	0	0	0	0	0	0	33.2	188.8
13-Jan	0	0	0	0	0	0	0	0	0	4	36	52	63	57	38	28	15	0	0	0	0	0	0	0	12.2	62.8
14-Jan	0	0	0	0	0	0	0	0	0	3	17	21	53	67	44	23	6	0	0	0	0	0	0	0	9.8	67.3
15-Jan	0	0	0	0	0	0	0	0	0	4	27	55	67	64	60	38	10	0	0	0	0	0	0	0	13.5	67.2
16-Jan	0	0	0	0	0	0	0	0	0	14	79	133	100	97	86	62	17	1	0	0	0	0	0	0	24.4	132.7
17-Jan	0	0	0	0	0	0	0	0	0	19	89	137	195	185	108	47	13	0	0	0	0	0	0	0	33.0	195.1
18-Jan	0	0	0	0	0	0	0	0	0	15	53	82	104	121	127	106	22	1	0	0	0	0	0	0	26.2	126.5
19-Jan	0	0	0	0	0	0	0	0	0	4	27	63	95	100	136	58	22	1	0	0	0	0	0	0	21.1	135.8
20-Jan	0	0	0	0	0	0	0	0	0	5	30	55	69	87	56	29	10	1	0	0	0	0	0	0	14.2	86.9
21-Jan	0	0	0	0	0	0	0	0	0	16	29	41	55	64	72	61	26	0	0	0	0	0	0	0	15.1	71.8
22-Jan	0	0	0	0	0	0	0	0	0	7	38	63	52	51	44	35	8	0	0	0	0	0	0	0	12.4	63.1
23-Jan	0	0	0	0	0	0	0	0	0	11	55	68	63	57	45	16	8	1	0	0	0	0	0	0	13.5	68.4
24-Jan	0	0	0	0	0	0	0	0	0	14	65	84	100	95	80	58	16	1	0	0	0	0	0	0	21.4	100.3
25-Jan	0	0	0	0	0	0	0	0	0	10	51	83	103	66	47	39	17	0	0	0	0	0	0	0	17.4	102.7
26-Jan	0	0	0	0	0	0	0	0	0	7	74	122	239	142	108	74	42	3	0	0	0	0	0	0	33.8	238.7
27-Jan	0	0	0	0	0	0	0	0	0	29	70	165	126	150	97	65	16	1	0	0	0	0	0	0	30.0	165.4
28-Jan	0	0	0	0	0	0	0	0	0	20	29	79	247	235	201	138	30	3	0	0	0	0	0	0	40.9	247.1
29-Jan	0	0	0	0	0	0	0	0	1	40	147	213	247	245	208	131	30	4	0	0	0	0	0	0	52.8	247.3
30-Jan	0	0	0	0	0	0	0	0	1	31	115	119	120	130	109	89	41	6	0	0	0	0	0	0	31.7	129.7
31-Jan	0	0	0	0	0	0	0	0	1	22	56	92	118	114	104	90	30	3	0	0	0	0	0	0	26.2	117.6
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 12.0 57.0 96.8 123.3 118.4 101.1 61.2 16.0 0.9 0.0 0.0 0.0 0.0 0.0 0.0																								Diurnal Average		
0.0 0.4 0.0 0.1 0.1 0.1 0.0 0.0 1.0 39.8 147.3 212.9 247.3 273.6 234.0 161.1 42.1 5.7 0.0 0.0 0.1 0.0 0.1 0.0																								Diurnal Maximum		

Hourly Averages

Solar Radiation (SR) - W/m²
Henry Pirker - January 2016



Hourly Averages

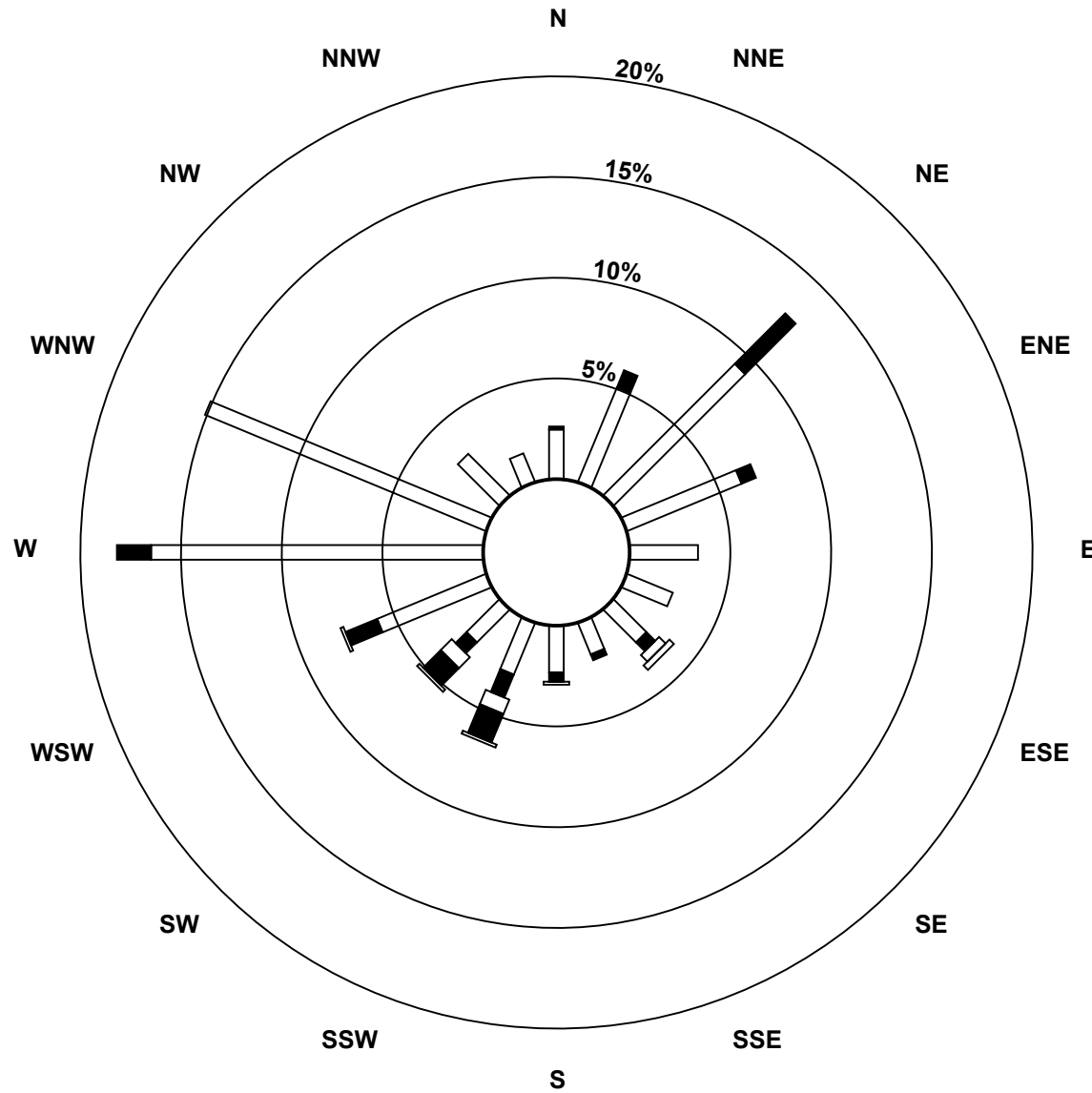
Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - January 2016

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	5	2	7	4	1	1	1	2	6	7	7	8	7	9	14	9	4	2	1	0	1	2	2	1	3.4	14.3
Dir	278	260	279	299	203	237	194	216	198	219	169	184	184	206	205	243	247	255	29	18	213	194	203	96	216.3	204.6
2 Spd	1	3	0	4	3	2	2	3	3	1	0	2	3	2	1	1	3	4	4	4	3	3	3	2	1.5	4.3
Dir	80	73	138	295	288	268	308	291	244	298	127	116	160	162	174	221	275	281	291	277	288	284	293	270	274.9	276.8
3 Spd	1	1	1	2	0	1	1	30	1	2	2	1	2	1	0	2	2	1	2	11	3	2	9	2	1.9	30.4
Dir	244	352	198	105	92	259	321	130	309	284	282	289	180	177	234	255	259	353	274	137	272	187	139	194	152.6	130.1
4 Spd	3	2	4	3	4	3	1	1	1	2	3	1	2	3	2	2	2	1	1	1	3	N	6	2	1.4	6.3
Dir	260	232	264	242	255	236	244	205	224	265	262	277	150	168	194	274	288	11	286	301	327	N	133	289	243.8	133.0
5 Spd	3	3	2	2	4	1	3	3	3	6	2	2	3	5	6	3	3	1	1	1	1	1	3	2	1.7	6.0
Dir	297	331	301	300	256	222	300	301	259	155	267	278	249	209	219	291	204	149	187	229	298	248	210	320	252.2	219.4
6 Spd	2	5	3	3	3	2	1	2	1	1	1	1	4	2	2	0	1	3	2	2	2	0	1	3	1.3	4.7
Dir	300	160	273	296	287	304	300	290	287	295	282	261	262	260	285	264	261	269	319	24	37	59	127	255	276.9	159.7
7 Spd	4	3	1	0	0	0	1	3	4	3	5	5	5	3	5	3	5	5	5	5	5	3	3	4	2.5	5.4
Dir	257	261	291	272	333	265	287	66	70	60	73	66	68	45	51	30	42	52	68	77	95	99	78	64	61.7	65.7
8 Spd	4	5	4	3	1	3	2	2	5	4	6	4	3	2	0	2	1	2	2	3	3	3	3	4	1.7	5.8
Dir	68	63	72	83	74	43	51	63	65	57	71	53	58	43	81	46	18	271	291	285	284	297	294	299	39.9	70.7
9 Spd	3	2	4	2	2	3	3	3	2	3	2	2	3	1	2	3	3	13	7	2	1	1	1	1	1.4	12.6
Dir	305	316	285	286	265	278	271	287	288	292	288	277	247	232	200	250	276	140	156	280	20	244	247	166	249.8	140.1
10 Spd	2	0	0	2	2	2	4	8	8	5	4	4	5	4	1	0	0	0	1	1	3	1	1	0	2.1	8.4
Dir	118	99	142	284	285	294	290	247	252	282	261	291	283	283	236	272	133	304	284	268	340	295	297	111	273.5	246.7
11 Spd	5	9	9	8	6	6	6	6	7	6	6	7	8	8	5	6	6	4	3	1	1	2	3	4	4.7	9.4
Dir	44	44	37	46	42	28	6	17	29	44	45	49	48	57	41	44	47	70	38	36	291	256	266	271	37.0	43.8
12 Spd	2	2	3	2	2	3	1	1	1	0	2	3	2	2	2	0	1	1	2	3	3	4	2	3	0.7	4.1
Dir	268	179	177	185	250	271	285	103	327	86	56	109	93	100	129	340	263	321	277	269	298	276	278	290	256.7	276.3
13 Spd	2	1	2	2	1	1	1	1	2	1	1	1	1	2	3	5	4	3	4	2	3	2	2	4	1.1	5.1
Dir	325	232	280	300	231	217	82	111	132	131	141	113	164	187	201	181	198	250	253	255	285	266	308	300	235.0	180.5
14 Spd	4	4	2	1	1	5	5	5	4	2	3	3	3	5	7	5	5	4	2	2	3	5	5	6	3.1	6.7
Dir	301	291	297	283	60	44	48	47	48	71	50	43	33	42	49	47	50	51	67	45	60	69	47	51	42.0	49.3
15 Spd	5	5	4	3	3	4	4	4	5	6	4	5	5	5	2	4	6	7	7	6	6	6	5	7	4.8	7.3
Dir	48	51	51	56	74	48	50	50	64	50	52	53	53	51	22	43	53	45	48	46	41	37	33	49	48.7	49.0
16 Spd	5	4	4	4	7	5	7	6	5	4	3	4	5	5	5	5	5	5	5	5	5	3	3	3	4.5	6.7
Dir	33	27	26	20	38	29	32	23	20	10	12	13	18	18	21	15	10	22	2	350	358	19	10	29	18.9	37.6
17 Spd	4	6	5	7	5	5	6	4	4	3	3	3	4	5	4	2	3	3	2	3	2	2	4	3	2.7	6.8
Dir	55	57	49	62	77	66	62	48	45	39	4	17	42	45	29	60	23	48	344	328	259	264	254	216	42.8	62.2
18 Spd	2	3	3	0	3	1	2	0	3	11	3	3	2	1	4	3	1	2	3	3	31	N	13	17	2.8	30.6
Dir	137	126	130	141	264	285	328	88	179	141	295	291	287	350	72	80	20	301	303	280	133	N	146	142	140.4	132.8
19 Spd	3	2	2	3	2	2	2	2	2	2	2	2	2	3	2	2	3	3	1	2	2	3	3	3	1.6	3.4
Dir	249	41	311	3	49	118	108	76	71	122	46	70	81	27	38	40	39	49	48	46	42	355	4	358	40.2	4.0
20 Spd	2	1	1	1	2	0	3	3	3	4	2	3	2	3	4	3	4	5	5	4	3	3	1	2	2.0	5.4
Dir	22	326	315	272	257	117	123	117	120	114	93	132	131	93	67	78	72	93	92	88	87	94	98	253	94.3	92.7
21 Spd	5	2	2	1	5	4	1	5	2	1	1	0	3	0	5	2	1	3	2	3	2	3	1	1	1.7	5.3
Dir	301	305	335	91	291	310	359	293	288	268	280	122	132	316	294	318	93	280	257	261	267	273	273	253	289.4	290.8
22 Spd	0	2	1	2	3	1	2	0	0	1	1	1	3	1	3	6	7	8	4	2	3	2	5	5	1.4	8.0
Dir	313	234	174	127	125	138	109	67	97	86	60	66	53	16	32	48	30	40	31	23	3	322	282	283	29.3	39.8

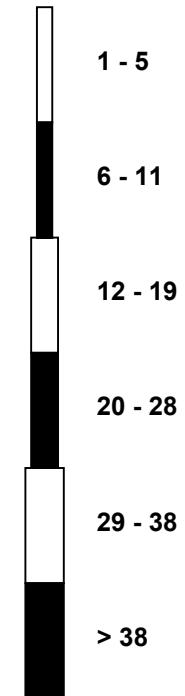
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	6	6	9	9	3	3	2	2	2	1	0	3	3	4	4	4	2	1	3	3	2	3	3	3	2.8	8.9
Dir	263	249	257	269	251	205	184	168	119	121	30	253	249	291	274	280	279	273	276	280	293	288	285	290	263.3	256.6
24 Spd	2	3	3	4	3	0	1	2	2	3	2	1	2	1	2	2	2	3	2	2	5	1	3	2	1.4	5.3
Dir	284	269	259	271	265	294	279	303	281	284	270	230	264	236	287	284	279	278	292	72	157	313	173	166	261.2	156.7
25 Spd	2	1	4	2	1	2	1	1	1	2	3	2	1	2	4	2	2	1	3	3	2	1	1	3	1.5	4.0
Dir	279	268	259	301	280	252	131	260	280	285	269	283	290	264	265	278	268	288	281	271	283	340	110	125	272.6	265.2
26 Spd	1	0	1	1	1	0	2	1	2	3	4	7	7	7	11	15	20	25	23	23	27	21	20	19	9.3	26.5
Dir	92	51	77	79	82	323	111	183	132	167	182	207	221	229	206	201	207	212	210	207	204	221	229	237	210.7	203.7
27 Spd	20	16	19	16	9	5	8	7	5	1	2	3	2	0	1	1	4	5	1	2	2	1	1	1	3.8	20.3
Dir	234	226	219	218	238	266	268	239	227	236	43	87	77	24	11	7	49	60	110	283	276	296	263	275	233.4	233.9
28 Spd	1	1	1	1	1	1	1	2	1	0	2	4	7	22	29	29	22	21	17	17	20	27	26	28	11.1	29.2
Dir	106	76	297	282	292	253	63	276	84	282	265	196	202	213	213	217	209	197	190	192	205	210	216	215	209.0	216.7
29 Spd	26	24	23	18	13	12	7	4	6	12	7	9	8	3	5	3	1	2	2	3	3	2	1	0	7.7	26.5
Dir	214	215	214	211	221	220	210	273	220	213	200	201	249	250	243	240	259	198	276	235	293	279	123	232	220.1	214.2
30 Spd	3	5	2	1	1	2	1	4	2	3	3	3	3	1	2	3	3	2	2	1	1	2	1	2	1.8	4.6
Dir	145	194	262	188	275	299	267	274	293	264	277	252	299	267	267	256	274	314	262	317	286	291	276	267	265.5	194.1
31 Spd	2	4	4	3	2	2	2	6	7	7	6	9	9	10	8	7	6	4	4	3	1	2	0	0	4.4	9.7
Dir	280	278	265	265	274	239	224	264	271	252	264	278	268	267	262	248	254	261	246	286	307	248	283	70	263.8	267.1
Spd	1.7	1.0	1.8	1.2	1.2	0.7	0.5	0.2	0.3	0.5	0.3	0.2	0.5	0.9	1.5	1.3	0.8	0.6	1.0	1.1	1.3	1.8	1.8	1.7	Diurnal Average	
Dir	254.0	234.4	250.2	256.7	264.2	291.3	342.6	160.7	270.6	191.4	302.0	217.0	234.0	231.0	226.4	237.4	244.8	186.7	234.4	229.1	195.5	243.3	215.5	231.5	Diurnal Maximum	
Spd	26.5	24.3	23.2	17.8	13.4	11.6	8.1	30.4	8.0	12.3	7.2	9.2	9.2	22.2	28.6	29.2	21.6	25.0	22.5	23.4	30.6	26.8	26.4	27.6		
Dir	214.2	215.2	214.2	211.5	220.7	219.7	268.1	130.1	251.8	213.5	199.9	200.9	267.7	212.9	212.9	216.7	209.4	212.4	210.0	206.9	132.8	210.5	215.5	214.8		
Maximum Speed Value: 31 km/h on Jan 18 21:00							Minimum Speed Value: 0 km/h on Jan 7 05:00													Hours in Service: 744						
Maximum Daily Speed Average: 11.1 km/h on Jan 28							Minimum Daily Speed Average: 0.7 km/h on Jan 6													Hours of Data: 742						
Maximum Diurnal Speed Average: 1.8 km/h at hour 22							Minimum Diurnal Speed Average: 0.2 km/h at hour 8													Hours of Missing Data: 2						
Monthly Average Velocity: 0.88 km/h 237.49 deg							Speed Percentiles: P ₁ = 0.2 P ₁₀ = 0.9 Q ₁ = 1.6 Median = 2.7 Q ₃ = 4.4 P ₉₀ = 6.9 P ₉₉ = 26.3													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	38		5		0		0		0		0		43													
NorthEast	89		44		0		0		0		0		133													
East	64		6		0		0		0		0		70													
SouthEast	39		6		4		0		2		0		51													
South	36		8		3		1		0		0		48													
SouthWest	42		14		8		18		2		0		84													
West	215		23		0		0		0		0		238													
NorthWest	75		0		0		0		0		0		75													
Total	598		106		15		19		4		0		742													

Wind Rose

Wind Speed (WS) (km/h)
Henry Pirker - January 2016



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Henry Pirker - January 2016

Maximum Speed: 37 km/h on Jan 18 21:00																			Maximum Daily Speed Average: 12.1 km/h on Jan 28										Hours in Service: 744	
Minimum Speed: 0 km/h on Jan 7 05:00																			Minimum Daily Speed Average: 2.3 km/h on Jan 13										Hours of Data: 742	
Maximum Diurnal Speed Average: 5.6 km/h at hour 21																			Minimum Diurnal Speed Average: 2.9 km/h at hour 6										Hours of Missing Data: 2	
Monthly Average Speed: 4.39 km/h																			Percentiles: P ₁ = 0.3 P ₁₀ = 1.2 Q ₁ = 2.0 Median = 3.2 Q ₃ = 4.9 P ₉₀ = 7.6 P ₉₉ = 26.6										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	5	3	7	4	2	1	2	3	6	7	7	8	8	9	14	10	5	2	2	1	2	2	3	1	4.7	14.4				
2-Jan	1	3	2	4	6	3	3	4	8	3	0	2	3	3	1	1	3	4	5	6	4	4	4	4	3.3	8.0				
3-Jan	1	2	1	2	0	3	8	36	1	2	3	1	2	1	1	2	3	7	5	16	4	8	13	2	5.1	35.6				
4-Jan	4	2	4	3	5	3	3	1	2	3	4	1	2	3	3	2	3	5	2	1	4	N	9	3	3.2	8.6				
5-Jan	3	8	3	3	5	2	3	3	4	11	4	4	3	5	7	3	3	2	1	2	1	1	6	6	3.9	10.7				
6-Jan	2	11	3	3	6	2	1	2	2	1	0	1	4	3	2	0	2	3	2	2	2	1	1	4	2.6	11.1				
7-Jan	4	3	1	0	0	0	2	3	4	3	5	6	5	4	5	3	5	5	5	5	5	3	3	4	3.6	5.5				
8-Jan	5	5	4	4	2	3	3	2	6	5	6	5	4	2	1	2	2	3	4	3	3	3	3	4	3.4	6.0				
9-Jan	3	2	4	2	2	3	3	3	3	3	3	2	3	1	2	4	3	18	13	2	5	1	1	1	3.6	18.1				
10-Jan	2	0	1	3	4	3	4	8	8	5	5	4	5	4	1	1	0	0	1	2	3	1	2	0	2.8	8.5				
11-Jan	5	9	9	8	6	6	6	6	7	6	6	7	8	8	5	6	6	4	3	2	1	3	4	4	5.7	9.5				
12-Jan	2	3	4	3	3	4	2	2	1	1	3	3	2	2	2	1	2	2	2	4	3	4	3	3	2.6	4.4				
13-Jan	3	1	2	2	1	1	1	1	3	2	1	0	1	2	3	5	4	4	4	2	3	3	3	4	2.3	5.1				
14-Jan	4	4	3	1	1	5	5	5	4	2	3	3	3	5	7	5	5	4	2	2	3	5	5	6	4.0	6.8				
15-Jan	5	5	4	3	4	4	4	4	5	6	4	5	5	5	2	4	6	7	7	6	6	6	5	7	4.9	7.4				
16-Jan	5	4	4	4	7	5	7	6	5	4	3	4	5	5	5	5	5	5	5	5	5	4	3	3	4.7	6.8				
17-Jan	4	7	5	7	6	5	6	4	4	3	3	3	4	5	5	3	3	3	3	3	3	3	4	3	4.1	7.0				
18-Jan	2	3	3	1	4	1	7	4	8	14	3	3	2	2	4	3	1	2	5	5	37	N	19	22	6.7	37.0				
19-Jan	6	7	2	3	2	2	2	2	3	2	2	3	3	3	2	2	3	3	1	2	3	4	4	3	2.9	6.8				
20-Jan	2	1	1	2	2	0	3	4	4	4	2	3	2	3	5	4	4	6	5	4	3	3	1	4	3.0	6.0				
21-Jan	5	2	2	2	5	4	2	5	2	2	1	1	3	2	5	2	2	3	2	3	3	4	1	1	2.7	5.4				
22-Jan	1	2	2	2	3	1	3	0	0	1	1	1	3	1	3	6	7	8	5	3	3	3	5	5	2.9	8.1				
23-Jan	6	6	9	9	3	3	2	2	2	1	0	3	3	4	5	4	2	2	4	3	2	3	3	3	3.5	9.0				
24-Jan	2	3	3	4	3	1	1	2	2	4	2	1	2	1	2	2	2	5	3	6	9	2	3	5	2.8	8.6				
25-Jan	3	5	7	2	2	4	1	4	3	3	4	2	1	2	4	2	2	2	4	3	3	1	2	3	2.8	6.9				
26-Jan	1	1	1	2	1	0	2	2	2	4	5	7	8	7	11	15	20	25	23	24	27	21	20	19	10.4	26.8				
27-Jan	20	17	19	16	9	5	8	7	6	2	2	3	2	1	1	1	4	5	2	3	2	2	3	1	5.9	20.4				
28-Jan	2	2	1	2	2	1	1	2	2	1	2	5	8	22	29	29	22	21	17	17	20	27	27	28	12.1	29.4				
29-Jan	27	24	23	18	14	12	7	4	6	12	7	9	8	4	5	3	2	2	4	4	3	3	1	1	8.5	26.6				
30-Jan	4	5	4	2	2	2	2	4	2	3	4	3	3	2	3	3	3	2	2	2	1	2	2	2	2.6	4.8				
31-Jan	2	4	4	3	2	2	2	6	7	7	7	9	9	10	8	7	6	4	4	3	1	2	0	0	4.6	9.8				
4.6 5.0 4.6 4.0 3.7 2.9 3.4 4.6 4.0 4.1 3.4 3.7 4.0 4.2 4.9 4.5 4.5 5.5 4.7 4.7 5.6 4.5 5.2 5.1																									Diurnal Average					
26.6 24.4 23.2 17.9 13.6 11.8 8.5 35.6 8.1 14.3 7.4 9.4 9.3 22.4 28.8 29.4 22.0 25.2 22.7 23.5 37.0 26.9 26.6 27.7																									Diurnal Maximum					
N - Not Valid																														
All monthly, daily, and diurnal averages have been calculated using scalar methods																														

Hourly Standard Deviations

Wind Direction (WD) - deg

Henry Pirker - January 2016

Maximum Value: 100.0 deg on Jan 21 14:00																				Hours in Service: 744					
Minimum Value: 4.7 deg on Jan 27 00:00																				Hours of Data: 744					
																				Hours of Missing Data: 0					
Percentiles: P ₁ = 5.2 P ₁₀ = 10.1 Q ₁ = 15.4 Median = 26.8 Q ₃ = 47.4 P ₉₀ = 66.3 P ₉₉ = 88.2																				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	16	55	14	49	62	70	66	45	13	19	9	14	9	16	8	23	23	74	61	86	38	23	65	50	85.6
2-Jan	47	19	83	22	41	35	39	38	53	78	69	19	18	25	44	59	22	9	26	34	28	24	23	58	83.5
3-Jan	57	64	85	87	41	83	58	70	51	39	50	64	25	32	69	41	30	58	47	73	40	59	66	14	86.6
4-Jan	36	23	24	27	24	29	57	35	46	48	29	71	48	13	25	22	42	60	58	61	46	85	75	44	85.0
5-Jan	25	51	27	37	37	67	40	41	37	59	42	38	21	15	37	28	16	77	71	43	64	33	32	52	77.2
6-Jan	53	71	31	16	41	12	30	36	54	39	66	31	20	33	31	48	57	20	46	19	26	62	24	23	71.3
7-Jan	23	19	39	69	53	42	61	12	9	12	11	13	16	33	19	26	21	13	17	19	14	26	34	21	68.9
8-Jan	20	16	21	28	51	21	39	47	25	27	16	23	34	48	60	33	39	72	34	15	18	12	11	14	71.8
9-Jan	13	28	22	33	13	12	15	14	17	12	13	18	12	29	17	29	20	72	70	28	62	48	36	47	72.3
10-Jan	15	83	84	50	49	29	19	5	9	43	9	6	5	25	24	70	45	58	50	47	16	61	56	70	83.7
11-Jan	35	9	11	11	14	17	16	13	12	12	14	14	12	13	18	12	13	13	25	51	56	24	25	19	55.6
12-Jan	46	30	28	27	61	49	71	85	86	88	46	24	40	26	24	79	70	91	62	26	9	27	44	47	91.2
13-Jan	66	87	62	24	28	66	62	65	37	66	36	53	33	16	11	8	12	56	12	29	18	39	21	7	87.1
14-Jan	14	28	19	80	79	10	13	11	13	25	20	17	18	20	10	15	16	9	35	17	21	17	8	9	80.2
15-Jan	11	9	10	17	21	15	14	19	15	9	17	16	16	16	31	27	16	12	11	9	11	12	14	12	31.0
16-Jan	22	12	25	20	11	13	12	12	15	21	24	20	15	18	13	22	17	21	23	19	20	19	27	30	30.5
17-Jan	20	13	13	14	13	13	12	22	28	17	24	29	28	18	15	41	26	18	35	37	65	45	14	37	65.2
18-Jan	33	19	9	47	34	44	62	57	57	70	9	16	37	67	25	19	34	39	52	59	71	66	73	59	72.9
19-Jan	47	64	29	51	47	24	51	20	29	18	42	40	45	24	40	49	31	11	49	23	31	24	23	30	63.5
20-Jan	27	26	25	44	27	48	9	8	9	10	48	40	34	23	16	24	28	27	18	18	24	24	40	70	70.4
21-Jan	9	25	28	68	9	13	82	22	15	28	22	77	25	100	24	80	41	44	42	20	42	30	77	70	100.0
22-Jan	73	46	44	27	57	62	27	82	52	36	39	44	27	28	24	17	13	9	25	24	25	44	12	15	81.7
23-Jan	8	8	6	10	26	22	17	36	44	33	50	17	11	10	17	26	35	75	49	25	14	10	10	9	75.4
24-Jan	10	14	13	15	33	82	47	30	13	15	17	13	23	27	21	31	24	35	28	59	53	39	91	66	90.7
25-Jan	46	51	44	25	58	55	46	51	47	16	31	20	35	22	20	32	26	76	62	42	35	31	56	16	76.4
26-Jan	24	83	53	31	48	95	60	61	53	38	35	13	29	16	9	11	8	7	7	6	7	6	7	5	94.6
27-Jan	5	9	6	6	16	21	19	20	20	86	50	11	42	45	74	48	24	14	59	26	47	78	80	59	86.2
28-Jan	71	67	61	66	34	86	91	34	73	90	51	34	13	7	6	7	10	6	8	6	8	6	7	5	91.4
29-Jan	5	5	5	7	9	10	12	36	22	5	13	12	14	32	8	16	59	41	66	45	55	59	63	88	87.8
30-Jan	41	28	58	60	56	77	43	30	17	34	27	26	14	57	33	20	10	16	43	17	35	22	30	15	76.8
31-Jan	11	14	13	18	28	19	29	12	11	5	7	10	9	9	9	5	9	15	17	11	89	28	50	72	89.0
	73.5	87.1	85.1	86.6	79.5	94.6	91.4	84.7	86.4	89.9	68.5	76.5	48.5	100.0	73.9	80.0	69.8	91.2	71.2	85.6	89.0	85.0	90.7	87.8	

PAZA
Evergreen Park Station
Monthly Summary Tables, Graphs and
Roses

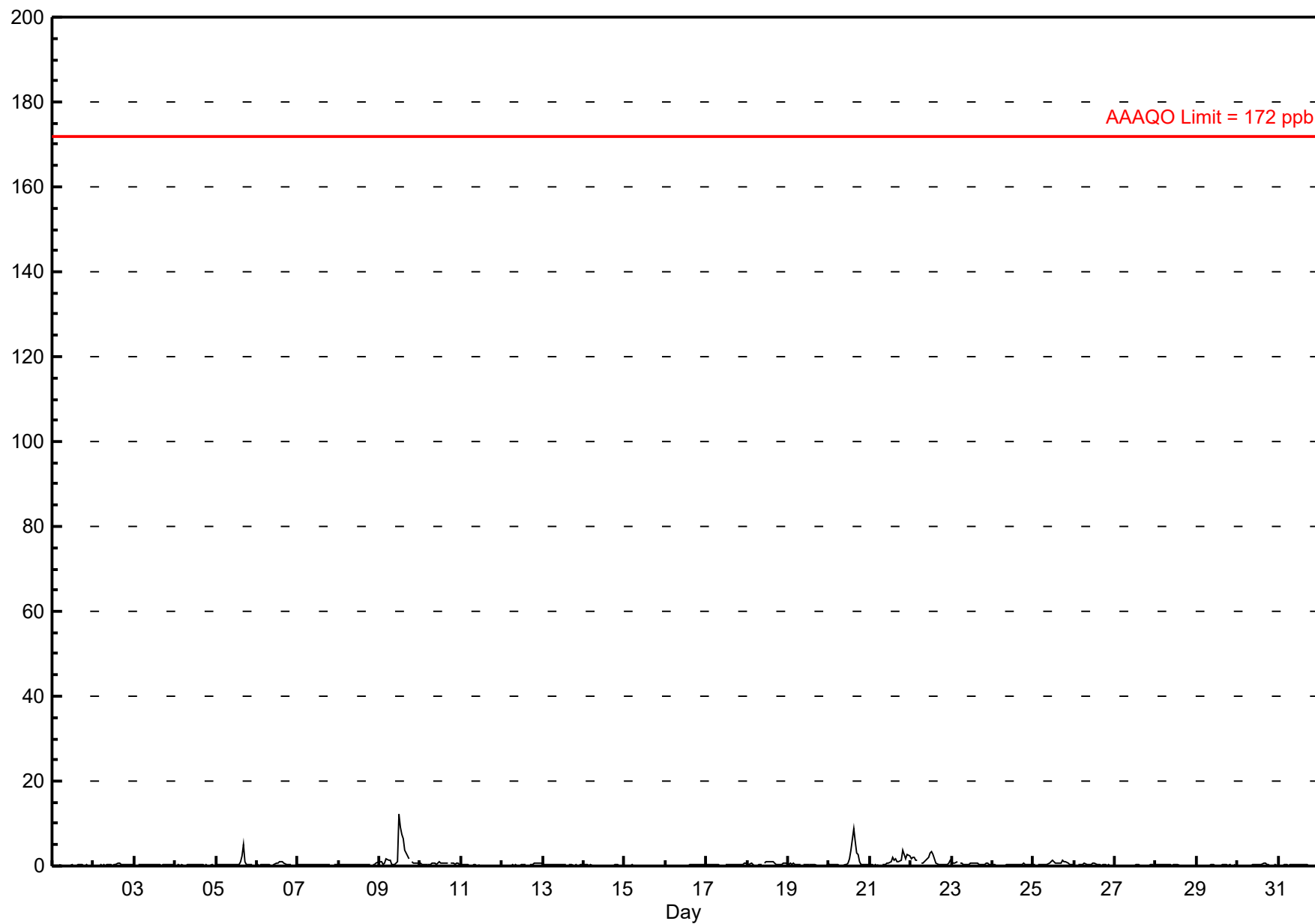
Hourly Averages

Sulphur Dioxide (SO₂) - ppb Evergreen Park - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 12.1 ppb on Jan 9 12:00 Maximum Daily Average: 2.5 ppb on Jan 9																				Hours in Service: 744 Hours of Data: 708 Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Jan 1 06:00 Maximum Diurnal Average: 1.0 ppb at hour 15 Monthly Average: 0.48 ppb																				Minimum Daily Average: 0.1 ppb on Jan 15 Minimum Diurnal Average: 0.2 ppb at hour 6 Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.3 Q ₃ = 0.4 P ₉₀ = 0.8 P ₉₉ = 4.4						
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	0	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
2-Jan	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0.3	0.6
3-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	0.5
4-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	0.3	0.5
5-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	5	1	0	0	0	0	A	0	0.7	4.9
6-Jan	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	A	0	0	0.4	1.1
7-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	0.3	0.4
8-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	1	0.4	1.1
9-Jan	1	1	0	1	2	1	1	0	0	0	1	12	9	7	6	4	2	2	A	1	1	1	1	1	2.5	12.1
10-Jan	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	A	1	1	0	1	1	0	0.6	0.9
11-Jan	0	0	0	0	0	0	0	0	0	0	0	0	C	C	C	0	A	0	0	0	0	0	0	0	0.2	0.4
12-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	1	1	1	1	0.3	0.8
13-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	0.3	0.5
14-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.3
15-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	0.2
16-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	0.5
17-Jan	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	1	0.3	0.5
18-Jan	0	0	1	0	0	0	0	0	0	A	1	1	1	1	1	1	1	0	0	0	0	1	1	1	0.5	1.2
19-Jan	1	1	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	0.7
20-Jan	0	0	0	0	0	0	0	A	0	0	0	1	2	4	9	6	3	3	1	0	0	0	0	0	1.4	8.9
21-Jan	0	0	0	0	0	0	A	0	0	0	1	1	1	2	1	2	1	1	1	4	3	2	3	2	1.1	3.8
22-Jan	2	2	2	1	1	A	1	1	1	1	2	3	3	3	2	1	0	0	0	0	0	0	1	1	1.3	3.2
23-Jan	1	1	1	1	A	1	1	0	0	0	0	1	1	1	1	1	0	0	0	0	1	1	0	0	0.6	1.1
24-Jan	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.3	0.7
25-Jan	0	0	A	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0.7	1.5
26-Jan	0	A	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
27-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	0.4
28-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	0.4
29-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
30-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	A	0	0	0	0.2	0.7
31-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	0.5
0.4 0.4 0.3 0.3 0.3 0.2 0.3 0.3 0.3 0.3 0.4 0.9 0.9 0.9 1.0 0.8 0.7 0.5 0.4 0.5 0.4 0.4 0.4 0.4																								Diurnal Average		
1.7 2.0 2.0 1.5 1.8 1.5 1.4 0.8 1.0 1.4 1.9 12.1 9.2 7.3 8.9 5.8 4.9 2.8 1.4 3.8 2.6 1.6 2.7 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 (SO₂) - ppb
Evergreen Park - January 2016



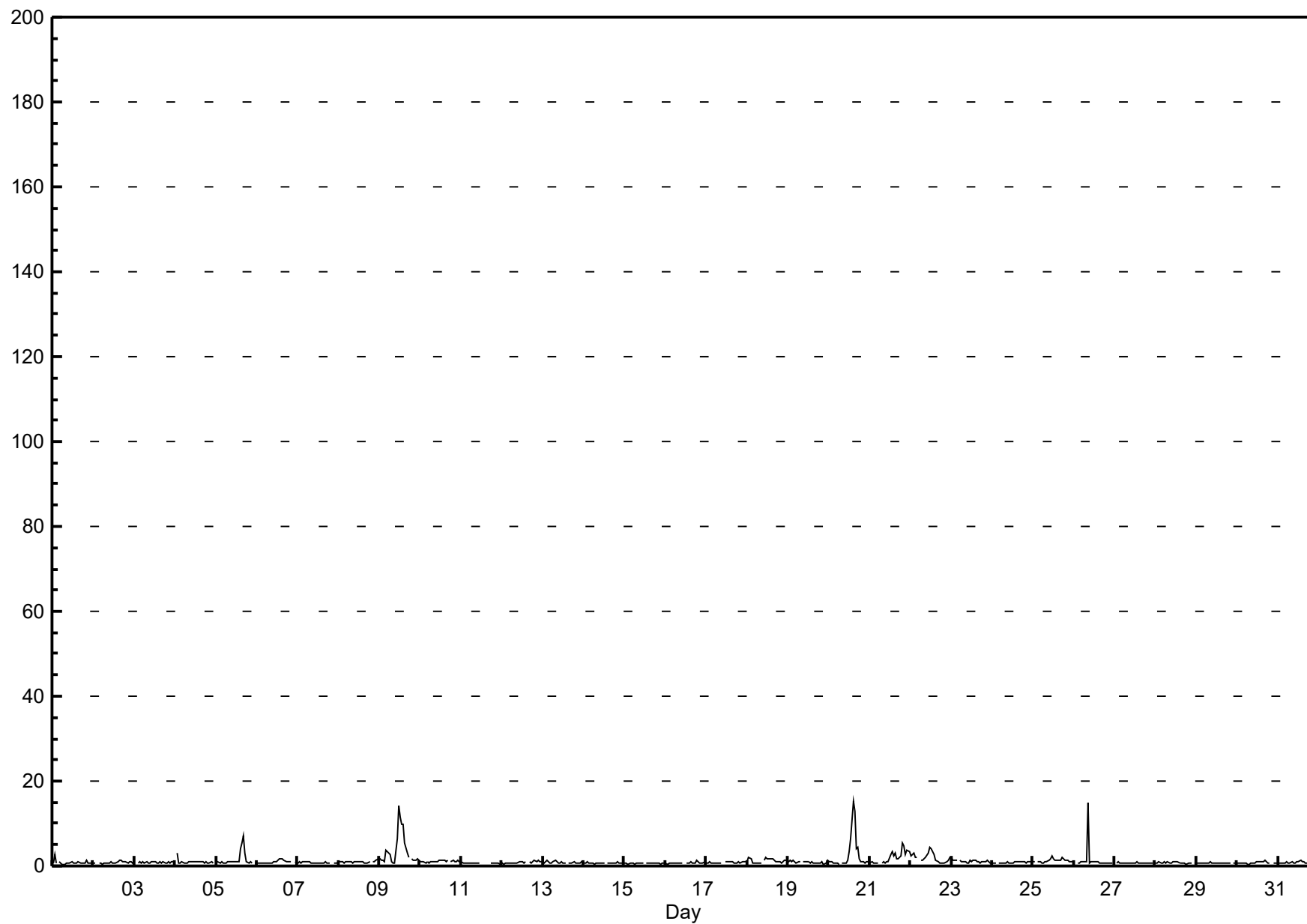
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb Evergreen Park - January 2016

Maximum Value: 15.3 ppb on Jan 20 15:00																				Maximum Daily Average: 3.8 ppb on Jan 9					Hours in Service: 744	
Minimum Value: 0 ppb on Jan 28 19:00																				Minimum Daily Average: 0.6 ppb on Jan 15					Hours of Data: 708	
Maximum Diurnal Average: 2.0 ppb at hour 15																				Minimum Diurnal Average: 0.8 ppb at hour 6					Hours of Missing Data: 36	
Monthly Average: 1.14 ppb																				Percentiles: P ₁ = 0.5 P ₁₀ = 0.6 Q ₁ = 0.7 Median = 0.8 Q ₃ = 1.0 P ₉₀ = 1.5 P ₉₉ = 10.0					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	1	3	1	A	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	2.7
2-Jan	1	1	A	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.4
3-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	1.1
4-Jan	A	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1.0	3.0
5-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	5	7	3	1	1	1	1	A	1	1.6	7.3
6-Jan	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1	1	A	1	1	1.0	1.9
7-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.0
8-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	2	1.0	1.7
9-Jan	2	1	1	1	4	3	3	1	1	1	6	14	11	10	10	5	3	2	A	2	1	1	2	1	3.8	14.2
10-Jan	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	A	1	1	1	1	1	1	1.1	1.5
11-Jan	1	1	1	1	1	1	1	1	1	1	1	C	C	C	1	A	1	1	1	1	1	1	1	0	0.7	1.0
12-Jan	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.9	1.5
13-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	0.9	1.2
14-Jan	1	1	1	1	1	1	0	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.7	0.9
15-Jan	1	1	0	1	1	1	0	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	1	1	0.6	0.8
16-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	1.3
17-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	1.1
18-Jan	1	2	2	1	1	1	1	1	1	A	1	2	2	2	2	2	1	1	1	1	1	1	1	1	1.2	1.9
19-Jan	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0.9	1.3
20-Jan	1	1	1	1	1	1	0	A	1	1	1	1	3	7	15	13	4	4	2	1	1	1	1	1	2.7	15.3
21-Jan	1	1	1	1	1	1	A	1	1	1	1	1	3	3	2	3	2	2	2	6	5	3	4	3	2.1	5.5
22-Jan	2	3	3	2	2	A	1	1	2	2	3	4	4	3	3	1	1	1	1	1	1	1	2	2	2.0	4.3
23-Jan	2	2	1	2	A	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1.1	1.9
24-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	1.2
25-Jan	1	1	A	1	1	1	1	1	1	1	2	2	2	1	1	1	1	2	2	1	1	1	1	1	1.3	2.4
26-Jan	1	A	1	1	1	1	1	1	15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.5	14.9
27-Jan	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.7	0.9	
28-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	A	1	0.7	0.9
29-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	0.7	0.9
30-Jan	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.3
31-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	0.8	1.3
0.9 1.1 0.9 0.9 0.9 0.8 0.8 0.8 1.3 0.8 1.1 1.6 1.6 1.7 2.0 1.7 1.3 1.1 0.9 1.1 1.0 0.9 1.0 1.0																									Diurnal Average	
2.5 3.0 2.9 2.1 3.7 3.0 2.6 1.5 14.9 2.1 6.5 14.2 11.4 10.0 15.3 12.9 7.3 4.5 2.3 5.5 4.7 2.7 3.9 3.4																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

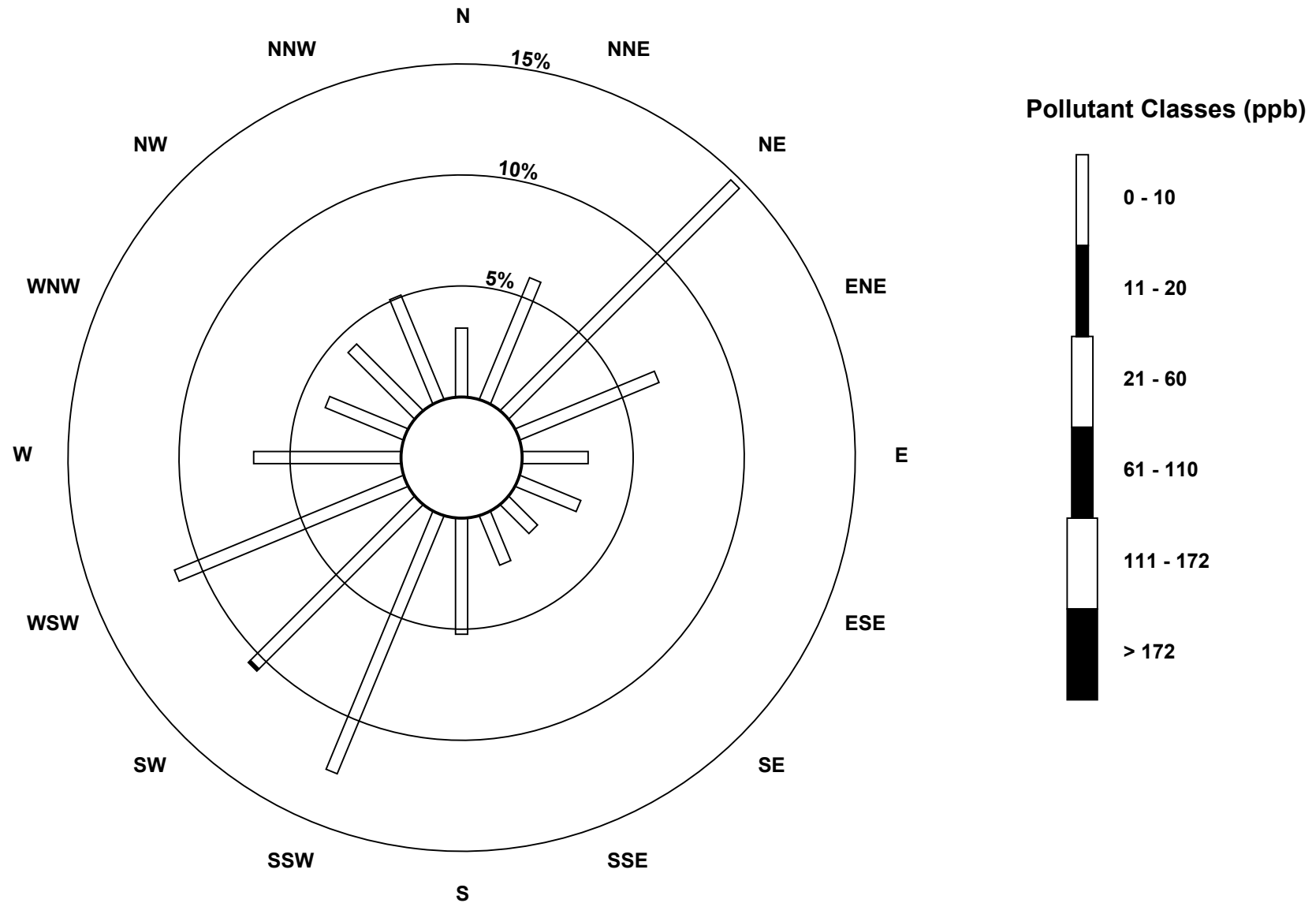
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Evergreen Park - January 2016



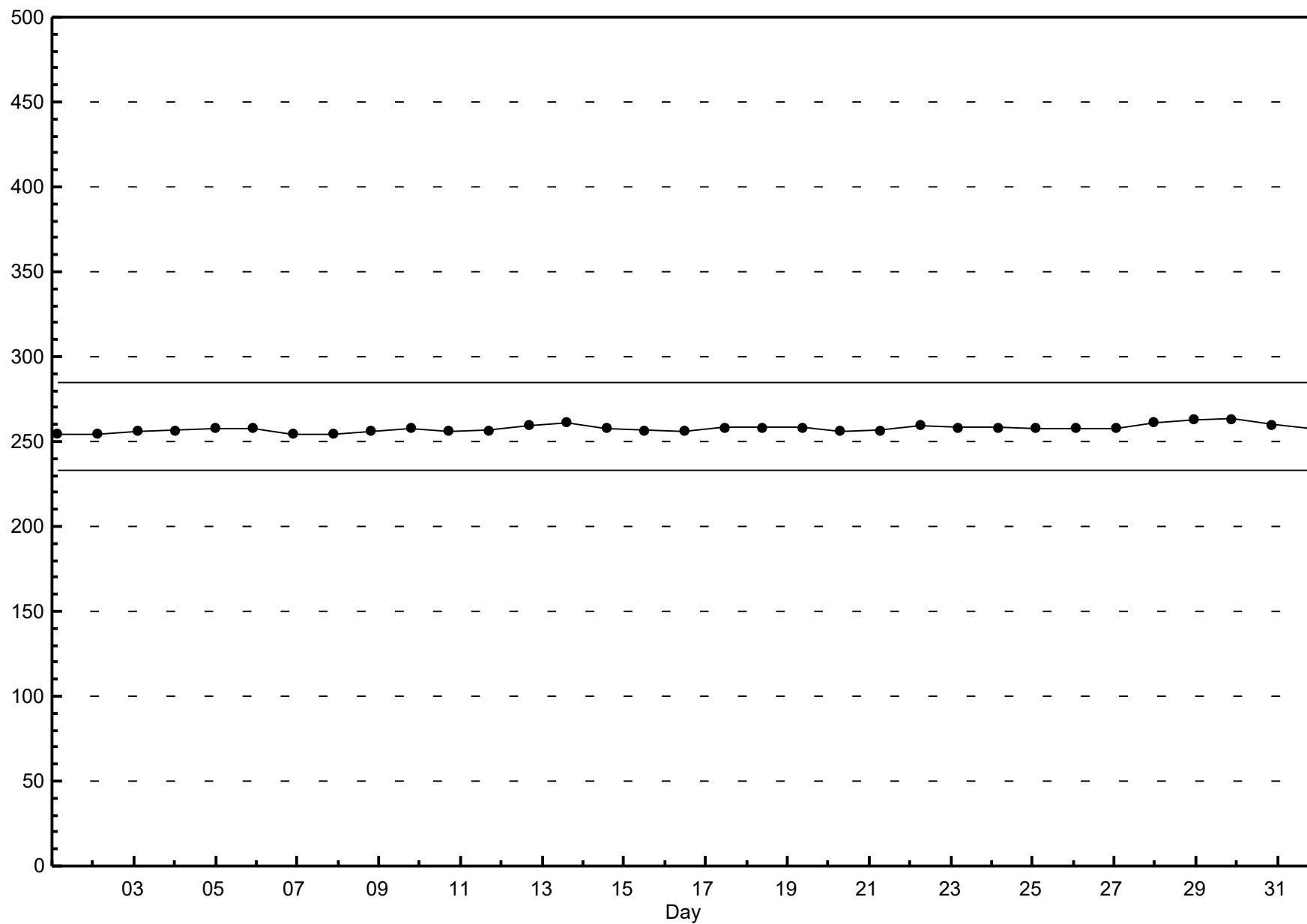
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Evergreen Park - January 2016



Span Responses

Sulphur Dioxide (SO₂)
Evergreen Park - January 2016



Hourly Averages

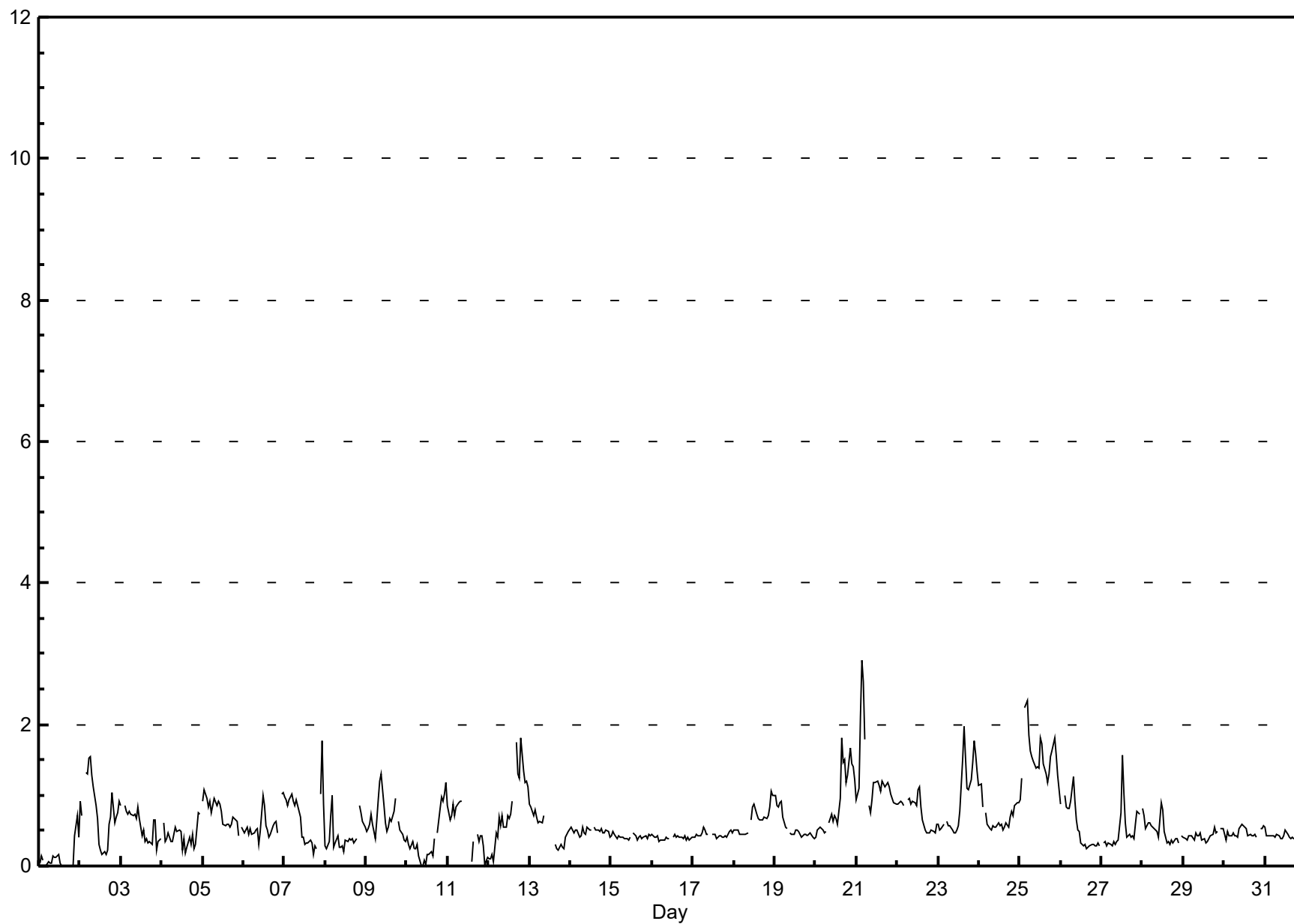
Total Reduced Sulphur (TRS) - ppb

Evergreen Park - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 744																													
Maximum Value: 2.9 ppb on Jan 21 04:00																				Maximum Daily Average: 1.5 ppb on Jan 25		Hours of Data: 701																											
Minimum Value: 0 ppb on Jan 1 05:00																				Minimum Daily Average: 0.1 ppb on Jan 1		Hours of Missing Data: 43																											
Maximum Diurnal Average: 0.7 ppb at hour 23																				Minimum Diurnal Average: 0.5 ppb at hour 15		Hours of Calibration: 37																											
Monthly Average: 0.62 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.3 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.8 P ₉₀ = 1.1 P ₉₉ = 1.8		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	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.1	0.7																							
2-Jan	1	1	A	1	1	2	2	1	1	1	1	0	0	0	0	0	0	1	1	1	1	1	1	1	0.8	1.5																							
3-Jan	1	A	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	1	1	0	0	0	0.6	0.9																							
4-Jan	A	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	A	0.4	0.8																							
5-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	1	0.7	1.1																							
6-Jan	0	1	1	0	1	0	0	1	1	0	0	1	1	1	1	0	0	1	1	1	0	A	1	1	0.6	1.0																							
7-Jan	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	A	1	2	1	0.7	1.8																							
8-Jan	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	0.4	1.0																							
9-Jan	0	1	1	1	1	0	1	1	1	1	1	1	0	1	1	1	1	1	A	1	1	0	0	0	0.7	1.3																							
10-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	1	1	1	0.4	1.2																							
11-Jan	1	1	1	1	1	1	1	1	1	C	C	C	C	C	0	0	A	0	0	0	0	0	0	0	0.5	0.9																							
12-Jan	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	A	2	1	1	2	1	1	1	1	0.8	1.8																							
13-Jan	1	1	1	1	1	1	1	1	1	M	M	M	M	M	M	0	0	0	0	0	0	0	0	0	0.5	0.9																							
14-Jan	1	1	0	1	0	0	0	1	0	0	1	1	1	A	1	1	1	0	1	0	0	1	0	0	0.5	0.5																							
15-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	0.4	0.5																							
16-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	0.4	0.5																							
17-Jan	0	0	0	0	0	0	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0.4	0.6																							
18-Jan	1	1	1	0	0	0	0	0	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.1																							
19-Jan	1	1	1	1	1	1	1	1	1	A	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0.6	1.0																							
20-Jan	0	1	1	1	1	0	0	A	1	1	1	1	1	1	1	2	1	2	1	1	2	1	1	1	0.9	1.8																							
21-Jan	1	1	2	3	3	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.3	2.9																							
22-Jan	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1	0.8	1.1																							
23-Jan	1	1	1	1	A	1	1	1	1	0	0	1	1	1	2	2	2	1	1	1	1	2	2	1	1.0	2.0																							
24-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	1.2																							
25-Jan	1	1	A	2	2	2	2	2	1	1	1	1	2	2	1	1	1	1	2	2	2	2	1	1	1.5	2.3																							
26-Jan	1	A	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.3																							
27-Jan	A	0	0	0	0	0	0	0	0	0	0	1	2	1	1	0	0	0	0	0	1	1	1	A	0.5	1.6																							
28-Jan	1	1	1	1	1	1	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0.5	0.9																							
29-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	A	1	1	0.4	0.6																							
30-Jan	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	A	1	1	1	0.5	0.6																							
31-Jan	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	0	0	1	1	0.4	0.6																							
																									0.6	0.6	0.6	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	Diurnal Average
																									1.1	1.2	2.1	2.9	2.6	1.9	1.6	1.5	1.5	1.4	1.4	1.4	1.8	1.7	1.5	2.0	1.8	1.5	1.5	1.8	1.8	1.8	1.8	1.3	Diurnal Maximum
C - Calibration																									M - Maintenance					A - Automated Daily Zero Span																			
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																																																	

Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Evergreen Park - January 2016



Hourly Maximums

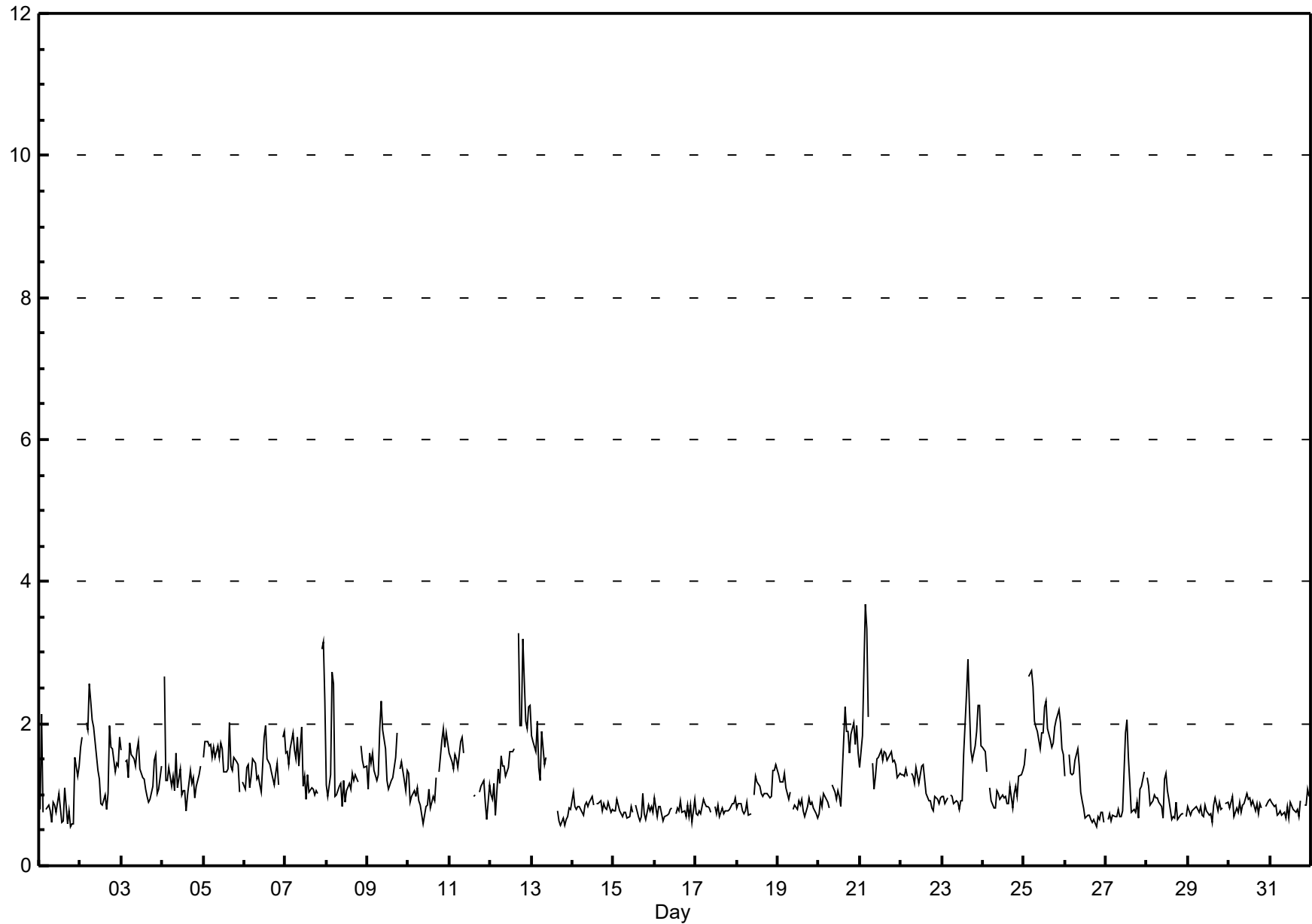
Total Reduced Sulphur (TRS) - ppb

Evergreen Park - January 2016

Maximum Value: 3.7 ppb on Jan 21 04:00																			Maximum Daily Average: 2.0 ppb on Jan 25										Hours in Service: 744	
Minimum Value: 1 ppb on Jan 26 19:00																			Minimum Daily Average: 0.8 ppb on Jan 15										Hours of Data: 701	
Maximum Diurnal Average: 1.3 ppb at hour 4																			Minimum Diurnal Average: 1.1 ppb at hour 10										Hours of Missing Data: 43	
Monthly Average: 1.18 ppb																			Percentiles: P ₁ = 0.6 P ₁₀ = 0.7 Q ₁ = 0.8 Median = 1.0 Q ₃ = 1.4 P ₉₀ = 1.8 P ₉₉ = 2.8										Hours of Calibration: 37	
																													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	2	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	0.9	2.1				
2-Jan	2	2	A	2	1	3	2	2	2	2	1	1	1	1	1	1	1	2	2	2	1	1	1	2	1.6	2.6				
3-Jan	2	A	1	1	1	2	2	2	1	2	2	1	1	1	1	1	1	1	1	1	2	1	1	1	1.3	1.8				
4-Jan	A	3	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1.2	2.7				
5-Jan	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	2	1	1	2	1	1	1	A	1	1.5	2.0				
6-Jan	1	1	1	1	1	2	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	A	2	2	1.4	2.0				
7-Jan	2	2	1	2	2	2	1	2	1	2	1	1	1	1	1	1	1	1	1	1	A	3	3	2	1.6	3.1				
8-Jan	1	1	1	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1.3	2.7				
9-Jan	1	2	1	2	1	1	1	2	2	2	2	1	1	1	1	1	2	2	A	1	1	1	1	1	1.4	2.3				
10-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	2	2	2	2	2	1.1	1.9				
11-Jan	2	1	1	2	2	1	2	2	2	C	C	C	C	C	1	1	A	1	1	1	1	1	1	1	1.3	1.8				
12-Jan	1	1	1	1	1	1	2	1	1	1	1	2	2	2	2	A	3	2	2	3	2	2	2	2	1.7	3.3				
13-Jan	2	2	2	2	1	1	2	1	2	M	M	M	M	M	M	1	1	1	1	1	1	1	1	1	1.2	2.0				
14-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.8	1.0				
15-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	1.0				
16-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	1.0				
17-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	1.0				
18-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				
19-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	1.3				
20-Jan	1	1	1	1	1	1	1	A	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	1.3	2.2				
21-Jan	1	2	3	4	3	2	A	1	1	1	2	2	2	1	2	2	1	2	2	1	1	1	1	1	1.7	3.7				
22-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	1.1	1.4				
23-Jan	1	1	1	1	A	1	1	1	1	1	1	1	1	2	2	3	2	2	1	2	2	2	2	2	1.4	2.9				
24-Jan	2	2	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.7				
25-Jan	1	2	A	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0	2.7				
26-Jan	1	A	2	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.6				
27-Jan	A	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	A	1.0	2.1				
28-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	1.3				
29-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	0.8	1.0				
30-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.9	1.0				
31-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	0.8	1.1				
1.2		1.3	1.2	1.3	1.3	1.2	1.2	1.2	1.2	1.1	1.1	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.3	1.3	1.3	Diurnal Average					
1.8		2.7	2.8	3.7	3.3	2.6	2.3	2.1	2.3	2.0	1.9	1.9	2.2	2.3	2.4	2.9	3.3	2.0	2.0	3.2	2.2	3.1	3.1	2.3	Diurnal Maximum					
C - Calibration		M - Maintenance						A - Automated Daily Zero Span																						

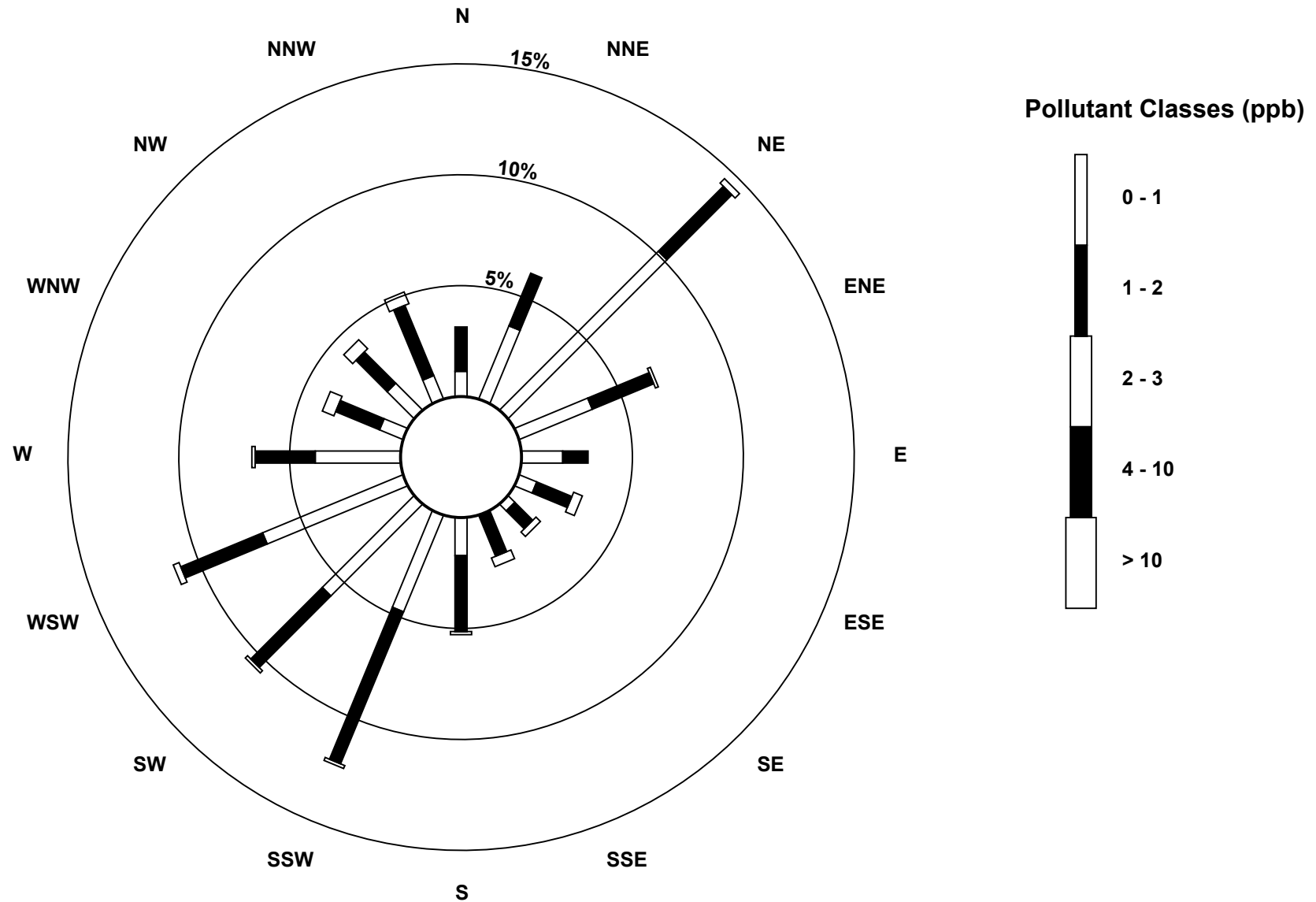
Hourly Maximums

Total Reduced Sulphur (TRS) - ppb
Evergreen Park - January 2016



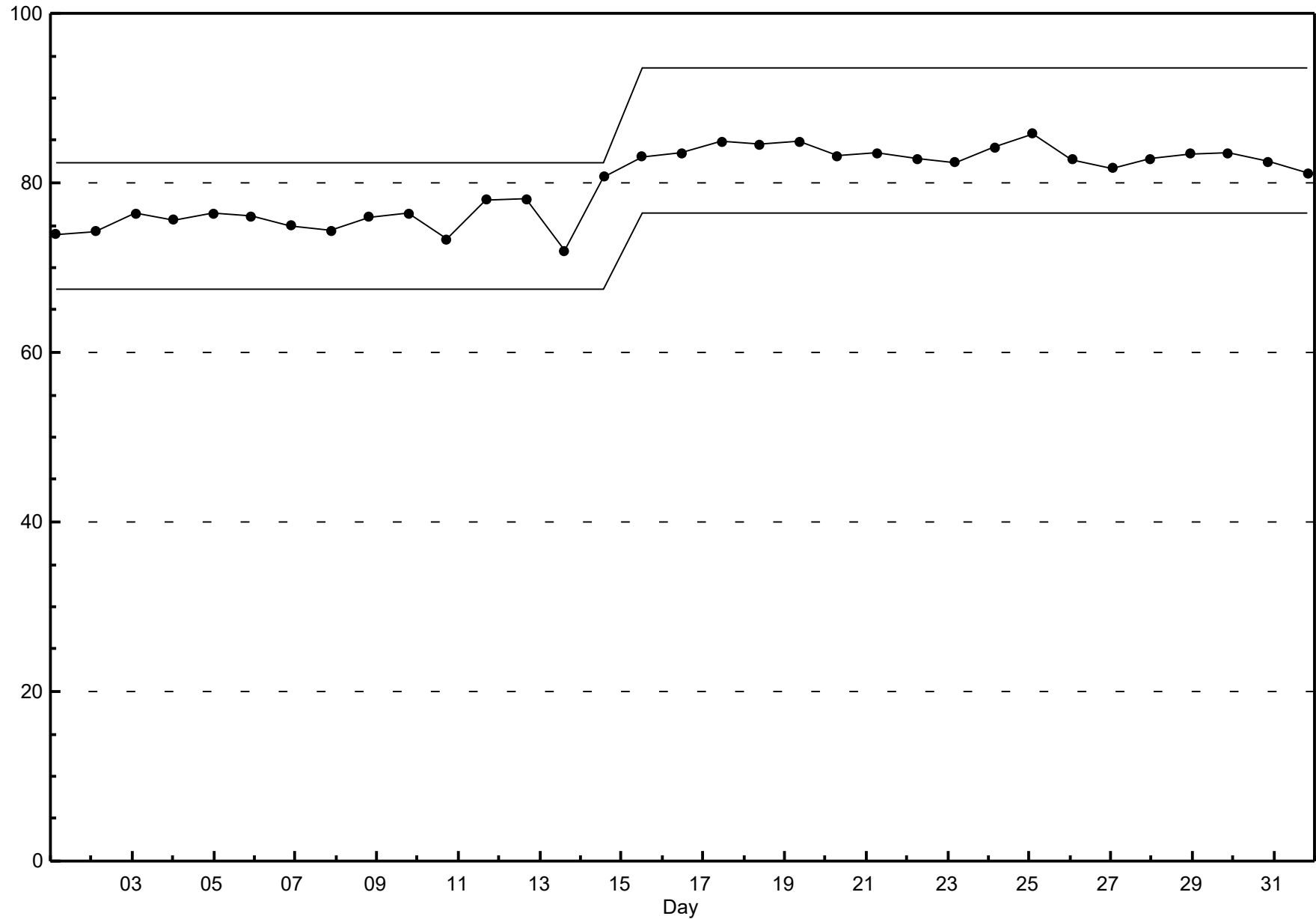
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb
Evergreen Park - January 2016



Span Responses

Total Reduced Sulphur (TRS)
Evergreen Park - January 2016



Hourly Averages

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

Evergreen Park - January 2016

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 38.4 µg/m³ on Jan 25 12:00 Maximum Daily Average: 27.8 µg/m³ on Jan 9																					Hours in Service: 744 Hours of Data: 741 Hours of Missing Data: 3 Hours of Calibration: 2 Percent Operational Time: 99.9					
Minimum Value: 0 µg/m³ on Jan 1 03:00 Maximum Diurnal Average: 9.3 µg/m³ at hour 22 Monthly Average: 7.71 µg/m³										Minimum Daily Average: 0.2 µg/m³ on Jan 29 Minimum Diurnal Average: 6.1 µg/m³ at hour 9 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 1.7 Median = 4.9 Q ₃ = 12.5 P ₉₀ = 20.6 P ₉₉ = 31.5																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jan	0	1	0	1	0	0	0	0	0	3	0	0	0	0	0	2	1	2	1	1	3	2	3	3	1.0	3.5
2-Jan	6	2	3	5	6	5	4	3	3	4	4	4	0	0	1	3	3	3	3	6	4	4	3	3	3.4	6.1
3-Jan	3	2	2	3	2	3	3	4	5	5	6	7	2	0	0	1	3	3	4	4	6	6	7	4	3.5	7.3
4-Jan	4	7	2	1	0	0	2	2	3	2	6	8	3	0	0	1	2	5	3	3	3	10	8	6	3.4	9.6
5-Jan	5	6	4	3	3	3	3	3	5	7	7	8	8	8	16	8	11	14	12	17	15	13	13	12	8.5	17.0
6-Jan	10	8	9	7	7	6	7	6	7	8	10	15	10	6	7	10	10	10	10	11	12	14	14	14	9.3	14.7
7-Jan	14	14	12	13	14	13	13	12	13	13	12	10	10	8	10	13	11	9	6	5	4	5	8	7	10.3	14.0
8-Jan	8	10	10	11	15	15	15	14	13	14	15	14	15	16	19	19	21	21	22	25	24	27	23	22	17.0	26.9
9-Jan	23	24	29	28	22	22	24	24	24	27	29	33	34	32	33	35	31	28	32	29	29	29	24	21	27.8	34.7
10-Jan	15	14	13	13	13	14	13	8	0	0	0	0	0	0	0	0	1	1	0	3	4	6	8	5	5.5	15.4
11-Jan	5	0	0	1	0	0	0	0	0	0	0	0	0	C	C	11	7	5	3	3	2	2	2	3	2.0	10.7
12-Jan	2	3	3	4	4	4	5	3	5	5	5	10	7	8	11	7	9	8	9	11	12	14	11	8	6.9	13.6
13-Jan	4	4	4	4	4	5	5	5	5	6	6	7	4	M	5	2	1	2	4	1	1	17	9	6	4.8	16.7
14-Jan	7	6	7	8	6	5	3	3	3	3	3	2	3	2	3	3	3	2	2	3	3	2	2	2	3.6	8.4
15-Jan	1	1	0	1	0	0	1	1	1	1	2	1	1	2	1	2	1	1	2	2	2	2	1	2	1.1	1.7
16-Jan	2	2	1	1	2	2	2	3	2	4	4	4	4	4	4	4	7	7	5	4	4	4	5	4	3.6	7.2
17-Jan	4	5	5	5	6	5	4	6	4	4	5	4	5	5	5	9	7	7	5	5	5	8	6	6	5.5	9.1
18-Jan	7	7	8	7	6	7	6	7	6	7	11	15	12	10	10	13	14	12	12	12	11	13	12	9	9.7	15.0
19-Jan	9	8	8	9	9	8	8	10	11	13	13	11	12	11	14	17	21	20	18	19	16	13	11	13	12.5	20.6
20-Jan	15	16	16	15	14	14	14	15	15	14	15	16	19	21	24	28	24	21	18	18	18	17	17	18	17.5	27.5
21-Jan	21	20	22	23	18	20	22	19	17	21	21	20	16	19	22	23	23	24	24	23	20	22	21	21	20.9	23.8
22-Jan	21	24	23	23	22	22	22	23	23	24	24	25	26	20	14	9	13	13	12	13	13	13	13	13	18.7	26.1
23-Jan	13	15	15	15	15	14	14	13	12	12	14	14	16	16	19	18	22	20	21	20	23	31	26	23	17.5	30.7
24-Jan	19	16	8	7	4	2	4	4	5	5	8	7	4	1	1	3	7	6	6	4	4	3	2	4	5.5	19.3
25-Jan	3	3	10	11	5	3	2	3	3	4	12	38	16	11	23	16	12	21	19	12	8	4	4	5	10.3	38.4
26-Jan	2	2	2	2	2	4	6	5	0	0	7	3	0	0	0	0	0	0	0	0	0	0	0	0	1.4	7.0
27-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	14	0	0	0	0	0	1	3	3	1.4	13.8
28-Jan	2	3	2	3	4	3	3	4	2	2	8	8	6	1	0	0	0	0	0	0	0	0	0	0	2.2	8.5
29-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	1	0.2	1.5
30-Jan	0	1	3	2	1	1	0	0	1	2	4	0	3	1	2	2	7	4	5	4	4	4	4	4	2.4	7.1
31-Jan	3	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	4	2	2	2	2	2	2	1.0	3.8
7.4 7.2 7.1 7.3 6.6 6.5 6.5 6.5 6.1 6.7 8.0 9.2 7.6 7.0 8.6 8.7 8.8 8.8 8.4 8.4 8.0 9.3 8.6 7.8 23.3 24.2 28.9 28.3 22.4 21.9 24.1 24.0 24.1 26.8 29.0 38.4 33.9 32.5 32.5 34.7 31.1 28.2 31.9 29.4 28.8 30.7 26.1 22.6																								Diurnal Average	Diurnal Maximum	
C - Calibration M - Maintenance Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																										

Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Evergreen Park - January 2016



Hourly Maximums

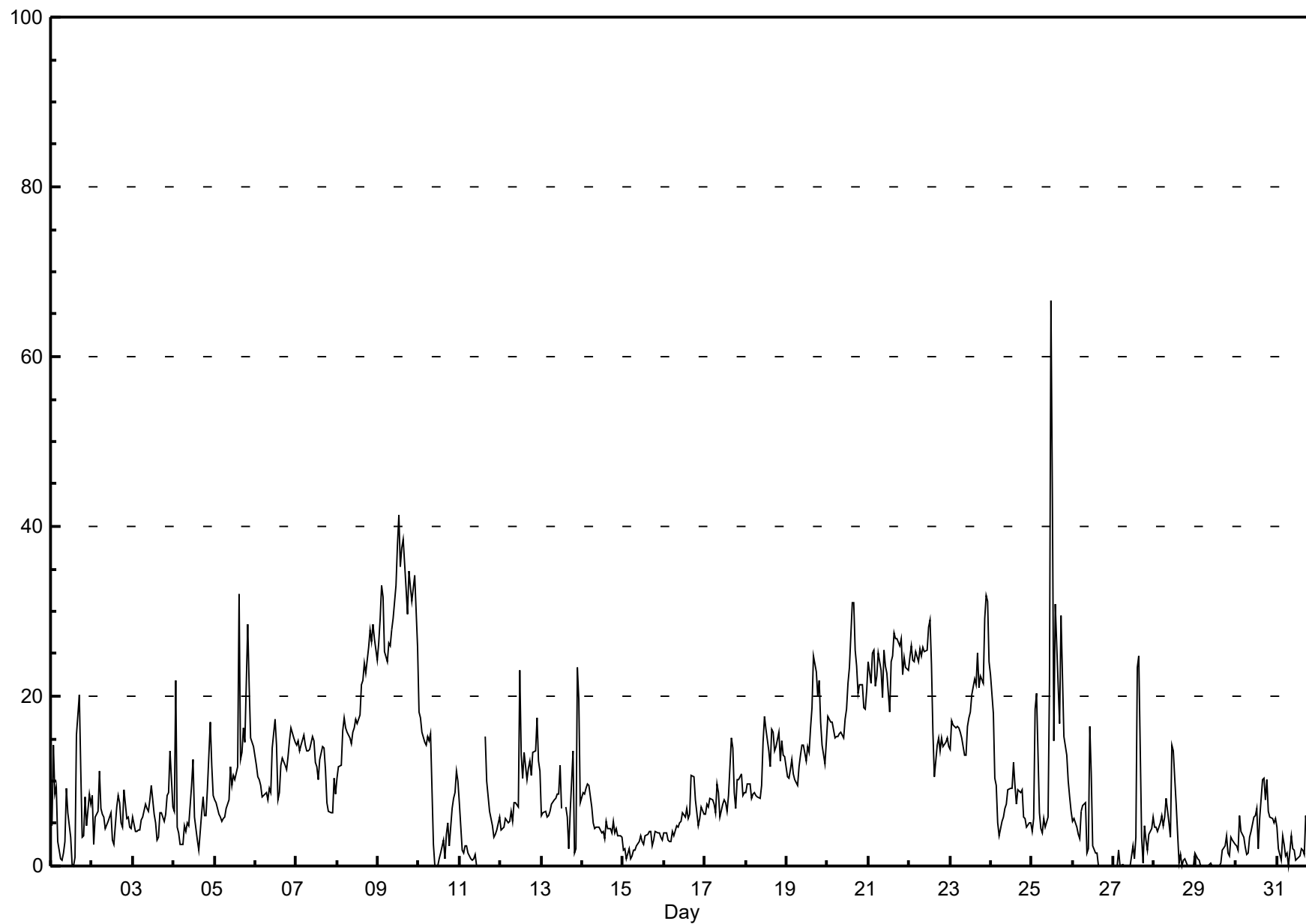
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Evergreen Park - January 2016

Maximum Value: 66.5 μg/m³ on Jan 25 12:00																								Maximum Daily Average: 31.4 μg/m³ on Jan 9								Hours in Service: 744	
Minimum Value: 0 μg/m³ on Jan 1 14:00																								Minimum Daily Average: 1.0 μg/m³ on Jan 29								Hours of Data: 741	
Maximum Diurnal Average: 13.2 μg/m³ at hour 12																								Minimum Diurnal Average: 8.1 μg/m³ at hour 6								Hours of Missing Data: 3	
Monthly Average: 10.31 μg/m³																								Percentiles: P ₁ = 0.0 P ₁₀ = 1.3 Q ₁ = 4.1 Median = 7.7 Q ₃ = 14.6 P ₉₀ = 23.7 P ₉₉ = 33.2								Hours of Calibration: 2	
																								Percent Operational Time: 99.9									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum							
1-Jan	5	14	8	9	3	1	1	2	3	9	6	3	0	0	1	15	20	11	3	4	8	5	8	7	6.2	20.1							
2-Jan	8	3	6	6	11	7	6	6	4	5	6	6	3	3	7	8	7	5	5	9	6	6	5	4	5.9	11.2							
3-Jan	6	4	4	4	4	5	6	7	7	6	8	9	6	5	3	3	6	6	5	6	8	9	14	7	6.3	13.6							
4-Jan	7	22	5	4	3	3	5	4	5	5	9	13	6	4	3	2	6	8	6	6	9	17	12	8	7.1	21.9							
5-Jan	8	7	6	6	5	6	6	7	8	12	9	11	10	12	32	13	13	16	15	28	21	15	15	14	12.2	32.1							
6-Jan	12	10	10	9	8	8	9	8	9	9	14	17	14	8	9	12	13	12	11	13	15	16	15	15	11.5	17.2							
7-Jan	14	15	14	14	15	14	14	14	14	15	15	12	12	10	13	14	14	11	7	6	6	6	10	8	12.0	15.5							
8-Jan	10	12	12	16	17	16	16	15	14	16	16	17	17	18	21	22	24	23	26	28	27	28	27	24	19.3	28.5							
9-Jan	26	29	33	32	25	24	26	26	28	29	33	38	41	35	37	38	33	30	35	33	31	34	30	26	31.4	41.3							
10-Jan	18	17	16	15	14	15	15	16	3	0	0	0	1	2	3	1	4	5	2	7	8	9	11	10	7.9	18.2							
11-Jan	7	2	2	2	2	2	1	1	1	1	0	0	0	C	C	15	10	6	6	5	3	4	4	6	3.6	15.3							
12-Jan	4	4	5	6	5	5	6	5	7	7	7	23	13	10	13	10	12	12	11	13	14	17	12	11	9.8	23.1							
13-Jan	6	6	6	6	6	7	7	8	8	8	8	12	7	M	7	6	2	6	14	2	2	23	20	7	8.0	23.3							
14-Jan	9	8	9	10	9	7	5	4	5	5	5	4	4	3	5	4	4	4	5	4	4	4	4	3	5.4	9.7							
15-Jan	2	2	1	2	1	1	2	2	2	3	4	3	3	4	4	4	4	2	3	4	4	4	3	3	2.7	4.1							
16-Jan	4	4	3	3	3	4	4	5	5	5	5	6	6	7	6	6	11	10	8	6	5	6	7	6	5.5	10.7							
17-Jan	6	7	7	8	8	7	6	10	9	6	7	8	7	7	8	15	14	9	7	10	10	11	8	9	8.5	15.1							
18-Jan	9	10	10	8	8	9	8	8	8	9	15	18	16	14	12	16	16	14	14	16	12	15	13	13	12.0	17.7							
19-Jan	10	10	11	13	11	10	9	12	13	14	14	12	14	13	16	19	25	23	20	22	17	14	12	15	14.6	24.8							
20-Jan	18	17	17	17	15	15	15	16	16	15	17	18	22	23	31	31	26	24	20	21	21	19	18	21	19.7	31.1							
21-Jan	24	22	25	26	21	22	25	23	20	25	24	23	18	24	25	27	27	27	26	27	23	25	23	23	23.9	27.5							
22-Jan	25	26	24	24	25	24	26	25	26	25	25	28	29	24	16	10	14	15	14	15	14	15	15	14	20.7	28.9							
23-Jan	14	17	17	16	16	16	16	15	13	13	16	17	18	20	22	21	25	21	22	22	29	32	31	24	19.8	31.9							
24-Jan	23	18	10	9	5	4	5	6	7	7	9	9	9	12	9	7	9	9	9	6	6	5	5	5	8.4	22.6							
25-Jan	4	6	18	20	6	4	4	6	5	6	22	67	43	15	31	21	17	29	22	15	13	10	8	6	16.6	66.5							
26-Jan	5	6	5	4	3	6	7	7	2	2	16	11	2	2	2	0	0	0	0	0	0	0	0	0	3.3	16.5							
27-Jan	0	0	0	2	0	0	0	0	0	0	0	2	1	3	23	25	3	0	5	3	2	4	4	6	3.5	24.8							
28-Jan	5	5	4	5	6	5	6	8	5	3	14	14	10	7	0	1	0	1	1	0	0	0	0	0	4.2	14.3							
29-Jan	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	4	2	1	3	3	3	1.0	3.6							
30-Jan	2	2	6	4	3	2	1	2	3	4	6	6	7	2	6	10	10	8	10	7	6	6	5	6	5.1	10.4							
31-Jan	5	2	1	4	3	1	2	0	4	2	2	1	1	1	2	2	1	6	4	3	5	4	3	3	2.5	6.0							
9.6 9.9 9.5 9.8 8.5 8.1 8.3 8.5 8.1 8.7 10.8 13.2 11.0 9.9 12.3 12.3 12.0 11.5 10.9 11.0 10.6 11.7 11.2 9.9																								Diurnal Average									
26.3 29.2 33.1 31.6 25.3 24.1 26.3 26.0 27.7 29.2 33.1 66.5 43.4 35.3 37.5 38.5 32.8 29.7 34.8 32.8 31.1 34.3 31.1 25.8																								Diurnal Maximum									
C - Calibration M - Maintenance																																	

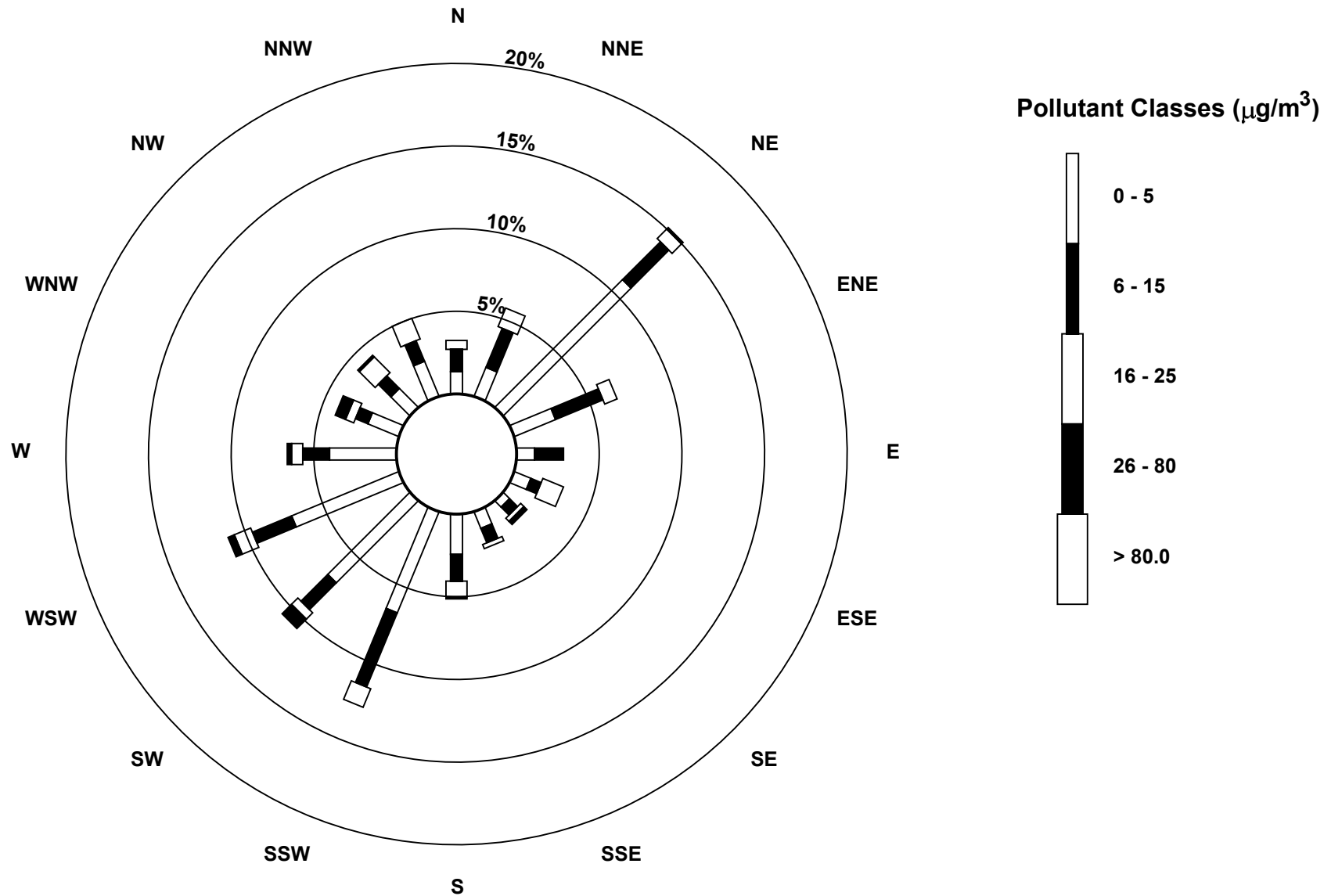
Hourly Maximums

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Evergreen Park - January 2016



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Evergreen Park - January 2016



Hourly Averages

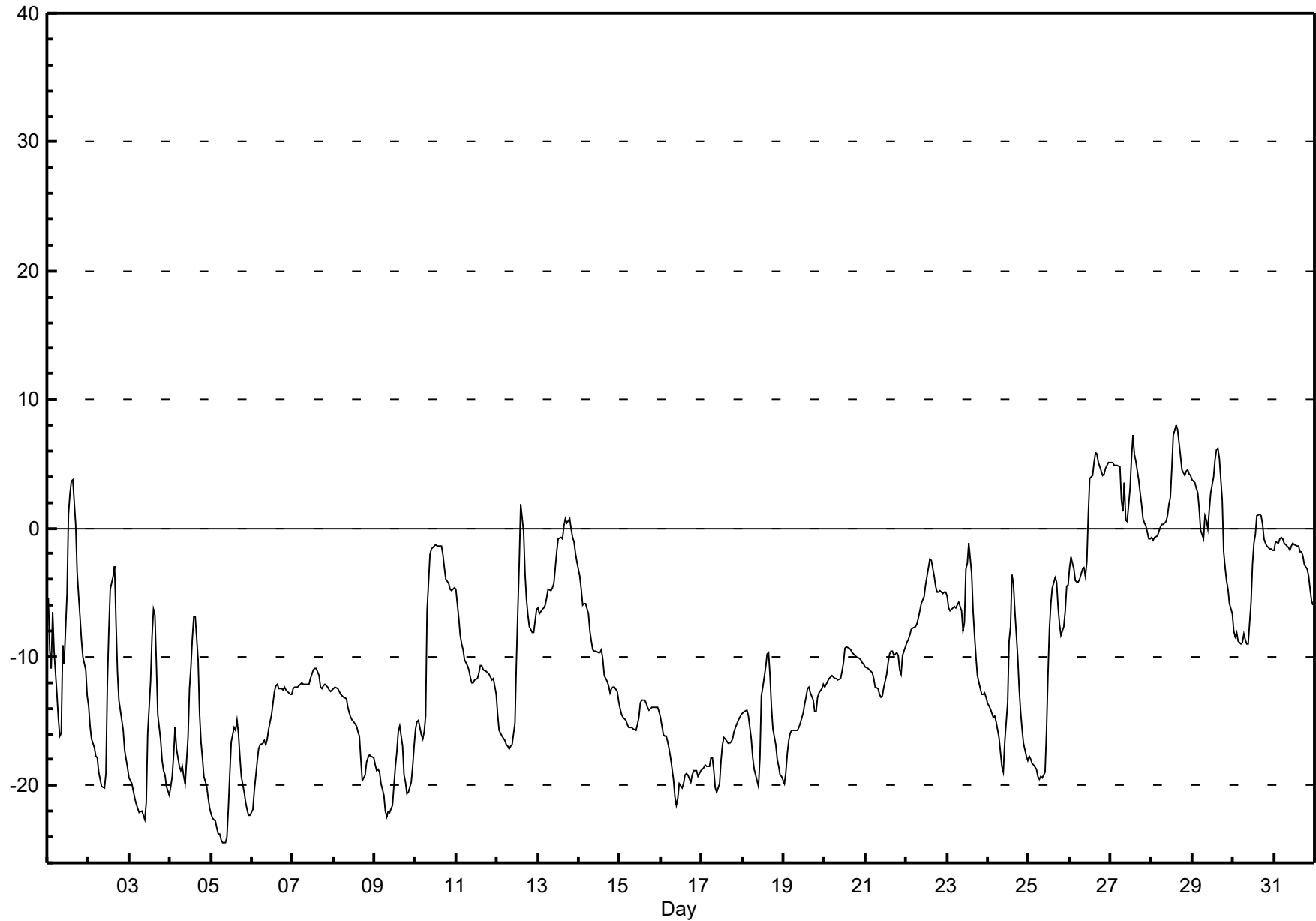
External Temperature (ET) - °C

Evergreen Park - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 8.0 °C on Jan 28 15:00 Maximum Daily Average: 3.0 °C on Jan 27																									Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0	
Minimum Value: -24 °C on Jan 5 09:00 Minimum Daily Average: -20.8 °C on Jan 5 Maximum Diurnal Average: -6.0 °C at hour 15 Minimum Diurnal Average: -12.5 °C at hour 10 Monthly Average: -10.24 °C Percentiles: P ₁ = -22.7 P ₁₀ = -19.3 Q ₁ = -16.2 Median = -11.7 Q ₃ = -4.7 P ₉₀ = 0.4 P ₉₉ = 5.9																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jan	-5	-9	-11	-7	-10	-13	-15	-16	-16	-9	-11	-5	1	3	4	4	0	-3	-5	-7	-9	-10	-11	-13	-7.2	3.8
2-Jan	-14	-15	-16	-17	-18	-18	-19	-20	-20	-20	-19	-12	-8	-5	-4	-3	-7	-11	-13	-14	-16	-17	-18	-19	-14.3	-3.0
3-Jan	-19	-20	-20	-21	-21	-22	-22	-22	-22	-23	-21	-16	-12	-8	-6	-7	-10	-14	-16	-18	-19	-19	-20	-21	-17.6	-6.3
4-Jan	-20	-19	-18	-16	-17	-18	-19	-19	-19	-20	-16	-12	-11	-9	-7	-7	-10	-14	-17	-18	-19	-20	-21	-22	-16.1	-6.9
5-Jan	-22	-22	-23	-23	-24	-24	-24	-24	-24	-24	-22	-19	-17	-16	-16	-15	-16	-18	-19	-21	-21	-22	-22	-22	-20.8	-14.9
6-Jan	-22	-20	-19	-18	-17	-17	-17	-17	-17	-16	-16	-15	-14	-13	-12	-12	-12	-13	-13	-12	-13	-13	-13	-13	-15.1	-12.1
7-Jan	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-11	-11	-11	-11	-11	-12	-12	-12	-12	-12	-13	-13	-13	-12.0	-10.9
8-Jan	-12	-12	-12	-13	-13	-13	-13	-13	-14	-14	-15	-15	-15	-15	-16	-16	-18	-20	-19	-18	-18	-18	-18	-18	-15.4	-12.4
9-Jan	-18	-19	-19	-19	-20	-21	-22	-22	-22	-22	-22	-20	-19	-17	-16	-15	-17	-19	-20	-21	-21	-20	-19	-17	-19.4	-15.3
10-Jan	-16	-15	-15	-16	-16	-16	-15	-6	-2	-2	-2	-1	-1	-1	-1	-1	-2	-3	-4	-4	-5	-5	-5	-5	-6.6	-1.2
11-Jan	-5	-7	-8	-9	-9	-10	-11	-11	-12	-12	-12	-12	-12	-11	-11	-11	-11	-11	-11	-11	-12	-12	-12	-13	-10.6	-4.8
12-Jan	-14	-16	-16	-16	-16	-17	-17	-17	-17	-17	-15	-10	-6	-3	2	0	-4	-6	-7	-8	-8	-8	-7	-6	-10.4	1.9
13-Jan	-6	-7	-6	-6	-6	-5	-5	-5	-5	-4	-3	-2	-1	-1	-1	0	1	0	1	0	-1	-1	-2	-3	-2.8	0.8
14-Jan	-4	-5	-6	-6	-6	-7	-8	-9	-9	-10	-10	-10	-10	-9	-10	-11	-12	-12	-13	-12	-12	-12	-13	-13	-9.5	-3.8
15-Jan	-14	-14	-15	-15	-15	-16	-15	-15	-16	-16	-15	-15	-14	-13	-13	-14	-14	-14	-14	-14	-14	-14	-14	-14	-14.4	-13.3
16-Jan	-15	-16	-16	-16	-17	-17	-18	-20	-21	-22	-21	-20	-20	-20	-19	-19	-19	-20	-19	-19	-19	-19	-19	-19	-18.7	-14.7
17-Jan	-19	-19	-18	-19	-18	-18	-18	-19	-20	-21	-20	-18	-17	-16	-16	-17	-17	-17	-16	-16	-16	-15	-15	-14	-17.4	-14.5
18-Jan	-14	-14	-14	-15	-15	-16	-18	-19	-20	-20	-18	-13	-12	-11	-10	-10	-11	-14	-16	-17	-18	-18	-19	-19	-15.5	-9.7
19-Jan	-20	-19	-18	-17	-16	-16	-16	-16	-16	-16	-15	-14	-14	-13	-12	-12	-13	-13	-14	-14	-13	-13	-12	-12	-14.7	-12.1
20-Jan	-12	-12	-12	-12	-11	-12	-12	-12	-12	-12	-11	-10	-9	-9	-9	-9	-10	-10	-10	-10	-10	-10	-11	-11	-10.7	-9.3
21-Jan	-11	-11	-11	-11	-11	-12	-12	-12	-13	-13	-13	-12	-11	-10	-10	-10	-10	-10	-10	-10	-11	-11	-10	-9	-11.0	-9.3
22-Jan	-9	-9	-8	-8	-8	-8	-7	-7	-6	-6	-5	-4	-4	-3	-2	-3	-4	-5	-5	-5	-5	-5	-5	-5	-5.6	-2.4
23-Jan	-5	-6	-6	-6	-6	-6	-6	-6	-6	-8	-7	-3	-3	-1	-4	-6	-8	-10	-11	-12	-13	-13	-13	-13	-7.5	-1.2
24-Jan	-14	-14	-14	-15	-15	-15	-16	-17	-18	-19	-17	-14	-9	-8	-4	-4	-6	-10	-12	-14	-16	-17	-18	-18	-13.5	-3.6
25-Jan	-18	-18	-18	-18	-19	-19	-20	-19	-19	-19	-16	-11	-8	-6	-5	-4	-4	-6	-7	-8	-8	-6	-5	-4	-11.9	-3.9
26-Jan	-3	-2	-3	-4	-4	-4	-4	-3	-3	-4	-3	1	4	4	5	6	6	5	4	4	4	5	5	5	0.9	5.9
27-Jan	5	5	5	5	5	5	2	1	4	1	0	3	5	7	6	5	4	3	2	1	0	0	-1	-1	3.0	7.2
28-Jan	-1	-1	-1	-1	0	0	0	0	1	1	2	2	5	7	8	8	7	6	5	4	4	4	4	4	2.9	8.0
29-Jan	4	3	3	3	2	0	-1	1	1	0	1	3	4	5	6	6	5	2	-2	-3	-4	-5	-6	-7	0.9	6.2
30-Jan	-8	-8	-8	-9	-9	-9	-8	-9	-9	-9	-6	-3	-1	0	1	1	1	0	-1	-1	-1	-2	-2	-2	-4.2	1.1
31-Jan	-2	-1	-1	-1	-1	-1	-1	-1	-2	-2	-1	-1	-1	-1	-1	-2	-2	-2	-3	-3	-4	-5	-6	-6	-2.1	-0.8
-11.2 -11.5 -11.6 -11.5 -11.8 -12.1 -12.5 -12.4 -12.5 -12.5 -11.5 -9.4 -7.7 -6.6 -6.0 -6.1 -7.3 -8.7 -9.6 -10.1 -10.5 -10.7 -10.9 -11.0 Diurnal Average 5.2 5.1 4.8 4.9 4.9 4.8 2.2 1.3 3.5 1.0 1.9 3.1 5.5 7.2 8.0 7.7 6.7 5.6 4.5 4.1 4.5 4.7 4.9 5.1 Diurnal Maximum																										

Hourly Averages

External Temperature (ET) - °C
Evergreen Park - January 2016



Hourly Averages

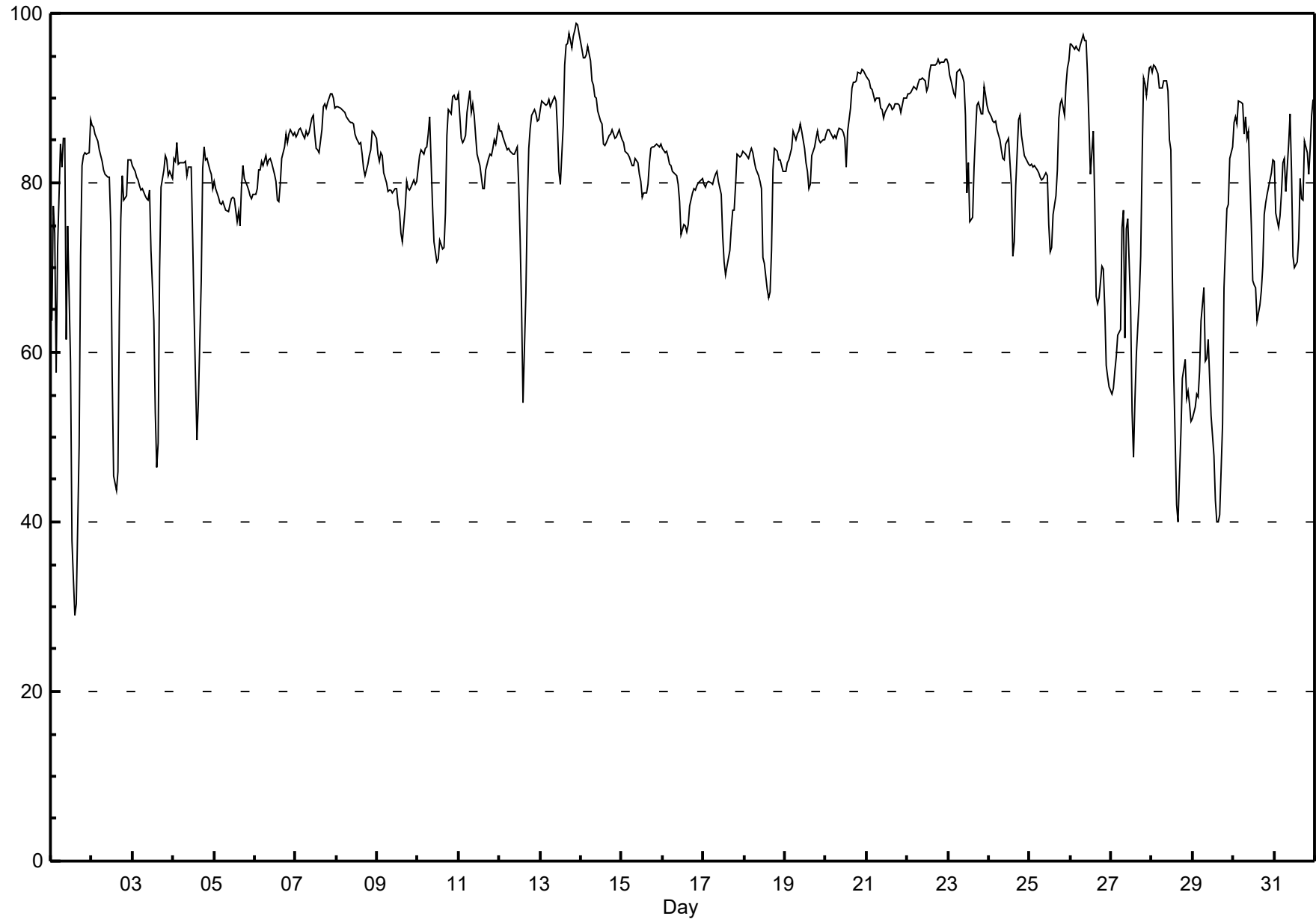
Relative Humidity (RH) - %

Evergreen Park - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 98.9 % on Jan 13 22:00 Maximum Daily Average: 92.6 % on Jan 22																								Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 29 % on Jan 1 15:00 Maximum Diurnal Average: 84.4 % at hour 7 Monthly Average: 80.88 %												Minimum Daily Average: 59.1 % on Jan 29 Minimum Diurnal Average: 69.9 % at hour 15 Percentiles: P ₁ = 40.8 P ₁₀ = 66.6 Q ₁ = 78.5 Median = 83.0 Q ₃ = 87.5 P ₉₀ = 91.6 P ₉₉ = 97.0														
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	64	77	74	58	72	85	82	85	85	61	75	59	38	33	29	30	49	71	82	83	84	83	83	88	68.0	87.5
2-Jan	87	87	86	85	84	83	82	82	81	81	81	75	57	45	44	46	65	76	81	78	78	83	83	83	75.4	86.7
3-Jan	82	81	81	80	80	79	79	79	78	78	79	72	64	53	46	49	70	80	82	83	83	81	81	81	75.0	83.2
4-Jan	83	83	85	82	82	82	82	83	81	82	82	74	65	57	50	54	68	82	84	83	83	82	81	79	77.0	84.8
5-Jan	80	79	78	78	77	78	77	77	77	77	78	78	78	75	77	75	79	82	80	80	79	78	78	79	78.2	82.0
6-Jan	79	79	81	82	83	82	83	82	83	83	82	81	80	78	78	80	83	84	86	85	86	86	86	86	82.4	86.2
7-Jan	85	86	86	87	86	85	86	86	86	88	88	86	84	84	84	86	89	89	89	89	91	91	90	89	87.0	90.6
8-Jan	89	89	89	89	88	88	88	87	87	87	87	86	85	85	83	82	81	82	83	84	86	86	85	85	85.9	89.1
9-Jan	83	83	84	83	81	80	79	79	79	79	79	77	77	74	73	77	80	79	79	79	80	80	80	80	79.4	83.6
10-Jan	82	83	84	83	84	84	86	88	77	73	72	71	71	73	72	72	77	86	89	88	90	90	90	90	81.4	90.3
11-Jan	90	85	85	85	86	88	91	88	89	88	86	83	82	81	79	79	82	83	83	83	84	85	85	87	84.9	90.9
12-Jan	86	86	85	85	84	84	84	84	83	83	84	80	73	65	54	67	78	84	86	88	89	88	87	87	81.5	88.7
13-Jan	89	90	89	89	89	90	89	90	90	90	86	81	80	87	94	96	97	98	96	97	98	99	99	98	91.6	98.9
14-Jan	96	95	95	95	96	94	92	91	90	90	88	87	87	84	84	85	86	86	86	86	85	85	86	86	89.0	96.1
15-Jan	85	85	84	83	83	83	82	82	83	82	81	80	78	79	79	80	82	84	84	84	85	84	84	85	82.6	85.1
16-Jan	84	83	84	83	82	82	81	81	81	80	78	74	75	75	74	75	77	79	79	79	80	80	80	81	79.5	84.0
17-Jan	80	79	80	80	80	80	81	81	81	80	79	74	71	69	70	72	75	77	77	80	83	83	83	84	78.3	83.7
18-Jan	84	83	83	84	84	84	82	82	81	80	79	71	70	68	66	67	72	81	84	84	83	83	82	81	79.1	84.1
19-Jan	81	82	83	83	84	86	85	86	86	87	86	84	82	81	79	80	83	84	85	86	85	85	85	85	84.0	86.9
20-Jan	86	86	86	86	85	86	85	86	87	86	86	85	82	86	89	91	92	92	92	93	93	93	93	93	88.3	93.4
21-Jan	93	92	91	91	90	90	90	90	89	89	88	88	89	89	89	89	89	89	89	89	88	89	90	90	89.6	92.5
22-Jan	91	91	91	91	91	91	92	92	92	92	92	91	91	93	94	94	94	94	94	94	94	94	95	95	92.6	94.6
23-Jan	94	93	92	91	90	93	93	93	92	92	88	79	82	75	76	82	86	89	89	88	88	91	90	89	88.2	94.1
24-Jan	88	88	87	87	87	86	85	84	83	83	85	85	82	80	71	73	80	88	88	86	84	83	83	82	83.7	88.4
25-Jan	82	82	82	82	82	81	81	80	81	81	81	75	72	72	76	78	82	88	89	90	88	91	93	94	82.7	94.5
26-Jan	96	96	96	96	96	96	96	98	97	97	93	87	81	86	78	67	66	66	70	70	65	59	57	56	81.8	97.5
27-Jan	55	56	58	60	62	63	75	77	62	75	76	65	53	48	54	60	66	71	83	92	92	90	94	94	69.9	93.7
28-Jan	93	94	94	93	91	91	91	92	92	91	85	84	70	57	42	40	45	50	57	59	55	55	54	52	72.0	94.0
29-Jan	52	54	55	55	58	64	68	59	59	62	57	53	48	43	40	40	41	52	68	72	77	77	83	84	59.1	84.2
30-Jan	87	88	87	90	90	89	86	88	85	86	75	68	68	68	64	66	67	70	76	78	79	80	81	83	79.1	89.6
31-Jan	83	77	75	76	79	82	83	79	85	88	81	71	70	71	73	80	78	78	85	84	81	84	88	90	80.0	89.8
83.5 83.6 83.5 82.9 83.5 84.2 84.4 84.2 83.3 82.9 81.8 77.7 73.8 71.5 69.9 71.3 76.0 80.4 83.1 83.7 83.6 83.9 84.2 84.3																								Diurnal Average		
96.4 96.2 95.7 96.1 96.1 95.6 96.3 97.5 96.8 96.8 92.6 90.9 91.4 93.0 93.9 96.3 96.5 97.6 95.8 97.3 98.0 98.9 98.7 97.7																								Diurnal Maximum		

Hourly Averages

Relative Humidity (RH) - %
Evergreen Park - January 2016



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Evergreen Park - January 2016

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	5	3	5	9	1	6	1	2	3	11	2	8	18	23	29	17	3	1	1	1	3	7	3	3	5.8	29.5
Dir	280	207	231	301	183	198	134	102	199	231	44	221	231	229	235	241	278	176	46	194	199	205	178	175	229.9	234.7
2 Spd	2	1	1	1	1	4	0	1	1	3	5	8	3	2	2	2	0	2	1	3	2	0	1	1	1.5	8.1
Dir	138	63	234	242	253	220	159	217	206	207	180	190	226	257	328	212	209	242	336	239	223	308	199	186	213.9	189.9
3 Spd	1	2	0	2	1	0	1	2	2	1	1	0	2	1	2	4	2	1	2	1	4	2	2	2	1.1	4.1
Dir	211	211	127	200	170	311	212	198	207	166	240	214	232	254	273	310	358	284	232	6	226	236	209	212	234.9	226.0
4 Spd	3	3	4	3	3	3	2	3	3	3	7	6	7	3	3	3	2	0	1	2	3	3	1	0	2.2	7.0
Dir	230	230	257	288	267	238	249	222	213	223	243	247	256	242	208	336	358	203	203	37	18	214	248	277	248.9	243.1
5 Spd	1	3	1	1	1	2	0	1	2	0	3	1	3	9	10	4	5	1	2	2	1	2	2	2	1.8	9.7
Dir	281	220	223	189	201	198	318	68	202	218	210	31	284	222	287	278	241	20	189	207	49	187	197	209	237.5	287.0
6 Spd	1	1	4	2	4	1	2	1	1	1	3	3	1	3	2	1	4	1	1	1	2	2	0	0	0.7	4.2
Dir	189	195	197	19	200	48	54	57	79	75	197	204	294	230	344	83	184	137	74	73	89	192	255	194	181.2	184.0
7 Spd	1	0	1	4	1	0	1	1	1	3	4	4	4	4	5	9	9	4	3	4	6	4	1	4	2.5	9.0
Dir	197	225	153	182	170	67	83	102	72	78	76	103	101	60	50	41	41	60	66	90	117	142	152	59	79.7	41.4
8 Spd	6	6	6	4	3	4	1	3	5	5	7	4	3	4	3	2	1	0	2	2	3	1	3	1	2.1	6.5
Dir	88	78	89	100	87	63	25	102	84	85	66	42	33	5	348	26	18	27	337	325	316	219	258	195	60.8	66.3
9 Spd	3	2	1	1	1	1	0	1	0	1	1	4	3	2	2	2	2	4	3	2	3	1	5	5	1.5	5.1
Dir	325	21	303	252	12	339	206	164	182	144	188	234	246	223	240	274	288	290	263	222	214	228	234	209	245.8	209.1
10 Spd	2	0	3	2	6	1	3	8	13	12	11	7	5	4	2	1	3	2	0	2	3	2	2	2	2.6	12.8
Dir	193	49	192	34	192	31	219	259	263	275	259	274	334	327	262	185	44	304	214	53	221	211	177	177	255.3	262.9
11 Spd	8	19	18	11	9	13	13	11	12	10	8	8	8	8	7	7	6	4	5	2	1	1	3	3	7.5	18.5
Dir	47	56	47	51	45	40	40	44	49	57	53	54	45	34	31	39	52	42	37	41	357	213	267	287	44.9	56.2
12 Spd	3	5	5	2	1	4	2	1	1	2	2	2	1	5	0	1	1	1	1	1	2	2	1	2	0.6	5.2
Dir	193	191	194	249	291	217	179	200	151	166	109	65	55	33	20	210	188	21	355	293	356	253	337	229	194.3	191.2
13 Spd	1	2	0	0	4	3	2	2	3	2	8	5	4	4	6	8	2	2	7	6	3	5	3	6	3.0	8.3
Dir	38	213	214	215	198	222	236	157	212	199	195	207	224	248	237	223	221	280	239	242	296	260	277	324	233.5	222.7
14 Spd	7	4	3	2	6	8	10	8	6	3	5	6	5	7	10	10	6	6	1	1	3	3	4	4	4.9	10.4
Dir	329	347	356	30	41	37	36	38	35	35	49	49	49	40	37	43	56	52	40	47	75	76	56	48	38.3	36.6
15 Spd	4	5	3	3	4	4	3	3	5	5	3	5	4	4	6	5	5	5	5	5	6	6	10	8	4.8	9.8
Dir	53	52	59	64	56	47	64	66	53	58	36	58	47	35	8	38	56	52	60	55	49	55	59	58	51.3	59.2
16 Spd	8	9	8	10	9	10	9	13	12	12	11	13	13	12	12	12	12	11	8	7	8	7	2	4	9.6	13.5
Dir	48	50	52	56	54	57	59	54	51	51	50	48	53	43	46	47	43	46	31	29	41	51	23	59	48.6	53.3
17 Spd	4	3	3	3	2	3	7	2	4	5	7	7	7	7	6	3	5	4	4	3	3	5	6	5	2.6	7.5
Dir	83	85	72	73	101	105	96	70	48	45	43	46	45	27	29	6	45	44	39	33	225	239	246	237	50.5	42.9
18 Spd	2	3	1	1	0	1	1	0	0	1	0	4	4	5	5	4	3	2	1	1	2	2	2	1	0.7	5.1
Dir	170	168	159	346	173	198	196	196	312	200	216	332	352	30	28	351	356	8	311	358	345	219	245	259	348.1	29.7
19 Spd	3	3	2	1	1	2	2	4	3	0	6	2	4	8	7	5	6	4	1	1	1	2	2	1	1.7	7.6
Dir	201	205	18	194	121	65	49	57	72	203	36	98	223	342	31	35	38	41	24	61	122	40	34	28	40.6	342.4
20 Spd	4	3	1	1	1	3	1	2	2	4	3	4	2	4	6	5	4	5	5	4	4	4	1	3	2.4	5.8
Dir	195	256	350	71	148	179	143	122	146	153	169	186	245	103	106	130	117	112	105	120	113	126	174	206	139.5	106.1
21 Spd	2	2	2	3	1	4	4	5	5	3	3	1	3	2	5	4	2	2	1	4	1	1	2	2	1.0	4.9
Dir	266	245	35	106	62	344	346	339	320	286	293	219	178	62	353	57	12	11	348	271	222	252	173	201	327.2	338.9
22 Spd	1	3	4	1	2	1	1	2	1	1	1	2	5	6	5	11	12	10	6	1	1	3	3	6	2.1	11.9
Dir	121	208	201	158	173	180	125	25	78	64	24	54	45	38	66	56	50	62	52	142	29	315	277	328	51.4	50.4

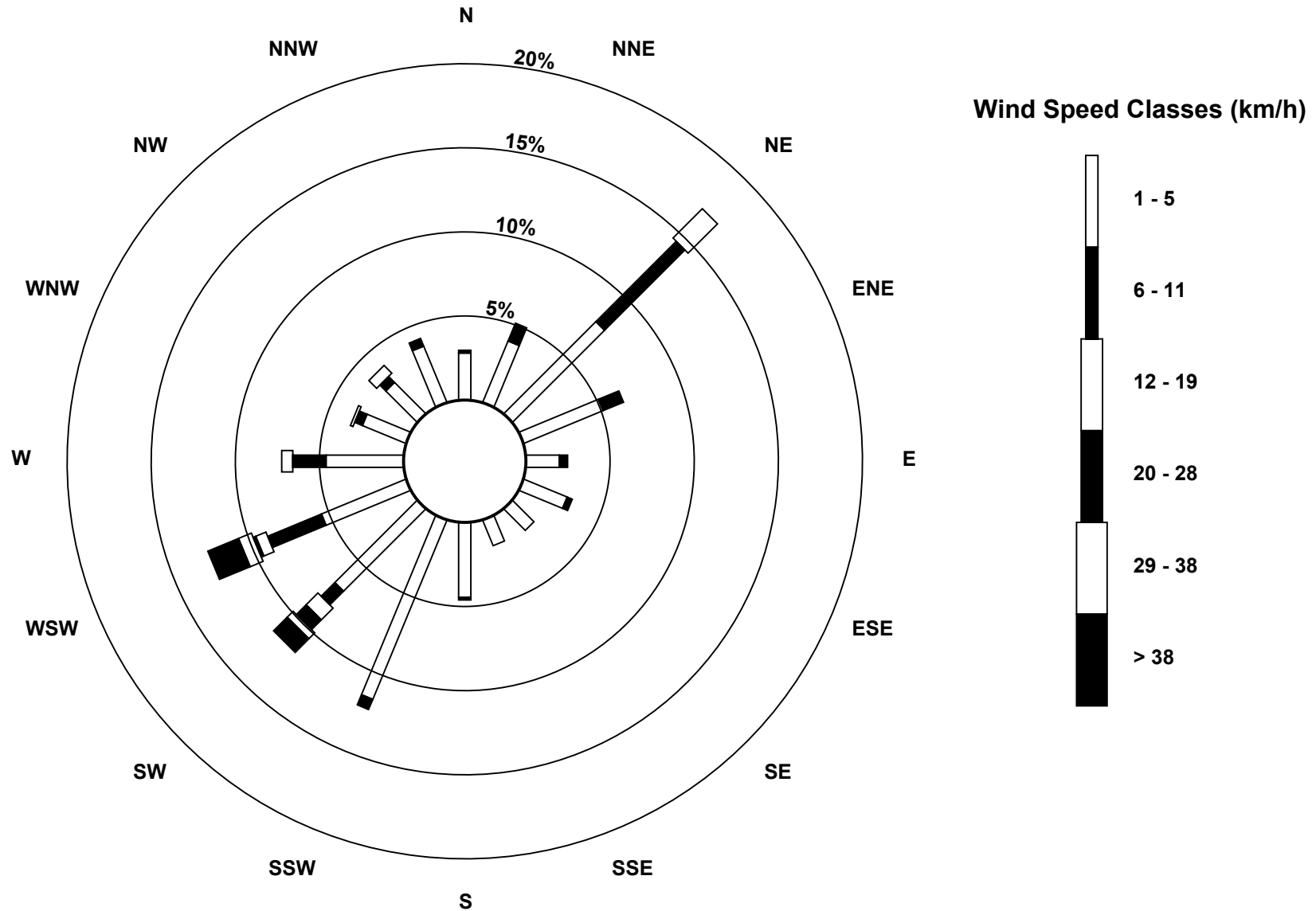
Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Evergreen Park - January 2016

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
23 Spd	6	9	10	7	6	3	2	1	3	1	1	1	5	3	5	6	2	1	1	1	2	3	4	3	2.6	9.5					
Dir	313	248	249	265	248	211	197	167	172	30	19	275	203	310	259	317	320	337	229	276	308	298	299	318	268.0	249.3					
24 Spd	2	4	5	3	2	0	2	0	1	1	1	2	1	1	1	2	2	0	2	1	0	0	0	0	0.9	5.0					
Dir	268	319	278	290	280	183	186	200	197	192	194	210	288	228	329	331	357	304	207	337	237	210	51	355	273.4	278.0					
25 Spd	0	1	1	0	1	0	0	0	0	0	1	1	3	2	1	1	1	1	1	1	1	1	0	1	0.4	2.7					
Dir	328	30	223	286	199	328	165	337	205	329	213	304	337	321	298	344	316	239	238	312	271	41	121	182	297.9	336.7					
26 Spd	1	1	0	0	1	1	3	6	5	3	2	5	4	3	19	34	41	41	40	40	43	43	43	38	16.9	43.1					
Dir	32	49	33	122	197	289	192	215	186	215	266	214	251	264	235	235	234	236	234	231	233	240	247	252	236.7	239.9					
27 Spd	35	30	26	27	22	11	2	4	13	3	1	4	5	2	3	3	4	3	0	1	2	1	5	1	6.6	35.0					
Dir	246	243	234	227	233	250	29	265	236	179	110	151	139	118	346	19	37	51	12	324	266	283	201	11	236.5	245.7					
28 Spd	1	1	1	1	0	0	0	1	1	1	3	7	12	34	47	46	40	45	39	37	46	52	47	48	20.5	51.6					
Dir	92	83	7	346	342	348	77	338	89	355	262	242	256	246	250	247	238	226	225	229	235	238	243	243	239.4	238.2					
29 Spd	46	46	39	32	17	6	11	17	11	15	18	25	26	15	13	7	5	5	1	2	0	4	2	1	14.4	46.0					
Dir	246	244	244	242	237	215	222	231	257	232	231	234	240	262	258	281	296	306	333	246	29	219	44	162	243.3	244.0					
30 Spd	2	3	3	2	2	4	1	5	3	4	5	6	9	9	9	9	6	1	5	1	0	2	1	2	3.3	9.5					
Dir	205	205	212	211	203	207	246	222	324	283	277	285	261	259	251	253	251	248	195	45	353	201	269	227	247.6	259.5					
31 Spd	4	6	10	11	10	5	6	7	13	7	9	15	16	15	15	12	7	6	5	3	2	1	0	0	7.0	16.3					
Dir	250	270	265	253	250	258	248	266	314	259	264	307	307	299	307	262	258	263	245	291	306	264	15	96	279.3	306.6					
Spd	2.5	2.4	2.3	1.8	1.4	0.2	0.6	0.1	0.5	0.6	0.5	1.2	2.1	2.5	3.5	2.7	1.5	1.3	2.2	2.4	2.6	3.8	3.5	3.1	Diurnal Average						
Dir	249.8	241.6	242.2	248.1	223.3	213.3	78.3	278.1	297.9	228.0	243.7	245.2	266.3	285.8	281.3	276.1	267.8	248.2	232.7	236.5	236.9	234.0	244.2	248.5	Diurnal Maximum						
Spd	45.8	46.0	38.8	32.0	21.5	13.1	12.8	16.7	13.3	15.2	18.3	24.7	25.8	33.8	46.7	46.0	41.2	45.0	39.8	40.1	46.1	51.6	47.1	48.1	Diurnal Maximum						
Dir	246.0	244.0	243.5	242.5	232.9	39.6	40.2	230.8	235.5	232.0	231.1	233.9	240.0	246.5	250.1	246.5	234.1	226.3	233.8	230.7	235.4	238.2	242.5	243.0							
Maximum Speed Value: 52 km/h on Jan 28 22:00																		Minimum Speed Value: 0 km/h on Jan 2 07:00													
Maximum Daily Speed Average: 20.5 km/h on Jan 28																		Minimum Daily Speed Average: 0.4 km/h on Jan 25													
Maximum Diurnal Speed Average: 3.8 km/h at hour 22																		Minimum Diurnal Speed Average: 0.1 km/h at hour 8													
Monthly Average Velocity: 1.74 km/h 250.91 deg																		Speed Percentiles: P ₁ = 0.1 P ₁₀ = 0.6 Q ₁ = 1.3 Median = 2.9 Q ₃ = 5.4 P ₉₀ = 10.8 P ₉₉ = 45.9													
All monthly, daily, and diurnal averages have been calculated using vector methods																		Percent Operational Time: 100.0													
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		53	2	0	0	0	0	55																							
NorthEast		93	63	18	0	0	0	174																							
East		42	8	0	0	0	0	50																							
SouthEast		30	1	0	0	0	0	31																							
South		90	6	0	0	0	0	96																							
SouthWest		113	18	8	7	7	18	171																							
West		65	29	7	0	1	1	103																							
NorthWest		52	7	5	0	0	0	64																							
Total		538	134	38	7	8	19	744																							

Wind Rose

Wind Speed (WS) (km/h)
Evergreen Park - January 2016



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Evergreen Park - January 2016

Maximum Speed: 52 km/h on Jan 28 22:00																				Maximum Daily Speed Average: 22.0 km/h on Jan 28										Hours in Service: 744	
Minimum Speed: 0 km/h on Jan 25 07:00																				Minimum Daily Speed Average: 1.4 km/h on Jan 25										Hours of Data: 744	
Maximum Diurnal Speed Average: 8.5 km/h at hour 15																				Minimum Diurnal Speed Average: 3.8 km/h at hour 7										Hours of Missing Data: 0	
Monthly Average Speed: 5.91 km/h																				Percentiles: P ₁ = 0.4 P ₁₀ = 1.2 Q ₁ = 2.2 Median = 3.7 Q ₃ = 6.0 P ₉₀ = 11.4 P ₉₉ = 46.2										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Jan	6	5	7	13	4	7	4	3	5	12	3	9	18	23	30	19	6	2	2	2	4	7	7	6	8.5	29.7					
2-Jan	6	1	1	2	2	4	0	2	2	3	5	8	4	2	3	2	2	3	3	3	3	1	1	1	2.7	8.2					
3-Jan	3	2	1	2	2	0	2	2	2	1	2	1	3	2	3	4	3	2	3	1	5	5	2	3	2.3	5.5					
4-Jan	4	4	5	3	4	4	3	3	3	4	7	6	7	3	3	3	2	1	2	3	3	3	4	1	3.5	7.3					
5-Jan	3	3	2	2	4	2	3	3	3	3	3	3	5	10	11	6	5	2	2	2	2	2	2	2	3.6	10.9					
6-Jan	1	1	4	3	4	1	2	1	1	2	3	3	3	3	3	2	4	2	1	1	3	2	0	1	2.1	4.4					
7-Jan	1	1	2	4	1	0	1	1	1	3	4	5	5	5	7	9	9	5	3	4	6	5	2	4	3.6	9.3					
8-Jan	6	6	7	5	4	5	3	3	6	5	7	5	4	4	4	3	1	0	2	3	3	2	3	3	4.1	7.5					
9-Jan	3	2	2	2	2	1	1	1	1	1	1	4	3	2	2	2	4	4	4	3	3	2	5	5	2.4	5.2					
10-Jan	2	1	3	3	7	3	3	9	13	12	11	7	6	4	2	2	3	2	1	2	4	2	2	3	4.5	13.2					
11-Jan	9	19	19	12	10	13	13	11	13	10	9	9	9	8	7	7	6	4	5	2	1	2	3	3	8.5	18.9					
12-Jan	3	5	6	3	2	5	4	4	5	4	7	5	3	5	1	3	3	2	2	1	2	4	2	2	3.4	7.1					
13-Jan	4	2	1	1	4	3	3	3	3	2	8	5	4	4	6	9	3	6	7	6	4	5	6	6	4.4	8.6					
14-Jan	8	5	3	3	6	8	10	8	6	4	6	6	6	8	11	11	7	7	1	2	3	3	4	4	5.7	10.7					
15-Jan	4	5	3	3	4	4	4	3	5	6	4	6	5	5	7	6	6	6	5	6	7	6	10	8	5.3	10.1					
16-Jan	9	9	8	11	9	10	10	13	12	12	12	13	14	13	12	13	13	11	8	7	8	7	2	4	10.1	14.0					
17-Jan	5	3	4	4	2	3	7	3	4	6	8	7	8	8	6	4	5	4	5	5	7	6	7	5	5.2	7.7					
18-Jan	3	3	1	1	1	2	1	1	1	1	1	4	5	6	5	5	4	2	2	1	2	3	2	2	2.3	5.8					
19-Jan	4	4	3	3	2	3	3	4	3	1	7	4	5	8	7	5	7	4	1	1	1	2	2	1	3.5	8.1					
20-Jan	5	4	1	1	1	3	2	2	3	4	5	4	3	6	6	5	5	6	6	5	4	4	2	4	3.8	6.5					
21-Jan	3	3	3	4	1	4	5	6	5	4	3	2	4	5	5	5	2	2	2	5	2	2	3	3	3.5	5.6					
22-Jan	3	3	5	2	3	2	2	2	2	1	1	3	5	6	5	11	12	10	6	2	2	4	3	7	4.3	12.3					
23-Jan	6	10	10	8	6	3	2	1	3	2	1	2	5	4	5	8	2	2	1	2	3	4	5	3	4.1	9.7					
24-Jan	3	4	5	4	2	0	2	1	1	1	1	2	1	1	1	2	2	0	2	1	1	1	1	0	1.7	5.2					
25-Jan	1	1	1	1	2	1	0	1	1	0	1	1	3	2	1	1	2	2	2	2	2	1	1	2	1.4	2.8					
26-Jan	3	1	1	3	3	2	3	8	5	5	4	6	5	5	20	34	41	42	40	40	43	44	43	38	18.4	43.5					
27-Jan	35	30	26	27	22	13	5	7	13	5	4	5	5	3	4	4	5	3	3	3	3	4	6	3	9.9	35.3					
28-Jan	2	2	2	2	2	2	1	2	2	2	4	9	13	34	47	46	41	45	39	37	46	52	47	48	22.0	51.9					
29-Jan	46	46	39	32	17	7	12	17	11	15	18	25	26	16	14	8	6	5	4	3	3	5	2	3	15.8	46.3					
30-Jan	3	4	5	3	3	7	2	5	5	6	7	8	10	10	9	9	6	2	5	1	1	2	2	2	4.8	10.1					
31-Jan	4	7	10	11	10	6	6	7	13	7	10	16	17	16	16	12	7	6	5	4	3	2	1	0	8.1	17.1					
6.4 6.3 6.1 5.7 4.7 4.2 3.8 4.4 4.9 4.7 5.4 6.2 6.8 7.4 8.5 8.3 7.2 6.2 5.6 5.1 5.9 6.2 5.9 5.8																								Diurnal Average							
46.1 46.3 39.1 32.2 21.7 13.4 13.1 16.9 13.4 15.3 18.4 24.9 26.1 34.3 47.0 46.3 41.5 45.4 40.0 40.3 46.4 51.9 47.3 48.4																								Diurnal Maximum							
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg
Evergreen Park - January 2016

Maximum Value: 99.9 deg on Jan 2 07:00																				Hours in Service: 744					
Minimum Value: 5.4 deg on Jan 26 18:00																				Hours of Data: 744					
																				Hours of Missing Data: 0					
Percentiles: P ₁ = 5.8 P ₁₀ = 14.8 Q ₁ = 23.5 Median = 41.9 Q ₃ = 67.4 P ₉₀ = 82.4 P ₉₉ = 94.7																				Hours of Calibration: 0					
																				Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Jan	45	75	74	49	84	56	68	69	78	44	71	30	5	6	7	54	67	85	97	96	81	29	71	76	97.2
2-Jan	69	64	79	80	91	33	100	78	74	54	48	11	25	29	54	24	88	44	60	33	26	79	72	84	99.9
3-Jan	91	55	85	82	97	92	73	60	63	84	60	82	43	40	50	36	65	93	71	67	45	86	73	57	96.8
4-Jan	63	21	28	31	49	27	75	25	57	62	23	30	19	20	56	26	46	73	92	63	46	21	73	64	92.1
5-Jan	68	55	82	85	78	56	85	83	54	91	23	79	51	25	27	48	35	68	46	22	82	58	78	68	90.7
6-Jan	72	50	45	62	18	89	22	42	70	52	24	25	66	19	52	74	22	49	26	38	58	48	48	53	89.0
7-Jan	37	53	68	25	47	52	18	32	23	24	26	39	46	35	39	17	13	38	46	30	25	28	57	28	68.4
8-Jan	24	24	23	51	73	42	92	54	35	33	31	34	75	40	34	27	71	95	64	52	30	80	44	81	94.9
9-Jan	41	50	66	98	66	65	79	59	74	35	29	16	19	16	18	32	28	30	31	40	14	58	16	14	97.5
10-Jan	33	89	60	71	51	87	58	22	15	17	15	17	27	19	20	65	33	62	82	87	59	73	60	53	88.9
11-Jan	26	11	15	16	24	16	12	13	17	19	24	27	16	18	20	19	28	20	23	68	78	79	23	27	78.9
12-Jan	58	16	42	79	81	70	66	93	88	77	74	79	70	20	92	87	88	58	70	54	56	67	78	62	92.9
13-Jan	88	50	93	95	33	26	34	61	35	61	8	18	26	16	9	13	46	75	17	10	39	27	56	17	94.8
14-Jan	22	57	37	35	23	13	12	17	18	26	24	27	30	35	17	13	24	23	69	41	30	21	28	33	68.6
15-Jan	24	21	25	34	24	30	33	43	21	34	39	36	59	41	26	32	22	20	26	25	27	27	21	24	58.7
16-Jan	26	22	20	17	19	23	22	13	14	14	13	17	24	21	19	16	12	12	14	21	22	27	44	22	44.0
17-Jan	37	32	32	46	39	49	26	53	54	20	15	31	32	26	33	55	29	37	23	61	79	32	12	64	78.5
18-Jan	54	47	66	63	95	73	62	91	92	46	99	35	40	36	21	24	24	50	57	79	48	60	60	78	98.7
19-Jan	58	58	67	72	58	59	36	29	43	79	38	61	47	23	27	35	22	22	63	46	82	22	35	65	81.5
20-Jan	31	46	61	44	40	30	23	37	26	21	72	44	59	58	35	38	40	34	32	45	40	45	83	51	83.3
21-Jan	68	67	60	44	66	53	38	33	27	52	39	55	48	83	31	53	57	60	81	40	58	74	55	83	82.7
22-Jan	62	44	24	81	68	62	62	46	45	75	49	48	22	25	28	20	16	19	28	51	74	34	33	27	81.5
23-Jan	27	14	10	21	19	25	35	59	43	69	79	63	21	40	31	38	50	83	80	68	49	31	31	29	82.9
24-Jan	47	24	18	30	36	85	39	74	60	25	20	23	45	37	32	41	21	91	59	74	76	82	73	59	90.5
25-Jan	90	78	56	90	89	82	89	73	91	77	65	70	27	50	78	44	89	87	77	82	84	63	83	92	91.6
26-Jan	86	77	90	95	87	88	43	52	43	62	55	25	61	59	10	6	6	5	6	6	7	7	7	8	95.2
27-Jan	7	7	11	8	7	32	87	74	17	54	77	30	37	54	40	21	23	36	93	85	83	87	47	77	92.5
28-Jan	66	79	68	55	93	88	91	80	84	73	46	42	21	10	7	6	9	7	6	7	7	6	6	6	92.5
29-Jan	6	7	6	6	6	30	41	9	14	6	6	7	8	15	15	31	28	32	86	55	95	51	69	72	95.0
30-Jan	87	82	72	89	57	71	81	37	58	45	50	37	26	21	18	9	9	67	21	75	80	27	60	18	89.3
31-Jan	15	20	14	15	9	16	10	20	10	18	20	17	19	20	20	16	16	15	13	32	45	85	74	77	85.4
90.6 88.9 93.0 97.5 96.8 92.2 99.9 92.9 92.4 90.7 98.7 82.5 75.3 82.7 91.6 87.2 88.8 94.9 97.2 95.8 95.0 87.3 83.3 91.6																									

PAZA
Smoky Heights Station
Monthly Summary Tables, Graphs and
Roses

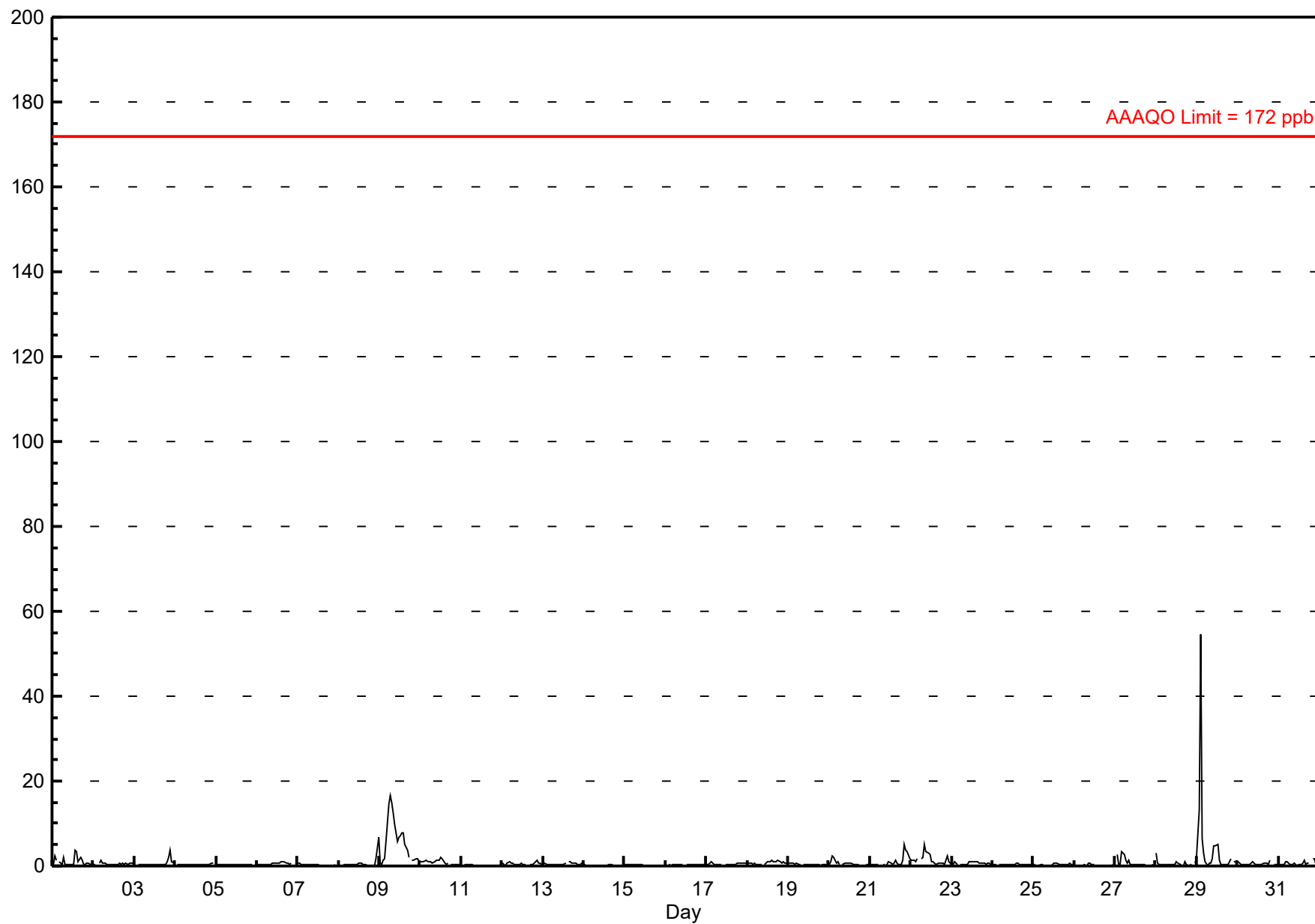
Hourly Averages

Sulphur Dioxide (SO₂) - ppb Smoky Heights - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 54.7 ppb on Jan 29 03:00 Maximum Daily Average: 5.8 ppb on Jan 9																				Hours in Service: 744 Hours of Data: 709						
Minimum Value: 0 ppb on Jan 8 22:00 Maximum Diurnal Average: 2.5 ppb at hour 3 Monthly Average: 0.83 ppb																				Minimum Daily Average: 0.1 ppb on Jan 14 Minimum Diurnal Average: 0.4 ppb at hour 19 Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.4 Q ₃ = 0.6 P ₉₀ = 1.3 P ₉₉ = 8.5		Hours of Missing Data: 35 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	0	2	1	A	1	0	2	0	0	0	0	0	0	4	3	1	2	1	0	0	1	1	0	0	1.1	3.9
2-Jan	0	0	A	1	1	1	1	1	0	0	0	0	0	0	0	1	0	1	0	1	0	1	1	1	0.5	1.4
3-Jan	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	4	1	1	0.6	3.6
4-Jan	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	A	0.3	0.7
5-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	0.3	0.5
6-Jan	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	1	A	1	1	0.6	1.1
7-Jan	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.6
8-Jan	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	A	0	0	2	7	0.6	6.9
9-Jan	1	0	1	2	6	15	17	15	12	10	6	7	7	8	8	5	4	2	A	1	2	2	2	1	5.8	16.8
10-Jan	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	0	1	A	0	0	0	0	0	0	0.9	1.9
11-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
12-Jan	1	0	0	1	1	1	1	0	0	0	0	1	0	0	0	A	0	0	0	1	1	1	1	0	0.5	1.2
13-Jan	0	1	0	0	0	0	0	0	0	0	0	0	0	1	A	1	1	1	1	1	0	0	0	1	0.5	0.9
14-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.3
15-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	0.4
16-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	0.2
17-Jan	0	0	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	1	1	1	1	1	0.4	1.2
18-Jan	1	1	1	1	1	0	0	0	0	0	A	0	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.3
19-Jan	1	1	1	1	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8
20-Jan	0	1	3	2	1	1	0	A	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.6	2.5
21-Jan	0	0	0	0	0	0	A	0	0	0	1	1	1	0	1	1	1	0	1	1	5	4	3	2	1.0	5.0
22-Jan	1	1	1	1	2	A	2	2	5	3	3	3	1	1	1	0	1	1	1	1	0	2	1	1	1.5	5.0
23-Jan	0	0	1	0	A	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0.6	1.2
24-Jan	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0.3	0.7
25-Jan	0	0	A	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	1	0	0	0.3	0.6
26-Jan	0	A	0	0	0	0	0	0	1	1	0	0	0	C	C	0	0	0	0	0	0	0	0	0	0.2	0.6
27-Jan	A	3	0	0	3	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.7	3.2
28-Jan	3	1	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	A	1	0.5	2.9
29-Jan	2	13	55	6	3	1	0	1	1	2	5	5	5	1	0	0	0	0	0	1	2	A	1	1	4.6	54.7
30-Jan	1	1	1	0	0	0	0	0	1	1	0	0	0	0	0	1	1	1	0	1	A	0	0	0	0.5	1.2
31-Jan	0	0	0	0	1	1	1	0	0	1	0	0	0	0	1	1	0	1	1	A	2	2	0	0	0.6	1.8
0.6 1.0 2.5 0.8 0.8 1.0 1.0 0.9 0.9 0.8 0.8 0.9 0.9 0.9 0.8 0.7 0.6 0.5 0.4 0.5 0.7 0.7 0.6 0.7																								Diurnal Average		
2.9 13.1 54.7 6.4 5.8 14.6 16.8 14.9 12.5 10.0 5.9 6.9 7.2 7.7 7.9 5.1 3.8 1.9 1.3 1.4 5.0 3.8 3.2 6.9																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Smoky Heights - January 2016



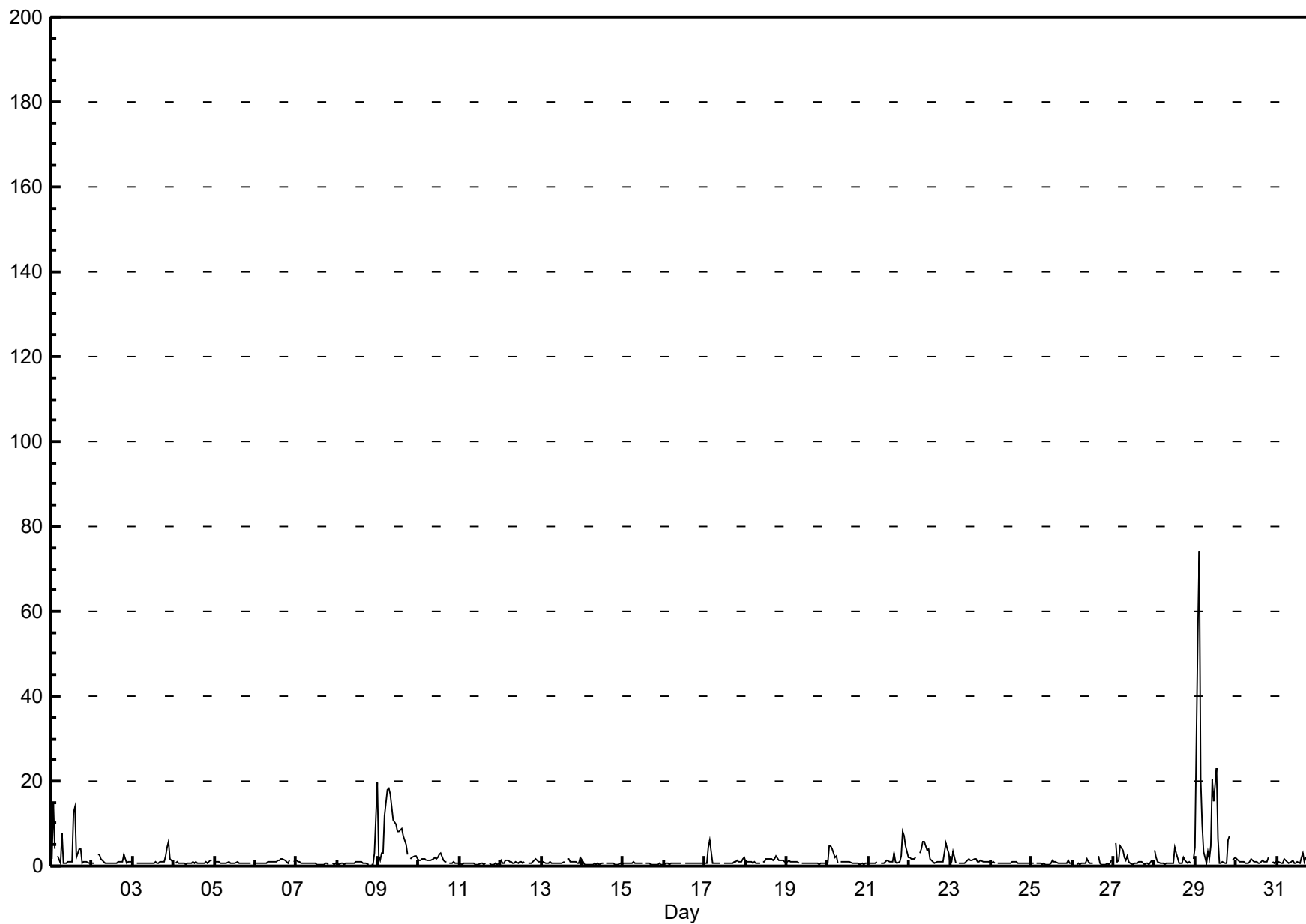
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb Smoky Heights - January 2016

Maximum Value: 74.4 ppb on Jan 29 03:00																				Maximum Daily Average: 11.5 ppb on Jan 29					Hours in Service: 744	
Minimum Value: 0 ppb on Jan 26 19:00																				Minimum Daily Average: 0.5 ppb on Jan 14					Hours of Data: 709	
Maximum Diurnal Average: 3.9 ppb at hour 3																				Minimum Diurnal Average: 0.9 ppb at hour 19					Hours of Missing Data: 35	
Monthly Average: 1.70 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.8 Q ₃ = 1.2 P ₉₀ = 2.8 P ₉₉ = 17.4					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	2	15	4	A	2	1	8	1	1	1	1	1	1	13	14	2	4	4	1	1	1	1	1	1	3.4	14.9
2-Jan	1	1	A	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1.1	2.8
3-Jan	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	4	6	2	1	1.3	5.8
4-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	1.5
5-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
6-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	A	1	1	1.0	1.6
7-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	A	1	0	1	0.7	1.5
8-Jan	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	0	0	3	20	1.6	19.7
9-Jan	2	2	3	3	12	18	18	17	14	11	10	8	8	8	9	7	5	3	A	2	2	2	2	2	7.3	18.3
10-Jan	1	1	2	2	1	1	1	1	2	2	2	2	3	3	1	1	1	A	1	1	1	1	1	1	1.4	3.1
11-Jan	1	0	1	1	1	1	1	1	1	0	0	0	1	1	0	1	A	1	0	0	0	1	0	1	0.6	0.8
12-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	2	1	1	1	1.0	1.7
13-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	2	1	1	1	1	1	1	2	1.0	2.0
14-Jan	1	0	0	0	1	0	0	1	0	1	0	1	1	A	1	1	1	1	1	0	0	0	1	0	0.5	0.9
15-Jan	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	0	0	0	0	1	0	0	0.6	0.9
16-Jan	0	1	1	0	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8
17-Jan	1	1	5	6	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	2	2	1.3	6.1
18-Jan	1	1	1	1	1	1	1	1	1	A	1	1	1	2	2	2	1	2	2	1	1	1	1	1	1.2	2.4
19-Jan	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	0.7	1.3
20-Jan	1	5	5	4	2	2	1	A	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1.4	4.7
21-Jan	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	3	1	1	1	2	8	7	5	2	1.8	8.1
22-Jan	2	2	2	2	2	A	3	4	6	6	4	4	2	1	1	1	1	1	1	1	1	5	4	3	2.5	5.9
23-Jan	1	1	3	1	A	1	1	1	1	1	1	2	1	1	2	2	1	1	1	1	1	1	1	1	1.2	3.4
24-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	1.1
25-Jan	1	1	A	1	1	1	0	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.5
26-Jan	1	A	0	1	0	1	1	1	2	1	1	1	1	C	C	2	1	1	0	0	1	0	1	1	0.8	2.4
27-Jan	A	6	1	1	5	4	2	1	2	1	1	1	1	1	1	1	1	1	0	1	1	0	1	A	1.5	5.6
28-Jan	4	2	1	1	1	1	0	1	1	1	1	1	5	3	1	1	1	2	1	1	1	1	A	2	1.3	4.5
29-Jan	4	55	74	20	10	4	1	3	2	5	20	15	23	6	1	1	1	1	1	6	7	A	1	2	11.5	74.4
30-Jan	2	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	2	A	1	1	1	1.0	1.9
31-Jan	1	1	1	1	2	1	1	1	1	1	1	1	1	1	2	3	1	2	2	A	3	4	1	1	1.4	3.5
1.2 3.6 3.9 2.0 1.8 1.6 1.7 1.5 1.5 1.4 1.8 1.7 2.1 1.9 1.6 1.3 1.1 1.1 0.9 1.2 1.5 1.5 1.3 1.8																									Diurnal Average	
4.4 54.9 74.4 20.3 12.0 18.0 18.3 16.9 13.9 10.8 20.4 15.2 23.2 12.6 13.9 7.0 5.1 4.1 2.4 6.1 8.1 7.2 4.6 19.7																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

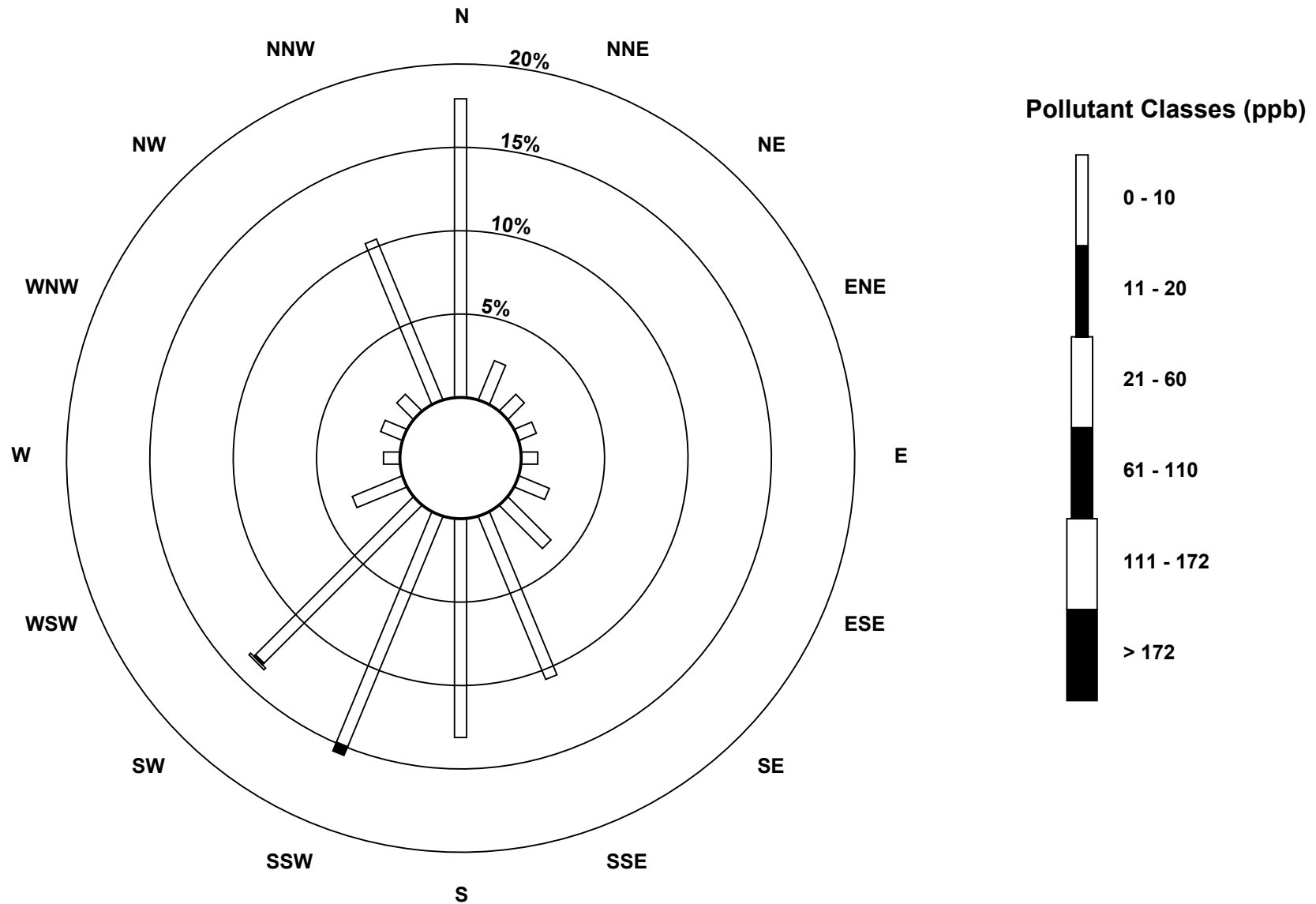
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Smoky Heights - January 2016



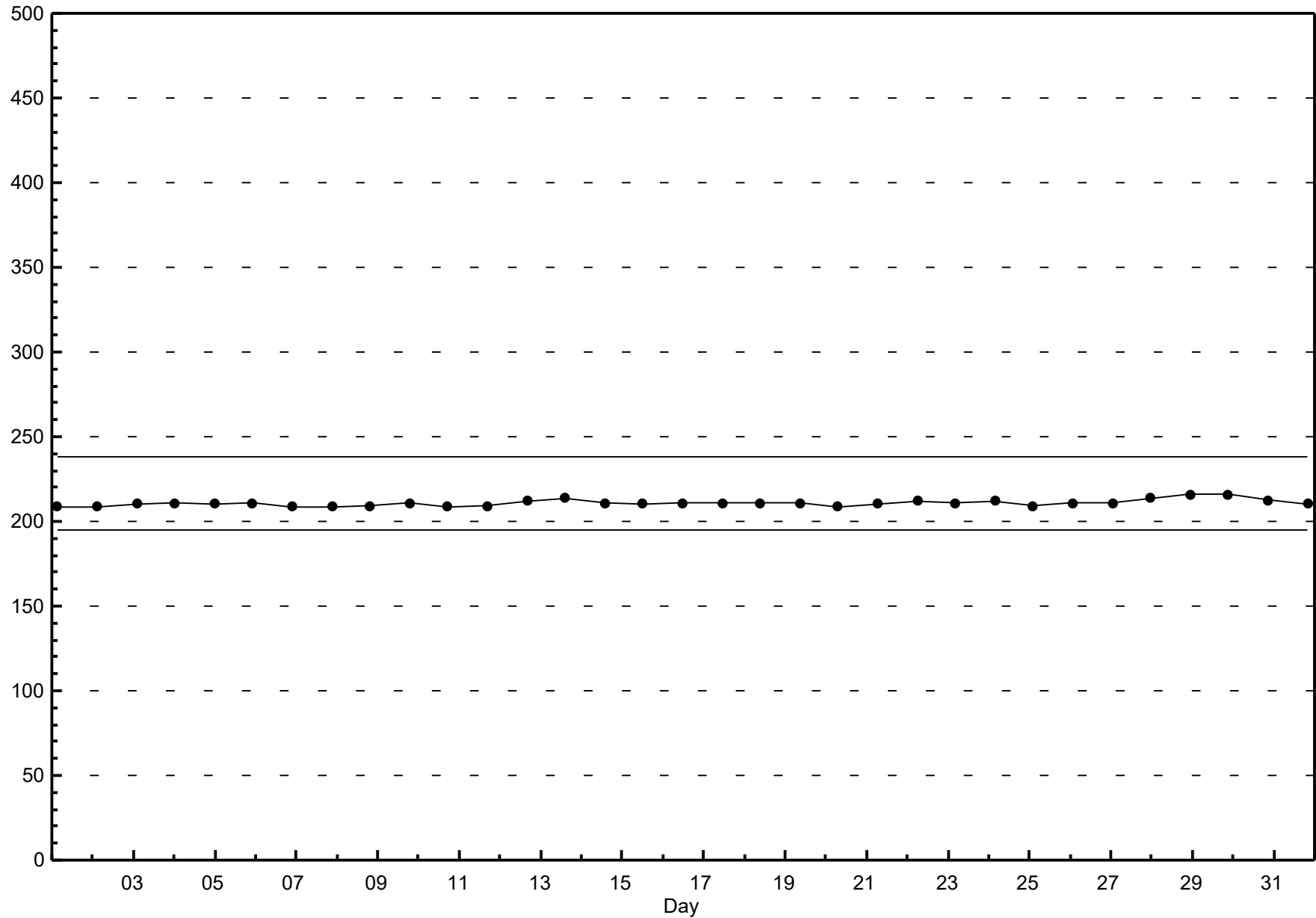
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Smoky Heights - January 2016



Span Responses

Sulphur Dioxide (SO₂)
Smoky Heights - January 2016



Hourly Averages

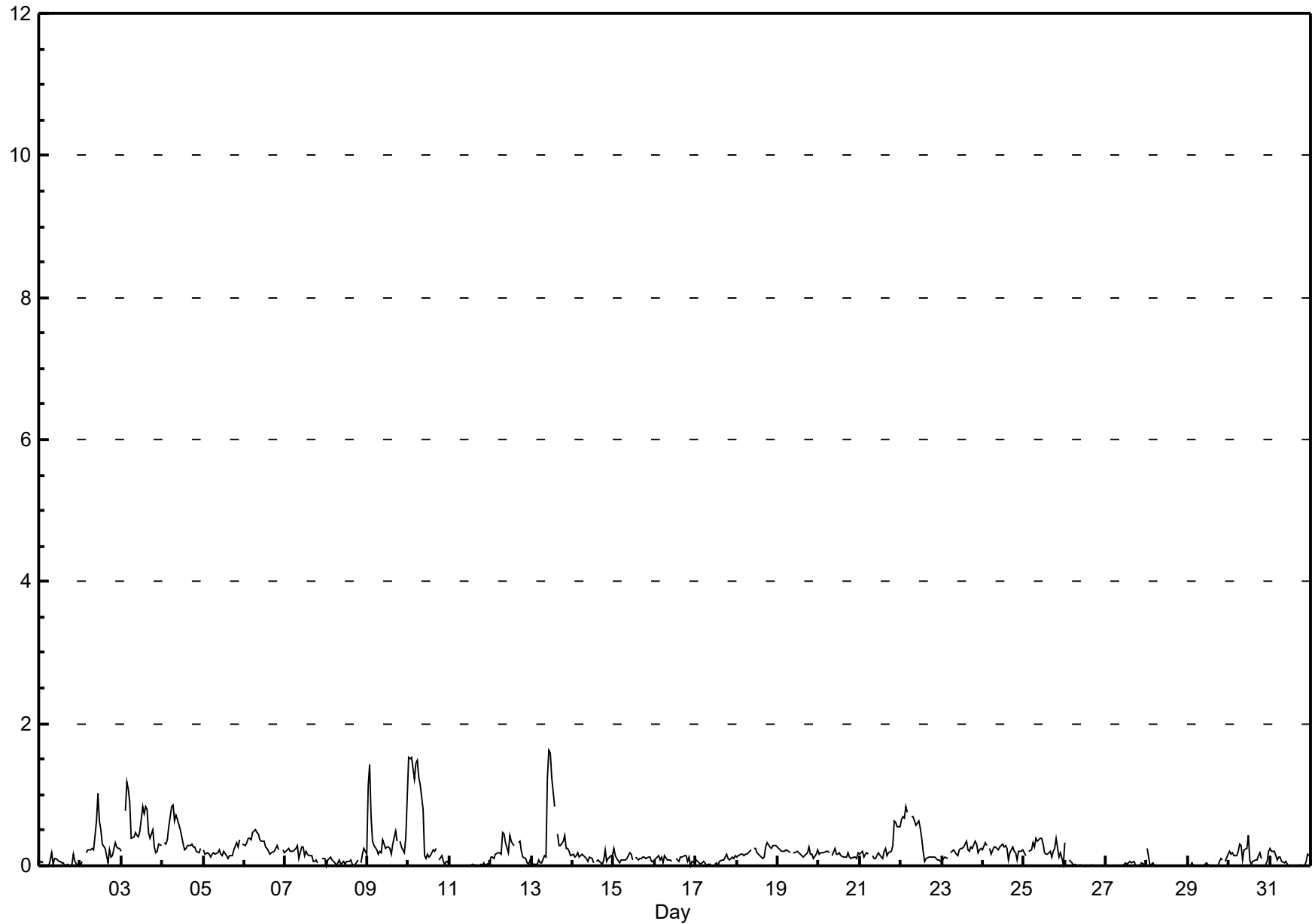
Total Reduced Sulphur (TRS) - ppb

Smoky Heights - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 744						
Maximum Value: 1.6 ppb on Jan 13 11:00																				Maximum Daily Average: 0.6 ppb on Jan 10		Hours of Data: 706				
Minimum Value: 0 ppb on Jan 1 06:00																				Minimum Daily Average: 0.0 ppb on Jan 11		Hours of Missing Data: 38				
Maximum Diurnal Average: 0.3 ppb at hour 11																				Minimum Diurnal Average: 0.1 ppb at hour 22		Hours of Calibration: 38				
Monthly Average: 0.20 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.4 P ₉₉ = 1.4		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	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
2-Jan	0	0	A	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	1.0
3-Jan	0	A	1	1	1	1	0	0	0	0	0	0	1	1	1	1	0	0	1	0	0	0	0	0	0.5	1.2
4-Jan	A	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0.4	0.9
5-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	0.4
6-Jan	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.5
7-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
8-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	0.1	0.2
9-Jan	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	0.4	1.4
10-Jan	2	1	2	1	1	1	1	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.6	1.5
11-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
12-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	0.5
13-Jan	0	0	0	0	0	0	0	0	0	1	2	2	1	1	A	0	0	0	0	0	0	0	0	0	0.4	1.6
14-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.2
15-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	0.2
16-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
17-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
18-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
19-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
20-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
21-Jan	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.2	0.6
22-Jan	1	1	1	1	1	A	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8
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	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
25-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	0.4
26-Jan	0	A	0	0	0	0	0	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.0	0.3
27-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	0.0	0.1
28-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
29-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	0.0	0.2
30-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
31-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	0.1	0.2
		0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	Diurnal Average	
		1.5	1.5	1.5	1.2	1.4	1.5	1.3	1.1	0.8	1.2	1.6	1.6	1.2	0.8	0.8	0.8	0.5	0.4	0.5	0.4	0.6	0.6	1.0	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

Total Reduced Sulphur (TRS) - ppb
Smoky Heights - January 2016



Hourly Maximums

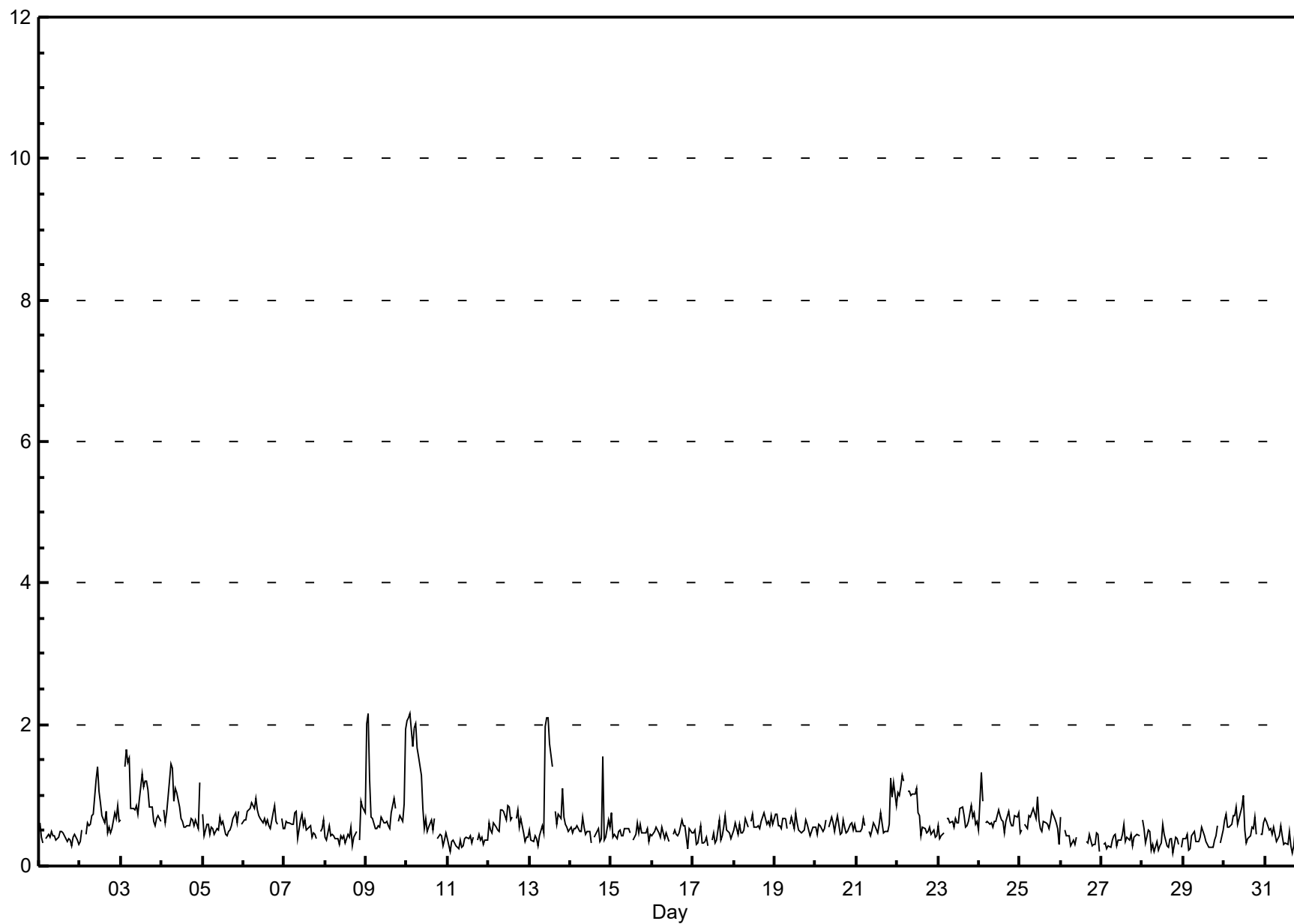
Total Reduced Sulphur (TRS) - ppb

Smoky Heights - January 2016

Maximum Value: 2.2 ppb on Jan 10 03:00																				Maximum Daily Average: 1.0 ppb on Jan 10										Hours in Service: 744									
Minimum Value: 0 ppb on Jan 31 17:00																				Minimum Daily Average: 0.4 ppb on Jan 11										Hours of Data: 706									
Maximum Diurnal Average: 0.7 ppb at hour 1																				Minimum Diurnal Average: 0.5 ppb at hour 17										Hours of Missing Data: 38									
Monthly Average: 0.60 ppb																				Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.7 P ₉₀ = 0.8 P ₉₉ = 2.0										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	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6													
2-Jan	0	1	A	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	0.7	1.4													
3-Jan	1	A	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.6													
4-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	1.5													
5-Jan	1	0	1	1	0	1	1	0	1	1	1	1	1	0	0	0	1	1	1	1	1	1	A	1	0.6	0.8													
6-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	0.7	1.0													
7-Jan	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	0	0	0	A	0	1	1	0.6	0.8													
8-Jan	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	A	0	1	1	1	0.5	0.9													
9-Jan	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	2	0.9	2.2													
10-Jan	2	2	2	2	2	2	2	2	1	1	1	1	0	1	1	1	1	A	0	0	0	0	0	0	1.0	2.2													
11-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	0.4	0.5													
12-Jan	1	1	0	1	1	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	0	0	0	0	0.6	0.8													
13-Jan	1	0	0	0	0	0	0	1	0	2	2	2	2	1	A	1	1	1	1	1	1	1	1	0	0.8	2.1													
14-Jan	1	0	1	1	1	0	0	1	1	0	0	0	0	A	0	0	1	0	0	2	0	0	1	1	0.5	1.5													
15-Jan	1	0	0	0	0	1	0	0	1	1	1	0	A	0	0	1	0	1	0	0	0	1	0	0	0.5	0.8													
16-Jan	0	0	1	0	0	0	1	0	0	0	0	A	0	1	0	0	0	1	1	1	0	0	1	0	0.5	0.6													
17-Jan	0	1	0	0	1	0	0	0	0	0	0	A	0	0	0	1	0	0	1	1	1	0	0	0	0.4	0.7													
18-Jan	1	1	0	1	0	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8													
19-Jan	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0	0	0	1	1	1	0	0	1	1	0.6	0.8													
20-Jan	1	0	1	1	0	1	1	A	1	1	1	0	1	1	0	0	1	1	0	0	1	1	1	1	0.6	0.7													
21-Jan	0	0	0	1	1	1	A	0	0	1	1	1	0	1	1	1	0	0	0	1	1	1	1	1	0.6	1.2													
22-Jan	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	1	1	0	0	1	0	1	0	0	0.8	1.3													
23-Jan	1	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	0.8													
24-Jan	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0.7	1.3													
25-Jan	0	1	A	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	0.6	1.0													
26-Jan	1	A	0	0	0	0	0	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.4	0.7													
27-Jan	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0.4	0.6													
28-Jan	1	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0.4	0.7													
29-Jan	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	A	0	1	0.4	0.6													
30-Jan	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	0	A	0	0	1	0.6	1.0													
31-Jan	1	1	1	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	A	0	0	1	0	0.4	0.7													
0.7 0.7 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.7 0.7 0.6 0.6 0.5 0.5 0.5 0.5 0.5 0.6 0.5 0.5 0.6 0.6																									Diurnal Average														
2.1 2.2 2.2 1.7 2.0 2.0 1.7 1.5 1.3 2.0 2.1 2.1 1.7 1.4 1.2 1.2 1.1 0.8 0.9 1.5 1.2 1.0 1.2 1.9																									Diurnal Maximum														
C - Calibration																									A - Automated Daily Zero Span														

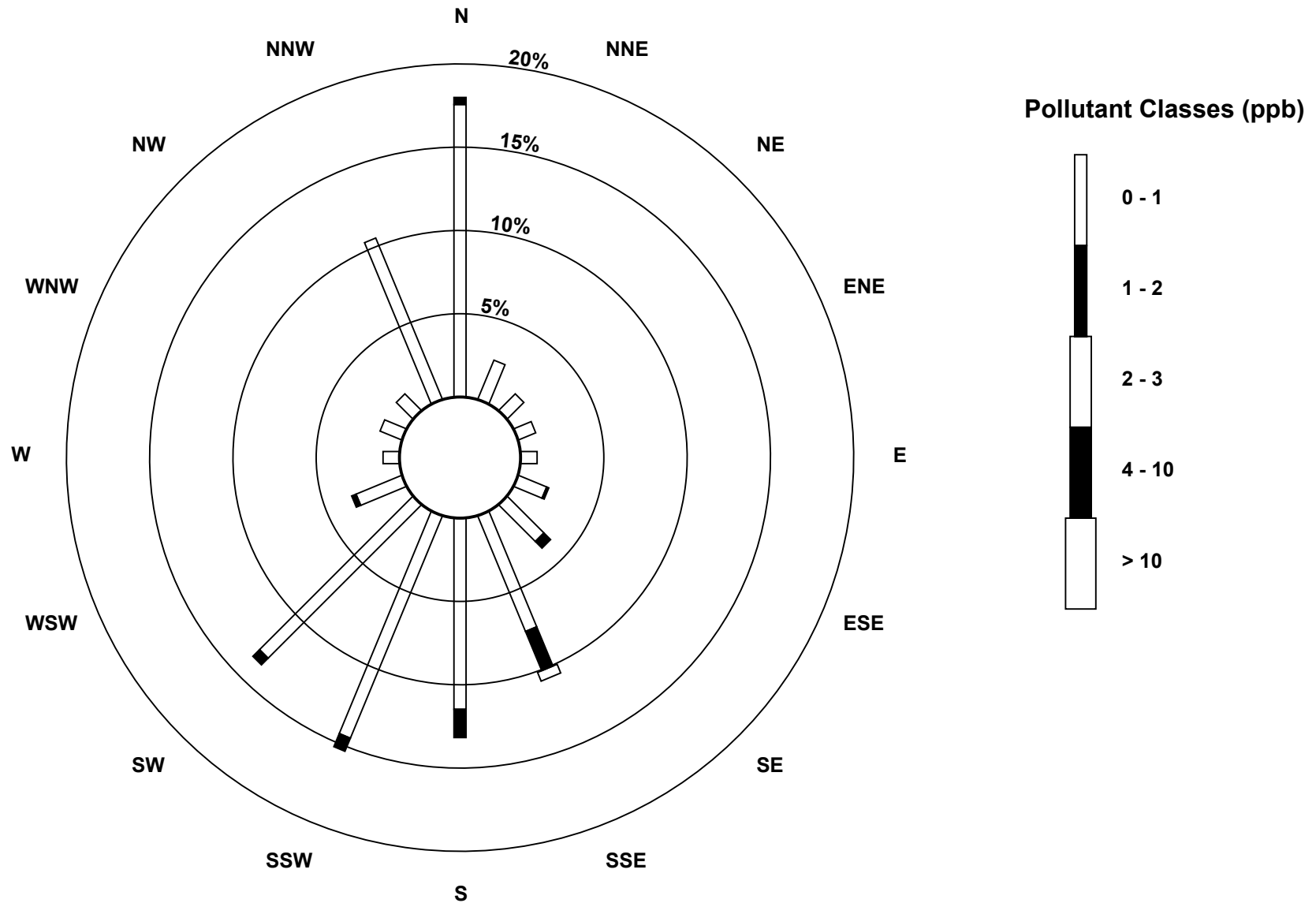
Hourly Maximums

Total Reduced Sulphur (TRS) - ppb
Smoky Heights - January 2016



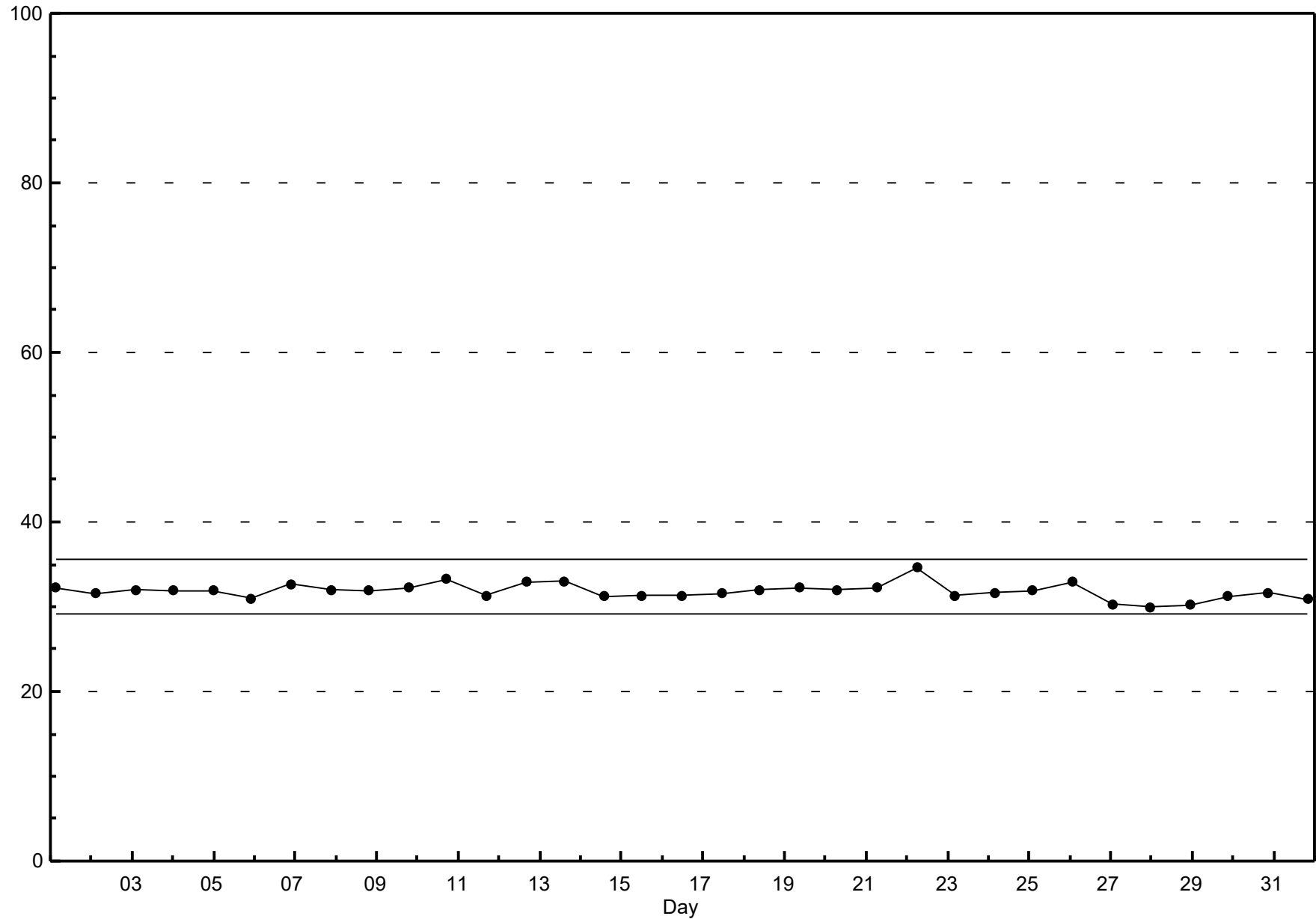
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb
Smoky Heights - January 2016



Span Responses

Total Reduced Sulphur (TRS)
Smoky Heights - January 2016



Hourly Averages

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

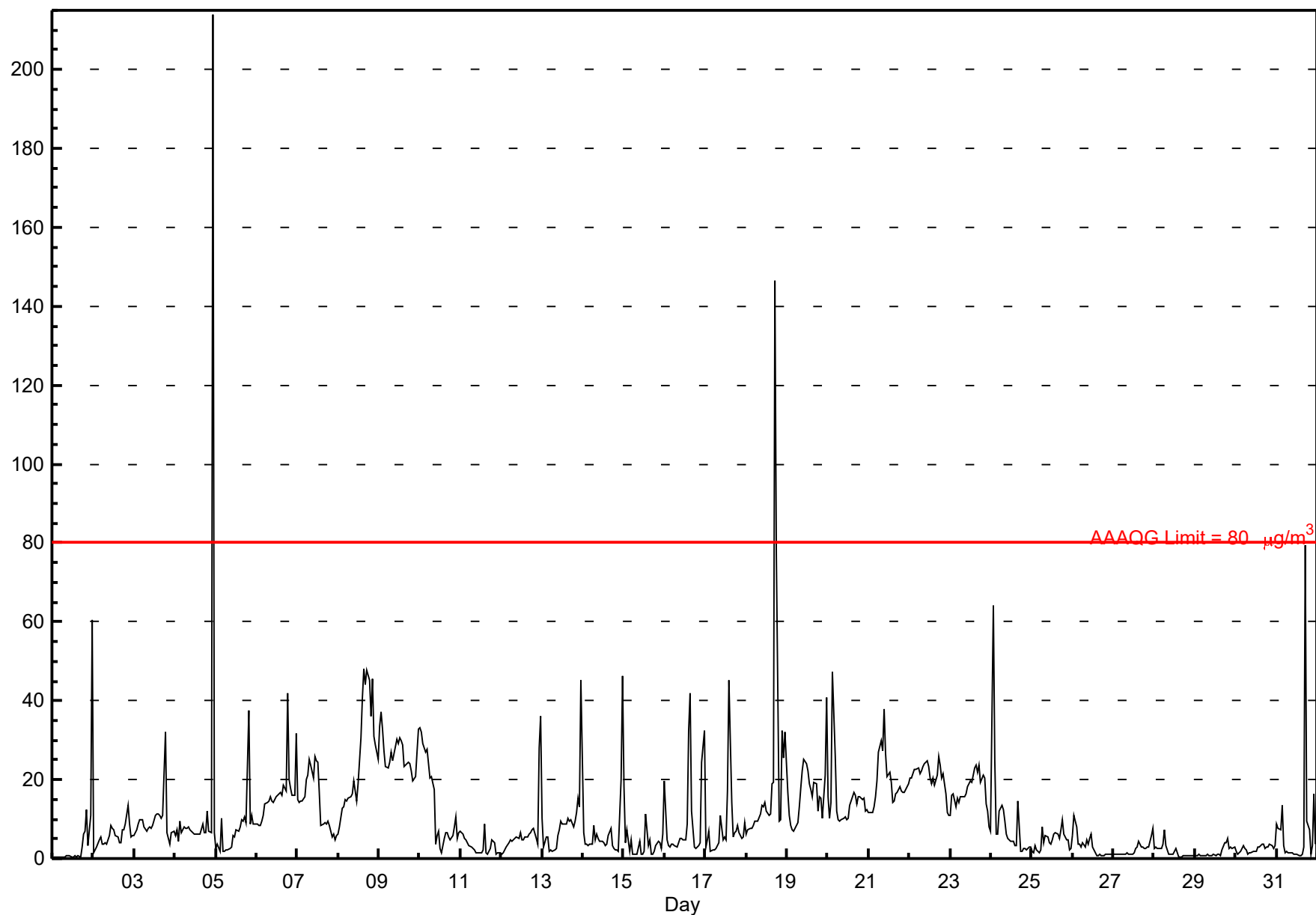
Smoky Heights - January 2016

Number of Exceedences: 1-hr: 2 24-hr: 0 Maximum Value: 213.9 µg/m³ on Jan 4 23:00 Maximum Daily Average: 27.0 µg/m³ on Jan 9																								Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 0 µg/m³ on Jan 1 07:00 Maximum Diurnal Average: 18.0 µg/m³ at hour 23 Monthly Average: 10.63 µg/m³ Minimum Daily Average: 1.6 µg/m³ on Jan 29 Minimum Diurnal Average: 8.1 µg/m³ at hour 6 Percentiles: P ₁ = 0.4 P ₁₀ = 1.1 Q ₁ = 2.9 Median = 6.6 Q ₃ = 14.9 P ₉₀ = 23.8 P ₉₉ = 36.5																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jan	1	0	0	0	0	0	0	1	1	1	1	0	0	1	1	1	0	3	6	7	12	3	11	61	4.7	60.6
2-Jan	2	2	3	5	5	4	4	4	4	6	8	7	7	6	5	4	4	7	7	9	13	9	5	6	5.7	13.4
3-Jan	6	7	9	10	10	10	8	7	8	8	8	9	11	11	11	11	10	11	32	7	5	4	7	7	9.4	31.9
4-Jan	6	7	4	9	7	8	8	8	8	7	6	6	6	6	6	6	9	6	7	12	7	7	214	7	15.7	213.9
5-Jan	3	4	2	10	2	2	2	2	3	3	6	6	7	7	8	10	9	11	9	37	9	11	9	9	7.5	37.4
6-Jan	9	9	8	9	11	14	14	14	16	15	14	16	16	16	17	16	19	17	42	20	18	16	16	32	16.3	41.8
7-Jan	15	14	15	14	16	20	21	25	24	21	26	25	24	17	8	9	9	9	10	8	6	6	5	6	14.7	26.0
8-Jan	6	8	13	13	15	15	15	16	16	20	17	15	19	31	41	48	44	48	45	36	46	31	29	25	25.4	48.2
9-Jan	33	37	33	28	23	23	24	27	25	26	30	29	31	30	29	23	24	24	24	22	20	21	27	33	27.0	37.0
10-Jan	33	32	29	27	28	24	20	21	17	4	6	7	3	1	5	7	6	6	5	6	8	11	5	7	13.2	33.2
11-Jan	7	6	5	5	4	3	3	3	2	1	1	1	2	2	9	1	1	2	5	4	4	1	1	1	3.2	8.9
12-Jan	1	1	2	3	4	5	4	5	5	5	5	6	5	5	5	6	6	6	7	8	5	4	28	36	7.0	36.1
13-Jan	10	3	5	6	2	2	2	2	3	6	7	9	9	9	9	10	9	10	8	9	12	15	13	45	9.0	45.2
14-Jan	7	4	4	3	3	3	8	5	6	5	4	4	4	3	4	6	8	3	3	2	2	2	20	46	6.6	46.3
15-Jan	18	4	7	2	5	1	1	1	1	4	1	1	2	11	3	5	1	1	2	3	5	4	3	6	3.8	18.1
16-Jan	20	5	3	3	4	4	3	3	4	5	5	5	5	9	32	42	12	3	3	3	3	4	24	32	9.8	42.0
17-Jan	3	5	7	2	2	2	2	3	4	11	5	5	5	17	45	14	5	6	7	8	7	5	5	9	7.8	45.2
18-Jan	6	7	7	8	8	9	9	9	11	13	13	14	12	11	11	19	19	147	77	9	10	32	25	32	21.8	146.7
19-Jan	17	11	8	7	7	7	9	13	18	22	25	24	22	19	17	16	19	19	12	16	15	10	21	41	16.5	40.9
20-Jan	16	10	14	47	26	12	10	10	10	10	10	10	10	13	16	17	16	14	16	16	15	15	12	12	14.9	47.4
21-Jan	12	12	12	13	16	20	27	30	28	38	27	21	22	19	14	15	16	17	18	17	17	17	18	19	19.2	37.9
22-Jan	20	21	21	23	23	23	22	22	23	24	25	23	21	19	20	19	21	26	24	21	21	16	12	11	20.8	25.7
23-Jan	11	16	17	13	15	14	16	16	16	16	18	19	20	19	23	24	22	24	19	21	20	14	12	8	17.2	23.8
24-Jan	7	64	25	6	6	12	13	12	10	6	5	4	4	4	3	3	15	2	2	2	2	2	3	3	9.0	64.2
25-Jan	2	1	3	2	2	2	8	4	6	6	4	4	5	6	7	6	5	7	10	6	5	5	2	3	4.6	10.0
26-Jan	6	11	8	3	4	3	4	3	5	4	5	6	3	2	1	1	1	1	1	1	1	1	1	1	3.1	10.9
27-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	3	3	4	3	3	3	2	3	3	6	8	2.3	7.6
28-Jan	3	3	2	3	3	4	7	3	1	1	1	1	2	3	0	0	0	1	1	1	1	1	1	1	1.7	7.2
29-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	4	4	5	3	3	3	3	1.6	5.2
30-Jan	2	1	1	2	3	3	2	1	1	2	2	2	2	3	3	4	4	3	3	3	4	3	2	3	2.4	3.7
31-Jan	9	8	7	13	3	1	2	2	1	1	1	1	1	1	1	1	3	80	9	7	1	3	16	4	7.4	79.6
9.3 10.1 9.0 9.4 8.3 8.1 8.8 8.8 8.9 9.5 9.4 9.1 9.0 9.8 11.6 11.2 10.5 16.7 13.5 10.7 9.6 9.0 18.0 16.6 33.5 64.2 32.7 47.4 27.7 24.0 27.1 30.0 27.5 37.9 30.4 29.3 30.6 30.8 45.2 48.2 44.2 146.7 77.2 37.4 45.6 32.3 213.9 60.6																								Diurnal Average	Diurnal Maximum	
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																										

Hourly Averages

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

Smoky Heights - January 2016

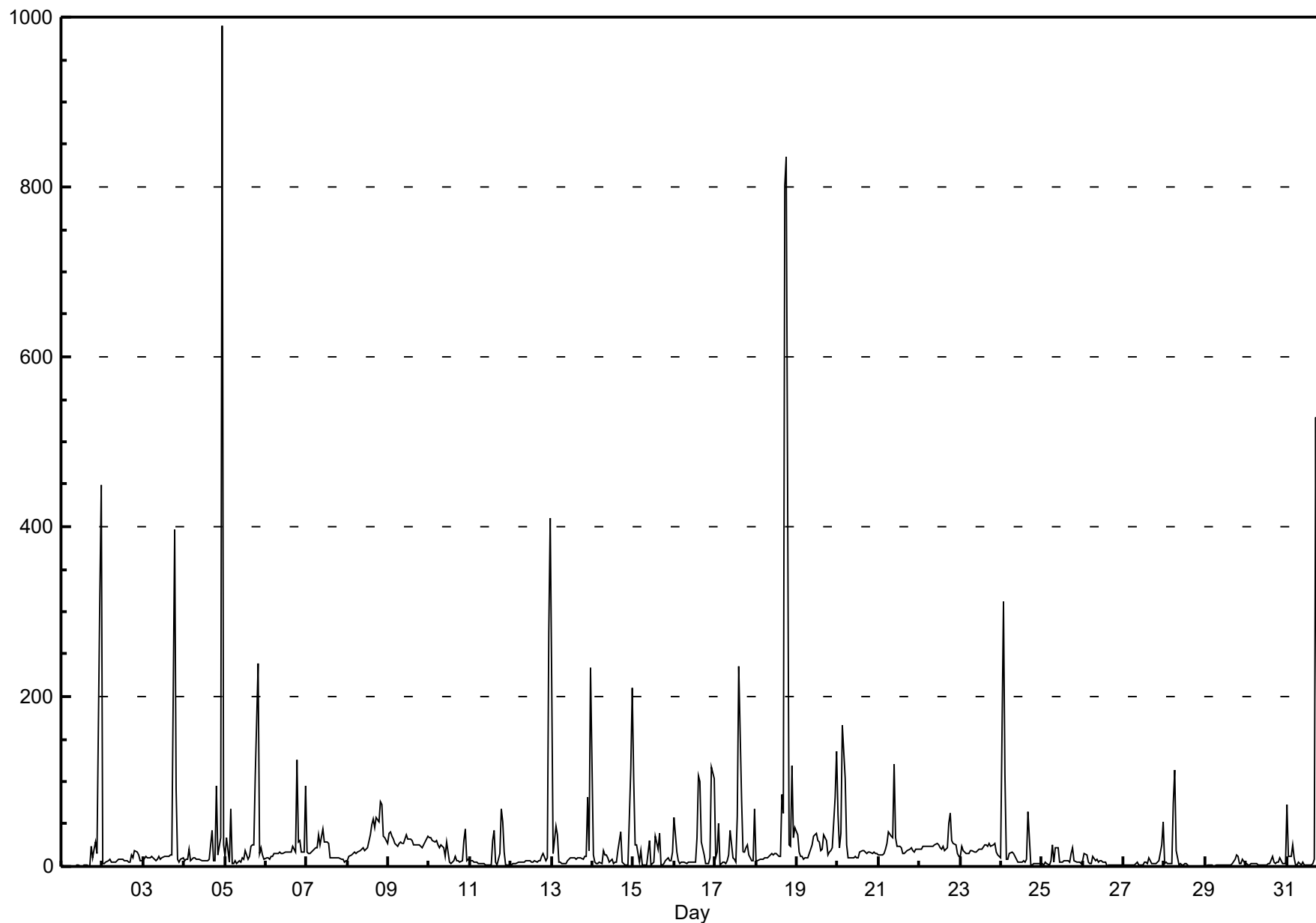


Hourly Maximums

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

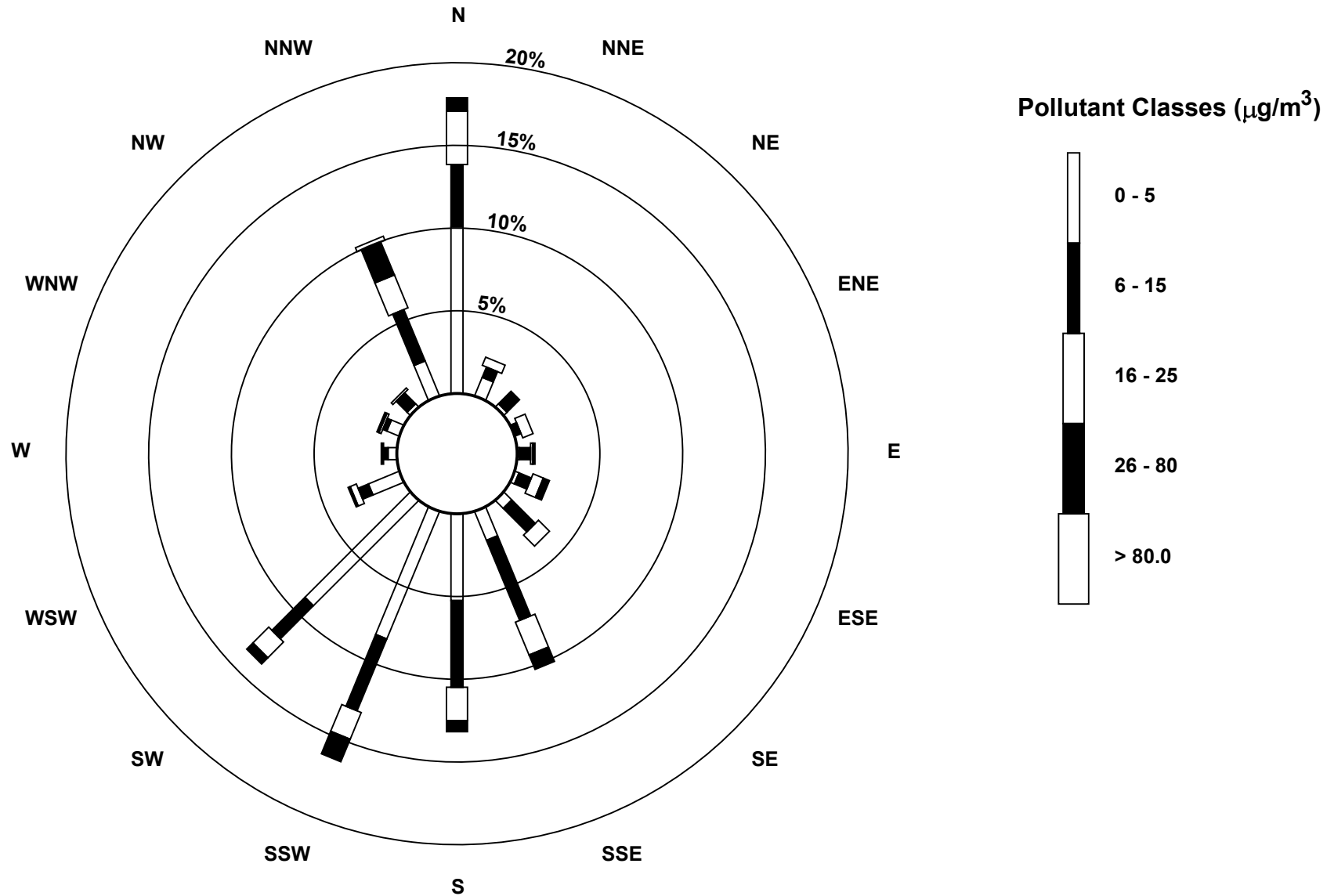
Smoky Heights - January 2016

Maximum Value: 990.0 μg/m ³ on Jan 4 23:00																								Maximum Daily Average: 91.6 μg/m ³ on Jan 18				Hours in Service: 744	
Minimum Value: 0 μg/m ³ on Jan 1 07:00																								Minimum Daily Average: 3.1 μg/m ³ on Jan 29				Hours of Data: 744	
Maximum Diurnal Average: 73.0 μg/m ³ at hour 23																								Minimum Diurnal Average: 11.0 μg/m ³ at hour 13				Hours of Missing Data: 0	
Monthly Average: 25.06 μg/m ³																								Percentiles: P ₁ = 0.7 P ₁₀ = 1.4 Q ₁ = 4.4 Median = 10.5 Q ₃ = 22.0 P ₉₀ = 38.6 P ₉₉ = 383.3				Hours of Calibration: 0	
																								Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
1-Jan	1	1	0	0	0	0	0	1	1	1	1	1	1	1	1	1	24	10	20	29	16	320	450	36.8	449.7				
2-Jan	3	3	4	7	9	5	5	5	4	9	9	8	8	7	7	6	5	14	11	19	18	13	6	7	7.9	18.5			
3-Jan	6	12	10	10	10	12	10	8	9	12	9	10	12	12	11	12	13	13	397	92	9	6	9	10	29.7	396.5			
4-Jan	6	9	8	20	7	10	10	8	9	8	7	7	7	7	7	8	43	7	7	95	14	33	990	26	56.4	990.0			
5-Jan	13	35	5	68	3	3	8	3	6	4	11	8	19	9	12	24	26	26	106	239	15	22	13	9	28.5	239.1			
6-Jan	9	10	9	11	12	16	15	16	17	15	15	17	17	18	17	17	24	18	125	29	31	17	18	95	24.4	124.6			
7-Jan	17	15	15	17	20	21	22	38	26	44	30	30	28	26	10	11	11	10	11	10	8	8	5	6	18.2	44.2			
8-Jan	6	11	13	15	18	16	16	18	20	21	18	21	22	38	49	55	46	58	52	75	73	36	33	27	31.6	75.4			
9-Jan	38	42	36	33	27	24	27	29	27	27	38	32	32	31	30	25	25	25	23	21	29	32	35		29.8	41.5			
10-Jan	35	34	31	30	31	26	22	25	22	11	28	17	6	3	7	13	7	6	6	7	31	43	7	8	18.9	43.4			
11-Jan	8	7	5	5	4	4	3	3	3	2	2	2	2	30	42	4	1	15	67	52	17	1	1	2	11.8	67.1			
12-Jan	1	3	3	3	4	5	5	5	6	6	7	7	6	5	6	6	7	7	13	15	7	10	277	411	34.4	410.6			
13-Jan	222	16	48	38	5	5	3	3	4	7	9	11	9	10	9	11	10	11	9	11	12	81	19	234	33.2	234.0			
14-Jan	14	6	4	4	5	4	19	14	14	11	4	8	4	4	5	19	40	4	3	2	2	2	116	210	21.5	210.1			
15-Jan	103	26	26	4	19	2	1	1	2	30	2	3	5	36	21	39	1	1	4	7	9	7	6	17	15.4	103.3			
16-Jan	57	17	6	4	5	4	5	3	5	6	6	5	5	33	106	99	28	13	3	3	3	11	117	103	27.1	117.0			
17-Jan	10	18	50	2	5	5	3	7	14	42	10	9	5	60	235	78	17	17	23	25	14	7	6	68	30.3	235.2			
18-Jan	7	7	8	8	9	10	10	10	14	16	14	15	15	12	12	84	63	801	835	25	23	119	34	46	91.6	835.0			
19-Jan	38	17	11	11	9	9	11	15	21	26	35	40	31	28	18	20	38	31	13	17	18	21	81	135	28.9	135.3			
20-Jan	62	22	39	165	104	25	11	10	10	11	11	10	11	16	19	19	17	15	18	17	16	17	15	15	28.1	165.4			
21-Jan	14	13	13	15	20	28	41	36	34	120	33	24	23	21	15	16	18	19	20	22	18	17	20	21	25.8	119.9			
22-Jan	21	21	23	23	23	24	23	23	24	25	27	25	22	20	24	19	22	51	63	30	27	25	15	12	25.5	62.8			
23-Jan	11	24	19	15	16	16	19	19	17	17	19	20	21	20	25	25	23	28	23	25	26	17	13	11	19.6	27.8			
24-Jan	10	312	108	9	9	16	17	15	12	9	6	5	5	7	5	9	65	2	2	3	3	3	3	3	26.6	312.2			
25-Jan	3	2	4	4	2	8	26	5	22	21	5	5	6	8	7	7	6	16	22	7	6	6	4	3	8.5	25.8			
26-Jan	8	15	14	4	4	4	12	7	8	5	7	7	6	5	1	1	2	1	1	1	2	1	1	1	4.8	14.6			
27-Jan	1	1	1	1	1	1	1	3	5	1	1	1	4	5	4	9	3	4	3	3	4	7	26	52	6.1	52.2			
28-Jan	3	4	3	3	4	74	113	18	1	3	1	2	3	4	1	1	1	1	1	1	1	1	1	1	10.2	112.8			
29-Jan	1	1	1	1	1	1	1	1	2	1	1	1	1	2	1	1	3	8	13	12	3	3	9	3	3.1	13.4			
30-Jan	3	1	2	4	4	3	3	1	2	2	2	2	2	4	4	12	6	4	5	5	10	4	3	4	3.8	12.2			
31-Jan	73	12	12	25	10	2	2	6	2	5	1	1	1	1	1	4	8	529	47	62	6	21	62	30	38.5	528.7			
26.0 23.0 17.2 18.1 13.0 12.3 14.9 11.4 11.7 16.7 11.9 11.4 11.0 15.6 23.0 21.1 18.7 57.3 62.4 30.8 15.4 19.4 73.0 66.2																									Diurnal Average				
222.0 312.2 107.9 165.4 104.0 74.0 112.8 37.6 34.1 119.9 38.0 39.5 32.4 59.6 235.2 99.4 64.9 801.0 835.0 239.1 73.0 119.4 990.0 449.7																									Diurnal Maximum				



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Smoky Heights - January 2016



Hourly Averages

External Temperature (ET) - °C

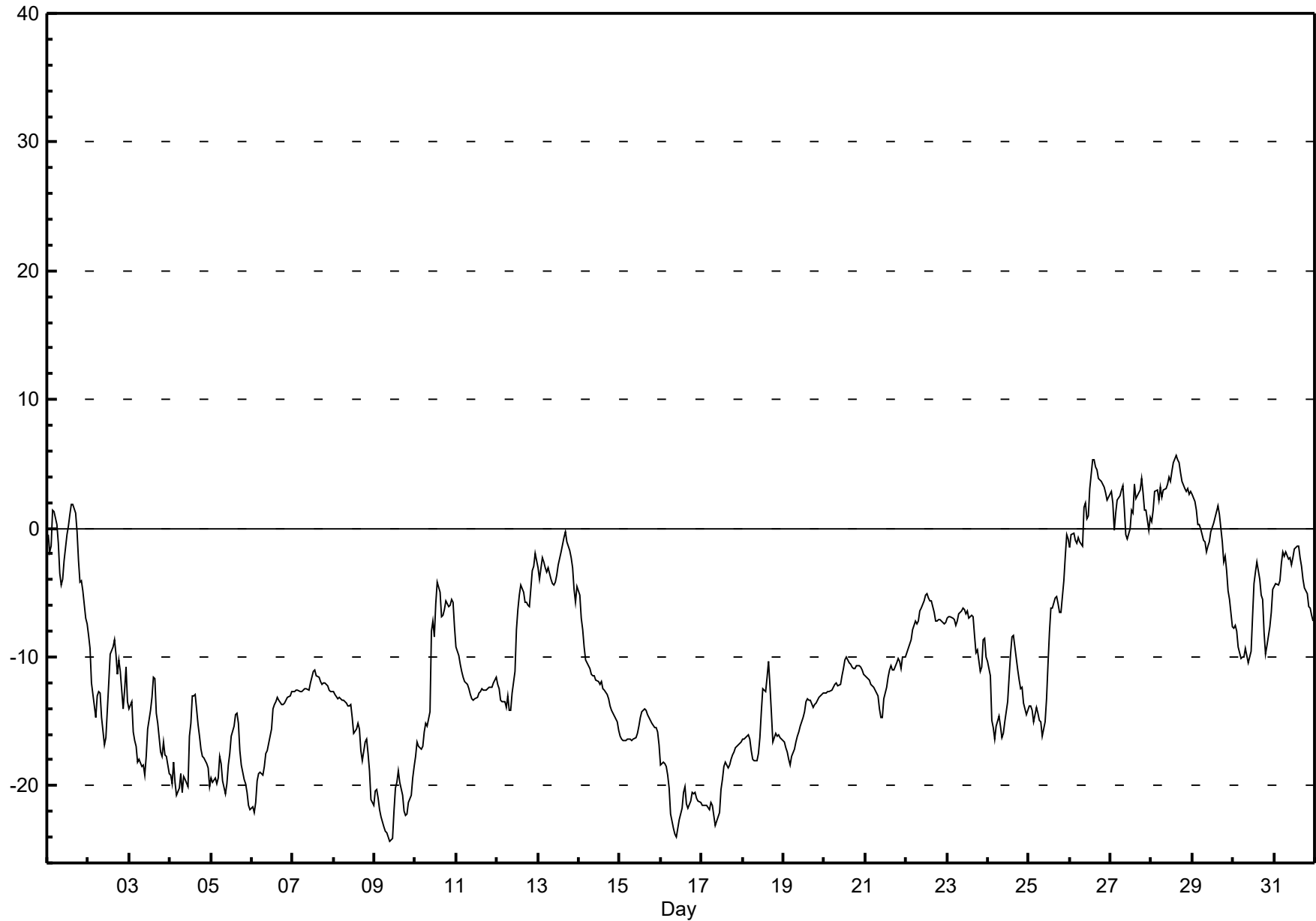
Smoky Heights - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 5.7 °C on Jan 28 15:00 Maximum Daily Average: 3.4 °C on Jan 28																								Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0			
Minimum Value: -24 °C on Jan 9 10:00 Maximum Diurnal Average: -8.2 °C at hour 15 Monthly Average: -10.64 °C												Minimum Daily Average: -21.5 °C on Jan 9 Minimum Diurnal Average: -12.2 °C at hour 9 Percentiles: P ₁ = -23.3 P ₁₀ = -19.6 Q ₁ = -16.1 Median = -12.2 Q ₃ = -5.6 P ₉₀ = 0.3 P ₉₉ = 4.4															
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Jan	-1	-2	-1	1	1	0	-1	-3	-4	-4	-2	0	0	1	2	2	1	0	-2	-4	-4	-5	-7	-7	-1.7	1.9	
2-Jan	-8	-9	-12	-14	-15	-13	-13	-13	-15	-17	-16	-14	-12	-10	-9	-9	-10	-11	-10	-11	-14	-13	-11	-13	-12.1	-8.3	
3-Jan	-14	-13	-16	-16	-17	-18	-18	-18	-18	-19	-18	-16	-14	-13	-12	-12	-14	-15	-17	-18	-17	-18	-18	-19	-16.2	-11.6	
4-Jan	-19	-20	-18	-20	-21	-20	-19	-20	-19	-19	-20	-16	-15	-13	-13	-13	-15	-16	-17	-18	-18	-18	-19	-20	-17.8	-12.9	
5-Jan	-19	-20	-19	-20	-19	-18	-18	-20	-21	-20	-18	-17	-16	-15	-14	-14	-15	-17	-18	-20	-20	-21	-22	-22	-18.5	-14.4	
6-Jan	-22	-22	-21	-20	-19	-19	-19	-18	-18	-17	-17	-16	-14	-14	-13	-13	-13	-14	-14	-14	-13	-13	-13	-13	-16.2	-12.7	
7-Jan	-13	-13	-13	-13	-13	-13	-13	-12	-12	-13	-12	-12	-11	-11	-11	-12	-12	-12	-12	-12	-12	-13	-13	-13	-12.2	-11.0	
8-Jan	-13	-13	-13	-13	-13	-13	-13	-14	-14	-14	-14	-15	-16	-16	-15	-16	-17	-18	-17	-16	-17	-19	-21	-22	-15.5	-12.7	
9-Jan	-20	-20	-21	-22	-22	-23	-24	-24	-24	-24	-24	-22	-20	-20	-19	-20	-21	-22	-22	-22	-21	-21	-19	-18	-21.5	-18.5	
10-Jan	-18	-17	-17	-17	-17	-16	-15	-15	-14	-8	-7	-8	-6	-4	-5	-7	-7	-6	-6	-6	-6	-6	-6	-8	-10.0	-4.2	
11-Jan	-9	-10	-11	-11	-12	-12	-12	-12	-13	-13	-13	-13	-13	-13	-13	-12	-13	-13	-12	-12	-12	-12	-12	-12	-12.1	-9.2	
12-Jan	-12	-13	-13	-14	-14	-14	-13	-14	-14	-13	-11	-8	-6	-5	-4	-5	-6	-6	-6	-6	-3	-3	-2	-2	-8.6	-1.9	
13-Jan	-3	-4	-2	-3	-3	-3	-3	-4	-4	-4	-4	-4	-3	-2	-1	-1	0	-1	-2	-2	-3	-5	-6	-5	-3.0	-0.3	
14-Jan	-5	-7	-8	-9	-10	-11	-11	-11	-11	-11	-12	-12	-12	-12	-12	-13	-13	-13	-14	-14	-14	-15	-15	-16	-11.7	-5.2	
15-Jan	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-15	-15	-14	-14	-14	-14	-15	-15	-15	-15	-16	-16	-17	-15.6	-14.1	
16-Jan	-18	-18	-18	-19	-19	-20	-22	-23	-24	-24	-23	-23	-22	-20	-20	-21	-22	-21	-20	-21	-21	-21	-21	-21	-21.0	-18.2	
17-Jan	-22	-22	-22	-22	-22	-21	-22	-22	-23	-23	-22	-20	-20	-19	-18	-19	-18	-18	-18	-17	-17	-17	-17	-17	-19.8	-16.6	
18-Jan	-16	-16	-16	-16	-16	-17	-18	-18	-18	-18	-16	-14	-12	-13	-12	-10	-12	-14	-17	-16	-16	-16	-16	-16	-15.5	-10.3	
19-Jan	-17	-17	-17	-18	-18	-18	-17	-17	-16	-16	-15	-15	-14	-13	-13	-13	-13	-14	-14	-14	-13	-13	-13	-13	-15.1	-12.8	
20-Jan	-13	-13	-13	-13	-13	-12	-12	-12	-12	-12	-11	-11	-10	-10	-10	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11.5	-10.1	
21-Jan	-11	-12	-12	-12	-12	-12	-13	-13	-14	-15	-15	-13	-12	-12	-11	-11	-11	-11	-10	-10	-10	-11	-10	-10	-11.8	-10.0	
22-Jan	-10	-9	-9	-9	-8	-7	-7	-7	-6	-6	-6	-5	-5	-5	-6	-6	-7	-7	-7	-7	-7	-7	-7	-7	-7.0	-5.1	
23-Jan	-7	-7	-7	-7	-7	-8	-7	-7	-6	-6	-6	-7	-6	-7	-7	-7	-8	-10	-9	-11	-11	-9	-9	-10	-7.7	-6.2	
24-Jan	-10	-11	-15	-15	-16	-15	-15	-15	-16	-16	-15	-13	-12	-10	-8	-8	-9	-11	-12	-12	-12	-14	-15	-14	-13.0	-8.4	
25-Jan	-14	-14	-14	-15	-14	-14	-15	-15	-16	-15	-13	-11	-8	-6	-6	-5	-5	-6	-7	-7	-4	-2	0	-1	-9.5	-0.5	
26-Jan	-2	0	0	-1	-1	-1	-1	-1	2	2	1	1	3	5	5	5	5	4	4	3	3	3	2	2	1.8	5.4	
27-Jan	3	2	0	1	2	3	3	3	2	0	-1	0	1	1	3	2	3	3	4	3	1	1	0	1	1.7	3.8	
28-Jan	1	1	3	3	2	3	2	3	3	3	4	4	4	5	6	5	5	4	4	3	3	3	3	3	3.4	5.7	
29-Jan	3	2	1	0	0	0	-1	-1	-2	-1	-1	0	0	1	1	2	1	-1	-3	-2	-3	-5	-6	-8	-0.9	2.6	
30-Jan	-8	-8	-8	-9	-10	-10	-10	-9	-10	-11	-10	-7	-4	-3	-3	-4	-5	-6	-8	-10	-9	-8	-7	-5	-7.5	-2.6	
31-Jan	-5	-4	-4	-4	-3	-2	-2	-2	-2	-2	-3	-2	-2	-1	-1	-2	-3	-4	-5	-5	-6	-6	-7	-7	-3.5	-1.4	
-10.9 -11.1 -11.4 -11.6 -11.8 -11.7 -11.8 -12.1 -12.2 -12.0 -11.5 -10.5 -9.4 -8.7 -8.2 -8.4 -9.1 -9.8 -10.1 -10.5 -10.5 -10.5 -10.7 -11.0 2.8 2.0 2.9 2.9 2.2 3.2 3.0 3.3 3.0 3.5 4.0 3.6 4.4 5.3 5.7 5.3 5.1 4.3 3.8 3.5 3.2 3.1 2.7 2.9																										Diurnal Average	Diurnal Maximum

Hourly Averages

External Temperature (ET) - °C

Smoky Heights - January 2016



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Smoky Heights - January 2016

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	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	30	27	32	38	38	33	27	18	15	19	19	25	24	20	21	12	10	12	5	2	14	5	4	1	18.0	38.2
Dir	232	213	220	224	223	229	218	214	196	186	196	198	208	222	225	183	222	252	266	234	237	198	138	161	216.3	223.8
2 Spd	7	9	9	11	14	11	13	13	10	10	10	13	10	7	7	9	13	17	15	10	13	14	13	13	10.2	17.3
Dir	183	211	182	166	170	172	179	172	165	161	165	150	154	144	190	221	224	231	228	193	191	218	179	176	186.0	231.2
3 Spd	10	8	8	8	8	10	10	10	8	6	7	8	6	6	5	2	6	7	5	4	2	4	5	5	6.1	10.5
Dir	187	201	145	177	186	170	191	176	169	177	172	159	143	150	150	182	179	213	247	219	259	196	199	168	179.8	170.2
4 Spd	7	8	4	5	7	5	7	7	6	6	7	3	5	3	5	3	3	1	1	4	4	4	4	1	3.0	8.2
Dir	196	176	220	154	139	166	215	179	202	180	151	180	183	166	154	187	129	233	316	348	318	313	342	93	182.1	176.0
5 Spd	3	5	5	5	8	12	8	6	5	13	11	8	9	9	8	4	10	3	5	3	4	5	4	5	4.9	13.3
Dir	333	0	354	349	353	350	358	359	350	355	348	0	1	359	355	322	350	351	228	9	239	212	206	179	346.9	355.1
6 Spd	7	5	7	5	6	6	7	2	2	4	7	5	3	3	2	2	1	3	1	1	2	3	3	2	3.1	7.0
Dir	175	176	157	173	147	145	178	140	154	181	168	164	148	105	135	145	76	15	335	148	184	182	170	359	159.0	175.1
7 Spd	4	3	2	4	3	2	3	3	3	3	3	3	2	2	5	4	5	3	3	4	9	8	4	6	2.4	8.6
Dir	20	46	43	26	21	13	10	342	5	14	348	354	355	68	84	30	19	38	56	129	138	133	120	91	56.5	137.8
8 Spd	7	6	5	2	4	4	4	5	7	5	5	8	7	4	3	2	3	5	1	1	4	6	8	8	2.4	8.2
Dir	92	69	93	66	3	4	51	75	62	57	109	124	112	113	157	109	81	226	174	121	200	198	208	219	112.6	207.6
9 Spd	10	12	11	13	14	13	12	12	14	13	9	12	9	8	7	10	12	10	15	13	10	10	9	11	10.9	14.6
Dir	204	209	217	212	211	203	202	196	204	199	185	201	201	209	190	201	202	188	184	184	191	182	166	163	196.6	184.0
10 Spd	10	10	10	8	7	7	3	1	3	8	4	6	5	5	3	4	3	3	2	4	2	2	6	14	2.8	13.6
Dir	166	162	166	189	234	245	220	10	142	173	205	147	194	179	136	109	158	207	256	193	112	54	23	7	173.7	7.3
11 Spd	12	13	13	13	11	15	12	10	13	11	11	11	13	11	10	10	12	11	8	6	4	3	8	9	8.8	14.6
Dir	10	12	9	7	11	6	5	12	20	15	4	6	359	358	345	354	1	354	354	356	334	26	182	192	4.1	6.3
12 Spd	14	15	19	19	18	11	14	9	8	18	14	7	13	11	12	13	7	11	11	9	8	7	3	5	10.0	18.9
Dir	177	168	167	178	172	190	182	153	149	173	181	157	149	143	157	179	175	205	229	224	229	238	268	356	178.9	167.3
13 Spd	8	5	4	3	1	2	2	3	6	7	6	7	7	6	10	7	3	4	6	7	6	3	4	10	2.1	9.8
Dir	3	359	333	358	42	193	177	144	149	170	155	146	181	192	205	225	211	208	193	206	220	225	345	340	199.4	339.6
14 Spd	14	14	11	11	9	8	7	8	6	7	11	8	9	9	10	6	6	6	7	6	6	7	8	6	8.3	14.0
Dir	0	356	10	6	355	4	339	351	346	1	0	12	11	358	355	348	353	22	10	8	5	2	355	333	359.6	0.3
15 Spd	7	7	6	8	8	11	8	6	5	6	9	6	5	5	5	8	8	9	8	11	11	13	12	11	7.8	13.2
Dir	336	327	336	346	344	353	7	1	356	351	3	9	339	337	335	350	6	15	358	352	350	354	4	348	352.8	354.0
16 Spd	11	16	18	20	14	18	15	17	19	17	23	24	25	17	16	15	16	21	25	21	22	15	12	13	17.8	24.6
Dir	345	354	357	359	358	357	351	352	353	346	357	356	356	349	346	337	337	354	357	354	1	350	339	345	352.3	356.8
17 Spd	13	12	13	14	9	10	11	8	5	11	13	11	14	10	9	9	12	12	12	12	11	12	9	5	10.6	14.1
Dir	347	348	352	359	357	359	5	345	340	349	350	344	356	343	342	335	339	345	343	342	340	353	350	358	348.7	355.5
18 Spd	4	2	3	4	6	6	9	8	8	8	6	2	3	2	1	3	6	5	7	9	12	13	14	13	2.6	13.5
Dir	46	44	149	197	209	209	204	213	235	242	255	68	11	104	123	359	351	336	350	354	348	339	341	338	313.3	340.7
19 Spd	16	15	12	13	10	7	9	11	11	9	4	8	7	6	8	10	6	7	11	11	8	11	10	7	9.3	15.9
Dir	344	345	348	347	351	354	7	1	358	6	351	356	358	358	1	353	343	332	353	354	347	349	345	341	351.5	343.6
20 Spd	7	4	6	6	5	4	3	2	4	4	5	6	4	6	7	6	5	7	9	11	8	8	9	8	2.9	10.9
Dir	345	324	329	330	328	6	356	120	168	164	155	161	120	131	97	109	130	139	145	157	163	161	183	182	145.7	156.6
21 Spd	7	4	4	4	5	4	5	3	4	1	5	2	5	8	8	2	2	3	1	6	7	8	8	10	3.0	9.8
Dir	196	207	223	254	256	257	5	331	7	297	229	177	145	172	221	150	134	347	224	216	195	191	158	160	201.5	160.1
22 Spd	9	7	6	7	5	5	6	4	2	3	5	9	11	16	16	19	20	18	18	18	15	14	14	10	6.0	19.6
Dir	160	149	148	157	171	192	160	160	207	109	5	3	357	357	352	360	348	344	351	346	344	329	325	307	348.8	347.9

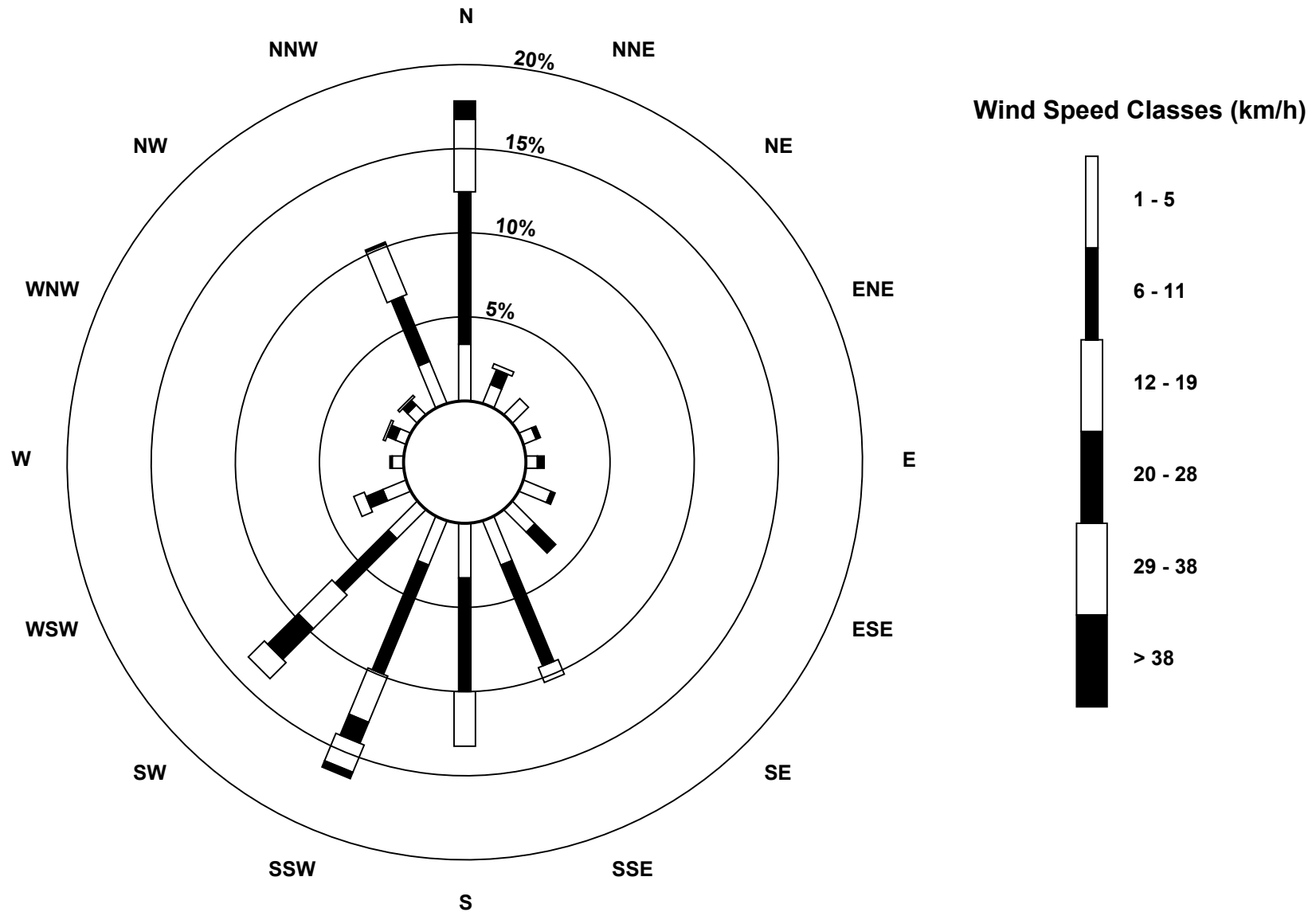
Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Smoky Heights - January 2016

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	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	7	4	6	3	5	3	5	6	9	10	10	13	12	11	8	10	9	9	9	12	13	13	9	7.0	13.1			
Dir	290	326	302	175	209	157	169	171	157	169	178	195	188	225	209	219	218	223	188	196	227	224	226	213	206.4	225.8			
24 Spd	9	6	8	7	6	7	7	8	8	10	10	7	9	6	7	5	4	10	11	11	10	8	8	7	7.2	10.9			
Dir	208	189	156	154	160	148	178	193	194	194	201	209	199	184	199	183	200	219	222	228	230	219	224	217	199.6	227.8			
25 Spd	11	8	10	10	12	7	8	10	9	9	9	10	11	10	11	13	12	7	8	7	14	16	16	14	10.1	15.8			
Dir	203	196	192	172	186	194	169	178	157	164	169	162	211	201	208	202	191	188	176	188	203	196	193	171	187.4	195.8			
26 Spd	12	14	11	12	6	6	7	7	17	23	22	16	15	23	25	26	31	33	39	42	38	33	31	28	20.5	41.7			
Dir	153	175	161	164	166	156	141	165	204	205	197	221	203	209	216	208	208	206	213	208	214	213	212	218	203.6	208.4			
27 Spd	30	22	17	25	28	28	27	24	16	12	12	10	7	6	3	6	4	4	5	4	5	6	4	3	12.4	30.2			
Dir	224	219	188	216	225	225	229	233	229	186	214	209	182	243	252	235	234	176	192	244	218	228	223	236	219.7	223.7			
28 Spd	8	7	5	5	3	2	1	4	4	3	7	10	15	24	32	35	40	35	34	33	31	38	32	35	17.9	39.5			
Dir	220	184	247	258	228	267	341	304	221	186	224	199	221	209	208	213	212	204	206	202	209	213	212	217	211.8	211.9			
29 Spd	36	35	30	25	28	28	24	23	23	23	22	22	19	16	14	9	8	9	12	13	13	11	10	19.5	36.3				
Dir	224	223	220	216	220	220	216	214	213	214	222	227	220	197	197	201	213	235	229	249	235	236	235	203	219.2	224.4			
30 Spd	14	14	14	13	16	16	17	15	12	8	10	8	4	4	3	2	6	6	8	7	6	7	5	3	8.2	17.3			
Dir	234	238	223	216	233	237	236	235	225	205	214	217	174	100	121	141	186	200	205	250	196	181	196	180	218.7	236.0			
31 Spd	2	2	1	1	5	8	8	9	5	9	12	11	8	8	7	10	9	8	2	3	2	2	3	4	4.5	11.8			
Dir	177	126	154	260	246	237	270	249	272	310	299	296	298	285	284	328	333	329	291	332	50	297	232	231	288.7	299.2			
Spd	4.4	3.6	3.3	3.7	4.5	4.0	3.8	3.3	3.1	3.5	3.3	2.8	2.4	2.8	3.4	3.0	3.1	3.7	3.7	3.5	4.5	4.6	3.8	3.3	Diurnal Average				
Dir	226.0	223.4	210.4	215.5	222.4	230.6	221.8	216.2	207.1	198.2	213.1	203.3	209.3	213.5	220.1	230.2	240.9	243.7	237.6	236.6	233.8	231.1	226.3	224.5	Diurnal Maximum				
Spd	36.3	35.0	31.6	38.2	37.7	32.9	27.4	24.3	22.8	23.2	23.5	25.2	24.5	23.8	32.2	35.3	39.5	35.3	39.4	41.7	37.9	37.7	31.8	35.0	Diurnal Maximum				
Dir	224.4	222.5	219.9	223.8	222.8	229.3	217.6	233.4	213.1	205.4	357.4	197.7	356.3	209.4	208.4	213.3	211.9	204.4	212.7	208.4	213.5	213.2	212.1	217.1					
Maximum Speed Value: 42 km/h on Jan 26 20:00																				Minimum Speed Value: 1 km/h on Jan 31 04:00					Hours in Service: 744				
Maximum Daily Speed Average: 20.5 km/h on Jan 26																				Minimum Daily Speed Average: 2.1 km/h on Jan 7					Hours of Data: 744				
Maximum Diurnal Speed Average: 4.6 km/h at hour 22																				Minimum Diurnal Speed Average: 2.4 km/h at hour 13					Hours of Missing Data: 0				
Monthly Average Velocity: 3.48 km/h 223.19 deg																				Speed Percentiles: P ₁ = 1.2 P ₁₀ = 2.9 Q ₁ = 4.9 Median = 8.1 Q ₃ = 12.0 P ₉₀ = 18.1 P ₉₉ = 37.6					Percent Operational Time: 100.0				
All monthly, daily, and diurnal averages have been calculated using vector methods																													
Frequency Distribution																													
Speed Range (km/h)																													
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																						
North	36	89	65	9	0	0	199																						
NorthEast	14	3	0	0	0	0	17																						
East	15	7	0	0	0	0	22																						
SouthEast	29	39	4	0	0	0	72																						
South	35	112	40	4	1	0	192																						
SouthWest	30	61	37	25	23	4	180																						
West	13	7	2	0	0	0	22																						
NorthWest	17	18	5	0	0	0	40																						
Total	189	336	153	38	24	4	744																						

Wind Rose

Wind Speed (WS) (km/h)
Smoky Heights - January 2016



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Smoky Heights - January 2016

Maximum Speed: 42 km/h on Jan 26 20:00																				Maximum Daily Speed Average: 21.7 km/h on Jan 26										Hours in Service: 744			
Minimum Speed: 2 km/h on Jan 6 20:00																				Minimum Daily Speed Average: 4.1 km/h on Jan 7										Hours of Data: 744			
Maximum Diurnal Speed Average: 11.2 km/h at hour 1																				Minimum Diurnal Speed Average: 8.8 km/h at hour 9										Hours of Missing Data: 0			
Monthly Average Speed: 10.00 km/h																				Percentiles: P ₁ = 2.0 P ₁₀ = 3.6 Q ₁ = 5.4 Median = 8.4 Q ₃ = 12.2 P ₉₀ = 18.3 P ₉₉ = 37.7										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	30	27	32	38	38	33	28	18	16	19	19	25	25	21	21	14	10	12	6	4	14	10	5	3	19.5	38.3							
2-Jan	7	9	9	11	14	12	13	13	10	10	10	13	10	8	7	10	13	17	15	11	13	14	14	13	11.5	17.3							
3-Jan	10	9	8	8	8	11	10	10	9	7	7	9	6	6	5	3	7	8	6	5	4	5	6	6	7.2	10.7							
4-Jan	8	9	5	6	7	5	7	8	6	7	7	4	5	3	6	4	3	2	2	4	4	5	4	2	5.1	8.5							
5-Jan	4	5	5	5	9	12	8	7	5	13	11	8	9	9	9	5	10	4	6	3	5	5	4	6	6.9	13.4							
6-Jan	7	5	7	5	6	6	7	3	3	5	7	5	4	3	3	2	2	4	2	2	3	3	3	3	4.1	7.1							
7-Jan	4	3	2	4	3	2	3	3	3	3	3	3	2	3	6	5	6	4	4	5	9	8	5	6	4.1	9.0							
8-Jan	7	7	5	2	4	4	4	5	7	5	6	9	7	5	8	3	3	5	2	2	5	6	8	8	5.3	8.6							
9-Jan	11	12	11	13	14	13	12	12	14	13	10	12	9	8	7	10	12	10	15	13	10	10	9	11	11.3	14.7							
10-Jan	10	10	10	9	7	8	3	3	4	8	6	6	5	6	4	4	4	3	3	4	4	4	7	14	6.0	13.7							
11-Jan	12	13	14	13	11	15	13	11	13	11	12	11	13	11	10	10	12	11	8	6	5	4	8	10	10.6	14.7							
12-Jan	14	15	19	19	18	11	15	9	9	18	14	8	13	11	12	14	8	12	12	9	8	7	4	5	11.7	18.9							
13-Jan	9	5	4	3	2	3	3	4	6	8	6	7	7	7	10	7	3	4	7	7	7	5	5	10	5.8	9.9							
14-Jan	15	14	11	12	9	9	7	8	7	7	12	8	9	10	10	6	6	6	7	6	6	7	8	6	8.6	14.5							
15-Jan	7	7	6	8	8	11	8	6	5	6	9	6	5	5	5	9	8	9	8	11	11	13	12	11	8.1	13.3							
16-Jan	11	16	18	20	14	18	15	17	19	17	24	24	25	17	17	15	16	21	25	21	22	15	12	14	18.0	24.7							
17-Jan	13	12	13	14	9	10	11	9	6	11	13	11	14	11	9	9	12	12	12	12	11	12	9	6	10.9	14.1							
18-Jan	4	2	3	4	6	7	9	9	8	8	7	2	4	2	2	4	6	5	7	9	12	13	14	13	6.5	13.6							
19-Jan	16	15	12	13	10	7	9	11	11	9	4	8	7	6	8	10	6	7	11	11	8	11	10	7	9.5	15.9							
20-Jan	7	4	6	6	5	4	3	3	4	5	5	6	4	7	8	6	6	7	10	11	8	8	10	8	6.3	11.1							
21-Jan	7	4	5	4	5	5	5	3	4	2	5	3	6	9	9	5	3	3	3	7	7	8	8	10	5.4	9.8							
22-Jan	9	7	6	8	6	5	6	5	3	3	5	9	11	16	16	19	20	18	18	18	15	14	14	10	10.8	20.0							
23-Jan	3	7	5	6	4	5	4	6	6	9	10	10	13	12	12	8	10	9	9	10	12	13	13	9	8.5	13.2							
24-Jan	9	8	8	7	6	7	7	8	8	10	10	7	9	7	7	6	5	10	11	11	10	8	8	8	8.0	10.9							
25-Jan	11	9	10	10	12	7	9	10	9	9	9	10	11	10	11	13	12	8	8	7	14	16	16	14	10.6	15.9							
26-Jan	12	14	11	12	6	6	8	8	18	23	22	16	15	24	25	26	31	33	39	42	38	33	31	29	21.7	41.7							
27-Jan	30	22	17	25	28	28	27	25	17	14	12	10	8	6	3	6	5	4	6	4	5	7	5	4	13.2	30.3							
28-Jan	8	9	5	5	3	3	3	7	5	4	7	12	15	24	32	35	40	35	34	33	31	38	32	35	18.9	39.7							
29-Jan	36	35	31	25	28	28	24	23	23	23	23	22	22	19	16	14	9	8	9	12	13	14	12	11	20.0	36.4							
30-Jan	14	14	14	13	16	17	17	15	12	9	10	8	5	5	4	2	6	6	8	7	7	7	5	4	9.4	17.3							
31-Jan	3	2	2	2	6	9	9	9	5	9	12	11	8	9	9	10	9	8	4	4	3	5	3	5	6.4	11.9							
11.2 10.6 10.1 10.6 10.4 10.3 9.9 9.3 8.8 9.7 10.3 9.7 9.9 9.6 9.9 9.4 9.7 10.0 10.1 10.0 10.4 10.5 9.7 9.6																									Diurnal Average								
36.4 35.1 31.8 38.3 37.8 33.0 27.5 24.6 22.9 23.5 23.6 25.3 24.6 23.9 32.3 35.5 39.7 35.4 39.5 41.7 38.0 37.7 31.8 35.0																									Diurnal Maximum								
All monthly, daily, and diurnal averages have been calculated using scalar methods																																	

Hourly Standard Deviations

Wind Direction (WD) - deg
Smoky Heights - January 2016

Maximum Value: 96.2 deg on Jan 10 08:00																		Hours in Service: 744							
Minimum Value: 2.1 deg on Jan 27 06:00																		Hours of Data: 744							
																		Hours of Missing Data: 0							
Percentiles: P ₁ = 2.9 P ₁₀ = 4.9 Q ₁ = 6.9 Median = 11.0 Q ₃ = 21.1 P ₉₀ = 39.6 P ₉₉ = 76.9																		Hours of Calibration: 0							
																		Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																							Daily	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Jan	10	13	6	3	4	3	6	5	11	9	4	4	4	10	5	36	8	10	35	94	5	58	28	84	93.8
2-Jan	13	7	9	7	11	15	9	9	7	6	3	12	6	12	11	7	3	5	6	22	14	4	23	7	23.4
3-Jan	5	14	7	15	14	12	12	17	22	24	14	19	9	12	8	48	32	16	37	44	68	33	26	27	68.4
4-Jan	33	17	61	30	6	24	14	20	18	23	26	40	17	30	10	35	27	48	70	48	34	32	41	60	69.6
5-Jan	45	40	43	17	9	7	11	22	43	7	13	15	8	11	9	16	9	80	39	72	25	8	19	17	79.6
6-Jan	10	27	15	12	14	12	14	44	40	12	9	7	30	21	29	12	50	24	63	37	31	15	19	69	69.2
7-Jan	18	11	14	5	11	20	13	19	17	16	11	13	16	57	30	34	22	33	37	28	16	17	24	22	56.7
8-Jan	16	18	15	46	13	13	17	16	8	24	38	19	7	18	38	41	25	26	53	70	33	22	4	9	70.3
9-Jan	7	6	7	6	4	6	5	5	3	4	14	4	8	6	18	9	4	5	4	10	11	9	8	5	18.2
10-Jan	6	7	6	13	13	11	32	96	57	23	69	18	25	49	32	35	51	30	56	34	65	70	23	7	96.2
11-Jan	6	6	9	7	6	6	6	18	6	7	9	8	9	10	7	9	8	9	10	15	30	54	10	6	53.8
12-Jan	4	4	3	5	7	7	17	8	19	8	10	22	9	6	12	11	28	8	6	10	8	10	42	26	41.5
13-Jan	13	18	27	19	73	32	40	36	11	14	6	8	10	28	9	11	68	19	8	13	33	54	23	10	72.9
14-Jan	16	10	8	9	10	9	7	9	9	14	9	21	17	10	8	8	9	11	12	9	9	8	13	11	20.9
15-Jan	7	6	7	7	6	7	8	8	13	13	10	16	12	8	20	10	7	6	13	9	9	8	11	14	19.6
16-Jan	5	8	7	6	7	8	5	5	6	5	7	5	5	6	10	4	5	9	5	6	5	6	7	7	10.4
17-Jan	4	7	8	7	11	8	6	24	27	13	7	6	6	5	6	14	14	8	6	9	7	9	12	30	30.0
18-Jan	18	34	58	23	9	14	21	6	10	4	40	27	23	39	49	31	13	15	13	8	5	5	4	4	58.1
19-Jan	4	5	6	5	12	9	6	6	10	10	15	11	21	15	11	8	18	8	9	9	10	6	9	9	21.1
20-Jan	14	12	9	10	11	17	21	58	25	14	8	9	22	24	9	15	21	13	16	10	8	10	13	15	57.7
21-Jan	13	19	27	14	28	33	17	34	14	47	12	29	26	27	14	64	80	46	95	18	9	8	11	6	94.9
22-Jan	8	5	12	7	22	20	13	17	46	25	17	7	8	6	7	6	13	4	7	4	7	7	6	23	45.5
23-Jan	26	8	49	23	34	16	52	15	10	12	9	11	7	14	16	8	7	12	11	18	8	5	6	14	51.8
24-Jan	11	36	12	12	16	6	15	6	6	5	7	16	10	21	7	34	40	5	6	6	9	8	6	11	39.6
25-Jan	8	12	7	8	10	24	17	7	10	9	7	5	14	5	8	5	5	17	14	13	5	8	10	6	23.6
26-Jan	7	13	10	8	9	18	20	18	10	9	7	12	23	25	4	4	3	3	4	3	3	2	3	4	25.3
27-Jan	4	11	6	5	3	2	3	8	10	28	14	9	28	9	30	10	22	24	23	35	20	14	40	51	51.2
28-Jan	14	53	21	18	27	45	80	54	30	53	12	31	11	3	5	5	5	5	3	3	2	3	3	4	80.3
29-Jan	3	2	5	3	4	4	5	4	4	5	6	5	7	4	5	4	16	18	11	7	11	11	20	19	20.5
30-Jan	11	7	9	7	5	4	4	6	9	19	13	18	37	27	48	15	16	7	16	8	25	12	20	47	48.4
31-Jan	54	52	59	91	36	12	9	13	33	10	9	7	18	19	36	6	6	7	85	49	51	61	54	20	90.9
53.6 53.3 61.2 90.9 72.9 45.4 80.3 96.2 56.7 52.7 68.7 40.4 36.7 56.7 49.4 63.7 80.1 79.6 94.9 93.8 68.4 70.4 53.8 84.0																									

PAZA
Beaverlodge Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

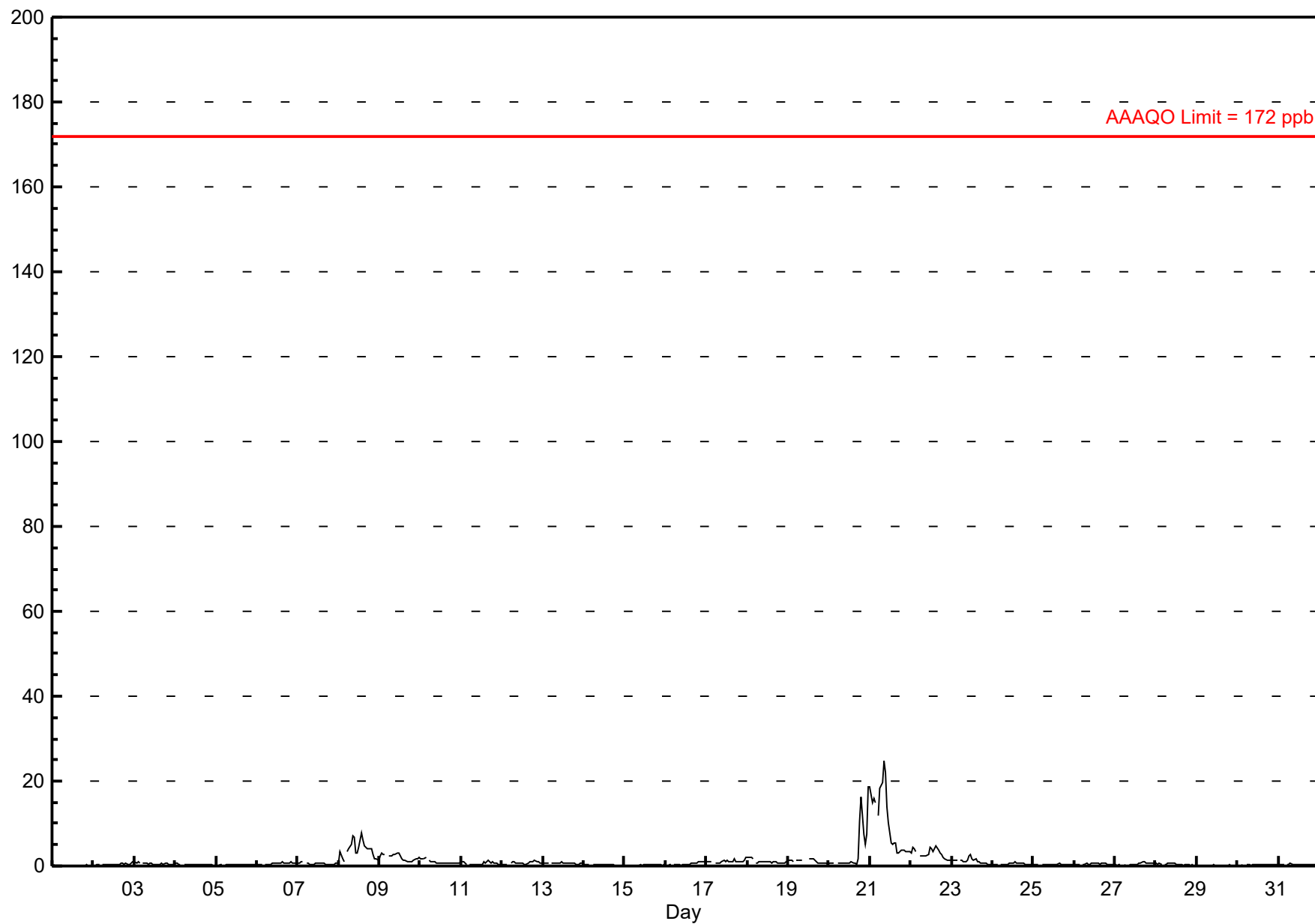
Sulphur Dioxide (SO₂) - ppb

Beaverlodge - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 24.6 ppb on Jan 21 09:00 Maximum Daily Average: 10.2 ppb on Jan 21																				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 1 16:00 Maximum Diurnal Average: 1.6 ppb at hour 9 Monthly Average: 1.17 ppb										Minimum Daily Average: 0.1 ppb on Jan 1 Minimum Diurnal Average: 0.8 ppb at hour 22 Percentiles: P ₁ = 0.0 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.5 Q ₃ = 0.9 P ₉₀ = 2.4 P ₉₉ = 15.0																
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	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
2-Jan	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0	0	1	1	0.4	1.0
3-Jan	1	1	1	1	A	1	1	1	0	1	1	0	0	0	0	0	1	0	1	1	0	0	0	0	0.6	1.0
4-Jan	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7
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	0.3	0.5
6-Jan	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9
7-Jan	1	1	1	1	A	1	1	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	1	1	0.6	1.2
8-Jan	1	3	2	1	A	3	4	5	7	7	3	3	5	8	6	5	4	4	4	4	3	2	2	2	3.8	7.9
9-Jan	3	3	3	3	A	2	2	2	3	3	3	3	2	2	1	1	1	1	1	1	1	2	2	2	2.1	3.1
10-Jan	2	2	2	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.1
11-Jan	1	1	1	0	A	0	0	0	0	0	0	0	0	1	1	1	2	1	1	1	1	1	0	0	0.6	1.5
12-Jan	0	0	0	0	A	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	0.7	1.2
13-Jan	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	0.6	0.9
14-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
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	1	1	1	1	1	1	1	1	1	0.5	1.2
17-Jan	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	2	1.0	2.0
18-Jan	2	2	2	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.1
19-Jan	1	1	1	1	A	1	1	1	1	C	C	C	2	2	2	2	1	1	1	1	1	1	1	0	1.1	1.8
20-Jan	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0	2	11	16	7	5	7	19	3.4	18.8
21-Jan	19	15	16	15	A	12	18	20	25	22	14	10	6	5	6	5	3	3	4	4	4	4	3	3	10.2	24.6
22-Jan	3	4	4	3	A	2	3	2	2	2	3	4	4	4	4	5	4	3	3	2	2	1	1	1	2.9	4.6
23-Jan	1	1	1	1	A	1	1	1	1	1	2	3	2	1	2	1	1	1	1	1	1	0	0	0	1.2	2.6
24-Jan	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0.5	0.9
25-Jan	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0.4	0.5
26-Jan	0	0	0	0	A	0	0	1	0	0	1	1	1	1	0	1	1	1	1	0	0	0	0	0	0.5	0.7
27-Jan	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0.4	1.0
28-Jan	1	1	1	0	A	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7
29-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
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	0.3	0.4
31-Jan	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
1.3 1.4 1.3 1.2 -- 1.1 1.3 1.4 1.6 1.5 1.2 1.2 1.0 1.1 1.1 1.0 0.9 0.8 1.1 1.3 0.9 0.8 0.9 1.3 Diurnal Average																										
18.5 15.0 16.0 14.8 -- 11.9 18.2 19.8 24.6 22.1 14.0 10.3 5.6 7.9 6.2 5.5 4.3 4.1 10.6 16.2 7.5 5.0 7.5 18.8 Diurnal Maximum																										
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - January 2016



Hourly Maximums

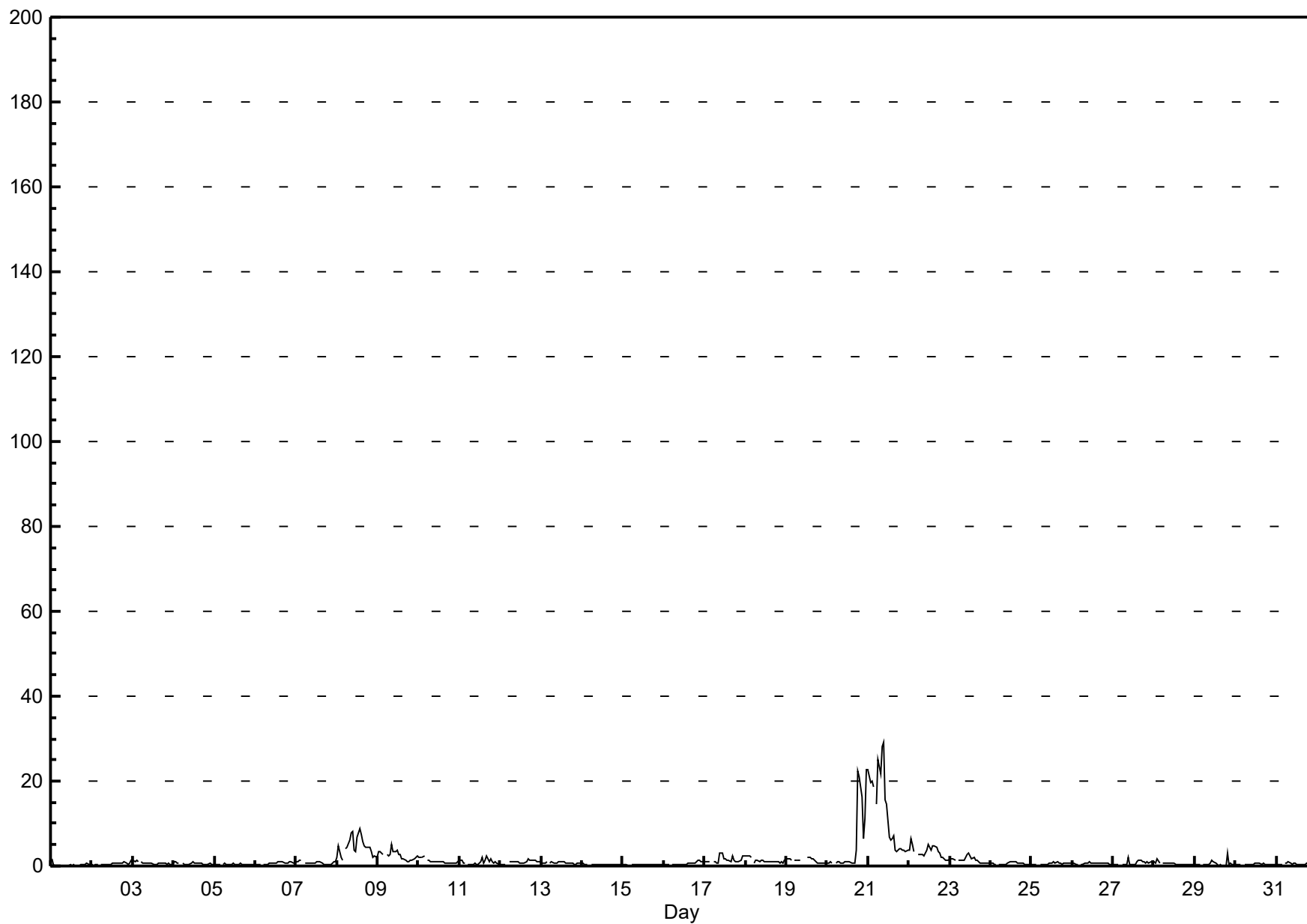
Sulphur Dioxide (SO₂) - ppb

Beaverlodge - January 2016

Maximum Value: 29.0 ppb on Jan 21 10:00																				Maximum Daily Average: 12.4 ppb on Jan 21					Hours in Service: 744	
Minimum Value: 0 ppb on Jan 1 16:00																				Minimum Daily Average: 0.3 ppb on Jan 1					Hours of Data: 710	
Maximum Diurnal Average: 2.1 ppb at hour 10																				Minimum Diurnal Average: 1.0 ppb at hour 22					Hours of Missing Data: 34	
Monthly Average: 1.50 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.3 Q ₁ = 0.4 Median = 0.7 Q ₃ = 1.2 P ₉₀ = 2.9 P ₉₉ = 21.4					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	2	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	1.8
2-Jan	0	0	0	0	A	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	1	1	0.6	1.3
3-Jan	1	1	1	1	A	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	0	0	0.7	1.4
4-Jan	1	1	1	1	A	1	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	1	0	0	0.5	0.9
5-Jan	0	0	0	0	A	0	1	0	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0.4	0.7
6-Jan	0	0	0	0	A	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2
7-Jan	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	1	0.7	1.4
8-Jan	2	5	2	1	A	4	5	6	8	8	4	3	7	9	7	6	5	4	4	4	3	2	2	2	4.5	8.8
9-Jan	3	3	3	3	A	3	3	3	5	3	3	4	3	3	2	2	1	1	1	2	1	2	2	2	2.5	5.0
10-Jan	2	2	2	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	2.5
11-Jan	1	1	1	1	A	0	0	0	0	1	0	0	1	2	1	1	2	1	2	1	1	1	1	0	0.9	2.4
12-Jan	0	0	0	0	A	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	0.9	1.7
13-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	1.0
14-Jan	1	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	0.6
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	0.3	0.5
16-Jan	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0.6	1.3
17-Jan	1	1	1	1	A	1	1	1	1	3	3	2	2	1	1	1	2	1	1	1	1	1	2	2	1.4	3.1
18-Jan	2	2	2	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.3	2.4
19-Jan	2	2	2	1	A	2	1	1	1	C	C	C	2	2	2	2	2	1	1	1	1	1	1	1	1.3	2.1
20-Jan	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	4	22	21	16	7	11	23	5.1	22.7
21-Jan	23	20	20	19	A	15	25	22	28	29	16	15	7	6	6	7	4	3	4	4	4	4	4	4	12.4	29.0
22-Jan	4	7	5	3	A	3	3	3	3	3	4	5	5	4	5	5	4	4	3	2	2	1	1	1	3.4	6.5
23-Jan	2	2	2	1	A	2	1	1	1	2	3	3	2	2	2	2	1	1	1	1	1	1	1	1	1.5	3.0
24-Jan	1	1	0	0	A	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0.6	1.1
25-Jan	0	0	0	0	A	0	1	0	0	0	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0.5	1.0
26-Jan	1	1	0	0	A	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0.6	0.9
27-Jan	0	0	0	0	A	0	0	0	0	2	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0.7	2.1
28-Jan	1	1	2	1	A	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.5	1.6
29-Jan	0	0	0	0	A	0	0	0	0	1	1	1	1	0	0	0	0	0	0	3	0	1	0	0	0.4	3.1
30-Jan	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0.4	0.6
31-Jan	0	0	0	0	A	1	1	1	1	0	1	1	0	0	0	0	0	0	1	0	0	0	1	0	0.5	1.0
1.7 1.8 1.6 1.5 -- 1.3 1.7 1.6 1.9 2.1 1.6 1.6 1.4 1.4 1.3 1.3 1.2 1.1 1.7 1.7 1.4 1.0 1.2 1.6																									Diurnal Average	
22.6 19.5 19.8 18.8 -- 14.6 24.9 21.7 28.3 29.0 15.6 14.7 6.7 8.8 7.3 7.2 4.6 4.4 22.3 21.2 16.1 6.6 11.0 22.7																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

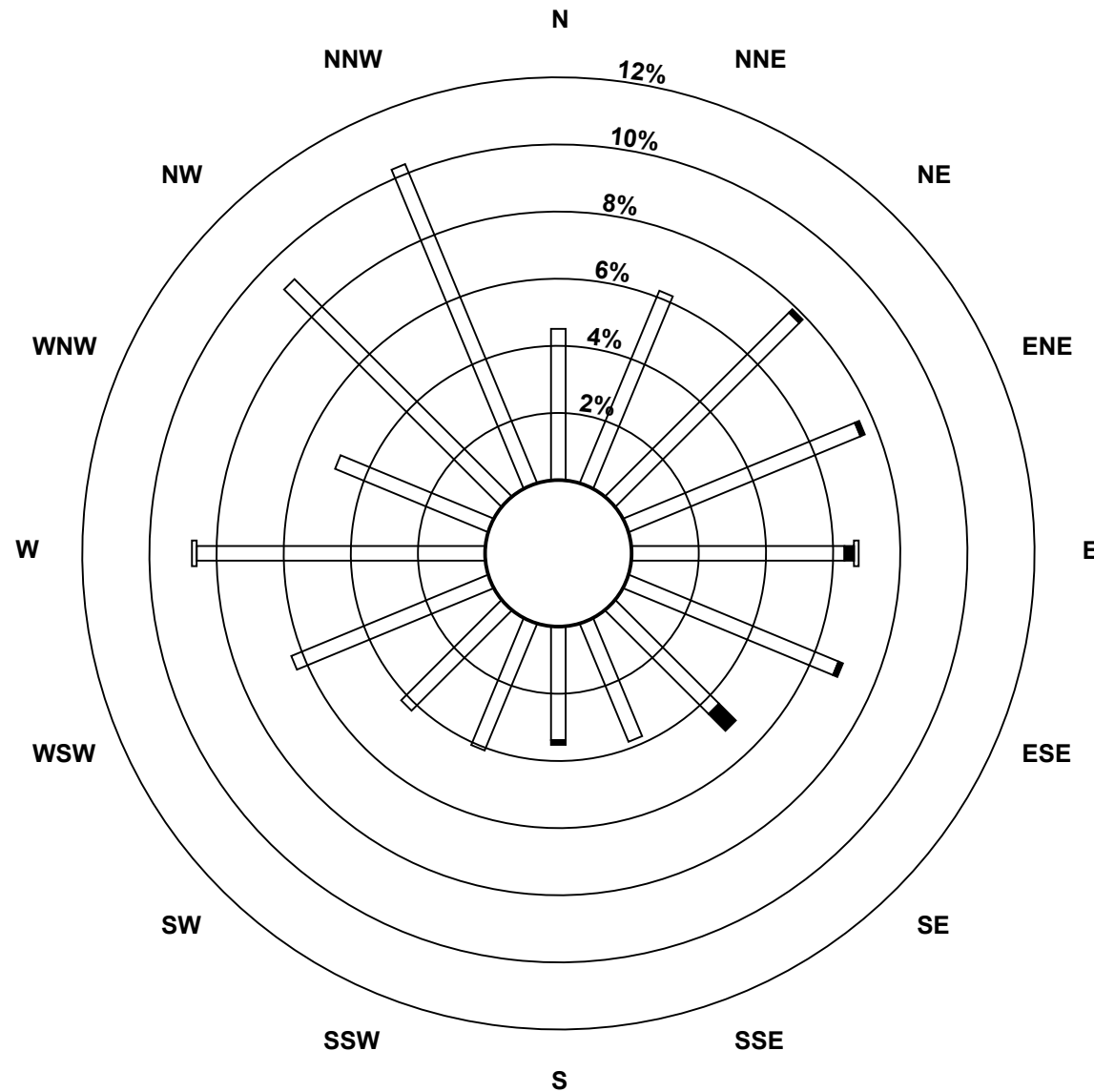
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - January 2016

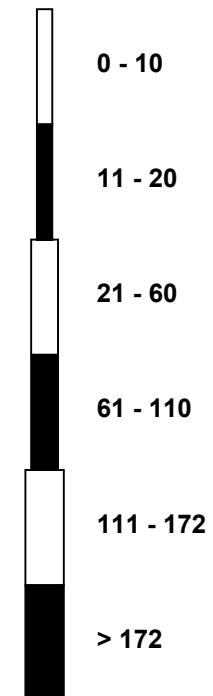


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - January 2016

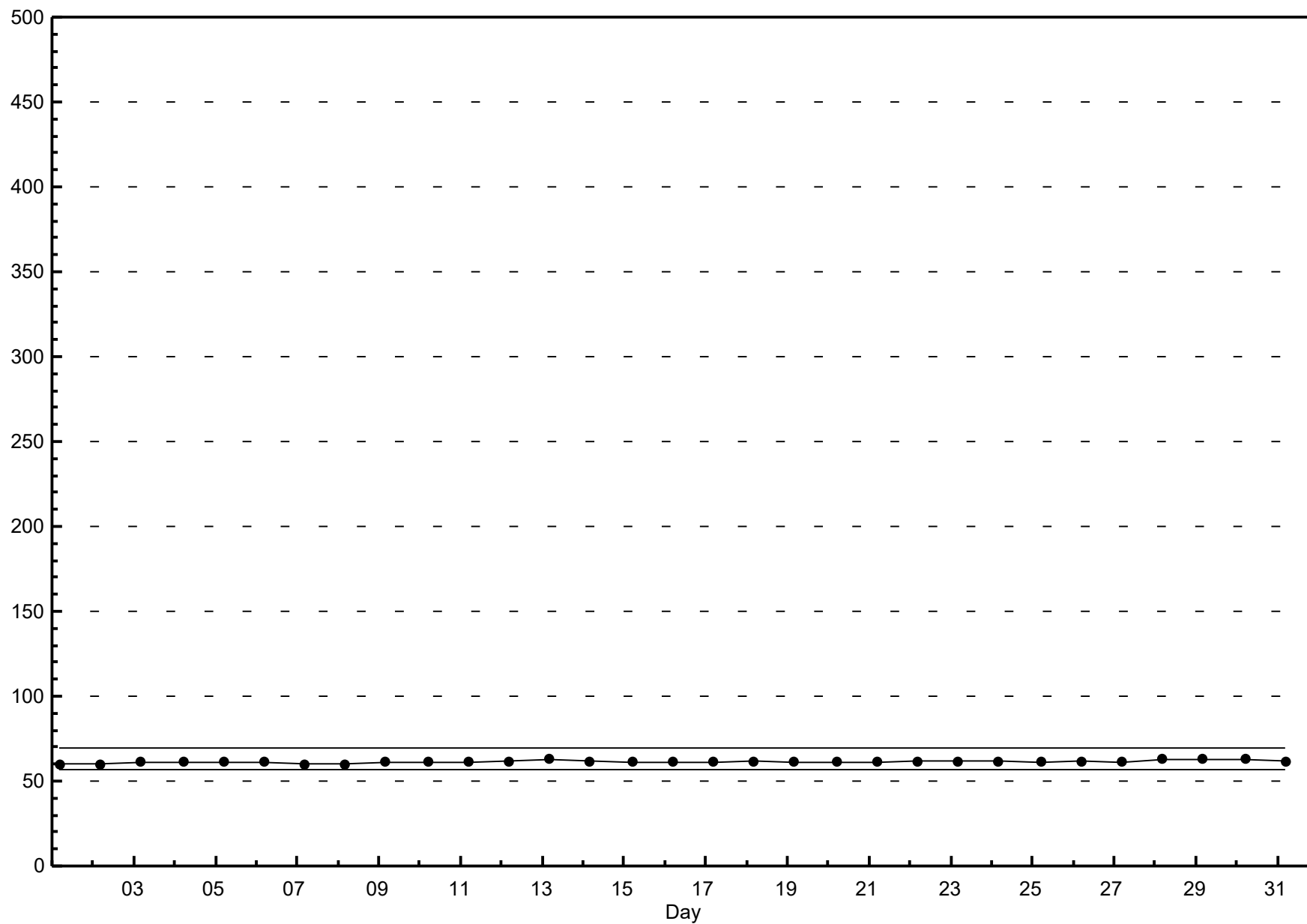


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Beaverlodge - January 2016



Hourly Averages

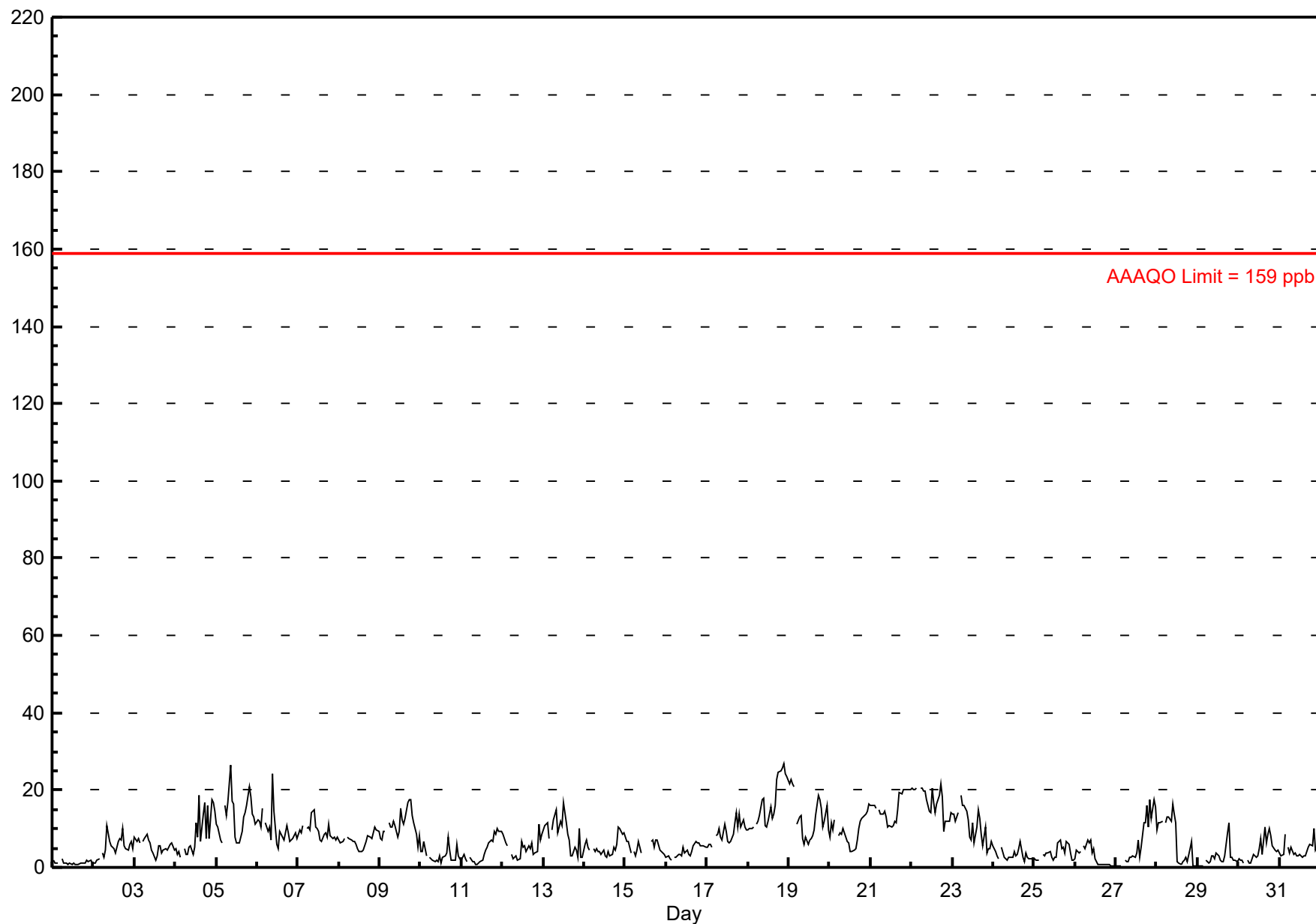
Nitrogen Dioxide (NO₂) - ppb

Beaverlodge - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 27.0 ppb on Jan 18 22:00 Maximum Daily Average: 17.1 ppb on Jan 22																				Hours in Service: 744 Hours of Data: 708 Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Jan 29 01:00 Maximum Diurnal Average: 9.3 ppb at hour 18 Monthly Average: 7.51 ppb																				Minimum Daily Average: 1.2 ppb on Jan 1 Minimum Diurnal Average: 5.9 ppb at hour 14 Percentiles: P ₁ = 0.4 P ₁₀ = 1.7 Q ₁ = 3.2 Median = 6.5 Q ₃ = 10.6 P ₉₀ = 15.4 P ₉₉ = 23.9						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jan	2	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1.2	2.2	
2-Jan	1	1	2	2	A	4	3	5	11	7	6	5	5	4	7	7	7	10	6	5	4	6	7	5	5.1	10.8
3-Jan	8	7	7	6	A	7	7	9	7	6	4	4	2	3	6	6	4	4	5	5	5	6	6	5	5.6	8.7
4-Jan	5	4	4	2	A	5	3	3	5	6	3	5	12	8	19	7	14	17	7	16	8	18	17	15	8.7	18.5
5-Jan	11	10	7	6	A	16	14	17	26	17	16	8	6	6	8	9	13	14	16	21	18	14	13	11	13.0	26.3
6-Jan	12	12	11	15	A	12	9	11	7	24	14	6	5	9	9	8	7	11	9	7	7	7	9	8	10.0	24.1
7-Jan	9	10	9	11	A	10	11	10	14	15	10	10	9	7	7	9	9	8	11	8	8	8	7	8	9.4	14.9
8-Jan	7	6	7	7	A	8	7	7	7	7	6	5	4	4	5	6	7	8	8	7	9	10	10	9	7.0	10.3
9-Jan	8	7	9	9	A	11	10	11	12	11	8	9	15	12	11	13	17	17	13	11	9	5	8	8	11.1	17.5
10-Jan	4	4	7	3	A	2	2	2	2	2	2	3	1	2	3	4	8	4	2	2	2	6	3	2	3.1	7.8
11-Jan	2	3	2	2	A	3	2	1	1	1	1	2	3	4	5	6	7	7	9	9	10	9	9	9	4.4	10.1
12-Jan	9	7	6	6	A	3	2	3	3	2	2	7	5	5	4	6	5	6	3	4	4	11	7	9	5.2	11.0
13-Jan	10	11	12	8	A	10	12	15	9	10	12	11	17	11	8	7	3	3	5	5	2	10	2	3	8.5	16.8
14-Jan	6	7	5	5	A	5	4	5	4	4	3	5	3	3	4	3	3	5	5	6	11	10	9	9	5.3	10.6
15-Jan	8	7	7	4	A	4	3	4	7	4	C	C	C	C	C	7	7	5	7	7	5	4	4	3	5.3	7.9
16-Jan	3	3	2	2	A	3	3	3	3	3	5	4	4	3	3	4	6	7	6	6	6	6	5	5	4.2	6.8
17-Jan	5	6	6	5	A	8	9	10	8	7	11	9	7	6	7	9	11	14	11	14	11	12	10	10	8.9	14.3
18-Jan	10	10	10	11	A	11	12	13	18	18	11	11	12	16	13	14	16	23	25	25	26	27	24	23	16.4	27.0
19-Jan	22	23	22	21	A	11	13	13	8	6	8	6	7	7	8	10	14	19	17	15	10	12	16	10	12.9	22.6
20-Jan	8	11	10	12	A	8	9	9	10	8	7	6	4	4	4	5	7	10	12	13	13	14	15	16	9.4	16.5
21-Jan	16	16	16	15	A	15	14	14	15	13	11	11	11	11	12	11	15	20	19	20	20	20	20	20	15.4	20.3
22-Jan	20	20	20	21	A	21	20	20	20	18	15	14	21	17	14	16	19	22	18	9	12	12	12	14	17.1	21.7
23-Jan	14	14	12	14	A	19	16	16	15	12	8	7	12	6	10	15	13	9	6	11	4	5	5	7	10.8	18.8
24-Jan	6	4	3	2	A	5	3	2	2	3	3	3	4	3	3	5	7	3	2	4	3	2	2	2	3.2	6.6
25-Jan	2	2	2	2	A	3	3	4	4	4	3	2	3	3	7	7	5	5	4	7	6	4	2	2	3.6	7.1
26-Jan	2	5	4	4	A	6	5	7	6	7	4	5	2	1	1	1	1	1	1	1	1	0	0	0	2.7	6.9
27-Jan	0	0	0	0	A	2	2	2	3	3	3	2	4	7	3	5	12	12	16	11	18	13	17	16	6.5	17.6
28-Jan	10	12	11	12	A	12	13	13	12	16	14	12	1	1	1	2	2	2	1	5	7	1	0	0	6.9	16.2
29-Jan	0	0	0	0	A	2	1	2	3	3	2	4	3	2	1	1	3	9	11	3	2	2	2	2	2.6	11.4
30-Jan	2	2	2	1	A	2	1	1	2	3	2	3	5	7	3	10	6	9	10	8	5	4	4	5	4.4	10.4
31-Jan	4	3	3	8	A	5	4	5	3	4	3	3	3	2	3	3	4	5	6	5	10	5	5	4	4.5	9.9
7.2 7.4 7.1 7.1 -- 7.6 7.0 7.6 8.0 7.8 6.6 6.0 6.3 5.9 6.3 6.9 8.1 9.3 8.9 8.8 8.3 8.7 8.0 7.8																								Diurnal Average		
21.8 22.6 21.7 21.0 -- 20.6 20.4 19.6 26.3 24.1 16.4 14.2 20.6 16.7 18.5 16.3 18.8 22.8 24.5 25.0 25.7 27.0 24.4 23.4																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb																										

Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - January 2016



Hourly Maximums

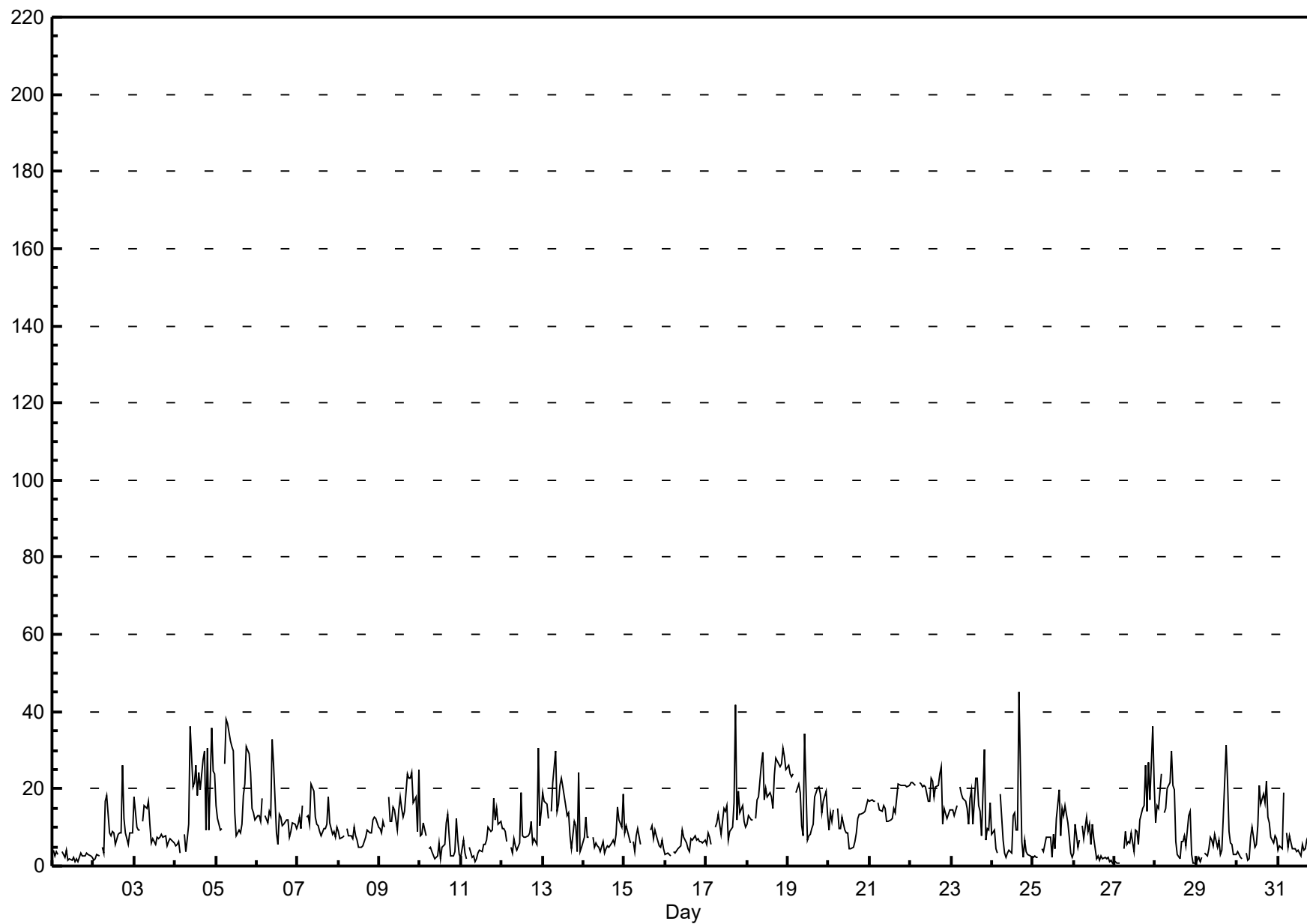
Nitrogen Dioxide (NO₂) - ppb

Beaverlodge - January 2016

Maximum Value: 45.2 ppb on Jan 24 17:00																								Hours in Service: 744		
Maximum Daily Average: 20.6 ppb on Jan 18																								Hours of Data: 708		
Minimum Value: 1 ppb on Jan 27 00:00																								Hours of Missing Data: 36		
Maximum Diurnal Average: 15.0 ppb at hour 18																								Hours of Calibration: 36		
Monthly Average: 11.05 ppb																								Percent Operational Time: 100.0		
Minimum Daily Average: 2.6 ppb on Jan 1																										
Minimum Diurnal Average: 8.7 ppb at hour 3																										
Percentiles: P ₁ = 0.9 P ₁₀ = 2.9 Q ₁ = 5.4 Median = 9.2 Q ₃ = 14.9 P ₉₀ = 21.3 P ₉₉ = 35.9																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jan	4	3	4	3	A	4	3	2	4	1	2	2	2	1	2	1	4	3	3	2	3	3	3	2	2.6	4.1
2-Jan	1	2	3	3	A	5	3	17	18	9	8	9	8	6	8	9	8	26	12	8	5	9	9	9	8.5	26.2
3-Jan	18	10	9	9	A	11	16	15	17	11	6	7	5	7	7	8	8	7	8	5	6	7	7	6	9.2	17.7
4-Jan	5	5	6	3	A	8	4	7	11	36	21	22	26	18	24	20	28	30	9	31	9	36	25	24	17.7	36.1
5-Jan	16	12	9	10	A	26	38	37	33	31	30	14	8	9	9	11	18	21	31	29	24	15	14	12	19.9	38.1
6-Jan	13	13	12	17	A	13	11	14	13	33	26	8	6	13	13	10	11	12	12	7	9	11	11	10	13.0	32.9
7-Jan	11	13	10	16	A	13	13	11	21	19	13	11	11	9	8	10	10	11	18	11	8	9	8	10	11.8	21.1
8-Jan	9	7	7	8	A	10	8	8	7	10	8	7	5	5	5	6	7	9	9	8	12	13	12	10	8.3	12.9
9-Jan	10	8	12	10	A	18	11	11	15	15	9	14	18	15	13	14	24	23	24	16	18	9	25	25	15.5	24.9
10-Jan	8	8	11	8	A	4	5	4	2	2	2	6	2	5	6	11	13	8	3	3	4	12	7	3	5.9	13.4
11-Jan	2	7	3	2	A	5	2	3	1	2	3	4	4	5	5	7	10	9	9	18	12	15	11	12	6.6	17.6
12-Jan	10	10	9	7	A	5	3	7	5	4	6	19	8	8	7	8	8	11	6	7	5	31	10	14	9.0	30.7
13-Jan	19	17	16	12	A	14	22	30	14	16	21	23	21	15	13	14	8	5	12	10	4	24	4	5	14.7	29.7
14-Jan	7	13	7	8	A	8	5	6	5	5	4	6	4	4	5	5	6	7	6	8	15	12	10	19	7.6	18.6
15-Jan	9	11	9	6	A	6	4	8	10	6	C	C	C	C	C	9	10	7	9	8	5	5	7	5	7.4	10.6
16-Jan	3	3	3	3	A	4	3	4	5	5	9	8	6	4	4	7	7	8	7	7	7	6	6	7	5.5	9.3
17-Jan	6	9	7	6	A	10	11	13	11	8	15	14	16	7	9	10	16	42	12	20	14	16	11	10	12.7	41.7
18-Jan	11	13	12	12	A	12	17	18	27	30	17	20	18	19	18	15	23	28	27	26	27	31	29	25	20.6	30.5
19-Jan	26	24	23	24	A	19	21	19	10	8	34	7	8	8	10	11	18	20	20	19	14	17	19	13	17.1	34.4
20-Jan	9	14	11	14	A	15	10	10	13	9	9	9	5	4	5	6	9	12	13	14	14	14	15	17	10.9	17.0
21-Jan	17	17	17	17	A	17	14	14	16	15	12	12	12	12	15	14	17	21	21	21	21	21	21	21	16.6	21.3
22-Jan	22	22	21	21	A	22	21	20	21	21	17	17	23	22	18	21	21	24	26	11	15	12	13	15	19.3	25.6
23-Jan	15	15	13	16	A	20	19	18	17	15	11	17	20	11	23	23	16	14	8	30	7	10	9	16	15.7	30.1
24-Jan	8	9	4	3	A	19	7	3	2	3	4	3	13	14	9	9	45	7	2	7	4	3	3	2	8.0	45.2
25-Jan	2	2	2	2	A	4	4	6	7	8	8	2	8	5	12	20	8	15	13	16	11	7	3	2	7.3	19.9
26-Jan	3	11	5	7	A	11	7	13	9	11	5	11	7	2	2	1	3	2	2	2	2	1	2	1	5.2	12.8
27-Jan	1	1	1	1	A	5	9	6	6	6	9	4	9	9	6	12	15	16	26	14	27	17	36	21	11.1	36.2
28-Jan	11	16	15	24	A	14	15	20	22	30	21	20	6	3	2	6	6	8	5	13	14	3	1	1	12.0	29.8
29-Jan	1	2	1	2	A	3	3	4	8	7	5	8	5	7	3	4	13	31	22	9	6	5	3	3	6.7	31.1
30-Jan	4	3	2	2	A	3	2	2	7	10	5	6	11	21	16	19	16	22	13	11	7	6	8	7	8.8	22.0
31-Jan	4	5	4	19	A	9	5	8	5	5	5	4	4	3	6	4	5	7	8	7	15	9	8	8	6.8	19.1
9.2 9.8 8.7 9.4 -- 10.8 10.2 11.5 11.7 12.5 11.4 10.4 9.9 9.1 9.4 10.5 13.3 15.0 12.7 13.1 11.1 12.9 10.7 10.8																								Diurnal Average		
26.2 23.9 22.9 23.9 -- 26.4 38.1 36.8 32.5 36.1 34.4 22.7 26.2 21.9 24.3 22.7 45.2 41.7 31.0 30.7 26.8 35.9 36.2 25.1																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

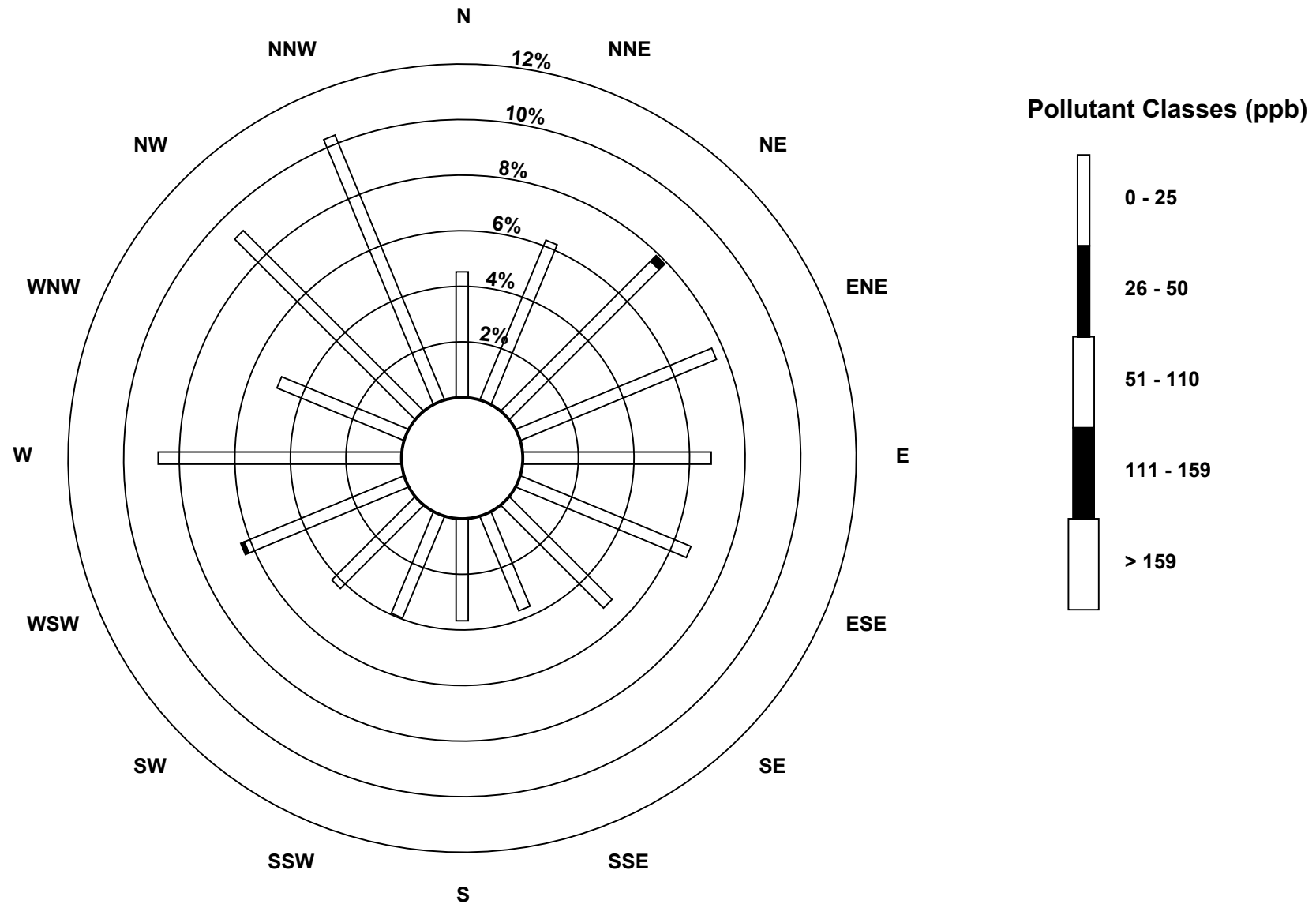
Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - January 2016



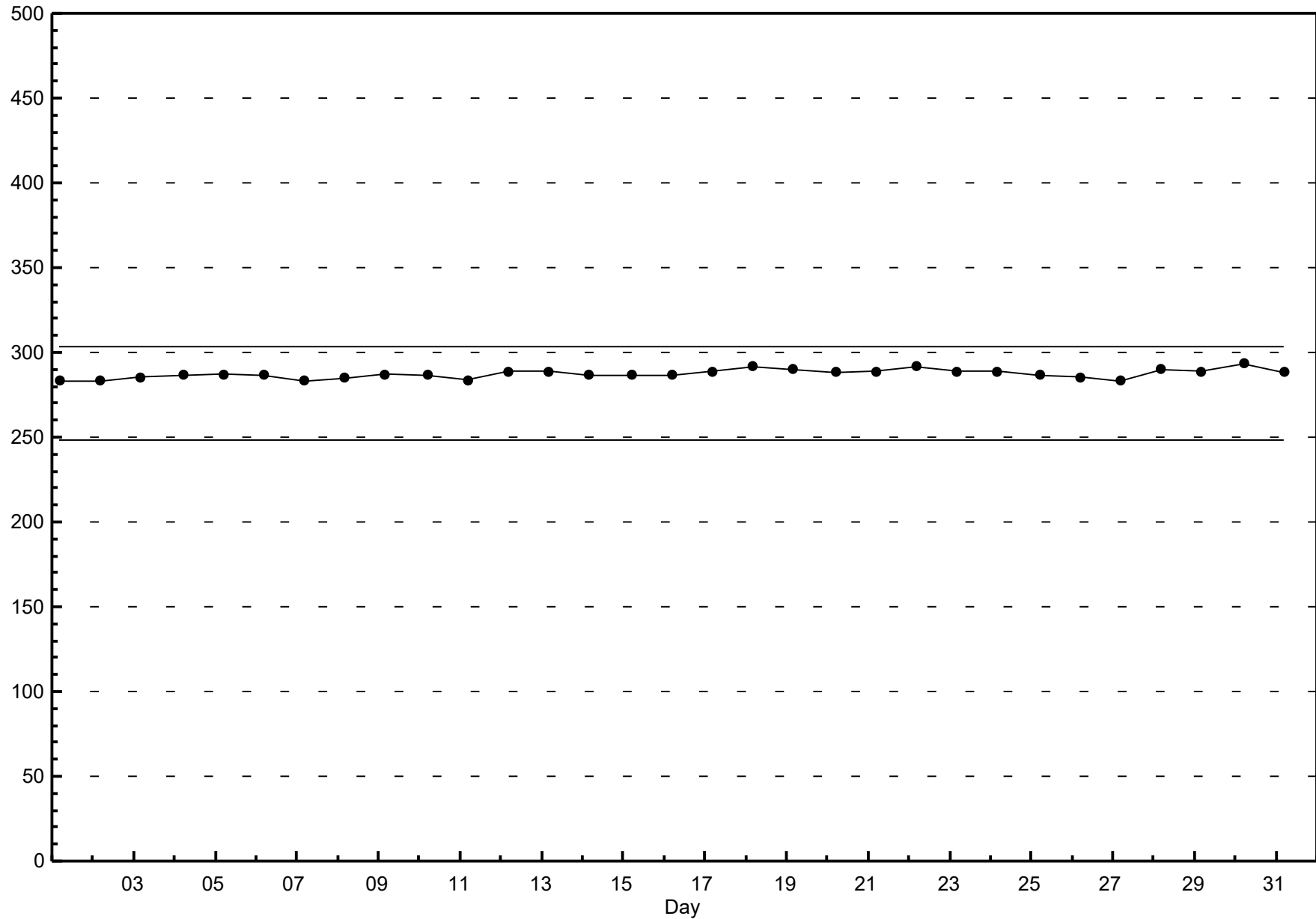
Pollutant Rose

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - January 2016



Span Responses

Nitrogen Dioxide (NO₂)
Beaverlodge - January 2016



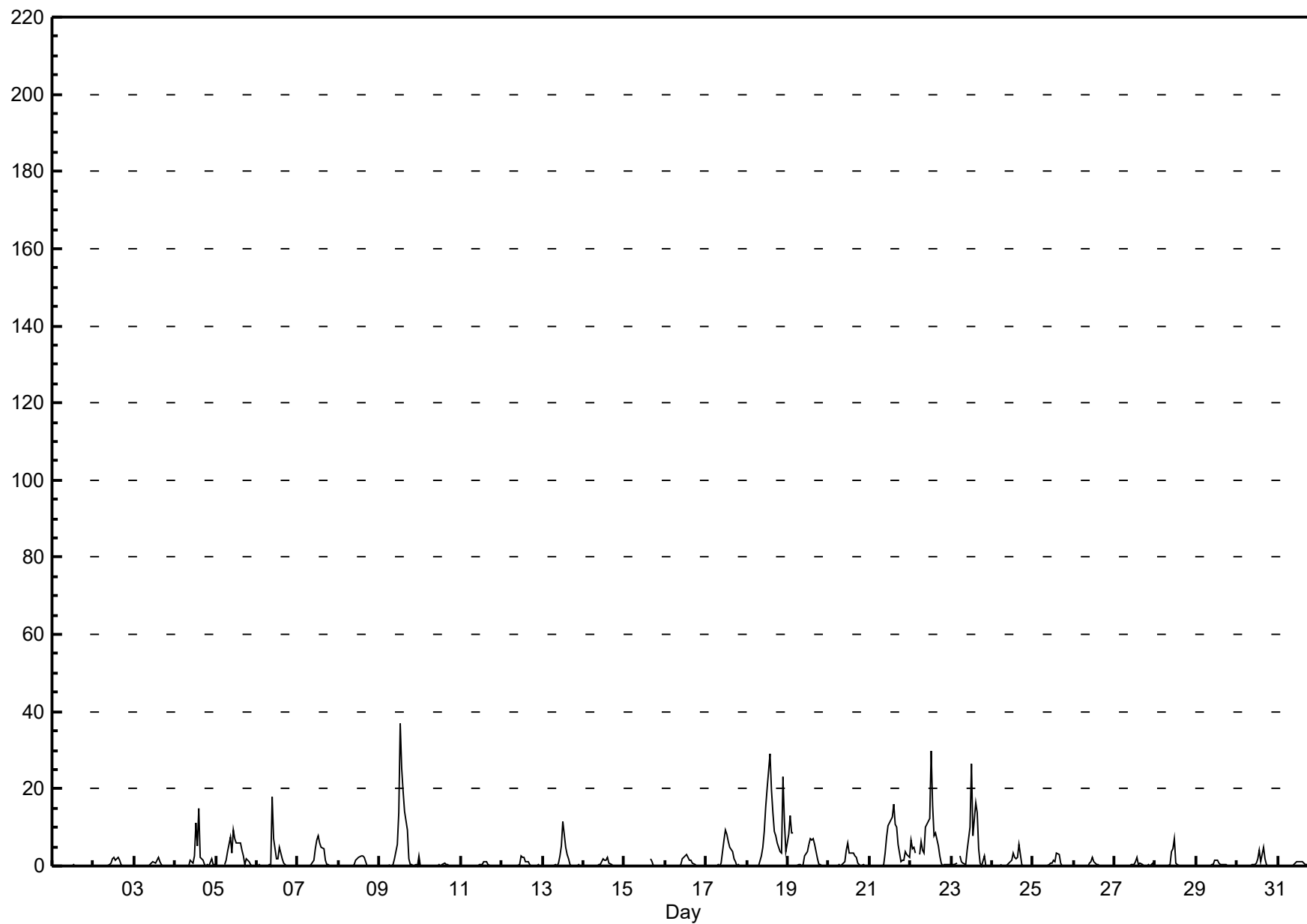
Hourly Averages

Nitrogen Oxide (NO) - ppb Beaverlodge - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 744						
Maximum Value: 36.9 ppb on Jan 9 13:00																				Maximum Daily Average: 8.0 ppb on Jan 18		Hours of Data: 708				
Minimum Value: 0 ppb on Jan 1 01:00																				Minimum Daily Average: 0.0 ppb on Jan 1		Hours of Missing Data: 36				
Maximum Diurnal Average: 6.8 ppb at hour 13																				Minimum Diurnal Average: 0.2 ppb at hour 21		Hours of Calibration: 36				
Monthly Average: 1.71 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 1.4 P ₉₀ = 5.4 P ₉₉ = 18.3		Percent Operational Time: 100.0				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-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
2-Jan	0	0	0	0	A	0	0	0	0	0	0	1	2	2	2	2	0	0	0	0	0	0	0	0	0.5	2.3
3-Jan	0	0	0	0	A	0	0	0	0	0	1	1	1	1	2	1	0	0	0	0	0	0	0	0	0.4	2.4
4-Jan	0	0	0	0	A	0	0	0	0	2	1	2	11	5	15	2	2	0	0	0	0	2	0	0	1.9	14.8
5-Jan	0	0	0	0	A	0	1	4	7	3	9	7	6	6	6	4	2	0	2	1	1	0	0	0	2.7	9.2
6-Jan	0	0	0	0	A	0	0	0	0	18	7	2	2	5	3	2	1	0	0	0	0	0	0	0	1.8	17.9
7-Jan	0	0	0	0	A	0	0	0	0	1	4	7	8	6	5	4	2	0	0	0	0	0	0	0	1.7	7.7
8-Jan	0	0	0	0	A	0	0	0	0	0	1	2	2	2	2	2	1	0	0	0	0	0	0	0	0.7	2.5
9-Jan	0	0	0	0	A	0	0	0	0	2	6	14	37	25	19	14	9	2	0	0	0	0	0	3	5.8	36.9
10-Jan	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.1	0.6
11-Jan	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0.2	1.2
12-Jan	0	0	0	0	A	0	0	0	0	0	0	2	2	2	1	1	0	0	0	0	0	0	0	0	0.5	2.5
13-Jan	0	0	0	0	A	0	0	0	0	1	3	5	11	5	3	2	0	0	0	0	0	0	0	0	1.4	11.4
14-Jan	0	0	0	0	A	0	0	0	0	0	0	2	2	1	2	1	1	0	0	0	0	0	0	0	0.5	2.1
15-Jan	0	0	0	0	A	0	0	0	0	0	C	C	C	C	C	2	1	0	0	0	0	0	0	0	0.2	2.0
16-Jan	0	0	0	0	A	0	0	0	0	0	2	2	3	2	2	2	1	0	0	0	0	0	0	0	0.6	3.2
17-Jan	0	0	0	0	A	0	0	0	0	1	7	9	8	6	5	4	2	1	0	0	0	0	0	0	1.9	9.1
18-Jan	0	0	0	0	A	0	0	0	3	5	9	15	20	29	20	14	9	8	6	4	3	23	12	4	8.0	29.0
19-Jan	8	13	9	9	A	0	0	1	0	0	2	4	5	7	7	7	5	2	0	0	0	0	0	0	3.5	12.9
20-Jan	0	0	0	0	A	0	0	0	0	1	4	6	4	3	3	3	2	1	0	0	0	0	0	0	1.3	6.0
21-Jan	0	0	0	0	A	0	0	0	0	3	8	10	12	13	16	11	10	6	1	2	1	4	3	2	4.5	16.2
22-Jan	7	4	5	3	A	3	6	4	3	10	12	12	30	16	8	8	5	3	1	0	0	0	0	0	6.2	29.8
23-Jan	0	0	0	1	A	3	1	1	0	4	7	10	26	8	16	14	5	1	0	3	0	0	0	0	4.4	26.4
24-Jan	0	0	0	0	A	0	0	0	0	0	1	2	3	2	2	2	6	0	0	0	0	0	0	0	0.8	5.6
25-Jan	0	0	0	0	A	0	0	0	0	0	1	1	1	1	3	3	1	0	0	0	0	0	0	0	0.5	3.2
26-Jan	0	0	0	0	A	0	0	0	0	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0.3	2.3
27-Jan	0	0	0	0	A	0	0	0	0	0	1	1	1	2	1	1	1	0	0	0	0	0	1	0	0.4	2.1
28-Jan	0	0	0	0	A	0	0	0	0	4	5	7	1	0	0	0	0	0	0	0	0	0	0	0	0.8	7.2
29-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	1.6
30-Jan	0	0	0	0	A	0	0	0	0	0	0	1	2	4	1	5	2	0	0	0	0	0	0	0	0.7	5.0
31-Jan	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.3	1.2
0.5 0.6 0.5 0.5 -- 0.3 0.3 0.4 0.5 1.9 3.1 4.4 6.8 5.3 5.0 3.6 2.2 0.8 0.4 0.4 0.2 1.0 0.6 0.3																									Diurnal Average	
8.3 12.9 8.6 8.5 -- 3.0 6.2 4.2 7.5 17.9 11.5 15.4 36.9 29.0 19.9 14.3 10.1 8.0 6.1 3.7 3.4 23.0 11.7 3.6																									Diurnal Maximum	
C - Calibration																									A - Automated Daily Zero Span	

Hourly Averages

Nitrogen Oxide (NO) - ppb
Beaverlodge - January 2016



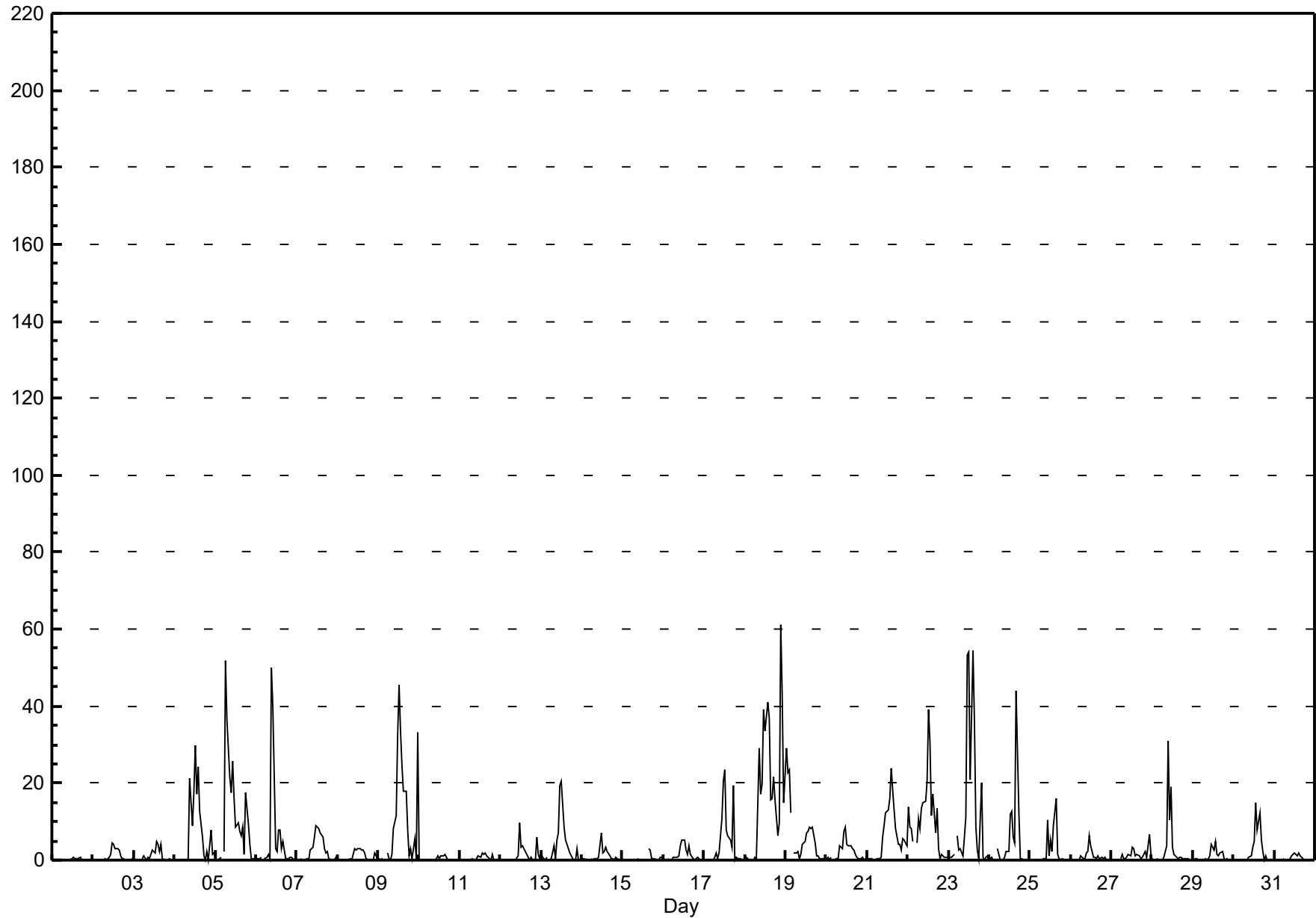
Hourly Maximums

Nitrogen Oxide (NO) - ppb Beaverlodge - January 2016

Maximum Value: 61.0 ppb on Jan 18 22:00																		Maximum Daily Average: 18.4 ppb on Jan 18						Hours in Service: 744		
Minimum Value: 0 ppb on Jan 1 02:00																		Minimum Daily Average: 0.2 ppb on Jan 1						Hours of Data: 708		
Maximum Diurnal Average: 11.6 ppb at hour 13																		Minimum Diurnal Average: 0.8 ppb at hour 6						Hours of Missing Data: 36		
Monthly Average: 4.10 ppb																		Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.6 Q ₃ = 3.2 P ₉₀ = 12.4 P ₉₉ = 42.8						Hours of Calibration: 36		
																								Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jan	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0.2	0.7
2-Jan	0	0	0	0	A	0	0	0	0	1	2	4	4	3	3	2	1	0	0	0	0	0	0	0	1.0	4.5
3-Jan	0	0	0	0	A	1	1	0	1	1	1	3	2	5	4	2	4	0	0	0	0	0	0	0	1.1	5.0
4-Jan	0	0	0	0	A	0	0	0	1	21	9	18	30	17	24	13	6	1	0	2	0	8	1	2	6.7	29.8
5-Jan	0	0	0	1	A	2	52	36	21	17	26	16	8	10	8	6	8	1	17	9	4	0	0	0	10.7	51.9
6-Jan	0	1	0	1	A	0	1	2	1	50	40	3	2	8	8	3	5	0	0	0	1	1	0	0	5.5	49.9
7-Jan	0	0	0	0	A	0	1	0	3	3	6	9	9	8	7	6	3	2	2	0	0	0	0	1	2.6	8.8
8-Jan	0	0	0	0	A	0	0	0	0	2	3	3	3	3	3	3	2	0	0	0	0	0	2	0	1.1	3.1
9-Jan	0	0	0	0	A	2	0	0	0	2	8	11	32	45	34	25	18	8	1	3	0	6	0	33	10.8	45.4
10-Jan	0	0	0	0	A	0	0	0	0	0	0	1	0	1	1	2	1	0	0	0	0	0	0	0	0.4	1.6
11-Jan	0	0	0	0	A	0	0	0	0	0	1	1	1	2	2	2	1	0	0	1	0	0	0	0	0.5	1.9
12-Jan	0	0	0	0	A	0	0	0	0	0	1	10	4	4	3	1	1	0	1	0	0	6	1	0	1.5	9.7
13-Jan	2	1	0	1	A	0	1	4	0	5	7	19	20	9	5	4	3	2	0	0	0	3	0	0	3.8	20.5
14-Jan	0	0	0	0	A	0	0	0	1	0	1	7	2	2	3	2	1	0	0	0	1	0	0	1	1.1	7.1
15-Jan	0	0	0	0	A	0	0	0	0	0	C	C	C	C	C	3	3	0	0	0	0	0	1	1	0.5	2.9
16-Jan	0	0	0	0	A	0	1	1	1	1	4	5	5	3	2	4	2	0	0	0	1	0	0	0	1.3	5.3
17-Jan	0	0	0	0	A	0	1	2	0	2	11	21	23	8	6	5	3	19	0	1	0	0	0	0	4.5	23.5
18-Jan	0	1	0	0	A	0	1	1	29	17	20	39	34	41	37	16	16	22	16	6	10	61	43	15	18.4	61.0
19-Jan	29	23	24	12	A	2	2	2	0	2	4	5	7	8	8	8	9	5	1	1	0	0	1	0	6.7	29.1
20-Jan	1	1	0	1	A	1	0	0	4	3	7	9	4	4	4	3	2	2	1	0	1	1	0	0	2.1	8.6
21-Jan	0	0	0	0	A	0	1	0	1	6	9	12	13	16	24	18	13	8	4	4	3	5	5	4	6.5	24.0
22-Jan	14	8	8	5	A	4	11	8	13	15	15	20	39	30	12	17	7	14	3	1	1	1	1	1	10.8	39.1
23-Jan	1	1	1	2	A	6	3	3	1	6	11	53	54	21	55	36	9	3	0	20	1	0	1	1	12.5	54.5
24-Jan	0	1	0	0	A	3	0	0	0	1	2	2	12	13	6	4	44	12	0	0	0	0	0	0	4.4	44.1
25-Jan	0	0	0	0	A	0	0	0	0	1	10	1	5	2	9	16	2	0	0	0	0	0	0	0	2.1	16.2
26-Jan	0	0	0	0	A	0	1	0	0	2	2	6	4	1	1	0	1	0	1	0	1	0	0	0	0.9	6.3
27-Jan	0	0	0	0	A	0	1	0	1	1	2	1	3	3	1	1	1	0	1	1	2	1	7	1	1.3	6.7
28-Jan	0	0	0	0	A	0	0	1	4	31	10	19	4	1	1	0	1	1	1	1	0	0	0	0	3.3	30.8
29-Jan	0	0	0	0	A	0	0	0	0	1	1	4	3	5	1	1	2	2	0	0	0	0	0	0	1.0	5.0
30-Jan	0	0	0	0	A	0	0	0	0	1	1	3	5	15	8	12	5	2	0	1	0	0	0	0	2.4	15.0
31-Jan	0	0	0	0	A	0	0	0	0	0	1	1	2	1	2	1	1	0	0	0	0	0	0	0	0.5	2.0
1.6		1.3	1.2	0.8	--	0.8	2.5	2.1	2.7	6.4	7.3	11.0	11.6	9.2	9.0	6.8	5.6	3.5	1.7	1.8	0.9	3.1	2.1	2.0	Diurnal Average	
29.1		22.9	23.7	12.5	--	6.3	51.9	36.5	29.0	49.9	39.8	53.5	54.2	41.0	54.5	35.8	44.1	21.7	17.4	20.1	9.7	61.0	43.4	33.0	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																								

Hourly Maximums

Nitrogen Oxide (NO) - ppb
Beaverlodge - January 2016



Hourly Averages

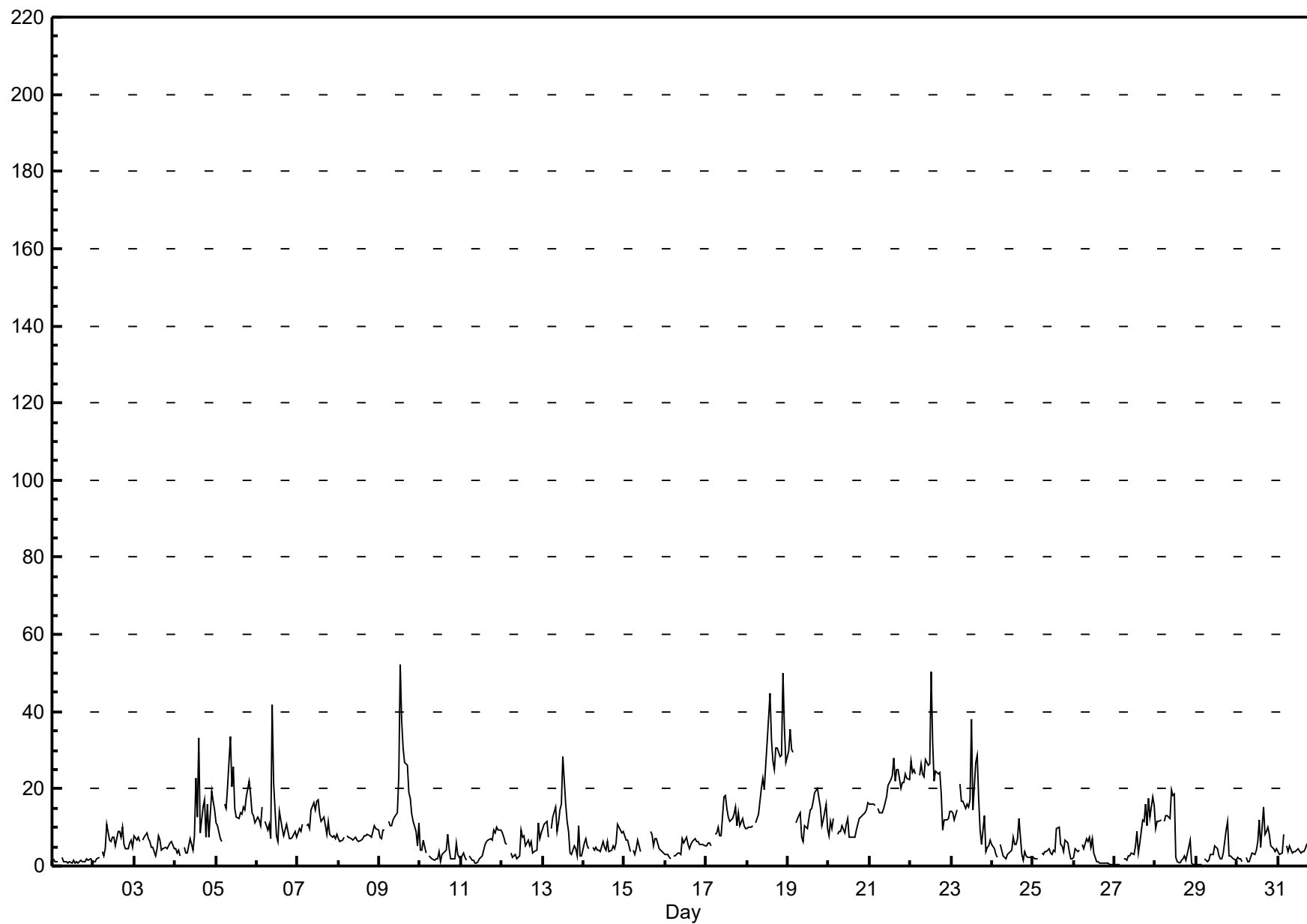
Oxides of Nitrogen (NO_x) - ppb

Beaverlodge - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 52.2 ppb on Jan 9 13:00 Maximum Daily Average: 24.3 ppb on Jan 18																																					
Minimum Value: 0 ppb on Jan 27 00:00 Maximum Diurnal Average: 13.2 ppb at hour 13 Monthly Average: 9.18 ppb												Minimum Daily Average: 1.2 ppb on Jan 1 Minimum Diurnal Average: 7.3 ppb at hour 7 Percentiles: P ₁ = 0.4 P ₁₀ = 1.8 Q ₁ = 3.6 Median = 7.0 Q ₃ = 12.1 P ₉₀ = 19.8 P ₉₉ = 37.1																									
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-Jan	2	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1.2	2.2												
2-Jan	1	1	2	2	A	4	3	5	11	7	6	7	7	5	9	9	7	10	6	5	4	6	7	5	5.6	10.8											
3-Jan	8	7	7	6	A	7	7	9	7	6	5	5	2	4	8	7	4	4	5	5	5	6	6	5	5.9	8.6											
4-Jan	5	4	4	2	A	5	3	3	5	7	4	8	23	13	33	9	15	17	7	16	8	19	17	15	10.5	33.2											
5-Jan	11	10	7	6	A	16	15	20	34	20	26	15	13	12	14	13	15	14	18	22	19	14	13	11	15.6	33.6											
6-Jan	13	12	11	15	A	12	9	11	7	42	22	8	7	14	12	10	8	11	9	7	7	7	9	8	11.7	41.9											
7-Jan	9	10	9	11	A	10	11	10	14	16	15	17	17	13	12	13	10	8	11	8	8	8	7	8	11.0	17.2											
8-Jan	7	6	7	7	A	8	7	7	7	7	7	7	6	7	7	8	8	8	8	7	9	10	10	9	7.6	10.3											
9-Jan	8	7	9	9	A	12	10	11	12	13	14	23	52	37	30	27	26	19	18	13	11	9	5	11	16.9	52.2											
10-Jan	4	4	7	3	A	2	2	2	2	2	2	4	1	3	4	4	8	4	2	2	2	6	3	2	3.3	8.1											
11-Jan	2	3	2	2	A	3	2	1	1	1	1	2	2	4	6	6	7	7	7	9	9	10	9	9	4.6	10.0											
12-Jan	8	7	6	6	A	3	2	3	3	2	3	9	8	8	5	7	5	6	3	4	4	11	7	9	5.6	11.3											
13-Jan	10	11	11	8	A	10	12	15	9	11	14	16	28	16	12	9	3	3	5	5	3	10	3	3	9.9	28.2											
14-Jan	6	7	5	5	A	5	4	5	4	4	4	6	5	4	6	4	4	5	5	6	11	10	9	9	5.7	10.7											
15-Jan	8	7	7	4	A	4	3	4	7	4	C	C	C	C	C	9	8	5	7	7	5	4	4	4	5.5	8.8											
16-Jan	3	3	2	2	A	3	3	3	3	3	7	6	7	5	5	6	6	7	6	6	6	6	5	5	4.8	7.5											
17-Jan	5	6	6	5	A	8	9	10	8	8	18	18	15	13	12	12	13	15	11	14	11	12	10	10	10.8	18.3											
18-Jan	10	10	10	11	A	11	12	13	20	23	20	26	32	45	33	27	25	31	31	29	29	50	36	27	24.3	49.9											
19-Jan	30	35	30	29	A	11	13	14	8	6	10	10	12	14	15	17	19	20	18	15	10	12	16	10	16.4	35.4											
20-Jan	8	11	10	12	A	8	9	9	11	9	11	12	8	7	8	8	9	11	12	13	13	14	15	16	10.5	16.4											
21-Jan	16	16	16	15	A	15	14	14	15	16	18	21	22	23	28	22	25	25	20	22	21	24	23	22	19.8	27.9											
22-Jan	27	24	25	24	A	24	26	24	23	28	26	26	50	32	22	25	24	24	19	9	12	12	12	14	23.2	50.3											
23-Jan	14	14	12	15	A	21	17	17	15	16	15	17	38	14	27	29	17	9	6	13	4	5	5	7	15.1	38.2											
24-Jan	6	4	3	2	A	6	3	2	2	3	3	4	7	5	5	7	12	3	2	4	3	2	2	2	4.0	12.1											
25-Jan	2	2	2	2	A	3	3	4	4	4	3	3	4	4	10	10	5	5	4	7	6	4	2	2	4.1	10.1											
26-Jan	2	5	4	4	A	6	5	7	6	8	5	7	3	1	1	1	1	1	1	1	0	0	0	0	3.0	7.6											
27-Jan	0	0	0	0	A	2	2	2	3	3	3	3	5	9	3	6	12	12	16	11	18	13	18	16	6.8	18.0											
28-Jan	10	12	11	12	A	12	13	13	12	20	18	19	2	1	1	2	2	2	5	7	1	0	0	0	7.7	19.9											
29-Jan	0	0	0	0	A	2	1	2	3	3	3	5	4	3	2	2	3	9	11	3	2	2	2	2	2.9	11.4											
30-Jan	2	2	2	1	A	2	1	1	2	3	3	4	6	12	5	15	8	9	10	8	5	4	4	5	5.0	15.4											
31-Jan	4	3	3	8	A	5	4	5	3	4	4	4	5	4	4	4	4	6	6	5	10	5	5	4	4.7	9.9											
7.7 7.9 7.5 7.5 --					7.8	7.3	7.9	8.4	9.7	9.7	10.5	13.2	11.2	11.2	10.5	10.3	10.1	9.2	9.1	8.5	9.6	8.5	8.1	Diurnal Average													
30.0 35.4 30.2 29.4 --					23.5	26.5	23.7	33.6	41.9	26.0	26.5	52.2	44.6	33.2	28.7	26.1	30.7	30.5	28.5	28.8	49.9	35.9	26.9	Diurnal Maximum													
C - Calibration A - Automated Daily Zero Span																																					

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb
Beaverlodge - January 2016



Hourly Maximums

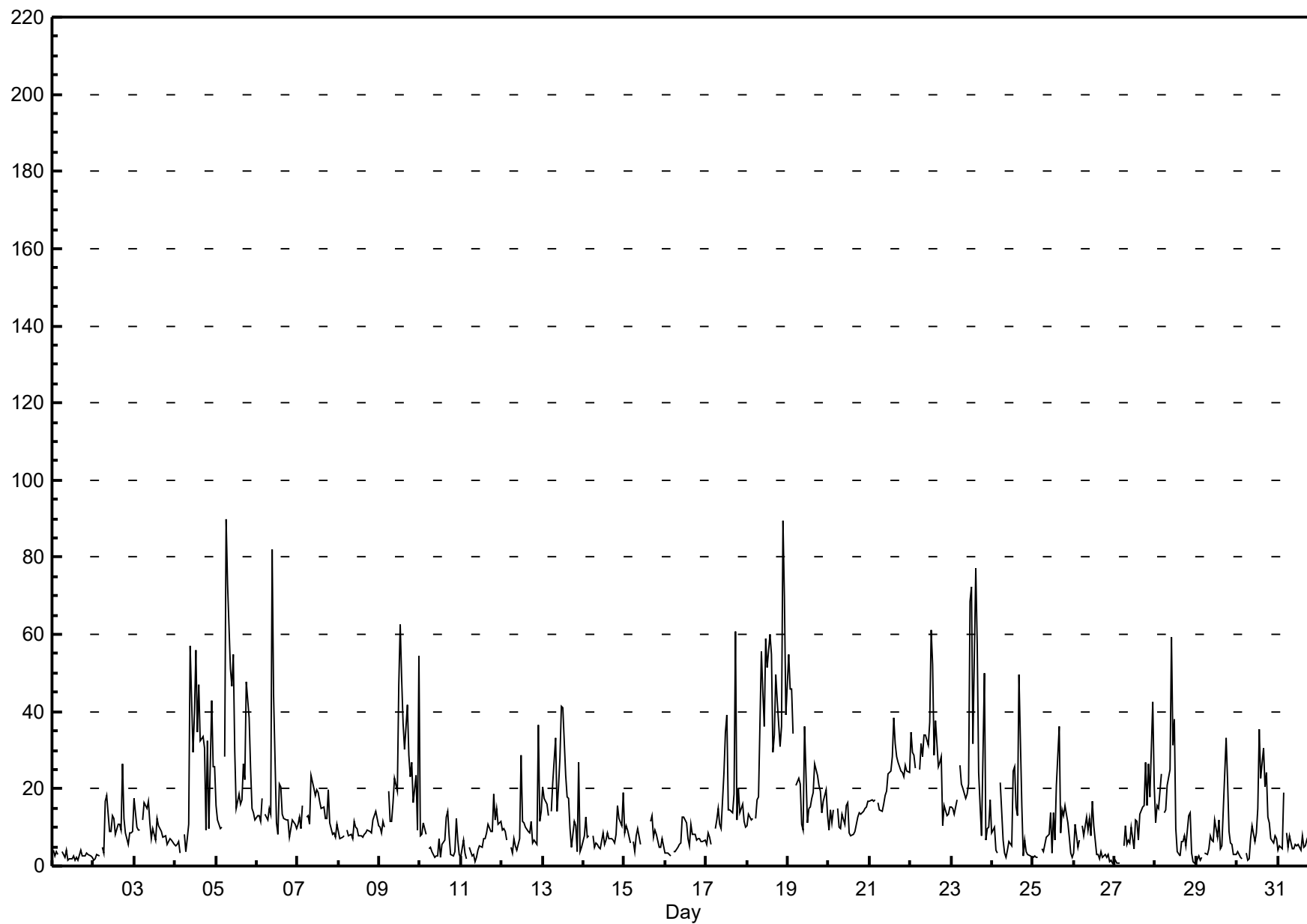
Oxides of Nitrogen (NO_x) - ppb

Beaverlodge - January 2016

Maximum Value: 89.9 ppb on Jan 5 07:00																								Hours in Service: 744			
Maximum Daily Average: 38.2 ppb on Jan 18																								Hours of Data: 708			
Minimum Value: 1 ppb on Jan 29 01:00																								Hours of Missing Data: 36			
Maximum Diurnal Average: 21.2 ppb at hour 13																								Hours of Calibration: 36			
Monthly Average: 14.71 ppb																								Percent Operational Time: 100.0			
Percentiles: P ₁ = 1.1 P ₁₀ = 3.0 Q ₁ = 6.2 Median = 10.6 Q ₃ = 17.6 P ₉₀ = 31.6 P ₉₉ = 68.5																											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Jan	4	3	4	3	A	4	3	2	4	1	2	2	3	1	2	1	4	3	3	2	3	3	3	2	2.7	4.2	
2-Jan	1	2	3	3	A	5	3	17	18	9	9	13	12	8	11	11	9	26	12	8	5	9	9	9	9.3	26.3	
3-Jan	18	10	9	9	A	12	17	15	17	11	7	10	7	12	10	10	9	7	8	5	6	7	7	6	10.0	17.7	
4-Jan	5	5	6	3	A	8	4	7	11	57	29	39	56	35	47	33	34	31	9	33	10	43	26	26	24.2	57.1	
5-Jan	16	12	10	10	A	28	90	73	51	47	55	30	15	19	16	17	27	23	48	38	26	15	14	12	30.0	89.9	
6-Jan	13	13	12	18	A	13	12	15	13	82	44	11	8	21	21	13	12	12	12	8	10	12	11	10	17.2	82.0	
7-Jan	11	13	10	16	A	13	13	11	23	20	18	20	19	17	15	15	12	12	20	11	8	9	8	11	14.1	23.4	
8-Jan	9	7	8	8	A	9	8	8	7	12	10	10	8	8	8	8	9	9	9	12	13	14	10	10	9.2	14.1	
9-Jan	10	8	12	10	A	19	11	11	17	23	19	47	63	49	37	30	42	29	23	27	16	23	9	54	25.7	62.6	
10-Jan	8	8	11	8	A	4	5	4	2	2	3	7	2	6	7	13	14	8	3	3	4	12	7	3	6.2	14.1	
11-Jan	2	7	3	2	A	5	3	3	1	2	4	5	5	7	7	8	11	9	9	19	12	15	11	12	7.0	18.8	
12-Jan	9	10	9	7	A	5	3	7	5	4	7	29	11	11	10	9	9	12	6	7	6	37	12	14	10.3	36.5	
13-Jan	21	17	16	13	A	14	22	33	14	21	28	42	41	24	18	18	10	5	12	10	4	27	4	5	18.1	41.5	
14-Jan	8	13	7	8	A	8	5	6	6	5	5	8	5	7	9	7	7	7	6	8	16	12	10	19	8.3	19.0	
15-Jan	9	10	9	6	A	6	4	8	10	6	C	C	C	C	C	12	13	7	9	8	5	5	7	5	7.7	13.0	
16-Jan	3	3	3	3	A	4	4	5	6	6	13	13	11	7	5	11	8	8	7	7	7	6	6	7	6.6	12.7	
17-Jan	6	9	7	6	A	10	12	15	11	10	24	35	39	15	15	14	19	61	12	20	14	16	11	10	16.9	60.7	
18-Jan	11	14	12	12	A	12	17	18	56	45	36	59	51	60	55	30	34	49	43	31	36	90	70	39	38.2	89.6	
19-Jan	55	46	46	34	A	21	23	21	11	9	36	11	15	15	18	19	26	23	21	20	14	17	20	13	23.2	54.7	
20-Jan	9	15	11	15	A	15	10	10	14	11	16	17	9	8	8	9	11	13	14	14	14	15	15	17	12.5	17.0	
21-Jan	17	17	17	17	A	17	15	14	16	18	19	24	24	28	39	32	28	27	25	24	23	26	24	24	22.5	38.6	
22-Jan	35	30	29	25	A	25	32	28	34	34	31	37	61	52	29	38	26	27	28	11	16	13	13	15	29.1	61.3	
23-Jan	15	15	13	17	A	26	21	20	17	18	21	69	72	32	77	57	24	16	8	50	7	10	10	17	27.5	77.1	
24-Jan	8	10	4	3	A	22	7	3	2	4	6	5	24	26	15	13	50	16	2	7	4	3	3	2	10.5	49.7	
25-Jan	2	3	2	2	A	4	4	6	8	8	14	3	14	7	21	36	9	15	13	16	11	7	3	2	9.1	36.1	
26-Jan	3	11	5	7	A	11	8	13	9	12	8	17	11	3	3	2	4	2	3	2	3	1	2	1	6.1	17.0	
27-Jan	1	1	1	1	A	5	11	6	7	6	10	4	12	12	7	13	15	16	27	16	27	18	43	21	12.1	42.6	
28-Jan	11	16	15	24	A	14	15	21	25	59	31	38	10	4	3	6	8	5	13	14	3	1	1	1	14.9	59.1	
29-Jan	1	3	1	2	A	3	3	5	8	7	6	12	7	12	4	5	15	33	22	9	6	5	3	3	7.6	33.1	
30-Jan	4	3	2	2	A	3	2	2	7	10	6	9	15	35	23	30	20	24	13	11	7	6	8	7	10.9	35.4	
31-Jan	4	5	4	19	A	9	5	8	4	5	6	5	6	4	8	5	5	7	8	7	15	9	8	8	7.1	18.9	
10.6 10.9 9.7 10.0 -- 11.4 12.5 13.4 14.0 18.2 17.5 21.0 21.2 18.1 18.2 16.9 16.8 17.5 14.1 14.6 11.6 15.7 12.6 12.4 Diurnal Average																											
54.7 45.8 45.8 34.3 -- 28.5 89.9 73.0 55.6 82.0 54.8 68.6 72.3 60.0 77.1 57.3 49.7 60.7 47.8 49.9 36.1 89.6 69.9 54.3 Diurnal Maximum																											
C - Calibration A - Automated Daily Zero Span																											

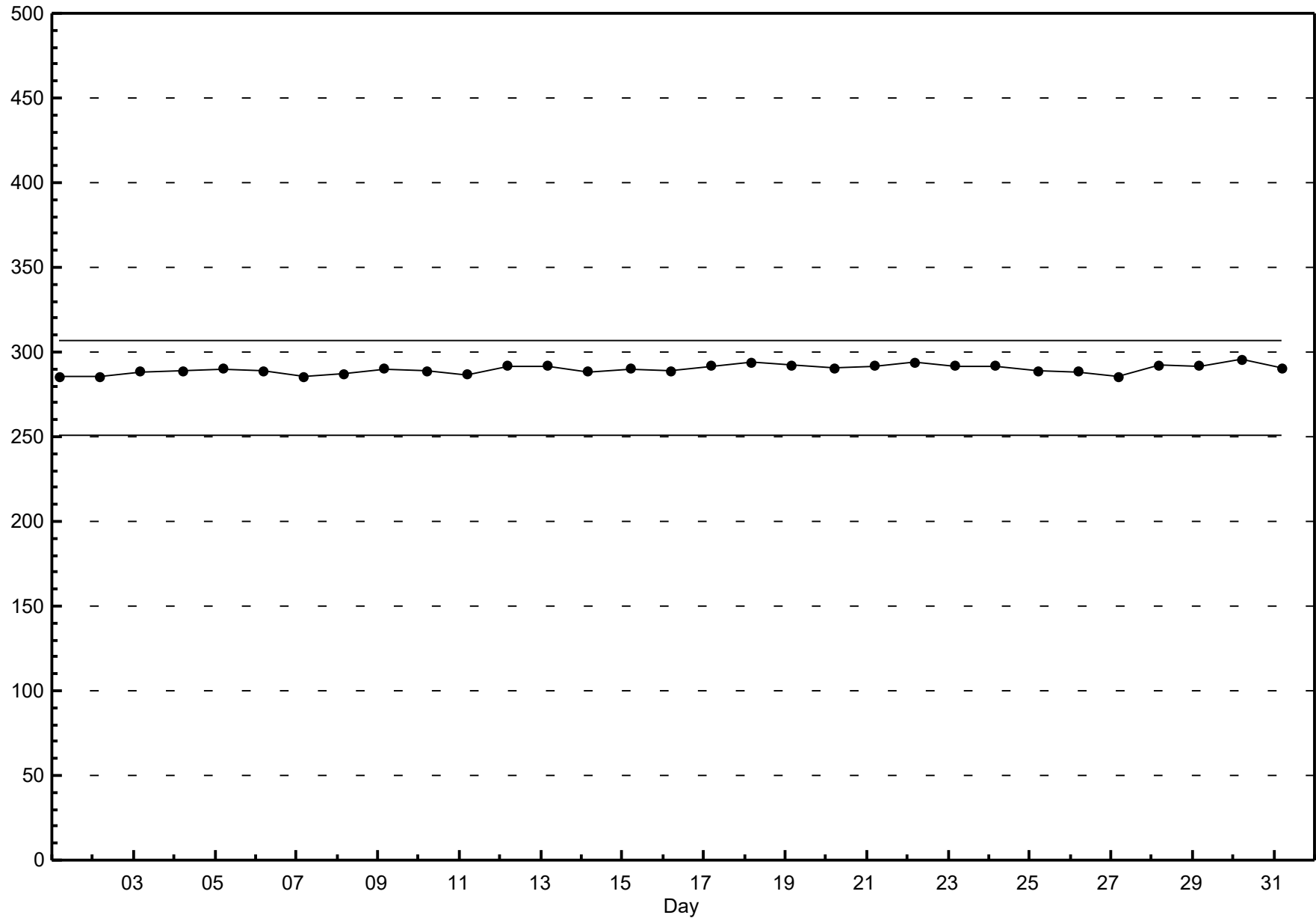
Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb
Beaverlodge - January 2016



Span Responses

Oxides of Nitrogen (NO_x)
Beaverlodge - January 2016



Hourly Averages

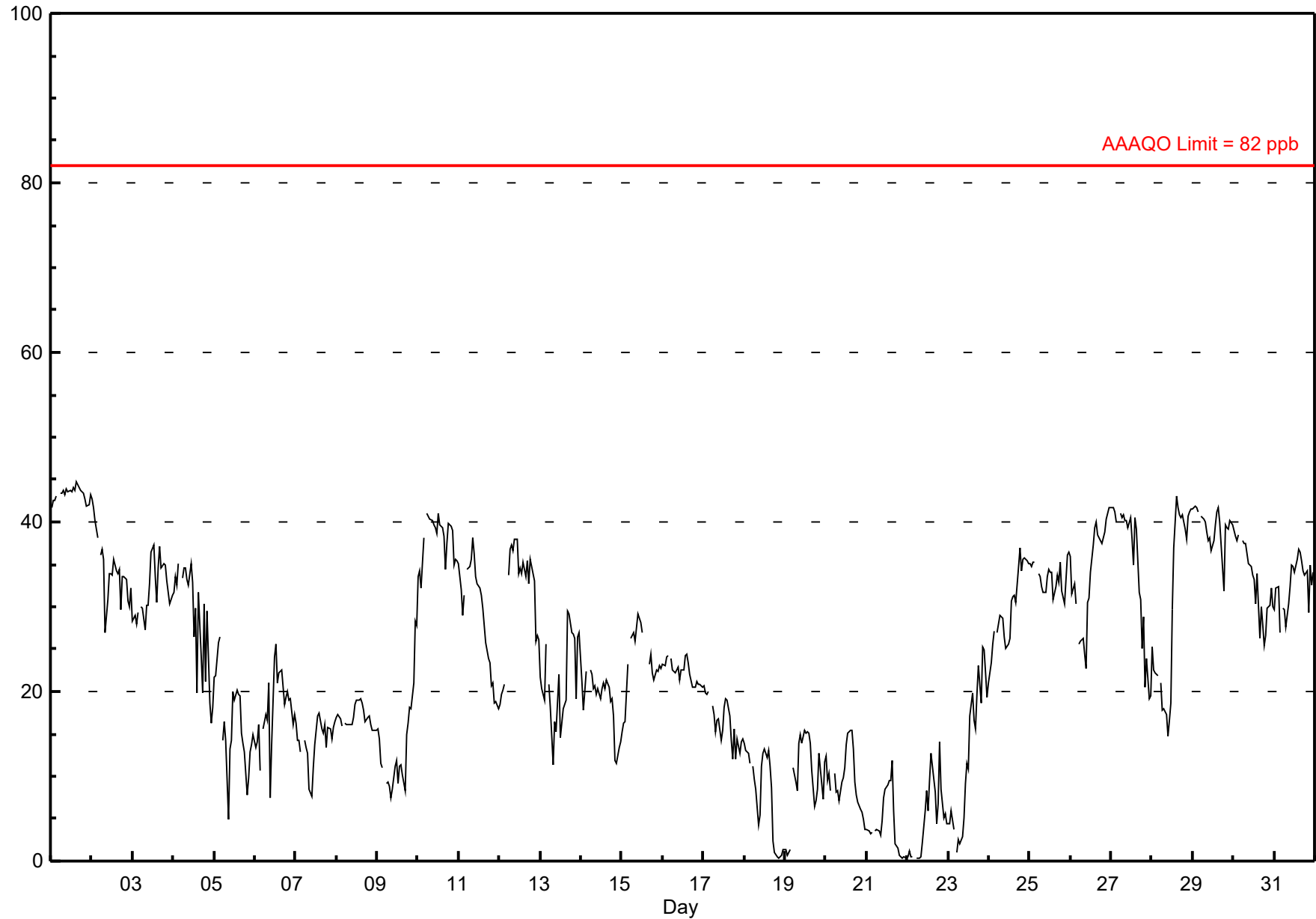
Ozone (O₃) - ppb

Beaverlodge - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 44.8 ppb on Jan 1 16:00 Maximum Daily Average: 43.3 ppb on Jan 1																								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 21 22:00 Minimum Daily Average: 4.4 ppb on Jan 21 Maximum Diurnal Average: 26.2 ppb at hour 15 Minimum Diurnal Average: 22.2 ppb at hour 9 Monthly Average: 23.68 ppb Percentiles: P ₁ = 0.4 P ₁₀ = 8.1 Q ₁ = 14.9 Median = 22.6 Q ₃ = 34.1 P ₉₀ = 39.6 P ₉₉ = 43.7																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jan	42	42	42	43	A	43	43	44	43	44	44	44	44	44	45	44	44	44	43	43	42	42	43	43.3	44.8	
2-Jan	43	42	40	38	A	36	37	36	27	31	34	34	34	36	34	34	34	30	34	33	31	30	32	34.4	42.7	
3-Jan	28	29	28	29	A	30	30	27	30	30	33	36	37	34	30	35	37	35	35	33	32	30	31	32.0	37.4	
4-Jan	32	33	32	35	A	33	35	35	33	33	35	33	26	30	20	32	24	20	30	21	29	19	16	18	28.5	35.2
5-Jan	22	22	26	27	A	14	16	14	5	13	14	20	19	20	19	15	14	13	8	10	13	14	15	16.2	26.5	
6-Jan	13	14	16	11	A	16	17	17	21	7	14	24	26	21	22	22	23	19	19	20	19	19	16	17	18.0	25.6
7-Jan	16	14	14	13	A	14	13	13	8	8	11	14	15	17	17	16	15	16	13	16	16	14	16	16	14.2	17.5
8-Jan	17	17	17	16	A	16	16	16	16	16	17	18	19	19	19	18	16	17	17	16	15	15	15	15	16.9	19.1
9-Jan	16	14	12	11	A	9	9	9	7	9	11	12	9	11	11	10	8	15	16	18	21	28	28	13.6	28.2	
10-Jan	34	34	32	38	A	41	41	40	40	40	39	39	41	40	39	38	34	37	40	39	39	35	36	35	37.9	41.1
11-Jan	35	32	29	31	A	34	35	36	38	36	34	33	32	31	30	28	26	24	23	21	21	19	19	18	28.9	38.2
12-Jan	19	20	20	21	A	34	37	37	37	38	38	34	35	34	35	34	35	33	36	35	33	26	27	26	31.3	38.0
13-Jan	22	20	19	26	A	21	18	11	16	15	19	22	15	18	19	19	30	29	27	27	26	19	26	27	21.3	29.5
14-Jan	21	18	20	22	A	23	22	20	21	20	20	19	20	21	20	21	21	19	19	17	12	12	13	14	19.0	22.6
15-Jan	15	16	16	23	A	26	27	27	26	29	29	28	27	C	C	C	23	24	22	21	22	22	23	23	23.6	29.1
16-Jan	23	23	24	24	A	24	23	22	23	23	21	23	23	24	24	23	22	21	20	21	21	21	21	20	22.3	24.5
17-Jan	21	20	20	20	A	18	17	15	17	17	14	15	18	19	19	17	14	12	16	12	14	13	14	14	16.4	20.6
18-Jan	14	13	13	11	A	11	10	8	4	5	11	13	13	12	13	11	9	2	1	1	0	1	1	1	7.8	13.9
19-Jan	1	1	1	1	A	11	9	8	14	15	14	15	15	15	15	14	11	6	7	9	13	11	7	12	9.8	15.3
20-Jan	12	9	10	8	A	10	8	8	7	9	10	11	14	15	15	15	13	9	8	7	6	6	5	4	9.6	15.5
21-Jan	4	4	3	3	A	4	4	4	3	5	7	8	9	10	9	12	6	2	2	1	1	0	0	0	4.4	11.9
22-Jan	1	1	0	0	A	0	0	0	0	2	6	8	6	10	13	11	8	4	7	14	8	5	6	4	5.1	14.1
23-Jan	4	4	6	4	A	1	2	2	3	5	9	11	11	17	20	17	16	20	23	19	25	25	22	19	12.4	25.2
24-Jan	21	23	26	27	A	27	29	29	29	27	25	26	26	31	31	31	31	35	37	34	36	36	35	35	29.8	36.9
25-Jan	35	35	35	35	A	34	34	32	32	32	33	34	34	34	31	32	34	33	35	32	30	33	36	36	33.6	36.5
26-Jan	36	31	33	30	A	26	26	26	24	23	30	31	34	37	39	40	38	38	37	38	39	40	41	42	34.0	41.7
27-Jan	42	42	41	40	A	41	41	41	40	40	39	40	38	35	41	39	32	31	25	29	21	24	19	20	34.7	41.7
28-Jan	25	23	22	22	A	21	18	18	17	15	17	19	30	37	43	42	41	40	41	39	38	41	41	42	30.0	43.1
29-Jan	42	42	42	41	A	41	40	40	39	38	38	37	38	40	41	42	40	35	32	40	39	39	40	40	39.3	41.9
30-Jan	39	38	38	38	A	38	37	37	36	35	35	34	33	30	34	26	30	28	25	27	30	30	32	30	33.1	39.1
31-Jan	30	32	32	27	A	30	30	28	30	32	35	35	34	36	37	36	35	34	34	34	29	35	32	34	32.7	36.7
23.3 22.9 22.9 23.2 -- 23.5 23.3 22.6 22.2 22.3 23.8 24.9 25.0 25.9 26.2 26.0 24.7 23.4 23.8 23.4 23.3 22.5 22.8 23.0																								Diurnal Average		
42.7 42.5 42.5 43.1 -- 43.4 43.5 43.7 43.3 43.8 43.5 43.7 43.5 44.0 43.8 44.8 44.0 43.8 43.6 43.4 42.7 41.9 42.0 43.2																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na																										

Hourly Averages

Ozone (O₃) - ppb
Beaverlodge - January 2016



Hourly Maximums

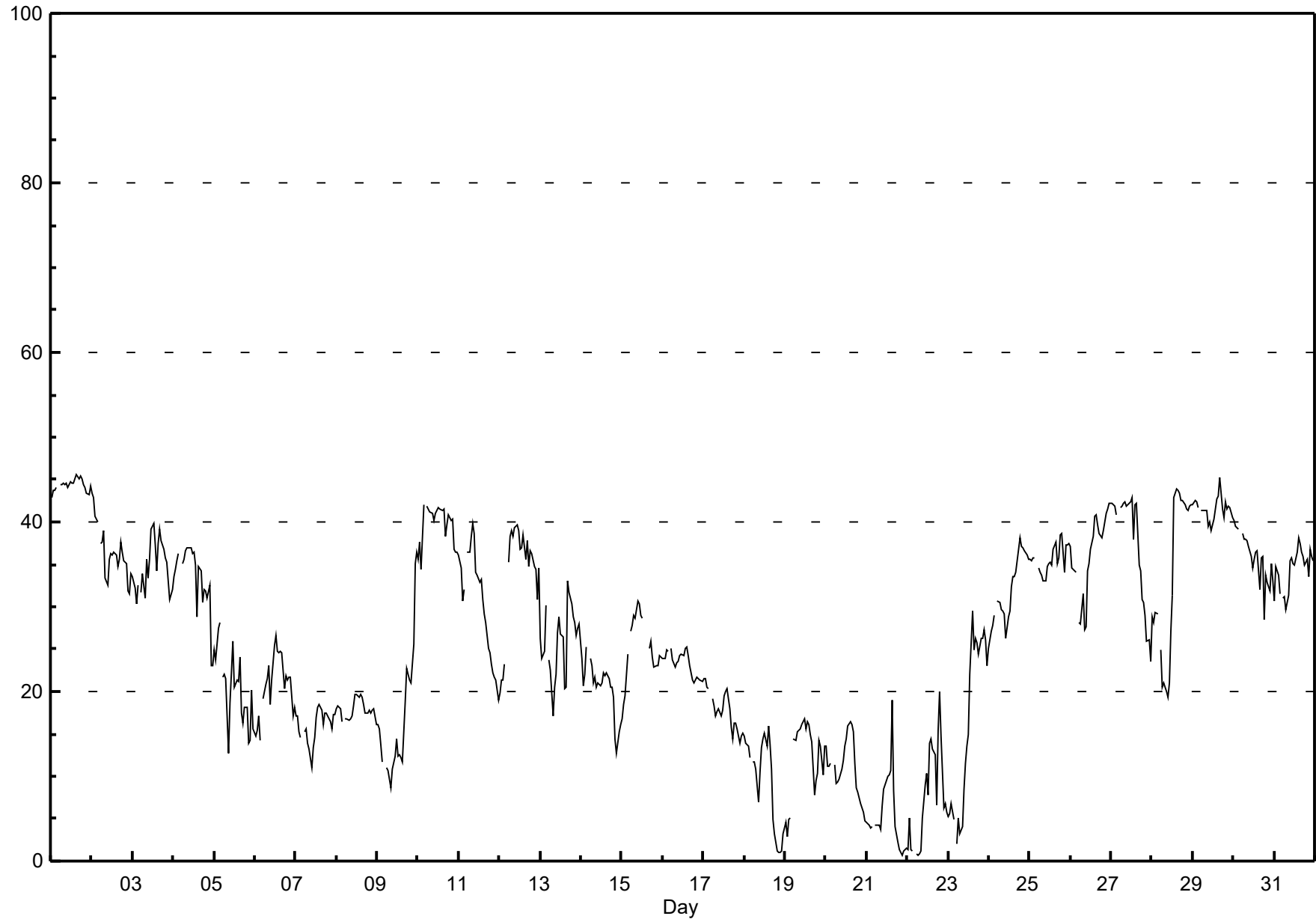
Ozone (O₃) - ppb

Beaverlodge - January 2016

Maximum Value: 45.6 ppb on Jan 1 16:00																								Hours in Service: 744		
Maximum Daily Average: 44.3 ppb on Jan 1																								Hours of Data: 710		
Minimum Value: 1 ppb on Jan 21 22:00																								Hours of Missing Data: 34		
Maximum Diurnal Average: 28.5 ppb at hour 15																								Hours of Calibration: 34		
Monthly Average: 26.00 ppb																								Percent Operational Time: 100.0		
Minimum Daily Average: 5.5 ppb on Jan 21																								Daily Average		
Minimum Diurnal Average: 24.5 ppb at hour 9																										
Percentiles: P ₁ = 1.1 P ₁₀ = 10.3 Q ₁ = 16.8 Median = 26.1 Q ₃ = 36.1 P ₉₀ = 41.4 P ₉₉ = 44.5																								Daily Maximum		
Day	1	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	44	44	44	A	44	44	45	44	45	44	45	45	45	46	45	45	45	44	44	43	43	44	44.3	45.6	
2-Jan	43	43	41	40	A	37	38	39	33	33	36	36	36	36	35	36	38	36	35	35	32	31	34	36.5	43.4	
3-Jan	34	32	30	33	A	32	34	31	36	33	36	39	40	37	34	37	39	38	37	36	35	33	31	32	34.7	39.9
4-Jan	33	34	35	36	A	35	36	37	37	37	37	36	36	35	29	35	34	31	32	32	31	33	23	23	33.4	37.0
5-Jan	25	24	27	28	A	22	22	22	13	19	22	26	20	21	21	24	17	16	18	18	14	14	20	16	20.4	28.1
6-Jan	15	16	17	14	A	19	21	22	23	18	21	25	27	25	25	25	25	20	22	21	22	22	17	18	20.8	26.7
7-Jan	17	17	15	15	A	15	16	14	13	11	13	15	17	18	18	18	16	17	18	17	16	16	17	17	16.0	18.4
8-Jan	18	18	18	16	A	17	17	17	17	17	18	20	20	19	20	19	18	17	18	18	17	18	18	16	17.9	19.7
9-Jan	16	16	14	12	A	11	11	10	9	11	12	14	12	13	12	12	19	23	22	21	21	26	35	36	16.8	36.4
10-Jan	36	38	34	42	A	42	41	41	41	40	41	41	42	41	41	41	38	40	41	40	40	37	36	36	39.7	42.0
11-Jan	36	35	31	32	A	36	36	38	40	39	34	34	33	33	31	29	28	25	25	23	22	22	21	19	30.6	39.8
12-Jan	20	21	21	23	A	35	38	39	38	39	40	39	37	37	38	36	38	35	37	36	35	34	31	35	34.0	39.7
13-Jan	26	24	25	30	A	24	23	17	21	22	27	29	27	26	20	21	33	32	30	29	28	27	27	28	25.9	33.0
14-Jan	24	21	22	25	A	24	23	21	22	21	21	21	21	22	22	22	21	20	20	19	14	13	15	16	20.5	25.3
15-Jan	17	19	19	24	A	27	28	29	29	31	30	29	29	C	C	C	25	26	24	23	23	23	24	24	25.1	30.7
16-Jan	24	24	25	25	A	25	24	23	23	24	24	24	24	25	25	24	23	21	21	21	22	21	21	21	23.3	25.2
17-Jan	22	22	20	20	A	19	18	17	18	18	17	18	20	20	20	18	16	14	16	16	16	14	15	15	17.8	21.6
18-Jan	15	14	13	12	A	12	12	11	7	11	13	14	15	13	16	14	11	5	3	1	1	1	1	3	9.5	16.0
19-Jan	5	3	5	5	A	14	14	15	15	16	16	17	16	17	16	15	14	8	10	10	14	14	10	14	12.3	16.8
20-Jan	14	11	11	12	A	11	9	9	10	11	12	14	14	16	16	16	15	11	9	8	7	6	6	5	11.0	16.4
21-Jan	5	4	4	4	A	4	4	4	4	6	8	9	10	10	11	19	8	4	2	1	1	1	1	1	5.5	18.9
22-Jan	1	5	1	1	A	1	1	1	1	5	9	10	8	14	14	13	13	7	15	20	15	6	7	6	7.6	20.1
23-Jan	5	6	7	5	A	2	5	3	4	9	12	14	15	22	30	25	26	26	24	26	26	27	26	23	16.0	29.6
24-Jan	25	27	28	29	A	31	31	30	29	29	26	29	29	32	34	33	34	37	38	37	37	37	36	36	31.9	38.2
25-Jan	36	35	36	36	A	35	34	34	33	33	35	35	35	35	37	38	35	36	38	39	34	37	37	37	35.6	38.6
26-Jan	37	35	34	34	A	28	28	31	27	28	34	35	37	38	41	41	40	39	38	39	40	41	41	42	36.0	42.2
27-Jan	42	42	42	41	A	42	42	42	42	42	42	42	43	38	42	42	35	34	31	31	29	26	26	24	37.5	42.9
28-Jan	29	28	29	29	A	25	20	21	20	19	21	27	31	43	44	44	43	43	43	42	41	41	42	42	33.4	43.8
29-Jan	42	42	42	42	A	41	41	41	41	40	40	39	40	42	43	43	43	45	42	41	42	42	42	40	41.5	45.2
30-Jan	40	39	39	39	A	39	38	38	38	37	36	35	36	36	37	32	36	36	29	34	33	32	35	33	35.9	40.1
31-Jan	31	35	34	32	A	31	31	30	31	35	36	35	35	36	38	37	36	36	35	36	34	37	36	35	34.4	38.2
24.9 24.9 24.7 25.2 -- 25.2 25.1 24.9 24.5 25.1 26.3 27.3 27.4 28.3 28.5 28.4 27.9 26.5 26.4 26.4 25.5 25.0 25.0 24.9																								Diurnal Average		
43.4 43.7 43.7 44.1 -- 44.4 44.3 44.6 44.3 44.6 44.1 44.7 44.5 44.5 45.1 45.6 45.2 45.4 45.0 44.4 44.0 43.4 43.2 44.2																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

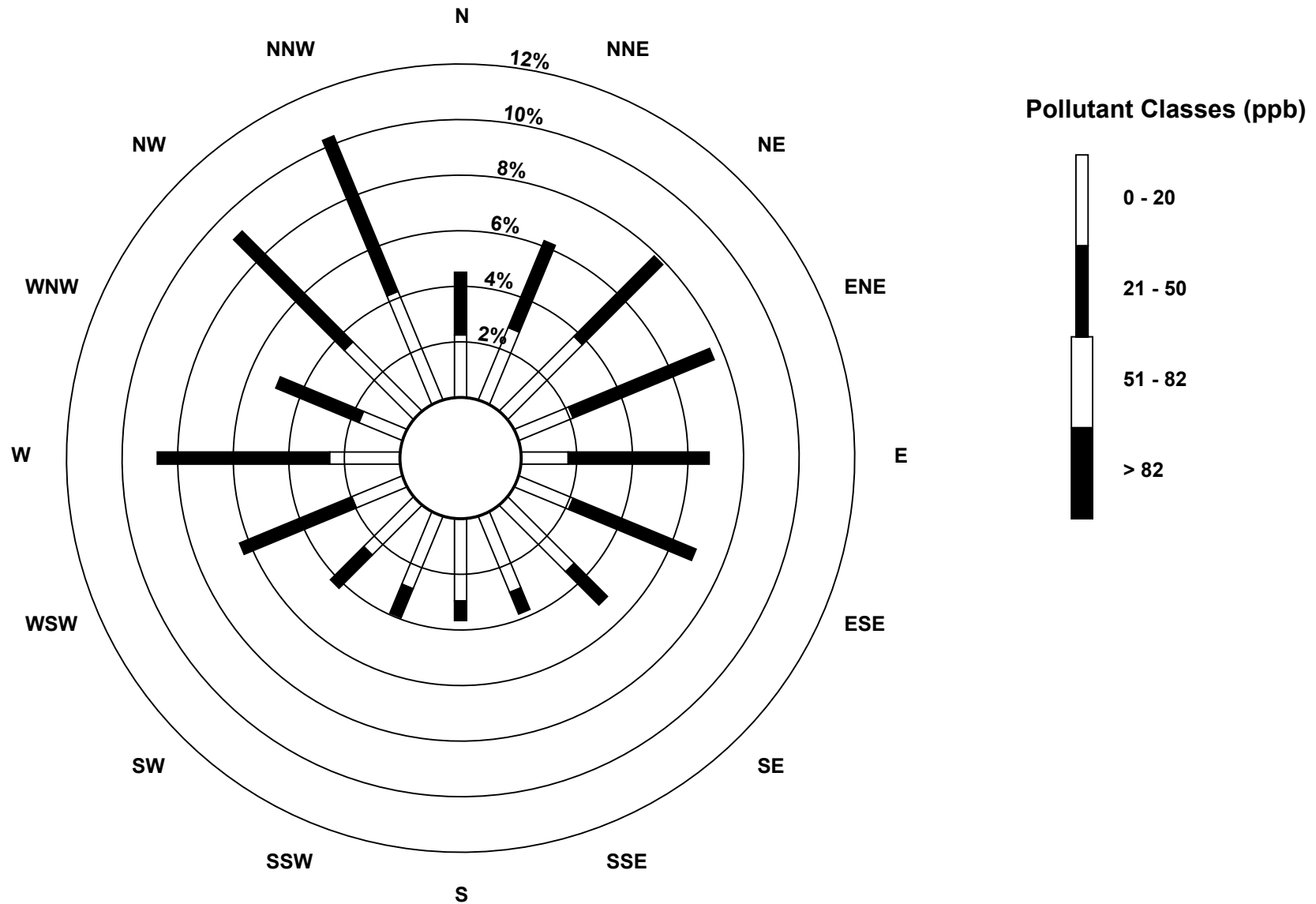
Hourly Maximums

Ozone (O₃) - ppb
Beaverlodge - January 2016



Pollutant Rose

Ozone (O₃) - ppb
Beaverlodge - January 2016



Eight Hour Running Averages

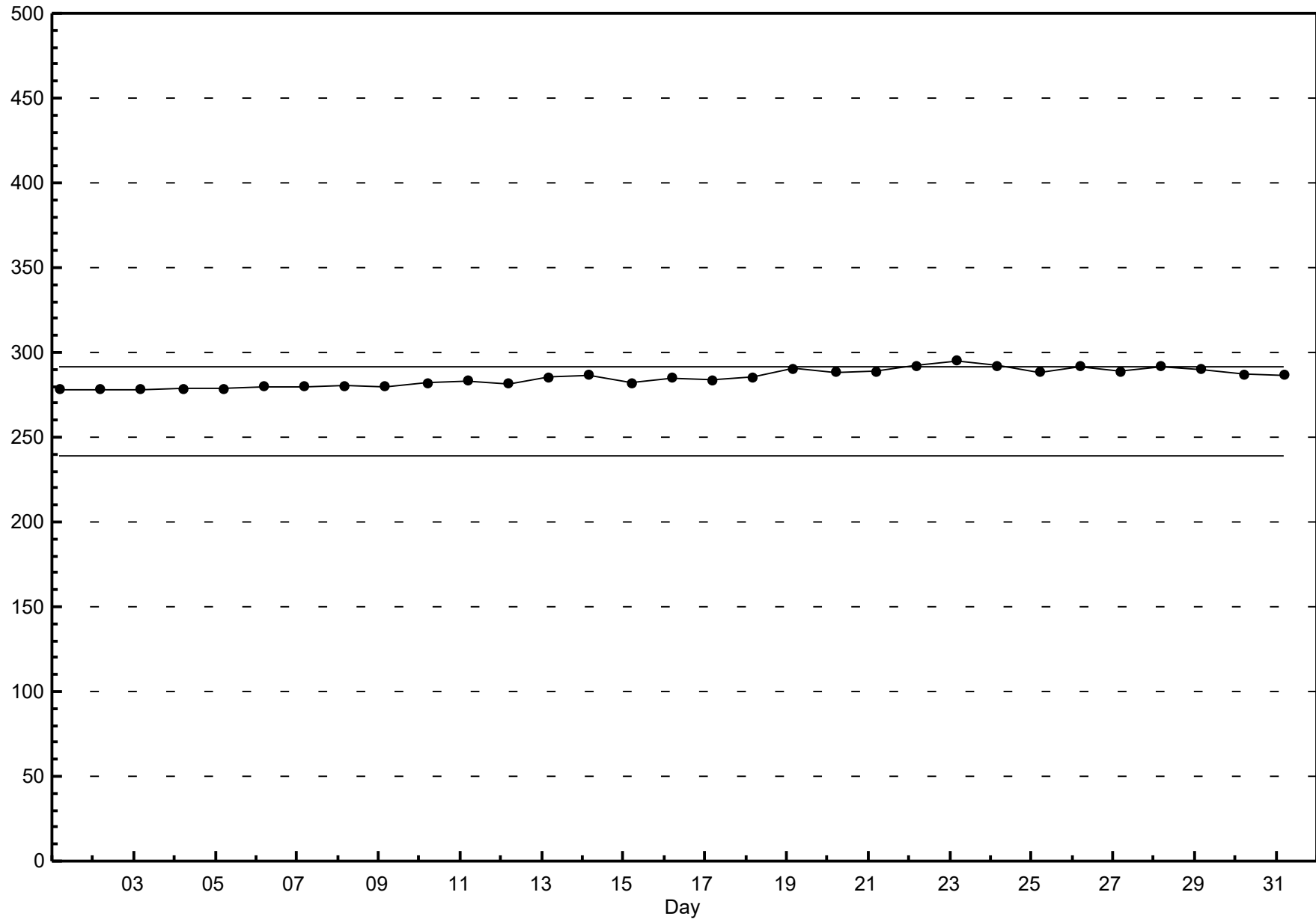
Ozone (O₃) - ppb

Beaverlodge - January 2016

Maximum Value: 43.9 ppb on Jan 1 19:00																								Hours in Service: 744
Minimum Value: 0.5 ppb on Jan 22 09:00																								Hours of Data: 738
Percentiles: P ₁ = 0.6 P ₁₀ = 8.4 Q ₁ = 14.8 Median = 22.7 Q ₃ = 33.6 P ₉₀ = 39.0 P ₉₉ = 43.6																								Hours of Missing Data: 6
																								Hours of Calibration: 6
																								Percent Operational Time: 100.0
Day	Hourly Period Ending At (MST)																							Daily Maximum
1-Jan	41	41	41	42	42	42	43	43	43	43	43	44	44	44	44	44	44	44	44	44	43	43	43	43.9
2-Jan	43	43	42	42	41	41	40	39	37	35	34	33	33	33	33	33	34	34	34	34	33	32	32	42.9
3-Jan	31	31	31	30	30	30	30	29	29	29	30	31	32	32	32	33	34	35	35	35	34	34	34	34.9
4-Jan	33	33	32	32	32	33	33	34	34	34	34	34	33	32	31	30	29	27	27	25	26	24	22	34.1
5-Jan	22	22	22	22	21	21	21	20	18	16	15	14	15	15	16	16	18	18	18	16	15	14	13	22.3
6-Jan	12	12	13	13	14	14	15	15	16	15	15	17	18	18	19	20	20	21	22	21	21	20	19	22.0
7-Jan	18	18	17	16	16	15	15	14	13	12	12	12	12	12	13	13	14	15	15	16	16	15	15	18.2
8-Jan	16	16	16	16	16	16	17	16	16	16	16	17	17	17	18	18	18	18	18	18	17	17	16	18.1
9-Jan	16	16	15	14	14	13	12	11	10	9	9	9	9	10	10	10	10	11	12	12	14	15	17	19.1
10-Jan	22	25	27	29	31	34	35	37	38	39	40	40	40	40	40	40	39	39	39	39	38	38	37	40.1
11-Jan	37	36	35	34	33	33	33	33	34	34	35	35	35	34	34	33	31	30	28	27	25	24	23	37.1
12-Jan	20	20	19	19	19	21	24	27	29	32	34	36	36	36	36	35	35	35	34	34	34	33	32	36.3
13-Jan	30	28	26	25	24	23	22	20	19	18	18	17	17	17	18	19	21	22	23	24	24	25	26	29.6
14-Jan	25	24	23	23	22	22	22	21	21	21	21	21	21	20	20	20	20	20	20	19	18	17	16	25.3
15-Jan	15	15	14	15	16	18	20	22	23	25	27	27	27	27	28	N	N	N	N	N	N	23	23	27.6
16-Jan	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	22	22	22	21	23.5
17-Jan	21	21	20	20	20	20	19	19	18	18	17	16	17	17	17	17	17	16	16	16	15	15	14	20.7
18-Jan	14	14	13	13	13	13	12	11	10	9	9	9	10	10	10	10	11	11	9	8	6	5	3	13.8
19-Jan	1	1	1	1	1	2	4	5	6	9	10	12	13	13	14	15	14	13	12	12	11	11	10	14.7
20-Jan	10	10	10	10	10	10	10	10	9	9	9	9	10	10	11	12	13	13	13	12	11	10	9	12.9
21-Jan	6	5	5	4	4	4	4	4	3	4	4	5	5	6	7	8	8	8	7	6	5	4	3	8.3
22-Jan	1	1	1	1	1	1	1	0	0	1	1	3	3	4	6	7	8	8	8	9	9	9	8	9.4
23-Jan	7	7	7	5	5	4	4	3	3	3	4	5	6	8	10	12	13	15	17	18	19	20	21	21.1
24-Jan	22	22	23	24	23	24	25	26	27	28	27	27	27	28	28	28	28	29	31	32	33	34	34	34.8
25-Jan	35	35	35	35	35	35	35	34	34	33	33	33	33	33	33	33	33	33	33	33	33	33	34	35.4
26-Jan	34	34	34	33	34	33	31	30	28	27	27	27	28	29	31	32	34	36	37	38	38	39	39	39.2
27-Jan	40	40	41	41	41	41	41	41	41	41	40	40	40	39	39	39	38	37	35	34	31	30	27	41.2
28-Jan	24	23	23	22	22	22	21	21	20	19	18	18	19	21	24	27	30	33	37	39	40	41	40	40.6
29-Jan	40	41	41	41	41	41	41	41	41	40	40	39	39	39	39	39	39	39	38	38	39	38	38	41.4
30-Jan	38	38	39	39	39	39	38	38	38	37	37	36	36	35	34	33	32	31	30	29	29	29	29	39.1
31-Jan	29	30	30	30	31	30	30	30	30	30	30	31	32	32	33	34	35	35	35	35	34	34	34	35.3
Diurnal Maximums																								
N - Not Valid																								

Span Responses

Ozone (O₃)
Beaverlodge - January 2016

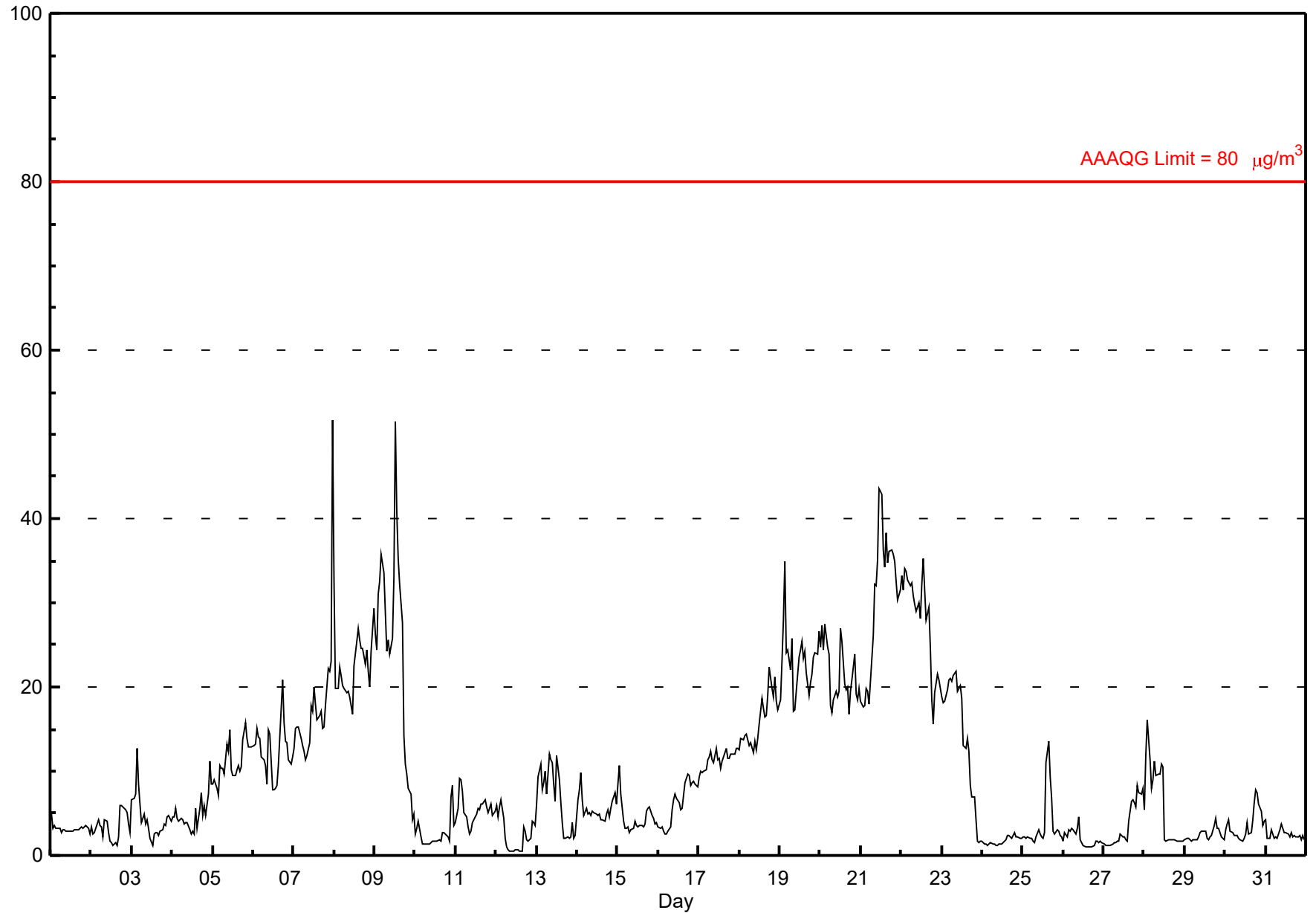


Hourly Averages

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

Beaverlodge - January 2016

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 51.6 µg/m ³ on Jan 8 00:00 Maximum Daily Average: 30.2 µg/m ³ on Jan 21																								Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 0 µg/m ³ on Jan 12 10:00 Minimum Daily Average: 1.7 µg/m ³ on Jan 24 Maximum Diurnal Average: 11.1 µg/m ³ at hour 13 Minimum Diurnal Average: 9.2 µg/m ³ at hour 7 Monthly Average: 9.92 µg/m ³ Percentiles: P ₁ = 0.7 P ₁₀ = 1.8 Q ₁ = 2.7 Median = 5.8 Q ₃ = 14.8 P ₉₀ = 24.3 P ₉₉ = 34.4																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jan	5	3	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	3	3	3.2	4.8
2-Jan	3	3	3	4	4	4	3	2	4	4	3	2	2	1	2	1	2	6	6	6	5	5	4	3	3.4	5.9
3-Jan	7	7	7	13	8	6	4	5	4	4	3	2	1	3	3	3	2	3	3	4	4	5	5	4	4.5	12.7
4-Jan	5	5	6	4	4	4	4	4	4	4	3	3	3	2	6	3	6	8	5	6	5	7	11	8	5.0	11.1
5-Jan	8	9	8	7	11	10	10	10	13	12	15	10	9	10	10	11	10	11	14	16	14	13	13	13	11.1	15.7
6-Jan	13	13	15	14	14	12	11	11	9	15	14	8	8	8	8	11	14	21	16	14	13	11	11	12	12.3	20.9
7-Jan	13	15	15	15	14	13	12	11	12	13	18	17	20	18	16	17	17	15	15	18	22	22	23	52	17.7	51.6
8-Jan	33	20	20	22	21	20	20	19	19	19	18	17	23	25	27	26	25	25	23	24	22	20	24	29	22.5	32.6
9-Jan	26	24	31	33	36	34	29	24	26	24	26	33	52	41	35	32	28	14	11	10	8	7	4	5	24.7	51.6
10-Jan	3	3	4	2	1	1	1	1	1	2	2	2	2	2	2	2	3	3	3	2	2	7	8	4	2.6	8.3
11-Jan	4	6	9	9	8	5	5	3	3	3	4	4	5	6	5	6	6	7	6	5	6	6	5	5	5.4	9.2
12-Jan	6	5	6	7	4	2	1	1	1	0	0	1	1	1	1	1	3	3	2	2	2	4	4	4	2.5	6.6
13-Jan	6	9	11	8	9	10	7	12	11	11	8	6	12	9	6	4	2	2	2	2	2	4	2	2	6.6	12.1
14-Jan	7	8	10	7	5	6	5	5	5	5	5	5	5	5	4	4	4	5	5	5	6	6	7	6	5.6	9.9
15-Jan	8	11	7	4	3	3	3	3	3	3	4	4	3	4	4	3	4	5	6	6	5	4	4	4	4.5	10.7
16-Jan	3	3	3	3	3	3	3	3	5	7	7	7	6	5	6	7	9	10	9	8	9	9	9	8	6.0	9.7
17-Jan	9	10	10	10	10	11	12	12	11	11	13	11	11	10	11	12	13	12	12	12	12	12	13	13	11.4	12.8
18-Jan	13	14	14	14	14	14	13	13	12	14	12	14	16	19	18	16	17	19	22	20	19	21	18	17	16.0	22.4
19-Jan	19	23	28	35	24	24	22	26	17	17	19	23	24	25	23	24	22	19	21	21	24	24	24	27	23.2	35.0
20-Jan	25	27	24	27	25	24	18	17	18	20	19	20	27	25	20	20	20	17	20	21	24	19	18	20	21.4	27.5
21-Jan	18	18	18	20	20	18	21	26	32	32	35	44	43	36	34	38	35	36	36	36	35	33	30	32	30.2	43.6
22-Jan	33	31	34	34	33	32	32	31	30	29	30	28	32	35	32	28	30	25	18	16	19	22	21	20	28.1	35.3
23-Jan	19	18	18	20	21	21	21	21	22	20	20	20	19	13	13	14	12	8	7	7	4	2	1	2	14.3	21.8
24-Jan	2	1	1	1	1	2	1	1	1	1	1	1	2	2	2	2	2	2	2	3	2	2	2	2	1.7	2.7
25-Jan	2	2	2	2	2	2	2	2	2	3	3	2	2	3	11	13	9	7	3	3	3	3	2	2	3.6	13.5
26-Jan	2	3	2	3	3	3	3	3	3	5	2	1	1	1	1	1	1	1	1	2	2	2	1	1	2.0	4.6
27-Jan	1	1	1	1	1	1	1	2	2	2	3	2	2	2	2	4	7	7	6	6	8	8	7	8	3.5	8.3
28-Jan	5	12	16	11	8	9	11	9	10	10	11	10	2	2	2	2	2	2	2	2	2	2	2	2	6.0	16.2
29-Jan	2	2	2	2	2	2	2	2	2	3	3	3	3	2	2	2	2	4	4	3	3	3	2	2	2.4	4.5
30-Jan	3	4	4	3	3	2	2	2	2	2	2	2	3	4	2	3	4	6	8	7	6	5	4	4	3.7	7.8
31-Jan	4	2	2	3	3	2	2	2	3	4	3	3	3	3	2	3	2	2	2	2	2	2	2	2	2.5	4.2
9.9 10.1 10.8 11.0 10.2 9.8 9.2 9.3 9.4 9.7 10.0 9.9 11.1 10.4 10.1 10.2 10.1 9.8 9.5 9.3 9.4 9.4 9.2 10.1 33.3 31.5 34.1 35.0 35.8 33.6 32.3 30.8 32.3 32.0 35.1 43.6 51.6 40.9 35.2 38.3 34.8 36.1 36.2 35.8 35.0 32.6 30.4 51.6																								Diurnal Average	Diurnal Maximum	
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m ³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m ³																										



Hourly Maximums

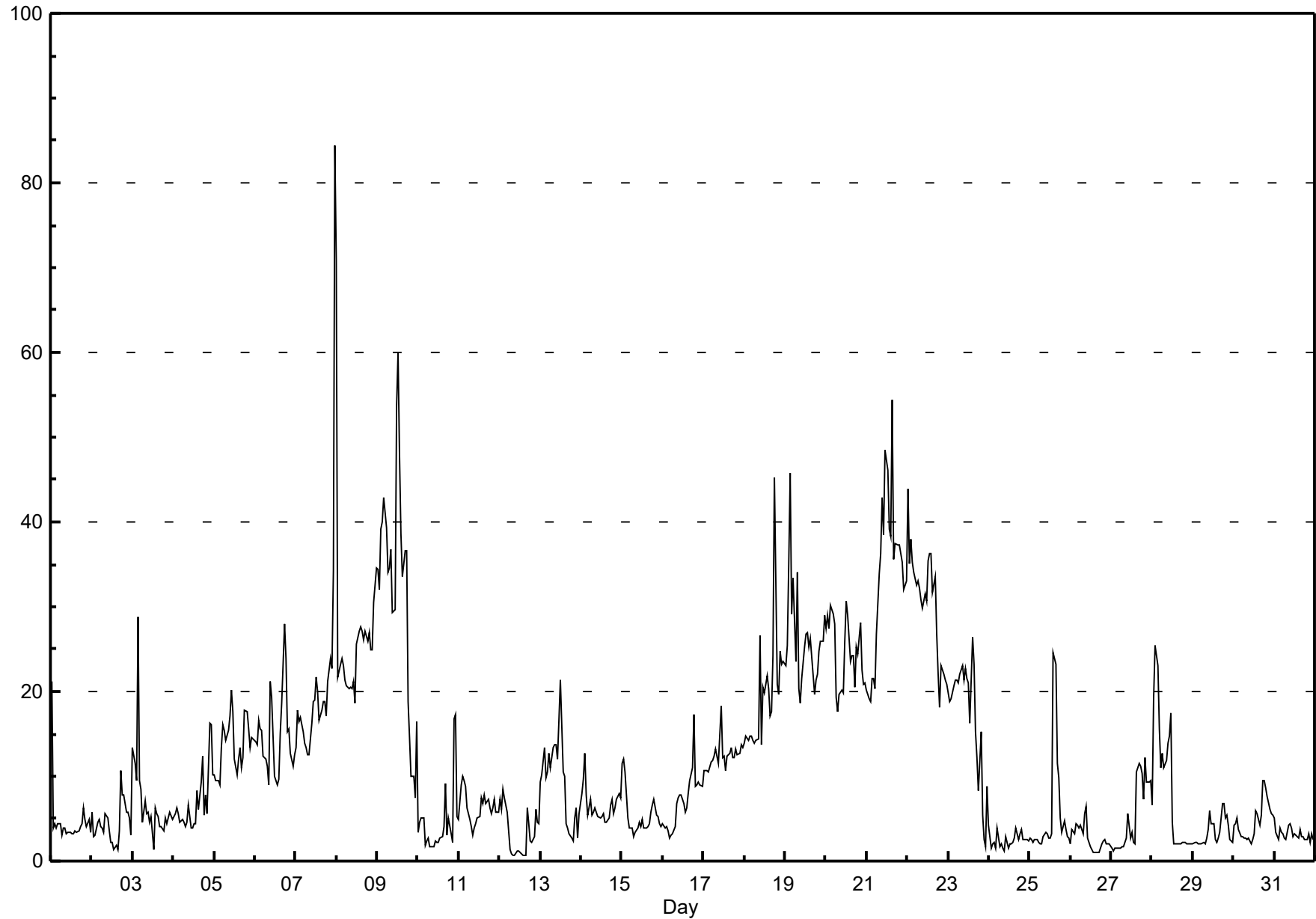
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Beaverlodge - January 2016

Maximum Value: 84.4 µg/m ³ on Jan 8 00:00																								Hours in Service: 744	
Maximum Daily Average: 33.8 µg/m ³ on Jan 21																								Hours of Data: 744	
Minimum Value: 1 µg/m ³ on Jan 12 10:00																								Hours of Missing Data: 0	
Maximum Diurnal Average: 13.7 µg/m ³ at hour 1																								Hours of Calibration: 0	
Monthly Average: 12.06 µg/m ³																								Percent Operational Time: 100.0	
Minimum Daily Average: 2.4 µg/m ³ on Jan 24																								Daily Average	
Minimum Diurnal Average: 10.5 µg/m ³ at hour 7																									
Percentiles: P ₁ = 1.0 P ₁₀ = 2.2 Q ₁ = 3.7 Median = 7.5 Q ₃ = 18.8 P ₉₀ = 27.3 P ₉₉ = 47.9																								Daily Maximum	
Day	Hourly Period Ending At (MST)																								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Jan	21	4	4	4	4	4	3	4	4	3	3	3	3	3	4	3	4	4	4	6	5	4	5	3	4.7
2-Jan	6	3	3	5	5	4	4	3	6	5	4	2	2	1	2	1	4	11	8	8	6	6	5	3	4.4
3-Jan	13	11	10	29	10	8	5	7	6	6	5	5	1	6	6	5	4	4	4	5	4	5	6	5	7.1
4-Jan	5	6	6	6	5	5	5	4	5	7	4	4	4	4	8	6	9	12	5	8	6	16	16	10	6.9
5-Jan	10	9	9	9	13	16	15	14	15	17	20	18	12	10	12	13	11	12	18	18	16	13	15	14	13.8
6-Jan	14	14	17	16	15	12	12	11	9	21	19	10	9	9	10	15	19	28	24	15	16	13	11	12	14.6
7-Jan	13	18	16	17	15	14	13	12	12	16	19	19	22	20	17	18	19	19	17	21	24	23	34	84	21.0
8-Jan	71	22	23	24	23	21	21	20	21	20	21	19	26	27	28	27	26	27	26	27	25	25	31	35	26.4
9-Jan	34	32	39	40	43	39	34	35	37	29	30	54	60	48	39	34	37	37	19	15	10	10	8	16	32.4
10-Jan	3	5	5	5	2	2	3	2	2	2	2	2	2	3	3	4	9	3	5	3	2	17	17	5	4.5
11-Jan	5	9	10	10	9	6	5	4	3	4	4	5	5	8	7	8	7	7	6	6	6	7	6	6	6.4
12-Jan	7	6	8	8	6	4	1	1	1	1	1	1	1	1	1	1	6	4	2	2	3	6	5	4	3.4
13-Jan	9	10	13	10	11	13	11	13	14	14	12	17	21	11	10	4	4	3	3	2	5	6	3	6	9.3
14-Jan	8	10	13	8	5	7	5	6	6	6	5	5	5	6	5	5	5	7	7	6	6	7	8	8	6.6
15-Jan	11	12	10	5	4	4	4	3	3	4	5	4	5	4	4	4	4	6	7	7	5	5	4	4	5.4
16-Jan	4	4	4	4	3	3	3	4	7	8	8	8	7	6	6	8	9	11	17	9	9	9	9	9	7.0
17-Jan	11	11	11	11	12	12	12	13	12	11	18	12	12	11	12	13	13	12	12	13	13	13	14	13	12.4
18-Jan	14	15	14	15	15	14	14	14	14	27	14	21	20	22	20	17	18	24	45	21	20	25	23	24	19.5
19-Jan	23	25	35	46	29	33	24	34	20	19	22	25	27	27	25	26	24	20	21	22	25	26	26	29	26.4
20-Jan	27	29	27	30	29	28	19	18	20	20	20	26	31	29	24	24	24	21	25	24	28	23	21	21	24.5
21-Jan	20	19	19	22	22	20	27	34	36	43	38	49	46	39	38	54	36	38	37	37	36	35	32	33	33.8
22-Jan	44	35	38	35	34	33	33	32	31	30	32	31	36	36	36	32	34	27	22	18	23	22	21	21	30.6
23-Jan	20	19	19	21	21	21	21	22	23	21	23	22	21	16	26	23	15	12	8	15	5	2	2	9	17.1
24-Jan	4	2	2	2	2	4	2	2	1	1	3	1	2	2	2	3	4	2	3	4	3	3	2	2	2.4
25-Jan	3	3	2	2	2	2	2	2	3	3	3	3	3	3	25	23	12	10	5	3	5	4	3	3	5.4
26-Jan	2	4	3	4	4	4	4	3	6	6	3	2	2	1	1	1	1	1	2	2	2	2	2	2	2.7
27-Jan	1	1	1	1	1	1	2	2	2	3	6	3	3	2	2	11	12	11	10	7	12	9	9	10	5.2
28-Jan	7	19	26	23	16	11	13	11	12	14	15	17	5	2	2	2	2	2	2	2	2	2	2	2	8.7
29-Jan	2	2	2	2	2	2	2	2	3	4	6	4	4	2	2	3	3	7	7	5	5	4	2	2	3.4
30-Jan	4	4	5	4	3	3	3	3	2	3	2	3	3	6	6	4	5	10	10	9	8	6	6	5	4.8
31-Jan	5	3	3	4	3	3	3	2	4	4	4	3	3	3	3	4	3	3	2	2	3	2	3	2	3.2
13.7 11.8 12.9 13.5 11.9 11.5 10.5 10.9 11.0 12.0 11.9 12.8 13.0 11.9 12.4 12.8 12.3 12.7 12.4 11.1 10.9 11.3 11.3 13.0																									Diurnal Average
70.9 35.0 39.2 45.8 42.8 39.4 34.0 34.5 36.8 42.9 38.4 53.8 60.0 48.2 38.6 54.4 36.7 37.5 45.3 37.3 36.3 35.3 34.2 84.4																									Diurnal Maximum

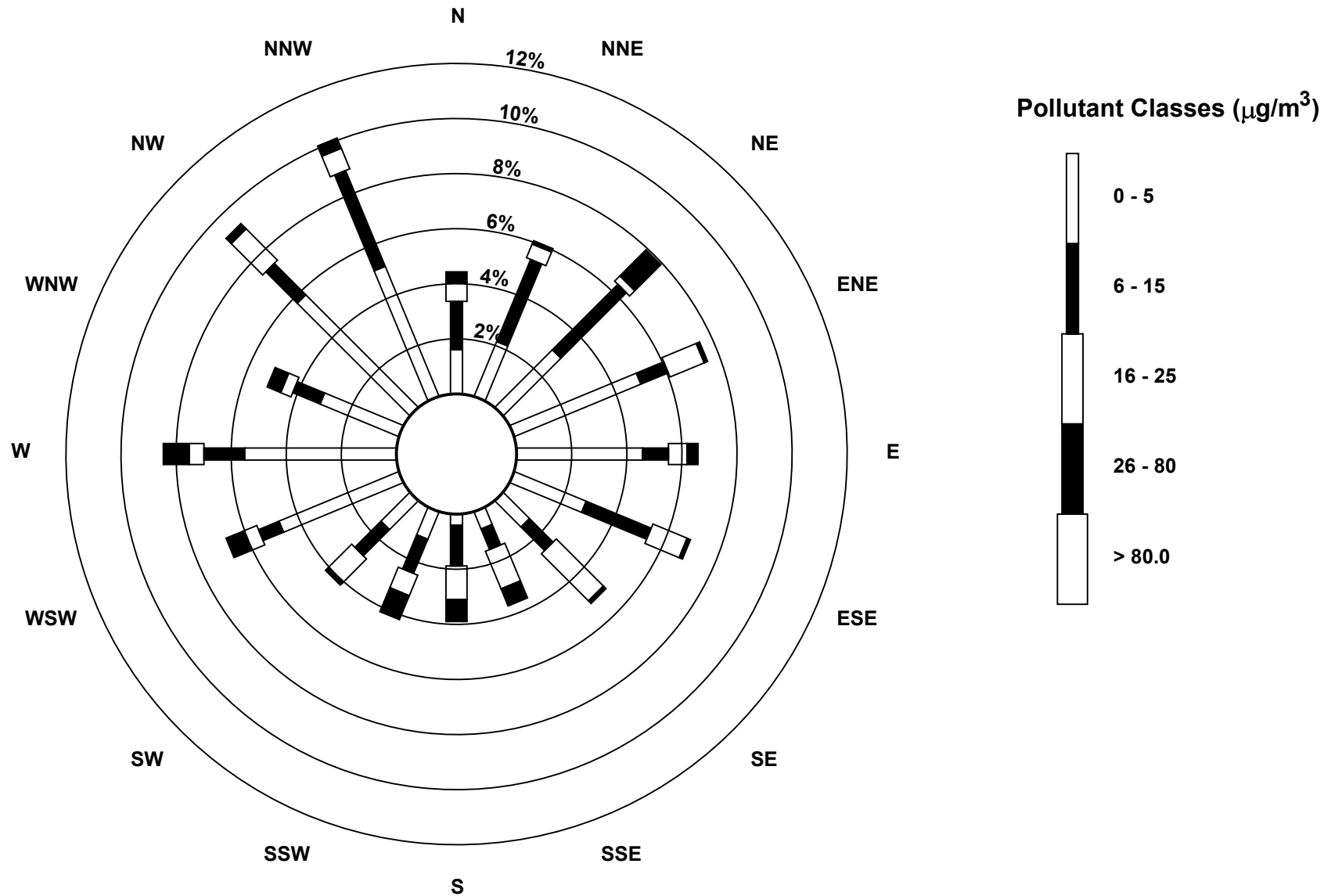
Hourly Maximums

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Beaverlodge - January 2016



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Beaverlodge - January 2016



Hourly Averages

External Temperature (ET) - °C

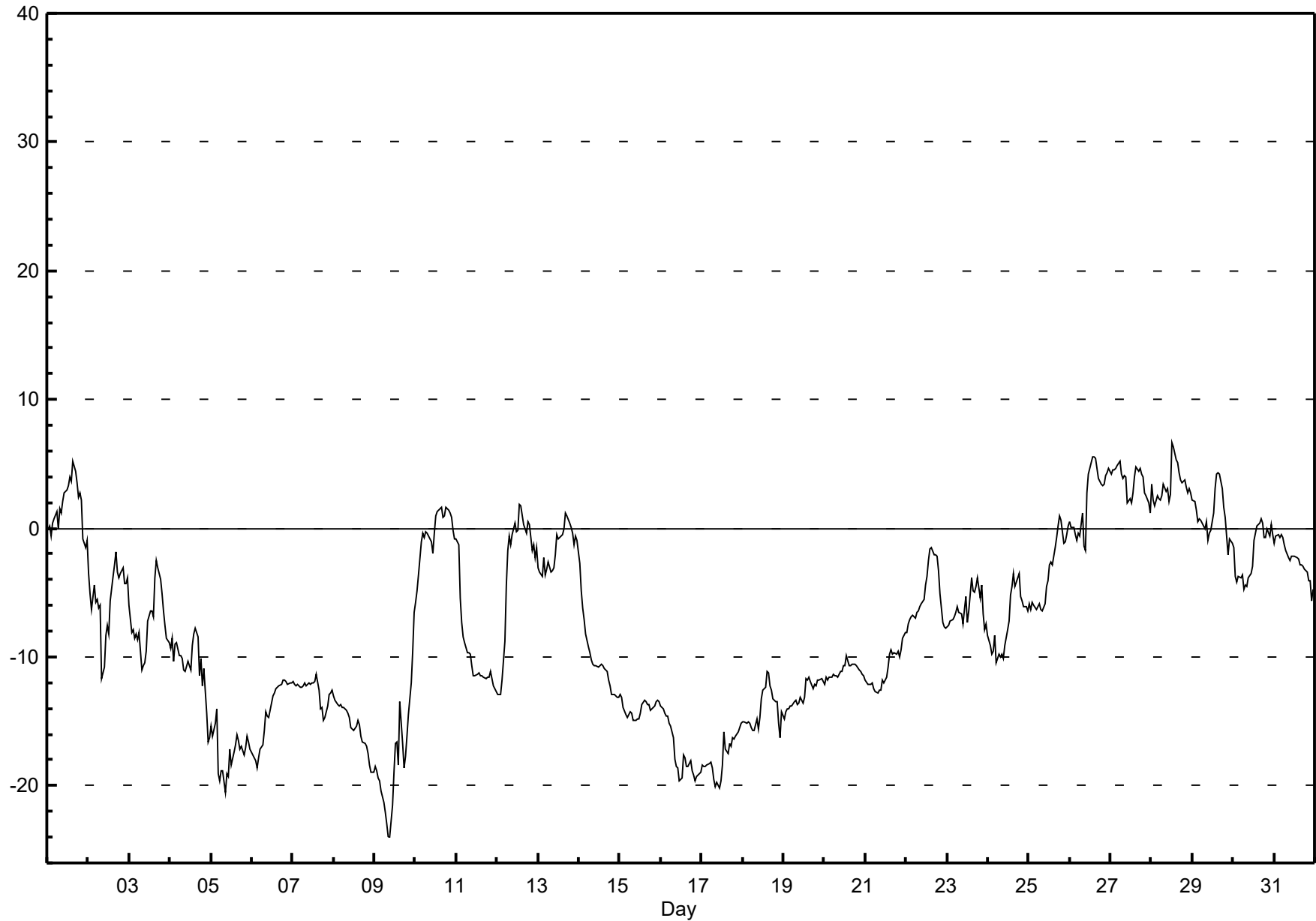
Beaverlodge - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 6.6 °C on Jan 28 13:00 Maximum Daily Average: 3.7 °C on Jan 27																			Hours in Service: 744 Hours of Data: 744								
Minimum Value: -24 °C on Jan 9 09:00 Minimum Daily Average: -17.9 °C on Jan 9 Maximum Diurnal Average: -6.0 °C at hour 16 Minimum Diurnal Average: -9.0 °C at hour 9 Monthly Average: -7.69 °C Percentiles: P ₁ = -20.4 P ₁₀ = -16.8 Q ₁ = -13.2 Median = -8.3 Q ₃ = -1.2 P ₉₀ = 2.0 P ₉₉ = 5.1																			Hours of Missing Data: 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	0	0	-1	0	1	1	0	1	1	2	3	3	3	4	4	5	4	3	2	3	2	-1	-2	-1	1.7	5.2	
2-Jan	-4	-5	-6	-4	-6	-5	-6	-6	-12	-11	-8	-8	-8	-6	-4	-3	-2	-3	-4	-3	-3	-4	-4	-4	-5.4	-1.8	
3-Jan	-6	-8	-8	-9	-8	-9	-8	-11	-11	-10	-10	-7	-6	-6	-7	-4	-2	-3	-4	-5	-6	-8	-9	-9	-7.2	-2.5	
4-Jan	-9	-9	-10	-9	-9	-10	-10	-10	-11	-11	-10	-11	-11	-9	-8	-8	-8	-11	-10	-12	-11	-14	-17	-16	-10.7	-7.8	
5-Jan	-15	-16	-15	-14	-19	-20	-19	-19	-21	-19	-19	-17	-18	-17	-17	-16	-16	-17	-17	-18	-17	-16	-17	-17	-17.4	-14.0	
6-Jan	-18	-18	-18	-19	-18	-17	-17	-16	-14	-15	-15	-14	-13	-13	-13	-12	-12	-12	-12	-12	-12	-12	-12	-12	-14.3	-11.8	
7-Jan	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-11	-13	-14	-14	-15	-15	-14	-13	-13	-13	-12.6	-11.3	
8-Jan	-13	-13	-14	-14	-14	-14	-14	-14	-14	-15	-15	-16	-16	-15	-15	-15	-16	-17	-17	-17	-18	-18	-19	-19	-15.5	-13.0	
9-Jan	-19	-19	-19	-20	-20	-21	-22	-23	-24	-24	-22	-19	-17	-17	-18	-13	-17	-19	-18	-16	-15	-12	-10	-7	-17.9	-6.6	
10-Jan	-6	-5	-4	-1	0	-1	0	0	-1	-1	-2	0	1	1	2	2	1	1	2	1	1	1	0	-1	-0.4	1.6	
11-Jan	-1	-1	-5	-7	-8	-9	-10	-10	-10	-11	-11	-12	-11	-11	-11	-11	-12	-12	-12	-12	-11	-12	-12	-13	-9.8	-0.8	
12-Jan	-13	-13	-13	-12	-9	-4	-2	-1	-1	-1	0	0	0	2	2	0	0	0	1	0	-2	-1	-2	-1	-2.9	1.8	
13-Jan	-3	-3	-4	-2	-4	-3	-3	-3	-3	-3	-2	-1	-1	-1	0	0	1	1	0	0	0	-1	-1	-1	-1.5	1.1	
14-Jan	-3	-5	-6	-7	-8	-9	-10	-10	-11	-11	-11	-11	-11	-11	-11	-11	-11	-12	-12	-13	-13	-13	-13	-13	-10.2	-2.8	
15-Jan	-13	-13	-14	-15	-15	-15	-14	-14	-15	-15	-15	-15	-14	-14	-13	-13	-14	-14	-14	-14	-14	-13	-13	-13	-14.0	-12.9	
16-Jan	-14	-14	-14	-15	-15	-15	-15	-16	-18	-19	-19	-20	-19	-18	-18	-19	-19	-18	-19	-19	-20	-19	-19	-19	-17.4	-13.8	
17-Jan	-18	-19	-19	-18	-18	-18	-19	-20	-20	-20	-20	-20	-18	-16	-17	-18	-17	-17	-16	-16	-16	-16	-16	-15	-17.7	-15.2	
18-Jan	-15	-15	-15	-15	-15	-16	-16	-16	-16	-15	-16	-15	-13	-13	-12	-11	-11	-12	-13	-13	-14	-15	-16	-14	-14.1	-11.1	
19-Jan	-15	-14	-14	-14	-14	-14	-14	-13	-14	-14	-13	-14	-13	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12.9	-11.6	
20-Jan	-12	-12	-12	-12	-12	-11	-11	-12	-12	-11	-11	-11	-11	-10	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11.1	-9.8	
21-Jan	-12	-12	-12	-12	-12	-12	-13	-13	-13	-13	-12	-12	-12	-11	-10	-9	-10	-10	-10	-10	-10	-9	-9	-8	-11.0	-8.1	
22-Jan	-8	-7	-7	-7	-7	-7	-7	-6	-6	-6	-6	-4	-4	-2	-2	-2	-2	-2	-2	-3	-5	-7	-8	-8	-5.2	-1.5	
23-Jan	-8	-7	-7	-7	-7	-6	-6	-7	-7	-7	-6	-5	-7	-6	-4	-5	-5	-5	-4	-5	-4	-7	-8	-7	-6.2	-3.9	
24-Jan	-8	-9	-10	-10	-8	-10	-10	-10	-10	-10	-9	-8	-7	-5	-5	-4	-5	-4	-3	-5	-6	-6	-6	-6	-7.3	-3.5	
25-Jan	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-5	-4	-3	-3	-3	-2	-1	0	1	1	-1	-1	0	0	-3.4	0.9	
26-Jan	1	0	0	-1	-1	0	-1	1	-1	-2	3	4	5	6	6	5	5	4	3	3	3	4	4	5	2.3	5.6	
27-Jan	4	5	4	5	5	5	4	4	4	4	2	2	2	3	4	5	4	5	4	4	3	3	2	1	3.7	5.2	
28-Jan	3	2	2	2	2	2	3	3	3	3	2	3	7	6	5	5	4	4	4	4	3	3	3	3	3.4	6.6	
29-Jan	2	2	1	1	1	1	0	0	0	-1	0	0	1	3	4	4	4	4	3	2	1	-1	-2	-1	-1	1.0	4.3
30-Jan	-2	-4	-4	-4	-4	-4	-5	-4	-4	-4	-4	-3	-1	0	0	0	1	0	-1	-1	0	-1	0	-1	-1.9	0.8	
31-Jan	-1	-1	-1	-1	0	-1	-1	-2	-2	-2	-2	-2	-2	-2	-2	-3	-3	-3	-3	-3	-4	-4	-6	-5	-2.4	-0.5	
																									Diurnal Average		
																									Diurnal Maximum		

Hourly Averages

External Temperature (ET) - °C

Beaverlodge - January 2016



Hourly Averages

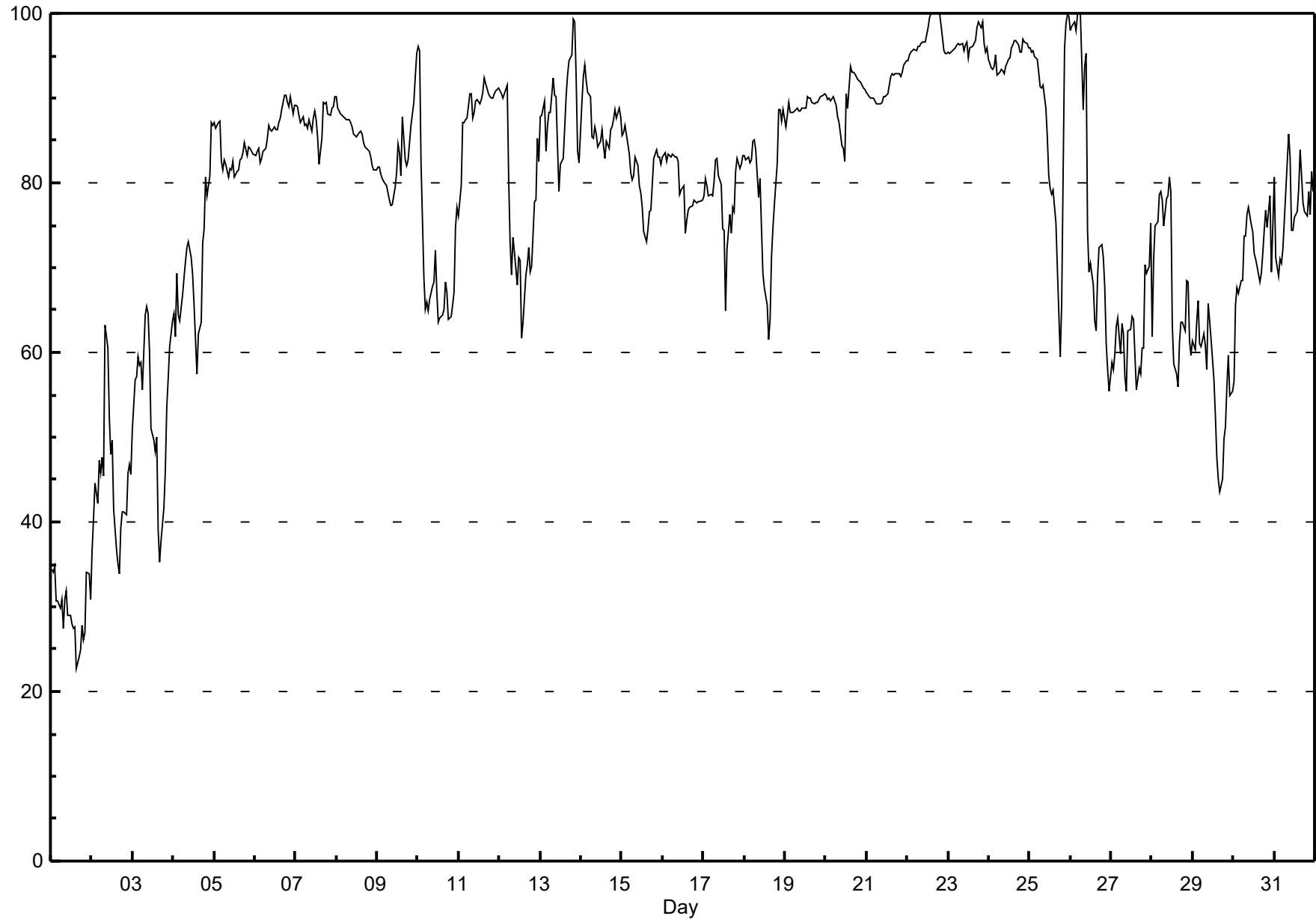
Relative Humidity (RH) - %

Beaverlodge - January 2016

Number of Exceedences (AAQO): 1-hr: 0 24-hr: 0 Maximum Value: 100.0 % on Jan 22 16:00 Maximum Daily Average: 97.2 % on Jan 22																								Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 23 % on Jan 1 16:00 Maximum Diurnal Average: 80.4 % at hour 3 Monthly Average: 77.87 %												Minimum Daily Average: 29.5 % on Jan 1 Minimum Diurnal Average: 73.7 % at hour 15 Percentiles: P ₁ = 27.6 P ₁₀ = 56.8 Q ₁ = 69.1 Median = 82.6 Q ₃ = 89.5 P ₉₀ = 95.2 P ₉₉ = 100.0														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jan	34	34	35	31	31	30	31	27	31	32	29	29	28	27	28	23	24	25	28	26	27	34	34	31	29.5	34.7
2-Jan	37	40	45	42	47	46	48	45	63	60	52	48	50	42	37	35	34	39	41	41	41	46	47	46	44.6	63.2
3-Jan	51	57	57	59	59	59	56	64	65	65	60	51	50	48	50	39	35	38	42	46	54	57	61	64	53.6	65.5
4-Jan	65	62	69	64	64	67	69	71	72	73	71	69	66	62	57	62	64	73	75	81	78	81	87	87	70.3	87.1
5-Jan	87	86	87	87	82	82	83	82	81	82	82	83	81	81	81	83	83	83	85	83	84	84	84	83	83.3	87.2
6-Jan	83	84	84	82	83	84	84	85	87	86	86	87	86	86	87	88	89	90	90	90	89	90	88	89	86.6	90.3
7-Jan	89	89	88	87	88	87	87	86	87	86	88	88	87	85	82	85	90	89	90	88	88	89	89	90	87.6	90.2
8-Jan	90	89	88	88	88	88	88	87	87	87	86	86	85	86	86	85	84	84	84	83	82	82	81	81	85.8	90.2
9-Jan	82	82	81	81	80	80	79	78	77	77	79	81	85	83	81	88	83	82	83	85	87	90	93	95	82.9	95.2
10-Jan	96	96	82	69	65	66	65	66	68	68	72	67	64	64	64	65	68	67	64	64	66	67	75	77	70.2	96.0
11-Jan	76	80	87	87	88	88	90	91	88	88	90	90	89	90	91	92	92	91	90	90	90	90	91	91	88.7	92.4
12-Jan	91	90	90	91	92	81	73	69	73	72	68	71	71	62	64	69	70	72	69	70	78	78	85	83	76.3	91.6
13-Jan	88	88	90	84	87	88	88	92	90	90	84	79	82	83	86	90	93	94	95	99	99	92	84	82	88.7	99.3
14-Jan	89	93	94	92	91	90	85	85	87	86	84	85	86	84	83	85	84	86	87	88	89	88	89	88	87.4	93.9
15-Jan	86	86	87	85	83	81	80	81	83	82	80	79	77	74	73	75	77	77	80	83	84	83	83	82	80.8	86.8
16-Jan	83	84	82	83	83	83	83	83	83	83	79	79	80	74	76	77	77	77	78	78	78	78	78	78	79.8	83.6
17-Jan	78	81	80	78	79	79	80	83	83	81	80	75	74	65	72	76	74	77	77	81	83	82	82	83	78.4	83.2
18-Jan	83	83	83	82	83	85	85	84	78	81	75	69	68	66	62	64	71	75	78	82	89	89	87	89	78.7	88.7
19-Jan	87	88	89	88	88	88	89	89	88	88	89	89	89	90	90	90	90	89	90	90	90	90	90	91	89.1	90.6
20-Jan	90	90	90	90	90	90	89	88	87	84	84	82	90	89	94	93	93	93	93	92	92	92	91	91	89.9	93.7
21-Jan	91	90	90	90	90	90	89	89	89	90	90	90	91	92	93	93	93	93	93	92	93	94	94	94	91.3	94.3
22-Jan	94	95	95	96	96	96	96	96	96	97	97	97	98	99	100	100	100	100	100	100	99	96	95	95	97.2	100.0
23-Jan	95	95	95	96	96	96	96	96	96	96	96	97	95	96	96	96	97	98	99	98	99	96	95	96	96.4	99.0
24-Jan	95	94	93	94	95	93	93	93	93	93	94	94	95	96	96	97	97	96	95	95	97	97	96	96	94.9	97.0
25-Jan	96	95	96	95	95	93	91	91	92	89	85	81	79	79	75	70	65	59	66	96	99	100	100	86.0	99.8	
26-Jan	98	99	99	98	100	100	100	89	94	95	74	70	71	68	64	63	69	72	73	71	68	61	58	55	79.5	100.0
27-Jan	59	58	60	63	64	60	63	62	57	55	63	63	64	64	60	56	58	58	60	60	70	69	70	75	62.1	75.3
28-Jan	62	71	75	75	79	79	78	75	78	79	81	79	63	59	57	56	61	64	64	63	68	68	61	60	68.9	80.7
29-Jan	61	60	64	66	61	61	62	61	58	66	64	62	57	53	48	45	44	45	50	51	56	60	55	55	56.8	66.1
30-Jan	57	66	68	67	69	68	74	74	76	77	75	74	72	71	70	68	69	72	74	77	75	78	70	75	71.5	78.4
31-Jan	81	71	69	71	71	72	76	79	86	83	74	74	76	77	79	84	81	78	77	76	79	76	81	79	77.1	85.8
79.2 79.8 80.4 79.4 79.5 78.9 79.1 78.8 79.9 79.7 77.8 76.4 75.7 74.0 73.7 74.1 74.6 75.6 76.1 77.1 79.5 79.8 79.8 80.1																								Diurnal Average		
97.9 98.5 99.0 98.0 99.8 100.0 99.9 96.2 96.5 96.6 96.7 97.5 98.4 99.4 100.0 100.0 100.0 100.0 100.0 100.0 99.0 98.9 99.8 99.7																								Diurnal Maximum		

Hourly Averages

Relative Humidity (RH) - %
Beaverlodge - January 2016



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Beaverlodge - January 2016

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	14	19	11	7	15	18	1	11	19	21	17	24	11	11	6	8	11	5	8	7	4	6	5	1	9.6	23.7
Dir	296	278	270	288	296	278	265	292	271	267	296	269	272	267	215	251	275	280	32	8	336	254	286	33	281	269
2 Spd	5	6	5	3	3	2	3	2	1	1	4	3	6	6	5	5	6	3	3	4	4	4	5	3	2.9	6.2
Dir	66	119	95	220	238	69	58	315	174	73	44	84	50	67	85	76	74	120	117	104	103	89	66	58	82	50
3 Spd	3	2	1	4	4	5	4	1	4	1	2	3	16	11	2	5	6	12	12	14	15	16	19	17	6.3	19.1
Dir	270	41	213	48	55	49	56	230	48	327	357	356	325	318	312	26	344	328	329	324	322	324	324	330	335	324
4 Spd	8	8	2	6	9	8	4	2	3	7	7	5	1	1	3	7	5	2	3	2	2	2	1	2	3.4	8.6
Dir	341	334	31	12	348	320	28	23	325	299	314	321	269	12	318	350	333	43	83	159	35	296	333	32	342	348
5 Spd	2	4	5	7	0	3	2	1	3	2	5	1	2	3	8	4	1	7	6	2	4	14	7	4	2.8	14.4
Dir	342	39	17	14	299	67	9	340	37	28	34	337	229	190	27	247	65	30	279	298	330	328	333	351	355	328
6 Spd	9	8	6	6	3	3	5	6	8	5	6	5	8	6	9	7	6	6	5	8	8	6	2	2	4.5	8.9
Dir	323	333	336	29	18	313	16	18	344	315	320	325	331	333	335	358	335	349	11	17	36	165	204	204	346	323
7 Spd	1	4	3	2	5	4	4	1	1	3	4	8	8	6	3	6	5	2	7	5	2	3	5	9	2.5	9.3
Dir	229	23	4	296	308	333	10	49	241	132	133	124	119	116	102	119	75	42	134	74	62	89	75	118	94	118
8 Spd	10	10	7	6	4	4	5	7	6	5	4	5	6	5	2	2	2	2	3	2	5	3	4	4	3.5	10.3
Dir	134	131	129	161	174	148	134	166	163	174	228	216	222	227	171	90	151	197	159	136	105	111	66	51	153	134
9 Spd	3	4	2	2	2	3	2	2	3	1	0	1	1	2	5	1	1	3	1	2	2	1	5	2	0.5	5.4
Dir	165	227	212	209	262	286	240	254	46	33	55	5	35	244	265	244	37	41	40	9	37	40	43	275	295	265
10 Spd	1	3	5	11	11	12	16	16	13	6	2	6	11	10	8	6	2	3	7	8	6	8	12	11	7.1	15.8
Dir	79	344	286	315	317	312	305	299	307	329	336	287	292	304	297	300	296	350	325	333	344	1	22	29	320	299
11 Spd	11	2	19	19	17	13	14	11	13	11	12	7	8	10	7	10	9	8	7	4	2	3	4	2	8.1	19.4
Dir	36	75	104	104	118	124	115	109	81	95	113	123	126	132	126	118	128	120	118	141	118	242	224	275	112	104
12 Spd	3	1	3	3	4	7	11	12	6	9	6	9	11	3	3	5	6	6	6	2	4	7	7	7	2.5	12.3
Dir	46	82	86	43	36	345	296	279	289	311	314	291	261	213	161	90	79	74	65	68	77	320	28	345	335	279
13 Spd	2	4	3	6	5	8	4	5	3	4	7	2	4	2	3	4	10	7	2	2	4	7	7	7	2.4	9.9
Dir	261	2	21	340	323	354	340	260	212	30	38	21	283	192	174	187	220	284	302	225	320	306	312	347	311	220
14 Spd	9	11	12	11	8	9	11	15	18	11	14	11	12	9	10	10	6	6	7	3	2	3	1	1	8.2	17.7
Dir	343	327	340	348	356	329	322	312	318	331	336	337	334	339	337	351	349	332	335	17	116	194	246	266	334	318
15 Spd	2	1	4	6	7	6	5	5	9	7	9	11	5	3	1	5	5	6	8	11	10	8	9	11	5.9	10.8
Dir	145	179	108	110	107	96	109	148	122	113	121	113	149	194	219	137	103	98	120	95	91	74	84	101	110	101
16 Spd	12	14	12	12	13	12	13	16	8	3	2	5	5	4	10	13	4	4	8	7	10	6	5	4	6.2	15.9
Dir	102	95	93	95	94	99	96	102	103	114	348	262	267	99	101	103	87	4	11	5	17	18	18	23	81	102
17 Spd	3	3	3	3	2	7	9	7	7	5	6	1	3	2	0	2	1	5	0	5	4	4	5	3	1.1	9.5
Dir	113	187	241	209	204	118	130	132	78	74	304	315	299	155	161	272	336	224	87	300	251	280	193	180	174	130
18 Spd	2	3	2	4	2	1	2	3	1	2	2	1	1	3	4	3	2	2	3	0	2	2	3	3	0.4	4.0
Dir	230	153	85	175	180	225	36	47	311	334	348	14	315	75	147	192	11	6	314	182	35	258	57	24	57	147
19 Spd	4	2	3	3	5	5	4	3	6	1	5	9	3	1	2	4	3	4	2	3	2	3	4	6	2.5	9.2
Dir	309	305	336	261	251	267	302	267	229	124	234	179	186	340	212	192	180	195	176	214	183	277	231	203	230	179
20 Spd	6	2	2	1	6	6	5	5	2	1	1	4	5	3	6	6	8	8	9	8	8	7	5	3	2.5	8.8
Dir	203	164	71	151	329	323	330	319	338	351	95	162	163	146	162	165	144	135	139	120	123	138	135	146	143	139
21 Spd	3	5	3	5	3	3	1	2	1	2	2	5	5	2	3	2	3	3	5	1	0	1	1	5	1.3	5.3
Dir	70	132	132	131	135	99	176	46	81	275	85	196	173	37	318	244	187	152	198	200	297	8	40	45	139	196
22 Spd	4	4	3	2	4	3	4	4	2	2	3	2	3	4	1	3	6	7	5	12	14	21	19	15	4.0	20.6
Dir	297	356	216	304	181	68	277	193	279	176	48	31	289	341	337	185	256	269	355	17	326	315	321	320	317	315

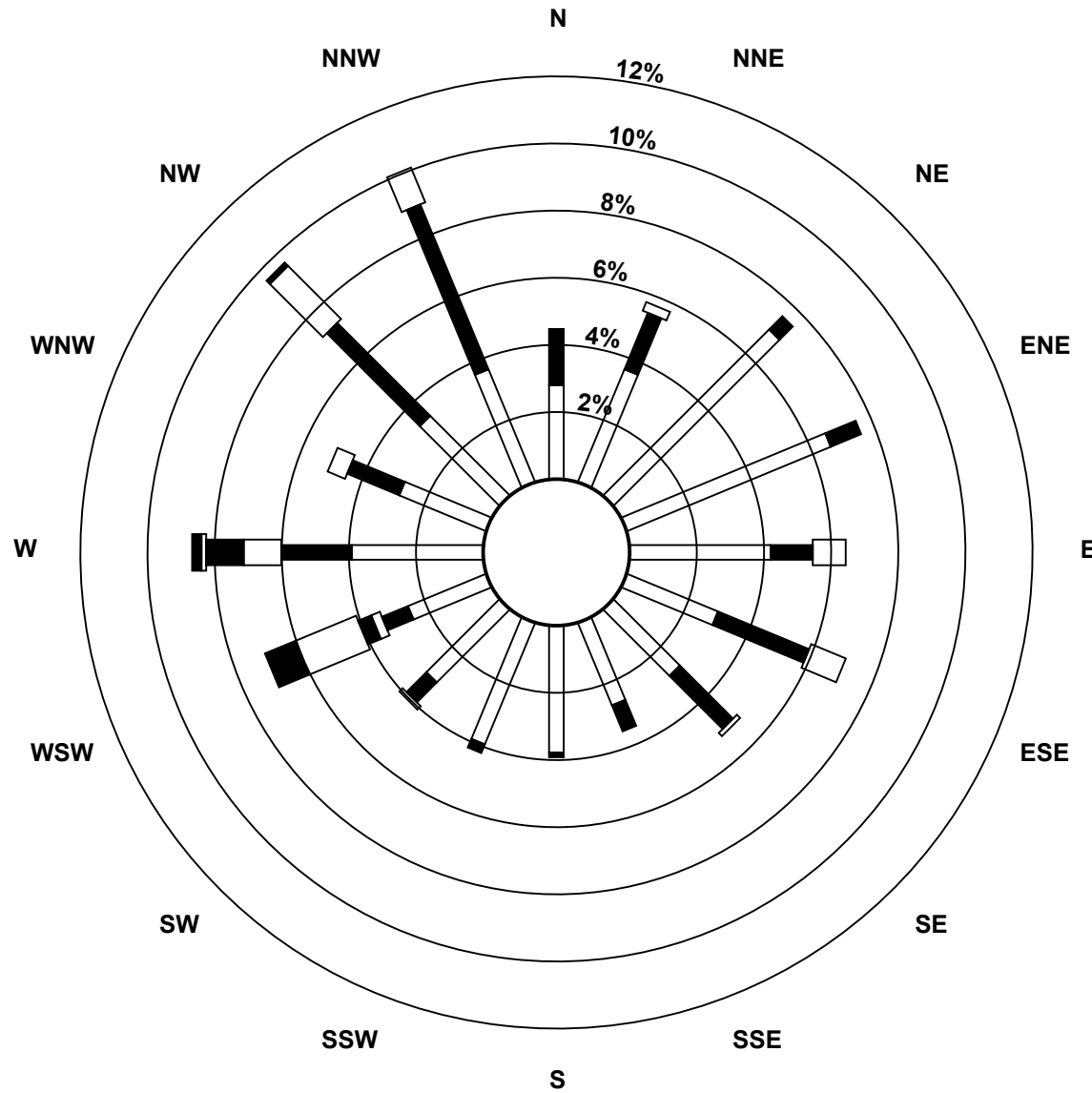
Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Beaverlodge - January 2016

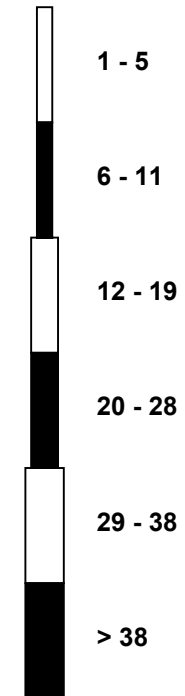
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24											
23 Spd	12	10	6	6	5	3	2	2	4	5	3	3	1	4	3	2	1	2	4	2	5	2	3	1	1.8	12.1									
Dir	323	332	328	313	297	277	244	117	69	117	80	45	168	53	273	261	165	18	47	84	44	100	41	357	357	323									
24 Spd	2	1	0	2	5	2	0	5	4	3	2	2	4	2	2	3	2	6	6	1	3	4	2	4	1.6	6.5									
Dir	69	17	71	62	47	63	86	51	59	73	53	43	44	41	39	52	27	258	265	14	79	78	134	72	50	258									
25 Spd	4	4	3	4	4	4	3	3	3	2	1	3	2	2	2	3	4	4	6	7	2	1	4	4	1.6	6.7									
Dir	78	73	67	71	71	94	96	86	101	77	108	73	76	80	185	71	56	212	270	260	240	109	90	93	87	260									
26 Spd	5	3	4	4	3	1	3	4	5	5	7	6	15	30	34	38	36	34	39	35	35	31	24	32	16.4	38.9									
Dir	125	141	92	154	208	282	55	277	169	194	262	221	233	247	251	259	248	246	246	250	249	258	262	260	248	246									
27 Spd	24	21	23	25	26	25	22	13	7	4	2	3	4	4	8	5	6	5	3	4	2	4	1	2	6.2	26.5									
Dir	248	264	259	266	257	265	262	262	334	351	126	58	77	102	74	122	130	121	228	299	1	56	221	52	261	257									
28 Spd	4	1	2	1	5	2	2	3	1	1	9	5	33	38	37	42	41	43	42	47	48	38	41	41	20.5	48.2									
Dir	85	175	79	236	66	175	137	217	110	172	305	289	245	251	249	247	246	246	247	254	254	255	261	259	251	254									
29 Spd	33	31	22	15	15	16	11	9	5	5	2	4	2	10	17	14	7	11	3	1	4	2	7	10	9.9	33.4									
Dir	258	256	257	261	255	253	237	235	272	250	210	185	232	250	272	276	262	284	268	332	58	57	260	271	259	258									
30 Spd	9	2	2	2	2	4	1	4	1	5	7	4	8	4	6	5	4	2	4	6	1	2	4	2	2.2	8.7									
Dir	276	146	209	43	250	272	49	49	13	329	329	317	309	327	350	327	2	327	223	30	68	59	295	211	324	276									
31 Spd	1	5	6	4	4	7	9	10	10	8	11	12	11	12	12	10	7	5	6	6	5	5	5	3	6.9	12.3									
Dir	201	330	310	287	307	324	312	317	328	320	314	318	326	325	327	326	317	331	332	331	309	326	31	24	323	325									
Spd	1.9	1.7	0.6	0.9	1.5	2.1	1.2	1.5	1.4	1.2	2.2	1.3	3.1	2.8	2.7	2.5	2.2	2.7	2.5	2.3	2.1	3.2	2.9	2.4	Diurnal Average										
Dir	289	294	310	328	299	306	321	290	334	324	332	281	272	269	268	257	252	266	267	296	303	296	308	304	Diurnal Maximum										
Spd	33.4	31.0	23.3	25.0	26.5	24.8	22.4	15.9	19.2	21.0	17.4	23.7	33.0	38.2	37.1	42.5	41.4	42.9	41.7	47.1	48.2	38.4	40.7	40.6	Diurnal Maximum										
Dir	258	256	259	266	257	265	262	102	271	267	296	269	245	251	249	247	246	246	247	254	254	255	261	259											
Maximum Speed Value: 48 km/h on Jan 28 21:00																		Minimum Speed Value: 0 km/h on Jan 9 11:00																Hours in Service: 744	
Maximum Daily Speed Average: 20.5 km/h on Jan 28																		Minimum Daily Speed Average: 0.4 km/h on Jan 9																Hours of Data: 744	
Maximum Diurnal Speed Average: 3.2 km/h at hour 22																		Minimum Diurnal Speed Average: 0.6 km/h at hour 3																Hours of Missing Data: 0	
Monthly Average Velocity: 1.88 km/h 290.0 deg																		Speed Percentiles: P ₁ = 0.4 P ₁₀ = 1.5 Q ₁ = 2.5 Median = 4.4 Q ₃ = 7.6 P ₉₀ = 12.7 P ₉₉ = 40.1																Percent Operational Time: 100.0	
All monthly, daily, and diurnal averages have been calculated using vector methods																																			
Frequency Distribution																																			
Speed Range (km/h)																																			
Direction	0 to 5		5 to 11		11 to 19		19 to 28		28 to 38		> 38		Total																						
North	42		31		4		0		0		0		77																						
NorthEast	84		17		1		0		0		0		102																						
East	70		22		13		1		0		0		106																						
SouthEast	38		36		4		0		0		0		78																						
South	48		12		0		0		0		0		60																						
SouthWest	49		10		2		0		3		5		69																						
West	36		30		13		13		9		7		108																						
NorthWest	52		57		33		2		0		0		144																						
Total	419		215		70		16		12		12		744																						

Wind Rose

Wind Speed (WS) (km/h)
Beaverlodge - January 2016



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Beaverlodge - January 2016

Maximum Speed: 48 km/h on Jan 28 21:00		Maximum Daily Speed Average: 22.7 km/h on Jan 28		Hours in Service: 744																						
Minimum Speed: 1 km/h on Jan 9 11:00		Minimum Daily Speed Average: 2.8 km/h on Jan 9		Hours of Data: 744																						
Maximum Diurnal Speed Average: 8.6 km/h at hour 16		Minimum Diurnal Speed Average: 5.7 km/h at hour 10		Hours of Missing Data: 0																						
Monthly Average Speed: 7.24 km/h		Percentiles: P ₁ = 1.6 P ₁₀ = 2.6 Q ₁ = 3.6 Median = 5.1 Q ₃ = 8.0 P ₉₀ = 13.1 P ₉₉ = 40.2		Percent Operational Time: 100.0																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jan	14	20	11	8	16	19	5	13	19	22	17	24	13	11	8	9	13	6	9	8	5	7	7	2	11.9	23.9
2-Jan	5	6	5	4	3	3	3	4	3	2	4	4	6	6	5	5	6	4	4	4	4	4	5	4	4.4	6.3
3-Jan	4	3	2	4	4	5	4	2	4	3	4	4	16	12	4	5	6	12	12	14	15	16	19	17	8.0	19.1
4-Jan	8	8	3	7	9	9	4	3	4	7	7	6	4	3	4	8	6	5	4	2	3	6	5	3	5.4	9.2
5-Jan	4	5	6	7	4	3	5	5	5	4	6	8	5	3	9	9	3	8	6	3	5	14	7	4	5.8	14.5
6-Jan	9	8	7	6	4	4	5	6	8	5	6	5	8	6	9	7	6	6	5	8	9	6	3	2	6.1	9.2
7-Jan	1	4	3	2	5	5	4	1	2	3	4	8	8	6	4	6	6	3	7	6	3	3	5	9	4.4	9.4
8-Jan	10	10	7	6	4	5	5	7	6	6	4	5	7	5	3	3	3	3	4	3	5	4	4	4	5.2	10.5
9-Jan	4	4	2	2	2	4	2	2	3	2	1	3	2	2	6	2	2	3	2	3	3	2	5	3	2.8	5.5
10-Jan	3	6	7	11	11	13	16	16	13	6	4	6	11	10	8	7	3	4	7	8	7	8	12	12	8.7	15.8
11-Jan	11	7	20	19	17	14	14	11	13	12	12	7	8	10	7	10	9	8	7	5	2	4	4	3	9.8	19.7
12-Jan	3	2	4	4	5	9	12	13	7	10	7	9	12	4	3	6	6	7	6	2	5	9	7	10	6.6	12.7
13-Jan	5	6	3	7	6	9	5	6	4	5	7	3	5	3	4	5	11	8	3	2	4	7	7	7	5.4	10.5
14-Jan	9	11	12	12	8	9	11	15	18	11	14	11	12	9	10	11	6	6	7	5	3	3	2	2	9.1	17.9
15-Jan	2	1	5	6	7	7	5	5	9	7	9	11	5	4	2	5	6	7	8	11	10	8	9	11	6.6	10.9
16-Jan	12	14	13	13	14	13	13	16	10	5	3	6	5	5	10	13	5	4	8	7	10	6	5	4	8.8	16.0
17-Jan	4	5	3	4	4	7	10	7	7	5	6	3	5	3	3	4	4	5	2	5	6	4	5	3	4.7	9.7
18-Jan	3	4	3	4	2	2	2	3	2	3	3	2	4	4	5	4	4	4	4	2	3	3	3	4	3.2	4.7
19-Jan	7	4	6	3	5	5	5	6	6	5	6	9	4	2	3	4	3	4	2	3	2	3	4	6	4.4	9.3
20-Jan	6	2	2	2	6	6	5	5	3	2	2	5	5	4	7	6	8	8	9	9	8	7	5	3	5.2	9.0
21-Jan	4	5	3	5	3	4	4	4	2	2	3	6	6	3	4	6	4	4	5	2	2	2	2	5	3.8	6.1
22-Jan	6	6	5	3	4	4	4	4	3	2	4	3	4	4	3	4	6	8	6	12	14	21	19	15	6.7	20.6
23-Jan	12	10	6	6	6	3	3	3	5	5	4	4	3	4	4	4	3	4	4	3	5	3	3	3	4.6	12.2
24-Jan	3	2	1	2	5	3	1	5	4	3	2	2	4	2	2	3	2	7	7	4	3	4	3	4	3.4	6.9
25-Jan	4	4	3	4	4	4	3	3	4	3	2	4	3	3	3	4	4	4	6	7	4	2	4	5	3.8	7.2
26-Jan	5	3	5	5	3	3	4	5	6	6	8	8	15	30	34	39	36	35	39	35	35	31	25	32	18.7	39.0
27-Jan	24	22	23	25	27	25	22	14	8	5	3	4	5	5	8	6	7	6	5	4	3	5	3	4	10.9	26.6
28-Jan	4	2	3	2	6	3	3	4	3	4	10	6	33	39	37	43	42	43	42	47	48	38	41	41	22.7	48.3
29-Jan	33	31	22	15	15	16	11	11	7	7	4	5	4	10	18	15	7	11	4	3	4	4	7	10	11.4	33.5
30-Jan	9	4	4	3	2	4	3	4	2	6	8	4	8	5	6	5	4	4	4	6	2	2	4	3	4.4	8.9
31-Jan	2	5	6	4	5	8	9	10	10	8	11	12	11	12	12	10	7	5	6	6	5	5	5	3	7.4	12.3
7.5		7.3	6.6	6.6	7.0	7.3	6.5	6.9	6.4	5.7	6.0	6.4	7.8	7.4	7.9	8.6	7.6	7.8	7.9	7.7	7.7	7.7	7.7	7.7	Diurnal Average	Diurnal Maximum
33.5		31.1	23.4	25.1	26.6	24.9	22.5	16.0	19.3	22.1	17.5	23.9	33.1	38.9	37.2	42.7	41.5	42.9	41.9	47.2	48.3	38.5	40.9	40.7		

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

Hourly Standard Deviations

Wind Direction (WD) - deg
Beaverlodge - January 2016

Maximum Value: 97.5 deg on Jan 11 02:00																		Hours in Service: 744							
Minimum Value: 2.3 deg on Jan 28 18:00																		Hours of Data: 744							
Percentiles: P ₁ = 3.3 P ₁₀ = 6.3 Q ₁ = 11.8 Median = 26.9 Q ₃ = 52.7 P ₉₀ = 71.7 P ₉₉ = 91.8																		Hours of Missing Data: 0							
																		Hours of Calibration: 0							
																		Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Jan	10	13	44	26	16	15	92	49	6	24	8	8	36	14	45	29	57	67	27	30	44	62	57	65	92.5
2-Jan	14	22	23	57	37	63	27	52	72	74	38	36	7	14	25	13	13	49	45	29	17	21	10	13	74.2
3-Jan	61	72	81	33	14	8	29	81	12	75	62	44	5	41	65	9	23	4	6	5	4	3	4	4	80.9
4-Jan	18	22	67	13	22	26	19	53	45	27	15	44	91	86	77	31	76	88	38	44	31	70	85	74	91.3
5-Jan	61	23	26	12	89	44	66	84	62	62	70	87	81	33	54	62	75	36	17	61	44	5	20	20	89.1
6-Jan	20	10	29	17	45	26	28	20	9	10	7	14	12	14	10	10	11	14	7	11	37	13	26	13	44.5
7-Jan	23	36	23	16	13	13	28	58	36	17	18	8	10	11	19	16	10	48	10	29	28	24	16	10	58.4
8-Jan	10	14	14	17	25	32	25	14	20	36	14	14	6	32	58	46	85	60	35	62	42	44	53	13	85.5
9-Jan	54	36	35	44	32	18	24	20	58	90	97	70	65	63	13	52	68	36	67	75	72	58	8	54	97.1
10-Jan	74	57	54	16	10	14	7	5	7	18	62	25	6	6	6	53	46	54	12	10	12	6	6	4	73.9
11-Jan	5	98	9	10	6	11	4	11	12	21	3	13	9	8	11	13	8	9	10	18	40	34	22	62	97.5
12-Jan	49	63	35	26	43	36	28	13	28	14	22	18	15	45	64	35	10	10	20	51	18	52	24	48	63.7
13-Jan	85	52	53	25	68	29	55	31	23	56	8	77	82	40	48	39	20	22	67	11	29	20	10	19	85.4
14-Jan	8	6	13	9	11	10	7	4	8	7	9	9	6	13	9	6	12	6	6	45	52	28	59	61	61.4
15-Jan	25	33	26	11	5	9	15	12	12	9	11	7	14	46	59	35	20	24	25	7	4	10	23	7	59.1
16-Jan	4	6	12	6	6	14	5	7	56	73	55	31	30	55	6	6	27	22	7	12	5	8	6	11	72.6
17-Jan	43	64	33	41	51	12	12	21	10	28	22	61	73	32	77	62	76	13	92	16	50	33	16	38	91.7
18-Jan	57	18	36	15	31	42	72	40	69	48	49	86	80	62	32	33	51	63	70	96	62	57	27	54	96.4
19-Jan	63	67	59	22	39	12	16	53	13	76	51	8	31	68	73	27	27	15	45	21	22	20	35	8	75.8
20-Jan	8	47	17	75	8	11	13	10	50	87	38	10	23	34	22	17	15	13	13	13	13	15	20	47	86.9
21-Jan	40	22	28	18	33	36	77	93	85	77	47	23	27	65	59	77	27	49	20	82	92	62	78	37	92.8
22-Jan	61	46	71	81	54	56	58	10	79	30	40	77	42	18	64	32	12	14	38	12	18	4	5	5	80.6
23-Jan	7	12	17	12	12	38	54	40	30	33	33	46	83	34	47	60	58	50	14	55	16	38	71	72	82.8
24-Jan	54	83	92	65	23	59	92	17	13	21	62	59	33	64	44	67	52	23	12	72	32	28	51	38	92.1
25-Jan	22	20	43	9	42	21	28	29	32	55	68	21	34	46	42	65	40	37	18	23	86	63	25	20	85.6
26-Jan	21	26	39	41	34	84	55	57	29	36	53	38	15	2	6	7	5	3	5	3	4	4	8	6	83.7
27-Jan	7	8	4	6	7	4	4	56	36	47	72	70	38	23	10	22	14	28	56	35	68	31	90	64	90.5
28-Jan	24	52	81	86	52	72	54	42	83	80	22	44	6	10	3	5	4	2	5	4	3	3	5	4	85.8
29-Jan	3	5	5	6	4	10	10	50	51	61	88	58	86	6	9	11	13	13	61	66	50	85	13	5	87.9
30-Jan	11	70	85	83	38	41	91	17	60	18	41	29	11	39	27	36	21	49	30	31	70	20	39	48	90.6
31-Jan	60	21	4	14	24	21	7	8	10	5	5	7	7	7	7	6	6	11	7	12	9	6	20	20	59.8
85.4 97.5 91.6 85.8 89.1 83.7 92.5 92.8 84.8 90.1 97.1 87.4 91.3 86.2 77.3 76.6 85.5 88.0 91.7 96.4 91.9 84.8 90.5 73.9																									

PAZA
Valleyview Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

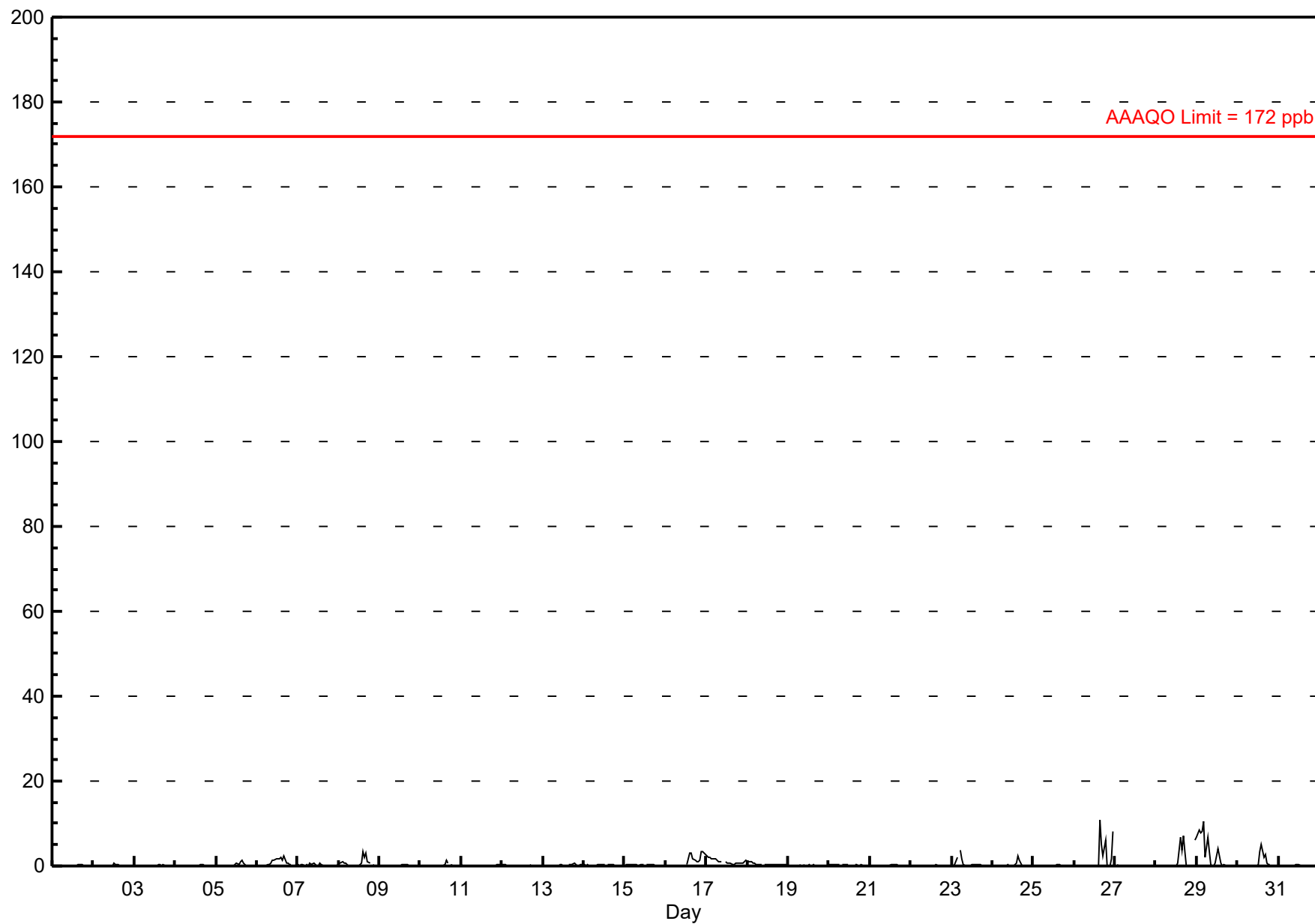
Sulphur Dioxide (SO₂) - ppb

Valleyview - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 10.8 ppb on Jan 26 16:00 Minimum Value: 0 ppb on Jan 1 02:00 Maximum Diurnal Average: 1.1 ppb at hour 16 Monthly Average: 0.43 ppb																				Hours in Service: 744 Hours of Data: 708 Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0						
Maximum Daily Average: 2.7 ppb on Jan 29 Minimum Daily Average: 0.0 ppb on Jan 27 Minimum Diurnal Average: 0.1 ppb at hour 9 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.9 P ₉₉ = 6.6																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-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
2-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	0.1	0.6
3-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
4-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	0.4
5-Jan	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	0	0	0	0	0	A	0	0.2	1.3
6-Jan	0	0	0	0	0	0	0	0	1	1	1	2	2	2	2	1	2	1	1	0	0	A	0	0	0.8	2.3
7-Jan	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0.2	0.7
8-Jan	1	1	1	1	1	0	0	0	0	0	0	0	0	1	3	2	3	1	1	A	0	0	0	0	0.7	3.2
9-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	0.3
10-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	A	0	0	0	0	0	0	0.1	1.3
11-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	0.4
12-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	0.3
13-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0.2	0.5
14-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.4
15-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	0.4
16-Jan	0	0	0	0	0	0	0	0	0	0	0	A	0	2	3	3	2	2	1	1	2	3	3	3	1.1	3.4
17-Jan	2	2	2	2	2	2	1	1	1	1	A	1	1	1	1	0	0	1	1	1	1	1	1	1	1.2	2.4
18-Jan	1	1	1	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.2
19-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
20-Jan	0	0	0	0	0	0	0	A	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0.2	0.4
21-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
22-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	0.3
23-Jan	0	0	0	2	A	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	3.9
24-Jan	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0.3	2.5
25-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
26-Jan	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	11	5	2	6	0	0	0	2	8	1.5	10.8
27-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	0.0	0.3
28-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7	4	7	3	0	0	0	0	A	6	1.2	7.0
29-Jan	7	8	8	8	10	2	7	4	0	0	0	1	4	2	1	0	0	0	0	0	0	A	0	0	2.7	10.4
30-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	3	5	2	3	1	0	0	A	0	0	0	0.6	5.1
31-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	0.1	0.3
																									Diurnal Average	
																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Valleyview - January 2016



Hourly Maximums

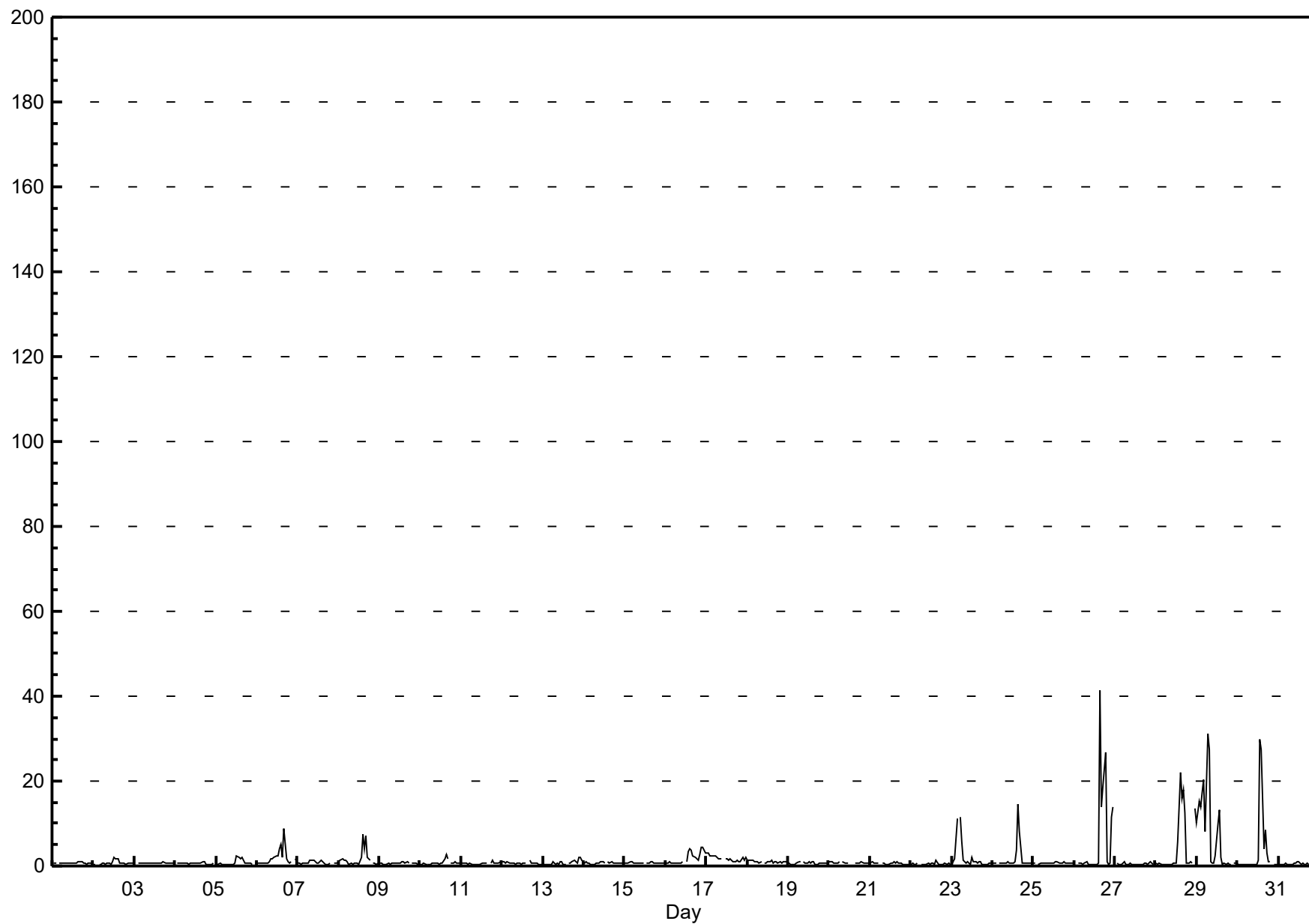
Sulphur Dioxide (SO₂) - ppb

Valleyview - January 2016

Maximum Value: 41.3 ppb on Jan 26 16:00																				Maximum Daily Average: 7.7 ppb on Jan 29					Hours in Service: 744		
Minimum Value: 0 ppb on Jan 30 10:00																				Minimum Daily Average: 0.5 ppb on Jan 22					Hours of Data: 708		
Maximum Diurnal Average: 3.5 ppb at hour 16																				Minimum Diurnal Average: 0.7 ppb at hour 20					Hours of Missing Data: 36		
Monthly Average: 1.50 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.9 P ₉₀ = 2.0 P ₉₉ = 19.2					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	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9	
2-Jan	1	1	A	1	1	1	1	0	1	1	1	1	2	2	2	1	1	1	1	0	1	1	1	1	1	0.7	2.0
3-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	0.9	
4-Jan	A	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0	0	0	0	1	A	0.6	1.0	
5-Jan	0	0	1	0	0	0	0	0	0	0	0	1	2	2	2	2	1	1	1	1	1	1	A	1	0.8	2.4	
6-Jan	1	1	1	1	1	1	1	1	2	2	2	3	3	4	5	2	9	2	1	1	1	A	2	1	1.8	8.7	
7-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	A	1	1	1	1	0.8	1.5	
8-Jan	1	1	2	1	1	1	0	1	0	1	1	1	0	2	7	4	7	2	1	A	1	1	1	1	1	1.7	7.5
9-Jan	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	0.6	1.0	
10-Jan	0	0	1	0	0	0	0	1	1	1	1	0	1	1	2	3	2	A	1	1	1	1	1	1	0.7	2.7	
11-Jan	1	1	1	1	0	1	0	0	0	0	0	0	1	1	1	1	A	1	1	1	1	1	1	1	0.6	1.2	
12-Jan	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	A	2	1	1	1	1	0	0	0	0.7	1.5	
13-Jan	0	0	0	0	0	0	1	0	1	0	1	1	0	0	A	1	1	1	1	1	1	2	2	1	0.8	2.1	
14-Jan	1	1	1	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.7	1.0	
15-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	1.1	
16-Jan	1	1	1	1	1	1	1	1	1	1	1	A	1	4	4	4	2	2	2	1	3	5	5	3	1.8	4.5	
17-Jan	3	3	3	3	2	2	2	2	2	2	A	2	2	1	2	1	1	1	1	1	1	2	2	2	1.8	3.0	
18-Jan	2	2	2	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.5	
19-Jan	1	0	0	0	0	1	1	1	A	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	0.6	1.0	
20-Jan	1	1	1	1	1	1	1	A	1	1	1	1	C	C	C	1	1	1	1	1	1	1	1	1	0.8	1.2	
21-Jan	1	1	1	1	1	1	A	1	1	1	1	0	1	1	1	1	1	1	1	0	0	0	0	0	0.6	1.0	
22-Jan	0	1	0	0	1	A	0	0	0	0	1	0	1	1	0	1	0	0	0	0	1	0	1	0	0.5	1.4	
23-Jan	0	1	2	11	A	12	6	1	1	1	1	0	2	1	1	1	1	1	0	0	0	0	1	1	1.9	11.6	
24-Jan	1	1	1	A	1	1	1	1	1	1	1	1	1	1	4	14	8	1	1	1	1	1	1	1	1.7	14.4	
25-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	0.6	1.0	
26-Jan	1	A	1	1	1	1	1	1	0	0	0	0	0	0	1	41	14	19	27	1	0	1	11	14	5.9	41.3	
27-Jan	A	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	1	0	1	1	0	A	0.5	0.9	
28-Jan	1	0	1	0	0	0	0	0	0	0	1	1	1	6	22	16	18	13	1	1	1	1	A	14	4.2	21.9	
29-Jan	10	15	14	17	20	8	31	27	1	1	1	2	10	13	2	1	1	0	1	0	0	A	1	1	7.7	31.1	
30-Jan	0	0	0	0	0	0	0	0	0	0	0	0	1	30	27	4	9	3	1	1	A	0	0	0	3.6	29.9	
31-Jan	0	0	0	0	1	0	0	0	0	1	1	1	1	0	1	0	0	1	0	A	0	0	1	0	0.5	1.0	
1.0 1.3 1.2 1.6 1.3 1.3 1.8 1.6 0.7 0.7 0.7 0.8 1.2 2.7 3.2 3.5 2.9 1.9 1.7 0.7 0.7 0.8 1.2 1.7																										Diurnal Average	
10.2 15.3 13.9 17.2 20.2 11.6 31.1 27.4 1.6 1.8 2.0 2.5 10.0 29.9 27.4 41.3 18.0 18.5 26.7 1.2 2.5 4.5 11.4 14.0																										Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																											

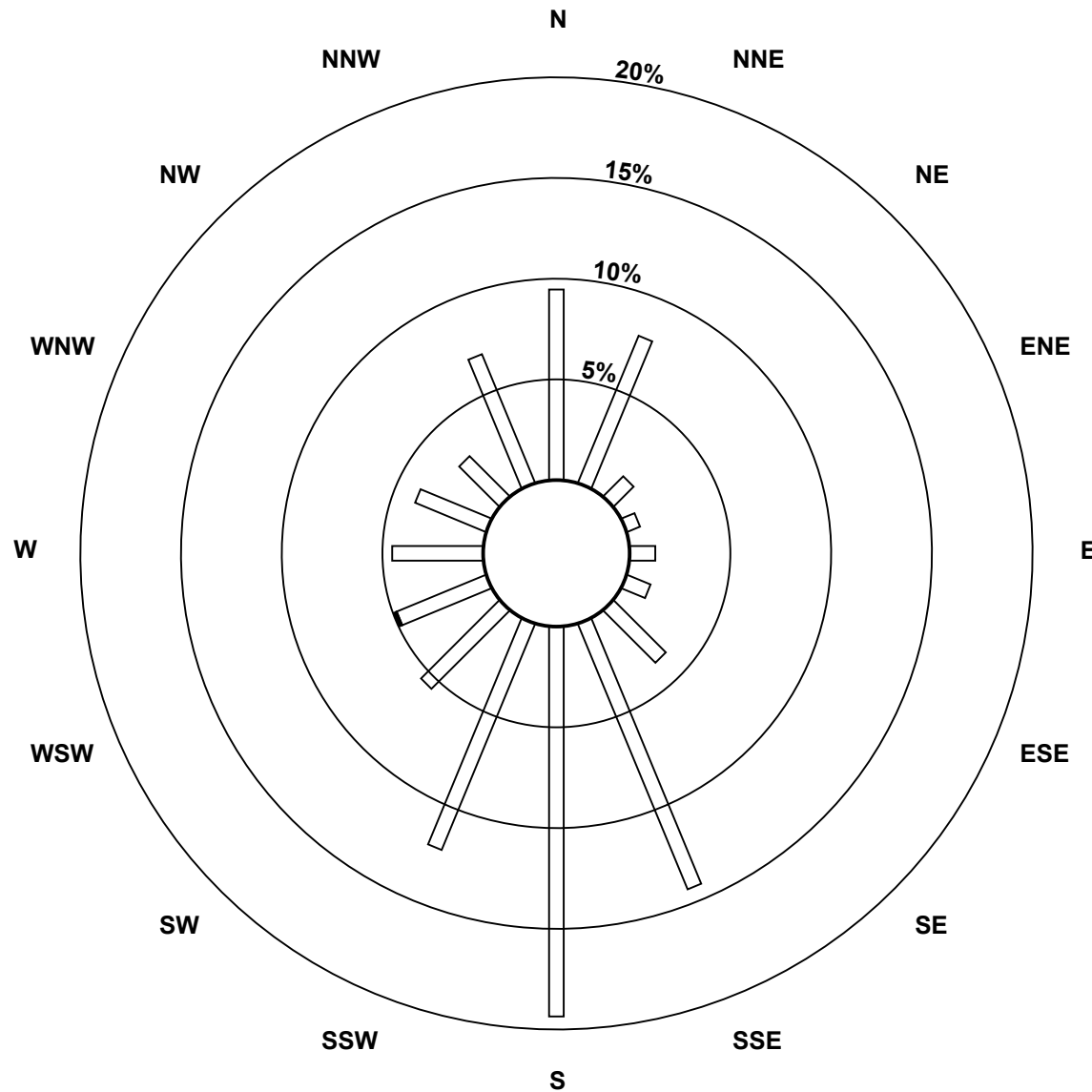
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Valleyview - January 2016

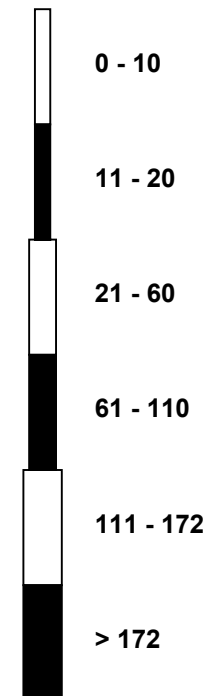


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Valleyview - January 2016

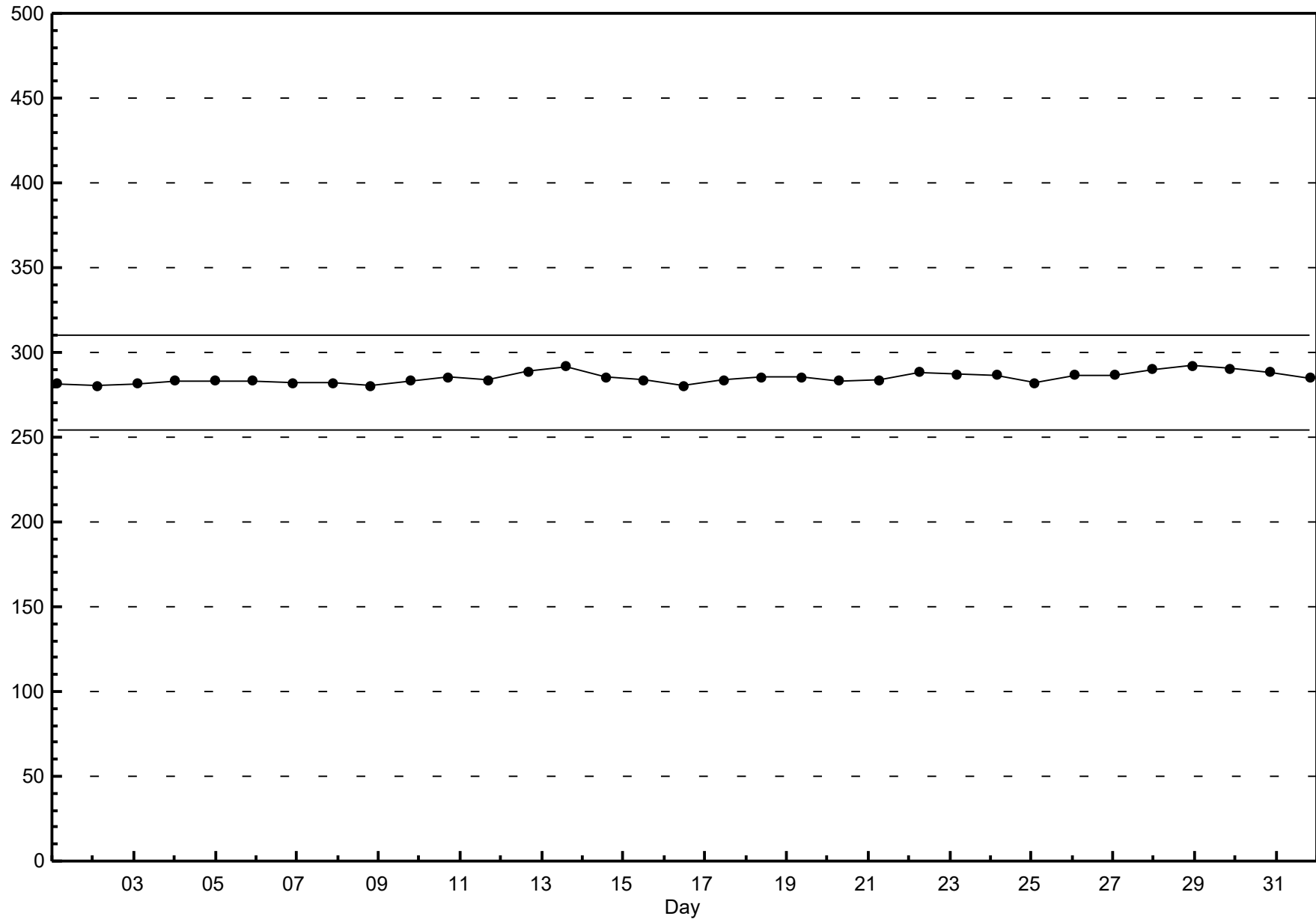


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Valleyview - January 2016



Hourly Averages

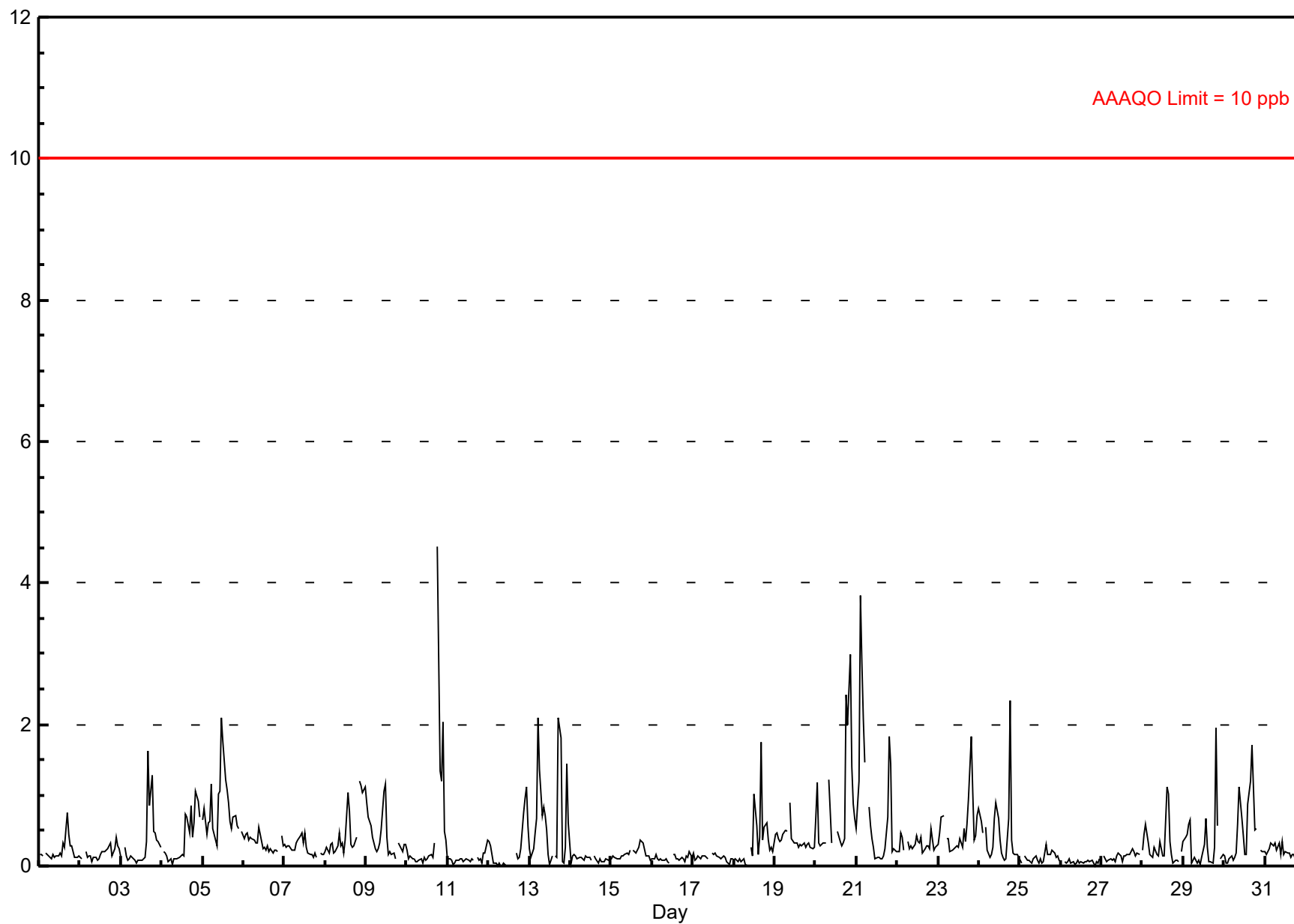
Hydrogen Sulphide (H₂S) - ppb

Valleyview - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 744							
Maximum Value: 4.5 ppb on Jan 10 19:00																				Maximum Daily Average: 0.9 ppb on Jan 20		Hours of Data: 708					
Minimum Value: 0 ppb on Jan 12 08:00																				Minimum Daily Average: 0.1 ppb on Jan 26		Hours of Missing Data: 36					
Maximum Diurnal Average: 0.7 ppb at hour 19																				Minimum Diurnal Average: 0.2 ppb at hour 8		Hours of Calibration: 36					
Monthly Average: 0.35 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.4 P ₉₀ = 0.8 P ₉₉ = 2.0		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	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.2	0.8
2-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	0.2	0.4
3-Jan	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0.3	1.6
4-Jan	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1	1	1	1	1	A	0.4	1.1
5-Jan	1	1	0	1	1	1	1	0	0	1	1	2	2	1	1	1	1	1	1	1	1	1	A	0	0	0.8	2.1
6-Jan	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	0.6
7-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	0.3	0.5
8-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	A	1	1	1	1	1	0.5	1.2
9-Jan	1	1	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0.4	1.2
10-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	5	1	1	2	0	0	0	0.5	4.5
11-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	0.1	0.4
12-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	1	1	1	1	0.2	1.1
13-Jan	0	0	0	0	1	2	1	1	1	1	1	0	0	0	A	0	0	2	2	0	0	0	1	1	1	0.6	2.1
14-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
15-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	0.2	0.4
16-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	0.1	0.2
17-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	0.1	0.2
18-Jan	0	0	0	0	0	0	0	0	0	0	A	0	0	1	1	0	2	0	1	1	0	0	0	0	0	0.3	1.7
19-Jan	0	0	0	0	0	0	1	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.9
20-Jan	1	1	0	0	0	0	0	A	1	0	C	C	C	0	0	0	0	0	2	2	3	1	1	1	1	0.9	3.0
21-Jan	1	1	4	3	2	1	A	1	1	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0	0	0.8	3.8
22-Jan	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.3	0.5
23-Jan	0	0	1	1	A	0	0	0	0	0	0	0	0	0	0	1	0	1	1	2	1	0	0	1	1	0.5	1.8
24-Jan	1	1	0	A	1	0	0	0	0	1	1	1	0	0	0	0	0	1	2	0	0	0	0	0	0	0.4	2.3
25-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	0.1	0.3
26-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	0.1	0.1
27-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	0.1	0.2
28-Jan	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	A	0	0	0.3	1.1
29-Jan	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	1	A	0	0	0	0.3	2.0
30-Jan	0	0	0	0	0	0	0	0	1	1	1	0	0	0	1	1	2	1	1	1	A	0	0	0	0	0.5	1.7
31-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	2	2	0.3	1.6
0.3 0.3 0.4 0.3 0.3 0.3 0.2 0.2 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.4 0.4 0.7 0.5 0.5 0.4 0.4 0.4																									Diurnal Average		
0.9 1.2 3.8 2.9 2.1 2.1 1.4 0.8 1.2 1.1 1.1 2.1 1.8 1.2 1.1 1.2 1.7 2.1 4.5 2.0 3.0 2.0 1.5 1.6																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																											

Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Valleyview - January 2016



Hourly Maximums

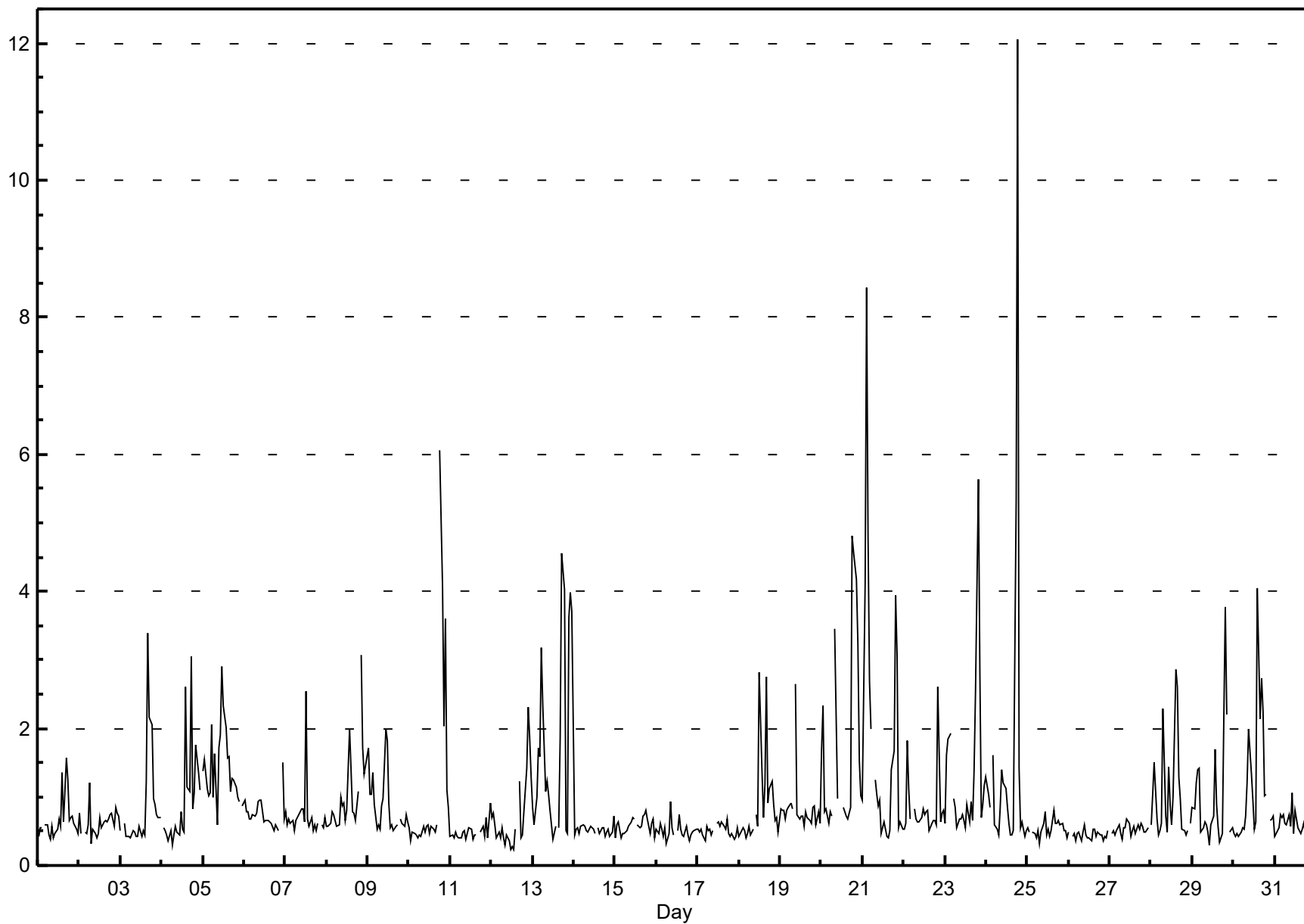
Hydrogen Sulphide (H₂S) - ppb

Valleyview - January 2016

Maximum Value: 12.1 ppb on Jan 24 19:00																				Maximum Daily Average: 1.8 ppb on Jan 21					Hours in Service: 744				
Minimum Value: 0 ppb on Jan 12 14:00																				Minimum Daily Average: 0.4 ppb on Jan 26					Hours of Data: 708				
Maximum Diurnal Average: 1.7 ppb at hour 19																				Minimum Diurnal Average: 0.7 ppb at hour 7					Hours of Missing Data: 36				
Monthly Average: 0.92 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.9 P ₉₀ = 1.7 P ₉₉ = 4.8					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	1	1	A	1	1	0	0	1	0	0	1	1	1	1	1	2	1	1	1	1	1	0	0.7	1.6				
2-Jan	1	0	A	0	0	1	1	0	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.2			
3-Jan	1	A	1	0	0	0	0	1	0	0	0	1	0	1	0	1	3	2	2	1	1	1	1	1	0.8	3.4			
4-Jan	A	1	1	0	0	1	0	0	1	0	0	1	1	0	3	1	1	3	1	1	2	1	1	A	0.9	3.0			
5-Jan	1	2	1	1	1	2	1	2	1	2	2	3	2	2	2	2	1	1	1	1	1	1	A	1	1.4	2.9			
6-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	A	1	1	0.7	1.5			
7-Jan	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	A	1	1	1	0.7	2.6			
8-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	A	3	2	1	2	1.0	3.1			
9-Jan	2	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	A	1	1	1	1	1	0.9	2.0			
10-Jan	1	0	0	0	0	0	0	0	1	0	1	1	0	1	1	0	1	A	6	4	2	4	1	1	1.1	6.1			
11-Jan	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	A	0	1	1	0	1	0	1	0.5	0.9			
12-Jan	1	1	1	0	0	0	1	0	0	0	0	0	0	0	1	A	1	0	0	1	1	2	2	1	0.7	2.3			
13-Jan	1	1	1	2	2	3	2	1	1	1	1	1	0	1	A	1	2	5	4	1	0	4	4	4	1.8	4.6			
14-Jan	0	1	1	0	1	1	1	1	0	1	1	1	0	A	1	0	1	1	0	0	1	0	0	1	0.5	0.7			
15-Jan	0	1	1	0	0	0	0	1	1	1	1	1	A	1	1	1	1	1	1	1	0	1	1	0	0.6	0.8			
16-Jan	1	0	1	1	0	1	0	0	1	1	0	A	0	1	1	0	0	1	0	0	0	0	1	1	0.5	0.9			
17-Jan	1	0	1	0	0	1	1	1	0	1	A	1	1	1	1	1	1	1	0	0	0	0	0	1	0.5	0.7			
18-Jan	0	0	1	1	0	0	1	0	1	A	1	1	3	1	1	1	3	1	1	1	1	1	1	0	0.9	2.8			
19-Jan	1	1	1	1	1	1	1	1	A	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	2.7			
20-Jan	2	2	1	1	1	1	1	A	3	1	C	C	C	1	1	1	1	1	5	5	4	3	2	1	1.8	4.8			
21-Jan	1	4	8	5	3	2	A	1	1	1	1	0	1	1	0	0	1	1	2	4	3	1	1	1	1.8	8.4			
22-Jan	1	1	2	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	0.8	2.6			
23-Jan	1	2	2	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	3	6	3	1	1	1	1.3	5.6			
24-Jan	1	1	1	A	2	1	1	0	1	1	1	1	1	1	0	0	1	5	12	1	1	1	0	1	1.5	12.1			
25-Jan	1	0	A	0	0	0	1	0	0	1	1	0	1	0	1	1	1	1	1	1	1	1	0	0	0.5	0.8			
26-Jan	0	A	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0.4	0.6			
27-Jan	A	0	0	0	1	1	0	0	1	1	1	1	0	1	1	0	1	1	1	1	0	0	1	A	0.5	0.7			
28-Jan	1	1	2	1	0	1	1	2	1	0	1	1	1	1	3	3	1	1	1	1	0	1	A	1	1.0	2.9			
29-Jan	1	1	1	1	1	0	1	1	1	0	0	1	1	2	1	1	0	0	2	4	2	A	0	1	1.0	3.8			
30-Jan	0	0	0	0	0	1	1	1	1	2	1	1	1	1	4	2	3	2	1	1	A	1	1	1	1.1	4.1			
31-Jan	0	0	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	0	A	1	1	3	3	0.8	2.6			
0.7 0.9 1.0 0.9 0.7 0.8 0.7 0.7 0.8 0.8 0.8 0.7 0.8 0.8 0.9 0.8 1.0 1.2 1.7 1.4 1.2 1.0 1.0 0.9																									Diurnal Average				
1.7 4.1 8.4 4.8 2.7 3.2 2.3 2.3 3.4 2.7 2.0 2.9 2.8 2.0 4.1 2.6 3.4 5.3 12.1 5.6 4.2 3.6 4.0 3.7																									Diurnal Maximum				
C - Calibration																									A - Automated Daily Zero Span				

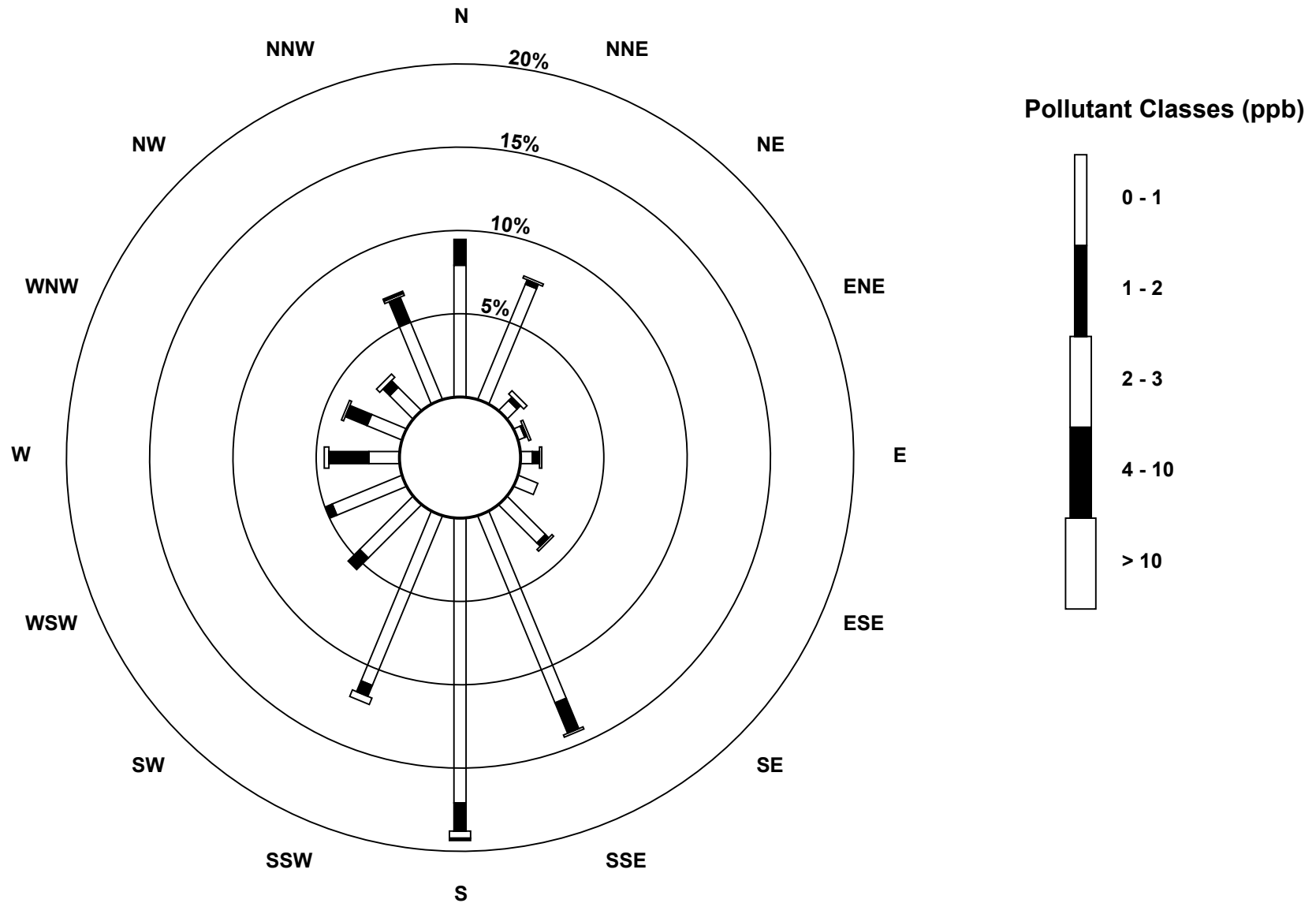
Hourly Maximums

Hydrogen Sulphide (H₂S) - ppb
Valleyview - January 2016



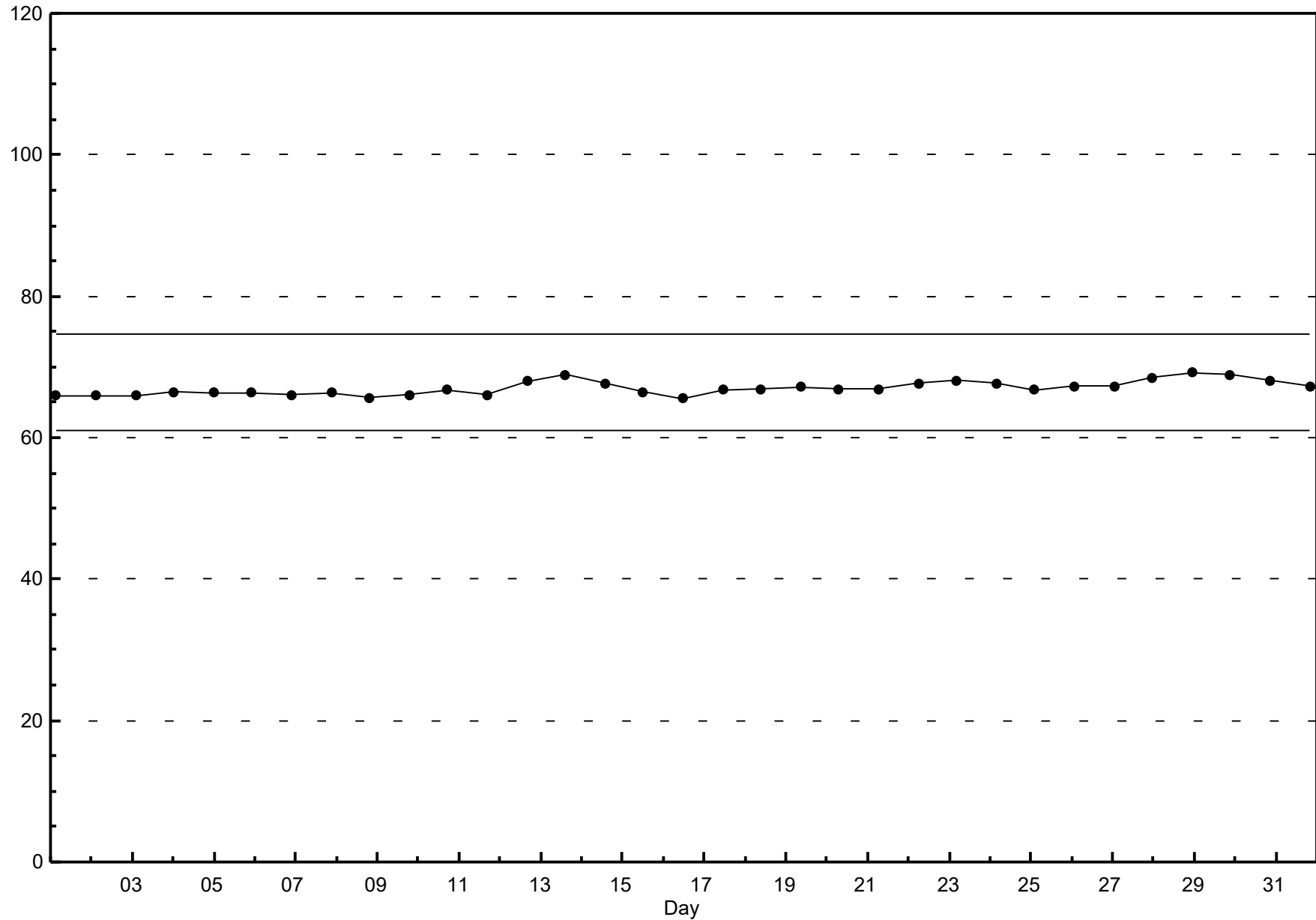
Pollutant Rose

Hydrogen Sulphide (H₂S) - ppb
Valleyview - January 2016



Span Responses

Hydrogen Sulphide (H_2S)
Valleyview - January 2016



Hourly Averages

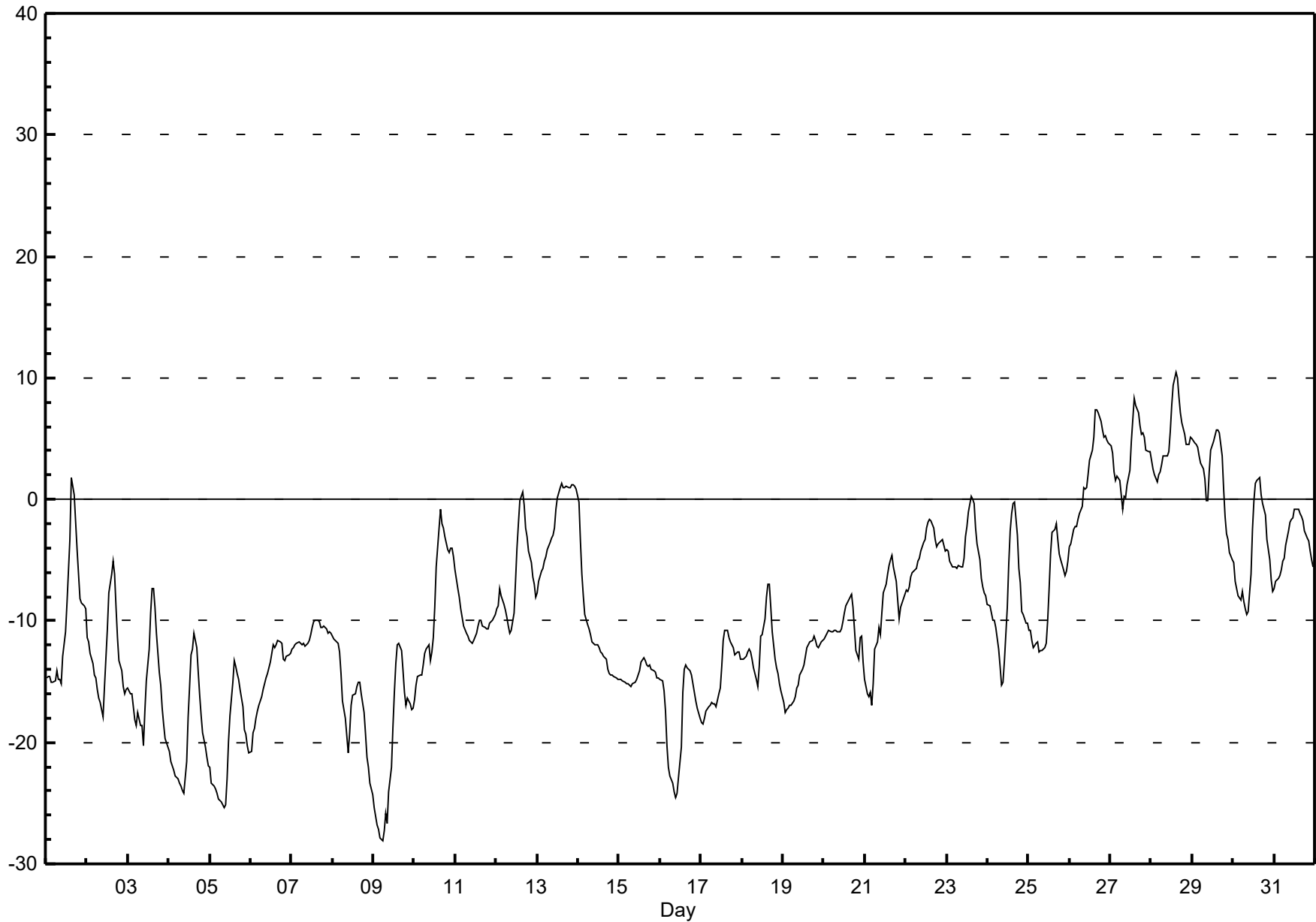
External Temperature (ET) - °C

Valleyview - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 10.4 °C on Jan 28 15:00 Maximum Daily Average: 5.0 °C on Jan 28																								Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: -28 °C on Jan 9 06:00 Minimum Daily Average: -20.3 °C on Jan 9 Maximum Diurnal Average: -4.8 °C at hour 16 Minimum Diurnal Average: -12.2 °C at hour 10 Monthly Average: -9.45 °C Percentiles: P ₁ = -25.9 P ₁₀ = -18.1 Q ₁ = -14.7 Median = -10.8 Q ₃ = -4.1 P ₉₀ = 1.5 P ₉₉ = 7.6																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jan	-15	-15	-15	-15	-15	-15	-14	-15	-15	-15	-13	-11	-9	-6	-3	2	0	-2	-4	-6	-8	-9	-9	-9	-9.7	1.9
2-Jan	-11	-12	-13	-14	-14	-15	-16	-16	-17	-18	-15	-13	-11	-8	-6	-5	-6	-9	-11	-13	-14	-15	-16	-16	-12.7	-5.0
3-Jan	-16	-16	-16	-17	-18	-19	-18	-19	-19	-20	-17	-15	-12	-9	-7	-7	-9	-11	-14	-15	-17	-19	-20	-20	-15.4	-7.4
4-Jan	-21	-22	-22	-22	-23	-23	-23	-24	-24	-24	-22	-18	-15	-13	-12	-11	-12	-14	-16	-18	-19	-20	-21	-22	-19.2	-11.0
5-Jan	-22	-23	-24	-24	-24	-25	-25	-25	-25	-25	-23	-20	-18	-15	-13	-14	-14	-15	-16	-17	-19	-19	-20	-21	-20.3	-13.3
6-Jan	-21	-19	-19	-18	-17	-17	-16	-16	-15	-15	-14	-13	-13	-12	-12	-12	-12	-12	-12	-13	-13	-13	-13	-13	-14.6	-11.6
7-Jan	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-11	-11	-10	-10	-10	-10	-11	-11	-10	-11	-11	-11	-11	-11.2	-9.9
8-Jan	-11	-11	-12	-12	-13	-14	-17	-18	-19	-21	-19	-17	-16	-16	-15	-15	-15	-16	-18	-19	-21	-22	-23	-24	-16.9	-11.3
9-Jan	-25	-26	-27	-27	-28	-28	-27	-26	-27	-24	-22	-19	-16	-14	-12	-12	-12	-14	-16	-17	-16	-17	-17	-17	-20.3	-11.9
10-Jan	-17	-15	-15	-14	-14	-14	-13	-12	-12	-13	-13	-11	-9	-6	-2	-1	-2	-2	-3	-4	-4	-4	-4	-5	-8.7	-0.8
11-Jan	-6	-7	-8	-9	-10	-10	-11	-11	-12	-12	-12	-12	-11	-10	-10	-10	-10	-11	-11	-11	-10	-10	-10	-9	-10.1	-5.8
12-Jan	-9	-9	-7	-8	-9	-9	-10	-10	-11	-11	-9	-7	-4	-2	0	1	0	-2	-3	-4	-5	-6	-7	-8	-6.3	0.7
13-Jan	-8	-7	-6	-6	-5	-5	-4	-4	-3	-3	-2	-1	0	1	1	1	1	1	1	1	1	1	1	1	-1.7	1.3
14-Jan	0	-3	-6	-8	-9	-10	-11	-11	-12	-12	-12	-12	-12	-13	-13	-13	-13	-14	-14	-14	-14	-15	-15	-15	-11.3	-0.3
15-Jan	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15	-14	-14	-13	-13	-13	-14	-14	-14	-14	-14	-14	-15	-15	-14.5	-13.1
16-Jan	-15	-15	-16	-17	-20	-22	-23	-23	-24	-25	-24	-23	-20	-16	-14	-14	-14	-14	-15	-15	-16	-17	-17	-18	-18.2	-13.7
17-Jan	-18	-19	-18	-17	-17	-17	-17	-17	-17	-17	-16	-15	-14	-12	-11	-11	-11	-12	-12	-12	-13	-13	-13	-13	-14.6	-10.7
18-Jan	-13	-13	-13	-13	-12	-13	-13	-14	-15	-15	-14	-11	-11	-10	-8	-7	-7	-9	-11	-13	-14	-14	-15	-16	-12.2	-7.0
19-Jan	-17	-18	-17	-17	-17	-17	-17	-16	-16	-15	-14	-14	-14	-13	-12	-12	-12	-12	-11	-12	-12	-12	-12	-12	-14.1	-11.2
20-Jan	-12	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-10	-9	-9	-8	-8	-8	-9	-11	-12	-13	-11	-11	-13	-10.6	-7.9
21-Jan	-15	-16	-16	-16	-17	-15	-12	-12	-11	-11	-9	-8	-7	-6	-5	-5	-5	-6	-7	-8	-10	-9	-8	-8	-10.1	-4.7
22-Jan	-7	-8	-7	-6	-6	-6	-6	-5	-5	-4	-4	-3	-2	-2	-2	-2	-2	-3	-4	-4	-4	-3	-4	-4	-4.3	-1.7
23-Jan	-4	-4	-5	-6	-6	-6	-6	-5	-6	-6	-5	-3	-2	-1	0	0	0	-2	-4	-5	-7	-7	-8	-8	-4.3	0.2
24-Jan	-9	-9	-9	-10	-10	-11	-12	-14	-15	-15	-13	-9	-5	-3	-1	0	0	-3	-6	-7	-9	-10	-10	-10	-8.3	-0.2
25-Jan	-11	-11	-12	-12	-12	-12	-13	-12	-12	-12	-12	-10	-7	-4	-3	-2	-2	-3	-5	-5	-6	-6	-6	-5	-8.1	-2.0
26-Jan	-4	-4	-2	-2	-2	-2	-1	-1	1	1	1	2	3	4	5	7	7	7	6	6	5	5	5	5	2.2	7.4
27-Jan	4	4	2	2	2	2	0	-1	0	0	1	2	5	7	8	8	7	6	5	5	4	4	4	4	3.7	8.4
28-Jan	3	3	2	1	2	2	3	4	4	4	4	6	8	9	10	10	8	7	6	5	5	5	5	5	5.0	10.4
29-Jan	5	5	5	4	4	3	2	2	0	0	2	4	5	5	6	6	5	4	1	-1	-3	-3	-4	-5	2.1	5.7
30-Jan	-5	-7	-7	-8	-8	-8	-8	-9	-10	-9	-6	-3	0	1	2	2	0	0	-1	-1	-3	-5	-7	-8	-4.5	1.8
31-Jan	-7	-7	-7	-6	-6	-5	-5	-4	-3	-2	-2	-2	-1	-1	-1	-1	-1	-2	-3	-3	-3	-4	-5	-6	-3.5	-0.8
																									Diurnal Average	
																									Diurnal Maximum	

Hourly Averages

External Temperature (ET) - °C
Valleyview - January 2016



Hourly Averages

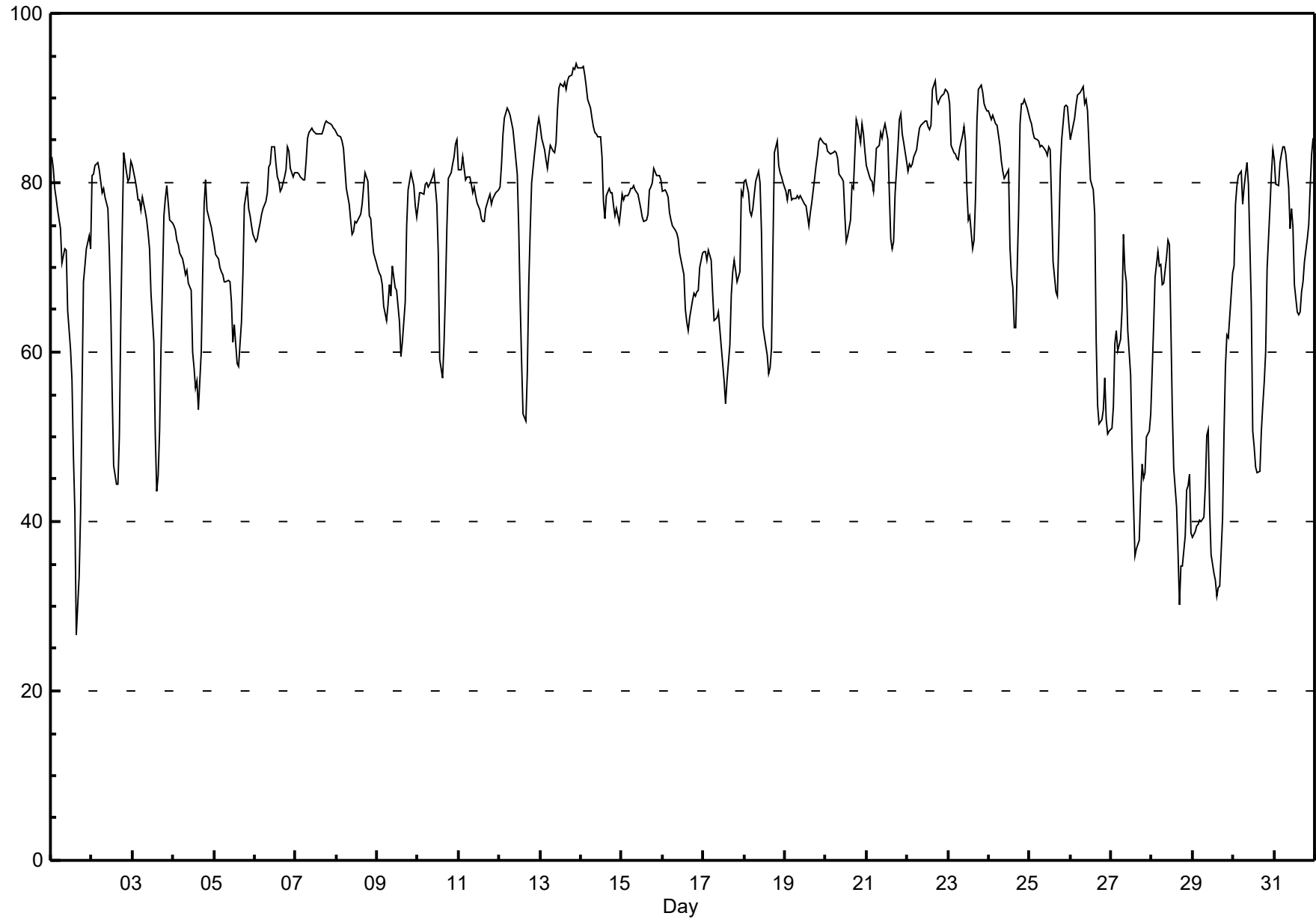
Relative Humidity (RH) - %

Valleyview - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 94.0 % on Jan 13 22:00 Maximum Daily Average: 88.8 % on Jan 13																								Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 27 % on Jan 1 16:00 Maximum Diurnal Average: 78.2 % at hour 4 Monthly Average: 74.29 %												Minimum Daily Average: 44.5 % on Jan 29 Minimum Diurnal Average: 62.9 % at hour 16 Percentiles: P ₁ = 33.9 P ₁₀ = 53.7 Q ₁ = 68.7 Median = 78.2 Q ₃ = 83.4 P ₉₀ = 87.1 P ₉₉ = 93.2														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jan	83	82	79	78	77	75	71	71	72	72	65	60	57	48	41	27	34	41	55	68	70	72	74	72	64.3	83.0
2-Jan	81	81	82	82	81	80	79	79	78	77	72	65	55	47	44	44	50	64	74	84	81	80	80	83	71.9	83.6
3-Jan	82	80	79	78	78	77	78	77	76	74	72	67	61	50	44	45	51	61	76	78	80	78	76	75	70.5	82.0
4-Jan	75	74	73	73	72	71	70	69	70	68	67	60	58	56	57	53	60	69	77	80	77	75	75	74	68.9	80.4
5-Jan	73	72	71	70	69	69	68	68	69	68	66	61	63	59	58	61	64	69	77	80	77	76	75	74	69.0	79.5
6-Jan	73	73	74	75	76	77	78	79	82	82	84	84	82	81	80	79	79	81	82	84	84	82	81	81	79.7	84.3
7-Jan	81	81	81	81	80	80	83	85	86	86	86	86	86	86	86	86	86	87	87	87	87	87	86	86	84.8	87.2
8-Jan	86	86	85	85	84	82	79	77	76	74	74	75	75	76	76	77	79	81	80	76	76	73	72	71	78.2	86.0
9-Jan	70	69	69	68	65	64	66	68	67	70	68	67	65	64	60	61	66	75	79	80	81	80	77	76	69.8	81.2
10-Jan	77	79	79	79	80	80	80	80	81	81	79	77	72	59	57	61	67	75	81	81	82	83	85	85	76.6	85.0
11-Jan	82	81	83	82	80	81	81	80	79	79	79	78	77	76	75	75	77	78	79	77	78	78	79	79	78.9	83.1
12-Jan	79	82	86	88	89	88	88	87	86	85	81	75	66	59	53	52	58	68	74	80	83	85	87	88	77.7	88.9
13-Jan	87	85	84	83	82	83	84	84	84	85	89	91	92	91	92	91	92	92	93	94	93	94	94	93	88.8	94.0
14-Jan	93	94	93	91	90	89	88	87	86	86	85	85	83	78	76	78	79	79	79	77	76	77	75	77	83.4	93.8
15-Jan	79	78	78	78	79	79	79	80	79	79	78	77	76	75	76	76	79	79	80	82	81	81	81	80	78.7	81.7
16-Jan	79	79	79	78	77	76	75	74	74	73	72	71	69	65	64	63	64	66	67	67	67	67	70	72	71.1	79.2
17-Jan	72	72	71	72	71	67	64	64	64	65	61	59	57	54	57	61	67	70	71	70	68	69	79	78	66.7	79.0
18-Jan	80	80	79	77	76	77	79	80	81	80	74	63	62	60	58	58	61	73	84	85	82	81	81	80	74.5	84.9
19-Jan	79	78	79	79	78	78	78	78	78	79	78	77	77	76	75	76	78	81	82	83	85	85	85	85	79.5	85.2
20-Jan	85	84	84	83	84	84	84	83	81	80	80	76	73	74	76	80	79	83	87	87	85	87	86	84	82.0	87.5
21-Jan	82	81	80	80	79	81	84	84	86	85	86	87	85	79	73	72	73	79	84	87	88	86	85	83	82.1	88.1
22-Jan	81	82	82	82	83	84	85	86	87	87	87	87	87	86	87	91	92	90	89	90	90	91	91	91	87.0	92.0
23-Jan	91	89	84	84	83	83	83	84	86	87	85	79	76	76	72	73	78	87	91	92	91	89	89	88	84.2	91.6
24-Jan	88	87	88	87	87	87	84	83	81	81	81	82	72	69	68	63	63	76	87	89	89	90	89	88	81.6	89.8
25-Jan	87	87	86	85	85	85	84	84	84	84	83	84	84	77	71	67	67	74	81	85	89	89	89	87	82.5	89.2
26-Jan	85	86	88	89	90	91	91	91	89	90	88	84	80	79	76	62	54	52	52	53	57	52	50	51	74.2	91.4
27-Jan	51	54	61	62	60	62	65	74	70	68	63	57	49	42	36	37	38	43	47	45	46	50	51	53	53.4	73.9
28-Jan	58	63	69	72	70	70	68	68	71	73	73	63	53	46	42	36	30	35	35	38	44	44	46	39	54.4	73.2
29-Jan	38	39	39	40	40	40	41	44	50	51	42	36	34	33	31	32	32	40	50	58	62	62	64	69	44.5	69.3
30-Jan	70	78	80	81	81	78	79	81	82	80	66	51	49	47	46	46	51	54	56	60	70	77	81	84	67.7	83.9
31-Jan	83	80	80	82	83	84	84	83	80	75	77	75	68	65	64	65	67	68	71	73	75	80	83	85	76.3	85.3
77.7 78.0 78.2 78.2 77.8 77.4 77.4 77.9 77.9 77.5 75.5 72.3 69.1 65.5 63.5 62.9 65.0 70.0 74.5 76.5 77.2 77.4 77.8 77.7																								Diurnal Average		
93.5 93.8 92.7 91.4 90.3 90.5 90.7 91.4 89.3 89.8 88.6 91.1 91.6 91.3 91.9 91.1 92.1 92.5 92.7 93.5 93.4 94.0 93.6 93.5																								Diurnal Maximum		

Hourly Averages

Relative Humidity (RH) - %
Valleyview - January 2016



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Valleyview - January 2016

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	3	4	5	4	4	4	4	4	4	4	4	4	4	2	1	5	0	2	1	1	2	2	2	1	2.6	4.7
Dir	206	190	188	190	191	187	209	205	197	178	197	190	179	173	102	302	175	199	155	181	207	193	180	156	194	188
2 Spd	1	2	0	1	2	1	1	1	0	1	1	2	1	1	1	1	0	0	0	1	1	0	1	1	0.8	2.0
Dir	239	200	223	206	200	198	209	161	258	206	217	228	245	216	200	183	182	184	188	146	215	131	206	194	206	200
3 Spd	1	1	0	0	1	1	1	1	1	1	0	2	3	2	1	1	2	1	1	0	1	0	1	1	0.7	2.5
Dir	193	166	229	165	164	186	194	163	189	170	179	180	174	168	219	315	337	277	173	250	183	166	179	164	185	174
4 Spd	1	2	1	2	1	1	1	0	0	0	1	1	1	1	2	1	1	1	1	0	0	0	1	1	0.4	1.9
Dir	190	188	198	192	190	183	185	170	353	176	202	165	175	192	347	311	332	24	334	6	212	83	210	160	199	347
5 Spd	1	1	0	0	0	0	0	0	1	1	0	0	1	1	1	2	3	1	0	0	1	0	0	1	0.2	3.0
Dir	341	168	124	298	3	221	222	245	121	334	262	62	12	88	349	9	349	354	269	217	162	169	324	172	5	349
6 Spd	1	0	0	1	1	1	1	1	1	0	0	1	1	0	2	2	1	2	0	0	1	1	2	1	0.2	2.5
Dir	177	188	188	182	149	154	154	163	60	277	171	144	220	158	349	328	326	15	38	348	316	259	337	31	341	15
7 Spd	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	2	3	3	3	4	4	4	5	1.4	5.0
Dir	294	238	185	153	126	42	335	298	122	153	160	164	163	165	146	132	105	125	154	159	166	162	163	168	155	168
8 Spd	4	3	3	2	1	0	0	0	0	0	0	0	1	3	3	3	3	2	0	0	1	0	0	0	0.2	4.2
Dir	163	129	123	79	70	152	178	191	133	161	237	131	332	332	335	331	337	334	13	81	342	267	137	43	26	163
9 Spd	0	0	0	0	1	0	0	0	0	0	0	0	2	2	2	2	1	0	0	1	2	1	0	0	0.6	2.1
Dir	168	277	225	174	168	174	151	202	146	141	165	167	171	180	210	235	241	229	177	200	189	331	57	166	196	189
10 Spd	1	1	0	0	1	3	4	4	0	1	0	1	0	1	2	1	1	1	0	0	0	1	0	4	0.7	4.4
Dir	197	186	237	170	214	188	176	168	137	166	193	176	98	148	153	121	135	219	179	63	247	195	152	20	167	20
11 Spd	11	7	9	8	9	8	8	8	7	6	5	5	4	5	3	4	4	4	2	1	1	0	1	0	4.9	10.7
Dir	6	353	356	353	0	8	357	4	11	28	29	15	9	8	4	2	348	353	338	352	303	230	27	322	3	6
12 Spd	0	2	3	3	2	2	2	2	2	1	2	4	4	3	2	1	1	1	0	0	0	0	0	0	1.5	3.6
Dir	12	185	185	189	193	200	209	202	196	185	194	190	179	181	181	198	205	193	256	271	334	165	187	161	191	179
13 Spd	0	0	0	1	0	1	2	1	0	0	1	1	1	0	2	7	7	5	5	4	1	0	0	3	1.3	7.0
Dir	182	166	54	347	149	47	340	0	157	176	191	187	145	187	307	302	297	281	263	232	209	260	259	294	279	302
14 Spd	5	11	11	9	7	8	6	8	9	6	8	7	9	7	9	8	7	6	7	7	5	5	5	4	7.1	10.6
Dir	339	0	3	19	21	24	25	20	19	17	24	22	15	18	359	1	12	19	14	12	15	19	12	20	13	0
15 Spd	3	2	2	3	2	2	2	2	1	1	1	2	3	3	2	2	2	1	1	3	4	4	6	6	2.4	6.0
Dir	352	5	24	3	4	5	3	24	9	340	14	351	25	359	326	354	294	15	292	0	17	353	353	9	360	353
16 Spd	4	3	5	5	6	5	3	3	3	3	3	3	3	3	6	7	8	5	3	5	6	7	4	3	1.8	7.7
Dir	14	24	7	28	22	16	4	22	359	360	330	337	333	130	127	128	126	126	140	139	147	149	161	175	84	126
17 Spd	6	6	7	7	7	7	6	6	6	5	5	10	7	4	4	2	4	5	6	7	6	5	5	6	5.7	10.1
Dir	171	166	167	158	160	168	166	161	169	160	161	164	158	163	163	168	168	167	162	169	167	168	178	177	166	164
18 Spd	5	5	6	4	3	2	1	1	0	0	1	2	2	2	3	2	1	1	1	4	3	3	2	1	0.5	5.6
Dir	176	168	169	168	174	179	192	188	248	261	223	183	319	325	264	271	34	332	351	342	348	2	350	337	216	169
19 Spd	0	0	1	1	0	1	1	1	0	1	0	1	2	2	2	5	2	3	5	8	4	5	5	4	1.8	8.0
Dir	121	25	17	11	92	237	149	158	126	54	13	345	9	332	337	333	7	341	347	347	12	340	4	8	353	347
20 Spd	1	2	2	0	1	0	0	1	1	1	1	2	2	1	2	1	1	0	0	1	0	2	0	0	0.4	2.2
Dir	274	272	329	90	169	174	167	250	286	294	188	164	190	190	153	172	102	346	322	317	183	148	142	5	216	272
21 Spd	0	1	0	0	0	0	0	0	1	1	2	2	3	4	6	4	1	0	1	0	2	2	2	2	1.2	5.8
Dir	294	289	327	213	169	203	277	292	239	178	195	182	179	184	168	168	183	336	285	140	175	240	167	181	184	168
22 Spd	1	1	1	0	1	1	1	0	0	1	0	3	2	3	2	4	10	8	7	3	5	3	5	3	2.1	9.8
Dir	190	175	307	231	236	136	156	221	125	162	3	32	2	355	324	350	18	23	17	10	340	11	349	343	5	18

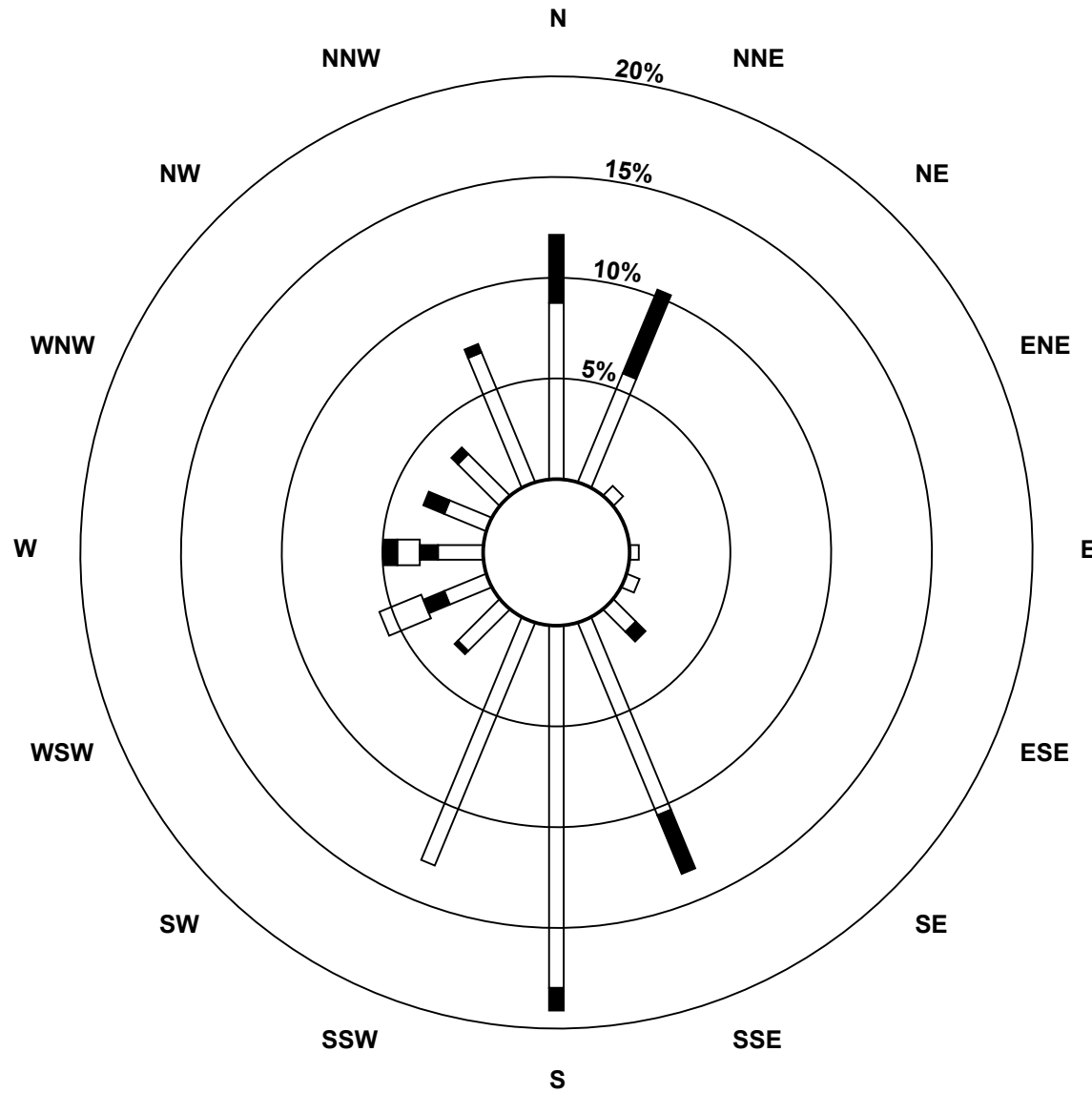
Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Valleyview - January 2016

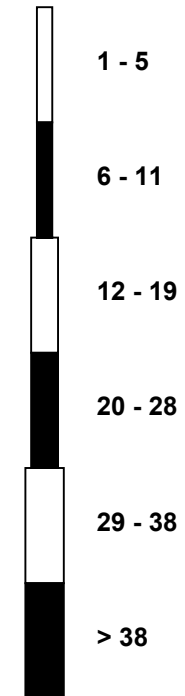
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
23 Spd	1	3	7	6	4	5	3	1	0	0	1	0	1	2	1	1	0	0	0	0	0	0	0	1	1.1	6.6			
Dir	13	294	273	271	262	257	249	218	151	139	160	185	28	195	163	229	271	228	162	188	185	270	152	344	260	273			
24 Spd	0	0	0	0	0	1	1	0	1	0	1	1	1	1	4	2	0	0	0	1	1	1	1	1	0.6	3.5			
Dir	83	4	333	204	189	212	168	182	11	268	164	186	182	202	245	243	233	212	149	191	194	201	195	209	210	245			
25 Spd	2	2	1	1	1	1	1	2	2	1	1	2	2	2	2	1	1	0	1	1	1	1	1	2	1.3	2.5			
Dir	206	196	207	195	203	200	197	198	198	206	205	188	177	181	219	214	264	183	234	202	213	215	206	174	199	188			
26 Spd	1	2	1	0	2	3	1	1	2	3	3	3	4	1	2	7	11	16	16	16	17	17	11	9	5.6	17.2			
Dir	188	194	181	174	210	199	210	185	192	175	179	180	182	186	208	255	258	256	258	252	249	254	257	259	243	254			
27 Spd	8	4	2	3	1	2	2	3	2	3	3	3	3	4	4	3	2	1	2	4	3	2	4	2	2.5	7.6			
Dir	253	233	169	146	204	221	220	155	197	190	197	173	170	171	167	177	171	178	191	186	179	178	177	183	190	253			
28 Spd	1	0	0	0	1	1	2	2	1	1	1	4	1	3	12	14	20	12	14	12	9	14	17	21	6.3	21.0			
Dir	221	299	232	205	215	193	195	185	242	180	233	181	182	230	273	273	267	258	245	239	235	241	249	265	251	265			
29 Spd	22	19	19	16	10	7	5	3	2	1	1	0	0	7	9	6	3	1	0	0	1	3	0	1	5.0	21.7			
Dir	267	269	270	270	267	247	252	235	164	148	186	55	354	283	288	299	324	47	122	195	190	197	50	167	267	267			
30 Spd	0	0	1	0	1	0	1	0	1	2	1	1	1	1	5	3	2	0	2	1	1	1	1	0	0.7	5.4			
Dir	188	216	225	281	210	184	23	9	29	196	166	205	202	200	264	269	261	4	294	295	161	171	165	175	239	264			
31 Spd	0	0	1	1	0	1	1	0	1	1	1	2	4	6	6	8	3	4	5	3	1	1	0	0	1.7	7.7			
Dir	82	191	348	17	224	194	163	160	293	285	347	24	309	318	315	331	310	313	22	42	8	314	312	95	332	331			
Spd	1.0	0.9	0.7	0.4	0.4	0.5	0.5	0.3	0.0	0.3	0.4	0.8	0.2	0.4	1.1	1.7	1.4	0.9	0.9	0.8	0.9	1.1	0.9	0.9	Diurnal Average				
Dir	261	254	278	274	238	211	217	163	148	154	178	166	172	238	273	298	301	293	273	257	225	235	248	251	Diurnal Maximum				
Spd	21.7	19.5	18.6	15.7	10.1	7.9	7.7	8.3	8.7	6.5	7.8	10.1	9.1	7.3	11.5	13.6	20.5	15.6	15.6	15.6	17.2	17.2	16.6	21.0	Diurnal Maximum				
Dir	267	269	270	270	267	8	357	20	19	28	24	164	15	18	273	273	267	256	258	252	249	254	249	265					
Maximum Speed Value: 22 km/h on Jan 29 01:00																		Minimum Speed Value: 0 km/h on Jan 8 08:00										Hours in Service: 744	
Maximum Daily Speed Average: 7.1 km/h on Jan 14																		Minimum Daily Speed Average: 0.2 km/h on Jan 9										Hours of Data: 744	
Maximum Diurnal Speed Average: 1.7 km/h at hour 16																		Minimum Diurnal Speed Average: 0.0 km/h at hour 9										Hours of Missing Data: 0	
Monthly Average Velocity: 0.58 km/h 254.5 deg																		Speed Percentiles: P ₁ = 0.0 P ₁₀ = 0.2 Q ₁ = 0.6 Median = 1.3 Q ₃ = 3.4 P ₉₀ = 6.3 P ₉₉ = 17.1										Percent Operational Time: 100.0	
All monthly, daily, and diurnal averages have been calculated using vector methods																													
Frequency Distribution																													
Speed Range (km/h)																													
Direction	0 to 5		5 to 11		11 to 19		19 to 28		28 to 38		> 38		Total																
North	93		35		0		0		0		0		128																
NorthEast	29		6		0		0		0		0		35																
East	14		0		0		0		0		0		14																
SouthEast	57		6		0		0		0		0		63																
South	255		21		0		0		0		0		276																
SouthWest	90		2		3		0		0		0		95																
West	38		11		13		4		0		0		66																
NorthWest	61		6		0		0		0		0		67																
Total	637		87		16		4		0		0		744																

Wind Rose

Wind Speed (WS) (km/h)
Valleyview - January 2016



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Valleyview - January 2016

Maximum Speed: 22 km/h on Jan 29 01:00																				Maximum Daily Speed Average: 7.3 km/h on Jan 28										Hours in Service: 744	
Minimum Speed: 0 km/h on Jan 8 08:00																				Minimum Daily Speed Average: 0.8 km/h on Jan 9										Hours of Data: 744	
Maximum Diurnal Speed Average: 3.7 km/h at hour 16																				Minimum Diurnal Speed Average: 1.7 km/h at hour 10										Hours of Missing Data: 0	
Monthly Average Speed: 2.71 km/h																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.4 Q ₁ = 0.8 Median = 1.5 Q ₃ = 3.6 P ₉₀ = 6.5 P ₉₉ = 17.2										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Jan	3	4	5	4	4	4	4	4	4	4	4	4	4	3	2	5	1	2	2	1	2	2	2	1	3.2	5.0					
2-Jan	1	2	1	1	2	2	1	1	0	1	1	2	1	1	2	1	0	1	1	1	1	0	1	1	1.0	2.1					
3-Jan	1	1	0	1	1	1	1	1	1	1	1	2	3	2	1	1	2	1	1	1	1	1	1	2	1.1	2.6					
4-Jan	1	2	1	2	1	1	1	0	1	0	1	1	1	2	2	1	1	1	1	1	0	1	1	1	1.0	2.2					
5-Jan	1	1	1	1	0	1	0	0	1	1	1	1	1	2	1	2	3	1	1	1	1	1	1	1	1.0	3.1					
6-Jan	1	0	1	1	1	1	1	1	1	0	1	1	1	1	3	2	2	3	0	1	1	1	2	1	1.0	2.6					
7-Jan	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	2	4	3	4	5	4	4	5	1.6	5.2					
8-Jan	4	3	3	2	1	1	0	0	0	0	0	0	1	3	3	3	3	2	1	0	1	0	0	0	1.3	4.3					
9-Jan	0	0	1	0	1	0	0	0	1	0	0	0	2	2	2	2	1	0	0	1	2	1	0	0	0.8	2.3					
10-Jan	1	1	1	0	1	3	4	4	1	1	0	1	1	1	2	1	1	1	1	1	0	1	1	5	1.3	4.7					
11-Jan	11	7	9	8	9	8	8	8	7	7	5	5	5	5	4	5	4	4	3	2	1	1	1	1	5.3	10.8					
12-Jan	0	2	3	3	2	2	2	2	2	1	2	4	4	3	2	1	1	1	1	0	0	1	1	1	1.7	3.7					
13-Jan	0	0	0	1	0	1	3	1	0	0	1	1	1	0	2	7	7	5	5	4	1	1	1	4	2.1	7.1					
14-Jan	5	11	11	9	7	8	6	8	9	7	8	7	9	7	9	8	8	6	7	7	5	5	5	4	7.3	10.7					
15-Jan	3	2	3	3	2	2	2	2	1	1	1	2	3	3	2	3	3	1	1	4	4	4	6	6	2.6	6.2					
16-Jan	4	3	5	5	6	5	3	3	3	3	3	3	3	4	6	7	8	5	3	5	6	7	5	3	4.5	7.8					
17-Jan	6	6	7	7	8	7	6	6	6	5	5	10	7	4	4	2	4	5	6	7	6	5	5	6	5.9	10.2					
18-Jan	5	6	6	4	3	2	1	1	0	0	1	2	3	2	3	2	1	1	1	4	3	3	2	1	2.4	5.7					
19-Jan	0	0	1	1	0	1	1	1	0	1	0	1	2	2	2	5	2	3	5	8	5	5	5	4	2.3	8.2					
20-Jan	1	2	2	0	1	1	0	1	2	2	1	2	2	2	2	2	1	1	1	1	0	2	0	0	1.2	2.4					
21-Jan	0	1	1	0	0	0	0	1	1	1	2	2	3	4	6	4	1	1	1	0	2	2	3	2	1.6	5.9					
22-Jan	1	1	1	1	1	1	1	0	0	1	1	3	3	3	3	4	10	8	7	4	5	3	5	4	2.9	10.0					
23-Jan	1	3	7	6	4	5	3	1	0	1	1	1	1	2	2	1	0	0	0	0	0	0	0	1	1.7	6.8					
24-Jan	0	1	1	1	0	1	1	0	2	0	1	1	1	1	4	2	0	0	1	1	1	1	1	1	0.9	3.6					
25-Jan	2	2	1	1	1	1	1	2	2	1	1	3	2	2	2	1	1	0	1	1	1	1	1	2	1.4	2.5					
26-Jan	1	2	2	0	2	3	1	2	3	3	3	3	4	1	2	7	12	16	16	16	17	17	11	9	6.4	17.3					
27-Jan	8	4	2	3	1	2	2	3	2	3	3	3	3	4	4	3	2	1	2	4	3	2	4	2	2.9	7.8					
28-Jan	1	1	1	0	1	1	3	4	3	2	3	4	1	5	12	14	21	12	14	12	9	14	17	21	7.3	21.3					
29-Jan	22	20	19	16	10	7	5	3	2	1	1	1	2	7	9	6	3	1	1	1	1	3	1	2	6.0	22.0					
30-Jan	0	1	1	1	1	0	1	1	2	2	1	1	1	1	6	3	2	1	2	2	1	1	1	1	1.4	5.6					
31-Jan	0	0	1	2	1	1	1	1	1	2	2	2	4	7	6	8	3	4	6	3	1	1	1	0	2.4	7.7					
2.8 2.9 3.1 2.7 2.4 2.4 2.1 2.0 1.9 1.7 1.8 2.4 2.5 2.8 3.5 3.7 3.6 3.0 2.9 3.1 2.9 2.9 2.9 3.0																									Diurnal Average						
22.0 19.6 18.7 15.8 10.3 8.0 7.7 8.5 8.9 6.6 7.9 10.2 9.3 7.5 11.7 13.9 20.8 15.8 15.7 15.7 17.3 17.3 16.7 21.3																									Diurnal Maximum						

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

Hourly Standard Deviations

Wind Direction (WD) - deg

Valleyview - January 2016

Maximum Value: 97.4 deg on Feb 1 00:00																		Hours in Service: 744							
Minimum Value: 6.1 deg on Jan 26 21:00																		Hours of Data: 744							
																		Hours of Missing Data: 0							
																		Hours of Calibration: 0							
																		Percent Operational Time: 100.0							
Percentiles: P ₁ = 6.9 P ₁₀ = 9.8 Q ₁ = 13.6 Median = 26.4 Q ₃ = 55.3 P ₉₀ = 78.9 P ₉₉ = 95.0																									
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	22	19	17	8	7	10	13	14	14	8	16	11	14	39	57	34	90	50	36	27	17	7	21	68	90.3
2-Jan	53	11	62	18	9	30	24	62	66	12	20	31	30	51	38	27	85	63	48	41	70	79	41	13	85.3
3-Jan	19	27	42	28	24	14	16	42	16	15	49	14	11	15	49	47	69	59	18	94	30	77	48	20	94.0
4-Jan	18	22	15	18	21	18	25	85	90	45	36	44	59	58	39	50	58	48	65	81	71	81	55	60	89.6
5-Jan	47	62	63	96	95	78	91	90	61	43	78	95	51	59	38	15	15	25	34	52	21	73	86	31	95.9
6-Jan	26	86	58	17	13	13	37	27	49	46	85	30	52	93	20	38	44	12	30	67	34	36	21	74	92.6
7-Jan	61	48	89	59	97	48	68	96	19	27	19	26	27	63	56	70	29	13	18	19	14	15	14	12	96.5
8-Jan	15	18	13	25	48	83	53	85	81	27	42	77	22	12	11	7	15	51	79	94	27	83	61	91	93.7
9-Jan	56	85	88	74	45	55	35	53	69	46	76	42	20	22	27	26	16	71	26	14	46	60	84	67	87.9
10-Jan	28	32	89	80	39	10	16	13	75	45	72	48	77	50	20	51	52	31	52	50	78	37	46	32	88.8
11-Jan	10	9	8	8	11	9	9	8	10	13	14	20	16	13	19	14	13	8	62	72	70	66	64	81	80.5
12-Jan	92	21	10	7	11	10	13	33	20	59	16	10	19	7	19	44	49	17	80	94	73	78	91	63	93.7
13-Jan	43	66	69	91	48	78	93	77	65	29	20	15	21	64	52	14	14	21	15	20	42	89	68	42	92.6
14-Jan	14	7	7	13	10	12	12	11	12	11	11	11	9	14	10	11	11	11	10	12	12	12	13	14	14.1
15-Jan	34	20	16	12	16	16	17	19	21	16	33	24	27	24	18	33	22	37	84	49	16	21	15	13	83.7
16-Jan	11	17	13	14	9	8	10	12	10	12	9	14	14	88	10	8	7	8	17	12	13	11	22	15	87.6
17-Jan	9	7	9	9	10	8	10	11	10	14	13	9	13	14	14	18	12	11	10	9	11	14	12	12	17.8
18-Jan	11	10	9	10	10	10	9	25	60	62	56	25	32	31	20	29	25	35	41	8	19	14	23	48	62.3
19-Jan	81	61	16	54	82	86	29	33	53	31	48	28	28	29	12	9	45	24	14	14	31	13	12	36	86.3
20-Jan	25	23	18	58	34	74	25	39	37	60	21	22	24	69	26	26	44	63	89	56	59	20	52	95	94.8
21-Jan	87	65	93	65	97	89	81	75	25	60	23	7	10	13	9	14	38	95	87	93	41	47	38	15	96.7
22-Jan	35	35	65	70	72	61	54	93	54	56	87	11	17	19	24	30	10	13	9	26	35	17	14	29	93.1
23-Jan	26	30	13	24	17	12	25	48	41	16	14	65	64	33	80	48	67	29	62	84	35	42	41	45	84.1
24-Jan	84	87	83	45	37	46	63	83	93	77	63	43	39	31	18	18	46	78	45	23	17	11	20	13	93.0
25-Jan	10	10	11	17	19	15	20	10	10	18	19	9	13	19	31	45	50	65	36	12	12	37	21	23	64.5
26-Jan	20	16	38	42	19	14	38	47	42	7	9	8	8	8	31	11	8	9	7	7	6	7	11	10	46.5
27-Jan	14	17	25	22	20	15	16	17	13	39	11	12	8	9	10	11	20	17	13	7	10	20	11	11	38.7
28-Jan	48	69	61	69	15	42	54	59	84	65	69	27	30	41	11	14	10	22	19	14	13	11	7	9	83.5
29-Jan	9	8	8	8	12	11	19	19	48	25	46	83	86	14	11	13	31	44	86	32	15	11	74	50	86.1
30-Jan	56	62	25	68	64	60	93	84	94	18	51	33	37	44	16	29	20	52	36	87	33	27	29	47	94.2
31-Jan	88	72	74	58	82	26	17	79	67	64	66	46	20	9	12	7	12	16	12	10	17	42	70	97	97.4
91.6 87.0 93.4 95.9 96.7 89.3 93.3 95.7 94.2 76.7 86.6 95.1 85.6 92.6 80.0 69.6 90.3 95.2 88.7 94.0 78.2 89.4 90.8 97.4																									

PAZA

Falher Station

Monthly Summary Tables, Graphs and
Roses

Hourly Averages

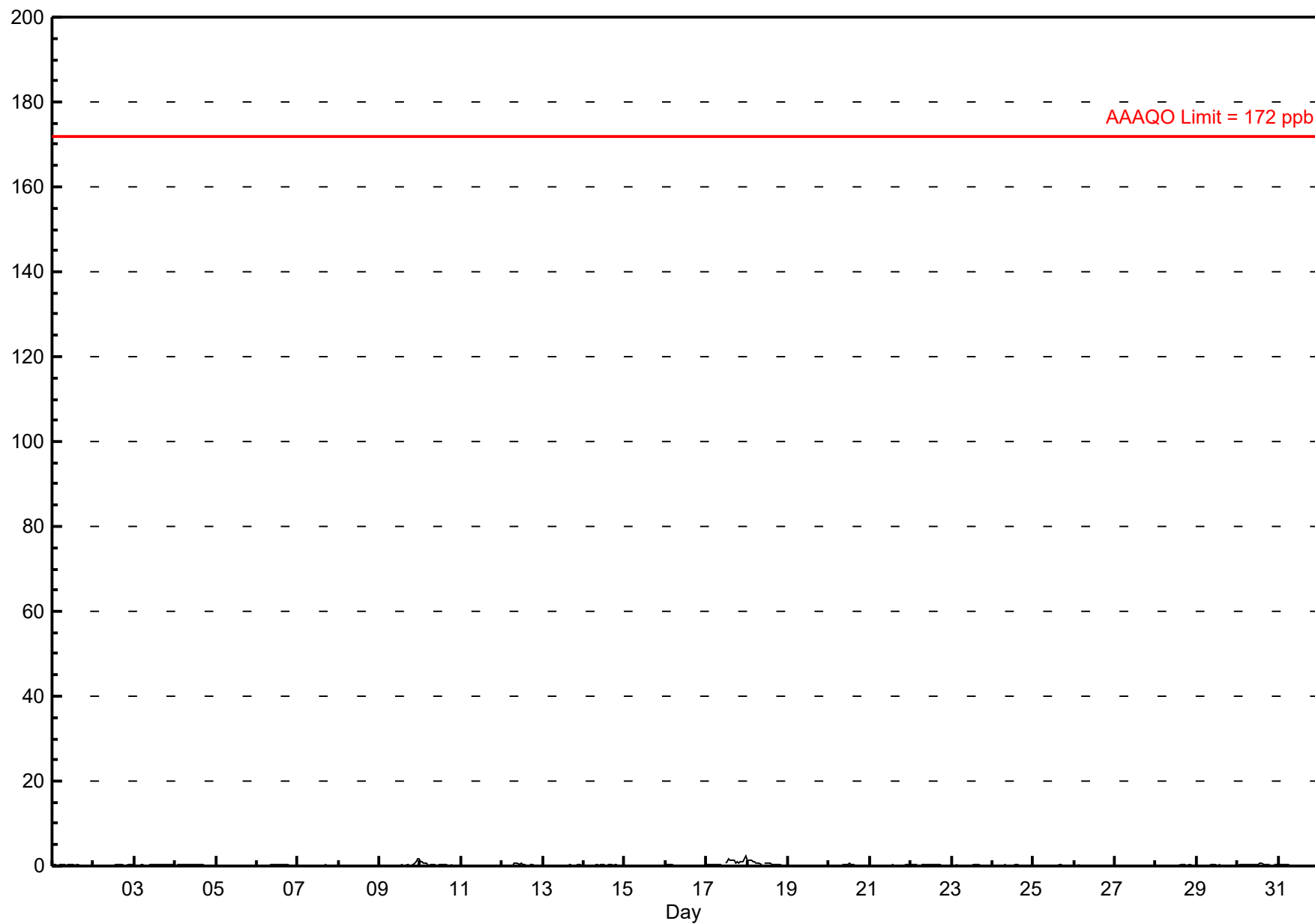
Sulphur Dioxide (SO₂) - ppb

Falher - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 744							
Maximum Value: 2.2 ppb on Jan 18 00:00																				Maximum Daily Average: 0.8 ppb on Jan 17		Hours of Data: 708					
Minimum Value: 0 ppb on Jan 5 09:00																				Minimum Daily Average: 0.0 ppb on Jan 15		Hours of Missing Data: 36					
Maximum Diurnal Average: 0.3 ppb at hour 14																				Minimum Diurnal Average: 0.1 ppb at hour 6		Hours of Calibration: 36					
Monthly Average: 0.18 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.4 P ₉₉ = 1.3		Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-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	0.2	0.4
2-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	0.2	0.4
3-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	0.3	0.5
4-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	A	0.2	0.3
5-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	0.1
6-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	0.2	0.3
7-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	0.2
8-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	0.0	0.1
9-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	2	2	0	0.3	1.8
10-Jan	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	1.0
11-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	0.1	0.1
12-Jan	0	0	0	0	0	0	0	1	1	1	0	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.6
13-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	0.1	0.3
14-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
15-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	0.1
16-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	0.1	0.2
17-Jan	0	0	0	0	0	0	0	0	0	0	0	A	1	1	2	1	1	1	1	1	1	1	1	2	2	0.8	2.2
18-Jan	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.6	1.4
19-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	0.1	0.1
20-Jan	0	0	0	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
21-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	0.4
22-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	0.2	0.4
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	0.2	0.5
24-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	0.1	0.3
25-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	0.1	0.2
26-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	0.1	0.2
27-Jan	A	0	0	0	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	A	0.1	0.1
28-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	0.1	0.3
29-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	0.1	0.2
30-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	A	0	0	0	0	0.3	0.5
31-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	0.1	0.3
0.2 0.2 0.2 0.2 0.2 0.1 0.1 0.2 0.2 0.1 0.1 0.2 0.2 0.3 0.2 0.2 0.2 0.2 0.1 0.1 0.1 0.2 0.2 0.2																									Diurnal Average		
1.3 1.4 1.3 1.1 1.0 0.8 0.6 0.6 0.5 0.5 0.5 0.8 1.1 1.5 1.4 1.5 1.2 0.8 0.9 0.8 1.0 1.1 1.8 2.2																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																											

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Falher - January 2016



Hourly Maximums

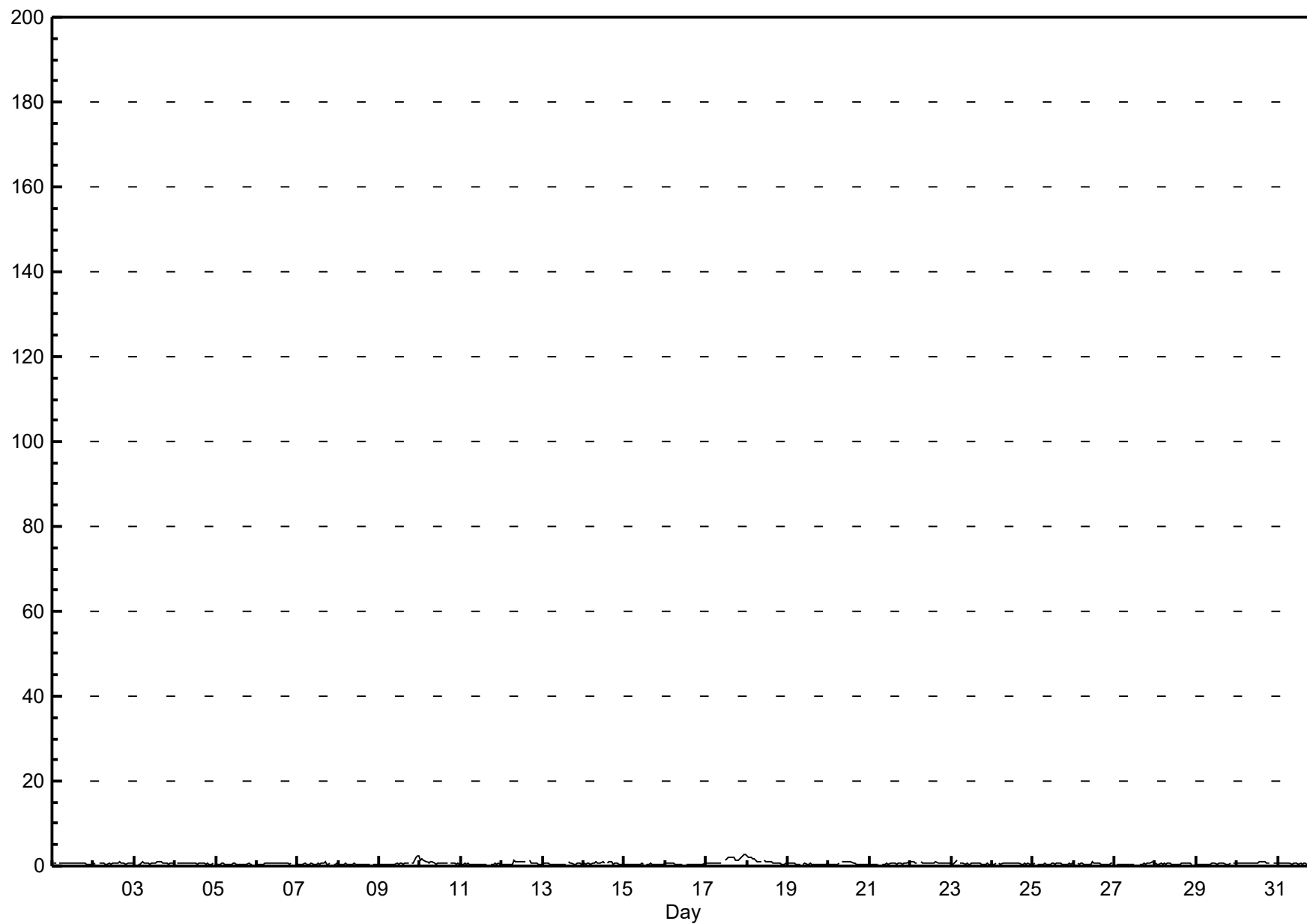
Sulphur Dioxide (SO₂) - ppb

Falher - January 2016

Maximum Value: 2.7 ppb on Jan 18 00:00																				Maximum Daily Average: 1.4 ppb on Jan 17				Hours in Service: 744		
Minimum Value: 0 ppb on Jan 20 03:00																				Minimum Daily Average: 0.4 ppb on Jan 15				Hours of Data: 708		
Maximum Diurnal Average: 0.7 ppb at hour 16																				Minimum Diurnal Average: 0.5 ppb at hour 7				Hours of Missing Data: 36		
Monthly Average: 0.60 ppb																				Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.7 P ₉₀ = 0.9 P ₉₉ = 2.1				Hours of Calibration: 36		
																								Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jan	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0.6	0.8
2-Jan	1	0	A	1	1	1	1	0	0	1	0	1	1	1	1	1	1	1	1	0	1	1	1	1	0.6	1.1
3-Jan	1	A	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0.7	1.0
4-Jan	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	1	0	0	1	A	0.6	0.8
5-Jan	1	0	0	1	1	0	0	0	0	0	1	1	1	0	0	0	0	0	0	1	0	0	A	0	0.4	0.6
6-Jan	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	1	1	0.6	0.8
7-Jan	0	0	0	0	1	0	0	0	1	0	0	0	1	0	1	1	1	0	0	1	A	0	0	1	0.5	0.9
8-Jan	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.4	0.6
9-Jan	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1	1	1	A	1	1	2	2	2	0.7	2.5
10-Jan	1	2	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	A	1	1	1	0	1	0	0.8	1.6
11-Jan	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	0	1	0	0.4	0.7
12-Jan	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0	0	0	0.7	1.2
13-Jan	0	1	1	1	0	0	0	0	0	0	0	0	0	0	A	1	1	1	0	0	1	1	1	0	0.5	0.9
14-Jan	1	0	1	1	0	1	1	1	1	1	1	1	1	A	1	1	1	0	1	1	1	0	0	0	0.7	1.1
15-Jan	0	0	0	0	0	0	0	0	0	0	1	0	A	0	0	1	0	0	0	0	0	0	0	0	0.4	0.6
16-Jan	1	1	1	1	1	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	0.5	0.7
17-Jan	1	1	1	1	1	1	1	1	1	1	1	A	1	2	2	2	2	2	1	1	1	2	2	3	1.4	2.7
18-Jan	2	2	2	2	2	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1.1	2.5
19-Jan	1	1	1	1	1	0	0	0	A	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0.5	0.8
20-Jan	0	0	0	0	0	0	1	A	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.6	1.1
21-Jan	0	0	0	0	1	1	A	0	0	0	1	0	1	1	1	1	0	1	1	0	1	1	1	1	0.6	0.9
22-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	0.7	1.0
23-Jan	0	0	1	1	A	1	1	1	0	1	0	0	1	1	1	1	1	1	0	1	0	1	0	0	0.6	1.4
24-Jan	1	0	1	A	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	1	0	0	0.6	0.8
25-Jan	0	1	A	0	0	0	0	1	0	0	0	1	1	0	1	1	1	0	1	0	0	1	0	1	0.5	0.6
26-Jan	1	A	1	0	1	1	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	1	1	0.5	1.1
27-Jan	A	0	0	0	0	0	0	0	0	0	0	0	C	C	C	0	0	1	0	1	1	1	1	A	0.5	0.9
28-Jan	1	0	0	1	0	1	0	1	1	0	0	1	0	0	0	1	1	1	1	1	1	0	A	0	0.5	0.8
29-Jan	0	0	0	0	0	0	0	1	0	1	1	1	0	1	1	1	1	0	0	0	1	A	1	1	0.5	0.7
30-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	1.1
31-Jan	1	1	1	1	1	1	1	1	0	1	1	1	0	1	0	1	1	0	0	A	0	0	0	0	0.5	0.8
0.6 0.6 0.6 0.6 0.6 0.5 0.5 0.6 0.6 0.5 0.6 0.7 0.7 0.7 0.7 0.7 0.7 0.5 0.5 0.6 0.6 0.6 0.7 0.7																									Diurnal Average	
2.5 2.0 2.0 1.6 1.6 1.2 1.0 1.2 1.1 1.1 1.2 1.5 1.6 2.1 2.0 2.2 1.9 1.4 1.4 1.3 1.5 2.3 2.7 2.7																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

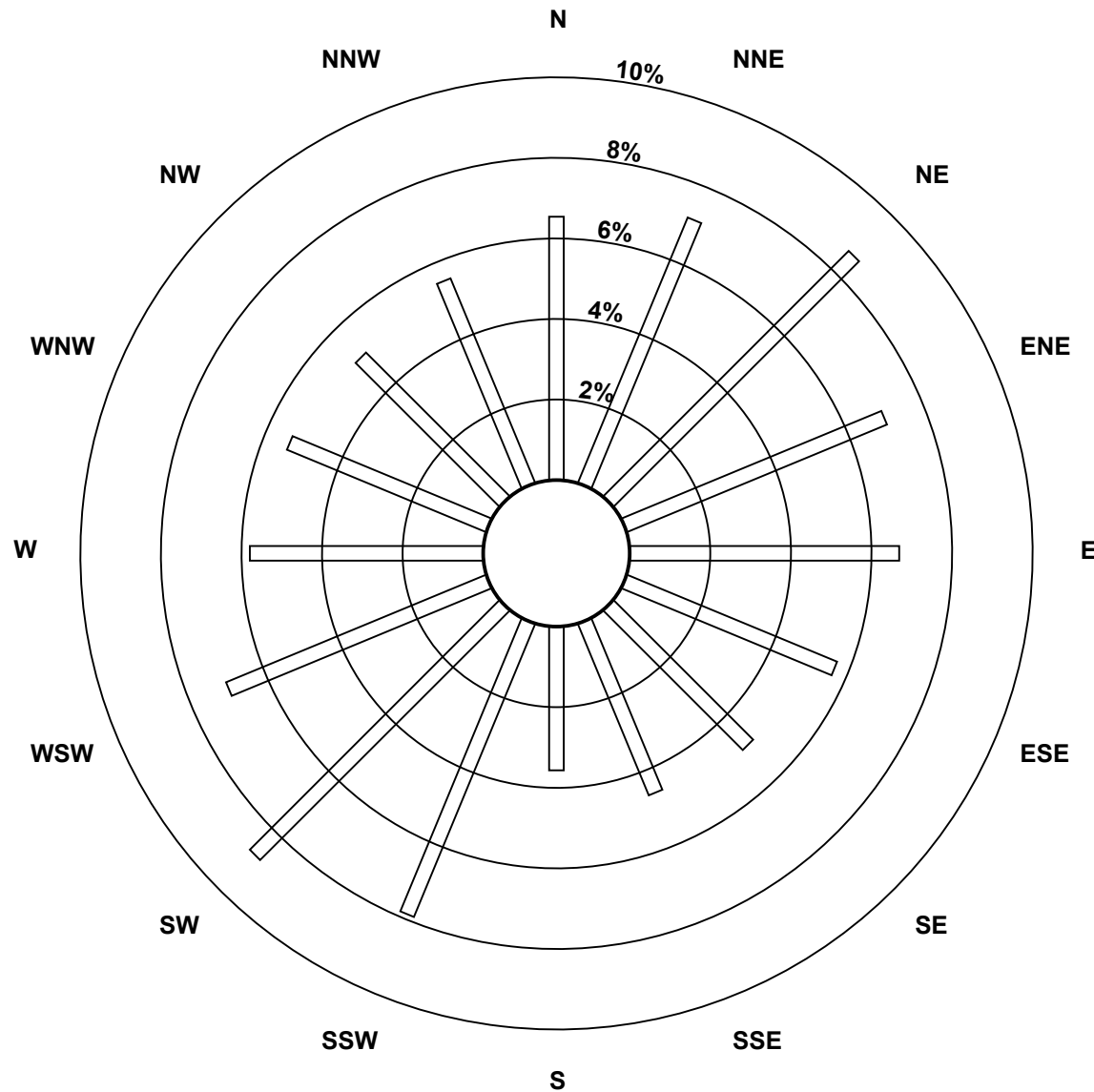
Sulphur Dioxide (SO₂) - ppb
Falher - January 2016



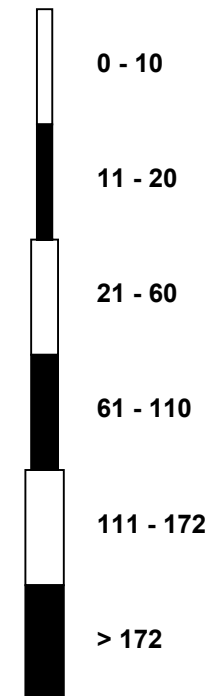
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb

Falher - January 2016



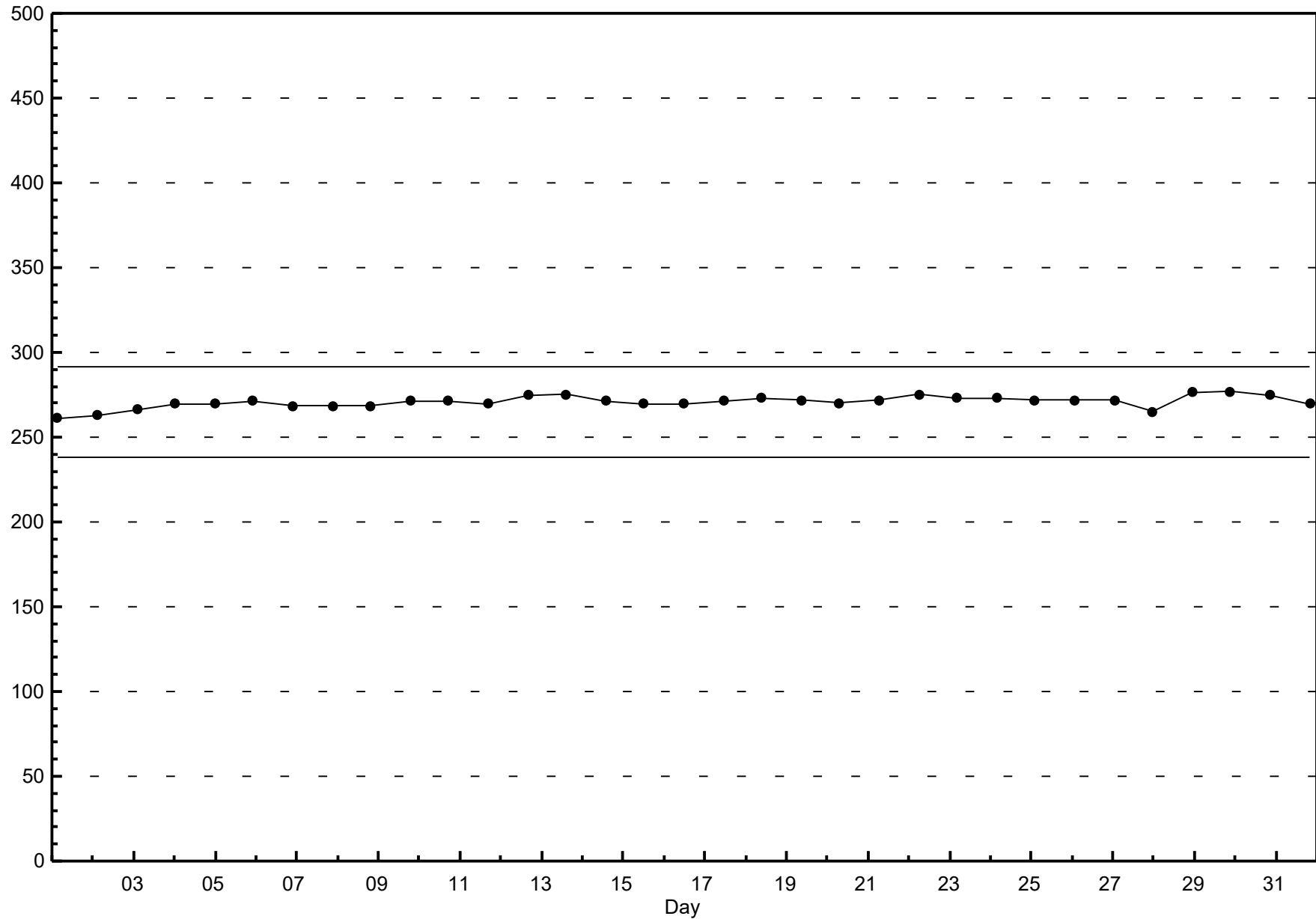
Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)

Falher - January 2016



Hourly Averages

Hydrogen Sulphide (H₂S) - ppb

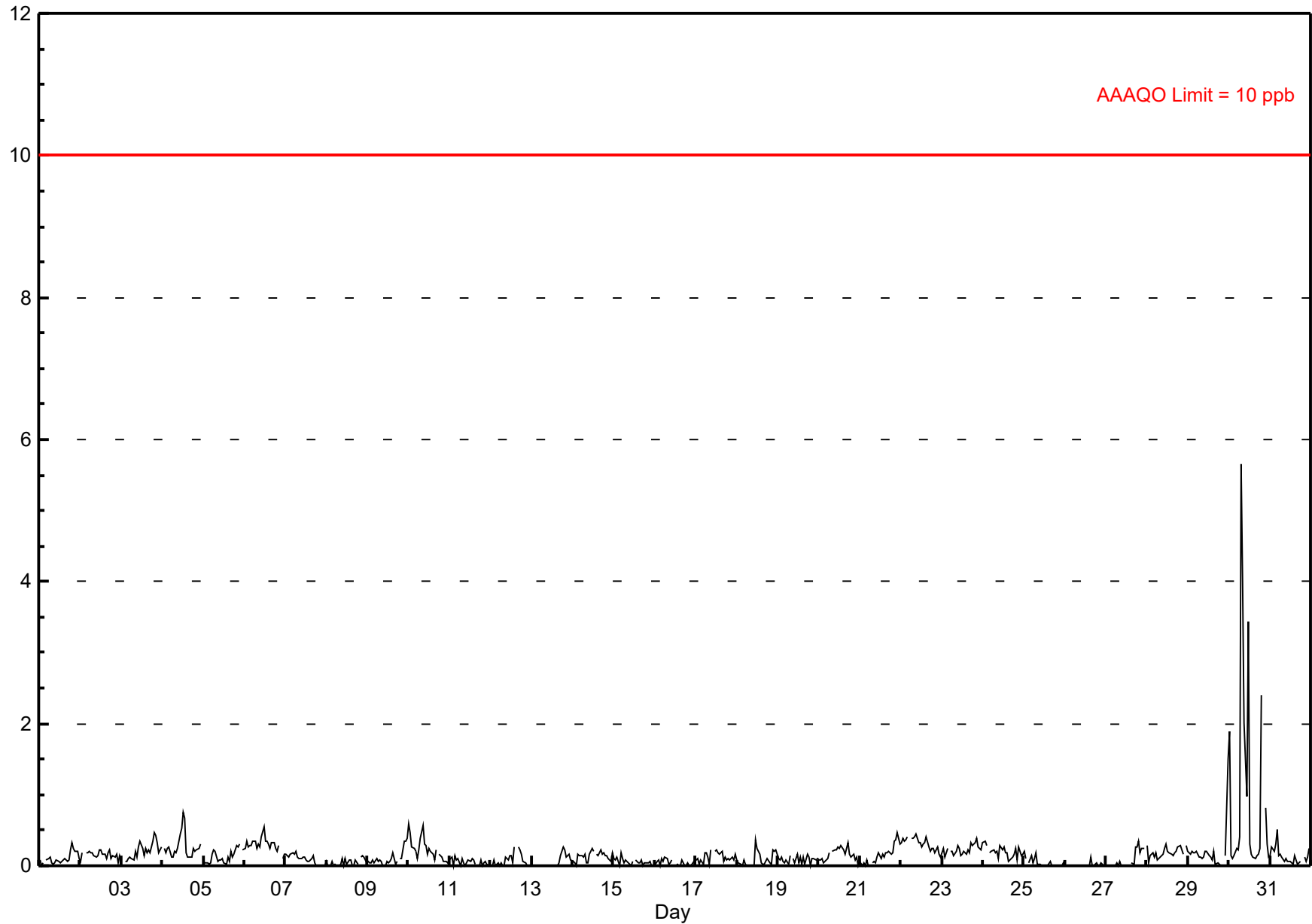
Falher - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 5.7 ppb on Jan 30 08:00 Maximum Daily Average: 1.0 ppb on Jan 30																					Hours in Service: 744 Hours of Data: 706 Hours of Missing Data: 38 Hours of Calibration: 38 Percent Operational Time: 100.0					
Minimum Value: 0 ppb on Jan 1 02:00 Maximum Diurnal Average: 0.3 ppb at hour 8 Monthly Average: 0.16 ppb																					Minimum Daily Average: 0.0 ppb on Jan 26 Minimum Diurnal Average: 0.1 ppb at hour 3 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.3 P ₉₉ = 1.3					
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	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
2-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	0.2
3-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
4-Jan	A	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	A	0.3	0.7
5-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
6-Jan	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.6
7-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	0.1	0.2
8-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	0.0	0.1
9-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	0.4
10-Jan	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.6
11-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	0.1
12-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	0.3
13-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	0.3
14-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.2
15-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	0.2
16-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	0.0	0.1
17-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
18-Jan	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
19-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	0.2
20-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
21-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	0.5
22-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
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	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
25-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	0.2
26-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
27-Jan	A	0	0	0	0	0	0	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	A	--	0.4
28-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
29-Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	2	0.2	1.5
30-Jan	2	0	0	0	0	0	0	6	4	2	1	3	0	0	0	0	0	0	0	2	A	1	0	0	1.0	5.7
31-Jan	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.5
0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.3 0.2 0.2 0.2 0.3 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.1 0.2 0.1 0.2																									Diurnal Average	
1.9 0.5 0.3 0.4 0.5 0.3 0.4 5.7 4.0 2.0 1.0 3.4 0.7 0.7 0.3 0.4 0.3 0.3 0.3 2.4 0.4 0.8 0.5 1.5																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																										

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Falher - January 2016



Hourly Maximums

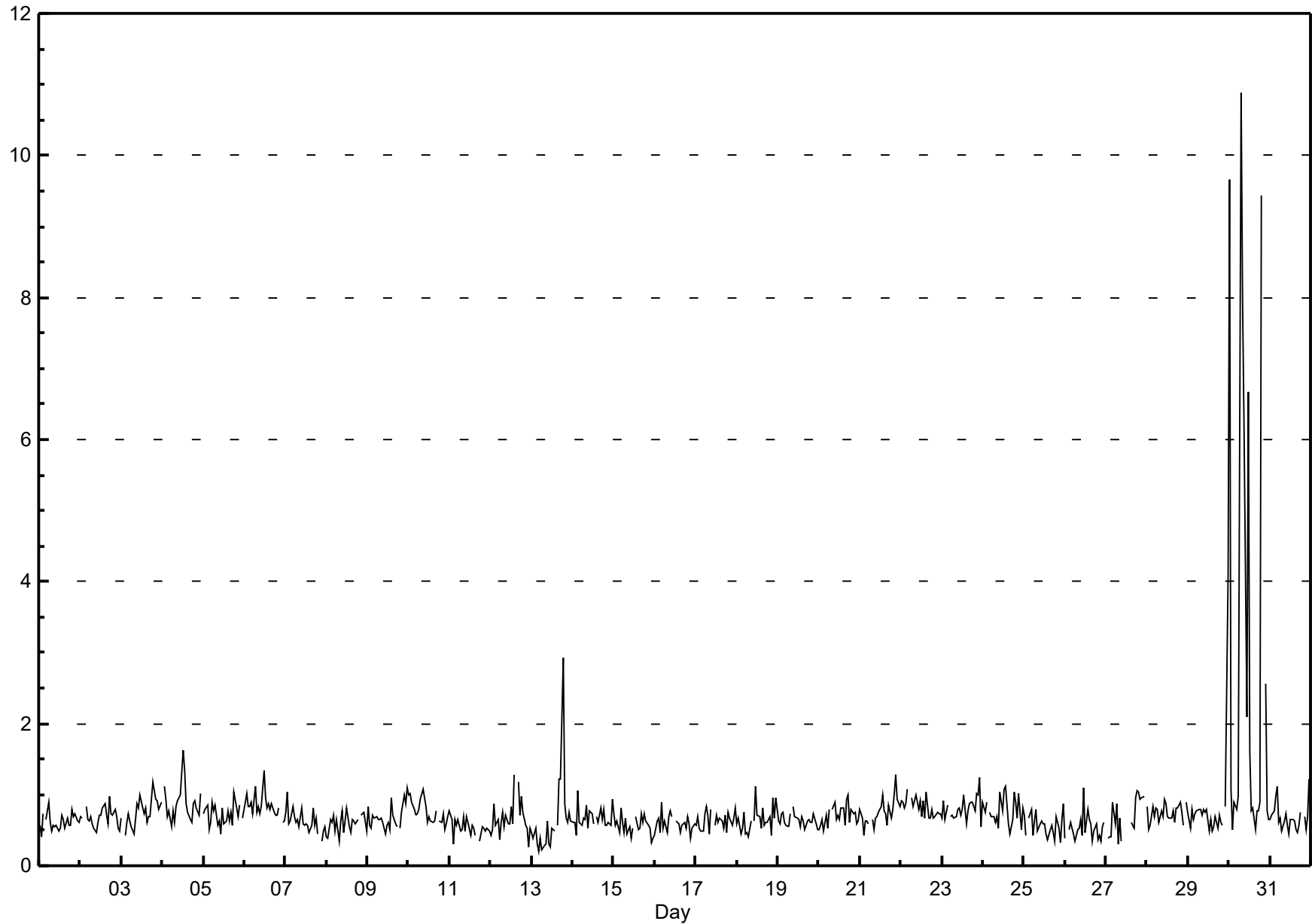
Hydrogen Sulphide (H₂S) - ppb

Falher - January 2016

Maximum Value: 10.9 ppb on Jan 30 08:00																				Maximum Daily Average: 3.2 ppb on Jan 30					Hours in Service: 744	
Minimum Value: 0 ppb on Jan 13 05:00																				Minimum Daily Average: 0.5 ppb on Jan 26					Hours of Data: 706	
Maximum Diurnal Average: 1.0 ppb at hour 20																				Minimum Diurnal Average: 0.6 ppb at hour 6					Hours of Missing Data: 38	
Monthly Average: 0.77 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.7 Q ₃ = 0.8 P ₉₀ = 0.9 P ₉₉ = 5.9					Hours of Calibration: 38	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jan	1	0	1	A	1	1	1	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9
2-Jan	1	1	A	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0.7	1.0
3-Jan	1	A	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
4-Jan	A	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	A	0.9	1.6
5-Jan	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	A	1	0.7	1.0
6-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	0.8	1.3
7-Jan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	A	0	0	1	0.6	1.0
8-Jan	0	0	1	1	1	0	1	0	1	1	0	1	1	1	0	1	1	1	1	A	1	1	1	0	0.6	0.8
9-Jan	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	A	1	1	1	1	1	0.7	1.1
10-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	0.8	1.1
11-Jan	1	1	0	1	1	1	0	1	1	0	1	1	0	1	1	0	A	0	0	1	1	0	1	0	0.5	0.8
12-Jan	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	1	0.7	1.3
13-Jan	0	0	1	0	0	0	0	0	0	1	0	0	1	0	A	1	1	1	3	1	1	1	1	1	0.6	2.9
14-Jan	1	1	0	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.7	1.0
15-Jan	1	1	1	0	1	1	0	1	0	1	0	1	A	1	1	1	1	1	1	1	1	1	0	0	0.6	0.8
16-Jan	0	1	1	0	1	1	1	0	1	1	1	A	1	1	1	0	1	1	1	1	1	0	1	1	0.6	0.9
17-Jan	1	1	1	0	0	1	1	1	0	1	1	A	1	1	1	1	1	1	0	1	1	1	1	1	0.6	0.8
18-Jan	1	1	0	1	1	0	0	0	1	A	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0.6	1.1
19-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	0.6	0.8
20-Jan	1	1	1	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
21-Jan	1	1	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.3
22-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
23-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	1.2
24-Jan	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0.8	1.1
25-Jan	1	0	A	1	1	0	1	1	0	1	1	1	1	1	0	0	1	1	0	0	1	1	0	1	0.6	0.9
26-Jan	0	A	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	0	1	0	0	0	1	1	0.5	1.1
27-Jan	A	0	0	0	1	1	1	0	1	0	C	C	C	C	C	1	1	1	1	1	1	1	1	A	--	1.1
28-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	0.7	0.9
29-Jan	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	A	1	4	0.8	4.1
30-Jan	10	1	1	1	1	1	6	11	8	6	2	7	2	1	1	1	1	1	1	9	A	3	1	1	3.2	10.9
31-Jan	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1	1	0	1	1	A	1	1	1	1	0.7	1.2
1.0 0.7 0.6 0.7 0.7 0.6 0.8 1.0 0.9 0.9 0.7 0.9 0.7 0.7 0.7 0.6 0.7 0.7 0.8 1.0 0.7 0.8 0.7 0.8																								Diurnal Average		
9.7 1.1 0.9 1.0 1.1 1.0 6.0 10.9 8.0 6.2 2.1 6.7 1.6 1.3 1.3 1.0 1.2 1.2 2.9 9.4 1.0 2.6 1.2 4.1																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

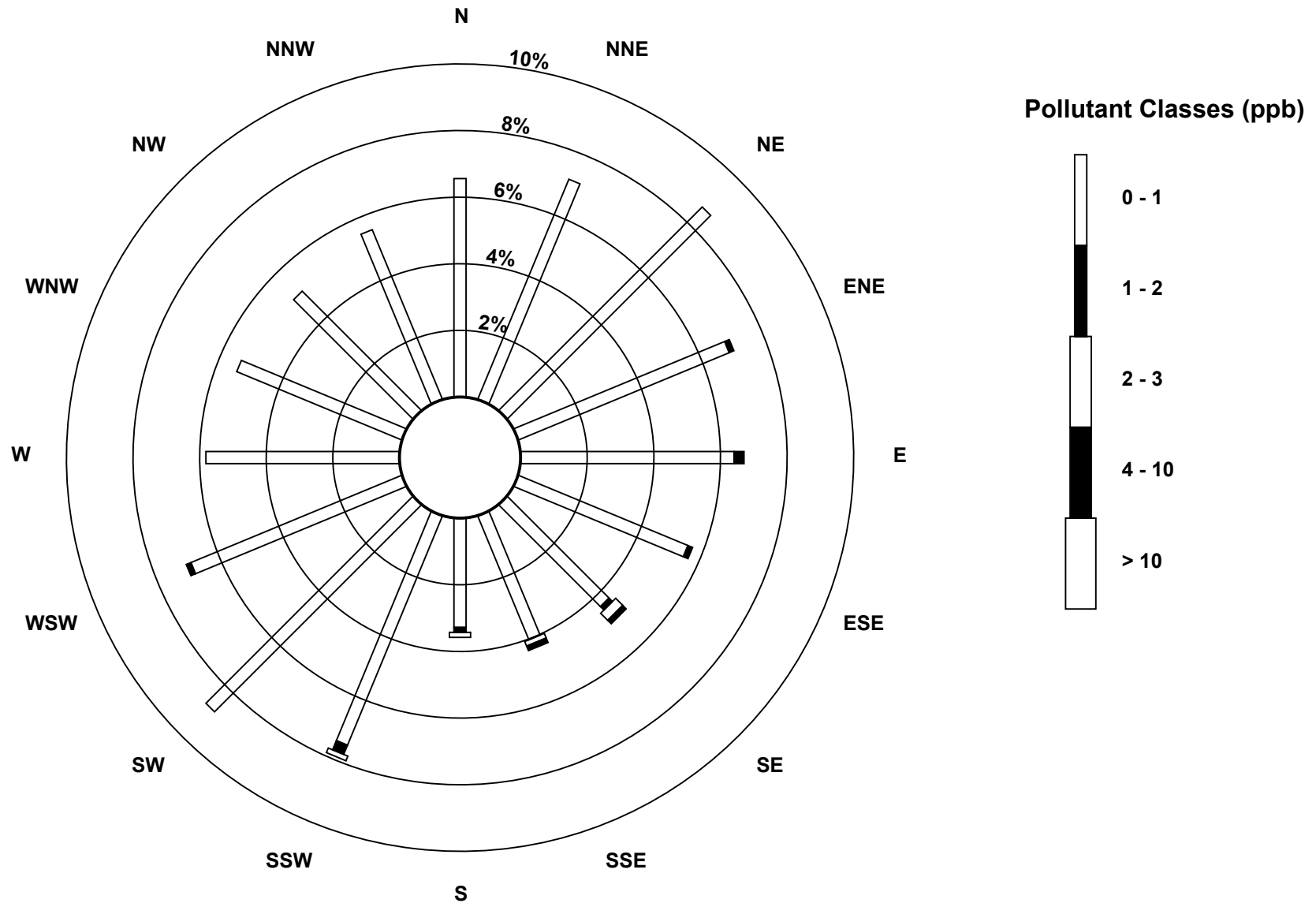
Hydrogen Sulphide (H₂S) - ppb
Falher - January 2016



Pollutant Rose

Hydrogen Sulphide (H₂S) - ppb

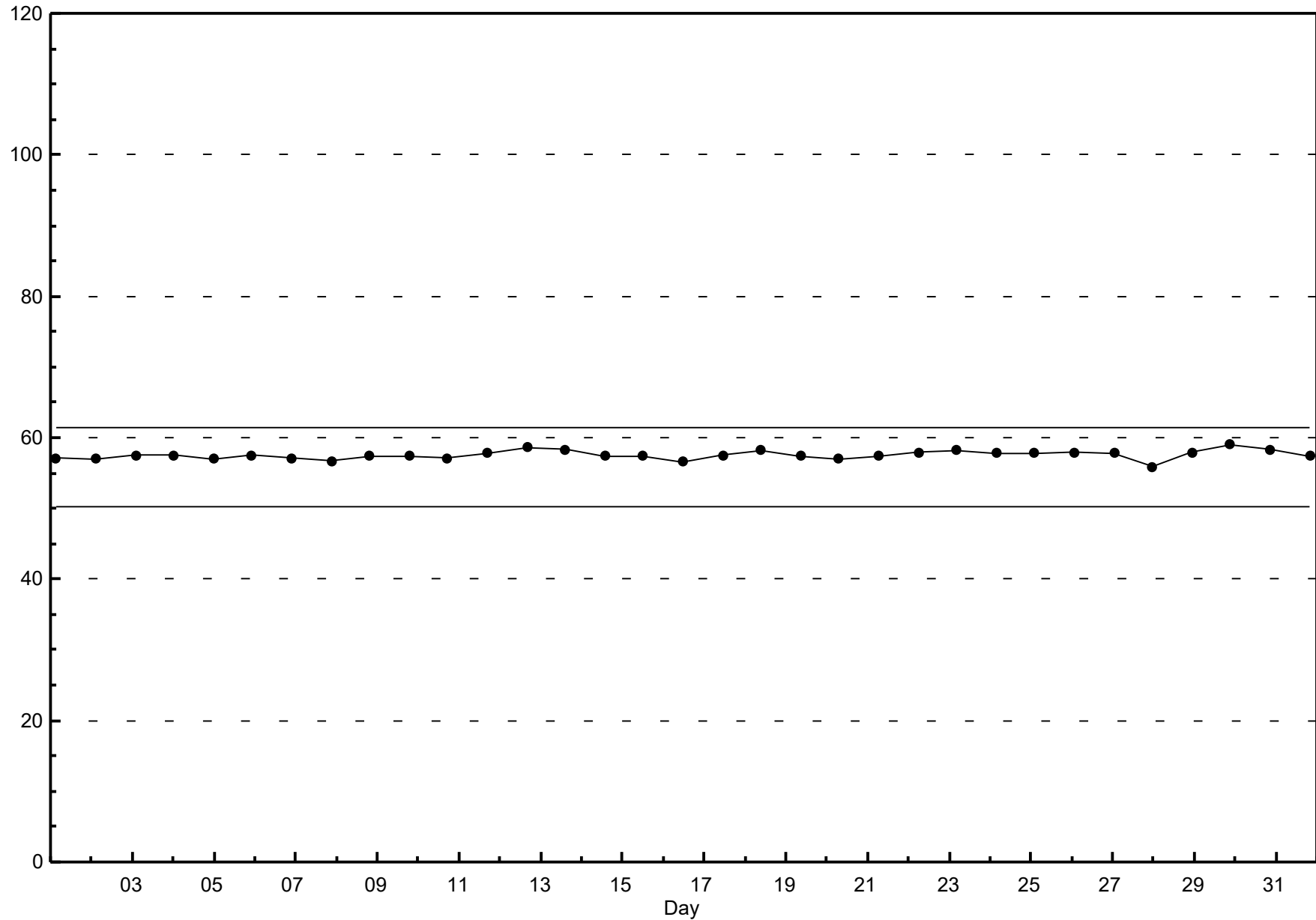
Falher - January 2016



Span Responses

Hydrogen Sulphide (H₂S)

Falher - January 2016



Hourly Averages

External Temperature (ET) - °C

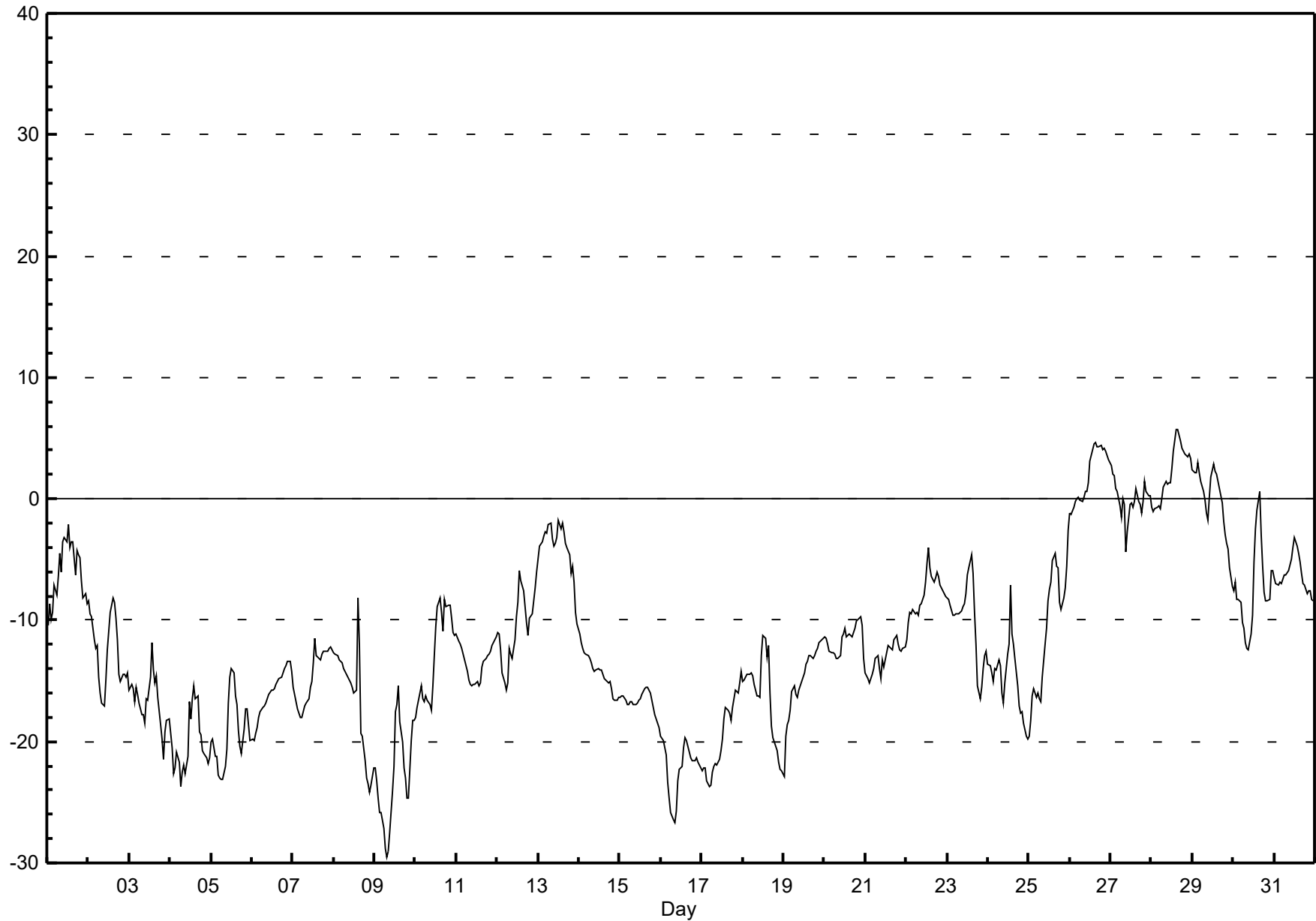
Falher - January 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 5.8 °C on Jan 28 15:00 Maximum Daily Average: 2.1 °C on Jan 28																								Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: -30 °C on Jan 9 08:00 Maximum Diurnal Average: -9.0 °C at hour 15 Monthly Average: -11.87 °C												Minimum Daily Average: -22.9 °C on Jan 9 Minimum Diurnal Average: -13.4 °C at hour 9 Percentiles: P ₁ = -25.9 P ₁₀ = -21.0 Q ₁ = -16.6 Median = -12.9 Q ₃ = -7.2 P ₉₀ = -0.6 P ₉₉ = 4.4														
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	-10	-9	-10	-9	-7	-8	-6	-5	-6	-4	-3	-4	-2	-4	-4	-3	-6	-4	-5	-5	-7	-8	-8	-9	-6.0	-2.2
2-Jan	-8	-9	-10	-12	-12	-12	-15	-16	-17	-17	-15	-12	-11	-9	-8	-8	-10	-12	-14	-15	-14	-14	-15	-14	-12.6	-8.1
3-Jan	-16	-15	-16	-17	-16	-16	-17	-18	-18	-18	-16	-17	-15	-12	-14	-15	-15	-16	-19	-20	-21	-19	-18	-18	-16.7	-11.9
4-Jan	-19	-21	-23	-22	-21	-22	-24	-23	-22	-23	-21	-17	-18	-16	-15	-17	-16	-19	-19	-21	-21	-21	-22	-21	-20.1	-15.4
5-Jan	-20	-20	-21	-21	-23	-23	-23	-23	-22	-21	-17	-15	-14	-14	-16	-17	-19	-20	-21	-19	-17	-17	-19	-20	-19.3	-14.0
6-Jan	-20	-20	-19	-19	-18	-17	-17	-17	-17	-17	-16	-16	-16	-16	-15	-15	-15	-15	-14	-14	-14	-13	-13	-14	-16.1	-13.4
7-Jan	-16	-16	-17	-17	-18	-18	-17	-17	-17	-16	-15	-15	-13	-12	-13	-13	-13	-13	-13	-13	-13	-12	-12	-12	-14.7	-11.5
8-Jan	-13	-13	-13	-13	-13	-14	-14	-14	-15	-15	-15	-16	-16	-8	-12	-19	-20	-22	-23	-23	-24	-24	-24	-22	-16.5	-8.1
9-Jan	-22	-23	-25	-26	-26	-27	-29	-30	-29	-28	-24	-22	-18	-17	-15	-18	-20	-22	-23	-25	-25	-20	-18	-18	-22.9	-15.3
10-Jan	-18	-17	-17	-15	-17	-17	-16	-17	-17	-17	-15	-13	-11	-9	-8	-9	-11	-8	-9	-9	-9	-10	-11	-11	-12.9	-8.2
11-Jan	-11	-12	-12	-12	-13	-13	-14	-15	-15	-15	-15	-15	-15	-15	-15	-14	-13	-13	-13	-13	-13	-12	-12	-11	-13.5	-11.2
12-Jan	-11	-11	-12	-14	-15	-16	-15	-12	-13	-13	-12	-10	-8	-6	-7	-8	-9	-10	-11	-10	-10	-8	-7	-6	-10.6	-5.9
13-Jan	-5	-4	-4	-3	-3	-3	-2	-2	-3	-4	-4	-3	-2	-2	-2	-3	-4	-4	-5	-6	-6	-7	-9	-10	-4.1	-1.7
14-Jan	-11	-12	-12	-13	-13	-13	-13	-13	-14	-14	-14	-14	-14	-14	-14	-15	-15	-15	-15	-16	-16	-17	-17	-16	-14.2	-11.2
15-Jan	-16	-16	-16	-17	-17	-17	-17	-17	-17	-17	-17	-17	-16	-16	-16	-16	-16	-16	-16	-17	-18	-18	-18	-19	-16.7	-15.5
16-Jan	-20	-20	-20	-21	-23	-25	-26	-26	-27	-26	-23	-22	-22	-21	-20	-20	-20	-21	-22	-22	-22	-21	-22	-22	-22.2	-19.5
17-Jan	-22	-22	-22	-23	-24	-24	-22	-22	-22	-22	-21	-21	-20	-18	-17	-17	-18	-18	-17	-16	-16	-16	-15	-14	-19.6	-14.2
18-Jan	-15	-15	-15	-15	-14	-14	-15	-15	-16	-16	-16	-13	-11	-12	-13	-12	-16	-19	-20	-20	-21	-22	-22	-22	-16.2	-11.3
19-Jan	-23	-20	-19	-18	-17	-16	-15	-16	-16	-16	-15	-15	-14	-14	-13	-13	-13	-13	-13	-13	-12	-12	-12	-12	-15.0	-11.5
20-Jan	-11	-11	-12	-13	-13	-13	-13	-13	-13	-13	-11	-11	-11	-11	-11	-11	-11	-11	-11	-10	-10	-10	-10	-13	-11.6	-9.7
21-Jan	-14	-15	-15	-15	-14	-14	-13	-13	-14	-15	-13	-14	-13	-12	-12	-12	-12	-12	-11	-12	-12	-13	-12	-12	-13.1	-11.2
22-Jan	-12	-10	-9	-9	-9	-9	-9	-10	-9	-9	-8	-7	-5	-4	-6	-6	-7	-7	-6	-6	-7	-8	-8	-8	-7.8	-4.0
23-Jan	-8	-8	-9	-10	-10	-10	-9	-9	-9	-9	-9	-8	-6	-6	-5	-6	-9	-12	-15	-16	-16	-14	-13	-13	-9.9	-4.6
24-Jan	-14	-14	-14	-15	-14	-14	-13	-14	-16	-17	-15	-13	-12	-7	-11	-12	-13	-15	-17	-18	-17	-19	-20	-20	-14.7	-7.1
25-Jan	-20	-18	-16	-16	-16	-16	-16	-17	-15	-12	-11	-8	-7	-7	-5	-4	-6	-6	-9	-9	-8	-7	-6	-3	-10.7	-2.6
26-Jan	-1	-1	-1	0	0	0	0	0	0	1	1	1	3	4	5	5	4	4	4	4	4	4	4	3	2.0	4.7
27-Jan	3	2	2	1	1	-1	-2	0	0	-4	-3	-1	0	-1	0	1	0	0	-1	0	1	1	0	0	-0.1	2.8
28-Jan	-1	-1	-1	-1	-1	-1	0	1	1	1	1	1	3	4	6	6	5	5	4	4	4	4	4	3	2.1	5.8
29-Jan	2	2	2	3	2	1	1	0	-1	-2	0	2	3	2	2	1	1	0	-2	-3	-4	-4	-6	-7	-0.2	2.9
30-Jan	-8	-7	-8	-8	-9	-10	-11	-12	-12	-12	-11	-10	-5	-3	-1	1	-3	-6	-8	-8	-8	-8	-6	-6	-7.5	0.6
31-Jan	-7	-7	-7	-7	-7	-7	-6	-6	-6	-5	-5	-4	-3	-4	-5	-5	-6	-7	-7	-8	-8	-8	-8	-8	-6.3	-3.2
-12.5 -12.4 -12.6 -12.8 -12.9 -13.1 -13.2 -13.2 -13.4 -13.4 -12.3 -11.1 -10.0 -9.2 -9.0 -9.3 -10.5 -11.1 -11.9 -12.2 -12.2 -12.1 -12.1 -12.2																								Diurnal Average		
2.8 2.1 2.1 2.9 2.2 1.4 0.6 1.0 1.4 1.2 1.4 1.8 3.1 4.1 5.8 5.7 5.2 4.7 4.5 4.0 4.2 4.0 3.7 3.3																								Diurnal Maximum		

Hourly Averages

External Temperature (ET) - °C

Falher - January 2016



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Falher - January 2016

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	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	13	7	4	0	7	3	8	11	6	6	3	9	5	1	4	7	7	10	11	4	6	9	7	16	5.9	16.0
Dir	153	143	157	213	183	232	164	192	173	248	287	218	211	9	177	198	180	181	192	211	145	179	131	146	178	146
2 Spd	17	8	10	8	10	13	12	9	10	12	11	8	12	8	5	5	7	10	7	10	12	13	12	12	8.5	16.6
Dir	153	93	132	71	64	79	61	36	34	34	56	74	109	87	107	74	33	54	36	50	62	70	47	41	68	153
3 Spd	6	6	8	8	10	7	6	5	5	4	6	9	5	2	10	8	5	5	2	4	2	9	8	2	3.6	10.4
Dir	33	23	45	16	25	19	13	7	10	358	42	52	102	48	84	84	43	26	357	84	170	211	219	191	42	25
4 Spd	6	1	2	3	1	1	3	4	3	3	1	0	4	4	4	9	5	8	8	7	7	4	4	8	2.8	9.4
Dir	89	132	210	250	286	70	62	22	58	27	34	121	58	91	49	57	24	337	9	350	14	348	333	317	20	57
5 Spd	7	6	8	4	1	2	4	2	5	5	5	2	4	6	8	8	4	4	1	5	7	6	6	5	1.0	8.2
Dir	332	343	21	5	292	3	322	323	324	325	17	345	189	207	212	208	214	153	251	158	194	188	170	143	242	212
6 Spd	8	4	3	5	5	6	3	1	1	4	6	4	3	4	5	5	3	6	6	8	8	8	7	10	3.2	9.6
Dir	117	96	80	104	140	138	206	222	129	101	141	177	209	157	191	219	201	185	179	204	214	230	258	270	182	270
7 Spd	11	10	7	7	7	6	4	3	2	3	0	0	0	0	2	2	2	5	8	9	9	9	7	8	0.1	10.7
Dir	264	259	256	241	235	233	233	224	216	265	270	328	221	269	314	339	18	62	91	91	67	72	58	56	252	264
8 Spd	9	8	9	8	4	5	5	7	5	5	3	2	2	1	0	0	0	11	6	4	4	4	8	10	4.0	10.9
Dir	55	50	55	69	65	44	47	79	57	51	73	79	79	117	208	265	349	353	15	33	315	321	340	351	33	353
9 Spd	12	12	3	0	0	0	2	4	4	1	3	5	3	2	0	1	0	3	4	0	2	5	2	0	1.8	12.3
Dir	356	352	111	327	225	238	348	348	349	344	9	18	33	100	146	80	72	68	66	324	88	120	177	285	21	356
10 Spd	2	4	3	4	6	6	10	3	7	5	6	8	5	5	3	6	6	2	6	8	5	9	15	13	1.8	15.2
Dir	90	105	71	88	110	116	135	149	125	137	135	153	175	207	213	163	134	226	286	297	312	259	286	276	185	286
11 Spd	15	18	17	11	12	17	20	19	16	12	10	10	10	8	9	12	15	17	19	20	15	14	17	16	7.1	20.3
Dir	277	275	281	262	256	269	265	258	263	288	300	299	310	330	8	26	25	30	30	41	41	50	43	56	327	265
12 Spd	11	9	9	11	9	8	7	11	7	4	6	3	3	0	4	1	5	8	9	9	8	10	10	9	6.3	11.3
Dir	61	67	58	38	49	59	91	130	136	102	102	107	75	247	113	100	67	34	47	32	44	49	61	48	65	130
13 Spd	10	10	16	14	16	17	13	2	5	4	4	7	2	6	2	4	4	2	6	6	2	19	22	22	1.7	21.9
Dir	39	63	69	64	69	81	90	255	247	204	111	64	108	221	223	216	193	68	75	354	317	290	273	270	40	270
14 Spd	24	24	18	18	17	17	14	14	17	13	11	18	17	16	15	17	14	13	11	13	11	11	10	8	14.9	24.1
Dir	263	266	257	261	258	256	263	260	251	248	251	261	252	256	251	249	245	244	245	251	254	255	273	270	256	263
15 Spd	6	7	7	7	6	6	7	10	12	10	10	9	10	13	11	11	12	12	12	14	16	14	14	18	9.1	17.6
Dir	267	277	293	319	327	319	332	343	23	20	18	34	27	22	31	24	10	26	19	17	7	358	10	352	4	352
16 Spd	20	13	12	15	11	6	4	1	4	7	3	6	10	18	16	11	11	13	16	16	13	24	27	21	11.9	27.5
Dir	334	349	354	328	320	303	294	9	289	295	330	5	3	340	349	330	315	310	317	320	346	332	337	343	333	337
17 Spd	20	27	22	19	16	14	15	22	20	15	15	14	16	18	12	10	8	2	2	5	8	3	9	16	12.9	27.3
Dir	342	337	344	8	348	356	343	341	352	2	354	3	3	6	16	20	19	297	337	356	39	123	16	45	358	337
18 Spd	6	4	11	9	6	6	6	2	0	0	0	0	1	2	1	1	0	0	5	7	3	1	1	2	1.3	10.9
Dir	174	138	124	116	109	122	130	165	178	353	88	36	237	231	196	280	171	286	302	286	279	100	293	287	148	124
19 Spd	3	8	5	5	1	2	4	6	9	7	5	5	8	7	10	9	7	7	7	8	11	10	10	9	6.4	10.9
Dir	268	273	306	321	282	279	247	271	285	299	312	315	327	330	302	299	282	285	277	267	303	312	322	321	298	303
20 Spd	6	6	9	9	9	5	7	8	8	5	4	2	1	3	3	6	9	8	9	17	14	13	15	14	1.8	16.6
Dir	309	231	241	257	287	238	202	200	204	207	207	258	223	118	88	52	50	53	67	90	89	69	68	33	86	90
21 Spd	17	17	15	14	16	14	12	9	3	3	4	5	4	4	10	5	5	2	3	4	4	3	2	4	5.5	16.9
Dir	26	24	17	11	14	29	37	30	115	357	14	39	59	192	226	258	343	97	98	90	47	25	57	54	27	24
22 Spd	4	7	7	11	7	10	14	10	12	12	9	9	5	3	15	14	18	14	13	14	18	18	17	15	7.2	18.5
Dir	44	40	41	56	51	41	49	37	41	39	15	25	58	310	314	308	292	306	306	293	296	297	288	281	338	297

Hourly Averages

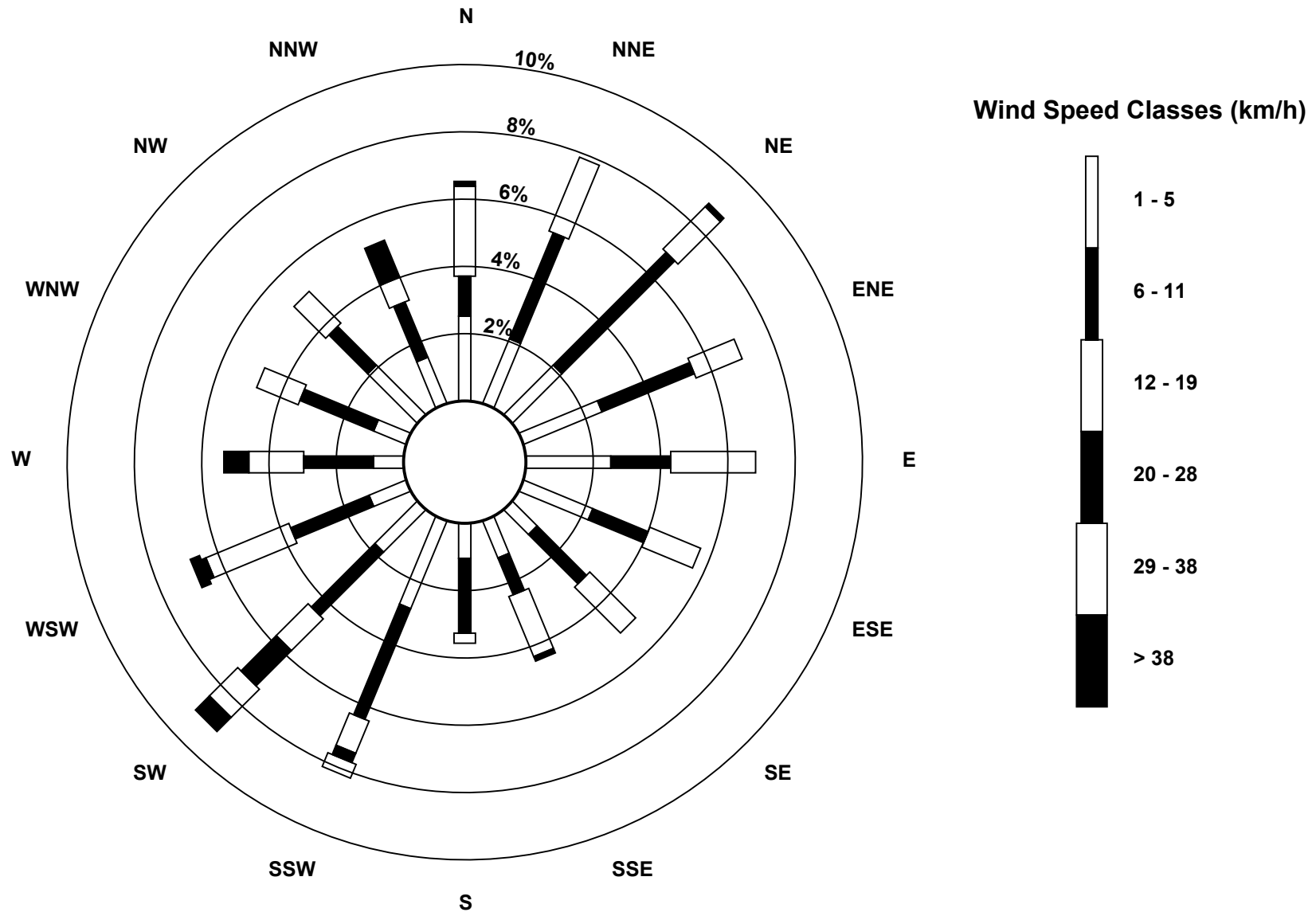
Wind Speed (km/h)
Wind Direction (deg)
Falher - January 2016

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	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	17	11	13	17	15	11	6	6	4	1	8	13	13	14	10	12	10	8	8	8	6	3	4	4	2.2	17.3			
Dir	302	305	234	235	237	238	223	208	196	38	74	99	100	115	122	115	101	67	90	107	102	49	31	38	141	235			
24 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	--	4.2			
Dir	47	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	47			
25 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	13	11	11	12	9	12	15	19	15	12	--	19.1			
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	151	152	162	153	121	120	131	145	158	143	--	145			
26 Spd	15	17	14	16	15	16	13	14	16	17	13	13	17	17	21	23	26	33	35	30	40	40	35	34	18.0	40.4			
Dir	139	128	139	134	132	142	161	167	162	143	148	171	193	206	215	221	210	216	222	225	224	223	224	225	196	224			
27 Spd	28	23	23	17	19	11	6	12	10	6	10	15	16	15	14	16	16	17	17	12	17	16	14	16	9.2	28.2			
Dir	227	227	229	230	235	214	206	202	206	154	162	163	171	131	117	130	122	99	104	97	102	104	98	115	162	227			
28 Spd	11	14	11	14	16	17	17	14	16	17	16	15	21	15	25	29	38	39	40	37	37	31	38	43	12.2	43.4			
Dir	91	76	70	87	76	83	83	97	80	90	89	101	163	205	222	216	209	214	214	211	213	221	233	244	190	244			
29 Spd	39	26	17	27	25	25	23	22	19	17	10	5	14	19	16	14	13	10	11	9	11	16	6	6	15.6	39.3			
Dir	245	257	224	223	221	219	217	211	205	207	216	221	242	232	222	218	228	188	188	197	196	203	198	126	220	245			
30 Spd	5	14	19	14	9	1	2	3	5	2	4	6	6	9	10	6	8	9	6	1	5	6	8	7	5.9	18.5			
Dir	126	153	166	167	168	278	152	135	168	194	192	190	212	225	237	243	225	214	226	154	196	203	206	197	191	166			
31 Spd	8	9	8	10	9	8	10	12	11	8	8	11	13	12	13	8	5	4	5	4	4	5	5	7	4.5	12.7			
Dir	182	184	208	223	237	229	234	239	261	251	251	253	254	306	325	328	1	358	4	22	6	355	2	12	268	325			
Spd	2.0	2.0	0.4	0.6	0.7	0.3	0.7	1.5	0.9	0.5	1.3	0.9	1.3	1.5	1.9	1.8	1.6	0.9	0.6	0.3	0.5	2.0	2.6	2.4	Diurnal Average				
Dir	283	309	249	281	263	172	164	230	236	354	61	93	185	244	235	222	222	224	232	263	211	244	289	304	Diurnal Maximum				
Spd	39.3	27.3	22.5	27.2	25.1	25.2	22.5	22.0	20.5	17.4	16.3	17.9	20.6	18.5	24.5	28.7	38.3	38.9	39.7	37.4	40.4	40.1	38.2	43.4	Diurnal Maximum				
Dir	245	337	229	223	221	219	217	341	352	207	89	261	163	232	222	216	209	214	214	211	224	223	233	244					
Maximum Speed Value: 43 km/h on Jan 29 00:00																		Minimum Speed Value: 0 km/h on Jan 7 12:00										Hours in Service: 744	
Maximum Daily Speed Average: 18.0 km/h on Jan 28																		Minimum Daily Speed Average: 0.1 km/h on Jan 9										Hours of Data: 707	
Maximum Diurnal Speed Average: 2.6 km/h at hour 23																		Minimum Diurnal Speed Average: 0.3 km/h at hour 20										Hours of Missing Data: 37	
Monthly Average Velocity: 0.80 km/h 252.7 deg																		Speed Percentiles: P ₁ = 0.1 P ₁₀ = 2.2 Q ₁ = 4.6 Median = 8.2 Q ₃ = 13.4 P ₉₀ = 17.3 P ₉₉ = 38.0										Percent Operational Time: 95.0	
All monthly, daily, and diurnal averages have been calculated using vector methods																													
N - Not Valid																													
Frequency Distribution																													
Speed Range (km/h)																													
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																						
North	29	28	28	5	0	0	90																						
NorthEast	27	57	30	1	0	0	115																						
East	32	26	31	0	0	0	89																						
SouthEast	19	26	25	1	0	0	71																						
South	18	30	14	1	0	0	63																						
SouthWest	31	40	20	11	10	8	120																						
West	22	28	30	7	0	0	87																						
NorthWest	21	31	16	4	0	0	72																						
Total	199	266	194	30	10	8	707																						

Wind Rose

Wind Speed (WS) (km/h)

Falher - January 2016



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Falher - January 2016

Maximum Speed: 44 km/h on Jan 29 00:00																				Maximum Daily Speed Average: 24.0 km/h on Jan 28										Hours in Service: 744	
Minimum Speed: 0 km/h on Jan 9 05:00																				Minimum Daily Speed Average: 2.8 km/h on Jan 9										Hours of Data: 707	
Maximum Diurnal Speed Average: 12.4 km/h at hour 24																				Minimum Diurnal Speed Average: 7.0 km/h at hour 11										Hours of Missing Data: 37	
Monthly Average Speed: 9.84 km/h																				Percentiles: P ₁ = 0.1 P ₁₀ = 2.6 Q ₁ = 4.9 Median = 8.5 Q ₃ = 13.6 P ₉₀ = 17.5 P ₉₉ = 38.1										Percent Operational Time: 95.0	
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	13	7	5	3	7	4	9	11	9	7	5	9	5	3	6	7	7	11	11	7	7	10	8	16	7.8	16.2					
2-Jan	17	9	10	9	10	13	12	9	11	13	12	8	12	8	5	6	7	10	8	10	13	13	12	12	10.3	16.6					
3-Jan	6	6	8	8	10	7	6	5	5	4	6	9	6	2	10	8	5	5	3	5	2	9	8	4	6.2	10.4					
4-Jan	6	2	2	3	1	1	3	4	4	3	1	0	4	4	4	9	6	8	8	7	7	4	4	8	4.3	9.4					
5-Jan	7	6	8	4	1	3	4	3	5	6	5	3	4	6	8	8	4	4	2	5	7	6	6	6	5.1	8.4					
6-Jan	8	4	3	5	5	6	3	2	1	4	7	5	4	4	5	5	3	6	6	8	8	8	7	10	5.2	9.7					
7-Jan	11	10	7	7	7	6	4	3	3	3	0	0	0	0	2	2	2	6	9	10	10	9	8	8	5.2	10.8					
8-Jan	9	9	9	8	5	5	5	7	5	5	3	2	2	1	0	0	0	11	6	4	5	4	8	10	5.1	10.9					
9-Jan	12	12	4	0	0	0	2	4	4	1	3	5	3	2	0	1	0	3	4	0	2	5	2	0	2.8	12.3					
10-Jan	2	4	3	4	6	6	10	3	7	5	6	8	5	5	3	7	9	3	6	8	6	10	15	14	6.4	15.3					
11-Jan	15	18	17	11	12	17	20	19	16	12	10	10	10	9	9	12	16	17	19	20	15	14	17	16	14.6	20.3					
12-Jan	11	9	9	11	10	8	7	12	7	4	6	3	4	2	4	5	6	9	9	9	9	10	10	9	7.7	11.5					
13-Jan	10	10	16	14	16	18	13	5	5	5	5	8	5	7	2	4	4	2	6	7	4	19	22	22	9.6	22.1					
14-Jan	24	24	19	18	17	17	14	15	17	13	11	18	17	16	15	17	14	13	12	13	11	11	10	8	15.1	24.1					
15-Jan	6	7	7	7	6	6	8	10	12	10	10	9	10	13	11	11	12	12	12	14	16	14	14	18	10.6	17.8					
16-Jan	20	13	12	15	11	7	4	1	4	7	4	7	10	18	16	11	11	13	16	16	14	24	28	21	12.5	27.5					
17-Jan	20	27	23	19	17	14	15	22	21	16	15	14	16	18	13	10	9	3	2	5	9	5	10	16	14.1	27.3					
18-Jan	6	5	11	9	6	6	6	2	0	0	1	0	1	2	1	1	0	1	5	7	3	1	1	2	3.3	11.0					
19-Jan	3	8	5	5	2	2	4	7	10	7	5	6	8	7	10	9	7	7	7	8	11	10	10	9	7.0	11.0					
20-Jan	6	6	9	10	10	5	7	8	8	5	4	3	2	3	3	6	9	9	9	17	14	14	15	14	8.1	16.8					
21-Jan	17	17	15	14	16	14	12	10	8	3	4	5	6	4	10	7	6	3	3	4	4	4	3	4	8.2	16.9					
22-Jan	4	7	7	11	8	10	14	11	12	12	9	9	5	4	16	14	18	14	13	14	18	19	17	16	11.7	18.5					
23-Jan	17	12	13	17	15	11	6	6	4	1	9	13	13	14	10	12	10	8	8	8	6	3	4	4	9.4	17.5					
24-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	--	4.3					
25-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	13	11	12	13	9	12	15	19	15	12	--	19.3				
26-Jan	15	17	14	16	15	16	13	14	16	17	13	14	17	17	22	23	26	33	35	30	40	40	35	34	22.2	40.4					
27-Jan	28	23	23	17	19	11	6	12	10	6	12	16	16	15	14	16	16	17	17	12	17	16	14	16	15.3	28.2					
28-Jan	12	14	12	14	16	17	17	14	16	18	16	15	21	16	25	29	38	39	40	37	37	31	38	44	24.0	43.6					
29-Jan	39	26	17	27	25	25	23	22	19	17	10	5	14	19	16	14	13	10	11	9	11	16	8	6	16.8	39.4					
30-Jan	6	14	19	15	9	3	3	4	5	2	4	6	6	10	10	6	8	9	6	1	5	6	8	7	7.2	18.6					
31-Jan	8	9	8	10	9	9	11	12	12	8	8	11	13	14	13	8	5	4	5	4	4	6	5	7	8.4	14.1					
12.1 11.5 10.8 10.8 10.0 9.2 9.0 8.8 8.8 7.4 7.0 7.5 8.2 8.3 9.2 9.3 9.5 10.1 10.2 10.4 11.0 12.1 12.1 12.4																									Diurnal Average						
39.4 27.3 22.7 27.2 25.1 25.2 22.5 22.0 20.6 17.6 16.3 18.0 21.2 18.6 24.6 28.8 38.4 39.0 39.7 37.4 40.4 40.1 38.3 43.6																									Diurnal Maximum						
N - Not Valid																															
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg

Falher - January 2016

Maximum Value: 97.8 deg on Jan 12 14:00																		Hours in Service: 744								
Minimum Value: 0.3 deg on Jan 9 05:00																		Hours of Data: 707								
																		Hours of Missing Data: 37								
Percentiles: P ₁ = 1.8 P ₁₀ = 3.7 Q ₁ = 5.6 Median = 9.4 Q ₃ = 17.4 P ₉₀ = 37.6 P ₉₉ = 79.2																		Hours of Calibration: 0								
																		Percent Operational Time: 95.0								
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	9	23	38	86	40	29	27	9	69	36	53	22	15	87	71	13	9	33	55	77	34	48	41	8	86.9	
2-Jan	6	22	11	21	11	9	9	17	4	8	15	9	14	17	15	26	7	12	16	8	14	12	5	5	26.5	
3-Jan	17	18	11	6	4	5	13	8	8	22	10	14	28	44	16	8	25	16	46	29	40	17	10	64	63.9	
4-Jan	28	62	12	21	24	60	19	22	36	28	34	46	15	16	7	8	16	9	20	11	15	18	33	9	62.2	
5-Jan	13	9	12	36	55	49	14	32	19	23	25	66	16	19	11	9	23	20	77	28	23	15	14	26	76.7	
6-Jan	9	8	16	9	7	8	26	67	34	17	16	16	26	13	17	14	12	11	9	11	7	9	10	7	67.0	
7-Jan	5	6	7	5	7	9	6	9	12	6	67	10	31	33	14	15	23	20	15	13	11	12	16	11	66.7	
8-Jan	10	7	16	15	23	15	16	20	15	13	18	12	11	14	31	23	40	3	22	25	16	14	4	3	40.3	
9-Jan	2	2	47	51	0	11	22	9	7	16	11	3	14	27	14	12	22	10	9	71	42	26	13	51	71.0	
10-Jan	9	12	15	11	8	5	9	33	8	17	14	13	24	14	53	31	42	59	17	10	26	11	5	7	59.1	
11-Jan	3	3	5	6	5	6	4	3	7	8	5	4	5	9	10	5	3	3	4	4	10	5	5	4	10.2	
12-Jan	6	4	12	6	15	12	13	11	12	27	10	22	28	98	22	79	32	19	11	7	13	7	6	9	97.8	
13-Jan	6	16	3	4	6	11	8	85	24	45	53	20	71	17	28	14	14	33	20	14	60	7	3	6	84.8	
14-Jan	4	5	6	4	3	4	7	6	6	7	7	6	5	5	4	3	4	4	6	6	4	4	5	5	7.2	
15-Jan	6	7	8	6	6	4	9	8	13	7	8	5	7	5	6	4	7	10	8	7	7	8	4	8	13.3	
16-Jan	4	7	10	8	4	11	7	26	47	10	36	38	12	4	6	13	7	4	5	4	10	5	2	4	47.0	
17-Jan	4	2	12	6	5	9	5	4	7	9	4	8	4	4	6	9	22	74	19	24	27	81	23	9	80.9	
18-Jan	25	23	5	6	7	7	10	11	1	5	66	9	79	26	31	19	37	72	8	7	34	65	15	18	79.3	
19-Jan	4	7	12	50	46	35	12	16	5	6	11	17	7	11	7	5	7	6	6	6	9	5	5	3	50.1	
20-Jan	12	13	3	13	8	30	11	5	8	11	13	50	70	27	22	15	7	10	7	8	9	6	4	8	70.2	
21-Jan	3	3	4	4	5	9	13	17	64	58	33	8	62	23	18	49	38	45	60	50	43	56	50	13	63.5	
22-Jan	27	10	12	3	16	6	6	6	7	8	9	9	15	26	6	11	3	7	3	6	2	3	5	7	27.4	
23-Jan	5	26	7	9	8	6	14	10	8	77	17	6	9	5	6	4	13	13	14	4	8	41	10	16	77.1	
24-Jan	9	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	8.5	
25-Jan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	7	3	10	16	8	5	3	7	5	10	15.8
26-Jan	8	7	4	3	6	5	9	4	9	5	5	12	9	8	6	4	5	3	2	4	2	1	2	2	12.0	
27-Jan	1	2	4	3	3	11	13	5	10	22	31	9	9	7	10	5	6	5	12	7	4	5	7	7	30.7	
28-Jan	11	6	13	17	6	6	4	6	12	10	4	7	14	14	4	4	3	2	2	2	4	5	4	5	17.4	
29-Jan	3	7	12	3	2	2	2	4	4	2	24	17	4	3	3	3	6	16	4	4	7	7	68	20	68.4	
30-Jan	37	8	4	5	11	54	48	30	7	54	47	9	9	14	4	4	7	4	4	39	11	6	4	8	54.5	
31-Jan	7	5	9	4	19	33	8	4	12	15	12	5	4	29	4	11	13	10	7	6	11	20	11	11	32.6	
36.8 62.2 47.5 85.8 55.1 59.5 48.4 84.8 68.7 77.1 66.7 65.6 79.3 97.8 70.8 79.4 41.5 74.2 76.7 76.5 59.7 80.9 68.4 63.9																										
N - Not Valid																										

PAZA

Monthly Passive Data Summary

[illegible]

PAZA Passive Results for January 2015

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	Site Legal
Duplicates						
4a	Gordondale	0.5	34.9	2.9		
4b	Gordondale	0.3	32.1	1.1		
7a	Steeprock Creek	0.3	39.1	1.7		
7b	Steeprock Creek	0.7	39.7	1.3		
10a	Woking	0.6	34.0	1.4		
10b	Woking	0.1	28.9	1.3		
42a	Sunset House	0.4	40.4	1.8		
42b	Sunset House	0.2	33.5	2.8		
63a	Girouxville 3				0.7	
63b	Girouxville 3				0.3	
1	Silver Valley	0.4	31.2	1.9		08-27-081-11 W6M
2	Bay Tree	0.2	26.7	3.0		13-16-078-13 W6M
3	Fourth Creek	0.4	32.8	1.8		04-13-082-07 W6M
4	Gordondale	0.4	33.5	2.0		04-34-078-10 W6M
5	Boone Creek	0.5	29.4	2.7		16-36-074-11 W6M
7	Steeprock Creek	0.5	39.4	1.5		09-35-072-13 W6M
9	Spirit River	0.4	32.3	2.3		08-12-079-07 W6M
10	Woking	0.4	31.4	1.3		01-13-076-07 W6M
11	Webber Creek	0.7	28.6	4.9		09-36-074-09 W6M
12	Hythe	0.9	28.5	3.7		14-36-072-11 W6M
14	Sylvester	0.1	25.3	1.7		08-06-069-12 W6M
16	Beaverlodge	1.2	34.4	4.2		15-36-071-10 W6M
17	Poplar	0.6	30.0	3.6		13-06-073-08 W6M
18	Saddle Hills	0.5	33.9	1.7		04-25-074-07 W6M
19	Wanham	0.5	36.4	1.6		16-22-077-03 W6M
20	Shaftesbury	0.2	32.3	1.6		04-03-082-23 W5M
21	Eaglesham	0.4	27.7	1.5		16-21-079-25 W5M
23	Bear Lake	0.7	33.7	3.2		15-31-072-06 W6M
24	Wembley	0.9	29.4	4.2		12-31-070-08 W6M
25	Pinto Creek	0.4	30.4	2.4		04-24-069-11 W6M
26	Flyingshot	0.6	23.6	5.3		15-36-070-07 W6M
27	Grande Prairie I	0.7	18.7	18.2		08-15-071-06 W6M

PAZA Passive Results for January 2015 (Continued)

28	Clairmont Lake	0.7	39.4	3.5	09-06-073-04 W6M
29	Smoky Heights	0.7	30.8	4.1	04-06-075-02 W6M
30	Fitzsimmons	0.2	25.5	3.5	15-36-072-03 W6M
32	Gold Creek	0.4	14.4	7.1	06-33-067-05 W6M
33	Wapiti	0.2	25.6	4.3	02-25-071-03 W6M
34	Puskwaskau	0.1	26.6	1.4	15-35-074-25 W5M
35	Jean Cote	0.3	36.5	1.9	12-35-079-21 W5M
36	Guy	0.2	39.5	1.6	03-04-076-22 W5M
37	Crooked Creek	0.3	31.1	2.7	16-01-071-26 W5M
38	Karr Creek	0.3	27.4	2.8	10-16-065-02 W6M
39	Clouston Creek	0.3	36.7	2.1	12-01-073-22 W5M
40	McLennan	0.2	31.1	1.8	03-29-077-19 W5M
41	Valleyview	0.5	32.4	3.6	09-30-069-22 W5M
42	Sunset House	0.3	37.0	2.3	05-32-070-19 W5M
43	High Prairie	0.3	32.6	2.6	16-13-074-17 W5M
44	Peavine	0.1	28.9	1.3	03-05-079-15 W5M
45	Gift Lake	0.1	29.6	1.0	0.5 10-07-079-12 W5M
46	Little Smoky	0.2	23.0	6.0	12-01-065-21 W5M
47	Kinuso	0.2	30.8	2.2	12-10-073-10 W5M
65	Deer Mountain 2	0.2	30.9	1.6	15-22-068-09 W5M
49	Grande Prairie HP	0.6	17.7	15.2	17-26-071-06 W6M
50	East Prairie	0.1	23.2	1.0	13-02-072-15 W5M
63	Girouxville 3			0.5	14-02-077-23 W5M
64	Girouxville 4			0.5	4-08-077-22 W5M

*BDL = Below Detection Level

*NS - No sample

Passive Summary for January 2015

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

Passive Summary for January 2016 (PAZA Zone)				
Mean	0.4	30.0	3.4	0.5
Standard Deviation	0.2	5.5	3.3	0.0
Minimum	0.1	14.4	1.0	0.5
Minimum At	East Prairie (#50)	Gold Creek (#32)	East Prairie (#50)	Gift Lake (#45)
Maximum	1.2	39.5	18.2	0.5
Maximum At	Beaverlodge (#16)	Guy (#36)	Grande Prairie I (#27)	Gift Lake (#45)

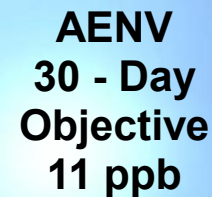
Comparison between Continuous and Passive monitoring at Beaverlodge (passive #16 Beaverlodge)

	SO ₂	O ₃	NO ₂
PAZA Beaverlodge station	1.2	23.7	7.5
PAZA Beaverlodge passive	1.2	34.4	4.2

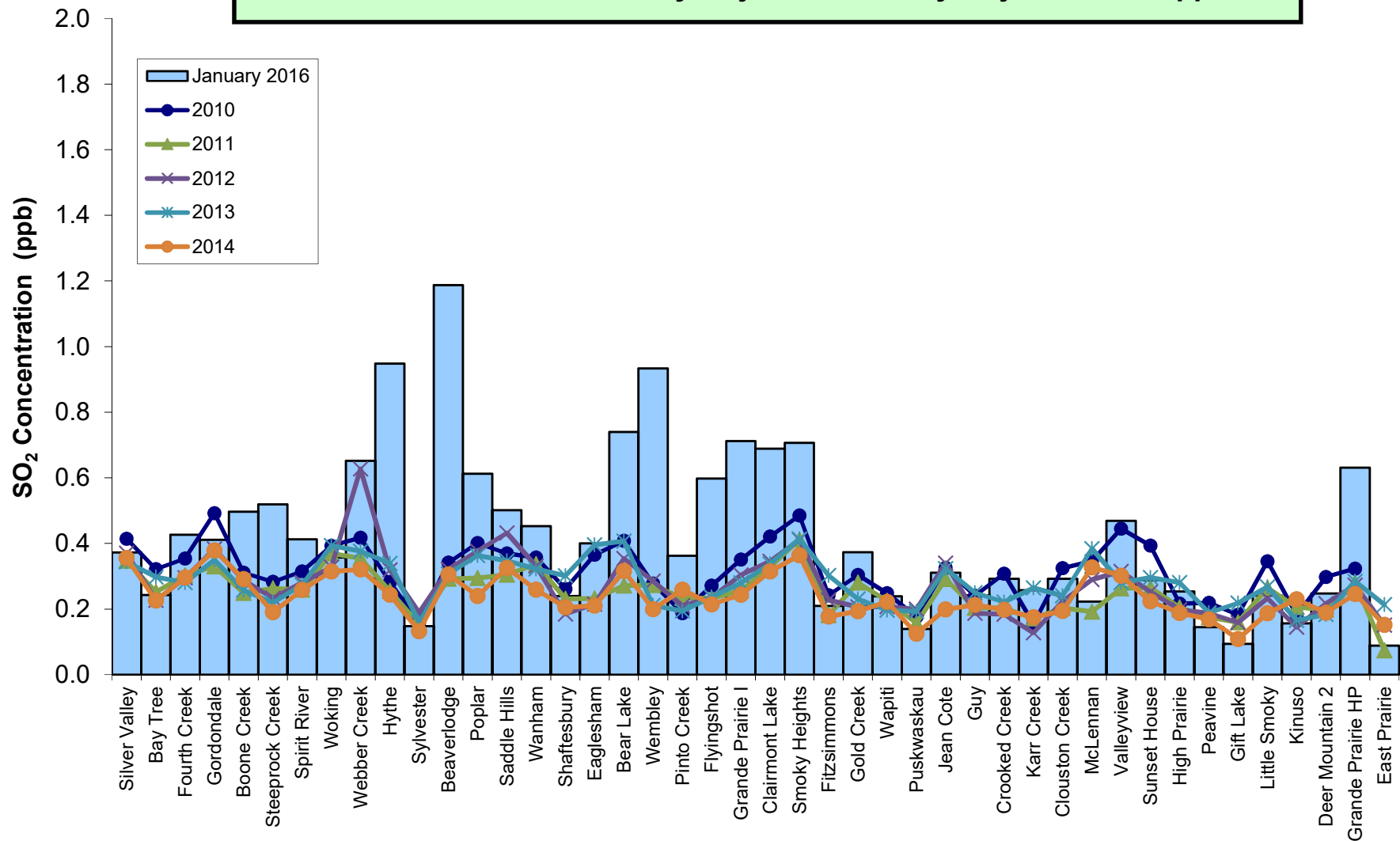
Comparison between Continuous and Passive monitoring at Henry Pirker (passive #49 Grande Prairie HP)

	SO ₂	O ₃	NO ₂
PAZA Henry Pirker station	0.6	10.4	19.8
PAZA Grande Prairie passive	0.6	17.7	15.2

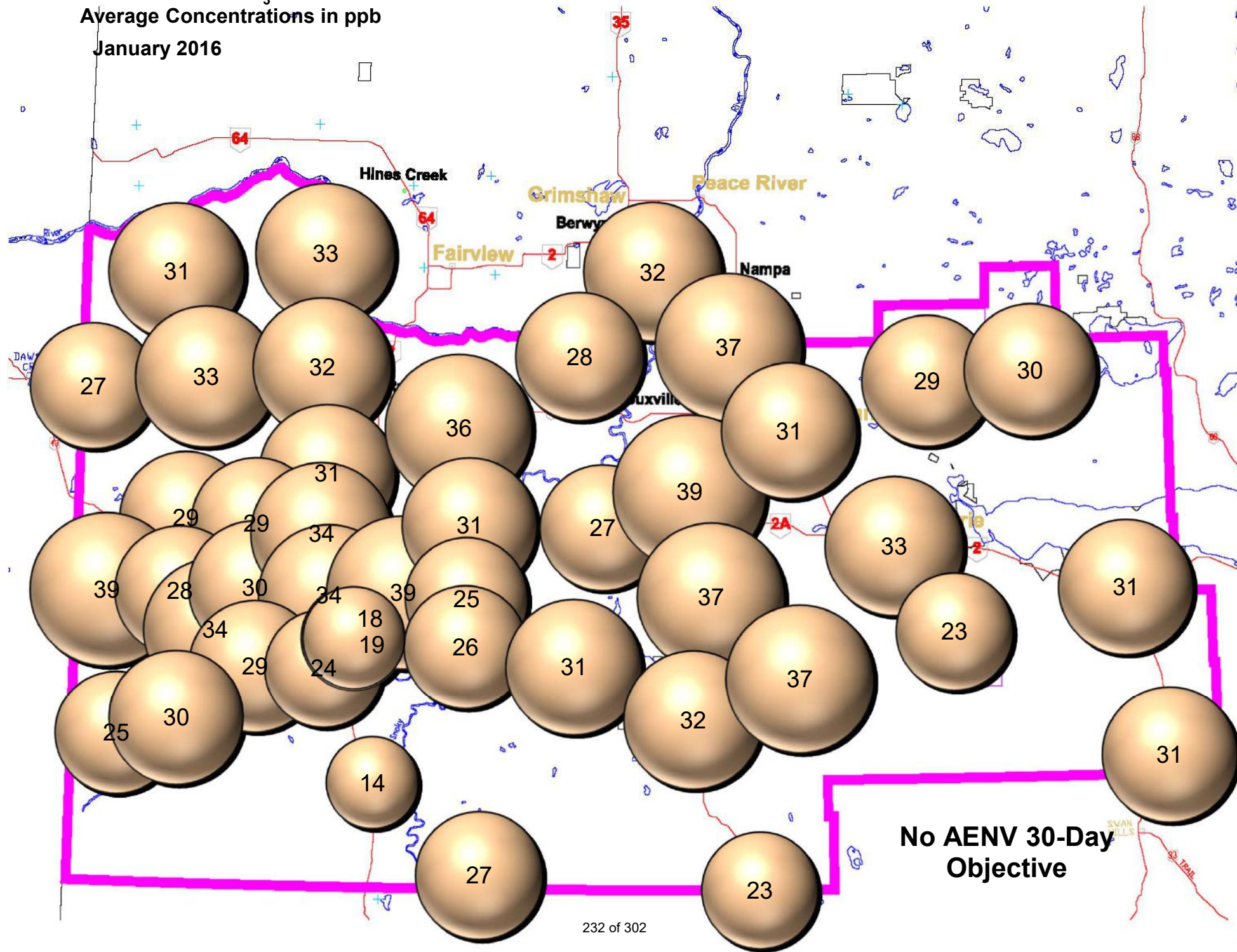
January 2016



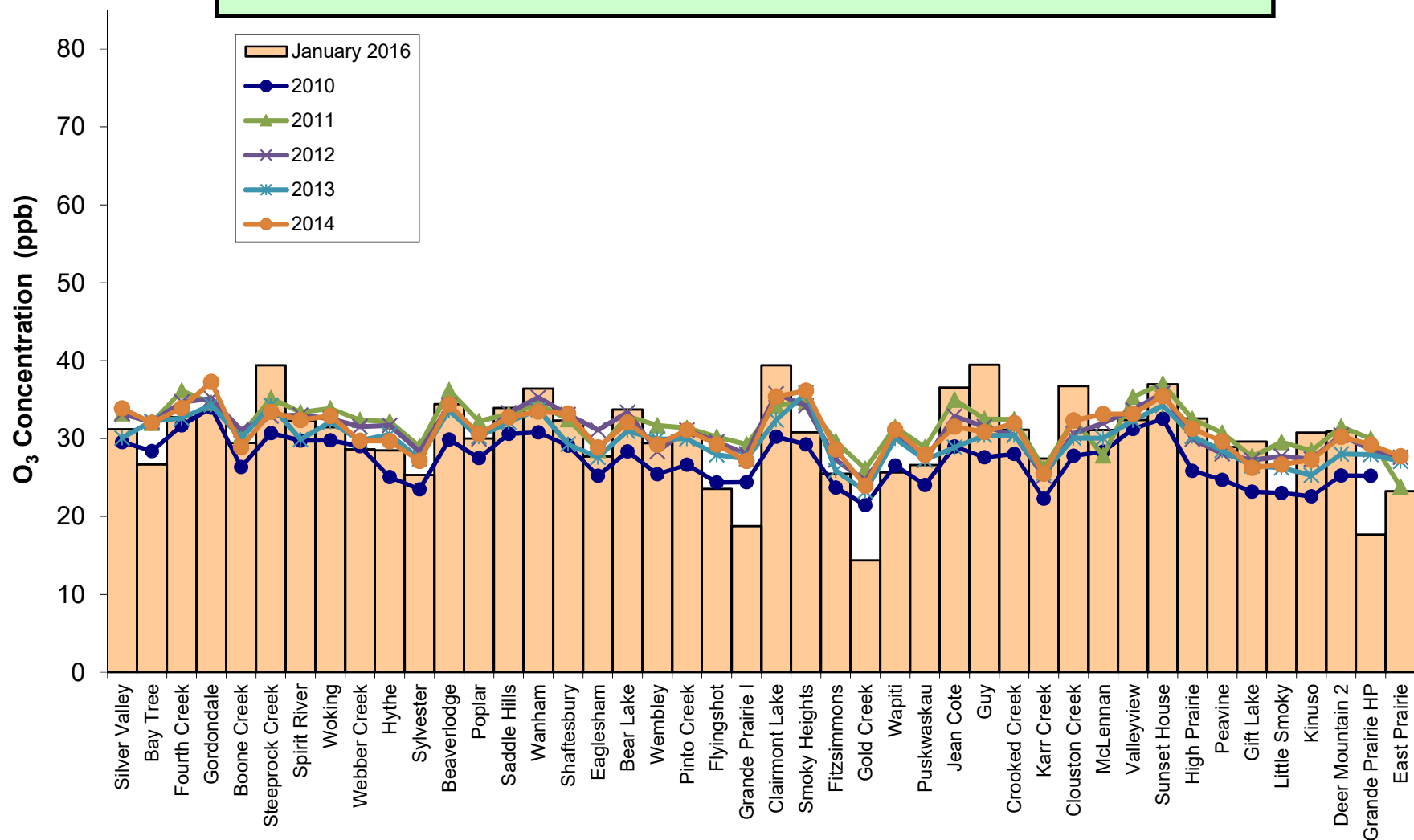
Alberta Ambient Air Quality Objective - 30-day Objective is 11 ppb



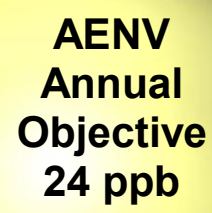
PAZA Passive O₃ Stations
Average Concentrations in ppb
January 2016



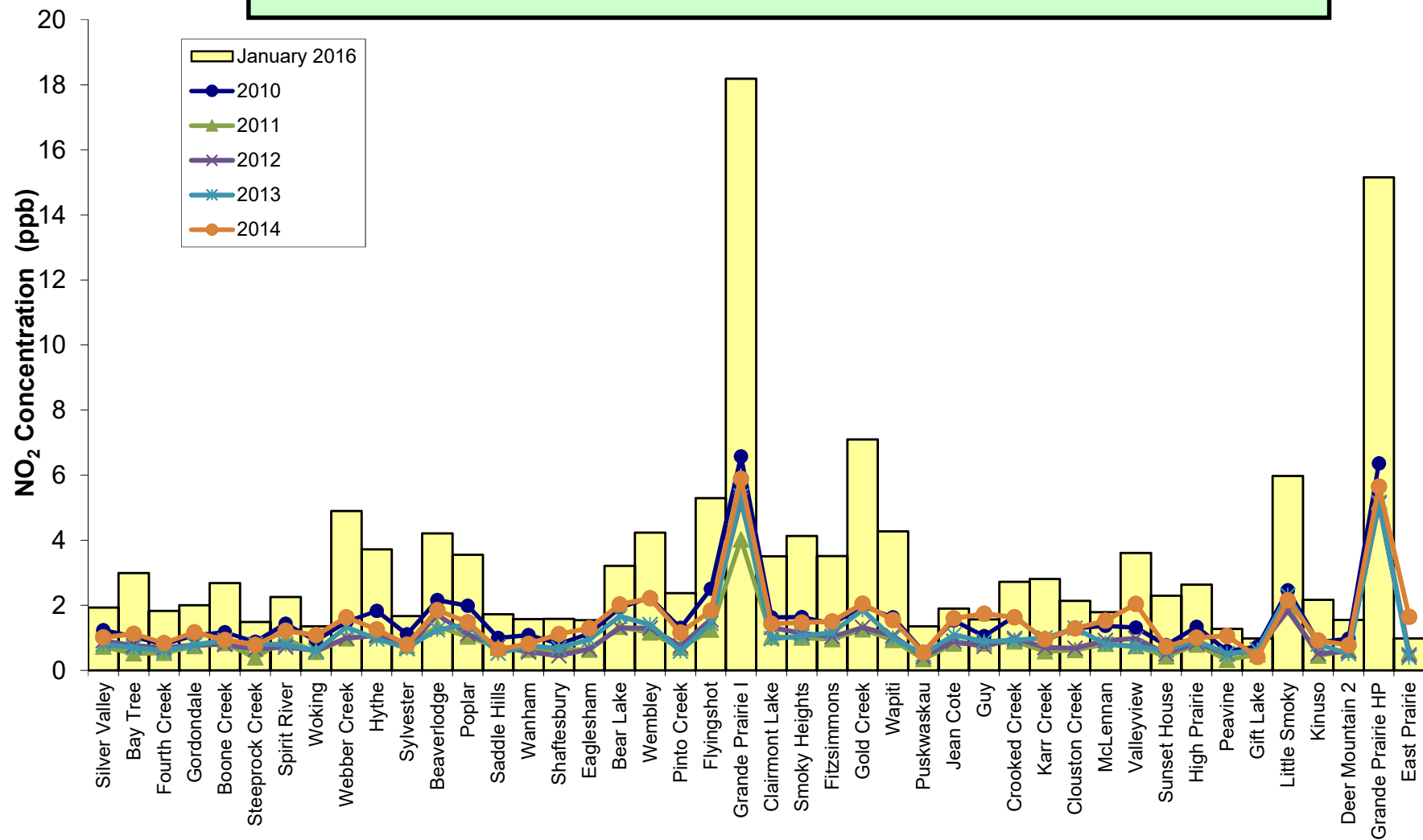
Alberta Ambient Air Quality Objective - No Annual O₃ Objective



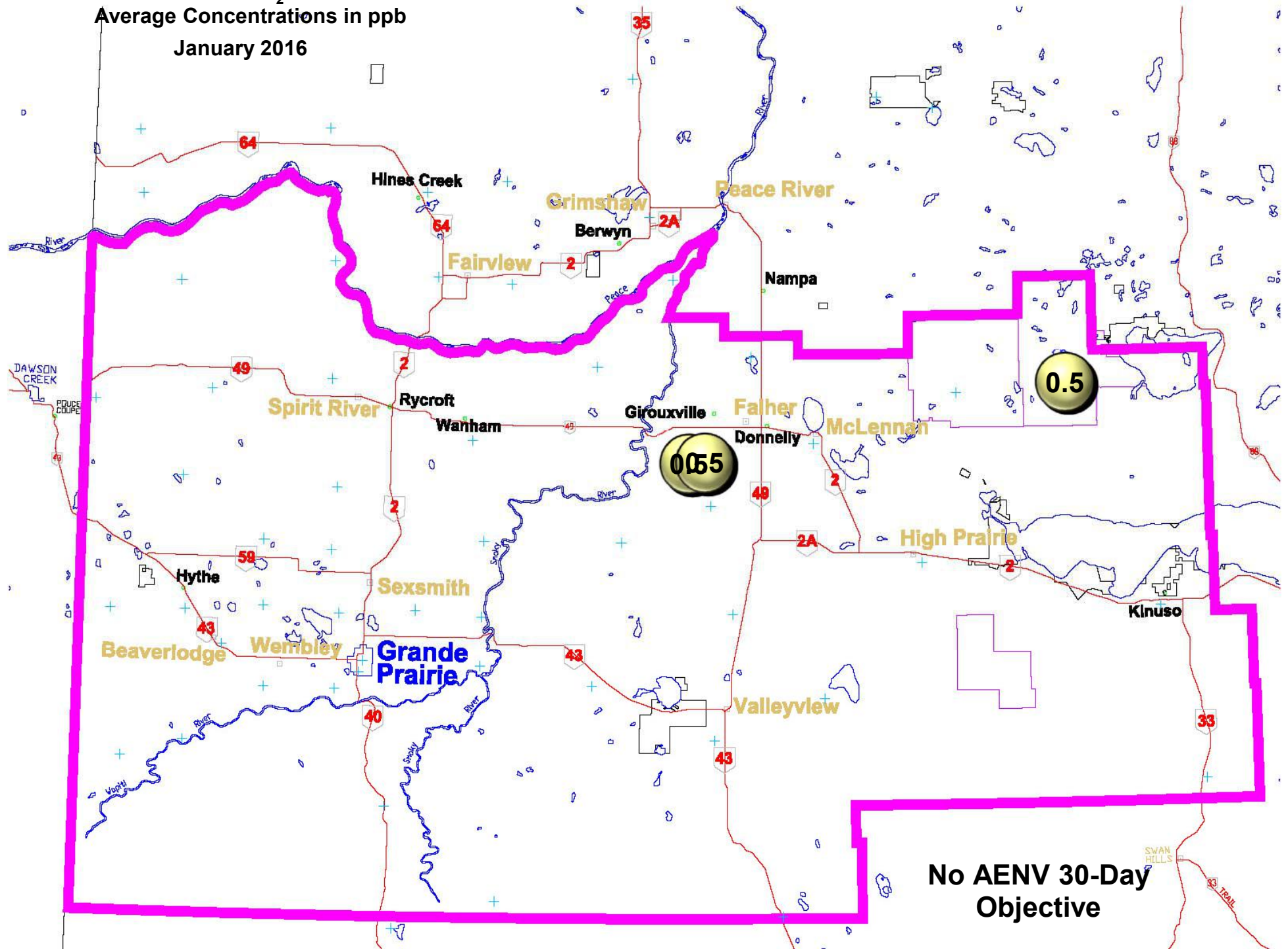
January 2016

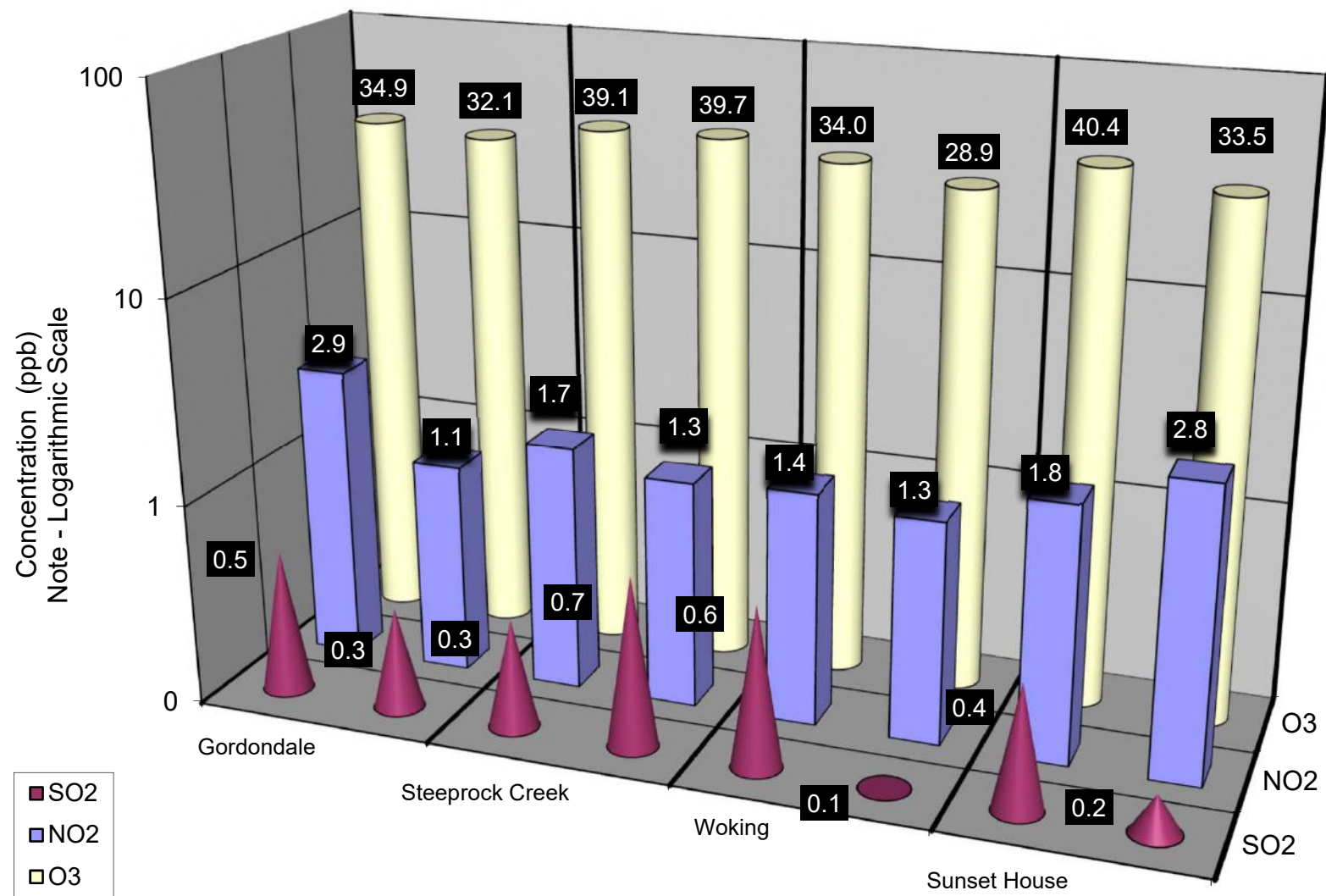


Alberta Ambient Air Quality Objective - Annual NO₂ Objective is 24 ppb



**PAZA Passive H₂S Stations
Average Concentrations in ppb
January 2016**





Duplicate Summary Chart

PAZA

ALBERTA ENVIRONMENT AND PARKS INCIDENCE REPORT

January 2016

Air Monitoring Directive Exceedence Report

**Alberta Environmental Monitoring, Evaluation and Reporting Agency
Energy & Environmental Response**

111 Twin Atria Building
4999 – 98th Avenue
Edmonton, Alberta T6B 2X3
erc.environment@gov.ab.ca
Phone: (780) 422-4505
Fax: (780) 427-1044

Reference Number:	307063	Reported To (AESRD Contact):	Stephen
Date & Time Incident Reported to AESRD:	January 5, 2016 10:30	Reported By:	Grover Christiansen
Reported on Behalf of:	PAZA	Approval Number (if applicable):	N/A
Location(s) of Incident:	Smoky Heights		
Start Date & Time of Incident:	January 4, 2016 23:00 MST	End Date & Time of Incident:	January 4, 2016 23:00 MST
Reason or Nature of Incident:			
The PM_{2.5} analyzer (Sharp 5030) within the Smoky Heights station, currently located ENE of Grande Prairie at LSD 13-8-074-02 W6, exceeded the AENV 1 hour average PM_{2.5} guideline (80 µg / m³) as detailed below: 23:00MST PM_{2.5}=213.9µg / m³ WS=3.8 km / hr WD=342.4 degrees Temp: -18.6°C			
Immediate Actions Taken:			
Reviewed and confirmed the data as valid, called it in to AESRD.			
Investigation Details:			
WD suggests smoke from wood boiler located at Oil Field Rig Mat process.			
Actions Taken to Prevent Reoccurrence (if any):			
N/A			
Additional Actions Required (if any):			
N/A			
Report Completed By:	Grover Christiansen	Date Report Submitted:	January 5, 2016
7-Day Letter Due Date:	January 11 2016		

Air Monitoring Directive Exceedence Report

**Alberta Environmental Monitoring, Evaluation and Reporting Agency
Energy & Environmental Response**

111 Twin Atria Building
4999 – 98th Avenue
Edmonton, Alberta T6B 2X3
erc.environment@gov.ab.ca
Phone: (780) 422-4505
Fax: (780) 427-1044

Reference Number:	307194	Reported To (AESRD Contact):	Vincent
Date & Time Incident Reported to AESRD:	Jan 10, 2016 10:00am	Reported By:	Christopher Hendrickson
Reported on Behalf of:	PAZA	Approval Number (if applicable):	N/A
Location(s) of Incident:	Henry Pirker		
Start Date & Time of Incident:	Jan 09 2016 01:00	End Date & Time of Incident:	Jan 09, 2016 00:00
Reason or Nature of Incident:			
PM2.5 24 hour exceedance between 01:00 and 00:00 PM2.5 limit is 30 ug/m3. 24 hour average was 33.9 ug/m3. Winds were WS 2.9 km/h WD 248 Deg			
Immediate Actions Taken:			
Confirmed validity of data and proceeded to call in the exceedance to AEMERA			
Investigation Details:			
N/A			
Actions Taken to Prevent Reoccurrence (if any):			
N/A			
Additional Actions Required (if any):			
N/A			
Report Completed By:	Christopher Hendrickson	Date Report Submitted:	January 10, 2016
7-Day Letter Due Date:	January 17, 2016		

Air Monitoring Directive Exceedence Report

Alberta Environmental Monitoring, Evaluation and Reporting Agency

Energy & Environmental Response

111 Twin Atria Building

4999 – 98th Avenue

Edmonton, Alberta T6B 2X3

erc.environment@gov.ab.ca

Phone: (780) 422-4505

Fax: (780) 427-1044

Reference Number: 307421		Reported To (AESRD Contact): Erin	
Date & Time Incident Reported to AESRD:	January 18, 2016 18:45	Reported By:	Grover Christiansen
Reported on Behalf of:	PAZA	Approval Number (if applicable):	N/A
Location(s) of Incident: Smokey Heights			
Start Date & Time of Incident:	January 18, 2016 18:00 MST	End Date & Time of Incident:	January 18, 2016 18:00 MST
Reason or Nature of Incident:			
The PM_{2.5} analyzer (Sharp 5030) within the Smoky Heights station, currently located ENE of Grande Prairie at LSD 13-8-074-02 W6, exceeded the AENV 1 hour average PM_{2.5} guideline (80 µg/m³) as detailed below: 18:00 MST PM2.5 146.6 ug/m3 WS: 5.0 km/hr WD: 335.9 degrees Temp: -14.3			
Immediate Actions Taken:			
Reviewed and confirmed the data as valid, called it in to AESRD.			
Investigation Details:			
WD suggests smoke from wood boiler located at Oil Field Rig Mat process.			
Actions Taken to Prevent Reoccurrence (if any):			
N/A			
Additional Actions Required (if any):			
N/A			
Report Completed By:	Tech's name Grover Christiansen	Date Report Submitted:	January 19, 2016
7-Day Letter Due Date:	January 24 2016		

WSP AQM Group: Exceedence Report

Revision #3

January 01, 2015

January 2016 Calibration Reports

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

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

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

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

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

**PAZA – Falher Station with the following calibrations:
SO₂ & H₂S**

Calibration Report

Parameter SO2

Air Monitoring Network PAZA



Station Information

Calibration Date	January 5, 2016	Previous Calibration	December 10, 2015
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
			Other:
Start Time (MST)	10:25	End Time (MST)	12:55
Barometric Pressure	728.000 mm	Station Temperature	21.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Conc	49.7 ppm	Cal Gas Cert Date	October 5, 2018
		Cal Gas Cylinder #	LL103793
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	10
	Before		After
Calculated slope	0.989102	Calculated slope	0.990725
Calculated intercept	0.821239	Calculated intercept	1.733865
Analyzer make	TEI 43I-TLE	Analyzer serial #	1507864682 (AMU 2006)

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	1.79		1.79	
Coefficient	1.012		1.012	
Pressure	668.8	mm Hg	668.8	mm Hg
Flow	0.441	lpm	0.440	lpm
Lamp intensity	82	Hz	82	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	0.1	N/A
4995	39.93	394.2	397.2	0.9924
4995	19.97	197.9	196.6	1.0064
4995	9.97	99.0	96.6	1.0248
4995	0.00	0.0	0.1	As Found Zero
4995	39.93	394.2	397.2	As Found Span
Average Correction Factor				1.0079

Calculated value of As Found Response: 393.5 ppb Percent Change of As Found: 0.2%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.1	ppb
Auto span	296.8	ppb	286.6	ppb

Notes: No adjustments made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



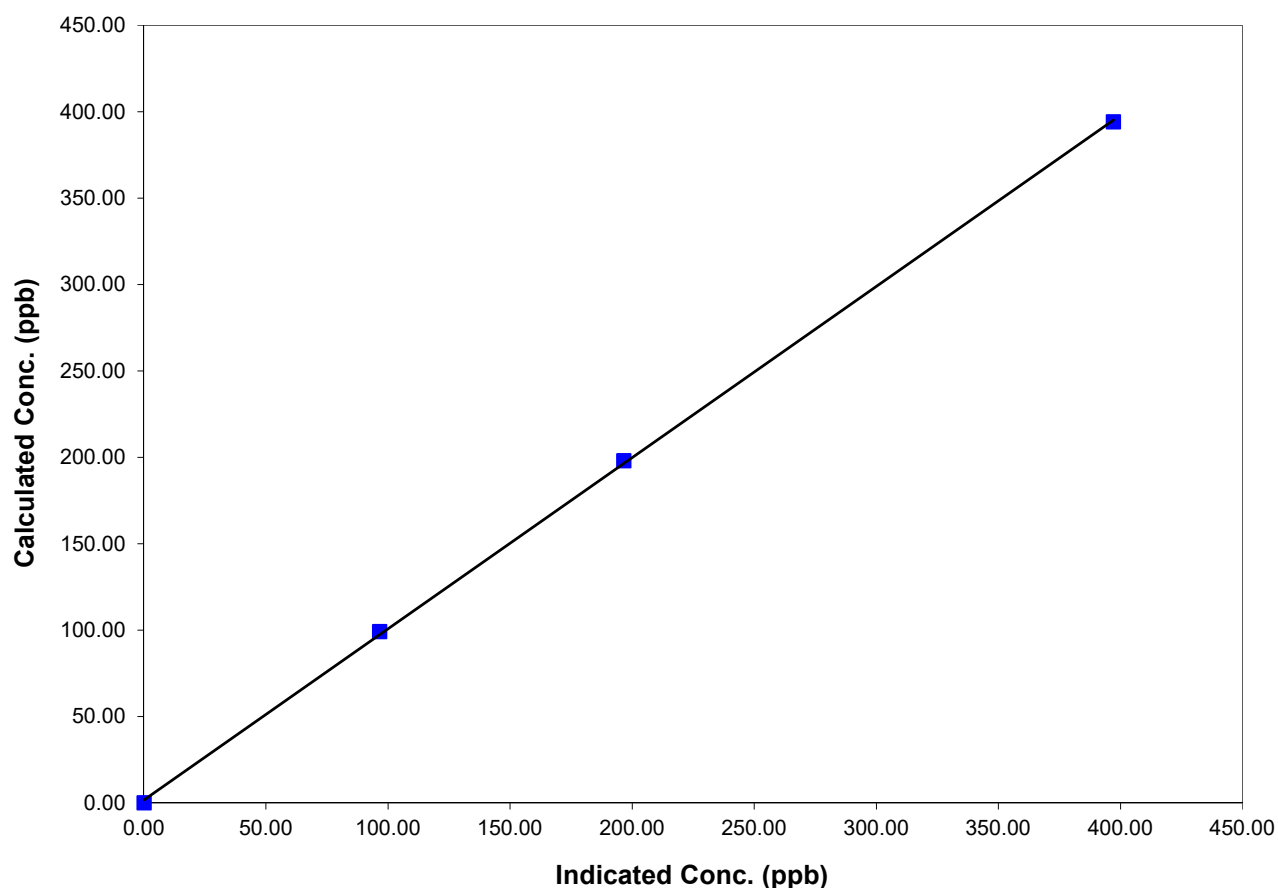
Station Information

Calibration Date	January 5, 2016	Previous Calibration	December 10, 2015
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:25	End Time (MST)	12:55
Analyzer make/model	TEI 43I-TLE	Analyzer serial #	1507864682 (AMU 2006)

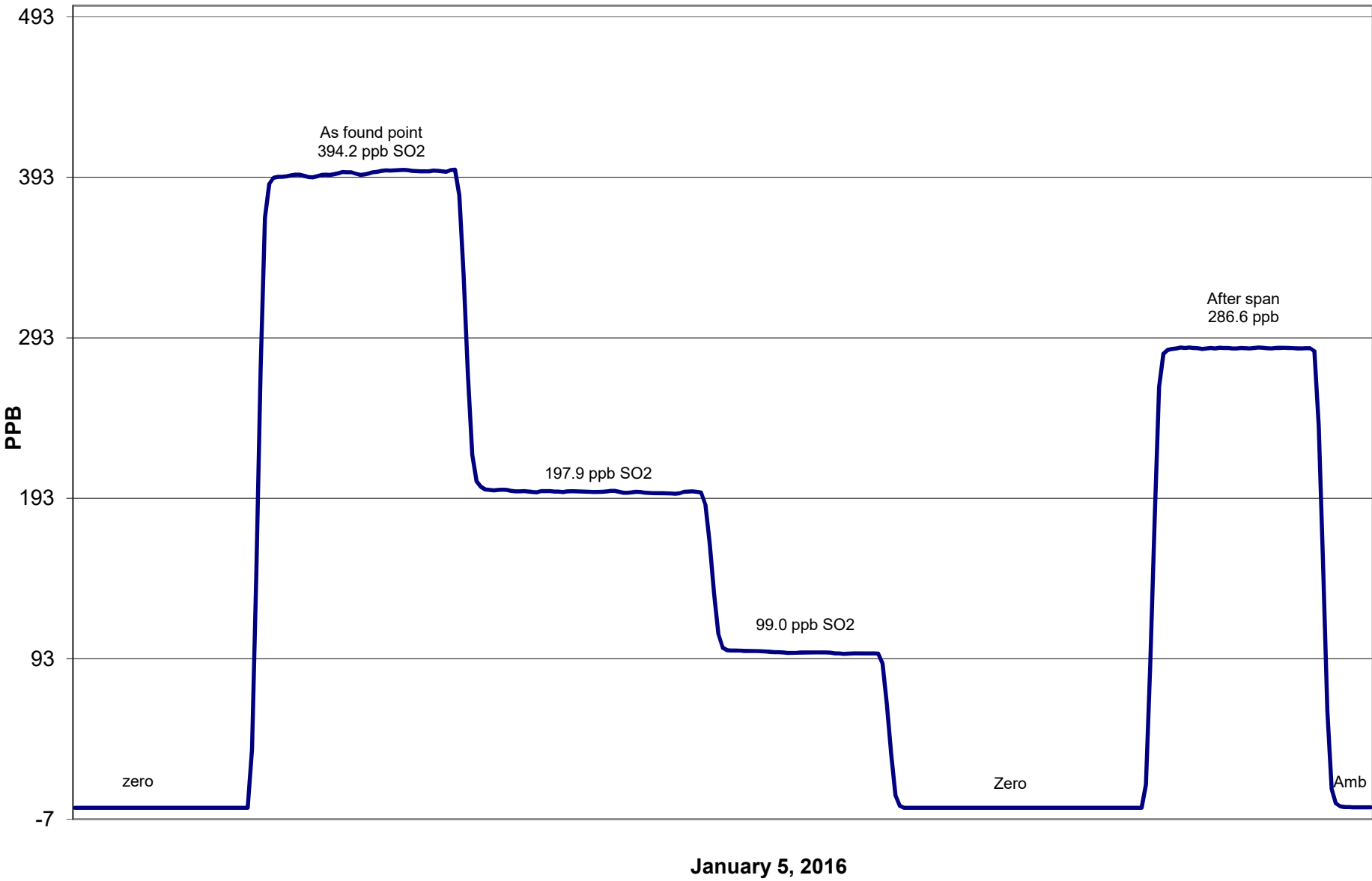
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999896
394.2	397.2	0.9924		
197.9	196.6	1.0064		
99.0	96.6	1.0248	Slope	0.990725
			Intercept	1.733865

SO2 Calibration Curve



SO2 Calibration



Calibration Report

Parameter

NO_x-NO-NO₂

Air Monitoring Network

PAZA



Station Information

Calibration Date	January 5, 2016	Previous Calibration	December 10, 2015
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Installation	Removal
Other:			
Start Time (MST)	10:25	End Time (MST)	14:40:00 PM
Barometric Pressure	721.000 mm	Station Temperature	21.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
NO Cal Gas Conc	50.9 ppm	Cal Gas Expiry Date	October 5, 2018
NOx Cal Gas Conc	51.2 ppm	Cal Gas Serial #	LL103793

DACS Information

DACS make	CR3000	DACS serial No.	5408	
Parameter		NO2	NOx	NO
Before	Data Slope	0.994583	1.010662	1.004268
	Data Offset	0.500841	0.501902	0.544684
After	Data Slope	0.996289	0.994398	0.988624
	Data Offset	-1.157780	0.819384	0.837314
Channel #		8	6	7
Voltage Range		0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model	42i	Analyzer serial #	906535087	
Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	6.1	mV	6.1	mV
NOx bkgnd	6.5	mV	6.5	mV
NO coefficient	0.956		0.956	
NOx coefficient	1.000		1.000	
NO2 conv temp	327.4	Deg C	326.3	Deg C
Cooler Temp	-2.7	Deg C	-2.7	Deg C
PMT Volt	-844.3	mV	-844.3	mV
R Cell Press	166.7	in Hg	164.6	in Hg
Sample Flow	0.626	LPM	0.629	LPM

Notes: NO adjustment made

Calibration Report

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



Station Information

Calibration Date: January 5, 2016 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	4995	0.00	0.0	0.0	0.0	-0.1	0.1	0.0	N/A	N/A
1	4995	39.92	405.9	403.6	2.4	407.9	408.1	0.0	0.9953	0.9889
2	4995	19.96	203.8	202.6	1.2	203.5	202.9	0.3	1.0014	0.9986
3	4995	9.93	101.6	101.0	0.6	100.7	100.8	0.1	1.0085	1.0017
AFZ	4995	0.00	0.0	0.0	0.0	-0.1	0.1	0.0	0.0000	0.0000
AFS	4995	39.92	405.9	403.6	0.8	407.9	408.1	0.0	0.9953	0.9889
Average Correction Factor									1.0017	0.9964

As Found Concentrations: NO_x= 412.8 NO= 410.2 As Found Percent Change NO_x= 1.7% NO= 1.7%

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	-0.1	0.1	0.0	N/A	N/A	N/A	N/A
NO point	405.2	405.2	0.0	405.1	405.2	-0.1	1.0003	1.0000	N/A	N/A
300	405.2	74.0	331.2	407.1	74.0	332.9	0.9954	1.0000	0.9950	100.5%
200	405.2	182.9	222.3	408.4	182.9	224.6	0.9923	1.0000	0.9897	101.0%
100	405.2	300.4	104.9	409.3	300.4	108.0	0.9900	1.0000	0.9709	103.0%
Average Correction Factor							0.9926	1.0000	0.9852	101.5%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.1	0.0	0.1	ppb	-0.1	0.0	0.2	ppb
Auto span	396.3	393.2	2.5	ppb	304.1	301.6	2.2	ppb

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



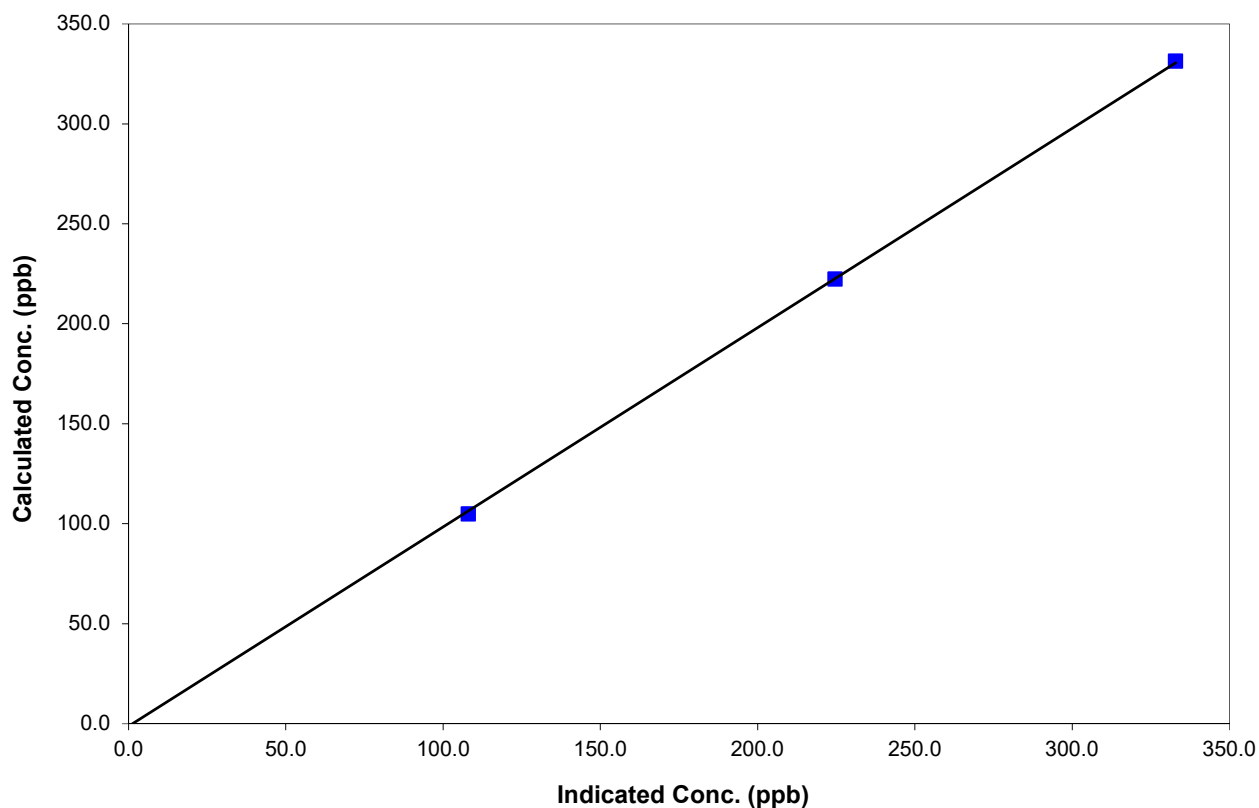
Station Information

Calibration Date	January 5, 2016	Previous Calibration	December 10, 2015
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:25	End Time (MST)	14:40:00 PM
Analyzer make	42i	Analyzer serial #	906535087

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999927
331.2	332.9	0.9950		
222.3	224.6	0.9897		
104.9	108.0	0.9709	Slope	0.996289
			Intercept	-1.157780

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



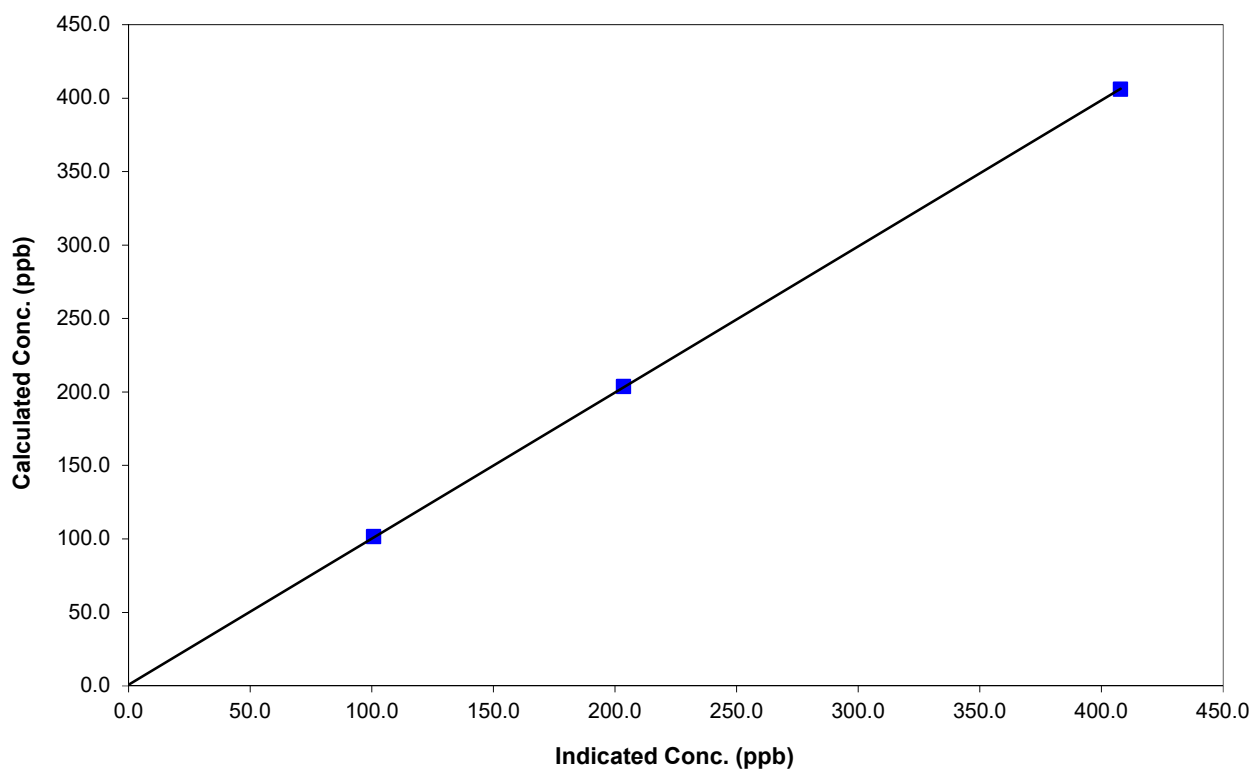
Station Information

Calibration Date	January 5, 2016	Previous Calibration	December 10, 2015
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:25	End Time (MST)	14:40:00 PM
Analyzer make	42i	Analyzer serial #	906535087

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A	Correlation Coefficient	0.999983
405.9	407.9	0.9953		
203.8	203.5	1.0014		
101.6	100.7	1.0085	Slope	0.994398
			Intercept	0.819384

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



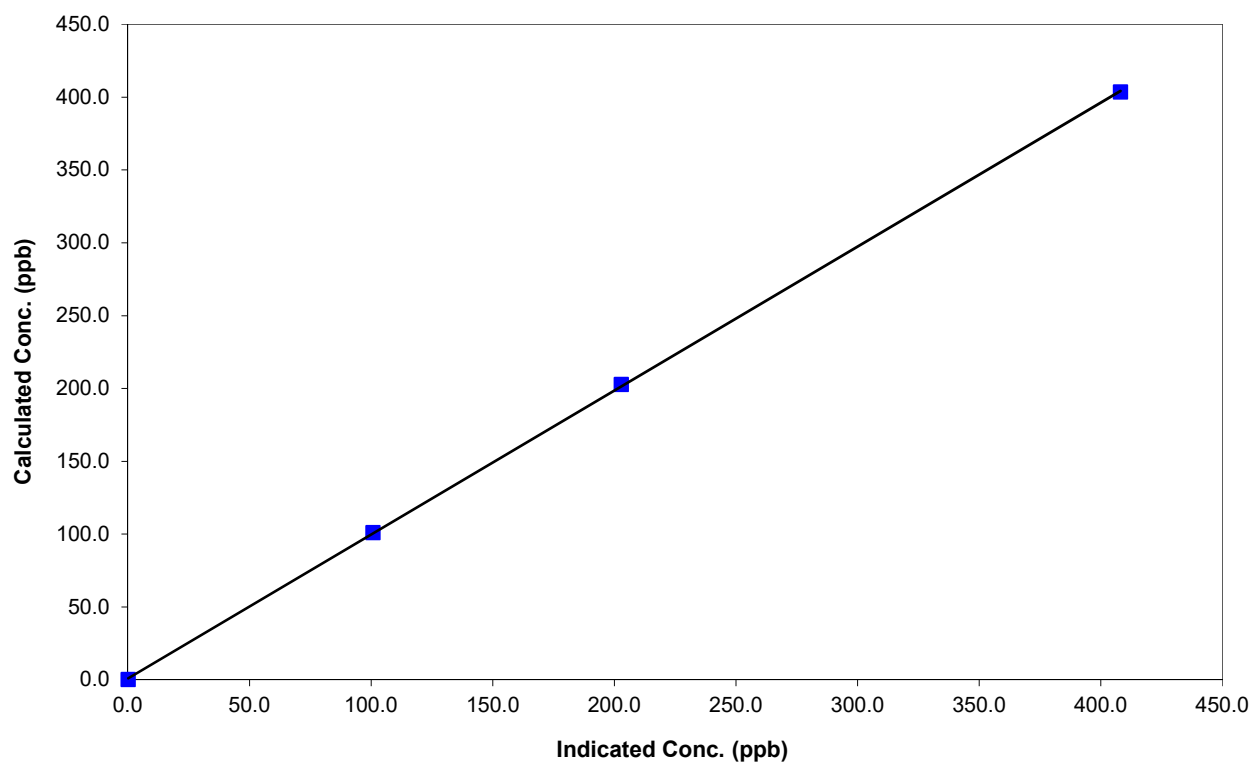
Station Information

Calibration Date	January 5, 2016	Previous Calibration	December 10, 2015
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:25	End Time (MST)	14:40:00 PM
Analyzer make	42i	Analyzer serial #	906535087

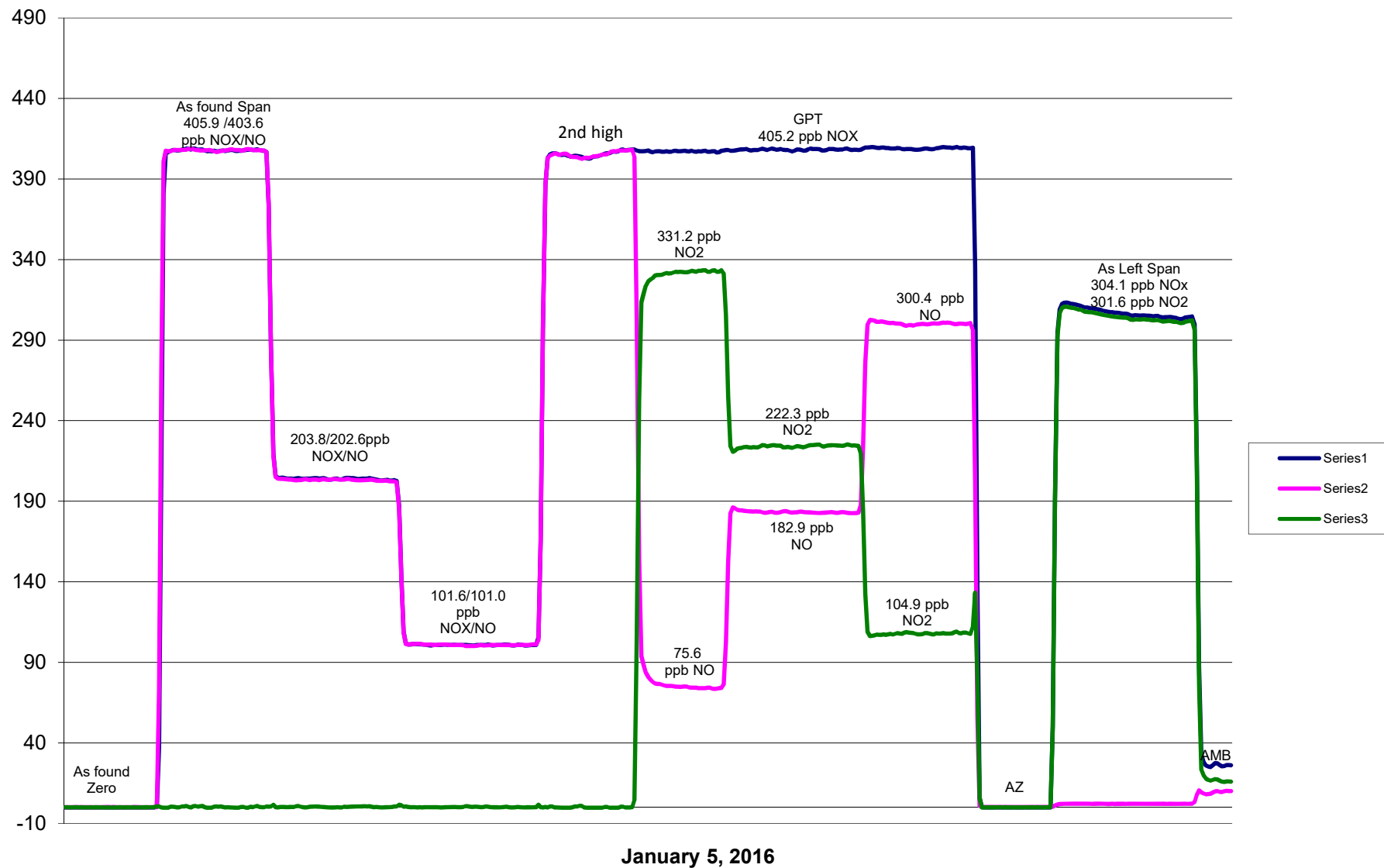
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999966
403.6	408.1	0.9889		
202.6	202.9	0.9986		
101.0	100.8	1.0017	Slope	0.988624
			Intercept	0.837314

NO Calibration Curve



NO_x Calibration



Calibration Report



Parameter 03

Air Monitoring Network PAZA

Station Information

Calibration Date	January 5, 2016	Previous Calibration	December 10, 2015
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Install	Removal
		Other:	

Start Time (MST)	13:35:00 PM	End Time (MST)	16:15:00 PM
Barometric Pressure	728.000 mm	Station Temperature	21.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA

DACS make	CR3000	DACS serial No.	5237
DACS voltage range	0 - 5 volt	DACS channel #	9
	Before		After
Calculated slope	1.001575	Calculated slope	1.006255
Calculated intercept	-0.106146	Calculated intercept	-0.202382

Analyzer make	Teco 49I	Analyzer serial #	1507964699 (AMU:2015)
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	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	0.70	ppb	0.70	ppb
slope	1.004		1.004	
Lamp temp	53.5	mV	53.7	mV
Lamp Intensity A/B	83111/93610	mV	83678/92452	mV
Pressure	690.1	mm Hg	0.691	mm Hg
Flow A	0.731	ccm	0.733	ccm
Flow B	0.732	ccm	0.735	ccm

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5035	0.0	0.0	-0.2	N/A
5035	0.3	331.3	330.0	1.0040
5035	0.2	222.3	219.6	1.0121
5035	0.1	104.9	105.8	0.9915
5035	0.0	0.0	-0.2	As found zero
5035	0.3	331.3	330.0	As found span
Average Correction Factor				1.0025

Calculated value of As Found Response: 330.6 ppm Percent Change of As Found: -0.2%

	before calibration		after calibration	
Auto zero	-0.5	ppb	-0.3	ppb
Auto span	363.3	ppb	362.7	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter 03

Air Monitoring Network PAZA



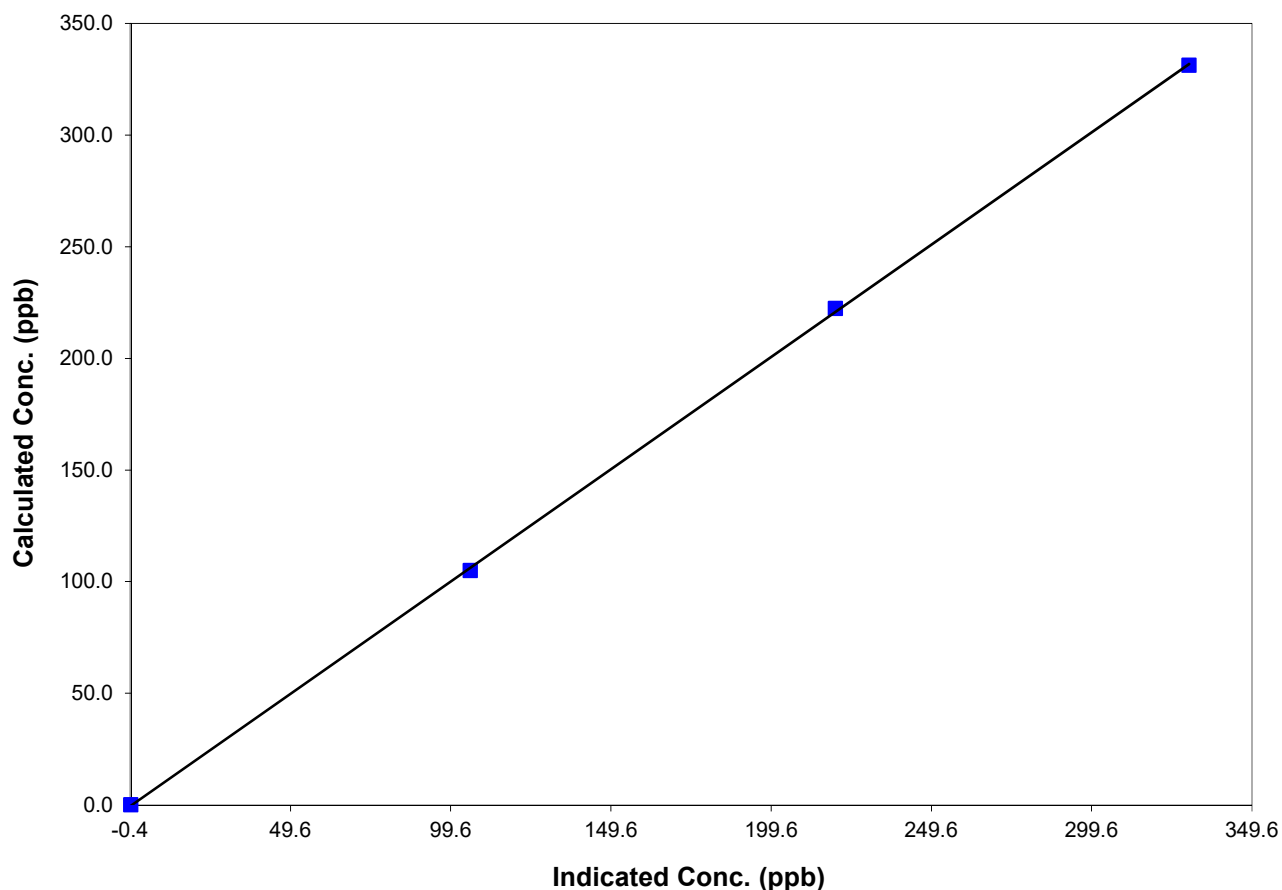
Station Information

Calibration Date	January 5, 2016	Previous Calibration	December 10, 2015
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	13:35:00 PM	End Time (MST)	16:15:00 PM
Analyzer make/model	Teco 49I	Analyzer serial #	1507964699 (AMU:2015)

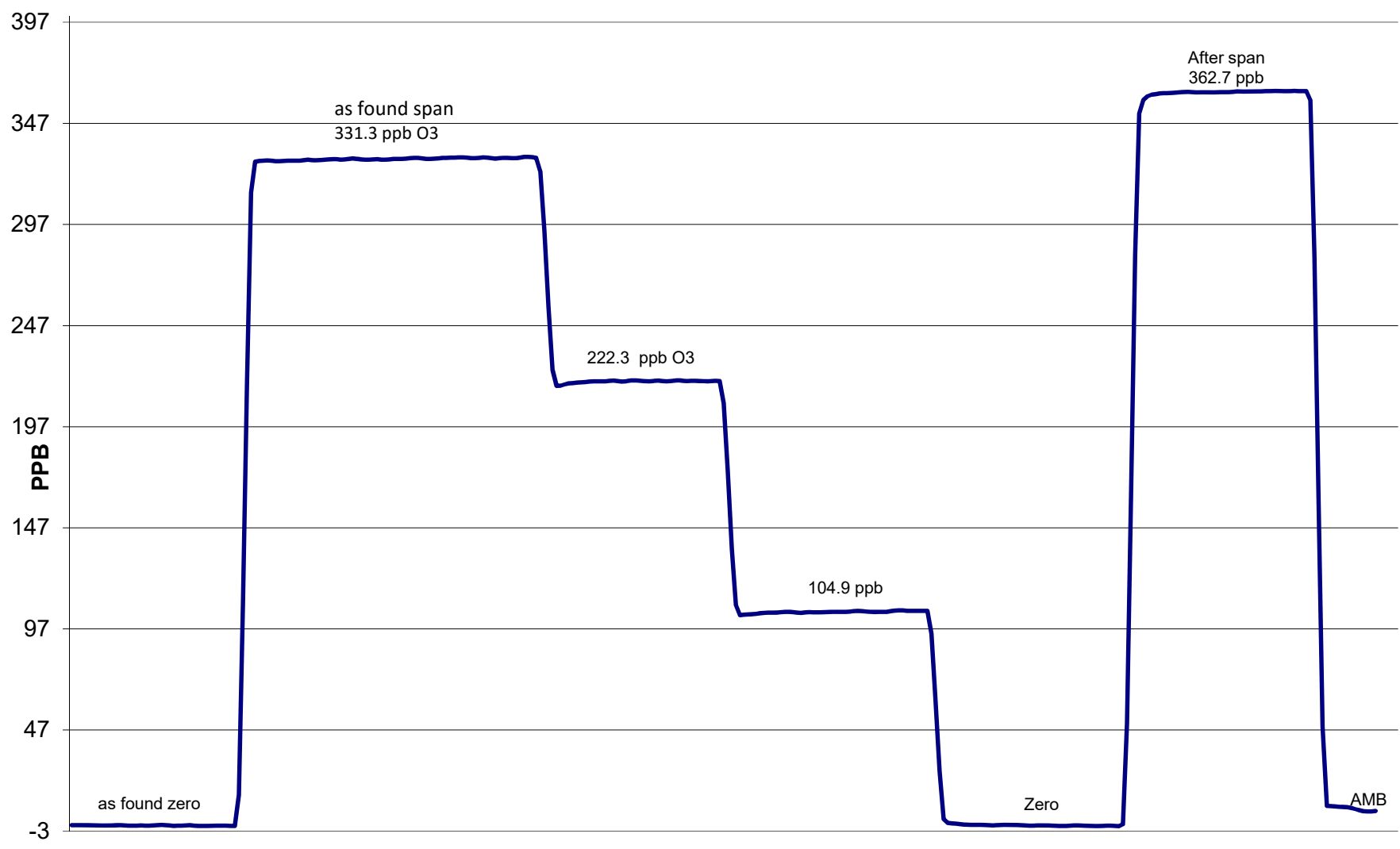
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.2	NA	Correlation Coefficient	0.999927
331.3	330.0	1.0040		
222.3	219.6	1.0121		
104.9	105.8	0.9915	Slope	1.006255
			Intercept	-0.202382

O3 Calibration Curve



O3 Calibration



January 5, 2016

Calibration Report

Parameter CO

Air Monitoring Network PAZA



Station Information

Calibration Date	January 4, 2015	Previous Calibration	December 14, 2015
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	13:15:00 PM	End Time (MST)	16:30:00 PM
Barometric Pressure	726.0 mm/hg	Station Temperature	21.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	6586
Cal Gas Conc	2898 ppm	Cal Gas Expiry Date	04/02/2013
		Cal Gas Cylinder #	LL83909
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 5 volt	DACS channel #	9
	Before		After
Calculated slope	1.010125	Calculated slope	1.012281
Calculated intercept	-0.262317	Calculated intercept	-0.250062
Analyzer make	Model 48I-TLE	Analyzer serial #	1408761378

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO zero setting	3.932		4.177	
CO span setting	1.001		1.001	
Sample pressure	698	mm Hg	698.3	mm Hg
Sample Flow	0.452	LPM	0.452	LPM

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.00	0.01	N/A
4995	69.94	40.02	39.65	1.0093
4995	34.96	20.14	20.27	0.9937
4995	17.96	10.38	10.74	0.9663
4995	0.00	0.00	0.29	As Found Zero
4995	69.94	40.02	40.39	As Found Span
Average Correction Factor				0.9898

Calculated value of As Found Response: 40.238 ppm Percent Change of As Found: -0.6%

	before calibration		after calibration	
Auto zero	0.01	ppm	0.01	ppm
Auto span	19.59	ppm	19.59	ppm

Notes: Zero adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter CO

Air Monitoring Network PAZA



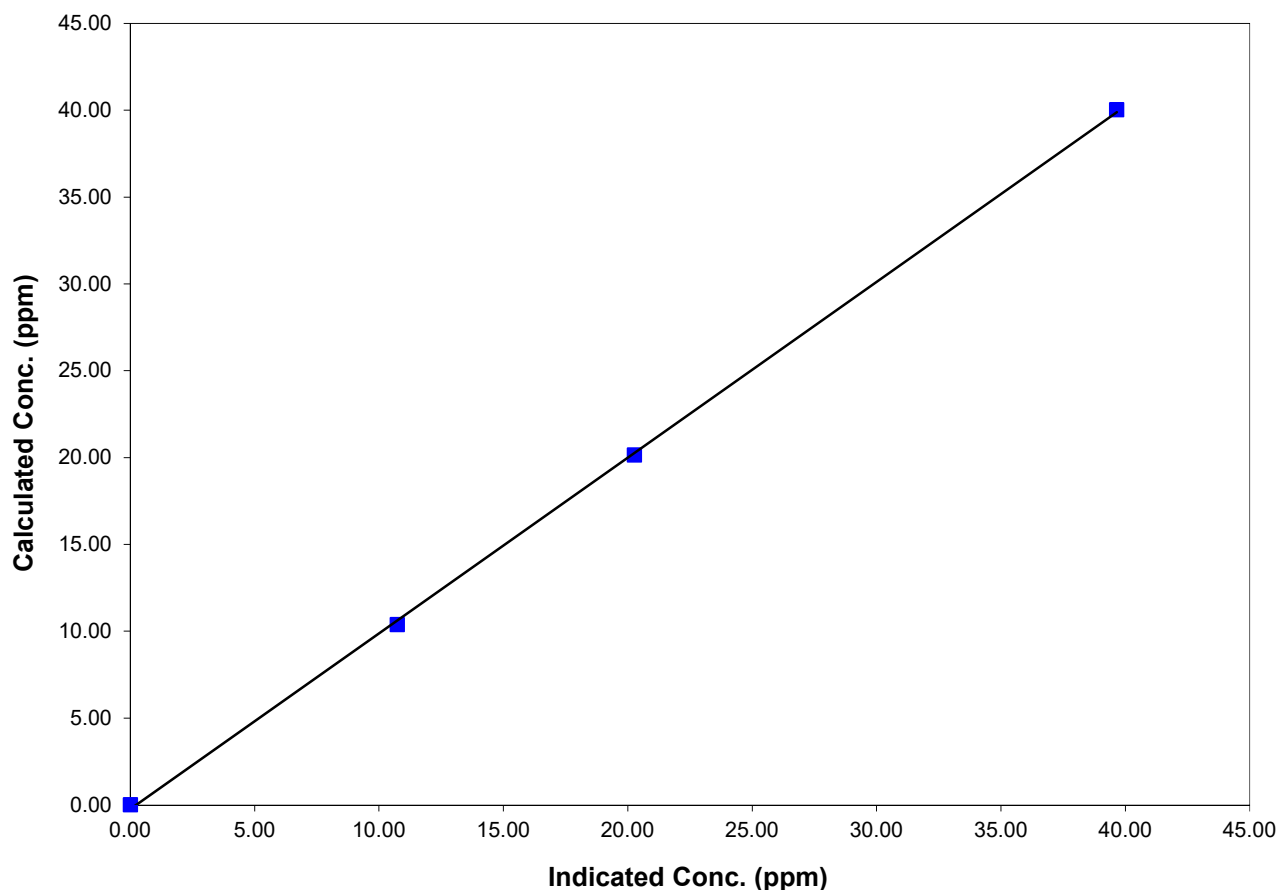
Station Information

Calibration Date	January 4, 2015	Previous Calibration	December 14, 2015
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	13:15:00 PM	End Time (MST)	16:30:00 PM
Analyzer make/model	Model 48I-TLE	Analyzer serial #	1408761378

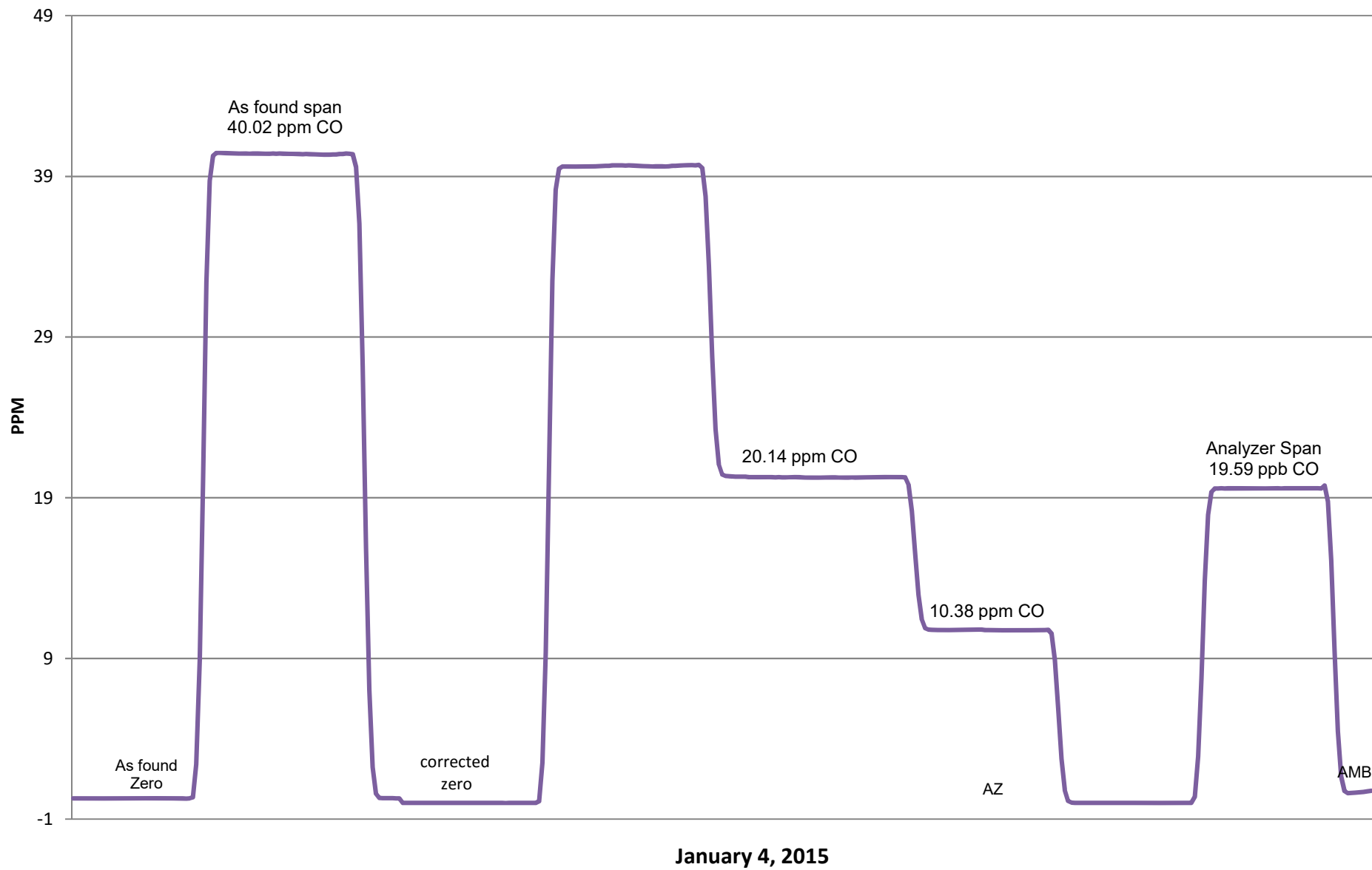
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.010	N/A	Correlation Coefficient	0.999827
40.017	39.649	1.0093		
20.142	20.271	0.9937	Slope	1.012281
10.383	10.745	0.9663		
			Intercept	-0.250062

CO Calibration Curve



CO Calibration



Calibration Report

Parameter CH4 / NMHC / THC

Air Monitoring Network

PAZA



Station Information

Calibration Date	January 4, 2016	Previous Calibration	December 14, 2015
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Install	Removal
			Other:

Start Time (MST)	10:50	End Time (MST)	14:00:00 PM
Barometric Pressure	726.00 mm/hg	Station Temperature	21.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas CH4 Conc	386 ppm CH4	Cal Gas Expiry Date	28/03/2014
Cal Gas C3H8 Conc	207 569.25 ppm CH4	Cal Gas Cylinder #	LL34318
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 5 volt	DACS channel #	SE 11,12,13

Analyzer make	TEI 55I	Analyzer serial #	1134650658
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	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	6.01		6.01	E ⁻⁴
NMHC cal factor	2.23		2.23	E ⁻⁴
Rt	12.74	Sec	12.74	Sec
Pk Index	23.22		23.22	

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)
1996	0.00	0.00	0.02	N/A
1996	68.96	12.89	12.91	0.9985
1996	40.96	7.76	7.71	1.0065
1996	15.99	3.07	3.04	1.0091
1996	0.00	0.00	0.02	As Found Zero
1996	68.93	12.89	13.21	As Found Span
Average Correction Factor				1.0047

Calculated value of As Found Response: 13.047 ppm Percent Change of As Found: -1.3%

	Before		After
Calculated slope	0.989078	Calculated slope	0.999818
Calculated intercept	-0.000866	Calculated intercept	0.011147

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.03	ppm	0.04	ppm
Auto span	9.20	ppm	9.38	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)
1996	0.00	0.00	0.02	N/A
1996	68.96	19.01	19.14	0.9932
1996	40.96	11.45	11.59	0.9876
1996	15.99	4.52	4.63	0.9769
1996	0.00	0.00	0.02	As Found Zero
1996	68.93	19.00	19.28	As Found Span
Average Correction Factor				0.9859

Calculated value of As Found Response: 19.401 ppm Percent Change of As Found: -2.1%

	Before		After
Calculated slope	1.011405	Calculated slope	0.994734
Calculated intercept	-0.080620	Calculated intercept	-0.053430

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.02	ppm
Auto span	12.75	ppm	13.18	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)
1996	0.00	0.00	0.03	N/A
1996	68.96	31.90	32.03	0.9960
1996	40.96	19.21	19.29	0.9958
1996	15.99	7.59	7.66	0.9915
1996	0.00	0.00	0.03	As Found Zero
1996	68.93	31.89	32.47	As Found Span
Average Correction Factor				0.9944

Calculated value of As Found Response: 32.460 ppm Percent Change of As Found: -1.8%

	Before		After
Calculated slope	1.002940	Calculated slope	0.997175
Calculated intercept	-0.072941	Calculated intercept	-0.035247

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.02	ppm
Auto span	21.95	ppm	22.55	ppm

Notes: Span adjustment made
Hydrogen cylinder replaced

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter CH4

Air Monitoring Network PAZA



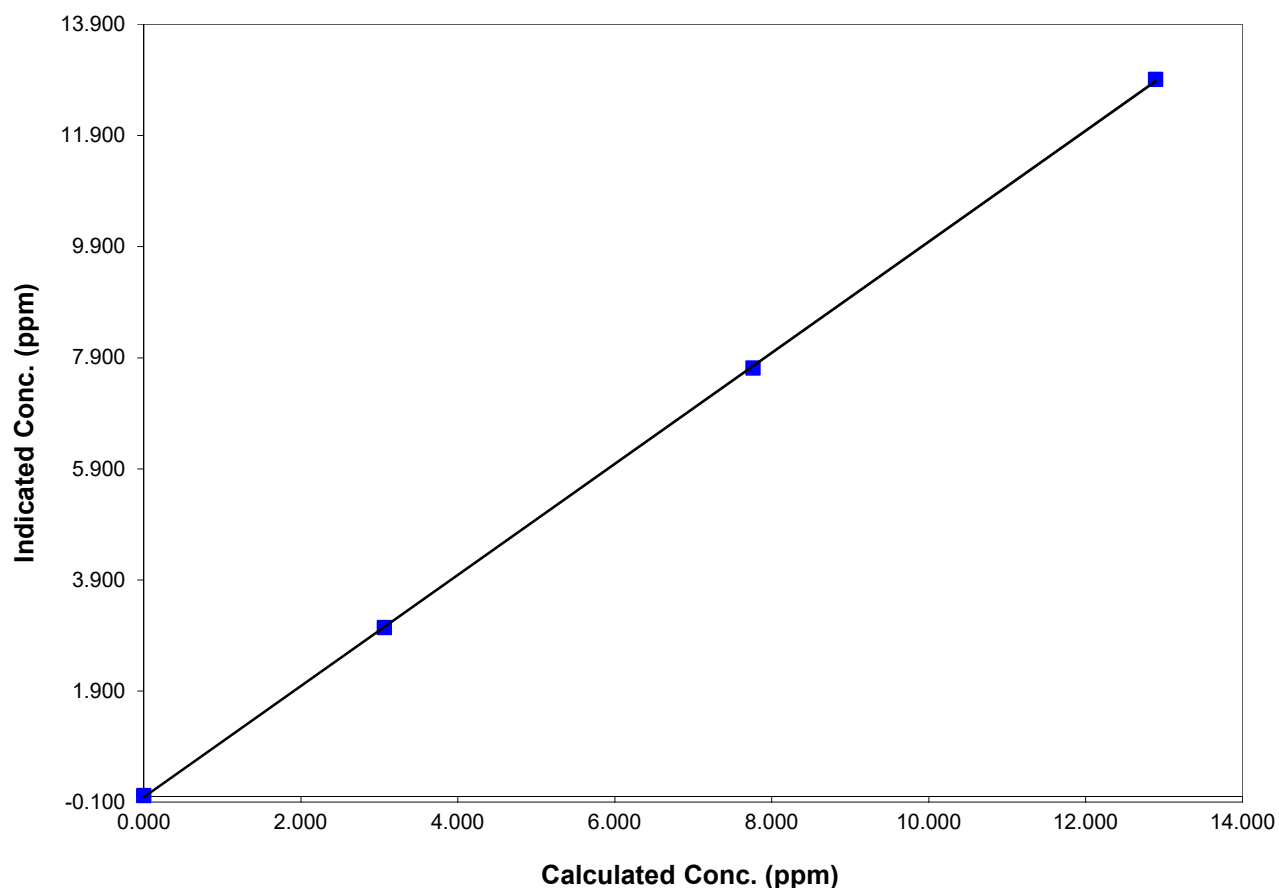
Station Information

Calibration Date	January 4, 2016	Previous Calibration	December 14, 2015
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:50	End Time (MST)	14:00:00 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	Correlation Coefficient	0.999962
12.891	12.910	0.9985		
7.762	7.712	1.0065		
3.068	3.040	1.0091	Slope	0.999818
			Intercept	0.011147

CH4 Calibration Data



Calibration Summary

Parameter NMHC

Air Monitoring Network PAZA



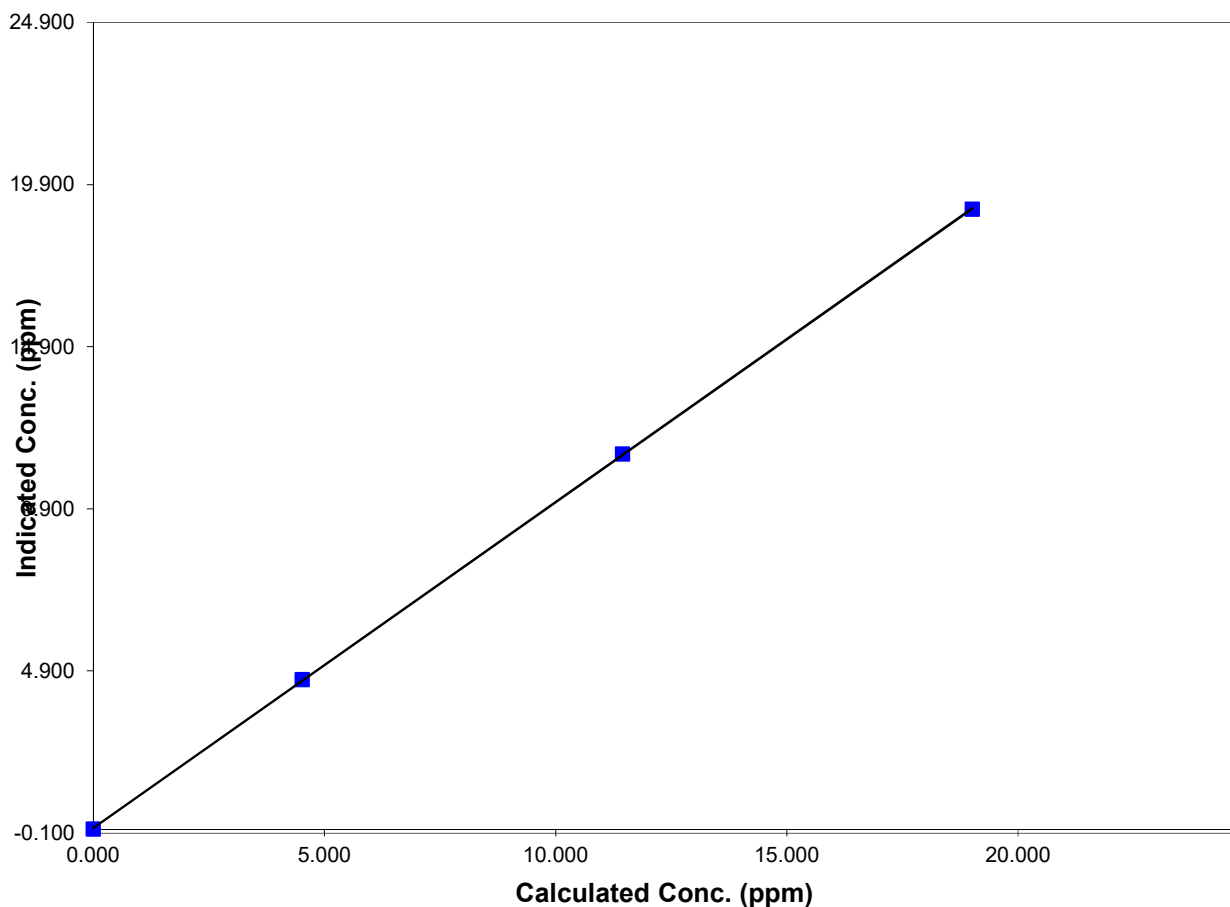
Station Information

Calibration Date	January 4, 2016	Previous Calibration	December 14, 2015
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:50	End Time (MST)	14:00:00 PM
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.020	N/A	Correlation Coefficient	0.999983
19.010	19.140	0.9932		
11.447	11.590	0.9876		
4.524	4.631	0.9769	Slope	0.994734
			Intercept	-0.053430

NMHC Calibration Data



Calibration Summary

Parameter THC

Air Monitoring Network PAZA



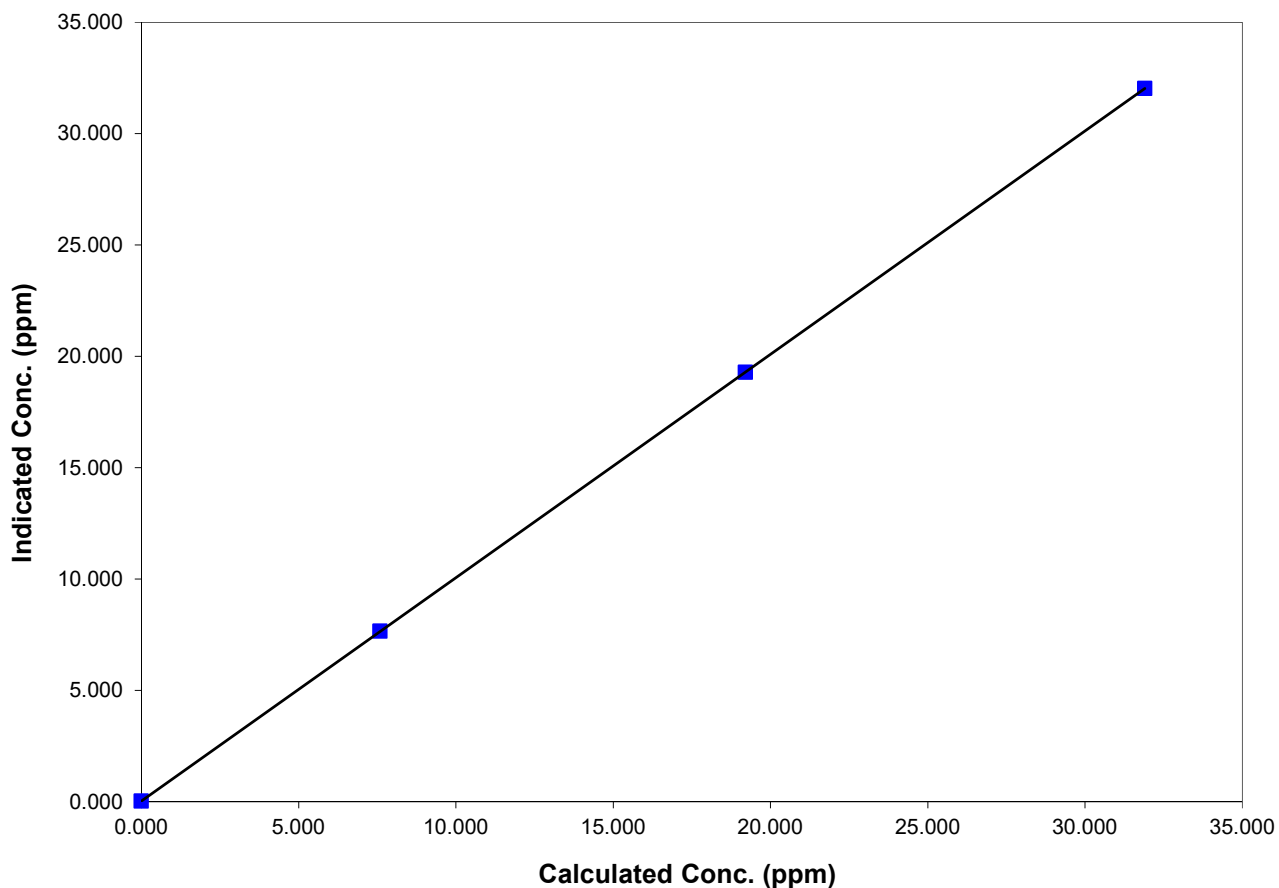
Station Information

Calibration Date	January 4, 2016	Previous Calibration	December 14, 2015
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:50	End Time (MST)	14:00:00 PM
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

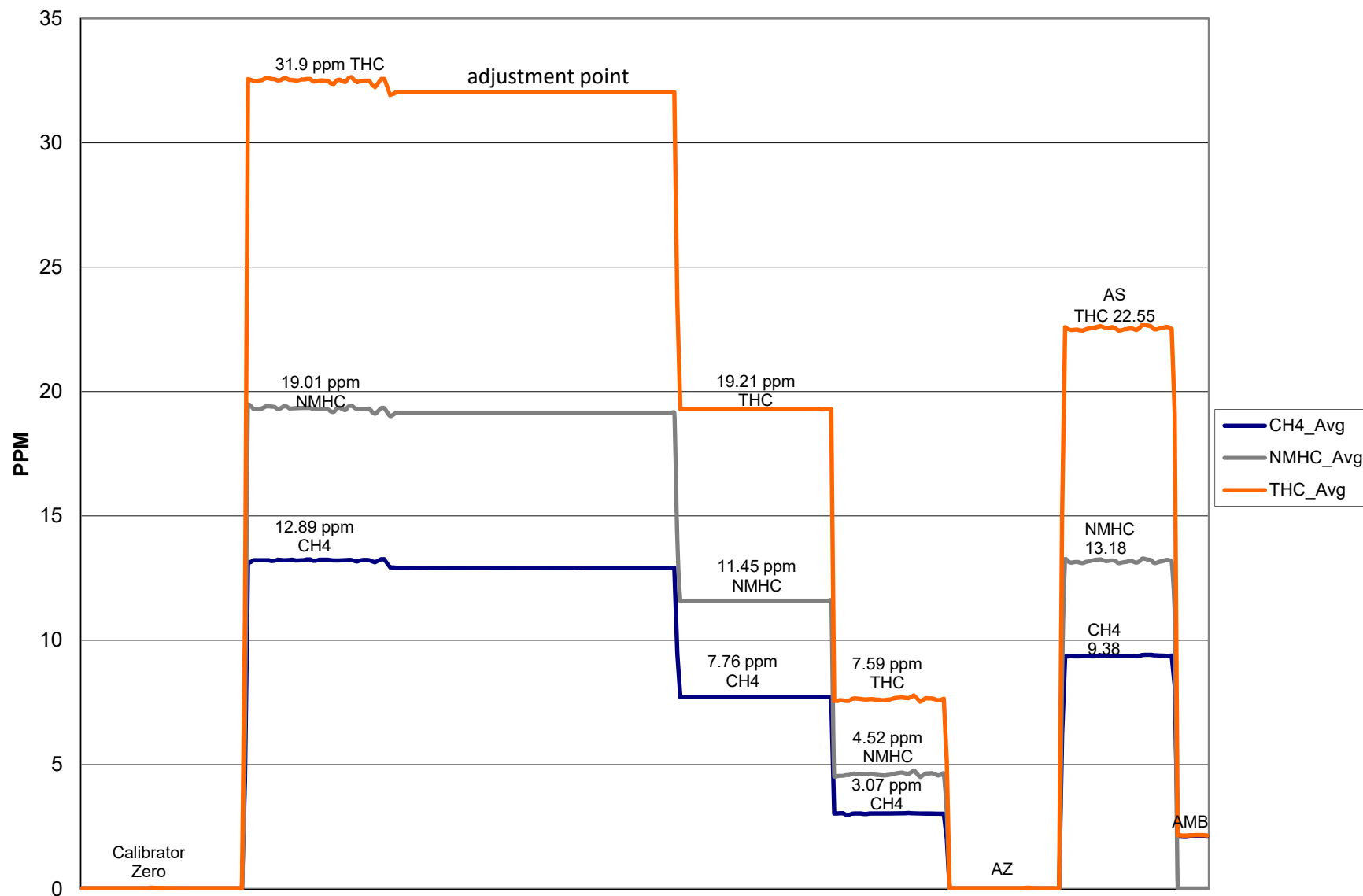
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.033	N/A	Correlation Coefficient	1.000000
31.901	32.030	0.9960		
19.209	19.289	0.9958		
7.592	7.657	0.9915	Slope	0.997175
			Intercept	-0.035247

THC Calibration Data



THC/CH₄/NMHC Calibration



Calibration Report

Parameter TRS

Air Monitoring Network PAZA



Station Information

Calibration Date	January 4, 2016	Previous Calibration	December 14, 2015
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	12:45	End Time (MST)	
Barometric Pressure	726.00 mm/Hg	Station Temperature	21.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Conc	10.32 ppb	Cal Gas Expiry Date	08/07/2016
		Cal Gas Cylinder #	LL110781
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	0.996902	Calculated slope	1.005923
Calculated intercept	0.447999	Calculated intercept	-0.245652
Analyzer make	TEI 45C	Analyzer serial #	630718528

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Coefficient	0.935		0.935	
Background	18.3		18.3	
Pressure	663.7	mm Hg	664.2	mm Hg
Flow	0.444	ccm	0.448	ccm
Lamp Voltage	903	V	902	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)
4995	0.00	0.00	0.31	N/A
4995	39.93	81.84	81.63	1.0026
4995	19.95	41.05	41.04	1.0004
6995	9.95	14.66	14.75	0.9938
4995	0.00	0.00	0.31	As Found Zero
4995	39.93	81.84	81.63	As Found Span
Average Correction Factor				0.9989

Calculated value of As Found Response: 81.5 ppb Percent Change of As Found: 0.4%

	before calibration		after calibration	
Auto zero	0.44	ppb	0.44	ppb
Auto span	34.12	ppb	34.12	ppb

Notes: No adjustment made
Scrubber material checked-still good.

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



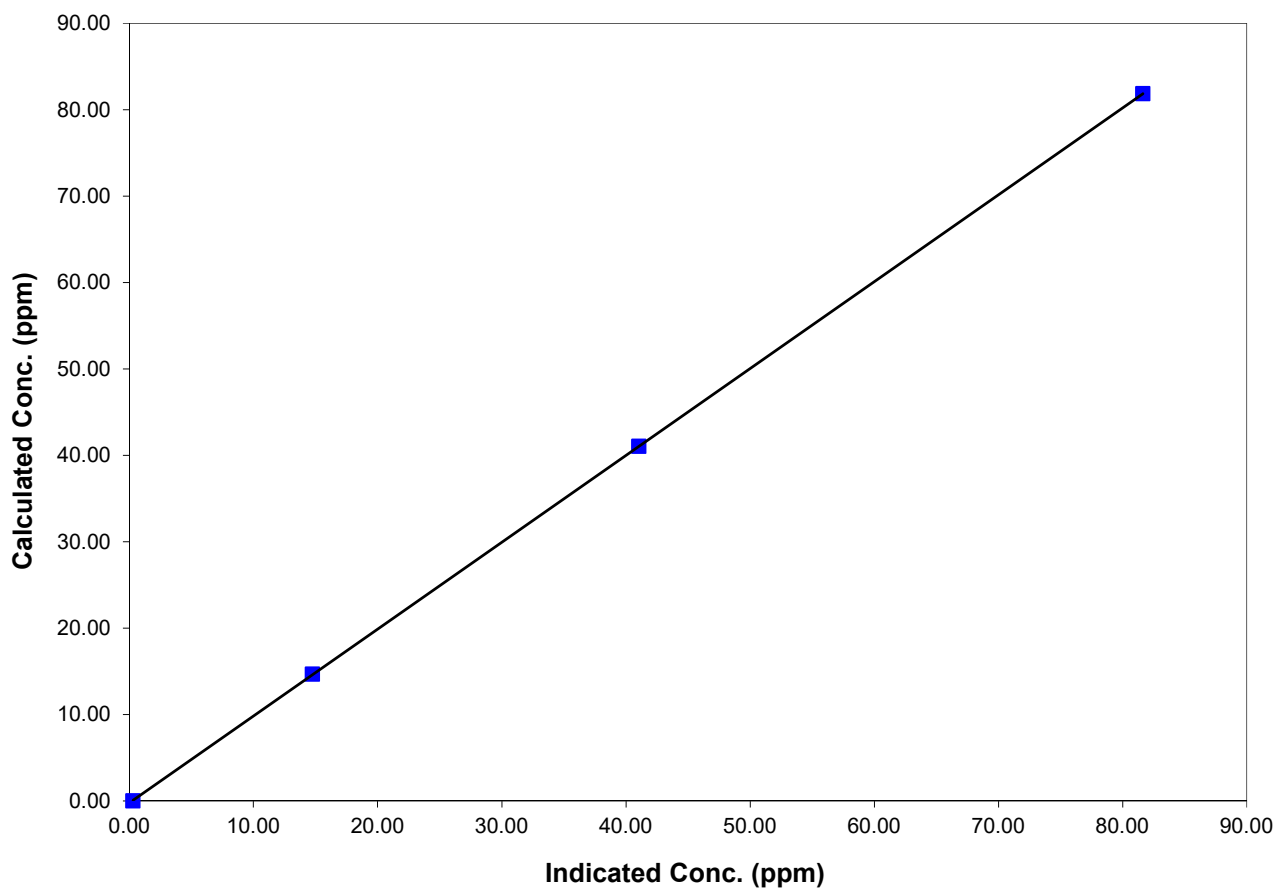
Station Information

Calibration Date	January 4, 2016	Previous Calibration	December 14, 2015
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:45	End Time (MST)	0:00
Analyzer make/model	TEI 45C	Analyzer serial #	630718528

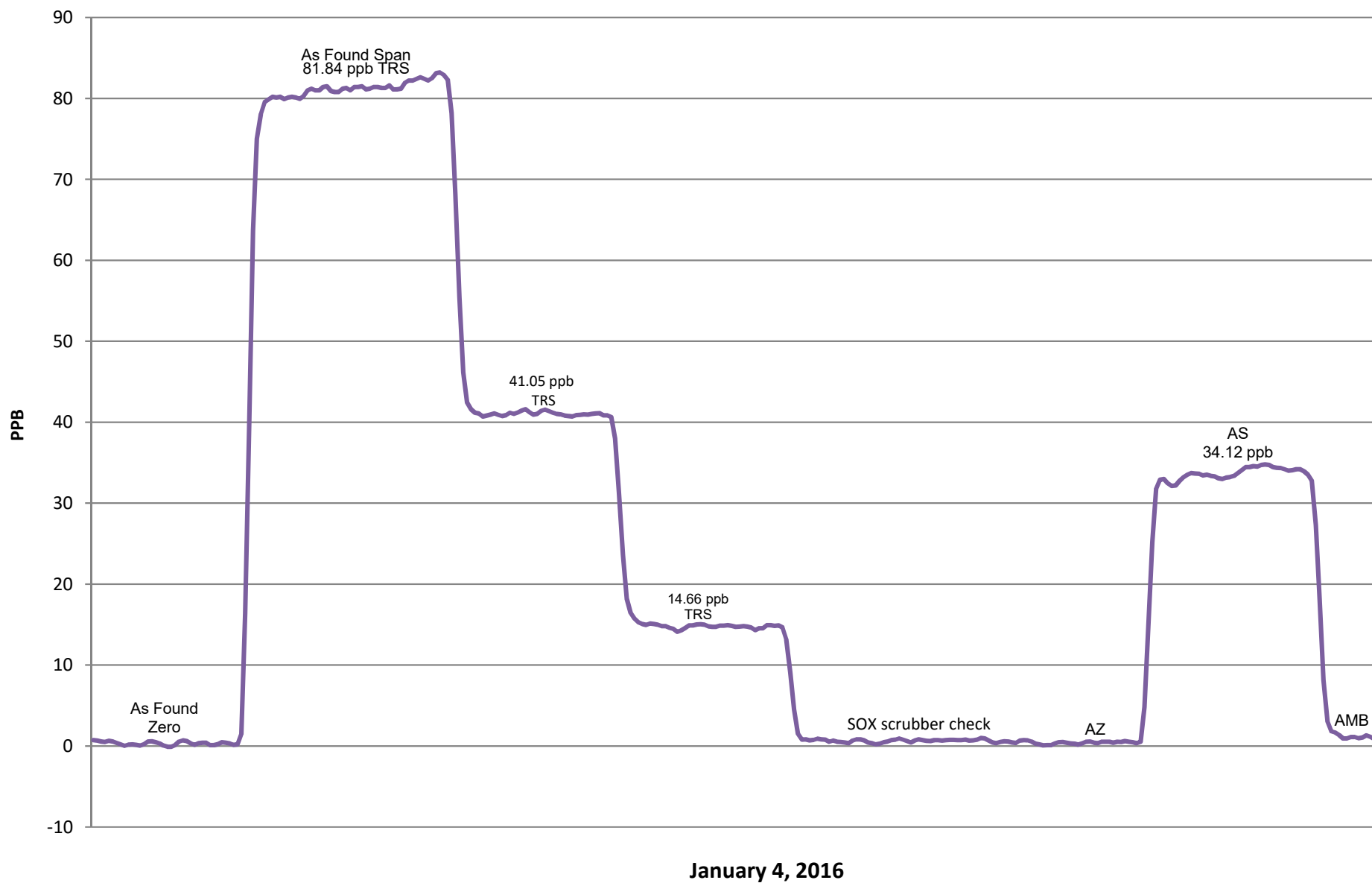
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.309	N/A	Correlation Coefficient	0.999998
81.844	81.628	1.0026		
41.054	41.037	1.0004	Slope	1.005923
14.659	14.751	0.9938		
			Intercept	-0.245652

TRS Calibration Curve



TRS Calibration



Calibration Report



Parameter SO₂

Air Monitoring Network PAZA

Station Information

Calibration Date	January 11 2016	Previous Calibration	December 4 2015
Station Number	2	Station Location	Evergreen Park
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	12:50	End Time (MST)	15:05:00 PM
Barometric Pressure	0.920 ATM	Station Temperature	21.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Concentration	49.7 ppm	Cal Gas Expiry Date	05/10/2018
Correction factor	0.031167	Cal Gas Cylinder #	LL103793
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	6
	<u>Before</u>		<u>After</u>
Calculated slope	0.999212	Calculated slope	1.006994
Calculated intercept	0.443018	Calculated intercept	0.456955
Analyzer make	Teco 43i	Analyzer serial #	701120008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	11.9		11.9	
coefficient	1.257		1257	
Lamp Voltage	834	volts	831	volts
Chamber Temp	44.9	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	672.5	mm Hg	672.1	mm Hg
Sample Flow	0.45	ccm	0.446	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)
4995	0.0	0.00	0.6	N/A
4995	39.93	394.2	391.5	1.0069
4995	19.97	197.9	195.6	1.0118
4995	9.95	98.8	96.6	1.0226
4995	0.0	0.0	0.6	As Found Zero
4995	39.93	394.9	391.5	As Found Span
Average Correction Factor				1.0138

Calculated value of As Found Response: 391.015 ppm Percent Change of As Found: 1.0%

	before calibration		after calibration	
Auto zero	0.5	ppm	0.5	ppm
Auto span	266.3	ppm	259.4	ppm

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



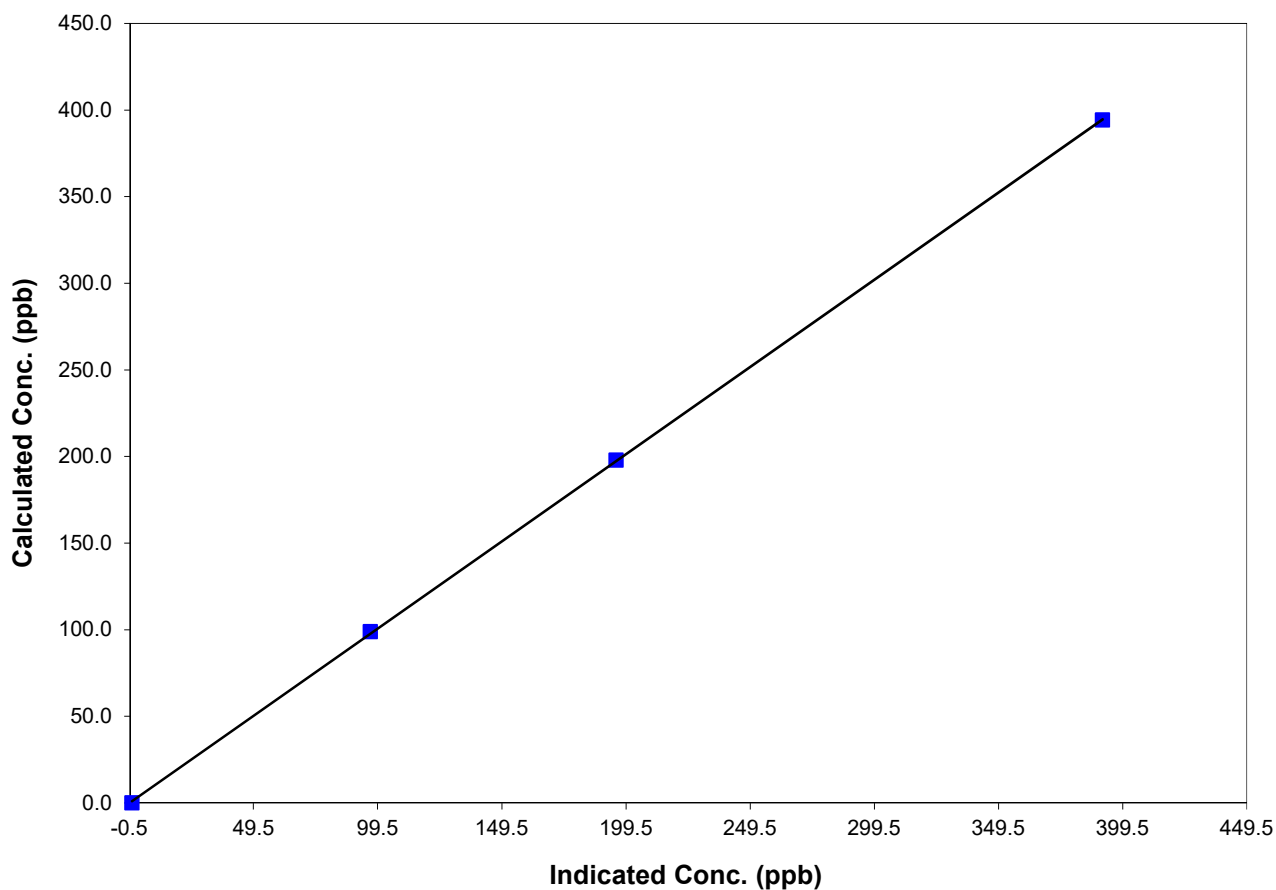
Station Information

Calibration Date	January 11 2016	Previous Calibration	December 4 2015
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	12:50	End Time (MST)	15:05:00 PM
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

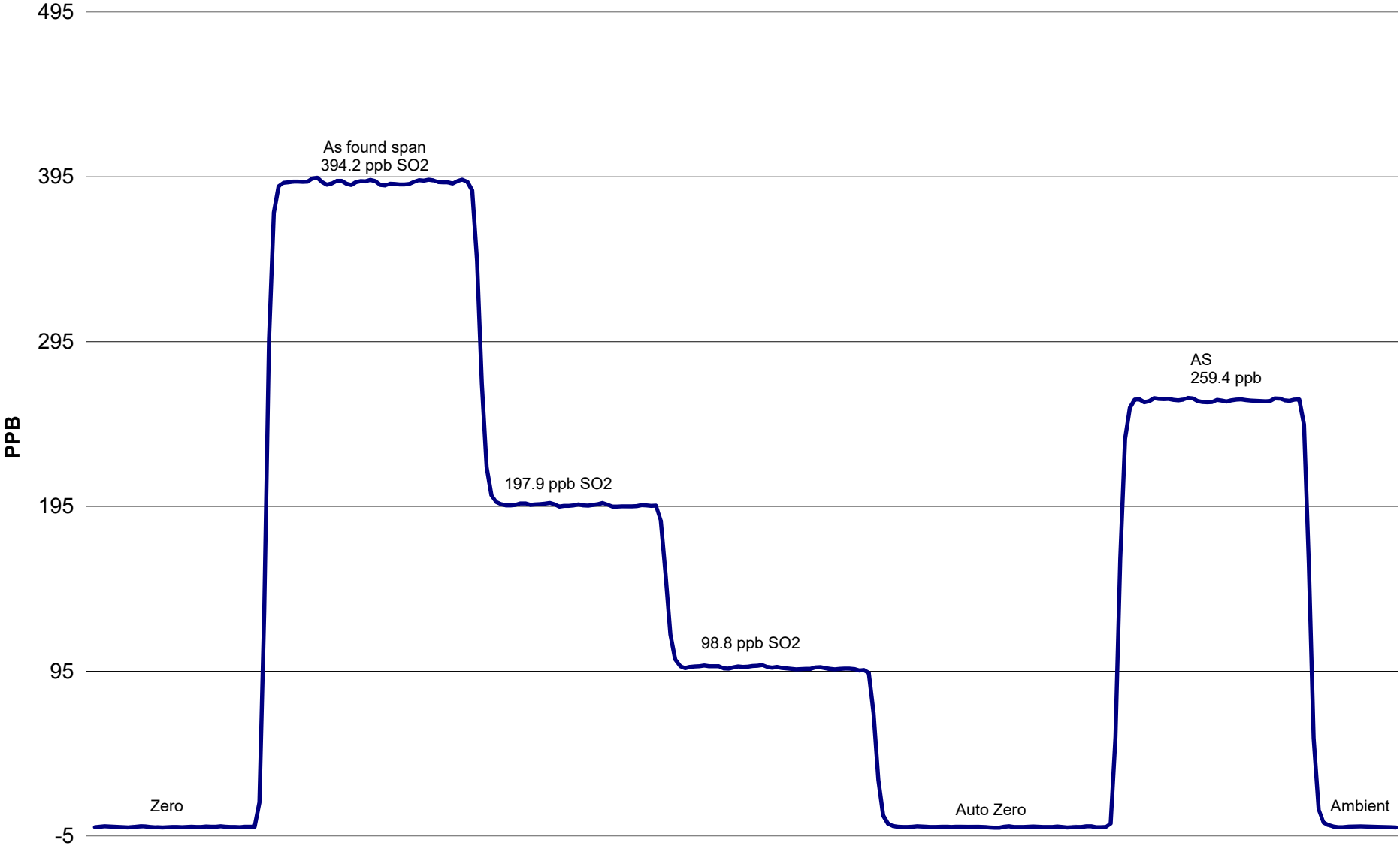
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.6	N/A	Correlation Coefficient	0.999969
394.2	391.5	1.0069		
197.9	195.6	1.0118		
98.8	96.6	1.0226	Slope	1.006994
			Intercept	0.456955

SO2 Calibration Curve



SO2 Calibration



January 11 2016

Calibration Report

Parameter TRS

Air Monitoring Network PAZA



Station Information

Calibration Date	January 11 2016	Previous Calibration	December 4 2015
Station Number	2	Station Location	Evergreen Park
Reason:	Routine	Install	Removal
			Other:
Start Time (MST)	9:50	End Time (MST)	13:35:00 PM
Barometric Pressure	0.920 ATM	Station Temperature	21.0 Deg C
Calibrator	Envionics	Serial Number	6586
Cal Gas Conc	10.32 ppm	Cal Gas Expiry Date	08/07/2016
Correction factor	0.031167	Cal Gas Cylinder #	LL110781
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
Calculated slope	1.002742	Calculated slope	0.984128
Calculated intercept	0.293937	Calculated intercept	0.677312

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

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	49.8	ppb	51.8	ppb
coefficient	1.149		1.194	
Lamp Voltage	1227	volts	1223	volts
Chamber Temp	44.2	Deg C	44.2	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	648.1	mm Hg	650.1	mm Hg
Sample Flow	0.568	ccm	0.558	ccm
Lamp Intensity	24,265	mv	24,424	mv

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.00	-0.3	N/A
4995	39.93	81.84	82.6	0.9905
4995	19.97	41.10	40.9	1.0050
6995	9.97	14.69	13.9	1.0591
4995	9.97		-0.4	Sox Test
4995	0.00	0.00	0.8	As Found Zero
4995	39.93	81.84	80.1	As Found Span
Average Correction Factor				1.0182

Calculated value of As Found Response: 79.82 ppm Percent Change of As Found: **2.5%**

	before calibration		after calibration	
Auto zero	0.6	ppm	-0.6	ppm
Auto span	75.7	ppm	75.2	ppm

Notes: Zero & span adjustments made
Sox scrubber check performed
Analyzer lamp voltage is out of the range-instrument needs maintainance

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



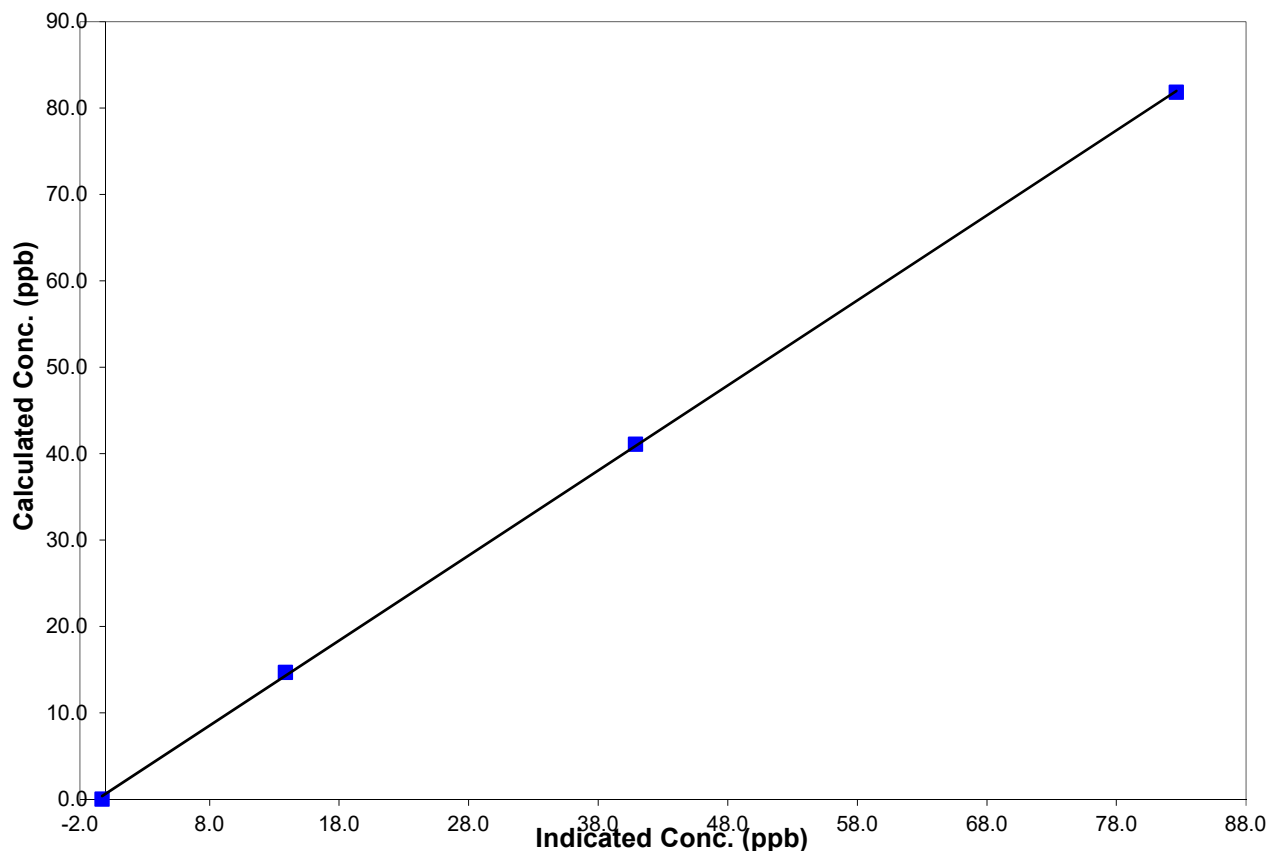
Station Information

Calibration Date	January 11 2016	Previous Calibration	December 4 2015
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	9:50	End Time (MST)	13:35:00 PM
Analyzer make/model	TEI Model 43C	Analyzer serial #	31990000000491

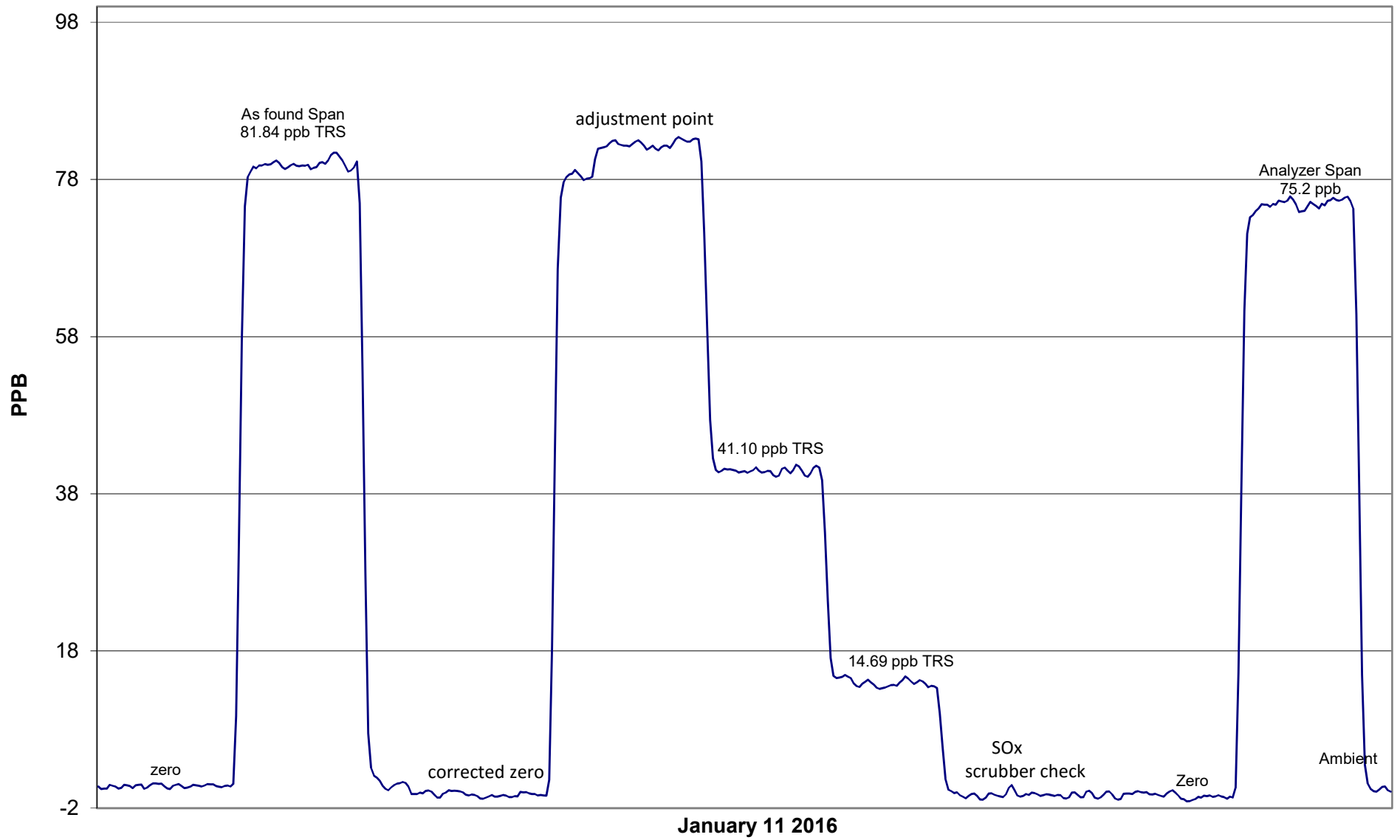
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.3	N/A	Correlation Coefficient	0.999913
81.8	82.6	0.9905		
41.1	40.9	1.0050		
14.7	13.9	1.0591	Slope	0.984128
			Intercept	0.677312

TRS Calibration Curve



TRS Calibration



Calibration Report



Parameter SO₂

Air Monitoring Network PAZA

Station Information

Calibration Date	January 26, 2016	Previous Calibration	December 9, 2015
Station Number	3	Station Location	Smokey Heights
Reason:	☒ Routine	☐ Install	☐ Removal
			☐ Other:
Start Time (MST)	12:55	End Time (MST)	15:20:00 PM
Barometric Pressure	0.927 ATM	Station Temperature	20.5 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Concentration	49.7 ppm	Cal Gas Cert Date	05/11/2018
Correction factor	0.031458	Cal Gas Cylinder #	LL103793
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	0.998672	Calculated slope	1.000461
Calculated intercept	-0.316266	Calculated intercept	-0.170065
Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	12.2		12.2	
coefficient	0.952		0.952	
Lamp Voltage	938	volts	937	volts
Chamber Temp	44.9	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	663	mm Hg	663	mm Hg
Sample Flow	0.442	lpm	0.442	lpm
Lamp Intensity	88	%	88	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.00	1.1	N/A
4995	39.93	394.15	394.6	0.9988
4995	19.97	197.91	197.4	1.0026
4995	9.97	99.00	98.3	1.0073
4995	0.0	0.00	1.1	As Found Zero
4995	39.93	394.15	394.6	As Found Span
Average Correction Factor				1.0029

Calculated value of As Found Response: 392.703 ppm Percent Change of As Found: 0.4%

	before calibration		after calibration	
Auto zero	0.9	ppb	1.1	ppb
Auto span	217.4	ppb	211.6	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



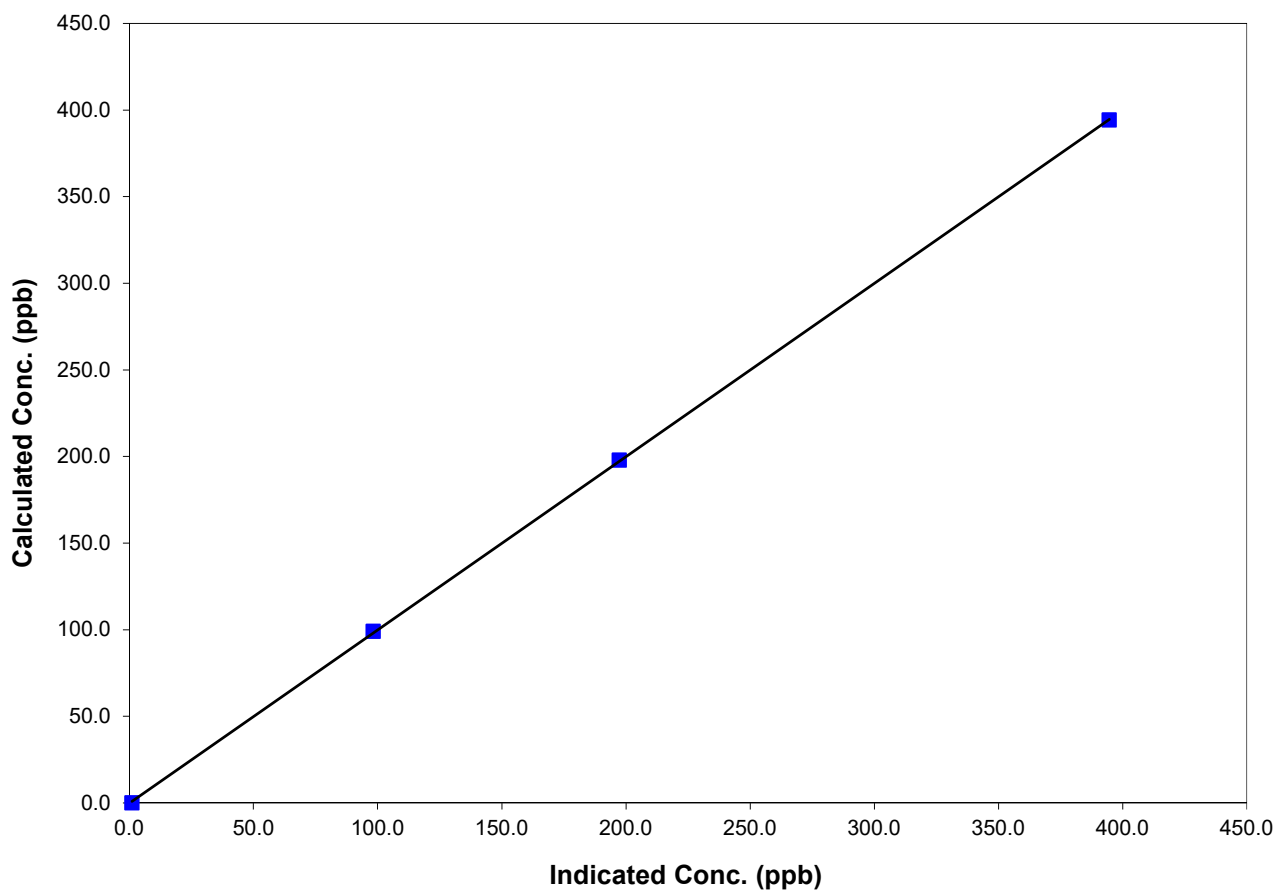
Station Information

Calibration Date	January 26, 2016	Previous Calibration	December 9, 2015
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	12:55	End Time (MST)	15:20:00 PM
Analyzer make/model	Teco 43i	Analyzer serial #	701120009

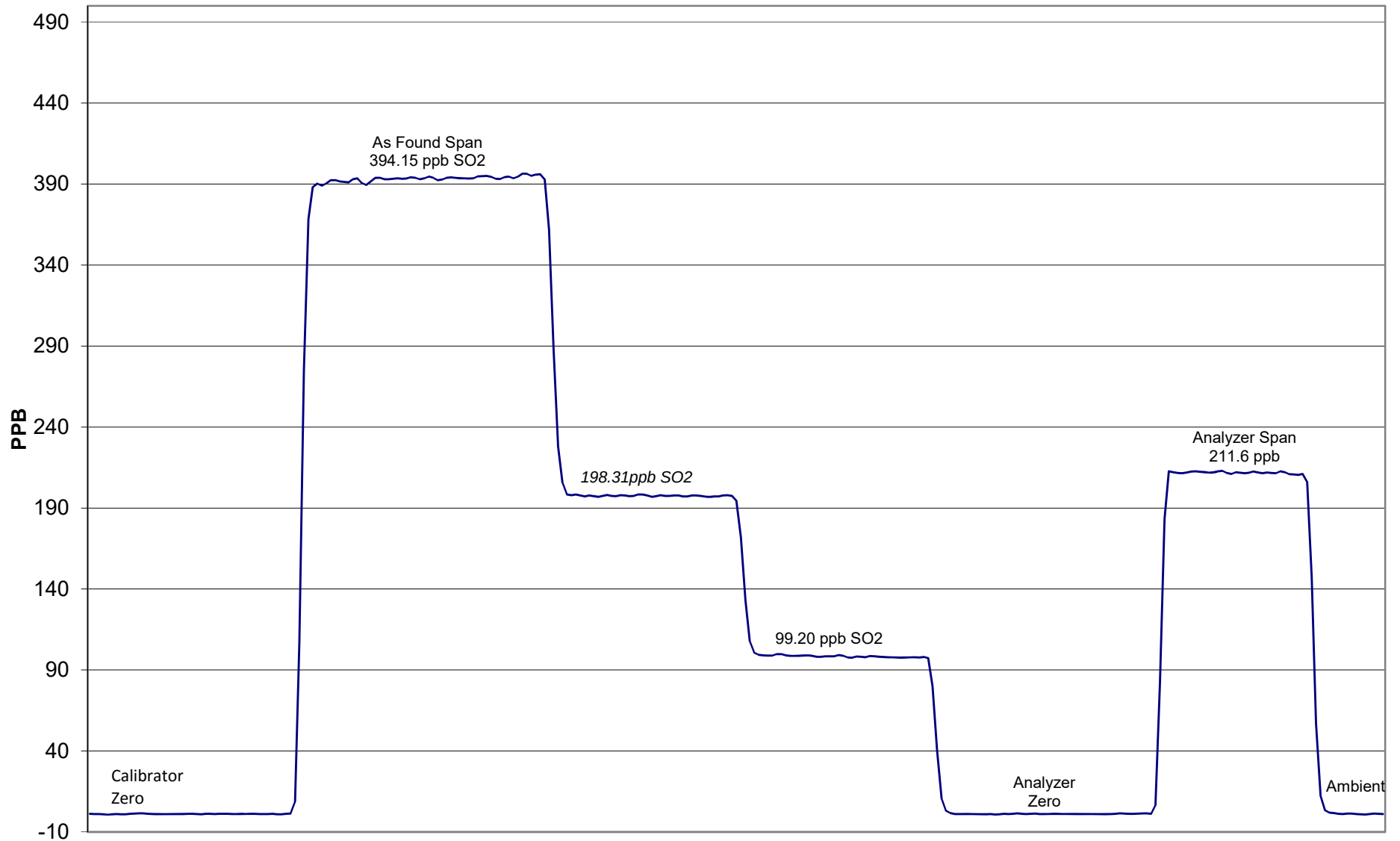
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	1.1	N/A	Correlation Coefficient	0.999974
394.2	394.6	0.9988		
197.9	197.4	1.0026		
99.0	98.3	1.0073	Slope	1.000461
			Intercept	-0.170065

SO2 Calibration Curve



Smokey Heights SO₂ Calibration



January 26, 2016

Calibration Report



Parameter TRS

Air Monitoring Network PAZA

Station Information

Calibration Date	January 26, 2016	Previous Calibration	December 9, 2015
Station Number	3	Station Location	Smokey Heights
Reason:	Routine	Install	Removal
			Other:
Start Time (MST)	10:05	End Time (MST)	14:15:00 PM
Barometric Pressure	0.927 ATM	Station Temperature	20.0 Deg C
Calibrator	Envionics	Serial Number	6586
Cal Gas Conc	10.32 ppm	Cal Gas Expiry Date	08/07/2016
Correction factor	0.031511	Cal Gas Cylinder #	BLM00586
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
Calculated slope	0.978364	Calculated slope	0.976652
Calculated intercept	1.044344	Calculated intercept	1.254945

Analyzer make TEI Model 43C Analyzer serial # 0436610005

	before		after	
Concentration range	100	ppb	100	ppb
Background	14.8	ppb	15.1	ppb
coefficient	1.041		1.065	
Lamp Voltage	857	volts	856	volts
Chamber Temp	43.9	Deg C	43.8	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	596.7	mm Hg	596.3	mm Hg
Sample Flow	0.560	lpm	0.560	lpm
Lamp Intensity	34,764	mv	34,500	mv

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4998	0.0	0.00	0.1	N/A
4998	39.96	81.86	83.3	0.9821
4998	19.97	41.07	39.2	1.0468
6998	9.97	14.68	13.1	1.1189
4998	9.97		0.2	Sox test
4998	0.0	0.00	0.1	As Found Zero
4998	39.96	81.86	78.7	As Found Span
Average Correction Factor				1.0493

Calculated value of As Found Response: 77.96 ppm Percent Change of As Found: 4.8%

	before calibration		after calibration	
Auto zero	-0.1	ppm	0.1	ppm
Auto span	33.7	ppm	34.2	ppm

Notes: Span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



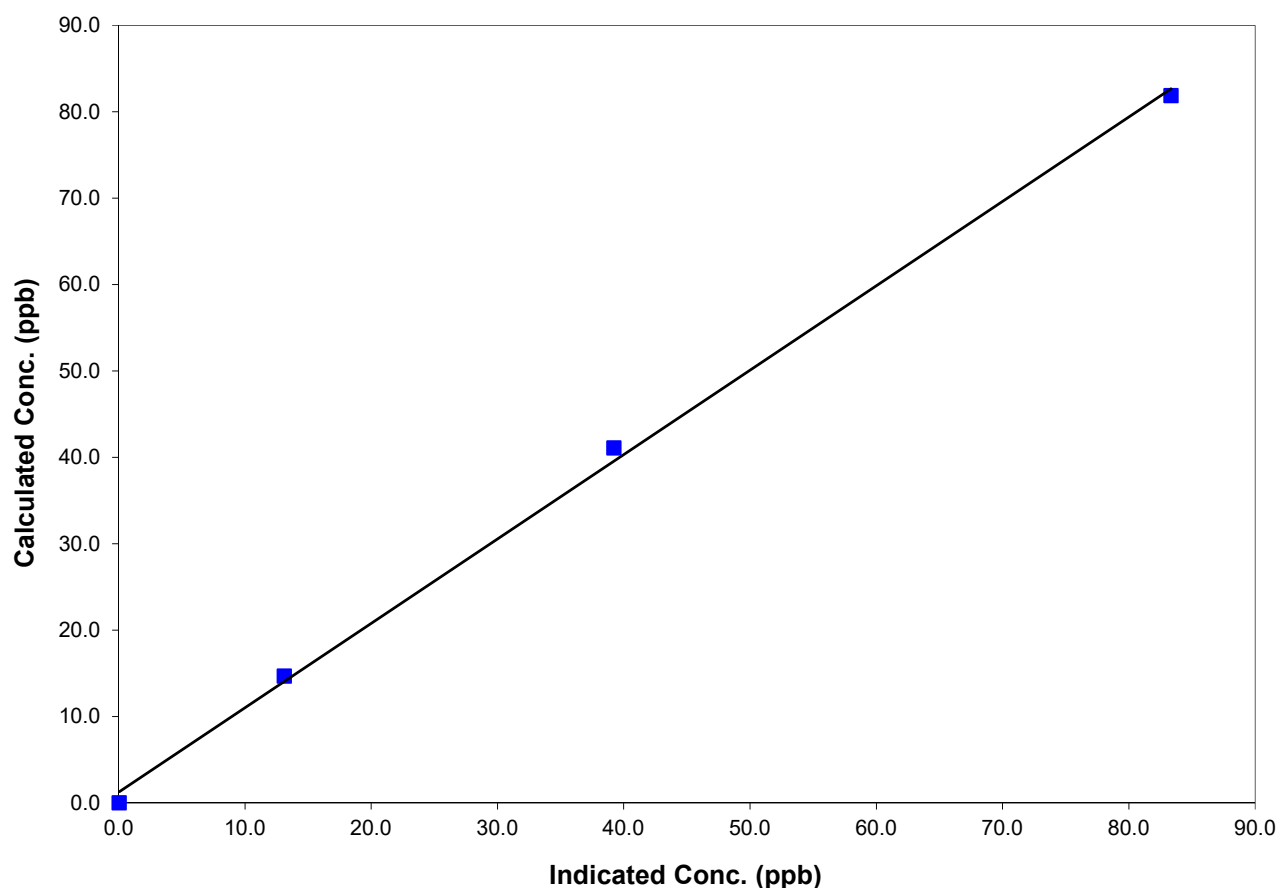
Station Information

Calibration Date	January 26, 2016	Previous Calibration	December 9, 2015
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	10:05	End Time (MST)	14:15:00 PM
Analyzer make/model	TEI Model 43C	Analyzer serial #	0436610005

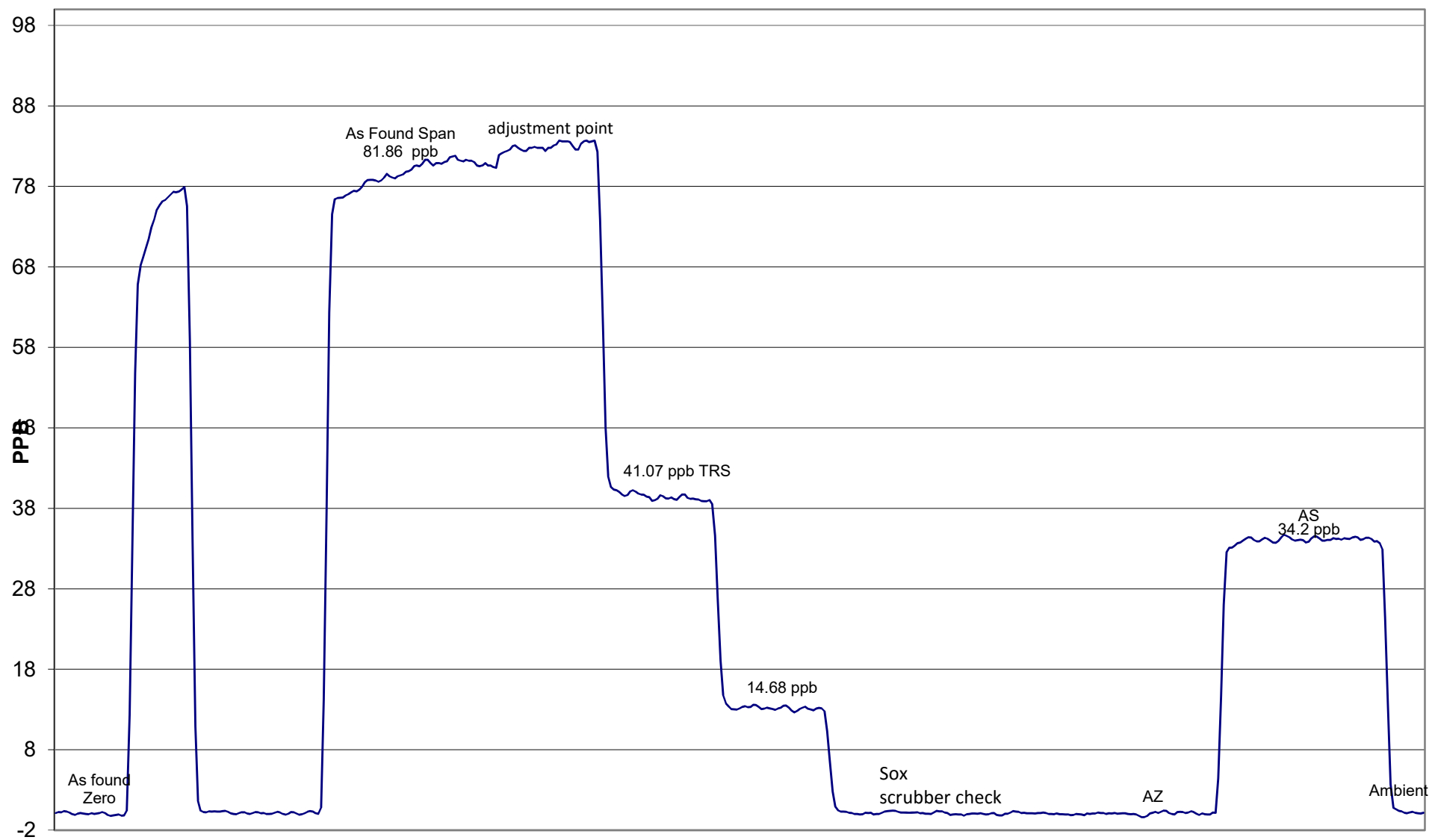
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.998718
81.9	83.3	0.9821		
41.1	39.2	1.0468		
14.7	13.1	1.1189	Slope	0.976652
			Intercept	1.254945

TRS Calibration Curve



Smokey Heights TRS Calibration



January 26, 2016

Calibration Report

Parameter SO2
Air Monitoring Network

PAZA



Station Information

Calibration Date	January 19, 2016	Previous Calibration	December 16, 2015
Station Number	4	Station Location	Beaverlodge
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	9:25	End Time (MST)	11:35
Barometric Pressure	0.928 atm	Station Temperature	20.0 Deg C
Calibrator	Envionics	Serial Number	6586
Cal Gas Concentration	10.8 ppm	Cal Gas Expiry Date	28/09/2012
Gas Cert Reference	FF14871		
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	0.983732	Calculated slope	0.994747
Calculated intercept	-0.258220	Calculated intercept	-0.104192
Analyzer make	TEI Model 43i-TLE	Analyzer serial #	713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.69		2.69	
Coefficient	1.018		1.018	
PMT	-768.5	V	-768.5	V
UV Lamp Voltage	1088	V	1088	V
Chamber Temp	45	Deg C	45	Deg C
Pressure	669.8	mm Hg	659.8	mm Hg
Sample Flow	0.451	LPM	0.451	LPM
Lamp Intensity	96	%	96	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4994	0.00	0.0	0.3	N/A
4994	39.92	85.6	86.3	0.9921
4994	19.96	43.0	43.1	0.9970
4994	9.96	21.5	21.6	0.9939
4994	0.00	0.0	0.3	As found zero
4994	39.92	85.6	86.3	As found span
Average Correction Factor				0.9944

Calculated value of As Found Response: 84.396 ppm Percent Change of As Found: 1.5%

	before calibration		after calibration	
Auto zero	0.0	ppb	0.2	ppb
Auto span	60.1	ppb	61.1	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



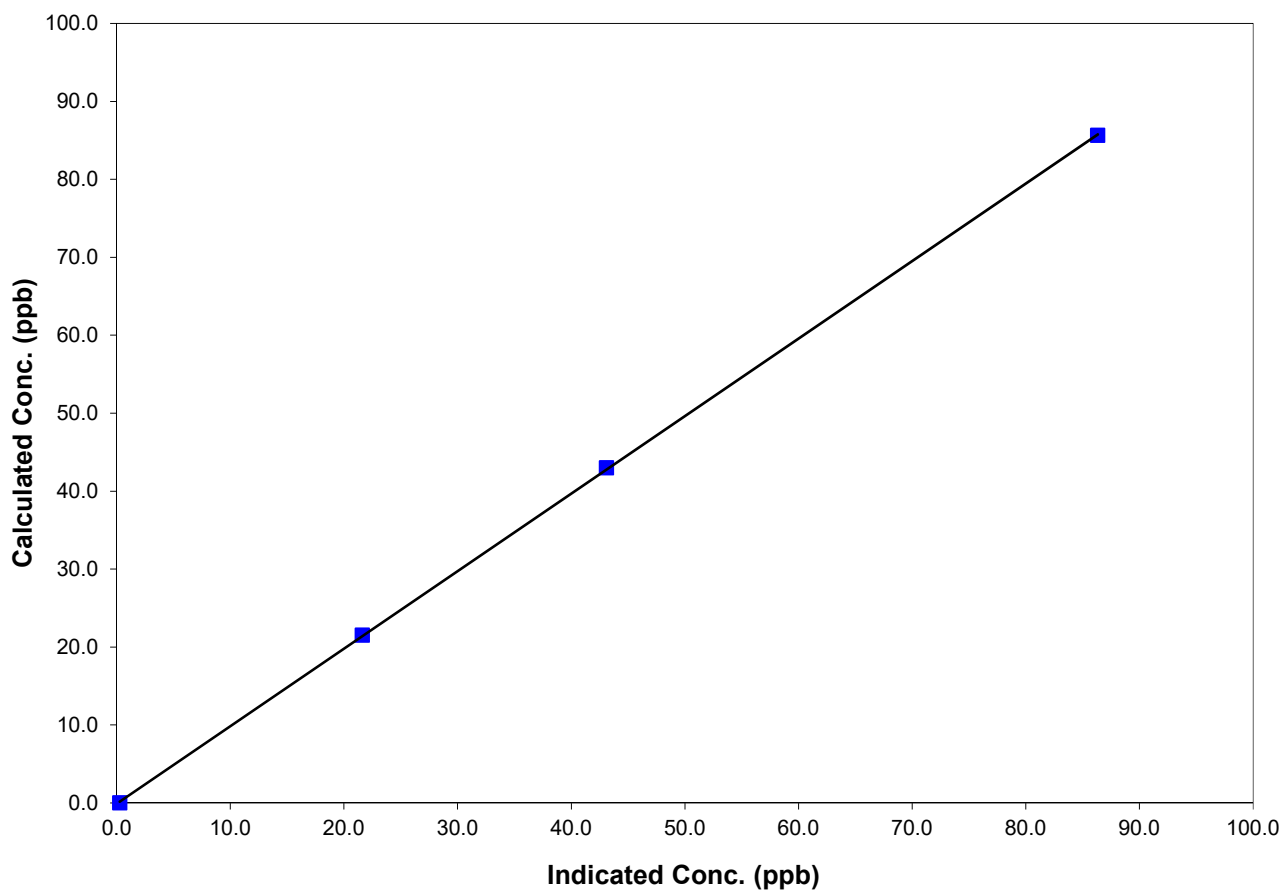
Station Information

Calibration Date	January 19, 2016	Previous Calibration	December 16, 2015
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	9:25	End Time (MST)	11:35
Analyzer make/model	TEI Model 43i-TLE	Analyzer serial #	713021137

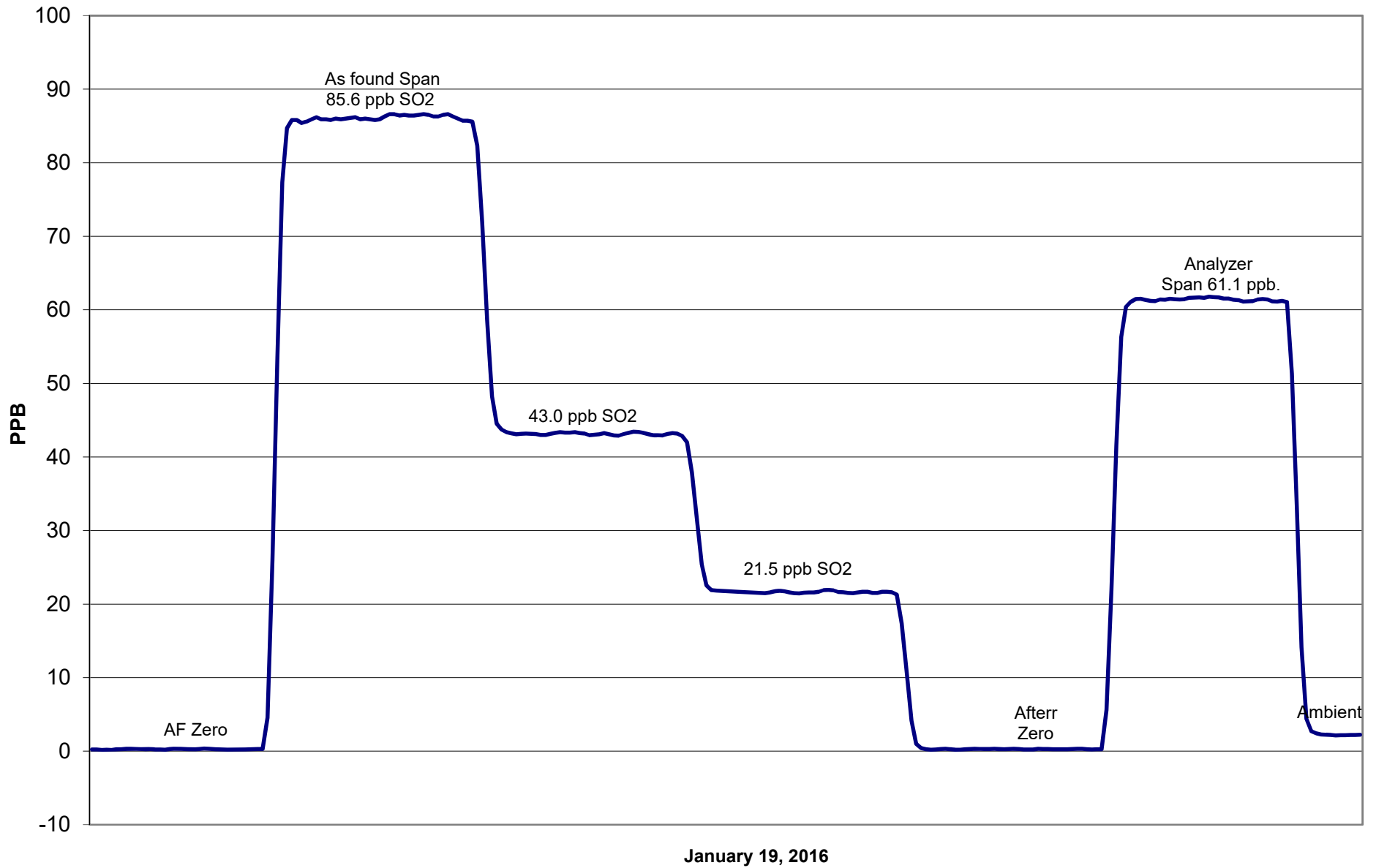
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A	Correlation Coefficient	0.999977
85.6	86.3	0.9921		
43.0	43.1	0.9970		
21.5	21.6	0.9939	Slope	0.994747
			Intercept	-0.104192

SO2 Calibration Curve



SO2 Calibration



Calibration Report

Parameter

NO_x-NO-NO₂

Air Monitoring Network

PAZA



Station Information

Calibration Date	January 15 2016	Previous Calibration	December 16 2015
Station Number	4	Station Location	Beaverlodge
Reason:	Routine	Installation	Removal
Start Time (MST)	10:55	End Time (MST)	14:45:00 PM
Barometric Pressure	0.928 Atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
NO Cal Gas Conc	50.9 ppm	Cal Gas Expiry Date	November 5, 2018
NOx Cal Gas Conc	51.2 ppm	Cal Gas Serial #	LL103793

DACS Information

DACS make	CR3000	DACS serial No.	5237
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Parameter		NO2	NOx	NO
Before	Data Slope	0.989567	0.996435	0.995605
	Data Offset	-1.522745	0.188348	0.434190
After	Data Slope	0.993936	0.991429	0.991952
	Data Offset	-0.678471	-0.289745	-0.315188
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
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Test Point	before		after	
Concentration range	0-500	ppb	0-500	ppb
NO offset	2.6	mV	2.6	mV
NOx bkgnd	3.0	mV	3.0	mV
NO coefficient	1.080		1.080	
NOx coefficient	1.005		1.005	
NO2 conv temp	326.8	Deg C	327.0	Deg C
PMT Temp	-2.9	Deg C	-2.9	Deg C
PMT Volt	-730.0	mV	-730.0	mV
R Cell Press	185.5	in Hg	185.7	in Hg
Sample Flow	0.742	LPM	0.741	LPM

Notes: No adjustments made

Calibration Report

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



Station Information

Calibration Date: 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	0.4	0.5	-0.3	N/A	N/A
1	4995	39.92	405.9	403.6	2.4	409.9	407.4	1.6	0.9904	0.9906
2	4995	19.96	203.8	202.6	1.2	205.6	204.0	0.7	0.9912	0.9931
3	4995	9.93	101.6	101.0	0.6	102.8	102.3	0.3	0.9886	0.9876
AFZ	4995	0.00	0.0	0.0	0.0	0.4	0.5	-0.3	0.0000	0.0000
AFS	4995	39.92	405.9	403.6	0.8	409.9	407.4	1.6	0.9904	0.9906
Average Correction Factor									0.9901	0.9904

As Found Concentrations: NO_x= 408.2 NO= 405.6 As Found Percent Change NO_x= 0.6% NO= 0.5%

GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.93 ccm

O3 Setpoint (ppb)	Indicated NOx high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	0.5	0.5	0.0	0.4	0.5	-0.3	N/A	N/A	N/A	N/A
NO point	407.1	407.1	0.0	409.3	407.1	1.4	0.9946	1.0000	N/A	N/A
300	407.1	72.6	334.5	410.3	72.6	336.7	0.9922	1.0000	0.9935	100.7%
200	407.1	181.3	225.7	410.2	181.3	227.9	0.9924	1.0000	0.9904	101.0%
100	407.1	298.4	108.7	410.4	298.4	111.4	0.9919	1.0000	0.9758	102.5%
Average Correction Factor							0.9922	1.0000	0.9866	101.4%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.1	-0.2	0.0	ppb	-0.1	-0.2	-0.1	ppb
Auto span	287.1	284.4	1.8	ppb	289.3	286.7	1.7	ppb

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



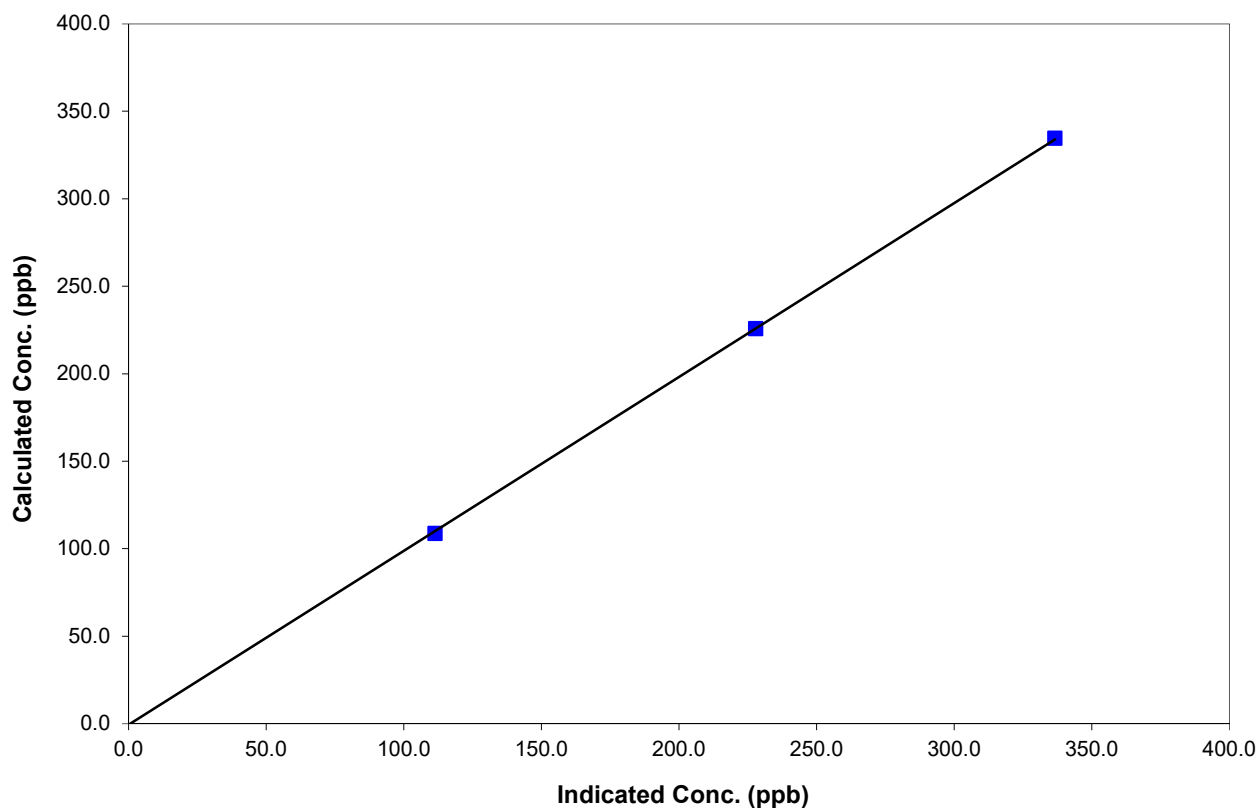
Station Information

Calibration Date	January 15 2016	Previous Calibration	December 16 2015
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	10:55	End Time (MST)	14:45:00 PM
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.3	N/A	Correlation Coefficient	0.999952
334.5	336.7	0.9935		
225.7	227.9	0.9904		
108.7	111.4	0.9758	Slope	0.993936
			Intercept	-0.678471

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



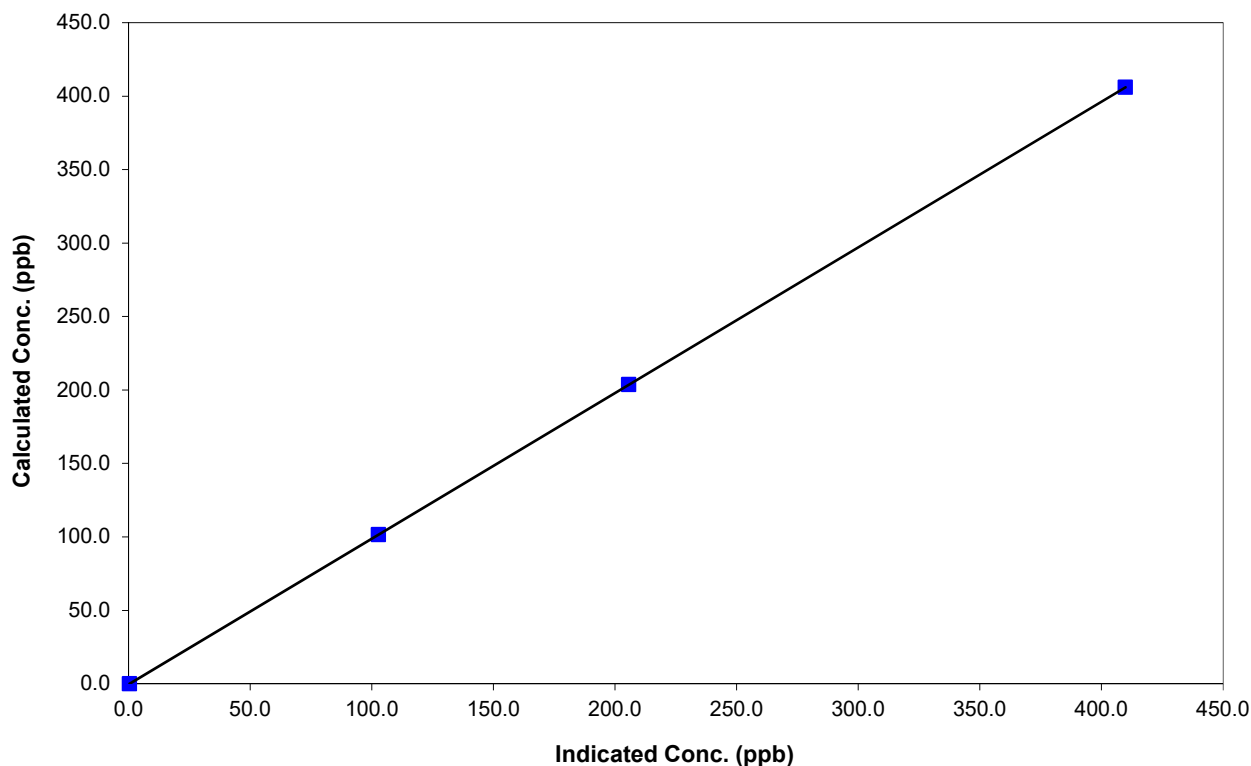
Station Information

Calibration Date	January 15 2016	Previous Calibration	December 16 2015
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	10:55	End Time (MST)	14:45:00 PM
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A	Correlation Coefficient	0.999999
405.9	409.9	0.9904		
203.8	205.6	0.9912		
101.6	102.8	0.9886	Slope	0.991429
			Intercept	-0.289745

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



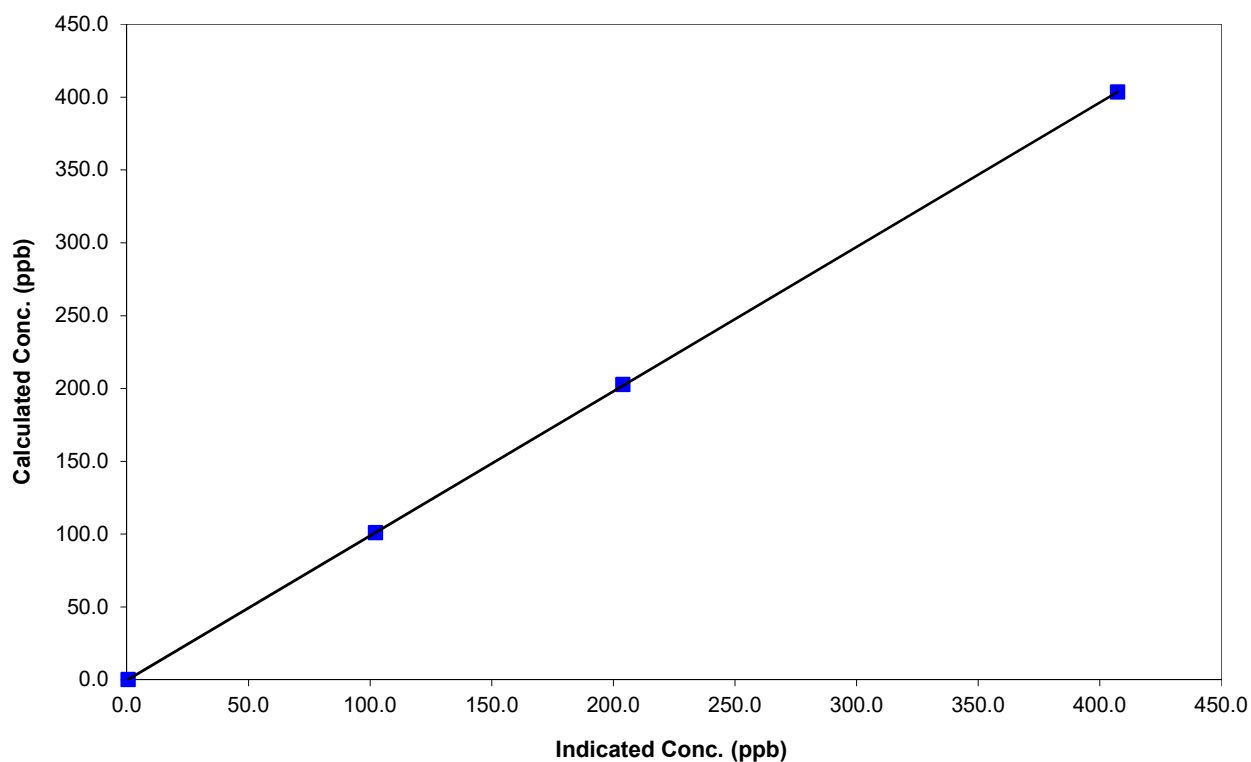
Station Information

Calibration Date	January 15 2016	Previous Calibration	December 16 2015
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	10:55	End Time (MST)	14:45:00 PM
Analyzer make	TEI 42i	Analyzer serial #	906535068

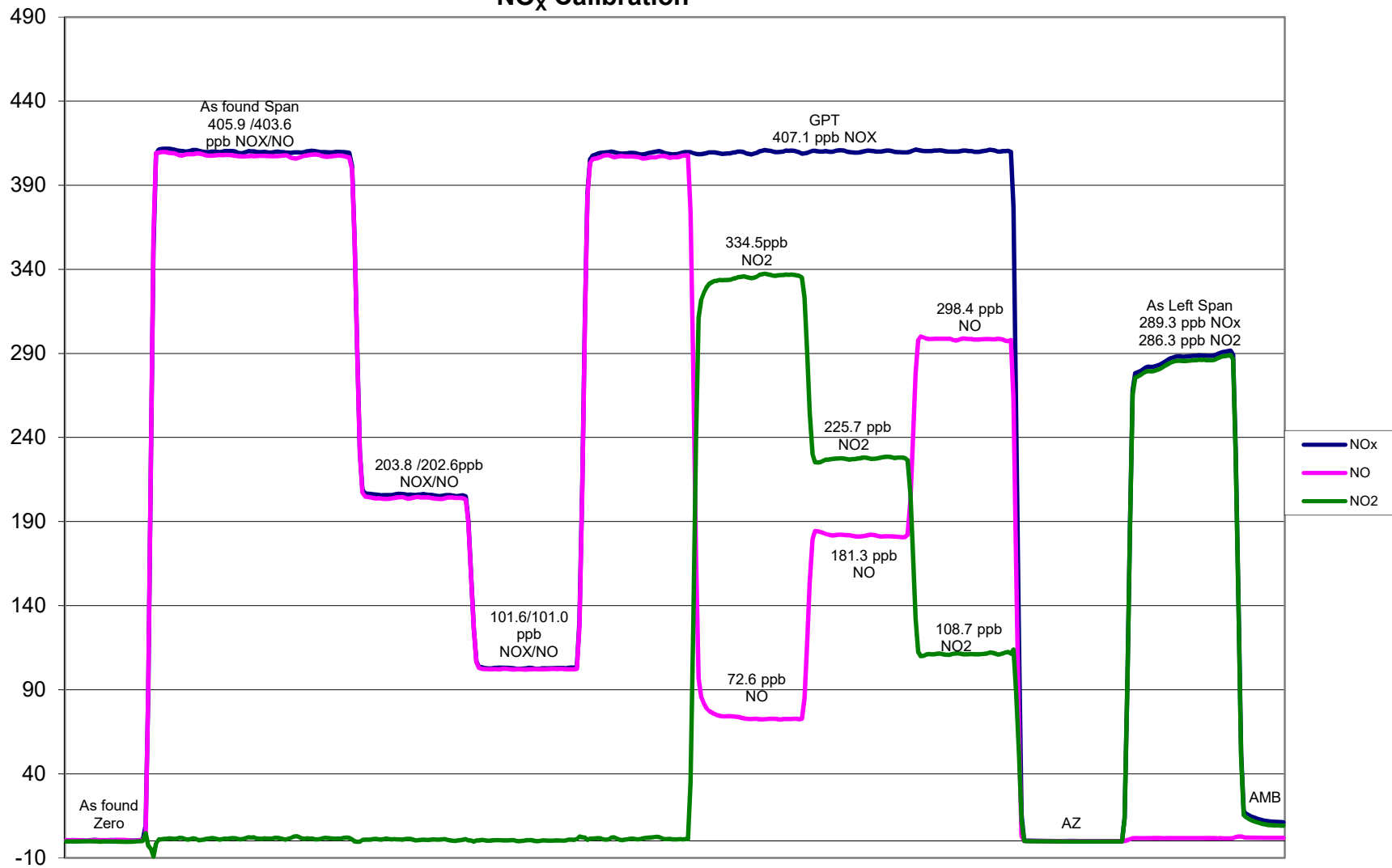
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A	Correlation Coefficient	0.999996
403.6	407.4	0.9906		
202.6	204.0	0.9931		
101.0	102.3	0.9876	Slope	0.991952
			Intercept	-0.315188

NO Calibration Curve



NO_x Calibration



January 15 2016

Calibration Report



Parameter 03

Air Monitoring Network PAZA

Station Information

Calibration Date	January 15, 2016	Previous Calibration	December 16, 2015
Station Number	4	Station Location	Beaverlodge
Reason:	Routine	Install	Removal
		Other:	

Start Time (MST)	13:45:00 PM	End Time (MST)	16:00
Barometric Pressure	0.928 atm	Station Temperature	20.0 Deg C
Calibrator	Envionics	Serial Number	6586
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA

DACS make	CR3000	DACS serial No.	5237
DACS voltage range	0 - 5 volt	DACS channel #	9
	Before		After
Calculated slope	0.991789	Calculated slope	1.003857
Calculated intercept	-0.926914	Calculated intercept	-0.149514

Analyzer make	Teco 49i	Analyzer serial #	1136451236,AMU 1879
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	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-0.30	ppb	-0.30	ppb
slope	1.062		1.090	
Lamp temp	53.8	mV	53.8	mV
Lamp Intensity A/B	52406/57572	mV	52375/57526	mV
Pressure	679.9	mm Hg	681.4	mm Hg
Flow A	0.783	LPM	0.784	LPM
Flow B	0.742	LPM	0.743	LPM

Calibration Data

Dilution air flow rate (cc/min)	Calibrator Setting	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5035	0.00	0.0	0.5	N/A
5035	0.30	334.5	334.5	1.0000
5035	0.20	225.7	223.1	1.0115
5035	0.10	108.7	108.8	0.9994
5035	0.00	0.0	0.5	As found zero
5035	0.30	334.5	327.2	As found span
Average Correction Factor				1.0036

Calculated value of As Found Response: 323.0 ppm Percent Change of As Found: -3.4%

	before calibration		after calibration	
Auto zero	0.4	ppb	0.7	ppb
Auto span	279.7	ppb	284.0	ppb

Notes: Span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter 03

Air Monitoring Network PAZA



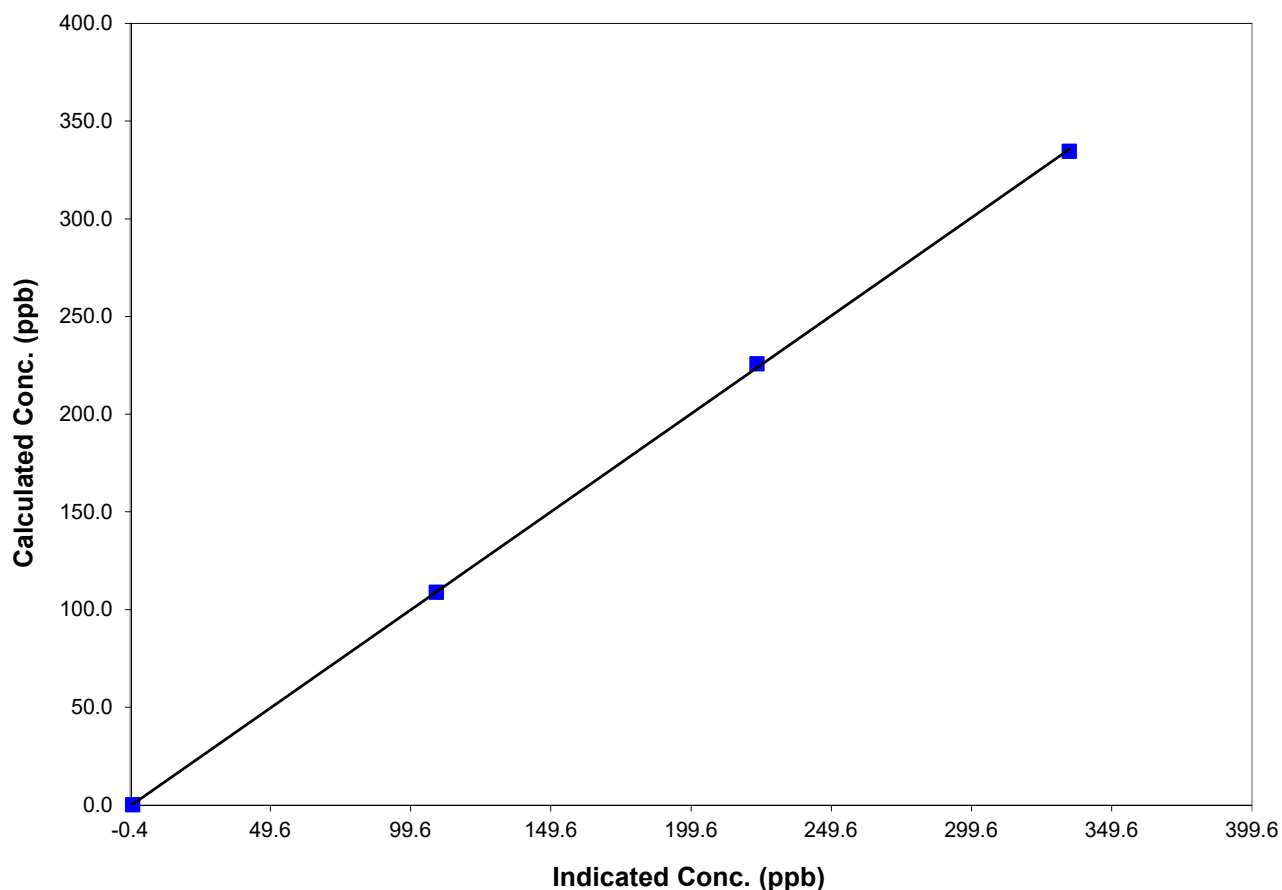
Station Information

Calibration Date	January 15, 2016	Previous Calibration	December 16, 2015
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	13:45:00 PM	End Time (MST)	16:00
Analyzer make/model	Teco 49i	Analyzer serial #	1136451236,AMU 1879

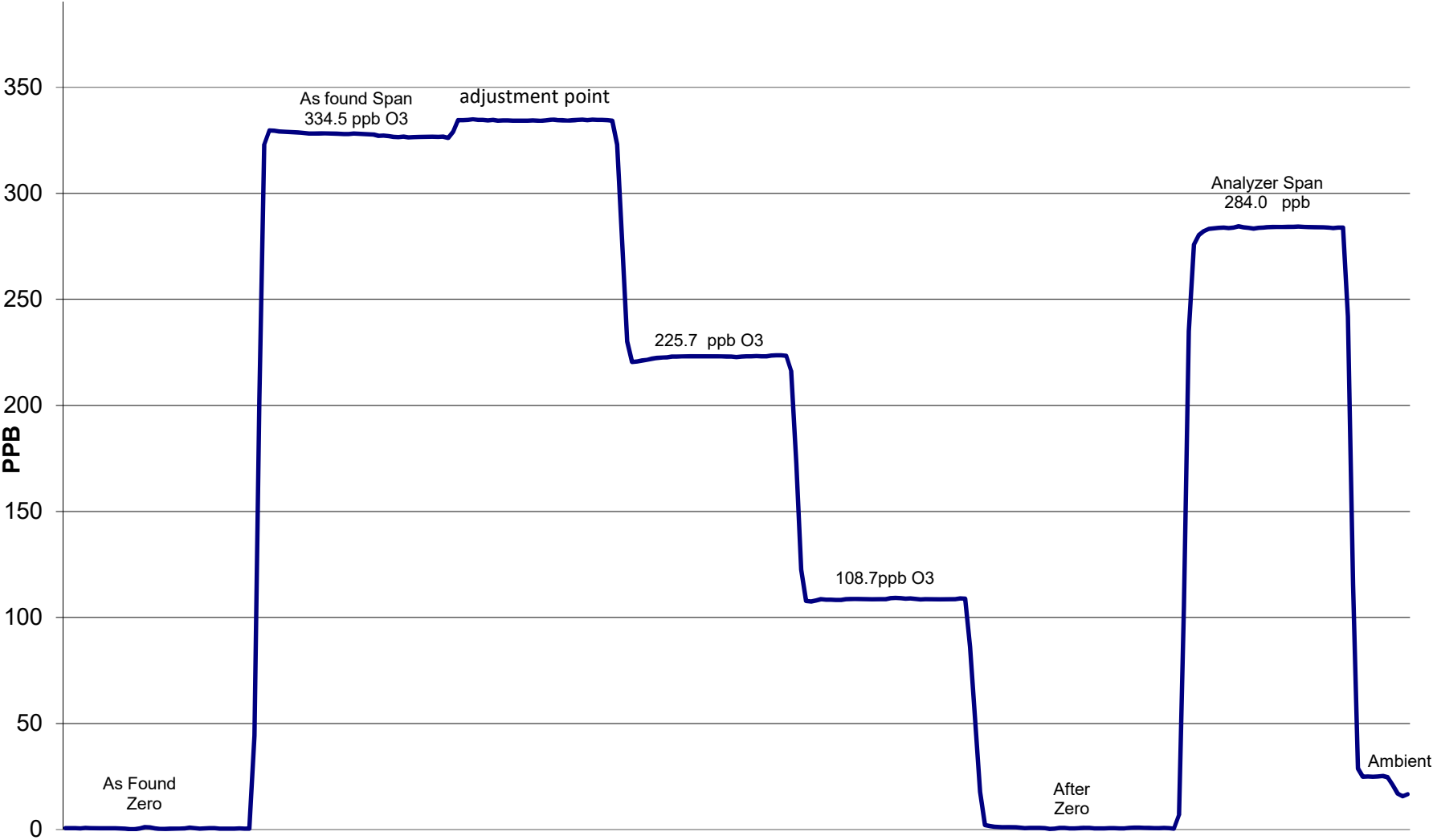
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	NA	Correlation Coefficient	0.999920
334.5	334.5	1.0000		
225.7	223.1	1.0115		
108.7	108.8	0.9994	Slope	1.003857
			Intercept	-0.149514

O3 Calibration Curve



O3 Calibration



January 15, 2016

Calibration Report

Parameter SO2

Air Monitoring Network PAZA



Station Information

Calibration Date	January 20 2016	Previous Calibration	December 15 2015
Station Number	6	Station Location	Valleyview
Reason:	Routine	Install	Removal
Start Time (MST)	12:25	End Time (MST)	14:35:00 PM
Barometric Pressure	0.929 atm	Station Temperature	20.5 Deg C
Calibrator	Envionics	Serial Number	3016
Cal Gas Concentration	49.7 ppm	Cal Gas Exp Date	November 5, 2018
Gas Cylinder Num.	LL103793		
DACS make	CR3000	DACS serial No.	5409
DACS voltage range	0 - 5 volt	DACS channel #	4
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.998970	Calculated slope	1.001125
Calculated intercept	0.655793	Calculated intercept	0.790292
Analyzer make	TEI 43C	Analyzer serial #	609716239

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	15.8		15.8	
Coefficient	1.031		1.031	
UV Lamp Voltage	740	LPM	736	LPM
Chamber Temp	43	V	43	V
Perm Gas Temp	45	C	45	C
Pressure	676	in Hg	677.5	in Hg
Sample Flow	0.489	LPM	0.489	LPM
Lamp Intensity	47573	Hz	47463	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	0.5	N/A
4995	39.93	394.2	393.7	1.0011
4995	19.97	197.9	195.7	1.0113
4995	9.95	98.8	97.0	1.0187
4995	0.00	0.0	0.5	As found zero
4995	39.93	394.2	393.7	As found span
Average Correction Factor				1.0103

Calculated value of As Found Response: 393.5 ppm Percent Change of As Found: 0.2%

	before calibration		after calibration	
Auto zero	0.5	ppm	0.4	ppm
Auto span	285.5	ppm	281.2	ppm

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



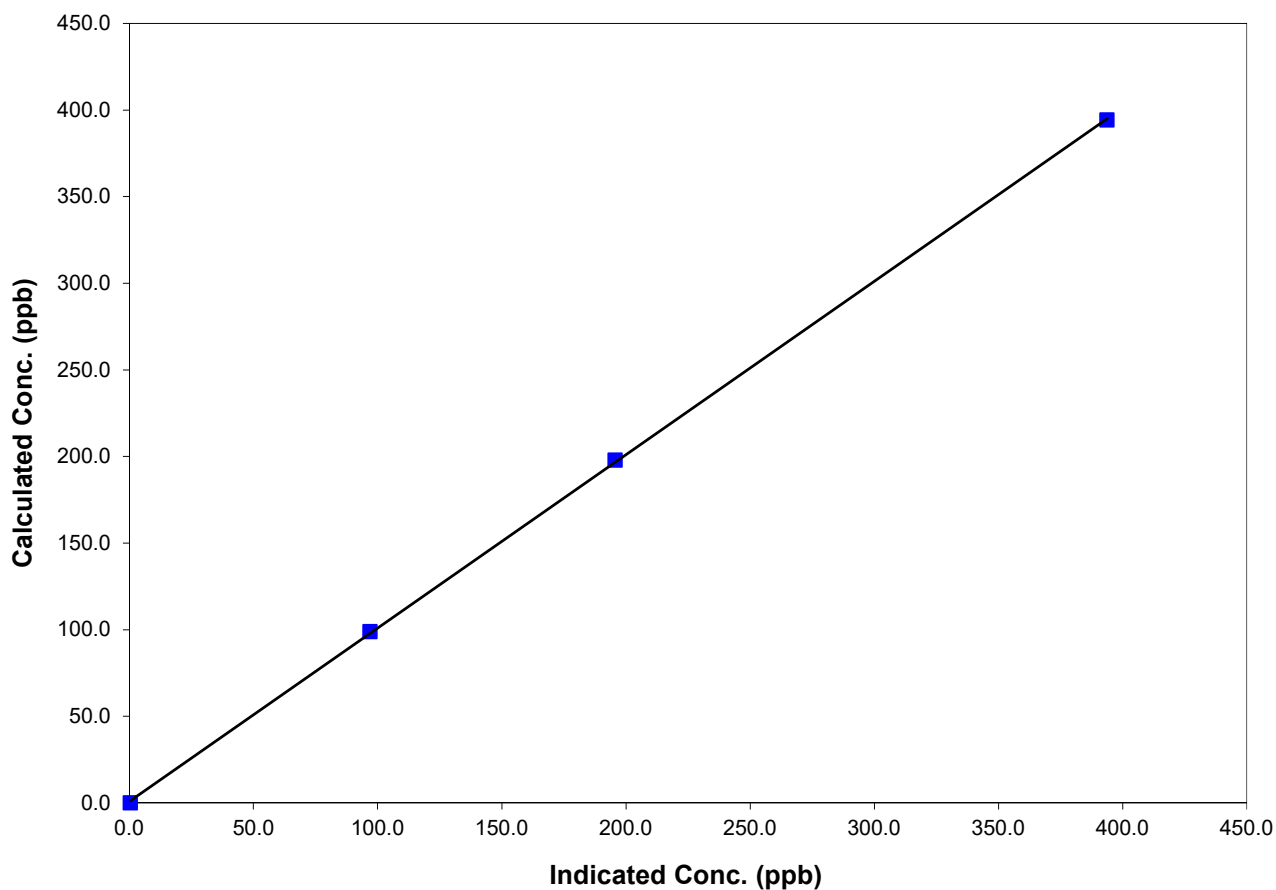
Station Information

Calibration Date	January 20 2016	Previous Calibration	December 15 2015
Station Number	6	Station Location	Valleyview
Start Time (MST)	12:25	End Time (MST)	14:35:00 PM
Analyzer make/model	TEI 43C	Analyzer serial #	609716239

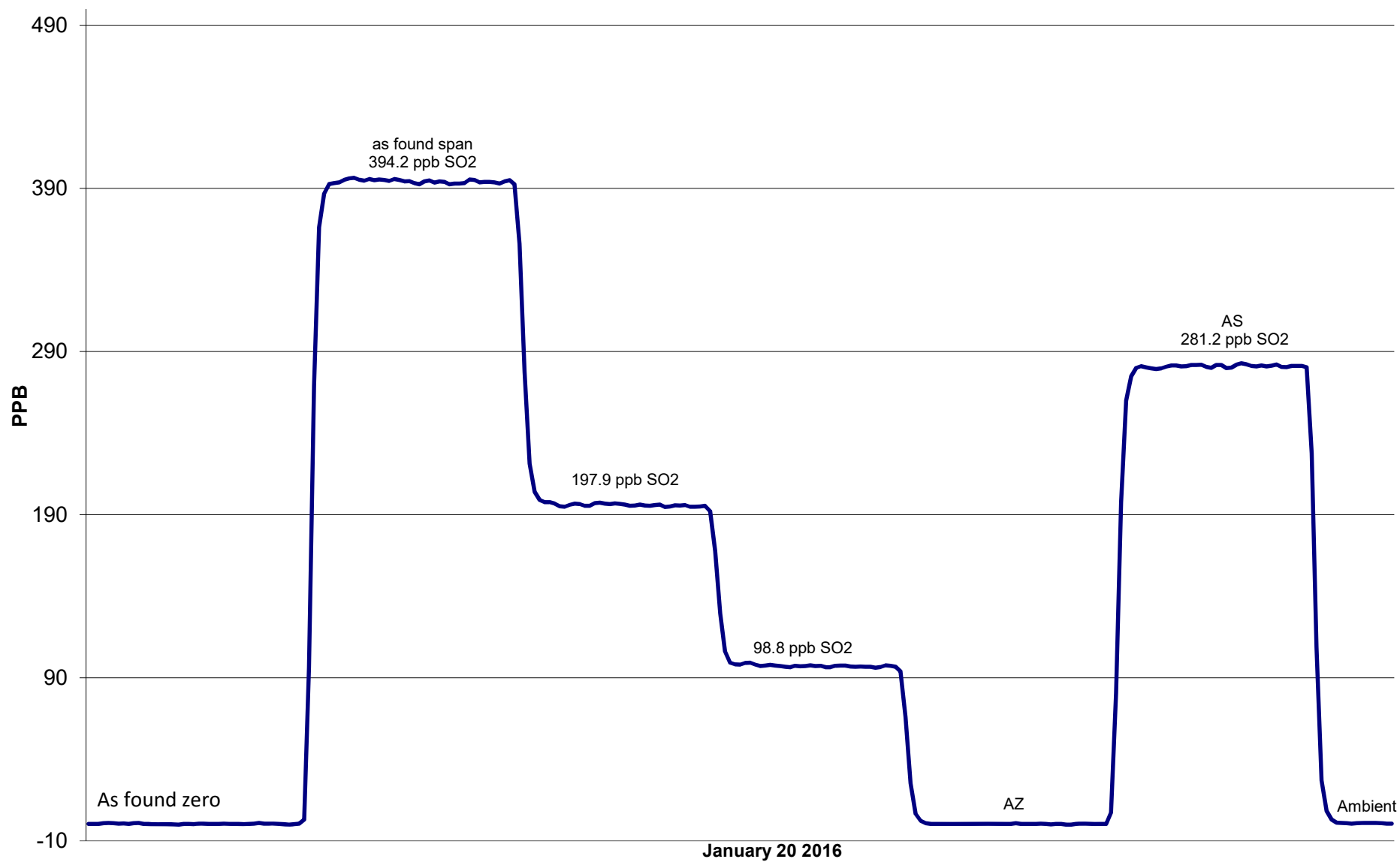
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A	Correlation Coefficient	0.999946
394.2	393.7	1.0011		
197.9	195.7	1.0113		
98.8	97.0	1.0187	Slope	1.001125
			Intercept	0.790292

SO2 Calibration Curve



SO2 Calibration



Calibration Report



Parameter H2S
Air Monitoring Network PAZA

Station Information

Calibration Date	January 20 2016	Previous Calibration	December 15 2015
Station Number	6	Station Location	Valleyview
Reason:	Routine	Install	Removal
Start Time (MST)	10:50	End Time (MST)	13:15:00 PM
Barometric Pressure	0.929 atm	Station Temperature	20.5 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Concentration	10.32 ppm	Cal Gas Expiry Date	July 03 2016
Gas Cert Reference	LL110781		
DACS make	CR3000	DACS serial No.	5409
DACS voltage range	0 - 5 volt	DACS channel #	9
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.004486	Calculated slope	1.012348
Calculated intercept	-0.536488	Calculated intercept	0.217706

Analyzer make TEI Model 43i - APSCB Analyzer serial # 701120010

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	8.0	ppb	7.5	ppb
Coefficient	0.871		0.871	
Lamp Voltage	794	V	790	V
Chamber Temp	44.9	c	45	c
Perm Oven Temp	44.98	c	45	c
Pressure	551.90	mm Hg	553.70	mm Hg
Sample Flow	0.377	ccm	0.378	lpm
Lamp Intensity	91	%	91	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	0.2	N/A
4997	39.91	81.8	80.8	1.0117
4997	19.94	41.0	39.8	1.0295
6995	9.97	14.7	14.1	1.0434
4997	9.97		2.8	Sox Test
4997	0.00	0.0	0.2	As found zero
4997	39.93	81.8	80.8	As found span
Average Correction Factor				1.0282

Calculated value of As Found Response: 80.43 ppm Percent Change of As Found: 1.7%

	before calibration		after calibration	
Auto zero	0.2	ppm	0.3	ppm
Auto span	66.9	ppm	66.3	ppm

Notes: No adjustment made
Sox scrubber test performed

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter H2S

Air Monitoring Network PAZA



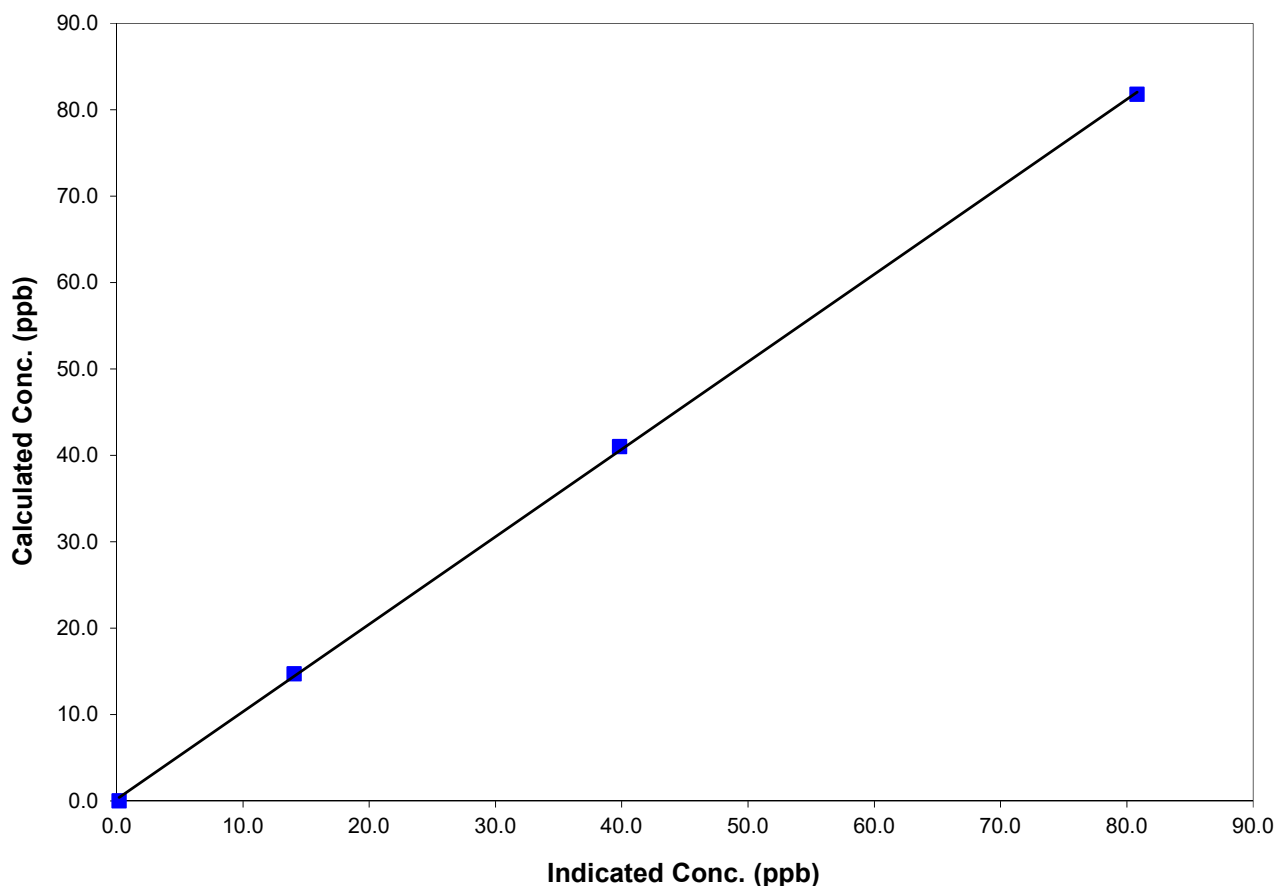
Station Information

Calibration Date	January 20 2016	Previous Calibration	December 15 2015
Station Number	6	Station Location	Valleyview
Start Time (MST)	10:50	End Time (MST)	13:15:00 PM
Analyzer make/model	TEI Model 43i - APSCB	Analyzer serial #	701120010

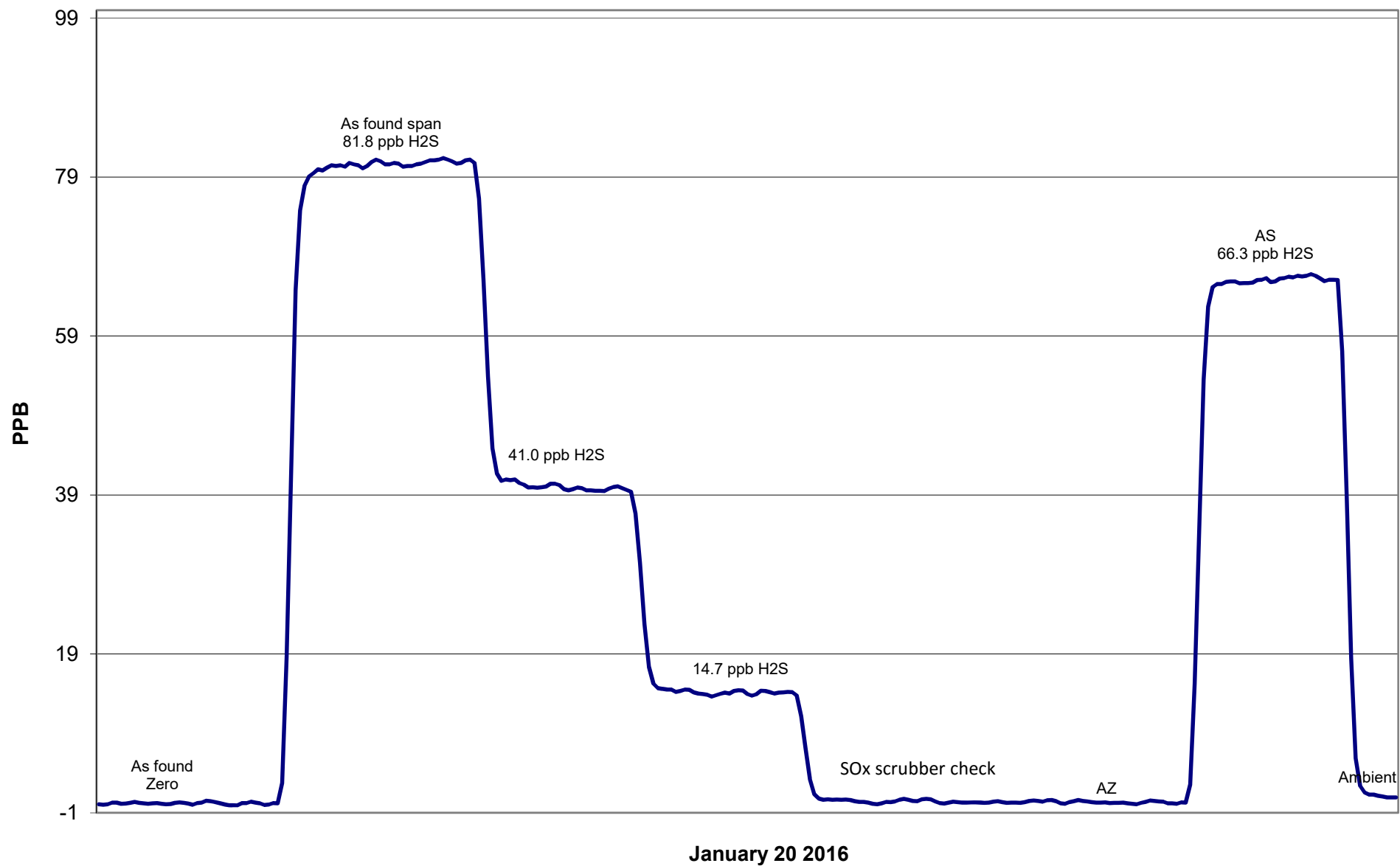
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999868
81.8	80.8	1.0117		
41.0	39.8	1.0295		
14.7	14.1	1.0434	Slope	1.012348
			Intercept	0.217706

H2S Calibration Curve



H2S Calibration



Calibration Report

Parameter SO₂

Air Monitoring Network PAZA



Station Information

Calibration Date	January 27, 2016	Previous Calibration	December 22, 2015
Station Number	1	Station Location	Falher
Reason:	☒ Routine	☐ Install	☐ Removal
			☐ Other:
Start Time (MST)	12:30	End Time (MST)	14:40:00 PM
Barometric Pressure	0.921 mm	Station Temperature	20.5 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Concentration	49.7 ppm	Cal Gas Expiry Date	05/10/2018
Correction factor	0.031254	Cal Gas Cylinder #	LL103793
DACS make	CR1000	DACS serial No.	3980
DACS voltage range	0 - 5 volt	DACS channel #	6
	<u>Before</u>		<u>After</u>
Calculated slope	1.001629	Calculated slope	0.991286
Calculated intercept	0.243968	Calculated intercept	0.175766
Analyzer make	Teco 43i	Analyzer serial #	1207452008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	7		7	
coefficient	0.905		0.905	
Lamp Voltage	864	volts	860	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	677	mm Hg	677.4	mm Hg
Sample Flow	0.399	ccm	0.399	ccm
Lamp Intensity	97	%	97	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.00	0.5	N/A
4995	39.93	394.2	397.8	0.9909
4995	19.96	197.8	199.0	0.9939
4995	9.97	99.0	99.0	1.0003
4995	0.0	0.0	0.5	As Found Zero
4995	39.93	394.2	397.8	As Found Span
Average Correction Factor				0.9950

Calculated value of As Found Response: 398.143 ppm Percent Change of As Found: **-1.0%**

	before calibration		after calibration	
Auto zero	0.6	ppm	0.7	ppm
Auto span	302.7	ppm	268.9	ppm

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



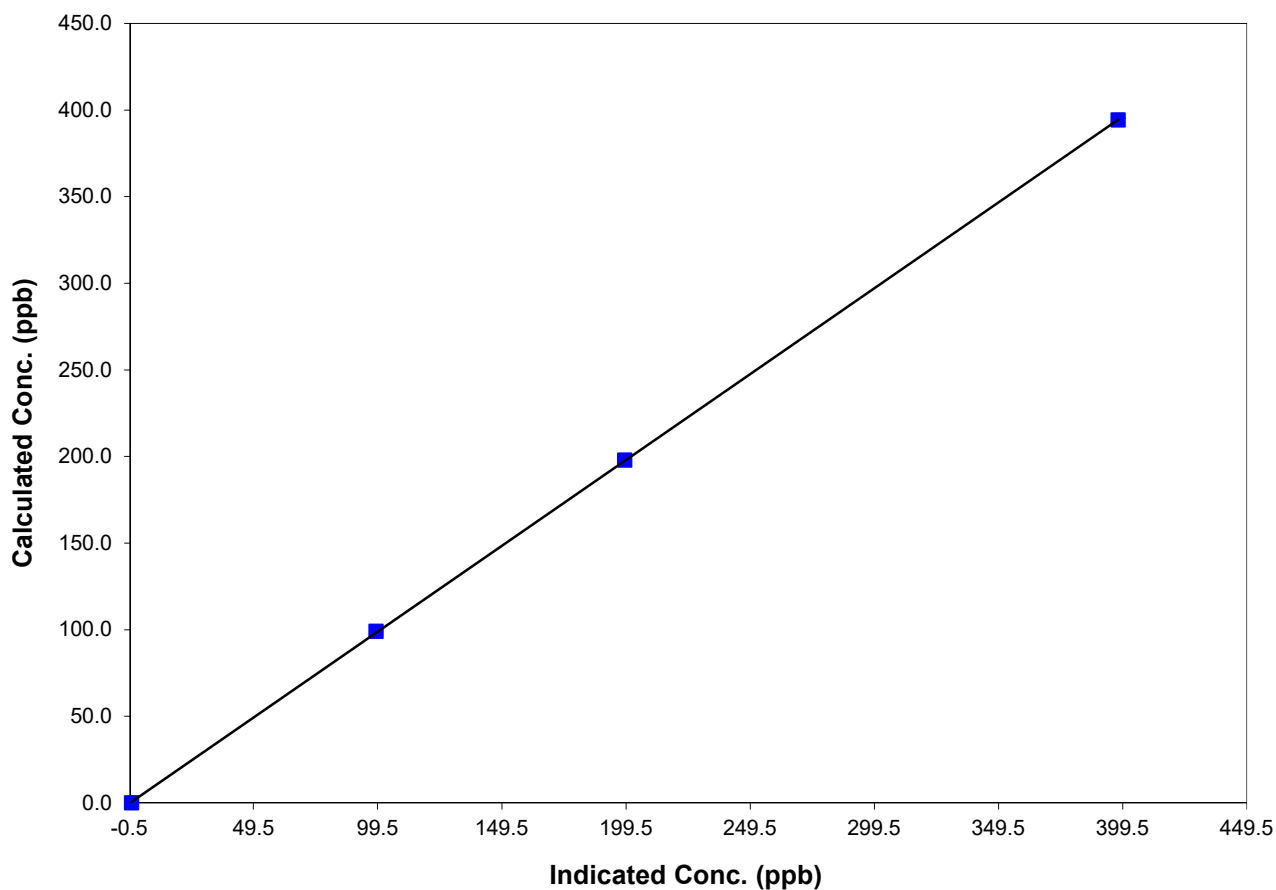
Station Information

Calibration Date	January 27, 2016	Previous Calibration	December 22, 2015
Station Number	1	Station Location	Falher
Start Time (MST)	12:30	End Time (MST)	14:40:00 PM
Analyzer make/model	Teco 43i	Analyzer serial #	1207452008

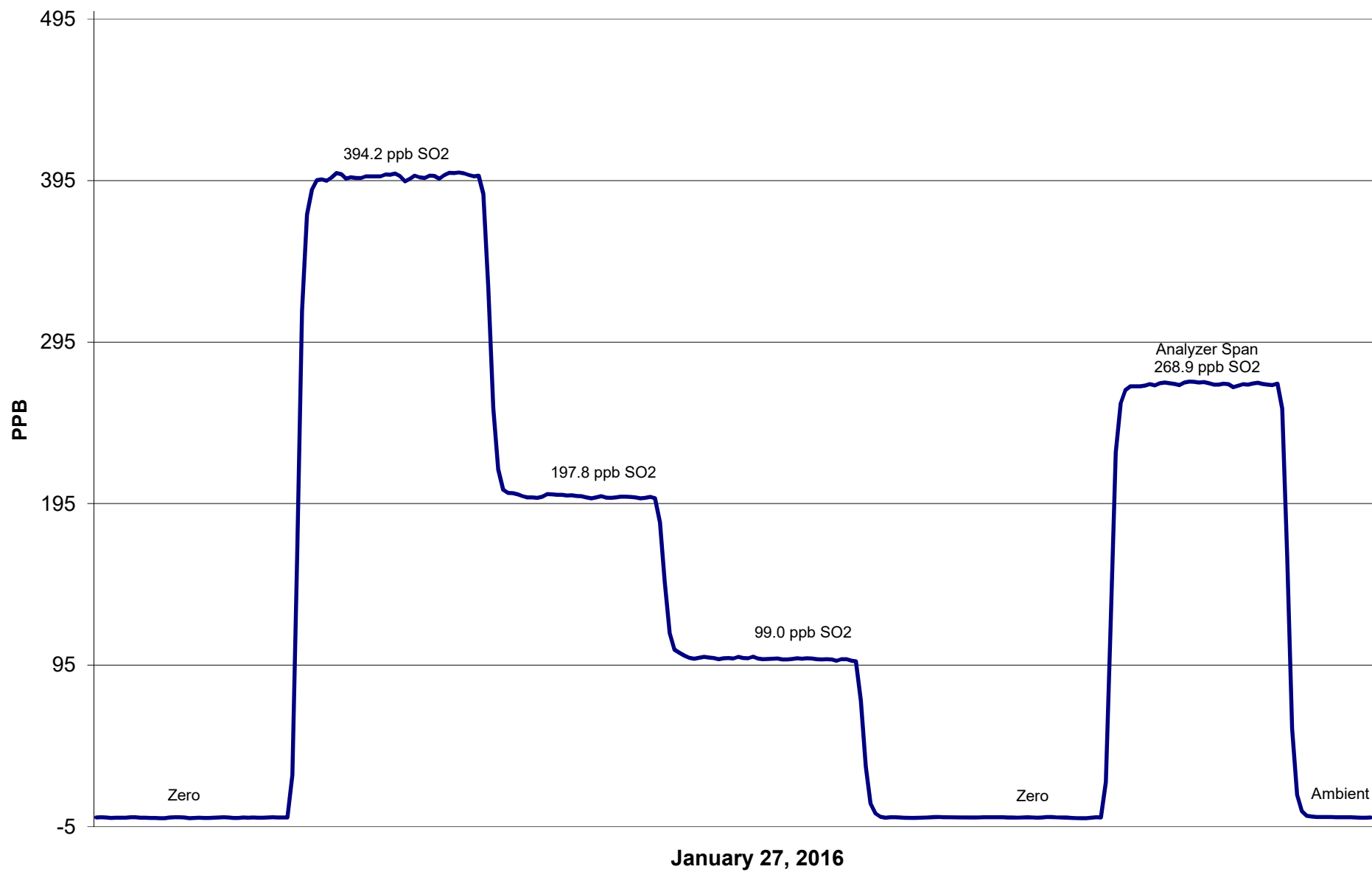
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A	Correlation Coefficient	0.999985
394.2	397.8	0.9909		
197.8	199.0	0.9939		
99.0	99.0	1.0003	Slope	0.991286
			Intercept	0.175766

SO2 Calibration Curve



SO2 Calibration



Calibration Report

Parameter H2S
Air Monitoring Network PAZA



Station Information

Calibration Date	January 27, 2016	Previous Calibration	December 22, 2015
Station Number	1	Station Location	Falher
Reason:	Routine	Install	Removal
Start Time (MST)	11:10	End Time (MST)	13:20:00 PM
Barometric Pressure	0.926 mm	Station Temperature	20.5 Deg C
Calibrator	Envionics	Serial Number	6586
Cal Gas Conc	10.32 ppm	Cal Gas Expiry Date	08/07/2016
Correction factor	0.031424	Cal Gas Cylinder #	LL110781
DACS make	CR1000	DACS serial No.	3980
DACS voltage range	0 - 5 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
Calculated slope	0.988526	Calculated slope	0.991857
Calculated intercept	0.027251	Calculated intercept	-0.277695
Analyzer make	Thermo 450i	Analyzer serial #	1207452006

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	15.4	ppb	15.4	ppb
coefficient	1.109		1.109	
Lamp Voltage	805	volts	805	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	513.5	mm Hg	512.9	mm Hg
Sample Flow	0.846	lpm	0.846	lpm
Lamp Intensity	90	mv	90	mv

Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.00	0.6	N/A
4995	39.93	81.84	82.9	0.9873
4995	19.96	41.07	41.6	0.9876
6994	9.97	14.69	14.8	0.9911
4995	0.00	0.00	0.6	As Found Zero
4995	39.93	81.84	82.9	As Found Span
Average Correction Factor				0.9887

Calculated value of As Found Response: 81.42 ppm Percent Change of As Found: **0.5%**

	before calibration		after calibration	
Auto zero	0.3	ppm	0.4	ppm
Auto span	59.0	ppm	58.3	ppm

Notes: No adjustment made
Sox crubber check performed

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter H2S

Air Monitoring Network PAZA



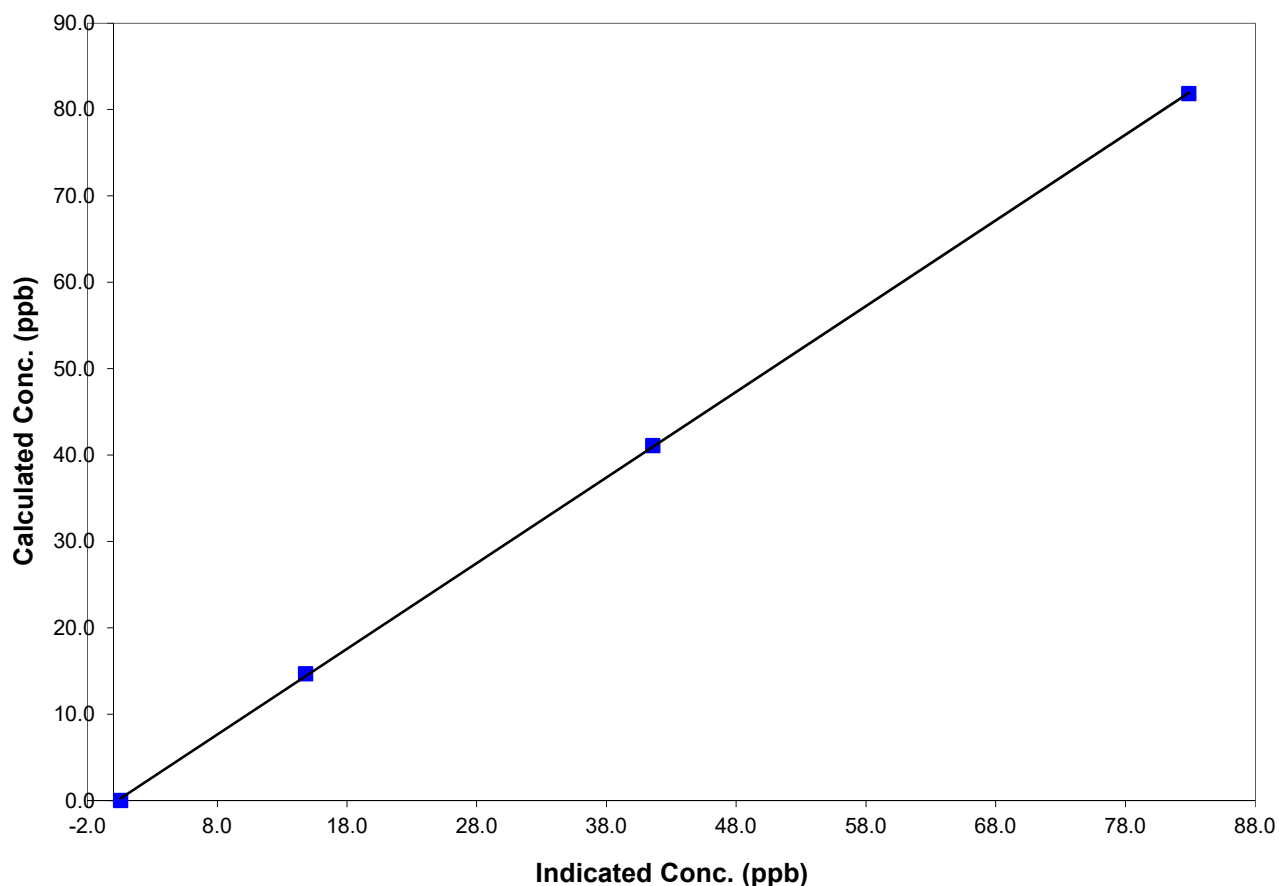
Station Information

Calibration Date	January 27, 2016	Previous Calibration	December 22, 2015
Station Number	1	Station Location	Falher
Start Time (MST)	11:10	End Time (MST)	13:20:00 PM
Analyzer make/model	Thermo 450i	Analyzer serial #	1207452006

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.6	N/A	Correlation Coefficient	0.999957
81.8	82.9	0.9873		
41.1	41.6	0.9876		
14.7	14.8	0.9911	Slope	0.991857
			Intercept	-0.277695

TRS Calibration Curve



H2S Calibration

