Peace Airshed Zone Association

Ambient Air Monitoring Network Summary

Continuous Ambient Air Quality Monitoring Program
Monthly Report
February 2014

Operations and Reporting

Peace Airshed Zone Association
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March 31st, 2014

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

RE: Peace Airshed Zone Association (PAZA) – February 2014 Ambient Air Report

Enclosed is the PAZA Ambient Monitoring Network Report for the month of **February 2014**.

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
Barrick Energy Inc.	Sturgeon/Valleyview	02-02-069-22-W5	1633-02-00
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

Company	Facility	LSD	EPEA Approval Number
	Gold Creek	13-26-067-05-W6	00010446-02-00
	Teepee Creek	SE-2-074-04-W6	00001635-02-00
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
Grande Prairie Generation Inc.	Northern Prairie Power Project	04-19-073-08-W6	00238762-00-00
Long Run Exploration	Eaglesham	01-25-076-01-W6	00241532-00-00
	Kakut	14-12-075-03-W6	00248469-00-00
	Donnelly	06-01-077-21-W5	00000087-02-00
	Puskwaskau	03-26-074-01-W6	00017524-01-00
Longview Oil Corp.	Sunset House	06-22-070-20-W5	138884-01-00
Penn West Petroleum Ltd.	Tangent	13-29-080-23-W5	00001746-02-00
	Pouce Coupe	16-07-078-11-W6	00000614-01-00

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

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

Continuous Monitoring: **Seven (7) Stations including Henry Pirker (Grande Prairie), Evergreen Park, Smoky Heights, Beaverlodge, Valleyview, Falher and Portable-Reno.**

During the month of **February** the following events were noted:

Henry Pirker Station:

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

Evergreen Park Station:

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

Smoky Heights Station:

- The measured ambient air quality was within the AAAQO for the Smoky Heights station with the exception of the $PM_{2.5}$ analyzer, which recorded two (2) 1-hour exceedences of the guideline of 80 $\mu g/m^3$:
  - Feb 28 22:00 101.4 $\mu g/m^3$ Alberta Environment Reference # 280972
  - Mar 01 00:00 173.9 $\mu g/m^3$ Alberta Environment Reference # 280972
- All analyzers and sensors at the Smoky Heights station had an operational uptime greater than 90% for the month of February.

Beaverlodge Station:

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

Valleyview Station:

- The measured ambient air quality was within the AAAQO for the Valleyview station with the exception of the H_2S analyzer, which recorded three (3) 1-hour exceedences of the guideline of 10 ppb:
  - Feb 25 13:00 19.4 ppb Alberta Environment Reference # 280839
  - Feb 25 14:00 14.6 ppb Alberta Environment Reference # 280839
  - Feb 25 15:00 13.4 ppb Alberta Environment Reference # 280839
- All analyzers and sensors at the Valleyview station had an operational uptime greater than 90% for the month of February.

Reno Station:

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

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 February.

Passive Monitoring - 46 Stations throughout the PAZA zone:

There were five duplicate sites sampled in the month of February: Fourth Creek, Wanham, Grande Prairie, High Prairie, 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 SO_2 passives ranged from 0.2 ppb to 0.7 ppb, with a mean of 0.4 ppb.
- Monthly average concentrations for NO_2 passives ranged from 0.3 ppb to 9.9 ppb, with a mean of 1.8 ppb.
- Monthly average concentrations for O_3 passives ranged from 25.9 ppb to 46.8 ppb, with a mean of 38.8 ppb.
- Monthly average concentrations for H_2S were between 0.2 And 0.4 pbb, with a mean of 0.3 ppb.

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

On Behalf of the
Peace Airshed Zone Association

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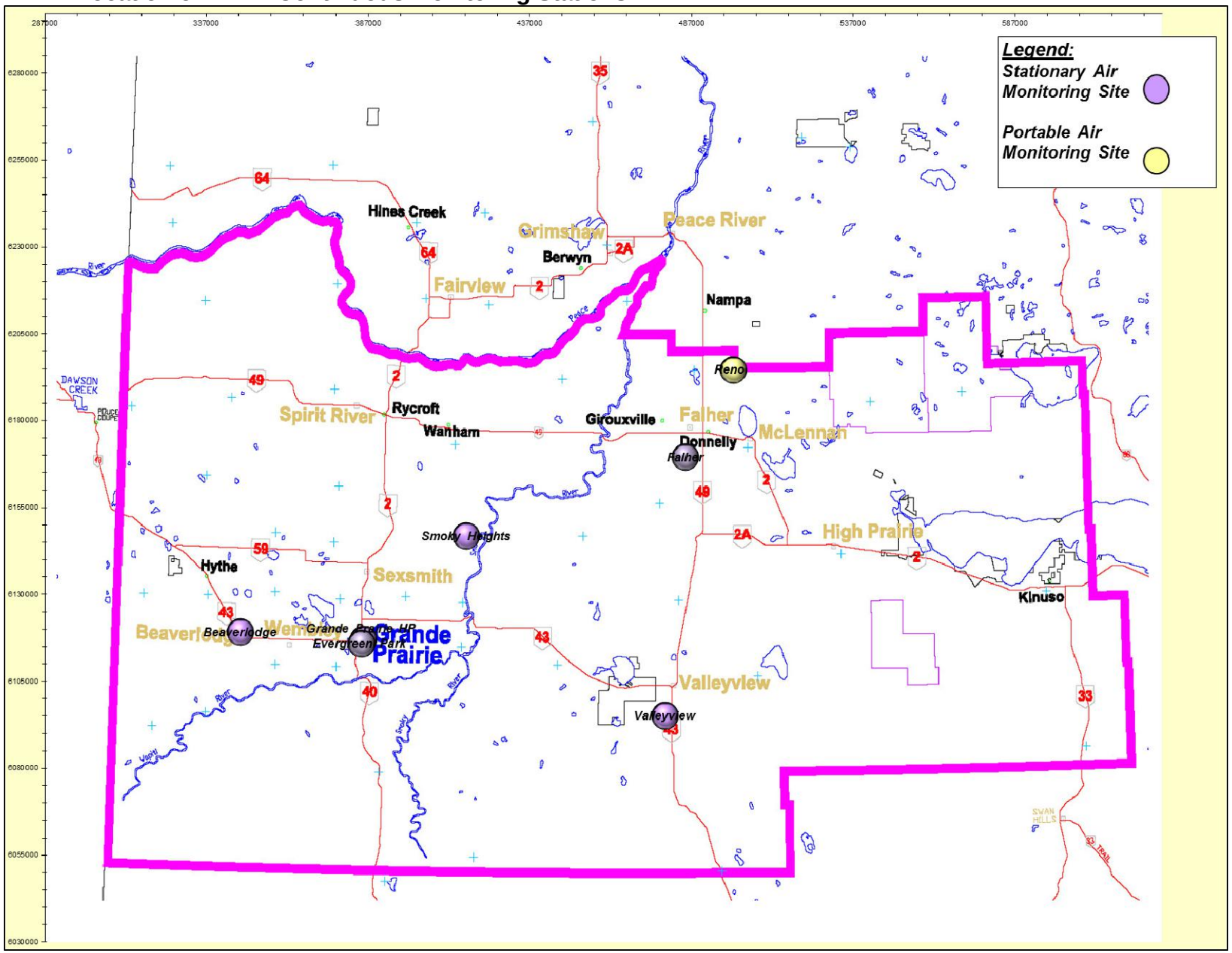
Location of PAZA Continuous Monitoring Stations



PAZA Monthly Continuous Data Summary

Feb-2014	Peace Airshed Zone Assocation						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	4.3	Feb-16 13:00	1.5	Feb-16	100%
SO_2 (ppb)	172	48	Evergreen Park	0.3	0	0	6.6	Feb-12 14:00	1.1	Feb-12	100%
SO_2 (ppb)	172	48	Smoky Heights	0.8	0	0	16.9	Feb-09 17:00	3.1	Feb-17	100%
SO_2 (ppb)	172	48	Beaverlodge	0.6	0	0	8.7	Feb-12 14:00	2.7	Feb-12	100%
SO_2 (ppb)	172	48	Valleyview	0.6	0	0	9.9	Feb-17 13:00	2.4	Feb-17	100%
SO_2 (ppb)	172	48	Reno	0.4	0	0	3.2	Feb-16 03:00	1.4	Feb-16	100%
SO_2 (ppb)	172	48	Falher	0.3	0	0	4.5	Feb-25 16:00	1.0	Feb-16	100%
NO (ppb)			Henry Pirker	12.6	0	0	131.8	Feb-07 00:00	36.7	Feb-06	100%
NO_2 (ppb)	159	106	Henry Pirker	21.6	0	0	63.0	Feb-07 00:00	42.2	Feb-26	100%
NO_X (ppb)			Henry Pirker	34.2	0	0	194.7	Feb-07 00:00	76.1	Feb-26	100%
NO (ppb)			Beaverlodge	2.1	0	0	63.8	Feb-20 10:00	7.0	Feb-10	100%
NO_2 (ppb)	159	106	Beaverlodge	7.0	0	0	30.8	Feb-10 03:00	14.5	Feb-14	100%
NO_X (ppb)			Beaverlodge	9.0	0	0	91.1	Feb-20 10:00	20.3	Feb-10	100%
NO (ppb)			Reno	0.6	0	0	5.6	Feb-24 11:00	1.4	Feb-24	100%
NO_2 (ppb)	159	106	Reno	3.4	0	0	23.7	Feb-27 05:00	8.0	Feb-26	100%
NO_X (ppb)			Reno	4.1	0	0	24.6	Feb-27 05:00	9.1	Feb-26	100%
O_3 (ppb)	82		Henry Pirker	19.0	0	-	41.2	Feb-27 17:00	35.5	Feb-03	100%
O_3 (ppb) - 8-hr			Henry Pirker		0				39.3	Feb-27	
O_3 (ppb)	82		Beaverlodge	30.8	0	-	47.9	Feb-26 14:00	40.0	Feb-18	100%
O_3 (ppb) - 8-hr			Beaverlodge		0				42.8	Feb-16	
O_3 (ppb)	82		Reno	31.2	0	-	45.2	Feb-18 17:00	41.2	Feb-18	100%
O_3 (ppb) - 8-hr			Reno		0				43.9	Feb-18	
CO (ppm)	13		Henry Pirker	0.27	0	-	1.4	Feb-18 10:00	0.5	Feb-26	100%
CO (ppm) - 8-hr	5		Henry Pirker		0				0.7	Feb-26	

PAZA Monthly Continuous Data Summary – continued

Feb-2014	Peace Airshed Zone Assocation						Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
THC (ppm)			Henry Pirker	2.1	-	-	3.0	Feb-15 10:00	2.5	Feb-26	100%
CH_4 (ppm)			Henry Pirker	2.1	-	-	3.0	Feb-15 10:00	2.5	Feb-26	100%
NMHC (ppm)			Henry Pirker	0.0	-	-	0.3	Feb-14 15:00	0.0	Feb-14	100%
THC (ppm)			Reno	1.96	-	-	2.7	Feb-27 05:00	2.3	Feb-06	100%
TRS (ppb)			Henry Pirker	0.6	-	-	1.6	Feb-26 21:00	0.9	Feb-07	100%
TRS (ppb)			Evergreen Park	0.4	-	-	2.0	Feb-26 10:00	1.0	Feb-26	100%
TRS (ppb)			Smoky Heights	0.1	-	-	1.3	Feb-25 18:00	0.2	Feb-06	100%
TRS (ppb)			Reno	0.3	-	-	0.8	Feb-11 14:00	0.4	Feb-11	100%
H_2S (ppb)	10	3	Valleyview	0.3	3	0	19.0	Feb-25 13:00	2.6	Feb-25	100%
H_2S (ppb)	10	3	Falher	0.2	0	0	2.3	Feb-18 10:00	0.9	Feb-19	100%
$PM_{2.5}$ (µg/m3)	80	30	Henry Pirker	6.8	0	0	25.8	Feb-26 13:00	14.4	Feb-26	95%
$PM_{2.5}$ (µg/m3)	80	30	Evergreen Park	3.5	0	0	30.2	Feb-26 10:00	8.3	Feb-26	100%
$PM_{2.5}$ (µg/m3)	80	30	Smoky Heights	4.7	2	0	168.2	Mar-01 00:00	17.6	Feb-28	100%
$PM_{2.5}$ (µg/m3)	80	30	Beaverlodge	8.9	0	0	27.6	Feb-13 19:00	14.1	Feb-14	99%
$PM_{2.5}$ (µg/m3)	80	30	Reno	2.6	0	0	13.6	Feb-24 16:00	5.1	Feb-19	97%
RH (%)			Henry Pirker	63.4	-	-	81.3	Feb-16 08:00	73.4	Feb-20	100%
RH (%)			Evergreen Park	69.4	-	-	89.6	Feb-16 09:00	81.6	Feb-20	100%
RH (%)			Beaverlodge	77.4	-	-	100.0	Feb-16 09:00	90.1	Feb-01	100%
RH (%)			Valleyview	67.4	-	-	89.0	Feb-15 07:00	80.0	Feb-20	100%
SR (W/m^2)			Henry Pirker	69.6	-	-	456.7	Feb-28 14:00	123.4	Feb-28	100%
Temp (°C)			Henry Pirker	-16.1	-	-	4.3	Feb-17 15:00	-2.9	Feb-17	100%
Temp (°C)			Evergreen Park	-15.8	-	-	3.6	Feb-17 15:00	-2.0	Feb-17	100%
Temp (°C)			Smoky Heights	-16.8	-	-	1.0	Feb-18 15:00	-4.1	Feb-16	100%
Temp (°C)			Beaverlodge	-14.5	-	-	2.1	Feb-17 15:00	-2.4	Feb-18	100%
Temp (°C)			Valleyview	-15.6	-	-	4.9	Feb-17 17:00	-0.5	Feb-17	100%
Temp (°C)			Reno	-17.1	-	-	-0.7	Feb-17 15:00	-4.8	Feb-15	100%
Temp (°C)			Falher	-18.0	-	-	1.8	Feb-17 14:00	-4.4	Feb-17	100%

PAZA Monthly Continuous Data Summary – continued

Feb-2014	Peace Airshed Zone Assocation						Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
WSPD s (km/hr)			Henry Pirker	6.1	-	-	26.0	Feb-16 16:00	12.2	Feb-27	100%
WSPD s (km/hr)			Evergreen Park	7.8	-	-	43.0	Feb-16 17:00	19.0	Feb-27	100%
WSPD s (km/hr)			Smoky Heights	12.3	-	-	47.0	Feb-16 16:00	21.8	Feb-24	100%
WSPD s (km/hr)			Beaverlodge	8.0	-	-	47.0	Feb-16 17:00	20.2	Feb-16	100%
WSPD s (km/hr)			Valleyview	3.9	-	-	20.0	Feb-16 17:00	9.0	Feb-03	100%
WSPD s (km/hr)			Reno	9.1	-	-	32.0	Feb-16 03:00	17.6	Feb-14	100%
WSPD s (km/hr)			Falher	10.1	-	-	35.0	Feb-16 02:00	17.6	Feb-12	100%
WSPD v (km/hr)			Henry Pirker	2.5	-	-	26.0	Feb-16 16:00	9.6	Feb-27	100%
WSPD v (km/hr)			Evergreen Park	3.2	-	-	43.0	Feb-16 17:00	15.6	Feb-27	100%
WSPD v (km/hr)			Smoky Heights	4.0	-	-	47.0	Feb-16 16:00	17.6	Feb-08	100%
WSPD v (km/hr)			Beaverlodge	3.0	-	-	47.0	Feb-16 17:00	14.9	Feb-16	100%
WSPD v (km/hr)			Valleyview	1.7	-	-	20.0	Feb-16 17:00	8.4	Feb-03	100%
WSPD v (km/hr)			Reno	1.1	-	-	32.0	Feb-16 03:00	16.3	Feb-14	100%
WSPD v (km/hr)			Falher	1.5	-	-	35.0	Feb-16 02:00	14.2	Feb-12	100%
WDIR			Henry Pirker	NNW	-	-	-	-	-	-	100%
WDIR			Evergreen Park	NNW	-	-	-	-	-	-	100%
WDIR			Smoky Heights	NW	-	-	-	-	-	-	100%
WDIR			Beaverlodge	NNW	-	-	-	-	-	-	100%
WDIR			Valleyview	NNW	-	-	-	-	-	-	100%
WDIR			Reno	SSE	-	-	-	-	-	-	100%
WDIR			Falher	WSW	-	-	-	-	-	-	100%

Continuous Network Equipment Summary

PAZA – Henry Pirker Station

General Station Issues

Routine monthly calibrations were performed on February 4th (CO, TRS, THC) and 5th (SO_2, NO_X, O_3).

Parameter	Make	Model	Notes
SO_2	TEI	43C	No operational issues observed.
NOx/NO/NO_2	TEI	42C	No operational issues observed.
O_3	TEI	49C	No operational issues observed.
CO	TEI	48C	No operational issues observed.
THC/CH_4/NMHC	TEI	55I	No operational issues observed.
TRS	TEI	45C/43C	Low spans attributed to low external temperatures.
$PM_{2.5}$	Sharp	5030	No operational issues observed.
RH	Met One	083D	No operational issues observed.
ET	Met One	083D	No operational issues observed.
SR	Met One	096-1	No operational issues observed.
WS / WD	Met One	010C/020C	No operational issues observed.

PAZA – Evergreen Park Station

General Station Issues

Routine monthly calibration performed on February 6th (SO_2, TRS).

Parameter	Make	Model	Notes
SO_2	TEI	43i	No operational issues observed.
TRS	TEI	43C	Low spans attributed to low external temperatures.
$PM_{2.5}$	R&P	1400AB	One (1) hour flagged as invalid due to irregular analyzer behavior.
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 February 25th (SO_2, TRS, $PM_{2.5}$).			
Parameter	**Make**	**Model**	**Notes**
SO_2	TEI	43C	No operational issues observed.
TRS	TEI	43C	Low spans attributed to low external temperatures.
$PM_{2.5}$	R&P	1400AB	Two 1-hour exceedences of the AAAQO were recorded on February 28th. **AE Reference #280972**
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 February 13th (NO_X, O_3, SO_2).

Parameter	Make	Model	Notes
SO_2	TEI	43CTL	No operational issues observed.
NOx/NO/NO_2	TEI	42C	Analyzer maintenance done during calibration to correct for span drift.
O_3	TEI	49C	No operational issues observed.
$PM_{2.5}$	R&P	1400AB	Sample heads cleaned February 14th. Switching valve malfunction February 23rd, repaired same day. Four (4) hours flagged invalid due to negative swings.
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 February 28th (SO_2 & H_2S).			
Parameter	**Make**	**Model**	**Notes**
SO_2	TEI	43i	No operational issues observed.
H_2S	TEI	43A	Three 1-hour exceedences of the AAAQO were recorded on February 25th. **AE Reference #280839**
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 – Portable-Reno			
General Station Issues			
Routine monthly calibrations were performed on February 11th (SO_2, NO_X, O_3, TRS), and February 24th (THC).			
Parameter	**Make**	**Model**	**Notes**
SO_2	TEI	43i	Diagnostic span triggered February 10th. Service done during calibration period.
NO_x	TEI	42i	No operational issues observed.
O_3	TEI	49C	No operational issues observed.
TRS	TEI	39C	Low spans attributed to low external temperatures.
THC	TEI	51C	No operational issues observed.
$PM_{2.5}$	R&P	1400AB	Nineteen (19) hours flagged invalid due to negative swings. Heads cleaned on February 24th.
ET	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 February 18th (SO_2 & H_2S). Power outage on February 15th invalidated four (4) hours.

Parameter	Make	Model	Notes
SO_2	TEI	43i	No operational issues observed.
H_2S	Thermo	450i	No operational issues observed.
ET	Gill	RM Young 5103	No operational issues observed.
WS / WD	Gill	RM Young 5103	No operational issues observed.

PAZA
Henry Pirker Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 4.3 ppb on Feb 16 13:00 Maximum Daily Average: 1.5 ppb on Feb 16

Minimum Value: 0 ppb on Feb 5 04:00 Minimum Daily Average: 0.0 ppb on Feb 5
Maximum Diurnal Average: 0.9 ppb at hour 13 Minimum Diurnal Average: 0.4 ppb at hour 1
Monthly Average: 0.58 ppb Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.3 Median = 0.5 Q_3 = 0.8 P_{90} = 1.1 P_{99} = 2.0

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	0	0	0	0	1	0	0	0	0.3	0.7
2-Feb	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
3-Feb	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	1	0.3	0.5
4-Feb	1	1	0	0	0	0	0	0	0	A	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0.3	0.9
5-Feb	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.3
6-Feb	0	0	0	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	1	1	1	0	1	1	0.4	1.2
7-Feb	1	1	0	0	0	0	A	0	0	0	1	1	1	1	2	2	1	1	1	1	1	1	1	0	0.8	1.7
8-Feb	0	0	1	1	1	A	0	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0.4	1.2
9-Feb	0	0	0	0	A	0	1	0	0	0	1	1	1	1	1	1	1	0	0	0	0	1	0	0	0.5	0.9
10-Feb	0	0	0	A	1	0	0	0	0	0	0	1	1	1	1	0	0	1	1	0	0	0	0	0	0.4	1.1
11-Feb	0	0	A	0	0	0	0	0	1	1	2	2	2	2	1	1	1	1	1	1	1	0	0	0	0.7	2.0
12-Feb	0	A	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	0.9	2.1
13-Feb	A	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	1.2	1.9
14-Feb	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	A	1	0.7	1.3
15-Feb	1	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.7	1.3
16-Feb	1	1	1	1	1	2	2	2	2	1	1	3	4	2	1	0	0	0	0	2	A	2	1	1	1.5	4.3
17-Feb	1	1	1	1	1	1	1	1	0	1	1	1	0	0	3	1	1	0	0	A	0	0	0	0	0.7	2.6
18-Feb	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0.4	1.2
19-Feb	0	0	0	1	1	0	0	1	0	0	1	1	1	1	1	0	0	A	0	0	0	0	0	0	0.5	0.8
20-Feb	0	0	0	0	0	1	0	0	1	1	1	0	1	0	1	1	A	0	0	1	1	1	1	1	0.5	1.0
21-Feb	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0	1	1	1	1	1	1	1	0.8	1.4
22-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	2	A	0	1	1	0	0	0	0	1	1	0.7	1.8
23-Feb	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0.3	0.5
24-Feb	0	0	0	0	0	0	0	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	1	1	0.5	0.9
25-Feb	1	1	1	1	1	1	1	1	1	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.5
26-Feb	0	0	0	0	0	0	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	0	0	0	0.7	1.4
27-Feb	0	0	0	1	2	2	2	1	1	A	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0.6	2.2
28-Feb	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0.3	1.5
	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.9	0.9	0.8	0.7	0.6	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	Diurnal Average	
	1.1	1.7	1.7	1.9	2.0	2.2	1.8	1.9	2.0	1.5	1.7	3.1	4.3	2.0	2.6	1.7	1.4	1.1	1.0	2.4	0.8	1.7	1.8	2.1	Diurnal Maximum	

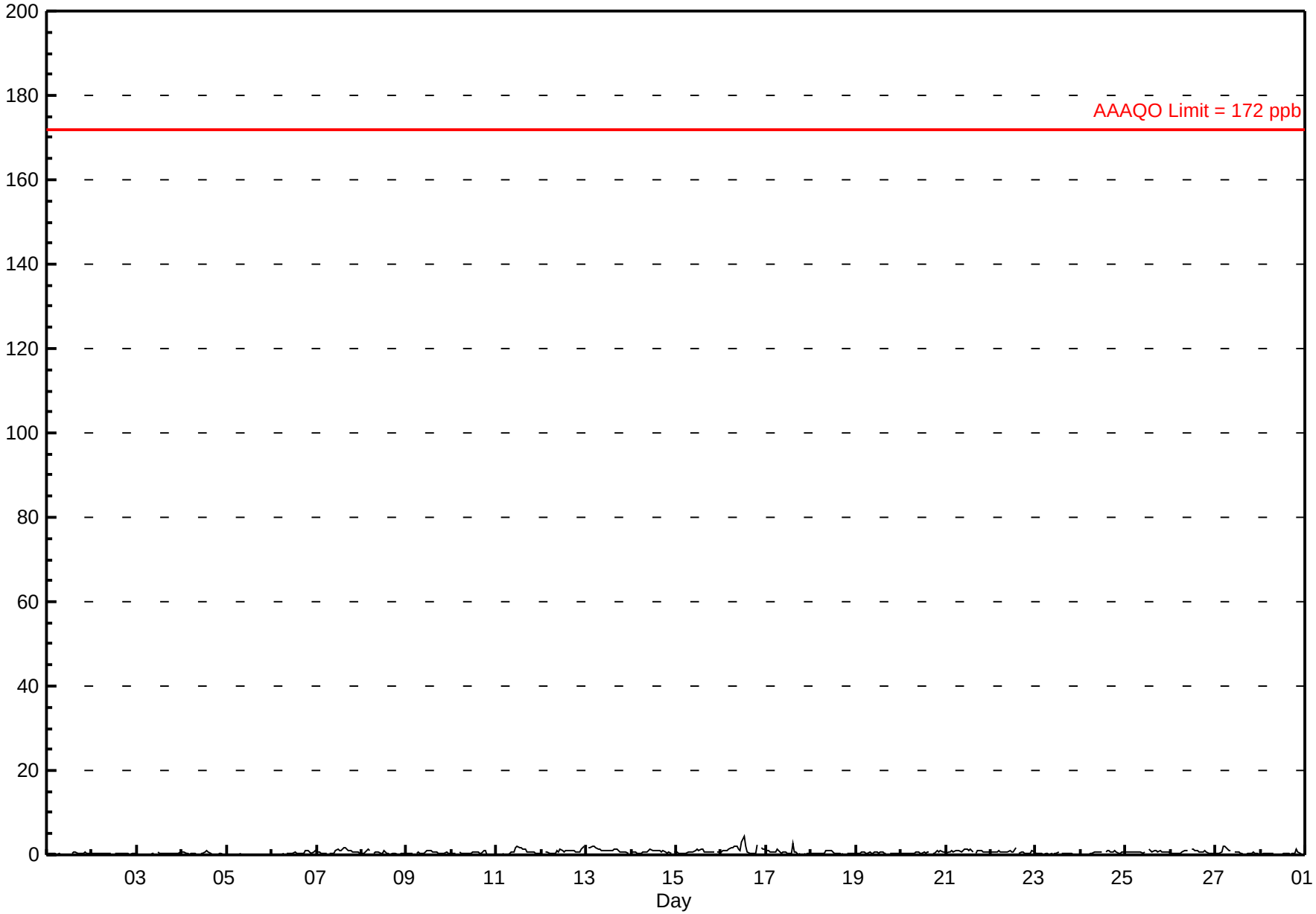
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - February 2014



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - February 2014

Maximum Value: 9.5 ppb on Feb 17 15:00

Maximum Daily Average: 2.2 ppb on Feb 16

Minimum Value: 0 ppb on Feb 5 13:00

Minimum Daily Average: 0.2 ppb on Feb 5

Maximum Diurnal Average: 1.4 ppb at hour 12

Minimum Diurnal Average: 0.7 ppb at hour 1

Monthly Average: 1.01 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.4$ $Q_1 = 0.6$ Median = 0.9 $Q_3 = 1.3$ $P_{90} = 1.8$ $P_{99} = 2.6$

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	1	1	1	1	1	0	0	0	0	0	0	0	A	1	1	1	0	0	1	1	1	1	0	1	0.6	1.3
2-Feb	1	0	0	1	1	0	1	1	1	1	1	A	1	1	0	0	0	0	0	0	0	0	0	1	0.6	0.9
3-Feb	0	0	0	0	0	0	0	0	0	1	A	1	1	1	1	1	1	0	1	1	1	1	1	1	0.6	1.0
4-Feb	1	1	1	1	0	1	1	1	1	A	1	1	2	2	1	1	1	1	0	0	1	1	1	0	0.7	1.6
5-Feb	0	0	0	0	0	1	1	1	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
6-Feb	0	0	0	0	0	1	1	A	1	0	1	1	1	1	1	1	1	1	2	2	1	1	1	2	0.8	2.3
7-Feb	2	1	1	1	1	1	A	1	1	1	1	2	1	2	2	2	2	1	1	1	1	1	1	1	1.3	2.4
8-Feb	1	1	1	2	2	A	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0	1	1	0	0.9	2.0
9-Feb	0	1	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.3
10-Feb	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	0	0	0	0	0	0.8	1.7
11-Feb	0	1	A	1	0	1	0	1	1	1	2	3	2	2	2	2	1	1	1	1	1	1	1	1	1.1	2.8
12-Feb	1	A	1	1	1	1	1	1	1	1	2	1	1	1	1	2	1	2	1	1	1	2	2	3	1.4	2.7
13-Feb	A	2	2	2	2	2	2	2	2	1	1	1	1	2	1	2	1	1	1	1	1	1	1	A	1.6	2.3
14-Feb	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	2	1	1	1	1	1	1	A	1	1.2	1.9
15-Feb	1	1	0	0	1	1	1	1	1	1	1	2	1	2	2	1	1	1	1	1	1	A	1	1	1.1	2.0
16-Feb	1	1	1	1	2	2	2	2	2	2	1	5	5	4	1	0	1	1	1	5	A	2	2	2	2.2	5.5
17-Feb	1	1	1	1	1	1	2	1	0	1	1	1	1	1	10	6	2	0	0	A	0	0	0	0	1.6	9.5
18-Feb	1	0	0	0	1	1	1	1	2	2	1	1	1	1	0	0	0	1	A	1	1	1	1	1	0.9	2.0
19-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.8	1.0
20-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0	1	1	1	1	1	1	0.9	1.5
21-Feb	1	1	1	1	1	1	1	1	1	1	2	3	2	2	1	A	1	1	1	1	1	1	1	1	1.3	2.5
22-Feb	1	1	1	2	2	1	1	1	1	1	2	1	1	3	A	1	1	1	1	1	1	1	1	1	1.1	2.8
23-Feb	1	1	0	0	0	1	0	0	0	0	1	1	1	A	1	0	1	1	0	0	0	0	0	0	0.6	1.0
24-Feb	0	0	0	0	0	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.9	1.5
25-Feb	1	1	1	1	1	1	1	1	1	1	1	A	2	2	1	2	1	1	1	1	1	1	1	1	1.1	1.9
26-Feb	1	1	1	1	1	1	1	1	1	2	A	2	2	1	1	1	1	1	1	1	1	1	1	0	1.1	1.9
27-Feb	0	1	1	1	3	3	2	1	1	A	1	1	1	1	0	0	0	0	0	0	1	1	1	0	1.0	3.0
28-Feb	0	1	1	1	0	0	0	1	A	0	0	0	0	0	1	1	0	0	1	3	1	1	0	0	0.6	2.9
	0.7	0.8	0.8	0.9	1.0	1.0	1.0	1.0	1.1	1.1	1.2	1.4	1.4	1.3	1.4	1.2	0.9	0.8	0.9	1.1	0.8	0.9	0.8	0.9	Diurnal Average	
	1.8	2.2	2.3	2.3	3.0	2.9	2.1	2.1	2.5	2.5	2.4	5.5	5.5	4.0	9.5	6.3	2.5	1.7	1.8	5.5	1.5	2.1	2.3	2.7	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

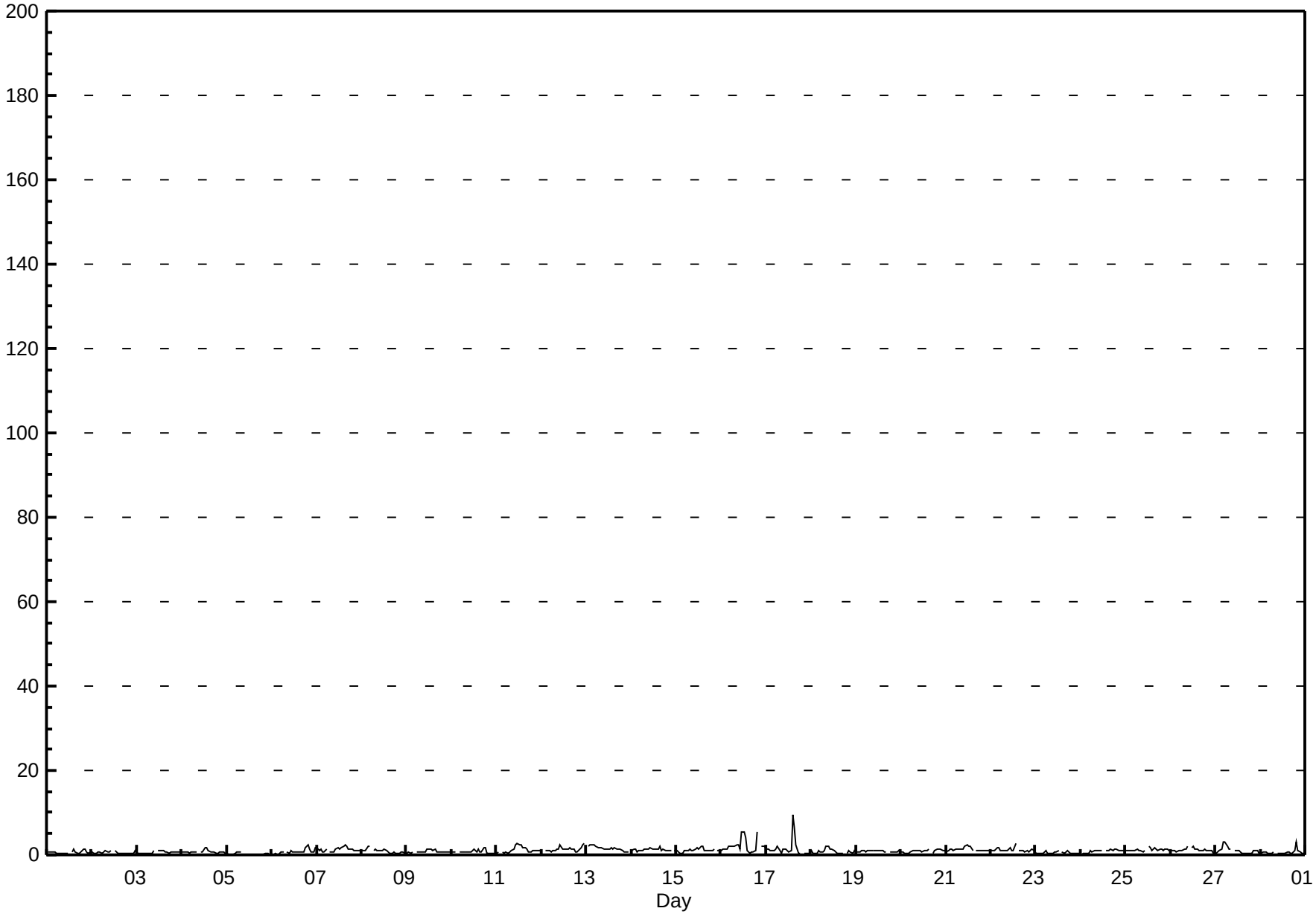
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - February 2014

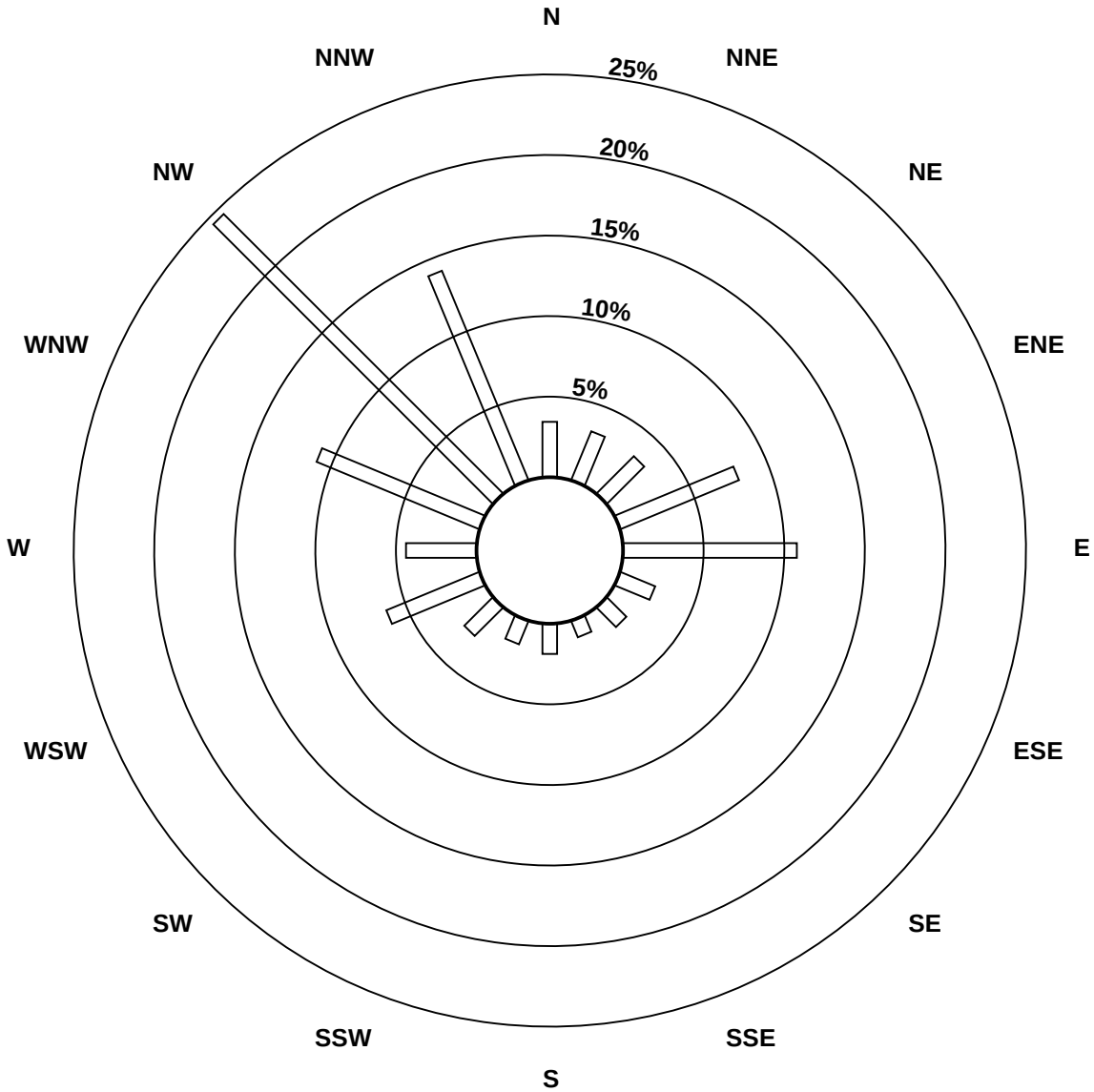


FOCUS AIR QUALITY MONITORING

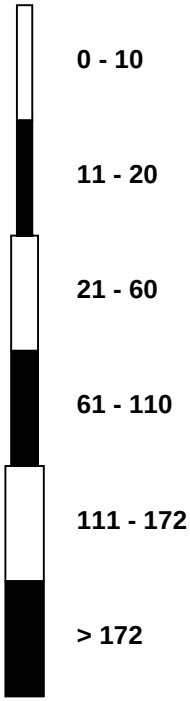
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - February 2014



Pollutant Classes (ppb)

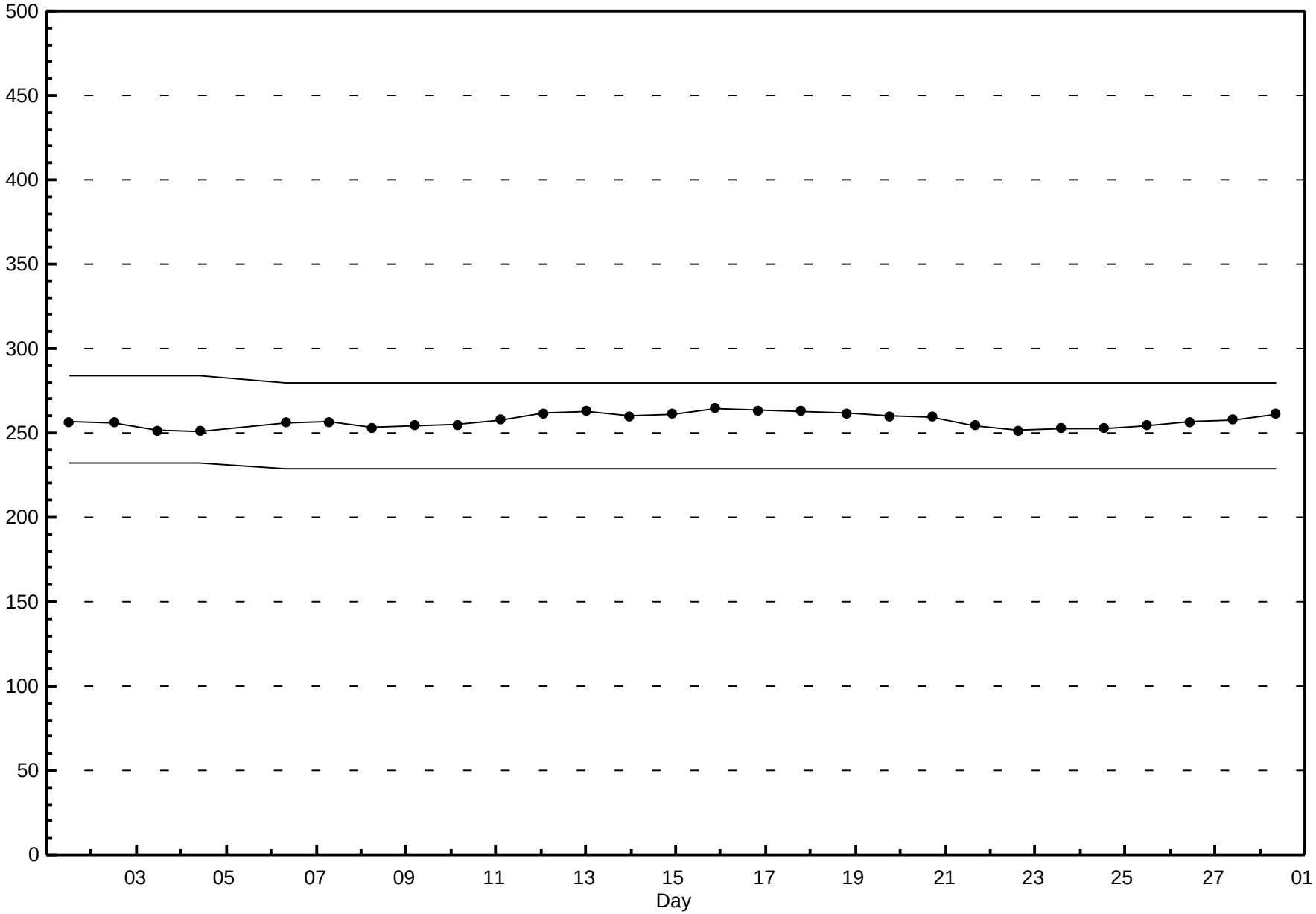


Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Henry Pirker - February 2014



Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 1.6 ppb on Feb 26 21:00

Maximum Daily Average: 0.9 ppb on Feb 7

Minimum Value: 0 ppb on Feb 23 01:00

Minimum Daily Average: 0.4 ppb on Feb 3

Maximum Diurnal Average: 0.7 ppb at hour 10

Minimum Diurnal Average: 0.5 ppb at hour 17

Monthly Average: 0.60 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.4$ $Q_1 = 0.5$ Median = 0.6 $Q_3 = 0.7$ $P_{90} = 0.9$ $P_{99} = 1.3$

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

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

C - Calibration A - Automated Daily Zero Span

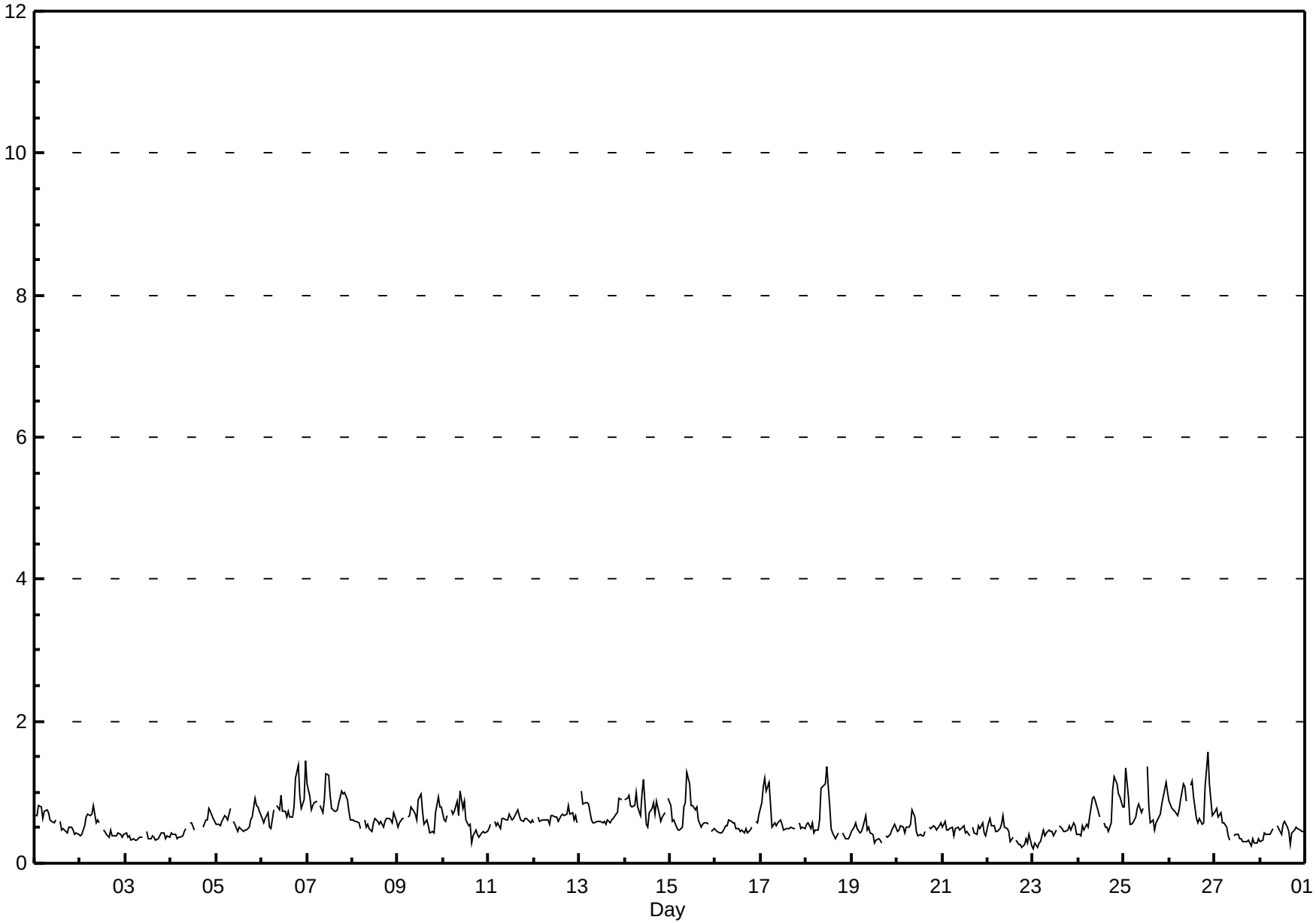
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - February 2014



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - February 2014

Maximum Value: 2.8 ppb on Feb 15 10:00

Maximum Daily Average: 1.4 ppb on Feb 7

Minimum Value: 1 ppb on Feb 19 17:00

Minimum Daily Average: 0.8 ppb on Feb 3

Maximum Diurnal Average: 1.2 ppb at hour 10

Minimum Diurnal Average: 0.9 ppb at hour 17

Monthly Average: 1.06 ppb

Percentiles: $P_1 = 0.7$ $P_{10} = 0.8$ $Q_1 = 0.9$ Median = 1.0 $Q_3 = 1.2$ $P_{90} = 1.4$ $P_{99} = 1.9$

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1.0	1.6
2-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.4
3-Feb	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	0.9
4-Feb	1	1	1	1	1	1	1	1	1	A	1	1	1	C	C	C	C	1	1	1	1	1	1	1	1.0	1.3
5-Feb	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1.0	1.6
6-Feb	1	1	1	1	1	1	1	A	1	1	2	1	1	1	1	1	1	1	2	2	2	1	1	2	1.3	2.5
7-Feb	2	1	1	1	1	2	A	1	1	1	2	2	2	1	1	1	1	1	2	1	1	1	1	1	1.4	1.9
8-Feb	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.3
9-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.5
10-Feb	1	1	1	A	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.6
11-Feb	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.3
12-Feb	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.3
13-Feb	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	A	1.1	1.7
14-Feb	1	1	2	1	1	1	1	1	1	1	2	1	1	1	1	2	1	1	1	1	1	1	A	1	1.3	1.7
15-Feb	1	1	1	1	1	1	1	1	1	3	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1.2	2.8
16-Feb	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.0	1.6
17-Feb	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1.1	1.7
18-Feb	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1	1	1	A	1	1	1	1	1	1.1	2.0
19-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.9	1.0
20-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.9	1.2
21-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.9	1.1
22-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.8	1.2
23-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.8	1.1
24-Feb	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	2	2	2	2	1	1	1.2	1.9
25-Feb	1	2	2	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	2	2	1	1.3	2.4
26-Feb	1	1	1	1	1	1	1	2	2	1	A	2	2	1	1	1	1	1	1	2	2	2	1	1	1.4	2.3
27-Feb	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
28-Feb	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	1.1
	1.1	1.1	1.1	1.0	1.0	1.0	1.0	1.1	1.1	1.2	1.2	1.1	1.1	1.0	1.0	1.0	0.9	1.0	1.0	1.1	1.1	1.1	1.1	1.0	Diurnal Average	
	1.9	2.4	1.9	1.6	1.7	1.5	1.4	1.9	2.0	2.8	2.1	1.7	1.9	1.6	1.3	1.5	1.3	1.3	1.8	2.5	2.3	1.6	1.6	2.0	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

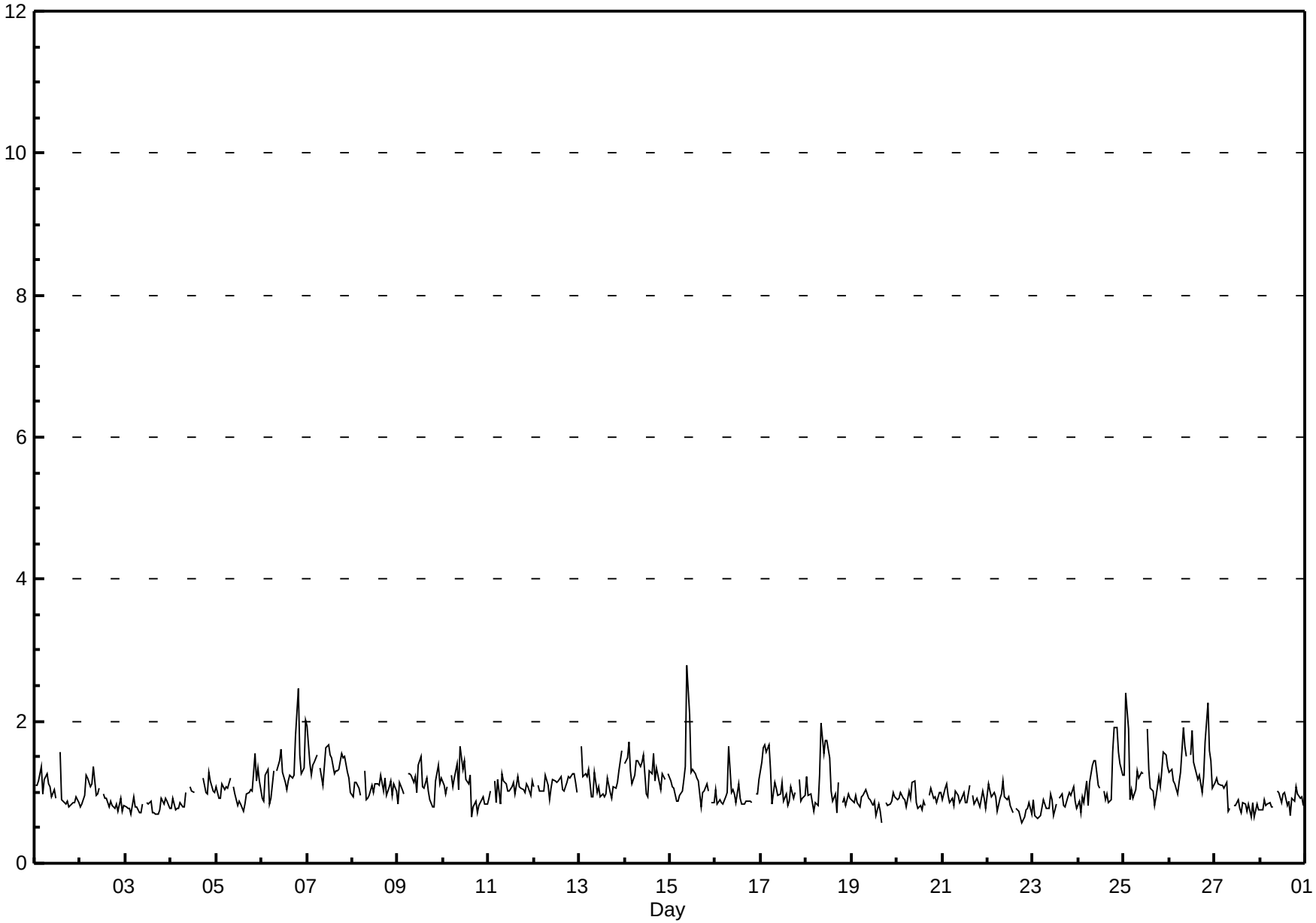
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - February 2014

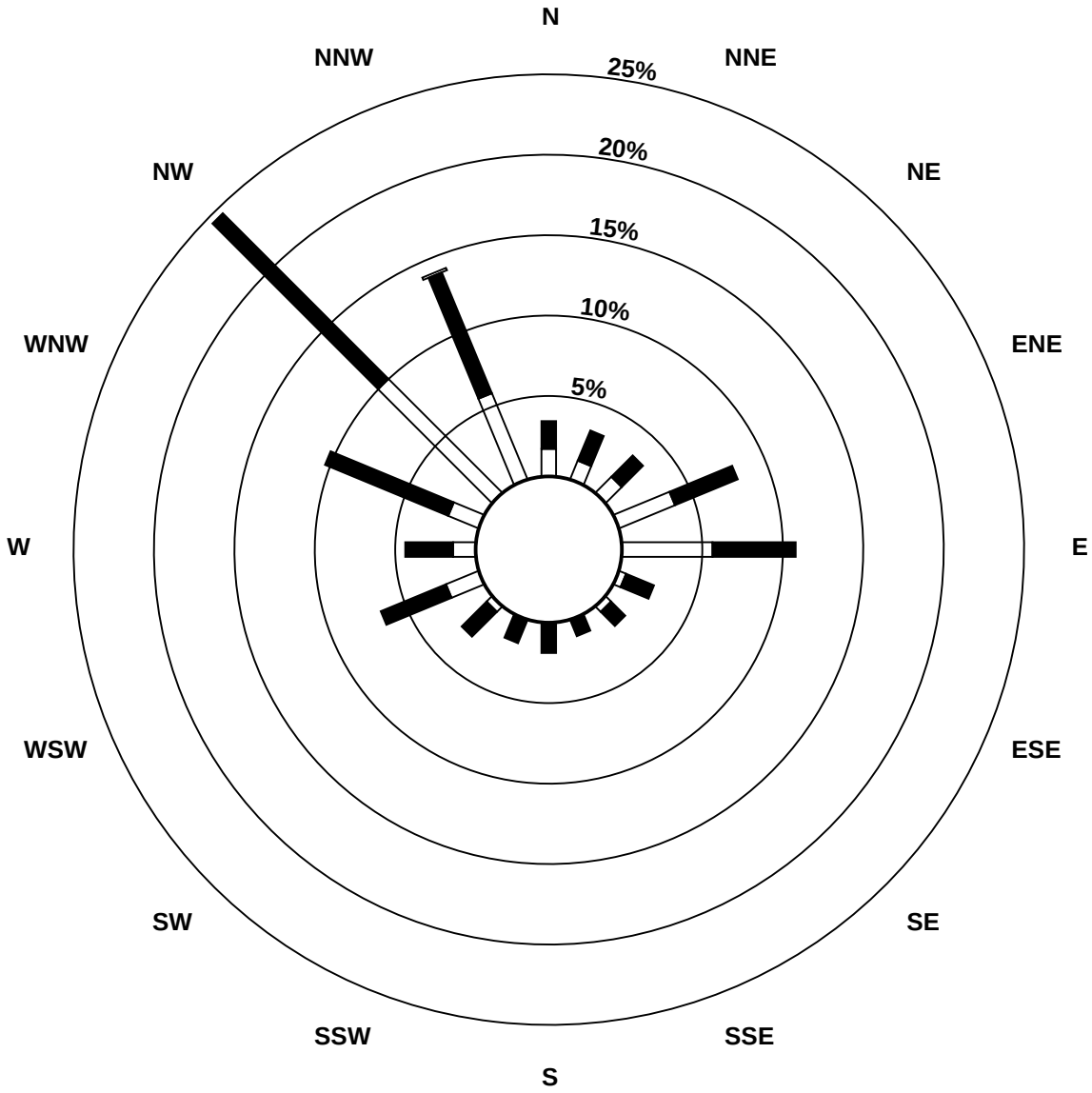


Peace Airshed Zone Association

Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - February 2014



Pollutant Classes (ppb)

- 0 - 1
- 1 - 2
- 2 - 3
- 4 - 10
- > 10

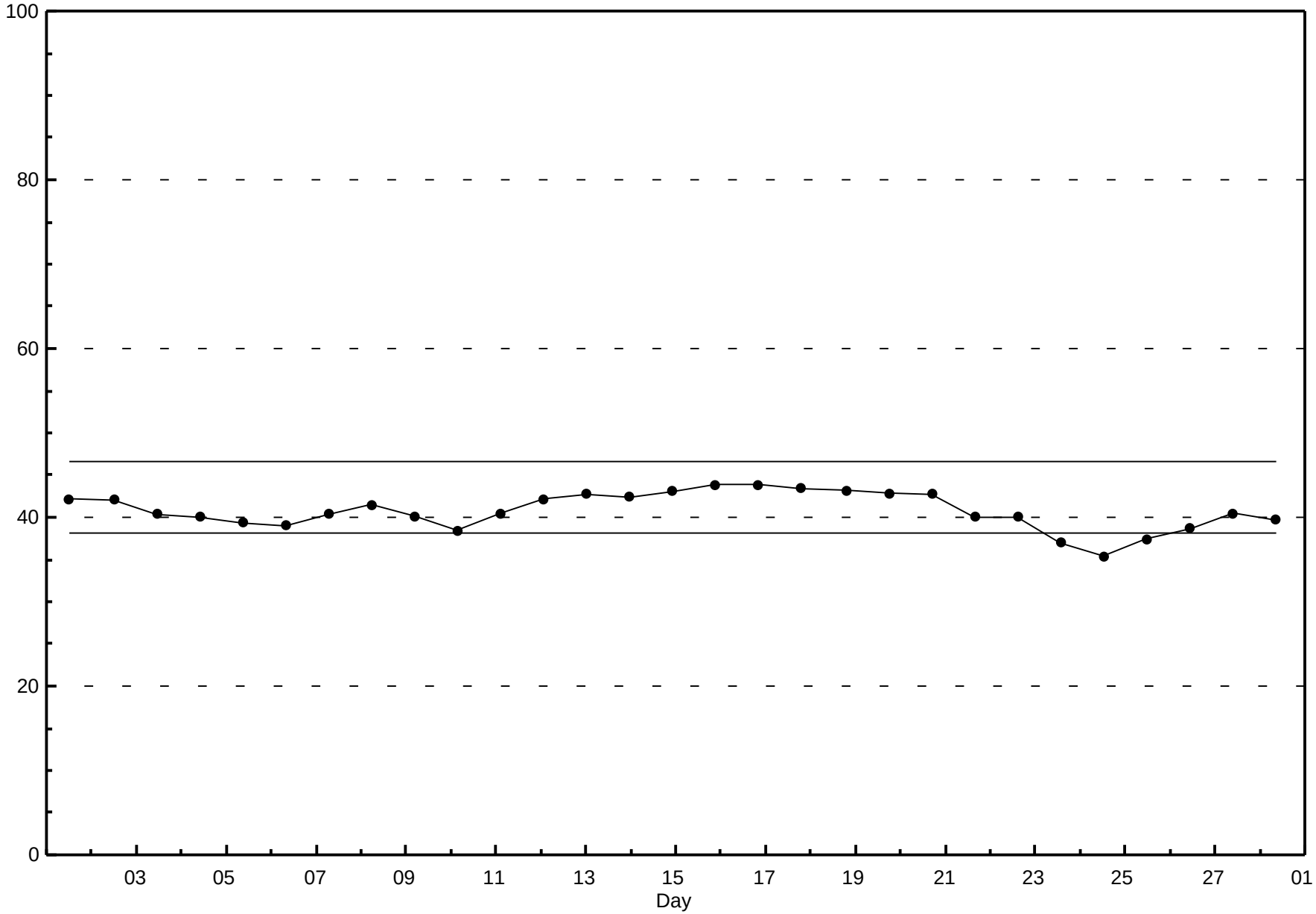
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Span Responses

Total Reduced Sulphur (TRS)

Henry Pirker - February 2014



Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 63.0 ppb on Feb 7 00:00

Maximum Daily Average: 42.2 ppb on Feb 26

Minimum Value: 2 ppb on Feb 2 19:00

Minimum Daily Average: 6.1 ppb on Feb 3

Maximum Diurnal Average: 30.8 ppb at hour 8

Minimum Diurnal Average: 11.9 ppb at hour 15

Monthly Average: 21.58 ppb

Percentiles: $P_1 = 2.2$ $P_{10} = 4.4$ $Q_1 = 8.1$ Median = 18.2 $Q_3 = 33.9$ $P_{90} = 43.0$ $P_{99} = 52.5$

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	42	43	43	41	38	36	34	35	29	22	16	14	A	16	6	5	5	6	5	4	4	2	3	3	19.6	43.1
2-Feb	4	12	28	26	35	34	39	43	27	30	20	A	7	5	3	7	8	4	2	2	2	2	2	2	15.0	43.0
3-Feb	4	3	2	2	3	6	7	8	9	6	A	4	2	2	3	4	4	10	12	12	14	6	6	8	6.1	13.5
4-Feb	8	9	8	9	13	13	21	33	39	A	18	15	11	5	6	9	9	10	30	38	45	40	40	36	20.2	44.9
5-Feb	31	29	18	28	40	41	39	42	C	C	C	C	C	C	14	16	12	28	44	47	51	49	45	36	33.9	51.2
6-Feb	32	32	36	37	30	32	42	A	36	27	31	24	27	22	31	32	31	47	58	62	53	50	53	63	38.7	63.0
7-Feb	55	51	39	47	44	45	A	40	35	39	50	49	32	20	16	15	26	39	46	43	34	38	17	6	35.9	55.1
8-Feb	4	4	4	4	6	A	6	6	6	5	4	3	4	4	6	5	7	13	30	30	20	23	34	15	10.7	34.0
9-Feb	10	14	17	18	A	18	29	38	30	27	23	33	35	28	12	19	23	14	27	26	44	47	43	45	27.0	46.6
10-Feb	41	37	39	A	43	39	38	39	36	33	29	38	19	9	8	9	8	11	11	9	12	15	11	8	23.6	42.5
11-Feb	11	14	A	11	12	18	20	29	12	9	6	5	4	6	7	17	12	10	10	11	9	6	5	6	10.9	28.5
12-Feb	4	A	5	7	8	7	9	12	14	15	15	12	14	19	19	20	23	36	41	36	33	25	24	20	18.3	40.7
13-Feb	A	24	19	21	26	30	15	14	14	9	9	7	6	6	6	9	9	14	21	22	29	41	33	A	17.5	40.6
14-Feb	35	36	39	35	34	35	36	32	29	35	39	14	14	20	33	33	29	42	36	31	32	33	A	38	32.1	41.8
15-Feb	38	28	34	22	15	24	42	54	50	44	35	35	36	36	21	13	13	19	41	33	19	A	6	6	29.0	53.6
16-Feb	5	5	6	8	9	11	16	16	18	17	10	11	14	12	7	4	5	6	7	12	A	29	38	48	13.7	48.4
17-Feb	51	44	42	44	48	34	19	19	24	17	9	6	5	5	9	5	5	5	6	A	8	7	8	18	18.9	51.1
18-Feb	18	13	7	8	18	29	21	43	60	62	46	39	25	12	9	10	15	20	A	13	11	12	17	18	22.9	62.1
19-Feb	12	13	18	19	15	19	36	47	33	19	11	8	6	6	8	10	13	A	15	21	22	34	36	36	19.8	47.4
20-Feb	33	31	29	21	21	20	29	34	37	33	17	12	8	6	8	12	A	9	7	5	6	7	6	4	17.2	37.2
21-Feb	3	3	3	5	4	5	8	8	12	6	4	4	3	4	3	A	8	7	12	29	28	19	17	17	9.2	29.4
22-Feb	30	31	23	15	11	13	21	28	30	18	11	8	4	3	A	3	3	4	9	13	11	6	6	8	13.4	31.2
23-Feb	7	11	14	16	26	34	31	29	24	12	11	11	17	A	11	13	15	20	30	34	32	33	32	23	21.1	34.3
24-Feb	16	17	31	22	23	28	36	44	42	36	23	22	A	16	18	21	23	22	48	49	49	48	48	45	31.5	49.5
25-Feb	44	34	23	23	31	33	41	45	36	21	20	A	42	33	17	20	18	25	39	45	44	45	48	44	33.6	48.2
26-Feb	43	41	38	40	42	43	44	53	47	40	A	45	53	49	33	27	36	31	45	51	50	49	33	39	42.2	52.8
27-Feb	38	26	34	45	19	13	16	12	9	A	4	3	2	2	2	3	3	6	7	7	6	7	7	6	12.1	45.2
28-Feb	5	10	13	32	36	32	27	27	A	7	4	4	3	4	4	4	4	6	12	13	12	11	11	12	12.7	36.1
	23.1	22.8	22.6	22.5	24.0	25.7	26.8	30.8	28.4	23.6	18.6	17.1	15.8	13.5	11.9	12.8	13.6	17.2	24.1	25.9	25.3	25.3	23.3	22.6	Diurnal Average	
	55.1	51.0	43.1	46.9	47.6	44.7	44.1	53.6	60.4	62.1	49.5	49.3	52.6	48.6	32.8	32.7	35.8	47.3	58.0	62.4	52.5	50.3	53.4	63.0	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

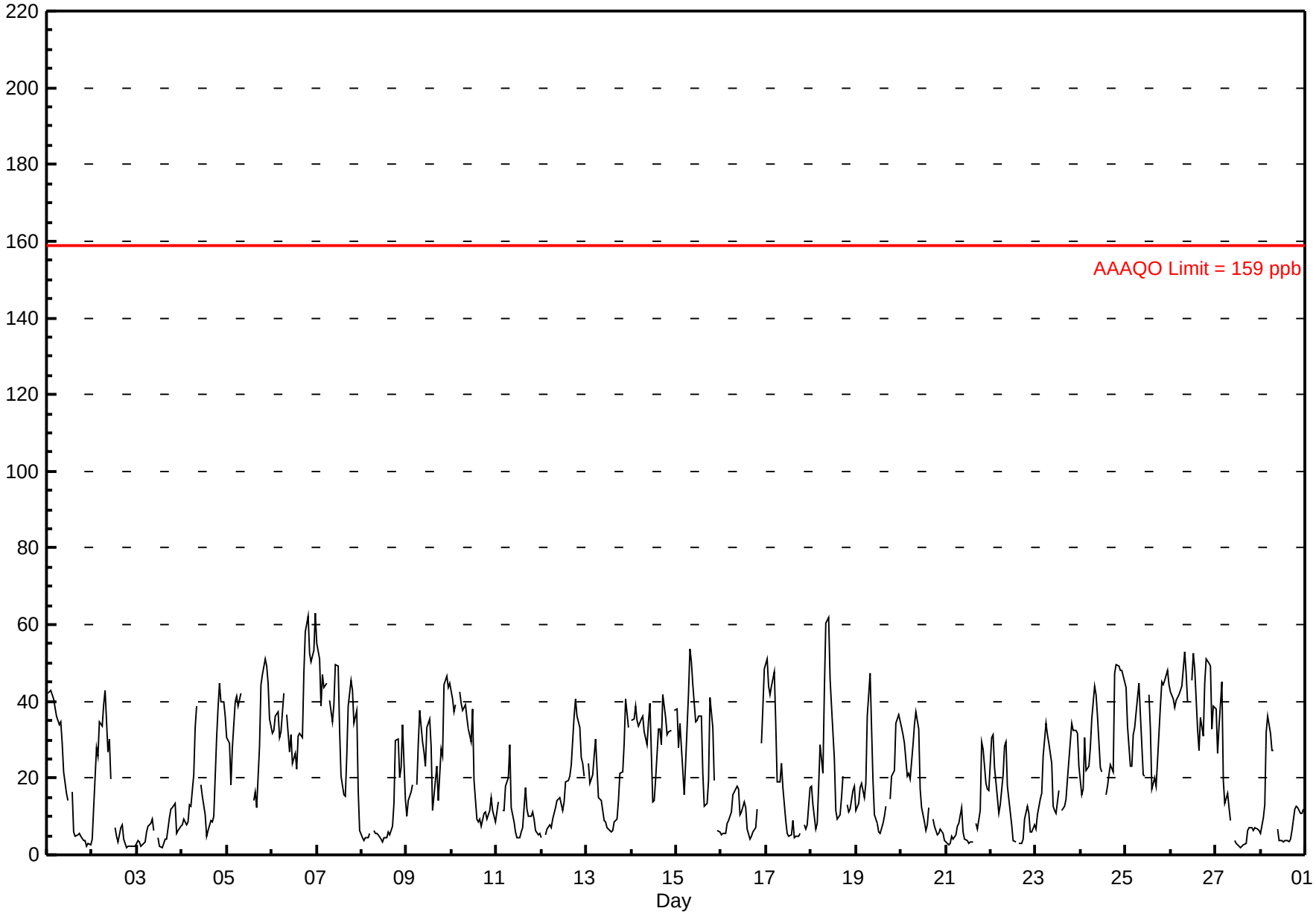
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb

Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - February 2014



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - February 2014

Maximum Value: 131.6 ppb on Feb 18 09:00

Maximum Daily Average: 52.0 ppb on Feb 26

Minimum Value: 3 ppb on Feb 27 14:00

Minimum Daily Average: 9.9 ppb on Feb 3

Maximum Diurnal Average: 39.1 ppb at hour 9

Minimum Diurnal Average: 17.2 ppb at hour 15

Monthly Average: 28.14 ppb

Percentiles: P_1 = 3.7 P_{10} = 7.0 Q_1 = 13.0 Median = 26.4 Q_3 = 41.9 P_{90} = 50.3 P_{99} = 67.6

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	47	47	45	43	41	38	43	38	42	26	21	19	A	24	13	7	8	9	6	5	5	4	5	6	23.7	46.5
2-Feb	10	26	35	35	43	42	45	46	45	35	32	A	12	9	6	17	11	11	4	4	4	4	5	5	21.0	45.6
3-Feb	6	6	3	5	7	11	12	12	18	11	A	7	4	3	5	10	6	18	17	16	18	9	12	11	9.9	18.2
4-Feb	15	15	11	16	21	22	37	42	46	A	23	20	14	9	11	12	15	18	44	47	54	49	51	42	27.6	53.7
5-Feb	38	34	24	38	42	44	42	45	C	C	C	C	C	C	18	20	17	44	47	49	56	53	50	42	39.0	56.2
6-Feb	38	37	44	43	34	42	49	A	41	37	40	29	30	27	35	37	41	54	66	79	62	54	57	73	45.5	78.5
7-Feb	70	61	56	51	59	69	A	48	41	44	54	52	48	24	20	20	33	46	53	47	41	44	37	13	44.7	70.1
8-Feb	6	7	7	7	7	A	9	9	8	8	8	6	7	7	9	9	12	22	39	34	30	37	40	34	15.7	39.8
9-Feb	14	21	22	22	A	23	42	48	36	37	29	41	40	33	20	26	32	21	38	30	48	51	46	47	33.3	50.8
10-Feb	42	50	45	A	44	44	40	41	38	39	39	42	40	12	12	13	11	19	16	16	18	20	17	13	29.3	50.4
11-Feb	16	21	A	14	18	23	27	36	23	17	11	20	11	7	13	39	18	14	17	15	12	9	11	10	17.5	38.9
12-Feb	7	A	10	9	12	10	12	19	20	18	52	23	16	25	27	33	30	45	45	42	41	31	30	25	25.3	52.4
13-Feb	A	31	23	26	34	49	26	22	20	12	15	15	10	10	8	17	13	22	29	28	38	44	41	A	24.2	49.3
14-Feb	44	46	53	41	38	40	44	43	46	49	44	34	22	38	44	51	37	47	43	35	34	34	A	46	41.3	52.8
15-Feb	41	34	40	34	38	47	52	65	61	48	39	45	45	47	28	19	19	34	48	52	25	A	10	13	38.4	64.7
16-Feb	8	7	8	22	12	13	20	24	26	29	13	14	18	15	13	6	7	9	10	17	A	39	47	53	18.6	53.2
17-Feb	55	52	46	47	50	49	28	29	29	24	13	9	8	12	17	6	7	7	7	A	14	9	15	33	24.5	54.8
18-Feb	59	34	16	19	30	40	35	63	132	79	63	46	40	17	12	15	25	24	A	21	16	22	28	25	37.5	131.6
19-Feb	17	21	27	24	21	29	48	50	45	28	20	14	12	9	11	19	17	A	19	28	29	38	39	40	26.3	49.5
20-Feb	39	34	34	29	28	27	33	36	42	40	32	22	15	9	16	22	A	16	11	7	8	9	7	5	22.7	42.3
21-Feb	4	3	5	7	6	8	10	12	22	9	5	6	5	5	7	A	13	9	20	38	38	22	21	23	12.9	38.2
22-Feb	34	36	29	18	13	20	28	33	35	34	29	22	5	7	A	4	6	7	18	21	15	8	11	13	19.3	35.6
23-Feb	9	14	18	19	34	38	35	34	31	17	15	13	22	A	15	15	16	24	34	38	38	35	33	31	25.1	38.0
24-Feb	19	29	35	29	26	34	48	65	51	47	31	28	A	22	22	27	31	36	52	54	55	55	52	50	39.1	65.4
25-Feb	45	42	32	29	38	38	50	49	48	28	28	A	46	42	22	25	29	32	46	47	48	50	52	54	40.1	54.5
26-Feb	49	44	42	44	64	51	52	59	60	65	A	51	65	55	49	38	43	41	55	54	53	59	57	46	52.0	64.9
27-Feb	45	37	55	56	40	19	28	20	12	A	6	5	3	3	6	4	5	8	10	16	9	14	14	10	18.5	56.2
28-Feb	10	13	16	39	44	44	32	33	A	15	6	6	6	6	6	6	7	12	17	16	16	13	18	15	17.1	44.1
	29.1	29.7	29.0	28.3	31.3	33.8	34.4	37.7	39.1	31.8	26.7	23.6	21.7	18.2	17.2	19.1	18.8	24.1	30.0	31.7	30.5	30.2	29.9	28.9	Diurnal Average	
	70.1	60.6	55.8	56.2	64.3	68.8	51.9	65.4	131.6	79.1	62.5	52.1	64.9	55.5	48.7	50.6	43.0	54.1	66.2	78.5	61.5	59.0	57.1	72.8	Diurnal Maximum	

C - Calibration

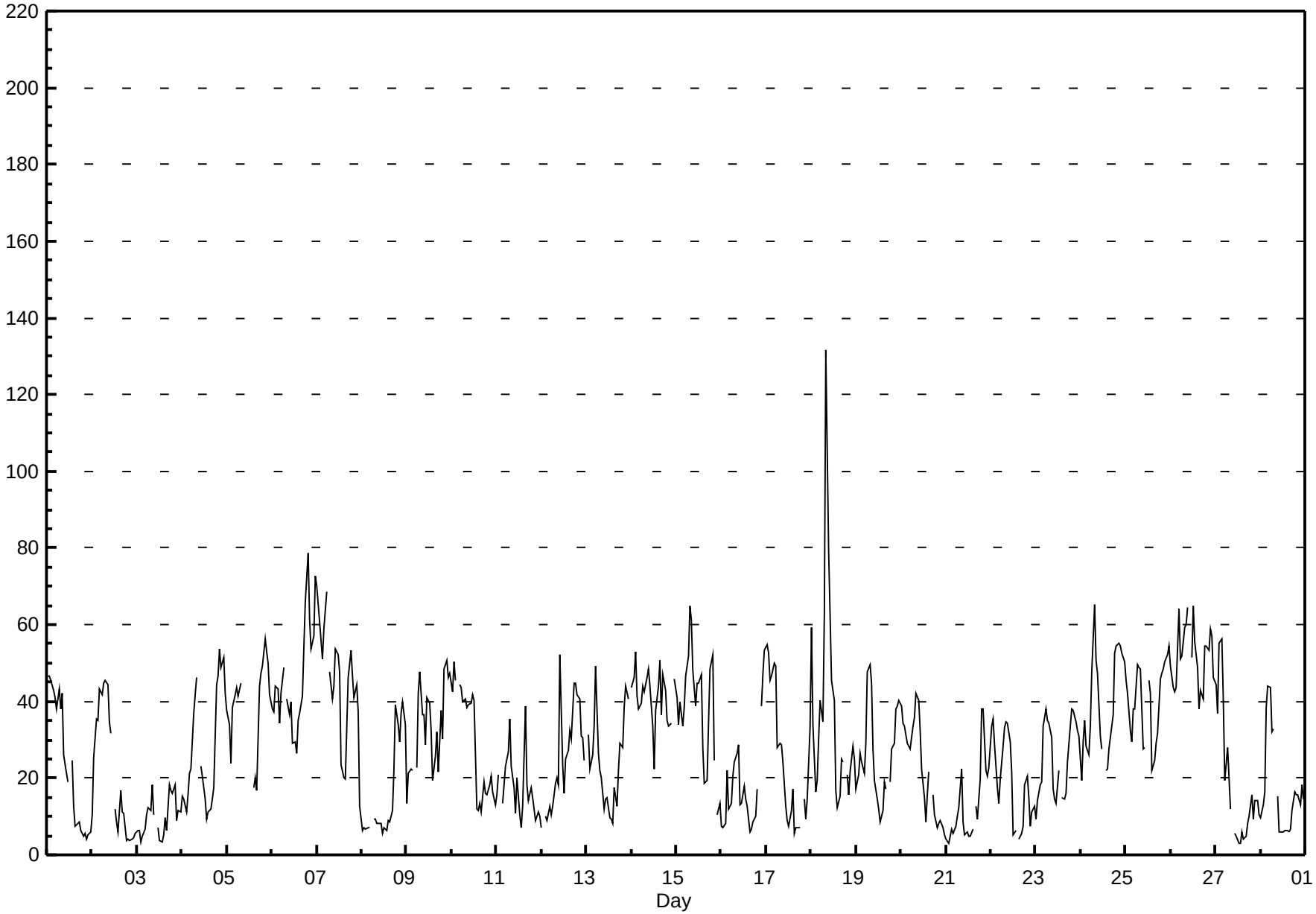
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

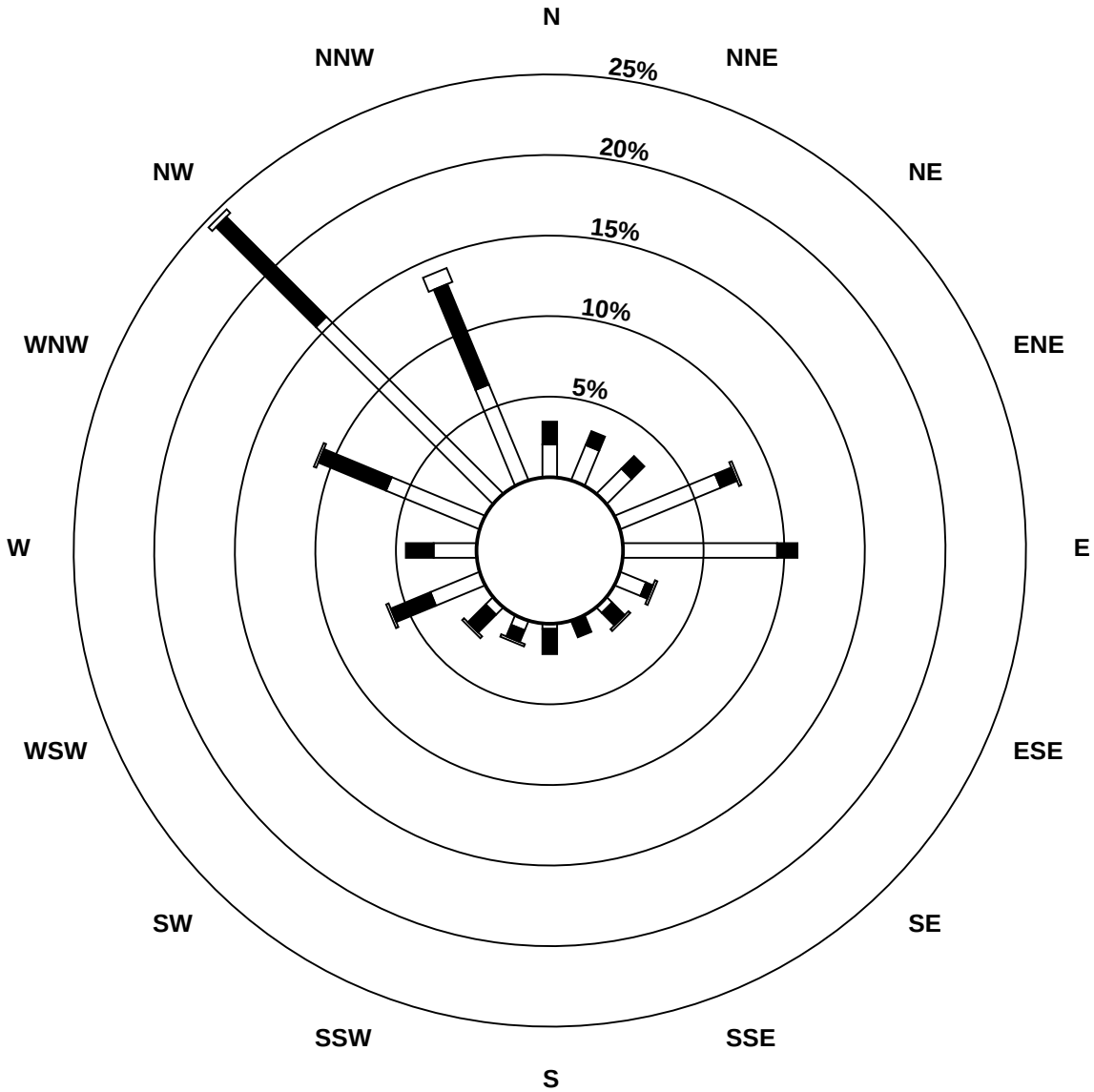
Henry Pirker - February 2014



Pollutant Rose

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - February 2014



Pollutant Classes (ppb)

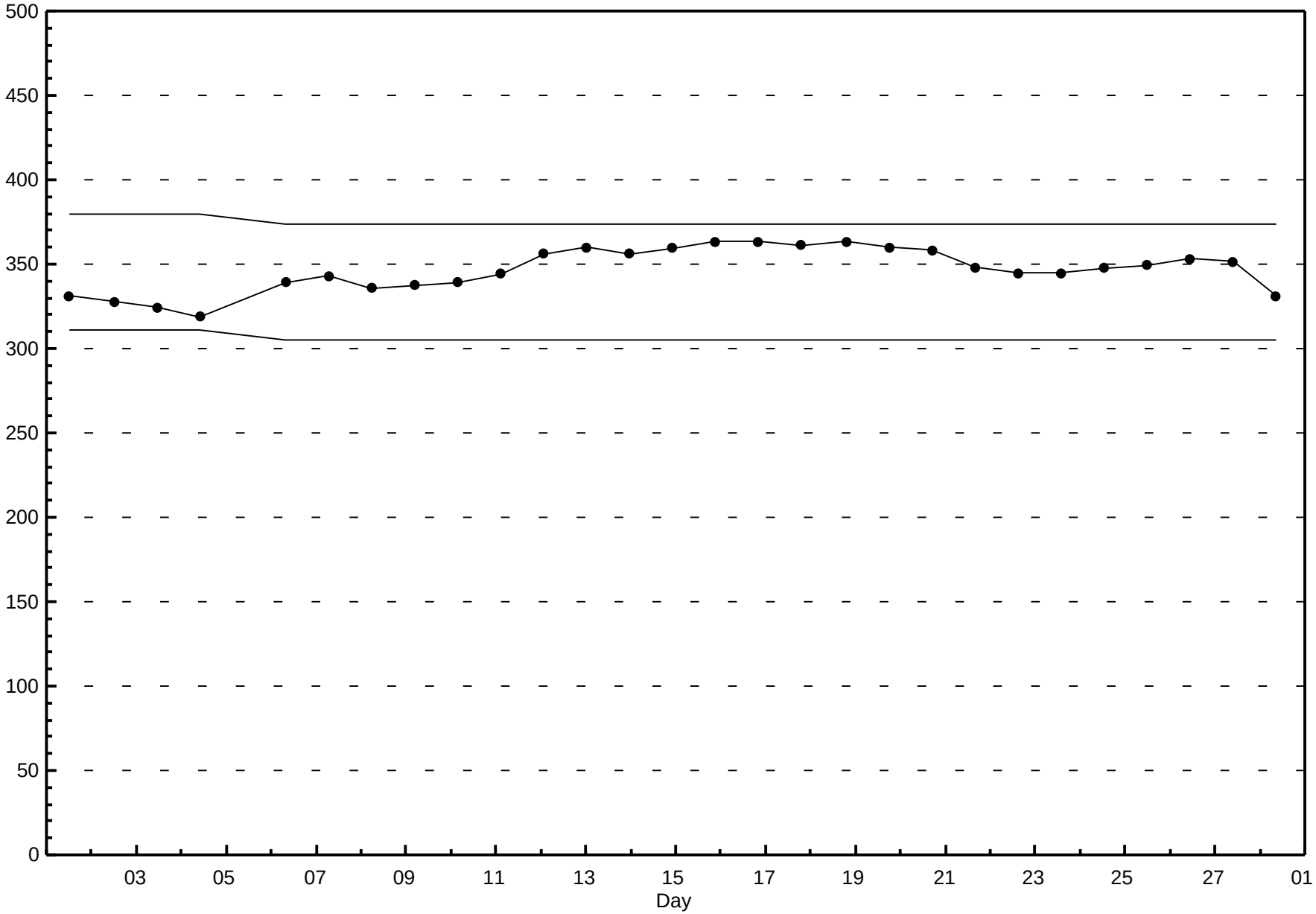
- 0 - 25
- 26 - 50
- 51 - 110
- 111 - 159
- > 159

Peace Airshed Zone Association

Span Responses

Nitrogen Dioxide (NO_2)

Henry Pirker - February 2014



Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Henry Pirker - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 131.8 ppb on Feb 7 00:00
Maximum Daily Average: 36.7 ppb on Feb 6

Minimum Value: 0 ppb on Feb 3 22:00
Maximum Diurnal Average: 23.2 ppb at hour 10
Monthly Average: 12.55 ppb

Minimum Daily Average: 0.4 ppb on Feb 3
Minimum Diurnal Average: 5.5 ppb at hour 4
Percentiles: $P_1 = 0.0$ $P_{10} = 0.2$ $Q_1 = 0.9$ Median = 3.6 $Q_3 = 16.2$ $P_{90} = 38.9$ $P_{99} = 86.5$

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	27	36	39	28	26	14	16	11	5	7	10	9	A	10	2	1	1	0	0	0	0	0	0	0	10.6	38.6
2-Feb	0	0	1	1	7	2	18	28	4	7	6	A	3	1	1	1	1	0	0	0	0	0	0	0	3.6	28.3
3-Feb	0	0	0	0	0	0	0	0	1	1	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0.4	1.4
4-Feb	0	0	0	0	0	0	1	2	16	A	10	11	7	2	3	4	2	0	4	6	31	18	11	3	5.8	30.6
5-Feb	1	0	0	2	19	20	16	44	C	C	C	C	C	C	10	10	3	4	7	15	56	45	45	10	17.1	56.3
6-Feb	3	2	6	9	1	6	38	A	22	20	46	32	39	27	41	33	17	31	89	126	52	22	51	132	36.7	131.8
7-Feb	77	45	14	37	39	35	A	12	6	28	80	89	39	17	10	7	12	21	47	32	4	6	1	1	28.7	89.2
8-Feb	1	1	1	1	0	A	1	2	1	2	2	2	3	3	4	3	3	2	3	3	1	1	5	1	1.9	4.7
9-Feb	0	0	0	0	A	0	7	19	6	17	19	47	51	34	8	14	11	2	2	1	34	43	34	44	17.2	51.4
10-Feb	17	6	14	A	28	21	18	29	19	29	34	61	19	5	4	4	2	1	1	1	1	1	1	0	13.8	61.4
11-Feb	0	0	A	0	0	0	1	3	0	2	2	4	3	4	5	13	5	2	2	2	1	1	1	1	2.3	13.1
12-Feb	1	A	1	1	1	1	1	1	1	5	15	10	14	21	20	18	14	20	19	9	5	2	2	1	7.9	21.2
13-Feb	A	1	0	1	0	7	2	3	3	2	5	5	4	4	4	4	3	3	2	1	7	48	18	A	5.8	47.8
14-Feb	16	31	38	24	23	39	48	34	26	55	82	11	8	20	44	44	26	53	18	5	5	8	A	41	30.4	82.5
15-Feb	44	3	3	0	1	1	5	50	48	49	33	37	40	35	14	6	3	4	8	9	2	A	0	0	17.3	50.5
16-Feb	0	0	0	0	1	0	1	1	1	5	5	8	9	6	2	1	1	0	0	0	A	0	1	15	2.5	14.9
17-Feb	34	11	7	7	22	6	0	0	2	5	4	3	3	3	5	2	1	0	0	A	0	0	0	0	5.0	34.2
18-Feb	7	1	0	0	0	0	1	12	86	105	64	45	22	6	4	3	3	2	A	1	1	0	0	0	15.8	104.9
19-Feb	0	0	1	0	0	0	5	32	12	8	5	5	4	4	5	5	4	A	1	1	1	5	8	23	5.7	32.2
20-Feb	13	9	8	1	2	1	5	18	49	49	14	8	4	3	4	7	A	3	0	0	0	0	0	0	8.7	49.1
21-Feb	0	0	0	0	0	0	1	1	3	3	2	3	3	3	3	A	3	1	0	9	6	2	1	1	2.0	9.5
22-Feb	5	7	2	0	0	0	3	10	33	15	10	8	4	4	A	2	1	1	1	1	1	0	0	1	4.8	32.5
23-Feb	1	1	1	1	5	27	16	14	16	11	15	16	28	A	16	16	14	12	16	28	21	26	23	4	14.3	28.4
24-Feb	1	1	8	2	2	7	30	76	85	72	39	37	A	16	18	17	15	6	30	45	61	66	55	42	31.8	85.0
25-Feb	44	7	1	1	4	6	34	48	38	20	26	A	70	45	15	18	10	9	10	14	18	34	55	27	24.0	69.9
26-Feb	18	13	11	15	19	33	43	104	85	61	A	82	92	66	30	22	28	11	8	12	14	13	1	1	34.0	103.8
27-Feb	2	0	7	15	0	0	1	0	1	A	1	2	1	1	1	1	1	1	0	1	2	1	1	1	1.7	14.8
28-Feb	1	1	1	1	5	4	3	6	A	3	2	3	2	3	2	2	2	2	3	2	3	2	2	1	2.4	6.1
	11.7	6.6	6.0	5.5	7.7	8.6	11.6	20.9	21.9	23.2	21.3	21.5	18.9	13.2	10.2	9.6	6.9	7.2	10.0	12.0	12.1	12.7	11.8	13.0	Diurnal Average	
	76.5	45.0	38.6	36.9	39.5	39.4	47.7	103.8	85.5	104.9	82.5	89.2	92.2	65.8	44.3	44.0	28.2	52.8	88.7	126.1	61.3	65.7	55.3	131.8	Diurnal Maximum	

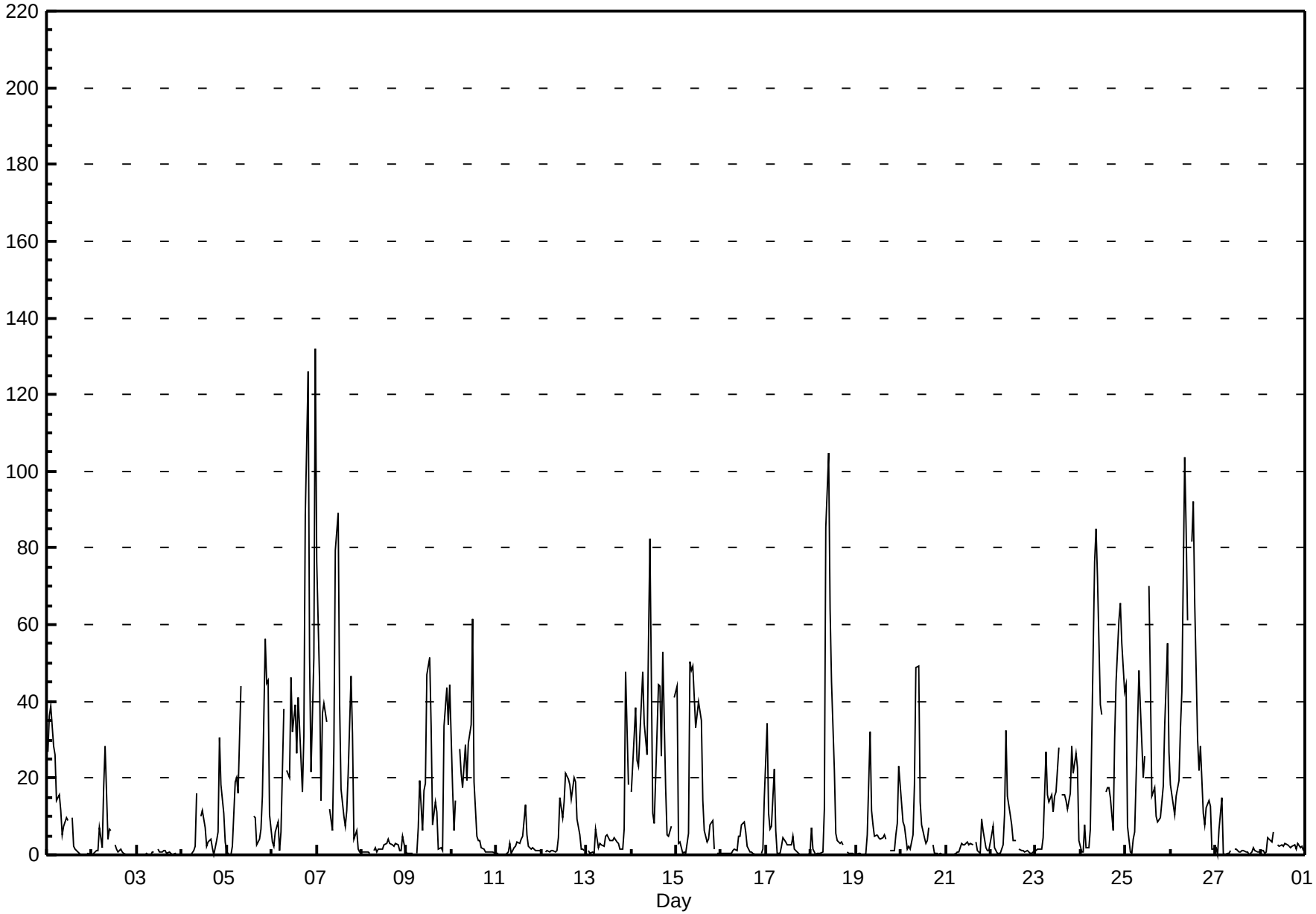
C - Calibration A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Henry Pirker - February 2014



Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Henry Pirker - February 2014

Maximum Value: 294.3 ppb on Feb 6 20:00

Maximum Daily Average: 65.0 ppb on Feb 6

Minimum Value: 0 ppb on Feb 11 04:00

Minimum Daily Average: 1.8 ppb on Feb 3

Maximum Diurnal Average: 46.7 ppb at hour 9

Minimum Diurnal Average: 12.4 ppb at hour 17

Monthly Average: 25.07 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 1.1$ $Q_1 = 3.3$ Median = 10.1 $Q_3 = 35.0$ $P_{90} = 65.7$ $P_{99} = 129.8$

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	41	52	58	41	43	29	37	25	10	18	15	14	A	20	7	2	1	1	1	1	1	1	1	0	18.3	57.7
2-Feb	1	1	5	3	24	6	52	37	29	16	11	A	6	3	2	5	1	1	1	1	1	1	1	4	9.1	51.6
3-Feb	1	3	1	1	1	3	1	2	5	2	A	3	2	1	2	5	1	3	1	1	2	1	1	1	1.8	5.2
4-Feb	0	0	0	0	1	1	10	11	55	A	19	17	10	6	7	7	4	0	24	32	86	48	36	10	16.8	86.3
5-Feb	1	1	1	18	27	33	23	61	C	C	C	C	C	C	14	14	5	11	15	24	108	66	73	21	28.6	108.1
6-Feb	10	5	28	26	3	22	56	A	32	35	73	45	45	33	52	47	30	48	162	294	119	37	81	212	65.0	294.3
7-Feb	218	96	61	88	114	133	A	33	18	57	94	100	82	22	18	12	16	42	94	48	15	17	9	4	60.4	217.9
8-Feb	4	5	4	2	1	A	5	8	2	8	6	3	7	8	9	8	7	7	14	5	6	5	11	5	6.0	13.9
9-Feb	1	1	2	1	A	1	28	46	14	44	29	68	62	43	16	22	18	3	6	3	47	61	55	56	27.3	67.6
10-Feb	24	18	39	A	39	41	32	47	32	43	64	75	64	7	9	7	5	3	5	3	7	6	1	1	24.9	74.7
11-Feb	1	1	A	0	0	1	3	8	1	5	5	31	15	5	12	51	12	7	4	3	3	2	4	4	7.7	50.8
12-Feb	1	A	7	4	3	5	3	5	4	9	97	27	16	32	32	35	35	37	39	23	15	5	4	4	19.3	97.3
13-Feb	A	4	1	2	3	42	6	10	10	4	22	26	9	11	6	13	8	9	6	3	32	66	46	A	15.4	65.9
14-Feb	59	116	147	56	41	57	76	88	102	71	106	57	18	58	75	89	39	73	51	10	6	14	A	66	64.2	147.2
15-Feb	67	15	9	2	7	6	23	96	97	62	46	62	65	61	23	12	7	14	35	49	9	A	2	1	33.5	97.1
16-Feb	1	1	1	3	4	4	8	19	6	10	7	10	13	8	6	2	1	1	0	0	A	1	6	30	6.2	29.7
17-Feb	53	38	20	14	30	27	1	1	5	7	5	4	5	8	11	2	2	1	1	A	0	0	0	3	10.4	53.4
18-Feb	94	17	1	4	3	2	7	48	286	199	120	70	51	11	8	5	7	4	A	4	2	3	4	1	41.3	286.3
19-Feb	1	4	5	1	2	2	32	43	23	11	8	13	14	8	9	14	13	A	5	8	5	13	19	49	13.1	48.6
20-Feb	38	18	17	7	7	8	13	29	84	77	41	20	11	7	11	17	A	13	1	1	1	2	1	1	18.5	84.3
21-Feb	1	0	1	1	1	2	3	3	7	4	3	5	4	5	19	A	6	2	1	25	22	8	2	4	5.6	24.7
22-Feb	12	16	5	2	1	2	11	25	49	31	46	39	6	49	A	2	3	3	2	3	2	1	2	6	13.8	49.5
23-Feb	4	8	4	3	17	45	29	30	25	17	21	20	39	A	22	22	20	16	30	53	40	35	33	15	23.9	52.5
24-Feb	1	9	17	4	5	17	85	102	122	125	64	52	A	25	25	24	21	16	48	73	111	99	84	66	52.0	124.7
25-Feb	53	35	3	3	10	14	68	67	68	37	42	A	81	66	23	28	20	15	33	32	32	67	83	78	41.7	83.0
26-Feb	48	26	22	30	66	65	76	156	124	161	A	98	122	90	62	41	44	29	18	33	28	38	25	7	61.2	160.5
27-Feb	20	2	40	49	5	1	2	2	3	A	3	3	2	1	4	3	1	1	1	5	6	5	5	2	7.3	49.4
28-Feb	6	4	2	2	58	25	12	14	A	6	5	5	4	7	5	6	4	5	7	4	7	4	6	3	8.8	57.9
	28.3	18.4	18.6	13.6	19.2	21.9	26.0	37.6	46.7	42.3	38.1	34.7	30.1	22.9	18.2	18.3	12.4	13.6	22.3	27.5	26.4	22.5	22.0	24.2	Diurnal Average	
	217.9	116.3	147.2	87.8	113.6	132.9	84.6	155.9	286.3	198.7	119.7	99.6	121.6	90.0	74.7	89.2	43.6	72.7	162.1	294.3	118.7	99.3	84.3	211.6	Diurnal Maximum	

C - Calibration

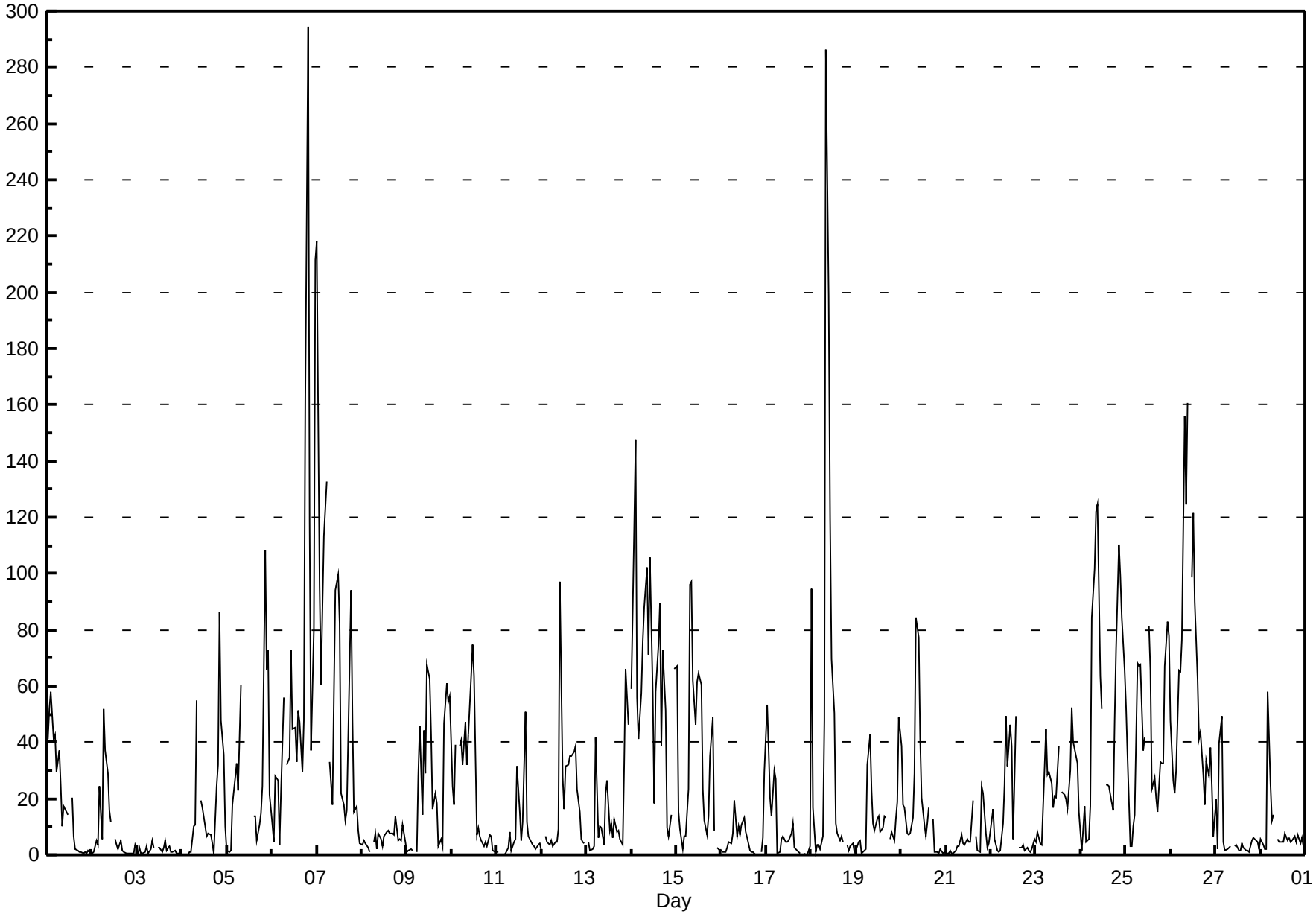
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Henry Pirker - February 2014



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 194.7 ppb on Feb 7 00:00
Maximum Daily Average: 76.1 ppb on Feb 26

Minimum Value: 2 ppb on Feb 2 19:00
Maximum Diurnal Average: 51.7 ppb at hour 8
Monthly Average: 34.15 ppb

Minimum Daily Average: 6.6 ppb on Feb 3
Minimum Diurnal Average: 20.5 ppb at hour 17
Percentiles: P_1 = 2.6 P_{10} = 6.0 Q_1 = 10.2 Median = 23.3 Q_3 = 49.4 P_{90} = 77.7 P_{99} = 145.4

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	69	79	82	69	64	51	49	46	35	29	26	23	A	26	8	6	6	6	5	4	4	2	3	3	30.2	81.8
2-Feb	4	12	29	27	42	35	57	71	31	37	26	A	10	6	4	8	9	4	2	3	3	3	2	2	18.6	71.3
3-Feb	4	4	3	3	3	6	8	9	10	7	A	6	3	3	4	6	5	11	12	13	14	6	7	8	6.6	13.9
4-Feb	8	9	8	9	13	13	22	36	55	A	29	27	18	7	10	14	11	11	35	45	76	59	52	40	26.3	76.2
5-Feb	32	30	19	31	60	63	56	87	C	C	C	C	C	C	24	26	14	32	51	62	107	93	90	46	51.2	107.2
6-Feb	35	34	42	46	31	38	80	A	58	47	78	56	65	49	72	65	47	78	147	188	104	72	105	195	75.2	194.7
7-Feb	131	96	53	84	83	79	A	52	41	68	129	138	72	38	26	23	37	60	92	74	38	44	18	7	64.5	138.4
8-Feb	5	5	5	5	6	A	7	8	7	7	6	5	7	7	11	8	10	16	33	33	22	24	39	16	12.7	38.7
9-Feb	11	15	17	19	A	18	36	57	36	44	42	80	87	62	19	33	34	16	29	27	78	90	77	89	44.1	89.8
10-Feb	58	43	53	A	70	60	55	68	55	62	63	99	38	14	12	13	10	12	12	10	13	16	12	9	37.3	99.2
11-Feb	12	14	A	11	12	18	21	31	13	11	8	8	8	10	12	31	17	13	12	13	11	8	6	7	13.4	31.5
12-Feb	5	A	6	8	9	9	11	13	15	19	30	22	28	40	39	39	38	56	60	45	38	27	25	22	26.3	59.5
13-Feb	A	25	19	22	26	37	17	17	17	11	13	12	10	10	10	13	13	17	23	23	36	88	52	A	23.2	88.3
14-Feb	51	66	77	59	57	75	84	66	54	89	122	24	23	39	77	77	54	94	53	36	37	40	A	79	62.3	121.8
15-Feb	82	31	37	22	16	25	48	104	98	93	68	72	76	71	35	19	17	23	49	42	21	A	7	6	46.2	103.8
16-Feb	5	6	6	9	9	12	17	18	19	22	15	19	22	19	9	5	6	7	7	12	A	29	40	63	16.3	63.1
17-Feb	85	55	48	51	70	41	19	20	26	22	13	9	8	8	14	6	6	6	6	A	8	7	8	18	24.1	85.2
18-Feb	25	14	7	9	18	29	22	55	146	167	110	84	47	17	13	13	19	23	A	14	12	12	17	18	38.8	167.0
19-Feb	12	14	18	19	15	19	42	80	45	27	15	13	10	10	13	15	17	A	16	22	23	40	44	60	25.5	79.6
20-Feb	47	40	37	22	24	21	34	52	86	82	31	20	13	9	12	19	A	12	8	6	6	7	6	4	26.0	86.3
21-Feb	3	3	3	5	4	6	8	9	15	9	7	7	6	7	6	A	12	8	12	39	34	21	18	18	11.3	38.9
22-Feb	36	39	25	15	11	13	23	39	62	33	22	16	7	7	A	5	4	5	10	14	11	6	6	9	18.2	62.1
23-Feb	8	12	16	17	30	61	47	43	40	24	27	27	45	A	27	28	29	32	45	63	53	59	54	27	35.3	62.6
24-Feb	16	18	38	24	25	34	66	120	127	108	62	58	A	32	35	38	38	28	77	94	110	113	103	87	63.2	126.6
25-Feb	88	41	24	23	35	39	74	93	75	41	46	A	111	78	32	37	28	33	48	59	62	79	103	71	57.4	111.4
26-Feb	61	53	49	55	61	76	87	157	132	101	A	127	145	114	63	49	64	42	53	63	64	62	34	40	76.1	156.6
27-Feb	40	26	40	60	19	13	17	13	10	A	5	5	3	3	3	4	4	7	7	8	8	8	8	7	13.9	59.8
28-Feb	6	11	14	33	41	36	31	33	A	10	6	7	6	7	6	6	6	9	15	15	15	13	13	13	15.2	40.6
	34.8	29.4	28.7	28.0	31.7	34.3	38.4	51.7	50.3	46.8	39.9	38.6	34.7	26.7	22.1	22.4	20.5	24.4	34.0	38.0	37.4	38.0	35.1	35.6	Diurnal Average	
	131.5	95.8	81.8	83.6	82.8	79.4	86.6	156.6	145.9	167.0	129.0	138.4	144.7	114.3	76.9	76.5	64.0	94.5	146.5	188.4	110.4	113.5	104.7	194.7	Diurnal Maximum	

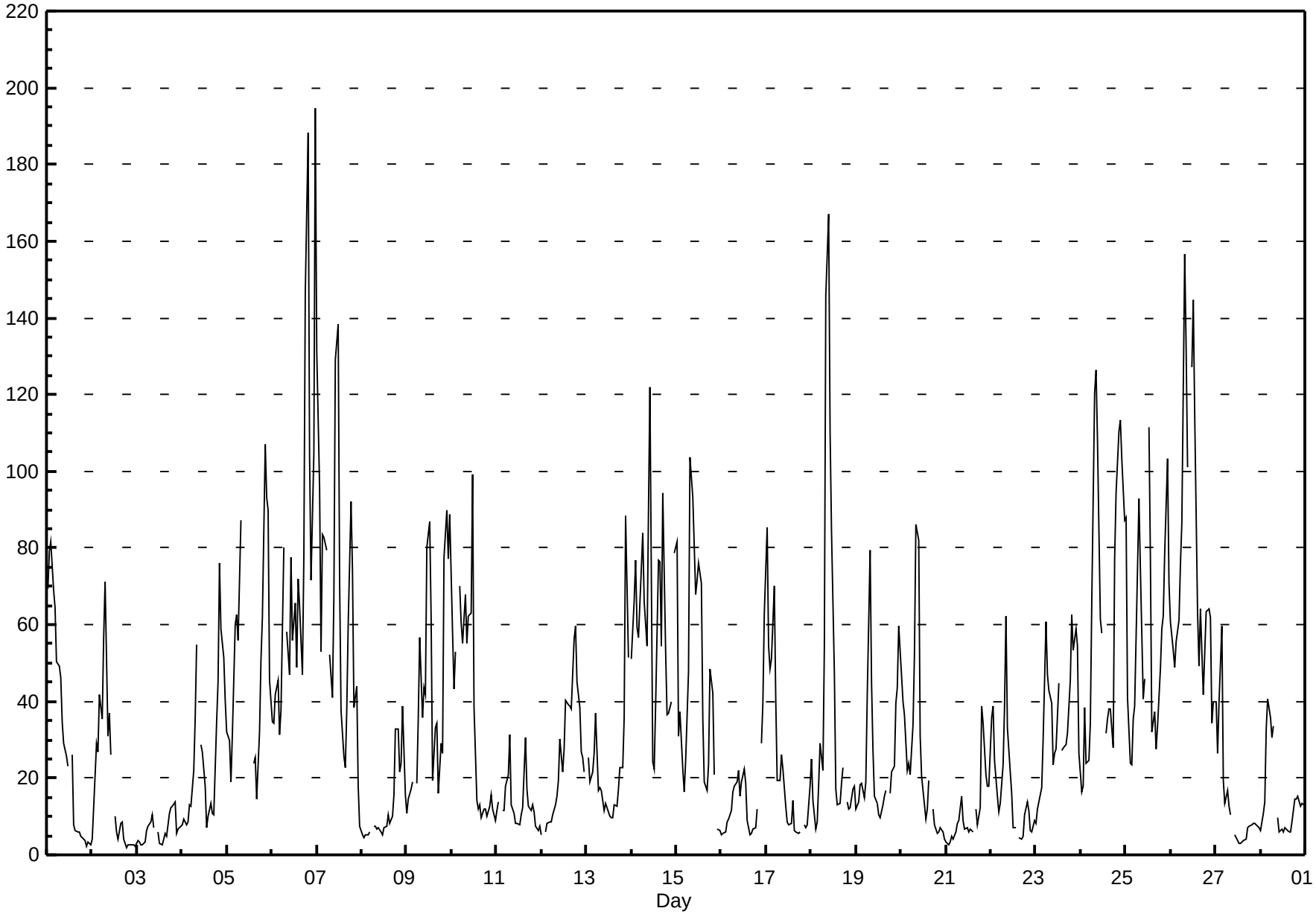
C - Calibration A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - February 2014



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - February 2014

Maximum Value: 385.2 ppb on Feb 18 09:00

Maximum Daily Average: 111.1 ppb on Feb 26

Minimum Value: 3 ppb on Feb 21 02:00

Minimum Daily Average: 11.4 ppb on Feb 3

Maximum Diurnal Average: 83.5 ppb at hour 9

Minimum Diurnal Average: 30.8 ppb at hour 17

Monthly Average: 52.26 ppb

Percentiles: $P_1 = 4.5$ $P_{10} = 9.7$ $Q_1 = 17.0$ Median = 36.0 $Q_3 = 75.5$ $P_{90} = 112.1$ $P_{99} = 182.4$

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	85	97	101	84	83	65	75	62	50	44	37	34	A	45	19	9	10	10	7	5	7	5	6	6	41.2	101.4
2-Feb	11	26	39	38	68	47	91	82	72	50	43	A	17	11	8	22	13	12	4	4	4	5	5	9	29.5	91.0
3-Feb	7	9	4	5	7	12	13	14	23	13	A	9	6	5	8	15	8	20	18	16	20	10	12	11	11.4	23.4
4-Feb	15	15	11	16	22	24	47	49	100	A	43	37	25	16	19	19	18	18	62	79	139	97	85	53	43.8	139.2
5-Feb	40	36	26	57	70	77	66	106	C	C	C	C	C	C	30	34	21	54	61	72	160	115	120	63	67.2	160.4
6-Feb	48	42	72	69	37	64	104	A	71	66	113	74	75	59	87	84	71	102	227	364	171	90	132	280	108.7	363.7
7-Feb	286	154	115	138	161	201	A	79	58	101	147	151	130	45	38	31	49	86	147	95	52	61	46	16	103.8	285.8
8-Feb	10	12	10	9	8	A	13	17	9	15	13	9	14	14	17	16	19	28	53	39	33	42	50	39	21.3	52.9
9-Feb	14	23	24	24	A	23	70	93	51	79	58	109	102	75	36	47	50	23	43	34	95	111	100	99	60.0	111.2
10-Feb	66	68	84	A	83	83	71	87	68	80	103	116	103	19	21	20	15	22	18	16	25	25	18	14	53.2	116.2
11-Feb	17	21	A	14	18	24	30	44	25	22	17	51	25	12	23	90	31	21	22	18	15	11	15	14	25.0	89.6
12-Feb	9	A	17	14	14	15	14	23	21	26	138	51	32	57	58	65	65	78	83	65	56	36	35	29	43.4	137.6
13-Feb	A	36	23	28	36	89	32	25	29	15	34	40	17	20	14	30	20	29	34	31	70	110	87	A	38.6	109.8
14-Feb	100	162	200	97	79	97	117	130	146	110	149	91	41	95	119	137	75	120	94	44	40	47	A	112	104.4	199.6
15-Feb	107	46	45	35	44	53	75	161	158	109	85	106	109	108	50	31	26	47	82	100	29	A	10	14	70.9	160.6
16-Feb	9	8	9	24	16	17	27	43	33	38	20	24	31	22	19	8	8	9	10	17	A	40	51	80	24.5	79.9
17-Feb	106	90	65	59	80	75	28	30	34	31	17	14	12	19	28	8	9	8	7	A	15	9	15	36	34.5	105.9
18-Feb	154	50	16	20	34	42	38	108	385	277	181	115	91	28	18	21	32	29	A	25	17	22	32	26	76.5	385.2
19-Feb	18	25	31	24	22	31	79	92	68	38	23	27	26	16	20	32	28	A	24	30	32	50	57	88	38.2	91.7
20-Feb	77	52	49	37	35	34	47	63	124	117	73	42	26	15	27	39	A	25	11	8	8	10	8	6	40.5	124.2
21-Feb	5	3	6	7	6	8	13	14	29	12	9	12	9	10	24	A	19	11	21	63	59	30	23	26	18.2	62.5
22-Feb	45	51	34	19	14	22	40	56	82	59	76	60	10	54	A	6	8	11	19	23	16	8	13	17	32.3	82.4
23-Feb	13	20	22	20	51	83	61	64	55	31	35	33	60	A	37	36	35	40	62	87	76	69	65	46	47.9	87.3
24-Feb	20	38	52	33	31	50	132	154	172	172	95	79	A	46	46	52	52	46	99	127	166	154	136	115	89.9	172.2
25-Feb	97	77	35	32	48	52	112	115	115	65	69	A	127	108	45	52	49	43	75	80	80	114	134	124	80.3	134.2
26-Feb	96	64	63	72	115	110	128	215	179	221	A	149	186	145	111	78	87	69	72	86	80	95	79	53	111.1	221.1
27-Feb	60	38	94	105	44	21	30	23	14	A	8	8	5	4	10	7	6	10	11	18	14	15	16	12	24.9	105.1
28-Feb	15	15	17	40	102	64	42	46	A	21	11	11	11	12	11	12	11	14	21	19	22	16	23	17	25.0	102.0
	56.6	47.3	46.8	41.4	49.2	54.8	59.1	73.8	83.5	72.4	63.8	58.1	51.5	40.8	34.9	37.0	30.8	36.4	51.4	58.0	55.6	51.8	50.9	52.0	Diurnal Average	
	285.8	161.9	199.6	138.2	160.7	201.1	132.0	214.9	385.2	276.9	181.0	151.0	185.8	145.4	118.8	137.1	86.7	119.6	226.6	363.7	171.2	153.7	136.4	279.7	Diurnal Maximum	

C - Calibration

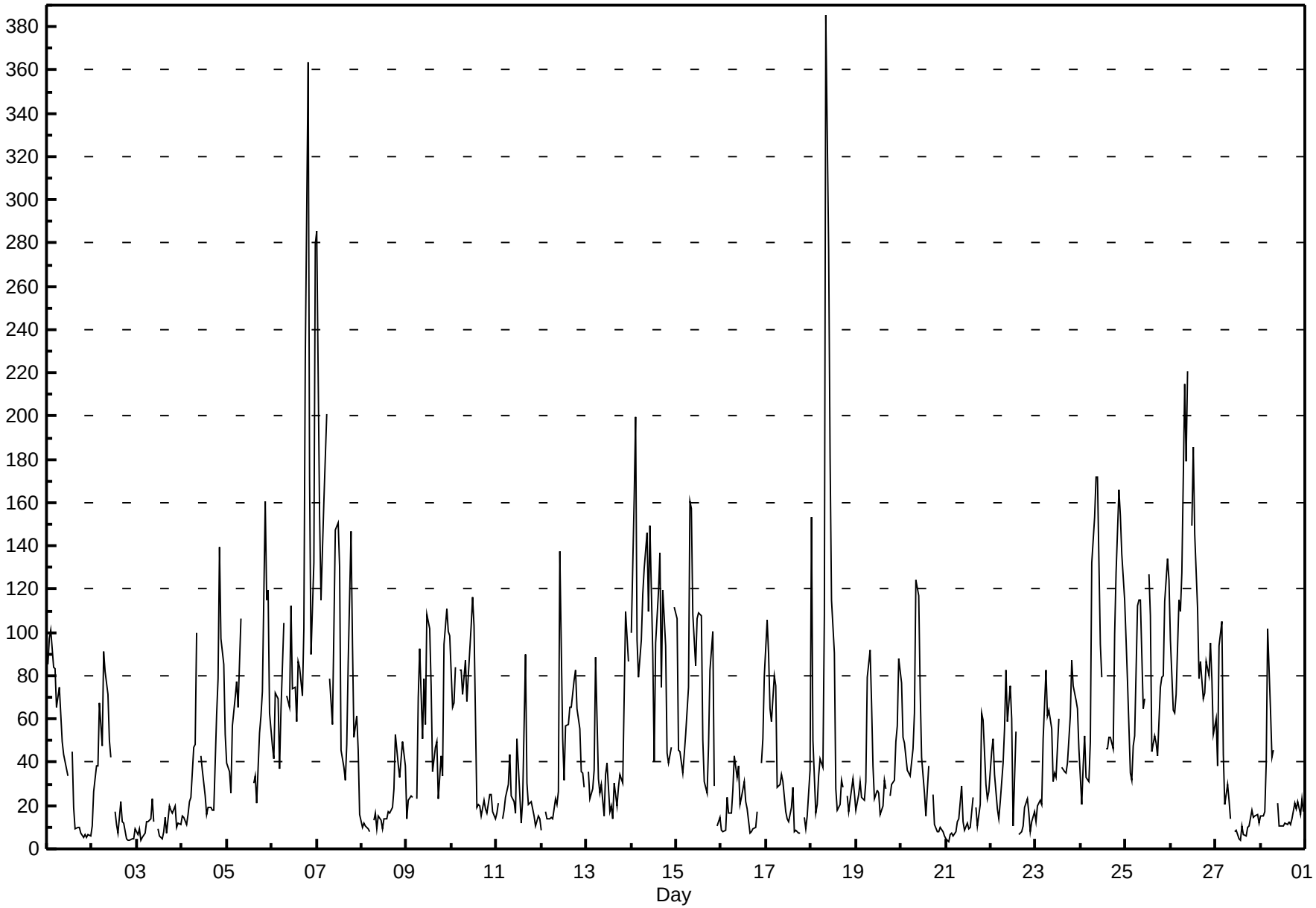
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - February 2014



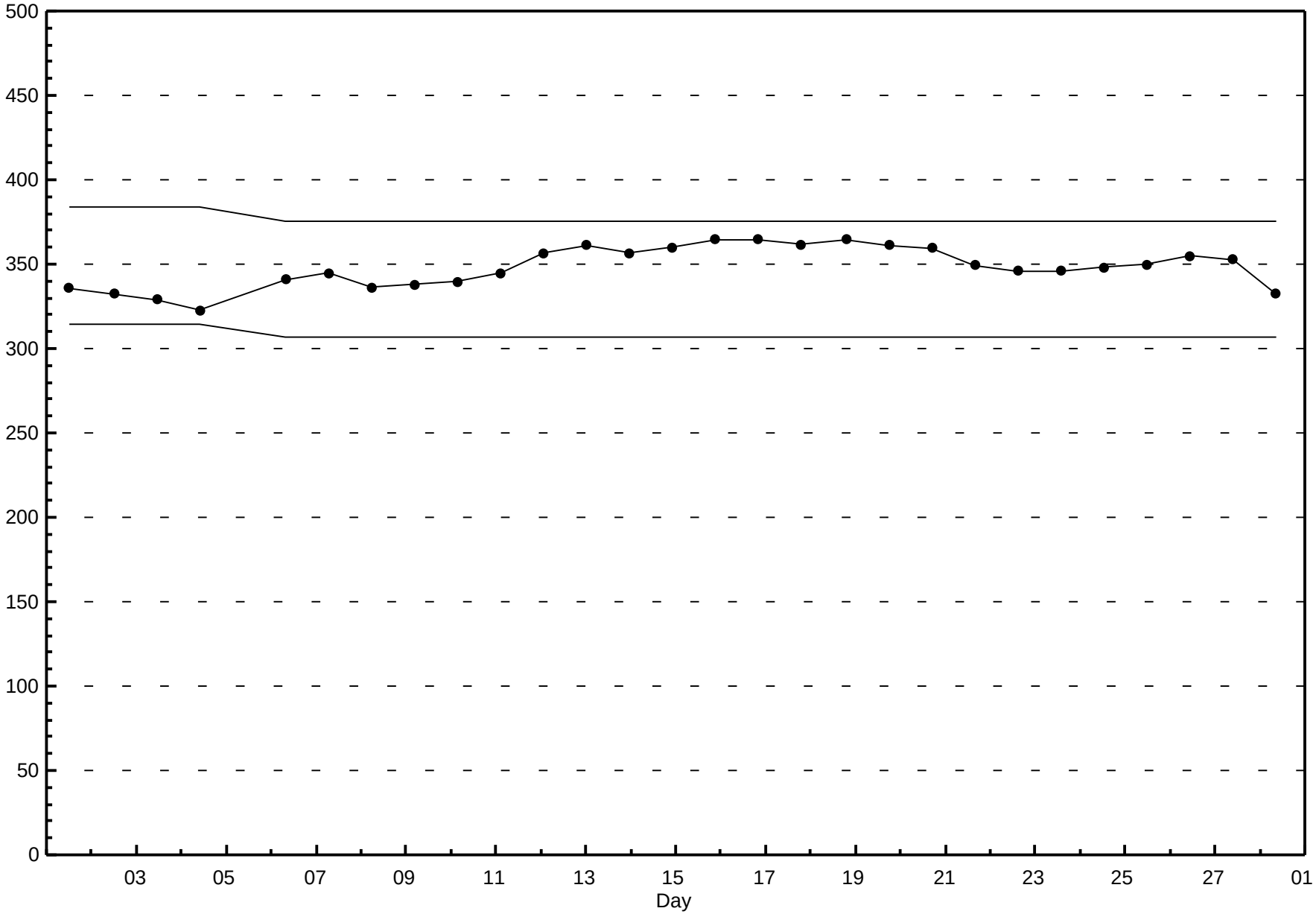
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Span Responses

Oxides of Nitrogen (NO_X)

Henry Pirker - February 2014



Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Henry Pirker - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 41.2 ppb on Feb 27 17:00 Maximum Daily Average: 35.5 ppb on Feb 3

Minimum Value: 0 ppb on Feb 13 22:00 Minimum Daily Average: 5.5 ppb on Feb 14
Maximum Diurnal Average: 29.7 ppb at hour 15 Minimum Diurnal Average: 10.4 ppb at hour 8
Monthly Average: 18.95 ppb Percentiles: P_1 = 0.0 P_{10} = 1.9 Q_1 = 6.4 Median = 20.2 Q_3 = 28.7 P_{90} = 36.4 P_{99} = 40.2

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	2	1	2	1	1	1	4	2	8	14	18	20	A	24	33	33	33	31	32	33	35	38	38	38	19.3	38.5
2-Feb	37	29	14	13	4	7	3	1	13	11	21	A	34	38	38	35	34	37	39	39	39	39	39	39	26.2	39.5
3-Feb	38	38	39	39	39	36	34	33	32	36	A	38	40	40	39	38	37	32	30	29	28	34	34	33	35.5	39.9
4-Feb	32	30	31	31	27	27	19	9	4	A	22	24	29	35	34	30	27	27	11	5	2	5	5	6	20.5	34.7
5-Feb	10	10	18	9	2	2	2	2	A	12	19	22	C	C	C	C	32	19	5	4	3	3	3	6	9.7	31.9
6-Feb	8	9	6	4	8	7	2	A	5	13	12	18	18	22	18	18	18	6	3	3	2	2	2	2	8.9	21.6
7-Feb	1	1	6	1	5	4	A	5	8	7	6	9	16	22	25	25	16	6	1	2	6	4	25	34	10.2	34.5
8-Feb	37	37	36	35	34	A	35	35	34	35	36	36	36	35	35	36	34	28	14	14	21	19	8	24	30.2	37.3
9-Feb	29	24	19	18	A	18	10	5	8	13	19	17	17	21	31	25	21	27	15	15	3	2	2	1	15.6	30.7
10-Feb	1	5	3	A	3	2	2	2	3	8	12	10	22	30	29	29	31	28	27	29	26	23	26	28	16.4	30.5
11-Feb	24	22	A	24	24	17	16	10	21	25	27	28	29	28	27	22	24	26	25	25	27	28	29	29	24.3	29.4
12-Feb	30	A	30	27	28	29	26	24	21	22	24	26	26	24	24	22	20	9	4	6	7	13	13	15	20.4	30.2
13-Feb	A	11	15	12	8	8	21	21	20	24	24	26	27	27	27	26	25	20	13	13	5	0	1	A	17.1	27.4
14-Feb	0	1	0	0	0	0	0	3	6	4	4	22	17	18	13	12	11	3	2	4	3	1	A	1	5.5	22.3
15-Feb	2	8	5	20	28	22	7	2	3	6	13	18	18	18	23	28	28	23	6	13	26	A	38	37	17.1	38.1
16-Feb	38	38	37	34	31	25	19	17	15	19	26	26	27	30	38	41	41	40	38	34	A	20	9	2	28.0	40.7
17-Feb	1	4	3	2	0	11	24	23	18	24	32	35	37	38	37	40	40	40	39	A	37	37	36	28	25.4	40.2
18-Feb	28	32	38	37	28	19	25	8	3	5	15	18	27	35	36	36	32	27	A	34	35	34	29	28	26.5	37.6
19-Feb	32	29	24	23	26	23	7	1	8	18	25	27	30	30	30	28	25	A	22	16	14	3	3	1	19.4	31.7
20-Feb	1	1	2	8	8	10	4	1	2	6	18	21	25	26	25	22	A	22	23	24	22	21	22	23	14.7	26.3
21-Feb	23	24	23	22	23	21	20	19	17	22	24	25	26	27	27	A	25	23	19	6	7	14	14	14	20.2	26.9
22-Feb	3	1	6	13	17	14	7	1	3	11	17	22	25	26	A	29	29	27	22	19	20	25	25	23	16.7	29.1
23-Feb	21	19	15	13	4	1	0	2	7	17	19	20	19	A	21	19	17	13	4	1	2	1	1	7	10.6	21.5
24-Feb	14	13	3	8	7	4	1	2	4	9	15	18	A	28	28	28	26	25	3	1	2	0	1	1	10.5	28.1
25-Feb	1	5	13	14	8	6	2	2	7	18	20	A	18	23	29	27	28	20	8	2	3	1	1	1	11.1	29.1
26-Feb	3	2	3	1	0	1	1	1	3	11	A	14	15	20	26	26	19	21	9	2	2	2	16	11	9.1	26.3
27-Feb	10	18	13	5	24	28	27	32	32	A	35	37	38	40	40	41	41	39	38	36	33	32	33	33	30.7	41.2
28-Feb	34	31	28	11	7	11	16	18	A	35	37	37	38	38	39	40	39	36	32	30	30	30	30	29	29.4	39.9
	17.1	16.5	15.9	15.8	14.6	13.1	12.4	10.4	11.6	16.2	20.8	23.8	26.1	28.5	29.7	29.1	27.9	24.3	17.9	16.2	16.3	16.0	17.9	18.4	Diurnal Average	
	38.2	38.1	39.2	39.4	38.5	35.7	34.7	34.9	34.3	35.9	37.0	38.1	39.6	39.9	40.3	41.0	41.2	39.7	38.7	38.6	39.5	38.8	38.9	39.4	Diurnal Maximum	

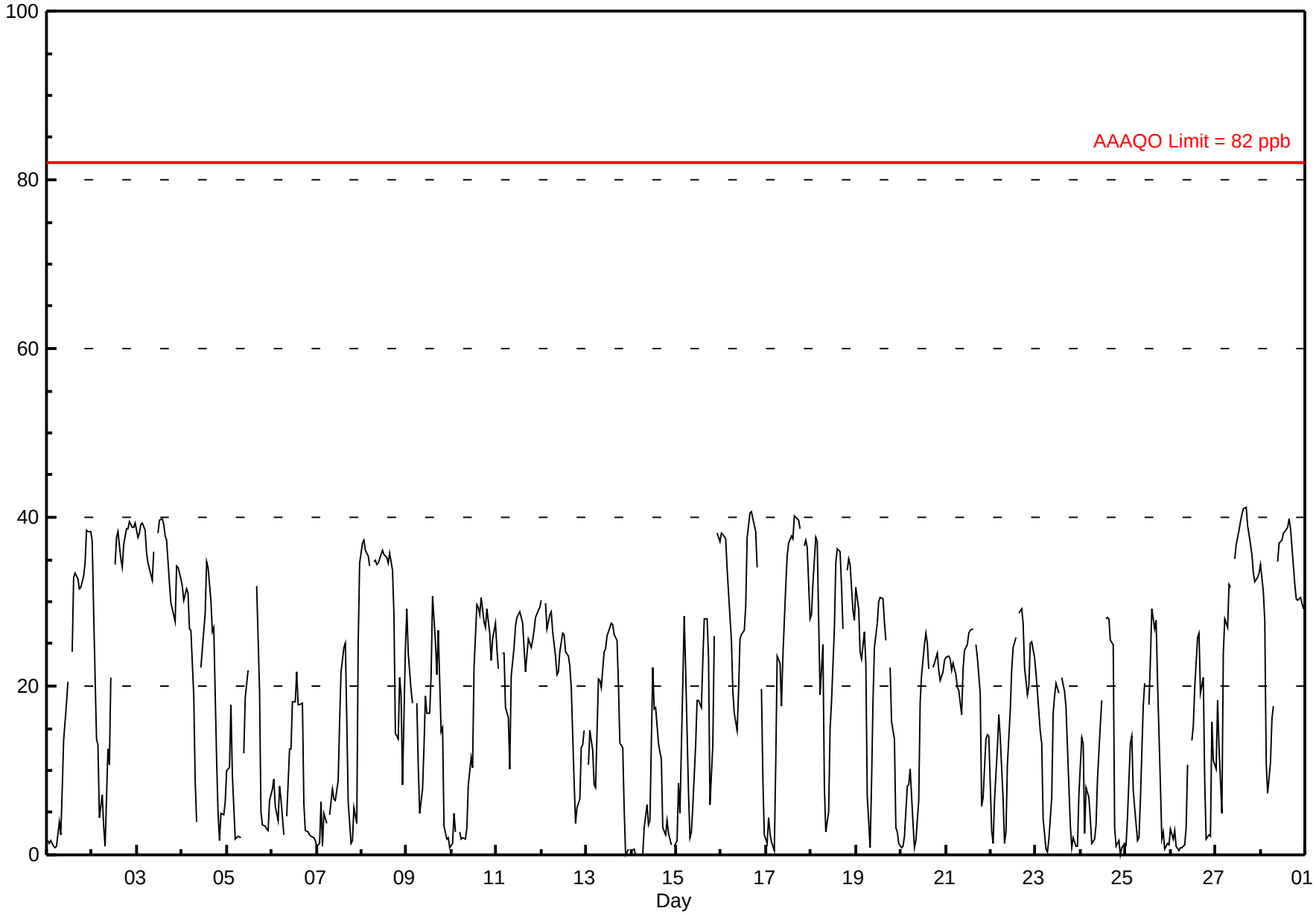
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na

Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Henry Pirker - February 2014



Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

Henry Pirker - February 2014

Maximum Value: 59.7 ppb on Feb 16 01:00

Maximum Daily Average: 38.1 ppb on Feb 3

Minimum Value: 0 ppb on Feb 14 05:00

Minimum Daily Average: 9.4 ppb on Feb 14

Maximum Diurnal Average: 33.2 ppb at hour 14

Minimum Diurnal Average: 15.1 ppb at hour 8

Monthly Average: 23.86 ppb

Percentiles: P_1 = 1.3 P_{10} = 5.6 Q_1 = 13.3 Median = 25.3 Q_3 = 34.1 P_{90} = 39.3 P_{99} = 45.5

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	2	2	3	1	1	2	17	6	13	16	21	24	A	27	35	34	34	33	33	35	36	40	40	40	21.6	40.1
2-Feb	39	35	22	26	13	18	12	5	19	14	29	A	39	40	40	37	36	39	39	40	40	40	40	44	30.7	44.3
3-Feb	39	40	40	40	40	38	37	35	36	38	A	39	40	41	40	40	39	37	34	33	32	41	42	35	38.1	41.6
4-Feb	34	34	34	35	34	32	28	15	11	A	25	28	35	38	37	34	31	31	24	12	2	11	14	12	25.7	37.8
5-Feb	15	16	24	19	3	3	3	2	A	15	21	24	C	C	C	C	34	32	9	7	17	4	4	12	14.0	34.4
6-Feb	16	17	13	9	12	10	9	A	14	22	18	22	21	26	21	24	24	16	8	13	5	4	3	6	14.5	25.7
7-Feb	5	7	22	17	20	13	A	14	13	9	8	11	22	23	27	34	27	13	2	12	13	9	31	38	16.9	38.2
8-Feb	38	39	37	37	36	A	36	36	36	36	37	37	37	37	36	37	36	32	21	16	27	25	18	39	33.3	38.9
9-Feb	50	39	23	24	A	20	21	14	14	16	23	23	20	27	33	31	29	31	21	18	13	12	4	12	22.6	50.3
10-Feb	8	10	7	A	15	12	12	2	6	12	13	11	29	31	31	30	32	31	31	32	31	27	29	30	20.5	32.1
11-Feb	27	26	A	38	39	29	23	18	27	27	28	31	30	29	29	26	30	31	44	39	38	37	36	41	31.3	43.7
12-Feb	31	A	31	37	38	40	39	31	25	25	33	29	47	31	27	27	22	21	8	11	12	16	17	18	26.8	46.7
13-Feb	A	15	18	16	10	20	25	26	27	31	27	27	34	29	29	29	28	25	18	17	13	5	11	A	21.7	33.5
14-Feb	4	4	1	0	0	0	0	9	11	6	7	25	25	28	17	17	16	6	4	11	10	5	A	9	9.4	27.8
15-Feb	9	12	10	27	38	32	13	8	6	9	15	23	23	24	26	30	30	28	17	27	41	A	47	46	23.6	46.5
16-Feb	60	47	39	37	34	29	22	19	21	26	27	28	29	32	41	42	42	45	41	37	A	30	16	10	32.7	59.7
17-Feb	4	11	15	5	1	19	28	28	25	30	35	44	44	45	41	41	42	41	40	A	39	39	39	36	30.1	44.6
18-Feb	42	40	41	42	36	30	30	27	4	8	23	21	34	43	39	39	37	31	A	36	39	39	34	32	32.4	42.9
19-Feb	34	34	28	29	30	28	18	2	14	25	40	31	32	33	38	30	29	A	25	22	19	11	7	5	24.4	39.6
20-Feb	2	3	6	14	22	14	9	2	11	20	23	26	27	27	27	25	A	25	25	25	23	22	28	30	18.9	30.1
21-Feb	25	28	24	23	24	23	22	21	22	24	26	26	28	39	30	A	27	32	25	12	19	20	18	17	24.0	38.7
22-Feb	9	4	12	15	18	16	11	3	9	15	31	32	31	37	A	30	30	34	27	23	25	26	27	28	21.4	37.1
23-Feb	31	41	30	20	10	1	13	4	13	19	20	21	21	A	22	22	19	17	8	2	9	1	2	13	15.7	41.2
24-Feb	20	16	4	12	13	10	2	3	5	21	30	21	A	31	31	41	28	36	11	8	3	7	6	11	16.0	40.8
25-Feb	2	9	18	17	17	13	5	8	16	26	23	A	20	32	36	33	33	26	19	4	12	9	8	2	16.8	35.7
26-Feb	18	6	7	6	4	2	3	3	6	16	A	16	22	30	33	34	25	26	19	5	6	5	23	28	15.0	33.9
27-Feb	17	28	23	14	33	37	35	46	39	A	36	38	39	41	41	42	42	40	40	39	35	34	35	35	35.2	46.0
28-Feb	36	34	30	26	23	21	20	21	A	37	38	38	39	45	41	41	40	38	35	32	33	32	31	32	33.1	44.7
	22.9	22.1	20.8	21.7	20.8	18.9	18.2	15.1	17.1	20.9	25.3	26.7	30.6	33.2	32.6	32.7	31.3	29.5	23.3	21.0	21.9	20.4	22.5	24.4	Diurnal Average	
	59.7	47.3	41.1	42.1	39.8	40.3	38.7	46.0	38.6	38.3	39.6	43.5	46.7	44.7	41.2	41.7	42.2	45.3	43.7	39.9	40.9	41.1	46.5	45.7	Diurnal Maximum	

C - Calibration

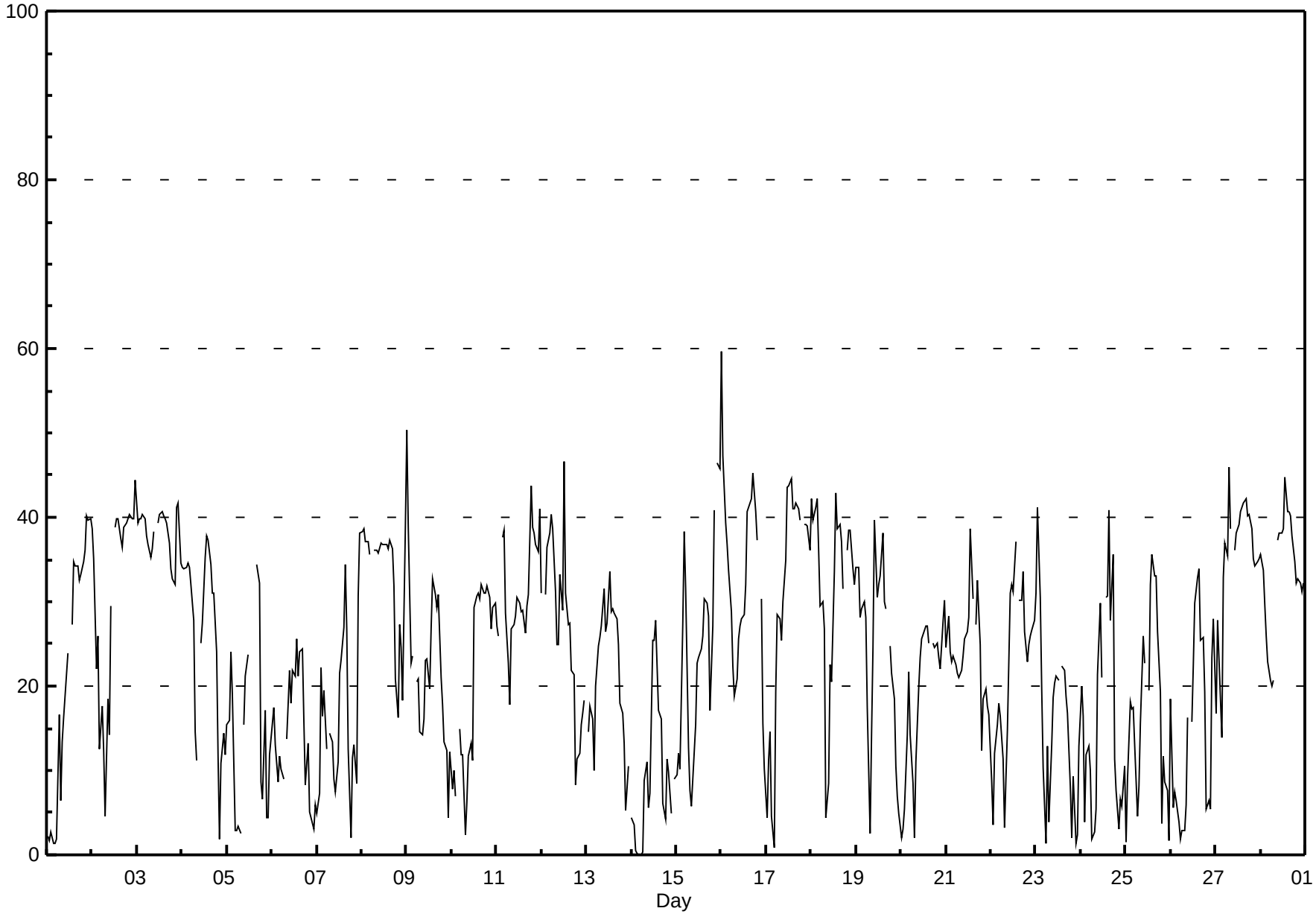
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

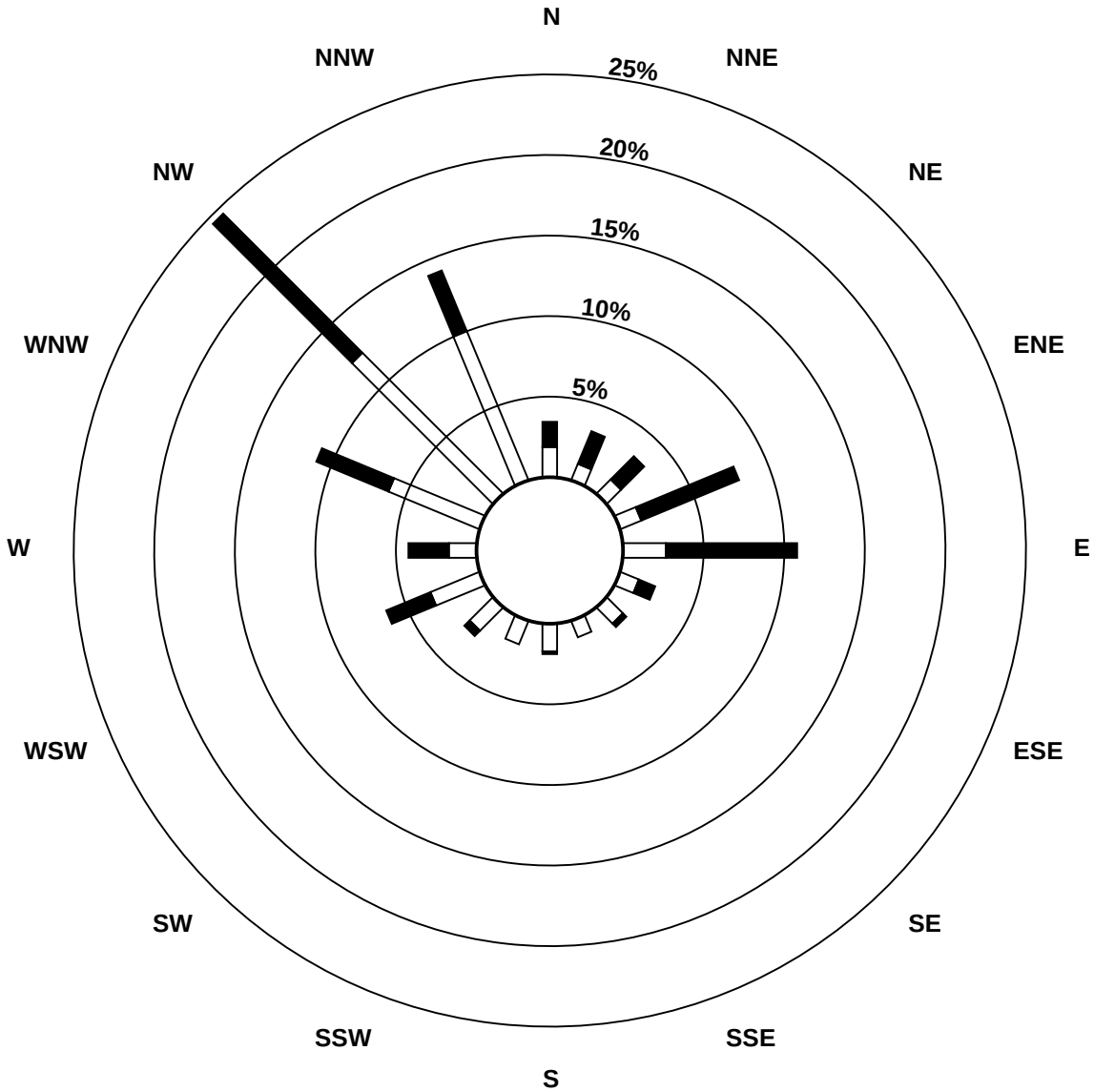
Henry Pirker - February 2014



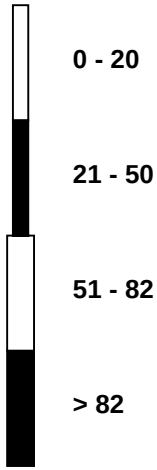
Pollutant Rose

Ozone (O_3) - ppb

Henry Pirker - February 2014



Pollutant Classes (ppb)



Peace Airshed Zone Association

Eight Hour Running Averages

Ozone (O_3) - ppb

Henry Pirker - February 2014

Maximum Value: 39.3 ppb on Feb 27 19:00

Minimum Value: 0.0 ppb on Feb 14 05:00

Percentiles: P_1 = 1.5 P_{10} = 5.1 Q_1 = 9.6 Median = 19.0 Q_3 = 26.5 P_{90} = 35.0 P_{99} = 38.7

Hours in Service:	672
Hours of Data:	664
Hours of Missing Data:	8
Hours of Calibration:	8
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Feb	16	13	10	7	6	3	3	2	3	4	6	9	10	13	17	21	25	28	30	31	32	34	34	35	34.8
2-Feb	35	35	33	30	26	23	18	14	11	8	9	9	13	17	22	27	30	34	36	37	37	37	38	38	38.1
3-Feb	39	39	39	39	39	38	38	37	36	36	36	35	36	36	37	38	38	38	37	36	34	33	33	32	38.8
4-Feb	31	31	31	32	32	31	29	26	22	21	20	19	19	20	22	25	29	28	27	25	21	18	14	11	31.6
5-Feb	9	7	8	8	8	8	7	7	7	7	7	9	10	N	N	N	N	N	N	N	N	11	10	10	11.1
6-Feb	6	5	5	5	6	6	6	6	6	6	7	9	11	13	15	15	17	16	15	13	11	9	7	5	17.0
7-Feb	3	2	2	2	3	3	3	3	4	5	5	6	8	10	12	15	16	16	15	14	13	11	11	12	15.6
8-Feb	14	18	23	27	30	34	36	36	35	35	35	35	35	35	35	35	35	34	32	29	27	25	22	20	35.7
9-Feb	20	19	20	20	20	20	20	18	15	13	13	13	13	14	16	19	20	22	22	21	20	17	14	11	22.2
10-Feb	8	6	4	2	2	2	2	2	3	3	5	5	8	11	15	18	21	24	26	28	28	28	27	27	28.5
11-Feb	26	26	25	25	24	24	22	20	19	20	21	21	22	23	24	26	26	26	26	26	25	25	26	27	26.6
12-Feb	27	28	28	29	29	29	29	28	26	26	25	25	25	24	24	24	24	22	19	17	14	13	12	11	28.9
13-Feb	9	10	11	12	12	12	13	14	14	16	17	19	21	24	25	25	26	25	24	22	20	16	13	11	25.9
14-Feb	7	5	3	1	0	0	0	0	1	1	2	5	7	9	11	12	13	13	12	10	8	6	5	4	12.7
15-Feb	2	3	3	6	9	12	12	12	12	12	13	12	11	11	13	16	19	21	20	20	21	21	23	24	24.5
16-Feb	26	28	33	36	36	35	33	30	27	25	23	22	22	22	25	28	31	33	35	36	37	36	32	26	37.2
17-Feb	21	16	10	6	5	4	6	8	10	13	17	21	25	29	30	33	35	37	38	39	39	39	38	37	38.7
18-Feb	35	34	34	34	33	31	29	27	24	20	17	15	15	17	18	22	25	28	30	32	33	33	32	31	35.0
19-Feb	31	32	31	29	28	27	24	21	18	16	16	17	17	18	21	25	27	28	28	26	24	20	16	12	31.5
20-Feb	9	8	5	4	3	4	4	4	5	5	7	9	11	13	16	18	21	23	24	24	23	23	22	22	23.9
21-Feb	22	23	23	22	23	23	22	22	21	21	21	21	22	22	23	24	25	25	25	22	19	17	15	15	25.3
22-Feb	12	10	8	9	10	10	9	8	8	9	10	11	12	14	15	19	23	25	26	25	25	25	25	24	25.7
23-Feb	23	22	21	20	18	15	12	9	8	7	8	9	11	12	15	17	19	18	16	13	11	10	7	6	23.0
24-Feb	5	5	5	6	7	7	7	7	5	5	6	8	8	11	15	19	22	24	22	20	18	14	11	7	24.0
25-Feb	4	2	3	5	5	6	6	6	7	9	9	9	10	13	17	20	23	24	22	19	17	15	11	8	23.6
26-Feb	5	3	2	2	2	2	2	2	2	3	3	4	7	9	13	16	19	20	19	17	16	13	12	10	20.1
27-Feb	9	9	9	10	12	16	17	20	22	23	26	31	33	34	36	38	39	39	39	39	38	38	37	36	39.3
28-Feb	35	34	33	29	26	24	21	19	17	18	19	23	27	31	35	38	38	38	37	37	36	35	33	32	38.1
Diurnal Maximums	38.5	38.7	38.7	38.8	38.7	38.3	37.8	37.0	36.4	36.1	35.7	35.5	35.6	36.2	36.9	37.7	38.9	38.9	39.3	39.1	38.6	38.6	38.4	38.1	

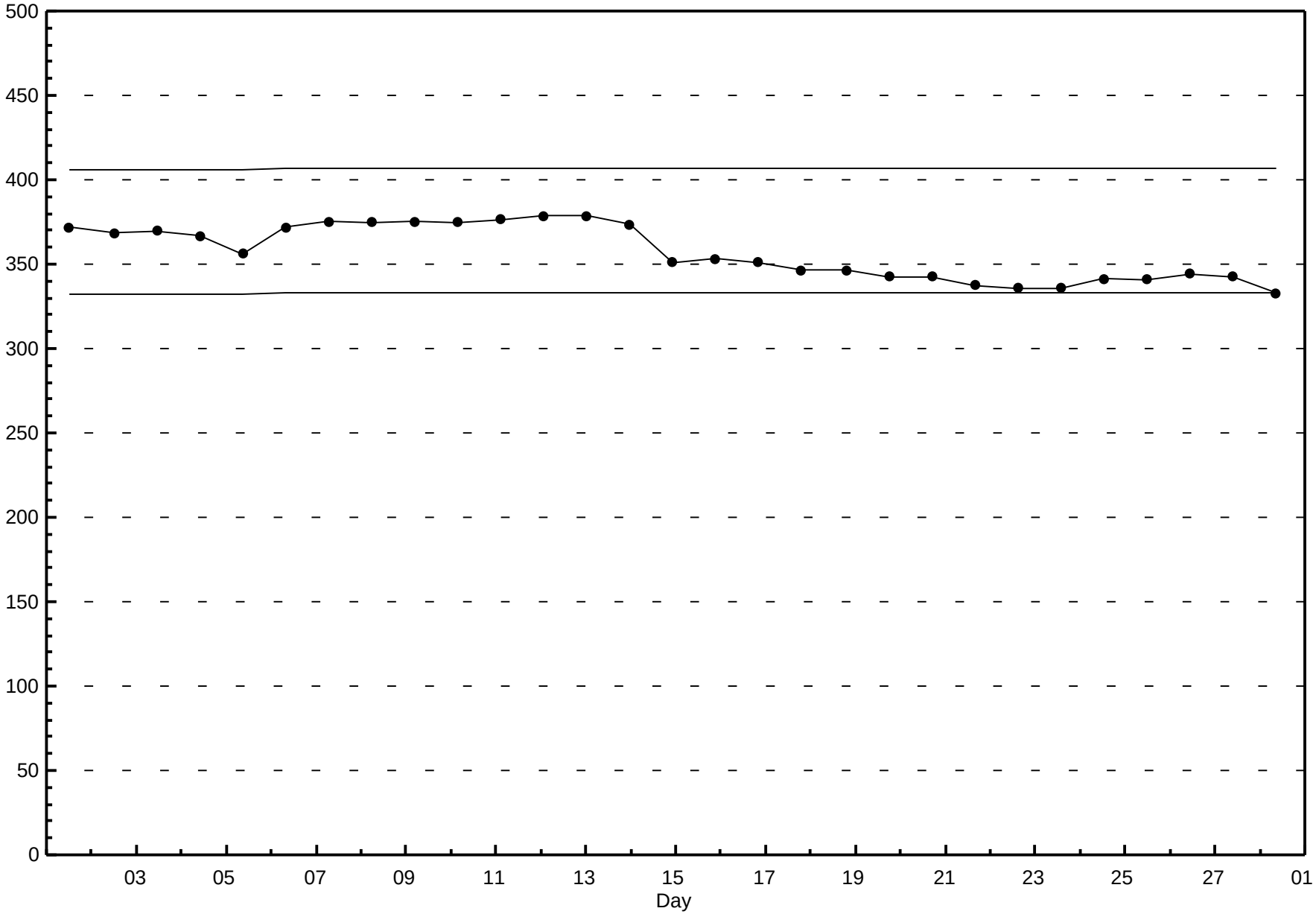
N - Not Valid

Peace Airshed Zone Association

Span Responses

Ozone (O_3)

Henry Pirker - February 2014



Peace Airshed Zone Association

Hourly Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 1.38 ppm on Feb 18 10:00

Maximum Daily Average: 0.45 ppm on Feb 26

Minimum Value: 0.1 ppm on Feb 3 01:00

Minimum Daily Average: 0.12 ppm on Feb 3

Maximum Diurnal Average: 0.37 ppm at hour 9

Minimum Diurnal Average: 0.22 ppm at hour 2

Monthly Average: 0.273 ppm

Percentiles: $P_1 = 0.10$ $P_{10} = 0.15$ $Q_1 = 0.18$ Median = 0.24 $Q_3 = 0.33$ $P_{90} = 0.43$ $P_{99} = 0.82$

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	0.5	0.5	0.5	0.4	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2	A	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.23	0.48
2-Feb	0.1	0.2	0.2	0.2	0.3	0.2	0.4	0.3	0.2	0.3	0.2	A	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.18	0.42
3-Feb	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.12	0.16
4-Feb	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	C	C	C	C	0.5	0.4	0.4	0.4	0.4	0.4	0.6	0.5	0.6	0.5	0.4	0.3	0.33	0.58
5-Feb	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	A	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.6	0.4	0.3	0.3	0.29	0.57
6-Feb	0.2	0.2	0.3	0.3	0.2	0.2	0.4	A	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.6	0.9	0.9	0.6	0.4	0.7	0.8	0.43	0.89
7-Feb	0.4	0.3	0.3	0.3	0.3	0.3	A	0.4	0.3	0.4	0.6	0.6	0.4	0.3	0.3	0.2	0.3	0.4	0.6	0.4	0.3	0.3	0.2	0.2	0.34	0.61
8-Feb	0.2	0.1	0.2	0.1	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.19	0.33
9-Feb	0.2	0.2	0.2	0.2	A	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.4	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.4	0.3	0.32	0.51
10-Feb	0.3	0.2	0.3	A	0.3	0.4	0.3	0.3	0.4	0.4	0.4	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.27	0.49
11-Feb	0.1	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.18	0.26
12-Feb	0.1	A	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	0.4	0.3	0.3	0.2	0.2	0.2	0.24	0.40
13-Feb	A	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	A	0.25	0.34
14-Feb	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.6	0.3	0.3	0.3	0.5	0.5	0.4	0.6	0.4	0.3	0.4	0.4	A	0.6	0.39	0.64
15-Feb	0.6	0.3	0.4	0.2	0.2	0.2	0.3	0.6	0.7	0.5	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.3	A	0.2	0.2	0.37	0.74
16-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.3	0.3	0.5	0.23	0.55
17-Feb	0.7	0.4	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.23	0.66
18-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	1.0	1.4	0.6	0.4	0.3	0.2	0.2	0.2	0.3	0.3	A	0.2	0.2	0.2	0.2	0.2	0.34	1.38
19-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.7	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	A	0.3	0.3	0.3	0.3	0.4	0.4	0.29	0.72
20-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.3	A	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.24	0.44
21-Feb	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.19	0.28
22-Feb	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	A	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.19	0.33
23-Feb	0.2	0.2	0.2	0.2	0.2	0.4	0.3	0.3	0.3	0.2	0.2	0.3	0.3	A	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.26	0.36
24-Feb	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.6	0.7	0.5	0.4	0.4	A	0.2	0.2	0.3	0.3	0.3	0.5	0.5	0.5	0.5	0.5	0.4	0.38	0.75
25-Feb	0.4	0.3	0.2	0.2	0.3	0.3	0.3	0.4	0.5	0.3	0.3	A	0.6	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.6	0.4	0.36	0.64
26-Feb	0.4	0.3	0.3	0.3	0.3	0.4	0.8	0.9	0.8	0.6	A	0.6	0.6	0.5	0.4	0.3	0.4	0.3	0.3	0.3	0.4	0.4	0.2	0.2	0.45	0.91
27-Feb	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.18	0.30
28-Feb	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.20	0.33
	0.26	0.22	0.24	0.23	0.23	0.24	0.28	0.35	0.37	0.35	0.30	0.28	0.28	0.25	0.24	0.24	0.24	0.26	0.31	0.29	0.29	0.28	0.26	0.28	Diurnal Average	
	0.66	0.48	0.46	0.38	0.37	0.40	0.78	0.91	0.99	1.38	0.64	0.60	0.65	0.52	0.45	0.46	0.43	0.64	0.87	0.89	0.57	0.51	0.69	0.84	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

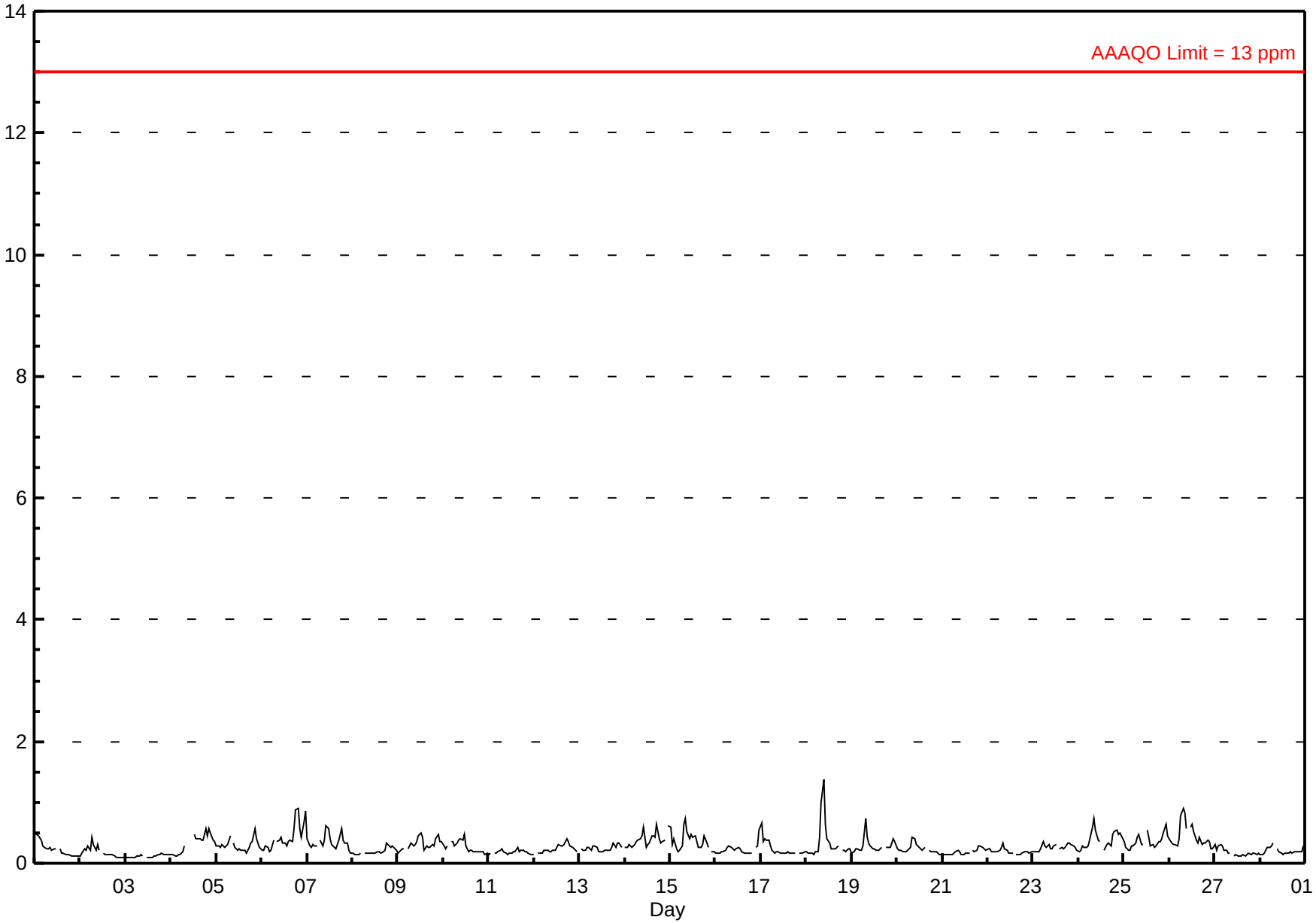
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm 24-hr na

Peace Airshed Zone Association

Hourly Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - February 2014



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Carbon Monoxide (CO) - ppm

Henry Pirker - February 2014

Maximum Value: 4.49 ppm on Feb 26 07:00

Maximum Daily Average: 0.82 ppm on Feb 26

Minimum Value: 0.1 ppm on Feb 2 20:00

Minimum Daily Average: 0.19 ppm on Feb 3

Maximum Diurnal Average: 0.69 ppm at hour 8

Minimum Diurnal Average: 0.31 ppm at hour 2

Monthly Average: 0.444 ppm

Percentiles: $P_1 = 0.15$ $P_{10} = 0.19$ $Q_1 = 0.24$ Median = 0.35 $Q_3 = 0.53$ $P_{90} = 0.75$ $P_{99} = 2.16$

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	0.6	0.6	0.5	0.5	0.4	0.5	0.7	0.3	0.4	0.3	0.5	0.3	A	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.34	0.67
2-Feb	0.2	0.2	0.3	0.4	0.4	0.3	1.1	0.4	0.3	0.7	0.3	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.29	1.08
3-Feb	0.1	0.3	0.1	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	0.3	0.2	0.2	0.2	0.2	0.19	0.31
4-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	C	C	C	C	0.5	0.5	0.4	0.7	0.4	0.4	2.6	0.6	0.7	0.7	0.5	0.4	0.51	2.56
5-Feb	0.3	0.3	0.3	1.3	0.3	0.3	0.6	0.7	A	0.7	0.6	0.3	0.4	0.4	0.3	0.3	0.2	0.3	0.5	0.4	1.3	0.6	0.5	0.3	0.49	1.33
6-Feb	0.3	0.3	0.4	0.3	0.2	0.4	0.6	A	0.6	0.5	0.6	0.4	0.4	0.4	0.5	0.5	0.7	0.7	1.3	1.6	1.0	0.6	1.6	1.1	0.65	1.65
7-Feb	0.7	0.4	0.5	0.4	0.4	0.5	A	0.6	0.5	0.5	0.7	0.7	0.6	0.4	0.3	0.3	0.5	0.5	1.1	0.5	0.5	0.8	0.4	0.2	0.51	1.05
8-Feb	0.3	0.2	0.2	0.2	0.2	A	0.5	0.6	0.3	0.3	0.2	0.3	0.2	0.3	0.2	0.3	0.4	0.5	0.7	0.3	0.4	0.6	0.3	0.3	0.35	0.72
9-Feb	0.2	0.3	0.2	0.3	A	0.3	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.5	0.4	0.4	0.4	1.2	0.5	0.7	0.5	0.6	0.5	0.4	0.48	1.18
10-Feb	0.3	0.3	0.4	A	0.4	1.1	0.3	0.4	0.5	0.6	0.6	0.7	0.5	0.2	0.8	0.4	0.2	0.2	0.4	0.3	0.3	0.2	0.2	0.3	0.43	1.09
11-Feb	0.2	0.2	A	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.6	1.6	0.2	0.8	0.4	0.3	0.2	0.2	0.2	0.2	0.33	1.56
12-Feb	0.2	A	0.2	0.2	0.2	1.5	0.5	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.6	0.4	0.6	1.0	0.6	0.4	0.4	0.3	0.3	0.3	0.42	1.46
13-Feb	A	0.3	0.3	0.3	0.3	0.4	0.3	1.0	0.8	1.8	0.3	0.3	0.3	0.8	0.5	0.3	0.5	1.0	1.3	0.4	0.6	0.4	0.4	A	0.56	1.77
14-Feb	0.3	0.4	0.4	0.4	0.5	0.5	0.6	0.5	0.8	0.9	1.3	0.4	0.7	0.5	0.6	0.7	0.6	0.8	0.8	0.4	0.4	0.5	A	0.8	0.61	1.28
15-Feb	0.9	0.4	0.6	0.3	0.4	0.3	0.4	1.8	2.3	0.7	0.6	0.5	0.6	0.6	0.5	0.3	0.4	0.7	0.6	0.6	0.3	A	0.4	0.3	0.64	2.25
16-Feb	0.2	0.2	0.2	0.8	0.3	0.3	0.4	0.9	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	A	0.3	0.4	0.8	0.34	0.93
17-Feb	1.0	0.5	0.5	0.5	0.5	0.5	0.3	0.2	0.2	0.3	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	0.32	1.01
18-Feb	0.3	0.2	0.2	0.2	0.2	0.3	0.3	1.7	1.8	2.2	1.3	0.5	0.5	0.4	0.5	0.3	0.4	0.5	A	0.4	0.4	0.2	0.4	0.4	0.59	2.17
19-Feb	0.3	0.3	0.3	0.3	0.3	0.2	0.7	1.3	0.6	0.5	0.4	0.3	0.4	0.6	0.3	0.3	0.3	A	0.4	0.3	0.4	0.4	0.8	0.5	0.44	1.28
20-Feb	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.7	0.5	0.4	0.5	0.5	0.3	1.0	0.4	A	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.36	0.99
21-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.2	A	0.3	0.4	0.3	0.5	0.5	0.3	0.3	0.2	0.26	0.53
22-Feb	0.6	0.6	0.3	0.2	0.2	0.3	0.3	0.4	0.5	0.3	0.3	0.3	0.2	0.3	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.28	0.59
23-Feb	0.3	0.3	0.2	0.2	0.3	0.5	0.8	0.3	0.4	0.3	0.3	0.3	0.4	A	0.3	0.3	0.4	0.3	0.4	0.5	0.5	0.3	0.3	0.3	0.37	0.80
24-Feb	0.2	0.3	0.4	0.3	0.3	0.4	0.5	1.1	1.8	0.8	0.5	0.5	A	0.3	0.3	0.4	0.5	0.4	0.6	0.9	0.7	0.6	0.7	0.5	0.57	1.78
25-Feb	0.4	0.3	0.2	0.2	0.4	1.0	0.5	0.7	0.7	0.4	0.4	A	0.6	0.6	0.4	0.4	0.4	0.4	0.6	0.5	0.6	0.9	1.1	0.6	0.54	1.09
26-Feb	0.6	0.5	0.3	0.4	0.5	0.6	4.5	2.2	1.6	0.8	A	0.7	0.8	0.6	0.6	0.5	0.5	0.4	0.5	0.4	0.5	0.5	0.4	0.3	0.82	4.49
27-Feb	0.4	0.3	0.4	0.4	1.5	0.3	0.4	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	0.3	0.2	0.2	0.30	1.47
28-Feb	0.2	0.2	0.3	0.3	0.4	0.6	0.8	1.0	A	0.5	0.3	0.5	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.2	3.3	0.49	3.32
	0.36	0.31	0.31	0.34	0.35	0.46	0.63	0.69	0.68	0.58	0.47	0.38	0.40	0.37	0.40	0.38	0.36	0.46	0.57	0.44	0.44	0.40	0.41	0.48	Diurnal Average	
	1.01	0.57	0.65	1.33	1.47	1.46	4.49	2.19	2.25	2.17	1.32	0.70	0.85	0.79	0.99	1.56	0.70	1.18	2.56	1.65	1.27	0.85	1.60	3.32	Diurnal Maximum	

C - Calibration

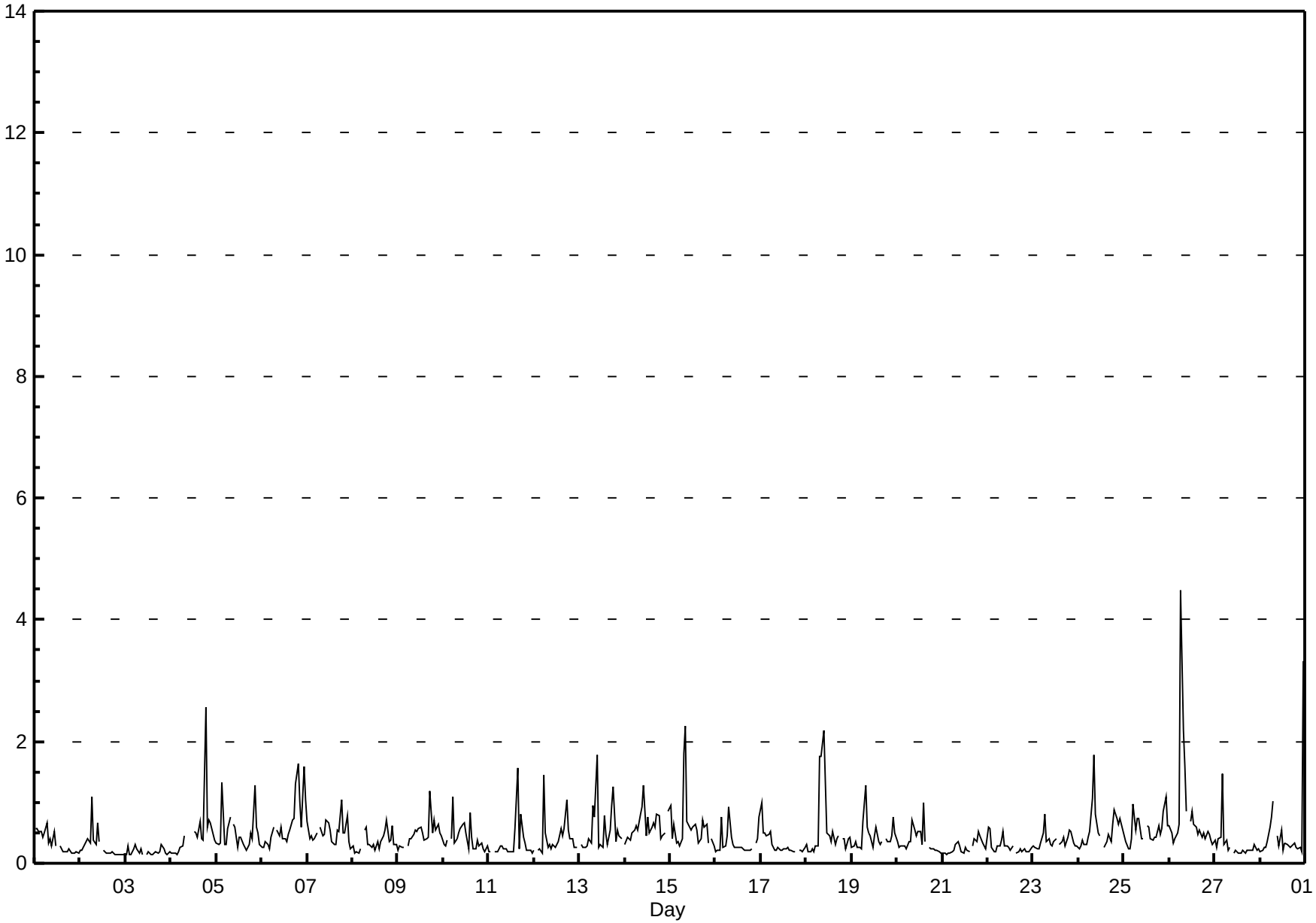
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Carbon Monoxide (CO) - ppm

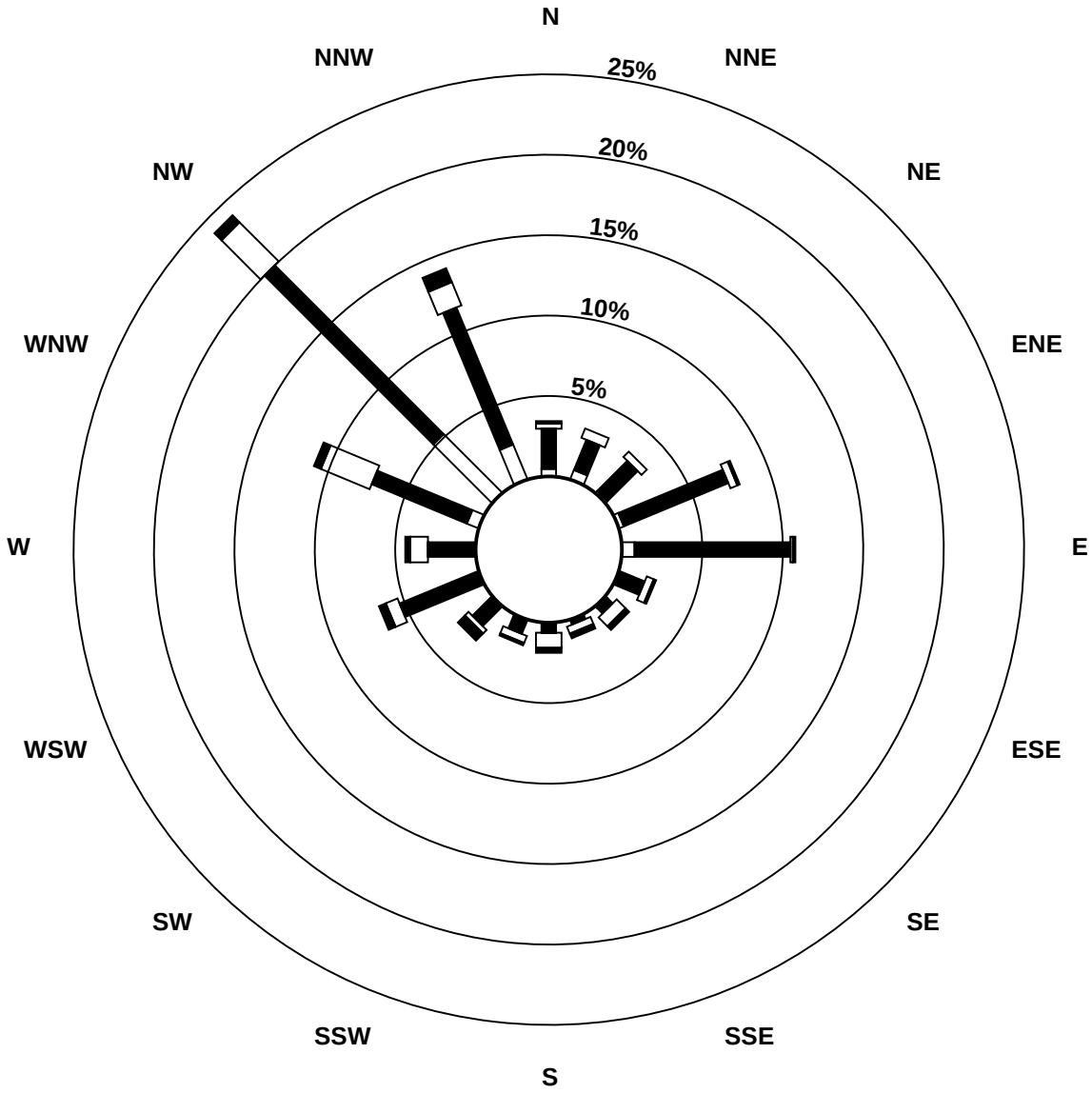
Henry Pirker - February 2014



Pollutant Rose

Carbon Monoxide (CO) - ppm

Henry Pirker - February 2014



Pollutant Classes (ppm)

- 0 - 0.1
- 0.1 - 0.3
- 0.3 - 0.5
- 0.5 - 1
- 1 - 10
- > 10

Peace Airshed Zone Association

Eight Hour Running Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - February 2014

Number of Exceedences (AAAQO): 8-hr: 0
Maximum Value: 0.69 ppm on Feb 26 14:00

Minimum Value: 0.10 ppm on Feb 3 05:00

Percentiles: P_1 = 0.11 P_{10} = 0.16 Q_1 = 0.18 Median = 0.25 Q_3 = 0.34 P_{90} = 0.42 P_{99} = 0.62

Hours in Service:	672
Hours of Data:	665
Hours of Missing Data:	7
Hours of Calibration:	7
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Maximum
1-Feb	0.2	0.3	0.3	0.3	0.3	0.4	0.4	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	0.1	0.1	0.1	0.35
2-Feb	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.28
3-Feb	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.14
4-Feb	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	N	N	N	N	N	N	N	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.46
5-Feb	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	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.44
6-Feb	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.65
7-Feb	0.7	0.6	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.66
8-Feb	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.31
9-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.37
10-Feb	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	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.37
11-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20
12-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.31
13-Feb	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.29
14-Feb	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.45
15-Feb	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.50
16-Feb	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.27
17-Feb	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.41
18-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.5	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.58
19-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.34
20-Feb	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.31
21-Feb	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.24
22-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.24
23-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.29
24-Feb	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.47
25-Feb	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	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.45
26-Feb	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.69
27-Feb	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.32
28-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.25
Diurnal Maximums	0.66	0.62	0.55	0.48	0.44	0.42	0.41	0.46	0.52	0.55	0.58	0.63	0.68	0.69	0.64	0.56	0.50	0.46	0.45	0.51	0.54	0.55	0.59	0.65	

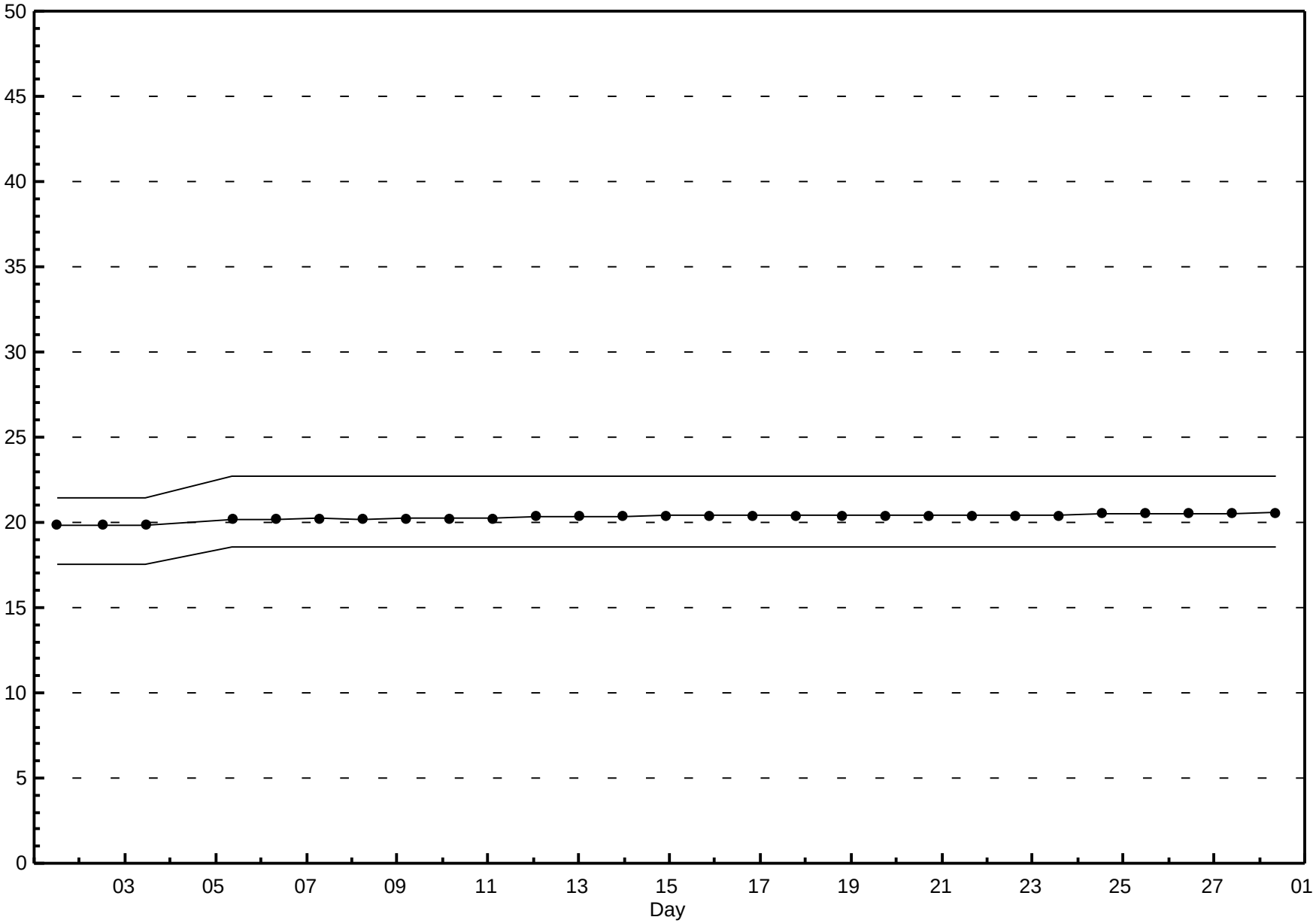
N - Not Valid
Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 5 ppm

Peace Airshed Zone Association

Span Responses

Carbon Monoxide (CO)

Henry Pirker - February 2014



Peace Airshed Zone Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Henry Pirker - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 3.04 ppm on Feb 15 10:00

Maximum Daily Average: 2.47 ppm on Feb 26

Minimum Value: 1.8 ppm on Feb 17 16:00

Minimum Daily Average: 1.94 ppm on Feb 3

Maximum Diurnal Average: 2.25 ppm at hour 10

Minimum Diurnal Average: 2.00 ppm at hour 17

Monthly Average: 2.116 ppm

Percentiles: P_1 = 1.85 P_{10} = 1.91 Q_1 = 1.97 Median = 2.04 Q_3 = 2.25 P_{90} = 2.42 P_{99} = 2.73

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	2.3	2.3	2.3	3.0	2.2	2.2	2.2	2.3	2.4	2.3	2.5	2.5	A	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.16	3.03
2-Feb	1.9	1.9	2.0	2.3	2.3	2.1	2.3	2.2	2.1	2.2	2.1	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.01	2.31
3-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.94	2.00
4-Feb	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	A	C	C	C	C	C	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.03	2.12
5-Feb	2.1	2.1	2.2	2.3	2.3	2.3	2.3	2.3	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.2	2.4	2.15	2.40
6-Feb	2.4	2.4	2.4	2.5	2.5	2.4	2.3	A	2.6	2.7	2.6	2.4	2.4	2.3	2.2	2.1	2.0	2.1	2.2	2.1	2.2	2.1	2.3	2.3	2.34	2.67
7-Feb	2.2	2.2	2.3	2.5	2.4	2.4	A	2.5	2.4	2.5	2.5	2.4	2.2	2.2	2.2	2.1	2.2	2.1	2.3	2.2	2.5	2.3	2.0	2.0	2.28	2.52
8-Feb	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	1.99	2.06
9-Feb	2.0	2.1	2.3	2.4	A	2.4	2.4	2.6	2.6	2.4	2.3	2.4	2.4	2.3	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.3	2.3	2.3	2.26	2.61
10-Feb	2.2	2.2	2.3	A	2.3	2.3	2.5	2.5	2.5	2.5	2.5	2.5	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	1.9	2.0	2.18	2.54
11-Feb	2.0	2.0	A	2.0	2.0	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.99	2.17
12-Feb	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	1.99	2.19
13-Feb	A	2.3	2.3	2.3	2.3	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	A	2.07	2.30
14-Feb	2.2	2.3	2.3	2.3	2.2	2.3	2.3	2.2	2.1	2.3	2.2	2.0	2.0	2.1	2.4	2.3	2.2	2.2	2.3	2.3	2.3	2.3	A	2.5	2.24	2.50
15-Feb	2.4	2.2	2.2	2.0	1.9	1.9	2.0	2.1	2.3	3.0	2.6	2.3	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	A	1.9	1.9	2.14	3.04
16-Feb	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.9	A	2.0	2.0	2.2	1.97	2.21
17-Feb	2.6	2.1	2.4	2.2	2.2	2.1	2.0	2.0	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.9	A	1.9	1.9	1.9	1.9	2.01	2.57
18-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.2	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.94	2.23
19-Feb	1.9	2.0	2.1	2.1	2.1	2.0	2.1	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.1	2.1	2.2	2.04	2.18
20-Feb	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.07	2.21
21-Feb	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.01	2.08
22-Feb	2.1	2.1	2.1	2.2	2.1	2.2	2.3	2.4	2.4	2.3	2.2	2.1	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.11	2.37
23-Feb	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.1	A	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.3	2.09	2.27
24-Feb	2.3	2.4	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.6	2.5	2.4	A	2.1	2.1	2.1	2.0	2.0	2.2	2.3	2.3	2.3	2.4	2.3	2.36	2.60
25-Feb	2.3	2.4	2.4	2.3	2.3	2.3	2.4	2.4	2.5	2.6	2.5	A	2.5	2.3	2.2	2.2	2.2	2.3	2.3	2.4	2.4	2.5	2.5	2.5	2.38	2.59
26-Feb	2.6	2.6	2.6	2.6	2.6	2.7	2.8	2.8	2.7	2.7	A	2.6	2.5	2.3	2.1	2.3	2.3	2.2	2.2	2.3	2.3	2.3	2.3	2.2	2.47	2.85
27-Feb	2.3	2.4	2.5	2.3	2.1	2.0	2.0	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.02	2.47
28-Feb	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	A	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.00	2.08
	2.13	2.14	2.19	2.21	2.17	2.17	2.17	2.20	2.22	2.25	2.20	2.14	2.09	2.05	2.02	2.01	2.00	2.01	2.04	2.05	2.08	2.07	2.08	2.10	Diurnal Average	
	2.57	2.62	2.57	3.03	2.62	2.73	2.82	2.85	2.74	3.04	2.62	2.57	2.52	2.33	2.38	2.33	2.30	2.31	2.35	2.38	2.50	2.52	2.55	2.50	Diurnal Maximum	

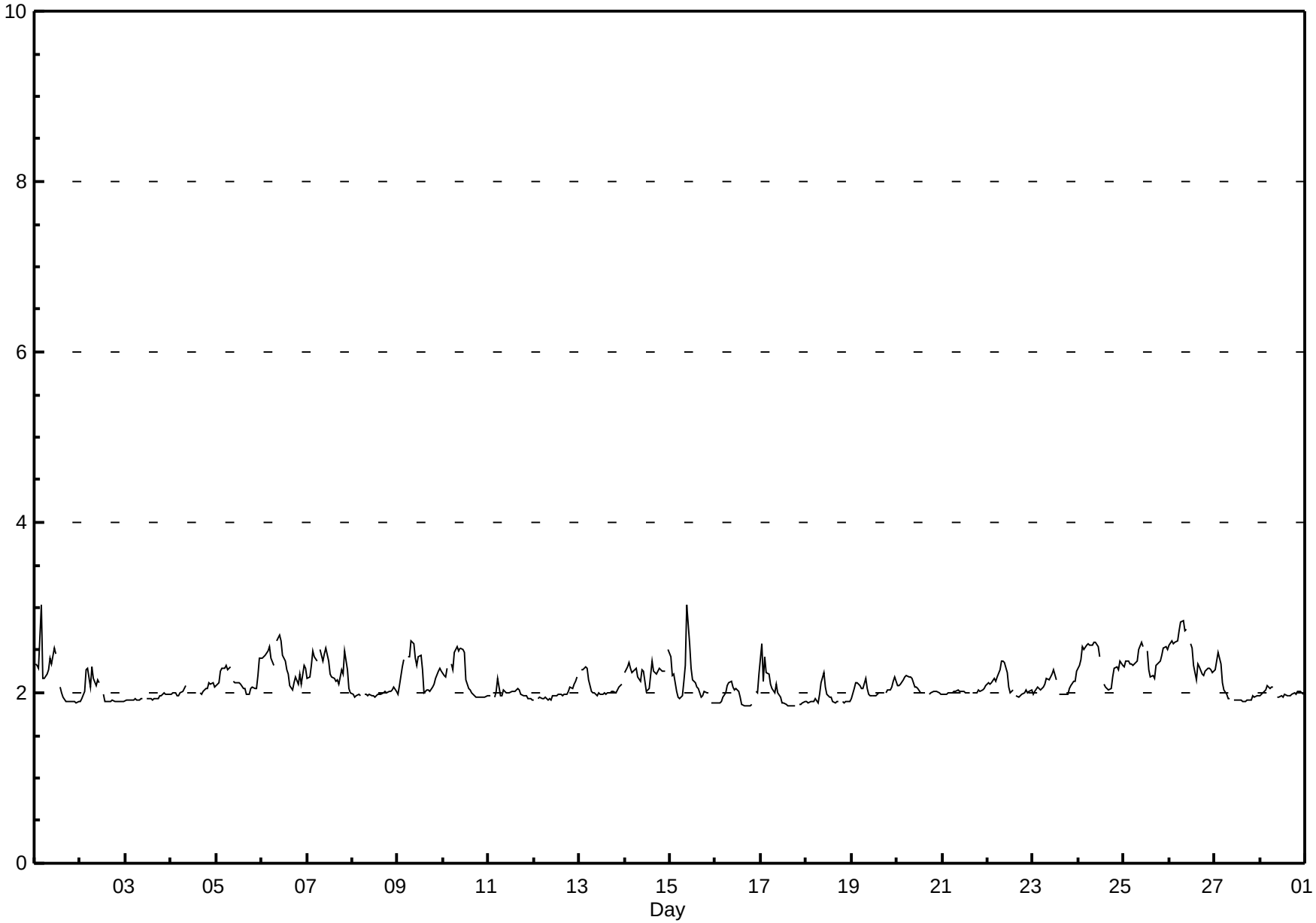
C - Calibration A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Henry Pirker - February 2014



Peace Airshed Zone Association

Hourly Maximums

Total Hydrocarbons (THC) - ppm

Henry Pirker - February 2014

Maximum Value: 7.03 ppm on Feb 17 01:00

Maximum Daily Average: 2.66 ppm on Feb 26

Minimum Value: 1.9 ppm on Feb 17 16:00

Minimum Daily Average: 1.96 ppm on Feb 3

Maximum Diurnal Average: 2.40 ppm at hour 1

Minimum Diurnal Average: 2.11 ppm at hour 18

Monthly Average: 2.249 ppm

Percentiles: P_1 = 1.86 P_{10} = 1.94 Q_1 = 2.03 Median = 2.18 Q_3 = 2.37 P_{90} = 2.60 P_{99} = 3.18

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	2.6	2.6	2.5	4.5	2.9	2.3	2.3	2.3	2.5	2.5	2.6	2.5	A	2.3	2.2	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.34	4.46
2-Feb	1.9	2.1	2.4	2.8	2.7	2.3	3.0	2.3	2.2	2.2	2.2	A	2.0	1.9	2.0	1.9	1.9	2.1	1.9	1.9	1.9	1.9	1.9	1.9	2.15	2.98
3-Feb	2.0	1.9	1.9	1.9	1.9	2.0	1.9	2.0	1.9	2.0	A	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.96	2.03
4-Feb	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	A	C	C	C	C	C	2.0	2.0	2.3	2.2	2.2	2.2	2.2	2.3	2.2	2.12	2.28
5-Feb	2.2	2.2	2.3	2.3	2.3	2.5	2.3	2.4	A	2.2	2.1	2.1	2.2	2.2	2.1	2.1	2.0	2.1	2.4	2.1	2.1	2.1	2.3	2.4	2.23	2.47
6-Feb	2.4	2.4	2.5	2.8	3.0	2.7	2.4	A	2.6	2.7	2.7	2.5	2.4	2.4	2.2	2.2	2.1	2.2	2.3	2.2	2.7	2.2	2.7	2.6	2.48	3.00
7-Feb	2.4	2.3	2.5	2.8	2.7	2.4	A	2.6	2.5	2.5	2.6	2.6	2.3	2.2	2.2	2.2	2.2	2.2	2.7	2.6	3.0	2.3	2.2	2.2	2.44	2.95
8-Feb	2.2	2.1	2.1	2.1	2.0	A	2.2	2.1	2.2	2.2	2.1	2.2	2.0	2.1	2.2	2.3	2.6	2.3	2.1	2.0	2.1	2.1	2.1	2.2	2.15	2.59
9-Feb	2.1	2.3	2.4	2.4	A	2.4	2.5	2.8	2.7	2.4	2.4	2.6	2.5	2.3	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.4	2.4	2.4	2.36	2.83
10-Feb	2.3	2.3	2.6	A	2.5	2.3	2.6	2.6	2.5	2.6	2.6	2.6	2.4	2.2	2.2	2.3	2.2	2.2	2.0	2.1	2.0	2.0	2.0	2.0	2.30	2.60
11-Feb	2.0	2.0	A	2.0	2.3	2.6	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.5	2.6	2.1	2.0	2.0	2.0	1.9	2.0	1.9	2.09	2.58
12-Feb	2.0	A	2.0	2.1	2.0	2.1	2.1	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.2	2.3	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.2	2.06	2.31
13-Feb	A	2.3	2.3	2.5	2.4	2.3	2.2	2.2	2.4	2.1	2.3	2.2	2.2	2.3	2.0	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.2	A	2.21	2.51
14-Feb	2.4	2.7	2.8	2.4	2.4	2.3	2.3	2.3	2.2	2.4	2.5	2.2	2.1	2.1	4.7	4.2	2.3	2.4	2.4	2.4	2.3	2.4	A	3.0	2.57	4.72
15-Feb	2.9	2.3	2.4	2.1	2.3	2.2	2.0	2.5	2.8	4.3	3.7	2.6	2.2	2.2	2.3	2.3	2.0	2.2	2.1	2.2	2.1	A	1.9	2.0	2.42	4.31
16-Feb	1.9	1.9	1.9	2.0	2.1	2.0	2.4	2.2	2.3	2.3	2.1	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	2.5	2.1	2.8	2.08	2.83
17-Feb	7.0	2.3	2.8	2.4	3.0	2.4	2.1	2.0	2.4	2.1	2.2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	2.32	7.03
18-Feb	2.0	1.9	1.9	2.0	2.1	2.0	1.9	2.1	2.4	2.6	2.3	2.0	2.0	2.1	2.0	2.0	2.2	1.9	A	2.0	1.9	2.0	1.9	1.9	2.05	2.64
19-Feb	2.0	2.1	2.2	2.2	2.1	2.1	2.3	2.3	2.3	2.1	2.0	2.0	2.0	2.2	2.4	2.4	2.4	A	2.2	2.1	2.1	2.2	2.3	2.4	2.19	2.44
20-Feb	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.3	2.2	2.1	2.2	2.3	2.0	A	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.14	2.27
21-Feb	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.1	2.1	2.2	2.1	2.2	2.05	2.20
22-Feb	2.2	2.2	2.2	2.3	2.2	2.2	2.3	2.5	2.5	2.4	2.3	3.1	2.0	2.1	A	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.4	2.21	3.08
23-Feb	2.1	2.2	2.5	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	A	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.3	2.17	2.49
24-Feb	2.4	2.5	3.0	2.5	2.6	2.6	2.6	2.6	2.9	2.6	2.6	2.5	A	2.1	2.1	2.1	2.0	2.1	2.6	2.4	2.4	2.3	2.6	2.4	2.46	2.97
25-Feb	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.5	2.6	2.6	2.6	A	2.6	2.4	2.3	2.3	2.3	2.4	2.4	2.4	2.5	2.6	2.6	2.7	2.46	2.66
26-Feb	2.9	3.0	2.8	2.6	2.7	3.2	3.4	3.4	3.1	2.9	A	2.8	2.6	2.4	2.5	2.5	2.4	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.66	3.44
27-Feb	2.3	2.7	2.5	2.5	2.2	2.1	2.0	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.2	2.1	2.1	2.1	2.09	2.72
28-Feb	2.1	2.5	2.1	2.1	2.1	2.1	2.3	2.3	A	2.1	2.0	2.3	2.0	2.5	2.2	2.2	2.1	2.3	2.2	2.2	2.2	2.3	2.1	2.1	2.18	2.51
	2.40	2.28	2.34	2.38	2.34	2.29	2.30	2.32	2.36	2.38	2.33	2.29	2.15	2.16	2.23	2.20	2.12	2.11	2.14	2.14	2.17	2.16	2.17	2.24	Diurnal Average	
	7.03	3.03	2.97	4.46	3.00	3.20	3.35	3.44	3.06	4.31	3.67	3.08	2.61	2.51	4.72	4.23	2.59	2.42	2.74	2.65	2.95	2.64	2.74	3.01	Diurnal Maximum	

C - Calibration

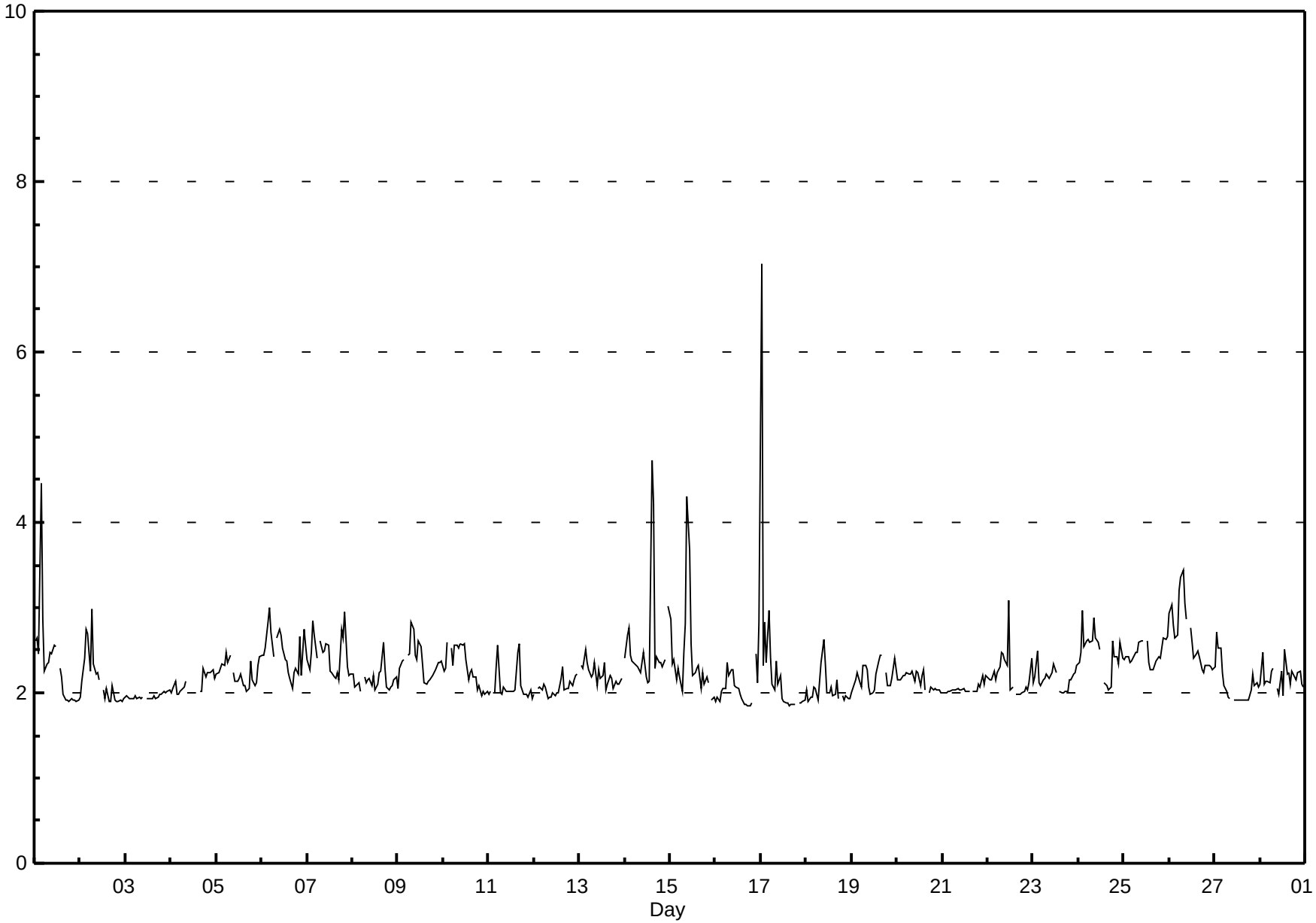
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Total Hydrocarbons (THC) - ppm

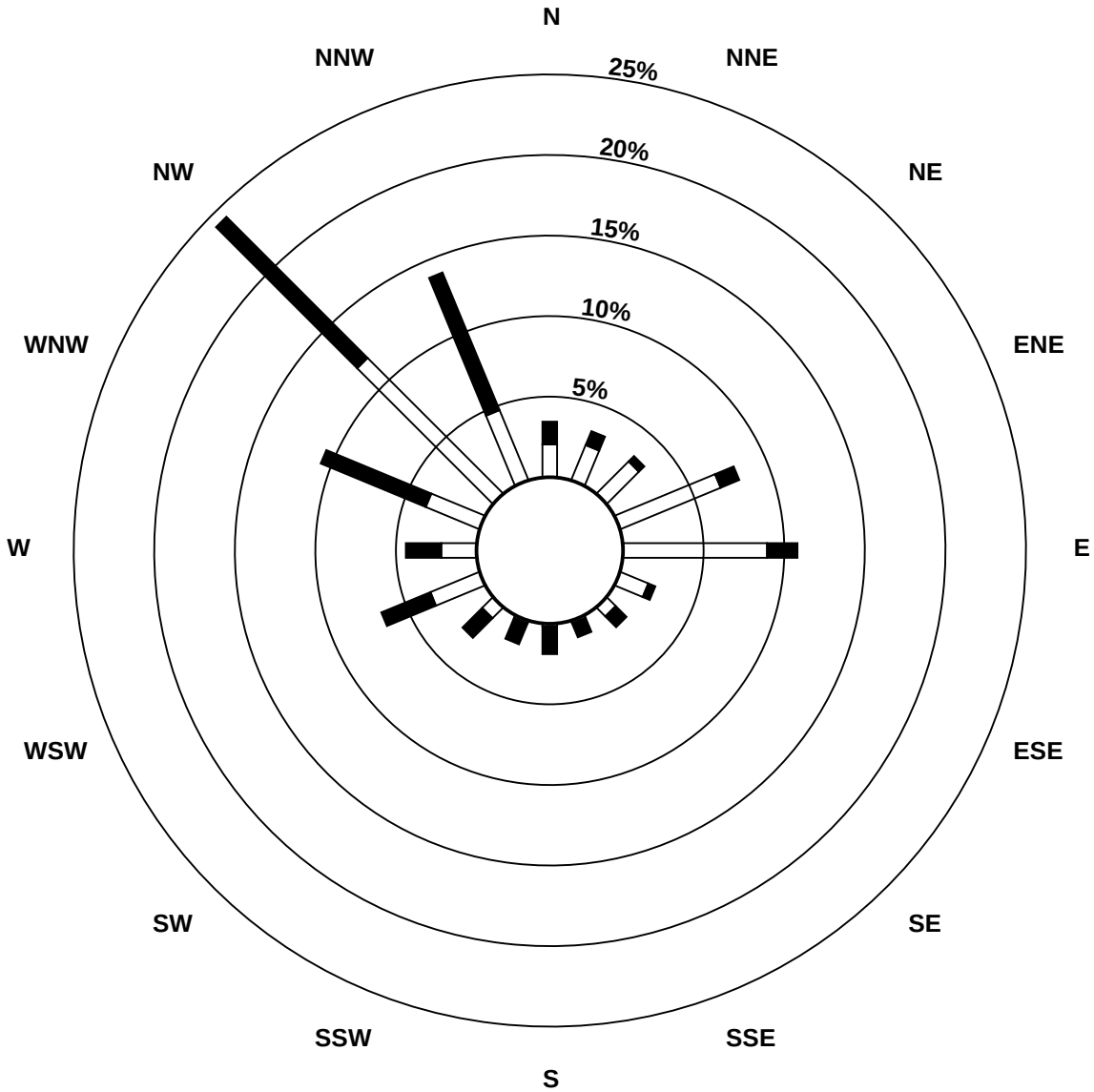
Henry Pirker - February 2014



Pollutant Rose

Total Hydrocarbons (THC) - ppm

Henry Pirker - February 2014



Pollutant Classes (ppm)

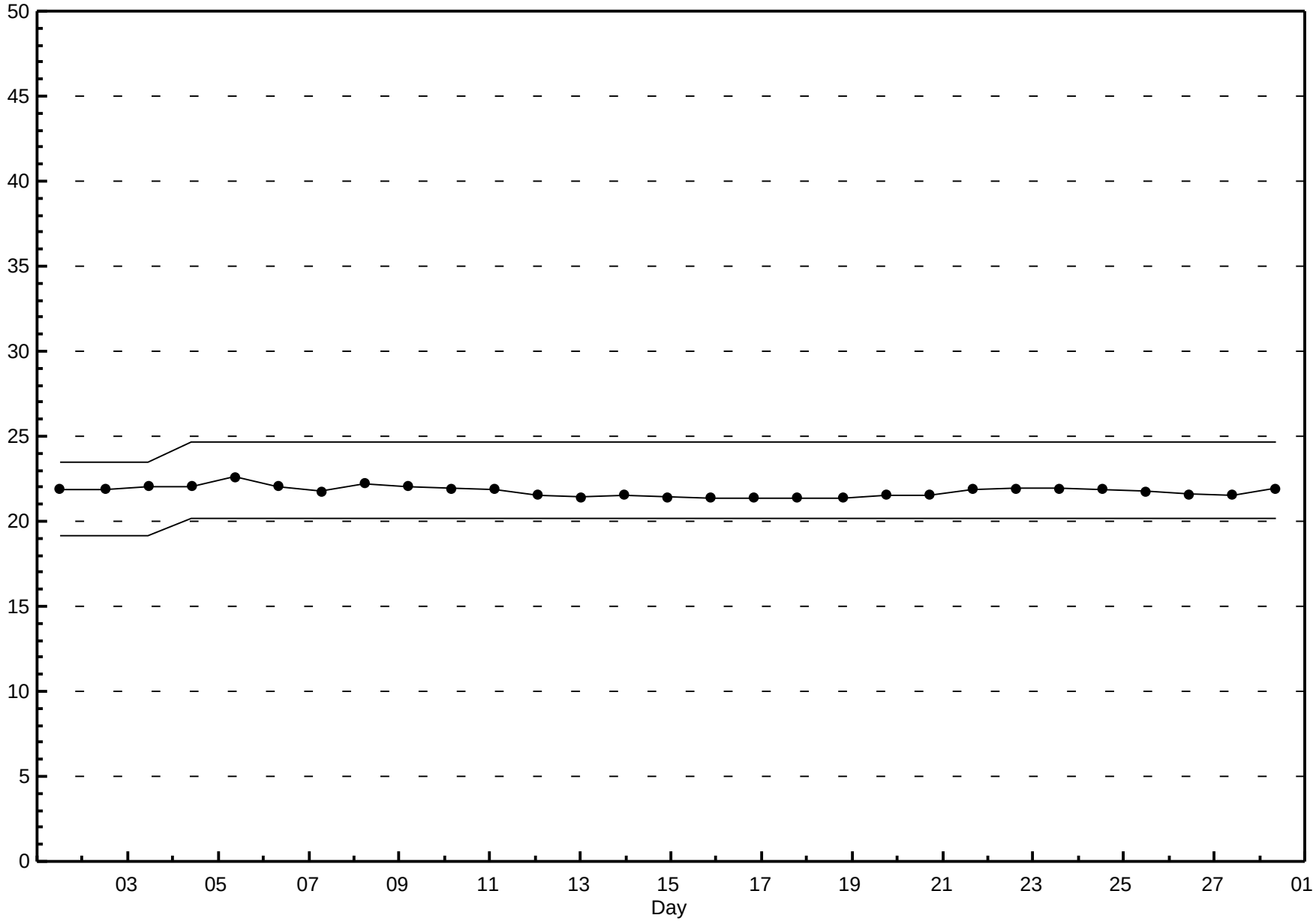
- 1.5 - 2.0
- 2.1 - 3.0
- 3.1 - 10.0
- > 10.0

Peace Airshed Zone Association

Span Responses

Total Hydrocarbons (THC)

Henry Pirker - February 2014



Peace Airshed Zone Association

Hourly Averages

Methane (CH_4) - ppm

Henry Pirker - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 3.03 ppm on Feb 15 10:00

Maximum Daily Average: 2.46 ppm on Feb 26

Minimum Value: 1.8 ppm on Feb 17 16:00

Minimum Daily Average: 1.94 ppm on Feb 18

Maximum Diurnal Average: 2.25 ppm at hour 10

Minimum Diurnal Average: 2.00 ppm at hour 17

Monthly Average: 2.111 ppm

Percentiles: P_1 = 1.85 P_{10} = 1.91 Q_1 = 1.97 Median = 2.04 Q_3 = 2.23 P_{90} = 2.41 P_{99} = 2.72

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	2.3	2.3	2.3	3.0	2.2	2.2	2.2	2.3	2.4	2.3	2.5	2.5	A	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.16	3.02
2-Feb	1.9	1.9	2.0	2.3	2.3	2.1	2.3	2.2	2.1	2.1	2.1	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.01	2.31
3-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.94	2.00
4-Feb	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	A	C	C	C	C	C	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.04	2.14
5-Feb	2.1	2.1	2.3	2.3	2.3	2.3	2.3	2.3	A	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.2	2.4	2.15	2.40
6-Feb	2.4	2.4	2.4	2.5	2.5	2.4	2.3	A	2.6	2.7	2.6	2.4	2.4	2.3	2.2	2.1	2.0	2.1	2.2	2.1	2.2	2.1	2.3	2.3	2.33	2.66
7-Feb	2.2	2.2	2.3	2.5	2.4	2.4	A	2.5	2.4	2.5	2.5	2.4	2.2	2.2	2.2	2.1	2.1	2.1	2.3	2.2	2.5	2.3	2.0	2.0	2.27	2.51
8-Feb	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	1.98	2.06
9-Feb	2.0	2.1	2.3	2.4	A	2.4	2.4	2.6	2.6	2.4	2.3	2.4	2.4	2.3	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.3	2.3	2.2	2.25	2.60
10-Feb	2.2	2.2	2.3	A	2.3	2.3	2.5	2.5	2.5	2.5	2.5	2.5	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.18	2.53
11-Feb	2.0	2.0	A	2.0	2.0	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.99	2.17
12-Feb	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.2	1.98	2.18
13-Feb	A	2.3	2.3	2.3	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	A	2.06	2.30
14-Feb	2.2	2.3	2.3	2.3	2.2	2.3	2.3	2.2	2.1	2.3	2.2	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.3	2.3	2.2	2.3	A	2.5	2.22	2.50
15-Feb	2.4	2.2	2.2	2.0	1.9	1.9	2.0	2.1	2.3	3.0	2.6	2.3	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	A	1.9	1.9	2.13	3.03
16-Feb	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.9	A	2.0	2.0	2.2	1.97	2.21
17-Feb	2.3	2.1	2.4	2.2	2.2	2.1	2.0	2.0	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	A	1.9	1.9	1.9	1.9	1.99	2.41
18-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.2	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.94	2.22
19-Feb	1.9	2.0	2.1	2.1	2.1	2.0	2.0	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.1	2.1	2.2	2.04	2.17
20-Feb	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.06	2.20
21-Feb	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.01	2.08
22-Feb	2.1	2.1	2.1	2.2	2.1	2.2	2.3	2.4	2.4	2.3	2.2	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	2.10	2.37
23-Feb	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.2	2.1	2.2	2.2	2.3	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.08	2.26
24-Feb	2.3	2.4	2.5	2.5	2.6	2.6	2.5	2.5	2.6	2.6	2.5	2.4	A	2.1	2.1	2.0	2.0	2.0	2.2	2.3	2.3	2.3	2.4	2.3	2.35	2.59
25-Feb	2.3	2.4	2.4	2.3	2.3	2.3	2.4	2.4	2.5	2.6	2.5	A	2.5	2.3	2.2	2.2	2.2	2.3	2.3	2.4	2.4	2.5	2.5	2.5	2.38	2.58
26-Feb	2.6	2.6	2.6	2.6	2.6	2.7	2.8	2.8	2.7	2.7	A	2.6	2.5	2.3	2.1	2.3	2.3	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.46	2.84
27-Feb	2.3	2.4	2.5	2.3	2.1	2.0	2.0	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.01	2.47
28-Feb	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	A	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.99	2.07
	2.11	2.13	2.18	2.21	2.16	2.17	2.17	2.19	2.22	2.25	2.19	2.14	2.08	2.04	2.01	2.01	2.00	2.00	2.03	2.04	2.07	2.07	2.07	2.10	Diurnal Average	
	2.56	2.61	2.56	3.02	2.61	2.72	2.82	2.84	2.73	3.03	2.61	2.56	2.51	2.32	2.21	2.33	2.30	2.31	2.34	2.37	2.49	2.51	2.54	2.50	Diurnal Maximum	

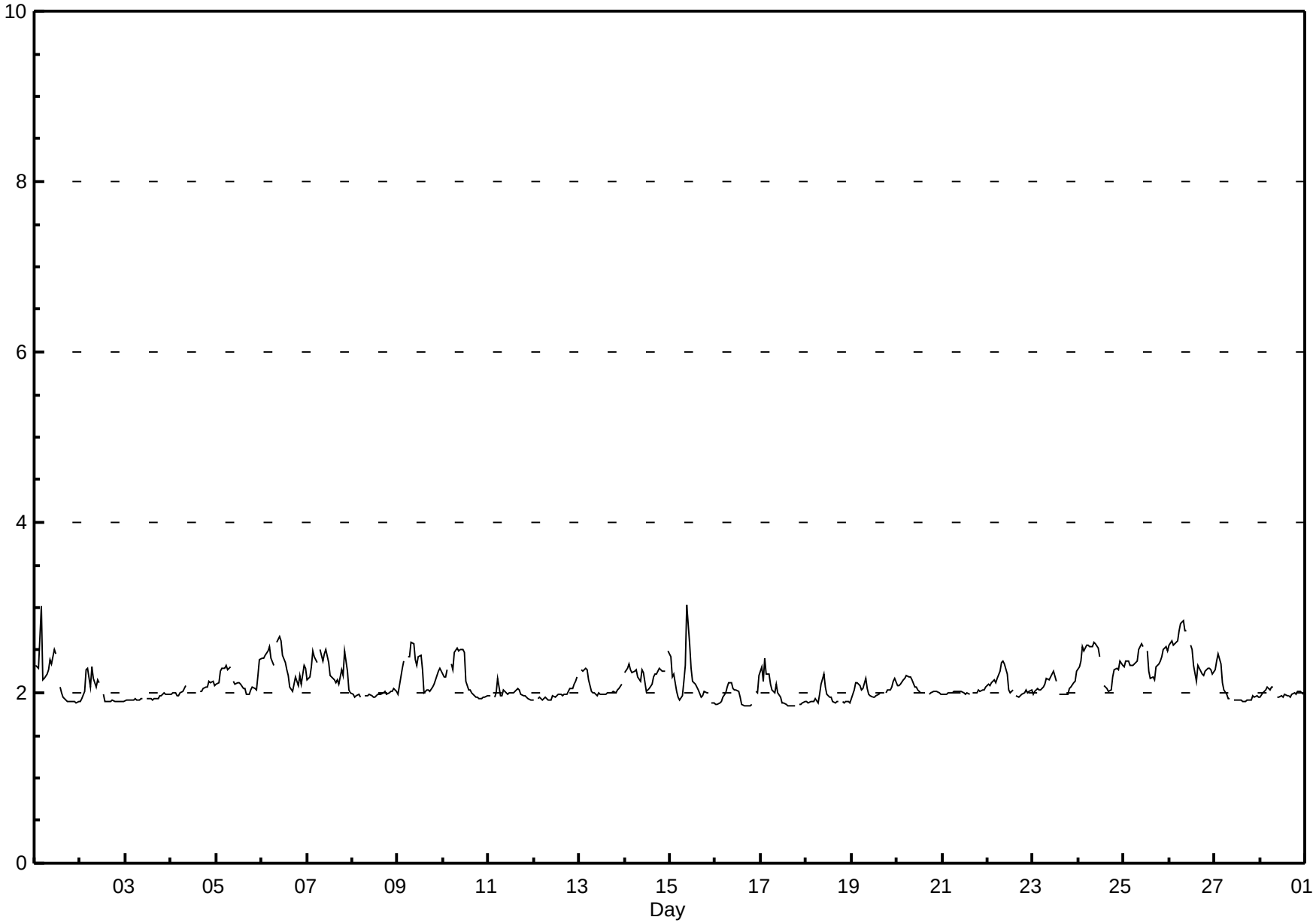
C - Calibration A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Methane (CH_4) - ppm

Henry Pirker - February 2014



Peace Airshed Zone Association

Hourly Maximums

Methane (CH_4) - ppm

Henry Pirker - February 2014

Maximum Value: 4.45 ppm on Feb 1 04:00

Maximum Daily Average: 2.65 ppm on Feb 26

Minimum Value: 1.9 ppm on Feb 17 16:00

Minimum Daily Average: 1.96 ppm on Feb 3

Maximum Diurnal Average: 2.38 ppm at hour 10

Minimum Diurnal Average: 2.10 ppm at hour 18

Monthly Average: 2.229 ppm

Percentiles: P_1 = 1.86 P_{10} = 1.94 Q_1 = 2.02 Median = 2.17 Q_3 = 2.36 P_{90} = 2.59 P_{99} = 3.06

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	2.6	2.6	2.5	4.5	2.9	2.3	2.3	2.3	2.5	2.5	2.6	2.5	A	2.3	2.2	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.33	4.45
2-Feb	1.9	2.1	2.4	2.7	2.7	2.3	3.0	2.3	2.2	2.2	2.1	A	2.0	1.9	2.0	1.9	1.9	2.1	1.9	1.9	1.9	1.9	1.9	1.9	2.15	2.97
3-Feb	2.0	1.9	1.9	1.9	1.9	2.0	1.9	2.0	1.9	1.9	A	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.96	2.02
4-Feb	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	A	C	C	C	C	C	2.1	2.0	2.3	2.2	2.2	2.3	2.3	2.3	2.2	2.12	2.31
5-Feb	2.2	2.2	2.3	2.3	2.3	2.5	2.4	2.4	A	2.2	2.1	2.1	2.2	2.2	2.1	2.1	2.0	2.0	2.4	2.1	2.1	2.1	2.3	2.4	2.23	2.47
6-Feb	2.4	2.4	2.5	2.8	3.0	2.7	2.4	A	2.6	2.7	2.7	2.5	2.4	2.4	2.2	2.2	2.0	2.2	2.3	2.2	2.7	2.2	2.7	2.6	2.48	3.00
7-Feb	2.4	2.3	2.5	2.8	2.7	2.4	A	2.6	2.5	2.5	2.6	2.6	2.2	2.2	2.2	2.1	2.2	2.1	2.7	2.6	2.9	2.3	2.2	2.2	2.43	2.94
8-Feb	2.2	2.1	2.1	2.1	2.0	A	2.2	2.1	2.1	2.1	2.1	2.2	2.0	2.1	2.2	2.3	2.6	2.3	2.1	2.0	2.1	2.1	2.1	2.2	2.15	2.57
9-Feb	2.0	2.3	2.4	2.4	A	2.4	2.5	2.8	2.7	2.4	2.4	2.6	2.5	2.3	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.4	2.4	2.35	2.83
10-Feb	2.2	2.3	2.6	A	2.5	2.3	2.6	2.6	2.5	2.6	2.6	2.6	2.4	2.1	2.2	2.3	2.2	2.2	2.0	2.1	2.0	2.0	2.0	2.0	2.29	2.59
11-Feb	2.0	2.0	A	2.0	2.3	2.5	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.5	2.6	2.1	2.0	2.0	2.0	2.0	2.0	1.9	2.08	2.56
12-Feb	2.0	A	2.0	2.1	2.0	2.1	2.1	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.2	2.3	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.06	2.31
13-Feb	A	2.3	2.3	2.5	2.4	2.3	2.2	2.2	2.3	2.1	2.3	2.1	2.2	2.3	2.0	2.1	2.2	2.2	2.0	2.1	2.1	2.1	2.2	A	2.20	2.49
14-Feb	2.4	2.7	2.8	2.4	2.4	2.3	2.3	2.3	2.2	2.3	2.5	2.2	2.1	2.1	2.3	2.3	2.3	2.4	2.3	2.4	2.3	2.4	A	3.0	2.38	3.00
15-Feb	2.9	2.3	2.4	2.1	2.3	2.2	2.0	2.5	2.8	4.3	3.7	2.6	2.2	2.2	2.3	2.3	2.0	2.2	2.1	2.2	2.1	A	1.9	2.0	2.41	4.30
16-Feb	1.9	1.9	1.9	2.0	2.0	2.0	2.3	2.2	2.3	2.3	2.1	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	2.5	2.1	2.8	2.07	2.83
17-Feb	2.7	2.3	2.8	2.3	3.0	2.4	2.1	2.0	2.4	2.1	2.2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	2.13	2.96
18-Feb	2.0	1.9	1.9	2.0	2.1	2.0	1.9	2.1	2.4	2.6	2.3	2.0	2.0	2.1	2.0	2.0	2.1	1.9	A	2.0	1.9	2.0	1.9	1.9	2.05	2.63
19-Feb	2.0	2.1	2.1	2.2	2.1	2.1	2.3	2.3	2.3	2.1	2.0	2.0	2.0	2.2	2.4	2.4	2.4	A	2.2	2.1	2.1	2.2	2.3	2.4	2.18	2.44
20-Feb	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.1	2.2	2.3	2.0	A	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.13	2.26
21-Feb	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.1	2.1	2.2	2.1	2.2	2.04	2.20
22-Feb	2.2	2.1	2.2	2.3	2.2	2.2	2.3	2.5	2.5	2.4	2.3	2.1	2.0	2.1	A	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.4	2.17	2.47
23-Feb	2.1	2.2	2.5	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.2	A	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.3	2.16	2.49
24-Feb	2.3	2.5	3.0	2.5	2.6	2.6	2.6	2.6	2.9	2.6	2.6	2.5	A	2.1	2.1	2.1	2.0	2.1	2.6	2.4	2.4	2.3	2.6	2.4	2.46	2.96
25-Feb	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.5	2.6	2.6	2.6	A	2.6	2.4	2.3	2.3	2.3	2.4	2.4	2.4	2.5	2.6	2.6	2.6	2.45	2.65
26-Feb	2.9	3.0	2.8	2.6	2.7	3.2	3.3	3.4	3.0	2.8	A	2.8	2.6	2.4	2.5	2.5	2.4	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.65	3.43
27-Feb	2.3	2.7	2.5	2.5	2.2	2.1	2.0	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.2	2.1	2.1	2.1	2.09	2.71
28-Feb	2.1	2.5	2.1	2.1	2.1	2.1	2.2	2.3	A	2.0	2.0	2.2	2.0	2.5	2.2	2.2	2.1	2.2	2.2	2.1	2.2	2.2	2.1	2.1	2.18	2.50
	2.24	2.28	2.34	2.37	2.33	2.29	2.29	2.31	2.35	2.38	2.32	2.24	2.14	2.15	2.13	2.13	2.12	2.10	2.13	2.14	2.17	2.16	2.17	2.23	Diurnal Average	
	2.93	3.02	2.96	4.45	3.00	3.19	3.34	3.43	3.05	4.30	3.66	2.76	2.61	2.50	2.46	2.48	2.57	2.42	2.74	2.65	2.94	2.64	2.74	3.00	Diurnal Maximum	

C - Calibration

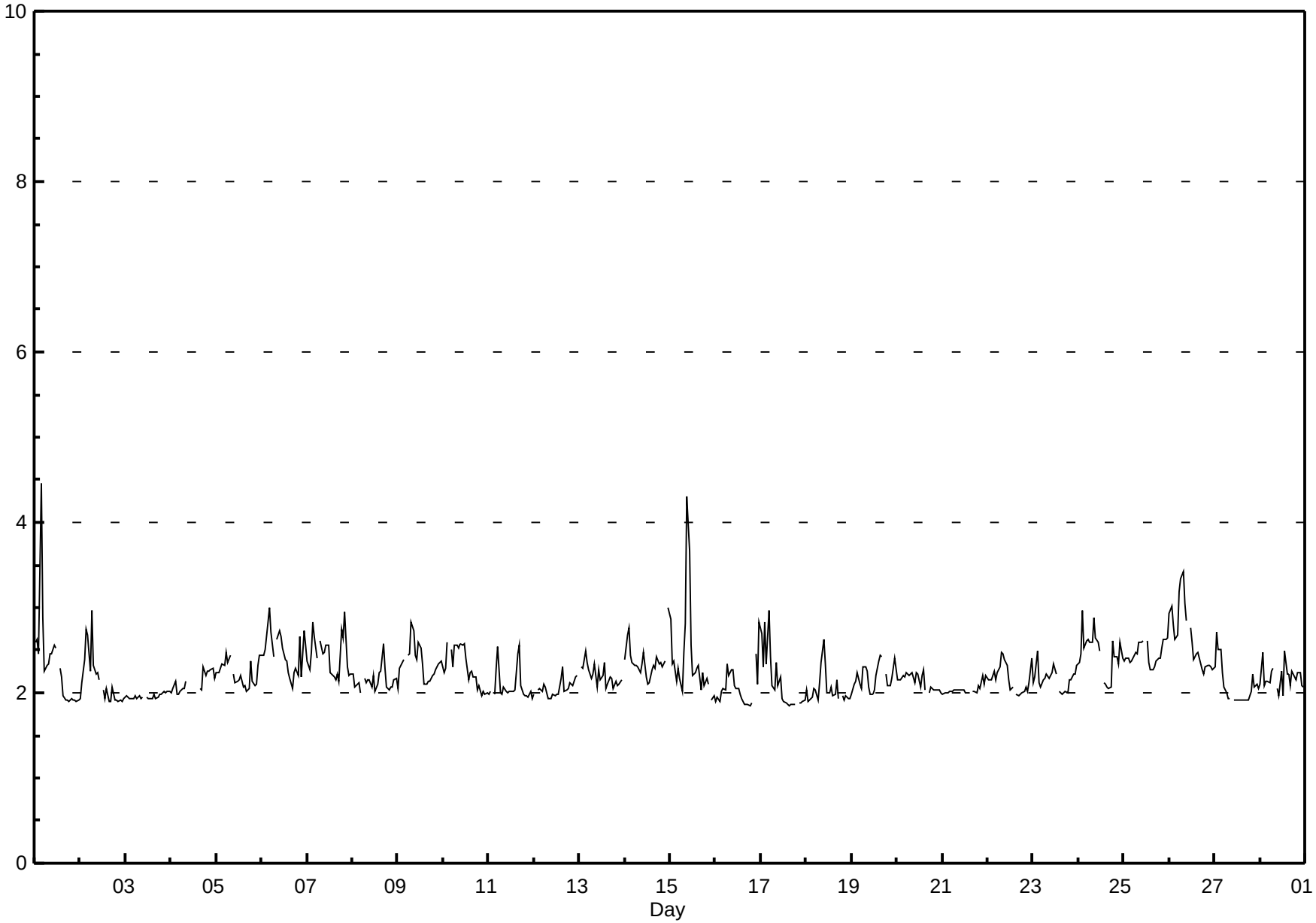
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Methane (CH_4) - ppm

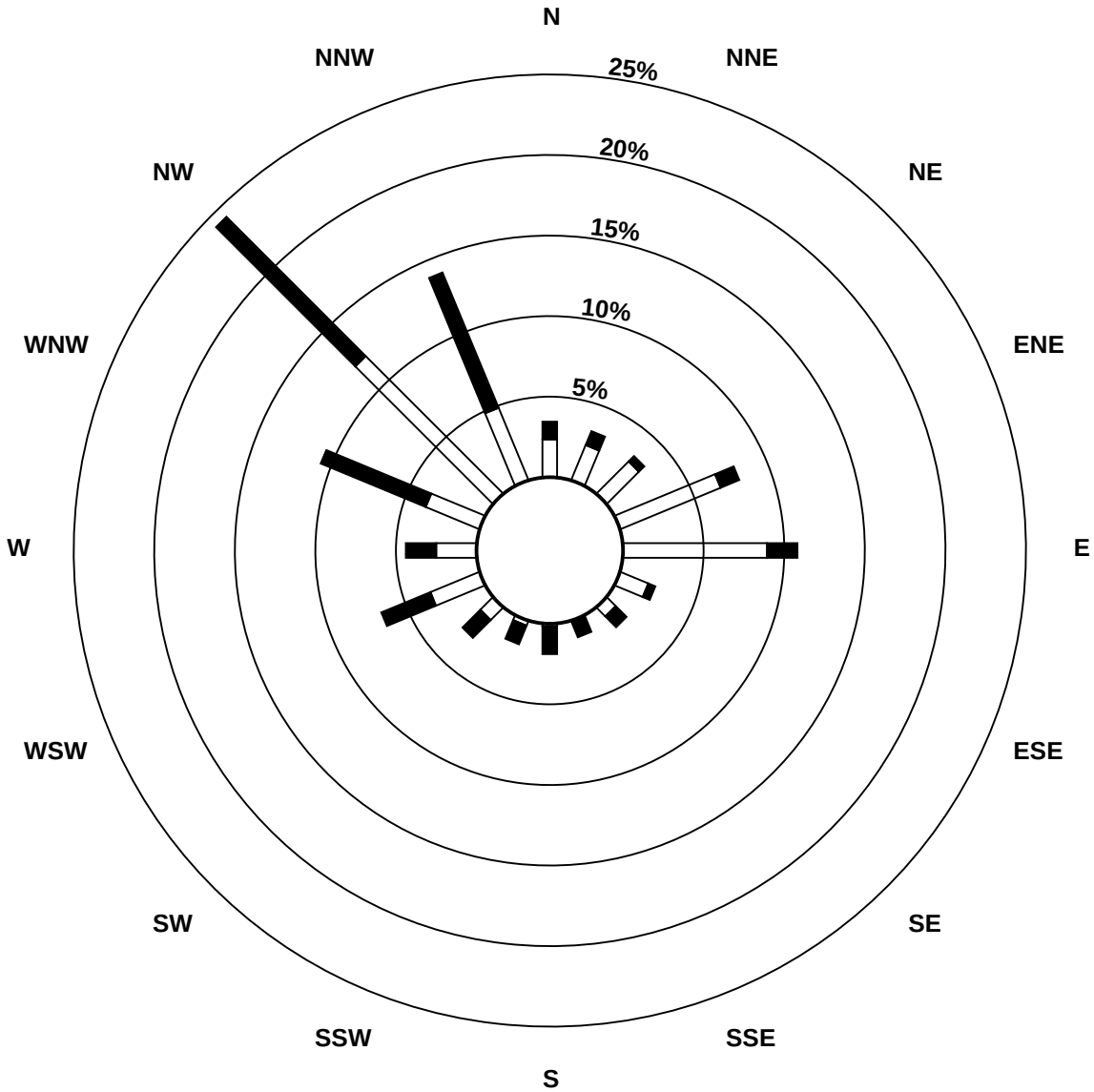
Henry Pirker - February 2014



Pollutant Rose

Methane (CH_4) - ppm

Henry Pirker - February 2014



Pollutant Classes (ppm)

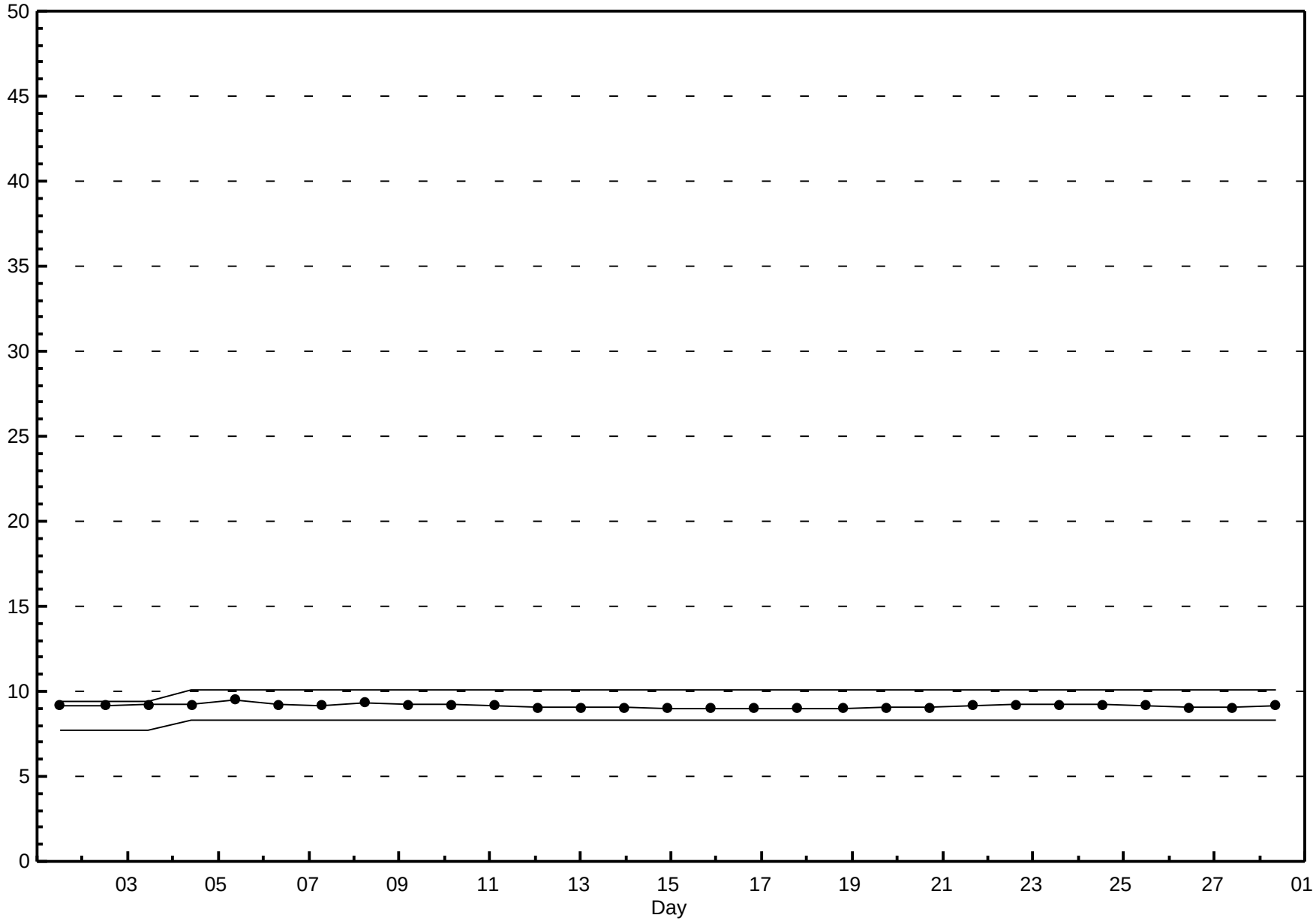
- 1.5 - 2.0
- 2.1 - 3.0
- 3.1 - 10.0
- > 10.0

Peace Airshed Zone Association

Span Responses

Methane (CH_4)

Henry Pirker - February 2014



Peace Airshed Zone Association

Hourly Averages

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 0.26 ppm on Feb 14 15:00

Maximum Daily Average: 0.01 ppm on Feb 14

Minimum Value: 0.0 ppm on Feb 1 04:00

Minimum Daily Average: 0.00 ppm on Feb 7

Maximum Diurnal Average: 0.01 ppm at hour 15

Minimum Diurnal Average: 0.00 ppm at hour 17

Monthly Average: 0.001 ppm

Percentiles: P_1 = 0.00 P_{10} = 0.00 Q_1 = 0.00 Median = 0.00 Q_3 = 0.00 P_{90} = 0.00 P_{99} = 0.00

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
2-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
3-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
4-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
5-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
6-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
7-Feb	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
8-Feb	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
9-Feb	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
10-Feb	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
11-Feb	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
12-Feb	0.0	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
13-Feb	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.00	0.00
14-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.01	0.26
15-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.00
16-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.00	0.00
17-Feb	0.3	0.0	0.0	0.0	0.0	0.0	0.0	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	0.01	0.25
18-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.00	0.00
19-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
20-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
21-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
22-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.03
23-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
24-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
25-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
26-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
27-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
28-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	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	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Diurnal Average	
	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.26	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Diurnal Maximum	

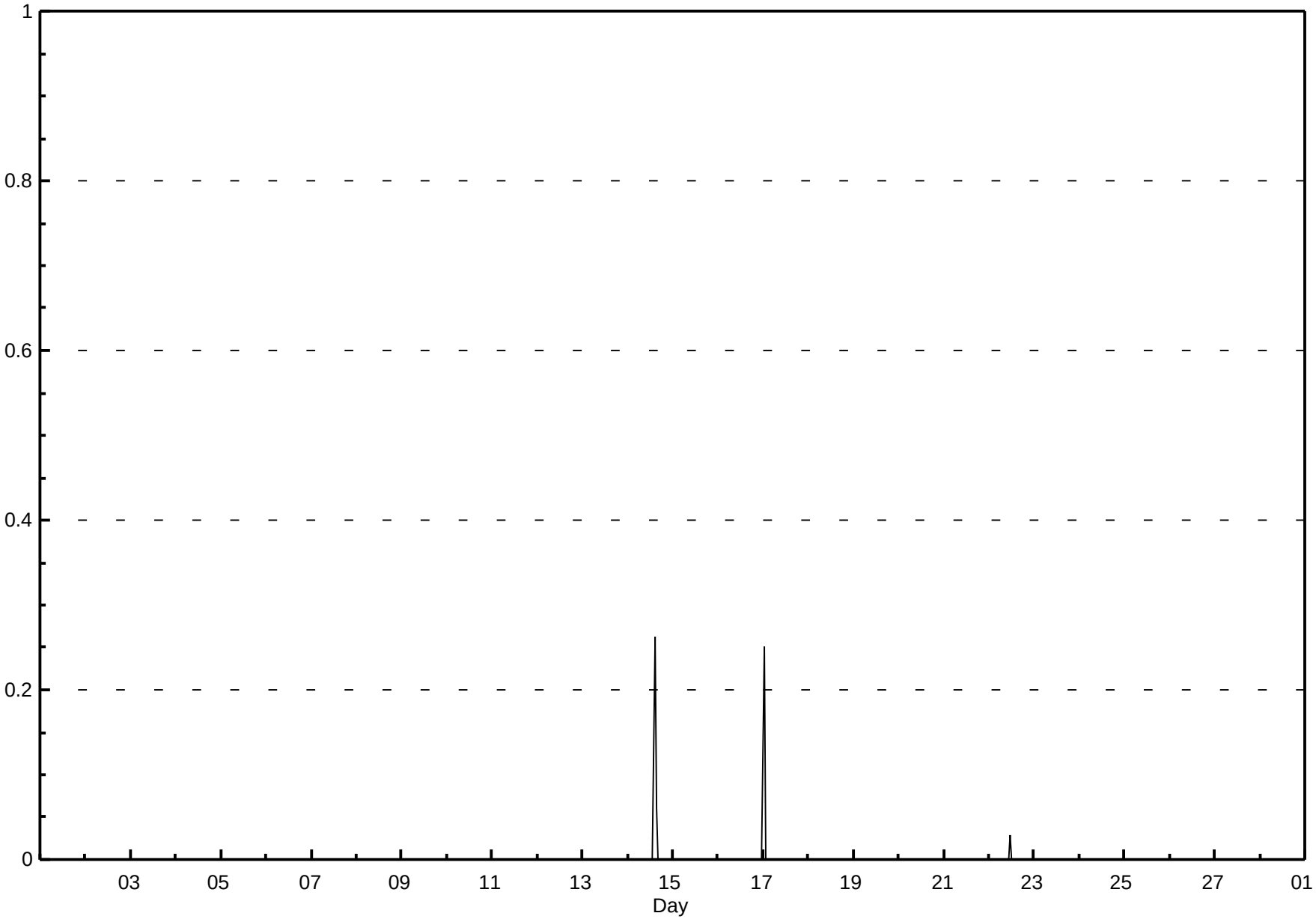
C - Calibration A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - February 2014



Peace Airshed Zone Association

Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - February 2014

Maximum Value: 4.61 ppm on Feb 17 01:00

Maximum Daily Average: 0.20 ppm on Feb 14

Minimum Value: 0.0 ppm on Feb 4 16:00

Minimum Daily Average: 0.00 ppm on Feb 4

Maximum Diurnal Average: 0.17 ppm at hour 1

Minimum Diurnal Average: 0.00 ppm at hour 22

Monthly Average: 0.017 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 in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
2-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
3-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
4-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
5-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
6-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
7-Feb	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
8-Feb	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
9-Feb	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
10-Feb	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
11-Feb	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
12-Feb	0.0	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
13-Feb	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.00	0.00
14-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.1	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.20	2.53
15-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.00
16-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.00	0.00
17-Feb	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.20	4.61
18-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.00	0.00
19-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
20-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
21-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
22-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.94
23-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
24-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
25-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
26-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
27-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
28-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.10	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Diurnal Average	
	4.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94	0.00	0.00	2.53	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Diurnal Maximum	

C - Calibration

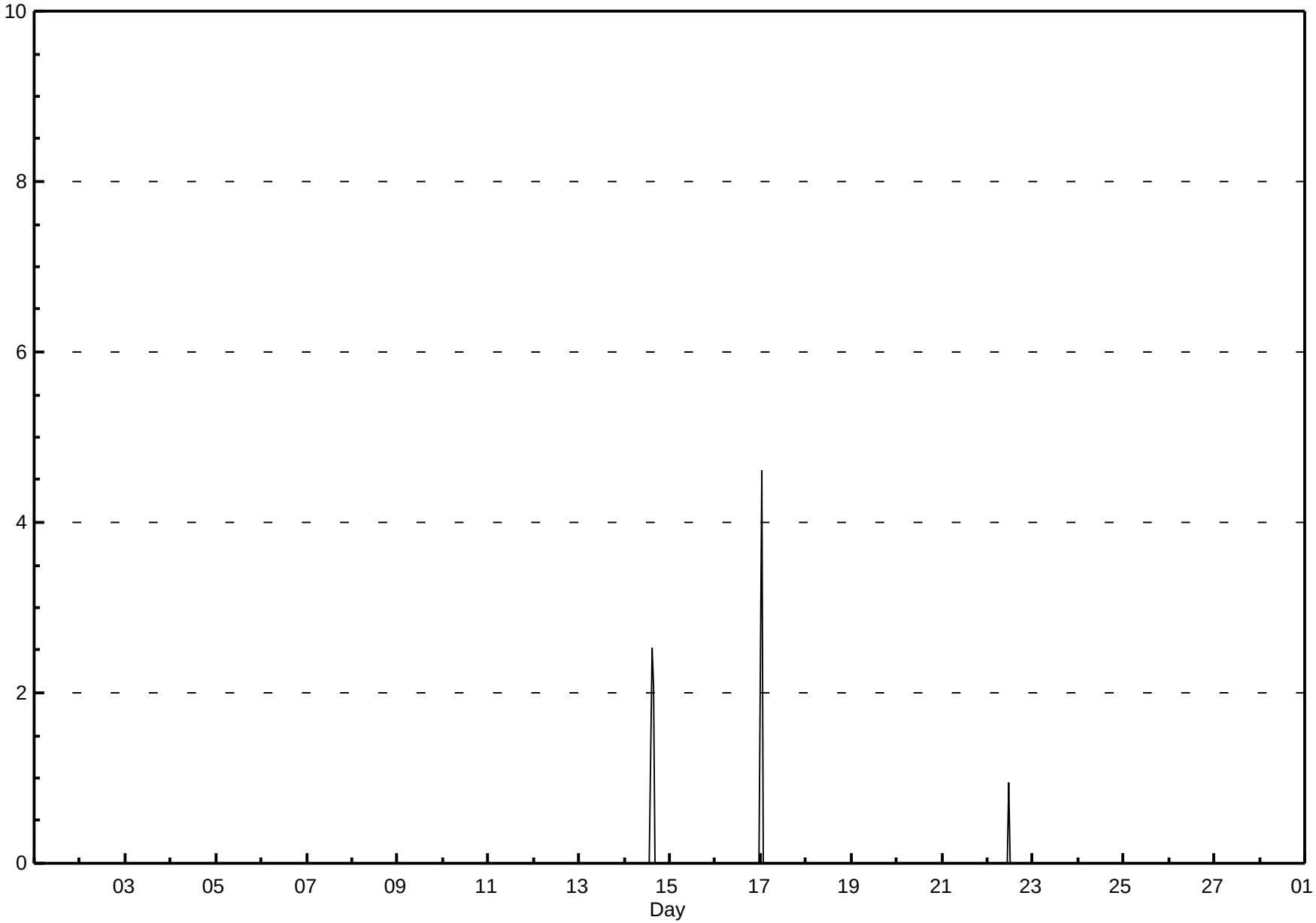
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - February 2014

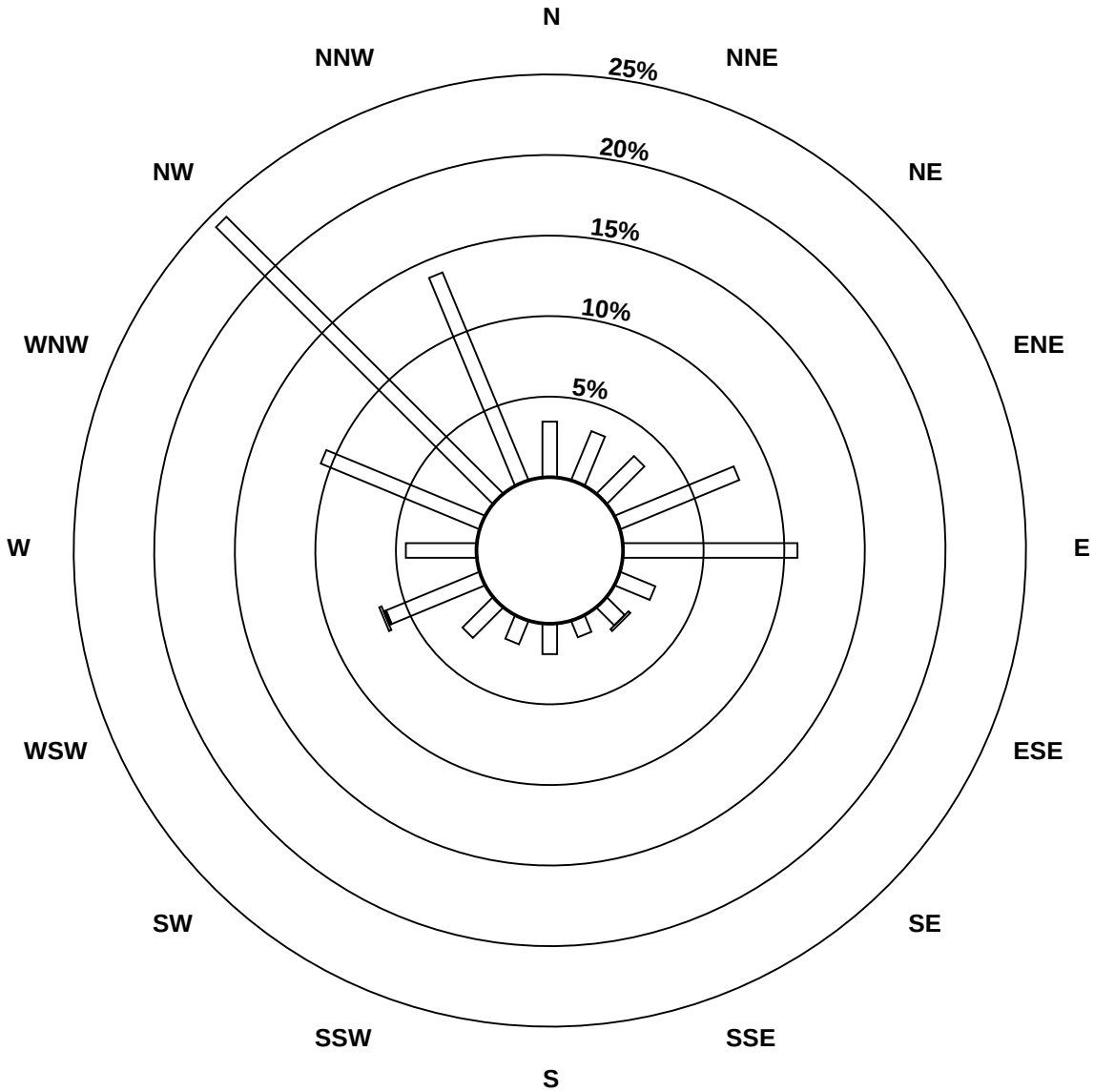


Peace Airshed Zone Association

Pollutant Rose

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - February 2014



Pollutant Classes (ppm)

- 0 - 0.05
- 0.06 - 0.1
- 0.11 - 0.30
- > 0.30

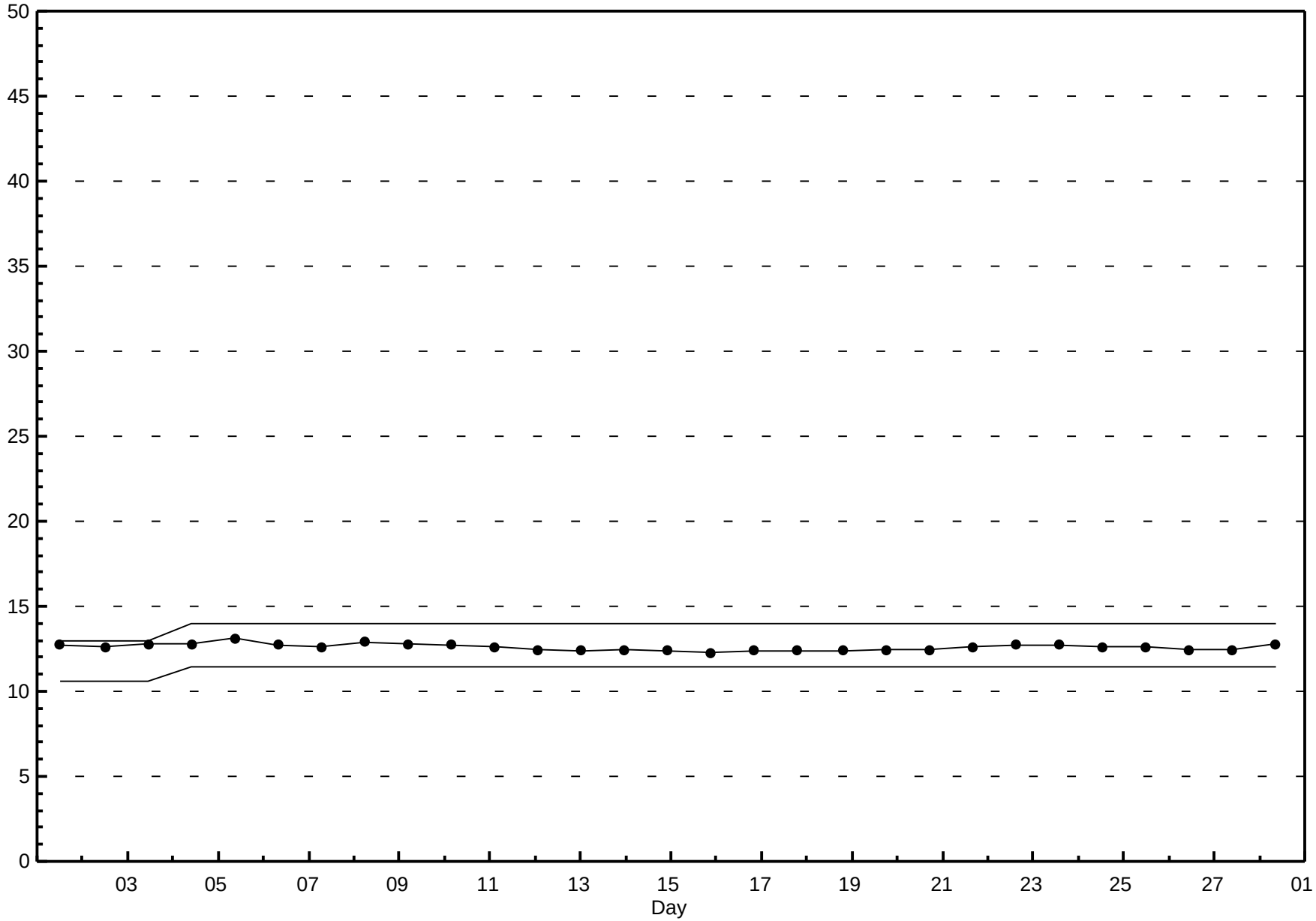
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Span Responses

Non Methane Hydrocarbon (NMHC)

Henry Pirker - February 2014



Peace Airshed Zone Association

Hourly Averages

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

Henry Pirker - February 2014

Number of Exceedences: 1-hr: 0 24-hr: 0

Maximum Value: 25.8 $\mu g/m^3$ on Feb 26 13:00

Maximum Daily Average: 14.4 $\mu g/m^3$ on Feb 26

Minimum Value: 1 $\mu g/m^3$ on Feb 27 16:00

Maximum Diurnal Average: 8.6 $\mu g/m^3$ at hour 8

Monthly Average: 6.76 $\mu g/m^3$

Minimum Daily Average: 1.6 $\mu g/m^3$ on Feb 3

Minimum Diurnal Average: 4.9 $\mu g/m^3$ at hour 16

Percentiles: P_1 = 1.1 P_{10} = 1.8 Q_1 = 3.2 Median = 6.1 Q_3 = 9.4 P_{90} = 12.4 P_{99} = 20.5

Hours in Service:	672
Hours of Data:	641
Hours of Missing Data:	31
Hours of Calibration:	0
Percent Operational Time:	95.4

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	10	9	10	8	7	7	7	7	7	8	7	6	6	5	4	4	3	3	3	2	2	2	1	1	5.3	9.8
2-Feb	2	2	3	2	3	2	3	3	3	3	3	3	2	2	1	1	1	1	1	1	1	1	1	1	2.1	3.2
3-Feb	1	1	1	1	1	1	1	1	1	2	1	1	1	2	2	2	1	2	2	2	2	2	2	2	1.6	2.4
4-Feb	2	2	2	2	2	2	2	4	5	4	4	3	3	3	2	2	2	2	4	4	7	8	6	7	3.6	8.3
5-Feb	6	7	7	8	10	11	9	9	8	7	6	5	5	5	4	3	3	3	4	5	8	8	9	14	6.9	13.9
6-Feb	10	10	9	10	9	7	9	13	10	14	9	7	7	6	7	6	5	5	8	10	11	13	13	18	9.4	18.3
7-Feb	11	10	12	11	12	12	11	11	10	12	17	13	10	8	8	8	8	12	12	11	10	11	8	7	10.6	16.7
8-Feb	6	6	6	5	5	5	4	4	3	3	3	2	2	2	2	2	3	3	5	6	5	10	6	5	4.2	9.5
9-Feb	4	4	4	5	5	6	6	8	8	8	8	8	10	11	7	8	8	7	9	8	22	18	16	10	8.7	21.6
10-Feb	8	8	8	10	10	11	9	13	11	11	12	13	10	7	7	6	5	5	4	4	3	3	3	3	7.7	13.1
11-Feb	3	4	4	5	5	5	5	5	5	4	4	3	3	3	3	3	4	4	4	4	4	3	3	3	3.9	5.1
12-Feb	3	4	5	5	5	5	5	5	6	6	6	5	6	7	7	8	9	11	13	15	16	11	10	11	7.5	15.5
13-Feb	10	10	10	10	10	11	10	11	9	8	8	8	7	7	7	7	7	7	8	9	11	11	11	10	9.0	11.5
14-Feb	12	11	16	13	12	12	12	12	11	12	15	9	9	8	10	11	11	13	12	13	13	13	14	17	12.1	17.1
15-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	M	9	8	8	8	7	7	--	8.9
16-Feb	8	11	10	10	11	13	16	18	19	17	9	8	8	6	5	4	3	3	2	2	2	2	2	5	8.1	19.2
17-Feb	6	5	6	8	8	6	5	4	4	4	3	2	2	1	1	1	1	1	1	1	1	1	1	2	3.3	8.1
18-Feb	2	1	1	1	1	1	2	2	3	3	4	5	6	4	4	4	4	4	5	4	3	3	4	3	3.1	5.9
19-Feb	4	4	5	6	6	6	7	9	M	M	M	M	5	6	6	7	8	9	8	5	5	7	10	7	6.6	10.2
20-Feb	N	N	N	N	N	N	N	N	N	10	10	10	8	8	8	11	9	8	8	7	7	10	8	5	--	10.6
21-Feb	5	5	5	4	4	3	3	4	7	4	3	3	2	3	2	3	3	4	4	6	7	8	6	7	4.5	8.1
22-Feb	12	11	8	6	6	6	9	8	9	9	5	4	3	4	2	2	2	2	4	3	4	6	4	3	5.6	12.3
23-Feb	3	5	5	5	5	5	7	22	7	6	5	5	9	9	8	7	6	7	8	11	15	13	16	21	8.7	22.2
24-Feb	8	7	8	7	7	6	11	15	16	14	9	8	3	2	3	3	3	3	9	14	17	15	21	19	9.5	20.9
25-Feb	12	11	7	5	5	5	7	10	9	8	7	7	14	11	8	9	8	9	10	13	15	13	16	17	9.8	16.7
26-Feb	11	12	10	10	10	13	13	19	17	18	16	20	26	26	13	9	16	9	15	12	11	12	9	17	14.4	25.8
27-Feb	9	8	8	11	6	4	3	2	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	3	3.2	10.7
28-Feb	3	3	3	7	11	10	5	4	5	3	3	3	3	3	2	2	3	4	5	8	6	6	7	8	5.0	11.5
	6.7	6.7	6.8	6.8	6.7	6.8	7.0	8.6	7.8	7.7	6.9	6.2	6.3	5.9	4.9	4.9	5.1	5.2	6.4	6.9	7.8	7.9	7.8	8.4	Diurnal Average	
	12.3	12.2	16.1	12.8	11.8	13.2	15.9	22.2	19.2	18.4	16.7	19.9	25.8	25.7	12.9	11.2	16.0	12.6	14.6	15.3	21.6	18.4	20.9	20.7	Diurnal Maximum	

M - Maintenance N - Not Valid

Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

Peace Airshed Zone Association

Hourly Averages

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

Henry Pirker - February 2014

Peace Airshed Zone Association

Hourly Maximums

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

Henry Pirker - February 2014

Maximum Value: 67.3 $\mu g/m^3$ on Feb 25 00:00

Maximum Daily Average: 25.5 $\mu g/m^3$ on Feb 26

Minimum Value: 1 $\mu g/m^3$ on Feb 27 14:00

Minimum Daily Average: 2.3 $\mu g/m^3$ on Feb 3

Maximum Diurnal Average: 17.6 $\mu g/m^3$ at hour 24

Minimum Diurnal Average: 6.4 $\mu g/m^3$ at hour 16

Monthly Average: 10.42 $\mu g/m^3$

Percentiles: P_1 = 1.3 P_{10} = 2.2 Q_1 = 4.1 Median = 7.9 Q_3 = 12.6 P_{90} = 21.1 P_{99} = 55.5

Hours in Service:	672
Hours of Data:	641
Hours of Missing Data:	31
Hours of Calibration:	0
Percent Operational Time:	95.4

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	13	11	11	9	8	7	8	7	9	14	9	6	6	6	4	5	3	3	3	3	2	2	1	1	6.4	14.4
2-Feb	8	12	7	3	5	3	3	3	3	3	3	3	3	2	2	2	3	2	2	2	2	2	2	2	3.4	11.6
3-Feb	2	1	1	1	1	1	1	1	1	2	2	1	2	2	7	4	3	3	5	4	2	2	2	2	2.3	7.5
4-Feb	2	2	2	2	2	2	3	6	10	5	4	4	3	3	2	2	2	3	6	9	11	12	10	10	5.0	12.2
5-Feb	8	8	8	19	21	15	13	15	13	8	9	5	7	6	4	4	3	3	5	7	16	12	13	22	10.1	22.2
6-Feb	13	11	10	13	10	8	18	35	14	26	11	8	8	10	9	6	5	6	10	14	62	23	21	51	16.8	61.8
7-Feb	17	14	28	13	18	19	13	15	15	18	20	15	12	9	10	8	9	26	25	26	13	25	11	7	16.1	28.2
8-Feb	9	7	8	6	5	5	4	4	4	3	3	3	3	2	2	2	3	4	6	9	6	37	11	6	6.4	37.4
9-Feb	6	4	4	6	6	6	7	23	10	9	12	12	11	12	9	9	10	8	11	11	64	42	45	13	14.6	64.1
10-Feb	10	12	9	12	13	18	10	26	15	12	14	15	15	8	7	8	6	6	5	5	4	3	3	3	9.9	25.7
11-Feb	4	4	5	5	10	5	6	6	5	5	4	4	3	3	3	4	4	5	5	4	4	4	3	3	4.6	9.7
12-Feb	4	4	5	5	5	5	5	6	7	7	6	6	6	8	8	9	11	13	31	32	47	12	12	26	11.7	46.7
13-Feb	12	11	11	11	10	22	11	12	10	9	11	9	7	7	7	7	7	8	9	11	17	12	24	12	11.1	24.3
14-Feb	14	15	20	17	16	13	14	14	13	16	31	16	11	10	12	15	12	14	13	14	14	14	16	21	15.3	31.4
15-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	M	14	10	9	9	7	7	--	14.1
16-Feb	12	12	11	11	12	15	18	19	21	37	10	8	8	7	6	4	4	3	2	2	2	2	3	13	10.0	37.2
17-Feb	7	8	9	9	9	8	6	5	4	4	3	3	2	1	1	1	1	1	1	1	1	1	1	4	3.9	9.2
18-Feb	6	2	1	1	1	2	2	2	4	5	5	7	7	5	4	4	4	4	8	5	3	4	20	4	4.6	19.8
19-Feb	5	5	5	6	7	7	7	12	M	M	M	M	8	7	10	9	9	15	11	11	10	12	35	9	10.0	35.1
20-Feb	N	N	N	N	N	N	N	N	N	12	12	13	10	8	10	19	13	14	9	8	8	19	21	5	--	20.9
21-Feb	6	5	7	5	4	4	4	6	23	7	4	3	3	3	3	4	4	5	11	10	12	11	9	10	6.8	23.4
22-Feb	46	66	9	9	6	7	11	9	12	14	12	6	4	9	2	2	4	3	8	7	7	11	7	8	11.6	65.6
23-Feb	5	6	8	6	8	10	16	64	10	7	9	6	11	11	11	7	6	8	12	25	44	14	47	49	16.6	63.6
24-Feb	12	13	10	11	8	8	13	41	22	22	12	9	7	3	3	5	4	6	13	29	28	27	39	67	17.1	67.3
25-Feb	18	19	13	7	6	7	8	15	17	12	12	11	16	14	11	13	10	11	14	15	33	15	32	59	16.1	58.5
26-Feb	14	18	11	12	14	21	24	41	53	47	23	24	34	37	25	13	28	15	28	26	16	23	16	51	25.5	52.9
27-Feb	13	10	13	13	9	5	4	2	1	2	3	1	1	1	1	1	1	1	5	3	3	4	4	4	4.4	12.9
28-Feb	5	5	5	12	35	26	11	5	6	5	3	3	3	5	3	3	3	6	8	15	10	10	16	22	9.5	35.4
	10.4	10.8	9.0	8.7	9.5	9.6	9.3	15.2	12.1	12.1	9.6	7.7	7.8	7.3	6.6	6.4	6.4	7.2	9.9	11.3	16.1	13.1	15.5	17.6	Diurnal Average	
	45.6	65.6	28.2	18.7	35.4	26.5	23.7	63.6	52.9	47.2	31.4	23.8	33.8	36.7	25.3	19.2	27.9	26.2	31.1	32.0	64.1	42.2	46.8	67.3	Diurnal Maximum	

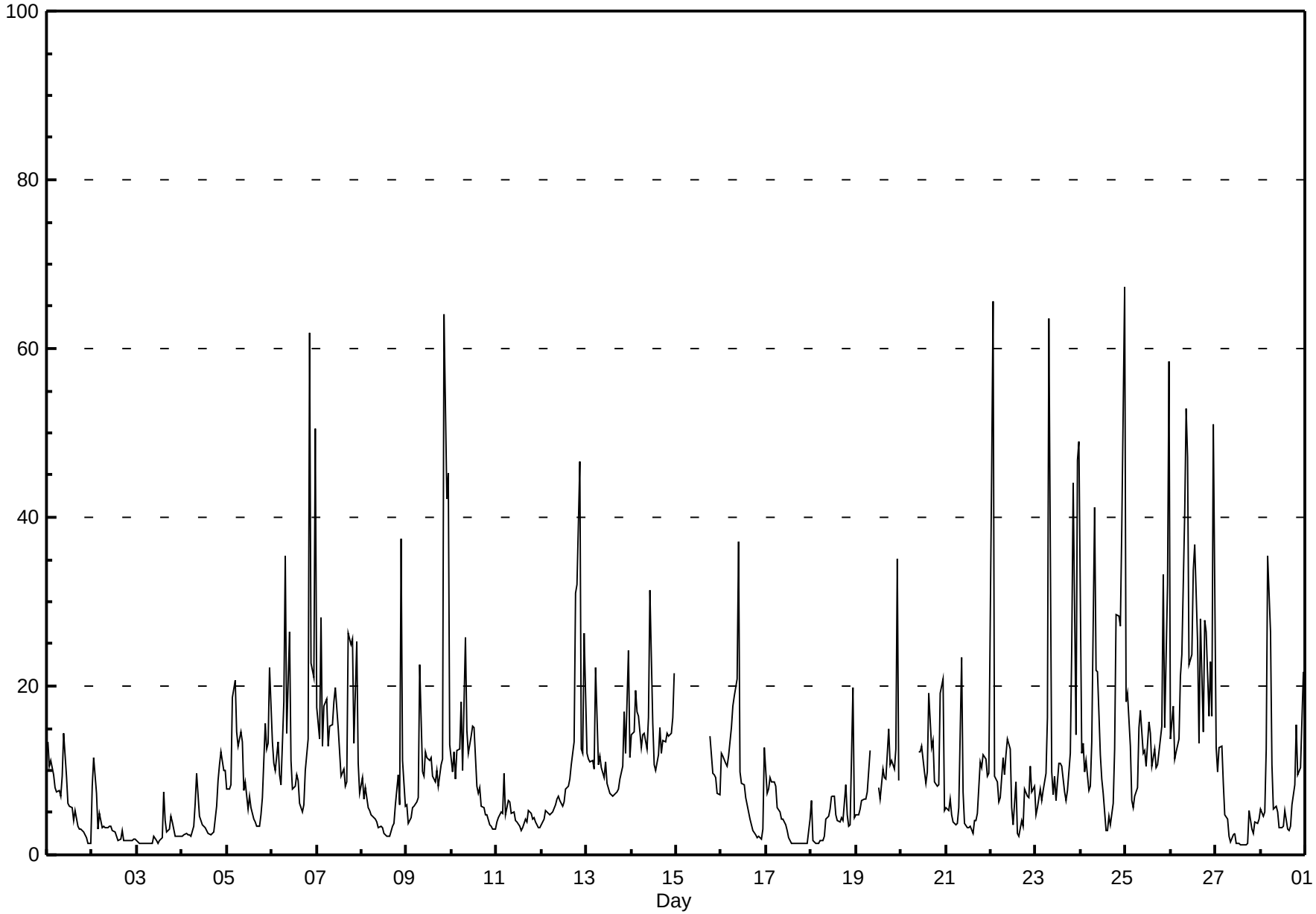
M - Maintenance N - Not Valid

Peace Airshed Zone Association

Hourly Maximums

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

Henry Pirker - February 2014

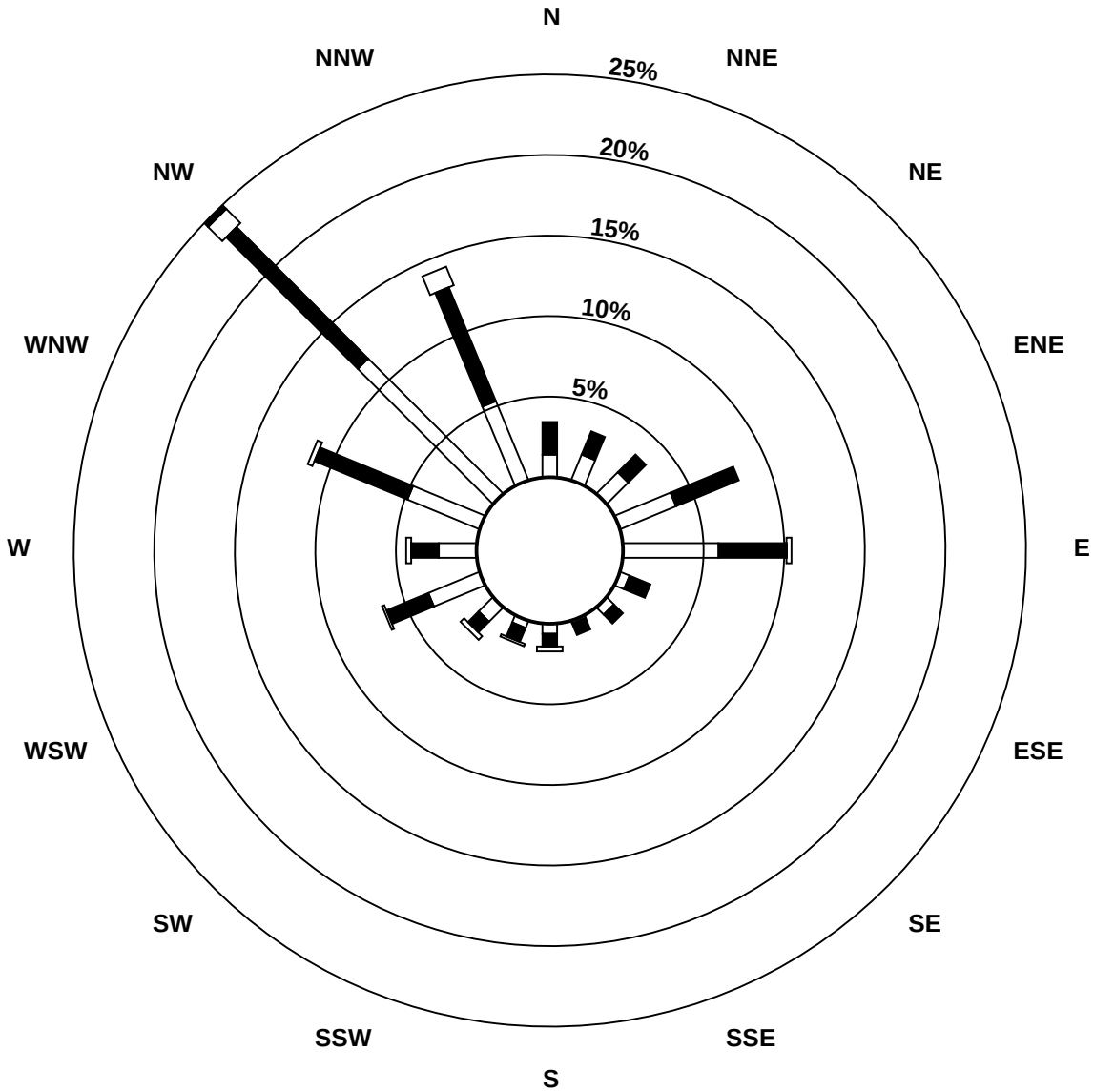


Peace Airshed Zone Association

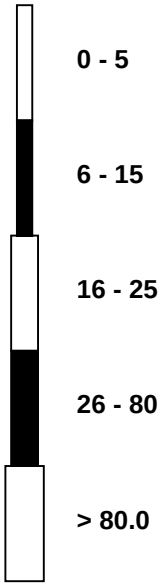
Pollutant Rose

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

Henry Pirker - February 2014



Pollutant Classes ($\mu g/m^3$)



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Henry Pirker - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 4.3 ^{o}C on Feb 17 15:00

Maximum Daily Average: -2.9 ^{o}C on Feb 17

Minimum Value: -32 ^{o}C on Feb 23 08:00

Minimum Daily Average: -25.2 ^{o}C on Feb 9

Maximum Diurnal Average: -10.6 ^{o}C at hour 15

Minimum Diurnal Average: -20.1 ^{o}C at hour 8

Monthly Average: -16.11 ^{o}C

Percentiles: P_1 = -31.5 P_{10} = -26.2 Q_1 = -21.1 Median = -17.0 Q_3 = -10.7 P_{90} = -5.2 P_{99} = 1.6

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

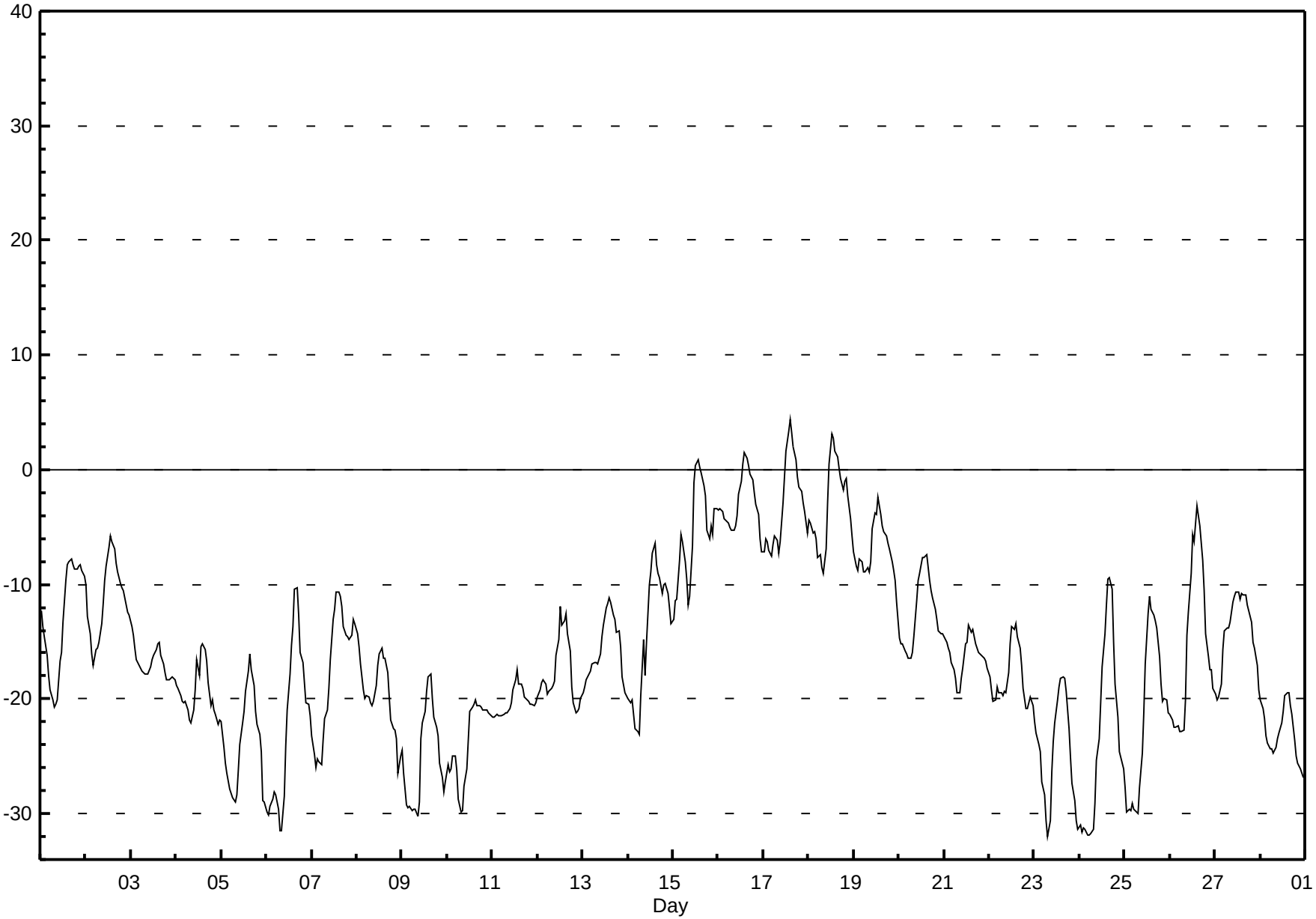
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-12	-14	-15	-16	-18	-19	-20	-21	-20	-20	-17	-16	-13	-10	-8	-8	-8	-8	-9	-9	-8	-8	-9	-9	-13.1	-7.8
2-Feb	-10	-13	-14	-16	-17	-16	-16	-15	-13	-12	-10	-8	-7	-6	-6	-7	-8	-9	-10	-10	-11	-12	-12	-13	-11.3	-5.7
3-Feb	-14	-14	-16	-17	-17	-17	-18	-18	-18	-18	-17	-17	-16	-16	-15	-15	-16	-17	-18	-18	-18	-18	-18	-18	-16.8	-13.6
4-Feb	-19	-19	-20	-20	-20	-20	-21	-22	-22	-21	-19	-17	-18	-15	-15	-16	-17	-19	-21	-20	-21	-21	-22	-22	-19.4	-15.2
5-Feb	-22	-24	-26	-26	-28	-28	-29	-29	-28	-26	-24	-22	-21	-19	-18	-16	-17	-19	-21	-22	-23	-25	-29	-29	-23.8	-16.1
6-Feb	-30	-30	-29	-29	-28	-28	-30	-31	-31	-29	-24	-21	-18	-15	-14	-10	-10	-13	-16	-17	-19	-20	-20	-21	-22.3	-10.3
7-Feb	-23	-25	-26	-25	-26	-26	-24	-22	-21	-19	-17	-13	-12	-11	-11	-11	-12	-14	-14	-15	-15	-14	-13	-13	-17.5	-10.7
8-Feb	-14	-15	-17	-19	-20	-20	-20	-20	-21	-20	-19	-17	-16	-16	-16	-16	-18	-20	-22	-23	-23	-24	-27	-25	-19.4	-14.3
9-Feb	-25	-27	-29	-29	-29	-30	-30	-30	-30	-29	-23	-22	-21	-19	-18	-18	-20	-22	-22	-23	-26	-27	-28	-27	-25.2	-17.9
10-Feb	-26	-26	-26	-25	-25	-26	-29	-30	-30	-28	-26	-24	-21	-21	-20	-20	-21	-21	-21	-21	-21	-21	-21	-22	-23.7	-20.1
11-Feb	-22	-22	-21	-21	-21	-21	-21	-21	-21	-21	-20	-19	-18	-17	-19	-19	-19	-20	-20	-20	-20	-20	-21	-20	-20.3	-17.5
12-Feb	-20	-19	-19	-18	-19	-20	-19	-19	-19	-18	-16	-15	-12	-14	-13	-13	-14	-16	-19	-20	-21	-21	-21	-20	-17.7	-11.9
13-Feb	-19	-19	-18	-18	-18	-17	-17	-17	-17	-16	-15	-14	-12	-12	-11	-12	-13	-13	-14	-14	-15	-18	-19	-20	-15.7	-11.2
14-Feb	-20	-20	-20	-21	-23	-23	-23	-20	-15	-18	-15	-10	-9	-7	-6	-8	-9	-9	-11	-10	-10	-11	-12	-13	-14.3	-6.4
15-Feb	-13	-11	-11	-8	-6	-6	-8	-10	-12	-11	-7	-1	0	1	0	0	-1	-2	-5	-6	-5	-6	-3	-3	-5.6	0.9
16-Feb	-3	-3	-4	-4	-4	-5	-5	-5	-5	-5	-4	-2	-1	1	1	1	0	0	-1	-2	-3	-4	-6	-7	-3.0	1.5
17-Feb	-7	-6	-6	-7	-7	-7	-6	-6	-7	-6	-3	-1	2	3	4	3	2	1	-1	-1	-2	-3	-4	-6	-2.9	4.3
18-Feb	-4	-5	-5	-5	-6	-8	-7	-9	-9	-7	-3	1	3	3	2	1	0	-1	-2	-1	-1	-2	-4	-6	-3.2	3.1
19-Feb	-7	-8	-9	-8	-8	-9	-9	-9	-9	-8	-5	-4	-4	-2	-4	-5	-5	-6	-6	-7	-8	-9	-10	-12	-7.1	-2.4
20-Feb	-15	-15	-15	-16	-16	-16	-16	-16	-15	-11	-10	-9	-8	-8	-8	-7	-10	-11	-11	-12	-13	-14	-14	-14	-12.5	-7.4
21-Feb	-15	-15	-16	-16	-17	-17	-18	-20	-20	-18	-17	-15	-15	-14	-14	-14	-15	-15	-16	-16	-16	-16	-17	-17	-16.2	-13.6
22-Feb	-18	-19	-20	-20	-19	-19	-19	-20	-19	-19	-18	-15	-14	-14	-13	-15	-16	-17	-19	-21	-21	-20	-20	-21	-18.2	-13.5
23-Feb	-22	-23	-24	-25	-27	-28	-31	-32	-31	-26	-24	-22	-20	-19	-18	-18	-18	-19	-23	-25	-27	-29	-31	-31	-24.7	-18.1
24-Feb	-31	-32	-31	-31	-32	-32	-32	-31	-29	-25	-23	-20	-17	-14	-12	-10	-9	-10	-15	-19	-22	-25	-25	-26	-23.1	-9.4
25-Feb	-28	-30	-30	-30	-29	-30	-30	-30	-28	-25	-21	-17	-12	-11	-12	-13	-13	-14	-16	-19	-20	-20	-20	-21	-21.6	-11.1
26-Feb	-21	-22	-22	-22	-22	-23	-23	-23	-20	-14	-12	-9	-6	-6	-3	-4	-5	-8	-11	-14	-16	-17	-17	-19	-15.1	-3.2
27-Feb	-20	-20	-20	-19	-16	-14	-14	-14	-13	-12	-11	-11	-11	-11	-11	-11	-11	-12	-12	-13	-15	-16	-17	-19	-14.2	-10.6
28-Feb	-20	-21	-22	-23	-24	-24	-24	-25	-24	-23	-23	-22	-21	-20	-19	-19	-21	-21	-24	-25	-26	-26	-26	-27	-23.0	-19.4
	-17.8	-18.5	-19.0	-19.1	-19.4	-19.6	-19.9	-20.1	-19.6	-18.1	-15.8	-13.6	-12.1	-11.0	-10.6	-10.7	-11.5	-12.6	-14.3	-15.1	-15.9	-16.7	-17.4	-17.9	Diurnal Average	
	-3.5	-3.4	-3.6	-4.3	-4.3	-4.6	-5.0	-5.3	-5.3	-5.0	-2.9	0.5	3.1	3.4	4.3	3.2	2.0	0.9	-0.6	-1.0	-0.8	-2.3	-3.4	-3.4	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Henry Pirker - February 2014



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Henry Pirker - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 81.3 % on Feb 16 08:00 Maximum Daily Average: 73.4 % on Feb 20

Minimum Value: 36 % on Feb 28 16:00 Minimum Daily Average: 52.1 % on Feb 28

Maximum Diurnal Average: 68.4 % at hour 9 Minimum Diurnal Average: 52.6 % at hour 15

Monthly Average: 63.36 % Percentiles: P_1 = 39.6 P_{10} = 50.1 Q_1 = 58.5 Median = 65.1 Q_3 = 69.4 P_{90} = 72.9 P_{99} = 79.5

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

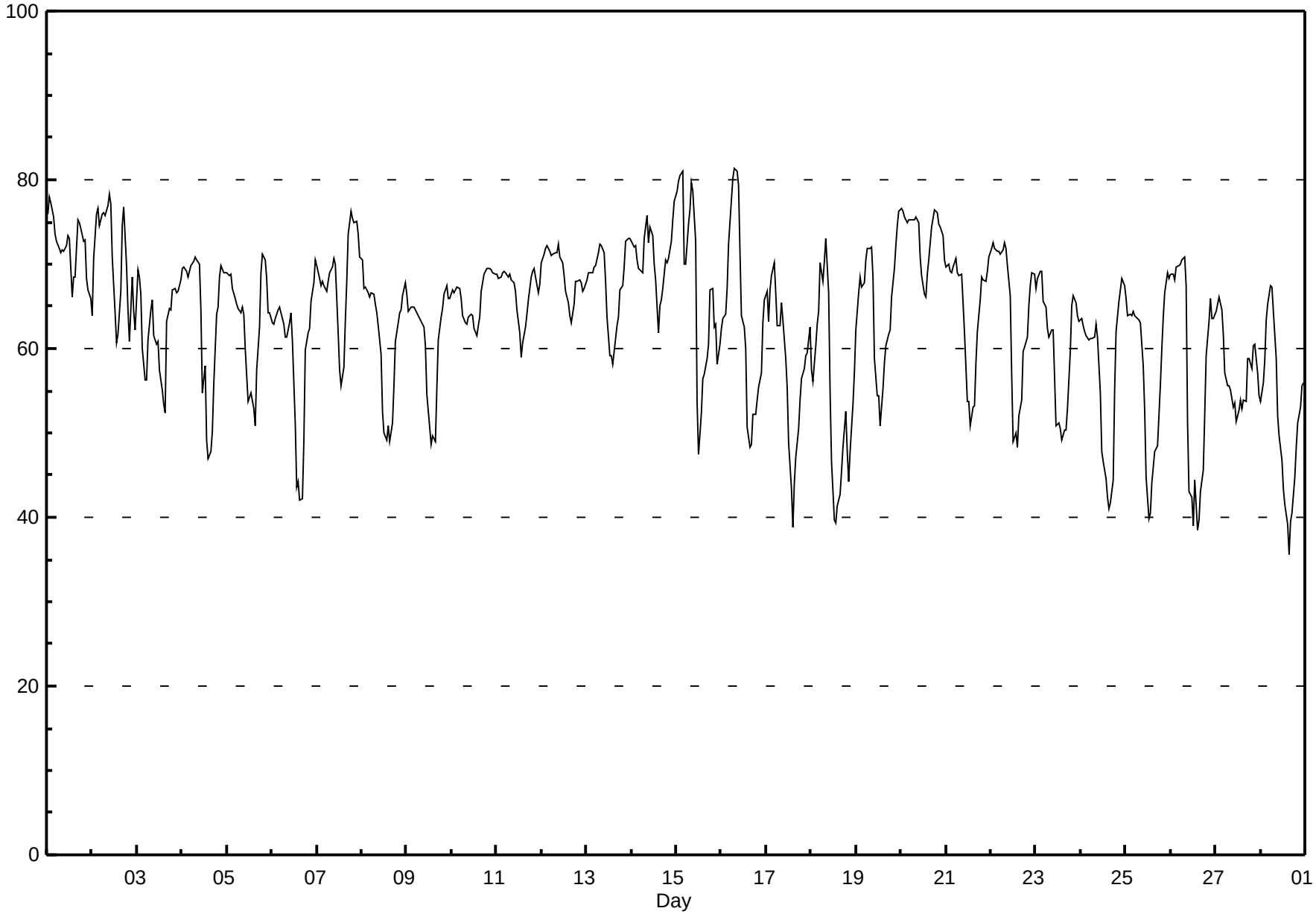
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	76	78	77	76	74	73	72	71	72	72	72	73	73	66	68	68	75	75	74	73	73	68	67	66	72.2	78.0
2-Feb	64	71	76	77	75	76	76	76	77	78	77	71	64	61	62	67	75	77	70	65	61	68	64	62	70.3	78.2
3-Feb	69	68	66	60	56	56	61	65	66	61	61	61	58	55	53	52	63	65	65	67	67	67	67	68	62.4	69.3
4-Feb	70	70	69	69	69	70	70	71	71	70	65	55	58	49	47	48	50	56	64	65	68	70	69	69	63.8	70.8
5-Feb	69	69	69	67	66	65	65	64	65	64	60	54	54	55	53	51	57	63	69	71	70	68	64	64	63.2	71.1
6-Feb	63	63	64	65	65	64	63	61	61	63	64	61	51	43	44	42	42	49	60	62	62	66	68	71	59.0	70.5
7-Feb	70	68	67	68	67	67	68	69	70	71	70	62	57	56	58	63	68	74	76	75	75	75	74	71	68.3	76.3
8-Feb	70	67	67	67	66	67	66	65	64	63	59	53	50	49	51	49	51	56	61	63	64	65	66	68	61.1	70.5
9-Feb	66	64	65	65	65	64	64	64	63	63	60	55	51	49	50	49	55	61	64	65	66	68	66	66	61.1	67.5
10-Feb	67	67	67	67	67	66	64	63	63	64	64	64	62	62	63	64	67	69	69	69	69	69	69	69	66.0	69.5
11-Feb	69	68	68	69	69	69	69	69	68	68	67	65	62	59	61	63	64	66	68	69	69	69	67	68	66.7	69.4
12-Feb	70	71	72	72	72	71	71	71	71	72	71	70	69	67	65	64	63	65	68	68	68	68	67	67	68.9	72.3
13-Feb	68	69	69	69	70	70	71	72	72	71	68	64	59	59	58	60	63	64	67	67	70	73	73	73	67.4	73.1
14-Feb	73	72	72	71	70	69	69	73	76	72	74	73	70	68	62	65	66	67	71	70	71	73	75	77	70.8	77.5
15-Feb	79	80	80	81	70	70	75	76	80	79	73	54	48	52	56	57	59	61	67	67	63	63	58	61	67.0	81.1
16-Feb	62	64	64	67	72	78	80	81	81	79	71	64	63	60	51	48	49	52	52	54	55	57	63	66	63.9	81.3
17-Feb	67	63	67	69	70	67	63	63	65	63	59	55	49	43	39	44	47	51	54	56	58	59	59	63	58.1	70.2
18-Feb	57	56	60	63	64	70	68	70	73	67	55	47	40	39	41	43	45	48	53	48	44	48	53	57	54.6	73.1
19-Feb	62	67	69	67	68	70	72	72	72	68	59	54	54	51	55	58	60	62	62	66	69	72	74	76	65.1	76.3
20-Feb	77	76	76	75	75	75	75	75	76	75	71	69	66	66	69	70	74	75	76	76	75	74	73	70	73.4	76.7
21-Feb	70	70	69	69	70	71	69	69	69	65	62	54	54	51	53	53	58	62	66	68	68	68	69	71	64.5	70.8
22-Feb	72	72	72	72	72	71	72	72	72	70	66	57	49	50	48	52	54	60	60	61	65	67	69	69	64.3	72.5
23-Feb	67	68	69	69	66	65	62	61	62	62	57	51	51	51	49	50	50	53	60	65	66	65	64	63	60.3	69.2
24-Feb	64	63	62	62	61	61	61	61	63	61	55	48	47	45	42	41	42	44	55	62	66	67	68	67	57.0	68.3
25-Feb	66	64	64	64	64	64	64	63	63	58	53	45	40	40	44	48	48	48	56	60	64	67	69	68	57.6	68.9
26-Feb	69	69	68	70	70	70	71	71	67	51	43	42	39	44	39	40	43	46	52	59	63	66	63	64	57.4	70.8
27-Feb	64	65	66	65	62	57	56	56	55	53	53	51	53	54	53	54	54	59	59	58	60	60	57	54	57.4	66.1
28-Feb	54	56	59	63	65	67	67	64	59	52	50	47	43	42	39	36	39	40	45	48	51	53	56	56	52.1	67.4
	67.6	67.8	68.4	68.4	67.8	68.0	68.0	68.2	68.4	66.3	62.8	57.7	54.8	53.1	52.6	53.5	56.6	59.5	62.9	64.2	65.1	66.2	66.2	66.6	Diurnal Average	
	78.7	79.9	80.5	81.1	75.2	77.6	80.1	81.3	81.0	79.3	77.1	73.4	73.0	68.2	68.8	70.5	75.2	76.8	76.5	76.1	75.0	75.1	75.3	77.5	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Henry Pirker - February 2014



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

Solar Radiation (SR) - W/m^2

Henry Pirker - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 456.7 W/m^2 on Feb 28 14:00

Maximum Daily Average: 123.4 W/m^2 on Feb 28

Minimum Value: 0 W/m^2 on Feb 1 01:00

Minimum Daily Average: 19.0 W/m^2 on Feb 11

Maximum Diurnal Average: 284.5 W/m^2 at hour 14

Minimum Diurnal Average: 0.0 W/m^2 at hour 1

Monthly Average: 69.63 W/m^2

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 99.2 P_{90} = 269.9 P_{99} = 432.4

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

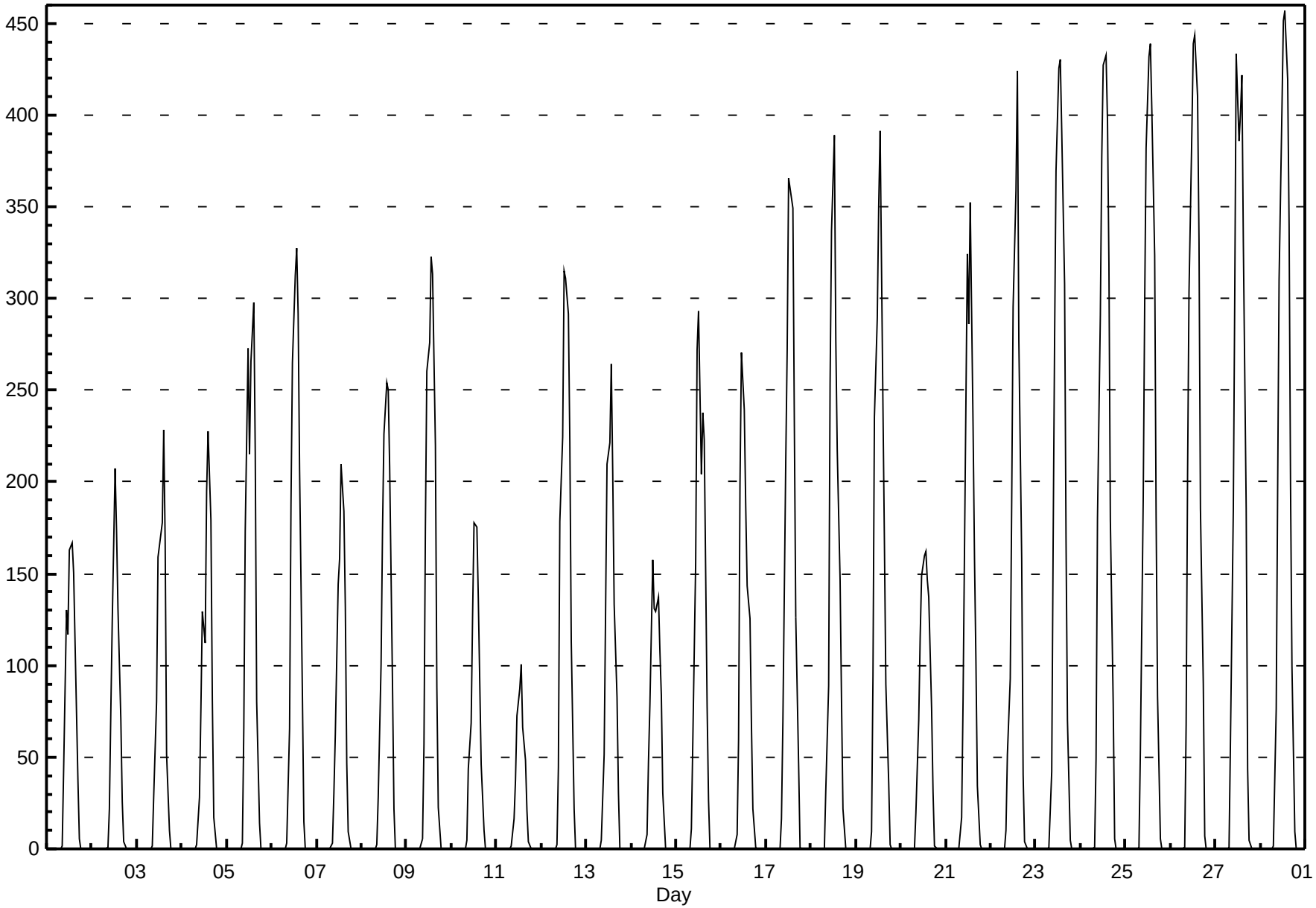
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0	0	0	0	0	0	0	0	2	43	130	117	163	167	151	112	38	5	0	0	0	0	0	0	38.7	166.8
2-Feb	0	0	0	0	0	0	0	0	1	22	75	124	208	174	131	71	25	4	0	0	0	0	0	0	34.8	207.5
3-Feb	0	0	0	0	0	0	0	0	2	29	80	159	165	178	228	167	52	10	0	0	0	0	0	0	44.6	228.2
4-Feb	0	0	0	0	0	0	0	0	2	28	77	129	113	195	227	179	81	17	0	0	0	0	0	0	43.7	227.3
5-Feb	0	0	0	0	0	0	0	0	3	66	173	273	215	266	298	216	81	14	0	0	0	0	0	0	66.8	297.5
6-Feb	0	0	0	0	0	0	0	0	3	66	188	265	312	327	292	207	83	15	0	0	0	0	0	0	73.3	327.1
7-Feb	0	0	0	0	0	0	0	0	3	31	63	144	158	210	184	131	47	9	0	0	0	0	0	0	40.8	209.8
8-Feb	0	0	0	0	0	0	0	0	2	28	101	173	226	254	250	208	89	22	0	0	0	0	0	0	56.4	254.0
9-Feb	0	0	0	0	0	0	0	0	6	57	175	260	276	323	314	219	88	23	0	0	0	0	0	0	72.6	322.9
10-Feb	0	0	0	0	0	0	0	0	5	44	69	127	178	176	136	91	46	10	0	0	0	0	0	0	36.7	178.2
11-Feb	0	0	0	0	0	0	0	0	2	17	38	73	87	101	67	48	21	4	0	0	0	0	0	0	19.0	100.9
12-Feb	0	0	0	0	0	0	0	0	2	45	178	225	315	311	292	222	113	22	0	0	0	0	0	0	71.8	314.7
13-Feb	0	0	0	0	0	0	0	0	5	51	129	210	222	264	205	133	83	30	0	0	0	0	0	0	55.5	264.2
14-Feb	0	0	0	0	0	0	0	0	8	47	79	157	131	130	137	108	83	30	0	0	0	0	0	0	37.9	157.3
15-Feb	0	0	0	0	0	0	0	0	11	59	156	272	293	205	238	223	78	27	0	0	0	0	0	0	65.0	293.1
16-Feb	0	0	0	0	0	0	0	0	8	59	199	271	240	187	144	125	68	22	1	0	0	0	0	0	55.1	270.8
17-Feb	0	0	0	0	0	0	0	0	17	69	211	272	366	355	349	232	127	46	1	0	0	0	0	0	85.2	365.5
18-Feb	0	0	0	0	0	0	0	0	32	89	253	337	389	278	217	147	80	22	0	0	0	0	0	0	76.9	388.8
19-Feb	0	0	0	0	0	0	0	0	9	95	236	290	350	391	239	167	89	36	2	0	0	0	0	0	79.3	391.1
20-Feb	0	0	0	0	0	0	0	0	20	70	115	149	160	162	146	137	77	31	1	0	0	0	0	0	44.5	162.0
21-Feb	0	0	0	0	0	0	0	0	17	81	163	324	286	352	230	159	102	34	2	0	0	0	0	0	72.9	352.2
22-Feb	0	0	0	0	0	0	0	0	10	52	93	188	296	359	424	277	159	41	4	0	0	0	0	0	79.2	424.1
23-Feb	0	0	0	0	0	0	0	0	42	168	277	369	426	430	391	308	169	70	4	0	0	0	0	0	110.6	430.4
24-Feb	0	0	0	0	0	0	0	1	49	180	291	378	428	433	397	319	179	79	5	0	0	0	0	0	114.0	432.7
25-Feb	0	0	0	0	0	0	0	1	53	192	296	382	432	439	403	324	181	84	6	0	0	0	0	0	116.4	439.1
26-Feb	0	0	0	0	0	0	0	1	68	204	303	390	439	444	410	331	186	90	7	0	0	0	0	0	119.7	443.9
27-Feb	0	0	0	0	0	0	0	1	59	186	302	434	386	401	422	330	186	44	5	0	0	0	0	0	114.8	433.8
28-Feb	0	0	0	0	0	0	0	2	76	196	310	403	451	457	419	340	199	100	9	0	0	0	0	0	123.4	456.7
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	18.5	81.1	170.0	246.3	275.3	284.5	262.2	197.6	100.3	33.6	1.8	0.0	0.0	0.0	0.0	0.0	Diurnal Average	
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	76.2	203.6	310.1	433.8	451.1	456.7	424.1	339.7	199.0	100.0	9.2	0.0	0.0	0.0	0.0	0.0	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

Solar Radiation (SR) - W/m^2

Henry Pirker - February 2014



Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - February 2014

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1 Spd	1	2	3	3	2	3	3	2	3	3	4	3	4	8	15	14	16	14	14	14	13	15	12	11	6.7	15.9
Dir	52	176	167	175	312	310	335	341	334	317	305	292	294	277	306	306	294	294	307	312	311	316	346	335	308.6	293.9
2 Spd	9	4	3	3	2	1	1	2	3	1	3	6	5	3	2	4	5	16	17	18	18	17	13	12	6.4	18.1
Dir	342	320	304	340	295	170	5	337	282	348	299	348	355	46	126	295	296	320	316	331	324	332	337	335	327.3	330.6
3 Spd	9	10	14	14	15	8	6	6	9	10	12	12	12	12	10	7	9	8	7	7	7	11	10	7	8.8	14.7
Dir	13	13	12	2	10	9	339	312	323	312	315	319	309	312	316	308	313	320	316	320	329	325	330	341	333.9	10.1
4 Spd	6	5	6	6	5	6	5	3	3	3	4	4	5	4	6	6	5	1	1	4	4	4	2	2	3.0	6.4
Dir	334	331	342	331	331	328	329	337	311	325	322	316	329	296	290	286	290	289	226	167	168	180	303	250	310.9	285.7
5 Spd	3	4	5	3	3	3	3	1	5	6	7	7	5	7	7	6	9	5	3	2	2	3	3	4	4.0	8.8
Dir	232	284	292	288	247	246	249	270	236	237	238	235	249	235	241	264	259	247	229	204	224	313	321	320	253.6	259.3
6 Spd	3	3	0	3	2	1	3	3	3	3	4	4	4	4	6	5	5	1	2	5	5	1	2	3	2.4	5.9
Dir	316	301	100	166	213	241	300	321	310	317	292	291	300	294	292	262	261	189	247	312	344	211	209	337	290.2	292.4
7 Spd	3	4	4	3	3	2	3	3	3	0	0	1	3	3	5	5	4	3	3	3	2	2	4	9	2.1	8.6
Dir	336	327	297	349	305	316	320	318	300	105	229	263	257	268	287	290	290	312	350	293	331	348	67	73	316.8	72.9
8 Spd	7	7	6	7	6	6	7	7	7	5	5	5	4	5	7	7	7	6	5	4	3	2	4	4	5.1	7.4
Dir	72	73	69	70	93	76	74	73	84	71	77	103	108	61	69	68	67	70	44	36	83	17	346	47	69.7	72.7
9 Spd	4	2	4	3	4	3	4	3	3	2	1	2	4	5	2	3	2	4	2	2	1	3	3	3	2.0	4.7
Dir	40	326	320	334	335	316	306	311	321	281	201	269	293	289	358	299	332	85	71	80	279	299	332	358	325.2	288.9
10 Spd	2	2	1	2	2	3	3	3	3	3	2	3	4	7	7	6	7	7	7	7	5	5	6	6	2.7	7.4
Dir	346	298	259	161	305	311	323	308	305	319	300	296	86	91	82	63	65	43	40	46	29	20	22	7	28.5	90.6
11 Spd	4	3	1	0	1	3	4	4	5	4	6	5	5	4	6	5	5	10	11	11	13	13	13	13	2.7	13.4
Dir	13	17	303	295	177	181	235	245	289	300	290	301	315	318	357	33	76	88	97	96	96	94	93	93	72.9	93.4
12 Spd	13	14	13	8	6	7	5	3	5	4	7	4	3	6	6	6	7	4	6	5	5	4	6	5	3.5	13.7
Dir	86	89	88	79	39	53	57	23	318	290	254	263	324	349	23	23	13	19	334	331	325	324	337	324	23.7	88.5
13 Spd	3	4	3	3	2	4	4	6	6	7	5	5	4	5	4	5	4	4	3	4	1	4	4	4	2.6	6.6
Dir	308	317	320	335	166	95	70	70	82	87	64	59	54	79	113	64	78	81	107	123	335	335	318	347	61.1	86.6
14 Spd	2	1	1	1	2	3	3	4	2	2	2	9	3	3	2	7	5	2	5	4	3	3	1	1	0.9	8.9
Dir	338	25	181	293	315	22	305	30	130	299	288	113	129	210	249	257	266	236	219	205	186	183	216	184	229.3	112.7
15 Spd	4	4	5	9	11	6	2	1	5	6	1	1	2	3	3	7	5	3	2	4	6	5	11	11	1.4	11.2
Dir	232	255	226	249	244	254	214	64	164	166	91	169	294	131	88	94	98	64	38	55	75	72	84	87	129.2	244.4
16 Spd	12	12	12	9	8	7	5	4	1	7	8	7	7	9	19	26	23	17	13	10	8	6	3	2	4.1	25.6
Dir	83	88	98	89	80	102	87	82	210	231	239	251	277	267	255	256	251	239	256	261	242	229	193	142	236.3	255.8
17 Spd	4	3	2	1	2	3	7	7	5	7	11	16	8	7	12	19	22	23	20	15	14	11	8	4	8.6	22.6
Dir	126	113	133	237	277	219	229	244	209	233	237	243	290	296	255	265	264	257	257	257	262	267	246	272	254.2	256.5
18 Spd	10	7	8	8	5	5	6	4	2	1	5	4	5	6	8	9	9	6	4	10	11	5	4	6	1.2	10.9
Dir	283	295	297	280	270	249	302	311	339	102	137	134	122	84	84	86	84	91	56	92	92	66	323	328	42.5	92.5
19 Spd	7	5	3	3	3	3	2	3	4	5	4	4	7	6	6	7	5	2	6	2	3	1	3	1	2.1	6.9
Dir	331	325	316	301	311	313	357	96	116	120	129	120	86	61	58	74	78	104	80	36	344	52	58	14	56.6	330.8
20 Spd	2	2	3	4	3	3	3	3	2	2	5	4	3	5	5	5	9	9	10	15	15	13	12	13	4.9	15.2
Dir	328	327	316	318	328	311	334	307	326	67	100	90	61	55	44	359	333	347	312	309	312	311	311	317	330.0	309.3
21 Spd	15	16	15	14	13	11	11	9	9	11	11	9	9	6	7	3	5	3	3	4	3	3	4	2	7.2	15.7
Dir	317	315	310	307	309	311	306	311	309	320	313	306	305	325	325	304	311	316	324	0	89	96	115	58	315.6	315.3
22 Spd	2	3	3	3	5	4	2	3	4	5	8	8	6	9	11	16	15	13	7	6	9	9	8	4	6.4	15.7
Dir	357	327	329	320	336	319	321	308	325	317	334	5	327	308	300	299	315	319	323	330	321	313	320	38	321.3	298.8

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - February 2014

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	Daily Average	Daily Maximum
23 Spd	7	4	3	4	2	1	4	3	3	3	4	4	5	6	6	5	5	4	3	2	4	3	4	5	2.8	6.8
Dir	86	81	81	82	79	359	313	336	330	308	302	302	348	347	336	1	7	356	341	336	317	339	333	331	351.8	85.7
24 Spd	5	4	3	4	3	3	3	3	2	3	4	4	10	9	7	5	6	2	3	2	3	3	3	3	2.9	9.8
Dir	336	313	359	313	323	339	311	305	255	258	297	288	245	247	241	264	269	322	56	65	305	317	340	323	292.3	245.1
25 Spd	3	4	4	2	3	3	2	4	4	5	3	3	2	4	6	7	6	5	5	4	4	3	3	3	3.7	7.1
Dir	337	324	330	302	331	312	302	300	319	299	287	285	284	310	325	325	327	329	338	329	308	339	335	318	318.9	324.7
26 Spd	4	4	3	3	3	2	2	2	3	1	3	3	4	7	4	4	5	7	4	3	4	4	4	3	3.4	7.0
Dir	320	315	335	325	341	303	346	291	335	270	319	317	319	326	14	304	325	337	336	327	327	345	335	312	328.0	325.9
27 Spd	4	4	4	5	8	10	13	10	14	15	20	21	22	22	23	20	13	9	9	8	9	7	9	9	9.6	22.6
Dir	310	326	302	279	305	311	300	292	304	305	304	307	311	313	311	312	307	310	324	20	58	57	81	88	316.4	310.8
28 Spd	10	5	3	2	2	2	4	6	7	12	13	10	9	8	9	8	10	9	9	9	9	8	8	6	7.2	12.8
Dir	83	74	85	125	97	98	67	68	87	98	98	86	92	83	84	76	87	71	67	49	60	75	78	94	81.2	97.9
Spd	2.7	2.4	2.1	1.9	2.3	1.9	2.4	2.1	2.0	1.8	2.6	2.5	2.9	3.0	3.4	4.0	3.9	3.1	3.0	2.8	2.7	2.9	3.0	3.0	Diurnal Average	
Dir	5.2	353.3	347.5	329.2	326.4	326.6	320.4	329.6	315.8	301.1	295.6	302.3	314.8	319.8	316.7	308.2	308.1	321.0	324.5	339.0	340.0	339.5	357.4	7.4		
Spd	14.5	15.7	15.2	13.9	14.7	11.1	13.0	10.1	14.0	15.4	19.9	21.0	22.3	21.6	22.6	25.6	23.2	22.6	20.3	18.1	17.7	16.8	13.4	13.4	Diurnal Maximum	
Dir	317.3	315.3	310.4	306.6	10.1	311.4	299.9	292.4	304.0	305.0	303.8	307.2	311.4	313.4	310.8	255.8	250.5	256.5	256.6	330.6	324.3	332.3	336.6	93.4		

Maximum Speed Value: 26 km/h on Feb 16 16:00
Maximum Daily Speed Average: 9.6 km/h on Feb 27
Maximum Diurnal Speed Average: 4.0 km/h at hour 16

Minimum Speed Value: 0 km/h on Feb 6 03:00
Minimum Daily Speed Average: 0.9 km/h on Feb 14
Minimum Diurnal Speed Average: 1.8 km/h at hour 10

Monthly Average Velocity: 2.54 km/h 327.42 deg

Speed Percentiles: $P_1 = 0.6$ $P_{10} = 2.0$ $Q_1 = 3.0$ Median = 4.4 $Q_3 = 7.0$ $P_{90} = 11.8$ $P_{99} = 21.4$

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

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Percent Operational Time:	100.0

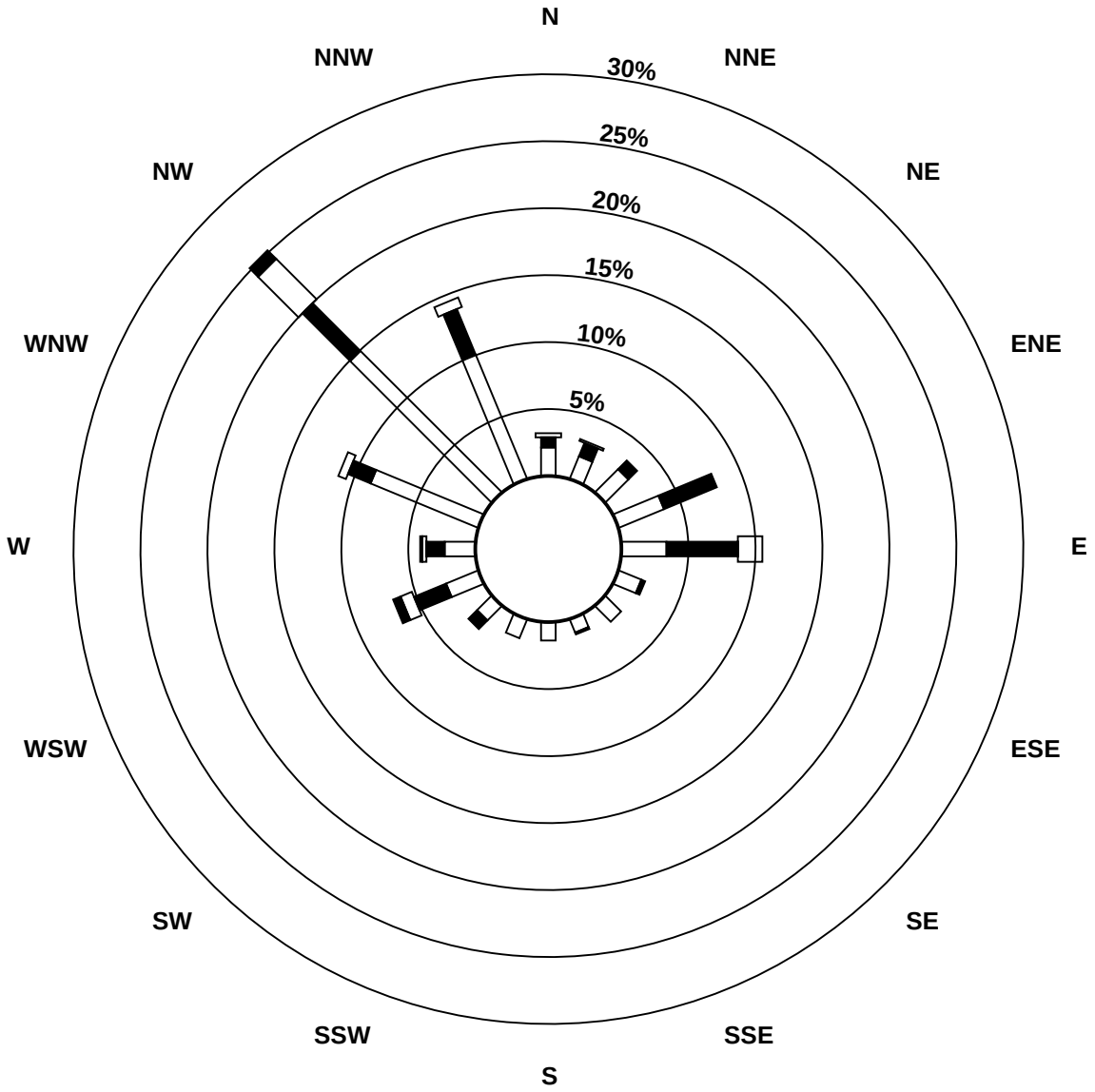
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	38	23	4	0	0	0	65
NorthEast	29	24	0	0	0	0	53
East	34	57	16	0	0	0	107
SouthEast	19	1	0	0	0	0	20
South	21	1	0	0	0	0	22
SouthWest	29	17	3	0	0	0	49
West	45	23	4	7	0	0	79
NorthWest	172	59	40	6	0	0	277
Total	387	205	67	13	0	0	672

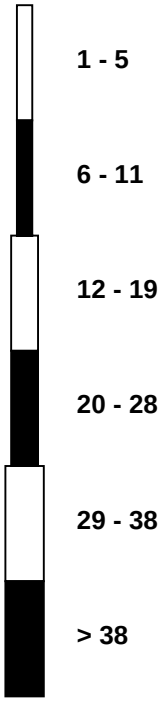
Wind Rose

Wind Speed (WS) (km/h)

Henry Pirker - February 2014



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Henry Pirker - February 2014

Maximum Speed: 26 km/h on Feb 16 16:00

Maximum Daily Speed Average: 12.2 km/h on Feb 27

Minimum Speed: 0 km/h on Feb 11 04:00

Minimum Daily Speed Average: 3.4 km/h on Feb 9

Maximum Diurnal Speed Average: 8.4 km/h at hour 17

Minimum Diurnal Speed Average: 4.2 km/h at hour 8

Monthly Average Speed: 6.10 km/h

Percentiles: $P_1 = 1.5$ $P_{10} = 2.6$ $Q_1 = 3.3$ Median = 4.8 $Q_3 = 7.3$ $P_{90} = 12.1$ $P_{99} = 21.5$

Hours in Service: 672

Hours of Data: 672

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	2	3	3	3	2	3	3	3	3	3	4	3	4	8	16	14	16	14	14	14	14	15	12	11	7.8	15.9
2-Feb	9	6	3	3	3	2	3	2	4	2	3	6	6	3	3	4	5	17	17	18	18	17	14	13	7.6	18.2
3-Feb	9	11	15	14	15	9	7	6	9	10	12	12	13	12	10	7	9	8	7	7	7	11	10	7	9.8	14.9
4-Feb	6	5	6	6	5	6	5	3	3	3	4	5	5	4	6	7	5	2	1	4	4	4	3	2	4.3	6.6
5-Feb	4	4	5	4	3	3	3	1	5	6	7	7	5	7	7	6	9	5	3	2	3	3	4	4	4.6	8.9
6-Feb	3	3	1	4	3	3	3	3	4	3	4	4	4	4	6	5	5	2	3	5	5	3	3	3	3.6	5.9
7-Feb	4	4	5	3	3	3	3	3	3	1	1	2	3	4	5	5	4	3	3	3	3	3	4	9	3.4	8.8
8-Feb	7	8	6	7	7	6	7	8	7	6	5	5	5	5	7	7	7	6	5	4	3	3	4	4	5.7	7.9
9-Feb	4	3	4	4	4	3	4	4	3	2	2	4	5	5	4	4	4	4	2	2	1	3	3	3	3.4	4.8
10-Feb	2	3	2	2	2	3	3	3	3	3	2	3	5	8	7	6	7	7	7	7	6	5	6	6	4.5	7.6
11-Feb	4	3	1	0	2	3	4	4	5	4	6	5	5	4	6	5	6	10	11	11	13	13	13	14	6.4	13.5
12-Feb	13	14	13	8	6	7	5	4	5	4	7	5	3	7	6	6	7	4	6	5	5	5	7	5	6.6	13.8
13-Feb	3	4	3	3	2	5	4	6	7	7	5	6	4	6	5	5	5	4	4	4	3	4	4	4	4.4	6.8
14-Feb	2	2	2	2	3	4	4	5	4	3	3	9	6	6	3	8	5	2	5	5	3	3	3	3	3.9	9.4
15-Feb	4	4	5	9	12	7	3	2	5	6	2	2	2	4	4	7	5	3	2	5	6	6	11	11	5.3	12.0
16-Feb	12	12	12	9	8	7	5	4	2	7	8	8	7	9	20	26	23	17	14	10	8	6	3	3	10.0	25.8
17-Feb	4	3	3	2	3	3	7	7	5	7	11	16	9	7	13	20	23	23	20	15	14	11	8	4	9.9	22.7
18-Feb	10	8	8	9	6	6	7	5	3	2	5	4	5	6	8	10	9	6	8	10	11	5	4	6	6.6	11.0
19-Feb	7	5	3	4	3	3	3	3	5	5	5	4	7	6	6	7	6	3	6	5	4	3	3	2	4.5	6.9
20-Feb	3	2	3	4	4	4	3	3	3	2	6	5	4	6	6	6	10	10	10	15	15	13	13	13	6.8	15.2
21-Feb	15	16	15	14	13	11	11	9	9	11	11	10	9	6	7	4	5	3	3	4	4	4	4	3	8.4	15.7
22-Feb	3	3	4	4	5	4	2	3	4	5	8	9	7	9	11	16	15	13	8	6	9	9	8	6	7.1	15.9
23-Feb	7	4	3	4	2	3	4	3	3	4	4	5	5	6	7	6	5	4	3	2	4	3	4	5	4.1	6.9
24-Feb	5	5	3	4	3	3	3	3	2	3	4	4	10	9	7	5	6	3	4	2	3	3	4	4	4.3	9.9
25-Feb	4	4	4	3	4	3	3	4	4	5	3	3	2	4	6	7	6	5	5	4	4	3	3	3	4.0	7.1
26-Feb	4	4	4	3	3	3	3	2	3	2	4	3	4	7	5	5	5	7	4	4	4	4	4	3	3.9	7.1
27-Feb	4	4	4	5	8	11	13	10	14	15	20	21	23	22	23	20	13	9	9	10	10	7	9	9	12.2	22.7
28-Feb	10	5	3	3	2	3	4	6	7	12	13	10	9	9	9	9	11	9	9	9	9	8	8	7	7.6	12.9
	5.8	5.4	5.2	4.9	4.9	4.6	4.6	4.2	4.8	5.1	6.0	6.4	6.3	6.9	7.9	8.4	8.4	7.3	6.9	6.9	6.8	6.4	6.3	6.0	Diurnal Average	
	14.6	15.7	15.3	14.0	14.9	11.1	13.1	10.3	14.0	15.5	20.0	21.1	22.5	21.7	22.7	25.8	23.3	22.7	20.4	18.2	17.8	17.1	13.6	13.5	Diurnal Maximum	

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

Peace Airshed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Henry Pirker - February 2014

Maximum Value: 99.5 deg on Feb 6 03:00

Minimum Value: 3.2 deg on Feb 22 22:00

Percentiles: P_1 = 5.0 P_{10} = 7.4 Q_1 = 10.9 Median = 17.1 Q_3 = 26.7 P_{90} = 50.0 P_{99} = 85.1

Hours in Service:	672
Hours of Data:	672
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-Feb	37	55	14	40	15	23	26	19	9	14	12	12	15	13	9	8	6	6	5	5	6	8	7	7	55.5
2-Feb	10	41	25	21	62	83	86	50	62	78	22	18	22	41	73	20	8	15	5	5	6	10	12	22	86.2
3-Feb	11	10	9	11	11	15	19	7	9	8	6	7	8	7	10	16	8	7	8	7	9	6	8	9	19.2
4-Feb	12	10	15	5	8	7	9	15	14	9	8	14	13	21	8	15	9	56	62	11	16	10	67	51	67.4
5-Feb	22	15	7	11	17	18	17	37	12	11	9	13	27	19	12	22	8	18	15	13	22	31	19	17	37.2
6-Feb	20	10	99	30	39	62	22	13	17	8	10	9	9	11	7	17	14	54	38	22	18	85	65	25	99.5
7-Feb	49	24	24	20	14	20	20	23	21	75	68	44	25	23	8	6	11	12	24	18	51	65	26	11	75.4
8-Feb	13	21	29	16	17	13	14	13	12	16	17	31	29	18	14	14	14	14	12	16	19	50	18	21	49.7
9-Feb	21	79	17	18	16	27	22	13	18	20	64	52	7	11	73	52	61	11	27	30	32	17	11	15	79.1
10-Feb	15	18	78	20	49	10	8	19	12	10	18	19	54	14	15	22	17	20	19	17	17	14	15	11	77.7
11-Feb	19	25	50	55	59	30	17	15	11	12	7	14	19	33	14	31	18	9	7	6	6	7	7	7	58.9
12-Feb	8	9	9	9	19	16	26	30	17	19	17	30	25	17	23	19	22	26	12	15	21	30	18	20	30.0
13-Feb	31	25	22	41	32	38	20	12	13	14	20	20	23	21	30	28	17	17	22	19	72	21	16	27	71.8
14-Feb	82	84	91	47	37	35	33	35	73	55	67	25	66	68	41	24	25	26	28	25	37	45	94	87	94.0
15-Feb	25	29	24	16	21	24	74	79	12	10	57	88	29	29	32	19	31	27	50	50	11	11	8	8	88.3
16-Feb	7	8	13	9	11	26	18	16	59	20	12	14	14	15	8	7	7	6	12	9	7	11	47	67	67.4
17-Feb	14	24	55	72	54	38	18	11	21	11	14	6	26	20	14	9	9	5	5	6	9	7	11	24	72.4
18-Feb	10	12	17	24	31	23	19	20	27	50	13	18	29	17	8	9	9	16	64	14	6	40	38	16	64.1
19-Feb	7	11	25	51	51	22	53	19	19	14	55	25	13	20	18	18	28	69	18	74	36	73	31	79	78.7
20-Feb	31	31	34	24	50	23	16	22	24	69	35	32	34	25	24	31	33	15	11	6	5	5	6	6	69.2
21-Feb	6	5	5	5	6	5	6	15	12	7	6	8	14	19	11	42	19	22	22	19	41	36	53	43	52.8
22-Feb	35	39	15	24	9	15	23	19	16	16	14	18	26	13	13	10	8	7	10	8	6	3	6	51	51.4
23-Feb	12	12	15	10	15	63	12	9	26	18	13	14	18	17	18	20	18	21	15	23	11	10	8	7	62.8
24-Feb	8	26	29	20	26	21	18	27	27	33	21	19	9	10	9	25	24	45	16	35	67	37	38	14	67.1
25-Feb	28	11	13	23	23	15	15	16	11	12	14	17	37	15	10	6	13	15	12	12	15	12	14	34	37.5
26-Feb	20	17	18	22	17	46	32	36	26	74	23	30	39	9	28	69	16	8	11	58	20	11	19	17	73.8
27-Feb	18	45	17	23	27	9	7	11	5	5	5	6	7	6	5	5	6	8	9	42	12	14	11	11	44.6
28-Feb	7	13	27	29	35	51	13	9	11	7	8	16	14	20	15	17	14	13	10	13	13	10	9	10	51.5
	82.0	83.5	99.5	72.4	61.8	83.5	86.2	78.6	72.8	78.1	68.3	88.3	65.7	68.1	73.3	68.7	60.9	68.8	64.1	74.0	71.8	85.3	94.0	87.2	

PAZA
Evergreen Park Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 6.6 ppb on Feb 12 14:00

Maximum Daily Average: 1.1 ppb on Feb 12

Minimum Value: 0 ppb on Feb 3 06:00

Minimum Daily Average: 0.1 ppb on Feb 28

Maximum Diurnal Average: 0.7 ppb at hour 14

Minimum Diurnal Average: 0.2 ppb at hour 1

Monthly Average: 0.33 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.1 Median = 0.2 Q_3 = 0.4 P_{90} = 0.7 P_{99} = 1.6

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	0	0	0	0	0	0	0	0	0.2	0.7
2-Feb	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
3-Feb	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	1	0	0	0.2	0.7
4-Feb	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
5-Feb	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
6-Feb	0	0	0	0	0	0	0	A	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0.2	0.4
7-Feb	0	0	0	0	0	0	A	0	0	0	0	0	0	1	1	2	1	1	0	0	0	0	0	0	0.4	1.6
8-Feb	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
9-Feb	0	0	0	0	A	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0.3	0.7
10-Feb	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.2	0.6
11-Feb	0	0	A	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0.3	0.9
12-Feb	0	A	0	0	0	0	0	0	0	1	1	1	4	7	2	1	1	1	0	1	1	1	1	2	1.1	6.6
13-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	A	0.6	1.1
14-Feb	0	0	0	0	0	0	0	0	1	1	1	1	0	1	1	1	0	0	0	0	0	0	A	0	0.4	0.9
15-Feb	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	A	0	0	0.3	1.0
16-Feb	0	0	0	0	0	1	0	0	1	1	1	1	1	1	0	0	0	0	0	0	A	1	0	0	0.4	1.3
17-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.3
18-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.4
19-Feb	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.6
20-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	1	1	1	1	0.3	0.9
21-Feb	1	1	1	0	0	0	1	1	0	1	1	2	1	0	0	A	0	0	0	0	0	0	0	0	0.5	1.6
22-Feb	0	0	0	0	0	0	0	0	0	0	1	1	0	1	A	0	0	0	0	0	0	0	0	0	0.4	0.7
23-Feb	0	0	0	0	0	0	0	0	0	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.6
24-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	1	0	0	0	0	0	0	0.3	1.0
25-Feb	0	0	0	0	0	0	0	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	0	0	0.6	1.4
26-Feb	0	0	0	0	0	0	0	1	1	2	A	1	1	1	1	0	0	0	1	1	0	0	0	0	0.5	1.8
27-Feb	0	0	0	0	1	1	1	1	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.4	1.0
28-Feb	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.6	0.7	0.5	0.5	0.4	0.3	0.3	0.3	0.2	0.3	0.2	0.2	Diurnal Average	
	0.8	1.0	1.1	1.0	0.9	0.9	1.0	0.9	0.9	1.8	1.3	1.6	4.0	6.6	1.9	1.6	1.4	0.9	0.9	0.9	0.8	1.0	1.1	1.6	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

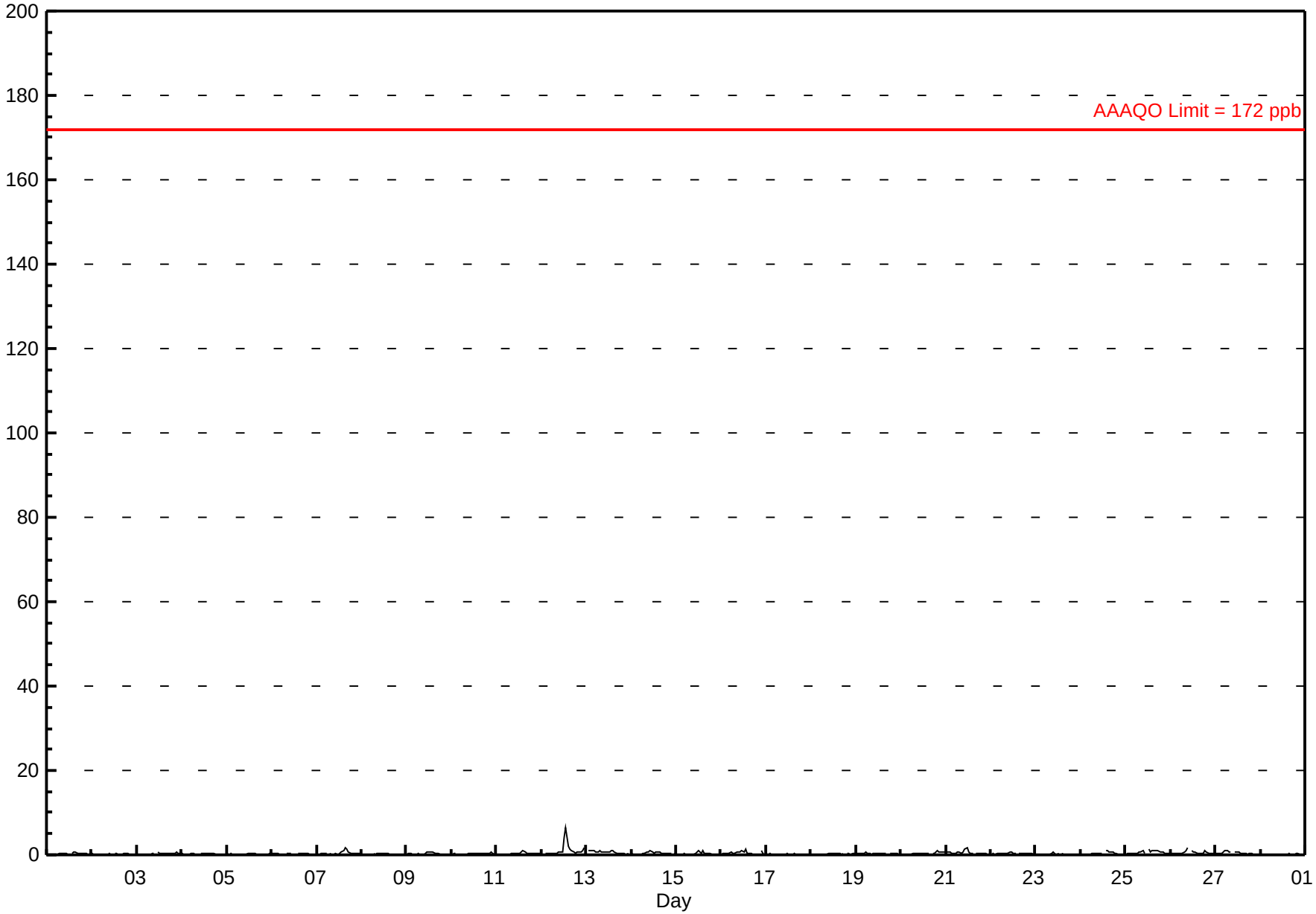
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - February 2014



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - February 2014

Maximum Value: 9.1 ppb on Feb 12 14:00

Maximum Daily Average: 2.2 ppb on Feb 12

Minimum Value: 0 ppb on Feb 28 07:00

Minimum Daily Average: 0.6 ppb on Feb 28

Maximum Diurnal Average: 1.4 ppb at hour 13

Minimum Diurnal Average: 0.7 ppb at hour 1

Monthly Average: 0.90 ppb

Percentiles: $P_1 = 0.4$ $P_{10} = 0.5$ $Q_1 = 0.6$ Median = 0.8 $Q_3 = 1.0$ $P_{90} = 1.4$ $P_{99} = 2.4$

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	0	1	0	1	1	1	1	1	1	1	1	1	A	1	2	1	1	1	1	1	1	1	1	1	0.8	1.7
2-Feb	1	1	1	1	1	0	1	1	1	1	1	A	1	1	1	0	1	1	1	1	2	1	0	1	0.7	1.6
3-Feb	1	0	1	0	0	0	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.3
4-Feb	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	0	0	1	1	0.7	1.1
5-Feb	1	1	1	0	1	0	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9
6-Feb	1	1	1	1	1	1	1	A	1	1	1	C	C	C	1	2	1	1	1	1	1	0	1	1	0.8	1.8
7-Feb	0	1	1	1	1	1	A	1	0	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1.0	2.4
8-Feb	1	1	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	0.7	1.1
9-Feb	1	1	1	1	A	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
10-Feb	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1
11-Feb	1	1	A	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.4
12-Feb	1	A	1	1	1	1	1	1	1	1	2	3	8	9	6	2	2	2	1	1	1	2	2	2	2.2	9.1
13-Feb	A	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1.2	1.8
14-Feb	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	A	1	1.0	1.6
15-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	0	A	1	1	0.8	1.8
16-Feb	1	1	1	1	1	1	1	1	1	1	1	2	2	3	1	1	1	1	1	1	A	2	1	1	1.1	2.5
17-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	1	1	1	1	0.7	1.4
18-Feb	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.7	1.0
19-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.8	1.1
20-Feb	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	2	1	0.9	1.7
21-Feb	1	2	1	1	1	1	1	1	1	1	2	2	2	1	1	A	1	1	1	1	1	1	1	1	1.1	2.2
22-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.9	1.3
23-Feb	1	0	0	0	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	1	1	1	1	1	0.7	1.2
24-Feb	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	2	1	1	1	0	1	1	0.9	1.8
25-Feb	1	1	1	1	1	1	1	1	1	1	1	A	3	1	1	2	2	1	1	1	1	1	1	1	1.2	2.5
26-Feb	1	1	1	1	1	1	1	1	2	3	A	2	1	1	1	1	1	1	2	1	1	1	1	1	1.1	2.7
27-Feb	1	1	1	1	1	1	2	1	1	A	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1.0	1.7
28-Feb	0	1	1	0	1	0	0	0	A	1	1	1	1	1	0	1	1	0	1	1	1	1	1	1	0.6	1.0
	0.7	0.8	0.8	0.7	0.8	0.7	0.8	0.8	0.8	1.0	1.0	1.1	1.4	1.3	1.2	1.1	0.9	0.9	0.8	0.8	0.8	0.9	0.8	0.7	Diurnal Average	
	1.3	1.6	1.8	1.6	1.5	1.4	1.7	1.4	1.7	2.7	2.2	3.2	7.5	9.1	6.5	2.4	2.4	1.8	1.7	1.5	1.6	1.9	1.9	2.2	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

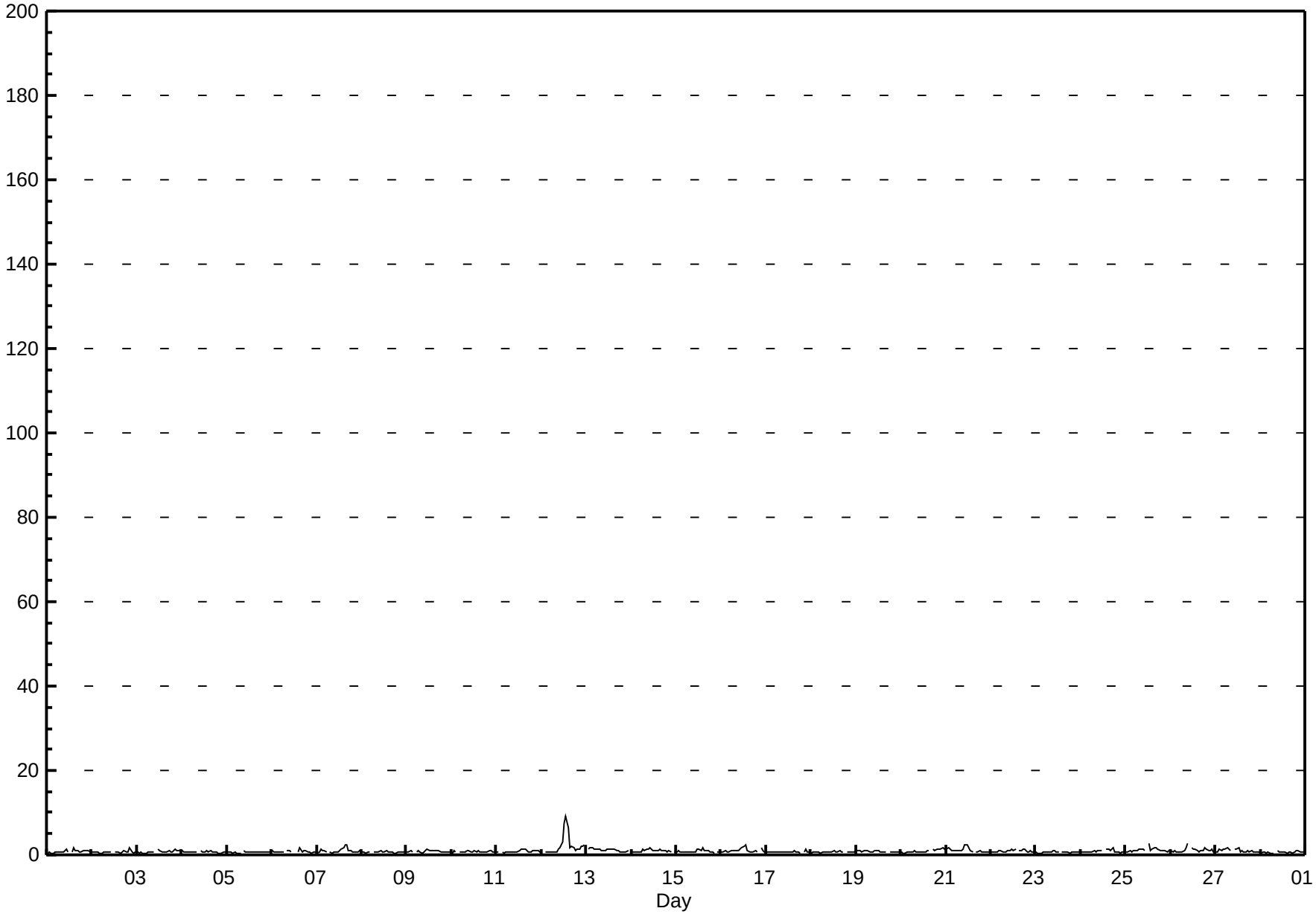
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

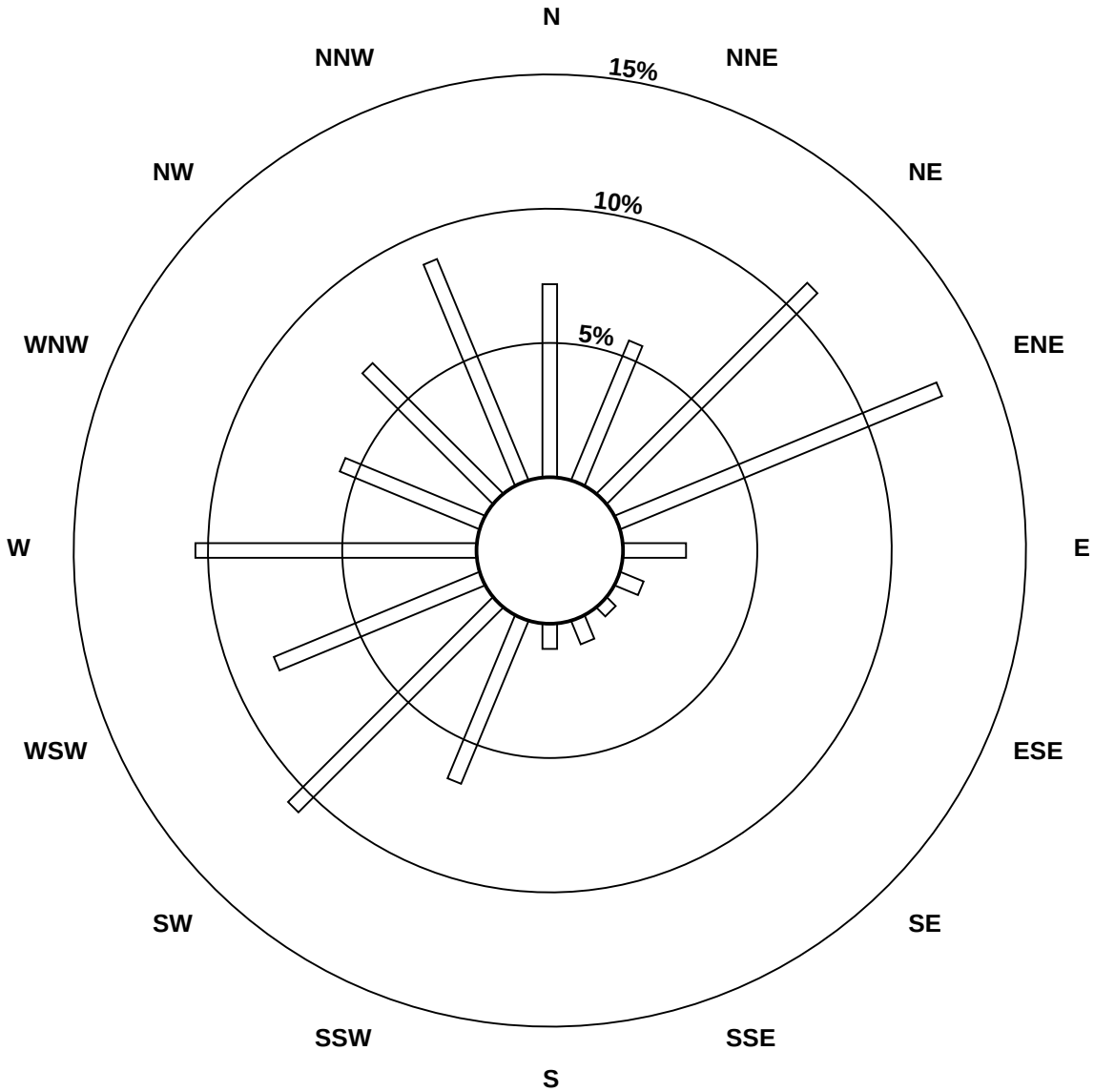
Evergreen Park - February 2014



Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - February 2014



Pollutant Classes (ppb)

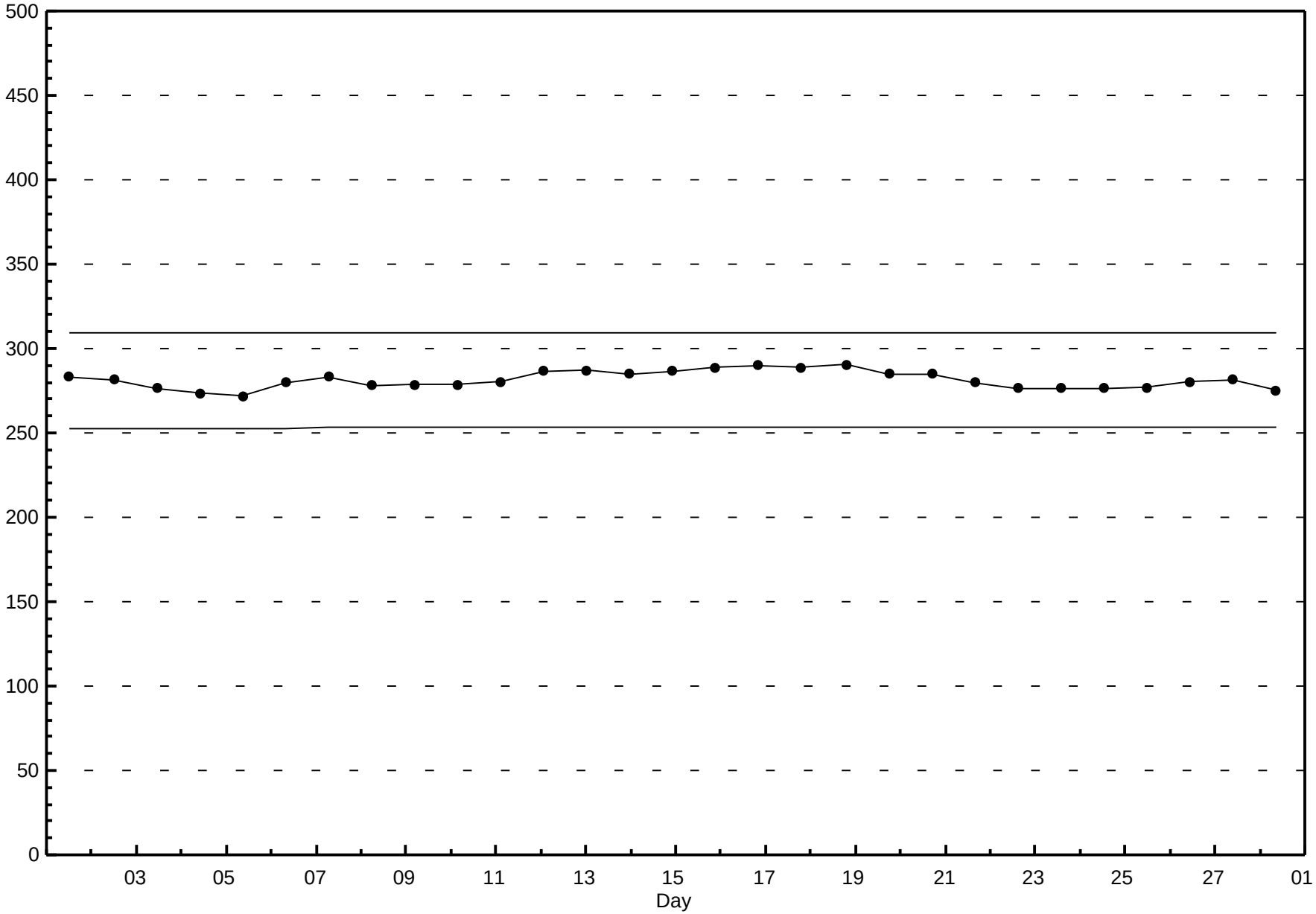
- 0 - 10
- 11 - 20
- 21 - 60
- 61 - 110
- 111 - 172
- > 172

Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Evergreen Park - February 2014



Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 2.0 ppb on Feb 26 10:00 Maximum Daily Average: 1.0 ppb on Feb 26

Minimum Value: 0 ppb on Feb 6 14:00 Minimum Daily Average: 0.1 ppb on Feb 28
Maximum Diurnal Average: 0.6 ppb at hour 10 Minimum Diurnal Average: 0.3 ppb at hour 17
Monthly Average: 0.42 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.2$ $Q_1 = 0.2$ Median = 0.4 $Q_3 = 0.5$ $P_{90} = 0.7$ $P_{99} = 1.5$

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	1	0	0	1	0	0	1	1	1	1	1	0	A	0	1	0	0	0	0	0	0	0	0	0	0.5	0.8
2-Feb	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
3-Feb	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2
4-Feb	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
5-Feb	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
6-Feb	1	1	1	1	1	0	1	A	1	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9
7-Feb	0	1	1	1	1	1	A	1	0	0	1	0	0	0	0	0	0	0	1	1	1	1	1	0	0.5	0.8
8-Feb	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
9-Feb	0	1	1	1	A	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
10-Feb	0	1	1	A	1	1	1	0	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.6
11-Feb	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
12-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0.4	0.9
13-Feb	A	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0.4	1.0
14-Feb	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	0	0	0	A	1	0.8	1.8
15-Feb	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	1	0	0	A	0	0	0.5	0.6
16-Feb	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	A	0	0	0	0.4	0.6
17-Feb	0	0	0	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.4	1.5
18-Feb	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	A	0	0	0	1	1	0.3	0.9
19-Feb	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.8
20-Feb	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	A	0	1	1	1	1	1	0	0.5	0.8
21-Feb	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0.5	0.6
22-Feb	0	0	0	1	1	1	1	1	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.4	0.7
23-Feb	0	0	0	0	0	0	0	1	1	1	1	1	1	A	1	0	0	0	0	0	0	0	1	1	0.5	1.3
24-Feb	1	1	1	1	1	1	1	1	1	0	0	0	A	1	0	0	0	0	0	0	0	1	1	1	0.5	0.8
25-Feb	1	1	1	1	1	1	1	1	1	1	1	A	0	0	1	1	1	1	1	1	1	1	1	1	0.8	1.0
26-Feb	1	1	1	0	1	1	1	2	2	2	A	1	1	1	1	0	0	0	1	1	2	1	1	1	1.0	2.0
27-Feb	1	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.2
28-Feb	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	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	Diurnal Average	
	1.2	1.1	1.0	1.0	1.5	1.1	1.2	1.9	1.5	2.0	1.8	1.4	1.2	0.9	0.7	0.6	0.6	0.6	0.6	1.1	1.7	1.4	1.3	1.3	Diurnal Maximum	

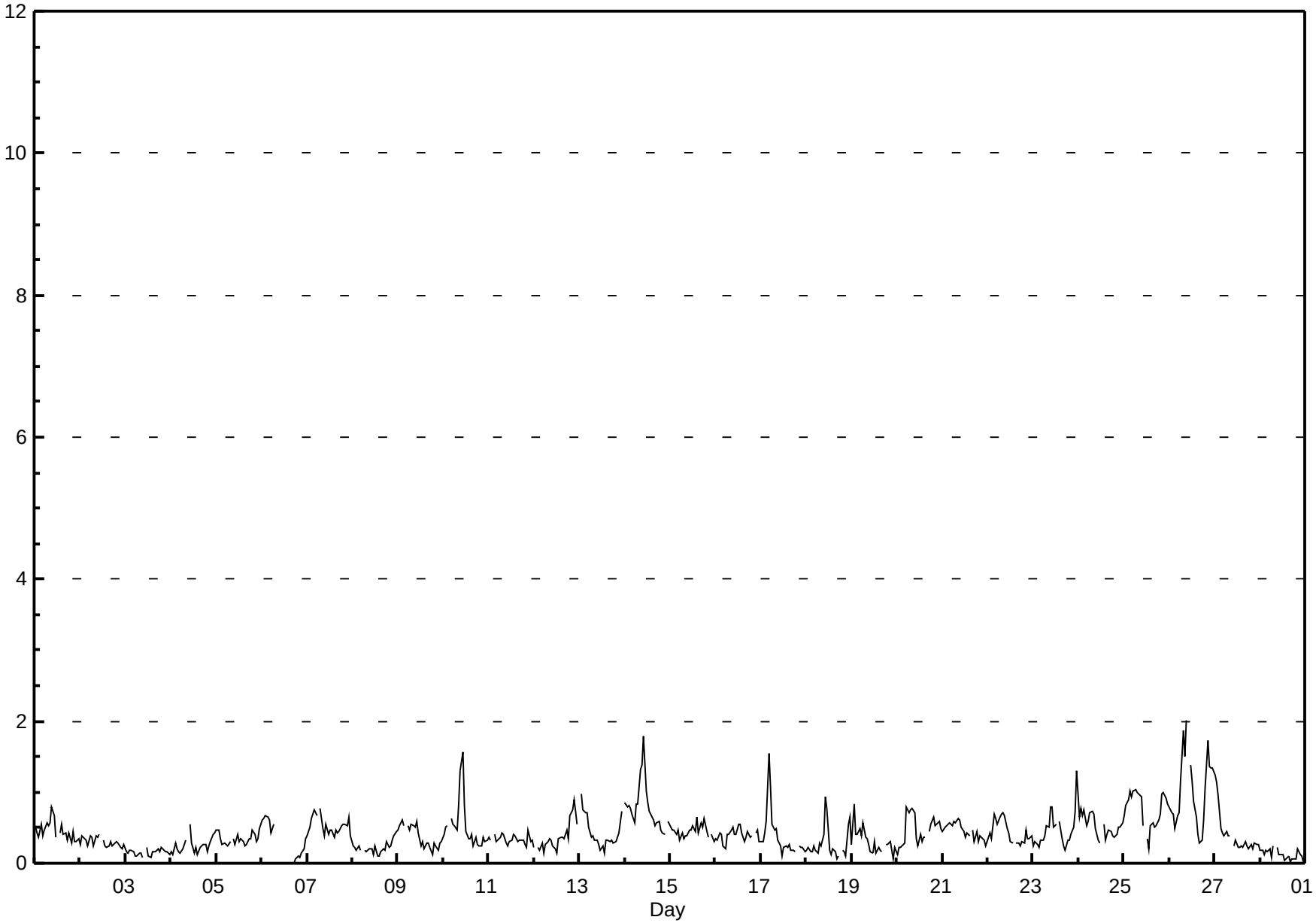
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - February 2014



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - February 2014

Maximum Value: 3.1 ppb on Feb 26 10:00

Maximum Daily Average: 1.9 ppb on Feb 26

Minimum Value: 0 ppb on Feb 6 14:00

Minimum Daily Average: 0.9 ppb on Feb 3

Maximum Diurnal Average: 1.4 ppb at hour 10

Minimum Diurnal Average: 1.0 ppb at hour 18

Monthly Average: 1.22 ppb

Percentiles: $P_1 = 0.7$ $P_{10} = 0.9$ $Q_1 = 1.0$ Median = 1.2 $Q_3 = 1.4$ $P_{90} = 1.6$ $P_{99} = 2.5$

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	1	1	1	1	1	1	1	1	2	2	2	1	A	1	1	1	1	1	1	1	1	1	1	1	1.2	1.9
2-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.3
3-Feb	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.1
4-Feb	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.5
5-Feb	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.5
6-Feb	1	2	2	2	1	1	2	A	2	C	C	C	C	0	0	1	1	1	1	1	1	1	1	1	1.1	1.6
7-Feb	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	2	1	1	1	1	1	2	1	1.3	1.9
8-Feb	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.2
9-Feb	1	1	1	1	A	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.6
10-Feb	1	1	1	A	1	1	1	1	2	2	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1.3	2.7
11-Feb	1	1	A	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	1.6
12-Feb	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1.2	1.7
13-Feb	A	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	A	1.2	1.8
14-Feb	2	2	2	2	2	1	2	2	2	2	3	2	2	2	1	1	1	1	1	2	1	1	A	1	1.6	2.9
15-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2	1	1	1	1	A	1	2	1.3	1.7
16-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	A	1	1	1	1.2	1.7
17-Feb	1	1	1	2	3	2	2	1	2	1	1	1	1	1	1	1	1	1	1	A	1	2	1	1	1.3	2.6
18-Feb	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	A	1	1	1	2	2	1.2	2.4
19-Feb	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1.1	2.1
20-Feb	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	A	1	1	1	1	1	2	1	1.3	2.0
21-Feb	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1.2	1.6
22-Feb	2	1	1	1	2	2	1	1	2	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1.2	1.7
23-Feb	1	1	1	1	1	1	1	2	1	2	2	2	1	A	1	1	1	1	1	1	1	1	2	2	1.3	2.4
24-Feb	1	2	1	2	1	1	1	2	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1.3	1.8
25-Feb	1	2	2	2	2	2	2	2	2	2	2	A	1	1	1	1	2	1	1	2	2	2	2	2	1.6	2.1
26-Feb	2	2	2	1	2	1	3	3	2	3	A	2	2	2	1	1	1	1	1	2	3	2	2	2	1.9	3.1
27-Feb	2	2	2	2	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	2.5
28-Feb	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
	1.2	1.3	1.2	1.3	1.3	1.2	1.3	1.3	1.4	1.4	1.4	1.3	1.1	1.1	1.1	1.1	1.1	1.0	1.1	1.2	1.2	1.2	1.3	1.3	Diurnal Average	
	2.5	2.1	1.8	2.1	2.6	1.8	2.8	2.8	2.2	3.1	2.9	2.4	1.9	1.7	1.6	1.4	1.9	1.5	1.7	2.3	2.8	2.3	2.1	2.4	Diurnal Maximum	

C - Calibration

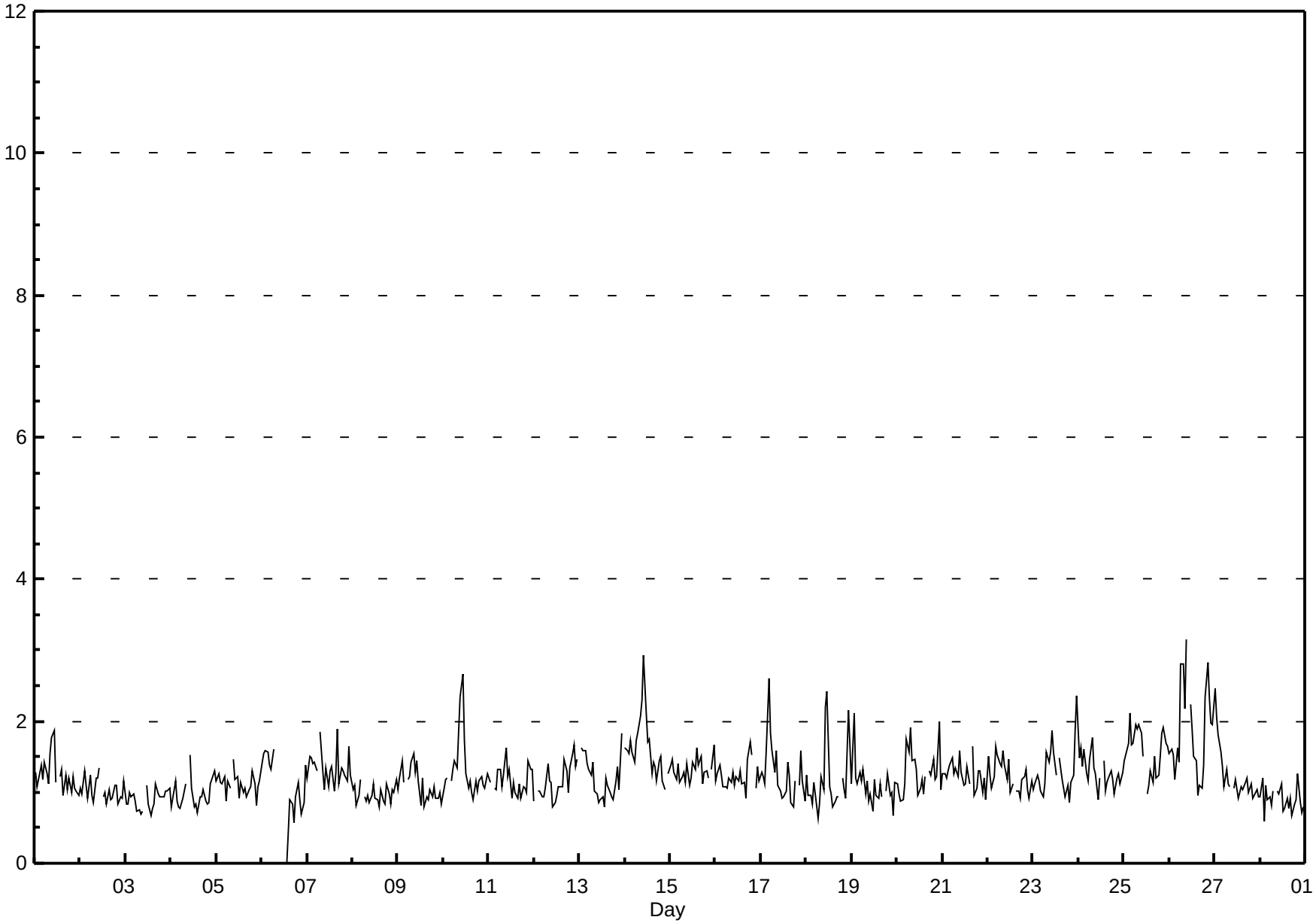
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

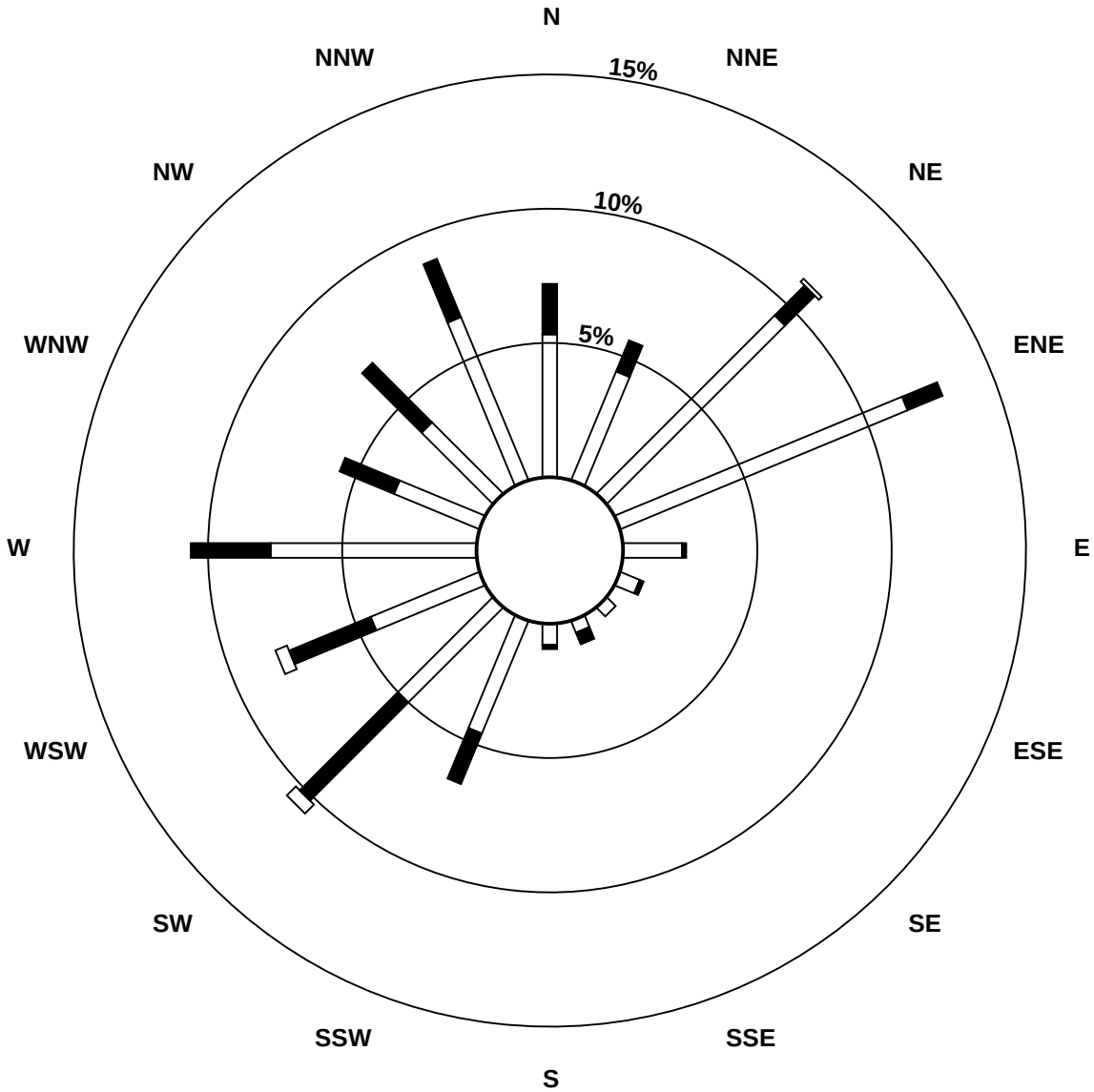
Evergreen Park - February 2014



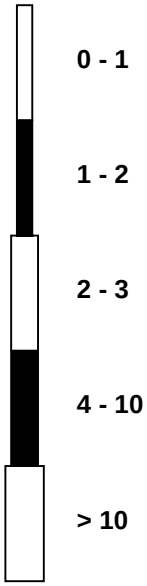
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - February 2014



Pollutant Classes (ppb)

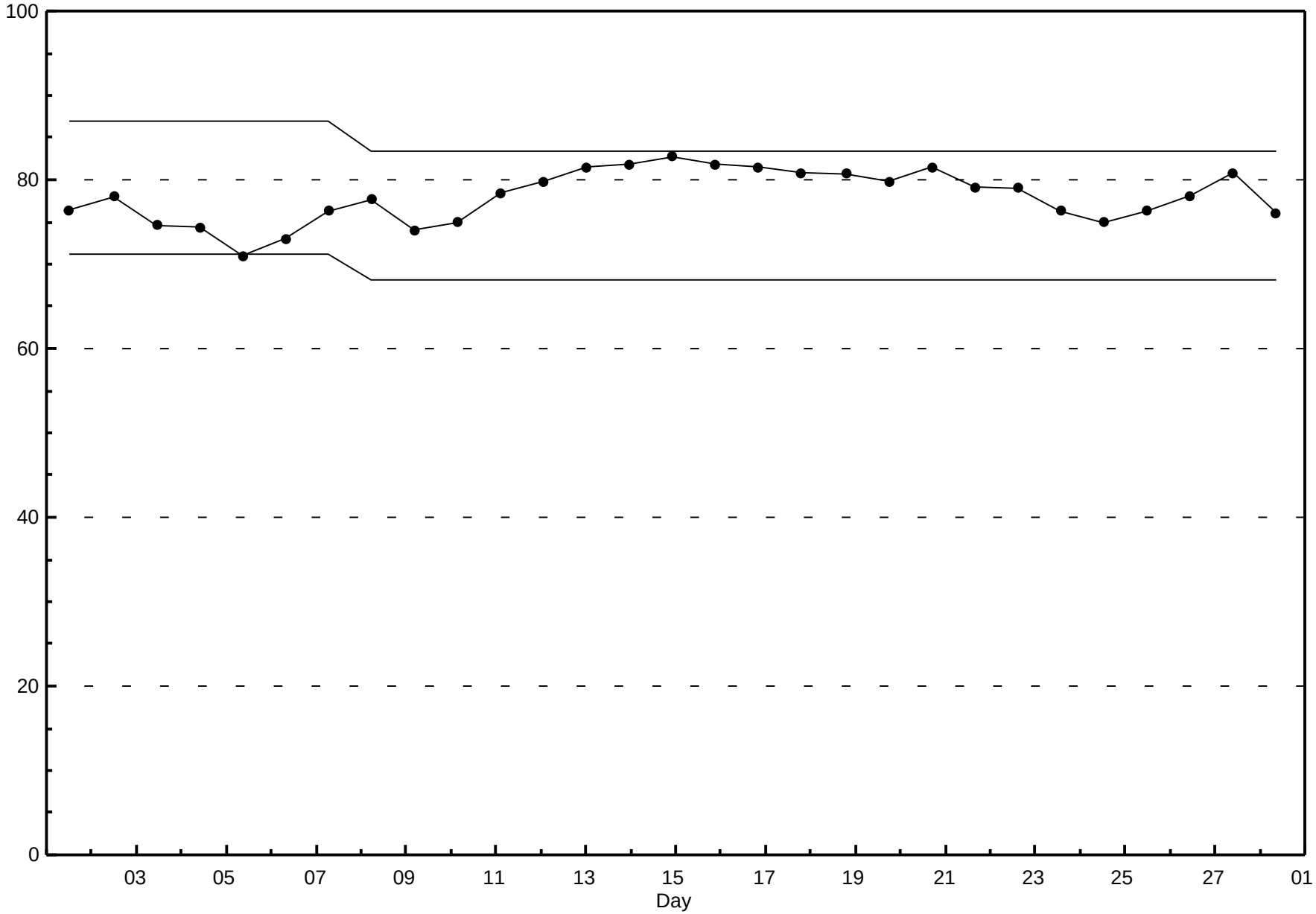


Peace Airshed Zone Association

Span Responses

Total Reduced Sulphur (TRS)

Evergreen Park - February 2014



Peace Airshed Zone Association

Hourly Averages

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

Evergreen Park - February 2014

Number of Exceedences: 1-hr: 0 24-hr: 0

Maximum Value: 30.2 $\mu g/m^3$ on Feb 26 10:00

Maximum Daily Average: 8.3 $\mu g/m^3$ on Feb 26

Minimum Value: 0 $\mu g/m^3$ on Feb 1 02:00

Maximum Diurnal Average: 6.1 $\mu g/m^3$ at hour 10

Monthly Average: 3.45 $\mu g/m^3$

Minimum Daily Average: 0.4 $\mu g/m^3$ on Feb 3

Minimum Diurnal Average: 2.5 $\mu g/m^3$ at hour 14

Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.7$ Median = 2.8 $Q_3 = 5.4$ $P_{90} = 7.8$ $P_{99} = 14.4$

Hours in Service:	672
Hours of Data:	671
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Feb	0	0	1	1	1	2	1	2	2	4	9	3	1	1	3	3	3	2	2	1	1	0	0	0	1.8	8.5
2-Feb	0	0	0	0	0	1	0	1	1	1	2	2	0	0	0	0	1	1	0	0	1	1	0	0	0.5	1.6
3-Feb	1	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	1	0	1	2	2	1	1	0	0.4	1.8
4-Feb	1	0	0	1	0	0	0	1	3	5	11	4	0	0	0	0	0	0	1	1	1	2	2	3	1.6	10.9
5-Feb	4	3	2	1	1	2	1	3	1	0	3	0	3	2	4	1	0	0	0	0	0	0	1	2	1.5	3.7
6-Feb	3	3	3	3	2	2	4	11	10	7	7	4	0	1	N	23	12	10	14	11	9	6	7	7	6.9	22.5
7-Feb	6	7	7	8	7	9	11	8	5	5	7	3	8	7	5	5	6	5	6	7	7	7	8	5	6.6	10.6
8-Feb	1	1	1	2	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	3	4	4	0.9	3.9
9-Feb	3	4	4	4	4	3	4	3	3	6	8	2	0	1	1	2	1	4	3	4	2	3	7	5	3.4	8.5
10-Feb	6	6	7	6	4	4	4	5	9	10	12	9	3	0	7	1	0	0	1	0	0	0	1	1	3.9	11.6
11-Feb	1	1	1	0	1	2	1	1	2	2	2	2	3	3	4	1	1	0	0	0	0	0	0	0	1.2	3.9
12-Feb	0	0	0	1	4	2	4	4	6	5	5	3	4	8	7	7	7	9	9	11	10	11	10	8	5.7	11.2
13-Feb	7	6	6	5	5	5	5	4	5	5	5	5	5	4	5	6	5	5	4	4	4	5	8	6	5.1	7.6
14-Feb	5	5	4	3	2	3	8	3	8	9	14	8	8	7	8	11	7	9	11	7	7	7	6	7	6.9	13.6
15-Feb	6	6	6	6	3	0	1	0	1	3	6	4	1	0	1	3	1	0	0	0	0	0	0	0	2.0	6.4
16-Feb	0	0	0	0	1	4	3	5	8	3	4	3	4	2	0	0	0	0	0	0	0	0	0	0	1.5	7.8
17-Feb	0	0	3	4	5	4	1	0	1	1	0	0	0	0	0	3	1	1	0	0	0	0	0	0	1.1	5.1
18-Feb	0	0	0	1	0	0	0	2	1	5	4	4	0	0	0	0	0	0	1	0	0	0	2	4	1.0	4.5
19-Feb	6	3	2	3	3	4	4	6	6	5	2	3	3	3	3	3	4	4	5	4	6	5	4	3	3.9	6.3
20-Feb	3	3	3	4	4	6	6	8	6	8	5	4	4	4	5	6	7	7	7	4	4	4	4	3	5.0	8.2
21-Feb	3	3	3	3	2	3	3	3	5	3	3	3	3	2	3	3	4	3	3	3	3	2	2	2	2.9	4.6
22-Feb	3	3	16	8	6	5	3	4	6	7	6	0	1	2	0	2	2	2	2	3	3	2	1	1	3.6	15.8
23-Feb	1	1	0	1	2	2	1	2	4	13	11	4	9	8	5	4	3	2	3	2	4	6	8	10	4.3	12.7
24-Feb	7	6	5	6	6	8	14	12	10	10	3	2	2	1	2	1	2	3	5	2	3	4	5	6	5.2	13.7
25-Feb	6	7	6	6	7	8	8	12	12	18	6	4	6	3	10	12	7	8	9	9	6	6	6	7	8.0	18.0
26-Feb	6	6	6	4	4	6	7	9	13	30	18	12	15	10	4	0	0	3	10	10	8	7	6	6	8.3	30.2
27-Feb	5	5	6	6	4	3	4	1	1	1	1	1	0	1	0	1	1	1	2	2	0	1	0	1	2.0	6.2
28-Feb	0	0	0	0	3	2	0	1	3	5	0	1	1	1	0	1	2	2	2	3	3	3	2	1	1.5	4.8
	3.0	2.9	3.3	3.1	3.0	3.1	3.5	4.0	4.8	6.1	5.5	3.2	3.0	2.5	2.9	3.5	2.8	2.9	3.7	3.2	3.0	3.0	3.4	3.3	Diurnal Average	
	7.0	7.3	15.8	7.7	7.4	8.7	13.7	12.5	13.2	30.2	18.2	11.8	14.5	9.9	10.1	22.5	11.6	10.1	14.4	11.3	10.5	11.2	9.9	9.5	Diurnal Maximum	

N - Not Valid

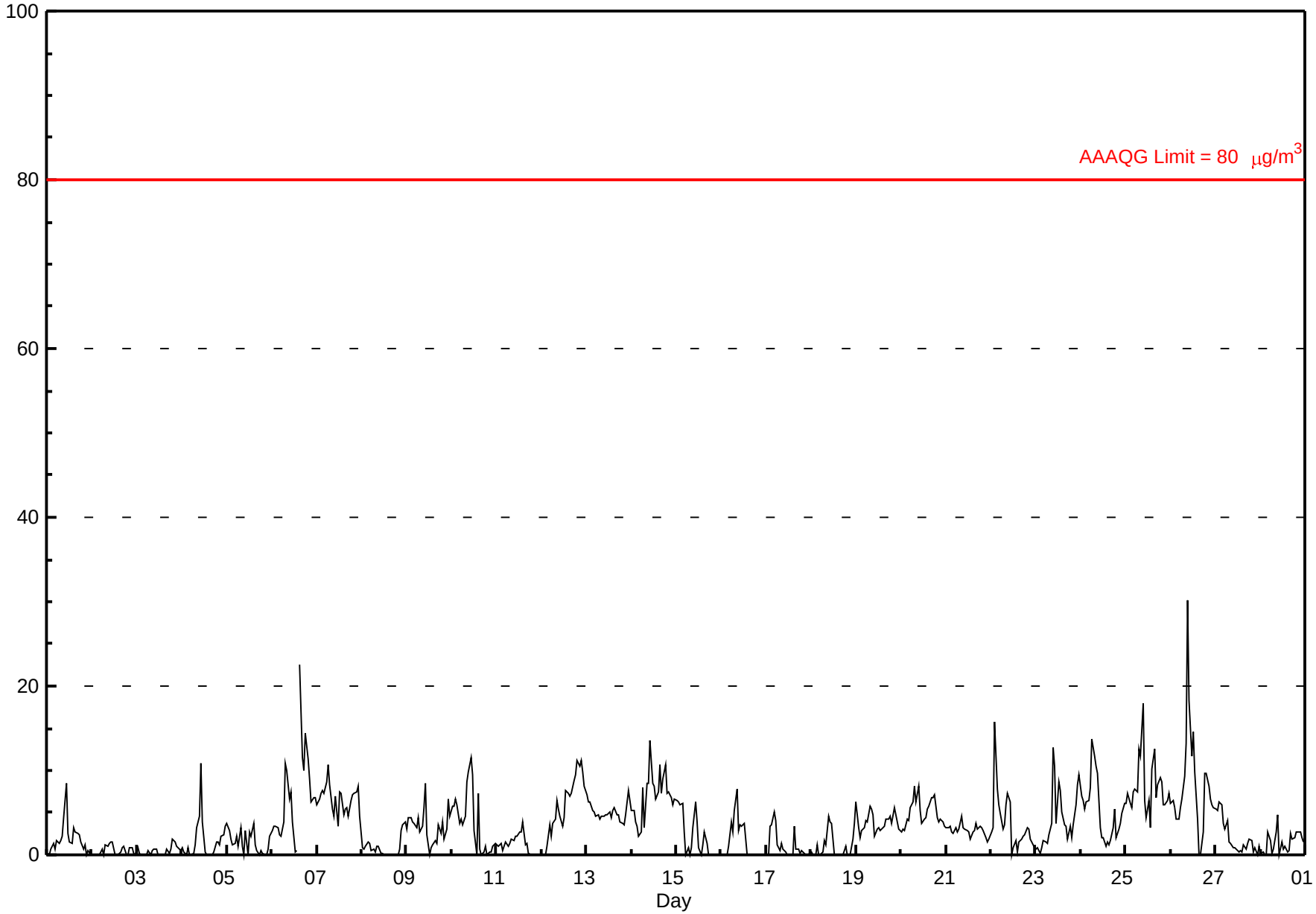
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

Peace Airshed Zone Association

Hourly Averages

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

Evergreen Park - February 2014



Peace Airshed Zone Association

Hourly Maximums

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

Evergreen Park - February 2014

Maximum Value: 42.6 $\mu g/m^3$ on Feb 26 10:00

Maximum Daily Average: 12.7 $\mu g/m^3$ on Feb 26

Minimum Value: 0 $\mu g/m^3$ on Feb 11 20:00

Minimum Daily Average: 2.0 $\mu g/m^3$ on Feb 2

Maximum Diurnal Average: 10.1 $\mu g/m^3$ at hour 11

Minimum Diurnal Average: 4.5 $\mu g/m^3$ at hour 17

Monthly Average: 6.18 $\mu g/m^3$

Percentiles: $P_1 = 0.0$ $P_{10} = 1.4$ $Q_1 = 2.8$ Median = 5.3 $Q_3 = 8.5$ $P_{90} = 11.3$ $P_{99} = 24.7$

Hours in Service:	672
Hours of Data:	671
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	2	1	2	3	3	3	3	4	4	10	11	5	4	4	5	3	6	4	3	2	3	2	2	1	3.7	11.2
2-Feb	1	1	0	0	0	4	3	3	3	3	3	3	1	0	1	1	2	3	2	1	5	3	3	1	2.0	4.8
3-Feb	5	2	2	2	1	1	3	1	2	3	3	2	1	2	2	2	3	2	2	3	4	2	3	2	2.2	4.6
4-Feb	3	3	2	2	2	2	3	4	5	6	16	14	3	1	0	2	1	2	4	4	4	6	5	6	4.1	15.5
5-Feb	7	6	6	5	5	5	5	13	4	4	6	7	15	4	7	7	3	4	3	3	3	2	3	5	5.5	14.8
6-Feb	6	7	7	7	5	7	10	15	16	14	12	6	2	3	N	34	14	18	18	17	11	9	10	9	11.1	33.5
7-Feb	8	9	10	11	11	12	14	11	8	7	10	7	10	11	7	7	7	7	10	10	9	10	10	7	9.3	14.1
8-Feb	2	3	3	3	4	2	2	2	3	3	2	2	1	1	1	1	1	3	2	0	4	6	6	8	2.7	8.2
9-Feb	6	8	8	6	8	6	8	5	8	8	11	7	2	3	3	4	4	6	5	6	5	7	10	7	6.4	10.9
10-Feb	8	8	10	9	6	9	9	9	13	15	15	15	11	2	13	5	2	3	3	2	3	3	3	3	7.4	15.3
11-Feb	3	3	3	3	3	5	5	3	3	3	4	7	7	6	7	3	4	2	2	0	1	0	0	0	3.2	7.2
12-Feb	0	0	2	4	5	5	6	6	9	8	9	6	8	11	10	9	10	12	11	14	13	13	12	10	8.1	14.3
13-Feb	10	10	9	8	8	7	7	6	7	7	7	6	7	7	7	8	6	7	6	5	6	9	10	9	7.6	10.4
14-Feb	8	7	9	8	7	10	13	6	11	15	18	11	19	11	10	15	10	11	13	9	9	8	7	9	10.7	18.9
15-Feb	9	8	8	10	10	11	4	2	5	6	22	29	6	0	4	6	4	3	1	0	1	0	1	0	6.3	29.2
16-Feb	0	0	1	0	3	6	5	8	10	6	5	4	7	4	1	1	1	0	0	0	0	1	3	0	2.8	10.2
17-Feb	1	2	6	6	7	6	4	2	4	2	3	0	0	0	2	8	3	3	2	2	2	2	1	1	2.8	7.7
18-Feb	1	1	1	3	2	3	2	3	3	8	9	11	6	1	3	2	1	1	7	2	0	1	5	5	3.5	10.9
19-Feb	9	7	3	5	6	6	5	8	8	6	5	5	5	6	5	6	6	8	8	7	8	7	6	6	6.3	9.2
20-Feb	4	5	5	6	5	7	8	10	8	12	8	7	6	6	7	7	9	10	11	6	6	6	6	5	7.1	11.9
21-Feb	4	5	5	5	5	5	5	5	7	6	5	6	7	4	4	5	6	5	5	5	5	4	4	4	5.0	6.8
22-Feb	5	5	27	11	10	7	5	7	9	11	8	5	2	3	1	4	3	4	4	5	5	4	3	3	6.3	27.4
23-Feb	3	3	3	3	5	5	5	5	7	20	27	9	12	11	7	5	5	4	6	6	7	9	11	13	7.8	26.5
24-Feb	11	10	9	10	10	13	20	17	16	15	7	5	4	3	4	2	3	7	9	4	5	7	8	9	8.7	20.4
25-Feb	9	9	9	9	13	13	12	19	17	25	12	7	9	11	15	16	10	12	12	10	8	9	8	10	11.9	25.0
26-Feb	9	8	8	6	6	9	10	13	17	43	38	17	17	15	7	2	0	14	13	14	12	9	9	8	12.7	42.6
27-Feb	7	8	10	11	6	5	6	4	3	2	2	3	3	2	1	2	2	3	4	5	2	2	2	3	4.1	10.7
28-Feb	2	2	2	4	6	6	3	3	6	7	5	4	3	3	3	3	4	4	4	5	5	5	5	4	4.0	7.2
	5.2	5.0	6.1	5.6	5.7	6.4	6.6	7.1	7.8	9.8	10.1	7.5	6.3	4.9	5.2	6.0	4.5	5.8	6.1	5.3	5.2	5.3	5.6	5.4	Diurnal Average	
	10.8	10.2	27.4	11.1	12.9	13.3	20.4	19.4	17.5	42.6	38.0	29.2	18.9	14.8	14.8	33.5	14.2	18.0	17.7	17.5	13.1	13.4	12.2	12.8	Diurnal Maximum	

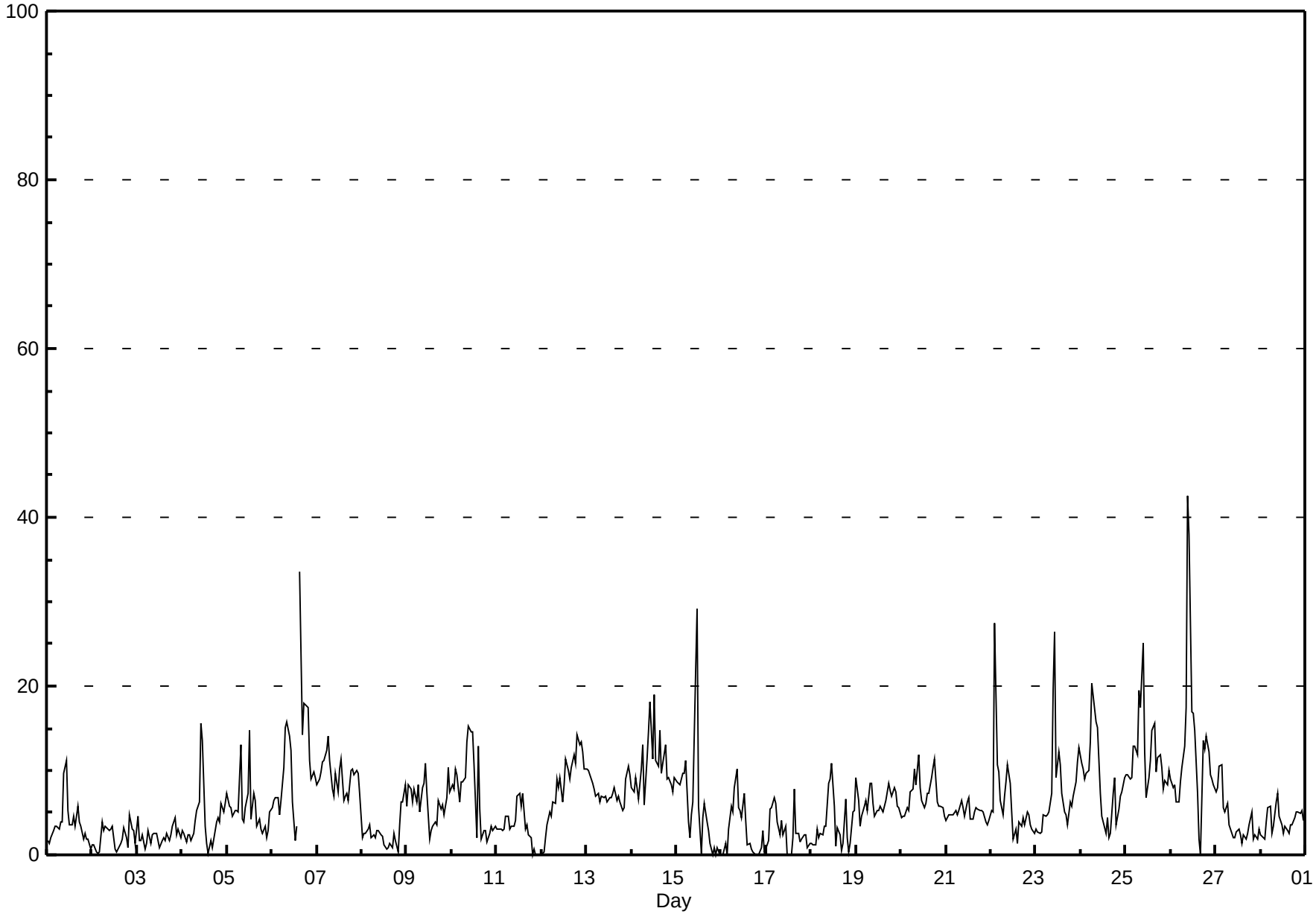
N - Not Valid

Peace Airshed Zone Association

Hourly Maximums

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

Evergreen Park - February 2014

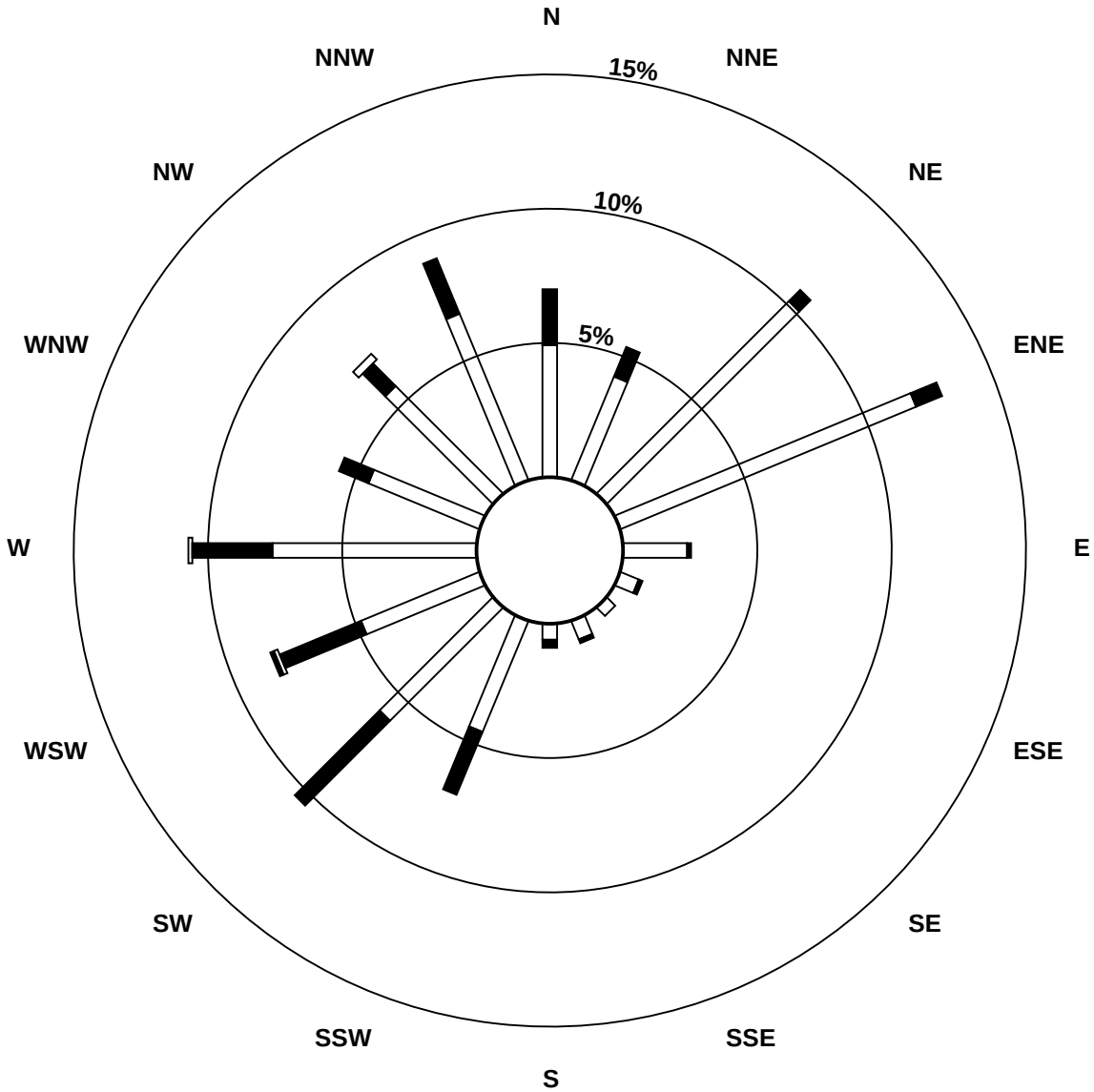


FOCUS AIR QUALITY MONITORING

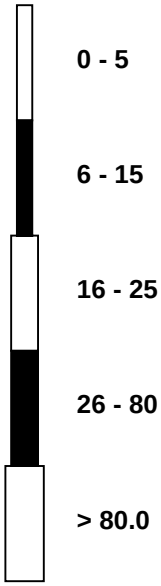
Pollutant Rose

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

Evergreen Park - February 2014



Pollutant Classes ($\mu g/m^3$)



Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Evergreen Park - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 3.6 ^{o}C on Feb 17 15:00

Maximum Daily Average: -2.0 ^{o}C on Feb 17

Minimum Value: -31 ^{o}C on Feb 24 07:00

Minimum Daily Average: -25.2 ^{o}C on Feb 9

Maximum Diurnal Average: -11.1 ^{o}C at hour 16

Minimum Diurnal Average: -19.6 ^{o}C at hour 8

Monthly Average: -15.82 ^{o}C

Percentiles: P_1 = -30.4 P_{10} = -26.5 Q_1 = -20.9 Median = -16.9 Q_3 = -10.4 P_{90} = -4.7 P_{99} = 2.6

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

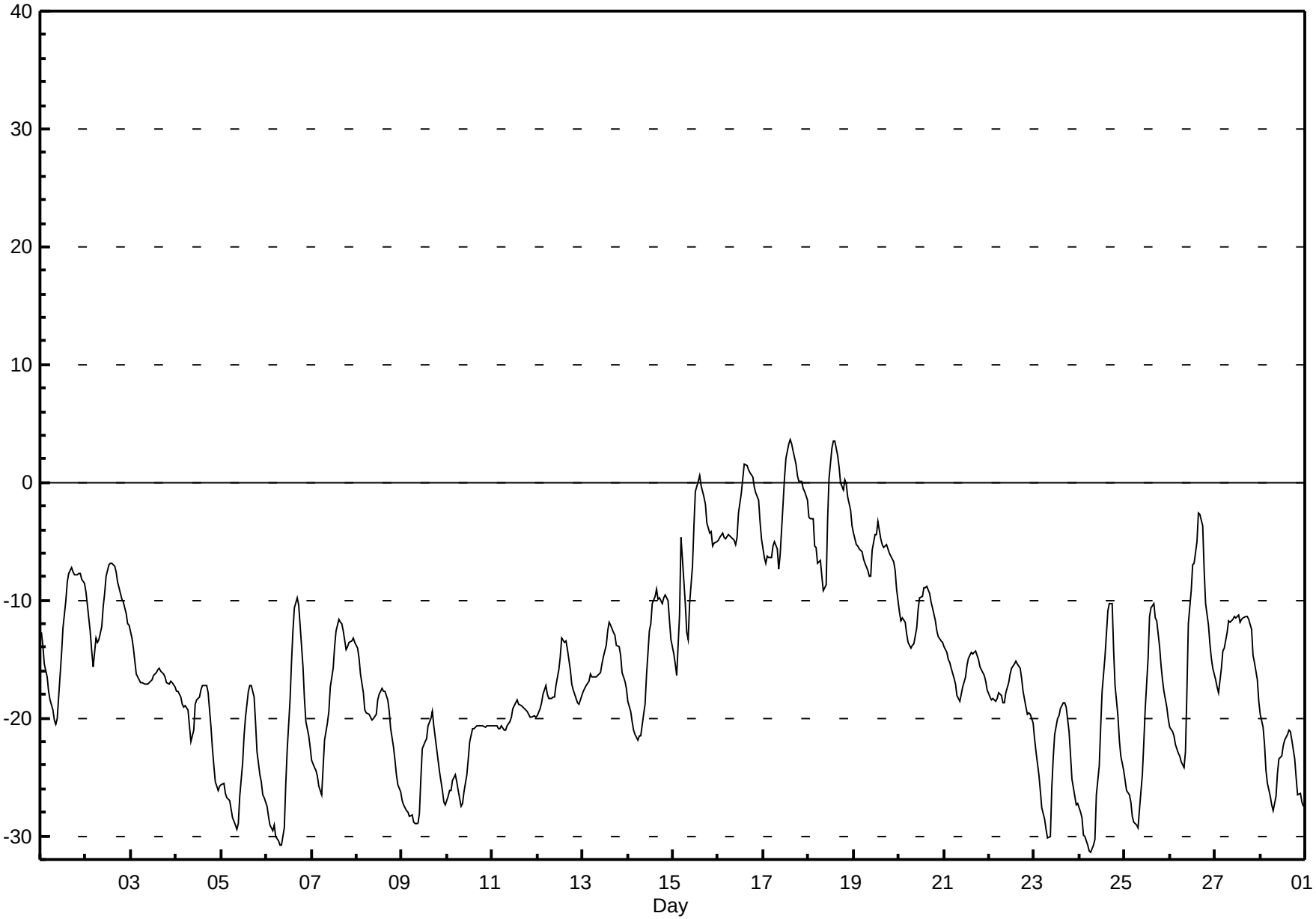
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-13	-14	-15	-16	-18	-18	-19	-20	-21	-20	-16	-15	-12	-10	-8	-8	-7	-8	-8	-8	-8	-8	-8	-9	-12.8	-7.3
2-Feb	-9	-10	-13	-14	-16	-13	-14	-13	-12	-11	-9	-8	-7	-7	-7	-7	-8	-8	-9	-10	-10	-11	-12	-12	-10.5	-6.9
3-Feb	-13	-14	-15	-16	-17	-17	-17	-17	-17	-17	-17	-17	-16	-16	-16	-16	-16	-16	-17	-17	-17	-17	-17	-17	-16.4	-13.2
4-Feb	-18	-18	-18	-19	-19	-19	-19	-21	-22	-21	-19	-19	-18	-18	-17	-17	-17	-18	-21	-23	-24	-25	-26	-26	-20.0	-17.2
5-Feb	-26	-26	-26	-27	-27	-28	-29	-29	-29	-29	-27	-24	-22	-20	-18	-17	-17	-18	-20	-23	-25	-25	-27	-27	-24.3	-17.2
6-Feb	-28	-28	-29	-30	-29	-30	-30	-31	-31	-29	-26	-23	-18	-15	-13	-11	-10	-10	-12	-16	-18	-20	-21	-22	-22.1	-9.8
7-Feb	-24	-24	-24	-25	-26	-26	-24	-22	-20	-19	-17	-16	-14	-13	-12	-12	-12	-13	-14	-14	-14	-14	-13	-14	-17.7	-11.6
8-Feb	-14	-15	-16	-18	-19	-20	-20	-20	-20	-20	-20	-18	-18	-17	-18	-18	-18	-19	-21	-22	-24	-25	-26	-26	-19.7	-14.1
9-Feb	-27	-27	-28	-28	-28	-28	-29	-29	-29	-28	-25	-23	-22	-22	-21	-20	-19	-21	-23	-24	-25	-26	-27	-27	-25.2	-19.4
10-Feb	-27	-26	-26	-25	-25	-25	-26	-27	-27	-26	-25	-23	-22	-21	-21	-21	-21	-21	-21	-21	-21	-21	-21	-21	-23.3	-20.6
11-Feb	-21	-21	-21	-21	-21	-21	-21	-21	-21	-20	-20	-19	-19	-18	-19	-19	-19	-19	-19	-20	-20	-20	-20	-20	-19.9	-18.5
12-Feb	-20	-19	-19	-18	-17	-18	-18	-18	-18	-18	-17	-16	-15	-13	-14	-13	-14	-16	-17	-18	-18	-19	-19	-18	-17.1	-13.2
13-Feb	-18	-17	-17	-17	-16	-16	-17	-17	-16	-16	-15	-15	-14	-13	-12	-12	-13	-13	-14	-14	-15	-16	-17	-17	-15.3	-11.9
14-Feb	-19	-19	-20	-21	-21	-22	-22	-22	-20	-19	-16	-13	-12	-10	-10	-9	-10	-10	-10	-10	-10	-10	-12	-13	-14.9	-9.1
15-Feb	-15	-15	-16	-11	-5	-6	-10	-13	-13	-10	-7	-4	-1	0	1	0	-1	-2	-3	-4	-4	-5	-5	-5	-6.5	0.6
16-Feb	-5	-5	-4	-5	-5	-4	-5	-5	-5	-5	-5	-3	-1	0	2	1	1	1	0	0	-1	-2	-3	-5	-2.5	1.6
17-Feb	-6	-7	-6	-6	-6	-5	-5	-6	-7	-6	-2	0	2	3	4	3	3	2	1	0	0	-1	-1	-1	-2.0	3.6
18-Feb	-3	-3	-3	-5	-6	-7	-7	-8	-9	-9	-3	0	3	3	4	2	1	0	-1	0	0	-1	-2	-4	-2.4	3.5
19-Feb	-4	-5	-5	-6	-6	-7	-7	-7	-8	-8	-6	-4	-4	-3	-5	-5	-5	-5	-6	-6	-6	-7	-8	-9	-6.0	-3.3
20-Feb	-11	-12	-11	-12	-13	-14	-14	-14	-14	-12	-11	-10	-10	-9	-9	-9	-9	-10	-11	-12	-13	-13	-13	-14	-11.6	-8.8
21-Feb	-14	-14	-15	-15	-16	-17	-17	-18	-19	-18	-17	-16	-16	-15	-14	-15	-14	-14	-15	-16	-16	-16	-17	-18	-15.9	-14.0
22-Feb	-18	-18	-18	-19	-18	-18	-18	-19	-19	-18	-17	-16	-16	-15	-15	-15	-16	-17	-18	-19	-20	-20	-20	-20	-17.8	-15.2
23-Feb	-22	-23	-25	-26	-28	-29	-29	-30	-30	-26	-23	-21	-20	-20	-19	-19	-19	-19	-21	-23	-25	-27	-27	-27	-24.1	-18.7
24-Feb	-28	-29	-30	-30	-31	-31	-31	-31	-30	-27	-24	-21	-18	-15	-13	-11	-10	-10	-14	-17	-20	-22	-23	-24	-22.5	-10.2
25-Feb	-25	-26	-26	-27	-28	-29	-29	-29	-28	-25	-22	-19	-15	-11	-11	-10	-11	-12	-14	-15	-17	-18	-19	-20	-20.3	-10.3
26-Feb	-21	-21	-22	-22	-23	-23	-24	-24	-23	-18	-12	-9	-7	-7	-5	-3	-3	-4	-8	-10	-12	-14	-15	-16	-14.3	-2.6
27-Feb	-17	-17	-18	-16	-14	-14	-13	-12	-12	-12	-11	-11	-11	-12	-12	-12	-11	-11	-12	-12	-15	-15	-17	-19	-13.5	-11.3
28-Feb	-20	-21	-22	-24	-25	-27	-27	-28	-27	-25	-24	-23	-22	-22	-21	-21	-21	-22	-23	-25	-26	-26	-27	-28	-24.1	-19.7
	-17.2	-17.7	-18.3	-18.6	-18.7	-19.0	-19.3	-19.6	-19.5	-18.3	-16.2	-14.5	-13.0	-12.0	-11.4	-11.1	-11.4	-11.9	-13.2	-14.2	-15.1	-15.8	-16.5	-17.1	Diurnal Average	
	-2.9	-3.1	-3.1	-4.7	-4.7	-4.5	-4.6	-4.7	-4.9	-5.3	-1.8	0.4	2.8	3.5	3.6	3.3	2.7	1.6	0.5	0.2	0.0	-0.5	-0.8	-1.5	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Evergreen Park - February 2014



Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Evergreen Park - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 89.6 % on Feb 16 09:00

Maximum Daily Average: 81.6 % on Feb 20

Minimum Value: 30 % on Feb 26 17:00

Minimum Daily Average: 53.6 % on Feb 18

Maximum Diurnal Average: 75.9 % at hour 9

Minimum Diurnal Average: 58.9 % at hour 15

Monthly Average: 69.43 %

Percentiles: P_1 = 38.5 P_{10} = 53.8 Q_1 = 64.0 Median = 72.8 Q_3 = 76.0 P_{90} = 80.2 P_{99} = 85.7

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

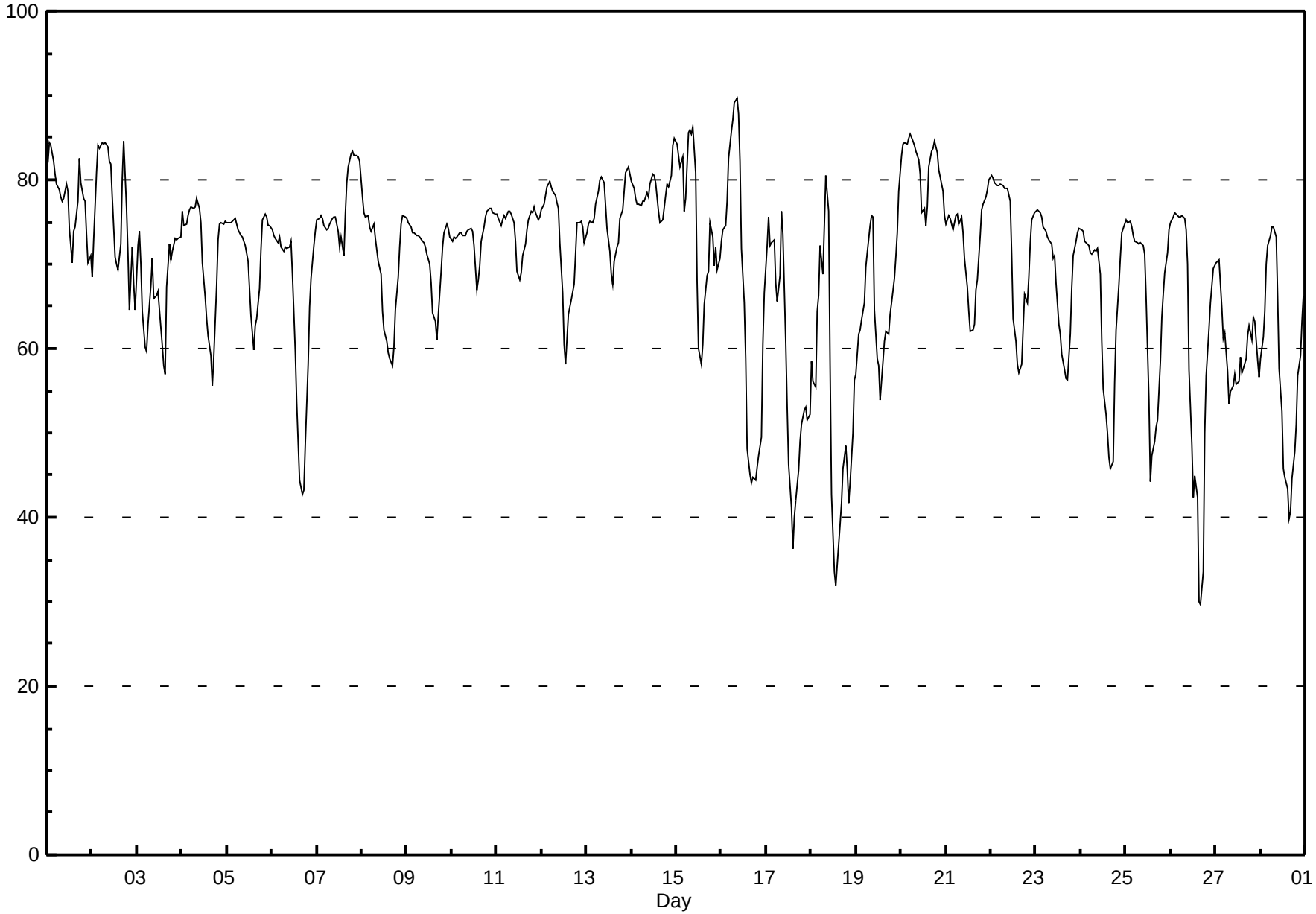
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	82	84	84	82	81	80	79	78	77	78	79	79	74	70	74	74	77	83	80	78	77	74	70	71	77.8	84.5
2-Feb	68	73	81	84	84	84	84	84	84	82	82	78	71	70	69	72	80	85	77	71	65	72	68	65	76.4	84.6
3-Feb	72	74	70	64	60	60	63	67	71	66	66	67	65	60	58	57	67	72	71	72	73	73	73	73	67.2	73.8
4-Feb	76	75	75	76	77	77	77	77	78	77	75	70	66	64	62	59	56	59	67	73	75	75	75	75	71.4	77.7
5-Feb	75	75	75	75	75	75	74	73	73	73	72	70	67	64	60	63	64	67	72	75	76	76	75	75	71.6	75.9
6-Feb	74	73	73	73	73	72	71	72	72	72	73	69	60	54	49	44	43	43	49	58	65	68	72	74	64.4	74.1
7-Feb	75	75	76	75	75	74	74	75	75	76	76	74	72	73	71	76	80	82	83	83	83	83	83	82	77.1	83.4
8-Feb	78	76	76	76	74	74	75	73	72	70	69	64	62	61	60	59	58	60	65	69	72	75	76	76	69.5	77.9
9-Feb	75	75	74	74	74	73	73	73	73	72	72	71	70	68	64	63	61	64	69	72	74	75	74	73	71.2	75.4
10-Feb	73	73	73	73	74	74	73	73	74	74	74	74	72	67	68	70	73	74	76	76	77	77	76	76	73.5	76.7
11-Feb	76	75	75	75	76	75	76	76	76	75	73	69	68	69	71	72	74	75	76	76	77	76	75	76	74.3	76.7
12-Feb	76	77	78	79	80	79	79	78	77	77	73	67	61	58	64	65	66	68	71	75	75	75	74	72	72.7	79.8
13-Feb	74	75	75	75	75	77	79	80	80	80	77	74	72	69	68	70	72	73	75	76	79	81	82	81	75.7	81.5
14-Feb	80	79	78	77	77	77	77	77	79	78	79	81	80	80	76	75	75	75	78	79	79	80	84	85	78.6	85.0
15-Feb	84	83	82	83	76	78	86	86	85	86	81	68	60	58	60	65	69	69	75	73	70	72	69	71	74.5	86.2
16-Feb	73	74	75	77	83	86	87	89	90	88	82	72	66	59	48	45	44	45	44	46	47	50	61	67	66.5	89.6
17-Feb	72	76	72	73	73	68	66	69	76	74	61	53	46	41	36	40	42	46	49	51	53	53	51	52	58.0	76.3
18-Feb	59	56	55	64	66	72	69	75	81	76	58	43	34	32	34	39	42	46	48	46	42	44	50	56	53.6	80.5
19-Feb	57	62	62	63	65	70	71	75	76	76	65	59	58	54	58	61	62	62	64	65	68	71	74	79	65.7	78.7
20-Feb	83	84	84	84	85	85	85	84	83	82	81	76	77	75	77	82	83	84	85	83	81	80	79	76	81.6	85.3
21-Feb	75	76	76	75	74	76	76	75	76	74	71	67	64	62	62	63	67	68	73	76	77	78	79	80	72.5	80.0
22-Feb	80	80	80	79	79	80	79	79	79	79	77	71	64	61	58	57	58	62	67	65	68	73	75	76	72.0	80.5
23-Feb	76	76	76	76	74	74	73	73	72	71	71	68	63	62	59	57	56	56	62	67	71	73	74	74	69.0	76.4
24-Feb	74	74	73	73	72	71	71	72	71	72	69	61	55	52	50	47	46	47	56	62	68	71	74	75	64.8	74.8
25-Feb	75	75	75	74	73	73	72	72	73	72	71	66	54	44	47	49	51	52	58	64	66	69	71	74	65.5	75.3
26-Feb	75	76	76	76	76	76	76	75	74	70	57	49	42	45	42	30	30	34	50	57	62	65	67	69	60.4	76.0
27-Feb	70	70	71	65	61	62	57	53	55	56	57	56	56	59	57	58	59	62	63	61	64	63	59	57	60.4	70.6
28-Feb	59	61	64	70	72	73	74	74	73	66	58	52	46	45	43	40	41	45	48	51	57	59	63	66	58.4	74.4
	73.8	74.4	74.4	74.7	74.4	74.8	74.9	75.3	75.9	74.6	71.3	66.7	62.3	59.8	58.9	59.0	60.5	62.7	66.1	67.9	69.3	70.7	71.5	72.3	Diurnal Average	
	84.2	84.5	84.4	84.2	84.9	85.7	87.1	89.1	89.6	87.7	82.1	80.7	80.5	79.7	76.8	81.6	83.4	84.6	84.7	83.4	83.0	82.8	84.0	85.0	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Evergreen Park - February 2014



Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Evergreen Park - February 2014

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1 Spd	2	1	2	0	0	0	1	1	0	2	6	12	13	17	17	20	16	15	17	16	14	22	18	13	8.3	21.5
Dir	19	209	221	203	218	301	231	229	60	231	263	275	276	276	297	328	305	299	315	309	311	326	344	340	306.4	326.0
2 Spd	8	4	3	2	2	3	2	1	4	2	7	5	11	6	3	3	5	24	29	31	32	26	23	17	9.0	32.3
Dir	337	274	231	200	251	278	209	283	265	273	261	287	31	47	4	1	305	330	339	348	346	342	352	344	337.5	345.8
3 Spd	14	15	22	19	12	11	8	10	10	15	14	19	16	19	18	18	15	12	8	8	7	14	12	12	12.0	22.1
Dir	36	35	37	34	29	37	26	342	331	335	324	337	334	337	345	338	336	330	307	314	307	343	350	342	352.4	36.9
4 Spd	9	7	5	10	5	6	4	2	3	1	2	8	8	3	6	9	9	2	0	0	0	0	0	1	2.9	9.7
Dir	355	30	8	338	5	360	9	214	219	313	261	265	267	319	303	291	315	312	239	145	160	195	307	206	319.2	337.6
5 Spd	2	3	4	5	7	4	3	5	9	6	8	10	11	6	8	11	10	6	1	1	2	1	0	1	4.1	11.1
Dir	212	207	207	219	226	256	231	220	212	200	251	292	292	277	287	288	292	306	212	197	220	230	248	226	257.6	288.2
6 Spd	1	1	4	3	1	1	1	3	2	4	9	11	14	13	18	16	14	6	5	0	4	0	2	1	5.1	17.6
Dir	227	215	208	204	194	219	229	231	221	228	255	271	273	267	266	269	270	284	280	230	209	234	212	226	259.3	266.5
7 Spd	1	1	3	1	1	2	2	2	6	2	2	4	5	5	7	9	8	2	0	0	0	1	2	9	1.9	9.5
Dir	209	251	218	256	208	214	208	246	231	201	212	227	230	256	278	272	270	314	282	167	348	228	76	60	248.4	271.7
8 Spd	13	10	9	8	7	6	5	12	8	5	8	5	8	9	13	14	15	8	5	2	1	1	1	2	6.9	15.0
Dir	59	59	67	66	73	80	59	51	65	68	57	56	357	22	53	58	59	67	54	15	259	334	9	358	54.0	58.6
9 Spd	4	4	3	1	1	2	3	2	1	1	1	3	8	11	9	10	6	6	4	1	0	1	0	0	1.9	11.4
Dir	225	251	217	223	258	251	282	286	270	218	75	339	359	353	352	345	18	62	41	340	202	242	226	202	339.9	353.1
10 Spd	1	2	1	1	1	1	1	2	0	1	3	4	8	9	10	9	8	7	8	10	8	7	5	4	4.0	10.3
Dir	198	215	206	193	171	63	99	60	217	59	46	349	45	57	50	57	52	46	36	44	44	43	37	40	46.9	50.5
11 Spd	4	2	1	2	2	2	2	1	1	3	5	5	3	7	8	9	8	10	9	10	11	13	10	12	3.4	12.8
Dir	38	26	40	145	219	210	199	187	203	209	228	243	316	357	17	49	65	68	87	91	89	93	87	83	76.3	93.1
12 Spd	12	12	12	9	7	10	4	8	9	8	9	8	6	6	8	8	9	6	4	2	2	3	5	4	2.8	12.1
Dir	81	81	73	70	64	47	1	329	290	275	263	216	203	190	13	10	25	22	21	345	307	293	348	315	19.6	80.8
13 Spd	3	2	3	1	1	5	5	8	6	8	10	10	7	7	7	7	8	6	2	1	2	1	2	1	3.5	10.2
Dir	319	253	254	321	164	68	63	66	74	68	54	51	38	60	5	22	57	61	67	97	353	4	246	201	48.5	51.1
14 Spd	1	1	1	2	2	1	1	2	2	1	1	1	2	10	7	12	12	6	4	3	3	2	3	2	2.2	12.2
Dir	11	109	51	40	41	11	346	32	229	216	259	199	205	251	262	267	279	265	229	210	216	173	203	34	257.9	278.7
15 Spd	1	0	1	3	10	5	1	2	2	9	9	7	1	5	2	8	2	4	4	9	6	7	10	9	1.1	9.9
Dir	52	80	69	262	262	232	208	219	207	205	201	217	30	154	42	46	62	28	50	59	70	60	71	70	97.5	71.2
16 Spd	8	10	7	7	8	3	2	2	6	11	8	10	10	16	40	41	43	39	28	14	9	7	1	1	9.7	42.8
Dir	70	70	88	62	64	112	45	24	257	254	260	264	284	261	248	248	247	247	246	246	245	231	112	177	250.0	246.7
17 Spd	1	2	1	1	3	3	4	1	2	1	24	29	26	22	30	32	38	36	30	25	34	23	21	5	15.6	38.0
Dir	73	40	237	314	234	218	217	223	66	57	244	246	255	276	264	268	270	265	261	258	262	258	252	266	260.1	270.0
18 Spd	3	6	4	2	4	3	6	2	1	3	1	7	6	6	5	9	7	6	5	7	10	5	4	7	1.6	9.7
Dir	42	322	326	325	240	187	219	26	202	59	154	201	161	144	76	57	65	64	64	75	71	63	303	324	67.6	71.1
19 Spd	9	6	2	1	2	4	3	3	3	2	3	3	8	9	14	13	9	3	4	5	5	3	3	2	3.6	13.6
Dir	341	312	303	293	295	288	54	60	105	88	79	353	360	25	51	55	56	62	58	76	1	74	39	29	31.0	51.1
20 Spd	2	1	1	2	0	2	2	1	1	2	7	9	10	6	8	10	11	10	13	18	18	16	17	18	5.7	17.8
Dir	41	27	47	357	267	241	3	279	59	67	65	59	55	40	34	44	348	14	326	320	319	311	322	322	349.7	319.4
21 Spd	19	19	20	15	14	11	10	8	6	9	14	9	12	12	10	9	6	3	3	2	1	1	1	2	7.7	19.9
Dir	327	328	330	315	308	303	291	285	289	314	322	287	259	262	340	348	271	333	20	65	78	119	61	40	312.6	329.7
22 Spd	1	0	1	1	4	4	3	2	2	7	8	15	12	14	16	22	28	24	13	7	6	6	7	1	7.2	28.2
Dir	6	276	323	263	334	272	307	233	283	331	6	38	28	347	333	324	333	340	353	356	286	276	273	8	337.3	333.0

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Evergreen Park - February 2014

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	Daily Average	Daily Maximum
23 Spd	5	2	1	1	0	0	0	1	1	0	4	7	8	10	11	10	8	6	4	1	0	0	1	2	2.3	10.9
Dir	72	44	69	29	49	241	244	212	221	331	254	232	358	357	360	2	9	33	30	29	243	10	332	302	358.8	359.8
24 Spd	2	4	1	2	3	0	1	2	1	9	11	15	15	18	13	14	13	7	6	3	1	1	0	1	4.9	18.1
Dir	309	265	40	235	203	278	316	236	232	262	278	286	277	273	268	278	272	281	52	54	28	49	358	22	277.5	272.8
25 Spd	1	1	1	0	0	1	1	1	1	6	7	9	5	5	8	7	12	9	6	2	3	1	0	2	2.5	11.9
Dir	1	4	283	263	192	229	223	262	217	251	253	279	255	251	357	360	337	340	339	326	245	249	271	226	301.3	337.0
26 Spd	2	1	2	1	0	1	0	1	1	4	1	7	5	8	7	12	10	7	3	2	2	2	1	1	1.8	12.0
Dir	231	233	220	233	38	250	263	216	225	240	304	354	0	6	15	56	55	11	340	326	244	245	302	258	2.8	55.9
27 Spd	1	2	4	10	8	9	14	16	17	22	29	32	36	35	39	36	27	18	17	12	17	17	14	9	13.9	38.9
Dir	250	272	255	264	257	260	280	283	292	302	319	322	327	332	333	335	333	330	342	20	61	56	74	73	328.2	333.1
28 Spd	7	8	1	0	0	3	5	3	10	11	13	16	15	16	17	14	15	17	11	8	6	9	10	8	9.2	16.9
Dir	89	73	110	90	46	48	57	63	70	77	63	51	52	53	53	53	62	52	58	52	52	71	69	66	60.1	52.4
Spd	2.8	2.0	1.4	1.4	1.0	0.9	1.0	1.3	1.4	2.2	3.8	5.1	5.5	5.8	7.4	7.7	7.1	5.8	4.5	3.5	3.0	2.9	3.0	3.0	Diurnal Average	
Dir	22.3	16.5	16.5	349.8	314.9	312.9	310.0	317.5	274.7	286.6	291.3	298.3	317.4	318.9	325.9	330.0	322.2	328.1	333.4	345.4	328.8	344.2	355.5	5.0		
Spd	19.3	19.1	22.1	18.8	14.4	11.3	13.9	15.5	16.6	22.4	29.5	32.1	36.0	35.0	40.3	40.9	42.8	38.7	30.2	31.0	33.7	26.1	23.2	17.6	Diurnal Maximum	
Dir	327.4	328.0	36.9	34.4	308.3	37.1	280.3	283.2	291.7	302.0	319.5	322.0	326.7	331.7	248.3	247.7	246.7	247.5	261.4	347.9	262.0	342.5	351.7	321.9		

Maximum Speed Value: 43 km/h on Feb 16 17:00
Maximum Daily Speed Average: 15.6 km/h on Feb 27
Maximum Diurnal Speed Average: 7.7 km/h at hour 16

Minimum Speed Value: 0 km/h on Feb 23 07:00
Minimum Daily Speed Average: 1.1 km/h on Feb 7
Minimum Diurnal Speed Average: 0.9 km/h at hour 6

Monthly Average Velocity: 3.21 km/h 327.84 deg

Speed Percentiles: $P_1 = 0.1$ $P_{10} = 0.8$ $Q_1 = 1.8$ Median = 5.4 $Q_3 = 9.7$ $P_{90} = 16.3$ $P_{99} = 35.6$

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

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Percent Operational Time:	100.0

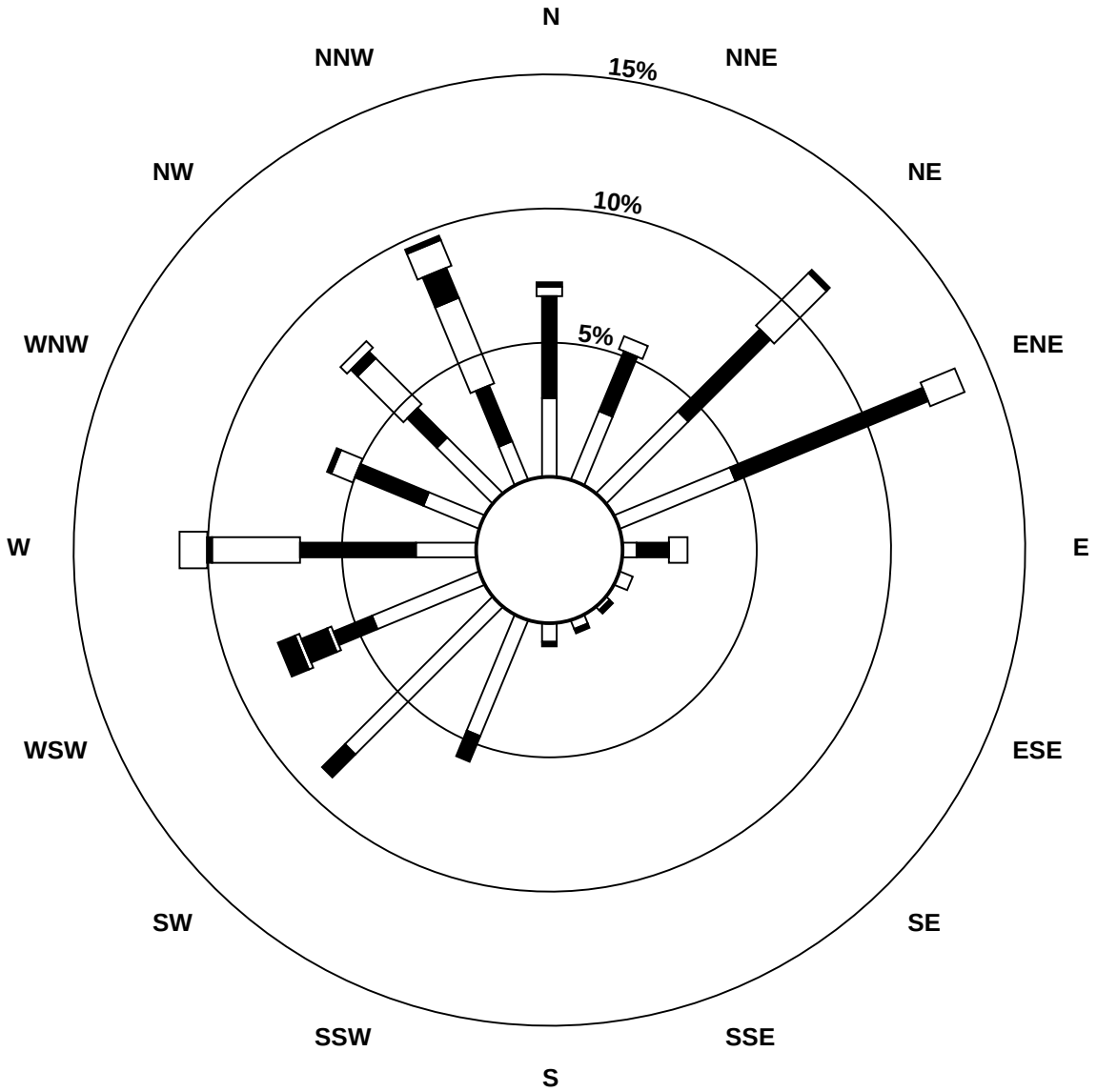
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	34	39	14	3	3	0	93
NorthEast	59	62	26	1	0	0	148
East	21	25	8	0	0	0	54
SouthEast	4	2	0	0	0	0	6
South	22	5	0	0	0	0	27
SouthWest	103	13	1	2	1	2	122
West	47	47	25	5	6	2	132
NorthWest	33	15	24	11	6	1	90
Total	323	208	98	22	16	5	672

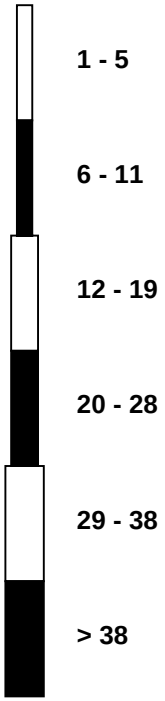
Wind Rose

Wind Speed (WS) (km/h)

Evergreen Park - February 2014



Wind Speed Classes (km/h)



Peace Airshed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Evergreen Park - February 2014

Maximum Speed: 43 km/h on Feb 16 17:00

Maximum Daily Speed Average: 19.0 km/h on Feb 27

Minimum Speed: 0 km/h on Feb 10 00:00

Minimum Daily Speed Average: 3.5 km/h on Feb 7

Maximum Diurnal Speed Average: 14.6 km/h at hour 16

Minimum Diurnal Speed Average: 3.9 km/h at hour 7

Monthly Average Speed: 7.83 km/h

Percentiles: $P_1 = 0.3$ $P_{10} = 1.3$ $Q_1 = 2.4$ Median = 6.0 $Q_3 = 10.1$ $P_{90} = 16.8$ $P_{99} = 36.6$

Hours in Service: 672

Hours of Data: 672

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	2	2	2	0	1	0	1	2	1	3	6	12	13	17	19	21	16	15	17	17	15	22	19	13	9.9	22.0
2-Feb	8	5	4	4	2	5	4	4	6	3	7	6	11	7	5	5	6	26	29	31	33	26	24	18	11.6	32.6
3-Feb	15	16	23	19	13	12	8	11	10	15	15	20	17	20	18	18	15	12	8	9	8	14	12	12	14.1	22.5
4-Feb	9	7	5	10	5	6	4	2	3	1	2	9	9	5	7	10	10	2	1	2	1	1	1	2	4.7	10.1
5-Feb	2	3	4	5	7	4	3	5	9	6	8	10	11	7	9	12	10	6	1	1	2	1	1	1	5.3	11.7
6-Feb	1	1	4	3	1	1	1	4	2	4	9	12	15	13	18	16	14	6	5	3	5	1	5	2	6.1	17.8
7-Feb	2	2	3	1	1	2	2	3	6	2	2	4	5	6	8	10	8	2	1	2	0	1	2	9	3.5	9.7
8-Feb	14	11	10	8	7	6	5	12	8	6	8	7	9	10	13	14	15	8	6	2	2	2	1	2	7.8	15.3
9-Feb	4	4	3	2	2	2	4	3	1	2	3	5	9	12	9	10	7	6	4	2	1	2	0	0	4.0	11.6
10-Feb	1	2	1	1	2	1	1	2	1	1	3	5	8	10	11	10	9	7	9	10	8	7	6	4	4.9	10.6
11-Feb	4	3	1	2	2	2	2	1	2	3	6	6	5	7	9	9	9	10	10	10	11	13	11	12	6.3	13.2
12-Feb	13	12	12	10	8	10	5	9	9	9	9	8	8	7	10	9	10	6	4	3	3	4	6	5	8.0	12.5
13-Feb	4	3	4	3	1	5	5	8	6	8	10	11	8	8	8	9	8	6	3	2	2	1	3	1	5.4	10.8
14-Feb	1	2	2	2	2	2	3	3	3	3	3	5	9	10	8	12	13	6	4	4	4	2	4	3	4.7	12.5
15-Feb	2	2	2	6	10	6	2	2	3	9	9	7	5	6	4	9	3	4	4	9	6	7	10	9	5.7	10.0
16-Feb	8	10	7	7	8	4	3	2	6	12	8	10	11	17	41	41	43	39	28	14	10	7	2	2	14.1	43.1
17-Feb	2	2	2	5	5	4	5	2	3	2	24	30	26	22	31	33	38	36	30	25	34	23	21	6	17.2	38.4
18-Feb	3	6	5	7	6	5	8	3	2	3	2	7	7	7	6	9	8	6	7	8	10	6	4	7	6.0	9.9
19-Feb	9	6	2	2	3	5	3	3	3	2	4	4	9	9	14	14	10	5	6	6	7	4	5	3	5.9	14.0
20-Feb	2	2	2	3	3	2	2	1	1	3	7	9	11	6	9	11	12	10	14	18	18	16	18	18	8.2	18.4
21-Feb	20	20	20	16	15	12	10	8	7	9	15	11	12	12	11	10	6	4	4	3	1	3	2	3	9.7	20.3
22-Feb	2	2	1	2	4	4	3	2	3	8	9	15	12	15	17	24	29	25	13	8	6	6	7	4	9.2	28.6
23-Feb	5	2	2	1	0	1	0	1	1	1	4	8	9	11	11	11	9	6	4	1	0	0	1	3	3.9	11.4
24-Feb	3	5	2	2	3	0	1	2	2	10	11	15	15	18	14	15	13	8	7	4	1	1	1	1	6.4	18.4
25-Feb	1	1	2	1	1	1	1	2	1	6	7	9	5	7	8	8	12	9	6	2	4	1	0	2	4.0	12.0
26-Feb	2	1	2	1	0	1	1	1	1	4	3	7	5	9	8	12	11	8	4	3	2	3	2	2	3.9	12.4
27-Feb	2	3	6	10	8	9	15	16	17	24	30	33	37	36	39	36	27	18	17	14	18	17	14	9	19.0	39.5
28-Feb	7	8	1	2	1	3	5	3	10	11	14	17	15	17	17	15	16	17	11	9	6	9	10	8	9.7	17.3
	5.3	5.0	4.9	4.9	4.4	4.2	3.9	4.2	4.6	6.0	8.6	10.8	11.4	11.9	13.6	14.6	13.8	11.2	9.2	7.8	7.8	7.2	6.9	5.6	Diurnal Average	
	19.9	19.7	22.5	19.2	15.0	12.0	14.6	16.2	17.3	23.6	30.3	33.4	36.9	36.1	40.7	41.2	43.1	39.1	30.4	31.4	33.9	26.5	23.7	18.1	Diurnal Maximum	

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

Peace Airshed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Evergreen Park - February 2014

Maximum Value: 97.2 deg on Feb 20 05:00

Minimum Value: 5.7 deg on Feb 17 12:00

Percentiles: P_1 = 6.4 P_{10} = 11.3 Q_1 = 15.7 Median = 27.7 Q_3 = 56.0 P_{90} = 77.0 P_{99} = 93.3

Hours in Service:	672
Hours of Data:	672
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-Feb	31	65	51	43	81	80	65	94	80	30	29	16	13	9	23	14	15	14	13	15	17	13	11	12	94.4
2-Feb	22	44	17	58	60	49	84	89	70	54	13	38	17	43	56	47	23	26	9	10	8	11	14	15	89.1
3-Feb	14	11	11	12	21	12	19	16	21	14	19	14	20	15	18	18	16	13	18	26	25	8	12	10	25.8
4-Feb	14	13	31	9	20	13	17	81	51	68	43	15	25	56	49	28	17	59	83	85	85	92	80	72	91.8
5-Feb	55	48	42	21	13	14	22	10	7	8	21	13	20	20	19	20	18	33	57	34	25	82	82	44	82.3
6-Feb	90	51	10	26	74	74	64	49	64	32	13	14	9	9	7	8	8	18	18	92	43	93	93	78	92.7
7-Feb	94	87	54	68	40	38	50	71	18	31	20	18	18	34	45	14	14	41	89	87	93	81	69	13	93.7
8-Feb	16	17	18	16	22	22	17	13	17	29	30	49	34	32	16	14	14	13	17	19	76	50	17	20	75.9
9-Feb	35	46	27	55	64	43	45	38	55	30	78	69	30	12	16	10	29	21	22	63	66	90	86	82	90.0
10-Feb	55	12	71	40	61	65	77	49	82	46	36	31	32	28	15	21	19	18	12	11	13	11	20	20	82.0
11-Feb	26	26	45	27	18	29	30	29	49	18	30	37	47	32	25	25	22	16	18	17	16	15	20	18	48.8
12-Feb	17	16	16	17	21	22	36	18	20	24	19	28	51	40	42	23	20	17	37	64	44	65	47	35	65.4
13-Feb	41	57	57	77	52	28	24	20	24	24	29	24	30	36	48	37	17	19	37	43	65	69	66	94	93.6
14-Feb	71	68	72	43	36	51	80	42	53	90	72	84	90	21	19	14	14	27	41	54	64	68	68	91	90.7
15-Feb	70	93	72	75	14	51	75	59	57	13	7	17	82	29	60	20	43	20	12	8	14	9	8	10	93.3
16-Feb	17	10	25	8	13	72	34	51	13	9	12	17	25	13	8	7	6	8	7	7	14	21	71	69	72.3
17-Feb	54	23	83	93	82	56	49	83	52	93	44	6	9	10	9	8	8	6	7	6	6	6	6	68	93.3
18-Feb	29	35	29	81	85	74	68	76	75	77	72	23	37	48	58	14	15	17	72	23	12	45	38	23	85.5
19-Feb	16	22	37	57	63	32	58	40	38	59	71	81	29	31	23	20	29	58	64	47	46	66	56	56	80.9
20-Feb	58	46	61	37	97	43	46	69	61	63	32	28	24	28	29	24	27	21	20	17	16	13	14	13	97.2
21-Feb	14	13	12	16	16	19	16	17	20	22	20	31	16	20	31	23	27	37	37	42	43	73	70	71	72.7
22-Feb	76	78	53	44	18	37	38	56	47	15	28	21	22	24	24	22	11	11	12	16	21	12	12	69	78.3
23-Feb	17	49	86	76	91	82	94	91	39	85	30	27	36	20	18	20	20	14	14	75	85	66	55	36	94.0
24-Feb	37	55	88	86	42	68	59	37	77	13	18	12	12	11	11	16	11	36	15	14	52	70	64	44	87.6
25-Feb	43	75	67	78	73	82	78	65	78	18	14	14	27	44	18	20	7	8	22	28	18	74	77	43	81.7
26-Feb	28	91	11	67	76	73	90	50	66	22	59	13	31	16	25	24	17	28	45	51	55	46	64	67	90.5
27-Feb	84	61	55	8	12	11	19	17	17	18	14	16	14	14	10	11	14	14	10	37	12	10	15	12	84.3
28-Feb	14	9	85	93	70	20	11	14	7	15	18	15	20	19	15	21	16	12	11	10	14	8	8	7	93.4
	93.7	93.3	87.6	93.4	97.2	82.1	94.0	94.4	82.0	93.3	77.5	83.8	90.1	55.6	59.7	46.9	42.8	58.8	89.1	91.8	93.2	92.7	92.6	93.6	

PAZA
Smoky Heights Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 16.9 ppb on Feb 9 17:00 Maximum Daily Average: 3.1 ppb on Feb 17

Minimum Value: 0 ppb on Feb 8 04:00 Minimum Daily Average: 0.1 ppb on Feb 8
Maximum Diurnal Average: 1.4 ppb at hour 17 Minimum Diurnal Average: 0.5 ppb at hour 4
Monthly Average: 0.78 ppb Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.2 Median = 0.4 Q_3 = 0.7 P_{90} = 1.8 P_{99} = 5.8

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0.3	0.7
2-Feb	0	0	0	0	0	1	1	1	1	1	0	A	1	0	0	0	1	0	1	0	0	0	1	0	0.4	1.1
3-Feb	0	0	0	0	0	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8
4-Feb	1	2	1	2	0	0	0	1	0	A	1	1	0	0	0	0	1	1	1	1	1	1	0	0	0.7	2.1
5-Feb	1	1	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
6-Feb	0	0	0	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0.4	0.6
7-Feb	1	1	1	0	1	1	A	1	0	0	0	0	0	0	0	1	1	2	2	0	0	0	0	0	0.6	1.7
8-Feb	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
9-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	17	9	2	1	1	1	0	0	1.5	16.9
10-Feb	1	1	1	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8
11-Feb	0	3	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.3	3.2
12-Feb	0	A	0	0	0	0	0	0	0	2	1	1	1	1	1	0	0	1	1	0	4	4	3	7	1.2	6.7
13-Feb	A	4	1	1	1	1	1	1	1	0	1	0	0	1	1	1	1	1	1	1	0	0	1	A	0.7	3.8
14-Feb	1	4	3	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	0	2	1	0	A	1	0.9	3.5
15-Feb	1	0	0	0	0	2	2	3	3	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.7	2.8
16-Feb	0	1	0	1	1	1	1	1	1	1	1	2	2	3	1	0	0	0	0	0	A	0	0	0	0.9	3.0
17-Feb	1	1	1	2	1	1	1	1	4	10	7	6	7	4	8	5	1	4	5	A	1	0	1	2	3.1	9.6
18-Feb	2	0	1	0	1	3	1	2	0	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0.6	2.6
19-Feb	1	3	1	0	0	1	0	0	2	2	0	0	0	0	0	0	0	A	1	4	0	0	0	0	0.8	4.3
20-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	1	0.2	1.0
21-Feb	3	2	0	1	0	0	0	0	0	0	1	2	1	1	0	A	0	0	0	0	1	2	3	2	0.9	2.8
22-Feb	1	1	0	0	3	4	3	2	2	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0.9	4.2
23-Feb	0	0	0	0	0	0	2	3	1	1	0	0	0	A	0	1	6	8	7	6	2	0	0	1	1.8	8.3
24-Feb	0	0	0	0	0	0	0	0	0	1	1	1	A	1	2	4	4	4	5	3	2	2	1	1	1.4	4.9
25-Feb	1	1	1	1	1	2	1	1	1	1	1	A	C	C	C	C	C	0	0	0	0	0	0	0	0.6	1.7
26-Feb	0	0	0	0	0	0	0	0	0	1	A	1	1	1	2	1	1	1	2	1	1	2	4	3	0.9	3.6
27-Feb	2	2	1	1	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	2.1
28-Feb	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.3	1.4
	0.6	1.0	0.6	0.5	0.5	0.8	0.7	0.8	0.8	0.9	0.7	0.7	0.7	0.6	0.8	0.8	1.4	1.3	1.1	0.9	0.6	0.6	0.6	0.8	Diurnal Average	
	2.5	3.8	3.0	2.2	3.0	4.2	3.0	3.0	4.5	9.6	6.7	5.8	6.7	4.1	7.7	5.1	16.9	8.7	6.7	6.3	3.5	4.5	3.6	6.7	Diurnal Maximum	

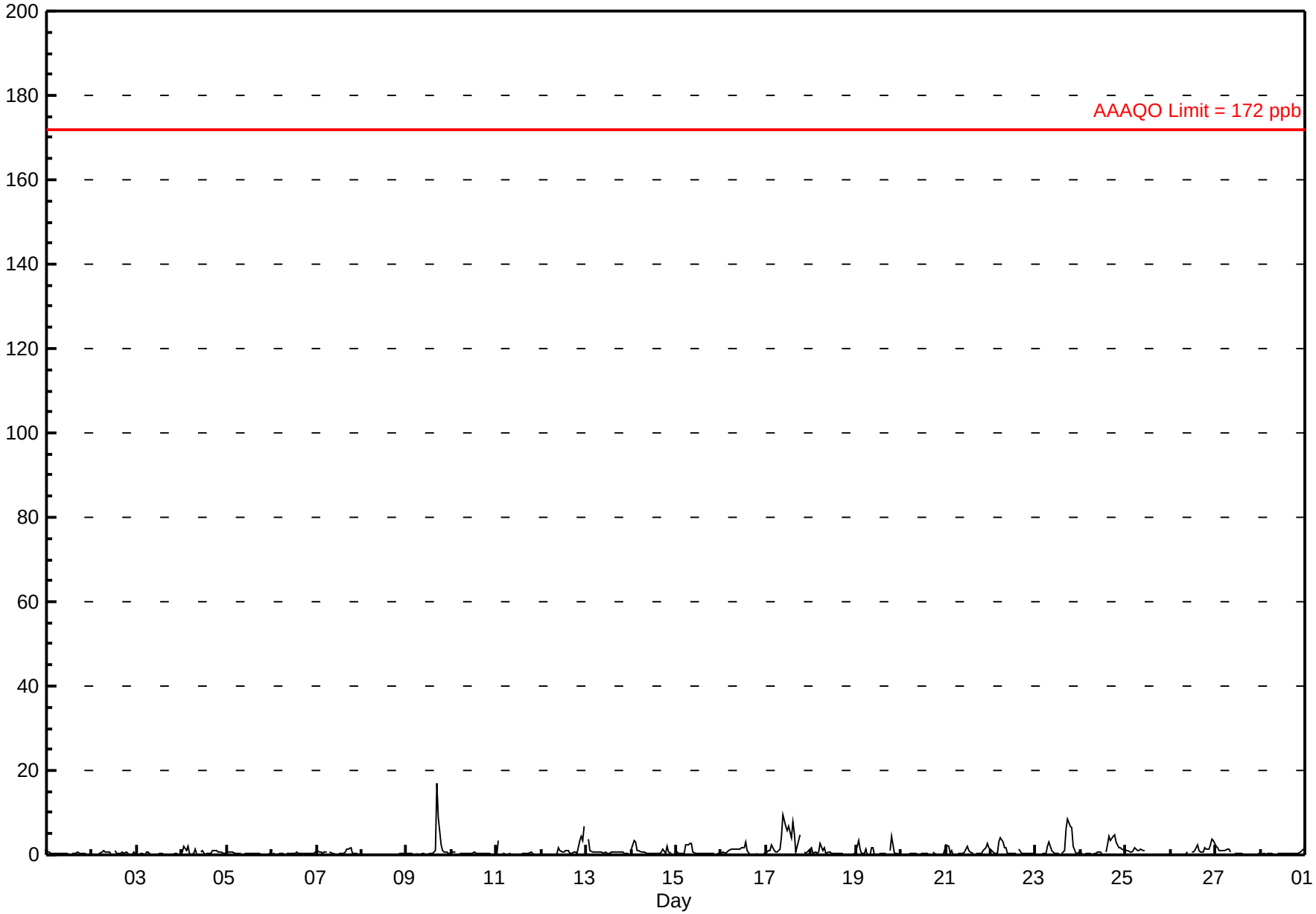
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - February 2014



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - February 2014

Maximum Value: 27.6 ppb on Feb 9 17:00

Maximum Daily Average: 5.6 ppb on Feb 17

Minimum Value: 0 ppb on Feb 25 18:00

Minimum Daily Average: 0.5 ppb on Feb 8

Maximum Diurnal Average: 2.7 ppb at hour 17

Minimum Diurnal Average: 1.2 ppb at hour 4

Monthly Average: 1.71 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.5$ $Q_1 = 0.6$ Median = 0.8 $Q_3 = 1.5$ $P_{90} = 4.3$ $P_{99} = 13.1$

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	0	0	0.7	1.1
2-Feb	0	1	1	0	1	1	2	1	1	1	1	A	6	1	1	1	2	1	3	3	0	0	2	1	1.4	5.7
3-Feb	0	0	2	1	0	2	2	0	0	0	A	0	1	1	0	1	0	1	1	0	2	2	0	1	0.8	2.1
4-Feb	4	6	3	6	1	0	1	5	1	A	1	3	0	1	1	1	2	1	1	1	1	1	1	1	1.9	6.1
5-Feb	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	0.7	1.1
6-Feb	1	1	1	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1
7-Feb	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	2	3	3	3	1	1	1	1	1	1.1	3.2
8-Feb	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0.5	0.7
9-Feb	1	1	1	1	A	1	1	0	1	1	0	1	1	1	1	7	28	12	5	1	1	1	1	1	2.9	27.6
10-Feb	2	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0.7	1.6
11-Feb	1	6	A	1	1	0	1	1	0	0	0	1	1	0	1	1	1	1	1	1	1	1	0	0	0.8	6.0
12-Feb	1	A	1	0	0	0	0	0	1	4	5	1	1	1	2	1	1	1	1	1	11	10	8	10	2.7	10.6
13-Feb	A	13	1	1	1	1	1	1	1	1	5	2	1	1	1	1	1	1	1	1	1	1	1	A	1.8	13.2
14-Feb	5	7	5	2	1	1	1	1	1	1	1	1	1	1	1	1	2	3	1	5	2	1	A	1	1.9	7.5
15-Feb	1	1	1	1	1	7	5	5	7	1	1	1	1	1	1	1	1	1	1	1	1	A	0	1	1.7	6.9
16-Feb	1	1	1	1	2	2	2	2	2	2	2	3	2	5	2	0	1	0	0	1	A	0	1	1	1.4	4.5
17-Feb	1	2	1	4	2	1	1	3	6	11	12	9	10	10	10	9	4	11	12	A	3	1	1	3	5.6	12.2
18-Feb	4	1	1	1	3	10	10	6	1	1	1	1	1	1	1	0	1	1	A	1	1	1	1	1	2.0	9.7
19-Feb	1	10	3	1	2	5	0	0	4	3	1	1	1	0	1	1	1	A	4	10	1	1	1	0	2.2	10.4
20-Feb	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	A	2	2	0	0	1	0	4	0.9	3.9
21-Feb	7	7	2	2	0	1	0	1	1	1	1	4	2	2	1	A	1	1	1	0	2	3	4	3	2.0	7.0
22-Feb	2	1	1	1	9	7	5	3	4	1	1	0	2	1	A	3	1	1	1	1	1	1	1	1	2.0	9.5
23-Feb	1	1	0	0	1	1	5	5	2	2	1	1	1	A	1	2	13	18	16	13	4	1	2	2	4.0	18.4
24-Feb	1	0	1	1	1	1	1	1	1	1	1	1	A	1	6	6	5	7	8	4	3	2	2	1	2.3	7.6
25-Feb	1	1	1	1	2	2	2	2	2	1	2	A	R	C	C	C	C	0	0	0	0	0	0	0	1.0	2.2
26-Feb	0	0	0	0	0	0	0	0	1	1	A	1	1	2	6	2	1	2	3	2	2	9	6	6	2.0	9.3
27-Feb	3	3	2	2	2	2	2	2	1	A	1	1	1	1	1	0	0	1	1	1	0	0	1	1	1.2	3.1
28-Feb	0	1	1	0	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	0.8	2.2
	1.5	2.5	1.2	1.2	1.3	1.9	1.7	1.7	1.6	1.5	1.6	1.4	1.4	1.3	1.5	1.7	2.7	2.7	2.6	1.9	1.5	1.6	1.4	1.7	Diurnal Average	
	7.0	13.2	4.9	5.8	9.5	9.7	9.7	5.9	6.9	10.8	11.8	9.2	10.0	9.7	9.8	9.3	27.6	18.4	16.4	13.4	10.6	10.3	8.1	10.4	Diurnal Maximum	

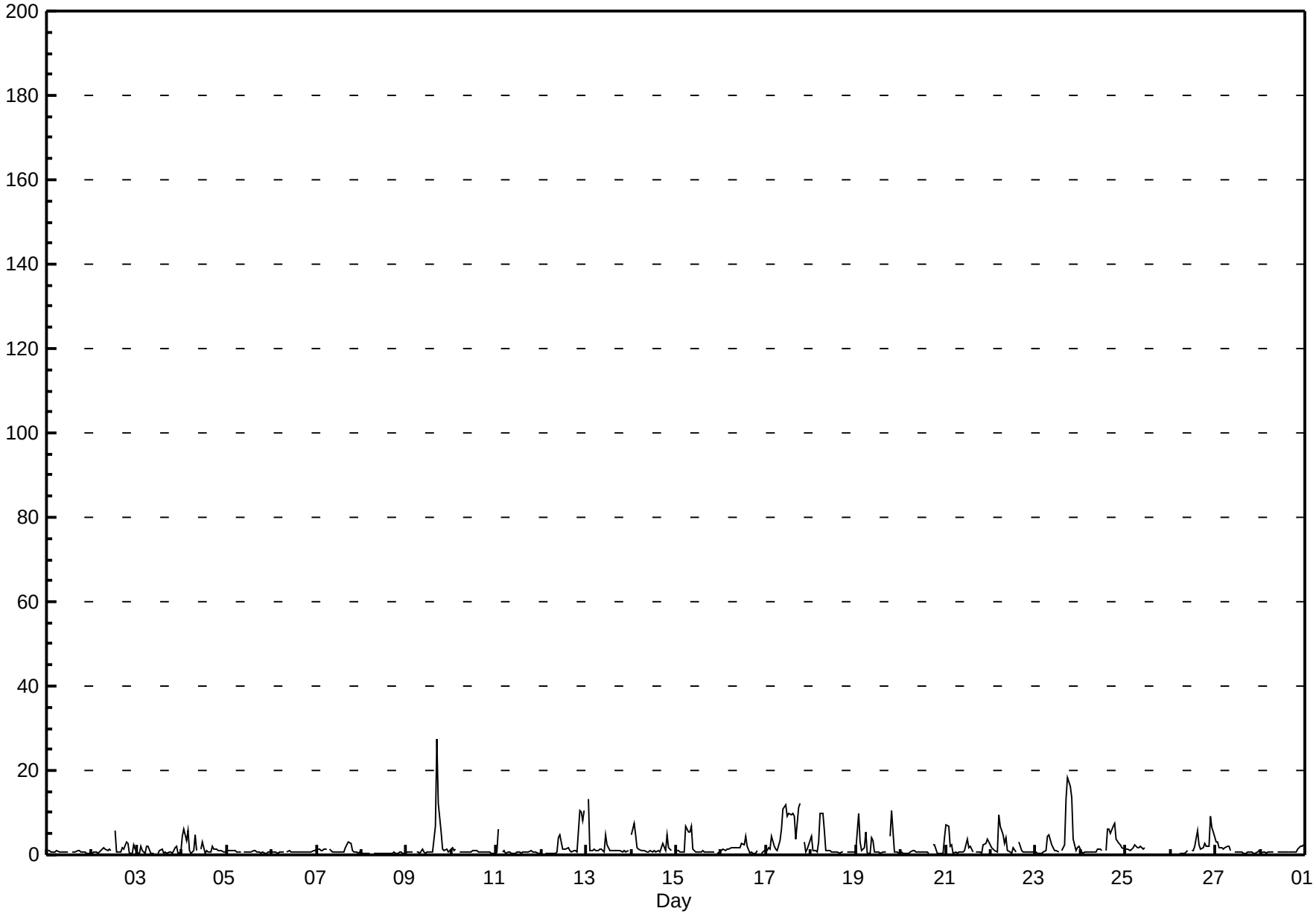
C - Calibration R - Recovery A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

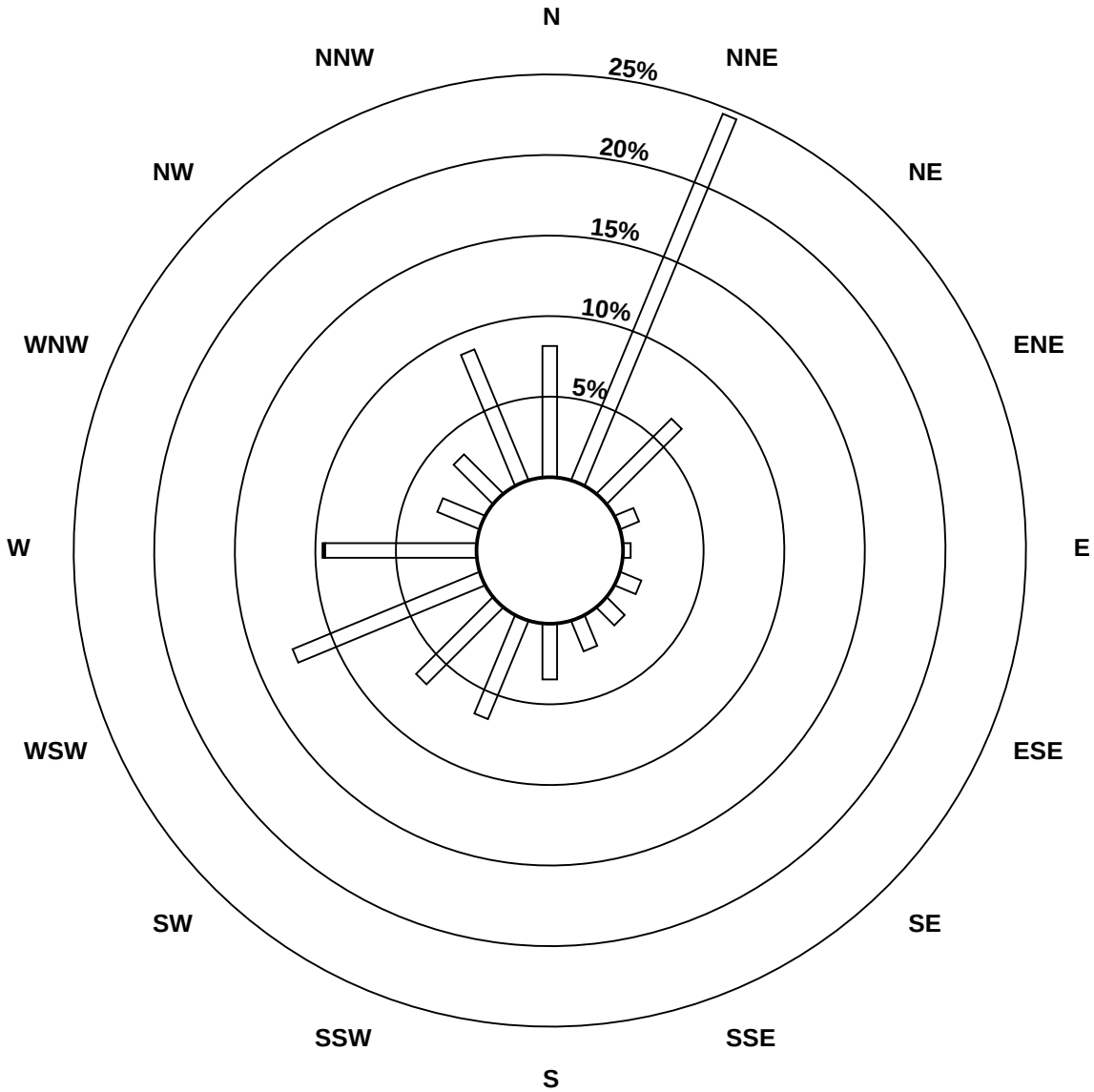
Smoky Heights - February 2014



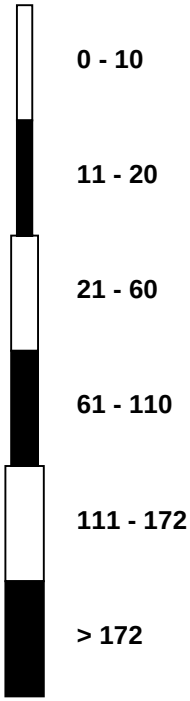
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - February 2014



Pollutant Classes (ppb)

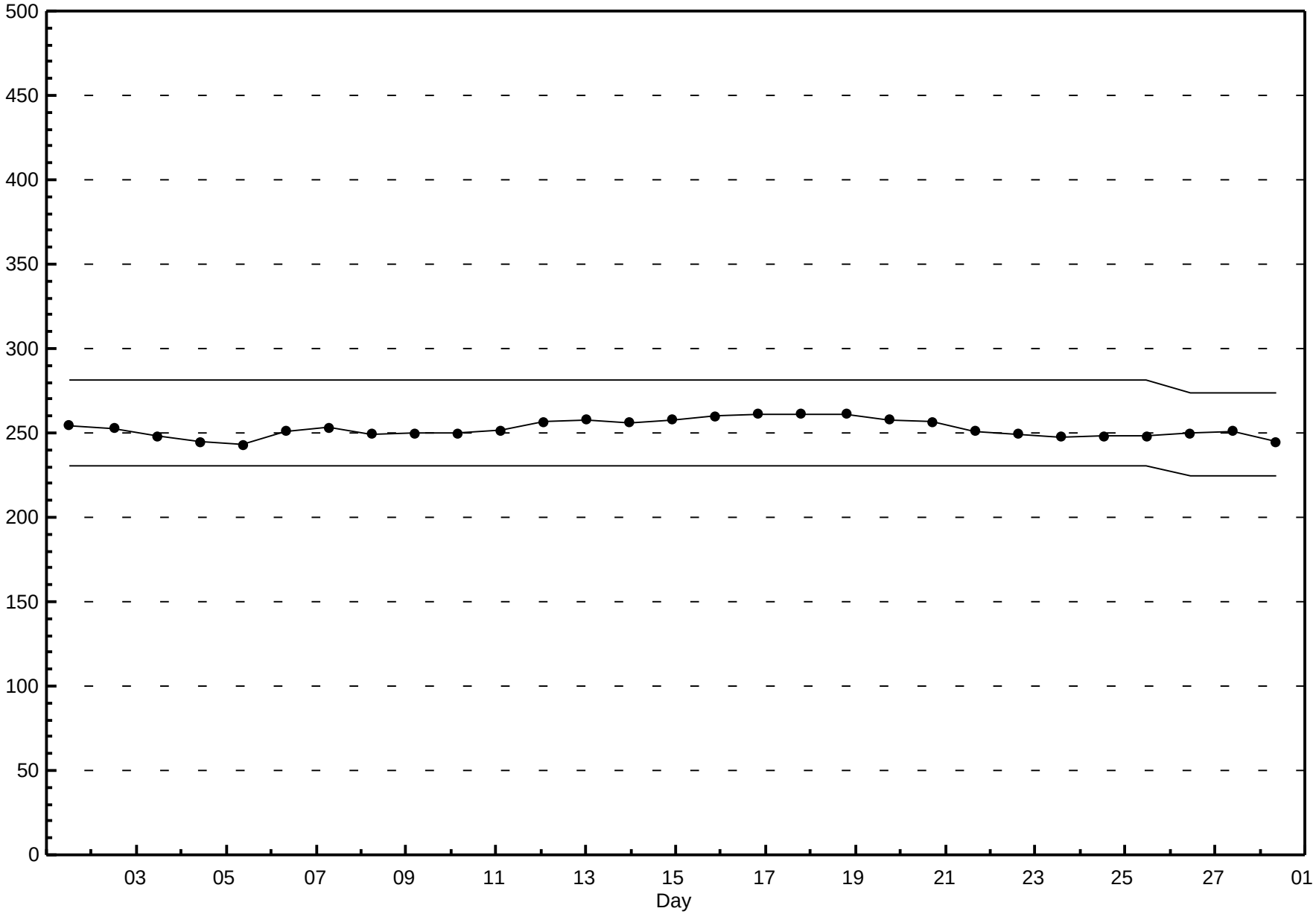


Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Smoky Heights - February 2014



Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.3 ppb on Feb 25 18:00 Maximum Daily Average: 0.2 ppb on Feb 6

Minimum Value: 0 ppb on Feb 3 13:00 Minimum Daily Average: 0.0 ppb on Feb 28
Maximum Diurnal Average: 0.2 ppb at hour 18 Minimum Diurnal Average: 0.1 ppb at hour 23
Monthly Average: 0.12 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.1 Q_3 = 0.2 P_{90} = 0.2 P_{99} = 0.4

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
2-Feb	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
3-Feb	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
4-Feb	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
5-Feb	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
6-Feb	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
7-Feb	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
8-Feb	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
9-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
10-Feb	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
11-Feb	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
12-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
13-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.4
14-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.4
15-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.4
16-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.2
17-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.1
18-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.1
19-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.2
20-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.2
21-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.2
22-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.2
23-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.2
24-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
25-Feb	0	0	0	0	0	0	0	0	0	0	0	A	C	C	C	C	C	1	0	0	0	0	0	0	0.2	1.3
26-Feb	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
27-Feb	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
28-Feb	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	Diurnal Average	
	0.3	0.4	0.2	0.3	0.2	0.3	0.5	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	1.3	0.3	0.2	0.3	0.3	0.3	0.4	Diurnal Maximum	

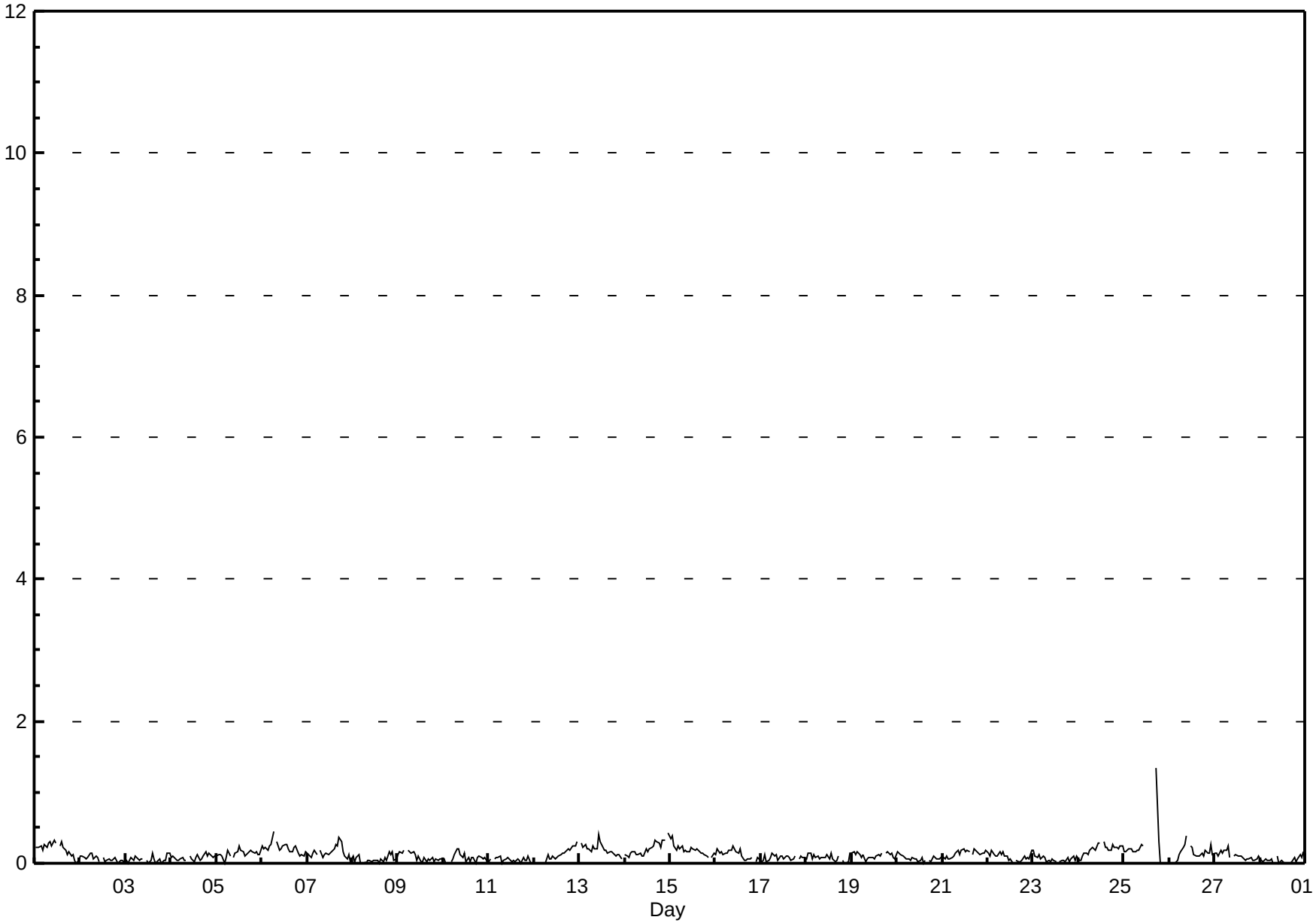
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - February 2014



Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - February 2014

Maximum Value: 3.4 ppb on Feb 13 11:00

Maximum Daily Average: 0.7 ppb on Feb 13

Minimum Value: 0 ppb on Feb 26 00:00

Minimum Daily Average: 0.4 ppb on Feb 2

Maximum Diurnal Average: 0.7 ppb at hour 11

Minimum Diurnal Average: 0.5 ppb at hour 23

Monthly Average: 0.53 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.4$ $Q_1 = 0.4$ Median = 0.5 $Q_3 = 0.6$ $P_{90} = 0.7$ $P_{99} = 0.9$

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	0	0	0	0.6	0.8
2-Feb	0	0	0	0	0	0	1	0	1	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0.4	0.5
3-Feb	0	0	0	0	1	1	1	0	1	0	A	0	0	0	1	0	0	0	0	0	0	0	1	1	0.5	0.8
4-Feb	0	1	0	0	0	1	1	0	0	A	1	0	0	0	1	0	0	1	1	0	1	1	0	1	0.5	0.7
5-Feb	1	0	1	0	0	0	1	0	A	0	1	1	1	0	1	1	1	1	1	0	1	1	1	1	0.5	0.7
6-Feb	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
7-Feb	1	0	0	1	0	1	A	1	0	0	1	0	1	1	1	1	1	1	1	1	0	1	1	1	0.6	0.9
8-Feb	0	0	0	0	0	A	1	0	0	0	0	0	1	0	0	0	0	1	1	1	0	1	0	0	0.5	1.5
9-Feb	1	0	1	1	A	1	1	1	1	0	1	0	0	1	1	1	0	0	0	0	0	0	1	1	0.5	0.7
10-Feb	0	0	0	A	0	0	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	0	0	0	0.5	0.7
11-Feb	1	0	A	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0.5	1.0
12-Feb	0	A	0	0	0	0	0	0	1	0	0	1	0	0	1	1	1	1	1	1	1	1	1	1	0.5	0.7
13-Feb	A	1	1	1	1	1	1	1	1	1	3	2	1	1	1	1	1	1	0	1	1	1	0	A	0.7	3.4
14-Feb	1	0	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.6	1.0
15-Feb	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	0	1	0	A	0	1	0.6	0.9
16-Feb	1	1	0	1	0	1	0	1	1	1	1	1	1	1	1	0	0	0	0	1	A	1	0	0	0.5	0.8
17-Feb	1	0	1	1	0	1	1	1	0	1	0	1	0	0	1	1	0	0	1	A	0	1	0	0	0.5	0.6
18-Feb	0	1	0	0	1	1	1	1	0	0	1	1	0	1	0	0	0	1	A	0	0	0	0	1	0.5	0.6
19-Feb	1	1	1	1	1	0	1	0	1	0	0	0	1	1	1	0	0	A	1	1	0	1	0	1	0.5	0.8
20-Feb	1	1	0	0	1	1	1	1	0	0	0	1	0	1	0	0	A	0	1	0	0	0	0	1	0.5	0.7
21-Feb	0	1	0	0	1	0	0	1	1	1	1	1	1	1	1	A	0	1	1	1	1	0	0	1	0.5	0.7
22-Feb	1	1	1	1	1	1	1	0	1	0	0	0	1	0	A	0	0	0	0	0	0	1	0	1	0.5	0.6
23-Feb	1	0	0	0	1	0	0	0	0	0	1	0	1	A	0	0	0	0	1	0	0	1	1	0	0.5	0.6
24-Feb	0	0	0	1	1	0	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8
25-Feb	1	0	0	1	1	1	0	1	1	1	1	A	C	C	C	C	C	2	1	0	0	0	0	0	0.6	2.4
26-Feb	0	0	0	0	0	1	1	1	1	1	A	1	1	0	0	0	0	1	0	1	1	0	1	1	0.5	0.8
27-Feb	0	1	1	0	1	1	1	1	1	A	1	1	0	1	1	0	0	0	0	1	0	0	0	1	0.5	0.8
28-Feb	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0.4	0.7
	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	Diurnal Average	
	0.8	0.9	0.7	0.7	0.6	1.0	0.9	0.8	0.8	0.7	3.4	1.6	0.7	0.9	0.7	0.6	0.8	2.4	1.2	1.0	1.0	1.0	0.8	0.8	Diurnal Maximum	

C - Calibration

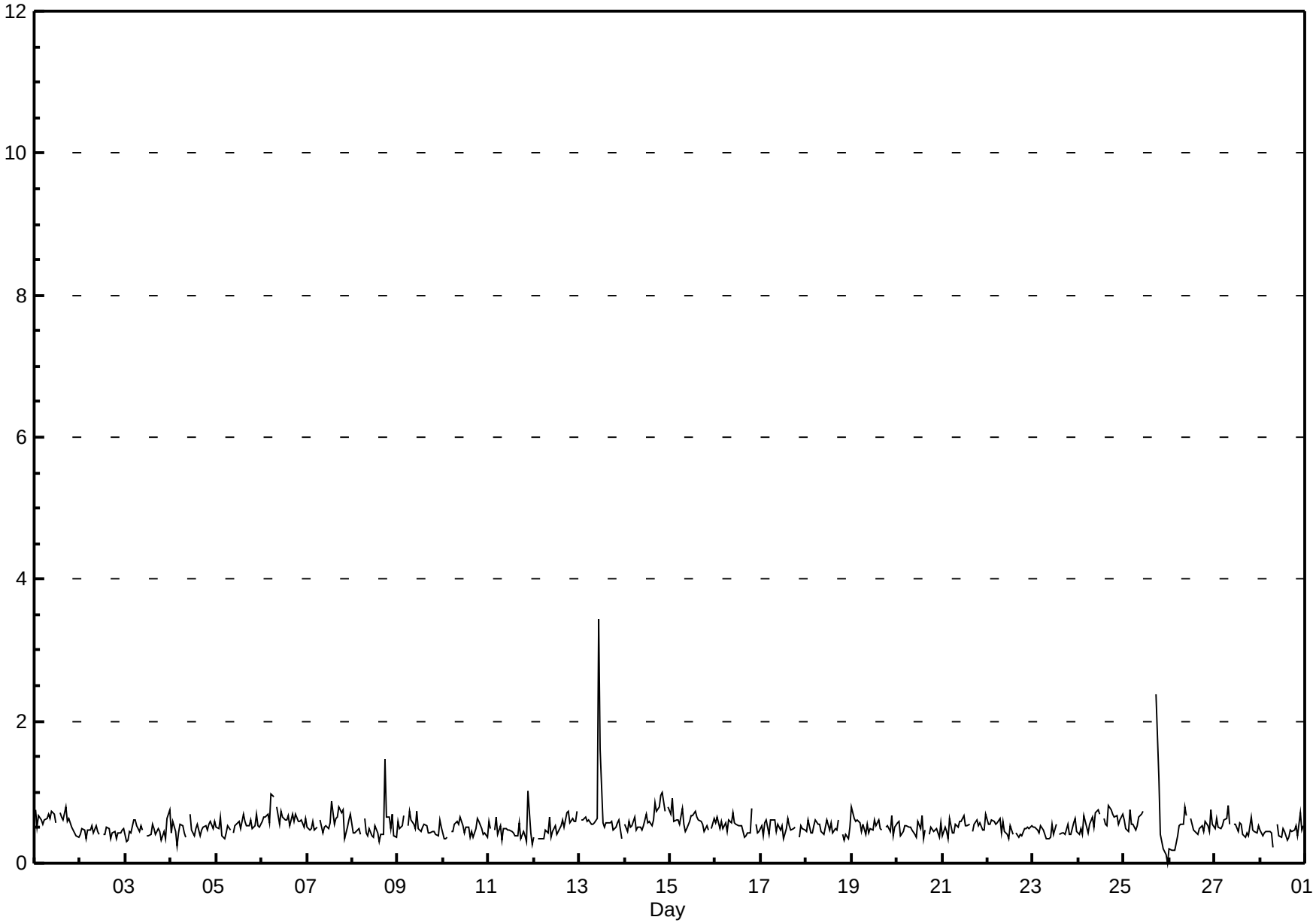
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - February 2014

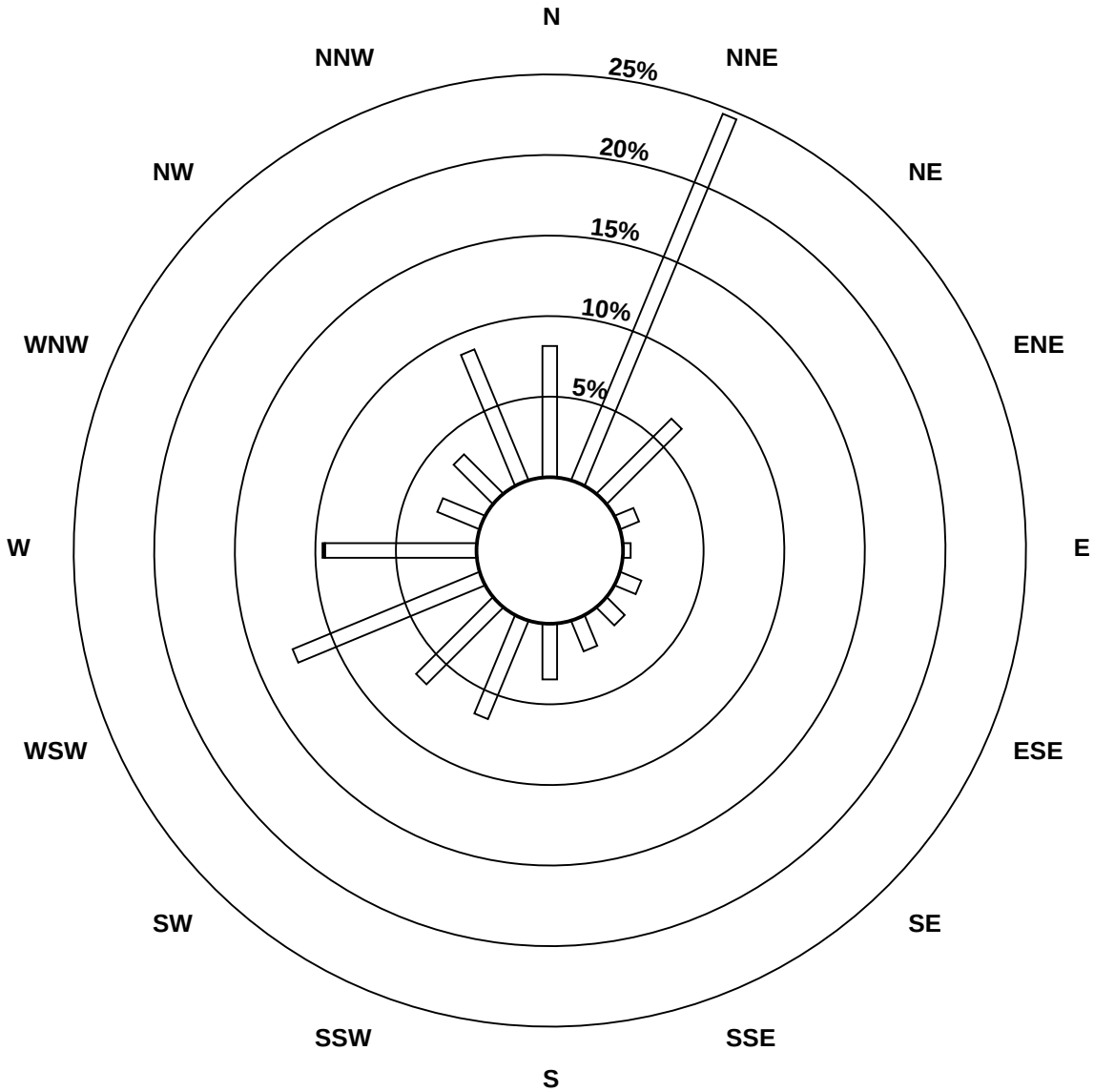


FOCUS AIR QUALITY MONITORING

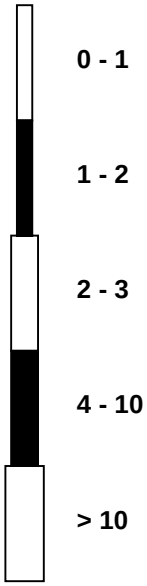
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - February 2014



Pollutant Classes (ppb)

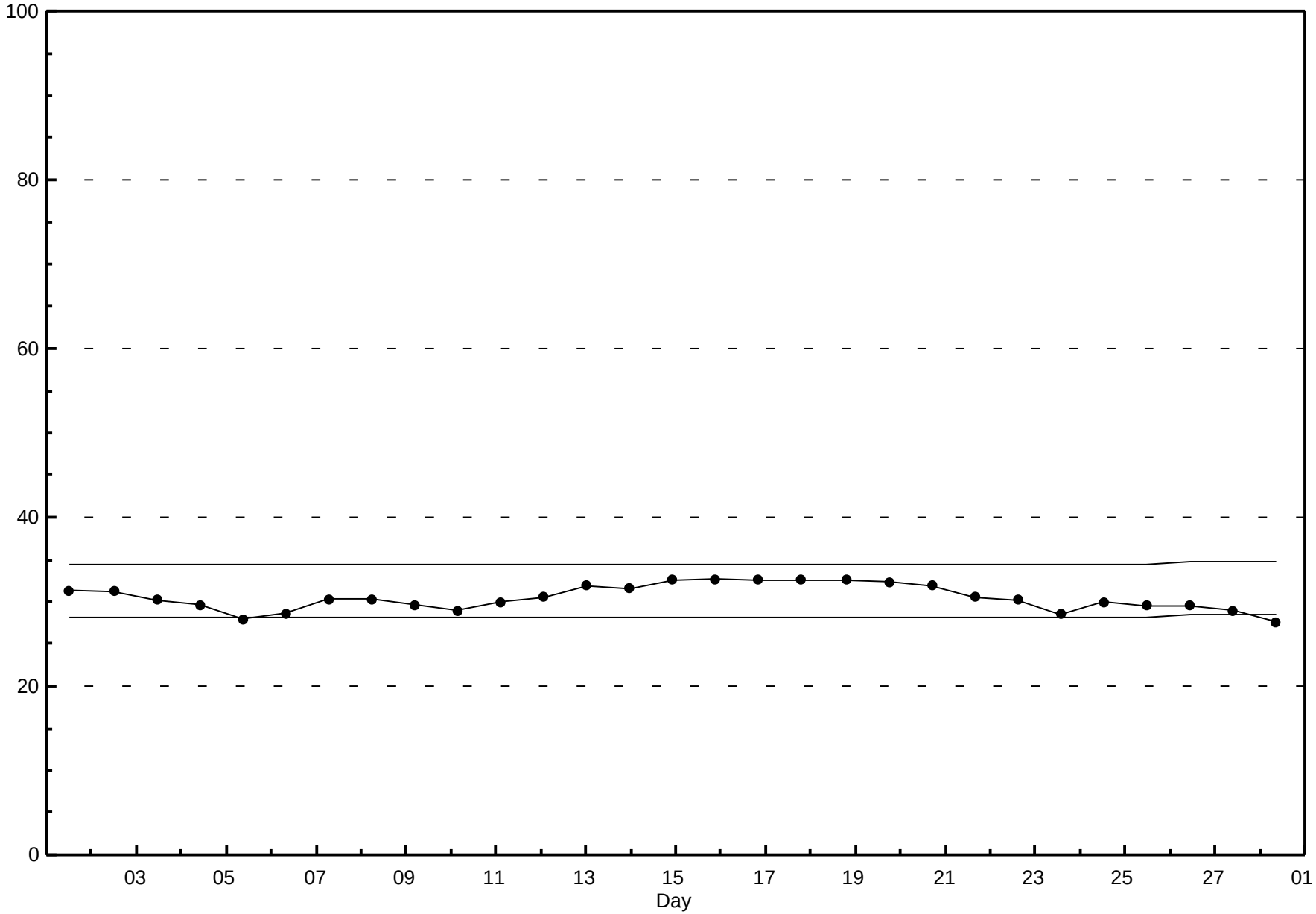


Peace Airshed Zone Association

Span Responses

Total Reduced Sulphur (TRS)

Smoky Heights - February 2014



Peace Airshed Zone Association

Hourly Averages

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

Smoky Heights - February 2014

Number of Exceedences: 1-hr: 2 24-hr: 0

Maximum Value: 168.2 $\mu g/m^3$ on Mar 1 00:00

Maximum Daily Average: 17.6 $\mu g/m^3$ on Feb 28

Minimum Value: 0 $\mu g/m^3$ on Feb 1 23:00

Maximum Diurnal Average: 13.6 $\mu g/m^3$ at hour 24

Monthly Average: 4.67 $\mu g/m^3$

Minimum Daily Average: 0.6 $\mu g/m^3$ on Feb 2

Minimum Diurnal Average: 2.5 $\mu g/m^3$ at hour 7

Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.8$ Median = 2.7 $Q_3 = 5.3$ $P_{90} = 9.3$ $P_{99} = 35.4$

Hours in Service:	672
Hours of Data:	670
Hours of Missing Data:	2
Hours of Calibration:	2
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Feb	2	1	0	0	1	2	1	1	4	6	6	4	6	8	8	5	6	2	1	1	1	1	0	0	2.7	7.6
2-Feb	1	0	0	0	0	0	0	0	0	1	2	3	2	0	1	0	0	0	0	0	1	0	1	1	0.6	3.1
3-Feb	3	1	1	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	1	18	10	1.6	18.2
4-Feb	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0	0	1	2	2	6	9	2	2	1	1.2	9.3
5-Feb	2	3	2	2	1	2	3	4	3	3	4	3	6	4	3	1	2	3	3	2	0	0	1	2	2.4	6.1
6-Feb	2	1	1	1	1	2	2	2	2	3	3	5	5	4	3	3	4	5	5	3	3	3	3	2	2.9	5.4
7-Feb	2	3	2	3	4	4	4	5	5	6	7	8	6	7	7	7	6	10	16	8	16	6	3	3	6.2	16.1
8-Feb	35	11	24	33	11	20	0	0	5	0	0	3	6	0	0	0	0	4	4	37	36	12	0	9	10.4	36.7
9-Feb	9	18	18	21	6	15	0	30	0	2	0	0	0	0	0	1	1	1	1	1	0	1	1	1	5.2	29.5
10-Feb	1	3	2	1	2	3	3	3	4	4	4	4	2	0	0	1	5	10	3	4	1	1	9	3	3.1	10.5
11-Feb	1	1	1	1	3	1	1	1	1	1	2	1	2	1	2	0	2	1	0	0	0	0	0	0	1.0	2.6
12-Feb	0	0	1	1	2	3	3	4	10	5	12	4	2	5	4	8	7	8	16	19	10	5	25	25	7.5	25.2
13-Feb	3	6	4	6	7	3	7	3	3	4	5	5	5	4	5	5	4	7	4	3	3	2	6	5	4.6	7.3
14-Feb	6	11	4	16	25	4	4	1	4	8	5	4	5	4	13	55	4	19	5	5	7	5	8	9	9.7	55.1
15-Feb	9	9	8	4	0	1	0	0	0	0	1	2	0	0	0	0	6	5	6	0	2	0	0	17	3.0	17.4
16-Feb	13	7	2	4	7	6	7	7	20	10	7	8	3	3	1	0	0	0	0	0	0	0	0	0	4.5	20.5
17-Feb	0	1	0	0	0	1	2	2	1	1	1	1	2	0	1	1	0	0	0	0	0	0	0	1	0.7	2.0
18-Feb	0	0	0	0	0	1	1	0	0	0	0	2	0	0	0	0	0	8	0	0	2	2	7	32	2.3	32.3
19-Feb	10	3	3	3	4	4	3	4	4	6	6	7	4	14	23	17	7	8	6	7	2	6	5	16	7.2	23.3
20-Feb	18	9	10	14	2	5	5	5	4	5	7	6	6	6	7	6	5	5	4	14	8	9	6	14	7.5	17.6
21-Feb	2	2	2	3	2	2	2	2	2	2	4	3	2	0	2	1	2	5	7	6	1	2	5	23	3.6	23.3
22-Feb	8	1	2	3	25	9	1	5	6	4	3	3	10	5	5	1	1	1	1	1	4	2	2	18	5.0	24.9
23-Feb	16	8	1	5	1	0	2	1	4	8	4	0	1	0	1	0	1	3	2	3	2	3	4	2	3.0	16.4
24-Feb	1	1	3	2	3	3	3	4	6	7	7	8	6	6	3	4	3	4	4	3	3	5	3	3	3.8	8.2
25-Feb	2	3	2	3	3	2	2	0	4	3	4	6	4	7	6	C	C	13	6	3	5	5	3	2	4.0	13.5
26-Feb	4	4	5	7	8	7	7	6	7	6	5	4	5	4	3	5	7	14	2	8	5	3	26	2	6.5	25.8
27-Feb	2	4	4	4	4	5	7	7	1	2	1	2	1	1	1	1	0	1	2	2	1	2	3	12	2.8	12.0
28-Feb	1	1	4	3	1	2	2	2	10	3	2	3	3	5	2	3	3	4	5	5	12	101	77	168	17.6	168.2
	5.5	4.0	3.9	5.0	4.4	3.8	2.5	3.6	4.0	3.7	3.7	3.6	3.3	3.2	3.6	4.7	2.9	5.1	3.8	5.0	4.8	6.5	7.7	13.6	Diurnal Average	
	35.4	18.0	23.7	33.2	24.9	20.2	7.3	29.5	20.5	10.4	12.0	8.2	9.6	14.0	23.3	55.1	7.5	19.1	16.2	36.7	35.9	101.4	77.2	168.2	Diurnal Maximum	

C - Calibration

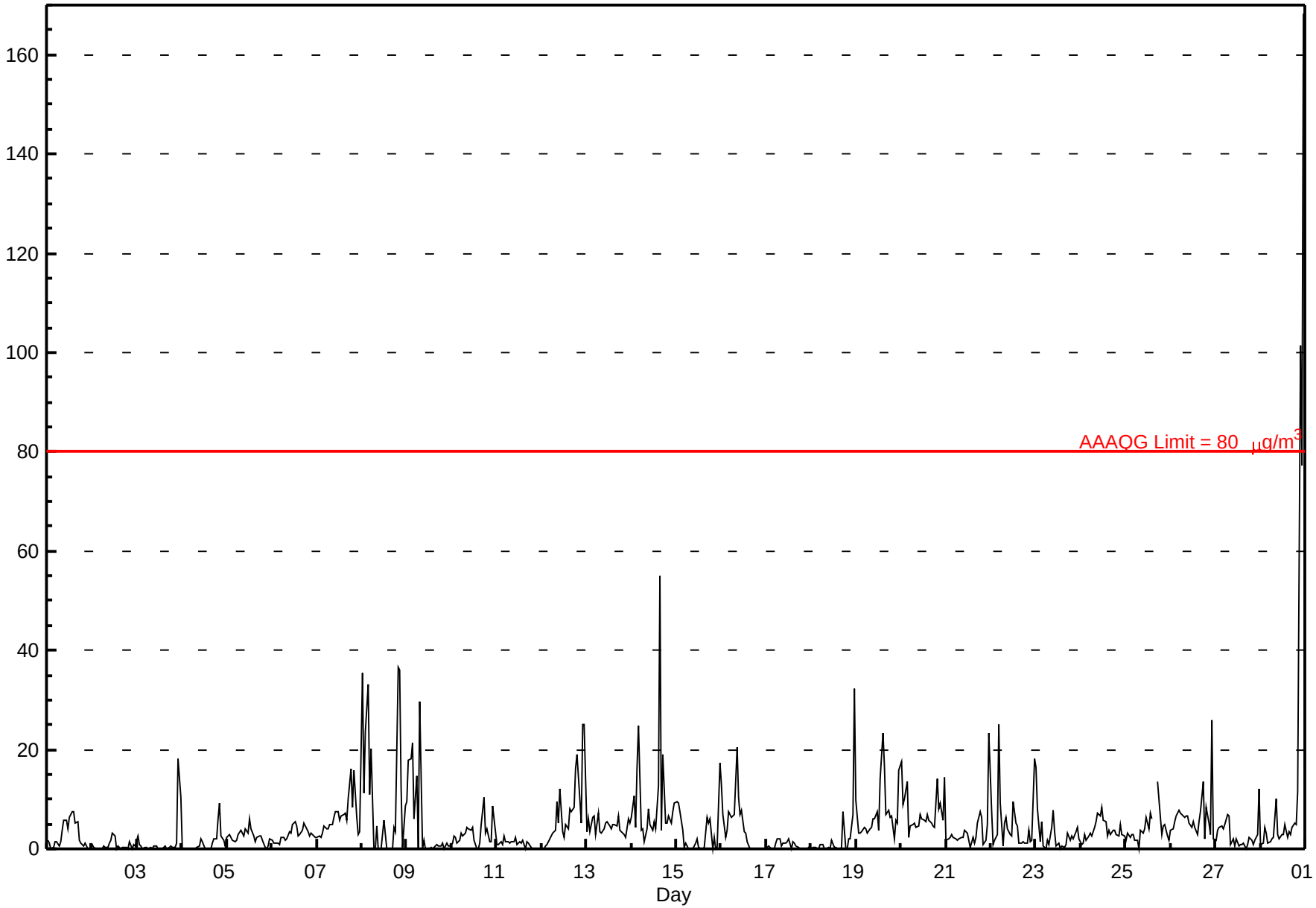
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

Peace Airshed Zone Association

Hourly Averages

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

Smoky Heights - February 2014



Peace Airshed Zone Association

Hourly Maximums

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

Smoky Heights - February 2014

Maximum Value: 251.4 $\mu g/m^3$ on Mar 1 00:00

Maximum Daily Average: 37.6 $\mu g/m^3$ on Feb 28

Minimum Value: 0 $\mu g/m^3$ on Feb 2 03:00

Minimum Daily Average: 2.7 $\mu g/m^3$ on Feb 17

Maximum Diurnal Average: 30.8 $\mu g/m^3$ at hour 24

Minimum Diurnal Average: 6.3 $\mu g/m^3$ at hour 14

Monthly Average: 11.81 $\mu g/m^3$

Percentiles: $P_1 = 0.0$ $P_{10} = 2.0$ $Q_1 = 3.4$ Median = 6.2 $Q_3 = 10.3$ $P_{90} = 28.6$ $P_{99} = 100.9$

Hours in Service:	672
Hours of Data:	670
Hours of Missing Data:	2
Hours of Calibration:	2
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Feb	5	5	4	3	3	4	3	6	7	8	10	6	10	11	10	7	8	7	4	3	3	3	2	2	5.6	10.9
2-Feb	4	9	0	1	1	1	5	2	2	3	4	6	8	2	2	1	1	3	2	2	4	3	5	3	3.2	8.8
3-Feb	8	3	3	3	3	2	2	2	2	2	3	2	2	3	3	3	2	2	3	2	2	3	50	36	6.2	50.2
4-Feb	2	1	2	1	2	2	1	3	2	3	7	6	2	1	2	2	5	4	5	18	25	6	4	3	4.5	25.4
5-Feb	6	6	4	4	4	3	6	6	5	5	7	5	8	7	6	4	5	4	11	4	2	2	3	5	5.1	10.8
6-Feb	4	4	3	3	3	5	4	3	4	6	6	7	8	7	4	5	6	13	8	7	4	7	9	5	5.6	13.2
7-Feb	6	7	8	8	7	6	6	7	8	10	10	9	8	9	11	9	8	49	54	38	42	30	13	15	15.7	53.5
8-Feb	53	31	62	61	36	41	9	5	27	9	2	21	21	1	1	2	2	24	27	92	84	75	6	37	30.4	92.4
9-Feb	17	55	64	63	43	31	37	58	15	18	2	4	2	3	1	2	3	2	3	4	1	3	5	2	18.4	64.0
10-Feb	4	4	4	3	4	5	5	6	7	5	7	9	6	2	3	3	12	15	9	8	5	6	23	9	6.9	23.5
11-Feb	3	3	4	2	8	3	5	3	3	3	5	3	5	4	6	4	5	3	2	2	1	1	0	0	3.3	7.6
12-Feb	0	2	3	3	5	5	5	6	17	9	23	8	6	7	8	15	11	41	64	44	33	14	50	57	18.2	64.3
13-Feb	28	15	11	19	15	5	14	7	6	8	10	8	6	7	9	8	8	14	6	6	5	7	11	10	10.0	27.6
14-Feb	13	29	13	39	117	26	8	9	10	15	8	9	9	9	40	136	12	53	16	8	9	8	13	12	25.8	136.4
15-Feb	15	15	15	13	4	4	3	4	4	8	7	5	4	4	1	3	44	30	36	5	6	2	4	32	11.2	43.5
16-Feb	31	12	4	11	12	13	13	9	47	18	11	10	7	5	4	3	1	1	0	0	0	0	7	6	9.3	47.2
17-Feb	3	4	2	1	1	3	4	5	3	3	3	4	4	2	3	2	3	1	2	2	1	1	2	3	2.7	5.4
18-Feb	3	2	2	4	2	2	3	2	1	4	2	4	2	2	1	0	2	34	0	0	8	5	27	49	6.7	48.6
19-Feb	36	7	5	6	9	7	6	6	7	17	10	14	7	22	34	39	18	34	11	12	5	10	9	39	15.3	38.9
20-Feb	40	33	23	34	11	9	8	11	6	7	10	12	10	8	9	9	7	7	7	21	14	14	35	81	17.7	81.4
21-Feb	4	4	4	6	4	4	3	4	4	5	8	7	6	3	5	4	8	15	24	12	5	4	21	103	11.1	102.6
22-Feb	60	2	5	16	79	36	3	16	18	10	6	6	27	12	8	4	4	6	3	3	10	3	5	38	15.8	78.9
23-Feb	41	17	20	20	3	3	5	3	9	23	10	11	5	6	3	3	3	10	3	6	5	5	9	6	9.5	40.6
24-Feb	4	7	6	4	5	6	6	8	9	10	12	15	10	14	5	6	5	7	6	8	8	11	6	8	7.7	14.9
25-Feb	8	8	9	7	7	8	5	2	6	7	9	11	8	10	9	C	C	24	10	7	9	8	7	4	8.2	24.1
26-Feb	6	6	8	10	10	10	10	9	9	11	11	6	8	7	6	10	12	36	7	15	11	5	52	9	11.8	51.9
27-Feb	6	7	8	6	8	8	11	12	3	5	3	5	2	3	3	3	3	4	5	4	4	4	6	40	6.8	40.0
28-Feb	20	5	28	11	3	7	6	7	24	8	5	5	6	9	6	6	5	8	8	8	101	215	150	251	37.6	251.4
	15.3	10.8	11.6	13.0	14.6	9.4	6.9	7.9	9.4	8.6	7.4	7.7	7.5	6.3	7.4	10.9	7.5	16.1	11.9	12.2	14.5	16.3	19.1	30.8	Diurnal Average	
	59.6	55.0	64.0	63.0	116.6	41.0	37.1	58.4	47.2	22.7	23.5	20.5	27.4	21.6	39.8	136.4	43.5	52.5	64.3	92.4	101.2	215.3	150.1	251.4	Diurnal Maximum	

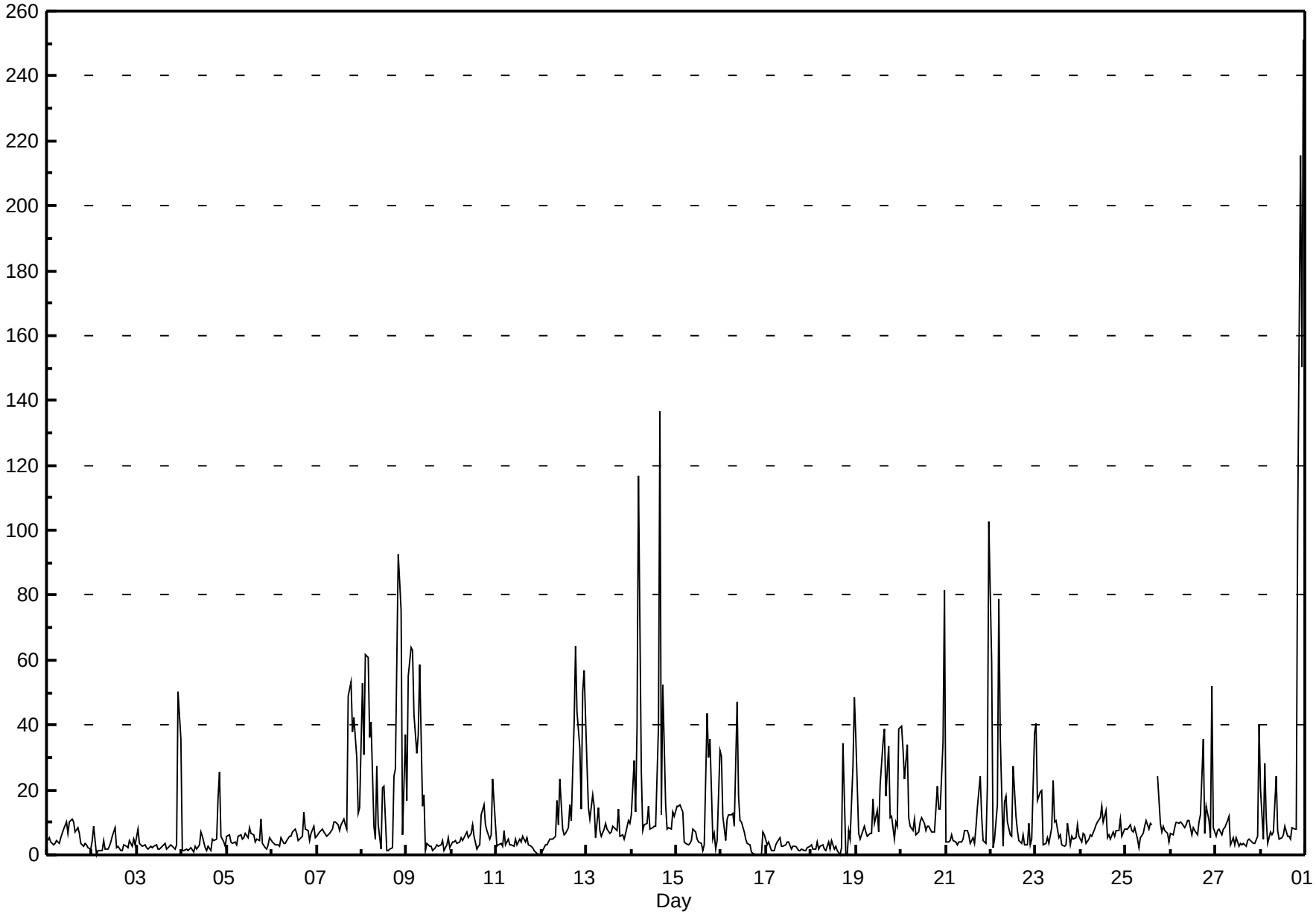
C - Calibration

Peace Airshed Zone Association

Hourly Maximums

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

Smoky Heights - February 2014

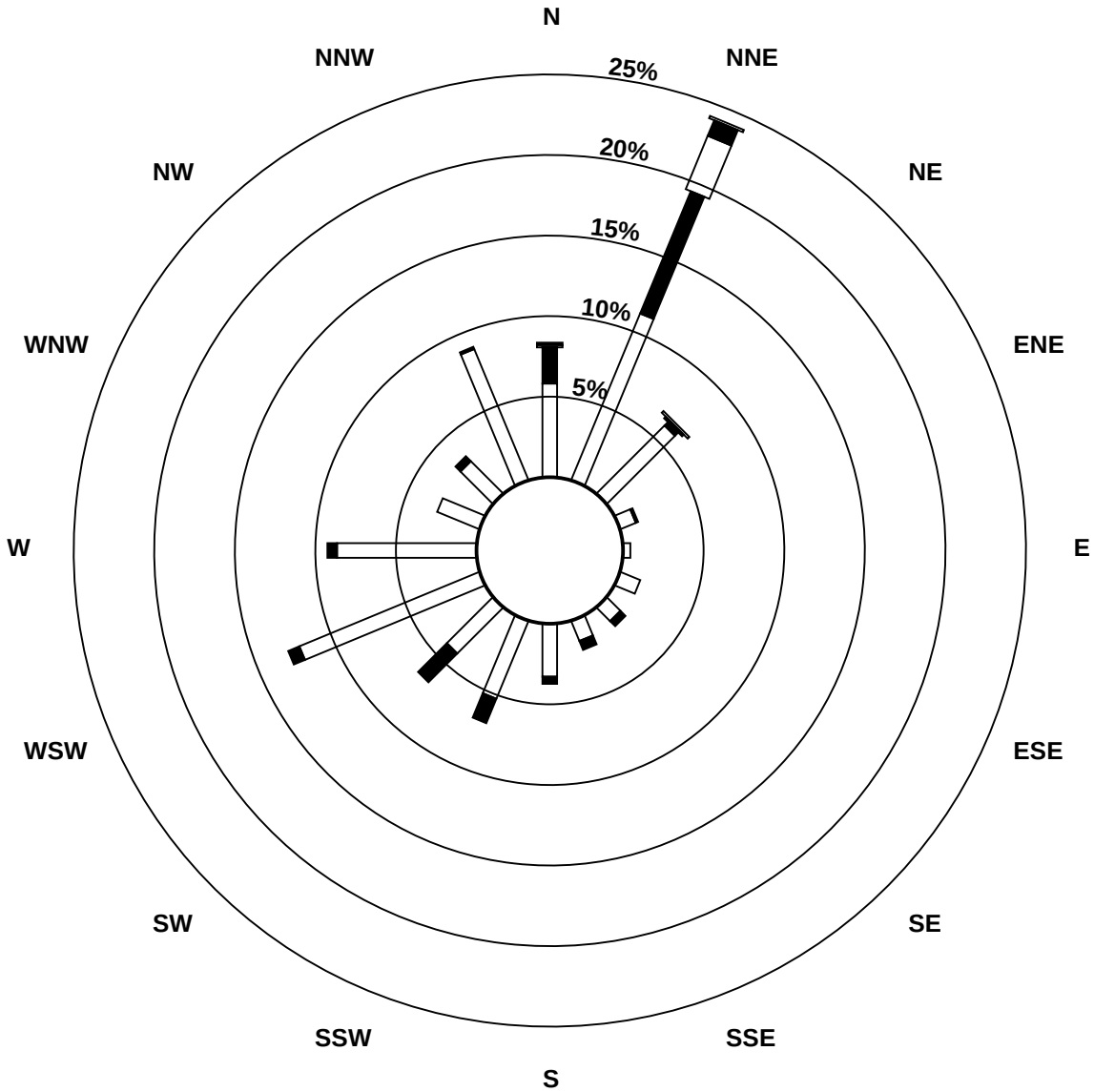


Peace Airshed Zone Association

Pollutant Rose

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

Smoky Heights - February 2014



Pollutant Classes ($\mu g/m^3$)

- 0 - 5
- 6 - 15
- 16 - 25
- 26 - 80
- > 80.0

FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Smoky Heights - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 1.0 ^{o}C on Feb 18 15:00 Maximum Daily Average: -4.1 ^{o}C on Feb 16

Minimum Value: -33 ^{o}C on Feb 24 08:00 Minimum Daily Average: -25.7 ^{o}C on Feb 5

Maximum Diurnal Average: -12.8 ^{o}C at hour 16 Minimum Diurnal Average: -19.9 ^{o}C at hour 7

Monthly Average: -16.79 ^{o}C Percentiles: P_1 = -30.3 P_{10} = -26.7 Q_1 = -21.7 Median = -17.6 Q_3 = -11.4 P_{90} = -6.0 P_{99} = 0.1

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

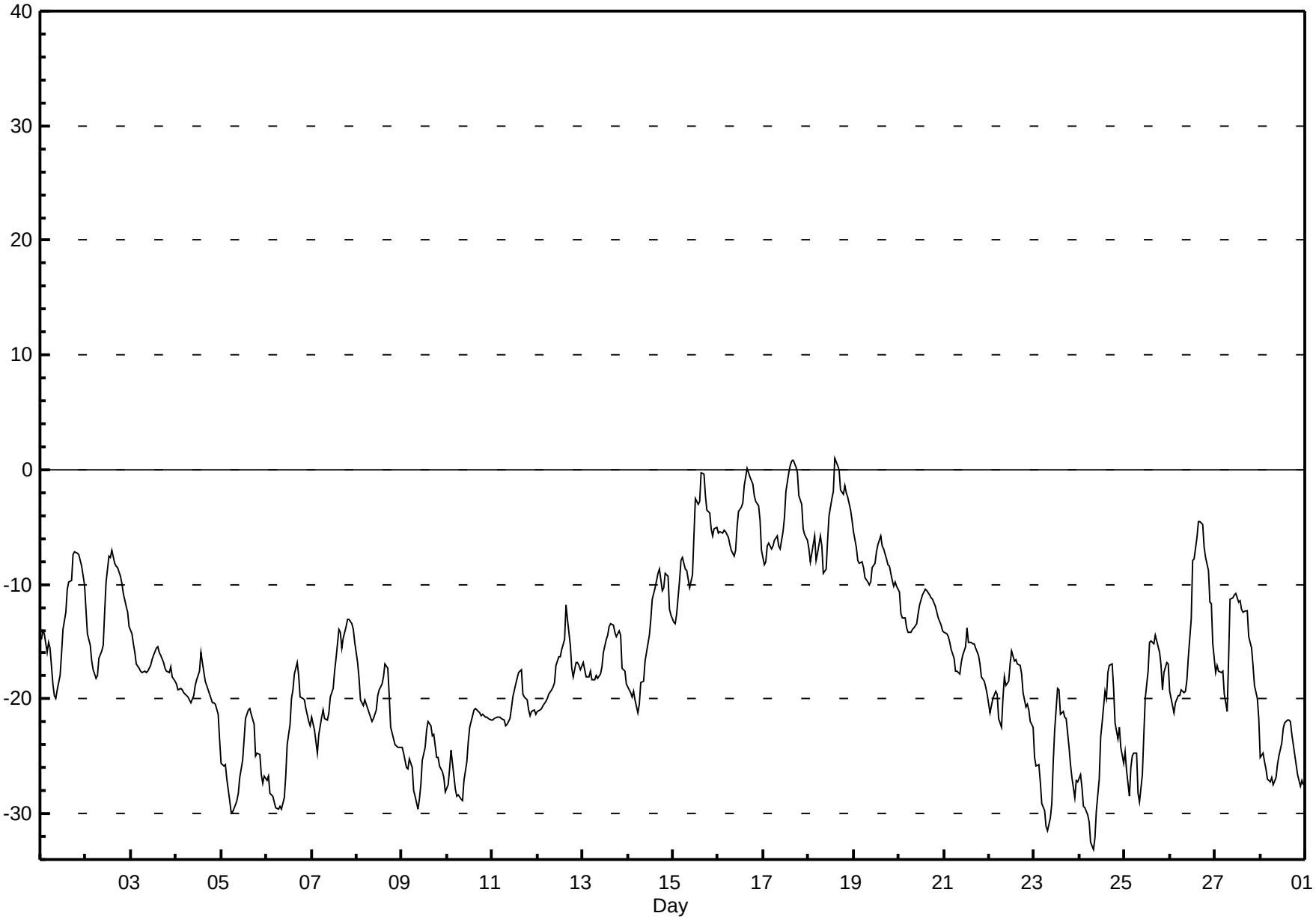
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	-15	-14	-14	-16	-15	-16	-19	-20	-20	-19	-18	-16	-14	-12	-10	-10	-10	-7	-7	-7	-7	-8	-8	-10	-13.0	-7.2
2-Feb	-12	-14	-15	-17	-17	-18	-18	-16	-16	-15	-12	-10	-8	-8	-7	-8	-8	-9	-9	-10	-11	-12	-12	-14	-12.4	-7.0
3-Feb	-14	-15	-16	-17	-17	-18	-18	-18	-18	-18	-17	-17	-16	-16	-15	-16	-16	-17	-17	-18	-18	-17	-18	-18	-16.8	-14.3
4-Feb	-19	-19	-19	-19	-19	-20	-20	-20	-20	-20	-19	-18	-18	-16	-17	-18	-19	-19	-20	-20	-20	-20	-21	-24	-19.4	-16.0
5-Feb	-26	-26	-26	-27	-29	-30	-30	-29	-29	-28	-27	-25	-24	-22	-21	-21	-21	-22	-25	-25	-25	-27	-27	-27	-25.7	-20.9
6-Feb	-27	-27	-28	-29	-29	-30	-30	-29	-30	-29	-27	-24	-22	-20	-19	-18	-17	-18	-20	-20	-20	-21	-22	-22	-24.0	-16.8
7-Feb	-22	-23	-24	-25	-23	-22	-21	-22	-22	-21	-20	-19	-18	-16	-14	-14	-16	-15	-14	-13	-13	-13	-14	-15	-18.2	-13.0
8-Feb	-17	-18	-20	-21	-20	-20	-21	-22	-22	-22	-21	-20	-19	-19	-18	-17	-17	-20	-22	-23	-24	-24	-24	-24	-20.6	-16.8
9-Feb	-24	-25	-26	-26	-25	-26	-28	-28	-30	-29	-27	-25	-24	-23	-22	-22	-23	-23	-25	-25	-26	-26	-27	-28	-25.6	-22.0
10-Feb	-27	-26	-25	-26	-28	-28	-28	-29	-29	-27	-25	-24	-22	-21	-21	-21	-21	-21	-21	-21	-22	-22	-22	-22	-24.1	-20.8
11-Feb	-22	-22	-22	-22	-22	-22	-22	-22	-22	-22	-21	-20	-19	-18	-18	-17	-20	-20	-20	-21	-21	-21	-21	-21	-20.7	-17.4
12-Feb	-21	-21	-21	-21	-20	-20	-20	-19	-19	-19	-17	-16	-16	-16	-15	-12	-13	-15	-17	-18	-17	-17	-17	-17	-17.7	-11.8
13-Feb	-17	-17	-18	-18	-18	-18	-18	-18	-18	-18	-17	-16	-15	-14	-14	-13	-14	-14	-15	-14	-14	-17	-18	-19	-16.4	-13.4
14-Feb	-19	-19	-20	-19	-20	-21	-20	-19	-18	-17	-16	-14	-13	-11	-10	-10	-9	-9	-11	-10	-9	-9	-12	-13	-14.6	-8.7
15-Feb	-13	-13	-13	-10	-8	-8	-9	-9	-10	-10	-9	-6	-3	-3	-3	0	0	-2	-4	-4	-5	-6	-5	-5	-6.5	-0.3
16-Feb	-5	-5	-6	-5	-5	-6	-7	-7	-8	-7	-5	-4	-3	-3	-1	0	0	-1	-1	-2	-3	-3	-4	-7	-4.1	0.1
17-Feb	-8	-8	-7	-6	-7	-7	-6	-6	-7	-7	-5	-4	-2	0	0	1	1	0	0	-2	-3	-5	-6	-6	-4.2	0.8
18-Feb	-7	-8	-7	-6	-8	-7	-6	-7	-9	-9	-6	-4	-3	-2	1	0	0	-2	-2	-1	-2	-2	-4	-4	-4.3	1.0
19-Feb	-5	-7	-8	-8	-8	-9	-9	-10	-10	-10	-9	-8	-7	-7	-6	-7	-7	-8	-8	-8	-10	-10	-10	-10	-8.2	-5.4
20-Feb	-11	-13	-13	-13	-14	-14	-14	-14	-14	-13	-13	-12	-11	-11	-10	-10	-11	-11	-11	-12	-12	-13	-14	-14	-12.4	-10.4
21-Feb	-14	-14	-15	-15	-16	-16	-18	-18	-18	-17	-16	-15	-14	-15	-15	-15	-15	-16	-16	-17	-18	-19	-19	-20	-16.2	-13.9
22-Feb	-21	-21	-20	-19	-20	-22	-22	-20	-18	-19	-18	-17	-16	-17	-17	-17	-17	-18	-19	-21	-20	-21	-22	-22	-19.3	-15.8
23-Feb	-25	-26	-26	-27	-29	-30	-31	-32	-30	-29	-25	-23	-19	-19	-21	-21	-22	-22	-24	-26	-27	-29	-27	-27	-25.7	-19.1
24-Feb	-27	-28	-29	-30	-30	-31	-33	-33	-32	-30	-27	-23	-22	-19	-20	-18	-17	-17	-19	-22	-23	-22	-24	-26	-25.1	-16.9
25-Feb	-25	-26	-29	-26	-25	-25	-25	-28	-29	-27	-23	-20	-18	-15	-15	-15	-14	-15	-16	-17	-19	-18	-17	-17	-20.9	-14.4
26-Feb	-19	-21	-21	-20	-20	-20	-19	-19	-19	-18	-16	-13	-8	-8	-6	-5	-4	-5	-7	-8	-9	-12	-12	-15	-13.5	-4.5
27-Feb	-18	-17	-18	-18	-18	-20	-21	-17	-11	-11	-11	-11	-12	-11	-12	-12	-12	-12	-15	-16	-17	-19	-20	-22	-15.4	-10.8
28-Feb	-25	-25	-26	-26	-27	-27	-27	-27	-27	-26	-25	-24	-23	-22	-22	-22	-22	-23	-25	-26	-27	-28	-27	-27	-25.2	-21.8
	-18.0	-18.5	-18.8	-18.9	-19.2	-19.6	-19.9	-19.9	-19.8	-19.1	-17.6	-16.0	-14.5	-13.7	-13.2	-12.8	-13.0	-13.6	-14.7	-15.3	-15.8	-16.4	-16.9	-17.8	Diurnal Average	
	-5.4	-5.4	-5.5	-5.3	-5.4	-5.9	-5.8	-5.8	-6.6	-6.9	-5.0	-3.6	-1.9	-0.2	1.0	0.7	0.8	0.2	-0.3	-1.4	-2.0	-2.3	-3.6	-4.3	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Smoky Heights - February 2014



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Smoky Heights - February 2014

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1 Spd	10	12	10	6	4	7	9	8	6	6	4	5	2	3	2	3	3	12	22	22	18	14	14	10	5.8	21.6
Dir	264	287	288	252	183	204	214	209	215	234	231	243	202	148	196	188	217	309	319	325	327	330	327	310	286.8	325.0
2 Spd	11	12	12	14	15	10	9	10	9	4	5	3	4	2	1	6	9	19	16	13	19	18	19	15	7.7	19.4
Dir	275	274	266	264	271	253	254	248	253	248	235	327	8	122	202	241	289	348	345	341	337	341	339	357	303.4	338.9
3 Spd	12	15	16	16	13	7	7	13	15	14	14	15	13	13	13	12	12	11	11	11	11	10	5	3	11.1	16.2
Dir	12	2	352	352	8	339	323	310	320	331	333	328	337	345	343	339	325	320	308	303	329	6	25	12	338.5	352.1
4 Spd	4	7	8	8	6	9	9	9	6	5	5	3	3	1	1	4	4	3	2	1	0	2	3	9	3.1	9.5
Dir	343	329	341	337	337	347	355	351	331	331	5	78	137	171	282	282	281	268	209	74	38	187	232	258	328.4	347.2
5 Spd	12	12	23	19	13	21	17	18	20	21	18	17	22	19	13	13	10	21	21	26	26	27	22	26	17.6	27.4
Dir	252	208	211	207	187	190	202	208	203	193	191	192	216	199	227	246	249	235	251	251	251	237	236	237	220.8	236.5
6 Spd	23	26	24	22	25	20	15	21	17	20	15	7	8	6	9	9	2	1	5	10	9	13	18	23	12.9	25.6
Dir	240	215	200	225	223	229	242	238	207	210	206	182	182	181	166	138	165	161	195	265	262	256	263	251	223.0	215.3
7 Spd	20	16	5	11	18	17	3	4	6	4	4	3	4	3	2	8	14	9	7	10	17	21	24	29	2.7	28.7
Dir	249	272	303	122	246	244	195	182	198	183	190	156	139	154	192	215	268	332	15	8	26	27	18	20	313.6	19.8
8 Spd	31	28	27	32	33	34	29	28	24	22	22	20	11	15	16	12	11	0	4	6	17	24	24	26	15.6	34.1
Dir	28	33	30	28	25	28	19	17	33	53	51	46	232	206	259	255	158	67	10	24	29	21	17	16	25.9	28.1
9 Spd	27	21	25	26	27	23	20	12	4	5	18	5	6	1	1	4	6	3	2	0	0	0	4	1	6.3	27.0
Dir	22	23	31	25	23	25	40	34	43	191	203	167	136	224	265	261	277	293	270	263	328	347	335	29	25.4	23.0
10 Spd	1	1	1	1	12	18	13	9	16	15	9	17	23	28	28	15	11	11	10	9	8	9	9	7	5.5	27.7
Dir	10	278	241	187	210	222	191	40	247	285	271	36	32	37	31	23	22	24	13	22	360	5	11	3	9.5	31.3
11 Spd	5	5	6	4	3	4	5	4	3	3	2	2	2	2	0	0	6	5	5	7	7	8	9	15	3.3	14.9
Dir	355	348	346	351	357	42	44	50	70	128	123	120	112	82	138	128	142	147	96	61	62	66	55	35	54.3	34.8
12 Spd	15	15	20	31	35	34	31	28	25	23	18	17	16	15	4	3	1	4	5	5	15	10	9	11	12.2	34.5
Dir	39	42	50	44	40	39	42	30	15	5	21	253	265	277	295	141	356	324	13	15	8	353	13	12	21.0	40.1
13 Spd	13	11	6	4	5	5	6	8	11	10	9	10	10	10	9	7	7	5	3	1	4	9	7	4	5.4	13.3
Dir	5	19	37	26	25	51	27	36	35	32	29	30	34	33	37	26	33	30	55	120	218	236	268	267	24.2	5.0
14 Spd	5	1	2	5	3	4	5	6	12	10	14	16	14	13	15	12	11	10	4	6	9	11	12	12	4.8	15.6
Dir	26	357	23	18	358	41	5	13	23	21	25	33	31	30	28	22	9	16	348	225	229	225	214	226	13.5	32.9
15 Spd	14	10	14	16	19	20	15	13	12	8	4	9	5	4	3	3	2	5	9	10	13	13	12	12	4.0	19.8
Dir	225	217	236	239	244	250	261	256	244	208	177	186	190	191	278	295	357	29	24	25	31	33	27	18	259.5	250.5
16 Spd	11	13	13	10	8	11	9	10	5	3	3	13	17	20	25	47	44	38	26	19	22	19	8	5	9.8	46.8
Dir	17	15	28	28	25	27	34	28	18	30	198	226	242	242	247	248	248	246	240	236	244	238	233	281	257.7	247.8
17 Spd	8	9	9	9	4	9	11	13	15	14	18	19	18	20	16	15	23	19	19	24	23	15	17	17	14.8	23.9
Dir	285	272	269	256	254	245	239	248	237	252	239	237	239	243	236	242	262	261	254	246	256	258	263	263	251.2	245.9
18 Spd	15	17	19	20	17	20	21	20	14	5	10	15	8	6	6	10	5	18	12	12	10	12	12	14	4.9	21.1
Dir	259	264	261	260	247	259	254	263	258	212	190	198	247	256	114	102	17	35	48	60	32	18	24	18	273.6	253.7
19 Spd	14	15	11	11	10	11	9	7	3	3	8	10	11	8	8	9	7	7	5	8	11	9	6	6	8.5	14.9
Dir	10	7	354	352	12	17	19	354	358	27	16	30	25	25	16	14	10	2	355	28	41	25	17	24	14.2	7.4
20 Spd	6	4	7	8	11	10	13	13	16	15	18	17	17	14	17	16	15	14	13	10	7	7	3	7	11.4	18.3
Dir	22	17	22	22	25	24	21	24	31	31	25	26	18	11	13	8	354	346	345	13	14	21	359	353	15.0	25.3
21 Spd	9	7	9	6	8	6	9	9	7	7	7	6	1	6	8	6	6	4	3	1	2	2	2	3	4.6	9.2
Dir	345	347	342	359	343	337	327	311	304	319	2	37	226	249	287	360	16	359	7	22	315	327	18	34	338.8	341.6
22 Spd	3	3	5	1	4	1	5	4	7	11	10	4	7	21	24	11	12	10	6	7	5	11	7	6	6.3	24.5
Dir	278	332	297	348	26	319	263	314	15	33	36	41	23	26	16	358	349	348	333	298	32	53	45	19	8.7	15.6

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Smoky Heights - February 2014

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	Daily Average	Daily Maximum
23 Spd	7	8	22	19	15	16	8	17	15	16	19	19	12	18	25	26	26	24	24	24	26	26	22	30	12.6	30.5
Dir	18	19	8	16	320	334	268	255	267	218	165	150	169	250	275	276	271	281	269	271	261	262	243	266	270.2	266.2
24 Spd	30	27	27	26	26	26	26	19	15	15	22	18	21	11	26	17	15	19	21	20	16	13	19	17	13.2	30.2
Dir	260	249	244	245	231	208	205	201	203	214	209	153	133	208	271	281	266	279	291	315	32	334	337	295	246.3	260.1
25 Spd	23	22	19	22	24	24	24	24	26	27	26	15	15	13	19	17	14	12	13	8	14	10	9	8	15.9	26.7
Dir	272	256	194	221	241	255	225	209	209	202	223	185	180	201	243	249	267	259	256	246	262	259	252	242	231.5	202.3
26 Spd	7	9	8	7	6	7	6	5	7	7	5	5	0	2	0	5	10	10	12	13	11	10	6	2	1.1	12.7
Dir	180	196	190	208	218	232	239	242	236	210	245	230	161	112	334	21	24	9	8	14	16	29	11	337	307.6	14.4
27 Spd	1	2	1	1	5	5	2	9	19	14	21	23	23	17	20	17	17	12	15	12	10	13	9	7	9.1	23.5
Dir	278	235	98	144	249	253	217	309	308	292	321	331	331	337	345	340	340	343	41	37	45	34	16	24	340.8	331.3
28 Spd	2	4	5	5	5	6	10	9	8	10	10	10	7	8	10	12	10	12	12	11	10	11	10	12	8.5	12.3
Dir	304	332	5	17	9	22	30	28	27	32	32	43	33	19	12	20	15	14	17	13	18	34	28	28	21.5	16.7
Spd	5.6	4.8	3.7	3.5	4.0	3.7	2.8	3.8	3.7	2.3	1.6	0.4	0.9	2.2	4.9	5.0	6.0	6.7	5.9	5.5	5.7	5.4	5.6	6.0	Diurnal Average	
Dir	312.9	308.2	316.6	321.3	303.3	294.7	292.1	298.2	284.1	266.1	258.5	130.3	270.1	290.9	308.3	296.1	297.9	313.3	316.8	317.5	329.9	334.7	332.3	324.8		
Spd	31.2	27.7	27.1	32.0	34.5	34.1	30.8	28.0	25.9	26.7	26.0	23.5	23.1	27.5	27.7	46.8	43.7	38.2	26.0	26.5	26.4	27.4	24.3	30.5	Diurnal Maximum	
Dir	28.2	32.9	243.9	27.8	40.1	28.1	42.1	30.5	208.5	202.3	223.2	331.3	331.1	36.8	31.3	247.8	247.7	245.9	239.9	250.8	250.8	236.5	17.1	266.2		

Maximum Speed Value: 47 km/h on Feb 16 16:00
Maximum Daily Speed Average: 17.6 km/h on Feb 8
Maximum Diurnal Speed Average: 6.7 km/h at hour 18

Minimum Speed Value: 0 km/h on Feb 9 21:00
Minimum Daily Speed Average: 1.1 km/h on Feb 4
Minimum Diurnal Speed Average: 0.4 km/h at hour 12

Hours in Service: 672
Hours of Data: 672
Hours of Missing Data: 0

Monthly Average Velocity: 3.95 km/h 309.68 deg

Speed Percentiles: $P_1 = 0.3$ $P_{10} = 2.9$ $Q_1 = 5.8$ Median = 10.4 $Q_3 = 16.8$ $P_{90} = 23.2$ $P_{99} = 33.4$

Percent Operational Time: 100.0

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

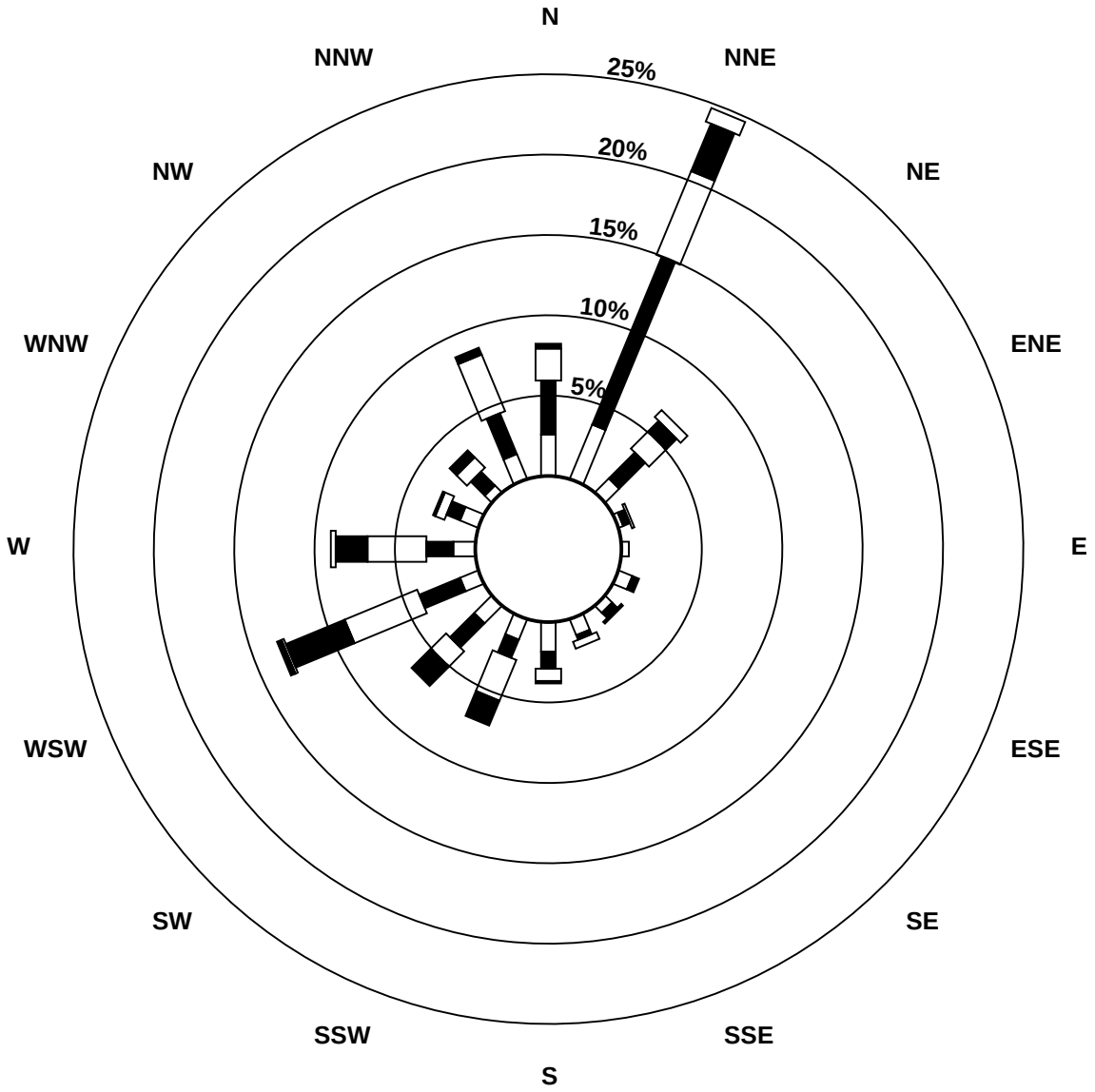
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	24	77	43	13	2	0	159
NorthEast	18	57	34	18	9	0	136
East	7	2	0	0	0	0	9
SouthEast	15	5	2	1	0	0	23
South	21	12	11	8	0	0	52
SouthWest	13	28	37	35	0	1	114
West	18	27	39	28	2	2	116
NorthWest	17	20	20	6	0	0	63
Total	133	228	186	109	13	3	672

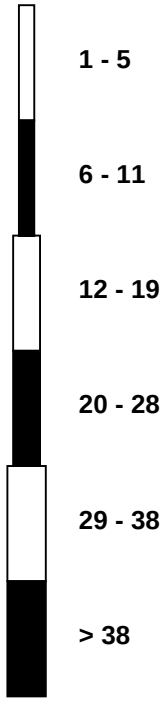
Wind Rose

Wind Speed (WS) (km/h)

Smoky Heights - February 2014



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Smoky Heights - February 2014

Peace Airshed Zone Association

Maximum Speed: 47 km/h on Feb 16 16:00

Maximum Daily Speed Average: 21.8 km/h on Feb 24

Minimum Speed: 0 km/h on Feb 9 21:00

Minimum Daily Speed Average: 4.8 km/h on Feb 11

Maximum Diurnal Speed Average: 14.0 km/h at hour 6

Minimum Diurnal Speed Average: 11.1 km/h at hour 20

Monthly Average Speed: 12.34 km/h

Percentiles: $P_1 = 0.5$ $P_{10} = 3.2$ $Q_1 = 6.1$ Median = 10.7 $Q_3 = 17.6$ $P_{90} = 23.7$ $P_{99} = 33.6$

Hours in Service: 672

Hours of Data: 672

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	11	12	10	6	4	8	9	8	6	6	4	5	2	3	3	3	4	13	22	22	18	14	15	10	9.0	21.7
2-Feb	11	12	13	14	15	11	9	10	9	5	5	7	5	3	1	6	12	19	16	13	19	19	20	15	11.2	19.6
3-Feb	12	16	17	17	13	7	7	13	15	15	14	16	13	14	14	13	13	11	12	11	11	11	5	3	12.0	16.6
4-Feb	4	8	8	8	6	10	9	9	6	5	5	5	4	1	1	4	4	3	3	2	2	3	4	9	5.0	9.6
5-Feb	12	12	23	20	13	21	18	19	20	21	18	17	22	20	14	13	10	21	21	27	27	27	22	26	19.3	27.4
6-Feb	24	26	24	23	25	21	15	21	17	20	15	7	8	6	10	9	3	2	5	10	9	13	19	23	14.8	25.7
7-Feb	21	19	18	18	19	18	3	4	6	5	4	3	5	3	2	10	14	16	8	10	17	21	24	29	12.3	28.8
8-Feb	31	28	27	32	34	34	29	28	25	23	22	20	18	16	17	16	12	0	4	6	17	24	25	26	21.4	34.3
9-Feb	27	21	25	26	27	23	20	12	4	8	18	6	6	3	1	4	6	3	2	0	0	0	4	2	10.3	27.1
10-Feb	1	1	1	2	12	18	17	17	17	17	16	17	23	28	28	15	11	11	10	9	8	10	9	7	12.7	27.9
11-Feb	5	5	6	4	3	4	5	5	3	3	2	2	2	2	1	0	6	5	6	7	7	8	9	15	4.8	14.9
12-Feb	15	15	20	31	35	34	31	28	25	23	21	19	17	15	5	4	2	5	5	5	15	10	9	11	16.6	34.6
13-Feb	13	11	6	5	6	5	6	8	11	10	9	10	10	10	9	7	7	5	3	2	4	9	7	6	7.6	13.4
14-Feb	6	3	3	5	4	4	5	7	12	10	14	16	14	13	15	13	11	10	5	6	9	11	12	12	9.1	15.6
15-Feb	14	10	14	16	19	20	16	13	13	9	4	9	5	4	4	3	3	5	9	10	13	14	12	12	10.5	19.9
16-Feb	11	13	14	10	8	11	9	10	6	3	3	13	17	20	25	47	44	38	26	19	22	19	9	5	16.7	46.9
17-Feb	8	9	9	9	4	9	11	14	15	14	18	19	18	20	16	15	23	19	19	24	23	15	17	17	15.2	23.9
18-Feb	15	17	19	20	18	20	21	20	14	6	10	15	10	6	6	10	6	18	13	12	11	12	12	14	13.6	21.3
19-Feb	15	15	11	11	10	11	9	7	3	3	8	10	11	8	8	9	7	8	7	8	11	9	6	6	8.9	15.1
20-Feb	6	4	7	9	11	10	13	13	16	15	18	18	17	14	17	16	16	14	14	10	7	7	3	7	11.8	18.4
21-Feb	9	7	10	6	8	6	9	9	7	7	7	6	3	7	8	6	6	4	3	1	2	2	3	4	5.8	9.5
22-Feb	4	3	6	1	4	2	6	4	7	11	10	4	7	22	25	11	12	10	6	7	6	11	7	6	8.0	24.7
23-Feb	7	8	22	22	18	18	20	21	20	19	20	20	16	21	25	26	26	24	24	25	26	26	23	31	21.2	30.6
24-Feb	30	27	28	27	26	26	27	20	16	15	22	19	22	19	26	17	15	19	21	21	19	19	21	21	21.8	30.3
25-Feb	24	22	21	22	25	24	24	25	26	27	26	16	15	13	19	17	14	12	13	8	14	11	9	9	18.1	26.7
26-Feb	7	9	8	7	6	7	6	6	7	7	5	5	0	2	0	5	10	10	12	13	11	10	6	3	6.9	12.7
27-Feb	1	3	2	2	5	5	3	11	19	14	21	24	23	18	20	17	17	14	15	12	10	14	9	7	12.0	23.7
28-Feb	3	5	5	5	5	6	10	9	8	10	10	10	7	8	11	12	10	12	12	11	10	11	10	12	8.9	12.4
	12.4	12.2	13.4	13.5	13.7	14.0	13.1	13.3	12.6	11.7	12.6	12.1	11.5	11.4	11.8	11.7	11.6	11.9	11.3	11.1	12.4	12.8	11.8	12.3	Diurnal Average	
	31.3	27.8	27.7	32.1	34.6	34.3	30.9	28.1	26.0	26.7	26.3	23.7	23.4	27.6	27.9	46.9	43.8	38.3	26.1	26.6	26.6	27.4	24.5	30.6	Diurnal Maximum	

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

Peace Airshed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Smoky Heights - February 2014

Maximum Value: 87.7 deg on Feb 21 13:00

Minimum Value: 2.3 deg on Feb 15 05:00

Percentiles: P_1 = 3.1 P_{10} = 4.8 Q_1 = 6.4 Median = 10.2 Q_3 = 17.7 P_{90} = 36.5 P_{99} = 81.8

Hours in Service:	672
Hours of Data:	672
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-Feb	7	3	5	22	15	20	4	7	5	12	15	22	26	18	39	26	71	10	6	7	7	8	9	14	71.4
2-Feb	10	5	5	5	5	12	7	12	10	34	12	66	27	55	48	11	38	8	9	11	8	9	8	11	66.3
3-Feb	11	15	13	12	7	13	10	5	11	7	7	8	11	13	10	10	7	5	5	8	13	15	14	49	49.1
4-Feb	12	7	5	8	9	9	12	11	5	6	18	41	38	36	65	10	15	36	65	82	83	52	29	11	82.7
5-Feb	19	18	6	9	9	7	8	9	9	4	4	7	8	16	20	5	4	5	6	5	6	4	6	7	19.6
6-Feb	15	4	6	8	3	9	3	10	7	4	12	6	4	21	19	10	25	47	24	15	7	10	19	6	47.0
7-Feb	19	35	84	57	16	14	36	11	8	14	13	17	11	20	12	29	6	53	30	14	7	11	7	4	83.7
8-Feb	5	5	6	5	5	7	7	8	12	15	9	14	61	28	11	53	22	38	12	6	5	6	7	6	60.6
9-Feb	4	6	9	5	6	9	5	15	17	72	8	29	5	62	19	11	8	12	23	37	29	28	19	29	72.1
10-Feb	30	21	11	25	21	14	49	61	20	32	59	12	6	6	6	11	6	5	7	7	12	11	8	11	61.3
11-Feb	11	11	9	12	13	16	7	6	18	21	21	13	28	17	74	26	10	11	16	10	9	9	12	3	74.5
12-Feb	4	6	4	6	4	5	5	4	11	10	39	23	12	9	12	62	76	38	10	11	12	15	10	10	75.5
13-Feb	7	17	11	28	19	16	12	9	5	6	8	7	6	6	9	9	7	7	17	67	18	13	12	45	67.2
14-Feb	52	67	26	27	27	41	26	31	6	7	5	4	5	4	6	8	7	7	46	20	9	7	10	10	66.5
15-Feb	5	6	15	11	2	5	8	18	12	32	25	6	21	36	28	22	58	43	8	3	5	7	5	5	58.1
16-Feb	7	6	6	6	5	11	13	5	13	28	58	11	4	4	5	3	3	4	5	7	8	4	61	33	60.9
17-Feb	9	7	10	5	19	16	8	13	7	13	10	5	4	4	5	10	4	3	6	2	5	12	6	6	18.5
18-Feb	12	9	6	4	8	4	6	4	15	30	10	10	33	18	19	8	32	10	8	11	21	11	8	4	33.3
19-Feb	7	9	10	10	11	7	11	19	18	26	7	6	5	7	10	6	11	17	33	8	9	7	9	9	33.3
20-Feb	15	9	4	6	4	6	5	4	4	4	5	6	5	7	6	7	10	10	13	7	8	5	18	10	17.8
21-Feb	9	18	15	12	14	10	6	7	5	16	22	9	88	25	21	14	15	17	13	79	43	36	13	13	87.7
22-Feb	70	38	24	46	16	68	13	41	16	5	8	9	22	9	8	17	9	8	10	11	44	4	12	6	70.4
23-Feb	4	8	5	42	32	25	83	41	51	37	14	22	48	32	6	6	4	6	11	9	7	10	18	5	83.4
24-Feb	4	7	12	15	13	8	10	7	8	8	11	24	12	53	5	12	10	11	6	20	36	51	27	36	53.1
25-Feb	15	9	23	12	14	9	7	12	6	4	9	19	7	14	9	4	13	4	5	6	5	8	5	27	26.9
26-Feb	17	4	5	12	6	8	7	11	6	21	21	17	31	49	74	14	4	9	8	6	5	6	11	52	74.2
27-Feb	87	36	85	81	20	21	69	51	11	15	8	8	8	11	11	9	8	26	6	5	15	15	8	13	87.3
28-Feb	19	19	9	7	7	12	3	6	5	3	5	9	15	11	12	7	12	8	4	6	10	4	5	4	19.1
	87.3	66.5	84.5	81.1	32.0	68.0	83.4	61.3	50.9	72.1	58.9	66.3	87.7	61.5	74.5	62.0	75.5	53.3	64.5	82.0	82.7	51.8	60.9	51.8	

PAZA
Beaverlodge Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8.7 ppb on Feb 12 14:00 Maximum Daily Average: 2.7 ppb on Feb 12

Minimum Value: 0 ppb on Feb 3 03:00 Minimum Daily Average: 0.1 ppb on Feb 3
Maximum Diurnal Average: 0.9 ppb at hour 14 Minimum Diurnal Average: 0.5 ppb at hour 8
Monthly Average: 0.62 ppb Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.2 Median = 0.4 Q_3 = 0.7 P_{90} = 1.3 P_{99} = 4.3

Hours in Service:	672
Hours of Data:	641
Hours of Missing Data:	31
Hours of Calibration:	31
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
2-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
3-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
4-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
5-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
6-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	1	1	1	2	1	1	1	1	0.5	1.7
7-Feb	1	1	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	1	0.6	0.8
8-Feb	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
9-Feb	0	0	1	1	A	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8
10-Feb	1	1	1	1	A	0	0	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	2	1	1.1	2.2
11-Feb	2	1	0	0	A	1	1	1	0	1	1	1	1	1	1	1	1	2	1	1	0	0	0	0	0.8	1.9
12-Feb	0	0	0	1	A	0	1	1	2	3	1	1	1	9	8	5	3	3	3	5	5	4	4	4	2.7	8.7
13-Feb	2	2	3	3	A	3	2	2	1	2	1	1	1	1	C	C	C	1	1	1	1	1	1	1	1.7	3.1
14-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	0	0.7	1.1
15-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1	0.3	0.7
16-Feb	1	1	2	2	A	2	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.7	1.7
17-Feb	0	1	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.3
18-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.3	0.6
19-Feb	1	1	1	1	A	0	0	0	1	1	1	1	2	3	2	2	3	2	2	1	1	1	1	1	1.1	2.7
20-Feb	1	1	1	1	A	1	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0.7	1.2
21-Feb	0	0	0	0	A	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.0
22-Feb	0	0	0	1	A	1	0	0	1	2	2	1	1	0	0	0	1	0	0	0	0	0	0	0	0.6	2.5
23-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0.3	0.6
24-Feb	0	0	0	0	A	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	1	0	1	0.4	1.0
25-Feb	1	1	1	1	A	1	1	1	0	1	0	1	1	1	0	0	0	0	0	1	1	1	1	0	0.6	0.9
26-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	2	3	3	3	2	3	2	2	2	1.2	3.2
27-Feb	1	1	2	2	A	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	4	1	0.8	3.9
28-Feb	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
	0.5	0.5	0.6	0.6	--	0.5	0.5	0.5	0.5	0.7	0.5	0.5	0.5	0.9	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	Diurnal Average	
	2.1	2.2	2.9	3.1	--	2.6	2.3	2.1	2.3	3.4	2.5	1.4	1.5	8.7	8.4	4.8	3.2	2.8	2.9	5.2	4.6	4.4	3.9	3.8	Diurnal Maximum	

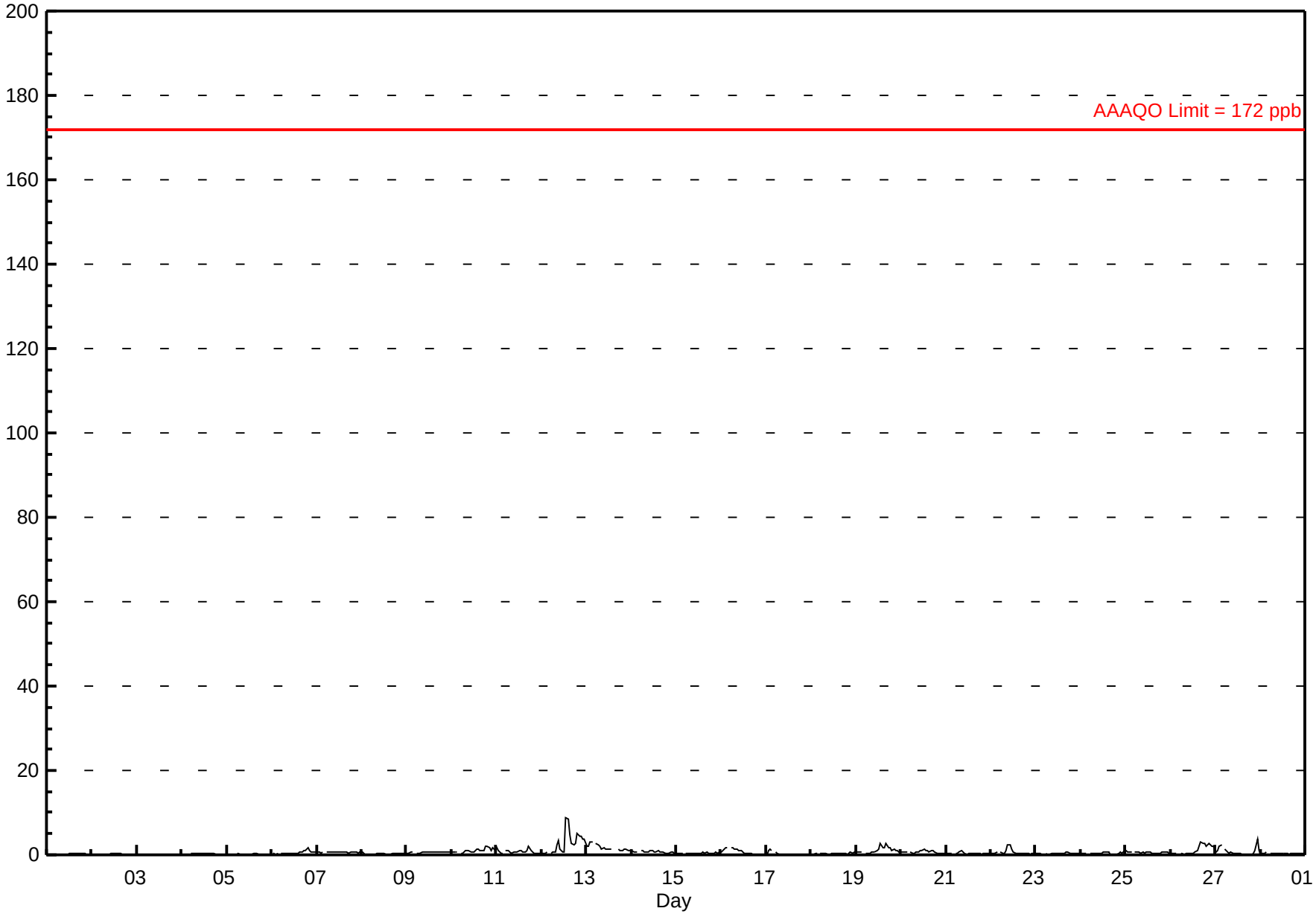
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - February 2014



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - February 2014

Maximum Value: 14.5 ppb on Feb 12 14:00

Maximum Daily Average: 3.8 ppb on Feb 12

Minimum Value: 0 ppb on Feb 3 03:00

Minimum Daily Average: 0.2 ppb on Feb 3

Maximum Diurnal Average: 1.4 ppb at hour 14

Minimum Diurnal Average: 0.7 ppb at hour 8

Monthly Average: 0.93 ppb

Percentiles: P_1 = 0.1 P_{10} = 0.2 Q_1 = 0.3 Median = 0.6 Q_3 = 1.0 P_{90} = 1.8 P_{99} = 6.2

Hours in Service:	672
Hours of Data:	641
Hours of Missing Data:	31
Hours of Calibration:	31
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	0	0	0	0	A	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
2-Feb	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
3-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
4-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	0.6
5-Feb	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0.3	0.9
6-Feb	0	1	0	0	A	0	1	1	1	1	0	1	1	0	1	1	1	1	2	2	2	1	1	1	0.8	2.2
7-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
8-Feb	1	1	0	0	A	0	0	0	0	1	0	1	0	0	0	0	1	1	1	1	0	0	0	0	0.4	0.8
9-Feb	0	0	2	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	2.1
10-Feb	1	1	1	1	A	1	1	1	1	4	1	1	1	3	2	1	1	1	4	3	2	2	2	1	1.6	4.0
11-Feb	2	2	1	0	A	2	2	1	1	1	1	1	1	1	1	1	2	3	1	1	1	1	1	0	1.1	3.0
12-Feb	1	1	1	1	A	1	1	1	3	4	4	1	1	14	11	7	4	3	5	7	5	5	4	6	3.8	14.5
13-Feb	4	3	4	3	A	3	3	2	2	2	1	2	2	2	C	C	C	2	1	1	2	2	1	1	2.1	3.8
14-Feb	2	1	1	1	A	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1.0	1.7
15-Feb	1	0	0	0	A	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	1	1	1	1	0.5	1.5
16-Feb	1	2	2	2	A	2	2	2	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.9	1.9
17-Feb	1	2	2	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.6
18-Feb	0	0	0	0	A	0	0	1	1	0	0	0	1	0	1	1	1	1	0	0	1	1	1	1	0.5	1.3
19-Feb	1	1	1	1	A	1	1	1	1	1	1	1	5	5	4	2	3	2	3	2	1	3	1	1	1.8	5.3
20-Feb	1	1	1	3	A	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	0	0	0	0	1.0	2.7
21-Feb	0	0	0	0	A	0	0	2	3	1	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0.6	2.5
22-Feb	0	0	1	1	A	1	1	1	2	3	3	2	1	1	0	1	1	0	0	0	0	0	1	1	0.9	2.9
23-Feb	1	1	0	0	A	0	0	0	0	3	0	0	0	0	1	1	1	1	1	0	0	0	1	0	0.6	2.6
24-Feb	0	0	1	1	A	1	1	0	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	1	0.7	1.5
25-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	1	1	2	2	1	1	1	1	0.9	1.6
26-Feb	0	0	0	0	A	0	0	0	0	0	0	1	1	1	4	6	6	3	4	3	4	3	2	3	1.9	6.5
27-Feb	1	2	3	3	A	2	1	0	1	1	0	0	1	0	0	0	0	0	0	0	2	2	5	3	1.3	5.2
28-Feb	1	0	0	1	A	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0.5	0.9
	0.8	0.8	0.8	0.9	--	0.7	0.7	0.7	0.9	1.0	0.8	0.7	0.9	1.4	1.3	1.1	1.1	0.9	1.1	1.0	1.0	1.0	1.0	0.9	Diurnal Average	
	3.8	2.6	3.6	3.5	--	3.3	2.6	2.4	3.3	4.4	3.5	1.9	5.0	14.5	10.6	6.8	6.5	3.5	4.9	7.2	5.2	5.3	5.2	5.5	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

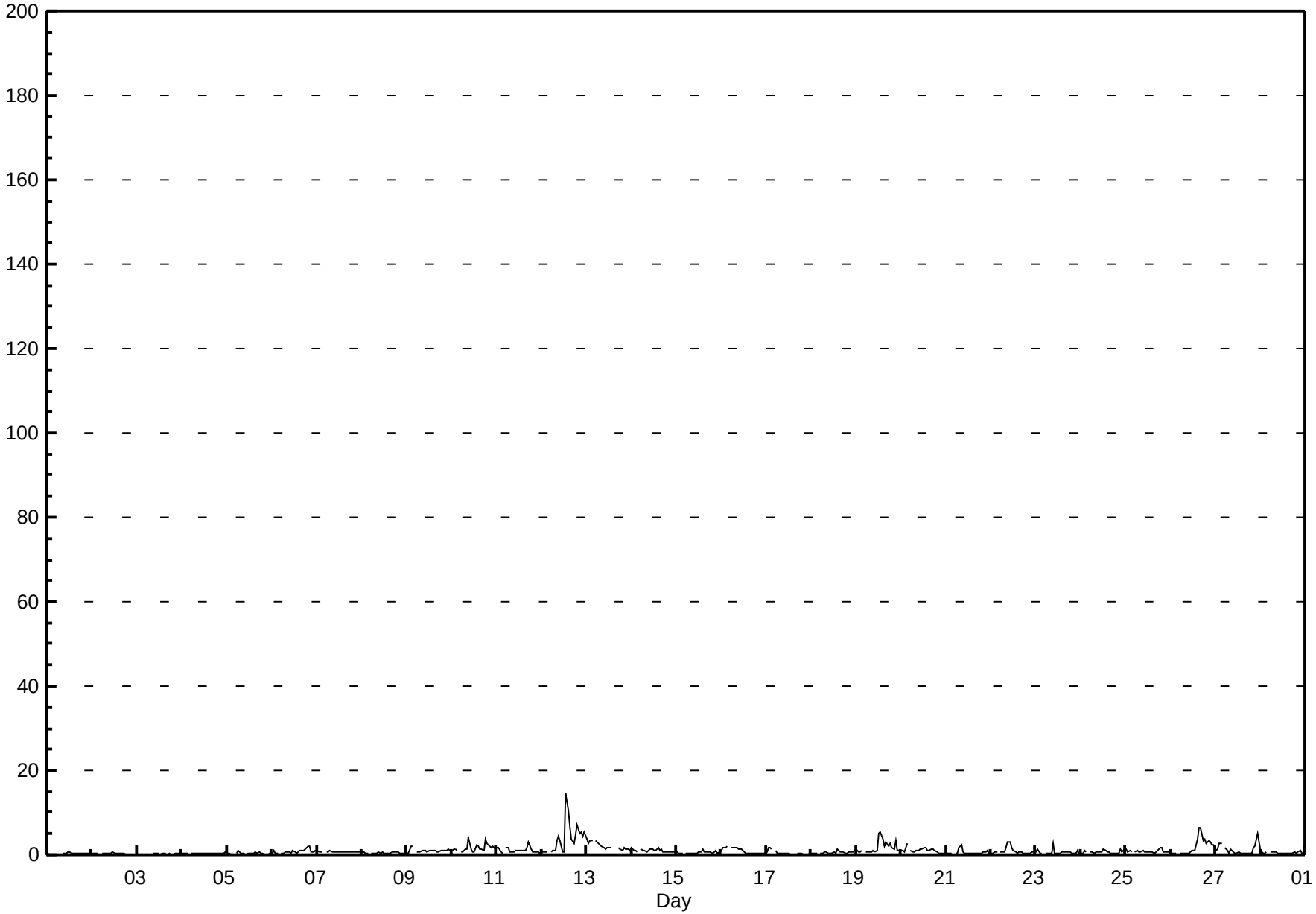
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - February 2014

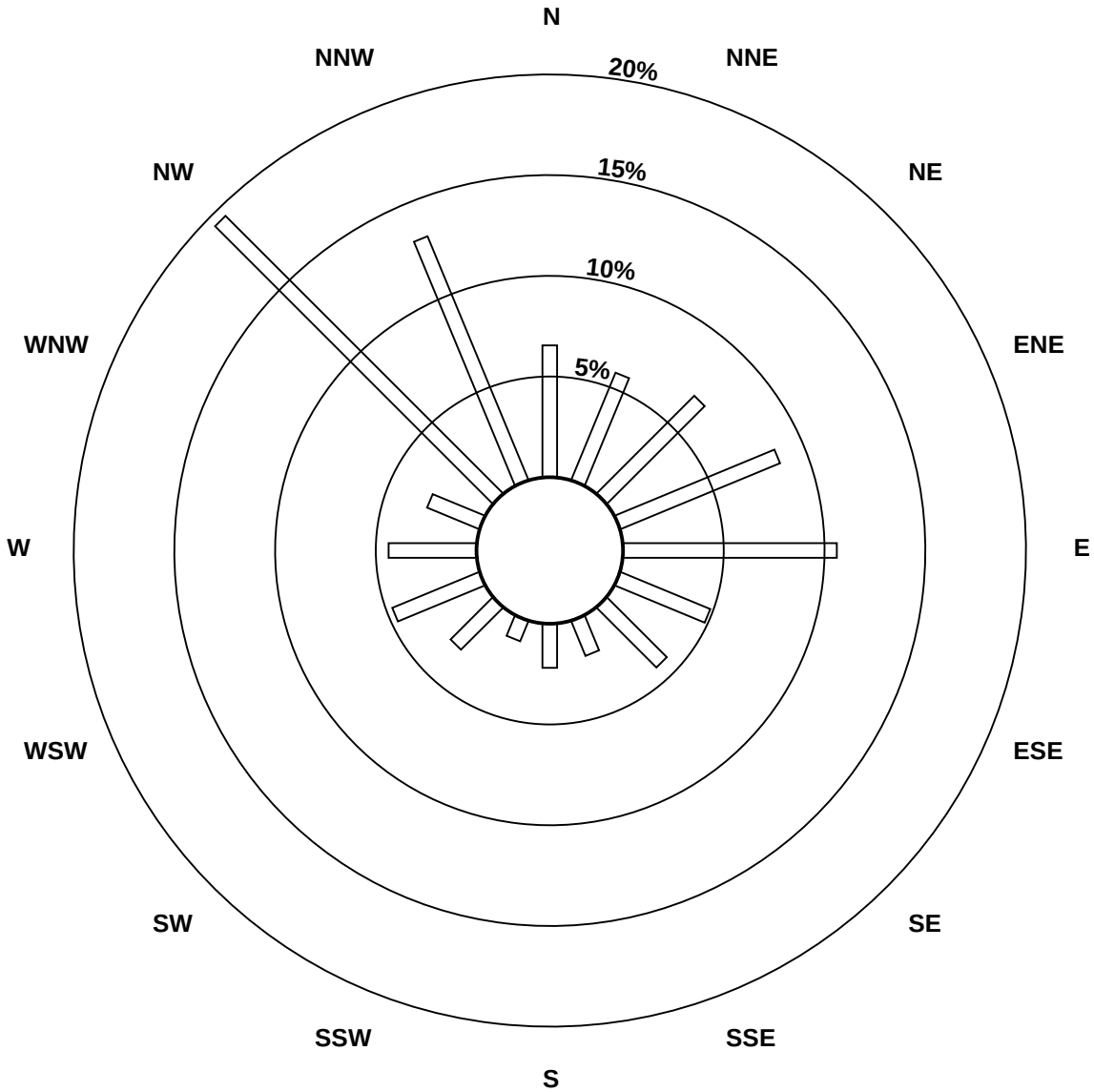


FOCUS AIR QUALITY MONITORING

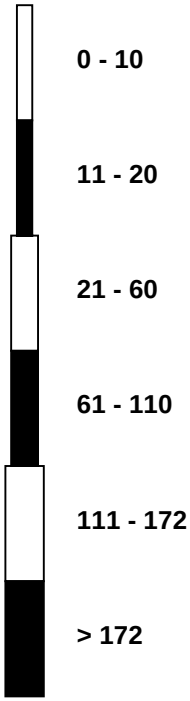
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - February 2014



Pollutant Classes (ppb)

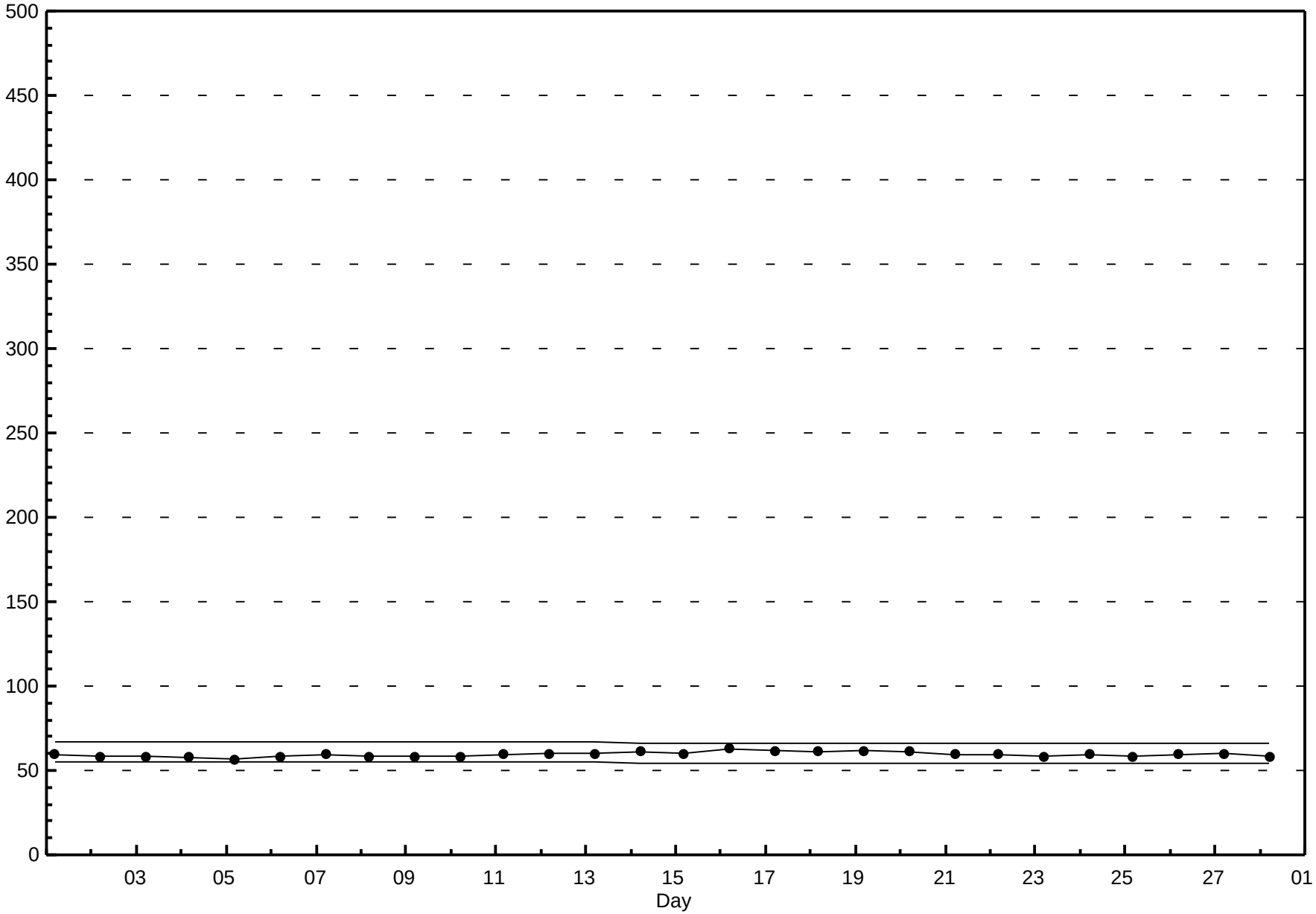


Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Beaverlodge - February 2014



Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 30.8 ppb on Feb 10 03:00
Maximum Daily Average: 14.5 ppb on Feb 14

Minimum Value: 1 ppb on Feb 3 04:00
Maximum Diurnal Average: 9.2 ppb at hour 9
Monthly Average: 6.99 ppb

Minimum Daily Average: 2.6 ppb on Feb 28
Minimum Diurnal Average: 4.1 ppb at hour 15
Percentiles: P_1 = 0.8 P_{10} = 1.6 Q_1 = 2.9 Median = 5.2 Q_3 = 9.8 P_{90} = 14.8 P_{99} = 26.6

Hours in Service:	672
Hours of Data:	632
Hours of Missing Data:	40
Hours of Calibration:	40
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	4	4	4	4	A	4	4	4	12	10	8	9	17	5	2	2	3	4	3	2	3	2	1	7	5.1	16.8
2-Feb	12	3	2	4	A	5	6	4	7	5	7	6	9	5	5	2	1	2	2	1	1	1	1	2	4.1	12.4
3-Feb	1	1	1	1	A	2	1	2	1	2	3	2	1	1	1	1	1	2	6	6	6	10	9	5	2.9	10.4
4-Feb	2	3	2	3	A	3	9	13	11	8	9	7	4	3	2	2	2	7	9	6	5	5	5	6	5.4	12.5
5-Feb	7	6	4	11	A	15	12	10	10	10	8	7	6	5	6	5	6	7	3	3	3	5	5	5	6.9	15.1
6-Feb	15	7	5	4	A	15	9	7	7	7	3	15	3	3	6	10	7	5	7	5	16	9	6	4	7.7	15.8
7-Feb	4	3	4	6	A	30	16	10	18	11	5	4	3	4	4	5	6	10	7	11	6	5	6	6	8.0	29.8
8-Feb	6	2	1	1	A	2	2	4	5	5	5	5	5	4	4	3	3	4	3	7	9	21	20	13	5.8	20.9
9-Feb	17	12	13	16	A	10	14	20	18	10	12	11	9	6	5	5	6	15	15	11	11	21	18	14	12.7	20.9
10-Feb	15	18	31	14	A	12	13	14	17	27	21	17	16	10	14	11	10	8	6	7	9	6	6	5	13.3	30.8
11-Feb	4	4	11	9	A	17	9	6	7	5	5	3	3	3	2	3	3	5	7	8	7	5	4	3	5.7	17.1
12-Feb	3	2	2	2	A	5	5	4	8	9	8	4	3	3	2	4	5	7	10	6	24	16	14	11	6.9	24.1
13-Feb	13	10	9	7	A	12	14	8	5	C	C	C	C	C	C	C	C	C	C	C	C	16	12	11	--	16.1
14-Feb	17	14	14	16	A	16	16	16	19	14	14	9	8	9	11	14	16	25	18	15	17	12	13	10	14.5	24.8
15-Feb	6	4	3	2	A	2	3	3	2	2	6	4	8	12	8	6	7	8	7	3	4	2	1	2	4.5	12.1
16-Feb	2	3	3	4	A	6	5	8	11	9	5	4	1	3	3	3	3	1	1	2	4	4	4	3	4.1	11.3
17-Feb	3	4	3	3	A	6	6	5	4	3	2	3	3	1	1	1	1	1	2	3	1	1	2	2	2.6	6.1
18-Feb	1	1	1	2	A	3	2	5	5	5	3	9	3	3	2	5	4	3	2	1	6	14	4	8	4.0	14.3
19-Feb	8	9	5	4	A	3	4	5	6	6	4	2	3	6	4	5	7	13	13	10	15	13	11	12	7.3	15.4
20-Feb	12	17	13	15	A	14	11	20	21	27	11	9	11	8	5	4	4	5	5	5	4	3	3	3	9.9	27.5
21-Feb	2	4	4	4	A	7	6	8	4	3	3	2	2	1	2	2	2	3	11	13	15	9	6	16	5.5	16.3
22-Feb	11	9	17	19	A	18	27	11	6	6	4	2	2	1	1	1	2	2	2	2	10	6	4	5	7.4	26.8
23-Feb	6	5	2	1	A	4	4	6	4	4	5	6	5	5	5	6	7	8	12	19	19	12	10	14	7.3	19.4
24-Feb	13	27	17	14	A	18	17	12	18	10	11	16	13	10	5	2	1	2	6	4	3	8	11	10	10.8	27.5
25-Feb	8	6	6	5	A	11	10	14	15	11	8	9	6	3	3	4	15	20	23	15	9	11	17	10	10.3	22.9
26-Feb	9	10	4	3	A	3	6	5	7	10	8	8	5	3	4	14	10	12	23	26	13	12	9	8	9.2	26.2
27-Feb	6	8	8	7	A	5	4	2	2	2	1	1	1	1	1	1	1	2	1	1	1	1	1	1	2.6	8.4
28-Feb	1	4	5	5	A	3	2	3	5	1	1	2	2	2	3	2	2	3	4	2	4	2	1	1	2.6	5.0
	7.5	7.1	6.9	6.6	--	8.9	8.4	8.2	9.2	8.2	6.7	6.5	5.5	4.4	4.1	4.5	5.0	6.7	7.8	7.2	8.3	8.4	7.4	7.0	Diurnal Average	
	17.5	27.5	30.8	19.0	--	29.8	26.8	20.1	20.9	27.5	21.0	16.5	16.8	12.1	13.8	14.1	15.6	24.8	23.2	26.2	24.1	20.9	20.4	16.3	Diurnal Maximum	

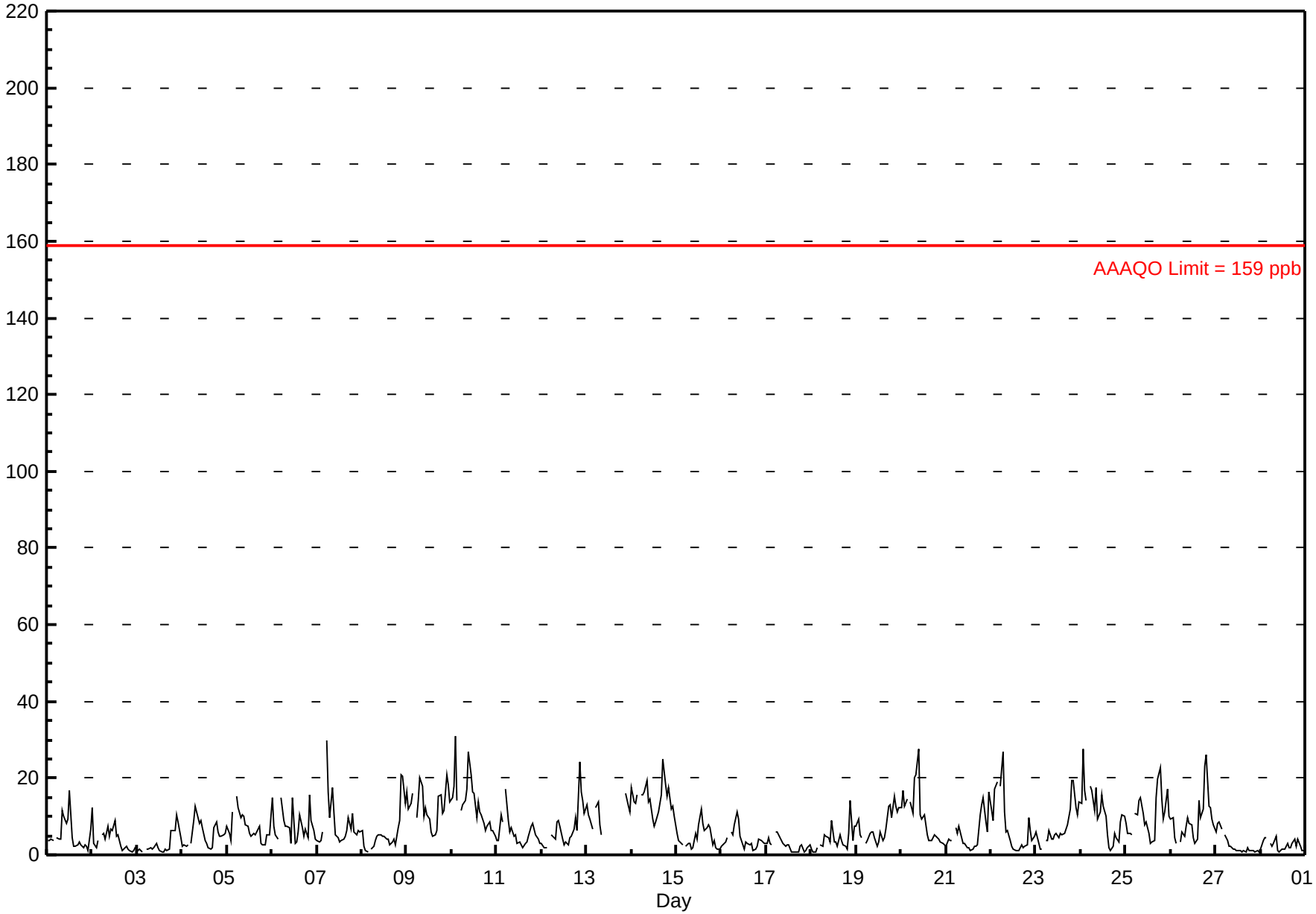
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb

Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - February 2014



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - February 2014

Maximum Value: 318.7 ppb on Feb 13 01:00

Maximum Daily Average: 26.5 ppb on Feb 11

Minimum Value: 1 ppb on Feb 27 17:00

Minimum Daily Average: 3.5 ppb on Feb 27

Maximum Diurnal Average: 24.2 ppb at hour 1

Minimum Diurnal Average: 7.3 ppb at hour 15

Monthly Average: 13.05 ppb

Percentiles: P_1 = 1.4 P_{10} = 2.7 Q_1 = 4.8 Median = 8.4 Q_3 = 15.7 P_{90} = 28.3 P_{99} = 48.7

Hours in Service:	672
Hours of Data:	632
Hours of Missing Data:	40
Hours of Calibration:	40
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	6	5	5	5	A	6	6	9	24	37	22	13	24	12	4	3	3	5	4	3	4	4	3	12	9.5	36.7
2-Feb	18	7	3	10	A	22	8	9	13	7	10	9	12	9	8	3	2	3	3	4	2	1	2	4	7.3	21.5
3-Feb	2	3	2	2	A	5	2	3	2	4	5	3	2	2	1	2	2	3	8	11	11	13	13	7	4.7	13.5
4-Feb	3	4	3	3	A	5	15	17	18	13	12	10	6	6	3	3	3	13	11	9	6	10	12	8	8.4	17.9
5-Feb	17	8	5	30	A	28	19	15	14	13	10	9	7	6	8	8	11	10	4	4	6	6	8	6	10.8	29.6
6-Feb	44	12	6	6	A	18	11	11	9	22	6	41	10	10	14	19	14	6	11	6	42	21	8	7	15.4	43.8
7-Feb	5	5	6	7	A	40	31	11	25	17	6	6	4	5	5	6	9	18	9	20	9	8	8	7	11.6	39.6
8-Feb	8	4	2	2	A	6	4	6	8	11	6	7	6	7	6	4	6	6	6	13	28	51	32	29	11.2	50.6
9-Feb	37	22	34	32	A	13	22	41	35	14	17	13	10	9	7	7	10	26	25	13	16	43	25	19	21.2	42.6
10-Feb	26	31	53	22	A	14	18	29	40	46	30	18	18	15	22	15	13	15	9	9	11	7	7	6	20.5	52.8
11-Feb	5	5	23	10	A	253	207	7	9	6	7	6	6	5	2	4	4	10	11	9	8	6	5	3	26.5	252.5
12-Feb	3	3	2	2	A	20	9	7	15	18	17	5	4	4	3	5	7	12	15	12	42	34	29	14	12.5	42.4
13-Feb	319	12	11	9	A	15	16	12	9	C	C	C	C	C	C	C	C	C	C	C	C	24	15	14	--	318.7
14-Feb	28	18	23	16	A	24	21	31	30	25	32	19	11	13	16	18	27	30	30	20	25	16	14	12	21.7	31.6
15-Feb	19	4	7	7	A	4	15	10	3	5	8	13	14	20	15	22	9	10	10	4	5	5	2	2	9.3	22.0
16-Feb	3	4	4	5	A	7	6	13	13	19	8	6	4	13	11	8	8	5	5	7	9	7	8	11	8.0	19.2
17-Feb	4	11	6	3	A	9	10	8	7	6	4	7	5	2	3	2	3	2	7	6	2	3	6	7	5.3	11.2
18-Feb	2	3	5	3	A	7	4	22	21	19	13	13	5	6	4	78	6	4	3	4	15	47	7	12	13.2	77.7
19-Feb	14	19	7	6	A	4	6	7	9	8	10	3	6	9	9	5	13	17	16	14	23	19	14	15	11.0	22.5
20-Feb	15	37	21	29	A	29	13	30	41	35	14	14	16	11	7	4	5	6	6	6	5	4	4	3	15.5	41.1
21-Feb	3	6	5	5	A	17	7	13	6	4	4	3	3	2	2	3	7	4	15	17	21	13	16	32	9.0	31.6
22-Feb	16	19	30	27	A	26	31	18	6	9	4	3	2	2	2	2	4	3	4	5	13	9	5	8	10.8	30.9
23-Feb	7	9	2	2	A	5	7	10	7	8	7	7	8	7	6	8	9	9	26	36	35	16	13	31	11.9	36.0
24-Feb	32	36	27	17	A	33	30	23	39	33	36	32	21	15	10	5	2	7	13	12	7	11	14	11	20.2	38.9
25-Feb	10	7	13	7	A	28	17	18	25	16	25	28	10	4	8	15	25	31	37	26	16	22	33	14	19.0	36.9
26-Feb	22	18	6	5	A	5	8	7	11	11	11	11	8	4	15	29	13	31	30	44	25	27	12	11	15.9	43.9
27-Feb	8	9	9	9	A	6	5	3	3	2	2	2	2	1	1	2	1	4	2	2	2	1	2	1	3.5	9.2
28-Feb	3	6	7	10	A	4	3	5	8	3	1	4	3	3	4	2	3	6	7	6	6	6	2	1	4.6	10.1
	24.2	11.7	11.7	10.4	--	23.2	19.7	14.1	16.1	15.2	12.1	11.3	8.4	7.4	7.3	10.5	8.1	11.0	12.1	12.0	14.6	15.6	11.4	11.0	Diurnal Average	
	318.7	37.4	52.8	31.7	--	252.5	206.6	40.5	41.1	45.6	35.7	40.7	23.8	19.7	21.7	77.7	27.2	31.0	36.9	43.9	42.4	50.6	32.9	31.6	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

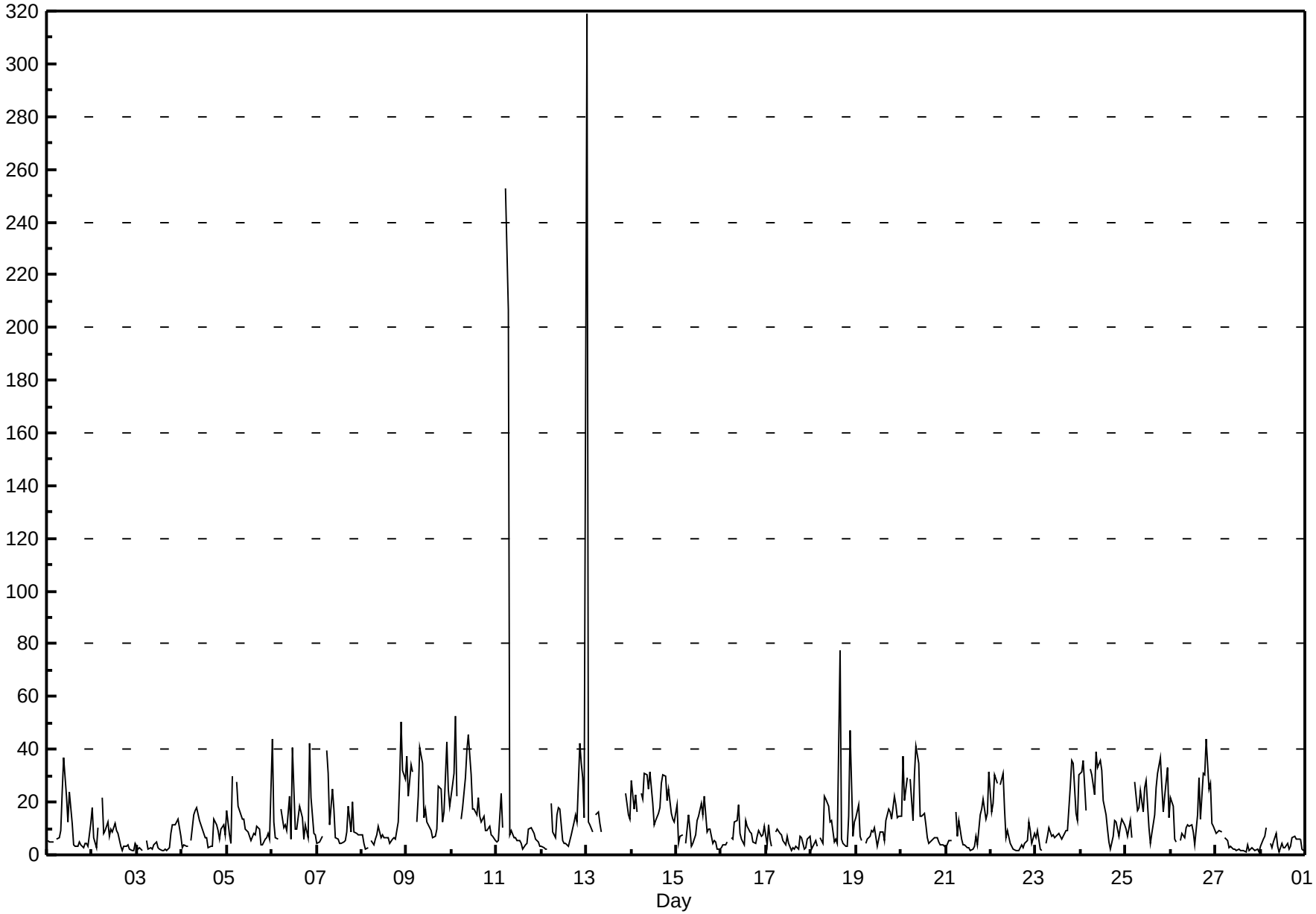
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - February 2014

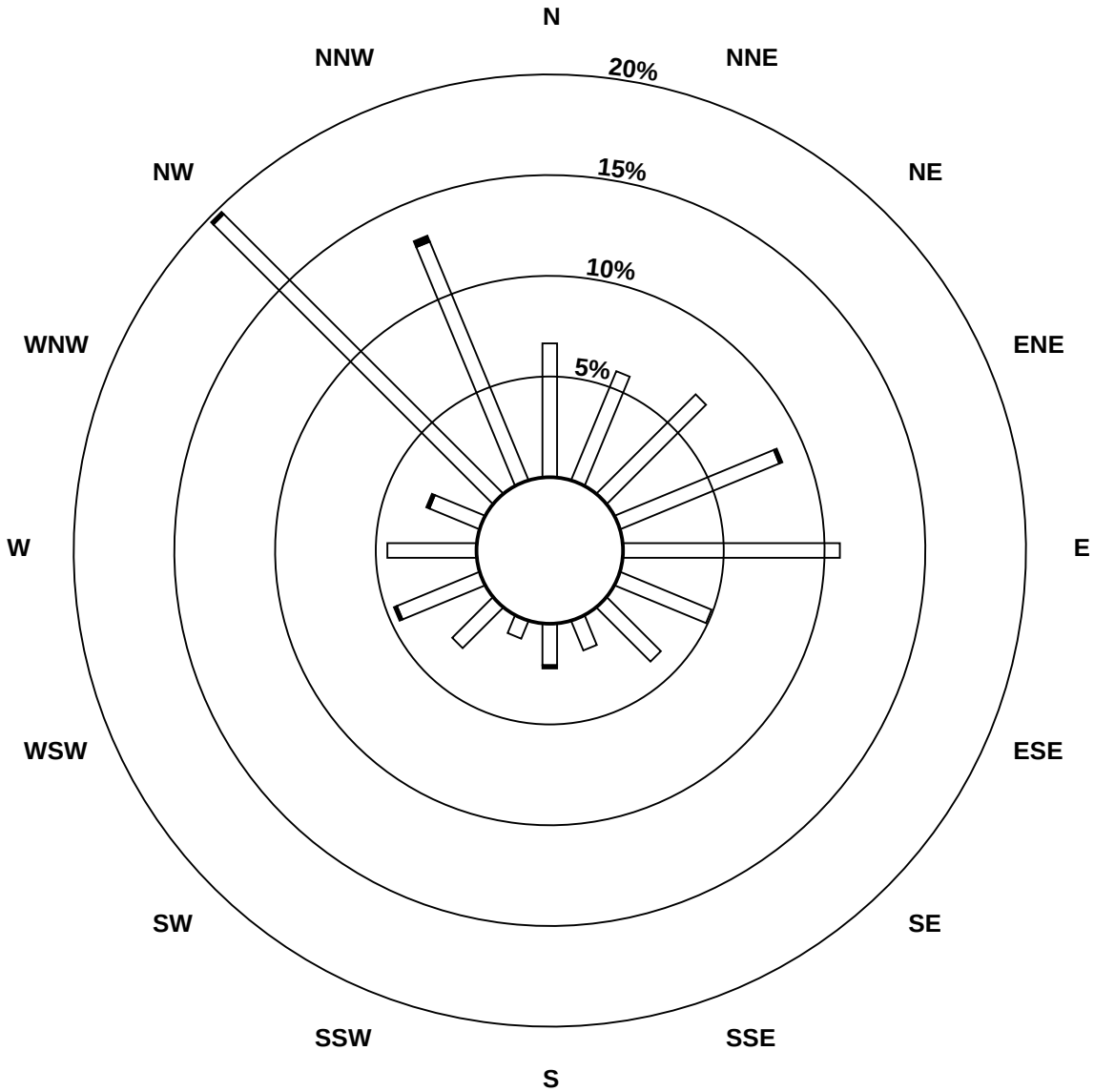


FOCUS AIR QUALITY MONITORING

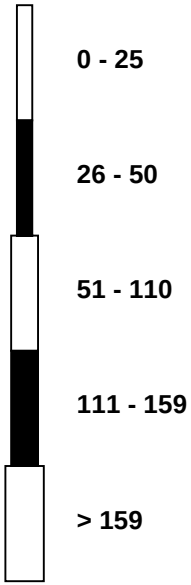
Pollutant Rose

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - February 2014



Pollutant Classes (ppb)

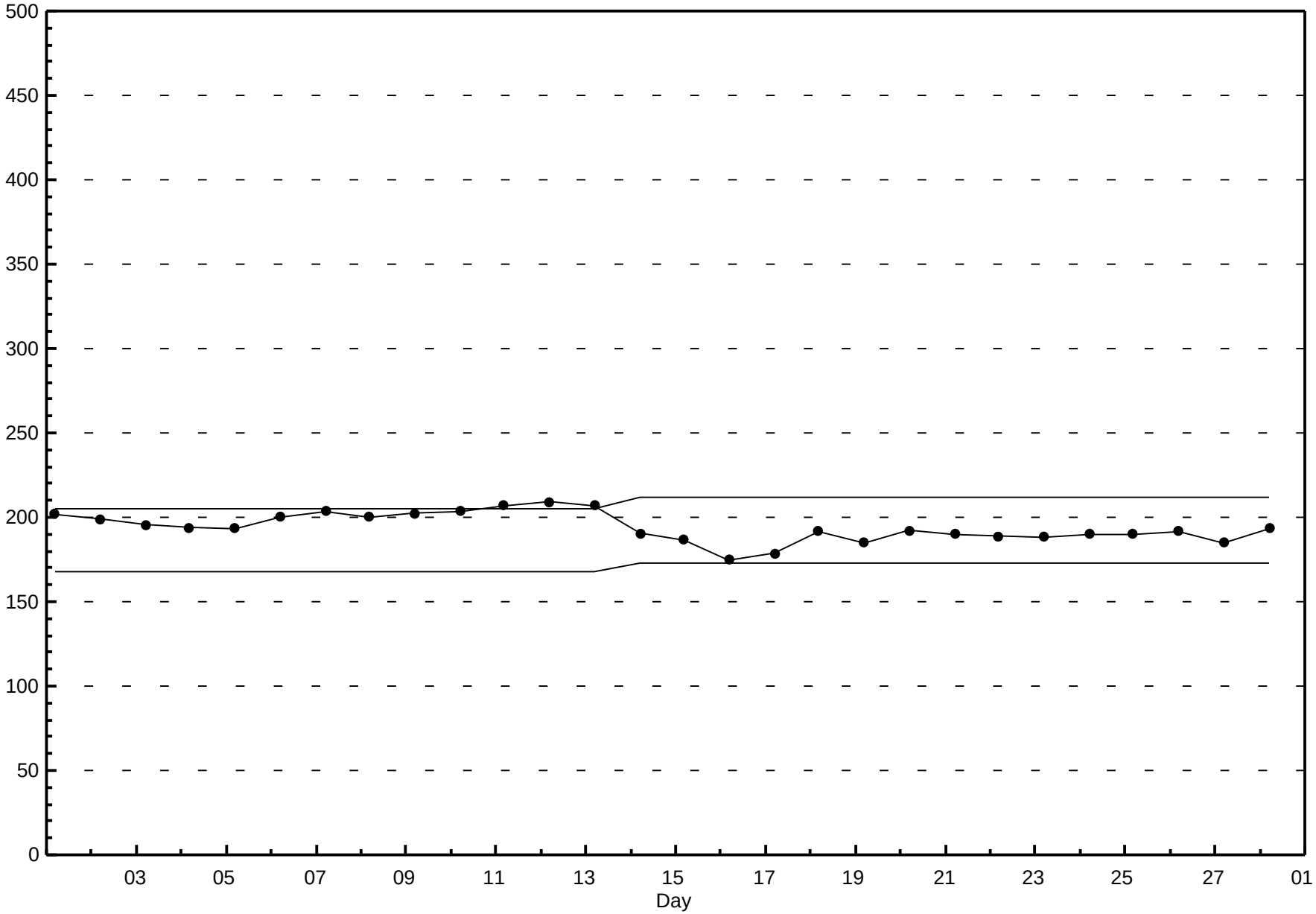


Peace Airshed Zone Association

Span Responses

Nitrogen Dioxide (NO_2)

Beaverlodge - February 2014



Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Beaverlodge - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 63.8 ppb on Feb 20 10:00
Maximum Daily Average: 7.0 ppb on Feb 10

Minimum Value: 0 ppb on Feb 2 08:00
Maximum Diurnal Average: 7.6 ppb at hour 12
Monthly Average: 2.10 ppb

Minimum Daily Average: 0.1 ppb on Feb 3
Minimum Diurnal Average: 0.1 ppb at hour 23
Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.2 Q_3 = 2.2 P_{90} = 6.1 P_{99} = 24.7

Hours in Service:	672
Hours of Data:	632
Hours of Missing Data:	40
Hours of Calibration:	40
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	0	0	0	0	A	0	0	0	0	5	4	6	18	3	1	1	1	0	0	0	0	0	0	0	1.7	18.1
2-Feb	0	0	0	0	A	0	0	0	0	0	2	3	7	2	2	0	0	0	0	0	0	0	0	0	0.7	6.6
3-Feb	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
4-Feb	0	0	0	0	A	0	0	0	0	2	5	6	3	3	1	1	0	0	0	0	0	0	0	0	0.9	6.1
5-Feb	0	0	0	0	A	0	0	0	0	3	5	6	5	4	5	4	3	1	0	0	0	0	0	0	1.5	6.2
6-Feb	0	0	0	0	A	0	0	0	0	2	2	30	4	3	6	8	3	0	0	0	0	0	0	0	2.5	29.8
7-Feb	0	0	0	0	A	1	0	0	1	2	2	2	2	2	3	2	2	1	0	0	0	0	0	0	1.0	2.6
8-Feb	0	0	0	0	A	0	0	0	0	1	2	4	5	4	4	2	1	0	0	0	0	2	0	0	1.2	5.1
9-Feb	0	0	0	1	A	0	0	2	1	3	9	11	10	6	4	3	2	2	0	0	0	1	0	0	2.4	10.8
10-Feb	0	0	12	0	A	0	0	1	3	37	32	20	22	10	13	6	4	1	0	0	0	0	0	0	7.0	36.8
11-Feb	0	0	0	0	A	8	4	0	0	1	3	2	3	3	1	2	1	1	0	0	0	0	0	0	1.3	8.0
12-Feb	0	0	0	0	A	0	0	0	0	4	7	5	3	4	3	4	2	1	0	0	8	1	0	1	1.9	7.6
13-Feb	17	0	0	0	A	0	0	0	0	C	C	C	C	C	C	C	C	C	C	C	C	0	0	0	--	17.2
14-Feb	1	0	0	0	A	0	1	4	8	8	16	12	8	10	12	14	13	17	3	0	0	0	0	0	5.6	17.0
15-Feb	0	0	0	0	A	0	0	0	0	0	2	2	5	9	6	3	2	1	0	0	0	0	0	0	1.4	8.8
16-Feb	0	0	0	0	A	0	0	0	1	3	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0.5	2.8
17-Feb	0	0	0	0	A	0	0	0	0	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0.3	2.0
18-Feb	0	0	0	0	A	0	0	0	4	2	2	8	3	2	1	3	1	0	0	0	0	1	0	0	1.2	7.9
19-Feb	0	0	0	0	A	0	0	0	0	2	4	2	4	5	3	2	3	3	0	0	0	0	0	0	1.3	5.4
20-Feb	0	2	0	1	A	1	0	6	16	64	10	8	11	7	5	3	2	1	0	0	0	0	0	0	6.0	63.8
21-Feb	0	0	0	0	A	0	0	0	0	1	3	2	2	1	1	2	1	1	0	0	0	0	0	1	0.8	2.6
22-Feb	0	0	2	1	A	1	8	0	1	4	4	3	2	1	1	1	2	1	0	0	0	0	0	0	1.4	7.9
23-Feb	0	0	0	0	A	0	0	0	1	3	8	11	8	10	9	8	7	4	1	1	2	0	0	1	3.1	10.7
24-Feb	0	5	0	0	A	2	2	0	19	14	27	37	24	16	5	1	1	0	0	0	0	0	0	0	6.8	37.0
25-Feb	0	0	0	0	A	0	0	0	4	8	9	12	7	3	3	3	12	9	2	0	0	0	0	0	3.2	12.0
26-Feb	0	0	0	0	A	0	0	0	1	5	6	7	4	2	3	13	5	3	2	0	0	0	0	0	2.3	13.3
27-Feb	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.3	0.9
28-Feb	0	0	0	0	A	0	0	0	1	0	0	2	2	2	3	1	1	1	0	0	0	0	0	0	0.6	3.2
	0.7	0.3	0.6	0.1	--	0.5	0.6	0.6	2.3	6.5	6.3	7.6	6.1	4.3	3.5	3.3	2.5	1.8	0.4	0.1	0.4	0.2	0.1	0.1	Diurnal Average	
	17.2	5.3	12.1	1.1	--	8.0	7.9	6.5	19.3	63.8	31.9	37.0	24.5	15.8	13.2	14.2	13.3	17.0	2.8	1.2	7.6	2.4	0.5	1.4	Diurnal Maximum	

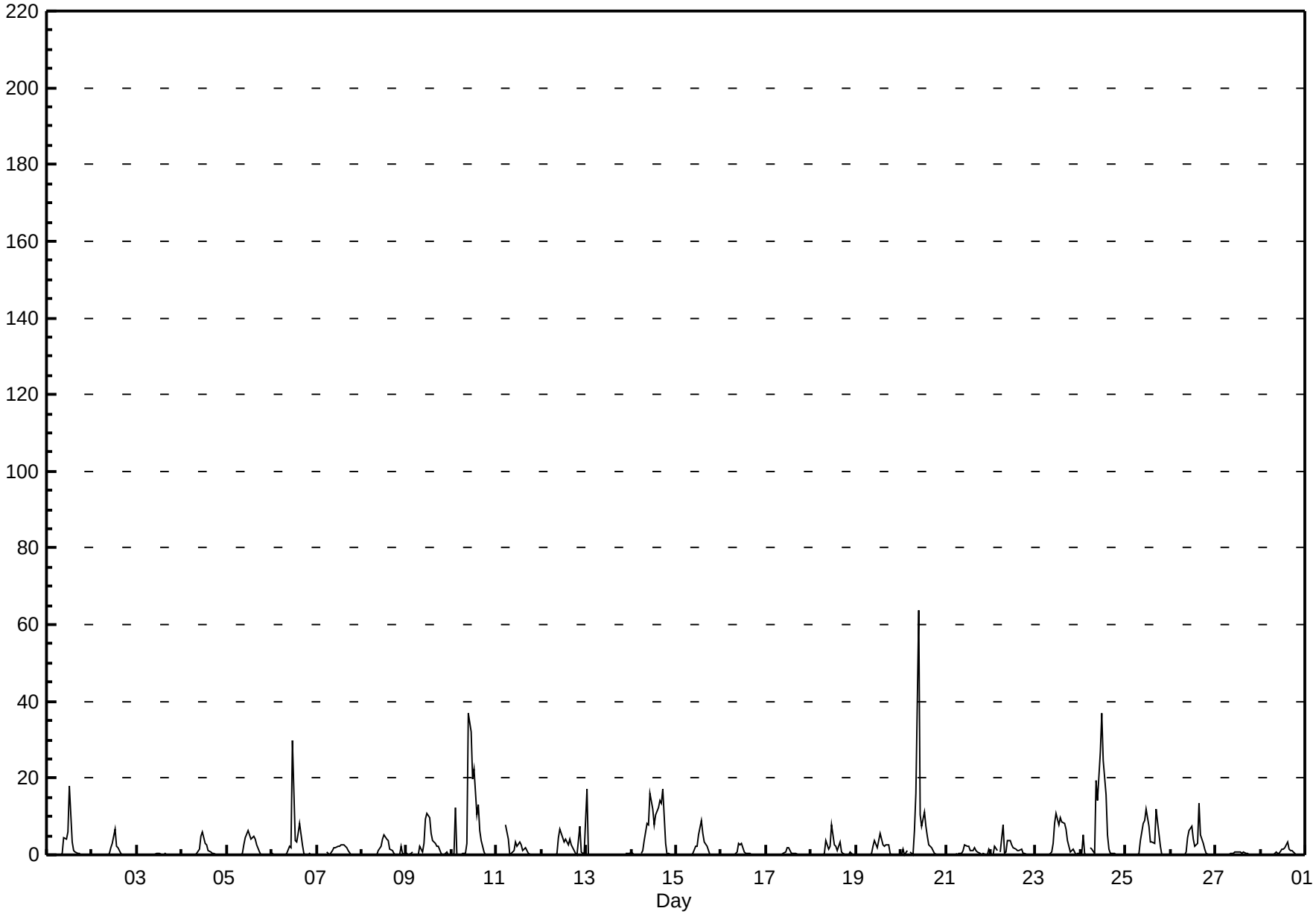
C - Calibration A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Beaverlodge - February 2014



Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Beaverlodge - February 2014

Maximum Value: 331.6 ppb on Feb 13 01:00

Maximum Daily Average: 22.5 ppb on Feb 24

Minimum Value: 0 ppb on Feb 2 18:00

Minimum Daily Average: 0.2 ppb on Feb 3

Maximum Diurnal Average: 17.8 ppb at hour 10

Minimum Diurnal Average: 0.5 ppb at hour 23

Monthly Average: 6.41 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.2 Q_1 = 0.2 Median = 1.0 Q_3 = 4.6 P_{90} = 13.6 P_{99} = 84.6

Hours in Service:	672
Hours of Data:	632
Hours of Missing Data:	40
Hours of Calibration:	40
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	0	0	0	0	A	0	1	0	1	42	18	11	32	12	2	1	1	1	0	0	0	0	0	0	5.4	42.2
2-Feb	0	0	0	0	A	0	0	0	0	1	4	4	10	6	4	1	0	0	0	0	0	0	0	0	1.4	10.0
3-Feb	0	0	0	0	A	0	0	0	0	0	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0.2	1.0
4-Feb	0	0	0	0	A	0	1	1	1	4	6	8	6	6	2	2	1	1	0	0	0	0	0	0	1.7	8.1
5-Feb	0	0	0	2	A	0	0	2	2	4	6	7	7	5	7	7	4	2	0	0	0	0	0	0	2.4	7.4
6-Feb	11	0	0	0	A	0	0	1	1	13	5	87	18	11	13	18	7	1	0	0	3	0	0	0	8.4	86.9
7-Feb	0	0	0	0	A	2	2	1	5	3	3	3	3	3	3	3	3	2	1	0	0	1	0	0	1.7	4.6
8-Feb	0	0	0	0	A	0	0	0	0	4	3	6	7	7	6	3	3	1	1	1	2	16	1	0	2.7	15.7
9-Feb	3	0	6	4	A	0	1	25	4	7	15	13	11	9	5	4	5	3	2	0	0	5	0	0	5.3	25.2
10-Feb	1	1	48	0	A	0	2	4	38	99	54	23	25	22	20	10	5	2	0	0	0	0	0	0	15.5	98.9
11-Feb	0	0	1	0	A	137	71	0	1	2	5	6	6	4	2	3	1	1	0	0	1	0	0	0	10.5	137.1
12-Feb	0	0	0	0	A	0	0	0	1	17	16	6	6	6	4	5	3	2	1	1	38	5	3	2	5.1	37.7
13-Feb	332	1	0	0	A	0	0	1	2	C	C	C	C	C	C	C	C	C	C	C	C	0	1	1	--	331.6
14-Feb	3	1	1	0	A	2	4	27	43	43	45	24	15	17	19	23	35	25	16	0	1	1	0	1	15.0	45.4
15-Feb	4	0	0	0	A	0	0	0	0	1	4	9	11	17	11	23	4	2	0	0	0	1	0	0	3.8	22.9
16-Feb	0	0	0	0	A	0	0	0	2	10	5	6	2	1	1	1	0	1	0	1	0	0	0	0	1.4	10.3
17-Feb	0	1	0	0	A	0	0	0	1	1	2	6	4	1	2	1	1	0	0	0	0	0	0	0	1.0	5.8
18-Feb	0	0	3	0	A	0	0	12	145	10	11	13	4	4	2	79	2	0	0	0	0	16	0	1	13.2	144.7
19-Feb	0	0	0	0	A	0	0	0	3	4	9	3	7	7	9	3	5	4	1	1	1	0	0	0	2.6	9.4
20-Feb	1	15	0	10	A	8	2	24	86	87	23	17	18	11	6	4	3	2	1	0	0	0	0	0	13.8	86.7
21-Feb	0	0	0	0	A	1	1	1	1	3	4	3	3	2	2	3	6	2	1	0	3	0	2	6	2.0	6.4
22-Feb	0	1	14	6	A	3	18	2	2	6	4	4	3	2	2	1	2	1	1	1	0	0	0	1	3.3	17.7
23-Feb	0	2	0	0	A	0	1	1	2	6	13	14	12	14	10	13	9	6	2	8	11	0	1	7	5.8	14.0
24-Feb	5	22	2	0	A	15	11	2	88	91	117	74	44	26	12	4	1	1	1	0	0	0	0	0	22.5	117.2
25-Feb	0	0	0	0	A	1	1	1	8	13	40	50	14	5	9	17	24	15	8	1	2	1	0	0	9.2	49.7
26-Feb	0	0	0	0	A	0	0	0	2	6	8	11	7	3	14	43	9	8	5	3	0	0	1	0	5.3	42.8
27-Feb	0	0	0	0	A	0	0	0	1	1	1	1	2	1	1	1	1	1	0	0	1	0	0	0	0.6	1.8
28-Feb	0	0	0	1	A	0	0	0	2	1	1	5	3	3	5	2	3	3	2	2	2	0	0	0	1.6	5.0
	12.9	1.7	2.8	1.0	--	6.2	4.1	3.9	15.8	17.8	15.7	15.4	10.4	7.6	6.3	10.2	5.1	3.3	1.7	0.9	2.5	1.8	0.5	0.8	Diurnal Average	
	331.6	21.9	48.4	10.2	--	137.1	70.6	27.2	144.7	98.9	117.2	86.9	43.5	25.8	19.8	79.5	34.7	25.4	16.3	8.4	37.7	15.9	2.5	7.2	Diurnal Maximum	

C - Calibration

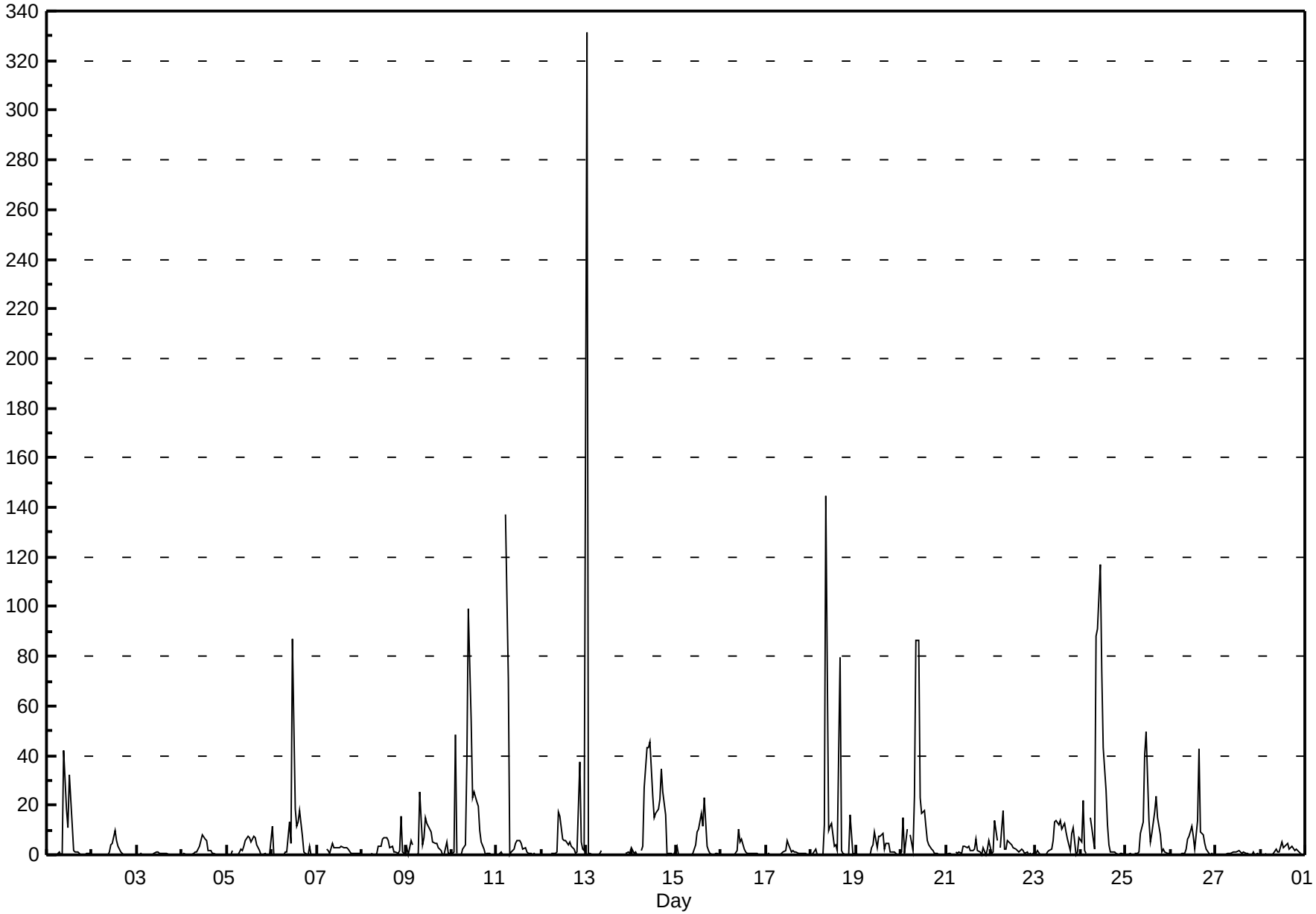
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Beaverlodge - February 2014



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 91.1 ppb on Feb 20 10:00
Maximum Daily Average: 20.3 ppb on Feb 10

Minimum Value: 0 ppb on Feb 3 04:00
Maximum Diurnal Average: 14.6 ppb at hour 10
Monthly Average: 9.04 ppb

Minimum Daily Average: 2.8 ppb on Feb 3
Minimum Diurnal Average: 6.7 ppb at hour 4
Percentiles: P_1 = 0.8 P_{10} = 2.0 Q_1 = 3.4 Median = 6.5 Q_3 = 12.2 P_{90} = 18.4 P_{99} = 40.7

Hours in Service:	672
Hours of Data:	632
Hours of Missing Data:	40
Hours of Calibration:	40
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	4	4	4	4	A	4	4	4	12	15	12	15	35	8	3	3	3	4	3	2	3	2	1	7	6.8	34.7
2-Feb	12	3	2	4	A	5	6	4	7	5	8	9	15	7	7	3	1	1	2	1	1	0	1	1	4.6	15.3
3-Feb	1	1	1	0	A	1	1	2	1	2	4	2	1	1	1	2	1	1	6	6	6	10	9	4	2.8	10.2
4-Feb	2	3	2	3	A	3	9	12	11	10	14	13	7	6	3	2	2	7	9	6	5	5	5	5	6.2	13.7
5-Feb	7	5	3	11	A	15	12	9	10	13	12	14	11	9	10	9	9	8	3	2	3	5	5	5	8.3	14.8
6-Feb	15	7	5	4	A	15	9	7	8	9	5	45	7	7	11	18	10	5	7	5	16	9	6	4	10.2	44.8
7-Feb	4	3	4	6	A	30	16	10	19	13	7	7	6	6	7	7	8	11	7	11	6	5	6	6	8.9	30.2
8-Feb	6	2	1	1	A	2	2	4	5	6	7	9	10	8	8	4	4	4	3	7	9	23	20	13	6.9	23.0
9-Feb	17	12	13	17	A	10	14	22	19	13	21	21	19	11	9	8	8	17	15	11	11	21	18	14	14.9	22.0
10-Feb	15	18	43	14	A	12	13	14	20	63	53	36	38	20	27	17	14	9	6	7	9	6	6	5	20.3	63.2
11-Feb	4	4	11	9	A	25	13	6	7	6	9	5	6	5	3	5	4	5	8	8	7	5	4	3	7.0	24.8
12-Feb	3	2	2	2	A	5	5	4	9	13	14	9	6	7	5	8	7	8	10	6	31	17	15	11	8.7	31.4
13-Feb	29	10	9	7	A	12	14	8	5	C	C	C	C	C	C	C	C	C	C	C	C	16	13	11	--	28.9
14-Feb	18	14	14	16	A	16	17	20	27	21	30	21	15	19	23	28	29	42	21	15	18	12	13	10	20.0	41.8
15-Feb	6	4	3	2	A	2	3	3	2	2	8	6	13	21	14	10	9	9	7	3	4	2	1	2	5.9	20.8
16-Feb	2	3	3	4	A	6	5	8	12	12	7	7	2	4	3	3	3	1	1	2	4	4	4	3	4.6	12.2
17-Feb	3	4	3	3	A	6	6	5	4	3	3	5	5	1	1	1	1	1	2	3	1	1	2	3	2.9	6.2
18-Feb	1	1	1	2	A	3	2	6	9	6	5	17	6	6	3	8	5	3	2	2	6	15	4	8	5.2	16.7
19-Feb	8	9	5	4	A	3	4	6	7	8	8	4	7	11	7	7	9	15	13	10	15	13	11	12	8.6	15.4
20-Feb	12	18	13	16	A	14	11	26	37	91	21	17	22	15	10	6	6	6	6	5	4	3	3	3	15.9	91.1
21-Feb	2	4	4	4	A	7	6	8	5	4	6	4	4	2	3	4	4	3	11	13	15	9	6	18	6.3	17.5
22-Feb	12	9	19	20	A	19	35	11	7	10	7	5	4	3	2	2	4	2	2	3	10	7	4	5	8.8	34.5
23-Feb	6	5	2	1	A	4	4	7	5	7	13	16	12	15	14	14	14	11	13	20	21	12	10	14	10.5	20.9
24-Feb	14	33	17	14	A	20	18	12	37	24	38	53	37	26	10	3	2	3	6	4	3	8	11	10	17.5	52.9
25-Feb	8	6	6	5	A	11	10	14	18	19	17	20	13	6	7	7	27	28	25	15	10	11	17	10	13.5	28.3
26-Feb	9	10	4	3	A	3	6	5	8	14	15	15	8	5	7	27	15	15	25	26	13	12	10	8	11.5	27.4
27-Feb	6	8	8	7	A	5	4	2	3	2	2	2	2	2	1	2	1	2	1	1	1	1	1	1	2.9	8.4
28-Feb	1	4	5	5	A	3	2	3	6	2	1	3	3	3	6	3	3	4	4	2	4	2	1	1	3.2	6.2
	8.1	7.3	7.4	6.7	--	9.3	8.9	8.7	11.4	14.6	12.9	14.1	11.7	8.7	7.6	7.9	7.5	8.4	8.1	7.3	8.7	8.5	7.4	7.0	Diurnal Average	
	28.9	32.7	42.5	20.0	--	30.2	34.5	26.4	37.0	91.1	52.7	52.9	38.2	25.8	26.8	27.7	28.9	41.8	25.2	26.4	31.4	23.0	20.3	17.5	Diurnal Maximum	

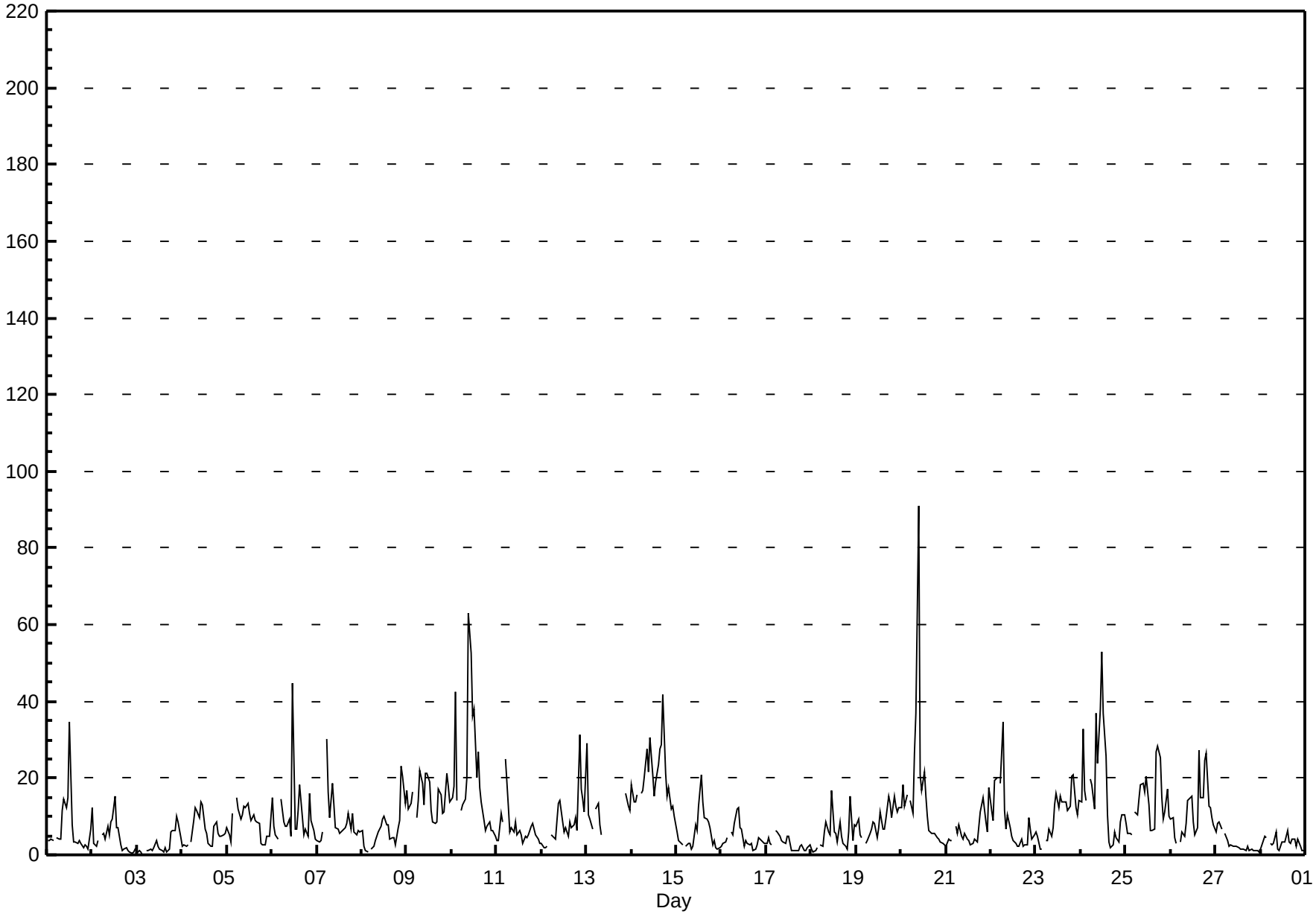
C - Calibration A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - February 2014



Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - February 2014

Maximum Value: 442.6 ppb on Feb 13 01:00

Maximum Daily Average: 41.8 ppb on Feb 24

Minimum Value: 1 ppb on Feb 28 00:00

Minimum Daily Average: 4.1 ppb on Feb 27

Maximum Diurnal Average: 32.4 ppb at hour 10

Minimum Diurnal Average: 11.2 ppb at hour 4

Monthly Average: 18.63 ppb

Percentiles: P_1 = 1.7 P_{10} = 3.2 Q_1 = 5.8 Median = 10.6 Q_3 = 20.3 P_{90} = 38.2 P_{99} = 134.1

Hours in Service:	672
Hours of Data:	632
Hours of Missing Data:	40
Hours of Calibration:	40
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	6	5	5	5	A	6	7	9	24	78	41	23	54	24	5	4	4	6	4	3	4	4	3	12	14.6	78.4
2-Feb	18	6	3	10	A	21	8	9	12	8	13	13	22	15	12	4	2	3	3	3	2	1	1	4	8.5	21.7
3-Feb	2	2	3	1	A	5	2	2	2	4	6	4	3	2	2	3	2	3	8	11	11	12	13	7	4.8	13.2
4-Feb	3	4	3	3	A	6	15	18	18	16	16	17	13	12	5	5	4	14	11	9	6	10	11	8	9.8	17.9
5-Feb	17	7	4	30	A	27	18	17	16	17	15	16	14	11	15	14	15	12	4	4	6	6	8	6	13.1	30.1
6-Feb	55	12	6	6	A	17	11	12	10	35	10	123	28	20	26	36	21	7	11	6	45	21	8	7	23.2	123.5
7-Feb	5	5	6	7	A	41	31	12	30	19	8	9	7	8	8	8	11	20	9	20	9	9	8	7	12.9	41.3
8-Feb	8	4	3	3	A	6	4	6	8	14	10	13	13	14	12	7	9	7	7	13	30	64	33	28	13.7	64.1
9-Feb	39	22	40	35	A	13	22	65	38	21	32	25	21	19	12	11	13	28	26	12	16	47	25	19	26.1	65.3
10-Feb	26	32	100	22	A	13	20	32	77	142	82	39	42	36	38	24	17	17	9	9	11	7	7	5	35.2	141.5
11-Feb	5	5	24	11	A	352	276	7	10	9	11	11	11	9	5	7	6	10	11	9	8	6	5	3	35.2	352.0
12-Feb	3	3	2	2	A	20	9	7	16	33	33	11	10	10	7	11	10	14	15	12	80	37	31	15	17.0	79.5
13-Feb	443	13	11	8	A	15	16	12	9	C	C	C	C	C	C	C	C	C	C	C	C	24	16	14	--	442.6
14-Feb	30	18	24	16	A	25	25	58	73	67	64	39	26	30	34	41	61	54	46	20	26	16	14	13	35.6	73.1
15-Feb	22	5	7	7	A	4	15	10	3	5	11	22	25	37	27	45	12	11	10	4	5	5	2	2	13.0	44.8
16-Feb	3	4	4	5	A	7	6	12	14	29	11	12	6	13	11	8	8	5	5	7	9	7	8	11	9.0	29.5
17-Feb	4	11	6	3	A	9	10	8	8	7	5	13	8	3	4	3	5	3	7	6	3	3	6	7	6.2	12.8
18-Feb	2	4	8	3	A	7	4	25	163	28	24	26	8	10	6	132	7	5	3	4	15	63	7	12	24.6	163.2
19-Feb	14	19	7	6	A	4	6	7	12	11	20	6	13	16	17	8	18	22	16	15	23	19	14	15	13.3	23.1
20-Feb	16	52	21	39	A	35	14	53	122	121	37	31	34	23	12	8	8	7	7	7	5	4	4	3	28.8	122.2
21-Feb	3	6	5	5	A	18	7	14	6	7	7	5	6	3	4	6	13	5	16	17	24	13	18	37	10.7	36.7
22-Feb	16	20	43	32	A	29	46	19	8	15	8	7	5	4	3	3	6	4	5	7	13	9	5	9	13.8	46.5
23-Feb	7	11	2	2	A	5	8	11	8	13	20	21	18	21	16	20	18	15	28	44	43	16	14	37	17.2	43.8
24-Feb	36	57	28	17	A	46	39	24	123	124	151	101	64	40	22	8	3	8	14	13	7	11	14	11	41.8	150.7
25-Feb	10	7	13	7	A	28	17	19	31	28	65	75	24	9	16	32	48	42	43	27	18	23	33	15	27.4	74.9
26-Feb	22	18	6	5	A	5	8	7	12	18	18	22	16	6	28	70	23	39	35	45	25	27	12	11	20.8	69.8
27-Feb	8	9	9	9	A	7	6	3	4	3	3	3	4	3	2	3	2	4	2	3	3	1	2	1	4.1	9.3
28-Feb	3	6	7	11	A	4	3	5	11	4	2	9	6	6	8	5	6	10	9	8	7	6	2	1	6.1	10.6
	29.5	13.1	14.3	11.2	--	27.7	23.3	17.3	30.9	32.4	26.8	25.9	18.5	14.8	13.2	19.5	13.1	13.8	13.5	12.6	16.8	16.9	11.7	11.5	Diurnal Average	
	442.6	56.6	100.0	39.4	--	352.0	275.7	65.3	163.2	141.5	150.7	123.5	63.7	39.9	38.3	131.6	60.9	53.5	46.0	45.5	79.5	64.1	33.0	37.1	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

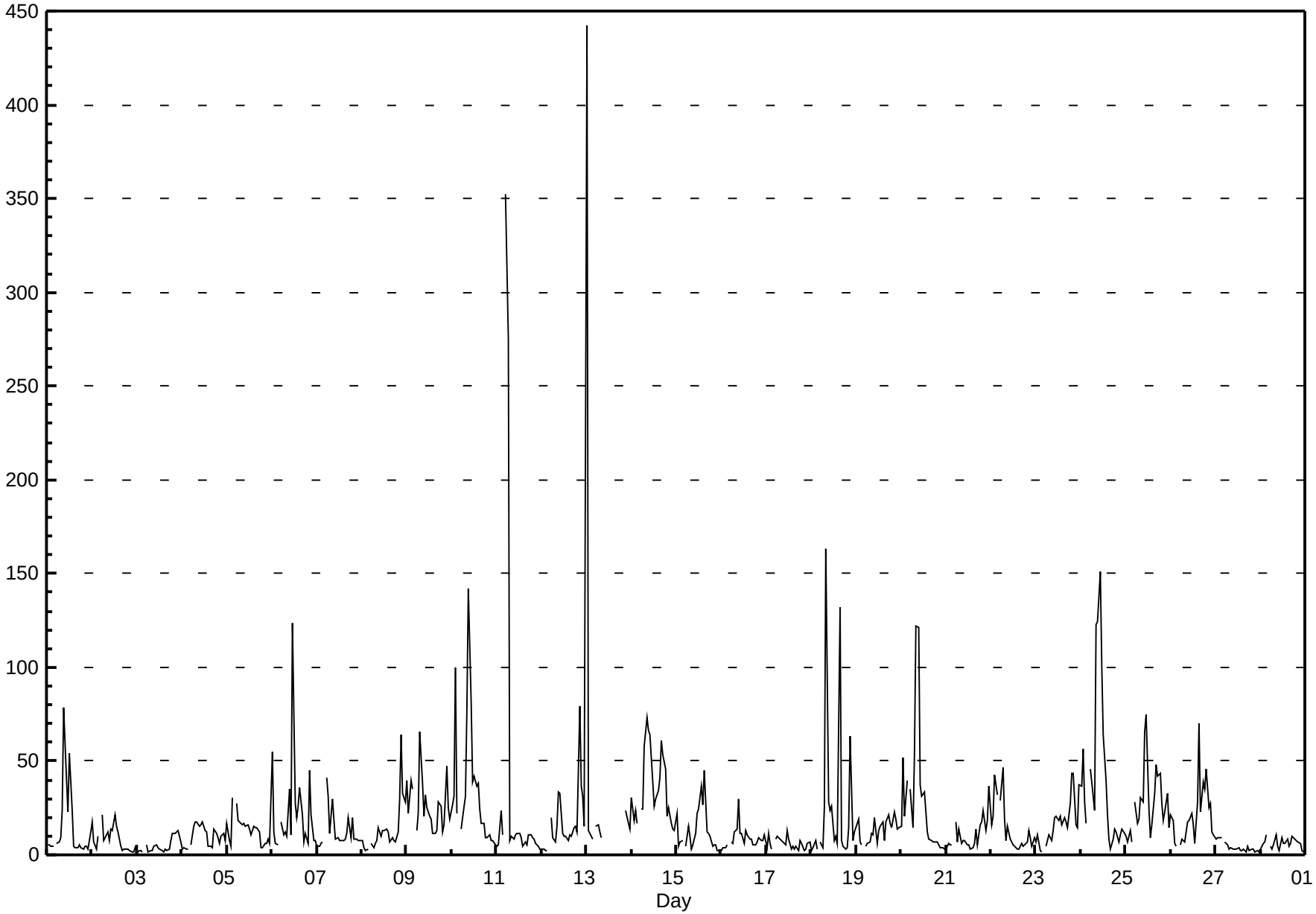
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - February 2014



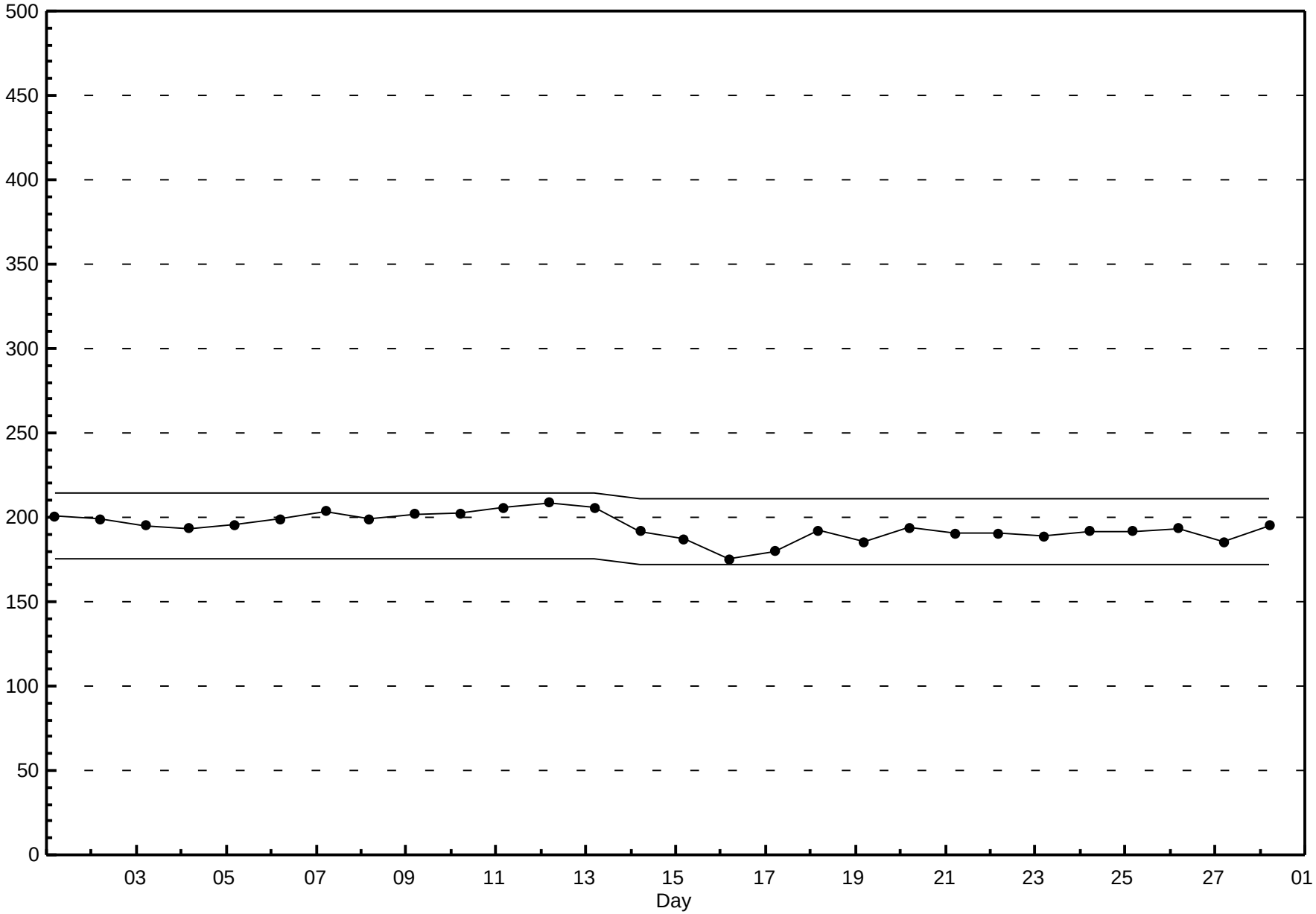
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Span Responses

Oxides of Nitrogen (NO_X)

Beaverlodge - February 2014



Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Beaverlodge - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 47.9 ppb on Feb 26 14:00
Maximum Daily Average: 40.0 ppb on Feb 18

Minimum Value: 2 ppb on Feb 22 07:00
Maximum Diurnal Average: 34.8 ppb at hour 15
Monthly Average: 30.82 ppb

Minimum Daily Average: 17.1 ppb on Feb 14
Minimum Diurnal Average: 26.8 ppb at hour 9
Percentiles: P_1 = 9.7 P_{10} = 20.0 Q_1 = 24.8 Median = 31.5 Q_3 = 37.7 P_{90} = 40.9 P_{99} = 43.7

Hours in Service:	672
Hours of Data:	641
Hours of Missing Data:	31
Hours of Calibration:	31
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	36	35	34	33	A	32	31	31	24	25	27	27	23	35	37	36	35	35	36	38	38	38	39	34	33.0	39.2
2-Feb	28	38	38	36	A	37	35	35	32	33	33	33	31	35	35	38	39	40	40	41	41	41	41	40	36.5	41.1
3-Feb	40	40	40	40	A	41	40	40	40	40	39	40	40	40	41	40	40	39	36	36	35	31	33	36	38.6	41.0
4-Feb	38	38	38	37	A	37	31	28	28	31	31	33	37	37	39	39	38	34	32	34	35	35	35	34	34.7	38.7
5-Feb	32	33	34	27	A	24	24	25	23	23	25	26	29	30	30	31	31	33	38	38	38	35	35	35	30.3	37.9
6-Feb	26	31	32	30	A	21	24	26	27	28	33	26	35	35	34	33	39	42	40	42	32	37	39	40	32.6	41.9
7-Feb	39	37	35	33	A	13	23	28	21	26	32	33	34	35	34	34	33	30	34	31	34	35	34	33	31.4	39.1
8-Feb	33	38	39	39	A	38	37	36	35	35	35	35	36	36	36	38	37	36	37	33	31	22	22	27	34.4	39.5
9-Feb	24	27	25	22	A	28	23	17	19	27	23	25	28	32	34	33	33	25	25	28	27	20	20	23	25.5	33.5
10-Feb	22	19	11	22	A	24	23	22	20	14	17	21	22	29	26	28	29	29	30	29	28	29	29	31	24.1	30.6
11-Feb	32	32	22	24	A	29	28	27	26	27	27	29	29	30	32	30	30	29	27	26	27	29	29	30	28.4	32.0
12-Feb	30	31	31	31	A	29	29	30	25	25	27	29	31	31	31	30	31	29	26	28	13	19	21	23	27.5	31.3
13-Feb	21	22	23	25	A	19	17	23	27	26	29	29	C	C	C	28	26	26	10	10	17	17	20	20	21.7	29.1
14-Feb	14	17	17	14	A	14	13	13	10	15	16	22	23	24	23	21	19	10	14	16	14	21	19	25	17.1	25.2
15-Feb	35	38	40	42	A	43	41	41	42	42	39	41	38	33	37	38	38	38	38	42	40	43	44	43	39.8	44.0
16-Feb	41	40	39	37	A	33	31	28	24	26	31	32	42	42	42	42	43	44	44	43	40	40	41	41	37.6	44.4
17-Feb	41	39	40	41	A	36	33	33	36	37	38	38	39	43	43	43	43	42	40	40	42	42	42	41	39.7	43.3
18-Feb	43	44	43	42	A	41	41	37	37	38	40	35	41	41	42	41	42	42	43	44	39	30	40	35	40.0	43.8
19-Feb	35	32	36	37	A	38	36	33	30	29	27	29	30	30	30	30	31	23	23	27	21	23	23	21	29.4	38.0
20-Feb	21	16	19	16	A	16	18	9	10	6	20	22	22	23	22	25	25	24	23	23	23	24	24	24	19.8	25.0
21-Feb	24	22	23	23	A	21	22	20	24	25	25	27	28	29	29	27	27	27	20	18	15	21	24	14	23.3	28.7
22-Feb	17	19	11	10	A	10	2	15	21	20	23	26	27	30	31	33	31	31	30	29	23	25	28	28	22.6	32.5
23-Feb	26	27	27	26	A	23	24	21	23	23	22	23	26	26	27	27	26	25	22	15	14	18	20	17	23.0	27.2
24-Feb	17	5	13	15	A	13	13	18	15	22	23	23	29	32	38	41	41	41	38	40	40	34	32	29	26.6	41.4
25-Feb	30	33	33	33	A	27	27	22	22	26	31	32	35	38	38	38	30	25	21	29	33	30	25	30	29.9	37.9
26-Feb	31	31	38	41	A	43	40	41	39	36	39	40	43	48	46	37	40	38	26	23	35	35	37	40	37.7	47.9
27-Feb	42	36	33	35	A	36	38	37	36	37	38	40	41	41	42	43	44	43	44	43	41	39	38	38	39.3	43.8
28-Feb	37	35	34	34	A	36	37	36	34	38	39	38	39	40	39	40	40	39	38	39	37	37	38	38	37.4	39.6
	30.6	30.5	30.3	30.2	--	28.6	27.9	27.6	26.8	27.9	29.5	30.5	32.5	34.3	34.8	34.4	34.3	32.9	31.2	31.5	30.5	30.4	31.1	31.1	Diurnal Average	
	43.1	43.8	43.4	42.0	--	43.2	41.4	41.1	42.4	42.2	39.7	40.8	42.8	47.9	46.0	43.3	43.8	44.4	44.1	43.8	42.3	43.2	44.0	42.7	Diurnal Maximum	

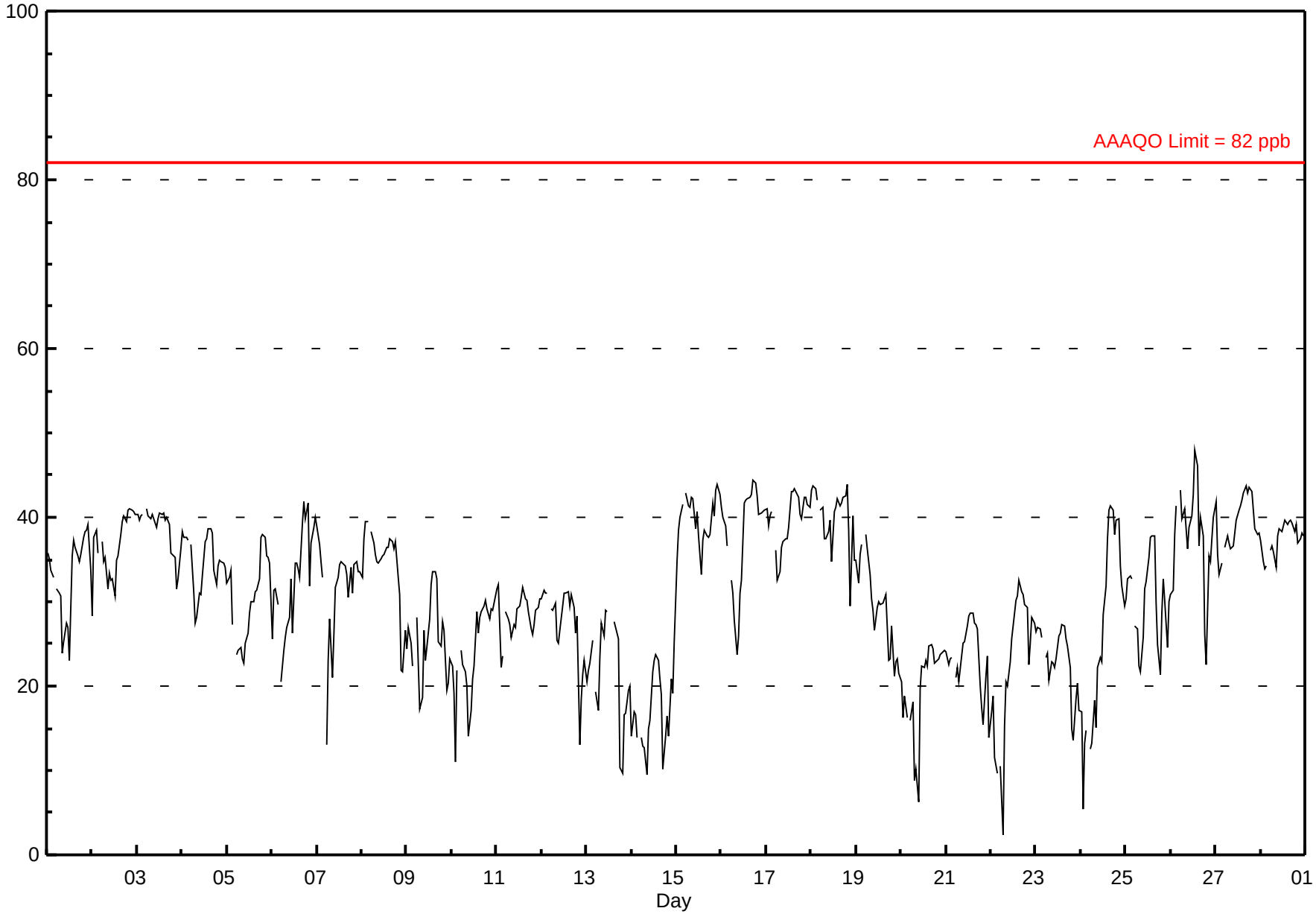
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na

Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Beaverlodge - February 2014



Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

Beaverlodge - February 2014

Maximum Value: 49.9 ppb on Feb 26 15:00

Maximum Daily Average: 42.5 ppb on Feb 18

Minimum Value: 9 ppb on Feb 22 07:00

Minimum Daily Average: 21.0 ppb on Feb 14

Maximum Diurnal Average: 36.3 ppb at hour 15

Minimum Diurnal Average: 30.0 ppb at hour 9

Monthly Average: 33.30 ppb

Percentiles: P_1 = 16.4 P_{10} = 23.5 Q_1 = 27.9 Median = 34.0 Q_3 = 39.6 P_{90} = 42.5 P_{99} = 44.9

Hours in Service:	672
Hours of Data:	641
Hours of Missing Data:	31
Hours of Calibration:	31
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	37	36	35	34	A	32	32	31	29	30	32	29	27	38	38	37	36	35	37	39	40	40	40	38	34.9	40.0
2-Feb	34	40	40	38	A	40	37	37	34	35	34	35	33	37	39	39	42	42	41	42	43	42	42	42	38.6	42.5
3-Feb	42	42	41	41	A	42	41	41	42	41	41	42	42	41	42	42	41	41	39	38	37	35	37	38	40.4	42.0
4-Feb	39	39	38	38	A	38	36	30	32	34	33	36	39	39	39	39	39	38	35	36	36	36	38	37	36.7	39.4
5-Feb	35	34	34	34	A	30	27	26	26	25	26	27	29	30	31	32	32	37	38	39	39	38	36	36	32.2	38.8
6-Feb	33	33	33	31	A	23	25	28	28	30	35	35	36	36	36	39	42	43	42	43	40	41	41	41	35.4	43.0
7-Feb	40	38	37	33	A	24	27	29	28	30	32	34	35	35	35	35	34	32	37	37	35	36	34	34	33.6	40.5
8-Feb	34	39	40	40	A	39	38	37	37	36	36	36	36	37	38	38	38	37	38	37	33	32	30	32	36.5	40.2
9-Feb	32	34	28	28	A	30	26	29	29	29	28	28	28	34	34	34	34	31	27	29	29	29	24	27	29.6	34.4
10-Feb	27	27	25	26	A	26	25	26	25	24	20	22	23	34	30	35	31	31	31	30	30	30	30	31	27.7	34.5
11-Feb	32	33	31	28	A	30	30	28	28	29	28	30	30	31	33	31	31	30	28	27	29	29	31	31	29.9	32.9
12-Feb	31	32	32	32	A	31	31	31	30	27	29	30	32	32	32	31	32	31	30	30	24	27	27	26	29.9	32.4
13-Feb	23	24	24	26	A	23	19	26	29	30	30	29	C	C	C	29	28	28	17	18	20	20	21	21	24.3	30.4
14-Feb	21	19	20	15	A	18	16	20	15	20	19	25	26	26	24	23	23	16	20	19	19	23	21	36	21.0	35.5
15-Feb	39	40	42	43	A	44	44	43	43	43	41	43	41	41	42	43	41	40	40	44	41	44	44	44	42.2	44.5
16-Feb	42	41	40	38	A	34	32	31	27	31	33	34	44	44	44	44	45	45	45	44	44	44	43	44	39.7	45.1
17-Feb	44	40	41	41	A	37	36	39	39	40	40	39	42	44	44	44	44	43	42	42	43	43	43	44	41.5	44.1
18-Feb	44	44	44	43	A	42	42	41	41	41	42	40	42	43	43	42	42	44	44	45	43	42	43	40	42.5	44.8
19-Feb	40	37	36	38	A	39	38	35	31	30	29	31	31	31	31	31	33	26	27	30	30	27	24	23	31.6	40.4
20-Feb	22	22	21	22	A	19	20	19	15	15	23	25	26	26	24	25	26	25	24	24	24	24	25	24	22.6	26.1
21-Feb	25	24	24	24	A	24	24	22	25	26	26	28	29	29	29	28	28	28	26	19	19	24	24	24	25.2	29.2
22-Feb	21	24	21	17	A	17	9	20	21	22	24	28	28	32	32	34	33	31	31	30	27	28	29	28	25.5	33.8
23-Feb	27	29	28	26	A	24	25	23	24	25	25	26	26	27	28	28	27	26	29	25	20	21	22	21	25.4	28.6
24-Feb	21	16	17	21	A	17	20	24	27	25	29	29	36	37	40	41	42	42	42	42	44	37	34	31	31.1	43.5
25-Feb	32	34	34	34	A	33	31	25	24	30	34	35	38	39	39	39	34	29	26	35	36	33	31	34	33.0	38.9
26-Feb	34	38	40	43	A	44	41	42	40	39	40	43	46	49	50	42	42	42	30	34	38	38	39	43	40.8	49.9
27-Feb	45	38	34	37	A	37	38	38	37	38	39	41	42	42	43	44	45	44	44	44	44	40	39	39	40.5	45.3
28-Feb	39	36	35	36	A	37	38	38	36	39	40	39	41	41	40	40	41	41	40	40	40	40	40	39	39.0	41.3
	33.4	33.2	32.7	32.5	--	31.2	30.3	30.6	30.0	30.8	31.7	32.9	34.5	36.1	36.3	36.1	35.9	35.0	33.9	34.4	33.8	33.6	33.3	33.9	Diurnal Average	
	45.3	44.3	44.0	43.5	--	44.4	43.6	42.7	43.0	43.0	42.2	43.1	46.4	49.3	49.9	44.3	45.0	45.1	45.0	44.8	43.9	44.5	44.5	44.0	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

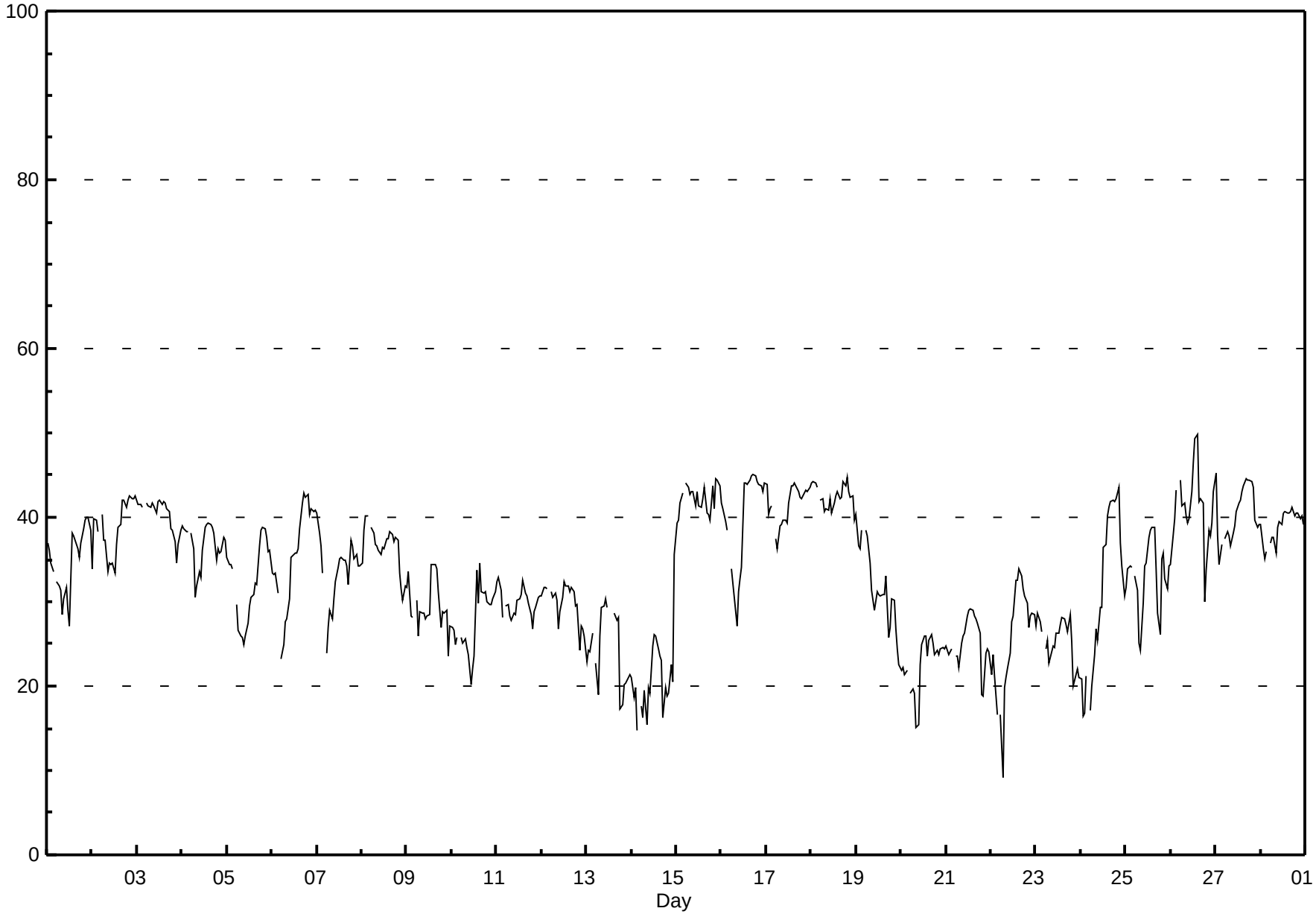
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

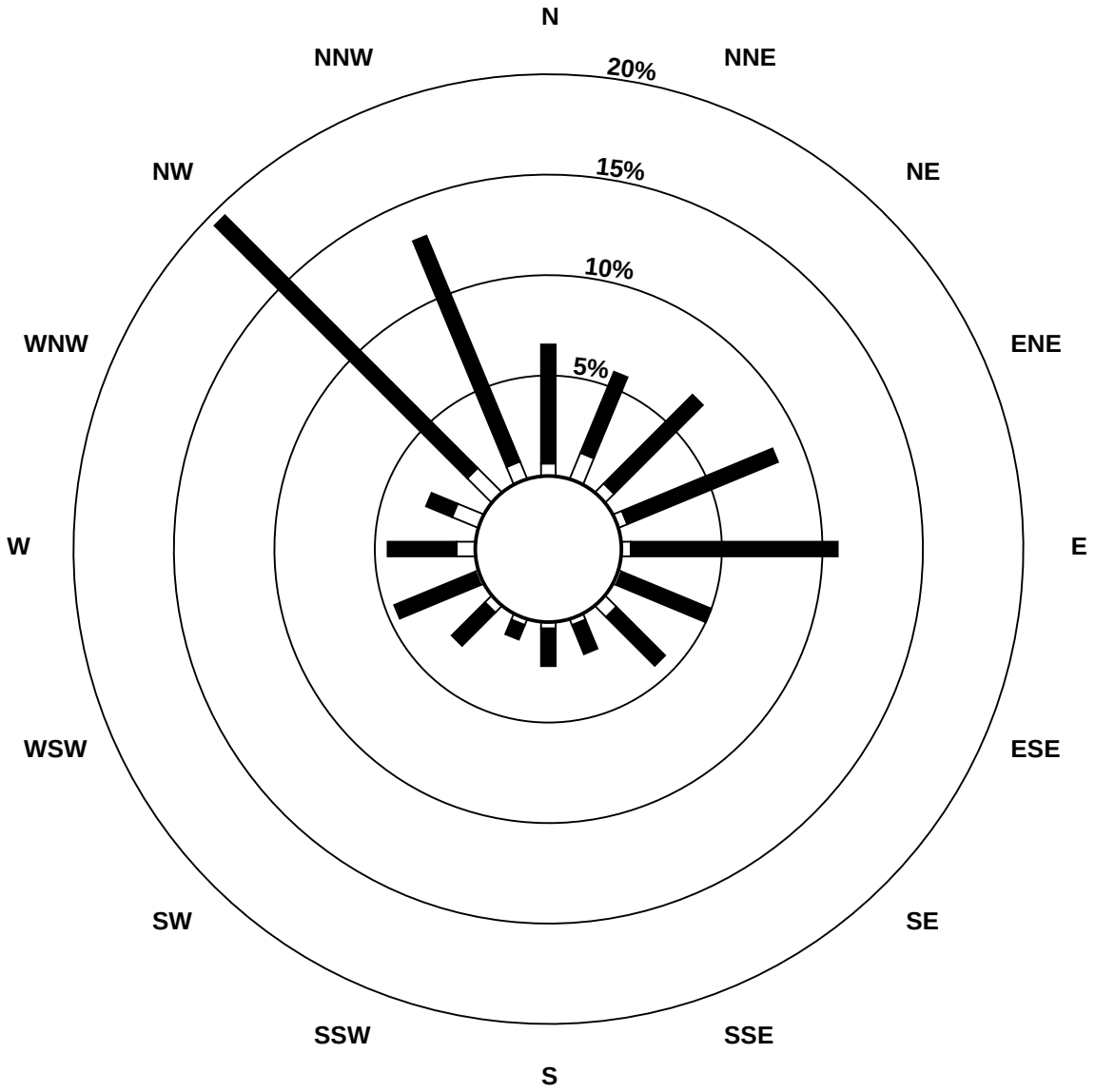
Beaverlodge - February 2014



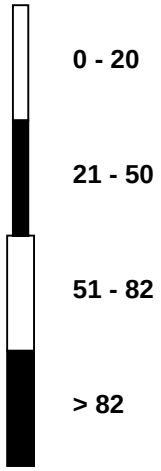
Pollutant Rose

Ozone (O_3) - ppb

Beaverlodge - February 2014



Pollutant Classes (ppb)



Peace Airshed Zone Association

Eight Hour Running Averages

Ozone (O_3) - ppb

Beaverlodge - February 2014

Maximum Value: 42.8 ppb on Feb 16 20:00

Minimum Value: 11.9 ppb on Feb 22 07:00

Percentiles: P_1 = 13.5 P_{10} = 19.5 Q_1 = 25.2 Median = 31.4 Q_3 = 36.9 P_{90} = 40.3 P_{99} = 42.4

Hours in Service:	672
Hours of Data:	666
Hours of Missing Data:	6
Hours of Calibration:	6
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Feb	33	33	33	32	32	33	33	33	31	30	29	28	27	28	29	29	31	32	33	34	36	37	37	37	37.0
2-Feb	36	36	36	36	36	36	35	35	36	35	34	34	34	33	33	34	35	35	36	37	39	39	40	40	40.4
3-Feb	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	39	38	37	36	36	40.5
4-Feb	36	35	36	36	36	37	36	35	34	33	32	31	32	32	33	34	36	36	36	36	36	36	35	35	36.7
5-Feb	34	34	34	33	33	31	30	28	27	26	24	24	25	26	26	27	28	29	31	32	34	34	35	35	35.3
6-Feb	35	34	34	33	32	30	28	27	27	27	27	26	27	29	30	31	33	35	35	37	37	37	38	39	38.8
7-Feb	39	38	37	36	37	34	31	30	27	26	25	25	26	29	30	31	33	33	34	33	33	33	33	33	38.8
8-Feb	33	34	35	36	36	36	37	37	37	37	36	36	36	36	35	36	36	36	37	36	36	34	32	31	37.5
9-Feb	29	28	26	25	24	25	25	24	23	23	23	23	24	24	25	27	29	29	29	30	29	28	26	25	29.6
10-Feb	24	23	21	21	20	20	21	20	20	19	20	20	20	21	21	22	23	25	27	28	29	29	29	29	29.3
11-Feb	30	30	29	28	28	28	28	28	27	26	27	28	28	28	29	29	29	30	30	29	29	29	28	28	30.0
12-Feb	28	29	29	30	30	30	30	30	30	29	28	28	28	28	29	29	29	30	30	30	27	26	25	24	30.4
13-Feb	23	22	21	21	22	22	21	21	22	23	24	24	24	25	N	N	N	N	N	N	19	19	19	18	25.3
14-Feb	17	15	16	17	17	16	15	14	14	14	13	15	16	17	18	19	20	20	19	19	18	17	17	17	20.3
15-Feb	19	23	26	29	31	35	38	40	41	42	41	41	41	40	39	39	38	38	38	38	38	39	40	41	41.6
16-Feb	41	41	41	41	41	39	38	35	33	31	30	29	31	32	33	35	38	40	42	43	43	42	42	42	42.8
17-Feb	42	41	41	40	40	40	39	38	37	37	36	36	36	37	38	40	40	41	41	42	42	42	42	42	42.2
18-Feb	42	42	42	42	42	42	42	42	41	40	40	39	39	39	39	39	40	40	41	42	42	40	40	39	42.5
19-Feb	38	37	36	35	35	36	36	35	35	34	33	32	32	31	30	29	29	29	28	28	27	26	25	24	38.4
20-Feb	23	22	21	20	20	19	18	16	15	13	14	14	15	16	17	19	21	23	23	23	24	24	24	24	23.9
21-Feb	24	23	24	24	24	23	23	22	22	23	23	24	24	25	26	27	27	27	27	26	24	23	22	21	27.4
22-Feb	19	18	17	16	16	15	12	12	13	13	14	17	18	20	24	26	28	29	30	30	30	29	29	28	30.2
23-Feb	27	27	27	26	27	26	26	25	24	24	23	23	23	23	24	25	25	25	25	24	23	22	21	20	27.4
24-Feb	19	16	15	15	15	14	13	13	13	16	17	18	20	22	25	28	31	33	35	37	39	39	38	37	39.0
25-Feb	36	35	34	33	32	31	30	29	28	27	27	27	28	29	31	32	33	33	32	32	31	30	29	28	35.5
26-Feb	28	29	31	32	32	34	36	38	39	40	40	40	40	41	41	41	41	41	40	37	37	35	34	34	41.4
27-Feb	34	34	35	37	37	37	37	37	36	36	37	37	38	38	39	40	41	41	42	43	43	42	42	41	42.6
28-Feb	40	39	38	37	36	36	36	36	35	35	36	37	37	37	38	38	39	39	39	39	39	39	39	38	40.3
Diurnal Maximums	41.8	41.8	42.2	42.5	42.5	42.3	42.2	41.7	41.1	41.6	41.5	41.3	40.9	40.7	41.4	40.9	41.1	41.5	42.1	42.8	42.6	42.4	42.2	42.0	

N - Not Valid

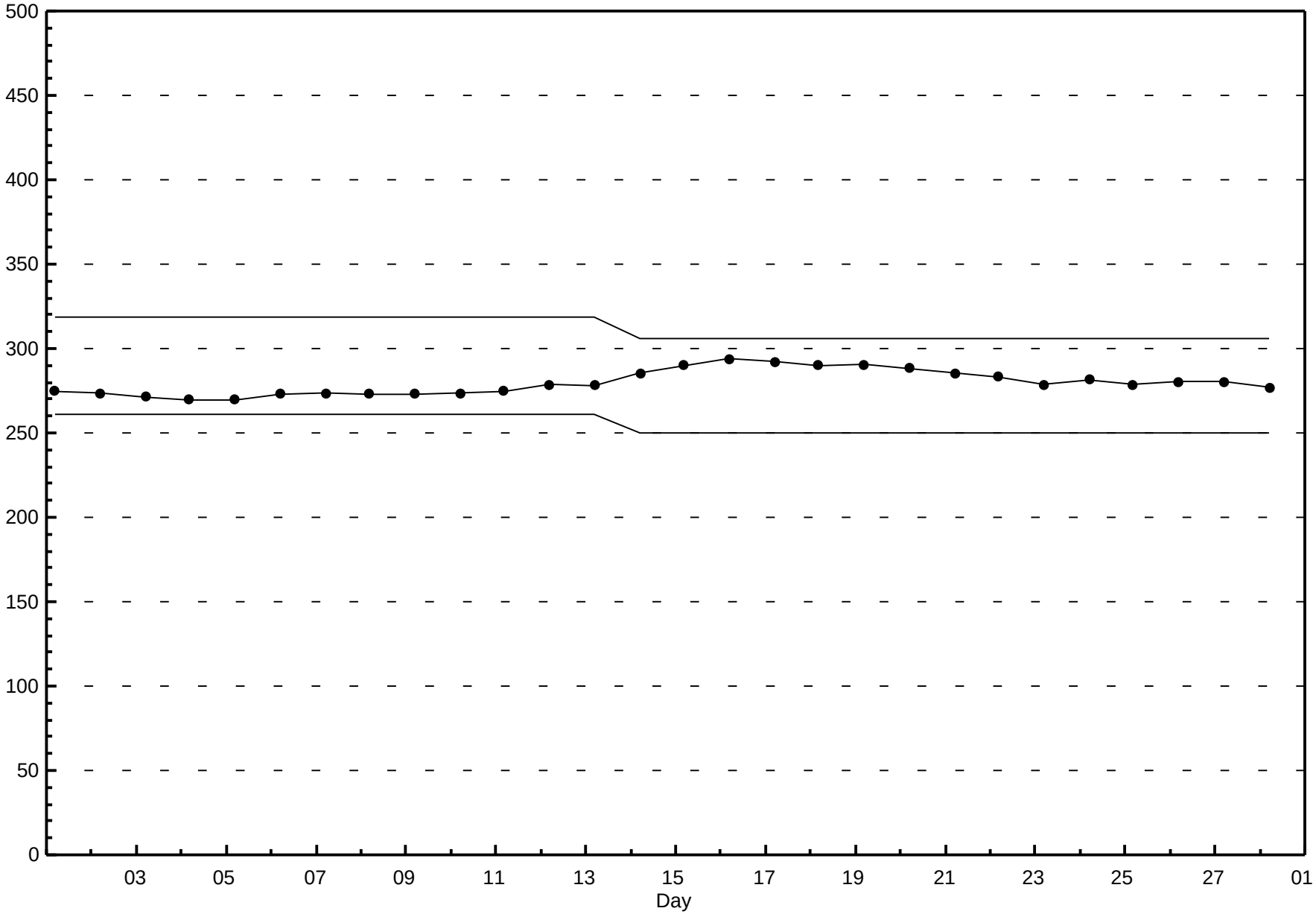
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Span Responses

Ozone (O_3)

Beaverlodge - February 2014



Peace Airshed Zone Association

Hourly Averages

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

Beaverlodge - February 2014

Number of Exceedences: 1-hr: 0 24-hr: 0

Maximum Value: 27.6 $\mu g/m^3$ on Feb 13 19:00

Maximum Daily Average: 14.1 $\mu g/m^3$ on Feb 14

Minimum Value: 0 $\mu g/m^3$ on Feb 3 15:00

Maximum Diurnal Average: 10.2 $\mu g/m^3$ at hour 19

Monthly Average: 8.90 $\mu g/m^3$

Minimum Daily Average: 5.4 $\mu g/m^3$ on Feb 3

Minimum Diurnal Average: 7.8 $\mu g/m^3$ at hour 4

Percentiles: $P_1 = 0.0$ $P_{10} = 4.6$ $Q_1 = 6.4$ Median = 8.7 $Q_3 = 11.2$ $P_{90} = 13.7$ $P_{99} = 17.9$

Hours in Service:	672
Hours of Data:	663
Hours of Missing Data:	9
Hours of Calibration:	0
Percent Operational Time:	98.7

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Feb	6	7	7	9	6	4	8	13	9	8	8	9	11	20	13	9	4	8	10	6	7	4	10	12	8.6	20.0
2-Feb	10	8	11	6	5	4	6	8	9	7	6	9	3	8	15	7	7	5	0	8	8	8	6	6	7.1	14.6
3-Feb	6	6	8	5	5	6	6	6	8	5	6	5	5	N	0	3	4	2	5	5	9	6	5	7	5.4	9.2
4-Feb	5	10	5	5	2	1	2	5	4	8	9	6	8	3	9	7	7	7	9	6	9	8	10	9	6.5	10.3
5-Feb	7	6	2	9	14	15	11	9	15	13	18	2	3	9	9	8	7	8	9	6	7	7	8	13	9.0	17.7
6-Feb	9	7	9	5	7	4	0	2	4	5	7	10	12	7	12	12	9	4	9	5	8	11	12	8	7.4	12.4
7-Feb	5	3	5	6	6	7	9	9	7	11	14	6	12	10	12	5	10	9	7	6	9	8	9	9	8.1	14.1
8-Feb	13	7	6	7	5	6	9	5	6	8	7	6	5	7	8	6	8	10	7	8	11	8	10	10	7.6	13.5
9-Feb	11	9	9	10	5	5	7	6	8	8	5	10	9	13	11	9	6	10	13	13	10	15	17	14	9.7	17.2
10-Feb	15	17	13	10	8	7	8	7	9	10	10	16	15	13	12	8	10	11	8	6	6	9	10	7	10.2	16.8
11-Feb	6	6	7	6	8	6	7	8	7	7	8	8	8	8	10	7	6	7	7	7	10	8	9	6	7.4	10.2
12-Feb	6	5	7	8	8	6	7	6	8	10	11	12	8	14	16	7	10	12	11	14	10	11	14	18	9.9	18.4
13-Feb	8	9	7	10	9	6	12	12	12	6	8	0	0	0	7	10	13	18	28	27	7	12	18	11	10.5	27.6
14-Feb	15	18	12	17	18	12	12	13	16	12	M	9	16	15	14	13	16	17	17	16	12	10	10	15	14.1	18.0
15-Feb	12	9	10	7	3	6	5	4	6	7	6	5	4	6	13	10	10	6	13	6	2	5	9	11	7.4	13.4
16-Feb	9	6	7	0	12	15	14	11	3	4	7	12	8	N	5	9	0	9	7	6	6	5	8	10	7.5	14.6
17-Feb	2	1	2	7	9	5	7	7	1	9	13	8	8	2	8	6	6	10	4	6	5	11	1	0	5.8	13.4
18-Feb	4	6	8	7	9	8	0	6	4	7	2	10	3	8	4	10	9	11	11	10	0	11	N	N	6.7	11.2
19-Feb	0	14	7	1	2	11	5	2	5	5	9	6	6	5	2	9	6	11	13	10	9	8	8	7	6.7	13.5
20-Feb	8	14	16	14	13	11	10	11	12	14	15	11	13	14	14	11	7	12	10	16	14	8	10	10	12.0	16.4
21-Feb	10	9	9	8	5	12	9	9	12	10	11	9	8	10	9	9	6	7	8	9	7	8	9	7	8.7	12.4
22-Feb	11	11	10	10	9	8	12	12	11	12	9	10	7	7	7	6	13	12	7	8	10	6	6	8	9.1	13.0
23-Feb	11	6	0	5	10	10	10	6	5	7	5	N	N	M	M	10	15	13	13	15	16	13	16	16	10.2	16.2
24-Feb	16	14	9	12	16	15	15	14	16	15	7	8	13	9	9	12	12	9	8	9	12	5	10	10	11.4	16.5
25-Feb	11	11	10	7	8	12	12	8	10	9	13	9	11	10	8	11	10	14	15	13	12	11	9	10	10.6	15.4
26-Feb	9	11	12	7	8	12	12	9	10	9	13	14	10	17	12	9	10	9	12	13	22	13	14	14	11.8	22.0
27-Feb	14	14	11	12	10	7	10	10	11	9	4	1	3	14	12	11	10	8	13	10	7	8	9	11	9.6	14.2
28-Feb	7	4	6	10	8	9	12	10	10	10	10	13	16	14	7	7	7	9	10	16	14	15	11	12	10.3	16.2
	8.9	8.8	8.0	7.8	8.1	8.2	8.4	8.1	8.5	8.8	8.9	8.3	8.4	9.8	9.5	8.6	8.6	9.4	10.2	10.0	9.2	8.9	9.9	10.1	Diurnal Average	
	15.9	17.6	15.8	16.8	18.0	15.3	14.6	13.8	16.5	14.8	17.7	15.8	16.3	20.0	16.3	13.1	15.7	17.7	27.6	26.8	22.0	15.0	18.1	18.4	Diurnal Maximum	

M - Maintenance N - Not Valid

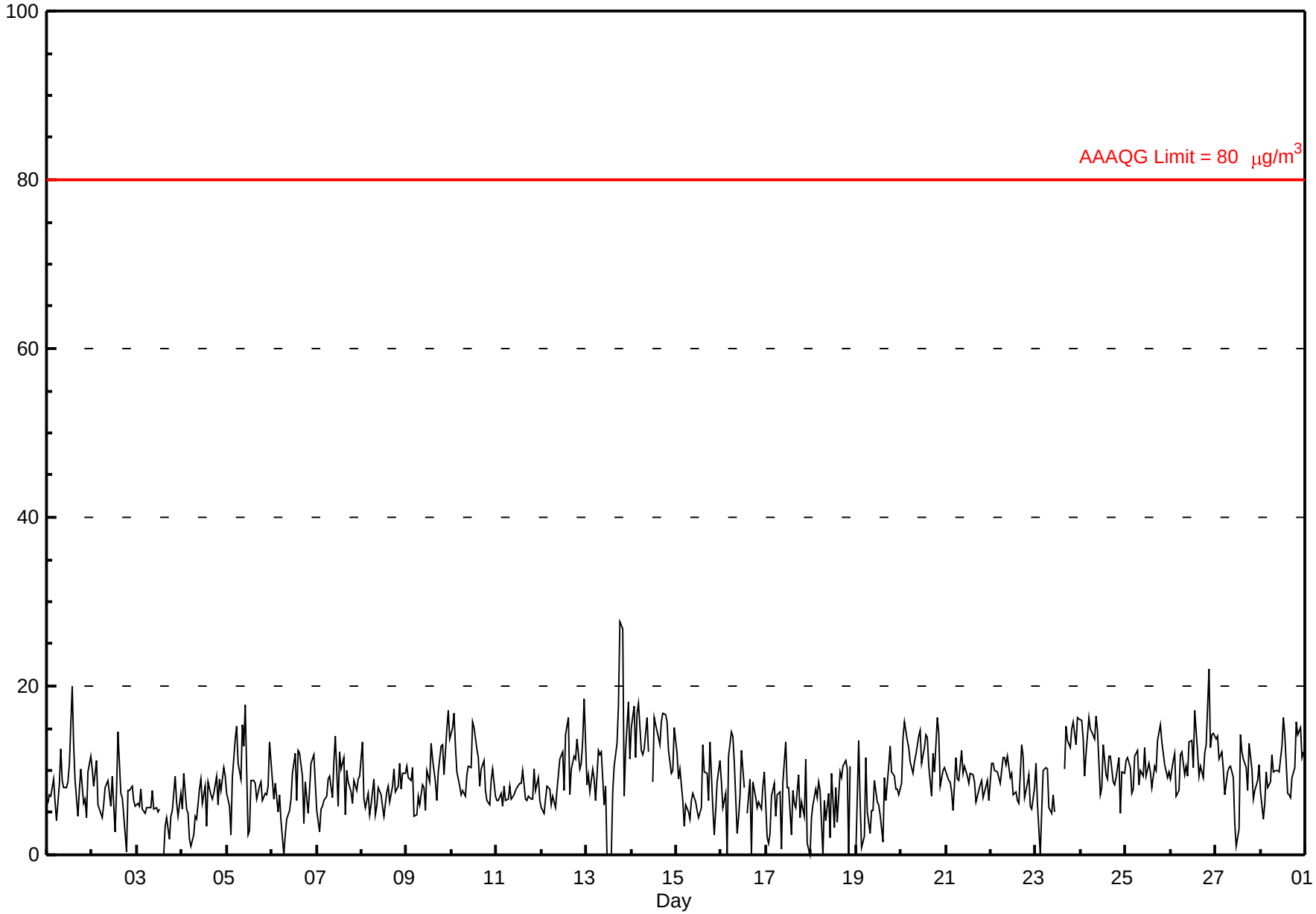
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

Peace Airshed Zone Association

Hourly Averages

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

Beaverlodge - February 2014



Peace Airshed Zone Association

Hourly Maximums

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

Beaverlodge - February 2014

Maximum Value: 33.0 $\mu g/m^3$ on Feb 13 20:00

Maximum Daily Average: 18.0 $\mu g/m^3$ on Feb 14

Minimum Value: 0 $\mu g/m^3$ on Feb 6 07:00

Minimum Daily Average: 7.2 $\mu g/m^3$ on Feb 3

Maximum Diurnal Average: 13.3 $\mu g/m^3$ at hour 20

Minimum Diurnal Average: 10.0 $\mu g/m^3$ at hour 4

Monthly Average: 11.71 $\mu g/m^3$

Percentiles: P_1 = 1.9 P_{10} = 7.0 Q_1 = 8.9 Median = 11.2 Q_3 = 14.3 P_{90} = 17.6 P_{99} = 23.7

Hours in Service:	672
Hours of Data:	667
Hours of Missing Data:	5
Hours of Calibration:	0
Percent Operational Time:	99.3

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Feb	9	10	9	12	8	5	12	15	12	10	9	11	19	24	16	13	9	11	12	10	9	9	15	15	11.8	23.7
2-Feb	14	11	16	10	10	9	10	11	11	9	9	12	5	13	16	12	11	10	4	11	11	11	8	8	10.5	16.3
3-Feb	8	8	9	8	6	8	7	7	9	9	6	7	8	3	2	6	6	4	6	7	11	10	7	9	7.2	10.7
4-Feb	9	11	7	6	4	3	4	6	6	10	10	9	10	8	12	8	8	8	11	10	10	9	12	12	8.4	11.7
5-Feb	10	9	9	10	18	18	14	11	20	20	21	9	8	10	10	11	9	11	10	9	9	9	10	18	12.2	21.4
6-Feb	17	11	10	7	8	8	0	4	6	7	8	13	14	9	16	13	13	5	12	12	10	14	13	12	10.1	17.2
7-Feb	7	5	7	7	7	9	10	11	11	18	21	8	15	17	13	8	12	10	10	11	11	10	12	12	11.0	20.9
8-Feb	16	12	8	8	7	9	11	9	10	11	9	7	6	9	9	7	10	12	10	13	13	10	11	12	10.0	15.8
9-Feb	11	11	11	12	10	8	8	8	10	9	9	12	11	17	12	12	9	14	15	14	14	18	20	16	12.1	19.6
10-Feb	17	18	17	11	9	9	10	9	11	12	12	19	17	16	13	12	12	13	9	8	7	11	12	8	12.2	19.3
11-Feb	8	9	10	8	10	8	8	10	8	9	9	10	12	12	12	8	8	8	8	9	14	10	11	11	9.6	13.6
12-Feb	7	7	8	9	9	8	9	7	10	11	14	17	11	21	21	9	14	16	15	17	13	13	18	21	12.6	20.8
13-Feb	13	11	12	12	11	11	18	17	17	11	10	10	8	6	17	17	16	24	30	33	13	18	24	20	15.8	33.0
14-Feb	22	24	19	22	23	18	16	18	21	18	M	15	18	17	15	16	17	19	18	18	14	12	16	16	18.0	24.3
15-Feb	15	11	12	9	5	7	6	5	9	10	8	8	5	14	18	13	12	10	16	13	5	8	11	12	10.0	17.9
16-Feb	11	8	11	3	17	18	18	18	6	6	13	14	12	0	16	17	2	14	13	7	8	7	12	12	11.1	18.5
17-Feb	4	2	5	10	11	6	11	12	6	14	15	9	10	5	10	9	10	12	7	9	11	15	7	2	8.7	15.0
18-Feb	7	16	17	11	11	10	3	10	10	11	5	13	10	10	7	15	12	14	14	14	14	15	1	0	10.3	16.9
19-Feb	6	17	15	3	8	14	11	5	7	7	11	7	8	7	10	12	9	14	14	12	11	10	9	10	9.8	16.5
20-Feb	11	17	18	16	15	13	12	13	14	18	18	12	14	15	15	13	9	14	14	19	20	11	12	11	14.3	19.7
21-Feb	11	10	10	9	6	14	12	11	15	11	12	11	11	11	11	10	8	8	11	11	8	10	10	8	10.4	14.6
22-Feb	12	12	11	11	11	10	13	13	13	13	11	12	9	9	7	8	19	20	8	10	11	7	7	10	11.1	20.2
23-Feb	12	9	5	6	14	14	11	8	6	9	8	N	N	M	M	16	17	17	15	18	19	15	19	18	12.9	19.2
24-Feb	19	17	12	15	19	19	17	17	19	18	11	13	16	13	10	15	14	10	10	12	15	7	13	12	14.2	19.4
25-Feb	14	14	14	9	9	14	15	10	13	12	15	12	13	12	13	13	13	16	18	18	15	12	11	11	13.2	18.5
26-Feb	11	14	13	11	10	15	15	12	13	16	16	15	13	19	19	11	12	12	15	16	27	23	17	16	15.1	26.5
27-Feb	16	16	14	14	11	10	12	12	12	12	6	3	7	18	16	15	15	13	15	12	12	12	16	16	12.7	17.7
28-Feb	10	10	11	12	10	11	13	13	13	13	13	15	18	17	12	9	9	11	12	19	18	16	14	14	13.1	18.7
	11.7	11.8	11.6	10.0	10.6	10.9	10.9	10.8	11.4	11.9	11.5	11.2	11.5	12.2	12.9	11.7	11.2	12.4	12.6	13.3	12.6	11.8	12.4	12.1	Diurnal Average	
	21.9	24.3	19.2	22.0	22.8	18.6	18.0	18.5	21.4	20.0	21.4	19.3	18.8	23.7	20.8	17.4	19.1	23.8	30.5	33.0	26.5	23.0	23.8	20.5	Diurnal Maximum	

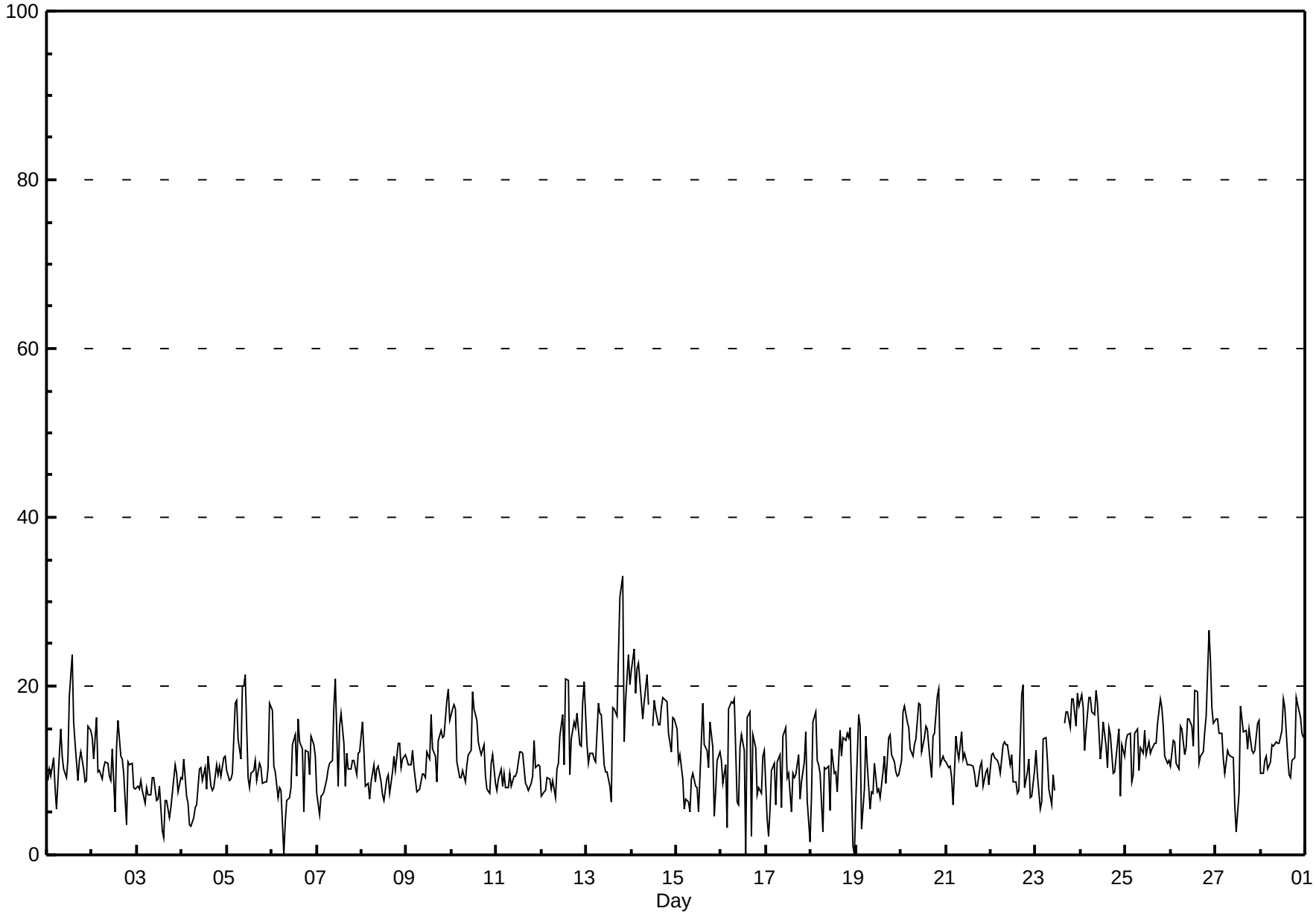
M - Maintenance N - Not Valid

Peace Airshed Zone Association

Hourly Maximums

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

Beaverlodge - February 2014



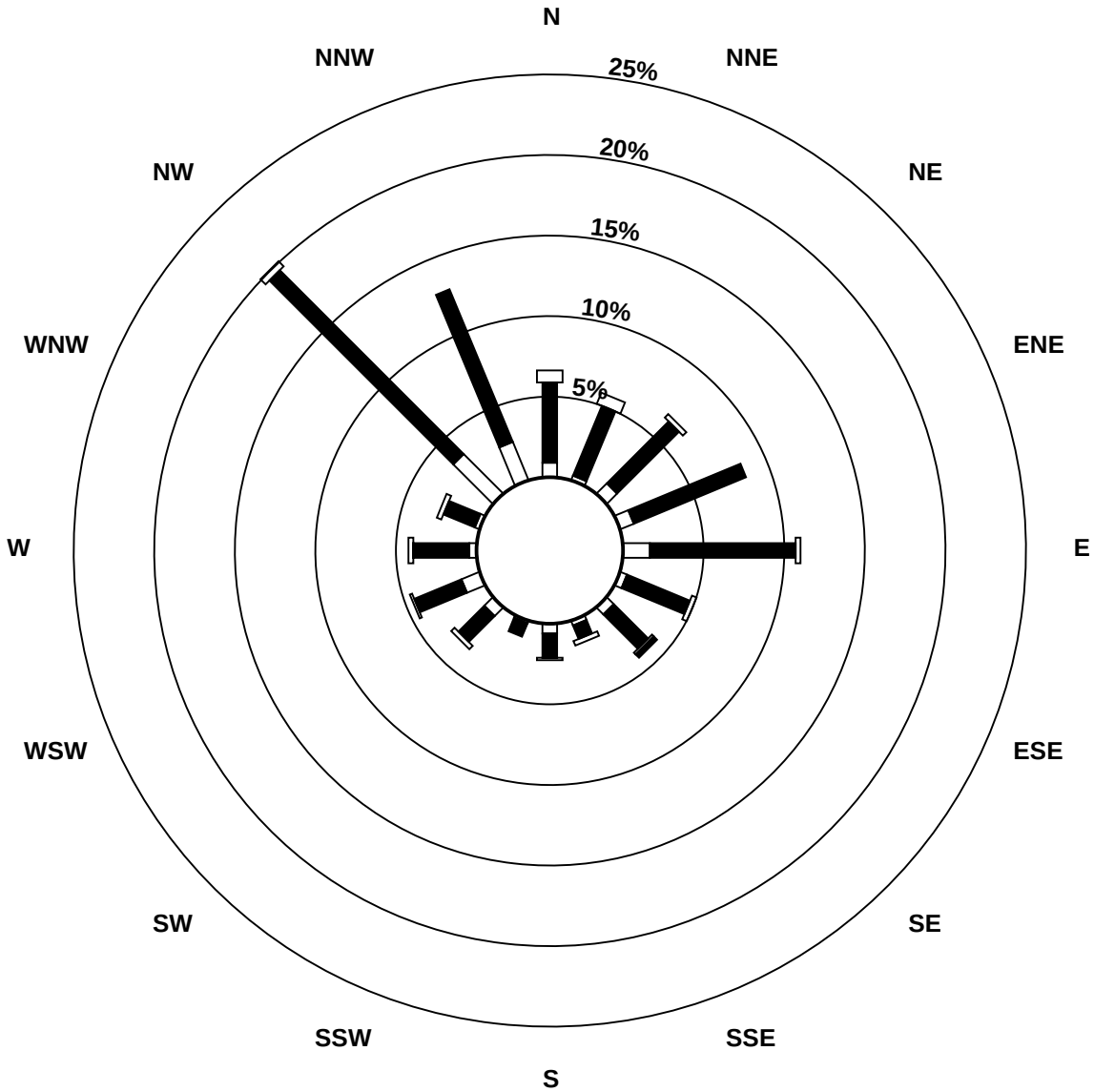
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

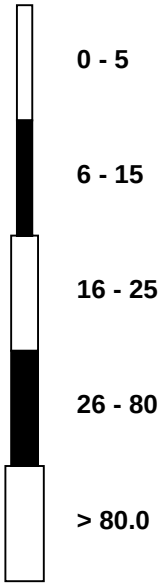
Pollutant Rose

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

Beaverlodge - February 2014



Pollutant Classes ($\mu g/m^3$)



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Beaverlodge - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 2.1 ^{o}C on Feb 17 15:00

Maximum Daily Average: -2.4 ^{o}C on Feb 18

Minimum Value: -30 ^{o}C on Feb 5 09:00

Minimum Daily Average: -23.9 ^{o}C on Feb 5

Maximum Diurnal Average: -11.4 ^{o}C at hour 16

Minimum Diurnal Average: -17.0 ^{o}C at hour 8

Monthly Average: -14.53 ^{o}C

Percentiles: P_1 = -27.2 P_{10} = -23.5 Q_1 = -20.2 Median = -15.6 Q_3 = -9.8 P_{90} = -3.5 P_{99} = 0.1

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

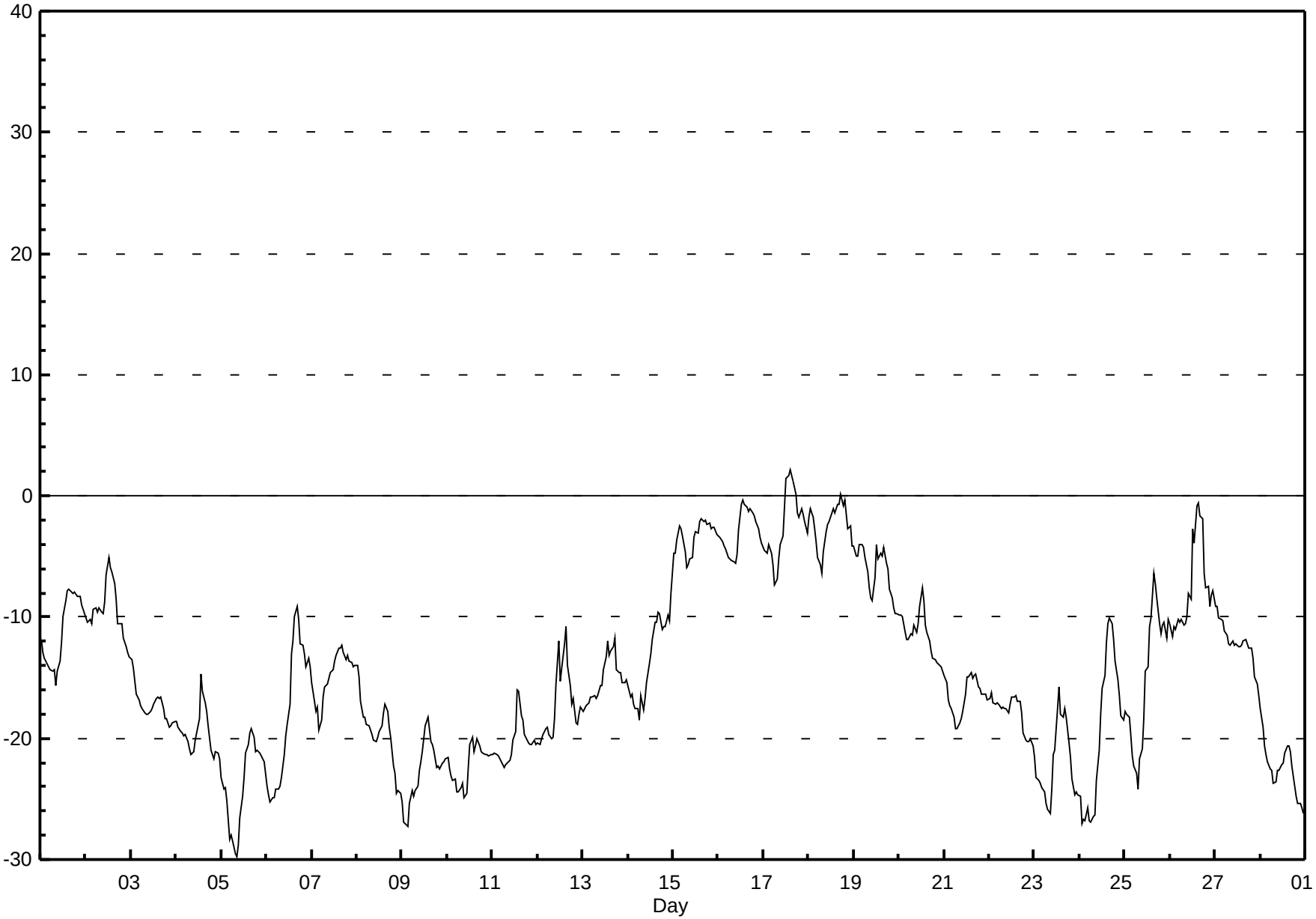
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	-12	-13	-13	-14	-14	-14	-14	-14	-16	-14	-14	-12	-10	-9	-8	-8	-8	-8	-8	-8	-8	-8	-9	-10	-11.1	-7.7
2-Feb	-10	-10	-10	-11	-9	-9	-10	-9	-10	-10	-9	-7	-5	-6	-6	-7	-9	-11	-11	-11	-12	-12	-13	-13	-9.5	-5.1
3-Feb	-14	-14	-15	-16	-17	-17	-18	-18	-18	-18	-18	-18	-17	-17	-17	-17	-17	-18	-18	-18	-19	-19	-19	-19	-17.2	-13.6
4-Feb	-19	-19	-19	-20	-20	-20	-20	-21	-21	-21	-20	-20	-18	-15	-16	-17	-18	-19	-21	-21	-22	-21	-21	-22	-19.6	-14.7
5-Feb	-23	-24	-24	-25	-28	-28	-28	-29	-30	-29	-27	-25	-23	-21	-21	-20	-19	-20	-21	-21	-21	-21	-22	-22	-23.9	-19.3
6-Feb	-24	-25	-25	-25	-25	-24	-24	-24	-23	-21	-20	-19	-17	-13	-12	-10	-9	-10	-12	-12	-13	-14	-13	-14	-17.9	-9.2
7-Feb	-15	-17	-18	-17	-19	-19	-17	-16	-16	-15	-15	-14	-14	-13	-13	-13	-12	-13	-14	-13	-14	-14	-14	-14	-14.9	-12.3
8-Feb	-14	-15	-17	-18	-18	-19	-19	-19	-20	-20	-20	-20	-19	-19	-18	-17	-18	-19	-20	-22	-23	-25	-24	-25	-19.5	-14.0
9-Feb	-25	-27	-27	-27	-25	-24	-25	-24	-24	-23	-22	-21	-19	-19	-18	-20	-20	-21	-22	-22	-23	-22	-22	-22	-22.7	-18.3
10-Feb	-22	-23	-23	-23	-23	-24	-24	-24	-24	-25	-24	-22	-21	-20	-21	-21	-20	-21	-21	-21	-21	-21	-21	-21	-22.2	-19.9
11-Feb	-21	-21	-21	-21	-22	-22	-22	-22	-22	-22	-21	-20	-19	-16	-16	-18	-19	-20	-20	-20	-21	-20	-20	-21	-20.4	-16.0
12-Feb	-20	-20	-20	-20	-19	-19	-20	-20	-20	-18	-16	-12	-15	-14	-12	-11	-14	-16	-17	-17	-19	-19	-18	-17	-17.2	-10.8
13-Feb	-18	-18	-17	-17	-17	-17	-16	-17	-16	-16	-16	-14	-13	-12	-13	-13	-12	-12	-14	-15	-15	-15	-15	-15	-15.1	-11.8
14-Feb	-16	-17	-16	-17	-18	-18	-18	-16	-18	-17	-15	-14	-13	-12	-10	-10	-10	-10	-11	-11	-11	-10	-10	-8	-13.5	-8.0
15-Feb	-5	-5	-4	-3	-3	-3	-5	-6	-6	-5	-5	-3	-3	-3	-2	-2	-2	-2	-2	-2	-3	-3	-3	-3	-3.4	-1.9
16-Feb	-3	-3	-4	-4	-4	-5	-5	-5	-5	-6	-5	-3	-1	0	-1	-1	-1	-1	-1	-2	-2	-3	-3	-4	-3.1	-0.4
17-Feb	-5	-5	-5	-4	-5	-6	-7	-7	-5	-4	-3	-1	1	2	2	2	1	0	-1	-2	-1	-2	-2	-3	-2.4	2.1
18-Feb	-2	-1	-2	-3	-4	-5	-6	-6	-5	-3	-2	-2	-1	-1	-1	-1	-1	0	-1	0	-2	-3	-2	-4	-2.4	0.2
19-Feb	-4	-5	-5	-4	-4	-4	-5	-6	-8	-8	-9	-7	-4	-5	-5	-5	-4	-6	-6	-8	-8	-9	-10	-10	-6.2	-4.0
20-Feb	-10	-10	-10	-11	-12	-12	-11	-11	-11	-11	-11	-9	-8	-9	-11	-11	-12	-13	-13	-14	-14	-14	-14	-14	-11.5	-7.6
21-Feb	-15	-15	-17	-17	-18	-18	-19	-19	-19	-18	-18	-16	-15	-15	-15	-15	-15	-15	-16	-16	-16	-16	-16	-17	-16.5	-14.6
22-Feb	-17	-16	-17	-17	-17	-17	-18	-17	-17	-18	-18	-17	-17	-17	-16	-17	-17	-18	-20	-20	-20	-20	-20	-21	-17.9	-16.3
23-Feb	-22	-23	-23	-24	-24	-24	-25	-26	-26	-24	-21	-21	-18	-16	-18	-18	-18	-18	-20	-22	-23	-25	-24	-25	-22.0	-15.7
24-Feb	-25	-27	-27	-27	-26	-27	-27	-26	-26	-23	-21	-18	-16	-15	-12	-11	-10	-11	-12	-14	-15	-17	-18	-19	-19.5	-10.1
25-Feb	-18	-18	-18	-20	-21	-22	-23	-24	-22	-21	-18	-14	-14	-11	-10	-6	-7	-8	-11	-11	-11	-10	-12	-10	-15.1	-6.4
26-Feb	-10	-12	-11	-11	-10	-10	-10	-11	-11	-10	-8	-9	-3	-4	-1	-1	-2	-2	-6	-8	-8	-9	-8	-8	-7.5	-0.6
27-Feb	-9	-9	-10	-10	-10	-11	-11	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-13	-13	-13	-15	-16	-16	-12.1	-9.1
28-Feb	-18	-19	-21	-21	-22	-22	-23	-24	-24	-23	-23	-22	-22	-21	-21	-21	-21	-22	-24	-25	-25	-25	-26	-26	-22.5	-17.6
	-14.8	-15.4	-15.7	-16.0	-16.2	-16.5	-16.8	-17.0	-16.9	-16.3	-15.4	-14.0	-12.7	-11.9	-11.6	-11.4	-11.6	-12.2	-13.5	-13.9	-14.3	-14.8	-14.9	-15.1	Diurnal Average	
	-1.8	-1.1	-1.8	-2.5	-2.8	-3.3	-4.6	-5.3	-4.6	-3.0	-2.3	-1.0	1.5	1.6	2.1	1.7	1.2	0.2	-0.8	-0.4	-1.1	-1.5	-2.1	-3.1	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Beaverlodge - February 2014



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Beaverlodge - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 100.0 % on Feb 16 09:00 Maximum Daily Average: 90.1 % on Feb 1

Minimum Value: 33 % on Feb 26 15:00 Minimum Daily Average: 47.6 % on Feb 26
Maximum Diurnal Average: 84.0 % at hour 8 Minimum Diurnal Average: 70.3 % at hour 17
Monthly Average: 77.41 % Percentiles: P_1 = 41.3 P_{10} = 57.0 Q_1 = 69.0 Median = 82.5 Q_3 = 86.8 P_{90} = 89.6 P_{99} = 97.2

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

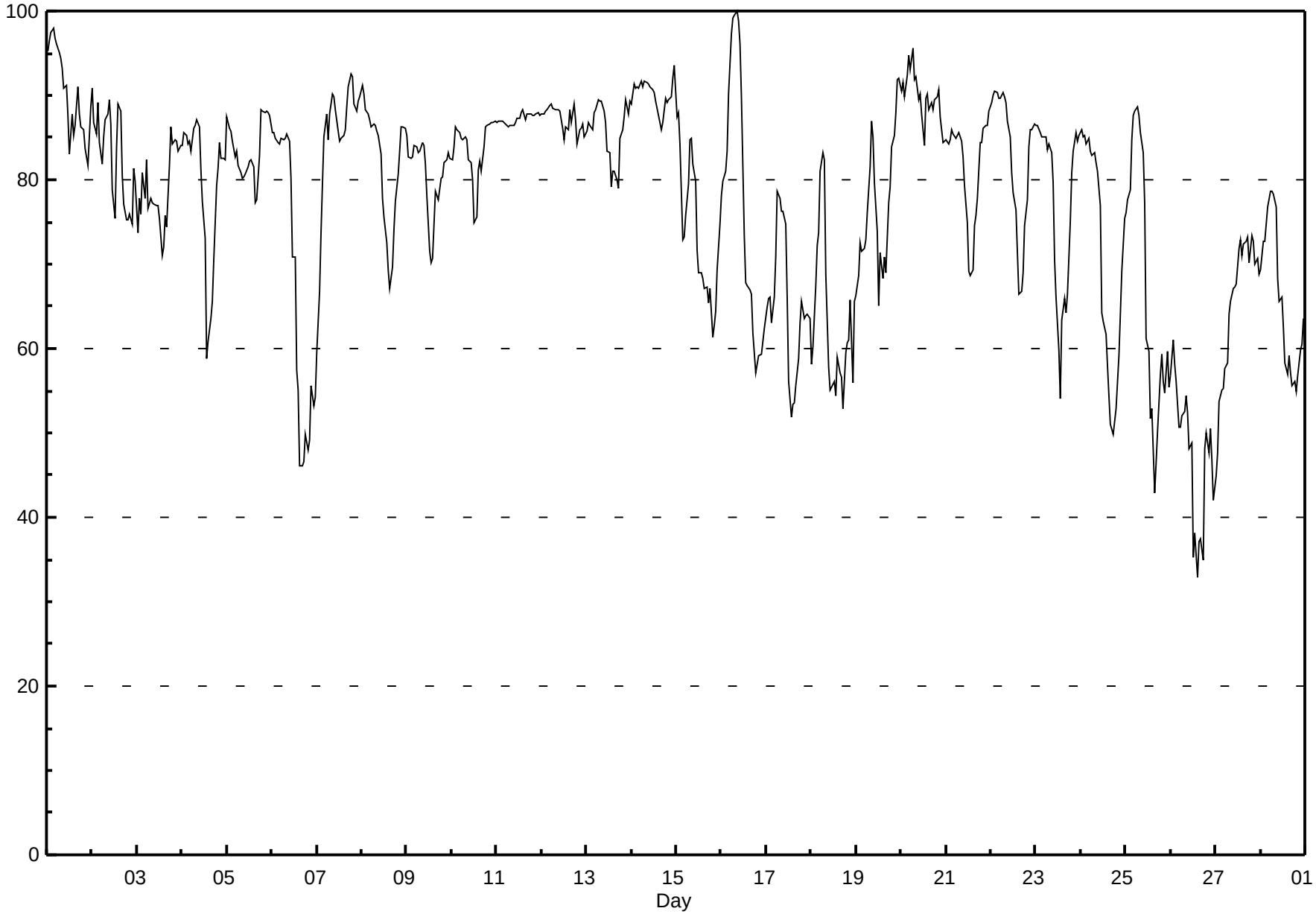
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	95	96	97	98	97	96	95	94	93	91	91	88	83	88	85	86	91	88	86	86	84	83	82	89	90.1	98.0
2-Feb	91	87	85	89	84	82	85	87	88	89	87	79	75	84	89	88	81	77	75	75	76	75	81	80	82.9	90.8
3-Feb	74	78	76	81	78	82	77	78	77	77	77	77	75	71	72	76	74	82	86	84	85	85	83	84	78.7	86.2
4-Feb	84	86	85	84	85	83	86	86	87	86	81	77	73	59	61	64	66	71	79	81	84	83	83	82	79.0	87.2
5-Feb	87	86	86	85	83	83	82	81	80	80	81	81	82	82	82	77	78	83	88	88	88	88	88	88	83.6	88.3
6-Feb	86	86	85	84	84	85	85	85	85	85	80	71	71	57	55	46	46	47	50	48	49	56	53	54	68.0	85.7
7-Feb	59	67	74	80	85	88	85	88	90	90	88	86	85	85	85	86	89	91	93	92	89	88	89	90	85.0	92.6
8-Feb	91	90	88	88	87	86	87	86	86	85	83	78	76	73	69	67	70	74	78	81	83	86	86	86	81.8	91.1
9-Feb	85	83	83	83	84	84	83	83	84	84	82	78	72	70	71	79	78	78	80	80	82	82	83	83	80.6	85.2
10-Feb	82	84	86	86	86	85	85	85	85	82	82	80	75	76	81	82	81	84	86	87	87	87	87	87	83.6	86.9
11-Feb	87	87	87	87	87	87	86	86	86	86	87	87	87	88	88	87	88	88	88	88	88	88	88	88	87.2	88.4
12-Feb	88	88	88	88	89	89	88	88	88	88	88	86	85	86	86	88	87	89	87	84	86	86	87	85	87.2	89.0
13-Feb	86	87	86	86	88	88	89	89	89	88	87	83	83	79	81	81	80	79	85	86	88	89	88	89	85.7	89.5
14-Feb	89	91	91	91	91	92	91	92	92	91	91	91	90	89	88	87	86	87	90	89	90	90	92	93	90.1	93.5
15-Feb	88	88	84	73	73	76	79	85	85	82	80	72	69	69	68	67	67	65	67	61	63	64	69	75	73.7	87.9
16-Feb	78	80	81	83	90	97	99	100	100	99	96	90	73	68	67	67	66	62	57	58	59	59	61	62	77.2	100.0
17-Feb	65	66	66	63	66	71	79	78	76	76	75	66	56	52	53	53	56	59	63	66	64	64	64	64	65.0	78.7
18-Feb	58	60	67	72	74	81	83	82	69	58	55	55	56	54	59	57	57	53	60	61	61	66	56	66	63.3	83.2
19-Feb	66	69	72	72	72	73	76	82	87	85	80	74	65	71	68	71	69	77	79	84	85	88	92	92	77.0	92.0
20-Feb	90	91	90	92	95	93	96	92	92	89	90	88	84	90	90	88	89	88	89	90	91	88	84	85	89.8	95.5
21-Feb	85	84	85	86	85	85	85	86	85	83	79	75	69	69	69	75	76	78	84	84	86	86	86	88	81.4	88.1
22-Feb	89	90	91	90	90	90	90	90	89	87	85	81	78	76	71	66	67	69	74	78	84	86	86	87	82.7	90.5
23-Feb	86	86	86	85	85	85	84	84	83	80	70	66	60	54	63	66	64	66	75	81	83	86	85	85	77.1	86.5
24-Feb	86	85	85	84	85	83	83	83	82	81	77	64	63	62	58	54	51	50	51	53	59	64	69	75	70.4	86.0
25-Feb	76	78	79	85	88	88	89	88	86	83	77	61	60	52	53	43	46	50	57	59	56	55	60	55	67.6	88.7
26-Feb	57	61	58	56	51	51	52	53	54	52	48	49	35	38	33	37	37	35	48	50	48	51	47	42	47.6	61.0
27-Feb	45	48	54	55	55	58	58	64	66	67	67	68	72	73	71	72	73	73	70	73	73	70	71	69	65.2	73.4
28-Feb	69	73	73	75	77	79	79	78	77	68	66	66	63	58	57	59	57	56	56	55	57	60	60	64	65.8	78.7
	79.4	80.5	81.0	81.5	81.9	82.8	83.4	84.0	83.7	82.0	79.7	75.6	72.0	70.4	70.5	70.4	70.3	71.3	74.4	75.1	75.9	76.8	77.1	78.0	Diurnal Average	
	95.2	96.4	97.5	98.0	96.9	97.2	99.1	99.5	100.0	98.8	96.0	90.7	90.3	89.6	90.1	88.3	91.1	91.1	92.6	92.1	90.7	89.7	92.1	93.5	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Beaverlodge - February 2014



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Beaverlodge - February 2014

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1 Spd	4	4	3	3	2	4	2	2	0	1	2	1	5	15	16	17	15	16	16	16	12	10	5	5	5.7	16.7
Dir	73	112	79	78	113	53	76	60	124	45	291	14	295	311	318	311	314	312	316	321	324	333	338	317	325	311
2 Spd	5	7	5	4	5	4	4	4	1	1	2	1	2	2	3	14	20	18	16	13	20	14	10	11	6.9	20.1
Dir	309	328	316	306	325	279	256	278	196	250	13	198	188	187	29	353	333	331	332	334	333	353	340	324	330	333
3 Spd	12	12	16	14	12	12	10	9	8	9	10	10	10	11	11	8	8	7	7	9	8	10	11	9	9.6	16.2
Dir	334	350	3	23	9	9	351	349	336	327	318	325	322	338	340	332	340	345	316	309	320	322	322	325	340	3
4 Spd	10	10	9	10	11	10	8	5	1	4	5	7	5	1	2	5	6	3	0	1	2	3	7	5	4.9	10.5
Dir	328	335	346	4	7	359	325	331	64	335	317	317	293	319	326	343	351	296	130	189	43	337	314	322	337	7
5 Spd	1	5	5	1	1	4	4	4	5	4	2	3	4	3	3	4	4	5	5	4	3	3	4	3	3.2	5.5
Dir	323	40	37	327	336	43	68	55	55	64	114	77	64	72	60	59	65	69	81	83	109	100	74	65	64	37
6 Spd	2	3	6	4	4	3	2	3	4	3	5	2	6	3	10	9	9	8	3	10	4	1	9	9	3.3	9.6
Dir	132	68	49	57	93	79	78	51	44	311	328	32	34	11	314	299	311	320	358	19	329	345	311	312	351	314
7 Spd	7	8	12	15	4	7	11	11	7	8	10	13	10	8	8	8	8	8	6	4	9	5	7	6	8.1	15.4
Dir	315	342	331	325	350	342	325	320	310	327	323	326	321	320	322	314	317	324	337	340	2	355	338	354	329	325
8 Spd	4	9	6	8	3	9	3	1	7	8	8	8	7	7	6	5	6	7	9	1	4	1	0	1	3.8	8.7
Dir	16	104	100	96	117	104	270	172	140	141	129	142	124	108	101	83	75	59	40	323	263	9	227	41	102	40
9 Spd	3	1	5	4	10	8	2	2	3	6	2	2	2	4	3	6	5	3	4	2	1	1	2	2	1.3	10.2
Dir	304	11	339	3	328	326	44	301	22	315	99	127	96	88	110	170	101	116	89	69	93	306	357	1	18	328
10 Spd	2	2	4	4	6	3	2	5	6	1	3	1	1	0	7	3	2	3	5	6	6	6	5	5	2.4	7.2
Dir	299	26	301	322	322	355	12	25	26	70	218	239	144	220	281	278	161	258	358	11	340	5	357	12	340	281
11 Spd	5	4	6	5	8	8	7	7	7	7	7	5	4	1	2	4	3	10	14	18	21	21	21	19	4.6	21.2
Dir	25	339	312	324	325	321	322	321	329	326	330	326	307	189	98	60	86	99	91	90	95	95	89	86	56	95
12 Spd	17	17	12	8	3	5	8	9	9	1	3	3	6	5	5	1	6	3	10	10	4	4	4	7	3.7	17.5
Dir	82	82	68	36	317	322	326	316	308	131	187	121	110	118	89	163	14	13	11	19	330	18	331	356	33	82
13 Spd	7	7	5	5	1	3	5	8	8	3	6	4	3	5	5	4	4	3	4	3	0	2	1	4	1.3	8.2
Dir	339	349	345	28	234	78	117	118	115	329	134	158	247	219	176	96	112	150	141	144	197	279	308	50	104	118
14 Spd	2	1	3	3	1	5	6	2	12	6	4	7	2	7	4	4	3	4	5	2	5	3	3	6	1.9	11.9
Dir	12	83	140	235	228	270	323	321	278	319	297	240	360	264	306	247	11	271	191	143	86	96	79	222	275	278
15 Spd	15	8	15	13	5	3	4	1	4	2	4	4	5	5	5	1	9	8	8	11	9	26	37	34	4.3	36.7
Dir	230	222	267	262	286	292	235	183	69	92	152	97	108	149	92	141	59	87	77	53	48	94	89	90	96	89
16 Spd	32	28	24	17	13	8	8	0	5	6	5	4	33	45	44	45	47	32	25	21	14	7	8	4	9.7	47.2
Dir	90	94	105	101	89	130	90	342	253	212	203	223	253	248	245	245	248	248	259	265	270	254	249	273	234	248
17 Spd	3	3	3	1	5	2	7	3	8	4	5	4	7	24	28	34	38	27	12	16	32	23	5	4	11.3	37.6
Dir	147	118	92	306	230	138	191	216	231	234	225	207	220	250	252	259	255	252	238	262	261	259	244	224	248	255
18 Spd	15	32	33	13	5	1	2	5	2	4	4	6	7	8	10	12	14	16	12	11	4	5	7	14	0.9	32.5
Dir	272	261	249	260	239	88	129	52	302	268	99	109	90	86	92	86	90	86	42	70	331	21	356	326	338	249
19 Spd	12	11	11	12	12	10	11	13	11	9	11	5	3	4	4	3	2	3	7	9	2	1	1	1	5.9	13.3
Dir	339	322	316	321	320	320	316	316	325	324	327	6	59	38	352	24	124	247	329	21	265	146	71	265	331	316
20 Spd	1	2	0	1	2	1	4	0	0	3	7	5	3	15	20	19	19	19	18	16	15	15	12	10	8.2	20.3
Dir	92	235	302	345	317	36	36	12	267	246	303	314	332	322	321	324	323	317	312	316	315	317	329	323	319	321
21 Spd	14	11	10	12	10	11	11	7	6	10	8	5	5	4	4	7	6	4	4	1	3	4	4	3	5.5	13.6
Dir	321	338	335	315	317	311	313	318	329	324	328	315	296	336	2	40	29	23	129	161	67	60	56	343	335	321
22 Spd	4	2	5	6	8	5	5	8	13	13	12	10	11	14	16	16	14	12	9	11	6	7	8	9	9.1	16.0
Dir	9	332	299	313	336	317	309	326	328	337	337	332	323	313	317	317	333	342	343	342	311	312	321	326	327	317

FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Beaverlodge - February 2014

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	Daily Average	Daily Maximum
23 Spd	8	4	5	7	4	7	4	1	1	1	2	4	1	1	4	4	3	3	1	1	1	1	2	1	1.8	8.2
Dir	333	52	82	65	80	75	52	240	215	144	173	166	120	156	78	82	96	109	351	262	150	207	7	27	73	333
24 Spd	1	1	0	4	1	2	3	1	1	2	1	0	3	9	10	11	10	12	11	9	4	3	5	9	3.3	11.5
Dir	18	184	282	35	13	17	286	322	283	59	247	223	310	304	305	318	344	360	9	355	353	1	70	84	349	360
25 Spd	6	6	3	1	2	3	1	4	1	2	4	3	5	3	4	3	4	2	1	2	2	1	2	5	2.3	6.3
Dir	87	79	100	89	64	72	148	41	138	61	70	111	83	74	42	30	279	347	33	29	28	51	105	47	66	87
26 Spd	2	2	4	5	5	3	4	5	3	3	3	6	2	7	6	3	3	2	1	5	3	3	3	8	2.6	7.7
Dir	74	84	51	50	57	57	54	63	73	109	94	83	77	49	19	188	70	180	245	330	27	50	16	317	51	317
27 Spd	5	9	12	14	15	19	20	23	23	24	21	23	23	22	20	20	16	13	9	11	14	19	17	17	14.9	24.2
Dir	326	326	321	317	312	307	312	319	319	317	322	324	329	322	325	333	338	335	339	356	32	43	38	47	334	317
28 Spd	11	11	8	6	7	6	6	9	9	9	11	13	14	10	8	10	10	12	9	12	15	13	12	14	8.9	15.1
Dir	66	132	113	97	85	88	69	64	66	86	116	116	116	120	126	118	120	117	50	46	43	65	87	87	91	43
Spd	3.0	2.2	2.7	3.4	3.2	3.0	3.0	3.4	2.9	2.9	2.0	1.3	1.8	3.6	4.4	4.6	4.4	3.4	3.8	4.4	4.0	3.2	3.7	4.0	Diurnal Average	
Dir	5	14	348	353	345	354	335	342	332	328	326	340	316	295	306	306	318	321	346	354	341	17	25	20		
Spd	32.0	32.0	32.5	17.5	15.4	18.7	19.6	23.4	22.6	24.2	21.1	23.1	32.9	44.9	44.0	44.9	47.2	32.3	25.1	20.5	32.3	25.9	36.7	34.0	Diurnal Maximum	
Dir	90	261	249	101	312	307	312	319	319	317	322	324	253	248	245	245	248	248	259	265	261	94	89	90		

Maximum Speed Value: 47 km/h on Feb 16 17:00
Maximum Daily Speed Average: 14.9 km/h on Feb 16
Maximum Diurnal Speed Average: 4.6 km/h at hour 16

Minimum Speed Value: 0 km/h on Feb 16 08:00
Minimum Daily Speed Average: 0.9 km/h on Feb 25
Minimum Diurnal Speed Average: 1.3 km/h at hour 12

Monthly Average Velocity: 2.96 km/h 340.5 deg

Speed Percentiles: $P_1 = 0.4$ $P_{10} = 1.4$ $Q_1 = 3.0$ Median = 5.3 $Q_3 = 9.8$ $P_{90} = 15.4$ $P_{99} = 33.7$

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

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Percent Operational Time:	100.0

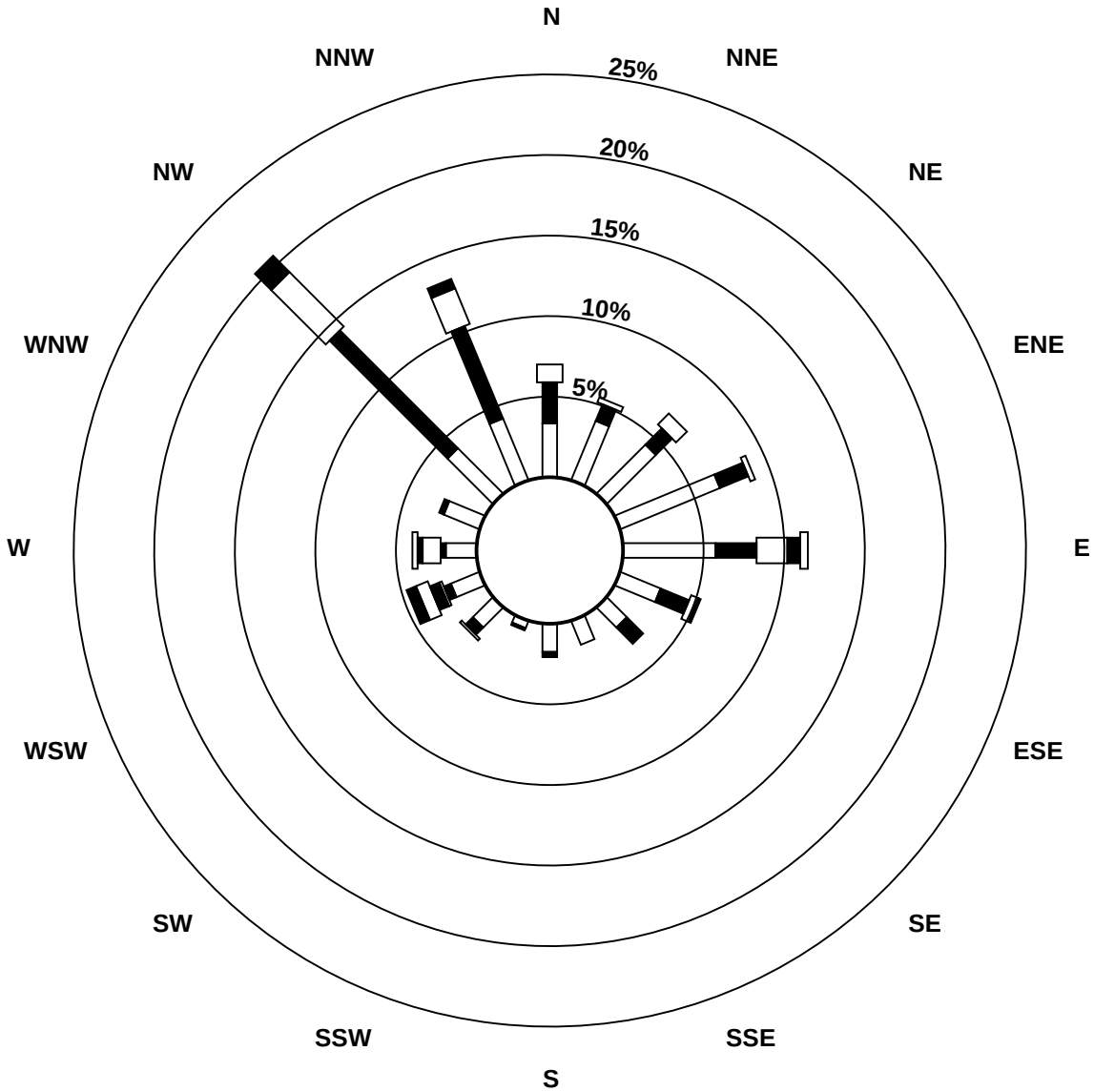
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	43	40	13	0	0	0	96
NorthEast	56	22	9	1	0	0	88
East	66	30	13	6	4	0	119
SouthEast	33	16	4	0	0	0	53
South	20	3	0	0	0	0	23
SouthWest	26	10	2	0	0	2	40
West	25	4	7	5	8	2	51
NorthWest	50	92	46	14	0	0	202
Total	319	217	94	26	12	4	672

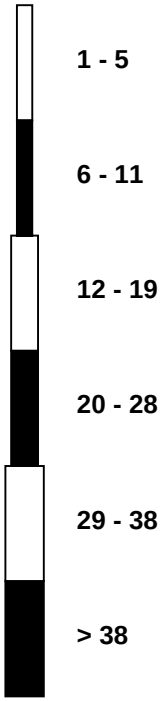
Wind Rose

Wind Speed (WS) (km/h)

Beaverlodge - February 2014



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Beaverlodge - February 2014

Peace Airshed Zone Association

Maximum Speed: 47 km/h on Feb 16 17:00

Maximum Daily Speed Average: 20.2 km/h on Feb 16

Minimum Speed: 1 km/h on Feb 1 09:00

Minimum Daily Speed Average: 3.5 km/h on Feb 25

Maximum Diurnal Speed Average: 10.7 km/h at hour 17

Minimum Diurnal Speed Average: 6.2 km/h at hour 12

Monthly Average Speed: 8.00 km/h

Percentiles: $P_1 = 1.4$ $P_{10} = 2.5$ $Q_1 = 3.8$ Median = 5.9 $Q_3 = 10.0$ $P_{90} = 15.5$ $P_{99} = 34.0$

Hours in Service: 672

Hours of Data: 672

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	5	4	4	3	2	4	2	2	1	2	3	2	6	16	16	17	15	16	16	16	12	10	6	5	7.6	16.7
2-Feb	5	7	5	5	6	4	5	4	3	3	4	2	2	2	3	14	20	18	16	13	20	14	10	12	8.3	20.4
3-Feb	13	12	16	14	12	12	10	10	9	9	10	10	10	11	11	9	9	8	7	9	8	10	11	9	10.3	16.3
4-Feb	10	10	10	10	11	10	8	6	2	4	5	7	6	2	3	6	7	5	3	2	2	4	7	6	5.9	10.5
5-Feb	3	5	5	2	3	4	4	5	5	5	3	3	4	3	4	4	4	5	5	4	3	3	4	4	3.9	5.5
6-Feb	2	3	6	4	4	3	3	3	4	4	6	3	6	4	10	9	9	8	5	10	8	3	9	9	5.6	9.7
7-Feb	7	8	12	15	5	7	11	11	7	8	10	13	10	9	8	8	8	8	7	4	9	5	7	6	8.6	15.4
8-Feb	5	9	7	8	4	9	4	4	7	8	8	8	7	7	6	5	6	7	9	6	4	3	2	2	6.0	8.8
9-Feb	4	3	6	4	10	8	3	3	4	6	3	3	3	4	4	6	5	3	4	2	1	3	2	3	4.1	10.3
10-Feb	2	2	5	4	6	4	3	5	6	3	3	2	3	2	7	4	2	4	6	6	6	6	5	5	4.3	7.3
11-Feb	5	4	6	5	8	8	7	7	7	7	7	5	5	2	2	5	3	10	14	18	21	21	21	19	9.0	21.2
12-Feb	18	17	12	8	4	5	8	9	9	3	3	3	6	5	5	2	6	3	10	10	7	6	6	7	7.2	17.6
13-Feb	8	7	6	5	2	4	5	8	9	5	6	4	3	5	5	4	4	3	4	3	1	2	2	4	4.6	8.6
14-Feb	4	2	3	3	3	5	9	6	12	7	6	8	7	8	5	5	5	5	5	2	5	5	4	8	5.5	12.2
15-Feb	15	8	15	13	5	3	5	2	4	3	5	5	5	5	5	6	9	8	8	11	10	26	37	34	10.4	36.7
16-Feb	32	28	25	18	13	9	8	4	5	6	5	5	33	45	44	45	47	32	25	21	14	7	9	6	20.2	47.2
17-Feb	5	5	3	4	6	3	7	6	9	6	8	6	7	24	28	34	38	27	13	17	32	23	6	5	13.5	37.7
18-Feb	15	32	33	13	6	2	3	5	4	6	5	6	7	8	11	12	14	17	12	12	6	6	8	14	10.6	32.6
19-Feb	12	11	11	12	12	10	11	13	11	9	11	6	4	5	5	4	3	7	8	9	4	2	2	2	7.6	13.4
20-Feb	2	3	2	4	4	3	4	2	2	4	7	5	4	15	20	19	19	19	18	16	15	15	12	10	9.4	20.3
21-Feb	14	11	10	12	10	11	11	7	7	11	8	6	5	5	5	7	6	4	4	2	3	4	4	4	7.1	13.7
22-Feb	5	4	5	7	8	5	5	8	13	13	12	10	11	14	16	16	15	12	9	11	6	7	8	9	9.5	16.2
23-Feb	8	7	5	7	4	7	4	2	1	2	3	4	2	2	4	4	3	3	1	1	3	2	4	2	3.5	8.2
24-Feb	3	3	2	4	4	3	4	2	3	2	3	1	4	10	10	11	10	12	11	9	5	4	5	9	5.6	11.6
25-Feb	6	6	3	2	3	4	4	5	1	3	5	3	5	4	4	3	5	3	2	3	3	1	3	5	3.5	6.3
26-Feb	3	2	4	5	5	3	4	5	4	4	4	6	3	7	6	4	3	3	4	7	4	4	4	8	4.4	7.8
27-Feb	7	9	12	14	15	19	20	23	23	24	21	23	24	23	20	20	16	14	9	11	16	19	17	17	17.3	24.3
28-Feb	13	11	9	6	7	6	6	9	9	9	11	13	14	10	8	10	10	12	9	12	15	13	12	14	10.3	15.1
	8.2	8.4	8.6	7.7	6.5	6.3	6.2	6.3	6.4	6.2	6.6	6.2	7.3	9.2	9.8	10.5	10.7	9.8	8.7	8.8	8.7	8.2	8.1	8.6	Diurnal Average	
	32.0	32.1	32.6	17.5	15.4	18.7	19.7	23.4	22.7	24.3	21.3	23.2	33.0	45.0	44.1	45.0	47.2	32.4	25.2	20.6	32.4	25.9	36.7	34.0	Diurnal Maximum	

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

FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Beaverlodge - February 2014

Maximum Value: 96.7 deg on Feb 24 03:00

Minimum Value: 1.9 deg on Feb 15 23:00

Percentiles: P_1 = 2.7 P_{10} = 5.0 Q_1 = 7.7 Median = 16.0 Q_3 = 44.3 P_{90} = 68.3 P_{99} = 92.3

Hours in Service:	672
Hours of Data:	672
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-Feb	16	18	18	24	35	10	36	29	84	75	62	66	41	5	6	5	5	4	6	5	8	13	12	36	83.9
2-Feb	16	14	11	29	15	23	17	22	92	57	54	92	52	28	54	10	10	6	6	8	10	8	12	14	92.4
3-Feb	14	11	7	7	5	8	8	7	18	11	9	11	10	14	10	14	12	10	7	9	5	6	6	5	17.7
4-Feb	5	5	5	5	3	9	10	50	73	30	39	5	17	93	64	36	12	46	83	68	59	42	13	40	92.8
5-Feb	82	19	6	78	68	14	12	6	17	17	33	40	14	49	41	8	9	11	12	12	25	21	13	26	81.6
6-Feb	25	26	7	17	16	26	29	25	8	44	23	80	7	56	5	14	6	7	65	9	85	89	8	12	89.4
7-Feb	15	29	14	3	72	25	5	5	10	6	6	6	11	11	8	6	6	7	11	20	8	22	10	7	71.8
8-Feb	34	16	18	17	46	14	56	68	14	4	9	9	6	11	14	8	10	21	6	76	24	67	88	84	88.0
9-Feb	63	86	44	41	5	45	37	49	41	13	53	25	41	9	30	9	12	17	11	35	61	78	33	32	85.8
10-Feb	53	66	50	52	18	44	32	14	24	76	41	74	75	96	11	69	46	52	36	21	19	7	10	8	96.2
11-Feb	10	18	6	9	9	6	6	7	7	7	13	27	40	86	69	17	23	10	6	3	3	3	4	4	86.0
12-Feb	6	5	8	19	47	30	14	8	7	70	26	16	21	14	20	82	28	32	7	29	57	63	69	14	82.4
13-Feb	11	32	20	22	81	22	13	13	30	68	20	28	29	25	17	13	19	45	24	24	88	68	66	13	87.9
14-Feb	63	77	37	31	94	66	52	83	16	38	74	30	78	23	33	48	49	40	23	50	18	54	33	77	94.0
15-Feb	9	12	10	7	49	35	48	80	13	67	38	39	23	27	15	79	13	19	8	8	19	2	2	2	79.9
16-Feb	2	3	5	4	14	19	10	89	20	10	8	22	7	3	2	3	2	3	5	7	11	15	29	54	89.4
17-Feb	63	55	31	86	52	56	5	74	55	77	71	72	20	14	7	6	5	5	34	50	4	4	34	40	85.6
18-Feb	9	6	5	16	17	63	38	15	63	65	43	21	12	12	11	8	4	16	16	18	50	41	26	7	65.0
19-Feb	11	8	4	4	4	4	4	5	16	11	6	28	28	20	38	66	65	90	41	15	64	72	60	95	94.7
20-Feb	79	73	97	85	76	62	12	79	82	80	14	31	51	5	5	4	5	5	5	5	4	5	10	9	96.6
21-Feb	7	7	11	8	6	5	5	10	22	8	13	18	27	33	39	12	16	16	21	46	41	17	12	32	45.8
22-Feb	51	59	12	20	6	20	6	6	3	5	8	11	7	8	7	8	7	9	5	9	9	10	6	9	59.1
23-Feb	8	49	11	6	15	5	41	79	69	66	29	14	66	61	15	9	11	21	50	68	74	52	63	83	82.9
24-Feb	81	85	97	43	89	68	60	83	67	56	89	85	87	23	6	8	15	6	7	23	66	42	17	5	96.7
25-Feb	5	5	36	72	66	52	62	58	47	77	35	20	14	20	8	50	49	45	47	39	49	81	45	5	80.9
26-Feb	41	40	10	6	9	10	11	11	34	37	23	12	65	15	30	30	50	60	78	53	57	67	43	10	77.7
27-Feb	45	5	4	4	5	3	5	4	6	6	7	6	10	8	9	7	8	7	8	9	24	4	3	7	45.4
28-Feb	42	12	18	8	6	5	8	4	5	12	6	5	3	10	12	5	6	7	18	5	2	13	5	4	42.4
	81.6	85.8	96.7	85.6	94.0	67.8	62.4	89.4	92.4	79.6	88.7	92.2	87.3	96.2	68.6	82.4	64.6	90.2	83.4	75.5	87.9	89.4	88.0	94.7	

PAZA
Valleyview Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Valleyview - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 9.9 ppb on Feb 17 13:00 Maximum Daily Average: 2.4 ppb on Feb 17

Minimum Value: 0 ppb on Feb 1 02:00 Minimum Daily Average: 0.0 ppb on Feb 21
Maximum Diurnal Average: 1.6 ppb at hour 17 Minimum Diurnal Average: 0.2 ppb at hour 3
Monthly Average: 0.62 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.3 Q_3 = 0.7 P_{90} = 1.3 P_{99} = 8.1

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	1	2	0	0	1	0	0	1	0	0	0	0.2	1.6
2-Feb	0	0	0	1	1	1	1	1	1	1	1	A	1	1	0	1	1	1	1	1	1	0	0	0	0.6	1.2
3-Feb	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0.1	0.5
4-Feb	0	0	0	0	0	1	0	0	0	A	0	1	1	1	8	2	2	1	1	1	1	1	1	1	1.1	8.2
5-Feb	1	0	1	1	0	1	1	0	A	1	1	1	1	0	0	1	3	1	0	0	0	0	0	0	0.6	2.8
6-Feb	0	0	0	0	0	0	0	A	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0.2	0.9
7-Feb	1	1	0	1	1	0	A	0	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0.4	1.0
8-Feb	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0.1	0.6
9-Feb	0	0	0	0	A	0	0	0	0	0	0	1	1	1	5	3	4	7	5	2	2	1	1	1	1.6	6.7
10-Feb	2	1	0	A	1	1	1	1	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0.5	1.7
11-Feb	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.3
12-Feb	0	A	0	1	0	1	1	2	3	3	4	4	3	2	1	1	1	1	1	1	1	0	0	1	1.4	4.5
13-Feb	A	0	0	0	0	1	1	1	1	0	0	1	2	1	1	1	1	1	1	0	1	1	1	A	0.7	2.1
14-Feb	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	2	4	4	2	2	1	1	A	0	0.9	4.1
15-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	A	0	0	0.1	1.3
16-Feb	0	0	0	0	0	0	1	1	1	1	1	1	1	1	5	8	7	3	0	0	A	0	0	0	1.4	8.1
17-Feb	0	0	0	0	0	0	0	0	0	0	0	1	10	8	3	2	9	3	1	A	9	4	2	0	2.4	9.9
18-Feb	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0	1	1	0.3	1.1
19-Feb	1	1	1	1	1	0	0	5	3	0	0	0	0	1	1	3	1	A	0	0	0	0	0	0	0.9	5.2
20-Feb	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	A	0	0	0	0	0	0	0	0.2	1.4
21-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.0	0.1
22-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	1	1	0	0	0	1	1	0.2	0.9
23-Feb	0	0	0	1	1	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	1	1	0	0	0.3	1.3
24-Feb	0	0	1	1	0	0	0	1	0	0	0	0	A	0	0	6	3	2	1	1	0	0	0	0	0.8	6.1
25-Feb	0	0	0	0	0	0	0	0	0	0	0	A	1	2	1	1	2	2	1	1	1	1	1	1	0.7	2.4
26-Feb	1	0	0	0	0	0	0	0	0	0	A	0	0	1	1	3	2	1	1	0	1	1	0	0	0.6	3.3
27-Feb	0	0	0	0	0	0	0	1	1	A	2	1	1	1	0	1	2	1	0	0	0	0	0	1	0.6	1.9
28-Feb	0	0	0	0	0	0	0	0	A	0	C	C	C	2	0	0	0	0	0	0	0	0	0	0	0.2	1.7
	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.5	0.5	0.4	0.5	0.5	1.1	1.0	1.2	1.4	1.6	1.1	0.7	0.5	0.8	0.5	0.4	0.3	Diurnal Average	
	1.7	0.9	0.8	1.1	1.0	1.0	1.3	5.2	3.4	3.0	4.5	4.1	9.9	8.3	8.2	8.1	9.0	6.7	5.4	2.4	8.7	3.9	2.3	1.1	Diurnal Maximum	

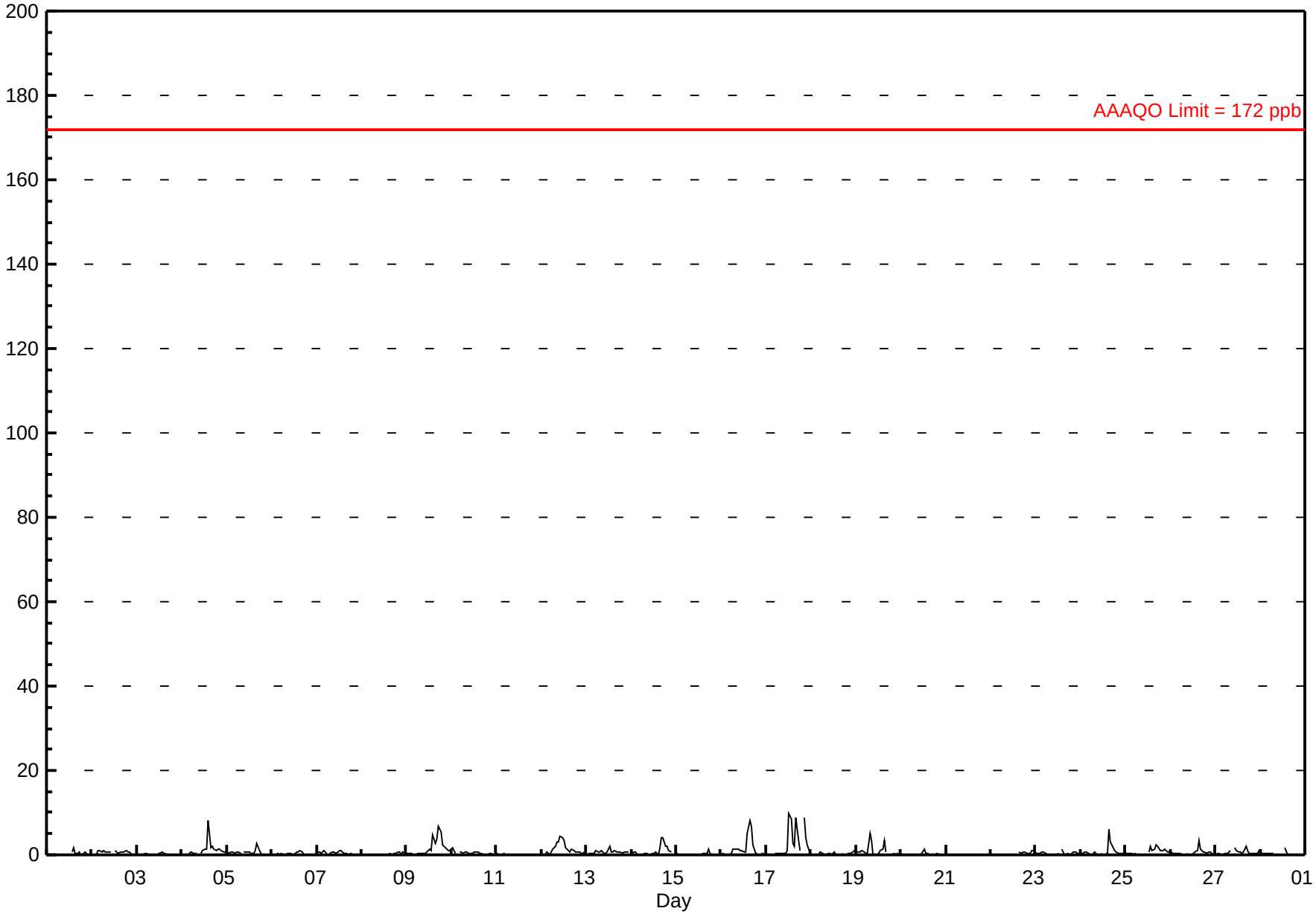
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Valleyview - February 2014



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Valleyview - February 2014

Maximum Value: 27.7 ppb on Feb 17 13:00

Maximum Daily Average: 7.9 ppb on Feb 17

Minimum Value: 0 ppb on Feb 3 02:00

Minimum Daily Average: 1.0 ppb on Feb 21

Maximum Diurnal Average: 4.4 ppb at hour 15

Minimum Diurnal Average: 1.4 ppb at hour 2

Monthly Average: 2.31 ppb

Percentiles: P_1 = 0.4 P_{10} = 0.9 Q_1 = 1.2 Median = 1.6 Q_3 = 2.2 P_{90} = 3.4 P_{99} = 16.2

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	2	1	2	1	2	1	0	1	1	1	1	1	A	8	14	2	2	2	2	1	2	2	1	1	2.1	14.1
2-Feb	1	1	1	7	6	2	2	2	2	2	2	A	2	2	2	2	2	2	6	2	2	2	1	1	2.4	6.7
3-Feb	1	0	0	1	1	1	1	1	1	1	A	1	1	2	1	1	1	1	1	1	1	1	1	1	1.1	2.0
4-Feb	1	1	1	1	1	2	2	2	1	A	1	3	3	3	21	4	5	3	2	3	3	3	2	2	3.0	20.7
5-Feb	2	2	2	2	1	2	2	2	A	2	2	2	2	1	2	4	6	3	2	1	1	1	1	1	1.9	6.0
6-Feb	1	0	1	2	2	2	1	A	2	2	1	1	2	2	2	2	2	2	2	2	1	1	2	1	1.6	2.3
7-Feb	2	2	2	2	2	1	A	2	2	2	2	2	3	3	2	1	2	2	2	2	1	1	1	1	1.8	2.6
8-Feb	1	1	1	0	1	A	1	1	2	2	1	1	1	1	1	1	1	2	2	3	2	1	2	1	1.3	2.7
9-Feb	1	2	1	2	A	2	2	1	2	2	1	2	2	4	8	4	6	10	10	4	3	3	2	4	3.4	10.0
10-Feb	4	3	2	A	3	2	1	1	2	2	2	2	2	2	2	2	1	1	1	1	1	1	2	2	1.8	3.8
11-Feb	1	1	A	1	2	1	1	1	1	1	1	1	1	1	0	0	1	0	2	2	2	1	2	2	1.2	2.4
12-Feb	2	A	2	2	2	2	4	3	5	6	7	6	6	4	3	2	3	4	2	2	2	2	2	3	3.3	7.5
13-Feb	A	1	2	1	2	3	2	3	2	2	2	3	9	2	3	2	2	2	3	2	2	3	2	A	2.4	8.5
14-Feb	2	3	2	3	1	1	2	2	3	1	1	2	2	2	2	4	8	7	4	3	3	2	A	1	2.7	7.6
15-Feb	2	1	1	1	1	1	1	1	0	1	1	1	1	1	3	1	2	3	1	1	1	A	1	1	1.2	2.7
16-Feb	2	2	1	1	1	2	3	2	3	2	2	2	2	2	16	20	18	16	2	1	A	1	1	1	4.6	20.4
17-Feb	1	1	1	1	1	2	1	1	1	1	2	11	28	20	15	14	18	20	6	A	13	12	9	2	7.9	27.7
18-Feb	2	2	2	1	1	2	1	1	1	2	2	1	3	1	1	1	1	3	A	1	2	1	2	3	1.7	3.3
19-Feb	3	2	2	2	2	2	1	13	12	1	1	1	2	10	3	11	2	A	1	1	2	2	2	1	3.5	12.5
20-Feb	1	1	1	1	1	1	1	1	1	1	2	2	3	2	2	2	A	1	2	2	1	2	1	1	1.5	3.2
21-Feb	1	1	1	1	1	1	0	1	2	1	1	1	1	1	2	A	2	2	1	1	1	1	1	1	1.0	1.9
22-Feb	1	1	1	2	1	1	1	1	1	1	1	1	1	1	A	2	2	2	2	2	2	2	3	2	1.5	2.8
23-Feb	2	2	1	2	2	2	1	1	1	1	1	1	2	A	3	2	1	1	1	2	2	2	2	1	1.6	3.1
24-Feb	2	2	3	3	2	2	1	2	3	2	2	2	A	2	2	11	7	4	3	2	2	2	2	2	2.7	10.8
25-Feb	2	1	2	2	1	2	1	1	1	1	1	A	2	4	3	3	4	4	2	3	2	3	2	2	2.1	4.4
26-Feb	2	2	1	2	1	1	1	1	1	1	A	2	2	2	3	6	3	2	2	2	3	2	1	1	2.0	6.5
27-Feb	2	1	1	1	1	2	1	2	3	A	4	2	2	1	1	2	4	3	1	1	1	2	1	2	1.8	3.7
28-Feb	2	2	3	1	1	1	1	1	A	2	C	C	C	10	1	1	1	1	1	1	1	1	1	1	1.7	9.6
	1.6	1.4	1.5	1.7	1.7	1.6	1.4	1.9	2.2	1.6	1.8	2.2	3.4	3.5	4.4	4.0	3.9	3.7	2.5	1.8	2.2	2.1	1.8	1.6	Diurnal Average	
	3.8	2.9	3.0	6.7	6.4	2.8	3.6	12.5	12.2	5.8	7.5	10.5	27.7	20.3	20.7	20.4	18.2	20.3	9.8	4.3	13.3	12.1	8.7	3.6	Diurnal Maximum	

C - Calibration

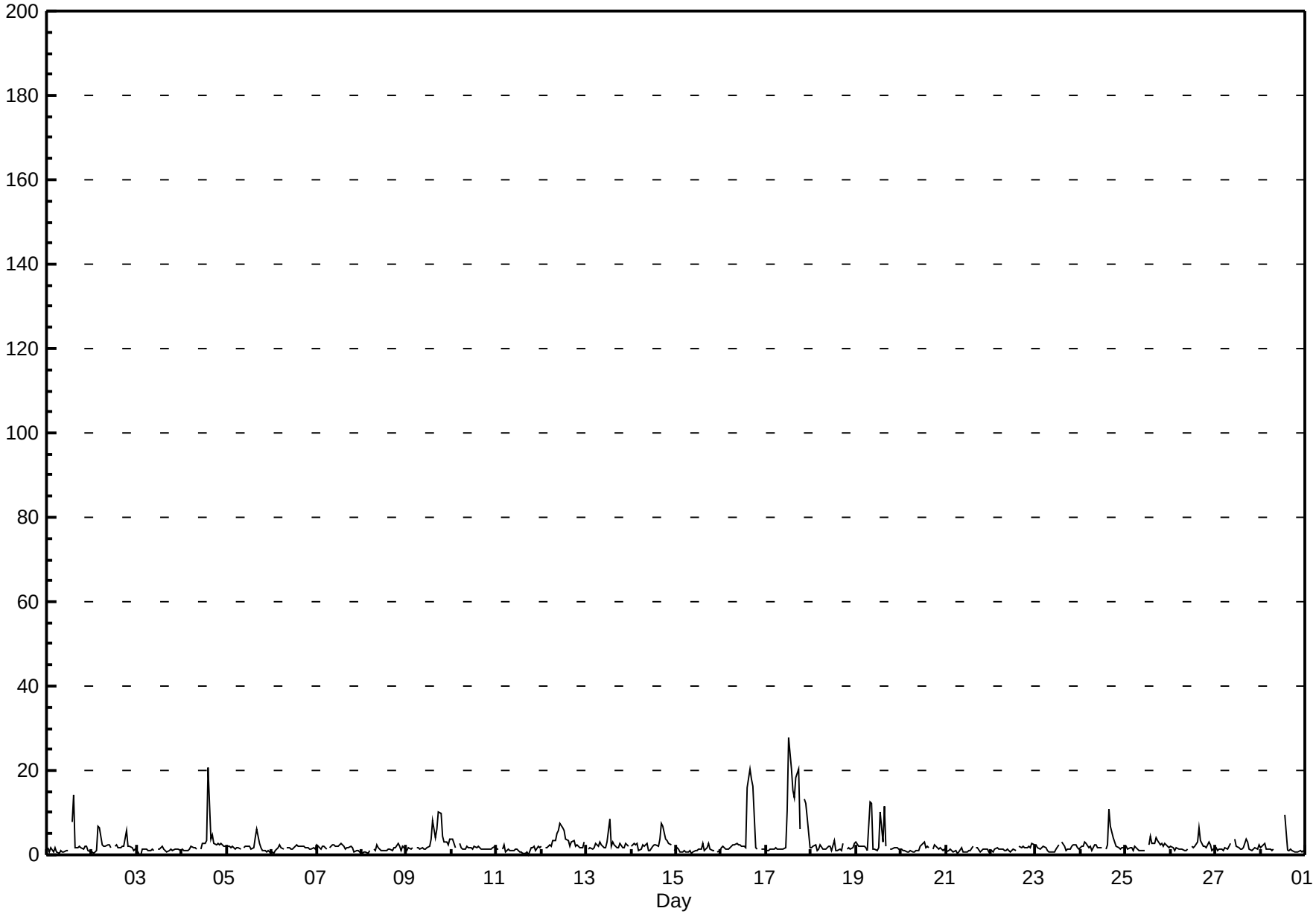
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

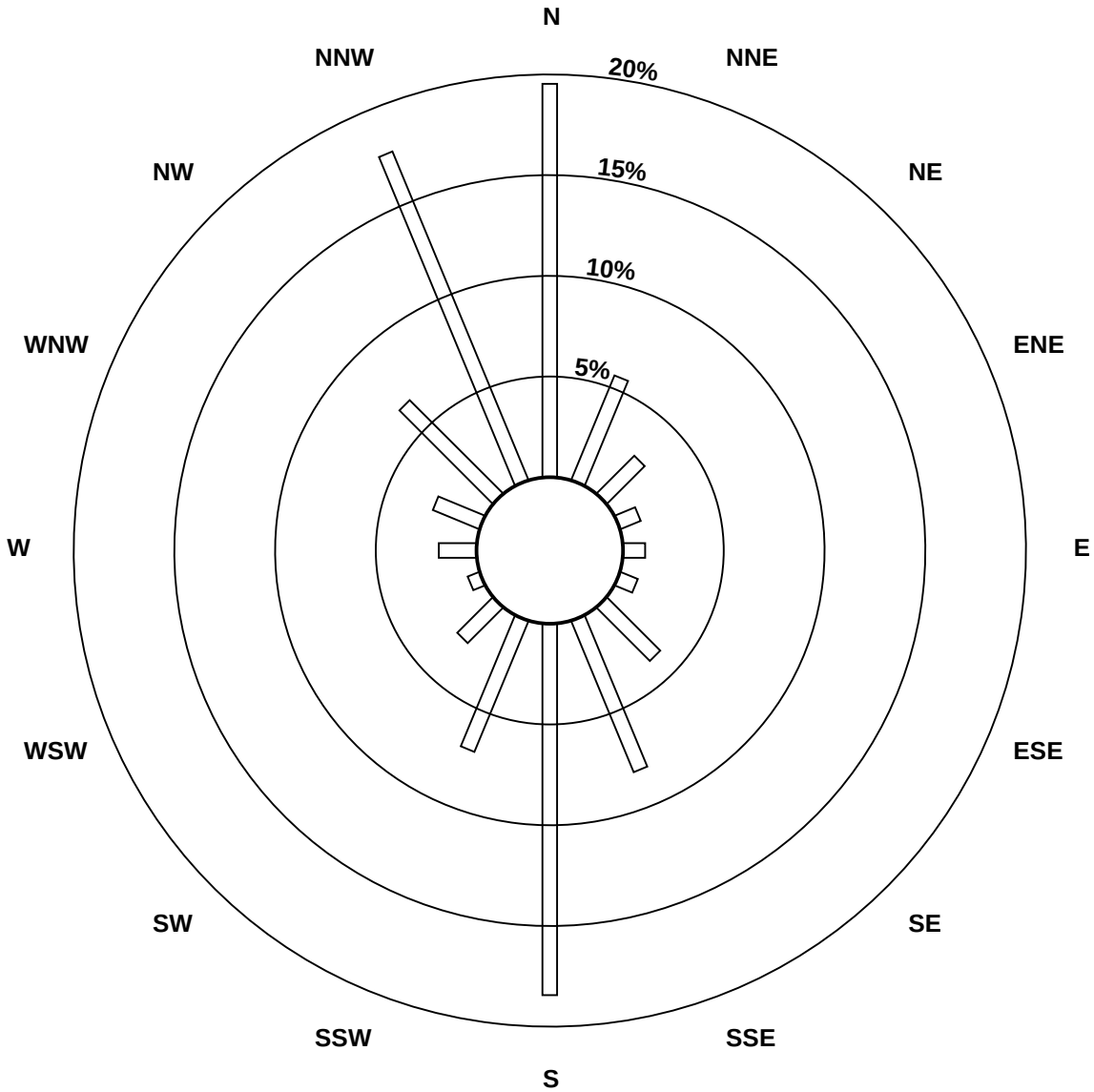
Valleyview - February 2014



Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Valleyview - February 2014



Pollutant Classes (ppb)

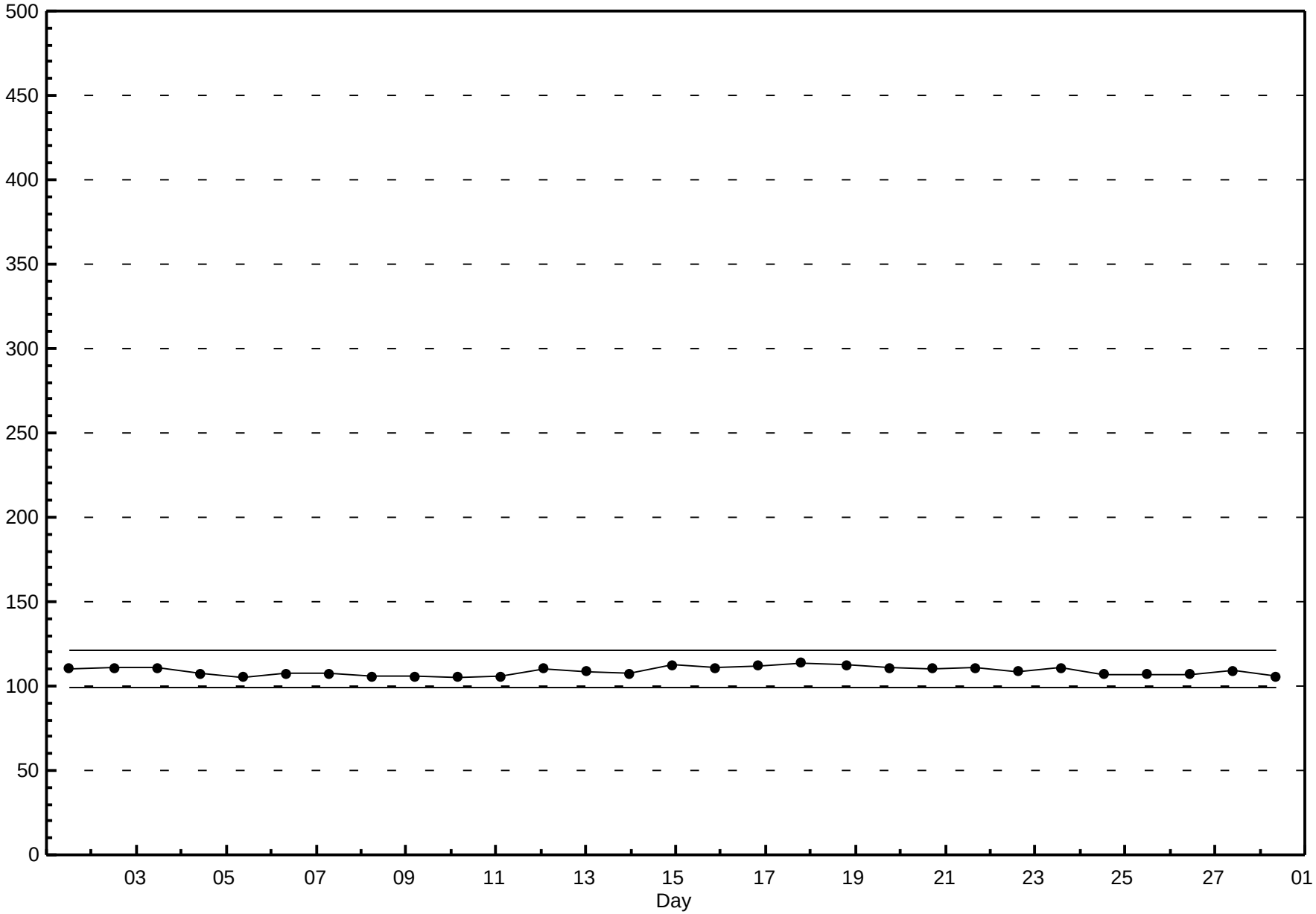
- 0 - 10
- 11 - 20
- 21 - 60
- 61 - 110
- 111 - 172
- > 172

Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Valleyview - February 2014



Peace Airshed Zone Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Valleyview - February 2014

Number of Exceedences (AAAQO): 1-hr: 3 24-hr: 0
Maximum Value: 19.0 ppb on Feb 25 13:00 Maximum Daily Average: 2.6 ppb on Feb 25

Minimum Value: 0 ppb on Feb 18 13:00 Minimum Daily Average: 0.0 ppb on Feb 28
Maximum Diurnal Average: 1.0 ppb at hour 13 Minimum Diurnal Average: 0.2 ppb at hour 10
Monthly Average: 0.31 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.2 Q_3 = 0.3 P_{90} = 0.5 P_{99} = 1.5

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
2-Feb	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
3-Feb	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2
4-Feb	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.4	1.4
5-Feb	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.3	0.8
6-Feb	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	1	2	2	1	1	1	0.5	2.1
7-Feb	1	3	2	1	0	0	A	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0.5	2.8
8-Feb	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
9-Feb	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0.3	1.0
10-Feb	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
11-Feb	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
12-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
13-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.1
14-Feb	0	0	0	1	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	A	0	0.3	0.7
15-Feb	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	A	1	1	0.3	0.7
16-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.4
17-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0.2	0.6
18-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.5
19-Feb	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.6
20-Feb	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.6
21-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.2
22-Feb	0	0	0	1	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	1.2
23-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.3
24-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
25-Feb	0	0	0	0	0	0	0	0	0	0	0	A	19	14	13	4	1	1	0	0	1	1	1	0	2.6	19.0
26-Feb	0	0	0	0	0	0	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	0	0.3	0.8
27-Feb	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
28-Feb	0	0	0	0	0	0	0	0	A	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0.0	0.1
	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.0	0.7	0.7	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	Diurnal Average	
	0.9	2.8	1.8	0.7	1.2	1.1	0.7	0.5	0.5	0.4	0.6	0.6	19.0	14.2	13.0	4.2	1.4	0.7	0.7	2.1	1.6	1.5	1.2	0.8	Diurnal Maximum	

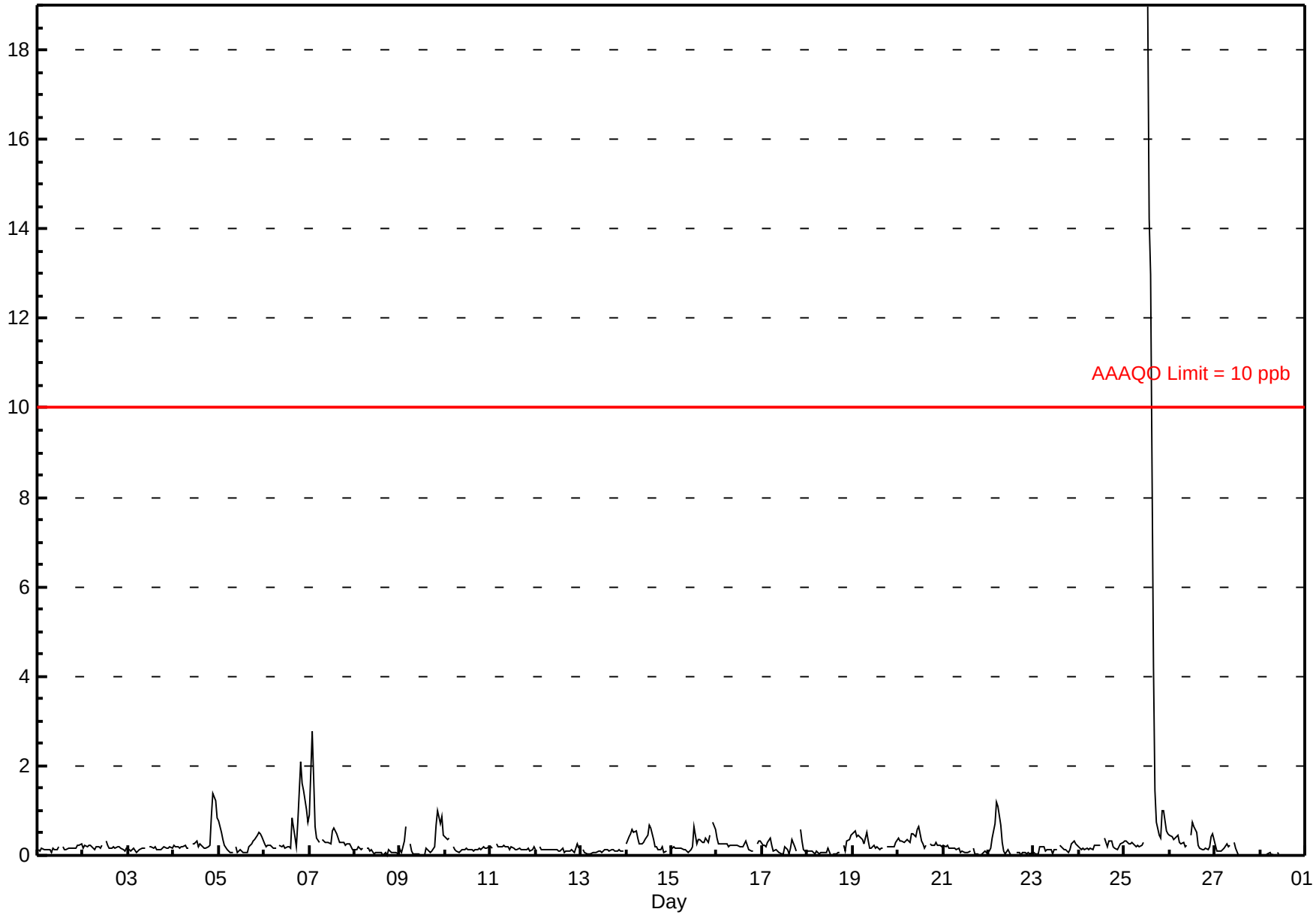
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Valleyview - February 2014



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Hydrogen Sulphide (H_2S) - ppb

Valleyview - February 2014

Maximum Value: 22.9 ppb on Feb 25 13:00

Maximum Daily Average: 3.8 ppb on Feb 25

Minimum Value: 0 ppb on Feb 28 16:00

Minimum Daily Average: 0.2 ppb on Feb 28

Maximum Diurnal Average: 1.5 ppb at hour 13

Minimum Diurnal Average: 0.5 ppb at hour 18

Monthly Average: 0.73 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.4$ $Q_1 = 0.5$ Median = 0.5 $Q_3 = 0.7$ $P_{90} = 0.9$ $P_{99} = 1.6$

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	0	0	0	0	1	1	0	0	0	0	1	1	A	1	0	1	1	1	1	1	0	1	1	1	0.5	0.7
2-Feb	1	1	1	1	1	0	0	1	1	1	1	A	1	1	0	0	1	0	1	1	0	1	0	1	0.6	0.8
3-Feb	1	0	1	1	0	1	1	1	1	1	A	1	1	1	1	0	0	1	0	1	1	0	1	0	0.5	0.7
4-Feb	1	1	1	0	1	1	1	0	0	A	1	1	1	0	1	0	1	1	1	1	2	2	2	1	0.8	2.3
5-Feb	1	1	1	1	0	0	0	0	A	1	0	1	1	0	0	0	1	1	1	1	1	1	1	1	0.6	1.3
6-Feb	1	1	1	1	1	1	0	A	1	1	1	1	1	1	1	6	1	1	2	3	2	2	1	1	1.2	6.4
7-Feb	2	4	2	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1.0	3.9
8-Feb	1	1	1	0	1	A	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.4	0.6
9-Feb	0	0	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	1	1	1	0.7	2.1
10-Feb	1	1	1	A	1	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	1	1	1	1	0.5	0.8
11-Feb	1	1	A	1	1	1	1	1	1	1	0	1	1	1	1	0	0	0	0	1	1	0	0	1	0.6	1.0
12-Feb	0	A	1	1	1	1	1	0	1	0	1	0	0	1	1	1	0	0	0	1	0	1	1	0	0.5	0.7
13-Feb	A	0	1	1	0	0	0	0	1	1	0	0	0	0	1	0	1	0	1	1	0	0	0	A	0.5	0.6
14-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	A	1	0.7	1.2
15-Feb	1	0	0	1	0	0	0	0	0	0	1	1	2	1	1	1	1	1	1	1	1	A	1	1	0.7	1.7
16-Feb	1	1	1	1	1	1	0	1	0	1	1	1	1	0	1	1	1	1	1	0	A	1	1	1	0.6	0.9
17-Feb	1	1	0	1	1	1	0	0	0	0	0	1	1	0	0	1	1	1	0	A	1	1	1	1	0.6	1.1
18-Feb	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	1	0	1	1	1	0.5	1.0
19-Feb	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	A	1	1	1	1	0	1	0.7	1.3
20-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.7	1.0
21-Feb	1	1	1	1	1	0	0	0	1	0	0	0	0	0	0	A	1	0	0	0	1	0	0	0	0.5	1.3
22-Feb	1	1	1	1	2	2	1	1	1	0	1	0	0	0	A	0	1	0	0	0	0	0	0	0	0.7	2.2
23-Feb	0	0	0	1	0	1	0	0	0	1	0	0	0	A	1	1	1	1	0	1	1	1	1	1	0.5	0.8
24-Feb	1	1	0	0	0	0	1	1	1	0	1	1	A	1	1	1	1	1	1	1	0	0	1	1	0.6	0.8
25-Feb	1	1	1	1	1	1	1	1	0	1	1	A	23	20	18	9	2	1	1	1	2	1	1	1	3.8	22.9
26-Feb	1	1	1	1	1	1	1	1	1	1	A	1	1	1	2	1	1	1	0	1	0	1	1	1	0.8	1.6
27-Feb	1	0	0	1	1	1	1	1	1	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
28-Feb	0	0	0	0	0	0	0	0	A	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0.2	0.5
	0.7	0.7	0.7	0.7	0.7	0.6	0.5	0.5	0.6	0.5	0.5	0.6	1.5	1.3	1.2	1.0	0.6	0.5	0.6	0.7	0.7	0.7	0.7	0.6	Diurnal Average	
	2.1	3.9	2.5	1.4	2.2	1.6	1.2	1.3	1.3	0.9	0.9	1.0	22.9	20.5	17.7	8.8	2.4	1.2	2.1	2.9	2.3	2.3	1.6	1.3	Diurnal Maximum	

C - Calibration

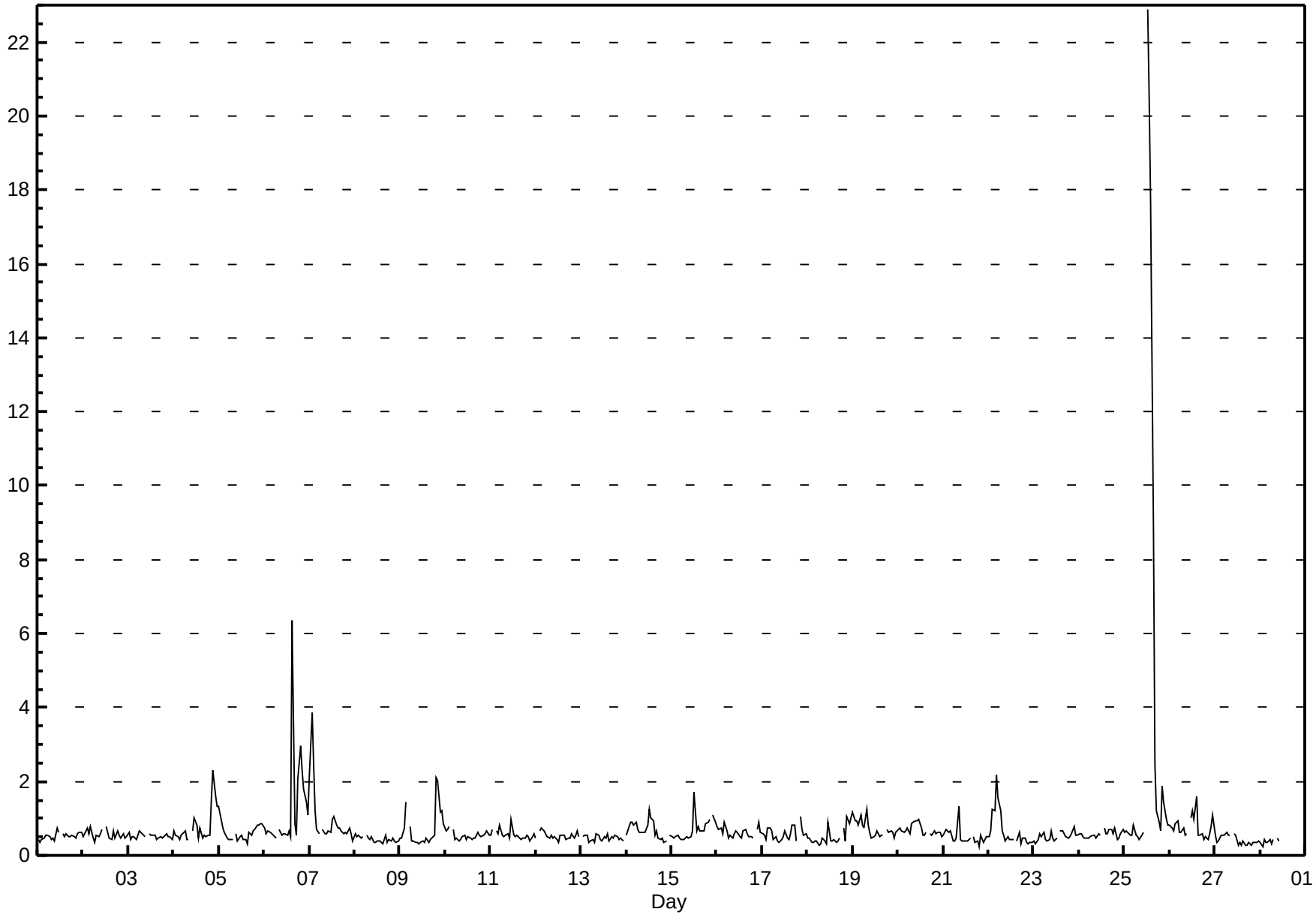
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Hydrogen Sulphide (H_2S) - ppb

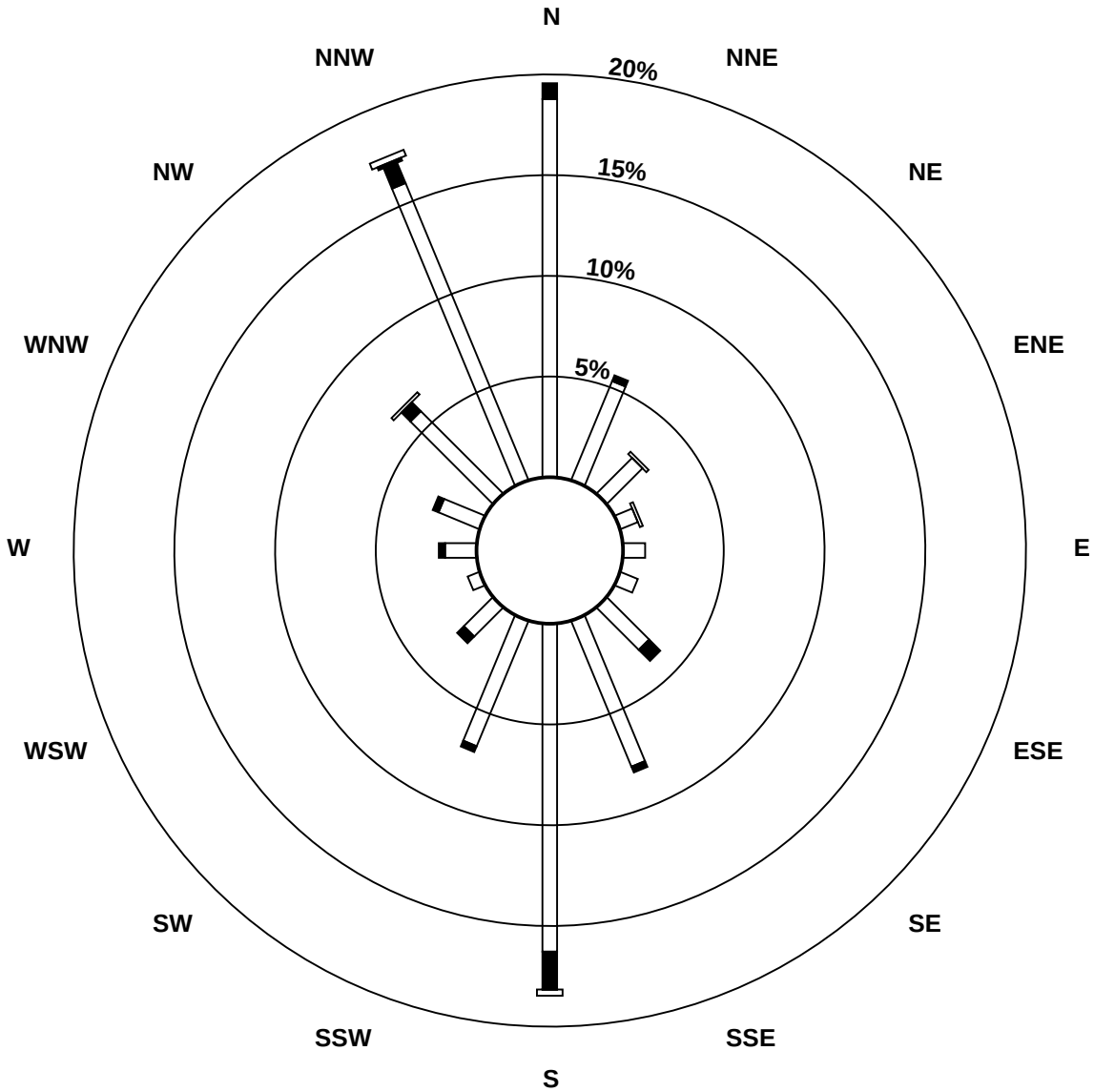
Valleyview - February 2014



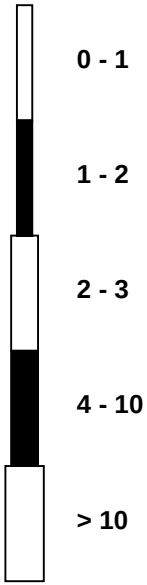
Pollutant Rose

Hydrogen Sulphide (H_2S) - ppb

Valleyview - February 2014



Pollutant Classes (ppb)

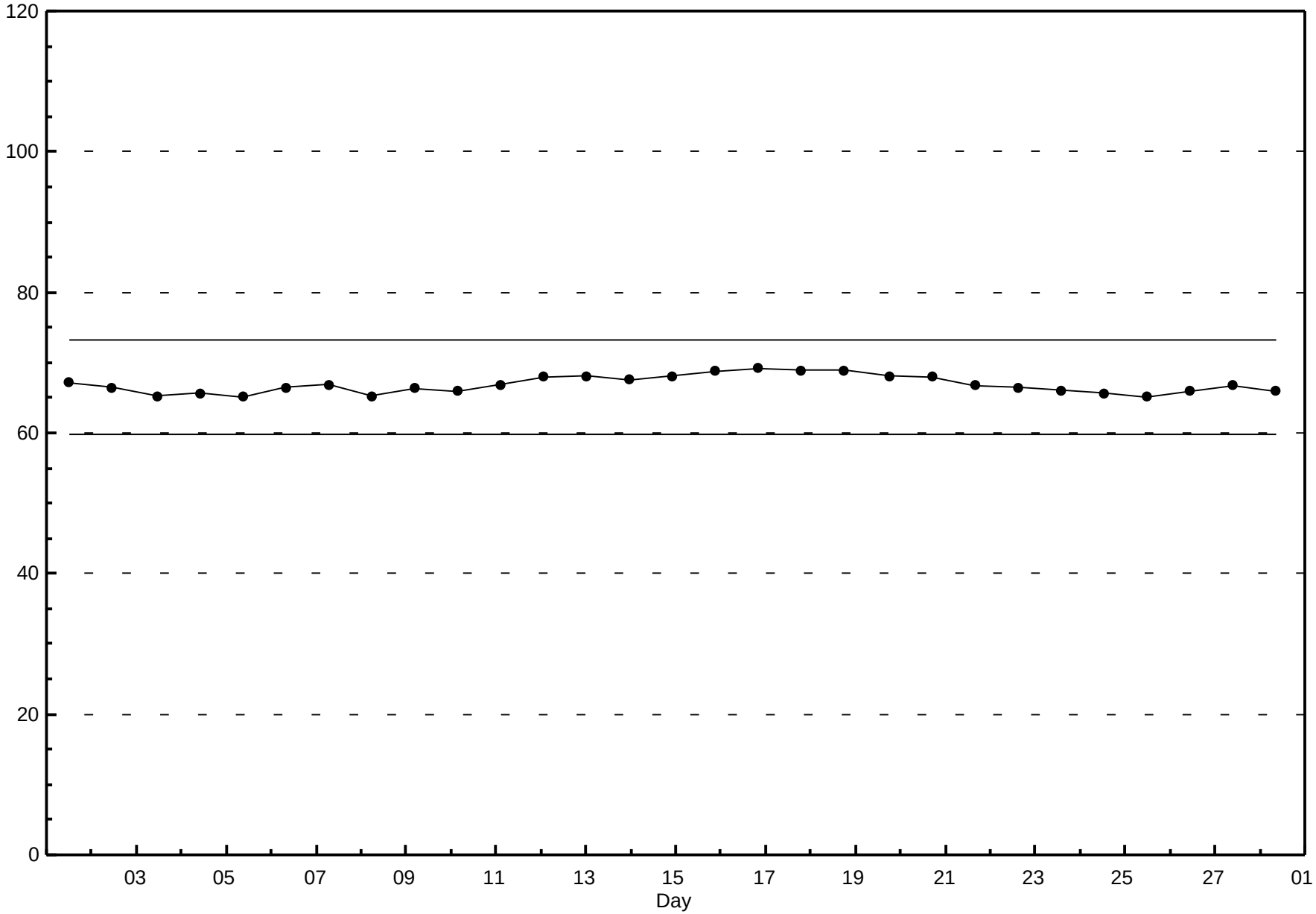


Peace Airshed Zone Association

Span Responses

Hydrogen Sulphide (H_2S)

Valleyview - February 2014



Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Valleyview - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 4.9 ^{o}C on Feb 17 17:00

Maximum Daily Average: -0.5 ^{o}C on Feb 17

Minimum Value: -34 ^{o}C on Feb 24 08:00

Minimum Daily Average: -26.0 ^{o}C on Feb 9

Maximum Diurnal Average: -10.0 ^{o}C at hour 17

Minimum Diurnal Average: -20.0 ^{o}C at hour 8

Monthly Average: -15.60 ^{o}C

Percentiles: P_1 = -32.2 P_{10} = -27.3 Q_1 = -21.1 Median = -16.3 Q_3 = -9.3 P_{90} = -3.5 P_{99} = 4.0

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

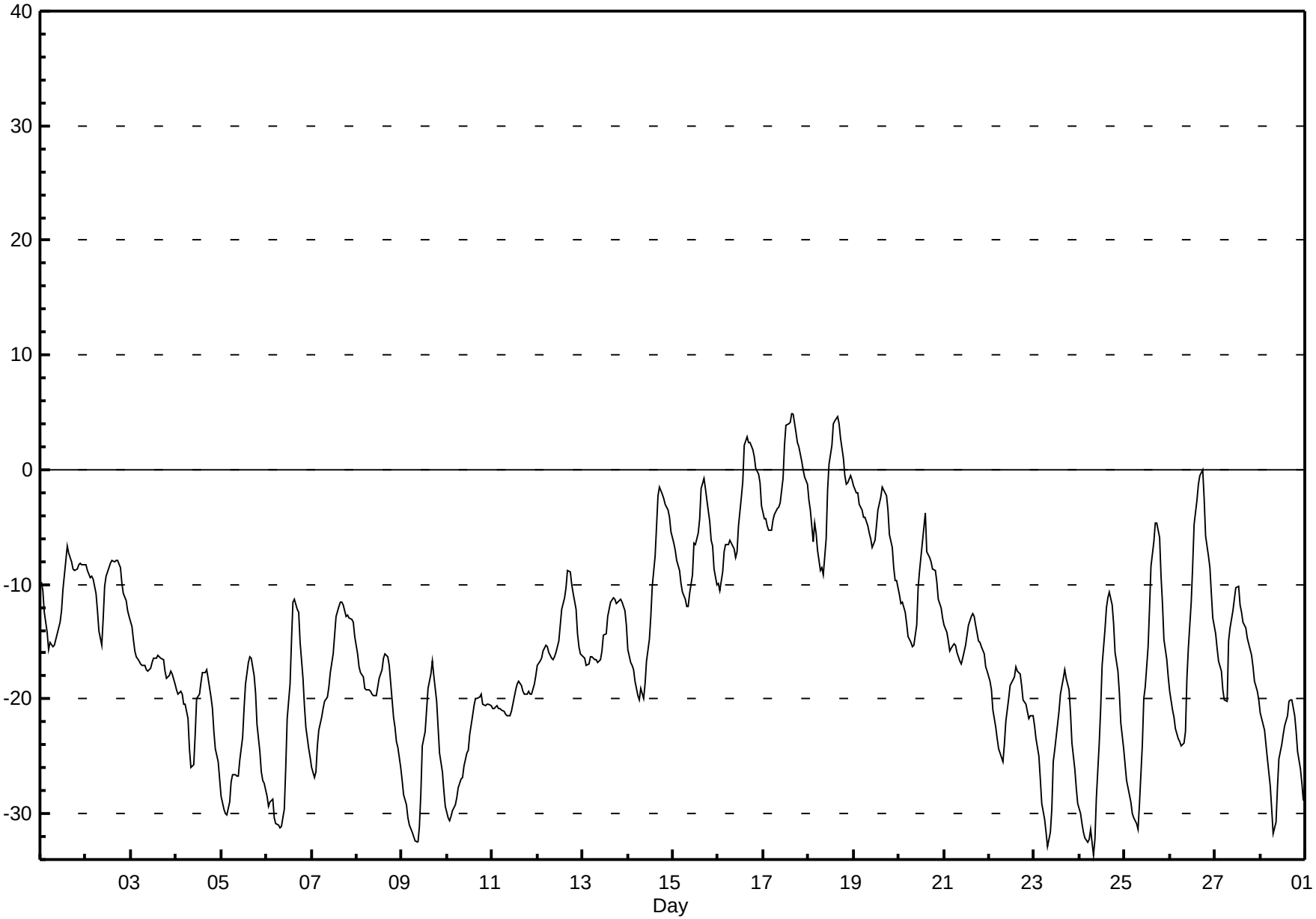
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-10	-11	-12	-14	-16	-15	-15	-15	-15	-14	-13	-12	-10	-8	-7	-7	-8	-9	-9	-9	-8	-8	-8	-8	-10.9	-6.7
2-Feb	-8	-9	-9	-9	-10	-11	-12	-14	-15	-13	-10	-9	-9	-8	-8	-8	-8	-8	-9	-10	-11	-11	-12	-13	-10.2	-7.9
3-Feb	-14	-15	-16	-16	-17	-17	-17	-17	-17	-18	-17	-17	-16	-16	-16	-16	-16	-17	-18	-18	-18	-18	-18	-19	-16.8	-13.7
4-Feb	-19	-20	-19	-20	-20	-20	-22	-24	-26	-26	-23	-20	-20	-19	-18	-18	-17	-18	-20	-21	-23	-24	-25	-27	-21.2	-17.4
5-Feb	-28	-30	-30	-30	-29	-27	-27	-27	-27	-27	-25	-23	-21	-19	-17	-16	-16	-18	-19	-22	-25	-26	-27	-27	-24.3	-16.3
6-Feb	-28	-29	-29	-29	-30	-31	-31	-31	-31	-30	-26	-22	-19	-15	-12	-11	-12	-12	-15	-18	-21	-22	-24	-25	-23.1	-11.3
7-Feb	-26	-27	-26	-24	-23	-22	-21	-20	-20	-19	-18	-16	-14	-13	-12	-12	-12	-12	-13	-13	-13	-13	-13	-15	-17.3	-11.5
8-Feb	-16	-17	-18	-18	-19	-19	-19	-19	-20	-20	-20	-19	-18	-17	-16	-16	-16	-17	-19	-22	-22	-24	-24	-26	-19.2	-16.0
9-Feb	-27	-28	-29	-30	-31	-32	-32	-32	-33	-31	-28	-24	-23	-21	-19	-18	-17	-18	-20	-23	-25	-26	-28	-29	-26.0	-16.7
10-Feb	-30	-31	-30	-30	-29	-29	-28	-27	-27	-26	-25	-24	-23	-21	-21	-20	-20	-20	-20	-20	-21	-20	-20	-21	-24.3	-19.6
11-Feb	-21	-21	-21	-21	-21	-21	-21	-21	-21	-21	-21	-20	-19	-19	-18	-19	-19	-20	-20	-19	-20	-20	-19	-18	-20.0	-17.9
12-Feb	-17	-17	-16	-16	-15	-15	-16	-16	-17	-16	-16	-15	-14	-12	-11	-10	-9	-9	-10	-11	-12	-14	-15	-16	-14.0	-8.8
13-Feb	-16	-16	-17	-17	-16	-16	-17	-17	-17	-17	-16	-14	-14	-13	-12	-12	-11	-11	-12	-11	-11	-11	-12	-14	-14.2	-11.2
14-Feb	-16	-17	-17	-17	-18	-20	-20	-19	-20	-19	-17	-15	-13	-10	-8	-5	-2	-2	-2	-3	-3	-4	-4	-5	-11.5	-1.6
15-Feb	-6	-7	-8	-9	-10	-11	-11	-12	-12	-11	-9	-6	-7	-5	-4	-2	-1	-2	-3	-5	-6	-7	-9	-10	-7.2	-0.8
16-Feb	-10	-11	-9	-7	-7	-6	-6	-6	-7	-8	-7	-5	-2	-1	2	3	2	2	2	1	0	0	-1	-3	-3.5	2.9
17-Feb	-4	-4	-5	-5	-5	-4	-4	-3	-3	-3	-1	2	4	4	4	5	5	3	2	2	1	0	-1	-1	-0.5	4.9
18-Feb	-3	-4	-6	-5	-6	-7	-9	-9	-9	-6	-2	0	2	4	4	5	4	3	1	0	-1	-1	-1	-1	-1.9	4.6
19-Feb	-1	-2	-2	-3	-4	-4	-4	-5	-5	-6	-7	-6	-5	-3	-2	-2	-2	-2	-3	-6	-7	-9	-10	-10	-4.6	-1.4
20-Feb	-11	-12	-12	-12	-13	-15	-15	-15	-15	-14	-10	-9	-6	-5	-4	-7	-8	-8	-9	-9	-10	-11	-12	-13	-10.6	-3.7
21-Feb	-14	-14	-15	-16	-16	-15	-15	-16	-17	-17	-16	-15	-14	-14	-13	-13	-13	-14	-15	-15	-15	-16	-17	-18	-15.1	-12.5
22-Feb	-18	-19	-21	-22	-23	-24	-25	-25	-24	-22	-20	-19	-19	-18	-17	-18	-18	-19	-20	-20	-21	-22	-22	-21	-20.8	-17.2
23-Feb	-22	-24	-25	-27	-29	-31	-32	-33	-32	-30	-25	-25	-22	-21	-20	-18	-17	-18	-19	-21	-24	-26	-28	-29	-24.9	-17.5
24-Feb	-30	-31	-32	-32	-32	-32	-31	-34	-32	-29	-24	-21	-17	-14	-12	-11	-11	-12	-13	-16	-18	-19	-22	-24	-22.9	-10.6
25-Feb	-26	-27	-28	-29	-30	-30	-31	-31	-29	-24	-20	-19	-15	-12	-8	-6	-5	-5	-6	-9	-12	-15	-17	-18	-18.8	-4.6
26-Feb	-19	-21	-22	-23	-24	-24	-24	-24	-23	-18	-16	-12	-8	-5	-3	-1	0	0	-3	-6	-8	-9	-11	-13	-13.1	0.0
27-Feb	-14	-16	-17	-18	-19	-20	-20	-15	-14	-12	-11	-10	-10	-12	-12	-13	-14	-15	-15	-16	-17	-18	-19	-20	-15.4	-10.2
28-Feb	-21	-22	-23	-24	-25	-28	-30	-32	-31	-28	-25	-24	-23	-22	-21	-20	-20	-20	-21	-23	-25	-26	-27	-29	-24.6	-20.1
	-17.1	-17.8	-18.4	-18.7	-19.2	-19.5	-19.8	-20.0	-19.9	-18.6	-16.7	-15.0	-13.4	-12.0	-10.7	-10.2	-10.0	-10.5	-11.7	-13.0	-14.1	-15.1	-16.0	-16.9	Diurnal Average	
	-1.4	-2.0	-2.1	-3.0	-3.5	-4.1	-3.8	-3.4	-3.2	-2.9	-0.8	2.1	3.8	4.0	4.3	4.8	4.9	3.3	2.3	2.0	0.8	-0.1	-0.5	-0.9	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Valleyview - February 2014



Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Valleyview - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 89.0 % on Feb 15 07:00 Maximum Daily Average: 80.0 % on Feb 20

Minimum Value: 25 % on Feb 26 17:00 Minimum Daily Average: 45.8 % on Feb 18

Maximum Diurnal Average: 74.7 % at hour 6 Minimum Diurnal Average: 54.6 % at hour 16

Monthly Average: 67.44 % Percentiles: P_1 = 29.4 P_{10} = 45.9 Q_1 = 60.7 Median = 71.0 Q_3 = 76.4 P_{90} = 81.4 P_{99} = 87.7

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

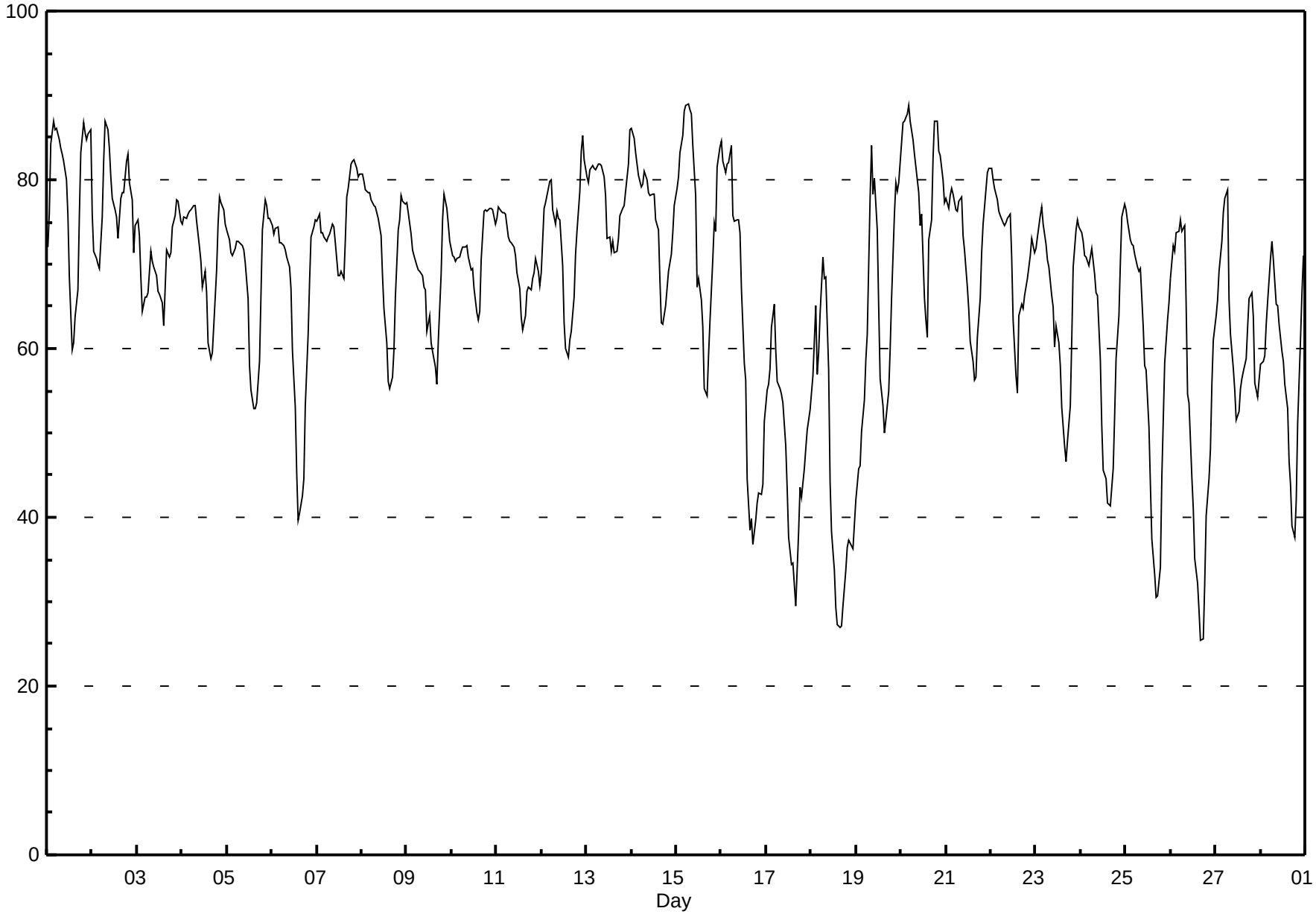
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	72	76	84	87	86	86	85	84	83	82	80	76	69	60	61	64	67	76	83	87	86	85	85	86	78.7	86.9
2-Feb	76	71	71	70	70	76	82	87	86	84	80	78	77	76	73	78	78	79	82	83	80	78	71	75	77.4	86.9
3-Feb	75	73	68	64	66	66	67	71	70	70	69	67	66	65	63	67	72	71	71	74	76	78	77	75	70.1	77.6
4-Feb	75	76	75	76	76	76	77	77	75	72	70	67	69	67	61	59	59	63	69	75	78	77	76	75	71.7	78.0
5-Feb	74	73	71	71	72	73	73	72	72	72	70	66	58	55	53	53	54	59	66	74	78	77	75	75	68.1	77.6
6-Feb	75	74	74	74	73	73	72	72	71	70	67	60	53	45	40	40	43	45	53	62	68	73	74	75	63.5	75.3
7-Feb	75	76	74	74	73	73	73	74	75	74	72	69	69	69	68	73	78	79	82	82	82	81	80	81	75.3	82.4
8-Feb	81	80	79	78	78	78	77	77	76	75	73	69	65	61	56	55	57	60	66	74	75	78	77	77	71.8	80.8
9-Feb	77	76	74	72	71	70	69	69	69	67	67	62	64	61	60	58	56	61	69	75	78	77	75	73	68.7	78.3
10-Feb	71	71	70	71	71	72	72	72	72	71	69	69	67	64	63	64	70	76	77	76	77	77	76	75	71.4	76.6
11-Feb	75	77	76	76	76	76	73	73	73	72	71	69	67	64	62	64	67	67	67	68	69	71	69	67	70.4	76.8
12-Feb	69	77	77	78	80	80	76	75	76	75	75	70	63	60	59	61	62	66	71	74	79	83	85	82	73.1	85.3
13-Feb	80	80	81	82	81	81	82	82	82	80	78	73	73	72	73	71	71	73	76	77	77	79	82	86	78.0	86.0
14-Feb	86	85	83	82	81	79	79	81	80	78	78	78	78	75	74	68	63	63	65	67	69	71	74	77	75.7	86.1
15-Feb	79	80	83	85	88	89	89	88	88	84	78	67	68	66	63	55	54	59	63	71	75	74	82	84	75.5	89.0
16-Feb	85	82	81	82	82	84	76	75	75	75	74	67	58	56	45	39	40	37	40	42	43	43	44	51	61.4	84.5
17-Feb	55	56	58	63	65	60	56	55	55	54	49	43	38	34	35	32	29	38	44	42	46	48	50	53	48.2	65.2
18-Feb	55	57	65	57	59	64	71	68	68	58	44	38	34	29	27	27	27	29	34	36	37	37	36	39	45.8	70.8
19-Feb	42	46	46	50	54	59	62	78	84	78	80	74	65	56	53	50	52	55	60	66	76	80	79	80	63.5	84.0
20-Feb	84	87	87	88	89	87	85	83	81	78	74	76	66	63	61	73	75	83	87	87	83	83	80	77	80.0	88.7
21-Feb	78	77	78	79	78	77	76	77	78	73	72	67	65	61	58	56	57	61	66	71	75	79	81	81	71.7	81.4
22-Feb	81	80	79	78	76	76	75	75	75	75	76	71	63	57	55	64	65	65	66	68	70	71	73	71	71.1	81.3
23-Feb	72	73	76	77	75	72	70	70	66	65	60	63	61	58	53	48	47	49	53	61	70	74	75	74	65.1	76.8
24-Feb	74	73	71	71	70	71	72	69	67	66	59	51	46	45	42	42	41	46	52	59	64	70	76	77	61.3	77.1
25-Feb	76	75	73	72	72	71	70	69	70	63	58	57	51	44	37	33	31	31	34	45	51	58	63	65	57.1	76.4
26-Feb	68	72	72	74	74	75	74	75	65	55	54	45	41	35	32	29	25	26	32	40	45	48	56	61	53.0	75.2
27-Feb	64	66	69	73	76	78	79	66	62	58	55	52	53	55	56	57	59	63	66	67	64	56	54	56	62.6	78.8
28-Feb	58	59	59	63	66	71	73	70	65	65	63	60	59	56	53	47	44	39	38	42	51	61	67	71	58.2	72.8
	72.6	73.0	73.4	73.8	74.2	74.7	74.4	74.4	73.5	71.1	68.4	64.4	60.8	57.5	54.9	54.6	55.1	57.7	61.9	65.9	68.6	70.2	71.2	72.2	Diurnal Average	
	86.1	86.7	87.0	87.9	88.7	88.8	89.0	88.3	87.8	84.1	80.3	78.3	78.4	75.5	74.0	77.8	78.5	82.6	87.0	86.9	85.5	84.7	85.4	86.0	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Valleyview - February 2014



Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Valleyview - February 2014

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1 Spd	1	1	1	1	2	1	1	2	2	1	2	2	2	2	7	8	8	10	7	6	7	7	6	5	2.4	9.6
Dir	201	172	191	174	171	190	196	166	170	190	187	197	198	197	330	323	295	298	303	305	319	320	336	338	300	298
2 Spd	9	10	8	5	4	3	2	1	2	1	0	2	8	7	6	7	2	1	5	15	11	16	17	13	5.3	17.0
Dir	314	319	315	284	260	235	218	211	172	135	347	335	341	345	344	337	331	309	300	9	356	3	2	354	340	2
3 Spd	16	18	15	16	12	10	8	9	7	6	8	10	11	11	10	10	7	5	4	3	3	3	5	7	8.4	17.5
Dir	1	2	3	5	2	351	331	327	318	293	312	323	332	353	3	356	353	330	315	304	311	348	328	332	345	2
4 Spd	3	3	4	2	1	1	1	1	1	1	2	1	3	3	1	1	0	1	1	1	1	1	0	0	0.8	4.3
Dir	317	321	326	345	341	333	191	164	176	168	149	79	346	347	6	23	20	353	349	315	326	125	272	130	338	326
5 Spd	0	0	0	0	2	2	3	3	2	2	2	2	3	3	2	3	3	2	0	0	1	1	1	0	1.0	3.0
Dir	5	172	189	152	176	182	174	171	180	186	183	157	150	139	175	241	331	7	360	179	180	170	183	184	177	241
6 Spd	1	1	1	2	1	2	2	2	1	4	3	2	2	3	3	3	4	2	1	0	0	0	1	0	0.9	4.1
Dir	195	187	163	201	191	189	193	192	185	186	178	184	196	178	218	330	7	25	231	45	181	182	182	187	195	7
7 Spd	0	0	0	1	1	0	1	1	1	1	0	1	2	1	2	2	1	2	4	2	2	6	10	12	1.4	12.0
Dir	15	74	173	188	173	176	184	163	156	181	104	5	207	283	347	344	354	350	358	335	306	339	350	360	346	360
8 Spd	11	9	8	6	7	7	6	4	6	5	5	3	3	2	2	2	4	3	2	6	3	2	1	0	4.2	10.7
Dir	1	1	7	4	356	357	1	5	0	354	357	348	341	358	27	38	58	67	4	342	356	340	9	159	2	1
9 Spd	1	0	0	0	0	0	0	1	1	1	1	1	3	3	2	1	0	1	1	1	2	1	0	0	0.4	3.0
Dir	349	201	2	128	170	173	162	160	170	147	157	86	359	346	10	11	168	349	305	356	349	175	153	125	3	359
10 Spd	0	0	0	1	1	2	2	1	1	1	1	3	3	4	6	7	9	8	8	10	8	9	8	8	3.5	10.2
Dir	177	160	169	171	172	173	172	162	340	59	33	340	330	333	347	342	350	360	6	357	357	355	357	1	354	357
11 Spd	8	5	3	5	4	4	5	5	4	3	3	3	1	1	2	2	4	3	2	1	2	3	5	6	2.4	7.8
Dir	352	348	357	344	357	12	8	19	23	23	24	34	11	26	29	52	79	85	91	106	64	105	119	125	32	352
12 Spd	7	7	10	6	4	4	10	10	8	7	7	9	8	7	6	6	6	5	5	3	1	1	2	3	5.0	10.0
Dir	126	125	128	126	136	135	164	163	161	167	169	167	162	161	163	167	165	167	169	174	44	9	9	353	153	163
13 Spd	6	4	4	6	6	6	6	4	4	4	4	2	7	6	8	7	6	5	3	1	1	1	0	0	3.8	7.5
Dir	18	10	349	355	356	9	7	20	11	12	6	340	340	342	336	334	349	335	350	345	207	181	186	281	353	336
14 Spd	1	1	1	0	0	1	1	0	2	1	0	1	3	2	2	1	6	8	8	9	8	7	7	6	2.0	8.8
Dir	15	332	340	224	173	179	198	206	3	189	49	42	357	317	28	334	170	172	174	171	172	170	172	173	171	171
15 Spd	6	4	4	4	4	4	4	3	4	3	1	1	4	3	5	2	2	3	2	1	2	1	0	0	1.0	5.5
Dir	175	179	187	184	197	194	191	189	193	191	219	360	339	331	341	325	320	342	22	342	326	321	179	134	218	175
16 Spd	0	1	1	0	0	3	9	10	11	8	4	2	1	1	13	19	20	10	3	1	1	0	1	0	3.4	19.9
Dir	138	179	200	217	1	183	167	169	173	178	169	170	131	145	276	269	267	259	235	222	200	177	200	213	225	267
17 Spd	1	0	0	2	0	2	2	3	3	4	2	4	14	14	6	6	10	7	8	14	8	4	2	2	4.0	14.3
Dir	205	126	218	336	222	207	190	175	185	184	199	242	266	265	248	296	279	314	292	279	273	256	205	199	263	279
18 Spd	3	1	1	3	2	2	2	3	1	3	1	1	5	4	4	3	2	3	3	2	1	2	2	1	1.5	5.2
Dir	231	212	195	194	177	181	192	196	144	139	181	188	159	157	137	106	90	64	62	20	279	162	173	222	156	159
19 Spd	1	0	1	3	3	3	2	5	3	5	2	1	1	2	3	3	2	1	5	7	3	5	3	1	2.1	6.6
Dir	235	131	330	349	6	10	333	285	305	358	51	24	33	47	38	22	62	77	324	340	34	358	334	324	355	340
20 Spd	1	0	1	0	0	0	0	0	0	0	0	3	4	6	7	16	12	10	9	8	12	11	10	11	4.7	15.6
Dir	186	201	176	309	333	288	130	10	203	201	322	344	333	348	347	343	4	5	358	346	324	322	321	327	340	343
21 Spd	9	6	4	6	6	9	9	4	6	3	4	3	3	2	2	3	5	5	4	2	1	1	2	1	3.8	9.4
Dir	325	319	317	316	328	331	329	339	21	16	13	39	42	6	358	360	3	3	15	34	35	336	344	334	347	325
22 Spd	2	0	0	0	0	0	1	1	1	1	5	14	13	10	7	8	7	6	5	3	4	3	2	2	3.5	13.7
Dir	337	354	5	216	12	311	167	173	161	48	359	350	4	23	26	14	10	12	359	359	340	335	323	327	4	350

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Valleyview - February 2014

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	Daily Average	Daily Maximum
23 Spd	4	2	0	0	0	0	0	0	0	2	1	3	3	4	3	3	3	4	2	0	0	1	0	0	1.0	3.8
Dir	335	332	291	147	157	171	179	165	159	166	158	341	343	344	346	333	334	337	332	6	330	178	182	174	336	344
24 Spd	0	1	1	1	1	1	1	1	1	3	2	0	1	0	1	3	3	7	6	6	3	0	0	0	0.7	6.7
Dir	208	174	167	167	185	197	208	162	196	179	184	301	26	41	355	12	9	343	358	356	349	279	184	161	352	343
25 Spd	0	0	0	0	1	0	0	1	1	1	1	4	3	3	2	3	2	3	2	1	1	0	0	0	0.7	3.7
Dir	196	169	167	204	170	142	179	183	203	178	174	344	344	341	326	330	0	346	3	338	191	192	190	129	337	344
26 Spd	0	1	0	0	0	1	0	0	0	0	1	2	2	2	5	7	5	3	6	8	4	2	0	1	1.7	8.2
Dir	192	185	180	117	189	160	172	183	158	99	8	284	326	343	356	349	354	26	349	344	355	333	289	183	348	344
27 Spd	0	1	1	1	2	1	2	7	7	4	7	12	14	19	17	17	15	12	11	11	7	10	9	11	7.2	18.9
Dir	204	167	196	193	345	185	223	299	329	305	313	315	335	6	7	11	11	7	4	12	2	2	5	6	354	6
28 Spd	7	4	5	3	1	1	0	1	1	2	2	4	9	10	11	10	10	7	7	8	6	3	1	2	4.2	10.7
Dir	9	345	305	336	331	170	164	158	159	39	340	327	338	340	339	349	347	4	9	17	10	339	348	11	350	339
Spd	2.0	1.4	1.1	1.1	0.9	0.5	0.4	0.6	0.2	0.4	0.4	1.7	2.8	2.8	3.4	4.2	3.3	2.9	2.7	3.1	2.4	2.2	2.0	2.1	Diurnal Average	
Dir	347	348	344	342	344	330	220	214	205	178	331	331	334	347	345	341	342	348	345	345	338	344	347	351		
Spd	16.2	17.5	15.2	15.8	12.1	9.8	9.9	10.0	10.7	7.5	7.9	13.7	14.5	18.9	16.9	18.8	19.9	12.5	10.6	15.2	12.3	16.2	17.0	13.5	Diurnal Maximum	
Dir	1	2	3	5	2	351	164	163	173	178	312	350	335	6	7	269	267	7	4	9	324	3	2	354		

Maximum Speed Value: 20 km/h on Feb 16 17:00
Maximum Daily Speed Average: 8.4 km/h on Feb 3
Maximum Diurnal Speed Average: 4.2 km/h at hour 16

Minimum Speed Value: 0 km/h on Feb 14 08:00
Minimum Daily Speed Average: 0.4 km/h on Feb 9
Minimum Diurnal Speed Average: 0.2 km/h at hour 9

Monthly Average Velocity: 1.74 km/h 341.9 deg

Speed Percentiles: $P_1 = 0.1$ $P_{10} = 0.3$ $Q_1 = 0.9$ Median = 2.4 $Q_3 = 5.6$ $P_{90} = 8.9$ $P_{99} = 16.8$

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

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Percent Operational Time:	100.0

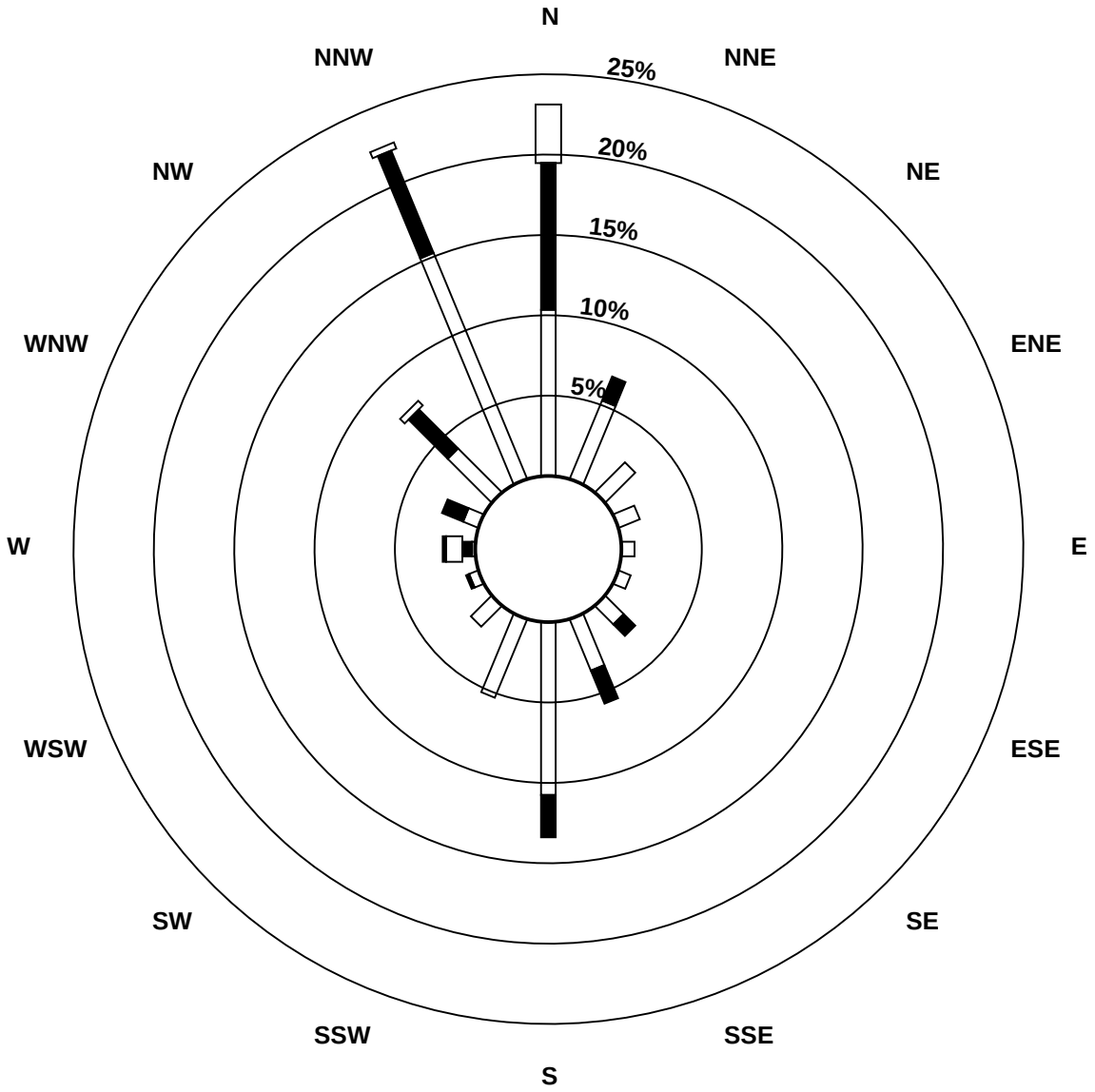
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	120	77	20	0	0	0	217
NorthEast	39	2	0	0	0	0	41
East	13	0	0	0	0	0	13
SouthEast	33	5	0	0	0	0	38
South	174	25	0	0	0	0	199
SouthWest	33	0	0	0	0	0	33
West	11	7	5	1	0	0	24
NorthWest	65	39	3	0	0	0	107
Total	488	155	28	1	0	0	672

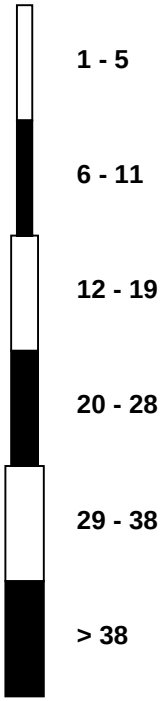
Wind Rose

Wind Speed (WS) (km/h)

Valleyview - February 2014



Wind Speed Classes (km/h)



Peace Airshed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Valleyview - February 2014

Maximum Speed: 20 km/h on Feb 16 17:00

Maximum Daily Speed Average: 9.0 km/h on Feb 3

Minimum Speed: 0 km/h on Feb 26 08:00

Minimum Daily Speed Average: 1.0 km/h on Feb 9

Maximum Diurnal Speed Average: 6.0 km/h at hour 16

Minimum Diurnal Speed Average: 2.5 km/h at hour 5

Monthly Average Speed: 3.86 km/h

Percentiles: $P_1 = 0.1$ $P_{10} = 0.5$ $Q_1 = 1.2$ Median = 2.7 $Q_3 = 5.7$ $P_{90} = 9.0$ $P_{99} = 17.1$

Hours in Service: 672

Hours of Data: 672

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	1	1	1	1	2	1	1	2	2	1	2	2	2	2	8	8	8	10	7	6	7	7	6	5	3.9	9.8
2-Feb	10	10	8	6	4	3	2	1	2	1	1	3	8	7	6	7	2	1	5	16	11	16	17	14	6.7	17.2
3-Feb	16	18	15	16	12	10	8	9	7	6	8	10	11	11	10	10	7	5	4	3	4	3	5	7	9.0	17.6
4-Feb	3	4	4	2	1	1	1	1	1	1	2	2	3	3	1	1	1	1	2	1	1	1	1	0	1.6	4.3
5-Feb	1	0	0	1	2	2	3	3	2	2	2	2	3	3	3	3	4	2	0	0	1	1	1	0	1.7	3.6
6-Feb	1	1	1	2	1	2	2	2	1	4	3	3	2	3	3	5	4	2	1	1	1	1	1	0	1.9	4.8
7-Feb	0	1	1	1	1	0	1	1	1	1	1	1	2	2	2	2	1	2	4	2	2	6	10	12	2.4	12.1
8-Feb	11	9	8	6	7	7	6	4	6	6	6	3	3	3	2	3	4	3	2	6	3	2	1	1	4.6	10.7
9-Feb	1	0	0	0	0	0	0	1	1	1	2	1	3	3	2	1	1	1	1	1	2	1	0	0	1.0	3.3
10-Feb	0	0	0	1	1	2	2	1	1	1	1	3	3	4	6	8	9	8	9	10	8	9	8	8	4.3	10.2
11-Feb	8	5	3	5	4	5	5	5	4	4	3	3	1	1	2	3	4	3	2	1	2	3	5	6	3.6	7.9
12-Feb	7	7	10	7	4	4	10	10	8	7	7	9	8	7	6	6	6	5	5	3	1	2	2	3	6.0	10.1
13-Feb	6	4	4	6	6	6	6	4	4	4	4	2	7	6	8	7	6	5	3	1	2	1	1	1	4.3	7.6
14-Feb	2	1	2	0	0	1	1	1	2	1	1	1	4	3	2	1	6	8	8	9	8	7	7	6	3.5	8.9
15-Feb	6	4	4	4	4	4	4	3	4	3	2	1	4	3	5	2	2	3	2	2	2	1	0	1	2.9	5.6
16-Feb	1	1	1	1	0	3	9	10	11	8	4	3	2	2	13	19	20	10	3	1	1	0	1	1	5.3	20.5
17-Feb	1	0	1	2	1	2	2	3	3	4	3	4	14	15	6	6	10	8	8	14	9	4	3	2	5.2	14.6
18-Feb	3	1	1	3	2	2	2	3	1	3	1	2	5	4	4	4	3	3	3	2	2	2	2	1	2.5	5.2
19-Feb	1	2	1	4	3	3	2	6	4	6	3	2	2	2	3	3	2	3	5	7	4	5	4	1	3.2	7.0
20-Feb	1	1	1	1	0	1	1	0	0	0	0	4	4	7	8	16	12	10	9	9	12	11	10	11	5.3	15.8
21-Feb	10	6	4	6	6	9	9	4	6	4	4	3	3	3	2	4	5	5	4	2	1	1	3	1	4.4	9.5
22-Feb	2	1	1	1	1	1	1	1	1	2	5	14	13	11	7	8	7	6	5	3	4	3	2	2	4.2	13.9
23-Feb	4	2	1	0	0	0	0	0	0	2	1	3	3	4	3	3	3	4	2	0	0	1	1	0	1.5	3.8
24-Feb	1	1	1	1	1	1	1	1	1	3	2	2	1	2	1	3	3	7	6	6	3	1	0	0	1.9	6.8
25-Feb	0	0	0	0	1	0	0	1	1	1	2	4	3	3	2	3	2	3	2	1	1	0	0	0	1.3	3.7
26-Feb	0	1	1	0	0	1	0	0	0	1	1	2	3	2	5	7	6	3	6	8	4	2	1	1	2.3	8.3
27-Feb	0	1	1	1	2	1	2	7	7	4	7	12	16	19	17	17	15	13	11	11	7	10	9	11	8.5	19.1
28-Feb	7	4	5	3	1	1	1	1	1	2	2	4	9	10	11	10	10	7	7	8	6	3	1	2	4.8	10.7
	3.6	3.2	2.9	2.9	2.5	2.6	3.0	3.1	3.0	2.9	2.9	3.7	5.0	5.1	5.4	6.0	5.8	5.0	4.5	4.9	3.9	3.8	3.7	3.5	Diurnal Average	
	16.4	17.6	15.3	15.9	12.2	10.0	10.0	10.1	10.8	7.7	8.0	13.9	16.1	19.1	17.1	19.2	20.5	12.7	10.7	15.8	12.4	16.4	17.2	13.6	Diurnal Maximum	

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

Peace Airshed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Valleyview - February 2014

Maximum Value: 97.1 deg on Feb 22 06:00

Minimum Value: 3.3 deg on Feb 8 20:00

Percentiles: P_1 = 5.3 P_{10} = 7.7 Q_1 = 10.5 Median = 19.5 Q_3 = 42.7 P_{90} = 67.3 P_{99} = 94.0

Hours in Service:	672
Hours of Data:	672
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-Feb	23	17	23	31	15	12	20	40	36	28	14	21	35	45	46	12	12	12	11	12	10	8	14	9	46.3
2-Feb	12	9	15	13	20	11	16	42	34	28	79	50	19	8	6	16	29	63	13	16	9	9	9	7	78.8
3-Feb	8	6	7	8	7	11	8	7	11	10	11	9	11	9	11	10	11	12	10	13	30	22	9	5	29.5
4-Feb	18	16	8	34	50	18	63	16	18	10	11	54	21	12	45	34	66	20	24	67	82	80	72	70	81.6
5-Feb	48	50	57	64	28	26	11	8	27	8	9	16	13	20	35	21	40	10	51	32	12	16	11	23	64.4
6-Feb	11	10	47	9	21	12	13	7	8	6	10	20	67	27	27	47	19	78	50	76	69	20	20	78	78.2
7-Feb	73	89	61	37	11	35	21	18	18	23	54	43	55	52	14	9	22	19	12	20	12	17	9	7	89.5
8-Feb	6	5	9	16	10	9	7	10	16	16	20	18	12	29	38	25	18	15	23	3	12	11	64	88	87.5
9-Feb	50	84	95	71	52	43	21	16	28	26	29	70	23	9	24	34	92	43	34	40	37	13	49	60	94.5
10-Feb	40	96	57	18	17	14	12	30	57	61	57	10	6	11	15	9	7	7	10	7	8	7	8	9	95.6
11-Feb	9	9	10	8	10	10	12	10	15	17	18	23	28	61	45	55	22	21	27	22	17	22	11	8	61.0
12-Feb	9	8	7	10	12	23	9	9	10	10	9	8	11	13	13	9	10	11	7	61	90	86	47	57	89.5
13-Feb	13	13	15	8	15	17	16	18	13	17	19	61	7	15	8	8	21	8	21	61	72	43	80	62	79.7
14-Feb	50	53	61	59	72	19	31	86	68	57	82	71	30	44	26	75	48	8	8	7	10	7	6	7	85.9
15-Feb	13	14	19	9	11	11	6	4	4	6	47	83	14	9	13	27	12	18	22	62	30	63	59	79	83.0
16-Feb	71	35	49	80	97	27	11	8	8	16	21	23	88	58	29	12	13	8	28	19	12	25	9	56	96.5
17-Feb	18	65	79	34	70	32	17	15	10	5	34	25	11	13	20	16	9	26	17	8	9	30	33	19	78.9
18-Feb	5	11	10	6	40	36	14	5	26	17	18	42	9	20	14	30	26	9	11	33	74	15	26	38	73.7
19-Feb	47	85	59	30	18	16	40	19	34	34	27	27	44	51	21	24	51	72	24	19	40	32	48	60	85.2
20-Feb	52	54	45	89	90	71	67	51	75	61	70	5	8	48	31	8	8	8	9	20	7	7	8	6	90.1
21-Feb	7	8	9	8	6	7	6	12	11	12	15	22	15	32	26	29	14	13	18	20	31	43	35	70	70.3
22-Feb	37	96	92	85	85	97	25	28	22	67	13	9	14	13	13	12	12	9	10	22	7	8	14	19	97.1
23-Feb	6	43	70	95	65	79	56	24	48	12	75	14	7	7	19	11	7	5	39	59	77	33	67	52	95.2
24-Feb	35	17	65	23	26	16	25	68	33	14	22	78	36	73	41	13	35	11	8	6	18	55	42	25	78.1
25-Feb	11	14	52	71	27	38	19	25	47	64	86	7	11	11	20	8	16	10	16	48	33	47	28	94	94.1
26-Feb	66	43	67	78	49	31	28	59	25	60	54	46	31	28	24	13	6	36	13	8	18	33	86	55	86.5
27-Feb	69	30	35	31	54	43	50	34	20	14	9	9	26	8	9	10	10	9	10	10	10	16	7	6	68.8
28-Feb	7	18	9	26	43	42	74	39	29	48	17	23	8	6	4	10	6	18	7	7	19	25	36	47	74.0
	72.6	95.9	94.5	95.2	96.5	97.1	74.0	85.9	75.2	67.3	85.6	83.0	87.8	72.8	46.3	74.8	92.3	78.2	51.3	76.2	89.5	85.7	86.5	94.1	

PAZA
Portable – Reno Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Portable Reno - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.2 ppb on Feb 16 03:00 Maximum Daily Average: 1.4 ppb on Feb 16

Minimum Value: 0 ppb on Feb 1 01:00 Minimum Daily Average: 0.0 ppb on Feb 8
Maximum Diurnal Average: 0.6 ppb at hour 15 Minimum Diurnal Average: 0.3 ppb at hour 11
Monthly Average: 0.43 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.3 Q_3 = 0.6 P_{90} = 1.1 P_{99} = 2.4

Hours in Service:	672
Hours of Data:	637
Hours of Missing Data:	35
Hours of Calibration:	34
Percent Operational Time:	99.9

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	Daily Average	Daily Maximum
1-Feb	0	0	0	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	1	0	0	0	0.2	0.6
2-Feb	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
3-Feb	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
4-Feb	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0.1	2.0
5-Feb	2	2	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.3
6-Feb	0	0	0	0	1	2	2	A	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	0	0.7	2.0
7-Feb	0	0	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0.5	1.4
8-Feb	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
9-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	0.2	0.9
10-Feb	0	1	1	A	1	0	0	0	0	0	0	0	M	2	2	1	1	1	1	1	1	1	0	0	0.6	1.8
11-Feb	0	0	A	0	0	0	0	0	1	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0.1	0.5
12-Feb	0	A	0	0	0	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	0.9	1.7
13-Feb	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.5
14-Feb	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	A	1	0.4	0.9
15-Feb	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	A	0	0	0.5	1.3
16-Feb	1	3	3	2	3	2	2	1	1	1	1	1	1	2	1	1	1	1	1	1	A	0	0	0	1.4	3.2
17-Feb	0	0	0	0	1	1	2	2	1	1	1	2	2	1	1	0	0	0	0	A	0	0	0	0	0.8	2.4
18-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	A	0	0	0	0	0	0.3	0.9
19-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.4
20-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.2
21-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0.2	0.5
22-Feb	0	0	0	0	1	1	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0.2	0.6
23-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	A	2	1	0	0	0	1	1	1	1	3	0.5	3.1
24-Feb	1	1	0	0	1	0	0	0	0	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
25-Feb	1	1	1	0	0	1	1	1	1	1	1	A	1	1	1	1	1	2	1	1	1	1	1	1	0.9	2.5
26-Feb	2	2	2	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.9
27-Feb	1	1	1	1	1	1	1	1	1	A	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0.5	1.3
28-Feb	0	0	0	0	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
	0.4	0.5	0.4	0.3	0.4	0.5	0.5	0.4	0.4	0.3	0.3	0.4	0.5	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.5	Diurnal Average	
	2.3	2.8	3.2	2.0	3.0	2.2	1.9	2.4	1.3	0.9	1.0	1.7	1.7	1.8	1.7	1.5	1.4	2.5	1.2	1.2	0.9	1.0	1.2	3.1	Diurnal Maximum	

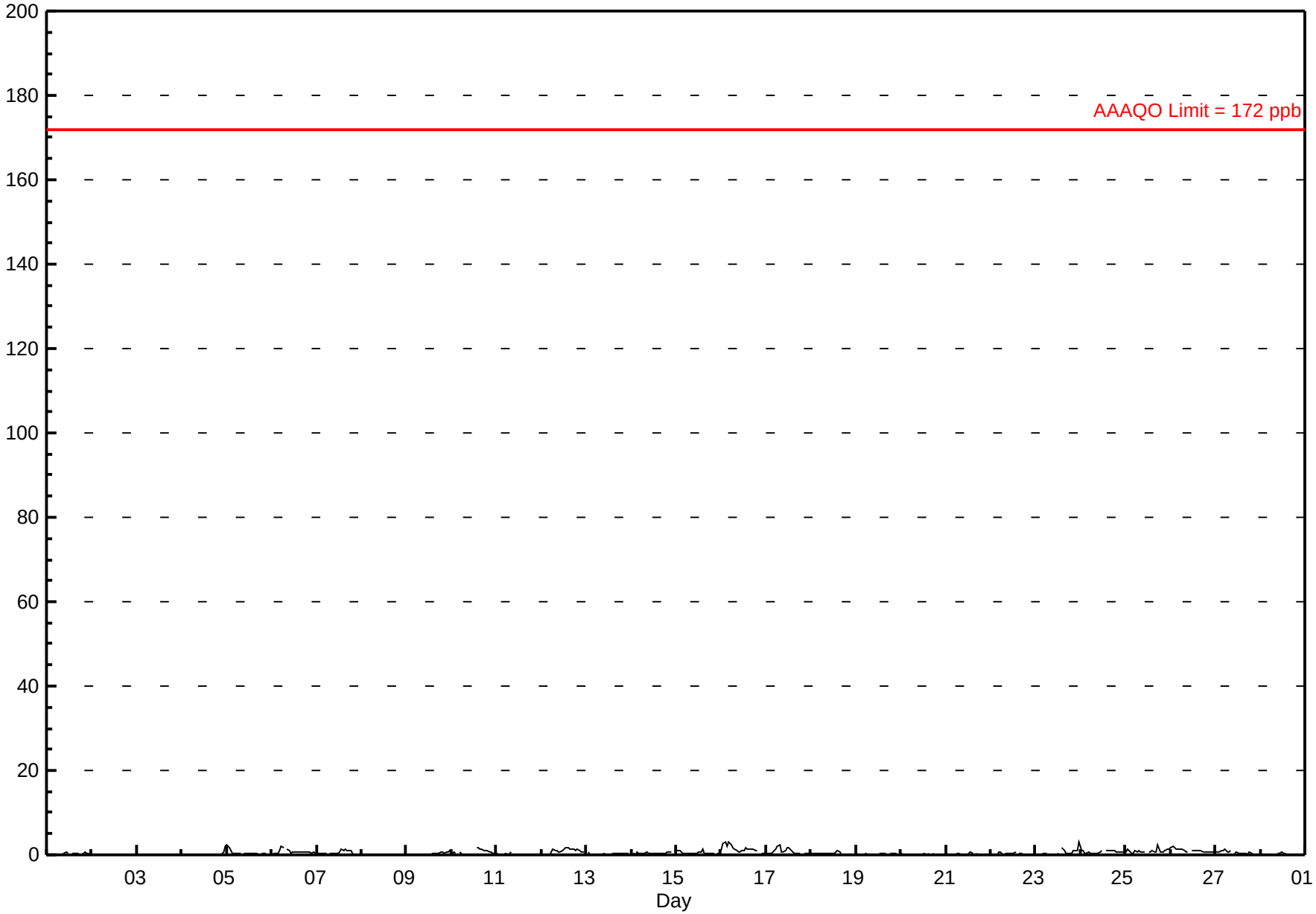
C - Calibration M - Maintenance A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Portable Reno - February 2014



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Portable Reno - February 2014

Maximum Value: 10.3 ppb on Feb 24 00:00

Maximum Daily Average: 2.2 ppb on Feb 16

Minimum Value: 0 ppb on Feb 10 10:00

Minimum Daily Average: 0.5 ppb on Feb 3

Maximum Diurnal Average: 1.3 ppb at hour 24

Minimum Diurnal Average: 0.9 ppb at hour 4

Monthly Average: 1.06 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.5$ $Q_1 = 0.6$ Median = 0.8 $Q_3 = 1.3$ $P_{90} = 1.8$ $P_{99} = 4.0$

Hours in Service:	672
Hours of Data:	637
Hours of Missing Data:	35
Hours of Calibration:	34
Percent Operational Time:	99.9

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	Daily Average	Daily Maximum
1-Feb	0	1	1	1	1	1	0	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.8	1.3
2-Feb	1	0	1	1	1	1	0	0	1	1	1	A	1	1	1	1	1	1	0	1	0	1	1	0	0.6	0.9
3-Feb	0	0	1	1	0	1	1	0	0	1	A	1	0	1	0	1	0	1	0	1	0	1	0	0	0.5	0.8
4-Feb	0	0	1	0	1	0	1	1	1	A	0	0	0	0	0	1	0	0	1	0	0	0	2	3	0.6	2.8
5-Feb	3	2	2	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1.0	2.9
6-Feb	0	1	1	1	3	3	2	A	2	1	1	2	2	1	1	1	1	2	1	1	1	1	1	1	1.4	2.9
7-Feb	1	1	1	1	1	1	A	1	1	1	1	1	1	2	2	2	2	2	2	1	1	1	1	1	1.2	2.4
8-Feb	1	1	1	1	1	A	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	0	0.5	0.6
9-Feb	0	1	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	0.8	1.7
10-Feb	1	1	1	A	1	1	0	1	0	0	0	0	M	2	2	2	2	2	1	1	1	1	1	1	1.1	2.3
11-Feb	1	1	A	1	1	1	0	1	1	C	C	C	C	C	1	1	0	1	1	0	1	1	0	1	0.7	1.2
12-Feb	1	A	0	0	1	1	2	2	2	1	2	2	2	2	2	2	2	2	2	2	1	2	1	1	1.6	2.4
13-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	1.2
14-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1.0	1.4
15-Feb	2	2	2	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	A	1	1	1.1	2.2
16-Feb	2	5	5	3	4	3	2	2	2	1	1	1	2	3	2	2	2	2	2	2	A	1	1	1	2.2	5.4
17-Feb	1	1	1	1	2	2	4	4	1	1	2	2	2	2	1	1	1	1	1	A	1	1	1	1	1.5	4.2
18-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	1	1	A	1	1	1	1	1	1.0	2.8
19-Feb	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	A	1	1	1	1	1	1	0.7	1.3
20-Feb	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.7	0.9
21-Feb	1	0	0	1	1	1	1	1	1	0	1	1	1	1	1	A	1	1	1	1	0	1	1	1	0.7	1.4
22-Feb	0	1	1	0	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.8	1.4
23-Feb	0	1	0	1	1	1	1	0	1	1	1	1	1	A	3	2	1	1	1	1	2	2	4	10	1.6	10.3
24-Feb	2	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	2	1	1	1	1	1	1	1.3	1.8
25-Feb	1	2	1	1	1	1	1	2	1	1	1	A	1	1	1	1	3	6	1	1	2	2	2	2	1.7	5.8
26-Feb	2	2	2	2	2	2	2	2	1	2	A	2	1	2	2	2	1	1	1	1	1	1	1	1	1.6	2.5
27-Feb	1	1	1	2	2	2	1	1	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	1.9
28-Feb	1	1	1	0	1	1	1	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0.7	1.2
	1.0	1.1	1.1	0.9	1.1	1.2	1.1	1.0	0.9	0.9	0.9	1.0	1.0	1.2	1.3	1.2	1.1	1.2	1.0	1.0	0.9	1.0	1.1	1.3	Diurnal Average	
	2.9	4.5	5.4	2.7	4.4	3.3	4.2	4.0	2.0	1.5	1.8	2.3	2.4	2.6	2.9	2.8	2.8	5.8	2.1	1.8	1.9	1.8	3.9	10.3	Diurnal Maximum	

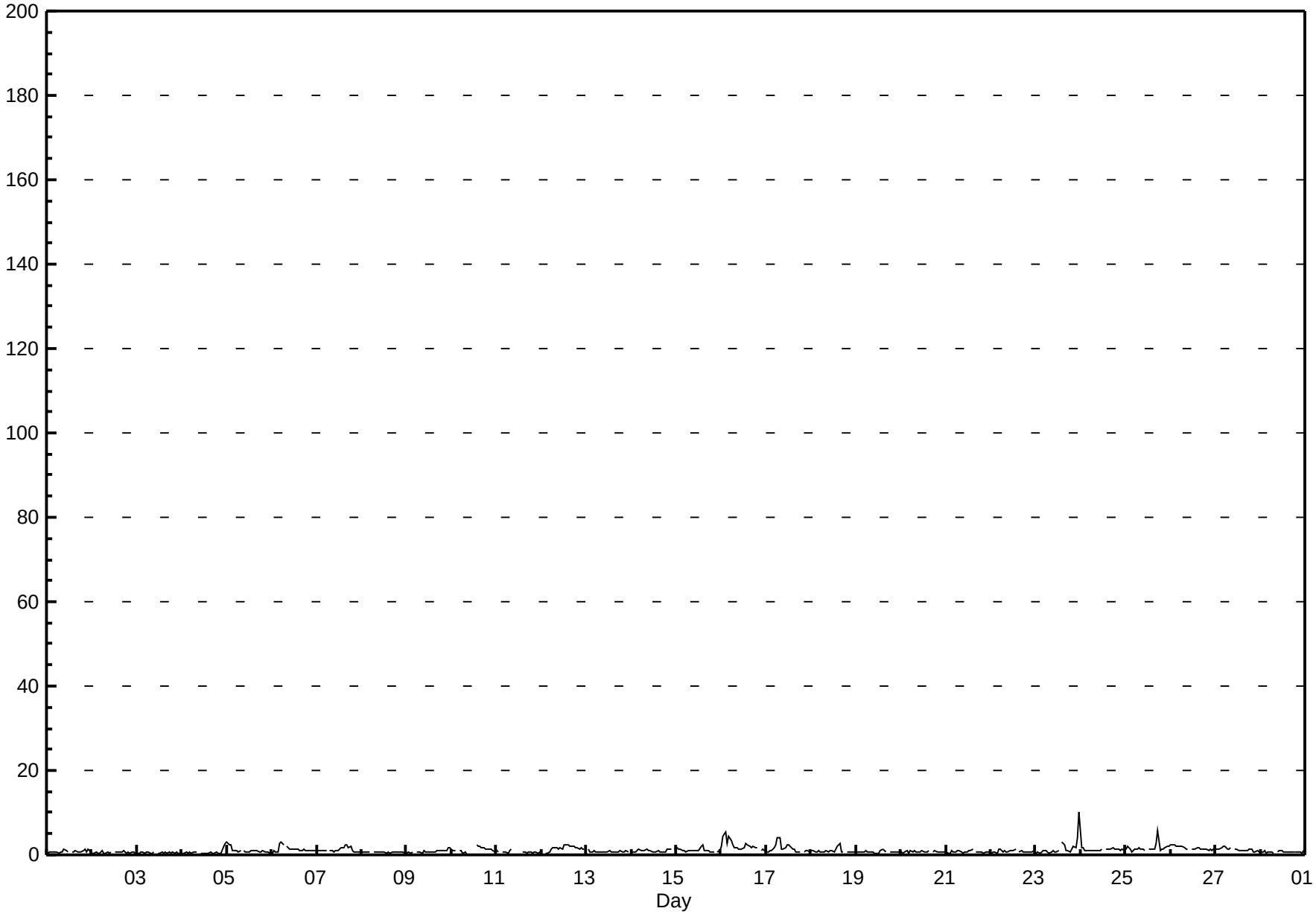
C - Calibration M - Maintenance A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

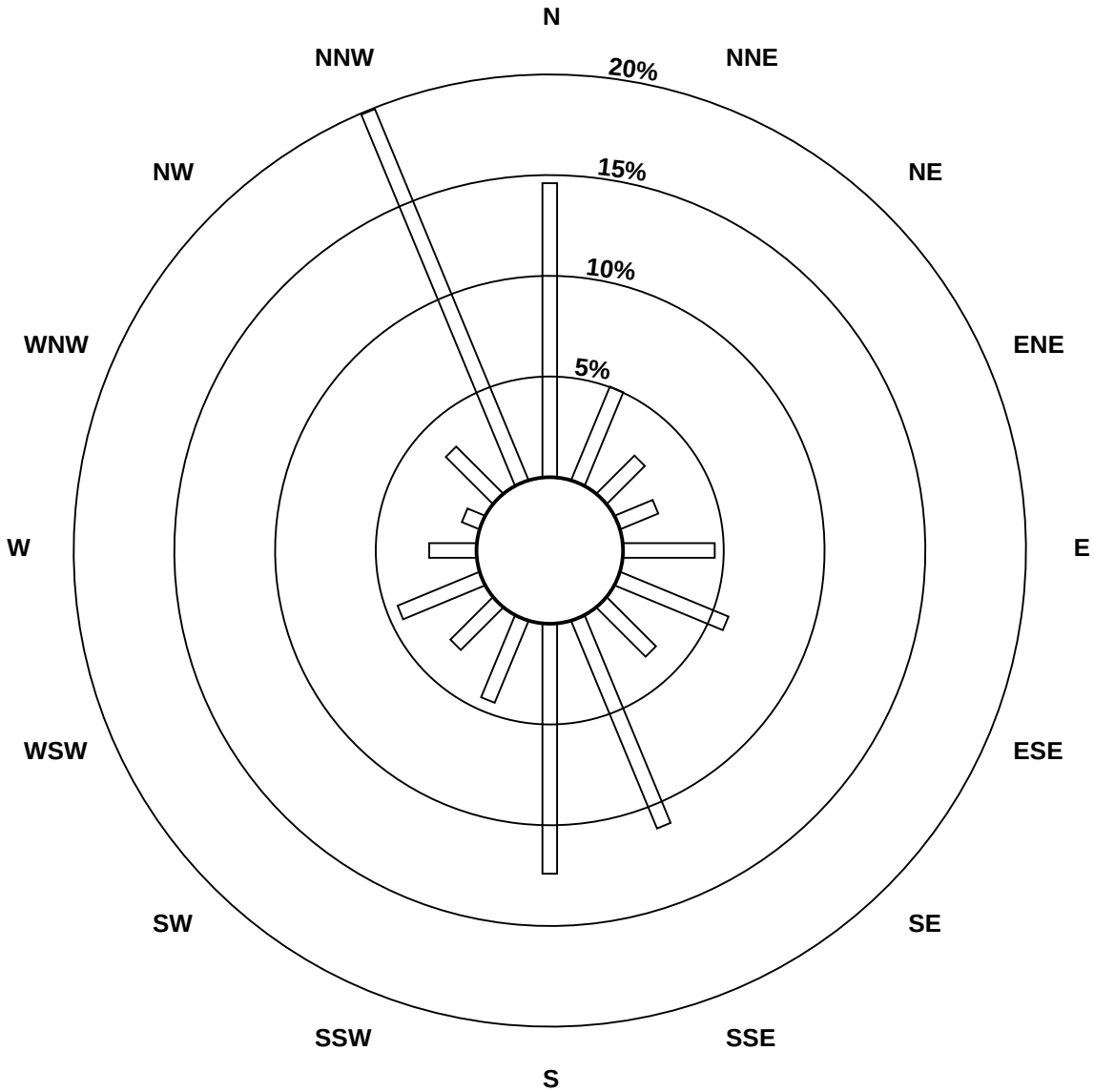
Portable Reno - February 2014



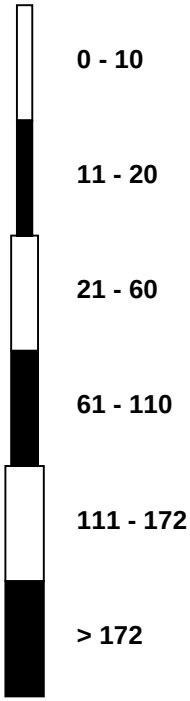
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Portable Reno - February 2014



Pollutant Classes (ppb)

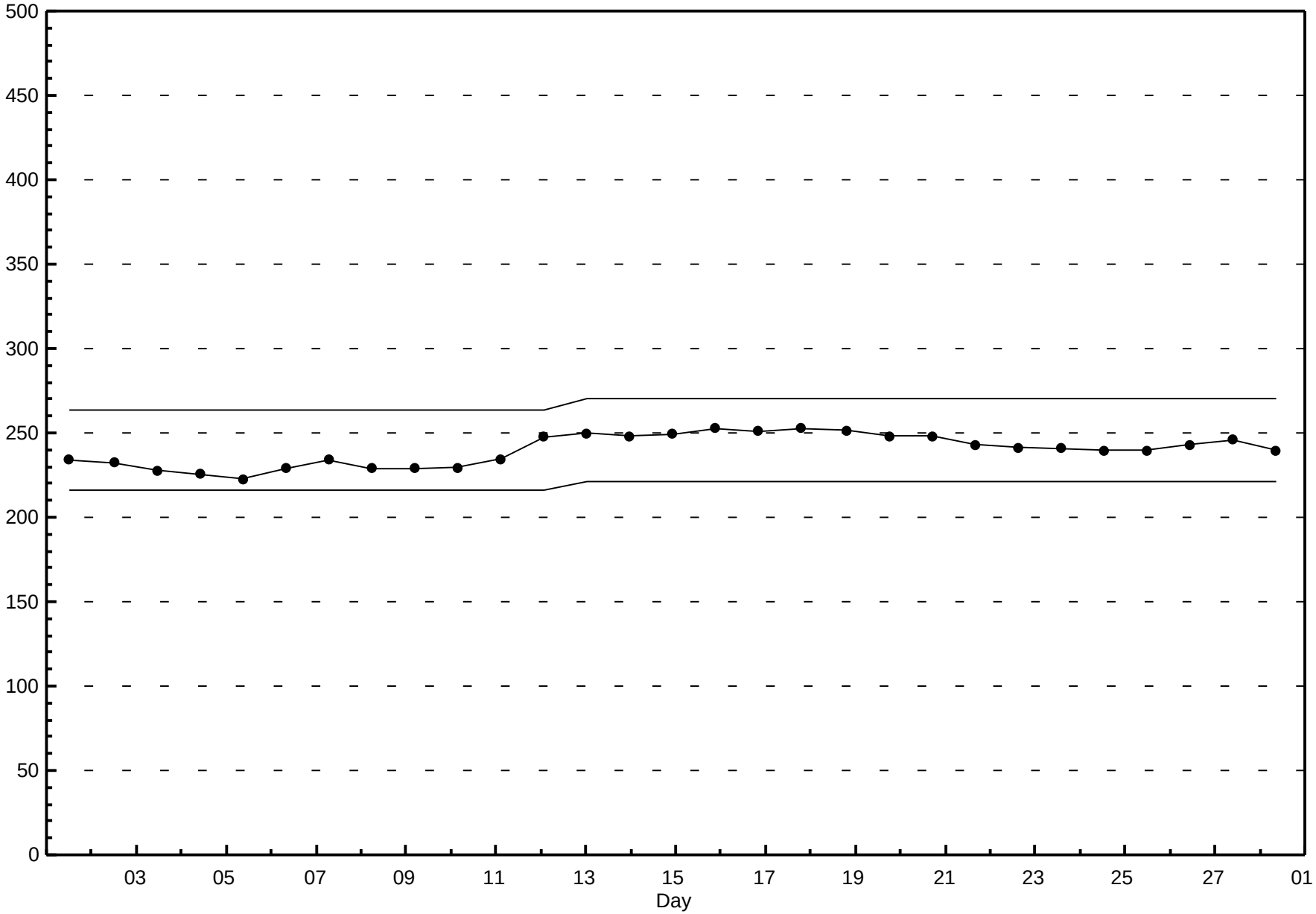


Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Portable Reno - February 2014



Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Portable Reno - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 0.8 ppb on Feb 11 14:00

Maximum Daily Average: 0.4 ppb on Feb 11

Minimum Value: 0 ppb on Feb 22 08:00

Minimum Daily Average: 0.1 ppb on Feb 22

Maximum Diurnal Average: 0.3 ppb at hour 15

Minimum Diurnal Average: 0.3 ppb at hour 18

Monthly Average: 0.28 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.2$ $Q_1 = 0.2$ Median = 0.3 $Q_3 = 0.3$ $P_{90} = 0.4$ $P_{99} = 0.6$

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.3
2-Feb	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.3
3-Feb	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
4-Feb	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
5-Feb	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
6-Feb	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
7-Feb	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
8-Feb	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
9-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
10-Feb	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
11-Feb	0	0	A	0	0	0	0	0	1	1	1	1	1	1	1	C	C	C	C	0	0	0	0	0	0.4	0.8
12-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
13-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.3
14-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.3	0.4
15-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.4
16-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	0.4
17-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.3	0.4
18-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.3
19-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.5
20-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.4
21-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	0.4
22-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.4
23-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.3	0.5
24-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
25-Feb	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
26-Feb	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0	1	0	0	0	0	0	0	0	0.4	0.6
27-Feb	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
28-Feb	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
	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	0.3	0.3	Diurnal Average	
	0.4	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.7	0.6	0.7	0.8	0.8	0.5	0.6	0.4	0.5	0.4	0.4	0.4	0.4	0.4	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

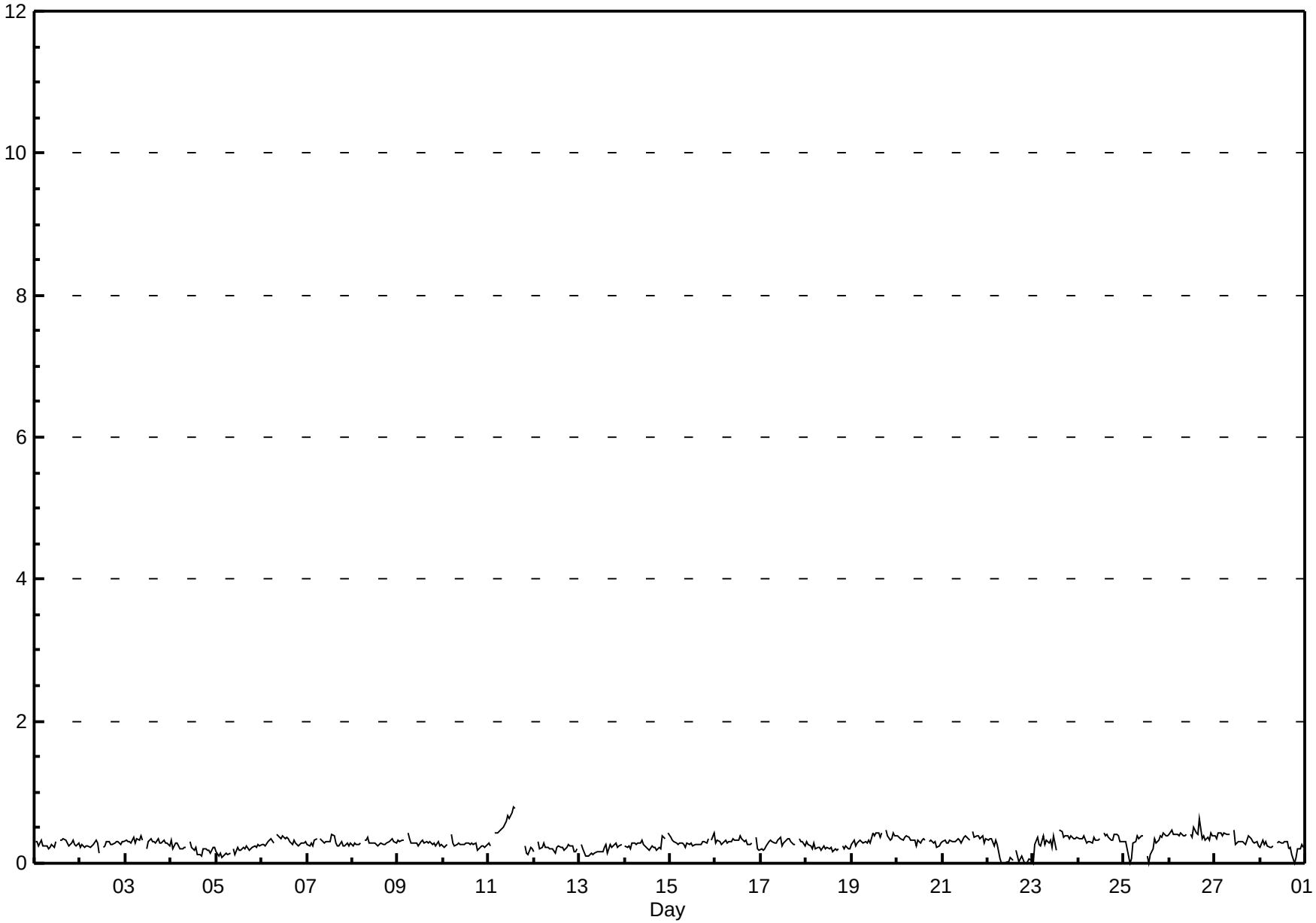
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Portable Reno - February 2014



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Portable Reno - February 2014

Maximum Value: 2.0 ppb on Feb 26 17:00

Maximum Daily Average: 0.9 ppb on Feb 11

Minimum Value: 0 ppb on Feb 23 01:00

Minimum Daily Average: 0.6 ppb on Feb 5

Maximum Diurnal Average: 0.8 ppb at hour 17

Minimum Diurnal Average: 0.7 ppb at hour 2

Monthly Average: 0.73 ppb

Percentiles: $P_1 = 0.5$ $P_{10} = 0.6$ $Q_1 = 0.6$ Median = 0.7 $Q_3 = 0.8$ $P_{90} = 0.9$ $P_{99} = 1.1$

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
2-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
3-Feb	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
4-Feb	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0.6	0.8
5-Feb	1	0	1	0	1	1	0	1	A	1	0	1	1	1	1	0	1	1	1	1	1	1	1	1	0.6	0.8
6-Feb	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
7-Feb	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1
8-Feb	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8
9-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
10-Feb	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
11-Feb	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	C	C	C	C	1	1	0	1	1	0.9	1.3
12-Feb	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
13-Feb	A	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.6	0.9
14-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.7	0.9
15-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.7	0.9
16-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	0.9
17-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.7	0.9
18-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.7	0.9
19-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.8	1.1
20-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.7	1.0
21-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.8	1.0
22-Feb	1	1	1	1	1	1	1	0	1	1	0	1	1	1	A	1	0	1	1	1	0	1	1	0	0.6	1.0
23-Feb	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.8	1.1
24-Feb	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
25-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
26-Feb	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	2	1	1	1	1	1	1	1	0.9	2.0
27-Feb	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
28-Feb	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0.7	0.9
	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.8	0.7	0.8	0.8	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	Diurnal Average	
	0.9	1.0	0.9	0.9	0.9	0.9	0.9	1.0	0.9	1.1	1.1	1.3	1.1	1.2	1.3	1.0	2.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	Diurnal Maximum	

C - Calibration

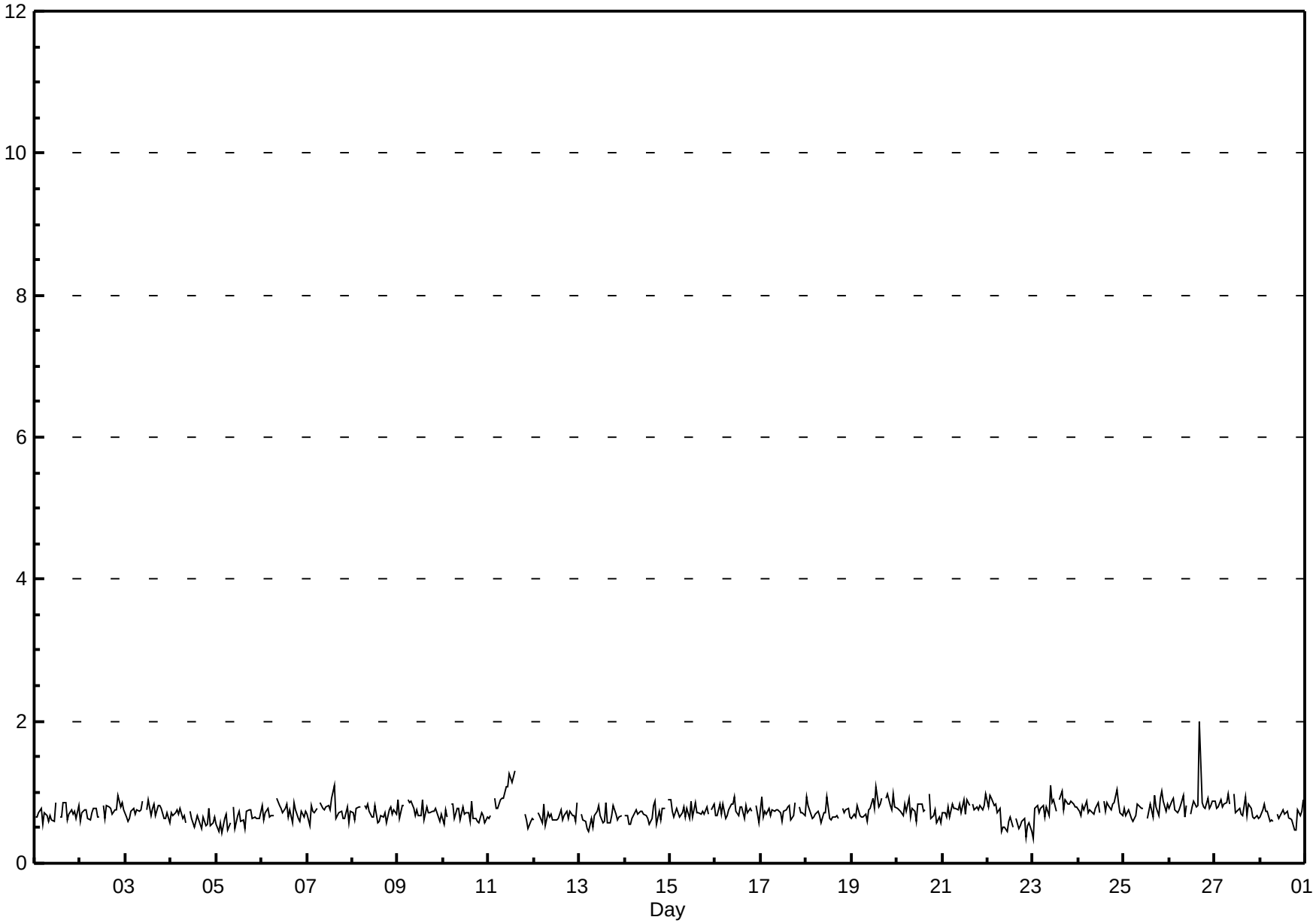
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

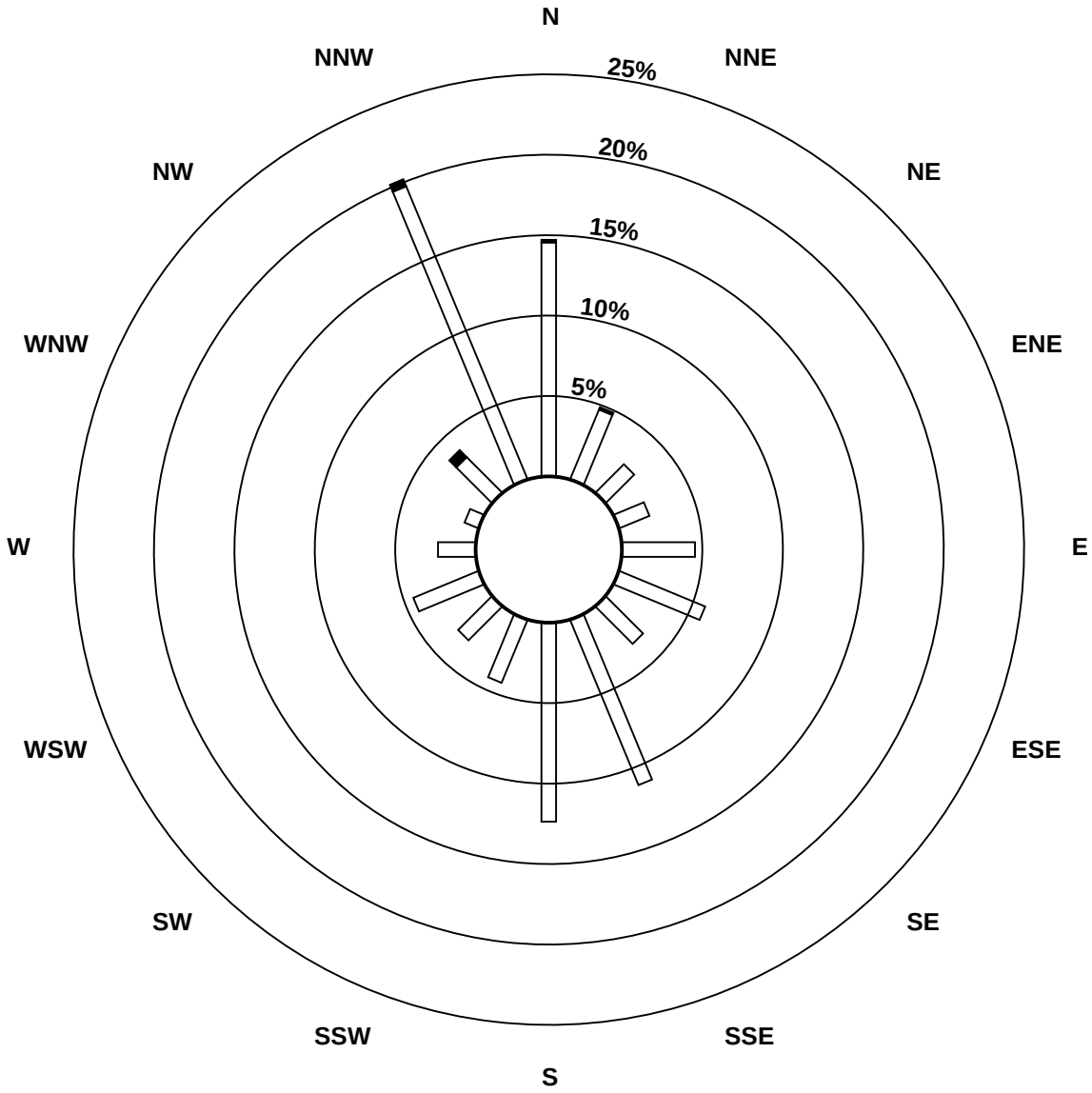
Portable Reno - February 2014



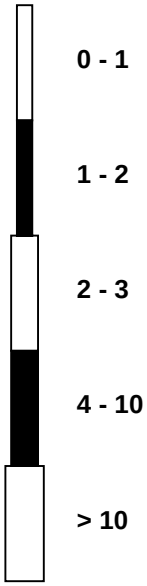
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Portable Reno - February 2014



Pollutant Classes (ppb)

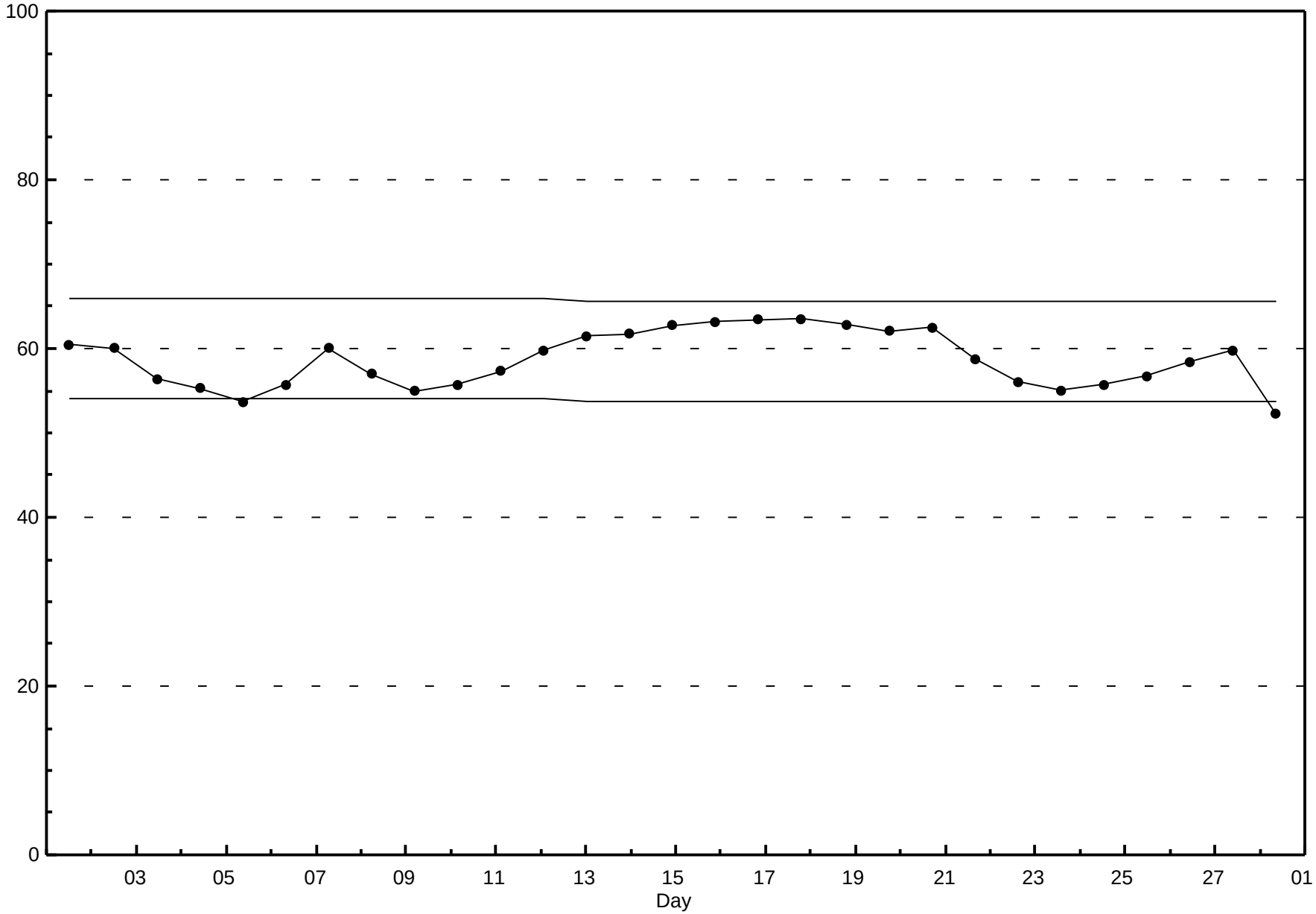


Peace Airshed Zone Association

Span Responses

Total Reduced Sulphur (TRS)

Portable Reno - February 2014



Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Portable Reno - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 23.7 ppb on Feb 27 05:00
Maximum Daily Average: 8.0 ppb on Feb 26

Minimum Value: 0 ppb on Feb 22 20:00
Maximum Diurnal Average: 4.7 ppb at hour 6
Monthly Average: 3.43 ppb

Minimum Daily Average: 0.8 ppb on Feb 3
Minimum Diurnal Average: 2.4 ppb at hour 13
Percentiles: P_1 = 0.3 P_{10} = 0.8 Q_1 = 1.3 Median = 2.5 Q_3 = 4.7 P_{90} = 7.2 P_{99} = 12.7

Hours in Service:	672
Hours of Data:	637
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	3	7	7	8	5	8	5	2	2	7	8	4	A	4	4	6	4	1	1	2	2	1	1	1	4.0	7.9
2-Feb	1	1	1	2	2	2	2	1	1	1	1	A	2	2	1	1	1	1	1	0	0	0	0	0	1.1	2.2
3-Feb	0	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	2	2	0.8	1.8
4-Feb	2	2	2	1	0	1	1	1	1	A	2	2	2	1	2	2	1	1	1	2	2	4	4	5	1.8	5.3
5-Feb	3	2	3	3	3	3	4	5	A	7	6	5	4	5	6	6	6	5	7	4	5	6	6	7	5.0	7.4
6-Feb	6	5	4	4	5	6	6	A	7	6	6	5	4	4	4	5	5	7	8	7	8	8	11	8	6.2	11.3
7-Feb	7	6	6	10	12	13	A	10	10	9	7	5	5	5	5	4	4	5	3	1	1	1	1	1	5.7	12.5
8-Feb	1	0	0	0	1	A	1	1	1	1	2	2	2	2	3	2	2	2	4	3	3	4	3	2	1.9	4.2
9-Feb	2	2	1	1	A	5	2	2	1	1	2	2	2	2	3	3	3	3	3	3	6	8	6	5	3.0	8.0
10-Feb	4	5	6	A	8	6	5	5	6	5	4	5	4	3	2	2	3	2	2	2	1	1	1	1	3.6	8.0
11-Feb	2	1	A	1	1	1	1	1	2	C	C	C	C	C	C	3	1	2	7	2	1	1	1	1	--	7.3
12-Feb	1	A	1	1	1	2	4	3	3	2	2	2	3	3	3	4	4	5	5	5	4	4	7	8	3.3	8.2
13-Feb	A	6	2	2	2	3	4	4	5	4	4	3	4	4	6	7	6	8	7	7	7	7	7	A	4.9	7.5
14-Feb	5	5	8	6	5	4	4	4	3	3	3	2	2	2	2	2	2	2	2	2	3	3	A	5	3.5	8.3
15-Feb	6	7	7	9	7	7	4	4	4	4	3	2	2	2	2	2	1	1	1	1	1	A	1	2	3.5	8.5
16-Feb	2	3	3	3	4	4	4	4	4	4	3	4	5	6	6	5	5	5	5	6	A	6	2	5	4.2	6.2
17-Feb	5	4	7	4	2	3	3	8	4	2	2	2	3	2	2	2	2	2	3	A	3	2	3	2	3.1	7.8
18-Feb	2	1	1	1	3	2	2	2	2	3	4	3	2	1	1	1	1	1	A	1	1	1	1	8	1.9	8.3
19-Feb	5	4	2	2	3	4	2	2	1	1	1	1	2	2	1	2	2	A	2	2	3	5	5	3	2.4	5.0
20-Feb	5	4	3	4	4	11	11	5	4	2	1	1	2	2	2	2	A	1	1	1	1	1	1	1	2.9	11.3
21-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	2	6	2	1	4	1	1.4	5.7
22-Feb	1	1	3	8	9	5	3	2	1	1	1	0	1	1	A	1	1	0	0	0	0	1	1	3	1.9	9.1
23-Feb	3	2	2	2	2	2	2	2	1	1	2	3	3	A	2	1	3	1	1	3	2	5	6	6	2.5	6.5
24-Feb	3	3	3	2	4	8	5	4	4	5	4	4	A	4	4	4	4	6	8	9	7	5	4	3	4.7	8.9
25-Feb	3	4	5	4	4	4	4	5	4	3	3	A	3	3	4	4	7	11	13	11	13	14	12	11	6.4	14.2
26-Feb	16	16	13	10	9	8	7	7	6	6	A	3	3	4	7	6	6	7	7	8	7	7	9	9	8.0	16.3
27-Feb	8	8	9	14	24	12	9	7	4	A	2	1	1	1	1	1	1	1	2	1	1	0	1	1	4.8	23.7
28-Feb	1	1	1	1	1	2	2	1	A	2	2	3	2	2	2	1	1	2	2	2	2	2	2	1	1.7	2.6
	3.6	3.9	3.8	3.8	4.5	4.7	3.7	3.4	3.2	3.3	3.0	2.6	2.4	2.6	2.9	2.9	3.0	3.1	3.7	3.5	3.2	3.7	3.8	3.9	Diurnal Average	
	15.6	16.3	13.4	14.3	23.7	12.5	11.3	9.9	9.5	8.8	7.9	5.5	5.0	6.2	7.3	6.5	7.1	10.7	12.8	10.5	12.6	14.2	12.1	11.5	Diurnal Maximum	

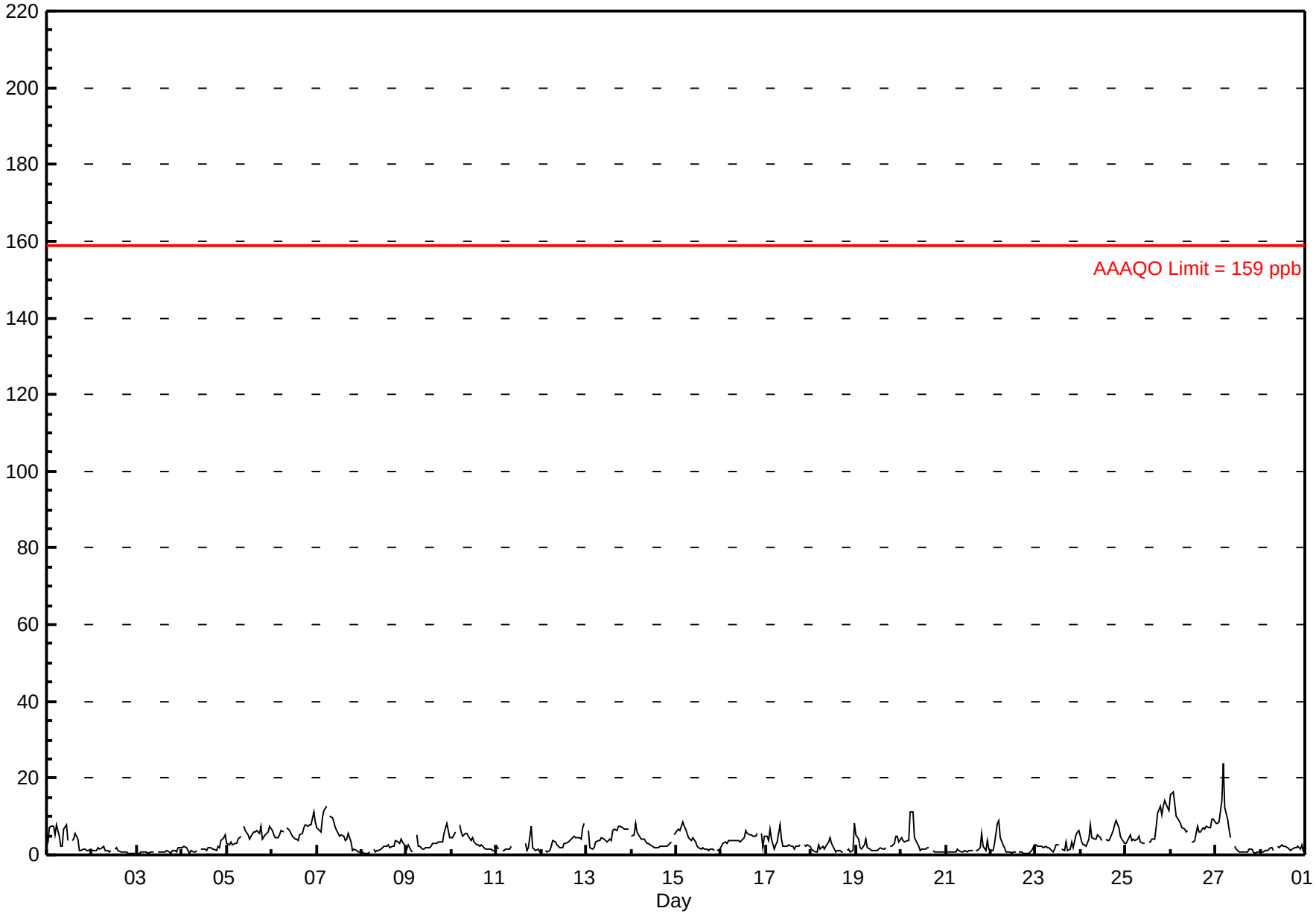
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb

Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Portable Reno - February 2014



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Portable Reno - February 2014

Maximum Value: 49.6 ppb on Feb 25 17:00

Maximum Daily Average: 10.8 ppb on Feb 25

Minimum Value: 1 ppb on Feb 8 02:00

Minimum Daily Average: 2.1 ppb on Feb 3

Maximum Diurnal Average: 7.7 ppb at hour 6

Minimum Diurnal Average: 3.9 ppb at hour 14

Monthly Average: 5.41 ppb

Percentiles: $P_1 = 0.9$ $P_{10} = 1.6$ $Q_1 = 2.5$ Median = 4.1 $Q_3 = 7.2$ $P_{90} = 10.3$ $P_{99} = 17.3$

Hours in Service:	672
Hours of Data:	637
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	7	11	9	10	9	11	10	2	5	29	14	6	A	4	5	7	7	2	2	4	3	3	3	3	7.2	28.9
2-Feb	3	2	2	3	2	3	3	2	6	4	4	A	2	4	4	2	2	2	2	3	1	1	1	1	2.6	6.4
3-Feb	1	2	2	2	1	1	1	1	1	1	A	2	1	2	1	2	2	2	2	4	3	2	6	4	2.1	5.7
4-Feb	4	5	6	3	1	4	5	5	8	A	5	5	4	4	5	3	3	2	3	3	2	10	9	7	4.6	10.0
5-Feb	5	3	4	3	4	3	6	6	A	12	9	6	5	6	9	8	9	6	13	8	8	9	7	9	6.8	13.2
6-Feb	8	7	5	5	5	8	7	A	7	7	6	6	5	4	4	7	7	9	9	8	11	9	12	11	7.3	12.4
7-Feb	8	7	11	17	17	15	A	10	10	10	15	7	7	6	5	6	6	8	7	3	4	2	1	2	8.1	17.3
8-Feb	3	1	1	1	7	A	2	2	6	2	4	4	4	3	3	3	3	3	4	4	4	10	6	4	3.6	10.3
9-Feb	2	6	2	1	A	13	4	10	2	2	2	7	3	3	4	4	3	4	4	4	8	9	8	5	4.8	12.8
10-Feb	5	6	6	A	14	10	7	6	6	7	6	6	6	5	4	4	6	3	3	4	2	3	2	3	5.4	13.8
11-Feb	5	6	A	2	3	4	5	3	8	C	C	C	C	C	C	5	1	5	13	3	2	1	2	1	--	13.0
12-Feb	1	A	1	1	2	3	4	4	3	3	2	2	3	3	4	4	5	5	5	5	5	4	17	14	4.4	16.8
13-Feb	A	12	6	4	5	9	10	8	8	8	6	6	6	6	9	8	10	10	9	10	7	8	10	A	7.9	12.0
14-Feb	5	12	11	7	6	5	5	6	4	3	3	2	2	2	2	2	3	3	2	3	3	4	A	6	4.4	11.9
15-Feb	7	7	7	11	10	9	5	5	5	5	4	3	3	2	2	2	19	2	2	2	1	A	1	2	5.0	18.6
16-Feb	3	4	4	3	4	5	4	4	4	9	5	4	6	7	8	6	6	5	10	10	A	9	3	10	5.7	10.4
17-Feb	8	7	16	15	2	5	6	11	7	2	2	3	12	5	4	3	3	3	6	A	3	3	4	4	5.9	16.4
18-Feb	3	1	1	1	10	4	4	3	3	5	6	4	2	1	1	1	1	1	A	1	2	1	7	13	3.4	13.2
19-Feb	7	7	4	4	6	6	4	4	3	2	2	1	3	2	2	3	2	A	3	3	7	8	7	4	4.1	7.8
20-Feb	7	8	8	8	8	25	20	7	5	4	1	2	2	2	3	3	A	3	2	2	2	2	2	2	5.6	25.0
21-Feb	2	2	1	3	2	2	2	3	3	2	3	3	3	3	1	A	1	2	4	8	6	2	6	2	2.7	7.6
22-Feb	2	1	11	13	12	8	5	4	2	2	3	1	1	2	A	1	2	1	1	1	1	1	5	3	3.6	13.3
23-Feb	3	5	2	3	3	3	2	2	1	1	4	4	4	A	2	2	6	4	7	7	2	10	9	8	4.1	10.2
24-Feb	8	3	3	3	7	10	8	5	5	7	6	5	A	8	7	4	5	8	8	11	11	6	5	4	6.3	11.3
25-Feb	3	5	10	6	6	4	5	5	4	3	3	A	4	4	21	13	50	15	16	12	14	15	14	14	10.8	49.6
26-Feb	18	18	17	11	10	9	8	7	7	20	A	4	4	8	8	8	9	9	8	9	10	8	10	10	10.0	19.7
27-Feb	10	11	12	25	28	21	12	9	7	A	4	2	2	2	2	2	2	2	4	3	3	1	1	1	7.2	28.4
28-Feb	2	1	1	4	7	9	3	2	A	3	4	7	4	4	3	2	3	2	3	2	3	2	6	3	3.5	9.0
	5.2	6.0	6.1	6.3	7.0	7.7	5.9	5.1	5.0	6.1	4.9	4.1	3.9	3.9	4.7	4.2	6.5	4.5	5.6	5.1	4.7	5.4	6.1	5.6	Diurnal Average	
	18.1	18.1	16.8	24.6	28.4	25.0	20.1	10.6	10.5	28.9	14.9	7.3	12.2	8.0	20.7	12.9	49.6	14.8	16.3	12.4	14.1	15.3	16.8	14.1	Diurnal Maximum	

C - Calibration

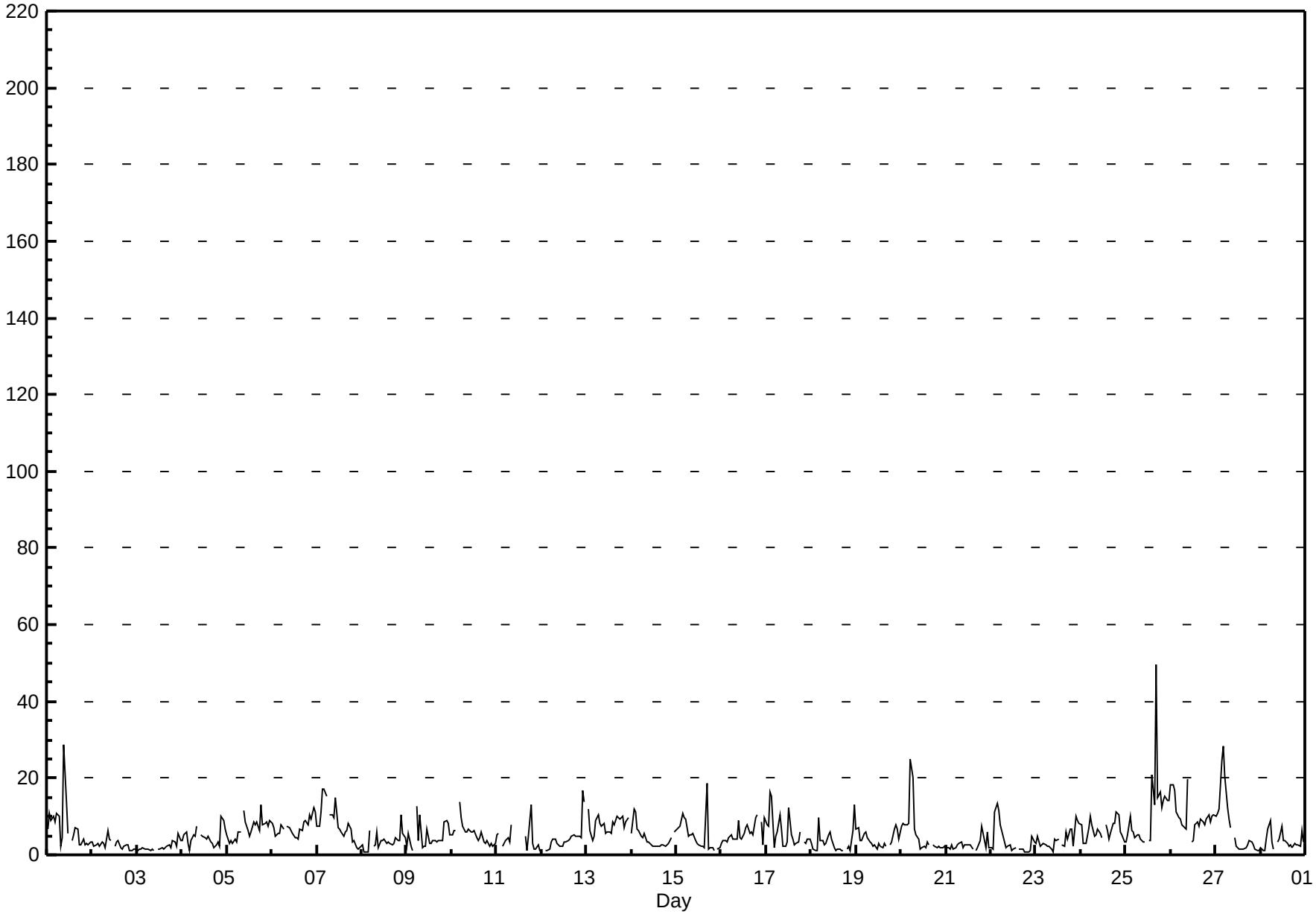
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

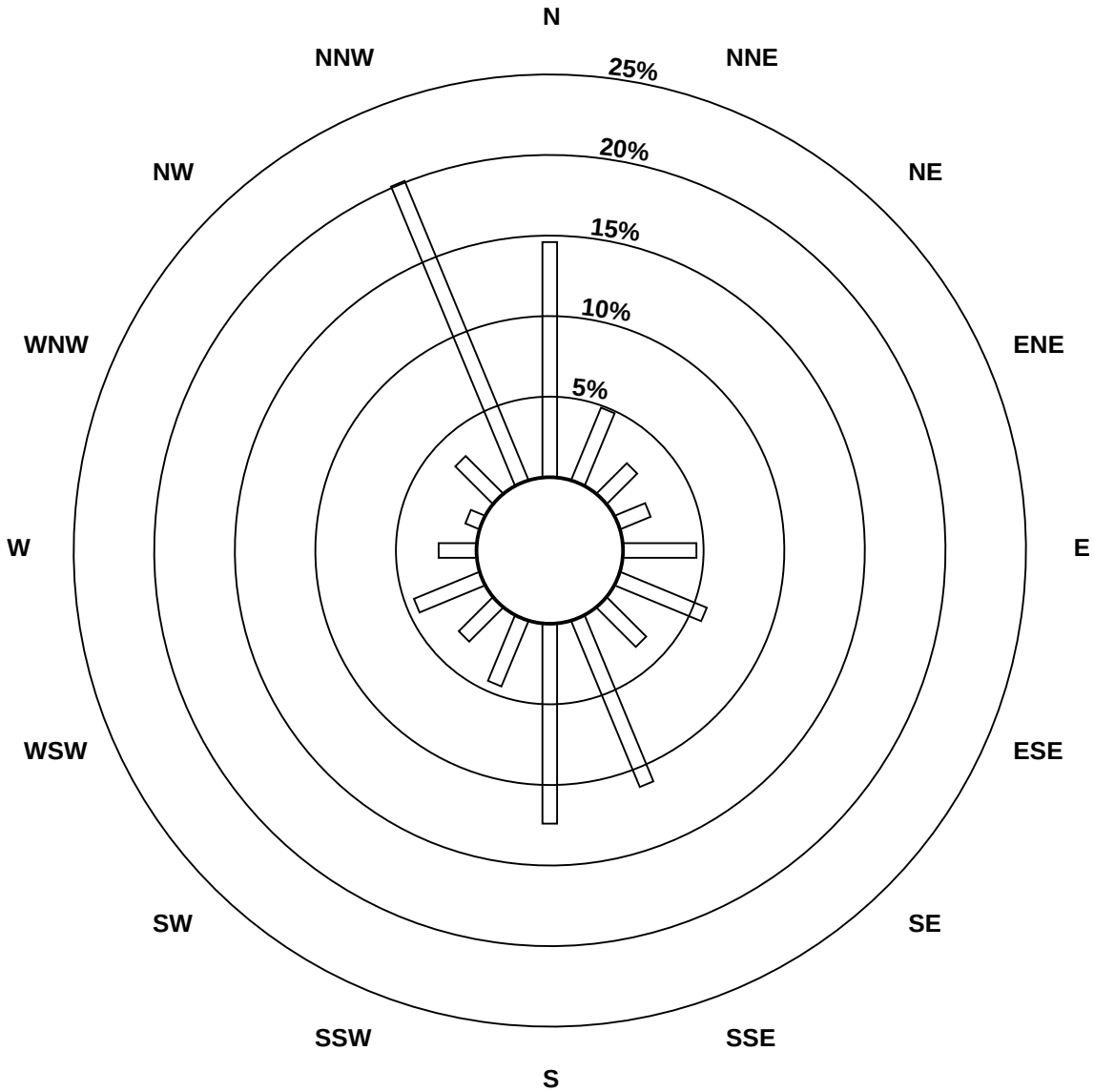
Portable Reno - February 2014



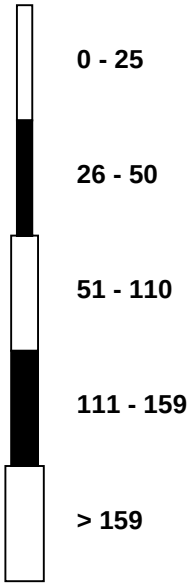
Pollutant Rose

Nitrogen Dioxide (NO_2) - ppb

Portable Reno - February 2014



Pollutant Classes (ppb)

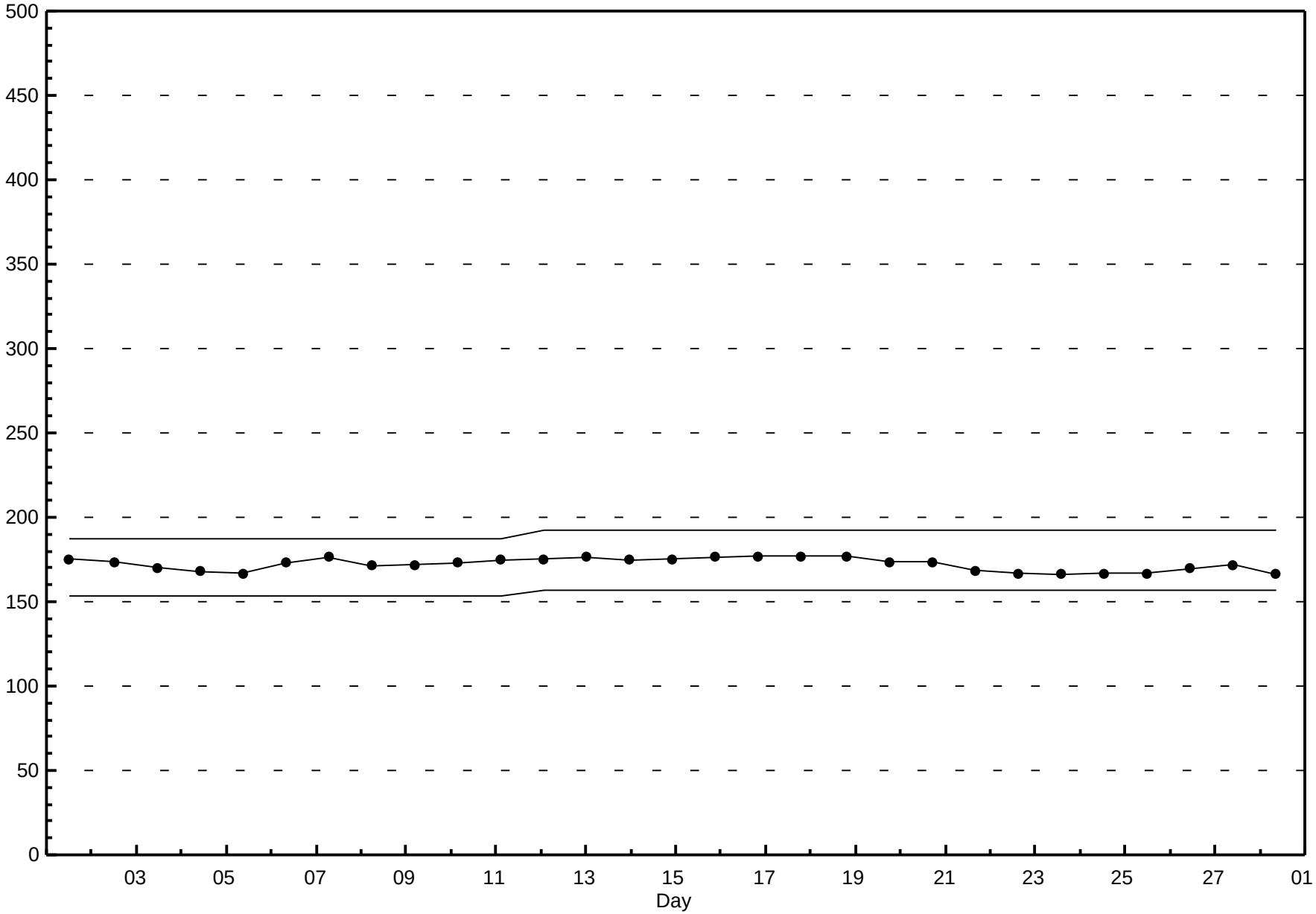


Peace Airshed Zone Association

Span Responses

Nitrogen Dioxide (NO_2)

Portable Reno - February 2014



Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Portable Reno - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 5.6 ppb on Feb 24 11:00

Maximum Daily Average: 1.4 ppb on Feb 24

Minimum Value: 0 ppb on Feb 1 01:00

Minimum Daily Average: 0.2 ppb on Feb 22

Maximum Diurnal Average: 1.9 ppb at hour 15

Minimum Diurnal Average: 0.1 ppb at hour 24

Monthly Average: 0.62 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.0$ Median = 0.2 $Q_3 = 0.7$ $P_{90} = 1.9$ $P_{99} = 4.7$

Hours in Service:	672
Hours of Data:	637
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	0	0	0	0	0	0	0	0	0	1	2	1	A	2	2	2	1	0	0	1	0	0	0	0	0.5	2.1
2-Feb	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	0	0	0	0	0	0	0	0	0	0.2	0.8
3-Feb	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	1	0.4	0.6
4-Feb	1	1	1	0	0	1	1	0	0	A	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.5	1.4
5-Feb	0	0	0	0	0	0	0	0	A	1	2	3	2	3	3	2	1	0	0	0	0	0	0	0	0.9	3.3
6-Feb	0	0	0	0	0	0	0	A	0	2	4	4	3	3	3	3	2	0	0	0	0	0	0	0	1.1	3.9
7-Feb	0	0	1	0	0	0	A	0	0	2	4	3	3	4	3	2	1	1	0	0	1	0	0	0	1.1	4.0
8-Feb	0	0	0	0	0	A	0	0	0	0	1	1	2	2	2	1	1	0	0	0	0	0	0	0	0.5	2.1
9-Feb	0	0	0	0	A	0	0	1	0	0	1	1	1	2	2	2	1	0	0	0	0	0	0	0	0.5	1.9
10-Feb	0	0	0	A	1	0	0	0	0	1	2	4	3	2	1	1	1	0	0	0	0	0	0	0	0.8	3.7
11-Feb	0	1	A	0	0	1	1	0	1	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	--	1.0
12-Feb	0	A	0	0	0	0	0	0	0	0	0	1	2	2	2	1	1	0	0	0	0	0	0	0	0.5	1.9
13-Feb	A	0	1	0	1	1	1	0	0	2	2	3	4	4	5	3	2	1	0	0	0	0	0	A	1.4	4.5
14-Feb	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	A	0	0.3	0.9
15-Feb	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	1	0	0	0	0	A	0	0	0.3	1.4
16-Feb	0	0	0	0	0	0	0	0	0	0	1	1	2	3	2	1	1	0	0	0	A	0	0	0	0.5	2.9
17-Feb	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	A	0	0	0	0	0.3	1.4
18-Feb	0	0	0	0	0	0	0	0	0	1	3	2	1	0	0	0	0	0	A	0	0	0	0	0	0.4	2.5
19-Feb	0	0	0	1	0	0	0	1	0	0	1	0	1	1	1	1	1	A	0	0	0	0	0	0	0.5	1.3
20-Feb	1	0	0	0	0	1	0	0	1	1	0	1	1	1	1	1	A	0	0	0	0	0	0	0	0.5	0.9
21-Feb	0	0	0	0	0	0	0	1	1	0	1	1	2	2	1	A	0	0	0	0	0	0	0	0	0.5	1.7
22-Feb	0	0	0	0	0	0	0	0	0	0	1	0	1	1	A	0	0	0	0	0	0	0	0	0	0.2	1.0
23-Feb	0	0	0	0	0	0	0	0	0	0	2	5	5	A	2	1	3	0	0	0	0	0	0	0	0.8	5.1
24-Feb	0	0	0	0	0	0	0	0	1	4	6	5	A	4	4	4	3	2	0	0	0	0	0	0	1.4	5.6
25-Feb	0	0	0	0	0	0	0	0	0	1	2	A	3	3	5	3	3	3	0	0	0	0	0	0	1.0	5.0
26-Feb	0	0	0	0	0	0	0	0	1	4	A	2	2	2	5	3	2	1	0	0	0	0	0	0	1.1	5.4
27-Feb	0	0	0	0	1	0	0	1	1	A	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0.4	1.2
28-Feb	0	0	0	0	0	1	0	0	A	1	1	3	2	2	2	1	1	0	0	0	0	0	0	0	0.6	2.7
	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.4	1.1	1.6	1.8	1.8	1.8	1.9	1.3	1.0	0.4	0.1	0.1	0.1	0.1	0.1	0.1	Diurnal Average	
	0.6	0.9	0.9	0.5	0.9	0.9	1.1	1.0	1.2	4.2	5.6	5.0	5.1	4.5	5.4	3.5	3.4	2.5	0.5	0.6	0.7	0.5	0.6	0.6	Diurnal Maximum	

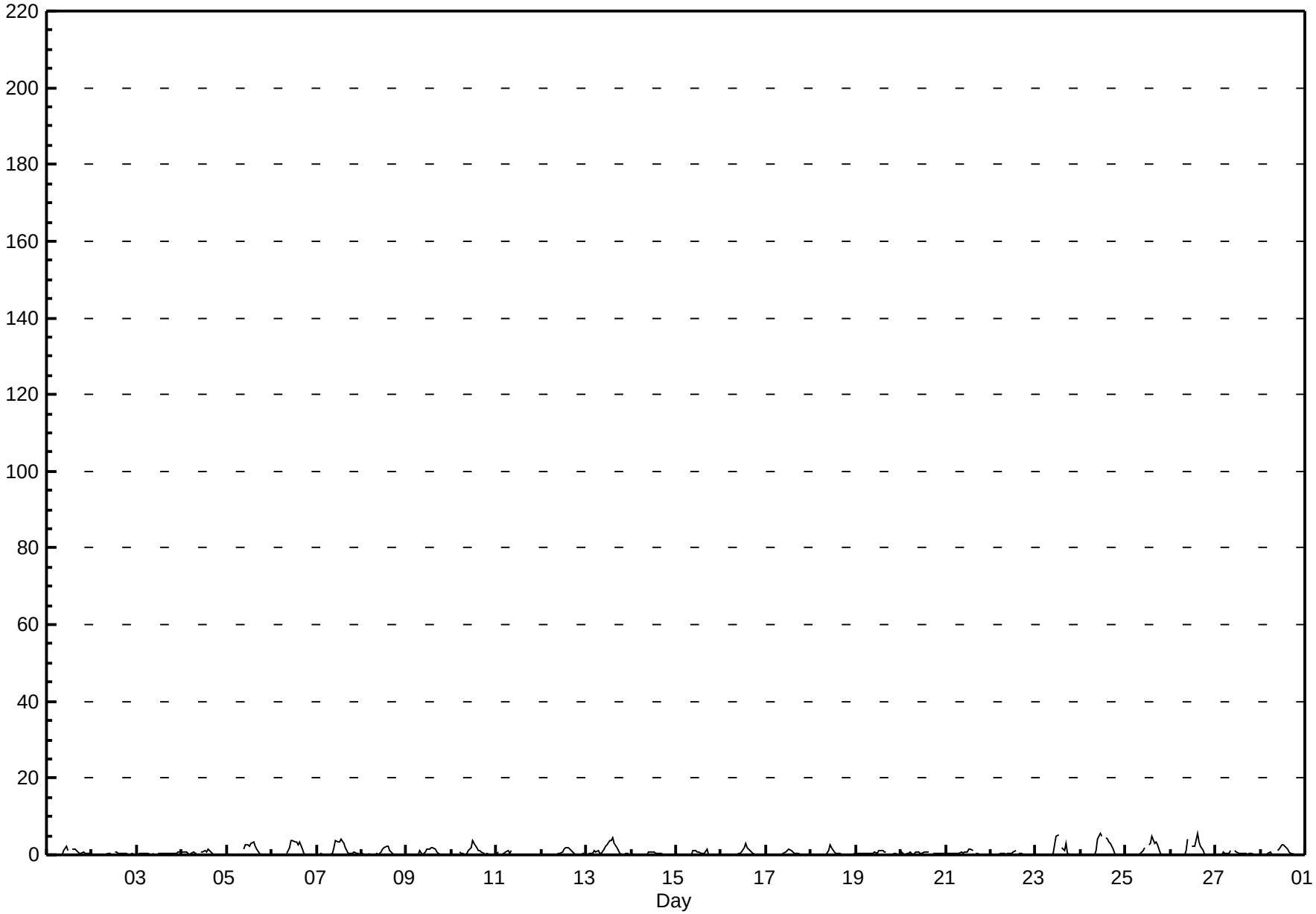
C - Calibration A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Portable Reno - February 2014



Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Portable Reno - February 2014

Maximum Value: 39.6 ppb on Feb 25 15:00

Maximum Daily Average: 5.0 ppb on Feb 13

Minimum Value: 0 ppb on Feb 22 00:00

Minimum Daily Average: 0.4 ppb on Feb 14

Maximum Diurnal Average: 4.6 ppb at hour 15

Minimum Diurnal Average: 0.8 ppb at hour 22

Monthly Average: 2.09 ppb

Percentiles: $P_1 = 0.1$ $P_{10} = 0.1$ $Q_1 = 0.2$ Median = 1.1 $Q_3 = 2.7$ $P_{90} = 4.9$ $P_{99} = 10.5$

Hours in Service:	672
Hours of Data:	637
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	0	0	0	0	0	0	0	0	0	14	5	2	A	2	2	2	1	1	2	3	2	2	2	2	1.9	14.1
2-Feb	0	0	0	0	0	0	0	1	4	3	1	A	1	2	2	2	2	2	3	1	1	1	1	2	1.3	3.6
3-Feb	1	2	1	2	1	2	1	1	1	1	A	1	1	2	2	2	2	2	2	3	3	2	3	3	1.7	3.4
4-Feb	3	4	4	2	1	3	4	5	6	A	2	3	4	3	5	2	2	0	0	0	0	0	0	0	2.3	6.3
5-Feb	0	0	0	0	0	0	0	0	A	2	4	4	3	4	5	3	3	1	0	0	0	0	0	0	1.3	4.9
6-Feb	0	0	0	0	0	0	0	A	1	3	5	5	4	4	3	4	2	1	0	0	0	0	0	0	1.5	4.5
7-Feb	0	0	6	0	2	0	A	1	1	3	25	5	6	4	4	4	3	2	2	2	3	2	1	1	3.4	24.8
8-Feb	2	0	0	0	10	A	0	0	6	1	5	3	3	2	3	2	1	0	0	0	0	1	2	2	2.0	10.3
9-Feb	0	2	0	0	A	0	0	16	0	1	1	8	3	3	3	2	1	0	0	0	0	0	0	0	1.8	16.2
10-Feb	0	0	0	A	9	2	5	0	1	2	5	6	9	4	4	3	3	3	2	3	1	1	1	1	2.9	9.3
11-Feb	3	4	A	2	2	3	5	1	6	C	C	C	C	C	C	0	0	0	3	0	0	0	0	0	--	6.2
12-Feb	0	A	0	0	0	0	0	0	0	2	6	1	2	2	2	2	1	1	0	0	0	0	9	6	1.6	8.8
13-Feb	A	5	4	3	6	7	11	4	3	7	5	6	7	7	7	6	4	5	3	2	0	3	5	A	5.0	10.7
14-Feb	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	A	0	0.4	1.1
15-Feb	0	0	0	0	0	0	0	0	1	2	1	1	1	1	1	0	29	0	0	0	0	A	0	0	1.7	29.3
16-Feb	0	0	0	0	0	0	0	0	0	2	1	1	3	4	6	2	1	1	0	0	A	0	0	0	1.0	6.2
17-Feb	0	0	0	0	0	0	0	0	0	1	1	2	12	3	2	1	1	0	1	A	0	0	0	0	1.2	12.0
18-Feb	1	0	0	0	0	0	0	1	0	2	4	3	1	1	1	1	0	0	A	0	0	0	0	4	0.9	4.2
19-Feb	4	3	3	4	3	4	2	3	2	2	3	1	4	2	1	2	1	A	0	1	5	4	1	0	2.4	4.9
20-Feb	7	6	4	7	12	6	1	3	3	5	0	2	2	1	3	2	A	3	2	1	2	2	2	3	3.4	12.1
21-Feb	2	2	2	2	2	2	2	3	3	3	3	6	6	4	2	A	0	1	0	0	0	0	0	0	1.9	5.9
22-Feb	0	0	0	0	0	2	2	2	1	3	2	2	2	2	A	2	2	1	0	2	0	0	9	0	1.6	9.5
23-Feb	0	1	0	0	0	0	0	0	0	1	7	8	8	A	4	3	6	3	0	0	0	0	0	0	1.8	8.4
24-Feb	0	0	0	0	0	0	0	0	2	6	9	6	A	5	7	4	3	3	1	0	0	0	0	0	2.1	8.7
25-Feb	0	0	0	0	0	0	0	0	1	2	3	A	3	3	40	16	25	5	1	0	0	0	0	0	4.4	39.6
26-Feb	0	0	0	0	0	0	0	0	2	23	A	2	2	8	9	5	4	2	1	0	1	0	0	0	2.7	22.9
27-Feb	0	0	0	0	10	4	2	3	5	A	4	2	1	1	1	2	2	1	2	2	2	0	0	0	2.0	9.9
28-Feb	3	0	0	1	5	15	1	0	A	2	3	8	5	3	3	3	3	0	0	0	0	0	0	0	2.5	15.0
	1.0	1.2	1.0	1.0	2.4	1.9	1.4	1.7	1.9	3.8	4.2	3.5	3.8	3.0	4.6	2.8	3.8	1.4	1.0	0.9	0.8	0.8	1.4	1.0	Diurnal Average	
	6.8	6.3	6.1	6.9	12.1	15.0	10.7	16.2	6.5	22.9	24.8	8.4	12.0	7.6	39.6	16.3	29.3	5.4	3.2	2.9	4.9	4.3	9.5	5.5	Diurnal Maximum	

C - Calibration

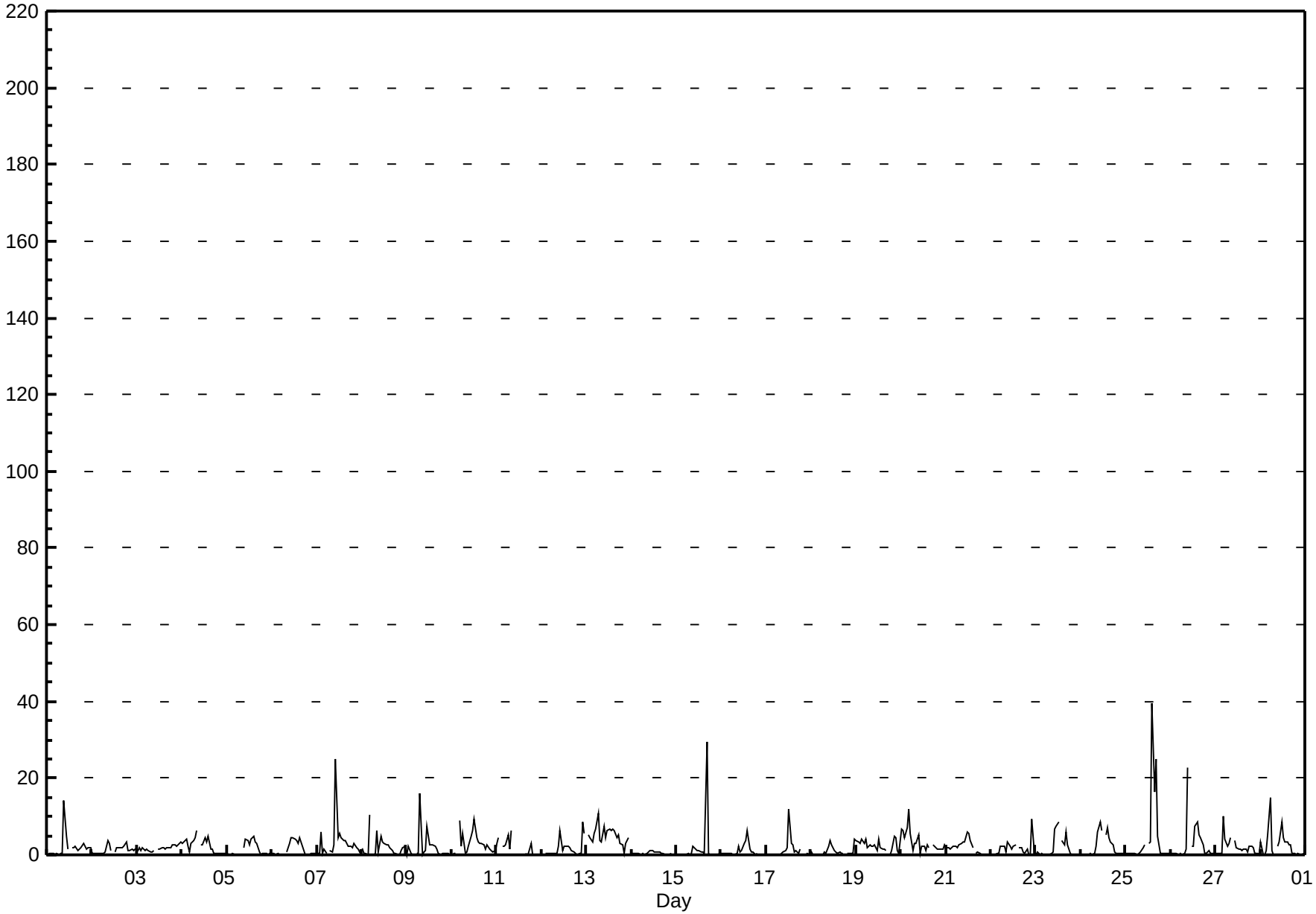
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Portable Reno - February 2014



Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Portable Reno - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 24.6 ppb on Feb 27 05:00
Maximum Daily Average: 9.1 ppb on Feb 26

Minimum Value: 0 ppb on Feb 22 19:00
Maximum Diurnal Average: 4.9 ppb at hour 6
Monthly Average: 4.06 ppb

Minimum Daily Average: 1.1 ppb on Feb 3
Minimum Diurnal Average: 3.4 ppb at hour 21
Percentiles: P_1 = 0.5 P_{10} = 1.1 Q_1 = 1.6 Median = 3.1 Q_3 = 5.7 P_{90} = 8.3 P_{99} = 12.8

Hours in Service:	672
Hours of Data:	637
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	3	7	7	8	5	8	5	2	2	8	10	5	A	5	6	7	5	1	1	2	2	2	2	2	4.6	10.0
2-Feb	1	1	1	2	2	2	2	1	1	1	1	A	2	3	2	1	1	1	1	1	0	1	0	1	1.3	2.6
3-Feb	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	2	1	2	2	1.1	2.4
4-Feb	2	3	3	1	0	1	2	1	1	A	2	3	3	2	3	3	2	1	1	2	2	4	4	5	2.3	5.4
5-Feb	3	2	3	3	3	3	4	5	A	9	9	8	6	8	9	8	8	6	8	4	5	6	6	7	5.8	9.1
6-Feb	6	5	4	4	5	6	6	A	7	8	9	9	8	7	6	9	7	7	8	7	8	8	11	9	7.2	11.4
7-Feb	7	7	7	10	12	13	A	10	10	11	11	9	8	9	8	6	5	6	4	1	2	1	1	1	6.8	12.8
8-Feb	1	1	1	1	1	A	1	1	1	1	2	3	4	4	5	3	3	2	4	3	3	4	3	3	2.4	4.9
9-Feb	2	3	1	1	A	5	2	3	1	2	3	3	3	4	5	5	4	4	3	3	6	8	7	5	3.6	8.1
10-Feb	4	5	6	A	9	6	5	5	6	6	6	8	7	5	4	3	3	2	2	2	1	1	1	1	4.4	8.8
11-Feb	3	2	A	2	2	2	2	2	3	C	C	C	C	C	C	3	1	2	7	2	1	1	1	1	--	7.3
12-Feb	1	A	1	1	1	2	4	3	3	2	2	3	4	5	5	5	5	5	5	5	4	4	7	8	3.8	8.4
13-Feb	A	7	3	2	3	4	5	4	5	6	6	6	8	7	11	9	8	9	8	7	7	7	7	A	6.2	10.9
14-Feb	5	5	8	6	5	4	4	4	3	3	3	3	3	2	2	2	3	2	2	2	3	3	A	5	3.7	8.3
15-Feb	6	7	7	9	7	7	4	4	4	5	4	3	3	2	2	2	3	1	1	1	1	A	1	2	3.8	8.5
16-Feb	2	3	3	3	4	4	4	4	4	4	4	5	7	9	8	7	6	5	5	6	A	6	2	5	4.6	9.1
17-Feb	5	4	7	4	2	3	3	8	4	3	3	3	4	3	3	2	3	2	3	A	3	2	3	2	3.4	7.8
18-Feb	2	1	1	1	3	1	2	2	2	4	7	5	2	1	1	1	1	1	A	1	1	1	1	9	2.3	8.8
19-Feb	5	4	2	2	3	4	2	2	2	1	2	1	3	3	2	2	2	A	2	2	3	5	5	3	2.9	5.5
20-Feb	5	4	4	4	4	12	11	5	4	3	2	2	2	2	3	2	A	2	1	1	1	1	1	1	3.4	11.9
21-Feb	1	1	1	1	1	1	2	2	1	1	2	2	3	3	2	A	1	1	2	6	2	1	4	1	1.8	5.7
22-Feb	1	1	3	8	9	5	3	2	1	1	1	1	2	2	A	1	1	1	0	0	0	1	1	3	2.1	9.1
23-Feb	2	2	2	2	2	2	2	2	1	1	4	7	8	A	3	2	6	2	1	3	2	5	6	6	3.3	7.8
24-Feb	3	3	3	2	4	8	5	4	5	9	10	9	A	9	8	7	7	8	8	9	7	5	4	3	6.1	10.2
25-Feb	3	4	5	4	4	4	4	5	4	4	5	A	6	6	9	7	10	13	13	11	13	14	12	12	7.5	14.4
26-Feb	16	17	14	10	9	8	7	7	7	11	A	5	5	6	13	9	9	8	7	8	7	7	10	9	9.1	16.5
27-Feb	8	8	9	15	25	13	10	7	6	A	3	2	1	1	1	1	1	1	2	2	1	1	1	1	5.2	24.6
28-Feb	1	1	1	1	2	3	2	1	A	4	3	5	5	4	3	2	2	2	2	2	2	2	2	1	2.3	5.3
	3.8	4.0	3.9	4.0	4.7	4.9	3.9	3.6	3.5	4.4	4.6	4.5	4.2	4.4	4.8	4.2	4.0	3.6	3.8	3.6	3.4	3.8	4.0	4.0	Diurnal Average	
	15.9	16.5	13.6	14.5	24.6	12.8	11.5	10.0	9.9	10.6	10.7	8.9	8.2	9.3	12.8	9.4	10.5	13.3	13.1	10.6	12.8	14.4	12.3	11.6	Diurnal Maximum	

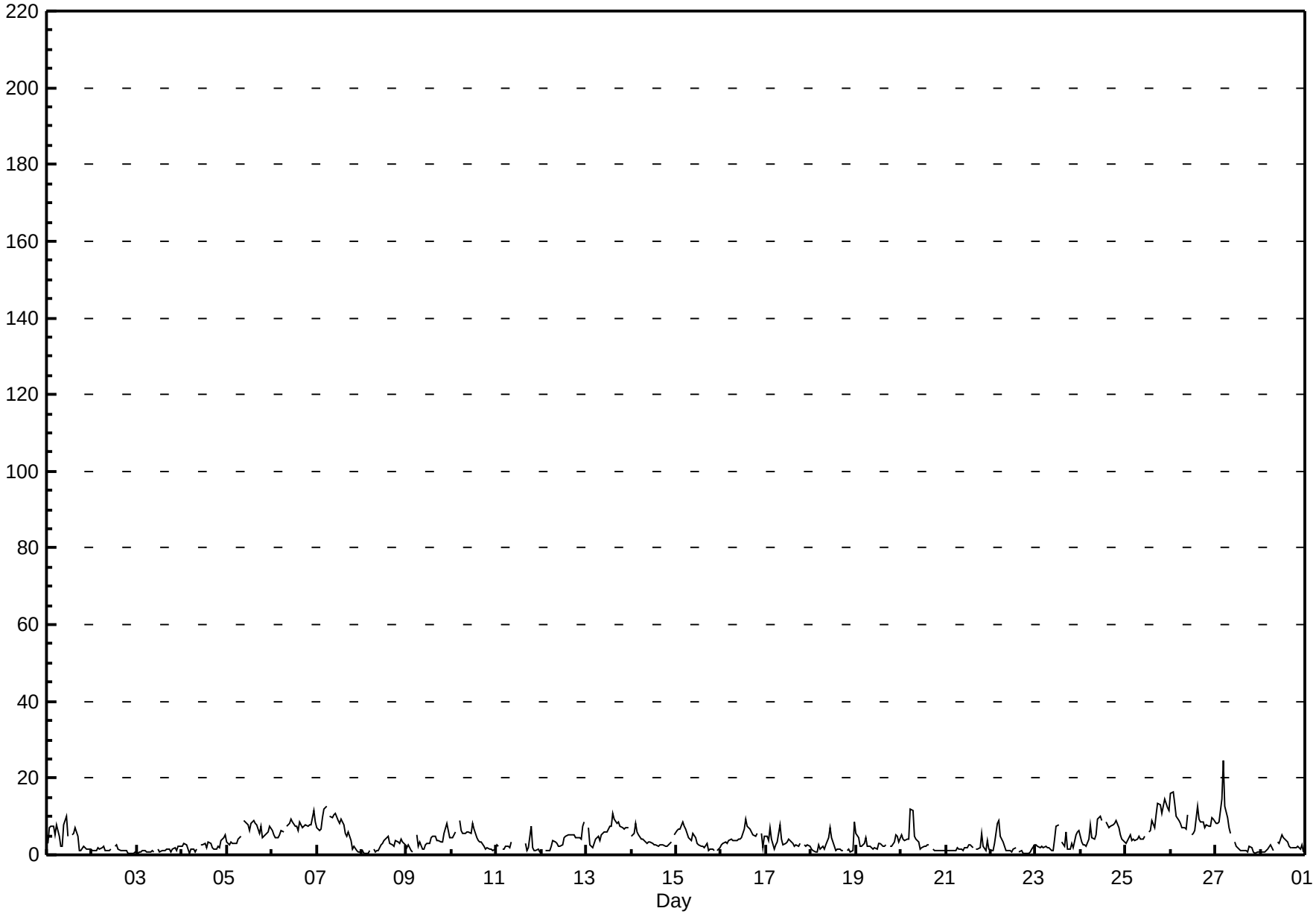
C - Calibration A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Portable Reno - February 2014



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Portable Reno - February 2014

Maximum Value: 74.5 ppb on Feb 25 17:00

Maximum Daily Average: 14.3 ppb on Feb 25

Minimum Value: 1 ppb on Feb 8 02:00

Minimum Daily Average: 3.4 ppb on Feb 3

Maximum Diurnal Average: 9.5 ppb at hour 10

Minimum Diurnal Average: 5.3 ppb at hour 21

Monthly Average: 7.10 ppb

Percentiles: P_1 = 0.9 P_{10} = 2.3 Q_1 = 3.2 Median = 5.5 Q_3 = 9.2 P_{90} = 12.9 P_{99} = 30.1

Hours in Service:	672
Hours of Data:	637
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	7	11	9	10	9	11	10	2	5	43	19	7	A	6	7	9	8	3	4	7	4	4	4	5	8.9	43.2
2-Feb	3	2	3	3	2	3	3	2	10	6	5	A	3	5	5	4	3	3	6	4	2	2	3	2	3.6	10.0
3-Feb	2	3	3	4	3	3	2	2	2	2	A	3	3	3	3	3	3	4	3	6	5	4	7	6	3.4	7.2
4-Feb	6	8	10	5	1	6	9	7	13	A	7	7	9	6	8	5	4	2	3	3	2	10	9	7	6.4	13.3
5-Feb	5	3	4	3	4	3	6	6	A	14	13	10	8	10	13	11	11	7	13	8	8	9	7	9	8.1	13.5
6-Feb	8	7	5	5	5	8	7	A	8	10	10	10	8	8	7	11	7	9	9	8	11	9	13	11	8.5	12.6
7-Feb	8	8	14	18	19	16	A	11	11	12	38	12	12	10	9	9	9	10	7	5	6	4	3	2	10.9	37.9
8-Feb	4	1	1	1	17	A	2	3	13	3	8	7	7	5	6	5	4	3	4	4	3	12	7	7	5.5	17.0
9-Feb	2	8	2	1	A	13	4	25	2	3	3	14	5	5	6	6	4	4	4	4	9	9	8	5	6.4	24.8
10-Feb	5	7	6	A	23	12	13	6	6	9	10	12	16	8	7	6	7	5	4	6	3	4	3	4	8.0	22.5
11-Feb	8	10	A	4	4	6	8	4	13	C	C	C	C	C	C	5	1	5	13	3	2	1	2	1	--	12.9
12-Feb	1	A	1	1	2	3	4	4	3	3	3	3	5	5	5	5	5	5	5	5	5	4	26	17	5.4	25.7
13-Feb	A	17	10	6	9	16	20	12	10	13	10	12	13	12	15	14	14	15	11	12	7	11	13	A	12.2	19.5
14-Feb	6	12	11	7	6	5	5	6	3	4	4	3	3	3	3	3	3	3	3	3	3	4	A	6	4.6	12.3
15-Feb	7	7	7	11	9	9	5	5	5	8	5	4	4	3	3	2	27	1	2	2	1	A	2	2	5.7	27.0
16-Feb	3	4	4	3	5	5	4	4	4	11	5	5	9	10	13	7	7	6	10	11	A	9	3	10	6.5	13.1
17-Feb	8	7	17	16	2	5	6	11	7	3	3	5	24	8	7	3	4	4	7	A	4	3	4	4	7.0	24.2
18-Feb	4	1	1	1	9	4	4	3	3	8	10	7	3	2	2	2	1	1	A	1	2	1	7	16	4.0	15.7
19-Feb	10	10	6	7	8	9	6	5	5	4	5	2	7	4	3	4	3	A	3	4	12	11	8	4	6.2	11.7
20-Feb	14	13	11	13	16	31	21	8	8	8	2	4	4	3	5	4	A	5	4	3	4	3	3	4	8.3	31.0
21-Feb	3	3	3	4	3	3	4	5	6	4	5	8	7	6	3	A	2	2	4	8	5	2	6	2	4.2	8.4
22-Feb	2	1	11	13	12	8	6	5	2	5	4	2	4	4	A	3	3	2	1	2	1	1	14	3	4.8	14.4
23-Feb	3	5	2	3	3	3	2	2	2	1	11	11	12	A	6	5	12	7	7	7	2	10	9	8	5.7	12.5
24-Feb	8	3	3	3	7	10	8	5	7	13	14	11	A	10	14	8	8	9	8	11	11	6	5	3	8.1	14.4
25-Feb	3	5	10	7	6	4	5	5	4	5	6	A	6	7	50	23	75	20	17	12	14	15	15	14	14.3	74.5
26-Feb	18	18	17	11	10	9	8	7	7	42	A	6	6	16	17	12	13	11	8	9	12	8	10	10	12.5	42.3
27-Feb	10	11	12	25	34	21	14	11	11	A	7	4	3	3	3	3	3	3	5	4	3	2	1	1	8.5	33.8
28-Feb	4	1	1	5	11	23	4	2	A	5	7	16	7	7	6	4	5	2	3	2	2	2	6	3	5.7	22.5
	6.0	6.9	6.9	7.0	8.9	9.2	7.0	6.3	6.5	9.5	8.6	7.5	7.4	6.5	8.7	6.6	9.1	5.5	6.2	5.7	5.3	6.1	7.3	6.2	Diurnal Average	
	18.4	18.3	17.1	25.1	33.8	31.0	21.2	24.8	13.3	43.2	37.9	15.9	24.2	15.7	50.0	23.2	74.5	19.6	16.6	12.5	14.4	15.4	25.7	17.4	Diurnal Maximum	

C - Calibration

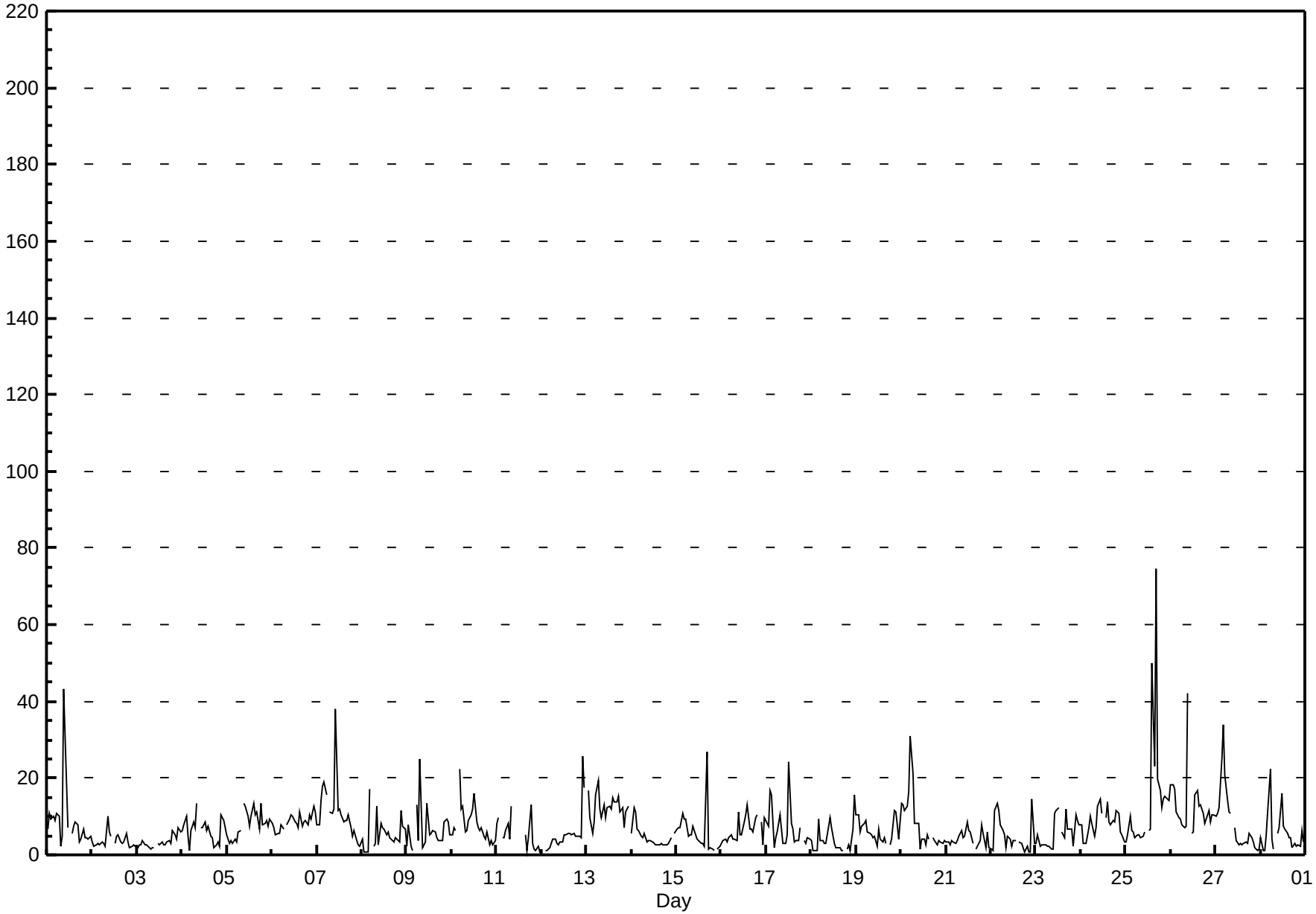
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Portable Reno - February 2014



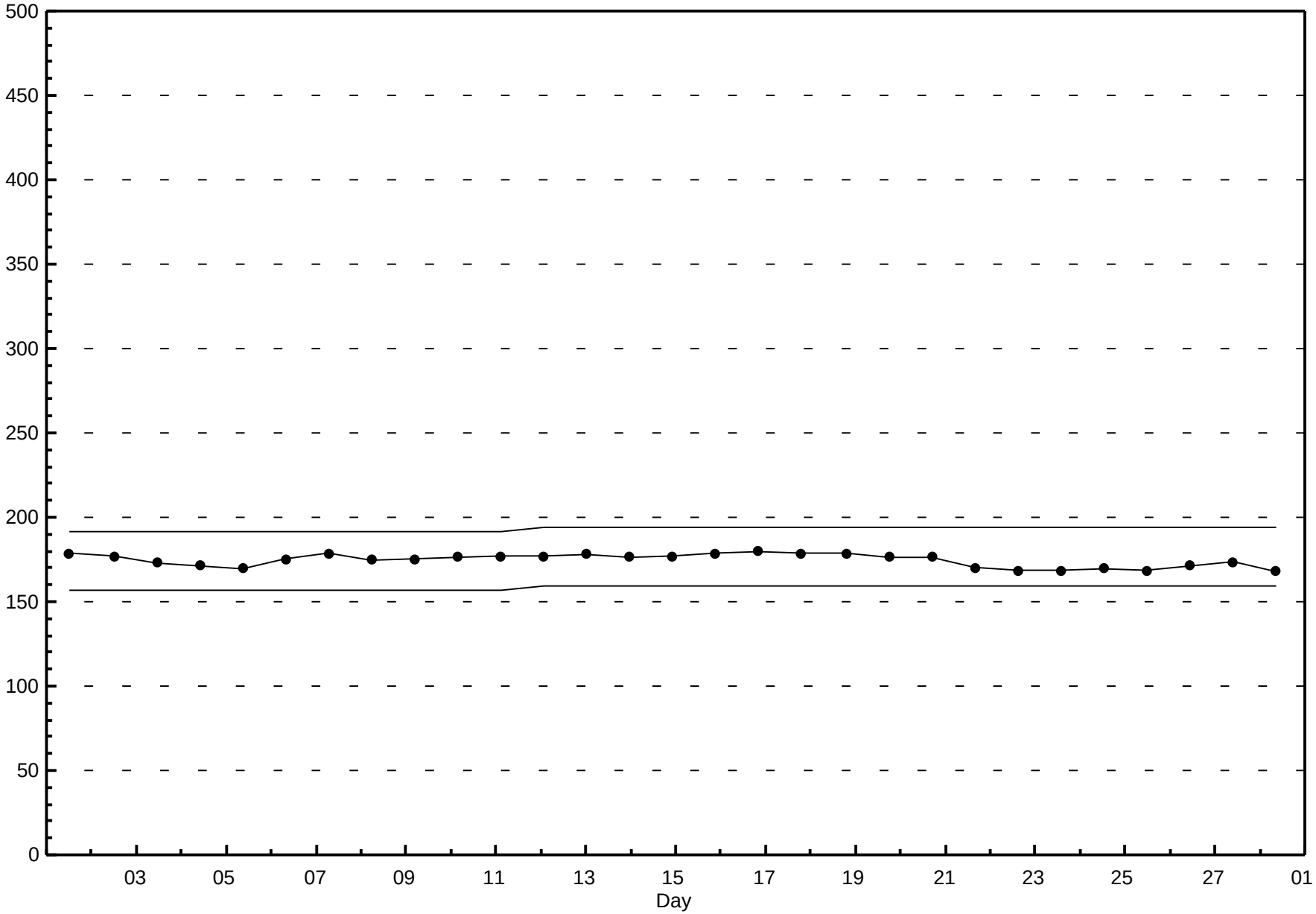
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Span Responses

Oxides of Nitrogen (NO_X)

Portable Reno - February 2014



Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Portable Reno - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 45.2 ppb on Feb 18 17:00

Maximum Daily Average: 41.2 ppb on Feb 18

Minimum Value: 12 ppb on Feb 27 05:00

Minimum Daily Average: 20.6 ppb on Feb 23

Maximum Diurnal Average: 33.7 ppb at hour 16

Minimum Diurnal Average: 28.8 ppb at hour 6

Monthly Average: 31.20 ppb

Percentiles: P_1 = 19.2 P_{10} = 23.1 Q_1 = 26.4 Median = 31.3 Q_3 = 35.9 P_{90} = 39.9 P_{99} = 43.7

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	37	33	31	31	33	30	33	35	34	31	29	33	A	33	32	31	32	36	36	36	36	37	38	39	33.8	39.4
2-Feb	39	39	39	38	38	38	37	38	38	38	38	A	37	38	38	38	37	37	37	38	40	40	40	40	38.4	40.2
3-Feb	41	41	41	41	41	41	41	40	40	40	A	40	40	40	40	40	39	39	39	39	38	39	37	37	39.7	41.0
4-Feb	37	36	37	37	37	36	36	36	36	A	35	34	34	35	35	34	35	36	35	34	35	32	32	31	35.0	37.1
5-Feb	33	33	32	33	32	32	30	30	A	28	29	30	32	31	31	32	32	34	32	35	34	34	33	32	32.0	35.0
6-Feb	32	33	33	33	31	29	28	A	26	26	28	30	31	32	33	32	32	31	30	30	29	29	25	25	29.9	33.1
7-Feb	25	26	26	23	22	20	A	23	22	23	25	27	29	29	30	34	34	33	36	39	38	38	38	38	29.4	38.8
8-Feb	37	37	36	36	36	A	32	33	34	34	33	33	33	33	33	34	34	34	32	31	30	29	29	30	33.2	37.1
9-Feb	30	31	34	34	A	29	32	29	31	31	31	31	32	32	32	33	34	33	32	32	28	26	27	29	30.9	34.3
10-Feb	29	27	26	A	23	25	26	25	24	25	27	26	28	31	31	32	33	33	33	32	32	32	32	31	28.8	32.8
11-Feb	30	31	A	30	30	31	31	31	29	30	31	32	32	C	C	C	33	32	26	31	32	31	32	34	30.9	33.5
12-Feb	34	A	34	34	33	31	29	30	31	32	32	32	31	31	31	31	30	29	29	28	27	27	24	22	30.1	33.9
13-Feb	A	24	30	30	30	28	28	27	26	26	27	27	25	25	24	25	26	24	24	24	24	23	24	A	26.1	30.2
14-Feb	25	23	19	20	20	22	21	22	25	25	26	29	31	34	35	34	34	35	35	34	34	33	A	28	28.0	35.2
15-Feb	26	27	29	28	30	32	34	33	34	35	37	40	42	43	43	43	44	45	42	42	42	A	41	39	37.1	44.5
16-Feb	38	38	38	39	36	34	33	32	31	31	31	31	31	30	32	34	34	36	36	34	A	37	42	40	34.6	42.0
17-Feb	39	40	37	39	42	40	39	35	39	41	41	41	41	41	42	44	44	44	43	A	41	41	40	40	40.6	43.8
18-Feb	40	40	41	42	40	41	40	41	40	39	38	40	41	44	44	44	45	45	A	43	42	43	42	31	41.2	45.2
19-Feb	30	26	26	26	25	23	26	26	27	27	27	28	28	28	29	29	29	A	28	27	27	25	24	24	26.8	29.6
20-Feb	23	24	23	22	20	15	13	20	20	22	27	27	27	28	27	26	A	28	28	28	29	27	25	25	24.1	28.9
21-Feb	25	25	24	24	24	24	24	25	25	25	25	25	25	25	26	A	27	27	26	22	26	27	25	27	25.1	27.0
22-Feb	26	26	23	19	18	22	24	25	28	29	29	28	27	26	A	27	27	26	25	24	24	23	23	21	24.7	29.0
23-Feb	20	20	19	20	20	19	20	20	21	20	20	20	21	A	23	23	21	23	23	21	23	20	19	19	20.6	23.0
24-Feb	22	23	24	25	23	20	22	22	22	22	23	25	A	27	26	27	27	25	23	23	25	27	29	30	24.6	29.8
25-Feb	30	29	26	26	26	29	29	28	30	31	31	A	33	36	37	38	36	33	29	30	27	25	27	27	30.1	37.6
26-Feb	23	22	24	27	27	28	29	27	27	27	A	35	38	37	35	37	37	34	34	33	32	32	28	28	30.5	38.1
27-Feb	27	27	26	21	12	22	24	27	31	A	33	35	36	36	36	36	37	37	36	36	38	39	39	39	31.8	38.9
28-Feb	38	38	38	38	37	36	36	36	A	34	34	34	33	34	35	36	36	35	35	34	34	34	33	35	35.4	38.2
	31.0	30.3	30.2	30.2	29.2	28.8	29.5	29.5	29.7	29.7	30.3	31.3	32.3	33.0	33.2	33.7	33.7	33.4	32.0	31.8	32.2	31.5	31.4	31.1	Diurnal Average	
	40.6	41.0	41.1	41.6	41.5	41.1	40.6	41.0	40.2	40.7	40.6	40.7	42.2	43.6	44.0	44.5	45.2	44.7	42.6	43.2	42.3	42.6	42.0	40.2	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

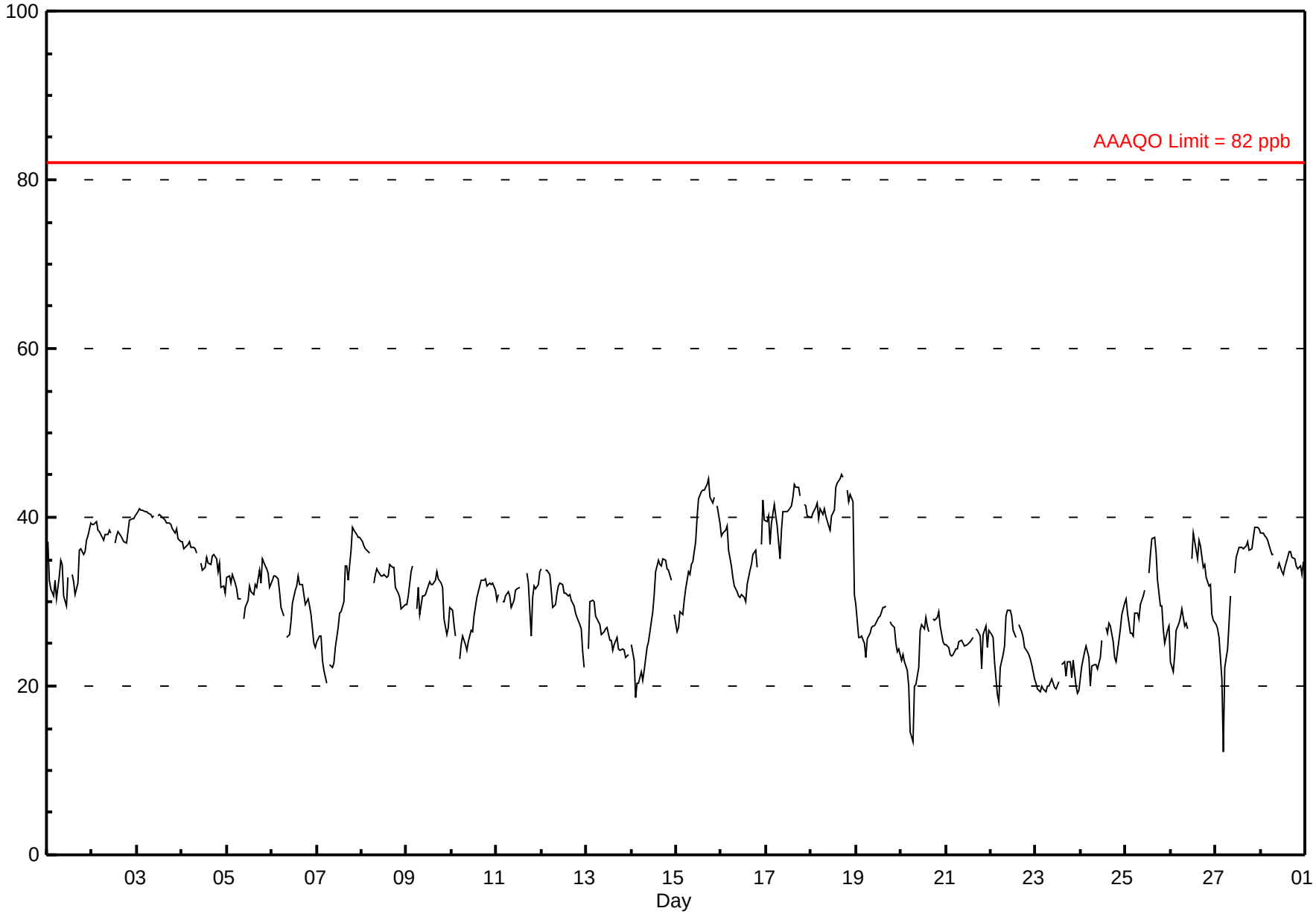
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na

Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Portable Reno - February 2014



Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

Portable Reno - February 2014

Maximum Value: 45.7 ppb on Feb 18 17:00

Maximum Daily Average: 42.2 ppb on Feb 18

Minimum Value: 17 ppb on Feb 27 05:00

Minimum Daily Average: 21.7 ppb on Feb 23

Maximum Diurnal Average: 34.6 ppb at hour 17

Minimum Diurnal Average: 30.4 ppb at hour 6

Monthly Average: 32.37 ppb

Percentiles: P_1 = 20.5 P_{10} = 24.4 Q_1 = 27.5 Median = 32.5 Q_3 = 36.7 P_{90} = 40.7 P_{99} = 44.5

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	39	35	33	32	35	32	37	36	35	34	32	33	A	34	33	32	34	37	37	37	37	38	38	41	35.3	40.7
2-Feb	40	40	40	39	39	39	38	39	39	39	39	A	38	39	39	38	38	38	38	39	40	40	41	41	39.1	40.9
3-Feb	41	42	41	41	41	41	41	41	41	41	A	41	41	41	40	40	40	40	40	39	39	39	39	38	40.4	41.7
4-Feb	38	37	38	38	37	37	37	37	37	A	35	34	35	36	35	35	36	36	36	35	35	35	34	32	36.0	37.7
5-Feb	34	34	34	34	33	32	31	32	A	30	31	32	33	33	32	33	33	35	36	37	37	36	34	35	33.5	36.7
6-Feb	34	34	34	34	32	31	29	A	26	27	29	31	32	33	34	34	33	32	31	31	31	30	27	27	31.1	34.2
7-Feb	27	28	28	26	24	23	A	23	23	24	26	29	30	30	31	36	35	34	39	39	39	39	38	38	30.7	39.2
8-Feb	38	37	37	37	37	A	33	35	35	35	34	34	34	34	35	35	34	35	33	32	31	33	30	33	34.3	37.7
9-Feb	32	33	35	35	A	34	33	32	33	32	33	33	33	33	34	34	35	33	33	32	32	27	29	30	32.6	35.3
10-Feb	30	29	27	A	25	26	27	26	25	26	28	28	30	32	32	33	34	33	34	33	33	33	33	32	29.7	33.6
11-Feb	31	32	A	31	31	32	32	32	30	32	32	32	32	C	C	C	34	35	31	32	33	32	33	34	32.1	35.2
12-Feb	35	A	34	34	34	32	30	31	32	32	33	33	32	31	31	31	31	30	29	29	28	28	28	23	30.9	34.7
13-Feb	A	31	31	31	31	30	29	28	27	27	28	28	26	26	25	26	27	26	26	25	25	24	25	A	27.2	31.0
14-Feb	26	25	22	22	22	23	22	24	26	26	28	30	33	35	36	36	35	36	35	35	34	33	A	30	29.2	36.2
15-Feb	28	29	29	30	32	34	34	34	36	36	39	41	43	44	44	44	45	45	44	42	43	A	42	40	38.2	45.2
16-Feb	39	39	40	40	38	35	34	33	32	31	31	31	31	31	33	35	36	36	38	36	A	41	43	42	35.8	42.8
17-Feb	41	43	39	43	42	42	40	37	41	42	41	41	42	42	44	45	44	44	44	A	43	42	42	41	41.9	44.7
18-Feb	41	41	42	42	42	42	41	42	41	41	40	41	42	44	44	45	46	45	A	44	43	43	43	36	42.2	45.7
19-Feb	31	28	27	27	27	24	27	27	27	28	28	29	29	29	30	30	30	A	28	28	28	27	25	25	27.7	31.4
20-Feb	24	25	24	23	21	22	19	21	21	26	28	29	28	29	28	27	A	28	28	29	30	29	26	25	25.6	29.7
21-Feb	26	25	24	24	24	25	25	26	26	26	25	26	26	26	26	A	27	27	27	24	28	28	28	27	25.9	28.4
22-Feb	27	27	26	23	20	24	25	26	29	30	30	29	28	27	A	28	28	27	25	25	24	24	24	22	26.0	29.7
23-Feb	21	21	20	21	21	20	21	21	22	22	21	21	22	A	23	23	23	24	24	22	24	23	20	21	21.7	24.1
24-Feb	24	24	25	26	25	21	24	23	23	23	24	27	A	28	27	28	28	26	24	23	27	27	30	30	25.6	30.4
25-Feb	32	31	29	28	27	29	30	29	30	31	32	A	34	37	39	38	38	35	35	31	28	26	29	31	31.9	38.9
26-Feb	26	23	27	28	28	29	30	30	30	30	A	37	39	38	36	39	39	36	36	35	33	33	31	28	32.3	39.3
27-Feb	28	30	27	25	17	25	25	31	31	A	35	36	37	37	37	36	37	38	37	37	38	39	39	39	33.2	39.4
28-Feb	38	38	38	38	38	37	36	36	A	34	35	34	34	35	36	37	36	36	36	35	34	35	36	35	36.1	38.4
	32.2	31.8	31.5	31.5	30.5	30.4	30.7	30.8	30.7	30.9	31.4	32.3	33.2	33.9	34.1	34.5	34.6	34.3	33.5	32.8	33.3	32.8	32.8	32.4	Diurnal Average	
	41.2	42.7	41.7	42.7	42.2	42.0	41.2	41.7	40.9	41.5	41.2	41.2	43.1	44.2	44.4	45.2	45.7	45.2	43.7	44.1	42.9	43.2	42.9	42.2	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

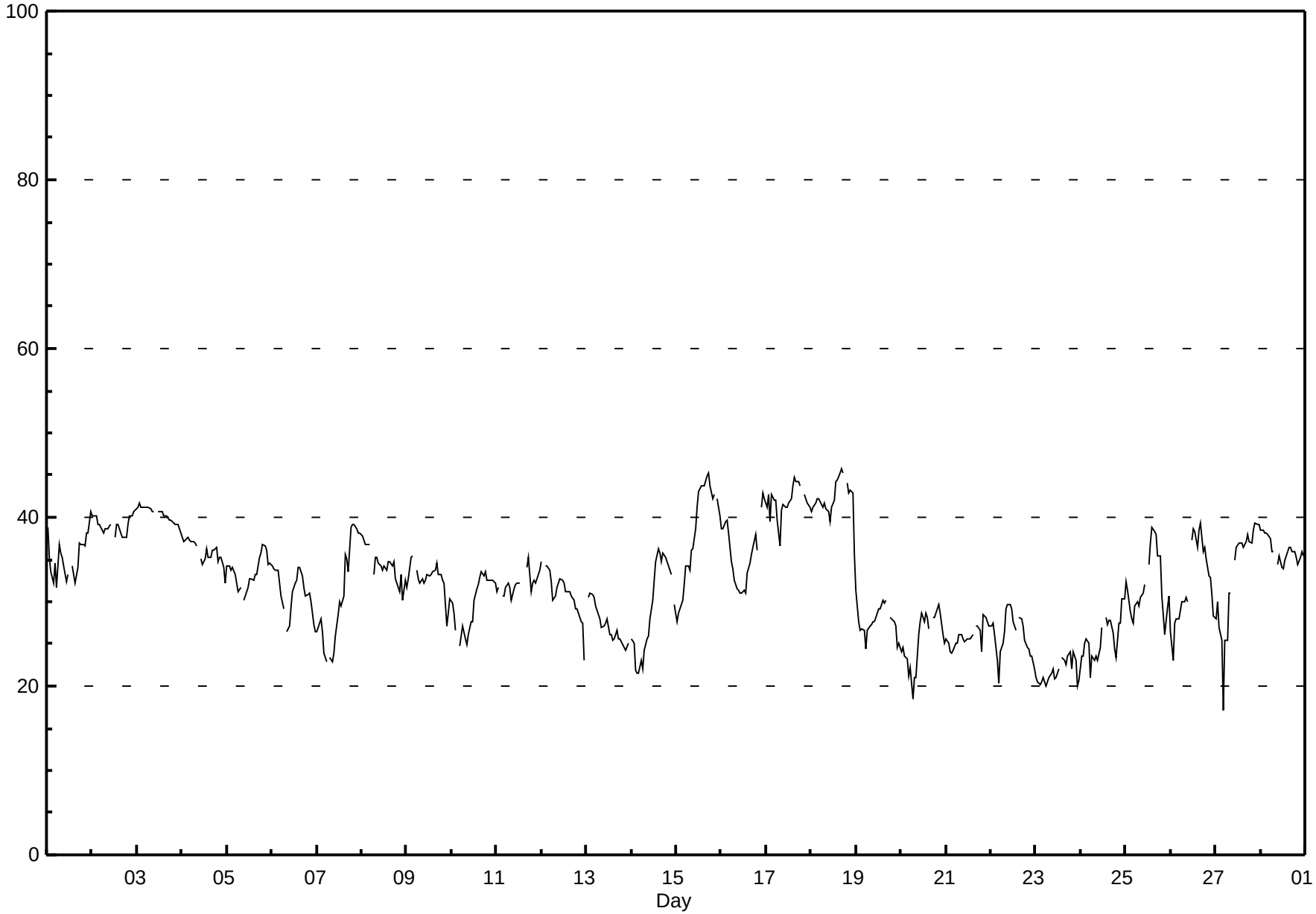
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

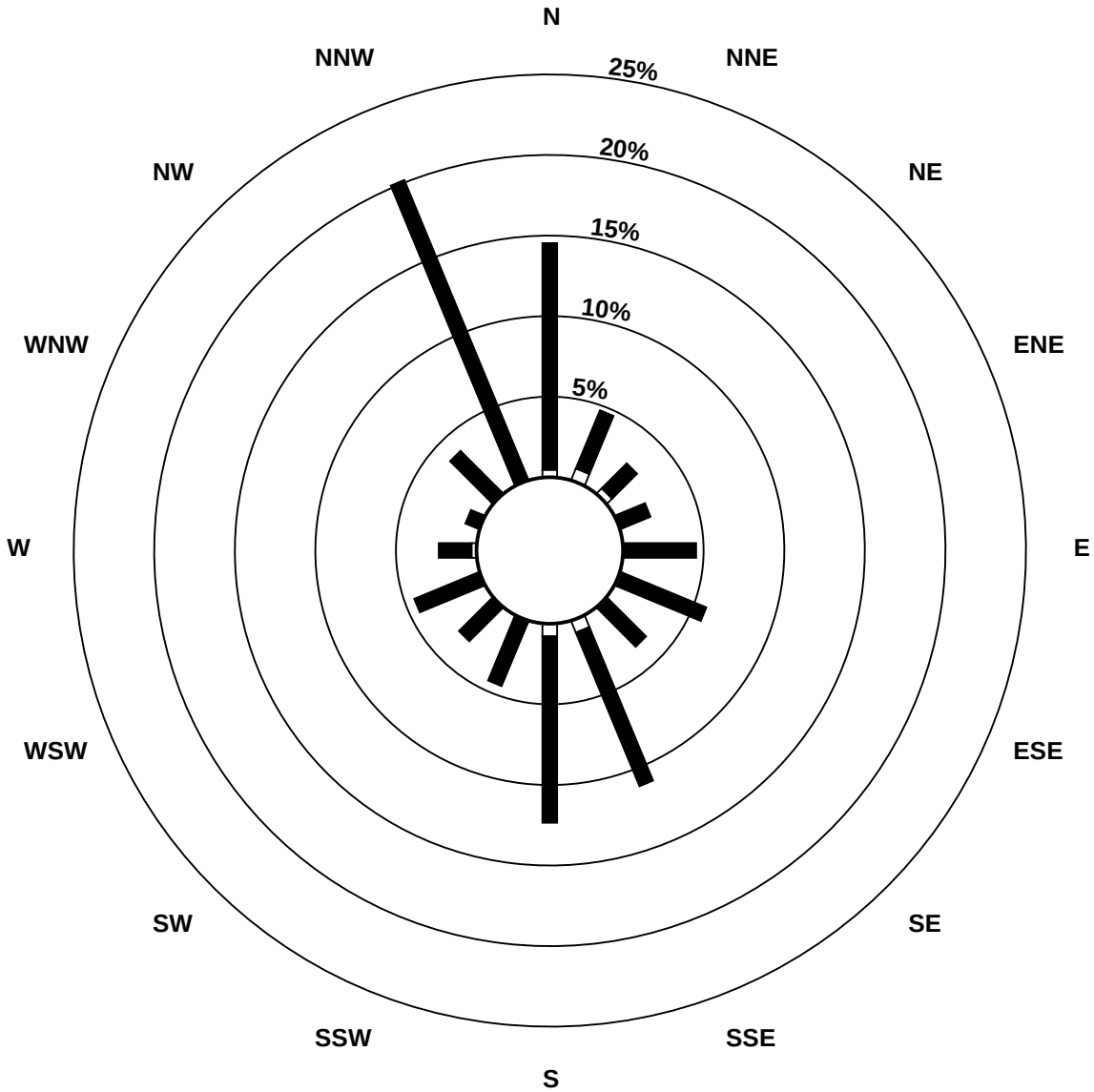
Portable Reno - February 2014



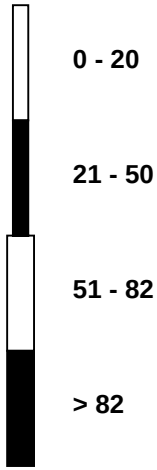
Pollutant Rose

Ozone (O_3) - ppb

Portable Reno - February 2014



Pollutant Classes (ppb)



Peace Airshed Zone Association

Eight Hour Running Averages

Ozone (O_3) - ppb

Portable Reno - February 2014

Maximum Value: 43.9 ppb on Feb 18 21:00

Minimum Value: 19.4 ppb on Feb 20 10:00

Percentiles: P_1 = 19.9 P_{10} = 23.4 Q_1 = 26.4 Median = 31.2 Q_3 = 35.3 P_{90} = 39.5 P_{99} = 43.0

Hours in Service:	672
Hours of Data:	666
Hours of Missing Data:	6
Hours of Calibration:	6
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Feb	36	35	34	33	32	32	33	33	33	32	32	32	32	33	33	32	32	32	33	34	34	35	35	36	36.3
2-Feb	37	38	38	38	39	39	39	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	39	38.7
3-Feb	39	40	40	40	40	41	41	41	41	40	40	40	40	40	40	40	40	40	40	40	39	39	39	38	40.7
4-Feb	38	38	38	37	37	37	37	37	36	37	36	36	35	35	35	35	35	35	35	35	35	34	34	34	38.2
5-Feb	33	33	33	33	32	32	32	32	32	31	31	30	30	30	30	31	31	31	32	32	33	33	33	33	33.3
6-Feb	33	33	33	33	33	32	31	31	30	30	29	28	28	29	29	30	30	31	31	31	31	31	30	29	33.4
7-Feb	28	27	27	26	25	24	24	24	23	23	22	23	24	25	26	27	29	30	31	33	34	35	36	37	36.7
8-Feb	37	38	38	37	37	37	36	35	35	34	34	34	33	33	33	33	33	33	33	33	33	32	32	31	37.6
9-Feb	31	30	30	31	31	31	31	31	31	31	31	30	31	31	31	32	32	32	32	32	32	31	30	30	32.4
10-Feb	30	29	28	28	27	27	27	26	25	25	25	25	26	27	27	28	29	30	31	31	32	32	32	32	32.3
11-Feb	32	32	32	31	31	31	31	31	30	30	30	31	31	31	31	N	N	N	N	N	N	31	31	31	31.9
12-Feb	31	31	32	33	33	33	33	32	32	32	32	31	31	31	31	31	31	31	31	30	30	29	28	27	33.1
13-Feb	27	26	26	26	27	27	28	28	28	28	28	27	27	27	26	26	26	26	25	25	25	24	24	24	28.2
14-Feb	24	24	23	23	22	22	21	21	21	22	23	24	25	27	28	30	31	32	33	34	34	34	34	33	34.4
15-Feb	32	31	30	29	29	29	29	30	31	32	33	34	36	37	38	40	41	42	43	43	43	43	43	42	43.0
16-Feb	41	40	40	39	39	38	37	36	35	34	33	32	32	31	31	31	32	32	33	33	34	35	36	37	41.3
17-Feb	38	38	38	39	39	40	40	39	39	39	39	40	39	40	40	41	42	42	42	43	43	43	42	42	42.7
18-Feb	41	41	41	41	41	41	41	41	41	41	40	40	40	40	41	41	42	43	43	44	44	44	43	41	43.9
19-Feb	39	37	35	33	31	29	27	26	26	26	26	26	27	27	28	28	28	29	29	29	28	28	27	26	39.2
20-Feb	26	25	25	24	23	22	20	20	20	19	20	21	21	23	25	26	26	27	27	27	28	28	27	27	27.8
21-Feb	27	26	26	25	25	24	24	24	24	24	25	25	25	25	25	25	25	26	26	25	25	26	26	26	26.9
22-Feb	26	26	25	25	24	23	23	23	23	24	24	25	26	27	27	28	28	27	26	26	25	25	25	24	27.8
23-Feb	23	22	22	21	21	20	20	20	20	20	20	20	20	20	21	21	21	21	22	22	22	22	22	21	23.1
24-Feb	21	21	22	22	22	22	22	23	23	23	23	23	23	24	24	25	26	26	26	26	26	26	26	26	26.1
25-Feb	27	27	27	28	28	28	28	28	28	28	29	29	30	31	32	34	35	35	35	34	33	32	30	29	34.8
26-Feb	28	26	25	25	25	26	26	26	26	27	28	29	30	32	32	34	35	36	36	36	35	34	33	32	36.2
27-Feb	31	30	29	28	25	24	23	23	24	23	24	26	30	32	34	35	36	36	36	36	37	37	37	38	37.5
28-Feb	38	38	38	38	38	38	37	37	37	36	36	35	35	34	34	34	35	35	35	35	35	35	35	35	38.2
Diurnal Maximums	41.3	40.9	40.7	40.8	40.6	40.6	40.7	40.7	40.7	40.5	40.4	40.4	40.3	40.4	40.9	41.3	42.0	42.7	43.3	43.7	43.9	43.7	43.4	42.2	

N - Not Valid

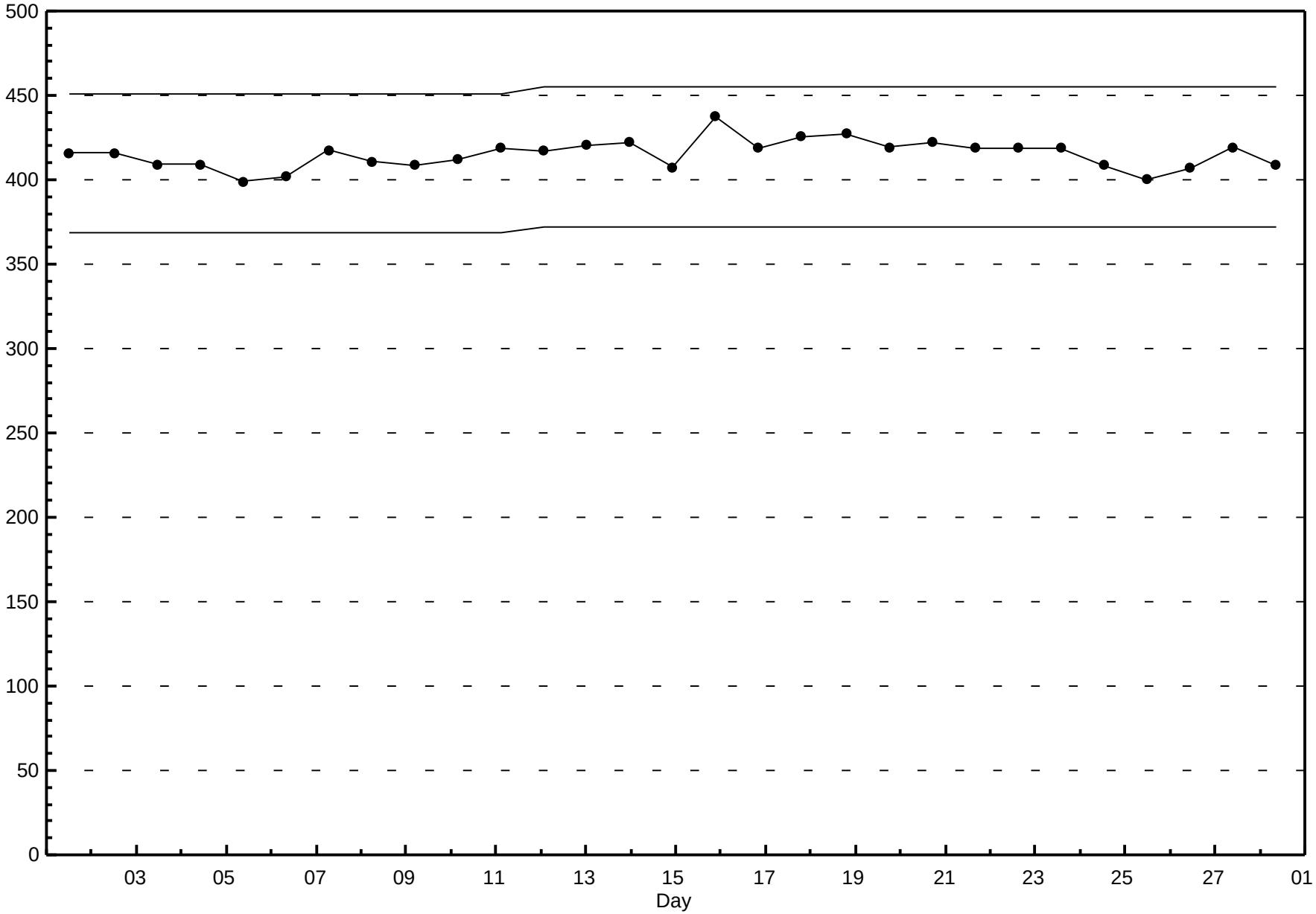
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Span Responses

Ozone (O_3)

Portable Reno - February 2014



Peace Airshed Zone Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Portable Reno - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 2.73 ppm on Feb 27 05:00

Maximum Daily Average: 2.34 ppm on Feb 6

Minimum Value: 1.5 ppm on Feb 16 23:00

Minimum Daily Average: 1.58 ppm on Feb 17

Maximum Diurnal Average: 1.99 ppm at hour 14

Minimum Diurnal Average: 1.93 ppm at hour 18

Monthly Average: 1.959 ppm

Percentiles: P_1 = 1.51 P_{10} = 1.63 Q_1 = 1.71 Median = 1.94 Q_3 = 2.18 P_{90} = 2.30 P_{99} = 2.51

Hours in Service:	672
Hours of Data:	641
Hours of Missing Data:	31
Hours of Calibration:	31
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	2.2	2.3	2.3	2.2	2.3	2.3	2.2	2.1	2.1	2.2	2.2	2.2	A	2.2	2.3	2.5	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.20	2.49
2-Feb	2.2	2.3	2.2	2.2	2.3	2.2	2.2	2.1	2.1	2.1	2.1	A	2.2	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.16	2.33
3-Feb	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.15	2.18
4-Feb	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.4	2.2	2.22	2.38
5-Feb	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	A	2.4	2.3	2.3	2.3	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.30	2.40
6-Feb	2.3	2.3	2.3	2.3	2.3	2.3	2.3	A	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.34	2.41
7-Feb	2.4	2.3	2.3	2.4	2.5	2.5	A	2.6	2.6	2.7	2.5	2.4	2.4	2.4	2.3	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.2	2.34	2.66
8-Feb	2.2	2.2	2.2	2.2	2.2	A	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.22	2.29
9-Feb	2.2	2.3	2.2	2.2	A	2.2	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	2.3	2.3	2.5	2.4	2.3	2.28	2.54
10-Feb	2.3	2.3	2.3	A	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.25	2.38
11-Feb	2.2	2.2	A	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.1	2.19	2.29
12-Feb	2.1	A	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.90	2.14
13-Feb	A	1.7	1.6	1.6	1.6	1.6	1.7	1.6	1.6	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.72	1.82
14-Feb	1.7	1.7	1.8	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	A	1.8	1.77	1.89
15-Feb	1.8	1.8	1.8	1.8	1.7	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.6	1.6	A	1.6	1.7	1.66	1.84
16-Feb	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.9	1.9	2.0	2.0	2.0	1.9	1.8	1.7	1.7	1.7	A	1.6	1.5	1.5	1.77	2.01
17-Feb	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.5	1.6	1.6	1.6	1.7	1.6	1.6	1.7	1.6	1.6	A	1.6	1.6	1.6	1.6	1.58	1.66
18-Feb	1.6	1.6	1.5	1.5	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	A	1.6	1.6	1.6	1.6	1.7	1.61	1.68
19-Feb	1.7	1.7	1.7	1.7	1.7	1.8	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.7	1.7	1.7	A	1.7	1.8	1.7	1.7	1.8	1.8	1.74	1.78
20-Feb	1.8	1.8	1.9	1.9	1.8	1.9	1.8	1.8	1.9	1.8	1.7	1.7	1.7	1.8	1.8	1.7	A	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.76	1.89
21-Feb	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	A	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.67	1.70
22-Feb	1.7	1.7	1.7	1.8	1.8	1.7	1.7	1.7	1.6	1.6	1.7	1.7	1.7	1.6	A	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.67	1.85
23-Feb	1.6	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.8	1.8	A	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.64	1.79
24-Feb	1.6	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.9	1.9	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.86	2.03
25-Feb	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	1.9	2.0	2.0	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.01	2.18
26-Feb	2.1	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	A	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.02	2.15
27-Feb	2.0	2.0	2.0	2.1	2.7	2.1	2.0	1.9	1.8	A	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.92	2.73
28-Feb	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	A	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.89	2.01
	1.96	1.95	1.95	1.95	1.99	1.97	1.94	1.94	1.95	1.97	1.97	1.98	1.98	1.99	1.98	1.97	1.94	1.93	1.94	1.95	1.95	1.96	1.95	1.94	Diurnal Average	
	2.35	2.34	2.33	2.41	2.73	2.52	2.34	2.62	2.63	2.66	2.46	2.44	2.38	2.39	2.37	2.49	2.32	2.31	2.31	2.31	2.32	2.54	2.44	2.37	Diurnal Maximum	

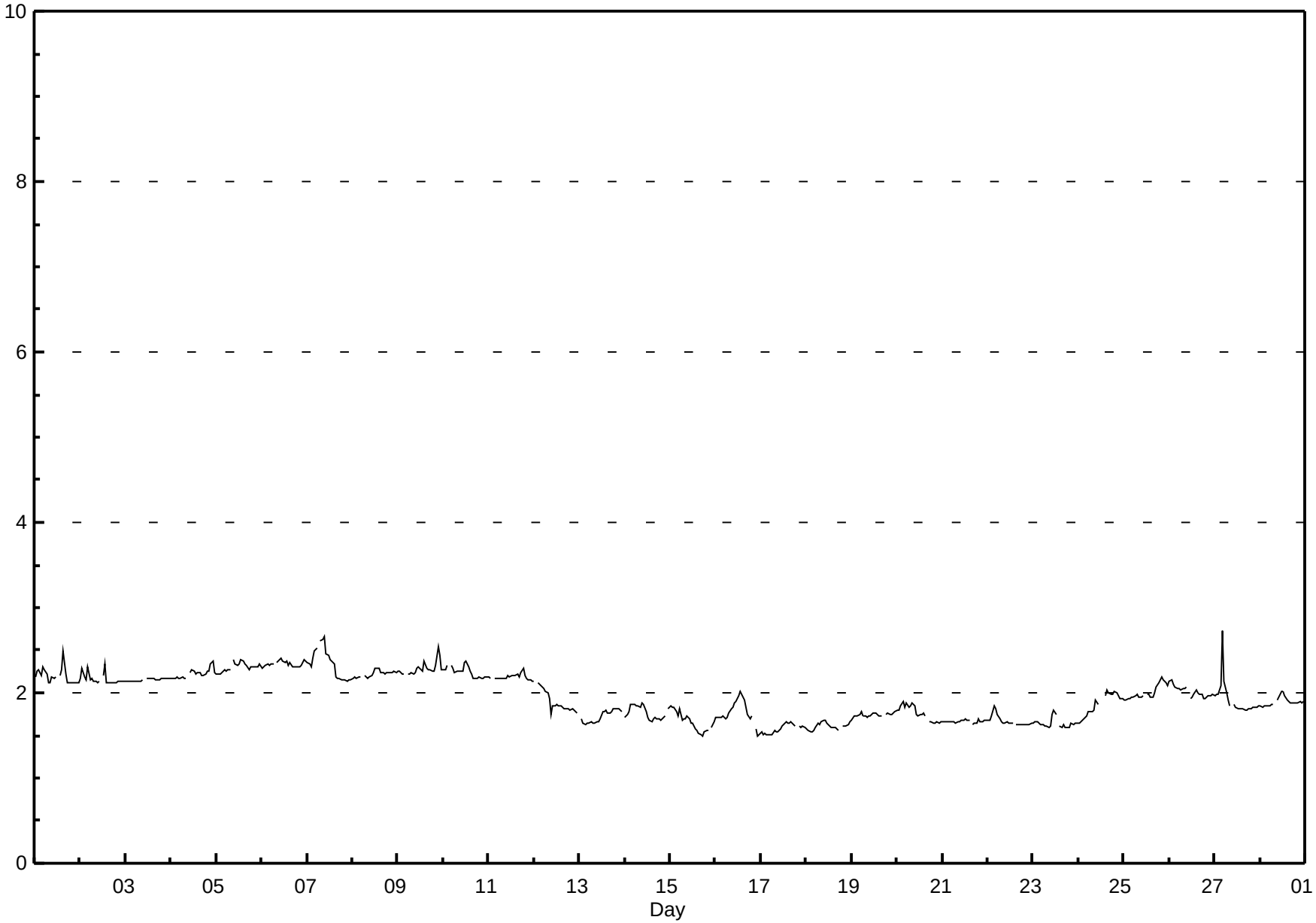
C - Calibration A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Portable Reno - February 2014



Peace Airshed Zone Association

Hourly Maximums

Total Hydrocarbons (THC) - ppm

Portable Reno - February 2014

Maximum Value: 3.18 ppm on Feb 11 18:00

Maximum Daily Average: 2.42 ppm on Feb 7

Minimum Value: 1.5 ppm on Feb 15 18:00

Minimum Daily Average: 1.63 ppm on Feb 17

Maximum Diurnal Average: 2.06 ppm at hour 14

Minimum Diurnal Average: 1.98 ppm at hour 8

Monthly Average: 2.017 ppm

Percentiles: P_1 = 1.56 P_{10} = 1.67 Q_1 = 1.76 Median = 1.99 Q_3 = 2.25 P_{90} = 2.37 P_{99} = 2.70

Hours in Service:	672
Hours of Data:	641
Hours of Missing Data:	31
Hours of Calibration:	31
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	2.4	2.4	2.4	2.3	2.4	2.3	2.4	2.2	2.1	2.3	2.2	2.2	A	2.2	2.7	2.8	2.3	2.2	2.1	2.2	2.2	2.2	2.1	2.1	2.28	2.75
2-Feb	2.5	2.8	2.5	2.2	2.5	2.3	2.3	2.2	2.2	2.1	2.3	A	2.4	2.8	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.29	2.82
3-Feb	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.19	2.23
4-Feb	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	A	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.3	2.3	2.3	2.4	2.8	2.3	2.29	2.84
5-Feb	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	A	2.5	2.4	2.4	2.4	2.5	2.4	2.4	2.4	2.3	2.4	2.4	2.3	2.3	2.4	2.4	2.35	2.50
6-Feb	2.3	2.3	2.3	2.4	2.4	2.4	2.4	A	2.4	2.4	2.5	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.39	2.45
7-Feb	2.4	2.4	2.5	2.6	2.7	2.8	A	2.7	2.7	3.0	2.5	2.5	2.4	2.4	2.4	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.42	2.96
8-Feb	2.2	2.2	2.2	2.2	2.2	A	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.26	2.35
9-Feb	2.3	2.3	2.3	2.3	A	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.3	2.5	2.3	2.3	2.3	2.3	2.3	2.4	2.6	2.6	2.3	2.34	2.64
10-Feb	2.3	2.3	2.4	A	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.29	2.46
11-Feb	2.2	2.3	A	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.4	2.4	2.5	2.5	3.2	2.4	2.3	2.2	2.2	2.2	2.2	2.31	3.18
12-Feb	2.2	A	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.94	2.18
13-Feb	A	1.8	1.7	1.7	1.7	1.8	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.77	1.84
14-Feb	1.7	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.7	1.7	1.7	1.8	1.8	1.7	1.7	1.7	1.7	1.8	A	1.8	1.81	1.92
15-Feb	1.9	1.9	2.0	1.9	1.8	2.2	1.7	1.7	1.7	1.8	1.8	1.7	1.8	1.6	1.6	1.5	1.5	1.5	1.6	1.6	1.6	A	1.6	1.7	1.72	2.16
16-Feb	1.7	1.7	1.8	1.8	1.8	1.7	1.8	1.8	1.8	1.9	1.9	1.9	2.0	2.0	2.1	2.0	1.9	1.8	1.8	1.8	A	1.7	1.5	1.6	1.82	2.05
17-Feb	1.6	1.6	1.6	1.6	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	A	1.7	1.6	1.7	1.7	1.63	1.72
18-Feb	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	A	1.6	1.6	1.6	1.7	1.8	1.65	1.80
19-Feb	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.8	1.8	2.2	1.8	1.9	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.80	2.20
20-Feb	1.8	1.8	2.0	2.0	1.9	1.9	1.9	1.9	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8	A	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.81	2.02
21-Feb	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	A	1.7	1.7	1.7	1.7	1.8	1.7	1.7	1.8	1.70	1.76
22-Feb	1.7	1.7	2.0	2.0	1.9	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	A	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.72	2.01
23-Feb	1.7	1.7	1.7	1.7	1.6	1.7	1.6	1.6	1.6	1.7	2.0	1.9	1.8	A	1.7	1.6	1.7	1.7	1.6	1.6	1.7	1.7	1.7	1.7	1.69	1.98
24-Feb	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	2.3	1.9	C	C	C	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	1.92	2.32
25-Feb	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.1	2.2	2.4	2.3	2.3	2.2	2.2	2.2	2.06	2.36
26-Feb	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.3	A	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.07	2.29
27-Feb	2.0	2.1	2.1	2.3	3.0	2.5	2.1	2.0	1.9	A	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.99	2.97
28-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.0	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.93	2.10
	2.02	2.02	2.03	2.01	2.05	2.05	1.99	1.98	1.99	2.05	2.02	2.05	2.03	2.06	2.04	2.03	1.99	2.00	2.00	1.99	1.99	2.00	2.01	1.99	Diurnal Average	
	2.53	2.76	2.51	2.58	2.97	2.75	2.38	2.67	2.74	2.96	2.50	2.50	2.44	2.82	2.65	2.75	2.54	3.18	2.44	2.36	2.42	2.64	2.84	2.41	Diurnal Maximum	

C - Calibration

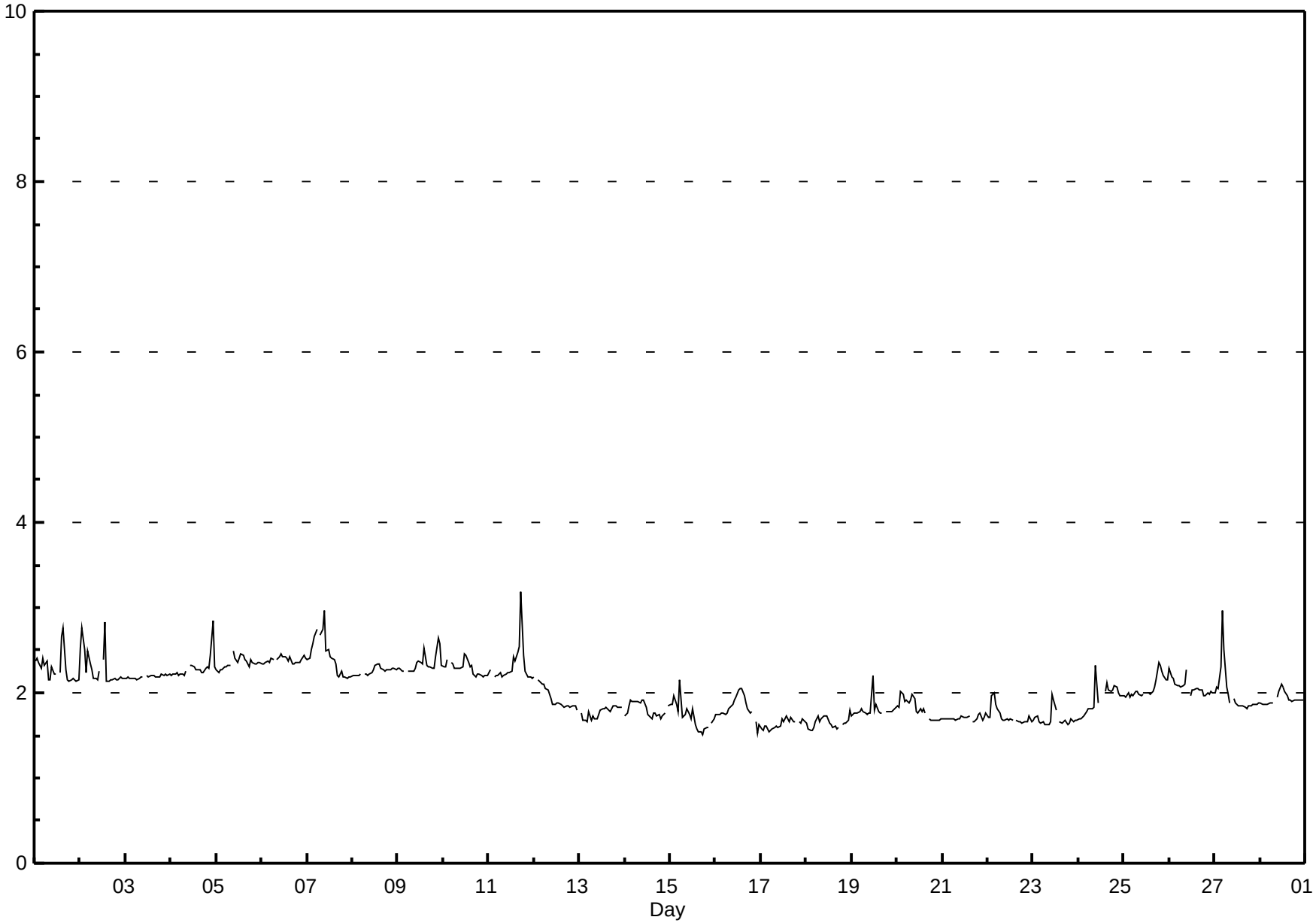
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Total Hydrocarbons (THC) - ppm

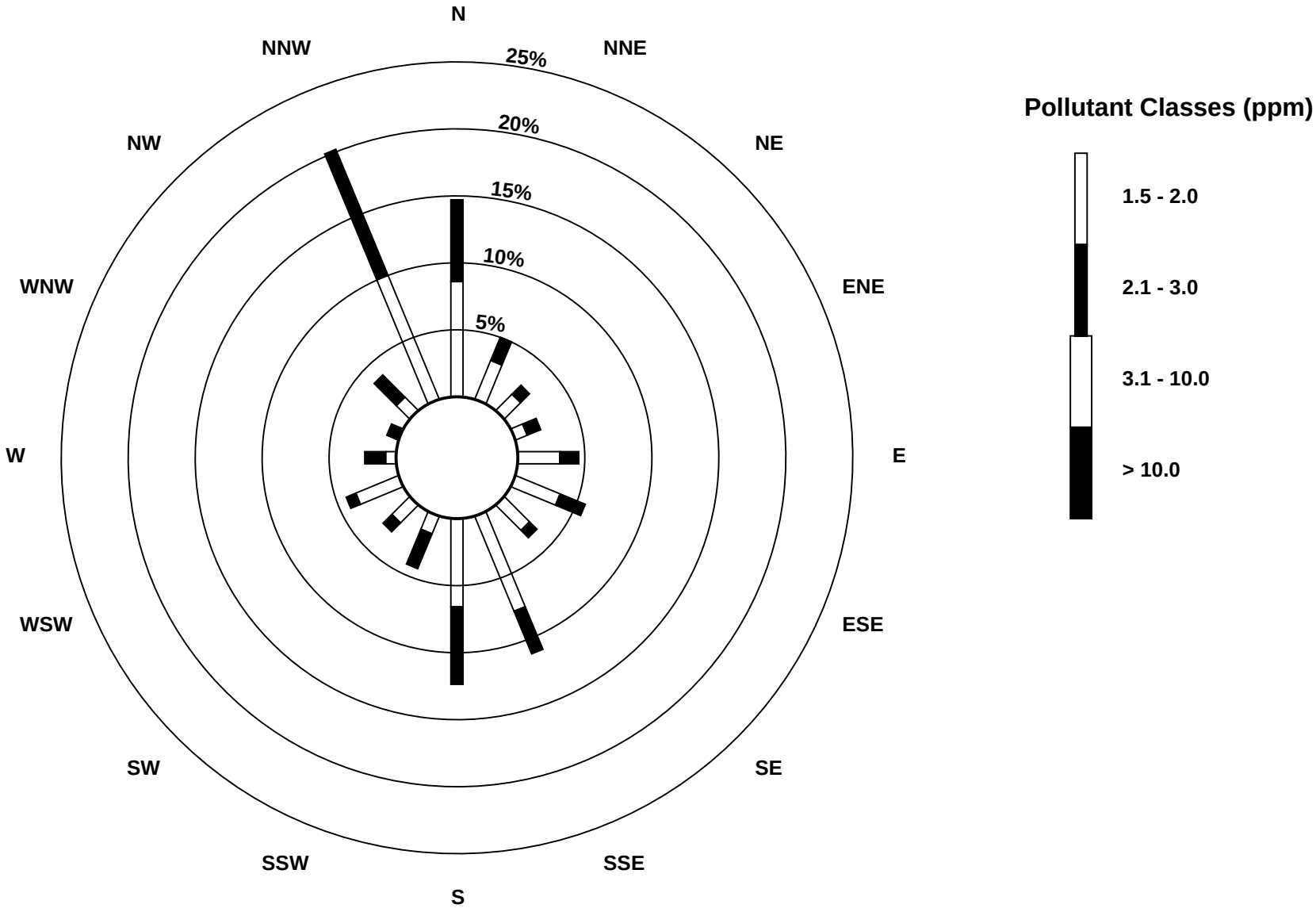
Portable Reno - February 2014



Pollutant Rose

Total Hydrocarbons (THC) - ppm

Portable Reno - February 2014



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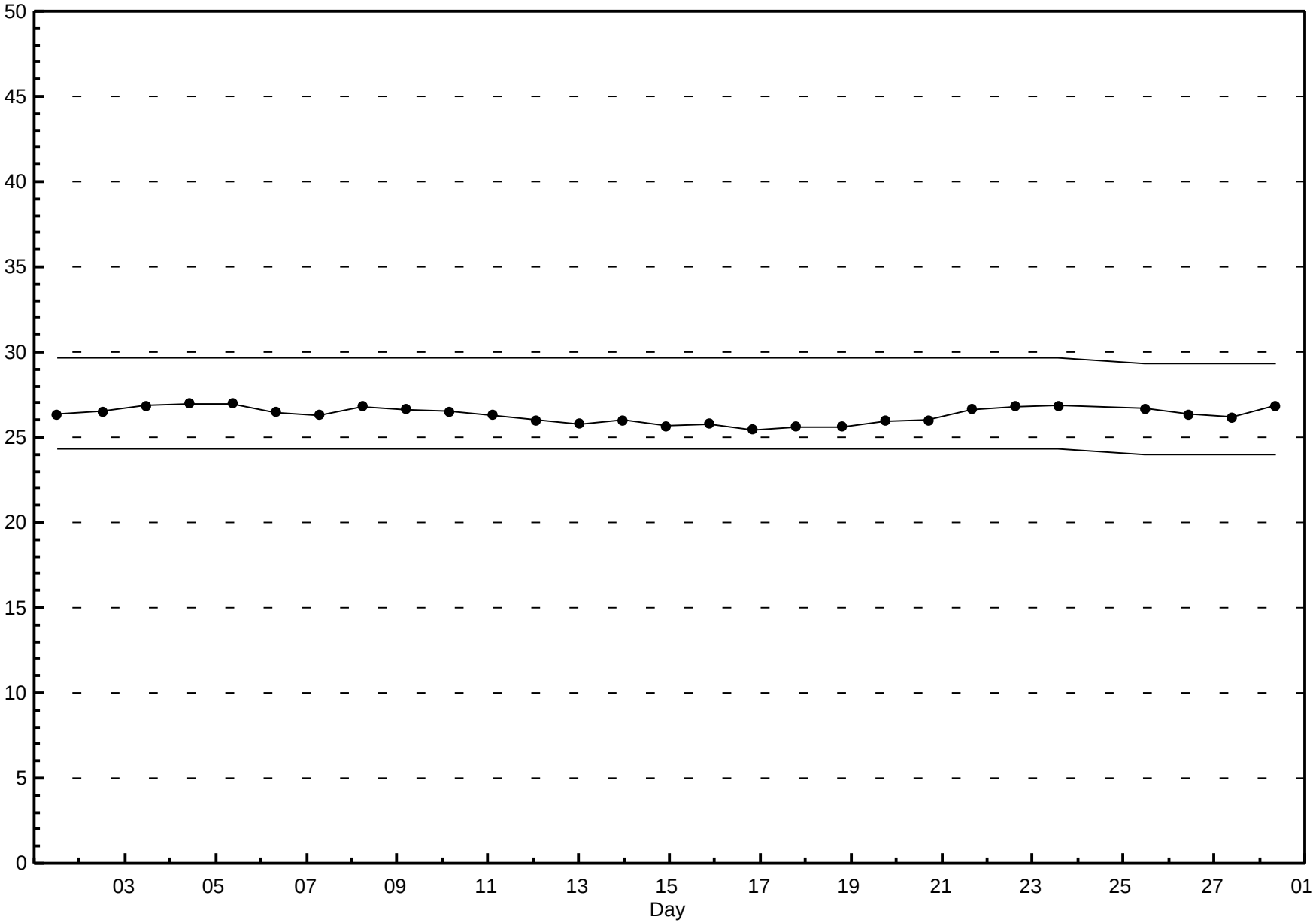
Span Responses

Total Hydrocarbons (THC)

Portable Reno - February 2014



Peace Airshed Zone Association

Hourly Averages

PM2.5 ($PM_{2.5}$) - $\mu g/m^3$

Portable Reno - February 2014

Number of Exceedences: 1-hr: 0 24-hr: 0

Maximum Value: 13.6 $\mu g/m^3$ on Feb 24 16:00

Maximum Daily Average: 5.1 $\mu g/m^3$ on Feb 19

Minimum Value: 0 $\mu g/m^3$ on Feb 1 01:00

Maximum Diurnal Average: 4.7 $\mu g/m^3$ at hour 10

Monthly Average: 2.61 $\mu g/m^3$

Minimum Daily Average: 0.2 $\mu g/m^3$ on Feb 18

Minimum Diurnal Average: 1.6 $\mu g/m^3$ at hour 5

Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.6$ Median = 2.2 $Q_3 = 3.9$ $P_{90} = 5.5$ $P_{99} = 10.4$

Hours in Service:	672
Hours of Data:	645
Hours of Missing Data:	27
Hours of Calibration:	6
Percent Operational Time:	96.9

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	Daily Average	Daily Maximum
1-Feb	0	0	0	1	0	0	6	4	0	6	10	0	1	2	3	1	2	1	0	1	1	1	0	0	1.6	9.6
2-Feb	0	0	0	0	0	0	0	0	5	2	4	4	2	N	2	N	0	0	5	1	0	0	2	1	1.3	5.1
3-Feb	1	2	1	2	3	3	0	0	5	4	2	0	4	0	0	0	0	0	1	1	1	3	3	3	1.6	5.4
4-Feb	2	2	2	3	1	N	N	3	4	3	1	7	2	0	1	0	3	N	0	0	1	7	9	3	2.5	8.9
5-Feb	3	3	1	0	0	1	N	3	2	5	4	1	1	0	0	0	0	N	N	N	0	N	N	N	--	5.1
6-Feb	1	N	0	1	0	1	1	2	3	2	3	5	3	3	4	2	4	7	3	1	5	2	3	3	2.6	6.9
7-Feb	3	3	4	4	4	5	4	5	4	6	7	5	4	5	4	2	1	2	4	0	1	1	1	1	3.4	7.2
8-Feb	1	0	0	3	1	0	0	3	7	10	1	0	0	2	0	4	N	N	0	0	0	0	1	0	1.5	10.2
9-Feb	0	0	1	1	0	1	1	1	3	5	7	5	10	2	N	2	2	3	3	3	3	5	4	4	2.9	10.5
10-Feb	4	4	3	4	4	3	2	2	3	4	3	6	1	0	0	1	0	0	1	1	0	1	1	1	2.0	6.5
11-Feb	1	1	1	1	1	1	1	1	2	3	2	2	5	C	C	C	C	C	C	8	6	3	1	0	2.3	8.1
12-Feb	1	2	0	0	0	0	1	3	2	3	3	6	5	5	5	6	6	4	4	5	4	4	3	5	3.2	6.0
13-Feb	5	3	0	0	0	1	1	1	2	2	2	4	5	5	3	4	5	3	4	4	5	4	5	4	3.0	5.4
14-Feb	1	3	4	4	2	4	0	5	6	8	6	4	2	3	3	4	6	5	3	2	5	7	8	9	4.4	9.0
15-Feb	9	9	6	4	0	1	1	1	2	5	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1.7	9.3
16-Feb	0	1	1	1	3	4	3	4	4	5	6	5	9	11	8	7	5	3	1	1	1	0	0	0	3.5	11.4
17-Feb	N	0	0	0	0	0	0	0	1	5	2	2	1	1	1	0	0	N	0	0	2	0	4	1	0.8	4.6
18-Feb	0	0	0	0	0	1	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	2.7
19-Feb	1	3	3	3	3	4	4	5	7	7	9	11	7	12	5	6	4	0	5	4	7	5	5	4	5.1	11.6
20-Feb	4	4	4	4	3	4	3	4	5	6	7	4	4	4	4	5	0	2	3	4	5	6	6	6	4.2	7.5
21-Feb	7	5	4	2	2	2	3	2	2	3	3	2	4	9	3	0	N	0	0	1	1	1	2	3	2.6	9.4
22-Feb	0	3	2	2	2	0	2	2	2	3	0	6	3	4	3	1	0	0	1	0	2	3	3	2	2.0	5.8
23-Feb	2	1	1	2	2	2	2	1	3	4	4	10	3	0	0	1	0	0	0	1	2	1	2	2	1.9	10.2
24-Feb	1	2	1	1	2	2	2	2	5	6	8	11	5	M	M	14	10	8	7	7	5	5	4	3	5.1	13.6
25-Feb	3	2	2	2	1	5	8	10	6	5	4	5	3	4	2	4	0	2	3	5	3	4	4	3	3.7	9.6
26-Feb	4	5	4	4	4	4	3	4	4	0	2	4	4	4	4	2	2	0	2	3	1	2	3	3	2.9	4.5
27-Feb	1	2	2	4	4	4	4	5	9	11	4	3	2	1	1	1	1	1	1	2	1	2	1	0	2.9	10.5
28-Feb	1	1	1	1	1	2	2	2	4	3	3	3	3	3	2	2	2	2	3	3	3	1	1	1	2.1	3.7
	2.1	2.3	1.7	1.9	1.6	2.0	2.1	2.6	3.7	4.7	3.9	4.1	3.3	3.1	2.4	2.6	2.1	1.9	2.2	2.1	2.3	2.5	2.8	2.3	Diurnal Average	
	9.3	8.6	5.8	4.2	4.4	5.5	7.5	9.6	8.7	10.5	9.6	11.1	10.5	11.6	8.0	13.6	9.8	8.1	7.5	8.1	6.8	7.2	8.9	9.0	Diurnal Maximum	

C - Calibration M - Maintenance N - Not Valid

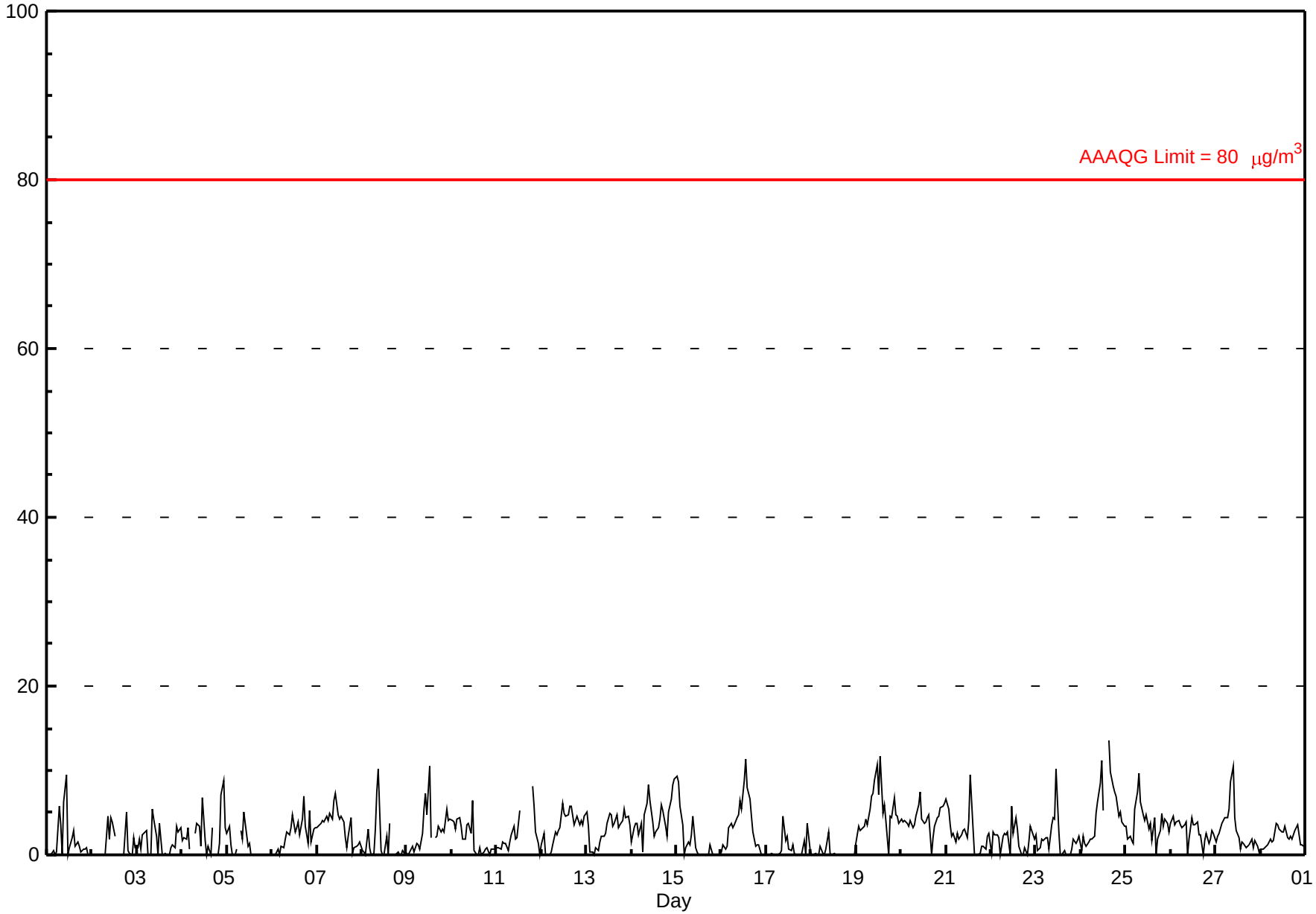
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

Peace Airshed Zone Association

Hourly Averages

PM2.5 ($PM_{2.5}$) - $\mu g/m^3$

Portable Reno - February 2014



Peace Airshed Zone Association

Hourly Maximums

PM2.5 ($PM_{2.5}$) - $\mu g/m^3$

Portable Reno - February 2014

Maximum Value: 111.3 $\mu g/m^3$ on Feb 19 14:00

Maximum Daily Average: 22.6 $\mu g/m^3$ on Feb 3

Minimum Value: 0 $\mu g/m^3$ on Feb 9 15:00

Minimum Daily Average: 3.3 $\mu g/m^3$ on Feb 18

Maximum Diurnal Average: 15.9 $\mu g/m^3$ at hour 12

Minimum Diurnal Average: 5.7 $\mu g/m^3$ at hour 18

Monthly Average: 9.45 $\mu g/m^3$

Percentiles: P_1 = 0.0 P_{10} = 3.3 Q_1 = 5.3 Median = 7.3 Q_3 = 10.8 P_{90} = 17.5 P_{99} = 38.7

Hours in Service:	672
Hours of Data:	664
Hours of Missing Data:	8
Hours of Calibration:	6
Percent Operational Time:	99.7

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	Daily Average	Daily Maximum
1-Feb	15	7	7	8	9	10	33	24	19	23	30	13	8	6	9	7	7	6	6	5	5	6	7	10	11.6	32.7
2-Feb	11	8	12	7	5	5	7	3	18	15	18	23	21	5	17	8	7	5	15	10	10	11	13	14	11.2	23.3
3-Feb	12	16	18	18	21	23	19	12	31	36	31	32	34	29	22	26	14	13	21	17	22	24	26	25	22.6	36.3
4-Feb	25	18	18	21	18	11	5	20	20	20	38	41	17	13	14	22	24	11	13	15	17	30	29	17	19.8	41.0
5-Feb	13	13	6	5	10	17	3	16	39	32	16	9	11	8	13	10	7	10	6	10	16	10	5	8	12.1	38.7
6-Feb	14	7	3	8	7	6	8	8	9	9	11	11	10	10	9	10	10	15	12	9	13	9	9	8	9.3	14.8
7-Feb	8	8	8	10	9	10	9	9	9	11	16	9	7	8	8	6	13	8	10	5	4	5	5	7	8.3	16.5
8-Feb	5	5	5	10	17	5	8	14	26	32	30	17	14	19	16	22	8	3	4	7	6	6	7	6	12.1	31.7
9-Feb	5	4	8	8	7	7	7	6	7	13	20	19	39	46	0	8	9	8	7	8	10	10	10	12	11.4	45.8
10-Feb	12	10	7	9	10	7	6	6	8	9	8	22	23	12	10	22	4	4	6	5	3	5	4	5	9.1	23.4
11-Feb	6	5	5	5	6	6	6	5	6	15	6	10	16	C	C	C	C	C	C	15	10	6	4	5	7.6	16.5
12-Feb	5	6	3	2	2	2	4	6	5	10	9	11	9	8	8	9	9	9	6	9	6	7	7	7	6.6	11.1
13-Feb	8	7	4	2	2	4	3	5	5	6	11	11	10	10	6	6	8	7	6	7	9	7	7	7	6.6	10.9
14-Feb	5	6	8	11	7	8	12	12	11	14	14	8	9	5	6	9	9	8	6	5	7	9	10	11	8.7	13.8
15-Feb	12	13	9	12	6	5	4	3	5	12	6	2	0	1	1	0	1	1	4	2	0	0	1	1	4.3	13.3
16-Feb	2	2	3	3	9	7	6	7	7	9	10	9	12	15	11	10	7	6	3	4	5	2	3	1	6.3	14.6
17-Feb	0	1	2	3	7	6	2	4	4	13	4	5	3	3	3	1	1	0	3	4	5	2	12	2	3.8	13.0
18-Feb	1	3	3	2	4	4	2	3	4	10	3	1	3	0	2	3	2	1	7	8	4	3	1	6	3.3	10.0
19-Feb	4	6	5	6	7	7	7	8	10	9	22	27	9	111	10	12	14	5	7	9	10	7	7	6	13.6	111.3
20-Feb	6	6	6	7	6	6	6	6	8	13	16	8	6	6	6	7	5	3	6	6	7	7	8	8	7.2	15.6
21-Feb	9	9	7	5	6	5	6	5	6	13	15	17	14	29	10	12	11	0	3	4	7	6	8	8	9.0	29.4
22-Feb	6	11	12	8	6	6	7	6	6	8	10	12	8	16	31	29	12	2	5	2	6	7	7	6	9.6	31.0
23-Feb	6	5	5	6	5	8	5	4	13	13	11	36	8	10	12	8	4	2	3	6	6	7	6	8	8.2	36.1
24-Feb	6	7	4	5	7	5	5	7	11	12	16	66	42	M	M	21	14	12	11	10	8	8	7	7	13.2	65.6
25-Feb	7	6	9	7	9	10	13	14	10	8	7	8	6	10	9	12	7	5	6	8	6	8	7	7	8.2	13.8
26-Feb	8	8	6	7	7	7	6	8	10	4	5	10	17	14	12	8	6	3	5	4	4	4	5	5	7.3	16.8
27-Feb	4	7	6	6	8	7	7	8	35	27	10	6	6	7	4	4	4	4	4	4	3	5	5	4	7.7	34.7
28-Feb	4	5	4	6	5	6	4	5	7	8	8	6	6	9	5	6	5	5	7	6	8	5	5	5	6.0	8.9
	7.9	7.5	6.9	7.4	7.9	7.5	7.5	8.4	12.4	14.3	14.3	15.9	13.2	15.8	9.7	11.1	8.3	5.7	7.1	7.3	7.8	7.7	8.0	7.7	Diurnal Average	
	25.2	18.1	18.3	20.8	20.9	22.8	32.7	23.6	38.7	36.3	38.4	65.6	42.0	111.3	31.0	29.0	24.2	14.8	20.6	17.4	22.3	29.5	28.8	25.4	Diurnal Maximum	

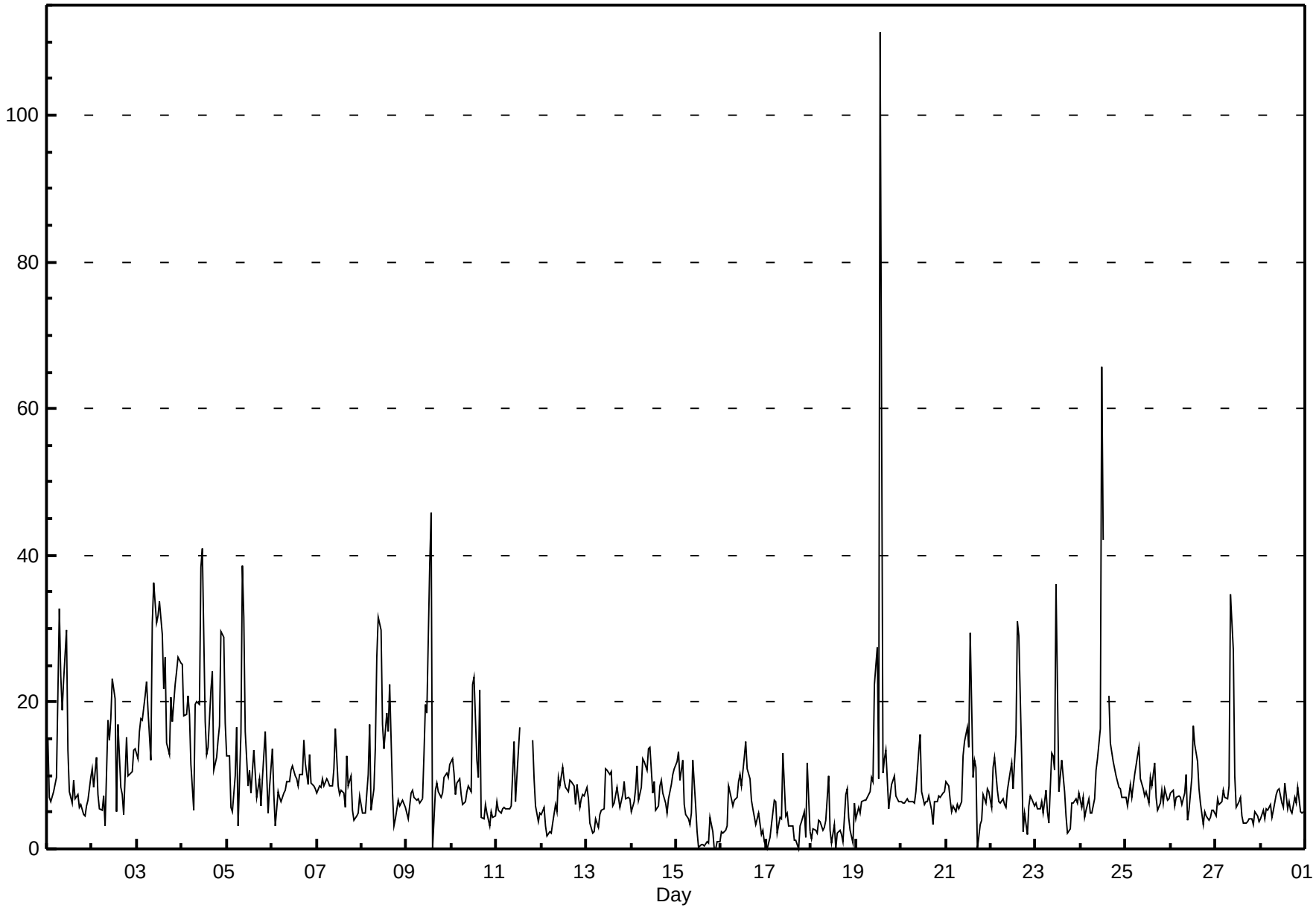
C - Calibration M - Maintenance

Peace Airshed Zone Association

Hourly Maximums

PM2.5 ($PM_{2.5}$) - $\mu g/m^3$

Portable Reno - February 2014



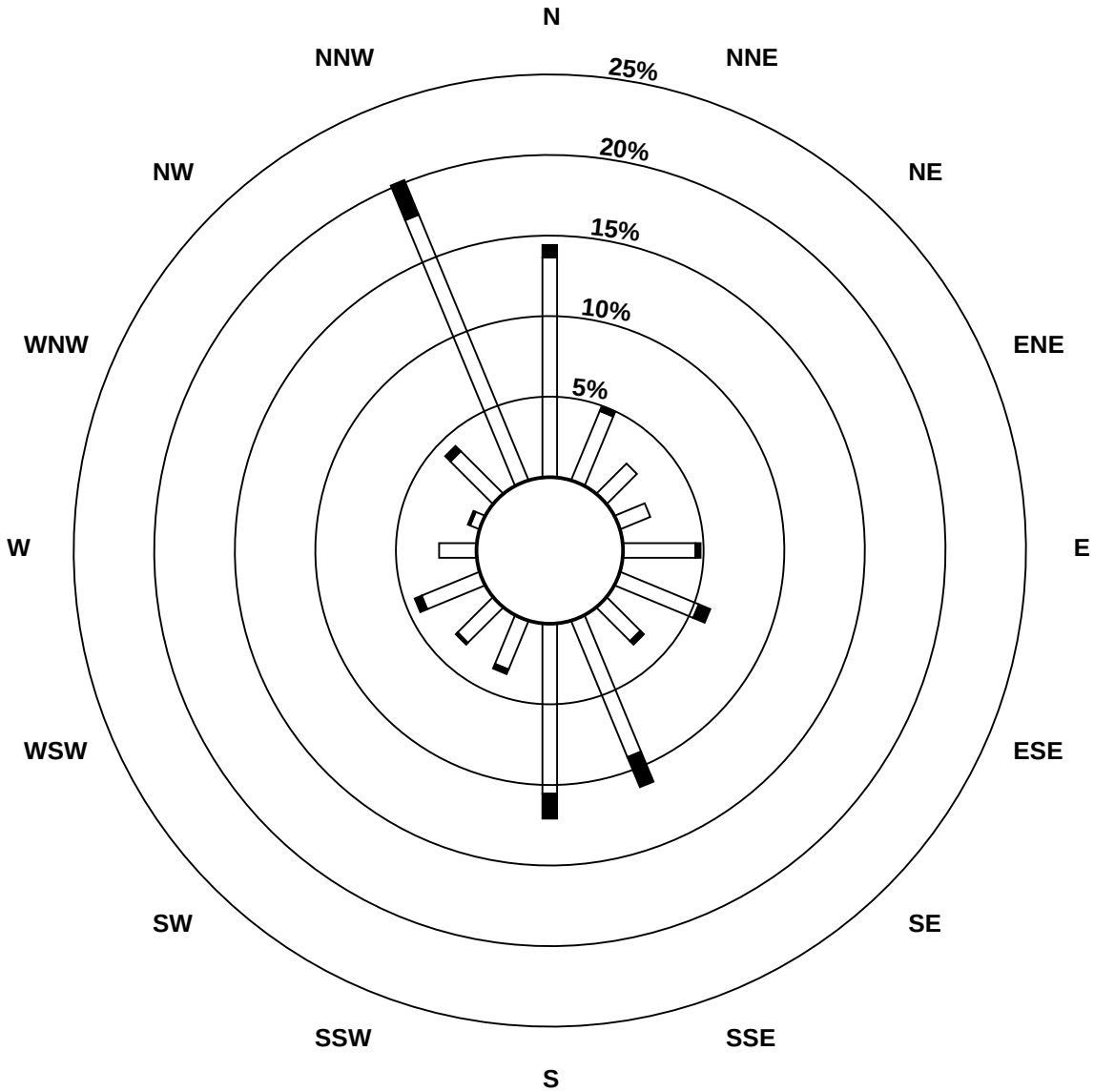
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

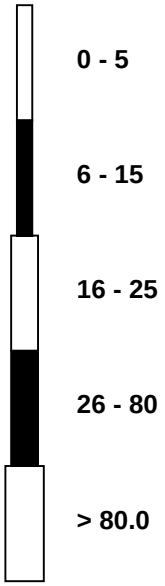
Pollutant Rose

PM2.5 ($PM_{2.5}$) - $\mu g/m^3$

Portable Reno - February 2014



Pollutant Classes ($\mu g/m^3$)



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Portable Reno - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: -0.7 ^{o}C on Feb 17 15:00

Maximum Daily Average: -4.8 ^{o}C on Feb 15

Minimum Value: -32 ^{o}C on Feb 28 08:00

Maximum Diurnal Average: -13.8 ^{o}C at hour 15

Monthly Average: -17.11 ^{o}C

Minimum Daily Average: -27.3 ^{o}C on Feb 28

Minimum Diurnal Average: -19.9 ^{o}C at hour 8

Percentiles: P_1 = -29.7 P_{10} = -26.2 Q_1 = -22.5 Median = -18.0 Q_3 = -12.6 P_{90} = -6.0 P_{99} = -2.1

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

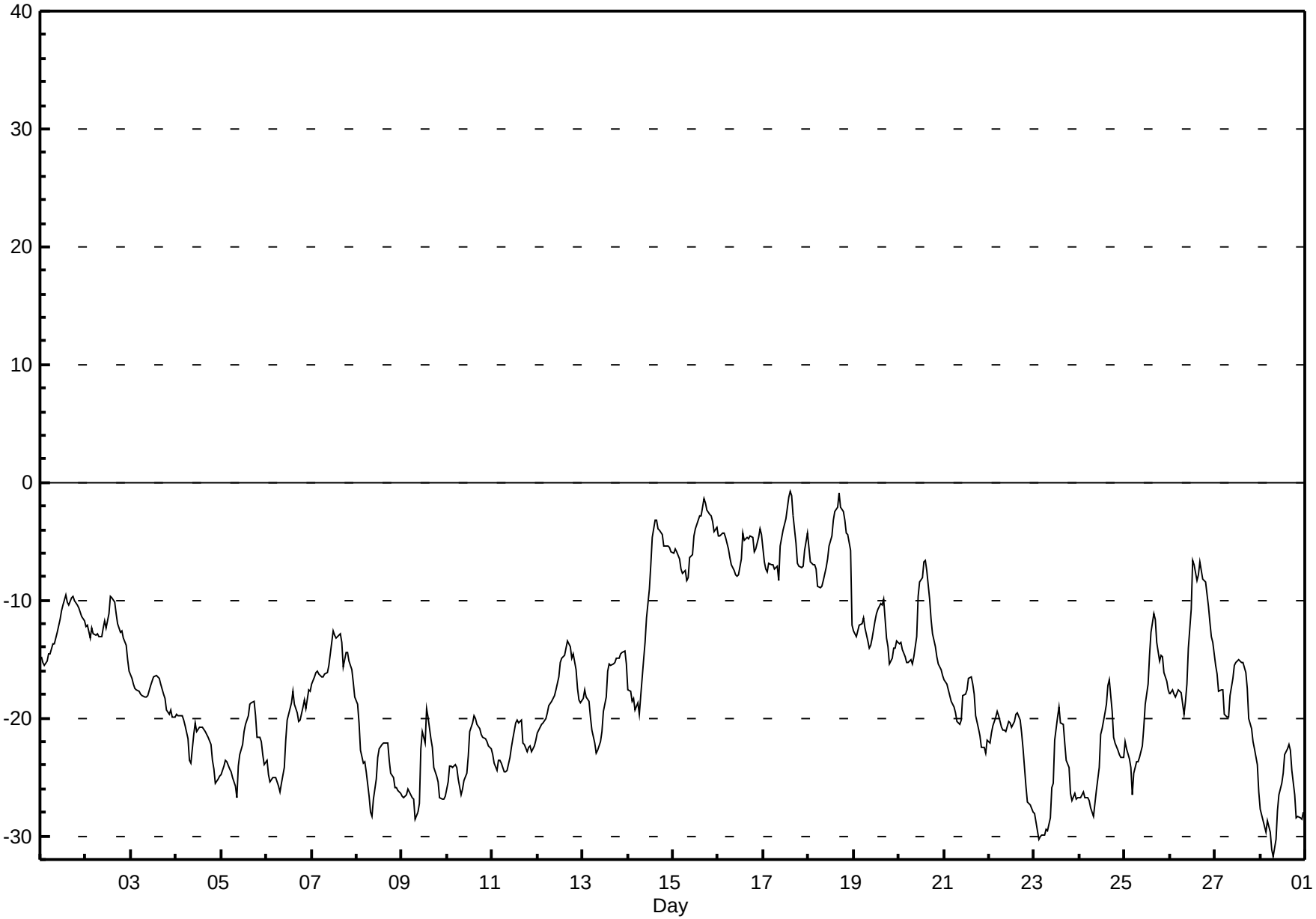
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-15	-15	-16	-15	-15	-15	-14	-14	-13	-13	-12	-11	-10	-10	-10	-10	-10	-10	-10	-10	-11	-11	-11	-12	-12.1	-9.6
2-Feb	-12	-12	-13	-12	-13	-13	-13	-13	-13	-12	-12	-12	-11	-10	-10	-10	-11	-12	-13	-13	-13	-14	-15	-16	-12.4	-9.7
3-Feb	-17	-17	-17	-18	-18	-18	-18	-18	-18	-18	-17	-17	-17	-16	-16	-17	-17	-18	-18	-19	-20	-19	-20	-20	-17.9	-16.3
4-Feb	-20	-20	-20	-20	-20	-21	-22	-24	-24	-21	-20	-21	-21	-21	-21	-21	-21	-22	-22	-24	-24	-25	-25	-25	-21.8	-19.6
5-Feb	-25	-24	-24	-24	-24	-25	-25	-26	-27	-24	-23	-22	-21	-20	-20	-19	-19	-19	-20	-22	-22	-22	-23	-24	-22.6	-18.6
6-Feb	-24	-25	-25	-25	-25	-25	-26	-26	-26	-24	-22	-20	-19	-19	-18	-19	-19	-20	-20	-19	-18	-19	-18	-18	-21.6	-17.6
7-Feb	-17	-17	-16	-16	-16	-16	-17	-16	-16	-16	-15	-13	-13	-13	-13	-13	-14	-16	-14	-14	-15	-16	-17	-18	-15.3	-12.5
8-Feb	-19	-20	-23	-24	-24	-25	-27	-28	-28	-27	-25	-23	-23	-22	-22	-22	-22	-24	-25	-25	-26	-26	-26	-26	-24.2	-18.8
9-Feb	-27	-27	-27	-26	-26	-27	-27	-29	-28	-27	-23	-21	-22	-19	-20	-22	-22	-24	-25	-25	-27	-27	-27	-27	-25.0	-19.2
10-Feb	-25	-24	-24	-24	-24	-24	-25	-26	-26	-25	-25	-23	-21	-20	-20	-20	-21	-21	-21	-22	-22	-22	-22	-23	-23.0	-19.8
11-Feb	-23	-24	-24	-24	-24	-24	-25	-25	-24	-23	-22	-22	-20	-20	-20	-20	-22	-22	-23	-22	-22	-23	-22	-22	-22.7	-20.1
12-Feb	-21	-21	-21	-20	-20	-20	-19	-19	-18	-18	-18	-16	-15	-15	-15	-14	-14	-14	-15	-15	-16	-17	-18	-19	-17.4	-13.5
13-Feb	-18	-18	-18	-19	-20	-21	-22	-23	-23	-22	-21	-19	-18	-16	-15	-16	-15	-15	-15	-15	-15	-14	-14	-15	-17.9	-14.3
14-Feb	-18	-18	-19	-18	-19	-19	-20	-18	-15	-14	-11	-9	-7	-5	-3	-3	-4	-4	-4	-5	-5	-5	-6	-6	-10.6	-3.1
15-Feb	-6	-6	-6	-6	-7	-8	-7	-8	-8	-6	-6	-5	-4	-3	-3	-3	-1	-2	-2	-3	-3	-3	-4	-4	-4.8	-1.4
16-Feb	-4	-4	-4	-4	-5	-6	-6	-7	-8	-8	-8	-8	-6	-4	-5	-5	-5	-4	-5	-6	-6	-5	-4	-4	-5.5	-3.9
17-Feb	-7	-7	-8	-7	-7	-7	-7	-7	-8	-5	-4	-4	-3	-1	-1	-1	-3	-5	-7	-7	-7	-7	-6	-4	-5.4	-0.7
18-Feb	-6	-7	-7	-7	-7	-9	-9	-9	-8	-7	-7	-5	-5	-3	-2	-2	-1	-2	-3	-3	-4	-4	-6	-12	-5.6	-0.9
19-Feb	-13	-13	-13	-12	-12	-11	-12	-13	-14	-14	-13	-12	-11	-11	-10	-10	-10	-13	-14	-15	-15	-14	-14	-13	-12.7	-9.9
20-Feb	-14	-14	-14	-15	-15	-15	-15	-15	-15	-13	-10	-8	-8	-7	-7	-7	-10	-12	-13	-14	-15	-15	-16	-16	-12.6	-6.6
21-Feb	-17	-17	-18	-18	-19	-19	-20	-20	-21	-20	-18	-18	-18	-17	-16	-17	-18	-20	-21	-22	-23	-22	-23	-22	-19.2	-16.5
22-Feb	-22	-21	-21	-20	-19	-20	-21	-21	-21	-21	-20	-20	-21	-20	-20	-20	-20	-21	-23	-26	-27	-27	-27	-28	-22.0	-19.4
23-Feb	-28	-29	-30	-30	-30	-30	-29	-30	-28	-26	-26	-22	-20	-19	-20	-20	-22	-24	-24	-26	-27	-26	-27	-27	-25.9	-19.0
24-Feb	-27	-27	-26	-27	-27	-27	-28	-28	-27	-26	-24	-21	-21	-20	-19	-17	-17	-19	-22	-22	-23	-23	-23	-23	-23.5	-16.7
25-Feb	-22	-23	-24	-24	-27	-25	-24	-24	-23	-22	-21	-19	-17	-15	-13	-11	-12	-14	-15	-15	-15	-16	-17	-18	-18.8	-11.2
26-Feb	-18	-18	-18	-18	-18	-18	-18	-20	-19	-17	-14	-11	-7	-7	-8	-8	-7	-8	-8	-8	-10	-12	-13	-14	-13.1	-6.7
27-Feb	-15	-16	-18	-18	-18	-20	-20	-20	-18	-17	-16	-15	-15	-15	-15	-15	-16	-18	-20	-21	-22	-23	-24	-26	-18.3	-15.0
28-Feb	-28	-29	-29	-30	-29	-30	-31	-32	-30	-28	-26	-26	-25	-23	-23	-22	-23	-24	-26	-28	-28	-28	-29	-28	-27.3	-22.3
	-18.1	-18.2	-18.6	-18.6	-18.8	-19.1	-19.5	-19.9	-19.6	-18.4	-17.1	-15.9	-15.0	-14.0	-13.8	-13.8	-14.1	-15.2	-16.0	-16.7	-17.1	-17.5	-17.8	-18.2	Diurnal Average	
	-4.5	-4.5	-4.3	-4.3	-4.6	-5.7	-6.4	-7.0	-7.5	-5.5	-4.0	-3.5	-3.1	-1.2	-0.7	-1.1	-0.9	-1.8	-2.4	-2.7	-2.8	-3.4	-3.9	-3.8	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Portable Reno - February 2014



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Portable Reno - February 2014

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1 Spd	10	9	7	7	8	7	9	9	9	9	8	10	7	7	7	7	10	9	8	10	11	10	11	9	2.7	10.8
Dir	177	177	172	167	173	171	161	162	168	177	196	244	247	244	254	274	311	358	351	336	337	339	332	331	236.9	336.9
2 Spd	8	13	16	15	13	13	13	9	3	4	1	7	5	7	13	12	11	11	10	8	8	10	11	10	7.5	15.8
Dir	278	263	268	277	267	280	283	298	323	345	261	242	239	298	328	332	334	331	333	2	8	355	2	358	307.0	268.3
3 Spd	10	9	16	14	16	18	17	16	19	16	17	18	16	14	16	13	13	11	10	6	8	8	6	8	12.9	19.4
Dir	356	351	334	335	323	326	322	314	320	318	326	327	333	336	338	338	335	336	339	344	344	344	342	332	331.5	319.8
4 Spd	9	8	8	6	6	4	5	3	3	6	4	4	7	8	4	2	0	2	3	5	5	6	7	8	2.0	9.4
Dir	332	333	327	345	6	349	343	350	348	321	342	332	327	336	342	9	61	147	153	153	160	169	167	162	336.9	332.4
5 Spd	9	9	10	10	10	9	9	9	9	6	10	11	10	10	10	11	12	12	12	14	14	15	10	11	10.2	14.5
Dir	151	154	161	164	168	163	180	167	175	184	187	190	182	197	179	203	205	201	200	212	205	201	186	185	185.5	201.0
6 Spd	12	12	11	12	11	13	12	12	13	11	9	11	12	10	10	9	9	11	10	9	8	7	4	3	9.4	12.6
Dir	191	178	172	176	183	187	176	175	184	180	176	207	232	235	220	175	177	168	171	172	169	174	183	103	184.5	186.9
7 Spd	2	3	1	2	3	3	2	1	3	2	2	2	4	3	3	6	7	6	8	6	9	13	9	7	3.7	13.0
Dir	108	109	298	221	250	270	288	359	35	314	341	339	341	351	1	341	332	341	340	351	333	330	351	351	338.4	330.0
8 Spd	10	14	13	6	1	3	9	5	2	2	3	4	5	4	4	4	3	0	4	9	6	8	3	0	4.0	14.1
Dir	353	30	58	72	20	13	73	51	333	5	4	335	342	5	16	10	284	138	45	78	93	90	115	78	39.7	29.9
9 Spd	3	2	4	8	4	4	5	1	3	3	3	6	9	5	4	4	3	2	1	2	3	1	4	2	1.6	9.4
Dir	19	44	105	106	112	120	122	96	66	117	140	192	175	195	339	1	351	24	118	134	234	2	38	16	111.3	175.5
10 Spd	3	3	2	2	3	2	3	2	2	2	3	4	5	5	5	6	6	5	6	5	7	8	6	6	4.0	7.5
Dir	23	25	352	320	318	330	339	13	10	13	5	337	334	355	360	340	343	351	1	346	3	3	3	1	354.0	2.7
11 Spd	5	7	8	8	8	5	4	5	4	6	7	6	4	2	3	1	4	2	4	6	9	11	14	15	2.6	14.9
Dir	346	335	340	339	340	347	348	313	310	321	323	326	336	349	24	21	50	204	143	95	102	105	100	110	23.9	109.9
12 Spd	21	23	23	22	20	14	12	14	21	20	20	19	17	18	18	14	11	7	9	4	0	3	3	1	12.1	23.3
Dir	97	96	98	96	92	97	101	107	115	120	127	133	155	165	164	164	163	136	116	131	136	6	0	2	119.4	96.1
13 Spd	0	3	4	3	4	4	2	2	3	3	2	5	7	5	5	5	4	3	3	1	2	2	3	3	3.0	6.6
Dir	134	346	340	342	336	338	350	355	18	352	7	354	333	322	343	345	334	3	359	9	256	358	358	6	345.8	333.3
14 Spd	3	6	7	6	7	9	8	14	20	22	22	20	21	22	22	21	24	25	27	25	21	21	21	24	16.3	26.7
Dir	80	141	157	133	106	105	140	130	111	105	108	111	114	111	110	107	114	108	114	131	149	151	160	163	123.0	113.8
15 Spd	24	21	20	22	20	17	19	17	11	8	9	9	12	12	12	13	10	8	12	15	19	22	25	26	10.8	25.8
Dir	163	178	190	200	208	212	232	233	212	189	164	166	168	169	164	151	142	119	102	100	96	93	91	95	158.9	94.8
16 Spd	29	30	32	30	29	17	18	15	14	15	14	20	16	12	12	11	11	11	9	7	10	16	16	12	9.8	31.9
Dir	93	92	92	94	100	117	114	120	128	147	152	160	173	235	251	251	251	245	215	170	169	220	227	195	140.5	92.0
17 Spd	12	15	14	15	14	14	14	12	14	16	15	12	14	9	10	12	8	10	11	10	15	17	19	19	11.0	19.5
Dir	174	169	184	169	170	174	169	197	219	229	236	241	244	260	275	280	258	249	242	223	243	243	243	243	221.3	243.5
18 Spd	19	18	19	18	16	10	7	9	5	6	8	9	13	11	14	15	10	6	9	13	16	19	15	6	6.2	19.1
Dir	236	237	232	231	228	236	247	245	237	183	174	175	172	164	163	160	136	137	109	96	91	90	71	356	180.7	231.7
19 Spd	8	8	7	7	4	8	14	10	9	6	8	7	8	4	5	2	2	5	7	1	3	3	4	6	5.3	14.5
Dir	347	348	341	337	353	341	329	332	341	357	331	324	316	351	270	347	48	43	57	277	345	339	40	51	346.0	329.0
20 Spd	3	4	4	5	5	6	4	6	5	6	11	6	6	6	6	9	12	9	9	12	12	11	10	9	6.6	12.2
Dir	345	7	2	33	24	26	48	355	355	27	83	15	356	1	346	358	338	346	350	343	343	347	349	346	359.9	338.3
21 Spd	10	11	14	13	11	11	13	9	6	5	5	9	10	7	4	3	3	1	2	4	2	4	7	7	4.7	14.3
Dir	342	342	336	339	342	341	337	343	352	354	340	321	326	333	3	18	29	183	160	163	141	166	162	164	340.8	336.1
22 Spd	7	4	7	5	3	7	7	6	8	6	9	14	19	13	8	7	6	7	7	4	3	3	3	3	4.7	18.7
Dir	152	150	176	172	185	321	338	345	0	356	339	335	328	333	341	350	354	2	6	6	353	18	6	8	344.6	328.5

FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Portable Reno - February 2014

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	Daily Average	Daily Maximum
23 Spd	3	1	0	1	2	3	3	3	2	4	4	2	2	4	9	8	5	6	7	12	11	13	14	16	4.1	16.1
Dir	18	5	195	312	15	24	45	47	75	161	178	184	173	232	213	212	181	163	138	161	160	162	166	165	166.6	165.3
24 Spd	17	12	13	12	11	12	10	12	12	12	13	9	8	6	5	3	0	2	1	1	4	3	6	10	5.6	16.9
Dir	165	171	186	179	180	187	179	180	181	182	179	212	245	243	253	244	184	17	301	355	37	28	54	64	182.4	164.9
25 Spd	8	6	6	10	15	15	16	18	22	22	21	17	15	14	16	10	8	10	11	8	9	9	9	9	11.6	22.3
Dir	76	93	138	153	161	153	154	154	161	162	164	164	167	172	168	177	182	172	183	201	203	202	215	196	166.7	162.0
26 Spd	8	8	10	12	11	9	9	5	5	13	18	17	9	6	5	6	5	1	2	3	3	2	5	3	4.2	17.9
Dir	179	175	165	168	168	163	157	119	133	167	170	171	178	345	4	28	336	55	102	62	346	9	20	30	156.9	170.5
27 Spd	2	4	4	4	4	6	6	8	10	8	14	17	14	15	11	11	12	13	14	12	9	9	7	5	8.0	17.3
Dir	162	27	184	206	266	346	351	342	328	335	339	342	350	343	348	346	345	341	337	340	3	7	10	10	344.4	342.5
28 Spd	4	4	2	1	3	3	3	6	10	6	5	8	7	5	6	5	5	3	1	4	6	11	14	16	3.8	15.8
Dir	355	350	16	326	329	0	5	26	31	15	359	324	333	349	332	332	343	354	231	38	50	89	96	96	24.0	96.4
Spd	2.3	2.1	2.2	2.7	2.4	1.2	1.2	1.2	1.6	2.4	2.5	2.1	2.2	1.7	1.3	0.9	0.9	0.5	1.3	1.8	1.4	1.5	1.9	2.2	Diurnal Average	
Dir	131.2	126.1	156.4	159.1	169.4	184.8	174.3	171.0	144.9	158.1	160.5	213.8	236.0	263.8	260.0	287.9	314.8	37.6	91.3	109.8	106.5	108.1	97.5	114.0		
Spd	29.0	30.2	31.9	30.3	29.2	18.4	19.2	18.2	22.0	22.3	22.2	20.2	21.3	22.4	21.8	21.2	23.8	24.8	26.7	25.2	20.7	22.1	25.2	25.8	Diurnal Maximum	
Dir	92.5	91.7	92.0	94.2	99.9	326.2	232.5	154.1	161.0	162.0	107.7	111.4	113.6	110.8	109.9	106.8	114.5	108.3	113.8	130.8	148.8	93.0	91.4	94.8		

Maximum Speed Value: 32 km/h on Feb 16 03:00
Maximum Daily Speed Average: 16.3 km/h on Feb 14
Maximum Diurnal Speed Average: 2.7 km/h at hour 4

Minimum Speed Value: 0 km/h on Feb 12 21:00
Minimum Daily Speed Average: 1.6 km/h on Feb 13
Minimum Diurnal Speed Average: 0.5 km/h at hour 18

Monthly Average Velocity: 1.09 km/h 154.98 deg

Speed Percentiles: $P_1 = 0.5$ $P_{10} = 2.5$ $Q_1 = 4.3$ Median = 8.0 $Q_3 = 12.0$ $P_{90} = 16.8$ $P_{99} = 25.6$

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

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Percent Operational Time:	100.0

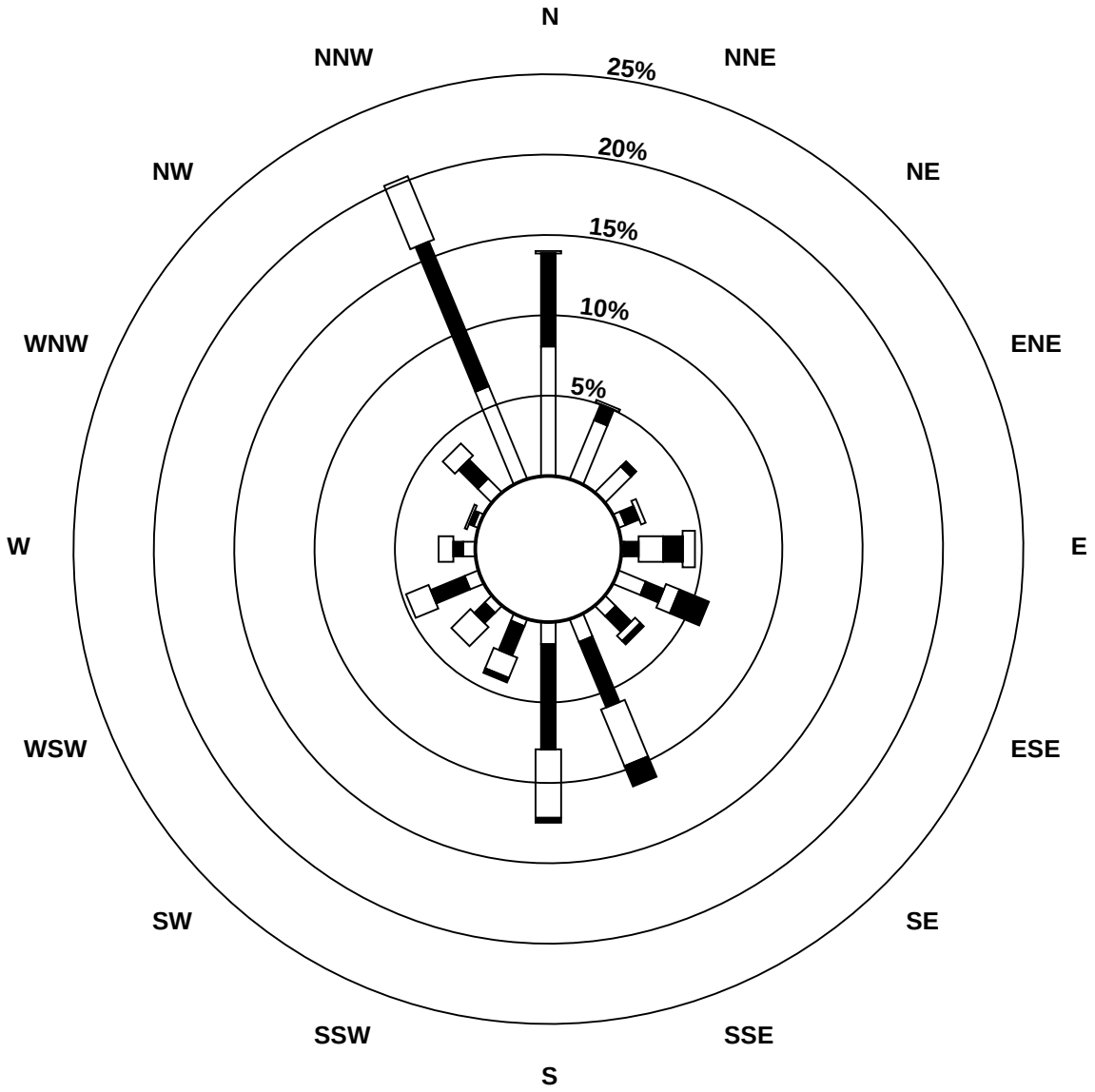
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	93	81	18	0	0	0	192
NorthEast	28	11	2	0	0	0	41
East	10	16	14	16	5	0	61
SouthEast	17	19	12	10	0	0	58
South	15	68	58	10	0	0	151
SouthWest	8	21	24	4	0	0	57
West	9	9	9	0	0	0	27
NorthWest	19	40	25	1	0	0	85
Total	199	265	162	41	5	0	672

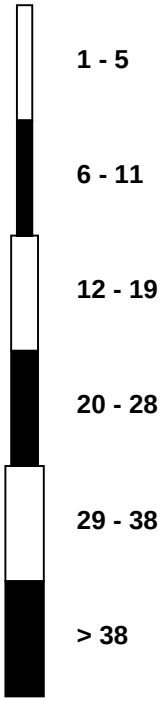
Wind Rose

Wind Speed (WS) (km/h)

Portable Reno - February 2014



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Portable Reno - February 2014

Maximum Speed: 32 km/h on Feb 16 03:00

Maximum Daily Speed Average: 17.6 km/h on Feb 14

Minimum Speed: 0 km/h on Feb 12 21:00

Minimum Daily Speed Average: 3.4 km/h on Feb 13

Maximum Diurnal Speed Average: 10.4 km/h at hour 3

Minimum Diurnal Speed Average: 7.4 km/h at hour 18

Monthly Average Speed: 9.12 km/h

Percentiles: $P_1 = 1.1$ $P_{10} = 2.9$ $Q_1 = 4.5$ Median = 8.1 $Q_3 = 12.1$ $P_{90} = 16.8$ $P_{99} = 25.6$

Hours in Service: 672

Hours of Data: 672

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Feb	10	9	7	7	8	7	9	9	9	9	9	10	7	8	7	7	10	9	8	10	11	10	11	9	8.8	10.9
2-Feb	8	13	16	15	13	13	13	9	3	4	3	7	5	7	13	12	11	11	10	8	8	10	11	10	9.8	16.0
3-Feb	10	10	16	14	16	18	17	16	19	16	17	18	16	14	16	13	13	11	10	6	8	8	6	8	13.2	19.4
4-Feb	9	8	8	6	6	4	5	3	3	6	4	4	7	8	5	2	1	2	3	5	5	7	7	8	5.3	9.5
5-Feb	9	9	10	10	10	9	9	10	9	7	10	11	10	11	11	11	12	12	12	14	14	15	10	11	10.7	14.5
6-Feb	12	12	11	12	11	13	12	12	13	11	9	12	12	10	10	9	9	11	10	9	8	7	5	3	10.1	12.7
7-Feb	2	4	3	3	5	3	2	1	3	2	2	3	4	4	3	6	7	6	9	6	10	13	9	8	4.9	13.2
8-Feb	11	14	13	6	3	4	9	6	3	3	4	5	5	4	4	4	4	1	4	9	6	8	4	1	5.7	14.1
9-Feb	3	2	4	8	4	4	5	1	4	3	3	6	9	6	4	4	3	2	2	2	3	2	4	2	3.9	9.5
10-Feb	3	3	2	2	3	3	3	2	2	2	3	4	5	6	5	6	6	5	6	5	7	8	6	6	4.3	7.6
11-Feb	5	7	9	8	8	5	4	5	4	6	7	6	4	3	3	2	4	2	4	6	9	11	14	15	6.3	15.0
12-Feb	21	23	23	22	20	14	12	14	21	20	20	19	17	19	18	14	11	7	9	4	0	3	3	1	14.0	23.4
13-Feb	1	3	4	3	4	4	2	2	3	3	3	6	7	5	5	5	5	4	3	2	2	2	3	3	3.4	6.7
14-Feb	5	6	7	7	7	9	9	15	20	22	22	20	21	23	22	21	24	25	27	25	21	21	21	24	17.6	26.9
15-Feb	24	21	20	22	20	18	19	17	11	9	9	9	12	12	12	13	10	8	12	15	19	22	25	26	16.0	25.8
16-Feb	29	30	32	30	30	17	18	15	15	15	14	20	16	12	12	11	11	11	9	7	10	17	16	12	17.1	31.9
17-Feb	13	15	14	15	14	14	14	12	14	17	15	12	14	9	10	13	8	10	11	10	15	17	19	19	13.5	19.5
18-Feb	19	18	19	18	16	10	8	9	5	7	8	9	13	11	14	15	10	6	9	13	16	19	17	7	12.3	19.1
19-Feb	8	8	8	7	4	8	15	10	9	6	9	7	8	4	5	2	3	5	7	4	4	4	5	7	6.6	14.5
20-Feb	4	4	6	6	5	7	5	6	5	8	11	7	6	7	6	9	12	9	9	12	12	11	10	9	7.8	12.4
21-Feb	11	11	14	13	11	11	13	9	6	5	5	9	10	7	4	4	4	2	2	4	3	4	7	7	7.4	14.4
22-Feb	7	4	7	5	3	8	7	6	8	6	10	14	19	13	8	7	6	7	7	4	4	3	3	3	7.1	18.7
23-Feb	3	2	0	1	2	3	3	3	2	5	4	2	2	4	9	8	5	6	7	12	11	13	14	16	5.8	16.1
24-Feb	17	12	13	12	12	12	10	12	12	12	13	10	8	6	5	4	1	3	1	2	4	3	6	10	8.2	16.9
25-Feb	8	6	7	10	15	15	16	18	22	22	21	17	15	14	16	10	8	10	11	8	9	9	9	9	12.7	22.4
26-Feb	8	8	10	12	11	9	9	6	6	13	18	17	10	6	5	6	5	2	3	3	3	2	5	3	7.5	18.0
27-Feb	3	6	4	4	5	6	6	8	10	8	14	17	14	15	12	11	12	13	14	12	9	9	7	5	9.3	17.5
28-Feb	4	4	3	2	3	4	3	6	10	6	5	8	7	5	6	5	5	3	2	4	6	11	14	16	6.0	15.8
	9.6	9.6	10.4	10.0	9.7	9.0	9.3	8.7	9.0	9.0	9.8	10.3	10.1	9.0	8.9	8.4	8.0	7.4	8.0	7.9	8.4	9.5	9.8	9.2	Diurnal Average	
	29.0	30.2	31.9	30.3	29.9	18.4	19.2	18.3	22.1	22.4	22.3	20.3	21.4	22.5	21.9	21.3	24.0	24.9	26.9	25.4	20.8	22.1	25.2	25.8	Diurnal Maximum	

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

Peace Airshed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Portable Reno - February 2014

Maximum Value: 90.4 deg on Feb 24 19:00

Minimum Value: 1.6 deg on Feb 23 23:00

Percentiles: P_1 = 2.3 P_{10} = 3.8 Q_1 = 5.7 Median = 9.3 Q_3 = 16.2 P_{90} = 33.7 P_{99} = 79.6

Hours in Service:	672
Hours of Data:	672
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-Feb	6	6	4	8	5	5	9	9	10	5	15	15	14	13	12	12	15	16	15	6	7	8	9	16	16.0
2-Feb	15	6	10	5	7	4	6	12	77	22	89	8	17	32	4	7	8	6	19	11	9	13	14	12	89.5
3-Feb	12	12	7	7	4	3	4	4	5	5	4	5	8	9	8	7	9	7	9	9	8	8	8	10	12.2
4-Feb	5	6	8	21	8	14	11	18	25	9	12	23	14	8	14	33	69	32	31	13	12	10	5	6	68.8
5-Feb	5	4	3	3	4	5	3	10	7	15	7	8	6	12	13	4	3	4	6	6	3	4	5	5	14.9
6-Feb	4	3	2	4	4	3	4	3	7	12	17	12	10	7	5	14	5	5	5	6	6	10	35	20	34.7
7-Feb	22	45	81	42	41	17	21	53	17	46	33	27	17	17	13	14	8	16	8	13	12	10	13	13	80.7
8-Feb	22	6	10	15	73	35	4	48	43	46	42	18	17	11	14	16	46	66	11	9	6	10	37	45	73.4
9-Feb	15	82	21	5	12	5	6	44	41	13	42	15	5	18	43	9	8	34	28	39	28	73	11	8	81.5
10-Feb	8	8	28	63	25	27	19	10	12	24	32	18	13	18	11	12	11	13	11	11	8	9	8	8	62.9
11-Feb	14	8	8	9	10	10	9	10	29	11	7	12	18	33	30	71	8	59	19	16	10	5	4	6	70.7
12-Feb	5	4	5	5	5	9	8	8	5	5	6	6	10	5	4	5	10	27	11	21	57	16	26	39	57.0
13-Feb	89	38	12	26	15	18	20	33	39	19	29	26	10	10	18	21	25	26	27	52	66	80	23	10	89.0
14-Feb	49	19	15	26	22	7	20	13	7	4	5	4	6	5	5	6	6	4	7	5	5	4	8	3	48.9
15-Feb	3	7	5	6	2	6	4	4	11	26	19	7	4	4	10	4	8	11	5	3	3	3	3	3	26.3
16-Feb	3	4	4	4	13	12	7	9	13	8	7	5	12	13	9	6	5	8	20	12	16	8	3	11	20.2
17-Feb	7	4	9	8	4	9	5	4	6	5	4	4	5	8	5	13	15	11	9	8	6	7	3	5	14.5
18-Feb	4	3	4	3	7	10	16	4	15	15	6	7	3	4	2	4	8	14	13	3	4	4	29	20	28.8
19-Feb	12	9	8	8	9	12	6	7	12	11	18	12	11	24	24	53	63	8	7	73	40	27	35	34	73.3
20-Feb	23	15	45	32	33	27	44	23	28	39	11	37	13	8	10	8	10	10	10	9	8	9	9	8	45.3
21-Feb	9	10	7	7	9	7	7	10	11	12	19	6	5	10	17	18	14	87	15	9	20	9	4	5	87.1
22-Feb	13	13	18	9	26	28	10	11	11	14	9	9	4	9	10	12	11	12	7	9	17	9	10	8	27.8
23-Feb	6	72	8	67	11	8	8	14	31	38	8	9	9	15	4	4	15	4	10	3	2	3	2	4	71.7
24-Feb	3	6	3	3	4	4	4	3	5	8	8	23	6	9	10	14	71	25	90	30	18	6	8	4	90.4
25-Feb	6	6	14	11	8	4	3	3	2	2	2	3	2	3	2	5	6	3	9	6	3	6	5	11	14.4
26-Feb	7	3	5	3	4	6	11	30	32	8	5	3	48	16	7	14	17	56	46	27	38	24	15	66	66.2
27-Feb	47	60	11	15	40	8	8	11	6	8	7	8	9	12	11	10	9	7	4	8	7	9	7	7	60.2
28-Feb	11	13	77	80	17	11	9	7	3	14	16	6	10	14	8	10	16	6	67	32	7	13	4	3	79.8
	89.0	81.5	80.7	79.8	73.4	35.2	43.6	53.1	77.3	46.3	89.5	36.6	48.0	32.5	43.0	70.7	71.1	87.1	90.4	73.3	66.5	79.8	37.1	66.2	

PAZA
Falher Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Falher - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 4.5 ppb on Feb 25 16:00

Maximum Daily Average: 1.0 ppb on Feb 16

Minimum Value: 0 ppb on Feb 1 05:00

Minimum Daily Average: 0.0 ppb on Feb 28

Maximum Diurnal Average: 0.5 ppb at hour 16

Minimum Diurnal Average: 0.2 ppb at hour 1

Monthly Average: 0.27 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.2 Q_3 = 0.3 P_{90} = 0.5 P_{99} = 2.0

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
2-Feb	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
3-Feb	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
4-Feb	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
5-Feb	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
6-Feb	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
7-Feb	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
8-Feb	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
9-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
10-Feb	0	0	0	A	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0.2	0.4
11-Feb	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
12-Feb	0	A	0	0	0	0	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	0	0	0.7	2.1
13-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.3	0.4
14-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.3
15-Feb	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	A	0	0	0.3	1.7
16-Feb	0	1	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	0	A	0	0	0	1.0	2.3
17-Feb	0	0	0	0	0	0	0	0	0	0	2	2	1	1	1	0	0	0	0	A	0	0	0	0	0.4	1.6
18-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	A	0	0	0	0	0	0.2	1.0
19-Feb	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.6
20-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.2
21-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.1
22-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.3
23-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	2	1	0	0	0	0	0.4	2.4
24-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	1	1	0	1	0	0	0	0.5	0.8
25-Feb	0	0	0	0	0	0	0	0	0	0	0	A	1	1	3	5	3	2	0	0	0	0	0	0	0.8	4.5
26-Feb	0	0	0	0	0	0	0	0	0	1	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0.4	0.8
27-Feb	0	0	0	0	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
28-Feb	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
	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	0.5	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	Diurnal Average	
	0.6	0.8	2.0	2.3	1.8	2.0	1.7	1.0	0.8	0.8	1.6	1.5	1.0	1.2	3.4	4.5	2.7	1.8	2.4	1.0	0.7	0.6	0.4	0.4	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

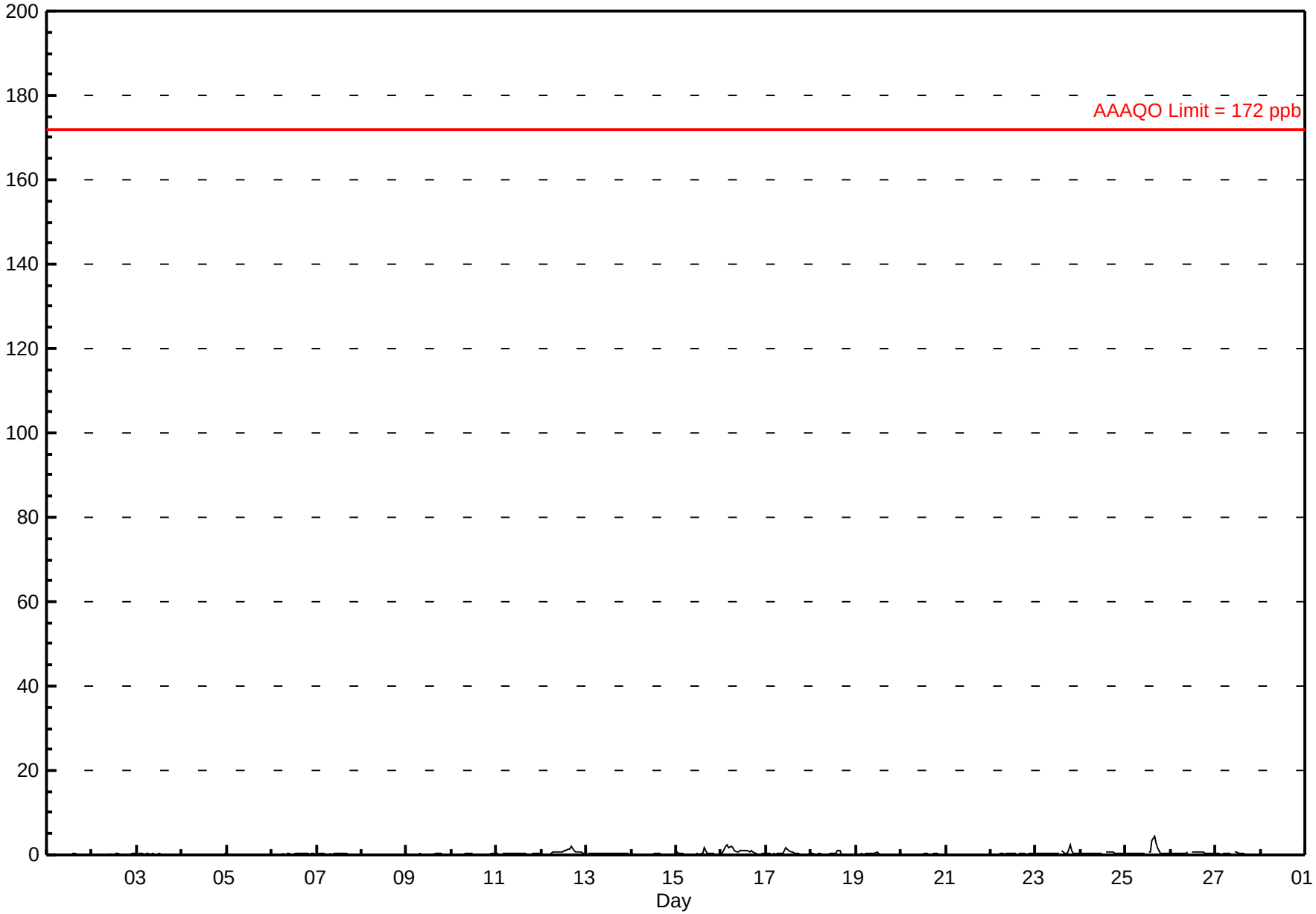
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Falher - February 2014



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Falher - February 2014

Maximum Value: 7.5 ppb on Feb 25 15:00

Maximum Daily Average: 1.7 ppb on Feb 16

Minimum Value: 0 ppb on Feb 10 17:00

Minimum Daily Average: 0.3 ppb on Feb 28

Maximum Diurnal Average: 1.3 ppb at hour 16

Minimum Diurnal Average: 0.5 ppb at hour 1

Monthly Average: 0.69 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.4$ $Q_1 = 0.4$ Median = 0.5 $Q_3 = 0.7$ $P_{90} = 1.1$ $P_{99} = 3.9$

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	0	0	0	0	0	0	0	1	0	0	0	0	A	1	1	0	0	1	0	0	0	0	0	1	0.5	0.7
2-Feb	0	0	0	0	0	1	1	1	0	1	0	A	1	1	1	1	1	0	0	0	1	1	1	1	0.5	0.6
3-Feb	0	1	1	1	1	0	1	1	1	1	A	1	1	0	0	1	0	0	1	0	0	0	0	0	0.5	0.6
4-Feb	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.4	0.5
5-Feb	0	0	0	0	0	0	0	0	A	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0.4	0.6
6-Feb	0	0	0	1	1	1	1	A	1	1	0	1	1	1	1	1	1	1	1	0	1	0	1	0	0.6	0.9
7-Feb	1	1	1	0	1	1	A	0	0	1	1	1	1	1	1	1	1	0	0	0	1	0	1	0	0.6	0.8
8-Feb	1	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	1	0.4	0.8
9-Feb	0	0	1	0	A	0	0	2	1	0	0	0	0	0	0	1	1	1	1	0	1	0	1	1	0.6	1.8
10-Feb	0	1	0	A	0	1	1	0	1	1	1	1	C	C	C	0	0	0	0	0	0	1	1	1	0.5	0.8
11-Feb	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	0	0	0.6	0.8
12-Feb	1	A	0	0	0	1	1	1	1	1	1	1	2	2	2	2	5	1	1	1	1	1	1	1	1.3	4.6
13-Feb	A	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.7	0.9
14-Feb	1	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	0	1	0	1	A	1	0.5	0.8
15-Feb	1	1	1	1	0	0	1	1	0	0	1	1	1	0	1	5	1	1	1	1	1	A	1	1	0.8	5.5
16-Feb	1	2	3	3	2	2	2	2	1	2	2	2	2	1	2	2	1	1	1	1	A	1	1	1	1.7	3.1
17-Feb	1	1	1	1	1	0	1	1	1	1	2	2	2	1	1	1	1	1	1	A	1	0	0	1	0.8	2.2
18-Feb	1	1	1	1	1	1	1	1	1	0	1	1	1	1	2	6	1	1	A	0	0	0	1	1	0.9	6.0
19-Feb	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	A	1	0	0	0	0	0	0.6	1.1
20-Feb	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	1	A	1	0	1	0	0	1	1	0.5	0.6
21-Feb	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.4	0.6
22-Feb	0	0	1	0	0	1	1	0	1	1	1	1	1	1	A	1	1	1	0	0	1	1	1	1	0.5	0.7
23-Feb	1	1	0	1	1	1	1	1	1	1	1	1	0	A	2	1	1	2	6	2	1	1	1	1	1.0	5.5
24-Feb	1	1	1	1	1	1	1	1	1	1	1	1	A	1	2	1	1	1	1	1	1	1	1	1	0.9	1.6
25-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	1	7	7	4	3	1	1	1	1	1	1	1.5	7.5
26-Feb	1	1	1	1	0	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.4
27-Feb	0	1	1	0	1	0	1	1	1	A	1	1	1	1	1	0	1	0	0	0	1	0	0	0	0.6	1.4
28-Feb	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.7	0.7	0.8	0.8	0.7	1.1	1.3	0.9	0.8	0.8	0.6	0.6	0.6	0.6	0.6	Diurnal Average	
	1.1	1.9	2.9	3.1	2.3	2.4	2.3	1.8	1.3	1.7	2.2	2.0	1.9	1.7	7.5	7.2	4.6	3.0	5.5	1.8	1.2	1.4	0.9	1.0	Diurnal Maximum	

C - Calibration

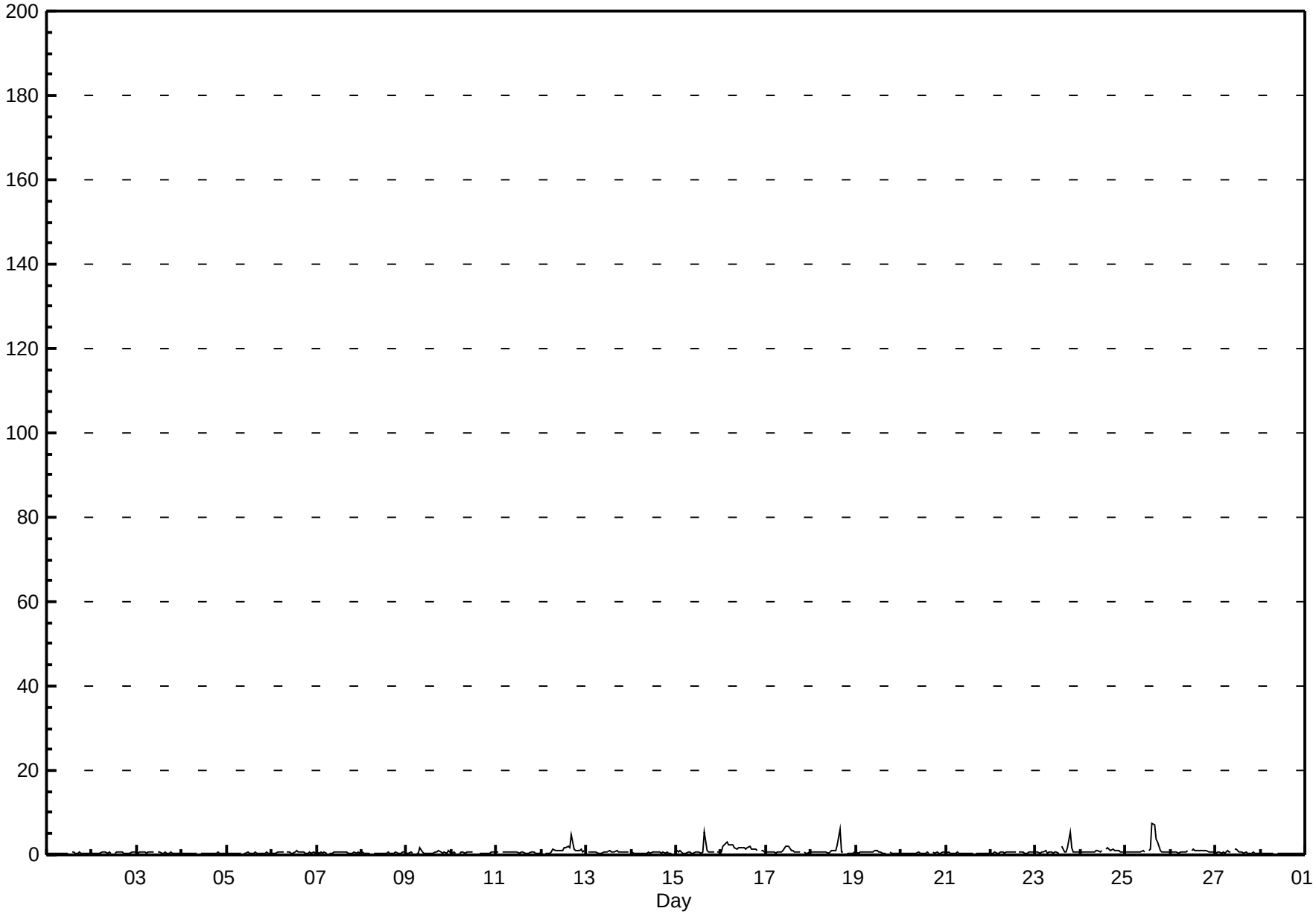
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

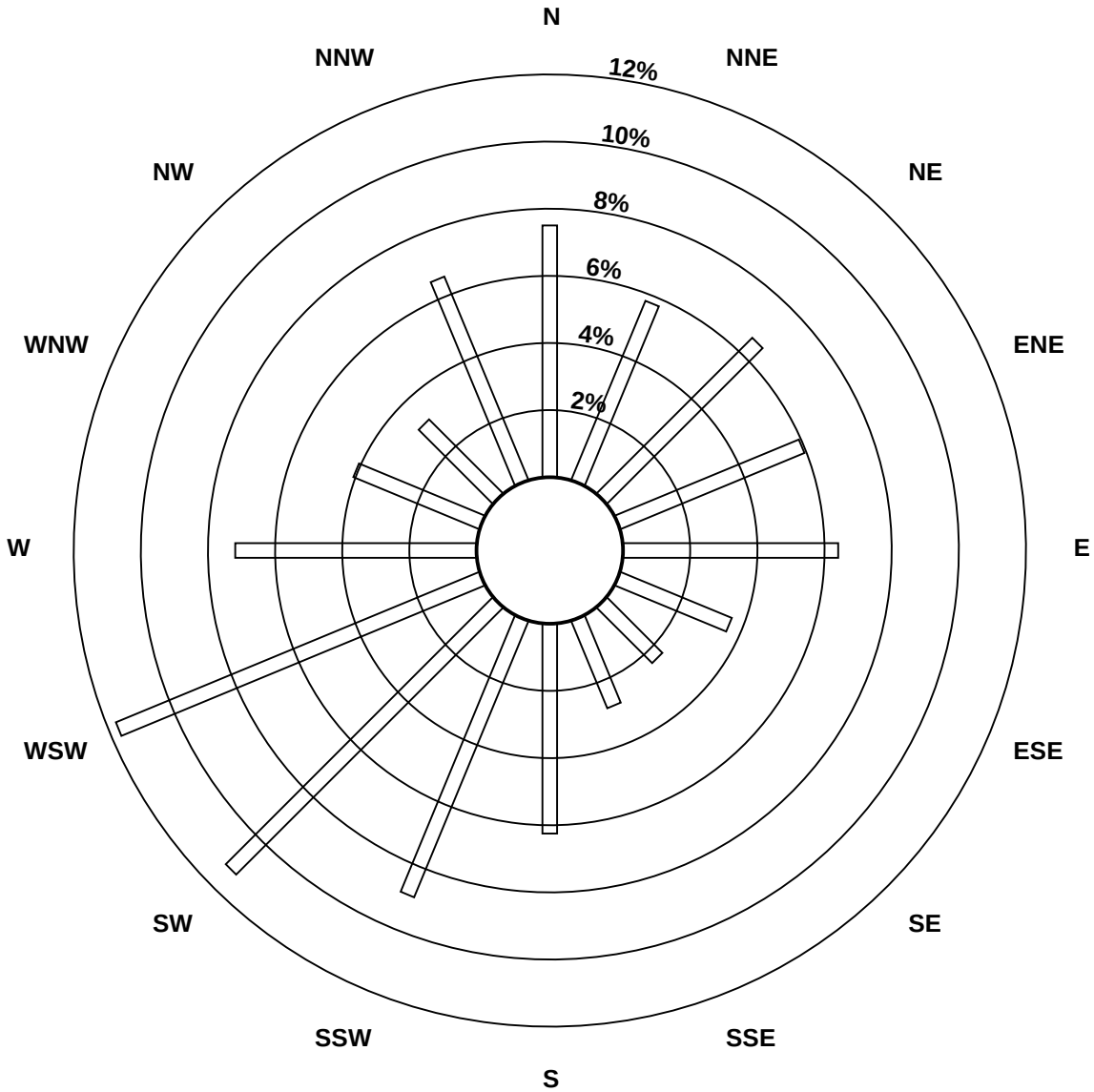
Falher - February 2014



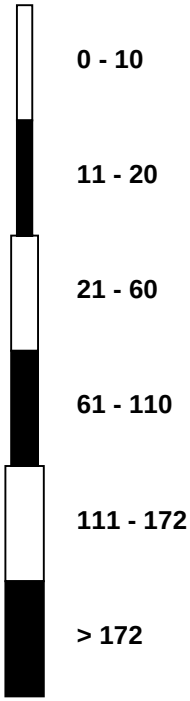
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Falher - February 2014



Pollutant Classes (ppb)

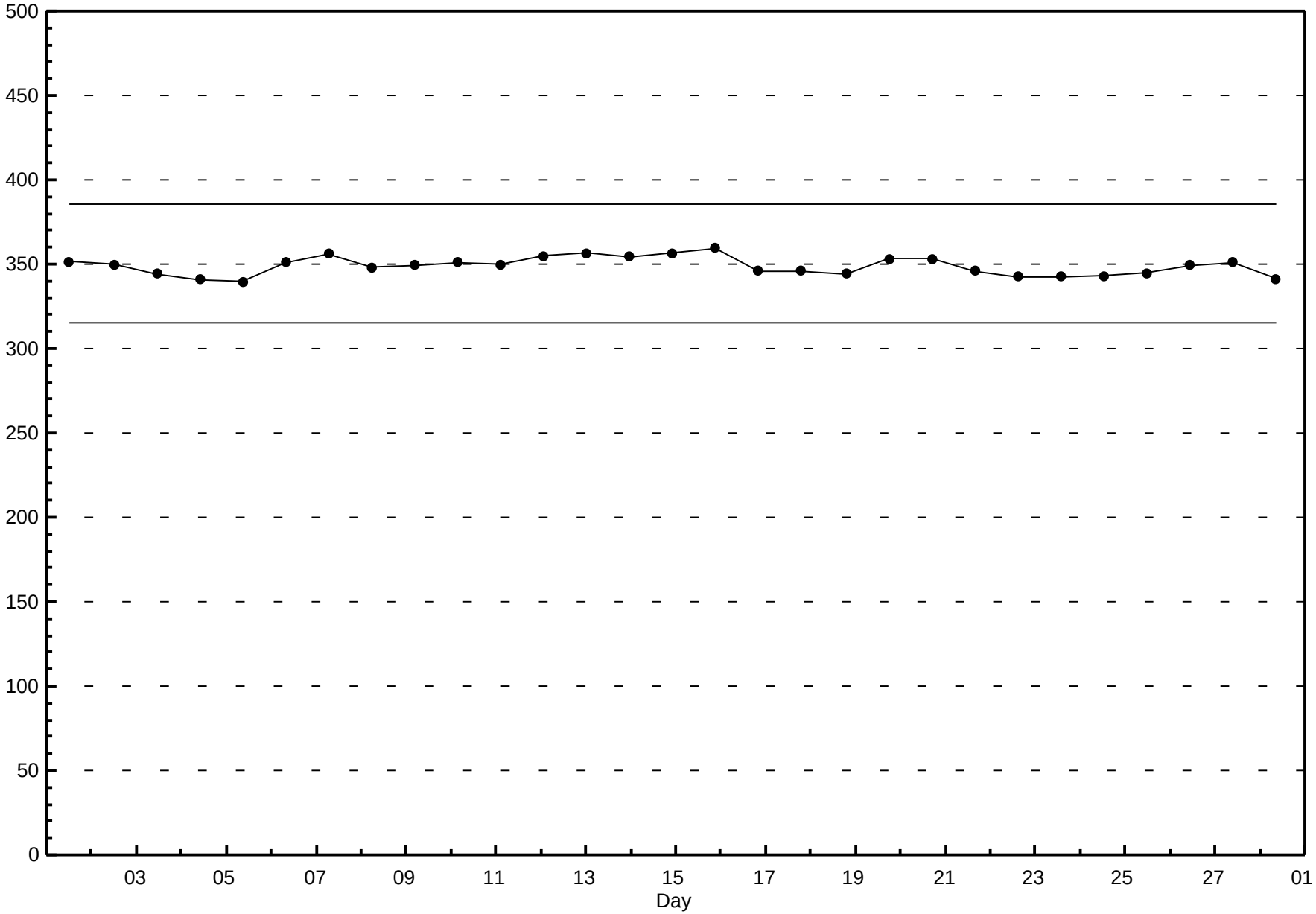


Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Falher - February 2014



Peace Airshed Zone Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Falher - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 2.3 ppb on Feb 18 10:00

Maximum Daily Average: 0.9 ppb on Feb 19

Minimum Value: 0 ppb on Feb 2 02:00

Minimum Daily Average: 0.0 ppb on Feb 4

Maximum Diurnal Average: 0.4 ppb at hour 10

Minimum Diurnal Average: 0.1 ppb at hour 17

Monthly Average: 0.22 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.2 Q_3 = 0.3 P_{90} = 0.4 P_{99} = 1.8

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
2-Feb	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
3-Feb	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
4-Feb	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
5-Feb	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
6-Feb	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
7-Feb	0	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
8-Feb	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.2	0.5
9-Feb	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	0.5
10-Feb	1	0	0	A	1	1	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0.3	1.0
11-Feb	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
12-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
13-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.3
14-Feb	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.3	0.8
15-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.4
16-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.4
17-Feb	0	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.6
18-Feb	0	0	0	0	1	1	1	1	2	2	2	1	1	0	0	0	0	0	A	1	1	1	1	1	0.8	2.3
19-Feb	1	1	1	1	1	1	2	2	2	2	2	2	1	0	0	0	0	A	0	0	0	0	0	0	0.9	2.0
20-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.2
21-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.2
22-Feb	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.9
23-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.5
24-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
25-Feb	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
26-Feb	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
27-Feb	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
28-Feb	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	Diurnal Average	
	1.1	1.2	1.1	1.2	1.3	1.5	1.6	1.7	1.9	2.3	2.0	1.8	1.3	0.4	0.4	0.4	0.3	0.3	0.5	0.7	0.8	0.8	1.0	1.1	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

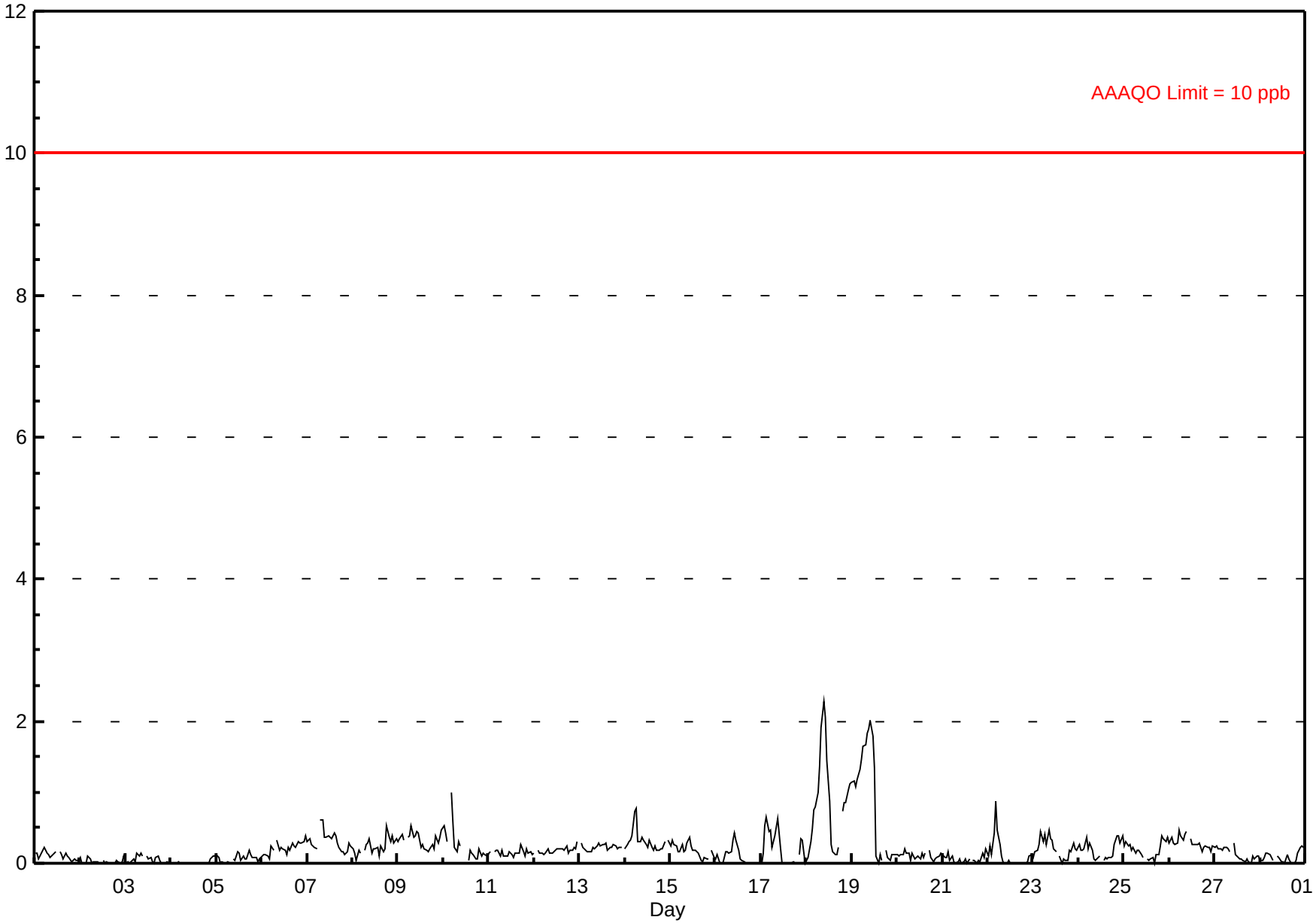
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Falher - February 2014



Peace Airshed Zone Association

Hourly Maximums

Hydrogen Sulphide (H_2S) - ppb

Falher - February 2014

Maximum Value: 3.1 ppb on Feb 18 10:00

Maximum Daily Average: 1.7 ppb on Feb 18

Minimum Value: 0 ppb on Feb 2 11:00

Maximum Diurnal Average: 1.1 ppb at hour 10

Monthly Average: 0.93 ppb

Minimum Daily Average: 0.7 ppb on Feb 4

Minimum Diurnal Average: 0.8 ppb at hour 18

Percentiles: $P_1 = 0.5$ $P_{10} = 0.6$ $Q_1 = 0.7$ Median = 0.8 $Q_3 = 1.0$ $P_{90} = 1.2$ $P_{99} = 2.6$

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
2-Feb	1	1	1	1	1	1	1	1	1	1	0	A	1	1	1	1	0	0	1	1	1	1	1	1	0.7	0.8
3-Feb	0	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2
4-Feb	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8
5-Feb	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	1.1
6-Feb	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.1
7-Feb	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.5
8-Feb	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	2	1	1.0	2.2
9-Feb	1	1	1	1	A	1	1	2	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1.1	2.5
10-Feb	1	2	1	A	2	2	1	1	1	1	C	C	C	1	1	1	1	1	1	1	1	1	1	1	1.0	2.0
11-Feb	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1
12-Feb	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3
13-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.9	1.1
14-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1.0	1.5
15-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	A	1	1	0.9	1.1
16-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.1
17-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	A	1	1	1	1	0.9	1.4
18-Feb	1	1	1	1	2	1	2	2	3	3	3	2	2	1	1	1	1	1	A	1	2	2	2	2	1.7	3.1
19-Feb	2	2	2	2	2	2	2	2	3	3	3	3	2	1	1	1	1	A	1	1	1	1	1	1	1.7	2.8
20-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.8	1.0
21-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.8	1.0
22-Feb	1	1	1	1	2	1	1	1	1	1	0	0	1	1	A	1	1	1	1	1	1	1	1	1	0.8	1.5
23-Feb	1	1	1	1	3	2	2	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1.0	2.6
24-Feb	1	1	1	1	1	1	1	1	1	1	1	1	A	0	1	0	1	1	1	1	2	1	1	1	0.9	1.9
25-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
26-Feb	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.2
27-Feb	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.3
28-Feb	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
	0.9	1.0	0.9	0.9	1.1	1.1	1.0	1.0	1.0	1.1	1.0	1.0	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	Diurnal Average	
	2.0	2.1	1.8	1.7	2.6	2.4	2.4	2.3	3.1	3.1	3.0	2.6	2.4	1.2	1.1	1.2	1.1	1.3	2.2	1.4	1.9	1.9	1.9	1.8	Diurnal Maximum	

C - Calibration

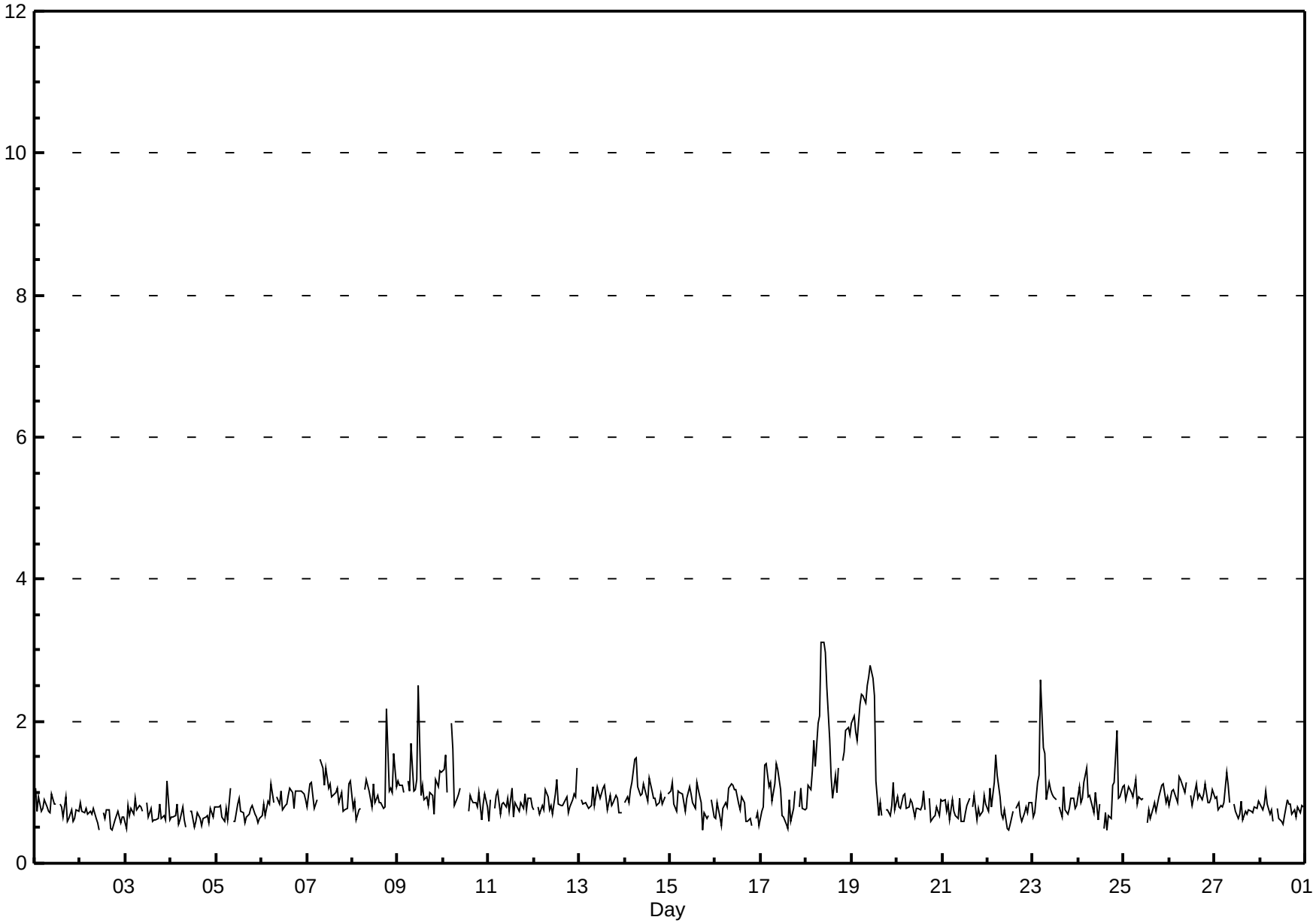
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Hydrogen Sulphide (H_2S) - ppb

Falher - February 2014

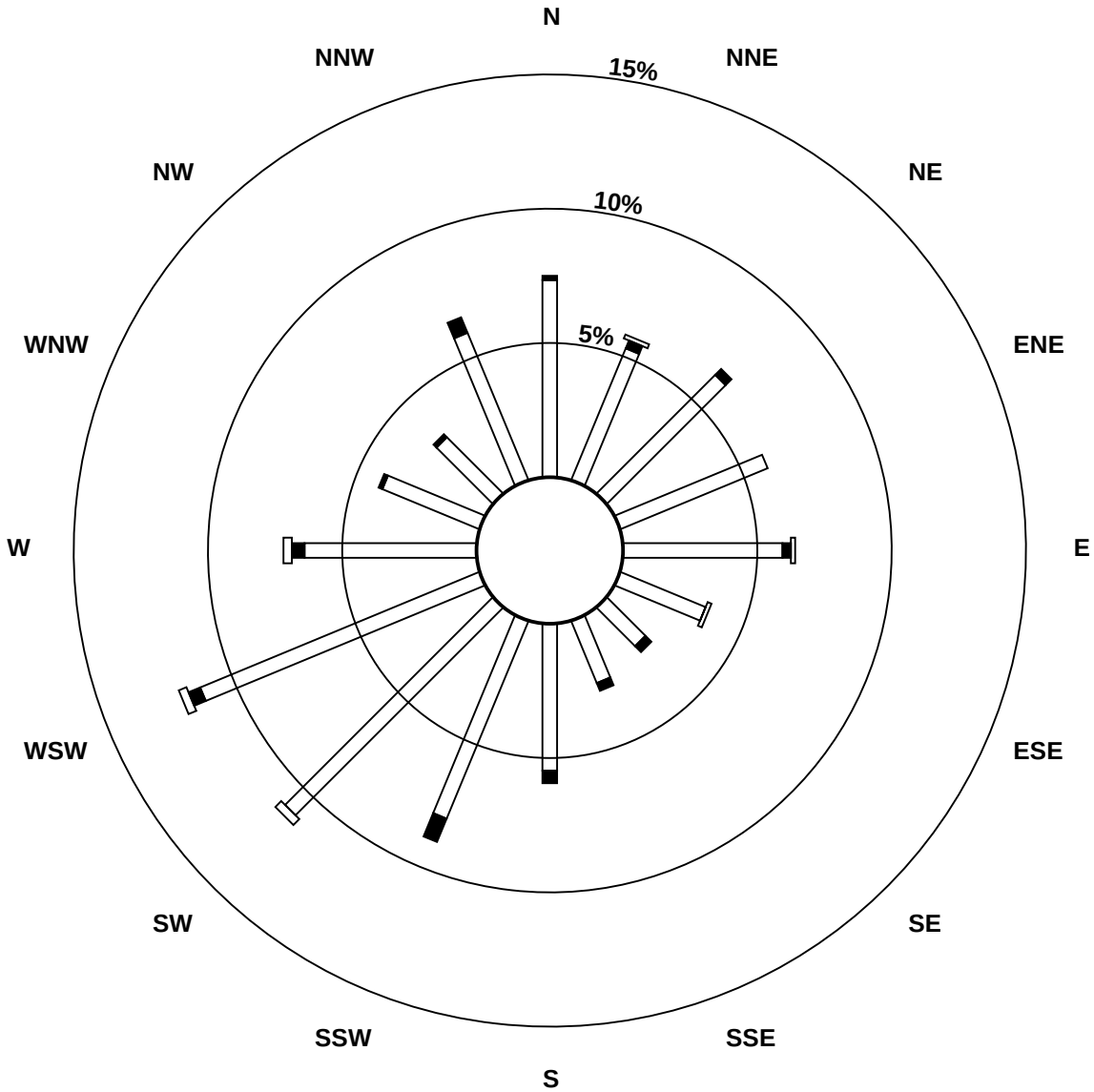


FOCUS AIR QUALITY MONITORING

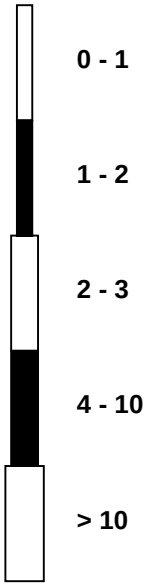
Pollutant Rose

Hydrogen Sulphide (H_2S) - ppb

Falher - February 2014



Pollutant Classes (ppb)

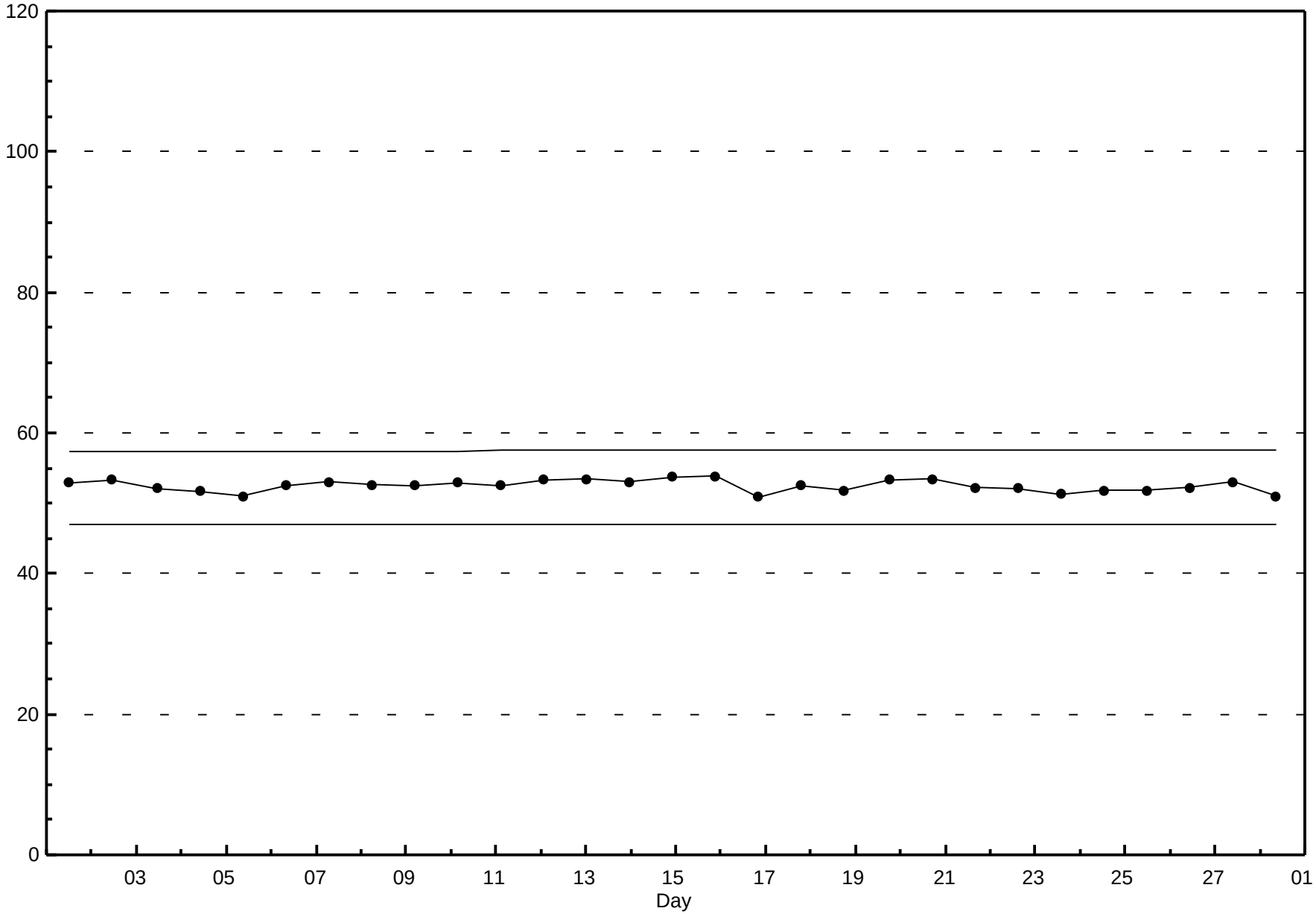


Peace Airshed Zone Association

Span Responses

Hydrogen Sulphide (H_2S)

Falher - February 2014



Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Falher - February 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 1.8 ^{o}C on Feb 17 14:00 Maximum Daily Average: -4.4 ^{o}C on Feb 17

Minimum Value: -35 ^{o}C on Feb 23 08:00 Minimum Daily Average: -29.3 ^{o}C on Feb 23

Maximum Diurnal Average: -14.0 ^{o}C at hour 15 Minimum Diurnal Average: -20.6 ^{o}C at hour 8

Monthly Average: -17.98 ^{o}C Percentiles: P_1 = -33.1 P_{10} = -28.2 Q_1 = -23.3 Median = -18.5 Q_3 = -12.5 P_{90} = -6.6 P_{99} = -2.8

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

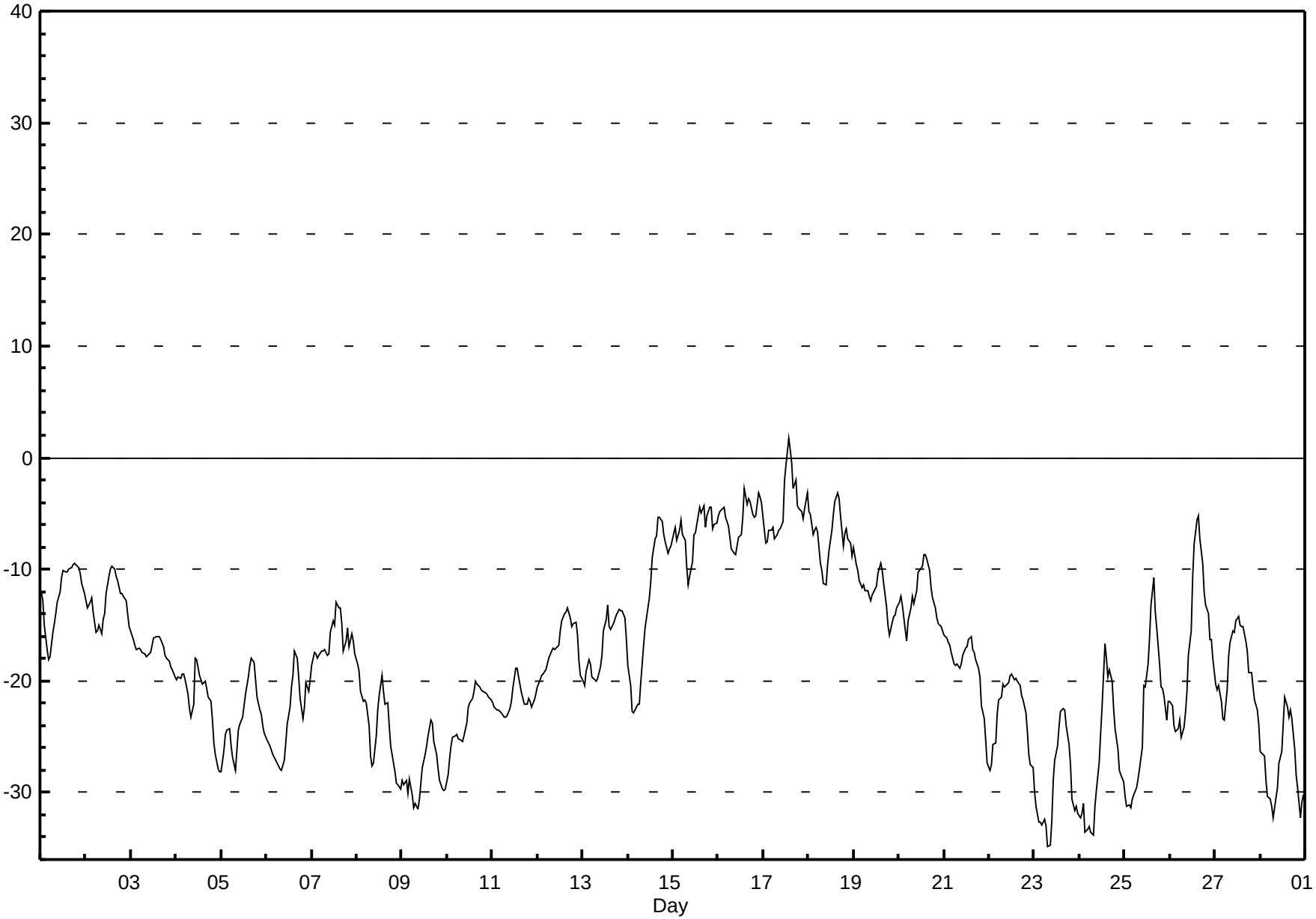
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-12	-13	-15	-17	-18	-18	-16	-15	-14	-13	-12	-11	-10	-10	-10	-10	-10	-10	-9	-10	-10	-10	-11	-12	-12.3	-9.5
2-Feb	-13	-13	-13	-12	-14	-16	-16	-15	-16	-15	-14	-12	-11	-10	-10	-10	-11	-11	-12	-12	-12	-13	-14	-15	-12.9	-9.8
3-Feb	-16	-16	-17	-17	-17	-17	-18	-18	-18	-18	-17	-17	-16	-16	-16	-16	-16	-17	-18	-18	-18	-19	-19	-20	-17.3	-15.9
4-Feb	-20	-20	-20	-19	-19	-20	-21	-22	-23	-22	-18	-18	-19	-20	-20	-20	-21	-21	-22	-23	-26	-27	-28	-28	-21.6	-17.9
5-Feb	-28	-26	-25	-24	-24	-26	-27	-28	-26	-24	-24	-23	-22	-21	-20	-19	-18	-18	-20	-22	-23	-23	-24	-25	-23.3	-18.0
6-Feb	-25	-26	-26	-27	-27	-27	-28	-28	-28	-27	-26	-24	-22	-20	-19	-17	-18	-20	-22	-23	-22	-20	-21	-20	-23.5	-17.4
7-Feb	-19	-17	-18	-18	-18	-17	-17	-17	-18	-18	-16	-15	-15	-13	-13	-14	-15	-17	-16	-15	-17	-16	-16	-18	-16.3	-13.0
8-Feb	-18	-19	-21	-22	-22	-22	-24	-27	-28	-27	-25	-23	-21	-19	-21	-22	-22	-24	-26	-27	-28	-29	-29	-30	-24.0	-18.4
9-Feb	-29	-29	-29	-30	-29	-30	-31	-31	-31	-31	-29	-28	-27	-26	-25	-24	-24	-25	-27	-28	-29	-30	-30	-30	-28.3	-23.5
10-Feb	-28	-27	-26	-25	-25	-25	-25	-25	-25	-25	-24	-22	-22	-22	-21	-20	-20	-21	-21	-21	-21	-21	-21	-22	-23.1	-20.0
11-Feb	-22	-22	-23	-23	-23	-23	-23	-23	-23	-22	-22	-21	-19	-19	-20	-21	-22	-22	-22	-22	-22	-22	-22	-21	-21.8	-18.8
12-Feb	-21	-20	-20	-19	-19	-18	-18	-17	-17	-17	-17	-17	-15	-15	-14	-14	-13	-14	-15	-15	-15	-16	-18	-19	-16.9	-13.4
13-Feb	-20	-20	-19	-18	-19	-20	-20	-20	-20	-19	-18	-15	-14	-13	-15	-15	-15	-14	-14	-14	-14	-14	-14	-16	-16.7	-13.2
14-Feb	-19	-20	-23	-23	-23	-22	-22	-20	-17	-15	-14	-13	-11	-9	-7	-7	-5	-5	-6	-7	-8	-9	-8	-8	-13.3	-5.3
15-Feb	-7	-6	-7	-7	-6	-7	-7	-10	-11	-11	-9	-7	-7	-5	-4	-5	-4	-6	-5	-4	-4	-6	-6	-6	-6.6	-4.2
16-Feb	-5	-5	-5	-4	-5	-6	-7	-8	-9	-9	-8	-7	-7	-5	-3	-4	-4	-4	-5	-5	-5	-3	-4	-4	-5.5	-2.8
17-Feb	-7	-8	-8	-7	-6	-6	-7	-7	-6	-6	-6	-2	-1	2	1	0	-3	-2	-4	-5	-5	-6	-5	-3	-4.4	1.8
18-Feb	-5	-5	-7	-6	-6	-7	-10	-10	-11	-11	-10	-8	-7	-5	-4	-3	-4	-5	-8	-7	-6	-7	-8	-9	-7.0	-3.1
19-Feb	-8	-10	-10	-11	-12	-11	-12	-12	-12	-13	-12	-12	-11	-10	-10	-10	-11	-13	-15	-16	-15	-14	-14	-14	-12.0	-8.1
20-Feb	-13	-12	-13	-15	-16	-15	-13	-12	-13	-12	-10	-10	-10	-9	-9	-9	-10	-12	-13	-14	-14	-15	-15	-16	-12.5	-8.7
21-Feb	-16	-16	-17	-17	-18	-19	-19	-18	-19	-18	-18	-17	-17	-16	-16	-17	-17	-18	-19	-20	-22	-23	-25	-27	-18.7	-15.9
22-Feb	-28	-27	-26	-26	-23	-22	-21	-20	-20	-20	-20	-20	-19	-20	-20	-20	-20	-21	-22	-23	-25	-27	-27	-28	-22.7	-19.4
23-Feb	-30	-31	-33	-33	-33	-32	-33	-35	-35	-32	-29	-27	-26	-24	-23	-22	-23	-24	-26	-27	-31	-32	-31	-32	-29.3	-22.5
24-Feb	-32	-32	-31	-33	-33	-33	-34	-34	-31	-30	-27	-25	-22	-17	-18	-20	-19	-20	-22	-24	-26	-28	-28	-29	-27.0	-16.6
25-Feb	-30	-31	-31	-31	-31	-30	-30	-29	-28	-26	-20	-20	-19	-16	-13	-11	-14	-15	-18	-21	-21	-21	-23	-22	-23.0	-10.7
26-Feb	-22	-22	-24	-25	-24	-24	-25	-24	-23	-21	-18	-15	-11	-8	-6	-5	-7	-9	-12	-13	-14	-16	-16	-18	-16.8	-5.2
27-Feb	-20	-21	-20	-22	-23	-24	-21	-18	-17	-16	-16	-15	-14	-15	-15	-15	-16	-17	-19	-19	-21	-22	-23	-24	-18.8	-14.2
28-Feb	-26	-27	-27	-29	-30	-31	-31	-32	-31	-30	-27	-26	-24	-21	-22	-23	-23	-23	-26	-28	-30	-32	-31	-30	-27.5	-21.4
	-19.3	-19.4	-19.6	-20.0	-20.1	-20.2	-20.5	-20.6	-20.4	-19.6	-18.1	-16.8	-15.7	-14.4	-14.0	-14.1	-14.5	-15.4	-16.6	-17.2	-17.9	-18.6	-19.0	-19.4	Diurnal Average	
	-4.8	-4.8	-4.6	-4.5	-5.3	-6.1	-7.2	-6.9	-6.5	-6.4	-5.7	-2.1	-0.7	1.8	0.7	-0.4	-2.7	-2.0	-4.4	-4.4	-4.5	-3.1	-3.6	-3.2	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Falher - February 2014



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Falher - February 2014

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1 Spd	11	9	3	3	5	3	6	5	3	6	8	9	9	12	14	15	14	11	8	9	10	9	11	9	4.3	15.3
Dir	128	133	116	30	68	80	75	40	64	84	135	188	200	208	210	208	212	239	265	268	278	259	244	217	206	208
2 Spd	7	9	8	12	11	9	10	7	8	7	5	8	8	10	7	5	14	14	8	20	20	23	27	28	8.9	27.8
Dir	185	167	189	194	184	175	195	186	175	179	166	192	210	208	215	302	299	287	264	271	267	256	264	262	235	262
3 Spd	24	21	19	13	14	15	15	18	17	16	17	15	18	17	17	17	14	14	9	9	11	10	12	10	14.1	23.8
Dir	247	240	233	221	222	220	193	187	185	182	187	201	225	229	231	235	242	240	224	236	234	228	222	209	220	247
4 Spd	12	11	9	9	8	8	13	10	6	1	2	3	2	6	4	1	1	5	10	10	6	5	7	8	1.8	12.7
Dir	199	208	194	207	209	251	253	249	245	215	211	243	170	153	132	121	7	26	15	61	62	53	20	354	220	253
5 Spd	8	5	4	6	7	10	9	9	8	9	9	8	9	10	9	10	9	15	18	17	15	15	12	11	9.2	17.9
Dir	349	4	34	50	56	59	73	78	72	84	94	88	91	87	92	96	110	114	106	97	96	99	90	95	86	106
6 Spd	11	14	16	14	15	16	13	11	12	10	9	10	8	7	6	4	4	6	6	7	7	4	5	2	7.6	15.9
Dir	69	63	64	53	55	50	43	37	60	91	103	98	93	133	138	156	130	99	97	38	12	26	35	315	68	50
7 Spd	5	4	5	3	2	1	2	3	2	4	3	3	5	7	9	10	12	13	15	17	16	20	24	22	6.8	23.8
Dir	10	62	116	118	114	170	198	196	174	181	184	195	182	219	237	224	214	215	235	248	247	249	247	248	230	247
8 Spd	19	20	18	16	12	7	11	11	12	8	5	5	6	4	3	3	2	1	4	5	4	4	3	3	6.5	20.1
Dir	247	250	240	249	258	247	243	241	244	261	261	194	189	219	254	87	90	34	298	313	336	317	313	255	250	250
9 Spd	6	6	6	6	8	2	2	3	2	4	7	4	5	3	5	2	1	2	2	3	1	1	4	1	2.1	7.9
Dir	263	305	311	316	311	335	25	316	274	338	9	58	95	116	280	263	147	276	349	11	7	264	303	303	323	311
10 Spd	0	0	3	5	4	4	6	5	3	3	4	4	6	6	9	12	14	14	15	16	17	16	14	15	6.9	16.6
Dir	206	114	122	126	132	162	177	193	210	179	180	186	249	256	251	249	249	243	244	235	238	234	235	240	229	238
11 Spd	13	12	12	12	12	14	8	5	5	7	7	5	2	0	1	2	6	5	7	10	13	15	19	23	3.7	23.5
Dir	236	223	218	217	218	235	226	181	170	161	196	219	272	95	75	21	330	17	357	351	351	339	335	336	277	336
12 Spd	26	27	29	26	26	26	21	21	23	23	24	20	17	18	18	12	8	11	11	11	7	3	6	4	14.2	28.9
Dir	335	336	336	334	332	336	335	349	357	7	13	24	48	69	72	67	48	25	9	14	6	212	264	275	359	336
13 Spd	4	5	8	9	9	10	5	4	4	4	5	6	5	4	10	10	7	5	4	1	2	3	6	4	4.8	9.8
Dir	240	206	216	255	241	246	260	262	265	278	300	336	331	253	227	230	236	258	274	262	196	211	247	256	250	227
14 Spd	2	2	2	6	7	6	7	10	16	21	17	25	23	21	19	19	28	34	29	22	23	16	6	13	13.1	33.5
Dir	220	103	63	322	347	344	335	359	0	10	28	39	48	60	72	84	73	63	69	80	65	61	104	99	53	63
15 Spd	18	18	21	21	20	17	13	6	1	4	5	7	11	13	14	13	11	11	12	16	19	19	25	25	8.4	24.7
Dir	115	131	150	162	187	186	197	212	226	135	97	108	106	122	111	85	76	50	58	60	49	38	38	38	102	38
16 Spd	29	35	32	21	15	24	26	24	24	24	18	21	17	5	5	2	8	6	5	3	6	16	15	15	10.0	35.0
Dir	38	39	42	55	94	68	61	56	55	77	100	122	140	181	258	271	234	219	104	45	193	200	176	170	79	39
17 Spd	18	18	16	17	15	14	13	15	16	12	13	4	10	11	4	5	5	3	12	13	15	13	11	17	9.1	18.4
Dir	159	151	147	143	136	133	137	156	170	183	198	249	240	252	302	7	350	176	174	196	210	207	215	209	177	151
18 Spd	18	18	14	10	14	15	6	5	2	6	8	12	11	14	15	13	13	9	10	17	18	16	16	11	4.3	17.9
Dir	203	200	194	203	203	198	193	210	20	105	87	91	101	94	94	93	68	65	35	42	40	28	17	342	98	40
19 Spd	10	9	14	21	15	13	17	14	15	14	9	12	11	5	1	2	7	7	4	1	2	3	11	7	7.5	20.8
Dir	345	280	254	272	267	245	235	253	262	267	246	228	242	299	146	10	356	351	326	288	331	280	303	337	271	272
20 Spd	3	5	3	7	9	10	8	7	7	11	9	12	16	16	20	18	21	24	25	24	22	21	21	17	11.6	25.2
Dir	360	345	332	300	290	289	333	329	313	328	359	299	301	291	287	281	270	263	255	246	237	237	237	233	274	255
21 Spd	17	19	17	18	17	15	13	13	11	8	7	9	8	7	8	8	5	1	0	3	6	5	5	8	7.1	19.2
Dir	229	229	228	229	224	222	215	226	224	219	232	212	235	257	263	282	306	281	158	42	40	22	11	347	237	229
22 Spd	8	6	6	6	3	2	4	11	16	12	10	13	13	15	14	9	10	11	11	9	7	7	6	6	7.0	16.5
Dir	341	315	352	350	2	110	207	242	239	229	224	207	233	253	251	272	274	271	257	230	210	218	221	212	248	239

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Falher - February 2014

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	Daily Average	Daily Maximum
23 Spd	5	5	4	3	4	4	2	5	5	5	3	4	5	6	8	8	7	7	9	9	8	8	9	9	3.6	9.3
Dir	179	174	207	231	242	252	279	4	24	3	359	4	30	49	57	34	12	3	10	2	354	348	350	1	5	1
24 Spd	10	3	6	10	9	11	9	7	10	7	9	9	6	6	5	6	3	1	0	2	5	5	8	8	4.2	10.7
Dir	24	9	25	30	50	32	41	44	50	65	80	87	101	206	239	310	302	350	21	335	290	357	356	349	31	32
25 Spd	7	5	5	5	7	7	10	9	10	8	4	5	7	6	4	4	4	4	3	3	1	3	4	5	3.7	10.4
Dir	343	341	342	324	320	331	333	334	340	360	39	76	89	50	58	233	17	28	53	71	327	54	49	108	5	333
26 Spd	3	5	9	6	4	5	7	6	9	13	10	8	7	5	4	4	4	6	5	5	1	4	6	1	4.6	12.9
Dir	86	28	21	17	0	3	335	327	346	21	42	42	33	32	301	354	326	2	318	25	89	277	296	286	4	21
27 Spd	5	5	2	5	4	6	9	14	14	10	13	17	22	26	24	20	22	20	16	19	13	13	10	9	11.6	26.0
Dir	188	213	167	148	163	214	208	204	197	208	244	260	255	261	266	274	265	256	238	228	227	211	216	210	238	261
28 Spd	8	9	8	7	8	10	5	7	9	9	5	7	6	6	7	7	6	5	6	5	4	9	14	14	5.8	14.5
Dir	184	179	184	226	212	217	227	242	248	251	258	247	233	188	218	248	230	216	220	245	302	291	312	311	240	311
Spd	1.7	1.8	1.6	2.2	2.6	2.1	1.7	1.7	1.1	0.7	1.2	1.5	1.6	2.2	2.3	1.7	2.3	1.8	1.3	1.4	1.8	2.9	4.2	3.6	Diurnal Average	
Dir	237	220	209	242	228	232	235	250	277	58	111	142	183	209	226	256	280	291	288	295	291	264	281	274		
Spd	28.6	35.0	32.1	25.8	26.3	26.1	26.0	24.1	24.2	24.2	24.0	24.5	22.7	26.0	23.9	19.5	28.4	33.5	29.1	24.4	22.8	23.4	27.1	27.8	Diurnal Maximum	
Dir	38	39	42	334	332	336	61	56	55	77	13	39	48	261	266	274	73	63	69	246	65	256	264	262		

Maximum Speed Value: 35 km/h on Feb 16 02:00
Maximum Daily Speed Average: 14.2 km/h on Feb 12
Maximum Diurnal Speed Average: 4.2 km/h at hour 23

Minimum Speed Value: 0 km/h on Feb 10 01:00
Minimum Daily Speed Average: 1.8 km/h on Feb 9
Minimum Diurnal Speed Average: 0.7 km/h at hour 10

Monthly Average Velocity: 1.50 km/h 249.4 deg

Speed Percentiles: $P_1 = 0.8$ $P_{10} = 3.1$ $Q_1 = 4.9$ Median = 8.5 $Q_3 = 13.9$ $P_{90} = 19.2$ $P_{99} = 28.4$

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

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Percent Operational Time:	100.0

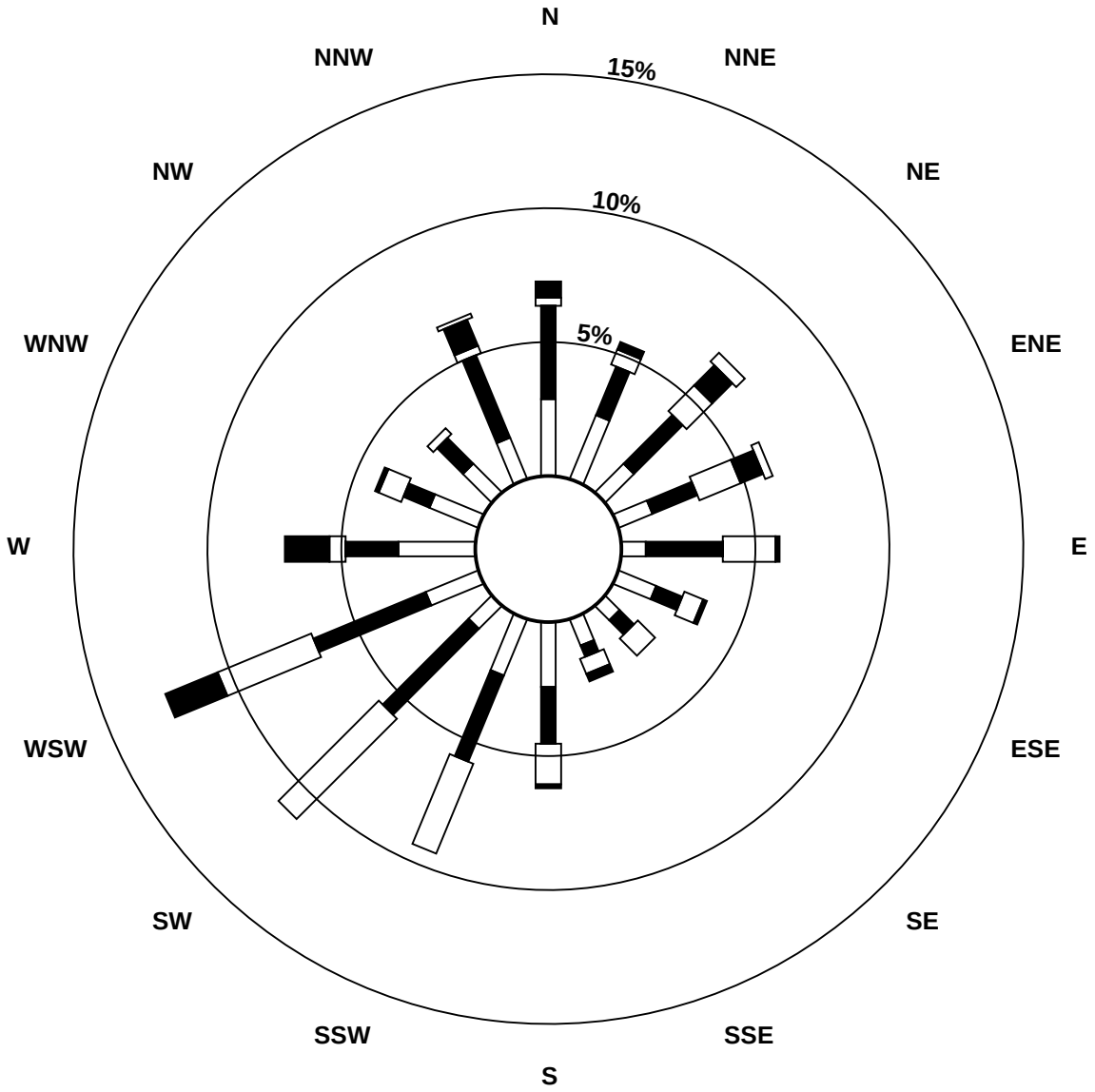
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	28	43	6	5	0	0	82
NorthEast	23	30	18	13	4	0	88
East	12	33	20	5	2	0	72
SouthEast	15	7	13	2	0	0	37
South	23	27	23	2	0	0	75
SouthWest	21	60	66	10	0	0	157
West	29	29	19	19	0	0	96
NorthWest	23	27	6	8	1	0	65
Total	174	256	171	64	7	0	672

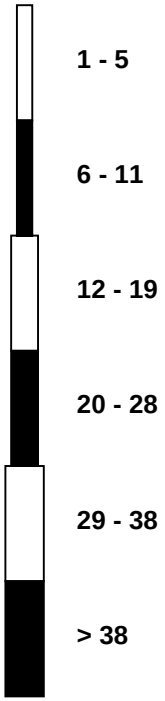
Wind Rose

Wind Speed (WS) (km/h)

Falher - February 2014



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Falher - February 2014

Maximum Speed: 35 km/h on Feb 16 02:00

Maximum Daily Speed Average: 17.6 km/h on Feb 12

Minimum Speed: 0 km/h on Feb 10 01:00

Minimum Daily Speed Average: 3.7 km/h on Feb 9

Maximum Diurnal Speed Average: 11.4 km/h at hour 23

Minimum Diurnal Speed Average: 8.9 km/h at hour 16

Monthly Average Speed: 10.13 km/h

Percentiles: P_1 = 1.1 P_{10} = 3.4 Q_1 = 5.3 Median = 8.8 Q_3 = 14.0 P_{90} = 19.4 P_{99} = 28.5

Hours in Service: 672

Hours of Data: 672

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	11	9	4	3	5	3	6	5	3	6	8	9	9	12	14	15	15	11	8	9	10	9	12	10	8.7	15.3
2-Feb	8	9	9	13	11	9	10	8	8	7	5	8	8	10	8	6	15	14	9	20	20	23	27	28	12.2	27.8
3-Feb	24	21	19	13	14	15	15	18	17	16	17	15	18	17	17	17	14	15	9	9	11	10	12	10	15.2	23.8
4-Feb	12	11	9	9	8	8	13	10	6	1	3	4	3	6	4	1	2	6	10	11	7	5	7	8	6.8	12.8
5-Feb	8	5	4	6	7	10	9	9	9	9	9	8	9	10	9	10	10	15	18	17	15	15	12	11	10.2	18.0
6-Feb	11	14	16	14	15	16	13	11	13	10	10	10	8	7	7	4	4	7	6	7	7	4	5	2	9.2	15.9
7-Feb	5	4	5	3	3	1	2	3	2	4	3	3	5	7	9	10	12	13	15	17	16	20	24	22	8.7	23.8
8-Feb	20	20	18	16	12	8	11	11	12	8	5	5	6	5	4	4	2	1	4	5	4	4	4	3	7.9	20.2
9-Feb	6	6	6	6	8	3	2	3	2	5	7	5	5	3	5	2	1	2	2	3	1	1	4	1	3.7	7.9
10-Feb	0	0	3	5	4	4	6	5	3	4	4	4	6	6	9	12	14	14	15	16	17	16	14	15	8.2	16.6
11-Feb	13	12	12	12	12	14	8	5	5	7	7	5	3	1	1	3	6	5	7	10	13	15	19	23	9.2	23.5
12-Feb	26	27	29	26	26	26	21	21	23	23	24	20	18	18	18	12	8	12	11	11	7	4	7	4	17.6	28.9
13-Feb	5	5	8	9	9	10	5	4	5	4	6	6	5	6	10	10	7	6	5	1	2	3	6	4	5.8	10.1
14-Feb	2	2	3	7	7	6	7	10	16	21	17	25	23	21	19	20	29	34	29	22	23	16	7	13	15.7	33.5
15-Feb	18	18	21	21	20	17	13	7	1	5	6	7	12	13	14	13	11	11	12	16	19	20	25	25	14.4	24.7
16-Feb	29	35	32	22	16	24	26	24	24	25	19	21	17	8	5	3	8	7	6	3	6	16	15	15	16.9	35.1
17-Feb	18	18	16	17	15	14	13	15	16	13	13	4	10	11	5	5	6	4	12	14	15	13	11	17	12.3	18.4
18-Feb	18	18	14	11	14	15	6	5	4	7	9	12	11	14	15	13	13	9	10	17	18	16	16	11	12.3	17.9
19-Feb	11	9	14	21	15	14	17	14	15	14	10	12	12	6	2	3	7	7	4	2	4	4	11	7	9.8	20.9
20-Feb	3	6	5	8	9	10	9	7	7	11	10	12	16	16	20	18	21	24	25	24	22	21	21	17	14.2	25.3
21-Feb	17	19	18	18	18	15	13	13	11	8	8	9	8	7	8	9	6	3	1	3	6	5	6	8	9.8	19.2
22-Feb	8	6	7	7	3	3	5	12	17	12	10	13	13	15	15	9	10	11	11	9	7	7	6	6	9.2	16.6
23-Feb	5	5	4	4	4	4	2	5	5	5	3	4	5	6	8	8	7	7	9	9	8	8	9	10	6.0	9.5
24-Feb	10	5	6	10	10	11	9	8	10	8	9	9	6	6	6	7	3	2	1	3	5	5	8	8	6.8	10.8
25-Feb	7	5	5	5	7	7	10	9	10	8	4	6	7	6	5	4	4	4	3	4	2	4	4	5	5.7	10.4
26-Feb	3	5	9	7	4	5	7	7	9	13	11	9	7	5	5	4	5	6	6	5	1	4	6	3	6.0	13.0
27-Feb	5	5	3	5	4	7	9	14	14	10	14	17	22	26	24	20	22	21	16	19	13	13	10	9	13.4	26.0
28-Feb	9	9	8	7	8	10	5	8	9	9	5	7	6	6	7	8	6	5	6	6	5	9	14	14	7.8	14.5
	11.1	11.1	11.0	10.8	10.3	10.3	9.8	9.6	9.8	9.7	9.1	9.6	9.9	9.9	9.8	8.9	9.5	9.8	9.7	10.4	10.1	10.4	11.4	11.1	Diurnal Average	
	28.6	35.1	32.1	25.8	26.4	26.1	26.1	24.1	24.3	24.8	24.1	24.7	23.1	26.0	23.9	19.7	28.8	33.5	29.3	24.5	22.9	23.5	27.2	27.8	Diurnal Maximum	

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

Peace Airshed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Falher - February 2014

Maximum Value: 92.1 deg on Feb 21 19:00

Minimum Value: 1.5 deg on Feb 16 03:00

Percentiles: P_1 = 2.1 P_{10} = 3.4 Q_1 = 5.0 Median = 9.2 Q_3 = 16.9 P_{90} = 29.6 P_{99} = 78.9

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

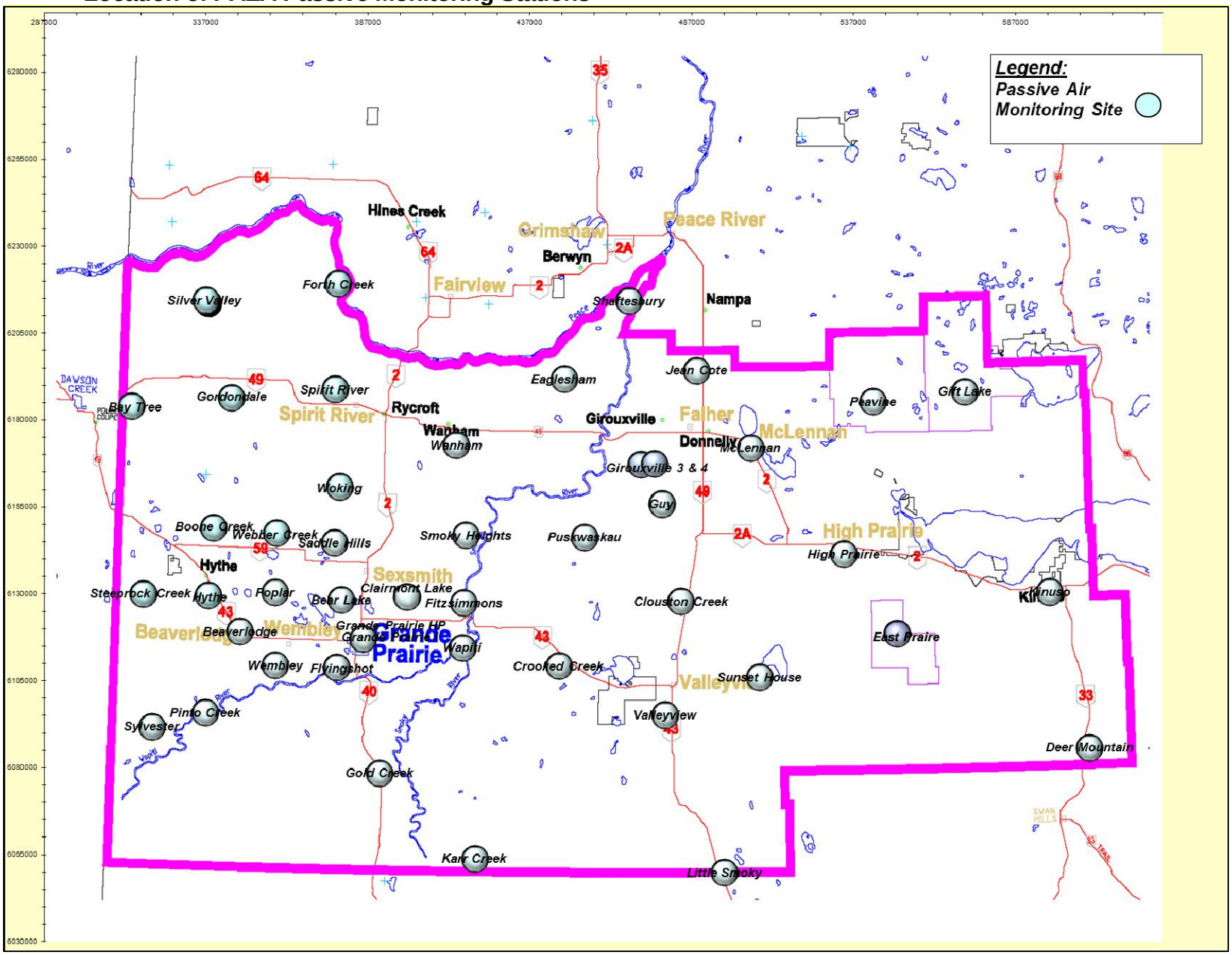
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Feb	4	6	45	11	13	32	23	10	25	9	18	21	6	5	3	2	8	6	9	7	7	7	10	17	44.6
2-Feb	16	20	11	6	11	9	9	19	7	8	10	11	6	6	20	37	6	4	19	10	6	3	5	5	37.0
3-Feb	3	5	7	5	4	8	7	3	3	5	6	9	7	3	4	5	4	4	8	9	8	6	5	13	12.9
4-Feb	5	6	4	7	5	17	7	5	13	60	19	37	83	10	13	76	45	24	10	26	6	17	11	16	82.9
5-Feb	5	11	17	24	5	5	8	10	17	9	13	10	7	4	6	3	9	4	5	3	5	2	3	5	23.9
6-Feb	3	2	5	2	2	6	8	5	16	3	10	11	7	9	16	15	20	24	18	17	13	15	26	73	73.3
7-Feb	16	24	11	21	19	37	40	18	21	7	8	9	12	16	10	4	6	2	10	5	4	3	3	5	40.3
8-Feb	4	4	6	5	6	15	4	2	3	7	37	16	12	18	59	23	22	32	10	17	9	11	28	10	58.9
9-Feb	5	19	9	10	5	65	28	20	17	29	4	43	10	42	12	52	64	11	16	14	19	43	7	20	64.8
10-Feb	30	60	9	6	11	9	9	13	11	12	8	22	10	7	6	6	4	3	4	3	3	3	3	3	60.5
11-Feb	5	4	5	4	5	4	17	11	19	13	18	9	39	91	63	34	14	10	6	5	5	6	4	3	90.7
12-Feb	2	3	3	2	2	3	3	4	4	3	3	4	15	5	3	7	9	15	12	5	16	70	15	35	69.7
13-Feb	21	10	14	5	6	12	13	13	11	17	31	9	20	54	6	15	12	18	21	18	18	14	10	9	53.6
14-Feb	45	9	39	25	10	6	19	4	5	9	6	7	11	8	13	13	10	2	6	8	6	3	27	5	44.6
15-Feb	6	4	8	7	4	5	3	25	56	38	27	12	8	8	10	9	8	8	4	6	4	4	2	3	56.0
16-Feb	3	3	1	15	16	5	3	3	4	12	7	10	5	51	18	41	15	19	43	49	8	6	10	4	50.6
17-Feb	5	3	8	6	4	3	6	6	5	8	6	29	7	6	52	24	48	62	7	15	3	5	4	3	62.1
18-Feb	2	2	3	7	4	2	9	22	69	16	12	8	8	6	6	11	8	10	13	3	5	8	5	14	69.1
19-Feb	25	21	13	4	6	14	8	11	7	7	14	3	15	27	70	79	7	7	16	61	61	68	19	8	79.2
20-Feb	40	24	52	22	17	12	19	14	11	7	13	7	3	3	3	4	4	3	4	5	4	3	4	4	51.9
21-Feb	4	4	6	5	4	3	4	7	6	10	11	11	8	12	12	15	24	87	92	41	6	9	13	10	92.1
22-Feb	12	7	29	20	18	41	19	9	5	7	9	6	13	4	3	7	4	3	10	6	7	5	4	9	41.0
23-Feb	16	8	16	19	5	10	19	19	12	10	6	14	6	7	3	11	8	8	4	3	6	5	7	12	19.2
24-Feb	8	49	17	4	9	11	4	15	11	21	3	6	11	45	42	15	19	33	81	55	10	13	7	8	80.6
25-Feb	5	5	5	5	3	7	5	3	7	11	25	21	17	11	29	41	28	19	15	53	61	25	25	16	61.0
26-Feb	24	21	7	10	20	12	11	16	10	8	18	17	9	12	25	24	29	19	9	19	83	22	14	65	82.8
27-Feb	26	21	28	8	15	21	9	6	10	15	21	5	5	3	3	4	3	9	5	2	4	6	5	6	28.0
28-Feb	22	10	14	10	5	6	5	11	2	11	31	8	13	10	14	15	14	13	8	64	36	8	5	3	64.0
	44.6	60.5	51.9	25.5	19.9	64.8	40.3	24.8	69.1	60.1	37.5	42.8	82.9	90.7	70.2	79.2	63.9	86.7	92.1	64.0	82.8	69.7	27.7	73.3	

FOCUS AIR QUALITY MONITORING

PAZA

Monthly Passive Data Summary

Location of PAZA Passive Monitoring Stations



PAZA Passive Results for February 2014

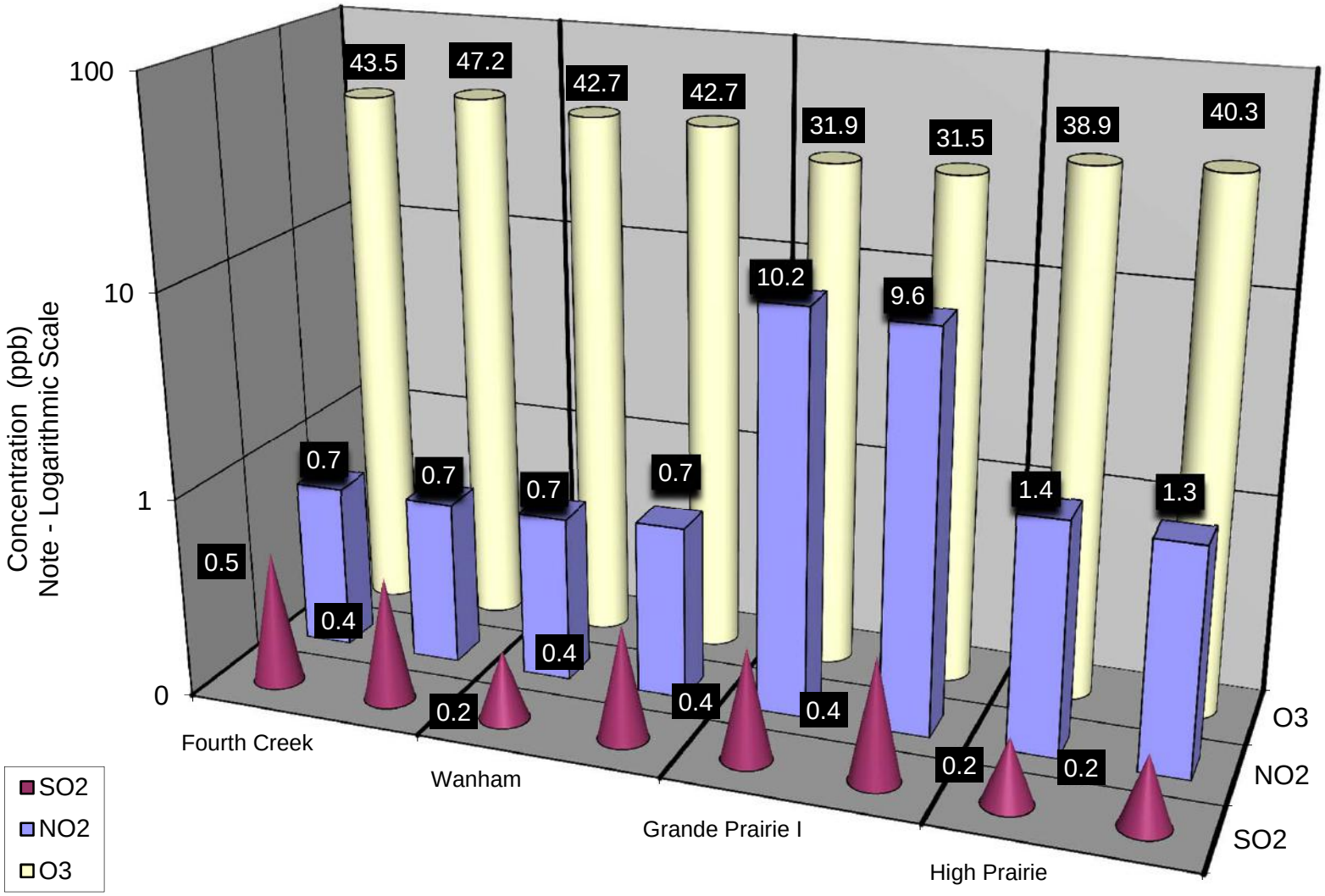
Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	Site Legal
Duplicates						
3a	Fourth Creek	**0.5**	**43.5**	**0.7**		
3b	Fourth Creek	**0.4**	**47.2**	**0.7**		
19a	Wanham	**0.2**	**42.7**	**0.7**		
19b	Wanham	**0.4**	**42.7**	**0.7**		
27a	Grande Prairie I	**0.4**	**31.9**	**10.2**		
27b	Grande Prairie I	**0.4**	**31.5**	**9.6**		
43a	High Prairie	**0.2**	**38.9**	**1.4**		
43b	High Prairie	**0.2**	**40.3**	**1.3**		
63a	Girouxville 3				**N/S**	
63b	Girouxville 3				**0.4**	
1	Silver Valley	**0.4**	**44.2**	**1.1**		08-27-081-11 W6M
2	Bay Tree	**0.3**	**40.2**	**0.9**		13-16-078-13 W6M
3	Fourth Creek	**0.4**	**45.3**	**0.7**		04-13-082-07 W6M
4	Gordondale	**0.6**	**40.3**	**1.2**		04-34-078-10 W6M
5	Boone Creek	**0.5**	**40.4**	**1.0**		16-36-074-11 W6M
7	Steeprock Creek	**0.3**	**41.7**	**0.8**		09-35-072-13 W6M
9	Spirit River	**0.3**	**40.4**	**0.8**		08-12-079-07 W6M
10	Woking	**0.4**	**39.7**	**0.9**		01-13-076-07 W6M
11	Webber Creek	**0.6**	**39.1**	**1.8**		09-36-074-09 W6M
12	Hythe	**0.4**	**37.4**	**1.9**		14-36-072-11 W6M
14	Sylvester	**0.3**	**37.5**	**0.9**		08-06-069-12 W6M
16	Beaverlodge	**0.4**	**38.2**	**2.9**		15-36-071-10 W6M
17	Poplar	**0.4**	**39.4**	**2.0**		13-06-073-08 W6M
18	Saddle Hills	**0.6**	**42.0**	**0.7**		04-25-074-07 W6M
19	Wanham	**0.3**	**42.7**	**0.7**		16-22-077-03 W6M
20	Shaftesbury	**0.3**	**40.0**	**1.0**		04-03-082-23 W5M
21	Eaglesham	**0.2**	**38.2**	**0.6**		16-21-079-25 W5M
23	Bear Lake	**0.5**	**43.4**	**1.8**		15-31-072-06 W6M
24	Wembley	**0.3**	**39.8**	**3.5**		12-31-070-08 W6M
25	Pinto Creek	**0.5**	**38.4**	**1.2**		04-24-069-11 W6M
26	Flyingshot	**0.3**	**35.3**	**3.4**		15-36-070-07 W6M
27	Grande Prairie I	**0.4**	**31.7**	**9.9**		08-15-071-06 W6M

PAZA Passive Results for February 2014 (Continued)

28	Clairmont Lake	**0.7**	**46.8**	**1.6**		09-06-073-04 W6M
29	Smoky Heights	**0.6**	**39.0**	**2.0**		04-06-075-02 W6M
30	Fitzsimmons	**0.2**	**41.0**	**1.3**		15-36-072-03 W6M
32	Gold Creek	**0.2**	**30.6**	**2.5**		06-33-067-05 W6M
33	Wapiti	**0.3**	**39.4**	**1.8**		02-25-071-03 W6M
34	Puskwaskau	**0.2**	**36.3**	**0.9**		15-35-074-25 W5M
35	Jean Cote	**0.3**	**43.5**	**1.4**		12-35-079-21 W5M
36	Guy	**0.4**	**40.3**	**0.9**		03-04-076-22 W5M
37	Crooked Creek	**0.2**	**43.6**	**1.8**		16-01-071-26 W5M
38	Karr Creek	**0.3**	**35.1**	**1.1**		10-16-065-02 W6M
39	Clouston Creek	**0.3**	**37.4**	**1.0**		12-01-073-22 W5M
40	McLennan	**0.3**	**41.7**	**1.3**		03-29-077-19 W5M
41	Valleyview	**0.6**	**38.1**	**1.6**		09-30-069-22 W5M
42	Sunset House	**0.3**	**42.0**	**0.8**		05-32-070-19 W5M
43	High Prairie	**0.2**	**39.6**	**1.4**		16-13-074-17 W5M
44	Peavine	**0.3**	**37.1**	**0.8**		03-05-079-15 W5M
45	Gift Lake	**0.2**	**35.4**	**1.2**	**0.2**	10-07-079-12 W5M
46	Little Smoky	**0.2**	**28.4**	**4.5**		12-01-065-21 W5M
47	Kinuso	**0.2**	**36.1**	**1.1**		12-10-073-10 W5M
48	Deer Mountain	**0.3**	**37.3**	**0.7**		15-22-068-09 W5M
49	Grande Prairie HP	**0.5**	**25.9**	**9.8**		17-26-071-06 W6M
50	East Prairie	**0.2**	**36.0**	**0.3**		13-02-072-15 W5M
63	Girouxville 3				**0.4**	14-02-077-23 W5M
64	Girouxville 4				**0.2**	4-08-077-22 W5M

*BDL = Below Detection Level

*N/S - No sample



Duplicate Summary Chart

Passive Summary for February 2014

Stats	Sulphur Dioxide SO_2	Ozone O_3	Nitrogen Dioxide NO_2	Hydrogen Sulphide H_2S
	ppb	ppb	ppb	ppb
	Passive Summary for February 2014 (PAZA Zone)			
Mean	**0.4**	**38.8**	**1.8**	**0.3**
Standard Deviation	**0.1**	**4.1**	**2.0**	**0.1**
Minimum	**0.2**	**25.9**	**0.3**	**0.2**
Minimum At	**Puskwaskau (#34)**	**Grande Prairie HP**	**East Prairie (#50)**	**Gift Lake (#45)**
Maximum	**0.7**	**46.8**	**9.9**	**0.4**
Maximum At	**Clairmont Lake (#28)**	**Clairmont Lake (#28)**	**Grande Prairie I (#27)**	**Girouxville 3 (#63b)**

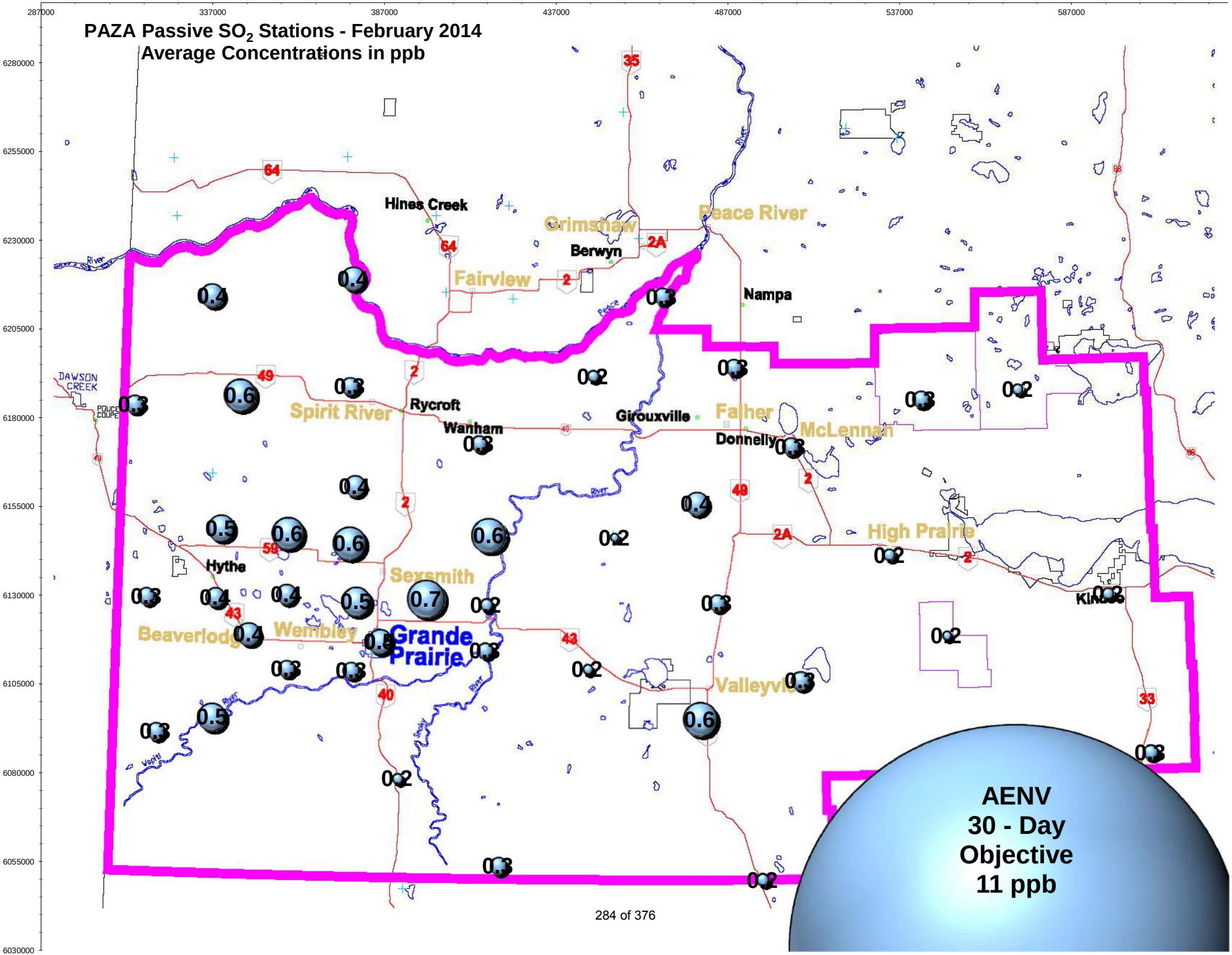
Comparison between Continuous and Passive monitoring at Beaverlodge (passive #16 Beaverlodge)

	SO_2	O_3	NO_2
PAZA Beaverlodge station	**0.6**	**30.8**	**7.0**
PAZA Beaverlodge passive	**0.4**	**38.2**	**2.9**

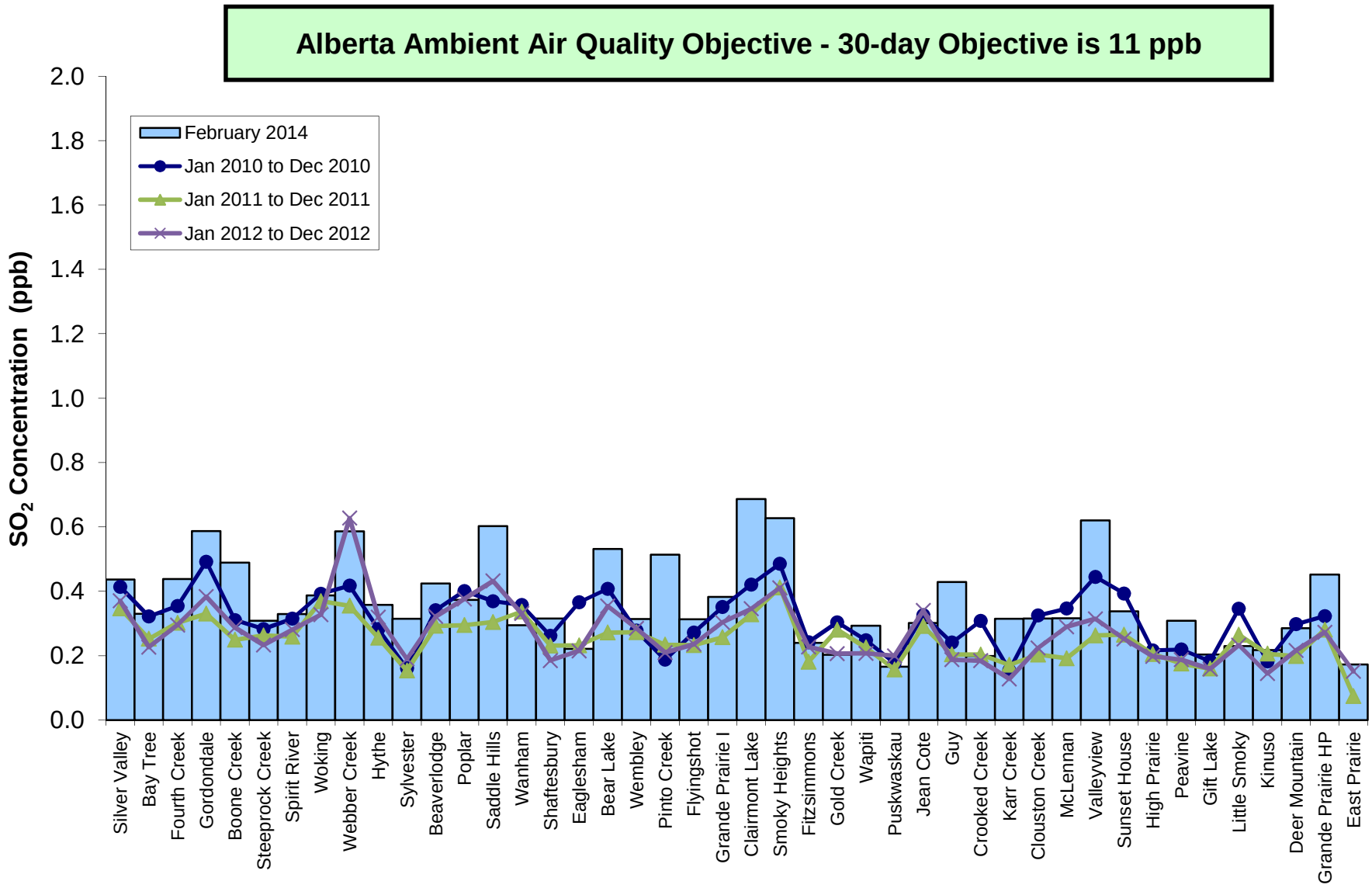
Comparison between Continuous and Passive monitoring at Henry Pirker (passive #49 Grande Prairie HP)

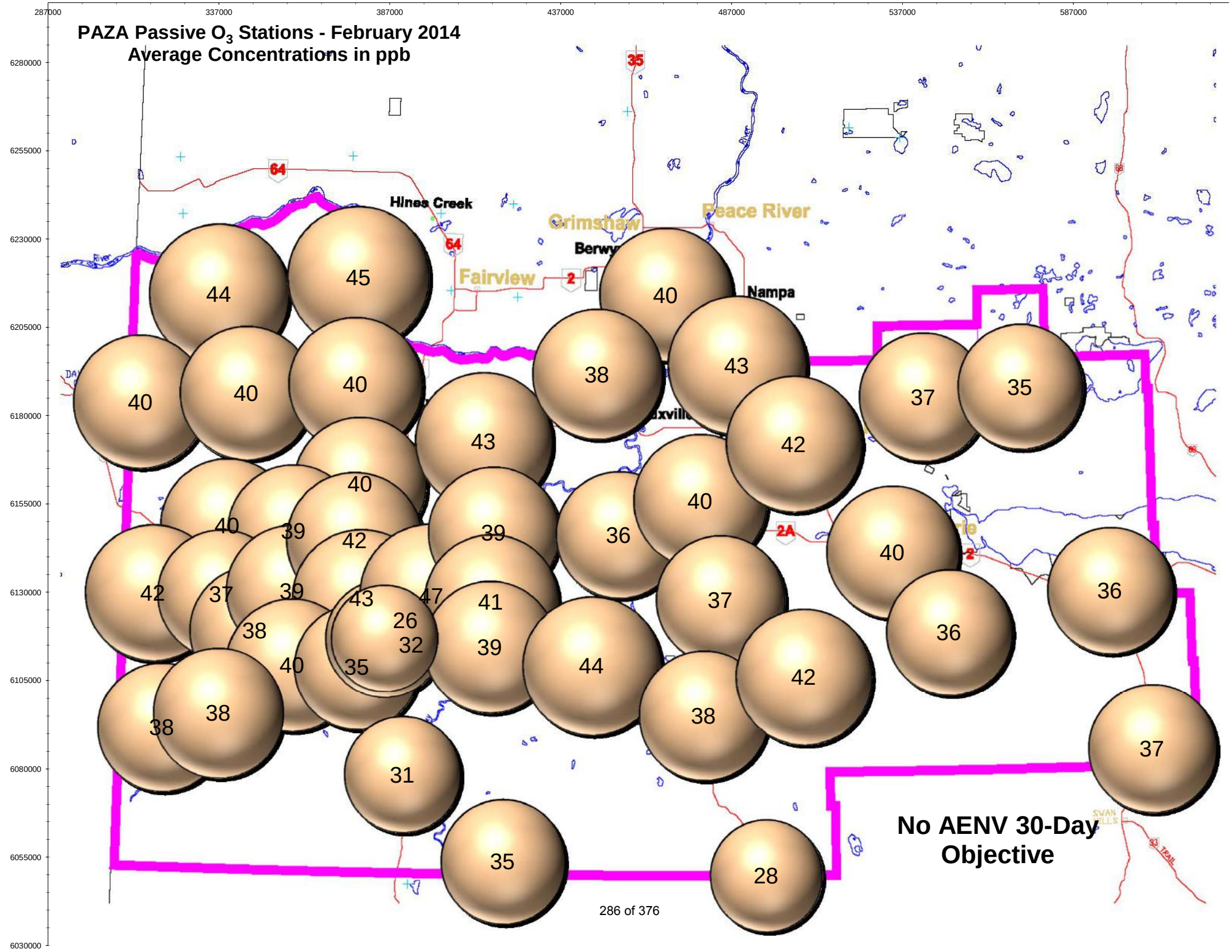
	SO_2	O_3	NO_2
PAZA Henry Pirker station	**0.6**	**19.0**	**21.6**
PAZA Grande Prairie passive	**0.5**	**25.9**	**9.8**

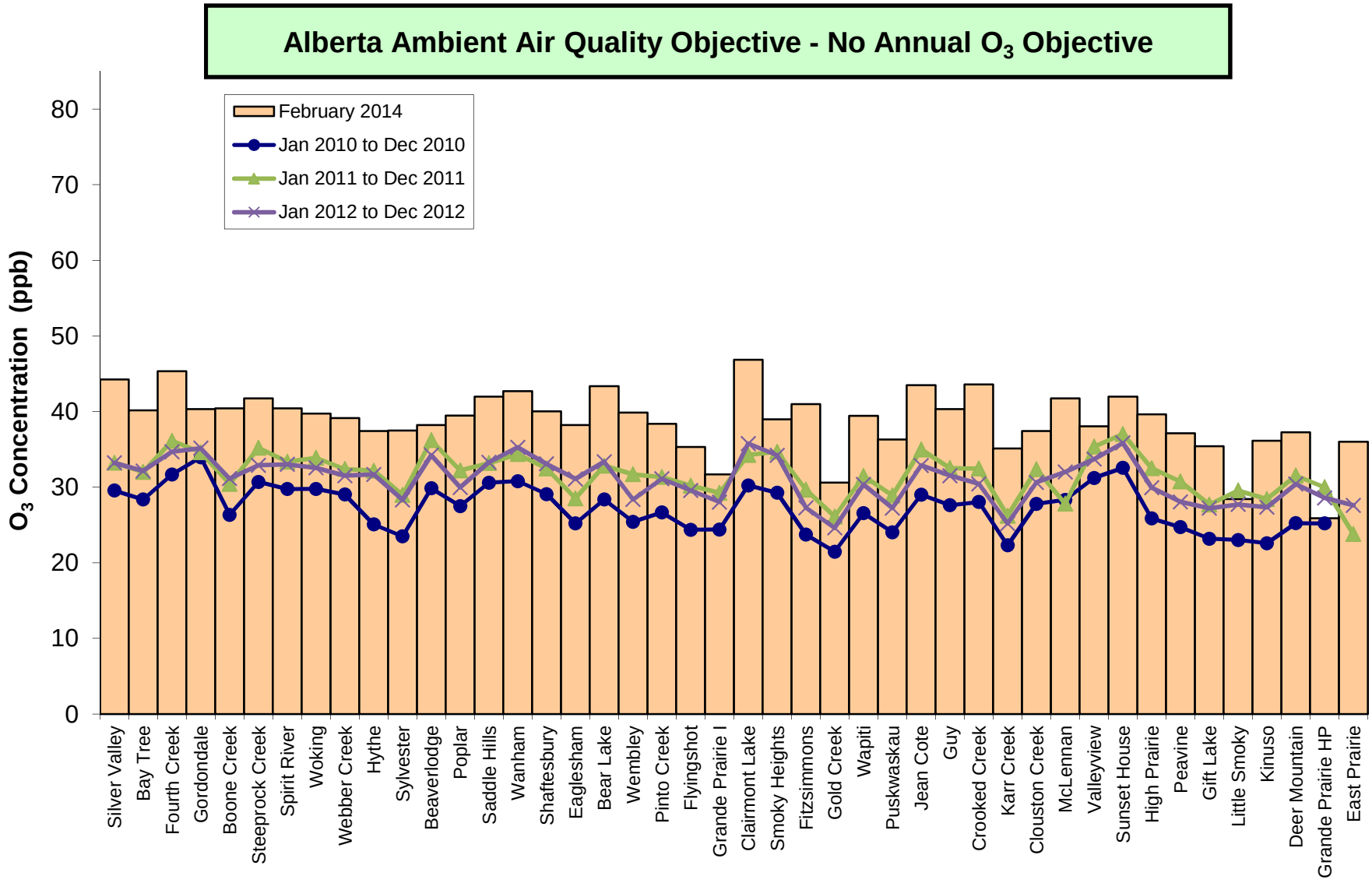
PAZA Passive SO_2 Stations - February 2014
Average Concentrations in ppb

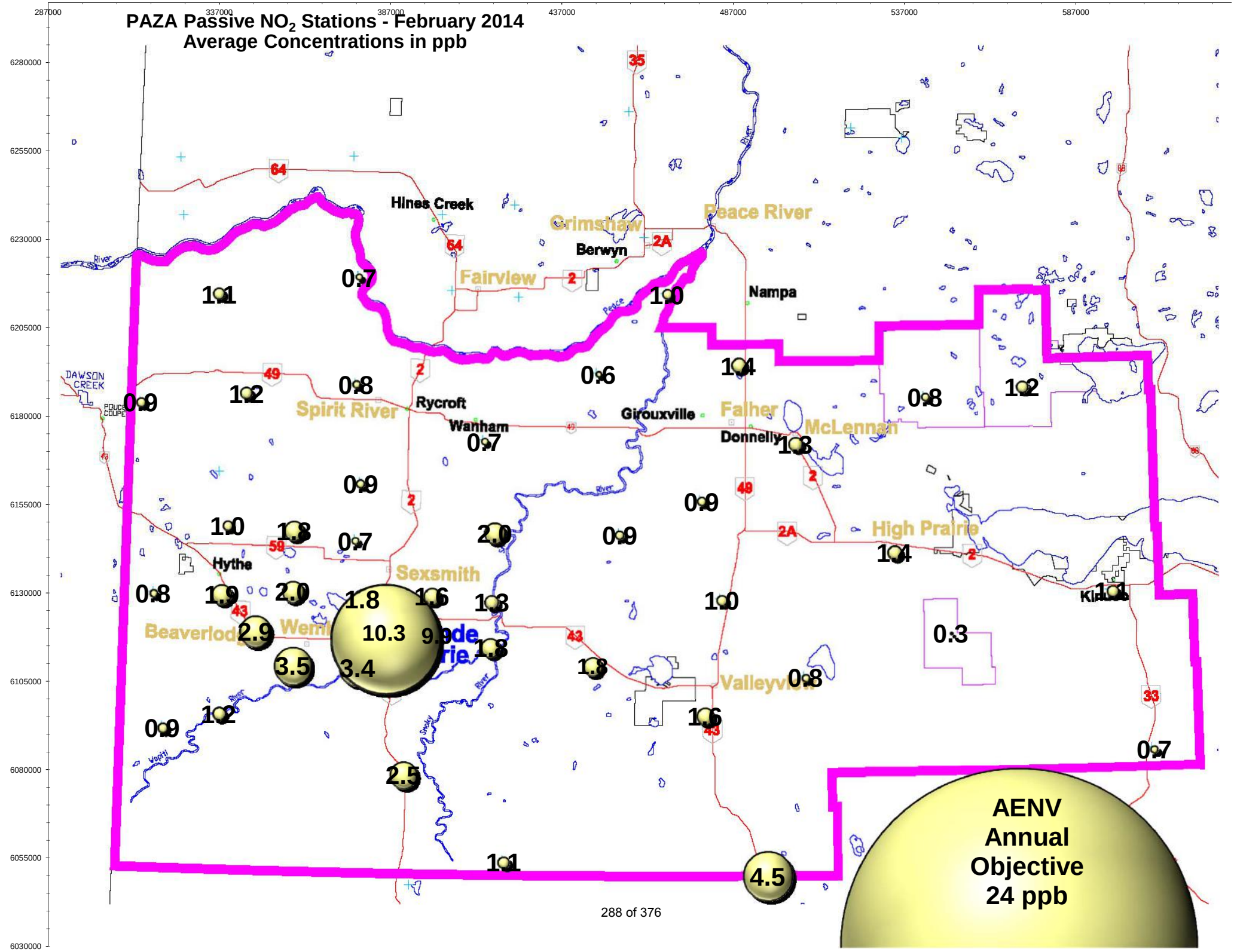


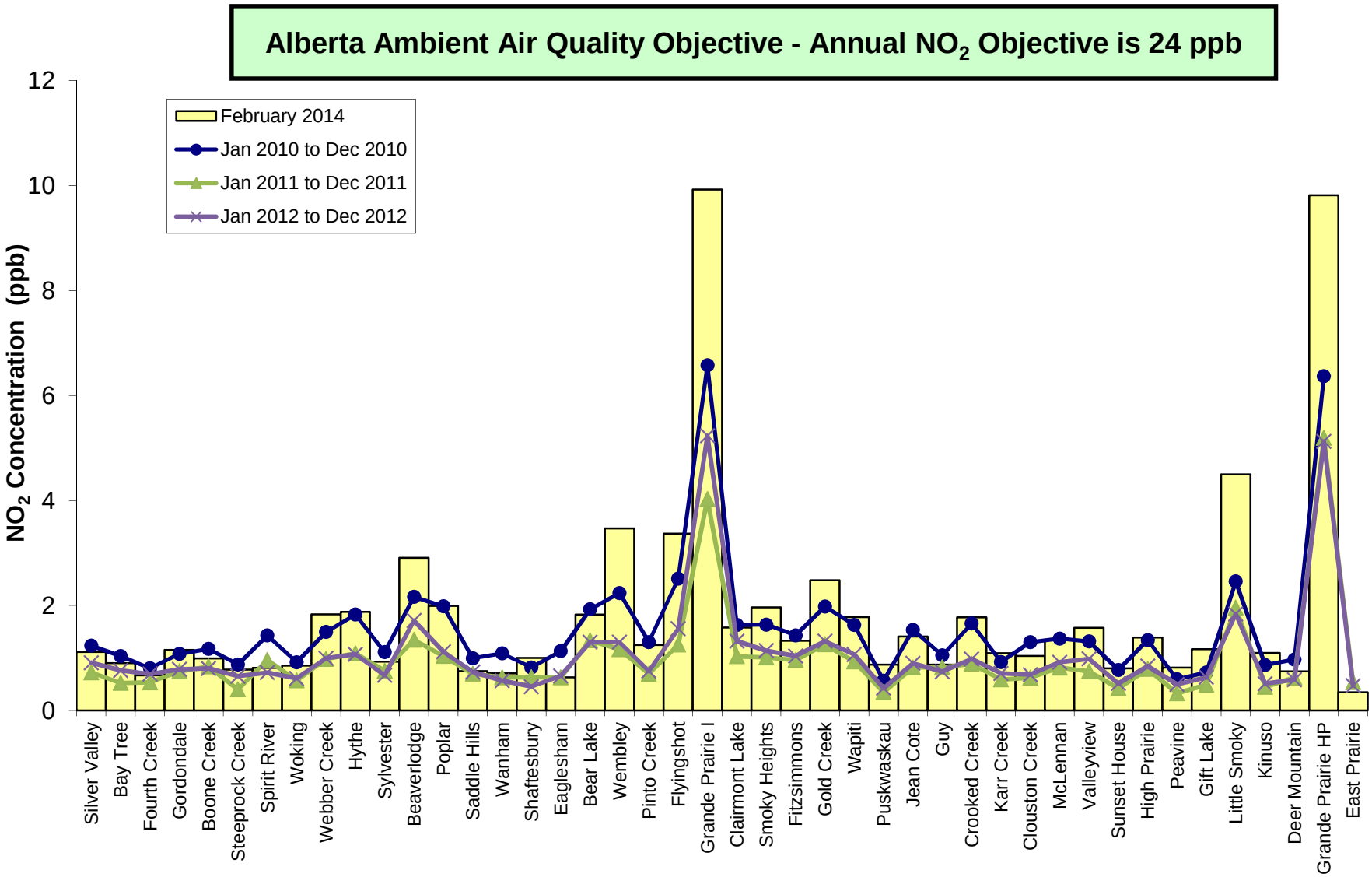
AENV
30 - Day
Objective
11 ppb


Alberta Ambient Air Quality Objective - 30-day Objective is 11 ppb
February 2014
Jan 2010 to Dec 2010
Jan 2011 to Dec 2011
Jan 2012 to Dec 2012
SO2 Concentration (ppb)
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Silver Valley
Bay Tree
Fourth Creek
Gordondale
Boone Creek
Steeprock Creek
Spirit River
Woking
Webber Creek
Hythe
Sylvester
Beaverlodge
Poplar
Saddle Hills
Wanham
Shaftesbury
Eaglesham
Bear Lake
Wembley
Pinto Creek
Flyingshot
Grande Prairie I
Clairmont Lake
Smoky Heights
Fitzsimmons
Gold Creek
Wapiti
Puskwaskau
Jean Cote
Guy
Crooked Creek
Karr Creek
Clouston Creek
McLennan
Valleyview
Sunset House
High Prairie
Peavine
Gift Lake
Little Smoky
Kinuso
Deer Mountain
Grande Prairie HP
East Prairie

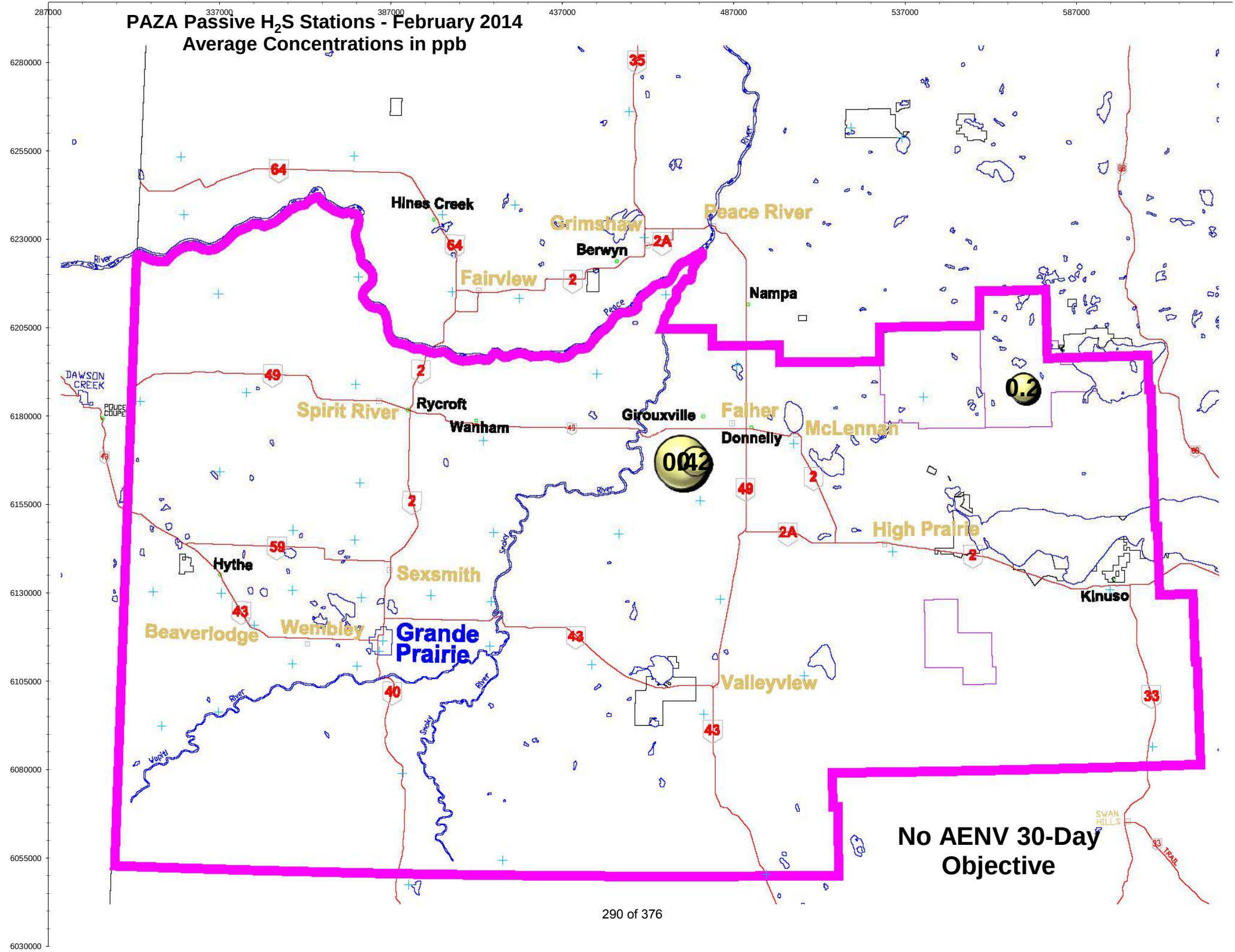

PAZA Passive O_3 Stations - February 2014
Average Concentrations in ppb
287000
337000
387000
437000
487000
537000
587000
6280000
6255000
6230000
6205000
6180000
6155000
6130000
6105000
6080000
6055000
6030000
Hines Creek
Grimshaw
Peace River
Fairview
Nampa
44
45
40
40
40
40
38
43
37
35
43
42
40
40
39
42
39
36
40
40
42
37
39
43
47
41
26
32
39
37
36
36
38
40
35
44
42
38
38
38
31
37
35
28
No AENV 30-Day Objective


Alberta Ambient Air Quality Objective - No Annual O_3 Objective
February 2014
Jan 2010 to Dec 2010
Jan 2011 to Dec 2011
Jan 2012 to Dec 2012
O_3 Concentration (ppb)
0
10
20
30
40
50
60
70
80
Silver Valley
Bay Tree
Fourth Creek
Gordondale
Boone Creek
Steeprock Creek
Spirit River
Woking
Webber Creek
Hythe
Sylvester
Beaverlodge
Poplar
Saddle Hills
Wanham
Shaftesbury
Eaglesham
Bear Lake
Wembley
Pinto Creek
Flyingshot
Grande Prairie I
Clairmont Lake
Smoky Heights
Fitzsimmons
Gold Creek
Wapiti
Puskwaskau
Jean Cote
Guy
Crooked Creek
Karr Creek
Clouston Creek
McLennan
Valleyview
Sunset House
High Prairie
Peavine
Gift Lake
Little Smoky
Kinuso
Deer Mountain
Grande Prairie HP
East Prairie


PAZA Passive NO_2 Stations - February 2014
Average Concentrations in ppb
287000
337000
387000
437000
487000
537000
587000
6280000
6255000
6230000
6205000
6180000
6155000
6130000
6105000
6080000
6055000
6030000
Hines Creek
Grimshaw
Berwyn
Peace River
Fairview
Nampa
DAWSON CREEK
Spirit River
Rycroft
Wanham
Girouxville
Falher
Donnelly
McLennan
High Prairie
Hythe
Sexsmith
Beaverlodge
Wembley
Grande Prairie
Valleyview
Kleskun
1.1
0.7
1.0
0.9
1.2
0.8
0.6
1.4
0.8
1.2
0.7
1.3
0.9
0.9
1.0
1.8
0.7
2.0
0.9
1.4
0.8
1.9
2.0
1.8
1.6
1.3
1.0
1.1
2.9
10.3
9.9
1.8
0.3
3.5
3.4
1.8
0.8
1.2
0.9
1.6
0.7
2.5
1.1
4.5
AENV
Annual
Objective
24 ppb


Alberta Ambient Air Quality Objective - Annual NO_2 Objective is 24 ppb
February 2014
Jan 2010 to Dec 2010
Jan 2011 to Dec 2011
Jan 2012 to Dec 2012
NO_2 Concentration (ppb)
0
2
4
6
8
10
12
Silver Valley
Bay Tree
Fourth Creek
Gordondale
Boone Creek
Steeprock Creek
Spirit River
Woking
Webber Creek
Hythe
Sylvester
Beaverlodge
Poplar
Saddle Hills
Wanham
Shaftesbury
Eaglesham
Bear Lake
Wembley
Pinto Creek
Flyingshot
Grande Prairie I
Clairmont Lake
Smoky Heights
Fitzsimmons
Gold Creek
Wapiti
Puskwaskau
Jean Cote
Guy
Crooked Creek
Karr Creek
Clouston Creek
McLennan
Valleyview
Sunset House
High Prairie
Peavine
Gift Lake
Little Smoky
Kinuso
Deer Mountain
Grande Prairie HP
East Prairie

PAZA Passive H_2S Stations - February 2014
Average Concentrations in ppb



PAZA

ALBERTA ENVIRONMENT AND SUSTAINABLE RESOURCES INCIDENCE REPORT

February 2014

Air Monitoring Directive Exceedence Report

Alberta Environment and Sustainable Resource Development
Environmental Service Response Centre
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:	280839	Reported To (AESRD Contact):	Steven
Date & Time Incident Reported to AESRD:	February 25, 2014 14:30 MST	Reported By:	Tosh Hayashi
Reported on Behalf of:	PAZA	Approval Number (if applicable):	N/A
Location(s) of Incident:	Valleyview Air Quality Monitoring station		
Start Date & Time of Incident:	February 25, 2014 12:00	End Date & Time of Incident:	February 25, 2014 15:00

Reason or Nature of Incident:

The H_2S monitor exceeded the 10ppb hourly limit, details as follows:

Feb25, 2014 12:00-13:00 HRS	H2S	19.4 ppb	WS=3.2 km/hr	WD=344.2 deg
Feb25, 2014 13:00-14:00 HRS	H2S	14.6 ppb	WS=2.8 km/hr	WD=340.6 deg
Feb25, 2014 14:00-15:00 HRS	H2S	13.4 ppb	WS=2.1 km/hr	WD=326.0 deg

Immediate Actions Taken:

A review of the data confirms the readings as valid.

Investigation Details:

I spoke with Troy Given of CNRL and he dispatched people to check H2S levels around their nearby and upwind sites. No H_2S was detected, however one operator reported very strong manure and silage feed odors close to the air monitoring station due to a cattle farmer in the near vicinity.

Actions Taken to Prevent Reoccurrence (if any):

N/A

Additional Actions Required (if any):

N/A

Report Completed By:	Tosh Hayashi	Date Report Submitted:	March 04, 2014
7-Day Letter Due Date:	March 04, 2014		

Air Monitoring Directive Exceedence Report

Alberta Environment and Sustainable Resource Development
Environmental Service Response Centre
111 Twin Atria Building
4999 – 98th Avenue
Edmonton, Alberta T6B 2X3
Phone: (780) 422-4505
Fax: (780) 427-1044

Reference Number:	**280972**	Reported To (AESRD Contact):	Steven
Date & Time Incident Reported to AESRD:	February 28, 2014 23:30 MST	Reported By:	Dmytro Dolotii
Reported on Behalf of:	PAZA	Approval Number (if applicable):	NA
Location(s) of Incident:	Smoky Heights Air Quality Monitoring station		
Start Date & Time of Incident:	February 28, 2014 21:00 MST	End Date & Time of Incident:	March 1, 2014 04:00 MST

Reason or Nature of Incident:

The PM2.5 monitor exceeded the one hour limit of 80 µg/m^3 for several hours on Feb28th and continued on March 1st, details as follows:

21:00-22:00 MST	Feb 28, 2014	PM 2.5	101.4 µg/m^3	WS=10.8 km/hr	WD=34.4 deg
23:00-00:00 MST	Feb 28, 2014	PM 2.5	173.9 µg/m^3	WS=11.9 km/hr	WD=28.5 deg
01:00-02:00 MST	March 1, 2014	PM 2.5	130.1 µg/m^3	WS=10.6 km/hr	WD=25.3 deg
02:00-03:00 MST	March 1, 2014	PM 2.5	113.3 µg/m^3	WS=11.9 km/hr	WD=29.2 deg
03:00-04:00 MST	March 1, 2014	PM 2.5	111.7 µg/m^3	WS=10.1 km/hr	WD=25.3 deg

Immediate Actions Taken:

The real time data was reviewed and confirmed as valid, proceeded to call it in to AESRD

Investigation Details:

Real time data was reviewed and it was deemed as valid.

Actions Taken to Prevent Reoccurrence (if any):

N/A

Additional Actions Required (if any):

N/A

Report Completed By:	Dmytro Dolotii	Date Report Submitted:	March 05, 2014
7-Day Letter Due Date:	March 08, 2014		

February 2014 Calibration Reports

PAZA - Henry Pirker Station with the following calibrations:
SO_2, NO, NO_2, NO_x, O_3, CO, THC, TRS

PAZA – Evergreen Park Station with the following calibrations:
SO_2, TRS

PAZA – Smoky Heights Station with the following calibrations:
SO_2, TRS, $PM_{2.5}$

PAZA – Beaverlodge Station with the following calibrations:
SO_2, NO, NO_2, NO_x, O_3

PAZA – Valleyview Station with the following calibrations:
SO_2 & H_2S

PAZA – Reno Station with the following calibrations:
SO_2, NO, NO_2, NO_x, O_3, TRS, $PM_{2.5}$

PAZA – Falher Station with the following calibrations:
SO_2 & H_2S

Calibration Report

Parameter **SO2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 5, 2014	Previous Calibration	January 7, 2014
Station Number	1	Station Location	Henry Pirker
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	8:50	End Time (MST)	11:55
Barometric Pressure	717.000 mm	Station Temperature	20.5 Deg C
Calibrator		Serial Number	3016
Cal Gas Conc	51.5 ppm	Cal Gas Cert Date	March 12, 2014
		Cal Gas Cylinder #	LL105159
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	10
	Before		After
Calculated slope	0.999640	Calculated slope	1.008166
Calculated intercept	2.515030	Calculated intercept	1.232702
Analyzer make	TEI 43C	Analyzer serial #	610816292

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	9.2		9.2	
Coefficient	0.781		0.781	
Pressure	665.4	mm Hg	664.8	mm Hg
Flow	0.487	lpm	0.488	lpm
Lamp intensity	44683	Hz	44187	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	0.0	N/A
4995	39.93	408.4	404.7	1.0093
4995	19.97	205.1	201.1	1.0196
4995	9.97	102.6	99.6	1.0304
4995	0.00	0.0	0.0	As Found Zero
4995	39.93	408.4	404.7	As Found Span
			Average Correction Factor	1.0198

Calculated value of As Found Response: 407.0 ppb Percent Change of As Found: 0.4%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.1	ppb
Auto span	250.7	ppb	247.0	ppb

Notes: No adjustment made.

Calibration Performed By: Grover Christiansen,Dmytro Dolotii

Calibration Summary

Parameter **SO2**

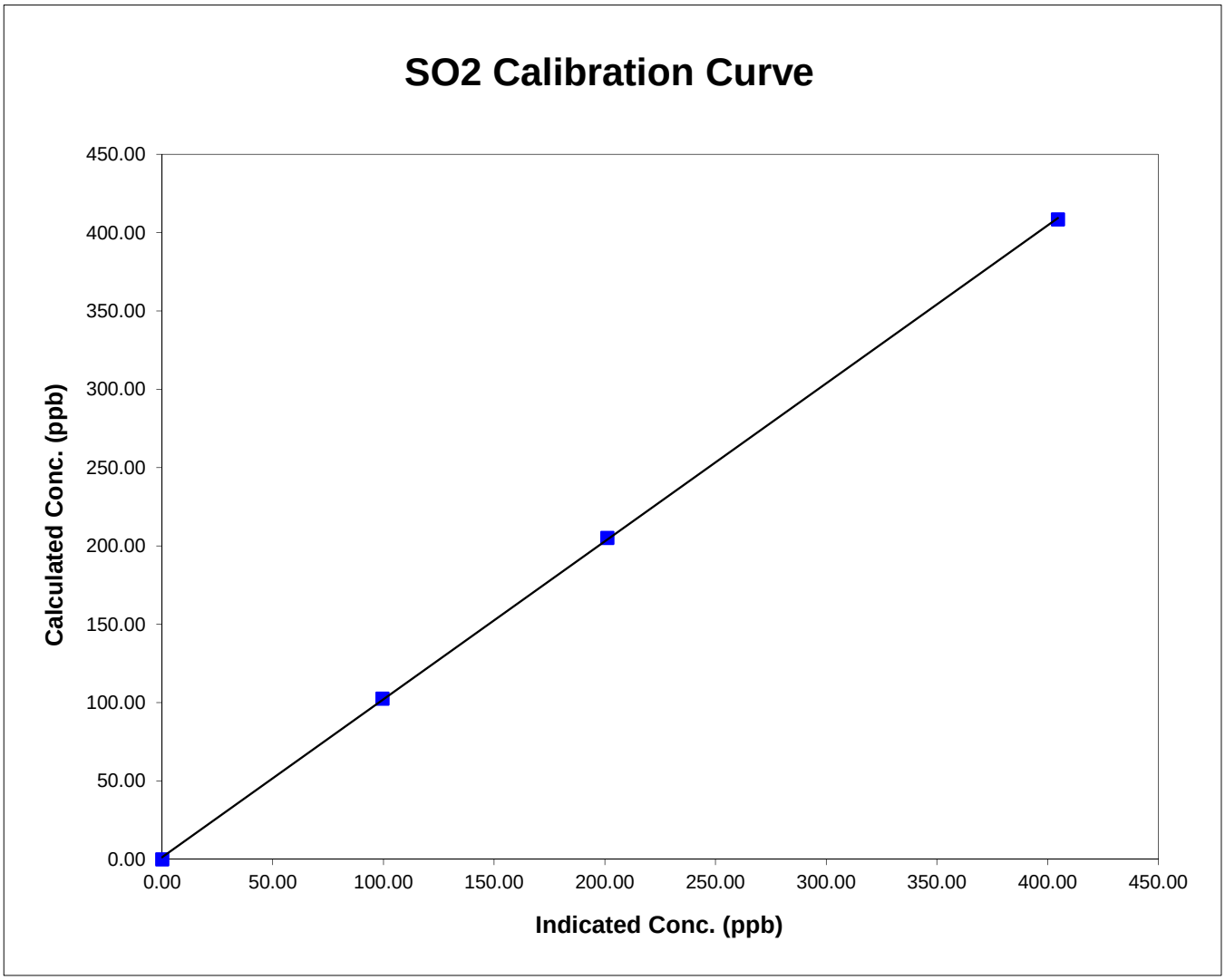
Air Monitoring Network **PAZA**

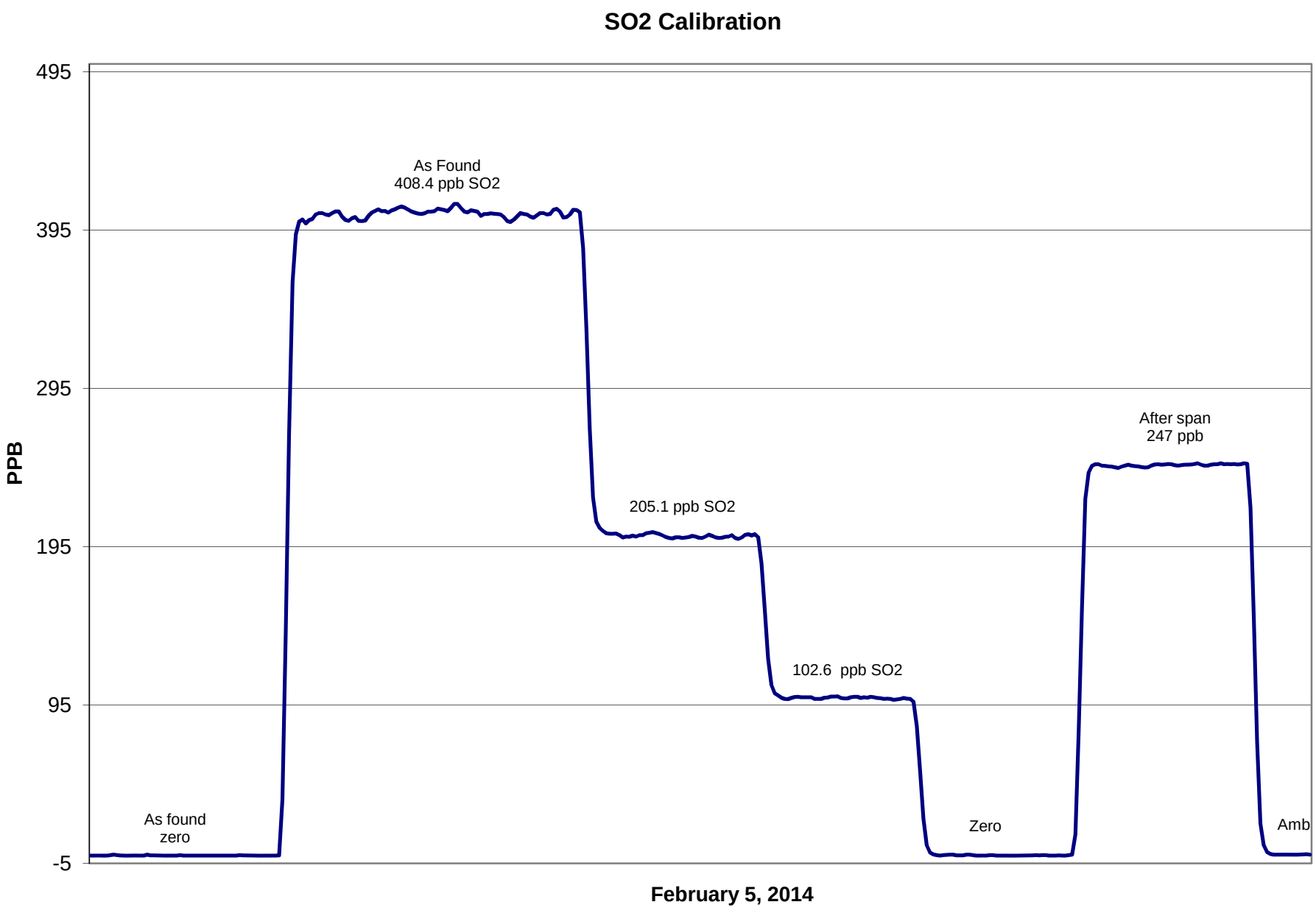
Station Information

Calibration Date	February 5, 2014	Previous Calibration	January 7, 2014
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:50	End Time (MST)	11:55
Analyzer make/model	TEI 43C	Analyzer serial #	610816292

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
408.4	404.7	1.0093	Correlation Coefficient	0.999952
205.1	201.1	1.0196		
102.6	99.6	1.0304	Slope	1.008166
			Intercept	1.232702




SO2 Calibration
495
395
295
195
95
-5
PPB
As Found
408.4 ppb SO2
205.1 ppb SO2
102.6 ppb SO2
After span
247 ppb
As found
zero
Zero
Amb
February 5, 2014

Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 5, 2014	Previous Calibration	January 7, 2014
Station Number	1	Station Location	Henry Pirker

Reason: Routine Installation Removal Other:

Start Time (MST)	8:50		End Time (MST)	13:30	
Barometric Pressure	717.000	mm	Station Temperature	20.5	Deg C
Calibrator	Environics		Serial Number	3016	
NO Cal Gas Conc	51.3	ppm	Cal Gas Expiry Date	March 12, 2014	
NOx Cal Gas Conc	51.4	ppm	Cal Gas Serial #	LL105159	

DACS Information

DACS make	CR3000	DACS serial No.	5408

Parameter		NO2	NOx	NO
Before	Data Slope	1.001518	1.001300	0.998320
	Data Offset	-1.555520	1.660329	1.815726
After	Data Slope	1.002085	0.997970	0.996679
	Data Offset	0.226132	1.218787	1.375201
Channel #		8	6	7
Voltage Range		0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model	TEI 42C	Analyzer serial #	508011073

Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	13.3	mV	13.7	mV
NOx bkgnd	13.7	mV	14.1	mV
NO coefficient	1.086		1.115	
NOx coefficient	0.999		1.000	
NO2 conv temp	318.0	Deg C	318.0	Deg C
Cooler	-2.5	Deg C	-2.5	Deg C
PMT Volt	-774.0	mV	-774.0	mV
R Cell Press	205.7	in Hg	204.0	in Hg

Calibration Report

Parameter **NOx-NO-NO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Calibration Date: February 5, 2014 Station Location: Henry Pirker

	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	0.0	0.0	-0.1	N/A	N/A
1	4995	39.93	407.6	406.8	0.8	408.0	407.7	0.3	0.9990	0.9980
2	4995	19.97	204.7	204.3	0.4	202.8	202.4	0.3	1.0095	1.0093
3	4995	9.97	102.4	102.2	0.2	100.4	100.1	0.2	1.0194	1.0205
AFZ	4995	0.00	0.0	0.0	0.0	0.0	0.0	-0.1	0.0000	0.0000
AFS	4995	39.93	407.6	406.8	0.8	396.4	397.8	-1.4	1.0282	1.0228
							Average Correction Factor		1.0093	1.0093

As Found Concentrations: NO_X= 398.1 NO= 399.6 As Found Percent Change NO_X= -2.3% NO= -1.8%

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	0.0	0.0	0.0	0.0	0.0	-0.1	N/A	N/A	N/A	N/A
NO point	406.9	406.9	0.0	407.1	406.9	0.1	0.9994	1.0000	N/A	N/A
300	406.9	102.2	304.6	405.5	102.2	303.4	1.0034	1.0000	1.0041	99.6%
200	406.9	200.6	206.3	407.0	200.6	206.5	0.9997	1.0000	0.9991	100.1%
100	406.9	298.9	107.9	405.9	298.9	106.9	1.0024	1.0000	1.0093	99.1%
					Average Correction Factor		1.0019	1.0000	1.0042	99.6%

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.0	0.0	-0.1	ppb	0.0	-0.2	-0.1	ppb
Auto span	329.9	327.5	2.4	ppb	325.6	324.1	1.6	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

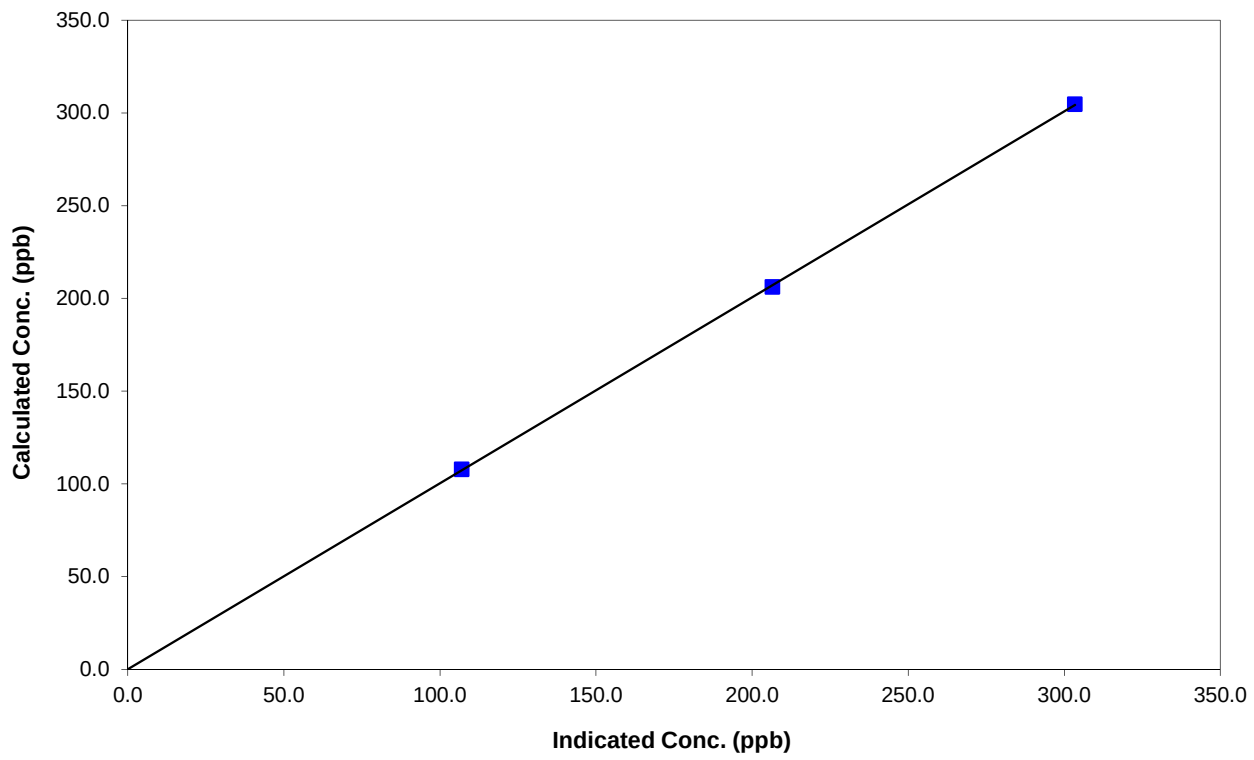
Station Information

Calibration Date	February 5, 2014	Previous Calibration	January 7, 2014
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:50	End Time (MST)	13:30
Analyzer make	TEI 42C	Analyzer serial #	508011073

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A		
304.6	303.4	1.0041	Correlation Coefficient	0.999977
206.3	206.5	0.9991		
107.9	106.9	1.0093	Slope	1.002085
			Intercept	0.226132

NO_2 Calibration Curve



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

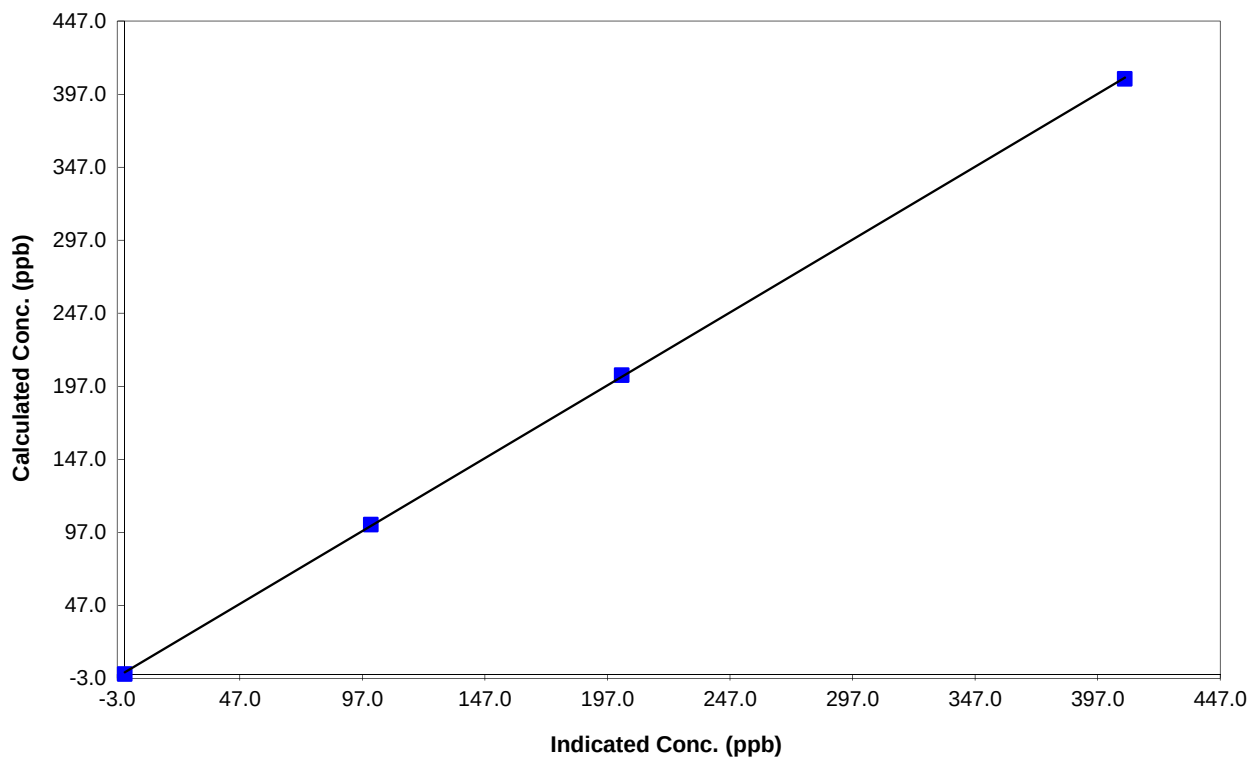
Station Information

Calibration Date	February 5, 2014	Previous Calibration	January 7, 2014
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:50	End Time (MST)	13:30
Analyzer make	TEI 42C	Analyzer serial #	508011073

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
407.6	408.0	0.9990	Correlation Coefficient	0.999953
204.7	202.8	1.0095		
102.4	100.4	1.0194	Slope	0.997970
			Intercept	1.218787

NOx Calibration Curve



Calibration Summary

Parameter **NO**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

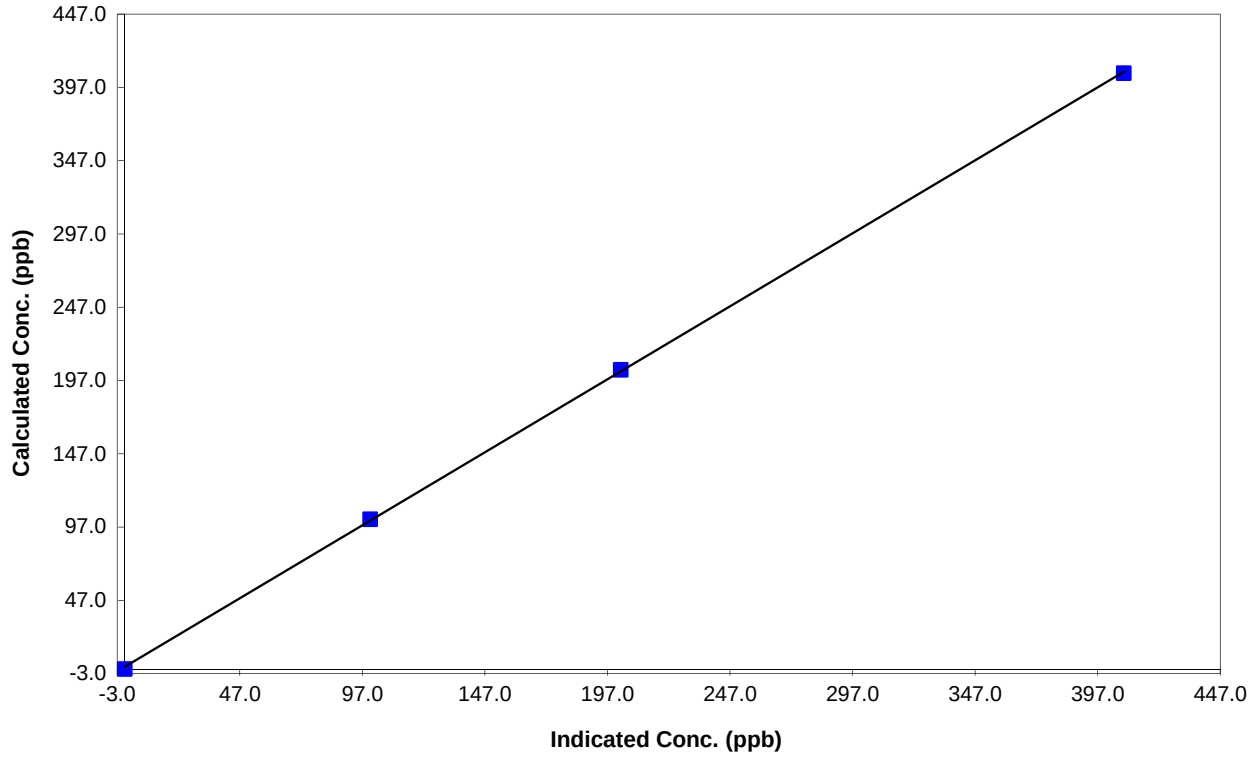
Station Information

Calibration Date	February 5, 2014	Previous Calibration	January 7, 2014
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:50	End Time (MST)	13:30
Analyzer make	TEI 42C	Analyzer serial #	508011073

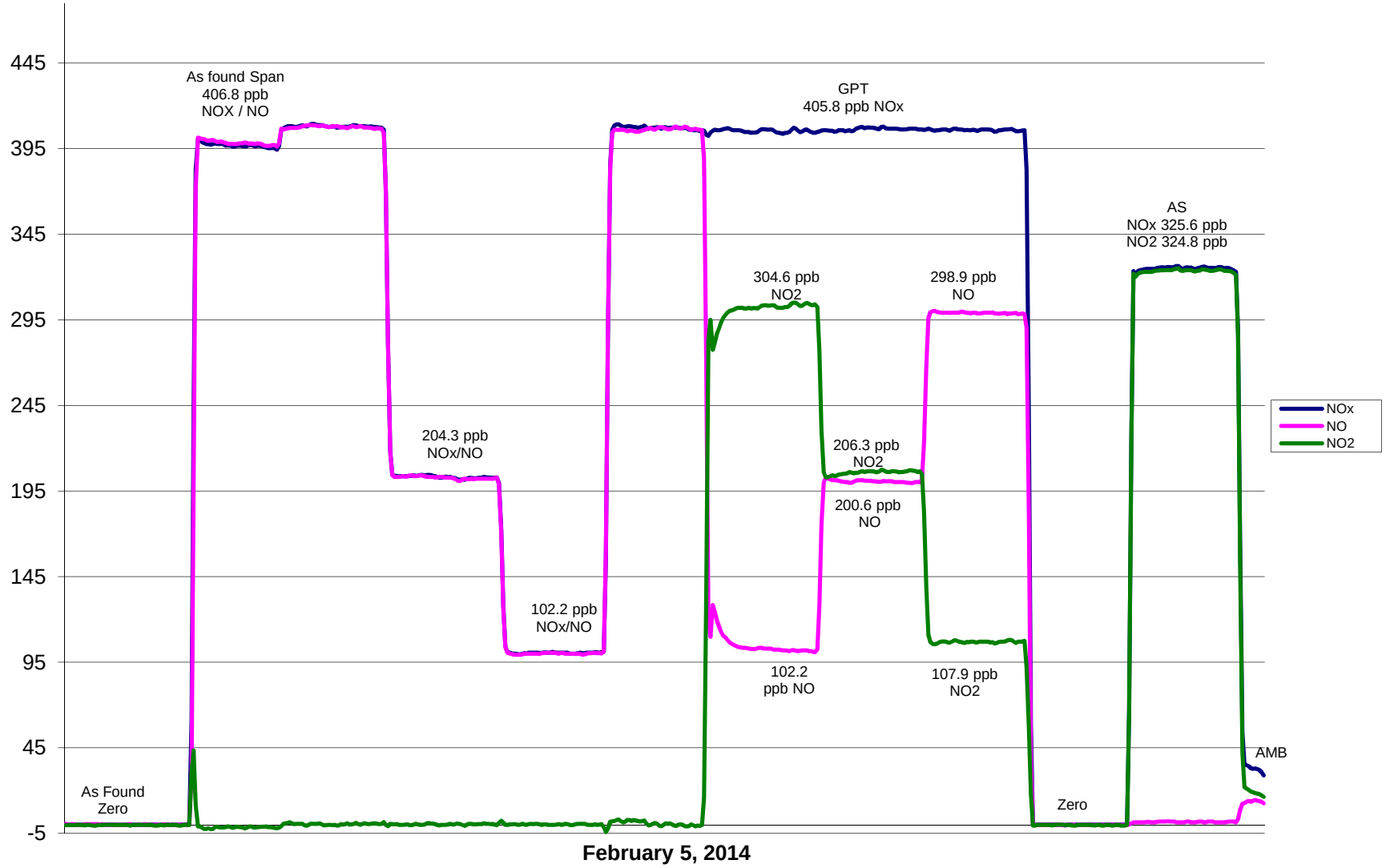
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
406.8	407.7	0.9980	Correlation Coefficient	0.999945
204.3	202.4	1.0093		
102.2	100.1	1.0205	Slope	0.996679
			Intercept	1.375201

NO Calibration Curve



PAZA
NO_X Calibration



Calibration Report

Parameter **O3**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 5, 2014	Previous Calibration	January 7, 2014
Station Number	1	Station Location	Henry Pirker
Reason: Routine	Install	Removal	Other:
Start Time (MST)	12:50	End Time (MST)	15:55
Barometric Pressure	717.000 mm	Station Temperature	20.5 Deg C
Calibrator	Environics	Serial Number	3016
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	0.995843	Calculated slope	1.004473
Calculated intercept	-0.882586	Calculated intercept	0.217811
Analyzer make	Teco 49C	Analyzer serial #	607415761

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	0.00	ppb	-0.50	ppb
slope	1.011		1.011	
Lamp temp	57	mV	57	mV
Lamp Intensity A/B	107654/96975	mV	110492/99504	mV
Pressure	701.6	mm Hg	698.8	mm Hg
Flow A	0.734	ccm	0.731	ccm
Flow B	0.738	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	0.1	N/A
5035	0.3	304.6	303.1	1.0050
5035	0.2	206.3	205.4	1.0044
5035	0.1	107.9	106.6	1.0123
5035	0.0	0.0	0.1	As found zero
5035	0.3	304.6	303.1	As found span
			Average Correction Factor	1.0072

Calculated value of As Found Response: 300.8 ppm Percent Change of As Found: -1.2%

	before calibration		after calibration	
Auto zero	1.0	ppb	0.6	ppb
Auto span	355.0	ppb	370.5	ppb

Notes: No adjustment made

Calibration Performed By: Grover Christiansen,Dmytro Dolotii

Calibration Summary

Parameter **O3**

Air Monitoring Network **PAZA**

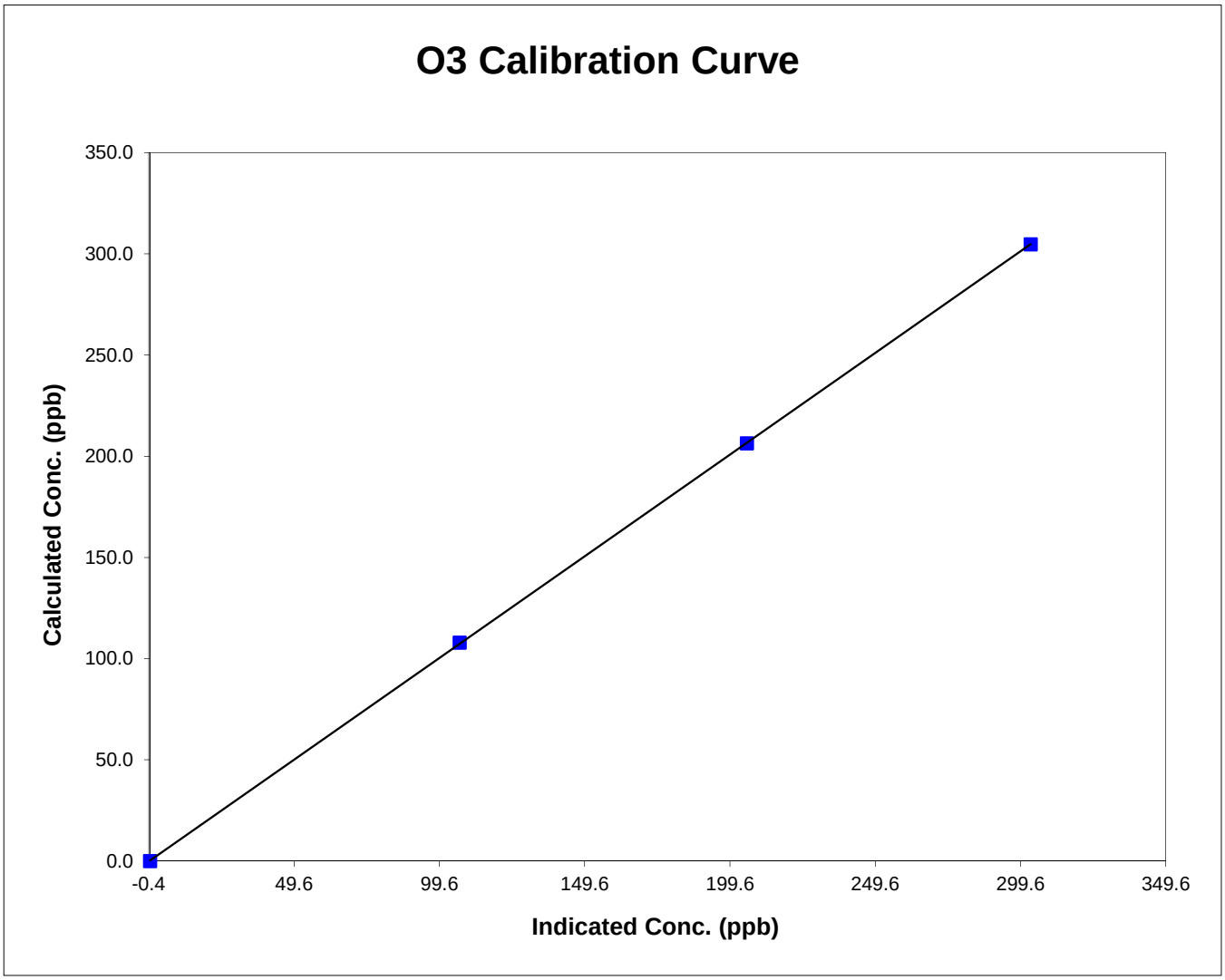
FOCUS AIR QUALITY MONITORING

Station Information

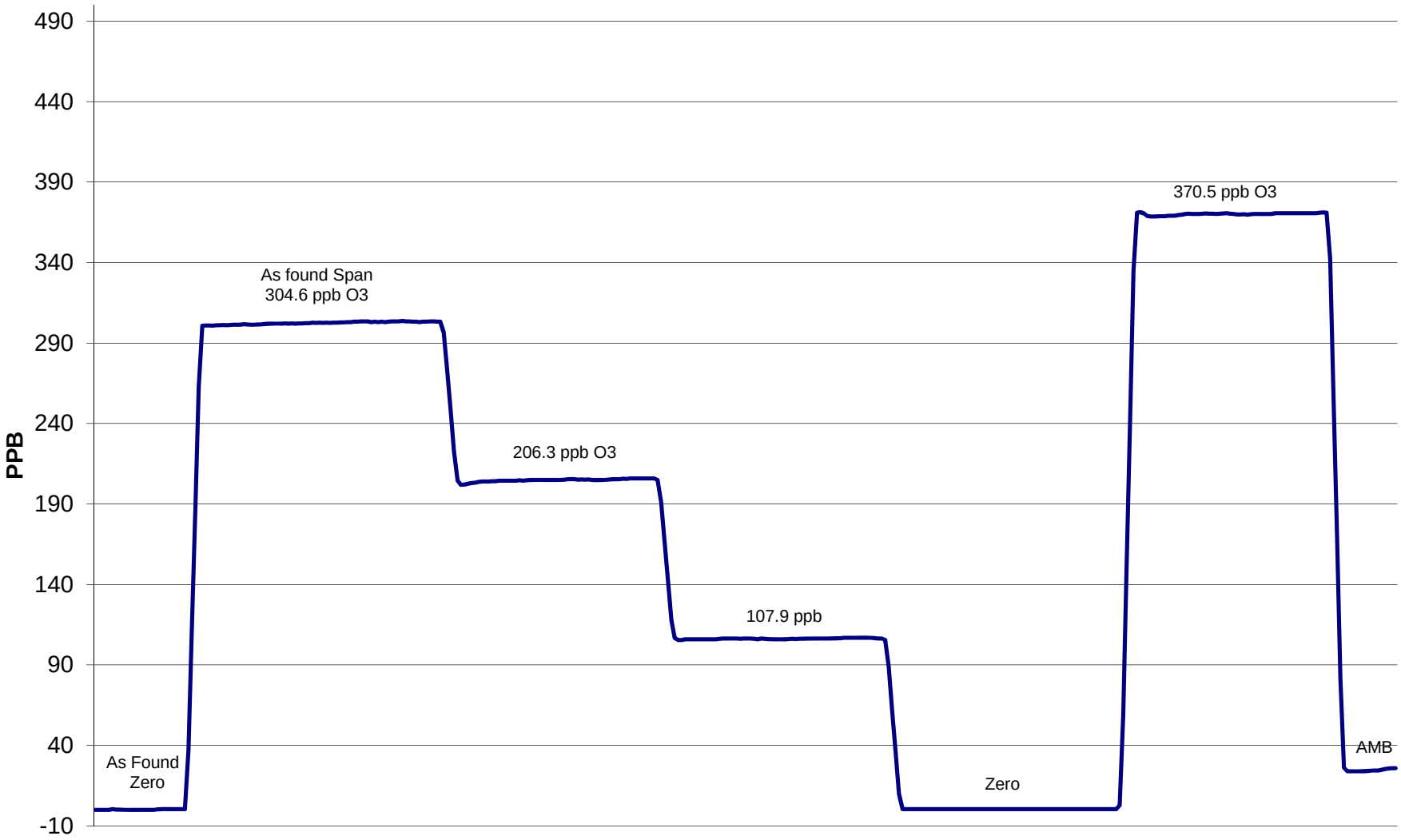
Calibration Date	February 5, 2014	Previous Calibration	January 7, 2014
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:50	End Time (MST)	15:55
Analyzer make/model	Teco 49C	Analyzer serial #	607415761

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	NA		
304.6	303.1	1.0050	Correlation Coefficient	0.999989
206.3	205.4	1.0044		
107.9	106.6	1.0123	Slope	1.004473
			Intercept	0.217811



O3 Calibration



February 5, 2014

Calibration Report

Parameter **CO**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 4, 2014	Previous Calibration	January 6, 2013
Station Number	1	Station Location	Henry Pirker
Reason: Routine	Install	Removal	Other:
Start Time (MST)	8:50	End Time (MST)	11:48
Barometric Pressure	704.0 mm/hg	Station Temperature	21.0 Deg C
Calibrator	Environics 6100	Serial Number	3016
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 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	1.006631	Calculated slope	1.002473
Calculated intercept	0.135424	Calculated intercept	-0.120755
Analyzer make	TEI Model 48C	Analyzer serial #	508011062

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO span setting	1.005		1.005	
CO zero setting	0.010		0.011	
Sample pressure	706.9	mm Hg	685.5	mm Hg
Sample Flow	1.140	LPM	1.145	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	0.26	N/A
4995	69.94	40.02	40.12	0.9976
4995	34.96	20.14	20.12	1.0009
4995	17.96	10.38	10.35	1.0032
4995	0.00	0.00	0.26	As Found Zero
4995	69.94	40.02	40.12	As Found Span
			Average Correction Factor	1.0005

Calculated value of As Found Response: 40.255 ppm Percent Change of As Found: -0.6%

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	19.81	ppm	19.95	ppm

Notes: Adjusted pressure setting on the daily span cylinder.

Calibration Performed By: Grover Christiansen,Dmytro Dolotii

Calibration Summary

Parameter **CO**

Air Monitoring Network **PAZA**

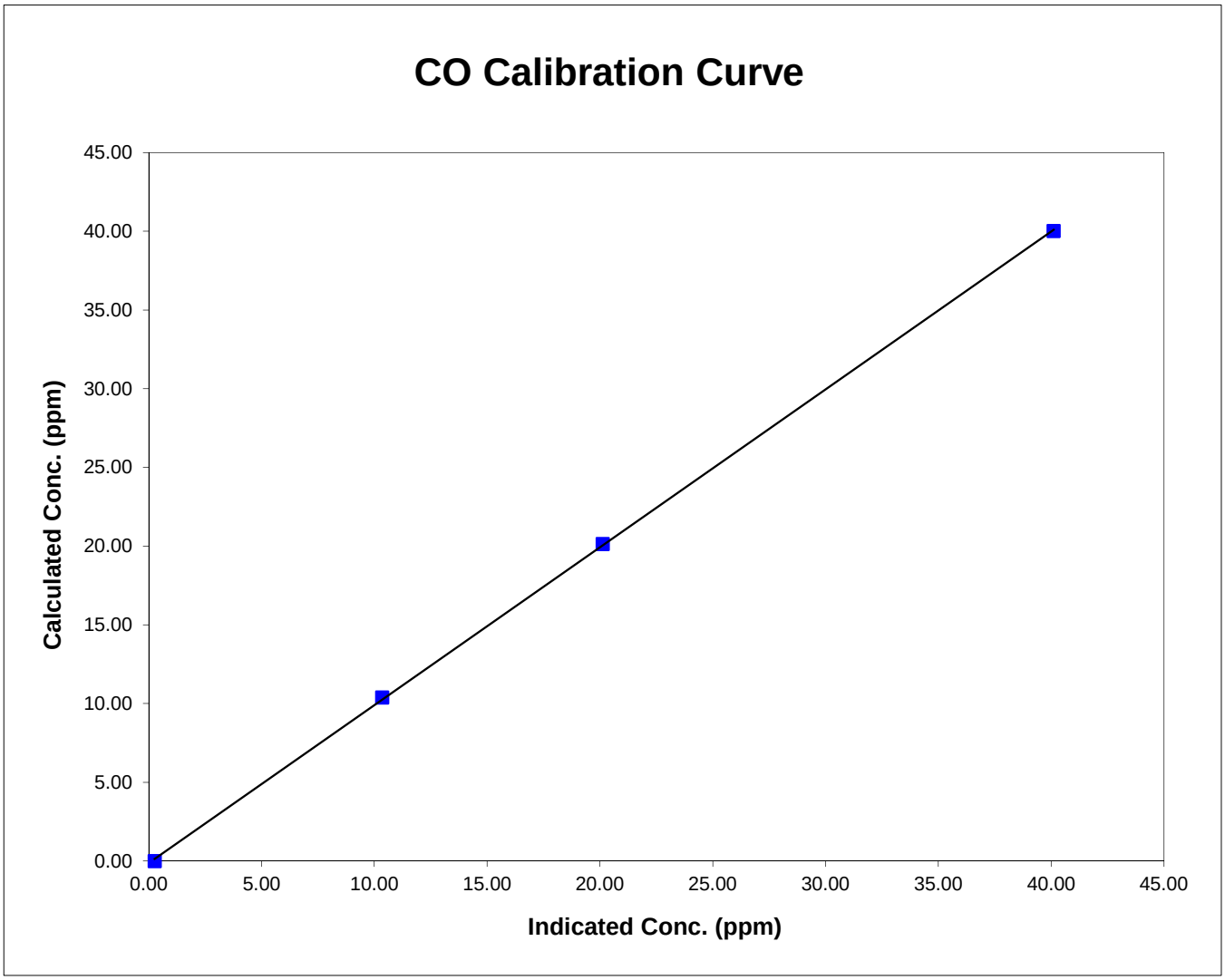
FOCUS AIR QUALITY MONITORING

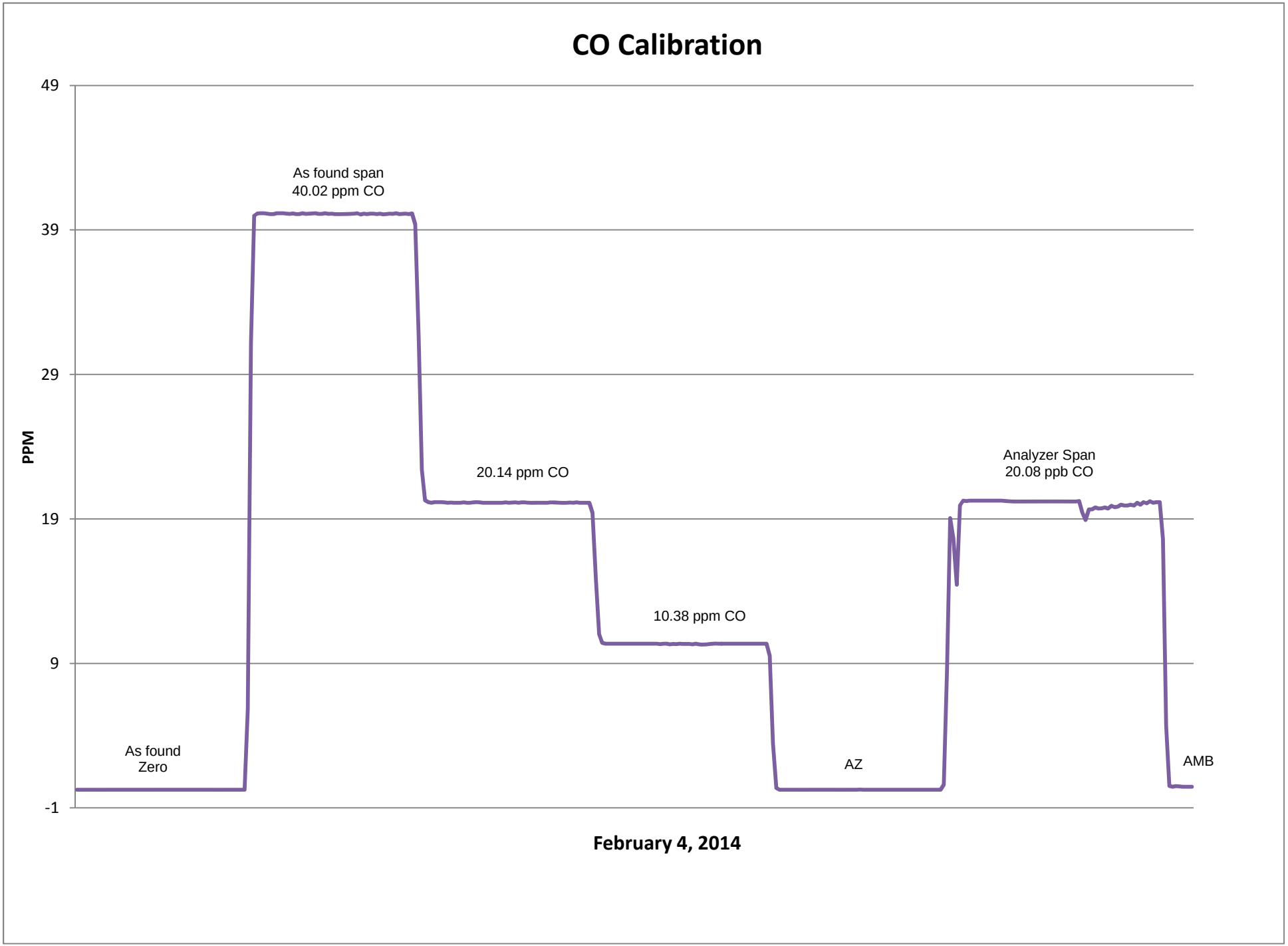
Station Information

Calibration Date	February 4, 2014	Previous Calibration	January 6, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:50	End Time (MST)	11:48
Analyzer make/model	TEI Model 48C	Analyzer serial #	508011062

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.260	N/A		
40.017	40.115	0.9976	Correlation Coefficient	0.999943
20.142	20.125	1.0009		
10.383	10.350	1.0032	Slope	1.002473
			Intercept	-0.120755




CO Calibration
49
39
29
19
9
-1
PPM
As found span
40.02 ppm CO
20.14 ppm CO
10.38 ppm CO
Analyzer Span
20.08 ppb CO
As found
Zero
AZ
AMB
February 4, 2014

Calibration Report

Parameter **CH4 / NMHC / THC**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 4, 2014	Previous Calibration	January 31, 2014
Station Number	1	Station Location	Henry Pirker

Reason: Routine | Install | Removal | Other:

Start Time (MST)	11:28	End Time (MST)	14:21
Barometric Pressure	NA inches Hg	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3016
Cal Gas CH4 Conc	404 ppm CH4	Cal Gas Expiry Date	28/03/2014
Cal Gas C3H8 Conc	201 552.75 ppm CH4	Cal Gas Cylinder #	LL34989
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 5 volt	DACS channel #	SE 11,12,13

Analyzer make	TEI 55I	Analyzer serial #	1134650658

	before		after	
Concentration range	0-20 (CH4, NMHC); 0-40 (THC)	ppm	0-20 (CH4, NMHC); 0-40 (THC)	ppm
Air pressure	28	PSI	28	PSI
Fuel pressure	42.5	PSI	42.5	PSI
Carrier pressure	30.5	PSI	30.5	PSI
CH4 cal factor	5.68		5.68	E^{-4}
NMHC cal factor	1.64		1.64	E^{-4}
Rt	12.60	Sec	12.60	Sec
Pk Index	23.00		23.00	

CH4 Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
1996	0.00	0.00	0.02	N/A
1996	64.93	12.73	12.75	0.9982
1996	39.93	7.92	7.88	1.0060
1996	14.95	3.00	2.97	1.0126
1996	0.00	0.00	0.02	As Found Zero
1996	64.93	12.73	12.78	As Found Span
			Average Correction Factor	1.0056

Calculated value of As Found Response: 12.744 ppm Percent Change of As Found: -0.1%

	Before		After
Calculated slope	0.997682	Calculated slope	0.999298
Calculated intercept	0.011756	Calculated intercept	0.015001

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	9.11	ppm	9.46	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	64.93	17.41	17.37	1.0025
1996	39.93	10.84	10.88	0.9965
1996	14.95	4.11	4.07	1.0092
1996	0.00	0.00	0.02	As Found Zero
1996	64.93	17.41	17.39	As Found Span
			Average Correction Factor	1.0028

Calculated value of As Found Response: 17.373 ppm Percent Change of As Found: 0.2%

	Before		After
Calculated slope	0.999953	Calculated slope	1.001772
Calculated intercept	-0.000959	Calculated intercept	-0.008184

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.02	ppm
Auto span	12.55	ppm	13.00	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	64.93	30.14	30.11	1.0012
1996	39.93	18.76	18.74	1.0014
1996	14.95	7.11	7.03	1.0112
1996	0.00	0.00	0.03	As Found Zero
1996	64.93	30.14	30.16	As Found Span
			Average Correction Factor	1.0046

Calculated value of As Found Response: 30.130 ppm Percent Change of As Found: 0.0%

	Before		After
Calculated slope	0.999681	Calculated slope	1.001202
Calculated intercept	0.013881	Calculated intercept	0.011028

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.02	ppm
Auto span	21.66	ppm	22.45	ppm

Notes: Slight span adjust, run adjustment point.

Calibration Performed By: Grover Christiansen,Dmytro Dolotii

Calibration Summary

Parameter **CH4**

Air Monitoring Network **PAZA**

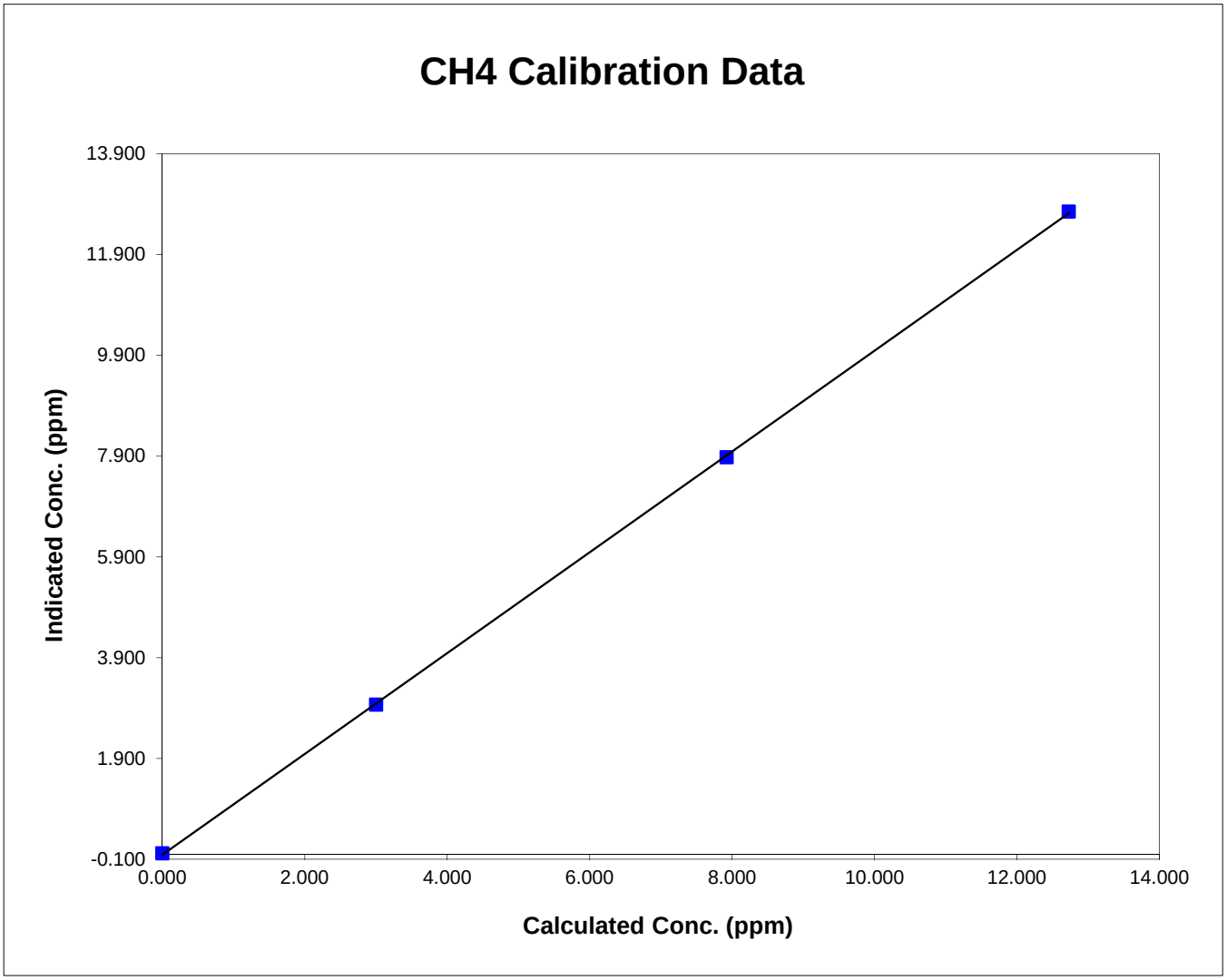
FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 4, 2014	Previous Calibration	January 31, 2014
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	11:28	End Time (MST)	14:21
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.018	N/A		
12.728	12.751	0.9982	Correlation Coefficient	0.999958
7.924	7.877	1.0060		
3.003	2.966	1.0126	Slope	0.999298
			Intercept	0.015001



Calibration Summary

Parameter **NMHC**

Air Monitoring Network **PAZA**

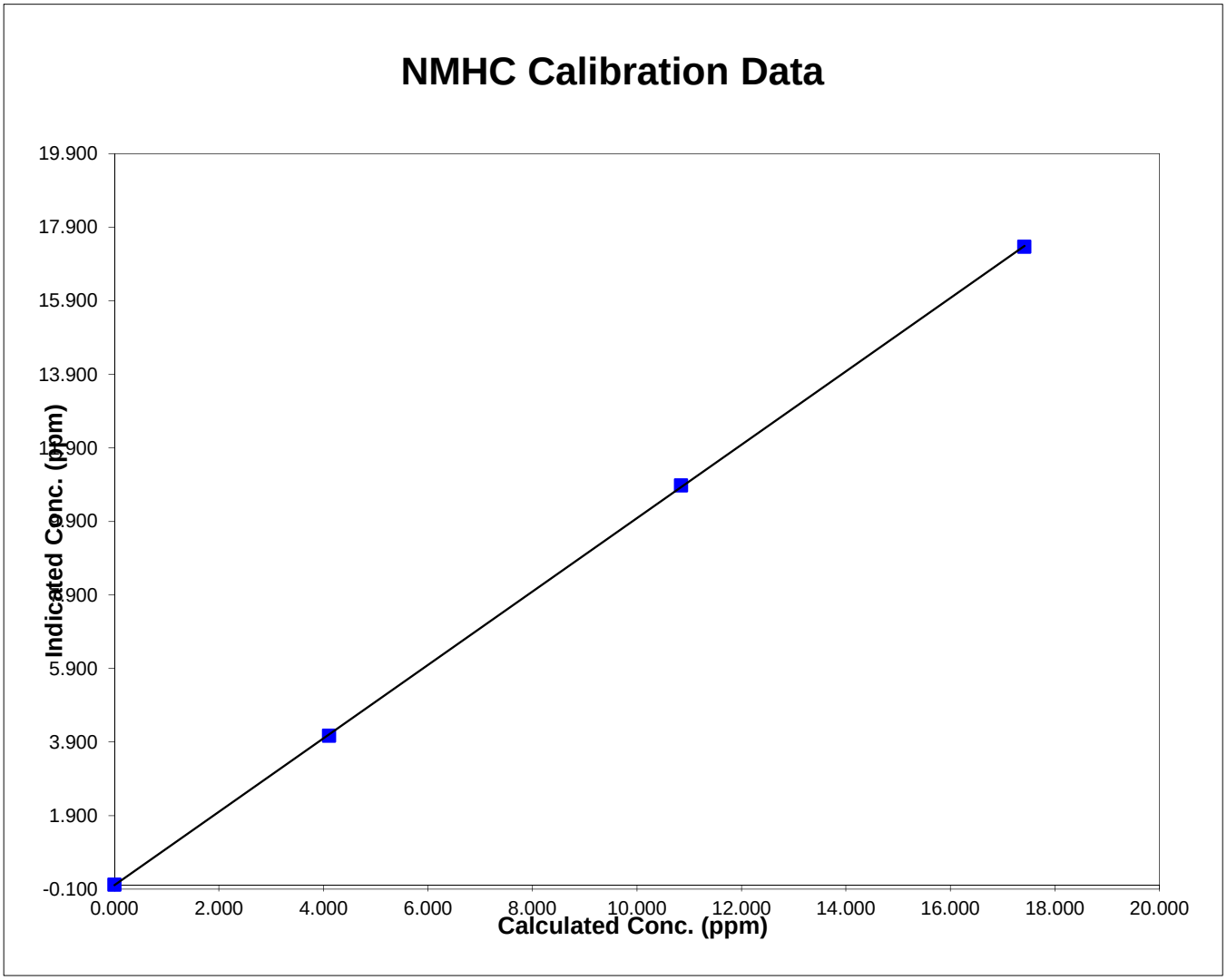
FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 4, 2014	Previous Calibration	January 31, 2014
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	11:28	End Time (MST)	14:21
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.019	N/A		
17.414	17.370	1.0025	Correlation Coefficient	0.999975
10.841	10.878	0.9965		
4.109	4.072	1.0092	Slope	1.001772
			Intercept	-0.008184



Calibration Summary

Parameter **THC**

Air Monitoring Network **PAZA**

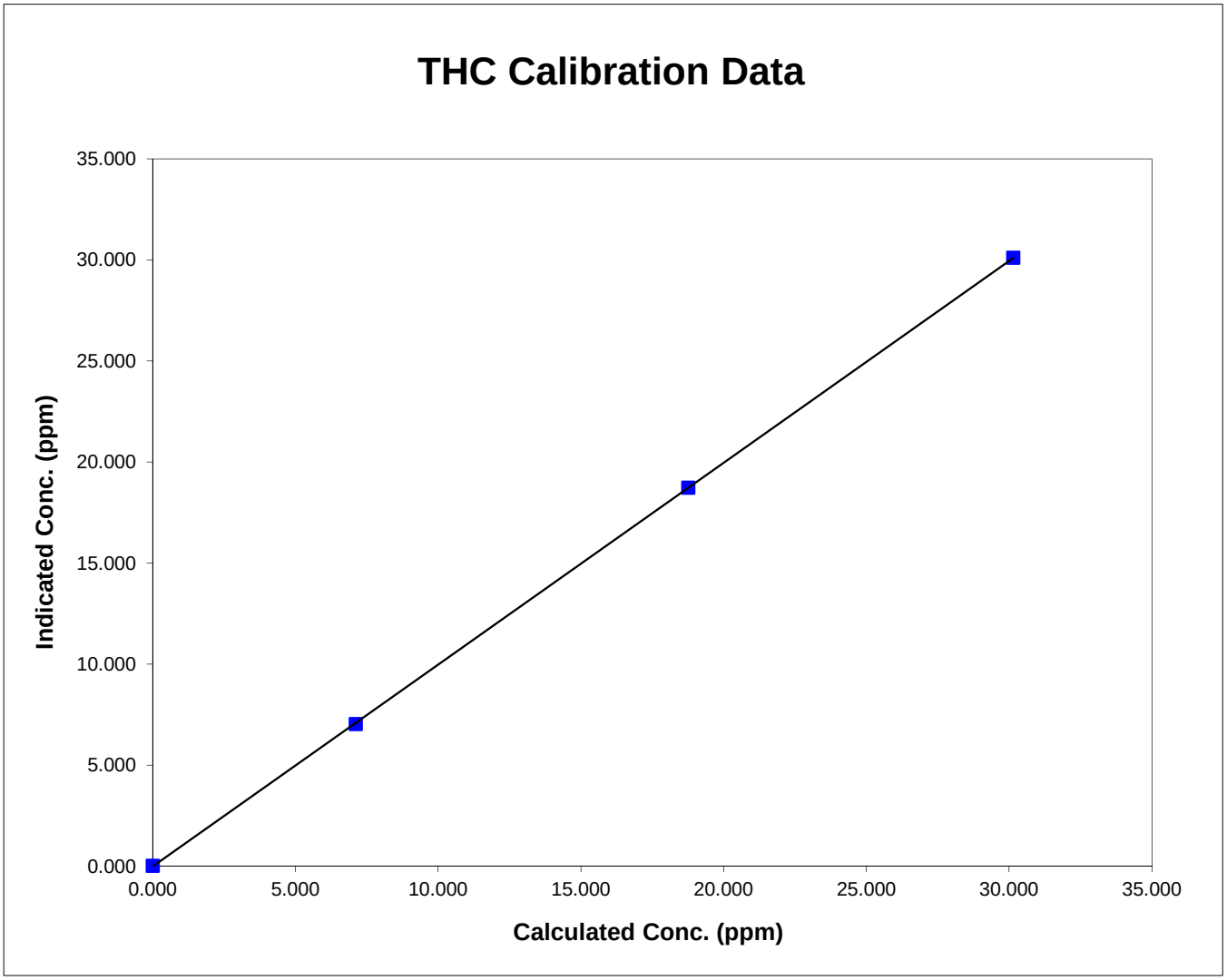
FOCUS AIR QUALITY MONITORING

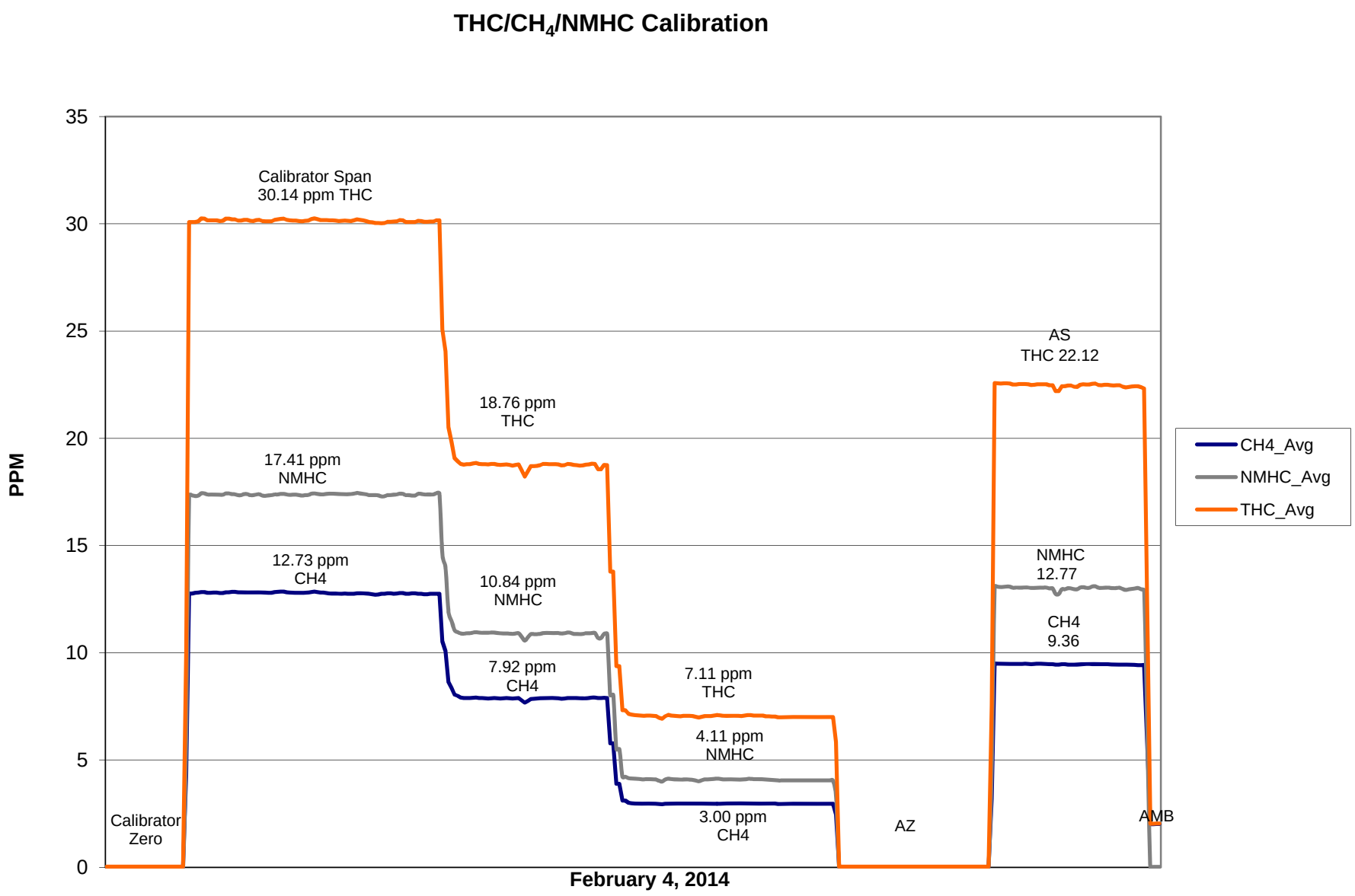
Station Information

Calibration Date	February 4, 2014	Previous Calibration	January 31, 2014
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	11:28	End Time (MST)	14:21
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.032	N/A		
30.143	30.105	1.0012	Correlation Coefficient	0.999990
18.764	18.738	1.0014		
7.113	7.034	1.0112	Slope	1.001202
			Intercept	0.011028




THC/CH4/NMHC Calibration
PPM
35
30
25
20
15
10
5
0
Calibrator Span
30.14 ppm THC
17.41 ppm
NMHC
12.73 ppm
CH4
18.76 ppm
THC
10.84 ppm
NMHC
7.92 ppm
CH4
7.11 ppm
THC
4.11 ppm
NMHC
3.00 ppm
CH4
AS
THC 22.12
NMHC
12.77
CH4
9.36
Calibrator
Zero
AZ
AMB
February 4, 2014
CH4_Avg
NMHC_Avg
THC_Avg

Calibration Report

Parameter **TRS**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 4, 2014	Previous Calibration	January 6, 2014
Station Number	1	Station Location	Henry Pirker

Reason: Routine | Install | Removal | Other:

Start Time (MST)	13:35:00 PM	End Time (MST)	16:58:00 PM
Barometric Pressure	704.00 mm/Hg	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Conc	10.4 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	1.016844	Calculated slope	1.005092
Calculated intercept	0.322705	Calculated intercept	0.331613

Analyzer make	TEI 45C	Analyzer serial #	630718528

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Coefficient	0.988		0.988	
Background	17.3		17.3	
Pressure	677.2	mm Hg	677	mm Hg
Flow	0.457	ccm	0.457	ccm
Lamp Voltage	882	V	882	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	-0.17	N/A
4995	39.93	82.48	81.84	1.0078
4995	19.95	41.37	40.63	1.0182
8995	8.95	10.34	9.89	1.0452
4995	0.00	0.00	-0.17	As Found Zero
4995	39.93	82.48	81.84	As Found Span
			Average Correction Factor	1.0238

Calculated value of As Found Response: 83.7 ppb Percent Change of As Found: -1.5%

	before calibration		after calibration	
Auto zero	-0.92	ppb	0.28	ppb
Auto span	33.06	ppb	40.83	ppb

Notes: No adjusment made

Calibration Performed By: Grover Christiansen,Dmytro Dolotii

Calibration Summary

Parameter **TRS**

Air Monitoring Network **PAZA**

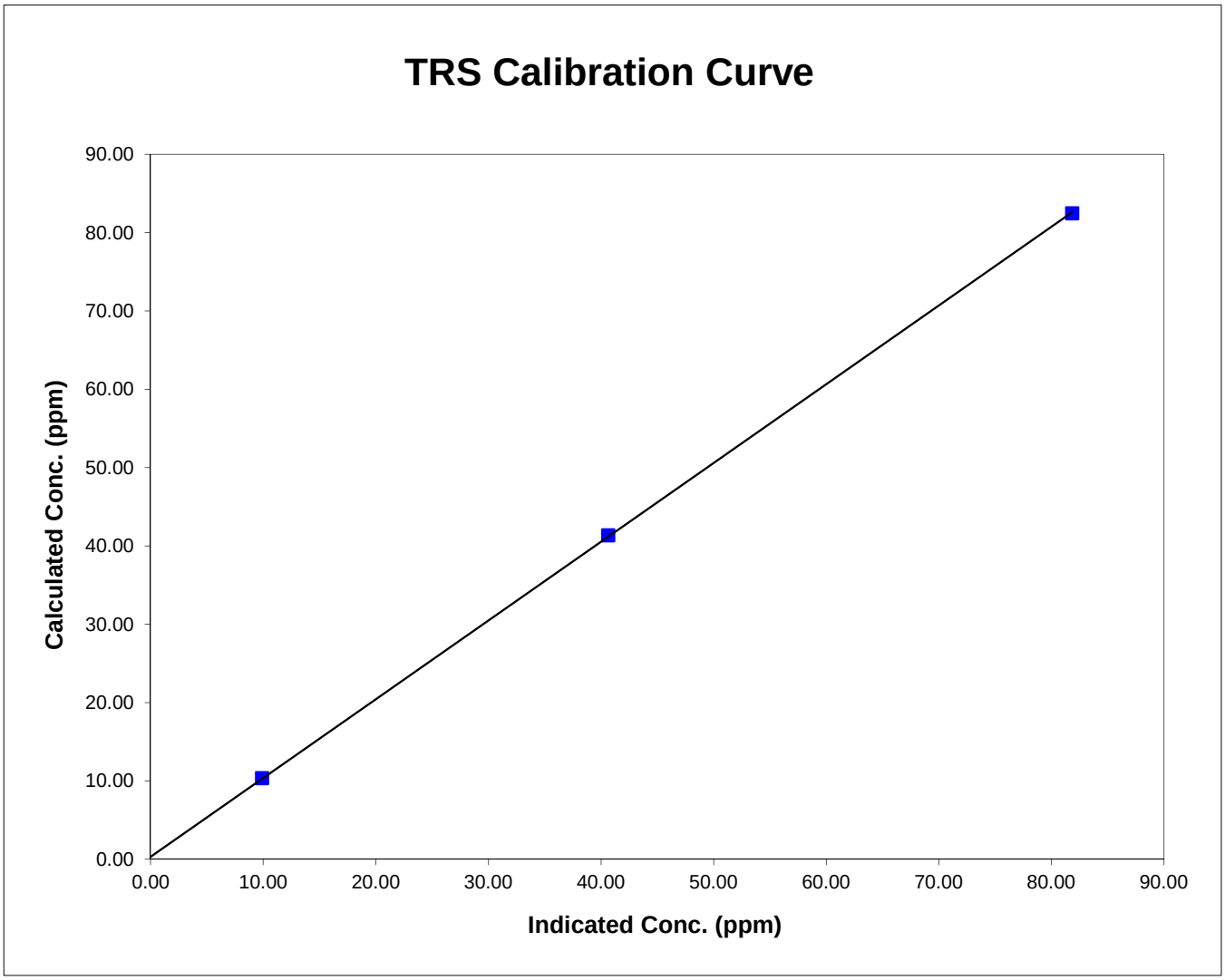
FOCUS AIR QUALITY MONITORING

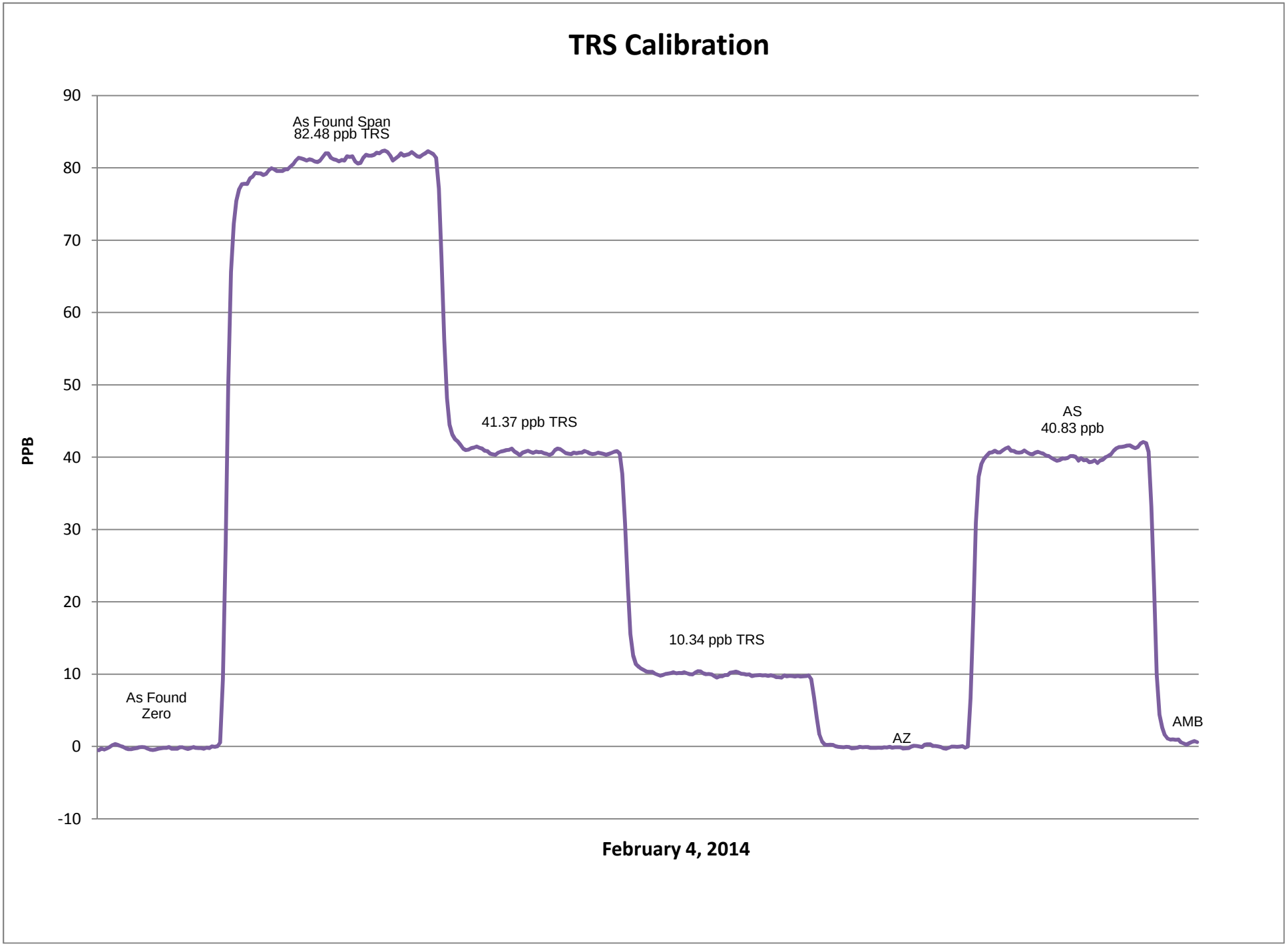
Station Information

Calibration Date	February 4, 2014	Previous Calibration	January 6, 2014
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	13:35:00 PM	End Time (MST)	16:58:00 PM
Analyzer make/model	TEI 45C	Analyzer serial #	630718528

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	-0.172	N/A		
82.478	81.838	1.0078	Correlation Coefficient	0.999980
41.372	40.632	1.0182		
10.338	9.890	1.0452	Slope	1.005092
			Intercept	0.331613




TRS Calibration
90
80
70
60
50
40
30
20
10
0
-10
PPB
As Found Span
82.48 ppb TRS
41.37 ppb TRS
10.34 ppb TRS
AS
40.83 ppb
As Found
Zero
AZ
AMB
February 4, 2014

Calibration Report

Parameter **SO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 06 2014	Previous Calibration	January 10 2014
Station Number	2	Station Location	Evergreen Park
Reason: Routine	Install	Removal	Other:
Start Time (MST)	11:30	End Time (MST)	14:10
Barometric Pressure	0.924 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3016
Cal Gas Concentration	51.5 ppm	Cal Gas Expiry Date	25/02/2025
Correction factor	0.031409	Cal Gas Cylinder #	LL105159
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	1.010684	Calculated slope	1.010134
Calculated intercept	0.734428	Calculated intercept	0.563226
Analyzer make	Teco 43i	Analyzer serial #	701120008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	11.3		11.3	
coefficient	1.203		1.203	
Lamp Voltage	831	volts	830	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	44.99	Deg C	45	Deg C
Pressure	672.2	mm Hg	670.7	mm Hg
Sample Flow	0.453	ccm	0.453	ccm
Lamp Intensity	89	%	90	%

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	408.4	404.4	1.0100
4995	19.97	205.1	201.7	1.0167
4995	9.97	102.6	100.1	1.0246
4995	0.0	0.0	0.5	As Found Zero
4995	39.93	408.4	404.4	As Found Span
			Average Correction Factor	1.0171

Calculated value of As Found Response: 408.933 ppm Percent Change of As Found: -0.1%

	before calibration		after calibration	
Auto zero	1.8	ppm	0.6	ppm
Auto span	290.1	ppm	278.0	ppm

Notes: No adjustments made.

Calibration Performed By: Grover Christiansen,Dmytro Dolotii

Calibration Summary

Parameter **SO2**

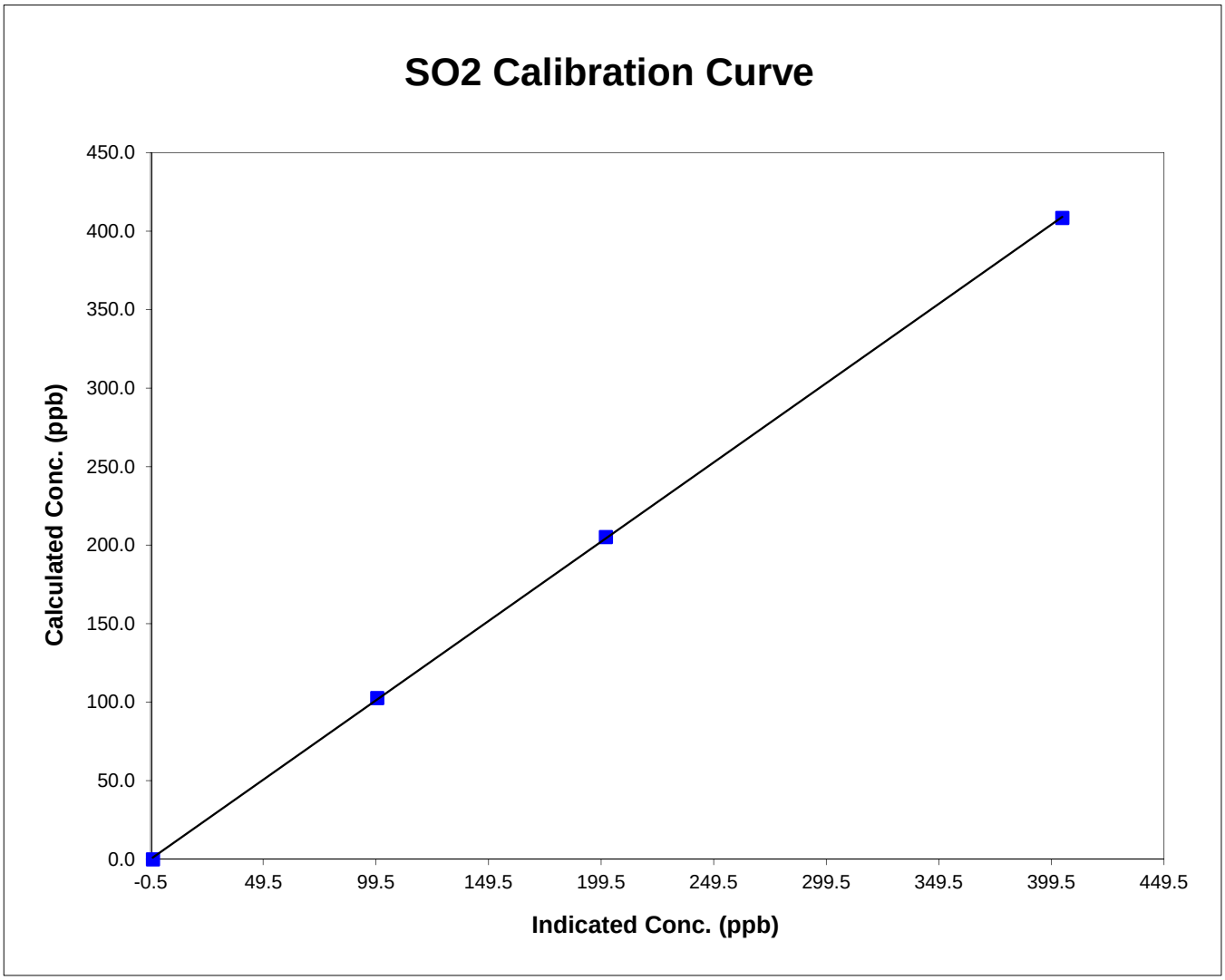
Air Monitoring Network **PAZA**

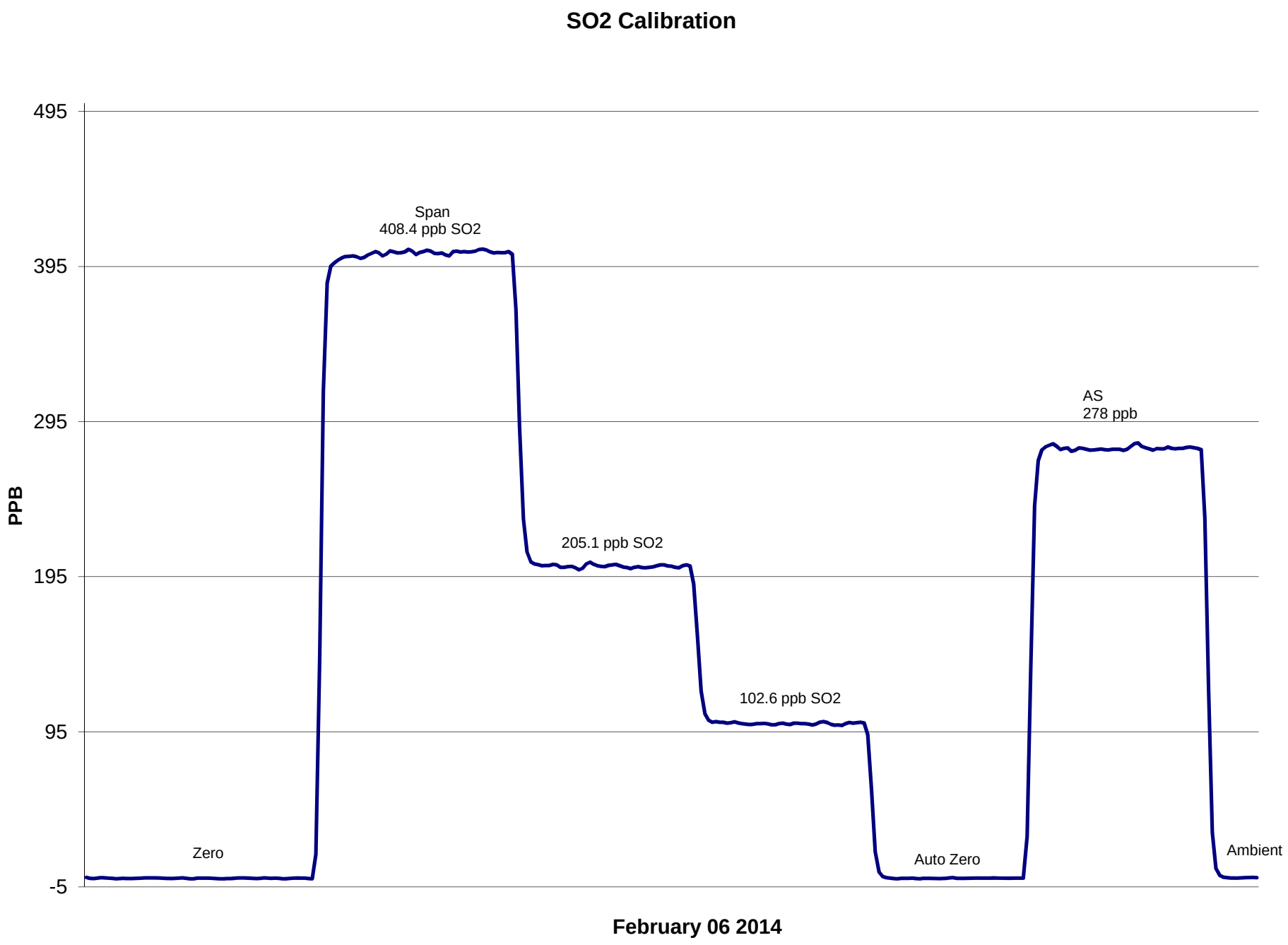
Station Information

Calibration Date	February 06 2014	Previous Calibration	January 10 2014
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	11:30	End Time (MST)	14:10
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A		
408.4	404.4	1.0100	Correlation Coefficient	0.999969
205.1	201.7	1.0167		
102.6	100.1	1.0246	Slope	1.010134
			Intercept	0.563226




SO2 Calibration
495
395
295
195
95
-5
PPB
Span
408.4 ppb SO2
205.1 ppb SO2
102.6 ppb SO2
AS
278 ppb
Zero
Auto Zero
Ambient
February 06 2014

Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **TRS**

Air Monitoring Network **PAZA**

Station Information

Calibration Date	February 06 2014	Previous Calibration	January 10 2014
Station Number	2	Station Location	Evergreen Park
Reason: Routine	Install	Removal	Other:

Start Time (MST)	9:20	End Time (MST)	12:45
Barometric Pressure	0.907 ATM	Station Temperature	22.0 Deg C
Calibrator	Environics	Serial Number	3016
Cal Gas Conc	10.4 ppm	Cal Gas Expiry Date	08/07/2016
Correction factor	0.030622	Cal Gas Cylinder #	LL110781
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
Calculated slope	1.002336	Calculated slope	1.021491
Calculated intercept	-0.133704	Calculated intercept	-0.573779

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

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	37.8	ppb	37.7	ppb
coefficient	1.043		1.043	
Lamp Voltage	1039	volts	1041	volts
Chamber Temp	44.2	Deg C	44.2	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	645.3	mm Hg	647.8	mm Hg
Sample Flow	0.611	ccm	0.589	ccm
Lamp Intensity	31,491	mv	31,300	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	0.5	N/A
4995	39.93	82.48	81.2	1.0158
4995	19.97	41.41	41.3	1.0018
8995	8.97	10.36	10.6	0.9743
4995	9.97	102.79	1.5	Sox Test
4995	0.00	0.00	0.5	As Found Zero
4995	39.93	82.48	81.2	As Found Span
			Average Correction Factor	0.9973

Calculated value of As Found Response: 80.74 ppm Percent Change of As Found: 2.1%

	before calibration		after calibration	
Auto zero	-0.2	ppm	-1.5	ppm
Auto span	82.2	ppm	76.6	ppm

Notes: **No adjusments made.**

Calibration Performed By: Grover Christiansen,Dmytro Dolotii

Calibration Summary

Parameter **TRS**

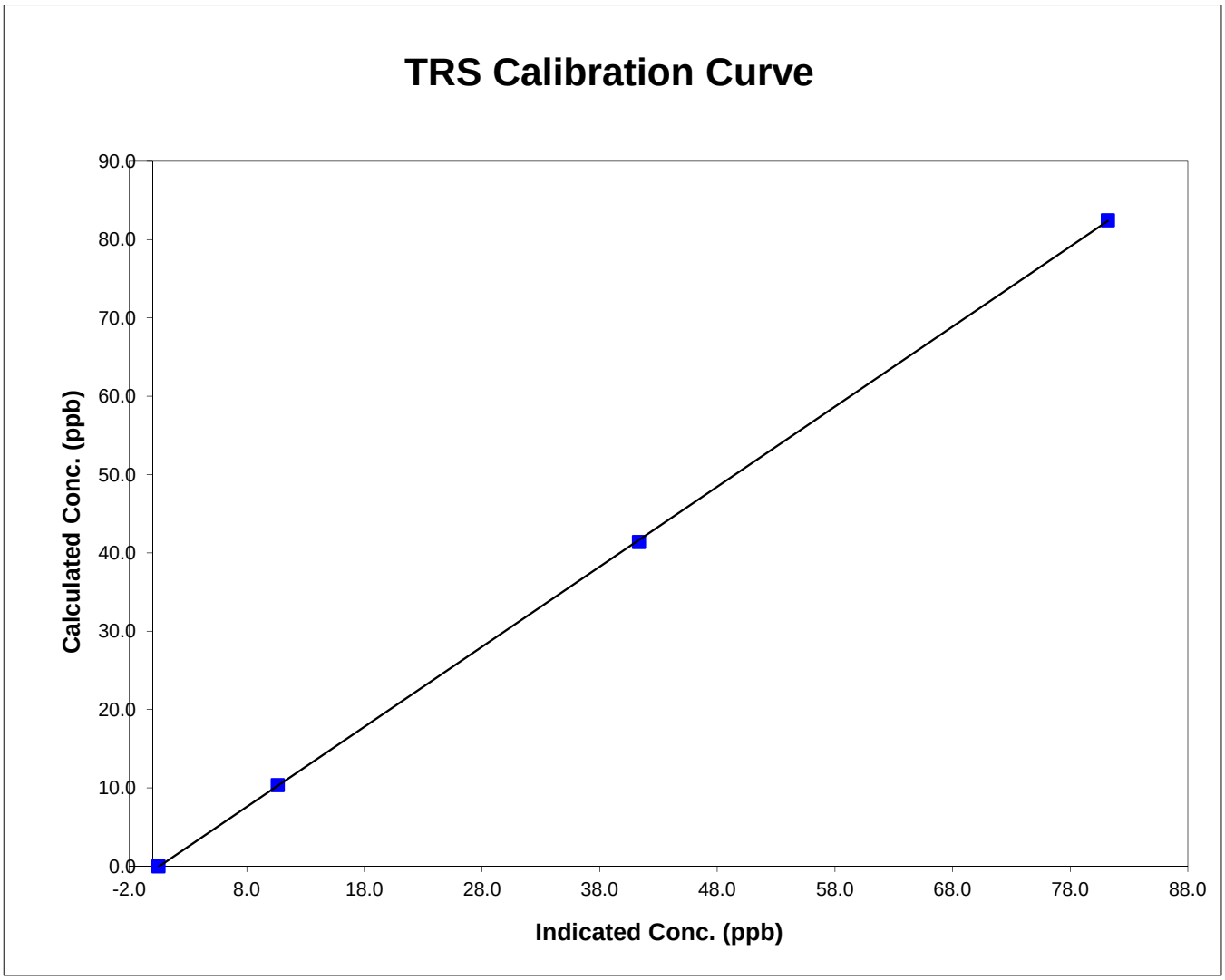
Air Monitoring Network **PAZA**

Station Information

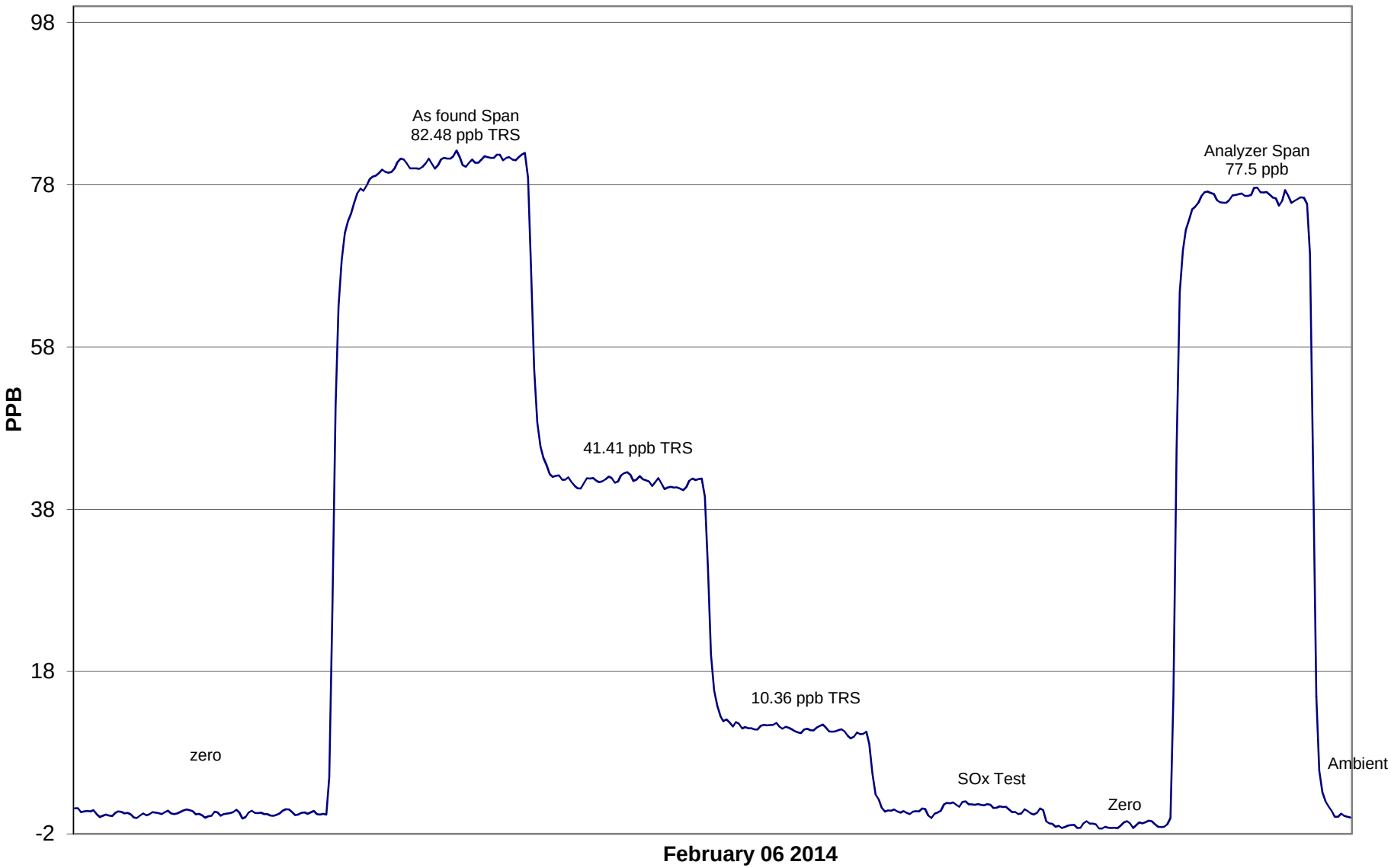
Calibration Date	February 06 2014	Previous Calibration	January 10 2014
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	9:20	End Time (MST)	12:45
Analyzer make/model	TEI Model 43C	Analyzer serial #	31990000000491

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A		
82.5	81.2	1.0158	Correlation Coefficient	0.999981
41.4	41.3	1.0018		
10.4	10.6	0.9743	Slope	1.021491
			Intercept	-0.573779



TRS Calibration



Calibration Report

Parameter **SO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 25, 2014	Previous Calibration	January 31, 2014
Station Number	3	Station Location	Smokey Heights
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	11:48	End Time (MST)	17:05
Barometric Pressure	0.935 ATM	Station Temperature	20.0 Deg C
Calibrator	Sabio 2010	Serial Number	9900912
Cal Gas Concentratior	50.1 ppm	Cal Gas Cert Date	23/07/2021
Correction factor	0.031783	Cal Gas Cylinder #	BLM001704
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	0.992722	Calculated slope	1.012954
Calculated intercept	1.034677	Calculated intercept	-2.932180
Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	11.2		11.1	
coefficient	0.973		0.959	
Lamp Voltage	935	volts	936	volts
Chamber Temp	45.1	Deg C	45.2	Deg C
Perm Gas Temp	45	Deg C	44.99	Deg C
Pressure	678	mm Hg	677.1	mm Hg
Sample Flow	453	ccm	452	ccm
Lamp Intensity	87	%	87	%

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)
5016	0.0	0.00	1.3	N/A
4936	40.10	403.73	400.5	1.0080
4960	20.20	203.21	204.6	0.9933
4980	10.20	102.40	105.4	0.9714
5016	0.0	0.00	1.1	As Found Zero
4936	40.10	403.73	405.6	As Found Span
			Average Correction Factor	0.9909

Calculated value of As Found Response: 402.574 ppm Percent Change of As Found: 0.3%

	before calibration		after calibration	
Auto zero	1.6	ppb	1.1	ppb
Auto span	248.2	ppb	246.2	ppb

Notes: Adjusted span, replaced fan and particulate filter

Calibration Performed By: Charlene Puttick

Calibration Summary

Parameter **SO2**

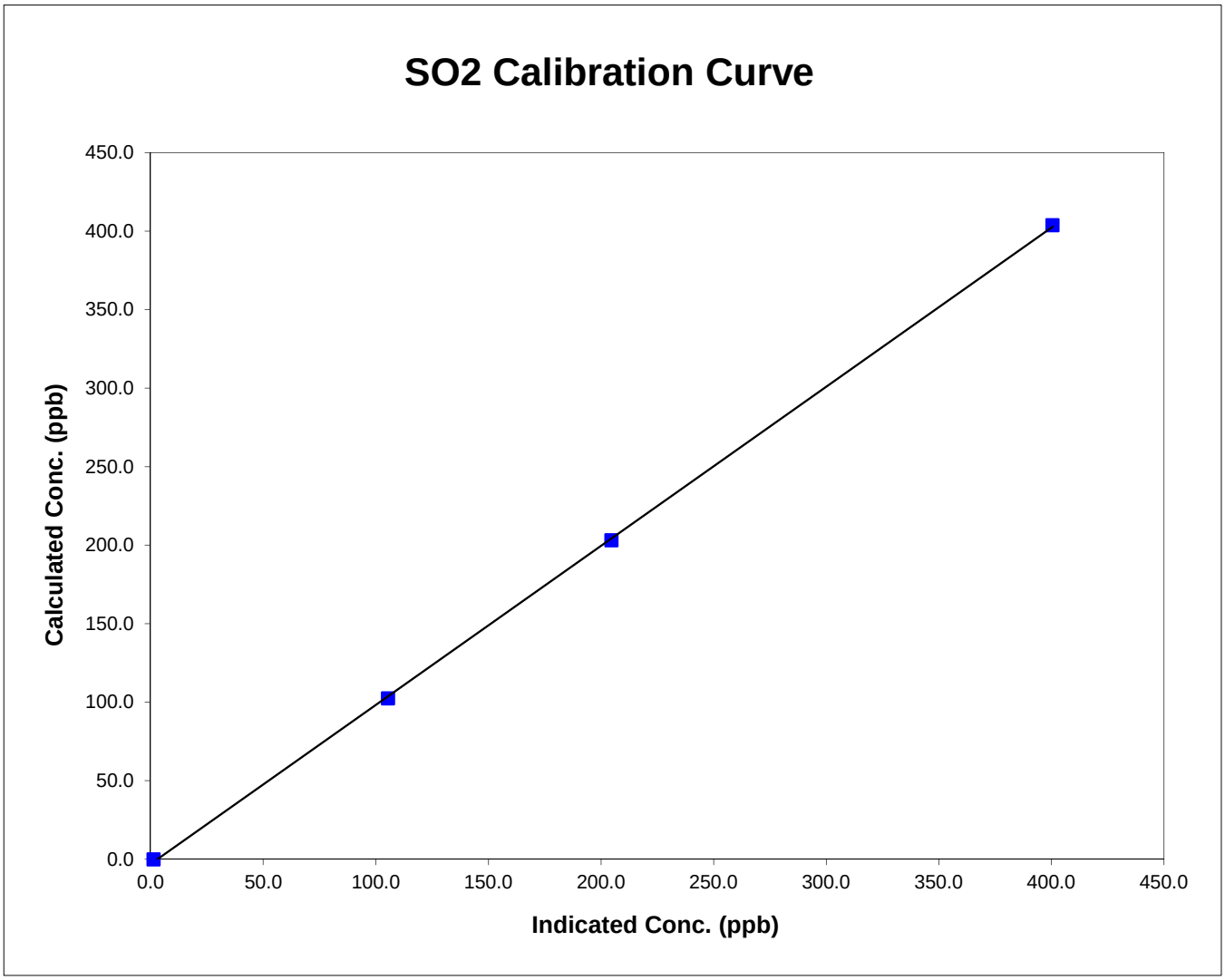
Air Monitoring Network **PAZA**

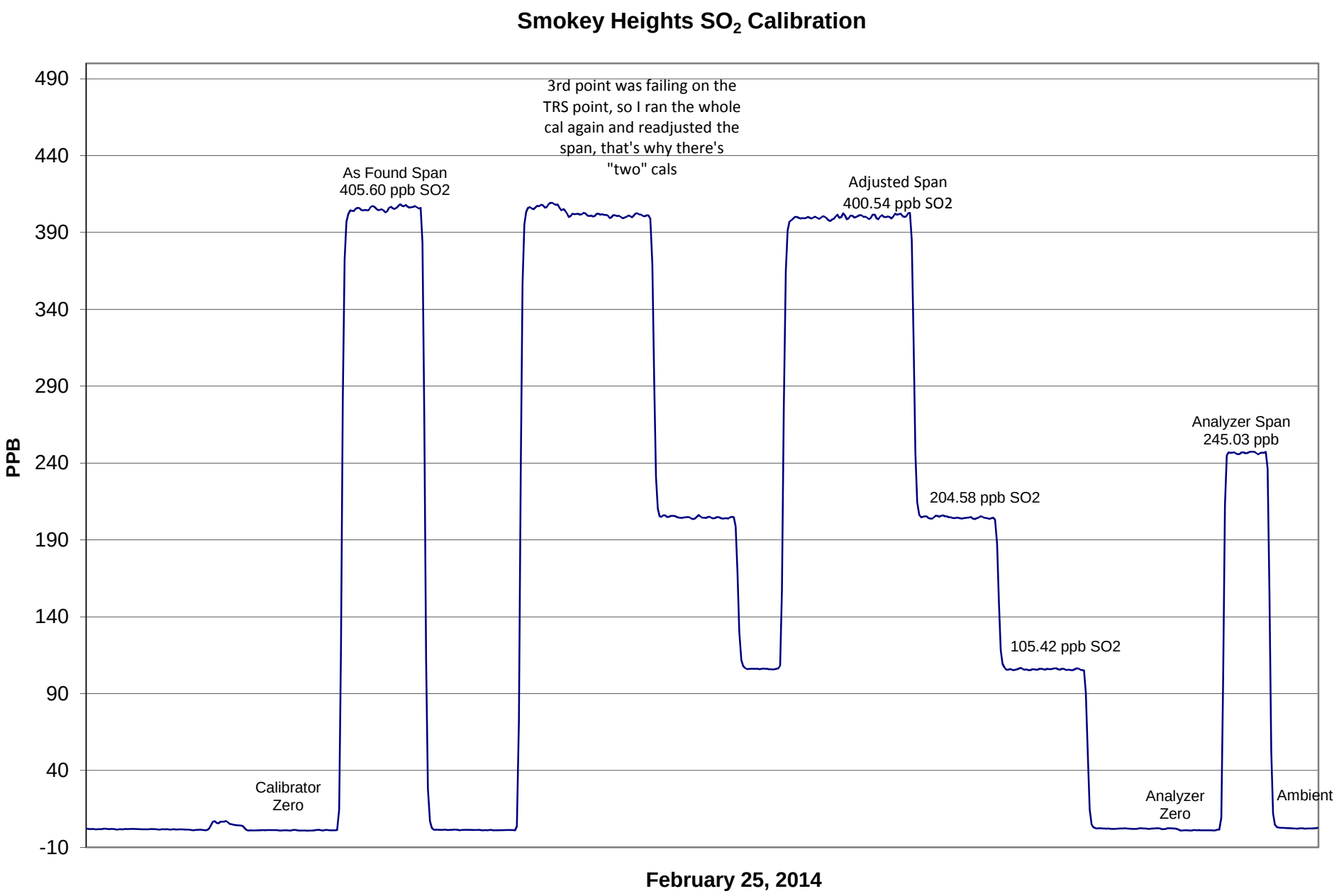
Station Information

Calibration Date	February 25, 2014	Previous Calibration	January 31, 2014
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	11:48	End Time (MST)	17:05
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	1.3	N/A		
403.7	400.5	1.0080	Correlation Coefficient	0.999924
203.2	204.6	0.9933		
102.4	105.4	0.9714	Slope	1.012954
			Intercept	-2.932180




Smokey Heights SO_2 Calibration
490
440
390
340
290
240
190
140
90
40
-10
PPB
3rd point was failing on the TRS point, so I ran the whole cal again and readjusted the span, that's why there's "two" cals
As Found Span 405.60 ppb SO2
Adjusted Span 400.54 ppb SO2
Analyzer Span 245.03 ppb
204.58 ppb SO2
105.42 ppb SO2
Calibrator Zero
Analyzer Zero
Ambient
February 25, 2014

Calibration Report

Parameter **TRS**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 25, 2014	Previous Calibration	January 31, 2014
Station Number	3	Station Location	Smokey Heights
Reason: Routine	Install	Removal	Other:

Start Time (MST)	11:48	End Time (MST)	17:05
Barometric Pressure	0.935 ATM	Station Temperature	20.0 Deg C
Calibrator	Sabio 2010	Serial Number	9900912
Cal Gas Conc	9.76 ppm	Cal Gas Expiry Date	30/07/2016
Correction factor	0.031783	Cal Gas Cylinder #	BLM000619
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
Calculated slope	1.011778	Calculated slope	0.987206
Calculated intercept	0.373045	Calculated intercept	-1.060078

Analyzer make	TEI Model 43C	Analyzer serial #	0436610005

	before		after	
Concentration range	100	ppb	100	ppb
Background	18.2	ppb	17.9	ppb
coefficient	0.956		0.96	
Lamp Voltage	836	volts	835	volts
Chamber Temp	43.7	Deg C	43.7	Deg C
Perm Gas Temp	45	Deg C	45.02	Deg C
Pressure	596	mm Hg	616.7	mm Hg
Sample Flow	631	ccm	647	ccm
Lamp Intensity	35,037	mv	34,846	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)
5016	0.0	0.00	0.9	N/A
4920	41.20	81.05	82.9	0.9773
4960	20.70	40.56	42.7	0.9504
4980	10.40	20.34	21.6	0.9417
5016	0.0	0.00	0.5	As Found Zero
4920	41.20	81.05	77.7	As Found Span
			Average Correction Factor	0.9565

Calculated value of As Found Response: 78.45 ppm Percent Change of As Found: 3.2%

	before calibration		after calibration	
Auto zero	0.5	ppm	3.8	ppm
Auto span	29.5	ppm	32.9	ppm

Notes: Ran Sox test--> 1.56 ppb
Adjusted span, 2x, replaced fan and particulate filters

Calibration Performed By: Charlene Puttick

Calibration Summary

Parameter **TRS**

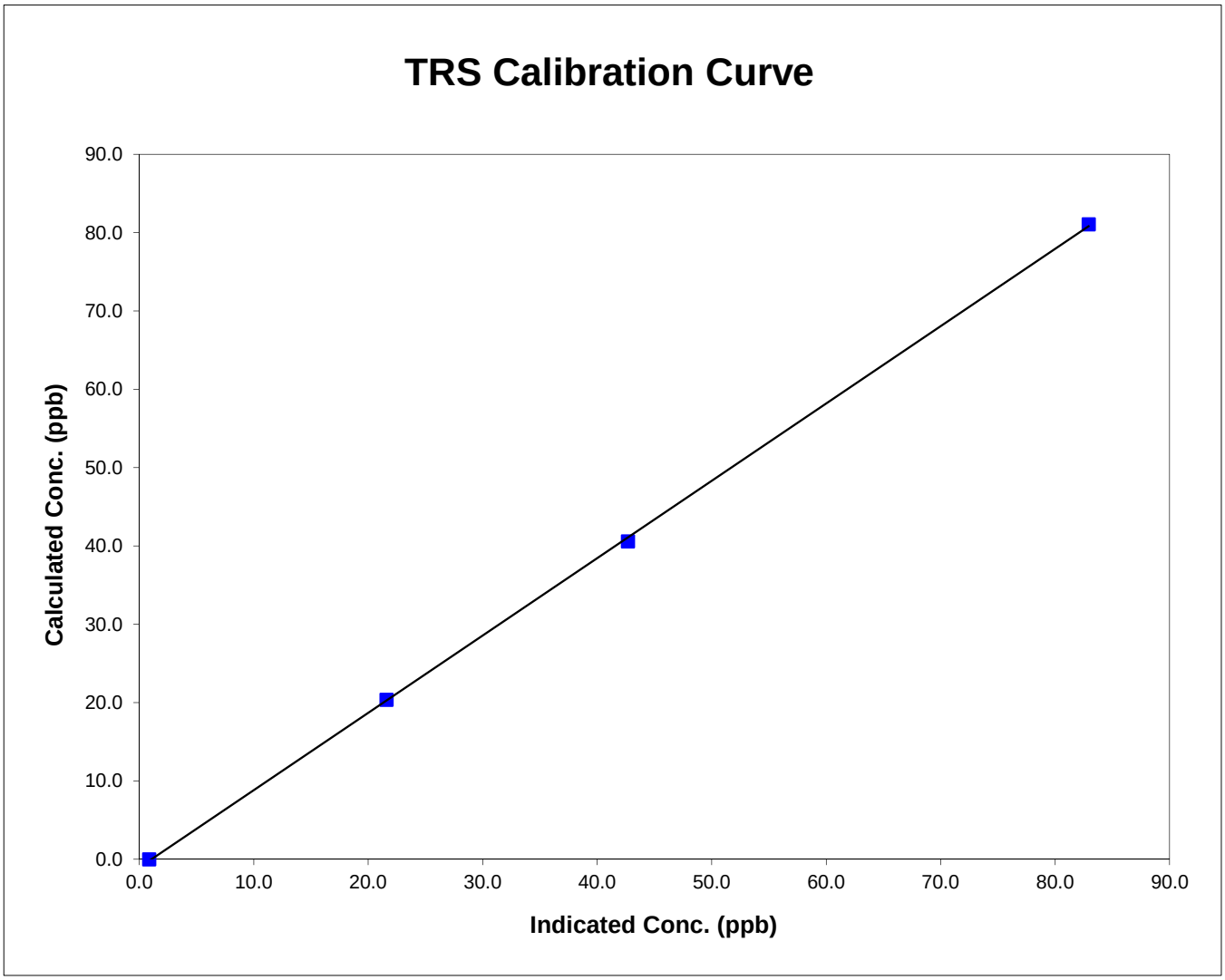
Air Monitoring Network **PAZA**

Station Information

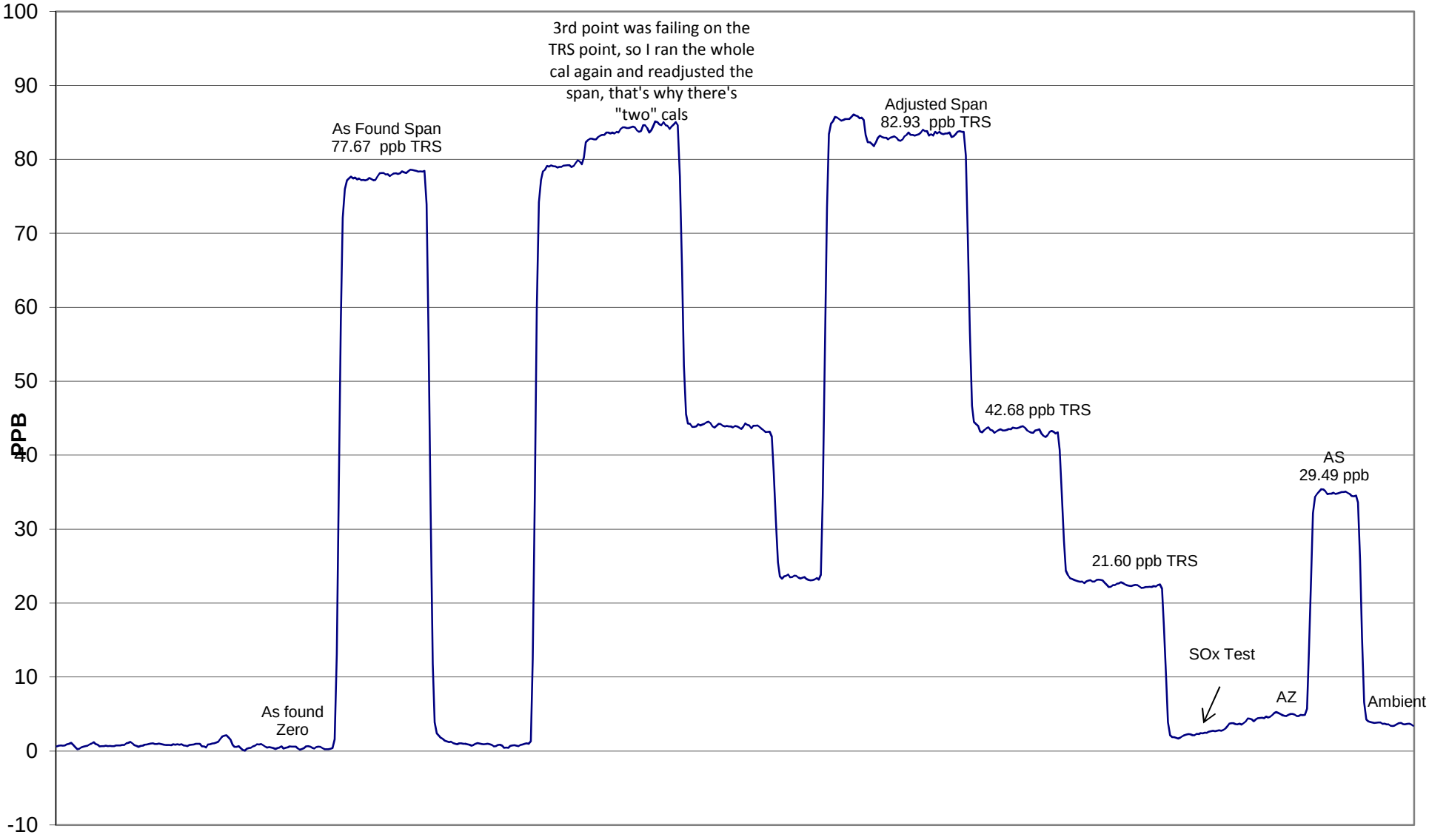
Calibration Date	February 25, 2014	Previous Calibration	January 31, 2014
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	11:48	End Time (MST)	17:05
Analyzer make/model	TEI Model 43C	Analyzer serial #	0436610005

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.9	N/A		
81.1	82.9	0.9773	Correlation Coefficient	0.999899
40.6	42.7	0.9504		
20.3	21.6	0.9417	Slope	0.987206
			Intercept	-1.060078



Smokey Heights TRS Calibration



February 25, 2014

AB TEOM PM2.5 Calibration

FOCUS AIR QUALITY MONITORING

STATION: **Smokey Heights**

LOCATION: PASZA - Grande Prairie

OPERATOR: Charlene Puttick

DATE: 25-Feb-14

MONITOR INFO / PARAMETER VALUES:

Make/Model	TEOM AB
Configuration	PM2.5
Serial Number	24634
Site Number	3
Inlet Type	PM 10 / SCC
FAdj. Main Setting	1.000
FAdj. Aux. Setting	0.995
T-Case Indicated / Set Point	40/40
T-Air Indicated / Set Point	40/40
T-Cap Indicated / Set Point	40/40
Splitter Assembly Alignment (cm)	15.5

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

RECENT CALIBRATION AND AUDIT HISTORY

Previous Audit	31-Jan-14
Previous Calibration	NA

PUMP CAPACITY CHECK *	PASS

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

"FAIL" indicates that pump requires service.

LEAK CHECK	Indicated Flow (lpm)	
	Main	Auxiliary
PUMP ON	-0.010	-0.010
PUMP OFF	0.000	-0.050
NET	-0.010	0.040
LIMITS	*<0.15*	*<0.60*

		Ambient Temp. (^{0} C)	Ambient Pres. (atm)	Ko *	Bypass flow (lpm)	Sample flow (lpm)
	SET POINT (S)	na	na	12122	13.67	3.000
	INDICATED (I)	-13.6	0.934		13.69	3.000
As Found Data	MEASURED (AF)	-13.6	0.935		13.58	2.880
Adjusted Data	MEASURED (M)	-13.6	0.935	12233	13.69	2.880
	DIFFERENCE (M-I)	0.0	0.001	0.9%	0.15	-0.12
	LIMITS	*± 2 ^{0} C*	*± 0.005 atm*	*± 2.5 %*	*± 1.0 L/min*	*± 0.2 L/min*

Ko Audit Filter data *Weight:* 0.11477 *Serial #:* *CVK 3532*

COMMENTS: PASS

Flows & leak checks were performed.

Head was cleaned

Changed filter

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

Calibration Report

Parameter **SO2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 13, 2014	Previous Calibration	January 8, 2014
Station Number	4	Station Location	Beaverlodge
Reason: Routine	Install	Removal	Other:
Start Time (MST)	14:00:00 PM	End Time (MST)	17:00:00 PM
Barometric Pressure	0.898 atm	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3016
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
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.014628	Calculated slope	1.026841
Calculated intercept	-0.048450	Calculated intercept	-0.071524
Analyzer make	TEI Model 43i-TLE	Analyzer serial #	713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.76		2.74	
Coefficient	1.042		1.042	
PMT	-767.4	V	-767.4	V
UV Lamp Voltage	1072	V	1072	V
Chamber Temp	44.7	Deg C	44.8	Deg C
Pressure	651.9	mm Hg	653.7	mm Hg
Sample Flow	0.473	LPM	0.474	LPM
Lamp Intesity	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)
4995	0.00	0.0	0.1	N/A
4995	39.93	85.7	83.5	1.0257
4995	19.97	43.0	41.9	1.0264
4995	9.97	21.5	21.0	1.0237
4995	0.00	0.0	0.1	As found zero
4995	39.93	85.7	83.5	As found span
			Average Correction Factor	1.0252

Calculated value of As Found Response: 84.581 ppm Percent Change of As Found: 1.2%

	before calibration		after calibration	
Auto zero	0.2	ppb	0.0	ppb
Auto span	59.9	ppb	60.5	ppb

Notes: No adjustments made.

Calibration Performed By: Grover Christiansen,Dmytro Dolotii

Calibration Summary

Parameter **SO2**

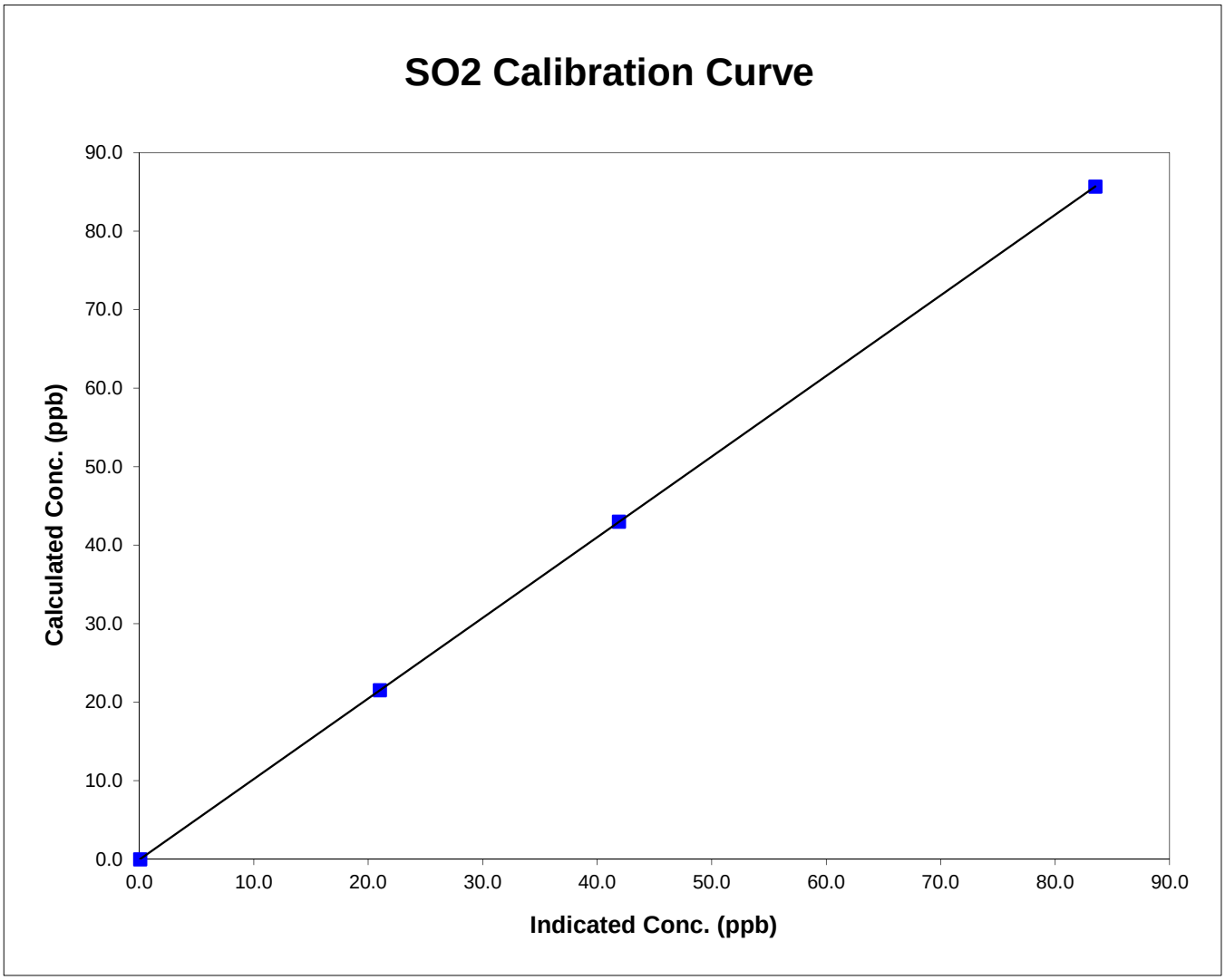
Air Monitoring Network **PAZA**

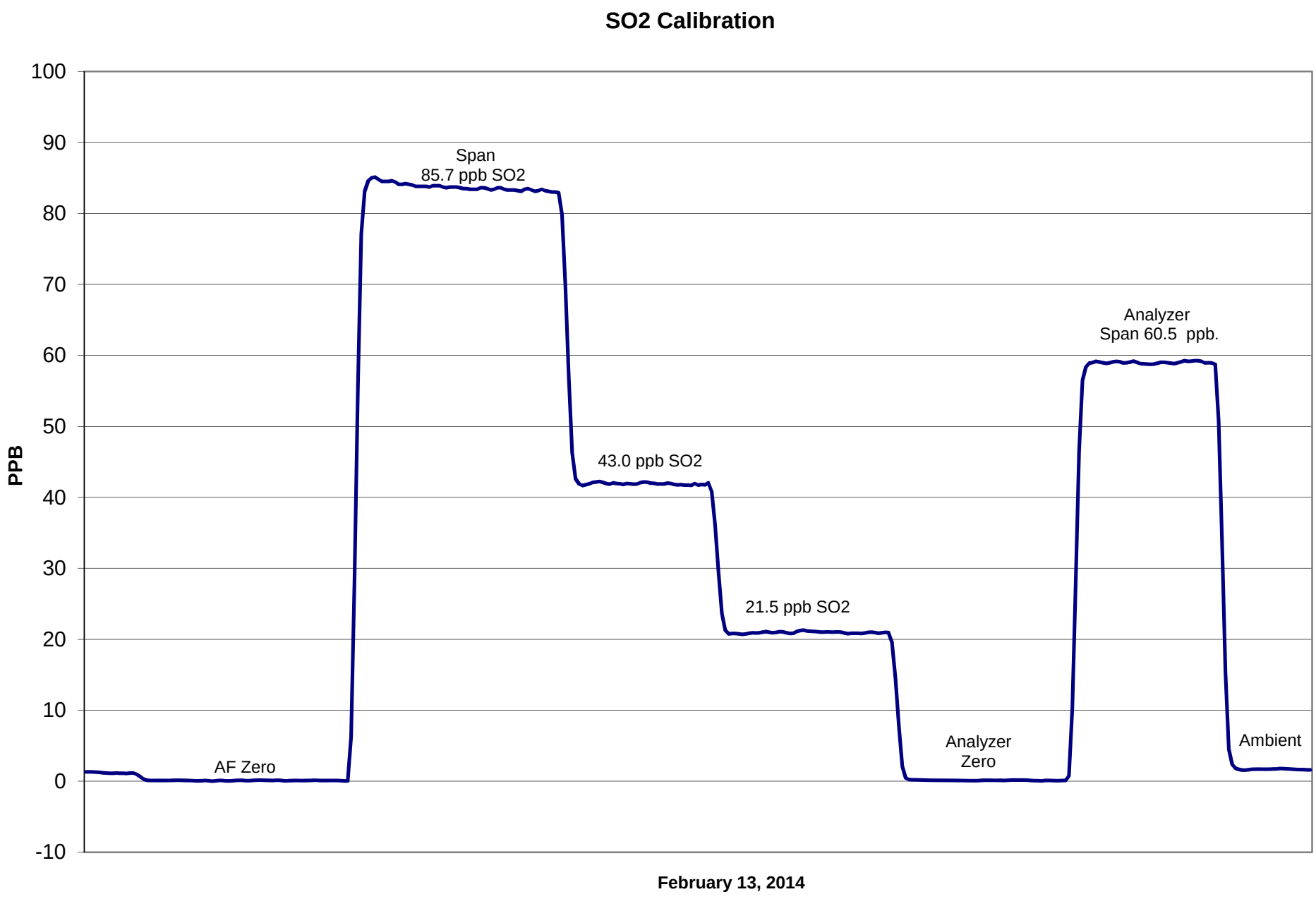
Station Information

Calibration Date	February 13, 2014	Previous Calibration	January 8, 2014
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	14:00:00 PM	End Time (MST)	17:00:00 PM
Analyzer make/model	TEI Model 43i-TLE	Analyzer serial #	713021137

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A		
85.7	83.5	1.0257	Correlation Coefficient	0.999999
43.0	41.9	1.0264		
21.5	21.0	1.0237	Slope	1.026841
			Intercept	-0.071524




SO2 Calibration
100
90
80
70
60
50
40
30
20
10
0
-10
PPB
Span
85.7 ppb SO2
43.0 ppb SO2
21.5 ppb SO2
Analyzer
Span 60.5 ppb.
AF Zero
Analyzer
Zero
Ambient
February 13, 2014

Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 13, 2014	Previous Calibration	January 9, 2014
Station Number	4	Station Location	Beaverlodge

Reason: Routine Installation Removal Other:

Start Time (MST)	8:55		End Time (MST)	20:25	
Barometric Pressure	0.891	Atm	Station Temperature	20.0	Deg C
Calibrator	Environics		Serial Number	3016	
NO Cal Gas Conc	51.3	ppm	Cal Gas Expiry Date	February 25, 2021	
NOx Cal Gas Conc	51.4	ppm	Cal Gas Serial #	LL105159	

DACS Information

DACS make: CR3000 DACS serial No.: 5237

Parameter		NO2	NOx	NO
Before	Data Slope	1.001238	1.003193	0.999226
	Data Offset	0.427803	0.653400	0.992680
After	Data Slope	1.001238	1.003193	0.999226
	Data Offset	0.427803	0.653400	0.992680
Channel #		8	6	7
Voltage Range		0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model: TEI 42i Analyzer serial #: 906535068

Test Point	before		after	
Concentration range	0-500	ppb	0-500	ppb
NO offset	3.2	mV	2.9	mV
NOx bkgnd	3.6	mV	3.1	mV
NO coefficient	0.985		1.001	
NOx coefficient	1.000		1.000	
NO2 conv temp	322.1	Deg C	326.0	Deg C
PMT Temp	-2.8	Deg C	-3.1	Deg C
PMT Volt	-743.0	mV	-738.5	mV
R Cell Press	207.9	in Hg	211.8	in Hg
Sample Flow	0.677	LPM	0.679	LPM

Notes: As found cal was performed that seemed unstable. Capiliaries were checked & reseated. Restart calibration. Adjust PMT, slight span adjust. Finish calibration. Looks much better. Have ordered ordered another set of capiliaries as one seems to have a slight crack.

Calibration Report

Parameter **NOX-NO-NO2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: February 13, 2014 Station Location: Beaverlodge

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4995	0.00	0.0	0.0	0.0	-0.2	0.0	-0.3	N/A	N/A
1	4995	39.93	407.6	406.8	0.8	406.8	406.1	-0.1	1.0019	1.0018
2	4995	19.97	204.7	204.3	0.4	203.4	202.3	0.3	1.0062	1.0098
3	4995	9.97	102.4	102.2	0.2	100.1	99.6	0.4	1.0227	1.0257
AFZ	4995	0.00	0.0	0.0	0.0	-0.4	-0.5	-0.1	0.0000	0.0000
AFS	4995	39.93	407.6	406.8	0.8	410.6	411.4	-1.6	0.9929	0.9889
							Average Correction Factor		1.0103	1.0124

As Found Concentrations: NO_X= 411.7 NO= 412.9 As Found Percent Change NO_X= 1.0% NO= 1.5%

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	-0.5	-0.5	0.0	-0.2	0.0	-0.3	N/A	N/A	N/A	N/A
NO point	406.7	406.7	0.0	407.7	406.7	0.2	0.9975	1.0000	N/A	N/A
300	406.7	96.7	310.0	407.2	96.7	309.9	0.9986	1.0000	1.0002	100.0%
200	406.7	197.1	209.6	407.7	197.1	209.8	0.9974	1.0000	0.9991	100.1%
100	406.7	298.6	108.1	408.2	298.6	109.0	0.9963	1.0000	0.9912	100.9%
					Average Correction Factor		0.9975	1.0000	0.9969	100.3%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.1	-0.1	-0.1	ppb	-0.1	0.0	-0.2	ppb
Auto span	168.3	166.9	1.1	ppb	192.2	190.8	0.8	ppb

Calibration Performed By: Grover Christiansen,Dmytro Dolotii

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **PAZA**

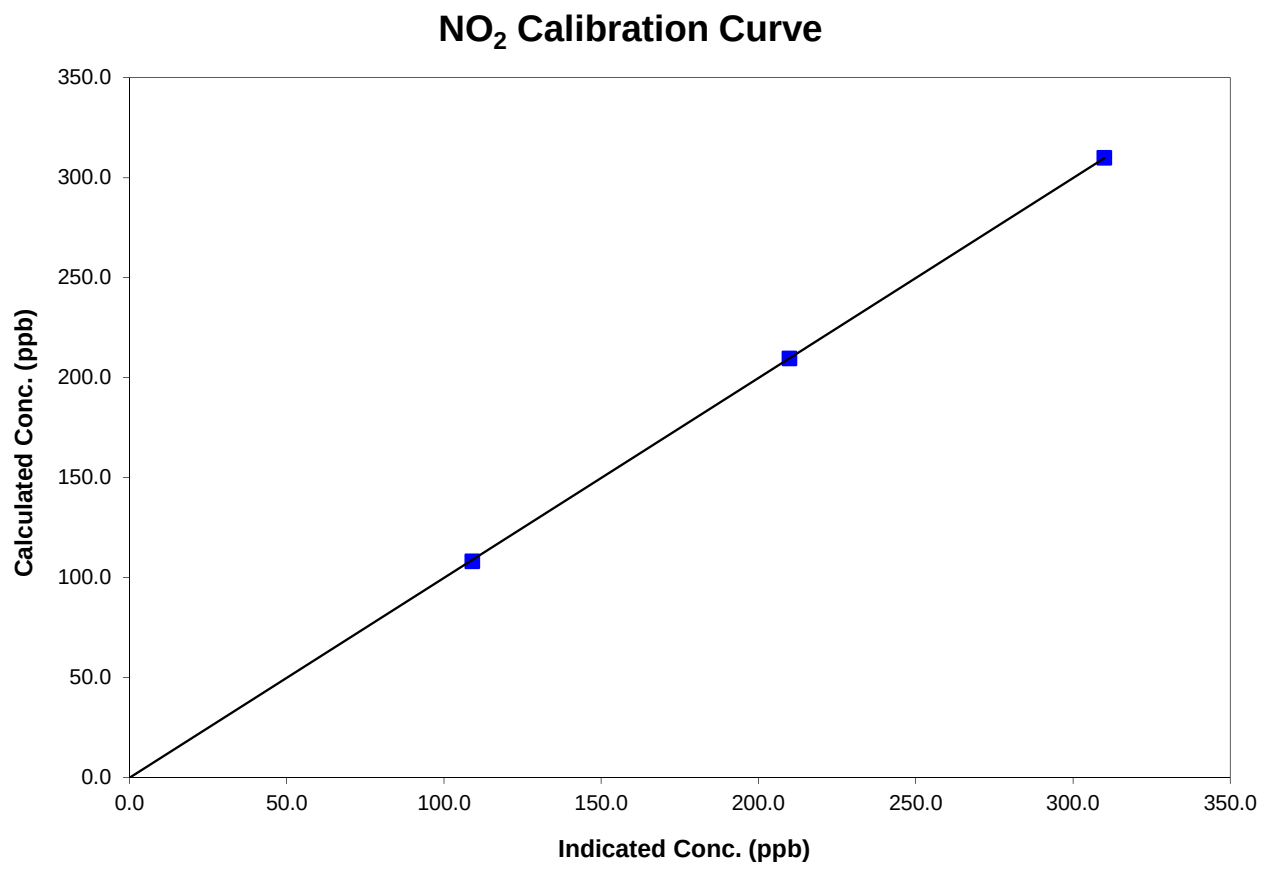
FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 13, 2014	Previous Calibration	January 9, 2014
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:55	End Time (MST)	20:25
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		
310.0	309.9	1.0002	Correlation Coefficient	0.999983
209.6	209.8	0.9991		
108.1	109.0	0.9912	Slope	1.000041
			Intercept	-0.200435



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

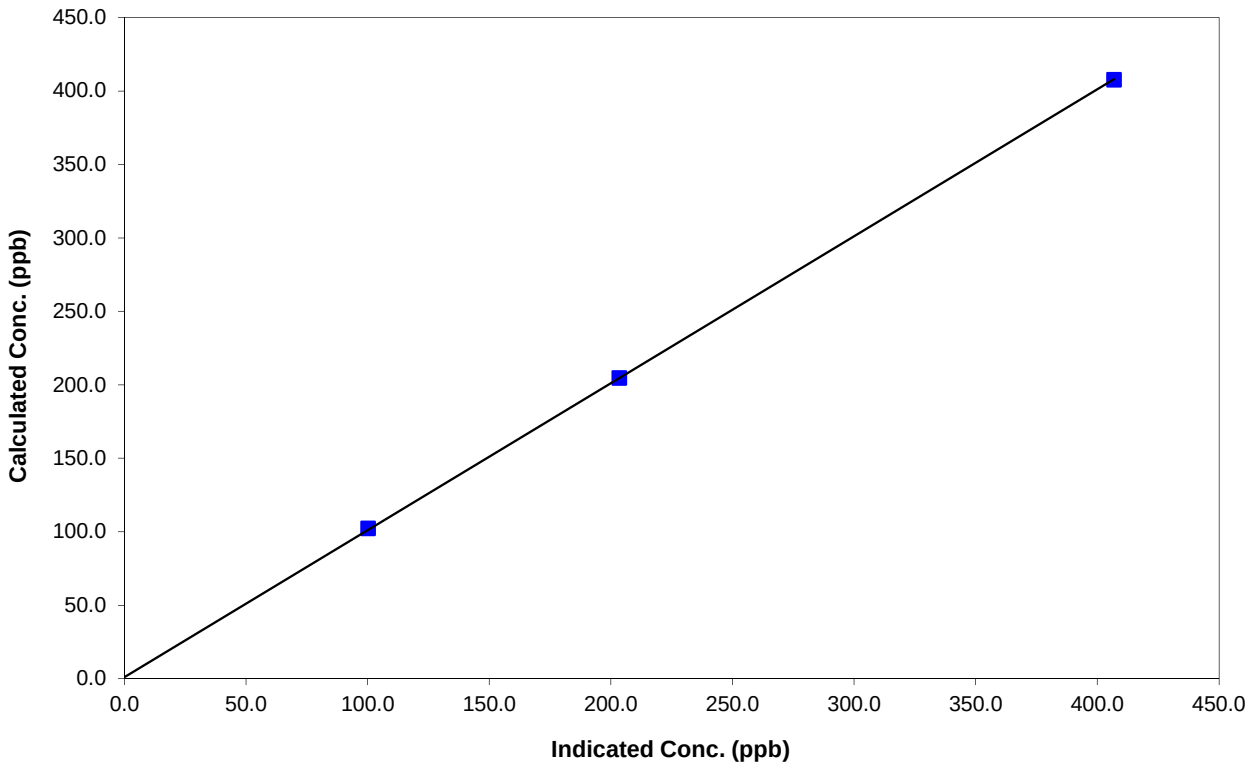
Station Information

Calibration Date	February 13, 2014	Previous Calibration	January 9, 2014
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:55	End Time (MST)	20:25
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.2	N/A		
407.6	406.8	1.0019	Correlation Coefficient	0.999974
204.7	203.4	1.0062		
102.4	100.1	1.0227	Slope	1.000107
			Intercept	1.099604

NOx Calibration Curve



Calibration Summary

Parameter **NO**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

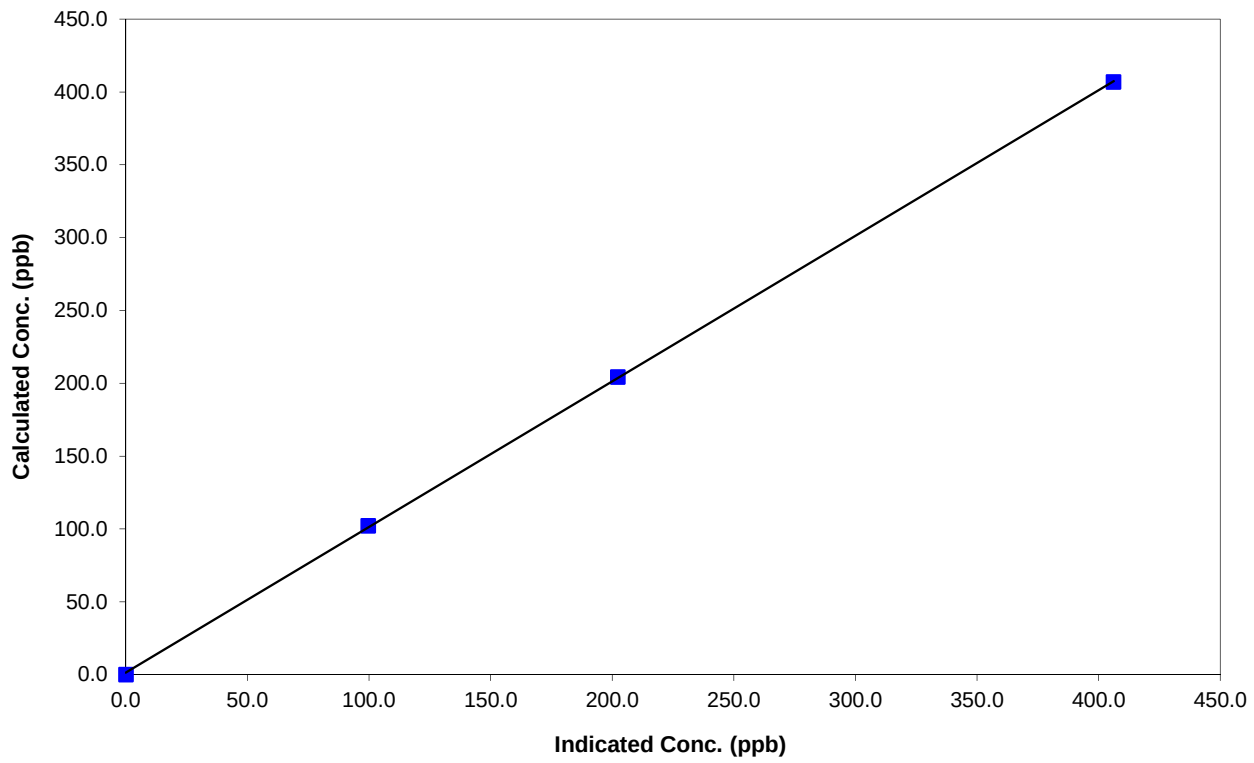
Station Information

Calibration Date	February 13, 2014	Previous Calibration	January 9, 2014
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:55	End Time (MST)	20:25
Analyzer make	TEI 42i	Analyzer serial #	906535068

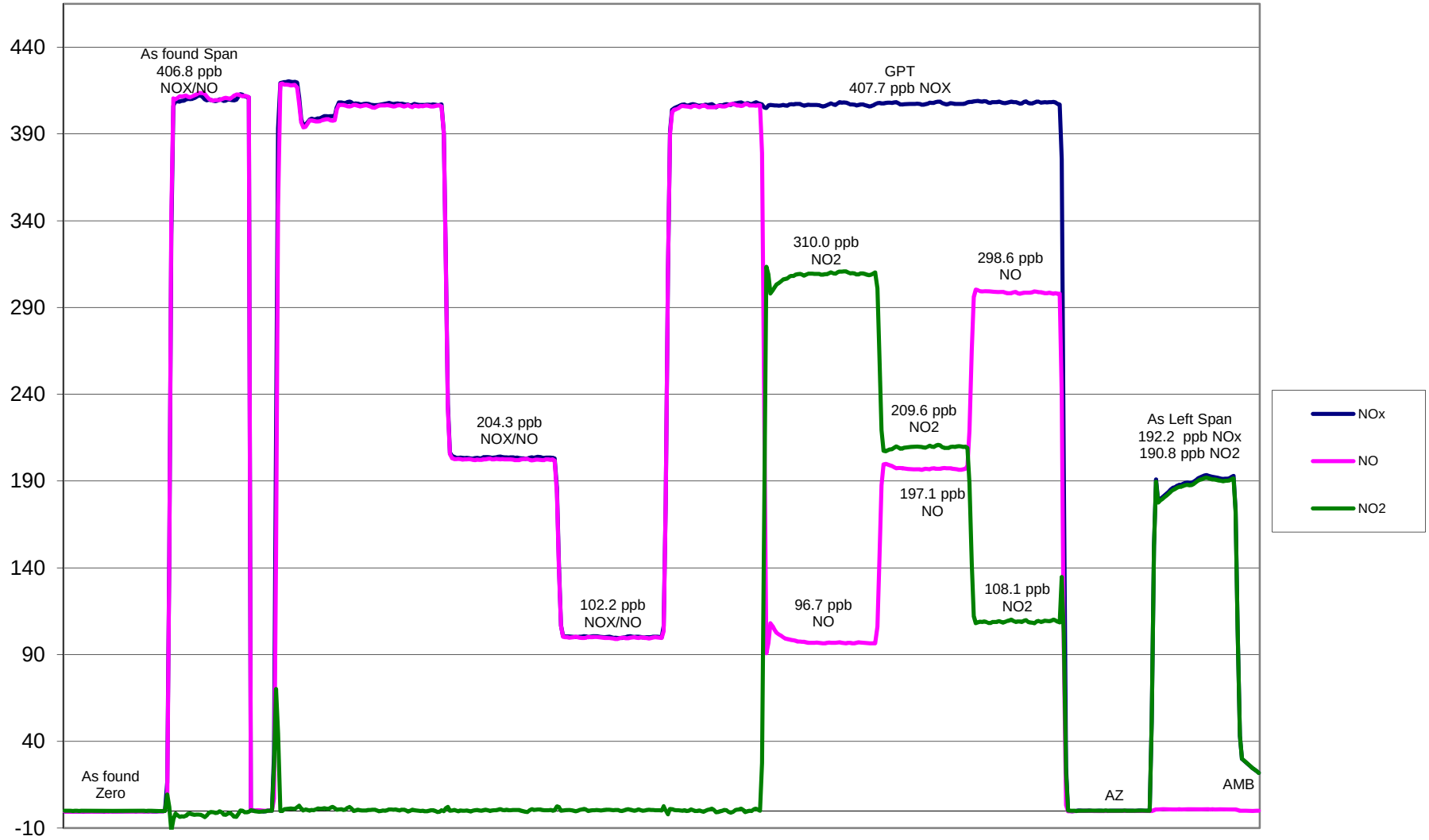
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
406.8	406.1	1.0018	Correlation Coefficient	0.999953
204.3	202.3	1.0098		
102.2	99.6	1.0257	Slope	1.000276
			Intercept	1.256239

NO Calibration Curve



PAZA Beaverlodge NO_X Calibration



February 13, 2014

Calibration Report

Parameter **O3**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 13, 2014	Previous Calibration	January 9, 2014
Station Number	4	Station Location	Beaverlodge
Reason: Routine	Install	Removal	Other:
Start Time (MST)	12:27	End Time (MST)	15:15:00 PM
Barometric Pressure	0.891 atm	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3016
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	1.008734	Calculated slope	1.040050
Calculated intercept	0.827472	Calculated intercept	-0.143190
Analyzer make	Teco 49i	Analyzer serial #	1136451236

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-0.40	ppb	-0.40	ppb
slope	1.036		1.036	
Lamp temp	53.8	mV	53.9	mV
Lamp Intensity A/B	64914/67898	mV	64870/67841	mV
Pressure	667.9	mm Hg	675.1	mm Hg
Flow A	0.733	LPM	0.742	LPM
Flow B	0.734	LPM	0.738	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	0.2	N/A
5035	0.30	310.0	298.6	1.0380
5035	0.20	209.6	200.9	1.0433
5035	0.10	108.1	104.3	1.0365
5035	0.00	0.0	0.2	As found zero
5035	0.30	310.0	298.6	As found span
			Average Correction Factor	1.0393

Calculated value of As Found Response: 301.8 ppm Percent Change of As Found: -2.6%

	before calibration		after calibration	
Auto zero	-1.2	ppb	0.5	ppb
Auto span	277.9	ppb	274.3	ppb

Notes: No adjustment been made

Calibration Performed By: Grover Christiansen,Dmytro Dolotii

Calibration Summary

Parameter **O3**

Air Monitoring Network **PAZA**

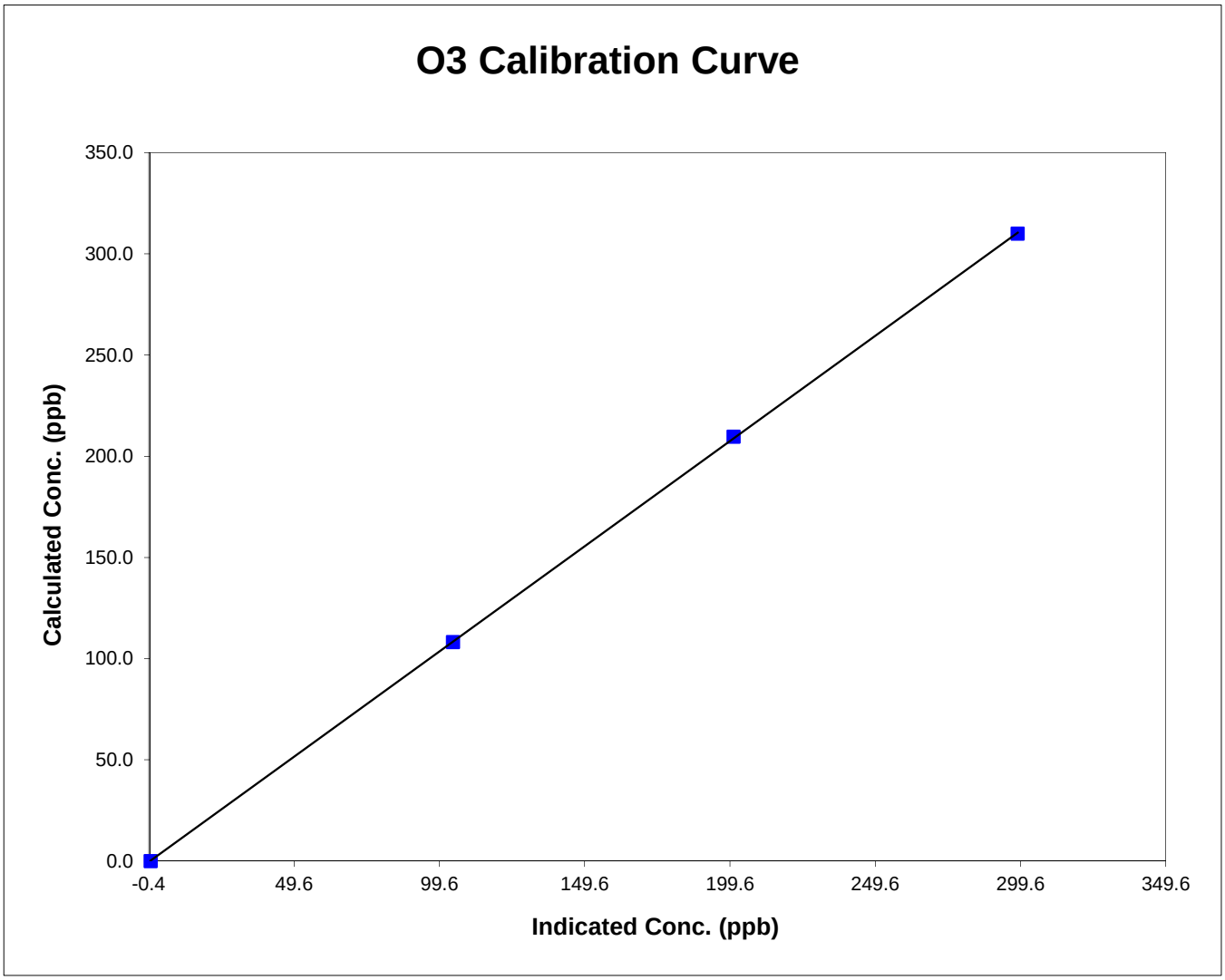
FOCUS AIR QUALITY MONITORING

Station Information

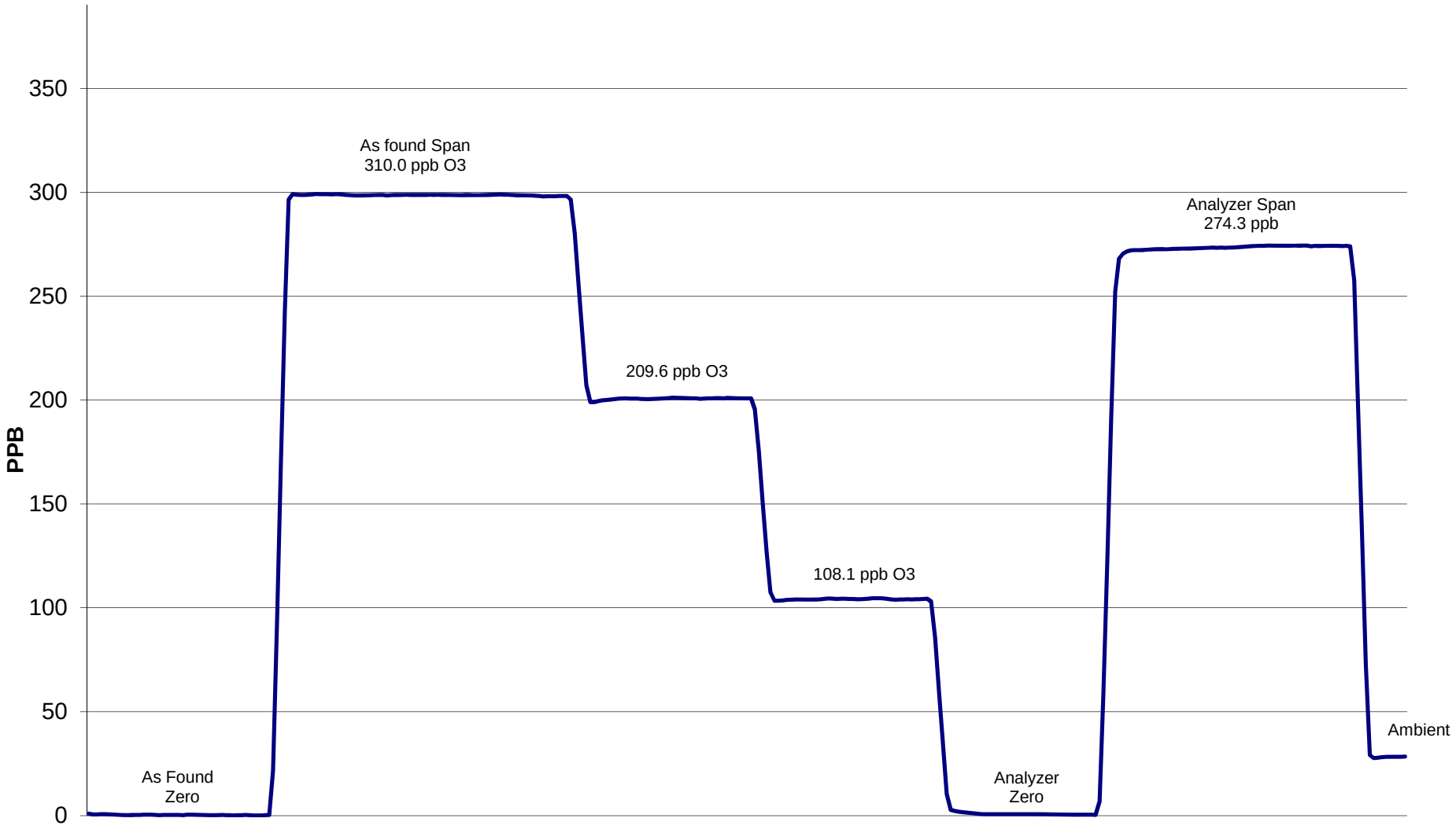
Calibration Date	February 13, 2014	Previous Calibration	January 9, 2014
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	12:27	End Time (MST)	15:15:00 PM
Analyzer make/model	Teco 49i	Analyzer serial #	1136451236

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	NA		
310.0	298.6	1.0380	Correlation Coefficient	0.999983
209.6	200.9	1.0433		
108.1	104.3	1.0365	Slope	1.040050
			Intercept	-0.143190



O3 Calibration



February 13, 2014

Calibration Report

Parameter **SO2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 28 2014	Previous Calibration	January 24 2014
Station Number	6	Station Location	Valleyview
Reason: Routine	Install	Removal	Other:
Start Time (MST)	10:00	End Time (MST)	12:46
Barometric Pressure	702.00 mmHg	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3016
Cal Gas Concentratior	51.5 ppm	Cal Gas Exp Date	February 25, 2021
Gas Cylinder Num.	LL105159		
DACS make	CR3000	DACS serial No.	5409
DACS voltage range	0 - 5 volt	DACS channel #	4
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.002472	Calculated slope	0.999365
Calculated intercept	1.159944	Calculated intercept	0.623055
Analyzer make	TEI 45C	Analyzer serial #	45C-57531-313

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	59.1		60.9	
Coefficient	1.023		1.054	
UV Lamp Voltage	831	LPM	831	LPM
Chamber Temp	44.5	V	44.4	V
Perm Gas Temp	37	C	37	C
Pressure	618.5	in Hg	619.4	in Hg
Sample Flow	0.536	LPM	0.542	LPM
Lamp Intensity	41875	Hz	41845	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	0.8	N/A
4995	39.93	408.4	408.8	0.9992
4995	19.97	205.1	203.9	1.0059
4995	9.97	102.6	100.7	1.0192
4995	0.00	0.0	0.8	As found zero
4995	39.93	408.4	397.2	As found span
			Average Correction Factor	1.0081

Calculated value of As Found Response: 398.6 ppm Percent Change of As Found: 2.4%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.0	ppm
Auto span	150.2	ppm	146.7	ppm

Notes: Span adjust. Next scheduled auto cal values were used for the zero span following the calibration.
Flow was accidentally adjusted down on the external zero/span supply following the calibration
which elevated the daily span value but didn't change anything on the analyzer set up.

Calibration Performed By: Grover Christiansen, Dmytro Dolotii.

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PAZA**

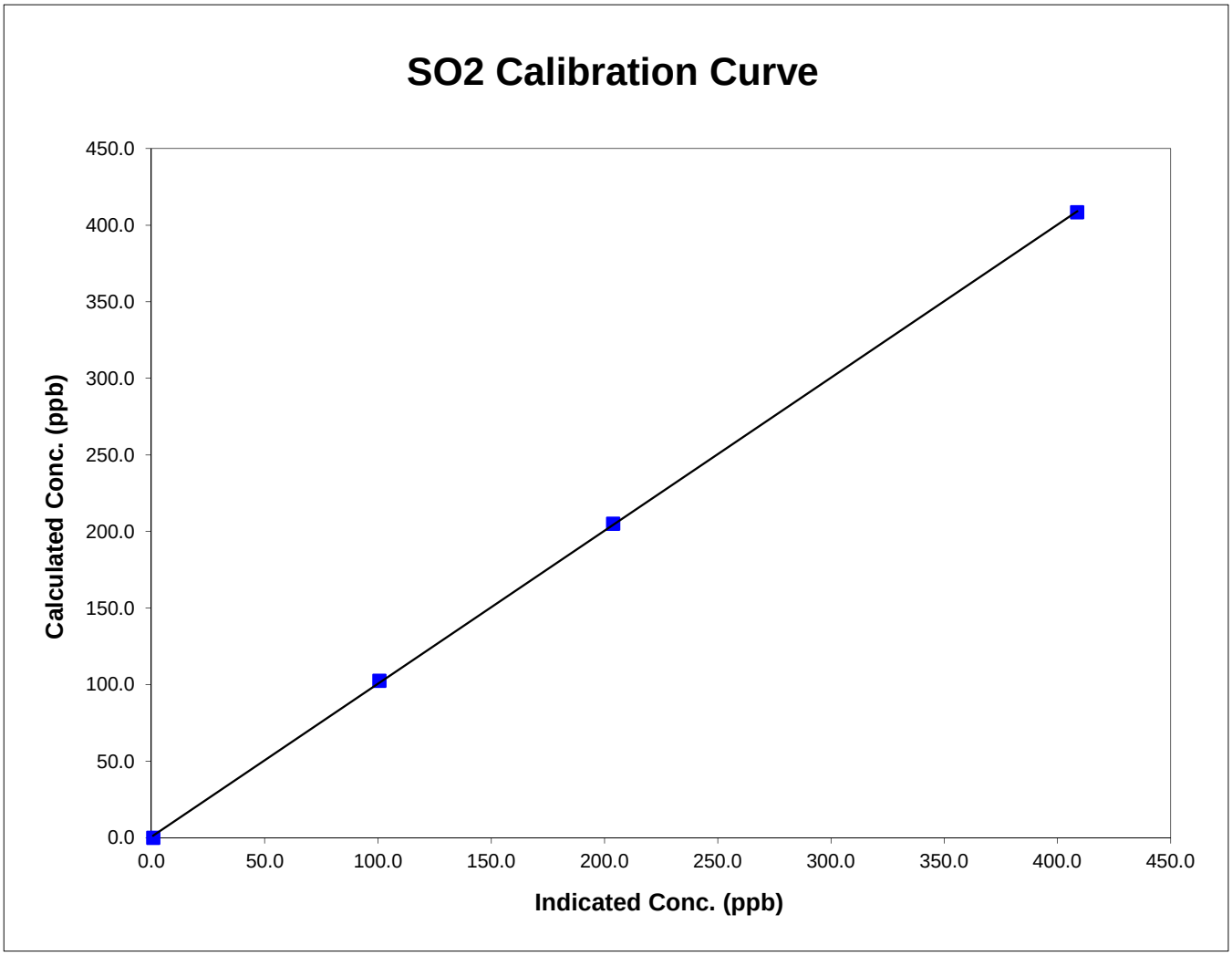
FOCUS AIR QUALITY MONITORING

Station Information

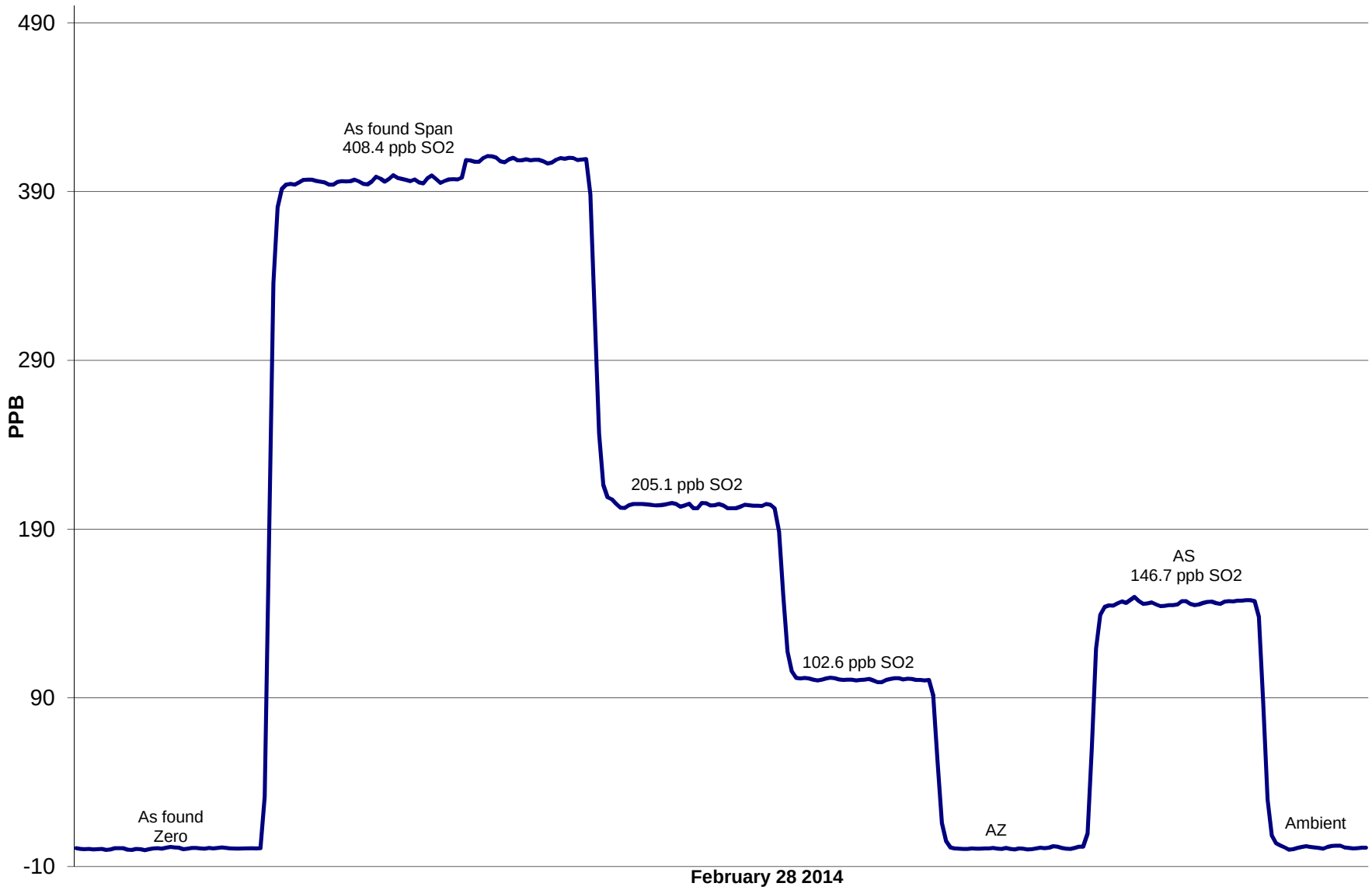
Calibration Date	February 28 2014	Previous Calibration	January 24 2014
Station Number	6	Station Location	Valleyview
Start Time (MST)	10:00	End Time (MST)	12:46
Analyzer make/model	TEI 45C	Analyzer serial #	45C-57531-313

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.8	N/A		
408.4	408.8	0.9992	Correlation Coefficient	0.999947
205.1	203.9	1.0059		
102.6	100.7	1.0192	Slope	0.999365
			Intercept	0.623055



SO2 Calibration



Calibration Report

Parameter **H2S**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 28 2014	Previous Calibration	January 24 2014
Station Number	6	Station Location	Valleyview
Reason: Routine	Install	Removal	Other:
Start Time (MST)	11:50	End Time (MST)	14:30
Barometric Pressure	702.00 mm	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3016
Cal Gas Concentratior	10.4 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	1.003588	Calculated slope	1.025413
Calculated intercept	0.043219	Calculated intercept	-0.164659
Analyzer make	TEI Model 43i - APSCB	Analyzer serial #	701120010

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	7.1	ppb	7.0	ppb
Coefficient	0.915		0.915	
Lamp Voltage	794	V	792	V
Chamber Temp	45.0	c	44.9	c
Perm Oven Temp	45	c	45	c
Pressure	597.50	mm Hg	599.10	mm Hg
Sample Flow	0.406	ccm	0.407	lpm
Lamp Intensity	91.0	%	91.0	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	0.4	N/A
4995	39.93	82.5	80.7	1.0215
4995	19.97	41.4	40.3	1.0280
8995	8.97	10.4	10.1	1.0221
4995	9.97	102.5	0.5	Sox Test
4995	0.00	0.0	0.4	As found zero
4995	39.93	82.5	80.7	As found span
			Average Correction Factor	1.0239

Calculated value of As Found Response: 80.67 ppm Percent Change of As Found: 2.2%

	before calibration		after calibration	
Auto zero	0.5	ppm	-0.3	ppm
Auto span	67.3	ppm	65.1	ppm

Notes: Slight zero adjust made,Sox material replaced,runs checks in span mode to determine why getting a spike on the beginning of the daily span.
Will bring zero/span solenoid on the next cal to replace.

Calibration Performed By: Grover Christiansen, Dmytro Dolotii.

Calibration Summary

Parameter **H2S**

Air Monitoring Network **PAZA**

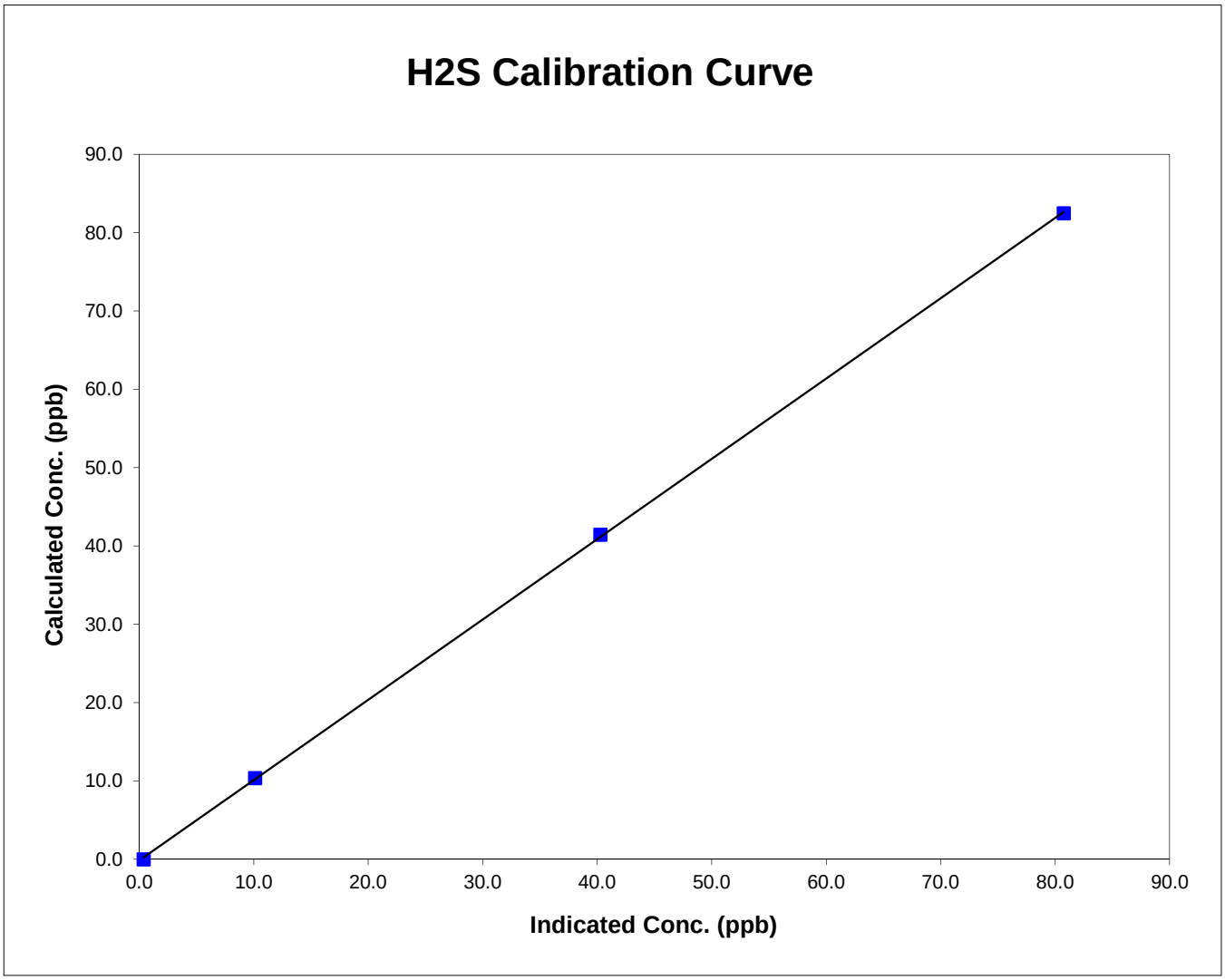
FOCUS AIR QUALITY MONITORING

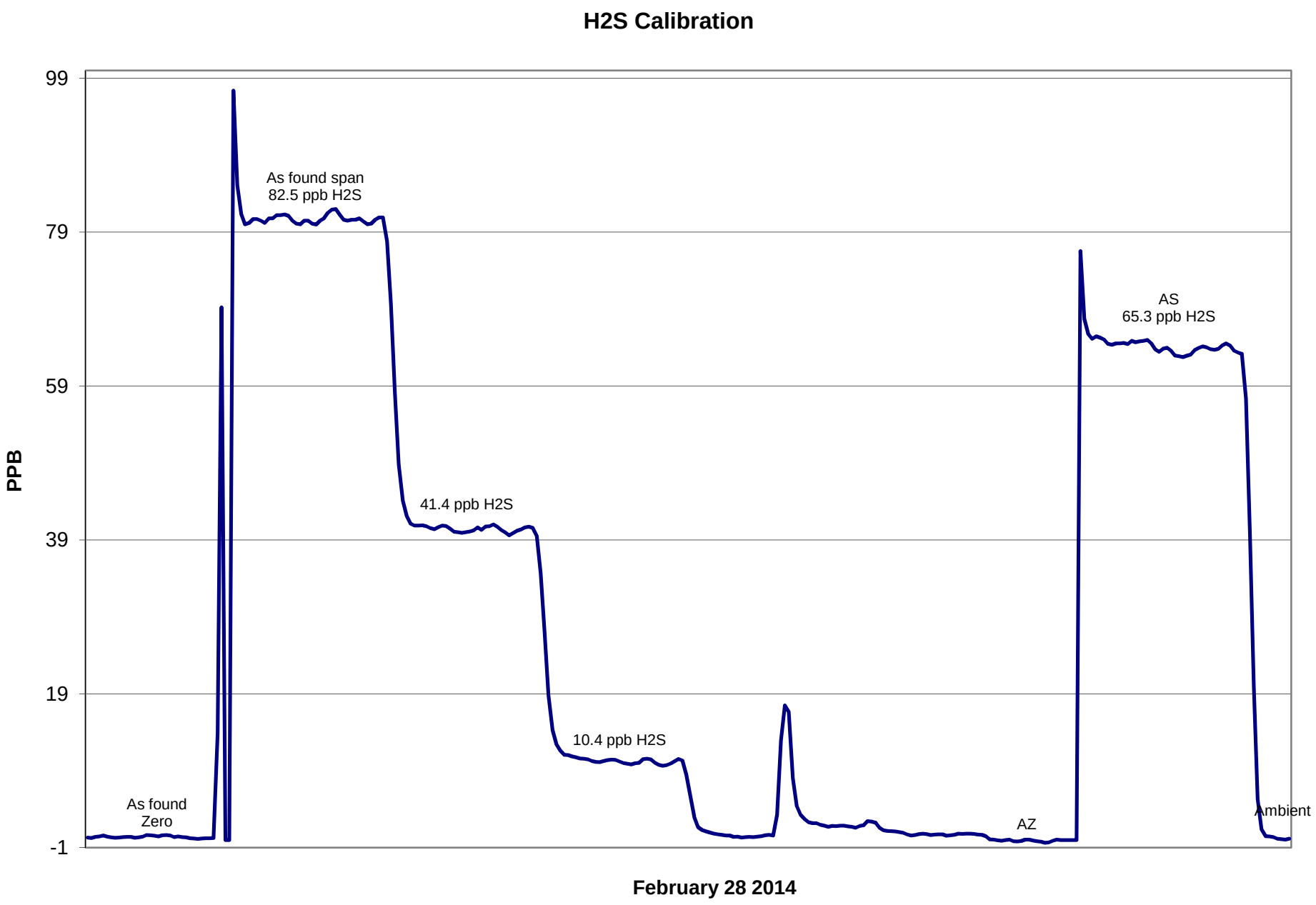
Station Information

Calibration Date	February 28 2014	Previous Calibration	January 24 2014
Station Number	6	Station Location	Valleyview
Start Time (MST)	11:50	End Time (MST)	14:30
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	0.4	N/A		
82.5	80.7	1.0215	Correlation Coefficient	0.999958
41.4	40.3	1.0280		
10.4	10.1	1.0221	Slope	1.025413
			Intercept	-0.164659




H2S Calibration
99
79
59
39
19
-1
PPB
As found span
82.5 ppb H2S
41.4 ppb H2S
10.4 ppb H2S
As found
Zero
AZ
AS
65.3 ppb H2S
Ambient
February 28 2014

Calibration Report

Parameter **SO2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 11, 2014	Previous Calibration	January 18, 2014
Station Number	10	Station Location	Reno
Reason: Routine	Install	Removal	Other:
Start Time (MST)	9:20	End Time (MST)	13:15:00 PM
Barometric Pressure	0.921 Atm	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3016
Cal Gas Concentratior	51.5 ppm	Cal Gas Expiry Date	12/03/2014
Gas Cert Reference	LL105159		
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volt	DACS channel #	2
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.996800	Calculated slope	0.997084
Calculated intercept	1.694263	Calculated intercept	1.306889
Analyzer make	TEI 43C	Analyzer serial #	436610005

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	19.5		20.4	
Coefficient	1.048		1.079	
UV Lamp Voltage	872	V	876	V
Chamber Temp	44.8	C	44.8	C
Perm Gas Temp	45	C	44.99	C
Pressure	676.7	mm Hg	674.2	mm Hg
Sample Flow	0.464	LPM	0.464	LPM
Lamp Intesity	30560	Hz	30534	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	0.3	N/A
4995	39.93	408.4	409.2	0.9981
4995	19.97	205.1	203.2	1.0095
4995	9.97	102.6	100.3	1.0226
4995	0.00	0.0	0.3	As found zero
4995	39.93	408.4	396.5	As found span
			Average Correction Factor	1.0101

Calculated value of As Found Response: 396.654 ppm Percent Change of As Found: 2.9%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	259.1	ppm	241.2	ppm

Notes: Slight span adjust SO2-run adjustment point.
Resubmit 80% point
Restart the analyzer in terms of service work.

Calibration Performed By: Grover Christiansen,Dmytro Dolotii.

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PAZA**

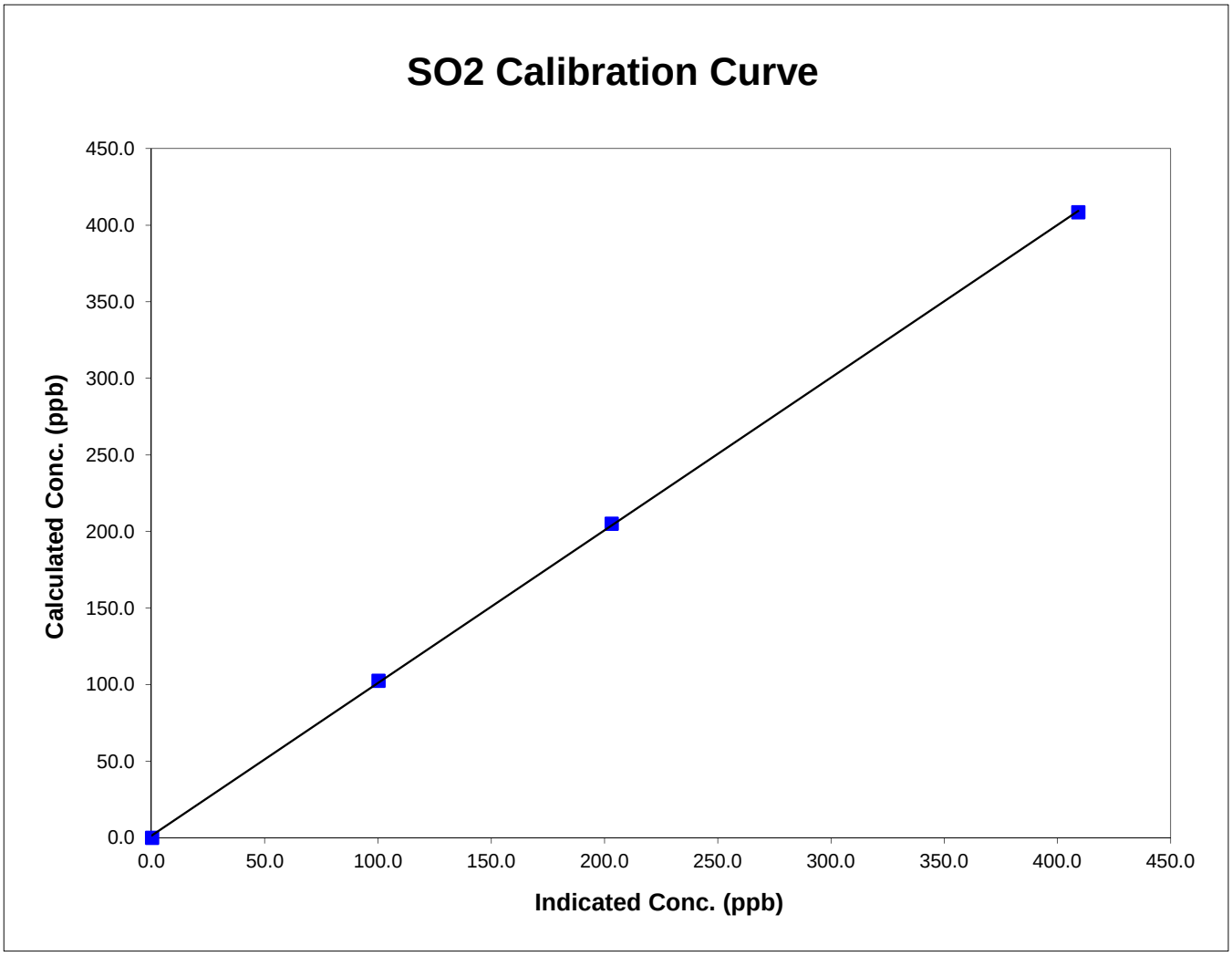
FOCUS AIR QUALITY MONITORING

Station Information

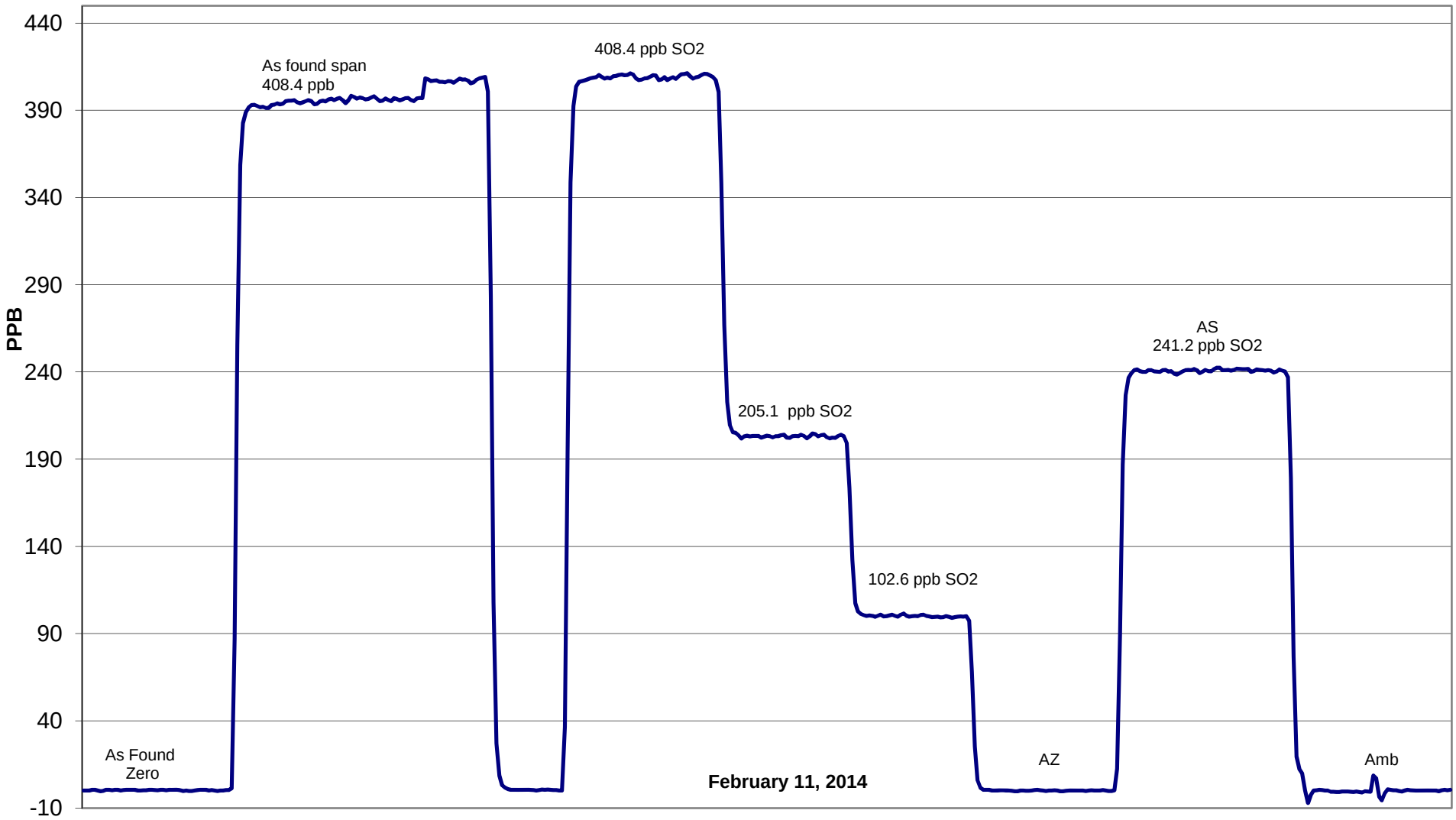
Calibration Date	February 11, 2014	Previous Calibration	January 18, 2014
Station Number	10	Station Location	Reno
Start Time (MST)	9:20	End Time (MST)	13:15:00 PM
Analyzer make/model	TEI 43C	Analyzer serial #	436610005

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A		
408.4	409.2	0.9981	Correlation Coefficient	0.999931
205.1	203.2	1.0095		
102.6	100.3	1.0226	Slope	0.997084
			Intercept	1.306889



SO2 Calibration



Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 11, 2014	Previous Calibration	January 18, 2014
Station Number	10	Station Location	Reno

Reason: Routine Install Removal Other:

Start Time (MST)	9:15		End Time (MST)	15:05:00 PM	
Barometric Pressure	0.921	Atm	Station Temperature	20.0	Deg C
Calibrator	Environics		Serial Number	3016	
NO Cal Gas Conc	51.3	ppm	Cal Gas Expiry Date	March 12, 2014	
NOx Cal Gas Conc	51.4	ppm	Cal Gas Serial #	LL105159	

DACS Information

DACS make CR3000 DACS serial No. 5407

Parameter		NO2	NOx	NO
Before	Data Slope	0.999870	0.996346	1.000382
	Data Offset	-0.082965	1.745717	1.568021
After	Data Slope	1.002014	0.995827	0.999451
	Data Offset	-0.238120	0.961973	0.913433
Channel #		5	3	4
Voltage Range		0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model TEI 42i Analyzer serial # 0701120011

Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	5.6	mV	6.4	mV
NOx bkgnd	6.0	mV	6.5	mV
NO coefficient	1.134		1.093	
NOx coefficient	0.998		1.002	
NO2 conv temp	326.8	Deg C	326.6	Deg C
Cooler Temp	-3.0	Deg C	-2.6	Deg C
PMT Volt	-828.4	mV	845.8	mV
R Cell Press	205.0	in Hg	204.7	in Hg
Sample Flow	0.702	ccm	0.704	ccm

NOTES: Slight span and pmt adjustments been made following as found.

Calibration Report

Parameter **NOX-NO-NO2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: February 11, 2014 Station Location: Reno

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4995	0.00	0.0	0.0	0.0	0.2	0.0	0.3	N/A	N/A
1	4995	39.93	407.6	406.8	0.8	409.0	406.6	0.7	0.9967	1.0005
2	4995	19.97	204.7	204.3	0.4	203.9	203.0	0.1	1.0039	1.0064
3	4995	9.97	102.4	102.2	0.2	100.7	100.4	0.5	1.0167	1.0180
AFZ	4995	0.00	0.0	0.0	0.0	0.2	0.0	0.3	0.0000	0.0000
AFS	4995	39.93	407.6	406.8	0.8	361.3	362.5	-2.8	1.1283	1.1222
							Average Correction Factor		1.0057	1.0083

As Found Concentrations: NO_X= 362.8 NO= 364.1 As Found Percent Change NO_X= -11.0% NO= -10.5%

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	0.0	0.0	0.0	0.2	0.0	0.3	N/A	N/A	N/A	N/A
NO point	406.0	406.0	0.0	407.8	406.0	-0.1	0.9957	1.0000	N/A	N/A
300	406.0	98.4	307.6	407.4	98.4	307.3	0.9966	1.0000	1.0010	99.9%
200	406.0	198.6	207.4	407.8	198.6	207.2	0.9956	1.0000	1.0012	99.9%
100	406.0	298.3	107.6	408.0	298.3	107.6	0.9951	1.0000	1.0006	99.9%
					Average Correction Factor		0.9957	1.0000	1.0009	99.9%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.8	0.9	0.0	ppb	0.0	0.0	0.1	ppb
Auto span	166.3	164.3	1.4	ppb	172.1	170.2	1.1	ppb

Calibration Performed By: Grover Christiansen, Dmytro Dolotii.

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

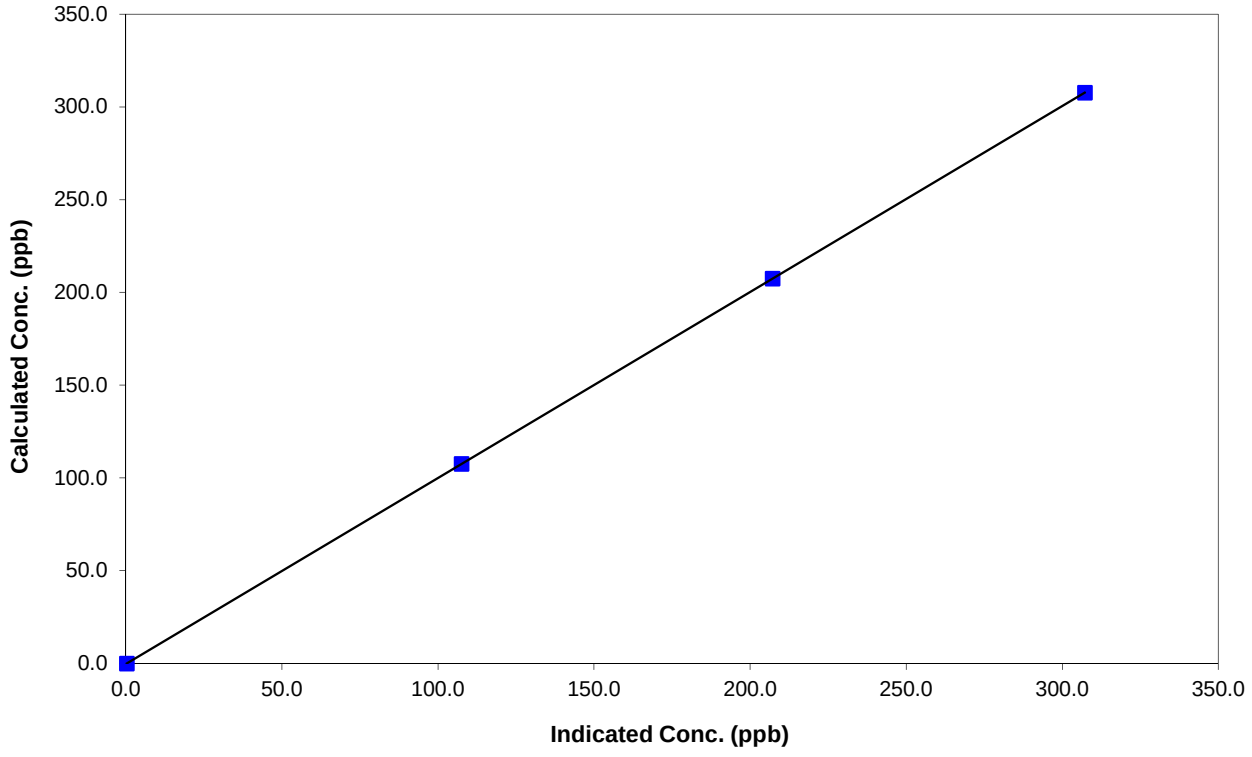
Station Information

Calibration Date	February 11, 2014	Previous Calibration	January 18, 2014
Station Number	10	Station Location	Reno
Start Time (MST)	9:15	End Time (MST)	15:05:00 PM
Analyzer make	TEI 42i	Analyzer serial #	0701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A		
307.6	307.3	1.0010	Correlation Coefficient	1.000000
207.4	207.2	1.0012		
107.6	107.6	1.0006	Slope	1.002014
			Intercept	-0.238120

NO_2 Calibration Curve



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

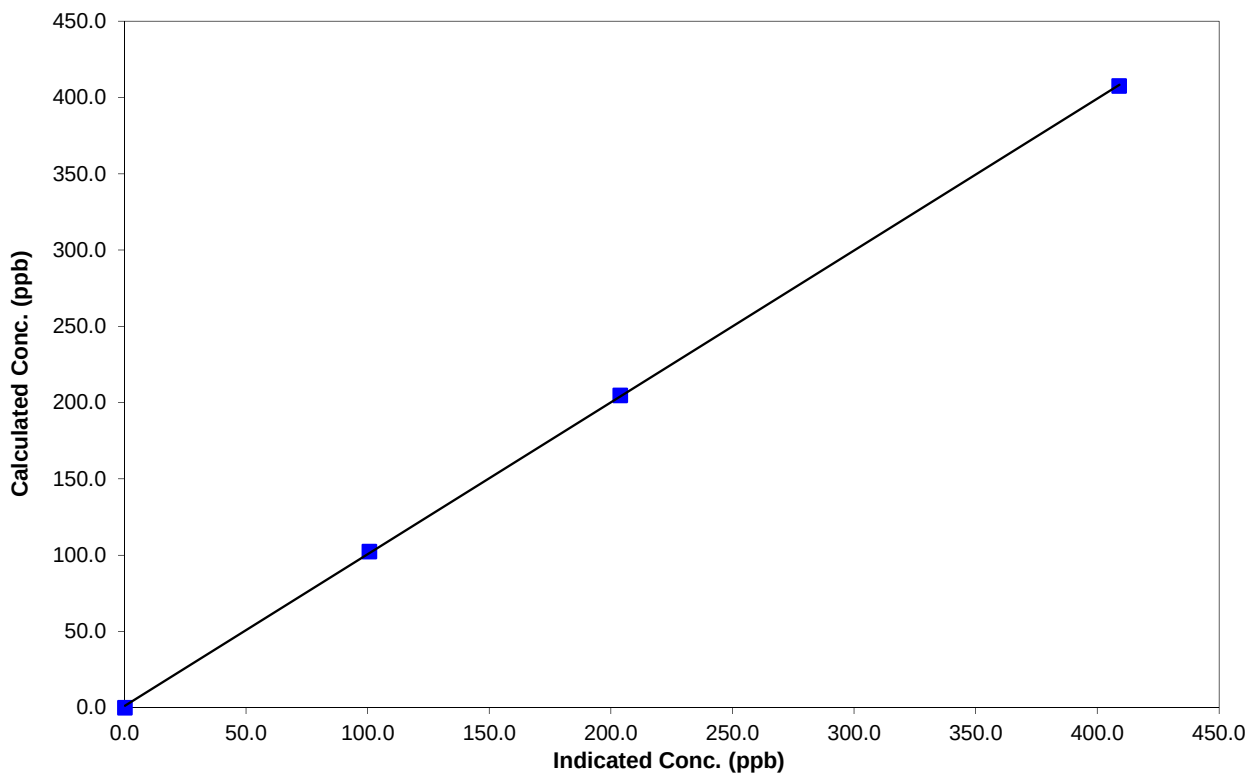
Station Information

Calibration Date	February 11, 2014	Previous Calibration	January 18, 2014
Station Number	10	Station Location	Reno
Start Time (MST)	9:15	End Time (MST)	15:05:00 PM
Analyzer make	TEI 42i	Analyzer serial #	0701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
407.6	409.0	0.9967	Correlation Coefficient	0.999961
204.7	203.9	1.0039		
102.4	100.7	1.0167	Slope	0.995827
			Intercept	0.961973

NOx Calibration Curve



Calibration Summary

Parameter **NO**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

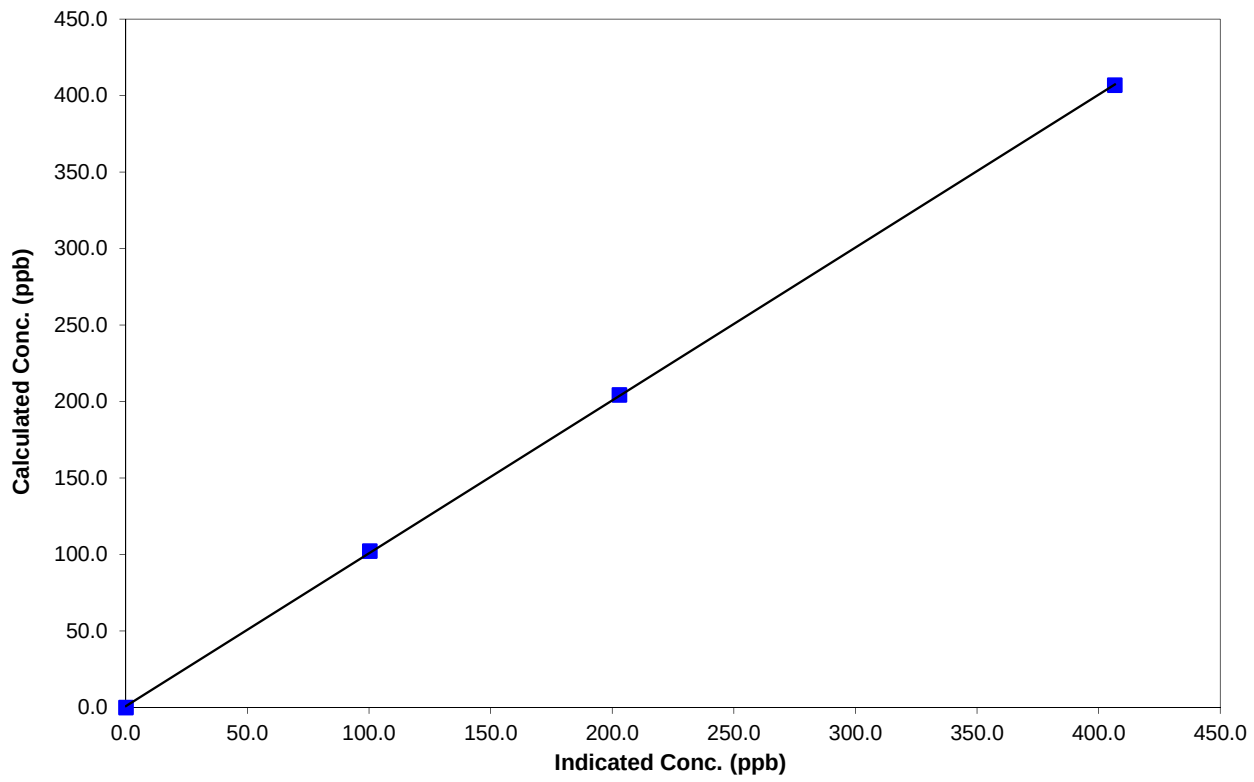
Station Information

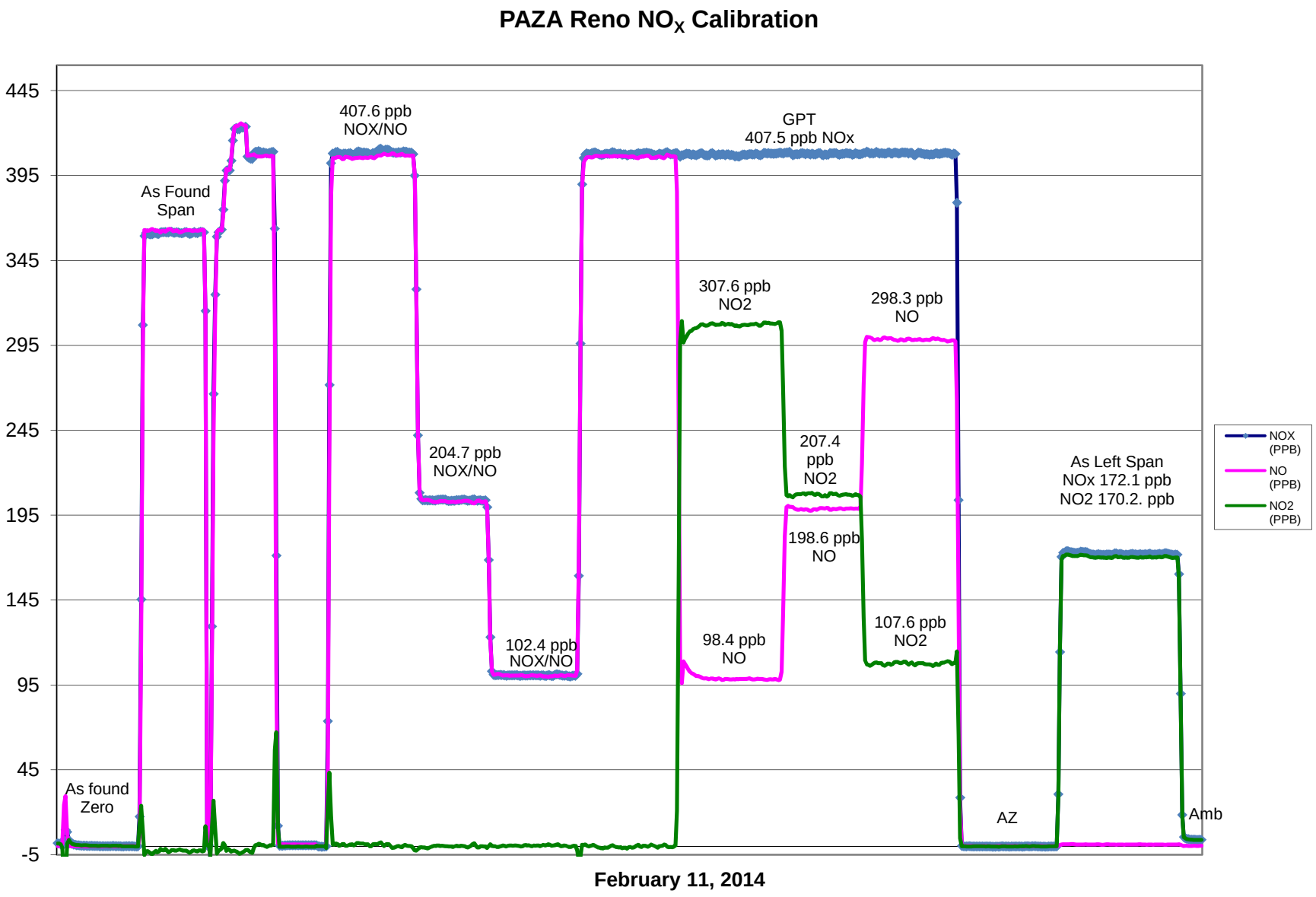
Calibration Date	February 11, 2014	Previous Calibration	January 18, 2014
Station Number	10	Station Location	Reno
Start Time (MST)	9:15	End Time (MST)	15:05:00 PM
Analyzer make	TEI 42i	Analyzer serial #	0701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
406.8	406.6	1.0005	Correlation Coefficient	0.999975
204.3	203.0	1.0064		
102.2	100.4	1.0180	Slope	0.999451
			Intercept	0.913433

NO Calibration Curve




PAZA Reno NOx Calibration
445
395
345
295
245
195
145
95
45
-5
As found Zero
As Found Span
407.6 ppb NOX/NO
204.7 ppb NOX/NO
102.4 ppb NOX/NO
GPT 407.5 ppb NOx
307.6 ppb NO2
98.4 ppb NO
207.4 ppb NO2
198.6 ppb NO
298.3 ppb NO
107.6 ppb NO2
AZ
As Left Span NOx 172.1 ppb NO2 170.2. ppb
Amb
NOX (PPB)
NO (PPB)
NO2 (PPB)
February 11, 2014

Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **O3**

Air Monitoring Network **PAZA**

Station Information

Calibration Date	February 11 2014	Previous Calibration	January 18 2014
Station Number	10	Station Location	Reno
Reason: Routine	Install	Removal remove	Other:
Start Time (MST)	13:41:00 PM	End Time (MST)	16:15:00 PM
Barometric Pressure	0.921 atm	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3016
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volts	DACS channel #	6
	Before		After
Calculated slope	1.011403	Calculated slope	1.014854
Calculated intercept	0.386067	Calculated intercept	0.609696
Analyzer make	TEI Model 49C	Analyzer serial #	49C-0609716240

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	0	ppb	0	ppb
Span	0.988		0.988	
Cell A intensity	119625	Hz	119596	Hz
Cell B intensity	115402	Hz	115381	Hz
Pressure	673.00	in Hg	672.90	in Hg
CellA Flow	0.708	ccm	0.707	ccm
Cell B Flow	0.702	cmm	0.702	cmm

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5035	0.00	0.0	0.1	N/A
5035	0.30	307.6	303.2	1.0147
5035	0.20	207.4	203.2	1.0207
5035	0.10	107.6	104.7	1.0282
5035	0.00	0.0	0.1	As found zero
5035	0.30	307.6	303.2	As found span
			Average Correction Factor	1.0212

Calculated value of As Found Response: 306.9 ppm Percent Change of As Found: -0.2%

	before calibration		after calibration	
Auto zero	-0.1	ppb	0.7	ppb
Auto span	403.2	ppb	414.6	ppb

Notes: No adjustment made.

Calibration Performed By: Grover Christiansen, Dmytro Dolotii.

Calibration Summary

Parameter **O3**

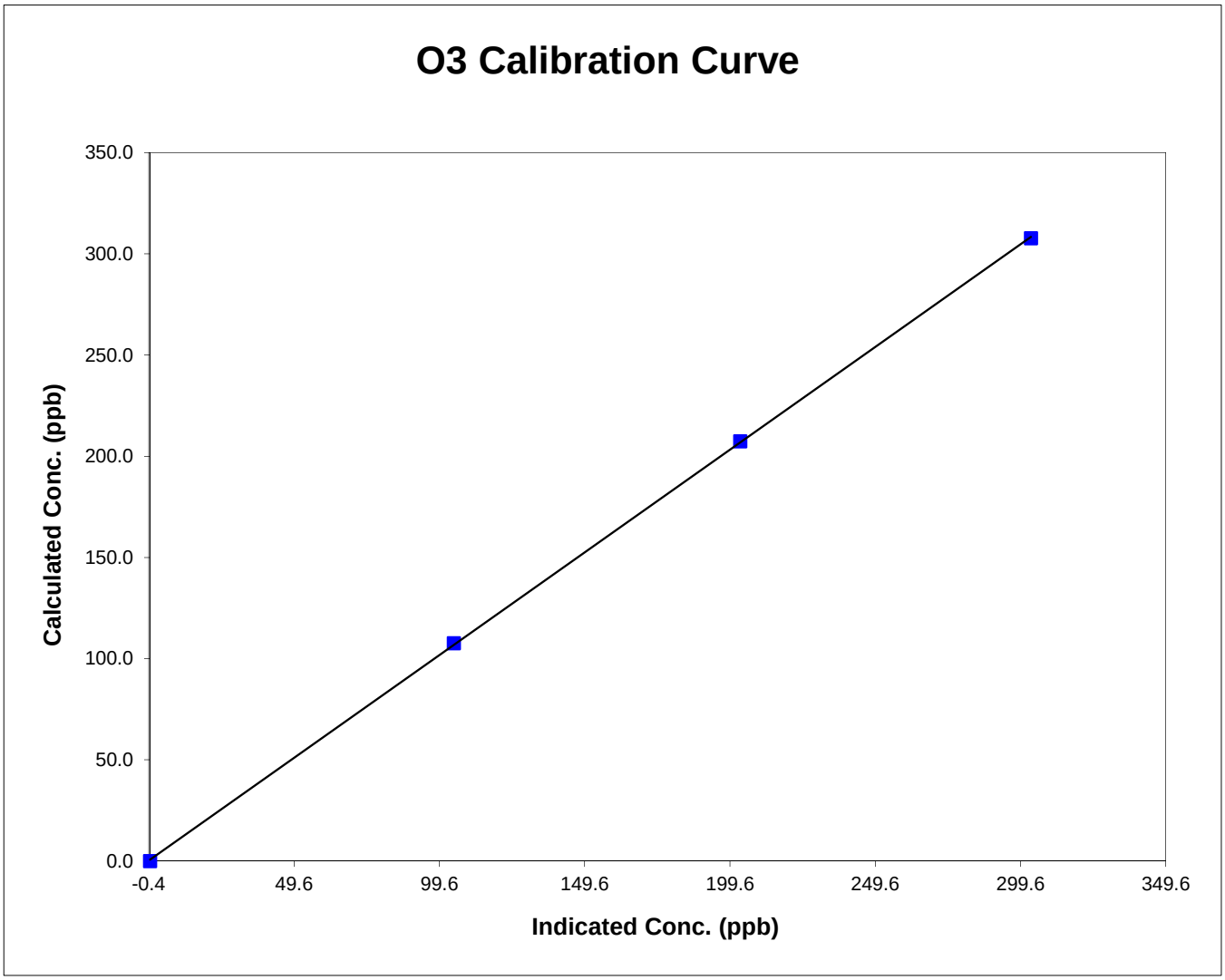
Air Monitoring Network **PAZA**

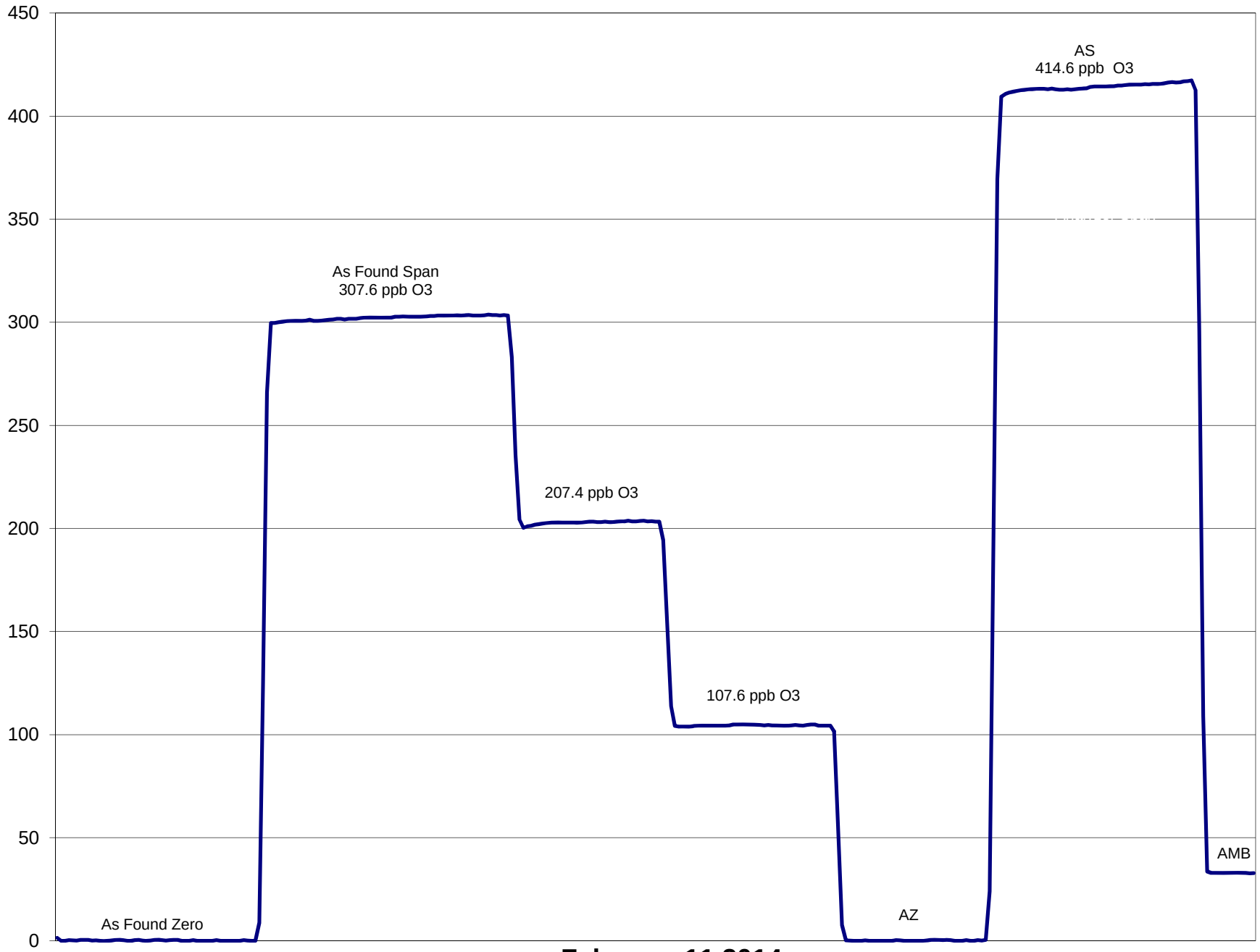
Station Information

Calibration Date	February 11 2014	Previous Calibration	January 18 2014
Station Number	10	Station Location	Reno
Start Time (MST)	13:41:00 PM	End Time (MST)	16:15:00 PM
Analyzer make/model	TEI Model 49C	Analyzer serial #	49C-0609716240

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	NA		
307.6	303.2	1.0147	Correlation Coefficient	0.999964
207.4	203.2	1.0207		
107.6	104.7	1.0282	Slope	1.014854
			Intercept	0.609696





February 11 2014

Calibration Report

Parameter **THC**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 24, 2014	Previous Calibration	January 19, 2014
Station Number	10	Station Location	Rover Reno
Reason: Routine	Install	Removal	Other:
Start Time (MST)	11:40	End Time (MST)	14:10:00 PM
Barometric Pressure	0.923 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentratior	404 ppm CH4/ 201 ppm C3H8	Cal Gas Expiry Date	28/03/2014
Cal Gas CH4 equiv	956.75 ppm	Cal Gas Cylinder #	LL34989
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 1 volt	DACS channel #	12
	Before		After
Calculated slope	0.993065	Calculated slope	0.989106
Calculated intercept	0.169902	Calculated intercept	0.165040
Analyzer make	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

	before		after	
Concentration range	0 - 25	ppm	0 - 25	ppm
THC sample pressure	6.51	psi	6.50	psi
THC span counts	2170	capture	2170	capture
THC zero counts	907	capture	907	capture

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)
2996	0.00	0.00	0.01	N/A
2996	69.93	21.82	21.95	0.9940
2996	29.96	9.47	9.32	1.0163
2996	9.97	3.17	2.89	1.0973
2996	0.00	0.00	0.01	As Found Zero
2996	69.93	21.82	21.95	As Found Span
			Average Correction Factor	1.0359

Calculated value of As Found Response: 21.956 ppm Percent Change of As Found: -0.6%

	before calibration		after calibration	
Auto zero	0.10	ppm	0.28	ppm
Auto span	21.83	ppm	26.66	ppm

Notes: No adjust.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **THC**

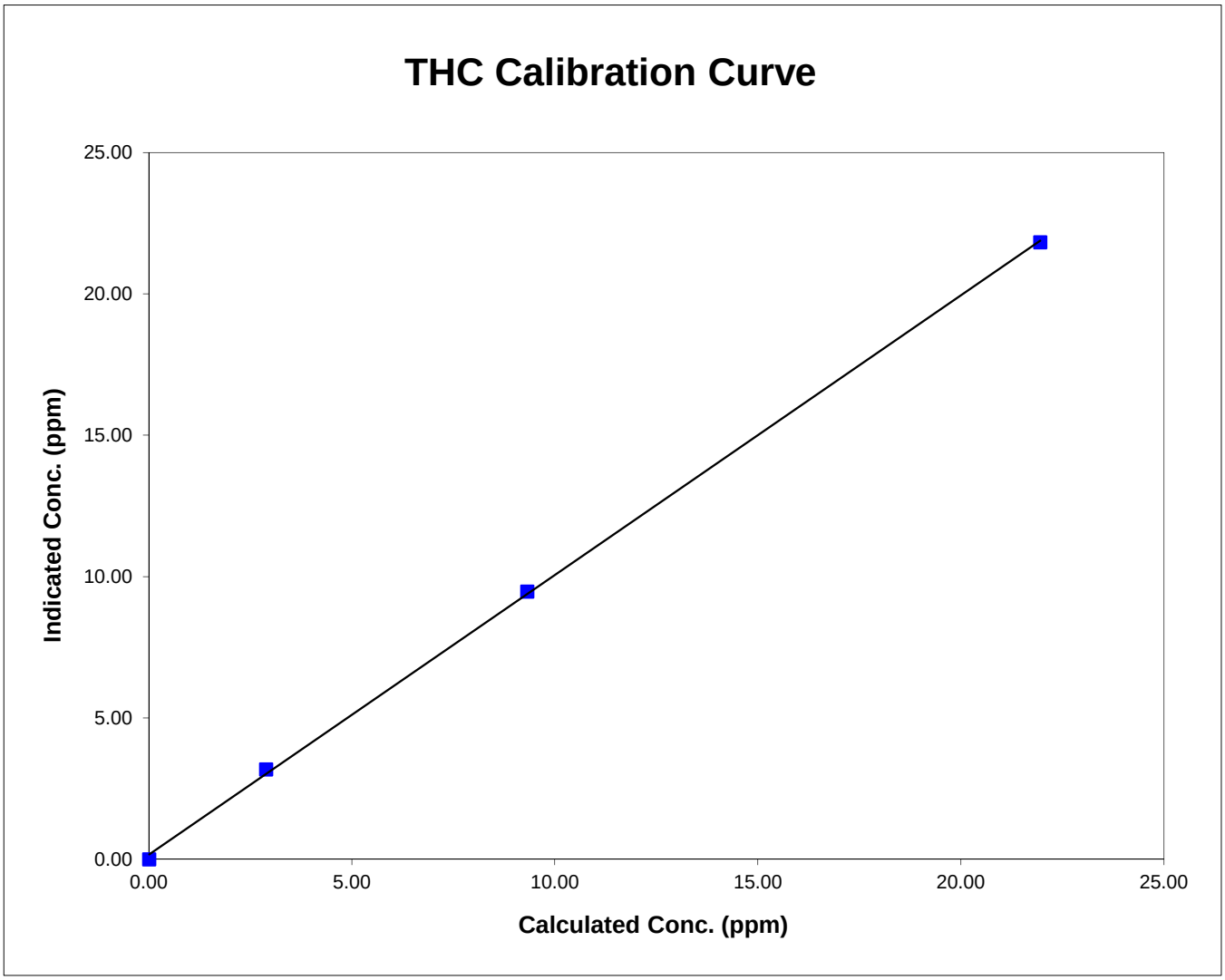
Air Monitoring Network **PASZA**

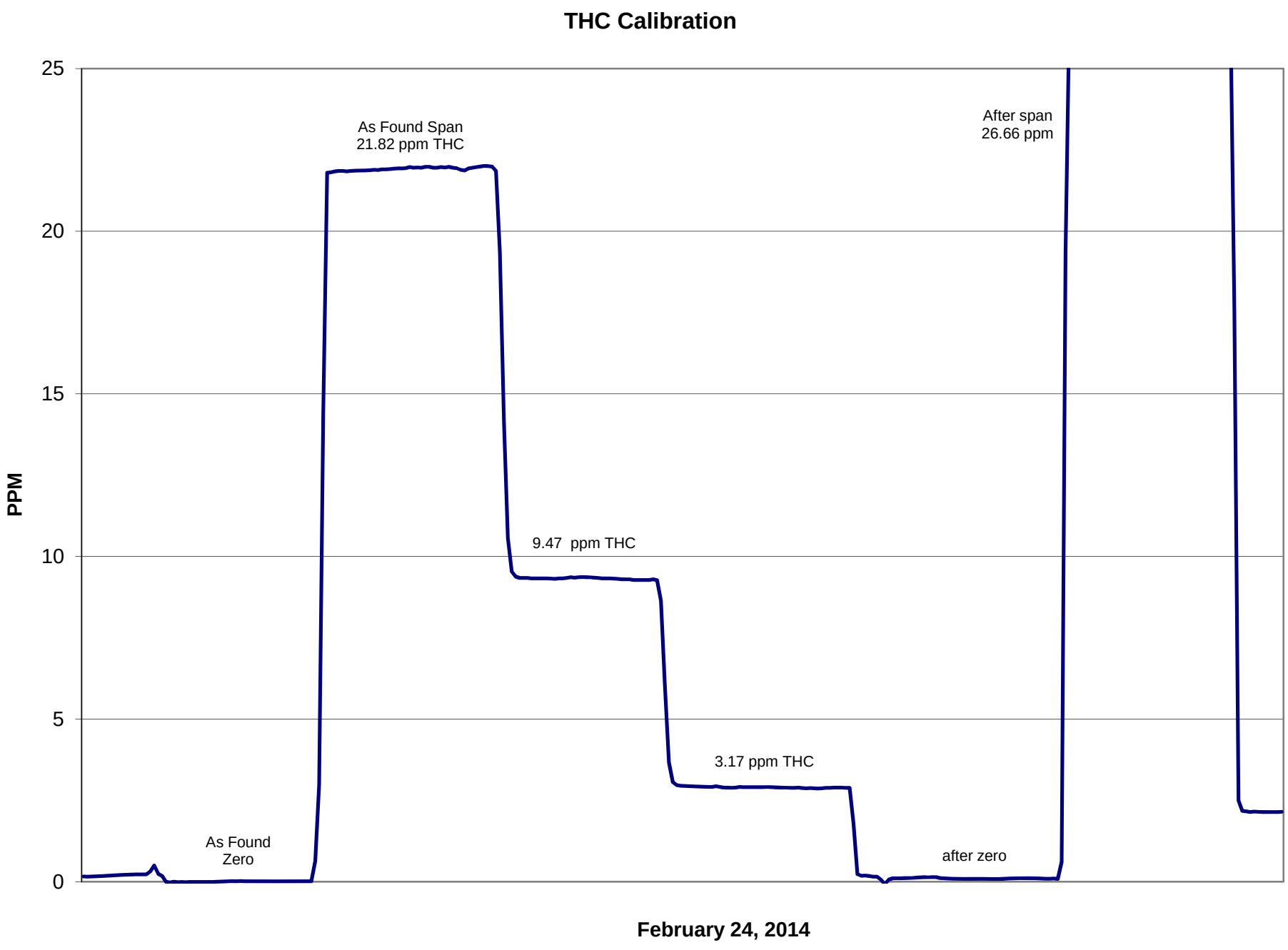
Station Information

Calibration Date	February 24, 2014	Previous Calibration	January 19, 2014
Station Number	10	Station Location	Rover Reno
Start Time (MST)	11:40	End Time (MST)	14:10:00 PM
Analyzer make/model	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.015	N/A		
21.82	21.95	0.9940	Correlation Coefficient	0.999766
9.47	9.32	1.0163		
3.17	2.89	1.0973	Slope	0.989106
			Intercept	0.165040




THC Calibration
25
20
15
10
5
0
PPM
As Found Span
21.82 ppm THC
After span
26.66 ppm
9.47 ppm THC
3.17 ppm THC
As Found
Zero
after zero
February 24, 2014

Calibration Report

Parameter **TRS**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 11 2014	Previous Calibration	January 19 2014
Station Name	PAZA Rover	Station Location	Reno
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	15:10:00 PM	End Time (MST)	18:55:00 PM
Barometric Pressure	0.923 Atm	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3016
Cal Gas Concentratior	10.44 ppm	Cal Gas Expiry Date	July/08/2016
Gas Cert Reference	LL110781		
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volt	DACS channel #	1
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.014208	Calculated slope	1.026742
Calculated intercept	0.282688	Calculated intercept	-0.231606
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	16.3	ppb	16.6	ppb
Coefficient	1.015		1.015	
Lamp Voltage	780	V	779	V
Chamber Temp	44	C	44.1	C
Perm gas Temp	45	C	45	C
Pressure	661.2	mmHg	662.0	mmHg
Sample Flow	0.444	lpm	445	lpm
Lamp Intensity	39124	Hz	39083	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	0.0	0.0	0.2	N/A
4995	39.93	82.8	80.9	1.0236
4995	19.97	41.6	40.7	1.0226
8995	8.97	10.4	10.4	0.9987
4995	9.97	102.8	0.4	Sox Test
4995	0.00	0.0	0.2	As found zero
4995	39.93	82.8	80.9	As found span
			Average Correction Factor	1.0150

Calculated value of As Found Response: 82.11 ppm Percent Change of As Found: 0.8%

	before calibration		after calibration	
Auto zero	0.1	ppm	0.1	ppm
Auto span	65.4	ppm	61.0	ppm

Notes: Slight problem with calibrator conditiotioning,dropped back to zero.
Perfommed leak check on the analyzer and oxidizer.

Calibration Performed By: Grover Christiansen,Dmytro Dolotii

Calibration Summary

Parameter **TRS**

Air Monitoring Network **PAZA**

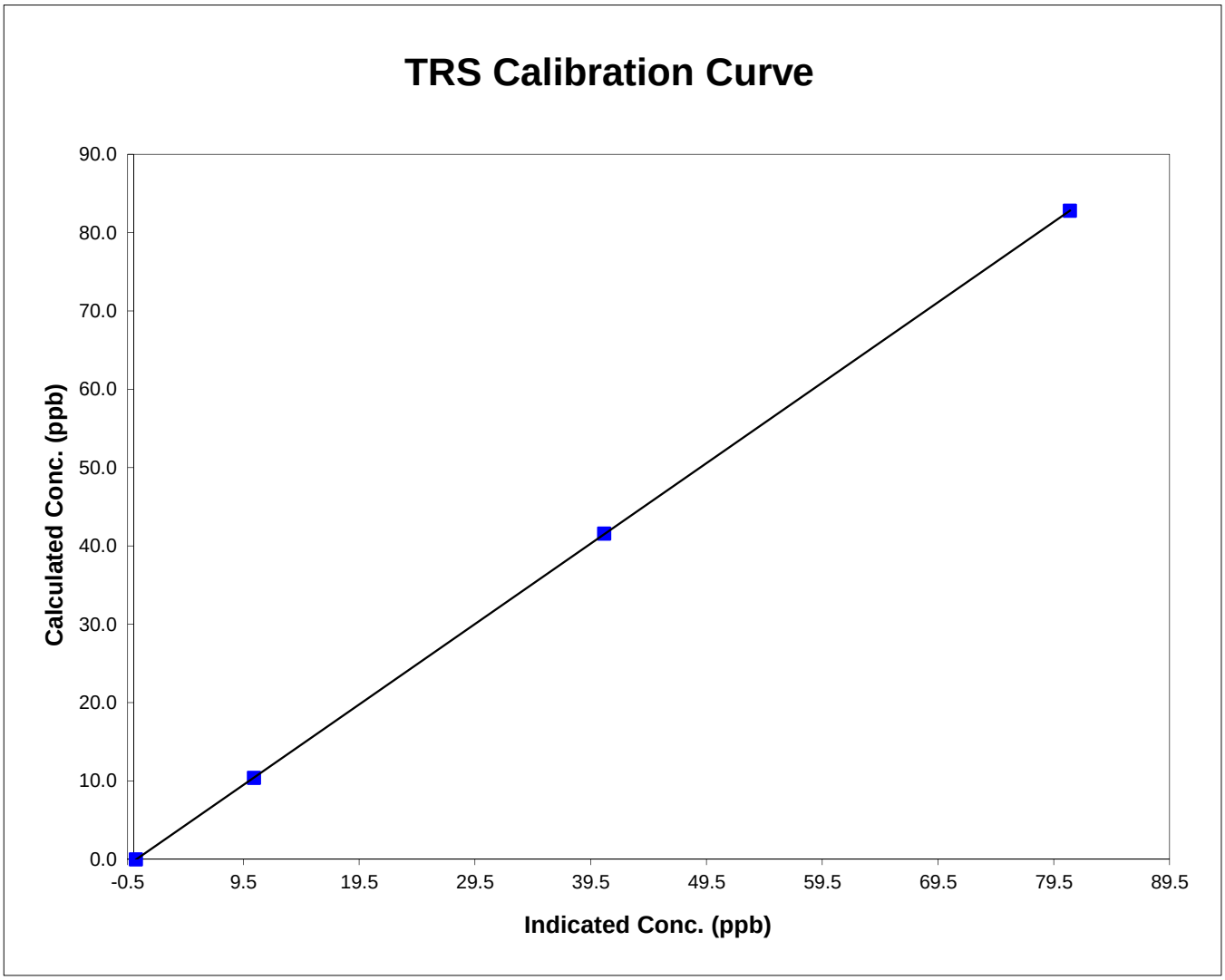
FOCUS AIR QUALITY MONITORING

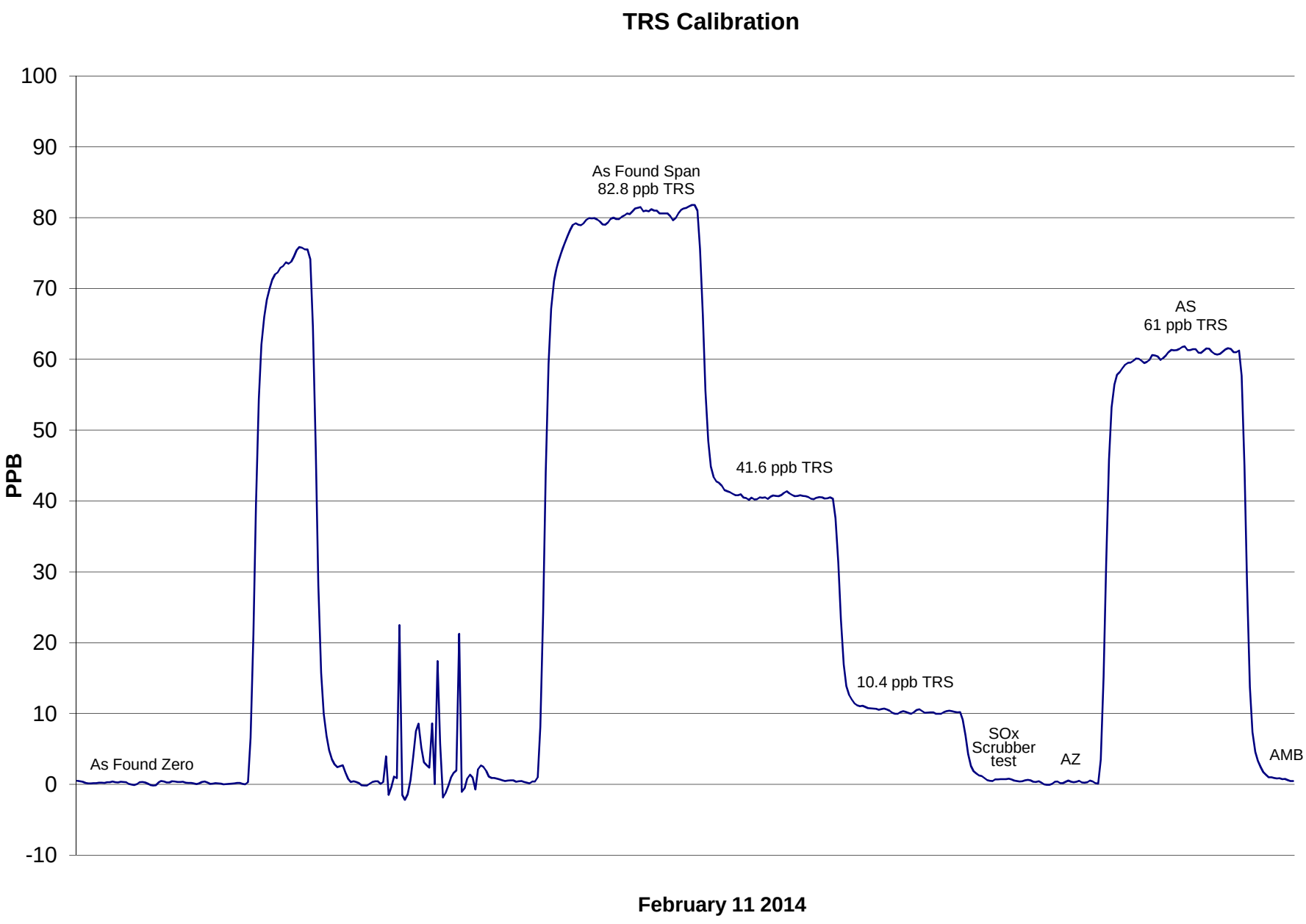
Station Information

Calibration Date	February 11 2014	Previous Calibration	January 19 2014
Station Number	PAZA Rover	Station Location	Reno
Start Time (MST)	15:10:00 PM	End Time (MST)	18:55:00 PM
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
82.8	80.9	1.0236	Correlation Coefficient	0.999998
41.6	40.7	1.0226		
10.4	10.4	0.9987	Slope	1.026742
			Intercept	-0.231606




TRS Calibration
100
90
80
70
60
50
40
30
20
10
0
-10
PPB
As Found Span
82.8 ppb TRS
AS
61 ppb TRS
41.6 ppb TRS
10.4 ppb TRS
SOx
Scrubber
test
AZ
AMB
As Found Zero
February 11 2014

AB TEOM PM2.5 Calibration

FOCUS AIR QUALITY MONITORING

STATION: **Rover-Reno**

LOCATION: PAZA - Grande Prairie

OPERATOR: Grover Christiansen

DATE: 11-Feb-14

MONITOR INFO / PARAMETER VALUES:

Make/Model	TEOM AB
Configuration	PM2.5
Serial Number	21551
Site Number	10
Inlet Type	PM 10 / SCC
FAdj. Main Setting	1.000
FAdj. Aux. Setting	1.000
T-Case Indicated / Set Point	40/40
T-Air Indicated / Set Point	40/40
T-Cap Indicated / Set Point	40/40
Splitter Assembly Alignment (cm)	15.5

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

RECENT CALIBRATION AND AUDIT HISTORY

Previous Audit	04-Dec-13
Previous Calibration	

PUMP CAPACITY CHECK *	PASS

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

"FAIL" indicates that pump requires service.

LEAK CHECK	Indicated Flow (lpm)	
	Main	Auxiliary
PUMP ON	0.140	0.090
PUMP OFF	0.130	0.090
NET	0.010	0.000
LIMITS	*<0.15*	*<0.60*

		Ambient Temp. (^{0} C)	Ambient Pres. (atm)	Ko *	Bypass flow (lpm)	Sample flow (lpm)
	SET POINT (S)	na	na	13810	13.67	3.000
	INDICATED (I)	-22.9	0.932		13.67	2.990
As Found Data	MEASURED (AF)	-22.3	0.931		13.68	3.010
Adjusted Data	MEASURED (M)	-22.3	0.931	14207	13.68	3.010
	DIFFERENCE (M-I)	0.6	-0.001	2.9%	0.01	0.01
	LIMITS	*± 2 ^{0} C*	*± 0.005 atm*	*± 2.5 %*	*± 1.0 L/min*	*± 0.2 L/min*

Ko Audit Filter data *Weight:* 0.11477 *Serial #:* *CVK 3532*

COMMENTS: Pass

Full audit was performed.

Pump needs rebuild soon.

TEOM control unit S/N: 140AB215519705

TEOM sensor unit S/N: 1200C158380009

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

Calibration Report

Parameter **SO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 10, 2014	Previous Calibration	January 18, 2014
Station Number	1	Station Location	Falher
Reason: Routine	Install	Removal	Other:

Start Time (MST)	12:00	End Time (MST)	15:00:00 PM
Barometric Pressure	0.931 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3474
Cal Gas Concentration	51.5 ppm	Cal Gas Expiry Date	25/02/2025
Correction factor	0.031647	Cal Gas Cylinder #	LL105159
DACS make	CR1000	DACS serial No.	3980
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	0.990452	Calculated slope	0.993083
Calculated intercept	0.976903	Calculated intercept	0.427400

Analyzer make	Teco 43i	Analyzer serial #	1207452008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	7.2		7	
coefficient	0.905		0.892	
Lamp Voltage	868	volts	868	volts
Chamber Temp	45.2	Deg C	45.2	Deg C
Perm Gas Temp	44.98	Deg C	45	Deg C
Pressure	682.9	mm Hg	683.5	mm Hg
Sample Flow	0.419	ccm	0.417	ccm
Lamp Intensity	96	%	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	408.4	411.3	0.9930
4995	19.96	205.0	205.4	0.9977
4995	9.97	102.6	102.0	1.0059
4995	0.0	0.0	0.5	As Found Zero
4995	39.93	408.4	415.5	As Found Span
			Average Correction Factor	0.9989

Calculated value of As Found Response: 412.014 ppm Percent Change of As Found: -0.9%

	before calibration		after calibration	
Auto zero	0.5	ppm	0.6	ppm
Auto span	359.4	ppm	349.6	ppm

Notes: Slight span adjust,run adjustment point.

Calibration Performed By: Grover Christiansen, Dmytro Dolotii

Calibration Summary

Parameter **SO2**

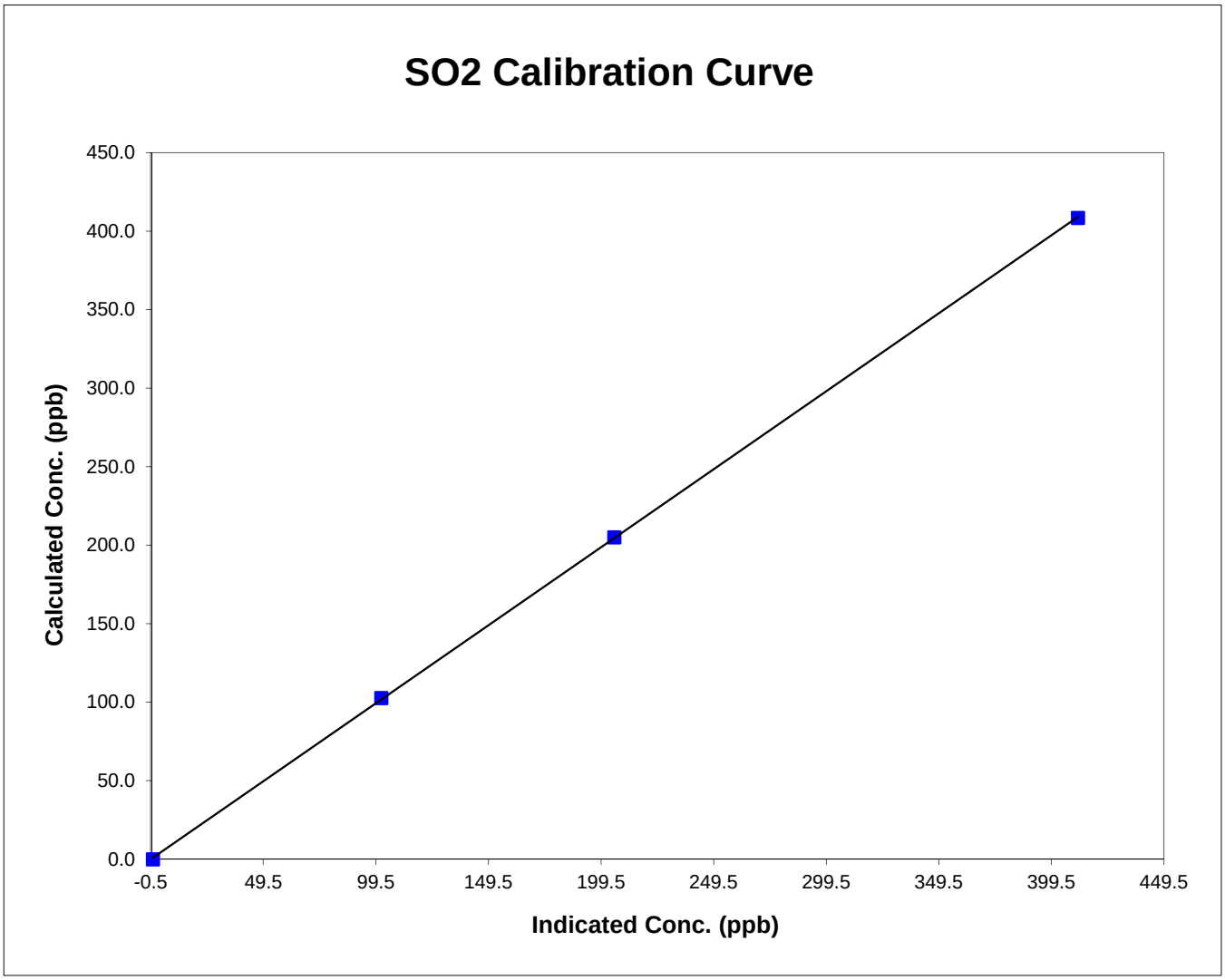
Air Monitoring Network **PAZA**

Station Information

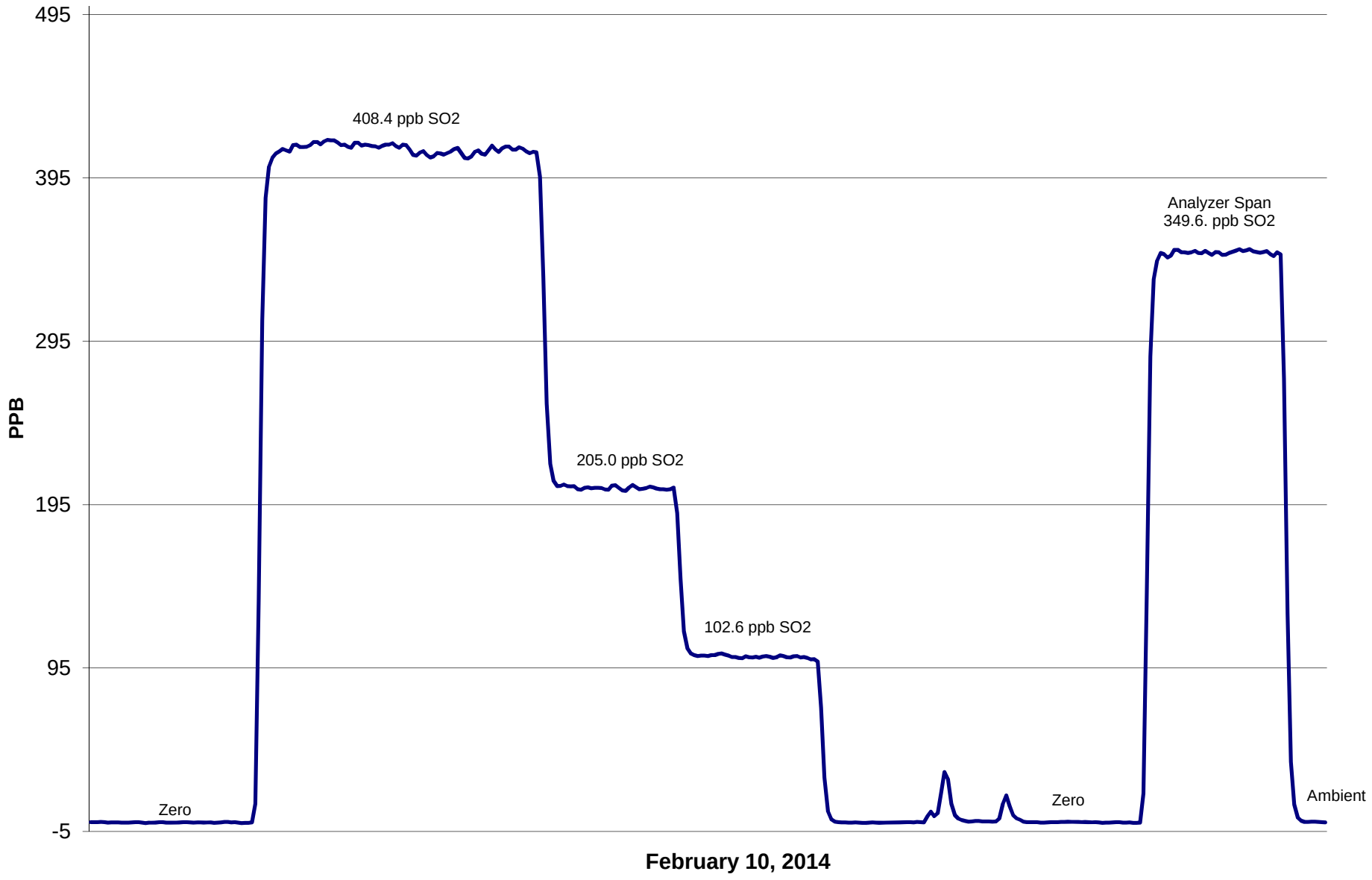
Calibration Date	February 10, 2014	Previous Calibration	January 18, 2014
Station Number	1	Station Location	Falher
Start Time (MST)	12:00	End Time (MST)	15:00:00 PM
Analyzer make/model	Teco 43i	Analyzer serial #	1207452008

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A		
408.4	411.3	0.9930	Correlation Coefficient	0.999977
205.0	205.4	0.9977		
102.6	102.0	1.0059	Slope	0.993083
			Intercept	0.427400



SO2 Calibration



Calibration Report

Parameter **H2S**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 10, 2014	Previous Calibration	January 18, 2014
Station Number	1	Station Location	Falher
Reason: Routine	Install	Removal	Other:

Start Time (MST)	10:35	End Time (MST)	12:55
Barometric Pressure	0.931 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3016
Cal Gas Conc	10.4 ppm	Cal Gas Expiry Date	08/07/2016
Correction factor	0.031647	Cal Gas Cylinder #	LL110781
DACS make	CR1000	DACS serial No.	3980
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
Calculated slope	0.976893	Calculated slope	0.967712
Calculated intercept	-0.222548	Calculated intercept	-0.373059

Analyzer make	Thermo 450i	Analyzer serial #	1207452006

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	13.5	ppb	13.3	ppb
coefficient	1.169		1.169	
Lamp Voltage	806	volts	809	volts
Chamber Temp	45	Deg C	44.9	Deg C
Perm Gas Temp	44.98	Deg C	45	Deg C
Pressure	571.5	mm Hg	572.8	mm Hg
Sample Flow	0.928	ccm	0.918	ccm
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	0.8	N/A
4995	39.93	82.48	85.9	0.9605
4995	19.96	41.39	42.7	0.9695
8994	8.97	10.36	10.9	0.9547
4995	0.00	0.00	0.8	As Found Zero
4995	39.93	82.48	85.9	As Found Span
			Average Correction Factor	0.9615

Calculated value of As Found Response: 82.85 ppm Percent Change of As Found: -0.5%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.3	ppm
Auto span	51.2	ppm	54.7	ppm

Notes: No adjustment been made.

Calibration Performed By: Grover Christiansen, Dmytro Dolotii

Calibration Summary

Parameter **H2S**

Air Monitoring Network **PAZA**

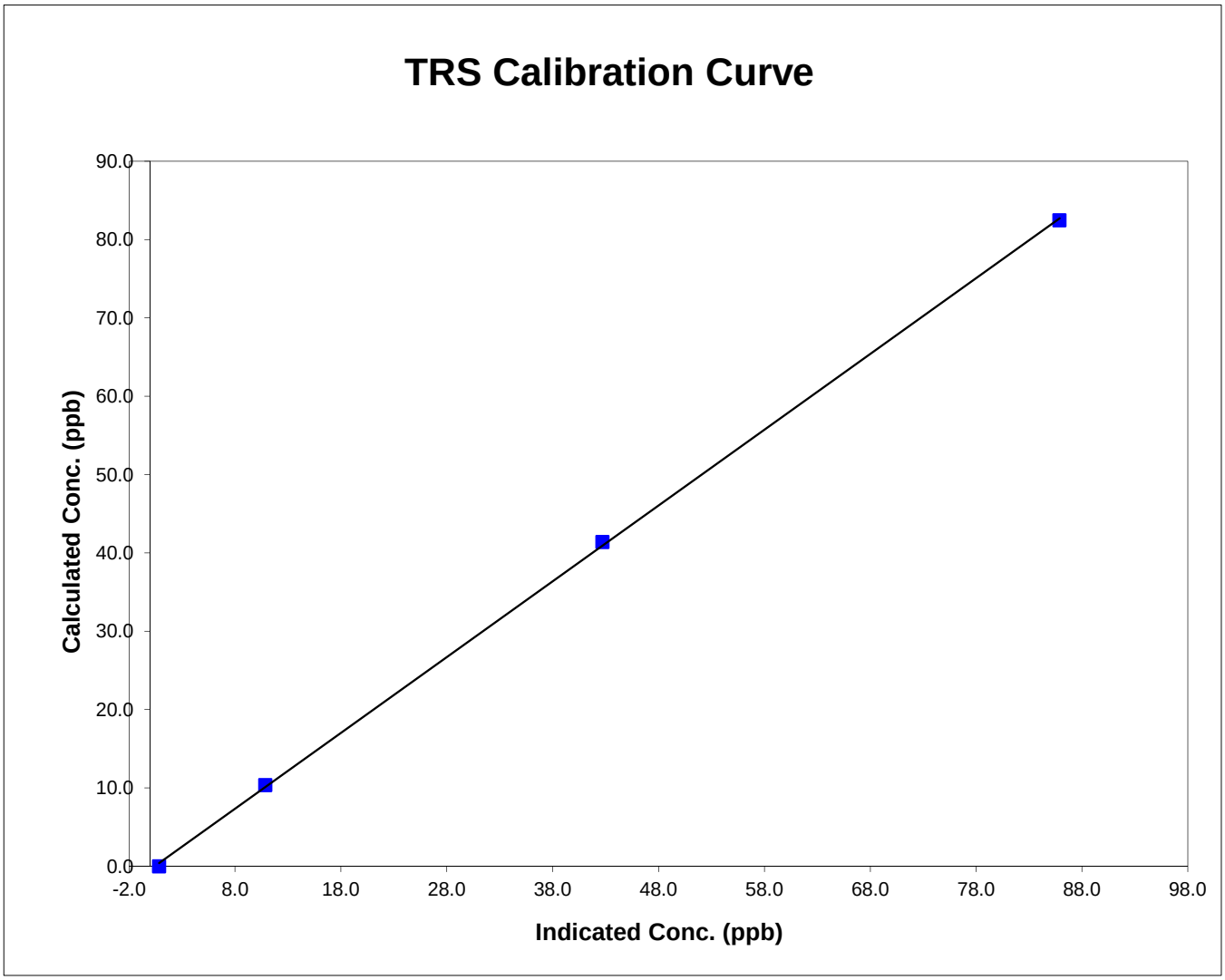
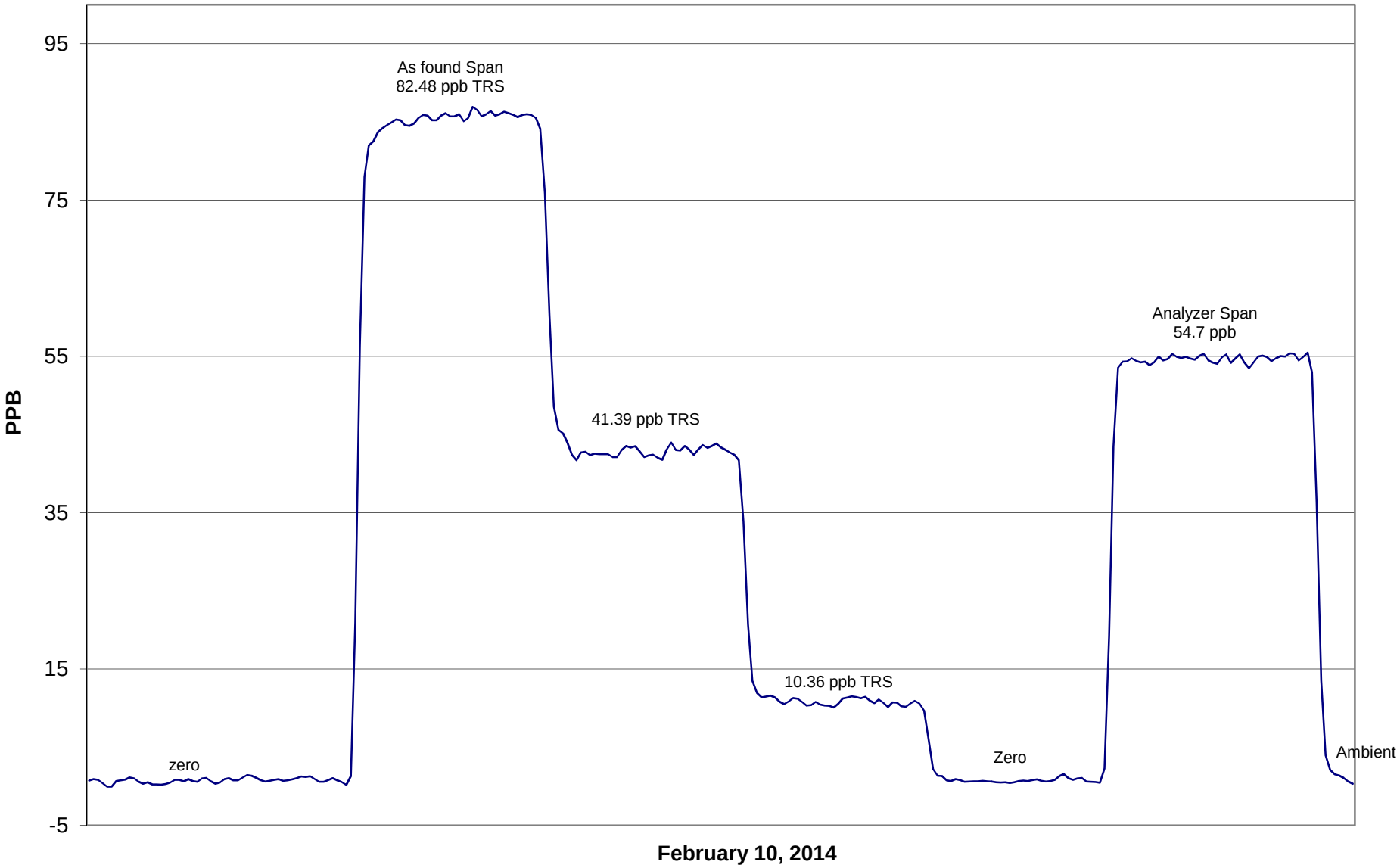
FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 10, 2014	Previous Calibration	January 18, 2014
Station Number	1	Station Location	Falher
Start Time (MST)	10:35	End Time (MST)	12:55
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	0.8	N/A		
82.5	85.9	0.9605	Correlation Coefficient	0.999877
41.4	42.7	0.9695		
10.4	10.9	0.9547	Slope	0.967712
			Intercept	-0.373059



H2S Calibration