Peace Airshed Zone Association

Ambient Air Monitoring Network Summary

Continuous Ambient Air Quality Monitoring Program
Monthly Report
February 2012

Operations and Reporting

Peace Airshed Zone Association
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April 2nd, 2012

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

RE: Peace Airshed Zone Association (PAZA) – February 2012 Ambient Air Report

Enclosed is the PAZA Ambient Monitoring Network Report for the month of **February 2012**.

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	AENV Approval Number
Advantage Oil & Gas Ltd.	Glacier	05-02-076-13-W6	262479-00-00
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
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
Bonavista Energy Corporation	Rycroft	08-25-077-06-W6	11351-02-00
	Spirit River	08-34-077-06-W6	11096-02-00
Canadian Natural Resources Limited	Bonanza	11-25-081-11-W6	29-01-01
	Progress/Gordondale	01-01-077-10-W6	10036-02-00
	Gold Creek	13-26-067-05-W6	10446-02-00
	Teepee Creek	SE-2-074-04-W6	1635-02-02

Conocophillips Canada Energy Partnership	Wembley	06-19-073-08-W6	212-01-00
Devon Canada	Tangent	16-20-080-24-W5	11346-02-00
	NW Belloy (Dunvegan)	16-36-079-03-W6	9810-02-00
	Eaglesham (South)	02-14-077-25-W5	47669-01-00
	Puskwaskau	03-26-074-01-W6	17524-01-00
	North Normanville	03-36-079-23-W5	47455-01-00
	West Culp	05-34-078-25-W6	136284-00-00
	Cecil	08-15-084-08-W6	10032-02-00
EnCana Corporation	Hythe Brainard	11-18-074-12-W6	10910-02-02
	Sexsmith	04-08-075-07-W6	10002-01-00
Galleon Energy Inc.	Eaglesham	01-25-076-01-W6	241532-00-00
	Kakut	14-12-075-03-W6	248469-00-01
	Donnelly	06-01-077-21-W5	87-02-00
Grande Prairie Generation Inc.	Northern Prairie Power Project	04-19-073-08-W6	238762-00-02
Longview Oil Corp.	Sunset House	06-22-70-20-W5	138884-01-00
Penn West Petroleum Ltd.	Tangent	13-29-080-23-W5	1746-02-01
	Pouce Coupe	16-07-078-11-W6	614-01-00
Spectra Energy Midstream Corporation	Fourth Creek	16-11-082-09-W6	263-01-00
Suncor Energy Inc.	Progress	07-22-078-09-W6	11428-02-00
Taqa North Ltd.	Valhalla	13-21-076-09-W6	17620-01-01
Weyerhaeuser Canada	Grande Prairie Pulp and Wood Plant	01-14-070-05-W6	113-02-00

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

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

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

Henry Pirker Station:

- The measured ambient air quality was within the Alberta Ambient Air Quality Objectives (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, except for $PM_{2.5}$, which had one (1) 1-hour exceedence of the AAAQO guideline:
  - February 17 19:00 113.0 $\mu g/m^3$ Alberta Environment Reference # 256077
- 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.
- All analyzers and sensors at the Valleyview station had an operational uptime greater than 90% for the month of February

Sunset House Station:

- The measured ambient air quality was within the AAAQO for the Sunset House station.
- $NO/NO_2/NOx$ data reporting commenced on February 15th.
- All analyzers and sensors at the Sunset House 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: Wanham, Eaglesham, Gold Creek, McLennan, and Girouxville 4. 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 0.1 ppb to 1.4 ppb, with a mean of 0.5 ppb.
- Monthly average concentrations for NO_2 passives ranged from 0.1 ppb to 8.0 ppb, with a mean of 1.1 ppb.
- Monthly average concentrations for O_3 passives ranged from 27.4 ppb to 47.3 ppb, with a mean of 38.6 ppb.
- Monthly average concentrations for H_2S passives ranged from 0.1 to 0.3 ppb, with a mean of 0.2 ppb.

If you have any questions or concerns, please contact Shelly Pruden, PAZA Program Manager at 780.833.4343 or 780.882.4071.

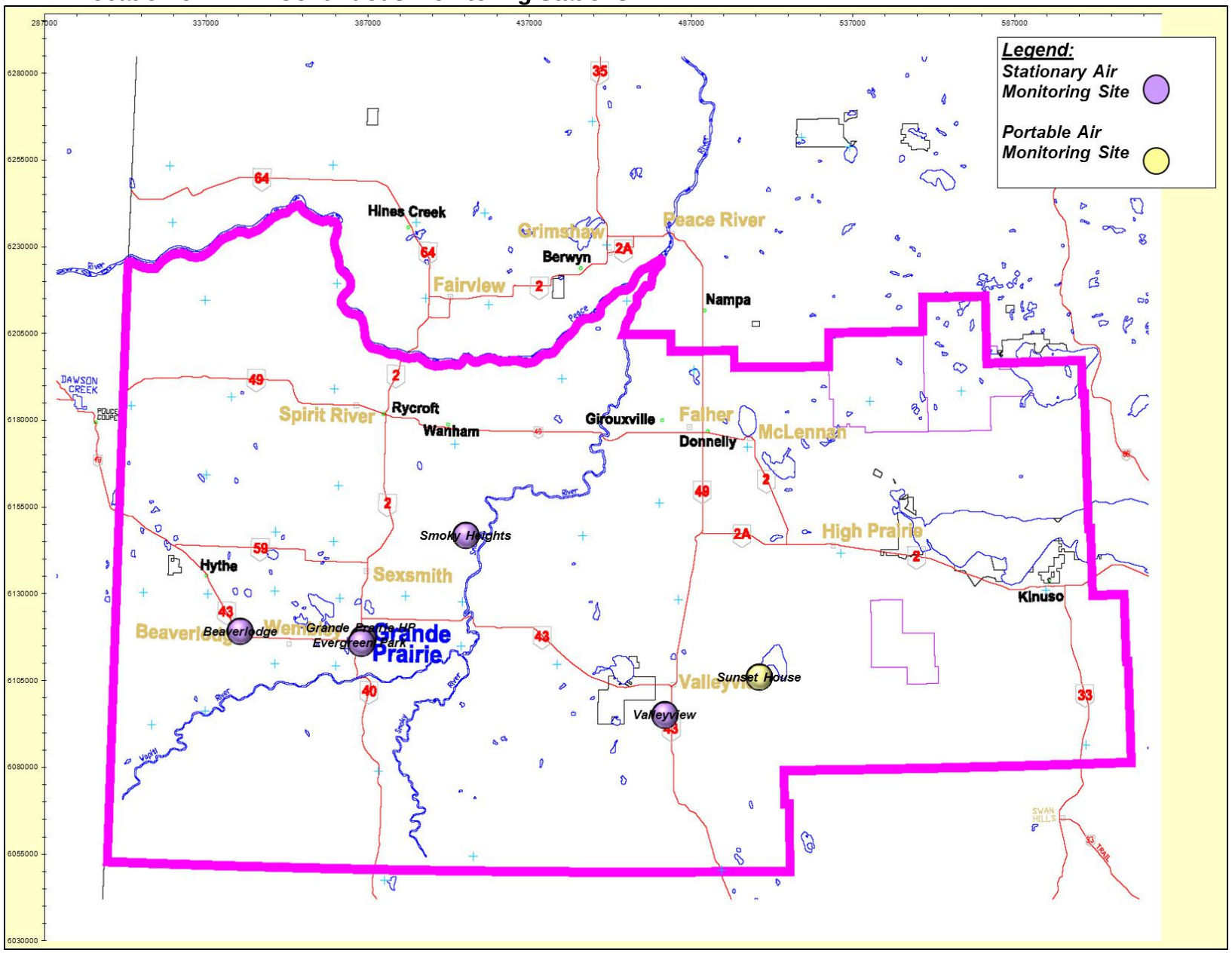
On Behalf of the,
Peace Airshed Zone Association

Shelly Pruden
Program Manager

Patrick Andersen, B.Sc.
FOCUS AQM Data Specialist

Jeff Cooper, C.Tech.
AQM Operations Manager

Location of PAZA Continuous Monitoring Stations



PAZA Monthly Continuous Data Summary

Feb-2012	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	0.5	0	0	4.6	Feb-16 13:00	1.4	Feb-26	100%
SO_2 (ppb)	172	48	Evergreen Park	0.2	0	0	2.4	Feb-26 13:00	0.9	Feb-26	100%
SO_2 (ppb)	172	48	Smoky Heights	0.9	0	0	8.0	Feb-28 16:00	1.9	Feb-13	100%
SO_2 (ppb)	172	48	Beaverlodge	0.5	0	0	7.2	Feb-22 11:00	2.5	Feb-26	100%
SO_2 (ppb)	172	48	Valleyview	0.6	0	0	20.1	Feb-22 09:00	2.2	Feb-22	100%
SO_2 (ppb)	172	48	Sunset House	0.4	0	0	3.9	Feb-28 02:00	1.4	Feb-10	100%
NO (ppb)			Henry Pirker	11.3	0	0	101.4	Feb-08 09:00	40.5	Feb-02	100%
NO_2 (ppb)	159	106	Henry Pirker	16.7	0	0	45.8	Feb-28 12:00	32.1	Feb-02	100%
NO_X (ppb)			Henry Pirker	28.0	0	0	134.5	Feb-02 20:00	72.9	Feb-02	100%
NO (ppb)			Beaverlodge	0.8	0	0	33.1	Feb-07 10:00	3.5	Feb-07	100%
NO_2 (ppb)	159	106	Beaverlodge	4.5	0	0	22.8	Feb-07 10:00	12.1	Feb-07	100%
NO_X (ppb)			Beaverlodge	5.2	0	0	55.6	Feb-07 10:00	15.5	Feb-07	100%
NO (ppb)			Sunset House	0.2	0	0	2.8	Feb-29 11:00	0.5	Feb-29	100%
NO_2 (ppb)	159	106	Sunset House	2.0	0	0	8.2	Feb-16 19:00	3.0	Feb-18	100%
NO_X (ppb)			Sunset House	2.1	0	0	9.4	Feb-29 11:00	3.3	Feb-18	100%
O_3 (ppb)	82		Henry Pirker	17.7	0	-	39.8	Feb-21 18:00	30.4	Feb-25	100%
O_3 (ppb) - 8-hr			Henry Pirker		0				38.0	Feb-21	
O_3 (ppb)	82		Beaverlodge	29.2	0	-	42.2	Feb-21 17:00	37.5	Feb-29	100%
O_3 (ppb) - 8-hr			Beaverlodge		0				40.4	Feb-21	
O_3 (ppb)	82		Sunset House	27.1	0	-	42.4	Feb-21 20:00	32.6	Feb-28	100%
O_3 (ppb) - 8-hr			Sunset House		0				41.1	Feb-21	
CO (ppm)	13		Henry Pirker	0.28	0	-	1.2	Feb-03 09:00	0.5	Feb-02	100%
CO (ppm) - 8-hr	5		Henry Pirker		0				0.8	Feb-03	
THC (ppm)			Henry Pirker	2.50	-	-	17.1	Feb-01 02:00	4.5	Feb-01	100%
TRS (ppb)			Henry Pirker	0.4	-	-	1.7	Feb-02 23:00	0.8	Feb-02	100%
TRS (ppb)			Evergreen Park	0.8	-	-	2.1	Feb-02 11:00	1.3	Feb-02	100%
TRS (ppb)			Smoky Heights	0.3	-	-	1.2	Feb-02 16:00	0.5	Feb-12	100%
TRS (ppb)			Sunset House	0.3	-	-	0.6	Feb-03 04:00	0.5	Feb-09	100%
H_2S (ppb)	10	3	Valleyview	0.3	0	0	5.2	Feb-11 03:00	1.1	Feb-05	100%
PM2.5 (µg/m3)	80	30	Henry Pirker	41.0	0	0	35.4	Feb-17 14:00	12.6	Feb-17	90%
PM2.5 (µg/m3)	80	30	Evergreen Park	5.0	0	0	23.0	Feb-11 17:00	12.4	Feb-11	100%
PM2.5 (µg/m3)	80	30	Smoky Heights	4.8	1	0	113.1	Feb-17 20:00	16.4	Feb-08	100%
PM2.5 (µg/m3)	80	30	Beaverlodge	7.3	0	0	28.3	Feb-10 13:00	19.1	Feb-11	100%
PM2.5 (µg/m3)	80	30	Sunset House	2.1	0	0	26.0	Feb-09 00:00	8.5	Feb-08	100%

PAZA Monthly Continuous Data Summary – continued

Feb-2012	Peace Airshed Zone Assocation						Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
RH (%)			Henry Pirker	66.6	-	-	87.9	Feb-22 05:00	80.0	Feb-24	100%
RH (%)			Evergreen Park	70.2	-	-	94.7	Feb-22 22:00	88.5	Feb-24	100%
RH (%)			Beaverlodge	73.6	-	-	100.0	Feb-12 09:00	95.0	Feb-24	100%
RH (%)			Valleyview	69.4	-	-	96.1	Feb-22 09:00	85.4	Feb-05	100%
SR (W/m^2)			Henry Pirker	71.7	-	-	446.3	Feb-26 14:00	108.7	Feb-28	100%
Temp (°C)			Henry Pirker	-6.6	-	-	7.8	Feb-03 16:00	1.4	Feb-21	100%
Temp (°C)			Evergreen Park	-5.7	-	-	9.0	Feb-12 16:00	2.2	Feb-21	100%
Temp (°C)			Smoky Heights	-7.1	-	-	9.0	Feb-03 17:00	0.3	Feb-03	100%
Temp (°C)			Beaverlodge	-4.1	-	-	8.7	Feb-12 15:00	2.3	Feb-03	98%
Temp (°C)			Valleyview	-5.8	-	-	12.8	Feb-03 17:00	2.0	Feb-03	100%
Temp (°C)			Sunset House	-4.3	-	-	12.2	Feb-03 17:00	6.9	Feb-03	100%
WSPD s (km/hr)			Henry Pirker	8.0	-	-	33.0	Feb-21 09:00	18.0	Feb-21	93%
WSPD s (km/hr)			Evergreen Park	5.2	-	-	30.0	Feb-21 09:00	15.3	Feb-21	100%
WSPD s (km/hr)			Smoky Heights	12.5	-	-	35.0	Feb-21 16:00	22.3	Feb-21	100%
WSPD s (km/hr)			Beaverlodge	10.0	-	-	44.0	Feb-21 08:00	24.1	Feb-21	100%
WSPD s (km/hr)			Valleyview	4.8	-	-	25.0	Feb-21 13:00	11.9	Feb-21	100%
WSPD s (km/hr)			Sunset House	11.8	-	-	30.0	Feb-25 00:00	21.4	Feb-25	100%
WSPD v (km/hr)			Henry Pirker	2.4	-	-	33.0	Feb-21 09:00	16.3	Feb-21	93%
WSPD v (km/hr)			Evergreen Park	1.9	-	-	29.0	Feb-21 09:00	14.6	Feb-21	100%
WSPD v (km/hr)			Smoky Heights	4.9	-	-	35.0	Feb-21 16:00	21.1	Feb-21	100%
WSPD v (km/hr)			Beaverlodge	2.7	-	-	43.0	Feb-21 08:00	22.7	Feb-21	100%
WSPD v (km/hr)			Valleyview	1.1	-	-	25.0	Feb-21 13:00	8.6	Feb-21	100%
WSPD v (km/hr)			Sunset House	5.9	-	-	30.0	Feb-25 00:00	20.6	Feb-25	100%
WDIR			Henry Pirker	NW	-	-	-	-	-	-	93%
WDIR			Evergreen Park	WNW	-	-	-	-	-	-	100%
WDIR			Smoky Heights	W	-	-	-	-	-	-	100%
WDIR			Beaverlodge	WNW	-	-	-	-	-	-	100%
WDIR			Valleyview	WSW	-	-	-	-	-	-	100%
WDIR			Sunset House	S	-	-	-	-	-	-	100%

Continuous Network Equipment Summary

PAZA – Henry Pirker Station

General Station Issues

Routine monthly calibrations were performed on February 2nd (TRS, CO & THC), February 3rd (SO_2, NO_X & O_3), and February 4th ($PM_{2.5}$) The TEOM had the control unit replaced on February 10th in attempt to resolve instability problems, returning to service on February 13th.

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	TEI	51-CLT	Span failed to perfrom Feb 3rd and 4th; cylinder replaced on Feb 4th
TRS	TEI	45C/43C	No operational issues observed.
$PM_{2.5}$	R&P	1400AB	Sixty (60) hours were flagged invalid due to negative readings.
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	False low wind speeds recorded February 7th through 12th.

PAZA – Evergreen Park Station

General Station Issues

Routine monthly calibration performed on February 29th (SO_2 and TRS). The wind system and the temperature and RH probes were replaced on February 28th.

Parameter	Make	Model	Notes
SO_2	TEI	43i	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
$PM_{2.5}$	R&P	1400AB	Three (3) hours were flagged invalid due to negative readings. Filter was found smoke-clogged on technician arrival on February 25th.
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 calibrations were performed on February 10th (SO_2, TRS and $PM_{2.5}$).			
Parameter	**Make**	**Model**	**Notes**
SO_2	TEI	43C	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
$PM_{2.5}$	R&P	1400AB	Three (3) hours were flagged invalid due to negative readings. There was one exceedence of the 1-hour AAAQO guideline: February 17: 19:00 113.0 µg/m^3 AE Reference # 256077
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 5th (SO_2, NO_X, O_3, $PM_{2.5}$).

Parameter	Make	Model	Notes
SO_2	TEI	43CTL	No operational issues observed.
NOx/NO/NO_2	TEI	42C	No operational issues observed.
O_3	TEI	49C	No operational issues observed.
$PM_{2.5}$	R&P	1400AB	No operational issues observed.
ET	n/a	n/a	Sensor malfunctioned on February 7th and February 18th.
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 14th (SO_2 & H_2S).

Parameter	Make	Model	Notes
SO_2	TEI	43i	No operational issues observed.
H_2S	TEI	43A	No operational issues observed.
ET	Gill	Met Pak 3	No operational issues observed.
RH	Gill	Met Pak 3	No operational issues observed.
WS / WD	Gill	Met Pak 3	No operational issues observed.

PAZA – Portable-Sunset House Station

General Station Issues

Installation calibrations were performed on February 15th (NO_X), along with routine monthly calibrations (SO_2, O_3, TRS, $PM_{2.5}$). Ozone (O_3) calibration was completed on February 21st after replacement of solenoid.

Parameter	Make	Model	Notes
SO_2	TEI	43i	No operational issues observed.
O_3	TEI	49C	Solenoid determined to require replacement during February 15th calibration. Instability in signal after February 15th calibration that self-rectified during automated zero/span cycle. Solenoid replaced on February 21st.
TRS	TEI	39C	No operational issues observed.
$PM_{2.5}$	R&P	1400AB	One (1) hour was flagged invalid due to negative reading.
ET	Gill	Met Pak 3	No operational issues observed.
WS / WD	Gill	Met Pak 3	No operational issues observed.

PAZA
Henry Pirker Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - February 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 4.6 ppb on Feb 16 13:00 Maximum Daily Average: 1.4 ppb on Feb 26

Minimum Value: 0 ppb on Feb 1 12:00 Minimum Daily Average: 0.1 ppb on Feb 22
Maximum Diurnal Average: 0.8 ppb at hour 13 Minimum Diurnal Average: 0.2 ppb at hour 6
Monthly Average: 0.46 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.3 Q_3 = 0.7 P_{90} = 1.1 P_{99} = 2.2

Hours in Service:	696
Hours of Data:	662
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	1	1	1	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	1.4
2-Feb	0	0	1	1	1	0	A	0	0	1	1	1	0	0	0	0	0	0	1	1	1	1	1	1	0.6	1.3
3-Feb	1	0	0	0	0	A	1	1	1	C	C	C	C	0	0	0	0	0	0	0	1	0	0	0	0.4	0.9
4-Feb	0	0	0	0	A	0	0	0	0	1	1	0	1	0	0	1	1	1	0	0	0	0	0	0	0.4	0.9
5-Feb	0	0	0	A	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.4	0.9
6-Feb	0	0	A	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0.5	1.2
7-Feb	1	A	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.5	1.0
8-Feb	A	2	1	1	1	1	0	1	1	1	1	1	1	1	1	1	2	1	1	1	0	0	0	A	0.9	1.8
9-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	A	0	0.3	0.6
10-Feb	0	0	0	0	0	0	1	1	1	2	2	2	2	2	2	1	1	1	1	1	1	A	1	1	0.9	2.1
11-Feb	1	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.6	1.1
12-Feb	1	0	0	0	0	0	0	1	1	1	1	1	1	2	1	1	0	0	0	A	0	0	0	0	0.6	1.5
13-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
14-Feb	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	1	A	0	0	0	0	0	0	0.4	1.2
15-Feb	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	A	1	1	0	0	0	0	0	0.3	1.2
16-Feb	0	0	0	0	0	0	0	0	1	1	2	3	5	1	0	A	0	0	0	0	0	0	0	0	0.6	4.6
17-Feb	0	0	0	0	0	0	0	0	0	0	0	1	0	1	A	0	1	0	0	0	0	0	0	0	0.2	0.7
18-Feb	0	0	0	0	0	1	1	1	0	1	1	1	1	A	1	1	1	1	1	1	1	1	0	1	0.6	1.2
19-Feb	1	0	0	0	1	0	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.4	1.2
20-Feb	0	0	0	0	0	0	0	0	0	1	1	A	2	1	1	1	1	1	1	1	1	0	0	0	0.6	1.5
21-Feb	0	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
22-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
23-Feb	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
24-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	0.1	0.2
25-Feb	0	0	0	0	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0.6	1.4
26-Feb	1	1	2	1	1	A	1	2	2	2	3	3	3	2	2	1	1	1	0	0	0	0	0	0	1.4	3.3
27-Feb	0	0	0	0	A	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
28-Feb	0	0	0	A	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.4	1.1
29-Feb	0	0	A	0	0	0	1	1	2	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.6	2.2
	0.3	0.3	0.3	0.3	0.2	0.2	0.4	0.5	0.6	0.7	0.8	0.8	0.8	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.3	0.2	0.3	0.3	Diurnal Average	
	1.1	1.8	1.5	1.4	0.8	0.7	1.0	2.0	1.8	2.4	3.3	3.0	4.6	2.3	2.0	1.5	1.6	1.5	1.2	1.2	1.2	1.0	1.3	1.1	Diurnal Maximum	

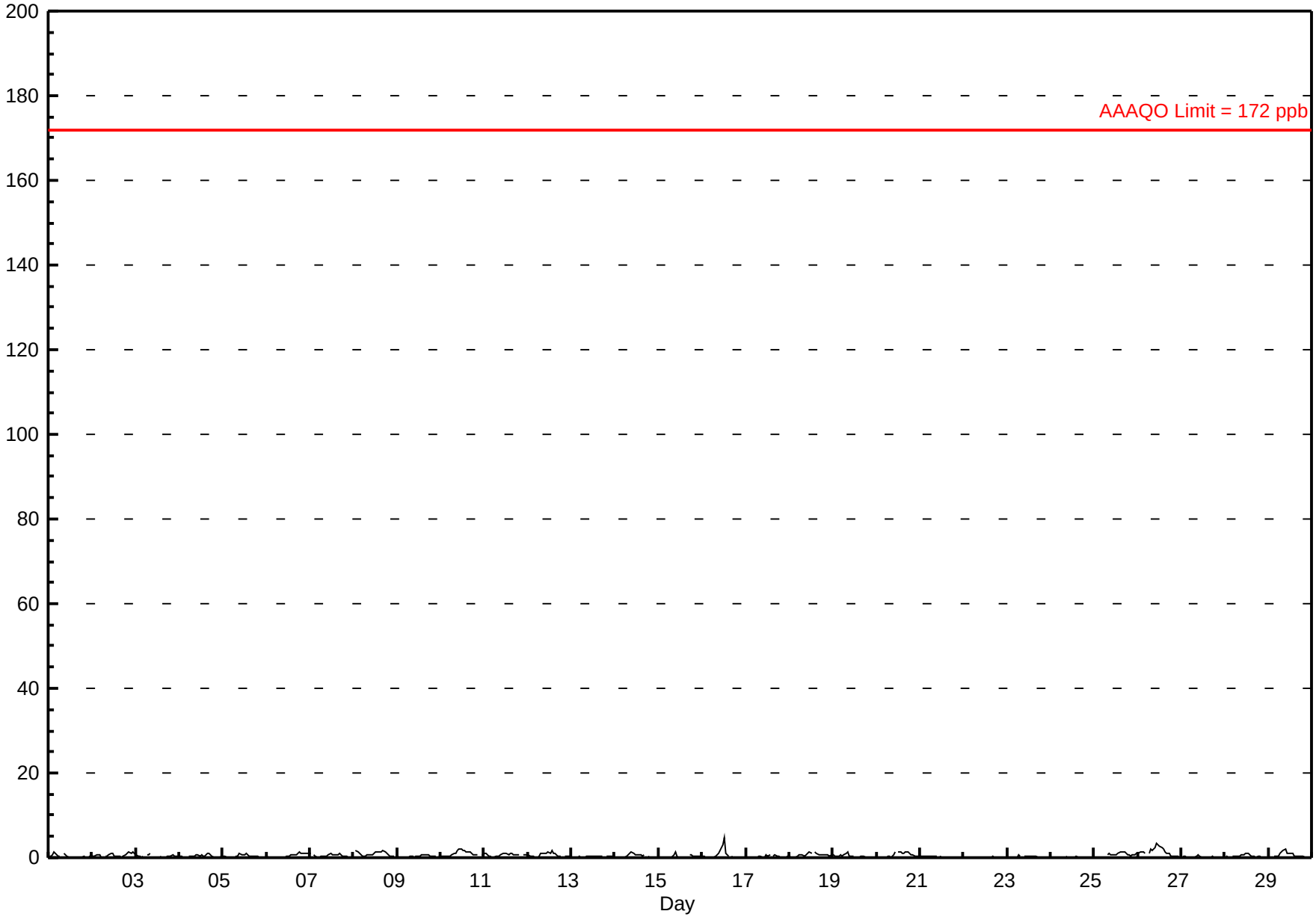
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - February 2012



Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - February 2012

Maximum Value: 6.4 ppb on Feb 16 13:00

Maximum Daily Average: 1.9 ppb on Feb 26

Minimum Value: 0 ppb on Feb 1 23:00

Minimum Daily Average: 0.3 ppb on Feb 27

Maximum Diurnal Average: 1.3 ppb at hour 11

Minimum Diurnal Average: 0.6 ppb at hour 6

Monthly Average: 0.87 ppb

Percentiles: P_1 = 0.1 P_{10} = 0.3 Q_1 = 0.5 Median = 0.6 Q_3 = 1.1 P_{90} = 1.6 P_{99} = 3.0

Hours in Service:	696
Hours of Data:	662
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	2	2	2	1	1	A	1	1	1	0	0	0	0	0	0	0	1	1	0	0	0	2	0.9	2.4
2-Feb	1	1	1	1	1	0	A	0	1	1	1	2	0	0	0	0	0	0	2	2	1	2	3	1	1.2	3.0
3-Feb	1	0	1	0	1	A	2	1	1	C	C	C	C	1	0	0	0	1	1	0	1	1	1	1	0.9	1.9
4-Feb	1	1	0	0	A	1	1	1	1	1	1	0	1	1	1	1	1	1	0	0	0	0	0	1	0.8	1.4
5-Feb	1	1	0	A	0	0	0	0	1	2	1	1	1	2	1	1	1	1	1	1	1	0	0	1	0.8	1.8
6-Feb	1	1	A	1	0	0	1	0	1	0	1	1	1	1	1	1	1	2	2	1	1	1	2	2	0.9	1.5
7-Feb	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	0.8	1.5
8-Feb	A	3	2	2	1	1	1	1	1	1	1	2	2	1	2	2	2	2	1	1	1	1	0	A	1.4	2.5
9-Feb	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.7	1.1
10-Feb	1	1	1	1	1	1	1	1	2	3	3	2	2	2	2	2	2	2	1	1	1	A	1	1	1.3	2.6
11-Feb	1	2	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	A	1	1	1	1.0	1.5
12-Feb	1	1	1	1	1	0	1	1	2	2	2	2	2	2	2	2	1	1	1	A	1	1	1	1	1.0	2.1
13-Feb	1	1	1	1	1	1	1	0	0	1	0	1	1	1	1	1	1	0	A	0	0	0	0	0	0.6	0.8
14-Feb	0	0	0	0	0	1	1	1	2	2	1	1	1	1	1	1	1	A	1	0	0	0	0	0	0.7	1.7
15-Feb	1	0	1	0	1	1	1	1	2	2	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.8	1.5
16-Feb	1	1	1	0	1	1	1	1	1	2	3	6	6	3	1	A	1	1	1	1	0	0	0	0	1.3	6.4
17-Feb	0	0	0	0	0	0	0	1	1	0	0	1	1	1	A	0	1	0	0	1	0	0	1	1	0.5	1.4
18-Feb	1	1	1	1	1	1	1	1	1	1	1	2	1	A	2	1	1	1	1	1	1	1	1	1	1.0	1.8
19-Feb	1	1	1	1	1	1	1	2	2	1	1	1	A	0	0	1	1	1	1	1	1	0	0	1	0.7	2.1
20-Feb	1	1	1	1	0	0	1	1	1	1	2	A	2	2	2	1	2	2	1	1	1	1	1	1	1.0	2.1
21-Feb	1	1	1	1	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.0
22-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
23-Feb	0	0	0	0	0	0	1	1	A	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.4	0.8
24-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	0.4	0.5
25-Feb	0	0	0	0	0	0	A	1	1	1	1	1	1	2	2	2	2	2	1	2	0	1	1	1	1.2	2.0
26-Feb	2	2	2	2	1	A	2	3	2	4	4	3	3	3	3	2	1	1	1	1	1	1	0	0	1.9	3.8
27-Feb	0	0	0	0	A	0	0	0	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0.3	0.7
28-Feb	0	1	0	A	1	1	1	1	1	1	2	2	1	2	1	1	1	0	0	1	0	0	0	0	0.8	1.8
29-Feb	0	0	A	1	1	1	1	2	3	3	2	1	1	1	1	1	0	0	0	3	0	0	0	0	1.1	2.9
	0.7	0.7	0.7	0.7	0.7	0.6	0.8	1.0	1.1	1.3	1.3	1.2	1.2	1.1	1.0	0.9	0.9	0.8	0.8	0.9	0.6	0.6	0.6	0.7	Diurnal Average	
	1.8	2.5	2.0	2.3	2.3	1.2	1.9	2.5	2.8	3.8	3.8	5.6	6.4	3.0	2.8	1.9	2.2	2.0	2.3	2.9	1.5	1.9	3.0	2.4	Diurnal Maximum	

C - Calibration

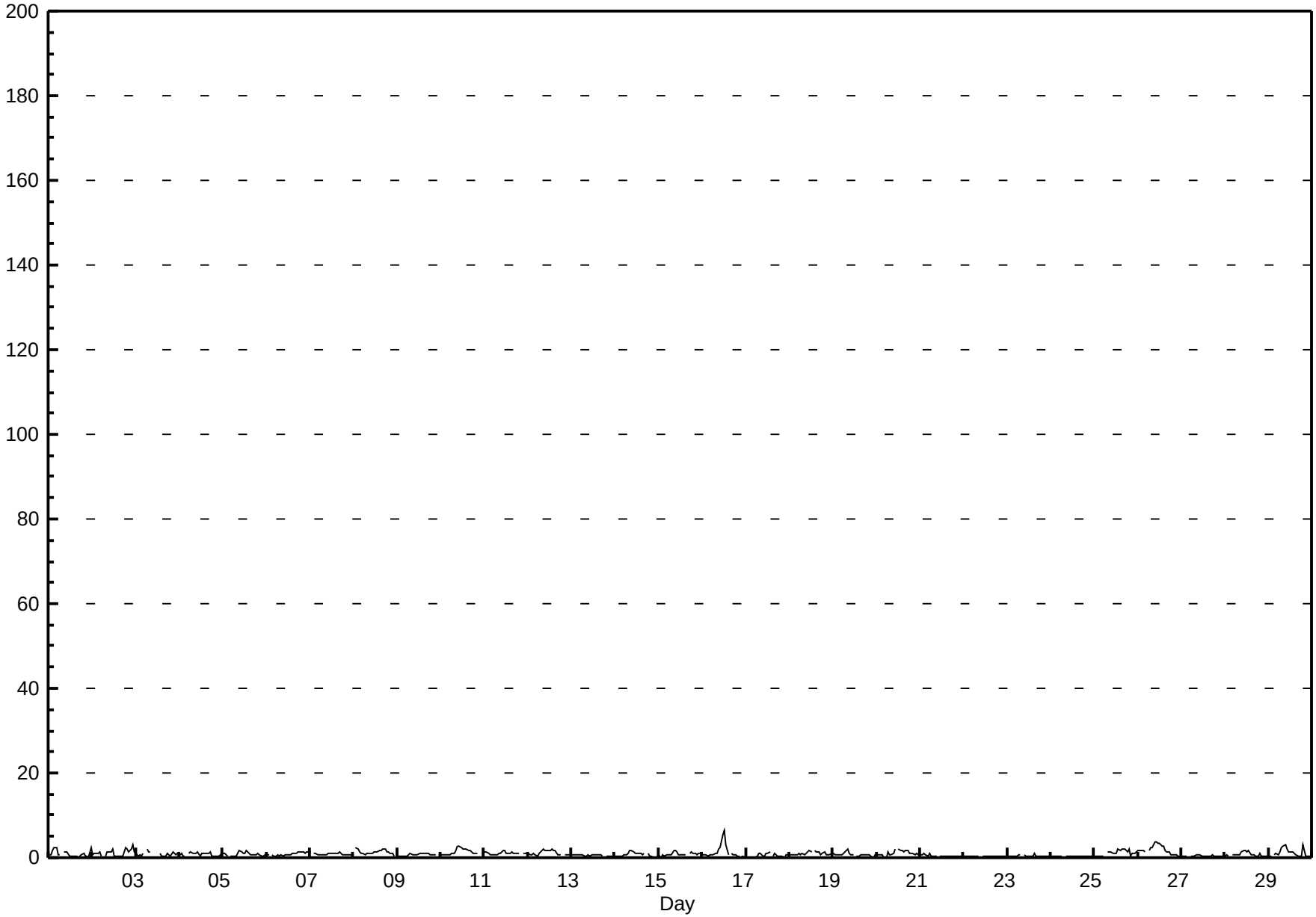
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - February 2012

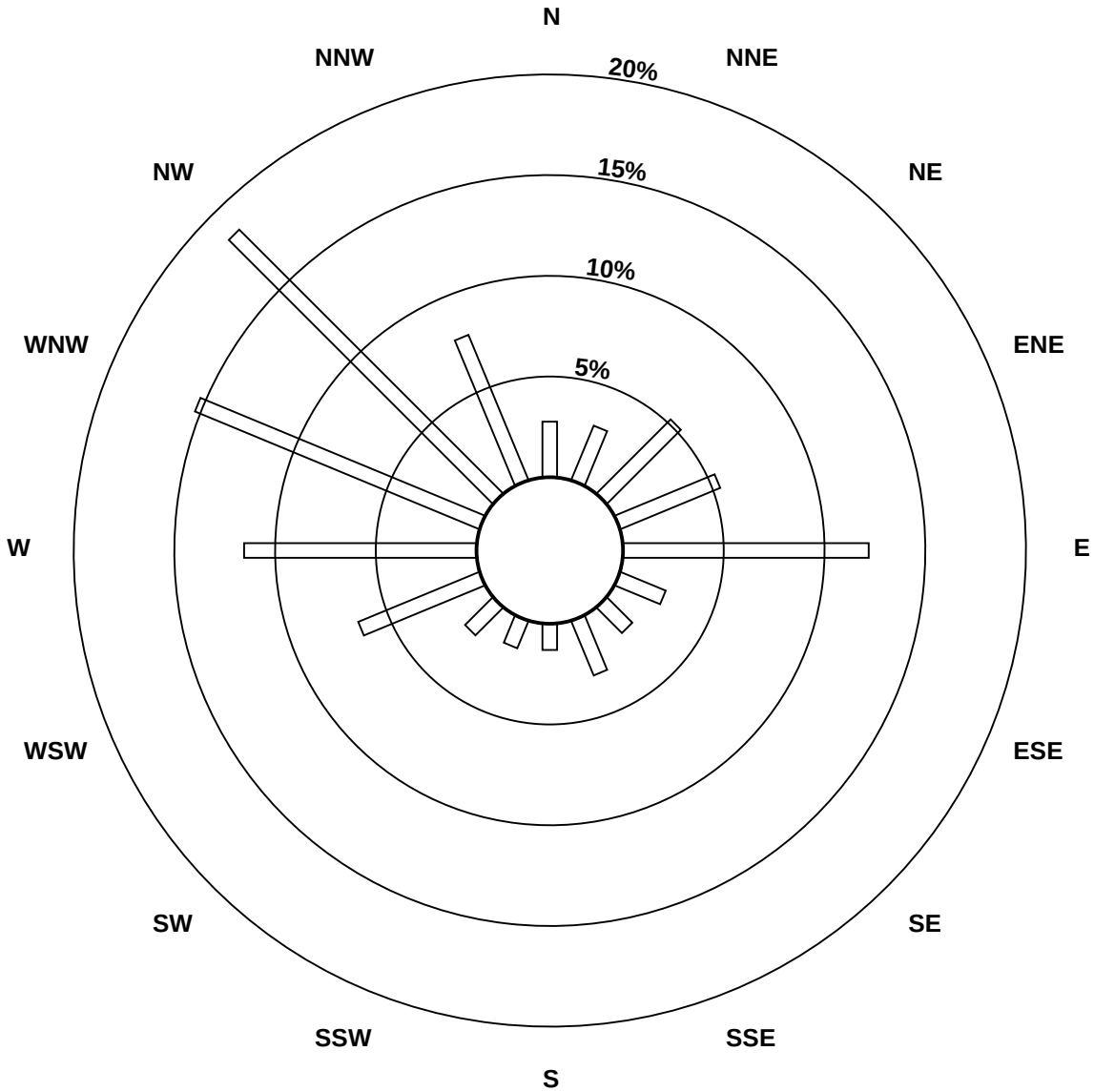


FOCUS AIR QUALITY MONITORING

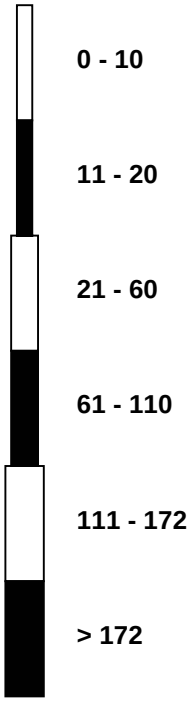
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - February 2012



Pollutant Classes (ppb)

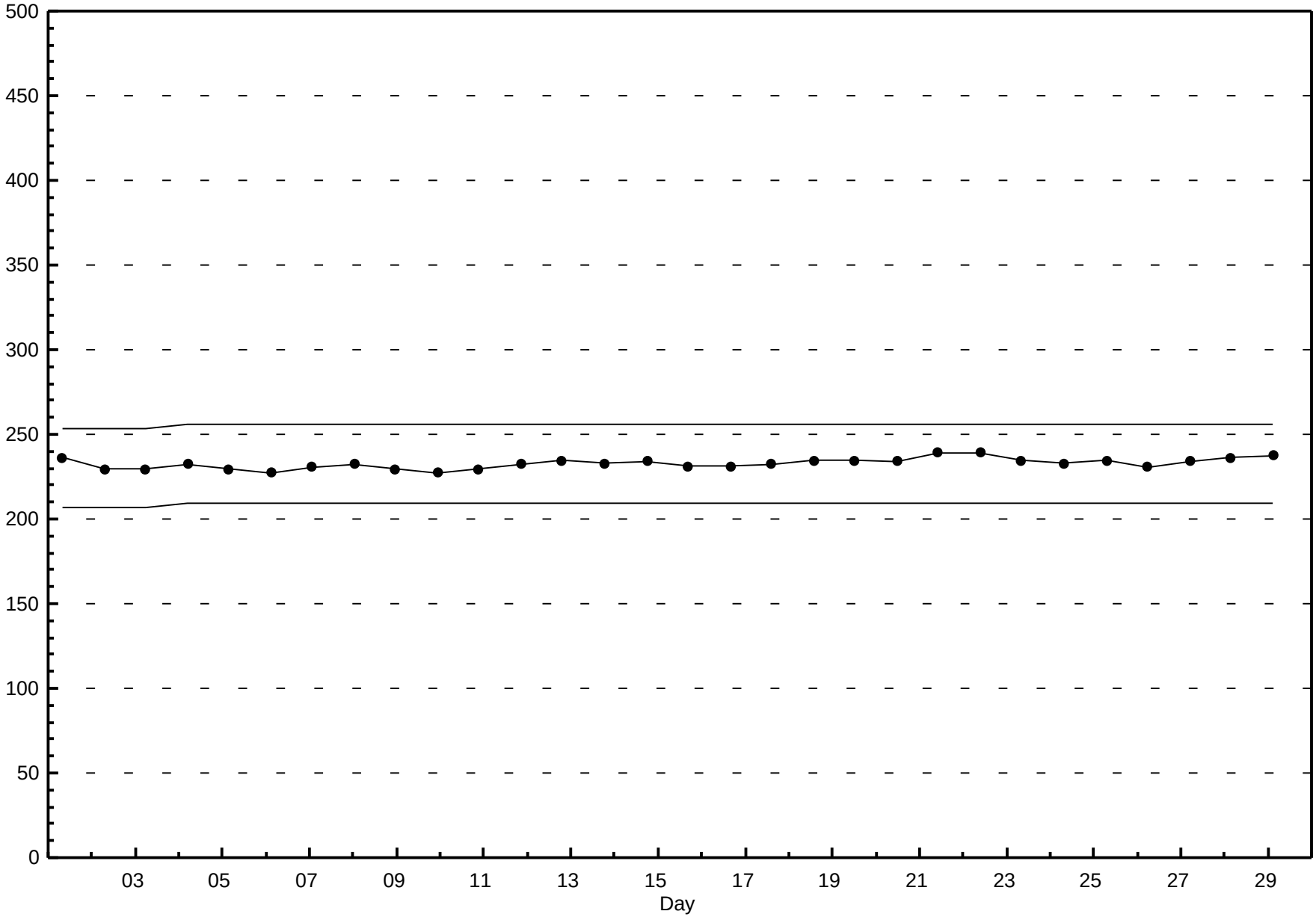


Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Henry Pirker - February 2012



Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - February 2012

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

Maximum Value: 1.7 ppb on Feb 2 23:00 Maximum Daily Average: 0.8 ppb on Feb 2

Minimum Value: 0 ppb on Feb 13 08:00 Minimum Daily Average: 0.2 ppb on Feb 13

Maximum Diurnal Average: 0.6 ppb at hour 10 Minimum Diurnal Average: 0.3 ppb at hour 17

Monthly Average: 0.42 ppb Percentiles: $P_1 = 0.2$ $P_{10} = 0.2$ $Q_1 = 0.3$ Median = 0.4 $Q_3 = 0.5$ $P_{90} = 0.7$ $P_{99} = 1.1$

Hours in Service:	696
Hours of Data:	662
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	1	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7
2-Feb	0	0	1	0	1	0	A	0	0	1	1	1	1	C	C	C	C	0	1	1	1	1	2	2	0.8	1.7
3-Feb	1	1	1	1	1	A	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0.6	1.2
4-Feb	0	0	0	1	A	1	1	1	1	1	1	0	0	0	0	0	0	0	1	1	1	1	0	1	0.5	0.9
5-Feb	1	1	1	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0.5	0.9
6-Feb	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
7-Feb	0	A	0	0	0	0	1	1	1	1	1	1	1	0	0	0	1	0	1	1	1	0	0	0	0.5	0.8
8-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	A	0.7	1.0
9-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	A	0	0.5	0.8
10-Feb	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0.4	0.6
11-Feb	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	A	0	0	1	0.5	0.8
12-Feb	1	1	1	1	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0.5	0.8
13-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
14-Feb	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	A	1	0	0	0	0	0	0.4	0.7
15-Feb	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	A	1	1	1	1	1	1	1	0.5	0.9
16-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	A	0	0	0	0	0	0	0	0	0.5	0.7
17-Feb	0	0	0	0	0	0	0	1	1	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0.4	0.7
18-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	0.4	0.5
19-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	0.5
20-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
21-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	0.4
22-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	0.3	0.5
23-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
24-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	0.5
25-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
26-Feb	0	0	0	0	0	A	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7
27-Feb	0	0	0	0	A	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7
28-Feb	0	0	0	A	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.5	1.1
29-Feb	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	Diurnal Average	
	1.0	0.8	0.7	0.6	0.8	0.9	0.9	1.0	1.0	1.2	1.0	1.5	1.0	0.7	0.6	0.6	0.5	0.6	0.9	0.9	1.0	1.1	1.7	1.6	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

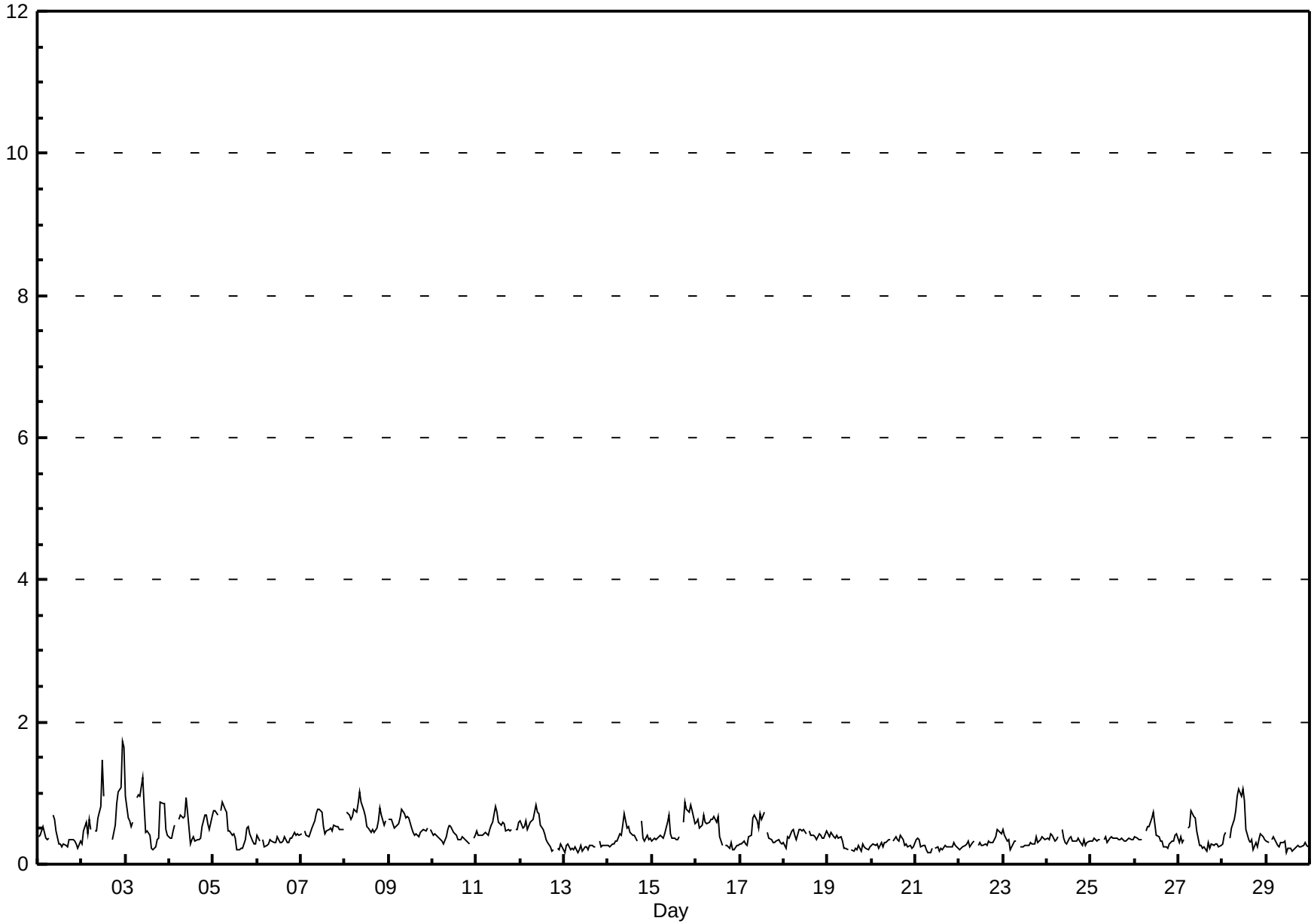
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - February 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - February 2012

Maximum Value: 2.2 ppb on Feb 3 00:00

Maximum Daily Average: 1.2 ppb on Feb 2

Minimum Value: 0 ppb on Feb 21 14:00

Minimum Daily Average: 0.6 ppb on Feb 13

Maximum Diurnal Average: 1.0 ppb at hour 10

Minimum Diurnal Average: 0.7 ppb at hour 18

Monthly Average: 0.81 ppb

Percentiles: $P_1 = 0.5$ $P_{10} = 0.6$ $Q_1 = 0.7$ Median = 0.8 $Q_3 = 0.9$ $P_{90} = 1.1$ $P_{99} = 1.6$

Hours in Service:	696
Hours of Data:	662
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	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
2-Feb	1	1	1	1	1	1	A	1	1	1	1	2	1	C	C	C	C	1	1	1	1	2	2	2	1.2	2.2
3-Feb	1	1	1	1	1	A	1	2	1	2	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1.1	1.8
4-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	0.9	1.4
5-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	0.9	1.3
6-Feb	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
7-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
8-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	1.0	1.5
9-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.9	1.3
10-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.8	1.0
11-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.9	1.2
12-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.8	1.2
13-Feb	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.6	0.8
14-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	1.2
15-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	1.3
16-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	1.2
17-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	1.3
18-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	1.0
19-Feb	1	1	1	1	1	1	1	1	1	1	0	0	A	1	1	1	1	1	0	1	1	1	1	1	0.7	0.9
20-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8
21-Feb	1	1	1	1	1	1	1	1	1	1	A	1	1	0	1	1	1	1	1	1	1	1	1	1	0.6	0.8
22-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	1.0
23-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	0.8
24-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
25-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	0.9
26-Feb	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
27-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0.7	1.2
28-Feb	1	1	1	A	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.6
29-Feb	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0.6	0.8
	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	1.0	1.0	0.9	0.9	0.8	0.8	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	Diurnal Average	
	1.4	1.3	1.2	1.1	1.2	1.3	1.3	1.6	1.6	1.6	1.5	2.1	1.5	1.3	0.9	1.1	1.1	1.0	1.3	1.8	1.6	1.9	2.2	2.2	Diurnal Maximum	

C - Calibration

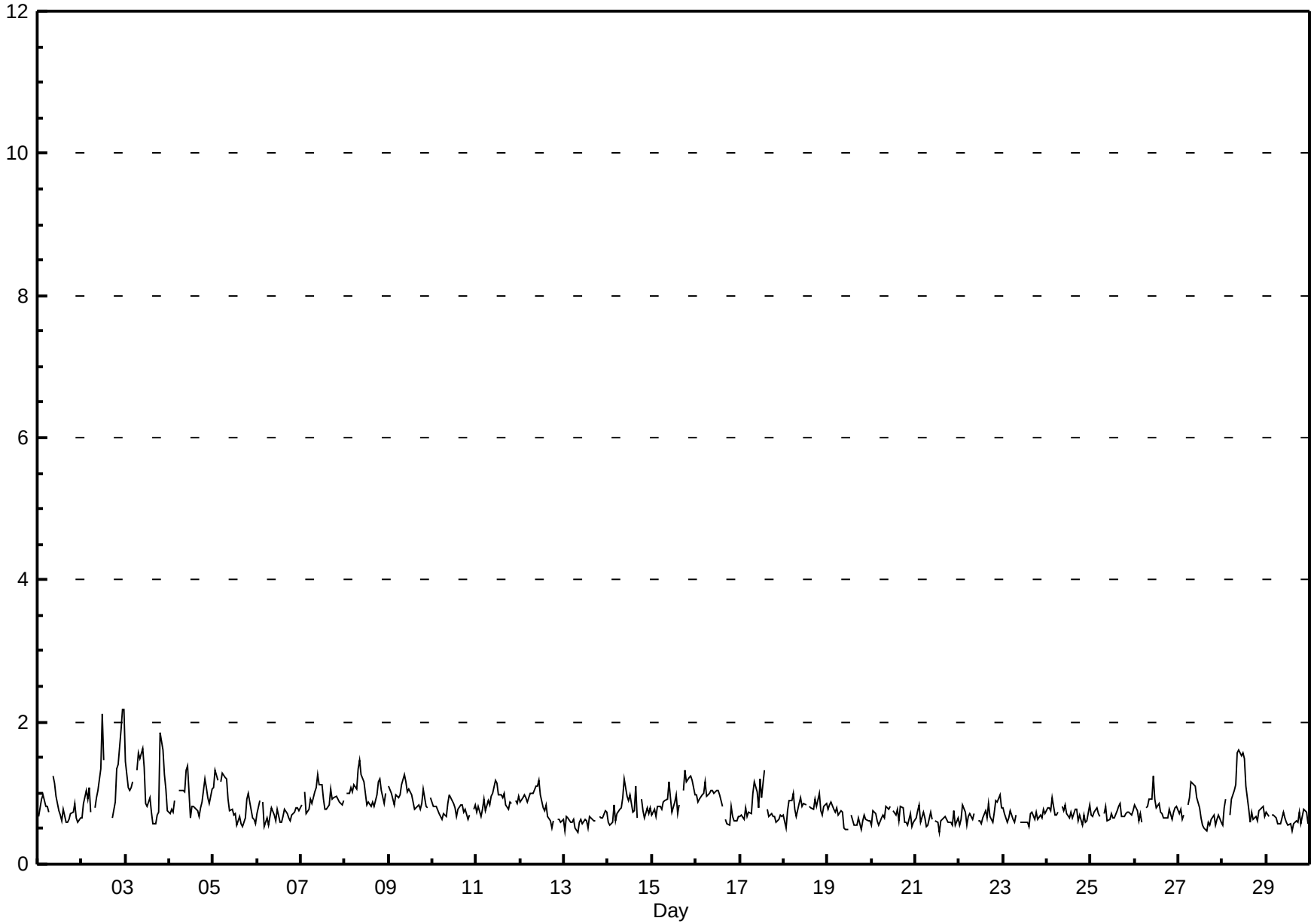
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - February 2012

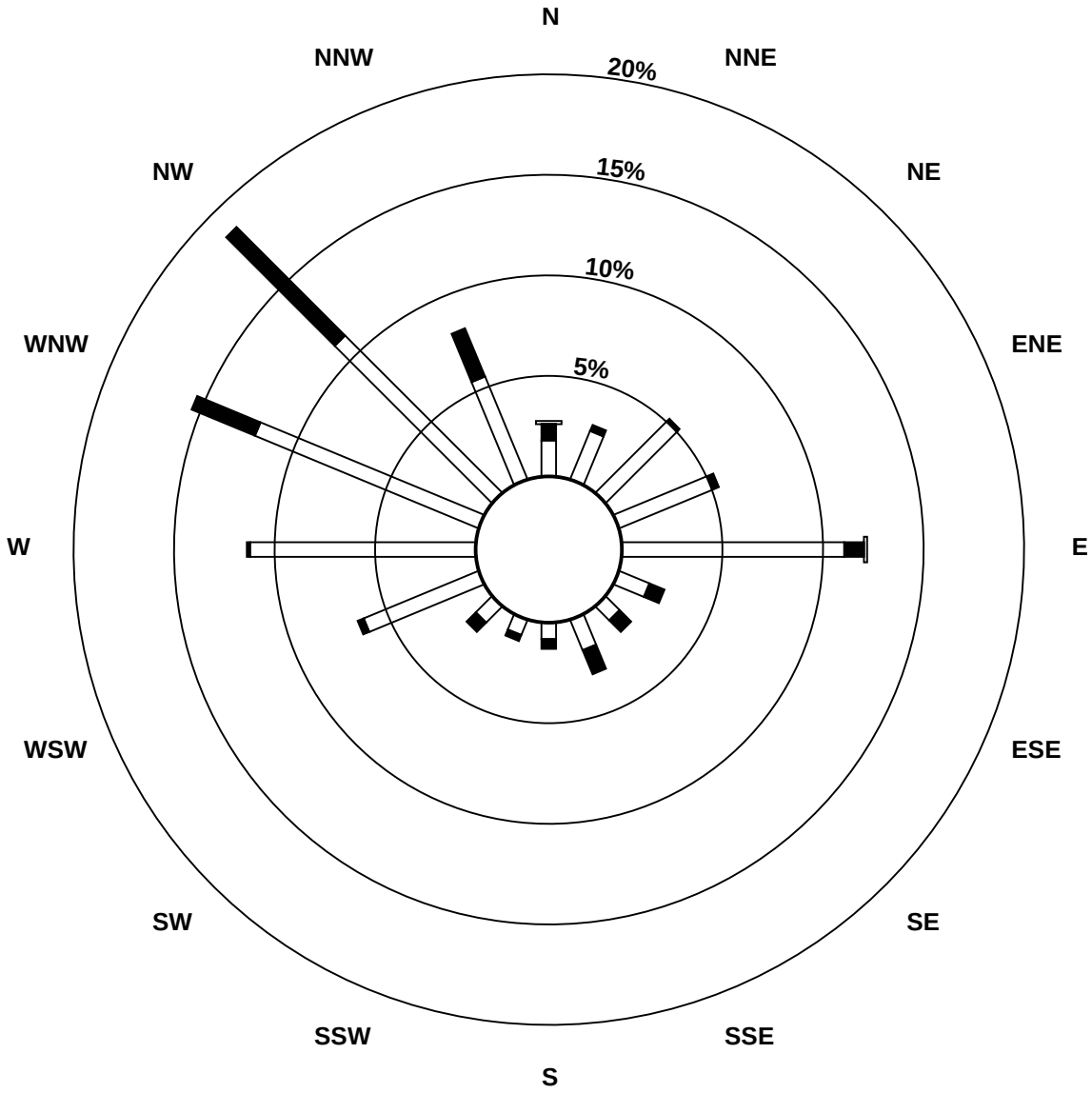


FOCUS AIR QUALITY MONITORING

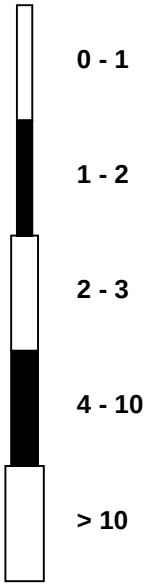
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - February 2012



Pollutant Classes (ppb)

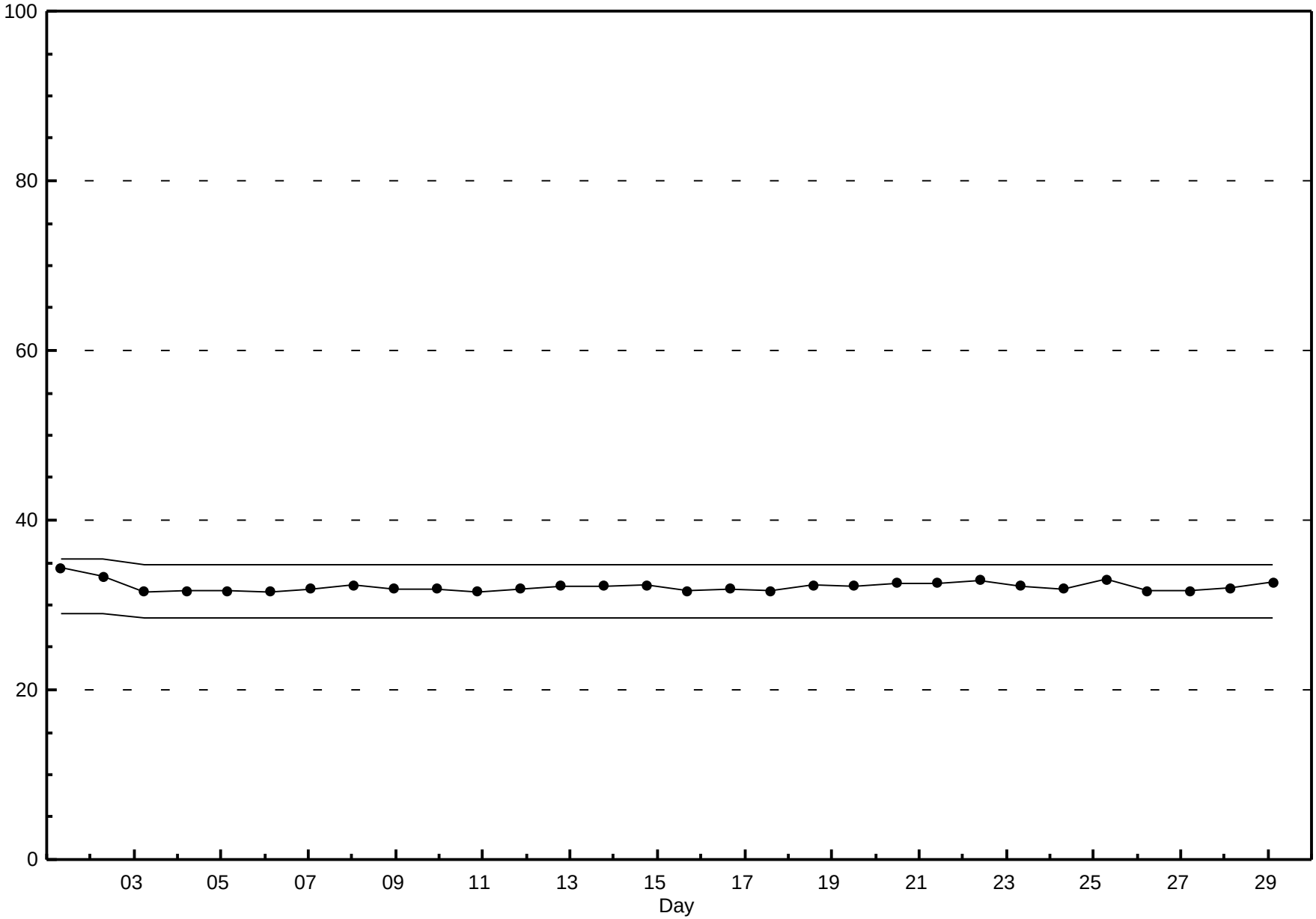


Peace Airshed Zone Association

Span Responses

Total Reduced Sulphur (TRS)

Henry Pirker - February 2012



Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - February 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 45.8 ppb on Feb 28 12:00
Maximum Daily Average: 32.1 ppb on Feb 2

Minimum Value: 1 ppb on Feb 28 18:00
Maximum Diurnal Average: 22.8 ppb at hour 8
Monthly Average: 16.68 ppb

Minimum Daily Average: 5.1 ppb on Feb 25
Minimum Diurnal Average: 8.8 ppb at hour 15
Percentiles: P_1 = 1.9 P_{10} = 4.4 Q_1 = 7.7 Median = 14.2 Q_3 = 24.4 P_{90} = 32.3 P_{99} = 42.2

Hours in Service:	696
Hours of Data:	660
Hours of Missing Data:	36
Hours of Calibration:	36
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	36	38	39	32	33	30	A	38	37	33	19	11	10	13	14	10	32	36	29	24	13	12	19	25.8	38.6
2-Feb	31	36	38	31	33	24	A	25	27	30	37	39	19	17	21	25	23	35	42	45	44	40	38	37	32.1	44.6
3-Feb	32	29	27	21	29	A	38	39	36	C	C	C	C	C	C	10	15	31	24	20	18	24	29	30	--	39.1
4-Feb	28	27	23	20	A	27	31	25	24	27	26	12	16	16	17	16	24	27	27	26	24	22	20	22	22.9	31.0
5-Feb	25	21	19	A	18	21	24	24	12	13	15	13	10	6	6	6	10	29	39	36	29	10	7	12	17.7	39.4
6-Feb	12	16	A	7	5	5	8	11	11	9	6	5	4	5	5	6	8	11	11	9	9	9	8	9	8.3	15.6
7-Feb	8	A	13	17	19	27	28	30	28	25	19	20	12	12	14	21	25	30	34	33	32	28	26	25	22.8	33.5
8-Feb	A	22	23	23	23	25	25	29	31	28	24	25	16	12	10	18	19	22	30	35	33	29	31	A	24.2	34.6
9-Feb	28	27	24	24	21	21	24	28	25	20	19	13	5	5	5	6	7	12	13	11	15	16	A	9	16.3	28.1
10-Feb	13	7	6	8	10	10	10	16	24	22	12	8	8	7	7	8	11	12	12	11	12	A	12	12	11.2	24.0
11-Feb	13	14	18	22	20	21	22	24	24	22	24	26	20	14	17	15	17	19	21	24	A	24	25	27	20.6	26.8
12-Feb	28	24	23	24	19	17	18	20	27	26	21	22	18	13	11	10	6	8	8	A	7	5	4	5	15.8	27.9
13-Feb	7	10	10	7	6	5	9	12	11	14	9	7	2	2	4	6	9	17	A	14	9	9	12	8	8.6	16.7
14-Feb	11	6	7	18	22	21	25	28	31	30	23	21	11	7	7	9	13	A	39	22	19	19	9	9	17.7	38.9
15-Feb	6	4	6	10	7	9	23	28	31	35	15	6	4	4	5	5	A	29	45	44	41	42	39	33	20.4	45.4
16-Feb	33	35	27	22	14	18	24	29	28	26	23	16	20	17	16	A	12	10	10	6	5	7	12	8	18.3	34.9
17-Feb	16	16	14	19	27	28	27	31	30	23	20	27	29	36	A	20	18	23	28	31	29	21	10	8	23.0	36.5
18-Feb	9	10	17	13	17	17	19	17	24	19	16	13	11	A	6	9	13	11	9	8	8	9	18	11	13.2	23.9
19-Feb	10	11	13	14	11	15	23	27	17	4	6	4	A	3	2	1	2	3	4	5	4	7	8	16	9.2	26.5
20-Feb	16	13	10	11	10	17	21	23	21	15	9	A	12	18	15	19	18	14	14	18	18	17	15	20	15.8	23.1
21-Feb	19	22	19	10	19	12	7	6	4	6	A	4	3	3	3	4	5	5	6	12	9	11	5	4	8.6	21.9
22-Feb	3	5	5	4	8	3	3	8	9	A	6	6	5	2	2	6	4	7	5	13	34	32	34	34	10.3	34.2
23-Feb	35	35	20	20	23	30	26	34	A	9	5	4	2	2	4	6	5	12	12	5	8	19	9	7	14.4	35.5
24-Feb	10	26	37	34	27	22	21	A	21	9	6	4	5	4	3	4	4	4	4	4	3	3	3	2	11.4	36.9
25-Feb	2	2	2	3	3	3	A	5	5	4	4	4	3	3	4	4	5	9	8	10	12	10	6	6	5.1	11.6
26-Feb	5	4	6	10	9	A	15	11	10	12	12	13	10	9	7	6	7	8	12	19	27	25	32	30	13.0	32.3
27-Feb	27	32	33	32	A	28	26	36	38	38	29	13	11	7	7	8	10	9	18	12	13	11	13	24	20.6	37.8
28-Feb	32	41	41	A	34	42	40	41	38	37	27	46	42	23	19	18	20	1	1	1	2	2	2	1	24.0	45.8
29-Feb	1	2	A	23	32	12	7	9	9	7	5	4	4	4	4	10	6	9	13	12	11	7	6	5	8.7	32.4
	17.7	19.1	19.2	18.0	18.4	18.9	21.2	22.8	22.5	20.1	16.7	14.6	11.6	9.7	8.8	10.3	11.8	15.7	18.8	18.4	17.8	16.8	15.9	15.5	Diurnal Average	
	36.3	40.7	41.4	38.6	33.6	42.1	39.8	40.9	38.0	37.6	37.2	45.8	41.9	36.5	21.1	25.4	24.6	35.2	45.4	44.6	44.1	42.2	38.8	36.6	Diurnal Maximum	

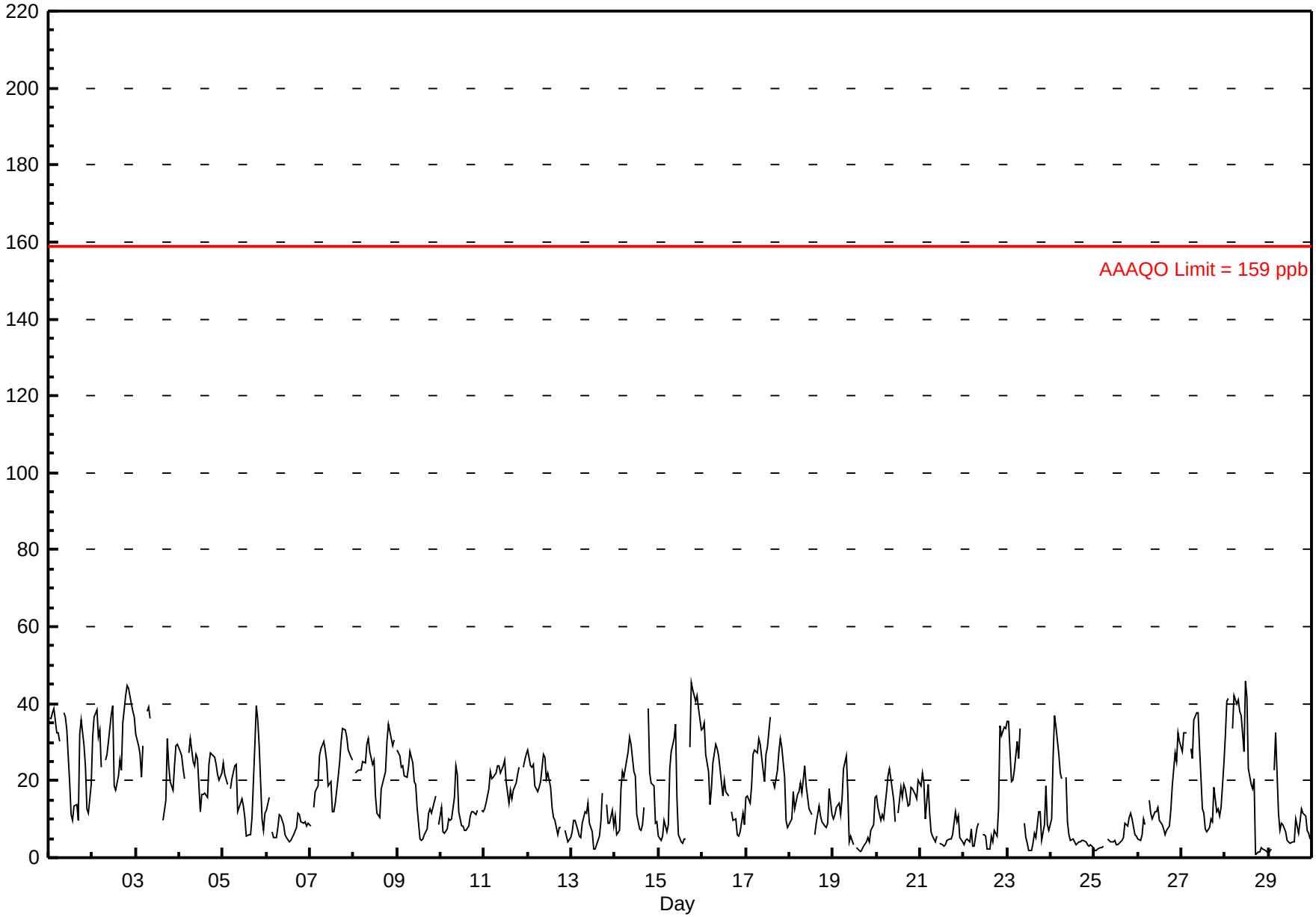
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb

Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - February 2012



Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - February 2012

Maximum Value: 90.8 ppb on Feb 4 07:00

Maximum Daily Average: 38.4 ppb on Feb 2

Minimum Value: 1 ppb on Feb 28 18:00

Minimum Daily Average: 7.9 ppb on Feb 25

Maximum Diurnal Average: 29.0 ppb at hour 7

Minimum Diurnal Average: 13.1 ppb at hour 15

Monthly Average: 21.82 ppb

Percentiles: P_1 = 3.1 P_{10} = 7.0 Q_1 = 11.5 Median = 21.3 Q_3 = 30.3 P_{90} = 39.0 P_{99} = 49.2

Hours in Service:	696
Hours of Data:	660
Hours of Missing Data:	36
Hours of Calibration:	36
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	39	45	45	41	39	34	A	48	45	43	24	15	14	22	25	22	39	39	36	32	16	16	29	32.6	47.8
2-Feb	37	43	42	38	48	29	A	29	29	46	45	52	28	20	24	35	31	40	44	49	49	44	40	40	38.4	52.0
3-Feb	36	31	32	28	35	A	45	48	42	C	C	C	C	C	C	14	29	35	29	23	23	30	31	33	--	48.2
4-Feb	30	29	26	24	A	33	91	36	26	33	36	17	21	24	24	23	29	30	30	28	26	23	23	24	29.8	90.8
5-Feb	27	26	21	A	21	23	38	30	15	16	21	17	15	9	10	8	22	38	42	40	34	20	8	21	22.7	41.9
6-Feb	19	22	A	9	8	7	10	15	15	11	10	9	6	5	7	8	10	16	13	12	12	12	10	11	11.3	21.7
7-Feb	15	A	19	24	27	35	31	41	33	29	27	24	16	17	19	25	29	33	35	34	33	31	28	27	27.5	40.7
8-Feb	A	24	24	24	24	28	27	34	37	31	29	30	23	13	14	31	23	26	36	37	35	31	33	A	27.9	37.5
9-Feb	30	30	27	27	23	23	29	33	28	23	24	25	8	7	9	10	10	17	18	14	22	23	A	14	20.5	33.1
10-Feb	22	11	8	9	14	13	14	23	27	26	19	10	10	9	8	11	13	16	14	14	20	A	16	13	14.8	27.1
11-Feb	14	16	22	28	23	25	27	27	28	25	27	29	28	16	19	17	22	22	23	27	A	26	29	31	23.9	31.0
12-Feb	32	28	29	30	22	19	20	23	31	32	25	29	25	18	14	13	11	17	13	A	10	8	6	8	20.1	32.0
13-Feb	11	16	15	10	8	8	15	21	14	32	14	12	5	5	22	10	18	23	A	21	12	12	19	11	14.5	31.9
14-Feb	18	9	12	29	29	25	29	33	36	33	27	26	17	12	14	12	25	A	49	29	35	25	17	18	24.5	49.2
15-Feb	13	10	9	14	12	20	35	34	36	40	32	9	7	6	9	9	A	43	50	48	45	46	43	39	26.7	49.7
16-Feb	38	40	32	29	20	21	30	35	31	30	26	22	28	29	22	A	15	13	13	11	8	10	15	19	23.4	40.1
17-Feb	24	30	29	32	33	37	39	34	32	31	27	31	33	49	A	27	25	31	33	40	33	31	16	12	30.8	48.6
18-Feb	10	14	28	18	21	22	29	26	29	32	20	20	16	A	9	14	19	21	13	10	15	16	25	21	19.5	32.1
19-Feb	15	14	17	16	15	18	30	31	26	6	10	6	A	4	3	2	3	5	8	8	6	14	12	20	12.7	30.6
20-Feb	20	18	14	20	15	28	27	26	24	19	13	A	16	22	20	26	28	17	21	25	23	26	23	25	21.6	27.6
21-Feb	22	27	24	17	28	25	9	9	8	8	A	5	5	4	4	7	8	7	10	18	17	17	9	6	13.0	27.8
22-Feb	6	6	6	9	14	9	10	12	13	A	9	14	10	7	4	9	10	16	11	23	42	40	42	38	15.7	41.6
23-Feb	39	41	27	30	31	39	37	40	A	15	10	7	4	4	8	14	10	18	16	9	19	31	12	10	20.6	41.3
24-Feb	23	37	40	39	33	31	26	A	34	18	8	5	7	5	5	7	6	7	10	7	5	4	7	4	16.1	40.4
25-Feb	4	4	3	4	4	5	A	7	6	6	6	7	5	6	6	8	7	13	11	17	16	13	11	13	7.9	16.6
26-Feb	6	6	8	14	12	A	21	15	14	16	16	20	12	11	10	8	9	10	21	25	31	28	36	35	16.6	36.2
27-Feb	33	34	35	36	A	31	30	39	45	45	36	29	15	11	10	11	13	13	26	21	18	18	25	32	26.5	45.3
28-Feb	40	44	43	A	43	45	43	55	46	42	34	51	46	36	28	25	40	1	2	2	4	4	2	3	29.6	54.8
29-Feb	2	20	A	35	44	25	9	12	11	10	8	7	6	7	9	32	10	15	18	18	15	9	10	8	14.8	44.5
	22.4	23.9	23.6	23.6	24.1	24.6	29.0	28.5	27.3	25.9	22.3	20.0	15.8	13.7	13.1	15.7	17.8	20.9	23.3	23.2	22.9	21.8	20.2	20.2	Diurnal Average	
	40.1	44.5	45.0	44.6	48.5	45.0	90.8	54.8	47.8	45.8	44.6	52.0	46.5	48.6	27.9	34.8	40.4	42.8	49.7	49.5	48.8	45.6	43.2	40.4	Diurnal Maximum	

C - Calibration

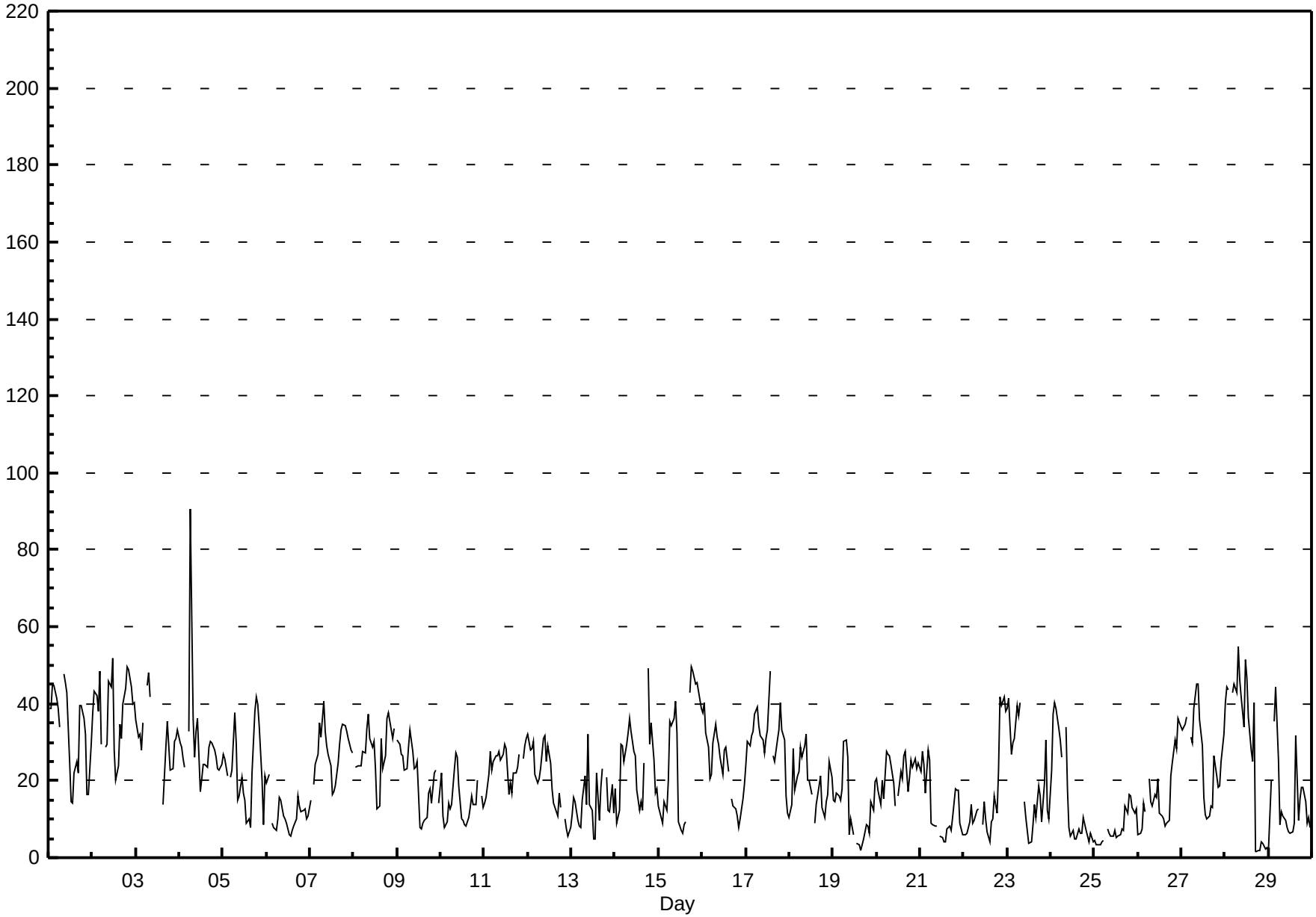
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - February 2012

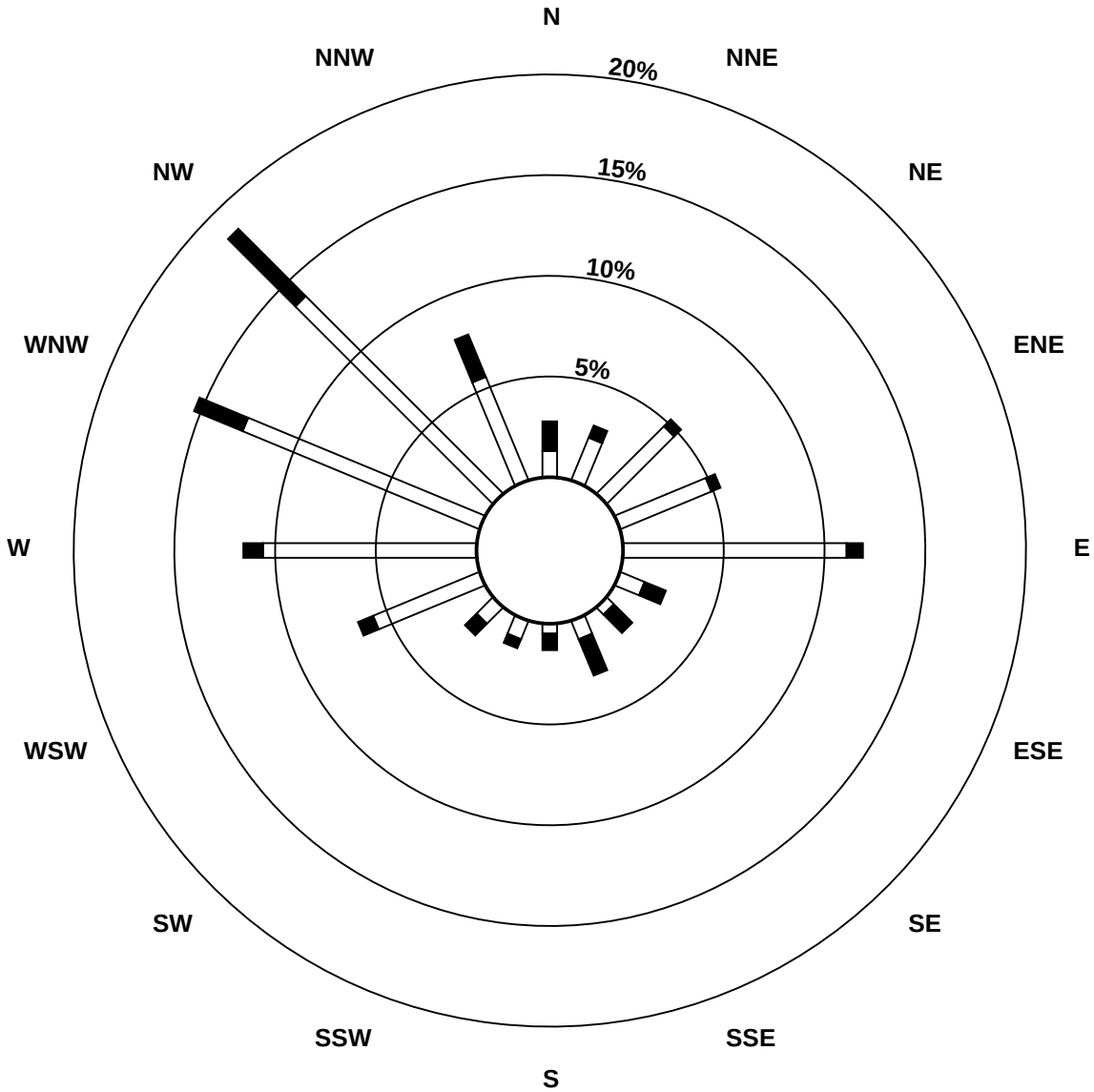


Peace Airshed Zone Association

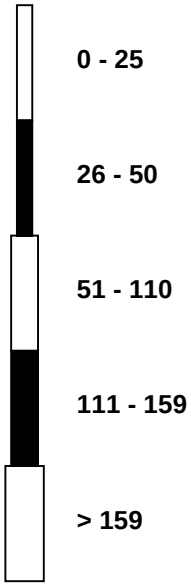
Pollutant Rose

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - February 2012



Pollutant Classes (ppb)



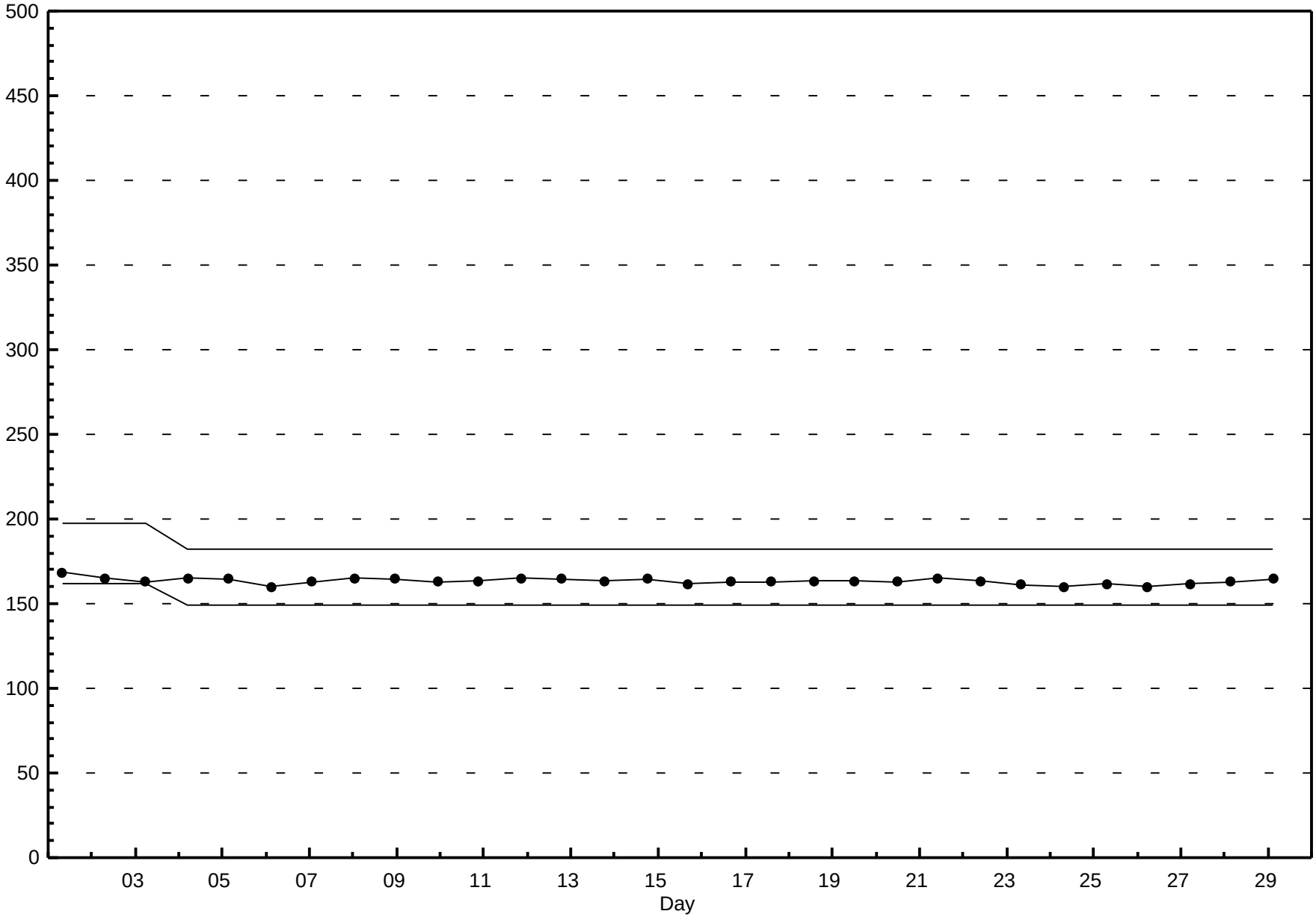
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Span Responses

Nitrogen Dioxide (NO_2)

Henry Pirker - February 2012



Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Henry Pirker - February 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 101.4 ppb on Feb 8 09:00
Maximum Daily Average: 40.5 ppb on Feb 2

Minimum Value: 0 ppb on Feb 14 03:00
Maximum Diurnal Average: 26.9 ppb at hour 9
Monthly Average: 11.27 ppb

Minimum Daily Average: 0.8 ppb on Feb 19
Minimum Diurnal Average: 5.2 ppb at hour 17
Percentiles: $P_1 = 0.1$ $P_{10} = 0.3$ $Q_1 = 0.9$ Median = 2.8 $Q_3 = 13.4$ $P_{90} = 36.0$ $P_{99} = 81.2$

Hours in Service:	696
Hours of Data:	660
Hours of Missing Data:	36
Hours of Calibration:	36
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	19	31	45	61	25	14	14	A	65	63	46	16	7	7	9	7	2	12	14	6	3	1	0	3	20.5	65.1
2-Feb	8	38	68	53	81	23	A	19	17	50	87	76	13	9	10	12	5	8	31	90	81	43	45	63	40.5	89.5
3-Feb	36	19	12	1	17	A	64	78	72	C	C	C	C	C	C	5	6	22	3	2	1	3	10	17	--	77.9
4-Feb	11	14	8	3	A	20	39	37	28	55	64	14	21	18	14	13	27	32	37	25	20	11	4	5	22.7	64.1
5-Feb	22	7	5	A	3	7	12	15	1	3	8	6	3	1	1	1	2	13	37	42	24	2	1	0	9.4	42.1
6-Feb	1	1	A	1	1	1	1	2	2	2	3	3	2	3	3	3	2	1	1	1	1	1	1	1	1.6	3.0
7-Feb	1	A	0	1	1	12	13	26	31	31	21	29	13	13	14	21	20	19	38	38	36	23	11	10	18.3	38.3
8-Feb	A	4	10	10	9	30	35	81	101	74	46	42	19	11	8	13	8	5	11	54	41	12	27	A	29.6	101.4
9-Feb	18	21	16	16	10	9	21	53	48	26	31	21	3	3	3	3	3	2	3	3	3	3	A	1	14.0	53.3
10-Feb	1	1	1	1	1	2	1	3	8	15	8	6	7	5	4	4	4	3	2	1	2	A	2	2	3.7	15.0
11-Feb	2	2	2	7	6	11	8	27	34	33	53	54	35	19	22	15	12	5	2	3	A	4	12	24	16.9	54.0
12-Feb	41	28	24	32	6	8	12	15	65	57	46	38	22	11	7	5	1	1	0	A	0	0	0	0	18.3	65.3
13-Feb	0	0	0	0	0	0	0	1	1	5	3	4	1	1	2	2	2	2	A	1	0	0	0	0	1.2	4.5
14-Feb	0	0	0	1	2	7	12	18	44	44	21	17	8	5	4	4	4	A	25	1	2	1	0	0	9.6	43.9
15-Feb	0	0	0	0	0	0	1	6	28	52	12	3	2	2	2	2	A	6	54	47	45	54	51	27	17.2	54.5
16-Feb	24	36	12	5	1	2	8	22	27	29	20	13	19	17	6	A	2	1	0	0	0	0	0	0	10.7	35.7
17-Feb	0	2	1	1	5	15	33	76	74	41	32	57	51	62	A	11	6	3	2	4	4	2	1	1	21.0	76.3
18-Feb	1	0	1	0	1	1	1	1	5	8	10	9	5	A	2	3	3	1	0	0	0	0	1	0	2.4	9.9
19-Feb	0	0	0	0	0	0	3	4	1	1	1	1	A	1	1	1	1	0	0	0	0	0	0	0	0.8	4.4
20-Feb	0	0	0	0	0	1	4	5	10	8	7	A	12	21	14	10	7	2	2	2	1	1	1	1	4.7	20.7
21-Feb	0	1	1	0	1	1	1	1	1	1	A	2	2	1	1	2	1	1	1	0	0	0	0	0	0.8	1.7
22-Feb	0	0	0	0	0	0	0	1	1	A	2	3	3	1	1	2	1	1	0	1	3	4	4	3	1.4	4.5
23-Feb	13	15	1	1	2	7	5	9	A	2	2	2	1	1	2	2	2	2	1	0	0	1	0	0	3.1	14.9
24-Feb	0	1	11	7	1	1	2	A	5	3	3	2	2	2	2	2	1	1	1	1	1	1	1	1	2.2	11.3
25-Feb	1	1	1	1	1	1	A	1	1	2	2	3	2	3	3	2	2	2	1	1	1	1	1	1	1.4	2.9
26-Feb	1	0	0	1	0	A	1	1	2	8	12	15	10	9	6	4	3	2	1	1	2	2	5	5	3.9	14.5
27-Feb	2	5	8	8	A	3	2	16	37	51	32	10	9	5	4	4	4	2	1	0	0	0	0	0	9.0	51.5
28-Feb	1	13	20	A	5	32	24	25	40	46	32	83	63	23	14	11	15	3	4	2	14	23	5	3	21.8	82.6
29-Feb	1	1	A	1	12	1	1	2	2	2	2	2	2	3	2	7	2	3	1	1	1	0	1	0	2.2	12.4
	7.3	8.6	9.2	7.9	7.1	7.7	11.9	20.2	26.9	26.3	22.5	19.6	12.6	9.5	6.0	6.1	5.2	5.6	9.7	11.7	10.3	7.0	6.6	6.1	Diurnal Average	
	40.6	37.6	68.1	61.4	81.2	32.0	64.3	81.3	101.4	73.6	86.8	82.6	63.2	62.3	22.1	21.5	26.9	32.5	53.7	89.5	81.3	54.5	51.1	63.2	Diurnal Maximum	

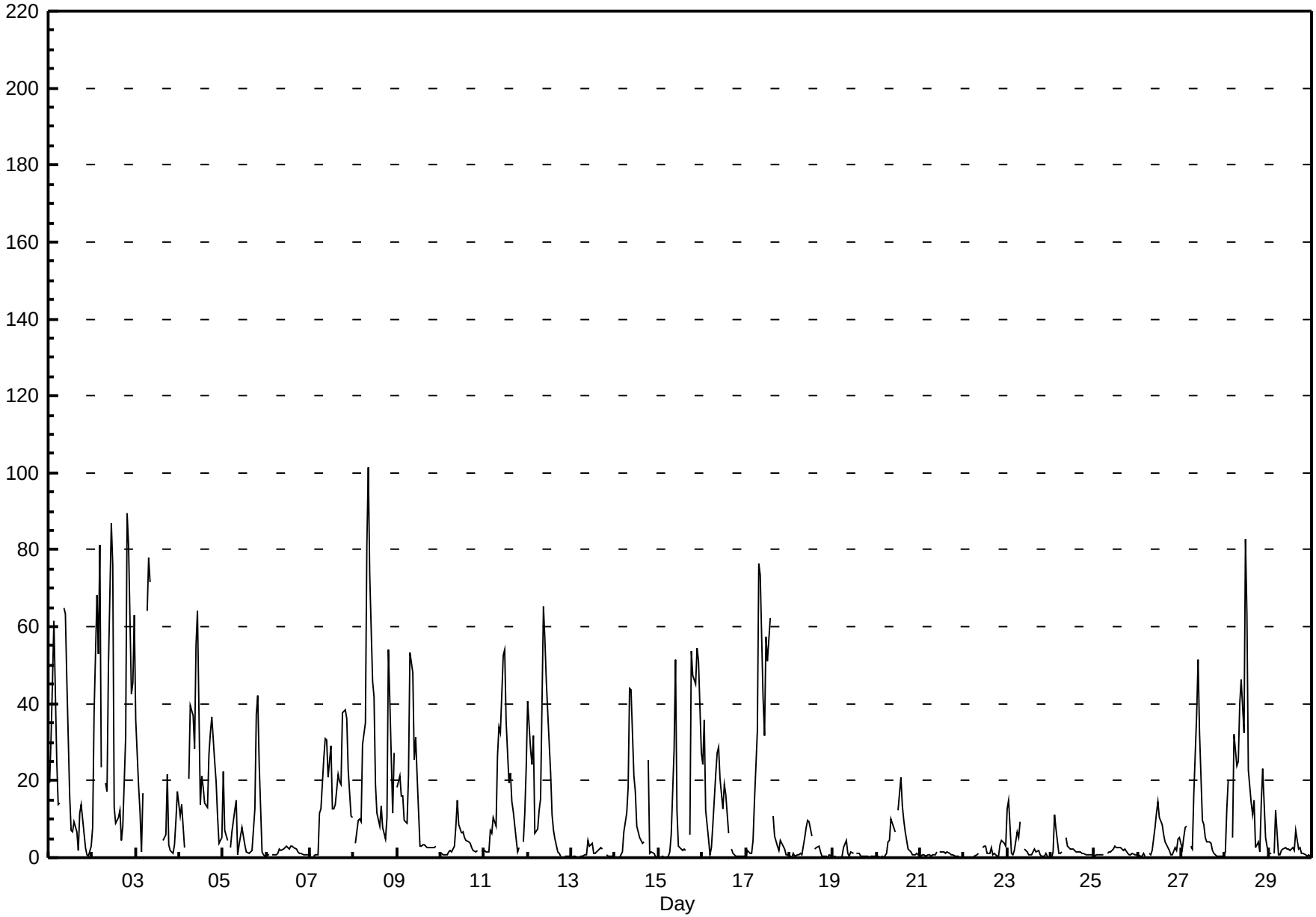
C - Calibration A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Henry Pirker - February 2012



Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Henry Pirker - February 2012

Maximum Value: 163.2 ppb on Feb 4 11:00

Maximum Daily Average: 69.3 ppb on Feb 2

Minimum Value: 0 ppb on Feb 27 22:00

Minimum Daily Average: 2.0 ppb on Feb 19

Maximum Diurnal Average: 44.5 ppb at hour 9

Minimum Diurnal Average: 10.2 ppb at hour 17

Monthly Average: 20.73 ppb

Percentiles: $P_1 = 0.5$ $P_{10} = 1.0$ $Q_1 = 2.5$ Median = 7.4 $Q_3 = 27.5$ $P_{90} = 61.4$ $P_{99} = 125.6$

Hours in Service:	696
Hours of Data:	660
Hours of Missing Data:	36
Hours of Calibration:	36
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	28	54	82	95	62	40	29	A	128	95	88	24	22	12	19	15	4	35	27	22	8	2	1	22	39.6	127.6
2-Feb	19	90	90	80	161	40	A	31	36	102	120	141	29	12	16	23	9	22	47	140	123	81	77	105	69.3	160.5
3-Feb	65	31	33	4	40	A	105	100	106	C	C	C	C	C	C	8	20	43	9	5	3	11	15	43	--	106.0
4-Feb	25	41	17	11	A	46	74	61	41	94	163	25	36	37	21	28	53	65	55	39	29	17	9	10	43.3	163.2
5-Feb	40	24	14	A	7	20	24	25	2	10	23	9	6	5	2	3	5	31	55	68	42	5	2	4	18.5	68.3
6-Feb	2	2	A	2	1	1	2	4	3	3	7	6	4	5	5	5	5	3	2	3	2	2	1	2	3.2	7.4
7-Feb	3	A	3	5	7	47	24	69	53	43	42	44	23	22	20	29	29	26	55	51	43	41	18	19	31.0	68.7
8-Feb	A	12	17	15	16	45	45	130	126	105	77	57	33	14	14	39	13	10	103	81	63	25	43	A	49.1	130.0
9-Feb	26	28	23	24	17	18	44	79	72	39	53	64	6	6	11	9	6	4	6	8	8	13	A	7	24.7	78.5
10-Feb	4	2	2	1	5	6	4	7	19	21	15	11	9	7	7	8	6	6	4	2	7	A	4	3	6.9	21.3
11-Feb	3	3	5	20	17	24	19	47	53	47	69	65	62	24	26	19	16	13	3	7	A	11	42	42	27.6	68.8
12-Feb	52	50	47	53	14	14	20	33	96	80	59	58	42	22	13	7	3	5	1	A	0	1	0	0	29.2	95.7
13-Feb	0	2	0	0	0	0	1	1	2	32	9	5	3	10	10	4	5	5	A	2	0	1	0	0	4.2	32.5
14-Feb	0	0	0	5	4	17	24	37	90	64	38	25	14	10	12	6	9	A	70	5	8	5	1	0	19.4	89.8
15-Feb	0	0	2	0	0	1	8	25	49	81	46	5	4	4	6	4	A	31	104	86	112	90	96	56	35.3	111.9
16-Feb	42	53	32	14	3	6	22	36	48	43	27	22	33	36	9	A	3	2	0	0	0	0	0	1	18.9	52.8
17-Feb	0	13	8	7	13	34	68	114	95	85	52	65	62	102	A	19	11	6	5	15	8	8	3	2	34.5	113.5
18-Feb	2	1	5	1	2	2	4	3	15	23	16	19	9	A	4	5	4	5	1	1	2	0	5	3	5.7	23.4
19-Feb	1	1	1	0	0	0	11	11	3	1	3	2	A	2	2	1	1	1	0	0	0	1	0	1	2.0	11.0
20-Feb	1	1	0	1	0	13	17	7	15	13	12	A	18	27	21	17	20	5	4	4	2	3	3	2	9.0	26.8
21-Feb	1	2	9	1	6	1	1	1	2	2	A	2	3	2	2	3	2	1	2	1	1	1	0	0	2.1	9.3
22-Feb	0	0	0	0	0	0	1	1	1	A	11	7	6	4	2	5	2	3	1	4	13	50	13	10	5.9	50.2
23-Feb	61	64	4	15	10	24	24	19	A	6	4	3	2	2	4	7	4	4	2	1	0	5	1	0	11.5	64.5
24-Feb	0	6	21	22	3	7	5	A	22	6	3	3	3	3	3	4	3	2	3	1	3	3	5	2	5.8	22.1
25-Feb	1	2	3	2	2	2	A	5	5	2	4	5	5	7	6	4	4	5	4	2	2	2	2	2	3.6	6.7
26-Feb	3	1	1	9	1	A	6	1	4	11	17	28	13	12	9	6	4	3	1	1	5	3	8	13	7.0	27.6
27-Feb	5	10	13	21	A	8	6	29	80	80	49	32	13	8	6	6	5	4	2	1	1	0	1	2	16.7	80.4
28-Feb	11	24	31	A	16	54	41	41	78	70	47	102	82	50	28	24	34	7	8	5	39	36	17	27	37.9	101.6
29-Feb	3	9	A	9	32	2	2	5	4	5	4	5	5	7	6	36	6	8	4	3	5	1	4	1	7.3	36.5
	14.2	18.9	17.2	15.6	16.3	17.5	23.3	34.1	44.5	43.2	39.3	30.9	20.3	16.6	10.4	12.3	10.2	12.6	20.6	20.0	18.9	14.9	13.3	13.6	Diurnal Average	
	64.7	89.9	90.4	95.1	160.5	53.7	104.6	130.0	127.6	104.7	163.2	141.0	81.8	102.0	27.8	38.5	52.7	65.1	103.6	140.2	122.5	89.7	96.1	104.8	Diurnal Maximum	

C - Calibration

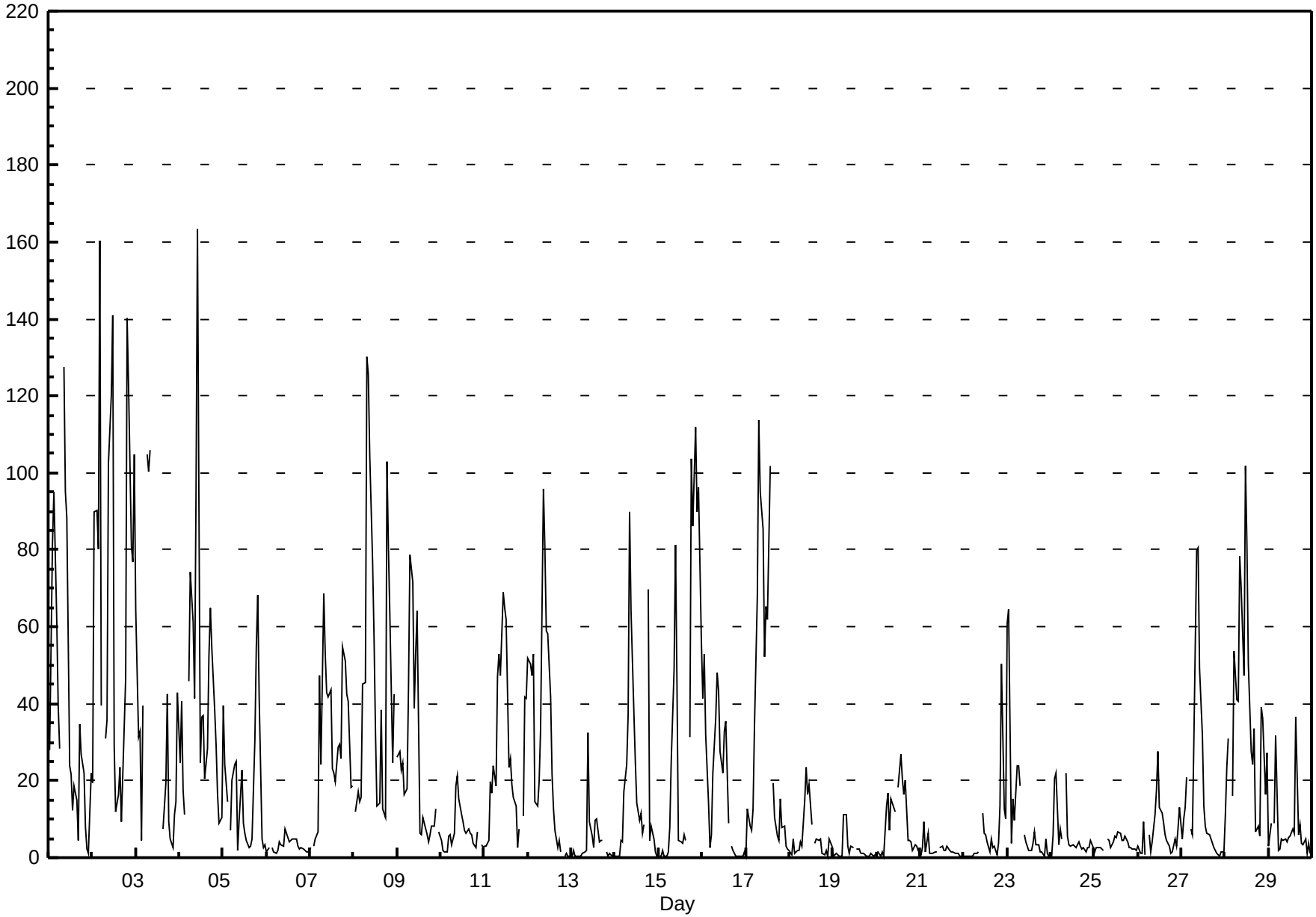
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Henry Pirker - February 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - February 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 134.5 ppb on Feb 2 20:00 Maximum Daily Average: 72.9 ppb on Feb 2

Minimum Value: 2 ppb on Feb 19 16:00 Minimum Daily Average: 6.5 ppb on Feb 25
Maximum Diurnal Average: 49.5 ppb at hour 9 Minimum Diurnal Average: 14.8 ppb at hour 15
Monthly Average: 28.02 ppb Percentiles: P_1 = 2.8 P_{10} = 5.7 Q_1 = 9.1 Median = 18.5 Q_3 = 38.6 P_{90} = 67.1 P_{99} = 115.9

Hours in Service:	696
Hours of Data:	660
Hours of Missing Data:	36
Hours of Calibration:	36
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	56	67	83	100	58	47	45	A	103	100	80	35	18	16	23	21	12	44	50	35	26	14	12	22	46.4	103.0
2-Feb	39	74	107	84	115	47	A	45	44	81	124	116	32	26	32	38	28	43	74	135	126	83	84	100	72.9	134.5
3-Feb	68	48	39	23	46	A	103	117	108	C	C	C	C	C	C	14	21	53	27	22	19	27	39	47	--	117.2
4-Feb	39	41	31	23	A	48	71	62	52	82	90	26	37	35	31	29	51	60	64	51	44	33	24	27	45.7	90.0
5-Feb	47	29	24	A	21	27	37	39	13	16	23	19	14	7	7	7	12	42	77	78	54	12	8	12	27.2	78.3
6-Feb	13	16	A	8	6	6	9	14	13	11	9	8	6	8	8	8	10	13	12	11	10	10	9	10	9.9	16.3
7-Feb	9	A	14	18	20	38	41	56	59	56	40	49	25	25	28	43	45	49	72	72	68	51	37	36	41.3	71.8
8-Feb	A	26	32	33	32	55	60	111	132	102	70	67	35	23	18	31	27	27	41	89	73	41	58	A	53.8	132.5
9-Feb	46	48	40	40	31	30	45	81	73	45	50	34	8	7	8	9	10	14	15	14	17	19	A	10	30.2	81.1
10-Feb	14	7	7	8	11	11	11	18	32	37	20	15	15	12	11	12	14	14	13	13	14	A	14	14	14.8	36.6
11-Feb	14	16	20	29	27	32	30	51	58	55	77	80	55	34	40	30	29	24	23	26	A	28	37	50	37.5	79.6
12-Feb	69	52	48	56	25	25	30	35	92	83	67	60	40	24	18	14	7	9	8	A	7	6	4	6	34.1	92.1
13-Feb	7	10	10	7	6	5	9	13	12	19	12	10	3	4	5	8	12	19	A	14	9	9	13	8	9.8	19.1
14-Feb	11	6	7	19	24	28	37	46	75	73	44	39	20	13	12	13	18	A	65	23	21	20	9	10	27.5	75.5
15-Feb	6	5	6	10	7	9	25	34	59	87	28	9	6	6	7	6	A	35	99	91	86	97	90	61	37.8	99.5
16-Feb	58	71	39	27	15	20	33	52	56	55	44	29	39	34	23	A	14	11	11	6	6	7	12	9	29.1	70.9
17-Feb	16	18	15	20	31	43	60	108	103	64	52	84	80	99	A	31	24	26	30	36	33	23	10	8	44.1	107.6
18-Feb	9	10	18	13	17	18	20	18	29	27	26	22	16	A	8	12	16	12	9	8	8	9	19	12	15.5	29.3
19-Feb	10	11	13	14	11	15	26	31	19	5	7	5	A	4	3	2	3	3	4	5	4	7	9	16	10.0	31.2
20-Feb	17	14	10	11	10	19	25	28	30	23	16	A	24	39	29	29	25	16	16	20	19	18	16	21	20.5	39.1
21-Feb	19	23	20	11	20	12	7	6	5	7	A	5	5	5	4	6	6	6	7	12	10	11	6	4	9.5	22.7
22-Feb	4	5	5	4	8	3	3	9	10	A	9	9	9	3	3	8	5	8	6	13	38	36	38	37	11.9	38.0
23-Feb	48	51	21	21	25	37	31	43	A	11	7	6	3	3	5	9	7	14	13	5	9	20	9	7	17.6	50.7
24-Feb	10	28	48	42	28	23	22	A	26	12	8	7	7	6	5	6	6	6	5	5	4	4	4	3	13.7	48.4
25-Feb	3	3	3	3	3	4	A	6	6	6	6	7	6	6	7	7	7	11	9	11	13	11	7	6	6.5	12.6
26-Feb	5	5	7	11	9	A	16	12	12	20	24	28	20	17	14	10	10	10	13	20	30	27	37	36	17.0	37.3
27-Feb	30	38	41	41	A	32	28	52	76	89	61	22	20	13	11	12	14	11	20	12	13	11	13	25	29.8	89.4
28-Feb	33	54	62	A	39	74	64	66	78	84	60	129	106	46	33	29	35	3	5	3	16	25	7	4	46.0	128.8
29-Feb	2	3	A	24	45	12	8	11	11	9	7	6	6	7	6	17	8	12	14	13	11	7	7	5	10.9	44.9
	25.1	27.7	28.5	26.0	25.5	26.7	33.2	43.1	49.5	46.6	39.3	34.3	24.3	19.2	14.8	16.4	17.0	21.3	28.6	30.1	28.2	23.8	22.5	21.6	Diurnal Average	
	68.6	74.4	106.9	100.4	115.0	74.5	102.5	117.2	132.5	101.5	124.4	128.8	105.5	99.0	39.6	42.5	51.4	60.0	99.5	134.5	125.8	97.1	90.2	100.0	Diurnal Maximum	

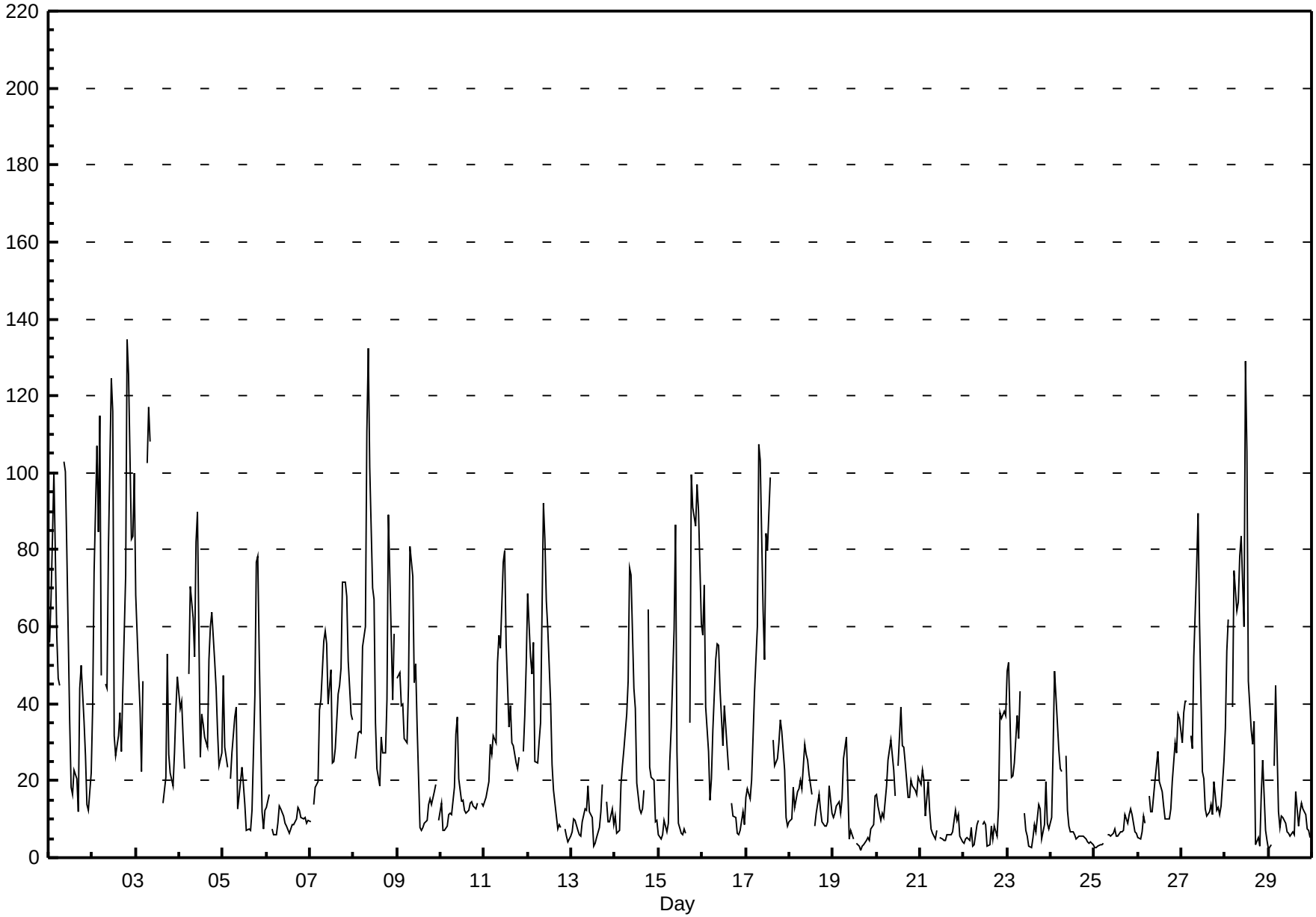
C - Calibration A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - February 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - February 2012

Maximum Value: 201.0 ppb on Feb 2 05:00

Maximum Daily Average: 106.4 ppb on Feb 2

Minimum Value: 3 ppb on Feb 19 16:00

Minimum Daily Average: 11.0 ppb on Feb 25

Maximum Diurnal Average: 71.1 ppb at hour 9

Minimum Diurnal Average: 23.1 ppb at hour 15

Monthly Average: 41.98 ppb

Percentiles: P_1 = 5.4 P_{10} = 9.9 Q_1 = 14.5 Median = 28.1 Q_3 = 57.3 P_{90} = 93.2 P_{99} = 165.5

Hours in Service:	696
Hours of Data:	660
Hours of Missing Data:	36
Hours of Calibration:	36
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	65	87	127	138	102	79	62	A	174	139	130	47	36	26	41	40	27	74	66	57	40	19	17	51	71.5	173.9
2-Feb	56	133	130	115	201	69	A	58	66	149	165	193	57	32	39	58	38	61	90	188	170	123	114	142	106.4	201.0
3-Feb	99	62	64	32	75	A	150	147	148	C	C	C	C	C	C	22	47	78	38	28	25	41	45	76	--	149.7
4-Feb	53	68	43	35	A	79	166	90	66	127	198	41	57	60	39	52	82	92	83	66	55	39	31	35	72.0	198.5
5-Feb	66	49	34	A	27	43	62	51	17	25	44	26	21	12	13	10	27	66	95	105	75	24	10	25	40.2	104.8
6-Feb	21	24	A	11	10	8	12	20	18	14	18	15	10	10	11	13	14	18	15	14	14	14	11	12	14.2	24.1
7-Feb	18	A	22	30	34	82	55	104	82	72	68	66	40	39	38	53	57	57	89	85	74	72	45	45	57.7	103.7
8-Feb	A	35	40	38	39	73	71	162	158	134	106	87	56	26	27	70	34	37	140	117	98	55	74	A	76.2	161.7
9-Feb	53	53	50	50	39	40	73	110	98	61	76	89	13	13	20	17	14	20	22	22	26	32	A	20	44.0	109.5
10-Feb	26	12	9	11	17	17	16	30	44	47	34	21	19	16	14	18	19	21	17	16	26	A	20	15	21.0	46.5
11-Feb	17	18	26	47	39	46	45	69	81	73	96	93	90	40	45	36	37	35	26	34	A	36	71	73	50.9	95.7
12-Feb	83	78	76	84	36	31	40	56	127	110	80	87	66	40	26	19	13	21	14	A	10	8	5	9	48.7	127.1
13-Feb	12	16	15	10	8	8	16	23	15	64	21	17	8	11	32	14	23	27	A	22	13	13	20	12	18.3	64.5
14-Feb	19	9	13	33	33	41	51	70	126	96	65	52	32	22	26	19	34	A	119	34	43	29	18	19	43.5	126.3
15-Feb	14	11	11	15	13	22	43	58	85	119	78	14	11	10	13	14	A	73	153	131	152	134	139	93	61.1	153.1
16-Feb	77	93	65	43	23	28	51	71	78	72	52	44	61	64	31	A	19	16	13	11	8	10	16	20	42.0	93.3
17-Feb	24	42	37	39	45	67	107	142	127	116	79	96	93	150	A	46	36	36	37	56	40	39	19	13	64.6	150.0
18-Feb	12	14	33	19	23	25	33	29	44	56	36	39	25	A	12	19	23	26	14	11	15	17	27	22	24.9	55.5
19-Feb	15	15	18	16	15	18	41	40	28	7	13	8	A	6	6	3	4	6	9	9	7	16	13	21	14.4	40.7
20-Feb	22	18	14	21	16	41	44	34	40	33	26	A	34	49	41	42	48	21	25	29	25	29	25	26	30.5	48.5
21-Feb	23	30	32	17	34	26	10	10	10	10	A	8	8	6	6	11	10	8	12	19	19	18	10	6	14.9	34.4
22-Feb	6	7	7	9	14	9	11	14	14	A	20	21	16	11	5	14	12	19	12	24	55	89	55	46	21.3	89.4
23-Feb	98	105	29	44	39	63	60	59	A	20	14	10	6	6	12	20	14	22	18	10	20	34	13	10	31.7	105.0
24-Feb	24	43	61	61	37	38	31	A	56	24	11	9	10	8	8	11	9	9	13	8	7	6	11	6	21.8	61.0
25-Feb	5	6	5	5	6	6	A	12	11	8	10	12	10	12	12	12	11	18	15	19	19	14	12	14	11.0	18.5
26-Feb	9	7	9	21	13	A	26	16	16	26	33	48	25	22	19	14	13	12	22	26	35	31	44	47	23.1	47.8
27-Feb	38	43	48	57	A	38	36	68	126	126	86	61	29	19	17	17	18	16	28	22	19	19	26	33	43.1	125.8
28-Feb	52	67	73	A	56	98	84	88	124	111	82	154	129	86	56	47	74	8	10	7	42	39	19	30	66.7	153.5
29-Feb	4	21	A	44	75	26	11	17	14	14	11	12	12	14	15	69	13	22	20	21	17	10	12	8	21.1	75.4
	36.1	41.6	40.3	38.7	39.5	41.6	52.1	60.9	71.1	68.6	61.2	50.8	36.1	30.0	23.1	27.8	27.5	32.9	43.4	42.5	41.1	36.0	32.8	33.2	Diurnal Average	
	99.0	132.9	129.6	138.5	201.0	98.1	165.9	161.7	173.9	148.6	198.5	192.5	128.5	150.0	55.8	69.6	81.6	92.2	153.1	188.4	170.2	134.0	138.6	142.0	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

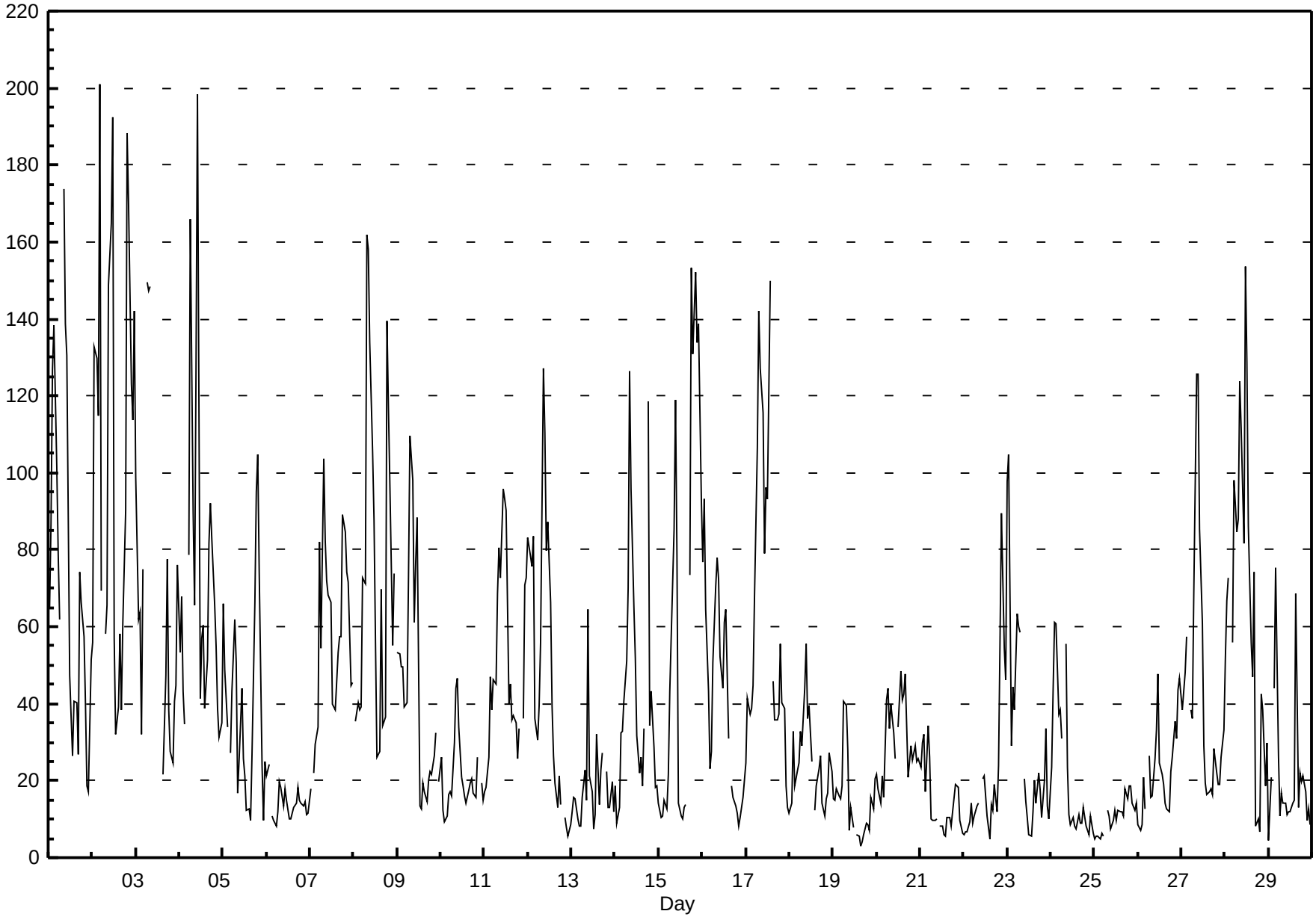
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - February 2012



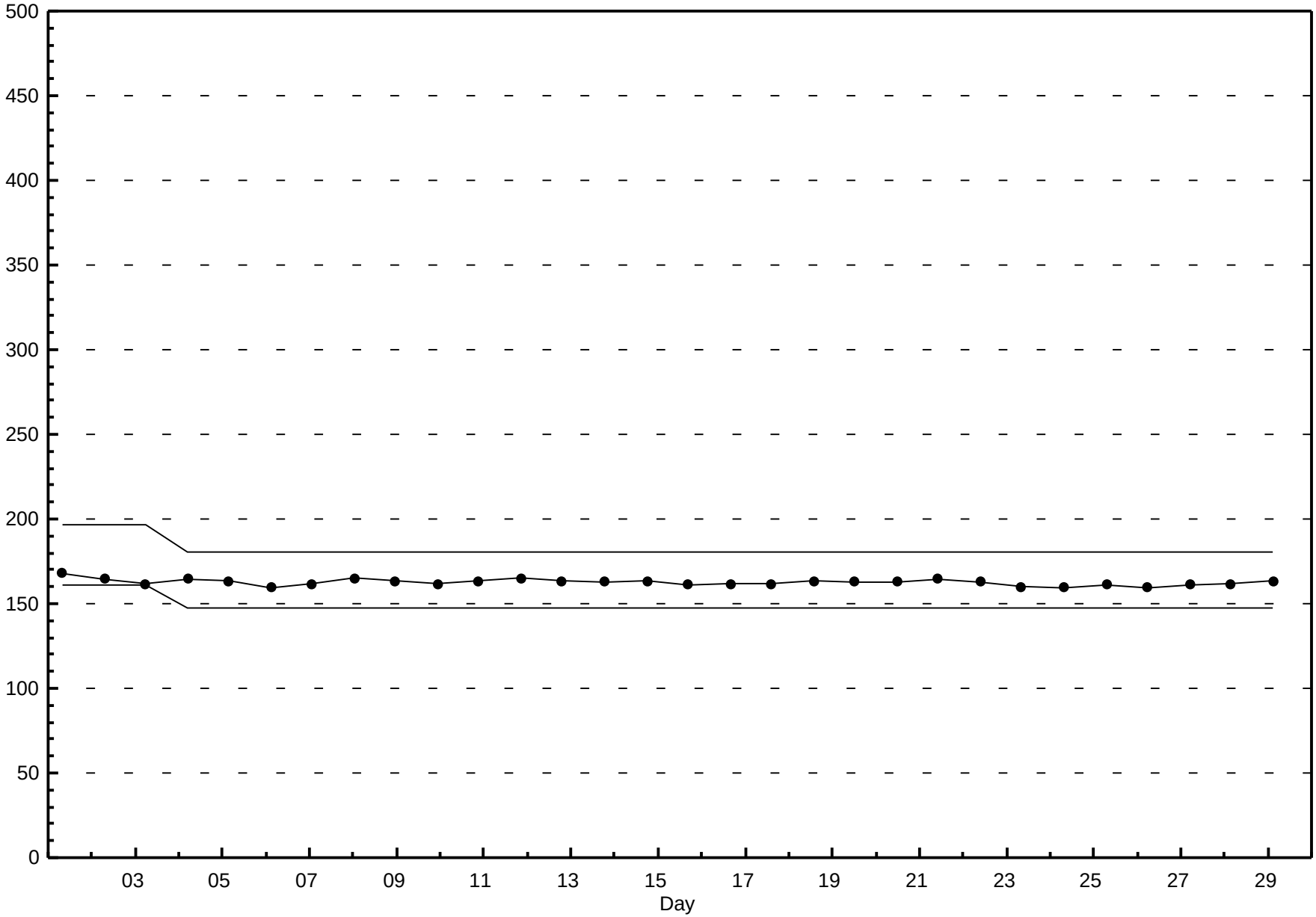
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Span Responses

Oxides of Nitrogen (NO_X)

Henry Pirker - February 2012



Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Henry Pirker - February 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 39.8 ppb on Feb 21 18:00 Maximum Daily Average: 30.4 ppb on Feb 25

Minimum Value: 0 ppb on Feb 2 06:00 Minimum Daily Average: 4.0 ppb on Feb 4
Maximum Diurnal Average: 28.4 ppb at hour 15 Minimum Diurnal Average: 9.6 ppb at hour 8
Monthly Average: 17.69 ppb Percentiles: P_1 = 0.6 P_{10} = 1.3 Q_1 = 4.9 Median = 18.1 Q_3 = 28.8 P_{90} = 33.5 P_{99} = 38.3

Hours in Service:	696
Hours of Data:	663
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	2	1	1	A	1	2	8	17	24	24	23	25	28	7	3	8	12	22	23	17	10.9	27.6
2-Feb	4	1	1	1	1	0	A	1	1	2	4	7	16	17	16	14	18	6	1	2	2	1	2	1	5.2	17.7
3-Feb	1	1	1	5	1	A	1	1	1	2	4	15	14	C	C	C	17	3	9	12	14	7	1	1	5.7	17.4
4-Feb	1	1	1	3	A	1	1	1	1	2	5	11	12	14	10	13	6	2	1	1	1	1	3	1	4.0	14.0
5-Feb	1	2	2	A	3	1	1	2	15	14	12	15	22	31	31	31	26	8	1	1	4	25	28	23	13.0	31.3
6-Feb	22	18	A	28	30	29	26	23	23	25	27	28	30	30	30	30	29	26	27	28	28	27	27	26	26.7	30.0
7-Feb	25	A	20	14	9	2	2	1	2	5	12	13	19	20	19	14	10	4	1	1	1	2	1	2	8.8	25.4
8-Feb	A	3	1	1	1	1	2	2	2	3	7	10	17	20	22	19	17	12	6	2	2	3	2	A	7.1	22.2
9-Feb	2	2	1	1	2	2	2	2	2	6	9	18	26	27	27	25	22	18	15	15	12	11	A	21	11.6	26.7
10-Feb	16	22	23	24	21	22	22	16	8	8	15	18	19	21	25	25	22	22	23	22	20	A	17	16	19.5	24.6
11-Feb	14	12	6	2	2	2	3	1	2	5	7	9	13	16	15	15	12	9	7	5	A	3	2	2	7.1	15.8
12-Feb	2	1	1	1	1	1	1	1	1	3	6	11	16	20	23	24	30	27	26	A	26	26	27	25	13.1	29.7
13-Feb	23	19	19	21	23	29	27	24	25	22	27	31	37	38	37	35	31	24	A	26	29	29	25	28	27.3	37.9
14-Feb	25	30	29	16	7	3	2	2	1	5	12	15	25	29	30	31	27	A	5	15	18	18	27	27	17.3	30.6
15-Feb	31	31	29	23	28	28	15	8	2	5	24	34	36	37	37	38	A	16	2	1	1	2	1	1	18.7	37.8
16-Feb	1	1	1	3	10	6	3	1	2	6	11	17	17	20	22	A	32	32	31	33	33	31	26	27	15.9	33.5
17-Feb	20	20	20	14	3	1	1	1	1	6	9	9	11	12	A	24	25	21	18	10	9	18	30	32	13.6	31.6
18-Feb	31	27	15	19	17	15	12	15	9	13	17	23	24	A	33	31	26	28	29	30	29	27	17	24	22.2	33.4
19-Feb	23	21	17	15	17	13	6	3	14	31	31	34	A	36	35	37	36	36	35	33	33	30	29	21	25.3	36.6
20-Feb	17	21	23	19	17	9	7	3	4	14	20	A	20	18	21	20	19	21	19	14	16	19	20	15	16.3	22.8
21-Feb	16	12	16	25	15	23	27	28	35	31	A	35	36	38	40	38	38	40	38	31	32	29	35	35	30.1	39.8
22-Feb	35	34	33	34	30	35	36	32	32	A	36	36	37	40	40	37	38	35	36	29	8	8	6	4	29.9	39.8
23-Feb	2	4	17	17	9	3	12	5	A	30	34	35	38	38	37	35	36	28	27	34	30	20	28	29	23.9	37.7
24-Feb	25	10	2	2	9	12	9	A	16	26	29	31	32	34	34	33	34	33	32	32	31	32	32	34	24.5	34.0
25-Feb	36	36	35	34	34	33	A	30	30	30	30	30	31	31	30	30	30	28	29	26	25	25	29	29	30.4	36.4
26-Feb	29	29	27	23	22	A	17	20	21	20	22	23	26	28	29	30	30	28	24	18	11	12	5	5	21.8	30.2
27-Feb	7	3	3	2	A	4	7	2	4	7	16	31	32	35	37	36	33	33	25	31	30	31	29	18	19.8	36.5
28-Feb	10	2	2	A	8	2	2	1	4	7	16	12	16	26	29	29	23	31	16	19	4	1	6	14	12.2	31.4
29-Feb	18	20	A	15	9	32	36	33	32	33	34	35	36	36	37	32	33	29	26	27	27	30	30	30	29.2	36.7
	15.7	13.6	12.8	13.5	12.2	11.5	10.3	9.6	10.4	12.9	17.4	21.7	24.3	27.2	28.4	27.8	26.0	21.7	18.2	18.1	17.4	17.5	18.1	18.1	Diurnal Average	
	36.1	36.4	34.9	33.8	33.6	34.8	35.7	33.2	35.5	32.7	35.6	35.7	37.6	39.8	39.8	38.3	38.3	39.8	38.4	34.4	33.3	32.0	35.0	34.6	Diurnal Maximum	

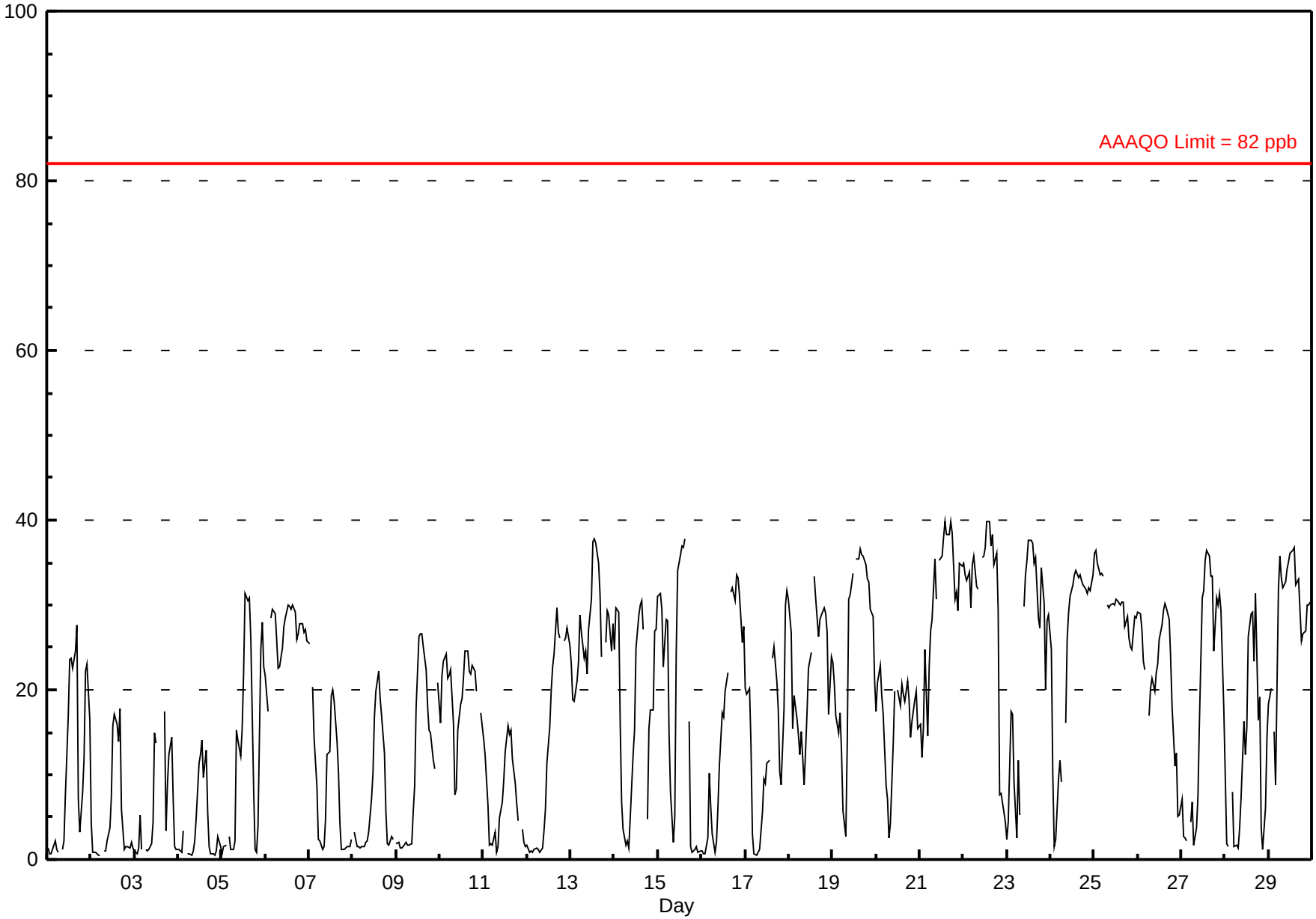
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na

Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Henry Pirker - February 2012



Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

Henry Pirker - February 2012

Maximum Value: 43.2 ppb on Feb 21 18:00

Maximum Daily Average: 33.6 ppb on Feb 22

Minimum Value: 1 ppb on Feb 4 08:00

Minimum Daily Average: 6.8 ppb on Feb 4

Maximum Diurnal Average: 31.2 ppb at hour 16

Minimum Diurnal Average: 13.0 ppb at hour 8

Monthly Average: 21.09 ppb

Percentiles: P_1 = 1.3 P_{10} = 2.6 Q_1 = 10.0 Median = 23.0 Q_3 = 31.4 P_{90} = 35.9 P_{99} = 40.6

Hours in Service:	696
Hours of Data:	663
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	12	1	1	2	6	3	2	A	2	3	16	23	26	26	26	29	32	16	6	14	20	26	26	25	14.9	31.6
2-Feb	14	1	1	1	1	1	A	2	1	3	7	15	18	20	18	19	23	13	4	3	2	2	5	5	7.8	22.5
3-Feb	3	1	3	12	3	A	2	1	2	2	9	17	15	C	C	C	23	10	13	16	18	13	3	2	8.5	22.6
4-Feb	3	3	2	8	A	1	2	1	5	4	9	13	18	21	17	19	10	3	1	2	1	2	6	4	6.8	21.0
5-Feb	1	4	3	A	5	2	3	12	17	16	15	22	29	33	32	33	33	19	3	1	18	30	30	27	16.9	33.4
6-Feb	24	23	A	30	32	31	29	26	25	27	29	30	31	31	31	31	31	30	28	30	30	28	29	27	28.7	31.7
7-Feb	27	A	25	19	13	5	4	5	3	8	19	15	22	23	20	17	16	7	2	2	2	2	3	5	11.6	26.9
8-Feb	A	5	3	2	2	2	2	3	3	5	9	13	20	21	27	26	22	16	13	3	2	7	6	A	9.5	26.5
9-Feb	3	5	2	3	2	4	4	3	3	8	12	25	28	28	28	27	25	22	18	16	16	16	A	23	13.9	28.1
10-Feb	22	23	25	26	25	24	25	20	11	11	18	19	21	24	26	27	24	26	25	23	22	A	19	17	21.9	26.5
11-Feb	16	14	11	3	4	5	6	2	3	7	9	10	15	17	16	16	16	11	9	8	A	6	4	3	9.2	16.8
12-Feb	4	1	1	1	2	2	2	2	2	5	8	17	22	24	26	28	33	30	28	A	29	28	28	28	15.3	32.5
13-Feb	26	23	23	23	27	31	29	28	28	27	30	34	39	39	39	37	36	29	A	31	32	32	31	31	30.6	39.4
14-Feb	29	33	33	31	12	13	7	11	3	8	17	18	28	32	33	33	32	A	22	21	25	21	31	32	22.8	33.1
15-Feb	34	34	33	30	34	33	22	16	5	10	33	38	37	38	39	41	A	25	3	2	8	6	2	4	22.9	40.6
16-Feb	3	1	2	8	12	12	7	2	3	10	19	20	21	25	25	A	37	35	34	36	36	34	30	31	19.2	36.5
17-Feb	29	27	27	24	8	2	1	2	2	8	11	10	15	15	A	29	27	28	26	25	18	28	33	33	18.6	33.1
18-Feb	33	30	21	21	22	18	19	22	15	17	20	27	28	A	35	34	29	33	30	33	32	30	23	27	26.1	35.4
19-Feb	26	24	19	18	19	16	13	6	29	32	34	35	A	38	37	38	37	37	36	35	34	35	32	29	28.6	37.5
20-Feb	21	24	27	25	23	16	14	5	8	18	22	A	22	19	22	33	24	23	22	19	20	23	25	20	20.8	33.2
21-Feb	19	16	24	29	19	29	29	33	39	32	A	37	37	40	41	40	42	43	41	38	35	35	37	36	33.4	43.2
22-Feb	36	35	36	36	33	37	38	36	36	A	37	39	39	41	41	40	41	40	39	35	20	15	14	10	33.6	40.9
23-Feb	12	15	25	24	22	11	27	17	A	35	36	38	39	39	40	39	39	33	33	37	35	30	31	31	29.7	39.7
24-Feb	30	19	8	7	14	16	15	A	22	29	31	32	34	35	35	34	35	34	34	33	32	33	33	36	27.5	36.0
25-Feb	37	37	37	34	34	34	A	32	30	31	31	31	31	31	31	32	32	30	30	29	28	27	31	30	32.0	37.5
26-Feb	30	30	29	27	24	A	22	23	23	22	24	27	27	29	32	32	32	30	29	22	15	16	11	13	24.7	31.7
27-Feb	15	6	6	5	A	8	12	4	5	10	21	35	35	37	39	38	37	35	31	37	34	34	37	28	23.8	39.1
28-Feb	16	5	6	A	17	4	4	3	6	12	22	17	19	31	33	34	34	35	24	26	13	5	12	22	17.3	35.3
29-Feb	24	25	A	23	25	38	38	36	34	34	36	36	37	38	39	37	36	33	31	31	31	33	32	33	32.9	38.7
	19.6	16.6	16.0	17.4	16.4	14.7	14.0	13.0	13.0	15.5	20.9	24.8	26.9	29.4	30.7	31.2	29.8	25.9	22.0	21.6	21.7	21.3	21.5	21.9	Diurnal Average	
	37.0	37.2	37.5	35.5	34.4	38.4	37.7	36.0	39.2	34.6	37.0	38.7	38.7	40.6	41.2	40.6	42.2	43.2	40.8	37.8	35.7	34.9	37.1	36.0	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

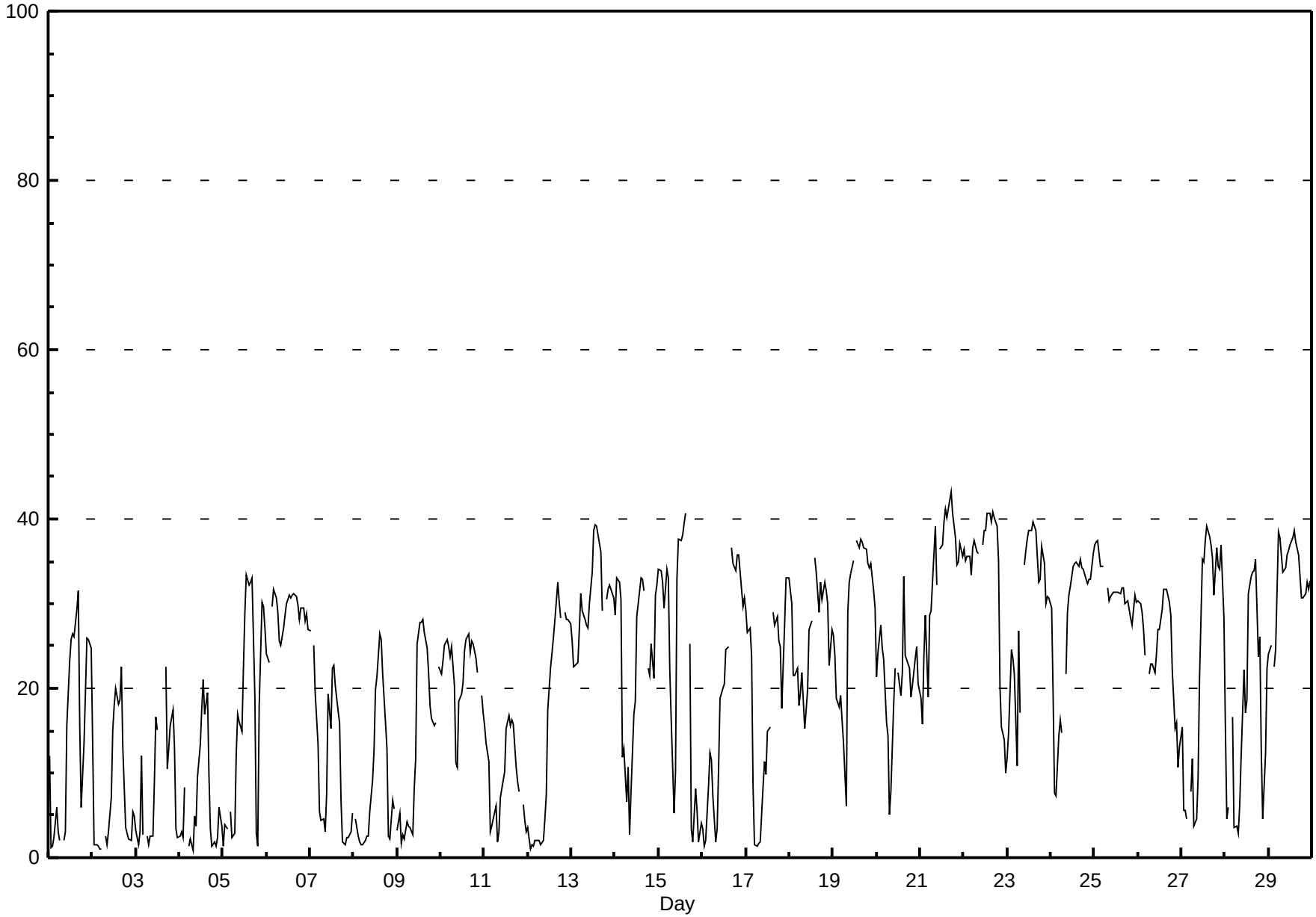
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

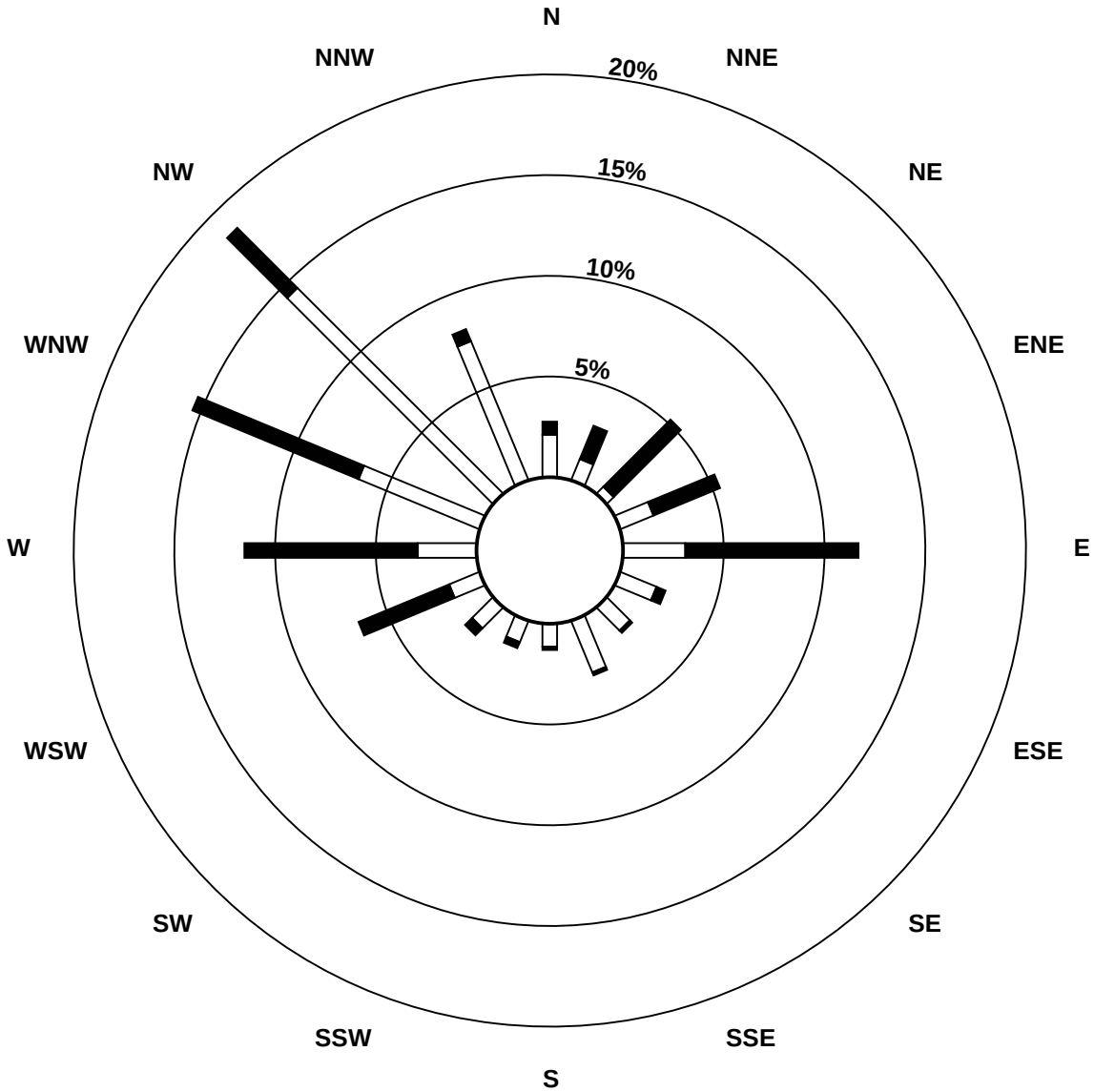
Henry Pirker - February 2012



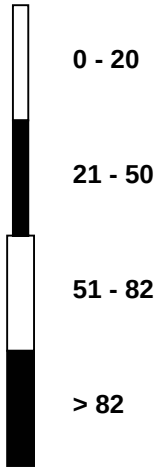
Pollutant Rose

Ozone (O_3) - ppb

Henry Pirker - February 2012



Pollutant Classes (ppb)



Peace Airshed Zone Association

Eight Hour Running Averages

Ozone (O_3) - ppb

Henry Pirker - February 2012

Maximum Value: 38.0 ppb on Feb 21 19:00

Minimum Value: 0.8 ppb on Feb 2 09:00

Percentiles: P_1 = 1.2 P_{10} = 2.5 Q_1 = 8.0 Median = 17.8 Q_3 = 26.4 P_{90} = 32.6 P_{99} = 36.7

Hours in Service:	696
Hours of Data:	690
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	4	3	3	3	3	3	2	1	1	1	2	5	8	11	14	15	19	19	19	18	16	16	16	15	19.2
2-Feb	12	11	11	10	9	6	3	1	1	1	1	2	5	7	8	10	12	12	12	11	9	7	6	4	12.2
3-Feb	2	1	1	2	2	2	2	2	2	2	2	4	5	5	6	N	N	N	N	N	N	11	9	8	10.6
4-Feb	6	6	5	4	2	1	1	1	1	1	2	3	4	6	7	9	9	9	9	7	6	4	3	2	9.1
5-Feb	1	1	1	1	2	2	1	2	4	5	7	8	10	14	18	21	23	22	21	19	17	16	15	14	22.8
6-Feb	14	15	17	21	25	25	25	25	25	26	26	26	26	26	27	28	29	29	29	29	28	28	28	27	28.8
7-Feb	27	27	26	24	21	18	14	11	7	7	6	6	7	9	11	13	14	14	13	11	9	7	4	3	26.8
8-Feb	2	2	2	2	2	2	2	2	2	2	3	4	6	8	10	13	14	16	15	14	12	10	8	6	15.6
9-Feb	4	3	2	2	2	2	2	2	2	2	3	5	8	11	14	17	20	21	22	22	20	18	17	16	22.3
10-Feb	15	16	17	18	20	21	21	21	20	18	17	16	16	16	16	17	19	21	22	22	22	23	22	20	22.6
11-Feb	19	18	15	13	10	9	7	5	4	3	3	4	5	7	8	10	11	12	12	11	11	9	8	6	19.1
12-Feb	4	3	2	2	2	1	1	1	1	1	2	3	5	7	10	13	17	20	22	24	25	26	27	27	26.7
13-Feb	26	25	24	23	23	23	23	23	23	24	25	26	28	29	30	31	32	33	33	33	31	30	28	27	33.4
14-Feb	26	27	27	26	23	20	17	14	11	8	6	6	8	11	15	19	22	24	23	23	22	20	20	20	27.5
15-Feb	20	21	25	25	27	28	27	24	21	17	17	18	19	20	23	27	30	32	29	24	19	14	9	3	31.8
16-Feb	3	1	1	1	2	3	3	3	3	4	5	7	8	10	12	14	18	22	24	27	29	31	31	31	31.1
17-Feb	29	28	26	24	20	16	13	10	7	6	4	4	5	6	7	10	14	16	17	17	17	18	19	20	29.2
18-Feb	21	22	21	23	24	23	21	19	16	14	15	15	16	16	19	21	24	26	28	29	29	29	27	26	29.5
19-Feb	26	25	23	22	20	18	17	14	13	14	16	19	19	22	26	31	34	35	35	35	35	34	33	31	35.4
20-Feb	29	27	26	24	22	20	17	15	13	12	12	11	11	12	14	17	19	20	20	19	18	19	18	18	29.1
21-Feb	18	16	16	17	17	18	18	20	23	25	26	28	31	33	35	36	37	38	38	37	37	36	35	35	38.0
22-Feb	34	33	33	33	33	34	34	33	33	33	33	34	35	35	36	37	38	37	37	36	33	29	25	20	37.6
23-Feb	16	12	10	8	9	8	9	9	10	13	16	18	22	27	31	35	35	35	34	34	33	31	30	29	35.2
24-Feb	28	25	22	18	16	15	12	10	9	11	15	19	22	25	29	29	32	32	33	33	33	33	32	32	33.0
25-Feb	33	33	33	34	34	34	34	34	33	32	31	31	31	30	30	30	30	30	30	29	29	28	28	27	34.5
26-Feb	27	27	27	27	27	27	25	24	23	22	21	21	21	22	24	25	26	27	27	27	25	23	20	17	27.5
27-Feb	14	11	8	6	5	4	4	4	3	4	6	10	13	17	20	25	28	32	33	33	32	32	31	29	32.7
28-Feb	26	22	19	17	14	10	6	4	3	4	6	7	8	11	14	17	20	23	23	24	22	19	16	14	25.9
29-Feb	14	12	12	11	12	16	21	23	25	27	28	30	34	34	35	34	35	34	33	32	31	30	29	29	34.6
Diurnal Maximums	34.3	33.5	33.5	33.7	34.0	34.1	34.5	34.0	33.1	33.0	33.4	33.6	34.7	35.4	36.0	36.6	37.6	37.9	38.0	37.4	36.9	35.8	35.2	34.7	

N - Not Valid

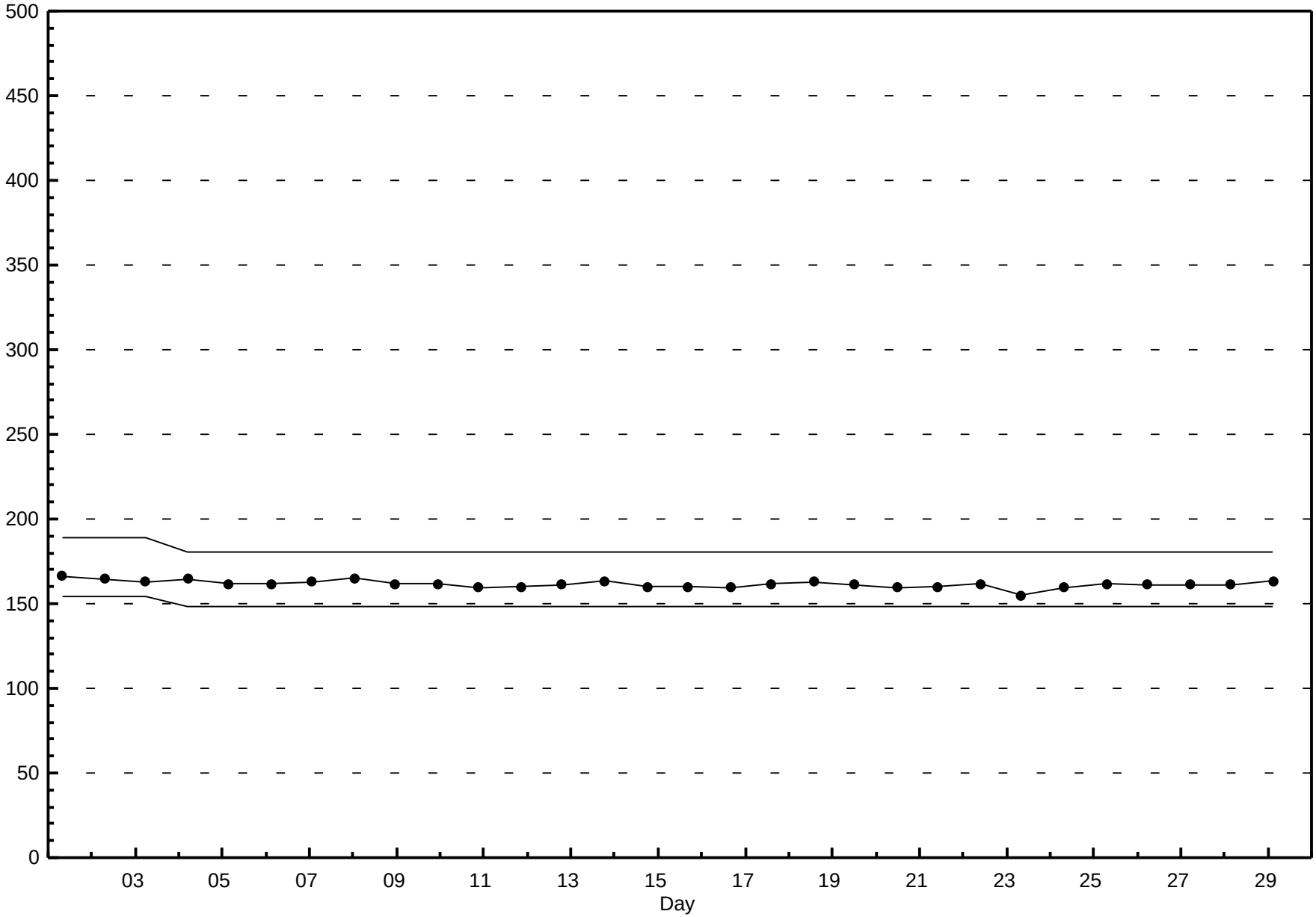
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Span Responses

Ozone (O_3)

Henry Pirker - February 2012



Peace Airshed Zone Association

Hourly Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - February 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.20 ppm on Feb 3 09:00 Maximum Daily Average: 0.51 ppm on Feb 2

Minimum Value: 0.1 ppm on Feb 15 03:00 Minimum Daily Average: 0.16 ppm on Feb 25
Maximum Diurnal Average: 0.40 ppm at hour 9 Minimum Diurnal Average: 0.22 ppm at hour 15
Monthly Average: 0.280 ppm Percentiles: P_1 = 0.15 P_{10} = 0.17 Q_1 = 0.19 Median = 0.23 Q_3 = 0.31 P_{90} = 0.45 P_{99} = 0.89

Hours in Service:	696
Hours of Data:	663
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	0.5	0.6	0.5	0.7	0.4	0.4	0.3	A	0.8	0.7	0.5	0.3	0.2	0.2	0.3	0.3	0.2	0.4	0.4	0.4	0.2	0.2	0.2	0.3	0.39	0.85
2-Feb	0.3	0.5	0.5	0.4	0.4	0.2	A	0.3	0.3	0.4	C	C	C	0.3	0.3	0.3	0.3	0.4	0.7	1.2	1.0	0.7	0.8	0.9	0.51	1.19
3-Feb	0.4	0.3	0.3	0.2	0.4	A	0.6	0.9	1.2	1.1	0.5	0.3	0.4	0.3	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.5	0.44	1.20
4-Feb	0.4	0.4	0.3	0.3	A	0.4	0.5	0.4	0.3	0.5	0.5	0.3	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.39	0.52
5-Feb	0.4	0.3	0.3	A	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.5	0.5	0.5	0.4	0.2	0.2	0.2	0.29	0.53
6-Feb	0.2	0.2	A	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19	0.27
7-Feb	0.2	A	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.4	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.27	0.36
8-Feb	A	0.2	0.2	0.2	0.3	0.4	0.5	0.7	0.7	0.6	0.5	0.5	0.3	0.3	0.2	0.3	0.3	0.3	0.5	0.6	0.4	0.3	0.4	A	0.40	0.75
9-Feb	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.26	0.41
10-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.21	0.39
11-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	A	0.3	0.3	0.7	0.30	0.69
12-Feb	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.5	0.6	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.32	0.64
13-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	A	0.2	0.2	0.2	0.2	0.2	0.20	0.30
14-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	A	0.4	0.3	0.3	0.2	0.2	0.2	0.24	0.44
15-Feb	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	A	0.3	0.7	0.6	0.5	0.7	0.6	0.3	0.32	0.75
16-Feb	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23	0.39
17-Feb	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.6	0.5	0.3	0.3	0.5	0.4	0.5	A	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.32	0.59
18-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22	0.28
19-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.1	0.2	0.2	A	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.19	0.28
20-Feb	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.25	0.35
21-Feb	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.21	0.29
22-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.3	0.3	0.4	0.22	0.39
23-Feb	0.5	0.4	0.2	0.2	0.2	0.3	0.2	0.4	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	0.2	0.2	0.23	0.47
24-Feb	0.2	0.3	0.3	0.2	0.2	0.2	0.2	A	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	0.21	0.33
25-Feb	0.1	0.2	0.1	0.1	0.2	0.1	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.16	0.20
26-Feb	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.3	0.21	0.35
27-Feb	0.3	0.3	0.3	0.4	A	0.3	0.3	0.4	0.6	0.8	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.31	0.78
28-Feb	0.3	0.5	0.5	A	0.3	0.6	0.4	0.6	0.9	0.7	0.4	0.7	0.6	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.4	0.3	0.2	0.44	0.90
29-Feb	0.2	0.2	A	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.22	0.29
	0.28	0.28	0.26	0.25	0.24	0.25	0.27	0.34	0.40	0.37	0.29	0.28	0.26	0.24	0.22	0.24	0.24	0.27	0.31	0.32	0.29	0.28	0.27	0.27	Diurnal Average	
	0.55	0.56	0.55	0.68	0.45	0.57	0.57	0.89	1.20	1.14	0.53	0.72	0.55	0.49	0.47	0.40	0.50	0.51	0.75	1.19	1.01	0.75	0.82	0.91	Diurnal Maximum	

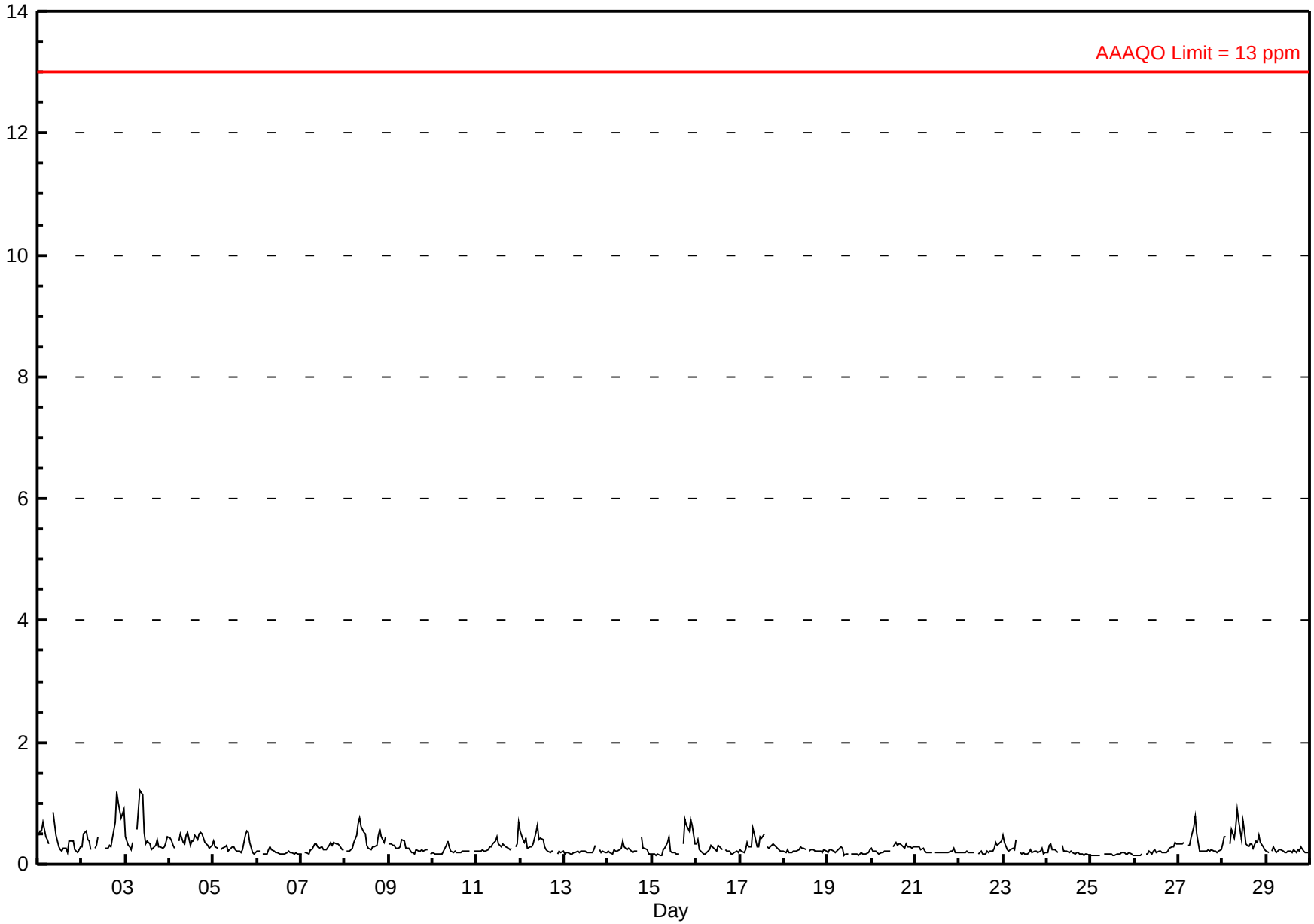
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm 24-hr na

Peace Airshed Zone Association

Hourly Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - February 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Carbon Monoxide (CO) - ppm

Henry Pirker - February 2012

Maximum Value: 3.17 ppm on Feb 17 08:00

Maximum Daily Average: 0.76 ppm on Feb 8

Minimum Value: 0.2 ppm on Feb 26 02:00

Minimum Daily Average: 0.24 ppm on Feb 25

Maximum Diurnal Average: 0.71 ppm at hour 8

Minimum Diurnal Average: 0.31 ppm at hour 15

Monthly Average: 0.422 ppm

Percentiles: $P_1 = 0.17$ $P_{10} = 0.21$ $Q_1 = 0.25$ Median = 0.33 $Q_3 = 0.47$ $P_{90} = 0.70$ $P_{99} = 1.67$

Hours in Service:	696
Hours of Data:	663
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	0.6	0.7	0.7	0.9	0.8	0.7	0.6	A	1.4	0.9	0.7	0.4	0.3	0.3	0.4	0.4	0.3	0.5	0.5	0.6	0.3	0.3	0.3	0.7	0.56	1.41
2-Feb	0.4	0.6	0.7	0.6	0.6	0.4	A	0.5	0.5	0.8	C	C	C	0.3	0.7	0.5	0.4	0.7	0.9	1.9	1.3	1.1	1.1	1.3	0.75	1.87
3-Feb	0.7	0.4	0.4	0.3	0.5	A	0.8	1.8	2.1	1.6	0.8	0.5	1.0	0.5	0.3	0.3	0.6	0.6	0.6	0.3	0.3	0.4	0.5	0.6	0.69	2.07
4-Feb	0.6	0.5	0.4	0.3	A	0.5	0.9	0.6	0.5	1.0	0.7	0.4	0.5	0.6	0.9	0.5	0.9	0.8	1.1	0.5	0.4	0.4	0.3	0.5	0.60	1.14
5-Feb	0.5	0.4	0.4	A	0.3	0.3	0.4	0.5	0.3	0.3	0.5	0.4	0.3	0.3	0.4	0.3	0.6	0.8	0.9	0.9	0.6	0.3	0.2	0.2	0.44	0.95
6-Feb	0.3	0.3	A	0.2	0.2	0.2	0.6	0.7	0.4	0.5	0.8	0.3	0.3	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.3	0.33	0.77
7-Feb	0.2	A	0.2	0.3	0.3	0.4	0.4	0.7	0.6	0.4	0.6	0.4	0.3	0.3	0.3	0.5	0.6	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.40	0.70
8-Feb	A	0.2	0.3	0.3	0.3	0.4	1.5	1.4	1.1	0.9	1.7	0.7	0.5	0.3	0.3	0.6	0.4	0.4	3.0	0.8	0.6	0.4	0.8	A	0.76	3.00
9-Feb	0.4	0.5	0.3	0.8	0.3	0.3	0.4	0.9	0.8	0.4	0.4	0.4	0.3	0.5	0.2	0.4	0.3	0.3	0.3	0.3	0.3	0.3	A	0.2	0.41	0.94
10-Feb	0.3	0.2	0.2	0.2	0.2	0.2	0.5	0.8	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	A	0.3	0.3	0.33	0.77
11-Feb	0.3	0.3	0.3	0.4	0.3	0.5	0.4	1.0	0.4	0.5	0.5	0.5	0.5	0.3	0.4	0.3	0.3	0.3	0.3	0.4	A	0.4	0.5	2.1	0.48	2.09
12-Feb	0.7	0.6	0.5	0.7	0.3	0.3	0.4	1.0	0.7	1.0	0.5	0.6	0.6	0.5	0.3	0.3	0.3	0.3	0.3	A	0.2	0.3	0.3	0.3	0.46	1.03
13-Feb	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.4	A	0.3	0.2	0.2	0.2	0.2	0.24	0.40
14-Feb	0.3	0.3	0.2	0.3	0.3	0.5	0.5	0.4	0.8	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.3	A	0.8	0.3	0.4	0.3	0.2	0.2	0.37	0.81
15-Feb	0.2	0.2	0.2	0.2	0.2	0.2	1.0	0.4	0.9	1.1	0.4	0.2	0.2	0.2	0.3	0.3	A	0.7	1.1	1.1	1.0	1.4	1.3	0.6	0.58	1.44
16-Feb	0.5	0.5	0.4	0.3	0.2	0.2	0.3	0.4	0.6	0.4	0.4	0.3	0.4	0.4	0.3	A	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.32	0.59
17-Feb	0.3	0.3	0.3	0.4	0.5	0.4	0.5	3.2	1.4	0.4	0.4	0.6	0.5	0.7	A	0.4	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.55	3.17
18-Feb	0.4	0.3	0.5	0.3	0.2	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.3	A	0.3	0.3	0.3	0.4	0.3	0.2	0.2	0.2	0.3	0.3	0.31	0.50
19-Feb	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.4	0.4	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.24	0.39
20-Feb	0.4	0.2	0.3	0.3	0.2	0.2	0.3	0.2	0.3	0.3	0.3	A	0.4	0.4	0.4	0.4	0.4	0.6	0.3	0.5	0.4	0.4	0.3	0.3	0.35	0.58
21-Feb	0.3	0.3	0.6	0.4	0.4	0.4	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.2	0.27	0.55
22-Feb	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	A	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.6	0.6	0.4	0.5	0.30	0.61
23-Feb	0.7	0.6	0.3	0.4	0.4	0.3	0.4	0.6	A	0.3	0.3	0.4	0.2	0.2	0.2	0.5	0.2	0.3	0.3	0.3	0.3	0.5	0.2	0.2	0.35	0.66
24-Feb	0.3	0.4	0.5	0.6	0.3	0.3	0.2	A	0.6	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.30	0.64
25-Feb	0.2	0.2	0.2	0.2	0.2	0.2	A	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.3	0.6	0.3	0.2	0.24	0.55
26-Feb	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.5	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.27	0.45
27-Feb	0.6	0.4	0.4	0.4	A	0.4	0.5	0.6	0.9	0.9	0.8	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.41	0.95
28-Feb	0.4	0.7	0.6	A	0.5	1.7	0.5	1.2	1.5	0.9	0.5	0.9	0.6	0.5	0.3	0.7	0.6	0.4	0.5	0.4	0.7	0.5	0.4	0.3	0.67	1.69
29-Feb	0.3	0.2	A	0.3	0.4	0.2	0.4	0.6	0.3	0.4	0.3	0.3	0.3	0.4	0.3	0.4	0.5	0.5	0.4	0.7	0.3	0.2	0.2	0.2	0.35	0.66
	0.37	0.36	0.36	0.37	0.32	0.38	0.47	0.71	0.67	0.55	0.47	0.39	0.37	0.33	0.31	0.34	0.36	0.40	0.54	0.46	0.40	0.40	0.38	0.42	Diurnal Average	
	0.71	0.70	0.69	0.86	0.76	1.69	1.47	3.17	2.07	1.61	1.68	0.90	0.99	0.69	0.86	0.68	0.87	0.81	3.00	1.87	1.32	1.44	1.26	2.09	Diurnal Maximum	

C - Calibration

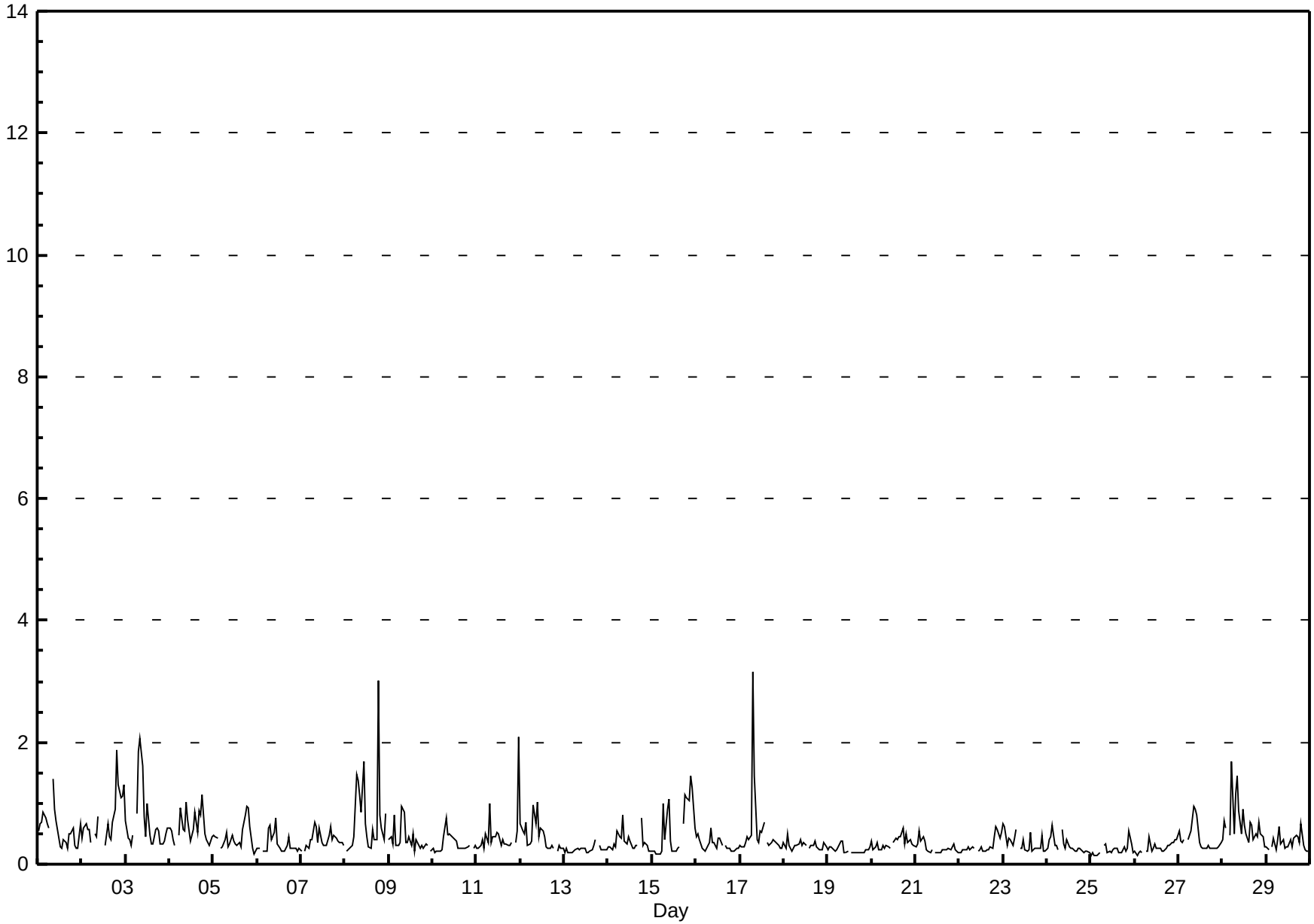
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Carbon Monoxide (CO) - ppm

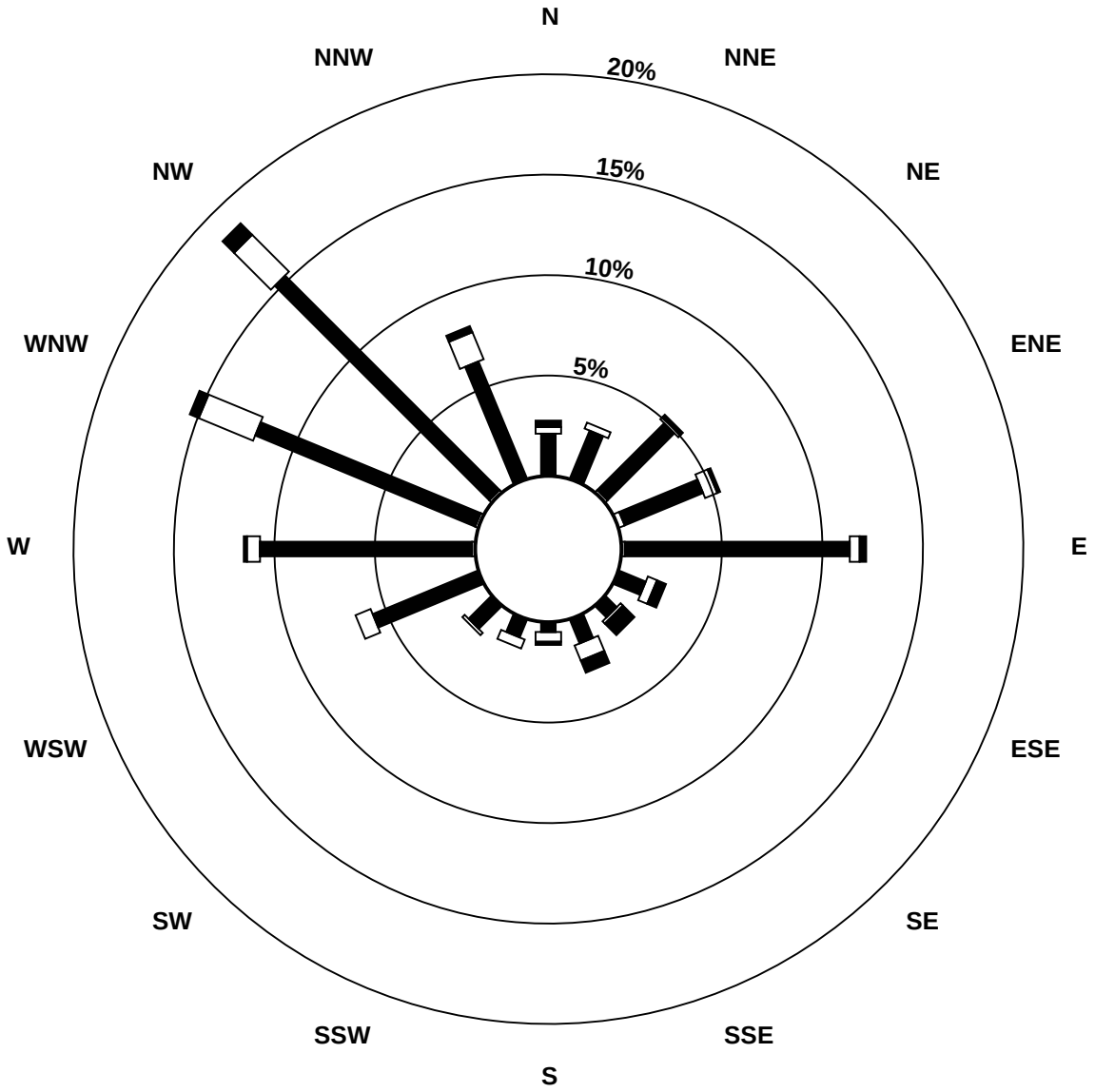
Henry Pirker - February 2012



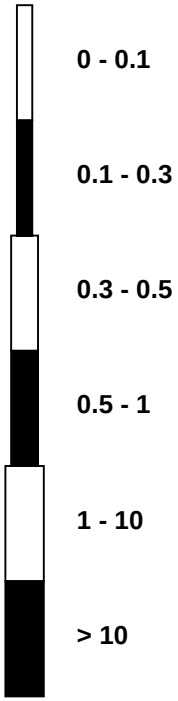
Pollutant Rose

Carbon Monoxide (CO) - ppm

Henry Pirker - February 2012



Pollutant Classes (ppm)



Peace Airshed Zone Association

Eight Hour Running Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - February 2012

Number of Exceedences (AAAQO): 8-hr: 0
Maximum Value: 0.78 ppm on Feb 3 01:00

Minimum Value: 0.15 ppm on Feb 25 07:00

Percentiles: P_1 = 0.15 P_{10} = 0.18 Q_1 = 0.20 Median = 0.24 Q_3 = 0.33 P_{90} = 0.43 P_{99} = 0.70

Hours in Service:	696
Hours of Data:	689
Hours of Missing Data:	7
Hours of Calibration:	7
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Feb	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.56
2-Feb	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	N	N	N	N	N	N	N	0.4	0.5	0.6	0.6	0.7	0.8	0.76
3-Feb	0.8	0.8	0.7	0.6	0.5	0.5	0.4	0.4	0.5	0.7	0.7	0.7	0.7	0.7	0.6	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.78
4-Feb	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.44
5-Feb	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.37
6-Feb	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.33
7-Feb	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	0.3	0.3	0.3	0.3	0.3	0.3	0.32
8-Feb	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.52
9-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	0.2	0.2	0.2	0.2	0.42
10-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	0.25
11-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.34
12-Feb	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.43
13-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22
14-Feb	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	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.27
15-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.5	0.6	0.56
16-Feb	0.5	0.5	0.5	0.4	0.4	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	0.2	0.2	0.2	0.2	0.2	0.2	0.54
17-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.43
18-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	0.26
19-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
20-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.31
21-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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.28
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	0.3	0.3	0.28
23-Feb	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.34
24-Feb	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	0.2	0.2	0.26
25-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	0.18
26-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.27
27-Feb	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.47
28-Feb	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.61
29-Feb	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.32
Diurnal Maximums	0.78	0.77	0.71	0.59	0.51	0.49	0.49	0.49	0.55	0.67	0.70	0.72	0.72	0.67	0.63	0.55	0.46	0.43	0.43	0.49	0.56	0.62	0.69	0.76	

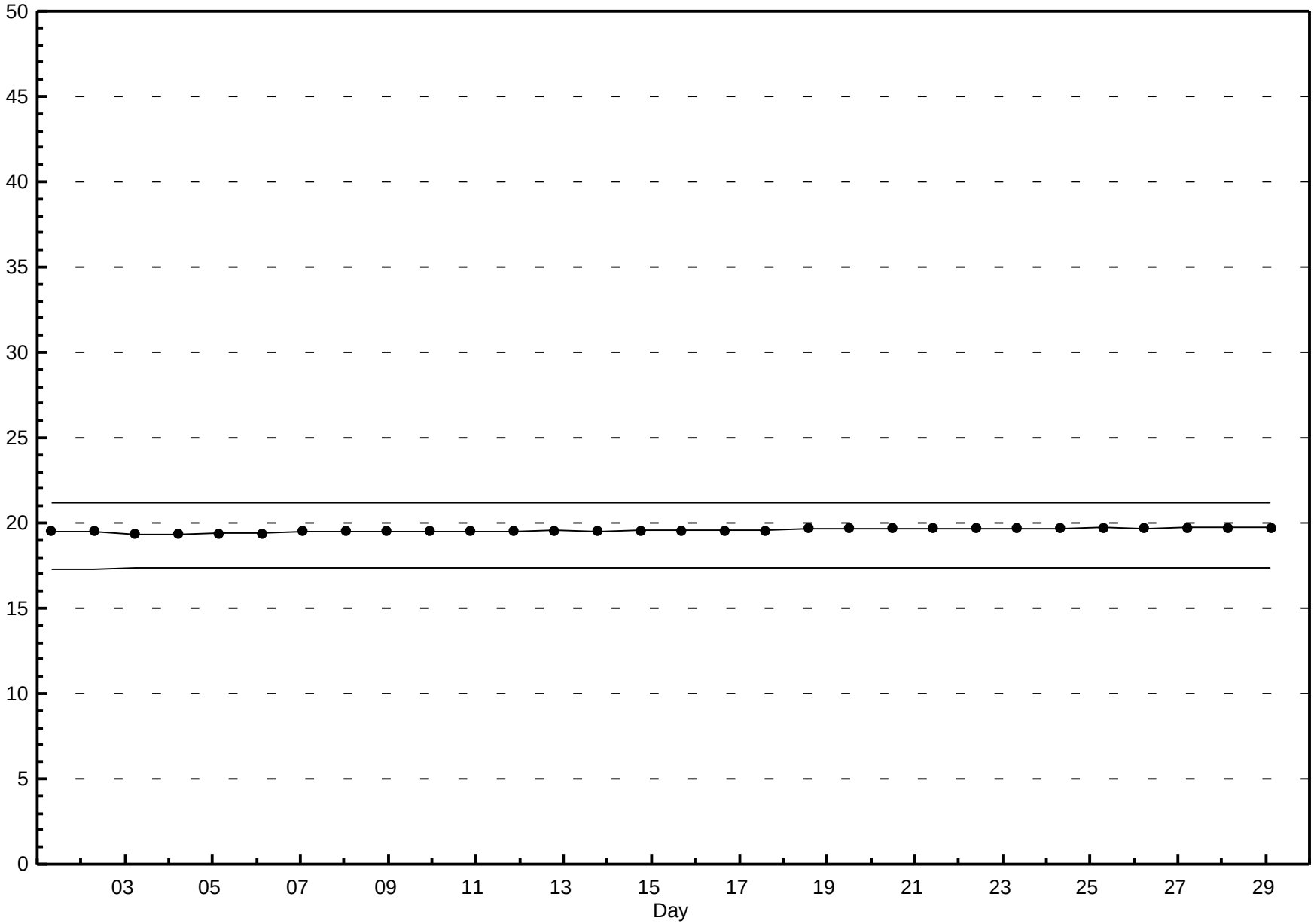
N - Not Valid
Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 5 ppm

Peace Airshed Zone Association

Span Responses

Carbon Monoxide (CO)

Henry Pirker - February 2012



Peace Airshed Zone Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Henry Pirker - February 2012

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

Maximum Value: 8.02 ppm on Feb 1 02:00

Maximum Daily Average: 2.84 ppm on Feb 1

Minimum Value: 1.9 ppm on Feb 21 09:00

Minimum Daily Average: 2.00 ppm on Feb 13

Maximum Diurnal Average: 2.52 ppm at hour 2

Minimum Diurnal Average: 2.10 ppm at hour 17

Monthly Average: 2.297 ppm

Percentiles: P_1 = 1.93 P_{10} = 1.99 Q_1 = 2.05 Median = 2.20 Q_3 = 2.46 P_{90} = 2.75 P_{99} = 3.25

Hours in Service:	696
Hours of Data:	662
Hours of Missing Data:	34
Hours of Calibration:	33
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	3.7	8.0	4.5	3.5	2.7	2.6	2.6	A	3.5	2.7	2.5	2.2	2.1	2.2	2.3	2.2	2.0	2.1	2.4	2.4	2.1	2.0	2.1	2.9	2.84	8.02
2-Feb	2.3	2.6	2.9	3.8	2.8	2.4	A	2.6	2.6	2.7	2.8	C	C	C	2.3	2.2	2.0	2.2	2.4	2.7	2.7	2.5	2.6	2.6	2.59	3.84
3-Feb	2.4	2.5	2.5	2.5	2.7	A	2.8	2.9	2.9	2.8	2.6	2.5	2.5	2.3	2.1	2.1	2.1	2.3	2.4	2.4	2.4	2.5	2.4	2.5	2.49	2.88
4-Feb	2.6	2.5	2.5	2.5	A	2.8	2.8	2.7	2.8	3.0	2.8	2.3	M	2.5	2.4	2.3	2.3	2.3	2.4	2.7	2.8	2.8	2.8	2.9	2.61	2.95
5-Feb	3.0	2.9	3.0	A	3.1	3.1	3.1	2.9	2.5	2.5	2.5	2.4	2.2	2.1	2.0	2.1	2.1	2.3	2.3	2.3	2.2	2.1	2.1	2.1	2.48	3.13
6-Feb	2.2	2.2	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.08	2.16
7-Feb	2.1	A	2.1	2.2	2.2	2.3	2.4	2.4	2.5	2.5	2.4	2.5	2.3	2.3	2.3	2.4	2.3	2.4	2.4	2.4	2.5	2.5	2.5	2.6	2.36	2.55
8-Feb	A	2.7	2.8	3.0	3.1	3.1	3.1	3.1	3.2	3.2	3.1	3.0	2.6	2.5	2.3	2.4	2.4	2.4	2.5	2.8	2.7	2.7	2.7	A	2.79	3.20
9-Feb	2.7	2.7	2.7	2.7	2.8	2.8	2.8	2.8	2.8	2.8	2.7	2.4	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.3	2.2	A	2.2	2.47	2.84
10-Feb	2.2	2.2	2.1	2.1	2.2	2.2	2.1	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	2.3	2.3	2.21	2.33
11-Feb	2.4	2.4	2.4	2.4	2.5	2.5	2.7	2.8	2.7	2.8	2.9	2.8	2.7	2.5	2.5	2.5	2.5	2.4	2.4	2.4	A	2.4	2.5	2.7	2.56	2.87
12-Feb	2.8	2.6	2.6	2.7	2.7	3.0	2.9	3.0	3.3	3.2	3.0	2.7	2.5	2.4	2.3	2.2	1.9	2.0	2.0	A	2.0	2.0	2.0	2.0	2.51	3.27
13-Feb	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.00	2.03
14-Feb	2.0	2.0	2.0	2.2	2.1	2.1	2.3	2.4	2.5	2.5	2.5	2.3	2.2	2.1	2.1	2.1	2.0	A	2.2	2.0	2.1	2.0	2.0	2.0	2.17	2.52
15-Feb	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.1	2.3	2.4	2.1	2.0	2.0	2.0	2.0	2.0	A	2.1	2.4	2.4	2.3	2.5	2.3	2.2	2.14	2.50
16-Feb	2.4	2.5	2.3	2.5	2.7	2.8	2.7	2.7	2.8	2.8	2.8	2.7	2.8	2.5	2.4	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.40	2.78
17-Feb	2.1	2.0	2.0	2.1	2.4	2.4	2.3	2.4	2.4	2.5	2.6	2.6	2.6	2.5	A	2.2	2.2	2.1	2.1	2.1	2.2	2.1	2.0	2.1	2.26	2.62
18-Feb	2.1	2.1	2.2	2.3	2.4	2.4	2.4	2.4	2.4	2.5	2.4	2.3	2.2	A	2.1	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.21	2.49
19-Feb	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.3	1.9	2.0	1.9	A	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.11	2.38
20-Feb	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.4	2.4	2.5	2.6	A	2.4	2.4	2.3	2.3	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.23	2.57
21-Feb	2.2	2.2	2.2	2.2	2.4	2.1	2.0	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	1.9	1.9	2.01	2.39
22-Feb	1.9	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	A	1.9	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.3	2.00	2.28
23-Feb	2.4	2.3	2.1	2.2	2.2	2.2	2.2	2.2	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.10	2.37
24-Feb	2.2	2.4	2.3	2.2	2.3	2.2	2.3	A	2.2	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	2.09	2.38
25-Feb	2.0	2.0	2.0	2.0	2.0	2.0	A	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.04	2.08
26-Feb	2.1	2.1	2.1	2.1	2.1	A	2.2	2.2	2.2	2.4	2.3	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.1	2.2	2.5	2.18	2.50
27-Feb	2.4	2.6	2.3	2.4	A	2.3	2.6	3.1	3.1	2.6	2.6	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.28	3.11
28-Feb	2.2	2.5	2.4	A	2.4	3.0	2.4	2.4	2.5	2.5	2.3	2.6	2.5	2.2	2.2	2.1	2.2	2.1	2.2	2.1	2.2	2.3	2.3	2.3	2.35	2.95
29-Feb	2.4	2.4	A	2.5	2.6	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.14	2.61
	2.32	2.52	2.39	2.40	2.41	2.40	2.43	2.45	2.51	2.48	2.43	2.29	2.24	2.19	2.14	2.12	2.10	2.13	2.17	2.21	2.18	2.19	2.20	2.25	Diurnal Average	
	3.71	8.02	4.48	3.84	3.10	3.13	3.14	3.10	3.45	3.23	3.05	2.97	2.76	2.55	2.52	2.48	2.47	2.44	2.49	2.77	2.78	2.78	2.76	2.95	Diurnal Maximum	

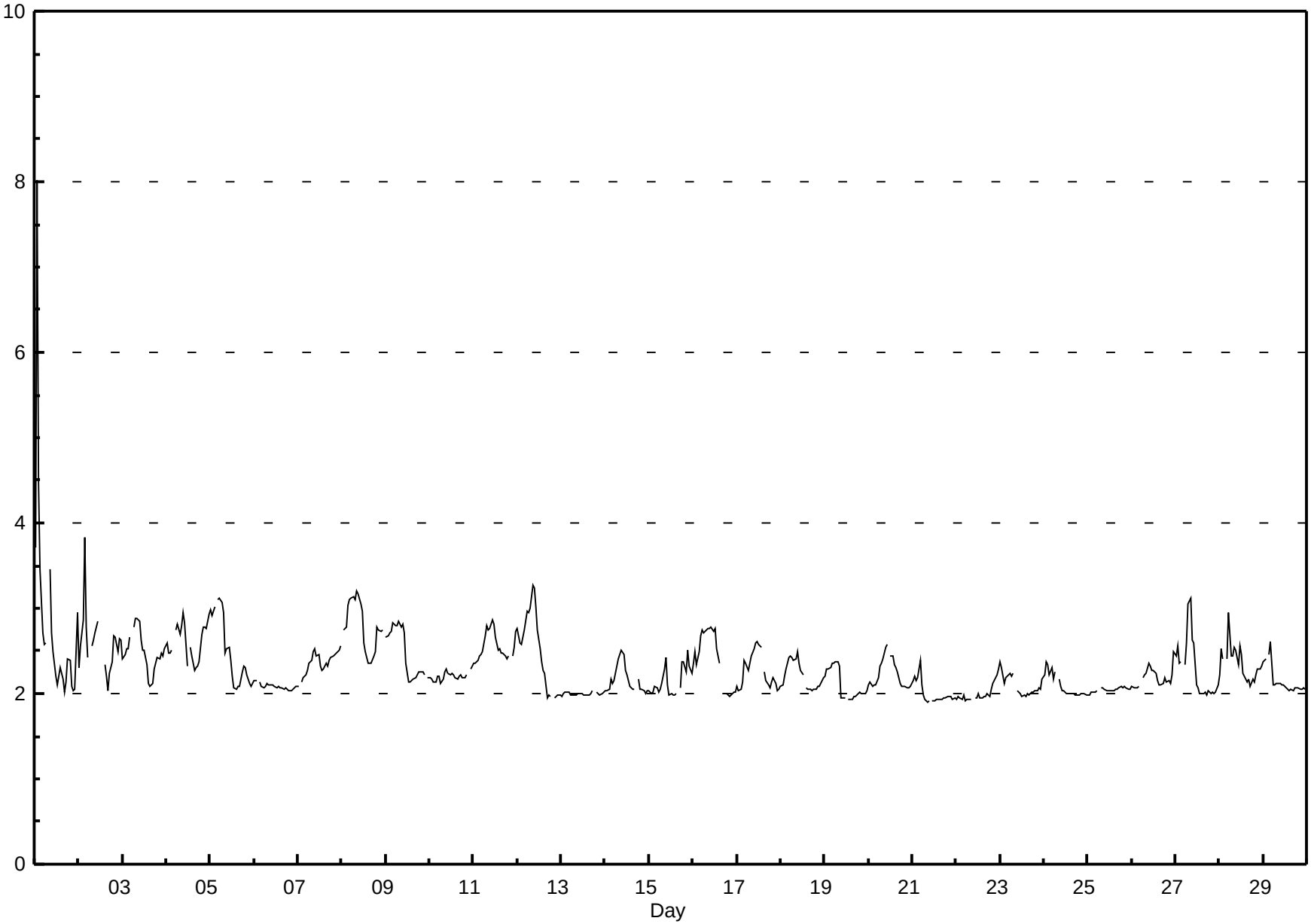
C - Calibration M - Maintenance A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Henry Pirker - February 2012



Peace Airshed Zone Association

Hourly Maximums

Total Hydrocarbons (THC) - ppm

Henry Pirker - February 2012

Maximum Value: 17.13 ppm on Feb 1 02:00

Maximum Daily Average: 4.54 ppm on Feb 1

Minimum Value: 1.9 ppm on Feb 21 09:00

Minimum Daily Average: 2.03 ppm on Feb 13

Maximum Diurnal Average: 3.01 ppm at hour 3

Minimum Diurnal Average: 2.21 ppm at hour 17

Monthly Average: 2.498 ppm

Percentiles: P_1 = 1.95 P_{10} = 2.02 Q_1 = 2.12 Median = 2.35 Q_3 = 2.62 P_{90} = 2.95 P_{99} = 5.39

Hours in Service:	696
Hours of Data:	662
Hours of Missing Data:	34
Hours of Calibration:	33
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	5.6	17.1	15.9	4.5	3.4	3.7	4.5	A	9.3	3.0	2.9	2.3	2.3	2.4	2.4	2.3	2.1	2.5	3.2	3.4	2.1	2.1	2.1	5.4	4.54	17.13
2-Feb	2.6	2.8	6.0	7.4	4.2	2.6	A	2.7	2.8	3.3	3.1	C	C	C	2.4	2.4	2.1	2.8	2.7	3.0	2.9	2.7	3.3	3.5	3.26	7.42
3-Feb	2.5	2.6	2.6	2.7	2.7	A	3.1	3.1	3.2	3.0	3.5	2.6	2.6	2.5	2.3	2.1	2.3	2.4	2.4	2.5	2.5	2.6	2.5	2.7	2.66	3.52
4-Feb	3.0	2.8	2.5	2.6	A	2.9	3.0	2.9	2.9	3.1	3.0	2.5	M	2.9	2.6	2.4	2.4	2.5	2.5	2.9	2.9	2.8	2.8	3.3	2.78	3.28
5-Feb	3.2	3.0	3.1	A	3.2	3.2	3.1	3.2	2.6	2.6	2.7	2.5	2.3	2.4	2.2	2.5	2.2	2.7	2.4	2.5	2.4	2.4	2.3	2.3	2.65	3.19
6-Feb	2.3	2.2	A	2.5	2.3	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.3	2.2	2.2	2.3	2.3	2.2	2.1	2.1	2.1	2.2	2.1	2.20	2.53
7-Feb	2.1	A	2.2	2.2	2.2	2.4	2.4	2.5	2.6	2.6	2.6	2.6	2.5	2.3	2.3	2.4	2.4	2.5	2.5	2.5	2.5	2.5	2.6	2.6	2.43	2.62
8-Feb	A	2.8	3.0	3.1	3.3	3.2	3.2	3.4	3.3	3.3	3.4	3.4	3.0	2.5	2.5	2.5	2.8	2.9	2.7	2.9	2.8	2.8	2.9	A	2.98	3.40
9-Feb	2.7	2.7	2.8	2.8	2.9	2.9	2.9	2.9	2.9	2.9	2.8	2.7	2.5	2.4	2.5	2.5	2.5	2.6	2.6	2.5	2.4	2.3	A	2.4	2.66	2.93
10-Feb	2.4	2.4	2.2	2.5	2.6	2.5	2.2	2.5	2.5	2.6	2.5	2.6	2.6	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.4	A	2.3	2.4	2.43	2.65
11-Feb	2.4	2.4	2.4	2.5	2.5	2.6	2.8	3.0	2.8	2.9	2.9	2.9	2.8	2.6	2.6	2.5	2.5	2.5	2.4	2.5	A	2.6	2.7	3.2	2.66	3.22
12-Feb	2.9	2.8	2.7	2.8	3.0	3.0	3.1	3.1	3.5	3.5	3.1	3.1	2.6	2.6	2.4	2.3	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.63	3.49
13-Feb	2.0	2.0	2.0	2.1	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	2.1	A	2.0	2.0	2.0	2.0	2.0	2.03	2.21
14-Feb	2.1	2.1	2.1	2.4	2.3	2.3	2.4	2.5	2.6	2.6	2.5	2.4	2.3	2.1	2.1	2.1	2.1	A	2.3	2.1	2.1	2.1	2.0	2.1	2.23	2.56
15-Feb	2.1	2.0	2.0	2.2	2.2	2.0	2.3	2.2	2.4	2.7	2.4	2.0	2.0	2.0	2.0	2.0	A	2.7	2.5	3.0	2.4	3.1	2.6	2.3	2.31	3.06
16-Feb	2.6	2.7	2.4	2.6	2.7	2.8	2.7	2.8	2.8	2.8	2.8	2.9	2.9	2.7	2.5	A	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.48	2.88
17-Feb	2.2	2.1	2.1	2.4	2.6	2.7	2.4	2.7	2.5	2.6	2.8	2.6	2.6	2.7	A	2.4	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.3	2.40	2.82
18-Feb	2.4	2.3	2.3	2.4	2.5	2.5	2.5	2.4	2.6	2.7	2.4	2.4	2.3	A	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.2	2.30	2.69
19-Feb	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.7	3.1	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.1	2.19	3.10
20-Feb	2.2	2.3	2.1	2.3	2.1	2.3	2.4	2.4	2.6	2.7	2.7	A	2.5	2.5	2.4	2.6	2.6	2.2	2.1	2.1	2.2	2.1	2.1	2.1	2.33	2.70
21-Feb	2.4	2.5	2.2	2.5	2.9	2.5	2.0	2.0	1.9	2.0	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	2.10	2.86
22-Feb	2.0	2.0	2.0	2.0	2.1	1.9	2.0	2.0	2.0	A	2.0	2.0	2.2	2.0	2.0	2.0	2.0	2.1	2.0	2.5	2.2	2.3	2.3	2.4	2.09	2.55
23-Feb	2.6	2.7	2.2	2.3	2.4	2.3	2.3	2.3	A	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.2	2.2	2.1	2.2	2.19	2.69
24-Feb	2.5	2.5	2.5	2.3	2.4	2.3	2.4	A	2.4	2.2	2.1	2.1	2.1	2.3	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.1	2.24	2.54
25-Feb	2.2	2.3	2.3	2.2	2.2	2.2	A	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.20	2.32
26-Feb	2.3	2.2	2.1	2.1	2.1	A	2.2	2.3	2.3	2.4	2.4	2.3	2.3	2.3	2.2	2.1	2.1	2.2	2.3	2.2	2.2	2.2	2.3	3.0	2.27	2.98
27-Feb	2.6	2.8	2.5	2.6	A	2.6	2.9	3.5	3.5	2.7	2.7	2.4	2.1	2.0	2.0	2.0	2.1	2.0	2.2	2.0	2.0	2.2	2.1	2.4	2.43	3.48
28-Feb	2.8	2.8	2.6	A	2.7	4.8	2.8	2.7	2.7	2.8	2.4	2.7	2.5	2.4	2.2	2.2	2.4	2.2	2.3	2.3	2.3	2.3	2.3	2.5	2.60	4.80
29-Feb	2.5	2.4	A	2.6	3.0	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.1	2.29	3.00
	2.55	2.99	3.01	2.70	2.64	2.63	2.61	2.61	2.87	2.63	2.59	2.43	2.38	2.32	2.23	2.24	2.21	2.29	2.30	2.37	2.27	2.29	2.31	2.51	Diurnal Average	
	5.59	17.13	15.86	7.42	4.19	4.80	4.47	3.48	9.32	3.49	3.52	3.40	3.02	2.85	2.62	2.64	2.83	2.91	3.23	3.43	2.94	3.06	3.32	5.41	Diurnal Maximum	

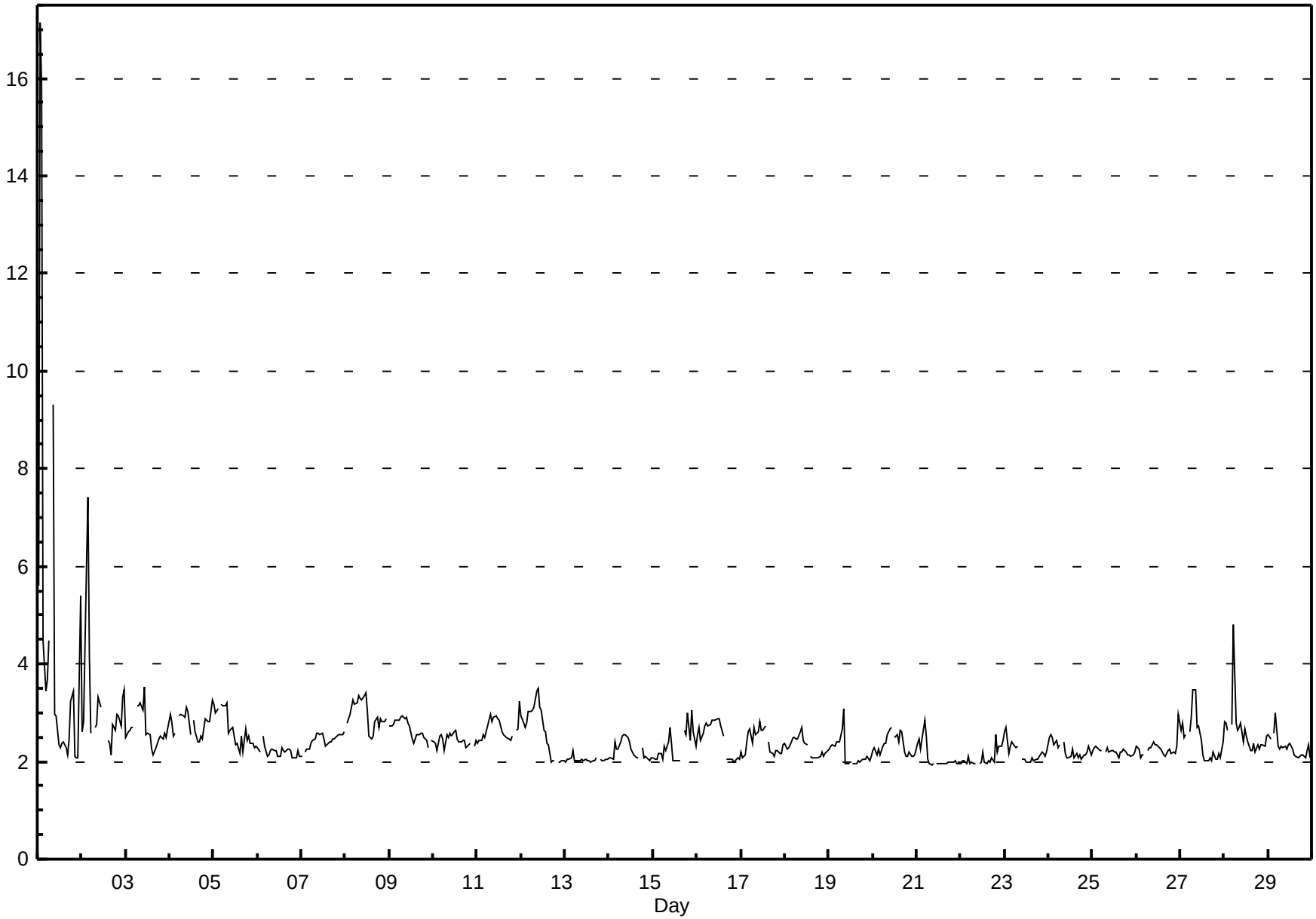
C - Calibration M - Maintenance A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Total Hydrocarbons (THC) - ppm

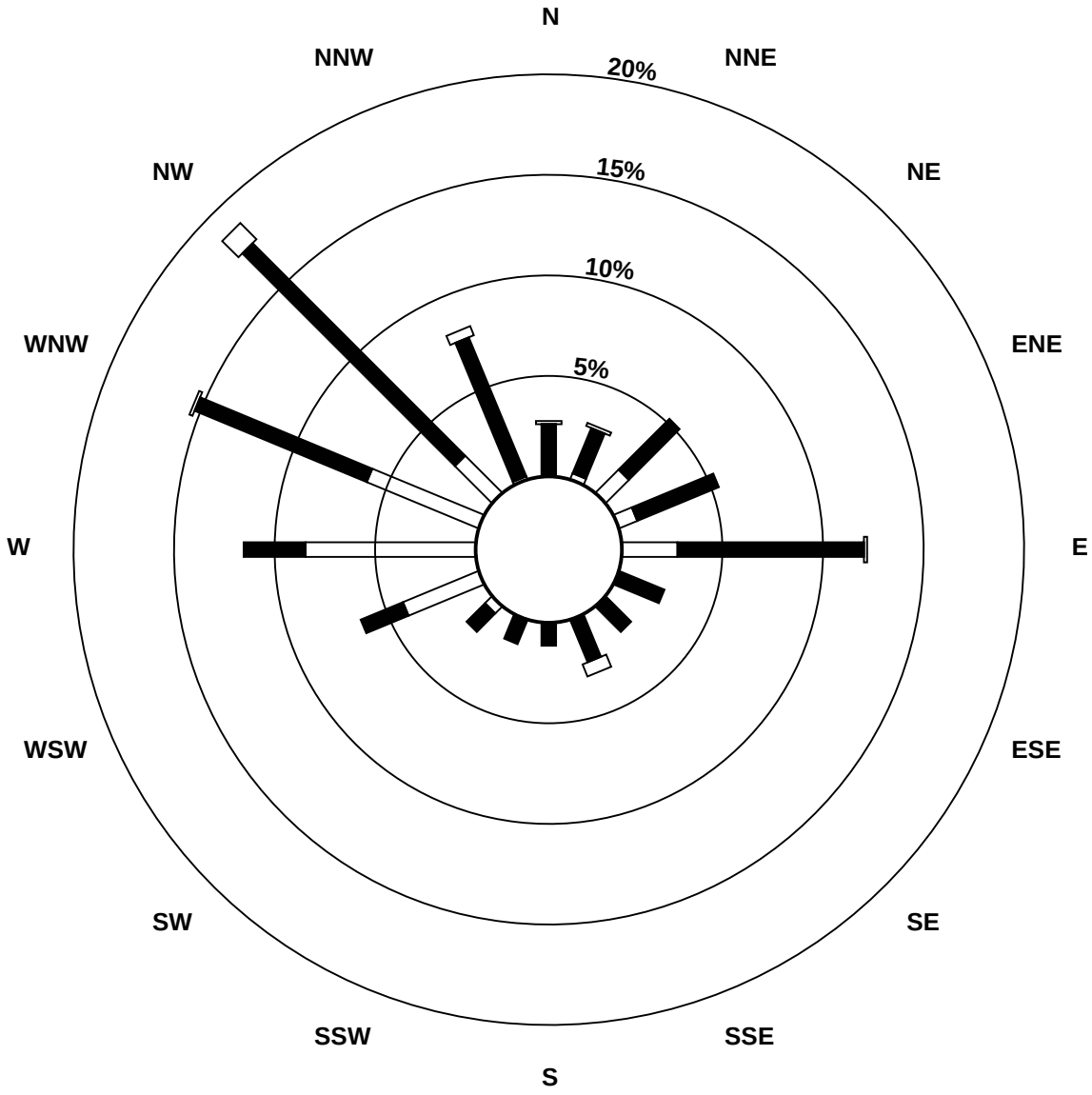
Henry Pirker - February 2012



Pollutant Rose

Total Hydrocarbons (THC) - ppm

Henry Pirker - February 2012



Pollutant Classes (ppm)

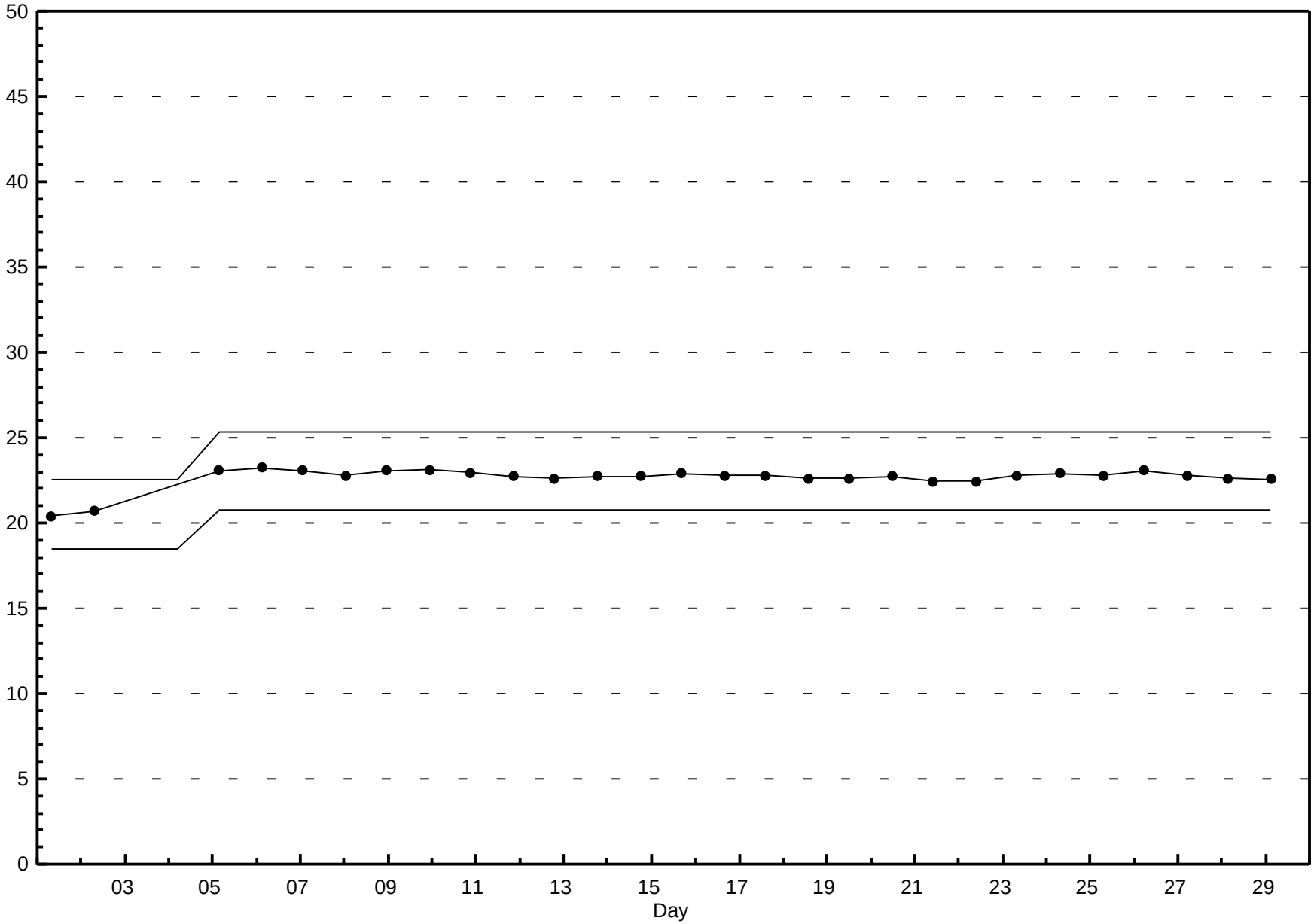
- 1.5 - 2.0
- 2.1 - 3.0
- 3.1 - 10.0
- > 10.0

Peace Airshed Zone Association

Span Responses

Total Hydrocarbons (THC)

Henry Pirker - February 2012



Peace Airshed Zone Association

Hourly Averages

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

Henry Pirker - February 2012

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

Maximum Value: 35.4 $\mu g/m^3$ on Feb 17 14:00

Maximum Daily Average: 12.6 $\mu g/m^3$ on Feb 17

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

Maximum Diurnal Average: 7.5 $\mu g/m^3$ at hour 14

Monthly Average: 4.98 $\mu g/m^3$

Minimum Daily Average: 1.0 $\mu g/m^3$ on Feb 7

Minimum Diurnal Average: 2.9 $\mu g/m^3$ at hour 23

Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.2$ Median = 3.3 $Q_3 = 7.4$ $P_{90} = 11.8$ $P_{99} = 28.3$

Hours in Service:	630
Hours of Data:	564
Hours of Missing Data:	66
Hours of Calibration:	4
Percent Operational Time:	90.2

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	N	0	0	0	3	11	3	0	10	0	0	3	N	0	N	N	N	N	7	4	0	0	0	0	2.2	11.0
2-Feb	4	3	0	0	0	0	0	1	0	0	3	3	0	N	N	N	N	0	0	2	2	N	N	6	1.4	5.8
3-Feb	6	10	10	2	3	0	2	10	1	2	11	3	N	N	4	9	0	N	3	7	2	N	0	N	4.6	10.7
4-Feb	N	N	N	0	0	2	1	0	0	0	0	N	0	0	C	5	29	24	7	N	0	0	0	0	3.8	29.2
5-Feb	2	N	0	3	3	0	0	2	1	3	4	1	N	N	N	1	8	7	7	2	0	1	N	0	2.3	7.9
6-Feb	0	0	0	0	0	1	1	3	0	1	2	0	3	1	2	2	N	0	0	4	4	1	0	0	1.1	3.7
7-Feb	0	0	0	1	0	0	N	1	4	4	6	0	1	0	1	N	0	0	N	0	0	0	0	N	1.0	5.7
8-Feb	0	0	0	3	3	1	2	2	3	4	6	4	3	0	N	N	4	4	7	3	0	0	N	0	2.3	6.7
9-Feb	0	1	3	N	0	2	3	7	7	7	5	0	0	N	N	0	0	1	0	0	0	0	1	3	2.0	7.1
10-Feb	0	0	N	0	1	0	3	0	0	0	N	4	0	N	N	M	M	NS	NS	NS	NS	NS	NS	NS	--	4.3
11-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
12-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
13-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	C	C	C	6	0	0	N	1	0	1	5	4	0	--	5.7
14-Feb	0	2	1	0	3	2	0	0	2	7	3	2	0	N	0	N	3	11	18	14	8	5	0	0	3.6	18.2
15-Feb	0	0	1	3	1	0	N	4	0	3	11	2	0	0	0	N	0	5	16	31	14	16	14	13	6.1	30.6
16-Feb	9	8	7	3	3	3	4	3	10	12	6	9	10	18	9	11	7	3	0	5	7	4	N	0	6.5	18.2
17-Feb	2	5	8	11	6	3	3	10	21	22	14	22	34	35	28	9	13	8	8	10	13	15	1	0	12.6	35.4
18-Feb	2	5	8	4	6	4	6	7	8	13	13	11	4	7	7	10	9	11	7	0	0	0	0	9	6.3	13.3
19-Feb	2	1	0	13	7	16	15	20	12	0	N	0	5	2	3	0	N	N	N	6	3	1	0	0	5.3	19.7
20-Feb	2	7	0	0	5	11	6	7	12	13	5	5	14	21	28	21	15	3	1	0	12	14	8	3	8.9	28.4
21-Feb	12	13	15	3	2	5	0	N	3	0	1	0	0	N	0	0	N	0	N	8	0	N	0	5	3.6	15.4
22-Feb	0	0	N	3	3	1	3	12	8	5	7	7	9	4	N	N	0	0	0	4	7	15	5	0	4.3	14.6
23-Feb	7	16	10	1	7	4	6	8	5	7	0	2	4	0	0	9	7	3	2	3	5	5	1	1	4.6	16.1
24-Feb	3	8	5	12	7	4	7	9	8	5	0	6	7	1	3	2	2	0	0	1	3	4	1	3	4.2	11.9
25-Feb	2	2	2	3	3	7	2	2	2	3	1	3	7	6	1	5	3	4	3	0	2	4	0	1	3.0	7.4
26-Feb	6	2	5	3	3	5	4	6	4	7	10	16	10	10	10	17	4	6	3	12	8	11	12	17	7.9	16.9
27-Feb	13	11	11	9	14	16	11	14	13	11	17	8	8	0	0	0	6	5	4	0	0	1	2	2	7.2	16.6
28-Feb	10	17	13	8	5	0	9	13	11	14	16	20	35	26	9	6	11	11	6	11	4	12	12	10	12.0	34.6
29-Feb	9	10	6	10	7	11	7	3	4	4	0	6	6	12	6	3	5	4	4	10	11	9	5	5	6.6	11.5
	3.9	5.2	4.6	3.8	3.8	4.2	4.2	5.7	5.7	5.7	5.9	5.4	7.0	7.5	6.3	5.9	5.9	5.0	4.5	5.4	4.0	5.3	2.9	3.2	Diurnal Average	
	13.4	17.2	15.4	13.4	14.0	16.0	15.3	19.7	21.5	22.1	16.6	21.7	34.6	35.4	28.5	21.0	29.2	24.5	18.2	30.6	13.6	16.4	14.0	16.6	Diurnal Maximum	

C - Calibration M - Maintenance N - Not Valid NS - Not in service

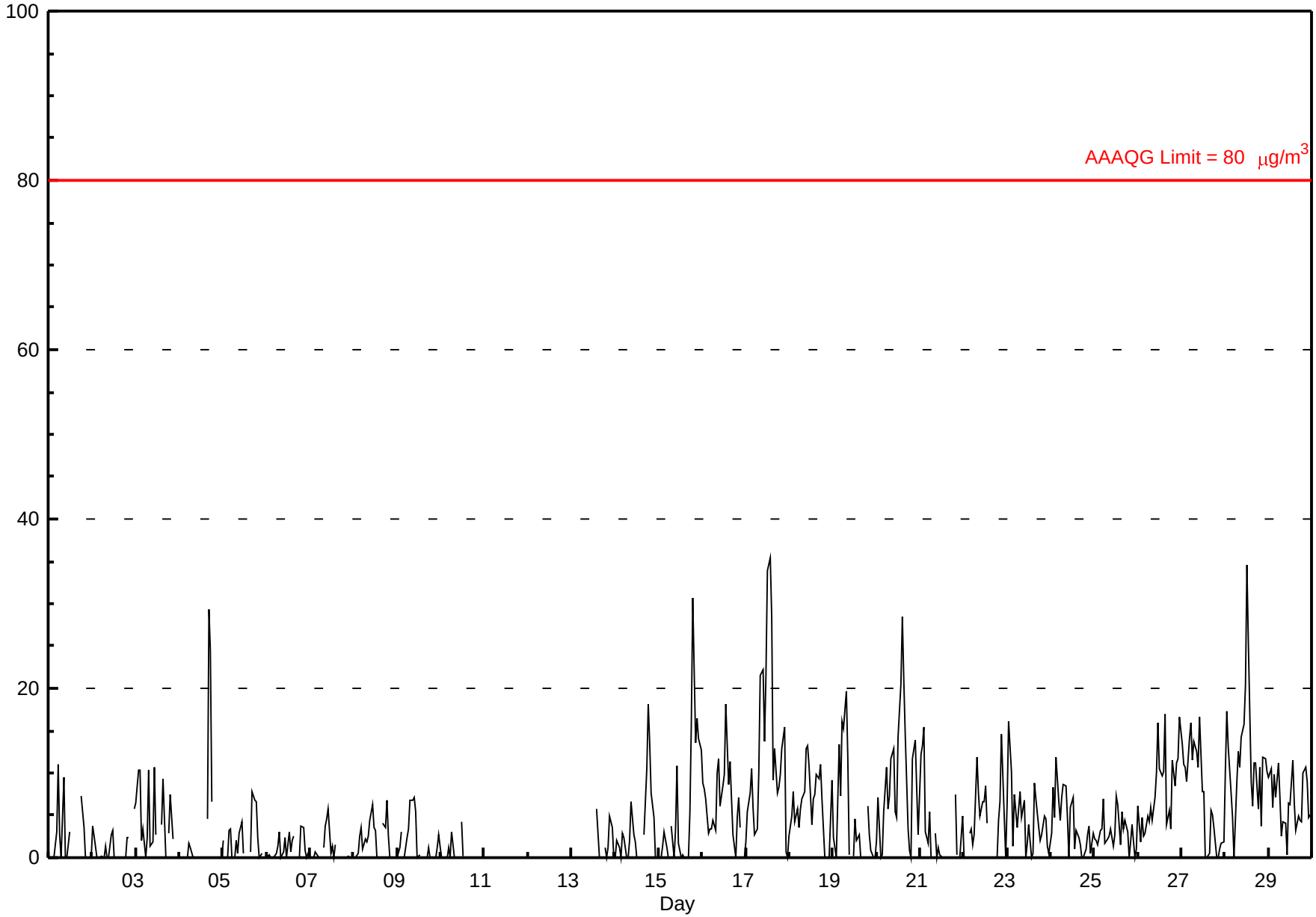
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

Peace Airshed Zone Association

Hourly Averages

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

Henry Pirker - February 2012



Peace Airshed Zone Association

Hourly Maximums

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

Henry Pirker - February 2012

Maximum Value: 40.3 $\mu g/m^3$ on Feb 17 13:00

Maximum Daily Average: 17.4 $\mu g/m^3$ on Feb 17

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

Minimum Daily Average: 1.8 $\mu g/m^3$ on Feb 7

Maximum Diurnal Average: 8.6 $\mu g/m^3$ at hour 13

Minimum Diurnal Average: 4.6 $\mu g/m^3$ at hour 23

Monthly Average: 7.07 $\mu g/m^3$

Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 1.8$ Median = 5.4 $Q_3 = 10.6$ $P_{90} = 15.5$ $P_{99} = 33.1$

Hours in Service:	630
Hours of Data:	624
Hours of Missing Data:	6
Hours of Calibration:	4
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	0	2	1	1	9	13	8	6	13	5	4	5	0	0	0	0	0	0	11	8	0	2	0	0	3.6	12.8
2-Feb	6	5	2	0	1	1	2	2	1	0	4	4	3	0	0	0	0	0	0	4	4	0	3	8	2.1	7.7
3-Feb	8	15	14	5	6	1	10	15	3	9	13	8	0	0	9	11	4	0	4	13	11	0	0	0	6.6	15.5
4-Feb	0	0	0	1	3	4	2	1	2	2	1	0	0	0	C	21	35	29	17	0	1	1	1	8	5.6	35.2
5-Feb	8	0	0	7	6	3	0	5	3	5	5	5	0	0	0	7	9	9	9	6	0	2	0	1	3.7	9.1
6-Feb	0	2	0	0	1	2	3	5	0	3	3	4	5	1	3	4	0	1	3	6	5	2	1	1	2.3	5.9
7-Feb	1	1	1	2	2	2	0	3	6	5	7	3	3	0	3	0	0	0	0	1	0	2	0	0	1.8	7.4
8-Feb	0	0	2	4	4	3	4	3	4	6	8	5	5	0	0	1	7	5	10	10	0	1	0	1	3.5	10.3
9-Feb	2	3	5	3	0	4	5	9	8	9	7	3	4	0	0	2	1	3	0	0	0	2	3	5	3.2	8.6
10-Feb	2	0	1	2	3	3	5	0	1	1	0	6	3	0	0	M	M	NS	NS	NS	NS	NS	NS	NS	--	6.5
11-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
12-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
13-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	C	C	C	11	6	4	0	4	4	5	7	7	0	--	11.3
14-Feb	0	7	7	0	6	6	1	1	5	9	4	3	2	0	0	0	6	16	20	19	11	7	2	2	5.6	19.6
15-Feb	3	3	4	8	8	2	0	7	5	12	14	3	1	2	1	0	0	10	29	34	22	19	16	14	9.0	34.0
16-Feb	11	10	8	5	7	7	7	6	13	13	12	12	14	20	16	13	12	5	1	9	9	6	0	0	8.9	19.9
17-Feb	6	10	11	15	15	4	9	13	27	27	18	27	40	37	39	14	16	12	14	14	21	21	5	1	17.4	40.3
18-Feb	10	9	10	6	8	10	10	9	12	15	15	14	7	13	12	12	12	14	14	2	3	0	6	11	9.8	15.4
19-Feb	9	7	10	15	11	20	20	22	17	9	0	4	7	4	4	0	0	0	5	7	4	4	4	4	7.8	21.8
20-Feb	6	10	4	4	8	12	7	10	13	14	12	11	18	27	30	27	17	11	2	5	16	16	11	8	12.5	30.3
21-Feb	14	15	18	13	6	7	2	2	5	0	3	3	1	0	0	1	0	0	0	11	8	0	4	7	4.9	17.6
22-Feb	2	0	1	5	5	4	10	14	12	9	11	10	10	9	0	0	0	0	0	6	15	18	11	6	6.6	17.6
23-Feb	7	24	24	8	9	7	7	9	7	9	1	6	7	0	7	11	9	5	5	4	9	8	7	7	8.3	23.8
24-Feb	11	12	10	14	10	9	9	11	10	8	1	10	9	5	4	4	5	2	0	6	6	5	3	6	7.0	13.5
25-Feb	6	4	3	4	9	10	4	6	5	4	4	8	9	9	4	7	5	5	4	2	4	5	1	4	5.4	9.8
26-Feb	8	4	6	4	4	5	5	7	6	9	11	18	18	12	18	19	11	8	6	16	14	12	14	21	10.6	20.6
27-Feb	20	13	13	14	14	17	16	18	17	17	19	12	11	2	1	4	6	6	6	6	2	3	3	3	10.1	19.6
28-Feb	19	20	14	9	8	5	11	14	13	15	16	30	37	33	16	10	14	14	10	12	8	15	13	11	15.3	37.2
29-Feb	13	13	9	12	9	13	10	6	5	5	3	10	12	13	10	5	7	7	6	14	13	12	6	7	9.2	14.0
	6.6	7.2	6.9	6.1	6.6	6.7	6.4	7.9	8.2	8.4	7.7	8.6	8.6	7.2	7.3	6.8	7.0	6.2	6.9	8.5	7.4	6.5	4.6	5.2	Diurnal Average	
	19.6	23.8	23.8	15.5	15.2	20.3	19.8	21.8	27.4	26.9	18.6	29.8	40.3	37.2	38.6	26.9	35.2	28.6	28.9	34.0	22.3	20.6	16.0	20.6	Diurnal Maximum	

C - Calibration M - Maintenance NS - Not in service

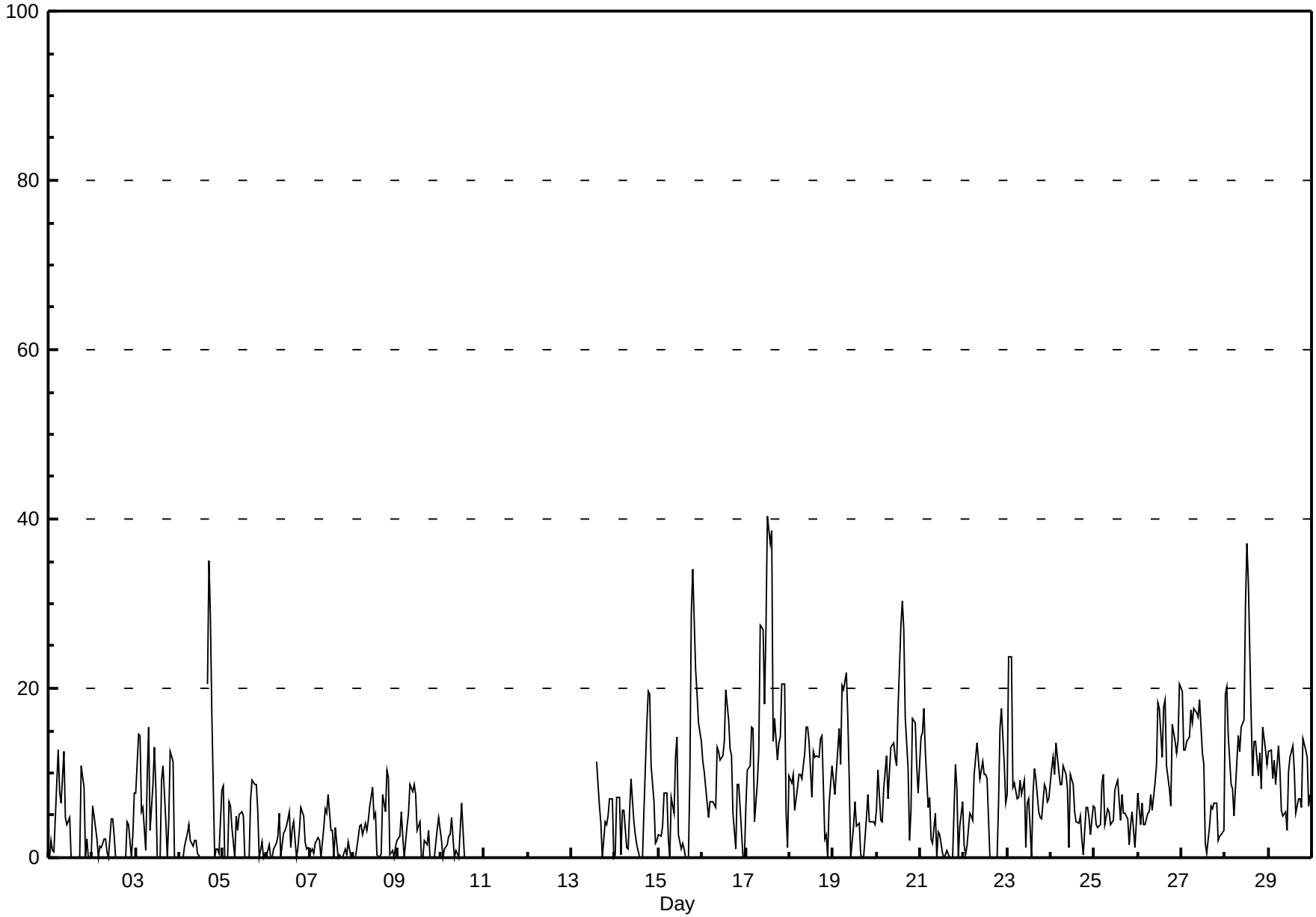
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

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

Henry Pirker - February 2012

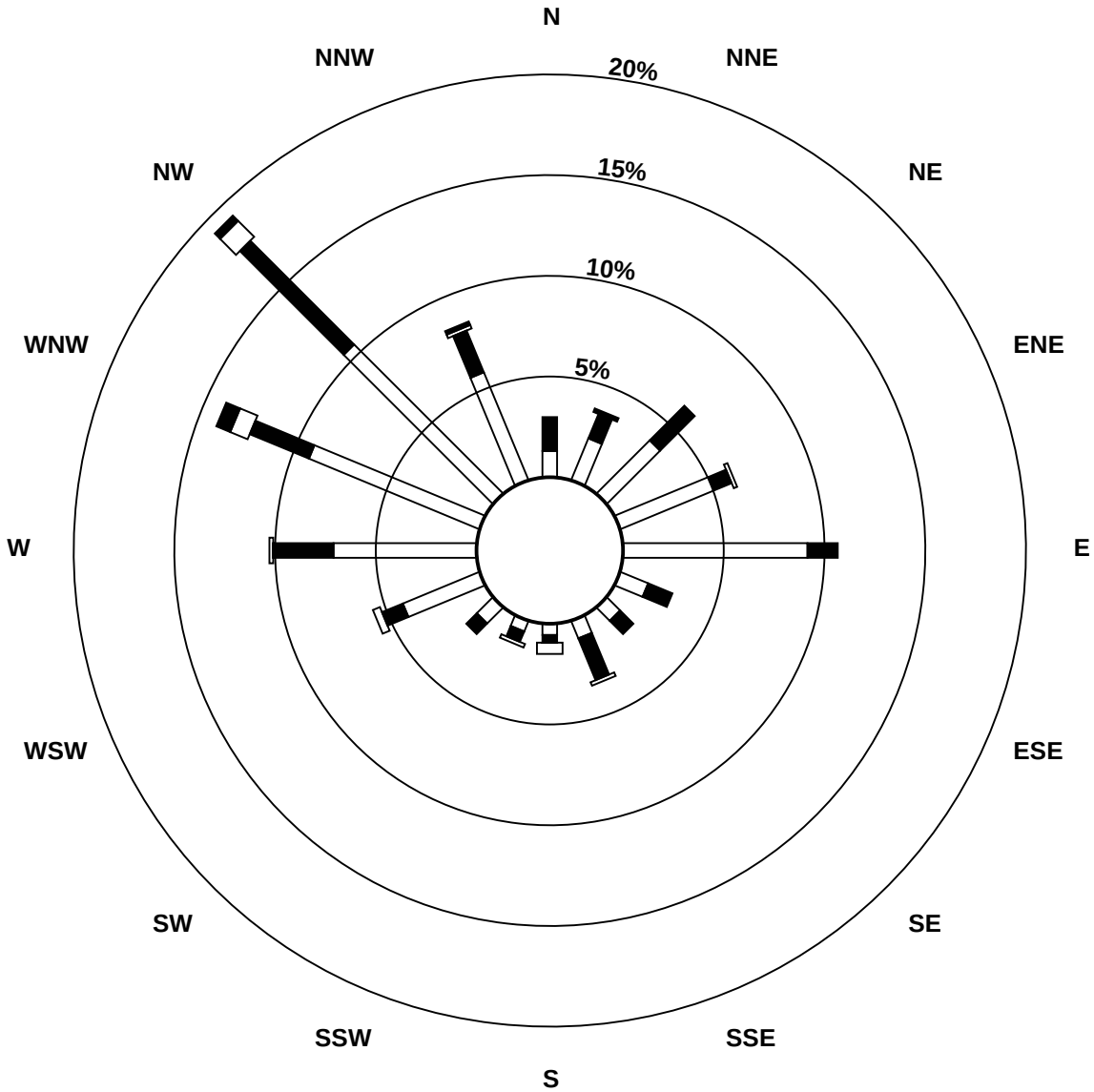


Peace Airshed Zone Association

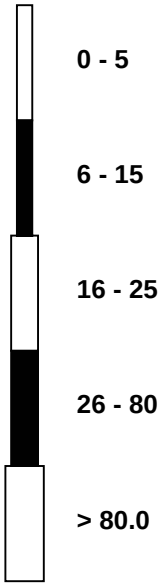
Pollutant Rose

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

Henry Pirker - February 2012



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



Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Henry Pirker - February 2012

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

Maximum Value: 7.8 ^{o}C on Feb 3 16:00

Maximum Daily Average: 1.4 ^{o}C on Feb 21

Minimum Value: -23 ^{o}C on Feb 11 08:00

Maximum Diurnal Average: 0.0 ^{o}C at hour 16

Monthly Average: -6.58 ^{o}C

Minimum Daily Average: -14.5 ^{o}C on Feb 11

Minimum Diurnal Average: -11.5 ^{o}C at hour 8

Percentiles: P_1 = -19.9 P_{10} = -15.4 Q_1 = -10.9 Median = -6.4 Q_3 = -1.7 P_{90} = 1.8 P_{99} = 6.6

Hours in Service:	696
Hours of Data:	696
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

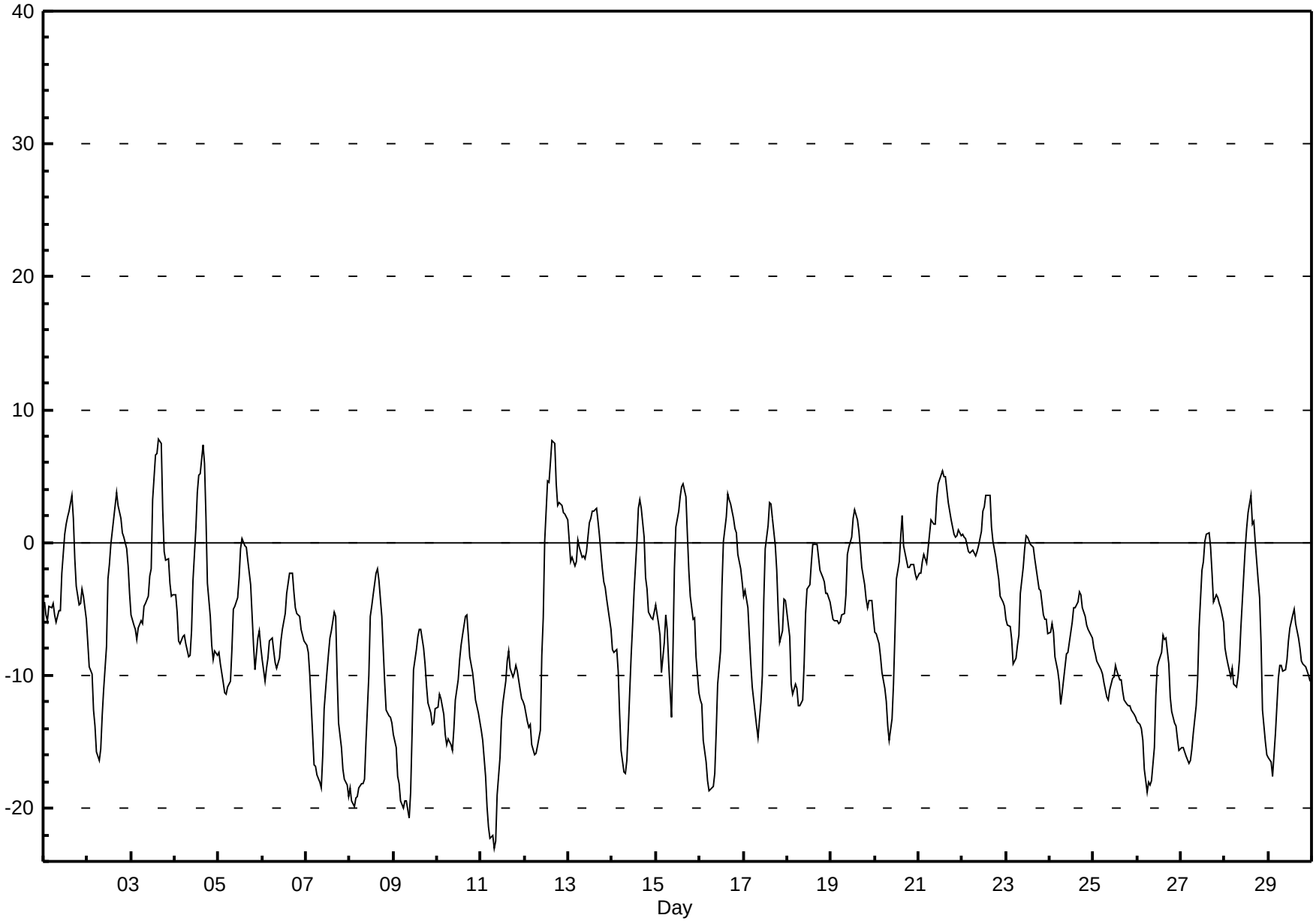
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-4	-5	-6	-5	-5	-5	-6	-6	-5	-5	-2	1	1	2	2	4	2	-1	-3	-5	-5	-4	-4	-6	-2.9	3.6
2-Feb	-7	-9	-10	-13	-14	-16	-16	-15	-13	-11	-8	-3	-2	0	2	3	4	3	2	1	0	0	-2	-4	-5.4	3.8
3-Feb	-5	-6	-7	-7	-6	-6	-6	-5	-5	-4	-3	-2	3	7	7	8	7	2	-1	-1	-1	-3	-4	-4	-1.7	7.8
4-Feb	-4	-5	-7	-8	-7	-7	-8	-9	-8	-7	-3	1	4	5	5	7	6	2	-3	-6	-8	-9	-8	-9	-3.5	7.3
5-Feb	-8	-9	-11	-11	-11	-11	-10	-8	-5	-5	-4	-3	0	0	0	0	-1	-3	-5	-8	-10	-7	-7	-8	-6.1	0.3
6-Feb	-9	-10	-10	-9	-7	-7	-8	-9	-9	-9	-7	-7	-5	-4	-3	-2	-2	-4	-5	-5	-6	-7	-7	-7	-6.6	-2.3
7-Feb	-8	-8	-10	-12	-17	-17	-17	-18	-19	-16	-12	-10	-8	-7	-7	-5	-6	-10	-14	-15	-17	-18	-18	-19	-12.8	-5.3
8-Feb	-19	-19	-20	-19	-19	-18	-18	-18	-18	-15	-10	-6	-5	-4	-2	-2	-3	-6	-8	-11	-13	-13	-13	-14	-12.2	-1.9
9-Feb	-14	-15	-18	-18	-19	-20	-19	-19	-21	-19	-14	-10	-8	-7	-7	-7	-8	-9	-11	-12	-13	-14	-14	-13	-13.7	-6.5
10-Feb	-12	-11	-12	-13	-14	-15	-15	-15	-16	-14	-12	-10	-9	-8	-7	-6	-5	-7	-9	-10	-11	-12	-13	-13	-11.2	-5.4
11-Feb	-14	-15	-18	-20	-21	-22	-22	-23	-22	-19	-16	-13	-12	-10	-9	-8	-10	-10	-10	-9	-10	-11	-12	-12	-14.5	-8.2
12-Feb	-12	-14	-14	-14	-15	-16	-16	-15	-14	-9	-6	0	5	4	6	8	7	4	3	3	3	2	2	2	-3.9	7.7
13-Feb	0	-1	-1	-2	-1	0	0	-1	-1	-1	-1	1	2	2	2	3	2	1	-2	-3	-3	-4	-6	-6	-0.9	2.6
14-Feb	-8	-8	-8	-10	-13	-16	-17	-17	-16	-14	-8	-6	-4	0	3	3	3	0	-3	-3	-5	-6	-6	-5	-6.9	3.2
15-Feb	-5	-6	-7	-10	-8	-5	-7	-9	-13	-8	-2	1	2	3	4	4	3	1	-2	-4	-6	-6	-9	-11	-4.1	4.4
16-Feb	-12	-12	-15	-17	-18	-19	-19	-18	-17	-14	-11	-8	-3	0	2	4	3	3	2	1	1	-1	-2	-3	-7.2	3.7
17-Feb	-4	-4	-5	-7	-9	-11	-13	-14	-15	-12	-10	-4	0	1	3	3	2	0	-2	-5	-8	-7	-4	-4	-5.4	3.0
18-Feb	-5	-7	-11	-11	-11	-11	-12	-12	-12	-9	-5	-3	-3	-2	0	0	0	-1	-2	-3	-3	-4	-4	-4	-5.7	-0.1
19-Feb	-5	-6	-6	-6	-6	-6	-5	-5	-4	-1	0	0	2	2	2	1	0	-2	-3	-4	-5	-4	-4	-6	-3.0	2.4
20-Feb	-7	-7	-8	-9	-10	-11	-12	-14	-15	-13	-11	-7	-3	-1	0	2	0	-1	-2	-2	-2	-2	-2	-3	-5.7	2.1
21-Feb	-2	-2	-1	-1	-2	-1	1	2	1	1	3	4	5	5	5	5	3	2	2	1	0	0	1	1	1.4	5.4
22-Feb	1	0	0	-1	-1	-1	-1	-1	-1	0	1	2	3	4	4	4	1	0	-1	-2	-3	-4	-4	-5	-0.2	3.6
23-Feb	-6	-6	-6	-7	-9	-9	-8	-7	-4	-2	0	0	0	0	0	0	-1	-3	-3	-4	-6	-6	-6	-7	-4.1	0.5
24-Feb	-7	-6	-7	-9	-10	-11	-12	-11	-9	-8	-8	-7	-6	-5	-5	-4	-4	-4	-5	-6	-6	-7	-7	-7	-7.1	-3.7
25-Feb	-8	-8	-9	-9	-10	-10	-11	-12	-12	-11	-10	-10	-9	-10	-10	-10	-11	-12	-12	-12	-12	-13	-13	-13	-10.7	-7.9
26-Feb	-14	-14	-14	-15	-17	-19	-18	-18	-18	-15	-12	-9	-9	-8	-7	-7	-7	-9	-12	-13	-14	-14	-15	-16	-13.0	-7.0
27-Feb	-15	-15	-16	-16	-17	-16	-16	-14	-12	-10	-6	-2	-1	0	1	1	0	-2	-4	-4	-4	-5	-5	-6	-7.8	0.7
28-Feb	-8	-9	-9	-10	-9	-11	-11	-10	-9	-6	-2	0	1	2	4	1	2	0	-3	-4	-8	-13	-15	-16	-6.0	3.6
29-Feb	-16	-17	-18	-16	-14	-10	-9	-9	-10	-10	-9	-7	-6	-5	-5	-6	-7	-8	-9	-9	-9	-10	-10	-10	-10.0	-5.0
	-8.2	-8.9	-9.7	-10.4	-11.1	-11.2	-11.4	-11.5	-11.1	-9.2	-6.5	-4.0	-2.3	-1.1	-0.4	0.0	-0.7	-2.5	-4.3	-5.3	-6.2	-6.8	-7.2	-7.9	Diurnal Average	
	0.7	0.4	0.2	-0.7	-0.8	0.2	0.6	1.7	1.4	1.3	3.4	4.4	5.0	6.6	6.7	7.8	7.5	4.5	2.8	3.0	2.8	2.3	2.1	1.7	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Henry Pirker - February 2012



Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Henry Pirker - February 2012

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

Maximum Value: 87.9 % on Feb 22 05:00 Maximum Daily Average: 80.0 % on Feb 24

Minimum Value: 35 % on Feb 28 15:00 Minimum Daily Average: 56.1 % on Feb 27

Maximum Diurnal Average: 75.7 % at hour 5 Minimum Diurnal Average: 52.4 % at hour 16

Monthly Average: 66.64 % Percentiles: P_1 = 39.1 P_{10} = 50.8 Q_1 = 58.4 Median = 68.4 Q_3 = 75.3 P_{90} = 80.3 P_{99} = 84.8

Hours in Service:	696
Hours of Data:	696
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

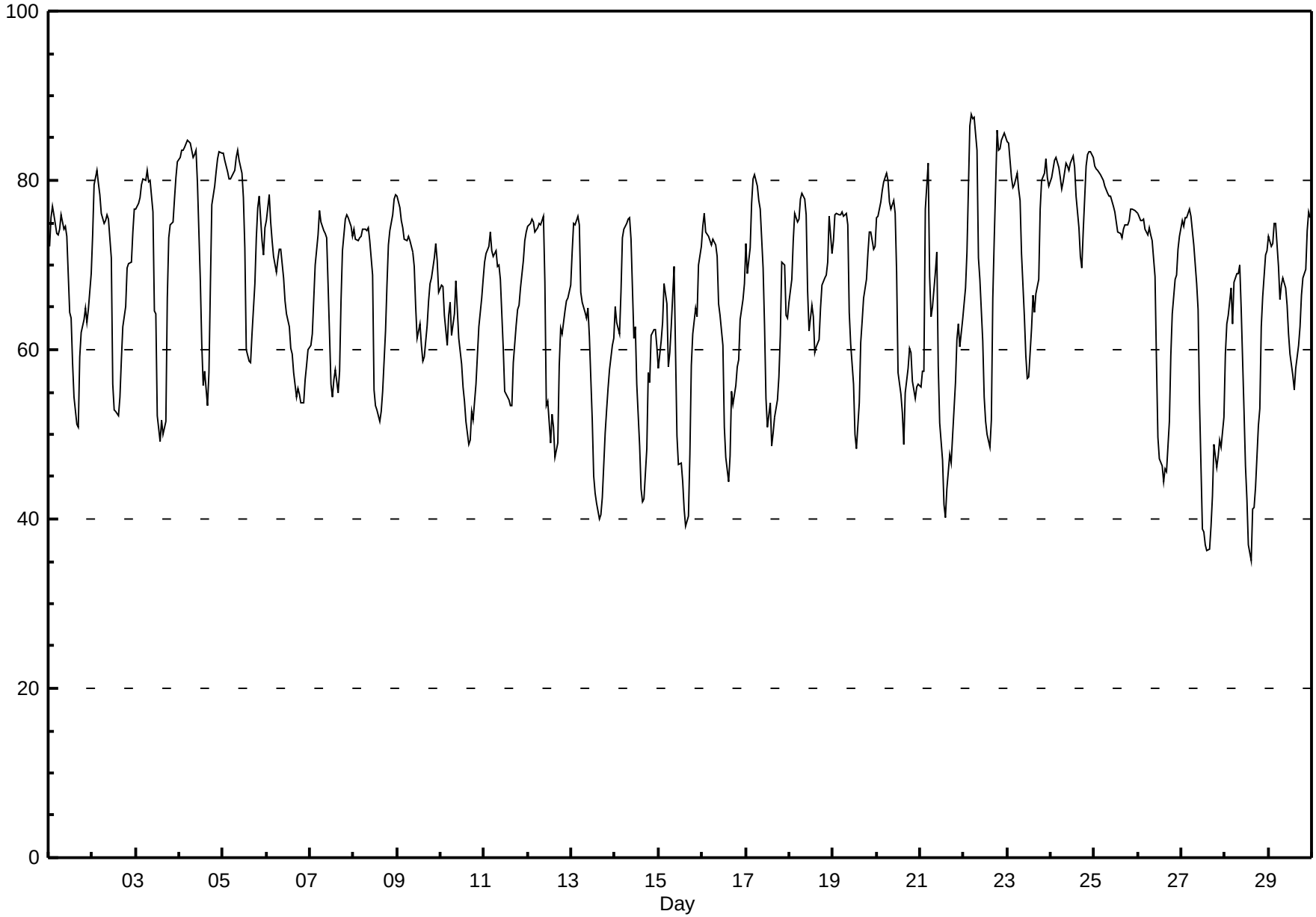
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	72	76	77	76	74	74	74	76	74	75	73	64	64	58	54	51	51	59	62	64	65	63	65	69	67.1	76.9
2-Feb	74	79	81	80	78	76	75	75	76	75	71	56	53	53	52	54	59	63	65	70	70	70	74	77	69.0	81.1
3-Feb	77	77	78	79	80	80	81	80	80	76	65	64	52	49	52	50	51	66	73	75	75	78	80	82	70.9	82.3
4-Feb	83	83	84	84	85	85	84	83	83	84	80	68	61	56	57	53	57	67	77	79	81	83	83	83	76.0	84.7
5-Feb	83	82	81	80	80	81	81	83	83	82	81	78	72	60	59	59	62	68	73	77	78	73	71	74	75.1	83.5
6-Feb	75	78	75	73	71	69	71	72	72	69	66	64	63	60	59	57	54	55	55	54	54	57	58	60	64.2	78.4
7-Feb	61	62	66	70	74	76	75	74	74	73	68	56	54	56	58	55	57	66	72	75	76	76	75	73	67.6	76.4
8-Feb	74	73	73	73	73	74	74	74	74	73	69	55	53	53	52	53	55	62	68	72	74	76	78	78	68.1	78.3
9-Feb	78	77	75	74	73	73	73	73	72	70	65	61	63	60	59	59	63	66	68	68	71	72	71	67	68.8	78.1
10-Feb	68	68	64	60	64	66	62	64	68	65	61	58	56	54	52	49	49	53	52	56	59	63	66	68	60.1	68.3
11-Feb	70	71	72	74	72	71	72	70	70	68	60	55	55	54	53	53	58	63	65	65	67	71	73	74	65.7	74.0
12-Feb	75	75	75	75	74	74	75	75	76	68	53	54	49	52	51	47	49	58	62	62	65	66	66	68	64.3	75.7
13-Feb	72	75	75	76	75	67	66	64	64	65	62	52	45	43	42	40	41	43	50	53	55	58	60	61	58.4	75.8
14-Feb	65	63	62	67	73	74	75	75	76	73	61	63	56	49	44	42	42	48	57	56	62	62	62	60	61.2	75.6
15-Feb	58	61	63	68	65	58	60	63	70	60	50	46	47	44	41	39	40	48	58	62	65	64	70	72	57.2	72.2
16-Feb	75	76	74	73	73	72	73	72	71	65	64	60	51	47	44	47	55	54	56	58	59	63	66	68	63.2	76.0
17-Feb	72	69	72	77	80	81	79	78	77	70	63	54	51	54	49	50	52	54	57	62	70	70	64	64	65.3	80.6
18-Feb	66	68	73	76	75	75	78	79	78	76	67	62	65	64	60	60	61	65	68	68	69	70	76	71	69.6	78.5
19-Feb	73	76	76	76	76	76	76	76	75	64	61	56	50	48	54	61	63	66	68	71	74	74	72	72	68.1	76.2
20-Feb	76	76	78	79	80	81	80	77	77	78	76	69	57	55	53	49	55	58	60	60	56	54	56	56	66.4	80.8
21-Feb	56	58	58	77	82	69	64	65	69	72	58	51	47	42	40	44	48	47	50	56	61	63	60	64	58.3	82.1
22-Feb	65	67	72	86	88	87	87	84	71	68	61	54	52	50	49	52	66	73	86	83	84	85	86	85	72.5	87.9
23-Feb	85	84	80	79	79	81	79	78	71	64	59	57	57	63	66	64	67	68	77	80	81	82	80	79	73.4	84.5
24-Feb	80	81	82	83	82	80	79	80	82	82	81	82	83	82	78	74	71	70	74	82	83	83	83	83	80.0	83.4
25-Feb	82	81	81	81	80	80	79	78	78	78	77	76	75	74	74	73	74	75	75	75	77	77	77	76	77.2	81.8
26-Feb	76	75	75	75	74	74	74	74	73	69	59	50	47	46	44	46	46	51	59	64	68	69	72	73	63.9	76.1
27-Feb	75	75	76	76	77	76	74	72	68	65	54	39	38	37	36	36	39	43	49	46	47	49	48	52	56.1	76.6
28-Feb	59	63	64	67	63	68	69	69	70	65	53	46	42	37	35	41	41	44	51	53	63	66	71	72	57.2	71.7
29-Feb	73	72	73	75	75	70	66	68	69	67	65	62	60	57	55	58	61	63	66	68	70	74	76	76	67.4	76.3
	72.3	73.2	73.6	75.5	75.7	74.7	74.3	74.2	73.7	70.9	64.9	59.1	55.8	53.7	52.5	52.4	54.8	59.1	63.9	66.1	68.2	69.3	70.3	71.0	Diurnal Average	
	84.5	84.4	83.6	86.4	87.9	87.3	87.4	83.6	83.5	83.6	81.2	82.1	82.9	81.6	78.1	74.3	74.3	74.7	86.0	83.5	83.6	84.8	85.7	85.1	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Henry Pirker - February 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

Solar Radiation (SR) - W/m^2

Henry Pirker - February 2012

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

Maximum Value: 446.3 W/m^2 on Feb 26 14:00

Maximum Daily Average: 108.7 W/m^2 on Feb 28

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

Minimum Daily Average: 21.2 W/m^2 on Feb 5

Maximum Diurnal Average: 314.0 W/m^2 at hour 14

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

Monthly Average: 71.67 W/m^2

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 106.9 P_{90} = 280.5 P_{99} = 392.5

Hours in Service:	696
Hours of Data:	696
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

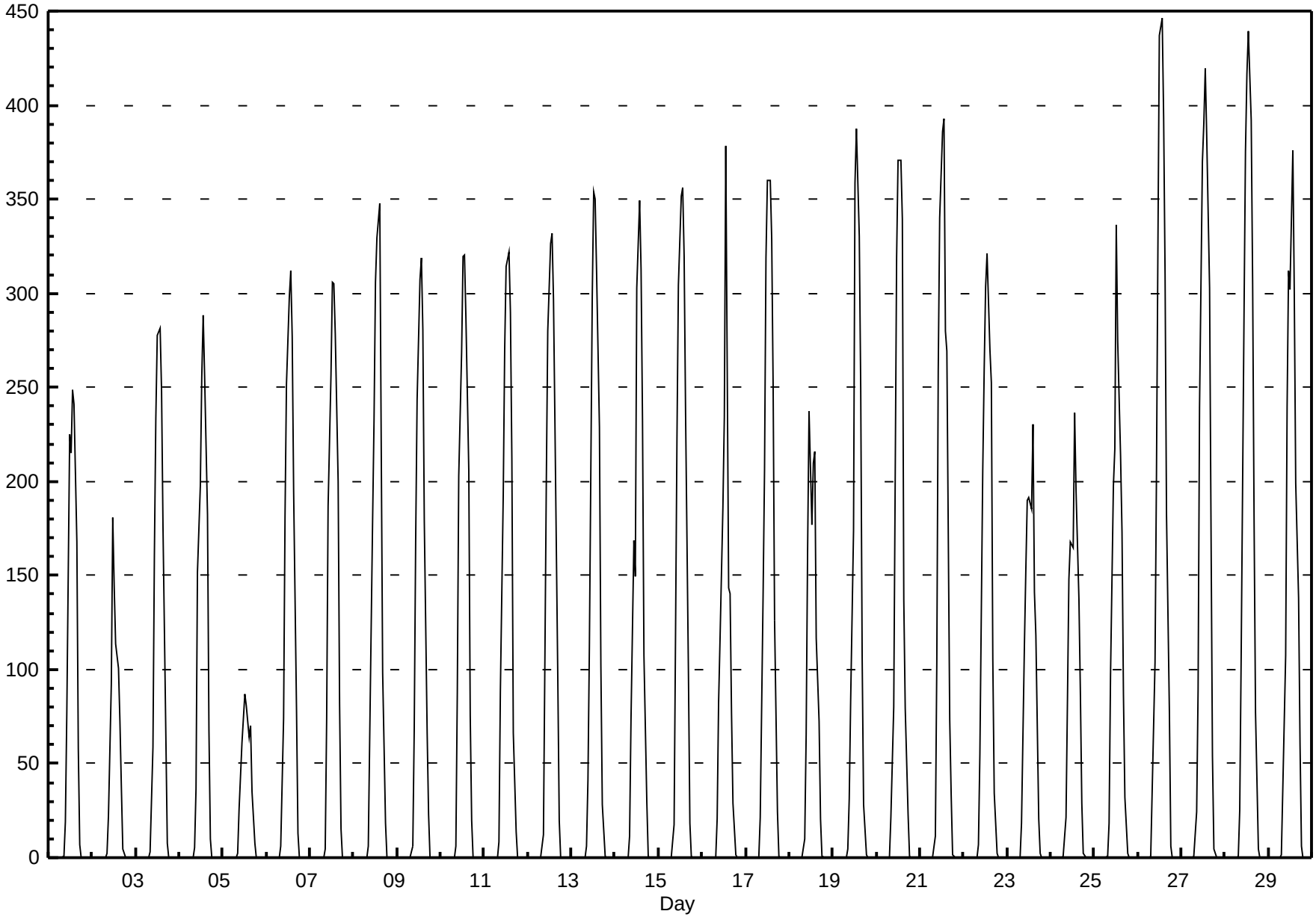
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0	0	0	0	0	0	0	0	1	19	77	225	215	249	241	168	58	7	0	0	0	0	0	0	52.5	249.0
2-Feb	0	0	0	0	0	0	0	0	2	22	92	181	144	113	101	73	38	5	0	0	0	0	0	0	32.1	181.1
3-Feb	0	0	0	0	0	0	0	0	3	59	161	234	278	282	248	175	64	8	0	0	0	0	0	0	63.0	281.8
4-Feb	0	0	0	0	0	0	0	0	5	36	152	198	256	288	256	182	68	10	0	0	0	0	0	0	60.4	288.4
5-Feb	0	0	0	0	0	0	0	0	2	26	61	74	87	81	64	70	35	8	0	0	0	0	0	0	21.2	87.2
6-Feb	0	0	0	0	0	0	0	0	6	74	181	252	298	312	277	195	79	13	0	0	0	0	0	0	70.3	311.9
7-Feb	0	0	0	0	0	0	0	0	5	74	187	256	306	305	278	199	82	15	0	0	0	0	0	0	71.1	305.7
8-Feb	0	0	0	0	0	0	0	0	6	65	179	233	306	329	348	219	98	19	0	0	0	0	0	0	75.1	348.0
9-Feb	0	0	0	0	0	0	0	0	6	69	168	243	308	319	281	180	66	23	0	0	0	0	0	0	69.2	318.7
10-Feb	0	0	0	0	0	0	0	0	6	88	203	269	320	320	287	206	75	20	0	0	0	0	0	0	74.8	320.0
11-Feb	0	0	0	0	0	0	0	0	8	88	193	270	314	322	290	212	66	13	0	0	0	0	0	0	74.0	322.0
12-Feb	0	0	0	0	0	0	0	0	12	105	200	280	326	332	297	231	95	20	0	0	0	0	0	0	79.1	331.8
13-Feb	0	0	0	0	0	0	0	0	6	41	112	298	354	350	312	229	102	28	1	0	0	0	0	0	76.4	354.2
14-Feb	0	0	0	0	0	0	0	0	11	74	168	150	303	349	313	232	108	30	1	0	0	0	0	0	72.4	349.2
15-Feb	0	0	0	0	0	0	0	0	17	117	223	304	352	356	320	237	98	18	0	0	0	0	0	0	85.1	356.3
16-Feb	0	0	0	0	0	0	0	0	21	83	116	186	234	378	144	141	77	29	1	0	0	0	0	0	58.7	378.3
17-Feb	0	0	0	0	0	0	0	0	21	140	206	319	360	360	328	249	126	24	1	0	0	0	0	0	89.0	360.3
18-Feb	0	0	0	0	0	0	0	0	10	65	163	237	177	210	216	117	73	21	1	0	0	0	0	0	53.7	237.4
19-Feb	0	0	0	0	0	0	0	0	4	32	84	174	358	388	330	250	107	28	1	0	0	0	0	0	73.2	387.7
20-Feb	0	0	0	0	0	0	0	0	21	80	199	318	371	370	339	137	79	23	1	0	0	0	0	0	80.8	370.9
21-Feb	0	0	0	0	0	0	0	0	11	104	259	340	386	393	280	269	73	34	2	0	0	0	0	0	89.6	392.9
22-Feb	0	0	0	0	0	0	0	0	7	55	206	259	304	321	270	253	106	35	2	0	0	0	0	0	75.7	321.4
23-Feb	0	0	0	0	0	0	0	0	19	112	153	190	191	185	230	141	118	20	2	0	0	0	0	0	56.8	230.0
24-Feb	0	0	0	0	0	0	0	1	21	83	148	168	165	237	195	137	88	29	2	0	0	0	0	0	53.0	236.5
25-Feb	0	0	0	0	0	0	0	0	18	97	198	217	336	274	213	174	87	32	2	0	0	0	0	0	68.7	336.0
26-Feb	0	0	0	0	0	0	0	1	35	104	203	324	437	446	394	310	182	78	6	0	0	0	0	0	105.0	446.3
27-Feb	0	0	0	0	0	0	0	0	24	89	240	370	390	420	384	303	176	54	5	0	0	0	0	0	102.3	419.6
28-Feb	0	0	0	0	0	0	0	1	25	106	289	375	416	439	392	305	179	77	5	0	0	0	0	0	108.7	439.3
29-Feb	0	0	0	0	0	0	0	1	37	107	239	312	302	376	300	199	138	60	6	0	0	0	0	0	86.6	376.2
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	12.8	76.3	174.5	250.1	296.3	314.0	273.3	199.8	94.5	26.9	1.4	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	1.3	36.9	139.6	288.9	375.1	436.9	446.3	393.7	309.9	182.4	78.0	6.2	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 2012



Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - February 2012

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	2	2	2	4	1	3	3	4	8	11	8	6	7	8	6	5	6	8	13	9	5	3.8	12.6
Dir	159	147	25	84	273	172	329	100	338	175	238	244	271	297	292	294	305	280	300	302	264	255	243	315	276.0	255.3
2 Spd	0	3	3	1	2	4	4	5	1	2	3	3	7	7	7	6	6	3	3	4	5	4	2	3	1.5	7.4
Dir	342	132	101	324	120	304	330	318	270	286	158	227	188	195	197	216	271	195	162	144	121	144	85	351	200.4	196.9
3 Spd	3	1	4	2	3	4	2	4	3	2	6	7	3	3	7	8	4	6	7	11	8	5	4	2	2.1	10.9
Dir	307	241	335	223	118	19	266	103	102	345	312	336	298	97	97	96	68	333	337	326	329	298	299	237	345.0	326.0
4 Spd	2	4	4	2	2	3	4	4	4	2	4	7	4	4	3	2	2	3	4	5	5	5	4	1	2.5	6.7
Dir	289	305	330	321	187	351	5	324	311	283	205	240	253	285	183	273	284	330	324	322	323	329	326	320	302.4	240.4
5 Spd	3	4	5	4	6	4	4	5	7	5	4	6	3	8	7	7	4	3	2	2	4	7	7	2	2.7	8.0
Dir	348	318	325	330	329	320	307	337	338	335	321	328	343	76	87	80	113	34	16	74	65	74	87	84	18.1	76.3
6 Spd	4	3	6	8	8	10	10	10	11	9	12	13	15	13	13	13	12	10	11	14	13	11	10	13	10.4	15.3
Dir	77	29	67	71	81	94	94	94	95	95	97	95	92	84	91	85	83	86	88	94	95	93	89	93	88.9	92.4
7 Spd	15	11	N	N	N	N	N	N	N	N	N	N	N	N	6	6	4	7	5	5	4	5	3	4	--	14.8
Dir	96	99	N	N	N	N	N	N	N	N	N	N	N	N	304	307	334	333	329	323	326	337	316	314	--	95.9
8 Spd	4	3	3	4	3	3	3	3	3	3	1	2	5	5	N	N	N	7	5	N	N	N	N	N	--	6.7
Dir	325	317	340	331	336	314	319	291	308	8	306	300	302	309	N	N	N	83	88	N	N	N	N	N	--	83.1
9 Spd	N	N	N	N	N	N	N	N	N	N	N	N	10	8	7	7	7	8	9	6	2	1	7	3	--	9.6
Dir	N	N	N	N	N	N	N	N	N	N	N	N	89	84	66	65	67	82	71	73	62	18	63	68	--	89.1
10 Spd	3	12	9	6	6	9	11	7	N	N	11	11	11	13	14	12	10	12	13	11	11	11	11	11	10.1	13.8
Dir	82	83	97	90	60	69	92	88	N	N	82	85	82	83	79	87	86	82	91	93	92	90	91	94	86.0	78.8
11 Spd	12	8	2	3	3	4	5	1	3	2	5	4	7	6	7	6	6	6	3	2	4	N	N	N	2.9	11.6
Dir	95	90	351	3	335	304	317	333	301	312	295	284	285	285	318	315	298	325	301	310	303	N	N	N	318.3	95.2
12 Spd	N	N	N	N	N	N	N	N	N	N	N	4	4	6	6	7	14	14	11	13	16	16	15	11	--	16.1
Dir	N	N	N	N	N	N	N	N	N	N	N	207	291	335	311	288	270	288	276	256	256	254	256	255	--	256.3
13 Spd	7	4	6	5	10	15	11	14	14	7	14	15	20	17	13	10	10	12	12	14	14	11	9	9	11.0	19.8
Dir	279	270	264	270	247	256	262	269	262	301	265	272	293	294	293	294	283	257	250	255	264	268	262	281	271.4	293.2
14 Spd	7	6	7	4	4	5	5	5	5	5	4	5	7	7	4	4	4	3	6	6	6	7	9	8	5.1	8.6
Dir	286	296	283	323	328	322	338	322	322	313	306	302	331	291	297	302	289	300	255	272	304	282	293	263	298.1	292.6
15 Spd	10	10	9	5	10	8	5	7	5	5	13	19	16	14	10	8	5	1	2	3	2	3	2	5	7.1	18.8
Dir	276	295	301	322	294	300	302	311	304	309	275	278	287	291	292	308	304	353	310	301	296	324	323	303	294.5	278.1
16 Spd	2	1	4	3	5	4	3	4	3	4	4	5	1	6	6	16	14	18	13	21	20	14	9	7	6.5	20.6
Dir	8	227	335	321	318	333	311	318	307	322	318	298	230	198	201	249	246	247	258	261	265	260	256	288	266.5	261.3
17 Spd	3	9	5	3	2	2	2	1	4	3	4	3	4	5	7	8	7	5	5	4	5	5	7	6	3.2	8.9
Dir	249	288	290	266	13	14	324	38	305	323	313	297	294	330	21	11	30	42	34	350	352	14	43	55	351.4	287.6
18 Spd	5	1	4	5	5	3	5	5	3	6	4	6	6	10	11	11	9	9	8	8	8	7	5	7	5.3	11.4
Dir	63	129	319	336	344	319	308	308	315	230	275	288	244	281	290	277	263	299	307	306	303	299	307	334	296.8	276.5
19 Spd	6	5	2	2	3	3	3	2	7	19	18	22	22	25	25	20	16	15	12	10	9	10	9	4	10.7	25.5
Dir	299	314	336	313	321	314	325	308	277	265	271	277	286	278	285	309	309	313	310	312	303	288	272	282	291.1	285.2
20 Spd	2	3	3	3	3	2	4	4	4	5	5	4	3	5	4	2	7	8	10	6	4	5	7	6	0.9	10.3
Dir	2	2	300	328	322	321	302	322	328	313	323	299	285	294	287	65	87	110	114	117	122	112	119	138	42.8	114.5
21 Spd	5	6	5	2	3	13	21	26	33	20	25	26	28	28	29	21	23	26	20	10	12	12	14	13	16.3	32.9
Dir	167	152	155	197	159	240	250	258	260	263	266	267	267	265	266	270	276	272	272	236	245	251	253	240	258.7	260.4
22 Spd	12	11	11	7	3	8	12	14	16	22	19	19	20	21	17	14	10	15	9	4	4	4	2	2	10.4	22.3
Dir	244	232	226	241	231	312	296	282	272	267	260	274	280	297	301	277	310	295	312	328	310	291	226	278	277.6	267.0

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - February 2012

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	5	8	4	3	3	3	4	10	8	10	15	20	20	12	11	10	11	12	16	7	9	9	4	8.6	20.3
Dir	314	283	277	269	333	355	314	329	312	312	305	293	305	299	316	316	306	275	260	293	297	271	299	311	298.2	298.9
24 Spd	1	3	2	2	3	3	4	3	5	7	11	12	13	16	19	19	17	20	19	18	18	18	16	16	9.8	19.5
Dir	103	198	266	314	343	326	305	353	78	95	98	94	89	88	86	84	83	88	89	85	79	81	76	75	82.8	87.8
25 Spd	18	16	15	12	11	13	13	14	12	11	14	12	12	12	11	9	10	8	7	5	5	10	10	10	10.9	18.1
Dir	81	76	67	61	57	56	53	50	54	49	43	40	43	51	38	37	44	44	48	35	26	27	44	46	51.5	81.2
26 Spd	8	8	8	6	5	4	4	6	5	4	2	5	5	6	4	5	3	6	8	9	6	7	7	4	0.5	8.9
Dir	51	46	38	27	312	315	337	325	321	308	301	290	292	288	262	265	292	178	162	151	138	141	162	183	317.9	150.6
27 Spd	4	4	4	4	4	6	7	5	5	4	5	9	8	9	9	10	12	16	8	12	10	9	8	2	4.8	15.7
Dir	149	141	118	121	157	170	168	164	154	158	181	258	258	270	265	270	259	272	266	260	251	241	242	237	236.3	271.9
28 Spd	3	2	1	5	4	4	5	3	1	4	3	5	4	5	4	8	5	7	6	5	3	4	5	5	0.6	7.8
Dir	225	255	335	195	234	132	154	145	72	136	156	296	305	320	312	350	22	88	89	76	78	327	316	311	1.0	349.8
29 Spd	6	5	4	2	2	8	13	13	14	14	16	12	11	11	11	12	12	10	8	9	8	5	5	5	7.8	16.3
Dir	330	323	320	358	86	46	51	54	59	60	66	67	61	53	40	25	12	15	4	351	14	37	47	25	37.3	66.1
Spd	0.7	0.7	1.7	1.4	1.5	1.9	2.2	2.5	3.3	2.9	2.8	4.8	4.7	4.6	3.6	3.7	3.5	2.9	1.8	2.3	2.3	2.1	1.2	1.1	Diurnal Average	
Dir	32.1	6.7	335.4	346.8	334.0	330.5	322.6	318.8	303.8	298.0	287.6	286.3	295.7	303.3	312.8	318.8	317.9	311.5	316.3	299.9	300.1	291.9	301.3	335.6		
Spd	18.1	15.7	14.8	12.3	11.4	14.9	20.6	26.3	32.9	22.3	25.4	26.3	28.0	28.4	28.7	20.9	22.5	26.2	19.7	20.6	19.7	17.7	15.7	16.4	Diurnal Maximum	
Dir	81.2	76.3	67.3	60.8	56.6	255.5	249.6	257.8	260.4	267.0	265.9	266.5	267.5	265.4	266.5	269.7	276.1	272.0	272.3	261.3	264.7	80.6	76.0	75.4		

Maximum Speed Value: 33 km/h on Feb 21 09:00
Maximum Daily Speed Average: 16.3 km/h on Feb 21
Maximum Diurnal Speed Average: 4.8 km/h at hour 12

Minimum Speed Value: 0 km/h on Feb 2 01:00
Minimum Daily Speed Average: 0.5 km/h on Feb 4
Minimum Diurnal Speed Average: 0.7 km/h at hour 2

Hours in Service: 696
Hours of Data: 648
Hours of Missing Data: 48

Monthly Average Velocity: 2.40 km/h 309.66 deg

Speed Percentiles: $P_1 = 0.8$ $P_{10} = 2.5$ $Q_1 = 3.7$ Median = 5.9 $Q_3 = 10.6$ $P_{90} = 14.7$ $P_{99} = 26.2$

Percent Operational Time: 93.1

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

N - Not Valid

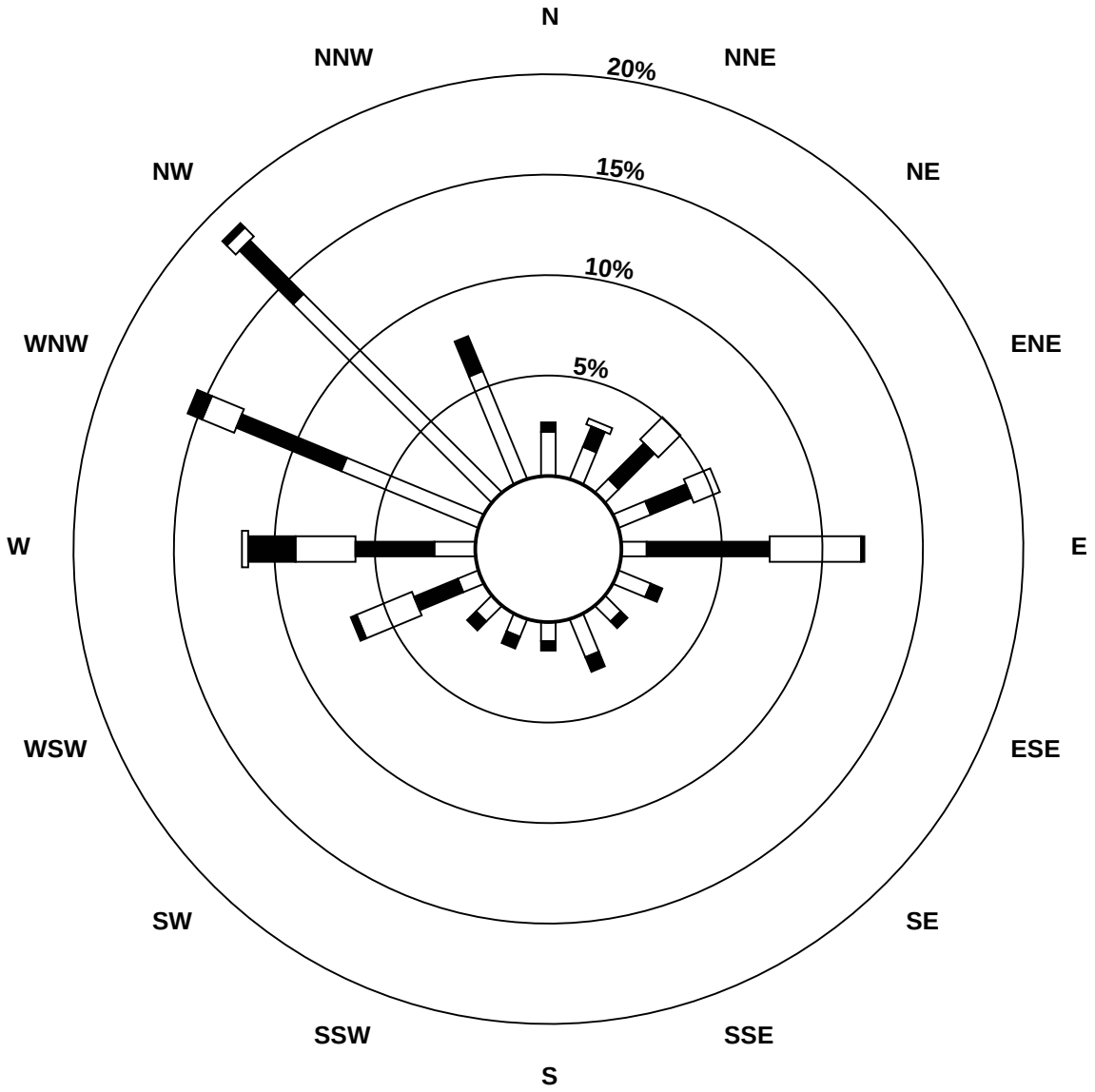
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	28	11	1	0	0	0	40
NorthEast	11	28	20	0	0	0	59
East	20	40	36	4	0	0	100
SouthEast	22	8	0	0	0	0	30
South	15	12	0	0	0	0	27
SouthWest	14	12	7	0	0	0	33
West	33	43	41	18	4	0	139
NorthWest	129	74	12	5	0	0	220
Total	272	228	117	27	4	0	648

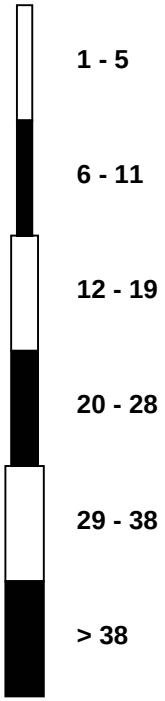
Wind Rose

Wind Speed (WS) (km/h)

Henry Pirker - February 2012



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Henry Pirker - February 2012

Maximum Speed: 33 km/h on Feb 21 09:00

Maximum Daily Speed Average: 18.0 km/h on Feb 21

Minimum Speed: 1 km/h on Feb 17 08:00

Minimum Daily Speed Average: 4.1 km/h on Feb 4

Maximum Diurnal Speed Average: 10.9 km/h at hour 14

Minimum Diurnal Speed Average: 4.7 km/h at hour 4

Monthly Average Speed: 7.97 km/h

Percentiles: P_1 = 2.1 P_{10} = 3.2 Q_1 = 4.3 Median = 6.2 Q_3 = 10.8 P_{90} = 14.9 P_{99} = 26.4

Hours in Service:	696
Hours of Data:	648
Hours of Missing Data:	48
Percent Operational Time:	93.1

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	2	3	3	4	3	4	3	4	4	4	8	11	8	6	7	8	6	5	6	8	13	9	6	5.7	12.7
2-Feb	3	3	3	2	3	4	4	5	3	3	4	4	7	7	8	7	6	5	4	4	5	4	3	3	4.3	7.6
3-Feb	4	3	6	4	5	4	6	5	4	3	6	7	3	4	7	8	6	6	7	11	8	6	4	3	5.5	10.9
4-Feb	3	4	4	3	3	4	4	4	4	3	4	7	4	4	4	3	3	4	4	5	5	5	5	4	4.1	6.9
5-Feb	4	4	5	5	6	4	4	5	7	5	4	6	4	8	7	7	4	4	3	2	4	8	8	4	5.1	8.4
6-Feb	4	4	6	8	8	10	10	10	11	9	12	13	15	13	13	13	12	10	12	14	13	11	11	13	10.7	15.4
7-Feb	15	11	N	N	N	N	N	N	N	N	N	N	N	N	6	6	5	7	5	5	4	6	4	4	--	14.9
8-Feb	4	3	3	4	3	3	3	3	4	3	2	2	5	5	N	N	N	7	5	N	N	N	N	N	--	6.9
9-Feb	N	N	N	N	N	N	N	N	N	N	N	N	10	8	7	7	8	8	9	7	2	2	7	4	--	10.0
10-Feb	4	12	10	6	6	9	11	7	N	N	11	11	11	13	14	12	10	12	13	11	11	11	11	11	10.4	14.0
11-Feb	12	8	3	3	4	4	5	2	3	3	5	4	7	6	7	6	6	6	3	3	4	N	N	N	4.9	11.6
12-Feb	N	N	N	N	N	N	N	N	N	N	N	5	5	6	7	7	14	14	11	13	16	16	15	11	--	16.2
13-Feb	8	5	7	5	10	15	11	14	15	8	14	15	20	17	13	10	10	12	12	14	14	11	9	9	11.6	19.9
14-Feb	7	6	7	4	4	5	5	5	5	5	4	5	7	7	4	4	4	3	7	7	6	7	9	9	5.7	8.8
15-Feb	10	10	9	5	10	8	5	7	5	5	13	19	16	14	10	8	6	2	3	5	4	4	3	5	7.8	18.9
16-Feb	4	3	5	4	5	4	3	4	4	5	4	5	2	6	6	16	14	18	13	21	20	14	9	7	8.2	20.8
17-Feb	4	9	5	3	3	2	3	1	4	4	4	3	4	5	8	8	8	6	5	5	6	6	7	7	4.9	9.0
18-Feb	5	3	5	5	5	4	5	6	4	7	4	6	7	11	11	12	9	9	8	9	8	7	6	7	6.8	11.6
19-Feb	6	5	3	3	4	3	3	3	8	19	19	22	22	25	26	21	16	15	12	11	9	10	9	5	11.5	25.7
20-Feb	3	4	4	4	3	3	4	4	5	5	5	4	3	5	4	4	7	8	10	6	5	6	7	6	4.9	10.4
21-Feb	6	6	6	6	4	14	21	26	33	20	26	26	28	29	29	21	23	26	20	11	12	13	14	13	18.0	33.2
22-Feb	12	11	11	8	4	8	12	14	16	22	19	19	20	21	17	15	11	16	9	6	5	5	3	3	11.9	22.4
23-Feb	3	5	8	4	4	4	4	5	10	8	10	15	20	21	13	12	10	12	13	16	8	10	11	5	9.6	20.7
24-Feb	3	3	3	3	4	3	4	3	5	8	11	13	13	16	19	19	17	20	19	18	18	18	16	17	11.3	19.7
25-Feb	18	16	15	13	12	13	14	14	13	12	14	13	12	12	12	9	10	8	7	5	5	10	10	10	11.5	18.3
26-Feb	8	8	9	6	5	4	4	6	5	4	2	5	5	6	5	5	3	6	8	9	6	7	7	4	5.8	9.0
27-Feb	4	4	4	4	4	6	7	6	5	4	5	9	8	10	10	10	12	16	9	12	10	9	8	3	7.4	15.8
28-Feb	3	3	3	5	5	5	6	3	3	5	5	5	5	5	4	8	5	7	7	5	4	5	6	6	4.9	8.1
29-Feb	6	6	5	4	5	8	13	13	14	14	17	12	11	11	11	12	12	10	9	9	8	6	5	5	9.4	16.5
	6.1	6.0	5.8	4.7	5.0	6.0	6.8	6.9	7.7	7.5	8.8	9.7	10.3	10.9	10.3	10.0	9.2	9.8	8.7	8.8	8.2	8.4	7.9	6.7	Diurnal Average	
	18.3	15.9	15.0	12.5	11.8	14.9	20.7	26.5	33.2	22.4	25.5	26.5	28.3	28.7	28.9	21.1	22.8	26.4	19.9	20.8	19.9	17.9	15.9	16.7	Diurnal Maximum	

N - Not Valid

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 2012

Maximum Value: 92.4 deg on Feb 11 08:00

Minimum Value: 4.1 deg on Feb 13 13:00

Percentiles: P_1 = 4.7 P_{10} = 6.7 Q_1 = 9.2 Median = 14.6 Q_3 = 27.2 P_{90} = 51.8 P_{99} = 79.7

Hours in Service:	696
Hours of Data:	648
Hours of Missing Data:	48
Hours of Calibration:	0
Percent Operational Time:	93.1

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	52	71	49	40	77	52	25	77	75	54	28	9	12	14	14	11	12	15	20	21	15	7	11	28	77.2
2-Feb	88	20	15	70	68	19	16	17	66	54	56	67	12	12	12	30	28	53	41	36	15	20	47	38	88.2
3-Feb	49	76	48	68	51	32	71	50	42	70	25	14	16	72	12	9	56	25	11	7	12	25	23	54	76.3
4-Feb	43	31	11	43	70	37	16	27	17	59	33	14	34	29	70	42	49	60	30	21	18	13	30	82	82.2
5-Feb	35	19	23	11	11	22	27	11	9	9	42	8	63	17	13	12	17	35	42	70	15	13	15	75	74.5
6-Feb	12	36	12	10	16	8	6	6	10	9	8	6	6	7	9	8	9	9	8	6	6	6	7	5	35.9
7-Feb	5	6	N	N	N	N	N	N	N	N	N	N	N	N	11	12	52	6	9	13	9	11	26	12	52.0
8-Feb	27	20	10	12	15	23	17	13	26	27	74	47	20	17	N	N	N	15	22	N	N	N	N	N	73.7
9-Feb	N	N	N	N	N	N	N	N	N	N	N	N	17	23	17	20	14	14	9	11	49	42	13	61	60.5
10-Feb	73	11	8	19	24	12	7	9	N	N	12	11	12	11	11	10	10	7	6	7	8	5	6	6	73.2
11-Feb	6	8	43	27	13	29	18	92	8	13	7	8	7	8	18	8	12	13	22	27	10	N	N	N	92.4
12-Feb	N	N	N	N	N	N	N	N	N	N	N	38	34	8	18	16	7	6	10	6	7	6	5	18	37.7
13-Feb	15	37	18	14	9	5	6	8	7	34	10	10	4	4	5	5	15	7	7	6	7	7	10	7	36.5
14-Feb	6	9	17	13	13	12	15	8	10	20	28	23	12	10	25	17	15	13	16	23	9	11	12	11	28.2
15-Feb	12	8	12	23	12	16	22	14	17	23	16	7	5	5	12	14	13	78	49	52	60	62	64	16	78.1
16-Feb	68	79	20	45	15	10	18	33	65	14	17	23	68	18	18	22	11	8	9	9	7	5	7	25	79.3
17-Feb	31	8	20	23	26	35	41	71	28	39	16	20	11	18	25	17	18	17	21	38	14	15	13	12	71.2
18-Feb	17	87	25	11	10	41	14	24	52	33	22	12	31	15	6	10	10	11	5	10	9	19	30	9	86.7
19-Feb	12	26	46	37	24	17	25	57	36	7	6	6	7	9	9	8	5	6	5	7	6	9	13	58	57.8
20-Feb	68	39	33	33	22	47	26	11	28	19	19	19	17	11	12	73	13	10	5	8	19	47	7	11	73.4
21-Feb	13	15	44	71	68	21	6	6	7	7	7	7	8	7	7	9	9	7	7	8	6	7	9	7	71.1
22-Feb	5	7	9	18	33	14	14	5	7	7	7	8	8	5	5	20	17	9	13	52	43	44	48	53	53.4
23-Feb	24	21	6	20	45	34	48	20	14	19	12	11	5	11	15	18	10	20	14	6	37	15	31	47	47.5
24-Feb	66	34	60	66	20	25	17	29	15	8	8	8	8	8	7	7	8	7	8	8	8	10	9	9	66.5
25-Feb	8	9	9	10	18	14	12	13	13	17	15	15	14	16	17	14	19	16	17	15	14	11	12	13	18.8
26-Feb	15	17	10	14	15	8	10	10	9	14	15	13	7	8	32	27	37	17	7	8	11	11	5	24	36.7
27-Feb	22	13	23	31	11	6	6	8	9	13	27	14	16	14	15	17	9	6	28	10	12	13	11	74	74.0
28-Feb	32	60	81	21	41	35	67	47	89	41	72	20	14	16	23	17	27	10	7	16	29	40	30	33	88.8
29-Feb	26	19	21	62	72	11	13	13	10	10	9	13	14	16	16	17	12	15	10	10	19	30	23	27	71.7
	88.2	86.7	81.0	71.1	77.0	52.2	70.5	92.4	88.8	70.4	73.7	66.7	68.1	72.3	70.1	73.4	55.6	78.1	48.6	70.3	60.0	61.5	63.5	82.2	

N - Not Valid

FOCUS AIR QUALITY MONITORING

PAZA
Evergreen Park Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - February 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 2.4 ppb on Feb 26 13:00 Maximum Daily Average: 0.9 ppb on Feb 26

Minimum Value: 0 ppb on Feb 2 04:00 Minimum Daily Average: 0.0 ppb on Feb 24
Maximum Diurnal Average: 0.5 ppb at hour 13 Minimum Diurnal Average: 0.1 ppb at hour 6
Monthly Average: 0.24 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.2 Q_3 = 0.3 P_{90} = 0.6 P_{99} = 1.6

Hours in Service:	696
Hours of Data:	662
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	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
2-Feb	0	0	0	0	0	0	A	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
3-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	0.5
4-Feb	0	0	0	0	A	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
5-Feb	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
6-Feb	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0.2	0.6
7-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0.3	0.7
8-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	A	0.4	0.9
9-Feb	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0.3	0.7
10-Feb	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	A	0	0	0.5	1.3
11-Feb	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	A	0	0	0	0.3	0.8
12-Feb	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	A	0	0	0	0	0.3	0.7
13-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
14-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	0.4
15-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.2
16-Feb	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.9
17-Feb	0	0	0	0	0	0	0	0	0	0	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.6
18-Feb	0	0	0	0	0	0	0	0	0	0	0	1	1	A	1	1	1	0	0	1	1	0	0	0	0.4	0.8
19-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
20-Feb	0	0	0	0	0	0	0	0	0	1	1	A	1	2	2	1	1	1	0	0	0	0	0	0	0.5	1.8
21-Feb	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
22-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
23-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	0.1
24-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	0.0	0.3
25-Feb	0	0	0	0	0	0	A	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0.2	0.8
26-Feb	0	1	1	1	1	A	1	1	1	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0.9	2.4
27-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
28-Feb	0	0	0	A	0	0	0	0	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0.2	0.9
29-Feb	0	0	A	0	0	0	0	0	0	0	0	C	C	C	C	1	1	1	0	0	0	0	0	0	0.3	0.7
	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	Diurnal Average	
	0.4	0.5	1.0	0.9	0.6	0.5	0.7	0.6	0.8	1.6	2.3	2.1	2.4	1.8	1.8	1.3	1.1	1.0	0.5	0.6	0.6	0.5	0.6	0.4	Diurnal Maximum	

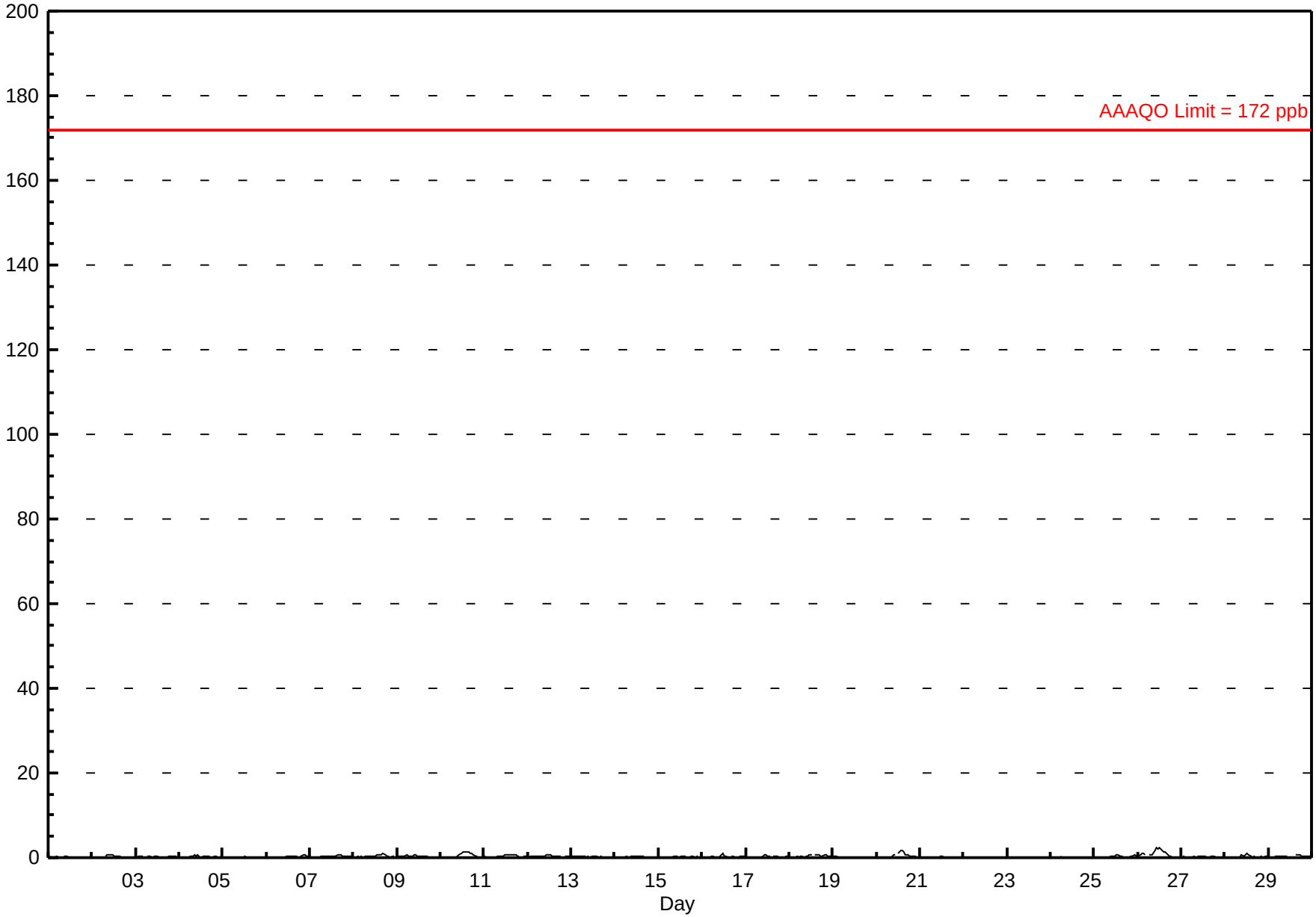
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - February 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - February 2012

Maximum Value: 12.6 ppb on Feb 28 10:00

Maximum Daily Average: 1.6 ppb on Feb 26

Minimum Value: 0 ppb on Feb 16 09:00

Minimum Daily Average: 0.5 ppb on Feb 24

Maximum Diurnal Average: 1.3 ppb at hour 10

Minimum Diurnal Average: 0.6 ppb at hour 5

Monthly Average: 0.78 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.5$ $Q_1 = 0.5$ Median = 0.7 $Q_3 = 0.8$ $P_{90} = 1.1$ $P_{99} = 2.6$

Hours in Service:	696
Hours of Data:	662
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	0	1	1	1	A	1	1	1	1	0	1	1	0	1	1	1	1	1	0	1	0	0.6	1.1
2-Feb	1	0	1	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0	1	0.7	1.4
3-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	1.0
4-Feb	0	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	1.1
5-Feb	1	1	1	A	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0.6	0.8
6-Feb	0	0	A	1	0	0	0	1	1	0	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0.7	1.1
7-Feb	1	A	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
8-Feb	A	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.9	1.4
9-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	A	0	0.8	1.1
10-Feb	0	1	0	0	1	1	1	0	1	1	1	2	2	2	2	2	2	1	1	1	1	A	1	1	1.0	2.0
11-Feb	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.3
12-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.8	1.2
13-Feb	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	1	1	1	0.7	1.6
14-Feb	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.6	0.9
15-Feb	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.7	1.3
16-Feb	1	1	1	1	0	1	1	1	0	1	1	2	1	1	1	A	1	1	1	1	1	1	2	1	0.8	2.3
17-Feb	1	0	0	0	0	1	0	1	1	1	1	1	1	1	A	1	1	1	1	1	0	1	1	1	0.7	1.1
18-Feb	1	1	1	1	1	1	1	1	1	1	2	2	1	A	1	1	1	1	1	1	1	2	1	1	1.0	2.5
19-Feb	1	1	1	1	1	1	1	1	0	0	0	0	A	0	0	0	1	1	1	1	1	2	0	1	0.6	2.4
20-Feb	1	0	1	0	0	0	1	1	1	1	1	A	1	3	3	2	1	1	1	1	1	1	1	0	1.0	2.6
21-Feb	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	1	1	0	2	0	1	0.6	1.7
22-Feb	0	1	1	1	1	0	1	0	0	A	1	0	0	1	1	1	1	1	0	0	0	1	1	1	0.5	0.8
23-Feb	1	0	0	1	0	0	0	1	A	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0	0.5	0.7
24-Feb	1	1	0	1	0	1	1	A	1	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0.5	0.8
25-Feb	1	1	1	1	1	0	A	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0.8	1.3
26-Feb	1	1	1	2	1	A	1	1	2	3	4	3	3	2	2	3	2	1	1	1	1	1	0	0	1.6	3.6
27-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0.8	1.0
28-Feb	1	1	1	A	0	1	1	1	1	13	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1.3	12.6
29-Feb	1	1	A	0	1	1	1	1	1	1	1	C	C	C	C	1	1	1	1	1	1	1	1	1	0.8	1.4
	0.7	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	1.3	1.0	1.0	1.0	1.0	0.9	0.9	0.8	0.8	0.7	0.7	0.6	0.8	0.7	0.7	Diurnal Average	
	1.1	1.2	1.5	1.6	1.2	1.0	1.2	1.3	1.5	12.6	3.6	2.8	3.0	2.6	2.6	2.8	1.7	1.5	1.1	1.1	1.1	2.4	2.3	1.3	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

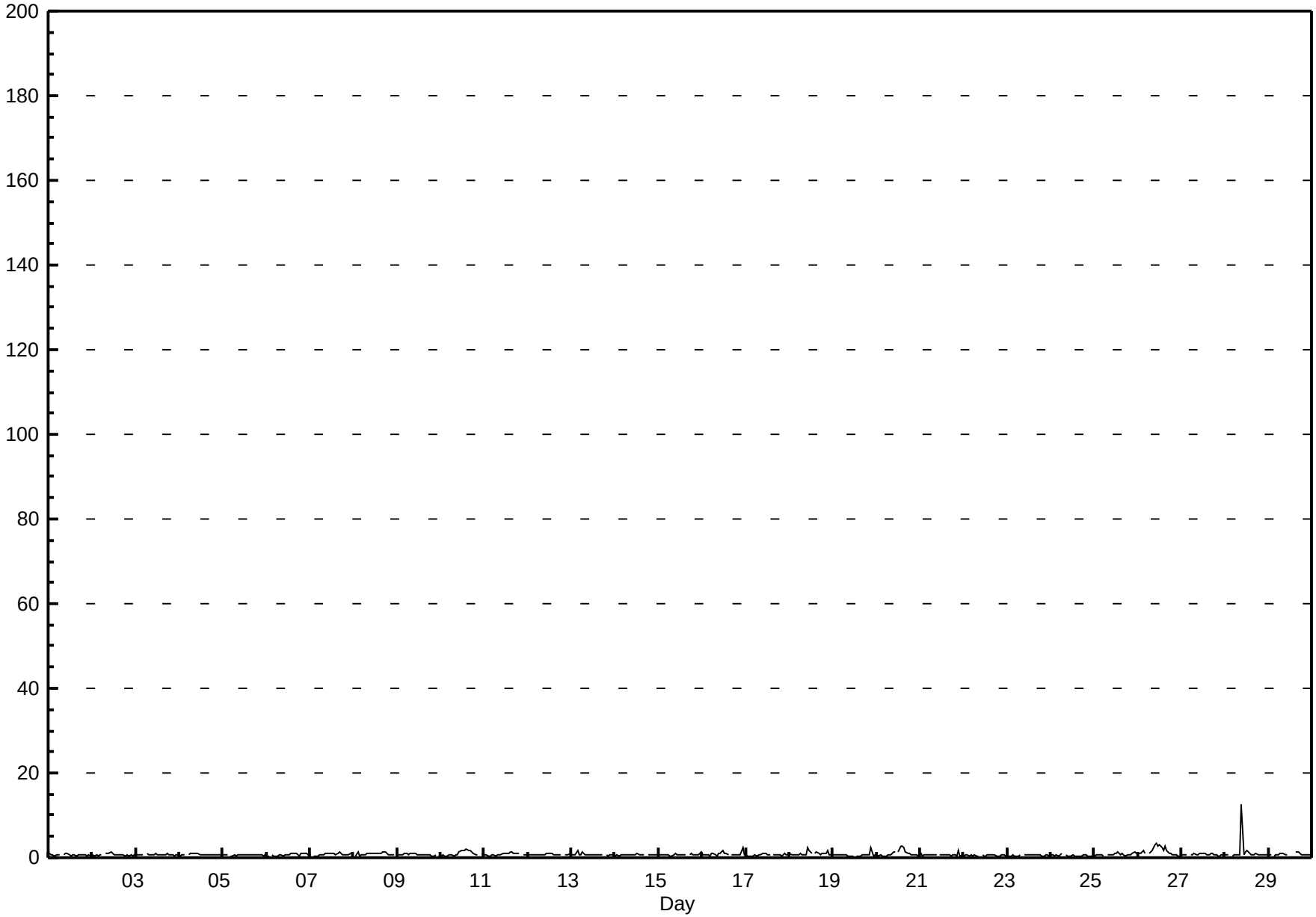
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

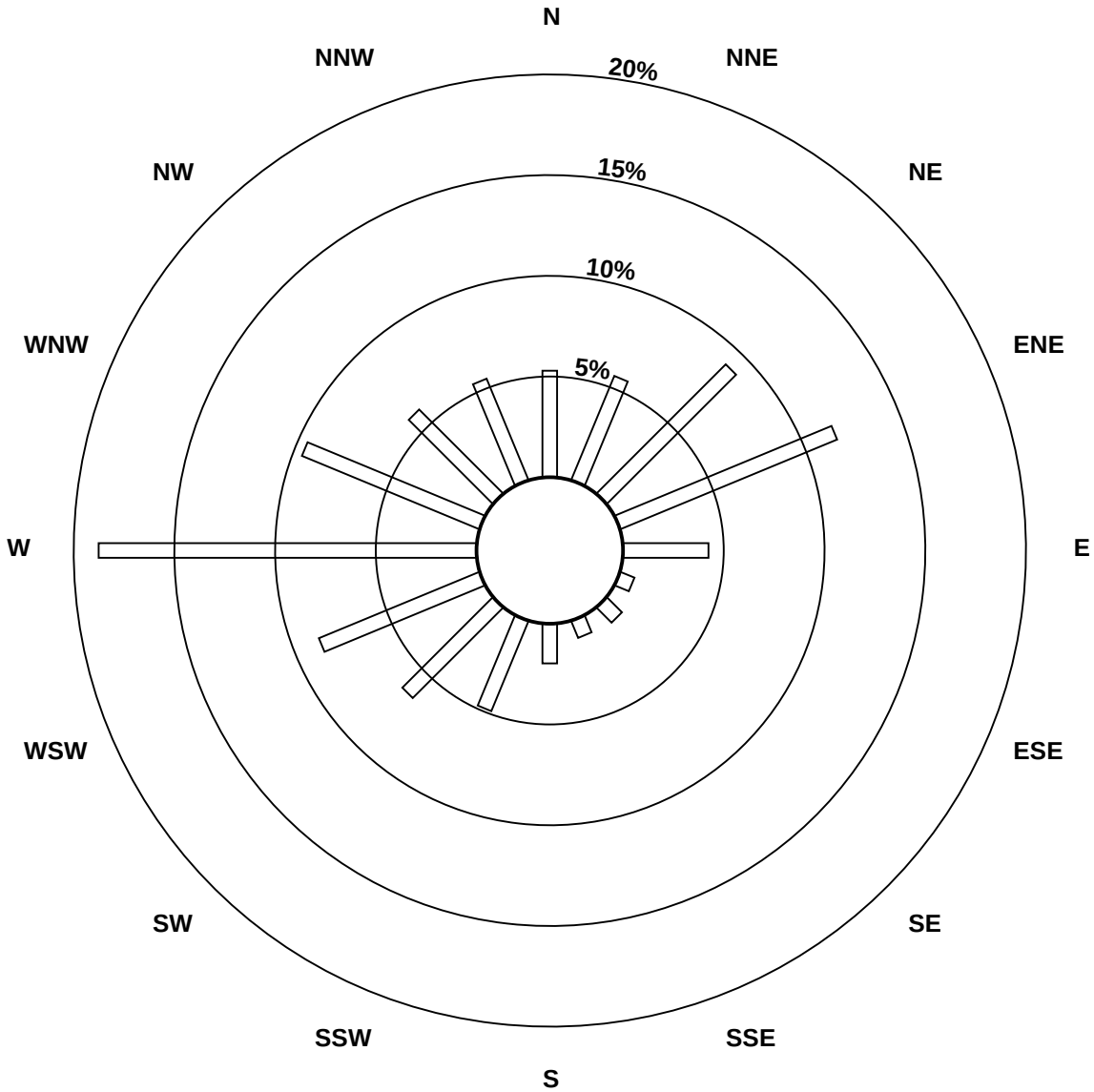
Evergreen Park - February 2012



Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - February 2012



Pollutant Classes (ppb)

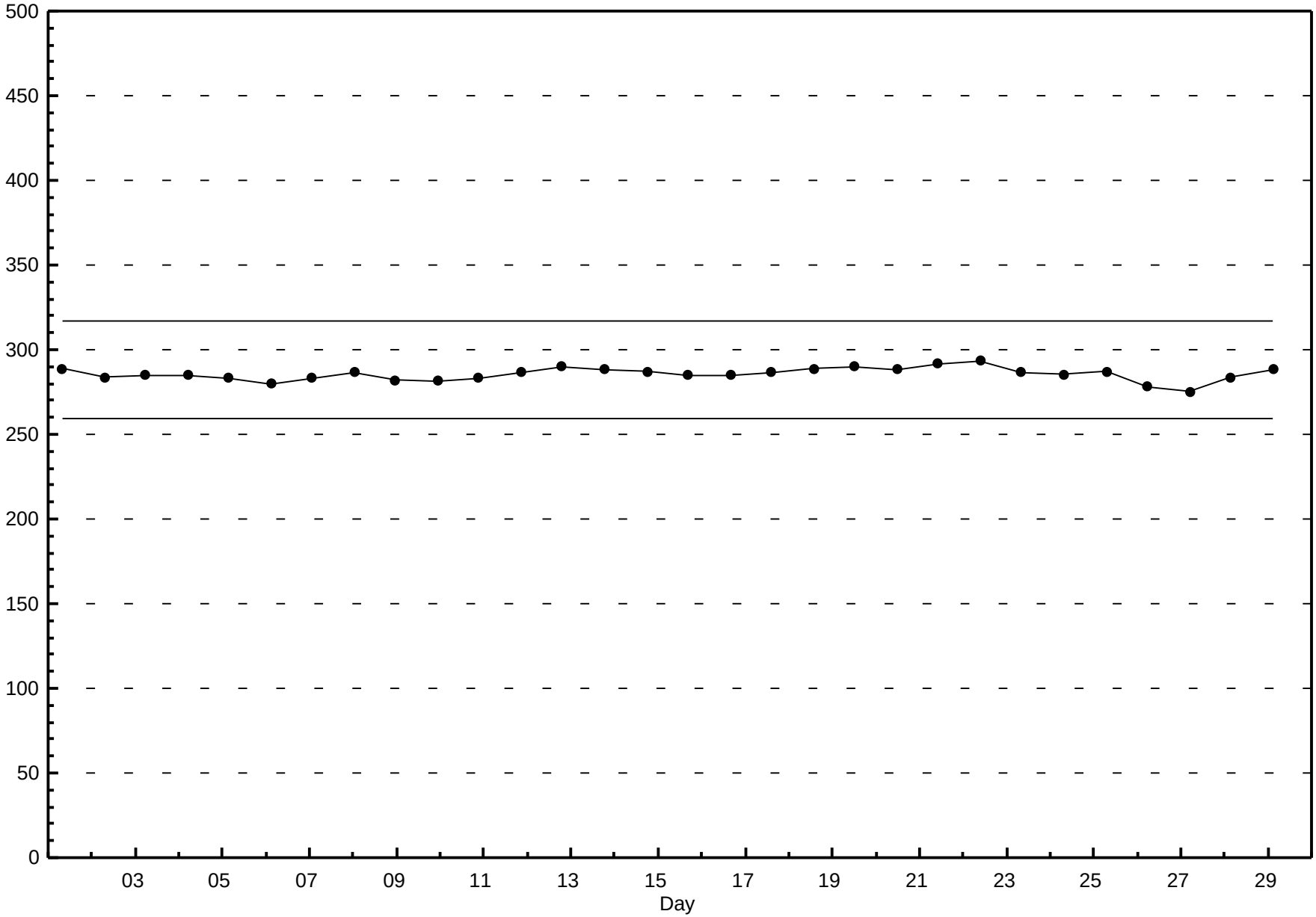
- 0 - 10
- 11 - 20
- 21 - 60
- 61 - 110
- 111 - 172
- > 172

Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Evergreen Park - February 2012



Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - February 2012

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

Maximum Value: 2.1 ppb on Feb 2 11:00

Maximum Daily Average: 1.3 ppb on Feb 2

Minimum Value: 0 ppb on Feb 28 06:00

Minimum Daily Average: 0.5 ppb on Feb 13

Maximum Diurnal Average: 0.9 ppb at hour 10

Minimum Diurnal Average: 0.6 ppb at hour 15

Monthly Average: 0.76 ppb

Percentiles: $P_1 = 0.4$ $P_{10} = 0.5$ $Q_1 = 0.6$ Median = 0.7 $Q_3 = 0.9$ $P_{90} = 1.1$ $P_{99} = 1.6$

Hours in Service:	696
Hours of Data:	662
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	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1
2-Feb	1	1	1	1	1	1	A	1	2	2	2	2	2	1	1	1	1	0	1	1	1	1	2	1	1.3	2.1
3-Feb	2	2	2	1	1	A	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1.0	1.9
4-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	0.7	1.2
5-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	0.9	1.5
6-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	0.6	0.7
7-Feb	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
8-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.9	1.3
9-Feb	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.9	1.5
10-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	0.8
11-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.9	1.1
12-Feb	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0.7	1.4
13-Feb	1	0	0	1	0	0	0	1	0	0	0	1	1	1	1	1	1	1	A	1	1	1	1	1	0.5	0.7
14-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	0.9
15-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
16-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	1.3
17-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	0.7	1.3
18-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1.0	1.5
19-Feb	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	1	1	1	1	1	1	1	1	1	0.8	1.3
20-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	0	1	1	1	1	1	1	1	1	0.7	1.0
21-Feb	1	1	1	1	1	1	1	0	0	0	A	1	1	1	1	1	1	1	1	1	0	0	1	0	0.5	0.9
22-Feb	0	0	1	0	1	1	0	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.7
23-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	0.6	0.7
24-Feb	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	1	1	1	0	1	1	0	1	0	0.6	1.0
25-Feb	0	1	1	0	1	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.7
26-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	1.3
27-Feb	1	1	1	1	A	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.7
28-Feb	1	1	0	A	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.3
29-Feb	1	1	A	1	1	1	1	1	1	C	C	C	C	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.8	0.7	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	Diurnal Average	
	1.5	1.7	1.9	1.4	1.5	1.3	1.5	1.4	1.7	1.8	2.1	1.6	1.6	1.4	1.3	1.4	1.5	1.0	1.3	1.3	1.2	1.4	1.6	1.4	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

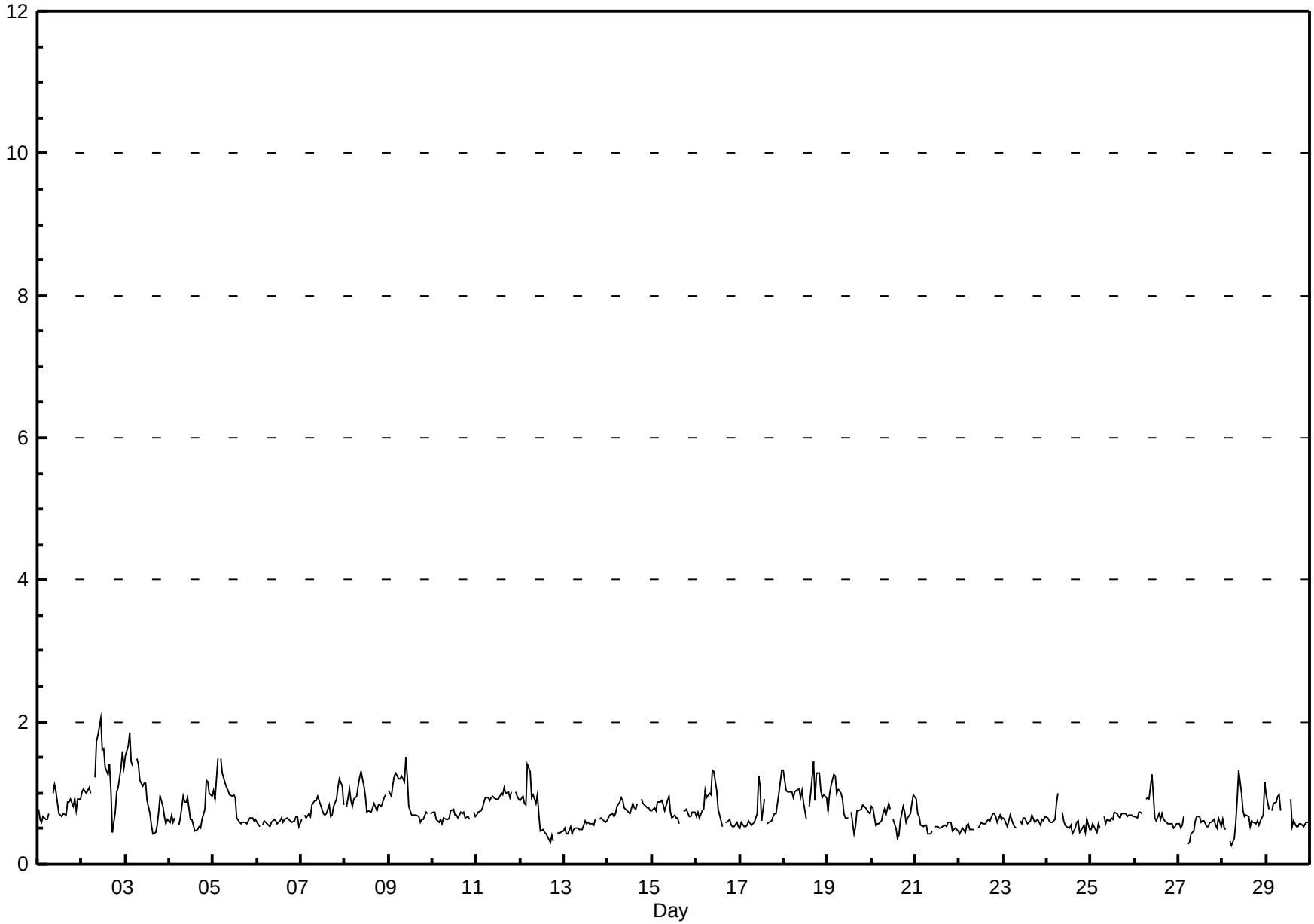
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - February 2012



Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - February 2012

Maximum Value: 4.0 ppb on Feb 18 17:00

Maximum Daily Average: 1.7 ppb on Feb 2

Minimum Value: 1 ppb on Feb 28 06:00

Minimum Daily Average: 1.0 ppb on Feb 27

Maximum Diurnal Average: 1.4 ppb at hour 10

Minimum Diurnal Average: 1.0 ppb at hour 15

Monthly Average: 1.19 ppb

Percentiles: $P_1 = 0.8$ $P_{10} = 0.9$ $Q_1 = 1.0$ Median = 1.1 $Q_3 = 1.3$ $P_{90} = 1.6$ $P_{99} = 2.3$

Hours in Service:	696
Hours of Data:	662
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	A	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	1.6
2-Feb	1	1	1	1	1	1	A	2	2	2	3	2	2	2	2	2	1	1	1	2	1	2	2	2	1.7	2.6
3-Feb	2	2	2	2	2	A	2	2	2	1	2	2	1	1	1	1	1	1	1	2	1	1	1	1	1.5	2.4
4-Feb	1	1	1	1	A	1	1	2	1	1	2	1	1	1	1	1	1	1	1	1	2	2	1	1	1.2	1.7
5-Feb	1	2	2	A	2	2	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.3	2.3
6-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	1.0	1.3
7-Feb	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1.3	1.8
8-Feb	A	1	2	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1.3	1.7
9-Feb	2	1	2	2	2	2	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	A	1	1.4	1.9
10-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	1.1	1.3
11-Feb	1	1	1	1	1	2	1	1	1	2	1	1	2	1	1	1	1	1	1	2	A	1	1	1	1.3	1.6
12-Feb	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1.1	2.3
13-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	1.0	1.4
14-Feb	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1.2	1.5
15-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1.2	1.5
16-Feb	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	A	1	1	1	1	1	1	2	1	1.2	1.9
17-Feb	1	1	1	1	1	1	1	1	1	2	2	2	1	1	A	1	1	1	1	1	1	2	2	2	1.2	1.8
18-Feb	2	1	1	1	1	1	2	1	2	1	1	1	1	A	1	2	4	2	4	3	1	2	1	1	1.7	4.0
19-Feb	1	1	2	2	2	2	1	2	1	1	1	1	A	1	1	1	1	1	1	1	1	2	1	1	1.3	2.3
20-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.4
21-Feb	2	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	1.6
22-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	1.0	1.2
23-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	1.0	1.1
24-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	1.0	1.4
25-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	1.3
26-Feb	1	1	1	1	1	A	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.7
27-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	1.0	1.1
28-Feb	1	1	1	A	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1.1	1.9
29-Feb	1	1	A	1	1	1	1	1	1	C	C	C	C	1	1	1	1	1	1	1	1	1	1	1	1.1	1.4
	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.4	1.3	1.2	1.1	1.1	1.0	1.1	1.1	1.1	1.2	1.2	1.1	1.2	1.2	1.2	Diurnal Average	
	2.0	2.1	2.4	2.0	2.3	2.3	2.0	1.9	2.2	2.3	2.6	2.1	2.2	1.8	1.8	2.2	4.0	2.0	3.5	2.8	1.6	2.3	2.3	1.9	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

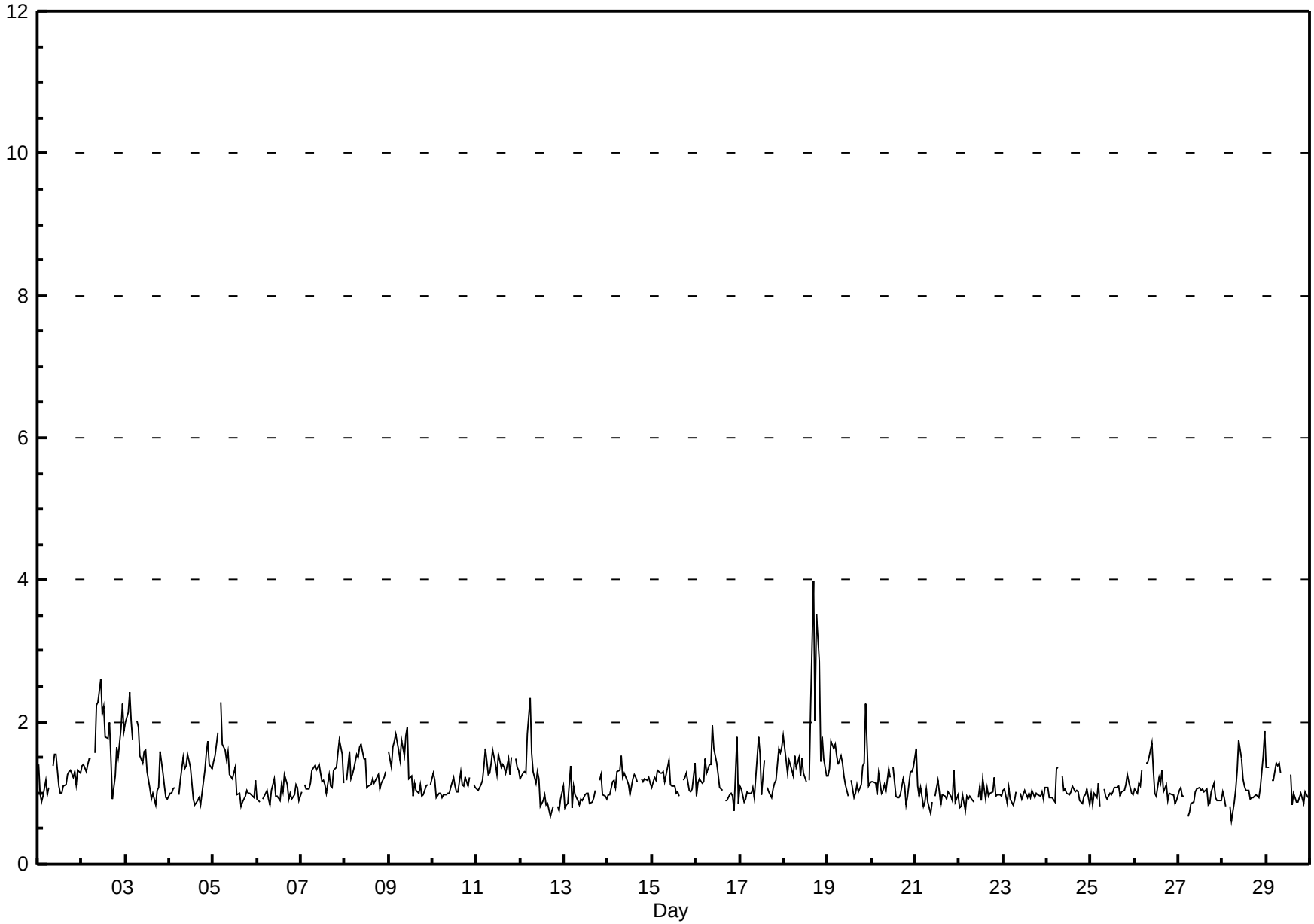
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

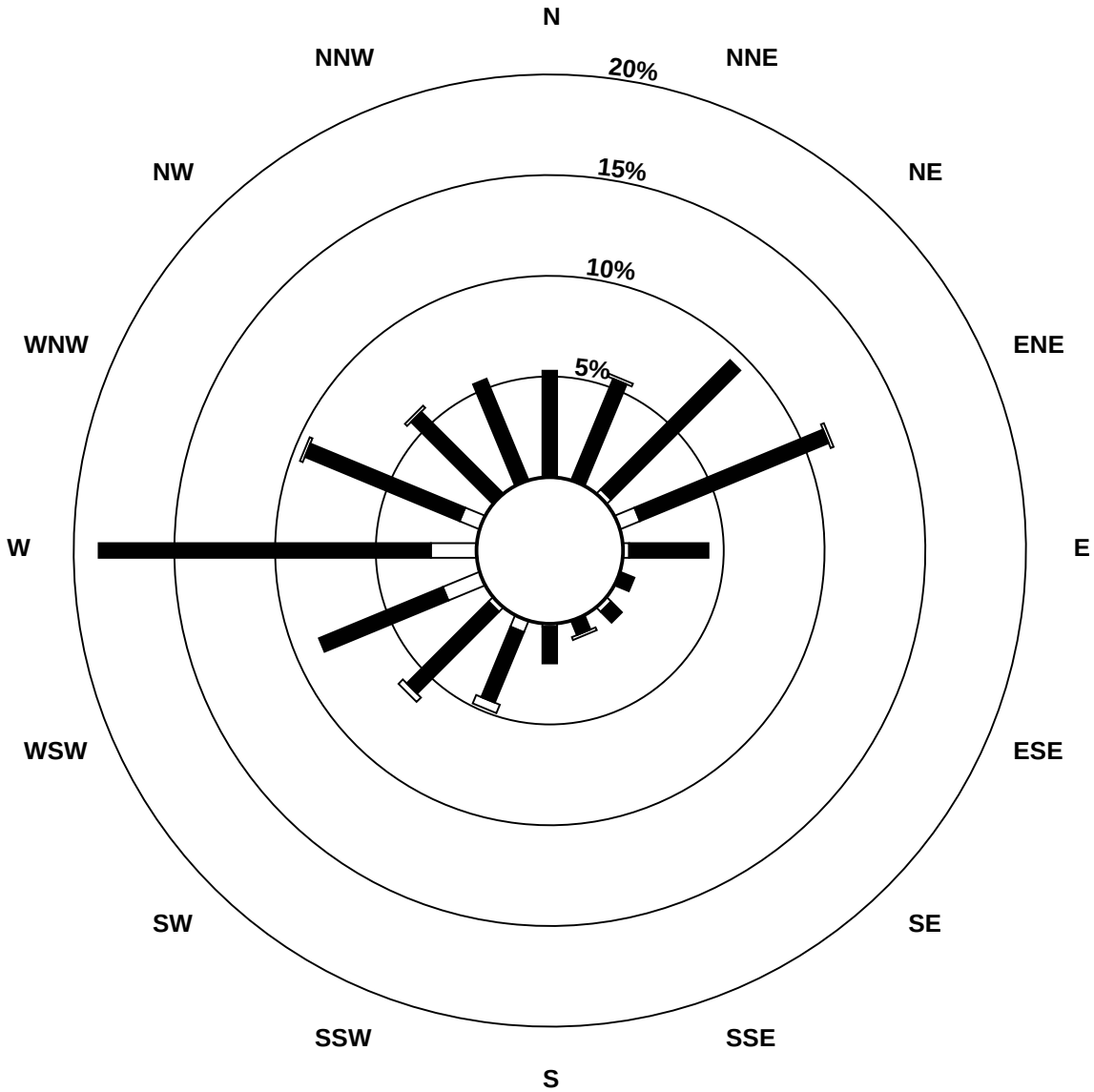
Evergreen Park - February 2012



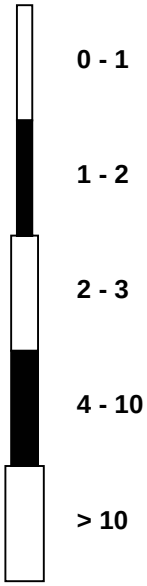
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - February 2012



Pollutant Classes (ppb)

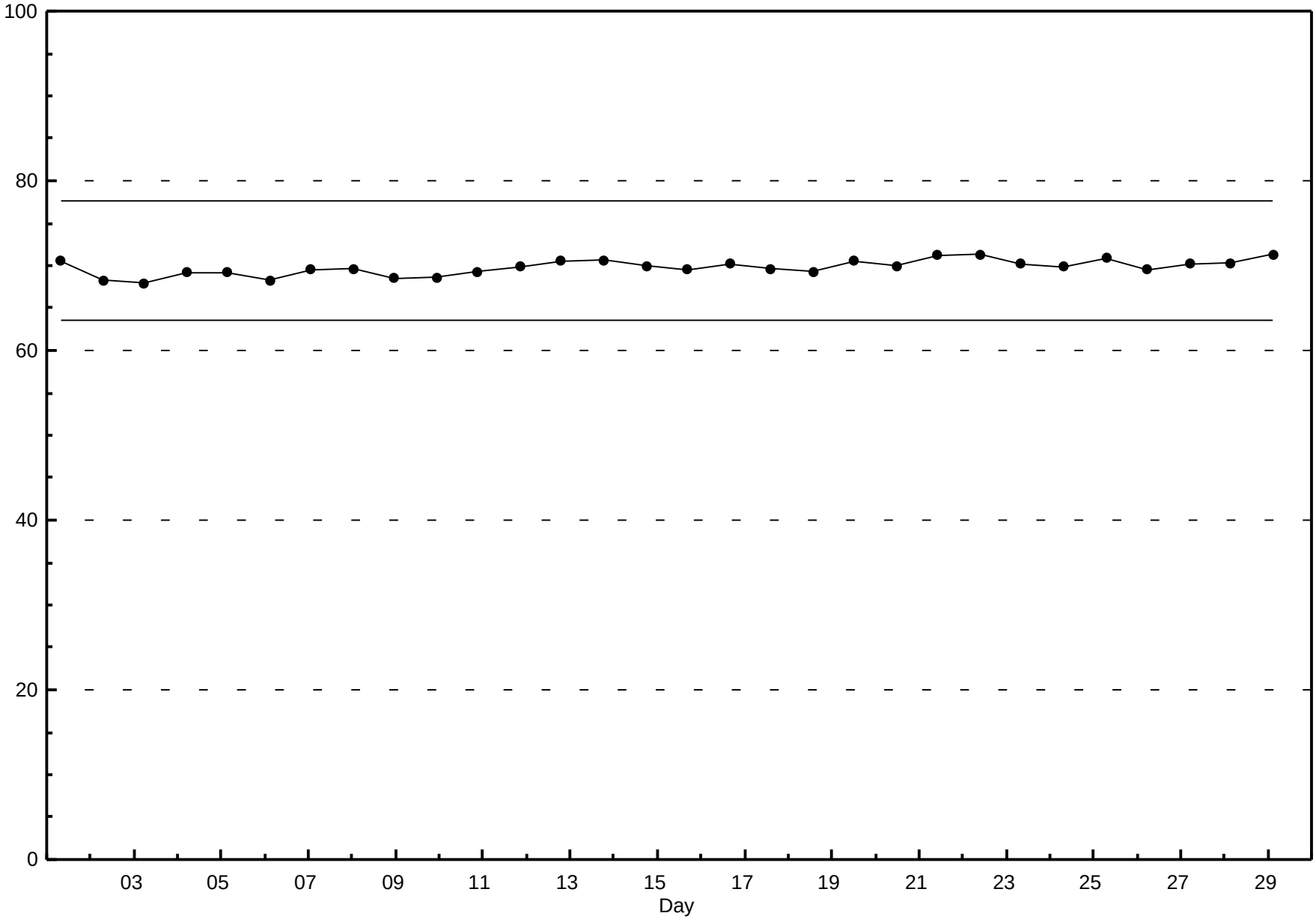


Peace Airshed Zone Association

Span Responses

Total Reduced Sulphur (TRS)

Evergreen Park - February 2012



Peace Airshed Zone Association

Hourly Averages

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

Evergreen Park - February 2012

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

Maximum Value: 23.0 $\mu g/m^3$ on Feb 11 17:00

Maximum Daily Average: 12.4 $\mu g/m^3$ on Feb 11

Minimum Value: 0 $\mu g/m^3$ on Feb 2 01:00

Maximum Diurnal Average: 8.2 $\mu g/m^3$ at hour 10

Monthly Average: 4.96 $\mu g/m^3$

Minimum Daily Average: 0.6 $\mu g/m^3$ on Feb 6

Minimum Diurnal Average: 2.6 $\mu g/m^3$ at hour 15

Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 1.0$ Median = 3.5 $Q_3 = 7.4$ $P_{90} = 12.3$ $P_{99} = 21.3$

Hours in Service:	696
Hours of Data:	693
Hours of Missing Data:	3
Hours of Calibration:	0
Percent Operational Time:	99.6

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	15	12	10	13	12	14	16	16	13	4	1	2	3	3	1	4	6	3	2	2	1	0	7.5	16.4
2-Feb	0	1	11	11	6	10	8	10	7	9	12	21	7	1	3	3	1	1	6	16	11	7	8	9	7.5	21.3
3-Feb	12	14	20	14	11	11	11	11	9	13	16	14	9	1	0	2	0	2	8	7	5	6	8	6	8.8	19.9
4-Feb	6	6	7	4	3	6	7	9	10	10	16	7	2	5	6	4	5	5	9	11	10	5	5	4	6.7	16.2
5-Feb	6	5	7	7	6	6	7	6	7	7	7	6	7	2	0	0	1	1	2	1	1	4	1	0	4.0	7.5
6-Feb	0	2	3	0	0	1	0	1	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	2.8
7-Feb	0	1	1	1	4	5	6	7	8	8	14	12	6	6	8	9	7	8	11	11	12	10	9	9	7.1	14.2
8-Feb	8	7	8	8	7	9	9	9	13	19	14	15	6	5	4	7	11	10	18	17	19	21	21	22	12.0	22.1
9-Feb	21	19	22	22	21	21	20	16	16	21	16	2	0	2	2	2	2	3	3	3	4	4	3	6	10.5	21.9
10-Feb	5	1	3	4	3	2	2	2	4	7	9	8	9	7	3	4	4	7	5	3	5	8	9	6	5.0	9.1
11-Feb	5	5	6	6	5	9	6	7	8	18	15	11	13	14	20	20	23	23	17	15	14	13	13	12	12.4	23.0
12-Feb	13	13	13	11	12	11	11	11	9	16	8	0	0	0	0	0	0	0	0	1	0	0	0	0	5.5	16.2
13-Feb	0	1	0	1	0	0	0	0	1	3	1	0	0	0	0	0	1	2	5	1	0	0	1	0	0.7	4.6
14-Feb	0	1	1	0	0	2	4	2	2	5	1	2	2	1	1	1	3	8	12	3	1	2	2	1	2.2	11.5
15-Feb	1	1	1	1	1	0	1	2	14	14	2	3	2	1	0	1	2	4	10	7	4	4	4	5	3.4	14.3
16-Feb	2	3	7	4	5	4	3	3	4	8	11	11	5	4	2	4	1	1	1	1	1	1	4	1	3.9	11.0
17-Feb	1	2	1	1	0	1	1	0	1	9	10	8	21	7	0	3	12	2	2	4	7	7	11	8	4.9	21.2
18-Feb	13	8	6	6	9	6	7	5	5	4	5	3	3	2	2	2	3	2	4	3	2	4	5	2	4.5	12.6
19-Feb	4	2	3	4	5	4	6	5	0	0	0	0	0	0	0	1	1	1	2	2	0	2	1	1	1.8	5.6
20-Feb	3	2	3	2	2	2	4	5	4	10	9	6	3	0	0	4	6	3	0	0	1	0	0	0	2.8	9.7
21-Feb	2	2	3	3	2	0	0	0	4	0	0	1	0	0	1	1	1	0	1	0	0	1	0	0	0.9	3.7
22-Feb	0	0	3	0	0	0	0	0	0	1	0	1	1	0	0	3	4	6	2	3	2	3	3	2	1.5	6.2
23-Feb	0	0	1	0	0	1	0	1	0	4	1	0	1	3	0	2	0	3	2	1	0	1	2	1	1.0	4.4
24-Feb	2	2	2	1	1	4	5	3	0	0	0	11	13	0	0	0	0	16	10	0	0	0	0	0	2.8	15.7
25-Feb	0	0	0	1	2	2	2	2	2	3	2	2	N	N	10	23	17	16	12	11	10	9	10	11	6.7	22.6
26-Feb	10	10	12	10	5	6	7	6	7	8	5	5	4	4	4	4	3	3	3	2	3	5	9	6	5.9	12.3
27-Feb	5	4	4	5	6	10	7	6	6	7	4	3	1	1	2	2	3	2	2	2	2	2	4	1	3.8	10.0
28-Feb	1	2	2	1	0	1	3	6	10	9	6	5	8	7	2	3	5	2	3	3	4	6	6	9	4.4	10.2
29-Feb	6	6	5	6	5	7	9	8	8	6	4	4	5	5	M	4	4	0	5	6	4	4	4	3	5.1	8.5
	4.7	4.6	5.9	5.1	4.6	5.2	5.4	5.5	6.1	8.2	7.0	5.7	4.5	2.9	2.6	3.8	4.1	4.7	5.5	4.7	4.3	4.6	4.9	4.5	Diurnal Average	
	20.5	19.2	21.9	21.7	21.2	21.4	19.6	16.1	16.5	21.2	16.4	21.3	21.2	13.6	19.6	22.6	23.0	22.7	18.1	17.3	18.7	21.2	20.6	22.1	Diurnal Maximum	

M - Maintenance N - Not Valid

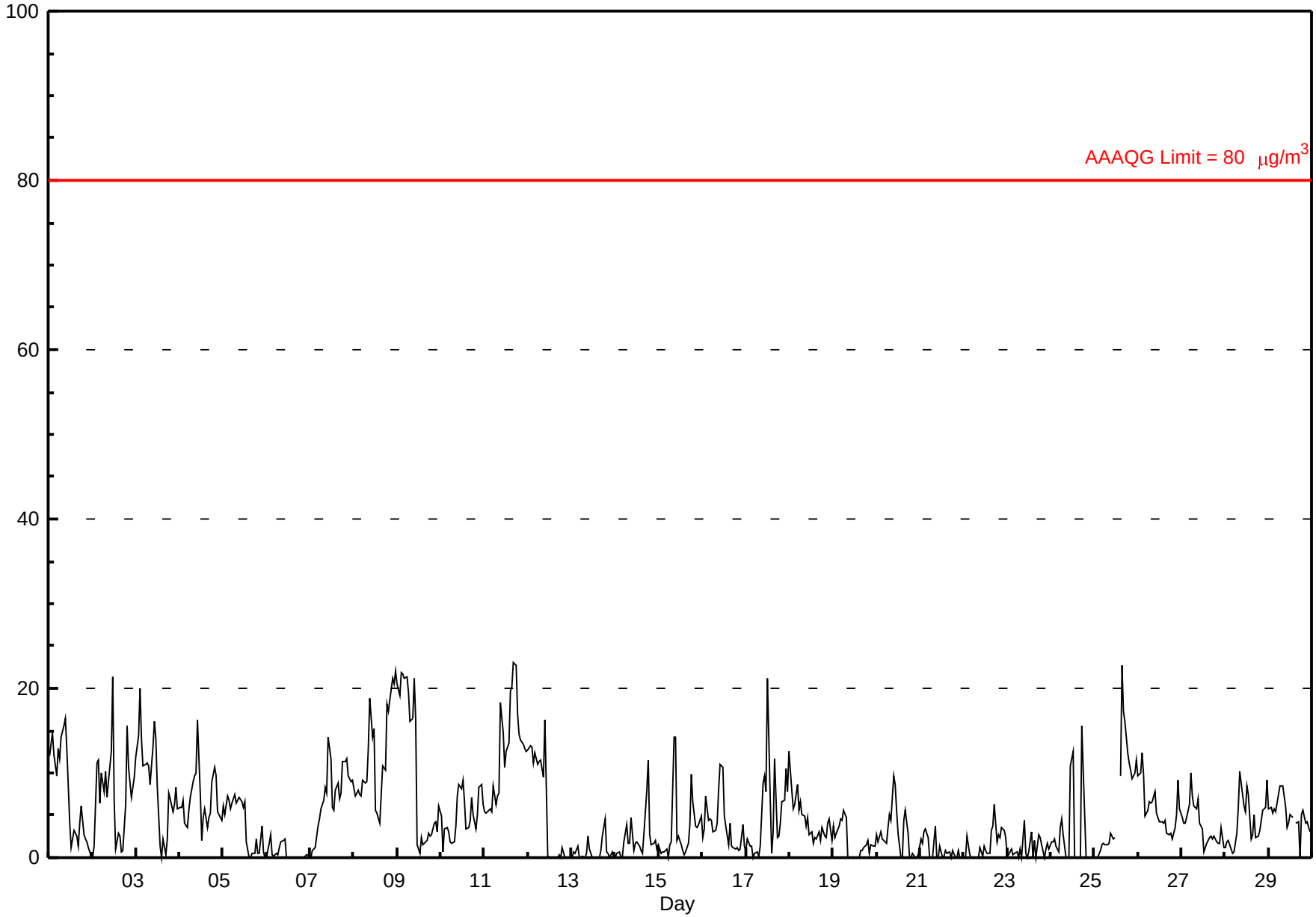
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

Peace Airshed Zone Association

Hourly Averages

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

Evergreen Park - February 2012



Peace Airshed Zone Association

Hourly Maximums

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

Evergreen Park - February 2012

Maximum Value: 50.9 $\mu g/m^3$ on Feb 24 13:00

Maximum Daily Average: 16.4 $\mu g/m^3$ on Feb 11

Minimum Value: 0 $\mu g/m^3$ on Feb 5 15:00

Minimum Daily Average: 2.2 $\mu g/m^3$ on Feb 6

Maximum Diurnal Average: 13.5 $\mu g/m^3$ at hour 10

Minimum Diurnal Average: 5.8 $\mu g/m^3$ at hour 15

Monthly Average: 8.25 $\mu g/m^3$

Percentiles: $P_1 = 0.0$ $P_{10} = 1.6$ $Q_1 = 3.3$ Median = 6.7 $Q_3 = 11.4$ $P_{90} = 17.2$ $P_{99} = 30.3$

Hours in Service:	696
Hours of Data:	693
Hours of Missing Data:	3
Hours of Calibration:	0
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	26	22	17	20	15	15	15	19	17	20	17	10	3	4	6	4	4	6	9	7	4	4	3	2	11.2	25.5
2-Feb	1	8	14	16	14	12	11	14	11	12	19	25	22	4	8	7	3	3	10	19	15	9	12	15	11.8	24.8
3-Feb	15	22	23	18	13	14	14	13	11	28	27	17	14	7	1	8	3	6	11	9	8	11	10	8	12.9	28.0
4-Feb	8	8	8	6	5	11	9	13	14	12	22	15	5	9	10	8	8	7	12	14	12	8	7	9	10.1	21.6
5-Feb	9	8	9	9	9	10	10	9	10	11	8	7	9	6	0	1	2	2	5	3	3	6	5	1	6.4	10.7
6-Feb	2	4	7	3	2	3	2	3	4	4	4	2	0	1	0	0	0	2	0	1	1	2	3	3	2.2	7.5
7-Feb	1	3	4	4	6	9	9	13	14	15	18	24	12	8	11	11	9	13	13	14	15	12	11	12	10.9	23.6
8-Feb	11	10	11	10	10	12	11	12	15	30	20	24	8	8	7	11	14	15	20	21	21	25	24	26	15.7	30.4
9-Feb	24	23	25	26	24	25	25	19	21	26	23	6	2	5	3	4	3	5	5	5	6	7	6	11	13.7	26.4
10-Feb	12	4	6	6	6	5	5	5	7	14	12	11	13	9	6	6	8	9	8	5	8	11	11	9	8.2	14.1
11-Feb	8	9	8	8	8	15	9	11	10	36	28	16	14	18	22	23	25	26	20	16	17	16	15	15	16.4	35.8
12-Feb	16	15	16	14	15	14	14	14	12	39	29	3	0	0	0	0	0	2	3	3	0	0	0	2	8.8	39.2
13-Feb	0	2	2	9	0	0	2	2	2	5	3	3	0	0	0	0	4	4	11	3	3	2	3	1	2.5	10.9
14-Feb	2	4	3	2	3	5	7	5	7	7	5	4	9	5	3	3	6	14	16	6	3	3	5	3	5.4	15.8
15-Feb	3	3	2	2	4	3	4	5	25	21	7	7	3	3	3	3	4	7	18	13	6	7	7	8	6.9	25.3
16-Feb	6	7	11	7	7	8	5	5	8	11	14	16	11	8	7	7	4	3	2	4	3	3	14	3	7.3	15.8
17-Feb	3	4	4	3	2	2	3	2	3	15	18	11	34	17	7	14	15	6	5	6	8	19	19	11	9.6	34.2
18-Feb	21	13	8	8	14	8	9	8	7	7	9	9	7	5	5	5	7	7	7	6	4	6	7	4	8.0	21.4
19-Feb	5	5	5	5	7	7	8	7	4	1	0	0	0	1	1	5	5	4	4	4	2	9	3	4	4.0	9.2
20-Feb	5	4	7	4	4	4	9	10	7	14	15	7	8	0	1	9	7	5	3	1	3	2	3	3	5.6	14.8
21-Feb	7	6	6	7	5	4	1	1	13	3	4	3	1	4	4	4	2	1	3	1	2	6	0	0	3.6	13.4
22-Feb	1	1	6	3	1	1	4	1	1	3	2	3	3	2	3	12	6	19	10	5	5	8	7	5	4.6	18.7
23-Feb	3	3	3	4	3	3	3	3	2	14	4	1	3	11	9	5	4	5	6	4	3	3	3	3	4.4	13.8
24-Feb	7	3	4	4	5	6	7	6	2	0	4	37	51	4	1	2	1	26	23	2	2	2	1	1	8.3	50.9
25-Feb	1	2	1	3	4	4	4	5	4	5	4	11	N	N	31	28	20	17	16	14	13	11	12	14	10.0	30.7
26-Feb	12	15	16	14	7	7	9	8	9	10	7	7	6	6	6	7	5	4	5	4	6	10	14	9	8.5	15.5
27-Feb	8	6	7	7	11	16	10	8	10	9	7	5	2	3	4	4	4	4	4	4	4	6	7	3	6.4	15.5
28-Feb	3	4	5	3	2	4	6	15	14	12	8	10	14	14	3	5	7	6	5	6	8	11	10	13	7.9	15.3
29-Feb	8	9	7	10	8	11	13	12	11	11	8	6	7	6	M	6	6	5	7	7	6	6	5	5	7.8	12.9
	7.9	7.8	8.5	8.2	7.3	8.3	8.2	8.5	9.6	13.5	12.0	10.4	9.3	6.0	5.8	7.1	6.4	8.0	8.9	7.0	6.6	7.7	7.8	7.0	Diurnal Average	
	25.5	23.0	25.3	26.4	24.3	24.8	24.8	18.9	25.3	39.2	28.9	36.9	50.9	18.2	30.7	28.2	25.0	26.3	23.1	20.8	20.6	24.9	23.5	26.4	Diurnal Maximum	

M - Maintenance N - Not Valid

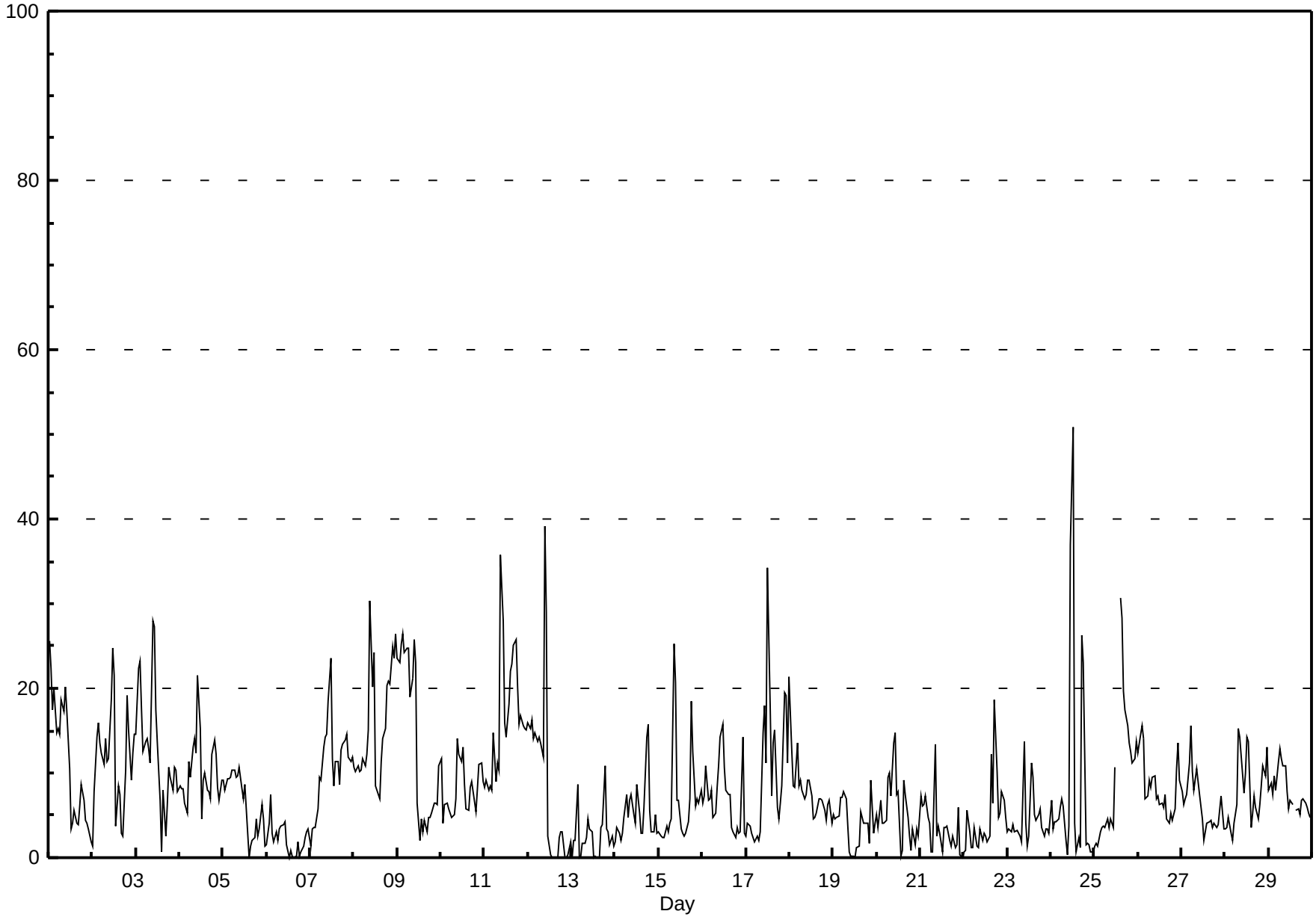
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

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

Evergreen Park - February 2012

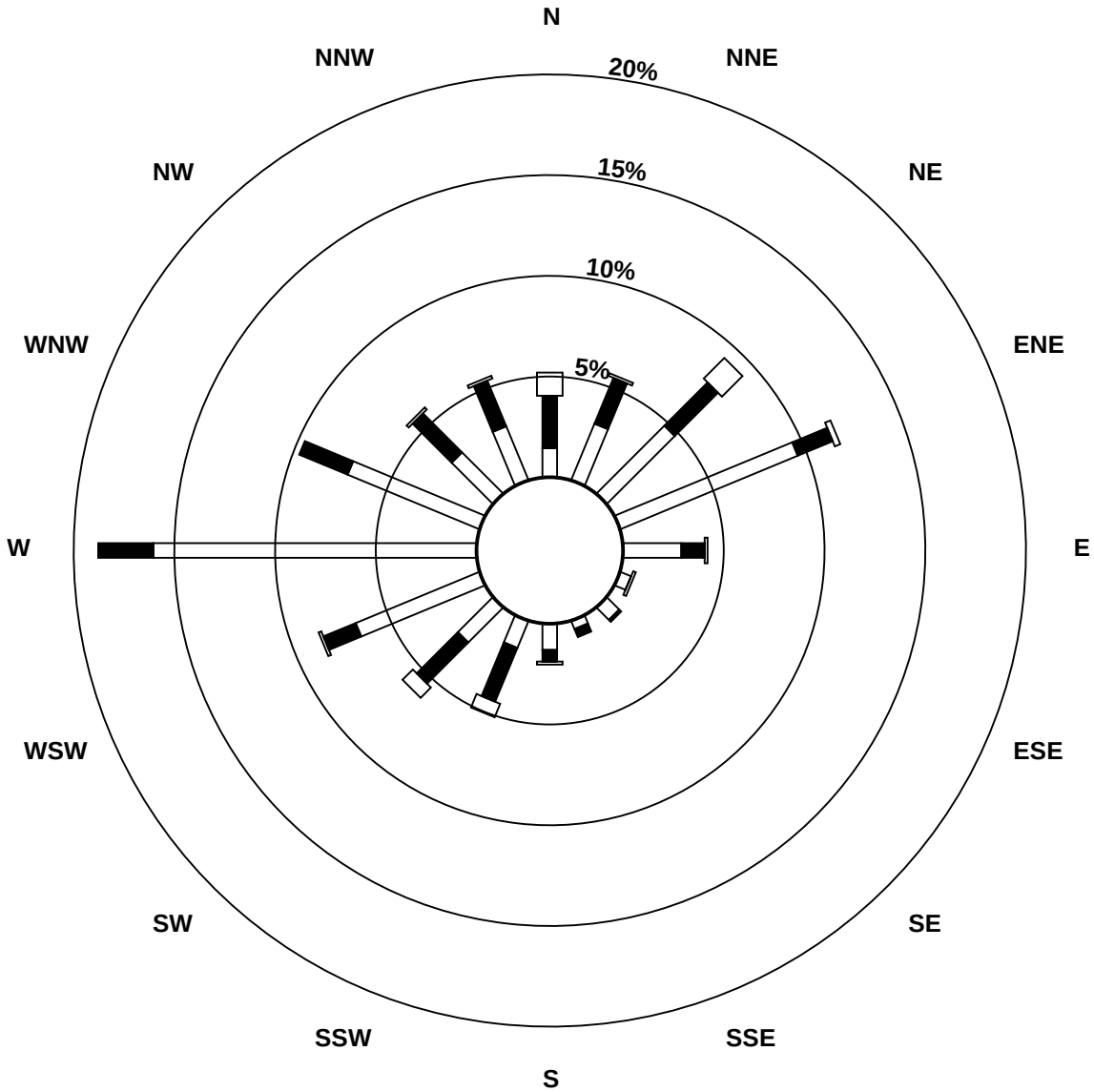


FOCUS AIR QUALITY MONITORING

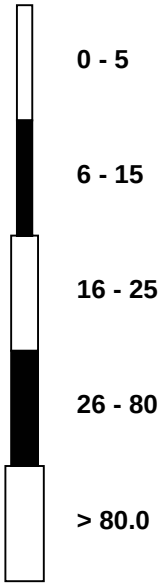
Pollutant Rose

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

Evergreen Park - February 2012



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



Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Evergreen Park - February 2012

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

Maximum Value: 9.0 ^{o}C on Feb 12 16:00 Maximum Daily Average: 2.2 ^{o}C on Feb 21

Minimum Value: -22 ^{o}C on Feb 11 09:00 Minimum Daily Average: -13.7 ^{o}C on Feb 11

Maximum Diurnal Average: -0.1 ^{o}C at hour 16 Minimum Diurnal Average: -10.3 ^{o}C at hour 8

Monthly Average: -5.65 ^{o}C Percentiles: P_1 = -19.6 P_{10} = -14.3 Q_1 = -10.6 Median = -4.9 Q_3 = -0.5 P_{90} = 2.2 P_{99} = 7.3

Hours in Service:	696
Hours of Data:	695
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	-2	-4	-4	-4	-3	-3	-3	-3	-3	-3	-2	0	2	3	3	4	3	1	0	-1	-1	-2	-2	-2	-1.1	3.7
2-Feb	-4	-7	-10	-11	-12	-13	-13	-12	-11	-10	-8	-4	-1	1	2	4	5	4	2	1	1	0	-2	-3	-4.2	5.2
3-Feb	-3	-3	-4	-4	-5	-5	-5	-5	-6	-6	-3	0	1	5	7	7	7	5	2	1	0	-1	-1	-1	-0.7	7.5
4-Feb	-2	-2	-2	-3	-4	-5	-6	-6	-6	-6	-3	-1	2	5	6	8	9	5	1	-1	-2	-3	-4	-5	-1.1	8.8
5-Feb	-6	-7	-7	-7	-8	-8	-8	-7	-6	-5	-3	-2	-1	0	0	0	-1	-2	-4	-6	-7	-7	-7	-9	-4.9	0.2
6-Feb	-11	-12	-13	-10	-9	-9	-10	-10	-11	-11	-9	-6	-4	-3	-3	-2	-1	-2	-3	-4	-4	-5	-7	-8	-6.9	-0.9
7-Feb	-9	-10	-11	-13	-15	-16	-17	-18	-18	-16	-13	-11	-9	-7	-5	-5	-5	-7	-10	-11	-13	-14	-15	-16	-11.8	-4.9
8-Feb	-17	-18	-19	-19	-19	-19	-20	-19	-20	-17	-13	-9	-6	-4	-3	-2	-3	-5	-7	-9	-10	-10	-11	-13	-12.1	-2.0
9-Feb	-14	-15	-15	-16	-17	-18	-18	-19	-19	-18	-14	-12	-9	-8	-8	-8	-8	-9	-10	-11	-12	-13	-14	-14	-13.3	-7.7
10-Feb	-13	-13	-13	-14	-15	-15	-16	-16	-17	-16	-14	-11	-9	-7	-7	-5	-4	-5	-8	-9	-10	-11	-12	-13	-11.4	-4.5
11-Feb	-14	-15	-17	-19	-20	-21	-21	-22	-22	-20	-16	-13	-11	-10	-9	-7	-7	-8	-9	-9	-8	-9	-11	-12	-13.7	-6.8
12-Feb	-13	-13	-13	-14	-13	-14	-14	-14	-14	-11	-5	0	5	8	9	9	8	7	5	4	3	4	4	4	-2.8	9.0
13-Feb	3	2	2	2	2	2	2	1	0	0	0	1	2	2	2	2	2	1	0	-1	-2	-2	-3	-4	0.6	2.9
14-Feb	-5	-5	-5	-9	-11	-9	-10	-10	-10	-8	-6	-4	-2	0	1	2	3	3	-1	0	-1	-1	-2	-3	-3.9	3.1
15-Feb	-3	-3	-4	-5	-6	-4	-7	-9	-6	-5	-2	1	2	3	4	4	4	3	-1	-1	-1	-1	-3	-5	-1.8	4.4
16-Feb	-8	-10	-11	-12	-13	-14	-14	-15	-15	-12	-10	-7	-3	1	2	4	4	4	3	3	2	1	0	0	-5.0	4.1
17-Feb	0	-1	-1	-4	-6	-8	-9	-11	-11	-9	-5	-1	2	2	2	3	2	0	-2	-3	-4	-6	-7	-9	-3.6	2.6
18-Feb	-9	-10	-10	-10	-10	-11	-11	-10	-10	-9	-6	-5	-4	-2	-1	0	0	0	0	-1	-1	-1	-2	-2	-5.3	0.0
19-Feb	-2	-3	-3	-3	-3	-4	-4	-3	-1	0	0	1	2	2	2	1	0	-1	-2	-3	-3	-3	-3	-4	-1.5	1.9
20-Feb	-4	-4	-5	-7	-8	-9	-11	-12	-12	-10	-8	-5	-2	1	3	2	1	0	-1	0	0	0	-1	-2	-4.0	2.8
21-Feb	-1	-1	-1	0	-1	1	2	3	2	2	3	4	5	5	5	5	4	3	3	2	2	2	2	2	2.2	5.3
22-Feb	2	2	1	0	0	0	0	0	1	1	1	2	2	4	4	3	2	1	-1	-1	-2	-2	-3	-2	0.7	4.2
23-Feb	-3	-3	-2	-3	-3	-3	-2	-1	-1	0	0	1	1	0	0	0	0	-1	-2	-2	-3	-4	-4	-4	-1.7	0.8
24-Feb	-5	-5	-6	-7	-9	-10	-10	-10	-10	-9	-8	-6	-5	-4	-4	-4	-3	-3	-4	-5	-6	-6	-6	-7	-6.4	-3.3
25-Feb	-8	-8	-8	-9	-9	-10	-10	-11	-12	-11	-11	-12	-12	-11	-12	-12	-12	-12	-12	-12	-12	-12	-13	-13	-11.0	-7.6
26-Feb	-13	-13	-14	-14	-15	-15	-16	-16	-16	-15	-14	-13	-12	-12	-11	-10	-9	-9	-11	-12	-13	-14	-16	-15	-13.3	-9.1
27-Feb	-16	-17	-18	-19	-19	-19	-18	-15	-14	-12	-9	-5	-4	-2	-1	0	-1	-2	-3	-3	-3	-3	-4	-6	-8.8	-0.4
28-Feb	-8	-9	-8	-8	-11	-11	-11	-11	-11	-8	-4	0	M	0	1	1	1	0	-3	-4	-6	-8	-10	-12	-6.1	1.4
29-Feb	-13	-13	-14	-15	-15	-16	-17	-15	-11	-10	-9	-9	-9	-8	-8	-8	-8	-8	-9	-9	-9	-10	-10	-10	-10.9	-7.5
	-6.9	-7.6	-8.1	-8.9	-9.6	-9.9	-10.1	-10.3	-10.1	-8.8	-6.5	-4.3	-2.7	-1.3	-0.6	-0.1	-0.2	-1.3	-3.0	-3.7	-4.4	-4.9	-5.8	-6.5	Diurnal Average	
	2.9	2.1	1.7	1.6	2.0	2.2	2.0	2.8	2.0	2.1	3.1	3.9	4.7	7.8	8.9	9.0	8.8	7.0	5.2	3.7	3.4	4.2	3.8	3.7	Diurnal Maximum	

M - Maintenance

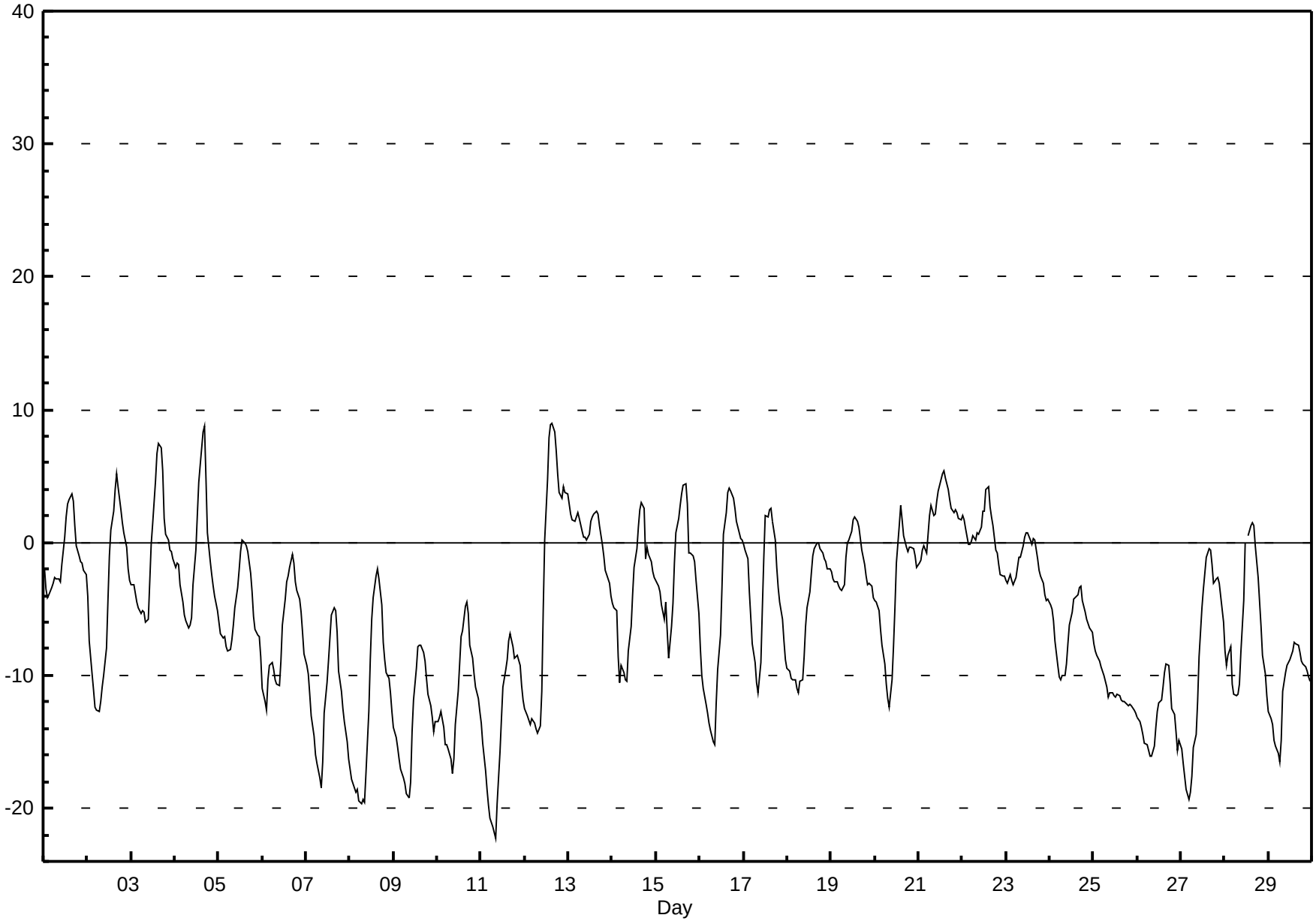
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Evergreen Park - February 2012



Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Evergreen Park - February 2012

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

Maximum Value: 94.7 % on Feb 22 22:00 Maximum Daily Average: 88.5 % on Feb 24

Minimum Value: 34 % on Feb 13 16:00 Minimum Daily Average: 51.4 % on Feb 15

Maximum Diurnal Average: 81.9 % at hour 5 Minimum Diurnal Average: 52.7 % at hour 16

Monthly Average: 70.23 % Percentiles: P_1 = 37.0 P_{10} = 48.8 Q_1 = 58.6 Median = 73.1 Q_3 = 82.5 P_{90} = 87.3 P_{99} = 92.5

Hours in Service:	696
Hours of Data:	695
Hours of Missing Data:	1
Hours of Calibration:	0
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	65	72	74	74	72	72	71	74	73	75	73	70	65	59	57	53	49	52	55	55	59	61	63	61	64.8	75.2
2-Feb	66	78	83	86	87	86	86	85	84	83	79	66	51	45	45	48	52	55	61	65	67	69	76	79	70.1	86.7
3-Feb	81	81	83	84	85	85	86	86	88	88	79	69	64	55	50	49	52	58	72	75	77	81	81	82	74.7	88.2
4-Feb	87	86	86	89	91	92	92	92	92	92	91	82	72	63	59	51	50	62	77	84	87	88	90	91	81.2	92.4
5-Feb	92	93	92	92	91	92	91	90	89	88	88	86	81	72	62	60	62	69	75	80	81	79	80	84	82.2	92.6
6-Feb	86	88	88	87	85	85	85	86	86	85	81	74	66	60	59	58	51	48	51	51	54	57	62	67	70.8	88.2
7-Feb	71	73	78	81	84	84	84	83	81	82	79	73	69	64	59	58	62	70	75	80	82	85	85	85	76.1	85.1
8-Feb	84	83	81	81	81	80	79	79	79	80	79	73	70	64	58	56	58	63	71	75	79	81	83	85	75.1	84.6
9-Feb	86	86	85	84	83	82	82	81	80	79	79	80	73	66	65	66	69	71	74	75	77	80	83	80	77.8	86.0
10-Feb	78	79	78	79	79	76	76	75	78	78	74	67	61	54	52	46	45	47	56	55	59	65	69	74	66.7	79.1
11-Feb	78	81	82	82	81	80	79	78	78	77	75	70	64	59	58	55	55	62	65	67	67	71	76	79	71.6	82.2
12-Feb	80	81	82	82	83	82	83	83	84	81	75	64	55	49	46	47	47	53	58	64	66	61	62	63	68.0	83.6
13-Feb	66	69	71	71	65	61	58	58	59	59	58	53	43	38	35	34	36	39	42	46	53	53	55	55	53.1	70.6
14-Feb	56	57	57	68	75	74	75	77	78	73	67	61	56	52	48	44	42	41	52	48	50	52	54	53	58.8	78.0
15-Feb	54	54	55	59	63	57	64	72	64	58	50	46	44	41	37	34	35	40	51	52	48	46	50	60	51.4	71.9
16-Feb	68	75	79	82	84	84	83	83	83	78	72	65	55	42	39	42	51	49	49	53	58	60	63	62	64.9	84.1
17-Feb	62	63	65	73	79	83	86	87	87	83	73	58	47	51	51	52	56	56	62	67	70	74	78	81	68.5	87.5
18-Feb	84	85	85	86	86	86	87	87	87	85	79	75	72	69	66	63	62	62	65	64	66	70	82	85	76.6	87.3
19-Feb	87	84	81	82	82	83	83	84	72	61	58	53	46	47	51	57	62	64	66	69	72	73	73	75	69.3	86.5
20-Feb	76	79	81	84	87	89	89	89	88	88	85	72	58	45	40	45	52	55	55	50	49	48	51	55	67.1	89.4
21-Feb	55	56	56	73	84	68	61	61	73	72	61	54	47	40	37	39	42	43	48	50	55	58	60	62	56.4	84.0
22-Feb	63	65	75	91	93	91	79	76	64	64	60	54	52	45	43	56	64	70	95	95	94	95	94	90	73.6	94.7
23-Feb	85	82	71	73	75	73	69	65	66	61	58	55	54	61	67	60	59	66	79	85	88	86	90	88	71.5	89.8
24-Feb	90	91	92	92	91	90	89	90	90	91	92	92	92	90	85	81	78	74	81	86	90	92	92	91	88.5	92.5
25-Feb	91	90	90	89	88	88	87	86	84	83	83	80	79	77	74	76	79	80	81	82	83	85	85	84	83.5	90.6
26-Feb	84	84	84	84	84	83	83	83	82	80	75	71	68	68	64	60	56	57	64	71	73	76	80	81	74.7	84.2
27-Feb	81	82	82	82	81	81	81	80	80	78	66	51	42	41	39	38	38	43	47	43	42	43	48	61	60.4	82.3
28-Feb	67	74	69	63	73	78	81	82	82	78	64	46	M	39	36	37	39	43	58	64	69	73	75	77	63.8	81.9
29-Feb	78	79	79	82	83	83	83	83	78	74	71	69	69	66	65	65	65	67	71	73	75	79	85	85	75.3	85.4
	75.9	77.5	78.1	80.5	81.9	80.9	80.4	80.5	79.6	77.8	73.3	66.6	61.2	56.0	53.4	52.7	54.1	57.3	64.0	66.4	68.7	70.3	73.3	75.1	Diurnal Average	
	92.1	92.6	92.5	92.3	92.7	91.7	92.1	92.3	92.4	92.3	91.7	92.2	92.2	90.3	84.9	80.5	79.4	80.1	94.5	94.6	94.5	94.7	94.2	91.5	Diurnal Maximum	

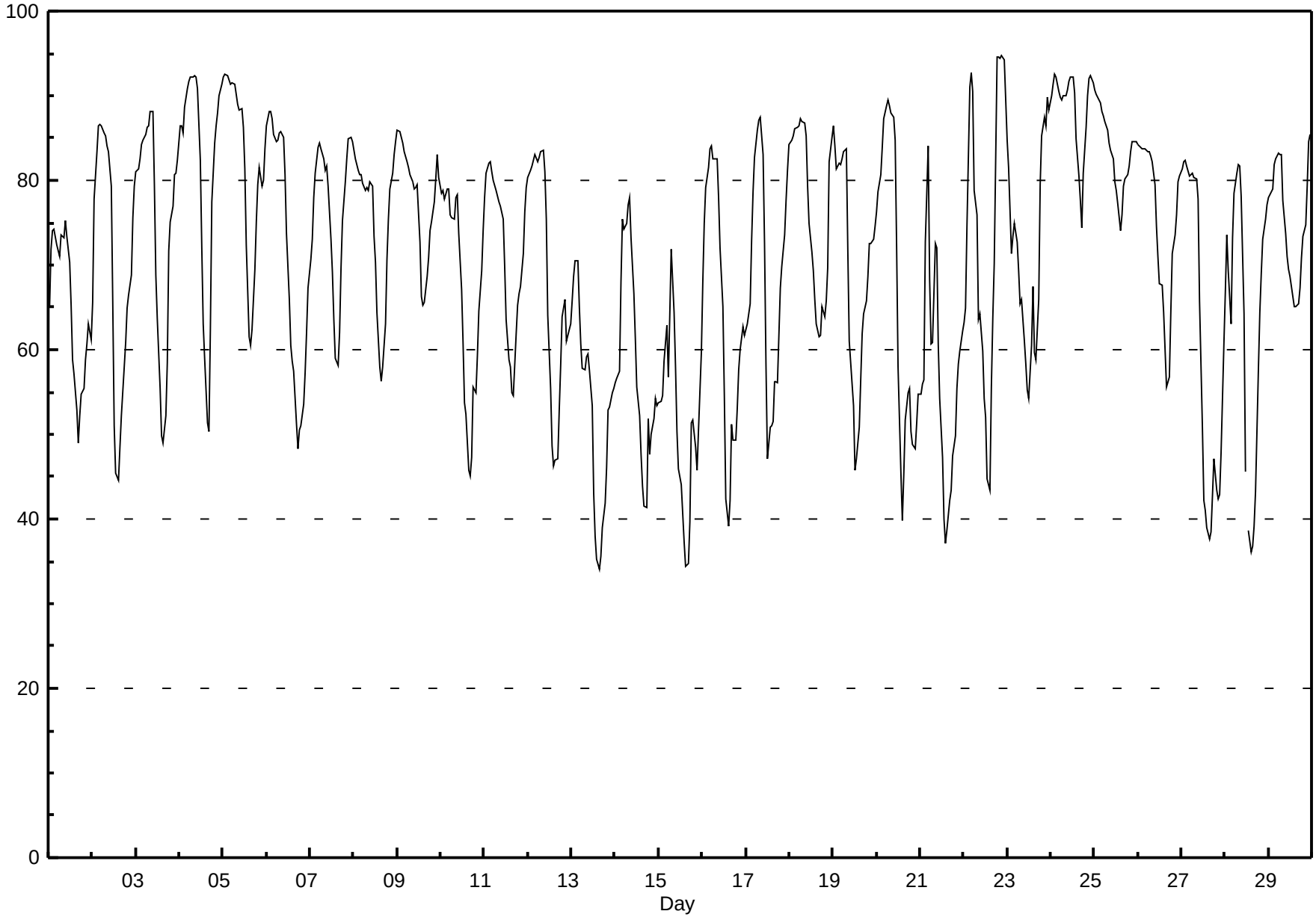
M - Maintenance

Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Evergreen Park - February 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Evergreen Park - February 2012

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	0	0	1	2	0	2	1	2	1	1	2	4	11	10	8	8	3	4	4	5	6	6	3	3	3.1	11.0
Dir	185	87	42	55	285	203	207	209	359	181	199	258	271	279	278	278	298	239	263	253	261	262	255	233	262.9	270.8
2 Spd	1	1	1	1	1	1	1	1	1	1	1	1	4	4	5	4	5	2	1	2	1	0	1	0	0.9	4.9
Dir	79	61	47	38	41	24	36	296	294	317	19	213	197	204	205	227	237	190	181	204	165	68	78	360	210.8	236.8
3 Spd	0	1	0	1	1	1	1	1	1	1	2	3	4	3	4	4	3	1	3	4	2	3	3	1	1.0	4.4
Dir	150	228	211	17	150	15	210	93	46	28	357	335	349	29	51	58	52	1	317	315	271	263	273	237	349.7	58.3
4 Spd	2	2	2	1	1	0	0	1	1	0	2	5	4	4	3	2	1	0	1	1	2	1	1	1	1.2	5.2
Dir	232	251	284	181	49	305	257	245	255	269	223	266	275	269	269	238	307	40	2	303	309	336	248	164	267.0	266.0
5 Spd	1	1	1	2	1	1	1	1	2	1	0	2	1	2	4	3	2	1	1	1	4	5	1	1	0.7	4.9
Dir	13	261	317	291	315	264	338	284	261	248	282	344	261	80	79	74	54	35	60	50	64	68	116	23	38.9	67.7
6 Spd	1	2	2	5	5	5	5	4	3	3	4	6	6	7	7	7	6	5	6	7	6	4	4	4	4.5	7.1
Dir	30	35	47	66	73	81	74	71	80	58	68	90	89	67	64	53	85	78	81	95	96	82	67	67	74.6	67.2
7 Spd	5	2	1	0	0	1	0	1	1	1	0	2	2	4	3	3	2	3	3	2	1	1	1	1	1.0	5.4
Dir	75	62	23	247	291	233	353	215	22	172	28	253	320	348	359	15	23	6	337	294	295	293	225	240	356.6	74.9
8 Spd	0	1	1	0	2	1	1	0	0	1	1	1	5	7	6	4	3	4	3	1	1	1	1	1	0.8	7.0
Dir	213	222	205	332	200	234	6	353	352	78	61	268	285	282	295	347	27	61	52	10	213	251	46	212	315.8	282.2
9 Spd	1	1	1	0	1	1	2	0	0	0	3	5	4	4	5	6	5	4	6	6	4	2	3	1	2.4	6.2
Dir	55	216	50	116	220	233	46	11	45	231	59	73	66	26	44	49	62	65	63	60	59	8	52	37	55.2	60.3
10 Spd	1	6	2	1	3	5	4	2	2	3	5	4	3	5	7	8	7	5	4	4	4	5	5	4	3.8	8.3
Dir	18	74	68	345	52	68	70	63	40	45	68	51	25	69	69	109	99	85	61	79	85	84	85	82	73.1	109.4
11 Spd	4	1	1	0	0	1	0	1	0	0	1	2	2	4	3	3	2	3	2	1	1	1	1	0	0.8	4.2
Dir	82	52	329	3	346	210	201	203	210	55	322	277	282	347	359	342	8	350	323	285	275	235	214	128	336.3	81.7
12 Spd	1	1	2	1	0	1	2	2	2	1	3	3	6	9	13	10	9	5	5	6	8	14	9	9	4.6	13.8
Dir	9	202	219	355	320	223	206	215	226	9	235	297	281	278	278	282	285	286	295	267	258	255	253	254	268.3	254.7
13 Spd	7	7	6	7	12	12	15	15	13	12	14	12	15	15	13	11	9	9	9	11	9	10	7	3	10.3	15.2
Dir	257	262	262	260	254	261	262	267	267	268	270	272	281	283	280	281	274	264	253	263	266	268	261	217	267.4	266.5
14 Spd	2	3	2	2	1	3	2	3	1	3	7	7	8	7	7	5	4	3	2	9	8	9	5	4	3.9	8.6
Dir	272	265	284	47	34	269	247	336	259	278	283	278	285	297	283	319	289	270	242	265	266	266	258	269	279.2	264.9
15 Spd	5	4	4	4	1	2	1	1	2	1	12	14	15	12	10	8	7	1	1	3	3	3	2	1	4.5	14.7
Dir	275	298	312	326	29	314	50	23	266	333	264	280	283	283	278	291	282	330	259	252	274	299	293	254	284.8	282.6
16 Spd	1	0	1	1	1	1	1	0	0	1	1	3	1	3	6	11	13	9	11	19	13	12	10	10	4.8	18.5
Dir	56	19	45	14	312	328	341	23	351	341	248	261	269	218	201	250	251	249	255	263	270	260	265	264	258.6	262.7
17 Spd	5	6	3	1	1	1	0	1	1	1	1	1	1	3	4	5	5	3	2	2	3	3	1	0	1.5	6.1
Dir	278	270	288	54	68	66	88	57	13	345	336	294	14	15	13	27	33	33	15	352	350	352	313	337	352.2	269.6
18 Spd	2	2	0	1	1	1	1	2	2	4	5	6	6	9	9	8	6	5	4	4	4	4	4	4	3.8	9.2
Dir	234	267	213	218	246	221	283	305	241	244	270	277	260	278	263	270	268	285	269	298	286	294	281	287	272.2	278.5
19 Spd	4	2	1	1	1	1	1	1	7	15	14	12	16	19	18	14	12	9	11	8	7	6	6	4	7.2	19.0
Dir	274	304	294	310	307	307	320	247	280	268	275	278	282	276	281	327	327	332	336	322	319	281	279	274	293.6	276.3
20 Spd	3	1	1	1	0	1	0	0	1	1	1	1	3	3	2	4	3	2	2	1	1	2	1	1	0.1	3.7
Dir	273	336	352	223	243	233	269	6	13	308	317	297	247	222	286	56	71	73	117	145	85	126	123	130	67.7	55.8
21 Spd	1	2	1	1	1	11	16	21	29	23	23	23	23	23	24	25	21	19	12	9	14	12	10	10	14.6	29.4
Dir	175	168	180	257	254	243	251	255	258	259	263	265	266	266	267	264	267	268	266	249	254	256	246	246	259.7	257.5
22 Spd	10	6	8	2	1	3	13	16	18	19	18	16	13	13	13	14	9	7	5	1	1	2	4	3	8.1	19.1
Dir	250	236	231	238	236	317	291	276	270	266	267	272	278	303	316	280	323	309	339	254	202	236	247	310	278.5	265.9

FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Evergreen Park - February 2012

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	1	3	7	3	2	4	6	7	6	12	12	13	14	14	10	9	8	11	11	9	5	5	5	4	7.0	14.2
Dir	336	277	261	288	291	329	273	290	306	271	278	280	284	290	339	315	319	275	263	285	282	271	277	302	287.7	289.9
24 Spd	2	2	1	1	1	1	1	2	2	4	4	4	6	7	9	8	7	10	9	11	10	10	9	9	4.9	10.6
Dir	78	223	247	229	351	1	354	47	56	64	78	68	69	71	65	69	74	94	84	81	75	74	76	79	74.5	81.4
25 Spd	9	10	9	9	10	11	10	10	10	9	11	13	13	11	10	10	9	7	6	6	5	6	5	5	8.8	13.0
Dir	72	73	68	62	59	58	59	54	57	54	52	54	49	51	49	44	45	47	50	46	45	38	50	48	54.3	49.2
26 Spd	5	4	3	2	1	2	2	2	1	3	3	6	7	6	3	4	7	6	3	3	2	1	1	3	1.4	7.3
Dir	45	47	37	23	344	342	314	314	304	280	271	286	283	302	285	247	212	213	170	171	182	153	189	206	272.2	283.1
27 Spd	1	0	1	1	0	1	2	2	2	1	4	3	8	9	11	8	9	8	2	4	9	4	2	1	3.0	10.7
Dir	128	64	65	64	1	212	203	216	64	195	200	224	270	264	283	282	272	278	278	280	256	256	217	182	262.9	283.3
28 Spd	2	0	1	1	1	1	1	0	1	1	1	1	M	9	8	12	8	7	5	3	2	2	4	4	1.8	11.6
Dir	222	206	204	191	138	199	133	10	24	80	291	270	M	314	324	337	39	72	58	40	69	354	347	274	359.5	337.2
29 Spd	3	3	2	2	4	1	1	4	3	8	16	20	18	19	18	21	18	14	10	10	10	8	9	7	8.7	21.0
Dir	350	343	337	231	11	226	215	69	69	67	68	69	71	45	52	52	59	49	33	29	32	47	31	19	49.7	51.7
Spd	0.6	0.5	0.7	0.5	0.4	0.7	1.3	1.7	2.2	2.4	2.7	3.2	4.3	4.7	4.1	3.7	2.5	1.6	1.6	1.9	1.9	2.0	1.4	1.1	Diurnal Average	
Dir	301.6	294.5	302.1	355.9	0.3	289.1	281.7	283.3	280.4	279.1	279.9	289.0	289.9	301.4	308.8	318.3	323.1	321.5	323.0	294.0	287.9	282.7	280.5	277.5		
Spd	10.1	9.9	8.7	9.3	11.9	11.8	16.3	20.9	29.4	23.1	23.4	22.8	22.9	23.2	24.5	24.8	21.3	19.5	12.3	18.5	14.1	13.8	10.1	10.5	Diurnal Maximum	
Dir	250.4	73.2	67.8	61.8	253.8	261.0	251.3	255.3	257.5	259.5	263.3	265.3	266.4	265.7	266.9	263.7	267.2	268.2	266.1	262.7	253.9	254.7	246.1	246.2		

Maximum Speed Value: 29 km/h on Feb 21 09:00
Maximum Daily Speed Average: 14.6 km/h on Feb 21
Maximum Diurnal Speed Average: 4.7 km/h at hour 14

Minimum Speed Value: 0 km/h on Feb 11 07:00
Minimum Daily Speed Average: 0.1 km/h on Feb 4
Minimum Diurnal Speed Average: 0.4 km/h at hour 5

Monthly Average Velocity: 1.89 km/h 297.35 deg

Speed Percentiles: $P_1 = 0.1$ $P_{10} = 0.6$ $Q_1 = 1.1$ Median = 3.1 $Q_3 = 6.8$ $P_{90} = 11.6$ $P_{99} = 22.8$

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

Hours in Service:	696
Hours of Data:	695
Hours of Missing Data:	1
Percent Operational Time:	99.9

M - Maintenance

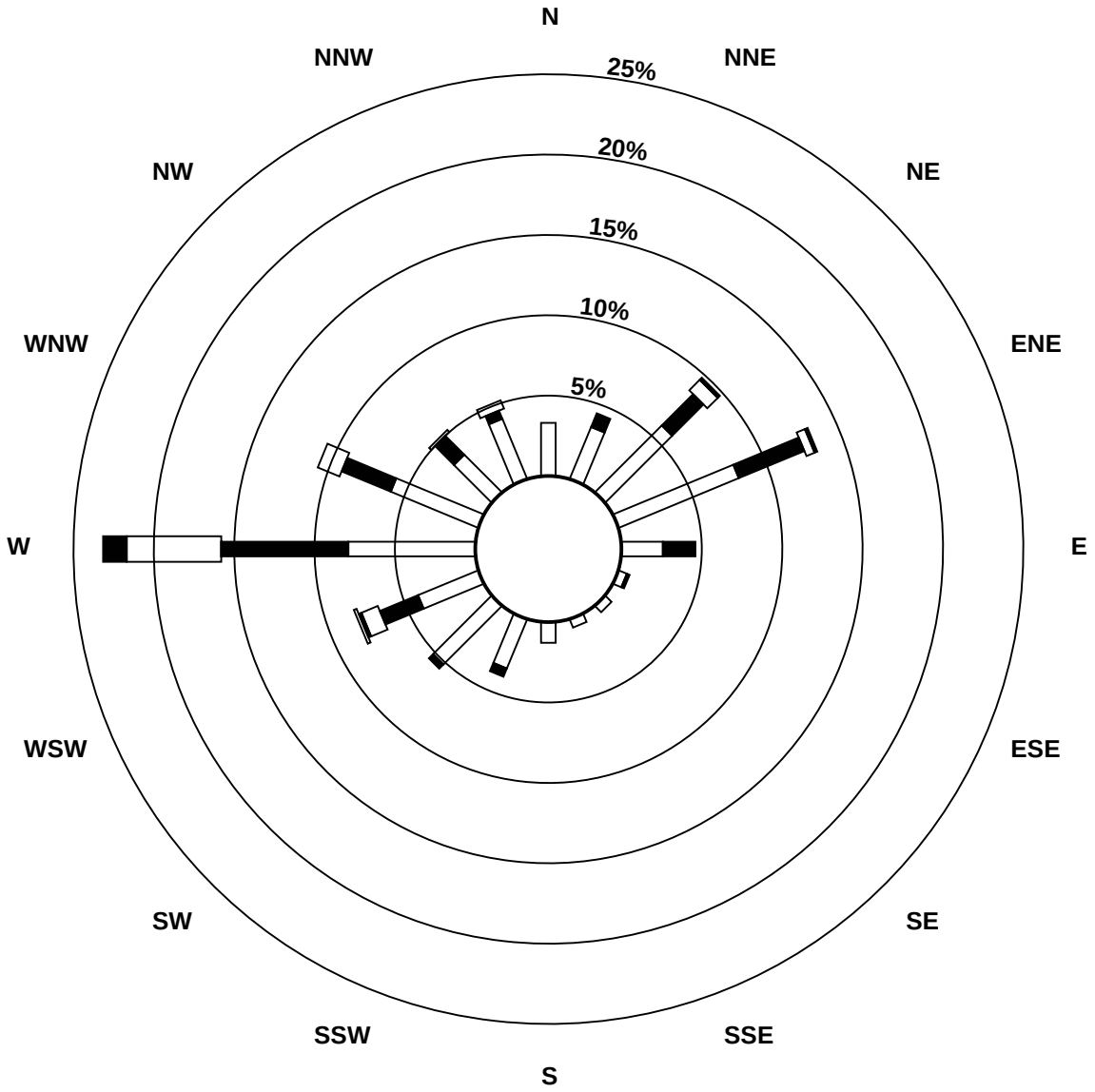
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	66	3	0	0	0	0	69
NorthEast	87	34	6	2	0	0	129
East	40	29	2	1	0	0	72
SouthEast	14	0	0	0	0	0	14
South	26	1	0	0	0	0	27
SouthWest	82	7	0	0	0	0	89
West	82	70	47	12	1	0	212
NorthWest	63	14	6	0	0	0	83
Total	460	158	61	15	1	0	695

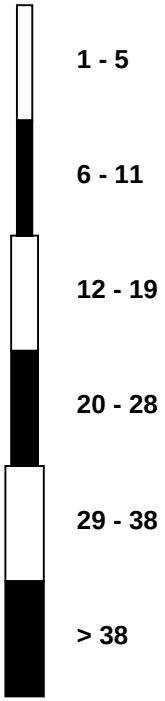
Wind Rose

Wind Speed (WS) (km/h)

Evergreen Park - February 2012



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Evergreen Park - February 2012

Maximum Speed: 30 km/h on Feb 21 09:00

Maximum Daily Speed Average: 15.3 km/h on Feb 21

Minimum Speed: 1 km/h on Feb 11 09:00

Minimum Daily Speed Average: 1.9 km/h on Feb 20

Maximum Diurnal Speed Average: 8.9 km/h at hour 14

Minimum Diurnal Speed Average: 2.4 km/h at hour 5

Monthly Average Speed: 5.21 km/h

Percentiles: $P_1 = 0.9$ $P_{10} = 1.3$ $Q_1 = 1.8$ Median = 3.6 $Q_3 = 7.0$ $P_{90} = 11.8$ $P_{99} = 22.9$

Hours in Service:	696
Hours of Data:	695
Hours of Missing Data:	1
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	1	1	1	2	2	2	2	2	2	2	2	4	11	10	8	8	4	4	4	5	6	6	3	3	4.1	11.1
2-Feb	2	1	1	1	1	1	2	2	2	2	2	2	4	5	5	5	5	2	1	2	2	1	1	2	2.2	5.1
3-Feb	1	1	2	3	2	2	3	2	1	2	2	3	4	4	4	4	3	2	3	4	3	4	4	1	2.6	4.4
4-Feb	2	2	2	2	1	1	1	1	1	2	2	5	4	4	3	2	1	1	2	2	2	2	2	2	2.1	5.3
5-Feb	1	3	2	2	2	2	2	2	2	2	2	2	2	3	4	3	2	2	1	1	4	5	2	1	2.2	5.0
6-Feb	1	2	2	5	5	5	5	4	3	3	4	6	6	7	7	7	6	5	6	7	6	5	4	4	4.9	7.5
7-Feb	5	3	2	1	1	2	1	1	1	1	1	2	3	4	3	4	3	4	3	2	2	1	1	1	2.2	5.5
8-Feb	1	1	1	1	2	1	1	1	1	2	2	2	5	7	7	5	4	4	3	1	1	1	2	1	2.4	7.5
9-Feb	1	2	2	1	1	1	2	1	1	2	3	5	4	5	5	6	5	4	6	6	4	2	3	3	3.2	6.2
10-Feb	3	6	3	1	3	5	4	3	2	3	5	4	5	6	7	9	7	5	4	4	4	5	5	4	4.5	8.6
11-Feb	4	2	1	1	1	1	1	1	1	1	1	2	3	4	4	3	2	3	2	1	1	2	2	1	1.9	4.2
12-Feb	1	1	2	2	2	1	2	2	2	1	3	3	6	9	13	10	10	5	5	6	8	14	9	9	5.3	13.9
13-Feb	8	7	6	7	12	12	15	15	13	12	14	12	15	15	13	11	9	9	9	11	9	10	7	3	10.6	15.3
14-Feb	3	3	2	2	2	3	2	3	2	4	7	7	8	8	7	5	4	3	2	9	8	9	5	4	4.6	8.7
15-Feb	5	4	4	4	2	3	2	2	3	2	12	14	15	13	11	8	7	2	2	3	3	3	3	2	5.2	14.9
16-Feb	1	1	1	1	1	1	1	1	1	2	1	3	2	3	6	12	13	9	11	19	13	12	10	10	5.7	18.7
17-Feb	5	6	3	2	1	1	1	1	1	2	1	1	2	4	5	5	5	3	2	2	3	3	1	1	2.6	6.2
18-Feb	2	3	1	1	1	1	2	3	3	5	5	6	6	9	9	8	7	5	4	4	4	5	4	4	4.4	9.5
19-Feb	4	3	2	1	1	1	1	1	8	15	14	13	17	19	19	14	12	9	11	9	7	6	6	5	8.2	19.3
20-Feb	3	1	1	1	1	2	1	1	1	1	1	2	3	4	2	4	3	2	2	2	2	2	1	1	1.9	4.1
21-Feb	2	2	2	4	3	11	16	21	30	23	24	23	23	23	25	25	22	20	12	9	14	12	10	10	15.3	29.7
22-Feb	10	6	8	3	1	4	13	17	18	19	18	16	13	14	13	15	11	8	6	2	2	2	4	3	9.5	19.2
23-Feb	2	3	7	4	2	4	6	7	6	12	13	13	14	15	11	11	9	11	11	9	5	5	5	4	7.9	14.6
24-Feb	2	2	2	2	1	1	1	3	3	4	4	5	6	7	9	8	8	11	9	11	10	10	9	10	5.7	10.8
25-Feb	9	10	9	9	10	11	11	10	10	9	11	13	13	12	10	10	9	7	6	6	5	6	6	5	9.1	13.2
26-Feb	5	4	4	2	2	3	2	2	2	3	3	6	8	6	3	6	7	6	3	3	2	2	1	3	3.7	7.6
27-Feb	2	1	2	2	1	1	2	2	2	2	4	4	8	9	11	8	9	8	3	5	9	4	3	1	4.3	11.0
28-Feb	2	2	2	2	2	1	1	1	2	2	1	1	M	10	9	12	9	8	5	4	4	4	5	7	4.2	12.4
29-Feb	4	4	3	6	5	4	5	6	5	9	17	21	19	20	19	22	18	15	10	10	10	9	9	8	10.7	21.7
	3.2	3.0	2.8	2.6	2.4	3.1	3.8	4.1	4.4	5.1	6.2	7.0	8.1	8.9	8.7	8.7	7.4	6.1	5.2	5.5	5.4	5.2	4.4	4.0	Diurnal Average	
	10.1	10.1	9.0	9.5	11.9	11.8	16.4	21.0	29.7	23.3	23.6	22.9	23.0	23.3	24.7	25.0	21.5	19.6	12.4	18.7	14.2	13.9	10.2	10.5	Diurnal Maximum	

M - Maintenance

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 2012

Maximum Value: 100.1 deg on Feb 1 02:00

Minimum Value: 4.2 deg on Feb 22 00:00

Percentiles: P_1 = 5.3 P_{10} = 9.1 Q_1 = 12.6 Median = 24.7 Q_3 = 57.0 P_{90} = 78.6 P_{99} = 95.2

Hours in Service:	696
Hours of Data:	695
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

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	84	100	86	39	81	28	61	60	82	70	20	23	9	20	12	13	28	9	10	11	6	6	13	13	100.1
2-Feb	79	38	42	52	72	60	30	49	84	76	75	79	41	14	18	29	28	61	72	53	35	87	80	94	93.9
3-Feb	96	82	95	79	67	86	83	74	64	45	30	13	19	32	17	10	29	46	19	16	30	24	19	53	96.2
4-Feb	44	22	54	60	70	81	81	68	70	83	20	10	21	22	24	37	54	91	74	57	36	48	84	80	90.7
5-Feb	82	65	45	32	71	64	57	81	32	62	77	39	37	74	20	34	14	24	80	70	11	7	54	49	82.3
6-Feb	23	43	38	7	12	16	12	10	40	12	17	16	20	20	13	12	19	17	15	10	9	21	22	17	42.6
7-Feb	10	57	63	79	81	84	78	54	31	68	83	41	37	16	46	27	24	23	19	28	38	48	43	59	84.0
8-Feb	91	40	68	64	10	68	50	96	72	39	85	68	24	21	24	37	23	16	26	67	68	56	92	54	95.8
9-Feb	61	83	89	76	72	73	67	75	87	92	33	18	29	35	18	19	16	20	10	10	42	45	13	56	91.9
10-Feb	68	11	69	40	37	7	10	36	31	25	14	25	50	43	24	18	16	15	10	13	9	10	11	10	68.7
11-Feb	10	40	46	60	67	54	97	30	74	72	60	26	40	31	28	22	32	21	21	41	49	46	75	96	96.7
12-Feb	60	82	39	70	87	65	49	57	16	73	26	15	17	13	9	11	13	16	17	12	8	6	5	5	86.6
13-Feb	12	7	9	7	5	5	7	6	6	6	7	10	10	11	10	10	8	8	6	9	7	6	18	25	25.3
14-Feb	20	14	50	9	68	12	66	39	55	25	16	17	16	23	20	18	24	35	41	6	7	6	8	16	68.1
15-Feb	14	24	12	14	60	30	70	72	32	76	12	11	9	11	10	20	12	79	75	12	15	22	46	88	88.3
16-Feb	87	75	61	75	57	60	65	74	85	56	36	18	49	20	16	22	9	7	6	8	10	5	5	6	86.8
17-Feb	15	7	29	59	64	63	80	85	86	70	39	56	87	20	22	15	14	17	27	16	11	13	49	76	87.5
18-Feb	29	57	94	56	53	80	59	27	45	36	30	15	15	12	10	10	12	13	14	24	21	20	11	14	94.1
19-Feb	9	39	60	48	56	47	61	70	30	6	9	10	11	10	15	13	16	14	8	13	15	15	11	10	70.4
20-Feb	22	47	36	89	87	75	88	74	57	61	46	35	27	40	61	32	17	13	22	28	57	24	44	64	88.9
21-Feb	79	47	66	92	94	12	6	6	7	8	7	6	6	6	7	7	8	7	7	11	6	5	5	4	93.7
22-Feb	6	5	10	23	53	34	22	9	7	6	7	9	9	20	17	30	30	28	27	58	91	72	22	34	90.7
23-Feb	38	36	7	27	32	30	15	19	22	10	10	9	9	14	19	31	24	14	12	13	13	13	15	33	37.8
24-Feb	44	27	80	66	69	17	38	21	30	15	19	22	21	17	14	16	15	14	15	13	12	21	15	15	79.6
25-Feb	15	12	14	12	10	9	11	11	9	12	12	13	10	13	15	14	15	12	10	11	11	12	13	12	15.0
26-Feb	10	11	14	14	28	27	25	25	21	29	27	15	17	27	23	45	13	12	11	9	43	78	87	23	87.5
27-Feb	46	69	72	57	95	57	37	33	24	82	10	28	12	12	13	19	10	10	72	37	22	36	26	84	95.2
28-Feb	58	92	76	53	73	37	74	81	74	74	71	59	M	36	31	23	25	18	10	24	55	65	40	59	91.9
29-Feb	44	51	56	83	55	91	90	67	87	33	17	19	19	16	20	15	12	16	12	12	12	17	14	19	90.7
	96.2	100.1	95.2	92.4	95.2	90.7	96.7	95.8	86.8	91.9	85.4	78.6	87.5	74.3	61.5	45.4	53.9	90.7	80.4	70.0	90.7	87.3	92.1	96.3	

M - Maintenance

FOCUS AIR QUALITY MONITORING

PAZA
Smoky Heights Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - February 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8.0 ppb on Feb 28 16:00 Maximum Daily Average: 1.9 ppb on Feb 13

Minimum Value: 0 ppb on Feb 6 01:00 Minimum Daily Average: 0.2 ppb on Feb 24
Maximum Diurnal Average: 1.3 ppb at hour 16 Minimum Diurnal Average: 0.6 ppb at hour 21
Monthly Average: 0.92 ppb Percentiles: P_1 = 0.0 P_{10} = 0.2 Q_1 = 0.4 Median = 0.6 Q_3 = 1.2 P_{90} = 2.0 P_{99} = 4.5

Hours in Service:	696
Hours of Data:	663
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	1	1	A	0	0	0	0	1	2	3	3	1	1	1	1	1	2	1	1	0.9	2.8
2-Feb	1	0	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0.3	0.8
3-Feb	0	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0.4	1.4
4-Feb	0	0	0	0	A	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0.5	1.2
5-Feb	0	0	0	A	0	0	0	1	2	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	2.7
6-Feb	0	0	A	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	1	2	2	2	0.6	2.2
7-Feb	2	A	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	2	1	1	0.8	2.0
8-Feb	A	1	1	1	1	1	2	2	2	2	2	2	2	2	3	2	2	1	4	3	1	1	1	A	1.8	4.1
9-Feb	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	A	0	0.7	1.0
10-Feb	0	0	1	0	0	0	0	0	1	1	1	C	C	C	1	1	1	0	0	0	1	A	2	2	0.7	1.7
11-Feb	2	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	A	1	1	1	1.2	2.4
12-Feb	1	1	1	2	3	3	2	1	1	1	2	2	1	2	4	3	2	1	1	A	1	1	1	1	1.6	3.7
13-Feb	2	1	1	2	2	1	1	1	1	0	0	1	1	2	3	4	4	6	A	3	1	1	2	4	1.9	5.8
14-Feb	2	3	3	2	3	2	1	1	1	1	3	3	3	2	2	1	2	A	1	1	0	1	1	2	1.7	3.4
15-Feb	2	1	2	2	5	5	2	2	2	2	2	1	1	3	2	1	A	0	0	0	0	1	1	1	1.7	4.6
16-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	2	1	1	1	1	1	1	0.9	1.6
17-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	0	1	1	1	0.7	1.5
18-Feb	1	1	1	1	0	3	5	2	1	1	1	1	1	A	1	2	1	5	2	1	1	1	1	1	1.5	5.4
19-Feb	1	1	1	0	0	1	1	1	1	1	2	2	A	1	1	0	1	1	1	0	0	0	0	1	0.8	1.8
20-Feb	1	1	0	0	1	1	0	0	0	0	1	A	1	1	1	1	1	1	1	1	0	0	0	0	0.6	1.4
21-Feb	0	0	0	0	1	1	0	0	0	2	A	2	1	2	1	0	0	1	1	0	0	0	0	0	0.7	2.0
22-Feb	0	0	0	0	0	0	0	1	0	A	1	0	2	2	0	1	0	0	1	0	0	0	1	0	0.6	2.4
23-Feb	1	1	1	1	2	1	1	1	A	1	2	2	1	1	0	1	0	1	1	0	0	0	0	0	0.8	1.8
24-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
25-Feb	0	0	0	0	0	0	A	0	0	1	1	1	1	1	1	0	0	0	0	0	1	1	1	1	0.5	1.0
26-Feb	2	2	1	1	1	A	4	3	1	0	1	1	3	2	3	2	2	2	1	1	1	1	0	0	1.5	4.4
27-Feb	0	0	0	0	A	0	0	0	0	1	1	1	4	3	1	0	0	0	0	0	1	2	3	2	0.9	4.2
28-Feb	0	0	0	A	1	1	1	1	0	1	1	0	1	1	1	8	5	1	1	1	0	1	1	1	1.3	8.0
29-Feb	0	0	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.1
	0.8	0.7	0.8	0.8	0.9	1.0	1.1	0.8	0.7	0.9	1.0	1.0	1.1	1.2	1.2	1.3	1.1	1.1	0.8	0.7	0.6	0.7	0.8	0.8	Diurnal Average	
	1.9	2.9	2.7	2.5	4.5	4.6	5.3	2.8	2.5	2.7	2.7	3.4	4.2	3.2	3.7	8.0	5.3	5.8	4.1	3.3	1.5	2.0	2.5	3.8	Diurnal Maximum	

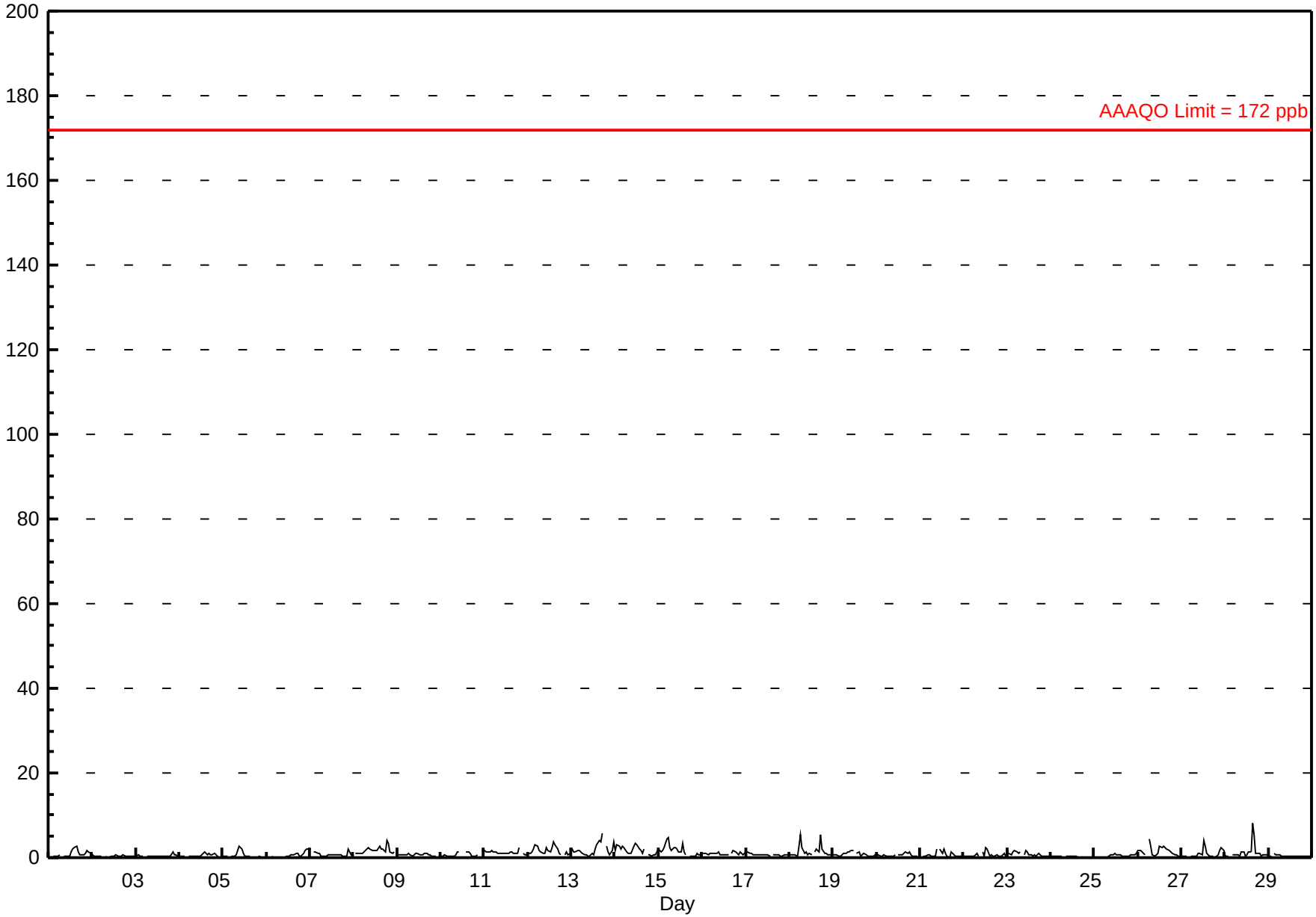
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - February 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - February 2012

Maximum Value: 17.5 ppb on Feb 28 16:00

Maximum Daily Average: 4.1 ppb on Feb 13

Minimum Value: 0 ppb on Feb 6 01:00

Minimum Daily Average: 0.6 ppb on Feb 24

Maximum Diurnal Average: 2.3 ppb at hour 16

Minimum Diurnal Average: 1.2 ppb at hour 2

Monthly Average: 1.69 ppb

Percentiles: $P_1 = 0.4$ $P_{10} = 0.6$ $Q_1 = 0.7$ Median = 1.1 $Q_3 = 1.9$ $P_{90} = 3.5$ $P_{99} = 10.0$

Hours in Service:	696
Hours of Data:	663
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	A	1	1	1	1	4	4	3	4	3	1	1	1	2	2	2	2	1.6	4.3
2-Feb	1	1	1	1	1	1	A	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0.7	1.4
3-Feb	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	5	2	1	1	1.0	5.4
4-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	2	2	1	2	1	1	1	1	1	1	1	0.9	1.6
5-Feb	1	1	1	A	0	1	1	3	4	5	7	4	1	1	1	1	1	0	0	0	1	1	0	0	1.4	6.9
6-Feb	0	0	A	1	0	0	0	0	0	0	1	1	1	1	1	1	2	2	1	1	2	2	2	3	1.0	2.6
7-Feb	2	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	2	1	1.3	3.6
8-Feb	A	2	2	1	1	1	3	3	3	3	3	2	2	2	3	3	3	2	10	9	2	2	2	A	2.9	10.2
9-Feb	2	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	A	1	1.1	1.7
10-Feb	1	1	1	1	1	1	1	1	1	2	2	C	C	C	2	2	2	1	1	1	1	A	2	2	1.1	2.2
11-Feb	2	2	2	2	2	2	2	1	1	1	2	1	1	2	2	2	1	1	1	5	A	2	1	1	1.7	5.2
12-Feb	1	1	2	3	4	4	2	2	2	2	3	3	2	4	7	5	3	1	1	A	2	2	1	2	2.5	6.6
13-Feb	3	2	2	2	2	2	2	1	1	1	1	5	2	6	6	8	10	14	A	6	5	1	4	8	4.1	14.4
14-Feb	3	4	3	3	3	3	2	1	1	2	4	4	5	3	2	2	3	A	1	2	1	1	1	2	2.4	4.7
15-Feb	3	2	2	4	7	7	5	2	4	5	3	2	3	5	3	1	A	1	1	1	1	1	1	1	2.7	7.0
16-Feb	1	1	2	1	1	1	2	1	2	2	1	1	1	1	1	A	1	4	4	2	1	3	1	2	1.7	4.5
17-Feb	2	2	2	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1.1	2.1
18-Feb	1	1	1	1	1	10	10	5	2	3	1	2	1	A	2	3	3	9	5	2	1	1	1	1	2.9	10.0
19-Feb	1	1	1	1	1	1	1	1	2	2	2	2	A	2	2	1	1	1	1	1	1	1	1	1	1.2	2.3
20-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	2	2	2	1	1	1	1	0	1.0	2.0
21-Feb	1	0	1	1	1	1	1	1	1	4	A	3	4	4	2	1	0	4	3	1	1	1	1	1	1.5	4.0
22-Feb	1	1	1	1	1	1	1	3	1	A	3	1	5	5	1	2	1	1	1	1	1	1	3	1	1.5	5.2
23-Feb	1	1	1	2	2	2	1	2	A	1	4	4	1	1	1	1	1	3	1	1	1	1	1	1	1.5	4.5
24-Feb	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	0	0	1	0	0	0.6	1.1
25-Feb	0	0	0	0	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	0.8	1.9
26-Feb	2	2	2	1	1	A	10	11	2	1	2	2	6	3	3	3	2	2	2	1	1	1	1	1	2.7	10.5
27-Feb	1	1	1	1	A	1	1	1	1	3	5	2	9	7	3	1	1	1	1	1	1	4	5	3	2.2	8.6
28-Feb	1	1	1	A	1	1	1	2	1	3	2	1	1	2	5	18	13	2	2	3	1	1	1	1	2.8	17.5
29-Feb	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	2.0
	1.3	1.2	1.2	1.3	1.5	1.8	2.0	1.8	1.3	1.7	1.9	1.8	2.2	2.2	2.1	2.3	2.2	2.1	1.6	1.6	1.3	1.3	1.4	1.4	Diurnal Average	
	3.1	3.5	3.4	3.5	6.5	10.0	9.9	10.5	3.9	4.8	6.9	5.4	8.6	7.1	6.6	17.5	13.3	14.4	10.2	8.8	5.4	3.6	4.9	7.8	Diurnal Maximum	

C - Calibration

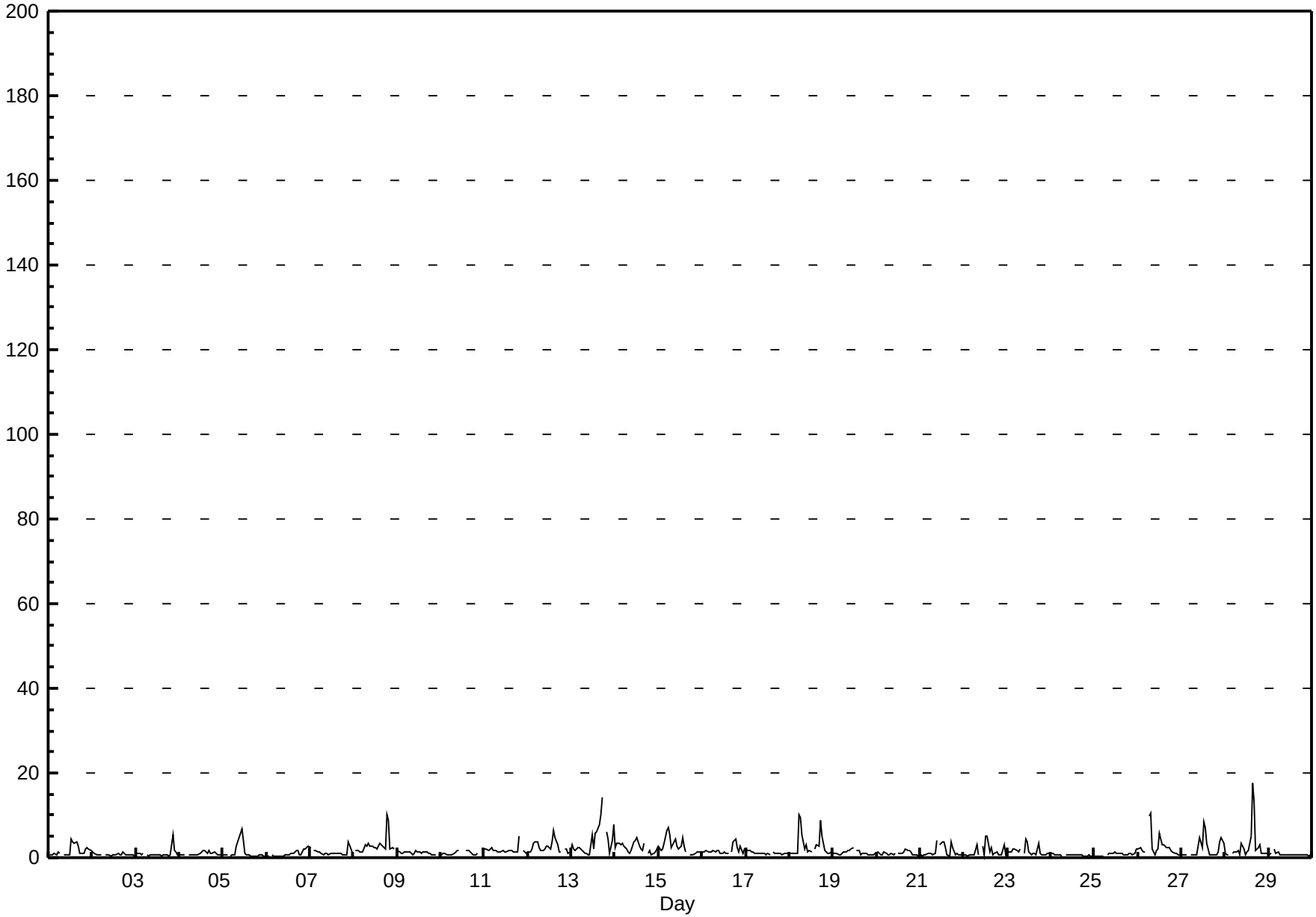
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

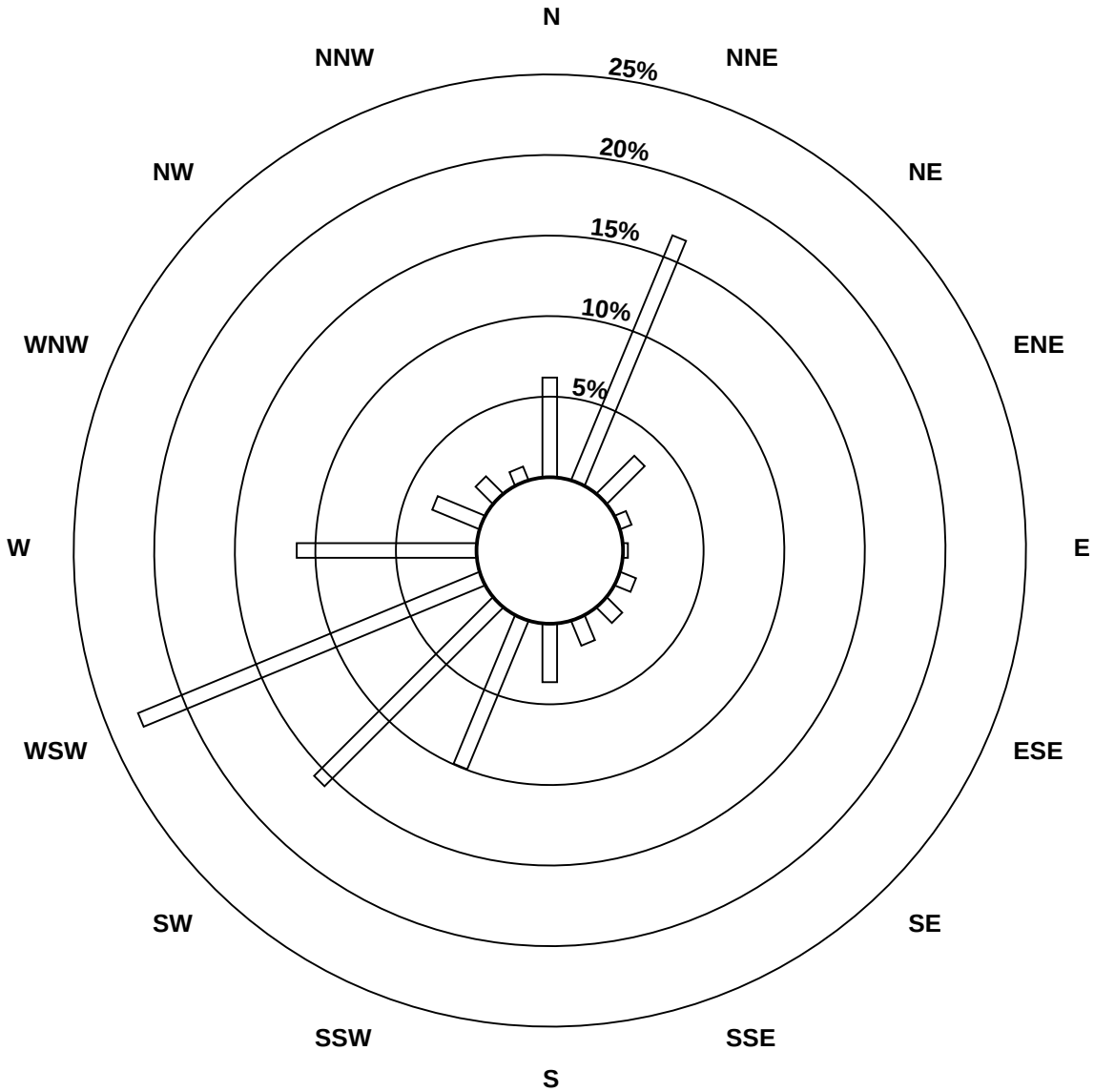
Smoky Heights - February 2012



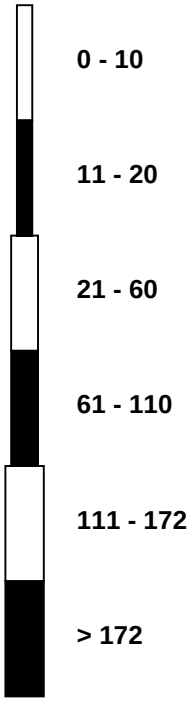
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - February 2012



Pollutant Classes (ppb)

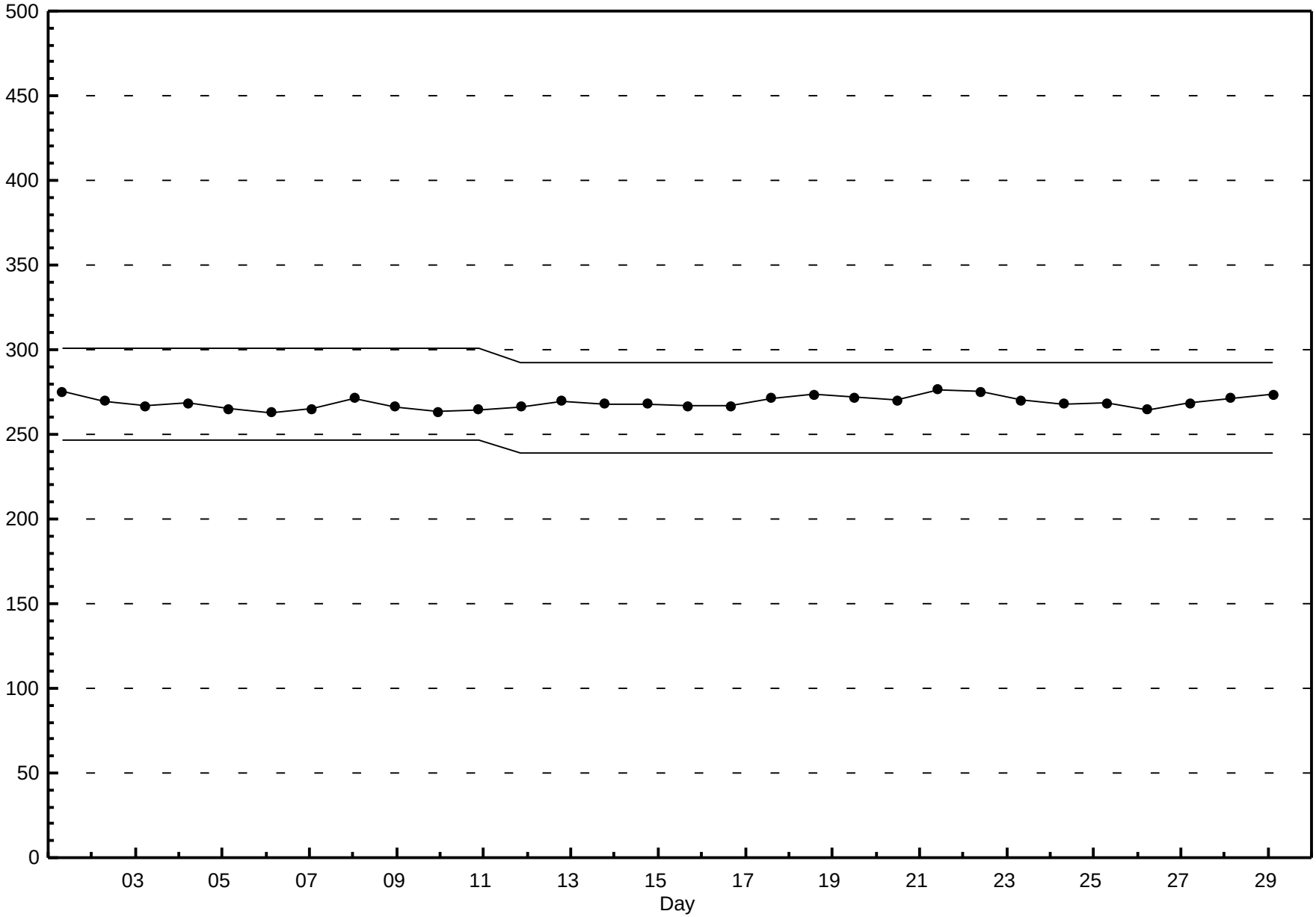


Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Smoky Heights - February 2012



Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - February 2012

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

Maximum Value: 1.2 ppb on Feb 2 16:00

Maximum Daily Average: 0.5 ppb on Feb 12

Minimum Value: 0 ppb on Feb 21 09:00

Minimum Daily Average: 0.2 ppb on Feb 21

Maximum Diurnal Average: 0.3 ppb at hour 2

Minimum Diurnal Average: 0.3 ppb at hour 22

Monthly Average: 0.31 ppb

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

Hours in Service:	696
Hours of Data:	662
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	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
2-Feb	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0.4	1.2
3-Feb	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.3	0.6
4-Feb	0	0	0	0	A	0	0	0	0	0	0	1	0	0	1	1	1	1	1	0	0	0	0	0	0.4	0.5
5-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	0.5
6-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
7-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
8-Feb	A	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	0	0	0	A	0.4	0.6
9-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	0.5
10-Feb	0	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	A	0	0	0.2	0.4
11-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0.3	0.5
12-Feb	0	1	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	A	0	0	0	0	0.5	0.7
13-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
14-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
15-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
16-Feb	0	1	1	1	1	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.4	0.6
17-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	0.3
18-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	0.4
19-Feb	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
20-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
21-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
22-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	0.3	0.5
23-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
24-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
25-Feb	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
26-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	0.3
27-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
28-Feb	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
29-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	0.3
	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	
	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.7	0.6	0.6	0.5	1.2	1.2	0.8	0.6	0.6	0.5	0.5	0.4	0.6	0.5	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

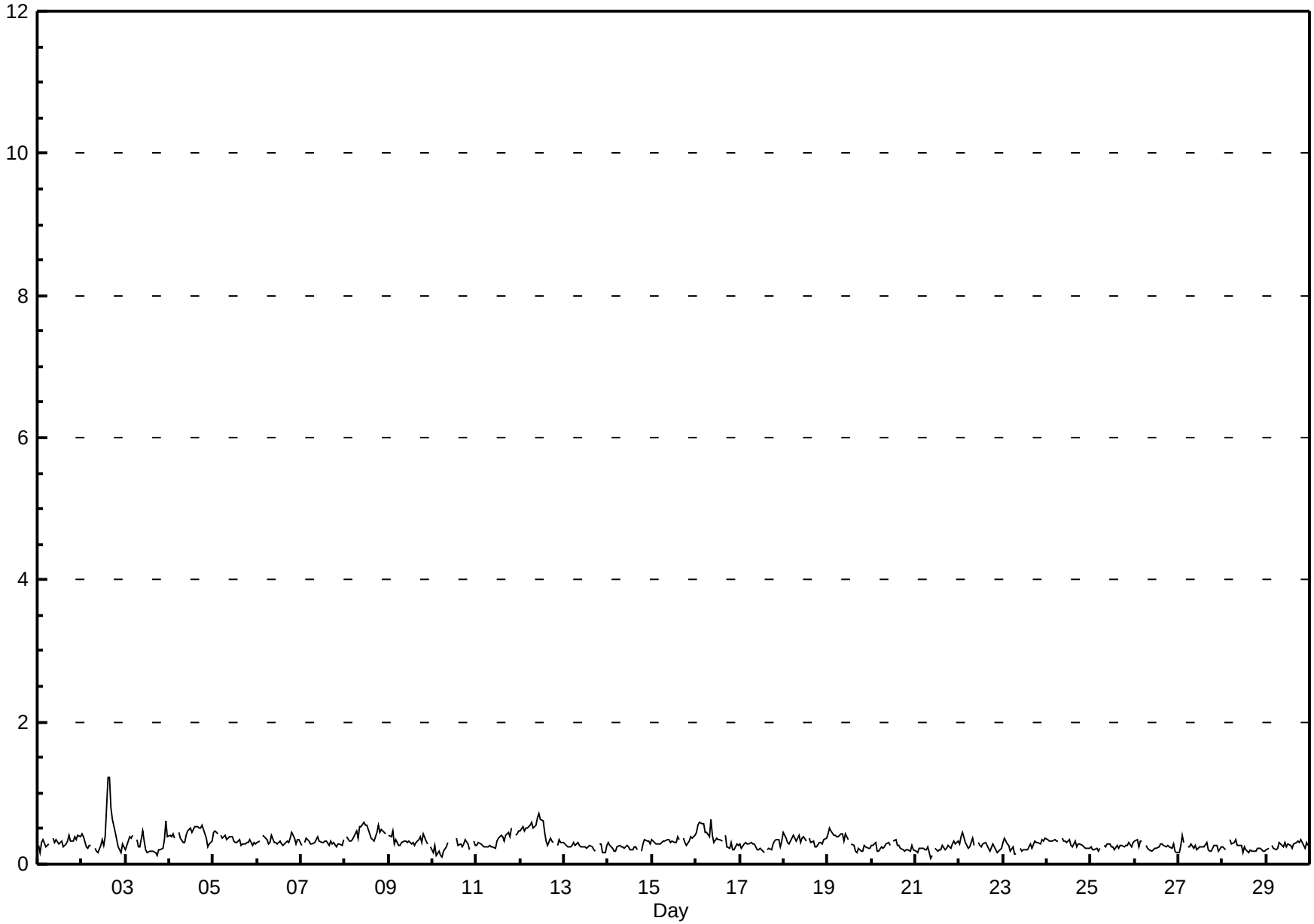
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - February 2012



Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - February 2012

Maximum Value: 2.1 ppb on Feb 3 23:00

Maximum Daily Average: 0.9 ppb on Feb 8

Minimum Value: 0 ppb on Feb 1 02:00

Minimum Daily Average: 0.6 ppb on Feb 21

Maximum Diurnal Average: 0.7 ppb at hour 15

Minimum Diurnal Average: 0.7 ppb at hour 14

Monthly Average: 0.71 ppb

Percentiles: $P_1 = 0.5$ $P_{10} = 0.6$ $Q_1 = 0.6$ Median = 0.7 $Q_3 = 0.8$ $P_{90} = 0.9$ $P_{99} = 1.2$

Hours in Service:	696
Hours of Data:	662
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	0	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
2-Feb	1	1	1	1	1	1	A	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	0.8	2.0
3-Feb	1	1	1	1	1	A	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	2	1	0.8	2.1
4-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
5-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	1.0
6-Feb	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
7-Feb	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8
8-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	1.2
9-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	1.2
10-Feb	1	1	1	1	1	1	1	1	1	C	C	C	C	1	1	1	1	1	1	1	1	A	1	1	0.7	0.9
11-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
12-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	0.9	1.1
13-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	1	1	1	1	1	0.6	0.8
14-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.7	0.9
15-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	0.8
16-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	1.1
17-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	1	1	1	1	1	1	1	1	1	0.7	0.8
18-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.7	0.9
19-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	1.1
20-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	1	1	1	0.7	0.9
21-Feb	1	1	1	1	1	1	1	1	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8
22-Feb	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0.7	0.8
23-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	0.8
24-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
25-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	0.6	0.7
26-Feb	1	1	1	1	1	A	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0.6	0.8
27-Feb	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0.6	0.9
28-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	0.6	0.8
29-Feb	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8
	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	Diurnal Average	
	1.0	1.0	1.1	0.9	1.1	1.0	1.0	1.2	1.0	1.0	1.1	1.0	1.0	0.9	2.0	1.7	1.3	1.1	1.2	1.2	1.1	1.1	2.1	0.9	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

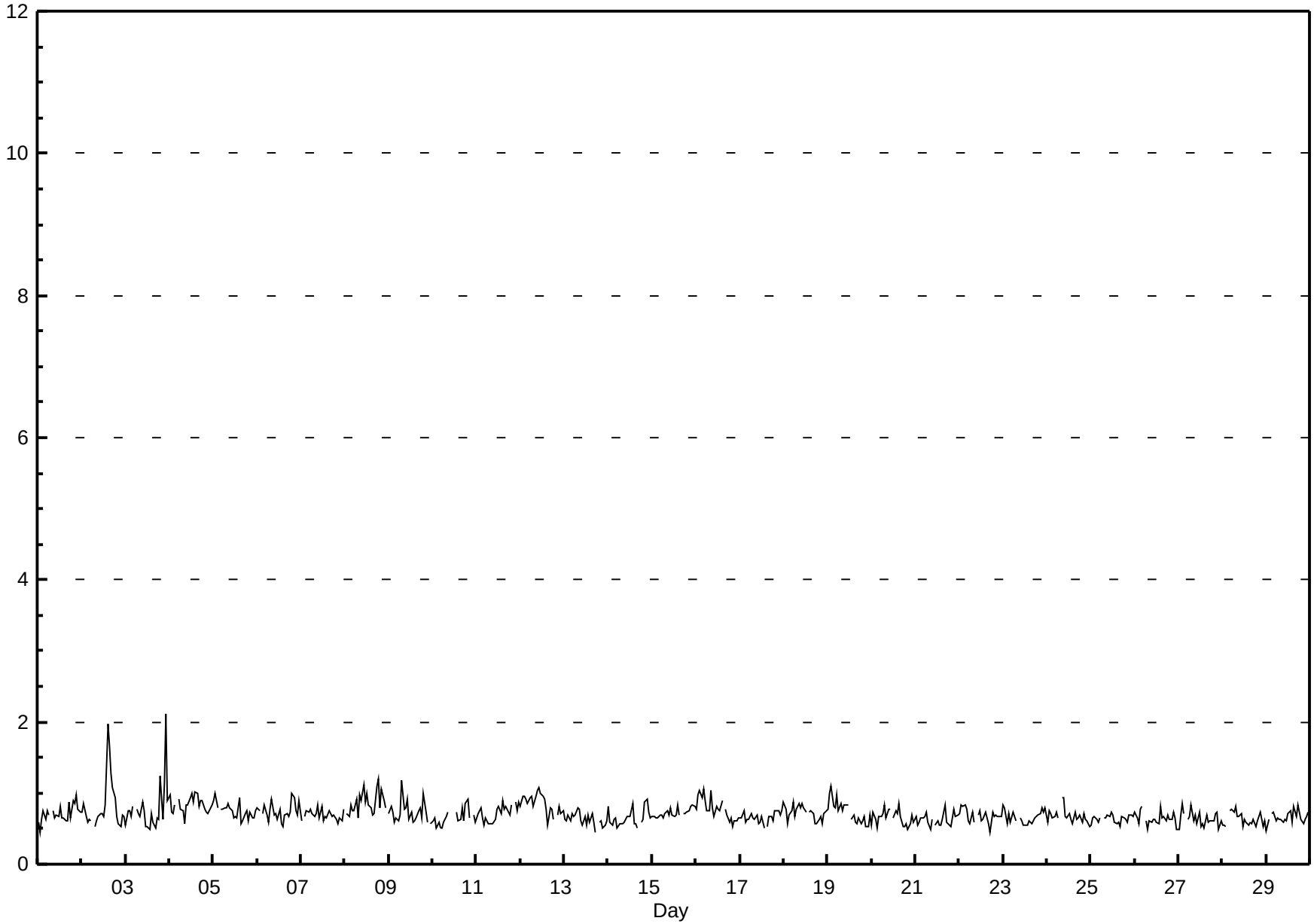
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - February 2012

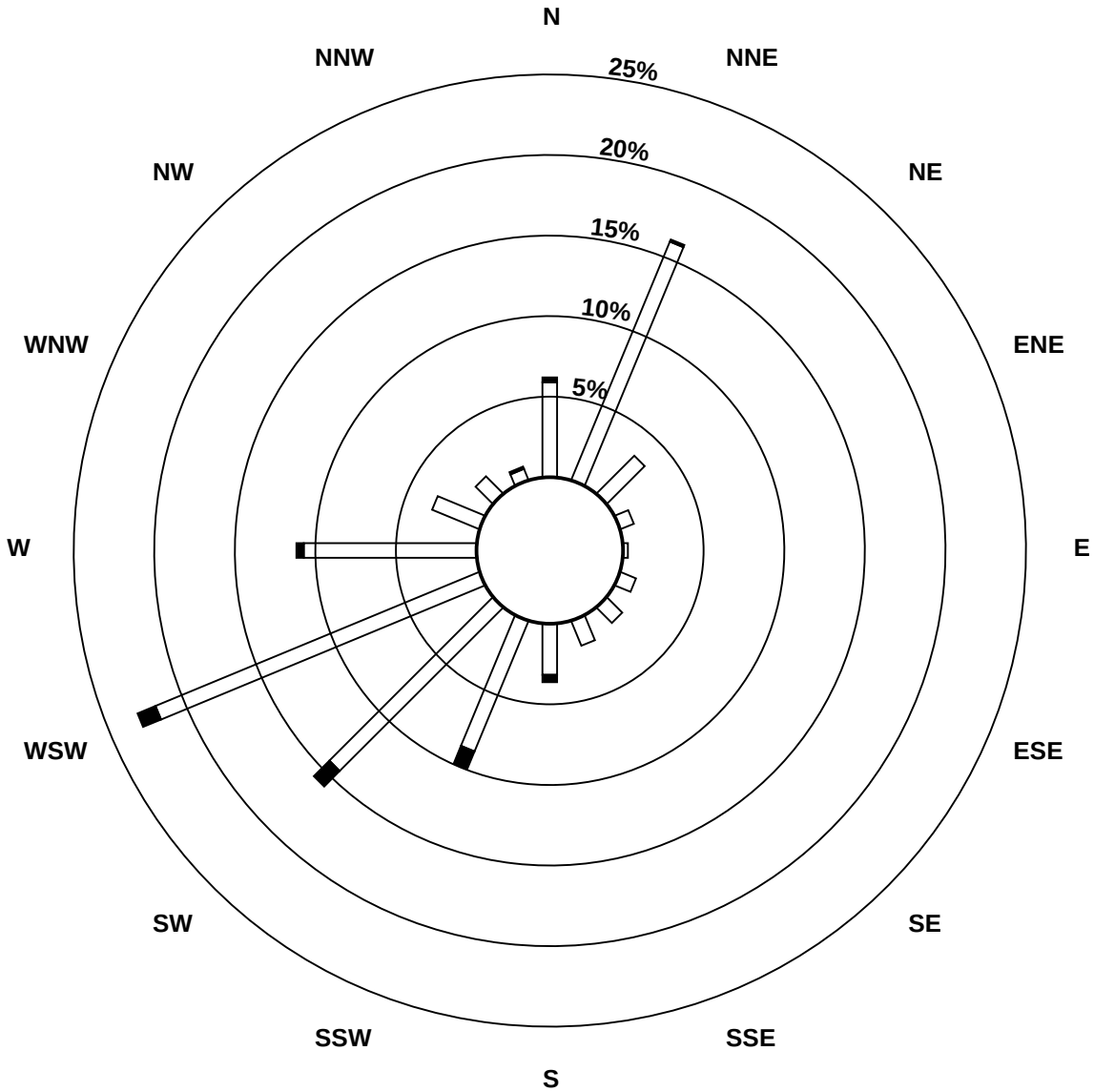


Peace Airshed Zone Association

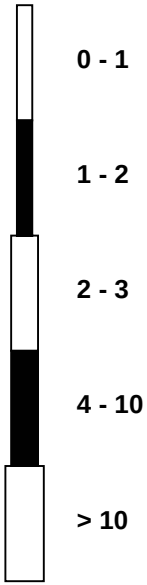
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - February 2012



Pollutant Classes (ppb)



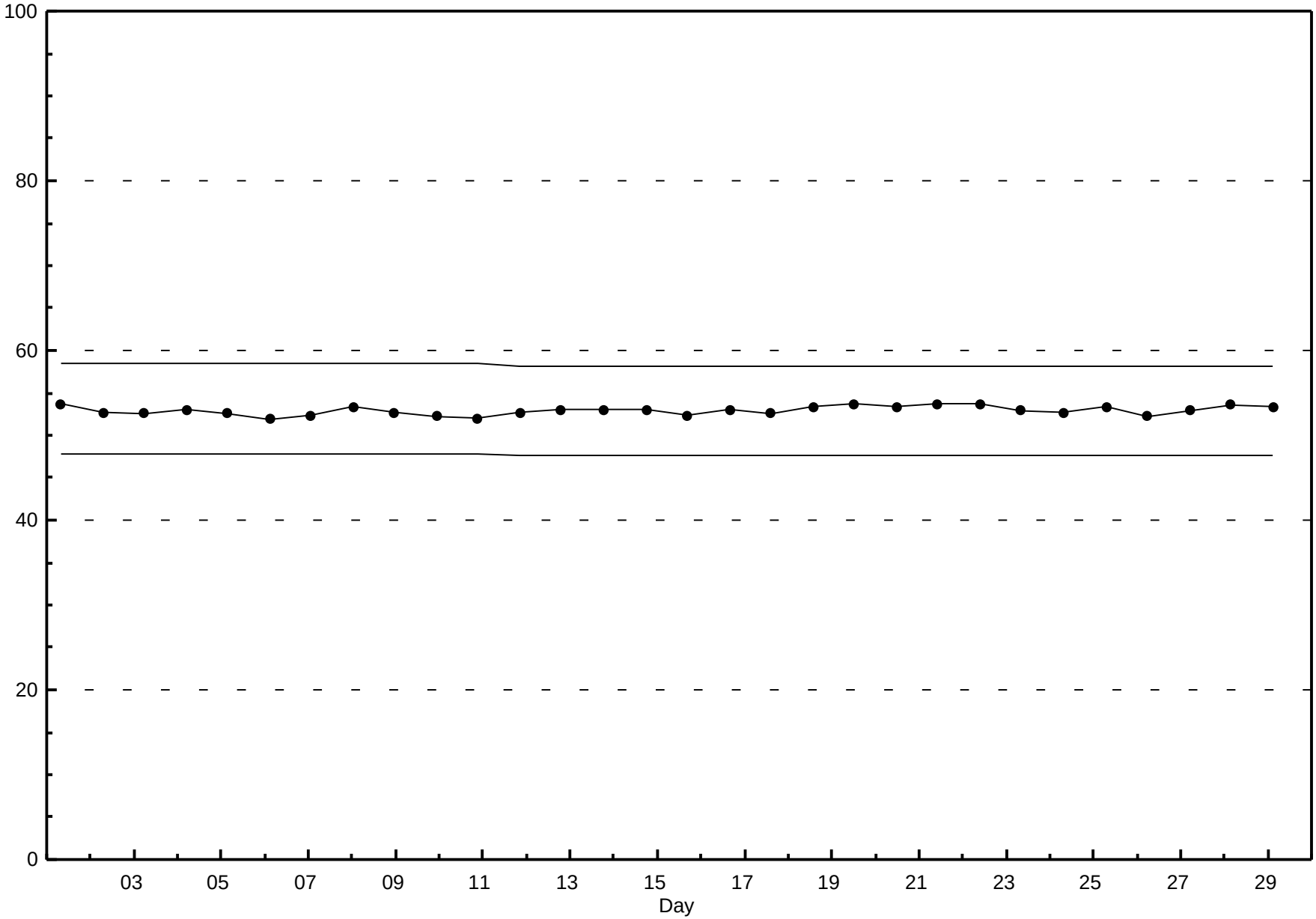
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Span Responses

Total Reduced Sulphur (TRS)

Smoky Heights - February 2012



Peace Airshed Zone Association

Hourly Averages

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

Smoky Heights - February 2012

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

Maximum Value: 113.1 $\mu g/m^3$ on Feb 17 20:00

Maximum Daily Average: 16.4 $\mu g/m^3$ on Feb 8

Minimum Value: 0 $\mu g/m^3$ on Feb 3 12:00

Maximum Diurnal Average: 10.5 $\mu g/m^3$ at hour 19

Monthly Average: 4.82 $\mu g/m^3$

Minimum Daily Average: 0.3 $\mu g/m^3$ on Feb 21

Minimum Diurnal Average: 2.7 $\mu g/m^3$ at hour 7

Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.7$ Median = 2.1 $Q_3 = 5.6$ $P_{90} = 11.4$ $P_{99} = 39.7$

Hours in Service:	696
Hours of Data:	692
Hours of Missing Data:	4
Hours of Calibration:	1
Percent Operational Time:	99.6

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	5	2	2	3	3	4	4	6	9	8	5	4	3	2	1	2	2	1	2	2	2	1	3.4	9.5
2-Feb	1	1	2	2	0	2	1	3	2	2	1	3	6	7	5	6	16	15	13	1	1	0	3	2	3.9	15.8
3-Feb	3	3	8	7	5	7	5	5	3	8	6	0	0	0	0	0	0	1	3	20	7	41	68	N	8.7	68.1
4-Feb	6	11	9	5	5	6	5	4	5	5	7	7	6	8	10	9	15	12	5	2	1	0	1	2	6.2	14.9
5-Feb	8	16	6	4	27	8	3	3	5	15	6	5	0	0	0	0	0	0	0	0	0	3	0	1	4.5	27.2
6-Feb	6	11	6	2	6	2	1	9	39	5	2	3	2	5	2	1	0	0	36	35	N	0	0	0	7.6	39.1
7-Feb	0	1	1	1	2	1	0	0	1	5	5	2	2	3	5	6	7	8	7	7	6	7	10	14	4.2	14.3
8-Feb	11	9	11	11	11	10	9	10	12	15	12	16	11	12	10	13	20	43	54	2	44	29	10	10	16.4	53.8
9-Feb	6	14	16	1	2	5	2	6	5	20	9	3	1	3	5	6	2	13	12	8	5	4	5	5	6.6	20.0
10-Feb	5	2	3	6	3	2	11	2	15	27	18	11	8	C	12	9	5	16	69	34	18	3	6	5	12.6	69.2
11-Feb	5	4	5	4	4	5	4	3	3	6	5	5	10	10	10	11	12	13	13	13	12	11	14	15	8.2	14.8
12-Feb	12	12	12	11	12	11	10	10	10	13	7	6	9	5	0	0	0	0	0	0	0	0	0	1	5.9	13.0
13-Feb	1	1	0	1	1	0	2	2	1	1	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0.5	2.1
14-Feb	0	1	0	0	1	1	1	0	1	4	2	3	2	1	2	1	1	0	1	2	1	3	4	2	1.5	4.1
15-Feb	4	2	2	1	2	2	1	1	3	4	3	3	3	3	2	2	1	0	0	2	1	2	1	1	2.0	4.5
16-Feb	4	5	4	4	2	0	1	0	1	6	1	6	7	5	7	9	5	4	1	1	1	1	1	1	3.2	8.8
17-Feb	2	1	1	1	1	1	1	0	2	5	3	2	3	3	4	3	8	8	57	113	75	N	1	21	13.7	113.1
18-Feb	19	6	0	9	30	28	1	1	11	2	1	3	4	1	4	5	3	2	0	1	2	2	3	2	5.8	29.9
19-Feb	3	4	1	2	1	4	4	4	5	6	6	4	8	2	4	0	1	2	2	1	0	1	0	0	2.7	8.4
20-Feb	1	0	1	2	0	0	0	0	0	3	2	2	0	2	3	1	2	2	0	0	0	0	0	0	0.9	3.1
21-Feb	0	0	1	3	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.9
22-Feb	0	1	2	2	3	1	0	1	0	0	1	1	1	0	1	1	2	2	2	2	2	2	1	0	1.2	2.5
23-Feb	2	1	2	1	0	1	0	1	2	1	1	1	1	2	2	2	1	7	6	0	0	0	0	1	1.5	7.4
24-Feb	2	2	8	0	0	0	0	4	8	1	0	1	0	0	0	0	0	0	0	0	1	1	0	0	1.1	8.2
25-Feb	0	1	1	1	2	2	2	2	3	3	4	4	6	3	4	9	11	3	9	13	5	3	1	1	3.9	12.7
26-Feb	6	11	9	15	14	12	0	0	0	2	3	1	2	1	1	2	2	2	1	0	1	1	3	2	3.8	14.7
27-Feb	3	5	6	4	5	4	4	3	3	2	1	2	1	1	0	0	0	0	0	1	0	0	1	0	1.9	5.8
28-Feb	0	1	0	0	0	1	1	2	2	2	3	2	3	2	3	2	2	1	2	2	2	13	0	1	1.9	12.8
29-Feb	10	1	3	5	4	5	5	4	8	6	7	15	10	6	3	4	5	11	8	12	12	2	6	10	6.8	14.9
	4.2	4.5	4.2	3.7	5.1	4.2	2.7	2.9	5.4	6.1	4.3	4.0	3.8	3.2	3.5	3.6	4.2	5.8	10.5	9.4	7.1	4.6	4.9	3.6	Diurnal Average	
	18.8	15.5	15.9	14.7	29.9	27.7	11.2	9.9	39.1	27.4	17.7	15.9	11.4	11.7	11.8	12.8	19.8	43.4	69.2	113.1	75.2	40.9	68.1	21.3	Diurnal Maximum	

C - Calibration N - Not Valid

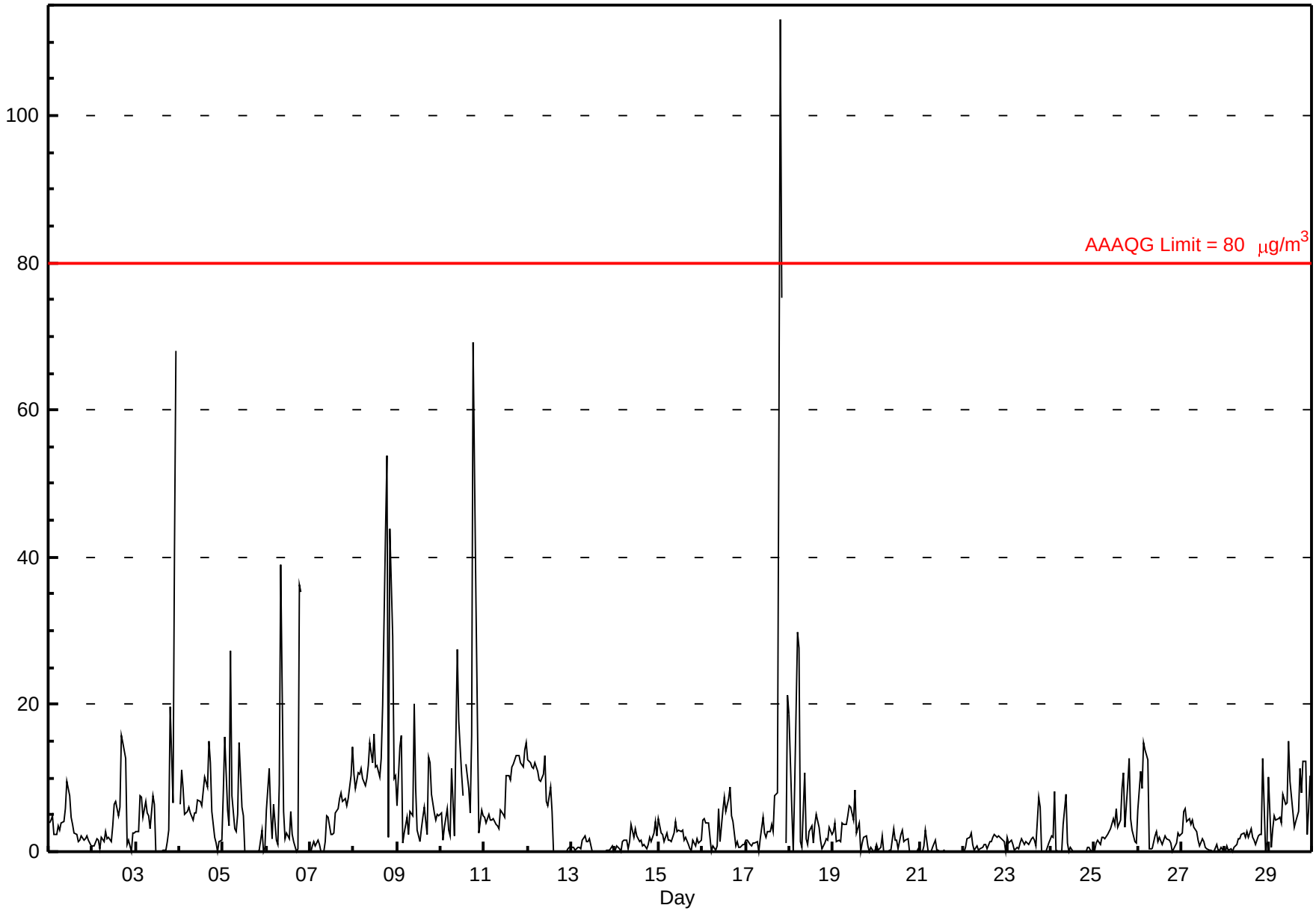
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

Peace Airshed Zone Association

Hourly Averages

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

Smoky Heights - February 2012



Peace Airshed Zone Association

Hourly Maximums

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

Smoky Heights - February 2012

Maximum Value: 248.7 $\mu g/m^3$ on Feb 3 23:00

Maximum Daily Average: 37.6 $\mu g/m^3$ on Feb 8

Minimum Value: 0 $\mu g/m^3$ on Feb 3 14:00

Minimum Daily Average: 2.0 $\mu g/m^3$ on Feb 21

Maximum Diurnal Average: 27.7 $\mu g/m^3$ at hour 19

Minimum Diurnal Average: 5.6 $\mu g/m^3$ at hour 14

Monthly Average: 12.20 $\mu g/m^3$

Percentiles: $P_1 = 0.4$ $P_{10} = 1.9$ $Q_1 = 3.2$ Median = 5.5 $Q_3 = 10.5$ $P_{90} = 21.0$ $P_{99} = 153.3$

Hours in Service:	696
Hours of Data:	695
Hours of Missing Data:	1
Hours of Calibration:	1
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	7	8	7	4	5	6	5	6	7	9	11	10	7	5	5	4	3	3	7	3	4	5	4	5	5.8	11.1
2-Feb	3	6	5	4	4	6	6	7	6	4	4	8	8	9	7	8	104	56	44	3	5	1	6	6	13.4	103.6
3-Feb	6	9	10	10	9	10	7	8	9	11	12	1	1	0	1	1	2	3	5	133	23	222	249	0	30.9	248.7
4-Feb	13	15	12	9	7	9	8	9	9	9	9	11	9	11	19	15	19	16	10	7	4	1	7	5	10.1	18.9
5-Feb	21	20	11	9	72	18	8	7	10	49	17	10	4	2	2	2	1	1	2	2	1	8	1	3	11.6	71.8
6-Feb	13	40	18	7	11	5	3	35	92	18	20	6	7	10	9	10	2	7	88	89	0	1	2	3	20.7	92.4
7-Feb	2	4	4	3	4	4	2	3	7	8	9	5	5	5	10	7	9	10	10	13	9	11	16	18	7.3	18.1
8-Feb	16	12	14	14	14	14	11	14	14	20	16	21	15	14	13	16	38	113	201	11	133	104	44	23	37.6	201.1
9-Feb	17	31	45	7	6	12	6	10	21	70	19	5	6	7	8	10	5	27	19	14	8	9	10	15	16.2	69.6
10-Feb	14	11	13	13	17	6	27	26	44	80	29	21	22	C	20	12	8	52	144	155	69	7	9	8	35.0	155.2
11-Feb	8	7	8	7	7	8	7	6	6	9	8	8	14	12	11	14	15	14	14	15	14	14	16	19	10.9	18.8
12-Feb	15	15	14	15	14	15	14	12	14	19	8	10	12	8	3	1	0	2	2	1	3	3	3	3	8.4	18.6
13-Feb	2	2	4	4	2	2	4	4	3	3	3	4	2	3	1	1	0	1	2	2	3	3	2	3	2.5	4.4
14-Feb	2	3	4	3	4	3	5	3	4	7	5	6	5	3	3	2	2	2	3	7	5	5	7	4	4.1	7.1
15-Feb	7	7	5	5	5	4	4	4	6	6	6	6	5	4	4	3	3	2	2	5	6	8	4	5	4.8	7.6
16-Feb	10	8	9	10	6	4	4	3	4	14	5	10	10	10	10	12	7	6	3	3	2	4	3	4	6.7	14.4
17-Feb	5	4	4	3	4	4	4	3	5	8	6	4	4	4	9	10	24	40	160	237	202	40	11	61	35.7	236.9
18-Feb	35	34	0	37	84	67	38	36	54	11	3	14	16	3	10	11	10	7	2	3	6	7	6	4	20.8	84.3
19-Feb	7	7	5	6	7	8	5	6	7	10	9	6	12	7	6	1	4	4	4	3	2	3	1	4	5.4	11.5
20-Feb	3	2	5	5	2	3	2	3	3	12	9	4	2	5	5	3	3	3	2	1	2	1	1	3	3.6	12.2
21-Feb	1	1	4	6	3	2	2	3	3	4	2	0	2	1	1	2	1	2	1	1	1	3	2	2	2.0	5.6
22-Feb	2	3	4	4	5	3	2	2	2	2	1	3	2	3	7	6	4	3	4	5	4	4	4	1	3.3	6.7
23-Feb	4	4	5	3	4	3	2	4	4	3	3	4	4	4	4	5	3	31	31	2	1	2	3	4	5.7	31.0
24-Feb	4	10	35	7	1	4	5	38	36	4	2	10	2	1	2	2	2	0	1	3	3	3	2	3	7.5	37.6
25-Feb	2	3	4	3	4	5	4	4	5	5	7	11	13	6	11	35	35	15	22	25	8	5	5	3	10.0	35.2
26-Feb	17	29	15	37	37	29	9	2	5	5	7	3	5	4	4	5	4	4	4	3	4	5	6	7	10.4	36.9
27-Feb	7	9	9	7	7	8	6	5	6	4	3	3	3	2	2	2	1	1	3	4	2	3	3	3	4.3	8.6
28-Feb	3	3	1	3	4	3	4	4	4	5	5	5	5	4	4	4	3	2	5	5	14	55	4	8	6.6	55.0
29-Feb	55	4	6	8	6	8	8	7	14	15	12	21	13	8	5	11	10	23	12	21	25	5	12	18	13.7	55.0
	10.4	10.6	9.6	8.7	12.3	9.4	7.3	9.5	13.9	14.5	8.6	7.9	7.3	5.6	6.8	7.4	11.2	15.5	27.7	26.7	19.5	18.6	15.4	8.3	Diurnal Average	
	55.0	39.8	44.7	37.1	84.3	66.6	37.9	37.6	92.4	79.9	29.2	21.5	21.6	14.2	20.0	35.2	103.6	112.9	201.1	236.9	202.3	221.6	248.7	61.3	Diurnal Maximum	

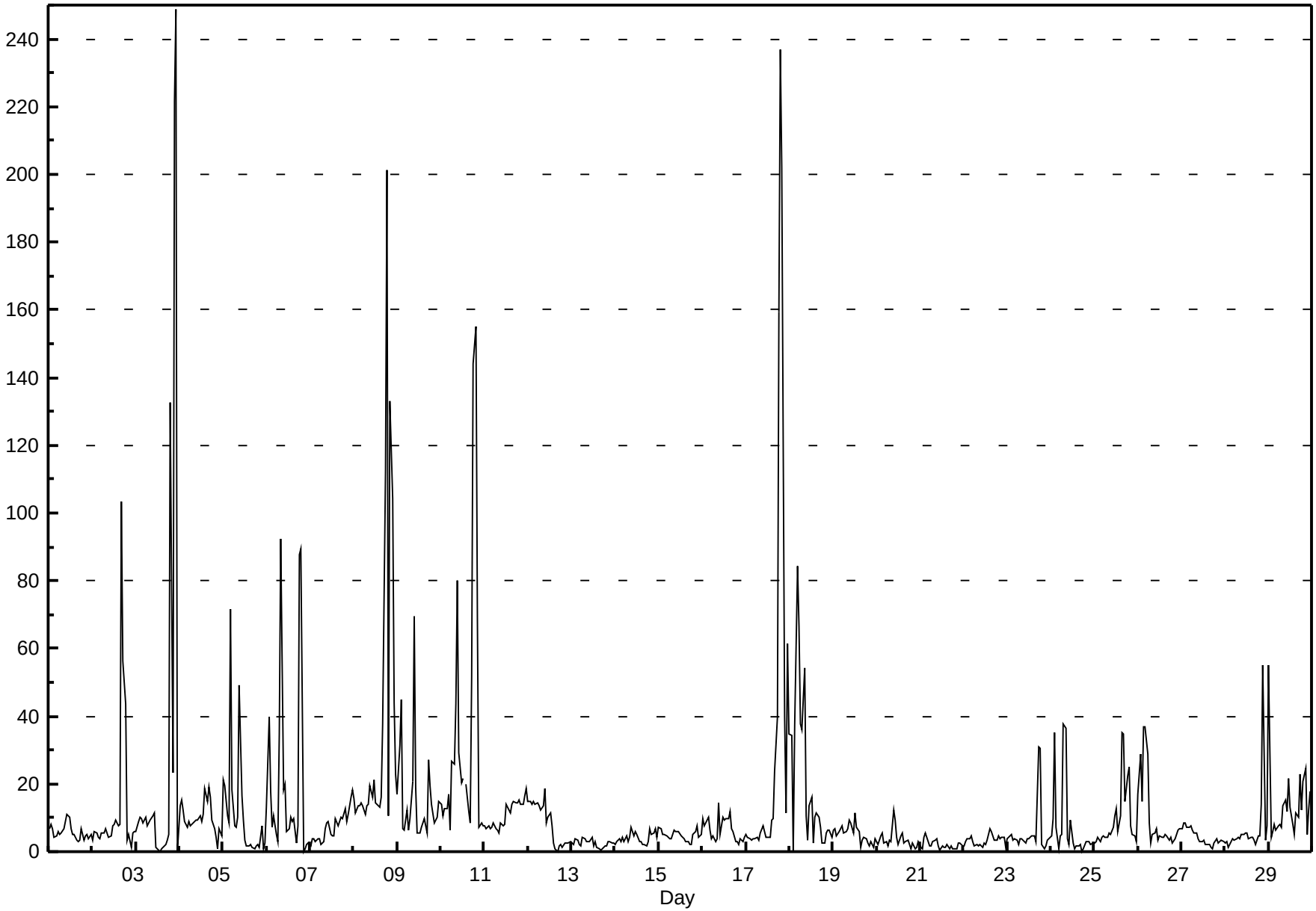
C - Calibration

Peace Airshed Zone Association

Hourly Maximums

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

Smoky Heights - February 2012



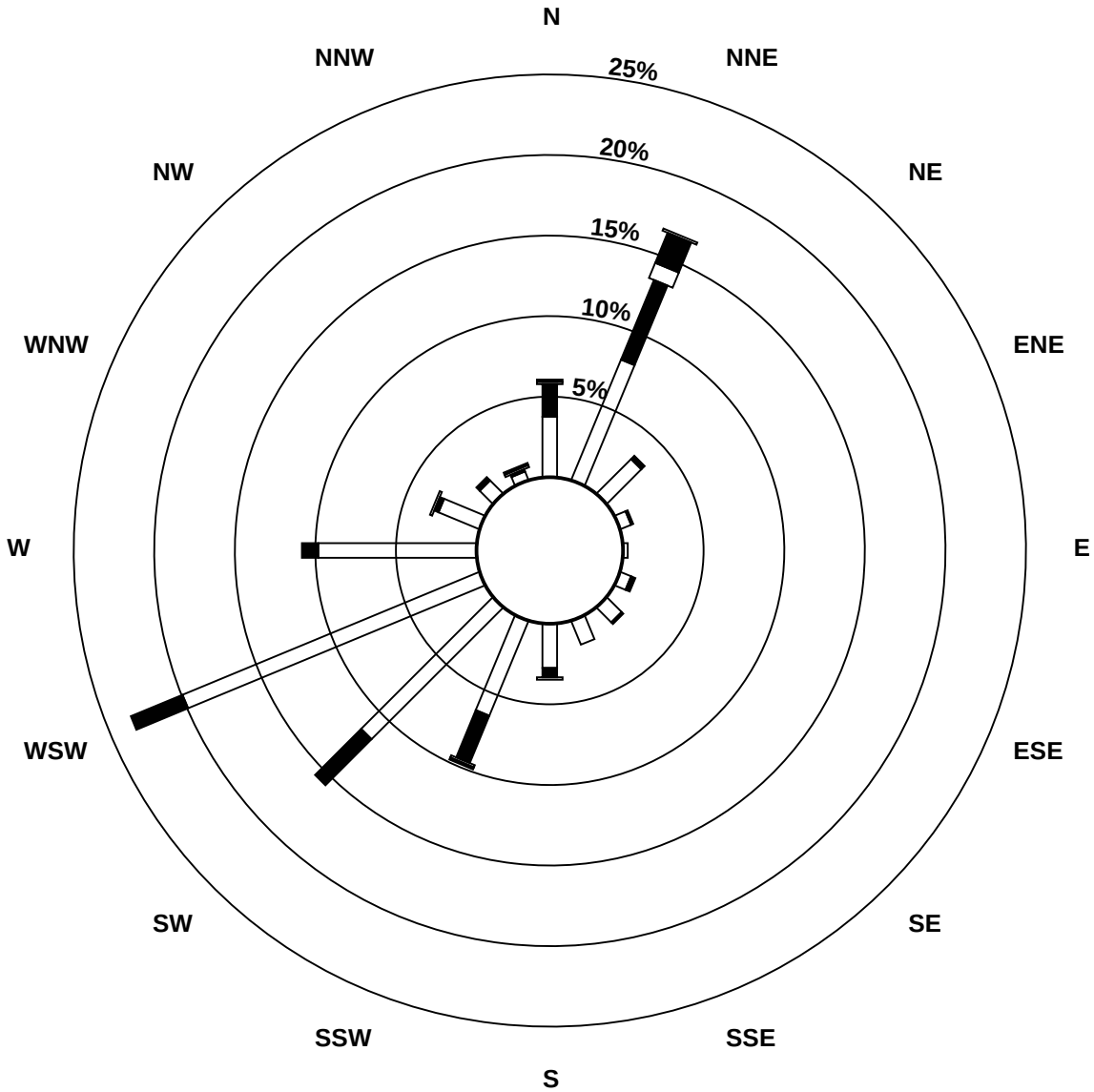
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Pollutant Rose

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

Smoky Heights - February 2012



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 2012

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

Maximum Value: 9.0 ^{o}C on Feb 3 17:00

Maximum Daily Average: 0.3 ^{o}C on Feb 3

Minimum Value: -20 ^{o}C on Feb 26 22:00

Minimum Daily Average: -15.6 ^{o}C on Feb 26

Maximum Diurnal Average: -1.6 ^{o}C at hour 16

Minimum Diurnal Average: -10.5 ^{o}C at hour 8

Monthly Average: -7.14 ^{o}C

Percentiles: P_1 = -19.1 P_{10} = -14.7 Q_1 = -11.3 Median = -7.0 Q_3 = -2.8 P_{90} = -0.3 P_{99} = 5.1

Hours in Service:	696
Hours of Data:	696
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

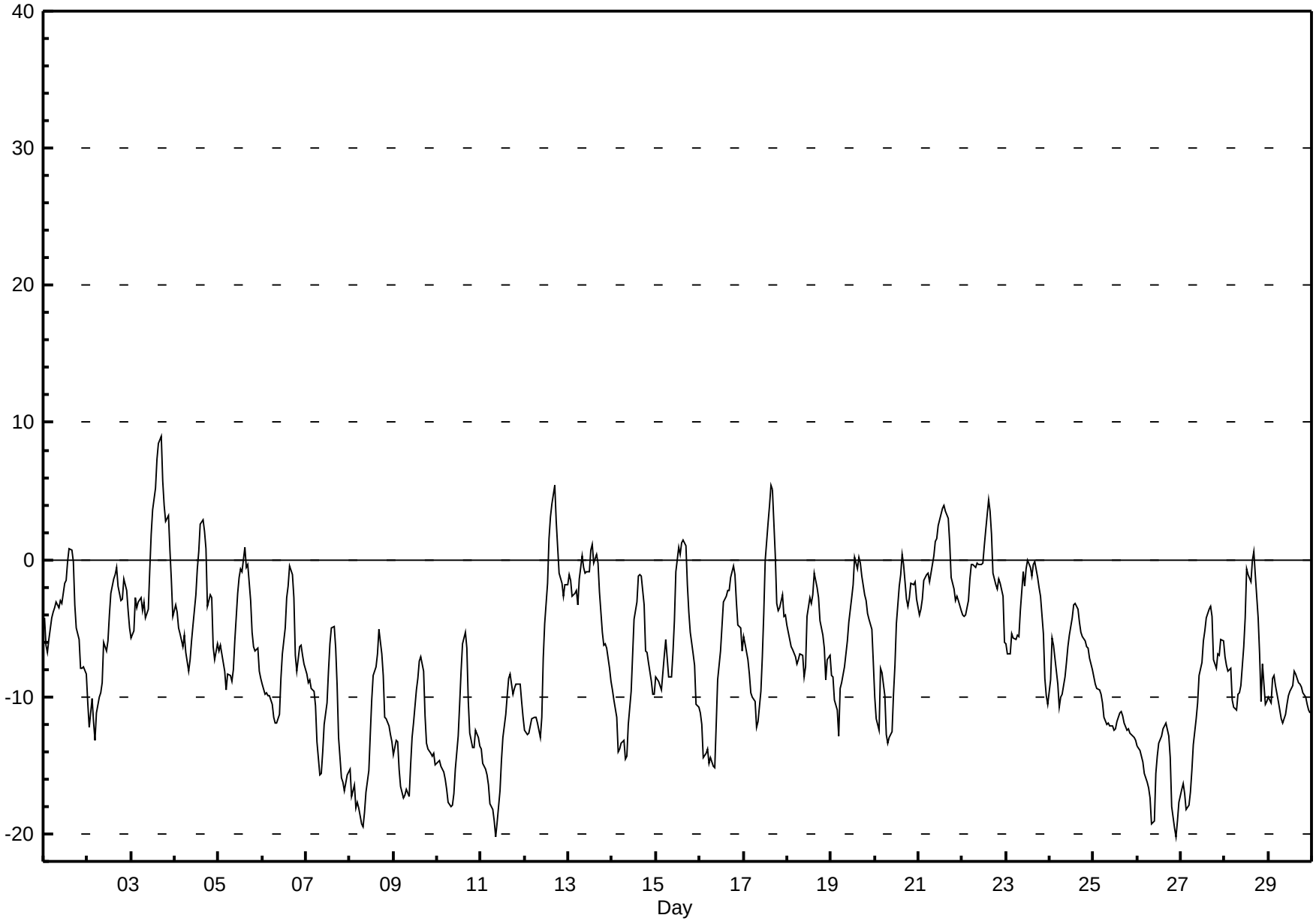
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-4	-6	-7	-6	-4	-4	-3	-3	-3	-3	-3	-2	-1	0	1	1	0	-3	-5	-6	-8	-8	-8	-8	-4.0	0.8
2-Feb	-10	-12	-10	-12	-13	-11	-10	-10	-9	-6	-7	-6	-4	-2	-1	-1	-1	-2	-3	-3	-1	-2	-4	-5	-6.1	-0.6
3-Feb	-6	-5	-3	-3	-3	-3	-4	-3	-4	-4	-1	2	4	5	7	8	9	6	4	3	3	1	-1	-4	0.3	9.0
4-Feb	-3	-4	-5	-5	-6	-6	-7	-8	-7	-6	-5	-3	-1	1	3	3	2	1	-3	-3	-3	-6	-7	-6	-3.5	2.9
5-Feb	-7	-6	-7	-8	-10	-8	-8	-9	-8	-6	-3	-1	-1	-1	1	-1	0	-3	-5	-6	-7	-6	-8	-9	-5.3	0.9
6-Feb	-9	-10	-10	-10	-10	-10	-12	-12	-12	-11	-9	-7	-5	-3	-2	0	-1	-3	-7	-8	-6	-6	-7	-8	-7.4	-0.5
7-Feb	-8	-9	-9	-9	-10	-11	-13	-16	-16	-14	-12	-10	-8	-6	-5	-5	-6	-9	-13	-16	-16	-17	-16	-16	-11.2	-4.9
8-Feb	-15	-17	-16	-18	-18	-18	-19	-19	-18	-17	-15	-13	-10	-8	-8	-7	-5	-7	-8	-12	-12	-12	-13	-13	-13.3	-5.1
9-Feb	-14	-13	-13	-15	-16	-17	-17	-17	-17	-15	-13	-12	-9	-9	-7	-7	-8	-11	-13	-14	-14	-14	-14	-15	-13.2	-7.0
10-Feb	-15	-15	-15	-15	-16	-17	-18	-18	-18	-17	-15	-13	-11	-8	-6	-5	-6	-10	-13	-14	-14	-12	-13	-14	-13.2	-5.3
11-Feb	-14	-15	-15	-16	-16	-18	-18	-19	-20	-19	-17	-15	-13	-11	-10	-9	-8	-10	-9	-9	-9	-9	-10	-12	-13.4	-8.3
12-Feb	-12	-13	-13	-12	-12	-11	-12	-12	-13	-12	-7	-5	-2	2	3	4	5	3	1	-1	-2	-3	-2	-2	-5.2	5.4
13-Feb	-1	-2	-3	-2	-2	-3	-1	0	-1	-1	-1	-1	1	1	0	0	0	-2	-5	-6	-6	-6	-8	-9	-2.5	1.1
14-Feb	-9	-10	-11	-14	-14	-13	-13	-15	-14	-12	-10	-7	-4	-3	-1	-1	-1	-3	-7	-7	-7	-9	-10	-10	-8.6	-1.1
15-Feb	-9	-9	-9	-9	-7	-6	-7	-9	-9	-7	-4	-1	1	0	1	1	1	-2	-4	-5	-7	-8	-11	-11	-5.3	1.4
16-Feb	-11	-12	-14	-14	-14	-15	-14	-15	-15	-12	-9	-7	-5	-3	-3	-2	-2	-1	0	-1	-3	-5	-5	-7	-7.9	-0.4
17-Feb	-6	-6	-7	-8	-10	-10	-10	-12	-12	-10	-7	-4	0	3	4	5	5	0	-3	-4	-3	-3	-4	-4	-4.4	5.4
18-Feb	-5	-6	-6	-7	-7	-8	-7	-7	-7	-9	-8	-4	-3	-3	-3	-1	-2	-3	-4	-5	-6	-9	-7	-7	-5.6	-0.9
19-Feb	-8	-9	-10	-11	-13	-9	-9	-8	-7	-6	-5	-3	-2	0	-1	0	0	-1	-3	-3	-4	-4	-5	-7	-5.3	0.2
20-Feb	-10	-12	-12	-8	-8	-10	-13	-13	-13	-13	-10	-8	-5	-2	-1	0	0	-3	-3	-3	-2	-2	-2	-3	-6.4	0.4
21-Feb	-4	-4	-3	-1	-1	-1	-2	-1	0	1	2	3	3	4	4	4	3	1	-1	-2	-3	-3	-3	-4	-0.3	3.9
22-Feb	-4	-4	-4	-3	-1	0	0	-1	0	0	0	0	1	2	4	4	2	-1	-2	-2	-1	-2	-3	-6	-1.0	4.4
23-Feb	-6	-7	-7	-5	-6	-6	-5	-6	-4	-1	-2	-1	0	-1	-1	0	0	-1	-2	-3	-5	-9	-10	-11	-4.1	0.0
24-Feb	-9	-6	-6	-7	-9	-11	-10	-10	-9	-8	-6	-6	-4	-3	-3	-4	-5	-5	-6	-6	-6	-6	-7	-8	-6.6	-3.2
25-Feb	-9	-9	-9	-10	-10	-10	-11	-12	-12	-12	-12	-12	-12	-12	-11	-11	-11	-12	-12	-12	-13	-13	-13	-13	-11.4	-8.5
26-Feb	-14	-14	-14	-15	-16	-16	-17	-17	-19	-19	-16	-14	-13	-13	-12	-12	-12	-13	-14	-18	-20	-20	-19	-18	-15.6	-11.9
27-Feb	-17	-16	-17	-18	-18	-17	-15	-13	-12	-10	-8	-7	-6	-5	-4	-4	-3	-4	-7	-8	-7	-7	-6	-6	-9.9	-3.4
28-Feb	-7	-8	-8	-8	-10	-11	-11	-10	-10	-9	-6	-4	-1	-1	-2	0	1	-1	-4	-7	-10	-8	-11	-10	-6.5	0.6
29-Feb	-10	-10	-9	-8	-9	-10	-11	-12	-12	-11	-11	-10	-10	-9	-8	-8	-9	-9	-9	-10	-10	-11	-11	-11	-9.9	-8.2
	-8.8	-9.2	-9.5	-9.7	-10.0	-10.0	-10.3	-10.5	-10.4	-9.2	-7.6	-5.9	-4.1	-3.0	-2.1	-1.6	-1.9	-3.8	-5.6	-6.6	-7.0	-7.6	-8.2	-8.8	Diurnal Average	
	-1.1	-1.5	-2.6	-1.5	-1.1	-0.3	-0.3	0.3	0.3	1.3	1.5	2.5	3.7	5.2	7.3	8.4	9.0	5.7	4.0	2.8	3.2	0.7	-1.5	-1.8	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Smoky Heights - February 2012



Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Smoky Heights - February 2012

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	13	11	9	8	8	7	10	8	6	11	12	13	15	14	16	16	11	13	12	15	13	17	15	6	11.2	17.1
Dir	214	225	235	234	239	243	230	256	209	236	223	223	226	247	247	245	247	257	266	265	254	262	264	182	241.6	261.9
2 Spd	9	10	12	12	8	8	7	7	10	14	11	15	16	12	8	3	5	4	1	6	7	8	8	4	7.7	15.8
Dir	219	220	211	244	245	237	230	259	219	206	207	226	235	221	232	274	347	357	245	230	230	253	235	216	230.6	234.9
3 Spd	7	11	15	11	18	13	14	13	9	10	10	8	6	5	3	4	4	4	1	2	12	5	4	7	6.2	18.2
Dir	215	235	233	230	252	237	187	194	232	246	232	225	245	258	270	287	194	190	273	299	344	25	23	245	236.3	252.1
4 Spd	11	8	9	8	6	5	8	9	6	5	5	7	8	10	7	8	9	7	6	11	10	3	5	8	6.6	11.3
Dir	266	200	198	203	194	218	242	206	187	211	200	191	228	228	203	206	252	235	233	272	276	272	223	245	226.7	265.9
5 Spd	6	4	5	6	1	2	4	1	4	5	6	14	18	11	9	10	7	8	12	10	9	14	15	11	5.6	17.6
Dir	217	205	206	235	210	208	243	306	63	6	16	5	28	41	34	37	5	7	23	14	18	21	25	32	19.5	28.2
6 Spd	8	9	12	14	13	12	11	11	8	10	9	8	8	8	9	8	7	9	10	9	12	10	10	11	6.8	13.9
Dir	15	17	17	19	16	15	15	14	15	21	24	22	18	20	22	111	110	67	26	28	120	146	147	148	40.2	18.5
7 Spd	10	6	10	14	15	6	1	1	6	6	9	9	7	5	3	4	8	7	4	2	5	4	11	9	4.0	14.7
Dir	142	135	127	149	156	192	41	66	187	204	176	190	210	223	232	267	277	290	310	253	247	264	255	242	198.8	155.6
8 Spd	10	9	6	6	4	4	5	4	3	3	3	3	3	5	7	6	2	7	7	4	2	4	3	3	2.4	10.4
Dir	239	225	212	184	189	198	204	217	215	250	208	176	201	195	258	263	31	12	1	279	332	31	309	2	237.1	238.6
9 Spd	5	6	4	4	5	5	4	6	6	7	6	9	10	10	7	9	13	12	13	10	12	11	12	14	7.9	14.3
Dir	255	24	12	350	358	23	21	27	25	29	23	23	33	27	14	24	28	17	18	11	14	11	16	27	18.6	26.6
10 Spd	11	15	14	13	9	10	11	9	8	9	10	12	13	8	19	22	14	12	11	11	7	15	16	16	8.5	21.9
Dir	8	28	28	21	14	9	21	10	9	19	22	25	35	60	113	115	82	31	24	31	28	123	133	141	52.0	114.6
11 Spd	15	6	9	12	11	4	5	6	6	8	10	9	10	10	10	9	9	10	13	18	13	15	15	11	8.4	18.3
Dir	143	179	169	159	148	194	179	184	212	197	201	219	238	243	244	240	214	226	253	255	238	206	199	216	209.6	255.4
12 Spd	10	10	12	10	9	9	8	9	9	8	10	9	12	9	13	16	12	11	12	10	13	15	19	19	10.6	18.7
Dir	231	238	220	218	216	242	239	203	207	225	248	211	185	191	219	217	239	239	248	254	249	257	258	263	232.7	263.3
13 Spd	19	18	16	19	17	13	17	16	12	13	5	6	10	14	16	20	19	14	15	18	21	22	22	22	15.1	21.8
Dir	257	252	248	256	269	267	271	304	313	298	307	260	302	252	242	247	254	252	253	251	254	256	249	262	261.8	261.9
14 Spd	22	15	15	12	9	13	12	10	14	13	12	8	10	14	11	16	15	12	11	12	13	17	18	17	13.0	21.5
Dir	261	223	225	228	228	260	251	253	248	230	224	246	250	234	246	243	245	243	257	249	266	266	261	255	246.3	261.0
15 Spd	20	22	23	21	20	21	14	18	15	16	19	16	7	17	18	18	15	10	12	12	11	13	8	6	14.5	22.9
Dir	261	261	261	264	252	251	203	204	236	251	235	269	242	235	242	257	259	272	284	260	262	268	205	191	249.7	261.2
16 Spd	9	8	8	9	8	9	8	7	8	9	7	10	12	11	12	6	10	12	16	14	12	16	19	18	9.8	18.7
Dir	233	261	243	233	193	200	174	204	230	205	219	220	218	180	191	208	254	257	248	236	245	246	249	250	229.1	249.4
17 Spd	19	19	18	18	14	8	11	13	13	10	10	7	4	1	2	5	4	6	9	10	11	12	11	13	5.2	19.3
Dir	248	259	263	268	263	258	269	258	254	234	211	197	129	114	338	1	7	49	21	18	15	11	13	10	284.2	258.7
18 Spd	15	13	14	13	13	13	12	9	9	4	7	3	7	6	5	9	10	7	3	3	8	9	11	10	5.3	14.6
Dir	16	11	5	13	14	11	9	349	24	167	196	258	323	238	194	3	10	356	306	266	271	260	269	265	343.1	15.9
19 Spd	8	13	15	8	5	9	6	5	5	6	7	4	5	4	8	21	21	17	17	16	12	7	7	13	8.1	20.9
Dir	258	266	261	285	254	269	211	241	203	214	217	203	65	292	11	302	292	299	290	281	262	260	261	267	273.8	292.4
20 Spd	16	11	14	16	6	9	9	7	6	6	9	11	7	7	6	4	4	4	5	11	15	14	14	6	6.6	16.1
Dir	268	275	266	282	239	250	201	218	221	174	227	237	232	227	239	248	161	140	146	166	172	161	166	200	219.1	268.2
21 Spd	11	8	11	19	17	22	21	21	25	34	29	31	35	33	32	35	31	26	19	18	14	15	14	10	21.1	35.0
Dir	204	198	228	218	195	199	227	245	248	250	244	248	252	252	257	255	256	251	256	258	251	234	240	247	242.7	255.3
22 Spd	8	13	11	13	19	19	22	20	24	25	26	25	22	19	17	17	14	13	15	16	19	20	16	17	16.9	25.8
Dir	241	256	239	250	236	241	247	258	260	256	258	257	249	281	316	315	298	270	266	261	268	255	262	263	261.8	257.5

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Smoky Heights - February 2012

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	15	14	13	18	23	21	17	6	13	12	18	17	17	16	12	4	4	8	3	12	15	16	19	18	13.0	22.7
Dir	260	260	248	258	260	261	260	250	284	275	248	254	297	288	244	311	122	293	273	299	254	255	257	252	263.6	259.7
24 Spd	18	12	7	6	5	6	12	3	5	9	9	11	14	16	17	18	20	22	21	24	23	26	25	23	11.9	25.8
Dir	261	266	1	353	14	11	25	32	360	33	38	42	70	71	79	40	44	51	50	48	47	49	49	48	42.1	49.4
25 Spd	23	23	23	24	23	22	26	23	24	24	26	30	29	21	16	13	13	12	10	11	13	16	14	14	19.3	30.0
Dir	49	45	47	47	43	35	27	29	28	24	21	23	25	26	27	23	21	26	11	3	7	16	23	26	29.0	22.6
26 Spd	15	19	19	15	13	11	8	7	3	5	6	12	16	19	21	17	19	19	16	8	10	10	12	11	5.2	21.2
Dir	21	15	14	14	7	11	351	345	346	217	252	242	234	235	239	246	240	204	185	210	221	227	213	227	258.5	239.1
27 Spd	13	14	10	12	11	13	14	17	18	17	15	13	16	20	23	16	14	12	12	19	16	18	24	18	15.5	23.9
Dir	213	234	244	235	224	239	227	244	247	231	233	241	231	236	238	239	231	220	224	230	236	233	234	218	233.0	234.2
28 Spd	18	14	21	16	17	14	12	13	12	13	12	10	6	11	11	7	5	3	10	8	12	14	11	10	7.5	20.9
Dir	209	200	214	228	232	231	247	243	232	245	219	185	186	238	236	250	242	227	292	341	9	14	351	350	240.5	213.6
29 Spd	13	14	18	19	21	21	21	19	20	23	22	22	30	30	26	21	21	20	21	21	23	25	21	23	21.1	30.1
Dir	17	28	18	16	14	13	18	21	20	27	25	14	16	20	22	359	356	3	356	5	13	17	18	19	14.8	16.3
Spd	6.4	5.4	5.2	5.3	4.6	5.2	4.3	4.4	4.9	5.4	5.5	5.2	4.2	5.3	5.0	5.5	5.0	4.2	4.9	5.7	5.3	4.6	5.1	4.6	Diurnal Average	
Dir	250.7	259.6	256.9	260.4	253.4	264.0	259.9	263.9	264.9	254.9	245.1	256.9	270.7	257.9	254.1	272.8	279.2	287.8	293.6	285.2	281.6	273.7	260.2	263.6		
Spd	22.7	23.3	22.9	24.2	22.7	22.5	25.7	22.8	24.8	34.5	29.4	30.6	34.8	33.4	31.9	35.0	30.9	26.3	20.9	23.8	23.3	25.8	24.8	23.0	Diurnal Maximum	
Dir	49.0	45.3	46.6	47.3	259.7	34.8	26.6	29.0	247.7	249.8	244.3	248.3	251.6	252.2	256.9	255.3	255.8	251.1	50.4	48.2	46.7	49.4	48.8	48.3		

Maximum Speed Value: 35 km/h on Feb 21 16:00
Maximum Daily Speed Average: 21.1 km/h on Feb 21
Maximum Diurnal Speed Average: 6.4 km/h at hour 1

Minimum Speed Value: 1 km/h on Feb 5 08:00
Minimum Daily Speed Average: 2.4 km/h on Feb 8
Minimum Diurnal Speed Average: 4.2 km/h at hour 13

Monthly Average Velocity: 4.93 km/h 265.06 deg

Speed Percentiles: P_1 = 1.5 P_{10} = 4.7 Q_1 = 7.6 Median = 11.3 Q_3 = 15.9 P_{90} = 20.9 P_{99} = 30.5

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

Hours in Service:	696
Hours of Data:	696
Hours of Missing Data:	0
Percent Operational Time:	100.0

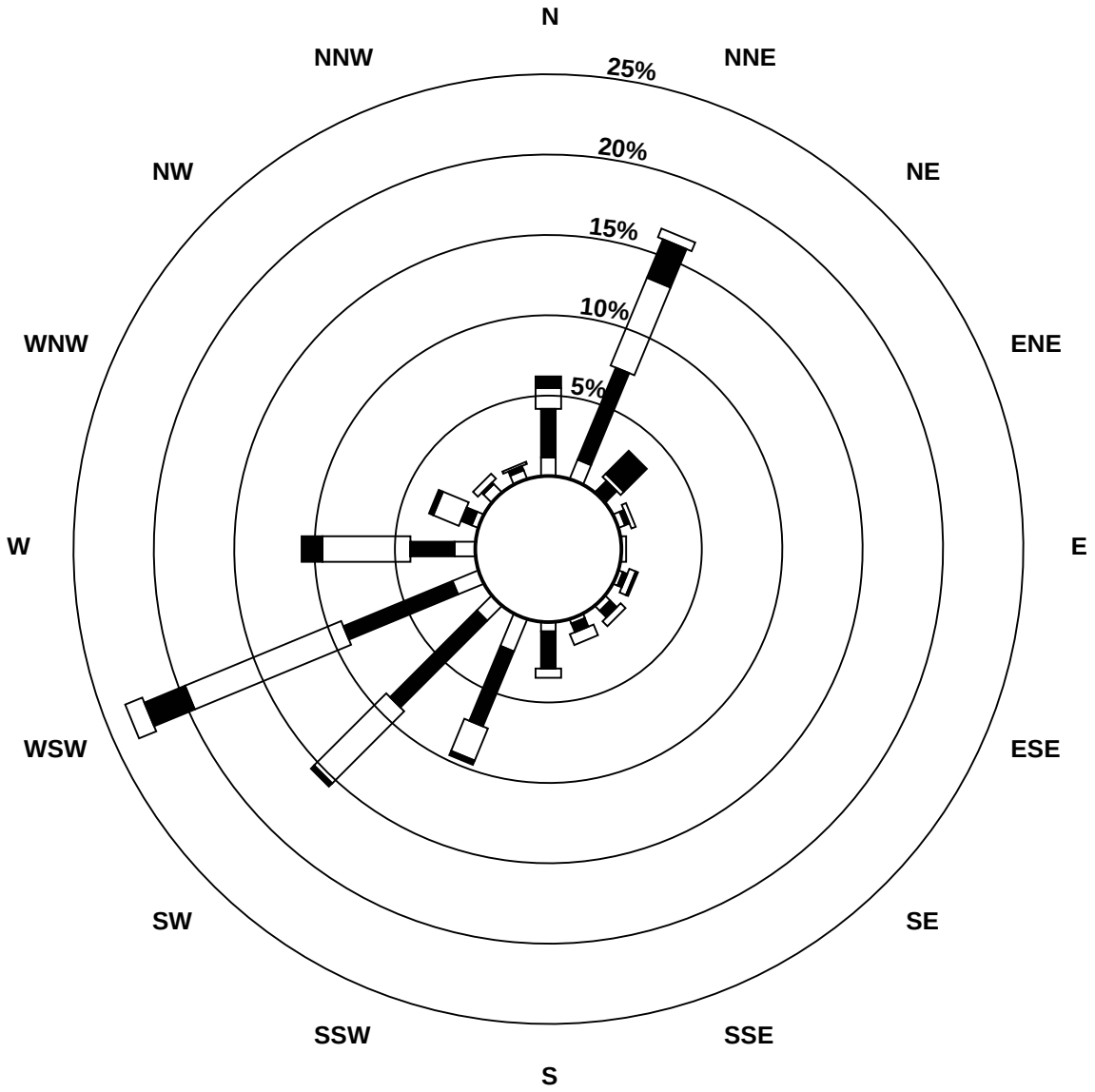
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	8	47	38	19	2	0	114
NorthEast	7	28	19	21	2	0	77
East	0	2	4	0	0	0	6
SouthEast	5	5	9	2	0	0	21
South	12	31	13	1	0	0	57
SouthWest	18	105	86	13	1	0	223
West	17	36	89	27	7	0	176
NorthWest	8	4	9	1	0	0	22
Total	75	258	267	84	12	0	696

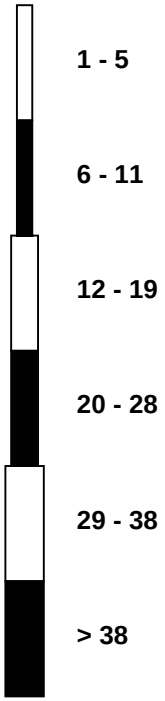
Wind Rose

Wind Speed (WS) (km/h)

Smoky Heights - February 2012



Wind Speed Classes (km/h)



Peace Airshed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Smoky Heights - February 2012

Maximum Speed: 35 km/h on Feb 21 16:00

Maximum Daily Speed Average: 22.3 km/h on Feb 21

Minimum Speed: 3 km/h on Feb 3 15:00

Minimum Daily Speed Average: 5.2 km/h on Feb 8

Maximum Diurnal Speed Average: 14.0 km/h at hour 23

Minimum Diurnal Speed Average: 10.8 km/h at hour 8

Monthly Average Speed: 12.47 km/h

Percentiles: P_1 = 3.2 P_{10} = 5.4 Q_1 = 8.1 Median = 11.5 Q_3 = 16.0 P_{90} = 21.0 P_{99} = 30.6

Hours in Service: 696

Hours of Data: 696

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	14	11	9	8	8	8	10	10	8	11	12	13	15	14	16	16	12	13	12	15	14	17	15	7	12.1	17.3
2-Feb	9	10	13	12	8	8	7	7	11	14	11	15	16	12	8	5	6	5	3	6	8	8	8	5	8.9	15.9
3-Feb	8	11	15	11	19	15	14	14	10	10	11	8	6	5	3	4	5	4	4	3	12	6	5	7	8.7	18.5
4-Feb	11	8	9	8	7	6	8	9	6	5	5	7	8	11	7	8	10	8	6	11	10	4	5	8	7.7	11.5
5-Feb	7	4	5	6	4	3	4	5	5	7	8	14	18	11	9	10	7	8	12	11	9	14	15	11	8.7	17.7
6-Feb	8	9	12	14	13	12	11	11	9	10	9	8	8	8	9	9	8	9	10	9	13	10	11	11	10.0	13.9
7-Feb	10	7	10	14	15	6	3	3	6	6	9	9	7	5	4	4	8	7	5	3	5	5	11	9	7.0	14.9
8-Feb	11	9	6	6	4	4	5	4	4	3	3	3	3	5	7	6	4	7	7	5	5	4	4	4	5.2	10.7
9-Feb	6	6	5	5	5	5	4	6	6	7	7	9	10	11	7	9	13	12	13	10	12	11	12	14	8.5	14.3
10-Feb	11	15	14	13	10	10	11	9	8	9	10	12	13	10	20	22	15	12	11	11	7	15	16	16	12.5	22.0
11-Feb	15	6	9	13	12	4	6	6	6	8	11	10	10	10	10	9	9	11	14	18	13	15	16	11	10.4	18.4
12-Feb	10	10	13	10	10	9	8	9	9	9	10	10	12	10	13	16	12	11	12	10	13	16	19	19	11.6	18.8
13-Feb	19	18	17	19	17	13	17	16	13	13	6	8	11	16	16	20	19	14	15	18	21	22	22	22	16.3	21.9
14-Feb	22	16	15	13	10	13	12	10	14	13	12	9	11	14	11	16	15	12	11	12	13	17	18	17	13.5	21.6
15-Feb	20	22	23	21	20	21	14	18	16	16	19	19	12	18	19	18	15	11	12	12	11	14	9	6	16.1	22.9
16-Feb	9	8	8	9	9	9	8	7	8	9	7	11	13	11	12	7	10	12	16	14	12	16	19	18	11.0	18.7
17-Feb	19	19	18	18	14	8	11	13	13	10	10	7	5	3	3	5	4	6	9	10	11	12	12	13	10.6	19.3
18-Feb	15	13	14	13	14	13	12	10	9	7	8	6	10	7	6	10	10	7	4	3	8	10	11	10	9.6	14.7
19-Feb	8	13	15	9	6	9	6	5	5	6	7	5	6	8	10	21	21	17	17	16	12	8	8	13	10.5	21.0
20-Feb	16	11	14	16	10	9	10	7	7	7	9	11	7	7	6	4	5	4	5	11	15	14	14	7	9.5	16.2
21-Feb	11	9	11	19	18	23	21	21	25	35	30	31	35	33	32	35	31	26	19	18	15	15	14	10	22.3	35.0
22-Feb	9	13	11	13	20	19	22	20	24	25	26	25	22	20	18	19	15	13	15	16	19	20	16	17	18.2	25.8
23-Feb	15	15	13	18	23	22	17	9	14	14	19	17	18	16	13	11	7	12	8	13	15	17	19	18	15.1	22.8
24-Feb	18	14	8	7	6	7	12	4	6	9	9	11	15	17	17	18	20	22	21	24	23	26	25	23	15.2	25.9
25-Feb	23	23	23	24	23	23	26	23	24	24	26	30	29	21	16	13	13	12	10	11	13	16	14	14	19.7	30.2
26-Feb	15	19	19	15	13	11	8	7	4	5	6	12	16	20	21	17	19	20	16	9	10	10	12	12	13.2	21.3
27-Feb	13	14	11	12	11	13	15	17	19	17	15	14	16	20	23	16	15	12	12	19	16	19	24	18	15.8	24.1
28-Feb	20	14	21	16	17	15	12	13	12	14	13	11	7	12	11	7	6	4	10	8	13	14	12	10	12.1	21.0
29-Feb	13	14	18	19	21	21	21	19	20	23	23	22	30	30	26	22	21	20	21	21	23	25	21	23	21.5	30.3
	13.2	12.6	13.1	13.1	12.6	11.7	11.6	10.8	11.0	11.9	12.1	12.6	13.4	13.2	12.9	13.1	12.2	11.4	11.3	12.0	12.8	13.7	14.0	13.0	Diurnal Average	
	22.7	23.4	23.0	24.3	22.8	22.6	25.8	22.9	25.0	34.6	29.5	30.7	34.8	33.5	31.9	35.0	30.9	26.3	21.0	23.9	23.3	25.9	24.9	23.1	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

Smoky Heights - February 2012

Maximum Value: 97.5 deg on Feb 5 05:00

Minimum Value: 1.9 deg on Feb 15 02:00

Percentiles: P_1 = 2.6 P_{10} = 4.0 Q_1 = 5.9 Median = 9.4 Q_3 = 17.4 P_{90} = 33.5 P_{99} = 81.2

Hours in Service:	696
Hours of Data:	696
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Feb	6	8	10	9	12	19	12	49	57	7	7	10	8	5	5	3	9	4	7	9	16	9	11	49	57.3
2-Feb	6	13	7	14	9	13	12	10	20	7	11	6	5	7	11	42	21	26	88	11	15	12	12	40	88.3
3-Feb	18	13	12	9	11	32	8	7	25	16	10	11	15	10	32	15	32	38	79	69	14	35	38	16	79.0
4-Feb	11	17	15	12	16	41	7	19	20	16	36	10	8	11	18	14	15	21	13	7	7	41	20	19	41.4
5-Feb	27	35	20	11	98	58	41	89	56	83	44	14	7	7	9	9	10	8	6	5	3	3	4	12	97.5
6-Feb	11	6	5	4	4	5	7	7	10	5	5	7	6	7	3	33	27	13	6	16	20	6	5	7	33.2
7-Feb	6	14	7	4	9	23	77	82	12	19	11	5	13	10	54	9	8	13	49	58	21	29	8	11	81.6
8-Feb	14	13	25	10	29	7	10	7	20	11	23	20	20	20	18	18	86	13	14	35	68	23	44	40	86.2
9-Feb	27	24	34	33	17	13	13	7	7	7	5	5	10	9	20	7	6	5	5	8	8	9	8	4	34.4
10-Feb	11	8	8	9	8	14	10	8	8	9	6	6	10	29	9	7	28	9	8	11	23	8	6	4	29.0
11-Feb	5	28	11	5	34	36	25	13	7	11	7	19	5	6	4	7	9	19	3	3	15	6	5	14	35.6
12-Feb	11	16	9	11	8	12	11	12	16	17	7	20	4	18	8	3	10	7	8	16	12	10	2	3	20.0
13-Feb	3	5	4	7	9	6	7	10	12	15	31	45	24	26	5	7	3	4	8	7	3	4	7	5	45.2
14-Feb	4	15	4	4	9	4	4	11	8	10	11	25	26	8	9	4	4	3	3	6	7	3	2	2	25.6
15-Feb	5	2	3	4	5	18	15	6	21	6	5	29	56	6	6	4	3	21	8	9	23	23	36	49	56.1
16-Feb	13	10	13	9	12	7	13	23	14	17	31	16	9	7	9	42	9	6	9	7	9	7	4	3	42.1
17-Feb	3	3	2	5	12	11	3	6	3	17	16	15	36	82	66	21	37	17	7	4	5	6	12	7	82.3
18-Feb	4	6	6	5	5	7	8	22	16	74	26	56	44	38	32	34	8	19	47	51	7	18	9	14	74.1
19-Feb	18	5	4	17	69	10	29	31	26	25	6	36	37	73	34	7	7	6	6	8	12	34	28	11	73.1
20-Feb	7	11	8	12	51	19	18	13	30	23	13	5	11	8	10	20	27	25	26	11	8	6	5	38	51.1
21-Feb	8	12	18	7	9	11	7	6	6	5	4	4	3	3	4	3	3	3	2	3	20	4	8	14	20.1
22-Feb	10	13	12	6	4	5	5	3	3	3	3	3	8	18	23	29	22	10	5	3	7	6	6	4	28.6
23-Feb	4	14	9	3	6	8	8	75	24	25	11	9	23	10	21	68	56	54	67	18	15	6	7	8	74.9
24-Feb	10	34	29	47	45	38	7	44	25	7	7	16	13	17	11	9	5	5	4	5	5	4	5	6	46.6
25-Feb	5	5	5	6	9	5	5	4	4	6	5	5	6	5	7	9	6	8	8	9	9	5	5	4	9.3
26-Feb	6	5	5	6	6	5	14	15	23	35	9	7	6	8	6	3	8	14	7	23	8	7	7	15	35.5
27-Feb	10	4	13	7	8	5	7	6	4	6	4	15	6	3	3	3	10	10	7	5	10	15	8	14	14.7
28-Feb	20	11	7	5	11	19	11	16	11	26	33	14	23	12	9	11	27	30	9	17	24	11	17	13	33.4
29-Feb	17	10	4	3	5	7	4	4	4	3	6	6	6	5	11	10	10	10	10	9	5	4	4	4	16.8
	27.2	34.9	34.4	46.6	97.5	58.3	77.1	88.9	57.3	83.4	43.6	56.4	56.1	82.3	66.3	67.8	86.2	53.7	88.3	68.9	67.7	41.4	43.7	49.3	

PAZA
Beaverlodge Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - February 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7.2 ppb on Feb 22 11:00 Maximum Daily Average: 2.5 ppb on Feb 26

Minimum Value: 0 ppb on Feb 24 03:00 Minimum Daily Average: 0.1 ppb on Feb 1
Maximum Diurnal Average: 0.8 ppb at hour 11 Minimum Diurnal Average: 0.3 ppb at hour 6
Monthly Average: 0.50 ppb Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.1 Median = 0.2 Q_3 = 0.6 P_{90} = 1.2 P_{99} = 4.3

Hours in Service:	696
Hours of Data:	664
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	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
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	1	0.2	0.9
3-Feb	1	1	0	0	A	0	0	0	0	0	2	4	1	1	1	0	0	0	0	1	1	1	1	1	0.8	4.4
4-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	0.3	0.6
5-Feb	0	0	0	0	A	0	0	0	0	1	0	1	1	C	C	C	0	0	0	0	0	0	1	1	0.4	0.9
6-Feb	1	0	0	0	A	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.2
7-Feb	1	1	1	0	A	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9
8-Feb	1	1	1	0	A	0	0	0	0	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	0.6	1.2
9-Feb	0	0	0	1	A	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	0	0	0	0.7	1.4
10-Feb	0	1	1	1	A	0	1	1	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1.2	2.3
11-Feb	1	1	1	1	A	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0.7	1.4
12-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
13-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
14-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	0.2	0.6
15-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
16-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
17-Feb	0	0	0	0	A	0	0	0	0	0	0	1	1	1	0	0	0	1	0	0	0	1	1	1	0.4	1.5
18-Feb	1	1	1	1	A	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0.8	1.5
19-Feb	1	1	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
20-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0.3	0.9
21-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
22-Feb	0	0	0	1	A	0	0	0	0	5	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	7.2
23-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
24-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
25-Feb	0	0	0	0	A	0	0	0	0	1	2	1	1	1	1	2	2	1	1	4	2	2	2	2	1.1	3.6
26-Feb	4	5	6	5	A	2	5	4	2	2	2	2	2	2	1	1	1	1	1	1	3	4	1	1	2.5	6.1
27-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	2	2	1	0	0	0	0	0.4	2.0
28-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
29-Feb	0	0	0	0	A	1	1	1	1	2	1	1	2	1	0	0	0	0	1	2	3	1	1	0	0.9	2.8
	0.5	0.5	0.5	0.5	--	0.3	0.4	0.4	0.3	0.6	0.8	0.6	0.6	0.5	0.5	0.5	0.4	0.5	0.5	0.6	0.6	0.6	0.5	0.5	Diurnal Average	
	4.4	5.2	6.1	5.4	--	2.2	5.3	4.1	2.0	5.5	7.2	4.4	2.2	1.9	1.7	2.3	1.5	1.5	2.0	3.6	2.8	4.2	2.4	2.3	Diurnal Maximum	

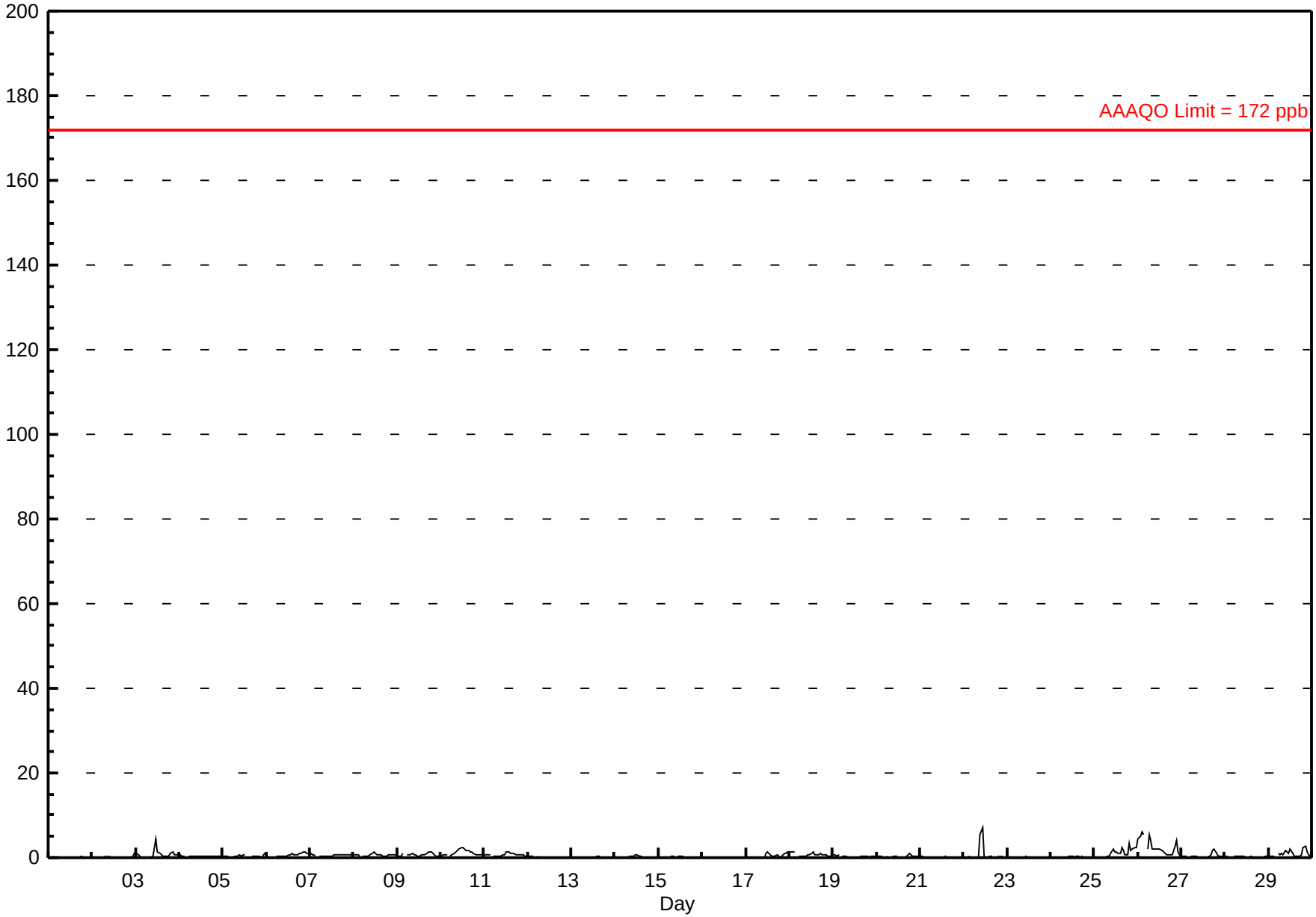
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - February 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - February 2012

Maximum Value: 52.6 ppb on Feb 22 10:00

Maximum Daily Average: 4.6 ppb on Feb 22

Minimum Value: 0 ppb on Feb 1 01:00

Minimum Daily Average: 0.2 ppb on Feb 1

Maximum Diurnal Average: 2.7 ppb at hour 11

Minimum Diurnal Average: 0.5 ppb at hour 6

Monthly Average: 0.88 ppb

Percentiles: P_1 = 0.1 P_{10} = 0.2 Q_1 = 0.2 Median = 0.4 Q_3 = 0.8 P_{90} = 1.6 P_{99} = 6.5

Hours in Service:	696
Hours of Data:	664
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	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	1	1	0.3	1.1
3-Feb	1	1	0	0	A	0	0	0	0	2	10	10	3	1	1	1	1	1	1	1	2	1	1	1	1.7	10.3
4-Feb	1	1	1	1	A	0	0	1	1	0	0	0	0	0	1	0	0	1	1	0	0	0	0	1	0.5	0.8
5-Feb	0	0	0	0	A	0	0	0	1	1	1	1	1	C	C	C	0	0	0	0	0	0	2	1	0.6	1.6
6-Feb	1	0	0	0	A	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.4
7-Feb	1	1	1	1	A	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1
8-Feb	1	1	1	1	A	0	0	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.6
9-Feb	1	1	1	2	A	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1	0	1	1.0	2.4
10-Feb	1	1	1	1	A	1	1	1	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1.4	2.5
11-Feb	1	1	1	1	A	1	0	0	0	0	1	1	2	1	1	1	1	1	1	1	1	1	1	1	0.8	1.9
12-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
13-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
14-Feb	0	0	0	0	A	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0.3	0.7
15-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
16-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
17-Feb	0	0	0	0	A	0	0	0	0	0	0	2	2	1	1	1	1	2	1	0	1	1	1	2	0.7	2.2
18-Feb	2	2	2	3	A	1	1	1	1	1	1	1	2	2	1	1	1	2	1	1	1	0	0	1	1.1	2.6
19-Feb	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	1	0.4	1.3
20-Feb	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0.4	1.1
21-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.2	1.1
22-Feb	0	0	0	1	A	0	0	0	0	53	47	0	0	0	0	0	0	0	0	0	0	0	0	0	4.6	52.6
23-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
24-Feb	0	0	0	0	A	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9
25-Feb	0	0	0	0	A	0	0	1	1	2	4	2	2	1	2	3	2	1	1	7	4	4	4	3	1.9	7.0
26-Feb	6	6	7	7	A	3	6	6	2	2	2	2	2	2	2	1	1	1	1	2	4	6	2	1	3.2	6.6
27-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	2	4	4	2	0	0	0	0	0.7	3.8
28-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
29-Feb	0	0	0	1	A	1	1	1	1	3	3	2	3	2	1	1	1	0	1	4	4	2	1	1	1.5	4.2
	0.7	0.7	0.7	0.7	--	0.5	0.6	0.6	0.5	2.5	2.7	1.1	0.9	0.7	0.7	0.6	0.6	0.7	0.7	1.0	0.9	0.8	0.7	0.7	Diurnal Average	
	5.6	6.1	6.6	6.5	--	3.2	6.5	6.3	2.5	52.6	46.5	10.3	3.1	2.1	1.9	2.9	2.4	3.8	3.6	7.0	4.2	5.8	3.7	3.3	Diurnal Maximum	

C - Calibration

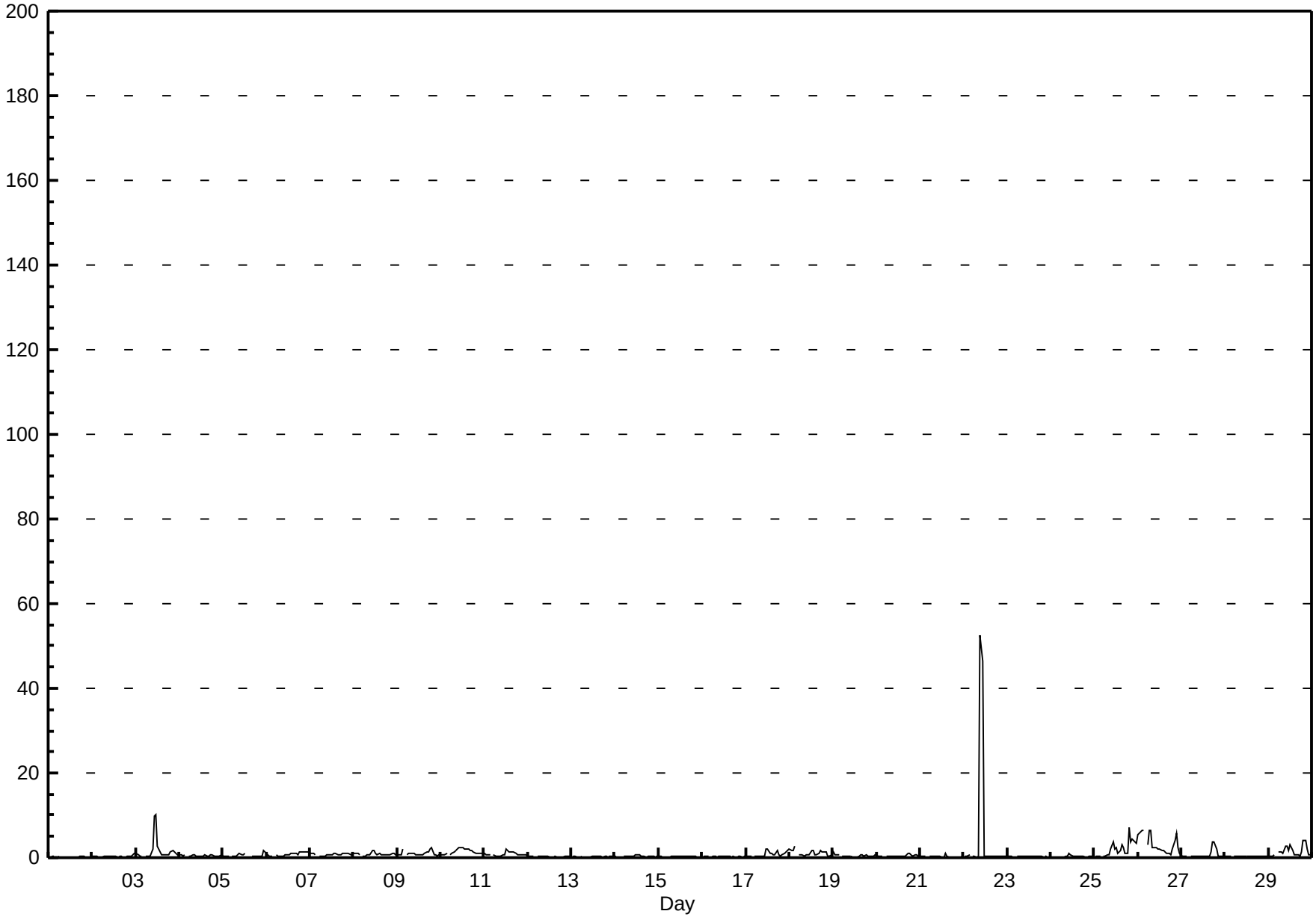
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

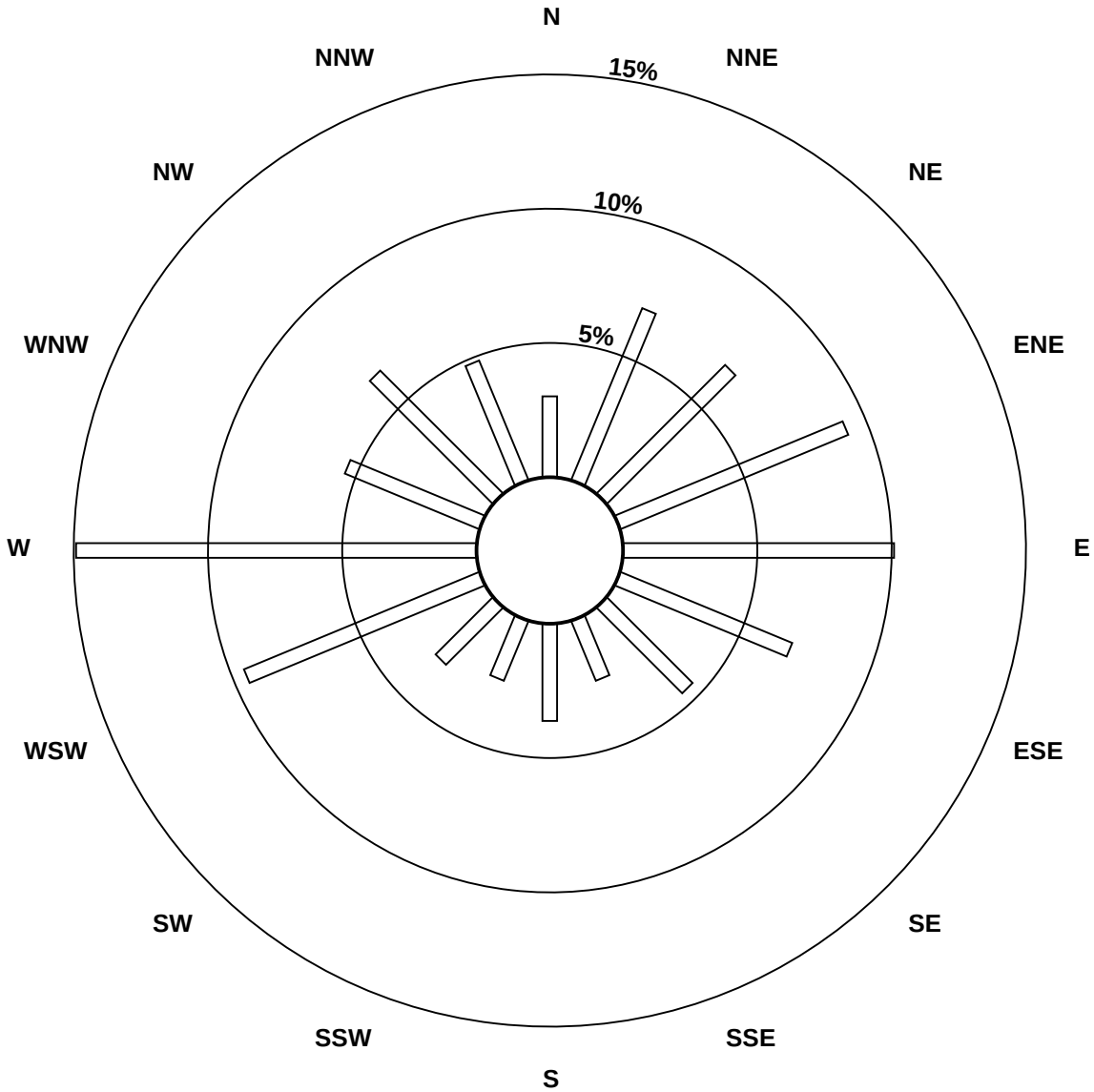
Beaverlodge - February 2012



Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - February 2012



Pollutant Classes (ppb)

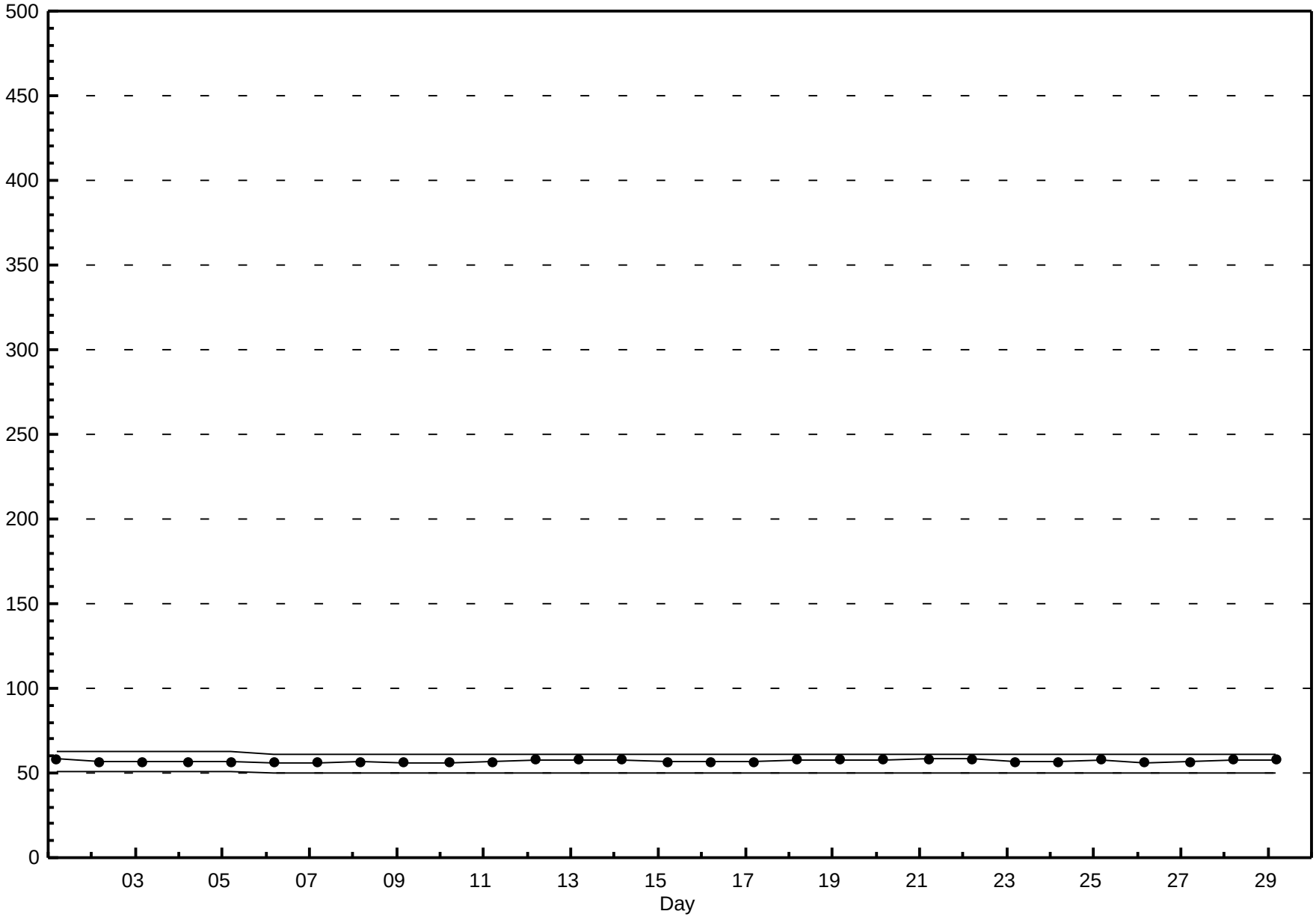
- 0 - 10
- 11 - 20
- 21 - 60
- 61 - 110
- 111 - 172
- > 172

Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Beaverlodge - February 2012



Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - February 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 22.8 ppb on Feb 7 10:00 Maximum Daily Average: 12.1 ppb on Feb 7

Minimum Value: 0 ppb on Feb 19 12:00 Minimum Daily Average: 1.4 ppb on Feb 25
Maximum Diurnal Average: 7.2 ppb at hour 10 Minimum Diurnal Average: 2.6 ppb at hour 15
Monthly Average: 4.48 ppb Percentiles: P_1 = 0.6 P_{10} = 1.0 Q_1 = 1.7 Median = 3.3 Q_3 = 5.9 P_{90} = 10.0 P_{99} = 17.6

Hours in Service:	696
Hours of Data:	662
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	3	3	3	3	A	5	3	7	5	6	5	6	3	1	1	5	6	5	5	2	3	2	3	2	3.9	7.2
2-Feb	3	3	4	2	A	3	3	5	10	10	8	7	5	4	3	2	3	6	4	5	3	4	3	4	4.4	10.1
3-Feb	4	5	4	4	A	7	6	6	6	10	9	19	12	9	9	9	10	11	9	9	9	18	13	14	9.3	19.2
4-Feb	11	10	8	6	A	7	5	5	5	17	12	12	7	7	4	5	6	4	4	5	6	6	5	6	7.1	16.7
5-Feb	7	9	4	6	A	8	5	4	C	C	C	C	C	4	3	3	5	4	4	2	2	1	2	1	4.2	8.9
6-Feb	1	1	1	1	A	2	2	2	3	3	3	4	3	3	3	3	3	3	4	4	4	5	5	5	3.0	5.1
7-Feb	6	6	6	8	A	17	11	17	16	23	12	11	7	7	7	7	12	16	15	15	16	17	12	14	12.1	22.8
8-Feb	14	16	14	14	A	10	6	7	8	9	8	5	3	2	3	3	4	4	5	5	5	4	5	7	7.1	16.1
9-Feb	11	17	11	12	A	11	12	7	8	10	15	10	6	3	4	4	4	4	6	3	4	4	3	5	7.6	16.8
10-Feb	4	5	5	4	A	8	3	4	6	7	7	7	6	7	7	6	6	7	6	5	5	6	7	7	5.8	7.8
11-Feb	8	9	10	11	A	16	18	12	13	10	9	8	7	7	7	8	9	10	14	14	16	15	15	13	11.2	18.0
12-Feb	11	7	6	7	A	8	5	7	7	5	4	1	1	1	1	1	1	1	2	2	2	1	2	3	3.5	11.0
13-Feb	2	1	2	1	A	2	2	1	2	3	2	1	1	1	1	1	1	2	3	2	2	4	3	2	1.7	3.8
14-Feb	2	2	2	2	A	2	2	3	4	4	5	3	2	2	1	1	1	2	4	3	3	2	2	2	2.4	5.4
15-Feb	2	2	1	1	A	2	3	4	4	2	2	2	1	1	1	1	2	7	5	3	2	3	2	1	2.2	6.7
16-Feb	2	1	1	1	A	4	4	5	7	18	12	12	9	4	1	1	1	2	1	1	2	1	1	3	4.1	17.6
17-Feb	2	2	2	2	A	2	2	2	3	5	5	5	3	2	1	3	4	3	2	1	2	2	2	3	2.6	5.3
18-Feb	3	4	4	4	A	10	13	15	11	7	4	4	4	4	2	3	4	6	7	14	7	4	6	6	6.3	14.6
19-Feb	4	3	3	3	A	3	1	1	1	1	1	0	1	1	1	1	2	3	6	3	7	6	3	2	2.4	6.6
20-Feb	2	2	3	2	A	3	2	3	5	4	6	3	3	2	2	2	3	5	11	13	5	6	7	6	4.4	12.9
21-Feb	6	6	5	5	A	1	1	3	2	1	2	2	2	2	1	1	2	2	1	1	1	2	1	3	2.3	6.3
22-Feb	2	2	2	1	A	1	1	1	1	1	1	1	1	1	1	2	1	2	3	5	4	4	6	3	2.0	6.1
23-Feb	1	1	2	1	A	2	2	2	3	1	1	1	1	1	1	1	2	2	3	2	9	4	2	2	2.1	9.4
24-Feb	1	1	1	1	A	1	2	6	20	19	15	6	3	2	2	1	1	1	1	1	1	1	1	1	3.9	20.4
25-Feb	1	1	1	1	A	1	1	2	2	2	1	1	1	1	1	2	2	2	2	2	2	2	2	2	1.4	2.5
26-Feb	2	3	3	3	A	3	3	3	5	5	4	4	4	2	2	2	2	8	15	5	5	9	5	3	4.3	14.5
27-Feb	3	4	3	3	A	4	3	6	3	2	2	1	1	1	1	1	1	2	2	1	2	2	2	1	2.3	6.4
28-Feb	1	2	2	2	A	4	6	6	7	13	6	3	3	3	3	2	3	3	4	3	2	2	3	5	3.9	13.5
29-Feb	3	2	2	3	A	4	2	3	3	6	2	3	2	1	2	1	1	2	2	2	2	2	3	2	2.3	5.9
	4.2	4.5	3.9	3.8	--	5.2	4.4	5.1	6.0	7.2	5.7	5.1	3.6	3.0	2.6	2.8	3.5	4.5	5.1	4.7	4.6	4.8	4.4	4.5	Diurnal Average	
	14.2	16.8	14.1	13.6	--	16.6	18.0	17.5	20.4	22.8	15.2	19.2	12.3	8.9	9.2	9.2	12.3	16.4	15.0	14.6	16.0	18.2	14.8	13.8	Diurnal Maximum	

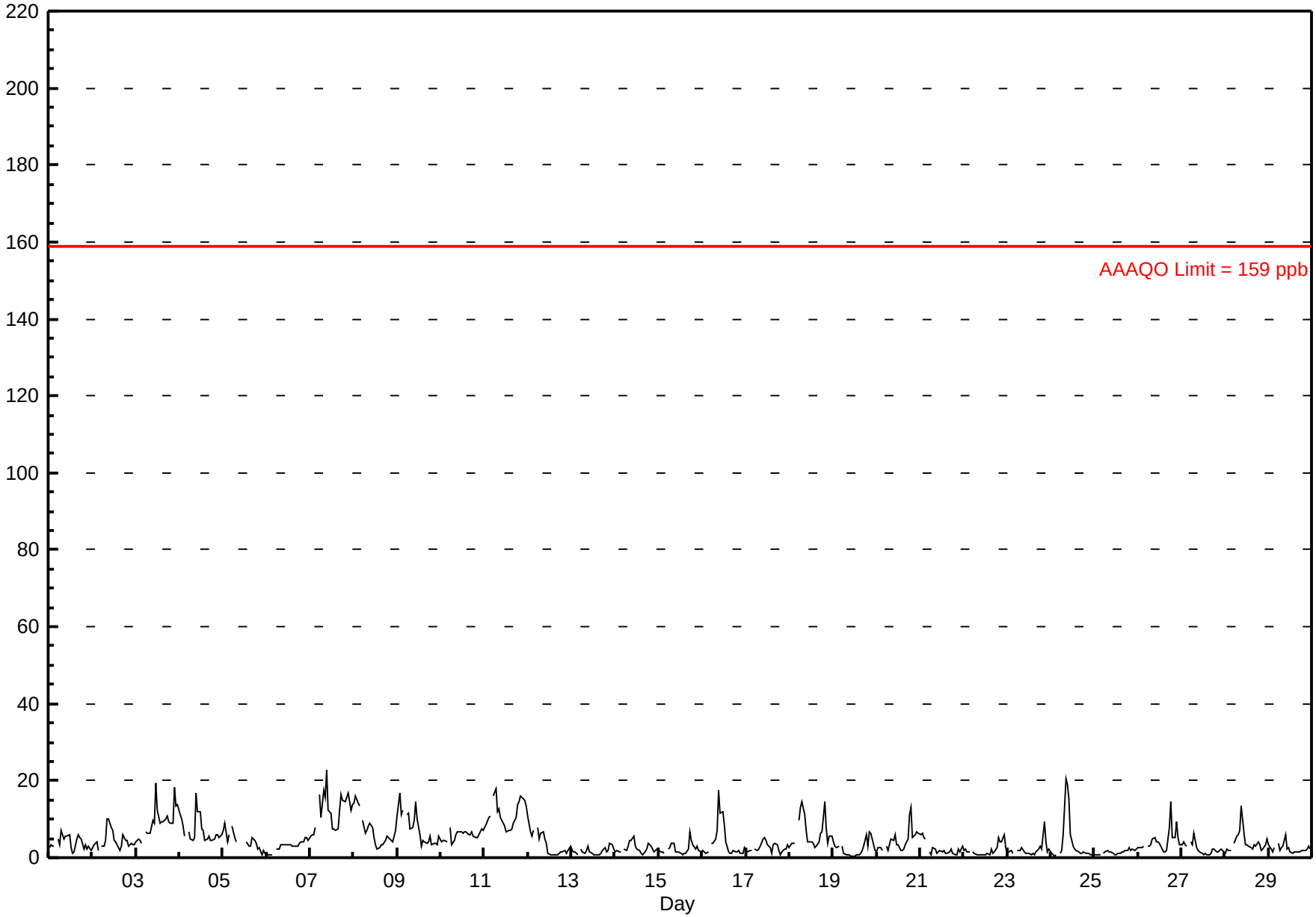
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb

Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - February 2012



Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - February 2012

Maximum Value: 141.6 ppb on Feb 27 08:00

Maximum Daily Average: 17.4 ppb on Feb 7

Minimum Value: 1 ppb on Feb 24 03:00

Minimum Daily Average: 2.0 ppb on Feb 25

Maximum Diurnal Average: 13.0 ppb at hour 8

Minimum Diurnal Average: 3.6 ppb at hour 15

Monthly Average: 7.33 ppb

Percentiles: P_1 = 1.0 P_{10} = 1.9 Q_1 = 3.0 Median = 5.0 Q_3 = 8.9 P_{90} = 15.8 P_{99} = 28.3

Hours in Service:	696
Hours of Data:	662
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	5	6	4	7	A	11	4	16	26	20	14	9	5	3	3	6	10	10	8	6	8	4	4	2	8.2	26.1
2-Feb	4	5	4	3	A	5	5	6	19	21	10	10	8	6	6	4	6	17	10	9	8	7	4	4	7.8	21.2
3-Feb	5	8	5	5	A	9	8	14	8	25	16	26	19	10	11	16	13	14	19	13	15	24	17	19	13.8	25.5
4-Feb	16	12	10	8	A	9	12	6	13	28	18	15	11	9	5	6	7	6	11	8	14	15	8	12	11.3	28.1
5-Feb	11	13	6	9	A	12	6	5	C	C	C	C	C	6	4	6	10	5	7	3	5	2	4	1	6.3	13.3
6-Feb	2	1	1	1	A	4	2	3	6	4	4	6	4	4	3	3	3	3	5	5	5	6	6	5	3.7	5.7
7-Feb	7	10	7	18	A	29	16	25	28	31	18	13	9	8	8	9	15	22	26	23	23	20	14	22	17.4	30.7
8-Feb	18	19	22	16	A	12	8	9	10	11	11	6	5	3	3	4	6	7	9	8	6	6	7	11	9.3	21.9
9-Feb	17	26	19	20	A	16	22	11	25	16	20	14	9	4	6	6	6	5	21	4	9	8	5	11	13.0	25.8
10-Feb	5	8	7	6	A	21	4	7	9	7	7	7	7	7	7	6	7	9	9	7	6	9	8	8	7.8	21.5
11-Feb	9	9	13	12	A	25	24	16	15	14	10	10	7	7	8	8	10	13	18	19	19	17	18	15	13.9	25.2
12-Feb	15	8	7	8	A	21	10	8	14	6	6	3	1	2	1	1	2	2	3	3	4	2	2	8	6.0	21.0
13-Feb	4	3	3	1	A	3	3	2	5	6	4	2	2	2	2	2	3	4	6	3	6	6	5	4	3.5	6.4
14-Feb	2	2	2	2	A	3	4	5	8	10	8	6	3	3	2	2	3	5	8	6	5	4	3	6	4.4	10.4
15-Feb	4	2	2	2	A	3	9	9	7	4	3	3	2	2	2	2	5	12	10	6	5	7	3	2	4.6	11.9
16-Feb	6	2	2	3	A	4	6	5	12	33	19	16	13	7	3	3	2	4	3	3	4	2	2	4	6.9	32.7
17-Feb	3	3	3	2	A	4	3	4	7	8	8	6	5	4	2	5	5	6	3	3	3	3	4	6	4.4	8.2
18-Feb	4	5	9	4	A	14	17	18	16	16	5	5	6	5	3	4	5	8	12	33	15	6	9	9	9.9	33.2
19-Feb	6	4	3	4	A	5	3	2	1	2	1	1	2	1	1	2	3	6	9	4	14	9	4	3	4.0	13.9
20-Feb	2	6	4	3	A	8	3	8	7	5	8	4	4	2	2	3	5	8	15	17	8	8	8	7	6.4	16.9
21-Feb	7	8	7	6	A	3	2	10	12	2	4	2	2	3	2	2	4	3	4	2	1	6	4	7	4.5	12.2
22-Feb	3	4	2	3	A	3	2	1	2	2	2	2	3	2	3	4	2	5	8	12	7	8	9	5	4.0	11.7
23-Feb	2	3	3	3	A	4	3	4	5	3	2	3	2	1	2	2	4	8	6	3	20	8	5	4	4.3	20.0
24-Feb	2	1	1	1	A	2	4	10	30	26	22	14	4	3	3	2	2	2	2	2	2	2	2	1	6.0	30.4
25-Feb	1	1	1	1	A	2	2	3	3	2	1	1	1	1	1	2	2	2	2	3	3	3	2	3	2.0	3.4
26-Feb	3	3	4	4	A	5	4	15	8	7	7	7	4	3	3	2	3	12	22	8	10	14	8	5	7.0	22.3
27-Feb	4	5	4	3	A	6	9	142	5	3	3	2	2	2	2	2	3	4	5	3	3	4	7	4	9.9	141.6
28-Feb	2	4	4	3	A	5	10	11	13	26	9	5	4	4	4	3	6	4	12	8	2	12	13	10	7.7	26.2
29-Feb	11	4	2	5	A	7	4	4	4	11	6	4	2	2	3	2	2	3	2	3	5	3	4	3	4.1	10.8
	6.2	6.5	5.5	5.6	--	8.8	7.2	13.0	11.3	12.4	8.8	7.2	5.2	3.9	3.6	4.2	5.3	7.2	9.5	7.8	8.1	7.8	6.5	7.0	Diurnal Average	
	17.5	25.8	21.9	20.2	--	28.8	24.3	141.6	30.4	32.7	22.1	25.5	19.1	9.9	11.2	15.7	15.3	21.5	26.4	33.2	22.8	24.2	17.9	22.4	Diurnal Maximum	

C - Calibration

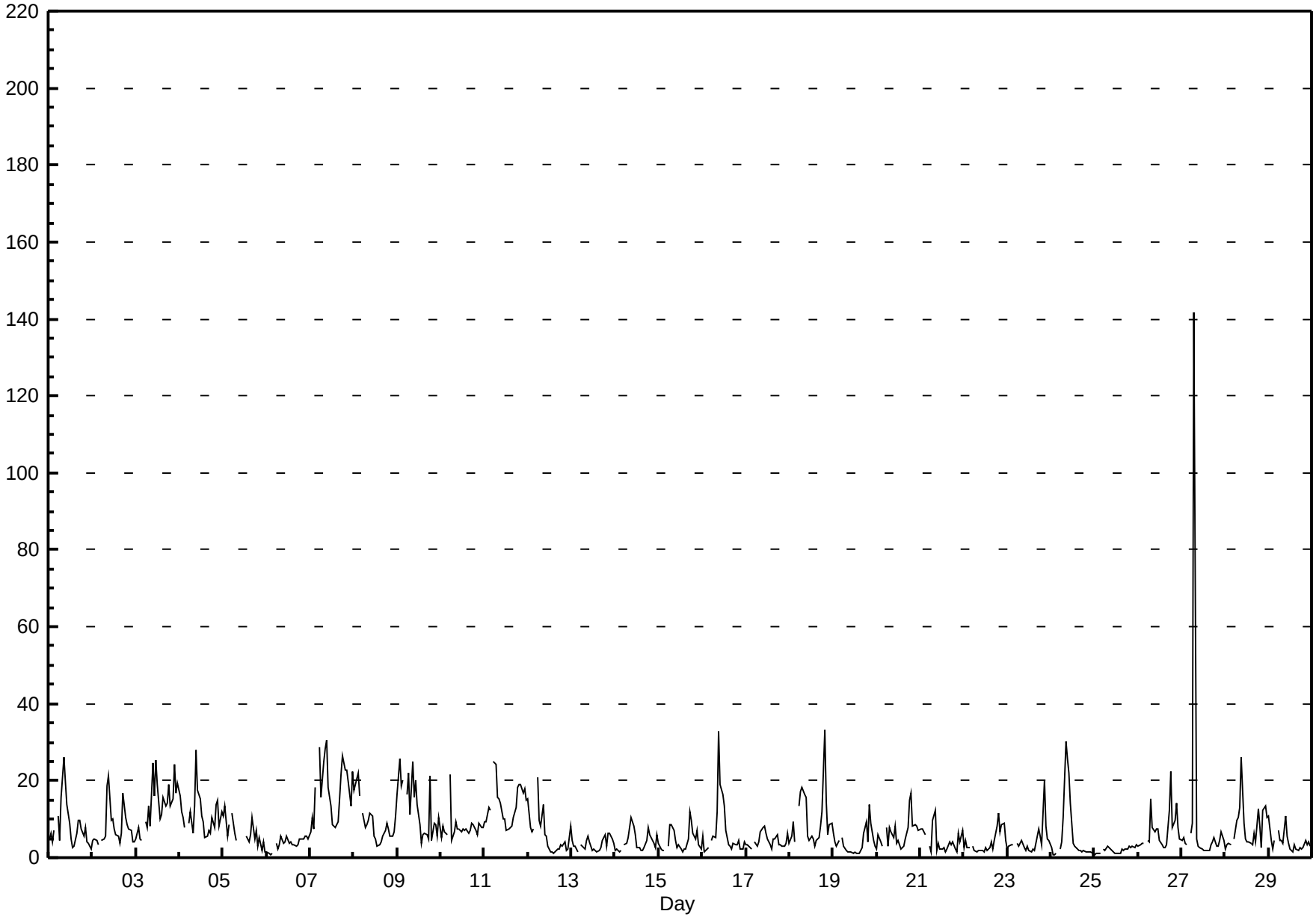
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - February 2012

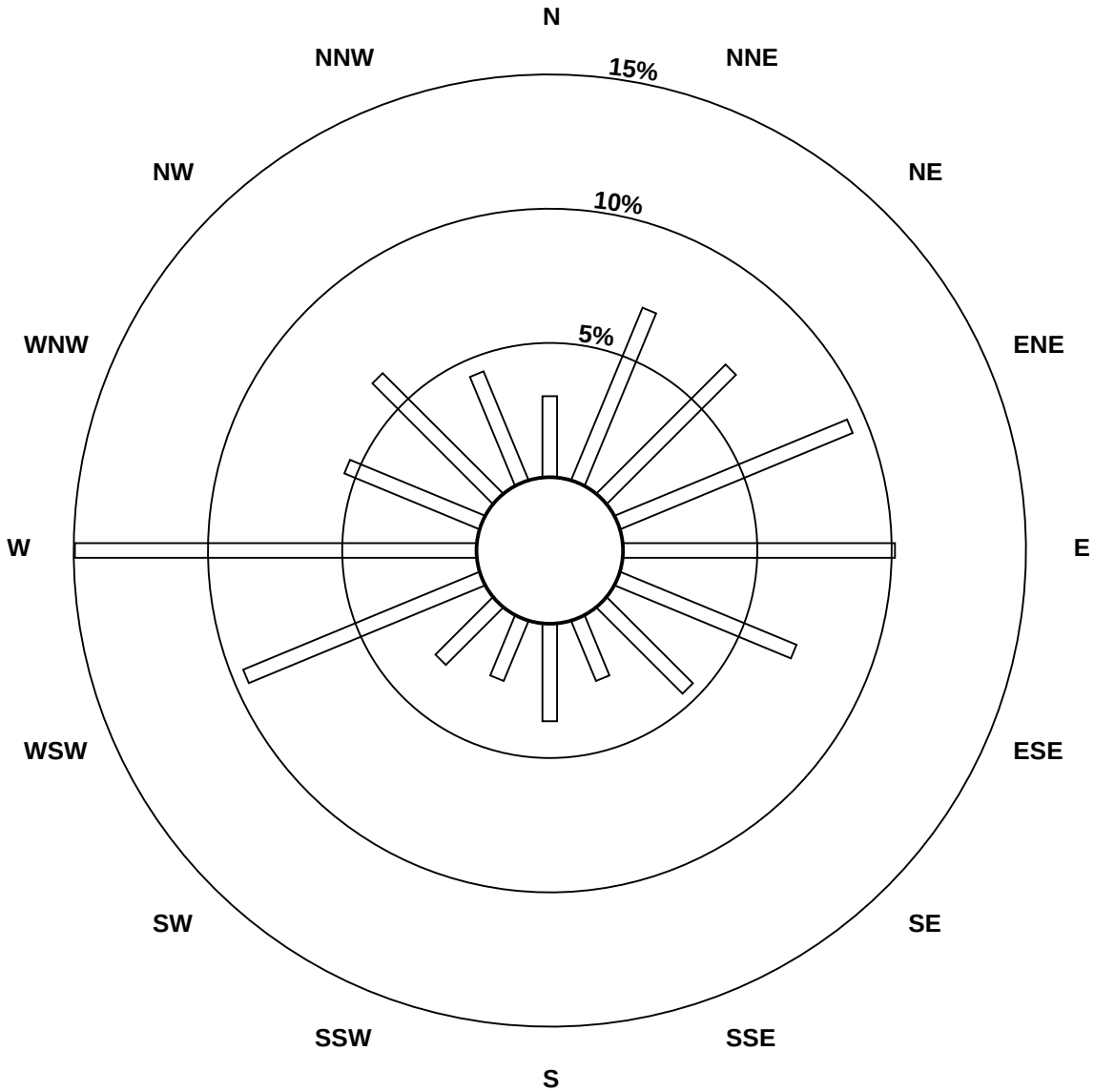


FOCUS AIR QUALITY MONITORING

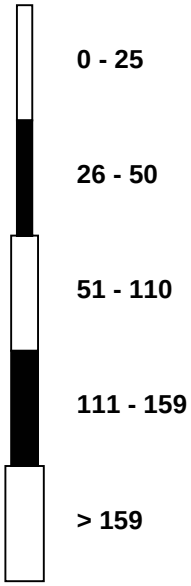
Pollutant Rose

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - February 2012



Pollutant Classes (ppb)

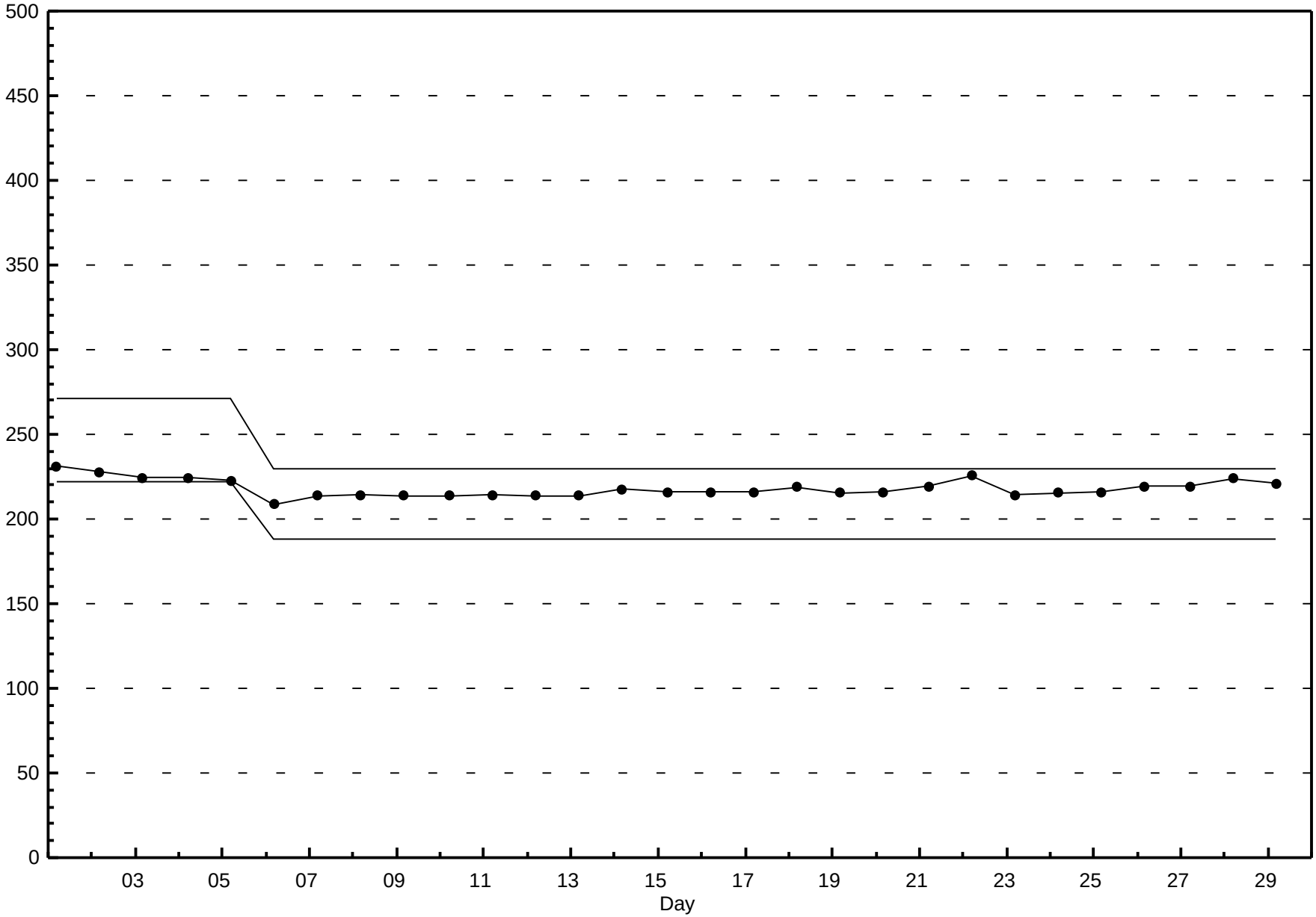


Peace Airshed Zone Association

Span Responses

Nitrogen Dioxide (NO_2)

Beaverlodge - February 2012



Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Beaverlodge - February 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 33.1 ppb on Feb 7 10:00
Maximum Daily Average: 3.5 ppb on Feb 7

Minimum Value: 0 ppb on Feb 6 03:00
Maximum Diurnal Average: 3.3 ppb at hour 10
Monthly Average: 0.76 ppb

Minimum Daily Average: 0.1 ppb on Feb 22
Minimum Diurnal Average: 0.0 ppb at hour 1
Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.4 P_{90} = 1.8 P_{99} = 11.6

Hours in Service:	696
Hours of Data:	662
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	A	0	0	0	0	0	1	2	1	0	0	1	1	0	0	0	0	0	0	0	0.3	1.5
2-Feb	0	0	0	0	A	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.3	1.3
3-Feb	0	0	0	0	A	0	0	0	0	2	4	20	9	5	4	3	1	0	0	0	0	0	0	0	2.2	20.2
4-Feb	0	0	0	0	A	0	0	0	0	10	12	12	5	5	2	2	1	0	0	0	0	0	0	0	2.2	11.6
5-Feb	0	0	0	0	A	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
6-Feb	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.3	1.3
7-Feb	0	0	0	0	A	1	0	1	2	33	8	9	5	5	4	3	4	2	0	0	0	0	0	0	3.5	33.1
8-Feb	0	0	0	0	A	0	0	0	0	2	3	3	1	1	1	1	1	0	0	0	0	0	0	0	0.6	3.2
9-Feb	0	0	0	0	A	0	1	0	2	3	12	7	3	1	2	1	1	0	0	0	0	0	0	0	1.5	12.3
10-Feb	0	0	0	0	A	0	0	0	0	1	3	3	4	4	3	2	1	0	0	0	0	0	0	0	1.0	4.1
11-Feb	0	0	0	0	A	2	3	1	2	6	7	8	6	6	5	4	3	1	0	0	0	0	0	0	2.5	8.0
12-Feb	0	0	0	0	A	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.2
13-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
14-Feb	0	0	0	0	A	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.3	1.5
15-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
16-Feb	0	0	0	0	A	0	0	0	0	7	5	4	3	1	0	0	0	0	0	0	0	0	0	0	0.9	6.6
17-Feb	0	0	0	0	A	0	0	0	0	1	2	2	1	1	0	1	1	0	0	0	0	0	0	0	0.4	1.8
18-Feb	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.3	1.0
19-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
20-Feb	0	0	0	0	A	0	0	0	0	1	3	2	2	1	1	0	0	0	0	0	0	0	0	0	0.5	2.8
21-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
22-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
23-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
24-Feb	0	0	0	0	A	0	0	0	14	13	8	2	1	1	1	0	0	0	0	0	0	0	0	0	1.8	13.9
25-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
26-Feb	0	0	0	0	A	0	0	0	1	2	3	4	4	2	1	1	1	2	1	0	0	0	0	0	0.9	4.0
27-Feb	0	0	0	0	A	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
28-Feb	0	0	0	0	A	0	0	0	1	4	3	2	2	2	1	1	1	0	0	0	0	0	0	0	0.8	4.4
29-Feb	0	0	0	0	A	0	0	0	0	2	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0.3	1.6
	0.0	0.1	0.1	0.0	--	0.2	0.2	0.2	0.9	3.3	2.9	3.1	1.9	1.4	1.1	0.9	0.7	0.4	0.1	0.1	0.1	0.1	0.0	0.1	Diurnal Average	
	0.1	0.5	0.5	0.2	--	2.0	3.2	1.4	13.9	33.1	12.3	20.2	9.0	6.0	5.3	4.2	3.8	1.9	1.0	0.4	0.4	0.3	0.1	0.5	Diurnal Maximum	

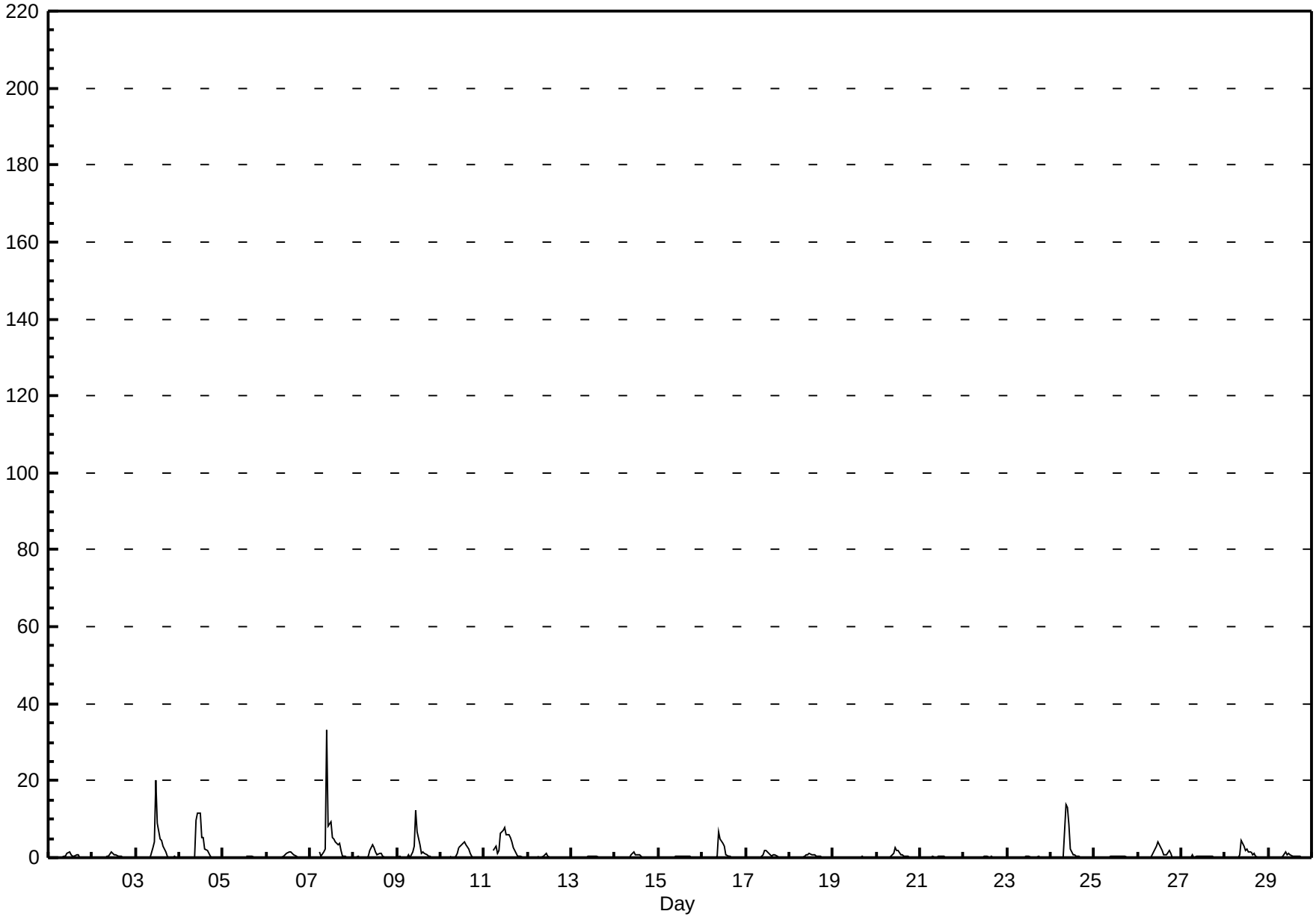
C - Calibration A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Beaverlodge - February 2012



Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Beaverlodge - February 2012

Maximum Value: 43.6 ppb on Feb 7 10:00

Maximum Daily Average: 7.2 ppb on Feb 7

Minimum Value: 0 ppb on Feb 22 04:00

Minimum Daily Average: 0.3 ppb on Feb 19

Maximum Diurnal Average: 8.2 ppb at hour 10

Minimum Diurnal Average: 0.2 ppb at hour 23

Monthly Average: 1.80 ppb

Percentiles: $P_1 = 0.1$ $P_{10} = 0.1$ $Q_1 = 0.1$ Median = 0.4 $Q_3 = 1.1$ $P_{90} = 3.6$ $P_{99} = 28.9$

Hours in Service:	696
Hours of Data:	662
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	A	1	0	1	9	3	8	3	2	1	1	1	1	0	0	0	0	0	0	0	1.4	8.7
2-Feb	0	0	0	0	A	0	0	0	1	1	2	2	2	1	1	1	1	1	0	1	0	0	0	0	0.6	1.9
3-Feb	0	0	0	0	A	0	0	1	0	26	12	36	20	6	6	7	3	1	0	0	0	2	0	0	5.3	35.8
4-Feb	0	0	1	0	A	0	1	0	0	32	29	19	12	8	3	3	2	1	0	0	1	0	0	0	5.0	32.4
5-Feb	0	0	0	0	A	0	0	0	C	C	C	C	C	1	1	1	1	0	1	0	1	0	0	0	0.4	0.9
6-Feb	0	0	0	0	A	0	0	0	0	1	1	2	2	2	1	1	1	0	0	0	0	0	0	0	0.6	2.4
7-Feb	0	0	0	1	A	10	1	7	24	44	20	13	6	6	5	4	5	4	2	5	2	0	0	8	7.2	43.6
8-Feb	0	0	6	2	A	0	0	1	1	4	4	3	2	1	1	1	1	0	0	1	0	0	0	1	1.4	6.2
9-Feb	0	4	1	1	A	0	5	0	22	12	27	12	7	2	3	3	1	0	4	0	0	0	0	0	4.6	26.7
10-Feb	0	0	0	0	A	4	0	0	1	2	3	4	5	5	4	3	2	1	1	0	0	0	0	0	1.5	4.6
11-Feb	0	0	1	0	A	11	7	6	4	16	9	12	7	6	6	5	3	2	1	1	1	1	1	0	4.4	16.0
12-Feb	1	0	0	0	A	3	1	0	2	1	2	1	0	1	0	0	1	0	0	0	0	0	0	0	0.7	2.6
13-Feb	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.4	1.0
14-Feb	0	0	0	0	A	0	0	0	0	5	2	2	1	1	1	1	1	0	0	0	0	0	0	0	0.6	4.7
15-Feb	0	0	0	0	A	0	1	0	0	1	1	1	1	0	1	1	1	1	0	0	0	1	0	0	0.4	1.0
16-Feb	0	0	0	0	A	0	0	0	2	31	17	10	5	2	0	1	0	0	1	0	0	0	0	0	3.2	31.5
17-Feb	0	0	0	0	A	0	0	0	0	2	3	3	2	1	1	1	1	1	0	0	0	0	0	1	0.8	3.4
18-Feb	0	0	0	0	A	0	0	1	1	2	1	1	1	1	1	1	1	0	0	2	0	0	0	0	0.6	2.0
19-Feb	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
20-Feb	0	0	0	0	A	0	0	1	2	2	5	2	3	1	1	1	1	0	0	0	0	0	0	0	0.9	4.7
21-Feb	0	0	0	0	A	0	0	1	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0.4	1.5
22-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	0.3	0.6
23-Feb	0	0	0	0	A	0	0	0	0	0	1	1	1	0	1	0	0	1	0	0	0	0	0	0	0.3	0.9
24-Feb	0	0	0	0	A	0	0	0	38	22	16	7	1	1	1	1	0	0	0	0	0	0	0	0	3.9	38.3
25-Feb	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.4	1.0
26-Feb	0	0	0	0	A	0	0	1	2	4	5	8	4	3	2	1	1	3	3	0	0	0	0	0	1.7	8.3
27-Feb	0	0	0	0	A	0	38	1	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	2.2	38.2
28-Feb	0	0	0	0	A	0	0	0	2	11	4	3	3	3	2	2	3	1	0	0	0	0	0	0	1.6	11.5
29-Feb	0	0	0	0	A	0	0	0	0	4	3	2	1	1	1	1	1	0	0	0	1	0	0	0	0.7	3.7
	0.2	0.3	0.5	0.3	--	1.1	2.0	0.9	4.2	8.2	6.4	5.4	3.2	2.0	1.6	1.5	1.2	0.8	0.6	0.5	0.3	0.2	0.2	0.5	Diurnal Average	
	0.5	4.2	6.2	1.8	--	10.9	38.2	6.7	38.3	43.6	29.2	35.8	20.0	8.0	6.1	7.0	5.0	3.8	3.8	4.8	1.7	1.7	0.5	7.9	Diurnal Maximum	

C - Calibration

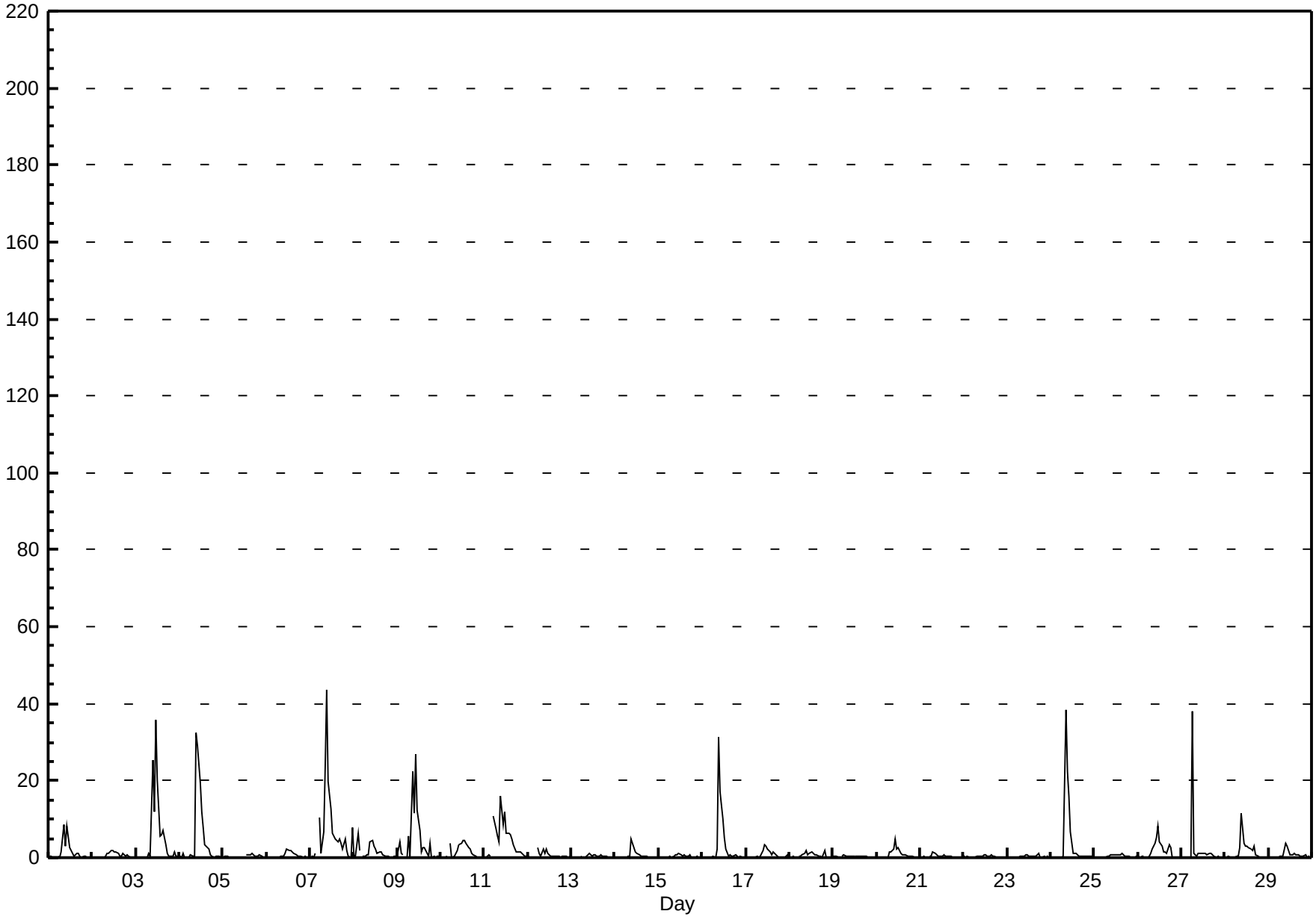
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Beaverlodge - February 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - February 2012

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

Maximum Value: 55.6 ppb on Feb 7 10:00

Maximum Daily Average: 15.5 ppb on Feb 7

Minimum Value: 1 ppb on Feb 19 12:00

Minimum Daily Average: 1.6 ppb on Feb 25

Maximum Diurnal Average: 10.5 ppb at hour 10

Minimum Diurnal Average: 3.7 ppb at hour 16

Monthly Average: 5.19 ppb

Percentiles: P_1 = 0.7 P_{10} = 1.2 Q_1 = 1.9 Median = 3.4 Q_3 = 6.4 P_{90} = 12.1 P_{99} = 23.8

Hours in Service:	696
Hours of Data:	662
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	3	3	3	3	A	5	3	7	5	6	6	8	3	2	2	6	7	5	5	2	3	2	3	2	4.1	7.5
2-Feb	3	3	4	2	A	3	3	5	10	10	9	8	5	5	3	2	3	6	4	5	3	4	3	3	4.7	10.3
3-Feb	4	5	4	4	A	7	6	6	6	12	13	39	21	14	14	12	11	11	9	9	9	18	13	14	11.4	39.2
4-Feb	11	10	8	5	A	7	5	5	5	26	23	23	12	12	7	7	7	5	4	5	6	6	5	6	9.2	26.1
5-Feb	7	9	4	6	A	8	5	4	C	C	C	C	C	4	3	3	6	4	4	2	3	1	2	1	4.3	8.9
6-Feb	1	1	1	1	A	2	2	2	3	4	4	5	5	5	4	4	3	3	4	4	4	5	5	5	3.3	5.1
7-Feb	6	6	6	8	A	18	11	19	18	56	20	21	13	12	11	11	16	18	15	15	16	17	12	14	15.5	55.6
8-Feb	14	16	14	13	A	10	6	7	9	11	11	8	5	3	4	4	4	4	5	5	5	4	5	7	7.6	16.0
9-Feb	11	17	11	12	A	11	12	7	9	13	27	17	9	4	6	5	4	4	6	3	4	4	3	5	8.9	26.8
10-Feb	4	4	5	4	A	8	3	4	6	8	9	10	10	11	10	8	7	7	6	5	5	6	7	7	6.7	10.6
11-Feb	8	9	10	11	A	18	21	13	15	16	16	16	13	13	12	12	11	11	14	14	16	15	15	13	13.6	21.0
12-Feb	11	7	6	7	A	8	5	6	7	5	5	2	1	1	1	1	1	1	2	2	2	1	2	3	3.7	10.9
13-Feb	2	1	2	1	A	2	2	1	2	3	2	1	1	1	1	1	1	2	3	2	2	4	3	2	1.8	3.8
14-Feb	2	2	2	2	A	2	2	3	4	5	7	4	3	3	1	1	1	2	4	3	3	2	2	2	2.7	6.9
15-Feb	2	2	1	1	A	2	3	4	4	2	2	2	1	1	1	1	3	7	5	3	2	3	2	1	2.4	7.0
16-Feb	2	1	1	1	A	4	4	5	7	24	16	15	11	5	2	1	1	2	2	1	2	1	1	3	5.0	24.0
17-Feb	2	2	2	2	A	2	2	2	3	6	7	6	5	3	2	4	4	3	2	1	2	2	2	3	3.0	7.1
18-Feb	3	4	4	4	A	10	13	15	11	8	5	5	5	4	3	4	5	6	7	14	7	4	6	6	6.6	14.5
19-Feb	4	3	3	3	A	3	1	1	1	1	1	1	1	1	1	1	2	3	6	3	7	6	3	2	2.4	6.6
20-Feb	2	2	3	2	A	3	2	3	5	5	9	5	5	3	2	3	4	5	11	13	5	6	7	6	4.9	12.8
21-Feb	6	6	5	5	A	1	1	3	2	1	2	2	2	2	1	1	2	2	1	1	1	2	1	3	2.4	6.3
22-Feb	2	2	2	2	A	1	1	1	1	1	1	1	1	1	1	3	1	2	3	5	4	4	6	3	2.1	6.1
23-Feb	1	1	2	1	A	2	2	2	3	2	1	1	1	1	1	1	2	2	3	2	9	4	2	2	2.1	9.3
24-Feb	1	1	1	1	A	1	2	6	34	32	23	8	4	3	3	2	1	1	1	1	1	1	1	1	5.6	34.0
25-Feb	1	1	1	1	A	1	1	2	2	2	1	1	1	1	1	2	2	2	2	2	2	2	2	2	1.6	2.5
26-Feb	3	3	3	3	A	3	3	4	5	7	7	8	7	4	3	2	2	10	15	5	5	9	5	3	5.2	15.3
27-Feb	3	4	3	3	A	4	4	6	3	2	2	2	1	1	1	1	1	2	2	1	2	2	2	1	2.4	6.4
28-Feb	1	2	2	2	A	4	6	6	8	18	9	5	5	4	4	3	4	4	4	3	2	2	3	5	4.6	17.7
29-Feb	3	2	2	3	A	4	2	3	3	8	3	4	2	2	2	2	2	2	2	2	2	2	3	2	2.6	7.5
	4.2	4.5	3.9	3.8	--	5.3	4.6	5.2	6.8	10.5	8.6	8.1	5.5	4.4	3.7	3.7	4.1	4.8	5.2	4.7	4.6	4.8	4.4	4.5	Diurnal Average	
	14.2	17.1	14.3	13.5	--	17.8	21.0	18.7	34.0	55.6	26.8	39.2	21.1	13.7	13.6	12.1	16.0	18.0	15.3	14.9	16.1	18.3	14.7	14.1	Diurnal Maximum	

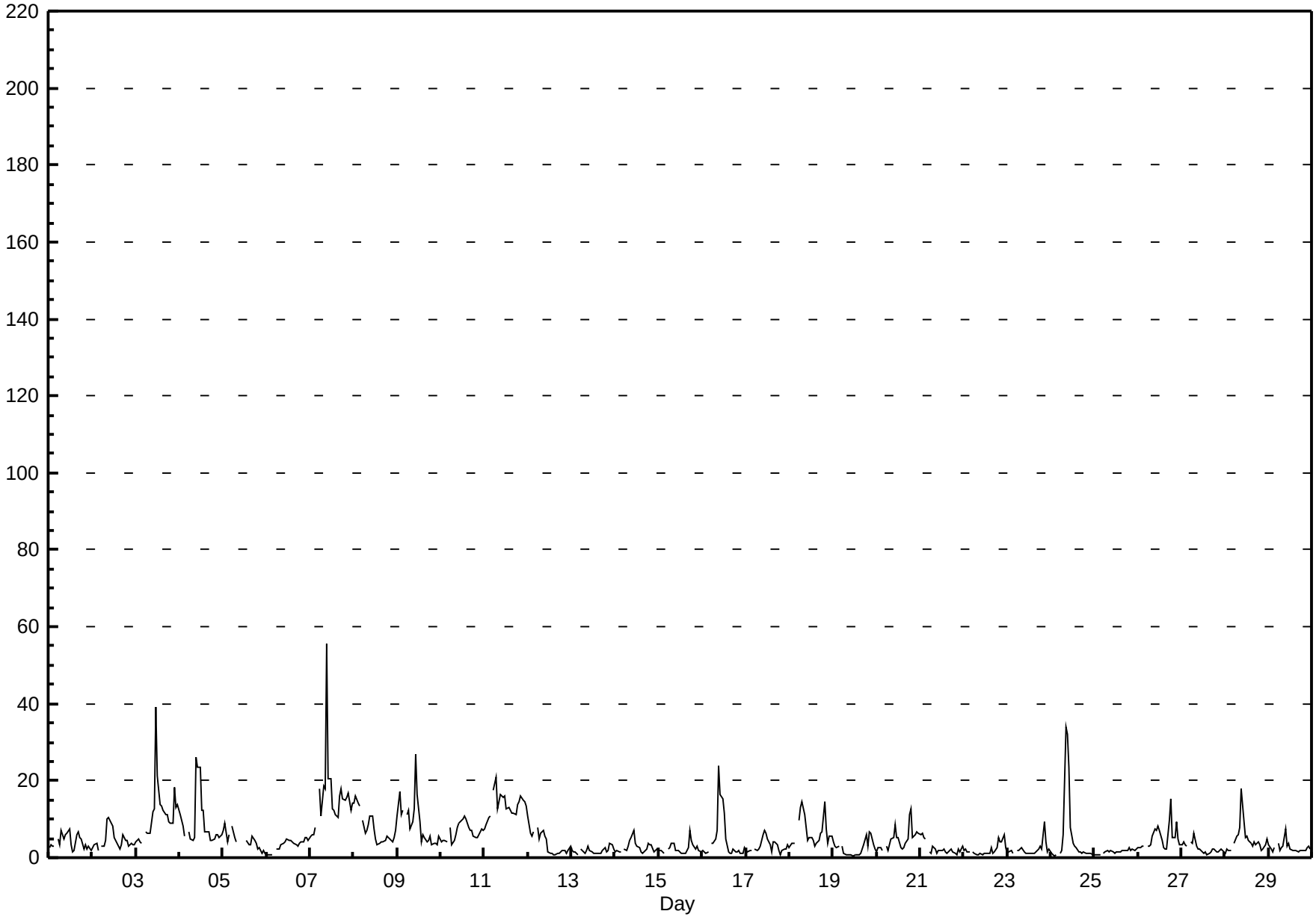
C - Calibration A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - February 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - February 2012

Maximum Value: 140.9 ppb on Feb 27 08:00

Maximum Daily Average: 24.0 ppb on Feb 7

Minimum Value: 1 ppb on Feb 24 03:00

Minimum Daily Average: 2.3 ppb on Feb 25

Maximum Diurnal Average: 20.0 ppb at hour 10

Minimum Diurnal Average: 5.1 ppb at hour 15

Monthly Average: 8.84 ppb

Percentiles: P_1 = 1.0 P_{10} = 2.2 Q_1 = 3.3 Median = 5.6 Q_3 = 10.3 P_{90} = 18.4 P_{99} = 50.1

Hours in Service:	696
Hours of Data:	662
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	5	6	4	7	A	11	4	16	34	23	22	11	7	3	4	7	11	10	8	6	8	4	4	2	9.4	34.4
2-Feb	4	5	4	3	A	5	5	5	20	22	11	12	9	7	7	4	7	17	11	9	8	7	4	4	8.3	22.1
3-Feb	5	8	5	5	A	9	8	15	8	50	27	60	38	15	17	23	16	15	19	13	15	25	17	20	18.8	60.4
4-Feb	16	12	11	8	A	9	13	6	13	57	46	34	22	17	8	8	9	7	11	8	14	15	8	12	15.8	56.9
5-Feb	11	13	6	9	A	12	6	5	C	C	C	C	C	6	5	7	11	5	7	3	6	2	4	1	6.6	13.2
6-Feb	2	1	1	1	A	4	2	3	6	4	5	8	5	6	4	4	4	3	5	5	5	6	5	5	4.1	8.1
7-Feb	7	10	7	19	A	39	16	29	51	73	38	26	15	14	12	13	20	24	28	27	24	20	13	29	24.0	72.9
8-Feb	18	19	28	17	A	11	8	9	11	16	15	8	7	4	5	5	6	7	9	8	6	6	7	11	10.4	27.7
9-Feb	17	29	20	21	A	16	26	11	43	27	46	26	15	5	9	9	7	5	24	5	9	8	5	11	17.1	45.7
10-Feb	5	8	7	6	A	25	4	7	10	9	10	10	12	11	11	9	9	10	9	7	6	9	8	8	9.2	24.8
11-Feb	9	9	14	12	A	34	29	20	19	29	19	22	13	14	14	13	13	14	20	20	20	17	18	15	17.7	34.4
12-Feb	15	8	6	7	A	23	10	8	15	7	7	4	2	2	2	2	3	2	3	3	4	2	2	8	6.4	23.3
13-Feb	4	3	3	1	A	3	3	2	5	6	5	3	3	2	2	2	3	4	6	3	6	6	5	4	3.8	6.5
14-Feb	2	2	2	2	A	3	4	5	8	13	11	8	4	3	2	3	3	5	8	6	5	4	3	6	4.8	12.8
15-Feb	4	2	2	2	A	3	9	9	7	5	3	4	3	2	3	3	5	13	10	6	5	7	3	2	4.9	12.5
16-Feb	5	2	2	2	A	4	6	5	14	61	35	26	19	9	4	4	3	4	4	3	4	2	2	4	9.8	61.2
17-Feb	3	3	3	2	A	4	3	4	7	10	11	9	7	5	3	6	6	6	3	3	3	3	4	7	5.0	11.4
18-Feb	4	5	10	4	A	14	17	18	17	17	6	6	7	6	4	5	5	8	12	35	14	6	9	9	10.3	34.8
19-Feb	6	4	3	4	A	5	4	2	2	2	2	1	2	1	1	2	3	6	9	4	14	9	4	3	4.2	13.9
20-Feb	2	6	4	3	A	8	3	9	8	7	13	6	7	4	3	4	5	8	15	17	8	9	8	7	7.1	16.8
21-Feb	7	8	6	6	A	3	2	10	13	2	4	3	3	3	2	3	5	4	4	3	2	6	4	7	4.8	13.3
22-Feb	3	4	2	3	A	3	2	2	2	2	2	2	3	2	3	5	3	5	8	12	7	8	9	4	4.2	11.6
23-Feb	2	3	3	3	A	4	3	4	5	3	3	4	3	2	2	2	4	8	6	3	20	8	5	4	4.5	20.1
24-Feb	2	1	1	1	A	2	4	10	66	47	38	21	5	4	3	2	2	2	2	2	2	2	2	1	9.7	66.4
25-Feb	1	1	1	1	A	2	2	3	3	3	2	2	2	2	2	3	2	3	2	3	3	3	3	4	2.3	3.7
26-Feb	3	3	4	4	A	5	4	16	9	10	12	15	8	6	4	4	5	15	23	8	10	14	8	5	8.4	23.4
27-Feb	4	5	4	3	A	6	9	141	5	4	4	3	3	3	3	3	4	5	5	3	3	4	7	4	10.3	140.9
28-Feb	2	3	4	3	A	5	10	11	16	37	12	8	7	7	6	5	9	5	12	8	2	12	13	10	9.0	37.3
29-Feb	11	4	2	4	A	7	5	5	4	14	8	5	3	2	4	3	2	3	2	3	5	3	4	3	4.7	14.3
	6.2	6.6	5.8	5.7	--	9.7	7.6	13.5	15.0	20.0	14.9	12.4	8.3	5.8	5.1	5.6	6.4	7.7	9.9	8.1	8.2	7.9	6.5	7.3	Diurnal Average	
	17.7	29.3	27.7	20.5	--	38.8	29.1	140.9	66.4	72.9	46.4	60.4	38.1	17.2	17.1	22.5	19.6	23.6	28.2	34.8	24.0	25.4	17.7	28.6	Diurnal Maximum	

C - Calibration

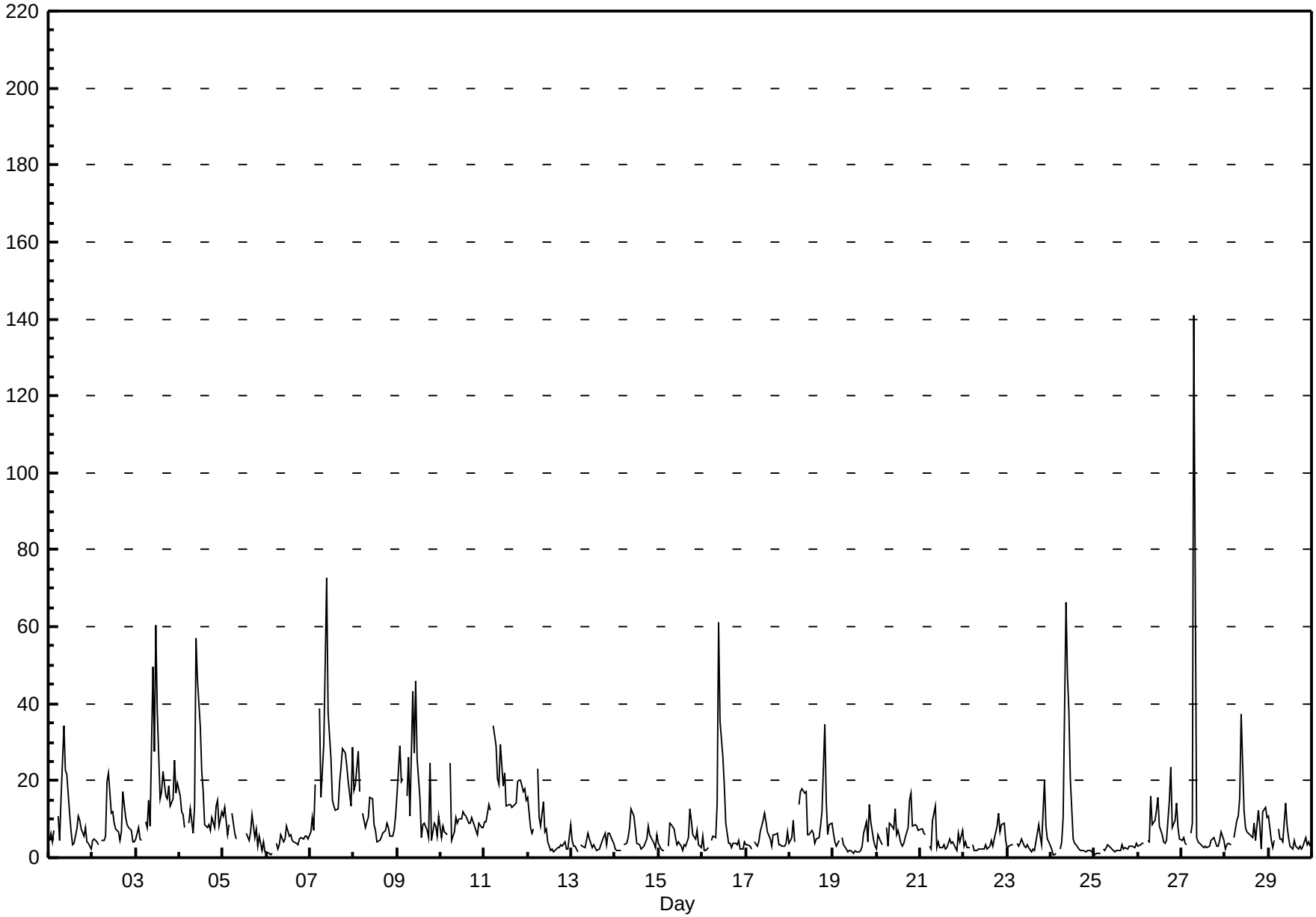
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - February 2012



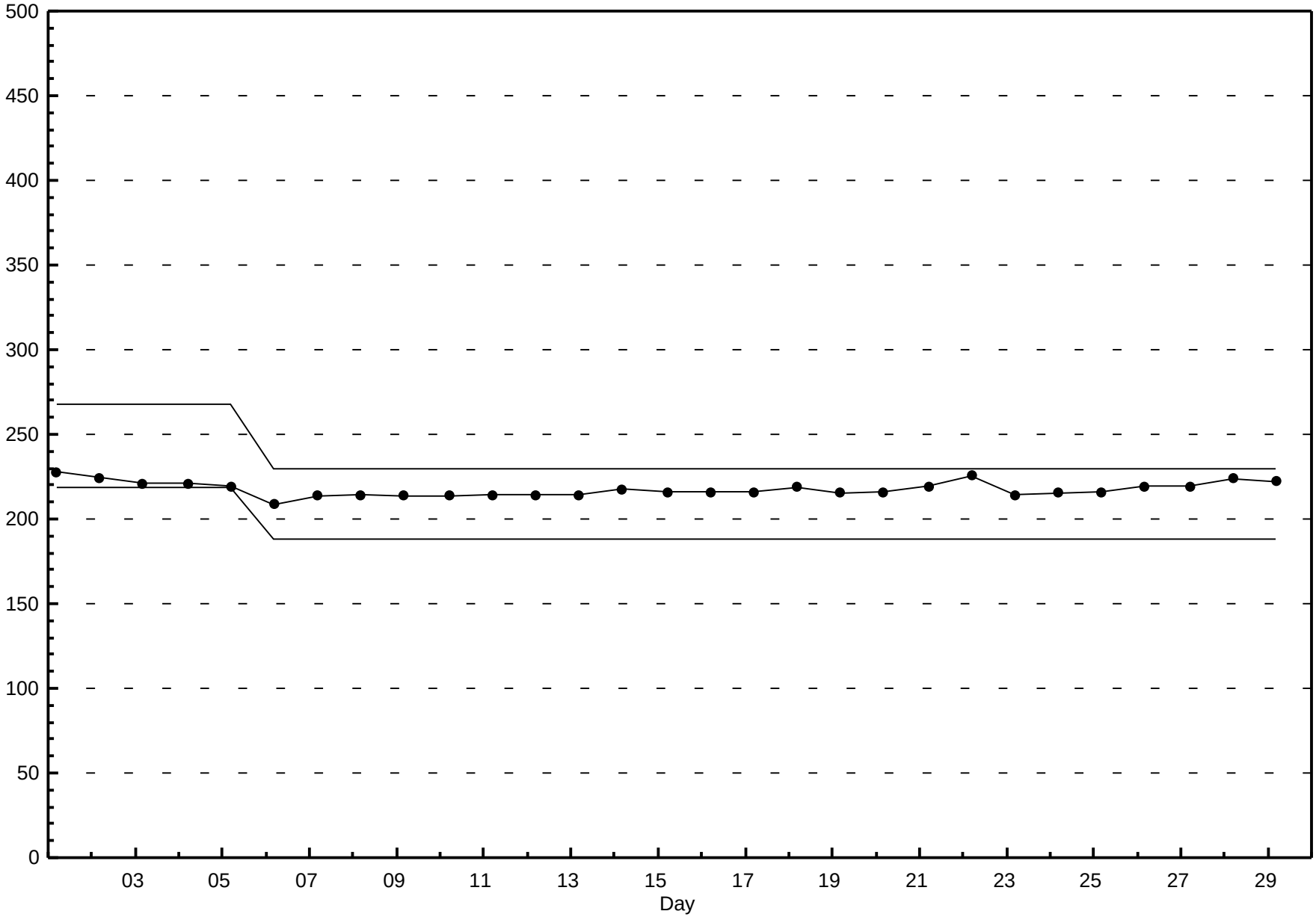
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Span Responses

Oxides of Nitrogen (NO_X)

Beaverlodge - February 2012



Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Beaverlodge - February 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 42.2 ppb on Feb 21 17:00
Maximum Daily Average: 37.5 ppb on Feb 29

Minimum Value: 2 ppb on Feb 11 07:00
Maximum Diurnal Average: 32.8 ppb at hour 15
Monthly Average: 29.19 ppb

Minimum Daily Average: 11.5 ppb on Feb 11
Minimum Diurnal Average: 24.4 ppb at hour 10
Percentiles: P_1 = 7.7 P_{10} = 17.5 Q_1 = 24.7 Median = 31.4 Q_3 = 34.7 P_{90} = 37.9 P_{99} = 41.0

Hours in Service:	696
Hours of Data:	664
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	33	33	33	34	A	29	29	26	29	28	26	24	30	35	35	32	31	31	31	32	30	31	30	31	30.7	35.1
2-Feb	31	30	30	32	A	33	32	29	23	22	22	27	29	30	35	36	34	34	36	32	34	33	34	34	30.9	35.9
3-Feb	32	30	31	31	A	26	26	21	25	17	19	12	18	21	22	24	27	25	23	25	26	14	19	15	23.0	32.2
4-Feb	19	18	19	21	A	19	21	22	23	8	11	12	18	17	18	20	21	26	29	26	25	24	24	23	20.2	29.1
5-Feb	24	23	31	28	A	24	27	27	18	22	20	22	C	C	C	30	28	30	30	32	32	33	31	32	27.2	33.3
6-Feb	32	32	32	32	A	31	29	28	27	27	28	28	29	29	29	29	30	31	31	30	30	28	27	27	29.5	32.3
7-Feb	25	25	24	18	A	9	15	7	10	3	15	15	18	20	20	21	17	13	16	13	12	11	15	13	15.4	25.2
8-Feb	13	11	13	10	A	15	20	19	17	17	20	23	28	32	31	31	31	29	27	28	26	26	24	22	22.3	31.9
9-Feb	16	11	15	15	A	13	12	18	18	14	12	17	22	27	26	27	28	27	23	23	21	22	21	17	19.4	28.1
10-Feb	21	22	22	22	A	19	26	24	21	20	19	21	20	20	22	23	25	24	25	26	25	23	21	20	22.2	25.8
11-Feb	18	17	15	12	A	6	2	8	5	9	12	14	16	16	17	17	15	13	10	9	6	8	10	10	11.5	17.9
12-Feb	17	24	25	23	A	23	25	20	19	21	23	31	33	33	33	33	32	31	31	29	27	26	27	26	26.6	33.2
13-Feb	26	26	28	32	A	33	32	32	32	32	34	36	37	37	37	37	37	35	33	33	33	30	30	32	32.9	37.5
14-Feb	32	32	33	33	A	34	32	33	30	30	27	29	31	33	37	37	37	36	33	33	33	33	32	31	32.7	37.4
15-Feb	31	32	32	32	A	32	32	33	34	35	35	36	38	39	39	40	39	34	34	36	37	35	38	38	35.3	39.7
16-Feb	35	37	38	38	A	34	32	31	25	13	19	20	22	31	38	38	37	36	36	35	34	35	34	32	31.7	38.2
17-Feb	32	32	32	34	A	33	33	32	32	27	27	30	32	35	40	34	33	36	40	41	41	38	37	35	34.3	41.2
18-Feb	34	31	34	33	A	22	18	16	20	25	30	31	32	34	35	35	33	31	30	22	27	30	29	29	28.8	35.4
19-Feb	27	27	28	30	A	29	30	30	32	34	35	36	35	34	34	35	34	33	30	33	28	28	32	33	31.6	35.8
20-Feb	34	31	29	32	A	28	30	25	23	23	23	26	27	30	31	30	28	27	23	21	29	27	26	27	27.4	33.5
21-Feb	27	25	26	27	A	32	32	31	35	34	36	36	37	39	40	41	42	42	40	40	39	37	37	33	35.3	42.2
22-Feb	36	32	32	35	A	38	38	38	38	38	39	39	39	39	39	37	38	38	36	32	34	34	31	34	36.3	38.9
23-Feb	37	36	36	37	A	37	37	36	35	36	36	37	37	38	38	39	37	36	35	35	28	32	36	35	35.9	38.6
24-Feb	36	37	37	37	A	37	36	30	10	13	20	30	33	35	35	35	35	34	33	33	33	33	33	34	31.7	37.3
25-Feb	36	36	36	36	A	34	32	32	32	32	32	32	32	32	33	33	33	33	33	32	33	32	32	31	33.0	36.3
26-Feb	30	29	29	29	A	29	29	29	27	27	28	28	29	31	34	34	34	28	22	30	29	26	30	32	29.2	34.3
27-Feb	32	32	34	34	A	34	34	35	36	37	38	38	39	40	40	40	40	39	39	39	39	39	38	39	37.1	40.1
28-Feb	39	38	38	37	A	34	32	32	31	28	33	36	36	37	39	40	40	40	39	40	41	41	40	37	36.9	41.3
29-Feb	39	41	41	40	A	39	41	39	38	34	37	37	38	39	39	38	38	37	37	35	35	34	33	33	37.5	41.1
	29.1	28.7	29.4	29.4	--	27.8	28.1	27.0	25.7	24.4	26.1	27.8	29.8	31.6	32.8	32.6	32.2	31.3	30.5	30.1	29.9	29.1	29.4	28.9	Diurnal Average	
	38.9	40.9	41.0	39.6	--	39.4	41.1	39.3	38.5	38.4	38.9	38.6	38.9	39.7	40.2	40.6	42.2	41.7	40.2	41.2	41.3	41.3	39.8	38.9	Diurnal Maximum	

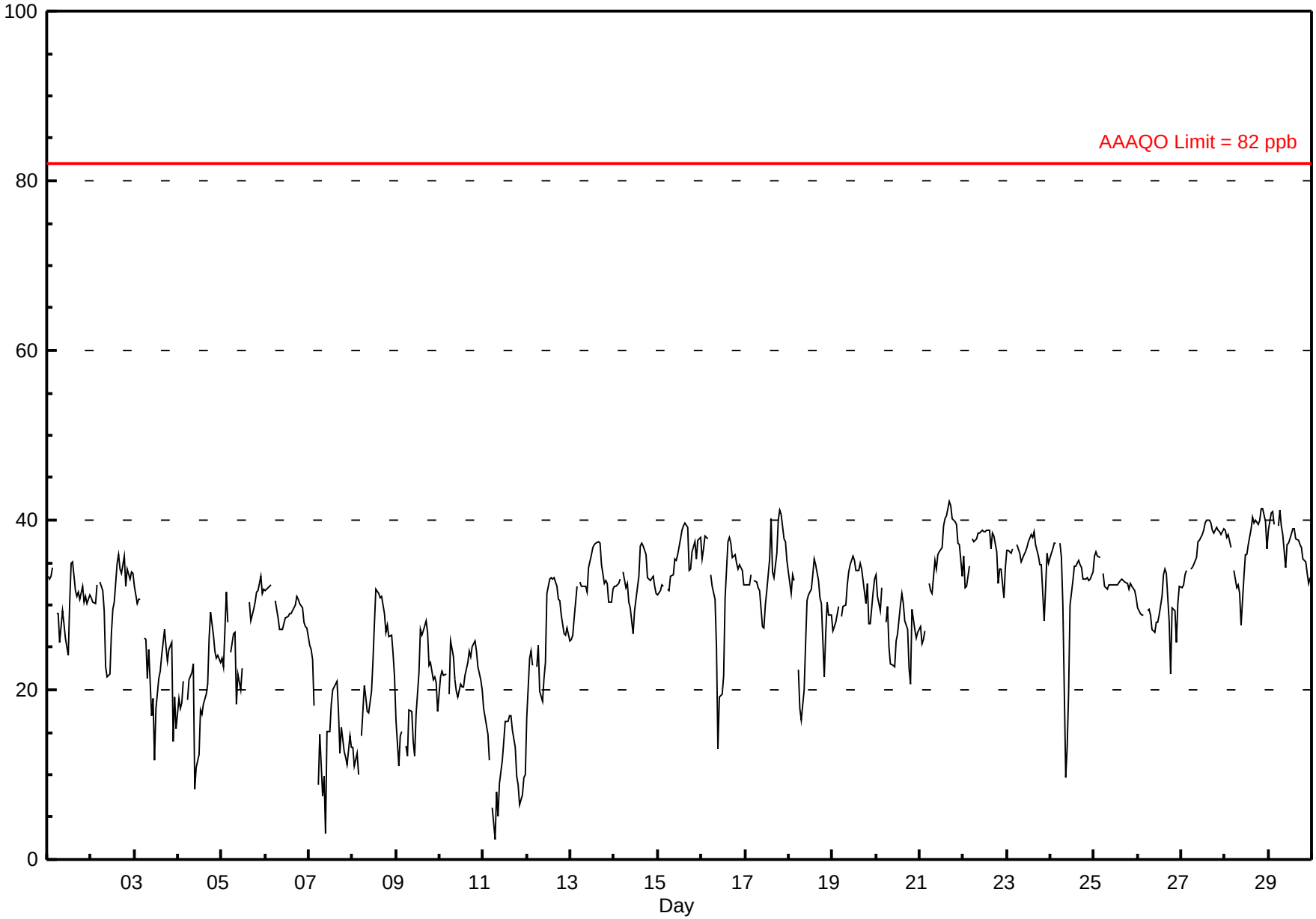
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na

Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Beaverlodge - February 2012



Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

Beaverlodge - February 2012

Maximum Value: 43.4 ppb on Feb 21 17:00

Maximum Daily Average: 39.0 ppb on Feb 28

Minimum Value: 6 ppb on Feb 7 10:00

Minimum Daily Average: 13.6 ppb on Feb 11

Maximum Diurnal Average: 34.3 ppb at hour 16

Minimum Diurnal Average: 27.9 ppb at hour 10

Monthly Average: 31.40 ppb

Percentiles: P_1 = 10.7 P_{10} = 20.7 Q_1 = 27.5 Median = 33.0 Q_3 = 36.7 P_{90} = 39.5 P_{99} = 42.2

Hours in Service:	696
Hours of Data:	664
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	35	35	36	36	A	36	30	29	32	31	30	28	34	36	36	33	33	33	33	33	32	33	32	33	33.0	36.4
2-Feb	32	31	31	33	A	34	34	31	30	25	26	32	33	35	37	37	36	38	40	38	36	36	35	35	33.6	39.9
3-Feb	33	31	32	33	A	27	28	27	29	25	26	18	23	23	27	27	30	28	28	28	28	26	22	22	27.0	33.1
4-Feb	24	21	21	24	A	21	25	27	28	17	19	18	21	21	21	21	23	34	33	29	30	32	27	26	24.5	34.4
5-Feb	28	35	35	31	A	27	28	28	26	25	23	25	C	C	C	33	31	31	32	33	33	34	33	33	30.1	34.9
6-Feb	32	33	33	33	A	32	30	30	29	28	29	30	30	30	30	31	31	32	31	31	31	29	28	28	30.4	33.3
7-Feb	27	26	26	22	A	16	19	16	16	6	20	17	21	22	21	22	22	19	20	19	15	14	17	17	19.1	27.1
8-Feb	15	14	16	12	A	17	22	21	19	19	23	25	31	33	33	32	33	32	29	30	29	27	26	24	24.4	33.1
9-Feb	19	16	19	20	A	16	15	20	20	18	15	20	28	28	28	29	30	29	26	25	23	23	23	22	22.2	29.6
10-Feb	25	24	23	24	A	27	27	26	23	20	20	23	22	23	24	25	26	25	27	27	26	24	22	21	24.1	27.2
11-Feb	19	18	16	15	A	11	8	13	8	11	14	16	17	18	18	18	17	15	12	11	8	9	13	12	13.6	19.4
12-Feb	23	25	26	24	A	26	28	23	20	23	29	34	34	35	34	34	34	33	32	31	28	28	28	28	28.6	34.5
13-Feb	27	28	30	34	A	34	33	33	34	34	36	38	38	39	39	38	39	38	34	34	34	33	32	35	34.5	38.7
14-Feb	34	33	33	34	A	34	34	34	33	33	29	32	32	36	39	39	38	37	36	35	34	34	34	33	34.4	39.2
15-Feb	33	33	33	33	A	34	34	36	36	36	36	37	40	40	41	41	42	38	37	38	39	39	39	39	37.2	41.8
16-Feb	39	38	39	39	A	35	33	32	30	27	24	27	26	37	39	39	38	37	37	36	35	36	35	34	34.4	39.4
17-Feb	34	33	34	34	A	33	33	33	33	32	30	32	34	40	42	42	35	39	42	42	42	40	38	37	36.3	42.3
18-Feb	37	34	36	36	A	24	21	21	24	30	32	32	34	36	37	36	34	33	33	27	31	33	32	32	31.4	37.0
19-Feb	31	31	31	32	A	30	31	31	34	35	36	37	37	35	35	36	35	35	33	34	34	30	33	34	33.4	36.9
20-Feb	34	34	33	34	A	34	31	29	26	25	27	27	29	31	33	32	30	29	26	27	33	31	28	28	30.0	34.4
21-Feb	29	29	29	29	A	34	33	38	41	36	37	37	38	41	41	43	43	43	41	41	41	39	39	37	37.4	43.4
22-Feb	37	37	34	36	A	39	38	39	39	40	40	39	40	40	40	39	40	40	39	39	37	36	32	37	38.2	40.4
23-Feb	38	37	38	38	A	38	38	37	36	37	37	38	38	39	39	40	39	38	37	36	35	35	37	36	37.5	40.4
24-Feb	37	37	38	38	A	38	37	33	30	24	26	33	34	36	36	36	35	35	34	33	34	34	34	35	34.2	37.9
25-Feb	37	37	37	36	A	35	34	32	33	33	33	33	33	33	33	33	33	33	33	32	33	33	32	31	33.6	36.8
26-Feb	30	30	30	30	A	31	30	31	29	29	29	30	30	34	34	35	35	32	28	31	32	27	33	34	31.0	35.0
27-Feb	33	33	35	35	A	36	37	37	37	38	38	39	40	40	41	41	41	41	40	41	40	40	40	40	38.5	40.8
28-Feb	40	40	40	38	A	35	35	35	35	34	35	37	37	38	40	42	42	41	42	42	42	43	42	42	39.0	42.8
29-Feb	41	42	42	42	A	41	42	41	40	40	38	38	38	40	40	38	38	38	38	36	36	35	34	34	38.8	42.2
	31.2	30.9	31.2	31.2	--	30.1	30.0	29.8	29.3	27.9	28.8	30.0	31.8	33.5	34.2	34.3	33.9	33.6	32.9	32.4	32.1	31.5	31.0	31.0	Diurnal Average	
	41.4	42.2	42.2	42.2	--	40.7	41.7	40.7	40.5	39.9	39.8	39.3	40.3	40.6	41.7	43.2	43.4	43.2	42.2	42.3	42.3	42.8	42.2	41.7	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

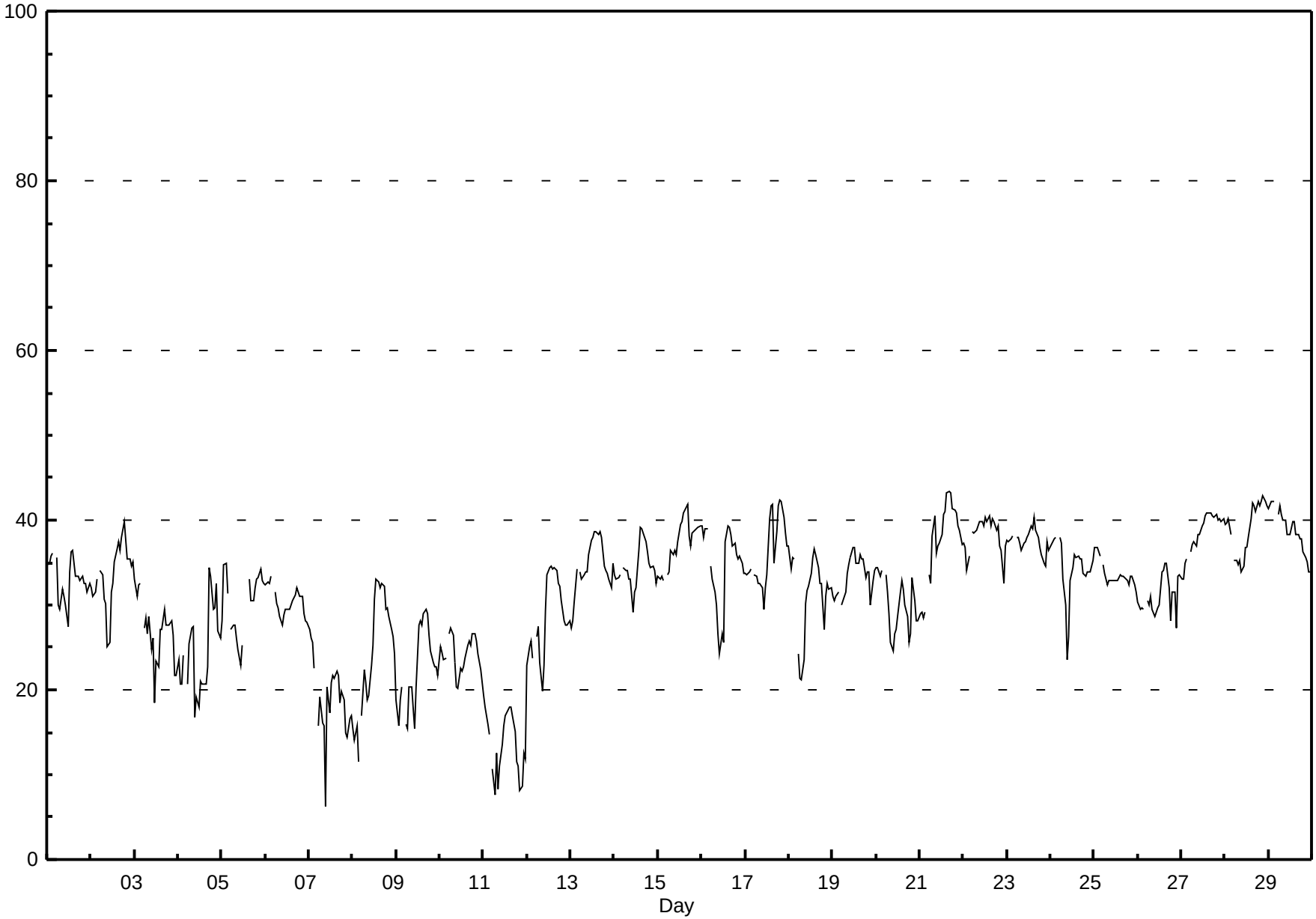
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

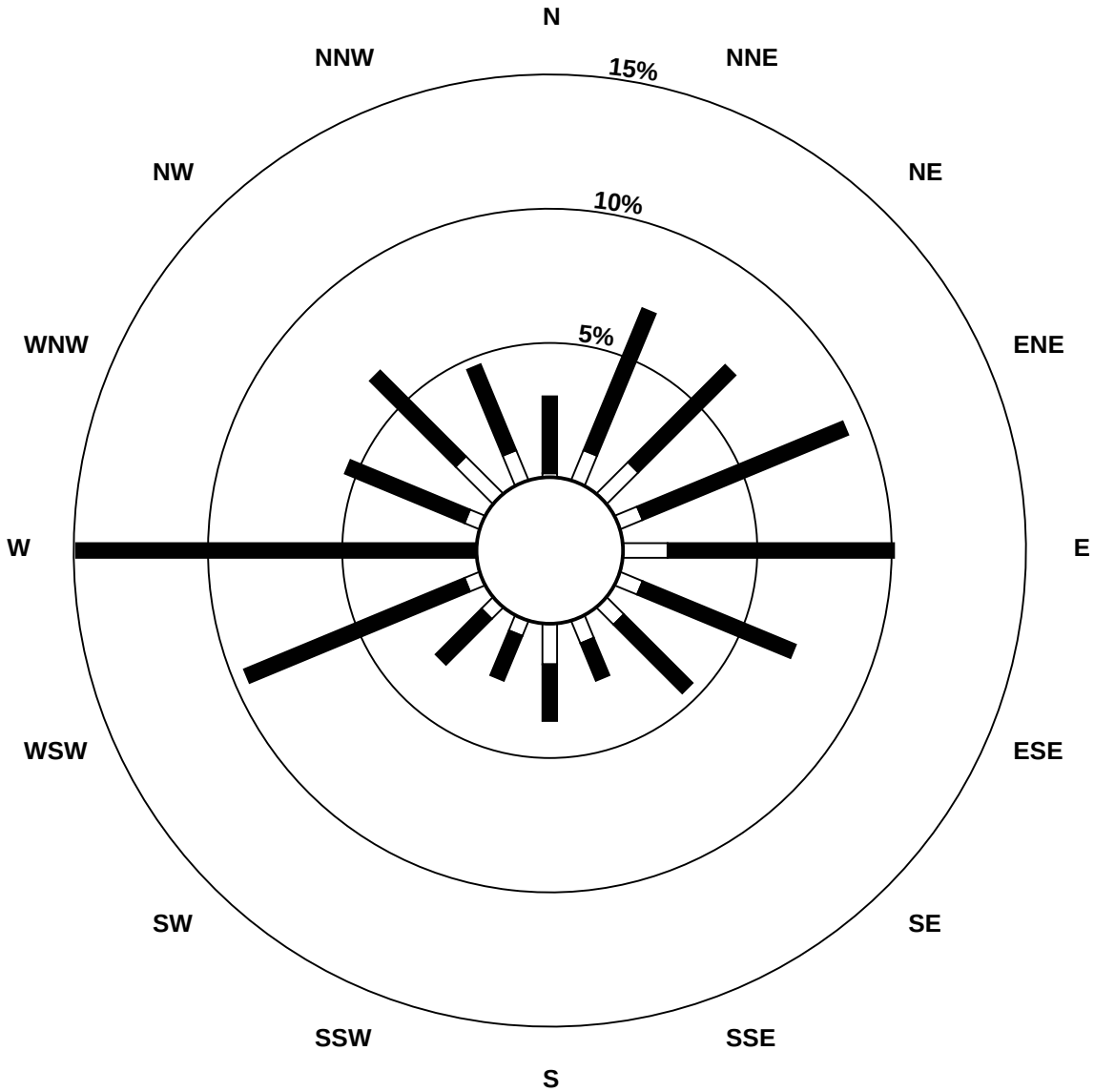
Beaverlodge - February 2012



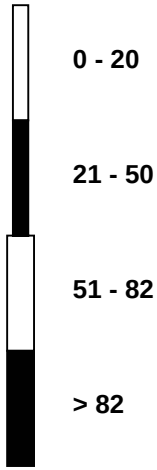
Pollutant Rose

Ozone (O_3) - ppb

Beaverlodge - February 2012



Pollutant Classes (ppb)



Peace Airshed Zone Association

Eight Hour Running Averages

Ozone (O_3) - ppb

Beaverlodge - February 2012

Maximum Value: 40.4 ppb on Feb 21 21:00

Minimum Value: 7.7 ppb on Feb 11 11:00

Percentiles: P_1 = 10.2 P_{10} = 17.8 Q_1 = 25.1 Median = 30.9 Q_3 = 34.4 P_{90} = 37.4 P_{99} = 40.0

Hours in Service:	696
Hours of Data:	690
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	33	34	33	32	31	31	30	29	27	28	28	29	30	30	31	31	32	32	32	31	31	33.7
2-Feb	31	31	31	31	31	31	31	31	30	29	27	27	27	27	27	28	29	31	33	33	34	34	34	34	34.2
3-Feb	34	33	33	32	32	31	30	28	27	25	24	21	20	20	19	20	20	21	22	23	24	23	23	22	33.6
4-Feb	21	20	19	19	18	19	19	20	20	19	18	17	17	17	16	16	16	18	20	22	23	24	24	25	24.8
5-Feb	25	25	25	25	25	25	26	26	25	25	24	23	23	23	N	N	N	N	N	N	30	31	31	31	31.0
6-Feb	31	32	32	32	32	32	31	31	30	30	29	28	28	28	28	28	29	29	30	30	30	30	30	29	32.1
7-Feb	29	28	27	26	25	22	20	18	15	12	11	11	12	13	14	15	16	17	18	17	16	15	15	14	28.7
8-Feb	13	13	13	12	12	13	14	14	15	16	17	19	20	22	24	25	27	28	29	30	29	29	28	27	29.6
9-Feb	25	23	21	19	18	17	15	14	14	15	15	15	16	17	19	20	22	23	25	25	25	25	24	23	25.4
10-Feb	22	21	21	21	21	21	21	22	22	22	22	21	21	21	21	21	21	22	22	23	24	24	24	23	24.0
11-Feb	23	22	20	19	18	15	13	11	9	8	8	8	9	10	12	13	14	15	15	14	13	12	11	10	22.7
12-Feb	10	12	13	15	16	19	21	22	23	22	22	23	24	26	27	28	30	31	32	32	31	30	29	29	32.2
13-Feb	28	27	27	27	28	28	29	30	31	32	32	33	33	34	35	35	36	36	36	36	35	34	34	33	36.4
14-Feb	32	32	32	32	32	32	33	33	32	32	31	31	31	31	31	32	33	33	34	35	35	35	34	34	35.0
15-Feb	33	32	32	32	32	32	32	32	32	33	33	34	34	35	36	37	38	38	37	37	37	37	37	37	37.7
16-Feb	36	36	37	37	37	37	36	35	33	30	27	25	24	24	25	26	27	30	32	34	36	36	36	35	37.0
17-Feb	34	34	33	33	33	33	33	33	33	32	31	31	31	31	32	32	32	33	35	36	38	38	38	38	37.9
18-Feb	38	37	36	35	35	32	30	27	25	24	24	23	24	26	28	30	32	33	33	31	31	30	29	29	37.8
19-Feb	28	28	27	28	29	28	29	29	29	30	31	32	33	33	34	34	35	35	34	34	33	32	32	31	34.6
20-Feb	31	31	31	31	31	31	31	30	28	27	26	25	25	26	26	27	27	28	28	27	27	27	26	26	31.2
21-Feb	26	26	26	27	27	27	28	29	30	31	33	34	34	35	36	37	38	39	40	40	40	40	40	39	40.4
22-Feb	38	37	36	35	35	35	35	35	36	37	38	38	38	38	39	38	38	38	38	37	37	36	35	35	38.6
23-Feb	35	34	34	35	35	35	36	36	36	36	36	36	36	37	37	37	37	37	37	37	36	35	35	34	37.3
24-Feb	34	34	34	35	36	37	36	36	32	29	26	25	26	26	26	26	29	32	34	34	34	34	34	34	36.5
25-Feb	34	34	34	35	35	35	35	34	34	33	33	32	32	32	32	33	33	33	33	33	33	33	32	32	34.9
26-Feb	32	31	31	30	30	30	29	29	29	28	28	28	28	28	29	30	31	31	30	30	30	29	29	29	31.7
27-Feb	29	29	31	31	31	33	33	34	34	35	35	36	36	37	38	38	39	39	39	39	39	39	39	39	39.4
28-Feb	39	39	39	38	38	38	37	36	35	33	33	32	33	33	34	35	36	38	38	39	40	40	40	40	40.2
29-Feb	40	40	40	40	40	39	40	40	40	39	38	38	38	38	38	38	38	38	38	38	37	37	36	35	40.0
Diurnal Maximums	39.7	39.8	40.0	39.9	39.7	39.5	39.6	40.0	39.9	39.0	38.5	38.2	38.3	38.4	38.6	38.5	39.0	39.1	39.7	40.1	40.4	40.2	40.2	39.8	

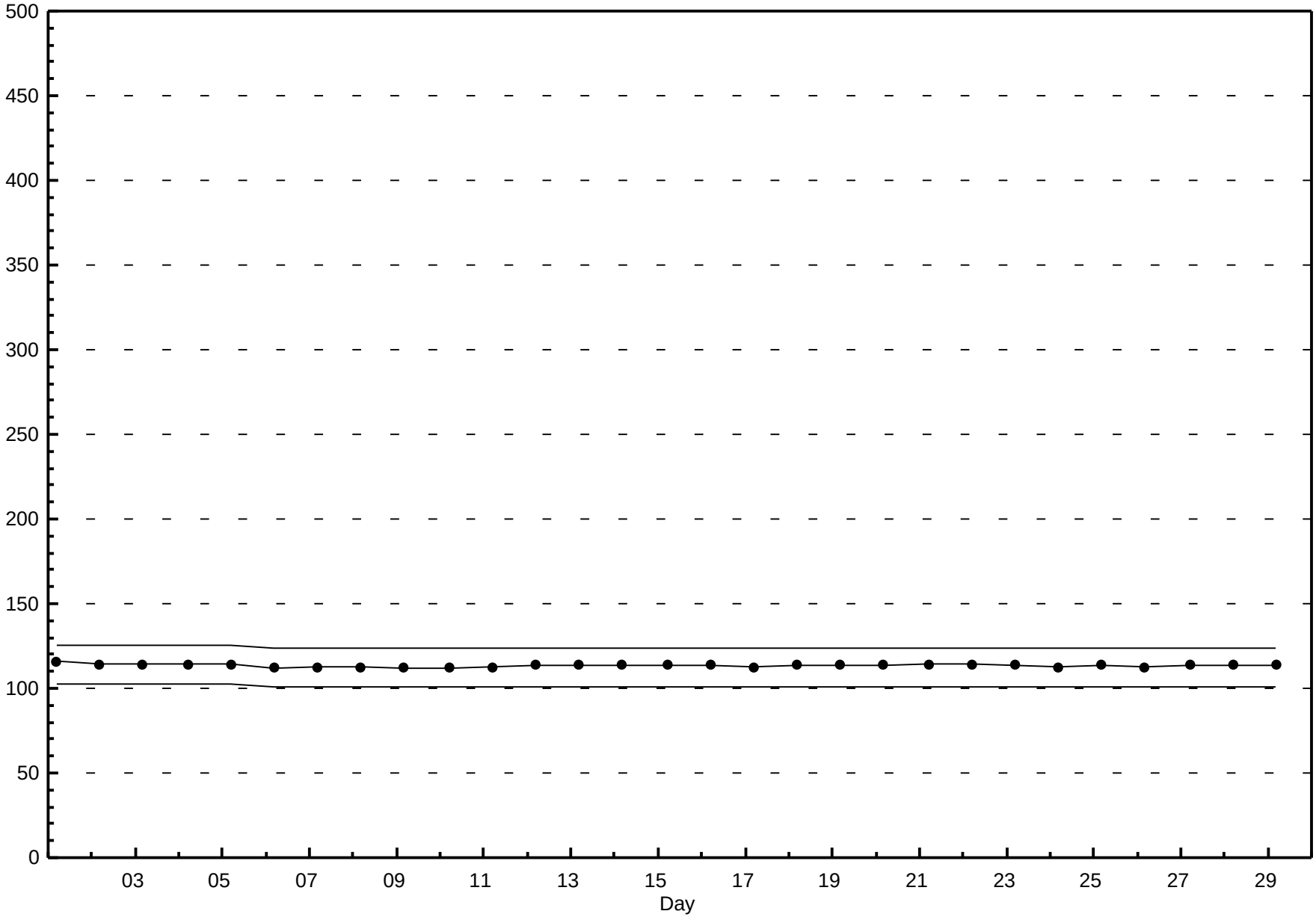
N - Not Valid

Peace Airshed Zone Association

Span Responses

Ozone (O_3)

Beaverlodge - February 2012



Peace Airshed Zone Association

Hourly Averages

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

Beaverlodge - February 2012

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

Maximum Value: 28.3 $\mu g/m^3$ on Feb 10 13:00

Maximum Daily Average: 19.1 $\mu g/m^3$ on Feb 11

Minimum Value: 0 $\mu g/m^3$ on Feb 19 13:00

Maximum Diurnal Average: 8.3 $\mu g/m^3$ at hour 11

Monthly Average: 7.29 $\mu g/m^3$

Minimum Daily Average: 3.5 $\mu g/m^3$ on Feb 27

Minimum Diurnal Average: 6.3 $\mu g/m^3$ at hour 8

Percentiles: P_1 = 2.7 P_{10} = 3.7 Q_1 = 4.6 Median = 5.7 Q_3 = 8.4 P_{90} = 13.1 P_{99} = 23.9

Hours in Service:	696
Hours of Data:	695
Hours of Missing Data:	1
Hours of Calibration:	1
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	4	4	4	6	8	6	4	6	7	8	9	8	7	5	5	5	5	4	4	4	5	4	4	5	5.5	9.0
2-Feb	5	6	4	4	5	5	2	2	6	6	10	10	6	5	5	5	5	5	6	5	7	5	6	6	5.4	9.6
3-Feb	6	7	6	5	7	8	7	5	5	3	4	10	12	11	11	11	16	19	16	14	11	10	11	11	9.3	18.6
4-Feb	12	11	13	11	14	11	11	9	8	10	12	13	11	11	11	10	8	8	9	8	8	9	8	8	10.3	13.9
5-Feb	10	9	9	6	7	6	6	5	7	6	7	7	7	6	6	C	5	6	6	7	7	4	4	4	6.4	10.2
6-Feb	3	5	5	5	6	6	5	6	6	7	7	7	8	7	5	5	6	5	4	4	4	6	6	6	5.6	8.0
7-Feb	7	8	7	8	9	8	8	9	9	11	12	12	13	14	13	15	15	13	17	21	22	22	20	19	12.9	22.0
8-Feb	17	18	18	16	15	14	12	10	13	14	14	13	11	8	6	7	8	6	6	8	7	7	8	8	11.1	18.5
9-Feb	9	9	11	9	9	11	15	14	17	19	19	17	14	15	12	14	12	10	9	10	9	13	12	13	12.5	19.2
10-Feb	16	17	13	12	9	10	9	11	10	13	18	21	28	18	25	22	16	14	13	12	13	14	13	14	15.0	28.3
11-Feb	15	16	18	15	15	14	18	18	17	16	18	19	18	17	17	19	22	24	25	25	25	25	21	22	19.1	25.4
12-Feb	19	12	10	10	10	10	9	8	9	7	6	5	4	4	5	5	4	5	5	4	5	5	5	5	7.2	19.0
13-Feb	6	6	4	5	5	5	5	4	5	6	5	5	3	4	4	5	5	3	5	4	3	4	5	5	4.6	6.1
14-Feb	4	5	5	4	4	5	5	5	5	5	5	6	5	6	5	4	4	4	4	5	5	5	4	7	4.8	6.5
15-Feb	6	5	4	3	4	4	4	6	6	5	5	5	7	7	5	4	6	7	6	5	5	6	4	4	5.1	7.4
16-Feb	4	4	3	4	3	4	3	4	6	6	10	8	9	7	5	6	5	6	5	6	8	5	4	4	5.4	10.0
17-Feb	4	6	8	5	5	6	5	5	6	7	8	7	7	6	6	6	5	6	7	5	6	6	5	6	6.0	7.8
18-Feb	6	4	8	6	7	6	7	7	10	10	9	8	8	8	7	5	7	7	7	8	7	8	10	9	7.5	10.5
19-Feb	8	9	9	9	7	6	5	5	5	6	5	5	0	4	4	5	5	6	5	7	6	6	6	5	5.8	9.3
20-Feb	4	6	5	5	4	6	5	5	4	4	5	6	5	4	5	5	3	4	8	11	8	6	9	8	5.7	10.6
21-Feb	9	10	10	7	9	5	4	2	3	5	4	3	1	4	5	5	7	6	4	4	5	5	4	4	5.1	9.8
22-Feb	4	4	4	3	4	6	5	5	4	3	4	6	5	5	3	3	6	5	5	5	5	6	5	5	4.6	5.9
23-Feb	5	5	5	5	4	4	3	3	4	4	6	3	5	3	3	3	5	4	5	6	7	6	6	4	4.6	6.6
24-Feb	4	4	3	4	5	3	5	5	7	13	13	10	7	8	9	7	6	4	6	5	5	5	5	5	6.1	12.9
25-Feb	6	5	4	5	4	4	4	5	3	4	4	6	6	6	5	5	5	5	6	5	4	5	5	5	4.9	5.8
26-Feb	6	6	6	6	5	4	6	7	4	7	8	6	5	8	9	7	6	6	9	11	6	5	6	4	6.3	11.3
27-Feb	5	3	2	3	2	3	3	4	4	3	3	3	3	4	5	4	3	3	4	4	4	4	4	4	3.5	4.9
28-Feb	3	4	4	4	4	3	4	4	5	6	5	5	3	5	5	5	5	6	6	5	4	4	4	4	4.4	6.2
29-Feb	6	5	4	4	5	8	7	5	5	6	8	7	6	8	8	8	6	6	8	8	7	7	8	8	6.6	8.5
	7.4	7.4	7.1	6.5	6.8	6.6	6.5	6.3	6.9	7.5	8.3	8.2	7.8	7.5	7.3	7.3	7.3	7.2	7.5	7.9	7.5	7.5	7.3	7.3	Diurnal Average	
	19.0	18.5	17.8	16.3	15.3	14.4	17.5	18.4	17.4	19.2	18.5	21.3	28.3	18.3	25.3	21.8	21.9	24.2	24.7	25.4	24.7	24.9	21.3	22.2	Diurnal Maximum	

C - Calibration

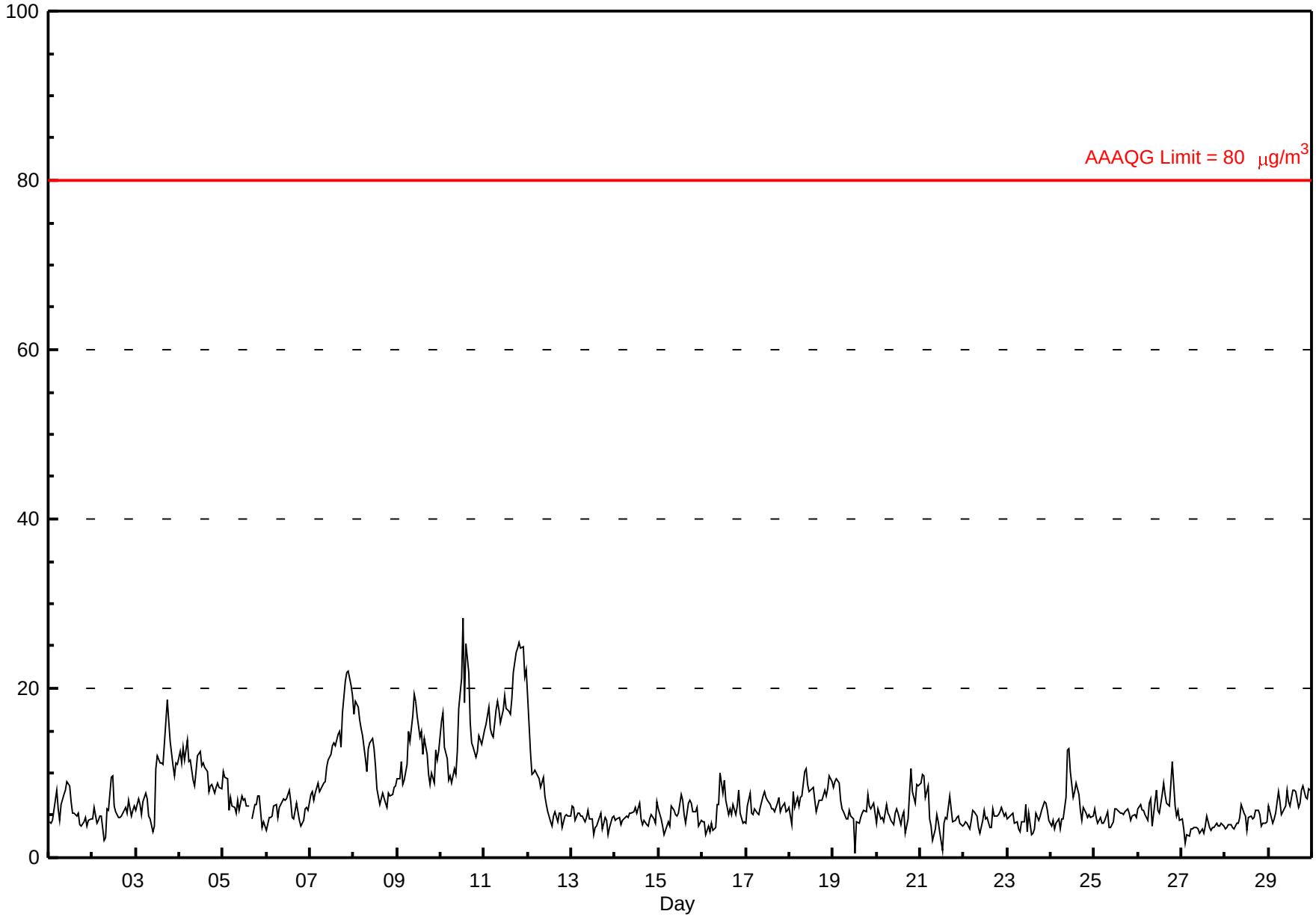
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

Peace Airshed Zone Association

Hourly Averages

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

Beaverlodge - February 2012



Peace Airshed Zone Association

Hourly Maximums

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

Beaverlodge - February 2012

Maximum Value: 30.1 $\mu g/m^3$ on Feb 10 13:00

Maximum Daily Average: 20.2 $\mu g/m^3$ on Feb 11

Minimum Value: 2 $\mu g/m^3$ on Feb 19 13:00

Maximum Diurnal Average: 9.4 $\mu g/m^3$ at hour 11

Monthly Average: 8.32 $\mu g/m^3$

Minimum Daily Average: 4.3 $\mu g/m^3$ on Feb 27

Minimum Diurnal Average: 7.4 $\mu g/m^3$ at hour 6

Percentiles: P_1 = 3.5 P_{10} = 4.6 Q_1 = 5.4 Median = 6.7 Q_3 = 9.4 P_{90} = 14.3 P_{99} = 26.0

Hours in Service:	696
Hours of Data:	695
Hours of Missing Data:	1
Hours of Calibration:	1
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	4	5	7	8	7	6	7	9	9	10	9	8	6	6	5	6	5	4	5	5	5	5	5	6.3	9.6
2-Feb	5	6	6	5	5	5	4	4	7	7	12	12	7	7	6	6	6	6	6	6	8	6	7	7	6.5	11.7
3-Feb	6	8	7	6	7	8	8	6	7	5	9	12	13	12	12	12	20	20	18	16	12	11	12	13	10.9	19.7
4-Feb	13	13	14	13	15	12	13	12	10	11	14	14	12	12	11	11	10	10	9	9	12	12	10	10	11.7	15.0
5-Feb	11	11	11	7	8	7	7	6	8	7	8	8	8	7	7	C	7	7	7	9	9	4	5	4	7.5	11.2
6-Feb	4	5	5	6	7	7	5	7	7	7	7	8	8	8	5	6	7	6	5	4	5	7	7	7	6.3	8.5
7-Feb	8	9	8	9	9	9	9	9	9	12	13	13	14	14	14	16	16	14	21	21	23	23	22	20	13.9	22.9
8-Feb	18	20	19	17	16	15	14	11	14	14	14	13	13	9	7	8	8	8	7	8	8	8	9	9	12.0	19.7
9-Feb	10	10	13	10	11	12	16	16	19	20	19	18	16	16	14	15	13	11	9	11	11	14	13	13	13.9	20.4
10-Feb	21	21	14	14	10	11	10	12	11	15	19	26	30	25	30	29	17	14	13	13	14	15	14	15	17.2	30.1
11-Feb	16	16	19	18	15	16	19	19	18	17	19	20	19	18	19	20	24	25	26	26	26	26	22	23	20.2	26.5
12-Feb	22	15	11	11	11	10	10	9	10	9	7	6	5	4	6	6	5	6	6	5	5	6	6	6	8.1	21.6
13-Feb	7	7	6	6	6	5	6	5	5	6	5	5	4	4	4	6	6	5	5	5	3	5	5	6	5.3	6.7
14-Feb	6	6	5	5	5	5	5	5	6	6	6	7	7	7	6	5	5	5	5	5	6	6	6	7	5.7	7.3
15-Feb	7	5	4	3	4	5	5	7	6	6	6	6	9	9	6	6	7	7	7	7	6	7	5	6	6.1	8.7
16-Feb	5	6	4	4	3	5	4	6	7	9	11	9	10	10	7	7	6	7	7	9	9	6	5	5	6.7	10.9
17-Feb	5	8	8	7	6	7	6	6	7	9	8	7	8	7	7	6	6	8	8	6	8	8	6	6	7.0	8.5
18-Feb	7	6	9	7	8	7	8	9	11	11	9	9	9	9	7	6	8	7	7	9	8	10	10	10	8.4	11.4
19-Feb	9	10	10	9	7	7	6	5	6	6	6	6	2	5	5	5	7	7	7	8	7	6	7	6	6.7	9.6
20-Feb	5	6	6	6	5	7	6	6	6	5	6	6	6	5	6	6	5	6	10	12	10	9	9	9	6.7	11.6
21-Feb	10	10	11	8	10	7	4	4	5	6	5	5	4	5	6	7	9	8	5	5	6	6	5	5	6.5	10.9
22-Feb	4	5	4	4	5	6	6	6	5	4	6	6	5	5	5	4	7	6	6	6	6	6	6	5	5.3	7.0
23-Feb	5	5	5	6	5	5	4	3	5	5	7	5	6	4	4	4	6	5	5	7	7	7	6	5	5.3	7.2
24-Feb	4	5	4	5	5	4	5	5	11	14	14	11	9	8	9	9	6	5	7	6	5	6	6	6	7.1	14.1
25-Feb	6	6	5	5	5	5	5	6	5	4	5	7	7	6	6	6	6	6	6	6	5	6	5	6	5.6	6.6
26-Feb	6	7	6	6	6	5	9	9	5	8	9	6	6	10	10	8	8	8	9	13	11	6	6	5	7.5	12.6
27-Feb	5	5	3	3	4	4	4	5	4	4	4	4	4	4	6	5	4	4	4	4	4	4	5	5	4.3	5.5
28-Feb	4	4	5	5	4	4	5	5	5	7	7	6	4	6	6	5	5	6	6	6	5	5	5	6	5.1	7.0
29-Feb	7	5	5	6	7	9	7	6	6	8	9	7	7	8	8	8	8	8	8	9	8	7	9	9	7.5	9.1
	8.3	8.4	8.0	7.5	7.6	7.4	7.5	7.4	8.1	8.7	9.4	9.3	9.0	8.7	8.4	8.4	8.5	8.3	8.5	8.9	8.7	8.4	8.2	8.2	Diurnal Average	
	21.6	20.7	19.0	18.2	16.5	15.7	19.1	19.2	19.4	20.4	19.4	26.2	30.1	24.5	29.9	28.6	23.6	24.6	26.5	26.3	25.7	26.0	22.1	22.8	Diurnal Maximum	

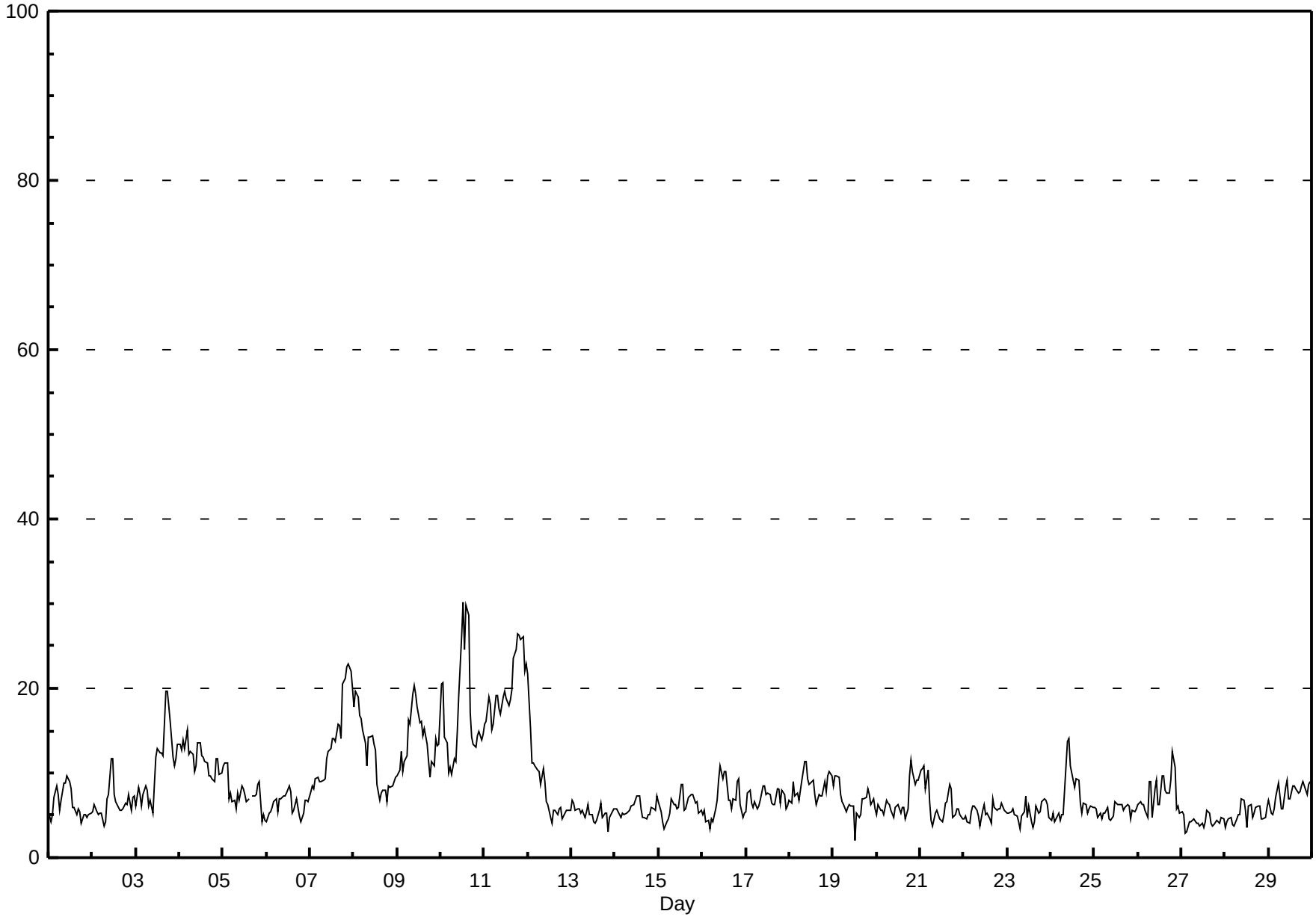
C - Calibration

Peace Airshed Zone Association

Hourly Maximums

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

Beaverlodge - February 2012



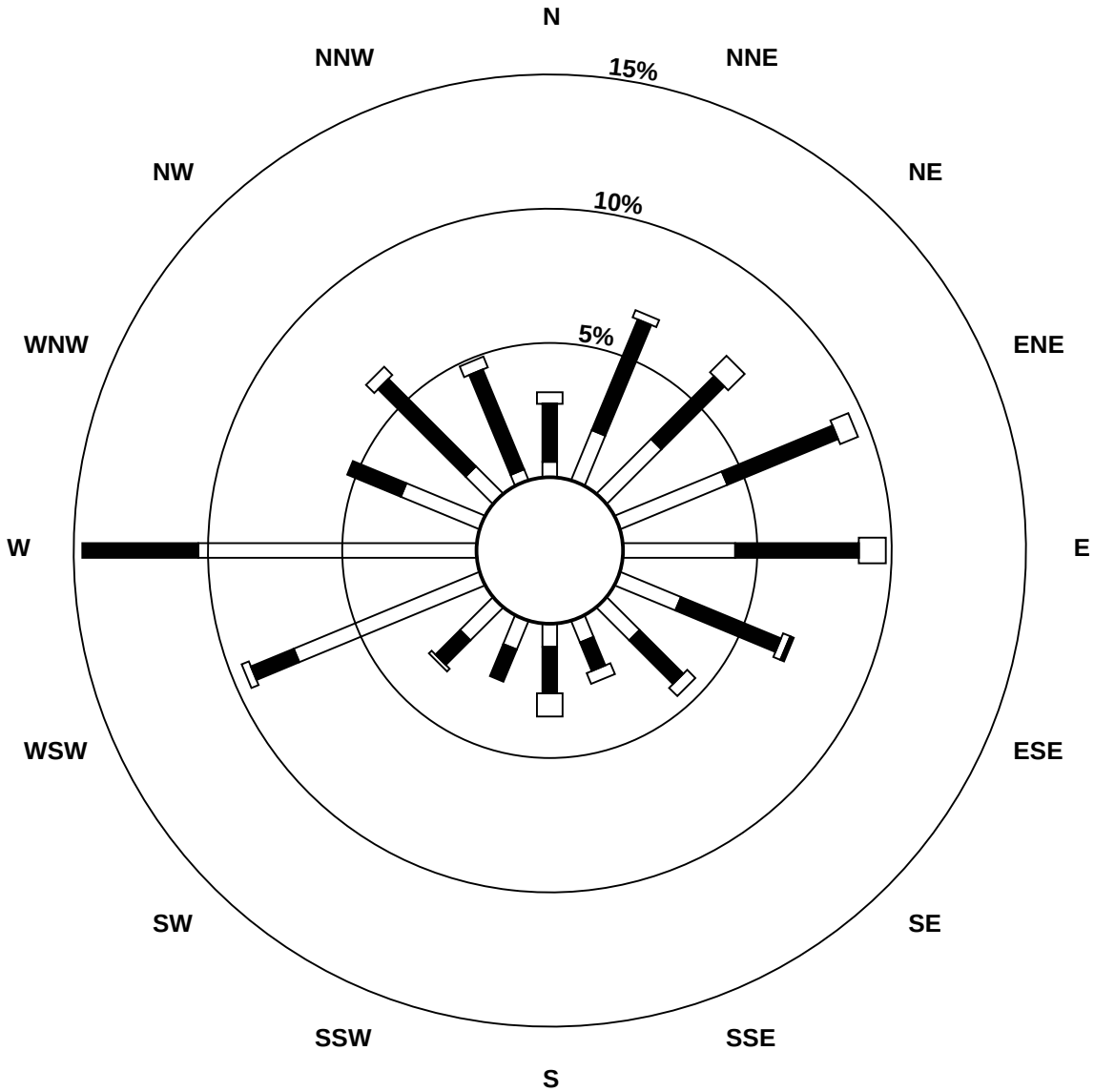
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

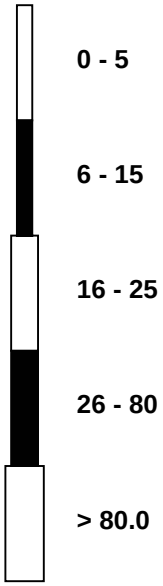
Pollutant Rose

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

Beaverlodge - February 2012



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



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Beaverlodge - February 2012

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

Maximum Value: 8.7 ^{o}C on Feb 12 15:00

Maximum Daily Average: 2.3 ^{o}C on Feb 3

Minimum Value: -19 ^{o}C on Feb 11 09:00

Maximum Diurnal Average: -0.4 ^{o}C at hour 16

Monthly Average: -4.11 ^{o}C

Minimum Daily Average: -13.5 ^{o}C on Feb 26

Minimum Diurnal Average: -6.6 ^{o}C at hour 9

Percentiles: P_1 = -16.4 P_{10} = -12.1 Q_1 = -7.7 Median = -3.7 Q_3 = -0.2 P_{90} = 2.4 P_{99} = 7.1

Hours in Service:	696
Hours of Data:	680
Hours of Missing Data:	16
Hours of Calibration:	0
Percent Operational Time:	97.7

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	-1	-1	-1	0	0	-2	-3	-4	-3	-3	-2	-1	1	3	3	2	2	1	-1	-2	-3	-3	-4	-4	-1.1	3.1
2-Feb	-5	-5	-5	-5	-5	-4	-4	-4	-5	-5	-5	-2	1	2	4	4	4	5	5	3	3	2	3	3	-0.6	4.8
3-Feb	3	1	1	1	1	0	1	-2	0	-3	1	3	5	6	6	6	5	4	3	3	4	1	3	1	2.3	6.3
4-Feb	1	0	-1	0	-2	0	0	0	0	-3	-2	1	5	4	6	8	8	5	5	3	2	2	1	0	1.8	8.3
5-Feb	0	0	0	-1	-2	-2	-2	-3	-3	-2	-3	-1	-1	0	0	0	-1	-2	-3	-4	-5	-5	-6	-6	-2.1	0.3
6-Feb	-6	-6	-6	-6	-6	-6	-7	-8	-9	-9	-7	-6	-5	-4	-3	-2	-3	-3	-4	-4	-5	-5	-6	-7	-5.6	-2.4
7-Feb	-9	-10	-10	-13	-14	N	N	N	N	N	N	N	-5	-4	-4	-4	-4	-5	-7	-9	-9	-10	-10	-10	--	-3.8
8-Feb	-10	-10	-9	-11	-10	-10	-10	-10	-11	-9	-8	-6	-4	-3	-2	-2	-2	-3	-5	-6	-7	-8	-9	-9	-7.3	-1.6
9-Feb	-10	-11	-12	-11	-12	-14	-14	-13	-13	-12	-10	-10	-9	-8	-7	-6	-6	-8	-10	-10	-11	-10	-10	-12	-10.4	-6.2
10-Feb	-11	-12	-12	-14	-14	-14	-14	-15	-15	-14	-13	-12	-11	-10	-9	-8	-8	-9	-10	-10	-10	-11	-12	-13	-11.7	-7.8
11-Feb	-14	-16	-16	-16	-17	-18	-18	-19	-19	-17	-14	-12	-10	-7	-6	-4	-5	-7	-7	-6	-7	-7	-6	-5	-11.3	-3.7
12-Feb	-4	-3	-4	-4	-4	-4	-4	-5	-6	-4	0	6	8	8	9	8	7	5	5	3	2	2	2	2	1.1	8.7
13-Feb	1	2	2	2	2	1	0	-1	-1	-1	0	1	1	2	2	2	2	0	-3	-4	-4	-5	-6	-6	-0.4	2.2
14-Feb	-7	-7	-7	-7	-7	-7	-8	-7	-8	-6	-5	-3	0	3	5	5	5	4	1	-1	-1	-2	-4	-4	-2.9	5.3
15-Feb	-5	-5	-5	-6	-6	-5	-5	-4	-3	-1	0	1	2	3	4	5	4	2	1	0	0	-2	-2	-2	-1.2	4.6
16-Feb	-4	-4	-4	-4	-6	-6	-6	-6	-6	-6	-5	-4	-4	1	4	3	3	2	1	0	-1	-1	0	-1	-2.3	3.5
17-Feb	-2	-3	-3	-2	-3	-5	-5	-5	-5	-4	-3	0	1	3	4	3	2	0	-1	0	-1	-1	-2	-3	-1.5	4.2
18-Feb	-4	-6	-5	-5	N	N	N	N	N	N	N	N	N	-2	0	0	0	0	-1	-1	-2	-3	-3	-3	--	0.1
19-Feb	-3	-3	-2	-2	-2	-1	-1	-1	-1	-1	0	1	1	0	1	-1	-1	-1	-2	-3	-4	-5	-5	-5	-1.7	1.1
20-Feb	-4	-5	-6	-6	-7	-8	-9	-9	-8	-5	-4	-3	-2	0	1	1	0	-1	-1	-1	0	-1	-2	-1	-3.5	0.9
21-Feb	-1	-1	-1	-1	1	2	2	2	1	2	3	4	5	5	5	4	3	2	2	1	1	1	1	0	1.7	5.1
22-Feb	1	0	0	-1	0	1	0	0	-1	-1	1	1	3	3	3	2	2	0	0	-1	-1	-1	-2	-1	0.3	3.3
23-Feb	-2	-2	-2	-2	-1	-1	-1	-1	-1	-1	0	0	0	0	1	-1	-2	-3	-3	-3	-4	-5	-4	-6	-1.8	0.5
24-Feb	-7	-8	-7	-7	-8	-8	-9	-9	-10	-11	-9	-7	-6	-6	-6	-5	-5	-5	-6	-6	-7	-7	-7	-7	-7.3	-5.1
25-Feb	-8	-9	-9	-10	-10	-10	-11	-12	-12	-12	-12	-13	-12	-12	-12	-12	-12	-13	-13	-13	-13	-13	-14	-14	-11.7	-8.3
26-Feb	-14	-14	-15	-16	-16	-16	-16	-16	-17	-16	-14	-11	-10	-10	-11	-10	-10	-11	-14	-14	-13	-13	-13	-13	-13.5	-9.8
27-Feb	-13	-13	-13	-13	-11	-11	-10	-8	-7	-7	-6	-4	-3	-2	-2	-2	-3	-3	-3	-4	-5	-5	-5	-6	-6.6	-1.9
28-Feb	-6	-6	-5	-7	-8	-8	-7	-7	-7	-5	-2	1	1	1	1	1	1	-1	-2	-4	-5	-4	-4	-7	-3.7	1.3
29-Feb	-7	-5	-7	-6	-9	-7	-7	-8	-9	-9	-8	-6	-7	-8	-7	-8	-8	-9	-9	-9	-10	-11	-11	-11	-8.2	-5.3
	-5.2	-5.6	-5.7	-6.0	-6.2	-6.1	-6.2	-6.4	-6.6	-6.1	-4.7	-3.1	-2.0	-1.0	-0.4	-0.4	-0.7	-1.9	-2.9	-3.5	-4.1	-4.5	-4.7	-5.1	Diurnal Average	
	2.6	2.1	2.2	2.2	1.8	1.5	1.8	1.6	1.1	1.8	2.8	6.3	7.7	8.4	8.7	8.3	8.3	5.4	4.8	3.3	4.4	2.5	3.1	3.1	Diurnal Maximum	

N - Not Valid

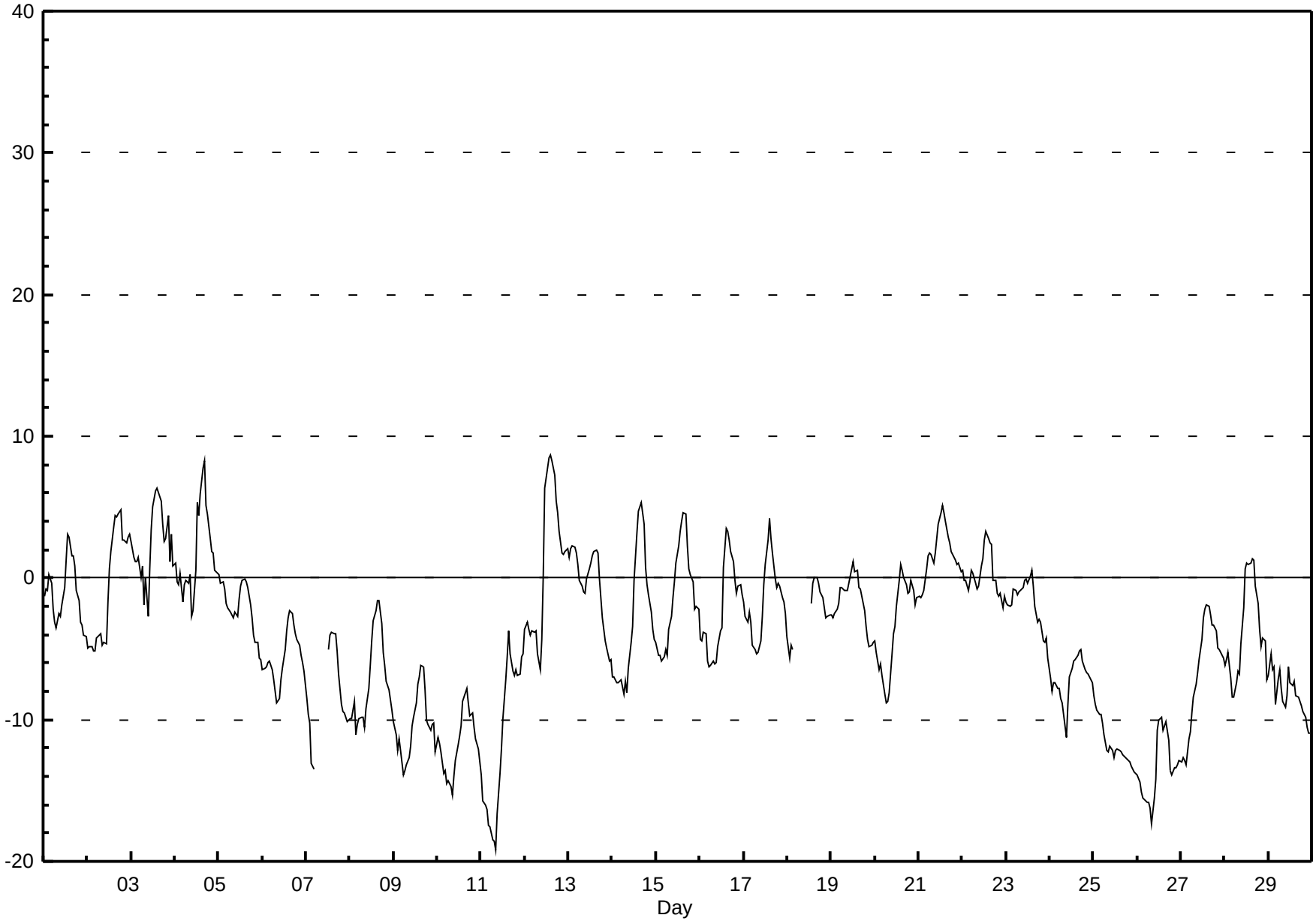
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Beaverlodge - February 2012



Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Beaverlodge - February 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 100.0 % on Feb 12 09:00 Maximum Daily Average: 95.0 % on Feb 24

Minimum Value: 34 % on Feb 15 17:00 Minimum Daily Average: 53.1 % on Feb 15
Maximum Diurnal Average: 81.6 % at hour 9 Minimum Diurnal Average: 60.0 % at hour 15
Monthly Average: 73.62 % Percentiles: P_1 = 38.4 P_{10} = 53.8 Q_1 = 64.3 Median = 73.7 Q_3 = 84.4 P_{90} = 92.1 P_{99} = 98.9

Hours in Service:	696
Hours of Data:	696
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

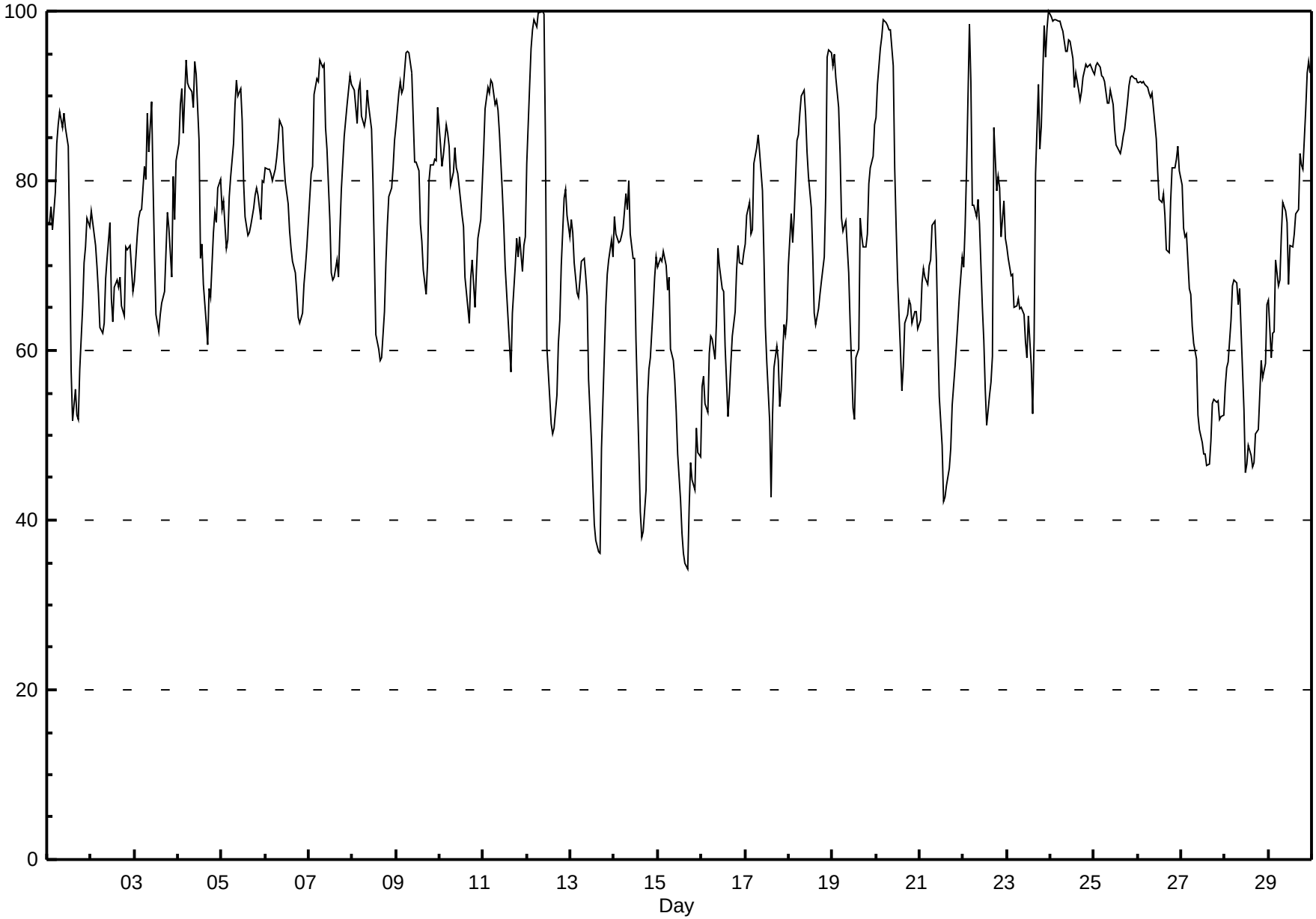
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	75	75	77	74	79	84	87	88	86	88	86	84	72	58	52	55	52	52	58	65	70	72	76	75	72.5	88.1
2-Feb	76	75	72	70	67	63	62	63	68	71	75	66	63	68	68	68	69	65	64	72	72	72	70	67	68.6	76.4
3-Feb	68	74	76	76	77	82	80	88	83	89	80	71	64	62	64	66	67	72	76	74	69	80	75	82	74.9	89.3
4-Feb	84	89	91	86	94	91	91	90	89	94	92	85	71	72	68	63	61	67	66	74	76	75	79	80	80.4	94.2
5-Feb	77	78	72	73	78	80	84	89	92	90	91	87	80	76	74	74	75	77	78	79	78	75	80	80	79.9	91.8
6-Feb	81	81	81	81	80	81	83	85	87	86	82	80	77	74	72	71	69	67	64	63	64	68	70	72	75.8	87.1
7-Feb	78	81	82	90	92	92	94	93	94	86	84	75	69	68	69	71	69	74	79	85	87	89	92	91	82.7	94.2
8-Feb	91	91	87	91	92	88	86	87	91	89	86	80	71	62	60	59	59	64	70	75	78	79	82	85	79.2	91.5
9-Feb	86	90	92	90	91	95	95	95	93	87	82	82	81	75	73	70	67	70	80	82	82	83	82	89	83.8	95.2
10-Feb	84	82	83	87	86	84	80	81	84	82	81	78	76	75	69	65	63	68	71	65	70	73	75	80	76.6	86.6
11-Feb	84	88	91	90	92	92	89	89	88	86	79	75	70	64	61	57	64	70	73	71	73	69	72	73	77.5	91.8
12-Feb	82	91	96	98	99	98	100	100	100	100	85	60	54	51	50	51	55	61	64	70	78	79	76	73	77.9	100.0
13-Feb	75	74	70	67	66	68	71	71	69	66	57	49	44	40	38	36	36	48	60	65	69	71	73	71	60.6	75.4
14-Feb	76	74	73	73	74	74	79	77	80	74	71	71	61	48	41	38	39	44	54	58	59	65	69	71	64.2	79.9
15-Feb	70	71	70	72	70	67	69	60	59	56	53	48	42	38	36	35	34	42	47	45	44	51	48	48	53.1	71.7
16-Feb	56	57	54	53	60	62	61	59	63	72	70	67	67	61	52	55	59	62	65	69	72	70	70	72	62.8	72.4
17-Feb	73	76	77	74	74	82	84	85	83	79	71	63	59	52	43	52	58	60	59	53	55	63	62	64	66.7	85.5
18-Feb	70	76	73	76	85	85	88	90	91	88	83	80	77	71	64	63	65	67	68	71	78	95	95	95	78.9	95.4
19-Feb	94	95	92	89	83	76	74	75	72	69	63	53	52	59	60	76	74	72	72	74	80	81	83	87	75.2	94.9
20-Feb	87	91	96	97	99	99	98	98	98	94	81	75	69	60	55	58	63	64	66	65	63	65	65	63	77.9	98.9
21-Feb	64	68	70	69	68	70	71	75	75	71	62	55	49	42	43	44	46	49	54	58	61	64	66	71	60.9	75.3
22-Feb	70	75	81	98	92	77	77	76	78	75	65	61	55	51	55	56	59	86	79	80	79	73	78	73	72.9	98.4
23-Feb	72	71	69	69	65	65	66	65	65	64	61	59	64	58	53	61	81	91	84	86	98	95	98	100	73.4	100.0
24-Feb	99	99	99	99	99	99	98	98	95	95	97	96	94	91	93	91	89	90	92	94	93	94	94	93	95.0	99.3
25-Feb	93	94	94	93	92	92	92	89	89	91	89	86	84	84	83	84	85	86	89	91	92	92	92	92	89.6	93.9
26-Feb	92	92	91	92	91	91	90	90	90	87	85	81	78	77	79	76	72	72	78	82	82	82	84	81	83.9	91.6
27-Feb	80	74	73	74	67	67	63	61	59	52	51	49	48	48	46	47	49	54	54	54	54	52	52	52	57.5	79.6
28-Feb	56	58	59	64	68	68	68	65	67	62	53	46	47	49	48	46	47	50	51	55	59	57	58	65	56.9	68.3
29-Feb	66	59	62	62	71	68	68	74	77	76	75	68	72	72	74	76	77	83	82	81	89	93	94	93	75.5	94.0
	77.9	79.2	79.4	80.1	81.0	80.7	81.0	81.3	81.6	80.0	75.5	70.0	65.9	62.3	60.0	60.8	62.1	66.5	68.8	71.0	73.3	75.1	76.2	77.1	Diurnal Average	
	99.3	98.8	99.0	98.9	99.0	98.8	99.9	99.9	100.0	99.6	96.6	96.4	94.3	91.0	92.7	90.7	89.5	91.4	92.2	93.7	98.3	94.6	98.0	100.0	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Beaverlodge - February 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Beaverlodge - February 2012

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	5	1	6	2	3	2	4	1	1	3	1	9	17	17	9	8	10	14	15	10	11	3	2	4.6	16.7
Dir	197	221	328	277	33	190	131	110	73	141	55	79	238	266	287	296	290	272	264	260	247	248	94	152	262	266
2 Spd	4	3	3	4	5	5	4	2	4	4	3	3	12	8	13	16	11	11	9	3	4	4	2	3	2.7	16.3
Dir	72	93	120	108	119	122	130	212	111	184	72	238	226	208	227	239	239	256	248	54	107	84	127	99	197	239
3 Spd	3	4	2	2	2	2	1	4	3	5	4	1	2	2	4	8	9	5	5	14	11	6	11	4	2.2	13.6
Dir	109	84	60	62	242	118	222	92	91	228	15	206	183	113	229	287	324	358	356	354	346	298	317	308	338	354
4 Spd	2	3	6	4	1	0	5	4	1	1	4	4	2	4	3	2	1	5	2	4	3	2	1	1	1.5	6.3
Dir	48	89	45	75	72	17	12	14	45	14	303	40	134	172	152	105	89	53	221	52	32	317	328	266	48	45
5 Spd	1	2	8	14	10	14	11	18	16	10	16	12	9	6	7	7	3	3	5	10	11	8	8	7	5.8	17.7
Dir	337	329	334	327	322	322	323	331	328	346	326	345	339	340	61	122	113	76	55	43	58	64	128	106	355	331
6 Spd	10	13	12	12	15	11	10	10	11	10	10	10	13	14	16	16	18	17	19	23	24	20	21	15	14.3	23.9
Dir	85	86	89	84	91	86	83	97	93	103	110	120	103	106	93	89	85	83	82	85	92	93	96	93	92	92
7 Spd	5	6	4	2	3	2	2	1	1	1	2	2	1	3	4	6	2	2	3	1	1	3	3	2	0.7	6.4
Dir	232	44	101	324	10	289	28	29	230	198	84	158	133	178	144	143	103	226	9	182	13	47	59	332	87	44
8 Spd	1	3	2	2	5	4	7	9	7	8	9	11	12	15	13	11	11	9	10	11	9	7	8	8	7.3	15.0
Dir	345	46	329	326	331	328	323	311	311	309	310	310	306	302	312	318	329	341	5	2	357	5	344	329	327	302
9 Spd	4	4	6	7	2	1	0	6	2	2	3	4	4	6	6	5	3	3	6	11	7	12	7	11	2.7	12.3
Dir	347	308	21	32	203	104	176	53	94	93	152	189	210	121	57	35	26	24	104	72	37	79	62	291	57	79
10 Spd	13	2	2	3	3	3	6	8	9	12	15	12	9	10	9	6	6	9	10	11	13	10	3	8	6.9	14.6
Dir	70	320	205	49	45	206	97	80	71	85	94	97	115	115	95	64	16	27	50	78	87	101	106	83	82	94
11 Spd	6	4	3	3	1	0	1	1	1	1	2	3	2	3	3	3	3	5	4	3	3	5	6	5	1.3	5.7
Dir	94	242	257	209	46	58	68	67	87	217	109	178	178	143	153	139	187	182	162	142	85	52	42	48	130	42
12 Spd	4	3	3	4	4	3	3	3	7	6	2	15	23	28	25	28	25	19	19	15	14	13	3	9	8.3	28.3
Dir	52	74	114	57	54	57	70	164	49	54	92	252	260	261	269	264	260	257	267	255	242	248	302	264	262	264
13 Spd	6	13	12	18	20	20	19	17	14	10	17	24	25	17	18	18	19	15	13	15	10	6	3	4	14.1	25.5
Dir	273	275	268	266	265	268	265	260	261	265	278	280	277	290	285	277	265	244	250	249	243	220	215	219	266	277
14 Spd	1	3	3	3	3	3	1	5	3	3	3	2	2	2	8	14	11	15	11	9	5	10	2	1	2.5	14.9
Dir	135	69	68	74	66	61	156	309	79	84	106	178	50	252	248	242	258	268	251	258	239	231	219	112	248	268
15 Spd	2	1	3	3	2	5	1	9	11	22	18	18	20	19	17	16	13	9	10	10	6	3	4	4	8.3	22.4
Dir	207	67	55	78	155	187	63	267	286	275	278	281	277	275	276	268	279	265	263	267	279	315	326	301	275	275
16 Spd	3	4	4	3	2	3	3	3	1	1	1	2	5	10	24	25	22	14	20	16	16	21	17	11	7.0	25.5
Dir	121	72	63	87	115	121	93	110	164	58	71	91	182	227	244	244	242	244	244	252	262	265	267	275	245	244
17 Spd	10	7	2	5	6	4	3	4	4	4	4	4	4	6	4	8	10	9	8	6	7	10	10	12	3.3	11.7
Dir	277	272	336	279	276	65	98	75	67	124	163	130	158	86	67	25	22	27	20	45	31	15	15	15	25	15
18 Spd	7	2	9	8	14	13	6	5	14	12	15	16	12	13	13	10	8	6	4	4	6	10	7	5	7.9	15.8
Dir	9	41	8	3	320	338	342	342	309	309	319	319	308	301	299	295	305	325	318	268	243	268	271	261	313	319
19 Spd	1	1	0	3	8	20	22	20	21	25	26	29	29	28	19	16	12	9	7	8	8	9	8	8	13.1	28.9
Dir	273	101	140	298	286	271	261	252	252	260	262	268	274	282	299	316	314	298	312	325	296	280	303	306	278	268
20 Spd	8	5	4	3	4	1	3	4	2	1	3	4	6	7	6	10	10	8	6	3	4	5	5	3	2.8	10.0
Dir	298	264	39	32	45	146	52	62	94	123	181	186	165	173	134	112	112	102	116	131	133	128	113	128	119	112
21 Spd	3	4	2	1	14	23	29	43	36	38	42	39	38	36	32	30	40	30	18	20	17	16	14	5	22.7	43.5
Dir	84	130	123	116	252	250	246	252	258	267	267	268	264	259	274	282	261	266	258	245	254	267	261	211	260	252
22 Spd	2	2	2	7	22	29	26	28	29	28	32	25	22	20	19	13	23	15	7	3	5	8	7	8	14.9	31.7
Dir	243	140	275	291	258	261	270	266	257	259	267	272	286	294	298	288	268	320	356	321	292	307	275	276	275	267

FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Beaverlodge - February 2012

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	13	14	12	14	20	20	21	22	19	24	27	24	24	17	16	19	18	13	9	11	9	10	11	2	15.8	26.6
Dir	273	276	274	261	268	269	270	275	278	271	272	279	280	298	294	295	286	270	308	307	282	281	264	179	278	272
24 Spd	6	5	7	4	4	3	2	1	1	1	2	10	25	28	27	27	28	29	34	32	33	35	32	32	16.5	35.4
Dir	72	91	69	83	78	79	95	203	244	310	258	97	91	86	81	76	75	75	73	71	72	71	71	69	76	71
25 Spd	28	23	24	24	23	22	20	18	14	13	22	25	20	18	17	17	13	11	9	10	10	11	10	11	16.7	28.0
Dir	63	55	53	56	57	46	36	33	26	26	33	32	33	33	34	45	43	38	32	13	15	19	26	21	39	63
26 Spd	10	7	9	7	7	8	7	5	4	1	2	2	2	4	9	10	7	8	7	6	4	3	2	3	1.9	10.3
Dir	12	11	2	350	11	25	15	5	330	332	64	150	129	135	187	189	160	120	111	103	101	82	179	177	63	12
27 Spd	5	5	5	2	6	5	8	9	5	8	9	8	9	16	19	21	18	15	12	14	9	10	11	12	9.6	21.2
Dir	186	207	204	138	217	205	243	238	238	258	259	243	239	274	243	240	247	248	247	239	234	246	256	242	242	240
28 Spd	13	12	7	3	3	3	4	2	3	0	3	3	3	4	5	6	7	6	6	6	9	3	3	1	1.5	13.2
Dir	251	264	278	161	139	143	150	316	64	193	136	140	115	72	62	88	103	75	58	84	75	92	35	76	101	251
29 Spd	2	2	6	1	3	13	21	16	9	3	10	1	9	11	16	16	14	14	13	15	10	8	9	9	8.5	20.6
Dir	225	359	49	221	216	25	50	34	353	343	23	101	344	355	8	17	23	34	34	32	28	341	328	349	18	50
Spd	1.2	0.9	2.2	1.9	2.0	2.7	2.6	3.8	3.9	4.7	5.0	5.2	5.6	5.2	5.2	4.8	4.8	3.0	2.0	1.9	1.5	1.4	1.8	1.5	Diurnal Average	
Dir	32	13	26	5	303	293	299	291	291	277	288	280	274	279	286	284	283	303	321	349	10	336	353	2		
Spd	28.0	22.9	23.7	24.0	22.7	29.0	29.4	43.5	36.0	38.2	42.2	38.9	37.7	36.1	32.3	29.7	40.1	29.5	33.5	32.3	32.9	35.4	32.2	31.8	Diurnal Maximum	
Dir	63	55	53	56	57	261	246	252	258	267	267	268	264	259	274	282	261	266	73	71	72	71	71	69		

Maximum Speed Value: 43 km/h on Feb 21 08:00
Maximum Daily Speed Average: 22.7 km/h on Feb 21
Maximum Diurnal Speed Average: 5.6 km/h at hour 13

Minimum Speed Value: 0 km/h on Feb 28 10:00
Minimum Daily Speed Average: 0.7 km/h on Feb 7
Minimum Diurnal Speed Average: 0.9 km/h at hour 2

Monthly Average Velocity: 2.66 km/h 299.0 deg

Speed Percentiles: $P_1 = 0.7$ $P_{10} = 1.8$ $Q_1 = 3.3$ Median = 7.2 $Q_3 = 13.3$ $P_{90} = 20.7$ $P_{99} = 35.4$

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

Hours in Service:	696
Hours of Data:	696
Hours of Missing Data:	0
Percent Operational Time:	100.0

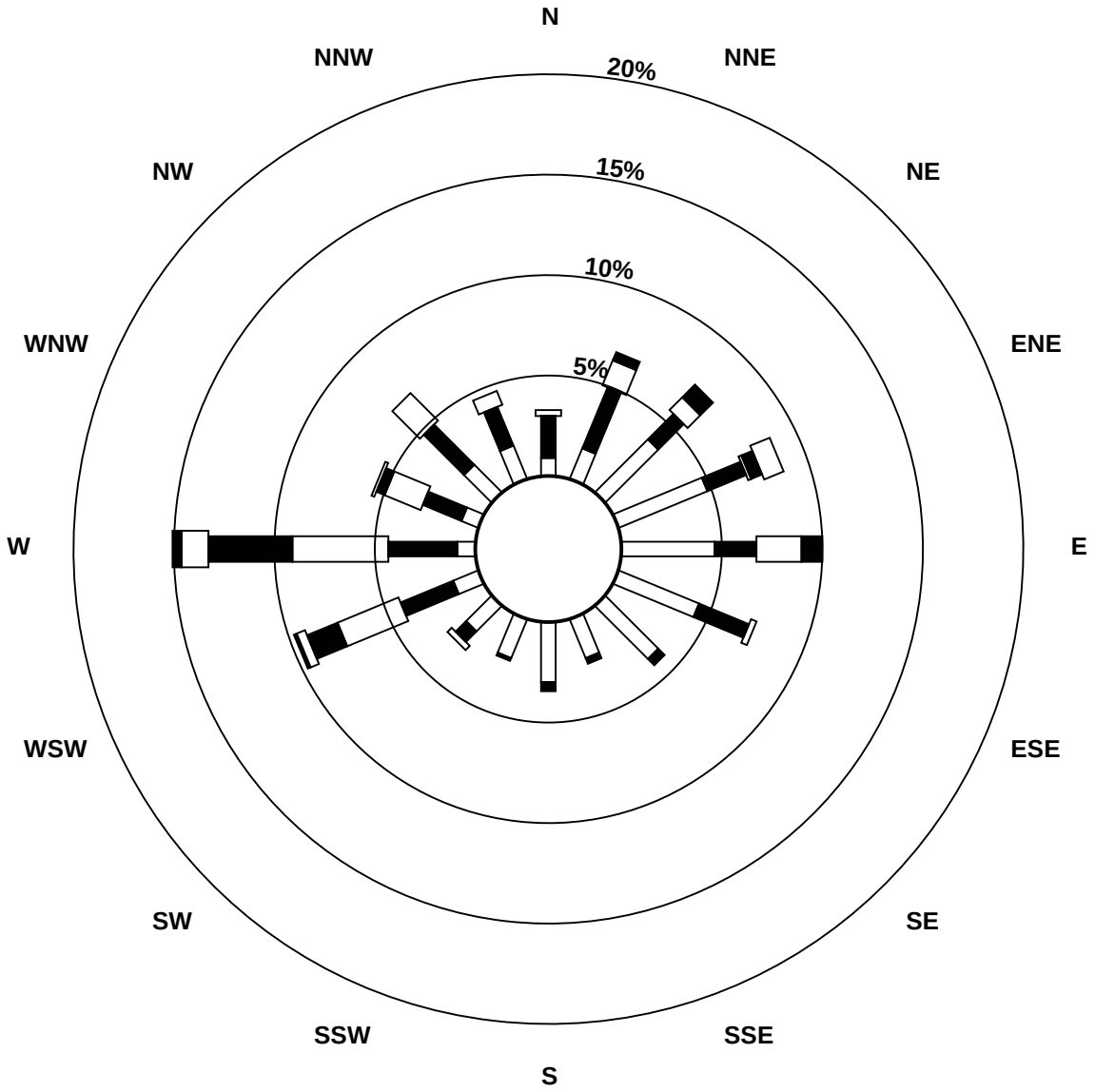
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	14	35	9	0	0	0	58
NorthEast	51	29	14	11	0	0	105
East	65	32	19	8	8	0	132
SouthEast	47	14	0	0	0	0	61
South	29	7	0	0	0	0	36
SouthWest	30	21	12	6	1	0	70
West	10	37	48	39	12	5	151
NorthWest	27	28	25	3	0	0	83
Total	273	203	127	67	21	5	696

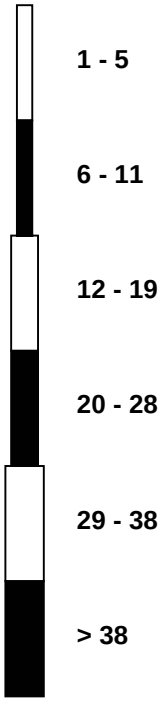
Wind Rose

Wind Speed (WS) (km/h)

Beaverlodge - February 2012



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Beaverlodge - February 2012

Maximum Speed: 44 km/h on Feb 21 08:00

Maximum Daily Speed Average: 24.1 km/h on Feb 21

Minimum Speed: 1 km/h on Feb 19 03:00

Minimum Daily Speed Average: 3.5 km/h on Feb 11

Maximum Diurnal Speed Average: 13.8 km/h at hour 16

Minimum Diurnal Speed Average: 6.1 km/h at hour 2

Monthly Average Speed: 10.01 km/h

Percentiles: $P_1 = 1.7$ $P_{10} = 2.9$ $Q_1 = 4.1$ Median = 7.6 $Q_3 = 13.4$ $P_{90} = 20.7$ $P_{99} = 35.8$

Hours in Service:	696
Hours of Data:	696
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	5	5	3	6	3	4	3	6	4	2	4	3	9	17	17	9	8	11	14	15	10	11	3	2	7.2	16.9
2-Feb	4	4	3	4	5	6	5	3	6	4	4	7	12	8	13	16	11	11	9	4	5	4	3	4	6.4	16.4
3-Feb	4	5	3	4	4	4	6	8	5	7	4	3	2	3	5	9	9	5	6	15	12	7	11	5	6.2	15.1
4-Feb	3	3	6	5	4	2	6	5	3	5	7	5	3	4	4	2	3	6	3	4	4	5	3	2	4.0	7.2
5-Feb	3	3	8	14	10	14	11	18	16	11	16	12	10	7	7	7	4	3	5	10	11	8	9	8	9.3	17.7
6-Feb	10	13	12	12	15	11	10	10	11	10	10	10	13	14	16	17	18	17	19	23	24	20	21	15	14.5	23.9
7-Feb	7	7	7	6	6	5	3	3	2	3	4	3	2	3	5	6	4	3	3	2	2	3	3	4	3.9	7.4
8-Feb	3	3	2	2	6	5	7	9	7	8	9	11	13	15	13	11	11	9	10	11	9	7	8	8	8.2	15.1
9-Feb	5	4	6	7	3	2	3	6	3	3	4	4	7	7	6	5	4	4	8	11	9	12	13	11	6.3	13.3
10-Feb	13	6	4	5	4	4	7	8	9	12	15	12	9	10	10	7	6	9	10	11	13	10	3	8	8.6	14.6
11-Feb	7	4	3	3	2	2	2	3	2	2	3	3	3	3	4	4	4	5	4	3	4	5	6	6	3.5	7.2
12-Feb	4	3	3	4	5	3	3	4	7	6	4	15	23	28	25	28	25	19	19	15	14	13	4	9	11.9	28.4
13-Feb	7	13	12	18	20	20	19	17	14	10	17	24	26	17	18	18	20	15	13	15	10	6	3	4	14.8	25.6
14-Feb	2	3	3	3	3	3	2	5	4	3	3	3	4	4	8	14	11	15	11	9	6	10	5	2	5.7	14.9
15-Feb	5	2	4	3	3	5	3	9	11	22	19	18	20	19	17	16	13	9	10	10	7	5	5	5	10.1	22.4
16-Feb	4	4	4	4	3	4	4	3	2	2	2	3	6	11	24	26	22	14	20	16	16	21	17	11	10.1	25.6
17-Feb	10	7	4	5	6	4	3	4	4	4	4	4	4	6	5	8	10	9	8	6	8	11	10	12	6.5	11.8
18-Feb	7	2	9	9	14	13	7	6	14	12	15	16	12	13	13	10	8	6	5	4	6	10	7	5	9.3	15.9
19-Feb	3	1	1	3	8	20	22	20	21	25	26	29	29	28	20	16	12	9	7	8	9	9	8	8	14.3	29.1
20-Feb	8	6	5	3	4	2	4	5	3	2	4	4	6	7	6	10	10	8	7	3	4	6	5	3	5.1	10.0
21-Feb	3	4	2	4	14	23	30	44	36	38	42	39	38	36	33	30	40	30	18	20	17	16	15	5	24.1	43.8
22-Feb	3	3	4	8	23	29	26	28	30	28	32	25	22	21	20	14	23	16	8	6	5	8	7	8	16.4	31.9
23-Feb	13	14	12	14	20	20	21	22	19	24	27	25	25	17	18	20	19	13	10	12	9	10	13	5	16.7	26.6
24-Feb	6	6	7	5	5	3	2	1	1	4	3	10	25	28	27	27	28	29	34	32	33	35	32	32	17.3	35.4
25-Feb	28	23	24	24	23	22	20	18	15	13	22	25	20	18	17	17	13	11	9	10	10	11	10	11	17.2	28.0
26-Feb	10	7	9	7	7	8	7	6	5	3	3	2	4	4	9	10	9	8	7	6	4	3	3	4	6.1	10.3
27-Feb	5	5	5	2	6	5	8	9	5	8	9	8	9	16	19	21	18	15	12	14	9	10	11	12	10.3	21.2
28-Feb	13	12	8	4	4	4	6	4	4	3	4	3	4	4	5	6	7	6	6	6	9	4	6	4	5.8	13.3
29-Feb	2	3	6	4	3	13	21	17	10	8	11	5	9	12	16	16	14	14	13	15	10	8	9	9	10.4	20.7
	6.9	6.1	6.2	6.6	8.0	9.0	9.3	10.4	9.4	9.8	11.2	11.4	12.7	13.2	13.7	13.8	13.3	11.4	10.6	10.9	10.0	10.0	8.7	7.7	Diurnal Average	
	28.0	22.9	23.7	24.1	22.8	29.1	29.6	43.8	36.2	38.3	42.3	39.0	37.8	36.5	32.7	30.4	40.2	29.8	33.6	32.3	33.0	35.4	32.2	31.8	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

Beaverlodge - February 2012

Maximum Value: 94.0 deg on Feb 11 06:00

Minimum Value: 1.9 deg on Feb 6 22:00

Percentiles: P_1 = 2.6 P_{10} = 4.3 Q_1 = 6.5 Median = 14.0 Q_3 = 37.8 P_{90} = 64.6 P_{99} = 87.4

Hours in Service:	696
Hours of Data:	696
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Feb	19	66	63	16	32	76	38	46	83	74	52	75	9	10	11	6	14	18	3	6	11	20	18	52	83.0
2-Feb	19	23	33	16	16	15	44	39	51	16	50	88	5	11	7	8	7	11	12	73	33	24	32	27	88.4
3-Feb	31	27	78	82	71	63	90	57	51	52	36	81	44	47	50	37	9	24	55	27	11	43	7	64	90.4
4-Feb	62	38	11	37	85	92	39	36	75	84	65	56	59	11	34	30	65	46	80	59	64	71	75	81	91.5
5-Feb	79	85	38	2	9	2	4	3	10	22	5	11	7	20	25	12	28	12	10	4	10	33	27	11	84.5
6-Feb	4	4	6	6	7	7	7	5	4	7	4	8	10	7	7	7	6	4	4	3	4	2	3	6	9.9
7-Feb	42	53	69	75	57	64	45	70	69	65	60	31	66	48	19	15	59	59	20	64	64	13	55	61	75.2
8-Feb	68	55	29	59	40	22	18	6	11	10	7	8	8	6	10	16	15	9	13	6	17	6	11	16	68.0
9-Feb	53	42	21	8	59	72	82	21	43	49	36	24	58	35	20	25	49	62	38	14	54	16	67	23	82.1
10-Feb	8	71	62	79	45	71	30	8	5	5	5	9	14	15	16	29	17	4	10	5	4	14	10	8	79.1
11-Feb	54	17	17	22	74	94	88	85	72	72	34	24	51	33	28	45	31	12	9	18	26	10	9	11	94.0
12-Feb	11	23	26	25	20	29	38	37	7	7	65	22	4	6	7	4	5	7	4	7	3	13	21	18	64.6
13-Feb	32	4	4	3	3	7	4	5	5	6	5	4	5	10	9	12	9	7	6	3	8	8	54	31	53.5
14-Feb	49	12	11	17	15	22	84	25	48	27	31	40	82	81	11	9	8	6	8	9	15	4	81	46	84.3
15-Feb	78	81	28	41	28	15	85	47	8	5	6	4	6	8	9	10	6	12	12	8	33	50	43	32	85.2
16-Feb	59	31	12	38	15	20	26	36	52	82	78	63	37	16	9	5	3	4	3	8	3	3	4	6	82.4
17-Feb	6	14	62	39	52	10	28	15	14	26	17	25	27	15	40	12	4	3	4	14	11	7	6	8	62.3
18-Feb	21	58	6	20	4	10	44	52	11	8	7	4	8	7	8	7	9	12	12	26	3	10	8	23	57.9
19-Feb	85	70	84	11	6	3	5	3	2	4	4	6	8	7	11	10	9	7	12	8	20	6	6	3	84.6
20-Feb	5	43	40	45	18	57	11	13	42	34	43	26	15	16	29	7	4	11	23	32	29	22	12	27	57.2
21-Feb	29	13	25	66	10	8	5	7	6	5	4	5	6	8	8	11	4	9	6	5	5	5	18	19	65.7
22-Feb	67	70	52	30	7	5	5	5	4	5	5	5	7	7	16	10	8	21	22	61	27	16	6	9	70.4
23-Feb	7	4	4	7	4	4	3	4	4	5	4	7	6	9	24	17	22	12	24	8	14	13	41	67	66.6
24-Feb	17	18	12	15	17	11	38	61	60	70	66	17	5	4	6	4	3	3	3	2	3	3	3	3	69.6
25-Feb	4	4	5	4	5	5	5	5	5	6	3	3	4	4	4	5	7	5	6	5	9	4	3	3	8.7
26-Feb	6	12	8	10	9	4	9	56	41	90	67	48	33	33	9	6	34	8	11	6	34	20	38	43	90.3
27-Feb	19	19	22	47	10	6	14	3	8	10	6	9	9	15	10	4	5	5	9	18	15	9	11	5	47.4
28-Feb	6	4	41	45	38	42	50	62	54	82	21	18	20	7	7	21	10	9	35	15	6	63	72	77	81.9
29-Feb	45	51	19	88	56	23	8	19	27	82	15	78	16	13	7	3	4	4	3	3	8	13	6	11	88.4
	84.6	84.5	84.0	88.4	85.1	94.0	90.4	85.2	83.0	90.3	77.9	88.4	82.5	80.8	49.5	44.7	65.0	62.1	80.4	73.0	63.8	71.0	81.4	81.0	

PAZA
Valleyview Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Valleyview - February 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 20.1 ppb on Feb 22 09:00
Maximum Daily Average: 2.2 ppb on Feb 22

Minimum Value: 0 ppb on Feb 1 01:00
Maximum Diurnal Average: 1.0 ppb at hour 9
Monthly Average: 0.55 ppb

Minimum Daily Average: 0.1 ppb on Feb 5
Minimum Diurnal Average: 0.3 ppb at hour 2
Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.3 Q_3 = 0.6 P_{90} = 1.2 P_{99} = 3.2

Hours in Service:	696
Hours of Data:	663
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	A	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0.1	1.2
2-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	0.1	0.4
3-Feb	0	0	0	0	0	A	0	0	0	0	0	0	1	1	0	1	1	1	1	1	1	1	0	0	0.4	1.3
4-Feb	0	0	1	0	A	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0.3	0.7
5-Feb	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.1	0.5
6-Feb	0	0	A	0	0	0	0	0	0	0	0	0	0	2	2	2	1	2	3	2	2	2	2	2	1.0	3.1
7-Feb	1	A	0	1	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0.7	1.4
8-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	A	0.5	1.4
9-Feb	0	0	0	0	0	0	0	0	0	0	0	0	4	2	1	0	0	0	0	0	0	0	A	0	0.5	4.4
10-Feb	0	0	0	1	3	3	3	1	1	2	4	3	2	2	2	1	1	2	2	3	2	A	1	1	1.8	3.7
11-Feb	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.3	2.2
12-Feb	1	1	1	1	1	1	0	0	0	1	1	1	1	1	2	0	0	0	1	A	0	0	0	0	0.6	2.1
13-Feb	0	0	3	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0.6	3.2
14-Feb	0	0	0	1	1	1	1	1	1	1	3	3	C	C	C	1	1	A	0	0	0	0	0	0	0.8	3.2
15-Feb	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	A	0	0	0	0	0	0	0	0.2	1.7
16-Feb	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	A	1	0	0	0	0	0	1	1	0.3	1.5
17-Feb	0	0	0	0	0	0	0	0	0	0	0	0	1	1	A	0	1	1	0	0	0	0	0	0	0.4	0.8
18-Feb	0	0	0	0	0	0	0	0	0	0	0	0	1	A	2	1	1	0	1	1	1	0	0	0	0.4	2.1
19-Feb	0	0	0	0	0	0	0	0	1	1	1	1	A	0	0	0	0	1	1	0	1	1	0	0	0.4	1.1
20-Feb	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0	1	1	1	0.3	0.8
21-Feb	1	1	1	1	0	0	0	0	1	5	A	1	0	0	0	0	1	1	0	1	1	0	0	1	0.7	4.6
22-Feb	1	1	1	1	0	0	2	11	20	A	3	1	1	0	0	1	0	1	1	0	0	1	1	3	2.2	20.1
23-Feb	1	0	0	0	0	1	1	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8
24-Feb	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.2	0.5
25-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	0.5
26-Feb	0	0	0	0	0	A	1	0	1	1	1	2	1	1	1	1	1	1	0	0	0	0	0	0	0.5	1.5
27-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0	0	0.3	3.9
28-Feb	0	0	0	A	0	0	0	0	0	0	0	1	1	1	3	3	0	0	0	0	0	0	0	0	0.4	2.9
29-Feb	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0.4	1.0
	0.3	0.3	0.4	0.4	0.3	0.4	0.4	0.7	1.0	0.5	0.7	0.7	0.7	0.8	1.0	0.7	0.6	0.6	0.6	0.5	0.4	0.4	0.4	0.5	Diurnal Average	
	1.8	2.0	3.2	2.2	2.7	3.3	2.7	10.9	20.1	4.6	3.7	2.6	4.4	2.4	3.9	2.8	1.5	2.2	3.1	3.0	2.4	2.3	2.2	2.7	Diurnal Maximum	

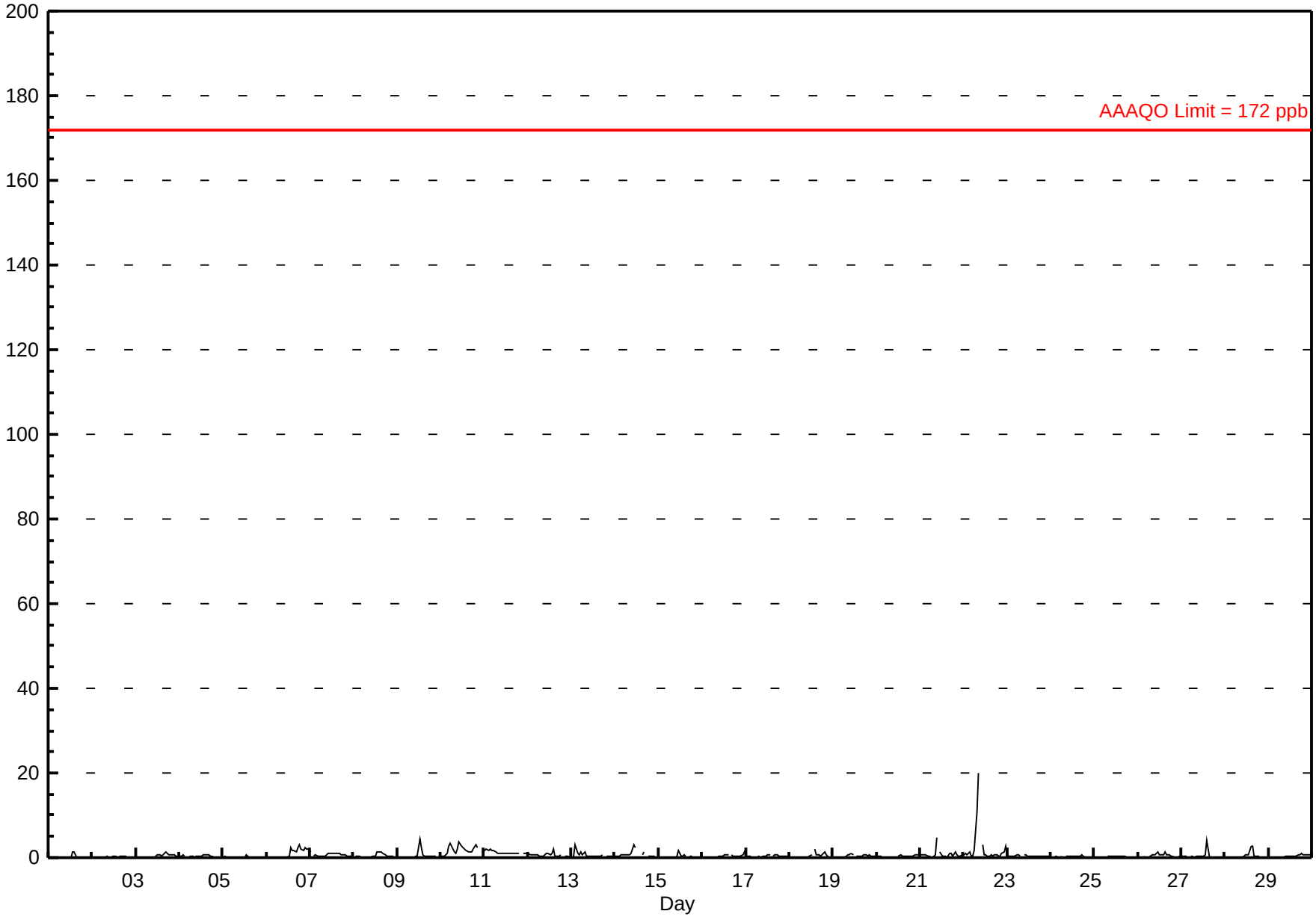
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Valleyview - February 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Valleyview - February 2012

Maximum Value: 54.9 ppb on Feb 22 09:00

Maximum Daily Average: 6.8 ppb on Feb 22

Minimum Value: 0 ppb on Feb 6 04:00

Minimum Daily Average: 0.8 ppb on Feb 5

Maximum Diurnal Average: 3.2 ppb at hour 9

Minimum Diurnal Average: 1.0 ppb at hour 5

Monthly Average: 1.63 ppb

Percentiles: $P_1 = 0.5$ $P_{10} = 0.7$ $Q_1 = 0.8$ Median = 1.0 $Q_3 = 1.5$ $P_{90} = 2.5$ $P_{99} = 12.4$

Hours in Service:	696
Hours of Data:	663
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	A	1	1	1	1	1	12	3	1	1	1	1	1	1	1	1	1	1.3	12.5
2-Feb	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1
3-Feb	1	0	1	1	0	A	0	1	1	1	1	1	1	1	1	2	2	1	2	1	2	1	1	1	1.1	2.1
4-Feb	1	1	2	1	A	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1.0	1.9
5-Feb	1	1	1	A	0	1	1	1	1	1	1	1	1	3	1	1	1	1	1	0	1	1	1	1	0.8	2.5
6-Feb	0	1	A	0	1	1	1	0	1	1	1	1	2	4	3	3	2	3	4	3	2	3	3	3	1.8	4.2
7-Feb	2	A	1	1	1	1	1	1	1	2	2	1	2	2	2	2	2	1	1	1	1	1	1	1	1.4	2.4
8-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1	1	1	A	1.2	2.3
9-Feb	1	0	1	1	1	1	1	1	1	1	1	2	9	5	2	1	1	1	1	1	1	1	A	1	1.5	8.8
10-Feb	1	1	1	2	4	5	4	4	2	4	5	3	3	3	2	2	2	2	3	4	3	A	2	2	2.9	4.8
11-Feb	2	3	2	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	A	2	2	2	1.9	2.7
12-Feb	2	2	1	1	1	1	1	1	1	1	1	2	2	4	8	1	1	1	1	A	1	1	1	1	1.7	8.4
13-Feb	1	1	7	2	2	3	2	3	1	1	1	1	2	1	1	1	1	1	A	1	1	1	1	1	1.6	7.0
14-Feb	1	1	1	1	1	1	1	2	2	2	8	4	C	C	C	2	3	A	1	2	1	1	1	1	1.8	8.4
15-Feb	1	1	1	1	1	1	1	1	1	1	1	6	1	1	1	1	A	1	1	1	1	1	1	1	1.1	6.5
16-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	5	5	1.2	4.9
17-Feb	1	1	1	1	1	1	1	1	1	1	1	1	2	1	A	1	2	2	1	1	1	1	1	1	1.1	2.0
18-Feb	1	1	1	1	1	1	1	1	1	1	1	2	1	A	8	1	1	1	2	2	1	1	1	1	1.4	8.0
19-Feb	1	0	1	1	1	1	1	1	1	2	2	2	A	1	1	1	1	1	1	1	1	1	1	1	1.1	2.1
20-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	2	2	1	1.0	1.5
21-Feb	2	1	1	2	1	1	1	1	9	13	A	3	1	1	5	3	5	10	2	4	2	1	1	1	3.0	13.3
22-Feb	1	3	4	7	1	1	9	25	55	A	14	1	1	1	1	2	1	2	2	1	1	2	11	11	6.8	54.9
23-Feb	2	1	1	1	1	1	2	1	A	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	2.7
24-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	1.3
25-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	1.5
26-Feb	1	1	1	1	1	A	1	1	1	1	5	6	5	2	6	15	2	1	1	1	1	1	1	1	2.5	15.1
27-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	5	16	1	1	1	1	1	1	1	1	1	1.7	16.2
28-Feb	1	1	1	A	1	1	1	1	1	1	1	1	1	2	7	6	1	1	1	1	1	1	1	1	1.4	7.0
29-Feb	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1.1	1.7
	1.1	1.0	1.3	1.2	1.0	1.1	1.4	2.0	3.2	1.7	2.0	1.8	1.7	2.3	3.0	2.1	1.5	1.6	1.4	1.4	1.2	1.1	1.6	1.5	Diurnal Average	
	2.4	2.7	7.0	6.7	3.7	4.8	9.4	25.0	54.9	13.3	13.6	6.5	8.8	12.5	16.2	15.1	5.1	10.3	4.2	4.3	3.2	2.9	11.3	10.6	Diurnal Maximum	

C - Calibration

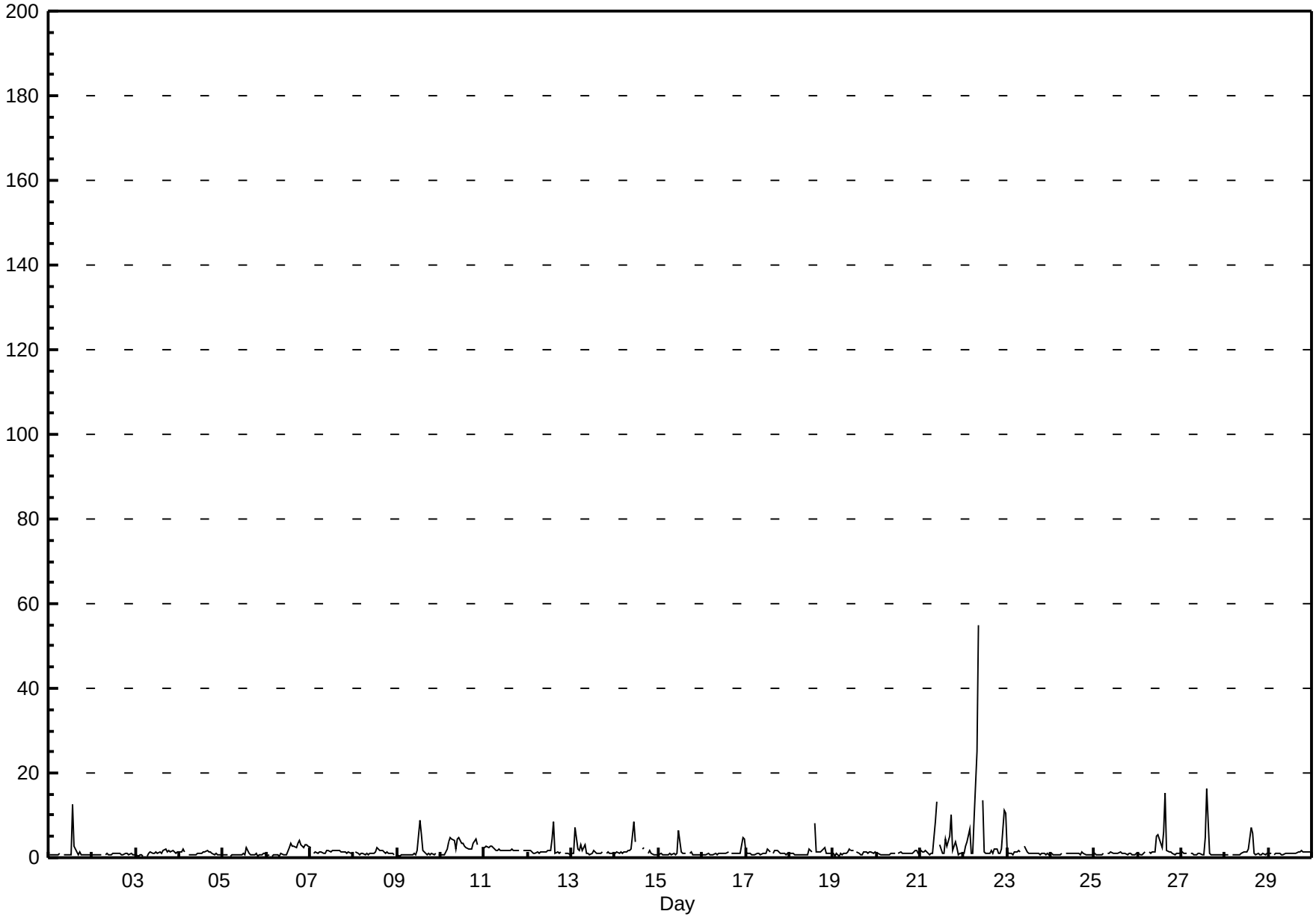
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Valleyview - February 2012

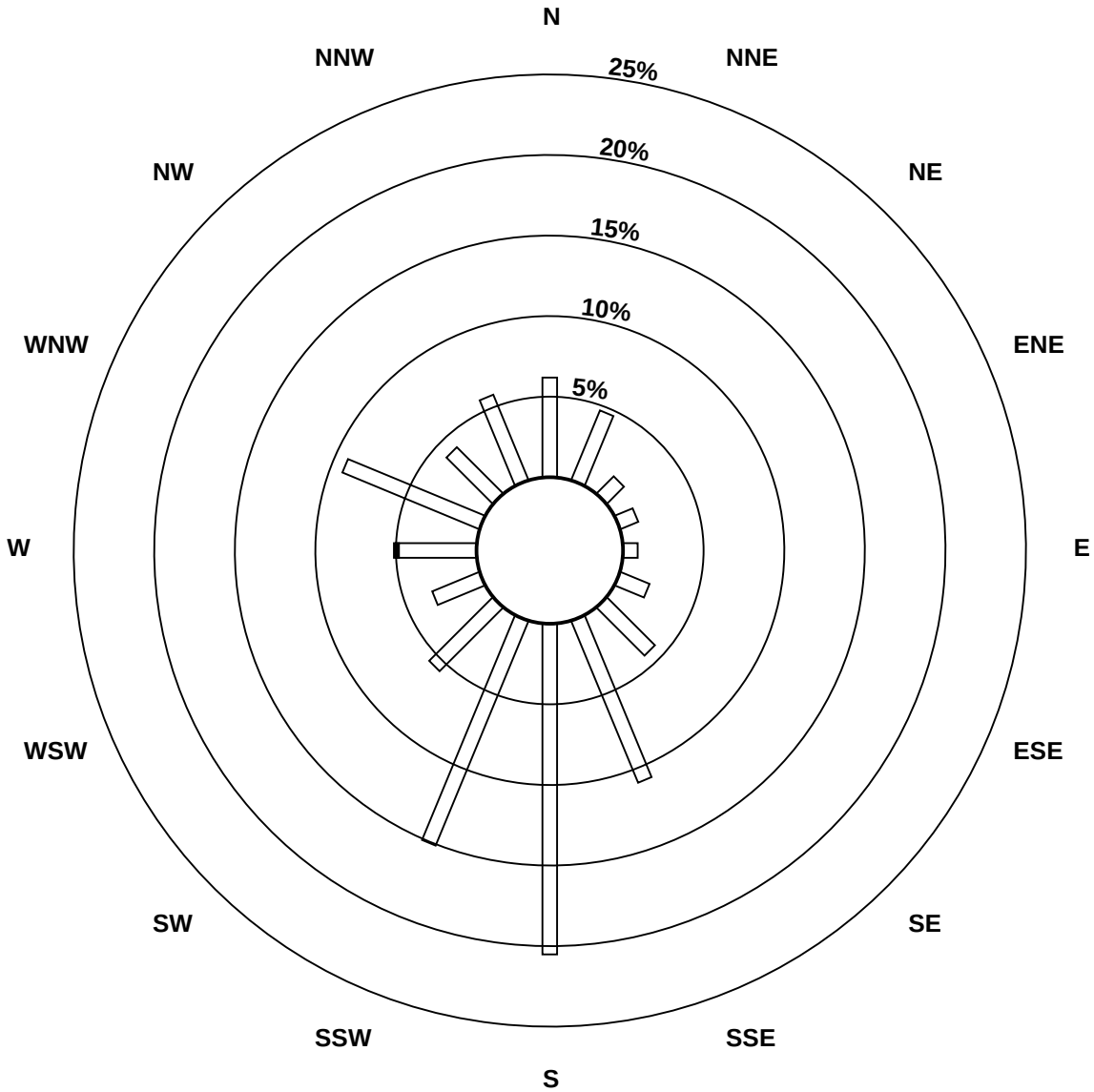


FOCUS AIR QUALITY MONITORING

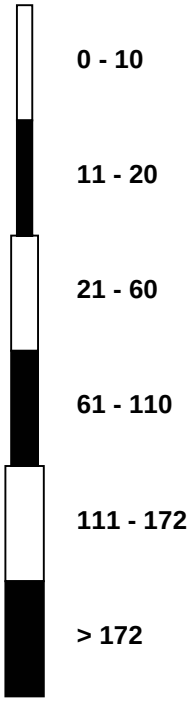
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Valleyview - February 2012



Pollutant Classes (ppb)

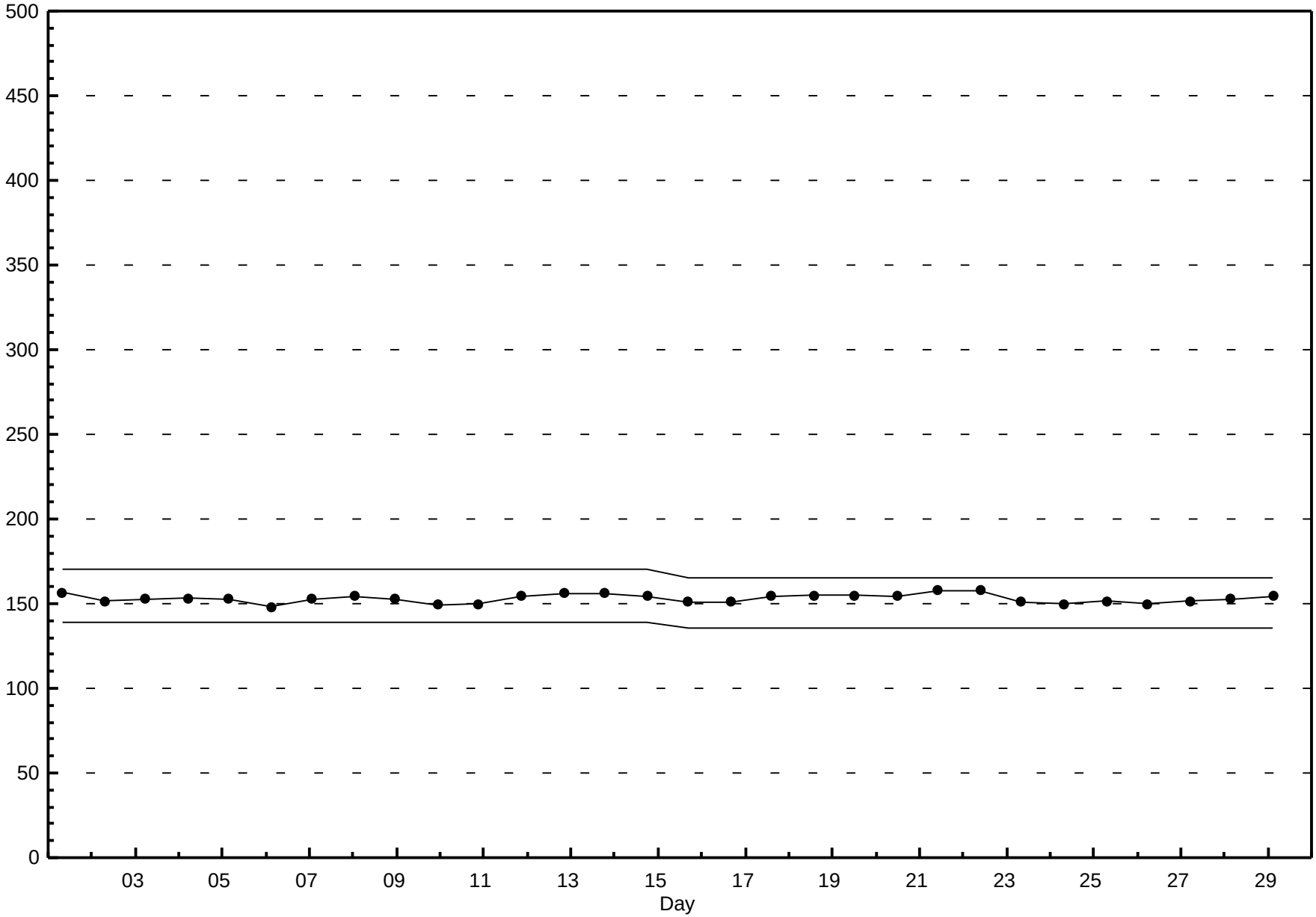


Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Valleyview - February 2012



Peace Airshed Zone Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Valleyview - February 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 5.2 ppb on Feb 11 03:00 Maximum Daily Average: 1.1 ppb on Feb 5

Minimum Value: 0 ppb on Feb 1 13:00 Minimum Daily Average: 0.0 ppb on Feb 25
Maximum Diurnal Average: 0.4 ppb at hour 3 Minimum Diurnal Average: 0.1 ppb at hour 16
Monthly Average: 0.26 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.3 P_{90} = 0.8 P_{99} = 2.3

Hours in Service:	696
Hours of Data:	661
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	A	0	0	0	0	0	0	2	1	0	2	1	0	0	0	0	0	0.3	2.1
2-Feb	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0.1	1.8
3-Feb	0	0	0	0	0	A	0	1	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0.2	0.7
4-Feb	1	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	2	0.4	2.1
5-Feb	0	0	1	A	1	1	1	1	2	2	2	1	1	1	0	0	0	0	5	2	1	2	1	1	1.1	4.8
6-Feb	1	0	A	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0.2	1.2
7-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
8-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	A	0.1	0.9
9-Feb	0	0	2	2	1	1	1	0	0	1	2	1	1	0	0	0	0	0	0	0	0	0	A	1	0.6	2.0
10-Feb	0	0	0	0	0	0	0	2	3	2	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	2.6
11-Feb	0	2	5	4	1	0	3	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.7	5.2
12-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.0	0.3
13-Feb	0	0	0	1	0	1	1	2	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	1.9
14-Feb	0	0	0	0	0	0	0	0	0	0	C	C	C	C	C	0	1	A	1	2	0	0	0	0	0.3	2.3
15-Feb	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	A	1	0	0	0	0	0	0	0.1	1.5
16-Feb	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	A	1	1	1	0	0	0	0	0	0.2	1.0
17-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
18-Feb	1	2	1	0	1	0	0	1	0	0	0	0	0	A	0	0	0	0	0	1	0	0	0	1	0.4	1.5
19-Feb	0	1	0	0	0	1	0	1	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	1	0.3	1.5
20-Feb	5	1	0	0	0	0	0	0	0	0	0	A	2	0	0	0	0	0	0	0	0	0	0	0	0.3	5.1
21-Feb	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	1	0	0	0	0	0.1	1.3
22-Feb	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	2	0	0	0	1	1	0.2	1.5
23-Feb	1	0	1	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0.3	1.3
24-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	0.1	0.5
25-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
26-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
27-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.1	0.8
28-Feb	0	0	0	A	1	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	1	0	0	0	0.3	1.6
29-Feb	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.1
	0.3	0.2	0.4	0.4	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.4	0.4	0.2	0.2	0.2	0.3	Diurnal Average	
	5.1	1.6	5.2	4.2	1.4	1.1	3.3	2.1	2.6	2.1	1.7	1.4	1.5	1.6	2.1	0.8	1.5	2.1	4.8	2.3	1.3	1.7	1.5	2.1	Diurnal Maximum	

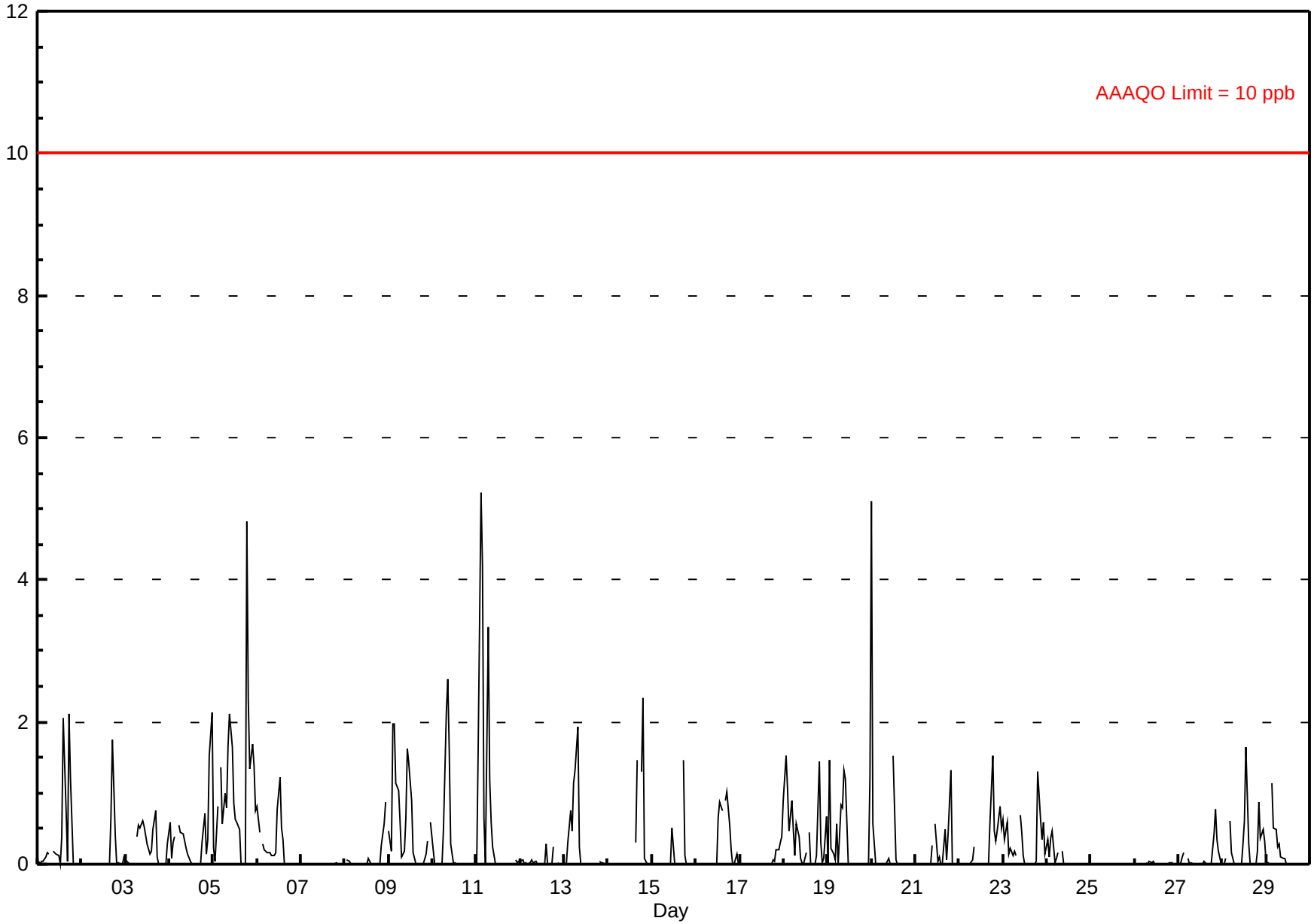
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Valleyview - February 2012



Peace Airshed Zone Association

Hourly Maximums

Hydrogen Sulphide (H_2S) - ppb

Valleyview - February 2012

Maximum Value: 22.8 ppb on Feb 19 02:00

Maximum Daily Average: 2.9 ppb on Feb 11

Minimum Value: 0 ppb on Feb 16 04:00

Minimum Daily Average: 0.2 ppb on Feb 25

Maximum Diurnal Average: 1.8 ppb at hour 2

Minimum Diurnal Average: 0.6 ppb at hour 16

Monthly Average: 0.96 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.2 Median = 0.4 Q_3 = 1.0 P_{90} = 2.4 P_{99} = 8.4

Hours in Service:	696
Hours of Data:	661
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	1	1	1	A	1	1	0	1	0	2	4	4	1	6	3	0	0	0	0	0	1.2	6.3
2-Feb	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	7	4	2	0	0	0	0	0	0.8	7.1
3-Feb	0	0	0	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	0.7	1.2
4-Feb	1	1	1	1	A	1	1	1	1	1	1	0	1	0	0	0	0	0	2	2	1	2	2	4	1.0	3.9
5-Feb	1	0	3	A	2	1	2	2	2	4	3	1	1	2	2	0	0	0	22	7	2	2	2	1	2.8	21.6
6-Feb	1	1	A	1	1	1	1	1	0	1	1	2	2	1	1	1	0	0	0	0	0	0	0	0	0.6	1.9
7-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
8-Feb	A	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	1	1	A	0.4	1.3
9-Feb	1	0	4	3	2	2	1	1	1	2	3	2	2	1	0	1	0	0	0	0	1	1	A	1	1.3	3.6
10-Feb	1	0	0	0	0	1	1	4	4	3	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0.8	3.8
11-Feb	0	10	10	9	2	0	18	6	5	3	0	0	0	0	1	0	0	1	0	0	A	0	0	0	2.9	17.7
12-Feb	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	1	A	0	0	0	0	0.4	1.9
13-Feb	0	0	1	2	2	2	2	3	2	1	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0.9	3.2
14-Feb	0	0	0	0	0	0	0	0	0	0	C	C	C	C	C	3	4	A	3	6	1	0	0	0	1.1	5.6
15-Feb	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	A	6	1	0	0	1	0	0	0.6	6.3
16-Feb	0	0	0	0	0	0	0	0	0	0	0	0	4	3	4	A	3	2	1	1	0	0	1	0	0.9	4.0
17-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	1	1	1	1	1	1	0.4	1.2
18-Feb	4	5	3	1	1	1	1	1	1	0	0	0	1	A	1	0	0	0	3	3	3	1	1	1	1.5	4.6
19-Feb	1	23	3	2	1	3	1	4	3	2	3	0	A	0	0	0	0	0	0	0	0	0	0	4	2.2	22.8
20-Feb	8	4	0	0	0	0	0	0	0	1	1	A	3	2	0	0	0	0	0	0	0	0	0	0	0.9	8.1
21-Feb	0	0	0	0	0	0	0	0	0	1	A	1	1	1	1	1	1	1	2	3	1	0	0	1	0.6	3.2
22-Feb	0	0	0	1	0	0	0	1	1	A	1	0	0	0	0	0	0	3	4	4	3	2	2	2	1.1	4.0
23-Feb	2	1	3	0	1	1	1	0	A	3	2	1	0	0	0	0	0	0	0	8	2	2	1	0	1.3	8.4
24-Feb	3	1	1	1	0	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.9
25-Feb	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.2	1.0
26-Feb	0	0	0	0	0	A	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0.4	1.1
27-Feb	0	0	0	1	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	2	1	1	0	0.5	2.1
28-Feb	0	0	1	A	2	1	0	0	0	0	0	1	2	5	1	1	0	0	0	1	2	1	1	1	1.0	5.4
29-Feb	1	1	A	2	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.8
	1.0	1.8	1.2	1.0	0.7	0.7	1.3	1.1	1.0	0.9	0.8	0.6	0.8	0.8	0.8	0.6	0.8	1.1	1.7	1.5	0.8	0.6	0.6	0.8	Diurnal Average	
	8.1	22.8	10.3	8.6	2.3	2.7	17.7	6.1	5.2	3.9	3.3	2.5	3.5	5.4	4.0	4.5	7.1	6.3	21.6	8.4	3.0	2.4	2.2	3.9	Diurnal Maximum	

C - Calibration

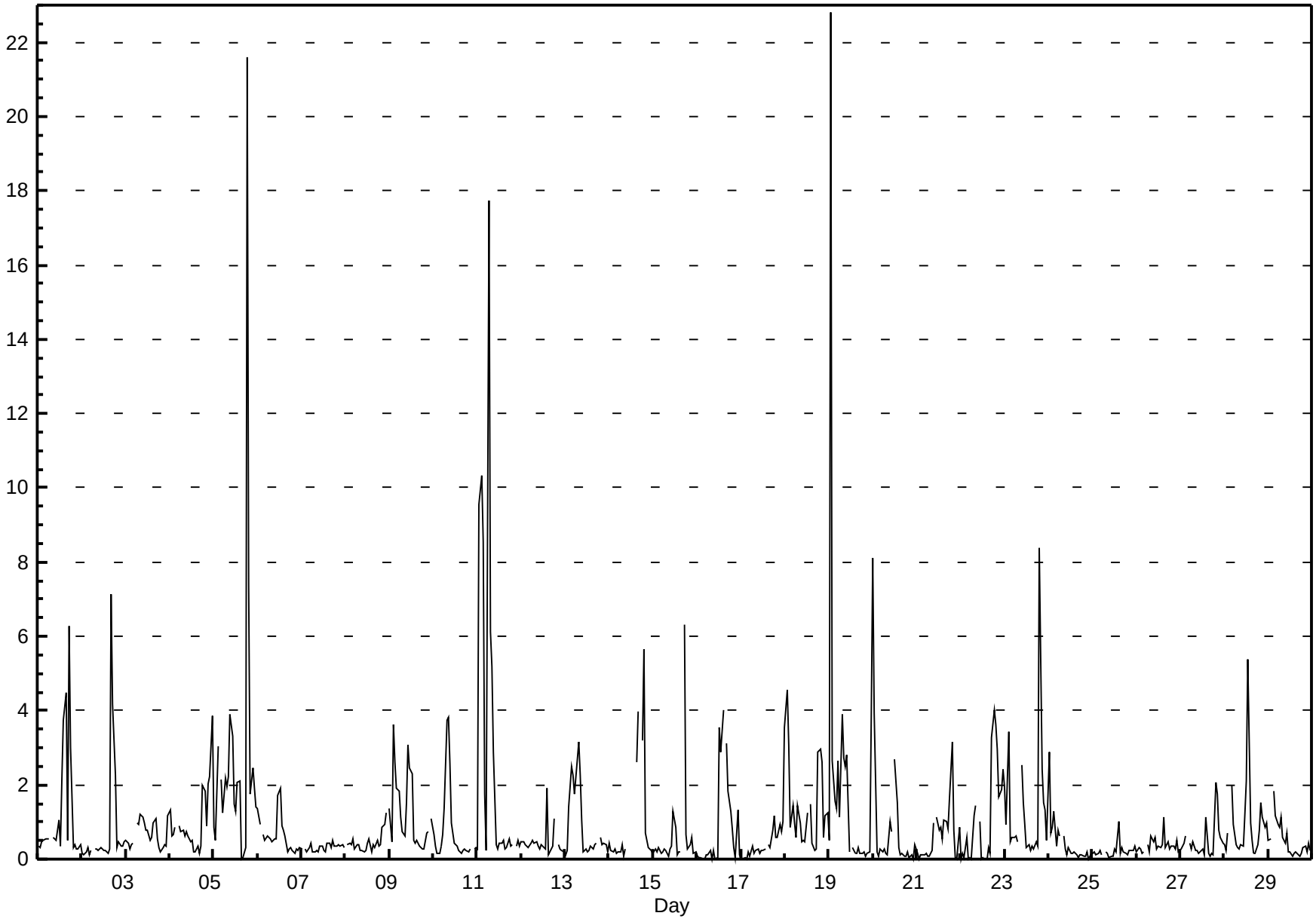
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Hydrogen Sulphide (H_2S) - ppb

Valleyview - February 2012

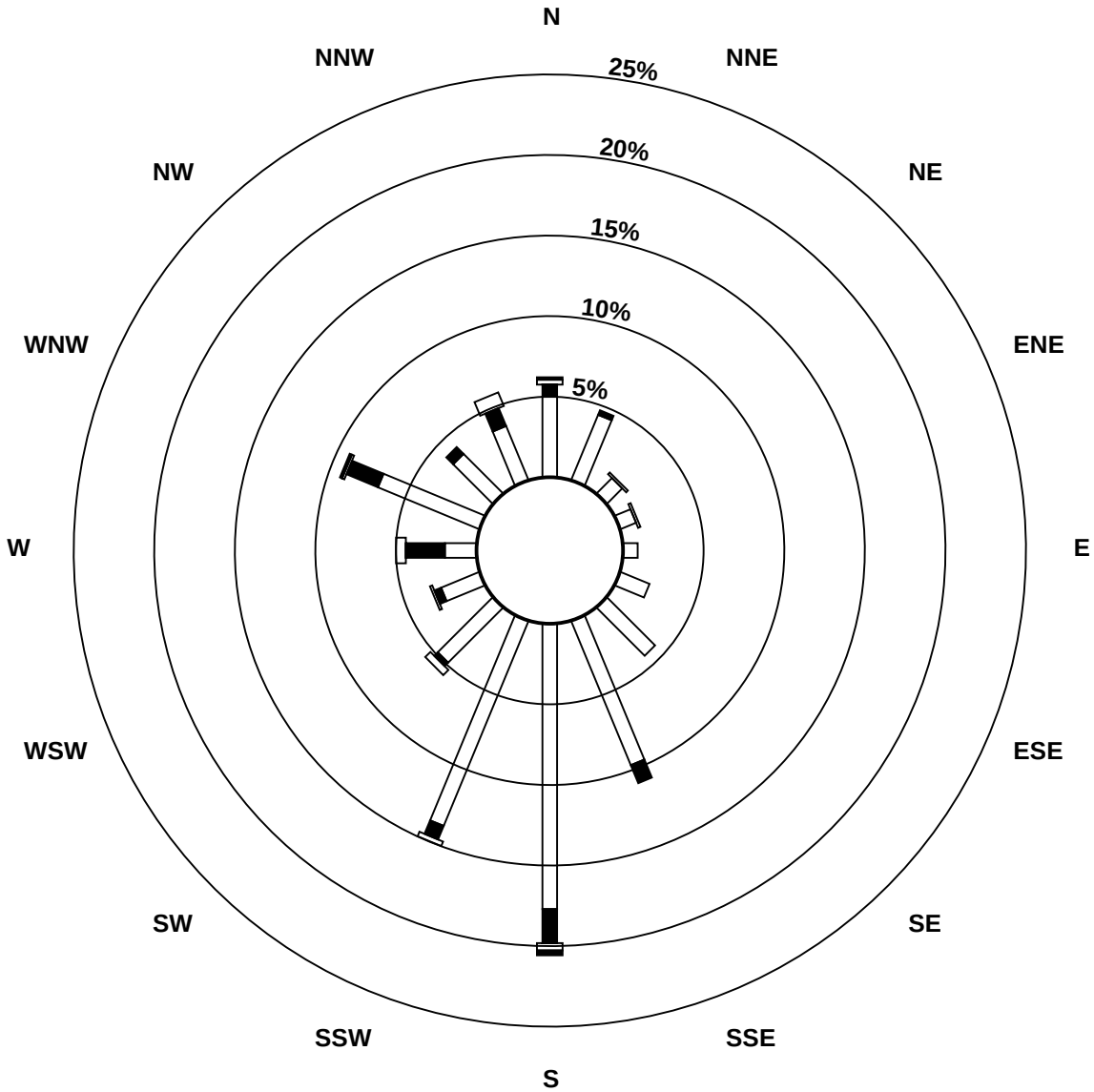


Peace Airshed Zone Association

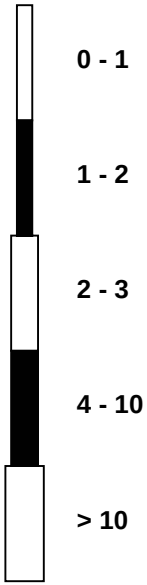
Pollutant Rose

Hydrogen Sulphide (H_2S) - ppb

Valleyview - February 2012



Pollutant Classes (ppb)



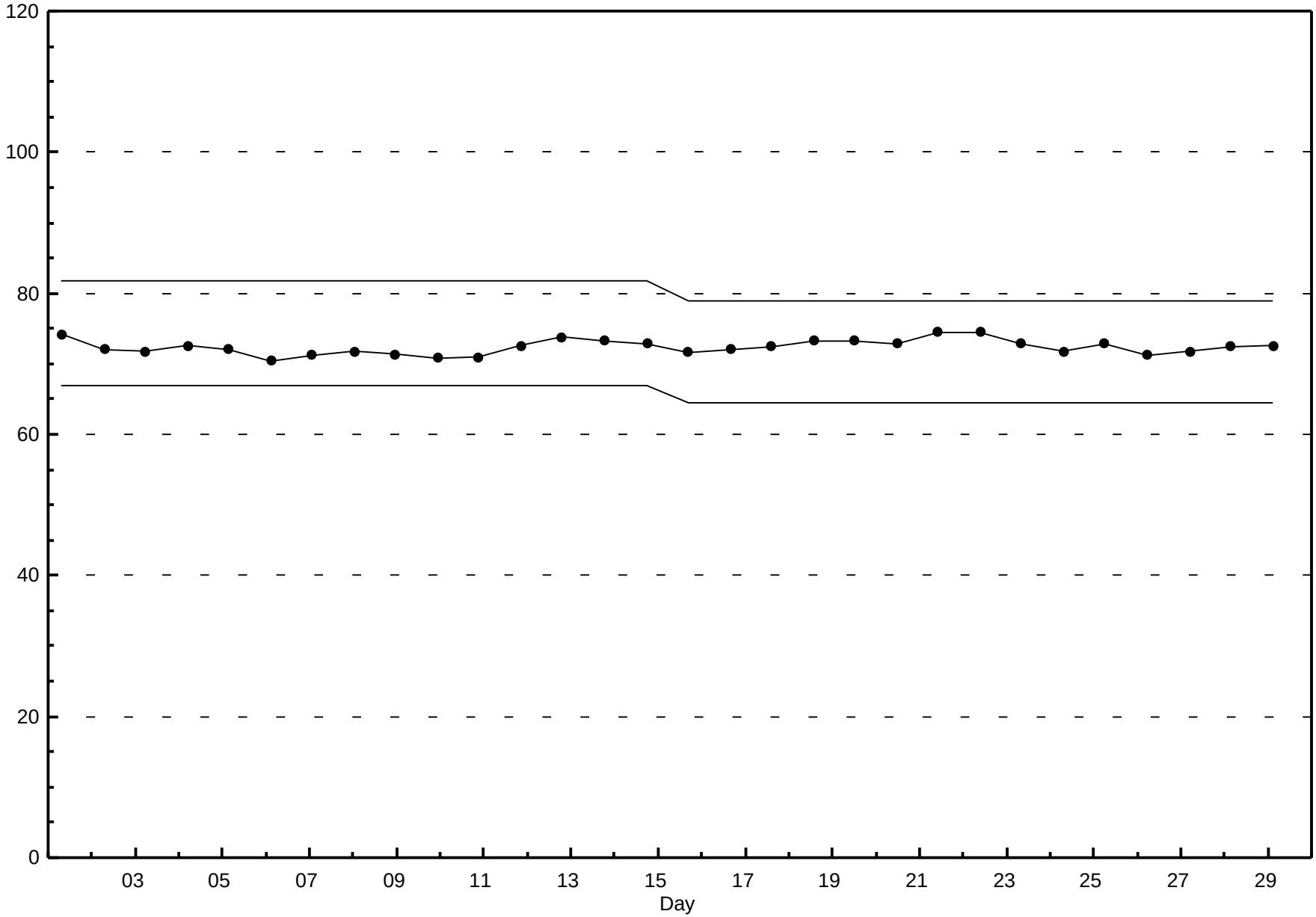
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Span Responses

Hydrogen Sulphide (H_2S)

Valleyview - February 2012



Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Valleyview - February 2012

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

Maximum Value: 12.8 ^{o}C on Feb 3 17:00

Maximum Daily Average: 2.0 ^{o}C on Feb 3

Minimum Value: -20 ^{o}C on Feb 9 09:00

Maximum Diurnal Average: 0.1 ^{o}C at hour 16

Monthly Average: -5.79 ^{o}C

Minimum Daily Average: -13.5 ^{o}C on Feb 26

Minimum Diurnal Average: -10.6 ^{o}C at hour 9

Percentiles: P_1 = -18.3 P_{10} = -14.2 Q_1 = -10.7 Median = -5.2 Q_3 = -1.1 P_{90} = 1.8 P_{99} = 9.3

Hours in Service:	696
Hours of Data:	696
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

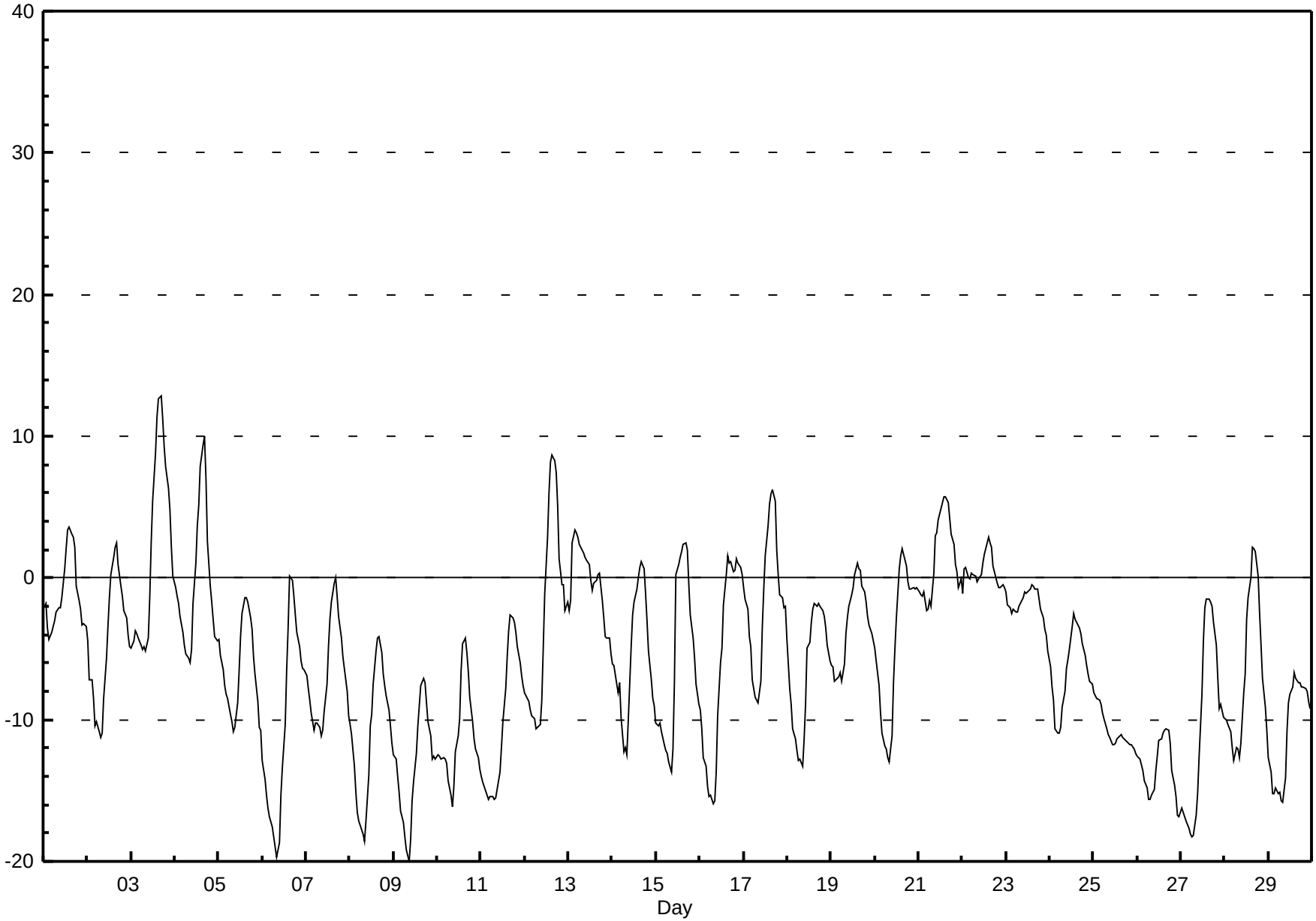
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-2	-2	-4	-4	-4	-3	-3	-2	-2	-2	-1	1	2	3	4	3	3	2	-1	-2	-2	-3	-3	-3	-1.1	3.6
2-Feb	-4	-7	-7	-9	-10	-10	-11	-11	-11	-9	-6	-3	-1	0	1	2	2	1	-1	-1	-2	-3	-4	-5	-4.5	2.5
3-Feb	-5	-4	-4	-4	-4	-5	-5	-5	-5	-4	-1	2	5	9	11	13	13	11	9	8	6	5	2	0	2.0	12.8
4-Feb	-1	-1	-2	-3	-4	-5	-5	-6	-6	-5	-2	1	4	5	8	9	10	7	3	-1	-2	-3	-4	-4	-0.2	10.0
5-Feb	-4	-5	-6	-8	-8	-9	-10	-10	-11	-11	-9	-7	-4	-3	-1	-1	-2	-3	-4	-6	-7	-9	-11	-11	-6.5	-1.4
6-Feb	-13	-14	-15	-16	-17	-18	-18	-19	-20	-19	-15	-13	-10	-6	-4	0	0	-1	-3	-4	-5	-6	-6	-6	-10.4	0.1
7-Feb	-7	-8	-9	-9	-11	-10	-10	-11	-11	-11	-9	-7	-5	-3	-2	0	0	-1	-3	-4	-6	-6	-8	-10	-6.7	0.0
8-Feb	-10	-11	-13	-15	-17	-17	-18	-18	-19	-17	-14	-10	-10	-7	-5	-4	-4	-5	-7	-8	-8	-9	-10	-12	-11.2	-4.1
9-Feb	-12	-13	-14	-15	-16	-17	-18	-19	-20	-18	-16	-14	-12	-10	-9	-8	-7	-7	-9	-10	-11	-13	-13	-13	-13.2	-7.1
10-Feb	-12	-13	-13	-13	-13	-13	-14	-15	-16	-15	-12	-11	-10	-7	-5	-4	-5	-7	-8	-10	-11	-12	-13	-14	-11.1	-4.2
11-Feb	-14	-14	-15	-15	-16	-15	-15	-16	-16	-15	-14	-12	-10	-8	-6	-4	-3	-3	-3	-4	-5	-6	-7	-8	-10.1	-2.7
12-Feb	-8	-9	-9	-9	-10	-10	-11	-11	-10	-9	-5	-1	3	6	8	9	8	7	5	1	0	-1	-2	-2	-2.4	8.7
13-Feb	-2	-2	2	3	3	3	2	2	2	1	1	1	0	-1	0	0	0	0	-2	-3	-4	-4	-4	-5	-0.2	3.4
14-Feb	-6	-6	-7	-8	-7	-10	-12	-12	-12	-10	-5	-3	-2	-1	0	1	1	1	-1	-3	-5	-7	-9	-9	-5.5	1.2
15-Feb	-10	-10	-10	-11	-12	-12	-12	-13	-14	-12	-7	0	1	1	2	2	2	2	0	-3	-4	-6	-7	-9	-5.9	2.5
16-Feb	-9	-11	-13	-13	-15	-15	-15	-16	-16	-14	-10	-6	-5	-2	0	2	1	1	0	1	1	1	1	0	-6.3	1.6
17-Feb	-1	-2	-2	-4	-5	-7	-8	-9	-9	-7	-3	-1	2	4	5	6	6	5	2	0	-1	-1	-2	-2	-1.4	6.2
18-Feb	-4	-8	-9	-11	-11	-12	-13	-13	-13	-11	-9	-5	-5	-3	-2	-2	-2	-2	-2	-2	-3	-4	-5	-6	-6.5	-1.8
19-Feb	-6	-6	-7	-7	-7	-7	-7	-6	-4	-3	-2	-1	-1	0	1	1	1	-1	-1	-2	-3	-3	-4	-4	-3.3	1.1
20-Feb	-5	-6	-8	-9	-11	-12	-12	-13	-13	-11	-7	-5	-3	1	2	2	2	1	0	-1	-1	-1	-1	-1	-4.7	2.1
21-Feb	-1	-1	-1	-1	-2	-2	-2	-2	0	3	3	4	5	5	6	6	5	4	3	2	1	0	-1	0	1.5	5.8
22-Feb	-1	1	1	0	0	0	0	0	0	0	0	1	2	2	3	2	2	1	0	0	-1	-1	0	-1	0.5	2.9
23-Feb	-1	-2	-2	-3	-2	-2	-2	-2	-2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-2	-2	-3	-4	-4	-5	-1.9	-0.5
24-Feb	-6	-8	-9	-11	-11	-11	-11	-9	-8	-6	-6	-5	-3	-3	-3	-3	-4	-4	-5	-5	-6	-7	-7	-7	-6.6	-2.5
25-Feb	-8	-8	-9	-9	-9	-10	-10	-11	-11	-11	-12	-12	-12	-11	-11	-11	-11	-11	-12	-12	-12	-12	-12	-12	-10.7	-8.1
26-Feb	-13	-13	-13	-14	-14	-15	-16	-16	-15	-15	-14	-13	-11	-11	-11	-11	-11	-11	-12	-14	-15	-15	-17	-17	-13.5	-10.6
27-Feb	-16	-17	-17	-17	-18	-18	-18	-18	-17	-15	-13	-8	-4	-2	-2	-2	-2	-2	-3	-5	-7	-9	-9	-10	-10.3	-1.5
28-Feb	-10	-10	-10	-11	-12	-13	-12	-12	-13	-12	-8	-7	-3	-1	0	2	2	2	0	-2	-5	-7	-9	-11	-6.7	2.2
29-Feb	-13	-14	-15	-15	-15	-15	-15	-16	-16	-14	-11	-9	-8	-8	-7	-7	-7	-7	-8	-8	-8	-8	-9	-9	-10.9	-6.6
	-7.1	-7.7	-8.3	-9.0	-9.6	-10.0	-10.4	-10.6	-10.6	-9.4	-7.1	-5.0	-3.4	-1.7	-0.6	0.1	0.0	-0.7	-2.1	-3.4	-4.4	-5.3	-6.1	-6.7	Diurnal Average	
	-0.6	0.7	2.4	3.4	3.2	2.9	2.4	2.0	1.8	3.0	3.2	4.1	5.5	8.8	11.4	12.6	12.8	11.3	9.3	7.9	6.3	4.8	2.2	0.2	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Valleyview - February 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Valleyview - February 2012

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

Maximum Value: 96.1 % on Feb 22 09:00 Maximum Daily Average: 85.4 % on Feb 5

Minimum Value: 28 % on Feb 28 16:00 Minimum Daily Average: 56.6 % on Feb 21

Maximum Diurnal Average: 81.7 % at hour 8 Minimum Diurnal Average: 51.2 % at hour 16

Monthly Average: 69.40 % Percentiles: P_1 = 33.8 P_{10} = 46.6 Q_1 = 58.9 Median = 72.0 Q_3 = 81.6 P_{90} = 87.5 P_{99} = 93.8

Hours in Service:	696
Hours of Data:	696
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

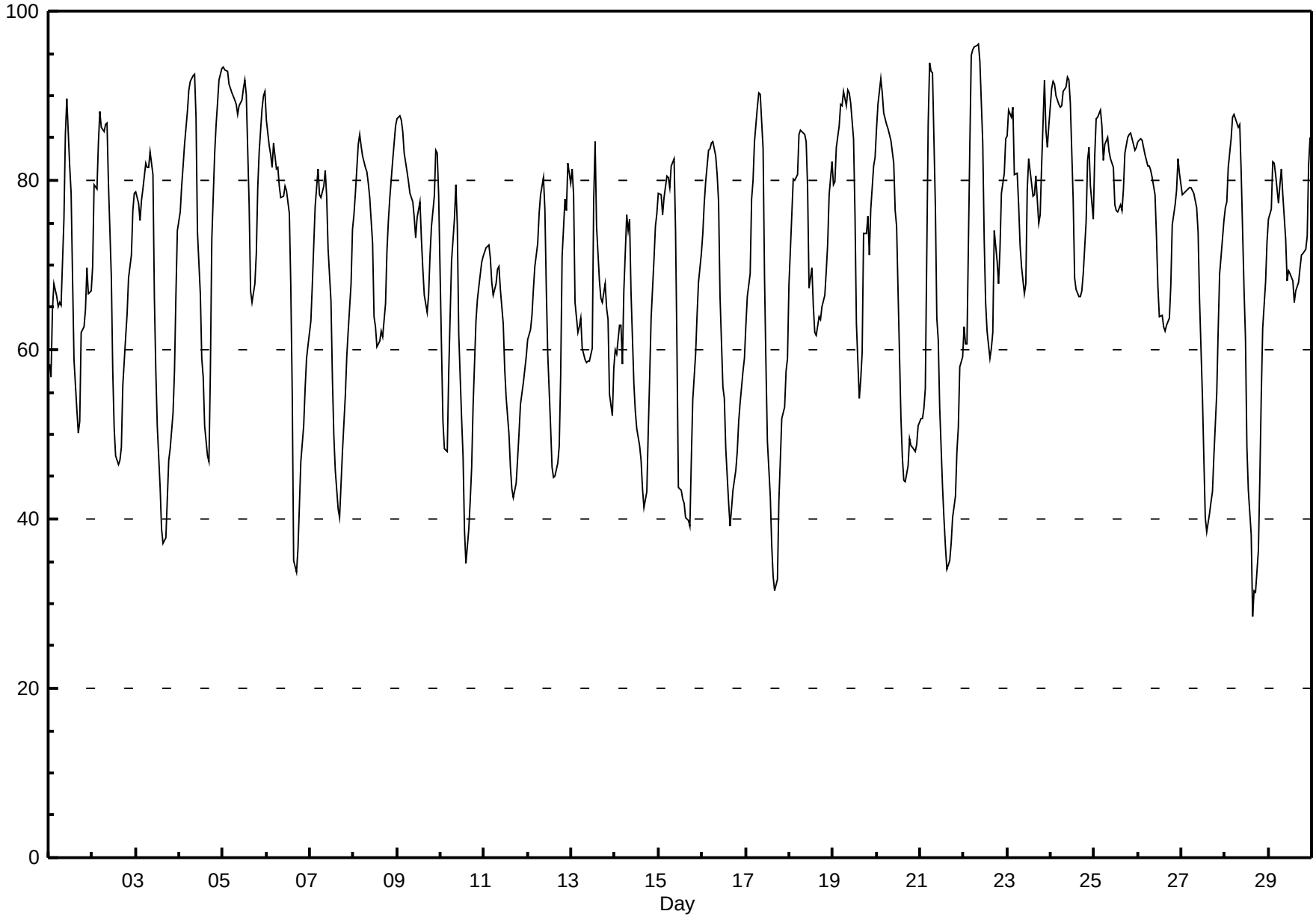
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	58	57	65	68	66	65	66	65	75	85	90	82	78	68	59	53	50	52	62	63	65	70	67	67	66.5	89.7
2-Feb	70	80	79	84	88	86	86	87	87	80	69	57	51	47	46	47	49	56	62	64	69	71	76	78	69.5	88.2
3-Feb	79	77	75	78	79	82	81	82	83	81	66	57	51	44	39	37	38	42	47	48	53	57	66	74	63.2	83.4
4-Feb	76	79	82	84	88	91	92	92	92	88	74	67	59	57	51	48	47	57	73	83	87	89	92	93	76.7	93.2
5-Feb	93	93	93	91	91	90	89	89	88	89	89	91	92	90	77	67	66	68	71	79	83	88	90	90	85.4	93.5
6-Feb	87	84	83	81	84	81	82	79	78	78	79	79	76	68	55	35	34	36	42	47	51	55	59	61	66.5	87.1
7-Feb	63	68	72	77	81	78	78	79	81	78	72	66	57	50	46	41	40	44	48	55	59	62	68	74	64.1	81.4
8-Feb	76	78	84	86	84	83	82	81	80	78	73	64	63	60	61	62	62	66	72	75	78	82	84	86	75.0	86.5
9-Feb	87	88	87	86	83	81	80	78	78	76	73	76	77	73	70	67	64	66	71	75	78	84	83	78	77.4	87.6
10-Feb	60	52	48	48	57	64	71	75	79	75	62	52	47	39	35	39	42	46	53	63	66	67	70	71	57.6	79.5
11-Feb	71	72	72	71	68	66	68	70	70	67	63	58	54	50	46	44	43	44	47	50	54	56	58	59	59.2	72.4
12-Feb	61	62	64	67	70	73	76	78	80	77	67	59	51	46	45	45	47	49	57	71	78	76	82	80	65.1	82.1
13-Feb	81	78	66	62	63	64	60	59	58	59	59	60	78	85	75	68	66	66	68	65	64	55	52	58	65.3	84.6
14-Feb	60	59	63	63	58	67	76	74	75	67	56	53	51	49	47	43	41	43	50	57	64	71	75	76	59.9	76.1
15-Feb	78	78	76	78	81	80	79	82	83	74	60	44	43	42	42	40	40	39	47	54	59	64	68	71	62.6	82.5
16-Feb	74	77	80	84	84	84	85	83	81	77	66	56	54	48	42	39	41	43	46	48	52	54	57	59	63.1	84.5
17-Feb	63	66	69	78	80	85	89	90	90	84	69	58	49	43	37	33	31	33	42	47	52	53	57	59	60.7	90.4
18-Feb	68	76	80	80	81	85	86	86	85	85	79	67	70	65	62	62	64	64	65	66	69	72	78	82	74.1	85.9
19-Feb	79	80	84	86	89	89	91	89	91	90	89	85	76	63	54	56	60	74	74	76	71	77	82	83	78.6	90.7
20-Feb	86	89	92	90	88	87	86	85	85	82	76	75	67	52	47	45	44	46	49	49	48	48	49	51	67.4	92.0
21-Feb	52	52	53	55	87	94	93	93	77	64	61	53	44	40	37	34	35	37	40	43	48	51	58	59	56.6	93.9
22-Feb	63	61	61	84	95	95	96	96	96	94	84	73	66	62	59	60	62	74	71	68	72	79	81	85	76.5	96.1
23-Feb	85	88	88	89	81	81	77	72	70	67	68	79	82	80	78	78	80	75	76	82	92	86	84	86	80.1	91.9
24-Feb	91	92	91	90	89	89	89	90	91	92	92	89	78	68	67	66	66	67	69	75	82	84	79	75	81.8	92.2
25-Feb	83	87	87	88	86	82	84	85	83	82	82	77	76	76	77	76	79	83	85	85	86	85	84	84	82.7	88.3
26-Feb	85	85	85	84	83	82	82	81	80	78	73	67	64	64	63	62	63	64	68	75	77	79	83	81	75.3	84.9
27-Feb	78	79	79	79	79	79	79	79	77	74	66	55	47	40	38	41	42	43	47	55	62	69	71	75	63.9	79.2
28-Feb	77	77	81	85	87	88	87	86	87	81	67	61	49	43	38	28	32	31	36	45	55	63	68	73	63.6	87.8
29-Feb	75	77	82	82	81	77	80	81	78	73	68	69	69	68	66	67	68	70	71	71	72	73	82	85	74.4	85.2
	74.5	75.6	76.6	78.5	80.4	81.0	81.6	81.7	81.4	78.4	72.2	66.5	62.7	58.0	53.7	51.2	51.6	54.4	58.9	63.2	67.0	69.7	72.5	74.3	Diurnal Average	
	93.5	93.0	92.8	91.4	94.7	95.4	95.8	96.0	96.1	94.1	91.8	90.8	91.8	90.2	78.1	78.4	80.5	83.3	85.0	85.4	91.9	89.1	91.9	93.2	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Valleyview - February 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Valleyview - February 2012

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	2	1	1	1	1	1	2	2	3	3	4	4	4	8	7	7	3	1	2	2	2	3	3	1.6	7.5
Dir	178	192	242	193	198	210	257	166	175	173	169	186	182	261	279	303	310	273	184	225	208	156	148	146	220	279
2 Spd	3	2	2	1	1	2	1	1	1	2	4	7	7	5	4	4	0	1	1	1	1	0	0	0	2.0	6.8
Dir	158	186	186	212	181	165	164	201	220	197	184	173	170	171	176	170	276	296	236	208	186	252	190	232	179	173
3 Spd	2	2	2	2	1	1	1	2	1	0	1	5	6	4	1	1	6	7	8	10	6	4	3	1	2.9	9.9
Dir	230	193	214	203	205	219	229	211	182	256	213	178	174	170	130	177	166	159	169	169	171	197	226	343	181	169
4 Spd	1	2	1	1	1	1	1	1	1	2	2	3	2	2	2	1	0	1	0	1	1	2	1	2	1.1	3.3
Dir	183	177	218	225	197	189	205	188	206	177	187	184	184	232	177	175	196	232	100	235	166	353	217	196	194	184
5 Spd	1	0	2	0	2	1	1	1	0	2	1	0	1	2	8	8	8	3	1	0	1	2	2	1	1.4	8.3
Dir	187	122	332	327	189	155	295	357	179	344	58	167	204	238	343	344	6	353	353	3	283	335	32	347	345	344
6 Spd	2	1	0	0	0	0	1	0	1	1	0	2	3	3	3	9	9	8	8	7	6	6	6	10	2.6	9.5
Dir	158	178	237	159	5	228	123	283	161	189	143	354	345	343	335	131	129	134	144	152	162	160	164	168	148	168
7 Spd	5	4	4	1	2	8	6	6	6	8	9	11	8	7	7	6	3	3	5	3	5	3	2	2	5.1	11.0
Dir	168	165	170	241	176	172	174	165	158	171	165	161	175	172	173	175	185	181	184	209	180	186	203	190	173	161
8 Spd	3	2	1	1	1	2	1	2	1	2	3	2	3	3	5	4	6	7	6	4	3	0	1	1	0.7	7.1
Dir	176	193	232	204	186	194	198	212	194	190	178	180	355	5	24	18	14	5	349	350	324	277	189	151	354	5
9 Spd	1	1	2	0	1	0	0	0	1	0	1	2	3	4	5	4	5	5	7	6	4	1	0	1	1.7	6.8
Dir	197	63	338	224	170	188	165	160	19	324	344	2	355	331	307	352	3	22	16	0	343	44	215	157	355	16
10 Spd	2	1	3	5	4	1	1	1	1	0	2	1	3	3	9	10	10	4	7	11	11	9	4	5	3.9	11.2
Dir	133	140	108	144	138	129	148	240	350	43	193	287	359	148	134	167	171	168	151	164	166	160	153	175	156	166
11 Spd	6	5	4	4	8	12	10	10	11	11	12	9	11	8	7	6	5	5	6	7	7	6	7	5	7.5	12.2
Dir	170	174	176	172	160	165	172	171	173	175	171	170	171	173	172	171	176	176	175	173	174	170	177	186	172	165
12 Spd	4	3	2	2	3	2	1	2	3	4	4	5	4	3	4	6	7	5	1	2	2	2	2	2	2.2	6.6
Dir	190	193	202	206	203	199	209	207	213	197	187	186	187	206	279	310	307	290	231	171	166	193	196	222	220	307
13 Spd	1	4	9	13	11	13	15	11	11	11	11	14	15	15	14	6	2	1	2	2	2	2	4	3	6.0	15.0
Dir	194	237	267	285	284	276	275	277	289	291	314	301	335	343	339	11	126	161	155	200	210	216	235	170	295	335
14 Spd	3	4	4	4	4	1	2	2	4	2	2	9	12	9	8	10	8	5	0	1	1	1	2	3	2.3	12.1
Dir	169	170	146	139	155	163	197	196	161	166	211	278	270	283	302	291	281	297	211	192	191	185	167	168	246	270
15 Spd	4	1	1	1	1	3	3	1	2	4	5	16	14	14	11	7	6	3	2	1	1	1	2	2	3.1	15.6
Dir	164	196	209	206	202	202	203	211	203	193	217	277	299	301	302	303	308	270	229	174	224	147	201	193	269	277
16 Spd	2	1	1	0	0	1	1	1	1	1	1	0	4	3	2	1	2	2	1	2	2	1	4	6	0.9	6.1
Dir	175	205	184	179	124	242	195	223	198	254	190	294	348	328	319	16	295	189	156	185	194	216	260	249	245	249
17 Spd	4	4	5	2	3	2	1	2	2	3	2	4	5	5	5	5	4	1	3	2	1	1	1	4	2.0	5.4
Dir	242	232	239	190	168	168	208	218	209	204	185	163	165	167	168	156	143	51	60	37	17	53	160	142	176	156
18 Spd	0	0	1	1	0	1	3	2	2	2	2	1	7	6	6	6	7	4	5	5	3	1	1	2	1.8	7.2
Dir	307	221	300	160	174	208	165	12	180	181	165	186	295	281	285	319	326	290	289	281	322	322	199	205	286	326
19 Spd	1	1	1	1	2	0	2	2	5	6	7	7	9	9	13	12	12	12	6	5	6	9	6	5	5.2	13.2
Dir	225	223	149	197	234	352	162	271	292	284	288	298	306	312	315	315	303	331	317	345	326	310	298	292	306	315
20 Spd	4	3	1	1	1	1	1	1	1	0	2	1	2	4	4	4	3	2	2	3	4	7	6	3	1.9	6.8
Dir	283	255	197	160	179	188	179	205	179	144	162	337	344	167	151	147	148	138	142	150	168	174	166	181	172	174
21 Spd	8	8	8	6	6	7	6	5	7	21	21	23	25	23	19	19	18	18	14	7	3	3	3	2	8.3	25.3
Dir	173	172	171	176	173	171	177	193	240	276	275	281	286	287	294	290	281	285	282	274	153	168	140	158	265	286
22 Spd	2	2	2	4	5	1	3	7	10	7	12	13	15	15	14	14	13	11	7	7	5	8	15	10	7.5	15.2
Dir	209	252	198	235	209	245	234	264	276	277	291	296	298	302	307	319	320	283	273	297	250	271	275	269	285	298

FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Valleyview - February 2012

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	8	4	2	0	1	1	3	6	10	12	13	10	9	9	11	9	7	4	3	2	6	5	3	5.6	12.7
Dir	270	266	290	152	307	144	78	332	287	297	285	288	299	303	300	300	315	295	297	267	266	266	272	268	290	288
24 Spd	2	1	1	2	2	0	1	1	1	5	6	6	4	10	14	11	10	11	14	11	7	7	6	6	5.2	14.3
Dir	270	106	186	203	178	16	25	15	65	121	120	119	108	123	128	138	126	123	120	116	101	98	86	91	118	120
25 Spd	7	5	6	7	8	10	11	11	12	11	12	12	13	12	11	11	10	8	7	7	6	5	6	6	8.6	12.5
Dir	84	63	51	39	46	44	26	32	34	30	29	24	24	23	12	17	17	12	14	14	24	24	18	12	28	24
26 Spd	7	6	6	6	7	8	6	5	2	3	2	4	5	4	4	5	4	4	2	3	4	4	3	5	1.7	8.1
Dir	7	12	8	4	351	353	337	335	302	305	246	231	239	302	289	248	231	219	193	170	180	190	200	187	301	353
27 Spd	3	2	3	3	3	3	3	3	4	5	5	3	4	4	6	7	5	3	1	1	1	1	1	1	1.7	6.7
Dir	197	202	197	202	201	208	203	205	192	185	186	172	166	209	286	329	16	67	105	197	210	179	196	203	203	329
28 Spd	0	0	1	0	1	1	1	1	1	1	0	4	2	4	5	3	5	3	1	3	3	2	0	1	1.4	4.6
Dir	201	208	0	297	328	178	300	200	305	203	298	340	317	340	343	9	6	3	47	337	334	334	357	212	342	343
29 Spd	1	1	1	1	1	0	0	1	0	1	5	12	14	16	15	14	17	12	9	8	8	9	7	7	6.3	17.0
Dir	171	6	322	189	174	125	339	183	64	191	4	346	347	343	345	357	4	2	0	7	4	357	3	358	355	4
Spd	1.8	1.4	0.9	1.0	1.2	1.2	1.1	1.0	1.4	1.9	1.9	2.8	3.3	3.2	3.5	2.8	2.4	1.5	0.3	0.7	1.0	0.9	1.1	1.4	Diurnal Average	
Dir	188	199	209	202	189	189	213	232	236	242	243	271	293	297	309	315	323	308	222	194	182	203	215	199		
Spd	8.5	8.4	8.5	12.6	10.9	12.5	15.0	11.3	11.5	21.0	21.2	23.1	25.3	22.5	19.2	19.1	17.7	18.0	14.3	11.0	11.2	9.5	14.6	9.8	Diurnal Maximum	
Dir	270	266	267	285	284	276	275	32	34	276	275	281	286	287	294	290	281	285	120	116	166	357	275	269		

Maximum Speed Value: 25 km/h on Feb 21 13:00
Maximum Daily Speed Average: 8.6 km/h on Feb 21
Maximum Diurnal Speed Average: 3.5 km/h at hour 15

Minimum Speed Value: 0 km/h on Feb 16 05:00
Minimum Daily Speed Average: 0.7 km/h on Feb 4
Minimum Diurnal Speed Average: 0.3 km/h at hour 19

Monthly Average Velocity: 1.10 km/h 256.6 deg

Speed Percentiles: $P_1 = 0.2$ $P_{10} = 0.7$ $Q_1 = 1.4$ Median = 3.2 $Q_3 = 6.5$ $P_{90} = 10.8$ $P_{99} = 19.0$

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

Hours in Service:	696
Hours of Data:	696
Hours of Missing Data:	0
Percent Operational Time:	100.0

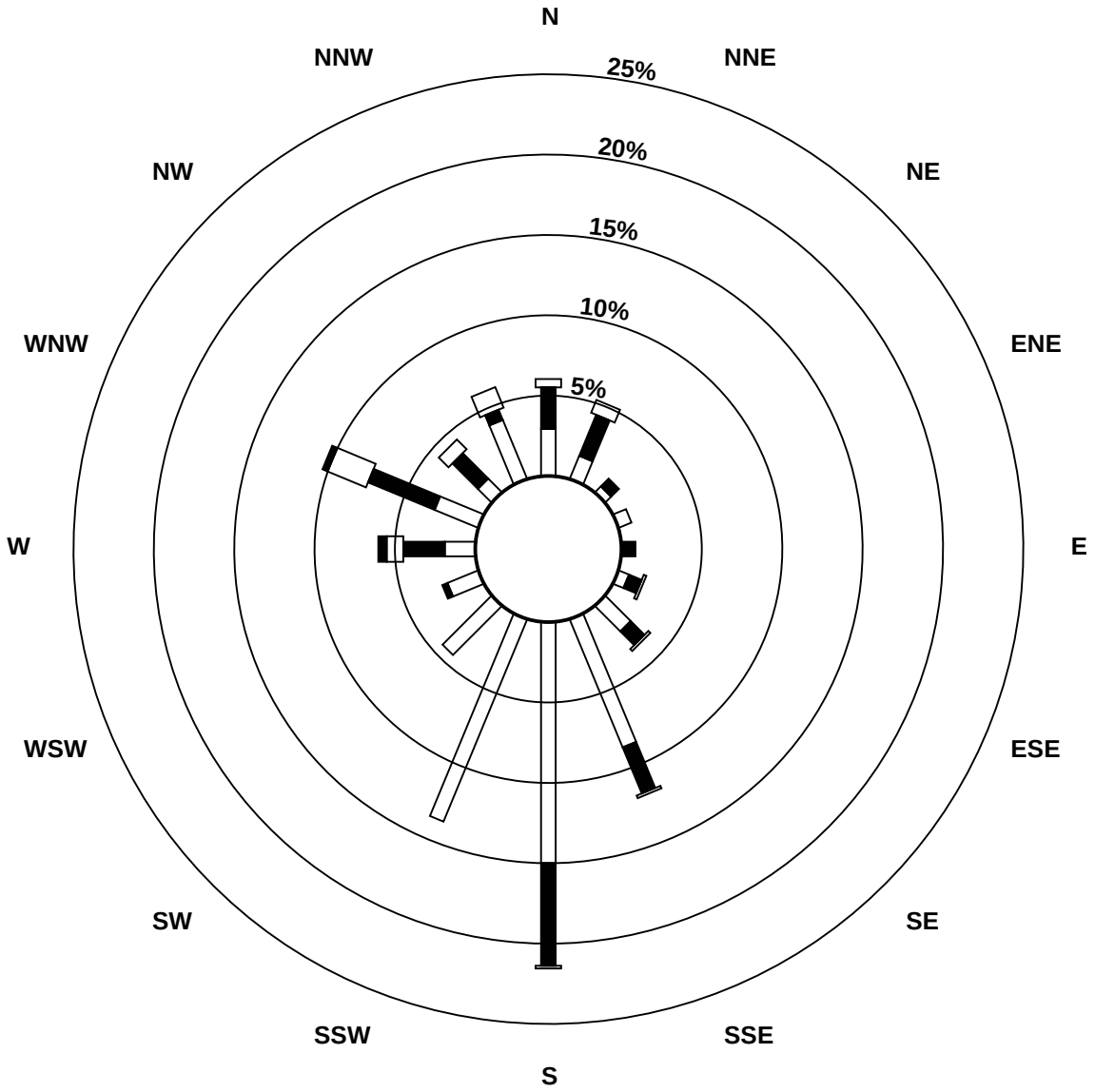
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	47	28	11	0	0	0	86
NorthEast	17	6	7	0	0	0	30
East	6	5	0	0	0	0	11
SouthEast	40	16	3	0	0	0	59
South	189	58	3	0	0	0	250
SouthWest	98	2	0	0	0	0	100
West	30	29	14	6	0	0	79
NorthWest	37	26	17	1	0	0	81
Total	464	170	55	7	0	0	696

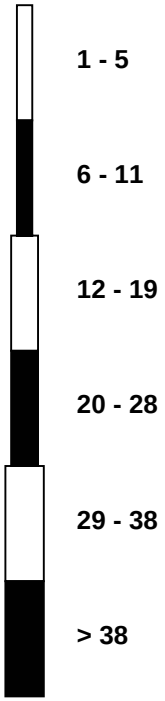
Wind Rose

Wind Speed (WS) (km/h)

Valleyview - February 2012



Wind Speed Classes (km/h)



Peace Airshed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Valleyview - February 2012

Maximum Speed: 25 km/h on Feb 21 13:00

Maximum Daily Speed Average: 11.9 km/h on Feb 21

Minimum Speed: 1 km/h on Feb 9 06:00

Minimum Daily Speed Average: 1.6 km/h on Feb 4

Maximum Diurnal Speed Average: 7.9 km/h at hour 15

Minimum Diurnal Speed Average: 2.8 km/h at hour 4

Monthly Average Speed: 4.75 km/h

Percentiles: $P_1 = 0.7$ $P_{10} = 1.1$ $Q_1 = 1.7$ Median = 3.3 $Q_3 = 6.5$ $P_{90} = 10.9$ $P_{99} = 19.2$

Hours in Service: 696

Hours of Data: 696

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	4	2	1	1	1	1	2	3	3	3	3	4	4	5	8	7	7	3	2	2	2	2	3	3	3.1	7.6
2-Feb	3	2	2	1	1	2	1	1	1	2	4	7	7	5	4	4	1	1	1	1	1	1	1	1	2.4	6.8
3-Feb	2	3	2	2	1	1	1	2	1	1	1	5	6	4	2	2	7	7	8	10	6	4	3	2	3.5	9.9
4-Feb	2	2	1	1	1	1	1	1	1	2	2	3	2	3	2	1	1	1	1	1	2	2	2	2	1.6	3.4
5-Feb	2	1	2	1	2	1	1	2	1	2	1	1	1	2	8	8	8	3	2	1	1	2	2	2	2.4	8.3
6-Feb	2	1	2	1	1	1	1	1	1	2	1	2	3	3	4	9	9	8	8	7	6	7	6	10	4.0	9.6
7-Feb	5	4	5	1	3	8	7	6	6	8	9	11	8	7	7	6	3	3	5	4	5	3	2	2	5.3	11.2
8-Feb	3	2	1	1	1	2	1	2	1	2	3	2	3	3	5	5	6	7	7	4	3	1	1	1	2.8	7.3
9-Feb	1	1	2	1	1	1	1	1	1	1	1	2	3	4	5	5	5	6	7	6	4	1	1	1	2.6	6.8
10-Feb	2	2	3	5	4	1	1	1	1	1	2	2	3	5	9	10	10	4	7	11	11	9	4	5	4.8	11.3
11-Feb	6	5	4	4	8	12	10	10	11	11	12	9	11	8	7	6	5	6	6	7	7	6	7	5	7.6	12.3
12-Feb	4	3	2	2	3	2	2	2	3	4	4	5	4	3	5	7	7	5	2	2	2	2	2	2	3.3	6.7
13-Feb	2	4	9	13	11	13	15	11	12	11	12	14	16	15	14	6	2	1	2	2	2	2	4	3	8.1	16.0
14-Feb	3	4	4	4	4	1	2	3	4	2	3	9	12	10	8	10	8	5	1	1	1	1	2	3	4.5	12.4
15-Feb	4	1	1	1	2	3	3	2	2	5	6	16	14	14	12	8	6	3	2	1	1	2	2	2	4.7	15.8
16-Feb	2	1	1	1	1	1	1	1	1	1	2	2	4	3	2	1	3	2	2	2	2	2	4	6	1.9	6.2
17-Feb	4	4	5	2	3	2	1	2	2	3	2	4	5	5	5	6	5	3	3	3	2	2	2	4	3.2	5.6
18-Feb	1	1	2	1	1	2	3	2	2	2	2	2	7	6	6	7	7	4	5	5	3	2	1	2	3.3	7.4
19-Feb	1	1	2	2	2	1	2	3	5	6	7	7	10	9	13	12	12	13	6	5	6	9	6	5	6.1	13.4
20-Feb	4	3	1	1	2	1	1	1	1	1	2	3	2	5	4	4	3	2	2	3	4	7	6	3	2.8	6.9
21-Feb	8	8	8	6	6	7	6	5	8	21	21	23	25	23	19	19	18	18	14	8	3	3	3	2	11.9	25.5
22-Feb	2	3	2	6	5	1	4	7	10	7	12	13	15	15	14	14	14	11	7	7	5	9	15	10	8.7	15.4
23-Feb	9	9	6	2	2	1	2	4	7	10	12	13	10	9	9	12	9	7	4	3	2	6	5	3	6.5	12.8
24-Feb	2	1	1	2	2	2	2	1	2	5	6	6	5	10	14	11	11	11	14	11	7	7	7	6	6.1	14.4
25-Feb	7	5	7	7	8	10	11	11	12	12	12	12	13	12	11	12	10	8	7	7	6	5	6	6	9.0	12.8
26-Feb	7	6	6	6	7	8	6	5	3	3	3	4	5	5	4	6	4	4	3	3	4	4	3	5	4.7	8.2
27-Feb	3	2	3	3	3	3	4	3	4	5	5	4	4	4	6	7	6	3	2	1	1	1	1	1	3.3	6.9
28-Feb	1	1	1	1	1	2	2	1	2	1	2	4	3	4	5	4	5	4	1	3	3	2	1	1	2.3	4.7
29-Feb	1	1	2	2	2	1	1	1	1	1	5	13	14	16	15	15	17	12	9	8	8	10	7	7	7.1	17.0
Diurnal Average	3.4	2.9	3.0	2.8	3.1	3.3	3.2	3.3	3.7	4.7	5.5	7.0	7.6	7.5	7.9	7.6	7.2	5.7	4.8	4.4	3.9	3.9	3.7	3.7		
Diurnal Maximum	8.7	8.5	8.6	12.7	11.1	12.6	15.1	11.4	11.6	21.2	21.4	23.4	25.5	22.8	19.5	19.3	17.9	18.2	14.4	11.1	11.3	9.5	14.8	10.0		

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 2012

Maximum Value: 99.0 deg on Feb 4 00:00

Minimum Value: 4.0 deg on Feb 26 21:00

Percentiles: P_1 = 5.5 P_{10} = 7.8 Q_1 = 9.7 Median = 16.6 Q_3 = 40.1 P_{90} = 69.2 P_{99} = 92.3

Hours in Service:	696
Hours of Data:	696
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	43	42	24	32	39	72	49	54	10	17	14	9	45	10	11	7	31	36	11	10	21	17	12	71.8
2-Feb	19	23	15	48	42	24	39	49	29	18	8	8	9	8	16	10	82	68	36	41	28	89	65	81	89.2
3-Feb	31	27	17	15	32	44	39	16	68	82	33	9	8	9	86	88	9	8	7	6	11	21	34	99	99.0
4-Feb	65	17	16	23	44	13	50	25	63	18	18	13	15	43	21	75	60	31	76	72	65	67	53	11	75.9
5-Feb	17	87	52	84	31	69	72	70	64	62	65	83	32	38	14	6	9	63	53	77	79	38	38	49	87.0
6-Feb	73	72	70	49	91	61	68	79	24	52	87	27	13	10	60	9	8	10	12	7	11	10	10	7	91.2
7-Feb	10	9	16	20	22	8	7	8	9	6	8	13	8	9	7	9	12	8	8	27	13	9	21	12	27.2
8-Feb	12	17	14	27	16	9	11	12	19	15	8	40	30	18	18	13	12	14	8	21	32	58	22	48	57.8
9-Feb	17	61	40	91	22	57	54	69	87	73	55	31	17	22	14	22	12	16	6	8	13	86	85	51	90.6
10-Feb	45	64	19	16	10	69	47	55	58	74	31	65	17	78	12	11	8	15	14	7	9	9	20	7	77.7
11-Feb	9	8	12	12	9	8	7	10	7	8	7	8	8	8	8	9	8	8	8	6	6	9	6	7	12.0
12-Feb	7	5	8	7	7	13	25	12	8	14	11	6	7	33	26	10	9	8	72	42	26	10	10	10	71.5
13-Feb	30	33	10	8	11	8	5	8	8	11	12	10	20	7	7	24	46	12	20	18	15	22	9	26	46.0
14-Feb	8	22	18	12	13	56	16	42	21	40	44	59	11	14	12	14	10	11	62	25	15	20	51	13	62.5
15-Feb	7	19	22	22	33	16	12	18	27	15	34	9	11	10	9	13	13	23	41	37	66	65	17	11	66.4
16-Feb	33	18	49	82	93	63	33	47	30	47	61	87	9	33	62	66	34	23	51	22	8	63	18	10	93.1
17-Feb	9	5	13	9	14	19	23	5	8	8	15	12	10	11	14	14	18	65	19	45	44	66	45	11	65.7
18-Feb	87	82	83	50	93	63	40	74	21	47	76	56	16	29	23	29	12	12	14	13	46	87	83	20	92.9
19-Feb	38	66	58	76	41	97	25	82	16	10	12	13	12	10	8	9	11	10	9	24	11	9	11	10	97.4
20-Feb	9	15	18	24	23	17	34	31	49	75	17	76	40	31	19	19	13	7	7	9	9	10	13	13	75.8
21-Feb	7	6	6	13	9	7	10	13	28	8	8	8	7	9	10	9	9	9	8	30	25	15	15	38	38.1
22-Feb	25	79	50	34	19	61	47	17	21	18	13	8	7	9	9	8	16	15	8	10	23	18	11	11	78.6
23-Feb	13	8	45	31	93	41	70	30	11	15	12	8	11	10	12	11	14	12	10	33	45	12	10	9	93.3
24-Feb	53	78	30	28	22	91	54	60	33	11	14	15	27	10	10	13	10	9	7	11	17	16	19	17	90.7
25-Feb	15	23	8	8	8	7	8	9	9	10	10	9	11	12	9	11	9	9	14	7	8	9	10	8	22.6
26-Feb	6	6	8	10	6	6	11	12	10	14	41	21	22	42	31	27	27	26	26	14	4	9	6	6	42.4
27-Feb	11	11	7	10	10	18	22	16	12	6	7	18	21	26	30	15	26	28	36	28	19	33	28	18	36.0
28-Feb	84	81	62	73	67	60	87	55	77	57	90	20	61	17	10	23	15	13	28	29	14	38	92	70	92.5
29-Feb	29	73	61	82	87	94	87	42	86	70	78	6	5	5	9	7	6	8	10	9	9	6	9	9	93.6
	86.7	87.0	83.2	90.6	93.3	97.4	87.3	81.7	86.9	81.8	90.4	87.2	61.3	77.7	85.8	87.8	82.4	68.3	75.9	77.1	78.8	89.2	92.5	99.0	

PAZA
Portable – Sunset House Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Sunset House - February 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.9 ppb on Feb 28 02:00 Maximum Daily Average: 1.4 ppb on Feb 10

Minimum Value: 0 ppb on Feb 5 18:00 Minimum Daily Average: 0.0 ppb on Feb 24
Maximum Diurnal Average: 0.6 ppb at hour 12 Minimum Diurnal Average: 0.3 ppb at hour 20
Monthly Average: 0.42 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.2 Q_3 = 0.6 P_{90} = 1.1 P_{99} = 2.2

Hours in Service:	696
Hours of Data:	661
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	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
2-Feb	0	0	0	0	0	0	A	0	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	0.5	1.2
3-Feb	1	1	1	1	1	A	0	0	0	0	0	1	1	0	0	1	1	0	0	0	1	1	1	1	0.6	1.1
4-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0.9	1.3
5-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
6-Feb	0	0	A	0	0	0	0	0	0	1	1	1	2	2	1	1	1	1	0	0	1	1	2	1	0.8	2.4
7-Feb	1	A	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0.7	1.3
8-Feb	A	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	A	0.8	1.3
9-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.3
10-Feb	0	0	0	1	1	1	2	1	0	1	2	2	2	1	1	2	2	3	2	1	1	A	2	2	1.4	3.2
11-Feb	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.2	1.9
12-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	A	1	0	0	0	0.6	1.0
13-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
14-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	0.0	0.2
15-Feb	0	0	1	1	1	1	1	C	C	C	C	C	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.8
16-Feb	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	A	0	0	0	0	0	0	0	0	0.2	1.1
17-Feb	0	0	0	0	0	0	0	0	0	1	1	1	0	2	A	0	0	0	0	0	0	0	0	0	0.3	1.9
18-Feb	0	0	0	0	0	0	0	0	0	1	1	0	0	A	0	0	0	1	0	0	0	0	0	0	0.3	0.8
19-Feb	0	0	0	0	0	0	0	0	0	1	1	1	A	1	0	0	0	0	0	1	0	0	0	0	0.4	0.9
20-Feb	0	0	0	0	0	0	0	0	0	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
21-Feb	0	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
22-Feb	0	1	1	0	0	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.2	1.4
23-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
24-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	0.0	0.1
25-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	0.1
26-Feb	0	0	0	0	0	A	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
27-Feb	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
28-Feb	1	4	4	A	1	1	1	2	1	1	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0.9	3.9
29-Feb	0	0	A	0	0	0	0	0	1	1	0	0	0	0	0	1	1	2	2	0	0	0	0	0	0.5	2.1
	0.3	0.5	0.5	0.4	0.3	0.3	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.6	0.4	0.4	0.4	0.5	0.4	0.3	0.3	0.3	0.4	0.4	Diurnal Average	
	1.9	3.9	3.8	1.6	1.4	1.3	2.2	1.9	1.2	1.5	1.8	1.6	2.4	2.0	1.4	2.0	2.2	3.2	2.3	1.4	1.3	1.3	1.7	1.9	Diurnal Maximum	

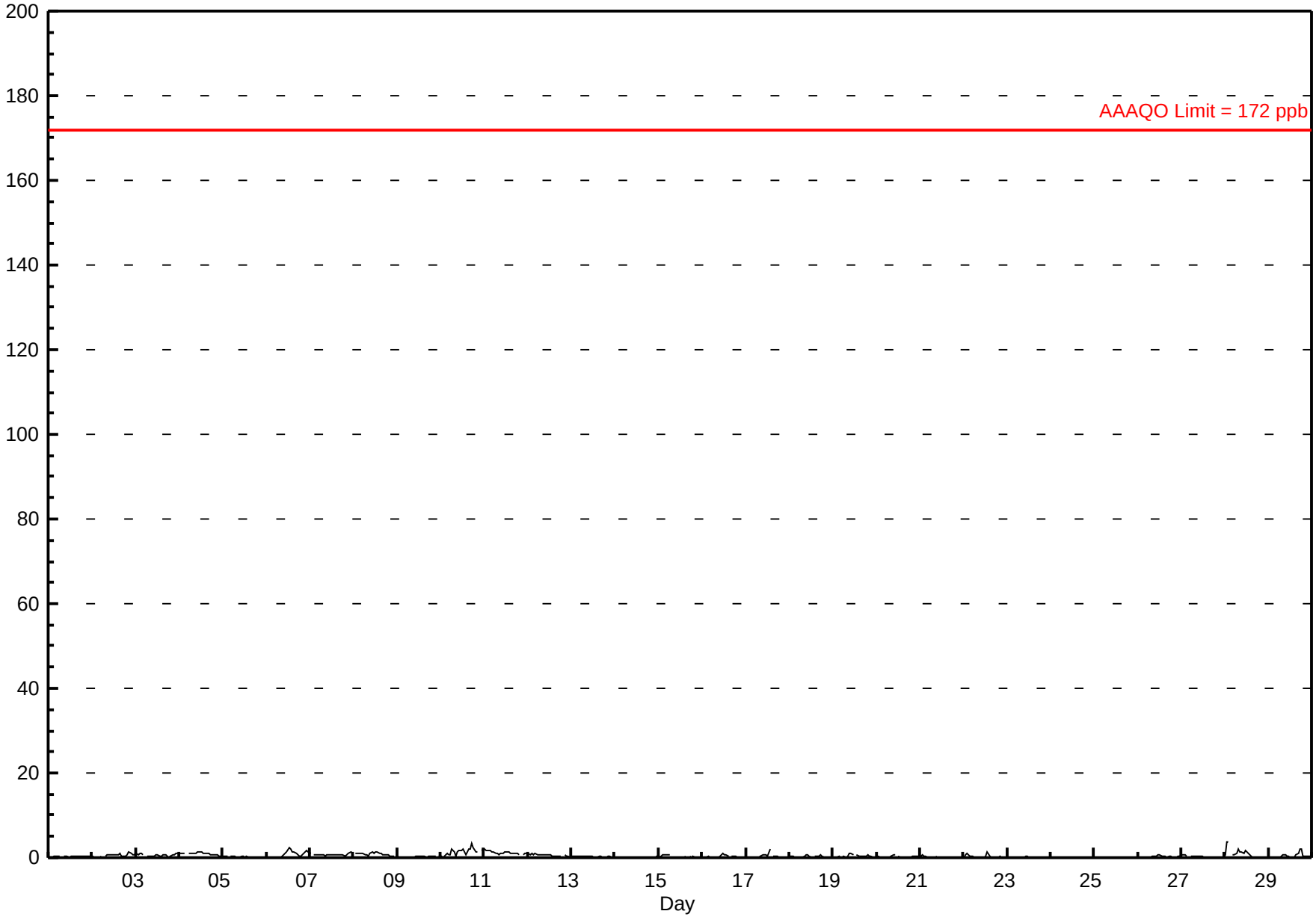
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Sunset House - February 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Sunset House - February 2012

Maximum Value: 6.0 ppb on Feb 28 02:00

Maximum Daily Average: 2.0 ppb on Feb 10

Minimum Value: 0 ppb on Feb 14 13:00

Minimum Daily Average: 0.3 ppb on Feb 25

Maximum Diurnal Average: 1.1 ppb at hour 12

Minimum Diurnal Average: 0.7 ppb at hour 5

Monthly Average: 0.87 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.3 Q_1 = 0.5 Median = 0.7 Q_3 = 1.1 P_{90} = 1.7 P_{99} = 3.1

Hours in Service:	696
Hours of Data:	661
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	1	1	1	A	1	0	0	0	1	1	1	1	1	1	1	0	1	1	1	1	0.7	1.1
2-Feb	0	1	1	0	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1.0	1.7
3-Feb	1	1	1	2	1	A	1	1	1	1	1	1	1	1	1	2	3	1	1	1	1	1	2	2	1.1	2.7
4-Feb	2	1	1	1	A	1	1	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1.4	2.0
5-Feb	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	0	0.6	1.0
6-Feb	1	0	A	0	0	0	0	1	0	1	2	2	4	3	2	2	2	1	1	1	1	2	2	2	1.3	3.5
7-Feb	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1.2	1.7
8-Feb	A	1	2	2	1	2	1	1	1	2	2	2	2	2	2	1	1	2	1	1	1	1	1	A	1.3	2.0
9-Feb	1	0	0	0	1	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.6	0.7
10-Feb	1	1	2	2	1	1	3	2	1	2	2	2	2	2	1	3	4	4	3	2	2	A	2	2	2.0	3.8
11-Feb	2	2	2	2	2	2	2	1	1	1	2	2	2	2	2	2	2	2	1	1	A	1	2	1	1.6	2.3
12-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	1.0	1.5
13-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0	1	1	0	0	0.6	1.1
14-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	A	0	0	0	0	0	0	0.3	1.5
15-Feb	1	1	1	1	1	1	1	C	C	C	C	C	0	1	0	1	A	1	1	1	1	0	1	0	0.8	1.3
16-Feb	0	0	1	1	0	0	0	0	0	0	1	2	1	1	1	A	1	1	1	0	0	0	0	0	0.7	2.4
17-Feb	0	0	0	0	0	0	0	0	1	1	1	1	1	2	A	1	1	1	0	0	0	0	0	0	0.7	2.4
18-Feb	0	1	1	0	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.7	1.4
19-Feb	1	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	1.5
20-Feb	1	1	1	1	0	1	0	1	1	1	1	A	1	1	0	0	1	0	0	0	1	1	1	1	0.6	1.1
21-Feb	1	1	1	1	1	0	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	1	0	0.6	1.0
22-Feb	0	1	1	1	1	1	1	1	0	A	1	1	1	3	1	1	1	0	0	1	1	1	1	1	0.8	2.6
23-Feb	0	1	0	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.5	0.8
24-Feb	1	1	1	1	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0.3	0.5
25-Feb	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	1	1	0	0	0	1	1	0	0	0.3	0.5
26-Feb	0	0	1	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.1
27-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	1	1	1	0.6	1.1
28-Feb	2	6	6	A	1	1	2	2	2	2	2	2	2	2	1	1	1	1	1	1	0	0	1	0	1.6	6.0
29-Feb	0	1	A	0	0	0	0	1	1	1	1	1	0	0	0	1	2	2	3	1	1	1	1	1	0.9	2.7
	0.7	0.9	1.0	0.7	0.7	0.7	0.8	0.8	0.8	0.9	1.0	1.1	1.0	1.1	0.8	0.9	1.0	1.0	0.8	0.7	0.8	0.8	0.8	0.7	Diurnal Average	
	2.3	6.0	5.5	1.8	1.8	1.8	3.2	2.4	2.0	2.2	2.2	2.4	3.5	3.1	2.1	2.8	3.8	3.8	3.0	1.8	1.8	1.7	2.3	2.3	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

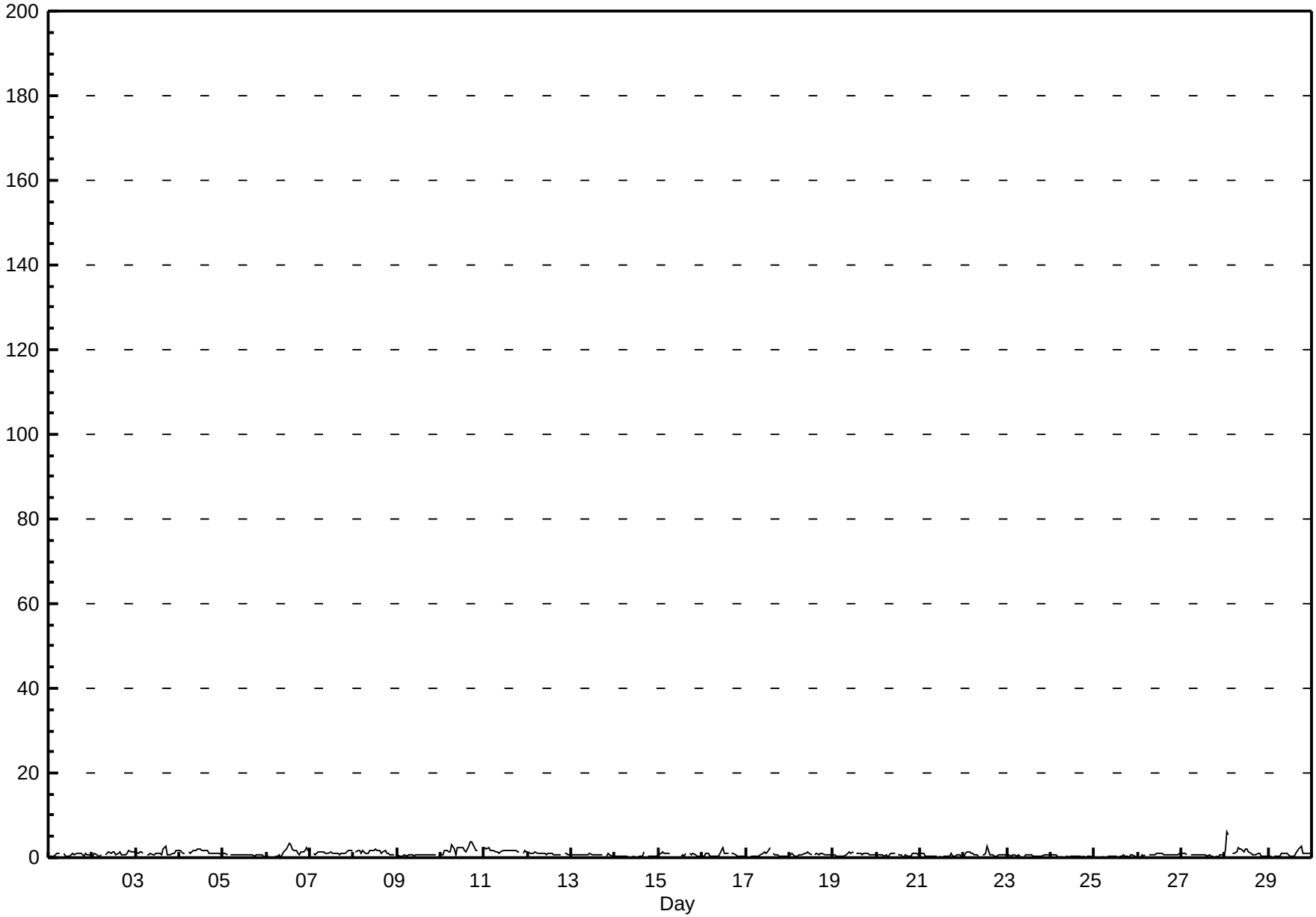
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

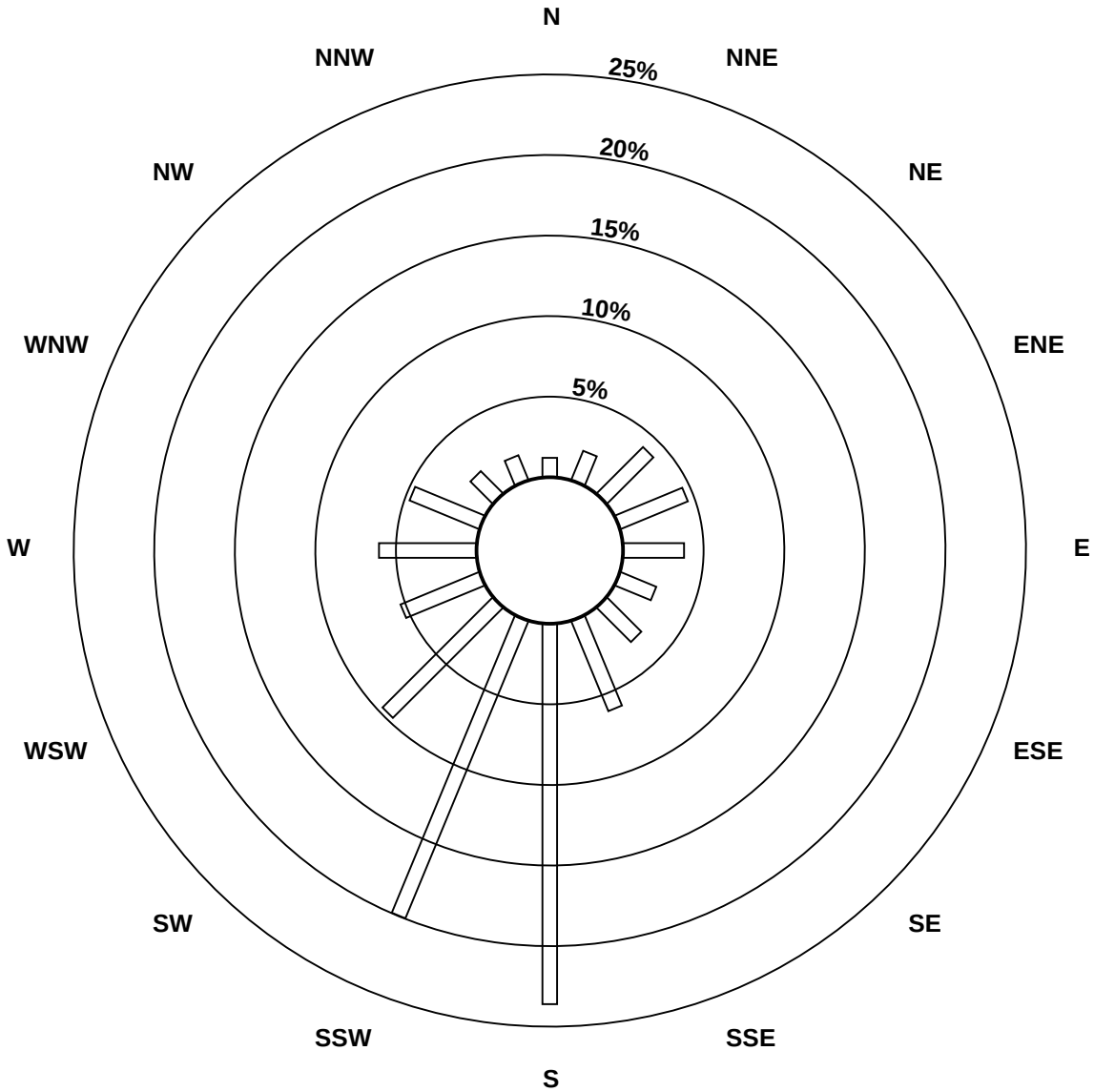
Sunset House - February 2012



Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Sunset House - February 2012



Pollutant Classes (ppb)

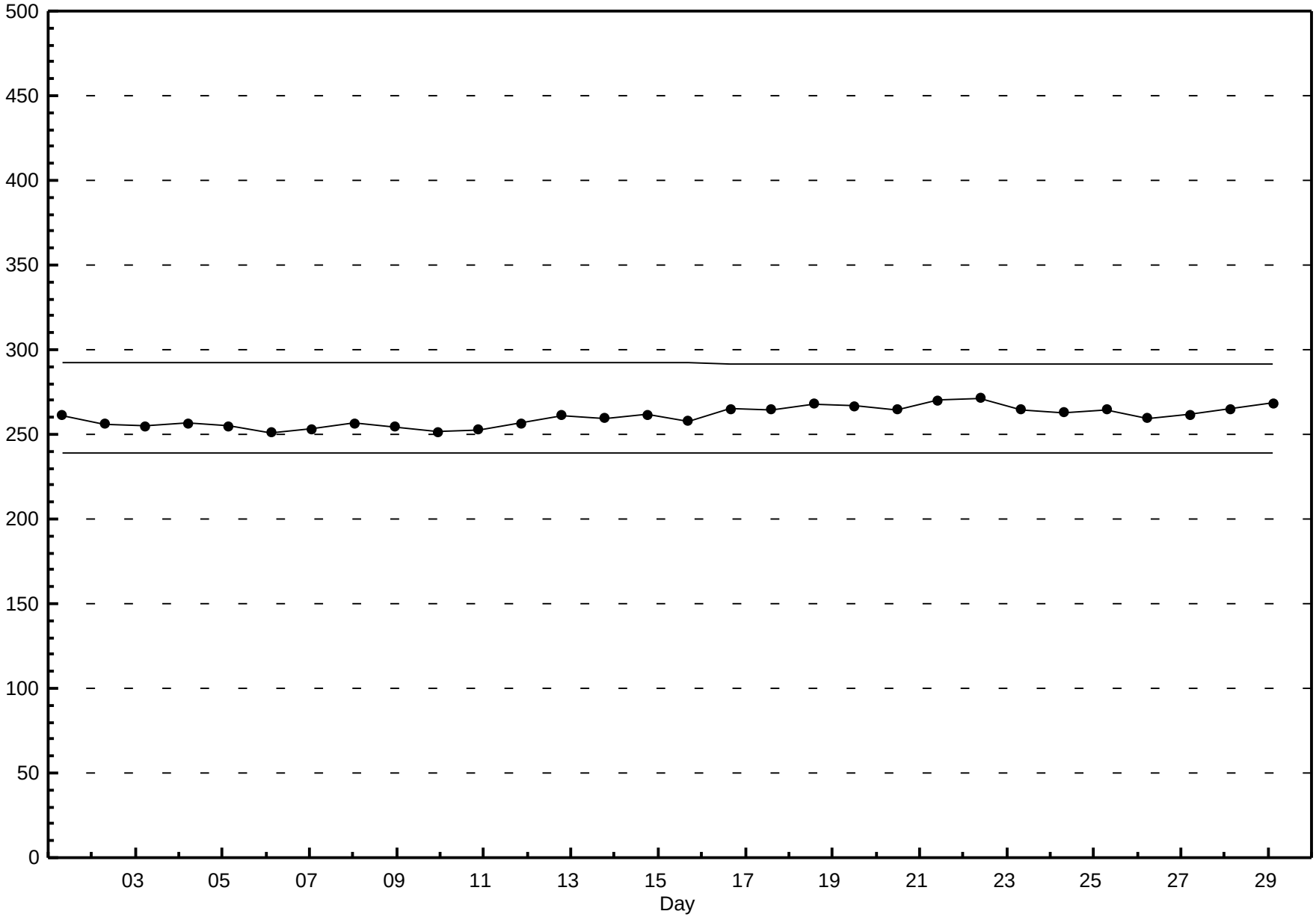
- 0 - 10
- 11 - 20
- 21 - 60
- 61 - 110
- 111 - 172
- > 172

Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Sunset House - February 2012



Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Sunset House - February 2012

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

Maximum Value: 0.6 ppb on Feb 3 04:00 Maximum Daily Average: 0.5 ppb on Feb 9

Minimum Value: 0 ppb on Feb 15 19:00 Minimum Daily Average: 0.2 ppb on Feb 25

Maximum Diurnal Average: 0.3 ppb at hour 14 Minimum Diurnal Average: 0.3 ppb at hour 20

Monthly Average: 0.32 ppb Percentiles: $P_1 = 0.1$ $P_{10} = 0.2$ $Q_1 = 0.3$ Median = 0.3 $Q_3 = 0.4$ $P_{90} = 0.4$ $P_{99} = 0.6$

Hours in Service:	696
Hours of Data:	662
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	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
2-Feb	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0.3	0.6
3-Feb	0	0	0	1	1	A	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0.4	0.6
4-Feb	0	0	0	0	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
5-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
6-Feb	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
7-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
8-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	0.4	0.5
9-Feb	1	1	1	1	1	0	0	1	0	0	0	1	1	0	0	1	0	0	0	0	0	0	A	0	0.5	0.6
10-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	0.4	0.5
11-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.4	0.4
12-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	0.3
13-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	0.3	0.4
14-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	0.4	0.5
15-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0.3	0.4
16-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	0.5
17-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	0.4
18-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	0.4
19-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	0.4	0.5
20-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
21-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
22-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	0.3	0.4
23-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	0.3
24-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	0.3
25-Feb	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
26-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	0.3
27-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
28-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
29-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
	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	
	0.5	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.6	0.5	0.5	0.5	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

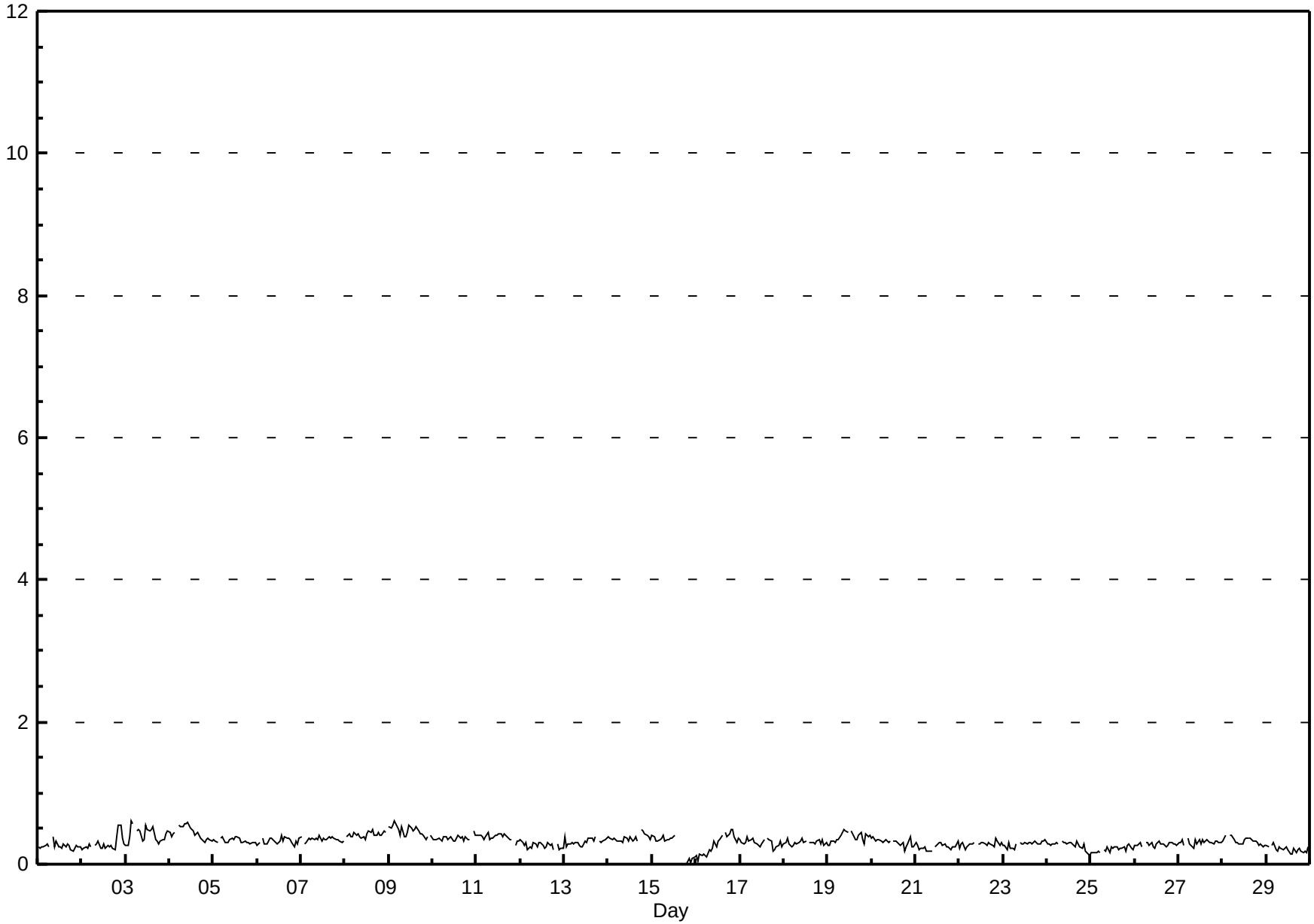
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Sunset House - February 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Sunset House - February 2012

Maximum Value: 1.2 ppb on Feb 4 11:00

Maximum Daily Average: 0.8 ppb on Feb 9

Minimum Value: 0 ppb on Feb 15 20:00

Minimum Daily Average: 0.6 ppb on Feb 25

Maximum Diurnal Average: 0.7 ppb at hour 1

Minimum Diurnal Average: 0.6 ppb at hour 20

Monthly Average: 0.69 ppb

Percentiles: $P_1 = 0.4$ $P_{10} = 0.5$ $Q_1 = 0.6$ Median = 0.7 $Q_3 = 0.8$ $P_{90} = 0.9$ $P_{99} = 1.1$

Hours in Service:	696
Hours of Data:	662
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	A	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	0.6	0.9
2-Feb	0	1	1	1	1	0	A	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0.7	1.0
3-Feb	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
4-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
5-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
6-Feb	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2
7-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	1.1
8-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	0.9
9-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	1.0
10-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
11-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	1.0
12-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	1	1	0.6	0.9
13-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	1.0
14-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.7	1.2
15-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	C	C	C	C	C	0	0	0	1	1	1	0.7	0.9
16-Feb	1	0	0	0	1	1	0	0	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.7	1.1
17-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	0	1	1	1	1	0.7	0.8
18-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.7	0.9
19-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	1.1
20-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
21-Feb	1	1	1	1	1	1	1	1	0	1	A	1	1	1	1	1	1	1	1	0	1	1	1	1	0.6	0.9
22-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	0.9
23-Feb	1	1	1	1	1	1	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8
24-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	0.6	0.9
25-Feb	1	0	1	0	0	1	A	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8
26-Feb	1	1	1	1	1	A	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9
27-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
28-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
29-Feb	1	1	A	1	1	1	0	0	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	0.6	0.8
	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.7	Diurnal Average	
	1.1	0.9	0.8	1.0	1.0	0.9	1.0	0.9	0.9	1.0	1.2	1.0	0.9	1.1	1.0	1.0	1.0	0.9	1.2	0.9	1.0	1.1	0.9	1.2	Diurnal Maximum	

C - Calibration

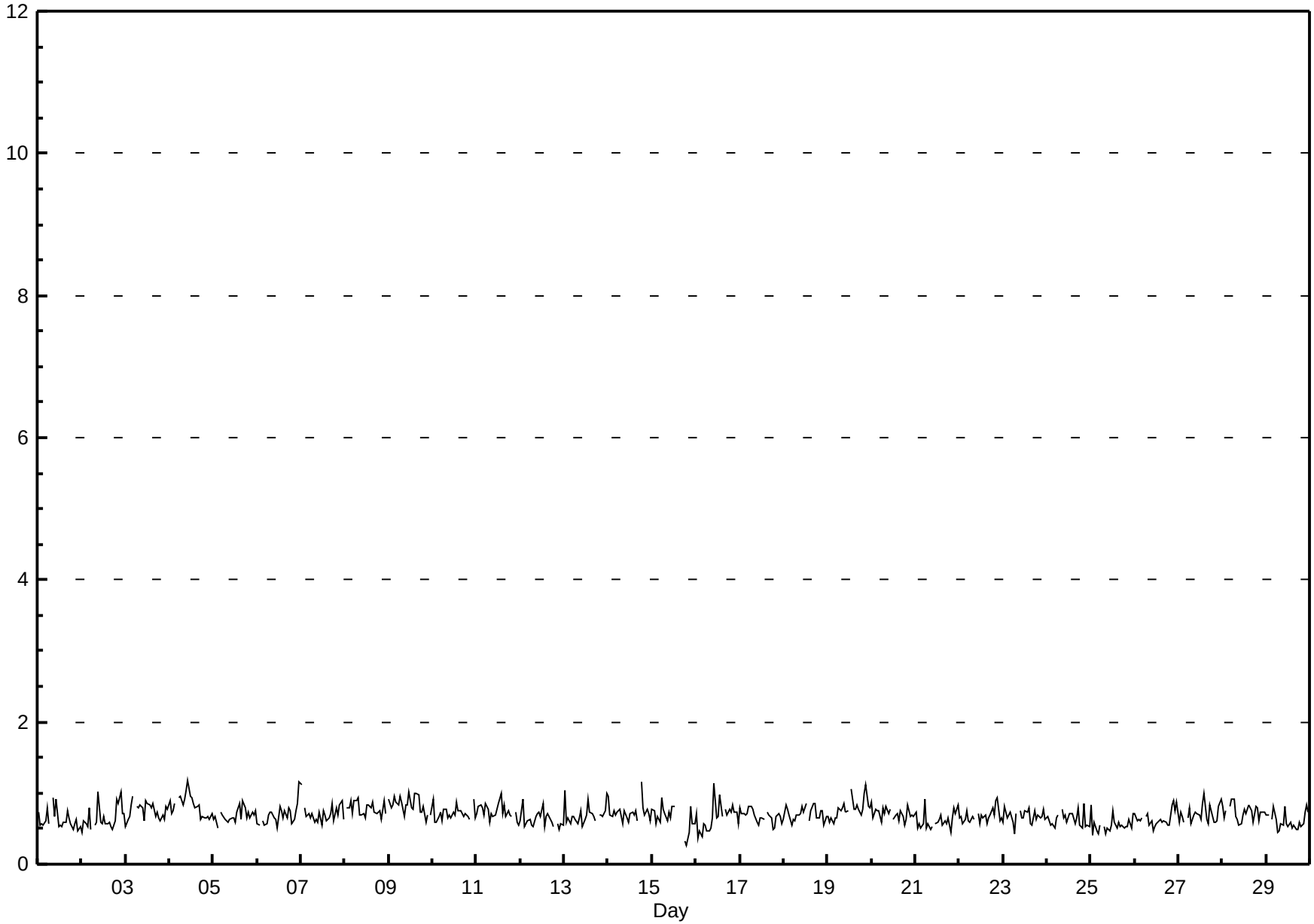
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Sunset House - February 2012

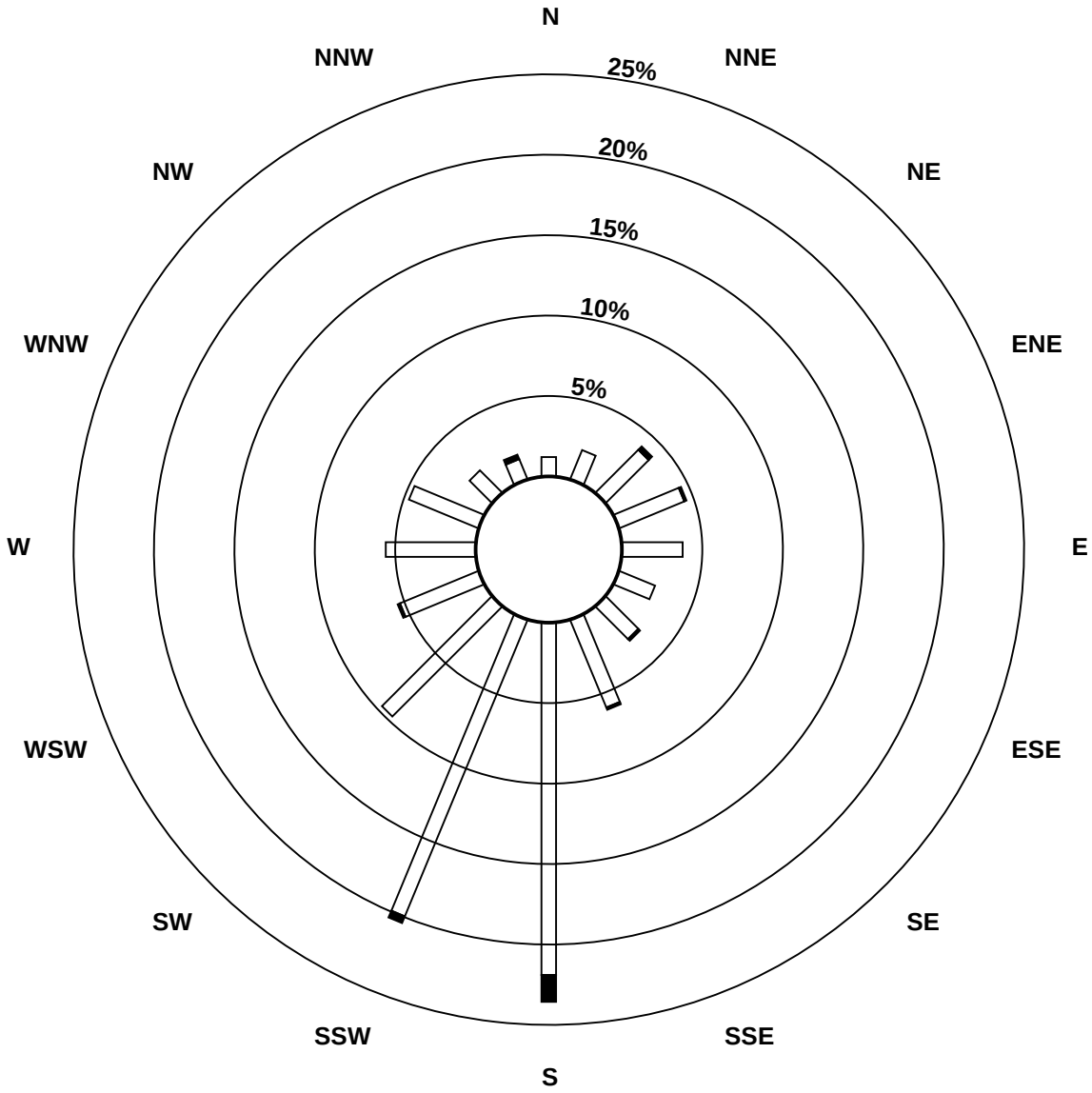


FOCUS AIR QUALITY MONITORING

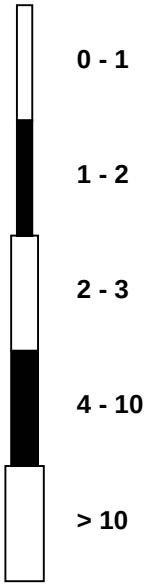
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Sunset House - February 2012



Pollutant Classes (ppb)

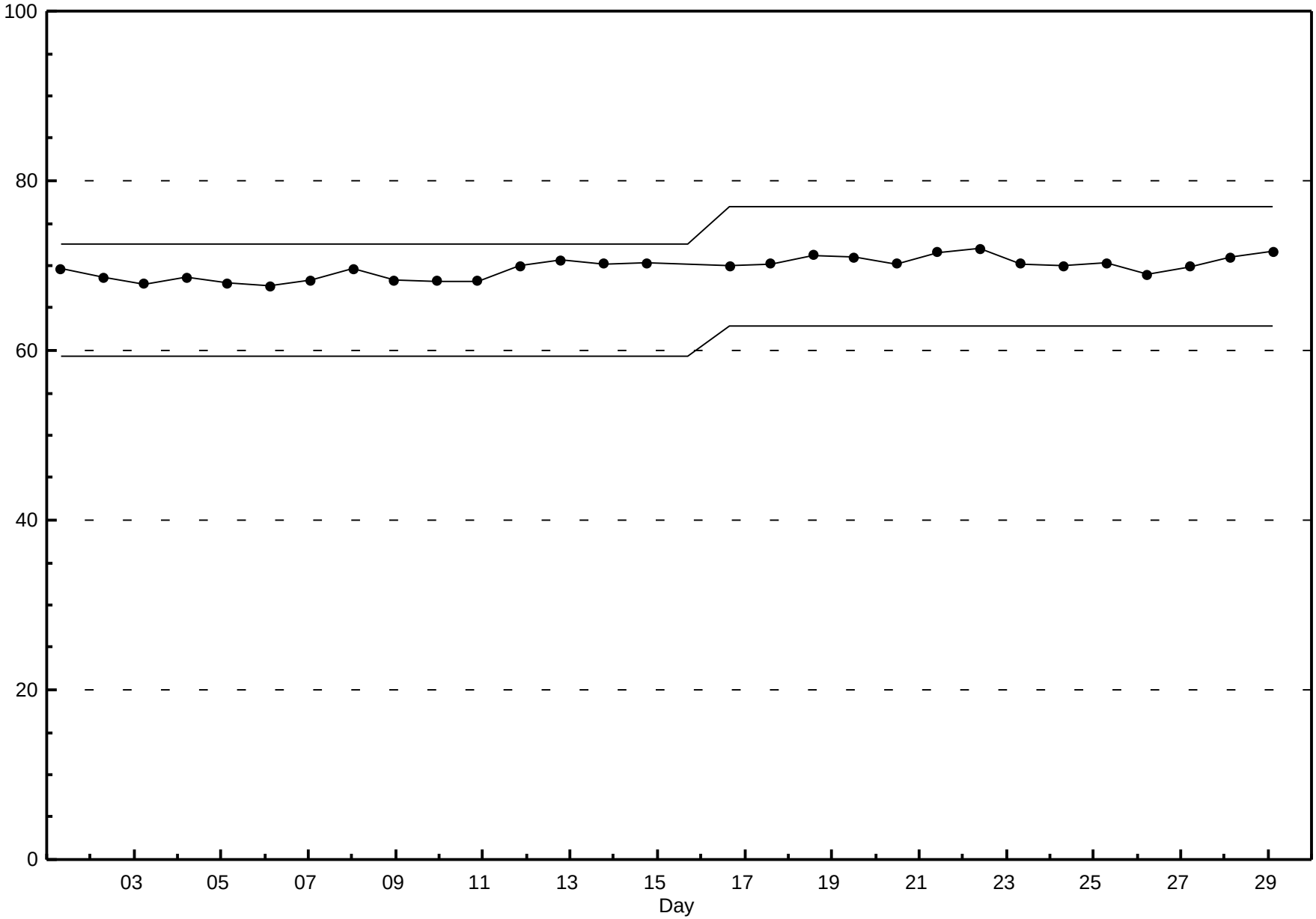


Peace Airshed Zone Association

Span Responses

Total Reduced Sulphur (TRS)

Sunset House - February 2012



Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Sunset House - February 2012

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

Maximum Value: 8.2 ppb on Feb 16 19:00

Maximum Daily Average: 3.0 ppb on Feb 18

Minimum Value: 0 ppb on Feb 25 01:00

Minimum Daily Average: 1.0 ppb on Feb 25

Maximum Diurnal Average: 2.4 ppb at hour 19

Minimum Diurnal Average: 1.5 ppb at hour 15

Monthly Average: 1.96 ppb

Percentiles: P_1 = 0.5 P_{10} = 0.8 Q_1 = 1.0 Median = 1.8 Q_3 = 2.6 P_{90} = 3.5 P_{99} = 4.8

Hours in Service:	349
Hours of Data:	330
Hours of Missing Data:	19
Hours of Calibration:	19
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	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
2-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
3-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
4-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
5-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
6-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
7-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
8-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
9-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
10-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
11-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
12-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
13-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
14-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
15-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	C	C	C	C	4	A	4	2	4	3	2	2	2	--	4.1
16-Feb	1	1	1	1	1	1	1	1	2	1	1	2	2	2	2	A	4	5	8	5	4	3	3	2	2.5	8.2
17-Feb	2	2	2	2	2	2	2	2	2	2	2	2	2	2	A	2	2	2	1	1	2	2	2	2	1.9	2.3
18-Feb	1	2	2	1	2	2	2	2	4	4	4	4	4	A	4	3	4	6	5	3	3	3	3	3	3.0	5.6
19-Feb	3	3	3	3	3	3	3	3	3	4	4	3	A	4	3	2	3	3	3	3	2	2	2	1	2.9	3.7
20-Feb	3	4	4	4	2	2	2	1	2	2	2	A	1	1	1	1	1	1	1	1	2	2	1	2	1.8	4.3
21-Feb	2	2	2	2	2	3	3	2	2	2	A	2	1	1	1	1	1	1	2	1	2	1	1	1	1.6	2.6
22-Feb	1	1	1	1	1	1	2	2	2	A	2	2	1	1	1	1	1	1	2	2	4	3	2	2	1.6	4.1
23-Feb	3	2	1	1	2	2	3	2	A	3	2	2	2	1	2	1	1	2	2	1	2	3	3	3	2.0	3.4
24-Feb	5	3	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1.0	5.2
25-Feb	0	0	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1.0	1.8
26-Feb	2	2	2	2	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	3	3	1.4	3.2
27-Feb	4	4	3	3	A	3	3	3	2	2	2	2	1	1	1	1	1	2	1	2	1	1	1	1	1.9	3.8
28-Feb	2	3	3	A	3	3	3	3	3	3	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1.9	3.4
29-Feb	1	0	A	1	1	1	1	2	4	6	7	4	2	2	2	3	3	5	5	3	3	2	2	2	2.7	6.6
	2.2	2.1	2.0	1.8	1.7	1.9	1.9	2.1	2.2	2.4	2.3	2.1	1.7	1.6	1.5	1.6	1.7	2.3	2.4	2.1	2.1	1.9	1.9	1.9	Diurnal Average	
	5.2	4.3	4.2	3.7	3.0	3.2	3.2	3.4	4.1	5.5	6.6	4.0	3.8	3.7	3.6	4.1	3.8	5.6	8.2	5.4	4.1	3.1	3.4	3.3	Diurnal Maximum	

C - Calibration NS - Not in service A - Automated Daily Zero Span

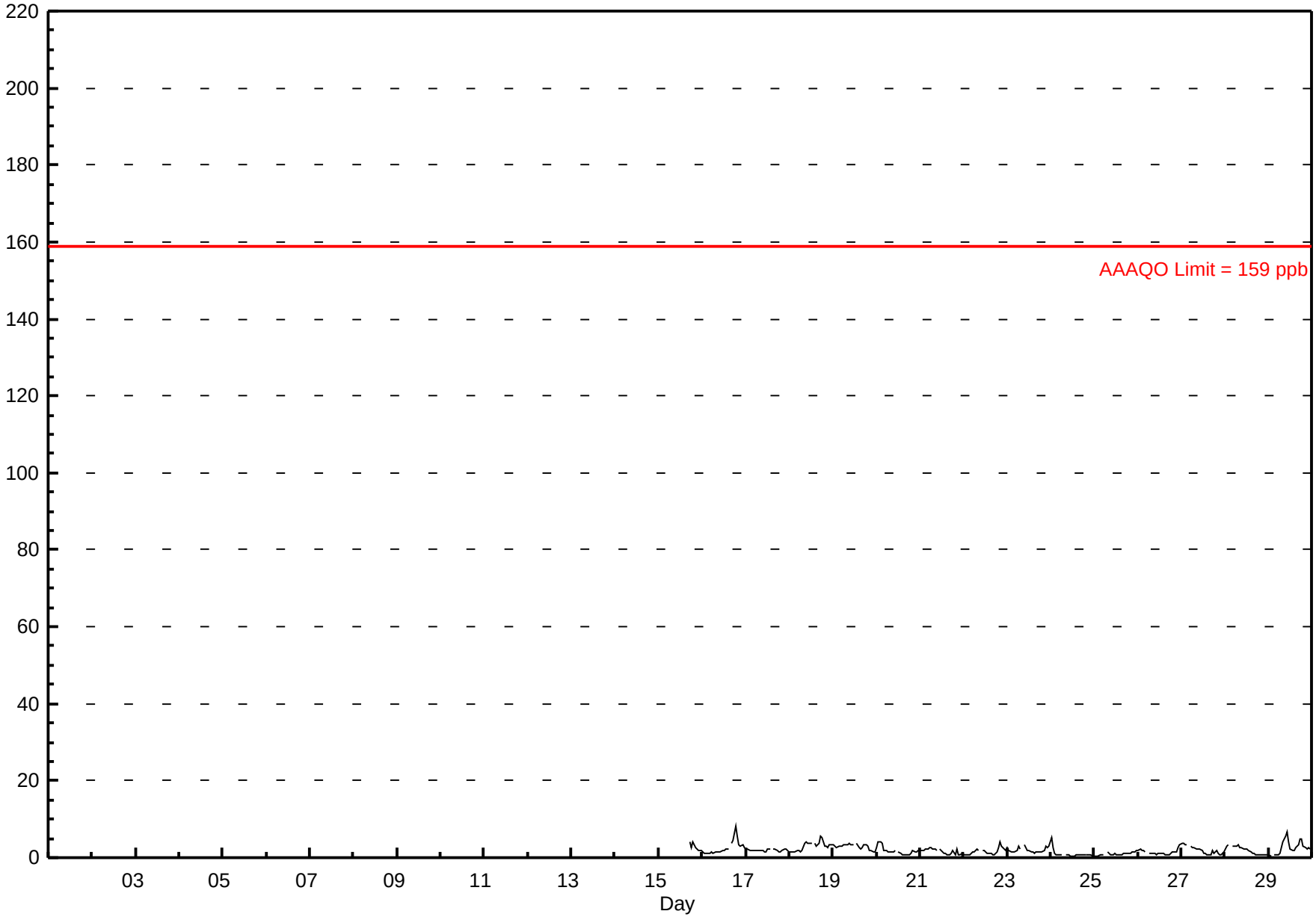
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb

Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Sunset House - February 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Sunset House - February 2012

Maximum Value: 12.8 ppb on Feb 16 19:00

Maximum Daily Average: 4.0 ppb on Feb 18

Minimum Value: 1 ppb on Feb 25 00:00

Minimum Daily Average: 1.2 ppb on Feb 25

Maximum Diurnal Average: 3.7 ppb at hour 19

Minimum Diurnal Average: 1.9 ppb at hour 15

Monthly Average: 2.69 ppb

Percentiles: $P_1 = 0.7$ $P_{10} = 1.0$ $Q_1 = 1.4$ Median = 2.2 $Q_3 = 3.5$ $P_{90} = 4.8$ $P_{99} = 9.2$

Hours in Service:	349
Hours of Data:	330
Hours of Missing Data:	19
Hours of Calibration:	19
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	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
2-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
3-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
4-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
5-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
6-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
7-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
8-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
9-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
10-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
11-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
12-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
13-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
14-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
15-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	C	C	C	C	6	A	9	5	6	4	5	2	2	--	8.7
16-Feb	2	1	1	1	1	2	2	2	2	2	2	2	2	2	2	A	4	8	13	7	4	4	8	3	3.4	12.8
17-Feb	3	3	2	2	2	2	2	2	2	2	2	2	2	3	A	3	2	2	2	2	2	2	2	2	2.2	3.0
18-Feb	2	2	2	2	4	3	2	4	5	5	4	4	4	A	4	4	5	8	9	4	4	4	4	4	4.0	9.3
19-Feb	4	3	4	4	4	4	4	4	4	5	4	4	A	5	3	3	3	4	4	3	3	3	2	2	3.5	5.3
20-Feb	8	6	6	8	3	2	2	2	2	2	2	A	2	1	1	1	1	1	1	1	2	2	2	2	2.6	8.0
21-Feb	2	2	2	2	3	3	3	3	2	3	A	5	2	2	2	5	1	2	4	3	7	1	2	1	2.7	6.9
22-Feb	1	1	1	2	1	2	3	3	4	A	3	2	2	1	1	1	1	1	3	4	10	5	3	3	2.6	9.5
23-Feb	7	3	2	2	2	3	5	4	A	4	3	3	2	2	2	2	2	2	2	2	5	5	7	6	3.3	6.8
24-Feb	9	5	1	1	1	3	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.5	8.8
25-Feb	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1.2	2.0
26-Feb	2	2	2	2	2	A	2	1	1	1	1	3	2	1	1	1	1	2	2	2	2	2	3	4	1.8	3.9
27-Feb	4	4	4	3	A	3	3	3	3	2	2	2	1	2	1	1	2	5	2	3	1	1	1	2	2.5	4.5
28-Feb	3	4	3	A	3	3	3	4	3	3	3	3	2	2	2	1	1	1	1	1	1	1	1	1	2.2	3.9
29-Feb	1	1	A	1	1	1	2	3	6	6	7	7	3	2	2	3	4	6	6	3	3	3	3	3	3.4	7.3
	3.4	2.6	2.5	2.5	2.2	2.6	2.5	2.8	2.9	2.9	2.7	2.9	2.1	2.0	1.9	2.4	2.1	3.5	3.7	2.9	3.3	2.7	2.8	2.6	Diurnal Average	
	8.8	5.8	6.3	8.0	3.7	3.5	4.6	4.2	6.1	6.2	7.3	6.9	4.3	5.3	4.4	5.9	4.5	8.7	12.8	6.7	9.5	5.0	7.6	5.9	Diurnal Maximum	

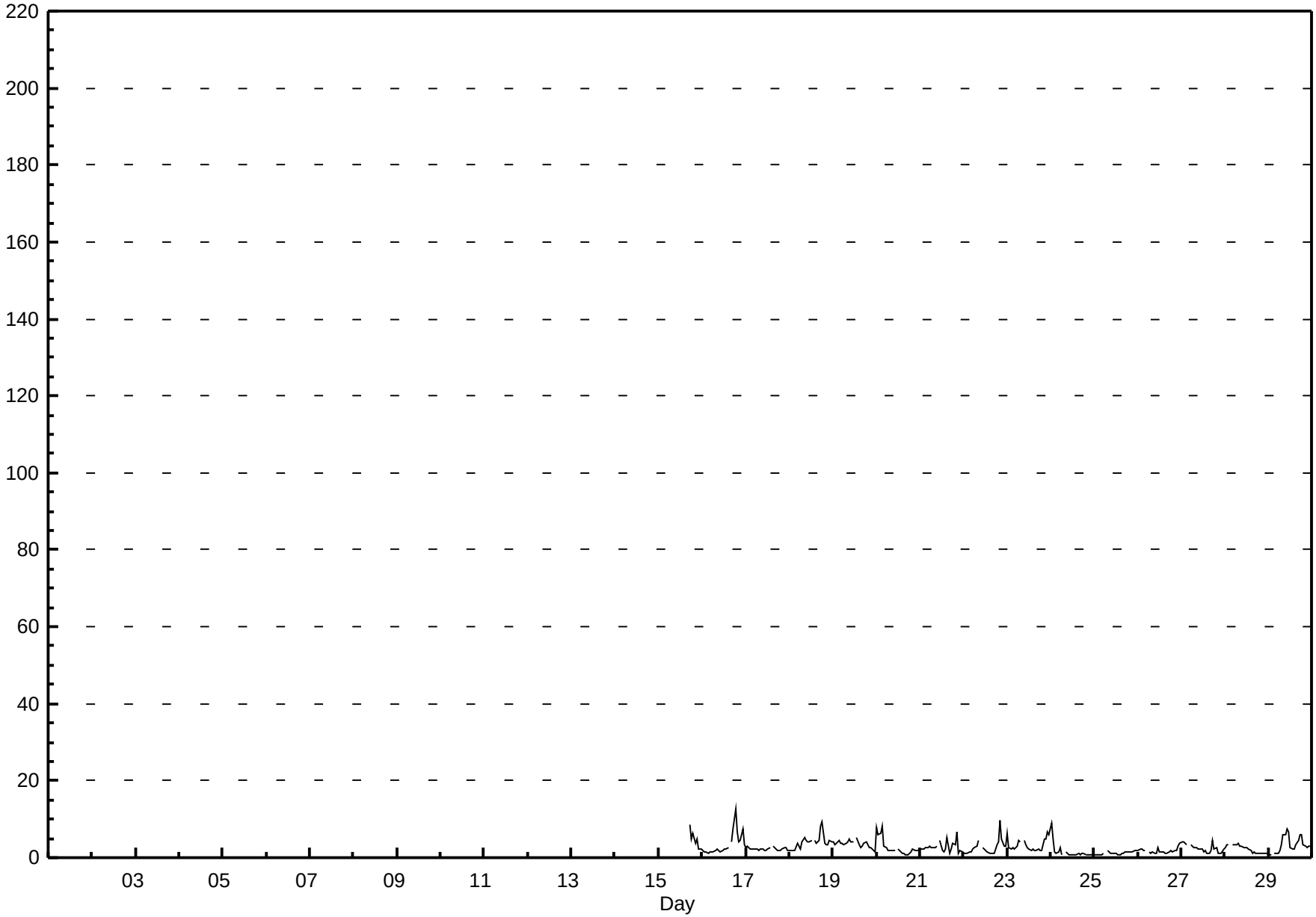
C - Calibration NS - Not in service A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Sunset House - February 2012

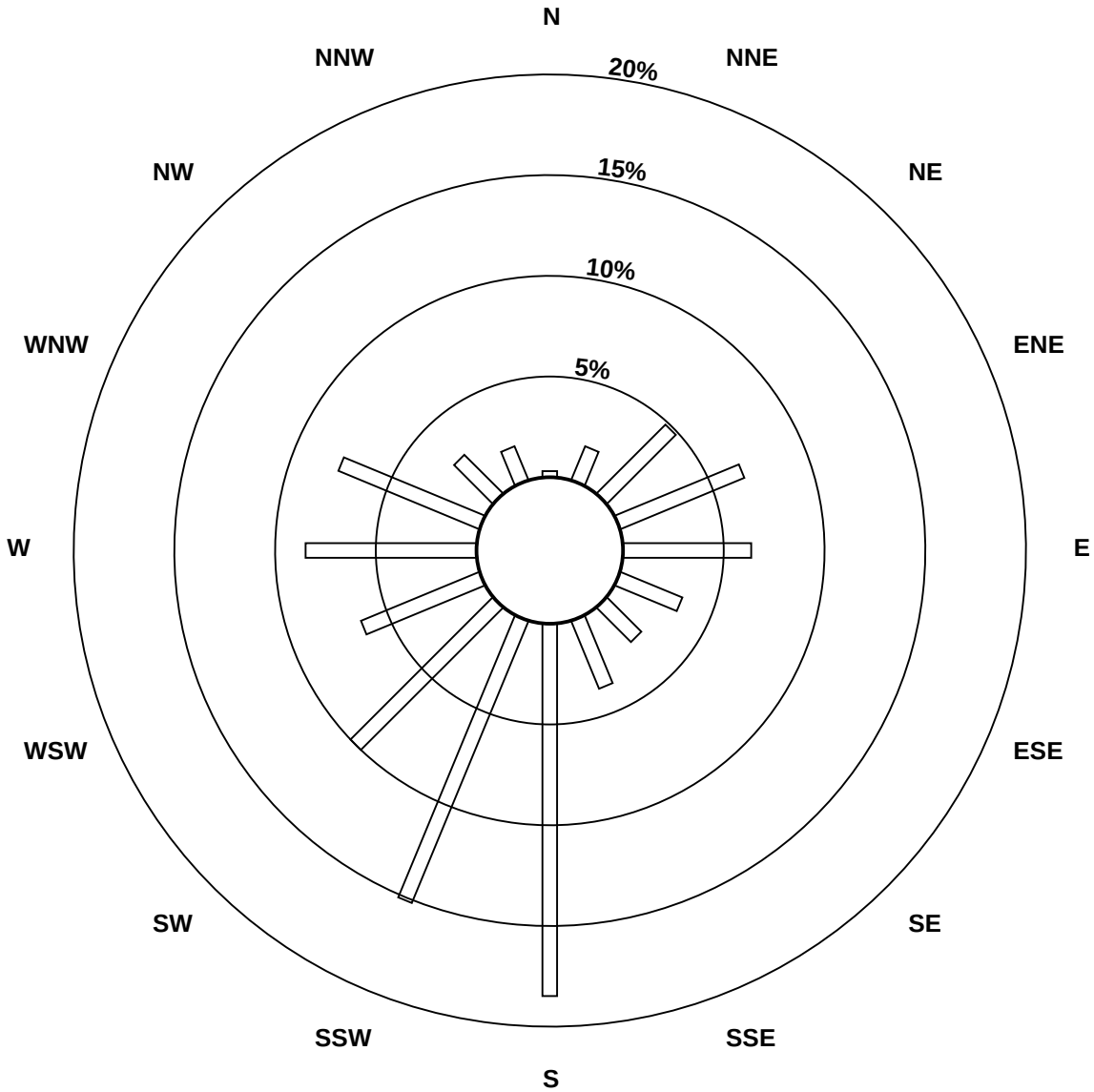


FOCUS AIR QUALITY MONITORING

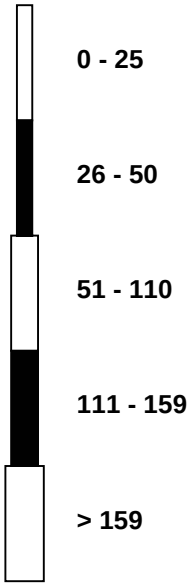
Pollutant Rose

Nitrogen Dioxide (NO_2) - ppb

Sunset House - February 2012



Pollutant Classes (ppb)

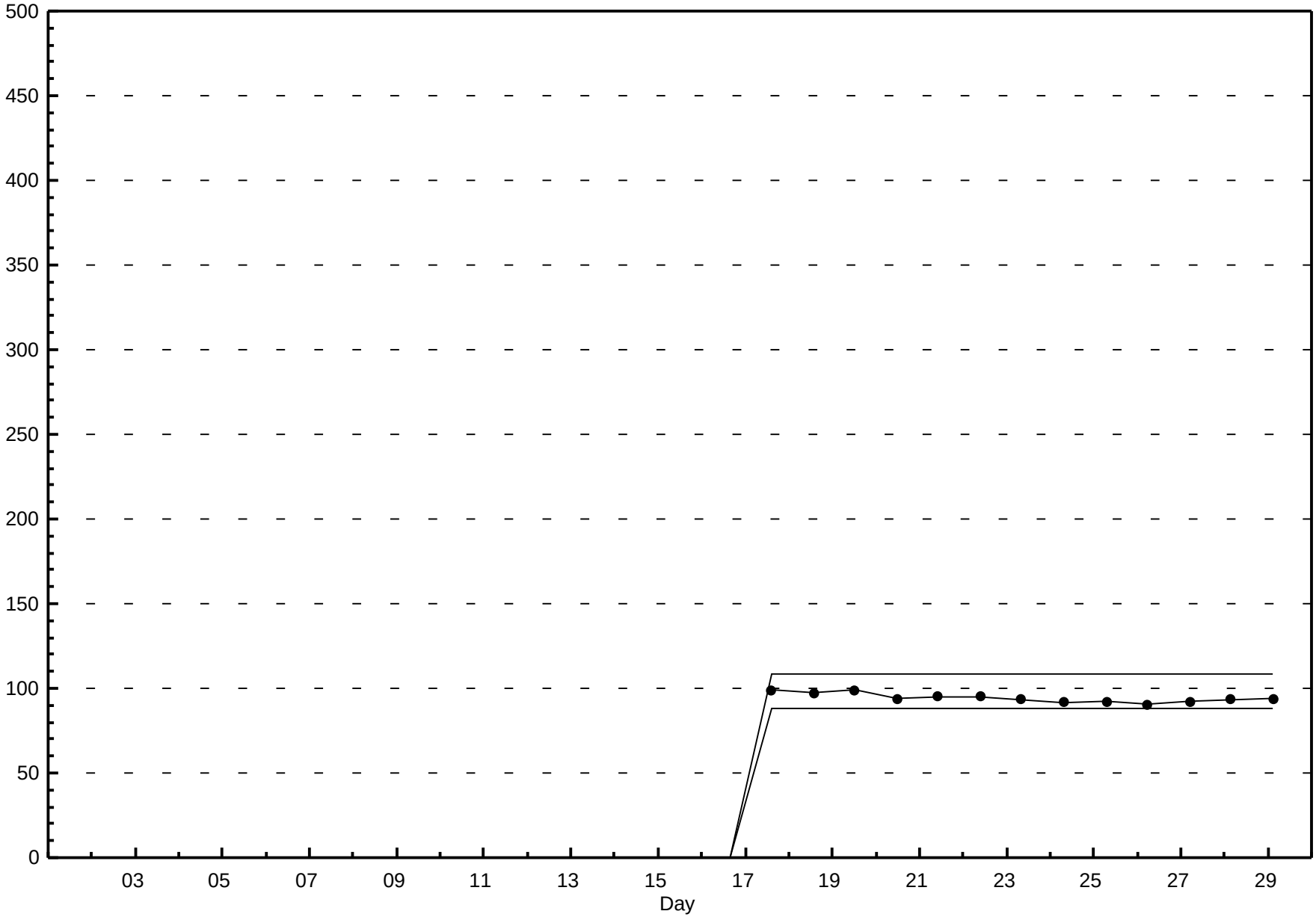


Peace Airshed Zone Association

Span Responses

Nitrogen Dioxide (NO_2)

Sunset House - February 2012



Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Sunset House - February 2012

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

Maximum Value: 2.8 ppb on Feb 29 11:00

Maximum Daily Average: 0.5 ppb on Feb 29

Minimum Value: 0 ppb on Feb 15 19:00

Minimum Daily Average: 0.0 ppb on Feb 24

Maximum Diurnal Average: 0.8 ppb at hour 12

Minimum Diurnal Average: 0.0 ppb at hour 5

Monthly Average: 0.18 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.0$ Median = 0.0 $Q_3 = 0.2$ $P_{90} = 0.6$ $P_{99} = 1.4$

Hours in Service:	349
Hours of Data:	330
Hours of Missing Data:	19
Hours of Calibration:	19
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	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
2-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
3-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
4-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
5-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
6-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
7-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
8-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
9-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
10-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
11-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
12-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
13-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
14-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
15-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	C	C	C	C	1	A	0	0	0	0	0	0	0	--	0.7
16-Feb	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	A	0	0	0	0	0	0	0	0	0.2	0.8
17-Feb	0	0	0	0	0	0	0	0	0	0	0	0	1	1	A	0	0	0	0	0	0	0	0	0	0.1	0.8
18-Feb	0	0	0	0	0	0	0	0	0	1	1	2	2	A	1	1	1	0	0	0	0	0	0	0	0.4	1.7
19-Feb	0	0	0	0	0	0	0	0	0	0	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0.2	0.9
20-Feb	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
21-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	0.5
22-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
23-Feb	0	0	0	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7
24-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	0.0	0.1
25-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	0.1	0.4
26-Feb	0	0	0	0	0	A	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0.2	1.1
27-Feb	0	0	0	0	A	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.2	0.9
28-Feb	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.3	1.4
29-Feb	0	0	A	0	0	0	0	0	0	1	3	2	1	1	1	1	1	0	0	0	0	0	0	0	0.5	2.8
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.7	0.8	0.6	0.5	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	Diurnal Average	
	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.4	1.4	2.8	2.1	1.6	1.1	1.0	0.8	0.6	0.3	0.1	0.1	0.1	0.1	0.1	0.0	Diurnal Maximum	

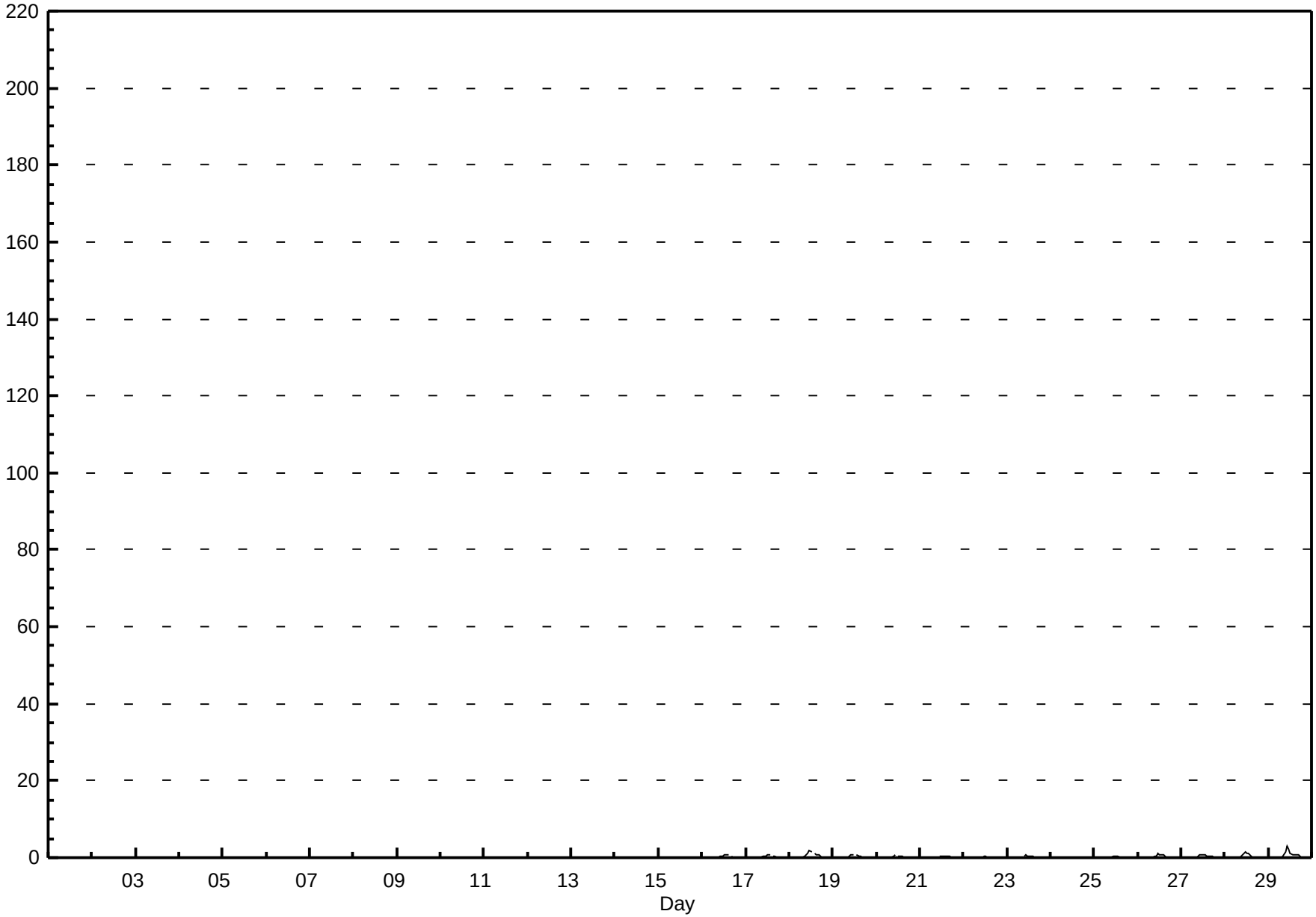
C - Calibration NS - Not in service A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Sunset House - February 2012



Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Sunset House - February 2012

Maximum Value: 13.6 ppb on Feb 21 15:00

Maximum Daily Average: 1.6 ppb on Feb 21

Minimum Value: 0 ppb on Feb 28 16:00

Minimum Daily Average: 0.2 ppb on Feb 25

Maximum Diurnal Average: 1.7 ppb at hour 15

Minimum Diurnal Average: 0.1 ppb at hour 20

Monthly Average: 0.54 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.1$ Median = 0.2 $Q_3 = 0.7$ $P_{90} = 1.2$ $P_{99} = 1.2$

Hours in Service:	349
Hours of Data:	330
Hours of Missing Data:	19
Hours of Calibration:	19
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	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
2-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
3-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
4-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
5-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
6-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
7-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
8-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
9-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
10-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
11-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
12-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
13-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
14-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
15-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	C	C	C	C	1	A	1	3	0	0	1	0	0	--	2.9
16-Feb	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	A	0	1	0	0	0	1	1	1	0.4	1.0
17-Feb	0	0	0	0	0	0	0	0	0	0	1	1	1	1	A	1	0	0	0	0	0	0	0	0	0.3	0.9
18-Feb	0	0	0	0	1	1	0	1	1	1	2	2	2	A	1	1	1	1	1	0	0	0	0	1	0.8	2.0
19-Feb	1	0	0	1	0	0	0	0	1	1	1	1	A	1	1	0	0	0	0	0	0	0	0	0	0.5	1.5
20-Feb	1	1	0	1	0	0	0	0	0	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0.4	1.1
21-Feb	0	0	0	0	0	0	0	0	0	1	A	2	2	1	14	5	9	0	0	0	1	0	1	0	1.6	13.6
22-Feb	0	0	0	1	0	1	1	1	1	A	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0.4	0.9
23-Feb	0	0	0	0	0	1	1	1	A	1	1	1	1	0	1	0	0	0	0	0	1	1	1	1	0.6	1.5
24-Feb	1	1	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9
25-Feb	0	0	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
26-Feb	0	0	0	0	0	A	0	0	0	0	1	2	1	1	1	1	1	1	1	0	0	0	0	0	0.5	2.3
27-Feb	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.5	1.5
28-Feb	0	0	0	A	0	0	0	0	0	1	1	2	2	1	1	0	0	0	0	0	0	0	0	0	0.4	1.6
29-Feb	0	0	A	0	0	0	0	0	1	2	3	4	1	1	1	1	1	1	0	0	0	0	0	0	0.7	3.5
	0.3	0.2	0.1	0.3	0.2	0.4	0.2	0.3	0.4	0.7	1.1	1.3	1.0	0.8	1.7	0.9	1.1	0.5	0.5	0.1	0.2	0.3	0.3	0.3	Diurnal Average	
	1.1	0.8	0.4	1.0	0.7	1.2	1.0	0.8	1.0	1.9	3.3	3.5	2.1	1.5	13.6	4.8	9.4	1.3	2.9	0.4	0.6	0.7	1.3	0.8	Diurnal Maximum	

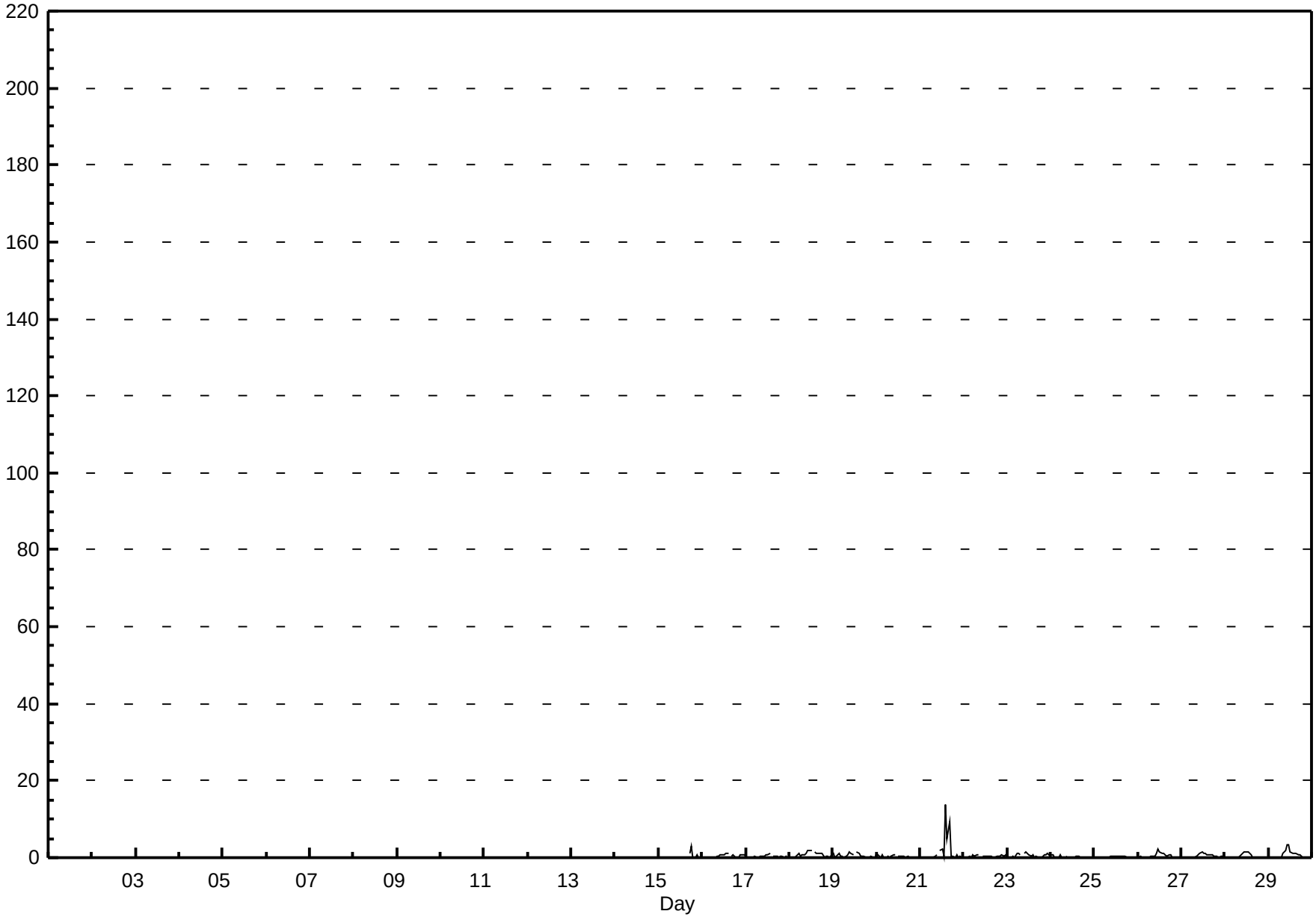
C - Calibration NS - Not in service A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Sunset House - February 2012



Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Sunset House - February 2012

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

Maximum Value: 9.4 ppb on Feb 29 11:00

Maximum Daily Average: 3.3 ppb on Feb 18

Minimum Value: 0 ppb on Feb 28 16:00

Minimum Daily Average: 1.0 ppb on Feb 25

Maximum Diurnal Average: 3.0 ppb at hour 11

Minimum Diurnal Average: 1.7 ppb at hour 5

Monthly Average: 2.10 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.8 Q_1 = 1.2 Median = 1.8 Q_3 = 2.8 P_{90} = 3.8 P_{99} = 5.7

Hours in Service:	349
Hours of Data:	330
Hours of Missing Data:	19
Hours of Calibration:	19
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	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
2-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
3-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
4-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
5-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
6-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
7-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
8-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
9-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
10-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
11-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
12-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
13-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
14-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
15-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	C	C	C	C	5	A	4	2	4	3	2	2	2	--	4.8
16-Feb	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	A	4	5	8	5	4	3	3	2	2.6	8.3
17-Feb	2	2	2	2	2	2	2	2	2	2	2	2	3	3	A	2	2	2	1	1	2	2	2	2	2.0	3.0
18-Feb	1	2	2	1	2	2	2	2	4	5	5	5	5	A	5	4	4	6	5	3	3	3	3	3	3.3	5.9
19-Feb	3	3	3	3	3	3	3	3	3	4	4	4	A	5	3	3	3	3	3	3	2	2	2	1	3.0	4.5
20-Feb	3	4	4	4	2	2	2	1	2	2	2	A	2	1	1	1	1	1	1	1	2	2	1	2	1.9	4.4
21-Feb	2	2	2	2	2	3	3	2	2	2	A	3	2	1	1	1	1	1	2	1	2	1	1	1	1.7	2.6
22-Feb	1	1	1	1	1	2	2	2	2	A	2	2	2	1	1	1	1	1	2	2	4	3	2	2	1.7	4.2
23-Feb	3	2	1	1	2	2	3	2	A	4	3	2	2	2	2	1	2	2	2	1	2	3	3	3	2.1	3.9
24-Feb	5	3	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1.0	5.3
25-Feb	0	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1.0	1.8
26-Feb	2	2	2	2	1	A	1	1	1	1	1	2	2	2	1	1	1	1	1	1	2	2	2	3	1.6	3.1
27-Feb	4	4	3	3	A	3	3	2	3	3	3	3	2	2	1	1	1	2	1	2	1	1	1	1	2.1	3.8
28-Feb	2	3	3	A	3	3	3	3	3	3	3	3	3	3	2	0	0	0	0	0	0	0	1	1	1.9	3.4
29-Feb	1	0	A	1	1	1	1	2	4	7	9	6	3	3	2	3	4	5	5	3	3	2	2	2	3.1	9.4
	2.2	2.1	2.0	1.8	1.7	1.9	1.9	2.1	2.3	2.8	3.0	2.8	2.3	2.1	1.9	1.8	1.8	2.3	2.4	2.0	2.0	1.8	1.9	1.9	Diurnal Average	
	5.3	4.4	4.2	3.8	3.0	3.2	3.2	3.4	4.5	6.9	9.4	6.0	5.3	4.5	4.5	4.8	4.4	5.9	8.3	5.4	4.2	3.1	3.5	3.3	Diurnal Maximum	

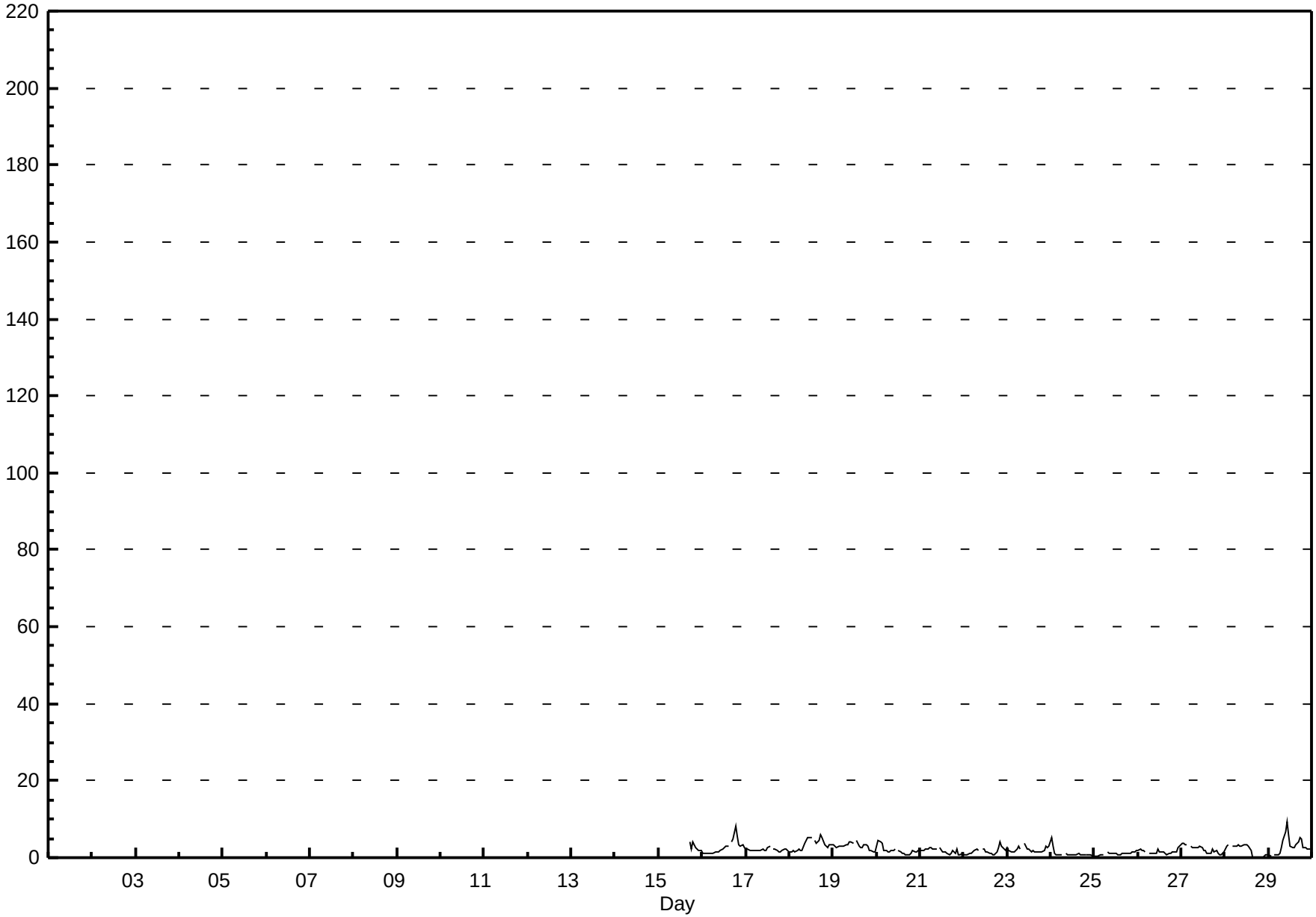
C - Calibration NS - Not in service A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Sunset House - February 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Sunset House - February 2012

Maximum Value: 12.9 ppb on Feb 16 19:00

Maximum Daily Average: 4.6 ppb on Feb 18

Minimum Value: 0 ppb on Feb 28 16:00

Minimum Daily Average: 1.2 ppb on Feb 25

Maximum Diurnal Average: 4.0 ppb at hour 12

Minimum Diurnal Average: 2.2 ppb at hour 5

Monthly Average: 2.97 ppb

Percentiles: P_1 = 0.0 P_{10} = 1.0 Q_1 = 1.5 Median = 2.4 Q_3 = 3.8 P_{90} = 5.7 P_{99} = 10.0

Hours in Service:	349
Hours of Data:	330
Hours of Missing Data:	19
Hours of Calibration:	19
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	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
2-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
3-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
4-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
5-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
6-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
7-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
8-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
9-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
10-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
11-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
12-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
13-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
14-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
15-Feb	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	C	C	C	C	7	A	10	5	7	4	6	2	2	--	10.1
16-Feb	2	1	1	1	1	1	1	2	2	2	2	3	3	3	3	A	5	8	13	7	4	4	8	4	3.5	12.9
17-Feb	3	3	2	2	2	3	2	2	2	2	2	2	3	3	A	3	3	2	2	2	2	2	2	2	2.4	3.4
18-Feb	2	2	2	2	4	4	3	5	5	5	6	6	6	A	5	5	5	8	11	4	4	4	4	5	4.6	10.5
19-Feb	5	3	4	5	4	4	4	4	5	6	5	5	A	7	4	3	3	4	4	3	3	3	2	2	3.9	6.7
20-Feb	9	6	6	8	3	2	2	2	2	2	2	A	2	2	1	1	1	1	1	1	2	2	2	2	2.7	8.6
21-Feb	2	2	2	2	3	3	3	3	2	3	A	6	3	2	4	9	6	2	4	3	7	1	2	2	3.3	8.9
22-Feb	1	1	1	2	1	3	3	4	5	A	3	2	2	2	1	1	1	1	4	5	10	6	3	4	2.8	9.8
23-Feb	7	3	2	3	2	4	6	5	A	5	5	3	3	2	3	2	2	2	2	2	5	5	8	6	3.7	7.5
24-Feb	10	5	1	1	1	3	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.6	9.8
25-Feb	1	1	1	1	1	1	A	2	1	1	1	2	1	1	1	1	1	1	1	1	1	2	2	2	1.2	2.0
26-Feb	2	2	2	2	2	A	2	1	1	1	2	5	3	2	2	2	1	2	3	2	2	2	3	4	2.1	4.9
27-Feb	4	4	4	3	A	3	3	3	3	3	3	3	2	2	1	2	3	5	2	2	1	1	1	2	2.7	5.3
28-Feb	3	3	4	A	4	4	3	4	3	3	3	4	4	3	2	0	0	0	0	0	0	0	1	1	2.1	3.9
29-Feb	1	1	A	1	1	1	2	3	7	8	10	10	4	3	3	4	5	6	6	3	3	2	3	3	3.9	10.3
	3.5	2.6	2.5	2.6	2.2	2.8	2.6	2.9	3.1	3.4	3.5	4.0	2.8	2.6	2.6	2.9	2.6	3.7	3.8	2.8	3.2	2.7	2.9	2.6	Diurnal Average	
	9.8	5.8	6.4	8.2	3.9	4.0	5.5	5.0	7.1	7.8	10.3	10.0	6.0	6.7	5.5	8.9	5.8	10.1	12.9	6.7	9.8	5.6	7.8	6.0	Diurnal Maximum	

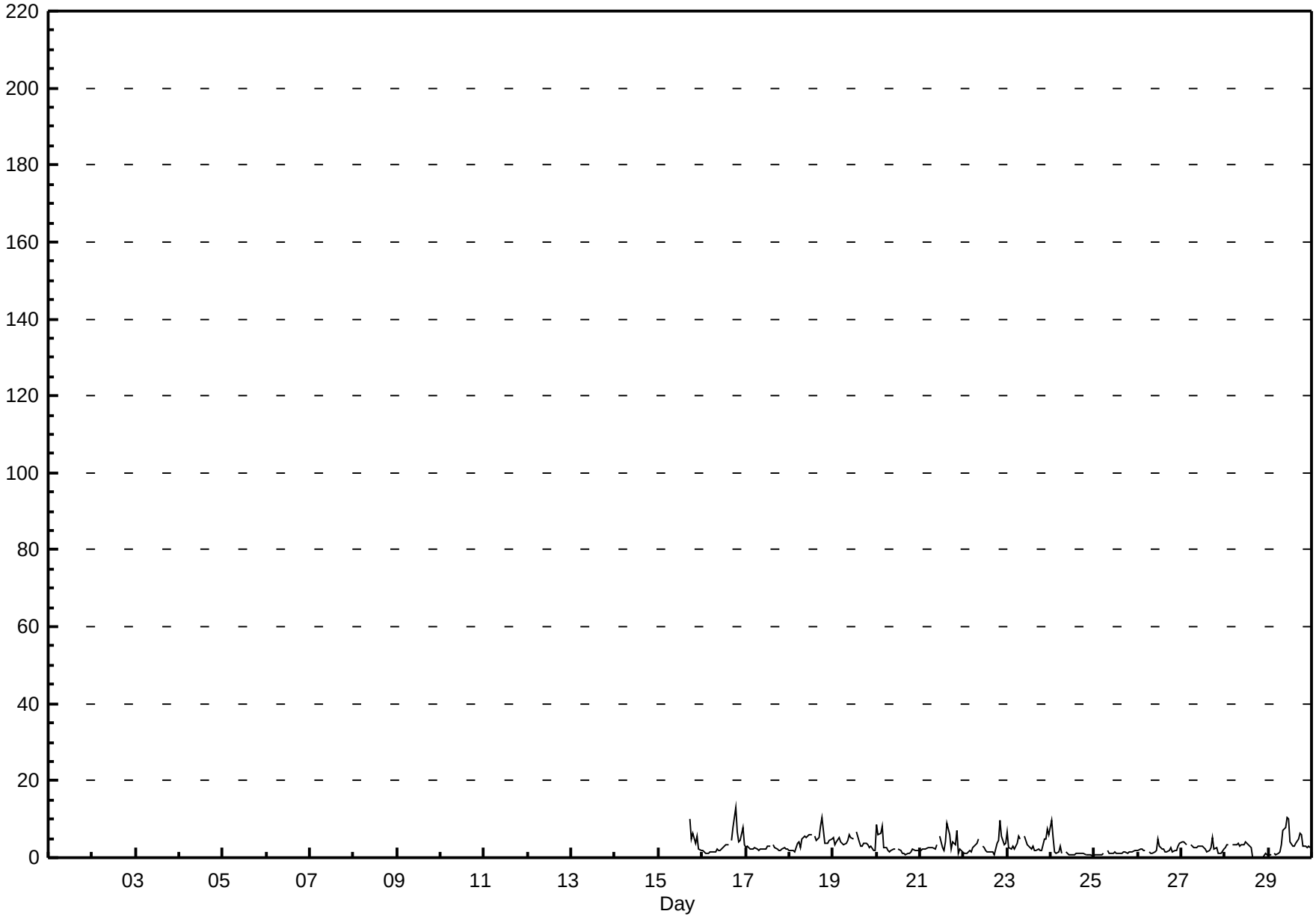
C - Calibration NS - Not in service A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Sunset House - February 2012



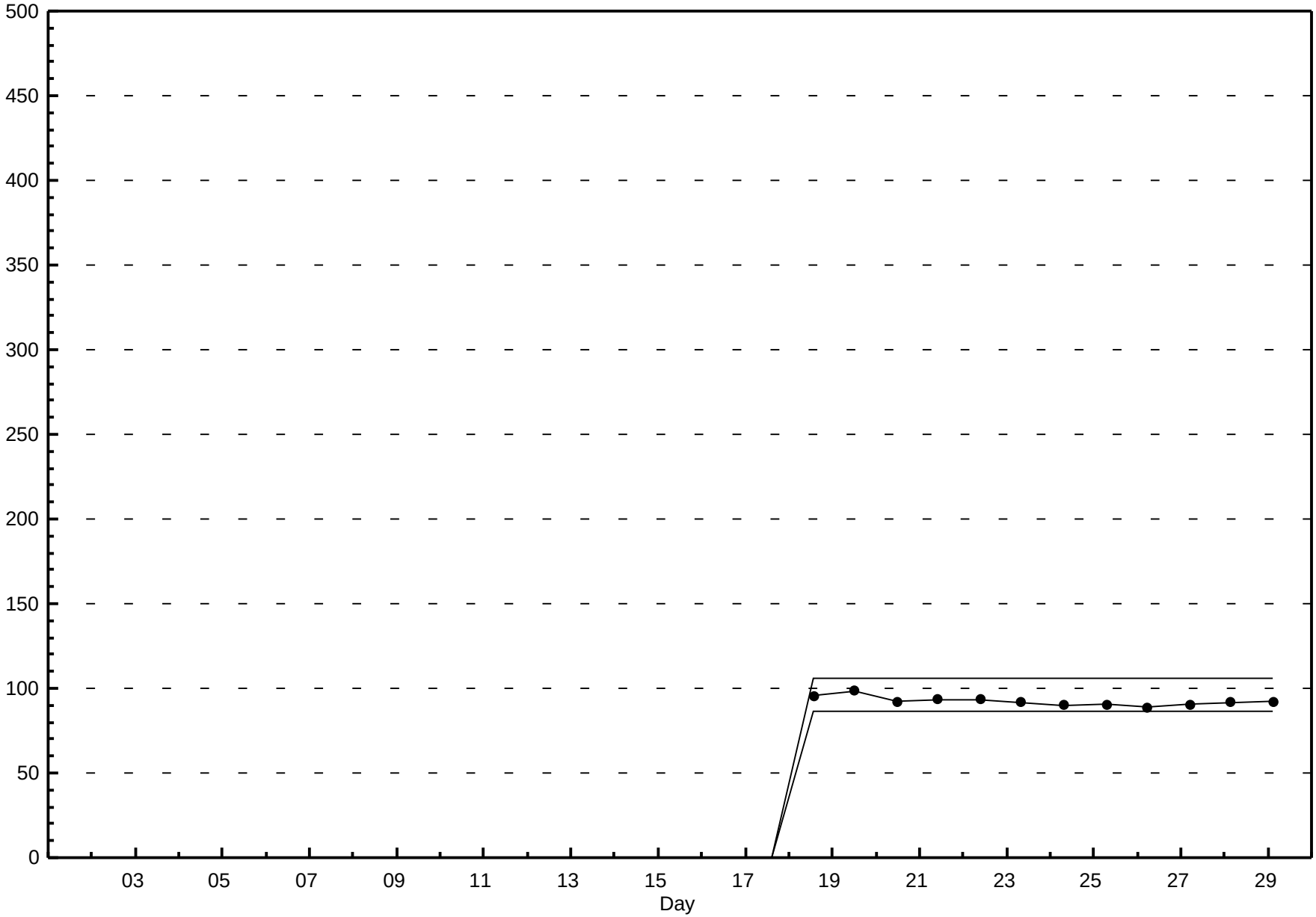
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Span Responses

Oxides of Nitrogen (NO_X)

Sunset House - February 2012



Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Sunset House - February 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 42.4 ppb on Feb 21 20:00
Maximum Daily Average: 32.6 ppb on Feb 28

Minimum Value: 15 ppb on Feb 9 08:00
Maximum Diurnal Average: 29.4 ppb at hour 17
Monthly Average: 27.08 ppb

Minimum Daily Average: 19.7 ppb on Feb 8
Minimum Diurnal Average: 24.5 ppb at hour 8
Percentiles: P_1 = 16.2 P_{10} = 20.6 Q_1 = 23.3 Median = 27.3 Q_3 = 30.7 P_{90} = 32.7 P_{99} = 38.5

Hours in Service:	696
Hours of Data:	656
Hours of Missing Data:	40
Hours of Calibration:	38
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	33	33	33	32	31	31	32	A	26	31	33	35	33	32	31	31	31	28	27	29	28	28	29	29	30.7	34.8
2-Feb	29	29	29	30	30	28	A	31	28	29	30	30	30	31	32	32	32	32	32	32	31	29	28	27	30.1	32.4
3-Feb	27	27	28	29	29	A	31	30	31	33	34	32	32	32	32	32	33	33	32	33	33	32	31	30	31.2	33.9
4-Feb	29	28	27	25	A	20	20	20	19	20	23	25	25	25	26	24	27	27	25	23	21	23	22	23	23.7	28.9
5-Feb	22	22	23	A	21	22	23	20	17	20	22	22	24	25	28	28	29	29	29	29	29	30	30	31	25.0	30.6
6-Feb	31	31	A	27	27	27	31	31	32	31	32	32	31	31	31	32	32	32	33	33	32	31	30	29	30.8	32.9
7-Feb	27	A	32	32	32	29	27	25	25	27	28	28	29	28	28	27	27	26	28	25	25	25	23	22	27.2	31.8
8-Feb	A	20	19	19	17	16	15	15	15	16	19	19	19	21	21	21	23	23	22	23	24	23	22	A	19.7	24.0
9-Feb	21	19	18	16	15	16	17	15	18	20	22	20	21	23	24	22	19	21	23	25	25	23	A	29	20.5	29.4
10-Feb	31	30	29	31	31	28	24	27	30	30	31	33	33	33	34	32	32	30	28	26	23	A	21	20	29.0	33.8
11-Feb	20	21	22	22	22	20	20	20	19	19	20	21	21	21	22	22	22	22	22	25	A	25	22	22	21.4	24.8
12-Feb	22	22	22	25	27	27	28	28	28	29	30	30	29	30	31	31	30	29	29	A	25	26	26	27	27.4	30.6
13-Feb	27	27	26	24	23	24	25	23	25	26	27	27	31	35	35	34	35	34	A	33	33	33	32	32	29.2	35.2
14-Feb	31	31	31	31	31	31	30	30	30	30	31	30	30	31	30	31	32	A	30	30	30	29	29	28	30.3	31.9
15-Feb	27	27	27	27	26	26	25	25	26	26	26	C	C	C	N	N	A	31	36	36	36	36	30	30	29.0	36.2
16-Feb	31	31	31	30	30	30	30	30	30	32	32	32	32	32	32	A	30	28	24	27	29	29	27	28	29.9	32.3
17-Feb	28	27	27	27	26	26	26	26	26	27	29	28	28	29	A	31	31	31	30	31	31	31	31	31	28.6	31.3
18-Feb	32	31	31	31	29	28	27	26	22	21	21	22	22	A	25	26	26	25	24	24	23	24	22	23	25.5	31.9
19-Feb	24	24	24	24	24	22	22	21	21	22	23	24	A	22	24	25	25	24	24	26	26	26	25	25	23.8	26.4
20-Feb	23	21	20	20	21	21	21	21	22	24	26	A	27	27	27	27	27	27	27	27	26	26	26	27	24.5	27.5
21-Feb	27	26	26	26	25	25	26	25	25	26	A	C	C	C	C	C	42	42	40	42	40	41	39	36	32.1	42.4
22-Feb	35	34	34	34	33	31	32	26	30	A	28	29	30	30	32	33	34	32	30	28	25	27	29	30	30.7	35.2
23-Feb	27	28	28	27	26	25	23	22	A	23	26	28	29	31	31	32	32	31	31	31	29	27	26	24	27.7	32.3
24-Feb	20	23	26	26	27	27	27	A	26	26	27	27	27	28	28	27	26	25	26	27	27	29	29	29	26.5	29.2
25-Feb	29	28	28	27	26	24	A	21	22	22	21	20	21	22	23	23	23	24	24	23	23	23	22	22	23.4	28.9
26-Feb	22	21	21	21	20	A	19	19	19	19	20	20	21	22	23	26	27	26	24	23	22	21	20	18	21.6	27.4
27-Feb	16	17	18	18	A	21	22	23	24	25	25	27	29	31	33	33	34	33	32	31	33	34	34	32	27.2	33.9
28-Feb	30	28	27	A	28	28	28	28	29	29	29	29	30	31	37	39	37	38	36	37	38	38	37	37	32.6	38.6
29-Feb	38	38	A	38	36	36	35	31	29	27	24	27	27	27	28	26	25	21	19	20	20	20	19	20	27.4	38.1
	27.2	26.7	26.2	26.6	26.5	25.5	25.4	24.5	24.8	25.4	26.2	26.8	27.4	28.1	28.7	28.8	29.4	28.7	28.0	28.5	28.1	28.1	27.2	27.2	Diurnal Average	
	37.5	38.1	33.5	37.6	36.2	36.0	35.5	31.4	32.3	32.7	33.9	34.8	33.4	34.6	36.6	38.6	42.1	41.5	40.3	42.4	39.6	40.6	38.5	37.2	Diurnal Maximum	

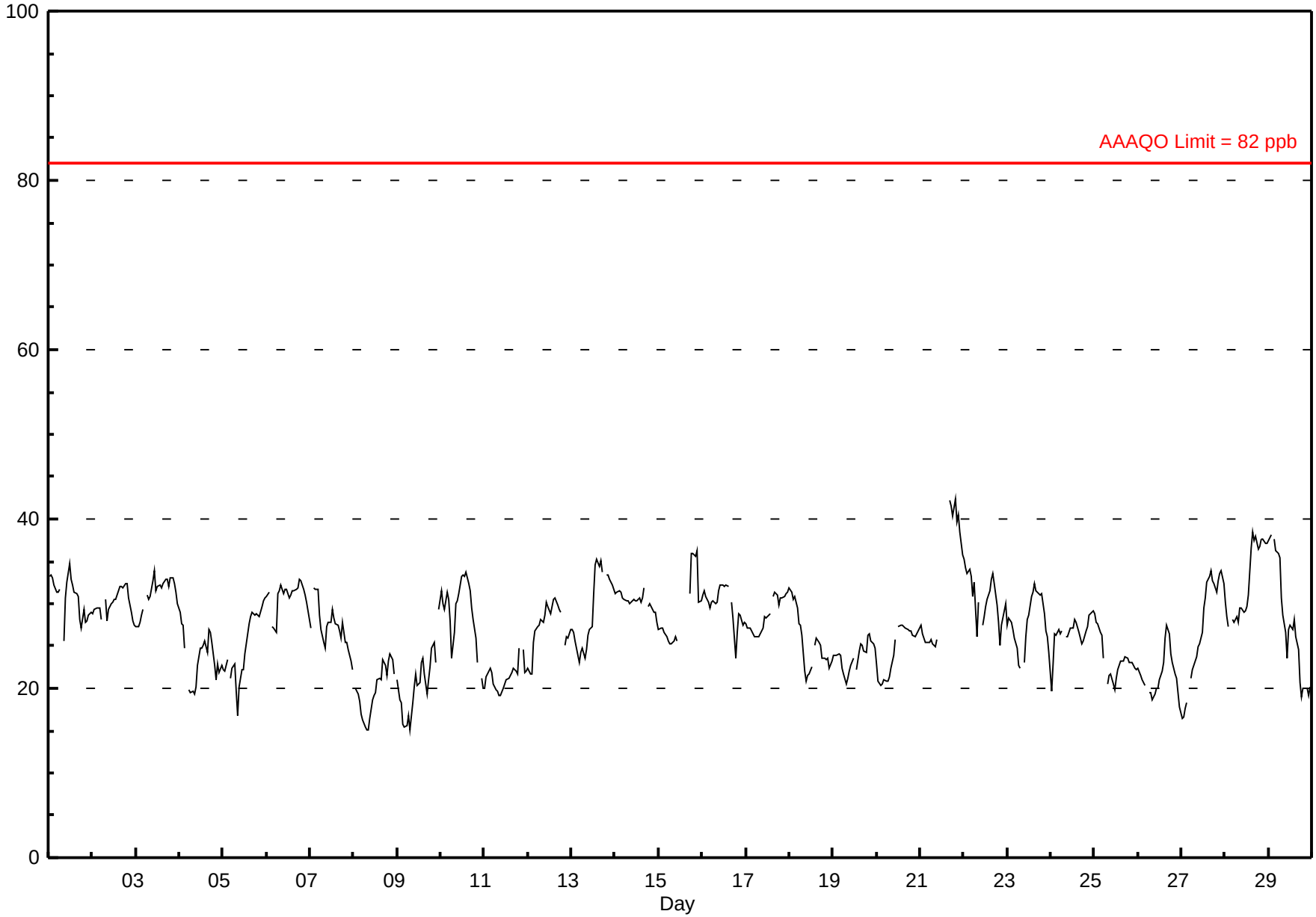
C - Calibration N - Not Valid A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na

Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Sunset House - February 2012



Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

Sunset House - February 2012

Maximum Value: 64.7 ppb on Feb 15 19:00

Maximum Daily Average: 34.0 ppb on Feb 28

Minimum Value: 15 ppb on Feb 8 08:00

Minimum Daily Average: 20.8 ppb on Feb 8

Maximum Diurnal Average: 30.7 ppb at hour 19

Minimum Diurnal Average: 25.7 ppb at hour 8

Monthly Average: 28.47 ppb

Percentiles: P_1 = 17.3 P_{10} = 21.8 Q_1 = 24.9 Median = 28.5 Q_3 = 31.9 P_{90} = 34.0 P_{99} = 41.5

Hours in Service:	696
Hours of Data:	656
Hours of Missing Data:	40
Hours of Calibration:	38
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	34	34	34	33	32	32	32	A	30	33	34	36	34	33	32	32	32	30	30	30	29	29	30	30	31.9	35.7
2-Feb	30	30	30	30	30	29	A	31	31	30	31	31	31	31	32	33	33	33	37	34	32	30	29	28	31.1	36.9
3-Feb	28	28	29	30	30	A	32	31	32	34	35	33	33	37	34	34	34	34	34	34	34	33	32	31	32.4	37.0
4-Feb	30	29	28	27	A	21	20	20	20	23	24	26	25	26	28	26	29	28	27	25	23	24	25	25	25.2	29.8
5-Feb	26	25	27	A	23	24	24	23	19	22	25	25	25	26	29	29	30	29	29	29	30	31	31	37	26.9	37.3
6-Feb	32	33	A	30	31	32	33	32	33	32	32	32	32	32	32	32	32	32	33	34	32	32	31	31	32.1	33.5
7-Feb	28	A	35	32	33	30	28	27	27	28	29	29	30	30	28	28	28	27	29	26	26	25	24	23	28.3	34.6
8-Feb	A	20	20	19	18	17	16	15	16	18	19	20	21	23	22	23	25	24	22	24	26	24	24	A	20.8	25.6
9-Feb	23	21	21	17	18	19	18	17	21	22	23	22	22	24	24	25	21	21	24	26	26	25	A	32	22.3	31.7
10-Feb	34	34	33	32	32	30	28	28	31	31	33	34	36	34	34	33	32	31	30	27	25	A	22	21	30.6	36.0
11-Feb	21	22	23	23	23	21	20	20	20	20	21	21	21	22	22	22	23	23	23	26	A	26	24	22	22.1	26.3
12-Feb	23	22	23	27	28	28	28	29	29	30	31	31	30	31	31	31	31	30	30	A	26	27	27	28	28.3	31.2
13-Feb	28	27	26	25	24	25	26	25	26	28	28	28	34	36	36	36	36	35	A	34	34	33	33	32	30.2	36.5
14-Feb	32	32	32	32	31	31	31	31	31	31	31	31	31	31	31	32	33	A	31	31	31	30	30	29	31.1	32.9
15-Feb	28	28	28	27	27	26	26	26	26	27	26	C	C	C	N	N	A	47	65	39	37	38	32	32	32.3	64.7
16-Feb	33	33	32	32	31	31	31	31	31	32	33	33	33	33	33	A	31	31	26	29	31	30	29	28	31.1	33.4
17-Feb	31	28	28	28	27	27	27	27	27	28	34	30	35	30	A	33	32	32	32	32	32	32	33	33	30.3	34.6
18-Feb	33	33	32	32	32	30	30	28	26	23	22	24	24	A	27	27	27	27	25	25	25	26	25	25	27.4	33.2
19-Feb	26	26	26	26	26	24	23	22	23	24	24	26	A	23	27	26	27	27	27	28	28	27	27	26	25.6	28.0
20-Feb	25	23	23	23	23	23	23	23	24	26	27	A	29	29	32	28	28	28	29	28	28	27	28	29	26.4	32.1
21-Feb	29	27	27	27	27	26	27	27	27	30	A	C	C	C	C	C	43	43	42	43	42	42	40	37	33.8	43.5
22-Feb	36	35	34	36	36	32	36	29	32	A	29	29	30	31	33	34	35	34	32	29	29	30	30	31	32.3	36.2
23-Feb	30	30	30	29	27	26	24	24	A	25	28	30	31	32	33	34	33	33	32	32	31	29	28	30	29.4	33.5
24-Feb	24	26	27	28	28	28	28	A	27	27	28	28	28	29	29	27	27	26	27	28	28	29	29	30	27.6	29.9
25-Feb	30	29	28	27	27	26	A	21	22	22	22	21	22	23	24	24	24	24	24	23	23	24	23	23	24.3	29.5
26-Feb	23	23	22	21	21	A	20	20	20	20	21	21	22	23	24	28	28	28	26	24	23	22	21	19	22.5	28.0
27-Feb	18	18	19	19	A	22	24	24	25	26	26	29	31	32	33	34	34	34	34	33	34	34	34	34	28.3	34.4
28-Feb	32	30	28	A	29	29	30	29	30	30	30	31	31	34	40	40	38	39	38	38	39	38	38	38	34.0	40.4
29-Feb	38	39	A	39	37	37	36	33	31	28	25	29	28	29	29	27	26	23	21	21	21	20	20	22	28.7	38.9
	28.6	28.0	27.5	27.8	27.7	26.9	26.7	25.7	26.3	26.8	27.6	28.1	28.8	29.4	30.1	30.1	30.5	30.4	30.7	29.7	29.4	29.2	28.5	28.8	Diurnal Average	
	38.4	38.9	34.6	38.6	37.4	36.9	36.4	33.4	32.9	34.1	34.6	35.7	36.0	37.0	39.8	40.4	43.0	46.8	64.7	43.5	42.2	41.6	40.5	38.1	Diurnal Maximum	

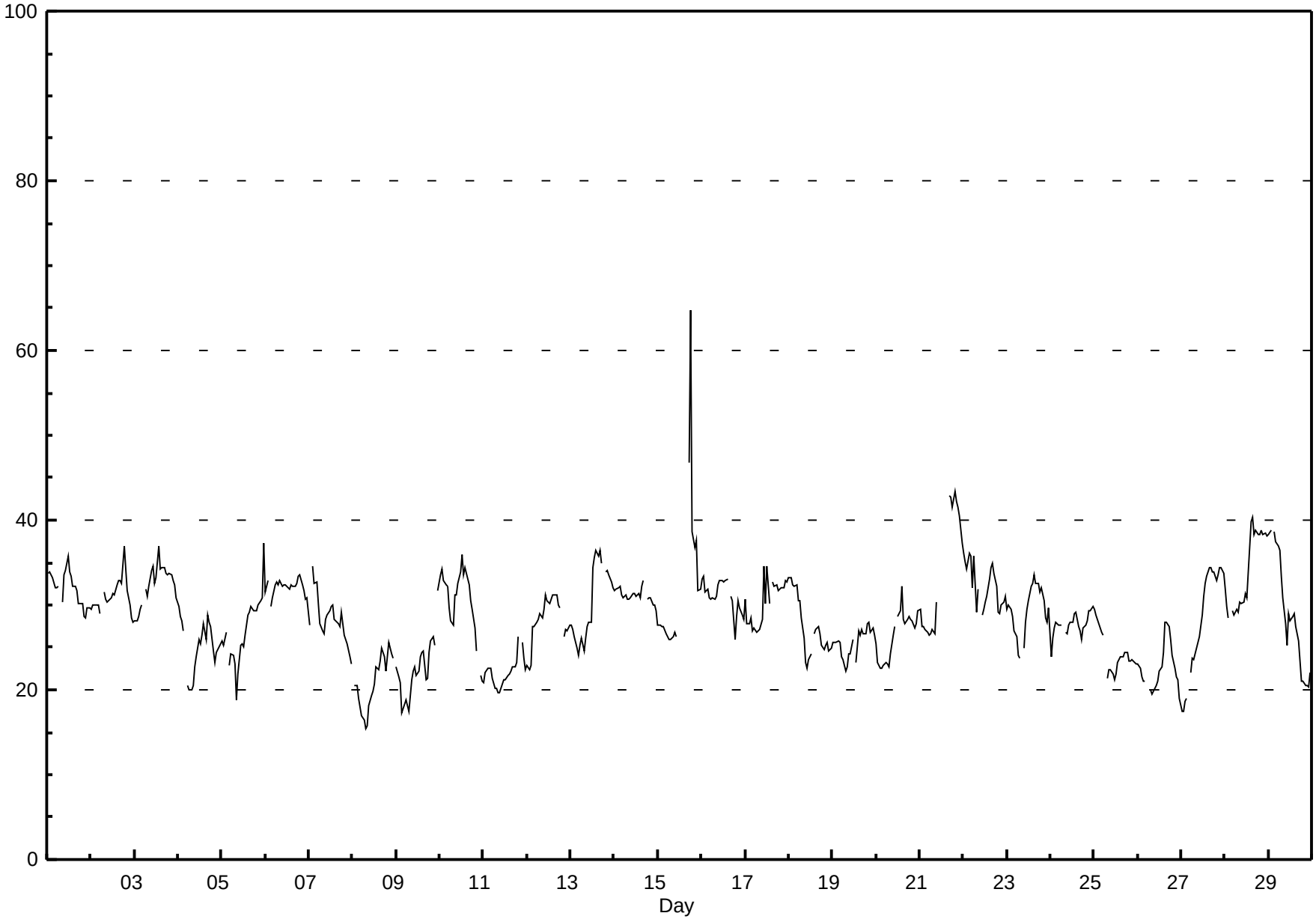
C - Calibration N - Not Valid A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

Sunset House - February 2012

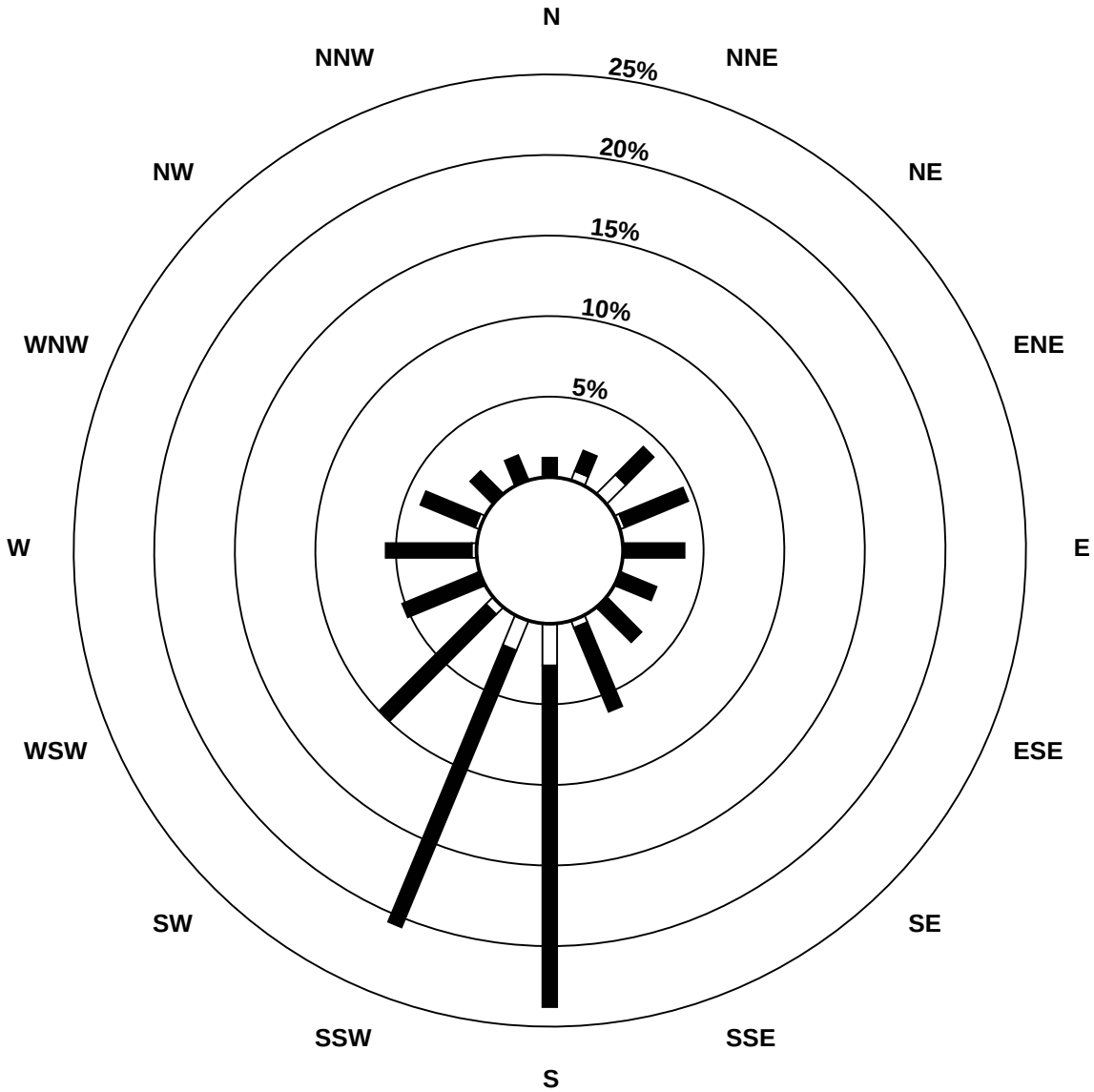


FOCUS AIR QUALITY MONITORING

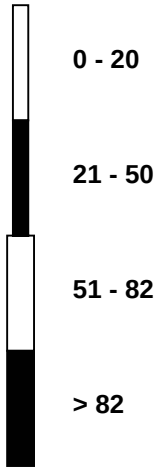
Pollutant Rose

Ozone (O_3) - ppb

Sunset House - February 2012



Pollutant Classes (ppb)



Peace Airshed Zone Association

Eight Hour Running Averages

Ozone (O_3) - ppb

Sunset House - February 2012

Maximum Value: 41.1 ppb on Feb 21 22:00

Minimum Value: 16.6 ppb on Feb 8 11:00

Percentiles: P_1 = 16.9 P_{10} = 21.2 Q_1 = 23.5 Median = 27.4 Q_3 = 30.5 P_{90} = 32.2 P_{99} = 37.5

Hours in Service:	696
Hours of Data:	678
Hours of Missing Data:	18
Hours of Calibration:	17
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Feb	34	34	34	33	33	33	32	32	31	31	31	31	31	31	31	31	32	32	31	30	30	29	29	29	34.0
2-Feb	28	28	29	29	29	29	29	29	29	29	29	29	30	30	30	30	31	31	31	32	32	31	31	30	31.7
3-Feb	30	29	29	28	28	28	28	29	29	30	31	31	32	32	32	32	32	32	32	32	33	33	32	32	32.6
4-Feb	32	31	30	29	29	27	25	24	23	22	21	21	21	22	23	23	24	25	25	25	25	24	24	24	31.7
5-Feb	23	23	22	22	22	22	22	22	21	21	21	21	21	22	22	23	25	26	27	28	28	29	29	29	29.3
6-Feb	30	30	30	30	30	29	29	29	30	30	30	30	31	31	31	31	31	31	32	32	32	32	32	31	31.9
7-Feb	31	31	31	30	30	30	30	29	29	29	28	28	27	27	27	28	28	28	28	27	27	26	26	25	30.8
8-Feb	25	24	23	22	21	19	18	17	17	17	17	17	17	18	18	19	20	21	21	22	22	23	23	23	24.9
9-Feb	23	22	21	20	19	18	17	17	17	17	17	18	19	19	20	21	21	21	22	22	23	23	23	24	23.6
10-Feb	25	27	28	29	29	30	29	29	29	29	29	29	30	30	31	32	32	32	32	31	30	29	27	26	32.4
11-Feb	24	23	22	21	21	21	21	21	21	21	20	20	20	20	20	21	21	21	22	22	22	23	23	23	24.0
12-Feb	23	23	23	23	23	24	24	25	26	27	28	28	29	29	29	30	30	30	30	30	29	29	28	27	29.8
13-Feb	27	27	26	26	26	25	25	25	25	24	25	25	26	27	29	30	31	32	33	34	34	34	34	33	34.3
14-Feb	33	32	32	32	32	31	31	31	31	31	31	30	30	30	30	30	31	31	31	31	30	30	30	30	32.6
15-Feb	29	29	28	28	27	27	27	26	26	26	26	26	26	N	N	N	N	N	N	N	N	N	34	34	34.2
16-Feb	33	33	33	32	31	30	31	30	30	30	31	31	31	31	32	32	32	31	30	29	29	28	28	28	33.3
17-Feb	27	27	28	28	27	27	27	27	27	27	27	27	27	27	28	28	29	30	30	30	30	31	31	31	30.8
18-Feb	31	31	31	31	31	31	30	29	28	27	26	25	24	23	23	23	23	24	24	24	25	24	24	24	31.1
19-Feb	24	23	24	24	24	23	23	23	23	22	22	22	22	22	22	23	24	24	24	25	25	25	25	25	25.3
20-Feb	25	25	24	23	23	22	22	21	21	21	22	22	23	24	25	26	27	27	27	27	27	27	27	27	27.2
21-Feb	27	27	27	26	26	26	26	26	26	26	25	25	N	N	N	N	N	N	N	N	N	41	41	40	41.1
22-Feb	39	38	37	36	36	34	34	32	32	32	31	30	29	29	29	30	31	31	31	31	30	30	30	29	39.2
23-Feb	29	28	28	28	28	28	27	26	26	25	25	25	25	26	27	29	29	30	31	31	31	31	30	29	31.0
24-Feb	27	26	26	25	25	25	25	25	26	26	26	27	27	27	27	27	27	27	27	27	27	27	27	27	27.4
25-Feb	28	28	28	28	28	27	27	26	25	24	23	22	21	21	21	22	22	22	23	23	23	23	23	23	28.1
26-Feb	23	23	22	22	22	22	21	21	20	20	20	20	20	20	20	21	22	23	24	24	24	24	24	23	24.2
27-Feb	21	20	19	19	18	18	19	19	20	22	23	24	25	26	27	28	30	31	31	32	32	33	33	33	33.0
28-Feb	32	32	31	31	31	30	29	28	28	28	29	29	29	29	30	32	33	34	35	36	37	37	37	37	37.4
29-Feb	37	37	37	38	37	37	37	36	35	33	32	31	29	28	27	27	26	26	25	24	23	22	21	20	37.5
Diurnal Maximums	39.2	38.3	37.5	37.5	37.3	37.1	36.9	35.9	34.7	33.0	31.9	31.4	31.8	31.9	32.0	32.2	32.6	33.7	34.6	35.6	36.6	41.1	40.7	40.1	

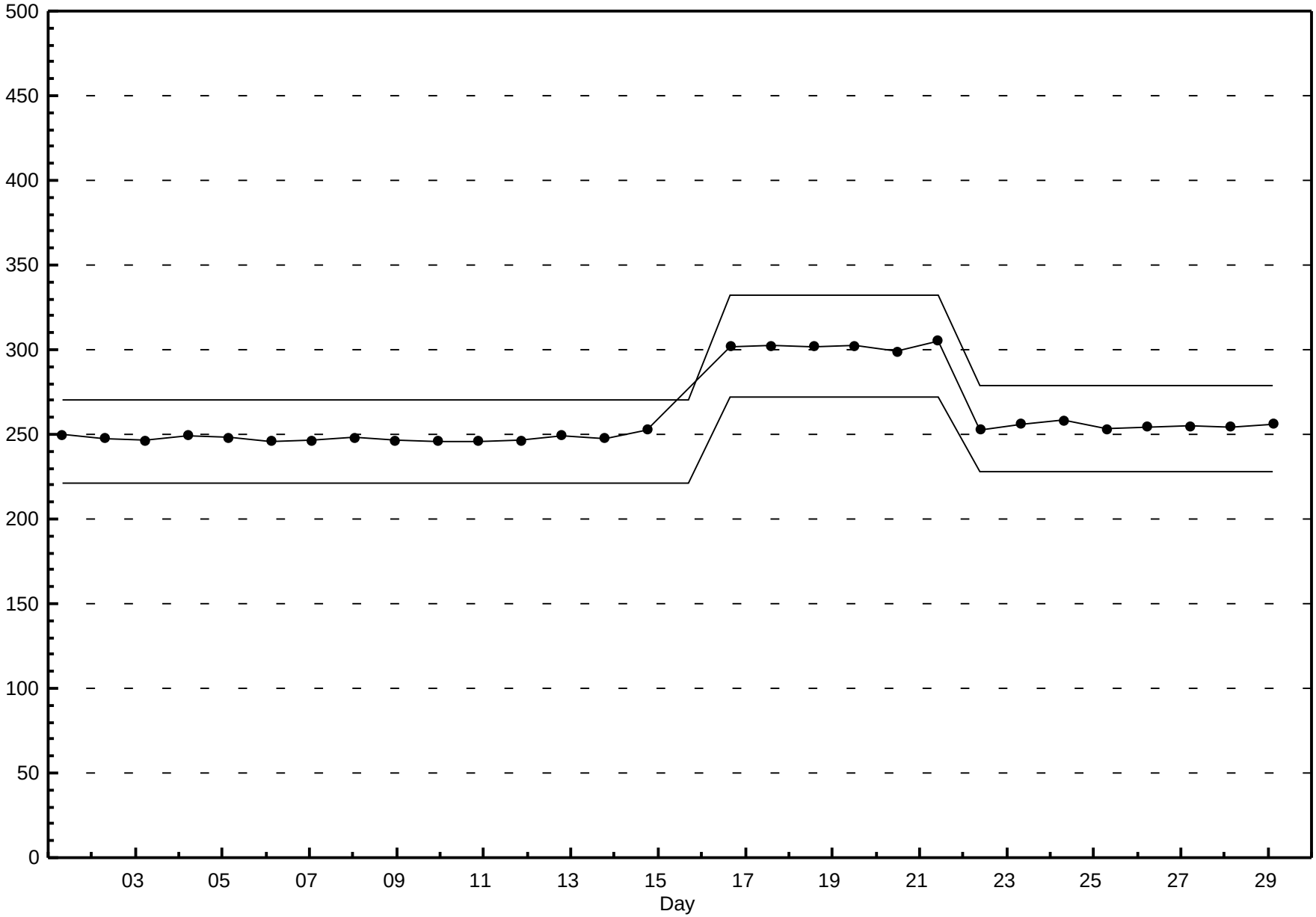
N - Not Valid

Peace Airshed Zone Association

Span Responses

Ozone (O_3)

Sunset House - February 2012



Peace Airshed Zone Association

Hourly Averages

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

Sunset House - February 2012

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

Maximum Value: 26.0 $\mu g/m^3$ on Feb 9 00:00

Maximum Daily Average: 8.5 $\mu g/m^3$ on Feb 8

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

Maximum Diurnal Average: 2.7 $\mu g/m^3$ at hour 24

Monthly Average: 2.07 $\mu g/m^3$

Minimum Daily Average: 0.1 $\mu g/m^3$ on Feb 24

Minimum Diurnal Average: 1.0 $\mu g/m^3$ at hour 15

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 1.0 Q_3 = 3.0 P_{90} = 5.0 P_{99} = 15.8

Hours in Service:	696
Hours of Data:	691
Hours of Missing Data:	5
Hours of Calibration:	4
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	1	0	1	1	2	4	4	2	2	1	0	0	1	2	2	2	2	2	2	2	2	1.5	4.0
2-Feb	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2	5	7	5	5	5	1.5	7.0
3-Feb	4	3	3	2	2	1	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	2	4	4	1.2	4.0
4-Feb	5	5	6	6	5	5	5	6	7	6	6	4	3	3	2	3	3	4	3	2	3	3	4	2	4.2	7.0
5-Feb	3	3	3	3	3	3	2	3	4	6	4	3	3	1	0	0	0	1	1	0	0	0	3	1	2.1	6.0
6-Feb	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.2	1.0
7-Feb	0	0	0	0	1	0	1	1	1	2	1	0	0	0	0	0	1	1	2	3	2	2	2	1	0.9	3.0
8-Feb	3	3	5	5	6	7	6	7	8	10	9	8	6	6	5	5	5	9	10	6	12	20	17	26	8.5	26.0
9-Feb	24	12	20	22	14	12	3	3	0	4	4	0	3	0	2	4	5	3	2	0	2	2	1	0	5.9	24.0
10-Feb	0	2	0	0	2	2	3	1	0	0	0	0	0	0	0	0	0	2	4	5	4	3	3	3	1.4	5.0
11-Feb	2	2	1	0	0	1	1	1	1	2	2	0	0	1	2	1	2	4	2	2	3	2	2	4	1.6	4.0
12-Feb	4	5	5	4	2	2	1	1	1	1	1	0	0	0	0	0	0	1	1	1	0	0	0	0	1.3	5.0
13-Feb	0	0	0	0	0	0	0	0	0	0	0	1	3	2	1	0	N	0	0	0	0	0	0	0	0.3	3.0
14-Feb	0	0	0	0	0	0	0	0	0	2	1	1	1	1	0	3	0	0	0	1	1	3	1	2	0.7	3.0
15-Feb	1	1	0	1	1	1	1	1	1	3	1	1	0	1	1	C	C	C	C	22	17	14	12	10	4.5	22.0
16-Feb	8	7	6	7	5	4	5	4	4	3	3	5	5	4	4	5	5	7	9	8	5	4	3	3	5.1	9.0
17-Feb	3	2	2	2	2	1	1	1	0	0	1	0	0	0	0	0	2	1	0	0	0	0	1	0	0.8	3.0
18-Feb	0	0	0	0	1	1	2	2	4	6	5	8	9	9	5	3	4	7	7	7	5	3	3	3	3.9	9.0
19-Feb	4	4	4	5	6	6	6	7	7	6	7	6	5	6	3	2	3	8	3	1	0	1	2	1	4.3	8.0
20-Feb	1	1	1	1	1	1	0	0	1	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	3.0
21-Feb	0	0	0	0	3	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	3.0
22-Feb	0	0	0	0	2	1	0	1	1	1	1	1	0	1	1	0	1	4	4	2	1	1	1	2	1.1	4.0
23-Feb	1	2	1	0	1	1	1	1	0	0	1	0	2	1	0	1	1	1	1	1	0	1	1	1	0.8	2.0
24-Feb	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.0
25-Feb	0	0	0	0	2	2	3	2	2	3	2	3	2	1	1	2	2	1	2	1	1	1	1	2	1.5	3.0
26-Feb	1	2	2	1	1	2	1	2	2	3	3	2	1	0	0	0	0	0	1	1	1	1	3	1	1.3	3.0
27-Feb	3	2	2	2	2	2	1	1	1	1	1	1	0	0	0	0	0	0	1	0	0	0	1	1	0.9	3.0
28-Feb	1	2	3	2	3	4	1	1	2	1	3	0	1	0	0	1	0	1	1	2	1	1	0	0	1.3	4.0
29-Feb	0	0	0	0	2	1	1	2	4	5	6	4	3	2	3	3	5	4	6	5	4	4	4	3	3.0	6.0
	2.4	2.0	2.3	2.2	2.3	2.2	1.6	1.7	2.0	2.5	2.3	1.7	1.7	1.3	1.0	1.3	1.6	2.3	2.3	2.7	2.4	2.6	2.6	2.7	Diurnal Average	
	24.0	12.0	20.0	22.0	14.0	12.0	6.0	7.0	8.0	10.0	9.0	8.0	9.0	9.0	5.0	5.0	5.0	9.0	10.0	22.0	17.0	20.0	17.0	26.0	Diurnal Maximum	

C - Calibration N - Not Valid

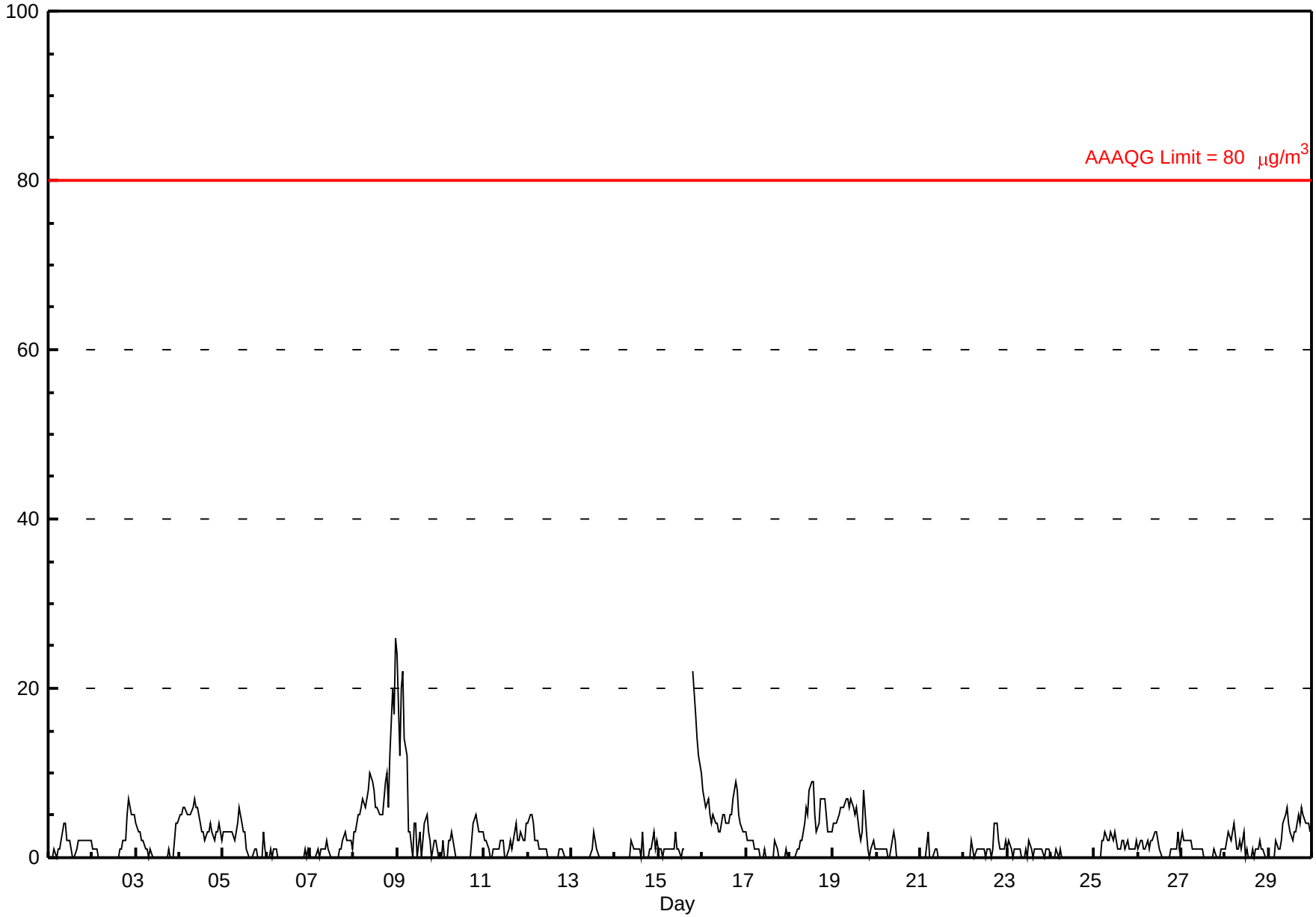
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

Peace Airshed Zone Association

Hourly Averages

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

Sunset House - February 2012



Peace Airshed Zone Association

Hourly Maximums

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

Sunset House - February 2012

Maximum Value: 37.2 $\mu g/m^3$ on Feb 8 22:00

Maximum Daily Average: 13.0 $\mu g/m^3$ on Feb 8

Minimum Value: 0 $\mu g/m^3$ on Feb 3 12:00

Minimum Daily Average: 1.3 $\mu g/m^3$ on Feb 6

Maximum Diurnal Average: 4.9 $\mu g/m^3$ at hour 23

Minimum Diurnal Average: 2.7 $\mu g/m^3$ at hour 14

Monthly Average: 3.93 $\mu g/m^3$

Percentiles: $P_1 = 0.0$ $P_{10} = 0.8$ $Q_1 = 1.7$ Median = 2.9 $Q_3 = 4.9$ $P_{90} = 7.4$ $P_{99} = 27.4$

Hours in Service:	696
Hours of Data:	692
Hours of Missing Data:	4
Hours of Calibration:	4
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	1	1	2	2	1	2	3	4	6	5	3	4	2	2	1	2	4	4	3	3	3	4	4	4	2.9	5.5
2-Feb	2	3	2	2	2	1	1	1	3	5	3	2	2	1	2	2	3	3	4	9	10	8	7	7	3.6	10.0
3-Feb	6	4	4	4	3	3	2	3	3	2	1	0	0	0	1	0	1	2	2	2	2	5	6	6	2.6	6.4
4-Feb	7	7	7	7	6	7	7	7	7	9	9	6	4	4	4	4	4	6	6	3	4	4	5	4	5.7	9.2
5-Feb	5	5	6	4	5	5	4	5	5	8	6	5	4	2	1	0	2	2	2	1	1	1	5	3	3.7	8.0
6-Feb	1	2	3	2	2	3	2	1	1	1	2	0	0	0	0	0	0	1	0	1	1	6	1	3	1.3	5.9
7-Feb	1	1	2	1	3	2	3	2	3	3	3	2	0	0	1	2	2	3	4	5	3	4	3	3	2.3	5.2
8-Feb	4	4	6	7	8	8	8	8	9	11	11	10	9	8	6	6	14	17	12	12	27	37	36	34	13.0	37.2
9-Feb	35	19	28	29	19	19	5	4	2	8	11	2	6	3	6	7	8	7	3	3	4	4	3	0	9.8	35.3
10-Feb	1	11	2	1	6	5	5	3	2	3	1	0	0	0	1	2	1	4	6	6	5	4	4	4	3.1	10.5
11-Feb	3	4	3	1	1	3	2	2	4	4	4	2	2	2	3	3	4	5	3	4	4	4	7	6	3.3	6.6
12-Feb	6	7	7	7	3	4	2	3	2	3	3	1	0	1	0	0	1	2	2	2	2	1	1	2	2.6	7.2
13-Feb	1	1	1	1	1	1	1	1	1	1	2	3	6	3	6	1	0	0	0	1	1	0	0	1	1.4	6.0
14-Feb	1	0	1	0	2	1	1	2	3	4	2	3	2	3	1	12	7	2	2	2	2	5	2	3	2.7	11.7
15-Feb	3	2	2	2	4	4	3	2	2	6	6	7	4	5	3	C	C	C	C	28	19	17	14	12	7.2	27.9
16-Feb	10	9	8	9	7	6	6	5	5	5	6	7	7	6	5	7	7	11	12	11	7	6	5	4	7.1	12.3
17-Feb	4	4	4	3	3	4	3	2	2	2	3	2	1	1	0	0	3	2	3	0	1	2	2	1	2.2	4.3
18-Feb	1	1	2	2	2	4	3	3	8	9	9	10	11	11	8	5	5	9	10	9	7	5	5	6	6.1	11.4
19-Feb	5	5	7	7	8	7	8	8	9	8	9	8	6	7	6	3	6	11	5	3	3	2	4	3	6.1	11.2
20-Feb	2	3	3	2	3	2	2	2	4	7	5	2	0	0	2	1	0	0	0	1	1	0	0	1	1.8	6.9
21-Feb	0	1	2	3	6	2	3	2	4	3	2	1	0	1	1	1	1	2	1	1	0	1	2	1	1.7	5.6
22-Feb	2	2	1	2	4	3	2	3	3	3	2	2	2	2	5	2	4	6	6	4	3	3	3	4	3.0	6.4
23-Feb	2	3	2	2	3	3	2	2	3	3	3	2	4	2	2	3	3	2	2	3	2	3	3	3	2.5	3.9
24-Feb	1	2	2	3	3	2	1	1	2	2	1	0	1	0	1	1	2	0	0	2	0	1	1	1	1.4	3.3
25-Feb	1	2	2	2	4	4	5	4	4	4	4	5	4	3	3	3	3	3	4	3	2	2	3	3	3.1	4.8
26-Feb	3	3	4	3	3	4	3	3	4	4	6	4	4	2	2	2	2	1	3	3	2	3	7	3	3.3	6.7
27-Feb	5	5	4	4	3	4	3	4	3	3	3	3	2	1	2	1	1	1	2	1	2	2	2	3	2.6	4.9
28-Feb	3	4	4	3	5	6	3	3	4	3	7	1	3	2	3	4	2	3	4	5	3	2	2	2	3.3	6.7
29-Feb	2	1	2	2	3	2	3	4	6	7	8	7	5	4	6	6	6	7	8	6	6	5	5	5	4.9	8.1
	4.2	4.0	4.1	4.0	4.3	4.2	3.3	3.3	3.9	4.7	4.6	3.5	3.1	2.7	2.8	3.0	3.4	4.2	3.9	4.6	4.4	4.9	4.9	4.5	Diurnal Average	
	35.3	18.7	27.5	29.4	19.3	19.5	7.9	8.4	8.7	11.4	11.5	10.2	11.4	11.4	7.6	11.7	13.9	17.3	12.3	27.9	27.3	37.2	36.4	34.4	Diurnal Maximum	

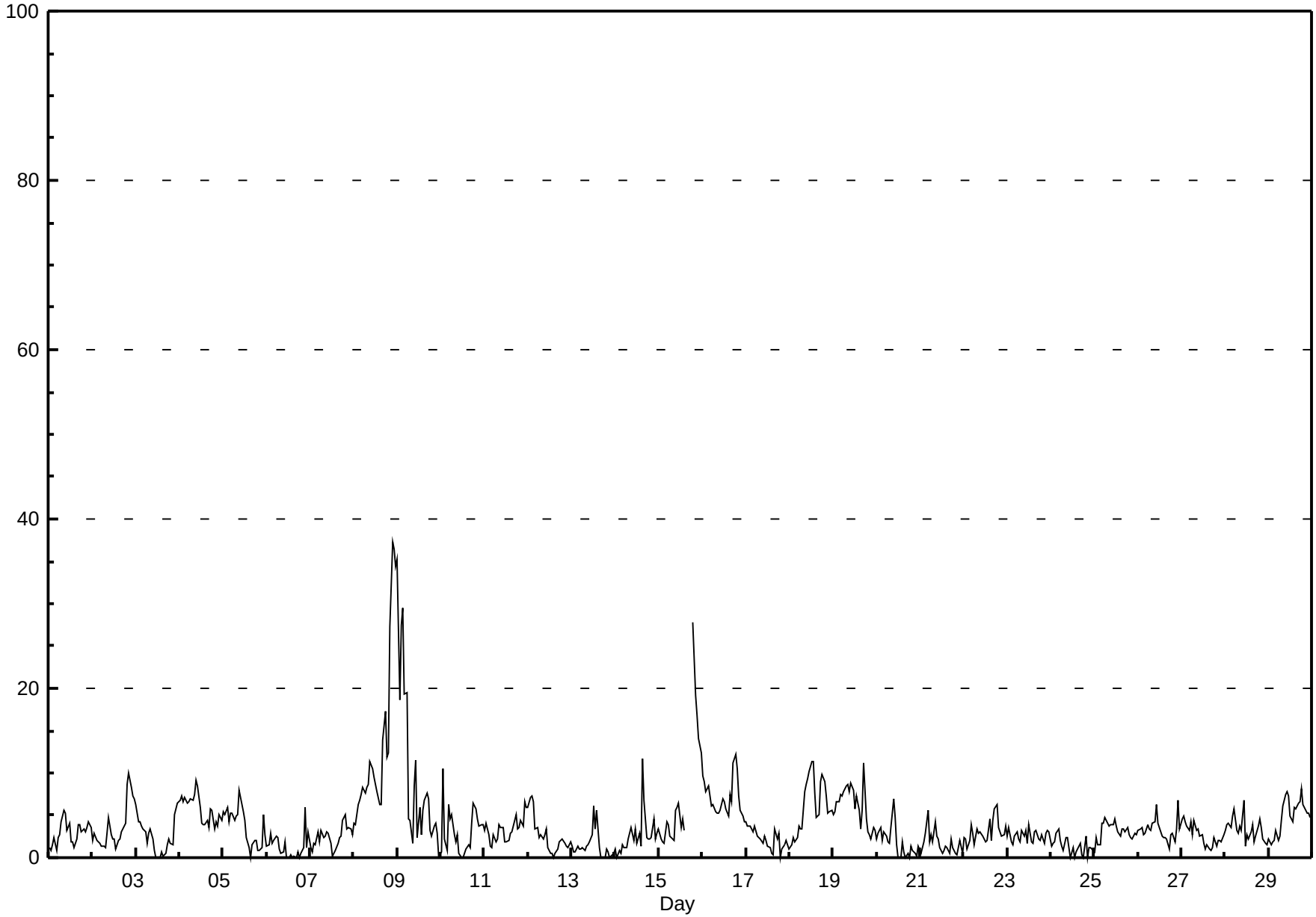
C - Calibration

Peace Airshed Zone Association

Hourly Maximums

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

Sunset House - February 2012



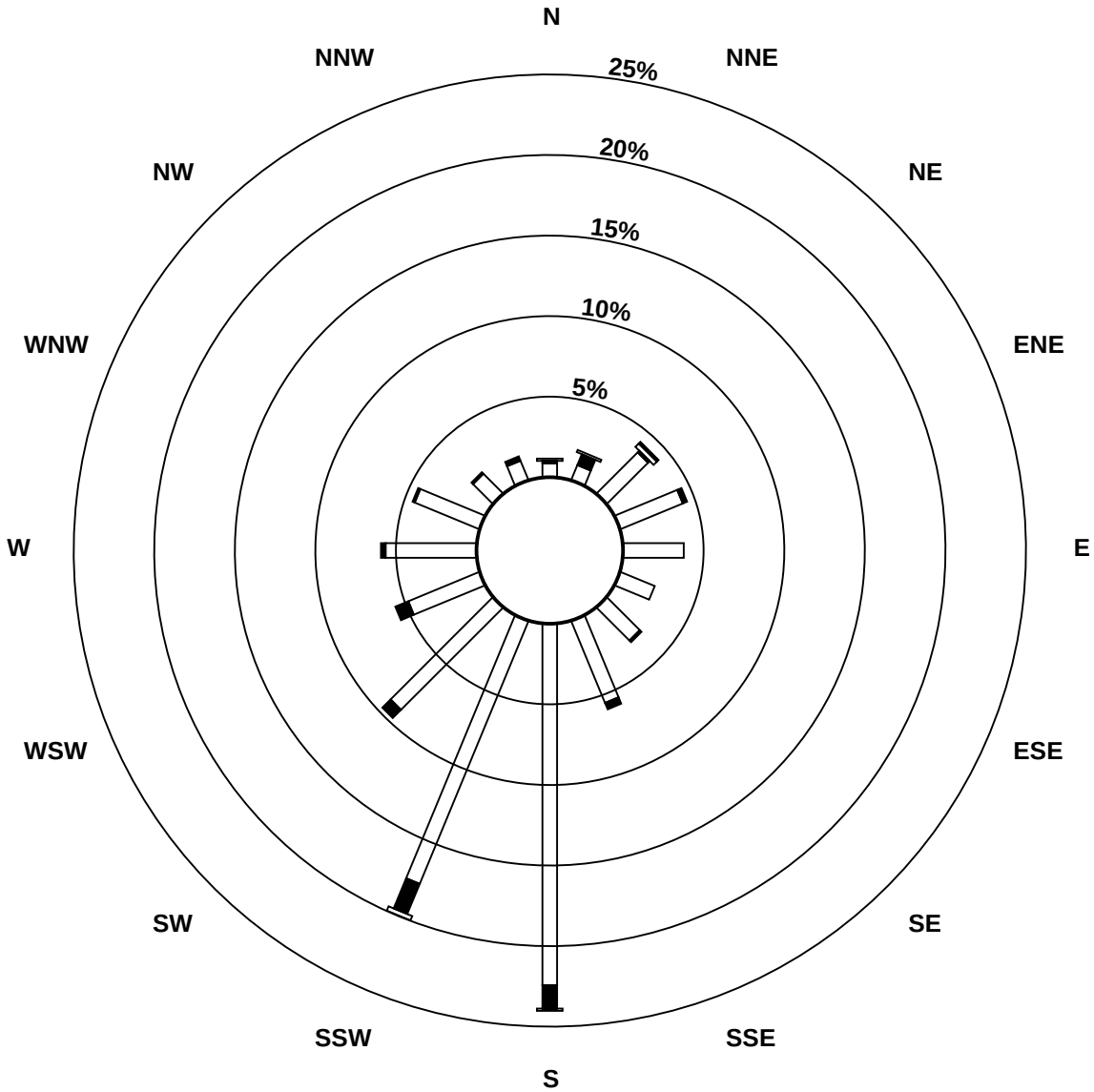
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

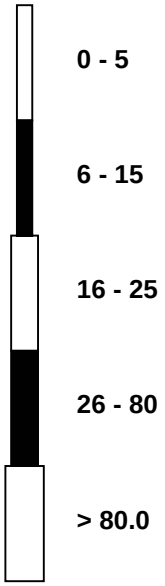
Pollutant Rose

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

Sunset House - February 2012



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



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Sunset House - February 2012

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

Maximum Value: 12.2 ^{o}C on Feb 3 17:00

Maximum Daily Average: 6.9 ^{o}C on Feb 3

Minimum Value: -17 ^{o}C on Feb 26 08:00

Minimum Daily Average: -14.2 ^{o}C on Feb 26

Maximum Diurnal Average: -0.6 ^{o}C at hour 16

Minimum Diurnal Average: -6.8 ^{o}C at hour 9

Monthly Average: -4.26 ^{o}C

Percentiles: P_1 = -15.9 P_{10} = -12.3 Q_1 = -7.3 Median = -4.0 Q_3 = -1.0 P_{90} = 2.3 P_{99} = 8.6

Hours in Service:	696
Hours of Data:	696
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

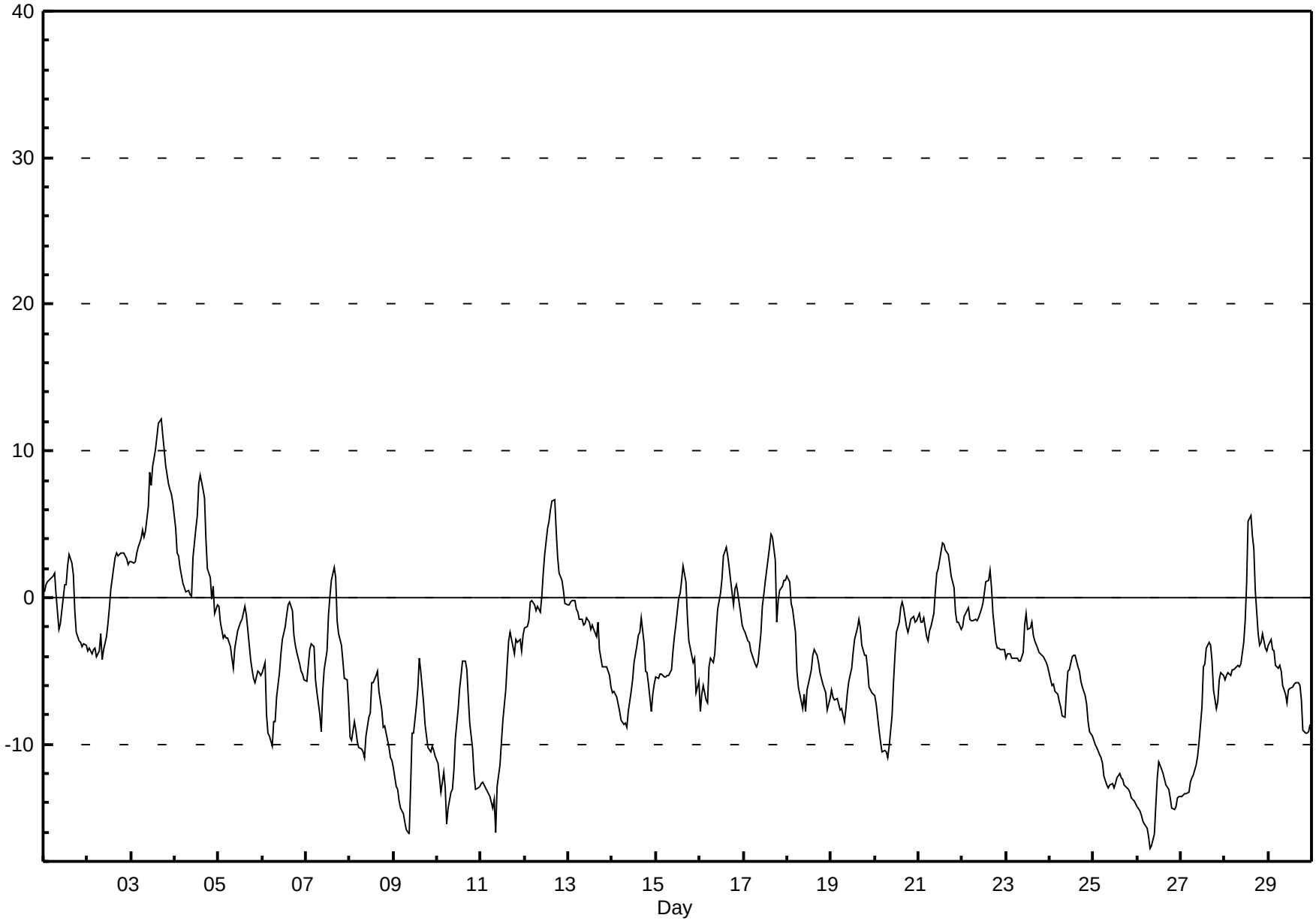
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0	1	1	1	1	2	2	0	-2	-2	-1	1	1	2	3	2	2	-1	-2	-3	-3	-3	-3	-3	-0.2	3.0
2-Feb	-4	-3	-4	-4	-3	-4	-4	-2	-4	-4	-3	-2	-1	1	2	3	3	3	3	3	3	3	2	2	-0.6	3.0
3-Feb	2	2	2	3	3	4	5	4	4	6	9	8	9	10	11	12	12	11	10	9	8	7	7	6	6.9	12.2
4-Feb	5	3	3	2	1	1	0	0	0	0	3	5	6	8	8	7	7	4	2	1	0	1	-1	-1	2.7	8.3
5-Feb	-1	-2	-3	-3	-3	-3	-3	-4	-5	-3	-2	-2	-2	-2	-1	-1	-2	-4	-5	-6	-6	-5	-5	-5	-3.2	-0.6
6-Feb	-5	-4	-8	-9	-9	-10	-9	-8	-7	-5	-4	-3	-2	-1	0	0	-1	-3	-3	-4	-4	-5	-5	-6	-4.9	-0.3
7-Feb	-6	-5	-4	-3	-3	-6	-7	-8	-9	-6	-5	-4	-1	0	1	2	1	-2	-3	-3	-4	-6	-6	-7	-3.8	2.0
8-Feb	-10	-10	-8	-9	-10	-10	-10	-11	-11	-9	-8	-8	-6	-6	-5	-5	-6	-8	-9	-9	-9	-10	-11	-11	-8.7	-5.0
9-Feb	-12	-13	-13	-14	-14	-15	-15	-16	-16	-13	-9	-9	-7	-6	-4	-5	-7	-9	-9	-10	-10	-10	-10	-11	-10.8	-4.1
10-Feb	-11	-12	-13	-12	-13	-15	-14	-13	-13	-12	-10	-8	-6	-5	-4	-4	-5	-7	-9	-10	-12	-13	-13	-13	-10.4	-4.3
11-Feb	-13	-13	-13	-13	-13	-14	-14	-14	-16	-13	-11	-10	-8	-6	-5	-3	-2	-3	-4	-3	-3	-3	-4	-3	-8.5	-2.4
12-Feb	-2	-2	-2	0	0	-1	-1	-1	-1	0	2	3	5	5	6	7	7	4	3	2	1	1	0	0	1.4	6.7
13-Feb	-1	0	0	0	-1	-1	-2	-1	-2	-2	-1	-2	-2	-2	-2	-3	-2	-4	-5	-5	-5	-5	-5	-6	-2.4	-0.2
14-Feb	-7	-6	-7	-7	-8	-8	-9	-9	-9	-8	-6	-6	-4	-3	-3	-2	-1	-3	-5	-5	-6	-8	-7	-6	-5.9	-1.4
15-Feb	-5	-6	-5	-5	-5	-5	-5	-5	-5	-4	-3	-2	0	0	1	2	1	-1	-3	-3	-4	-4	-6	-6	-3.3	2.2
16-Feb	-8	-7	-6	-7	-7	-5	-4	-4	-4	-2	-1	0	1	3	3	3	2	1	-1	1	1	0	-1	-2	-1.8	3.4
17-Feb	-2	-2	-3	-3	-4	-4	-5	-5	-4	-2	-1	0	1	3	3	4	4	3	-2	0	1	1	1	1	-0.6	4.3
18-Feb	1	1	0	-1	-2	-5	-6	-7	-8	-7	-8	-6	-5	-5	-4	-4	-4	-4	-5	-6	-6	-6	-8	-7	-4.7	1.5
19-Feb	-6	-7	-7	-7	-7	-8	-8	-8	-8	-6	-6	-5	-4	-3	-2	-1	-2	-3	-4	-4	-5	-6	-6	-7	-5.4	-1.5
20-Feb	-7	-7	-9	-10	-11	-10	-10	-11	-10	-8	-6	-4	-2	-2	-1	0	-1	-2	-2	-2	-2	-1	-2	-2	-5.1	-0.3
21-Feb	-1	-2	-2	-1	-3	-3	-2	-2	-1	0	2	2	3	4	4	3	3	2	1	1	-1	-2	-2	-2	0.1	3.7
22-Feb	-2	-1	-1	-1	-1	-2	-2	-1	-2	-1	-1	0	0	1	1	2	1	-1	-3	-3	-3	-4	-4	-4	-1.3	1.8
23-Feb	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-2	-1	-2	-2	-2	-3	-3	-3	-4	-4	-4	-4	-4	-5	-3.5	-1.0
24-Feb	-6	-6	-6	-6	-7	-7	-7	-8	-8	-6	-5	-5	-4	-4	-4	-5	-5	-6	-6	-7	-7	-8	-9	-9	-6.3	-3.9
25-Feb	-10	-10	-10	-11	-11	-11	-12	-13	-13	-13	-13	-13	-13	-12	-12	-12	-12	-13	-13	-13	-13	-14	-14	-14	-12.3	-9.7
26-Feb	-14	-15	-15	-15	-15	-16	-16	-17	-17	-16	-14	-12	-11	-12	-12	-12	-13	-13	-14	-14	-14	-14	-14	-14	-14.2	-11.2
27-Feb	-14	-14	-13	-13	-13	-13	-12	-12	-11	-11	-10	-8	-5	-4	-3	-3	-3	-4	-6	-8	-7	-6	-5	-5	-8.5	-3.1
28-Feb	-6	-5	-5	-5	-5	-5	-5	-5	-5	-5	-3	-2	1	5	6	4	3	0	-2	-3	-3	-2	-3	-4	-2.2	5.6
29-Feb	-3	-3	-4	-4	-5	-5	-5	-5	-6	-7	-7	-6	-6	-6	-6	-6	-6	-6	-7	-9	-9	-9	-9	-9	-6.1	-2.9
	-5.1	-5.2	-5.5	-5.6	-6.0	-6.3	-6.4	-6.6	-6.8	-5.6	-4.3	-3.4	-2.3	-1.4	-0.7	-0.6	-1.0	-2.5	-3.7	-4.1	-4.5	-4.7	-5.1	-5.2	Diurnal Average	
	4.7	3.0	2.9	3.0	3.4	4.0	4.6	4.1	4.5	6.1	8.6	7.7	8.9	10.1	11.0	11.9	12.2	11.1	10.1	9.1	7.7	7.4	7.1	6.5	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Sunset House - February 2012



Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Sunset House - February 2012

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	15	14	15	16	13	14	9	4	4	11	14	13	9	7	10	8	9	7	4	5	6	7	8	9	8.3	16.4
Dir	189	190	184	182	178	178	188	218	214	186	186	201	219	243	270	280	274	264	215	217	207	209	219	206	205.1	181.8
2 Spd	10	12	13	14	14	17	17	19	22	23	23	23	22	19	17	16	15	15	16	17	17	15	14	16	16.8	23.3
Dir	195	190	184	179	180	174	176	178	187	185	187	186	186	188	189	191	190	176	178	175	181	186	180	183	183.4	185.4
3 Spd	20	21	21	19	18	20	20	22	21	22	21	21	20	19	18	18	18	17	20	21	18	19	19	17	19.5	22.1
Dir	188	186	184	186	189	183	186	183	184	180	181	185	187	187	184	179	171	178	179	177	187	185	178	191	183.2	179.7
4 Spd	10	9	10	10	10	11	10	10	8	8	8	7	5	4	5	6	5	7	6	7	4	4	6	8	7.1	11.0
Dir	207	199	205	209	196	191	190	189	190	198	198	204	221	238	232	227	209	191	187	184	156	178	144	177	196.4	190.9
5 Spd	7	5	4	5	4	2	0	1	4	9	9	11	10	8	8	8	8	7	10	10	13	18	19	20	5.6	19.8
Dir	169	160	162	186	184	55	128	215	39	52	43	27	10	357	335	346	353	21	39	54	58	64	72	89	50.2	89.2
6 Spd	17	15	3	4	3	3	5	7	15	18	17	16	16	17	16	16	15	13	17	19	22	26	24	20	12.9	25.9
Dir	102	113	241	78	148	99	73	106	147	158	161	159	158	160	145	144	132	125	141	160	173	174	177	181	151.0	174.3
7 Spd	13	13	17	21	22	13	15	10	11	16	16	14	14	9	7	6	5	5	11	11	12	9	13	11	11.7	21.7
Dir	187	187	176	169	174	202	199	210	204	184	195	196	193	218	214	238	245	220	184	206	208	210	199	214	195.7	174.3
8 Spd	10	11	14	11	9	12	12	11	9	9	8	7	5	7	8	7	8	8	5	10	7	6	4	5	2.9	13.9
Dir	226	201	187	190	195	192	192	191	190	205	218	230	289	318	311	296	349	11	21	31	359	359	22	35	226.0	187.0
9 Spd	5	3	3	3	5	2	3	3	3	6	1	5	4	7	5	7	12	14	18	18	13	13	11	16	3.7	18.1
Dir	53	68	50	174	165	168	160	144	101	54	96	246	333	357	5	348	17	56	75	79	78	143	184	168	85.0	78.8
10 Spd	15	5	4	14	3	3	7	8	14	14	11	17	20	19	18	17	13	14	15	15	7	9	10	8	10.8	19.7
Dir	175	111	164	139	291	52	193	189	186	167	159	154	153	143	153	160	157	159	160	167	192	164	162	191	161.8	152.6
11 Spd	12	15	14	15	15	10	10	14	11	12	15	17	17	12	12	11	10	8	13	17	20	17	20	18	13.6	20.0
Dir	186	187	178	173	180	205	209	200	198	212	205	207	205	206	201	203	201	217	194	190	186	195	187	187	195.0	185.7
12 Spd	17	15	17	16	15	14	13	13	11	11	13	11	11	13	13	11	7	5	6	5	5	6	5	7	9.3	17.0
Dir	190	193	184	195	192	192	191	200	207	202	213	224	263	282	271	273	261	245	213	226	223	230	212	210	214.9	184.3
13 Spd	9	8	6	8	7	7	6	8	7	4	4	5	11	10	12	10	2	4	7	8	10	8	9	9	5.8	11.6
Dir	199	220	232	244	229	222	231	254	261	247	240	263	317	314	298	290	257	213	204	202	195	209	205	207	239.9	298.2
14 Spd	9	10	12	12	14	13	11	11	12	12	10	10	8	7	6	6	6	6	6	7	6	2	8	10	8.4	14.1
Dir	209	204	199	192	191	193	198	203	200	204	218	226	221	256	239	232	236	252	201	200	194	144	187	205	207.4	191.1
15 Spd	8	10	11	11	12	10	8	11	12	11	9	10	8	10	8	7	7	5	4	4	5	3	5	7	7.4	12.1
Dir	229	203	211	208	208	218	218	206	203	208	231	236	258	268	268	275	265	223	214	207	200	238	186	172	222.2	203.0
16 Spd	7	8	8	8	11	13	15	16	17	17	18	17	15	12	11	9	8	5	5	8	8	9	6	6	10.1	18.3
Dir	138	184	165	179	184	185	183	184	182	180	182	188	189	201	189	196	191	220	184	209	213	252	248	227	190.4	182.0
17 Spd	7	7	7	8	10	10	11	12	12	11	11	14	14	11	12	11	13	6	7	11	18	22	22	22	10.6	22.1
Dir	220	216	209	209	198	195	187	191	182	180	187	195	181	190	184	171	147	115	93	119	150	147	156	155	171.8	147.5
18 Spd	20	20	16	16	4	5	5	5	7	13	11	9	9	8	8	8	8	6	4	4	2	3	5	6	3.9	20.4
Dir	149	140	99	83	118	242	201	227	225	204	218	229	253	257	267	265	267	263	340	21	234	195	204	204	197.9	148.9
19 Spd	5	5	4	5	6	6	6	6	5	5	6	3	5	6	7	5	8	9	8	11	13	9	10	8	4.8	12.8
Dir	215	207	237	242	210	203	212	206	224	239	264	258	247	240	301	329	338	334	299	295	309	294	296	300	273.1	309.2
20 Spd	5	5	4	4	5	4	6	8	9	8	12	12	11	13	11	11	7	7	10	15	19	20	20	19	9.7	20.3
Dir	257	245	208	216	189	196	176	176	182	193	193	185	199	198	193	192	196	164	151	161	169	177	178	176	184.0	177.1
21 Spd	20	20	22	18	20	22	20	18	13	17	22	23	26	24	23	21	20	17	13	13	7	7	8	7	12.4	25.6
Dir	175	179	177	190	200	192	198	200	216	266	276	282	286	285	282	287	290	287	270	276	259	211	218	207	241.5	286.1
22 Spd	8	8	7	7	11	10	8	9	11	11	14	17	17	18	16	16	10	4	4	4	7	7	7	5	8.1	17.7
Dir	204	209	202	238	225	242	261	271	272	279	288	289	293	293	295	291	323	326	234	243	226	221	229	236	266.8	293.0

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Sunset House - February 2012

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	6	6	5	8	6	5	4	8	8	6	7	9	9	6	6	12	11	7	6	6	6	5	5	5.5	11.8
Dir	214	218	216	213	202	223	255	230	217	233	253	266	279	272	282	298	305	315	314	291	270	273	280	286	262.2	305.1
24 Spd	5	5	5	5	2	3	5	7	7	5	8	11	12	15	18	21	19	21	20	22	25	27	29	30	10.8	30.3
Dir	259	276	319	359	336	193	158	129	160	198	132	126	121	129	146	135	129	118	104	90	95	92	87	87	111.9	86.8
25 Spd	27	28	25	25	26	22	23	25	23	17	16	19	21	23	24	20	20	19	15	13	19	21	21	17	20.6	28.4
Dir	87	86	86	85	84	72	58	61	59	53	48	31	49	53	59	60	64	68	63	62	73	72	70	63	66.7	86.1
26 Spd	16	15	13	12	11	10	10	9	6	5	5	5	5	5	8	9	10	10	10	13	18	22	25	25	2.9	24.7
Dir	63	61	58	61	56	43	52	57	36	336	288	276	263	271	237	225	225	228	225	201	195	185	183	181	168.4	182.6
27 Spd	22	20	19	19	19	18	19	19	18	16	12	10	10	13	12	11	10	4	4	7	11	15	18	19	12.5	21.6
Dir	187	191	190	189	187	188	187	189	195	200	203	223	242	272	274	275	275	271	181	173	181	185	185	179	200.6	186.8
28 Spd	17	14	14	14	15	12	13	15	13	14	15	15	7	2	3	5	2	2	4	7	10	12	9	10	7.4	17.0
Dir	186	181	180	181	180	185	183	185	187	187	194	192	229	252	299	312	314	25	95	88	96	110	105	105	173.5	186.5
29 Spd	10	12	11	13	9	17	18	18	24	25	25	23	20	21	20	21	18	17	11	11	10	11	12	17	15.0	24.7
Dir	105	103	94	94	87	86	89	86	74	69	67	66	45	42	32	35	41	51	19	15	36	38	45	56	61.0	66.9
Spd	8.3	8.2	7.9	7.9	8.4	7.3	7.4	7.5	7.5	7.5	7.2	6.7	5.2	4.2	4.1	3.5	1.9	1.6	3.8	4.7	5.9	6.8	7.6	7.9	Diurnal Average	
Dir	173.5	173.3	174.2	172.6	180.7	182.7	182.0	183.1	184.3	188.9	196.8	203.8	218.2	234.7	234.6	233.1	223.6	169.7	158.1	162.3	166.8	166.1	167.5	167.3		
Spd	26.9	28.4	25.4	24.9	26.0	21.9	23.3	24.6	23.8	24.6	24.7	23.1	25.6	24.1	23.6	21.5	20.0	20.7	20.4	21.7	24.9	27.2	29.2	30.3	Diurnal Maximum	
Dir	86.8	86.1	86.0	85.2	84.1	191.9	58.5	60.5	74.2	69.3	66.9	65.8	286.1	284.6	59.2	35.1	64.1	118.0	178.8	90.1	94.8	91.6	87.4	86.8		

Maximum Speed Value: 30 km/h on Feb 25 00:00
Maximum Daily Speed Average: 20.6 km/h on Feb 25
Maximum Diurnal Speed Average: 8.4 km/h at hour 5

Minimum Speed Value: 0 km/h on Feb 5 07:00
Minimum Daily Speed Average: 2.9 km/h on Feb 19
Minimum Diurnal Speed Average: 1.6 km/h at hour 18

Monthly Average Velocity: 5.85 km/h 183.49 deg

Speed Percentiles: P_1 = 2.1 P_{10} = 4.6 Q_1 = 6.7 Median = 10.7 Q_3 = 16.0 P_{90} = 20.2 P_{99} = 25.9

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

Hours in Service:	696
Hours of Data:	696
Hours of Missing Data:	0
Percent Operational Time:	100.0

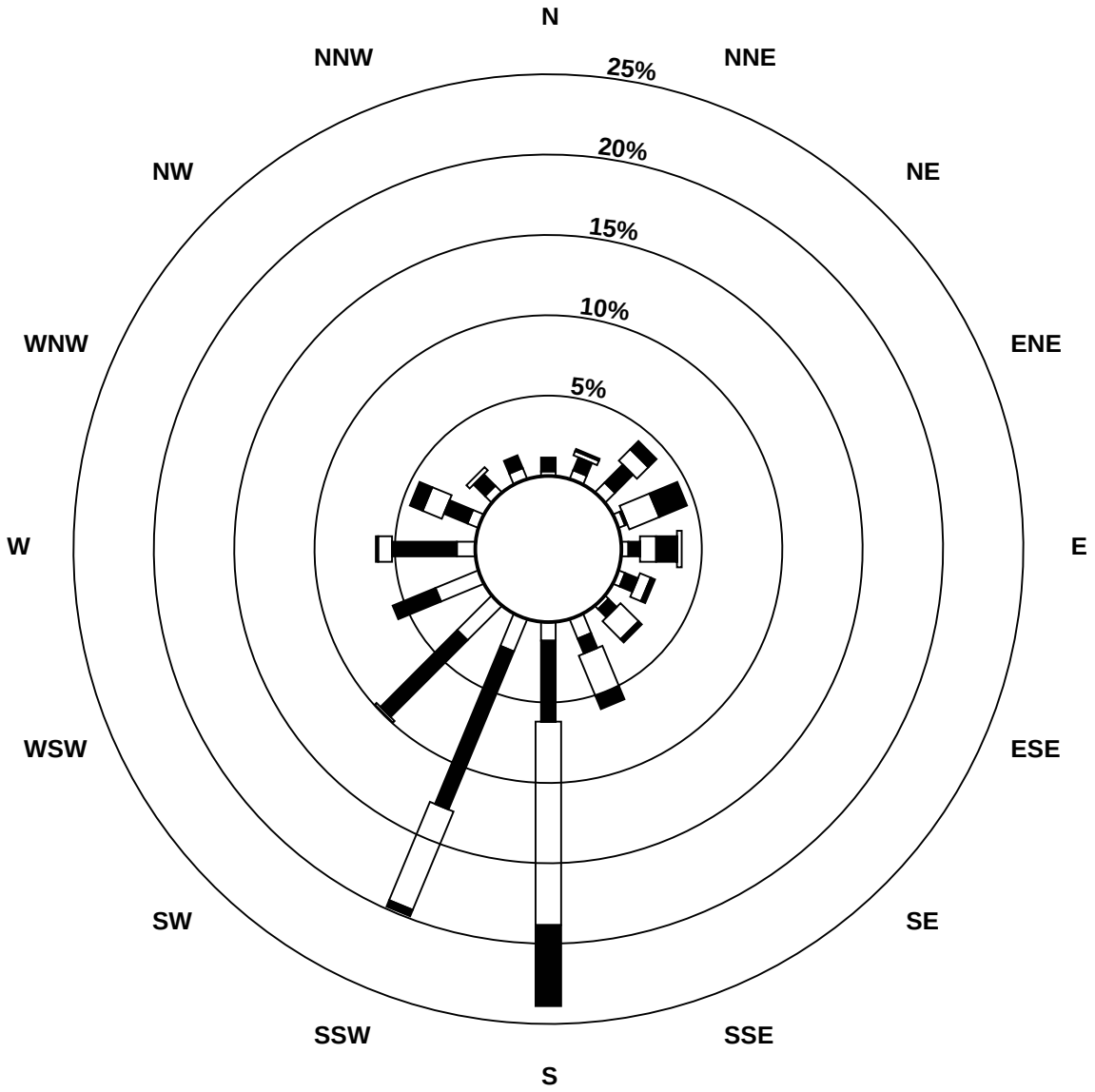
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	4	14	3	0	0	0	21
NorthEast	6	14	18	14	0	0	52
East	7	9	14	16	3	0	49
SouthEast	6	6	20	9	0	0	41
South	16	65	136	49	0	0	266
SouthWest	31	110	18	0	0	0	159
West	10	47	12	7	0	0	76
NorthWest	8	17	7	0	0	0	32
Total	88	282	228	95	3	0	696

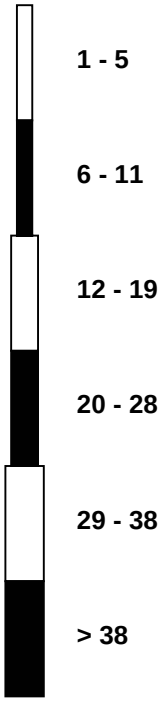
Wind Rose

Wind Speed (WS) (km/h)

Sunset House - February 2012



Wind Speed Classes (km/h)



Peace Airshed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Sunset House - February 2012

Maximum Speed: 30 km/h on Feb 25 00:00

Maximum Daily Speed Average: 21.4 km/h on Feb 25

Minimum Speed: 2 km/h on Feb 5 07:00

Minimum Daily Speed Average: 6.8 km/h on Feb 19

Maximum Diurnal Speed Average: 13.1 km/h at hour 24

Minimum Diurnal Speed Average: 9.7 km/h at hour 18

Monthly Average Speed: 11.81 km/h

Percentiles: P_1 = 2.9 P_{10} = 5.2 Q_1 = 7.0 Median = 10.8 Q_3 = 16.3 P_{90} = 20.4 P_{99} = 26.1

Hours in Service:	696
Hours of Data:	696
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	15	14	15	16	14	14	9	6	5	11	14	13	10	8	10	9	9	7	5	5	6	7	8	9	9.9	16.5
2-Feb	10	12	13	14	14	17	17	19	22	23	23	23	22	19	17	16	15	15	16	17	17	15	14	17	17.0	23.4
3-Feb	20	21	21	19	19	20	20	22	21	22	21	21	20	19	18	18	18	17	21	21	18	19	19	17	19.7	22.2
4-Feb	10	10	10	10	10	11	10	10	8	9	8	8	6	4	5	6	6	7	6	7	5	4	6	8	7.7	11.2
5-Feb	7	5	4	6	4	2	2	2	5	9	10	11	10	9	9	9	8	7	10	11	13	18	19	20	8.7	20.0
6-Feb	17	16	4	5	3	4	6	7	15	18	17	16	16	17	16	17	16	13	18	19	22	26	24	21	14.7	26.1
7-Feb	13	14	17	21	22	13	15	11	11	16	17	14	14	9	7	6	5	5	11	11	13	10	13	11	12.5	22.4
8-Feb	10	11	14	11	9	12	12	11	9	9	8	7	5	8	8	7	9	8	5	10	7	6	5	5	8.6	14.0
9-Feb	5	3	4	3	5	3	4	3	4	6	4	5	5	7	6	8	13	14	18	18	14	14	11	16	8.1	18.3
10-Feb	15	9	7	14	6	3	8	9	14	14	12	17	20	19	18	17	13	14	15	15	8	9	10	8	12.3	20.2
11-Feb	12	15	14	15	16	11	10	15	11	12	15	17	18	13	12	11	10	8	13	17	20	17	20	18	14.1	20.0
12-Feb	17	15	17	16	15	14	13	13	11	12	13	11	11	13	13	11	7	6	6	6	5	6	6	7	11.0	17.2
13-Feb	9	8	6	8	7	7	6	9	7	5	5	5	11	10	12	10	3	5	8	8	10	9	9	9	7.7	11.8
14-Feb	9	10	12	12	14	13	11	11	12	12	10	10	8	7	6	7	7	6	6	7	6	5	8	10	9.1	14.1
15-Feb	8	10	11	11	12	11	9	11	12	11	10	10	9	10	9	7	7	5	4	4	5	4	6	7	8.5	12.3
16-Feb	7	8	8	8	11	13	15	16	17	17	18	17	16	12	11	9	8	7	6	8	8	9	7	6	11.0	18.4
17-Feb	7	7	7	8	10	10	11	12	12	11	12	14	14	12	12	11	13	6	7	11	19	22	22	22	12.1	22.2
18-Feb	20	20	17	17	9	6	5	6	7	13	12	10	9	9	8	8	8	7	7	4	2	3	5	6	9.1	20.5
19-Feb	5	5	5	5	6	6	6	6	5	5	6	3	5	7	7	5	8	9	8	11	13	9	10	9	6.8	12.9
20-Feb	5	5	5	4	5	4	6	8	9	8	12	12	12	14	12	11	8	7	11	15	19	20	20	19	10.4	20.4
21-Feb	20	20	22	18	20	22	21	18	14	18	23	23	26	24	23	21	20	17	14	13	7	7	8	7	17.7	25.8
22-Feb	8	8	7	8	11	10	8	9	11	11	14	17	17	18	17	16	10	6	4	4	7	7	7	5	10.1	17.8
23-Feb	5	6	6	5	8	7	5	4	8	8	7	7	10	9	7	7	12	11	7	6	6	6	5	5	7.0	11.9
24-Feb	5	6	5	5	5	3	6	7	8	5	8	12	12	15	19	22	19	21	21	22	25	27	29	30	14.0	30.4
25-Feb	27	29	26	25	26	22	23	25	23	17	16	19	21	23	24	21	20	19	15	13	20	21	21	17	21.4	28.6
26-Feb	16	15	13	12	11	10	10	9	7	5	5	5	6	6	10	10	11	10	10	13	18	22	25	25	11.8	24.8
27-Feb	22	20	20	19	19	18	19	19	18	16	13	10	10	13	12	11	10	5	4	7	11	15	18	19	14.5	21.7
28-Feb	17	15	14	14	15	12	13	15	13	15	15	15	8	3	4	5	3	3	4	7	10	12	9	10	10.4	17.1
29-Feb	11	12	11	13	9	17	18	18	24	25	25	23	20	21	21	22	18	17	12	11	10	11	12	17	16.5	24.7
	12.2	12.0	11.6	11.9	11.5	10.8	11.0	11.4	11.9	12.5	12.8	13.0	12.8	12.4	12.1	11.6	10.7	9.7	9.9	11.1	11.8	12.6	12.9	13.1	Diurnal Average	
	27.0	28.6	25.6	25.1	26.1	22.1	23.4	24.7	23.9	24.7	24.7	23.3	25.8	24.3	23.8	21.6	20.2	20.8	20.6	21.9	25.0	27.4	29.4	30.4	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

Sunset House - February 2012

Maximum Value: 81.0 deg on Feb 9 11:00

Minimum Value: 2.9 deg on Feb 14 06:00

Percentiles: P_1 = 3.5 P_{10} = 5.2 Q_1 = 7.1 Median = 10.3 Q_3 = 15.6 P_{90} = 24.6 P_{99} = 71.9

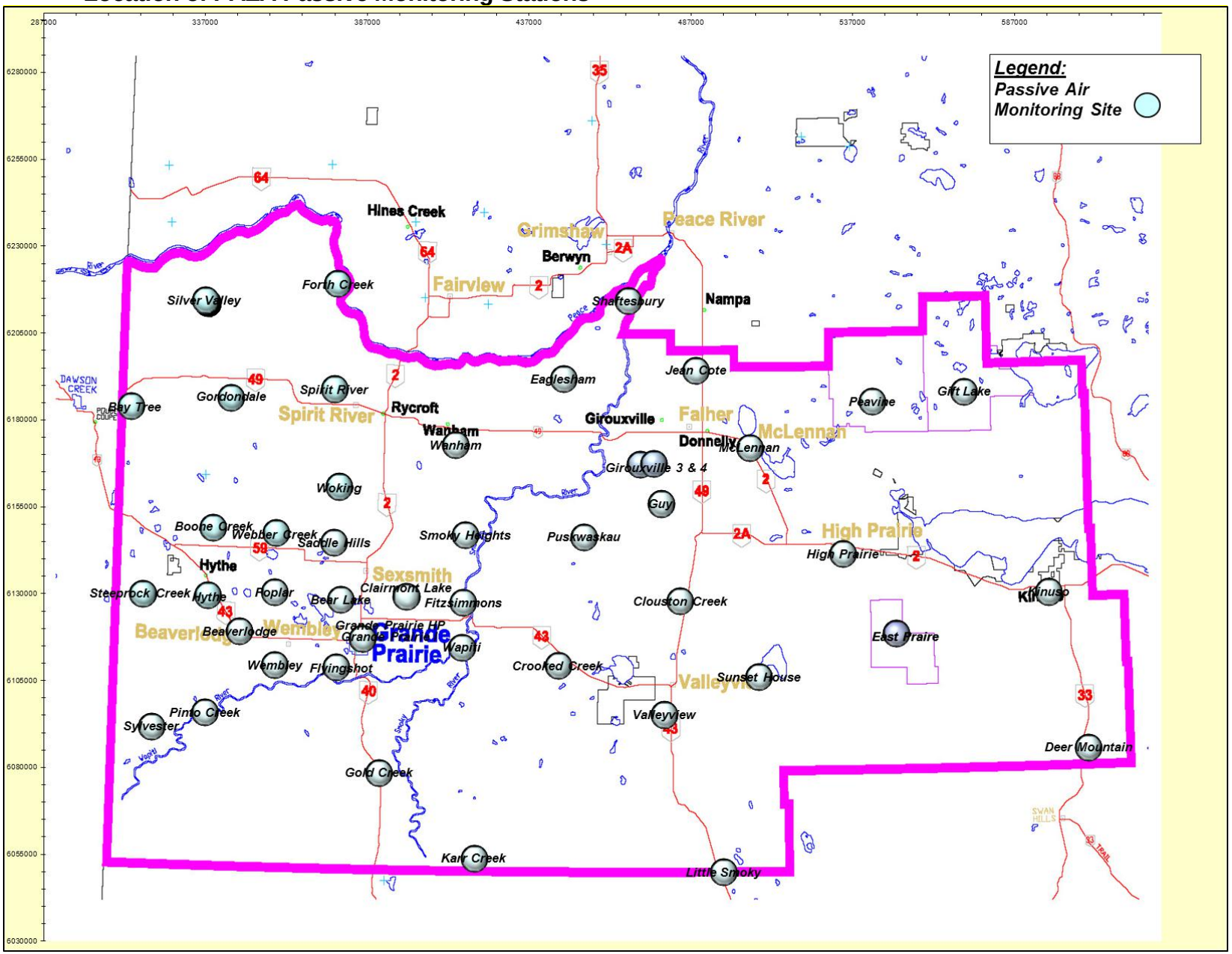
Hours in Service:	696
Hours of Data:	696
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

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	6	6	6	6	6	22	42	52	9	6	13	10	19	10	14	8	16	17	14	13	10	10	9	52.1
2-Feb	7	8	5	4	6	8	5	8	9	6	6	6	5	7	6	5	8	3	3	5	7	7	7	6	8.8
3-Feb	7	5	6	6	6	4	4	4	5	4	5	6	6	7	7	7	7	6	7	5	7	7	6	6	7.4
4-Feb	22	27	9	10	9	10	5	9	11	30	13	26	14	18	16	13	13	4	5	6	20	17	18	12	29.6
5-Feb	11	15	21	17	27	41	70	74	68	14	22	9	11	15	15	12	11	10	6	5	4	4	7	9	73.6
6-Feb	7	42	41	43	36	36	24	29	7	5	6	10	13	11	13	11	11	8	10	7	8	7	7	10	42.7
7-Feb	13	16	9	7	17	11	8	24	18	7	9	10	10	13	16	10	10	17	8	13	12	16	8	9	24.3
8-Feb	14	12	3	4	8	6	5	7	6	9	10	11	32	25	14	15	25	9	13	7	18	12	24	17	31.8
9-Feb	17	38	48	28	17	33	29	26	36	28	81	21	43	17	28	31	20	6	10	5	16	19	11	10	81.0
10-Feb	8	58	77	30	59	44	41	23	14	13	17	11	13	11	13	11	12	12	10	10	15	12	11	15	77.3
11-Feb	10	9	12	7	7	11	10	24	23	12	13	8	9	9	10	11	10	13	9	6	4	10	9	10	24.4
12-Feb	7	9	8	10	14	19	7	11	15	11	13	11	15	10	9	8	14	18	12	16	18	22	16	8	22.0
13-Feb	9	18	18	15	11	10	11	15	16	22	60	13	15	10	9	13	52	20	8	8	6	12	10	8	60.1
14-Feb	8	7	6	8	4	3	5	10	12	9	18	13	20	19	13	13	18	16	9	8	9	74	13	17	73.5
15-Feb	22	8	12	9	14	13	12	9	8	9	16	19	14	10	10	13	12	20	28	15	19	42	26	20	42.2
16-Feb	5	20	10	10	4	3	4	6	5	5	5	6	8	9	12	10	5	41	21	15	10	23	20	18	41.1
17-Feb	11	10	13	13	7	14	11	4	4	6	10	9	9	15	11	12	12	26	10	8	10	6	5	4	26.0
18-Feb	5	9	25	12	78	51	13	14	9	8	10	18	19	19	17	12	11	13	58	28	24	23	14	15	77.8
19-Feb	12	11	30	18	12	16	14	16	15	14	18	30	24	18	14	22	18	13	7	8	7	8	10	10	30.3
20-Feb	12	16	15	20	12	30	20	10	8	14	8	7	14	10	13	15	16	8	4	6	5	5	6	6	29.9
21-Feb	5	5	6	10	6	6	7	6	18	14	11	8	7	8	8	7	7	7	11	12	15	14	12	12	18.0
22-Feb	9	10	10	19	10	17	20	15	11	10	7	9	7	5	9	8	19	63	24	18	10	11	15	18	63.4
23-Feb	11	9	9	26	10	18	19	25	15	11	15	16	9	11	25	27	8	8	8	14	16	12	13	23	26.7
24-Feb	16	16	19	33	79	28	28	23	36	8	21	10	12	14	14	11	11	8	7	8	7	6	5	5	79.5
25-Feb	6	6	6	7	5	7	5	5	5	9	10	8	9	7	7	7	8	7	7	7	7	5	5	6	10.1
26-Feb	6	5	4	6	7	5	7	6	16	26	16	13	25	29	32	12	12	14	11	6	5	4	5	5	31.6
27-Feb	5	6	8	4	5	6	11	11	7	8	10	11	17	11	9	10	9	23	13	8	4	4	6	5	23.2
28-Feb	5	4	6	5	5	8	8	7	10	5	14	7	18	49	80	15	78	64	15	16	11	5	7	5	79.6
29-Feb	7	5	5	9	12	5	5	5	6	5	4	7	10	6	7	6	12	8	18	13	5	8	8	4	17.5
	22.2	58.1	77.3	42.7	79.5	51.5	69.9	73.6	67.7	29.6	81.0	30.3	43.0	48.9	79.6	31.0	78.1	63.9	58.2	28.1	23.8	73.5	26.5	23.5	

PAZA

Monthly Passive Data Summary

Location of PAZA Passive Monitoring Stations



PAZA Passive Results for February 2012

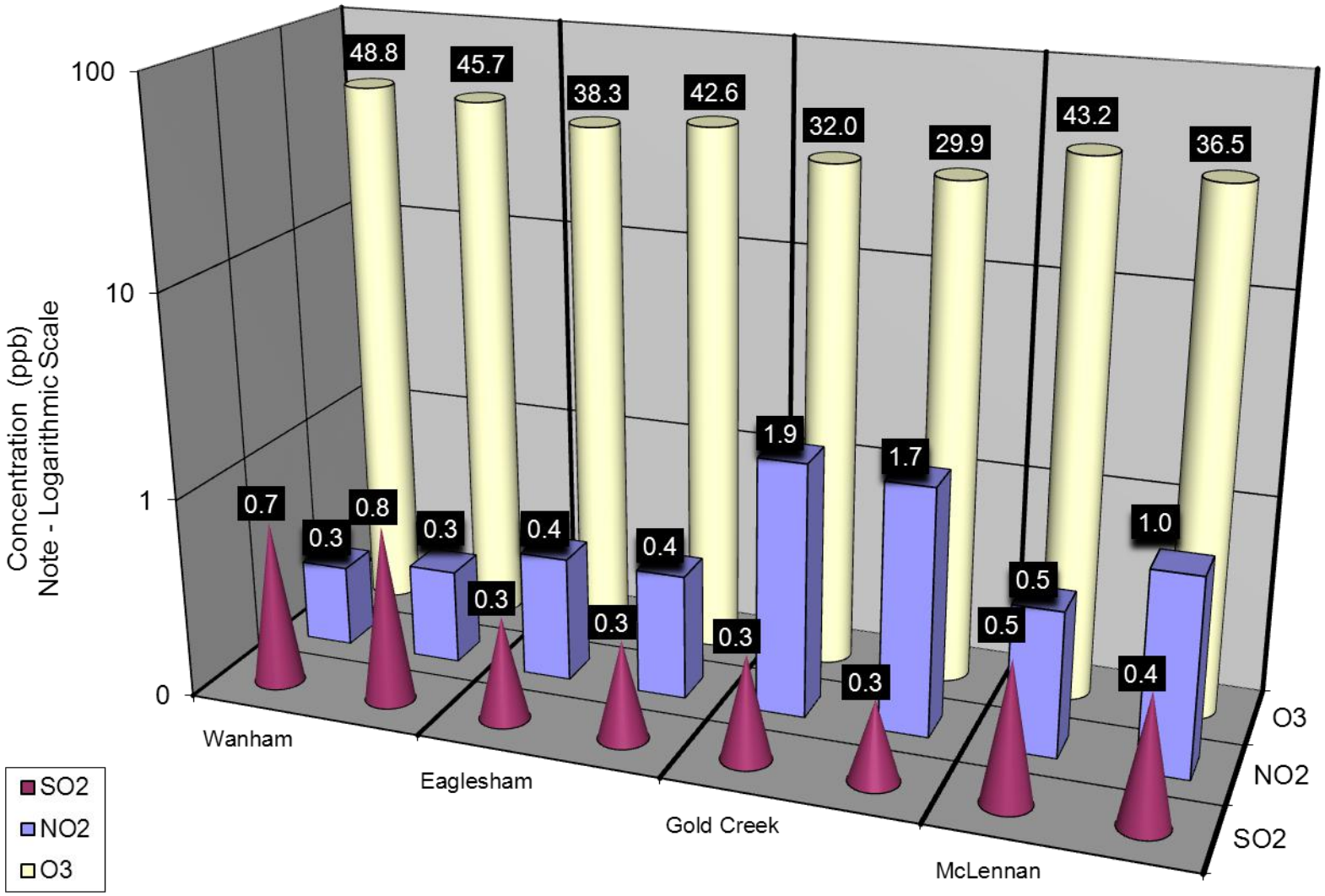
Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	Site Legal
Duplicates						
19a	Wanham	**0.7**	**48.8**	**0.3**		
19b	Wanham	**0.8**	**45.7**	**0.3**		
21a	Eaglesham	**0.3**	**38.3**	**0.4**		
21b	Eaglesham	**0.3**	**42.6**	**0.4**		
32a	Gold Creek	**0.3**	**32.0**	**1.9**		
32b	Gold Creek	**0.3**	**29.9**	**1.7**		
40a	McLennan	**0.5**	**43.2**	**0.5**		
40b	McLennan	**0.4**	**36.5**	**1.0**		
64a	Girouxville 4				**0.2**	
64b	Girouxville 4				**0.2**	
1	Silver Valley	**0.6**	**43.4**	**0.5**		08-27-081-11 W6M
2	Bay Tree	**0.2**	**37.9**	**0.5**		13-16-078-13 W6M
3	Fourth Creek	**0.7**	**43.2**	**0.5**		04-13-082-07 W6M
4	Gordondale	**0.7**	**39.7**	**0.8**		04-34-078-10 W6M
5	Boone Creek	**0.4**	**39.4**	**0.7**		16-36-074-11 W6M
7	Steeprock Creek	**0.3**	**37.5**	**0.5**		09-35-072-13 W6M
9	Spirit River	**0.5**	**42.9**	**0.5**		08-12-079-07 W6M
10	Woking	**0.4**	**40.8**	**0.3**		01-13-076-07 W6M
11	Webber Creek	**1.4**	**41.0**	**1.3**		09-36-074-09 W6M
12	Hythe	**0.5**	**34.9**	**1.1**		14-36-072-11 W6M
14	Sylvester	**0.1**	**35.7**	**0.1**		08-06-069-12 W6M
16	Beaverlodge	**0.5**	**35.2**	**1.6**		15-36-071-10 W6M
17	Poplar	**0.6**	**37.0**	**1.7**		13-06-073-08 W6M
18	Saddle Hills	**1.0**	**43.5**	**0.4**		04-25-074-07 W6M
19	Wanham	**0.7**	**47.3**	**0.3**		16-22-077-03 W6M
20	Shaftesbury	**0.5**	**N/S**	**N/S**		04-03-082-23 W5M
21	Eaglesham	**0.3**	**40.5**	**0.4**		16-21-079-25 W5M
23	Bear Lake	**1.0**	**46.6**	**1.1**		15-31-072-06 W6M

PAZA Passive Results for February 2012 (Continued)

24	Wembley	**0.2**	**34.5**	**1.1**		12-31-070-08 W6M
25	Pinto Creek	**0.2**	**36.7**	**0.6**		04-24-069-11 W6M
26	Flyingshot	**0.3**	**38.2**	**1.9**		15-36-070-07 W6M
27	Grande Prairie I	**0.5**	**28.2**	**6.2**		08-15-071-06 W6M
28	Clairmont Lake	**0.7**	**46.8**	**1.2**		09-06-073-04 W6M
29	Smoky Heights	**0.7**	**40.5**	**1.4**		04-06-075-02 W6M
30	Fitzsimmons	**0.4**	**38.9**	**0.9**		15-36-072-03 W6M
32	Gold Creek	**0.3**	**30.9**	**1.8**		06-33-067-05 W6M
33	Wapiti	**0.3**	**N/S**	**1.2**		02-25-071-03 W6M
34	Puskwaskau	**0.2**	**36.6**	**0.4**		15-35-074-25 W5M
35	Jean Cote	**0.4**	**47.0**	**0.6**		12-35-079-21 W5M
36	Guy	**0.3**	**40.4**	**0.4**		03-04-076-22 W5M
37	Crooked Creek	**0.4**	**40.3**	**1.0**		16-01-071-26 W5M
38	Karr Creek	**0.2**	**34.5**	**0.6**		10-16-065-02 W6M
39	Clouston Creek	**0.5**	**43.2**	**0.5**		12-01-073-22 W5M
40	McLennan	**0.5**	**39.9**	**0.7**		03-29-077-19 W5M
41	Valleyview	**0.6**	**40.2**	**0.7**		09-30-069-22 W5M
42	Sunset House	**0.6**	**44.7**	**0.3**		05-32-070-19 W5M
43	High Prairie	**0.3**	**32.5**	**1.1**		16-13-074-17 W5M
44	Peavine	**0.3**	**38.6**	**0.2**		03-05-079-15 W5M
45	Gift Lake	**0.3**	**32.6**	**0.6**	**0.1**	10-07-079-12 W5M
46	Little Smoky	**0.4**	**36.5**	**2.9**		12-01-065-21 W5M
47	Kinuso	**0.2**	**33.9**	**0.3**		12-10-073-10 W5M
48	Deer Mountain	**0.4**	**40.0**	**0.4**		15-22-068-09 W5M
49	Grande Prairie HP	**0.4**	**27.4**	**8.0**		17-26-071-06 W6M
62	East Prairie	**0.2**	**33.3**	**0.3**		13-02-072-15 W5M
63	Girouxville 3				**0.3**	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 2012

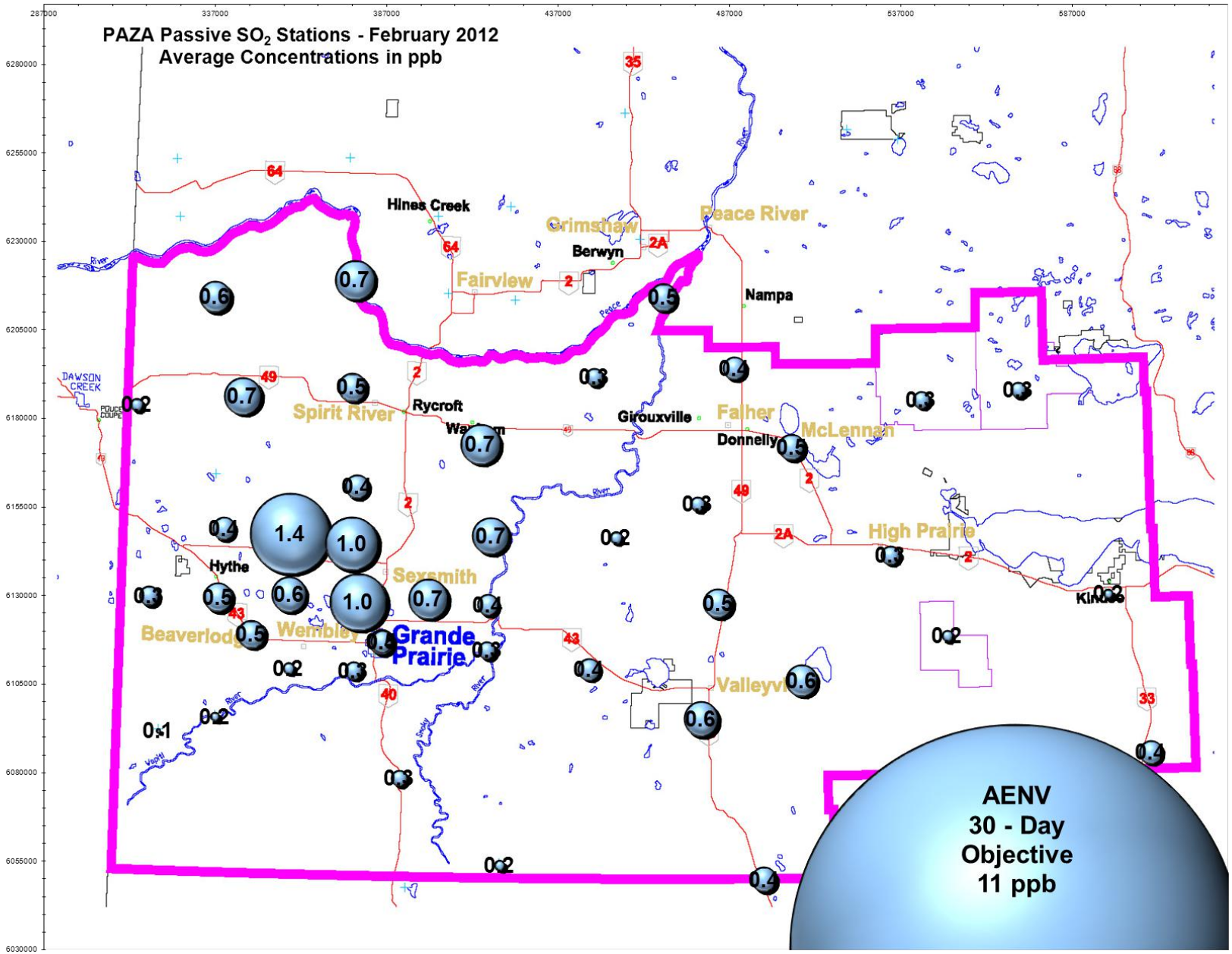
Stats	Sulphur Dioxide SO_2	Ozone O_3	Nitrogen Dioxide NO_2	Hydrogen Sulphide H_2S
	ppb	ppb	ppb	ppb
	Passive Summary for February 2012 (PAZA Zone)			
Mean	**0.5**	**38.6**	**1.1**	**0.2**
Standard Deviation	**0.2**	**4.8**	**1.5**	**0.1**
Minimum	**0.1**	**27.4**	**0.1**	**0.1**
Minimum At	**Sylvester (#14)**	**Grande Prairie HP**	**Sylvester (#14)**	**Gift Lake (#45)**
Maximum	**1.4**	**47.3**	**8.0**	**0.3**
Maximum At	**Webber Creek (#11)**	**Wanham (#19)**	**Grande Prairie HP**	**Girouxville 3**

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

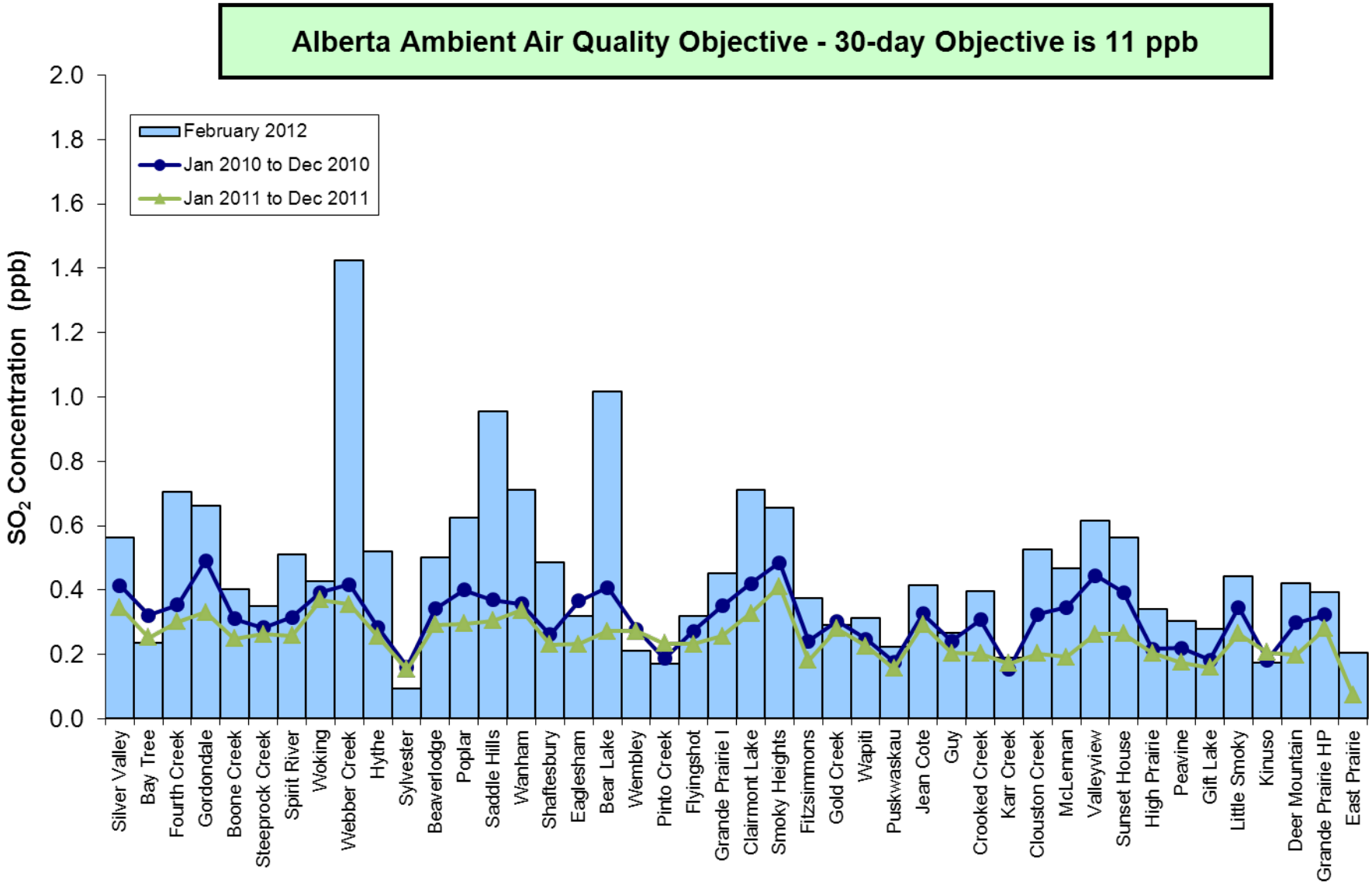
	SO_2	O_3	NO_2
PAZA Beaverlodge station	**0.5**	**29.2**	**4.5**
PAZA Beaverlodge passive	**0.5**	**35.2**	**1.6**

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

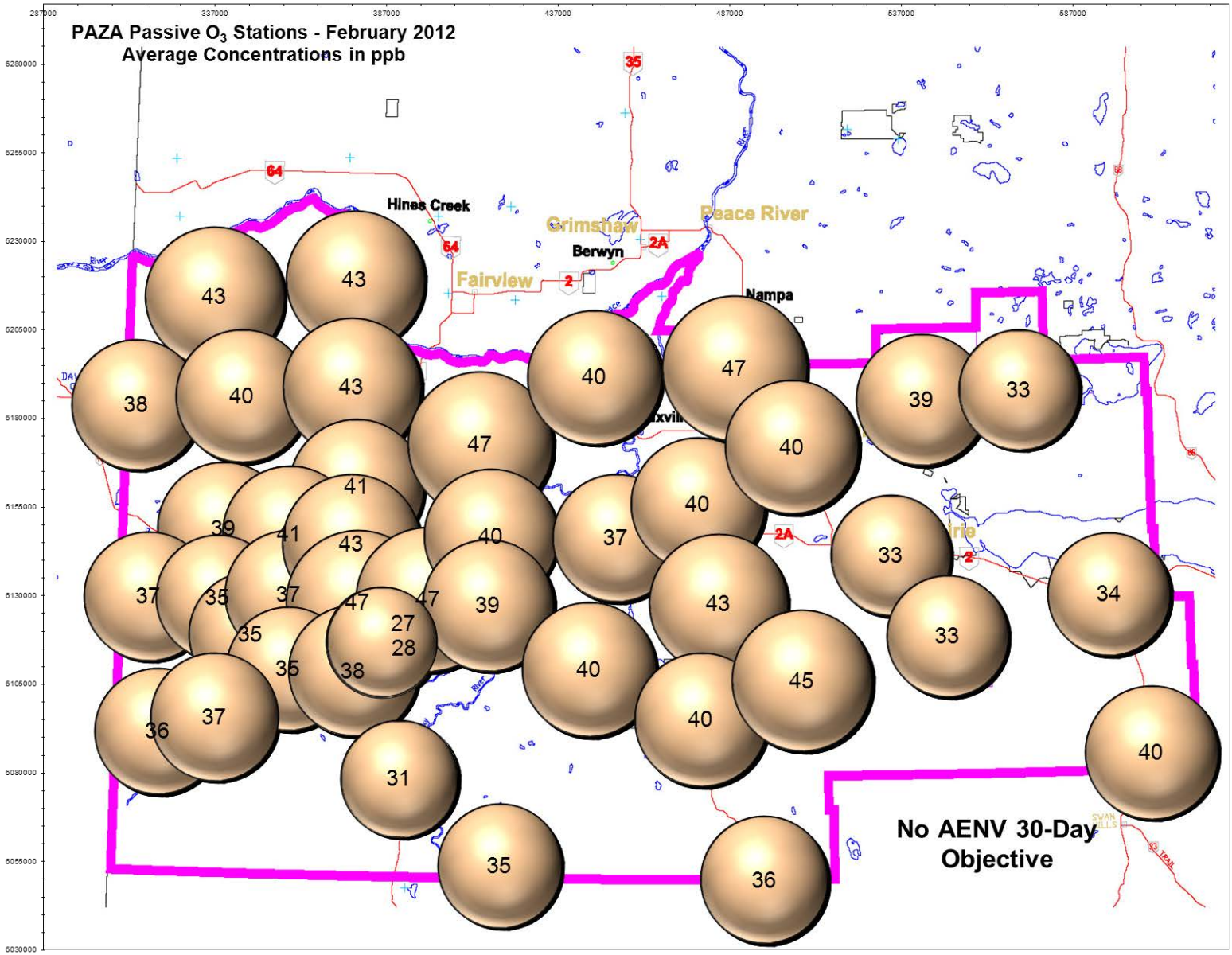
	SO_2	O_3	NO_2
PAZA Henry Pirker station	**0.5**	**17.7**	**16.7**
PAZA Grande Prairie passive	**0.4**	**27.4**	**8.0**



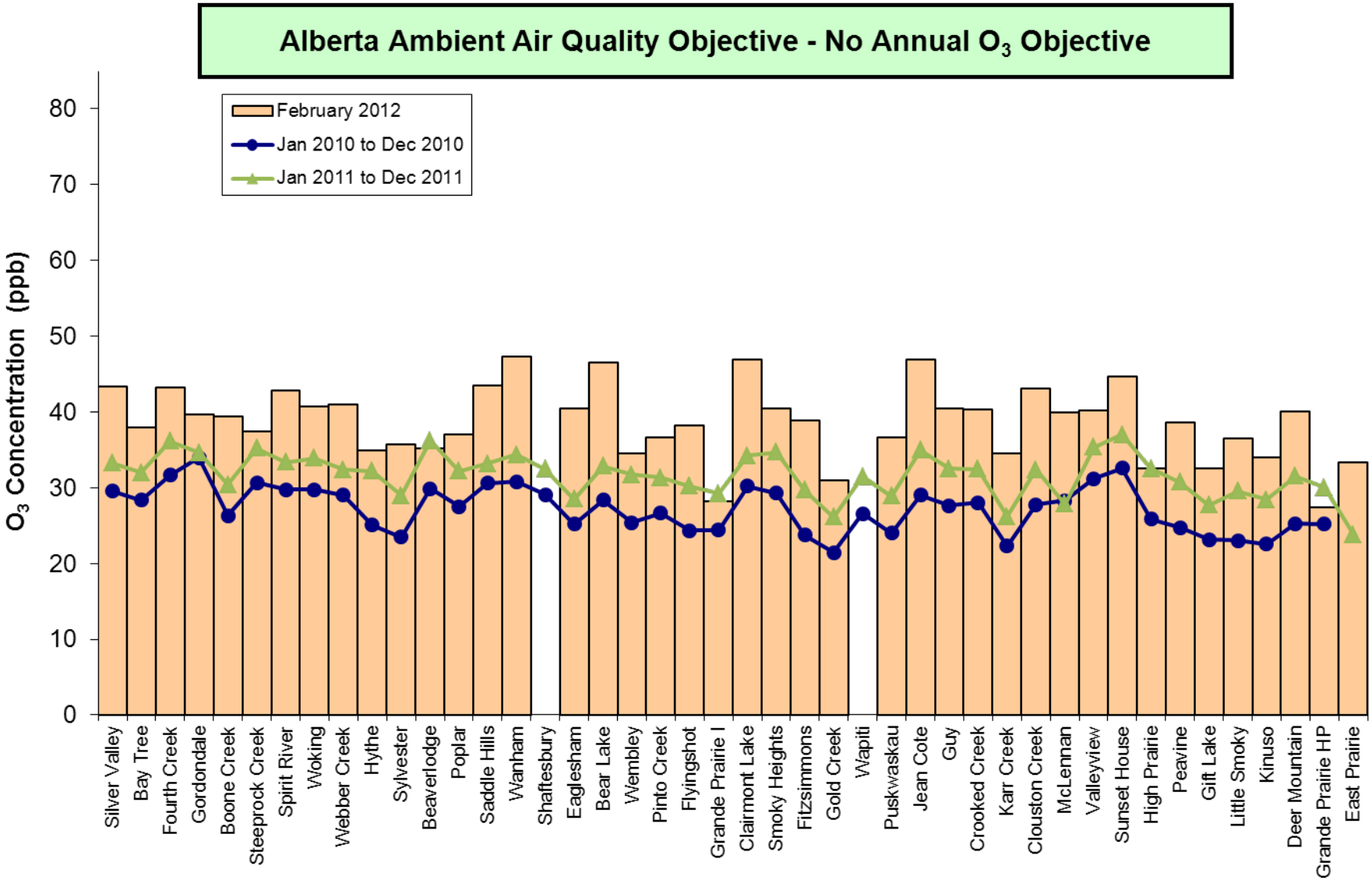
SO_2 Bubble Chart



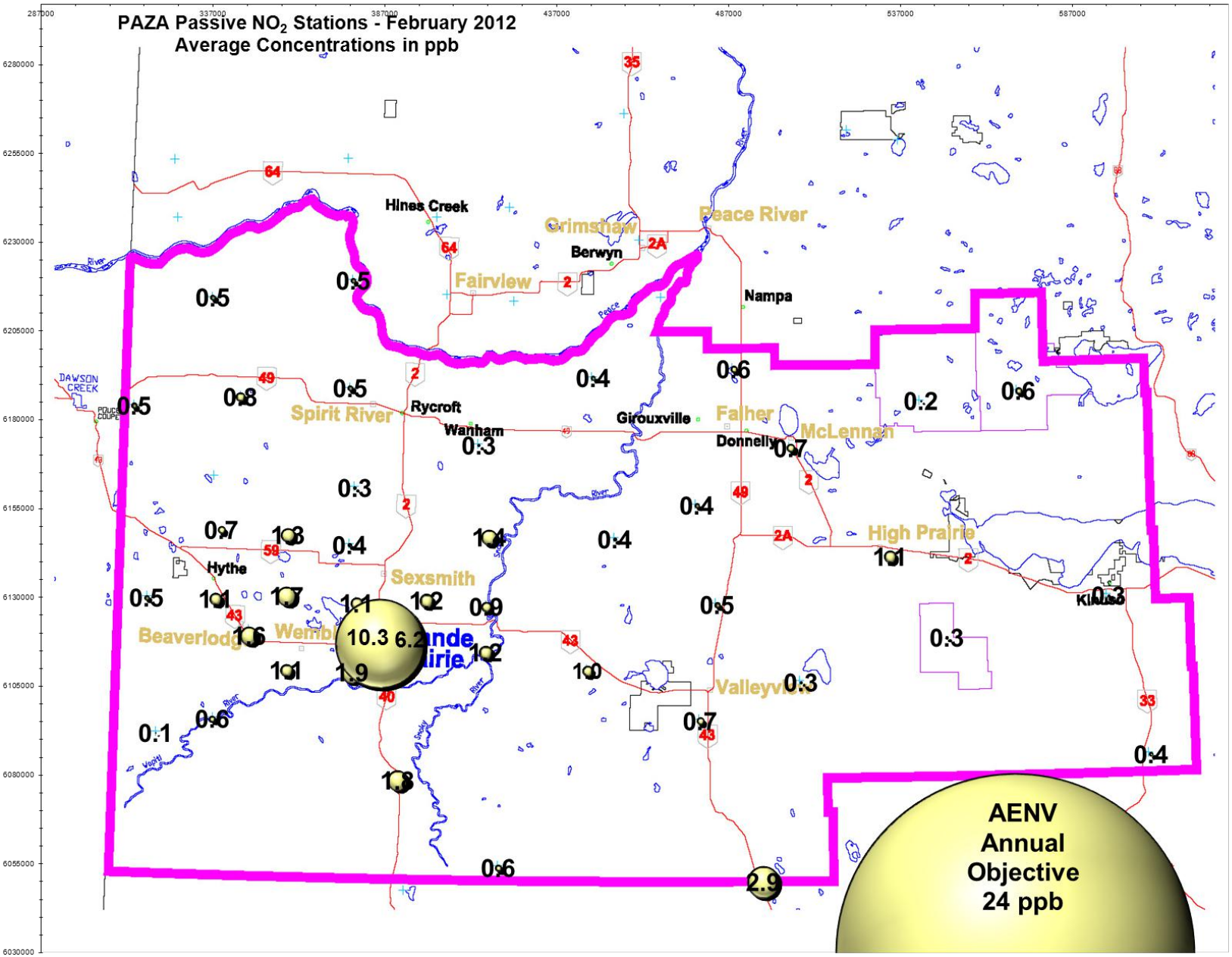
SO_2 Summary Chart



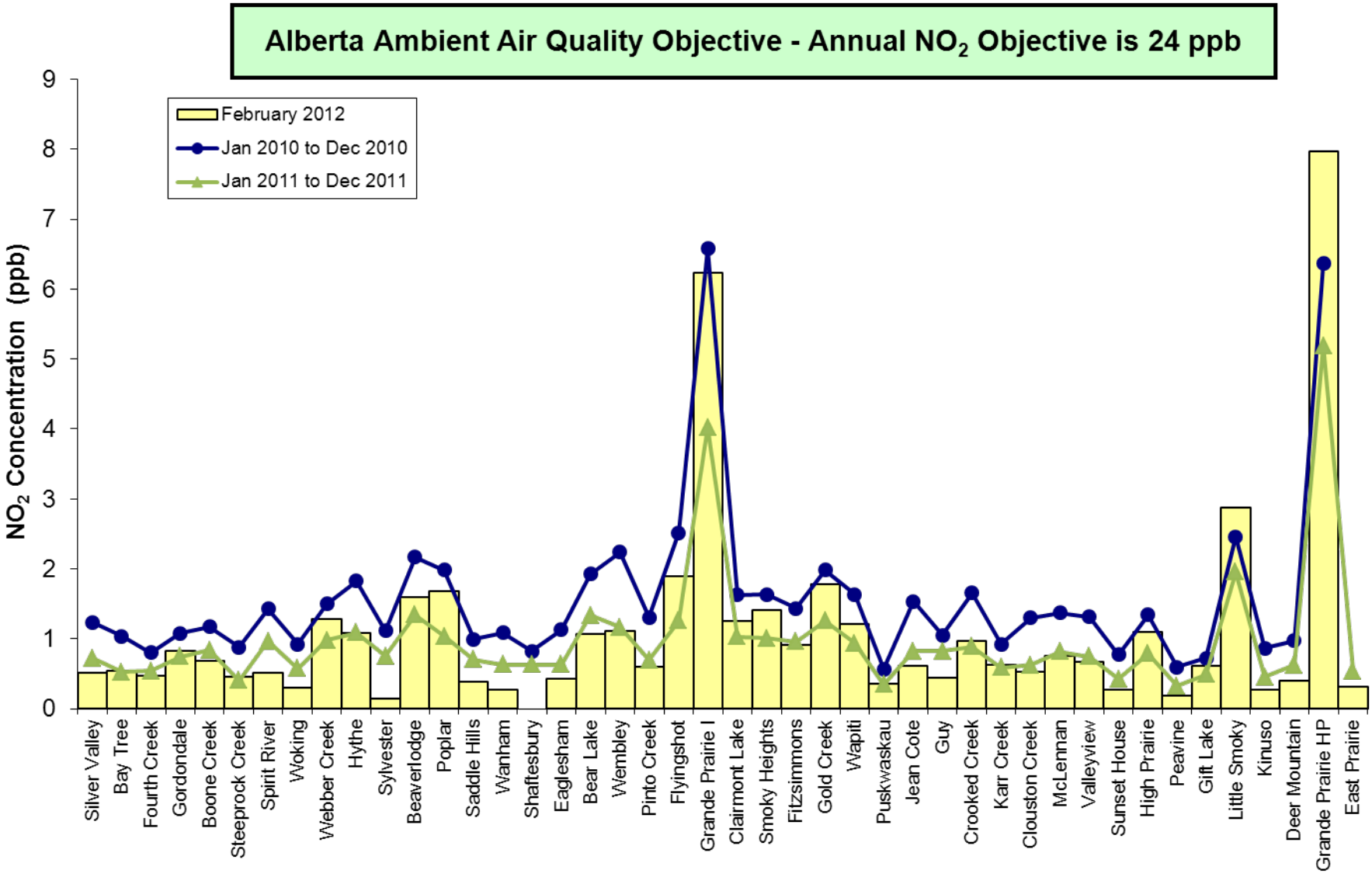
O_3 Bubble Chart



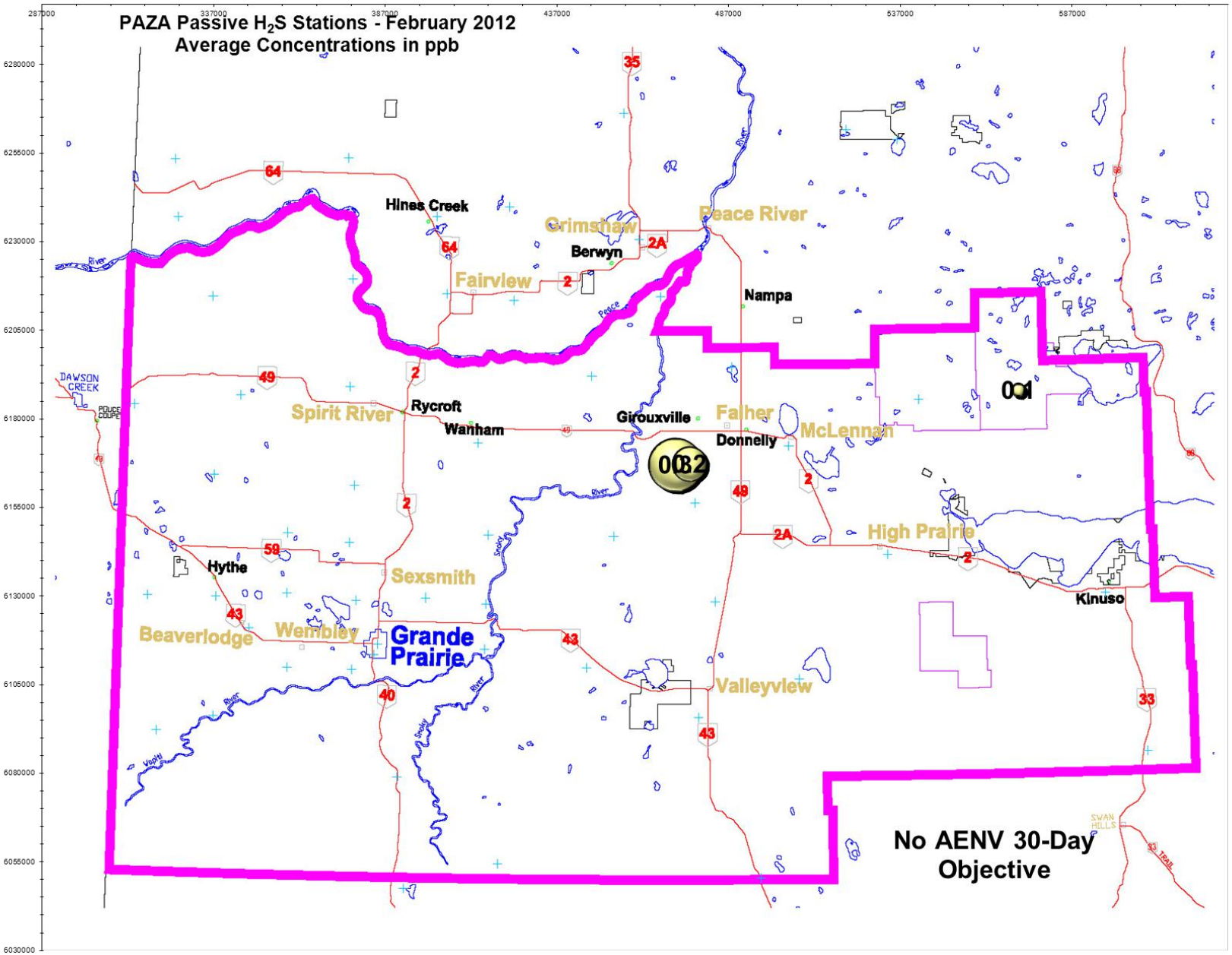
O_3 Summary Chart



NO_2 Bubble Chart



NO_2 Summary Chart



H_2S Bubble Chart

PAZA

ALBERTA ENVIRONMENT
INCIDENCE REPORT

February 2012

Air Monitoring Directive Exceedence Report

Alberta Environment
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:256077		**Reported To (AENV Contact):**	Jazmina
Date & Time Incident Reported to AENV:	February 17, 2012	**Reported By:**	Focus-Brad Moyles
Reported on Behalf of:	PASZA	**Approval Number (if applicable):**	Not applicable
Location(s) of Incident:	Smokey Heights Air Quality station		
Start Date & Time of Incident:	February 17, 2012 @ 19:00MST.	**End Date & Time of Incident:**	February 17, 2012 @ 20:00 MST.

Reason or Nature of Incident:

The $PM_{2.5}$ analyzer (TEOM) within the Smoky Heights station, currently located east, North East of Grande Prairie, exceeded the AENV hourly average $PM_{2.5}$ hourly guideline (80 µg/m3):

February 17, 2012 19:00–20:00 MST $PM_{2.5}$= 113.0 µg/m^3 WS= 10.2 km/h WD=18.0 deg

Immediate Actions Taken:

Confirmed validity of data and reported to AENV Environmental Service Response Centre.

Investigation Details:

Operation of the PM2.5 analyzer appear normal during the time of this report.

Actions Taken to Prevent Reoccurrence (if any):

Not applicable

Additional Actions Required (if any):

Not applicable

Report Completed By:	Brad Moyles	Date Report Submitted:	February 21, 2012
7-Day Letter Due Date:	February 24, 2012		

February 2012 Calibration Reports

PAZA - Henry Pirker Station with the following calibrations:
SO_2, NO, NO_2, NO_x, O_3, CO, THC, TRS, $PM_{2.5}$

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, $PM_{2.5}$

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

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

Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **SO2**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	February 3, 2012	Previous Calibration	January 16, 2012
Station Number	1	Station Location	Henry Pirker
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	10:05	End Time (MST)	12:52
Barometric Pressure	0.932 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3474
Cal Gas Conc	49.8 ppm	Cal Gas Cert Date	3/28/2013
		Cal Gas Cylinder #	LL85275
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	10
	Before		After
Calculated slope	1.003304	Calculated slope	0.998532
Calculated intercept	-1.929281	Calculated intercept	-1.092943
Analyzer make	TEI 43C	Analyzer serial #	610816292

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	8.7		8.9	
Coefficient	0.768		0.772	
Pressure	639.2	mm Hg	639.3	mm Hg
Flow	0.510	lpm	0.509	lpm
Lamp Voltage	43908	Hz	44329	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)
4989	0.00	0.0	0.4	N/A
4989	39.84	394.5	396.2	0.9957
4989	19.91	198.0	198.6	0.9968
4989	9.93	98.9	101.5	0.9743
4989	0.00	0.0	0.4	As Found Zero
4989	39.84	394.5	389.2	As Found Span
			Average Correction Factor	0.9889

Calculated value of As Found Response: 388.1 ppb Percent Change of As Found: 1.6%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.1	ppb
Auto span	248.1	ppb	232.6	ppb

Notes: Span adjusted

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **SO2**

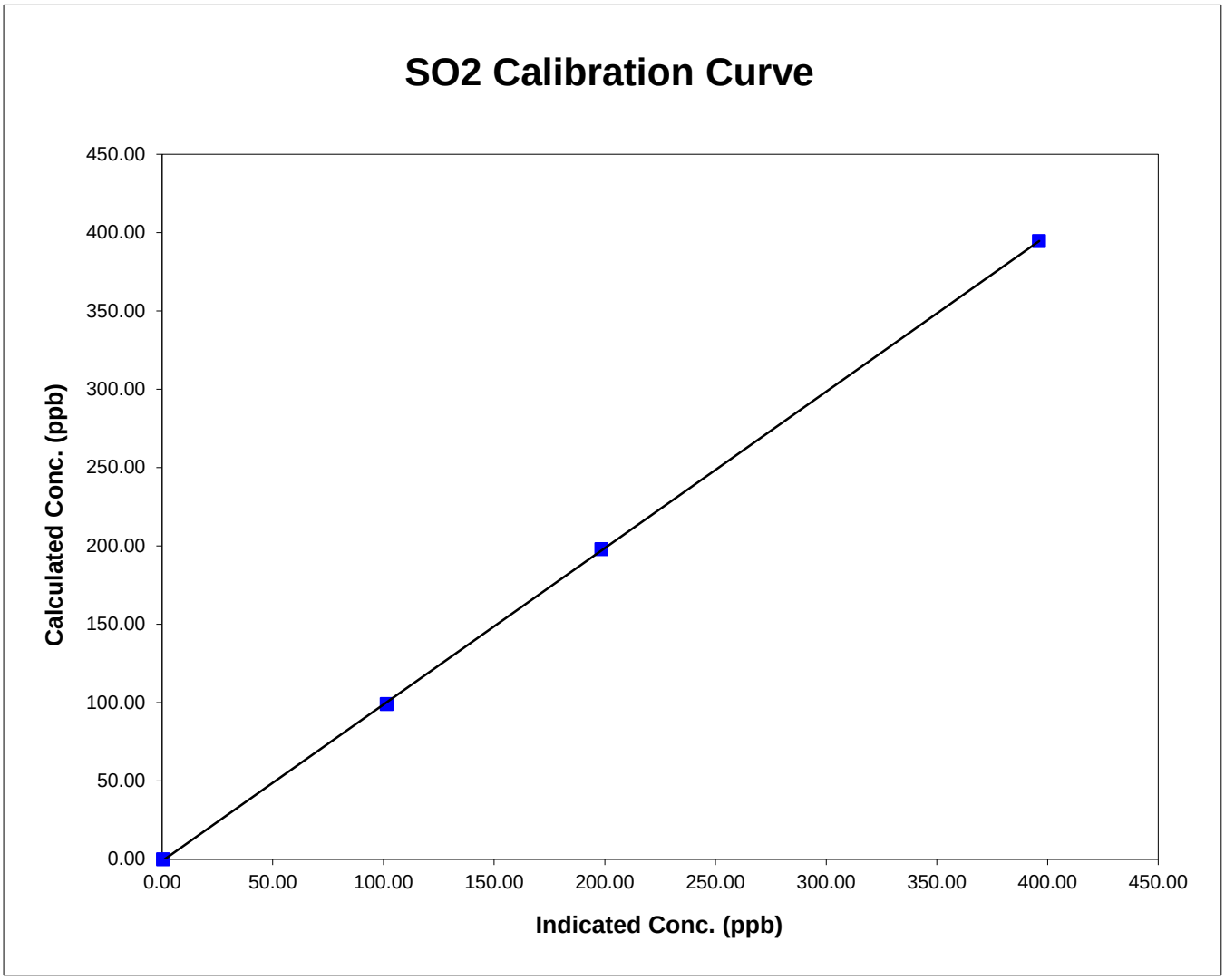
Air Monitoring Network **PASZA**

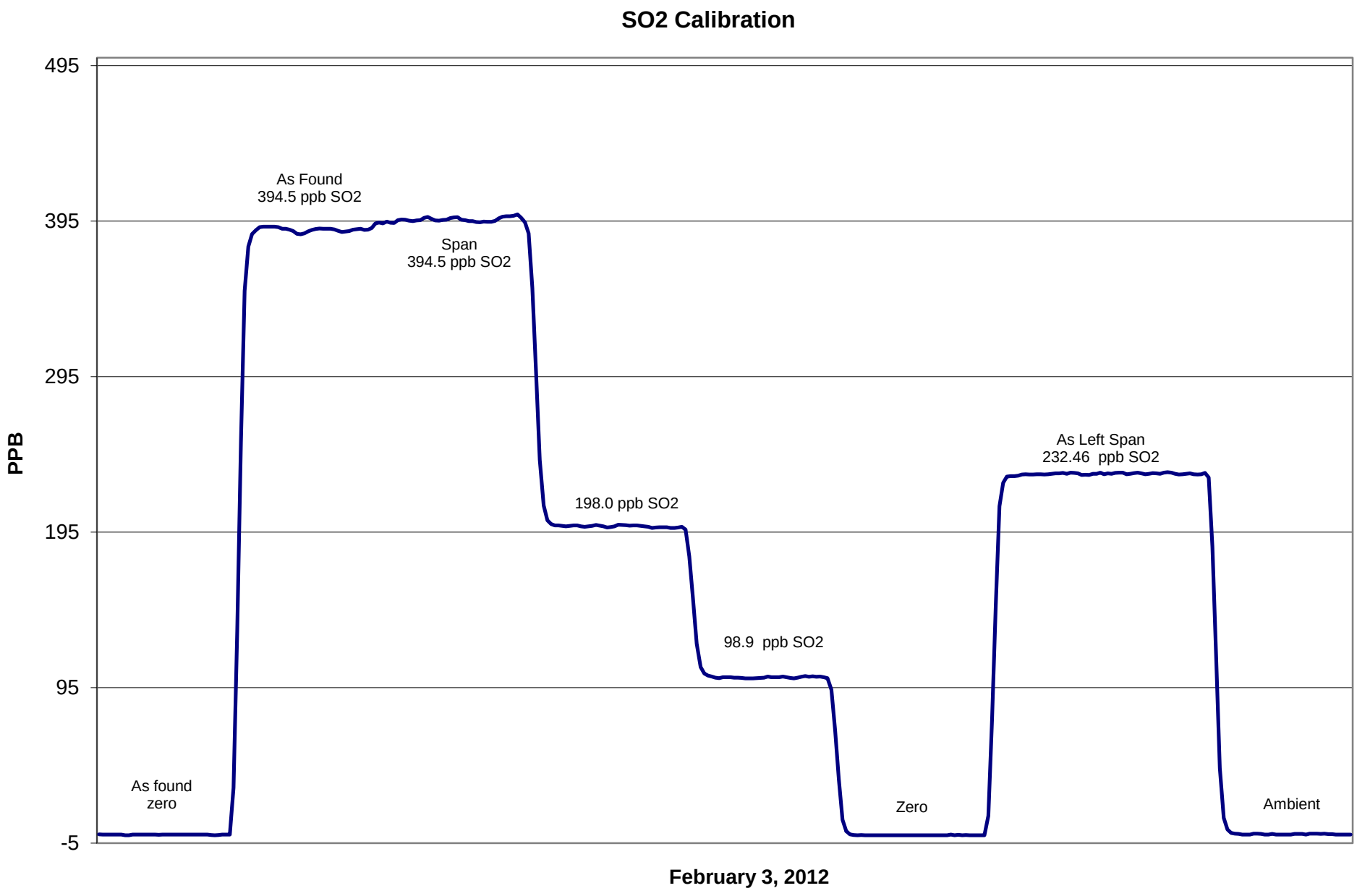
Station Information

Calibration Date	February 3, 2012	Previous Calibration	January 16, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:05	End Time (MST)	12:52
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	0.4	N/A		
394.5	396.2	0.9957	Correlation Coefficient	0.999967
198.0	198.6	0.9968		
98.9	101.5	0.9743	Slope	0.998532
			Intercept	-1.092943




SO2 Calibration
495
395
295
195
95
-5
PPB
As Found
394.5 ppb SO2
Span
394.5 ppb SO2
198.0 ppb SO2
98.9 ppb SO2
As Left Span
232.46 ppb SO2
As found
zero
Zero
Ambient
February 3, 2012

Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 3, 2012	Previous Calibration	January 16, 2012
Station Number	1	Station Location	Henry Pirker

Reason: Routine Installation Removal Other:

Start Time (MST)	10:05		End Time (MST)	14:35	
Barometric Pressure	0.932	Atm	Station Temperature	20.0	Deg C
Calibrator	Environics		Serial Number	3474	
NO Cal Gas Conc	52.5	ppm	Cal Gas Expiry Date	March 28, 2013	
NOx Cal Gas Conc	52.5	ppm	Cal Gas Serial #	LL85275	

DACS Information

DACS make	CR3000	DACS serial No.	5408

Parameter		NO2	NOx	NO
Before	Data Slope	0.999074	1.007093	1.005619
	Data Offset	0.289123	-2.616568	-2.508949
After	Data Slope	0.999643	1.003601	1.003322
	Data Offset	-0.029022	-2.295570	-1.713859
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	10.4	mV	10.5	mV
NOx bkgnd	10.7	mV	10.8	mV
NO coefficient	0.764		0.773	
NOx coefficient	1.001		0.994	
NO2 conv temp	318.0	Deg C	318.0	Deg C
PMT Temp	-2.5	Deg C	-2.5	Deg C
PMT Volt	-786.0	mV	-786.0	mV
R Cell Press	175.1	in Hg	174.9	in Hg

Calibration Report

Parameter **NOx-NO-NO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Calibration Date: February 3, 2012 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	4989	0.00	0.0	0.0	0.0	0.1	0.0	0.0	N/A	N/A
1	4989	39.81	415.6	415.6	0.0	415.2	415.0	0.1	1.0009	1.0016
2	4989	19.91	208.7	208.7	0.0	211.4	210.9	0.5	0.9870	0.9896
3	4989	9.94	104.4	104.4	0.0	108.5	107.3	1.1	0.9623	0.9733
AFZ	4989	0.00	0.0	0.0	0.0	0.1	0.0	0.0	0.0000	0.0000
AFS	4989	39.83	415.8	415.8	0.0	413.6	411.0	2.6	1.0053	1.0117
							Average Correction Factor		0.9834	0.9882

As Found Concentrations: NO_X= 410.9 NO= 408.5 As Found Percent Change NO_X= -1.2% NO= -1.8%

Dilution Flow 4989 ccm Source Gas Flow 39.85 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	0.1	0.0	0.0	N/A	N/A	N/A	N/A
NO point	413.7	413.7	0.0	413.5	413.7	-0.2	1.0006	1.0000	N/A	N/A
300	413.7	155.1	258.6	413.5	155.1	258.5	1.0007	1.0000	1.0006	99.9%
200	413.7	232.7	181.0	414.3	232.7	181.7	0.9987	1.0000	0.9962	100.4%
100	413.7	309.2	104.6	413.5	309.2	104.3	1.0007	1.0000	1.0025	99.8%
					Average Correction Factor		1.0000	1.0000	0.9998	100.0%

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.1	0.0	0.0	ppb	0.1	0.0	0.0	ppb
Auto span	168.4	169.5	1.2	ppb	165.1	164.2	1.0	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

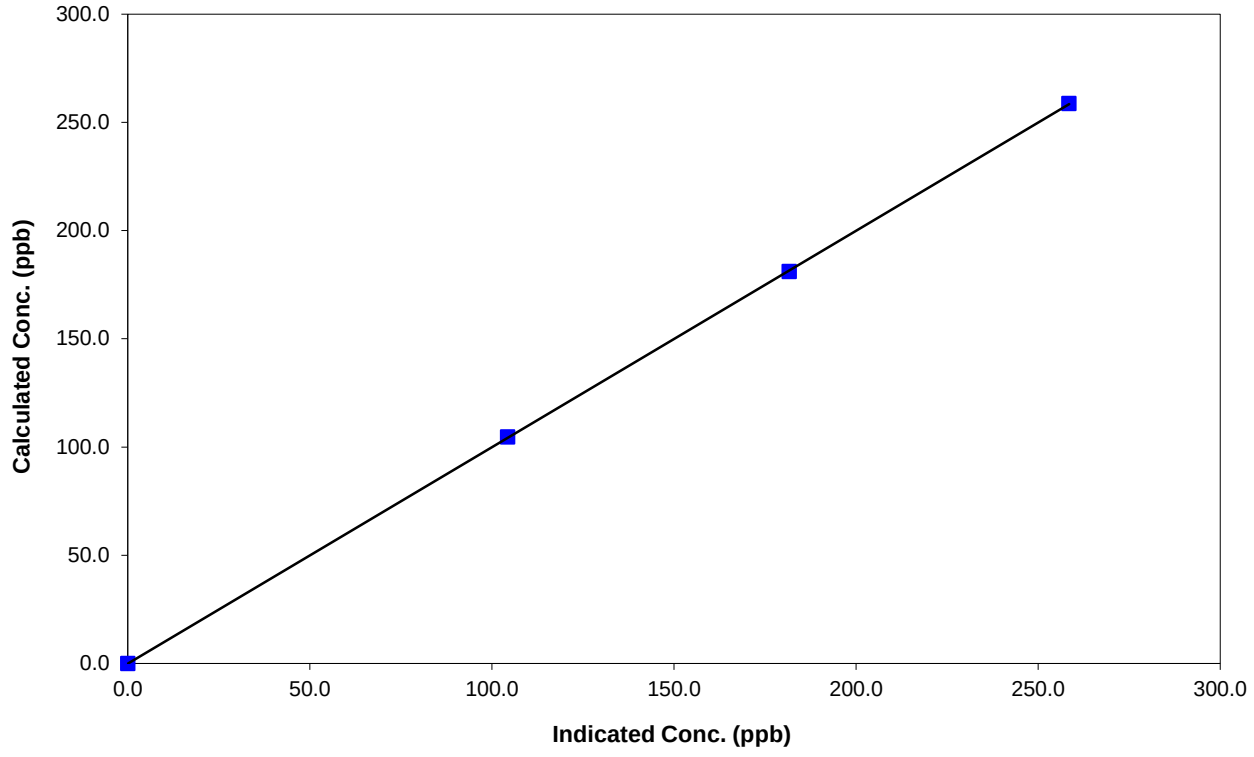
Station Information

Calibration Date	February 3, 2012	Previous Calibration	January 16, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:05	End Time (MST)	14:35
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		
258.6	258.5	1.0006	Correlation Coefficient	0.999985
181.0	181.7	0.9962		
104.6	104.3	1.0025	Slope	0.999643
			Intercept	-0.029022

NO_2 Calibration Curve



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

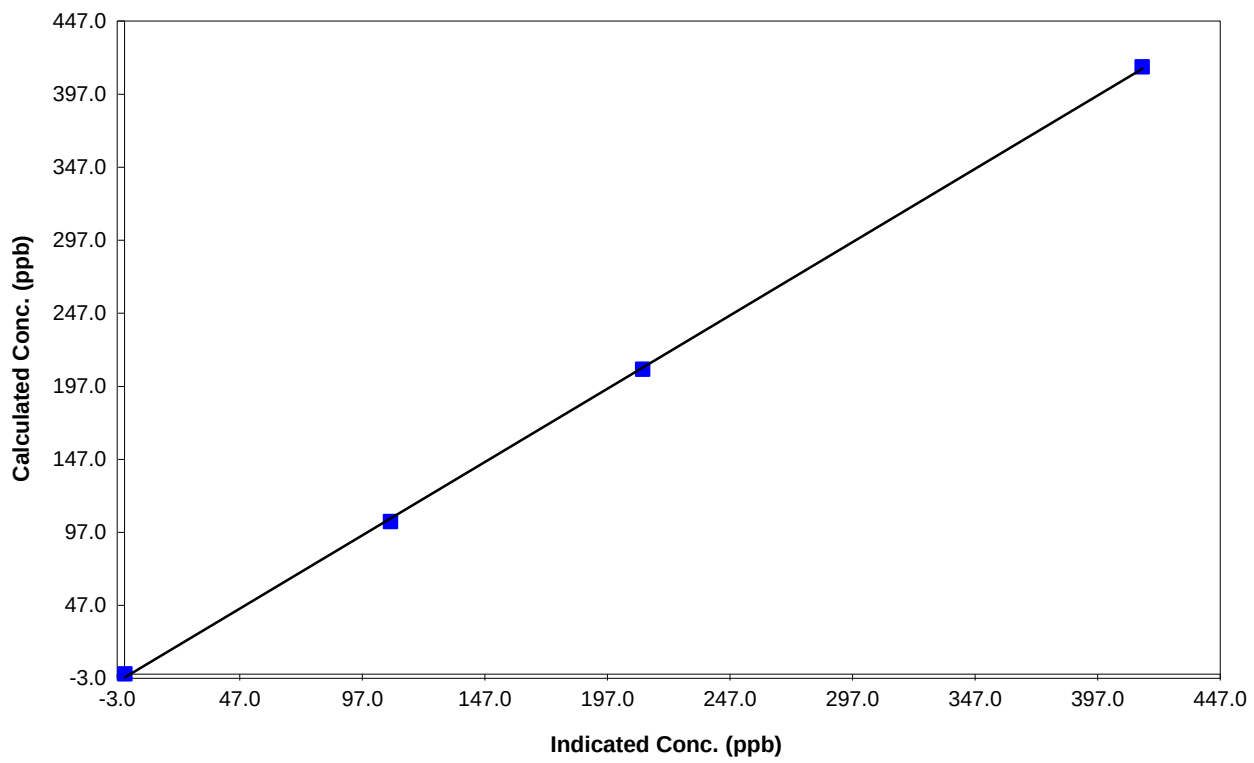
Station Information

Calibration Date	February 3, 2012	Previous Calibration	January 16, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:05	End Time (MST)	14:35
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		
415.6	415.2	1.0009	Correlation Coefficient	0.999867
208.7	211.4	0.9870		
104.4	108.5	0.9623	Slope	1.003601
			Intercept	-2.295570

NOx Calibration Curve



Calibration Summary

Parameter **NO**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

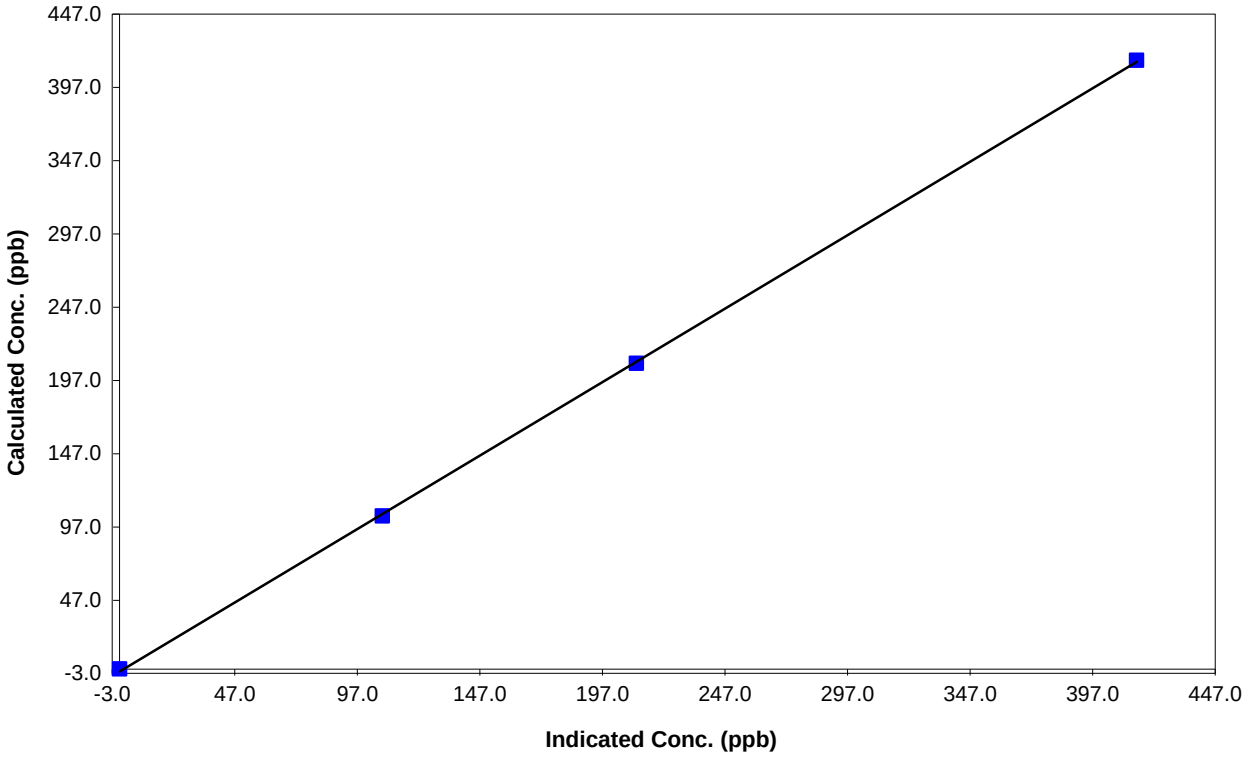
Station Information

Calibration Date	February 3, 2012	Previous Calibration	January 16, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:05	End Time (MST)	14:35
Analyzer make	TEI 42C	Analyzer serial #	508011073

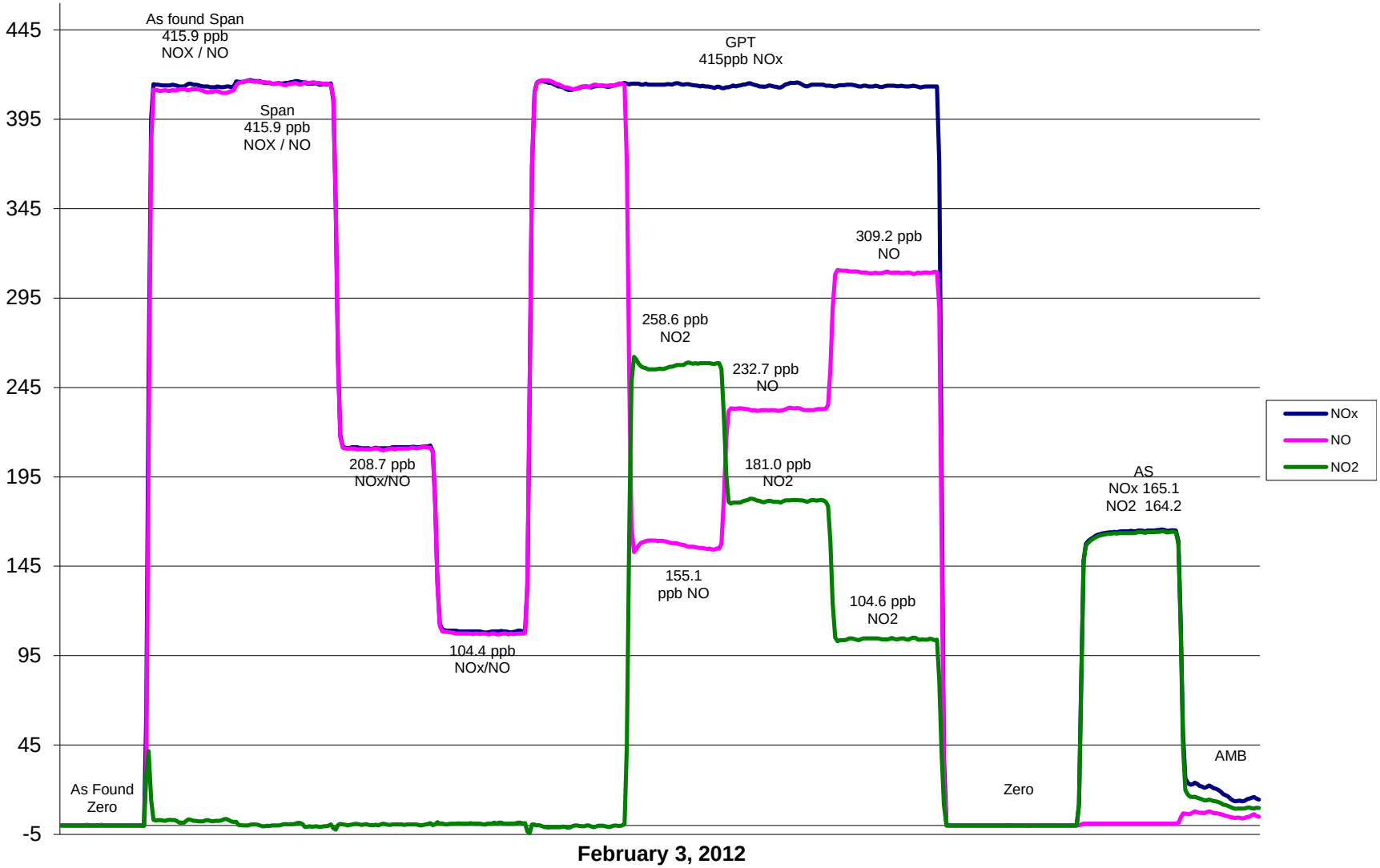
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
415.6	415.0	1.0016	Correlation Coefficient	0.999921
208.7	210.9	0.9896		
104.4	107.3	0.9733	Slope	1.003322
			Intercept	-1.713859

NO Calibration Curve



PASZA
NO_X Calibration



Calibration Report

Parameter **O3**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 3, 2012	Previous Calibration	January 16, 2012
Station Number	1	Station Location	Henry Pirker
Reason: Routine	Install	Removal	Other:
Start Time (MST)	12:56	End Time (MST)	15:30
Barometric Pressure	0.928 atm	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	5
	Before		After
Calculated slope	1.010314	Calculated slope	0.988095
Calculated intercept	0.283023	Calculated intercept	-0.640419
Analyzer make	TECO 49C	Analyzer serial #	607415761

	before		after	
Concentration range	500	ppb	500	ppb
offset	-0.6	ppb	-0.6	ppb
slope	1.011		1.011	
O3 Lamp temp	71.1	Deg C	71.1	Deg C
Intensities	81235/71359	mV	81555/71228	mV
Pressure	691.1	inches Hg	691.4	inches Hg
Flow A	0.720	ccm	0.720	ccm
Flow B	0.739	ccm	0.739	ccm

Calibration Data

Referenced concentration (ppb)	Dilution air flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
0	4989	0.0	0.2	N/A
300	4989	258.6	261.9	0.9873
200	4989	181.0	184.1	0.9833
100	4989	104.6	107.2	0.9760
0	4989	0.0	0.2	As found zero
300	4989	258.6	261.9	As found span
			Average Correction Factor	0.9822

Calculated value of As Found Response: 264.7 ppm Percent Change of As Found: 2.4%

	before calibration		after calibration	
Auto zero	0.3	ppb	0.3	ppb
Auto span	156.4	ppb	165.5	ppb

Notes: No adjustment made.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **O3**

Air Monitoring Network **PASZA**

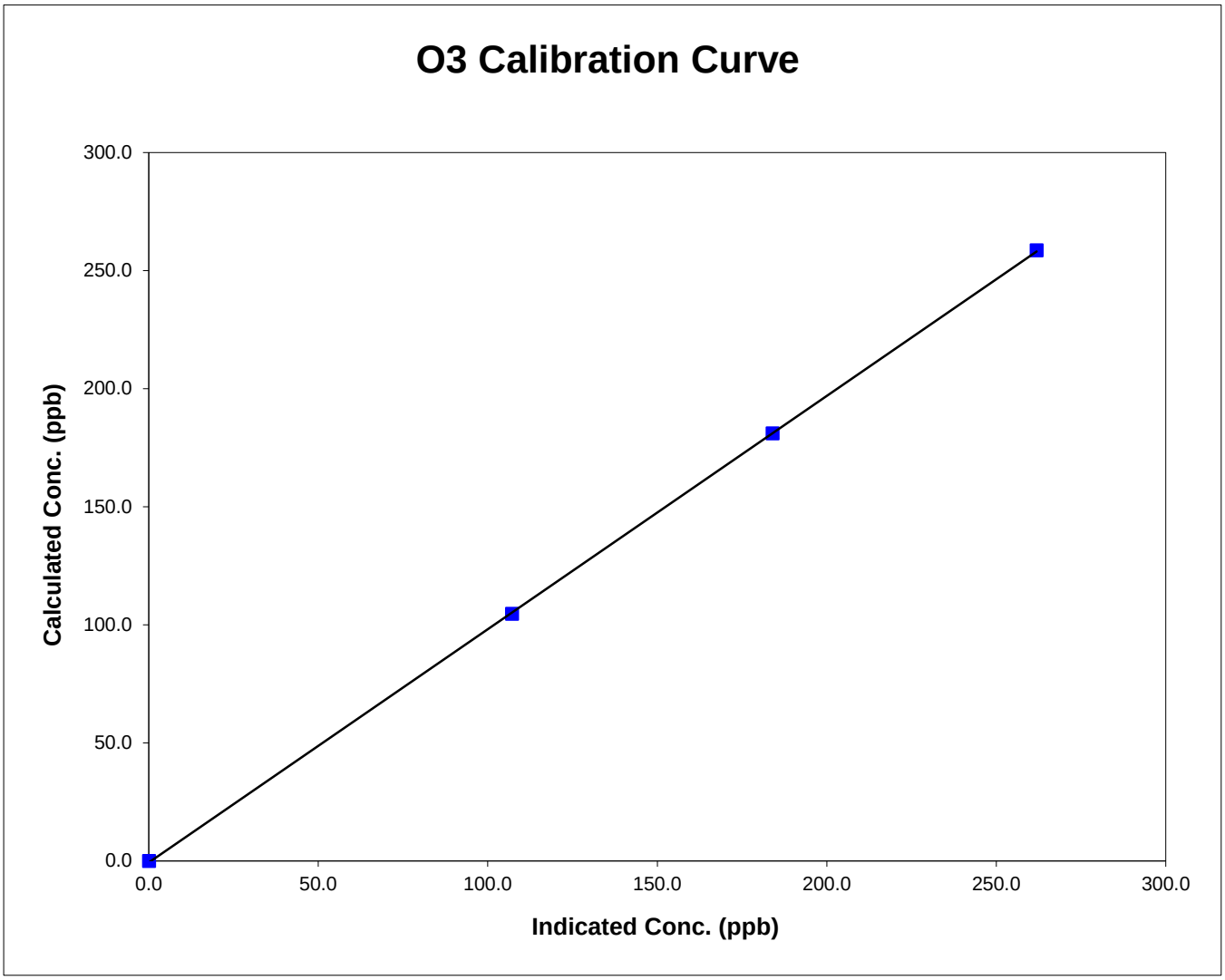
FOCUS AIR QUALITY MONITORING

Station Information

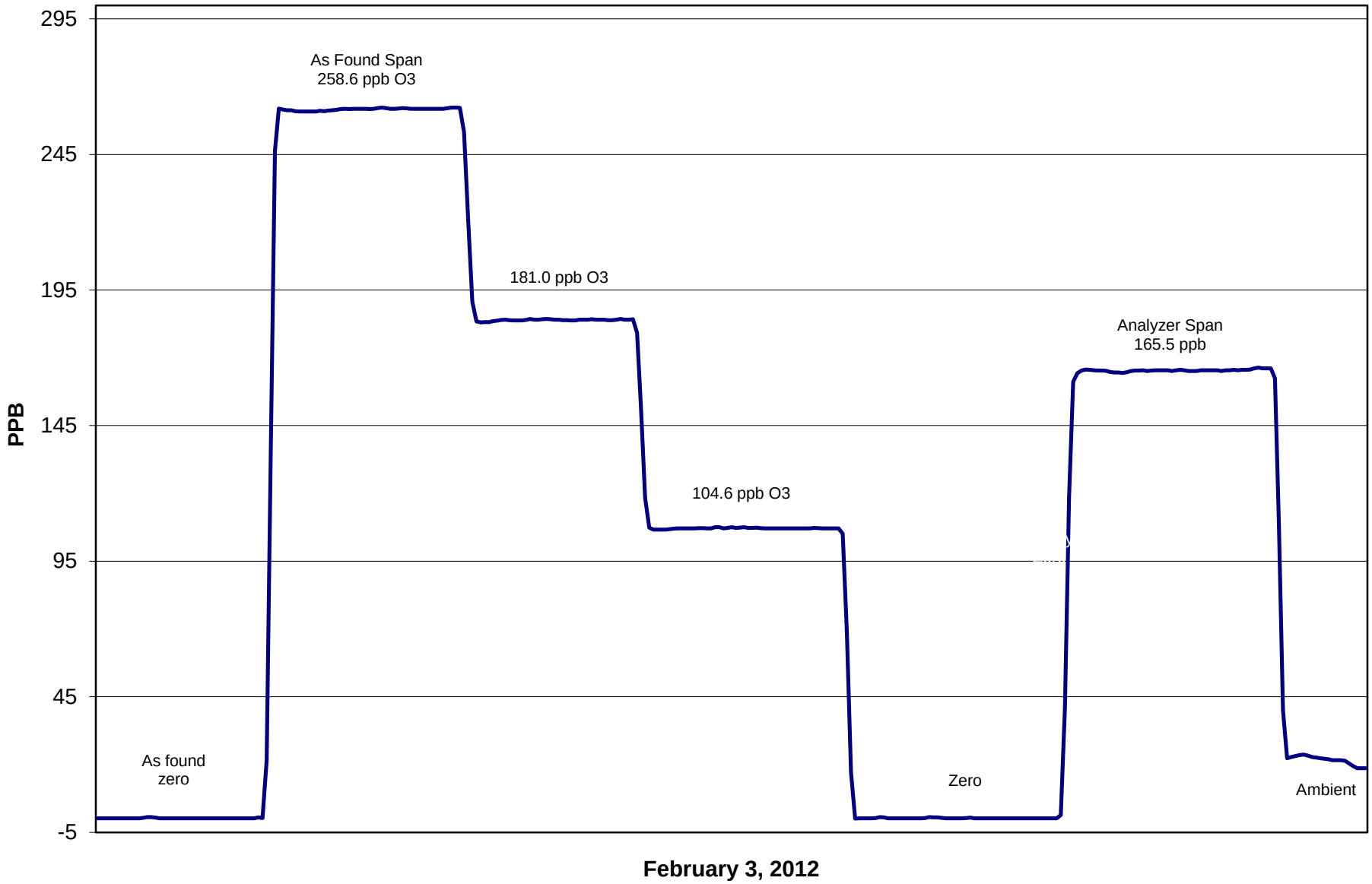
Calibration Date	February 3, 2012	Previous Calibration	January 16, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:56	End Time (MST)	15:30
Analyzer make/model	TECO 49C	Analyzer serial #	607415761

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	NA		
258.6	261.9	0.9873	Correlation Coefficient	0.999975
181.0	184.1	0.9833		
104.6	107.2	0.9760	Slope	0.988095
			Intercept	-0.640419



O3 Calibration



Calibration Report

Parameter **CO**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 2, 2012	Previous Calibration	January 17, 2012
Station Number	1	Station Location	Henry Pirker
Reason: Routine	Install	Removal	Other:
Start Time (MST)	10:15	End Time (MST)	12:50
Barometric Pressure	0.932 ATM	Station Temperature	21.0 Deg C
Calibrator	Environics	Serial Number	3474
Cal Gas Conc	3000 ppm	Cal Gas Expiry Date	AUG 28/05
		Cal Gas Cylinder #	AAL20565
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	1.004624	Calculated slope	1.000991
Calculated intercept	-0.491356	Calculated intercept	-0.559397
Analyzer make	TEI Model 48C	Analyzer serial #	508011062

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO span setting	1.088		1.088	
CO zero setting	2.459		2.459	
Sample pressure	690.4	mm Hg	693.2	mm Hg
Sample Flow	1.147	LPM	1.151	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)
4988	0.00	0.00	0.46	N/A
4988	39.83	23.77	24.25	0.9802
4988	19.90	11.92	12.52	0.9519
4988	9.93	5.96	6.62	0.9010
4988	0.00	0.00	0.46	As Found Zero
4988	39.85	23.78	24.25	As Found Span
			Average Correction Factor	0.9444

Calculated value of As Found Response: 23.409 ppm Percent Change of As Found: 1.5%

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	19.56	ppm	19.27	ppm

Notes: No adjustment made.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **CO**

Air Monitoring Network **PASZA**

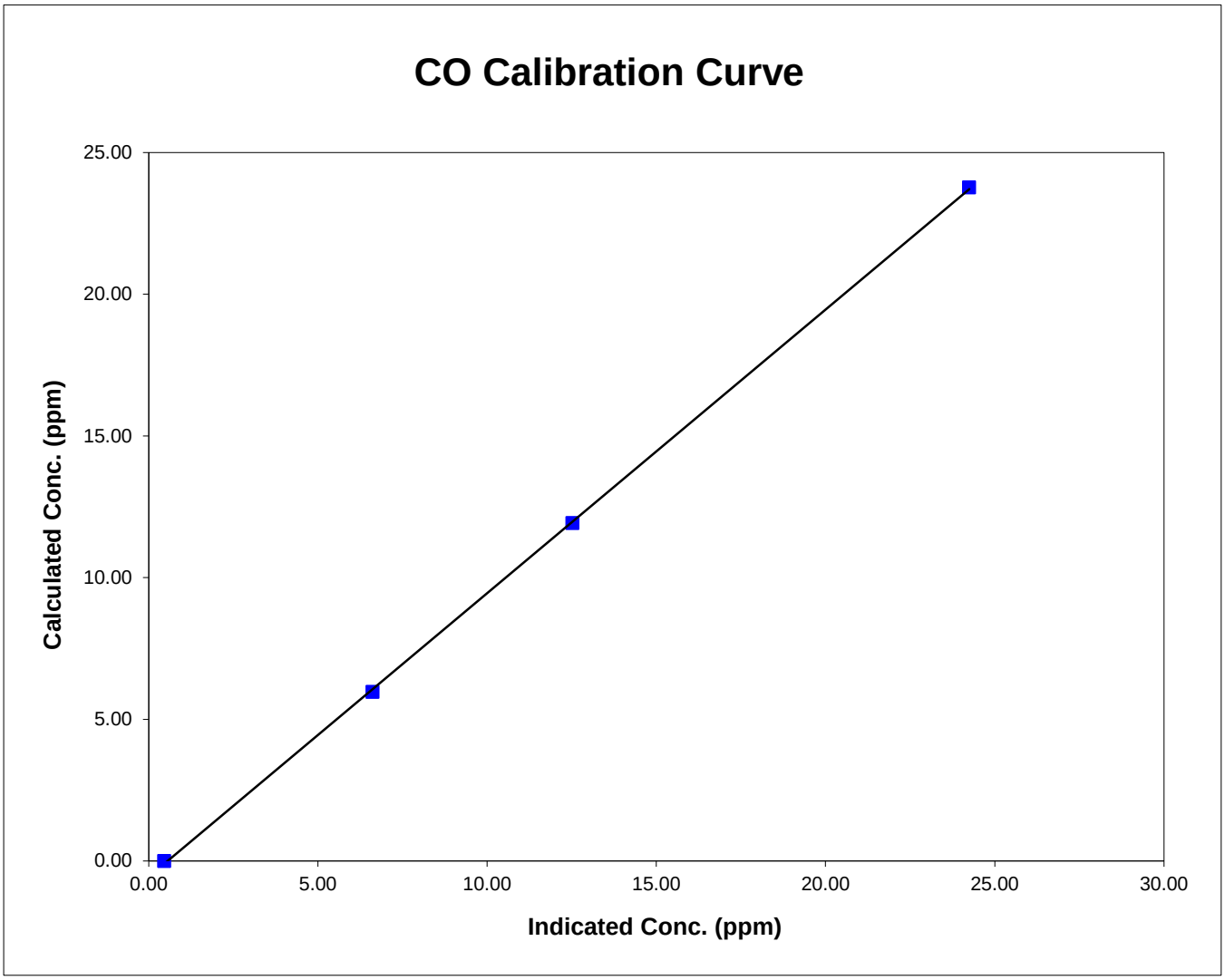
FOCUS AIR QUALITY MONITORING

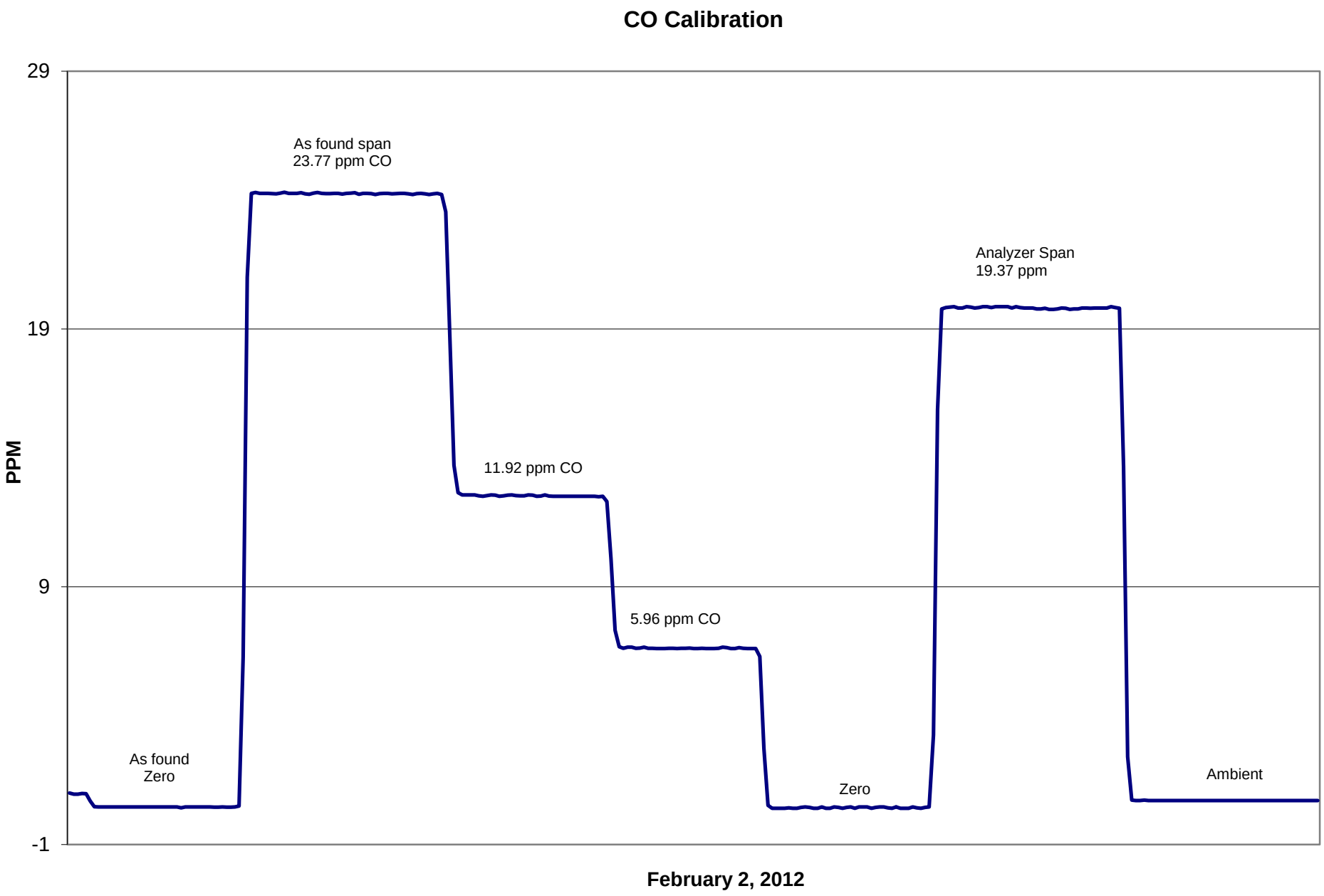
Station Information

Calibration Date	February 2, 2012	Previous Calibration	January 17, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:15	End Time (MST)	12:50
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	0.456	N/A		
23.766	24.247	0.9802	Correlation Coefficient	0.999913
11.921	12.523	0.9519		
5.960	6.615	0.9010	Slope	1.000991
			Intercept	-0.559397




CO Calibration
29
19
9
-1
PPM
As found span
23.77 ppm CO
11.92 ppm CO
5.96 ppm CO
Analyzer Span
19.37 ppm
As found
Zero
Zero
Ambient
February 2, 2012

Calibration Report

Parameter **THC**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 2, 2012	Previous Calibration	January 17, 2012
Station Number	1	Station Location	Henry Pirker
Reason: Routine	Install	Removal	Other:
Start Time (MST)	11:40	End Time (MST)	14:02
Barometric Pressure	0.935 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentratior	701 ppm CH4/ 299 ppm C3H8	Cal Gas Expiry Date	2/4/2010
Cal Gas CH4 equiv	1523.25 ppm	Cal Gas Cylinder #	ALM 004476
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	1.039026	Calculated slope	1.046026
Calculated intercept	-0.258414	Calculated intercept	-0.262011
Analyzer make	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

	before		after	
Concentration range	0 - 25	ppm	0 - 25	ppm
THC sample pressure	6.50	psi	6.50	psi
THC span counts	9616	capture	9616	capture
THC zero counts	447	capture	447	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)
4989	0.00	0.00	0.25	N/A
4989	69.79	21.01	20.36	1.0321
4989	29.87	9.07	8.85	1.0239
4989	9.92	3.02	3.19	0.9481
4989	0.00	0.00	0.25	As Found Zero
4989	69.79	21.01	20.36	As Found Span
			Average Correction Factor	1.0014

Calculated value of As Found Response: 20.641 ppm Percent Change of As Found: 1.8%

	before calibration		after calibration	
Auto zero	0.10	ppm	-0.01	ppm
Auto span	21.83	ppm	20.78	ppm

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **THC**

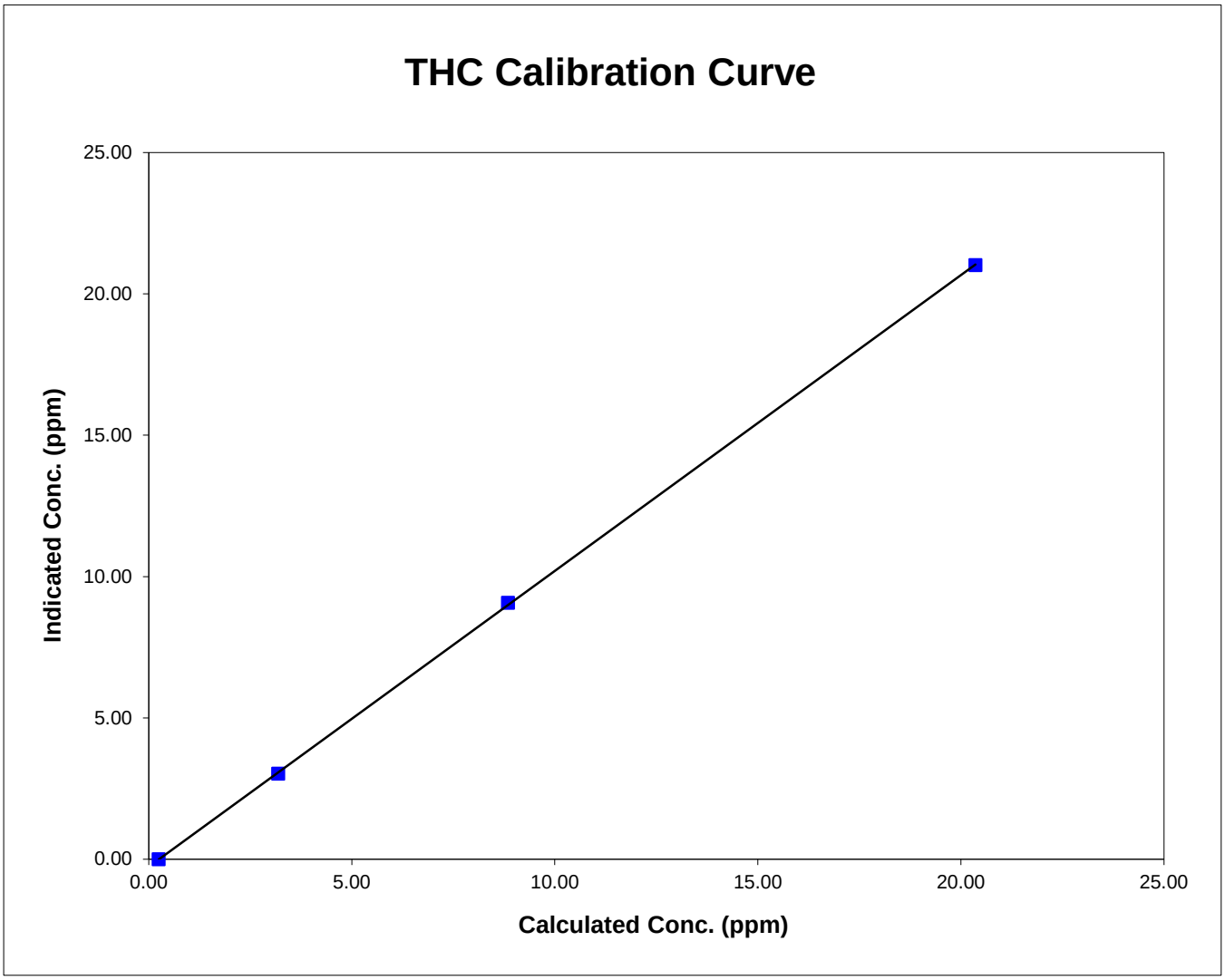
Air Monitoring Network **PASZA**

Station Information

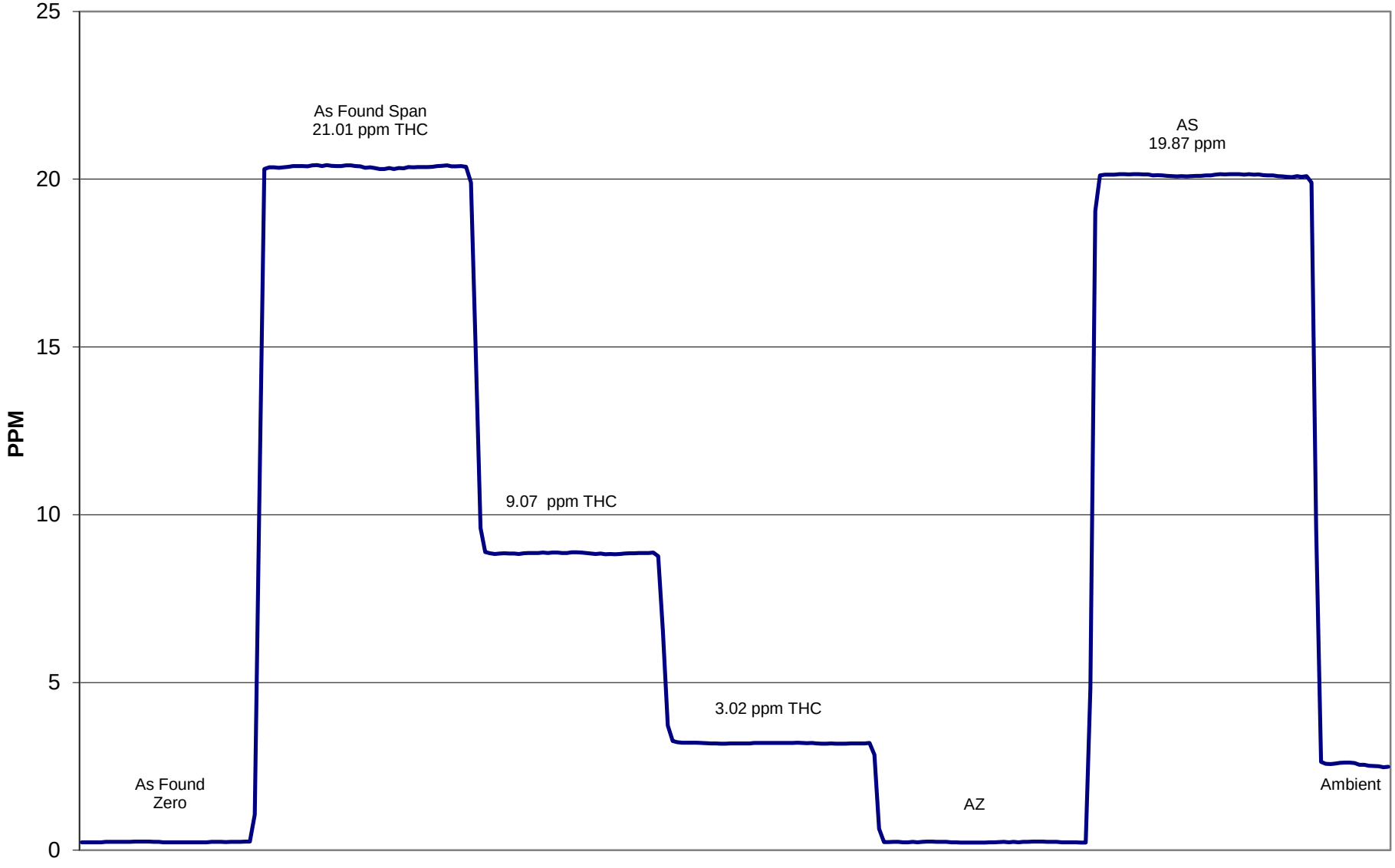
Calibration Date	February 2, 2012	Previous Calibration	January 17, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	11:40	End Time (MST)	14:02
Analyzer make/model	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.246	N/A		
21.014	20.360	1.0321	Correlation Coefficient	0.999971
9.066	8.854	1.0239		
3.023	3.188	0.9481	Slope	1.046026
			Intercept	-0.262011



THC Calibration



February 2, 2012

Calibration Report

Parameter **TRS**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 2, 2012	Previous Calibration	January 17, 2012
Station Number	1	Station Location	Henry Pirker
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	13:10	End Time (MST)	16:32
Barometric Pressure	0.933 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Conc	5.77 ppb	Cal Gas Expiry Date	9/3/2011
		Cal Gas Cylinder #	BLM001434
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	1.004790	Calculated slope	0.992888
Calculated intercept	-0.400599	Calculated intercept	-0.040949
Analyzer make	TEI 45C	Analyzer serial #	630718528

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Coefficient	1.107		1.066	
Background	11.1		10.7	
Pressure	668.4	mm Hg	666.5	mm Hg
Flow	0.462	ccm	0.461	ccm
Lamp Voltage	822	V	821	V

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)
4988	0.00	0.00	0.16	N/A
4989	69.78	79.59	80.45	0.9893
4989	34.88	40.06	39.83	1.0057
4989	8.96	10.34	10.65	0.9716
4989	0.00	0.00	0.16	As Found Zero
4989	69.78	79.59	81.70	As Found Span
			Average Correction Factor	0.9889

Calculated value of As Found Response: 81.5 ppb Percent Change of As Found: -2.4%

	before calibration		after calibration	
Auto zero	-0.29	ppb	0.22	ppb
Auto span	33.10	ppb	32.31	ppb

Notes: Span adjustment made.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **TRS**

Air Monitoring Network **PASZA**

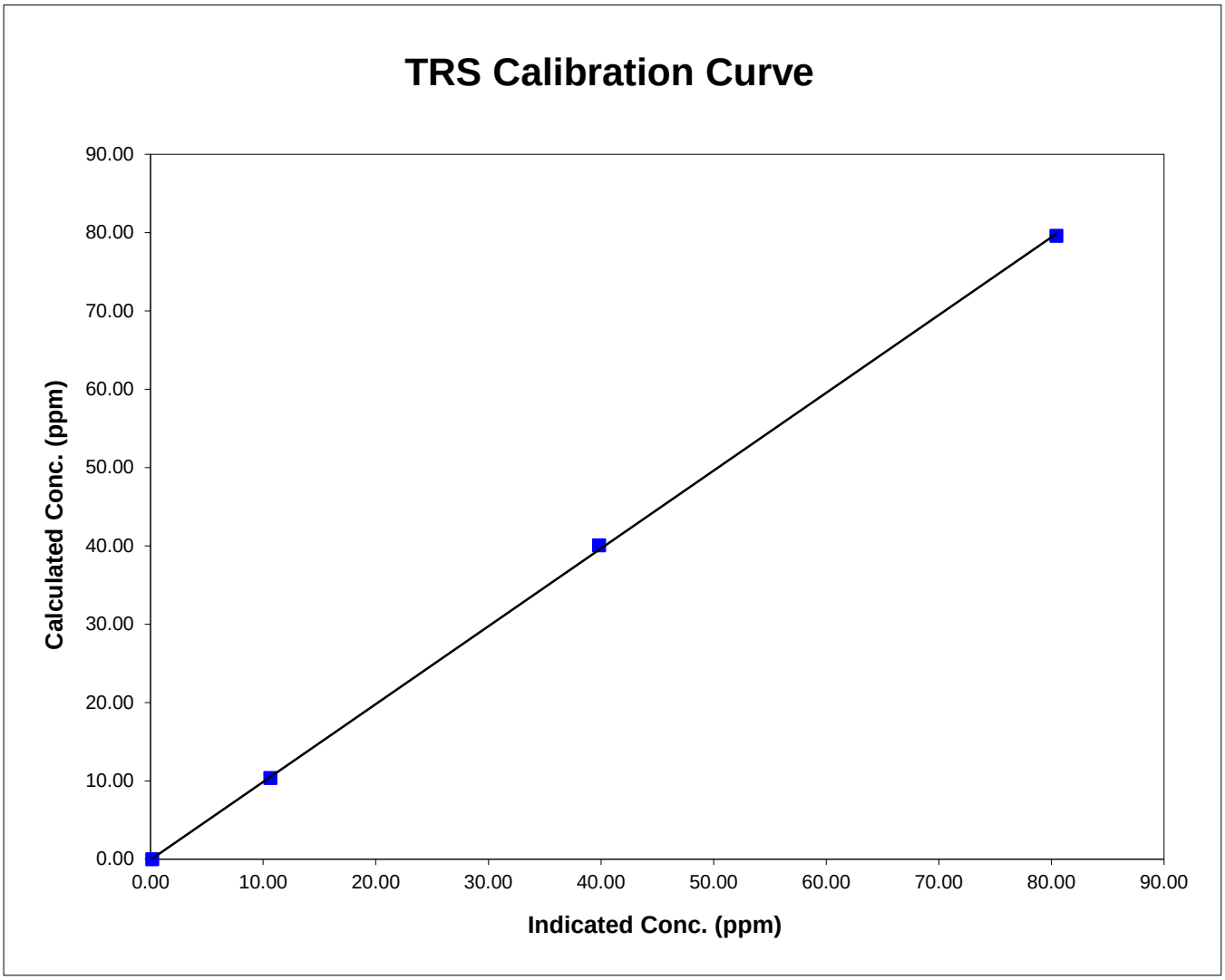
FOCUS AIR QUALITY MONITORING

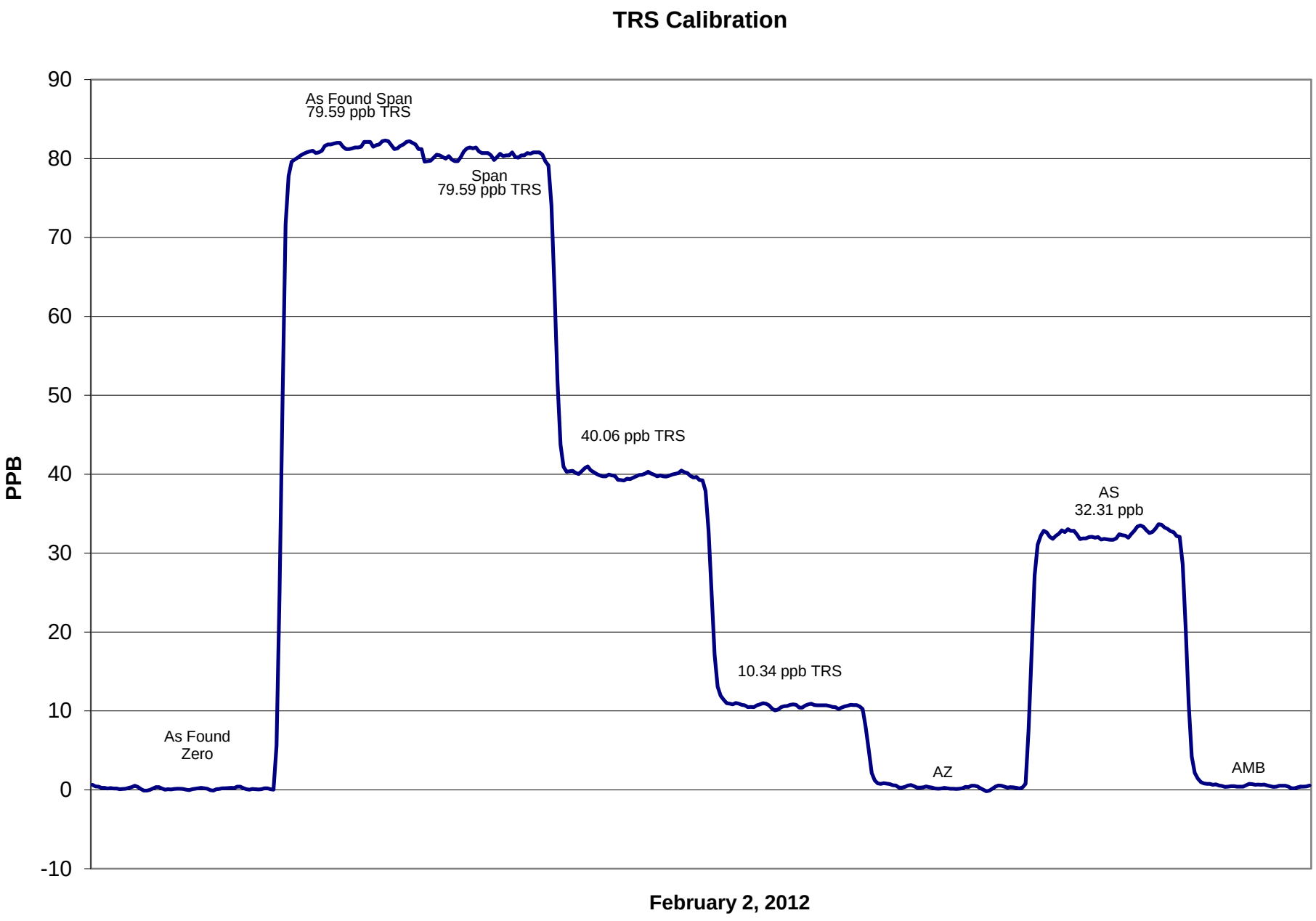
Station Information

Calibration Date	February 2, 2012	Previous Calibration	January 17, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	13:10	End Time (MST)	16:32
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	0.160	N/A		
79.590	80.452	0.9893	Correlation Coefficient	0.999891
40.060	39.832	1.0057		
10.344	10.647	0.9716	Slope	0.992888
			Intercept	-0.040949




TRS Calibration
90
80
70
60
50
40
30
20
10
0
-10
PPB
As Found Span
79.59 ppb TRS
Span
79.59 ppb TRS
40.06 ppb TRS
10.34 ppb TRS
AS
32.31 ppb
As Found
Zero
AZ
AMB
February 2, 2012

FDMS AB TEOM PM2.5 AUDIT

FOCUS AIR QUALITY MONITORING

STATION: **Henry Pirker**

LOCATION: PASZA - Grande Prairie

OPERATOR: Grover Christiansen

DATE: 2/10/2012

MONITOR INFO / PARAMETER VALUES:

Make/Model	TEOM AB
Configuration	PM2.5
Serial Number	AMU 1697
Site Number	1
Inlet Type	PM 10 / VSCC
FAdj. Main Setting	1.000
FAdj. Aux. Setting	1.000
T-Case Indicated / Set Point	30/30
T-Air Indicated / Set Point	30/30
T-Cap Indicated / Set Point	30/30
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	N/A
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	0.040
PUMP OFF	0.004	0.009
NET	0.006	0.031
LIMITS	*<0.15*	*<0.60*

]

		Ambient Temp. (^{0} C)	Ambient Pres. (atm)	Ko *	Bypass flow (lpm)	Sample flow (lpm)
	SET POINT (S)	na	na	15818	13.67	3.000
	INDICATED (I)	-5.2	0.919		13.68	3.000
As Found Data	MEASURED (AF)	-5.3	0.920		13.68	3.010
Adjusted Data	MEASURED (M)	-5.3	0.920	15772	13.68	3.010
	DIFFERENCE (M-I)	-0.1	0.001	-0.3%	0.07	0.33
	LIMITS	*± 2 ^{0} C*	*± 0.005 atm*	*± 2.5 %*	*± 1.0 L/min*	*± 0.2 L/min*

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

COMMENTS:

Leak check was performed on both reference & Base valves 8500C FDMS - OK.

Leak Check; Reference: Main: 0.04 Auxillery: 0.20

Sample Head Inspection Or Cleaning: TEOM / FDMS IN LINE FILTER INSPECTION OR REPLAC

FDMS AB TEOM PM2.5 AUDIT

FOCUS
AIR QUALITY MONITORING

STATION: **Henry Pirker**

LOCATION: PASZA - Grande Prairie

OPERATOR: Grover Christiansen

DATE: 2/13/2012

MONITOR INFO / PARAMETER VALUES:

Make/Model	TEOM AB
Configuration	PM2.5
Serial Number	AMU 1693
Site Number	1
Inlet Type	PM 10 / VSCC
FAdj. Main Setting	1.000
FAdj. Aux. Setting	1.000
T-Case Indicated / Set Point	30/30
T-Air Indicated / Set Point	30/30
T-Cap Indicated / Set Point	30/30
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	N/A
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	0.040
PUMP OFF	0.000	0.000
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	15818	13.67	3.000
	INDICATED (I)	1.5	0.920		13.68	3.000
As Found Data	MEASURED (AF)	1.4	0.920		13.68	3.010
Adjusted Data	MEASURED (M)	1.4	0.920	15772	13.68	3.010
	DIFFERENCE (M-I)	-0.1	0.000	-0.3%	0.07	0.33
	LIMITS	*± 2 ^{0} C*	*± 0.005 atm*	*± 2.5 %*	*± 1.0 L/min*	*± 0.2 L/min*

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

COMMENTS: Hard cal. Temp & Press set to exact local. Hard cal on flows - F-Adj main & Aux set to 1.000

Leak check was performed on both reference & Base valves 8500C FDMS - OK.

Leak Check; Reference: Main: 0.04 Auxillery: 0.20

Base: Main: 0.05 Auxillery: 0.22

Will observe over next few days.

Sample Head Inspection Or Cleaning: TEOM / FDMS IN LINE FILTER INSPECTION OR REPLAC

Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **SO_2**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	February 29, 2012	Previous Calibration	January 26, 2012
Station Number	2	Station Location	Evergreen Park
Reason: Routine	Install	Removal	Other:

Start Time (MST)	10:55	End Time (MST)	15:07
Barometric Pressure	0.913 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3474
Cal Gas Concentratior	49.8 ppm	Cal Gas Expiry Date	3/28/2013
Correction factor	0.031035	Cal Gas Cylinder #	SGAL3245
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	1.009035	Calculated slope	0.998624
Calculated intercept	-1.814481	Calculated intercept	-0.791909

Analyzer make	Teco 43i	Analyzer serial #	701120008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	11.2		11.1	
coefficient	1.069		1.072	
Lamp Voltage	830	volts	830	volts
Chamber Temp	45.2	Deg C	45.2	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	659.8	mm Hg	663.5	mm Hg
Sample Flow	0.449	ccm	0.454	ccm
Lamp Intensity	90	%	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)
4989	0.0	0.00	0.6	N/A
4989	39.84	394.5	396.1	0.9960
4989	20.15	200.3	200.5	0.9991
4989	10.10	100.6	102.4	0.9829
4989	0.0	0.0	0.6	As Found Zero
4989	39.84	394.5	389.9	As Found Span
			Average Correction Factor	0.9927

Calculated value of As Found Response: 390.988 ppm Percent Change of As Found: 0.9%

	before calibration		after calibration	
Auto zero	0.6	ppm	0.6	ppm
Auto span	292.7	ppm	290.1	ppm

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **SO2**

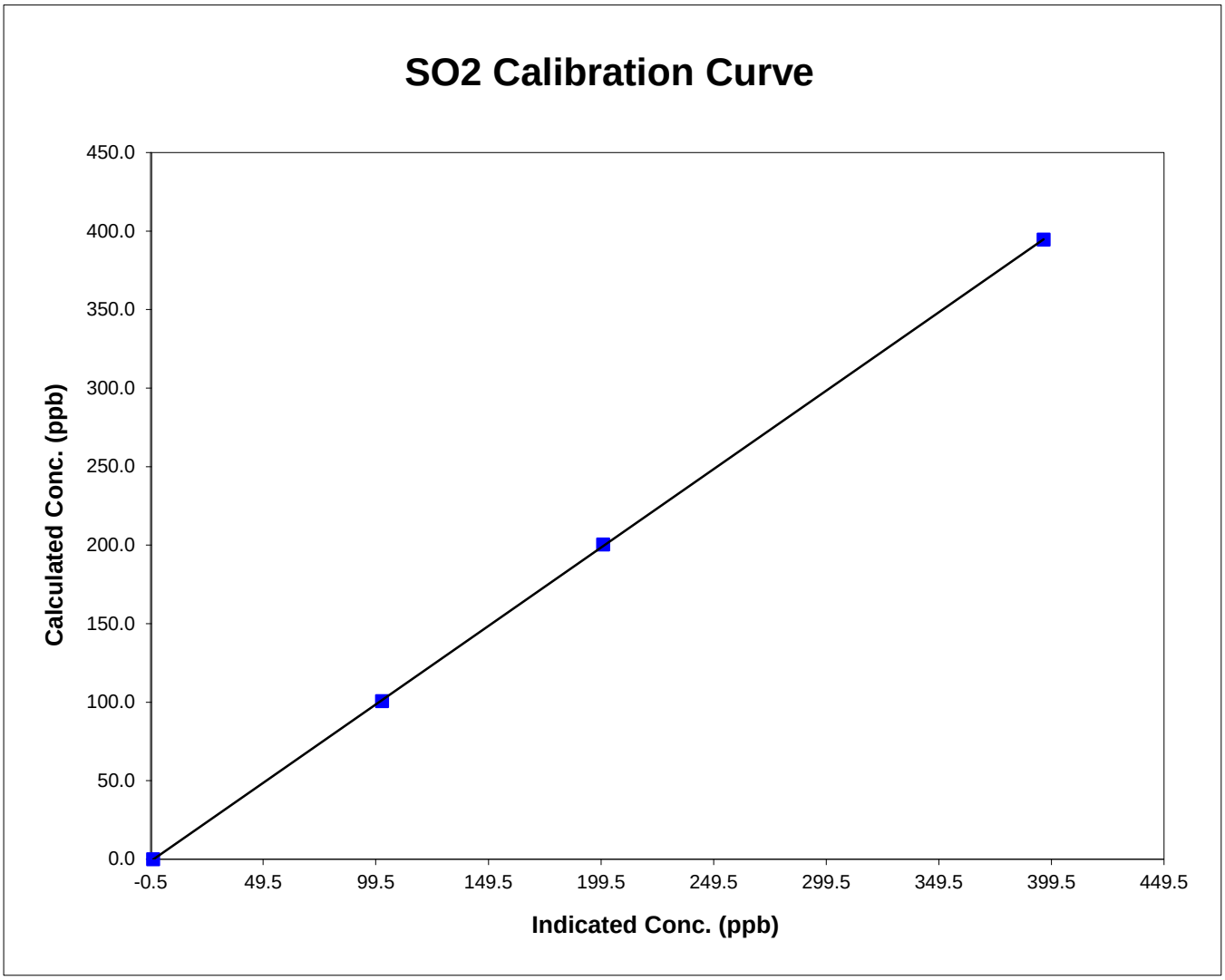
Air Monitoring Network **PASZA**

Station Information

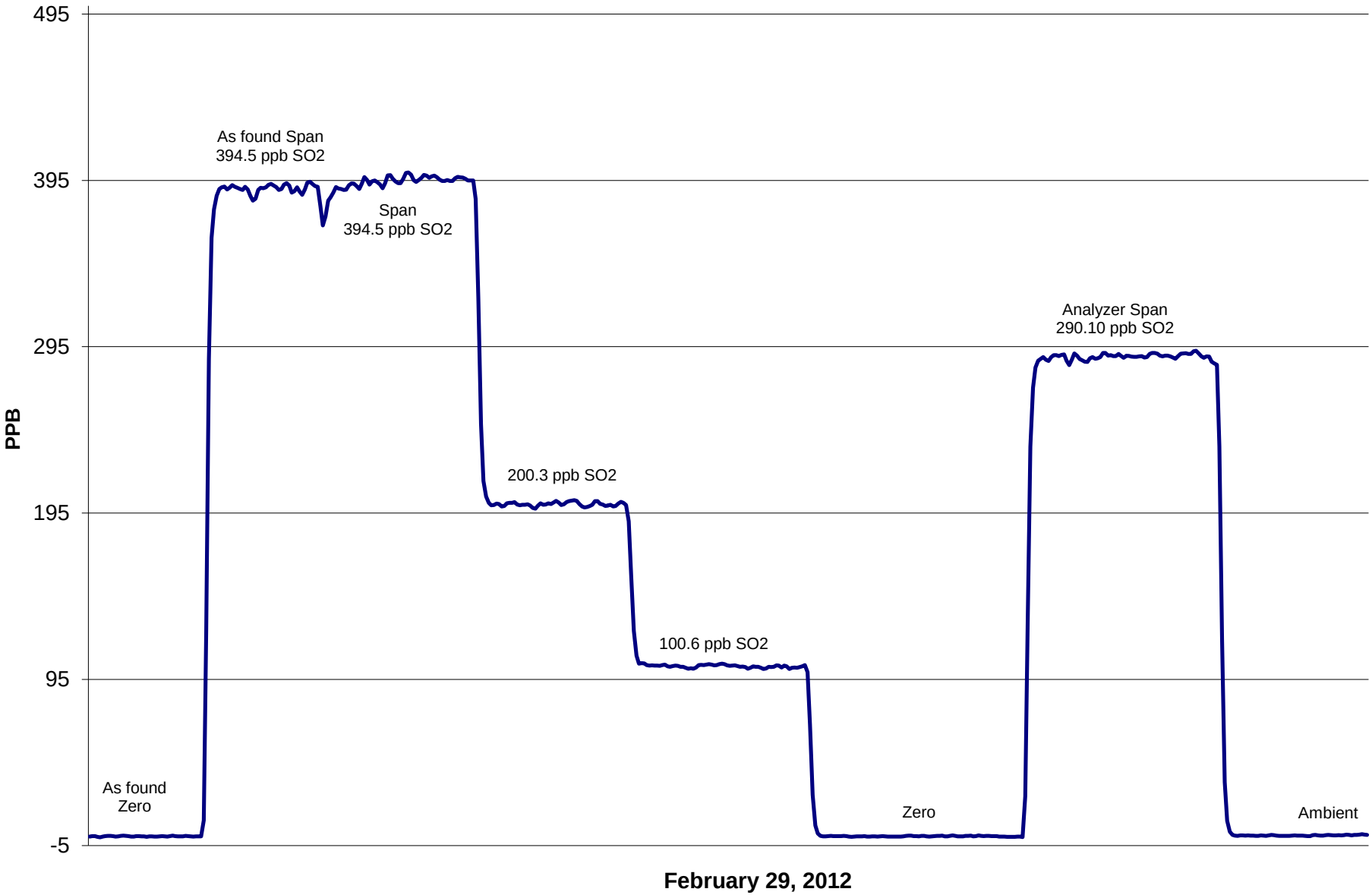
Calibration Date	February 29, 2012	Previous Calibration	January 26, 2012
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	10:55	End Time (MST)	15:07
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.6	N/A		
394.5	396.1	0.9960	Correlation Coefficient	0.999982
200.3	200.5	0.9991		
100.6	102.4	0.9829	Slope	0.998624
			Intercept	-0.791909



SO2 Calibration



Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **TRS**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	February 29, 2012	Previous Calibration	January 26, 2012
Station Number	2	Station Location	Evergreen Park
Reason: Routine	Install	Removal	Other:

Start Time (MST)	9:11	End Time (MST)	12:32
Barometric Pressure	0.913 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3474
Cal Gas Conc	5.77 ppm	Cal Gas Expiry Date	9/3/2011
Correction factor	0.031035	Cal Gas Cylinder #	BLM1715
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
Calculated slope	0.997564	Calculated slope	0.997122
Calculated intercept	0.058969	Calculated intercept	-0.105565

Analyzer make	TEI Model 43C	Analyzer serial #	436610005

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	19.7	ppb	19.7	ppb
coefficient	0.922		0.922	
Lamp Voltage	812	volts	812	volts
Chamber Temp	45	Deg C	44.3	Deg C
Perm Gas Temp	45.01	Deg C	44.97	Deg C
Pressure	637.9	mm Hg	638.3	mm Hg
Sample Flow	0.472	ccm	0.472	ccm
Lamp Intensity	45,194	mv	45,329	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)
4989	0.00	0.00	-0.1	N/A
4989	69.81	79.62	80.0	0.9954
4989	34.88	40.06	40.2	0.9978
4989	8.96	10.34	10.8	0.9622
4989	0.00	0.00	-0.1	As Found Zero
4989	69.81	79.62	80.0	As Found Span
			Average Correction Factor	0.9851

Calculated value of As Found Response: 79.93 ppm Percent Change of As Found: -0.4%

	before calibration		after calibration	
Auto zero	0.2	ppm	0.0	ppm
Auto span	71.9	ppm	72.9	ppm

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **TRS**

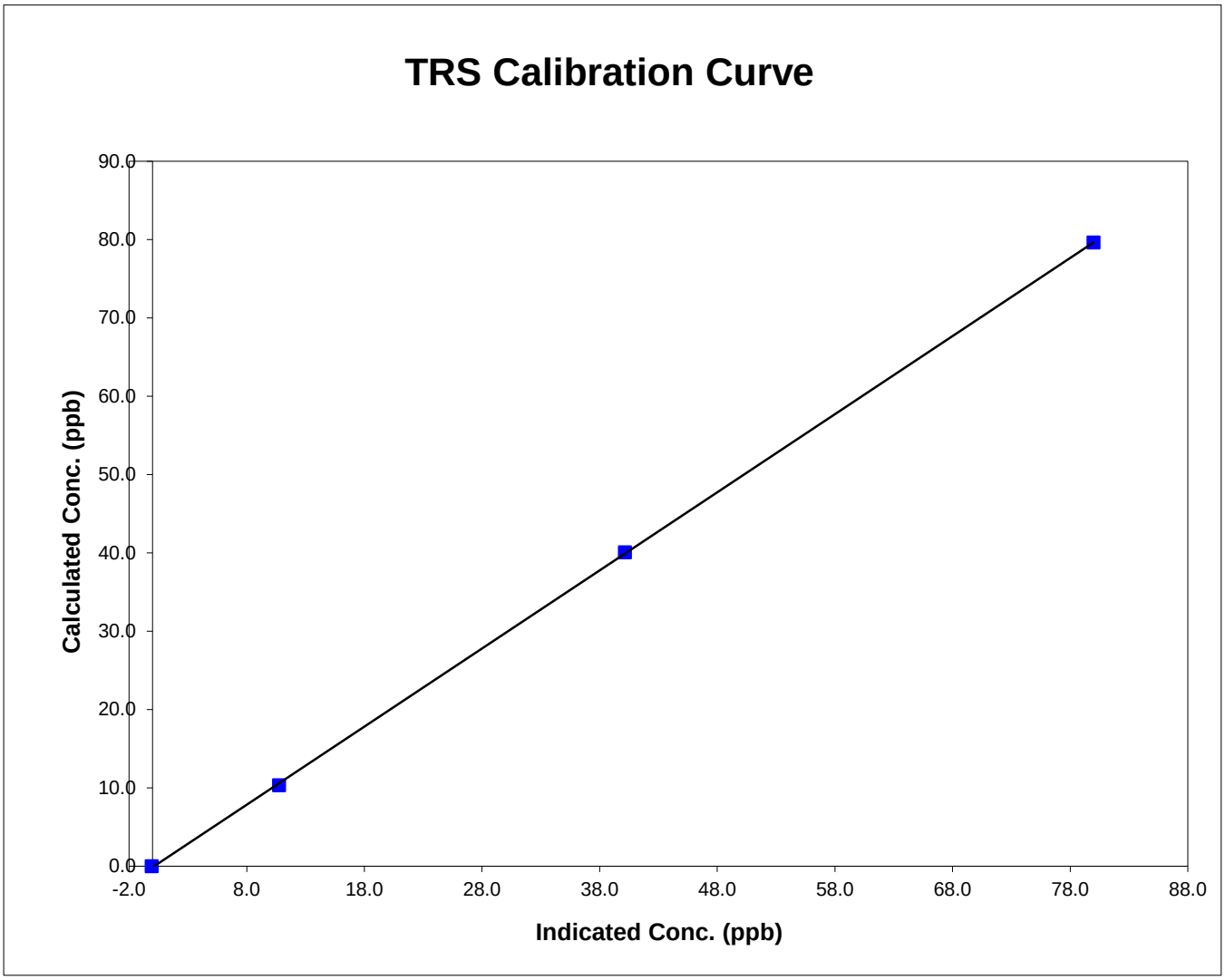
Air Monitoring Network **PASZA**

Station Information

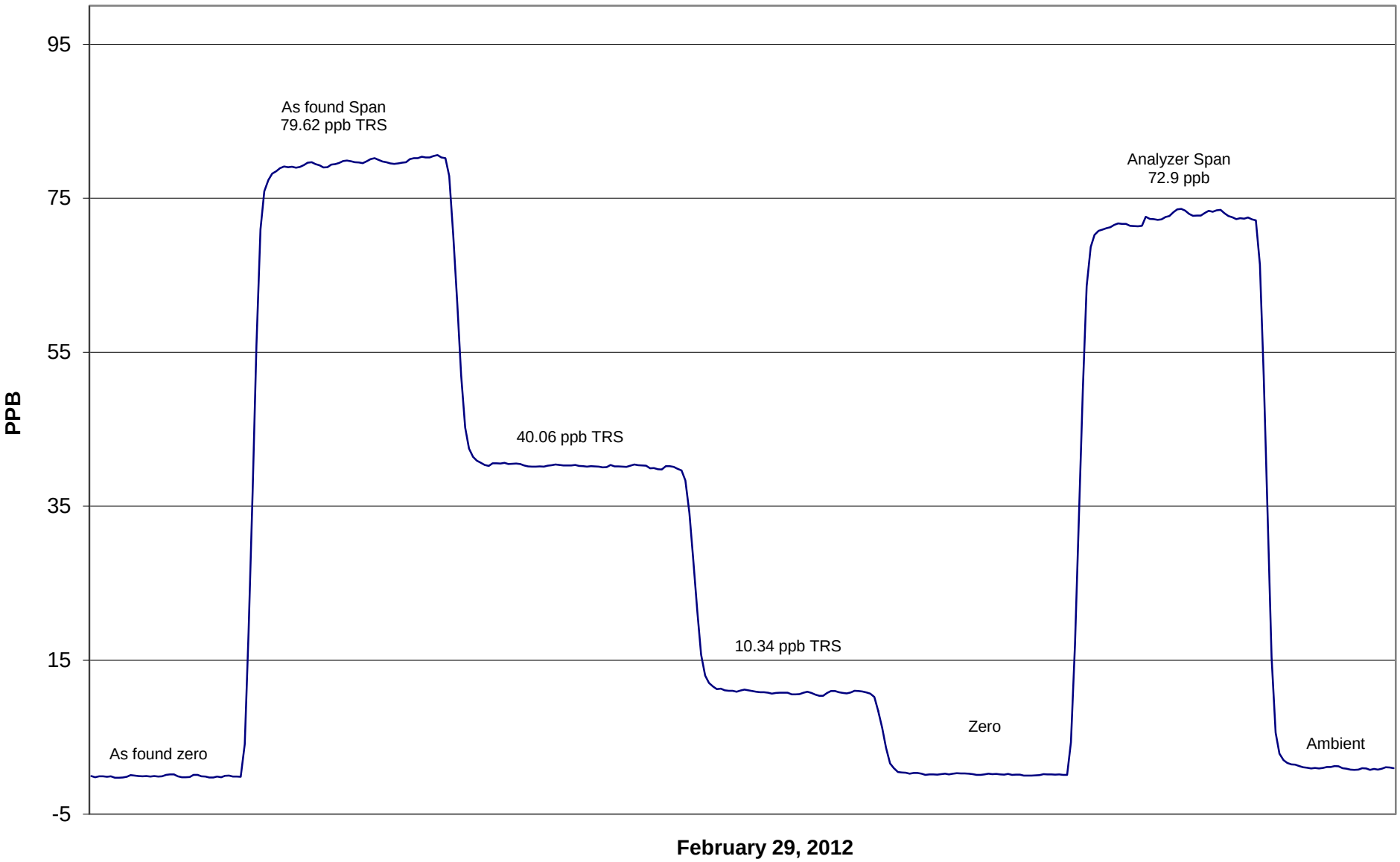
Calibration Date	February 29, 2012	Previous Calibration	January 26, 2012
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	9:11	End Time (MST)	12:32
Analyzer make/model	TEI Model 43C	Analyzer serial #	436610005

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A		
79.6	80.0	0.9954	Correlation Coefficient	0.999969
40.1	40.2	0.9978		
10.3	10.8	0.9622	Slope	0.997122
			Intercept	-0.105565



TRS Calibration



Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **SO_2**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	February 10, 2012	Previous Calibration	January 27, 2012
Station Number	3	Station Location	Smokey Heights
Reason: Routine	Install	Removal	Other:

Start Time (MST)	11:15	End Time (MST)	14:23
Barometric Pressure	0.937 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentratior	49.8 ppm	Cal Gas Cert Date	3/28/2011
Correction factor	0.031851	Cal Gas Cylinder #	LL85275
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	1.000761	Calculated slope	0.996406
Calculated intercept	-2.161548	Calculated intercept	-2.492315

Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	9.9		9.8	
coefficient	0.978		0.978	
Lamp Voltage	920	volts	920	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	677.1	mm Hg	681.9	mm Hg
Sample Flow	0.445	ccm	0.450	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)
4989	0.0	0.00	0.5	N/A
4989	39.84	394.53	397.3	0.9930
4989	19.91	197.95	202.4	0.9778
4989	9.94	99.02	103.7	0.9545
4989	0.0	0.00	0.5	As Found Zero
4989	39.84	394.53	397.3	As Found Span
			Average Correction Factor	0.9751

Calculated value of As Found Response: 394.945 ppm Percent Change of As Found: -0.1%

	before calibration		after calibration	
Auto zero	0.4	ppb	0.5	ppb
Auto span	304.5	ppb	264.9	ppb

Notes: No adjust.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **SO2**

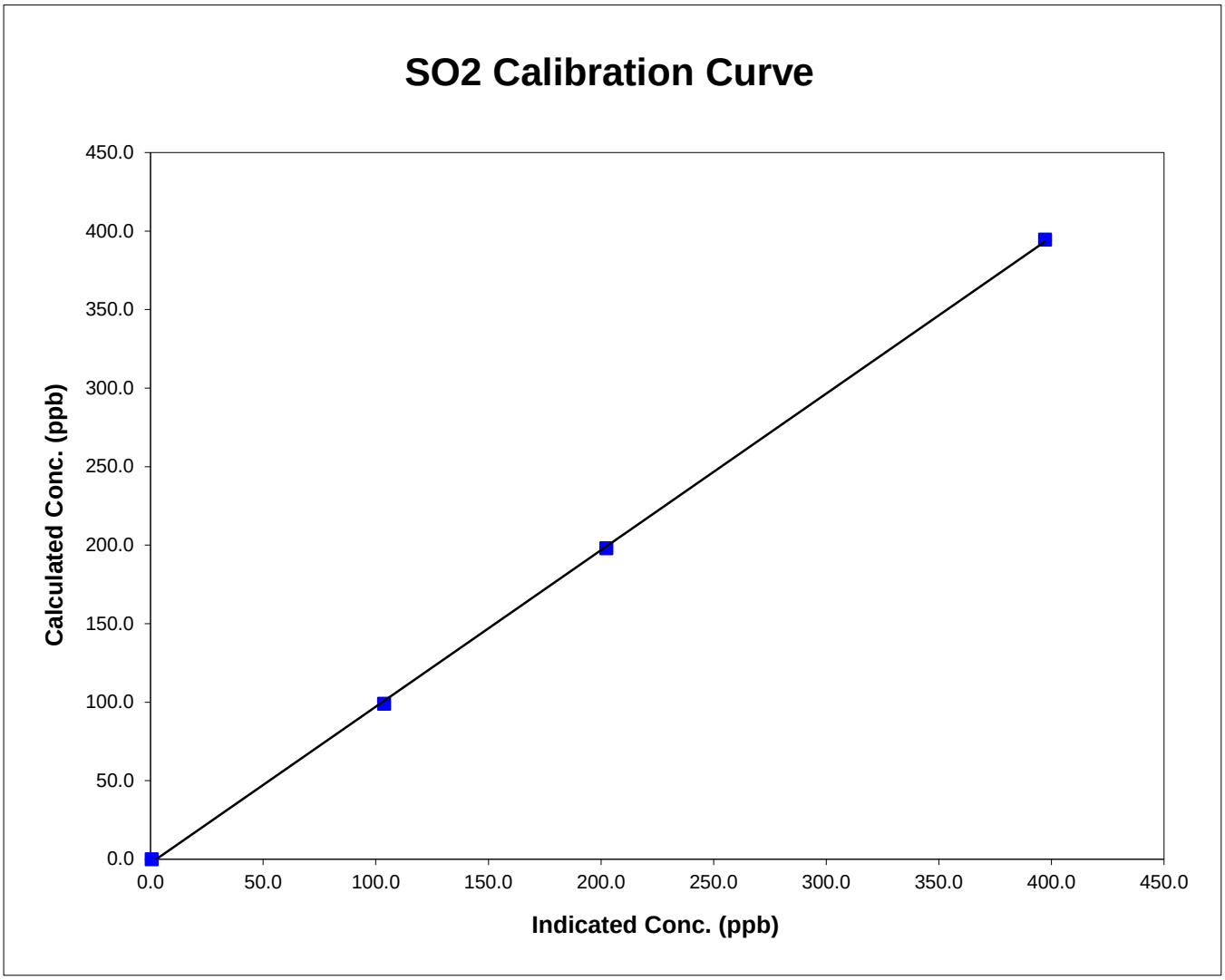
Air Monitoring Network **PASZA**

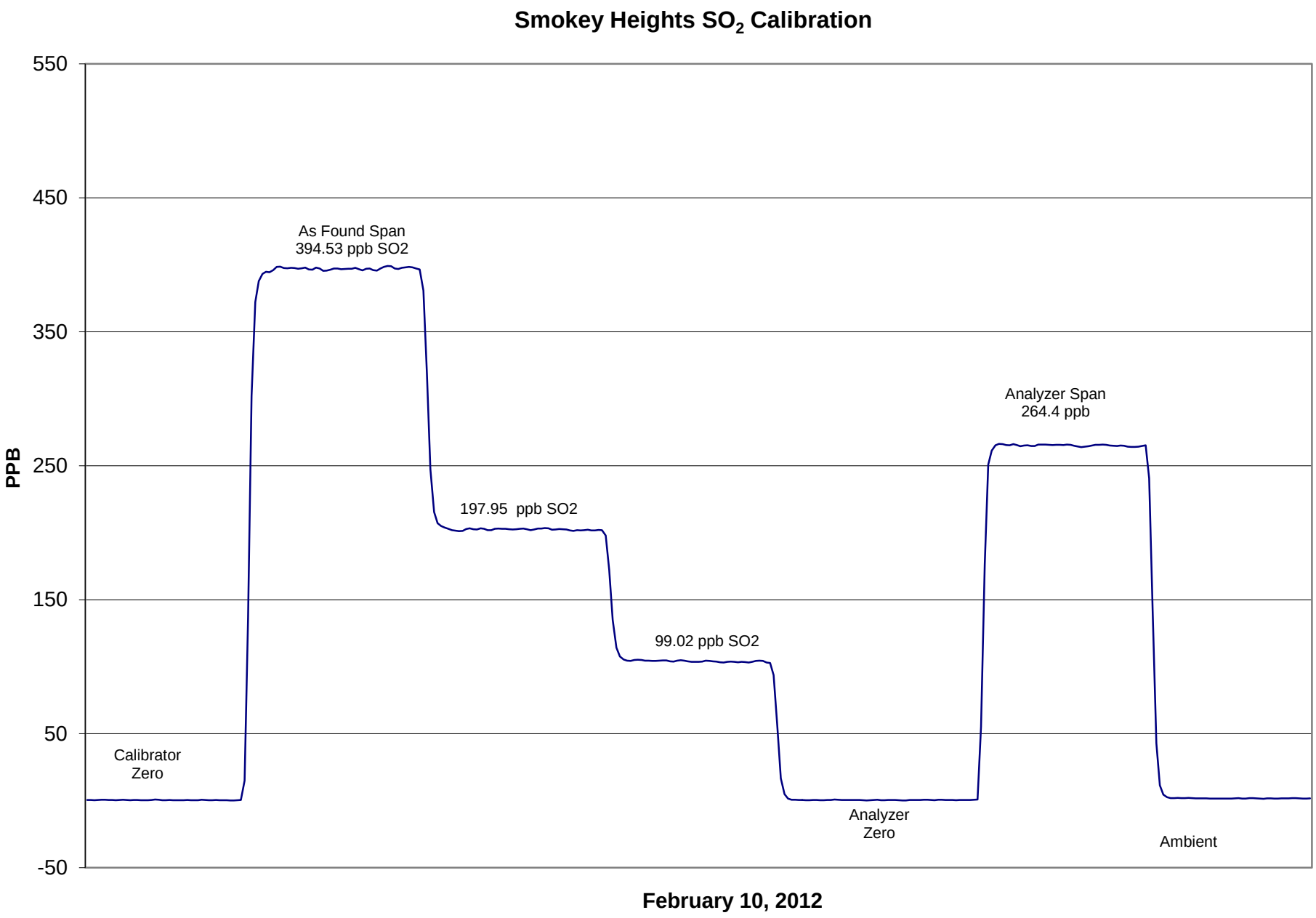
Station Information

Calibration Date	February 10, 2012	Previous Calibration	January 27, 2012
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	11:15	End Time (MST)	14:23
Analyzer make/model	Teco 43i	Analyzer serial #	701120009

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A		
394.5	397.3	0.9930	Correlation Coefficient	0.999879
198.0	202.4	0.9778		
99.0	103.7	0.9545	Slope	0.996406
			Intercept	-2.492315




Smokey Heights SO_2 Calibration
550
450
350
250
150
50
-50
PPB
As Found Span
394.53 ppb SO2
197.95 ppb SO2
99.02 ppb SO2
Analyzer Span
264.4 ppb
Calibrator
Zero
Analyzer
Zero
Ambient
February 10, 2012

Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **TRS**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	February 10, 2012	Previous Calibration	January 27, 2012
Station Number	3	Station Location	Smokey Heights
Reason: Routine	Install	Removal	Other:

Start Time (MST)	9:15	End Time (MST)	12:55
Barometric Pressure	0.937 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Conc	5.77 ppm	Cal Gas Expiry Date	9/3/2011
Correction factor	0.031851	Cal Gas Cylinder #	BLM001434
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
Calculated slope	1.005164	Calculated slope	0.998410
Calculated intercept	-0.579533	Calculated intercept	-0.769283

Analyzer make	TEI Model 43C	Analyzer serial #	0436610005

	before		after	
Concentration range	100	ppb	100	ppb
Background	17.4	ppb	17.1	ppb
coefficient	0.946		0.946	
Lamp Voltage	797	volts	797	volts
Chamber Temp	44	Deg C	44.99	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	560.5	mm Hg	548.7	mm Hg
Sample Flow	0.59	ccm	0.579	ccm
Lamp Intensity	35,382	mv	35,434	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)
4989	0.0	0.00	0.6	N/A
4989	69.80	79.61	80.5	0.9893
4989	34.88	40.06	40.9	0.9790
4989	8.96	10.34	11.3	0.9120
4989	0.0	0.00	0.6	As Found Zero
4989	69.80	79.61	80.5	As Found Span
			Average Correction Factor	0.9601

Calculated value of As Found Response: 79.70 ppm Percent Change of As Found: -0.1%

	before calibration		after calibration	
Auto zero	0.0	ppm	-0.1	ppm
Auto span	52.9	ppm	52.2	ppm

Notes: No adjustments required

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **TRS**

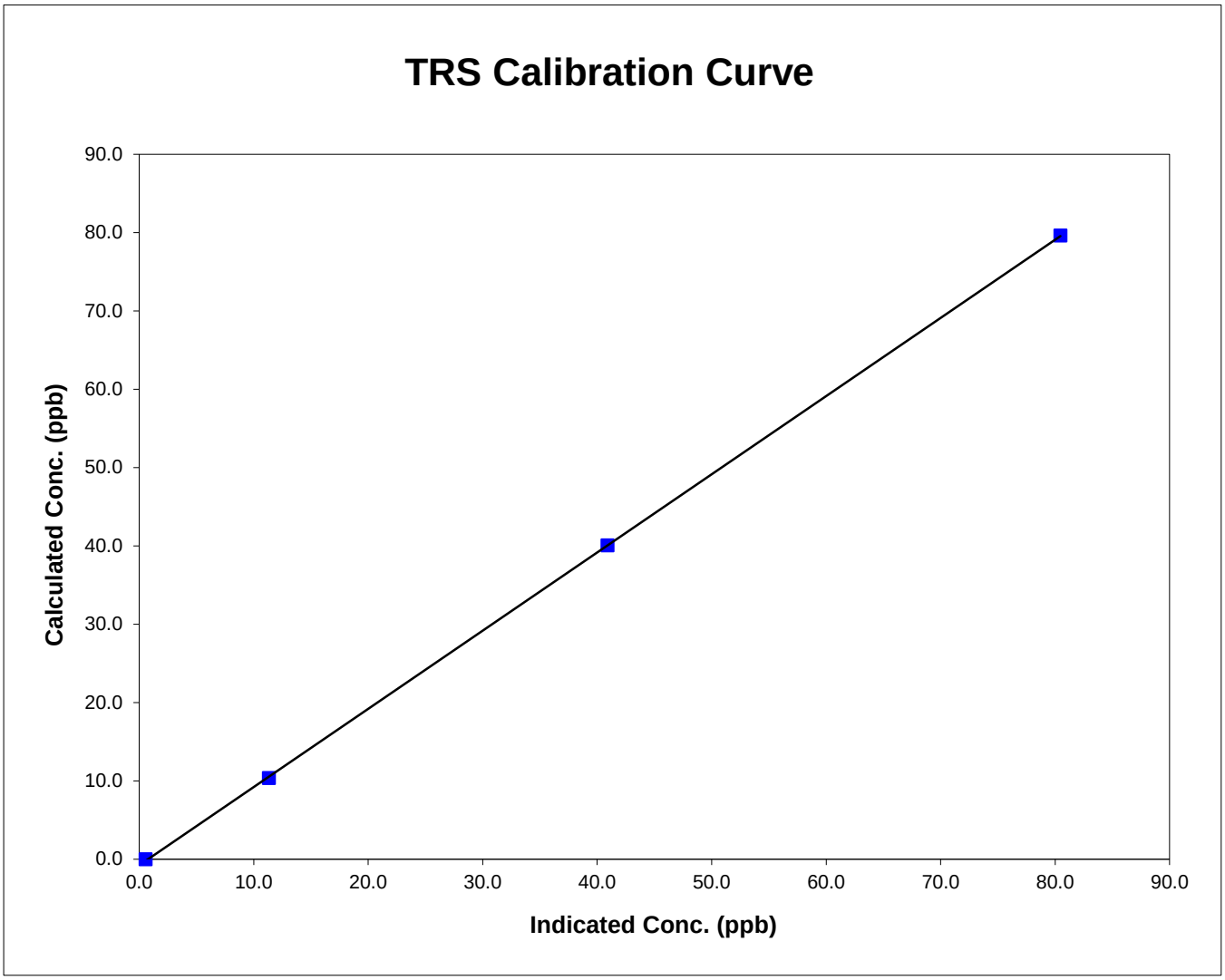
Air Monitoring Network **PASZA**

Station Information

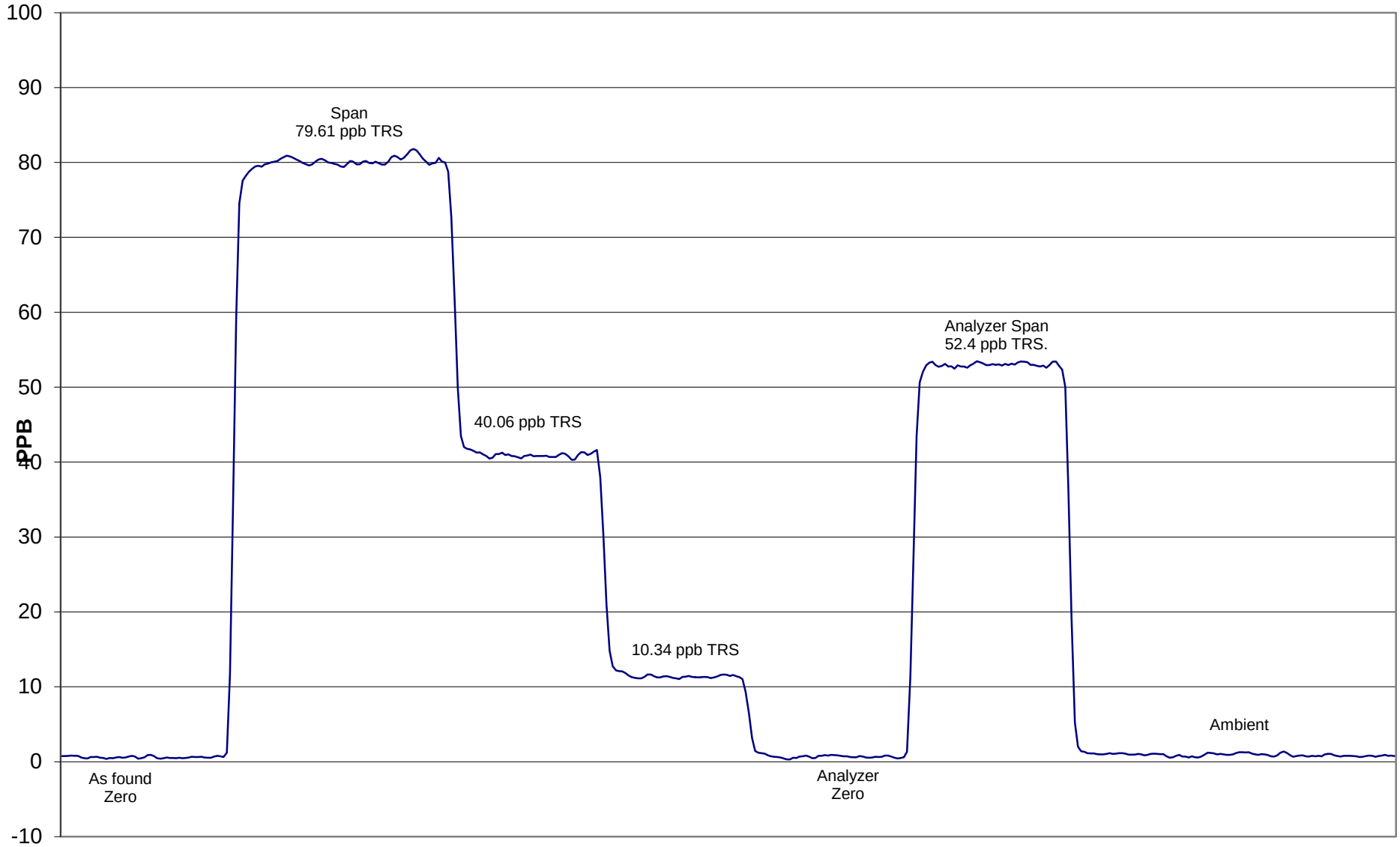
Calibration Date	February 10, 2012	Previous Calibration	January 27, 2012
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	9:15	End Time (MST)	12:55
Analyzer make/model	TEI Model 43C	Analyzer serial #	0436610005

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.6	N/A		
79.6	80.5	0.9893	Correlation Coefficient	0.999978
40.1	40.9	0.9790		
10.3	11.3	0.9120	Slope	0.998410
			Intercept	-0.769283



Smokey Heights TRS Calibration



February 10, 2012

Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter: SO2

Air Monitoring Network: PASZA

Station Information

Calibration Date	February 5, 2012	Previous Calibration	January 18, 2012
Station Number	4	Station Location	Beaverlodge
Reason: Routine	Install	Removal	Other:
Start Time (MST)	13:20	End Time (MST)	15:48
Barometric Pressure	0.926 atm	Station Temperature	23.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	10.1 ppm	Cal Gas Expiry Date	1/25/2010
Gas Cert Reference	SAGL 671		
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	1.006258	Calculated slope	0.995984
Calculated intercept	-0.801605	Calculated intercept	-0.733106
Analyzer make	TEI Model 43i-TLE	Analyzer serial #	713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.38		2.37	
Coefficient	1.071		1.071	
PMT	-767.8	V	-767.6	V
UV Lamp Voltage	1051	V	1052	V
Chamber Temp	45	Deg C	45.2	Deg C
Pressure	674.3	mm Hg	676.4	mm Hg
Sample Flow	0.497	LPM	0.498	LPM
Lamp Intesity	97%	%	96%	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4989	0.00	0.0	0.2	N/A
4989	39.83	80.0	80.8	0.9905
4989	19.90	40.1	41.3	0.9706
4989	9.93	20.1	21.4	0.9384
4989	0.00	0.0	0.2	As found zero
4989	39.83	80.0	80.8	As found span
			Average Correction Factor	0.9665

Calculated value of As Found Response: 80.251 ppm Percent Change of As Found: -0.3%

	before calibration		after calibration	
Auto zero	-0.3	ppb	-0.5	ppb
Auto span	58.2	ppb	55.9	ppb

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **SO2**

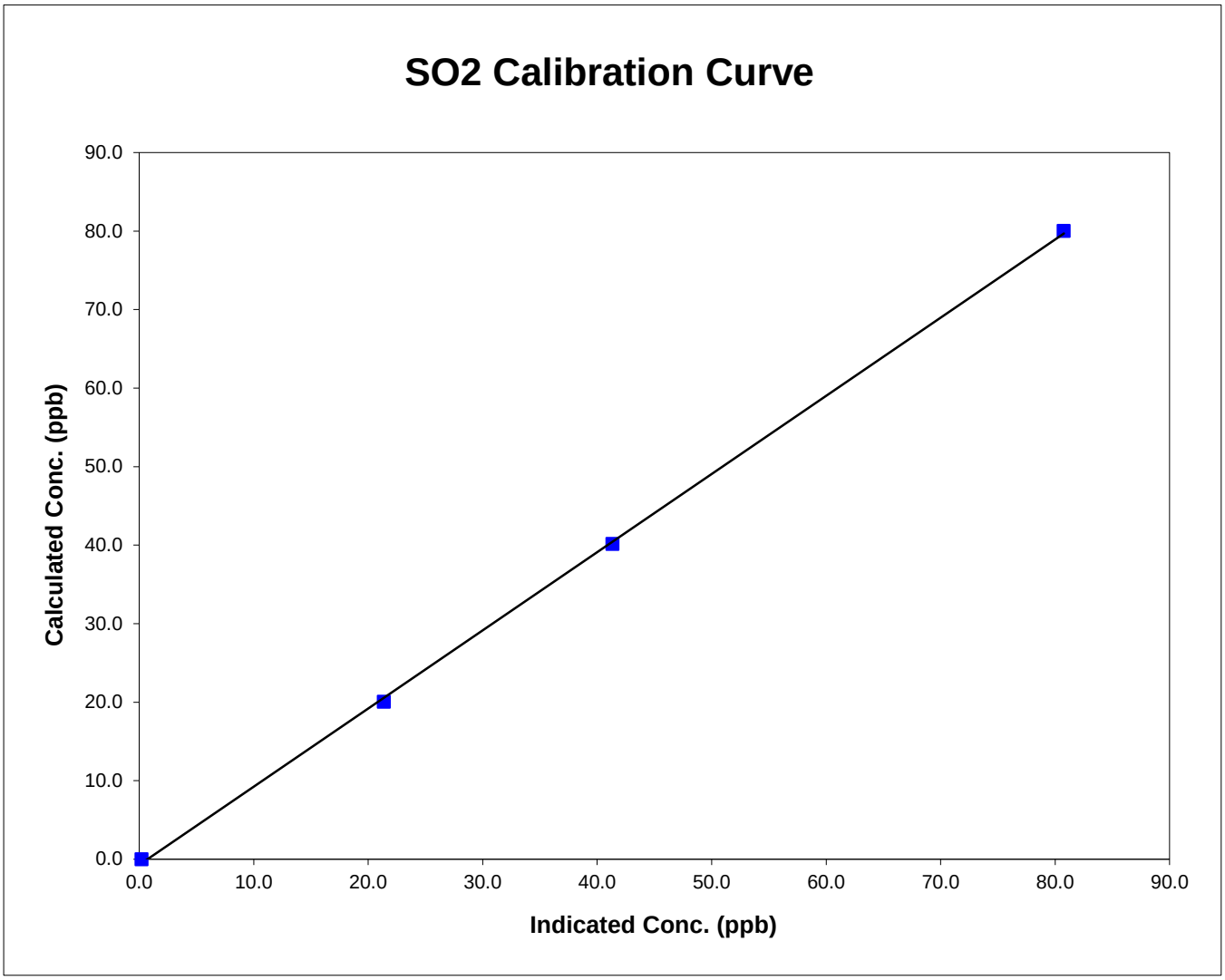
Air Monitoring Network **PASZA**

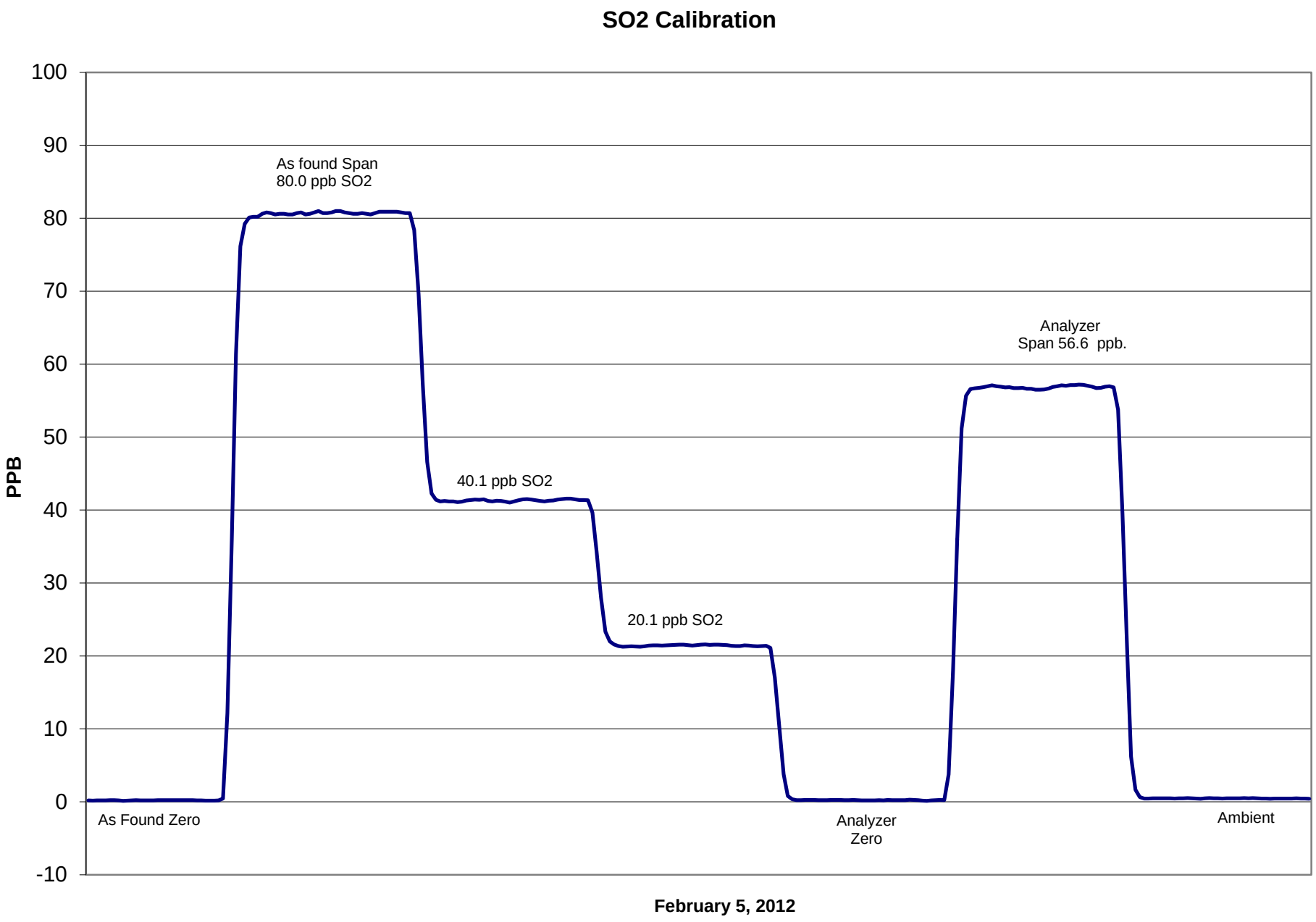
Station Information

Calibration Date	February 5, 2012	Previous Calibration	January 18, 2012
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	13:20	End Time (MST)	15:48
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	0.2	N/A		
80.0	80.8	0.9905	Correlation Coefficient	0.999797
40.1	41.3	0.9706		
20.1	21.4	0.9384	Slope	0.995984
			Intercept	-0.733106




SO2 Calibration
100
90
80
70
60
50
40
30
20
10
0
-10
PPB
As found Span
80.0 ppb SO2
40.1 ppb SO2
20.1 ppb SO2
Analyzer
Span 56.6 ppb.
As Found Zero
Analyzer
Zero
Ambient
February 5, 2012

Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 5, 2012	Previous Calibration	January 18, 2012
Station Number	4	Station Location	Beaverlodge

Reason: Routine Installation Removal Other:

Start Time (MST)	8:40		End Time (MST)	12:50	
Barometric Pressure	0.926	Atm	Station Temperature	23.0	Deg C
Calibrator	Environics		Serial Number	2844	
NO Cal Gas Conc	52.5	ppm	Cal Gas Expiry Date	March 28, 2013	
NOx Cal Gas Conc	52.5	ppm	Cal Gas Serial #	LL8575	

DACS Information

DACS make AP1000 DACS serial No.

Parameter		NO2	NOx	NO
Before	Data Slope	1.011372	1.002590	1.003638
	Data Offset	0.511703	-2.866628	-2.513348
After	Data Slope	0.998706	1.002531	1.003183
	Data Offset	-0.149139	-2.768092	-2.467744
Channel #		8	6	7
Voltage Range		0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model TEI 42i Analyzer serial # 906535068

Test Point	before		after	
Concentration range	0-500	ppb	0-500	ppb
NO offset	2.2	mV	2.0	mV
NOx bkgnd	2.4	mV	2.2	mV
NO coefficient	1.410		1.349	
NOx coefficient	0.992		0.999	
NO2 conv temp	325.7	Deg C	326.8	Deg C
PMT Temp	-3.0	Deg C	-2.9	Deg C
PMT Volt	-671.9	mV	-671.2	mV
R Cell Press	170.2	in Hg	169.9	in Hg
Sample Flow	0.803	ccm	0.797	ccm

Notes: Adjusted Span

Calibration Report

Parameter **NOX-NO-NO2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: February 5, 2012 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	4989	0.00	0.0	0.0	0.0	0.0	-0.1	-0.1	N/A	N/A
1	4989	39.84	415.9	415.9	0.0	416.0	415.6	0.1	0.9999	1.0007
2	4989	19.91	208.7	208.7	0.0	213.0	212.1	0.2	0.9799	0.9840
3	4989	9.93	104.3	104.3	0.0	109.1	108.8	0.1	0.9559	0.9588
AFZ	4989	0.00	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0000	0.0000
AFS	4989	39.84	415.9	415.9	0.8	434.8	433.9	0.6	0.9566	0.9585
							Average Correction Factor		0.9785	0.9811

As Found Concentrations: NO_X= 431.9 NO= 431.5 As Found Percent Change NO_X= 3.8% NO= 3.7%

GPT Calibration Data

Dilution Flow 4989 ccm Source Gas Flow 39.84 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	-0.1	-0.1	0.0	0.0	-0.1	-0.1	N/A	N/A	N/A	N/A
NO point	416.0	416.0	0.0	416.3	416.0	0.1	0.9992	1.0000	N/A	N/A
300	416.0	130.5	285.5	416.9	130.5	285.9	0.9976	1.0000	0.9986	100.1%
200	416.0	218.2	197.8	416.9	218.2	198.2	0.9977	1.0000	0.9981	100.2%
100	416.0	305.9	110.0	416.8	305.9	110.7	0.9979	1.0000	0.9941	100.6%
					Average Correction Factor		0.9977	1.0000	0.9969	100.3%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.2	-0.3	-0.2	ppb	0.0	-0.1	0.0	ppb
Auto span	238.0	235.5	1.6	ppb	214.4	212.5	1.2	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **PAZA**

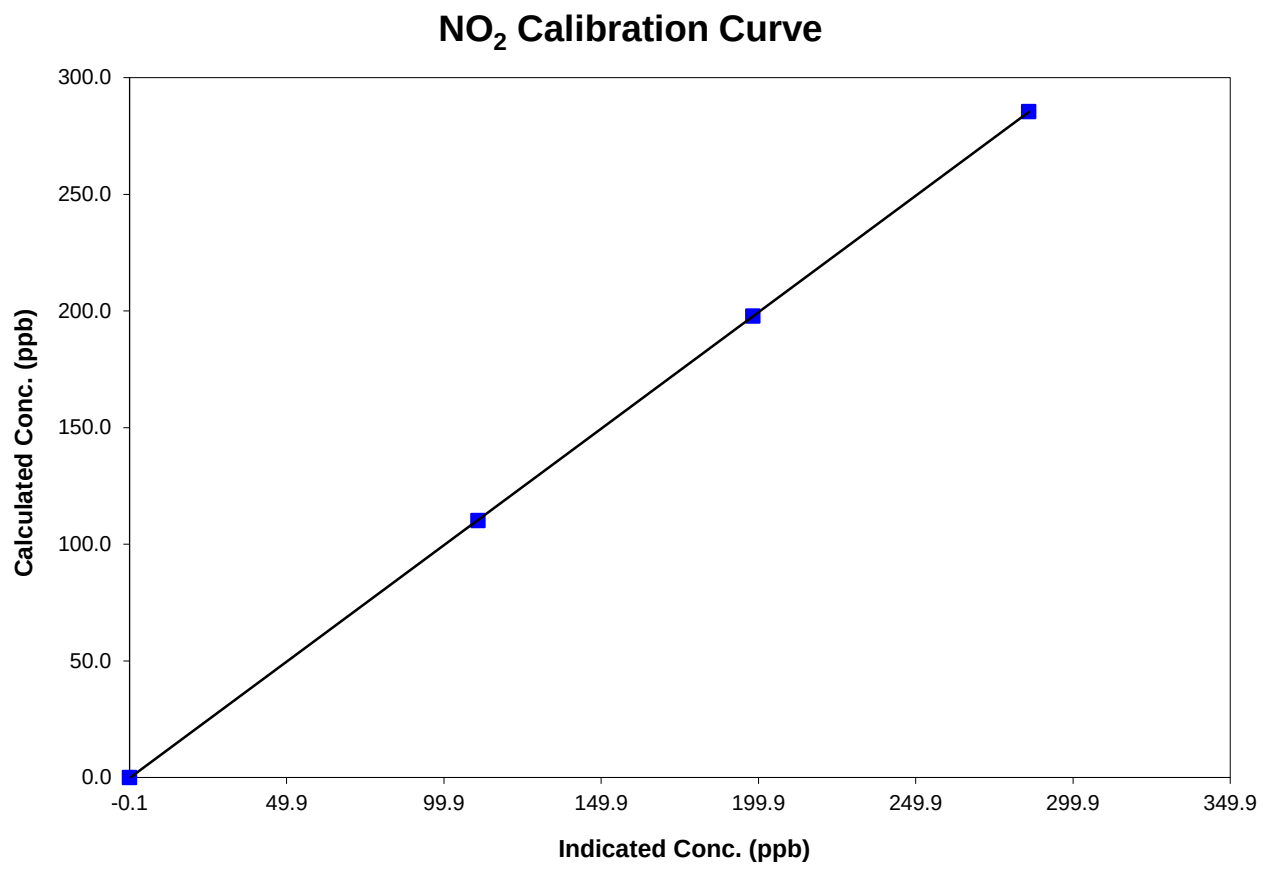
FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 5, 2012	Previous Calibration	January 18, 2012
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:40	End Time (MST)	12:50
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A		
285.5	285.9	0.9986	Correlation Coefficient	0.999996
197.8	198.2	0.9981		
110.0	110.7	0.9941	Slope	0.998706
			Intercept	-0.149139



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

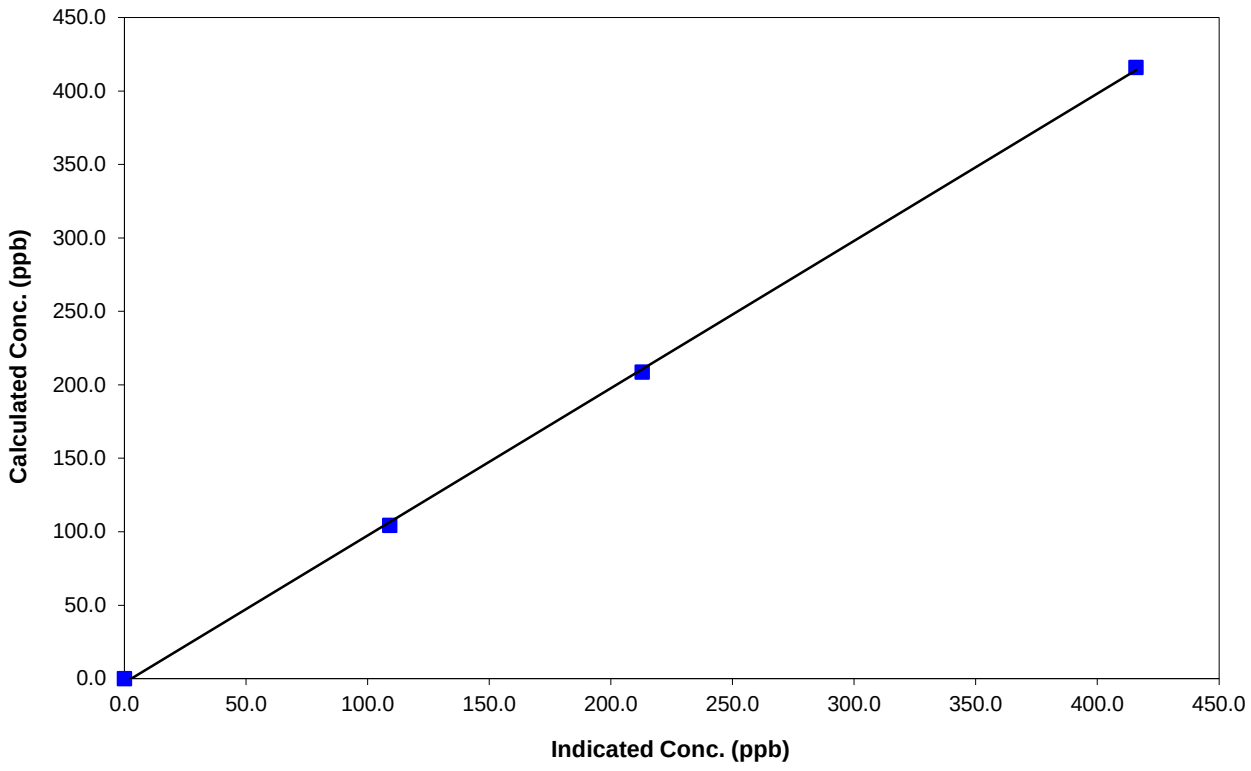
Station Information

Calibration Date	February 5, 2012	Previous Calibration	January 18, 2012
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:40	End Time (MST)	12:50
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		
415.9	416.0	0.9999	Correlation Coefficient	0.999791
208.7	213.0	0.9799		
104.3	109.1	0.9559	Slope	1.002531
			Intercept	-2.768092

NOx Calibration Curve



Calibration Summary

Parameter **NO**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

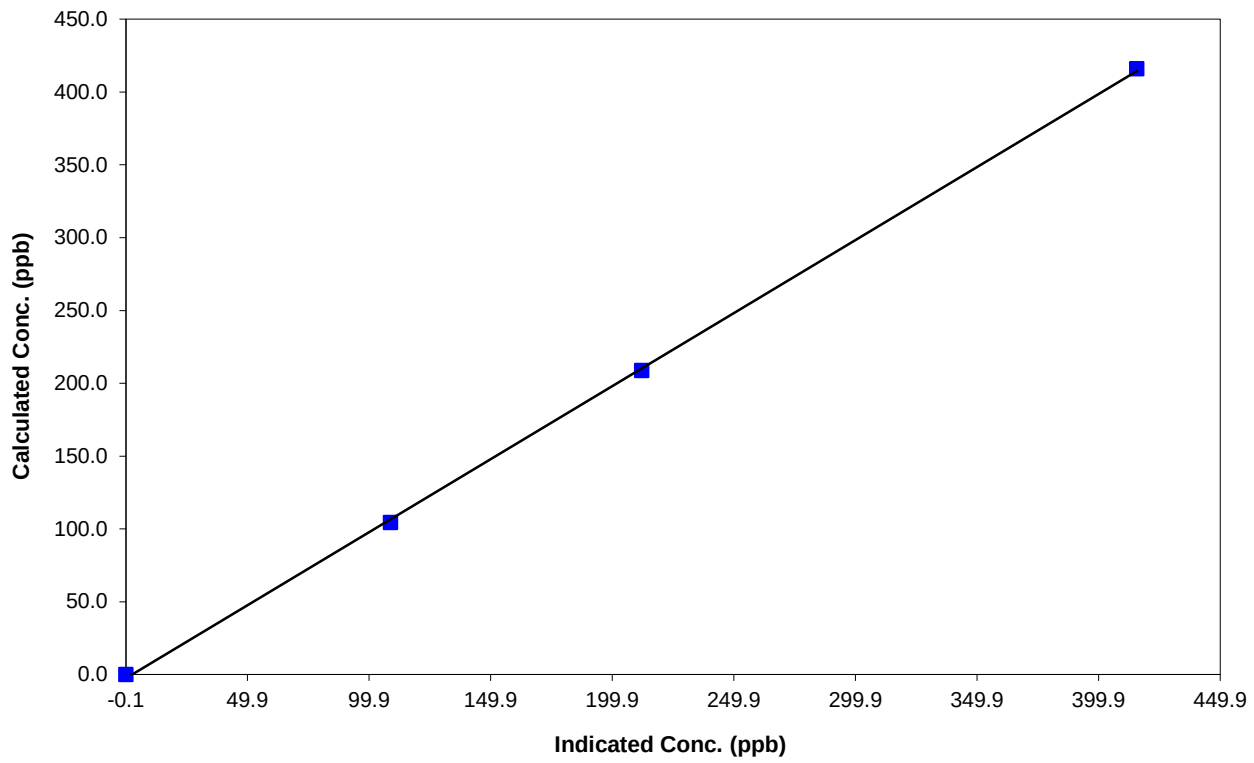
Station Information

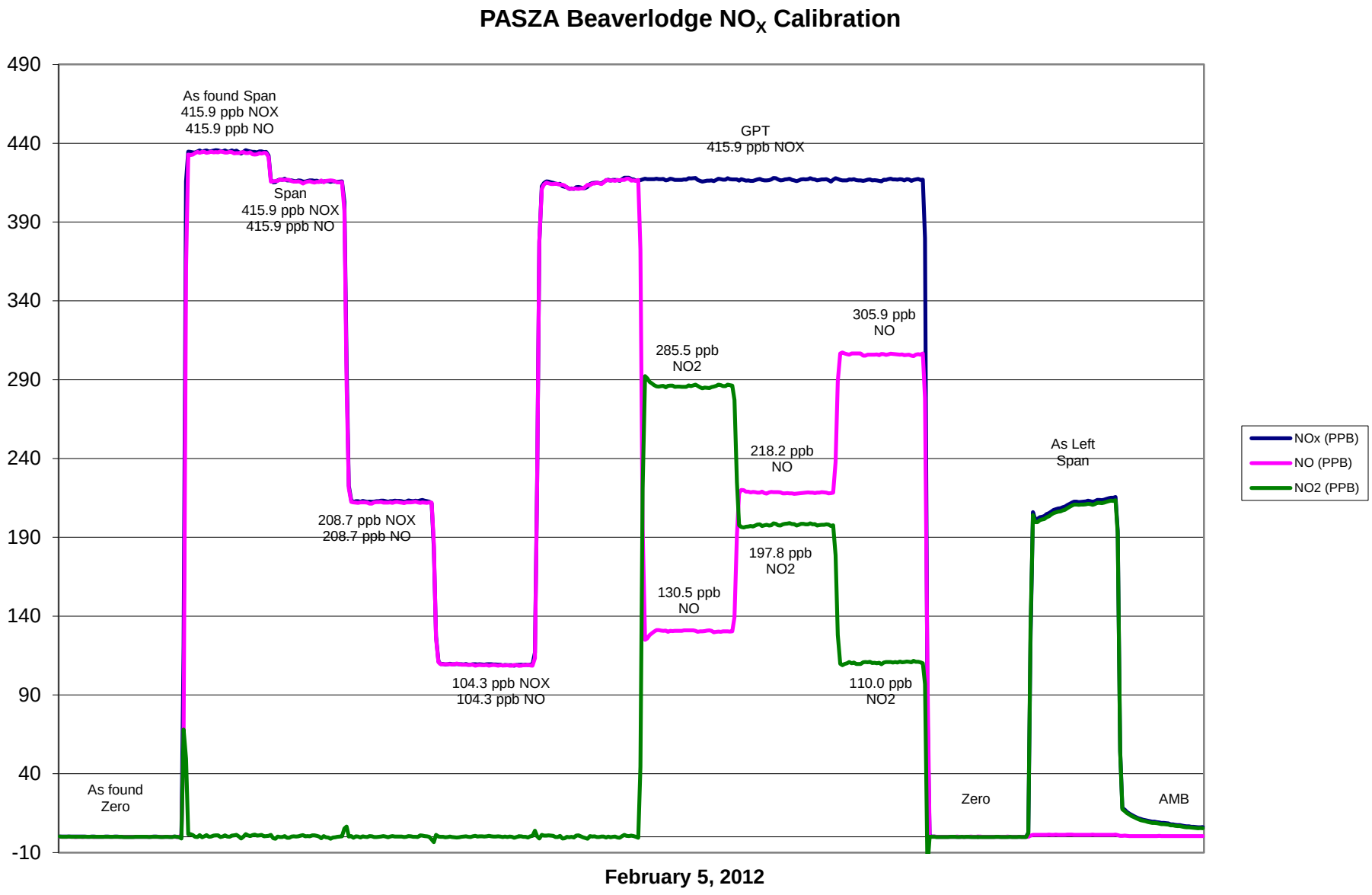
Calibration Date	February 5, 2012	Previous Calibration	January 18, 2012
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:40	End Time (MST)	12:50
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A		
415.9	415.6	1.0007	Correlation Coefficient	0.999824
208.7	212.1	0.9840		
104.3	108.8	0.9588	Slope	1.003183
			Intercept	-2.467744

NO Calibration Curve




PASZA Beaverlodge NOx Calibration
490
440
390
340
290
240
190
140
90
40
-10
As found Span
415.9 ppb NOX
415.9 ppb NO
Span
415.9 ppb NOX
415.9 ppb NO
208.7 ppb NOX
208.7 ppb NO
104.3 ppb NOX
104.3 ppb NO
GPT
415.9 ppb NOX
285.5 ppb
NO2
130.5 ppb
NO
218.2 ppb
NO
197.8 ppb
NO2
305.9 ppb
NO
110.0 ppb
NO2
As Left
Span
As found
Zero
Zero
AMB
NOx (PPB)
NO (PPB)
NO2 (PPB)
February 5, 2012

Calibration Report

Parameter **O3**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 5, 2012	Previous Calibration	January 18, 2012
Station Number	4	Station Location	Beaverlodge
Reason: Routine	Install	Removal	Other:
Start Time (MST)	11:50	End Time (MST)	14:37
Barometric Pressure	0.926 atm	Station Temperature	23.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	CR3000	DACS serial No.	5237
DACS voltage range	0 - 5 volt	DACS channel #	9
	Before		After
Calculated slope	0.976518	Calculated slope	0.998476
Calculated intercept	1.460697	Calculated intercept	0.542914
Analyzer make	Teco 49C	Analyzer serial #	49C-76443-383

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-1.00	ppb	-0.90	ppb
slope	1.030		1.000	
Lamp temp	56.3	mV	56.3	mV
Lamp Intensity A/B	55066/61547	mV	54683/60752	mV
Pressure	689.8	mm Hg	703.1	mm Hg
Flow A	0.76	ccm	0.766	ccm
Flow B	0.713	ccm	0.720	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)
4989	0.0	0.0	-0.2	N/A
4989	280.0	285.5	285.8	0.9988
4989	200.0	197.8	197.1	1.0035
4989	110.0	110.0	109.3	1.0067
4989	0.0	0.0	-0.2	As found zero
4989	280.0	285.5	292.1	As found span
			Average Correction Factor	1.0030

Calculated value of As Found Response: 286.9 ppm Percent Change of As Found: 0.5%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.3	ppb
Auto span	114.3	ppb	111.8	ppb

Notes: Slight span adjustment made.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **O3**

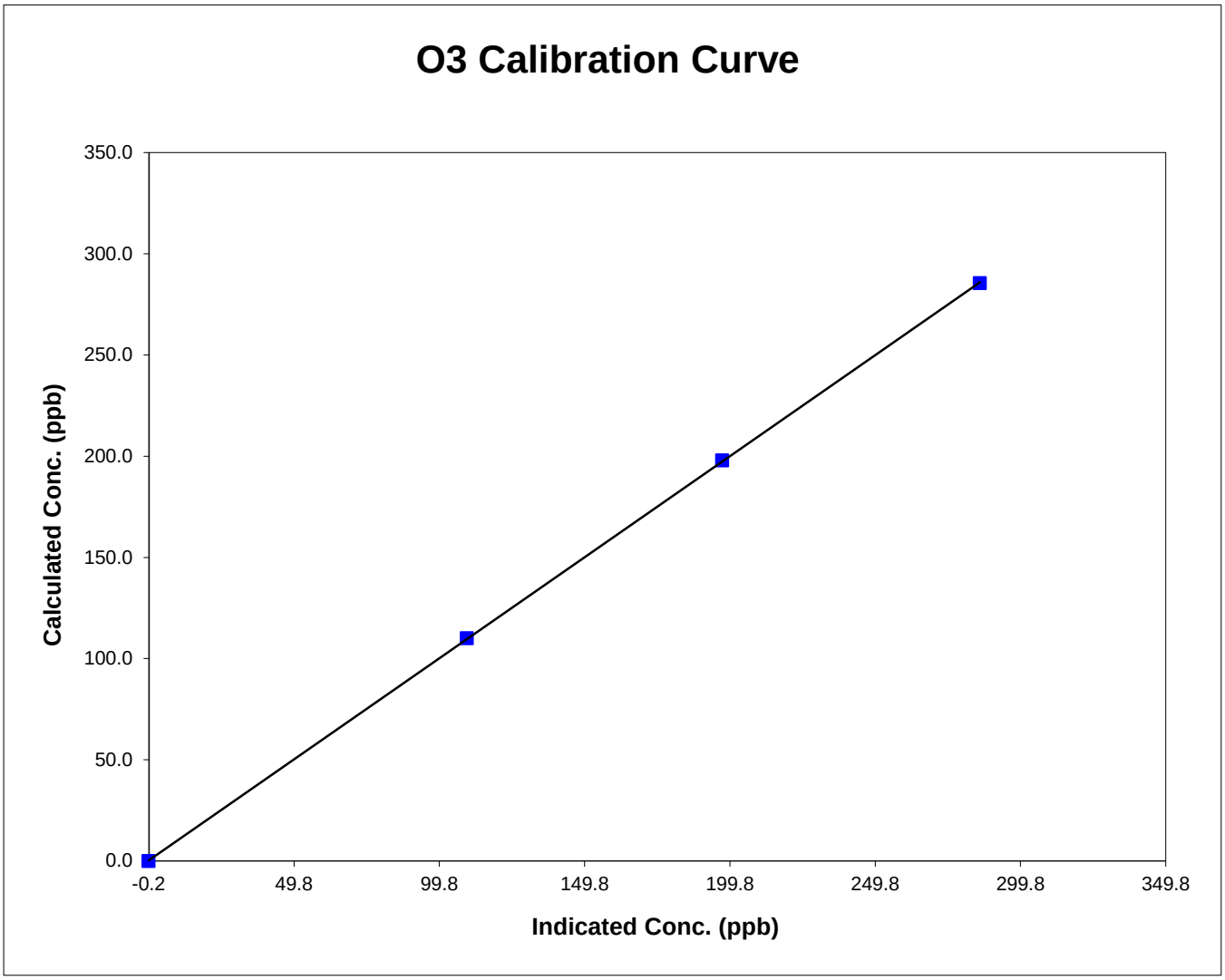
Air Monitoring Network **PASZA**

Station Information

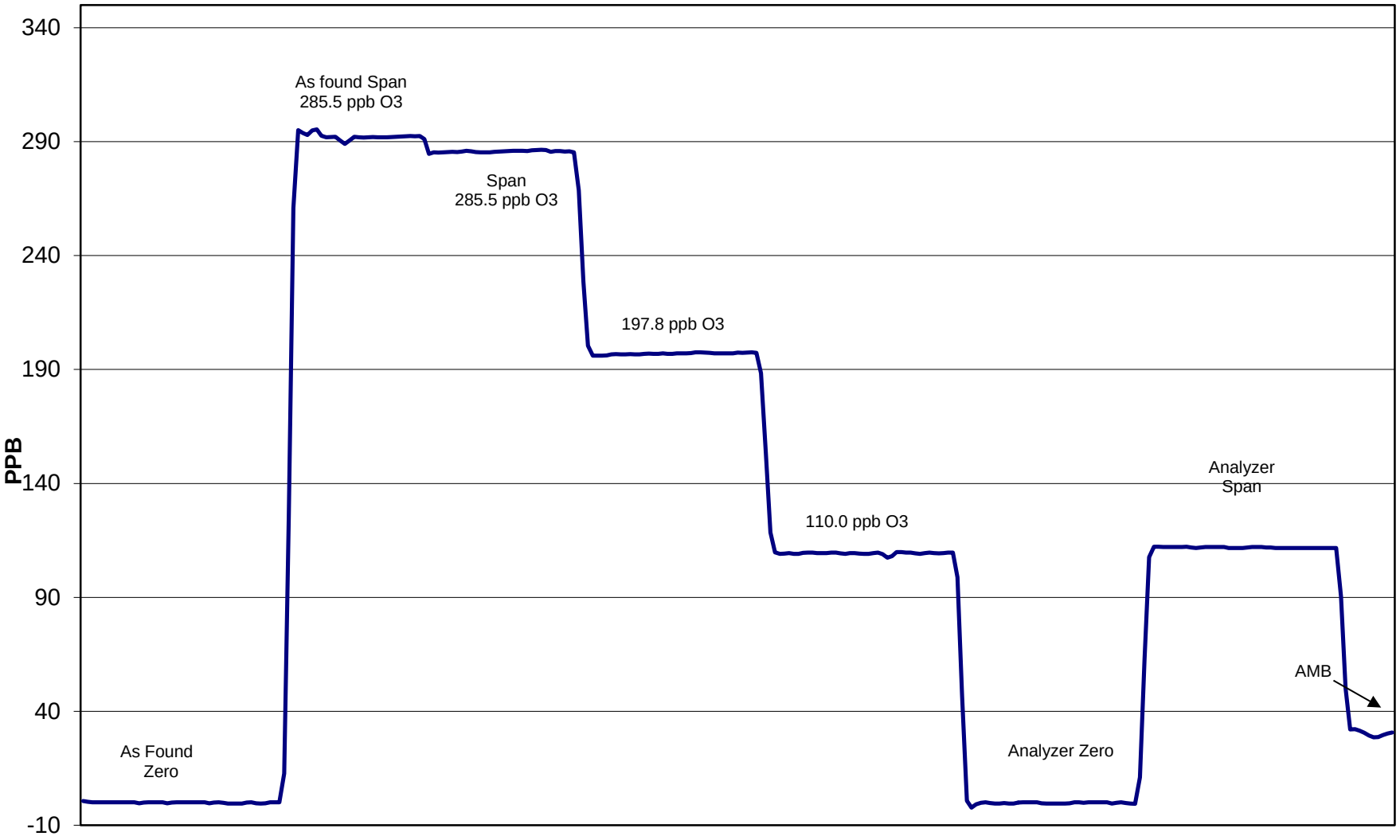
Calibration Date	February 5, 2012	Previous Calibration	January 18, 2012
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	11:50	End Time (MST)	14:37
Analyzer make/model	Teco 49C	Analyzer serial #	49C-76443-383

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.2	NA		
285.5	285.8	0.9988	Correlation Coefficient	0.999986
197.8	197.1	1.0035		
110.0	109.3	1.0067	Slope	0.998476
			Intercept	0.542914



O3 Calibration



February 5, 2012

FDMS TEOM PM2.5 AUDIT

FOCUS
AIR QUALITY MONITORING

STATION: **BeaverLodge**

LOCATION: PASZA - Grande Prairie

OPERATOR: Grover Christiansen

DATE: 5-Feb-12

MONITOR INFO / PARAMETER VALUES:

Make/Model	TEOM AB
Configuration	PM2.5
Serial Number	AMU1649
Site Number	4
Inlet Type	PM 10 / SCC
FAdj. Main Setting	1.000
FAdj. Aux. Setting	1.000
T-Case Indicated / Set Point	30/30
T-Air Indicated / Set Point	30/30
T-Cap Indicated / Set Point	30/30
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	11-Oct-11
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	-0.10	0.11
PUMP OFF	0.01	0.01
NET	-0.11	0.10
LIMITS	*<0.15*	*<0.60*

		Ambient Temp. (^{0} C)	Ambient Pres. (atm)	Ko *	Bypass flow (lpm)	Sample flow (lpm)
	SET POINT (S)	na	na	14287	13.67	3.00
	INDICATED (I)	-0.1	0.918		13.67	3.00
As Found Data	MEASURED (AF)	-0.2	0.919		13.68	3.02
Adjusted Data	MEASURED (M)	-0.2	0.919	14184	13.68	3.02
	DIFFERENCE (M-I)	-0.1	0.001	-0.7%	0.01	0.02
	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

Sample Head was cleaned.

Reference leak check: Main: -0.07 Aux: 0.11

PASS

Sample Head Inspection Or Cleaning: TEOM / FDMS IN LINE FILTER INSPECTION OR REPLAC

Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter: SO2

Air Monitoring Network: PASZA

Station Information

Calibration Date	February 14, 2012	Previous Calibration	January 7, 2011
Station Number	6	Station Location	Valleyview
Reason: Routine	Install	Removal	Other:
Start Time (MST)	11:50	End Time (MST)	14:50
Barometric Pressure	702.00 mmHg	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	49.8 ppm	Cal Gas Cert Date	7/23/2010
Gas Cert Reference	SGAL3245		
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	1.004218	Calculated slope	1.005356
Calculated intercept	-2.554109	Calculated intercept	-2.677803
Analyzer make	TEI 45C	Analyzer serial #	45C-57531-313

	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
Background	29.8		30.9	
Coefficient	0.865		0.865	
UV Lamp Voltage	961	LPM	964	LPM
Chamber Temp	44.5	V	44.4	V
Perm Gas Temp	35.1	C	28	C
Pressure	610.5	in Hg	607.1	in Hg
Sample Flow	0.561	LPM	0.559	LPM
Lamp Intensity	48327	Hz	47964	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)
4989	0.00	0.0	1.0	N/A
4989	39.84	394.5	394.2	1.0010
4989	19.89	197.8	200.5	0.9865
4989	9.94	99.0	102.6	0.9648
4989	0.00	0.0	1.0	As found zero
4989	39.84	394.5	394.2	As found span
			Average Correction Factor	0.9841

Calculated value of As Found Response: 392.2 ppm Percent Change of As Found: 0.6%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.0	ppm
Auto span	155.5	ppm	150.6	ppm

Notes: Cal went well, no adjustments required

Calibration Performed By: Virginia McKergow / Grover Christiansen

Calibration Summary

Parameter **SO2**

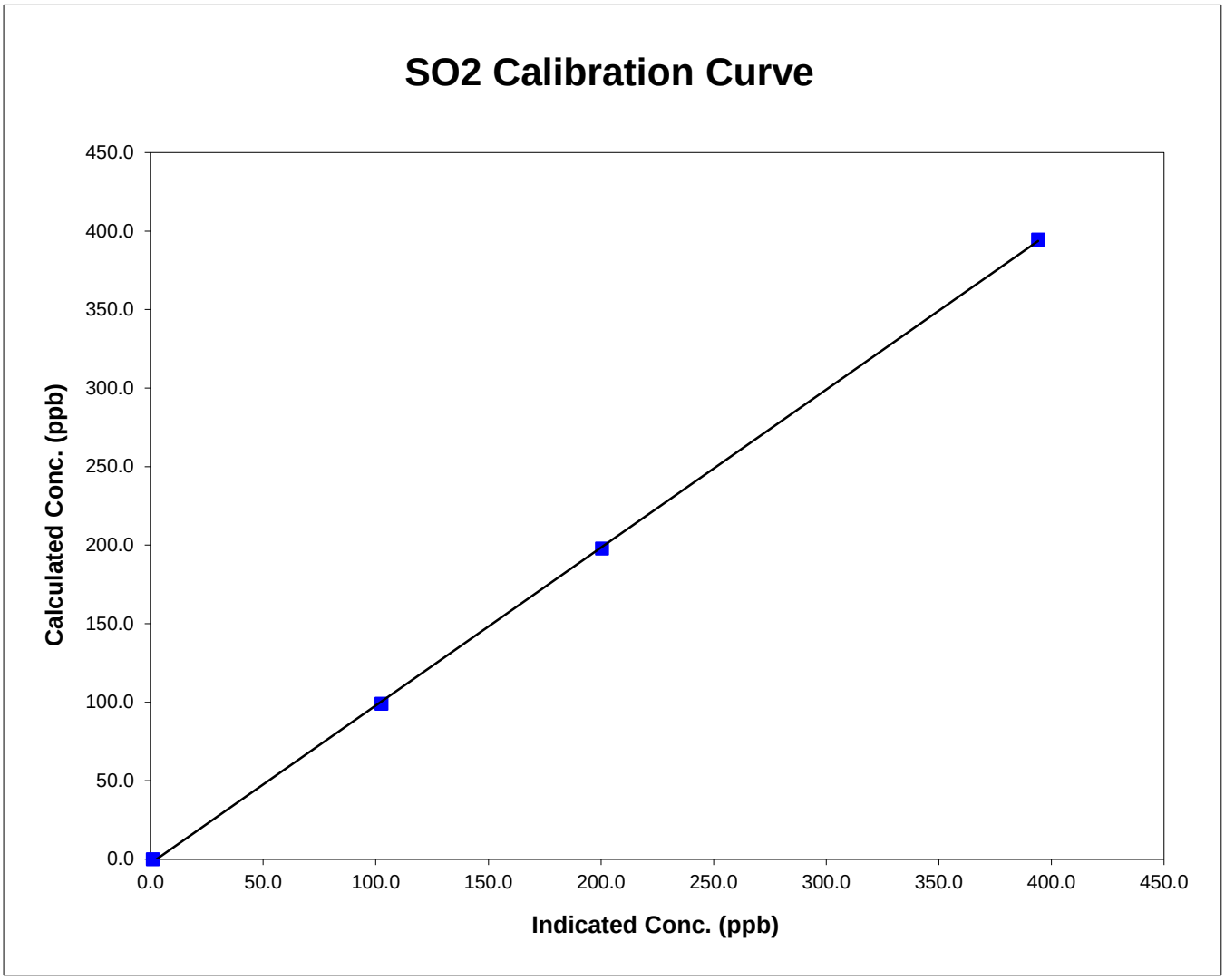
Air Monitoring Network **PASZA**

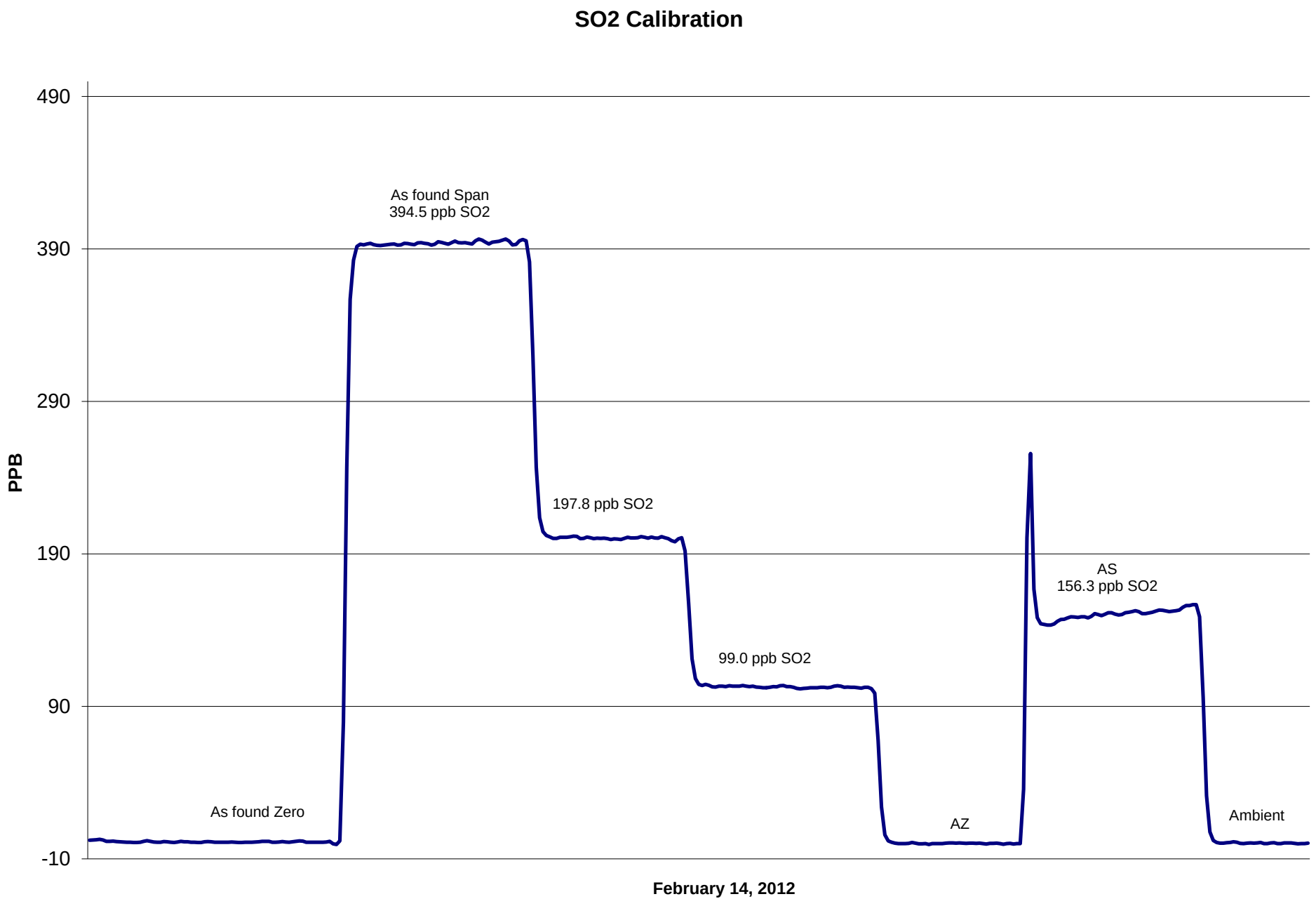
Station Information

Calibration Date	February 14, 2012	Previous Calibration	January 7, 2011
Station Number	6	Station Location	Valleyview
Start Time (MST)	11:50	End Time (MST)	14:42
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	1.0	N/A		
394.5	394.2	1.0010	Correlation Coefficient	0.999917
197.8	200.5	0.9865		
99.0	102.6	0.9648	Slope	1.005356
			Intercept	-2.677803




SO2 Calibration
490
390
290
190
90
-10
PPB
As found Span
394.5 ppb SO2
197.8 ppb SO2
99.0 ppb SO2
AS
156.3 ppb SO2
As found Zero
AZ
Ambient
February 14, 2012

Calibration Report

Parameter **H2S**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 14, 2012	Previous Calibration	January 7, 2011
Station Number	6	Station Location	Valleyview
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	10:00	End Time (MST)	13:15
Barometric Pressure	702.00 mm	Station Temperature	21.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentratior	5.77 ppm	Cal Gas Expiry Date	9/3/2012
Gas Cert Reference	BLM001434		
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	1.000274	Calculated slope	0.994324
Calculated intercept	-0.335700	Calculated intercept	-0.663710
Analyzer make	TEI Model 43i - APSCB	Analyzer serial #	701120010

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	7.2	ppb	7.1	ppb
Coefficient	1.368		1.368	
Lamp Voltage	786	V	785	V
Chamber Temp	44.9	c	45.1	c
Perm Oven Temp	45.00	c	45.01	c
Pressure	624.40	mm Hg	620.00	mm Hg
Sample Flow	.422	ccm	420	ccm
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)
4989	0.00	0.0	0.1	N/A
4989	69.79	79.6	80.6	0.9874
4989	34.87	40.0	41.0	0.9776
4989	8.96	10.3	11.7	0.8815
4989	0.00	0.0	0.1	As found zero
4989	69.79	79.6	80.6	As found span
			Average Correction Factor	0.9488

Calculated value of As Found Response: 80.21 ppm Percent Change of As Found: -0.8%

	before calibration		after calibration	
Auto zero	0.0	ppm	-0.3	ppm
Auto span	70.6	ppm	73.0	ppm

Notes: Cal went well, no adjustments required

Calibration Performed By: Virginia McKergow / Grover Christiansen

Calibration Summary

Parameter **H2S**

Air Monitoring Network **PASZA**

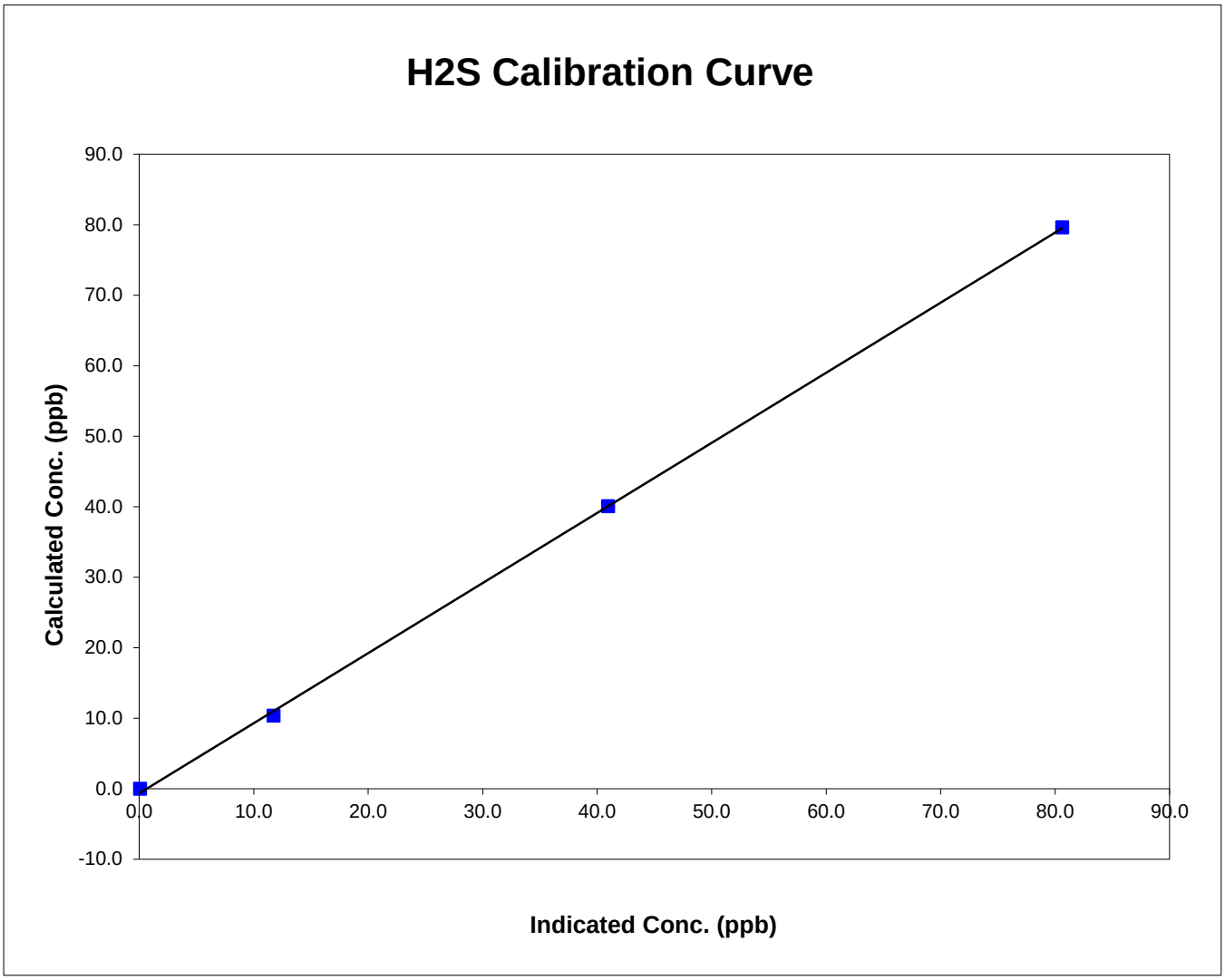
FOCUS AIR QUALITY MONITORING

Station Information

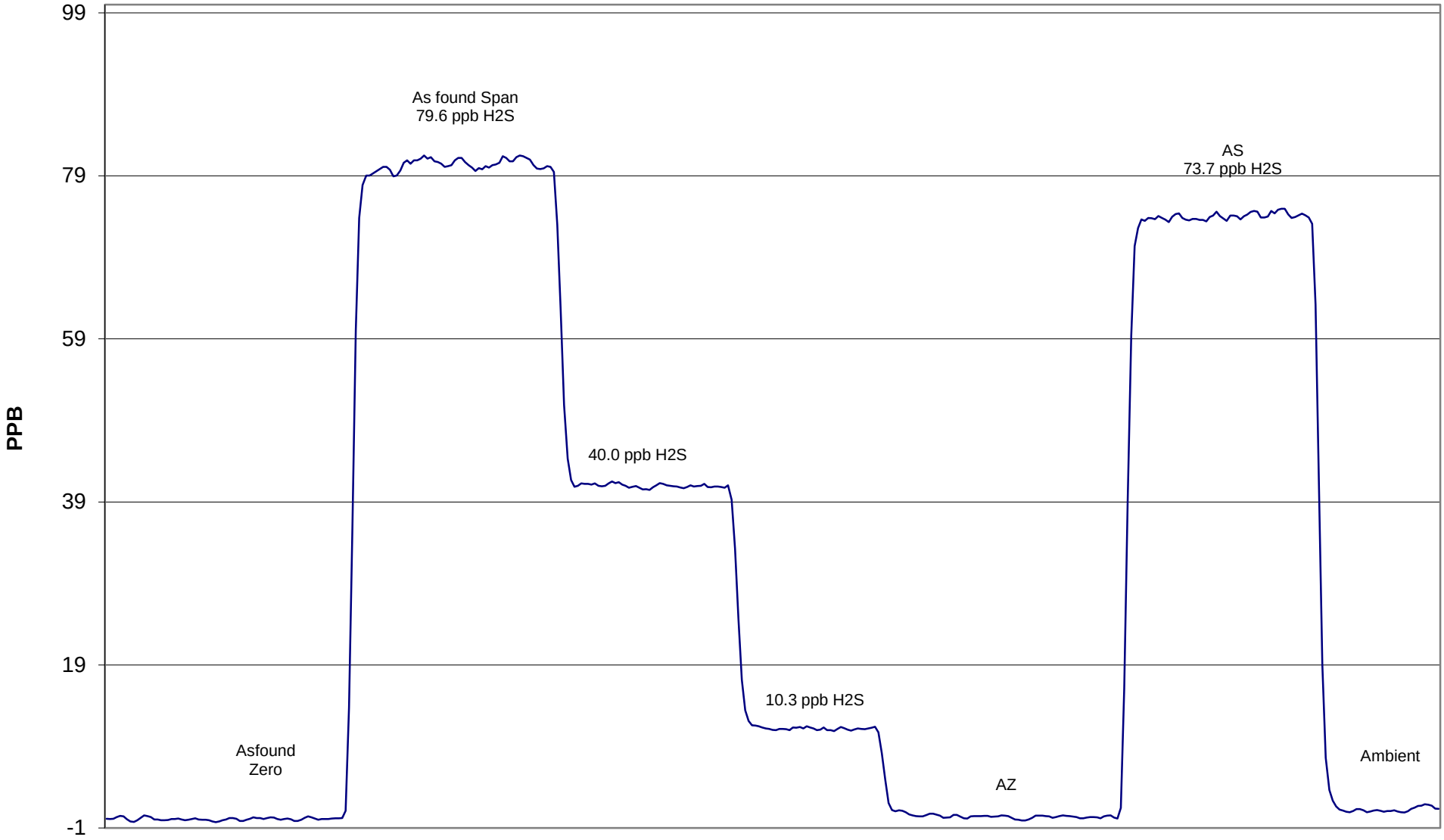
Calibration Date	February 14, 2012	Previous Calibration	January 7, 2011
Station Number	6	Station Location	Valleyview
Start Time (MST)	10:00	End Time (MST)	13:15
Analyzer make/model	TEI Model 43i - APSCB	Analyzer serial #	701120010

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A		
79.6	80.6	0.9874	Correlation Coefficient	0.999796
40.0	41.0	0.9776		
10.3	11.7	0.8815	Slope	0.994324
			Intercept	-0.663710



H2S Calibration



February 14, 2012

Calibration Report

Parameter **SO2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 15, 2012	Previous Calibration	January 6, 2012
Station Number	9	Station Location	Sunset House
Reason: Routine	Install	Removal	Other:
Start Time (MST)	7:35	End Time (MST)	11:15
Barometric Pressure	31.70 inches Hg	Station Temperature	19.7 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	49.8 ppm	Cal Gas Expiry Date	4/6/2012
Gas Cert Reference	SGAL3245		
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volt	DACS channel #	2
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.001379	Calculated slope	0.998582
Calculated intercept	-1.993532	Calculated intercept	-1.357476
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	14.4		16.5	
Coefficient	0.960		0.983	
UV Lamp Voltage	796	V	817	V
Chamber Temp	44.2	C	44.6	C
Perm Gas Temp	45	C	45	C
Pressure	662.3	mm Hg	661.2	mm Hg
Sample Flow	0.481	LPM	0.48	LPM
Lamp Intesity	37743	Hz	37214	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)
4989	0.00	0.0	0.1	N/A
4989	39.84	394.5	395.9	0.9964
4989	19.90	197.9	199.7	0.9909
4989	9.93	98.9	102.0	0.9696
4989	0.00	0.0	0.1	As found zero
4989	39.84	394.5	381.8	As found span
			Average Correction Factor	0.9856

Calculated value of As Found Response: 380.298 ppm Percent Change of As Found: 3.6%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	264.0	ppm	265.7	ppm

Notes: Cal went well, minor adjustment made to span, Possibly due to new lamp/socket being installed last cal

Calibration Performed By: Virginia McKergow / Grover Christiansen

Calibration Summary

Parameter **SO2**

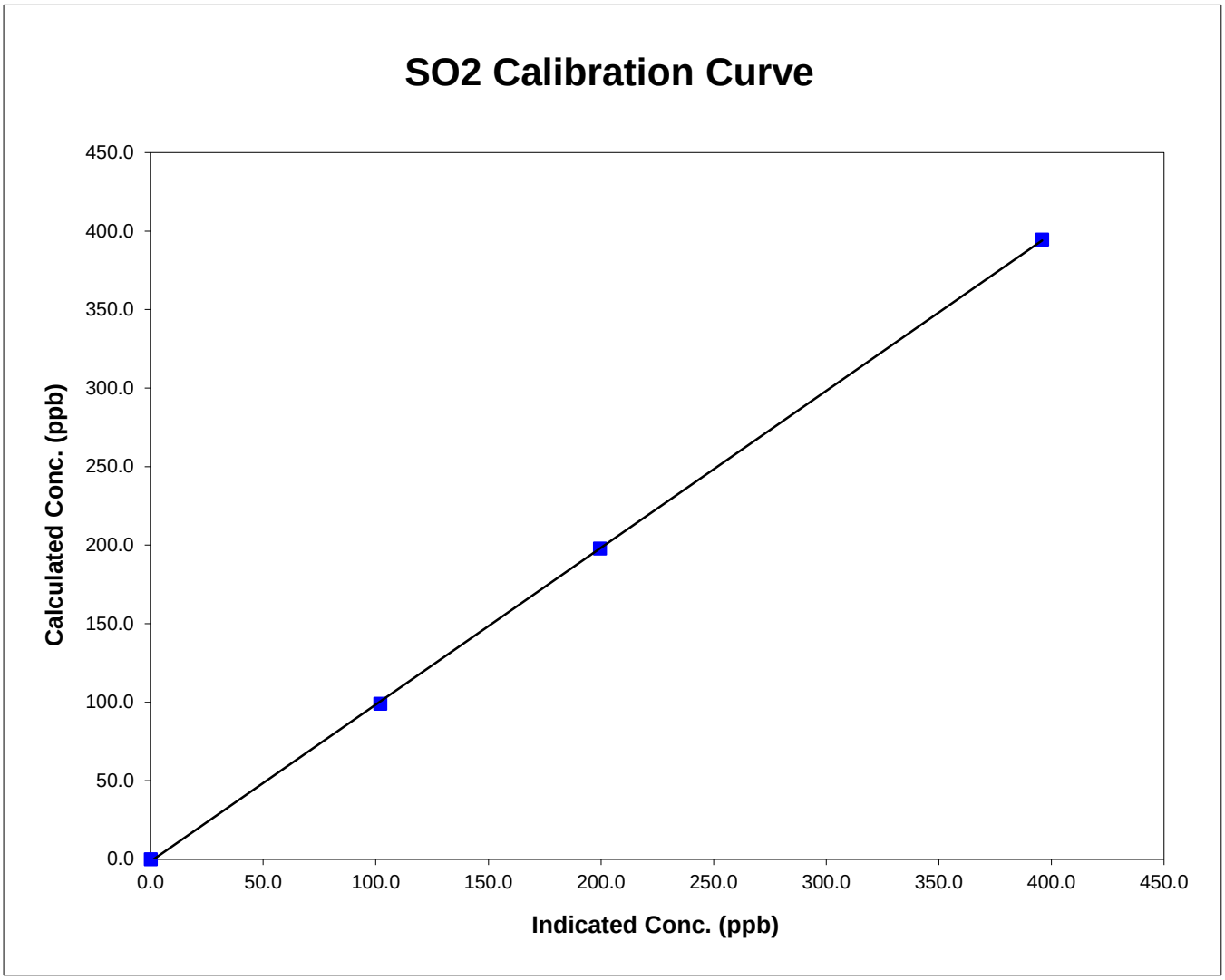
Air Monitoring Network **PASZA**

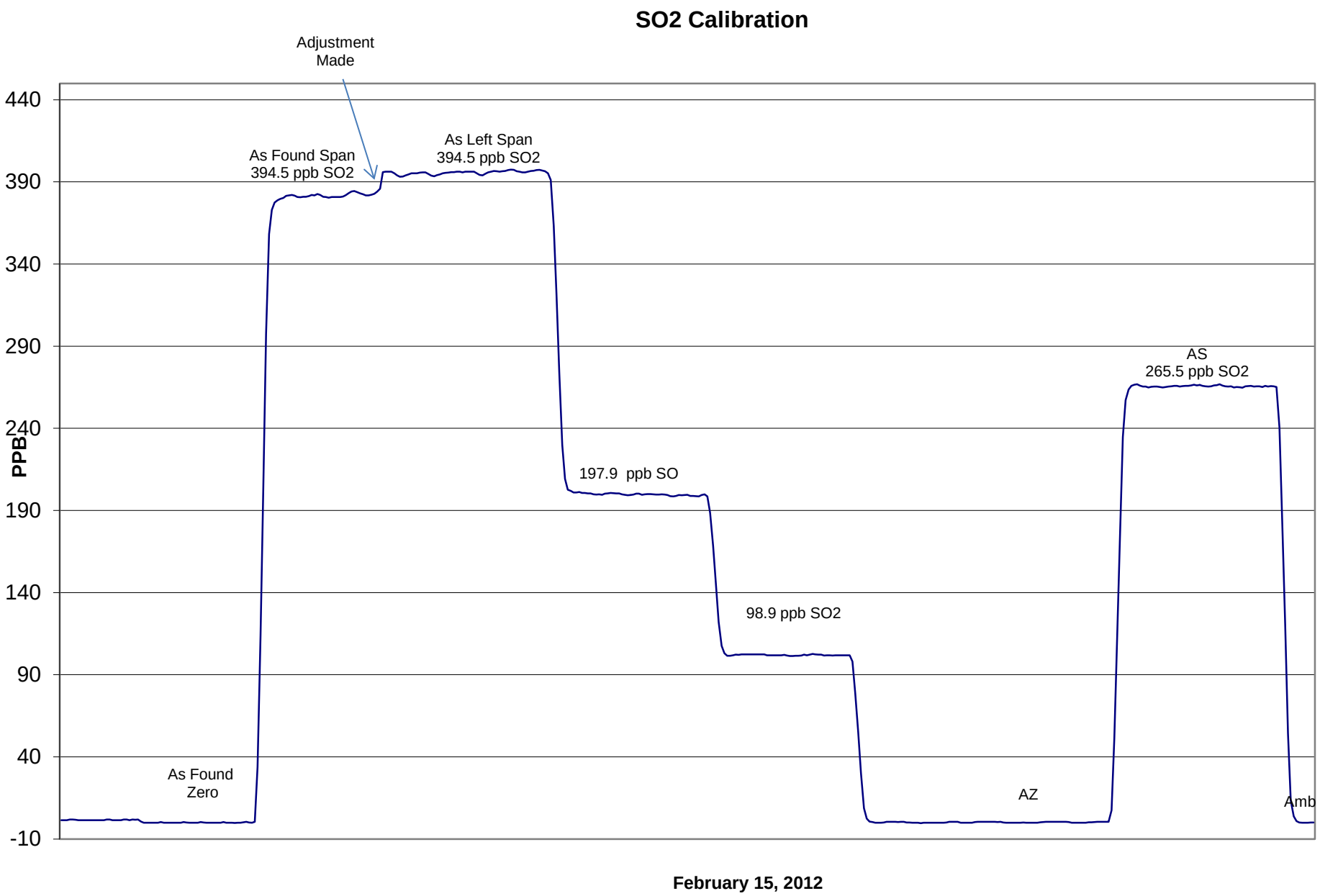
Station Information

Calibration Date	February 15, 2012	Previous Calibration	January 6, 2012
Station Number	9	Station Location	Sunset House
Start Time (MST)	7:35	End Time (MST)	11:15
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	0.1	N/A		
394.5	395.9	0.9964	Correlation Coefficient	0.999947
197.9	199.7	0.9909		
98.9	102.0	0.9696	Slope	0.998582
			Intercept	-1.357476




SO2 Calibration
Adjustment Made
As Found Span 394.5 ppb SO2
As Left Span 394.5 ppb SO2
197.9 ppb SO
98.9 ppb SO2
AS 265.5 ppb SO2
As Found Zero
AZ
Amb
PPB
440
390
340
290
240
190
140
90
40
-10
February 15, 2012

Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 15, 2012	Previous Calibration	N/A
Station Number	9	Station Location	Sunset House

Reason: Routine | Install | Removal | Other:

Start Time (MST)	7:35		End Time (MST)	12:00	
Barometric Pressure	0.907	Atm	Station Temperature	20.0	Deg C
Calibrator	Environics		Serial Number	3474	
NO Cal Gas Conc	52.5	ppm	Cal Gas Expiry Date	March 28th, 2013	
NOx Cal Gas Conc	52.5	ppm	Cal Gas Serial #	LL8575	

DACS Information

DACS make	CR3000	DACS serial No.	5407

Parameter		NO2	NOx	NO
Before	Data Slope	N/A	N/A	N/A
	Data Offset	N/A	N/A	N/A
After	Data Slope	0.997531	0.997655	1.003661
	Data Offset	-0.041240	-3.000822	-3.510851
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	N/A	mV	4.8	mV
NOx bkgnd	N/A	mV	7.3	mV
NO coefficient	N/A		1.171	
NOx coefficient	N/A		1.003	
NO2 conv temp	N/A	Deg C	323.7	Deg C
PMT Temp	N/A	Deg C	-3.1	Deg C
PMT Volt	N/A	mV	-773.3	mV
R Cell Press	N/A	in Hg	153.6	in Hg
Sample Flow	N/A	ccm	0.970	ccm

NOTES: Cal went great, ozonator had overnight to settle in, and the analyzer calibrated great
Adjustment made to span only

Calibration Report

Parameter **NOX-NO-NO2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: February 15, 2012 Station Location: Sunset House

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	4989	0.00	0.0	0.0	0.0	0.7	0.7	0.2	N/A	N/A
1	4989	39.83	415.8	415.8	0.0	418.5	416.3	0.5	0.9936	0.9988
2	4989	19.90	208.6	208.6	0.0	213.5	212.8	-0.1	0.9767	0.9801
3	4989	9.93	104.3	104.3	0.0	109.7	110.2	-0.5	0.9505	0.9462
AFZ										
AFS										
							Average Correction Factor		0.9736	0.9751

As Found Concentrations: NO_X= NA NO= NA As Found Percent Change NO_X= NA NO= NA

GPT Calibration Data

Dilution Flow 4989 ccm Source Gas Flow 39.84 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				0.7	0.7	0.2	N/A	N/A	N/A	N/A
NO point	417.2	417.2	0.0	419.2	417.2	-0.1	0.9951	1.0000	N/A	N/A
300	417.2	162.3	254.8	419.9	162.3	255.5	0.9936	1.0000	0.9973	100.3%
200	417.2	243.4	173.7	419.7	243.4	174.3	0.9940	1.0000	0.9968	100.3%
100	417.2	322.2	95.0	419.0	322.2	95.0	0.9955	1.0000	0.9995	100.1%
					Average Correction Factor		0.9944	1.0000	0.9979	100.2%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.2	-0.3	-0.2	ppb	0.6	0.1	0.7	ppb
Auto span	200.0	197.1	1.6	ppb	172.5	170.1	1.7	ppb

Calibration Performed By: Virginia McKergow / Grover Christiansen

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

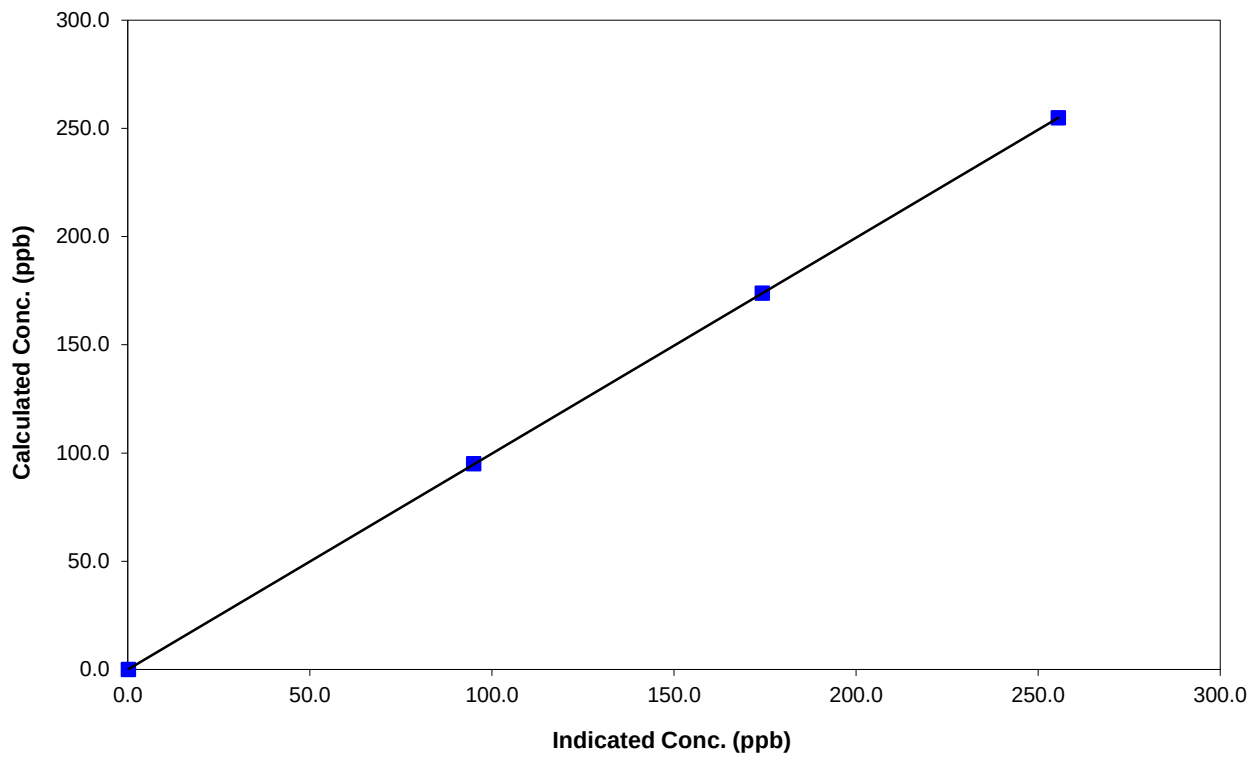
Station Information

Calibration Date	February 15, 2012	Previous Calibration	N/A
Station Number	9	Station Location	Sunset House
Start Time (MST)	7:35	End Time (MST)	12:00
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		
254.8	255.5	0.9973	Correlation Coefficient	0.999998
173.7	174.3	0.9968		
95.0	95.0	0.9995	Slope	0.997531
			Intercept	-0.041240

NO_2 Calibration Curve



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

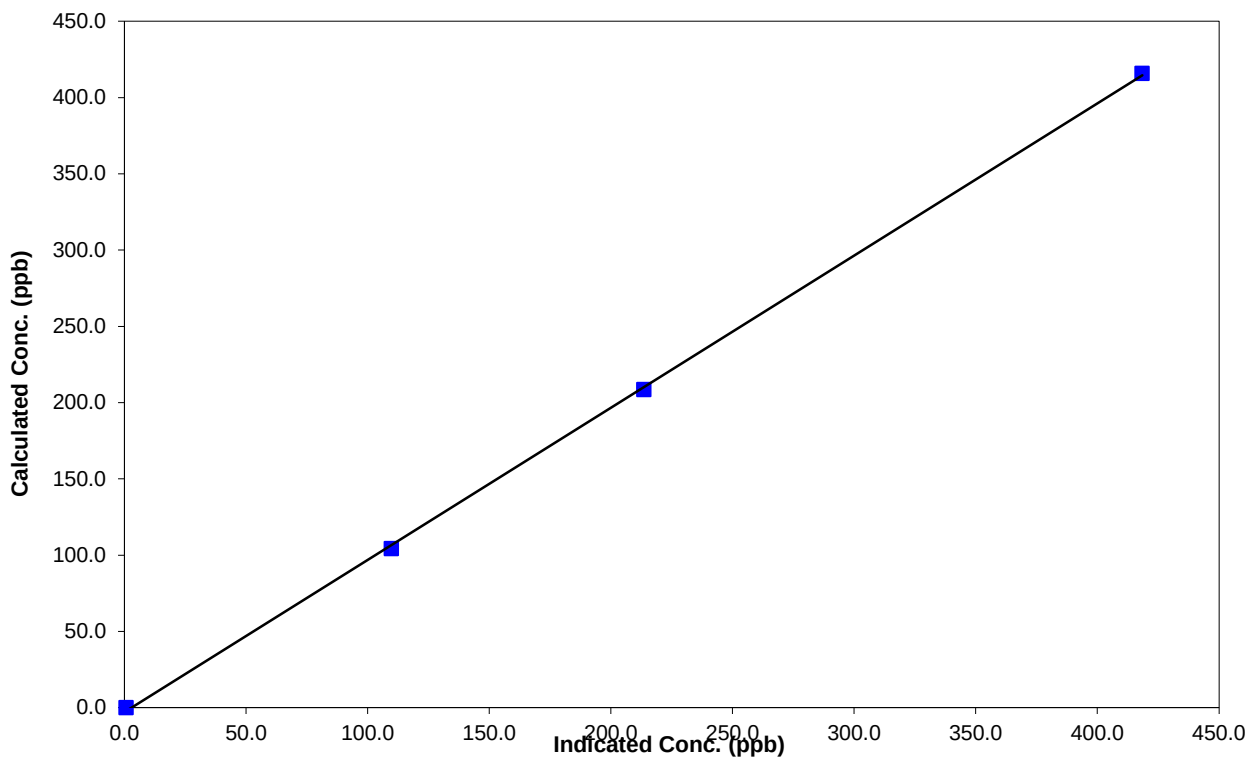
Station Information

Calibration Date	February 15, 2012	Previous Calibration	N/A
Station Number	9	Station Location	Sunset House
Start Time (MST)	7:35	End Time (MST)	12:00
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	0.7	N/A		
415.8	418.5	0.9936	Correlation Coefficient	0.999852
208.6	213.5	0.9767		
104.3	109.7	0.9505	Slope	0.997655
			Intercept	-3.000822

NOx Calibration Curve



Calibration Summary

Parameter **NO**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

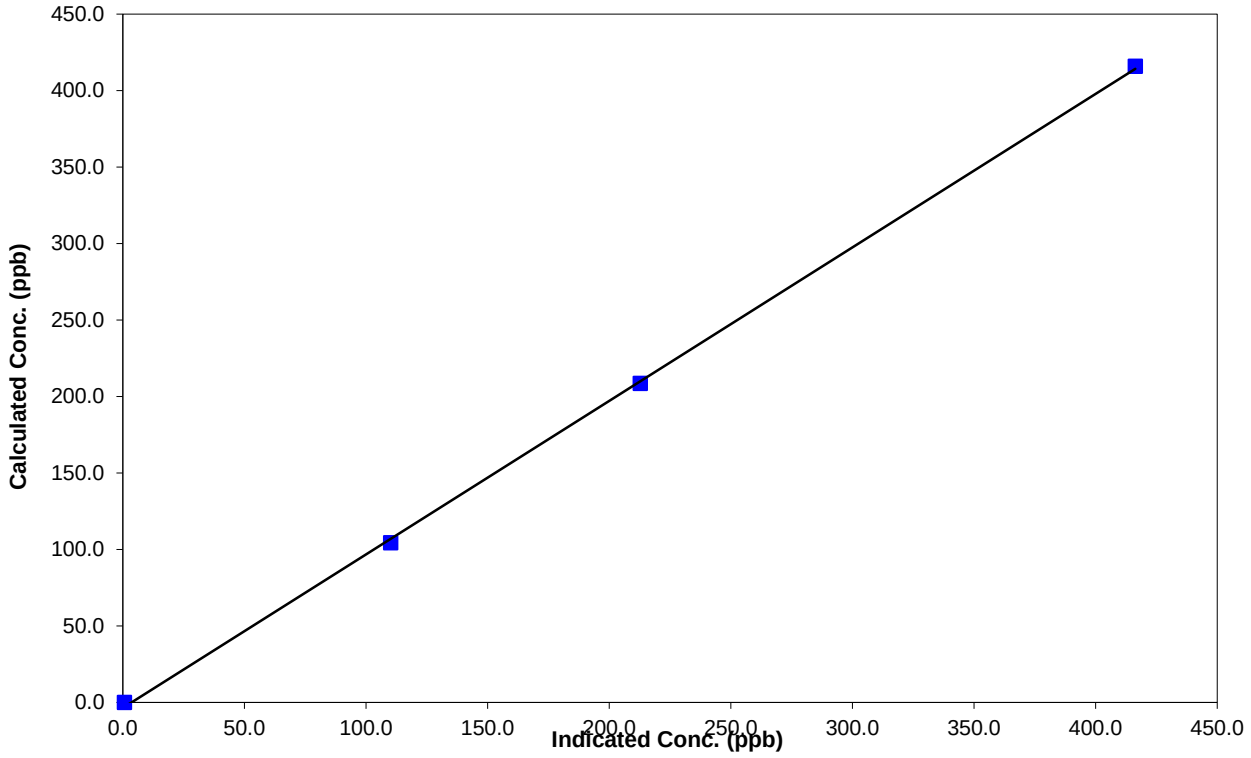
Station Information

Calibration Date	February 15, 2012	Previous Calibration	N/A
Station Number	9	Station Location	Sunset House
Start Time (MST)	7:35	End Time (MST)	12:00
Analyzer make	TEI 42i	Analyzer serial #	0701120011

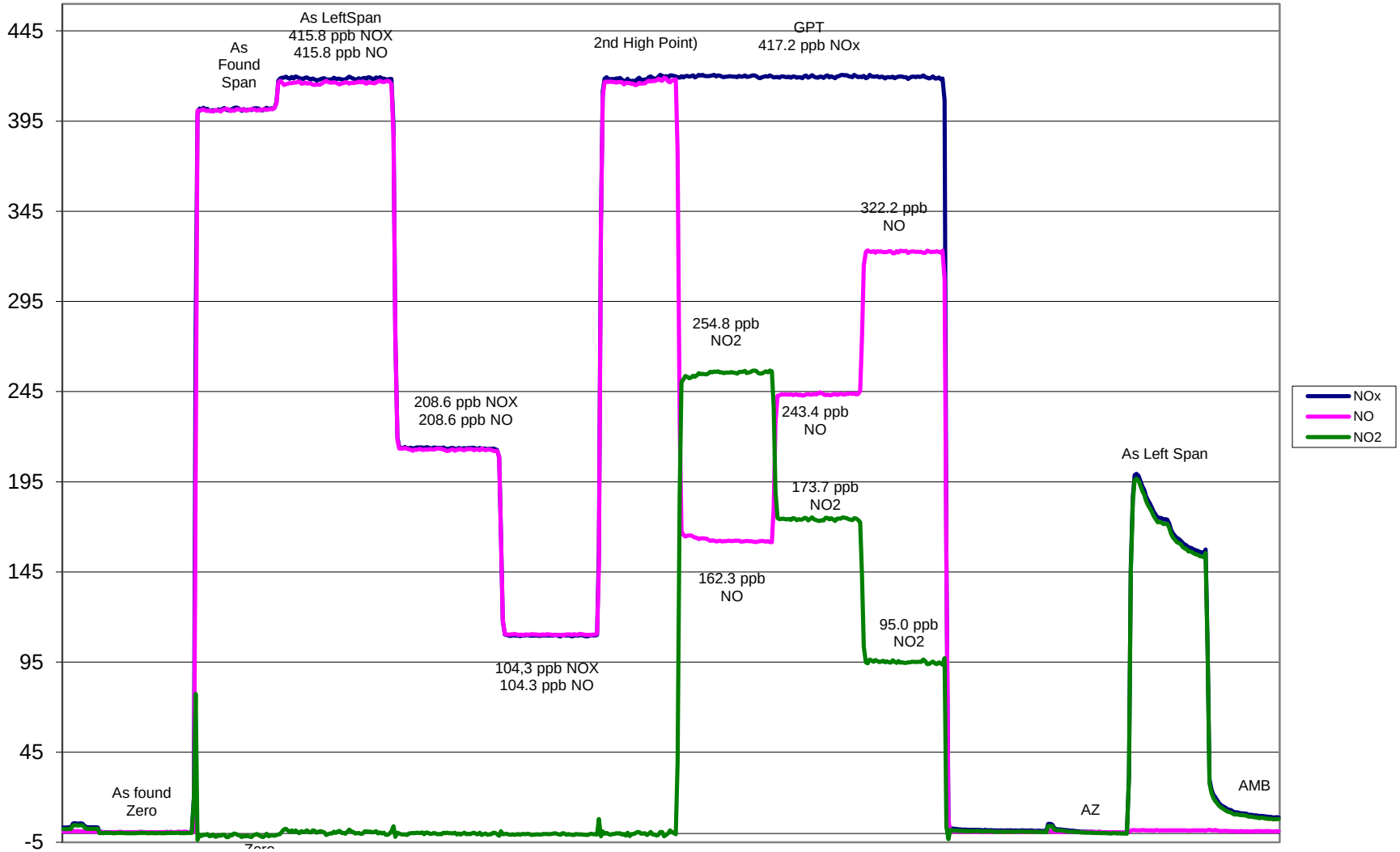
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.7	N/A		
415.8	416.3	0.9988	Correlation Coefficient	0.999785
208.6	212.8	0.9801		
104.3	110.2	0.9462	Slope	1.003661
			Intercept	-3.510851

NO Calibration Curve



PASZA Sunset House NO_X Calibration



February 15, 2012

Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **O3**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	February 15, 2012	Previous Calibration	January 6, 2012
Station Number	9	Station Location	Sunset House
Reason: Routine	Install	Removal remove	Other:
Start Time (MST)	11:04	End Time (MST)	12:45
Barometric Pressure	0.911 atm	Station Temperature	15.7 Deg C
Calibrator	Environics 6100	Serial Number	3474
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volts	DACS channel #	6
	Before		After
Calculated slope	0.967079	Calculated slope	1.142728
Calculated intercept	1.293631	Calculated intercept	-0.028439
Analyzer make	TEI Model 49C	Analyzer serial #	49C-0609716240

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	-2.1	ppb	-2.1	ppb
Span	1.086		1.086	
Cell A intensity	87512	Hz	87512	Hz
Cell B intensity	99212	Hz	99212	Hz
Pressure	685.90	in Hg	685.90	in Hg
CellA Flow	1.178	ccm	1.178	ccm
Cell B Flow	0.723	cmm	0.723	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)
4990	0.00	0.0	0.0	N/A
4989	0.30	254.8	223.0	1.1426
4989	0.00	0.0	-4.3	As found zero
4989	0.30	254.8	223.0	As found span
			Average Correction Factor	1.1426

Calculated value of As Found Response: 221.1 ppm Percent Change of As Found: -13.2%

	before calibration		after calibration	
Auto zero	0.6	ppb		ppb
Auto span	137.7	ppb	0.0	ppb

Notes: As founds were determined, analyzer has major flow issues, solenoid needs to be replaced

Calibration Performed By: Virginia McKergow / Grover Christiansen

Calibration Summary

Parameter **O3**

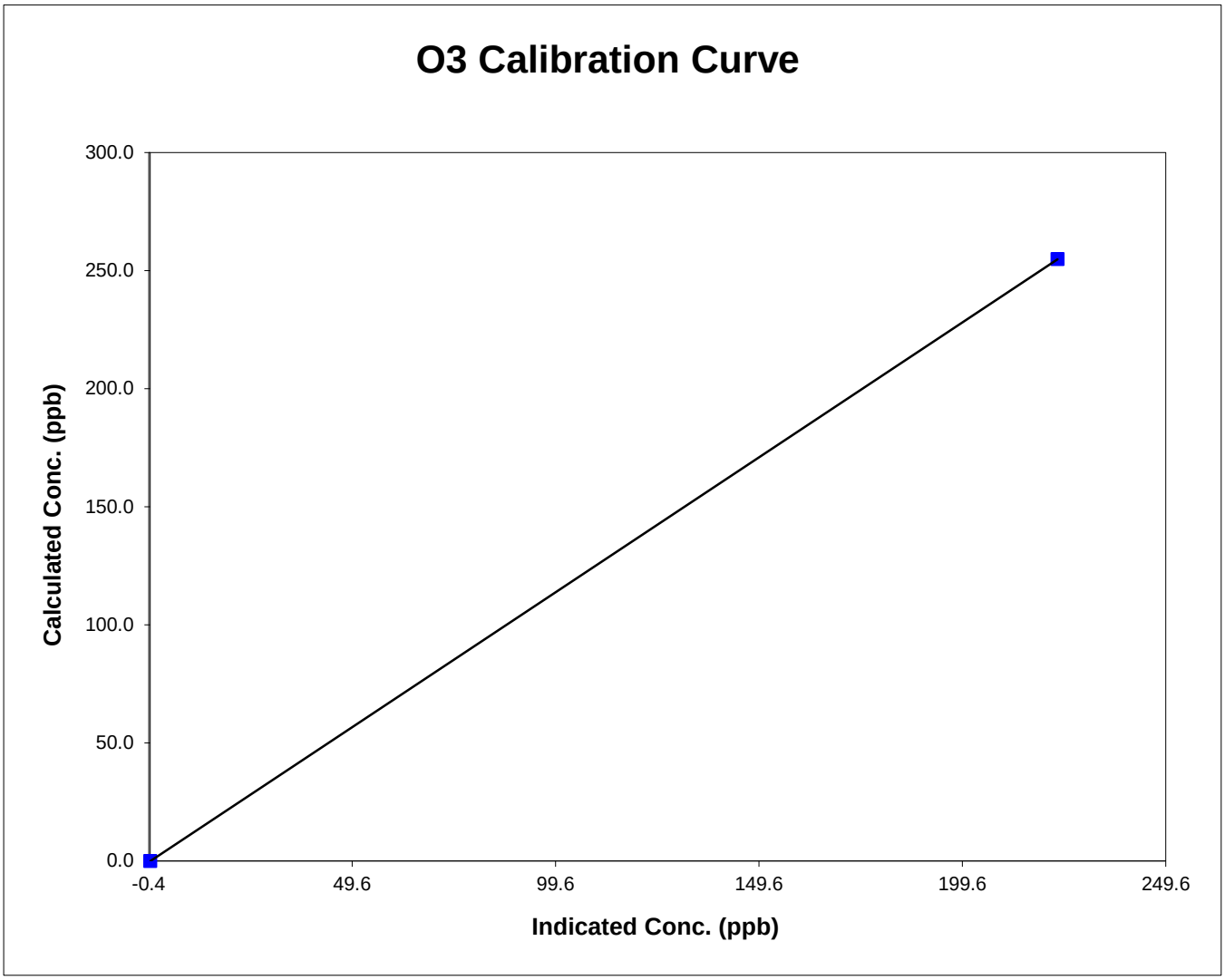
Air Monitoring Network **PASZA**

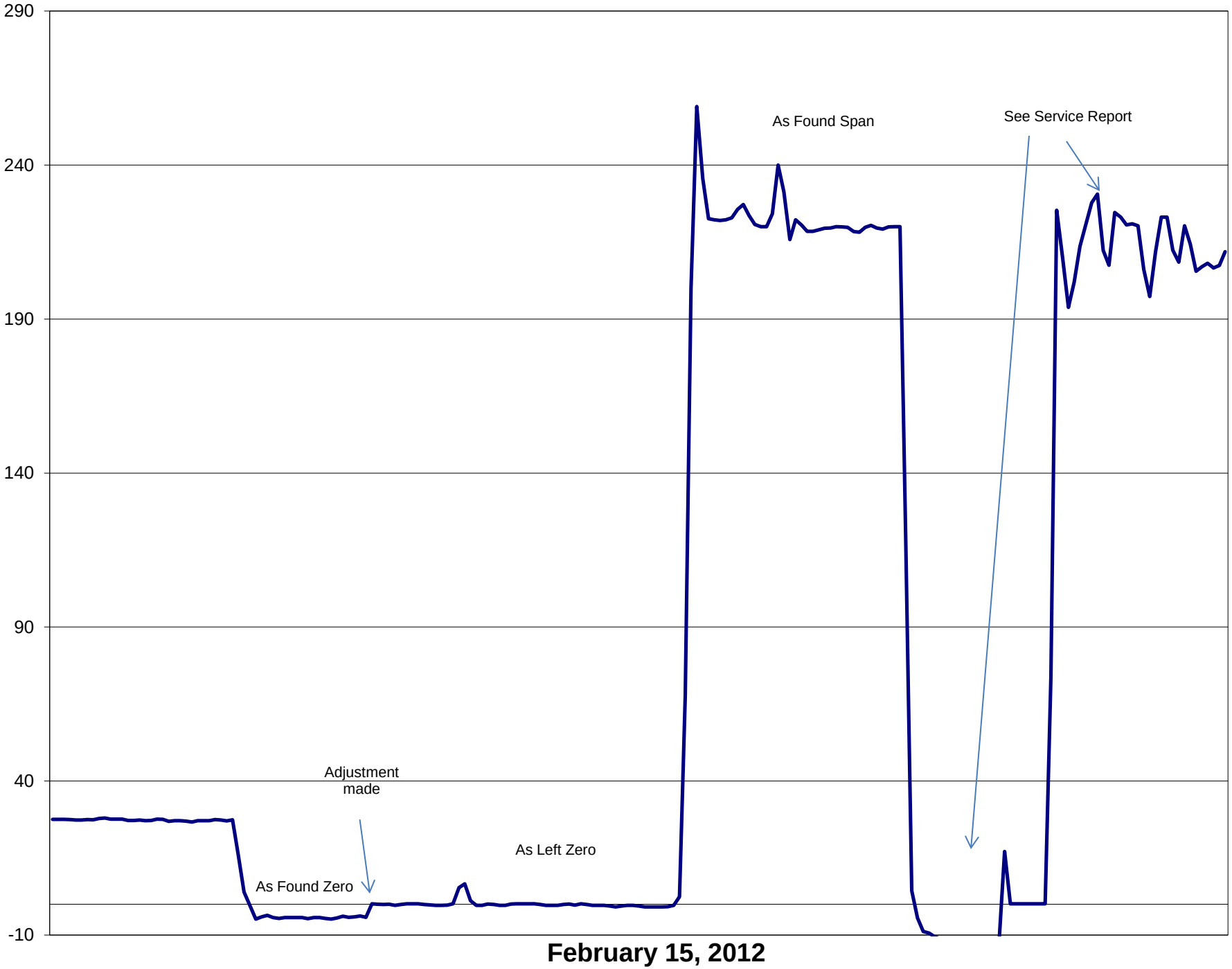
Station Information

Calibration Date	February 15, 2012	Previous Calibration	January 6, 2012
Station Number	9	Station Location	Sunset House
Start Time (MST)	11:04	End Time (MST)	12:45
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	0.0	NA		
254.8	223.0	1.1426	Correlation Coefficient	1.000000
			Slope	1.142728
			Intercept	-0.028439




290
240
190
140
90
40
-10
As Found Span
See Service Report
Adjustment made
As Left Zero
As Found Zero
February 15, 2012

Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **O3**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	February 21, 2012	Previous Calibration	February 15, 2012
Station Number	9	Station Location	Sunset House
Reason: Routine	Install	Removal remove	Other:
Start Time (MST)	10:41	End Time (MST)	11:40
Barometric Pressure	0.911 atm	Station Temperature	15.7 Deg C
Calibrator	Environics 6100	Serial Number	3474
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volts	DACS channel #	6
	Before		After
Calculated slope	1.142728	Calculated slope	1.341183
Calculated intercept	-0.028439	Calculated intercept	-0.280052
Analyzer make	TEI Model 49C	Analyzer serial #	49C-0609716240

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	-2.1	ppb	-2.1	ppb
Span	1.086		1.086	
Cell A intensity	69782	Hz	69782	Hz
Cell B intensity	98212	Hz	98212	Hz
Pressure	682.00	in Hg	682.00	in Hg
CellA Flow	0.800 / 0.940	ccm	0.800 / 0.940	ccm
Cell B Flow	0.713	cmm	0.713	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)
4990	0.00	0.0	0.2	N/A
4989	0.30	254.8	190.2	1.3397
4989	0.00	0.0	0.2	As found zero
4989	0.30	254.8	190.2	As found span
			Average Correction Factor	1.3397

Calculated value of As Found Response: 217.1 ppm Percent Change of As Found: -14.8%

	before calibration		after calibration	
Auto zero	0.6	ppb		ppb
Auto span	137.7	ppb	0.0	ppb

Notes: As founds determined before solenoid was replaced

Calibration Performed By: Virginia McKergow

Calibration Summary

Parameter **O3**

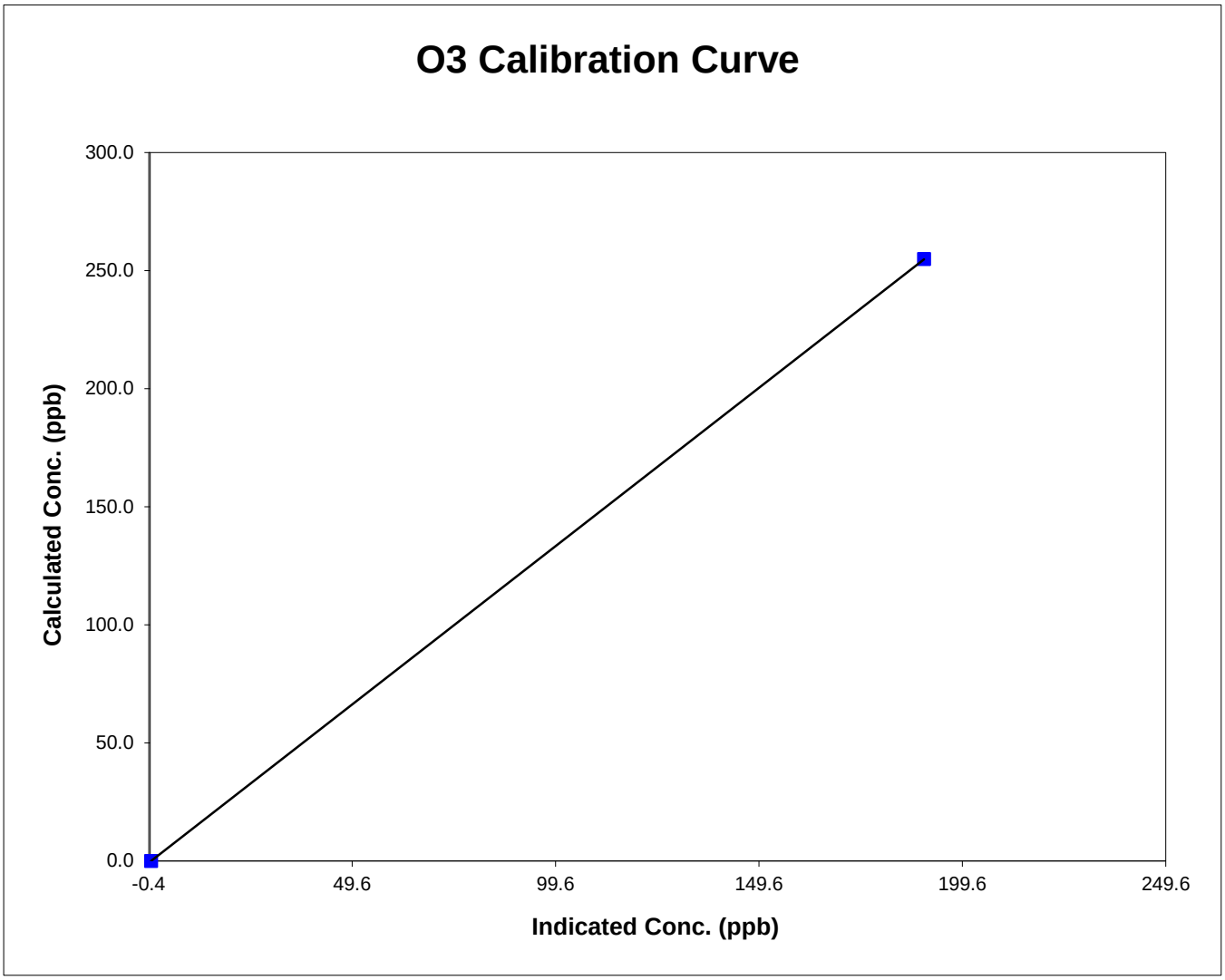
Air Monitoring Network **PASZA**

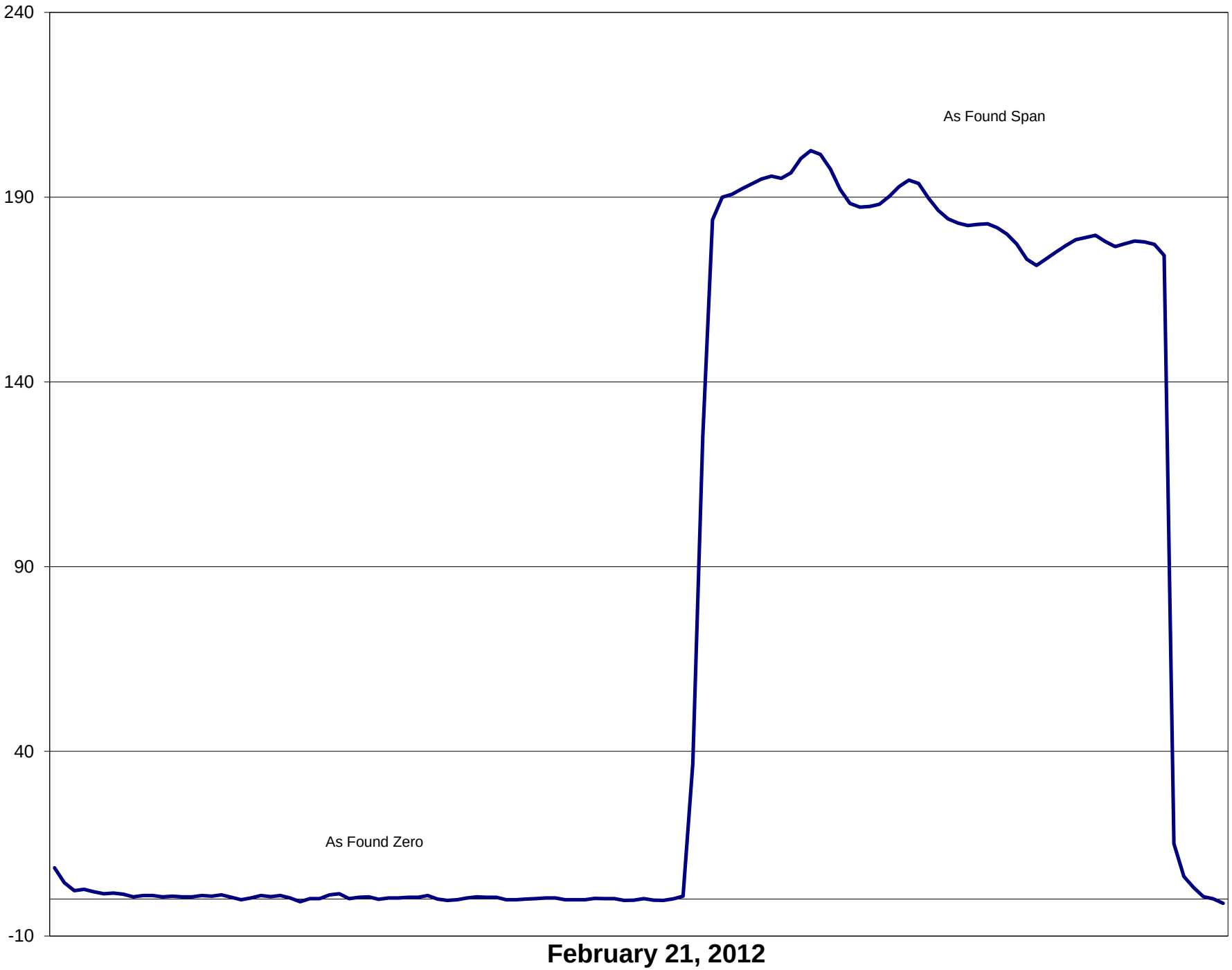
Station Information

Calibration Date	February 21, 2012	Previous Calibration	February 15, 2012
Station Number	9	Station Location	Sunset House
Start Time (MST)	10:41	End Time (MST)	11:40
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	0.2	NA		
254.8	190.2	1.3397	Correlation Coefficient	1.000000
			Slope	1.341183
			Intercept	-0.280052




240
190
140
90
40
-10
As Found Span
As Found Zero
February 21, 2012

Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **O3**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	February 21, 2012	Previous Calibration	February 21, 2012
Station Number	9	Station Location	Sunset House
Reason: Routine	Install	Removal remove	Other:
Start Time (MST)	13:00	End Time (MST)	15:50
Barometric Pressure	0.911 atm	Station Temperature	15.7 Deg C
Calibrator	Environics 6100	Serial Number	3474
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volts	DACS channel #	6
	Before		After
Calculated slope	1.288934	Calculated slope	1.000962
Calculated intercept	-0.269142	Calculated intercept	-0.472265
Analyzer make	TEI Model 49C	Analyzer serial #	49C-0609716240

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	-2.1	ppb	-1	ppb
Span	1.086		1.808	
Cell A intensity	69782	Hz	67630	Hz
Cell B intensity	98212	Hz	98007	Hz
Pressure	682.00	in Hg	668.60	in Hg
CellA Flow	0.800 / 0.940	ccm	0.933	ccm
Cell B Flow	0.713	cmm	0.714	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)
4990	0.00	0.0	0.6	N/A
4990	0.30	254.8	255.3	0.9981
4990	0.20	173.7	173.7	1.0003
4990	0.10	95.0	95.4	0.9962
				As found zero
				As found span
			Average Correction Factor	0.9982

Calculated value of As Found Response: NA ppm Percent Change of As Found: NA

	before calibration		after calibration	
Auto zero	0.6	ppb	1.4	ppb
Auto span	137.7	ppb	254.8	ppb

Notes: Cal went great, adjusted zero and high point,
as founds were determined before maintenance was done

Calibration Performed By: Virginia McKergow

Calibration Summary

Parameter **O3**

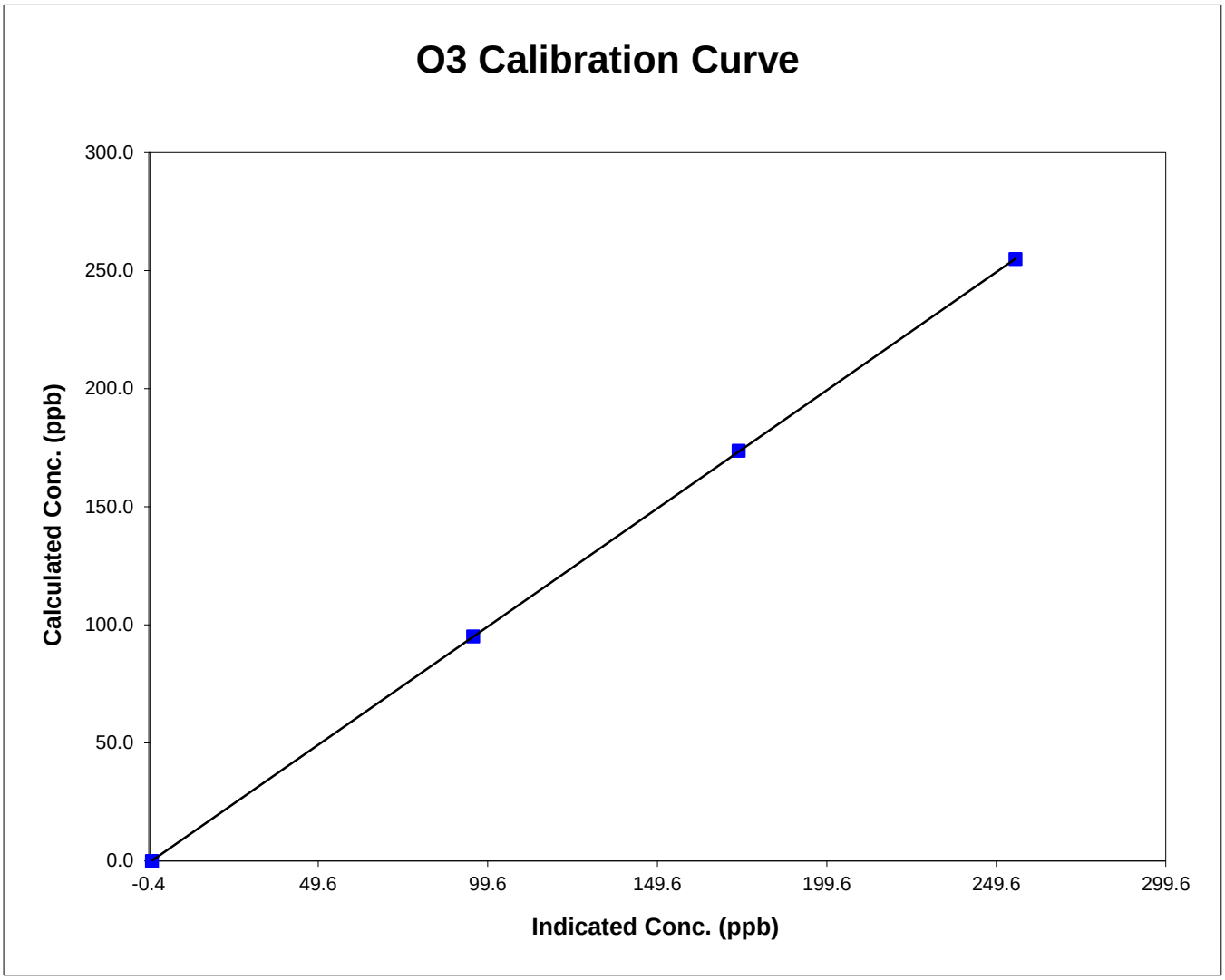
Air Monitoring Network **PASZA**

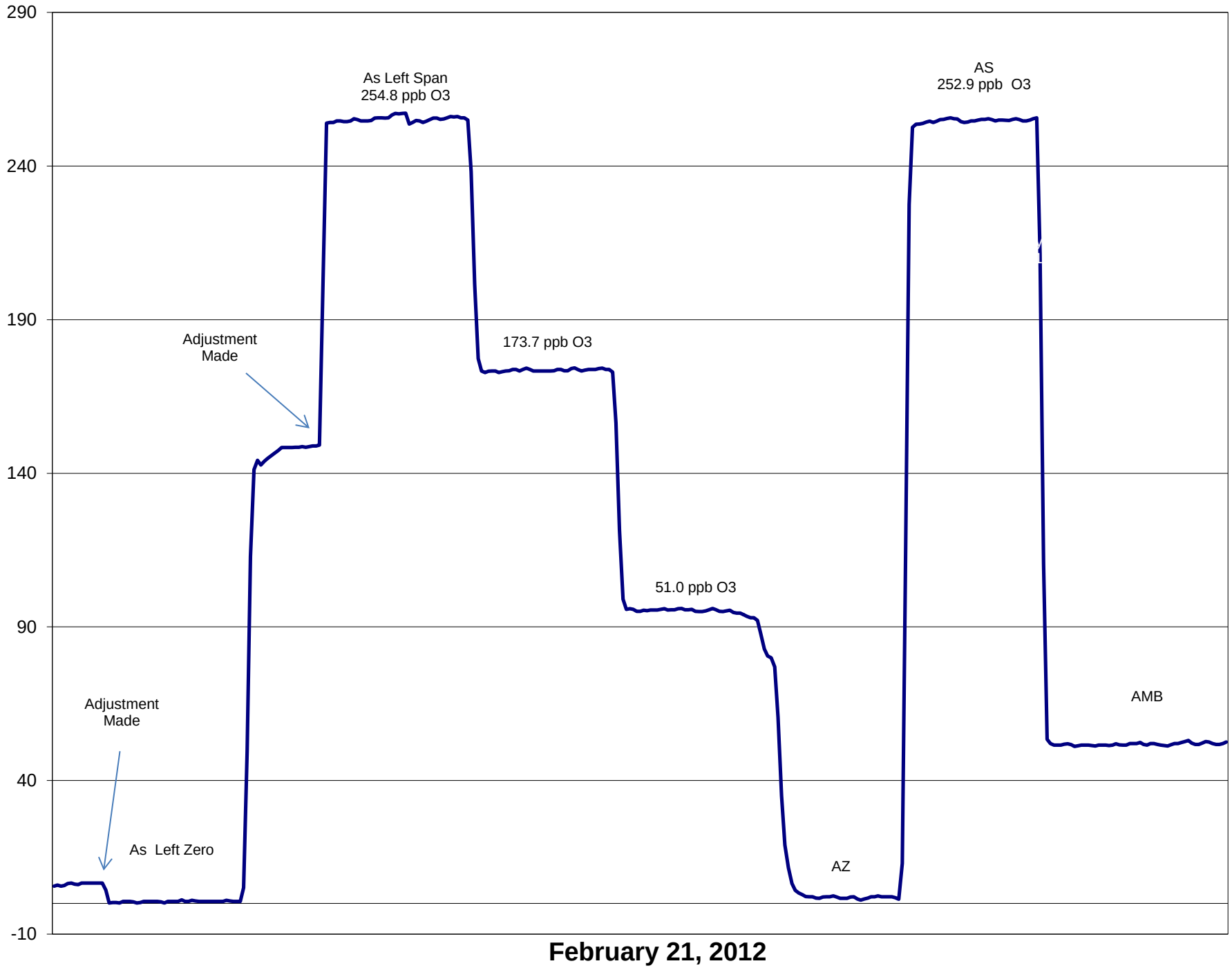
Station Information

Calibration Date	February 21, 2012	Previous Calibration	February 21, 2012
Station Number	9	Station Location	Sunset House
Start Time (MST)	13:00	End Time (MST)	15:50
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	0.6	NA		
254.8	255.3	0.9981	Correlation Coefficient	0.999994
173.7	173.7	1.0003		
95.0	95.4	0.9962	Slope	1.000962
			Intercept	-0.472265





February 21, 2012

Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **TRS**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	February 15, 2012	Previous Calibration	January 6, 2012
Station Name	PAZA Rover	Station Location	Sunset House
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	12:49	End Time (MST)	16:00
Barometric Pressure	27.5 inches Hg	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	5.77 ppm	Cal Gas Expiry Date	9/13/2011
Gas Cert Reference	BLM001434		
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	1.015370	Calculated slope	1.029385
Calculated intercept	0.369981	Calculated intercept	0.161234
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	12.5	ppb	13.9	ppb
Coefficient	1.388		1.338	
Lamp Voltage	795	V	797	V
Chamber Temp	44.2	C	44.0	C
Perm gas Temp	45.0	C	45.0	C
Pressure	645.1	mmHg	648.3	mmHg
Sample Flow	.430	ccm	0.421	ccm
Lamp Intensity	39057.0	Hz	39279.0	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)
4988	0.0	0.0	0.5	N/A
4988	69.82	79.7	77.4	1.0289
4988	34.83	40.0	38.4	1.0409
4988	8.93	10.3	9.3	1.1051
4988	0.00	0.0	0.5	As found zero
4988	69.72	79.5	77.4	As found span
			Average Correction Factor	1.0583

Calculated value of As Found Response: 78.52 ppm Percent Change of As Found: 1.3%

	before calibration		after calibration	
Auto zero	-0.6	ppm	-0.7	ppm
Auto span	69.6	ppm	68.1	ppm

Notes: Cal went well, no adjustment required

Calibration Performed By: Virginia McKergow / Grover Christiansen

Calibration Summary

Parameter **TRS**

Air Monitoring Network **PASZA**

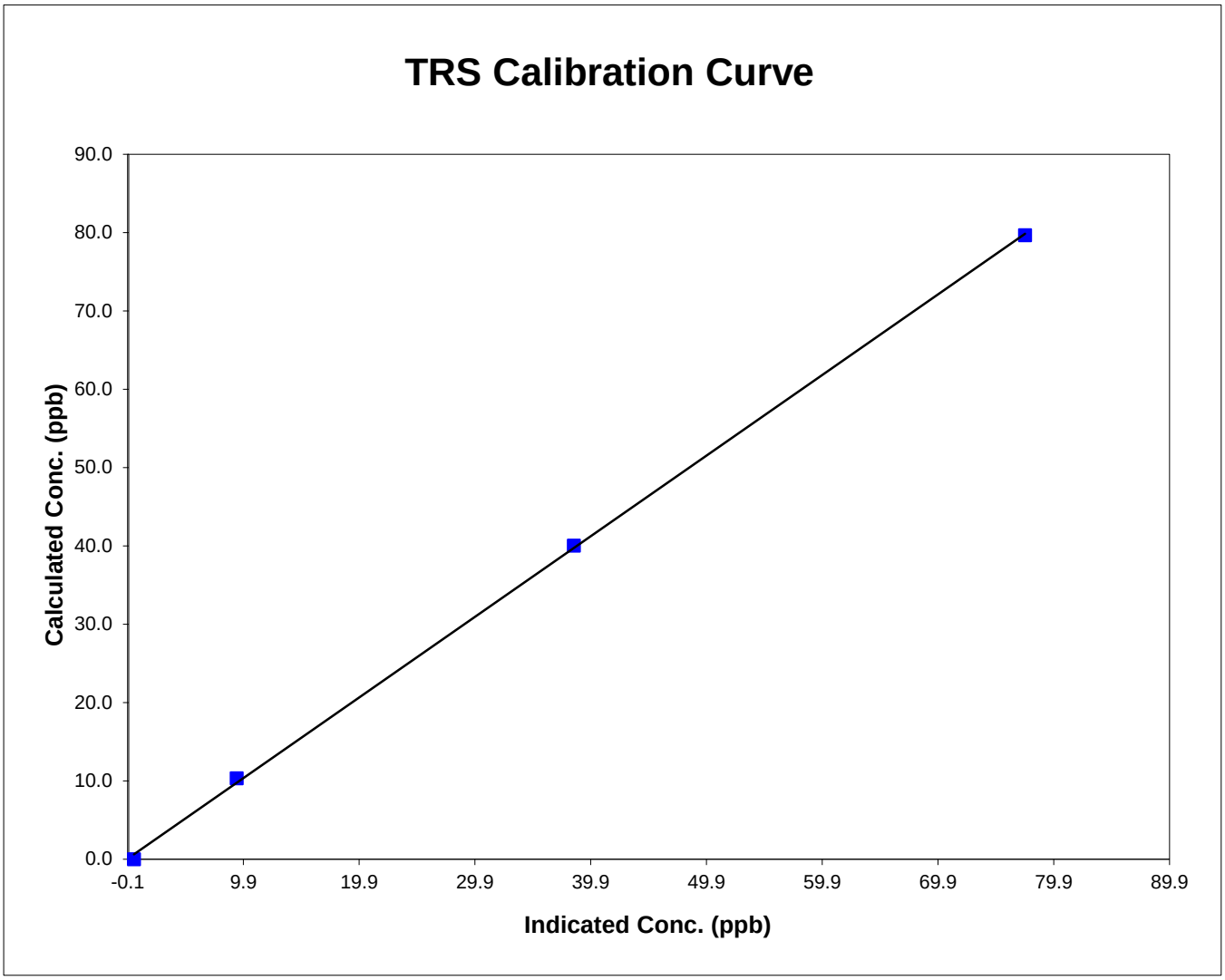
FOCUS AIR QUALITY MONITORING

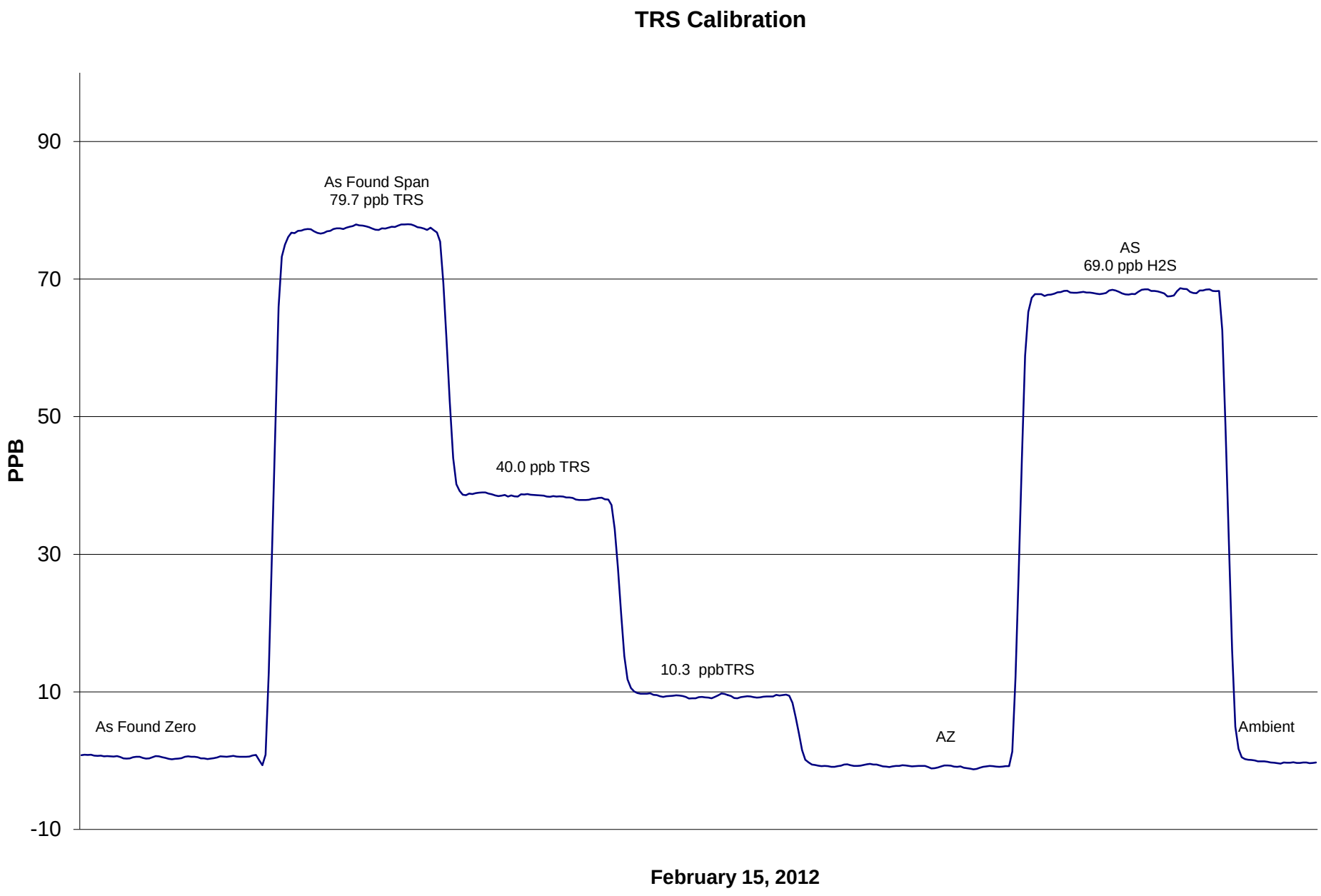
Station Information

Calibration Date	February 15, 2012	Previous Calibration	January 6, 2012
Station Number	PAZA Rover	Station Location	Sunset House
Start Time (MST)	12:49	End Time (MST)	16:00
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	0.5	N/A		
79.7	77.4	1.0289	Correlation Coefficient	0.999789
40.0	38.4	1.0409		
10.3	9.3	1.1051	Slope	1.029385
			Intercept	0.161234




TRS Calibration
90
70
50
30
10
-10
PPB
As Found Span
79.7 ppb TRS
40.0 ppb TRS
10.3 ppbTRS
AS
69.0 ppb H2S
As Found Zero
AZ
Ambient
February 15, 2012

AB TEOM PM2.5 Calibration

FOCUS
AIR QUALITY MONITORING

STATION: **Rover-Sunset House**

LOCATION: PASZA - Grande Prairie

OPERATOR: Virginia McKergow / Grover C

DATE: 15-Feb-12

MONITOR INFO / PARAMETER VALUES:

Make/Model	TEOM AB
Configuration	PM2.5
Serial Number	21551
Site Number	2
Inlet Type	PM 10 / SCC
FAdj. Main Setting	1.000
FAdj. Aux. Setting	1.000
T-Case Indicated / Set Point	40/40
T-Air Indicated / Set Point	40/40
T-Cap Indicated / Set Point	40/40
Splitter Assembly Alignment (cm)	15.5

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

RECENT CALIBRATION AND AUDIT HISTORY

Previous Audit	2-Oct-11
Previous Calibration	6-Jan-12

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	0.150	0.170
PUMP OFF	0.150	0.170
NET	0.000	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	10124	13.67	3.000
	INDICATED (I)	3.9	0.911		13.67	2.990
As Found Data	MEASURED (AF)	2.2	0.909		14.90	2.450
Adjusted Data	MEASURED (M)	2.2	0.909	10089	13.71	2.990
	DIFFERENCE (M-I)	-1.7	-0.002	-0.3%	0.29	-0.33
	LIMITS	*± 2 ^{0} C*	*± 0.005 atm*	*± 2.5 %*	*± 1.0 L/min*	*± 0.2 L/min*

Ko Audit Filter data *Weight:* 0.11014 *Serial #:* *CVK 2123*

COMMENTS:

Ko value is from last calibration, as there is no Ko kit on site

TEOM control unit S/N: 140AB215519705

TEOM sensor unit S/N: 1200B137649705

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