Peace AirShed Zone Association

Ambient Air Monitoring Network Summary

Continuous Ambient Air Quality Monitoring Program
Monthly Report
February 2011

Operations and Reporting

FOCUS
AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

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April 13, 2011

Alberta Environment
11th Floor, Oxbridge Place
9820-106 Street
Edmonton Alberta T6B 2X3

RE: Peace Airshed Zone Association (PASZA) – February 2011 Ambient Air Report

Enclosed is the PASZA Ambient Monitoring Network Report for the month of **February 2011**.

This report is submitted by PASZA 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.	Sunset House	06-22-0707-20-W5	138884-01-00
	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
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	00000029-01-00
	Progress/Gordondale	01-01-077-10-W6	00010036-02-00
	Gold Creek	13-26-067-05-W6	00010446-02-00
	Teepee Creek	SE-2-074-04-W6	00001635-02-00
Conocophillips Canada Energy Partnership	Wembley	06-19-073-08-W6	00000212-01-00

Devon Canada	Tangent	16-20-080-24-W5	00011346-01-00
	NW Belloy (Dunvegan)	16-36-079-03-W6	00009810-02-00
	Eaglesham (South)	02-14-077-25-W5	00047669-01-00
	Puskwaskau	03-26-074-01-W6	00017524-01-00
	North Normanville	03-36-079-23-W5	00047455-01-00
	West Culp	05-34-078-25-W6	00136284-00-00
	Cecil	08-15-084-08-W6	00010032-02-00
EnCana Corporation	Hythe Brainard	11-18-074-12-W6	00010910-02-00
	Sexsmith	04-08-075-07-W6	00010002-01-00
Galleon Energy Inc.	Eaglesham	01-25-076-01-W6	00241532-00-00
	Kakut	14-12-075-03-W6	00248469-00-00
	Donnelly	06-01-077-21-W5	00000087-02-00
Grande Prairie Generation Inc.	Northern Prairie Power Project	04-19-073-08-W6	00238762-00-00
Penn West Petroleum Ltd.	Tangent	13-29-080-23-W5	00001746-02-00
	Pouce Coupe	16-07-078-11-W6	00000614-01-00
Spectra Energy Midstream	Gordondale	11-26-079-09-W6	00011495-02-00
	Fourth Creek	16-11-082-09-W6	00000263-01-00
Suncor Energy Inc.	Progress	07-22-078-09-W6	00011428-02-00
Taqa North Ltd.	Valhalla	13-21-076-09-W6	00017620-01-00
Weyerhaeuser Canada	Grande Prairie Pulp and Wood Plant	01-14-070-05-W6	00000113-02-00

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

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

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 with the exception of the TEOM - **Alberta Environment Reference #245269**.

Evergreen Park Station:

- The measured ambient air quality was within the AAAQO for the Evergreen Park station.
- All analyzers / sensors at the Evergreen Park station had an operational uptime greater than 90% for the month of February with the exception of the TEOM - **Alberta Environment Reference #245270**.

Smoky Heights Station:

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

Portable – Bonanza Station:

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

Passive Monitoring - 43 Stations throughout the PASZA zone:

There were four duplicate sites sampled in the month of February: Bay Tree, Gold Creek, Wapiti and Kinuso. The passive samples at Shaftesbury and McLennan were not collected in January as roads were inaccessible due to heavy snow conditions; they were collected in February. The results for the SO_2, NO_2 and O_3 samples for the Shaftesbury and McLennan sites are over a two month sample period (January and February). There is no NO_2 sample result for Spirit River; sample was damaged upon arrival at the lab. The passive sample analyses were performed by MAXXAM Analytics Inc.

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

- Monthly average concentrations for SO_2 passives ranged from 0.2 ppb to 0.9 ppb, with a mean of 0.5 ppb.
- Monthly average concentrations for NO_2 passives ranged from 0.3 ppb to 6.9 ppb, with a mean of 1.1 ppb.
- Monthly average concentrations for O_3 passives ranged from 32.8 ppb to 50.1 ppb, with a mean of 43.6 ppb.

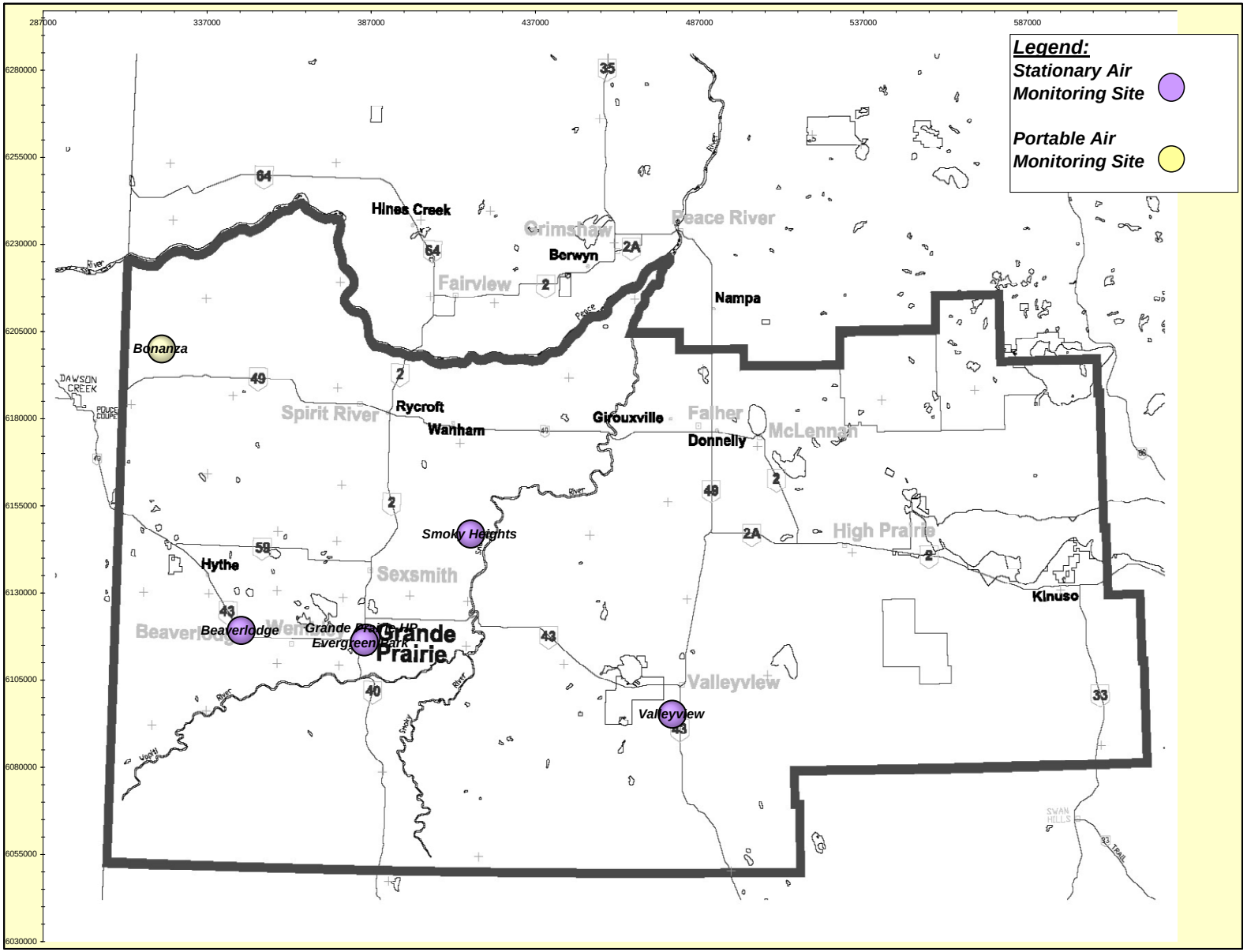
If you have any questions or concerns, please contact Shelly Pruden, PASZA Program Manager at 780.833.4343 or 780.882.4071.

On Behalf of the,
Peace Airshed Zone Association

Shelly Pruden
Program Manager

Sharon Whiteley, B.Sc.
FOCUS AQM Data Specialist

Location of PASZA Continuous Monitoring Stations



PASZA Monthly Continuous Data Summary

Feb-2011	Peace Airshed Zone Assocation						Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
Pollutant	**Objectives**		**Station**	**Monthly**	**Exceedence**		Conc	Day	Conc	Day	**Operational**
(units)	1-hr	24-hr		**Average**	1-hr	24-hr					**Time (%)**
SO_2 (ppb)	172	48	Henry Pirker	0.4	0	0	5.6	Feb-11 19:00	0.9	Feb-01	100.0%
SO_2 (ppb)	172	48	Evergreen Park	0.4	0	0	4.6	Feb-17 04:00	1.2	Feb-02	99.9%
SO_2 (ppb)	172	48	Smoky Heights	0.9	0	0	9.5	Feb-07 18:00	2.6	Feb-10	99.3%
SO_2 (ppb)	172	48	Beaverlodge	0.5	0	0	8.3	Feb-27 13:00	1.5	Feb-17	99.1%
SO_2 (ppb)	172	48	Portable-Bonanza	0.4	0	0	1.9	Feb-26 20:00	0.8	Feb-19	99.7%
SO_2 (ppb)	172	48	Valleyview	1.0	0	0	28.3	Feb-10 06:00	5.9	Feb-10	100.0%
NO (ppb)			Henry Pirker	5.4	0	0	139.3	Feb-01 12:00	33.8	Feb-01	100.0%
NO_2 (ppb)	212	106	Henry Pirker	12.5	0	0	51.9	Feb-14 09:00	28.6	Feb-08	100.0%
NO_X (ppb)			Henry Pirker	18.0	0	0	189.3	Feb-01 12:00	60.0	Feb-01	100.0%
NO (ppb)			Beaverlodge	0.7	0	0	18.5	Feb-19 13:00	4.4	Feb-19	99.1%
NO_2 (ppb)	212	106	Beaverlodge	3.6	0	0	27.9	Feb-01 01:00	10.9	Feb-19	99.1%
NO_X (ppb)			Beaverlodge	4.2	0	0	36.2	Feb-01 01:00	15.3	Feb-19	99.1%
NO (ppb)			Portable-Bonanza	0.8	0	0	14.8	Feb-19 13:00	3.1	Feb-19	96.9%
NO_2 (ppb)	212	106	Portable-Bonanza	3.3	0	0	23.6	Feb-01 07:00	10.7	Feb-19	96.9%
NO_X (ppb)			Portable-Bonanza	4.1	0	0	30.5	Feb-01 07:00	14.0	Feb-19	96.9%
O_3 (ppb)	82		Henry Pirker	27.3	0	-	46.5	Feb-21 04:00	39.6	Feb-21	100.0%
O_3 (ppb) - 8-hr			Henry Pirker		0				44.2	Feb-26	
O_3 (ppb)	82		Beaverlodge	36.8	0	-	47.4	Feb-21 01:00	42.9	Feb-13	99.1%
O_3 (ppb) - 8-hr			Beaverlodge		0				45.4	Feb-21	
O_3 (ppb)	82		Portable-Bonanza	35.0	0	-	45.5	Feb-25 16:00	42.4	Feb-13	99.9%
O_3 (ppb) - 8-hr			Portable-Bonanza		0				44.0	Feb-13	
CO (ppm)	13		Henry Pirker	0.23	-	-	1.6	Feb-14 09:00	0.4	Feb-14	100.0%
CO (ppm) - 8-hr	5		Henry Pirker		0				0.8	Feb-14	
THC (ppm)			Henry Pirker	2.14	-	-	3.4	Feb-01 16:00	2.9	Feb-20	100.0%
TRS (ppb)			Henry Pirker	0.3	-	-	1.3	Feb-14 10:00	0.6	Feb-01	100.0%
TRS (ppb)			Evergreen Park	0.7	-	-	1.5	Feb-01 16:00	1.1	Feb-01	100.0%
TRS (ppb)			Smoky Heights	0.3	-	-	0.9	Feb-20 23:00	0.5	Feb-08	99.3%
TRS (ppb)			Portable-Bonanza	0.5	-	-	0.8	Feb-16 05:00	0.6	Feb-19	99.7%
H_2S (ppb)	10	3	Valleyview	0.3	0	0	3.9	Feb-10 06:00	1.1	Feb-10	100.0%

PASZA Monthly Continuous Data Summary – continued

Feb-2011	Peace Airshed Zone Assocation						Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
PM2.5 (µg/m3)	80	30	Henry Pirker	8.6	0	0	45.6	Feb-25 00:00	17.2	Feb-01	89.6%
PM2.5 (µg/m3)	80	30	Evergreen Park	5.9	0	0	75.9	Feb-15 05:00	13.7	Feb-20	82.7%
PM2.5 (µg/m3)	80	30	Smoky Heights	3.0	0	0	35.5	Feb-17 09:00	9.3	Feb-01	98.8%
PM2.5 (µg/m3)	80	30	Beaverlodge	4.0	0	0	16.3	Feb-19 16:00	10.0	Feb-19	98.8%
RH (%)			Henry Pirker	64.0	-	-	88.9	Feb-13 00:00	77.5	Feb-26	100.0%
RH (%)			Evergreen Park	67.7	-	-	95.1	Feb-12 23:00	83.1	Feb-26	100.0%
RH (%)			Beaverlodge	66.9	-	-	93.0	Feb-04 20:00	81.5	Feb-26	98.4%
RH (%)			Valleyview	66.3	-	-	96.4	Feb-13 01:00	82.1	Feb-26	100.0%
SR (W/m^2)			Henry Pirker	58.9	-	-	387.8	Feb-24 14:00	97.3	Feb-24	100.0%
Temp (°C)			Henry Pirker	-11.1	-	-	9.0	Feb-11 13:00	4.9	Feb-02	100.0%
Temp (°C)			Evergreen Park	-10.4	-	-	9.4	Feb-02 16:00	6.3	Feb-02	100.0%
Temp (°C)			Smoky Heights	-11.8	-	-	5.8	Feb-02 15:00	3.5	Feb-02	99.3%
Temp (°C)			Beaverlodge	-10.2	-	-	7.9	Feb-02 15:00	4.9	Feb-02	98.4%
Temp (°C)			Portable-Bonanza	-11.3	-	-	6.1	Feb-03 01:00	3.5	Feb-03	99.9%
Temp (°C)			Valleyview	-10.9	-	-	9.9	Feb-02 16:00	3.8	Feb-11	100.0%
WSPD s (km/hr)			Henry Pirker	10.6	-	-	31.0	Feb-02 08:00	17.7	Feb-15	100.0%
WSPD s (km/hr)			Evergreen Park	7.7	-	-	26.0	Feb-03 10:00	16.6	Feb-10	100.0%
WSPD s (km/hr)			Smoky Heights	15.9	-	-	48.0	Feb-14 20:00	27.6	Feb-09	99.3%
WSPD s (km/hr)			Beaverlodge	12.8	-	-	41.0	Feb-03 09:00	21.7	Feb-10	99.1%
WSPD s (km/hr)			Portable-Bonanza	15.4	-	-	48.0	Feb-02 08:00	29.5	Feb-10	98.7%
WSPD s (km/hr)			Valleyview	6.9	-	-	23.0	Feb-09 21:00	16.0	Feb-27	99.9%
WSPD v (km/hr)			Henry Pirker	5.9	-	-	31.0	Feb-02 08:00	17.4	Feb-15	100.0%
WSPD v (km/hr)			Evergreen Park	4.1	-	-	26.0	Feb-03 10:00	16.4	Feb-10	100.0%
WSPD v (km/hr)			Smoky Heights	8.4	-	-	48.0	Feb-14 20:00	27.2	Feb-09	99.3%
WSPD v (km/hr)			Beaverlodge	5.4	-	-	41.0	Feb-03 09:00	21.4	Feb-27	99.1%
WSPD v (km/hr)			Portable-Bonanza	8.8	-	-	48.0	Feb-02 08:00	29.2	Feb-10	98.7%
WSPD v (km/hr)			Valleyview	3.0	-	-	23.0	Feb-09 21:00	15.4	Feb-27	99.9%
WDIR			Henry Pirker	WNW	-	-	-	-	-	-	100.0%
WDIR			Evergreen Park	WNW	-	-	-	-	-	-	100.0%
WDIR			Smoky Heights	W	-	-	-	-	-	-	99.3%
WDIR			Beaverlodge	WNW	-	-	-	-	-	-	99.1%
WDIR			Portable-Bonanza	WSW	-	-	-	-	-	-	98.7%
WDIR			Valleyview	NW	-	-	-	-	-	-	99.9%

Continuous Network Equipment Summary

PASZA – Henry Pirker Station

General Station Issues

Routine monthly calibrations were performed on February 7th (TRS, CO & THC) and February 8th (SO_2 NO_X & O_3).

Parameter	Make	Model	Notes
SO_2	TEI	43C	There were no spans on February 1st, 6th & 7th –configuration issues with spans resolved on February 7th.
NOx/NO/NO_2	TEI	42C	There were no spans on February 1st, 6th & 7th –configuration issues with spans resolved on February 7th.
O_3	TEI	49C	There were no spans on February 1st, 6th & 7th –configuration issues with spans resolved on February 7th.
CO	TEI	48C	There were no spans on February 1st, 6th & 7th –configuration issues with spans resolved on February 7th.
THC	TEI	51-CLT	There were no spans on February 1st, 6th & 7th – configuration issues with spans resolved on February 7th. Spans were outside the target February 1st to 8th and 13th and 14th – influences from external temperature.
TRS	TEI	45C/43C	There were no spans on February 1st, 6th & 7th – configuration issues with spans resolved on February 7th. Spans were outside the target February 9th to 19th, 21st, 23rd to 25th and 27th to March 1st – influences from external temperature.
$PM_{2.5}$	R&P	1400AB	Sixty-eight (68) hours were flagged for baseline drift. Two (2) hours were flagged invalid due to loading issue from adverse weather conditions. **AE Reference #245269**.
RH	Met One	083D	No operational issues observed.
ET	Met One	083D	No operational issues observed.
SR	Met One	096-1	No operational issues observed.
WS / WD	Met One	010C/020C	No operational issues observed.

PASZA – Evergreen Park Station

General Station Issues

Routine monthly calibrations were performed on February 4th (SO_2, TRS & $PM_{2.5}$).

Parameter	Make	Model	Notes
SO_2	TEI	43i	No operational issues observed. One (1) hour was flagged for maintenance to download data prior to calibration.
TRS	TEI	43C	No operational issues observed.
$PM_{2.5}$	R&P	1400AB	A total of one hundred and seventeen (117) hours were flagged for either baseline drift or unusual spiking caused by loading issues in adverse weather conditions. One (1) hour was flagged for maintenance to download data prior to calibration. **AE Reference #245270.**
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.

PASZA – Smoky Heights Station

General Station Issues

Routine monthly calibrations were performed on February 9th (SO_2, TRS & $PM_{2.5}$). There were two power failures: February 4th and 14th resulting in several hous of invalid data for all parameters.

Parameter	Make	Model	Notes
SO_2	TEI	43C	Spans were outside the target range February 1st, 2nd, 5th, 8th & 9th – due to influnces from external temperatures. Five (5) hours were flagged for above noted power failures.
TRS	TEI	43C	Spans were outside the target range February 16th to 19th, 22nd to 25th & 27th to March 1st – due to influnces from external temperatures. Five (5) hours were flagged for above noted power failures.
$PM_{2.5}$	R&P	1400AB	One (1) hour was flagged due to baseline drift. Seven (7) hours were flagged for above noted power failures.
ET	Met One	083D	Five (5) hours were flagged for above noted power failures.
WS / WD	Met One	010C/020C	Five (5) hours were flagged for above noted power failures.

PASZA – Beaverlodge Station

General Station Issues

Routine monthly calibrations were performed on February 2nd (SO_2, O_3 & NO_X). On February 8th six (6) hours are flagged invalid for all parameters due to an error in updating the datalogger programming the result was no data was collected during this time.

Parameter	Make	Model	Notes
SO_2	TEI	43CTL	Span on February 18th was outside the target due to influence from external temperature.
NOx/NO/NO_2	TEI	42C	No operational issues other than above noted error.
O_3	TEI	49C	Span on February 15th was outside the target due to influence from external temperature.
$PM_{2.5}$	R&P	1400AB	Two (2) additional hours were flagged invalid on February 15th due to loading issues from adverse weather.
ET	n/a	n/a	Five (5) additional hours were flagged invalid due to signal interference – possibly due to loose connection.
RH	n/a	n/a	Five (5) additional hours were flagged invalid due to signal interference – possibly due to loose connection.
WS / WD	Blue Sky	857	No operational issues other than above noted error.

PASZA – Bonanza (Portable) Station

General Station Issues

Routine monthly calibrations were performed on February 16th and February 17th (SO_2, TRS, NO_X & O_3). On February 16th the AP1000 datalogger was replaced with the new Campbell Scientific datalogger; As-founds were captured on February 16th and full calibrations were performed on February 17th.

Parameter	Make	Model	Notes
SO_2	TEI	43C	Two (2) hours were flagged maintenance for the datalogger replacement.
TRS	TEI	43C	Spans were outside the target range Febraury 12th, 21st, 26th & 27th – reason unknown. Two (2) hours were flagged maintenance for the datalogger replacement.
NOx/NO/NO_2	TEI	42I	Twenty-one (21) hours were flagged invalid due to a loose wire connection – issue resolved February 17th.
O_3	TEI	49C	One (1) hour was flagged maintenance for the datalogger replacement.
ET	Met One		One (1) hour was flagged maintenance for the datalogger replacement.
WS / WD	Met One	010C/020C	Eight (8) hours were flagged invalid due to flatlining caused by freezing conditions. One (1) hour was flagged maintenance for the datalogger replacement.

PASZA – Valleyview Station

General Station Issues

Routine monthly calibrations were performed on Febraury 3rd (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	Gill	Met Pak 3	One (1) hour was flagged invalid due to spiking caused by fog/snow conditions.
WD	Gill	Met Pak 3	One (1) hour was flagged invalid due to spiking caused by fog/snow conditions.

PASZA
Henry Pirker Station
Monthly Summary Tables, Graphs and Roses

PASZA
Peace Air Shed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 5.6 ppb on Feb 11 19:00 Maximum Daily Average: 0.9 ppb on Feb 1

Minimum Value: 0 ppb on Feb 11 04:00 Minimum Daily Average: 0.1 ppb on Feb 26
Maximum Diurnal Average: 0.6 ppb at hour 19 Minimum Diurnal Average: 0.3 ppb at hour 6
Monthly Average: 0.38 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.2$ Median = 0.3 $Q_3 = 0.5$ $P_{90} = 0.8$ $P_{99} = 1.9$

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	0	0	0.9	1.9
2-Feb	0	0	0	A	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	3.1
3-Feb	0	0	0	0	0	0	0	0	A	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
4-Feb	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
5-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
6-Feb	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	1	0	0	0	1	2	1	0.6	2.2
7-Feb	1	1	0	0	1	1	1	1	1	1	1	1	1	1	A	2	2	1	1	1	1	1	1	1	0.9	1.9
8-Feb	1	0	0	0	0	0	1	1	1	C	C	C	1	A	A	0	0	0	1	0	0	0	0	0	0.4	0.9
9-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	A	0	0	0	0	0.3	1.3
10-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.2
11-Feb	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	3	1	A	6	2	0	0	0	0	0.7	5.6
12-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	1	0	0	0	0	0.3	0.9
13-Feb	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.7
14-Feb	0	0	0	0	0	0	0	0	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	1.3
15-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	0	0	1	1	0	0	0.3	1.1
16-Feb	1	1	3	2	1	0	0	0	0	1	1	1	A	1	1	1	0	1	1	1	1	1	0	0	0.7	2.5
17-Feb	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	1	1	1	1	1	1	0.5	1.0
18-Feb	1	1	0	0	0	0	0	1	1	1	A	0	1	1	1	0	0	0	0	0	0	1	1	0	0.5	0.9
19-Feb	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	1	1	0	1	0	0	0	0	0	0.4	0.9
20-Feb	0	0	0	0	0	0	0	0	A	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0.5	0.8
21-Feb	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0.3	0.7
22-Feb	0	0	0	3	1	0	A	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.6
23-Feb	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
24-Feb	0	0	1	1	A	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0.4	0.8
25-Feb	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
26-Feb	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
27-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
28-Feb	A	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	A	0.3	0.6
	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.6	0.4	0.4	0.4	0.4	0.3	Diurnal Average	
	1.0	1.2	2.5	2.6	0.9	0.9	0.8	3.1	1.0	1.3	1.6	1.9	1.3	1.5	1.5	3.0	1.9	1.4	5.6	2.1	0.9	1.4	2.2	1.0	Diurnal Maximum	

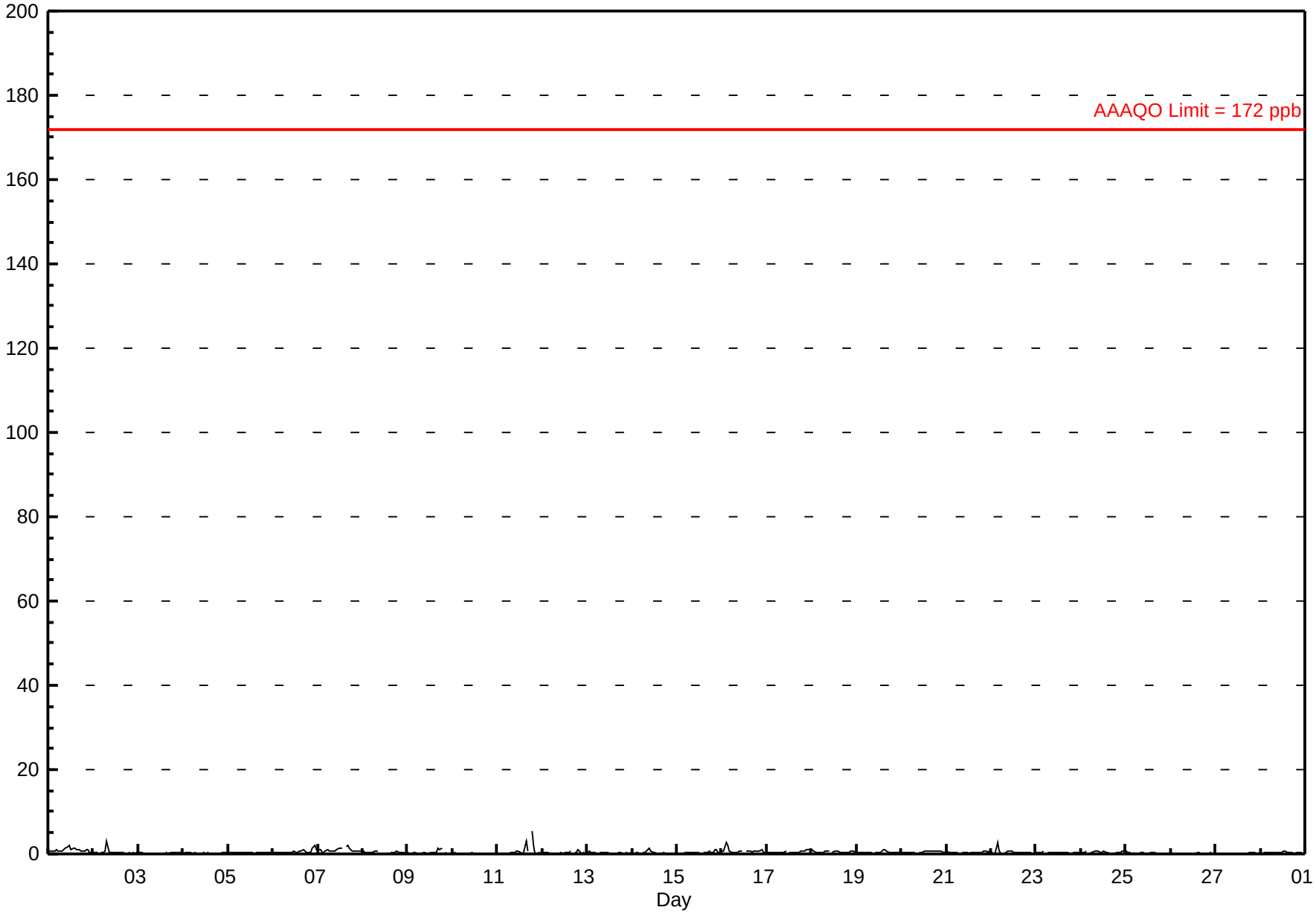
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

PASZA
Peace Air Shed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - February 2011

Maximum Value: 10.3 ppb on Feb 2 08:00

Maximum Daily Average: 1.9 ppb on Feb 11

Minimum Value: 0 ppb on Feb 14 22:00

Minimum Daily Average: 0.5 ppb on Feb 27

Maximum Diurnal Average: 1.3 ppb at hour 16

Minimum Diurnal Average: 0.8 ppb at hour 6

Monthly Average: 0.96 ppb

Percentiles: P_1 = 0.3 P_{10} = 0.5 Q_1 = 0.6 Median = 0.8 Q_3 = 1.1 P_{90} = 1.4 P_{99} = 4.2

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	1	1	1	1	2	1	1	1	1	2	2	3	2	2	2	2	2	1	1	1	3	4	1	1	1.7	3.7
2-Feb	1	1	1	A	1	1	2	10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	10.3
3-Feb	1	1	1	1	1	1	1	1	A	A	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2
4-Feb	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	1	0	1	1	1	1	1	0.7	1.0
5-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0.8	1.0
6-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	3	3	2	1.1	3.2
7-Feb	2	2	1	1	1	1	1	1	1	1	2	2	2	2	A	2	3	2	2	1	2	1	1	1	1.5	2.5
8-Feb	1	1	1	1	1	1	1	1	1	C	C	C	2	A	A	1	1	1	1	1	1	1	1	1	1.0	2.4
9-Feb	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	2	3	2	2	A	1	1	1	1	0.9	2.8
10-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	0.7
11-Feb	0	1	0	0	0	1	1	1	1	1	1	1	1	1	7	9	2	A	7	6	1	1	1	1	1.9	9.0
12-Feb	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.8	1.5
13-Feb	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.7	1.5
14-Feb	1	1	1	1	0	0	1	1	2	2	1	1	1	0	A	1	1	2	0	0	0	0	0	0	0.7	1.9
15-Feb	0	0	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	3	3	1	1	1.0	3.0
16-Feb	1	1	5	4	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	2	2	1	1	1.4	4.7
17-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	2	1	2	1.0	1.6
18-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
19-Feb	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	2	1	1	1	1	1	1	1	1	0.9	1.5
20-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	1.4
21-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	1.4
22-Feb	1	1	0	8	2	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	7.8
23-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	1.1
24-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	1.3
25-Feb	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	0	0.6	1.1
26-Feb	0	1	A	1	1	1	0	1	0	1	0	1	0	0	1	1	1	0	0	1	1	1	0	0	0.6	0.9
27-Feb	1	A	1	0	0	0	0	0	0	1	0	0	1	1	1	0	1	0	1	1	1	1	1	1	0.5	0.9
28-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	1.1
	0.9	0.8	0.9	1.2	0.8	0.8	0.8	1.1	0.9	0.9	0.9	0.9	0.9	0.9	1.1	1.3	1.0	1.0	1.1	1.0	1.0	1.1	0.9	0.8	Diurnal Average	
	1.6	1.8	4.7	7.8	2.0	1.4	1.7	10.3	1.6	1.9	2.2	2.7	2.4	2.2	7.2	9.0	2.8	2.2	7.0	5.5	3.2	3.7	3.2	1.9	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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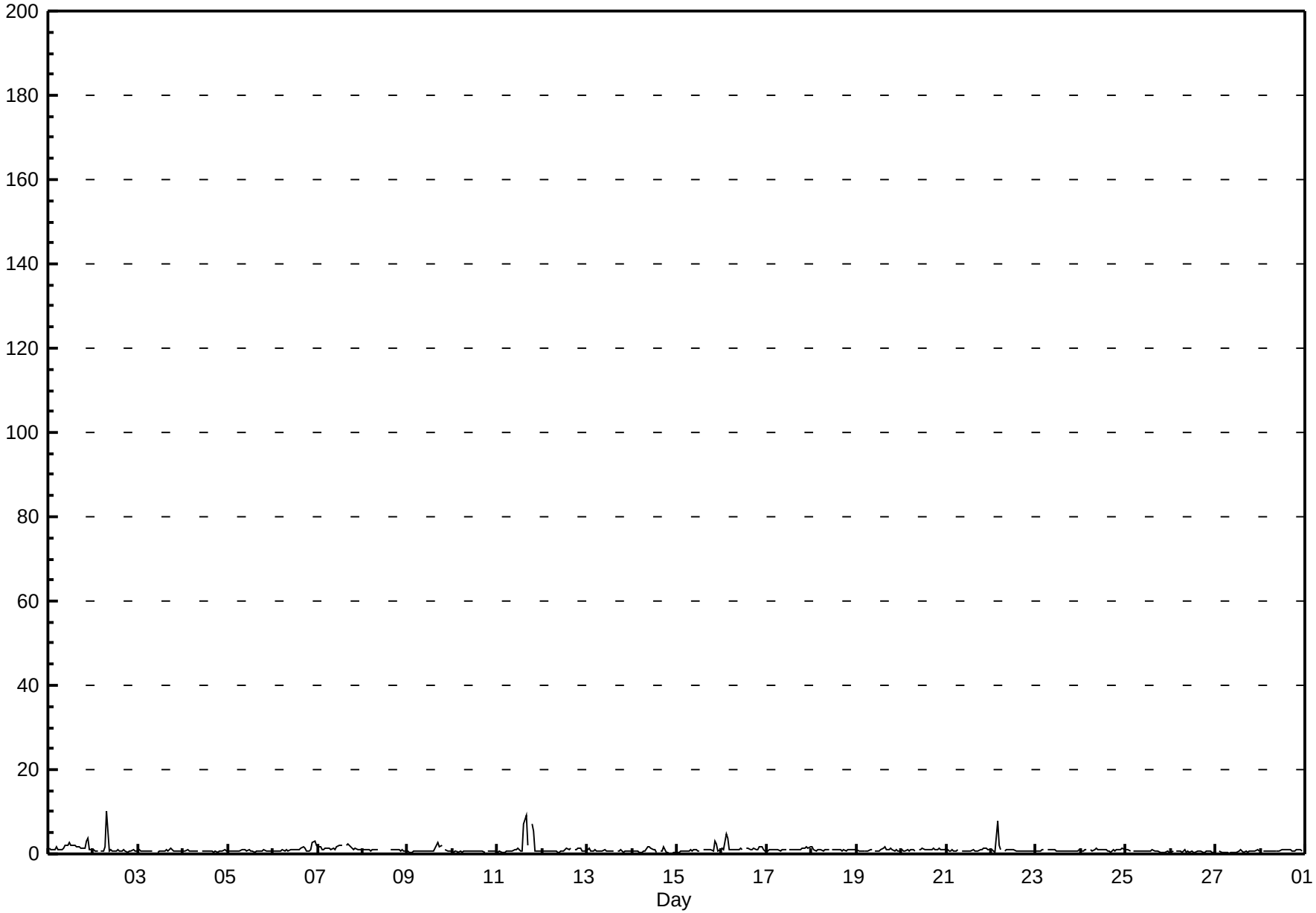
Peace Air Shed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - February 2011



FOCUS AIR QUALITY MONITORING

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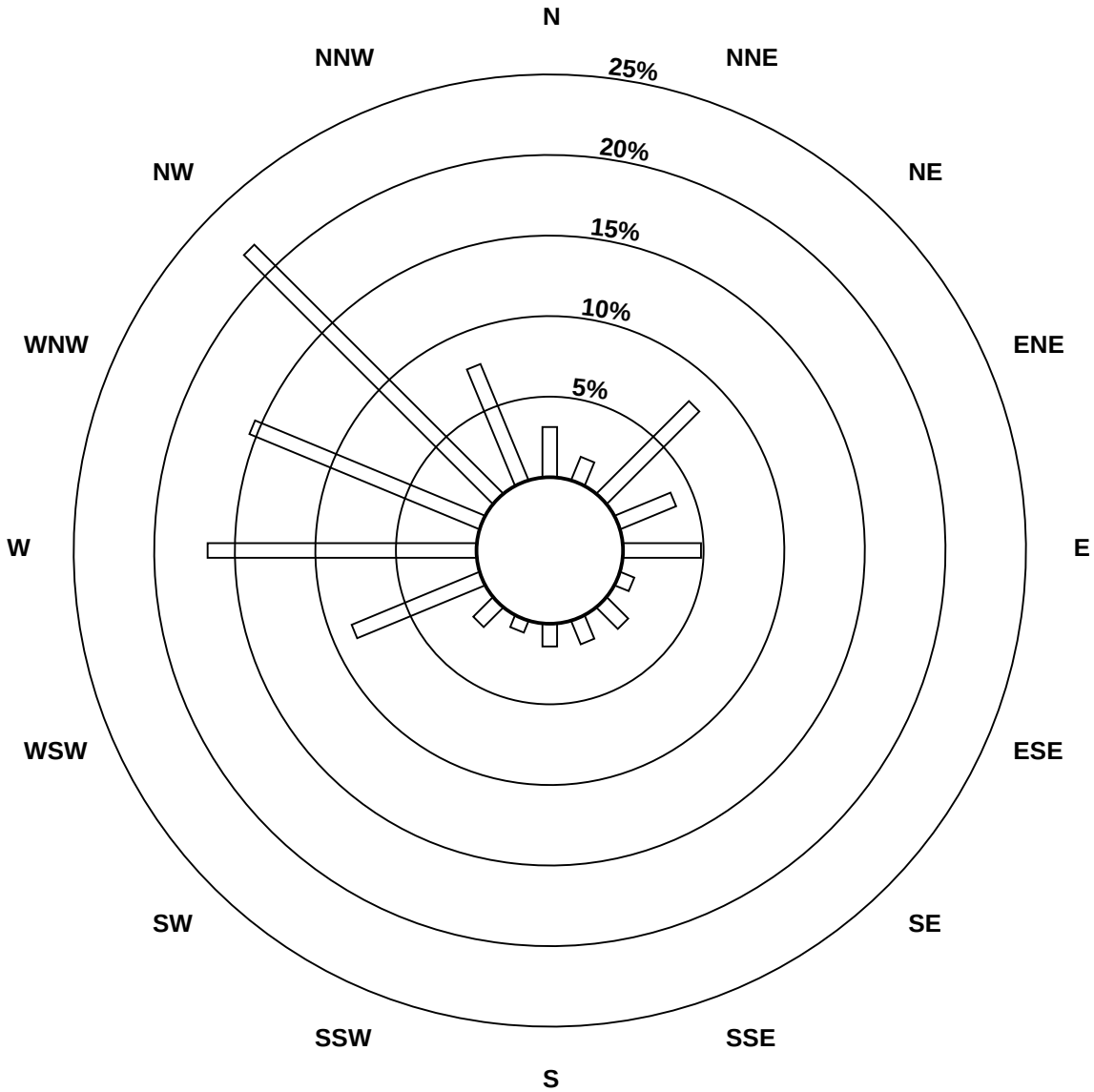
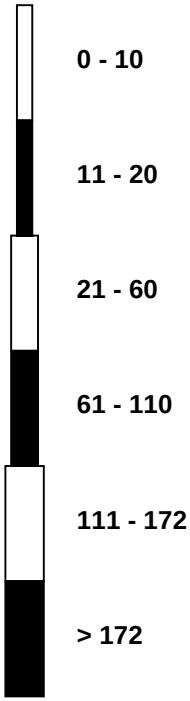
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - February 2011



Pollutant Classes (ppb)



FOCUS AIR QUALITY MONITORING

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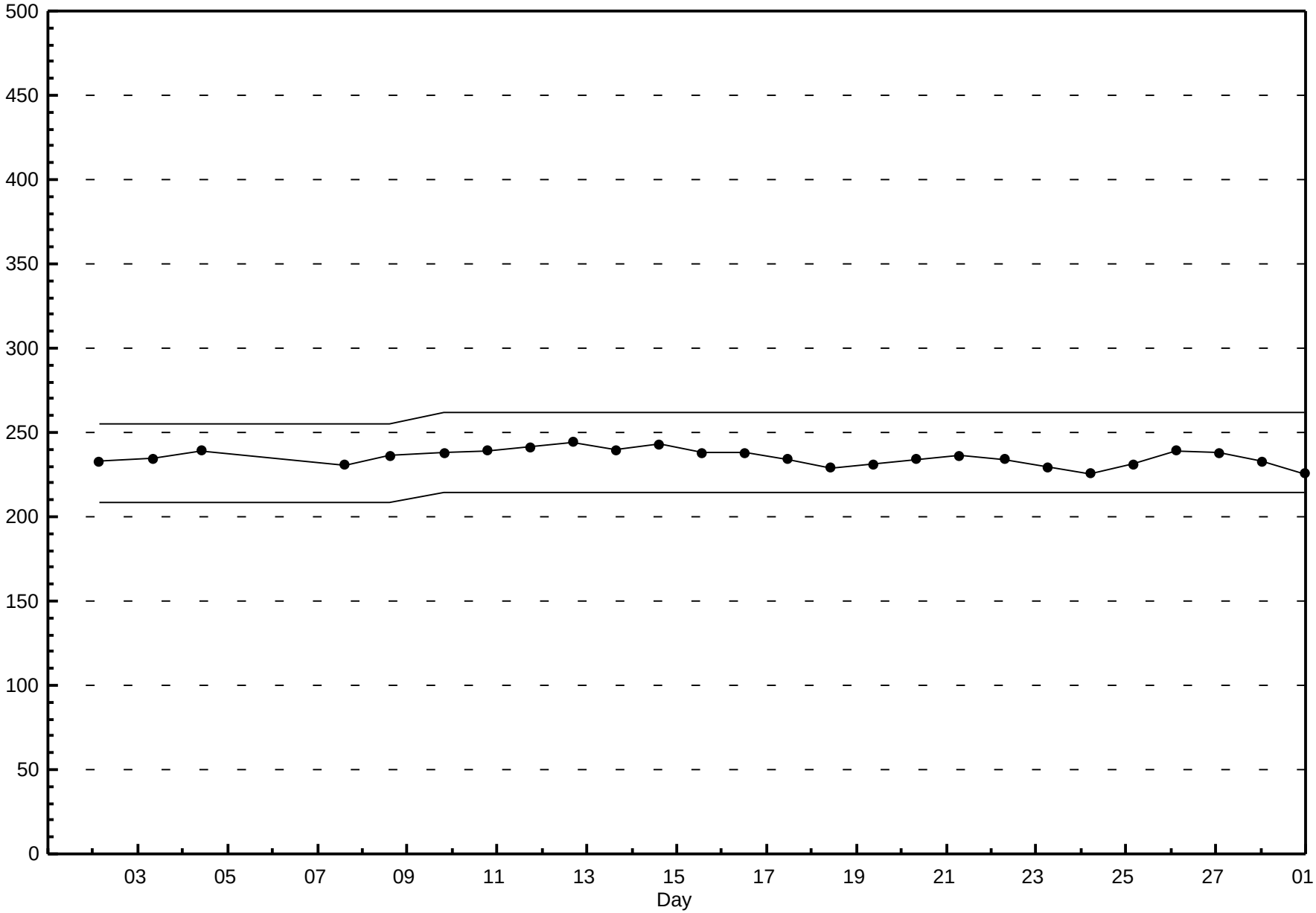
Span Responses

Sulphur Dioxide (SO_2)

Henry Pirker - February 2011



PASZA
Peace Air Shed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.3 ppb on Feb 14 10:00 Maximum Daily Average: 0.6 ppb on Feb 1

Minimum Value: 0 ppb on Feb 27 01:00 Minimum Daily Average: 0.1 ppb on Feb 17
Maximum Diurnal Average: 0.4 ppb at hour 10 Minimum Diurnal Average: 0.3 ppb at hour 6
Monthly Average: 0.32 ppb Percentiles: $P_1 = 0.1$ $P_{10} = 0.2$ $Q_1 = 0.2$ Median = 0.3 $Q_3 = 0.4$ $P_{90} = 0.5$ $P_{99} = 0.8$

Hours in Service:	672
Hours of Data:	642
Hours of Missing Data:	30
Hours of Calibration:	30
Percent Operational Time:	100.0

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

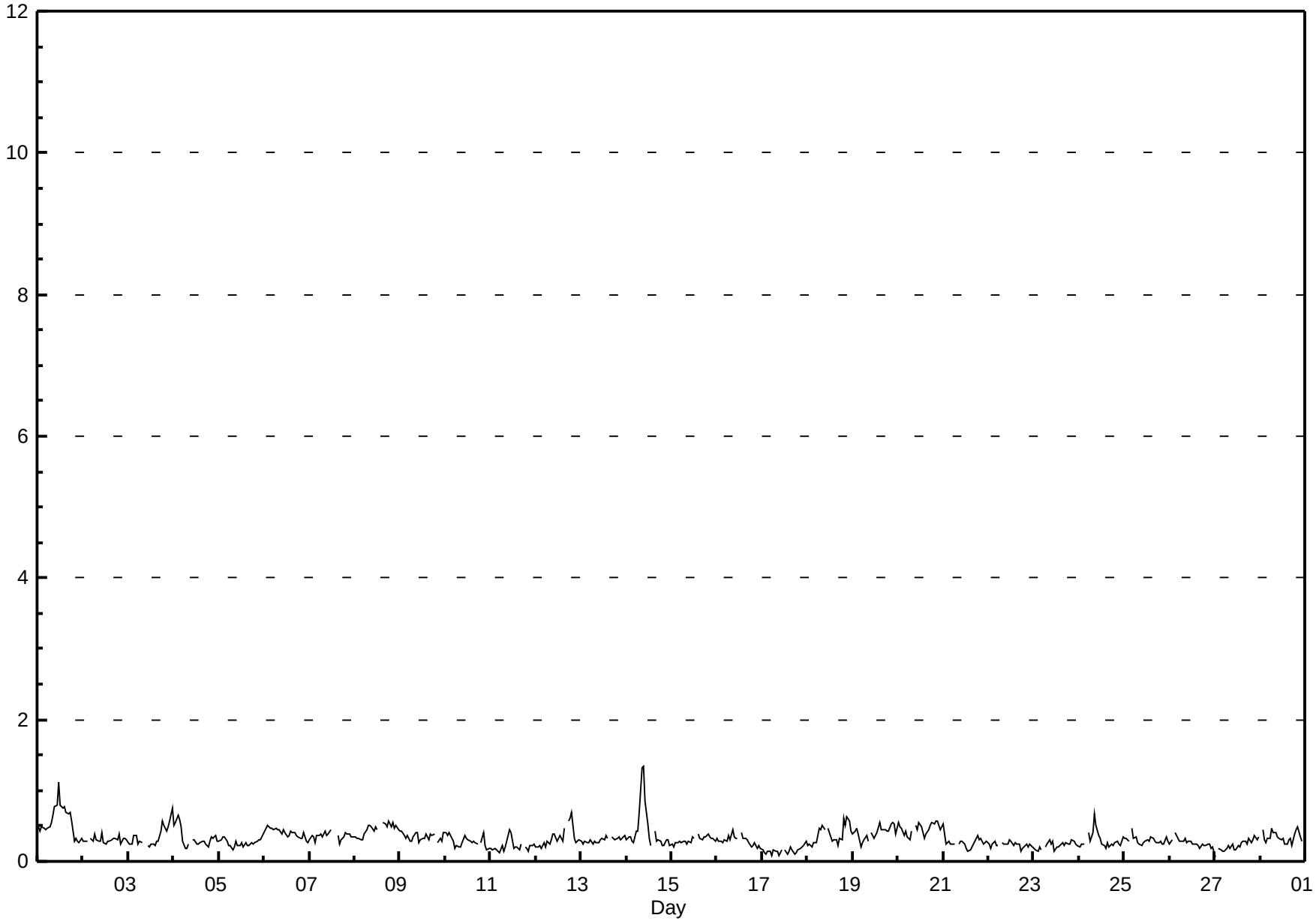
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

PASZA
Peace Air Shed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - February 2011

Maximum Value: 2.1 ppb on Feb 14 09:00

Maximum Daily Average: 1.2 ppb on Feb 1

Minimum Value: 1 ppb on Feb 15 02:00

Minimum Daily Average: 0.8 ppb on Feb 17

Maximum Diurnal Average: 1.0 ppb at hour 12

Minimum Diurnal Average: 0.9 ppb at hour 6

Monthly Average: 0.94 ppb

Percentiles: $P_1 = 0.6$ $P_{10} = 0.7$ $Q_1 = 0.8$ Median = 0.9 $Q_3 = 1.0$ $P_{90} = 1.1$ $P_{99} = 1.6$

Hours in Service:	672
Hours of Data:	642
Hours of Missing Data:	30
Hours of Calibration:	30
Percent Operational Time:	100.0

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

C - Calibration

A - Automated Daily Zero Span

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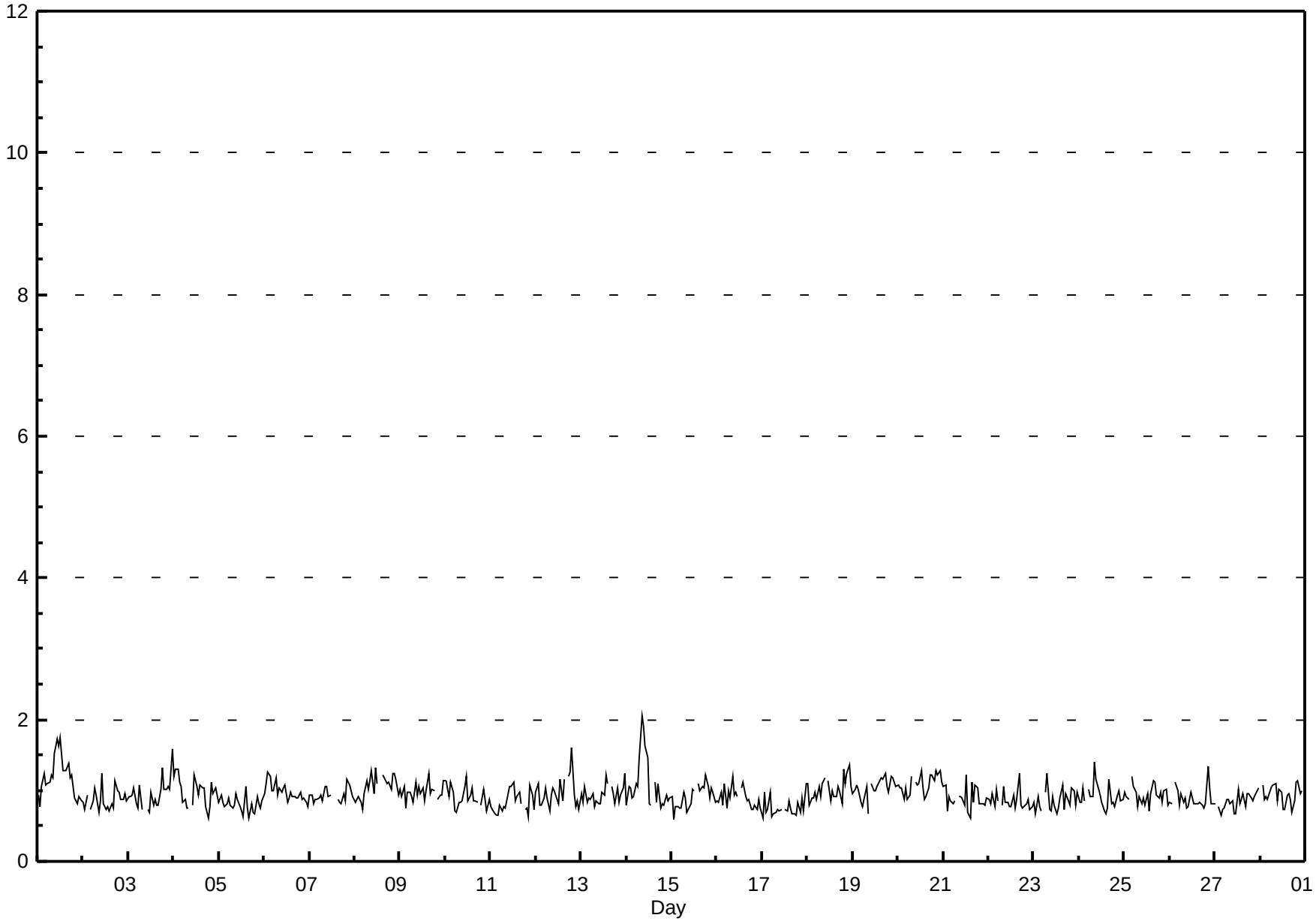
Peace Air Shed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - February 2011



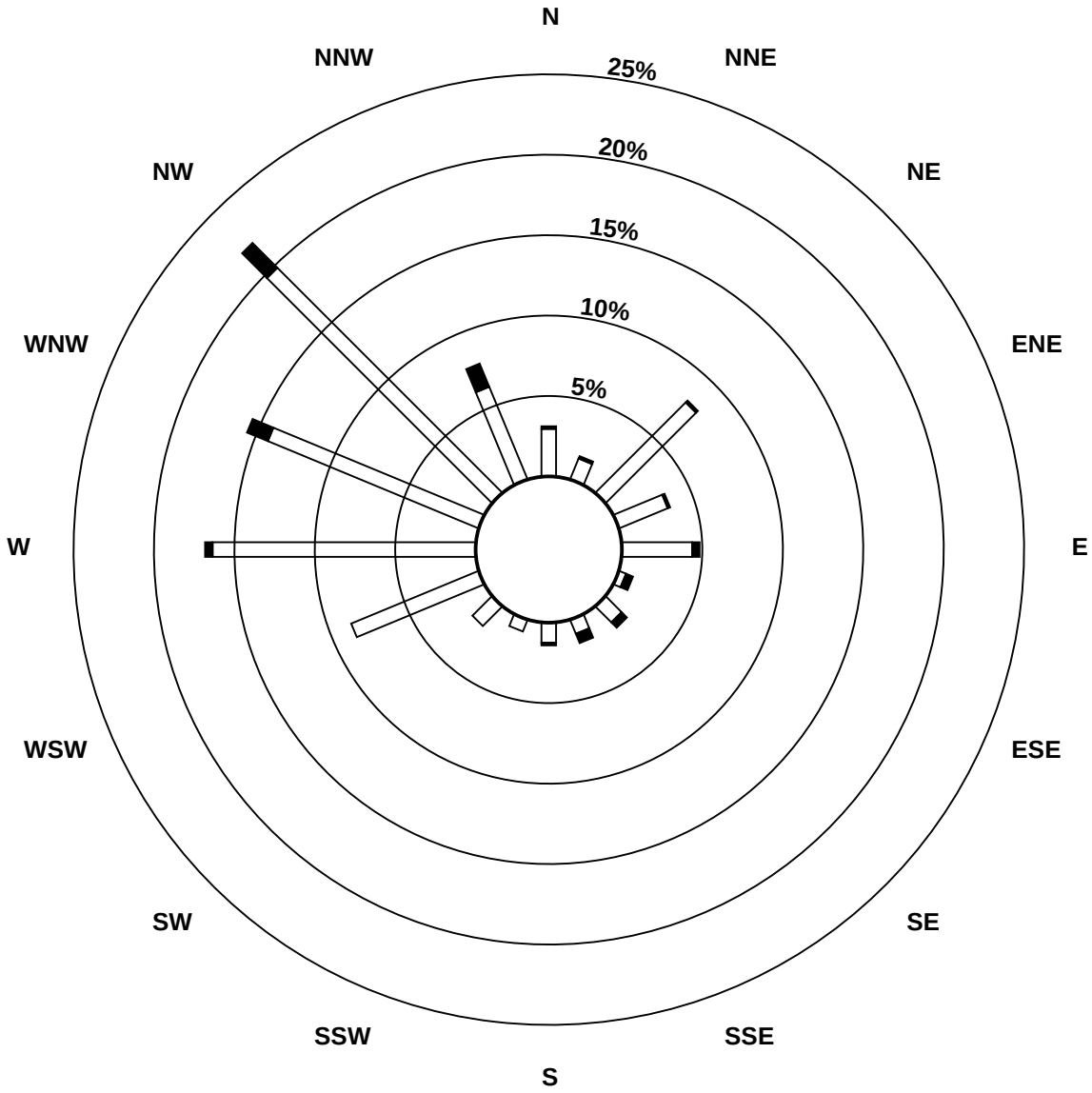
FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

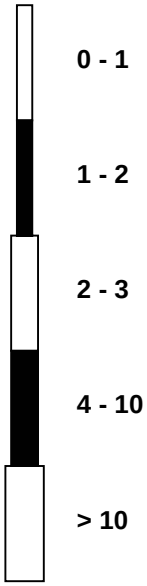
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - February 2011



Pollutant Classes (ppb)

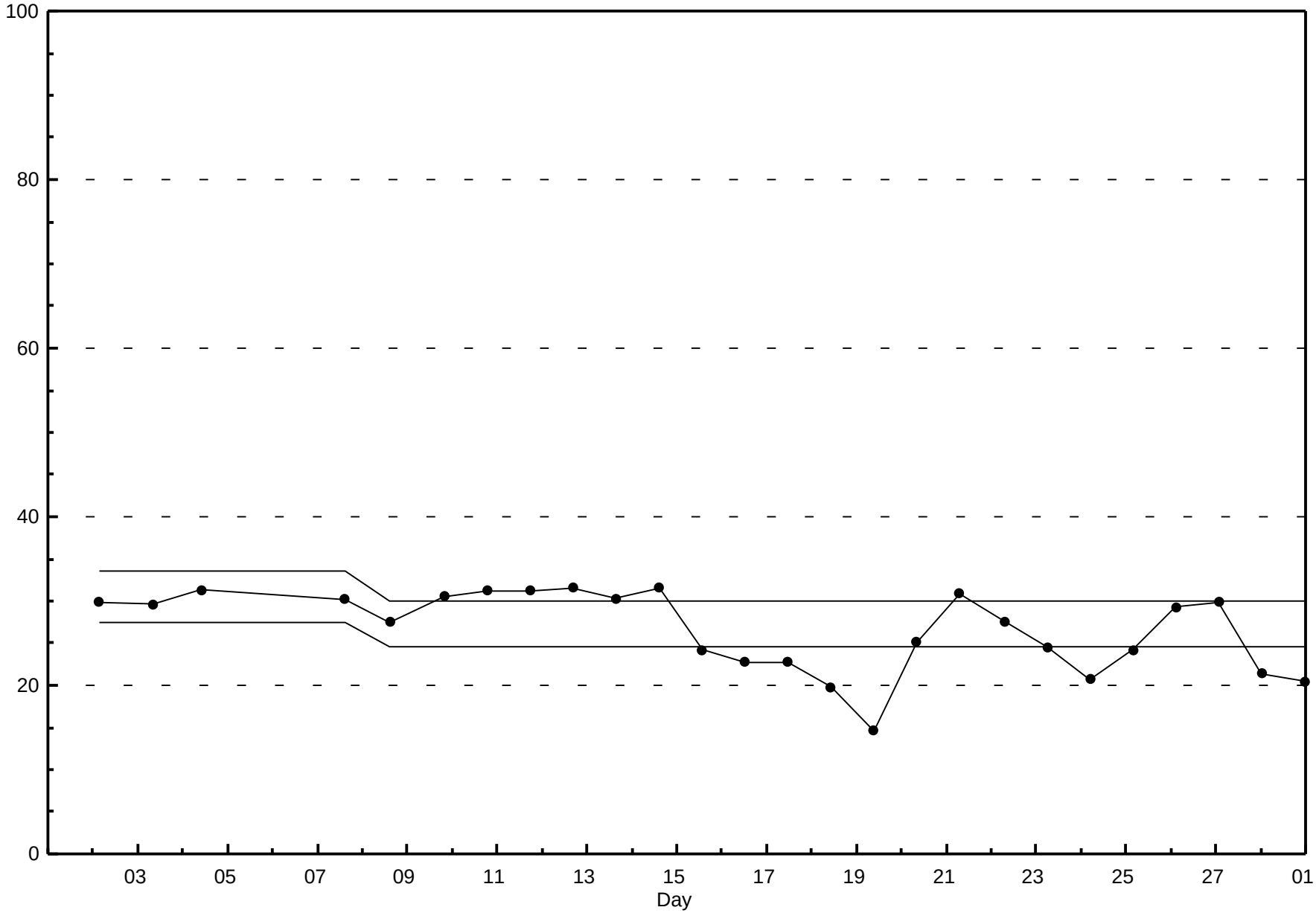


PASZA
Peace Air Shed Zone Association

Span Responses

Total Reduced Sulphur (TRS)

Henry Pirker - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 51.9 ppb on Feb 14 09:00
Maximum Daily Average: 28.6 ppb on Feb 8

Minimum Value: 1 ppb on Feb 5 14:00
Maximum Diurnal Average: 18.4 ppb at hour 20
Monthly Average: 12.45 ppb

Minimum Daily Average: 2.2 ppb on Feb 5
Minimum Diurnal Average: 7.5 ppb at hour 14
Percentiles: P_1 = 1.5 P_{10} = 2.8 Q_1 = 4.2 Median = 7.5 Q_3 = 19.3 P_{90} = 30.9 P_{99} = 40.3

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	29	27	27	27	26	25	28	28	29	35	33	47	31	26	27	21	26	34	35	13	6	6	7	7	25.0	47.4
2-Feb	5	5	5	A	5	4	6	5	5	7	8	7	6	6	8	10	15	17	20	34	21	27	23	17	11.5	33.8
3-Feb	8	8	11	20	26	6	24	7	A	A	6	6	8	6	6	9	12	33	40	39	31	24	37	27	17.9	40.1
4-Feb	11	18	28	28	28	13	14	8	11	A	6	7	7	5	5	5	3	2	3	2	2	2	2	2	9.2	28.1
5-Feb	2	1	2	2	2	2	1	2	3	2	1	1	2	1	2	2	2	3	3	3	3	4	4	4	2.2	4.1
6-Feb	7	7	6	7	7	9	7	8	9	7	6	5	4	4	4	5	5	5	4	6	5	5	6	3	5.9	9.3
7-Feb	4	4	3	3	5	6	9	12	17	10	8	9	6	5	A	6	7	22	35	40	37	30	22	26	14.2	39.6
8-Feb	25	21	18	21	22	28	32	36	33	C	C	C	C	C	A	21	25	32	39	33	35	32	31	28	28.6	39.3
9-Feb	23	13	8	4	9	7	9	22	30	23	6	8	7	5	5	6	9	12	13	A	6	5	7	5	10.5	29.8
10-Feb	4	2	1	4	4	9	13	8	8	7	7	6	7	6	7	7	9	10	A	9	11	7	5	5	6.8	12.7
11-Feb	4	3	3	2	4	7	18	25	25	40	36	22	9	5	10	10	17	A	15	14	8	11	17	22	14.2	39.7
12-Feb	20	12	14	11	11	16	23	26	20	25	21	12	15	13	22	26	A	32	40	42	17	12	7	12	19.5	41.7
13-Feb	4	4	4	3	3	4	4	3	3	4	3	3	5	6	6	A	13	9	7	9	11	17	20	22	7.3	22.0
14-Feb	14	20	16	13	16	38	41	43	52	51	36	22	11	9	A	10	7	5	4	3	4	4	5	5	18.6	51.9
15-Feb	3	2	2	2	2	2	3	3	3	2	2	2	2	A	3	3	3	4	4	5	4	4	3	2	2.8	5.1
16-Feb	2	3	3	5	6	11	23	24	31	7	5	7	A	8	6	8	6	6	7	7	7	6	6	7	8.8	31.2
17-Feb	5	3	4	4	4	6	9	8	7	6	4	A	4	5	6	6	4	5	8	6	7	6	6	7	5.6	9.0
18-Feb	14	12	19	18	19	23	30	35	32	26	A	13	12	10	13	13	10	18	29	43	40	40	36	29	23.2	43.2
19-Feb	25	23	22	16	17	26	31	31	26	A	13	14	14	20	24	18	20	27	32	31	35	34	31	32	24.4	34.8
20-Feb	35	33	33	31	31	26	30	32	A	21	19	17	16	17	17	20	24	27	36	39	39	38	35	37	28.4	39.3
21-Feb	38	7	5	3	2	6	8	A	7	9	9	4	4	4	3	2	2	2	2	3	4	3	3	3	5.8	38.0
22-Feb	3	3	4	3	3	4	A	11	13	7	5	4	3	3	3	4	4	6	6	6	6	11	17	8	6.0	16.9
23-Feb	3	3	3	3	5	A	6	13	15	14	9	4	3	3	3	4	3	7	9	18	16	12	10	9	7.7	18.2
24-Feb	9	11	9	9	A	10	18	30	39	30	16	10	8	6	4	4	5	14	19	28	23	14	13	16	15.1	38.7
25-Feb	22	19	14	A	21	20	28	13	14	9	7	7	8	8	9	15	16	7	5	5	5	4	3	3	11.4	27.9
26-Feb	2	2	A	2	2	3	4	4	5	6	8	6	4	5	5	6	8	10	17	23	22	20	3	3	7.4	22.8
27-Feb	3	A	2	2	3	3	3	5	4	4	3	3	3	3	4	3	4	5	7	5	4	4	4	3	3.5	6.6
28-Feb	A	4	5	8	7	7	9	10	10	7	5	4	3	3	3	4	5	8	22	34	33	26	23	A	11.0	33.6
	12.1	10.0	10.1	9.7	10.8	11.9	15.9	16.7	17.2	14.9	10.9	9.6	7.8	7.5	8.2	9.2	9.8	13.4	17.1	18.4	15.8	14.7	13.7	12.7	Diurnal Average	
	38.0	32.5	33.3	31.4	31.0	38.0	40.8	43.4	51.9	51.2	36.0	47.4	31.3	25.5	26.9	26.3	26.3	33.7	40.1	43.2	39.9	40.4	36.8	36.9	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 212 ppb 24-hr 106 ppb

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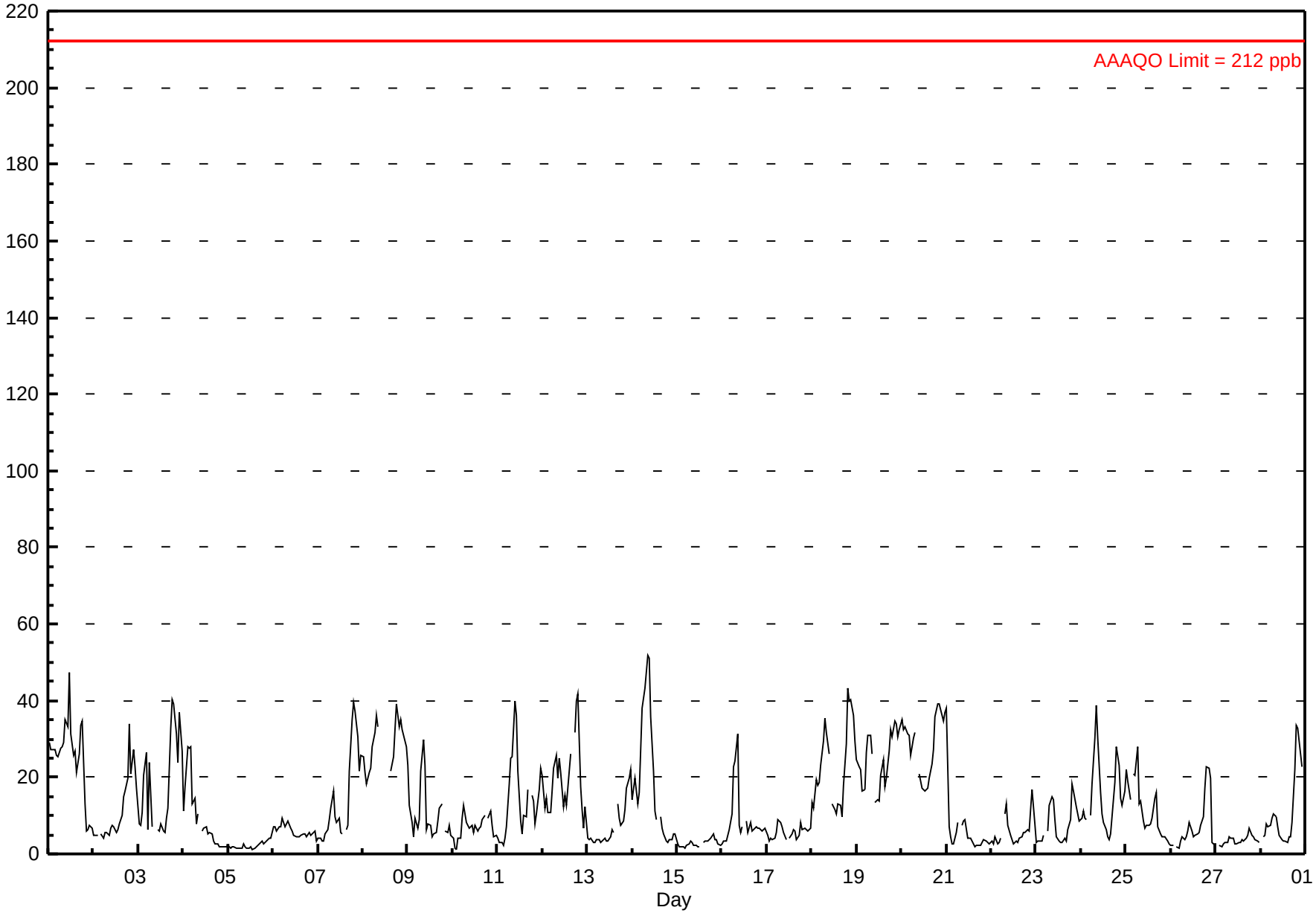
Peace Air Shed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - February 2011

Maximum Value: 69.8 ppb on Feb 14 09:00

Maximum Daily Average: 34.5 ppb on Feb 8

Minimum Value: 2 ppb on Feb 4 23:00

Minimum Daily Average: 4.3 ppb on Feb 15

Maximum Diurnal Average: 23.8 ppb at hour 9

Minimum Diurnal Average: 11.8 ppb at hour 15

Monthly Average: 17.43 ppb

Percentiles: P_1 = 2.5 P_{10} = 4.6 Q_1 = 6.7 Median = 12.6 Q_3 = 27.4 P_{90} = 36.9 P_{99} = 49.2

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	34	29	28	28	28	26	36	30	34	69	47	55	54	36	35	24	31	36	41	23	10	9	11	10	31.9	69.1
2-Feb	14	13	8	A	8	6	7	8	6	12	11	12	10	8	11	16	24	27	40	44	30	33	31	30	17.9	43.6
3-Feb	13	14	31	35	40	17	37	15	A	A	10	9	15	11	8	21	24	44	45	40	40	39	40	33	26.5	45.0
4-Feb	14	25	31	31	36	25	24	17	25	A	8	8	9	7	7	10	6	5	4	3	3	3	2	3	13.4	36.4
5-Feb	5	2	4	2	4	3	3	5	19	3	2	3	3	2	3	3	4	5	5	5	6	6	6	6	4.5	19.3
6-Feb	16	12	8	11	11	18	9	10	12	10	7	8	6	8	6	6	8	7	7	7	7	8	8	6	8.9	17.8
7-Feb	5	5	5	5	7	9	14	18	22	18	11	18	9	9	A	10	12	31	41	42	43	40	27	31	18.7	42.7
8-Feb	33	28	25	28	29	31	40	42	38	C	C	C	C	C	A	28	32	38	40	39	41	36	36	36	34.5	42.1
9-Feb	36	17	19	13	25	17	23	34	37	33	13	12	10	8	7	7	11	14	16	A	9	10	10	7	16.9	37.3
10-Feb	7	2	3	7	7	15	16	12	12	11	11	10	13	9	8	10	15	12	A	13	21	13	10	7	10.8	21.0
11-Feb	8	5	5	5	7	12	31	35	42	45	43	36	15	10	19	16	34	A	24	27	11	18	25	32	22.0	45.4
12-Feb	36	18	21	16	16	21	32	36	27	30	29	18	19	18	28	38	A	39	45	46	32	17	12	18	26.7	46.2
13-Feb	6	6	6	6	4	6	5	4	5	7	5	5	7	9	9	A	18	17	14	13	15	26	29	30	10.9	30.0
14-Feb	19	24	25	24	28	49	47	49	70	56	51	28	22	12	A	14	9	7	6	5	8	7	9	10	25.1	69.8
15-Feb	8	3	3	3	4	3	4	5	5	3	3	4	3	A	4	4	5	5	5	7	7	5	4	3	4.3	8.4
16-Feb	3	5	5	7	8	15	31	32	34	18	7	10	A	11	15	25	10	11	12	9	8	9	10	11	13.3	34.0
17-Feb	7	6	6	6	7	10	14	13	14	11	6	A	7	10	9	16	8	7	10	9	8	8	9	11	9.3	15.6
18-Feb	22	24	28	22	22	30	51	40	37	32	A	16	16	14	18	16	22	21	44	46	43	43	39	32	29.7	51.4
19-Feb	30	30	29	23	20	32	34	35	35	A	16	17	17	27	31	23	25	32	36	36	39	36	35	38	29.5	38.8
20-Feb	37	38	37	35	34	29	34	34	A	26	34	27	25	24	20	23	28	36	38	42	42	40	38	43	33.3	42.9
21-Feb	50	29	9	5	4	11	13	A	10	12	17	5	5	6	4	3	3	3	4	5	6	6	9	4	9.7	49.8
22-Feb	5	4	6	5	5	6	A	16	19	11	7	6	4	17	9	13	8	9	9	10	11	17	24	20	10.4	24.2
23-Feb	7	5	5	5	7	A	8	21	20	25	32	8	7	5	5	14	7	15	15	30	21	24	16	16	13.8	32.5
24-Feb	15	16	11	13	A	13	26	36	46	36	26	14	13	9	6	6	13	25	26	31	26	23	16	28	20.6	45.8
25-Feb	29	22	17	A	35	27	41	20	18	13	9	11	10	12	14	22	22	13	8	6	6	6	5	4	16.1	40.8
26-Feb	4	4	A	4	3	5	8	10	7	9	11	8	6	17	6	9	10	13	23	27	33	41	6	4	11.6	40.5
27-Feb	7	A	3	3	5	5	6	8	7	6	4	4	6	5	5	6	9	11	10	8	9	6	5	4	6.2	11.2
28-Feb	A	7	8	11	13	12	16	15	15	13	7	5	6	5	5	15	7	17	34	37	36	32	31	A	15.9	37.2
	17.4	14.6	14.3	13.6	15.5	16.8	22.5	22.2	23.8	21.3	16.4	13.7	12.2	11.9	11.8	14.8	15.0	18.5	22.3	22.7	20.4	20.0	18.0	17.7	Diurnal Average	
	49.8	38.1	37.0	35.2	40.0	48.7	51.4	49.4	69.8	69.1	50.8	55.4	53.9	35.7	35.3	37.8	34.1	43.7	45.3	46.2	43.4	43.3	39.9	42.9	Diurnal Maximum	

C - Calibration

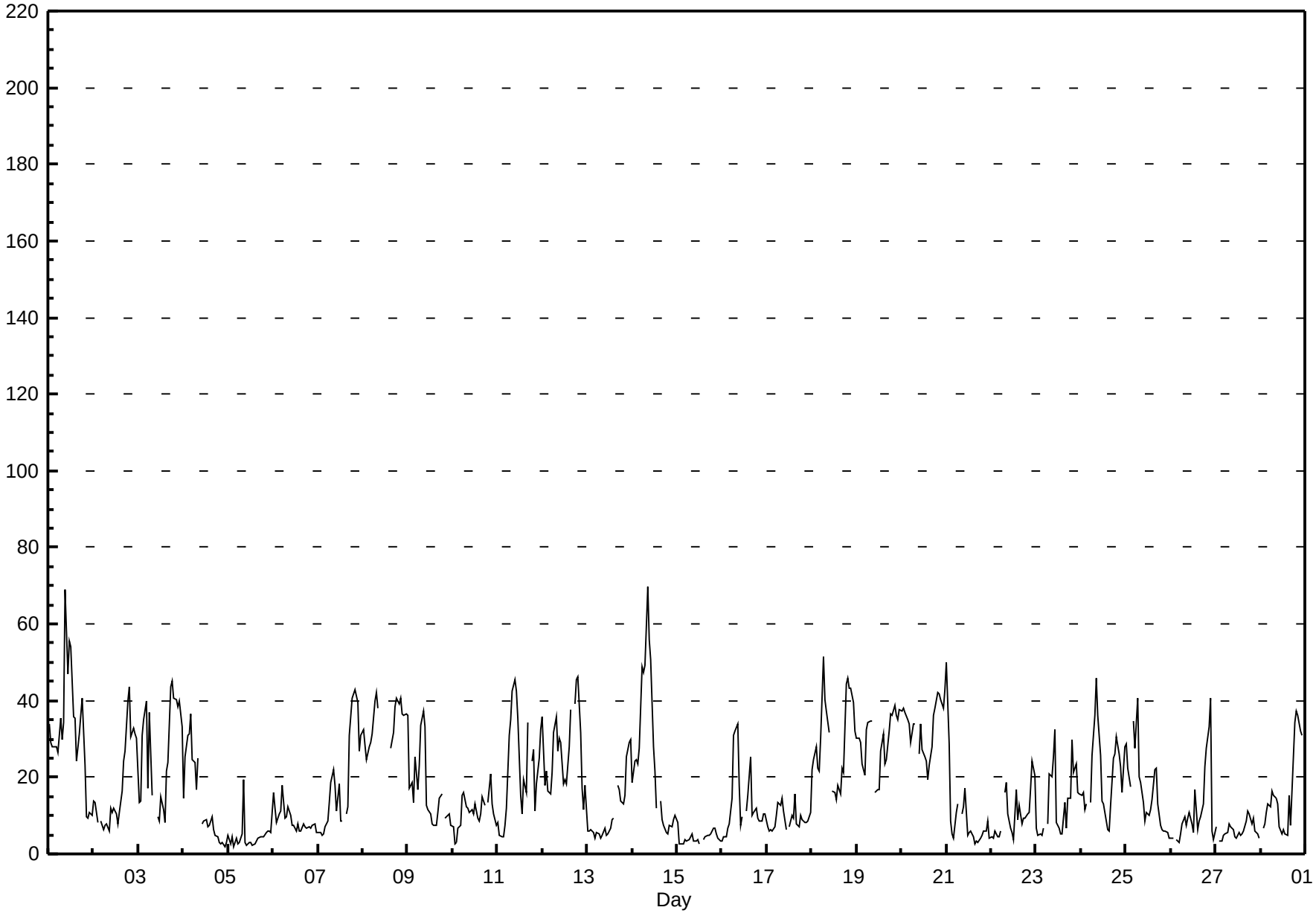
A - Automated Daily Zero Span

PASZA
Peace Air Shed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - February 2011



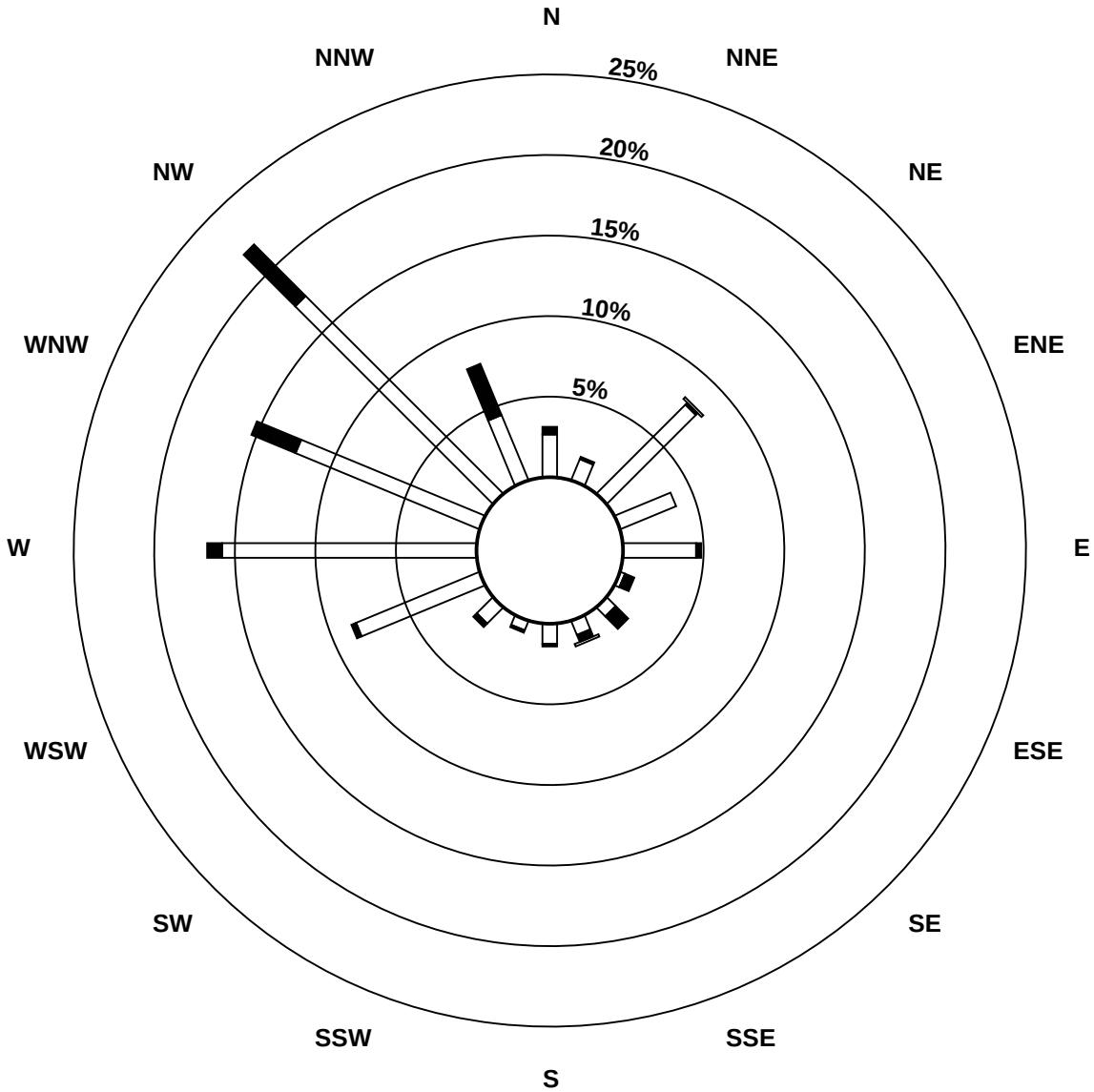
FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

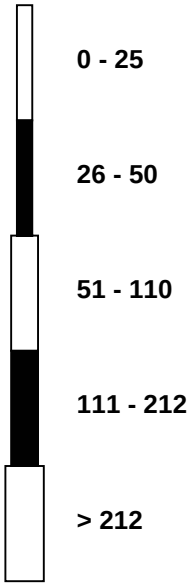
Pollutant Rose

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - February 2011



Pollutant Classes (ppb)



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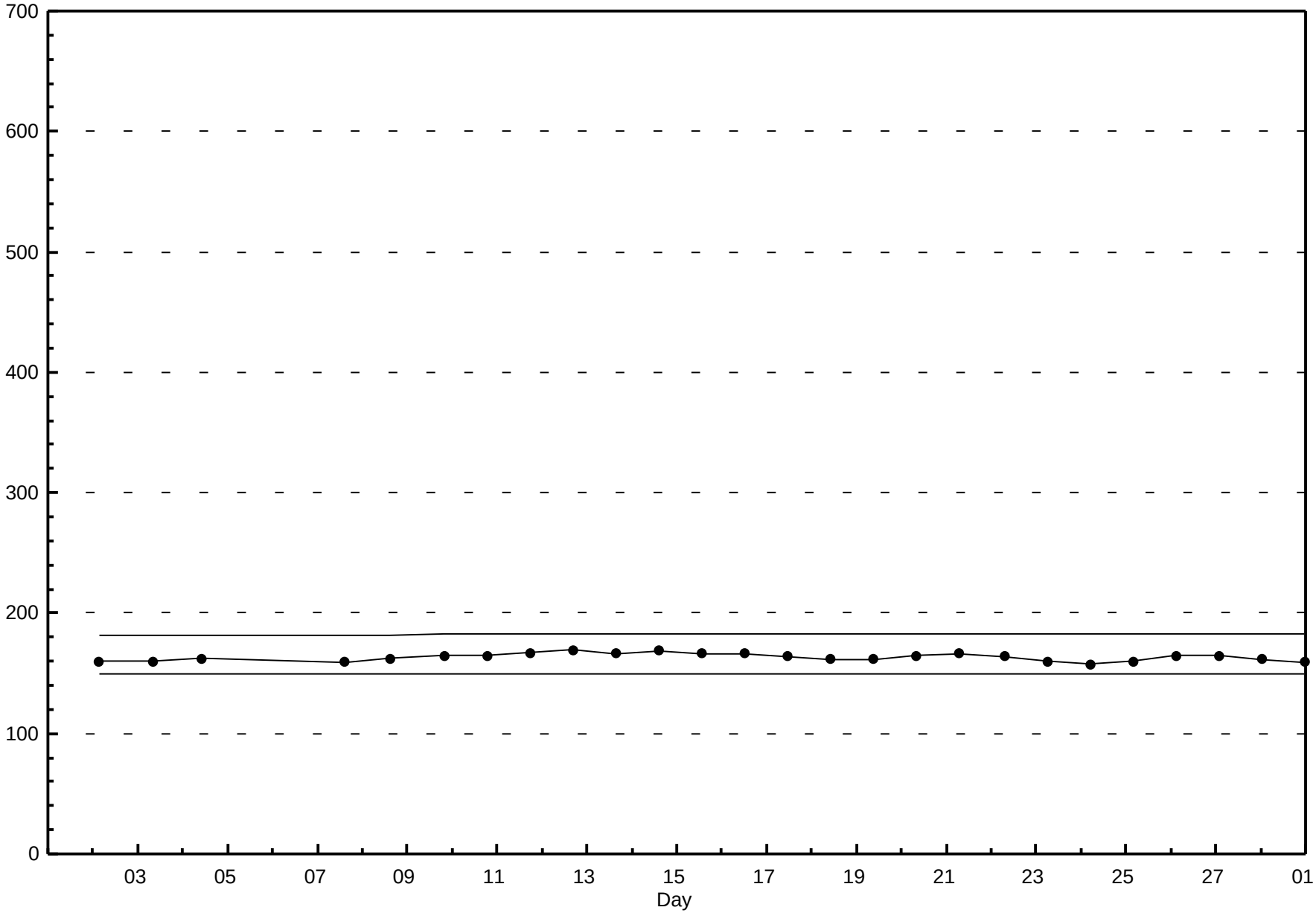
Peace Air Shed Zone Association

Span Responses

Nitrogen Dioxide (NO_2)

Henry Pirker - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Henry Pirker - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 139.3 ppb on Feb 1 12:00
Maximum Daily Average: 33.8 ppb on Feb 1

Minimum Value: 0 ppb on Feb 15 03:00
Maximum Diurnal Average: 14.6 ppb at hour 10
Monthly Average: 5.42 ppb

Minimum Daily Average: 0.4 ppb on Feb 5
Minimum Diurnal Average: 1.4 ppb at hour 2
Percentiles: $P_1 = 0.0$ $P_{10} = 0.2$ $Q_1 = 0.5$ Median = 1.2 $Q_3 = 4.0$ $P_{90} = 15.2$ $P_{99} = 58.9$

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	33	19	28	21	10	9	20	32	59	90	82	139	70	48	45	27	23	35	23	1	0	0	0	0	33.8	139.3
2-Feb	0	0	0	A	0	0	0	1	0	1	2	3	3	3	3	3	3	2	2	7	1	1	1	0	1.6	6.6
3-Feb	0	0	1	1	4	0	1	0	A	A	1	2	3	3	2	4	2	23	35	31	12	4	24	6	7.2	35.2
4-Feb	0	1	10	6	5	0	1	1	1	A	1	2	3	3	2	2	1	0	0	0	0	0	0	0	1.8	10.4
5-Feb	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.4	0.8
6-Feb	1	0	1	1	1	1	1	1	1	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1.1	2.4
7-Feb	0	0	1	1	1	1	2	3	4	2	3	5	3	3	A	2	2	3	8	18	15	9	2	2	3.9	18.1
8-Feb	2	1	1	1	2	6	15	34	32	C	C	C	C	C	A	21	19	21	25	16	15	11	7	4	12.9	33.9
9-Feb	2	0	0	0	1	0	1	1	6	6	2	3	3	2	2	1	2	1	1	A	0	0	0	0	1.6	6.2
10-Feb	0	0	0	0	0	1	1	0	1	1	2	2	3	3	3	2	2	1	A	0	1	0	0	0	1.1	3.0
11-Feb	0	0	0	0	0	0	0	1	2	22	30	15	4	2	4	3	4	A	1	1	0	0	0	1	4.0	29.6
12-Feb	1	0	1	0	0	0	1	2	1	7	11	5	6	4	7	8	A	6	12	37	1	0	0	0	4.8	36.5
13-Feb	0	0	0	0	0	0	0	0	0	1	1	1	2	2	2	A	2	1	0	0	0	0	0	1	0.8	2.4
14-Feb	0	0	0	0	0	16	18	34	122	116	44	10	4	3	A	3	1	1	1	1	1	1	1	1	16.5	121.7
15-Feb	0	0	0	0	0	0	0	0	1	1	1	1	1	A	1	1	1	1	1	1	0	0	0	0	0.6	1.4
16-Feb	0	0	0	0	0	1	2	2	11	2	2	4	A	6	4	6	2	2	2	2	1	1	1	1	2.3	11.5
17-Feb	1	1	1	1	1	1	1	1	2	2	2	A	2	3	4	4	2	1	1	1	1	1	0	0	1.4	4.4
18-Feb	1	1	1	1	1	2	8	16	19	26	A	15	14	11	14	10	5	5	6	32	19	57	29	4	12.9	57.0
19-Feb	2	1	1	0	0	5	7	12	12	A	15	19	19	27	27	14	13	13	8	5	10	8	4	7	10.1	27.3
20-Feb	15	9	14	6	7	1	5	10	A	13	18	18	16	15	14	14	13	9	8	12	16	19	13	18	12.3	18.8
21-Feb	15	0	0	0	0	0	0	A	1	2	3	2	2	2	1	1	1	0	0	0	0	0	0	0	1.3	14.6
22-Feb	0	0	0	0	0	0	A	1	3	2	3	2	2	3	2	3	2	1	1	0	1	1	0	0	1.1	3.2
23-Feb	0	0	0	0	0	A	0	1	2	6	6	2	2	2	2	3	1	2	1	1	1	1	1	0	1.6	6.2
24-Feb	0	0	0	0	A	1	1	14	52	39	17	10	8	6	4	3	2	4	1	2	1	0	0	0	7.3	52.0
25-Feb	1	1	0	A	2	1	2	1	2	2	3	5	5	5	5	7	6	1	0	0	0	0	0	0	2.2	6.6
26-Feb	0	0	A	0	0	0	0	0	0	1	3	2	3	3	2	2	2	1	1	0	1	2	1	1	1.2	3.0
27-Feb	1	A	1	1	1	1	1	2	2	2	2	2	3	3	3	2	2	2	1	1	1	1	1	1	1.5	2.6
28-Feb	A	1	1	1	1	1	1	2	3	3	3	3	3	3	2	4	3	4	9	26	30	9	4	A	5.4	30.3
	2.9	1.4	2.4	1.6	1.4	1.9	3.4	6.4	13.1	14.6	10.0	10.6	7.2	6.4	6.3	5.7	4.3	5.2	5.5	7.3	4.7	4.7	3.3	1.8	Diurnal Average	
	32.8	19.2	28.0	20.7	10.0	16.0	19.8	33.9	121.7	115.9	81.8	139.3	69.7	47.5	44.7	26.5	22.7	35.1	35.2	36.5	30.3	57.0	28.9	17.7	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

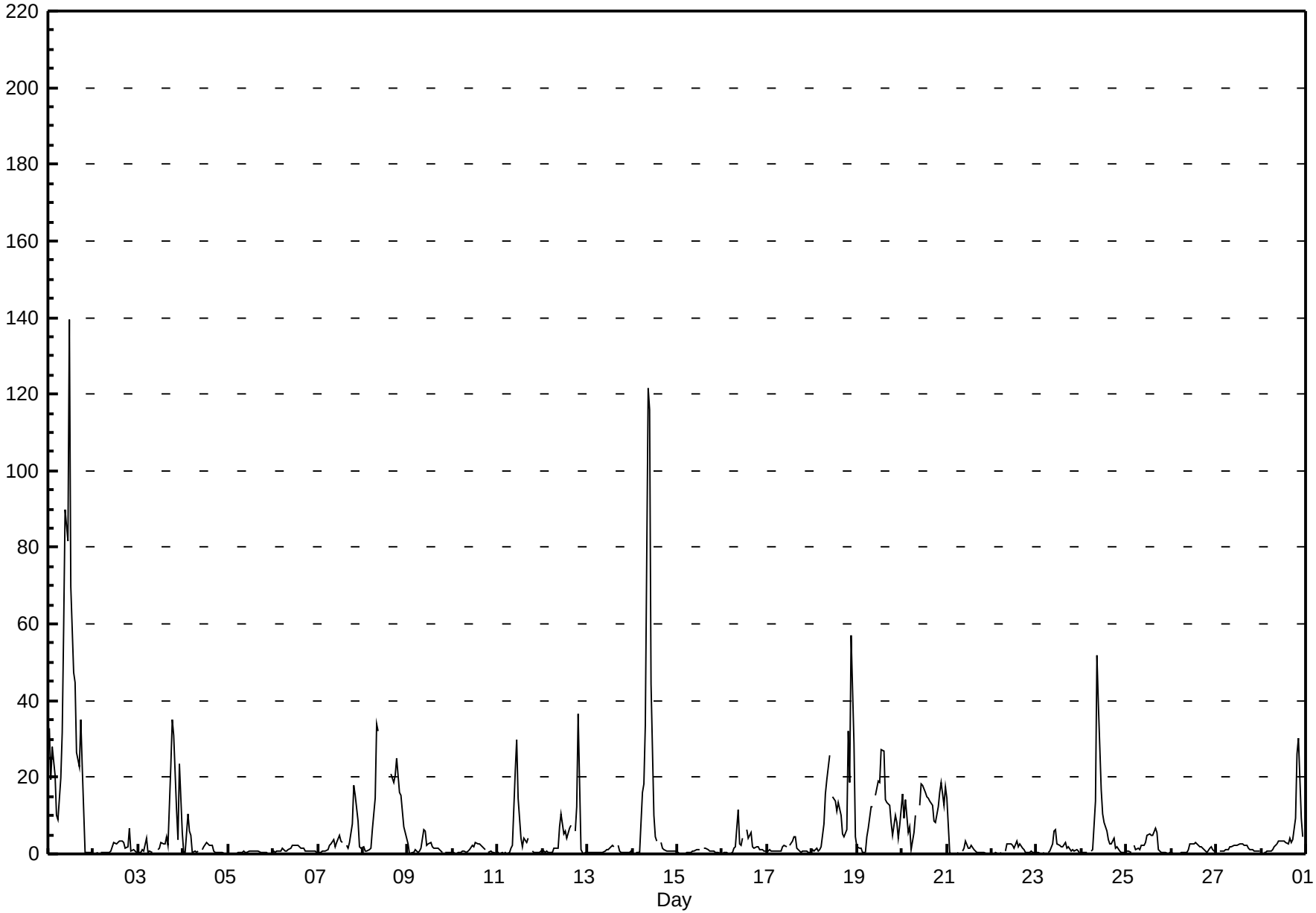
FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Henry Pirker - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Henry Pirker - February 2011

Maximum Value: 208.8 ppb on Feb 14 09:00

Maximum Daily Average: 56.2 ppb on Feb 1

Minimum Value: 0 ppb on Feb 15 03:00

Minimum Daily Average: 1.3 ppb on Feb 5

Maximum Diurnal Average: 25.8 ppb at hour 10

Minimum Diurnal Average: 3.2 ppb at hour 4

Monthly Average: 11.07 ppb

Percentiles: $P_1 = 0.4$ $P_{10} = 0.5$ $Q_1 = 1.2$ Median = 3.4 $Q_3 = 11.0$ $P_{90} = 30.8$ $P_{99} = 140.4$

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	50	33	34	25	18	17	31	47	89	192	146	176	163	86	77	35	43	45	38	2	1	1	0	1	56.2	191.6
2-Feb	1	0	0	A	0	0	0	1	1	1	4	5	5	4	8	7	7	5	9	21	5	4	3	2	4.1	20.6
3-Feb	3	2	20	5	16	1	2	1	A	A	2	3	8	6	4	27	6	79	73	48	31	25	36	13	18.7	78.9
4-Feb	1	2	21	13	11	1	2	3	4	A	2	3	4	4	4	5	2	1	1	1	1	1	1	1	3.7	21.4
5-Feb	1	1	1	0	1	0	1	3	8	1	1	2	2	1	1	1	2	1	1	1	0	1	1	0	1.3	7.9
6-Feb	6	2	3	2	2	4	2	3	2	3	4	4	4	4	3	2	2	2	2	2	2	1	1	2	2.5	6.5
7-Feb	1	1	2	2	3	4	6	7	13	4	6	11	6	7	A	7	3	8	20	32	37	27	9	5	9.6	36.9
8-Feb	7	5	2	4	4	23	30	59	57	C	C	C	C	C	A	37	33	33	45	41	36	25	24	13	26.5	59.4
9-Feb	14	1	1	2	5	1	4	5	14	12	5	5	5	3	2	2	2	2	1	A	1	0	1	1	3.9	14.4
10-Feb	1	0	0	1	1	1	1	1	1	2	4	5	6	4	4	3	4	2	A	1	2	1	1	1	2.1	6.4
11-Feb	1	0	0	0	0	0	2	5	21	56	53	35	9	4	9	6	12	A	2	2	1	1	1	4	9.8	56.2
12-Feb	4	1	3	0	0	0	9	9	5	19	19	11	9	7	11	20	A	13	51	68	17	1	0	0	12.2	68.1
13-Feb	0	1	1	0	0	0	0	0	0	2	2	2	3	4	3	A	3	2	0	0	0	2	2	2	1.3	3.5
14-Feb	1	0	0	1	2	40	52	112	209	152	92	18	10	6	A	7	3	4	1	2	3	4	4	2	31.6	208.8
15-Feb	1	1	0	0	1	0	2	1	2	1	2	3	2	A	2	2	2	1	1	1	2	1	1	0	1.3	3.4
16-Feb	0	0	0	0	0	1	4	7	20	6	3	7	A	11	14	24	4	3	9	5	4	4	2	2	5.8	23.9
17-Feb	2	4	2	4	4	2	5	6	14	10	5	A	6	8	7	22	7	2	1	1	2	1	1	1	5.0	22.4
18-Feb	2	2	6	2	2	5	35	29	43	43	A	21	20	18	21	15	20	9	28	43	45	73	50	12	23.7	73.4
19-Feb	5	5	5	1	1	9	11	24	18	A	23	23	25	35	33	24	19	19	18	16	26	15	19	22	17.3	35.4
20-Feb	22	31	39	14	15	4	12	18	A	17	57	37	32	29	19	20	20	16	13	28	35	36	27	30	24.7	57.2
21-Feb	39	2	0	0	0	0	0	A	1	2	7	2	2	4	2	1	1	1	1	1	0	0	0	0	3.1	39.0
22-Feb	0	0	1	0	0	0	A	2	6	4	3	3	3	29	11	13	3	2	1	1	1	3	1	1	4.0	29.4
23-Feb	0	0	0	0	0	A	1	4	5	22	75	6	8	8	7	16	7	6	3	3	2	6	3	0	8.0	74.9
24-Feb	0	0	1	1	A	2	2	37	69	55	33	15	11	9	6	4	6	9	8	3	1	0	0	2	12.1	69.0
25-Feb	3	1	1	A	18	2	5	3	4	3	4	8	7	8	9	11	11	3	1	1	1	0	0	0	4.5	17.9
26-Feb	1	0	A	0	0	0	1	1	1	2	4	4	15	16	3	3	3	2	1	2	7	7	4	2	3.6	16.5
27-Feb	3	A	2	2	2	2	2	3	3	4	5	5	5	6	5	4	5	4	2	4	2	3	3	1	3.5	5.5
28-Feb	A	1	1	1	2	2	3	4	8	7	6	6	7	6	5	18	8	14	29	47	62	24	12	A	12.3	62.3
	6.4	3.7	5.5	3.2	4.1	4.7	8.3	14.6	23.7	25.8	21.8	16.2	14.5	12.6	10.8	12.4	8.7	10.7	13.4	14.0	11.7	9.6	7.5	4.5	Diurnal Average	
	49.7	32.8	38.6	24.9	17.9	39.6	51.8	112.2	208.8	191.6	146.0	176.4	162.6	86.1	76.6	37.1	42.5	78.9	72.8	68.1	62.3	73.4	50.5	30.1	Diurnal Maximum	

C - Calibration

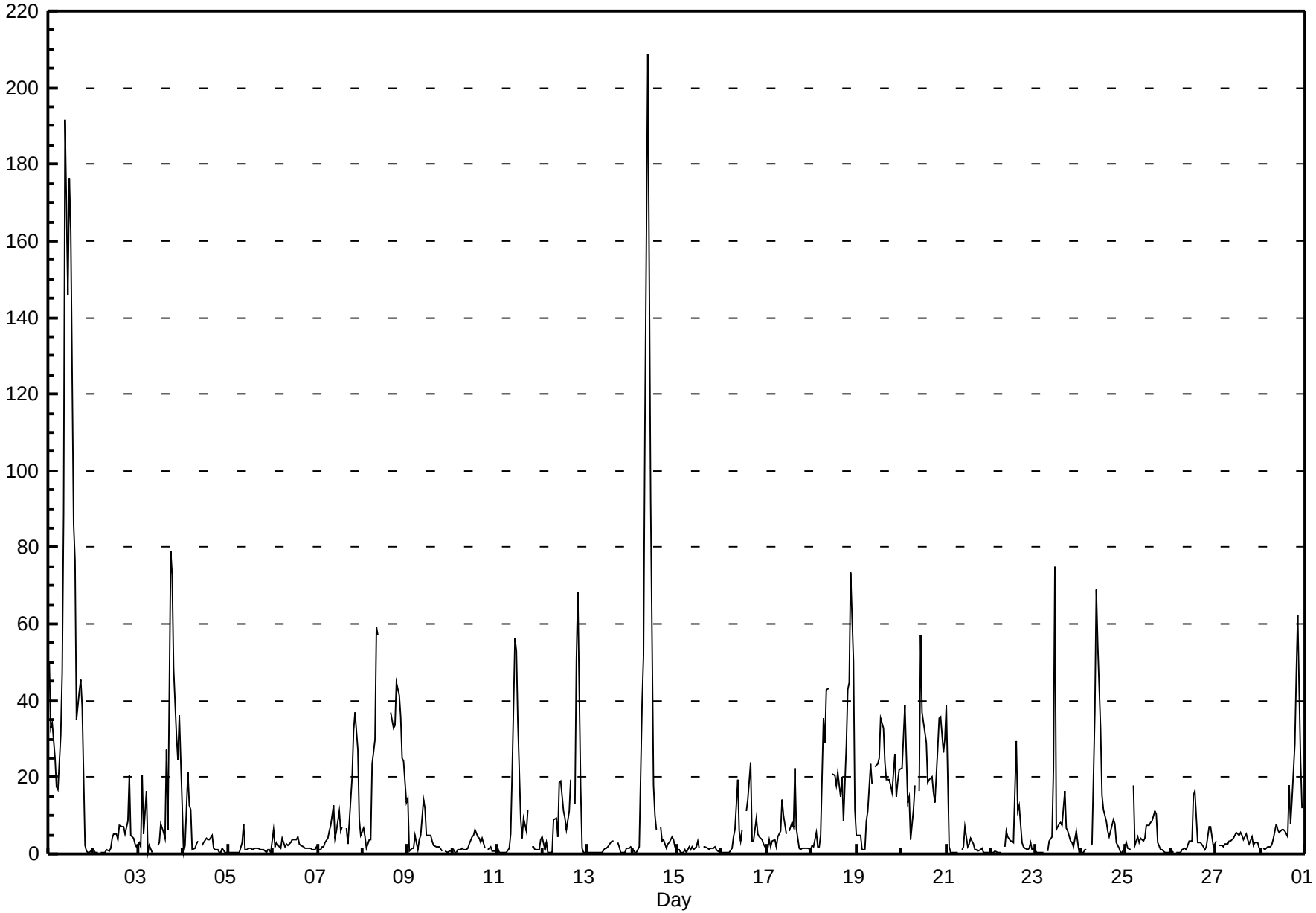
A - Automated Daily Zero Span

PASZA
Peace Air Shed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Henry Pirker - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 189.3 ppb on Feb 1 12:00
Maximum Daily Average: 60.0 ppb on Feb 1

Minimum Value: 1 ppb on Feb 10 03:00
Maximum Diurnal Average: 30.6 ppb at hour 9
Monthly Average: 18.03 ppb

Minimum Daily Average: 2.7 ppb on Feb 5
Minimum Diurnal Average: 11.5 ppb at hour 4
Percentiles: P_1 = 1.7 P_{10} = 3.2 Q_1 = 5.2 Median = 9.2 Q_3 = 23.3 P_{90} = 44.4 P_{99} = 90.1

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	63	48	57	49	37	35	49	61	89	127	116	189	103	74	73	49	50	70	59	14	6	7	8	7	60.0	189.3
2-Feb	5	5	5	A	5	4	6	6	5	7	10	10	8	10	12	14	18	19	22	42	22	30	25	18	13.5	42.0
3-Feb	9	8	12	22	32	7	26	8	A	A	8	8	11	9	8	14	15	58	77	72	44	29	62	34	26.1	77.4
4-Feb	12	19	40	35	34	14	16	9	12	A	8	9	10	8	8	8	4	3	3	2	2	2	2	2	11.5	39.9
5-Feb	3	2	2	2	2	2	2	2	4	2	2	2	3	2	2	3	3	3	4	3	4	4	4	4	2.7	4.5
6-Feb	8	8	7	8	8	11	8	9	10	9	8	7	7	7	6	6	7	6	5	6	6	6	7	4	7.3	11.1
7-Feb	4	5	4	4	6	8	11	15	21	12	12	15	9	8	A	9	9	26	44	60	54	40	24	29	18.7	59.5
8-Feb	28	23	20	23	25	36	48	72	67	C	C	C	C	C	A	43	44	53	65	50	51	44	39	32	42.3	71.7
9-Feb	26	13	9	5	11	7	10	23	36	30	9	11	11	7	7	7	10	13	14	A	6	6	8	5	12.3	36.5
10-Feb	5	2	1	5	5	10	14	9	8	8	10	8	11	9	9	9	11	11	A	10	12	8	5	5	7.9	13.5
11-Feb	4	3	3	2	4	7	19	26	28	62	66	36	13	7	14	13	21	A	16	14	8	11	17	23	18.2	66.0
12-Feb	22	12	15	11	11	17	24	27	21	32	32	18	21	17	28	34	A	38	53	79	19	12	7	13	24.5	78.7
13-Feb	4	4	4	3	3	4	4	3	3	5	4	4	6	8	7	A	15	10	8	9	11	18	20	23	7.8	22.8
14-Feb	14	20	17	13	17	54	59	77	174	168	81	32	16	12	A	13	8	6	4	4	4	4	6	6	35.2	174.3
15-Feb	3	2	2	2	2	2	3	3	3	3	3	3	3	A	4	4	4	4	4	6	4	4	3	2	3.1	5.5
16-Feb	2	3	3	5	6	11	24	26	43	10	8	11	A	15	10	14	8	8	9	8	8	7	7	7	11.0	42.9
17-Feb	5	4	5	4	5	6	10	9	9	8	5	A	6	8	11	10	5	5	9	7	7	7	6	7	7.0	10.7
18-Feb	15	13	21	19	20	25	38	52	51	52	A	28	26	21	27	23	15	23	35	76	59	98	66	34	36.3	97.8
19-Feb	27	24	24	17	17	31	38	43	38	A	29	33	32	48	51	32	33	40	41	36	45	43	35	40	34.6	51.3
20-Feb	51	42	48	37	38	27	36	42	A	34	37	35	32	32	32	33	36	36	44	52	56	57	48	55	40.8	56.7
21-Feb	53	7	5	3	3	6	9	A	8	10	12	5	5	6	4	3	3	3	3	3	4	3	3	3	7.0	52.8
22-Feb	3	3	5	3	3	4	A	11	16	10	7	6	4	6	5	7	6	7	6	7	6	12	17	8	7.0	17.2
23-Feb	3	3	3	3	5	A	6	13	17	20	15	7	5	5	5	7	5	8	9	19	17	13	11	9	9.1	20.1
24-Feb	9	11	9	9	A	11	19	44	91	70	33	21	16	12	8	6	7	18	20	30	24	15	13	17	22.4	91.0
25-Feb	23	20	15	A	23	22	30	14	16	11	10	12	13	13	14	21	22	8	6	5	5	5	4	3	13.6	29.7
26-Feb	2	2	A	2	2	3	5	4	5	7	11	8	7	8	8	7	9	11	18	23	24	22	4	3	8.5	23.9
27-Feb	3	A	3	3	3	4	4	6	6	6	5	5	6	6	6	6	6	7	8	6	5	4	4	3	5.0	7.6
28-Feb	A	5	5	8	8	8	10	12	12	10	8	7	7	6	5	8	7	12	31	60	63	36	27	A	16.3	63.3
	15.1	11.5	12.7	11.5	12.4	14.0	19.5	23.3	30.6	29.6	21.0	20.4	15.0	14.0	14.5	14.9	14.2	18.7	22.9	26.0	20.7	19.5	17.2	14.7	Diurnal Average	
	63.3	47.6	56.5	49.0	38.2	54.2	59.4	77.4	174.3	167.8	116.5	189.3	102.6	74.3	72.9	48.8	50.1	70.4	77.4	78.7	63.3	97.8	65.6	54.8	Diurnal Maximum	

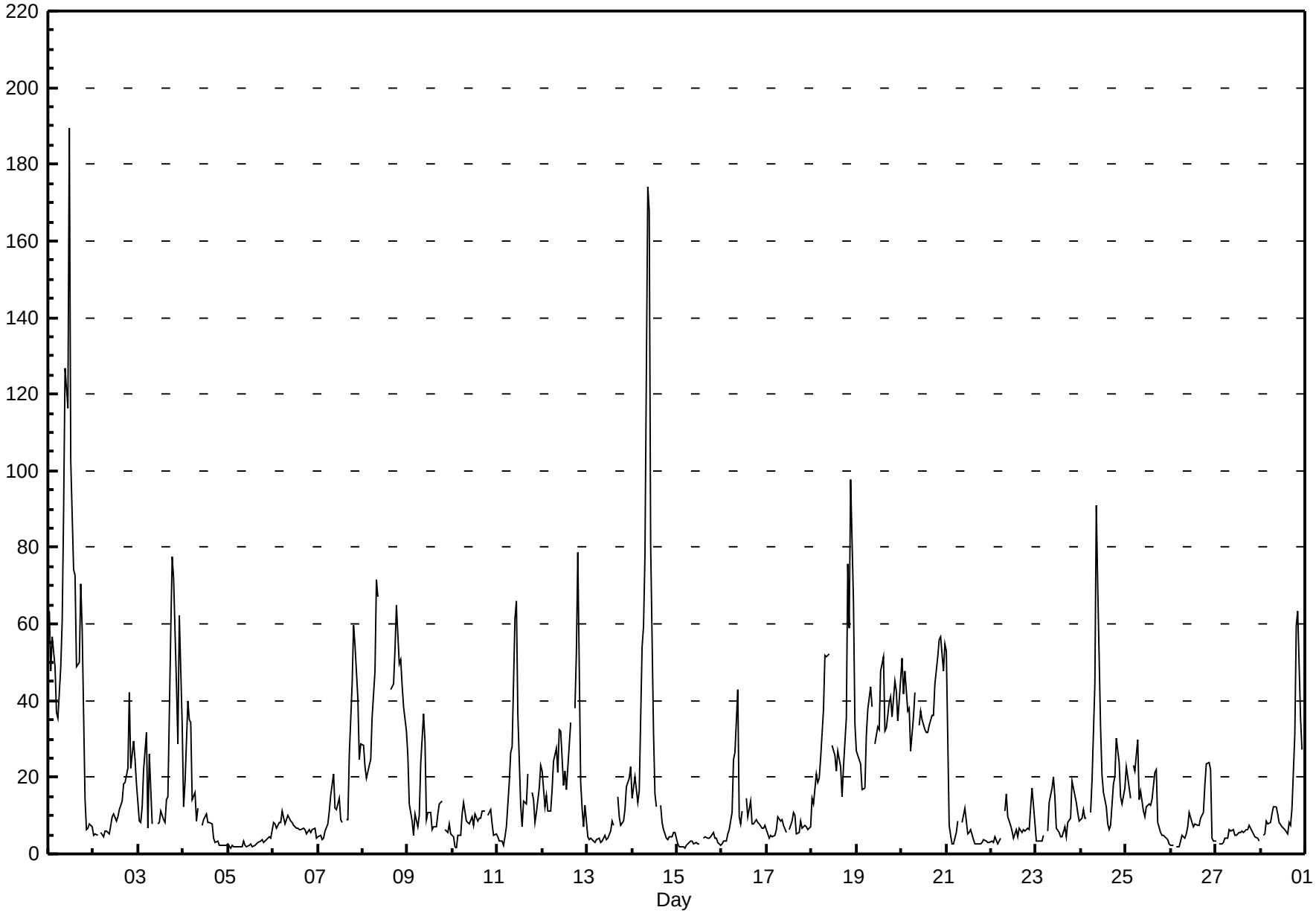
C - Calibration A - Automated Daily Zero Span

PASZA
Peace Air Shed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - February 2011

Maximum Value: 279.4 ppb on Feb 14 09:00

Maximum Daily Average: 88.1 ppb on Feb 1

Minimum Value: 3 ppb on Feb 15 03:00

Minimum Daily Average: 5.3 ppb on Feb 15

Maximum Diurnal Average: 47.0 ppb at hour 9

Minimum Diurnal Average: 16.7 ppb at hour 4

Monthly Average: 28.17 ppb

Percentiles: P_1 = 3.0 P_{10} = 5.4 Q_1 = 9.0 Median = 15.9 Q_3 = 35.4 P_{90} = 64.9 P_{99} = 181.3

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	84	62	63	54	46	44	64	77	121	250	194	234	219	122	114	60	75	83	77	26	11	10	12	11	88.1	249.8
2-Feb	14	14	8	A	9	6	8	9	6	13	15	17	16	12	18	24	32	33	50	66	35	37	35	34	22.2	66.3
3-Feb	16	15	51	42	58	18	40	17	A	A	11	12	24	17	13	42	31	124	118	90	72	65	77	47	45.5	124.2
4-Feb	16	29	54	42	50	26	27	19	30	A	10	12	13	11	12	15	8	6	5	4	3	4	3	3	17.4	53.9
5-Feb	5	3	5	3	4	3	3	8	28	4	3	5	5	4	4	5	5	6	6	5	6	7	7	6	5.7	27.8
6-Feb	23	13	11	12	13	22	11	12	14	12	11	12	10	13	9	9	10	8	8	9	8	9	9	7	11.4	22.6
7-Feb	6	6	6	7	10	11	20	27	35	23	18	30	15	16	A	17	14	37	62	76	81	67	34	37	28.5	80.8
8-Feb	40	32	27	33	34	56	68	103	93	C	C	C	C	C	A	65	65	71	86	80	76	60	61	50	61.0	102.9
9-Feb	51	18	20	15	30	18	27	39	51	45	17	17	15	11	10	9	13	16	17	A	10	11	11	9	20.8	51.3
10-Feb	8	3	3	8	8	17	17	13	13	14	16	15	20	14	12	13	19	14	A	14	22	14	11	8	12.9	22.5
11-Feb	10	5	5	5	8	12	33	40	64	100	96	70	25	15	29	22	46	A	26	29	12	19	26	35	31.7	100.0
12-Feb	41	19	24	17	16	22	38	45	32	48	46	30	29	25	39	58	A	52	95	114	49	18	12	18	38.5	114.1
13-Feb	6	7	7	6	4	6	6	5	5	8	6	7	9	12	12	A	21	18	14	13	15	27	31	32	12.0	32.0
14-Feb	19	24	25	24	28	88	98	160	279	208	142	45	32	17	A	21	11	11	7	7	9	9	10	12	55.9	279.4
15-Feb	9	3	3	3	4	4	6	5	7	4	5	7	4	A	6	6	6	5	7	8	8	6	5	4	5.3	8.7
16-Feb	3	5	5	7	8	16	35	39	53	24	10	16	A	23	30	49	14	13	21	15	12	12	12	12	18.8	53.3
17-Feb	8	10	7	9	11	11	18	14	26	21	11	A	12	18	16	34	14	8	11	10	9	10	10	12	13.5	33.9
18-Feb	24	27	32	24	24	35	85	67	80	76	A	38	37	32	40	31	42	29	73	89	86	116	90	43	53.0	115.9
19-Feb	35	36	34	25	21	41	45	59	51	A	39	40	42	62	60	47	44	49	52	52	65	51	54	58	46.2	65.4
20-Feb	59	69	76	49	49	33	45	52	A	43	92	64	57	53	38	43	48	52	52	70	75	75	63	67	57.5	91.6
21-Feb	89	31	9	5	4	11	13	A	11	14	24	7	7	10	7	4	4	4	5	6	6	6	9	5	12.7	89.3
22-Feb	5	4	7	5	5	6	A	17	24	13	10	9	6	34	20	24	11	10	10	11	11	20	25	21	13.5	34.3
23-Feb	7	5	6	5	7	A	8	23	22	43	66	14	12	12	12	29	13	20	16	33	23	29	17	16	19.0	65.8
24-Feb	16	16	12	13	A	15	28	72	110	91	59	29	24	17	12	10	19	34	34	33	27	24	16	30	32.3	110.3
25-Feb	32	24	18	A	53	28	46	23	22	17	13	18	17	20	22	33	33	16	8	7	7	7	6	5	20.6	52.8
26-Feb	5	5	A	4	3	5	9	11	8	12	15	11	15	33	9	12	13	15	24	30	38	48	9	6	14.7	47.9
27-Feb	10	A	5	5	6	7	8	11	10	10	9	8	10	10	10	10	14	14	12	12	11	8	8	5	9.2	13.7
28-Feb	A	7	9	12	15	13	19	18	22	20	12	11	13	11	9	33	15	27	63	82	99	56	43	A	27.7	98.5
	23.7	18.2	19.6	16.7	19.5	21.3	30.6	36.4	47.0	46.3	36.5	30.0	26.4	23.9	22.4	26.8	23.7	28.8	35.6	36.7	31.7	29.4	25.2	21.9	Diurnal Average	
	89.3	69.0	75.9	53.8	57.7	87.9	98.3	160.0	279.4	249.8	194.1	234.3	219.1	122.3	113.7	64.7	75.3	124.2	118.2	114.1	98.5	115.9	89.8	67.5	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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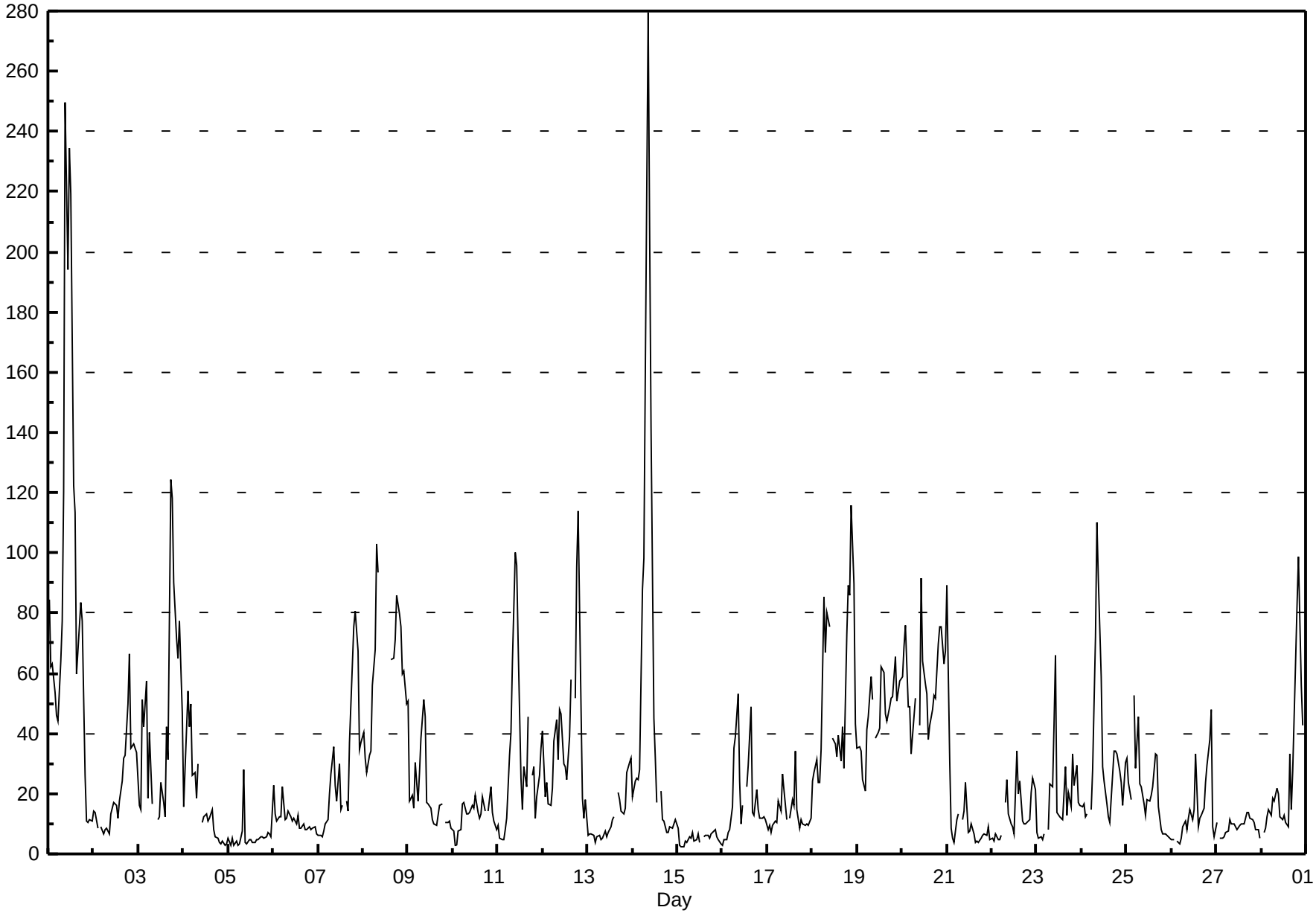
Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
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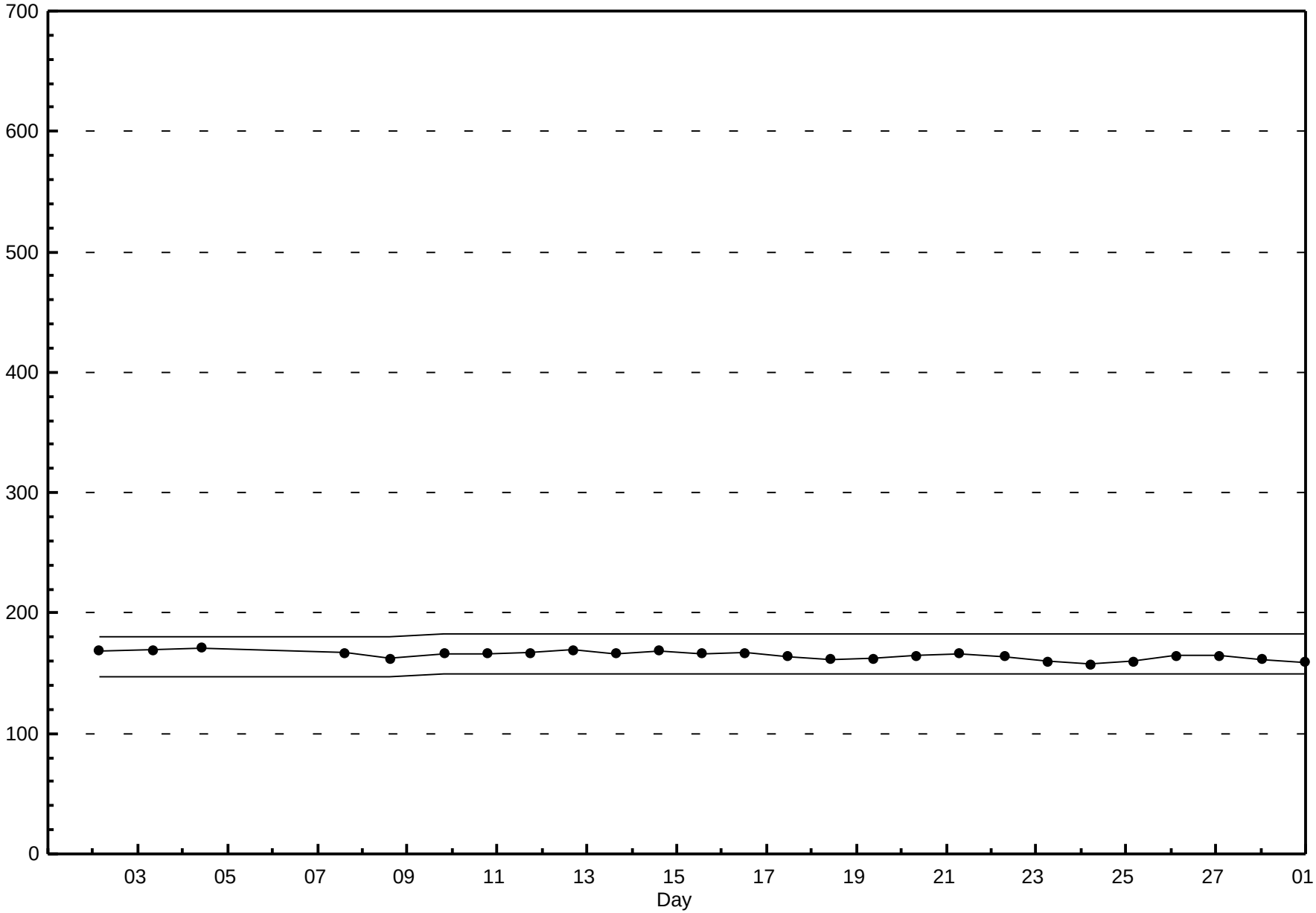
Span Responses

Oxides of Nitrogen (NO_X)

Henry Pirker - February 2011



FOCUS AIR QUALITY MONITORING

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Hourly Averages

Ozone (O_3) - ppb

Henry Pirker - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 46.5 ppb on Feb 21 04:00 Maximum Daily Average: 39.6 ppb on Feb 21

Minimum Value: 1 ppb on Feb 3 23:00 Minimum Daily Average: 8.0 ppb on Feb 8
Maximum Diurnal Average: 34.0 ppb at hour 14 Minimum Diurnal Average: 22.0 ppb at hour 8
Monthly Average: 27.31 ppb Percentiles: P_1 = 0.9 P_{10} = 5.4 Q_1 = 21.3 Median = 31.5 Q_3 = 35.5 P_{90} = 39.6 P_{99} = 44.4

Hours in Service:	672
Hours of Data:	643
Hours of Missing Data:	29
Hours of Calibration:	29
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	1	1	1	1	1	1	1	1	1	3	6	7	10	11	12	12	8	2	4	31	38	37	36	36	10.9	38.1
2-Feb	37	36	36	A	36	37	35	35	36	34	33	34	36	36	34	32	26	24	22	9	20	13	17	23	29.7	37.1
3-Feb	31	32	30	16	14	35	18	33	A	A	33	33	31	32	33	29	26	6	1	1	7	12	1	4	20.7	34.9
4-Feb	18	11	1	4	4	25	26	32	29	A	33	32	31	33	33	34	35	35	34	35	36	35	35	34	27.2	35.6
5-Feb	34	35	34	34	33	31	31	32	32	34	35	35	35	36	36	36	36	35	35	35	34	34	33	33	34.2	36.3
6-Feb	30	31	33	31	31	29	31	30	29	31	32	33	33	34	34	33	32	33	35	35	35	34	33	36	32.4	36.4
7-Feb	36	36	36	36	33	32	30	28	24	30	32	30	34	34	A	33	31	19	6	1	4	8	15	9	25.1	36.3
8-Feb	9	13	17	15	12	4	3	2	2	7	13	14	C	C	C	17	13	5	2	3	2	3	3	7	8.0	17.4
9-Feb	15	25	32	36	32	34	32	20	14	21	36	36	36	39	38	38	35	32	31	A	38	38	36	38	31.8	38.8
10-Feb	38	41	41	38	38	33	30	34	34	35	35	37	36	37	35	35	32	30	A	29	27	30	33	32	34.4	40.7
11-Feb	34	36	37	40	38	35	24	18	18	7	12	27	39	43	39	37	30	A	30	31	37	33	26	19	29.9	42.5
12-Feb	21	28	25	27	28	23	18	16	21	18	23	33	30	33	24	20	A	12	4	3	23	27	31	26	22.4	32.6
13-Feb	37	36	35	39	39	37	39	40	41	41	41	43	41	40	41	A	34	37	39	38	34	28	25	23	36.9	42.7
14-Feb	29	21	23	31	27	6	2	1	2	3	12	22	33	36	A	37	40	35	34	35	34	34	32	32	24.4	40.0
15-Feb	34	33	33	33	34	34	33	33	33	34	34	34	35	A	34	34	34	34	34	33	34	34	35	35	33.9	35.1
16-Feb	35	34	34	32	30	27	14	12	6	30	32	31	A	31	33	31	32	31	30	31	30	31	31	30	28.6	34.7
17-Feb	32	33	32	32	32	30	27	28	29	30	32	A	33	31	30	31	32	31	27	29	28	28	29	29	30.2	33.5
18-Feb	23	24	18	19	17	13	9	3	6	14	A	26	28	30	29	31	33	24	13	2	4	2	2	6	16.4	33.1
19-Feb	10	12	13	18	17	8	4	5	9	A	22	24	25	24	25	28	23	14	7	8	3	4	7	5	13.8	27.7
20-Feb	2	2	3	3	4	8	4	3	A	16	19	22	24	26	25	23	20	15	5	2	2	2	2	1	10.1	26.0
21-Feb	4	41	44	46	46	43	39	A	40	38	38	41	41	41	42	42	41	40	41	42	41	41	40	40	39.6	46.5
22-Feb	39	39	38	40	38	38	A	31	29	35	38	40	42	42	42	40	40	38	38	37	37	32	25	35	37.2	42.2
23-Feb	41	41	40	40	38	A	37	29	27	29	35	38	39	39	39	38	38	35	32	22	23	26	27	29	34.0	40.8
24-Feb	28	25	26	26	A	24	16	5	4	12	24	29	31	33	34	35	34	27	21	11	15	23	26	21	23.2	34.9
25-Feb	14	17	21	A	19	22	17	32	32	36	38	39	40	40	39	34	32	38	40	41	42	43	44	45	33.2	44.8
26-Feb	45	45	A	44	44	43	41	41	40	39	37	39	41	41	41	41	38	36	28	21	21	25	42	41	38.1	44.9
27-Feb	41	A	39	37	30	22	21	20	22	24	27	28	30	31	31	32	34	35	35	35	35	36	37	37	31.2	40.6
28-Feb	A	35	35	32	33	33	32	30	29	30	32	31	31	31	31	30	29	25	11	1	2	6	7	A	25.4	35.5
	26.7	28.3	28.1	28.9	27.7	26.2	22.8	22.0	22.8	25.3	29.1	31.0	33.2	34.0	33.6	31.9	31.1	27.0	23.7	22.2	24.4	24.9	25.3	26.2	Diurnal Average	
	44.9	44.5	44.3	46.5	46.2	42.7	41.1	41.4	41.3	41.5	41.5	42.7	41.5	42.5	42.2	42.0	41.1	40.1	41.2	41.5	41.8	42.7	43.7	44.8	Diurnal Maximum	

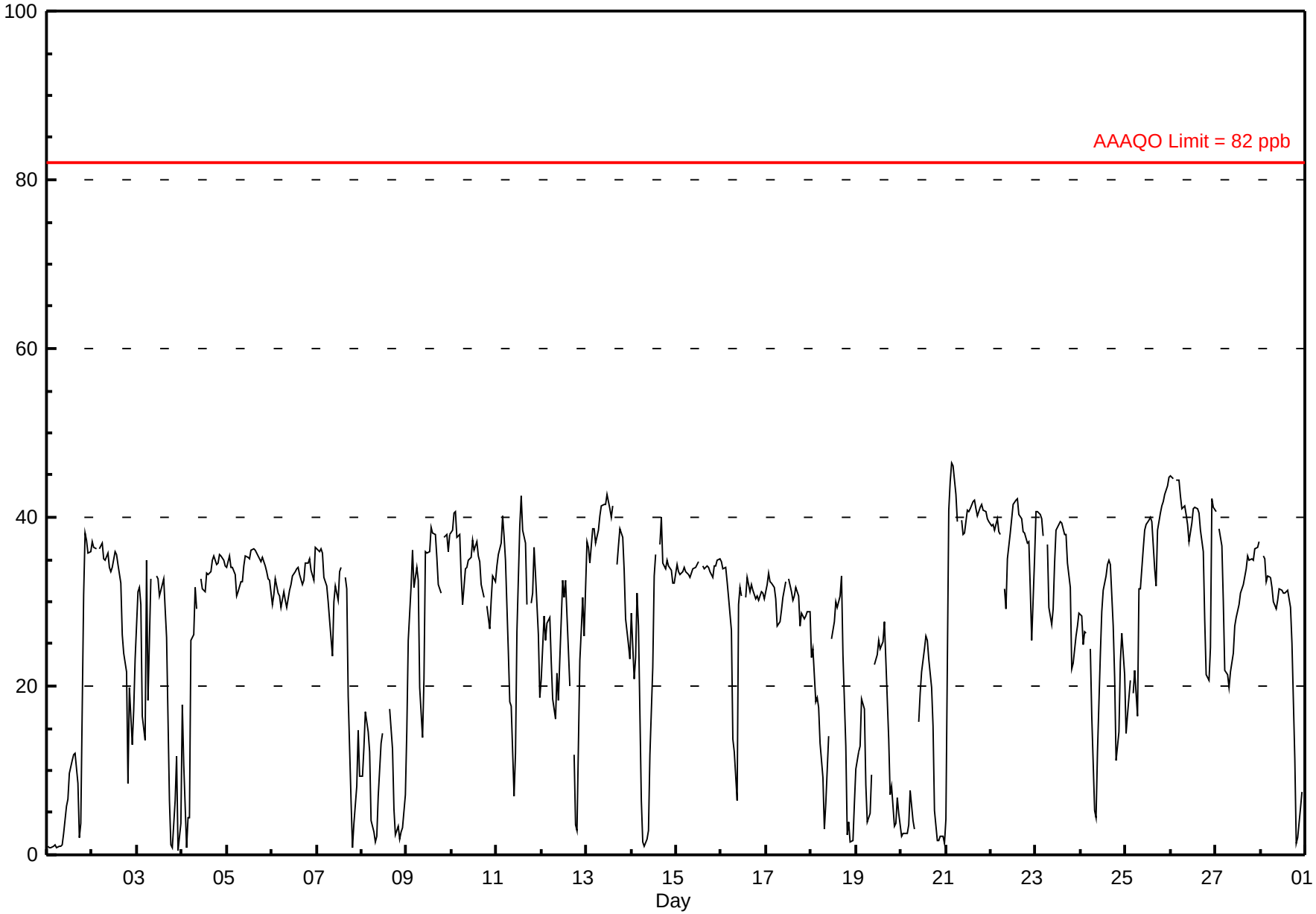
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na

PASZA
Peace Air Shed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Henry Pirker - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

Henry Pirker - February 2011

Maximum Value: 47.5 ppb on Feb 21 05:00

Maximum Daily Average: 42.0 ppb on Feb 21

Minimum Value: 1 ppb on Feb 1 06:00

Minimum Daily Average: 12.9 ppb on Feb 8

Maximum Diurnal Average: 35.9 ppb at hour 14

Minimum Diurnal Average: 26.1 ppb at hour 8

Monthly Average: 30.94 ppb

Percentiles: P_1 = 1.5 P_{10} = 12.2 Q_1 = 27.5 Median = 34.4 Q_3 = 38.0 P_{90} = 41.7 P_{99} = 46.2

Hours in Service:	672
Hours of Data:	643
Hours of Missing Data:	29
Hours of Calibration:	29
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	2	1	1	1	2	1	2	1	2	4	8	8	11	13	15	14	12	6	19	37	40	39	39	39	13.1	39.5
2-Feb	40	39	39	A	38	38	37	37	37	38	35	37	38	37	37	36	35	34	34	31	32	25	24	30	35.2	40.0
3-Feb	34	37	37	25	35	38	31	35	A	A	35	34	34	34	34	34	34	22	4	2	19	21	1	16	27.2	38.3
4-Feb	21	14	4	13	17	35	36	34	36	A	34	33	33	35	35	37	37	36	35	35	36	36	36	35	30.6	36.9
5-Feb	35	36	35	35	34	33	32	33	34	35	36	36	36	37	37	37	37	36	36	37	37	35	35	34	35.4	37.0
6-Feb	32	35	34	34	33	33	33	33	31	34	34	35	35	35	35	35	34	35	37	36	36	36	35	38	34.4	38.0
7-Feb	38	37	38	37	34	33	32	31	29	33	34	34	35	35	A	34	34	28	23	1	12	19	18	18	29.1	38.0
8-Feb	20	20	19	19	16	9	8	5	7	14	16	19	C	C	C	20	17	12	3	11	4	9	8	12	12.9	20.0
9-Feb	21	30	40	40	38	38	37	26	21	33	39	38	40	40	40	40	37	36	34	A	40	40	40	40	36.1	40.2
10-Feb	40	41	41	41	40	37	33	36	36	37	37	40	40	40	38	37	35	33	A	32	32	34	35	34	37.0	41.3
11-Feb	36	37	38	42	41	39	31	32	27	24	22	39	42	46	44	43	38	A	34	42	39	37	35	26	36.1	45.8
12-Feb	33	34	35	35	32	29	31	28	29	24	29	37	37	35	32	28	A	24	9	15	30	32	35	39	30.1	38.6
13-Feb	39	39	36	41	40	38	41	41	43	43	43	44	43	43	44	A	42	39	43	41	39	36	33	30	40.0	44.4
14-Feb	36	28	33	40	37	25	9	2	3	4	23	27	36	37	A	40	42	39	35	36	36	35	35	35	29.3	41.8
15-Feb	36	34	34	34	35	34	34	34	34	35	35	35	35	A	35	35	35	35	35	34	35	36	36	35	34.9	36.4
16-Feb	35	35	35	33	33	31	23	18	17	32	33	33	A	33	35	34	35	33	32	32	32	33	33	33	31.5	35.4
17-Feb	33	35	34	34	33	33	32	30	31	32	33	A	34	33	32	33	33	34	30	31	30	29	30	31	32.3	34.7
18-Feb	29	30	29	23	20	18	17	6	10	22	A	29	30	32	33	33	39	30	29	6	6	2	4	8	21.1	39.1
19-Feb	16	19	21	21	22	20	6	13	19	A	26	26	26	26	27	31	29	21	12	16	7	9	14	10	19.0	30.6
20-Feb	4	5	4	4	8	11	10	8	A	20	22	25	26	30	27	27	25	21	10	3	3	6	9	4	13.6	29.8
21-Feb	15	46	46	47	48	47	43	A	42	41	42	42	42	42	43	43	42	41	42	44	43	43	42	41	42.0	47.5
22-Feb	41	40	41	42	40	40	A	34	33	37	40	41	43	43	43	42	42	40	40	39	40	36	31	39	39.5	43.5
23-Feb	42	42	41	41	39	A	39	37	32	35	40	41	41	41	41	40	40	38	34	30	28	31	32	32	37.2	42.0
24-Feb	33	28	29	28	A	26	23	15	7	19	28	30	33	35	36	36	37	32	24	15	17	28	29	28	26.8	36.7
25-Feb	20	20	25	A	31	26	30	38	36	40	40	41	41	43	43	40	39	42	42	44	44	45	45	46	37.4	46.2
26-Feb	46	46	A	46	46	44	43	43	42	41	39	41	43	42	42	42	40	39	37	25	32	43	44	42	41.3	46.2
27-Feb	41	A	40	39	33	26	23	22	24	26	29	29	32	32	33	33	36	37	38	37	36	38	38	38	33.1	41.3
28-Feb	A	37	38	35	35	37	36	33	32	33	33	32	32	32	32	32	31	29	23	3	8	12	14	A	28.8	37.8
	30.3	31.3	31.4	31.9	31.9	30.4	27.8	26.1	26.8	29.4	32.1	33.7	35.3	35.9	35.7	34.7	34.7	31.6	28.8	26.6	28.3	29.5	28.9	30.1	Diurnal Average	
	46.2	46.2	45.8	47.4	47.5	46.8	43.1	43.0	43.2	43.4	43.4	44.4	42.9	45.8	43.9	43.0	41.9	42.1	43.0	43.6	43.8	44.6	45.1	46.2	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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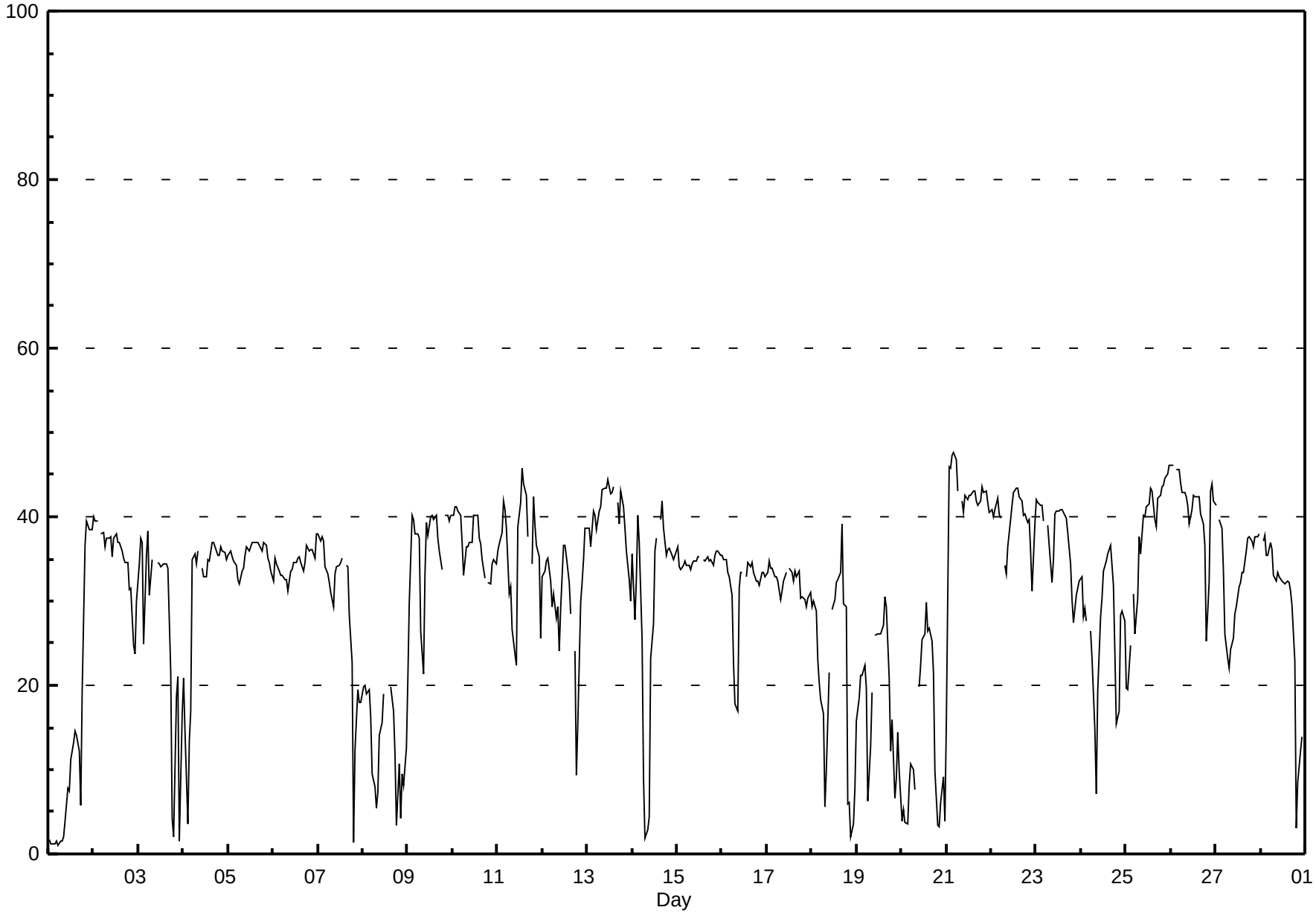
Peace Air Shed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

Henry Pirker - February 2011



FOCUS AIR QUALITY MONITORING

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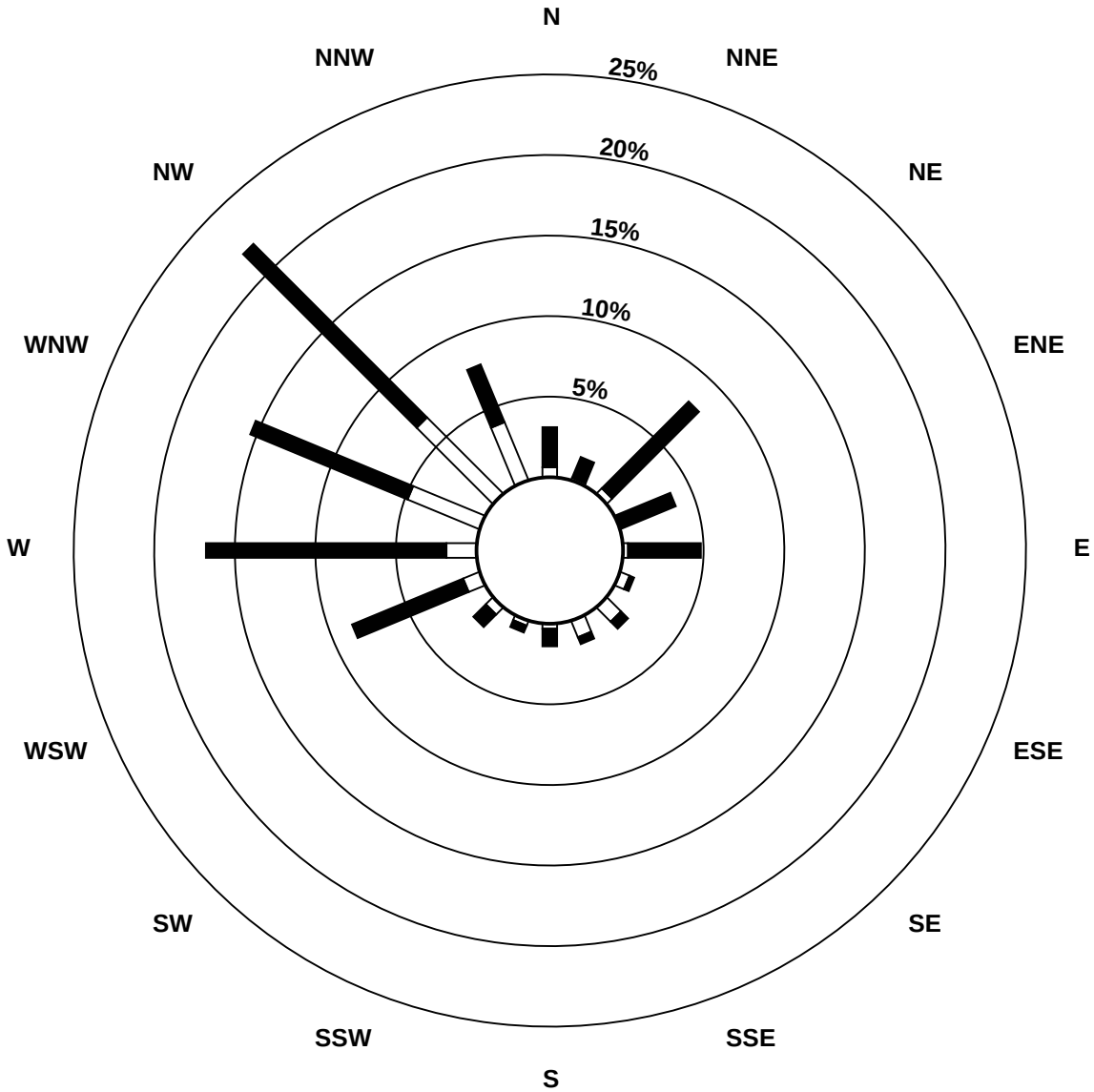
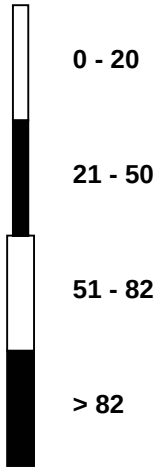
Pollutant Rose

Ozone (O_3) - ppb

Henry Pirker - February 2011



Pollutant Classes (ppb)



FOCUS
AIR QUALITY MONITORING

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Eight Hour Running Averages

Ozone (O_3) - ppb

Henry Pirker - February 2011

Maximum Value: 44.2 ppb on Feb 26 05:00

Minimum Value: 1.0 ppb on Feb 1 08:00

Percentiles: P_1 = 1.4 P_{10} = 10.3 Q_1 = 21.8 Median = 30.9 Q_3 = 34.8 P_{90} = 38.2 P_{99} = 43.0

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

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Feb	2	2	2	1	1	1	1	1	1	1	2	3	4	5	6	8	9	8	8	11	15	18	21	24	24.0
2-Feb	28	32	36	37	36	36	36	36	36	36	35	35	35	35	35	34	33	32	30	27	25	22	20	19	36.7
3-Feb	20	21	22	23	22	25	25	26	25	24	25	28	30	30	32	32	31	28	24	20	17	14	10	7	32.3
4-Feb	6	7	7	7	7	9	12	15	17	17	22	26	30	31	32	32	33	33	33	34	34	35	35	35	34.9
5-Feb	35	35	35	35	34	34	33	33	33	33	33	33	33	34	35	35	36	36	36	36	35	35	35	34	35.7
6-Feb	34	33	33	32	32	31	31	31	31	31	31	31	31	32	32	33	33	33	33	34	34	34	34	34	34.0
7-Feb	34	35	35	35	35	35	34	33	32	31	30	30	30	30	30	31	32	30	27	23	18	15	15	12	35.3
8-Feb	9	8	9	11	12	12	10	9	8	8	7	7	6	7	N	N	N	N	N	N	7	7	6	5	12.2
9-Feb	5	8	11	15	19	23	27	28	28	28	28	28	29	29	30	32	35	36	36	36	36	36	35	35	36.2
10-Feb	36	37	38	38	38	38	37	36	36	35	35	34	34	35	35	36	35	35	35	34	32	31	31	31	38.4
11-Feb	31	32	32	34	35	36	35	33	31	27	24	22	22	23	25	28	29	32	35	35	35	34	32	29	35.6
12-Feb	28	28	28	27	26	25	24	23	24	22	22	23	23	24	25	25	26	25	22	18	17	16	17	18	28.1
13-Feb	20	23	27	32	34	35	36	38	38	39	40	40	40	41	41	41	40	40	39	39	38	36	33	32	41.4
14-Feb	31	29	28	27	26	23	20	18	14	12	10	9	10	14	16	21	26	31	34	36	36	35	35	34	35.7
15-Feb	34	34	34	33	33	33	33	34	33	33	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34.3
16-Feb	34	34	34	34	34	33	30	27	24	23	23	23	22	22	25	28	31	32	31	31	31	31	31	31	34.3
17-Feb	31	31	31	32	32	32	31	31	30	30	30	30	30	30	30	31	31	31	31	30	30	29	29	29	31.8
18-Feb	28	27	26	25	24	22	19	16	14	12	12	13	14	17	19	23	27	29	27	24	21	17	14	11	28.6
19-Feb	8	6	6	8	10	11	11	11	11	11	12	13	14	16	19	23	25	23	21	19	17	14	12	9	24.6
20-Feb	6	5	4	4	4	4	4	4	4	6	8	11	14	16	19	22	22	22	20	18	15	12	9	6	22.2
21-Feb	4	7	12	18	23	29	33	38	43	42	41	41	40	40	40	40	40	41	41	41	41	41	41	41	42.8
22-Feb	40	40	40	40	39	39	39	38	36	36	36	36	36	37	37	39	40	40	40	40	39	38	36	35	40.3
23-Feb	35	36	36	36	36	37	39	38	36	34	34	33	34	34	35	36	37	38	37	35	33	32	30	29	38.8
24-Feb	28	26	26	26	27	27	25	22	18	16	16	16	18	19	22	25	29	31	31	28	26	25	24	22	31.0
25-Feb	20	19	19	20	20	20	19	20	23	25	28	29	32	34	37	37	37	38	38	38	38	39	39	41	40.6
26-Feb	42	43	43	44	44	44	44	43	43	42	41	41	40	40	40	40	40	39	38	36	33	31	31	32	44.2
27-Feb	32	31	33	35	36	36	33	30	27	27	25	24	24	25	27	28	30	31	32	33	34	34	35	36	36.3
28-Feb	36	36	36	35	35	35	34	33	32	32	31	31	31	31	31	31	31	30	28	24	20	17	14	12	35.8
Diurnal Maximums	42.3	43.0	43.4	43.8	44.2	44.2	43.8	43.3	42.8	42.4	41.5	40.7	40.5	40.8	41.2	41.4	40.5	40.7	41.1	41.2	41.2	41.2	40.9	40.6	

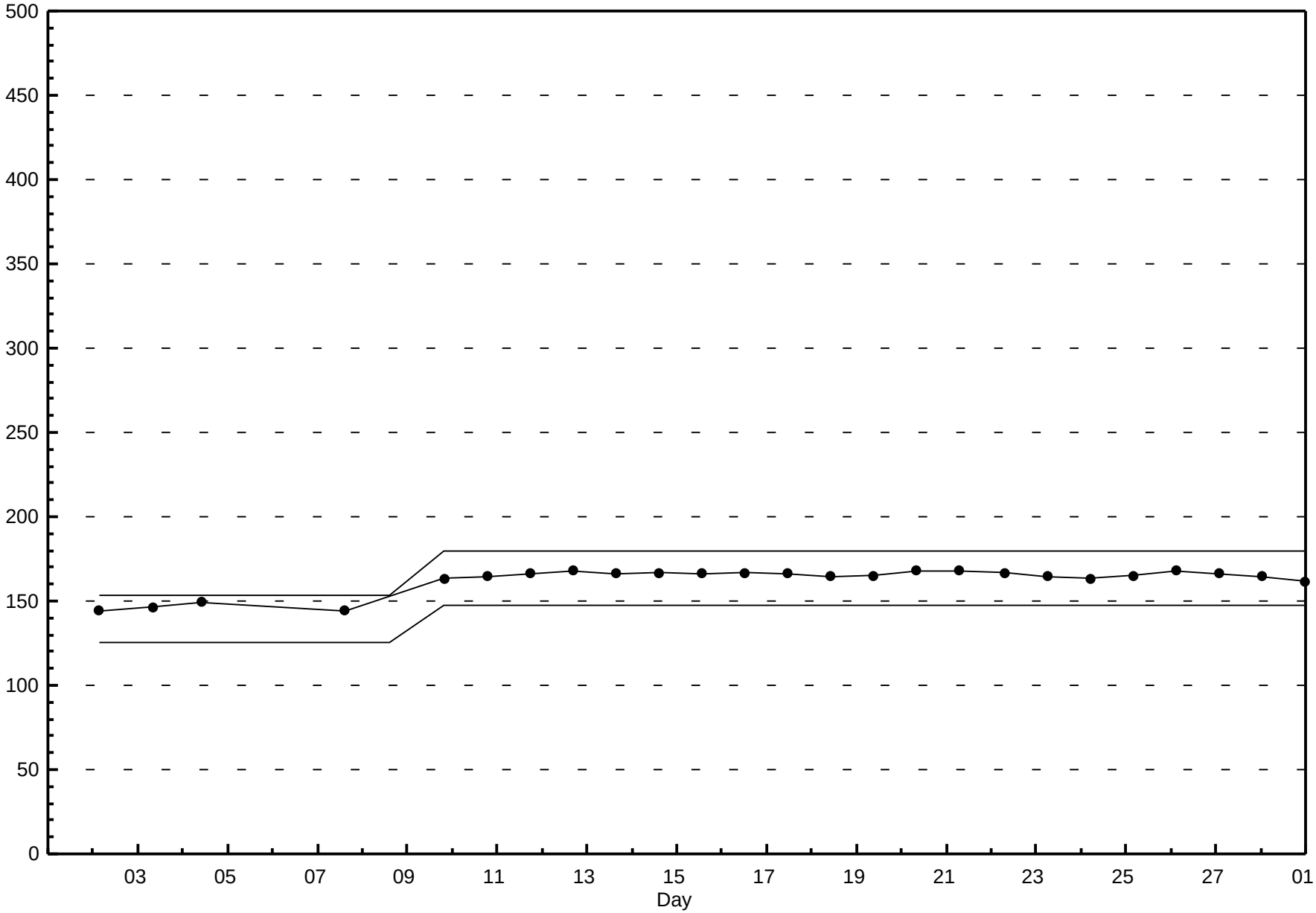
N - Not Valid

PASZA
Peace Air Shed Zone Association

Span Responses

Ozone (O_3)

Henry Pirker - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.56 ppm on Feb 14 09:00 Maximum Daily Average: 0.40 ppm on Feb 14

Minimum Value: 0.1 ppm on Feb 15 05:00 Minimum Daily Average: 0.14 ppm on Feb 15
Maximum Diurnal Average: 0.31 ppm at hour 9 Minimum Diurnal Average: 0.18 ppm at hour 4
Monthly Average: 0.229 ppm Percentiles: P_1 = 0.12 P_{10} = 0.15 Q_1 = 0.16 Median = 0.19 Q_3 = 0.25 P_{90} = 0.35 P_{99} = 0.75

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.5	0.8	0.5	0.4	0.4	0.3	0.4	0.5	0.4	0.2	0.2	0.2	0.2	0.2	0.36	0.78
2-Feb	0.2	0.1	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.21	0.38
3-Feb	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	A	A	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.7	0.7	0.7	0.5	0.5	0.5	0.4	0.33	0.72
4-Feb	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23	0.33
5-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.17	0.21
6-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22	0.25
7-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	C	C	C	0.1	A	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.22	0.32
8-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.4	0.3	0.3	0.3	A	A	0.3	0.4	0.3	0.5	0.3	0.3	0.3	0.3	0.3	0.30	0.49
9-Feb	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.1	0.1	0.1	0.18	0.25
10-Feb	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.18	0.21
11-Feb	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.4	0.5	0.3	0.2	0.2	0.2	0.2	0.3	A	0.2	0.2	0.2	0.2	0.3	0.3	0.23	0.47
12-Feb	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.4	0.4	0.3	0.3	0.3	0.3	0.4	A	0.4	0.5	0.6	0.3	0.3	0.2	0.2	0.30	0.63
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	A	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.20	0.28
14-Feb	0.2	0.3	0.3	0.2	0.2	0.4	0.5	1.0	1.6	1.5	0.8	0.3	0.2	0.2	A	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.40	1.56
15-Feb	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.14	0.16
16-Feb	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	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	0.18	0.31
17-Feb	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.17	0.19
18-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.3	A	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.4	0.6	0.4	0.4	0.4	0.2	0.29	0.62
19-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.3	A	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	0.26	0.37
20-Feb	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	A	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.33	0.43
21-Feb	0.4	0.2	0.1	0.1	0.1	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.18	0.43
22-Feb	0.1	0.1	0.1	0.1	0.1	0.1	A	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.16	0.21
23-Feb	0.1	0.1	0.1	0.1	0.1	A	0.1	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.17	0.28
24-Feb	0.2	0.1	0.1	0.1	A	0.2	0.2	0.5	0.8	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.5	0.5	0.27	0.75
25-Feb	0.3	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20	0.33
26-Feb	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.20	0.28
27-Feb	0.2	A	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.17	0.25
28-Feb	A	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.3	0.2	A	0.20	0.37
	0.22	0.19	0.19	0.18	0.19	0.19	0.22	0.27	0.31	0.30	0.25	0.23	0.21	0.21	0.21	0.22	0.22	0.25	0.27	0.28	0.24	0.23	0.23	0.22	Diurnal Average	
	0.43	0.32	0.37	0.31	0.30	0.45	0.54	0.96	1.56	1.47	0.75	0.78	0.51	0.40	0.43	0.38	0.40	0.68	0.72	0.67	0.49	0.50	0.51	0.53	Diurnal Maximum	

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

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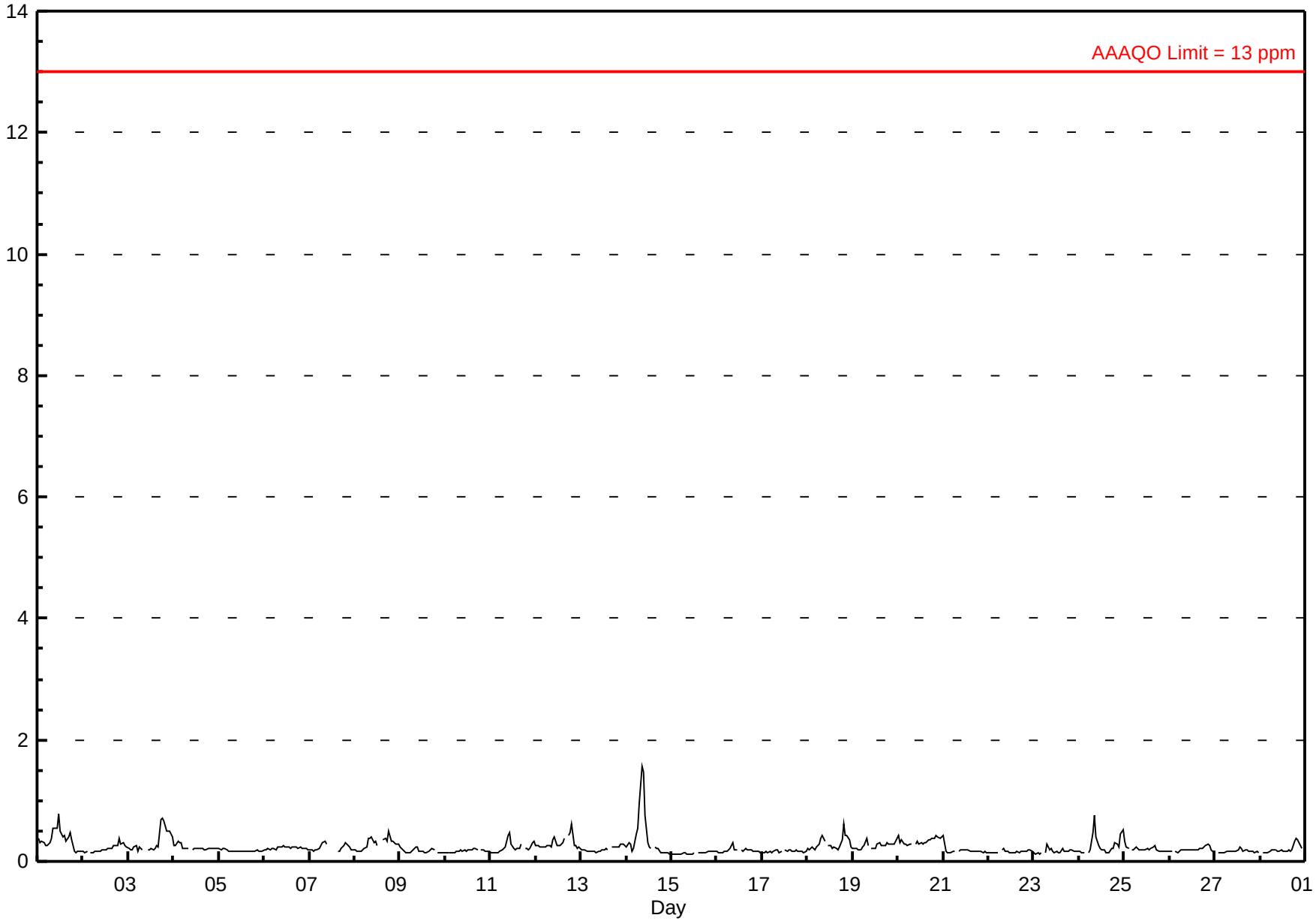
Hourly Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Maximums

Carbon Monoxide (CO) - ppm

Henry Pirker - February 2011

Maximum Value: 2.39 ppm on Feb 14 09:00

Maximum Daily Average: 0.64 ppm on Feb 14

Minimum Value: 0.1 ppm on Feb 11 04:00

Minimum Daily Average: 0.18 ppm on Feb 15

Maximum Diurnal Average: 0.54 ppm at hour 9

Minimum Diurnal Average: 0.23 ppm at hour 4

Monthly Average: 0.342 ppm

Percentiles: $P_1 = 0.15$ $P_{10} = 0.17$ $Q_1 = 0.20$ Median = 0.26 $Q_3 = 0.38$ $P_{90} = 0.60$ $P_{99} = 1.42$

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	0.5	0.4	0.4	0.3	0.3	0.3	0.4	0.6	0.9	0.8	0.8	0.9	0.9	0.6	0.6	0.4	0.5	0.7	0.5	0.2	0.2	0.2	0.3	0.2	0.49	0.95
2-Feb	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	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.4	0.4	0.3	0.3	0.27	0.55
3-Feb	0.3	0.2	0.2	0.4	0.3	0.2	0.3	0.2	A	A	0.2	0.2	0.2	0.2	0.3	0.7	0.4	1.3	1.3	1.1	0.7	1.5	0.6	0.4	0.52	1.50
4-Feb	0.3	0.4	0.4	0.4	0.4	0.3	0.2	0.3	0.3	A	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26	0.40
5-Feb	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.20	0.30
6-Feb	0.2	0.3	0.3	0.3	0.3	0.4	0.3	0.5	0.4	0.4	0.5	0.4	0.3	0.4	0.4	0.5	0.3	0.3	0.3	0.4	0.3	0.3	0.2	0.3	0.33	0.54
7-Feb	0.2	0.2	0.2	0.2	0.2	0.6	0.5	0.7	0.5	0.5	C	C	C	0.4	A	0.5	0.2	0.4	0.3	0.5	0.5	0.4	0.3	0.2	0.38	0.72
8-Feb	0.2	0.3	0.2	0.4	0.3	0.3	0.3	1.0	1.1	1.6	0.4	0.4	0.3	A	A	0.5	0.6	0.5	0.6	0.5	0.5	0.5	0.5	0.4	0.52	1.60
9-Feb	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.1	0.2	0.2	0.22	0.35
10-Feb	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	A	0.2	0.3	0.2	0.3	0.2	0.23	0.32
11-Feb	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.4	0.4	0.6	0.7	0.4	0.2	0.2	0.3	0.3	0.4	A	0.3	0.3	0.2	0.3	0.5	0.6	0.32	0.66
12-Feb	0.4	0.4	0.3	0.3	0.5	0.3	0.3	0.4	0.3	1.0	0.6	0.4	0.3	0.3	0.4	0.6	A	0.7	0.7	0.9	0.4	0.3	0.3	0.3	0.45	1.02
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	A	0.3	0.3	0.3	0.4	0.3	0.3	0.4	0.3	0.24	0.42
14-Feb	0.3	0.4	0.4	0.2	0.4	1.1	0.9	2.2	2.4	1.7	1.3	0.5	0.3	0.3	A	0.5	0.3	0.6	0.2	0.2	0.2	0.2	0.2	0.2	0.64	2.39
15-Feb	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.18	0.34
16-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.7	0.4	0.7	0.2	A	0.2	0.5	0.9	0.5	0.5	0.3	0.2	0.4	0.4	0.2	0.2	0.34	0.87
17-Feb	0.2	0.2	0.2	0.2	0.3	0.2	0.4	0.3	0.3	0.2	0.2	A	0.5	0.4	0.5	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.28	0.53
18-Feb	0.3	0.2	0.3	0.2	0.2	0.5	0.8	1.0	1.4	0.6	A	0.3	0.3	0.3	0.3	0.2	0.3	0.3	1.2	0.8	0.6	0.7	0.6	0.3	0.51	1.42
19-Feb	0.3	0.2	0.3	0.2	0.2	0.5	0.3	1.0	0.4	A	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.4	0.6	0.37	1.03
20-Feb	0.8	0.5	0.7	0.3	0.4	0.3	0.3	0.3	A	0.4	0.6	0.4	0.5	0.4	0.5	0.4	0.5	0.4	0.8	0.6	0.6	0.9	0.5	0.5	0.51	0.86
21-Feb	0.7	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	0.2	0.2	0.2	0.2	0.2	0.2	0.22	0.67
22-Feb	0.2	0.3	0.2	0.3	0.2	0.2	A	0.4	0.5	0.2	0.2	0.2	0.2	0.3	0.2	0.4	0.2	0.2	0.2	0.2	0.2	0.4	0.2	0.4	0.25	0.45
23-Feb	0.2	0.2	0.2	0.2	0.2	A	0.2	0.6	0.3	0.5	0.2	0.3	0.3	0.2	0.3	0.8	0.5	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.29	0.84
24-Feb	0.2	0.2	0.2	0.2	A	0.2	0.3	0.9	1.7	0.6	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.5	0.6	0.38	1.66
25-Feb	0.5	0.3	0.3	A	0.2	0.2	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26	0.54
26-Feb	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.5	0.4	0.4	0.2	0.25	0.48
27-Feb	0.2	A	0.2	0.2	0.2	0.2	0.6	0.2	0.2	0.3	0.4	0.2	0.4	1.0	0.8	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.33	1.01
28-Feb	A	0.2	0.2	0.2	0.2	0.2	0.4	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.2	0.7	0.2	0.4	0.9	0.6	0.6	0.3	0.2	A	0.34	0.92
	0.29	0.25	0.25	0.23	0.25	0.29	0.34	0.50	0.54	0.48	0.37	0.31	0.30	0.31	0.32	0.40	0.32	0.38	0.41	0.38	0.33	0.36	0.32	0.29	Diurnal Average	
	0.82	0.47	0.65	0.39	0.54	1.07	0.89	2.20	2.39	1.73	1.34	0.95	0.85	1.01	0.79	0.87	0.63	1.34	1.34	1.09	0.70	1.50	0.63	0.63	Diurnal Maximum	

C - Calibration

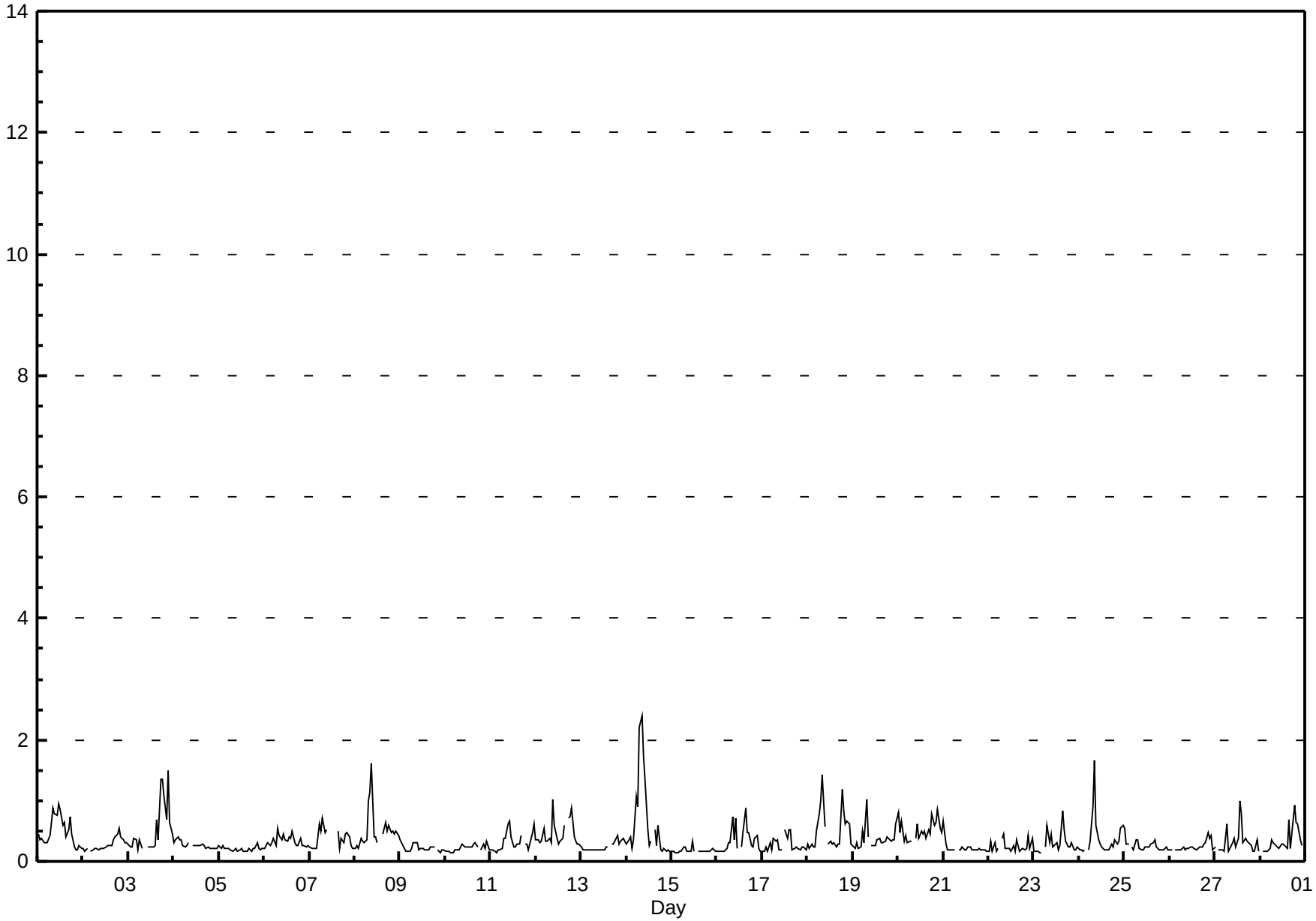
A - Automated Daily Zero Span

PASZA
Peace Air Shed Zone Association

Hourly Maximums

Carbon Monoxide (CO) - ppm

Henry Pirker - February 2011



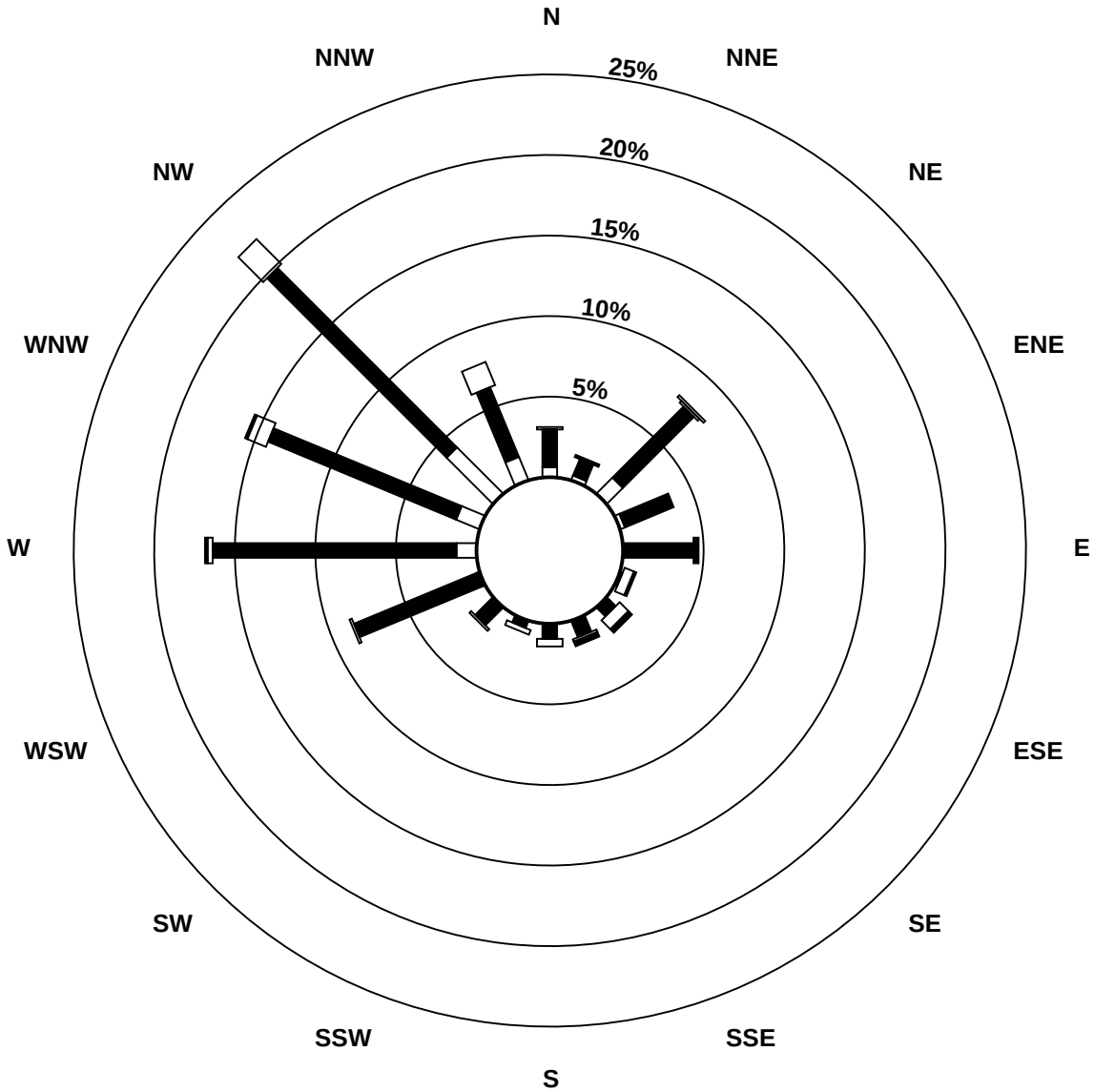
FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Pollutant Rose

Carbon Monoxide (CO) - ppm

Henry Pirker - February 2011



Pollutant Classes (ppm)

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

FOCUS AIR QUALITY MONITORING

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Peace Air Shed Zone Association

Eight Hour Running Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - February 2011

Number of Exceedences (AAAQO): 8-hr: 0
Maximum Value: 0.78 ppm on Feb 14 15:00

Minimum Value: 0.12 ppm on Feb 15 06:00

Percentiles: P_1 = 0.12 P_{10} = 0.16 Q_1 = 0.17 Median = 0.20 Q_3 = 0.27 P_{90} = 0.34 P_{99} = 0.68

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

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	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	0.4	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.52
2-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.28
3-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	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.53
4-Feb	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.53
5-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20
6-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.24
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	N	N	N	N	N	N	N	0.2	0.2	0.2	0.2	0.2	0.27
8-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	0.4	0.4	0.4	0.4	0.4	0.3	0.37
9-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
10-Feb	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20
11-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.28
12-Feb	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.39
13-Feb	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.33
14-Feb	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.78
15-Feb	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.16
16-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	0.21
17-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	0.17
18-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.35
19-Feb	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.36
20-Feb	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.38
21-Feb	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.39
22-Feb	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.17
23-Feb	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19
24-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.35
25-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	0.33
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	0.2	0.23
27-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
28-Feb	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.27
Diurnal Maximums	0.53	0.48	0.43	0.38	0.36	0.34	0.32	0.40	0.56	0.71	0.77	0.78	0.78	0.75	0.78	0.68	0.49	0.49	0.47	0.40	0.43	0.47	0.51	0.53	

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

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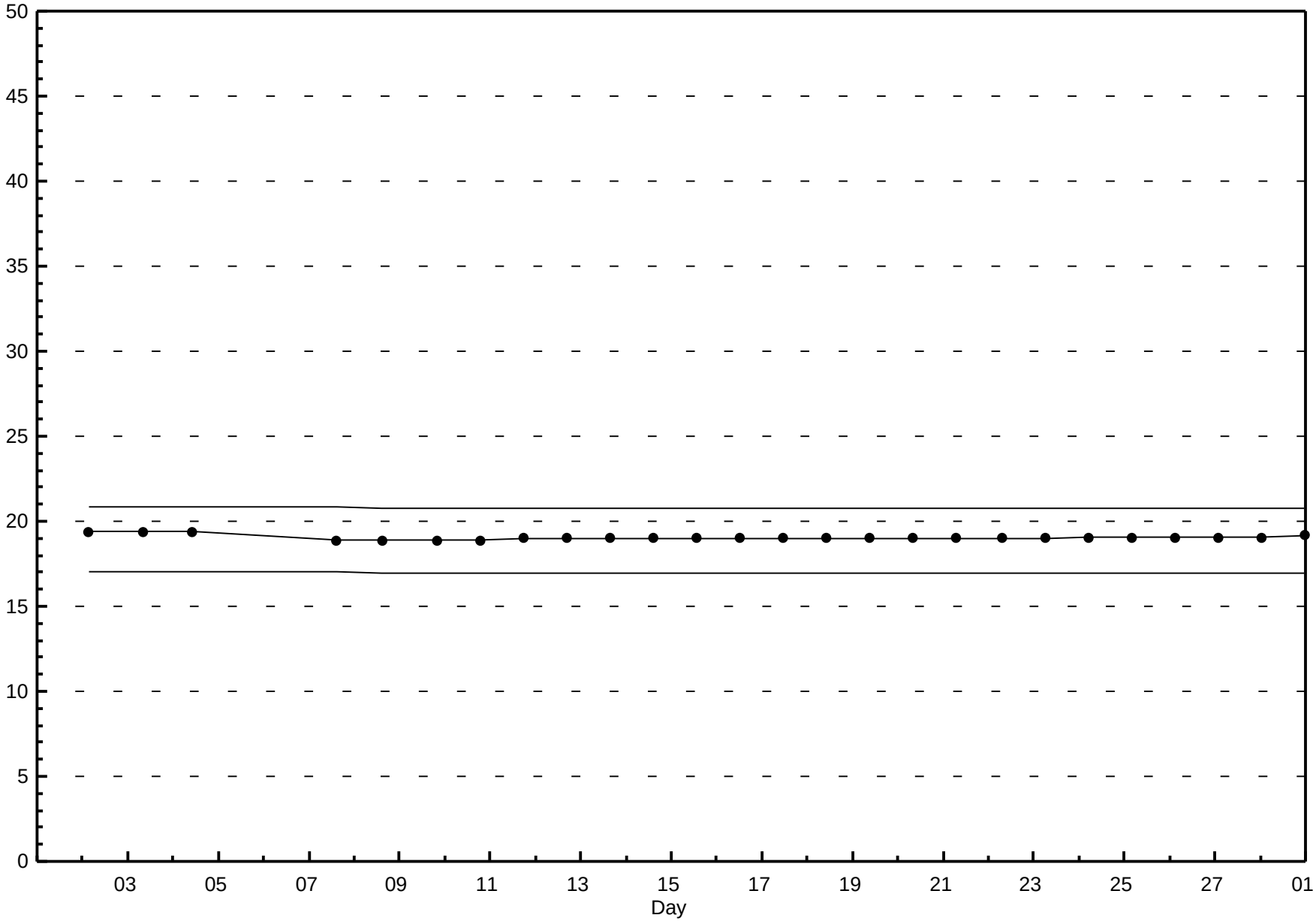
Span Responses

Carbon Monoxide (CO)

Henry Pirker - February 2011



FOCUS AIR QUALITY MONITORING

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Hourly Averages

Total Hydrocarbons (THC) - ppm

Henry Pirker - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.39 ppm on Feb 1 16:00 Maximum Daily Average: 2.89 ppm on Feb 20

Minimum Value: 1.8 ppm on Feb 2 09:00 Minimum Daily Average: 1.92 ppm on Feb 2
Maximum Diurnal Average: 2.19 ppm at hour 10 Minimum Diurnal Average: 2.09 ppm at hour 21
Monthly Average: 2.137 ppm Percentiles: P_1 = 1.86 P_{10} = 1.92 Q_1 = 1.96 Median = 2.03 Q_3 = 2.14 P_{90} = 2.58 P_{99} = 3.28

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	2.7	2.6	2.8	2.9	2.9	3.0	3.2	3.3	3.3	3.3	3.1	3.3	3.0	3.1	3.2	3.4	3.3	3.2	2.9	1.9	1.9	1.9	1.9	1.9	2.83	3.39
2-Feb	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.92	2.04
3-Feb	1.9	1.9	1.9	2.1	2.1	1.9	2.0	1.9	A	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2	2.2	2.2	2.1	2.0	2.3	2.3	2.02	2.34
4-Feb	2.0	2.0	2.2	2.1	2.2	2.0	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.94	2.20
5-Feb	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.04	2.18
6-Feb	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.07	2.17
7-Feb	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	C	C	C	2.1	2.1	A	2.1	2.1	2.1	2.2	2.3	2.3	2.4	2.6	2.7	2.18	2.75
8-Feb	2.7	2.6	2.4	2.3	2.3	2.6	2.8	2.8	2.8	2.7	2.5	2.4	2.7	A	A	2.5	2.4	2.4	2.5	2.5	2.5	2.6	2.5	2.5	2.54	2.84
9-Feb	2.4	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.0	A	1.9	1.9	1.9	1.9	2.01	2.37
10-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	A	1.9	1.9	2.0	1.9	2.0	1.93	1.96
11-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.2	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	2.0	2.0	1.96	2.16
12-Feb	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.1	A	2.1	2.2	2.3	1.9	1.9	1.9	2.0	2.04	2.32
13-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.94	2.04
14-Feb	2.1	2.2	2.2	2.0	2.0	2.3	2.3	2.3	2.6	2.6	2.4	2.1	2.1	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.13	2.63
15-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	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.01	2.03
16-Feb	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.3	2.2	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.09	2.28
17-Feb	2.0	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.1	2.1	A	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.07	2.14
18-Feb	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.4	2.3	A	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.5	2.5	2.6	2.24	2.58
19-Feb	2.5	2.5	2.5	2.5	2.6	2.7	2.8	2.8	2.9	A	2.9	2.8	2.8	2.7	2.6	2.4	2.4	2.5	2.5	2.5	2.5	2.6	2.5	2.7	2.63	2.90
20-Feb	2.8	2.7	2.7	2.8	3.0	2.9	3.1	3.0	A	3.0	3.1	3.0	2.8	2.8	2.8	2.8	2.8	2.8	2.9	2.8	2.7	2.8	3.2	3.2	2.89	3.17
21-Feb	3.0	2.1	2.0	2.0	2.0	2.0	2.0	A	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.01	3.00
22-Feb	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.03	2.12
23-Feb	2.0	2.0	2.0	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.1	2.07	2.21
24-Feb	2.1	2.3	2.2	2.2	A	2.3	2.2	2.3	2.4	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.3	2.18	2.36
25-Feb	2.2	2.2	2.4	A	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.03	2.38
26-Feb	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	1.9	2.0	1.94	2.06
27-Feb	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.01	2.05
28-Feb	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.4	2.3	A	2.07	2.38
	2.16	2.12	2.13	2.12	2.13	2.15	2.18	2.18	2.18	2.19	2.17	2.15	2.13	2.09	2.10	2.11	2.10	2.12	2.13	2.12	2.09	2.12	2.15	2.16	Diurnal Average	
	3.00	2.70	2.75	2.87	2.95	3.00	3.21	3.31	3.33	3.34	3.14	3.29	3.05	3.08	3.19	3.39	3.28	3.24	2.89	2.85	2.74	2.82	3.16	3.17	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

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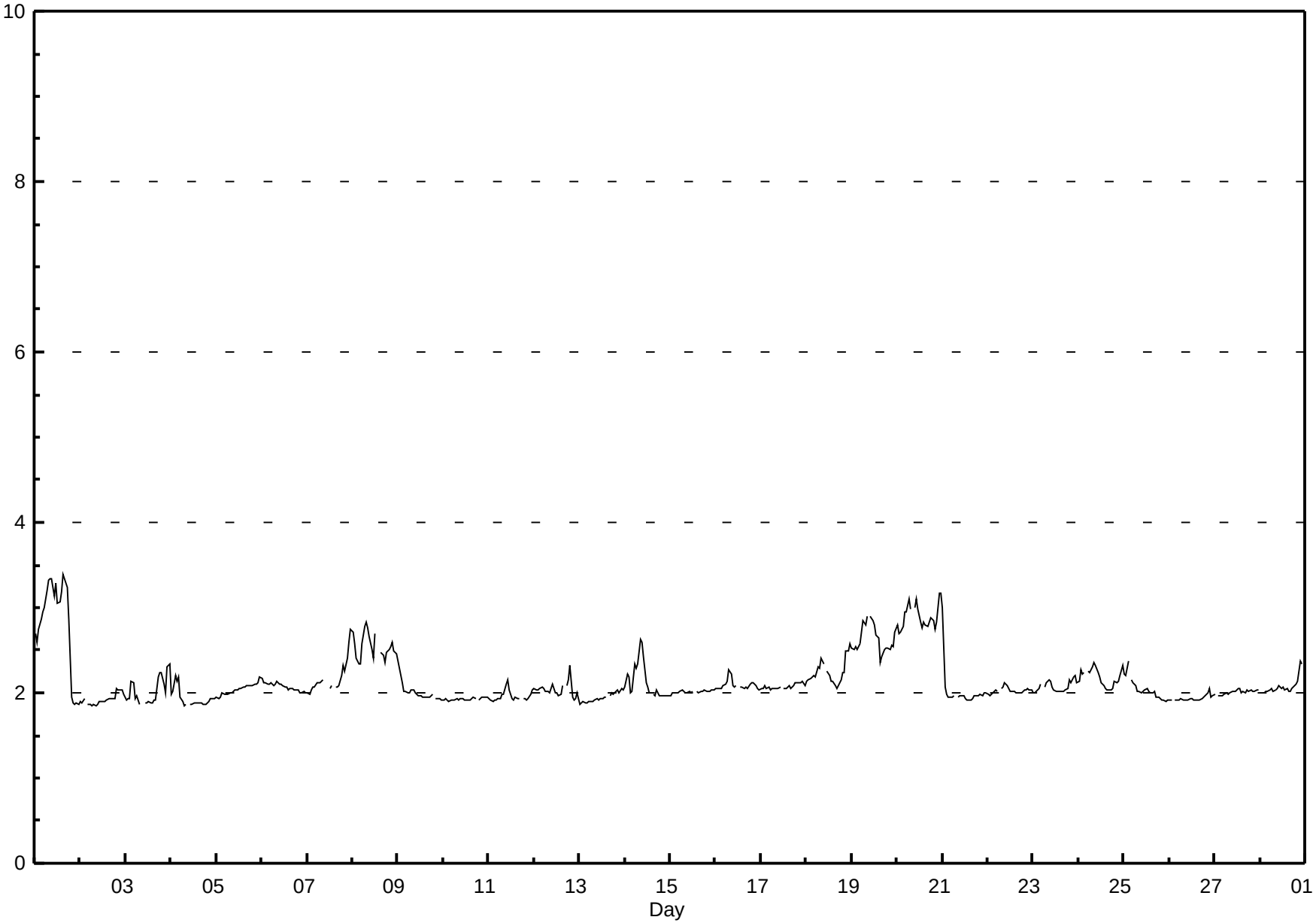
Peace Air Shed Zone Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Henry Pirker - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Maximums

Total Hydrocarbons (THC) - ppm

Henry Pirker - February 2011

Maximum Value: 3.66 ppm on Feb 19 15:00

Maximum Daily Average: 3.02 ppm on Feb 20

Minimum Value: 1.9 ppm on Feb 2 09:00

Minimum Daily Average: 1.96 ppm on Feb 10

Maximum Diurnal Average: 2.31 ppm at hour 10

Minimum Diurnal Average: 2.19 ppm at hour 17

Monthly Average: 2.243 ppm

Percentiles: P_1 = 1.89 P_{10} = 1.94 Q_1 = 2.01 Median = 2.12 Q_3 = 2.34 P_{90} = 2.73 P_{99} = 3.49

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	2.8	2.7	2.8	2.9	3.0	3.0	3.5	3.4	3.4	3.5	3.3	3.3	3.3	3.2	3.4	3.6	3.4	3.3	3.2	2.1	1.9	1.9	1.9	1.9	2.94	3.57
2-Feb	1.9	1.9	2.1	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.1	2.2	2.2	2.00	2.23
3-Feb	2.0	2.1	2.0	3.5	2.5	2.1	2.1	1.9	A	A	2.1	1.9	1.9	1.9	1.9	2.0	2.0	2.5	2.5	2.3	2.3	2.2	2.4	2.4	2.22	3.47
4-Feb	2.1	2.2	2.5	2.4	2.5	2.1	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.02	2.54
5-Feb	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.08	2.24
6-Feb	2.3	2.5	2.5	2.2	2.1	2.2	2.1	2.2	2.5	2.4	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.18	2.53
7-Feb	2.1	2.1	2.3	2.4	2.3	2.5	2.7	2.6	2.7	C	C	C	2.6	2.6	A	2.5	2.4	2.2	2.3	2.5	2.4	2.7	2.7	2.8	2.47	2.84
8-Feb	2.9	2.7	2.4	2.4	2.5	2.7	2.9	3.0	2.9	2.8	2.7	2.4	3.3	A	A	2.6	2.5	2.4	2.5	2.6	2.6	2.7	2.7	2.5	2.67	3.35
9-Feb	2.6	2.3	2.3	2.0	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	1.9	2.0	1.9	2.05	2.58
10-Feb	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	2.0	1.9	1.9	2.0	2.0	2.0	A	1.9	2.0	2.0	2.0	2.0	1.96	2.01
11-Feb	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.2	2.3	2.1	2.0	2.0	2.0	2.0	2.0	A	2.0	2.1	1.9	2.0	2.0	2.2	2.03	2.34
12-Feb	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.0	2.1	2.3	A	2.2	2.3	2.5	2.1	2.0	2.0	2.3	2.15	2.54
13-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.00	2.15
14-Feb	2.2	2.3	2.3	2.0	2.1	2.7	2.6	2.6	2.8	2.7	3.0	2.5	2.4	2.4	A	2.3	2.3	2.5	2.0	2.1	2.3	2.2	2.1	2.0	2.36	2.95
15-Feb	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	A	2.1	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.04	2.06
16-Feb	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.5	2.1	2.2	A	2.1	2.4	2.3	2.5	2.3	2.6	2.5	2.8	2.7	2.5	2.1	2.30	2.76
17-Feb	2.2	2.4	2.3	2.3	2.3	2.1	2.3	2.1	2.1	2.1	2.1	A	2.1	2.1	2.2	2.4	2.1	2.1	2.2	2.2	2.1	2.1	2.2	2.1	2.18	2.45
18-Feb	2.2	2.2	2.2	2.3	2.2	2.2	2.4	2.5	2.6	2.5	A	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.4	2.3	2.3	2.6	2.6	2.6	2.32	2.63
19-Feb	2.6	2.5	2.6	2.6	2.6	2.8	3.0	3.6	3.0	A	3.0	3.0	3.0	2.7	3.7	2.4	2.5	2.5	2.7	2.6	2.5	2.6	2.6	2.9	2.79	3.66
20-Feb	2.9	2.8	2.8	2.8	3.1	3.0	3.1	3.1	A	3.1	3.2	3.2	3.0	2.9	2.9	2.9	2.8	2.9	3.0	2.9	2.8	3.0	3.6	3.6	3.02	3.57
21-Feb	3.3	2.4	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.2	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.08	3.35
22-Feb	2.0	2.0	2.0	2.1	2.1	2.1	A	2.1	2.3	2.2	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.08	2.25
23-Feb	2.0	2.0	2.2	2.1	2.1	A	2.1	2.2	2.2	2.2	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.2	2.3	2.3	2.1	2.14	2.35
24-Feb	2.3	2.4	2.3	2.3	A	2.3	2.3	2.5	2.6	2.4	2.3	2.2	2.2	2.1	2.1	2.0	2.1	2.1	2.1	2.2	2.1	2.2	2.3	2.4	2.24	2.58
25-Feb	2.4	2.3	2.6	A	2.2	2.2	2.1	2.1	2.1	2.0	2.1	2.1	2.2	2.0	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.10	2.57
26-Feb	1.9	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.4	2.2	2.2	1.99	2.35
27-Feb	2.2	A	2.1	2.1	2.0	2.1	2.1	2.1	2.2	2.3	2.2	2.2	2.5	2.3	2.1	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.3	2.2	2.20	2.53
28-Feb	A	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.2	2.3	2.4	2.2	2.3	2.5	2.3	2.1	2.1	2.1	2.2	2.1	2.3	2.5	2.4	A	2.22	2.50
	2.26	2.22	2.24	2.25	2.22	2.23	2.27	2.31	2.29	2.31	2.27	2.24	2.27	2.20	2.21	2.22	2.19	2.22	2.24	2.23	2.19	2.23	2.26	2.26	Diurnal Average	
	3.35	2.84	2.81	3.47	3.07	3.05	3.48	3.62	3.39	3.52	3.30	3.32	3.35	3.21	3.66	3.57	3.43	3.33	3.17	2.95	2.78	3.00	3.57	3.56	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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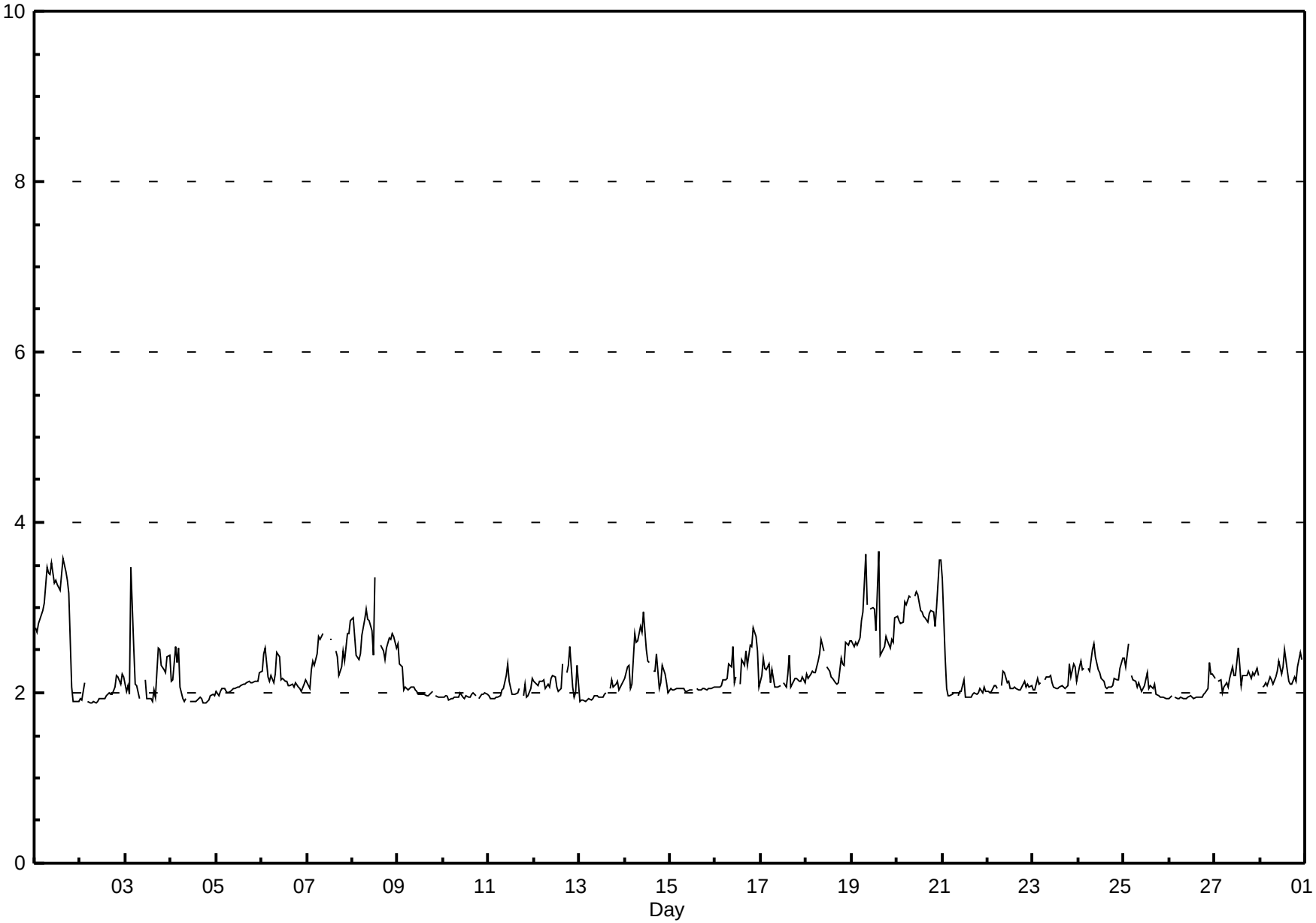
Hourly Maximums

Total Hydrocarbons (THC) - ppm

Henry Pirker - February 2011



FOCUS AIR QUALITY MONITORING

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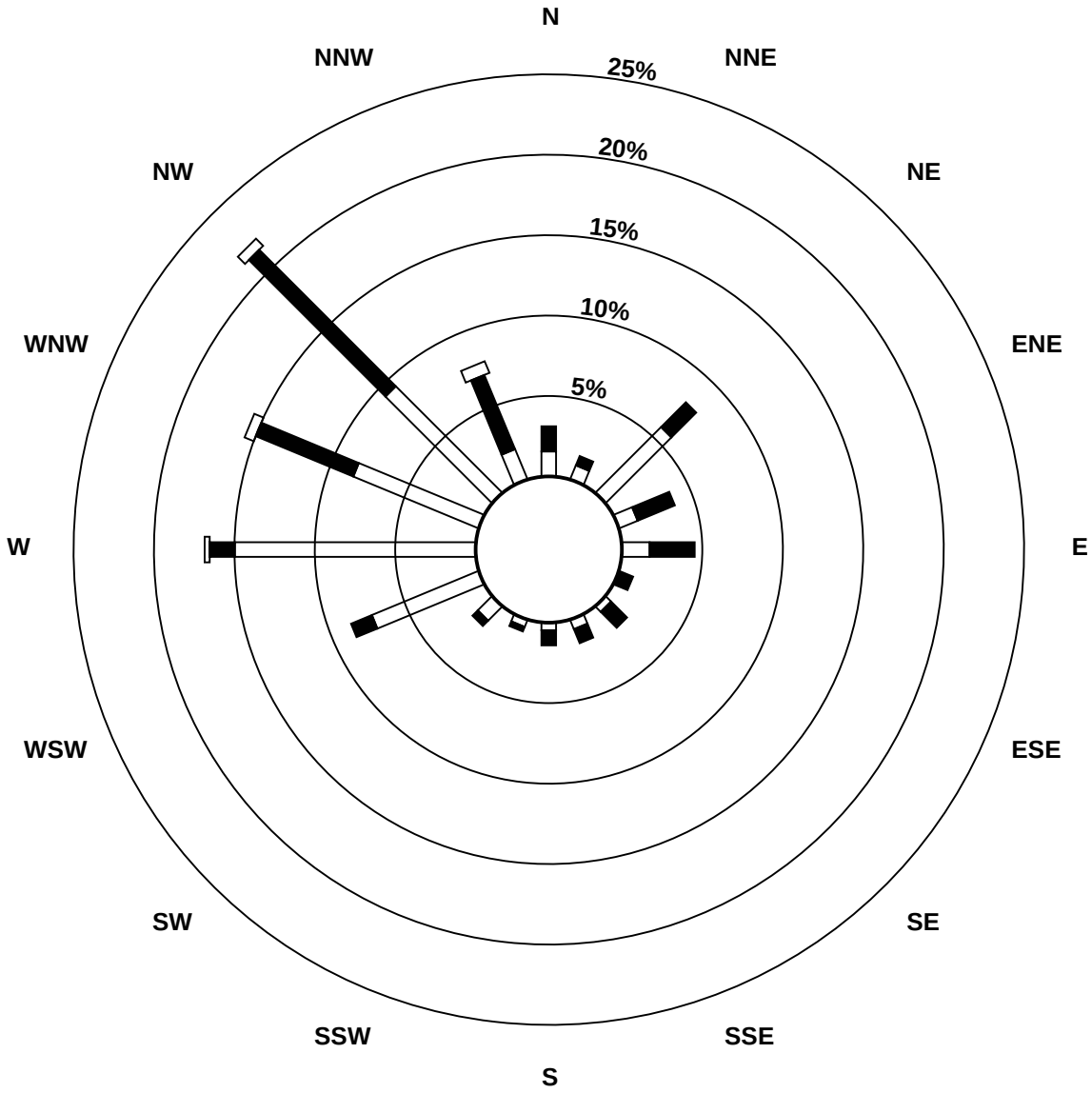
Pollutant Rose

Total Hydrocarbons (THC) - ppm

Henry Pirker - February 2011



Pollutant Classes (ppm)

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

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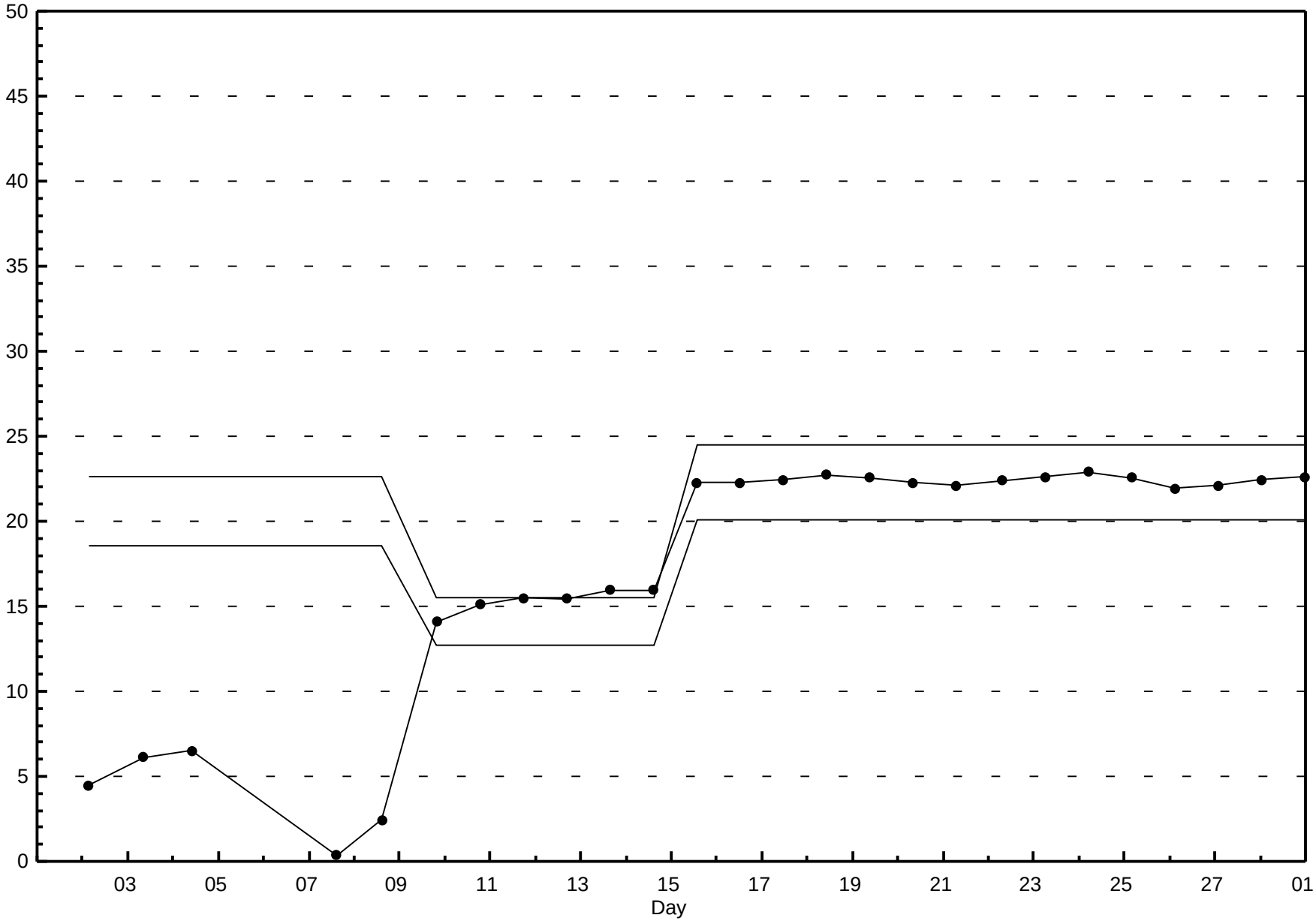
Span Responses

Total Hydrocarbons (THC)

Henry Pirker - February 2011



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Hourly Averages

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

Henry Pirker - February 2011

Number of Exceedences: 1-hr: 0 24-hr: 0
Maximum Value: 45.6 $\mu g/m^3$ on Feb 25 00:00
Maximum Daily Average: 17.2 $\mu g/m^3$ on Feb 1

Minimum Value: 0 $\mu g/m^3$ on Feb 2 08:00
Maximum Diurnal Average: 10.0 $\mu g/m^3$ at hour 24
Monthly Average: 8.55 $\mu g/m^3$

Minimum Daily Average: 3.6 $\mu g/m^3$ on Feb 23
Minimum Diurnal Average: 6.3 $\mu g/m^3$ at hour 7
Percentiles: $P_1 = 0.0$ $P_{10} = 0.8$ $Q_1 = 3.2$ Median = 7.1 $Q_3 = 12.0$ $P_{90} = 17.3$ $P_{99} = 32.0$

Hours in Service:	672
Hours of Data:	602
Hours of Missing Data:	70
Hours of Calibration:	0
Percent Operational Time:	89.6

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	19	12	15	12	15	16	15	16	24	20	21	32	28	24	43	33	15	22	21	3	1	3	1	2	17.2	42.9
2-Feb	7	8	6	6	3	4	3	0	0	2	4	3	1	8	4	3	BD	4	7	2	0	10	0	BD	3.8	10.0
3-Feb	8	9	0	BD	0	5	0	BD	0	9	11	7	7	0	2	4	1	10	8	5	7	2	11	16	5.6	16.4
4-Feb	17	14	10	7	0	BD	BD	BD	0	10	10	1	BD	6	1	0	3	0	2	2	3	7	11	10	5.7	16.9
5-Feb	BD	BD	2	7	16	21	BD	BD	BD	BD	15	32	30	18	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	--	32.0
6-Feb	BD	BD	BD	11	22	24	9	BD	BD	BD	BD	0	5	4	BD	BD	2	5	21	26	17	10	4	0	--	26.2
7-Feb	BD	6	21	7	5	7	4	6	6	1	5	7	7	7	8	4	5	10	9	12	12	11	9	11	7.9	20.8
8-Feb	12	8	9	12	7	3	11	18	17	12	17	16	15	16	12	18	22	18	32	44	20	14	15	17	16.1	44.1
9-Feb	13	13	7	5	8	2	0	0	7	7	0	5	5	0	7	5	3	7	3	3	10	3	1	1	4.9	13.4
10-Feb	8	2	0	1	12	12	3	BD	BD	9	12	3	1	3	7	13	9	0	BD	8	20	10	BD	BD	7.0	20.1
11-Feb	0	9	10	7	1	BD	0	2	2	4	7	12	6	9	2	7	4	7	2	3	7	15	12	13	6.1	14.9
12-Feb	4	4	16	17	15	5	2	11	10	13	4	0	BD	5	3	0	23	36	25	13	0	0	1	12	9.5	36.3
13-Feb	22	4	4	BD	2	13	7	BD	5	11	BD	0	13	12	13	12	11	12	13	19	12	8	1	0	9.3	22.2
14-Feb	2	11	20	9	BD	BD	17	22	26	12	20	24	16	13	8	6	7	7	BD	6	14	5	BD	2	12.3	25.7
15-Feb	1	9	8	4	10	6	6	1	3	3	3	2	1	4	3	4	3	3	1	2	3	3	3	4	3.7	9.6
16-Feb	2	4	1	4	6	0	4	8	3	5	8	5	3	3	8	8	5	3	4	4	7	8	4	2	4.5	8.2
17-Feb	4	4	4	3	4	3	5	3	2	5	5	8	8	5	6	9	6	5	5	6	6	4	7	6	5.0	8.7
18-Feb	4	7	6	6	9	7	9	9	9	12	8	6	8	6	7	8	8	7	4	8	12	11	18	12	8.4	17.9
19-Feb	9	8	9	7	7	7	9	8	10	12	9	10	12	13	22	28	28	22	17	13	13	12	16	16	13.1	27.7
20-Feb	18	18	15	17	17	16	16	16	13	15	12	12	20	24	17	12	15	20	22	16	10	13	15	11	15.9	23.5
21-Feb	14	8	9	10	9	8	6	0	BD	BD	5	10	2	0	1	8	10	14	5	BD	BD	1	11	16	7.3	16.1
22-Feb	14	7	1	2	0	0	1	5	8	1	1	12	14	6	BD	BD	0	9	9	4	3	7	10	8	5.6	13.9
23-Feb	1	0	4	6	2	0	3	3	1	3	2	5	7	2	3	5	6	5	5	6	8	5	3	3	3.6	7.7
24-Feb	5	4	2	2	3	4	3	6	11	16	12	5	4	4	8	1	2	2	4	7	8	7	18	46	7.7	45.6
25-Feb	39	10	10	9	7	2	3	2	3	9	7	2	3	7	10	8	3	3	6	3	2	5	5	9	6.9	38.7
26-Feb	2	0	2	6	11	8	0	0	7	12	4	BD	1	11	11	0	5	15	6	0	10	16	16	17	7.0	16.5
27-Feb	9	0	BD	BD	4	17	22	17	14	11	1	BD	BD	0	3	N	N	7	BD	BD	BD	9	33	BD	--	33.5
28-Feb	BD	15	31	BD	4	29	BD	8	13	BD	32	18	1	32	0	0	29	BD	0	10	7	17	7	8	13.7	32.1
	9.8	7.5	8.5	7.4	7.4	8.7	6.3	7.3	8.1	8.9	8.9	9.1	8.7	8.7	8.3	8.1	9.1	9.7	9.6	9.1	8.5	8.0	9.3	10.0	Diurnal Average	
	38.7	17.8	30.9	17.4	21.8	28.9	21.8	21.9	25.7	19.9	31.9	32.0	30.4	32.1	42.9	32.6	28.9	36.3	31.8	44.1	20.2	16.9	33.5	45.6	Diurnal Maximum	

N - Not Valid BD - Baseline Drift
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

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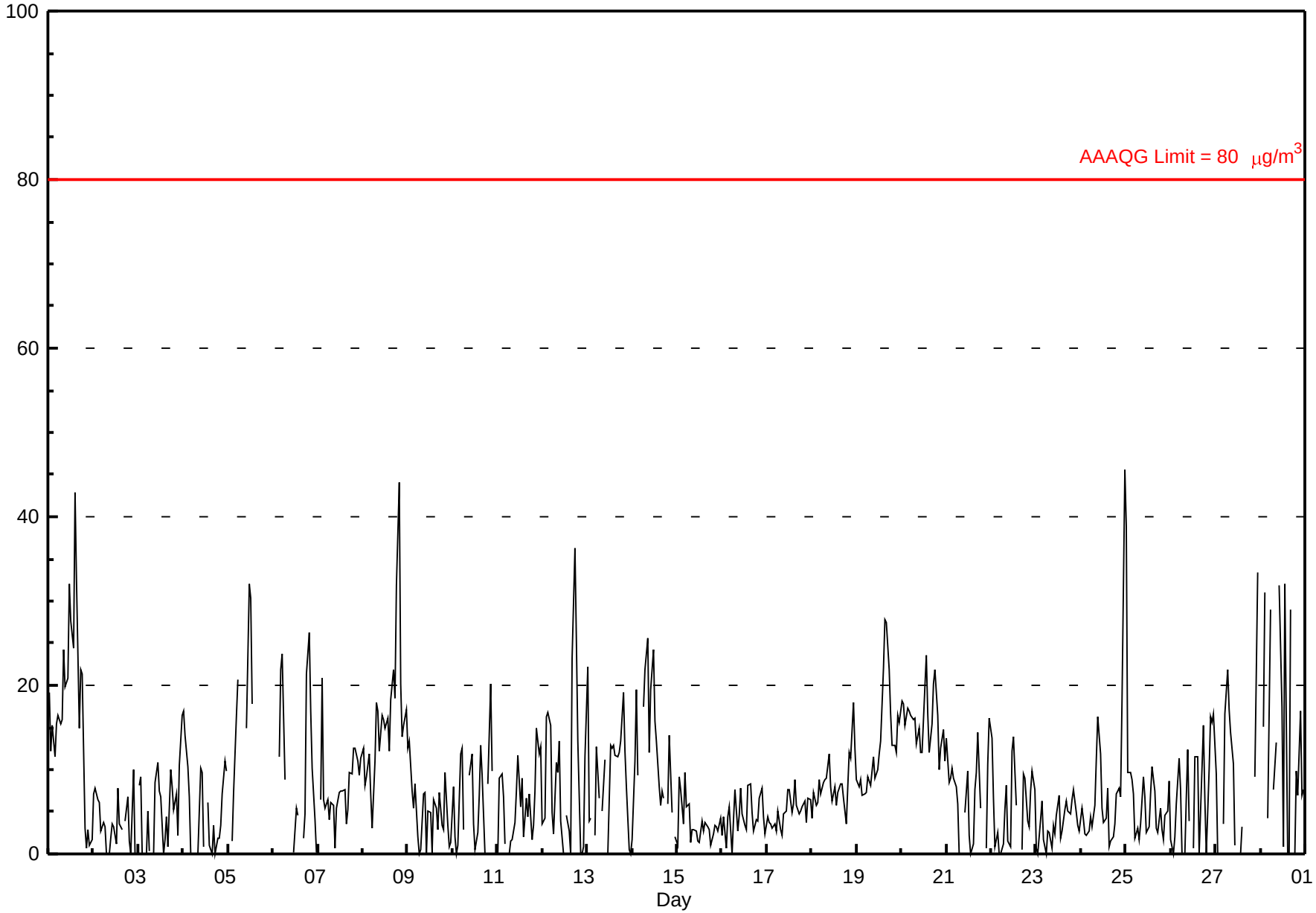
Hourly Averages

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

Henry Pirker - February 2011



FOCUS AIR QUALITY MONITORING

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Hourly Maximums

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

Henry Pirker - February 2011

Maximum Value: 50.5 $\mu g/m^3$ on Feb 8 20:00

Maximum Daily Average: 22.2 $\mu g/m^3$ on Feb 28

Minimum Value: 0 $\mu g/m^3$ on Feb 4 06:00

Minimum Daily Average: 5.2 $\mu g/m^3$ on Feb 23

Maximum Diurnal Average: 12.6 $\mu g/m^3$ at hour 11

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

Monthly Average: 11.16 $\mu g/m^3$

Percentiles: $P_1 = 0.0$ $P_{10} = 2.5$ $Q_1 = 5.2$ Median = 9.1 $Q_3 = 14.8$ $P_{90} = 22.0$ $P_{99} = 47.6$

Hours in Service:	672
Hours of Data:	642
Hours of Missing Data:	30
Hours of Calibration:	0
Percent Operational Time:	95.5

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	20	17	18	14	17	18	17	23	26	21	28	34	31	34	48	46	19	25	26	14	5	5	2	4	21.4	48.0
2-Feb	9	9	7	8	4	5	4	2	3	3	5	4	5	9	8	8	4	5	8	7	4	13	9	0	5.9	12.5
3-Feb	13	13	4	BD	2	7	5	BD	5	9	12	10	7	6	7	7	7	11	10	9	9	4	19	20	8.9	19.5
4-Feb	19	15	13	9	3	0	0	0	2	14	14	6	0	10	8	9	10	2	3	4	4	9	13	13	7.6	19.3
5-Feb	3	0	6	9	23	23	12	BD	BD	BD	32	33	33	25	4	BD	BD	BD	BD	BD	BD	BD	BD	BD	--	33.4
6-Feb	BD	BD	0	20	24	25	20	0	BD	BD	0	2	7	7	0	1	3	13	26	27	25	11	8	2	11.1	27.4
7-Feb	BD	19	24	15	8	8	5	7	7	5	7	9	9	9	10	7	8	11	11	14	14	12	11	13	10.5	23.7
8-Feb	14	10	11	13	10	5	16	19	19	15	18	17	16	17	15	21	23	21	48	50	31	16	18	18	19.2	50.5
9-Feb	15	15	12	8	9	7	0	2	11	11	1	7	8	2	9	9	5	9	9	8	12	7	2	6	7.8	15.5
10-Feb	10	6	0	7	15	16	7	0	0	15	15	8	2	4	11	14	14	4	BD	18	21	20	0	BD	9.3	21.3
11-Feb	4	11	11	8	6	0	2	3	3	5	12	14	10	11	5	8	7	8	6	5	14	16	13	15	8.2	16.4
12-Feb	9	9	20	18	18	12	7	13	12	15	10	2	3	6	5	4	39	40	28	24	6	0	2	23	13.5	39.8
13-Feb	27	14	6	2	10	14	13	0	13	14	4	6	15	15	14	13	12	13	17	20	18	9	7	0	11.5	26.7
14-Feb	5	16	23	22	0	6	21	26	29	19	24	26	21	15	11	7	9	9	2	14	15	11	0	4	13.9	28.5
15-Feb	6	13	13	6	14	9	9	2	4	4	4	4	3	5	5	5	4	4	3	5	6	6	6	6	6.0	14.2
16-Feb	6	6	4	7	8	2	8	9	5	7	9	6	5	5	9	9	8	4	5	4	9	10	6	3	6.4	9.8
17-Feb	5	4	4	4	4	4	6	4	4	5	6	11	11	5	8	9	9	5	5	6	7	6	9	9	6.3	10.6
18-Feb	5	8	8	7	10	10	10	10	11	12	11	8	9	6	9	9	10	10	5	11	13	15	19	18	10.1	19.1
19-Feb	10	10	10	7	8	8	11	11	12	13	13	12	12	17	26	29	28	27	19	15	14	15	17	18	15.1	29.3
20-Feb	20	19	17	18	18	17	17	17	14	16	15	16	22	24	22	13	17	23	23	20	13	15	17	12	17.8	24.5
21-Feb	14	13	12	12	9	9	8	3	0	BD	11	12	6	0	5	9	14	15	12	0	BD	6	15	17	9.2	16.9
22-Feb	16	11	3	3	1	1	2	8	9	7	8	14	15	12	1	BD	5	12	12	5	6	8	11	11	7.9	15.6
23-Feb	4	1	7	7	4	1	4	4	2	4	4	7	7	6	5	7	7	6	6	7	8	7	5	5	5.2	8.4
24-Feb	6	6	4	4	3	6	5	8	16	17	15	8	5	7	9	5	3	4	4	9	9	8	33	50	10.1	50.3
25-Feb	50	26	12	11	9	5	4	3	7	10	10	4	4	10	11	9	7	5	7	5	6	6	9	10	10.0	49.5
26-Feb	5	1	5	9	13	12	1	2	11	14	10	0	6	15	15	5	14	16	13	3	14	17	16	17	9.8	17.4
27-Feb	15	4	BD	0	8	22	22	22	15	14	7	BD	0	1	4	N	N	12	0	BD	BD	28	40	19	13.0	39.8
28-Feb	2	36	42	4	17	37	15	27	29	8	48	46	15	42	23	13	37	19	6	12	14	19	10	14	22.2	47.8
	11.9	11.6	11.0	9.3	9.9	10.3	9.1	8.6	10.4	11.2	12.6	12.1	10.2	11.6	11.0	11.1	12.3	12.4	12.1	12.1	11.9	11.1	11.7	12.6	Diurnal Average	
	49.5	35.7	42.4	21.8	23.7	36.8	22.5	26.6	28.6	21.4	47.8	46.0	33.4	41.5	48.0	46.0	38.8	39.8	48.3	50.5	31.2	28.1	39.8	50.3	Diurnal Maximum	

N - Not Valid BD - Baseline Drift

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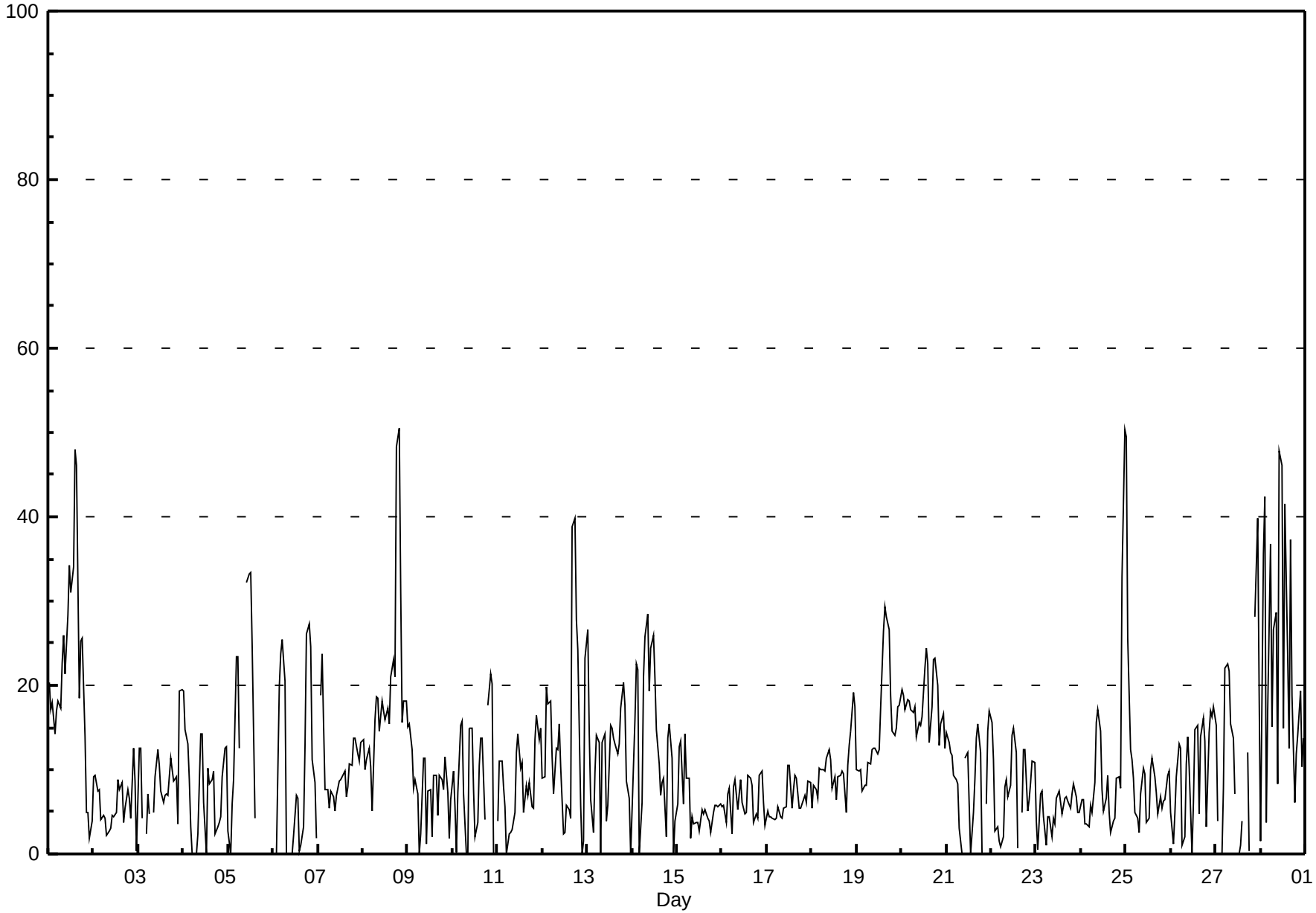
Hourly Maximums

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

Henry Pirker - February 2011



FOCUS AIR QUALITY MONITORING

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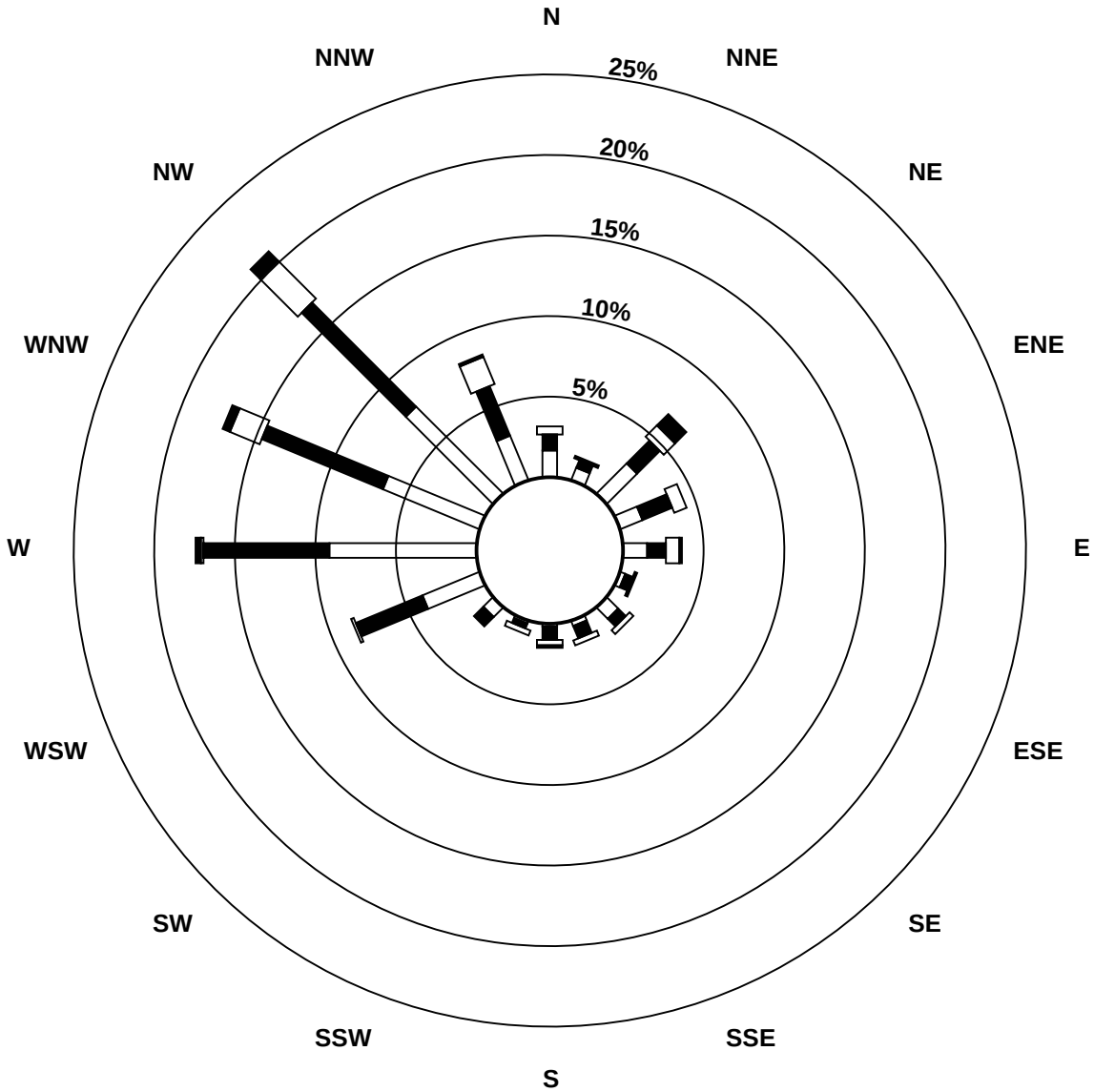
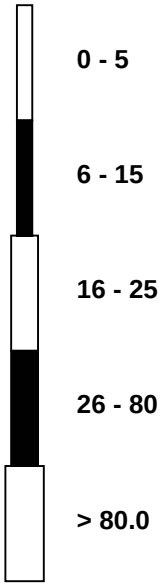
Pollutant Rose

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

Henry Pirker - February 2011



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



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Henry Pirker - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 9.0 ^{o}C on Feb 11 13:00 Maximum Daily Average: 4.9 ^{o}C on Feb 2

Minimum Value: -36 ^{o}C on Feb 19 04:00 Minimum Daily Average: -27.7 ^{o}C on Feb 19
Maximum Diurnal Average: -7.3 ^{o}C at hour 15 Minimum Diurnal Average: -13.3 ^{o}C at hour 8
Monthly Average: -11.11 ^{o}C Percentiles: P_1 = -34.8 P_{10} = -23.9 Q_1 = -20.8 Median = -11.5 Q_3 = -0.2 P_{90} = 3.6 P_{99} = 7.5

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

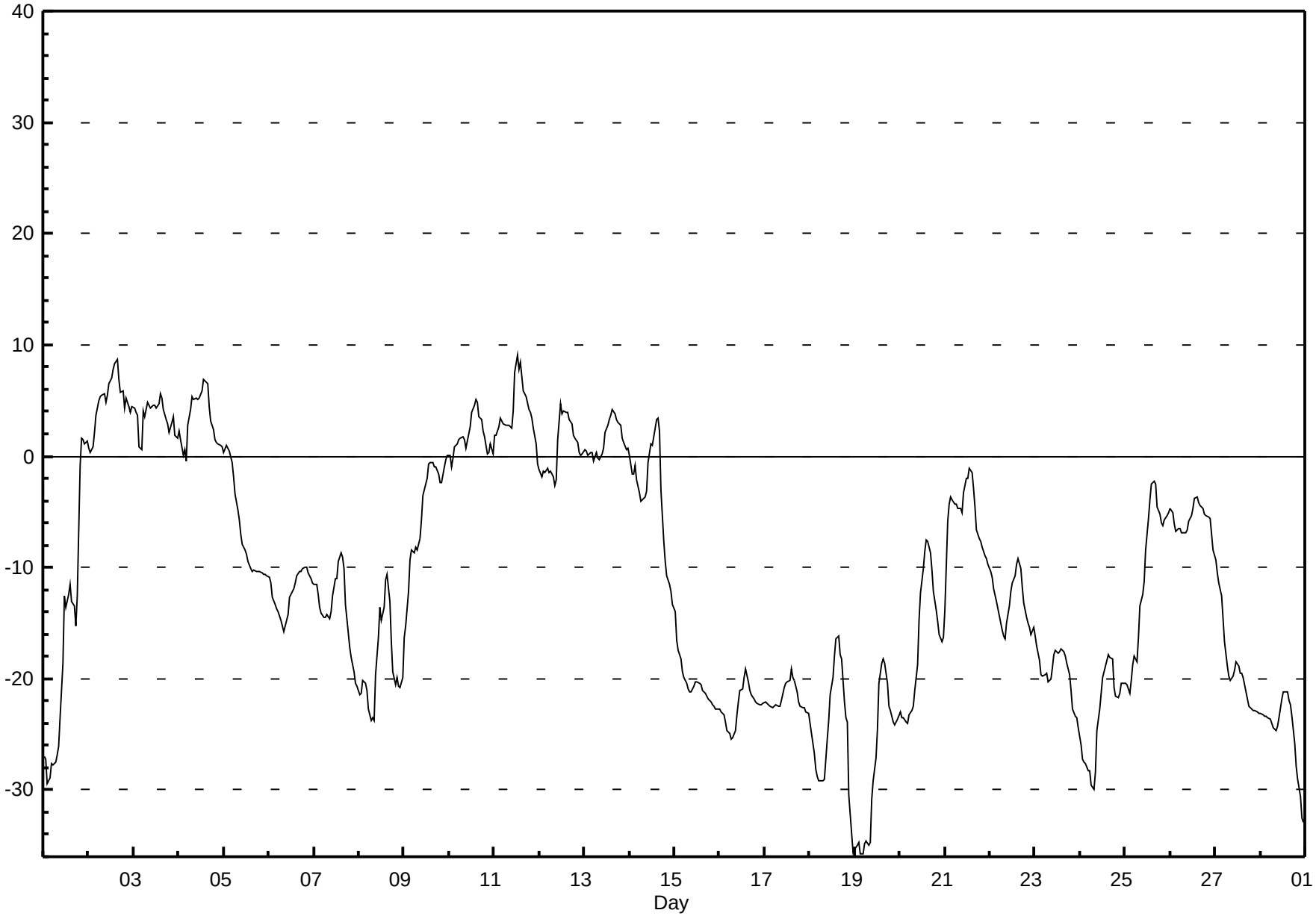
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-27	-27	-29	-29	-28	-28	-27	-27	-26	-23	-19	-13	-14	-12	-11	-13	-13	-15	-13	-1	2	2	1	1	-16.3	1.7
2-Feb	1	0	1	2	4	5	5	6	6	5	6	6	7	8	8	9	7	6	6	4	5	4	4	4	4.9	8.7
3-Feb	4	4	4	1	1	4	4	5	5	4	5	5	4	5	6	5	4	3	3	2	3	4	2	2	3.6	5.7
4-Feb	2	2	0	1	0	3	4	5	5	5	5	5	6	7	7	7	4	3	2	2	1	1	1	1	3.3	6.9
5-Feb	0	1	1	0	-1	-2	-3	-5	-6	-7	-8	-8	-9	-9	-10	-10	-10	-10	-10	-10	-10	-11	-11	-11	-6.7	1.0
6-Feb	-11	-11	-13	-13	-14	-14	-15	-15	-16	-15	-14	-13	-12	-12	-11	-11	-10	-10	-10	-10	-10	-11	-11	-11	-12.2	-10.0
7-Feb	-12	-12	-12	-14	-14	-15	-15	-14	-15	-14	-13	-11	-11	-9	-9	-9	-10	-13	-16	-17	-18	-19	-20	-21	-13.8	-8.7
8-Feb	-21	-21	-20	-20	-21	-23	-24	-23	-24	-20	-16	-14	-15	-14	-11	-11	-13	-17	-19	-21	-20	-21	-21	-20	-18.7	-10.6
9-Feb	-16	-15	-12	-9	-8	-9	-8	-8	-7	-6	-4	-3	-2	-1	-1	-1	-1	-1	-2	-2	-2	-1	0	0	-5.0	0.0
10-Feb	0	-1	0	1	1	1	2	2	1	1	2	3	4	5	5	5	4	3	2	2	0	0	1	0	1.8	5.1
11-Feb	2	2	3	3	3	3	3	3	3	3	4	8	9	8	8	6	6	5	4	4	3	3	1	-1	3.9	9.0
12-Feb	-1	-2	-1	-1	-1	-1	-1	-2	-3	-2	1	5	4	4	4	4	3	3	2	2	1	0	0	0	0.7	4.7
13-Feb	1	1	0	0	0	0	0	0	0	0	1	2	3	3	4	4	4	3	3	3	2	1	1	1	1.5	4.1
14-Feb	0	-2	-2	-1	-2	-3	-4	-4	-4	-3	-1	1	1	2	3	3	2	-3	-8	-9	-11	-11	-12	-13	-3.3	3.4
15-Feb	-14	-17	-17	-18	-19	-20	-20	-21	-21	-21	-21	-20	-20	-20	-21	-21	-21	-22	-22	-22	-22	-23	-23	-23	-20.4	-14.0
16-Feb	-23	-23	-23	-24	-25	-25	-25	-25	-25	-23	-22	-21	-21	-20	-19	-20	-21	-21	-22	-22	-22	-22	-22	-22	-22.5	-19.1
17-Feb	-22	-22	-22	-22	-23	-23	-22	-23	-22	-22	-21	-20	-20	-20	-19	-20	-20	-21	-22	-22	-23	-23	-23	-23	-21.7	-19.2
18-Feb	-24	-25	-27	-28	-29	-29	-29	-29	-29	-25	-24	-21	-20	-18	-16	-16	-18	-18	-22	-24	-24	-30	-34	-36	-24.8	-16.1
19-Feb	-35	-35	-35	-36	-36	-35	-35	-35	-35	-31	-29	-27	-25	-20	-19	-18	-19	-20	-22	-23	-24	-24	-24	-24	-27.7	-18.2
20-Feb	-23	-24	-23	-24	-24	-23	-23	-22	-21	-19	-15	-12	-10	-9	-8	-8	-9	-10	-12	-14	-15	-16	-17	-16	-16.5	-7.5
21-Feb	-14	-6	-4	-4	-4	-4	-4	-5	-5	-5	-3	-2	-2	-1	-1	-3	-5	-7	-7	-8	-8	-9	-9	-10	-5.4	-1.1
22-Feb	-10	-11	-12	-13	-14	-14	-16	-16	-16	-15	-13	-12	-11	-11	-10	-9	-10	-12	-13	-15	-15	-15	-16	-15	-13.2	-9.1
23-Feb	-16	-17	-18	-20	-20	-20	-20	-20	-20	-19	-18	-17	-18	-18	-17	-18	-18	-19	-20	-21	-23	-23	-23	-24	-19.4	-16.2
24-Feb	-26	-27	-28	-28	-28	-28	-30	-30	-28	-25	-23	-21	-20	-19	-18	-18	-18	-18	-21	-22	-22	-21	-20	-20	-23.3	-17.8
25-Feb	-20	-21	-21	-20	-19	-18	-18	-16	-13	-12	-11	-8	-6	-4	-2	-2	-3	-5	-5	-6	-6	-6	-5	-5	-10.6	-2.3
26-Feb	-5	-5	-6	-7	-7	-7	-7	-7	-7	-7	-6	-5	-5	-4	-4	-4	-5	-5	-5	-5	-5	-6	-7	-8	-5.7	-3.7
27-Feb	-9	-11	-11	-13	-15	-17	-19	-20	-20	-20	-19	-18	-19	-20	-20	-20	-21	-22	-22	-23	-23	-23	-23	-23	-18.7	-9.4
28-Feb	-23	-23	-23	-23	-24	-24	-24	-24	-25	-24	-24	-22	-21	-21	-21	-22	-22	-23	-26	-28	-29	-31	-33	-33	-24.7	-21.1
	-12.3	-12.4	-12.7	-12.8	-13.0	-13.0	-13.3	-13.3	-13.2	-12.2	-10.7	-9.2	-8.6	-7.9	-7.3	-7.5	-8.3	-9.5	-10.6	-10.9	-11.3	-11.8	-12.3	-12.5	Diurnal Average	
	4.4	4.0	3.6	3.5	3.7	5.0	5.3	5.5	5.7	5.2	5.5	7.6	9.0	7.8	8.4	8.7	6.9	5.7	5.9	4.3	5.2	4.5	3.9	4.5	Diurnal Maximum	

PASZA
Peace Air Shed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Henry Pirker - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Henry Pirker - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 88.9 % on Feb 13 00:00 Maximum Daily Average: 77.5 % on Feb 26

Minimum Value: 40 % on Feb 22 16:00 Minimum Daily Average: 55.7 % on Feb 24
Maximum Diurnal Average: 68.8 % at hour 5 Minimum Diurnal Average: 54.1 % at hour 15
Monthly Average: 64.01 % Percentiles: P_1 = 41.3 P_{10} = 51.9 Q_1 = 58.4 Median = 64.8 Q_3 = 69.2 P_{90} = 75.4 P_{99} = 85.7

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

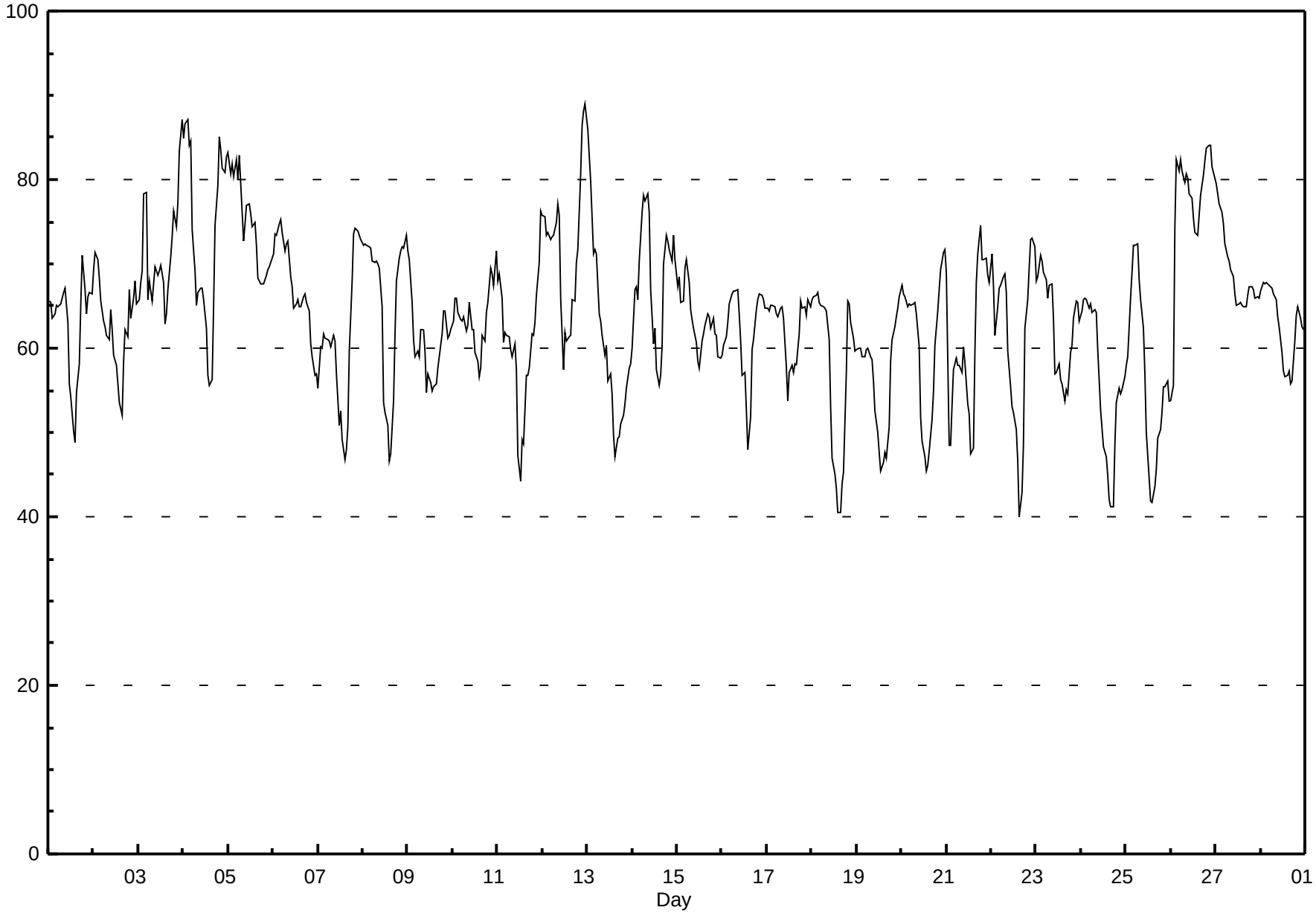
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	66	65	64	64	65	65	65	66	67	67	63	56	54	50	49	55	58	65	71	67	64	66	67	66	62.7	71.0
2-Feb	69	71	71	68	66	63	63	62	61	65	62	59	58	56	54	52	58	62	61	67	64	66	68	65	62.9	71.3
3-Feb	66	68	69	78	78	66	68	66	68	70	69	69	70	68	63	64	67	71	73	76	74	77	83	87	71.2	87.1
4-Feb	85	87	87	84	85	74	69	65	67	67	67	66	62	57	56	56	65	75	79	85	84	81	81	83	73.6	87.2
5-Feb	83	81	82	80	82	80	83	76	73	75	77	77	76	74	75	72	68	68	68	68	69	69	70	70	74.8	83.2
6-Feb	71	74	73	75	75	74	72	72	73	69	67	65	65	66	65	65	66	66	65	64	61	59	57	57	67.3	75.2
7-Feb	55	60	60	62	61	61	61	60	62	61	57	51	52	49	47	48	51	60	68	74	74	74	73	73	60.5	74.2
8-Feb	72	72	72	72	72	70	70	70	70	70	65	54	52	51	47	47	54	62	68	71	72	72	72	73	65.4	73.4
9-Feb	72	71	65	61	59	60	59	62	62	60	55	57	56	55	55	56	58	59	62	64	64	61	62	62	60.7	71.5
10-Feb	63	66	66	64	63	63	64	62	63	65	62	62	59	59	57	58	62	61	64	65	70	69	67	71	63.6	71.5
11-Feb	68	69	66	61	62	62	61	60	59	60	58	47	44	49	49	57	57	58	62	61	63	66	70	76	60.2	76.2
12-Feb	76	76	73	74	73	73	73	75	77	76	66	57	62	61	61	62	66	66	70	72	81	87	88	89	72.2	88.9
13-Feb	86	83	80	71	72	71	64	63	61	59	60	56	57	55	50	47	49	49	51	52	53	55	58	58	60.9	85.9
14-Feb	60	67	67	66	70	76	78	77	78	76	67	60	62	57	56	57	60	70	73	73	72	70	73	71	68.3	78.3
15-Feb	67	68	65	66	70	70	68	65	63	62	61	58	58	61	62	63	64	64	62	63	62	62	59	59	63.4	70.5
16-Feb	59	60	61	63	65	66	67	67	67	64	61	57	57	53	48	52	60	61	65	66	67	66	66	65	61.7	66.9
17-Feb	65	64	65	65	65	64	64	65	65	64	58	54	57	58	57	58	58	62	66	65	65	64	66	65	62.4	65.7
18-Feb	66	66	66	67	65	65	65	65	64	61	53	47	45	43	41	40	44	45	57	66	65	63	61	60	57.5	66.6
19-Feb	60	60	60	59	59	60	60	59	59	56	53	50	48	45	46	48	47	51	58	61	63	64	65	66	56.5	66.1
20-Feb	68	66	66	65	65	65	65	65	64	60	52	49	47	45	46	48	52	55	60	64	67	69	71	72	60.3	71.8
21-Feb	69	48	48	53	58	59	58	58	57	60	58	53	52	47	48	60	68	71	75	71	71	71	69	68	60.4	74.6
22-Feb	71	67	62	65	67	67	68	69	67	60	55	53	52	50	47	40	43	49	62	66	69	73	73	72	61.2	73.0
23-Feb	68	69	71	70	69	68	66	68	68	64	57	57	58	56	56	54	55	55	59	60	64	66	65	63	62.7	71.0
24-Feb	64	66	66	66	65	65	64	65	64	60	53	51	48	47	45	42	41	41	49	54	55	55	55	57	55.7	65.8
25-Feb	58	59	66	69	72	72	72	68	66	62	57	50	45	42	42	44	46	49	50	52	55	55	56	54	56.8	72.4
26-Feb	54	56	74	82	81	82	81	80	81	80	78	78	75	74	73	76	78	80	82	84	84	84	82	81	77.5	84.1
27-Feb	80	78	77	76	75	72	71	70	69	69	66	65	65	65	65	65	65	66	67	67	67	66	66	66	69.2	79.5
28-Feb	67	68	68	68	68	67	67	66	66	64	63	60	57	57	57	57	56	56	61	64	65	64	63	62	62.8	67.8
	68.1	68.0	68.3	68.3	68.8	68.0	67.4	66.6	66.4	65.1	61.4	57.8	57.0	55.4	54.1	55.0	57.6	60.5	64.7	66.5	67.2	67.6	68.0	68.2	Diurnal Average	
	85.9	86.6	87.2	84.1	84.7	82.3	82.9	79.7	80.6	80.1	78.4	77.8	75.9	74.5	74.9	75.7	78.1	80.5	82.2	85.1	84.1	86.5	88.2	88.9	Diurnal Maximum	

PASZA
Peace Air Shed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Henry Pirker - February 2011



FOCUS AIR QUALITY MONITORING

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Peace Air Shed Zone Association

Hourly Averages

Solar Radiation (SR) - W/m^2

Henry Pirker - February 2011

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

Maximum Value: 387.8 W/m^2 on Feb 24 14:00

Maximum Daily Average: 97.3 W/m^2 on Feb 24

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

Minimum Daily Average: 32.1 W/m^2 on Feb 3

Maximum Diurnal Average: 248.1 W/m^2 at hour 14

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

Monthly Average: 58.91 W/m^2

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 100.9 P_{90} = 221.6 P_{99} = 349.7

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

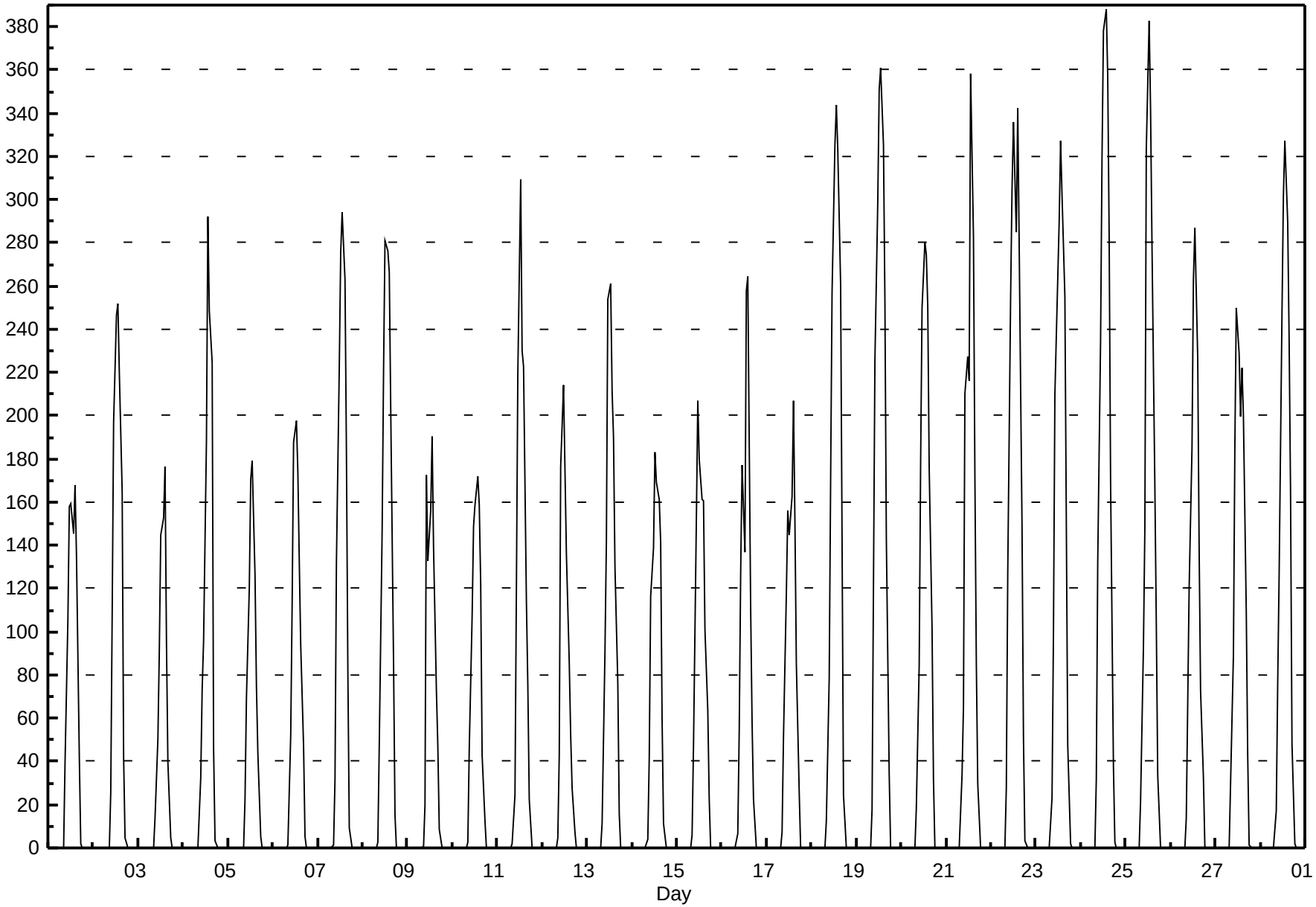
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0	0	0	0	0	0	0	0	0	40	106	158	160	145	168	135	41	2	0	0	0	0	0	0	39.8	167.8
2-Feb	0	0	0	0	0	0	0	0	0	25	108	197	247	252	220	165	42	5	0	0	0	0	0	0	52.5	251.8
3-Feb	0	0	0	0	0	0	0	0	0	14	50	91	145	153	177	96	40	5	0	0	0	0	0	0	32.1	176.6
4-Feb	0	0	0	0	0	0	0	0	0	33	74	96	188	292	248	225	46	3	0	0	0	0	0	0	50.2	292.0
5-Feb	0	0	0	0	0	0	0	0	0	22	69	120	171	179	126	75	44	5	0	0	0	0	0	0	33.8	179.0
6-Feb	0	0	0	0	0	0	0	0	1	52	113	188	197	174	132	94	47	5	0	0	0	0	0	0	41.8	197.4
7-Feb	0	0	0	0	0	0	0	0	1	32	132	223	276	294	263	183	82	9	0	0	0	0	0	0	62.3	294.2
8-Feb	0	0	0	0	0	0	0	0	3	48	146	221	281	276	266	204	85	15	0	0	0	0	0	0	64.4	281.2
9-Feb	0	0	0	0	0	0	0	0	0	20	173	133	156	190	139	73	47	9	0	0	0	0	0	0	39.1	190.1
10-Feb	0	0	0	0	0	0	0	0	2	47	107	148	158	172	159	122	43	12	0	0	0	0	0	0	40.4	171.6
11-Feb	0	0	0	0	0	0	0	0	2	25	120	220	310	230	223	114	75	22	0	0	0	0	0	0	55.8	309.6
12-Feb	0	0	0	0	0	0	0	0	4	43	177	214	175	136	86	52	28	7	0	0	0	0	0	0	38.5	214.2
13-Feb	0	0	0	0	0	0	0	0	11	91	141	254	261	211	190	130	76	16	0	0	0	0	0	0	57.5	260.9
14-Feb	0	0	0	0	0	0	0	0	4	41	116	139	183	169	162	141	59	11	0	0	0	0	0	0	42.8	183.2
15-Feb	0	0	0	0	0	0	0	0	6	48	152	207	180	161	161	101	64	22	0	0	0	0	0	0	45.9	207.1
16-Feb	0	0	0	0	0	0	0	0	7	54	126	177	137	258	264	112	58	23	0	0	0	0	0	0	50.7	264.4
17-Feb	0	0	0	0	0	0	0	0	7	52	118	156	145	162	207	151	85	26	0	0	0	0	0	0	46.2	207.1
18-Feb	0	0	0	0	0	0	0	0	13	79	171	257	325	344	323	261	143	25	0	0	0	0	0	0	80.8	343.5
19-Feb	0	0	0	0	0	0	0	0	18	123	226	299	351	361	325	253	144	34	0	0	0	0	0	0	88.9	360.9
20-Feb	0	0	0	0	0	0	0	0	19	84	178	250	280	274	250	176	102	32	0	0	0	0	0	0	68.6	280.3
21-Feb	0	0	0	0	0	0	0	0	33	66	210	227	216	358	283	172	86	30	0	0	0	0	0	0	70.1	358.3
22-Feb	0	0	0	0	0	0	0	0	28	127	254	305	336	285	342	280	148	51	3	0	0	0	0	0	90.0	342.2
23-Feb	0	0	0	0	0	0	0	0	23	99	210	237	289	327	302	255	152	48	2	0	0	0	0	0	81.0	327.2
24-Feb	0	0	0	0	0	0	0	0	32	132	236	320	378	388	357	283	170	38	3	0	0	0	0	0	97.3	387.8
25-Feb	0	0	0	0	0	0	0	0	22	93	148	323	383	341	278	167	104	34	0	0	0	0	0	0	78.9	382.5
26-Feb	0	0	0	0	0	0	0	0	14	67	120	185	263	287	227	138	73	32	1	0	0	0	0	0	58.6	287.0
27-Feb	0	0	0	0	0	0	0	0	30	90	185	250	228	199	222	200	109	43	2	0	0	0	0	0	64.9	249.8
28-Feb	0	0	0	0	0	0	0	0	17	76	126	247	302	327	289	235	164	48	2	0	0	0	0	0	76.4	327.4
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.6	61.5	146.1	208.6	240.0	248.1	228.3	164.0	84.2	21.9	0.4	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	0.0	33.5	132.4	254.3	323.2	382.5	387.8	357.2	282.9	169.8	51.3	3.1	0.0	0.0	0.0	0.0	0.0	Diurnal Maximum	

PASZA
Peace Air Shed Zone Association

Hourly Averages

Solar Radiation (SR) - W/m^2

Henry Pirker - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - February 2011

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1 Spd	1	3	3	3	4	3	3	3	2	3	2	1	4	3	5	6	4	4	8	15	27	21	16	13	6.1	26.8
Dir	308	313	319	300	326	303	319	333	316	328	313	281	299	289	295	287	328	341	288	273	262	269	272	283	285.4	262.0
2 Spd	9	8	16	11	17	18	21	31	30	17	16	14	21	20	15	13	14	13	12	6	7	6	8	5	14.2	30.7
Dir	284	283	281	273	280	264	255	252	265	280	270	287	268	259	264	270	257	274	259	247	221	249	234	267	265.5	252.4
3 Spd	7	6	3	3	7	11	5	21	26	25	23	22	14	14	17	8	6	2	4	4	5	2	3	7	7.9	25.5
Dir	296	246	249	163	290	261	255	270	261	249	256	264	287	296	289	317	299	158	95	142	104	130	177	166	264.7	261.1
4 Spd	6	4	3	4	6	8	13	19	21	24	17	20	23	23	20	17	20	21	19	21	21	19	19	15	13.8	23.9
Dir	157	154	129	336	228	265	248	260	254	260	265	259	256	260	272	301	309	302	300	296	304	311	308	300	278.7	260.1
5 Spd	15	17	14	13	18	15	19	21	17	19	21	19	20	22	21	18	17	16	15	13	10	8	7	5	15.7	22.1
Dir	296	299	299	307	319	327	321	322	326	319	317	316	313	318	315	316	315	312	308	317	314	316	326	327	315.0	318.0
6 Spd	4	7	8	7	9	8	10	10	8	9	10	10	13	14	16	16	16	15	17	15	18	18	17	16	11.9	18.3
Dir	355	95	93	93	95	99	97	96	86	90	97	91	94	96	95	97	95	94	94	98	98	97	94	89	93.9	97.6
7 Spd	19	19	14	13	11	11	11	10	7	8	8	7	9	6	5	4	3	7	5	3	4	5	5	3	6.1	19.1
Dir	91	89	75	73	72	69	70	79	75	89	81	55	74	59	43	68	126	305	326	348	302	303	312	316	66.4	90.8
8 Spd	3	3	5	5	6	4	3	3	3	2	4	4	5	4	4	4	5	5	5	4	4	4	4	4	3.7	6.1
Dir	317	273	251	264	291	343	300	335	304	312	262	298	299	296	302	300	316	308	327	307	337	328	337	327	305.3	290.8
9 Spd	5	3	12	13	14	13	13	8	10	11	15	18	18	20	23	21	16	17	14	12	15	15	14	19	13.7	22.9
Dir	341	314	295	286	284	288	285	287	276	276	284	282	277	273	268	263	261	258	263	282	288	268	276	282	277.3	267.6
10 Spd	20	13	17	19	21	16	12	14	14	13	16	15	12	16	17	15	16	17	15	10	8	10	10	7	14.0	20.7
Dir	283	300	292	277	269	274	278	271	271	309	286	293	279	284	274	270	261	266	281	273	289	277	283	313	280.1	269.0
11 Spd	13	10	15	19	13	11	6	8	7	2	3	4	6	8	7	10	10	12	15	10	14	12	6	1	9.1	19.0
Dir	271	289	256	260	262	262	271	251	254	193	228	266	249	247	281	294	267	254	254	253	259	264	253	270	261.6	260.1
12 Spd	8	5	2	5	3	5	6	4	5	3	3	0	6	5	4	2	3	5	3	4	5	4	2	6	1.7	7.6
Dir	266	285	343	189	223	289	263	288	263	202	113	257	231	221	244	139	65	123	9	17	26	318	317	227	260.3	265.8
13 Spd	16	17	18	24	22	15	24	24	19	16	23	22	15	14	13	13	6	9	13	11	7	7	6	6	13.1	24.4
Dir	255	258	254	255	255	246	255	259	266	259	254	249	236	253	263	253	238	187	197	201	168	144	149	124	244.8	254.7
14 Spd	3	3	7	7	3	4	4	2	3	3	3	4	7	8	7	8	13	16	19	17	12	11	13	14	5.7	18.8
Dir	158	172	207	254	315	36	142	135	43	153	93	62	75	86	61	57	63	57	52	65	47	40	22	26	58.1	52.5
15 Spd	15	21	21	24	21	20	21	20	19	18	18	19	19	19	20	18	18	17	16	13	12	10	12	9	17.4	24.4
Dir	332	316	309	311	305	308	310	311	306	305	307	306	300	300	305	304	302	305	314	323	326	319	319	320	309.8	310.5
16 Spd	9	9	9	6	4	5	4	4	2	6	4	5	4	7	7	6	5	6	8	8	6	6	5	6	3.7	9.4
Dir	320	328	342	328	324	336	310	300	289	102	138	275	41	15	27	46	61	67	77	76	58	51	41	22	18.2	342.0
17 Spd	5	6	5	6	5	5	4	7	7	7	8	8	7	6	6	6	5	6	7	12	12	12	12	9	5.8	12.3
Dir	39	47	58	43	52	40	38	350	335	330	342	353	345	0	24	4	342	307	309	314	323	325	313	286	344.0	325.0
18 Spd	8	9	4	6	6	5	6	5	5	5	9	6	7	7	6	5	5	1	2	4	5	1	4	4	3.9	9.3
Dir	283	257	294	300	307	305	286	287	312	279	266	261	255	285	293	293	308	291	140	121	120	144	317	309	283.6	257.0
19 Spd	4	4	3	5	4	5	3	4	4	4	5	6	6	6	7	7	6	5	5	5	4	4	4	2	4.4	7.0
Dir	320	333	314	309	294	343	347	300	307	297	288	286	285	308	321	322	310	308	330	330	315	320	296	354	312.5	320.8
20 Spd	3	1	3	4	4	2	2	2	3	4	3	3	4	4	4	4	4	3	4	4	3	4	2	2	3.0	4.4
Dir	315	350	282	338	324	317	307	303	310	310	283	278	283	293	308	305	334	314	332	322	312	325	280	343	311.2	332.3
21 Spd	2	10	11	16	10	9	15	18	16	13	13	23	20	20	18	20	22	28	24	18	16	12	13	12	14.2	27.5
Dir	269	300	279	297	315	281	252	245	236	248	234	257	270	280	291	304	303	300	311	317	319	299	299	323	286.2	300.5
22 Spd	9	9	10	10	10	11	7	10	11	12	13	14	15	15	14	11	10	12	11	11	11	6	5	8	10.3	15.1
Dir	335	346	3	314	314	321	327	322	321	316	310	303	304	308	310	329	305	316	325	309	316	339	322	351	319.7	303.9

PASZA
Peace Air Shed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - February 2011

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	11	8	11	12	9	9	7	8	8	9	9	15	15	15	13	13	9	8	5	7	8	8	6	9.4	15.1
Dir	343	340	320	324	329	323	322	321	322	4	351	351	360	1	1	358	358	346	331	317	312	324	327	296	339.9	1.0
24 Spd	6	5	5	6	6	6	5	4	3	4	9	9	11	11	12	10	9	6	7	7	8	8	7	2	4.1	11.8
Dir	318	320	331	343	318	325	311	324	294	288	252	248	251	252	245	292	295	259	175	165	170	169	172	188	262.6	244.8
25 Spd	4	5	7	5	8	8	5	12	15	16	17	14	10	8	7	6	10	19	24	24	21	23	19	25	12.6	24.6
Dir	261	283	296	270	258	253	267	287	268	259	259	250	248	244	228	253	260	269	262	264	273	275	270	277	265.6	277.0
26 Spd	28	22	25	25	21	18	22	21	17	13	11	12	15	13	13	12	9	8	6	5	4	6	16	15	11.9	28.0
Dir	278	284	290	281	288	280	279	278	279	276	268	266	271	271	265	270	269	266	281	283	354	56	68	55	282.9	278.2
27 Spd	16	18	17	16	18	17	16	14	14	11	13	12	11	11	13	11	12	11	10	11	10	13	11	12	13.2	18.5
Dir	60	60	57	54	43	42	44	36	40	42	48	45	50	56	41	47	45	49	47	50	47	47	51	50	48.2	42.9
28 Spd	10	8	9	7	8	9	8	10	10	11	9	11	10	11	8	10	9	7	5	4	5	6	5	3	7.1	11.2
Dir	46	43	40	40	37	39	39	42	42	41	45	50	51	40	49	20	27	11	360	329	305	325	316	339	31.5	41.0
Spd	5.1	4.8	5.6	6.5	6.7	6.0	6.0	7.4	7.4	6.1	6.6	7.5	7.0	7.2	7.2	6.6	6.0	6.0	5.3	4.6	4.9	4.6	4.3	4.1	Diurnal Average	
Dir	308.4	312.8	304.7	297.6	301.1	302.8	292.3	288.6	287.1	289.3	283.8	286.4	287.5	293.4	298.5	308.1	308.8	300.0	303.3	303.2	305.5	308.5	311.1	320.8		
Spd	28.0	21.6	24.9	25.0	21.7	19.8	23.9	30.7	30.0	25.5	23.2	23.1	23.0	22.9	22.9	21.4	22.3	27.5	24.1	23.8	26.8	22.6	19.1	24.6	Diurnal Maximum	
Dir	278.2	284.4	289.9	280.8	255.0	308.3	254.7	252.4	265.0	249.4	254.4	257.1	255.6	259.8	267.6	262.5	303.4	300.5	310.9	264.2	262.0	275.2	307.8	277.0		

Maximum Speed Value: 31 km/h on Feb 2 08:00
Maximum Daily Speed Average: 17.4 km/h on Feb 15
Maximum Diurnal Speed Average: 7.5 km/h at hour 12

Minimum Speed Value: 0 km/h on Feb 12 12:00
Minimum Daily Speed Average: 1.7 km/h on Feb 20
Minimum Diurnal Speed Average: 4.1 km/h at hour 24

Monthly Average Velocity: 5.89 km/h 298.81 deg

Speed Percentiles: $P_1 = 1.8$ $P_{10} = 3.4$ $Q_1 = 4.9$ Median = 8.9 $Q_3 = 14.9$ $P_{90} = 19.4$ $P_{99} = 25.5$

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

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

Frequency Distribution

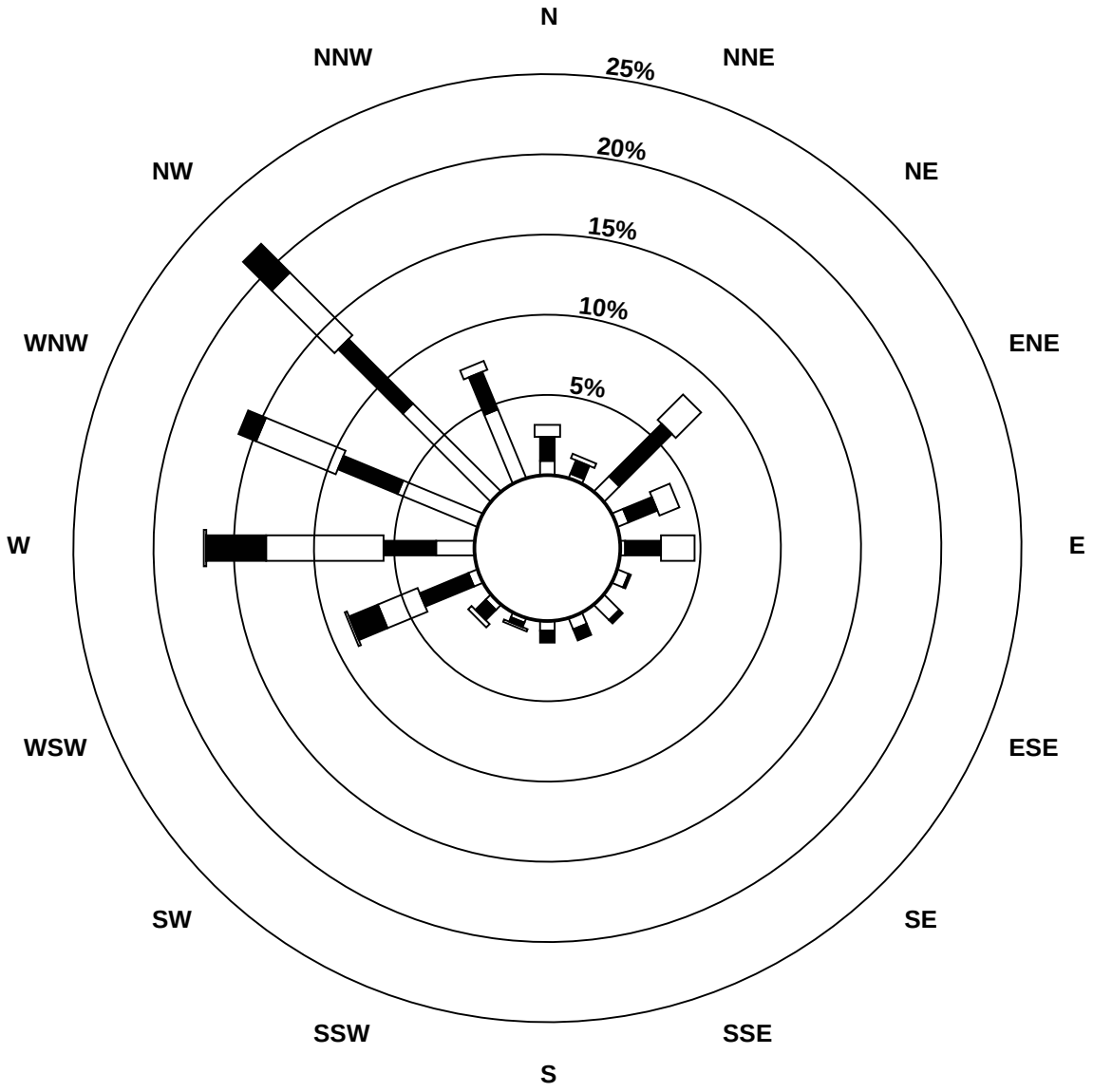
Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	18	21	7	0	0	0	46
NorthEast	11	37	27	0	0	0	75
East	3	24	17	1	0	0	45
SouthEast	14	6	0	0	0	0	20
South	8	9	2	0	0	0	19
SouthWest	4	12	7	0	0	0	23
West	31	56	79	47	3	0	216
NorthWest	82	65	51	30	0	0	228
Total	171	230	190	78	3	0	672

PASZA
Peace Air Shed Zone Association

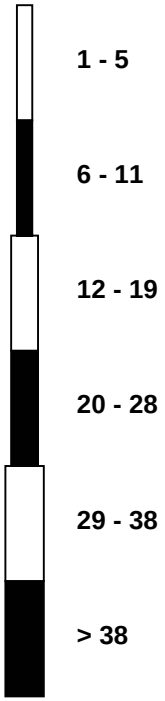
Wind Rose

Wind Speed (WS) (km/h)

Henry Pirker - February 2011



Wind Speed Classes (km/h)



PASZA
Peace Air Shed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Henry Pirker - February 2011

Maximum Speed: 31 km/h on Feb 2 08:00

Maximum Daily Speed Average: 17.7 km/h on Feb 15

Minimum Speed: 2 km/h on Feb 1 12:00

Minimum Daily Speed Average: 3.6 km/h on Feb 20

Maximum Diurnal Speed Average: 12.1 km/h at hour 14

Minimum Diurnal Speed Average: 8.8 km/h at hour 24

Monthly Average Speed: 10.59 km/h

Percentiles: $P_1 = 2.6$ $P_{10} = 3.9$ $Q_1 = 5.4$ Median = 9.1 $Q_3 = 15.0$ $P_{90} = 19.5$ $P_{99} = 25.6$

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

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST) 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	4	4	3	3	2	3	2	2	4	3	5	6	4	4	9	15	27	21	16	13	6.8	26.9
2-Feb	9	8	16	11	18	18	21	31	30	18	16	14	21	20	16	13	14	13	12	8	7	7	8	6	14.9	31.0
3-Feb	7	8	5	4	7	12	6	21	26	26	23	23	14	14	18	9	7	5	5	4	6	5	5	7	11.1	25.8
4-Feb	6	4	4	5	7	8	13	20	21	24	18	21	23	23	20	18	20	22	19	21	21	19	19	15	16.2	23.9
5-Feb	15	17	14	13	18	15	19	21	17	19	21	19	20	22	21	18	18	16	15	13	10	8	7	5	16.0	22.1
6-Feb	5	7	8	7	9	8	10	10	8	9	10	10	13	14	16	16	16	15	17	15	18	18	18	16	12.2	18.4
7-Feb	19	19	14	13	11	11	11	10	7	8	9	7	9	6	5	5	4	7	5	3	5	5	5	4	8.4	19.2
8-Feb	3	4	5	5	6	5	4	4	3	3	4	4	5	4	4	4	5	5	5	4	5	5	4	5	4.4	6.3
9-Feb	6	4	12	13	14	13	13	8	10	11	15	18	18	21	23	22	16	17	14	12	15	15	14	19	14.3	23.0
10-Feb	20	13	17	19	21	16	12	14	14	13	17	16	13	17	17	15	16	17	15	10	8	10	11	7	14.5	20.9
11-Feb	13	11	16	19	13	11	6	9	7	3	3	5	7	8	7	10	10	12	15	10	15	12	7	4	9.7	19.1
12-Feb	8	6	6	6	4	5	6	5	5	4	4	4	6	5	4	3	4	6	4	5	6	4	3	6	5.0	7.9
13-Feb	16	17	18	25	22	16	24	24	19	17	23	23	15	15	14	13	7	10	13	11	7	7	6	6	15.2	24.5
14-Feb	4	4	7	7	5	4	5	4	4	3	4	4	8	9	8	9	13	17	20	18	12	12	13	14	8.6	19.5
15-Feb	15	21	21	25	21	20	21	20	20	18	18	19	19	19	20	18	18	18	16	13	12	10	12	9	17.7	24.7
16-Feb	9	9	10	6	5	5	4	4	3	6	4	6	5	8	8	7	6	6	8	8	6	6	6	6	6.3	9.5
17-Feb	5	6	5	6	5	5	4	7	7	7	8	8	7	7	6	7	5	6	7	12	12	12	12	10	7.4	12.4
18-Feb	8	9	5	6	6	5	6	5	5	5	9	7	7	7	6	5	6	2	3	4	5	2	4	4	5.5	9.4
19-Feb	4	4	4	5	4	5	4	4	4	4	5	6	6	6	7	7	6	5	5	6	4	4	4	3	4.8	7.0
20-Feb	3	3	4	4	5	3	3	3	3	4	3	4	4	4	4	4	4	4	5	4	3	5	3	3	3.6	4.6
21-Feb	3	11	12	17	10	10	15	18	16	14	13	23	20	20	18	20	22	28	24	19	16	12	13	12	16.1	27.6
22-Feb	9	9	11	10	10	11	8	10	11	12	13	14	15	15	14	11	10	12	11	11	11	6	5	8	10.8	15.2
23-Feb	13	11	8	11	12	9	10	7	9	9	10	10	15	15	15	13	13	9	8	6	7	8	8	6	10.0	15.3
24-Feb	6	5	5	6	6	6	5	4	4	4	9	10	11	11	12	10	9	7	7	7	8	8	7	3	7.1	12.2
25-Feb	4	6	7	5	8	8	5	12	16	16	17	14	10	8	7	6	10	20	24	24	21	23	19	25	13.2	24.7
26-Feb	28	22	25	25	21	18	22	21	17	13	11	12	15	13	13	12	9	8	6	5	4	7	16	15	15.0	28.2
27-Feb	16	19	17	17	19	17	17	14	14	12	13	12	11	12	13	11	12	11	10	11	10	13	11	12	13.6	18.8
28-Feb	10	9	9	7	8	9	8	10	11	11	10	11	11	11	8	11	9	7	5	4	5	6	5	3	8.2	11.4
	9.6	9.5	10.2	10.7	10.7	9.9	10.2	11.5	11.2	10.6	11.2	11.6	12.0	12.1	11.8	10.8	10.6	11.0	10.9	10.1	10.3	9.7	9.3	8.8	Diurnal Average	
	28.2	21.7	25.0	25.1	21.8	20.1	24.0	31.0	30.3	25.6	23.3	23.2	23.1	22.9	23.0	21.6	22.4	27.6	24.2	23.9	26.9	22.7	19.1	24.7	Diurnal Maximum	

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

PASZA
Peace Air Shed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Henry Pirker - February 2011

Maximum Value: 94.6 deg on Feb 12 12:00

Minimum Value: 3.4 deg on Feb 5 19:00

Percentiles: P_1 = 4.4 P_{10} = 5.7 Q_1 = 7.5 Median = 11.6 Q_3 = 19.1 P_{90} = 32.1 P_{99} = 72.8

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

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Feb	73	17	11	13	13	15	18	21	24	16	58	73	14	15	10	8	29	33	14	10	6	11	8	18	73.1
2-Feb	13	20	6	17	6	7	8	8	7	16	8	7	10	5	7	10	7	11	10	34	17	17	14	39	39.1
3-Feb	20	43	64	46	40	14	39	8	9	6	8	9	9	8	15	27	22	75	26	20	37	77	62	12	77.4
4-Feb	8	15	46	44	23	16	8	6	11	4	7	6	6	5	5	13	6	8	7	4	6	4	4	6	46.1
5-Feb	6	5	12	5	6	7	5	4	6	5	5	6	5	5	5	5	5	4	3	5	5	8	7	11	11.6
6-Feb	32	15	8	10	6	8	5	6	9	9	7	10	7	7	7	7	6	6	6	6	6	6	9	6	32.4
7-Feb	6	6	9	8	9	8	8	8	10	10	9	19	12	19	33	36	53	24	10	14	16	8	12	25	53.0
8-Feb	31	40	12	21	15	17	28	27	23	46	27	7	20	14	11	20	18	11	7	39	36	49	18	24	48.5
9-Feb	31	23	16	5	13	9	12	10	7	9	8	8	7	10	6	6	7	5	7	9	6	8	8	5	30.9
10-Feb	6	8	5	8	7	7	9	13	14	11	13	11	11	8	6	7	7	7	6	9	9	11	15	15	15.4
11-Feb	12	15	8	6	10	7	10	11	15	50	38	33	23	21	22	10	12	8	5	20	10	9	20	80	80.3
12-Feb	17	34	83	27	30	22	17	44	27	39	59	95	12	23	35	51	32	40	61	36	23	30	64	30	94.6
13-Feb	7	8	8	6	7	7	7	8	8	9	7	9	8	10	14	9	29	16	7	8	15	13	15	9	29.1
14-Feb	31	26	21	12	72	36	32	51	54	41	31	23	24	20	14	14	10	13	16	15	16	19	13	13	72.2
15-Feb	18	6	9	8	11	10	7	6	5	6	7	6	8	7	8	7	6	6	6	7	11	8	6	7	17.5
16-Feb	6	8	9	9	8	6	14	10	68	20	40	51	50	18	22	27	28	27	13	12	18	23	18	15	67.8
17-Feb	22	20	21	20	23	23	34	16	10	8	15	17	17	17	26	36	25	11	9	7	6	9	6	10	36.2
18-Feb	12	9	21	8	7	8	8	21	14	25	12	21	23	13	7	6	13	64	36	14	8	77	41	14	76.7
19-Feb	14	18	31	12	24	13	31	16	20	19	9	6	7	11	6	9	12	13	26	22	21	19	17	51	50.8
20-Feb	26	72	46	19	22	36	23	22	32	17	22	33	13	12	17	12	19	17	17	20	15	21	47	61	72.2
21-Feb	57	25	19	12	14	18	7	7	8	10	12	6	9	6	8	9	6	5	5	5	6	7	8	9	57.4
22-Feb	10	13	12	7	6	6	9	4	5	5	7	6	6	7	6	18	8	8	13	5	13	11	20	15	20.0
23-Feb	8	6	13	4	5	6	7	9	8	27	24	17	10	10	10	12	10	13	10	12	7	6	8	9	26.7
24-Feb	9	9	11	9	21	17	15	9	13	34	13	11	10	12	15	9	5	31	12	5	4	5	7	63	63.0
25-Feb	31	36	6	18	16	9	27	17	10	6	6	10	14	20	25	25	19	9	8	6	8	6	11	7	35.6
26-Feb	6	6	6	5	6	8	7	6	6	6	8	8	8	9	7	8	8	9	11	14	18	17	14	12	18.3
27-Feb	11	11	12	14	12	14	14	14	15	16	13	16	16	15	13	19	13	17	16	15	15	16	18	13	19.0
28-Feb	17	14	12	17	14	14	17	13	12	14	18	14	17	15	20	21	17	16	12	9	8	11	15	22	22.1
	73.1	72.2	83.0	46.2	72.2	36.4	39.4	51.3	67.8	50.0	59.3	94.6	49.9	23.1	35.2	50.8	53.0	74.7	61.0	38.9	36.7	77.4	63.8	80.3	

PASZA
Evergreen Park Station
Monthly Summary Tables, Graphs and Roses

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Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 4.6 ppb on Feb 17 04:00
Maximum Daily Average: 1.2 ppb on Feb 2

Minimum Value: 0 ppb on Feb 3 04:00
Maximum Diurnal Average: 0.7 ppb at hour 4
Monthly Average: 0.38 ppb

Minimum Daily Average: 0.1 ppb on Feb 10
Minimum Diurnal Average: 0.2 ppb at hour 20
Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.2 Q_3 = 0.5 P_{90} = 0.8 P_{99} = 2.7

Hours in Service:	672
Hours of Data:	641
Hours of Missing Data:	31
Hours of Calibration:	30
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	0	0	0	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	2	0	A	2	0.8	1.8
2-Feb	3	0	1	5	4	2	0	1	2	2	1	3	2	1	0	0	0	0	0	0	0	A	0	0	1.2	4.6
3-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.2
4-Feb	0	0	0	0	0	0	0	0	0	M	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
5-Feb	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
6-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0.3	1.8
7-Feb	1	1	1	A	0	1	0	0	0	0	1	1	1	1	1	2	2	1	1	0	0	0	0	0	0.7	1.6
8-Feb	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0.3	0.7
9-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
10-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.2
11-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.2	1.0
12-Feb	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7
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	A	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.5
15-Feb	0	0	A	0	0	0	1	0	1	1	0	0	1	1	0	0	0	0	1	0	1	1	1	1	0.4	0.6
16-Feb	1	A	4	4	1	1	0	0	0	1	1	1	1	2	1	1	1	0	0	0	0	0	1	1	1.0	3.9
17-Feb	A	1	1	5	0	1	1	0	0	0	0	1	0	0	0	0	0	0	1	1	1	2	1	A	0.9	4.6
18-Feb	1	1	1	1	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	A	0	0.4	1.0
19-Feb	1	0	0	0	1	0	0	0	0	1	0	1	1	1	1	1	1	1	1	0	0	A	0	0	0.6	1.5
20-Feb	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.6	1.1
21-Feb	1	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0	1	0	A	1	1	1	1	0.5	1.0
22-Feb	0	0	0	2	1	1	0	0	0	1	1	1	1	1	0	0	0	0	A	0	0	0	0	0	0.6	1.9
23-Feb	0	0	0	0	1	0	1	0	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.7
24-Feb	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.5
25-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.3
26-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
27-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.4
28-Feb	0	0	0	0	0	1	0	1	0	0	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8
	0.4	0.2	0.4	0.7	0.5	0.4	0.3	0.3	0.3	0.4	0.4	0.6	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.3	0.3	0.3	0.3	Diurnal Average	
	2.6	1.0	3.9	4.6	4.1	2.4	1.3	0.8	1.5	1.7	1.2	3.3	1.7	1.5	1.4	1.5	1.6	1.2	0.9	0.9	1.6	1.5	1.8	1.8	Diurnal Maximum	

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

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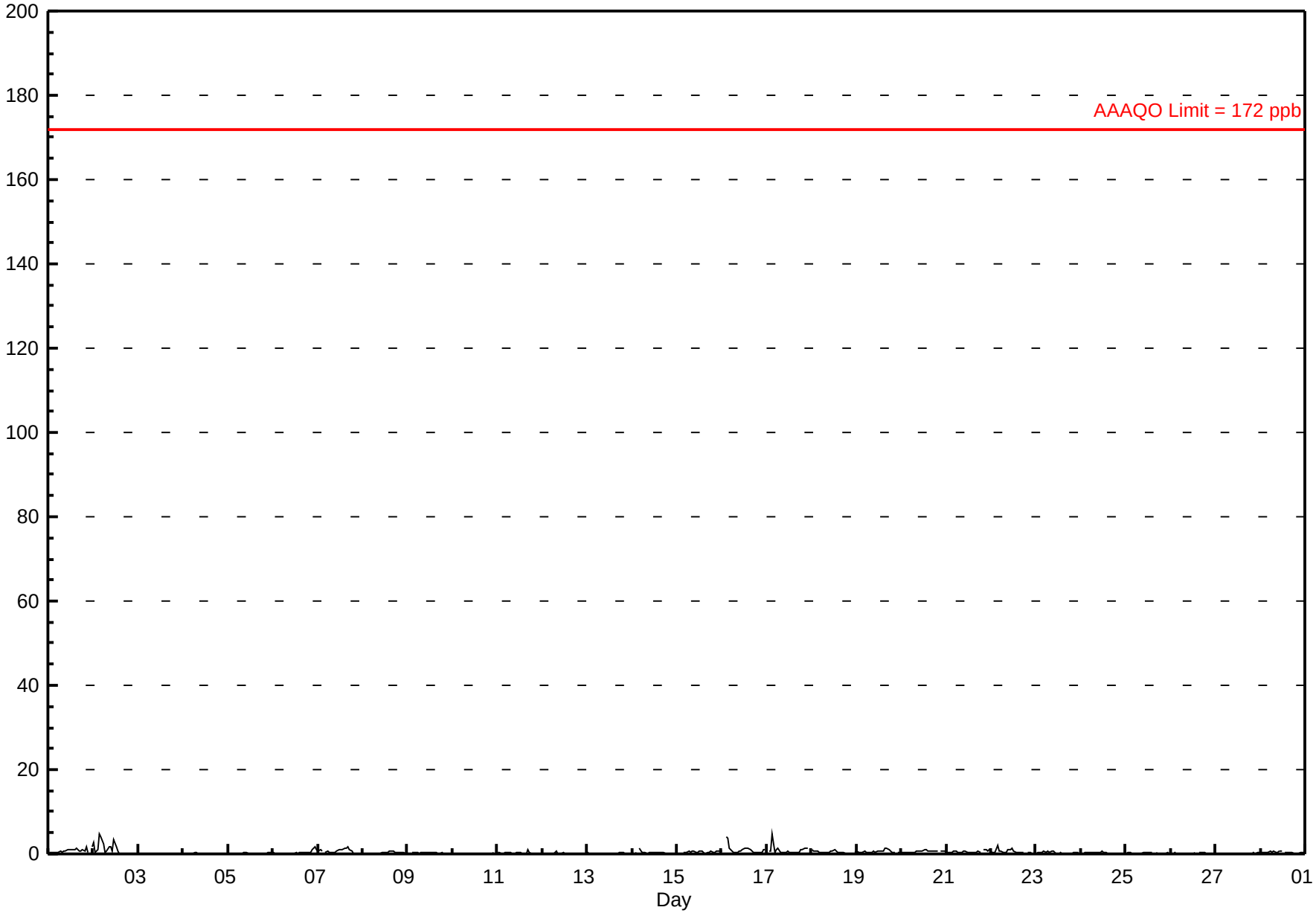
Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - February 2011

Maximum Value: 11.0 ppb on Feb 2 05:00

Maximum Daily Average: 2.9 ppb on Feb 2

Minimum Value: 0 ppb on Feb 15 00:00

Minimum Daily Average: 0.4 ppb on Feb 3

Maximum Diurnal Average: 1.7 ppb at hour 4

Minimum Diurnal Average: 0.6 ppb at hour 20

Monthly Average: 0.83 ppb

Percentiles: P_1 = 0.2 P_{10} = 0.3 Q_1 = 0.4 Median = 0.6 Q_3 = 0.9 P_{90} = 1.4 P_{99} = 6.1

Hours in Service:	672
Hours of Data:	641
Hours of Missing Data:	31
Hours of Calibration:	30
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	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	5	1	A	5	1.4	5.2
2-Feb	6	1	3	10	11	4	1	4	4	4	3	4	5	2	0	0	1	0	0	0	0	A	0	0	2.9	11.0
3-Feb	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	A	1	0	0	0.4	0.9
4-Feb	0	0	0	0	0	0	2	1	0	M	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.9
5-Feb	0	0	0	0	0	A	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0.4	1.1
6-Feb	1	0	0	0	A	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	2	2	2	0.7	2.4
7-Feb	1	1	1	A	1	1	1	1	1	1	1	1	1	2	2	2	2	2	1	0	0	1	1	1	1.0	1.9
8-Feb	0	0	A	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	1	1	0.6	1.1
9-Feb	1	A	1	1	0	1	1	1	1	0	2	1	1	0	1	1	0	0	1	0	0	1	0	0	0.6	1.8
10-Feb	A	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	A	0.4	1.0
11-Feb	1	1	1	0	1	1	0	1	1	0	1	1	1	1	0	0	2	2	0	0	0	0	0	0	0.6	1.9
12-Feb	0	0	0	0	0	A	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.3
13-Feb	1	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0.4	0.7
14-Feb	0	1	0	A	5	1	1	1	0	1	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0.7	5.0
15-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	0.8	1.3
16-Feb	1	A	7	6	3	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	2	1	1.6	7.2
17-Feb	A	1	2	9	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	A	1.6	9.4
18-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	A	2	0.8	1.9
19-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1	1	A	0	1	0.9	1.8
20-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	1.0	1.5
21-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	2	1	1	1.0	1.8
22-Feb	1	1	1	6	1	1	1	1	1	2	2	2	1	1	1	1	1	1	A	1	1	0	0	0	1.1	6.1
23-Feb	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	0	0	A	0	0	1	1	1	0	0.6	1.0
24-Feb	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	1	A	0	0	0	0	1	0	0	0.6	1.2
25-Feb	0	1	0	0	0	0	0	0	1	1	1	0	1	1	1	A	0	0	0	0	0	0	0	0	0.5	0.7
26-Feb	0	0	1	0	0	0	0	0	0	0	0	1	1	1	A	1	1	1	1	0	1	0	0	0	0.5	0.7
27-Feb	0	0	0	0	0	0	0	1	0	0	0	1	0	A	0	0	0	1	0	1	1	0	1	1	0.5	0.7
28-Feb	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	0	0	0	1	1	1	0.8	1.3
	0.9	0.6	0.9	1.7	1.3	0.8	0.7	0.8	0.8	0.8	0.9	1.0	0.9	0.8	0.7	0.7	0.8	0.7	0.6	0.6	0.7	0.8	0.7	0.8	Diurnal Average	
	6.1	1.5	7.2	9.9	11.0	4.2	2.3	4.1	4.4	4.2	3.0	4.3	4.6	1.9	2.0	1.9	1.9	1.9	1.5	1.4	5.2	2.0	2.4	4.8	Diurnal Maximum	

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

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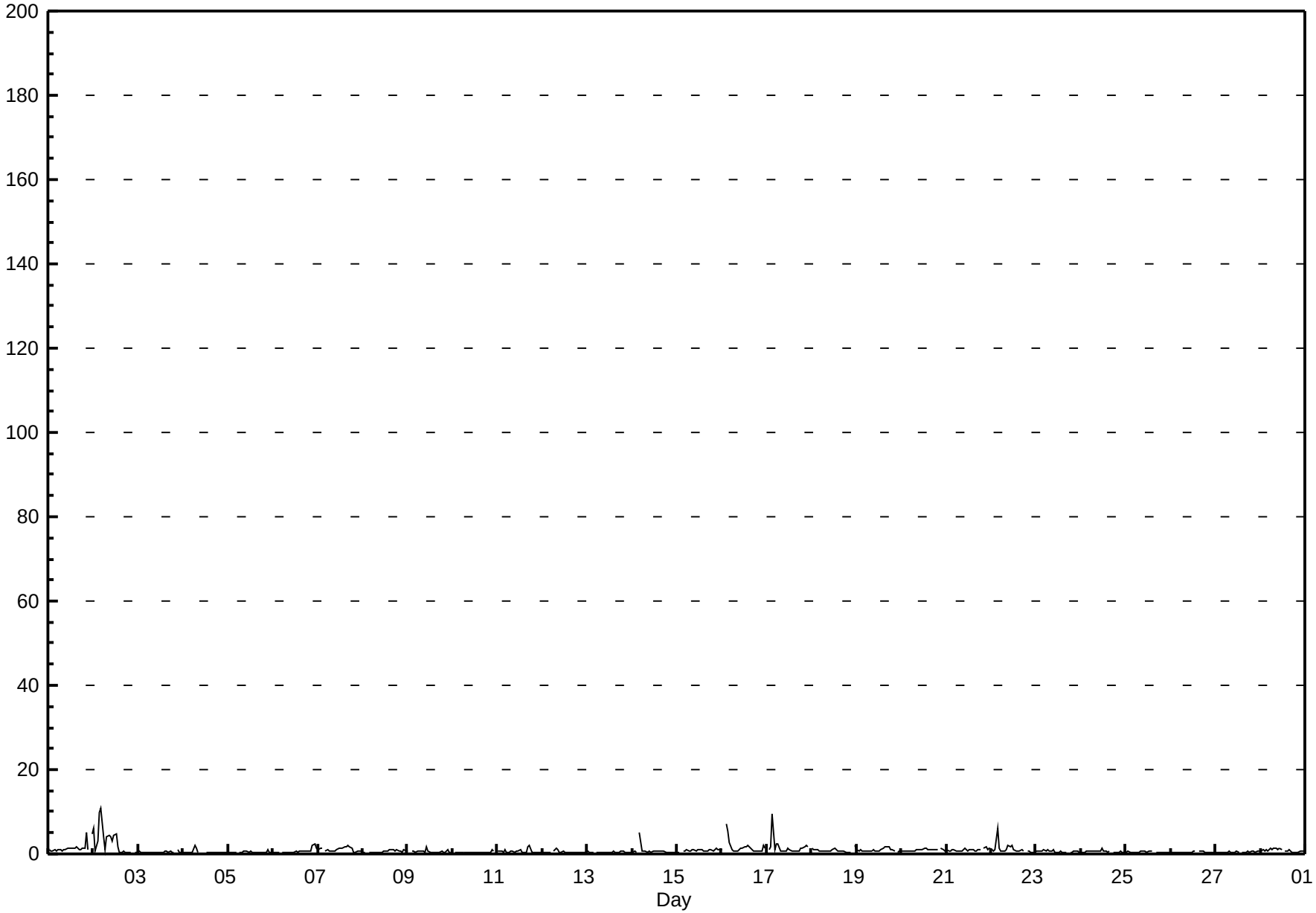
Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - February 2011



FOCUS AIR QUALITY MONITORING

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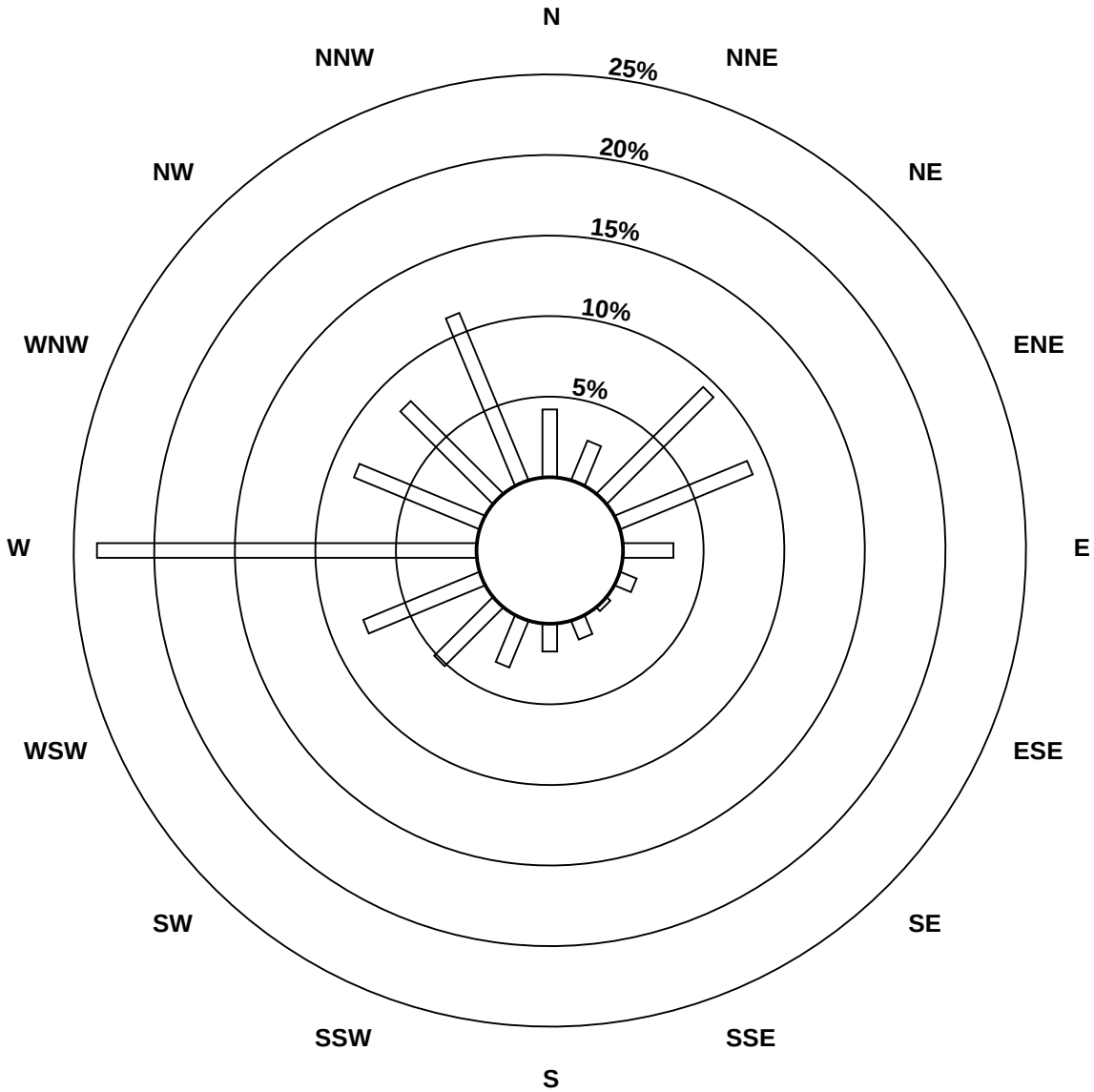
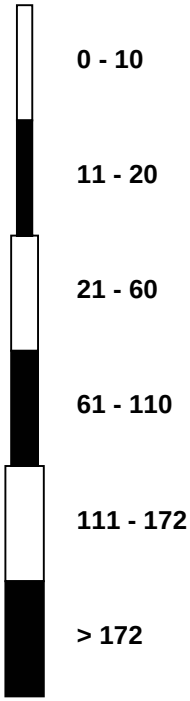
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - February 2011



Pollutant Classes (ppb)



FOCUS AIR QUALITY MONITORING

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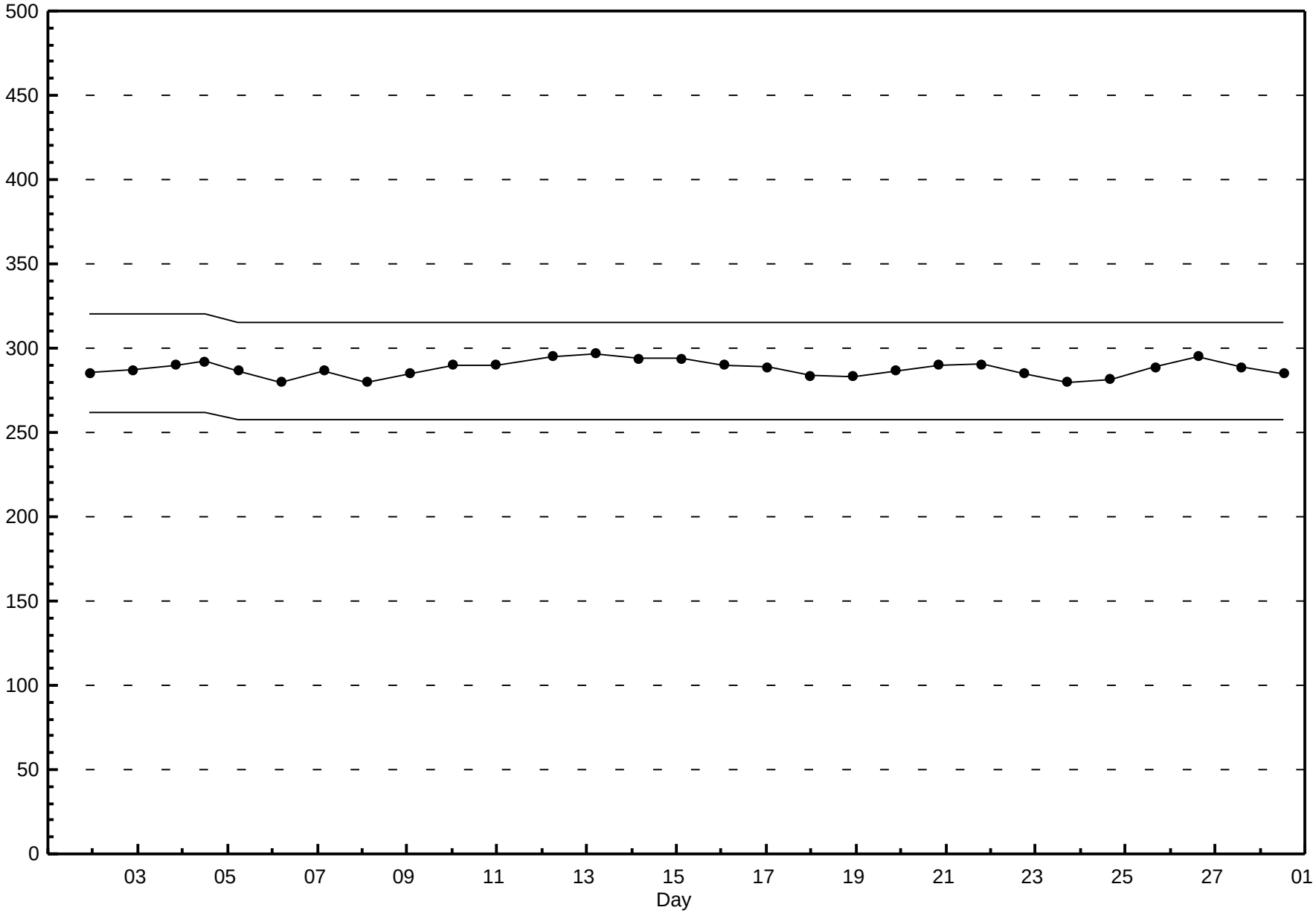
Span Responses

Sulphur Dioxide (SO_2)

Evergreen Park - February 2011



PASZA
Peace Air Shed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.5 ppb on Feb 1 16:00 Maximum Daily Average: 1.1 ppb on Feb 1

Minimum Value: 0 ppb on Feb 12 10:00 Minimum Daily Average: 0.5 ppb on Feb 11
Maximum Diurnal Average: 0.7 ppb at hour 8 Minimum Diurnal Average: 0.6 ppb at hour 14
Monthly Average: 0.65 ppb Percentiles: $P_1 = 0.4$ $P_{10} = 0.5$ $Q_1 = 0.5$ Median = 0.6 $Q_3 = 0.7$ $P_{90} = 0.9$ $P_{99} = 1.3$

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

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

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

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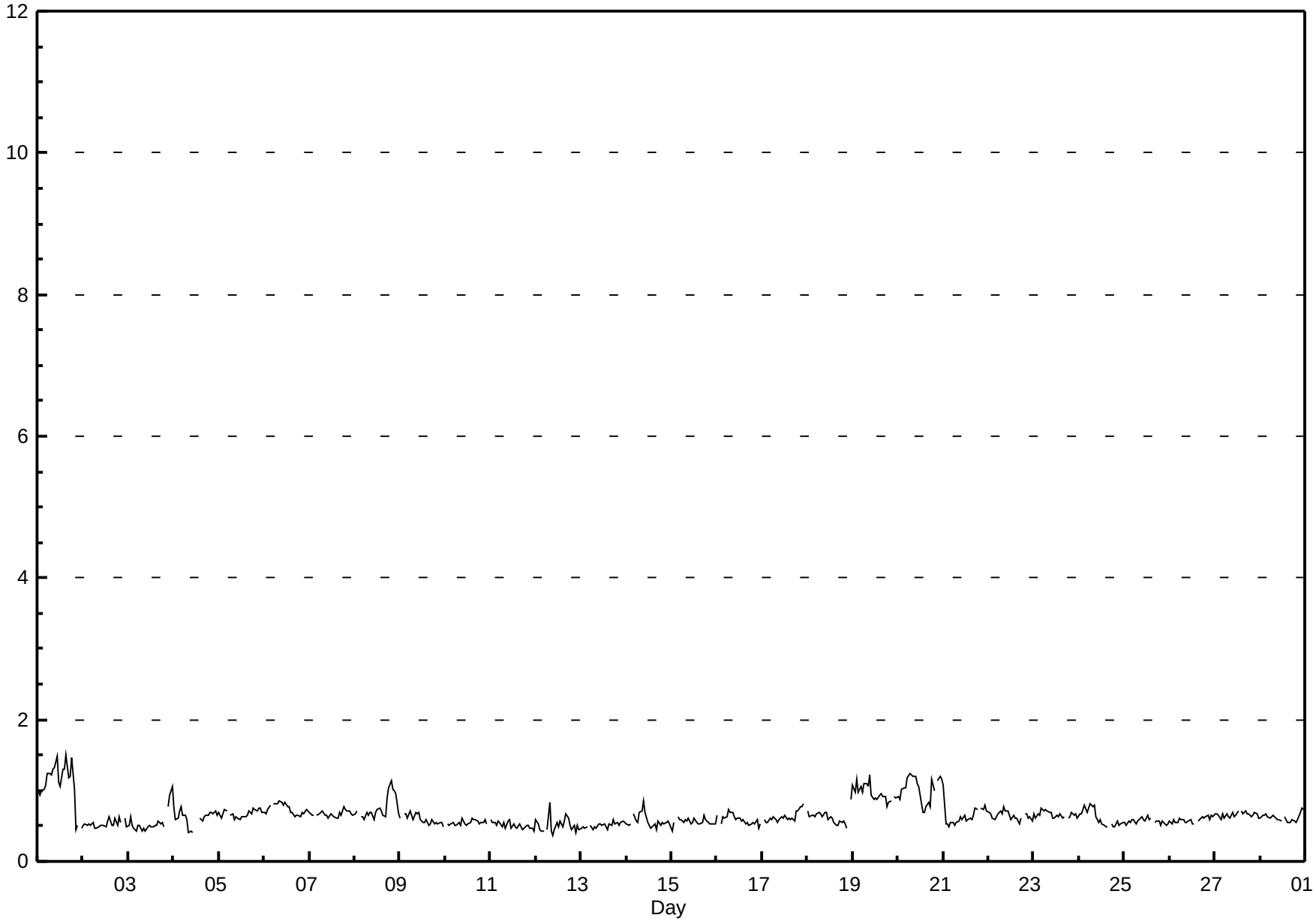
Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
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Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - February 2011

Maximum Value: 2.6 ppb on Feb 9 11:00

Maximum Daily Average: 1.5 ppb on Feb 1

Minimum Value: 1 ppb on Feb 3 10:00

Minimum Daily Average: 0.8 ppb on Feb 11

Maximum Diurnal Average: 1.1 ppb at hour 11

Minimum Diurnal Average: 1.0 ppb at hour 17

Monthly Average: 1.02 ppb

Percentiles: $P_1 = 0.7$ $P_{10} = 0.8$ $Q_1 = 0.9$ Median = 1.0 $Q_3 = 1.1$ $P_{90} = 1.3$ $P_{99} = 1.7$

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	1	1	1	1	1	2	2	2	2	2	2	1	1	2	2	2	2	2	2	2	1	1	A	1	1.5	2.2
2-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.9	1.0
3-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.9	1.4
4-Feb	1	1	1	1	1	1	2	1	1	1	1	C	C	C	1	1	1	1	1	1	1	1	1	1	1.0	1.7
5-Feb	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.4
6-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.2
7-Feb	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.2
8-Feb	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	2	1	1.1	1.9
9-Feb	1	A	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	2	1	1	1.0	2.6
10-Feb	A	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.9	1.6
11-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
12-Feb	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3
13-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	1.0
14-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
15-Feb	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.0
16-Feb	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.1
17-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	1.2
18-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1.0	2.0
19-Feb	1	1	1	1	1	1	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1.3	1.6
20-Feb	1	1	1	1	1	2	2	2	2	2	1	1	1	1	1	1	1	1	2	1	A	2	1	2	1.4	2.1
21-Feb	2	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
22-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	1.2
23-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	1.0	1.1
24-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	1.0	1.3
25-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.9	1.1
26-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.9	1.1
27-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	1.3
28-Feb	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1.0	1.1
	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.0	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.0	1.0	1.1	1.1	1.0	Diurnal Average	
	1.5	1.3	1.5	1.4	1.4	1.6	1.7	1.5	1.7	1.7	2.6	1.5	1.5	1.7	1.7	1.9	1.6	1.6	2.2	2.2	1.4	1.6	1.9	2.0	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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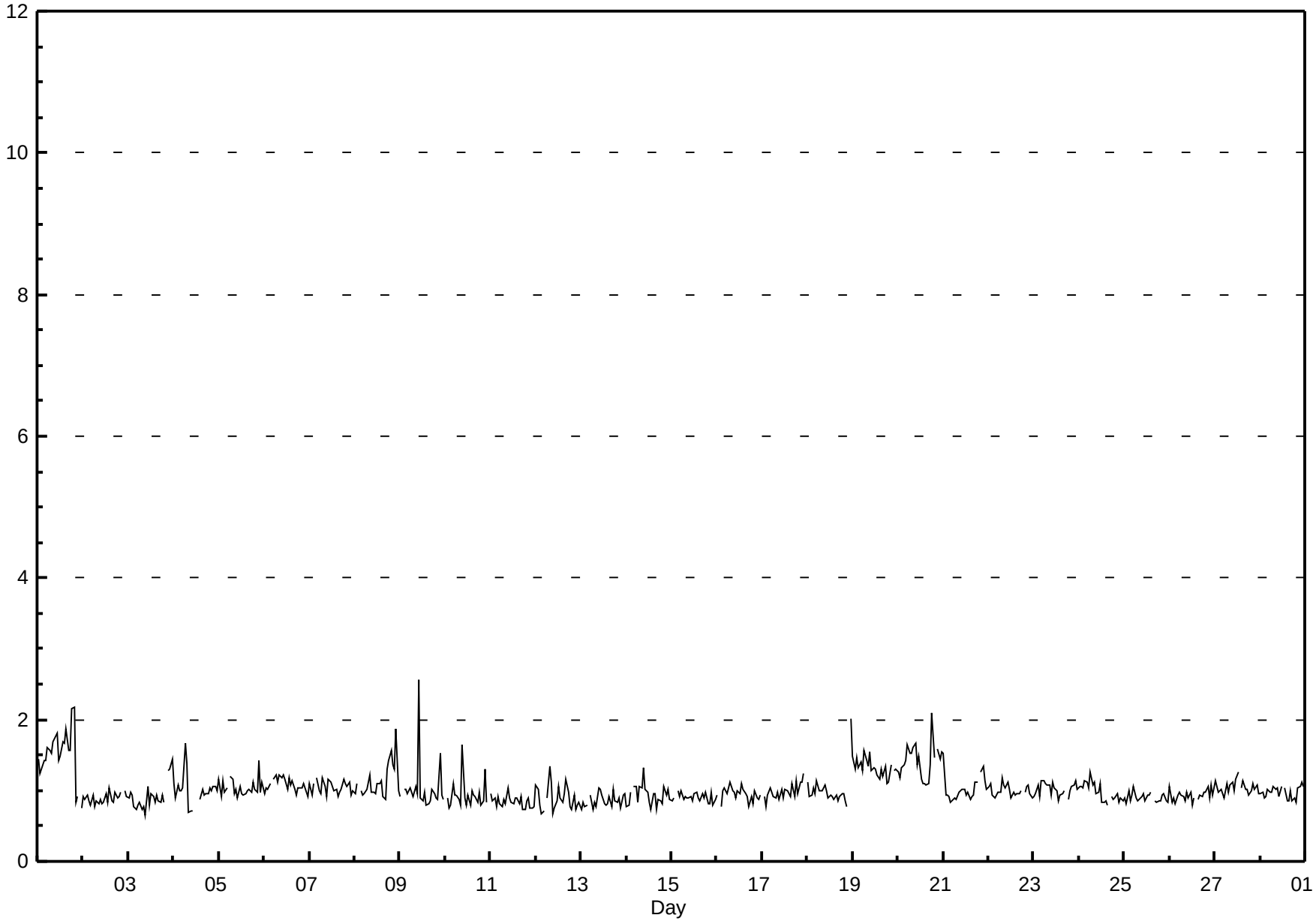
Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - February 2011



FOCUS AIR QUALITY MONITORING

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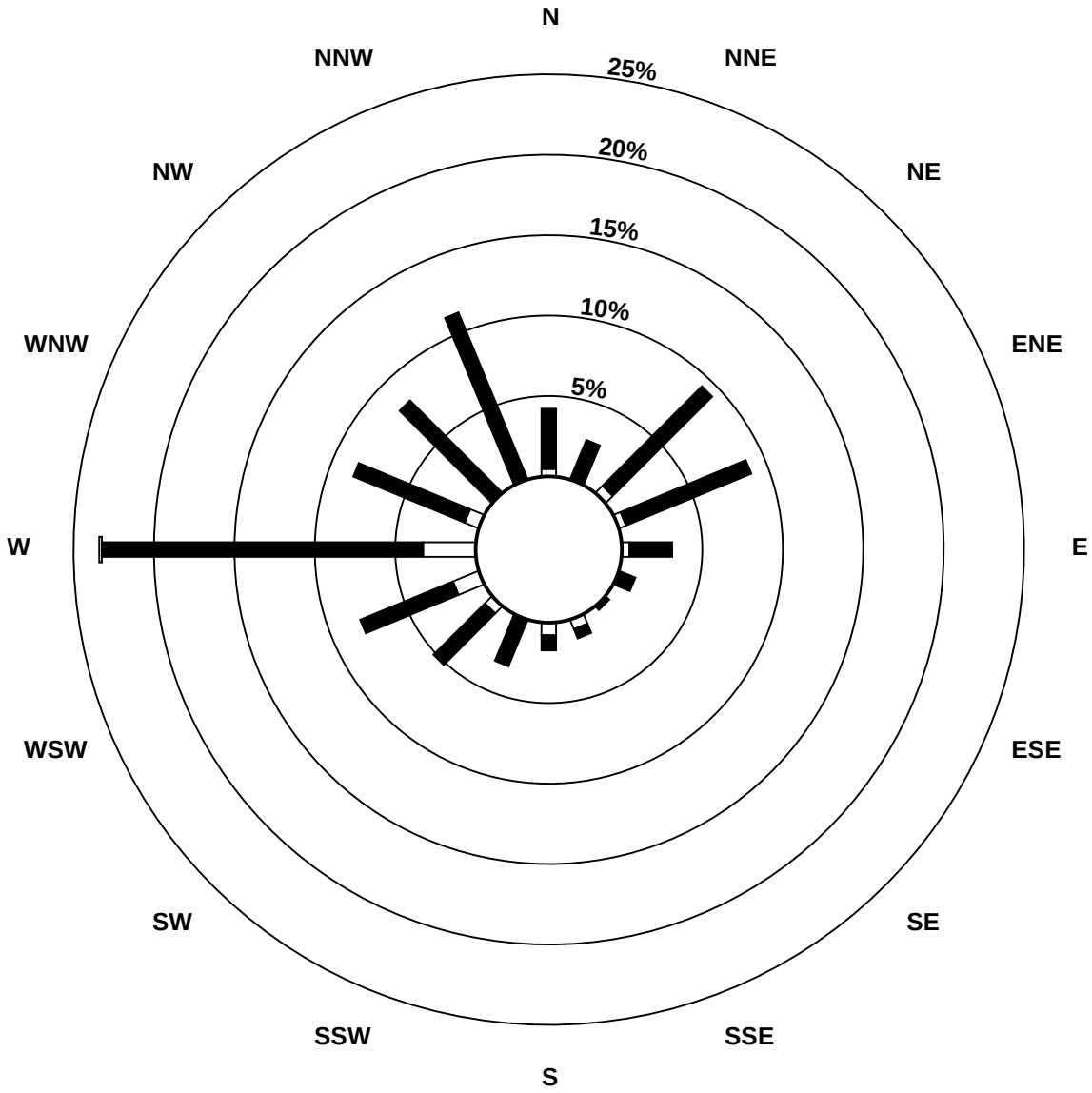
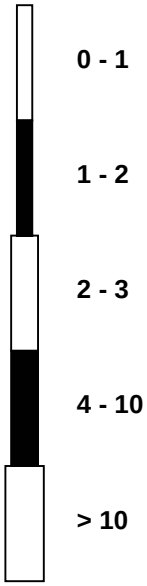
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - February 2011



Pollutant Classes (ppb)



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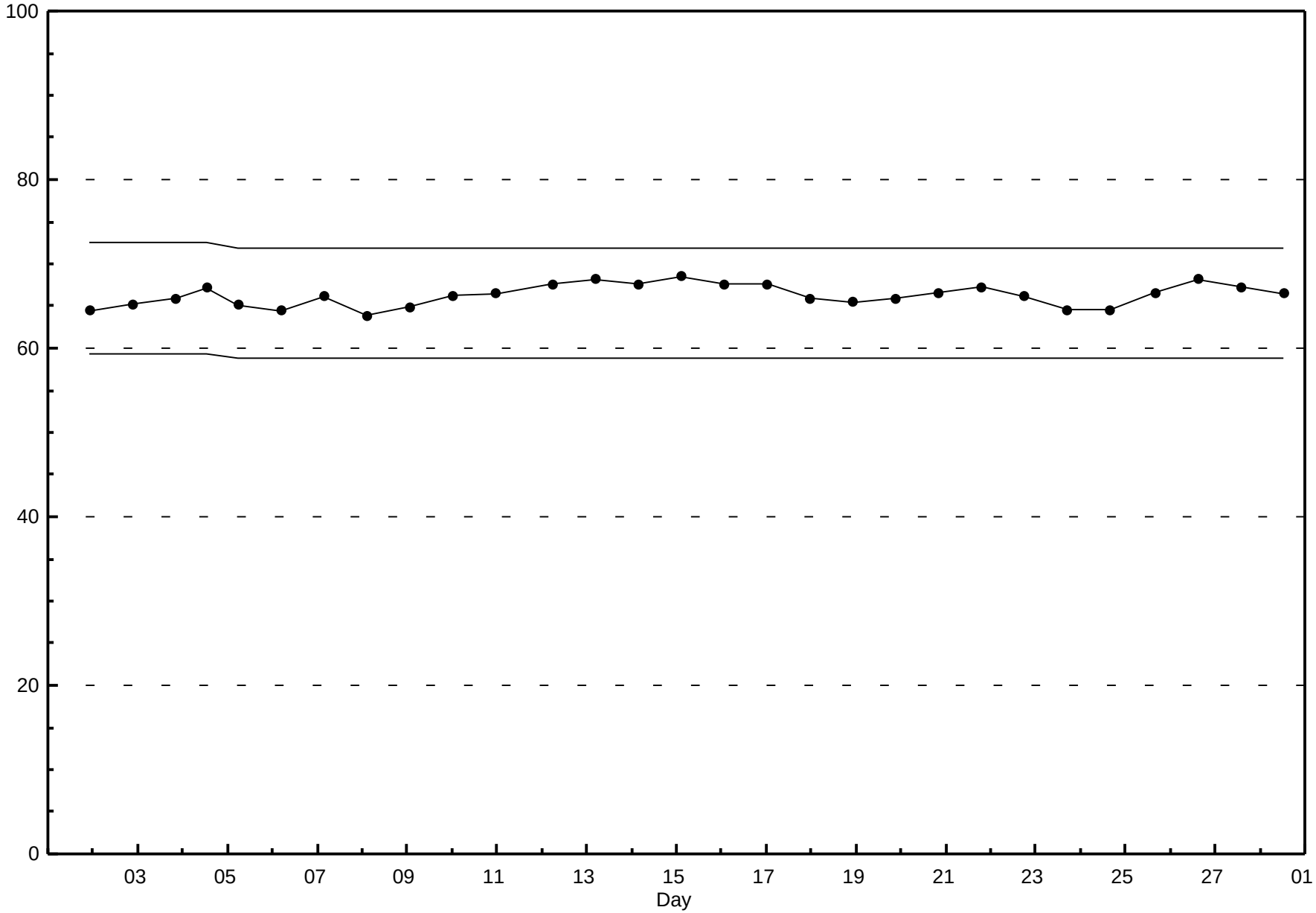
Span Responses

Total Reduced Sulphur (TRS)

Evergreen Park - February 2011



FOCUS AIR QUALITY MONITORING

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Hourly Averages

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

Evergreen Park - February 2011

Number of Exceedences: 1-hr: 0 24-hr: 0
Maximum Value: 75.9 $\mu g/m^3$ on Feb 15 05:00
Maximum Daily Average: 13.7 $\mu g/m^3$ on Feb 20

Minimum Value: 0 $\mu g/m^3$ on Feb 1 23:00
Maximum Diurnal Average: 7.8 $\mu g/m^3$ at hour 21
Monthly Average: 5.93 $\mu g/m^3$

Minimum Daily Average: 1.0 $\mu g/m^3$ on Feb 3
Minimum Diurnal Average: 2.9 $\mu g/m^3$ at hour 6
Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.4$ Median = 3.2 $Q_3 = 7.2$ $P_{90} = 14.1$ $P_{99} = 38.6$

Hours in Service:	672
Hours of Data:	554
Hours of Missing Data:	118
Hours of Calibration:	2
Percent Operational Time:	82.7

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	7	6	6	7	7	9	8	9	12	14	20	12	10	11	11	17	13	15	17	14	BD	BD	0	0	10.2	20.2
2-Feb	0	0	0	0	0	0	0	2	1	2	3	2	5	9	6	5	10	4	BD	BD	BD	BD	BD	BD	2.7	9.7
3-Feb	0	3	1	1	0	2	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2	3	6	5	1.0	6.5
4-Feb	0	1	0	1	2	N	BD	0	BD	M	C	C	1	5	0	3	0	0	0	N	N	N	BD	BD	--	4.6
5-Feb	BD	BD	BD	BD	BD	BD	BD	BD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	--	0.0
6-Feb	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	10	13	12	4	2	1.8	12.8
7-Feb	5	40	20	7	3	3	3	4	4	4	4	4	3	3	3	4	5	10	11	6	8	8	8	5	7.2	40.1
8-Feb	5	7	5	3	2	3	6	5	7	6	13	19	18	19	21	28	26	36	32	20	13	10	10	8	13.4	36.1
9-Feb	2	0	0	0	0	0	0	0	3	4	10	15	13	46	23	13	1	0	0	0	0	10	4	1	6.1	46.5
10-Feb	0	0	1	3	7	1	0	1	3	6	2	1	0	3	4	2	0	1	0	0	0	0	0	2	1.6	7.1
11-Feb	4	0	2	0	1	0	0	0	1	3	3	0	1	3	4	2	2	3	2	1	0	6	4	2	1.8	6.0
12-Feb	2	1	1	0	0	0	0	10	2	1	4	0	0	0	7	4	2	0	0	0	N	N	N	N	1.7	9.7
13-Feb	BD	BD	0	0	0	0	0	0	5	2	0	0	0	0	0	0	4	2	0	0	2	7	5	3	1.4	7.1
14-Feb	3	5	4	5	1	3	2	4	5	10	5	3	1	0	0	1	2	2	2	5	51	26	11	10	6.7	50.9
15-Feb	6	38	13	32	76	5	12	5	3	3	7	11	12	20	19	24	14	7	3	3	2	2	2	2	13.3	75.9
16-Feb	2	3	2	2	3	7	8	8	5	4	7	9	19	7	6	3	8	7	6	5	6	5	7	7	6.1	19.4
17-Feb	4	3	3	3	3	6	4	3	7	8	7	14	11	11	11	13	20	9	9	22	18	13	7	6	8.9	21.9
18-Feb	5	4	4	4	3	5	4	5	6	7	7	6	8	5	2	3	3	3	3	2	N	N	N	N	4.4	8.4
19-Feb	N	N	N	N	N	N	N	N	N	N	14	15	14	26	31	38	39	47	37	26	19	13	11	11	--	47.0
20-Feb	10	10	12	14	12	14	14	16	16	25	17	17	12	6	6	11	16	22	20	18	11	12	10	9	13.7	25.1
21-Feb	7	BD	0	0	0	0	1	3	0	37	19	18	10	0	3	4	6	3	17	2	0	0	4	8	6.2	36.7
22-Feb	5	1	0	1	0	0	1	1	2	2	1	1	1	1	1	2	3	3	6	3	4	5	2	7	2.2	6.6
23-Feb	7	4	2	2	4	5	2	3	5	N	N	N	N	N	N	N	N	N	7	4	5	5	N	N	--	6.9
24-Feb	N	N	N	N	N	N	N	N	N	19	7	5	4	3	2	5	2	4	N	N	N	N	34	30	--	33.8
25-Feb	32	13	5	1	0	0	0	1	4	3	0	0	0	0	0	0	0	1	1	2	0	0	0	0	2.7	32.1
26-Feb	2	3	29	0	0	2	4	11	2	3	6	4	3	4	3	9	6	6	4	2	2	4	1	1	4.7	29.0
27-Feb	2	2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	2.2
28-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
	4.8	6.6	4.8	3.7	5.4	2.9	3.2	3.9	4.0	7.0	6.6	6.5	5.9	7.2	6.6	7.6	7.2	7.4	7.5	6.3	7.8	7.0	6.2	5.6	Diurnal Average	
	32.1	40.1	29.0	31.6	75.9	13.6	14.0	16.3	15.6	36.7	20.2	19.1	19.4	46.5	31.0	37.9	38.7	47.0	37.2	26.3	50.9	26.1	33.8	30.2	Diurnal Maximum	

C - Calibration M - Maintenance N - Not Valid BD - Baseline Drift
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

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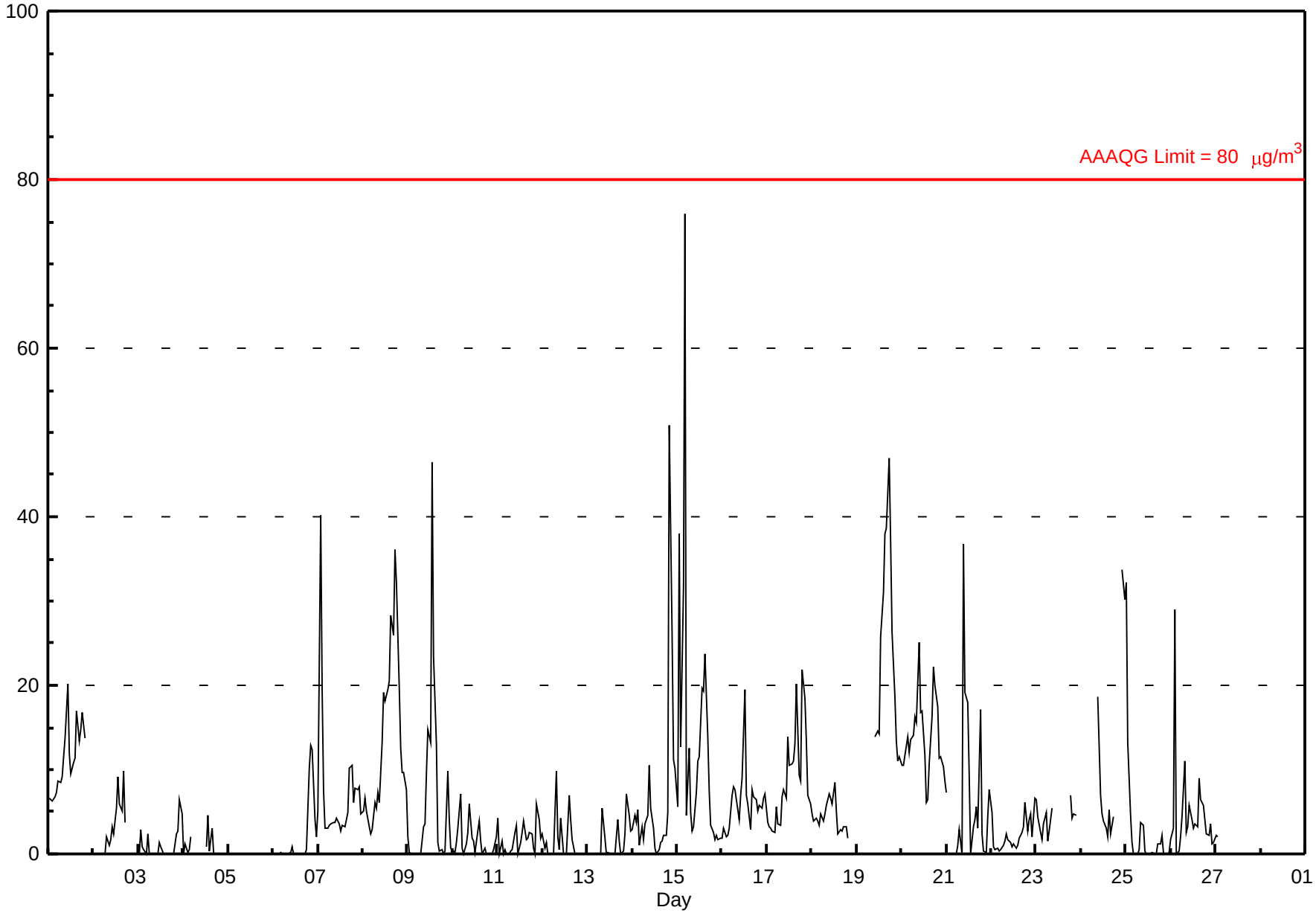
Peace Air Shed Zone Association

Hourly Averages

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

Evergreen Park - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Maximums

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

Evergreen Park - February 2011

Maximum Value: 157.2 $\mu g/m^3$ on Feb 15 05:00

Maximum Daily Average: 29.4 $\mu g/m^3$ on Feb 15

Minimum Value: 0 $\mu g/m^3$ on Feb 1 21:00

Minimum Daily Average: 0.2 $\mu g/m^3$ on Feb 5

Maximum Diurnal Average: 16.0 $\mu g/m^3$ at hour 21

Minimum Diurnal Average: 5.6 $\mu g/m^3$ at hour 6

Monthly Average: 11.48 $\mu g/m^3$

Percentiles: $P_1 = 0.0$ $P_{10} = 0.5$ $Q_1 = 3.0$ Median = 6.6 $Q_3 = 13.5$ $P_{90} = 26.4$ $P_{99} = 97.8$

Hours in Service:	672
Hours of Data:	571
Hours of Missing Data:	101
Hours of Calibration:	2
Percent Operational Time:	85.3

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	12	11	11	11	11	12	13	13	15	17	32	16	12	13	15	21	18	17	20	21	0	0	0	6	13.1	31.7
2-Feb	4	2	1	3	1	4	4	6	6	3	7	4	10	21	9	8	13	8	2	0	BD	BD	0	0	5.3	21.4
3-Feb	3	6	15	4	2	7	1	2	1	1	3	4	3	2	0	1	0	1	1	3	5	6	9	8	3.7	15.1
4-Feb	4	26	23	4	7	N	7	7	BD	M	C	C	2	18	7	7	2	1	1	N	N	N	BD	BD	--	26.4
5-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0.2	2.4
6-Feb	2	2	0	0	11	0	1	1	1	5	3	4	2	1	0	0	2	1	6	27	24	26	10	5	5.5	26.5
7-Feb	12	156	52	18	6	5	5	5	6	5	7	6	4	5	5	7	8	14	16	8	10	9	12	7	16.2	155.9
8-Feb	10	9	9	5	5	6	10	10	11	10	20	23	23	26	26	32	34	45	43	27	15	12	12	10	18.0	45.4
9-Feb	6	2	1	1	0	0	0	2	10	8	29	29	30	98	39	27	4	5	5	1	5	17	10	4	13.9	98.5
10-Feb	4	9	9	10	21	5	2	8	8	15	5	3	3	10	10	4	1	5	1	0	0	2	3	6	6.0	20.8
11-Feb	9	0	5	2	5	0	1	3	8	9	7	0	5	4	7	4	4	6	5	6	2	21	10	3	5.2	20.5
12-Feb	5	3	4	2	1	1	6	14	8	3	9	7	0	3	10	8	5	4	0	1	N	N	N	N	4.7	13.8
13-Feb	BD	0	0	0	0	0	1	1	23	5	2	2	2	0	0	0	43	18	1	2	6	13	8	4	5.7	42.8
14-Feb	6	7	5	12	3	9	5	5	8	18	9	6	4	1	2	2	3	4	4	17	110	63	28	37	15.3	109.7
15-Feb	37	77	29	64	157	18	36	13	5	7	20	14	28	57	35	38	23	15	8	5	4	7	3	3	29.4	157.2
16-Feb	4	6	6	5	7	12	11	10	7	6	12	13	33	16	10	6	13	10	11	7	9	9	11	12	10.2	33.1
17-Feb	9	5	5	4	4	9	6	6	14	12	12	29	24	15	24	31	37	13	14	138	84	22	11	11	22.4	137.7
18-Feb	10	6	6	6	5	7	6	8	10	10	11	10	18	17	5	12	4	5	5	5	N	N	N	N	8.2	17.6
19-Feb	N	N	N	N	N	N	N	N	N	N	19	19	19	32	33	41	47	52	42	33	23	20	15	16	--	52.2
20-Feb	15	15	16	22	16	18	19	22	18	33	22	27	17	10	12	14	21	30	27	22	14	16	13	10	18.7	32.9
21-Feb	10	3	0	1	0	0	8	11	15	91	33	35	18	3	7	11	26	4	40	12	5	3	15	23	15.7	91.5
22-Feb	20	3	3	2	3	2	3	3	4	3	4	3	2	2	2	4	6	5	17	4	6	9	4	10	5.2	19.8
23-Feb	15	12	5	4	7	8	4	7	11	N	N	N	N	N	N	N	N	N	11	8	7	8	N	N	--	15.4
24-Feb	N	N	N	N	N	N	N	N	N	35	10	9	9	5	5	22	4	16	N	N	N	N	43	37	--	43.0
25-Feb	42	20	10	3	4	2	2	5	10	9	2	2	1	2	3	2	4	5	4	7	4	3	2	2	6.2	41.9
26-Feb	4	7	102	1	2	4	13	18	8	6	16	12	7	10	9	19	18	7	8	4	4	6	5	8	12.4	101.9
27-Feb	5	4	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	5.0
28-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
	10.3	15.6	13.2	7.7	11.5	5.6	6.9	7.5	8.9	13.5	12.3	11.5	11.0	14.9	10.9	12.9	13.6	11.6	11.7	14.9	16.0	13.0	10.2	10.1	Diurnal Average	
	41.9	155.9	101.9	64.3	157.2	18.3	36.3	22.1	23.1	91.5	33.4	35.1	33.1	98.5	38.8	41.4	47.0	52.2	43.3	137.7	109.7	63.1	43.0	37.3	Diurnal Maximum	

C - Calibration M - Maintenance N - Not Valid BD - Baseline Drift

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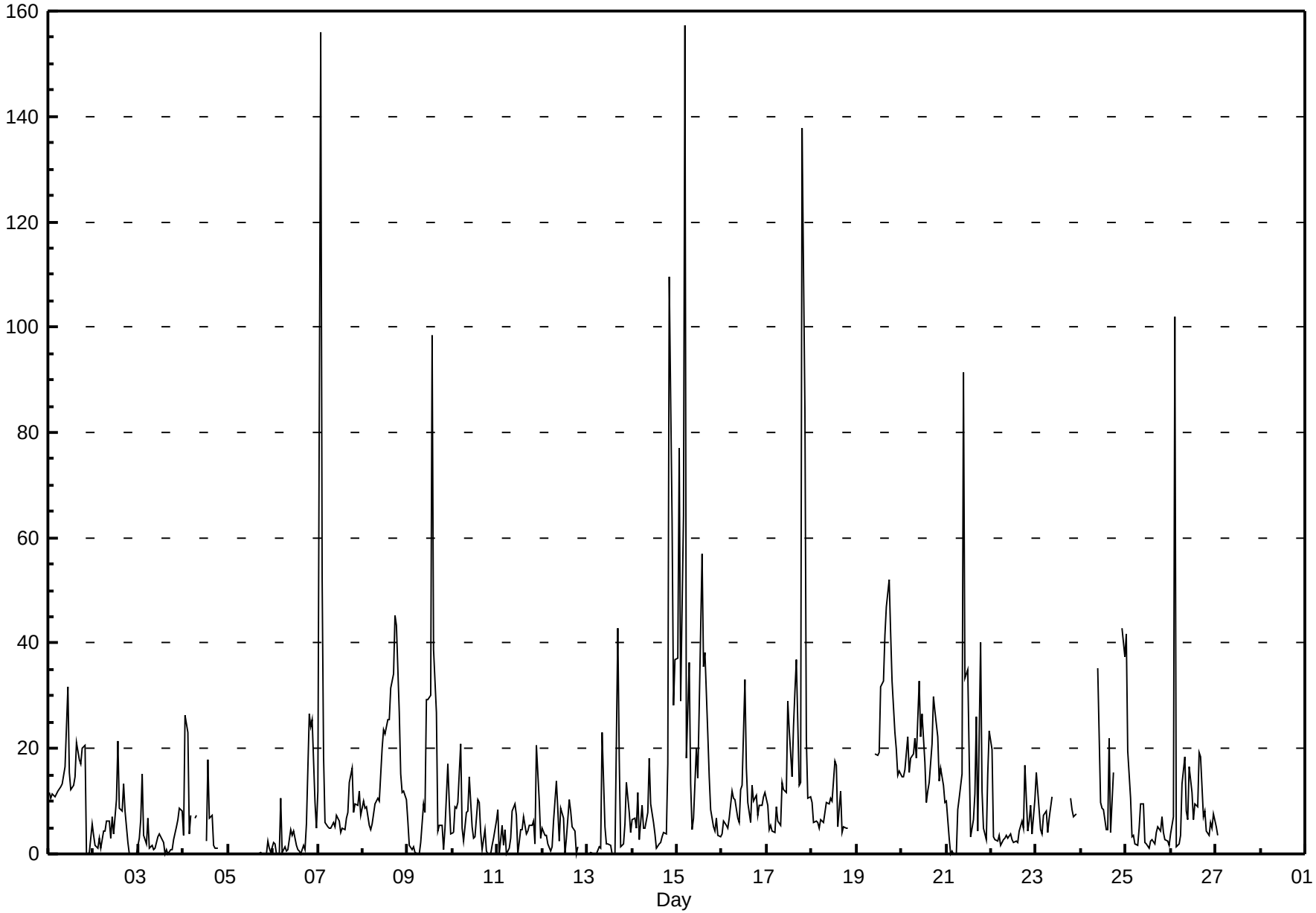
Hourly Maximums

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

Evergreen Park - February 2011



FOCUS AIR QUALITY MONITORING

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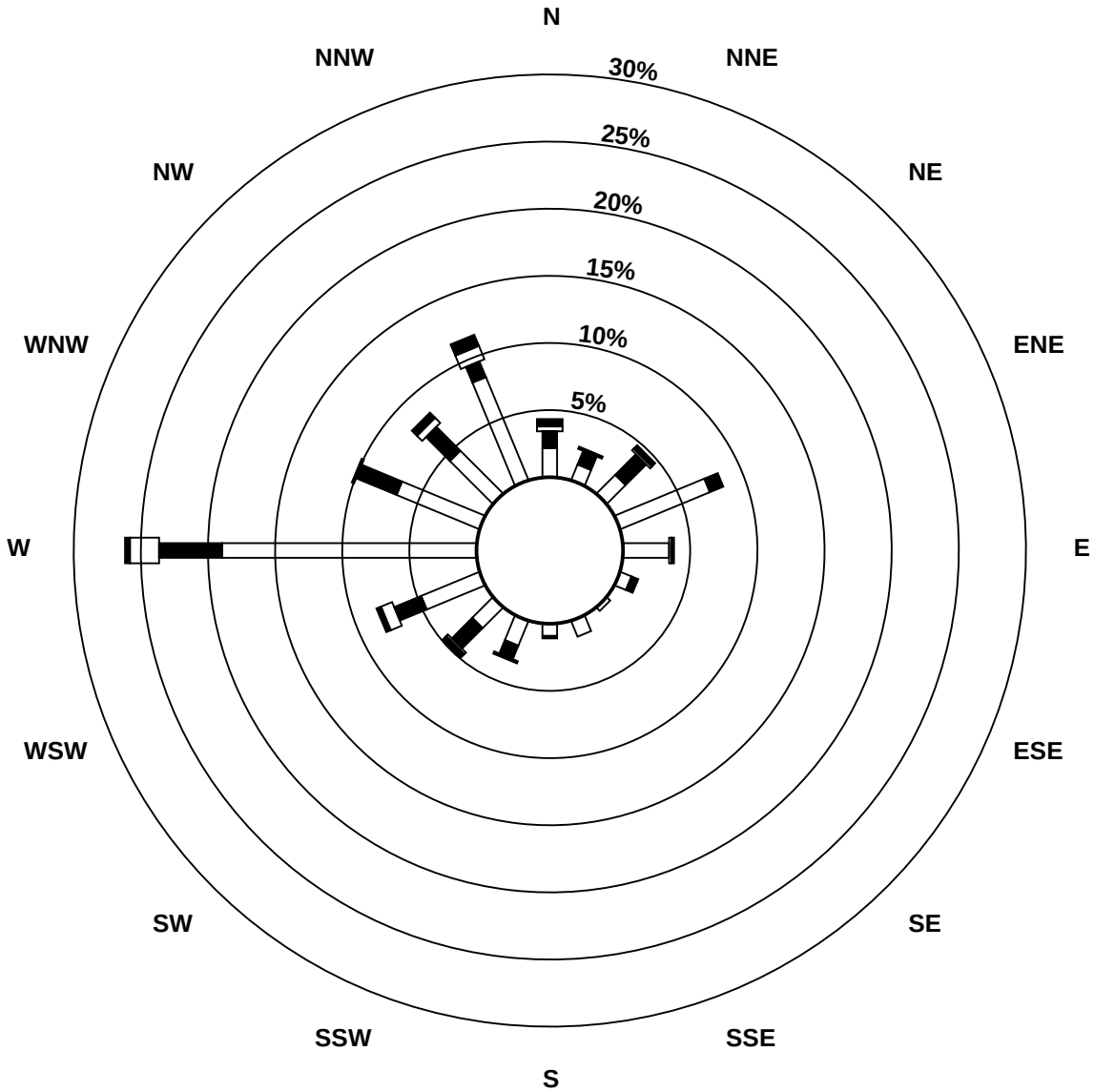
Pollutant Rose

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

Evergreen Park - February 2011



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

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

FOCUS AIR QUALITY MONITORING

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Hourly Averages

External Temperature (ET) - ^{o}C

Evergreen Park - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 9.4 ^{o}C on Feb 2 16:00 Maximum Daily Average: 6.3 ^{o}C on Feb 2

Minimum Value: -35 ^{o}C on Feb 19 08:00 Minimum Daily Average: -25.4 ^{o}C on Feb 19
Maximum Diurnal Average: -7.2 ^{o}C at hour 16 Minimum Diurnal Average: -12.7 ^{o}C at hour 9
Monthly Average: -10.42 ^{o}C Percentiles: P_1 = -32.1 P_{10} = -23.7 Q_1 = -20.8 Median = -10.8 Q_3 = 0.6 P_{90} = 4.6 P_{99} = 7.7

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

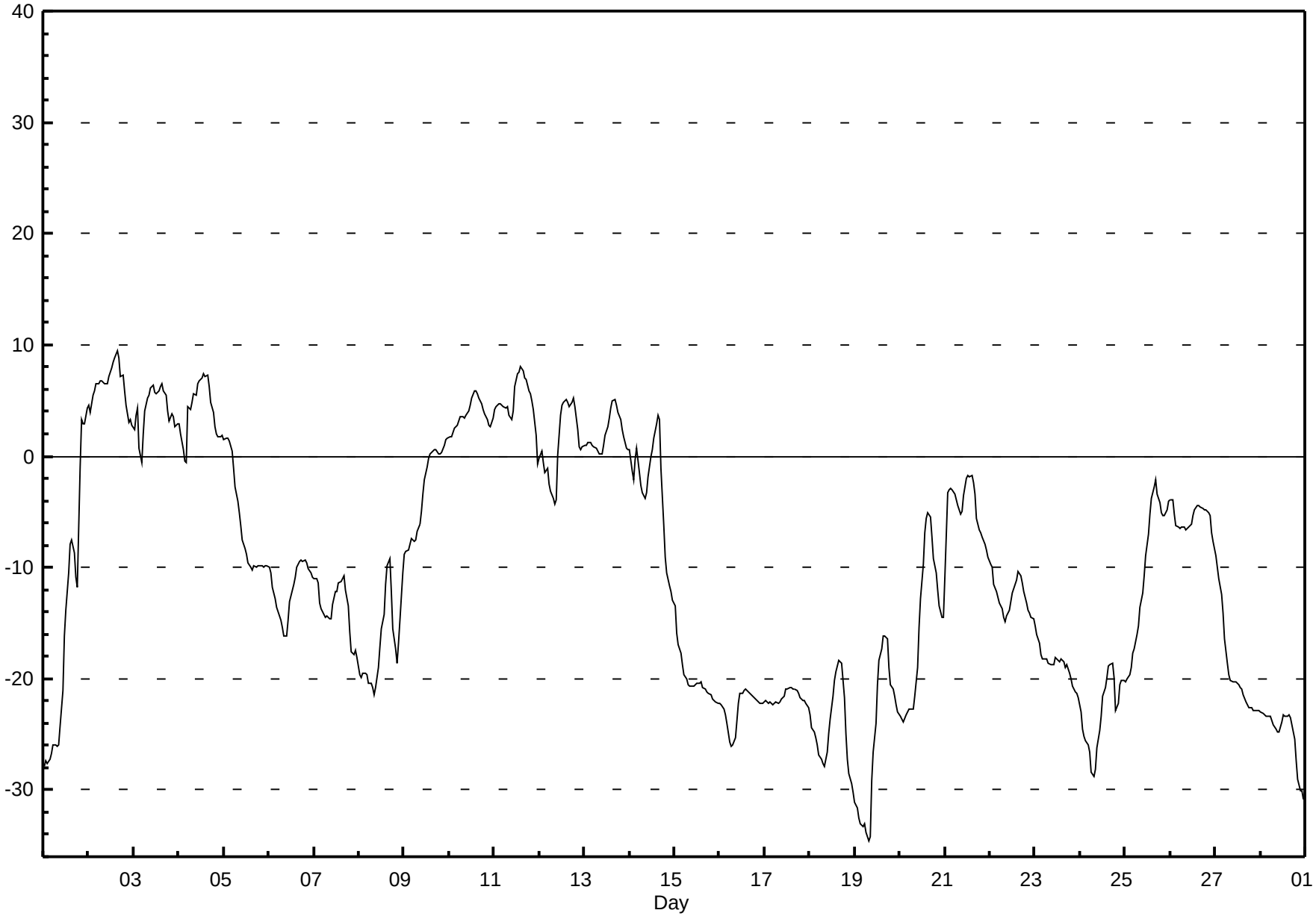
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-28	-27	-28	-27	-27	-26	-26	-26	-26	-24	-21	-16	-14	-11	-8	-8	-9	-11	-12	-1	3	3	3	4	-15.1	4.3
2-Feb	5	4	5	6	7	7	7	7	7	7	7	7	8	8	9	9	9	7	7	6	5	3	3	3	6.3	9.4
3-Feb	2	4	4	1	-1	2	4	5	6	6	6	6	6	6	6	6	6	5	4	3	4	4	3	3	4.2	6.5
4-Feb	3	2	1	0	-1	5	4	5	6	5	6	7	7	7	7	7	6	5	4	3	2	2	2	2	4.0	7.4
5-Feb	2	2	2	1	0	-1	-3	-4	-5	-6	-7	-8	-9	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-6.1	1.6
6-Feb	-10	-11	-12	-13	-14	-14	-15	-15	-16	-16	-15	-13	-12	-12	-11	-10	-10	-9	-9	-9	-10	-10	-11	-11	-11.9	-9.3
7-Feb	-11	-11	-11	-13	-14	-14	-14	-14	-15	-15	-13	-12	-12	-11	-11	-11	-11	-12	-13	-16	-18	-18	-17	-18	-13.6	-10.8
8-Feb	-20	-20	-20	-20	-20	-20	-20	-21	-21	-21	-19	-17	-16	-14	-12	-10	-9	-12	-16	-17	-19	-17	-15	-10	-16.8	-9.2
9-Feb	-9	-9	-8	-8	-7	-8	-8	-7	-6	-5	-3	-2	-1	0	0	0	1	1	0	0	0	1	2	2	-3.1	1.6
10-Feb	2	2	2	2	3	3	4	4	3	4	4	5	5	6	6	6	5	5	4	4	3	3	3	3	3.7	5.9
11-Feb	4	4	5	5	5	4	4	4	4	3	4	6	7	8	8	8	7	7	6	6	5	4	2	-1	5.0	8.0
12-Feb	0	0	-1	-2	-1	-2	-3	-4	-4	-4	0	4	5	5	5	5	4	5	5	4	2	1	1	1	1.1	5.2
13-Feb	1	1	1	1	1	1	1	0	0	0	1	2	3	3	4	5	5	5	4	3	2	2	1	1	2.0	5.1
14-Feb	1	-1	-2	0	1	-2	-3	-3	-4	-3	-2	0	1	2	3	4	3	-1	-6	-9	-10	-12	-12	-13	-2.9	3.7
15-Feb	-13	-16	-17	-18	-19	-20	-20	-21	-21	-21	-21	-20	-20	-20	-20	-21	-21	-21	-21	-21	-22	-22	-22	-22	-20.0	-13.5
16-Feb	-22	-22	-23	-23	-24	-26	-26	-26	-25	-24	-22	-21	-21	-21	-21	-21	-21	-22	-22	-22	-22	-22	-22	-22	-22.7	-20.9
17-Feb	-22	-22	-22	-22	-22	-22	-22	-22	-22	-22	-22	-21	-21	-21	-21	-21	-21	-21	-21	-22	-22	-22	-22	-23	-21.7	-20.8
18-Feb	-23	-24	-25	-25	-26	-27	-27	-28	-28	-27	-25	-24	-22	-20	-19	-18	-18	-19	-22	-25	-27	-29	-29	-30	-24.5	-18.4
19-Feb	-31	-32	-32	-33	-33	-33	-34	-35	-34	-29	-27	-24	-21	-18	-17	-16	-16	-16	-19	-21	-21	-22	-22	-23	-25.4	-16.1
20-Feb	-23	-24	-24	-23	-23	-23	-23	-23	-22	-19	-15	-13	-10	-7	-6	-5	-5	-7	-9	-11	-12	-14	-15	-14	-15.3	-5.1
21-Feb	-11	-3	-3	-3	-3	-3	-4	-4	-5	-5	-4	-2	-2	-2	-2	-2	-3	-6	-7	-7	-7	-8	-8	-9	-4.7	-1.7
22-Feb	-10	-10	-11	-12	-13	-13	-14	-15	-15	-14	-14	-13	-12	-12	-11	-10	-11	-11	-12	-13	-14	-14	-14	-15	-12.6	-9.7
23-Feb	-15	-16	-17	-18	-18	-18	-18	-19	-19	-19	-19	-18	-18	-18	-18	-19	-19	-19	-20	-20	-21	-21	-21	-22	-18.7	-15.3
24-Feb	-23	-25	-25	-26	-26	-27	-28	-29	-28	-26	-25	-23	-22	-21	-20	-19	-19	-19	-20	-23	-22	-21	-20	-20	-23.1	-18.6
25-Feb	-20	-20	-20	-19	-18	-17	-16	-15	-14	-12	-11	-9	-7	-5	-4	-3	-2	-3	-4	-5	-5	-5	-5	-4	-10.2	-2.1
26-Feb	-4	-4	-5	-6	-6	-6	-6	-6	-7	-7	-6	-6	-5	-5	-4	-4	-5	-5	-5	-5	-5	-5	-7	-8	-5.6	-3.9
27-Feb	-9	-10	-11	-12	-14	-16	-19	-20	-20	-20	-20	-20	-21	-21	-21	-21	-22	-22	-23	-23	-23	-23	-23	-23	-19.0	-8.9
28-Feb	-23	-23	-23	-23	-23	-23	-24	-24	-25	-25	-25	-24	-23	-23	-23	-23	-24	-24	-25	-27	-29	-30	-30	-31	-25.0	-23.0
	-11.0	-11.1	-11.4	-11.8	-12.0	-12.2	-12.5	-12.7	-12.7	-12.1	-11.0	-9.7	-8.8	-8.1	-7.5	-7.2	-7.5	-8.3	-9.3	-9.9	-10.4	-10.8	-11.0	-11.1	Diurnal Average	
	4.6	4.4	5.5	5.8	6.5	6.6	6.7	6.7	6.5	6.5	6.5	7.2	7.9	8.5	8.9	9.4	8.9	7.2	7.3	5.8	4.9	4.2	3.2	4.3	Diurnal Maximum	

PASZA
Peace Air Shed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Evergreen Park - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Evergreen Park - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 95.1 % on Feb 12 23:00 Maximum Daily Average: 83.1 % on Feb 26

Minimum Value: 38 % on Feb 21 02:00 Minimum Daily Average: 56.9 % on Feb 9
Maximum Diurnal Average: 73.5 % at hour 5 Minimum Diurnal Average: 57.0 % at hour 16
Monthly Average: 67.70 % Percentiles: P_1 = 43.3 P_{10} = 53.4 Q_1 = 59.5 Median = 68.9 Q_3 = 74.7 P_{90} = 81.4 P_{99} = 92.3

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

Day	Hourly Period Ending At (MST)																								Daily	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	74	74	74	74	74	75	75	75	75	75	74	73	72	65	62	61	67	74	75	69	62	64	64	62	70.4	75.4
2-Feb	63	66	61	61	59	59	58	58	60	60	60	58	55	53	52	50	53	59	59	64	68	73	74	76	60.8	75.5
3-Feb	77	72	71	84	88	78	70	67	68	65	65	68	69	68	63	62	63	64	69	72	75	85	91	92	72.7	92.3
4-Feb	92	92	94	95	95	77	76	71	68	69	64	61	58	54	54	54	58	72	79	89	90	86	84	85	75.6	95.0
5-Feb	85	85	84	83	86	84	86	79	75	77	81	84	82	82	80	78	71	72	72	72	73	74	74	75	78.8	86.4
6-Feb	76	80	84	84	85	85	85	84	84	82	79	75	70	70	70	69	70	70	71	68	65	62	60	58	74.4	85.3
7-Feb	59	60	61	66	66	65	65	65	66	67	64	59	59	57	58	58	58	63	68	73	79	81	80	79	65.6	80.8
8-Feb	78	79	80	80	80	80	79	79	79	78	75	72	67	63	55	53	53	59	68	73	77	77	75	64	71.8	80.2
9-Feb	60	59	60	59	58	61	61	58	59	59	57	55	53	51	52	52	53	55	57	58	57	56	57	59	56.9	61.2
10-Feb	60	60	61	61	59	58	57	56	57	57	56	57	56	53	53	54	55	57	59	60	62	64	66	62	58.3	65.6
11-Feb	61	61	59	58	57	56	55	54	57	59	59	50	49	50	48	50	53	52	56	55	58	62	70	80	57.0	79.7
12-Feb	79	74	77	82	79	84	87	88	89	89	77	62	60	59	58	60	60	57	56	62	79	92	95	95	75.0	95.1
13-Feb	91	90	83	76	78	72	70	67	66	68	67	61	57	49	43	41	43	44	46	47	51	55	59	60	61.8	91.4
14-Feb	61	71	73	67	66	74	78	80	82	81	75	66	61	57	54	53	57	70	77	81	80	78	78	77	70.7	82.2
15-Feb	72	75	69	69	71	76	69	66	65	64	62	61	61	60	61	63	64	64	65	65	63	63	63	63	65.7	76.0
16-Feb	63	64	65	68	71	74	75	75	75	74	69	64	64	61	59	59	64	67	70	72	73	73	73	72	68.5	75.5
17-Feb	72	72	73	75	74	74	73	71	72	72	69	67	64	65	68	67	68	70	71	70	70	70	72	72	70.5	74.5
18-Feb	73	75	75	73	73	74	74	74	73	70	67	63	59	58	55	50	50	52	62	71	73	74	74	74	67.4	75.3
19-Feb	74	73	73	72	72	72	72	70	70	70	69	65	57	54	54	53	55	56	63	68	68	69	71	73	66.3	73.8
20-Feb	74	75	75	75	75	76	75	75	74	70	62	57	52	46	45	47	50	56	62	65	69	74	76	78	66.0	77.6
21-Feb	62	38	41	45	49	53	57	59	61	60	58	50	48	48	47	57	63	70	76	73	73	73	74	75	58.8	75.8
22-Feb	80	72	64	68	71	71	71	73	73	67	64	59	57	53	51	44	43	48	63	66	71	78	75	76	64.9	79.9
23-Feb	75	75	77	78	76	75	71	69	73	71	64	63	66	62	59	59	65	64	67	71	70	71	71	71	69.3	78.3
24-Feb	72	72	73	73	73	75	76	75	75	74	70	66	59	55	51	48	48	46	50	59	60	58	59	62	63.6	75.6
25-Feb	63	64	72	76	79	80	74	69	70	67	60	55	50	46	44	43	42	46	47	51	54	54	54	51	58.8	79.6
26-Feb	51	51	71	90	89	89	87	84	86	86	86	85	82	80	78	81	86	90	91	91	92	92	90	88	83.1	92.5
27-Feb	85	84	82	80	79	76	74	75	73	72	69	67	67	65	69	68	66	71	71	71	71	71	70	69	72.8	85.1
28-Feb	70	74	75	75	76	75	74	74	74	71	71	67	64	63	63	61	62	61	62	70	73	74	75	74	70.0	75.5
	71.5	71.0	71.7	73.1	73.5	73.1	72.3	71.1	71.3	70.5	67.5	64.0	61.4	58.8	57.4	57.0	58.5	61.7	65.4	68.1	69.9	71.6	72.2	72.2	Diurnal Average	
	91.7	91.7	94.1	94.7	95.0	89.0	86.9	87.7	88.7	89.1	85.5	85.3	82.4	82.3	80.2	81.1	86.2	89.5	90.5	91.3	91.8	92.5	95.1	94.9	Diurnal Maximum	

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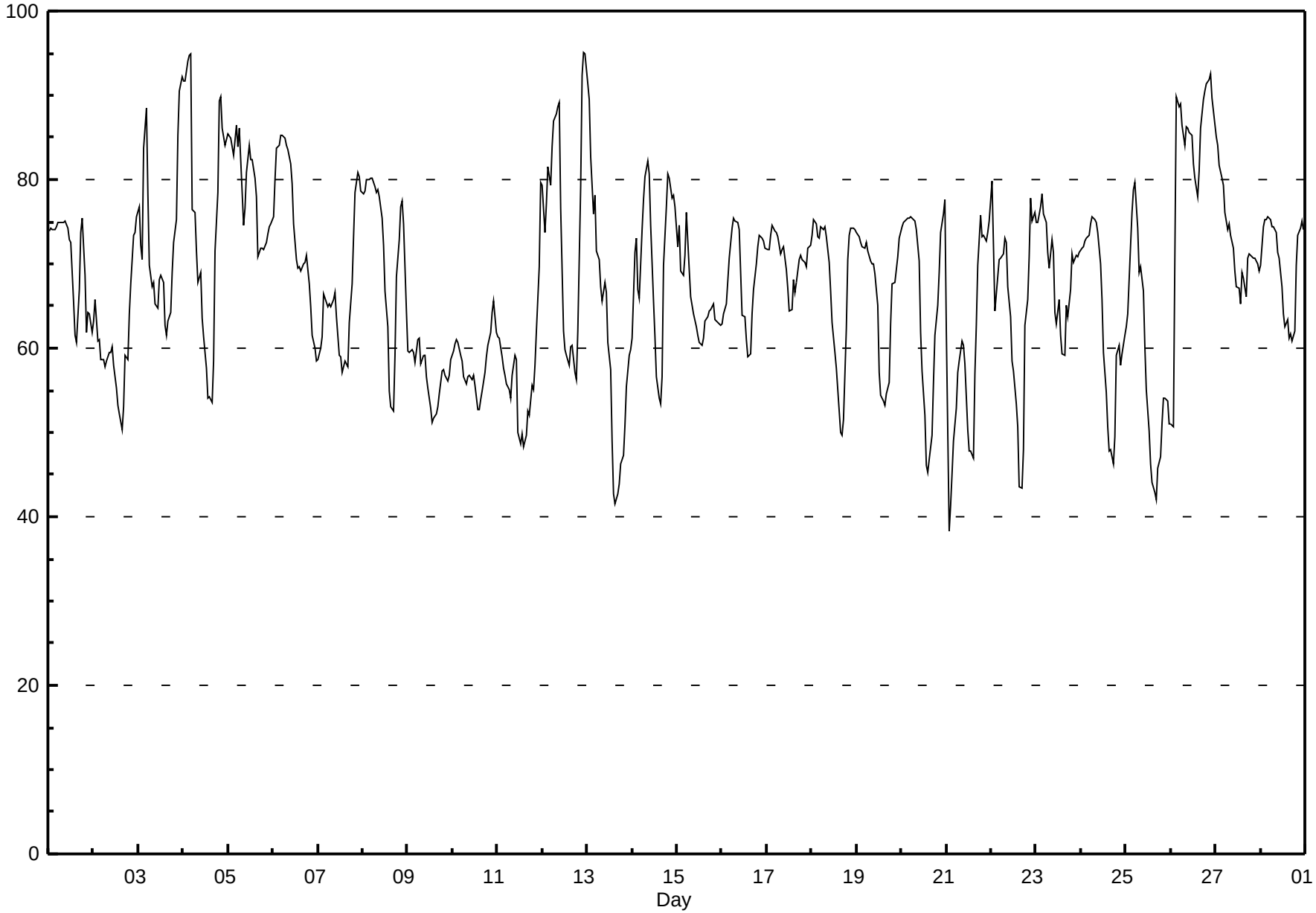
Hourly Averages

Relative Humidity (RH) - %

Evergreen Park - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Evergreen Park - February 2011

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1 Spd	1	1	0	0	1	1	1	0	1	0	1	1	2	1	1	2	2	2	2	12	20	16	10	16	3.6	19.5
Dir	357	213	249	229	292	271	257	20	242	268	240	305	332	289	292	274	344	352	244	278	265	258	283	269	271.9	265.0
2 Spd	9	7	15	13	14	15	20	24	22	18	15	18	20	18	11	10	6	6	5	4	1	2	1	1	11.0	24.0
Dir	305	296	277	276	280	266	259	265	275	278	279	267	272	272	275	265	276	269	271	247	168	190	198	174	272.0	264.5
3 Spd	2	4	1	1	1	4	3	11	21	26	19	13	6	11	13	6	4	3	1	1	2	1	2	3	5.7	25.6
Dir	205	237	224	44	189	260	266	284	265	258	263	272	312	284	278	320	304	255	122	87	114	200	210	198	268.2	257.7
4 Spd	2	1	1	0	5	9	3	7	13	13	20	20	24	21	15	14	9	13	13	10	10	11	10	9	9.2	24.2
Dir	162	123	81	61	215	238	263	263	263	256	262	269	266	271	279	288	317	327	296	308	307	330	326	323	282.1	266.1
5 Spd	9	7	6	7	12	13	16	17	14	17	17	16	16	17	16	15	13	10	9	9	7	6	5	2	11.2	17.3
Dir	295	306	300	319	344	345	344	344	350	341	343	340	334	342	337	338	337	332	326	332	332	338	340	354	336.4	344.1
6 Spd	1	2	3	3	3	2	2	2	3	3	4	5	5	6	7	6	8	8	8	9	12	11	9	9	5.3	11.8
Dir	15	86	78	82	81	86	82	76	76	78	78	65	70	70	77	97	102	100	96	107	103	103	100	94	90.6	103.2
7 Spd	8	9	8	9	8	8	6	6	5	4	4	5	7	5	5	4	3	4	2	0	1	3	2	2	3.5	9.0
Dir	92	95	86	78	77	77	73	76	77	83	72	62	59	40	17	19	343	308	322	261	218	256	305	277	65.4	95.4
8 Spd	1	2	3	4	2	2	4	2	3	4	4	5	6	4	2	4	3	2	2	2	1	2	2	5	2.6	5.6
Dir	234	230	247	234	261	335	246	265	224	210	252	272	275	276	261	225	229	348	322	261	309	278	257	268	257.1	275.3
9 Spd	8	9	7	8	12	9	3	8	4	7	13	19	20	25	25	21	16	14	11	14	18	24	24	20	14.0	25.0
Dir	281	296	308	296	270	253	310	271	285	280	288	273	279	276	275	276	276	277	278	280	274	275	276	275	277.8	275.4
10 Spd	20	17	18	22	22	20	19	20	20	21	20	17	13	19	18	15	16	14	15	14	11	6	6	15	16.4	22.3
Dir	274	275	277	273	273	272	270	265	268	267	270	280	286	278	279	280	277	275	273	268	266	259	265	261	272.6	272.7
11 Spd	17	15	15	15	14	12	8	3	1	1	3	6	7	8	9	4	5	9	9	8	12	7	0	1	7.4	17.2
Dir	263	266	267	268	261	251	250	295	158	160	214	230	277	276	282	315	294	266	264	250	245	255	166	35	263.1	263.4
12 Spd	3	3	2	2	1	2	1	1	2	1	2	1	1	2	1	2	2	3	6	1	2	2	4	6	0.5	6.2
Dir	255	216	203	70	152	67	233	213	78	89	185	337	7	265	235	60	139	184	198	147	360	357	342	249	216.3	249.1
13 Spd	12	10	13	20	17	19	17	19	14	17	21	21	15	17	19	11	6	9	6	5	4	2	1	2	11.8	20.7
Dir	260	258	262	257	257	260	257	263	257	258	259	253	258	266	265	246	212	228	218	203	194	193	159	186	253.6	253.0
14 Spd	1	1	2	6	4	1	1	1	1	1	2	4	6	6	7	7	7	14	14	13	10	11	8	12	4.4	14.3
Dir	198	261	213	250	254	126	182	223	29	207	63	69	69	64	69	81	82	68	66	65	54	50	48	50	63.9	68.4
15 Spd	9	14	14	14	11	11	13	11	10	10	12	12	11	13	12	11	10	12	11	9	11	8	7	5	10.5	14.1
Dir	358	336	331	309	317	310	318	317	316	316	326	314	321	329	323	321	316	333	341	344	346	336	339	319	326.0	331.4
16 Spd	5	4	4	2	1	2	1	0	1	2	1	2	4	5	6	6	4	5	4	5	5	5	3	3	2.2	5.9
Dir	326	329	359	324	278	234	230	169	79	85	217	268	8	11	18	35	41	58	71	69	64	56	56	43	28.4	34.6
17 Spd	3	3	3	3	3	2	1	3	2	2	4	4	5	4	5	4	3	3	4	9	10	7	5	6	3.1	9.8
Dir	50	51	57	54	53	49	68	47	59	44	43	17	33	39	35	50	43	18	323	337	346	342	306	286	13.7	345.8
18 Spd	5	3	4	5	4	2	3	2	4	4	6	7	6	8	6	3	4	2	1	0	1	1	1	0	3.1	7.7
Dir	270	267	282	282	278	279	296	294	282	277	284	285	288	279	293	312	338	352	62	118	24	43	24	29	290.3	279.3
19 Spd	0	0	0	1	1	1	0	0	1	0	1	3	2	4	4	4	3	3	2	2	1	1	1	0	1.0	3.9
Dir	270	345	46	224	231	353	184	222	345	328	267	257	313	14	357	4	8	347	334	334	279	294	226	228	329.1	357.2
20 Spd	0	0	1	0	0	1	0	1	1	1	1	2	3	2	2	3	2	2	2	1	1	0	0	1	0.7	2.6
Dir	247	57	288	276	273	228	268	223	246	243	258	260	250	297	332	355	7	348	347	323	262	289	262	219	298.4	355.3
21 Spd	4	14	13	11	10	4	7	10	8	7	12	22	17	15	13	12	13	14	18	14	7	8	7	10	9.5	22.0
Dir	250	266	267	275	270	288	268	246	238	269	262	264	279	285	293	309	316	321	340	344	339	332	311	347	291.3	264.0
22 Spd	5	5	5	8	12	12	9	5	5	6	12	12	13	12	12	10	11	10	10	8	6	4	3	4	8.0	13.5
Dir	9	30	37	352	345	347	346	325	312	336	341	343	341	337	339	349	341	338	349	333	330	8	17	35	345.9	340.5

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Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Evergreen Park - February 2011

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	10	6	5	7	6	7	7	3	4	6	7	7	7	9	8	6	6	5	1	3	4	5	5	3	5.0	9.5
Dir	5	11	350	344	343	349	351	2	345	42	40	49	33	40	38	38	46	45	14	316	318	333	359	347	13.3	5.2
24 Spd	3	4	3	4	3	3	2	3	4	6	8	9	7	8	8	6	5	3	2	1	3	4	2	1	3.4	9.1
Dir	302	319	324	336	317	263	237	222	263	273	282	283	285	283	290	284	312	324	174	179	197	191	194	257	279.7	283.2
25 Spd	2	4	6	6	7	6	8	9	14	14	13	13	10	9	12	11	11	14	16	14	6	4	9	15	9.2	16.0
Dir	253	267	285	275	273	275	275	284	277	275	279	272	268	243	235	233	246	274	281	270	277	277	276	290	269.9	280.5
26 Spd	18	18	16	15	12	15	18	16	13	13	11	12	13	11	11	10	6	5	3	1	1	4	14	13	8.8	18.0
Dir	289	294	292	282	289	283	281	290	291	291	283	277	279	281	286	285	284	273	272	246	63	66	69	65	291.1	281.1
27 Spd	14	12	15	17	17	17	16	14	12	11	11	11	12	12	11	12	12	10	9	10	10	9	8	8	12.0	17.3
Dir	68	64	63	62	54	53	52	52	49	53	59	54	55	59	55	50	57	56	58	56	58	59	59	59	56.7	52.8
28 Spd	8	7	6	4	5	5	7	7	8	9	10	8	8	9	8	8	7	5	2	1	2	1	2	1	5.1	9.6
Dir	58	55	50	53	50	53	55	51	50	51	55	60	61	48	42	38	40	41	44	236	216	247	251	218	50.5	54.8
Spd	3.3	3.4	3.7	4.2	4.2	4.0	4.1	4.6	4.6	4.8	5.6	6.4	6.0	6.3	6.0	4.4	3.6	3.7	3.3	3.0	2.7	2.4	2.3	2.6	Diurnal Average	
Dir	301.3	300.5	301.1	294.6	295.4	293.8	294.8	290.4	287.6	287.3	290.4	288.9	301.4	302.0	304.1	313.2	321.7	320.5	314.9	311.6	307.7	314.9	325.6	307.4		
Spd	19.5	17.9	17.9	22.3	21.5	20.2	19.6	24.0	22.0	25.6	20.5	22.0	24.2	24.6	25.0	20.7	16.0	14.3	18.1	14.0	19.5	23.9	23.5	20.1	Diurnal Maximum	
Dir	273.7	293.7	276.8	272.7	272.7	272.3	258.5	264.5	275.1	257.7	259.2	264.0	266.1	276.3	275.4	275.6	276.1	68.4	339.8	344.2	265.0	275.4	276.4	275.2		

Maximum Speed Value: 26 km/h on Feb 3 10:00
Maximum Daily Speed Average: 16.4 km/h on Feb 10
Maximum Diurnal Speed Average: 6.4 km/h at hour 12

Minimum Speed Value: 0 km/h on Feb 19 03:00
Minimum Daily Speed Average: 0.5 km/h on Feb 20
Minimum Diurnal Speed Average: 2.3 km/h at hour 23

Monthly Average Velocity: 4.08 km/h 301.09 deg

Speed Percentiles: $P_1 = 0.2$ $P_{10} = 1.0$ $Q_1 = 2.4$ Median = 6.1 $Q_3 = 11.5$ $P_{90} = 15.9$ $P_{99} = 23.5$

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

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

Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	40	24	20	0	0	0	84
NorthEast	43	43	18	0	0	0	104
East	24	23	4	0	0	0	51
SouthEast	8	0	0	0	0	0	8
South	26	1	0	0	0	0	27
SouthWest	51	11	3	0	0	0	65
West	63	55	81	34	0	0	233
NorthWest	36	41	23	0	0	0	100
Total	291	198	149	34	0	0	672

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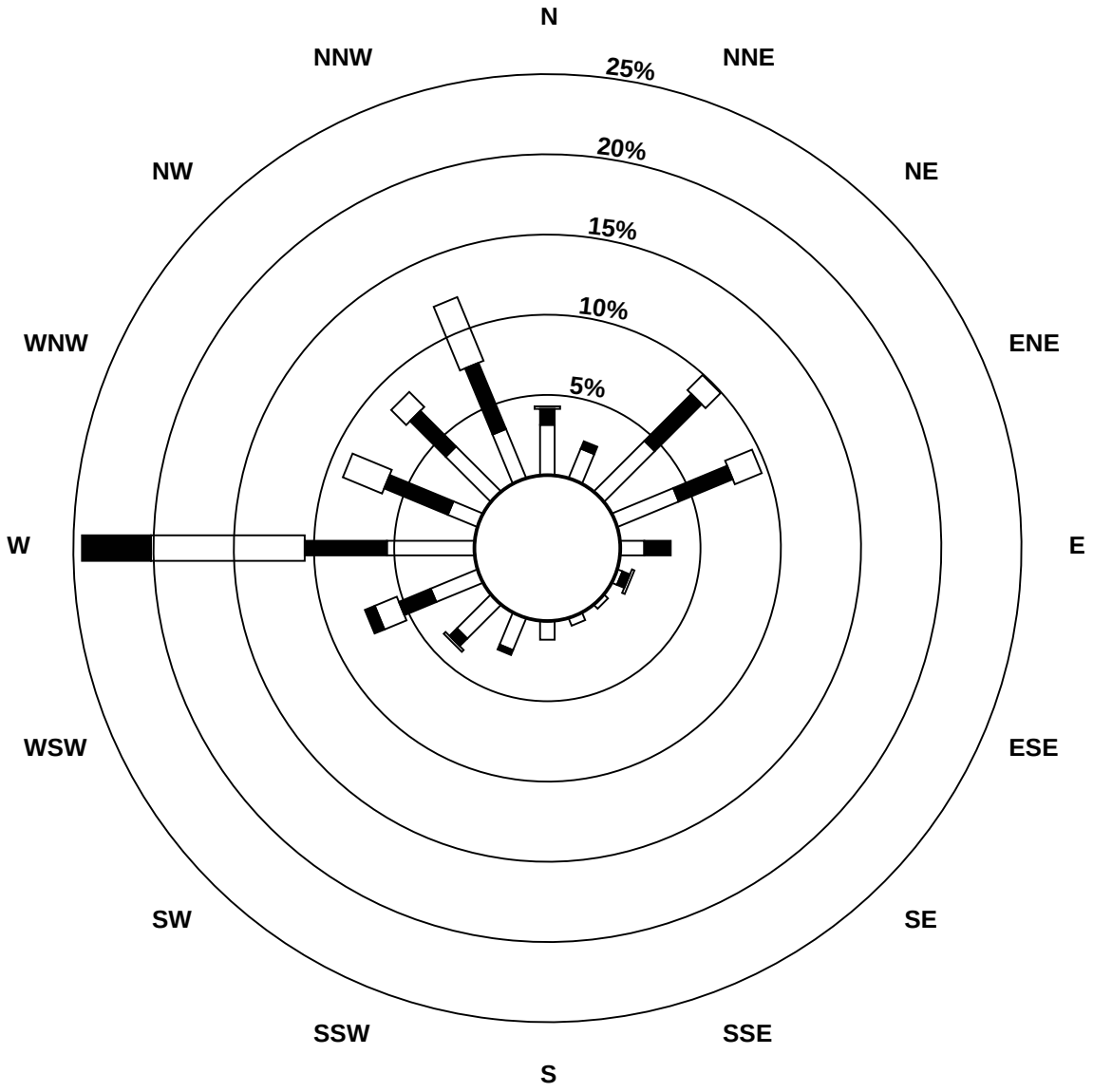
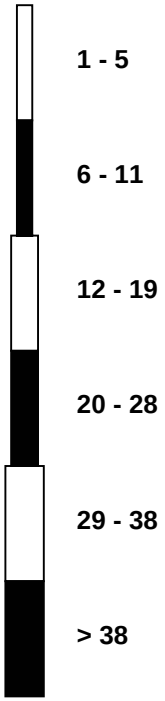
Wind Rose

Wind Speed (WS) (km/h)

Evergreen Park - February 2011



Wind Speed Classes (km/h)



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Peace Air Shed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Evergreen Park - February 2011

Maximum Speed: 26 km/h on Feb 3 10:00

Maximum Daily Speed Average: 16.6 km/h on Feb 10

Minimum Speed: 1 km/h on Feb 18 20:00

Minimum Daily Speed Average: 1.5 km/h on Feb 20

Maximum Diurnal Speed Average: 10.3 km/h at hour 14

Minimum Diurnal Speed Average: 5.7 km/h at hour 23

Monthly Average Speed: 7.72 km/h

Percentiles: $P_1 = 0.8$ $P_{10} = 1.5$ $Q_1 = 2.7$ Median = 6.4 $Q_3 = 11.7$ $P_{90} = 16.2$ $P_{99} = 23.6$

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

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	1	1	1	1	1	1	1	1	1	1	2	1	2	1	1	2	2	2	2	13	20	16	10	16	4.2	19.7
2-Feb	10	7	15	13	14	15	20	24	22	18	15	18	20	18	11	10	6	6	6	4	3	2	2	2	11.7	24.1
3-Feb	2	5	2	1	2	4	4	12	21	26	19	13	6	11	13	7	5	4	2	1	4	3	2	3	7.1	25.7
4-Feb	2	3	2	2	6	9	3	8	13	13	20	20	24	21	16	14	10	14	13	10	11	11	11	9	11.0	24.3
5-Feb	9	7	6	7	12	14	17	18	14	17	17	16	16	18	16	15	13	11	9	9	8	6	5	3	11.7	17.6
6-Feb	1	2	3	3	3	2	2	2	3	4	4	5	6	7	7	6	8	8	8	10	12	11	10	9	5.6	12.1
7-Feb	8	9	9	9	8	8	6	6	5	4	4	5	7	5	5	4	3	4	2	1	1	3	2	2	5.1	9.3
8-Feb	2	2	3	4	3	2	4	3	4	4	4	5	6	4	3	5	3	2	2	3	2	3	4	5	3.3	5.7
9-Feb	9	9	7	8	12	9	4	8	4	8	14	19	20	25	25	21	16	14	11	14	18	24	24	20	14.3	25.2
10-Feb	20	17	18	22	22	20	19	20	20	21	20	17	14	19	18	15	16	14	15	14	11	6	6	15	16.6	22.4
11-Feb	17	15	15	15	14	12	8	3	2	1	3	6	7	9	9	5	5	9	9	9	12	7	1	2	8.2	17.3
12-Feb	3	3	2	2	1	2	1	1	2	2	2	2	2	2	1	2	4	4	6	2	3	2	4	7	2.5	6.5
13-Feb	12	10	13	20	17	19	17	19	14	17	21	21	15	17	19	12	7	9	6	5	4	2	1	3	12.5	20.8
14-Feb	3	2	2	6	5	3	1	2	2	1	2	4	7	7	7	7	8	15	14	13	11	11	8	12	6.3	14.6
15-Feb	10	14	15	14	13	11	13	12	10	10	12	13	11	14	13	12	10	12	11	9	11	8	7	5	11.3	14.5
16-Feb	5	4	4	2	1	2	1	1	1	2	2	3	4	6	6	6	4	5	4	5	5	5	3	3	3.6	6.2
17-Feb	3	3	3	3	3	2	2	3	2	2	4	5	5	5	6	5	3	3	4	9	10	7	5	6	4.3	9.9
18-Feb	5	3	4	5	4	3	3	2	4	4	6	8	6	8	7	4	4	2	1	1	1	1	1	1	3.7	7.9
19-Feb	1	1	1	1	1	1	1	1	1	1	2	3	3	4	4	4	3	3	3	2	2	2	2	1	1.9	4.1
20-Feb	1	1	1	1	1	1	1	1	1	1	1	2	3	2	2	3	2	2	3	1	1	1	1	2	1.5	2.7
21-Feb	5	14	13	12	10	4	7	11	9	7	12	22	17	15	14	13	14	14	18	14	7	9	7	10	11.6	22.3
22-Feb	5	5	5	8	13	12	9	5	5	6	12	13	14	12	12	10	12	10	10	8	7	5	3	5	8.6	14.0
23-Feb	10	7	5	7	6	7	7	3	4	6	7	7	8	9	8	7	6	5	2	3	4	5	5	3	5.8	9.7
24-Feb	3	4	3	4	3	3	2	3	4	6	8	9	7	9	9	6	6	3	2	2	3	4	2	1	4.5	9.3
25-Feb	2	4	6	6	7	6	8	9	14	14	14	13	10	10	12	11	11	14	16	14	6	4	9	15	9.8	16.2
26-Feb	18	18	16	15	12	16	18	16	14	13	11	12	13	11	11	10	6	5	3	1	1	4	14	13	11.4	18.3
27-Feb	14	13	15	17	17	17	16	14	12	12	11	12	12	13	11	12	12	10	9	10	10	9	8	8	12.2	17.5
28-Feb	8	7	6	5	5	5	7	7	8	9	10	8	8	9	9	8	7	5	2	1	2	1	2	2	5.9	9.8
	6.8	6.8	6.9	7.6	7.7	7.5	7.2	7.6	7.7	8.2	9.3	10.1	9.8	10.3	9.8	8.4	7.4	7.5	7.0	6.7	6.6	6.1	5.7	6.5	Diurnal Average	
	19.6	18.2	18.0	22.4	21.6	20.3	19.7	24.1	22.1	25.7	20.7	22.3	24.3	24.7	25.2	20.8	16.2	14.6	18.3	14.1	19.7	24.0	23.7	20.3	Diurnal Maximum	

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

PASZA
Peace Air Shed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Evergreen Park - February 2011

Maximum Value: 97.4 deg on Feb 19 10:00

Minimum Value: 4.3 deg on Feb 10 21:00

Percentiles: P_1 = 4.8 P_{10} = 7.4 Q_1 = 10.2 Median = 15.0 Q_3 = 26.2 P_{90} = 58.3 P_{99} = 90.8

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

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Feb	71	69	75	85	60	52	41	80	29	91	39	58	46	40	37	20	20	16	47	11	6	11	22	13	91.0
2-Feb	20	16	7	10	8	6	5	6	5	8	8	5	6	5	10	12	11	16	17	24	77	40	82	80	82.2
3-Feb	51	26	70	57	74	23	43	33	8	5	11	9	25	10	7	26	39	57	69	64	62	95	56	24	94.7
4-Feb	46	67	74	90	49	11	25	10	12	9	7	8	5	6	8	14	26	21	11	14	14	11	11	12	90.1
5-Feb	11	15	13	16	9	9	9	10	9	8	9	12	11	11	12	10	13	14	13	15	17	12	13	36	36.4
6-Feb	51	60	15	13	10	18	10	23	10	16	17	16	18	14	14	21	17	13	14	13	12	14	15	12	59.5
7-Feb	16	14	15	13	12	11	10	11	13	15	19	27	15	29	17	21	23	19	24	84	38	30	24	54	84.3
8-Feb	63	22	16	10	32	30	21	34	13	7	29	11	12	17	26	21	32	32	24	53	73	45	66	17	73.2
9-Feb	27	17	17	14	12	9	39	9	22	16	15	8	8	6	5	6	7	6	8	7	7	5	6	6	39.2
10-Feb	5	8	7	5	5	6	5	6	6	6	6	9	10	5	6	7	6	6	5	5	4	7	26	4	26.3
11-Feb	5	5	6	6	6	6	6	40	77	58	33	15	15	9	13	29	17	9	4	12	12	16	81	75	81.3
12-Feb	40	46	48	36	48	31	72	57	26	52	40	59	45	30	49	15	54	52	11	75	20	24	18	21	75.4
13-Feb	9	7	6	4	5	5	7	6	8	7	8	7	9	8	8	23	20	9	12	15	13	30	60	36	59.9
14-Feb	87	78	30	14	72	66	75	81	49	89	10	16	18	12	14	14	16	11	11	12	14	12	12	11	89.2
15-Feb	25	14	15	19	28	17	14	16	14	17	18	22	19	18	19	18	21	14	12	14	9	15	14	16	27.6
16-Feb	18	27	24	23	44	13	25	70	47	33	69	47	31	23	21	18	21	13	16	14	15	13	16	17	70.3
17-Feb	17	10	13	16	15	21	25	16	20	24	23	33	21	24	22	26	23	28	15	11	11	21	16	12	32.8
18-Feb	10	20	10	11	10	25	21	25	21	14	17	15	14	14	27	38	27	26	61	78	46	22	34	85	84.8
19-Feb	77	81	95	33	41	53	84	90	63	97	50	11	40	17	14	21	22	23	22	43	35	54	77	89	97.4
20-Feb	96	85	74	91	93	70	82	55	54	43	45	22	12	39	49	14	13	24	39	33	49	73	87	59	96.2
21-Feb	59	8	7	28	17	38	26	12	12	7	8	10	15	8	14	23	17	13	9	7	15	13	15	11	59.2
22-Feb	19	20	12	23	7	7	8	15	15	20	10	12	16	17	16	13	13	12	9	12	20	23	17	16	22.9
23-Feb	13	16	19	8	10	10	14	26	21	23	17	19	23	14	19	18	15	10	43	20	18	10	19	23	43.3
24-Feb	21	11	11	15	15	27	17	10	17	14	12	12	14	17	18	18	22	24	14	49	20	9	22	58	58.5
25-Feb	19	10	11	14	9	13	7	13	9	8	8	9	16	20	13	15	14	9	9	11	13	26	9	10	26.4
26-Feb	9	10	10	9	14	9	10	10	11	9	8	9	8	10	10	11	11	9	10	75	19	10	10	10	75.0
27-Feb	10	9	8	8	9	9	8	8	10	12	11	14	13	11	13	13	10	11	10	10	10	11	12	10	13.5
28-Feb	13	10	10	13	11	12	12	10	10	12	11	16	20	18	14	17	15	12	10	72	11	48	27	58	71.5
	96.2	84.7	94.5	90.8	93.3	70.4	83.8	90.1	77.2	97.4	68.6	58.9	45.9	40.0	49.2	37.9	54.1	56.8	68.6	84.3	77.0	94.7	87.4	88.9	

PASZA
Smoky Heights Station
Monthly Summary Tables, Graphs and Roses

PASZA
Peace Air Shed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 9.5 ppb on Feb 7 18:00 Maximum Daily Average: 2.6 ppb on Feb 10

Minimum Value: 0 ppb on Feb 5 08:00 Minimum Daily Average: 0.1 ppb on Feb 27
Maximum Diurnal Average: 1.5 ppb at hour 15 Minimum Diurnal Average: 0.5 ppb at hour 20
Monthly Average: 0.86 ppb Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.2 Median = 0.5 Q_3 = 1.1 P_{90} = 2.0 P_{99} = 5.8

Hours in Service:	672
Hours of Data:	634
Hours of Missing Data:	38
Hours of Calibration:	33
Percent Operational Time:	99.3

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	3	3	2	A	1	1	2	3	2	2	2	1	1	1	1	1	1	1	2	1.6	2.8
2-Feb	2	1	1	2	1	1	2	A	2	1	0	3	6	3	3	2	1	2	2	0	0	0	0	0	1.6	6.0
3-Feb	0	1	1	1	1	0	A	1	2	0	1	0	1	1	0	1	2	1	1	1	1	1	0	0	0.8	1.8
4-Feb	0	0	0	0	0	A	0	0	1	P	P	P	3	2	5	1	0	0	0	0	0	0	0	0	0.8	4.7
5-Feb	0	0	0	0	A	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	1	0	0	0	0.3	0.9
6-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
7-Feb	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	2	2	9	4	1	1	1	1	1	1.5	9.5
8-Feb	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0.8	1.3
9-Feb	A	2	2	1	2	2	2	2	1	0	C	C	C	C	5	0	0	0	0	0	0	1	2	2	1.2	4.6
10-Feb	3	6	3	5	3	A	1	2	1	0	2	3	1	0	1	1	1	2	2	1	5	6	6	4	2.6	6.2
11-Feb	3	3	4	4	A	1	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	1	0.9	3.9
12-Feb	1	0	0	A	0	0	0	0	1	1	0	1	0	0	6	4	1	0	0	0	0	0	0	1	0.8	6.3
13-Feb	0	0	A	3	1	1	1	0	0	1	0	5	0	0	1	0	0	0	0	0	0	0	0	0	0.7	5.2
14-Feb	0	A	0	0	0	0	2	1	1	1	1	0	0	P	P	0	0	0	0	0	0	0	0	0	0.4	1.8
15-Feb	1	A	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0.4	1.5
16-Feb	A	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	A	0.5	1.1
17-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	2	0	0	0	0	0	A	2	0.6	2.3
18-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	1	1	1	1	1	1	A	1	0	1.1	2.6
19-Feb	1	0	0	0	0	0	1	1	1	1	2	2	2	1	1	1	2	3	6	3	A	4	3	1	1.6	5.8
20-Feb	2	2	2	2	2	1	1	1	1	0	0	0	1	2	2	1	1	1	4	A	1	1	1	1	1.2	3.8
21-Feb	1	1	2	3	2	2	1	0	0	0	0	0	1	1	0	1	1	0	A	0	0	0	0	2	0.9	2.9
22-Feb	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	0	0	0	0.3	1.5
23-Feb	0	4	1	0	0	1	3	1	1	0	0	0	0	0	1	1	A	1	0	0	1	2	5	7	1.3	6.5
24-Feb	1	0	0	0	0	0	0	0	0	0	1	1	1	1	0	A	0	0	0	0	0	0	0	0	0.3	1.1
25-Feb	1	1	0	0	0	1	1	1	1	1	0	1	1	0	A	0	0	0	0	0	0	0	0	1	0.5	1.5
26-Feb	1	0	2	2	1	0	0	0	0	1	2	1	3	A	1	0	1	0	1	1	1	0	0	0	0.9	3.0
27-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	0.3
28-Feb	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	2	2	2	1	0	0	0	0.4	2.0
	0.8	0.9	0.9	1.1	0.8	0.7	0.8	0.6	0.6	0.5	0.7	1.0	1.1	0.9	1.5	1.0	0.8	1.0	1.0	0.5	0.6	0.8	0.9	1.0	Diurnal Average	
	3.2	5.6	3.9	4.9	2.9	2.7	2.9	2.3	1.6	1.4	2.4	5.2	6.0	3.0	6.3	3.9	2.3	9.5	5.8	2.5	5.4	6.2	5.9	6.5	Diurnal Maximum	

C - Calibration P - Power Failure A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

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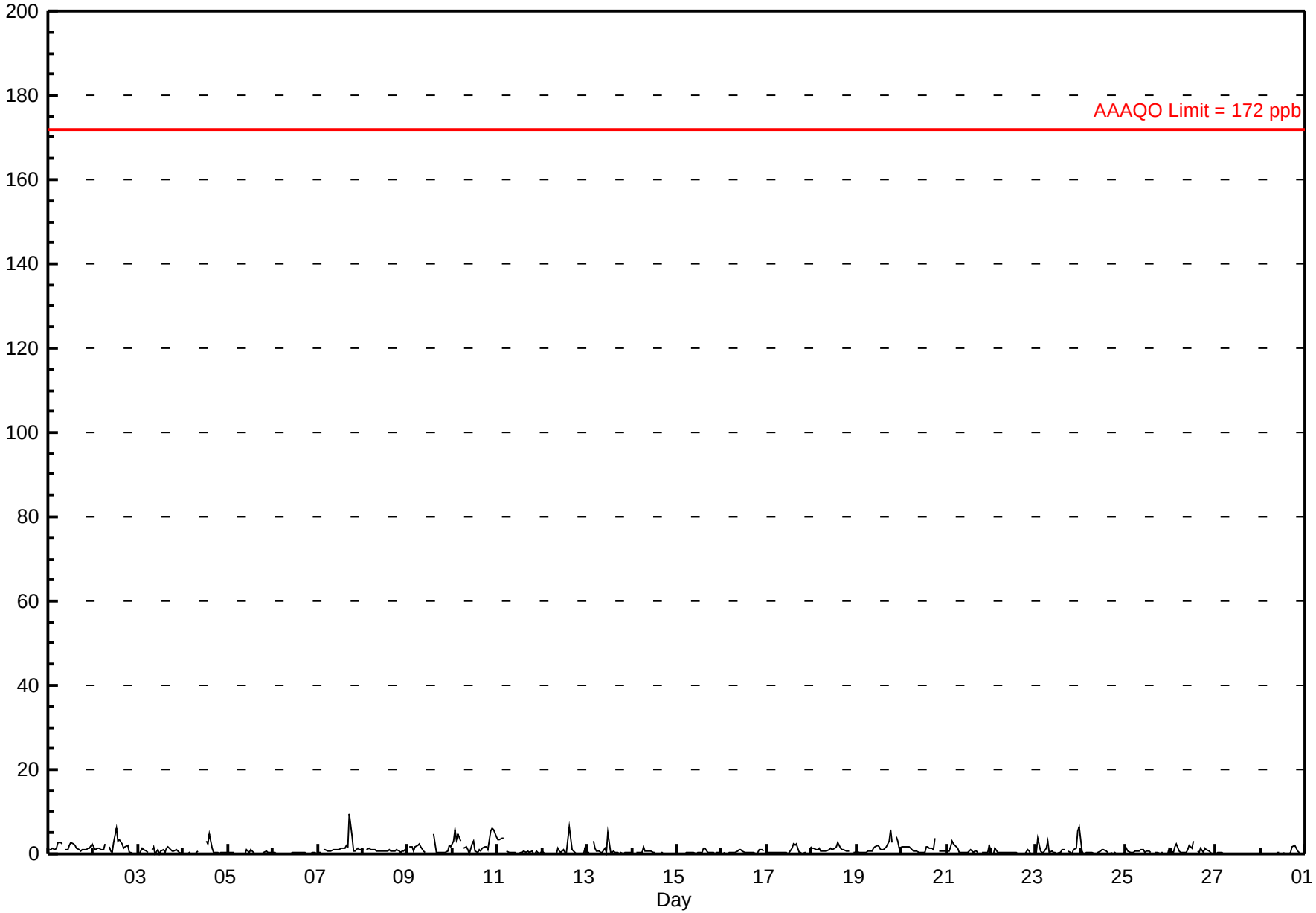
Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - February 2011

Maximum Value: 30.9 ppb on Feb 7 18:00

Maximum Daily Average: 5.4 ppb on Feb 10

Minimum Value: 0 ppb on Feb 14 22:00

Minimum Daily Average: 0.4 ppb on Feb 27

Maximum Diurnal Average: 3.3 ppb at hour 15

Minimum Diurnal Average: 1.2 ppb at hour 20

Monthly Average: 2.02 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.4$ $Q_1 = 0.5$ Median = 1.0 $Q_3 = 2.4$ $P_{90} = 4.7$ $P_{99} = 16.5$

Hours in Service:	672
Hours of Data:	634
Hours of Missing Data:	38
Hours of Calibration:	33
Percent Operational Time:	99.3

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	2	2	2	3	3	3	3	A	1	1	3	4	3	3	2	2	1	1	1	2	7	2	7	2.6	7.2
2-Feb	5	5	12	11	2	3	5	A	5	3	1	9	10	7	9	8	3	4	5	1	1	1	0	0	4.7	11.9
3-Feb	0	2	5	2	1	1	A	3	4	0	4	0	2	2	2	3	4	3	1	1	2	1	1	0	2.0	4.6
4-Feb	0	0	0	1	0	A	0	3	6	P	P	P	6	7	14	3	1	0	1	0	1	1	1	1	2.3	14.0
5-Feb	1	1	0	1	A	0	0	0	0	1	4	2	3	3	0	0	0	0	0	1	2	1	0	0	1.0	3.9
6-Feb	1	0	0	A	0	0	1	0	1	0	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0.5	0.7
7-Feb	0	1	A	2	1	1	1	1	1	1	1	1	2	2	2	6	2	31	29	1	2	2	1	1	4.0	30.9
8-Feb	1	A	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	2	1.2	1.9
9-Feb	A	4	2	1	3	3	5	5	4	1	C	C	C	C	17	1	1	1	1	1	1	4	7	5	3.4	16.8
10-Feb	6	7	5	7	8	A	3	5	4	1	4	5	4	1	2	1	3	4	5	2	11	19	13	7	5.4	18.9
11-Feb	6	7	6	8	A	1	1	1	1	1	1	0	1	1	1	1	3	3	3	0	1	2	0	1	2.1	7.6
12-Feb	1	1	0	A	0	0	0	0	3	5	0	4	1	2	8	6	2	1	0	0	0	0	1	5	1.9	8.2
13-Feb	1	1	A	18	5	4	2	1	2	4	3	7	2	1	2	1	1	1	1	0	1	1	1	1	2.5	18.1
14-Feb	1	A	1	1	1	1	3	1	1	1	1	1	1	P	P	1	1	0	0	0	0	0	0	0	0.8	2.9
15-Feb	3	A	0	0	1	2	1	1	1	1	0	0	1	1	3	6	1	1	1	1	0	1	1	1	1.1	5.8
16-Feb	A	0	0	0	0	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	1.6
17-Feb	1	1	1	1	1	1	1	1	1	1	1	0	1	4	4	6	5	1	1	0	1	1	A	3	1.4	5.9
18-Feb	2	2	1	1	2	1	1	1	1	1	2	1	2	3	6	2	1	1	1	1	1	A	1	1	1.6	6.2
19-Feb	1	1	0	1	1	1	1	1	1	2	2	2	2	2	1	2	3	6	11	5	A	6	4	2	2.5	11.0
20-Feb	3	3	2	2	2	2	1	1	1	1	1	1	1	2	2	2	2	2	7	A	1	1	1	1	1.8	7.3
21-Feb	1	1	6	11	4	6	6	1	1	1	1	1	3	3	1	2	4	1	A	1	1	1	1	4	2.6	10.6
22-Feb	0	0	7	3	1	1	1	1	1	1	1	1	1	1	1	0	0	A	0	4	4	0	0	0	1.2	7.1
23-Feb	1	10	3	1	3	5	6	3	4	2	1	1	2	1	2	3	A	3	1	0	6	5	10	17	3.9	17.2
24-Feb	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	0	0	0	0	0	1	0.8	2.2
25-Feb	3	2	1	1	1	2	1	1	2	2	1	1	1	1	A	1	1	1	0	0	0	0	0	6	1.3	5.9
26-Feb	3	1	4	5	2	1	1	1	1	2	3	3	7	A	1	1	3	1	2	2	1	0	0	0	1.9	7.1
27-Feb	0	0	1	1	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0.4	0.7
28-Feb	0	0	0	0	0	0	0	0	1	1	1	A	1	0	0	0	2	4	4	3	1	0	0	0	1.0	4.4
	1.7	2.1	2.5	3.1	1.7	1.6	1.7	1.4	1.8	1.3	1.4	1.9	2.2	2.0	3.3	2.2	1.8	2.6	3.0	1.2	1.6	2.1	1.9	2.6	Diurnal Average	
	6.3	9.9	11.9	18.1	7.5	5.8	6.2	4.8	6.0	4.6	3.9	8.8	9.6	7.0	16.8	7.7	4.6	30.9	28.7	5.5	10.7	18.9	13.0	17.2	Diurnal Maximum	

C - Calibration P - Power Failure A - Automated Daily Zero Span

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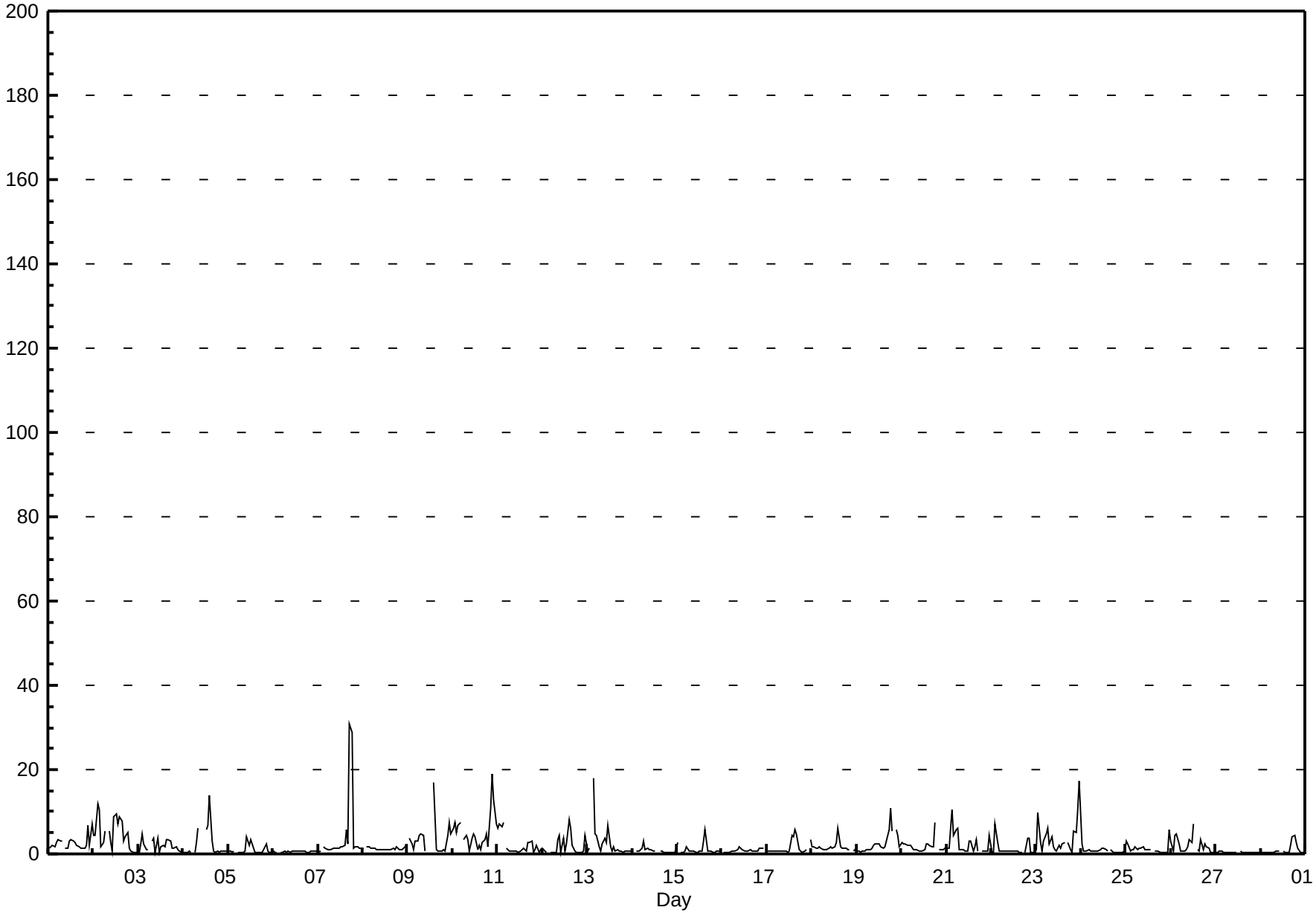
Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - February 2011



FOCUS AIR QUALITY MONITORING

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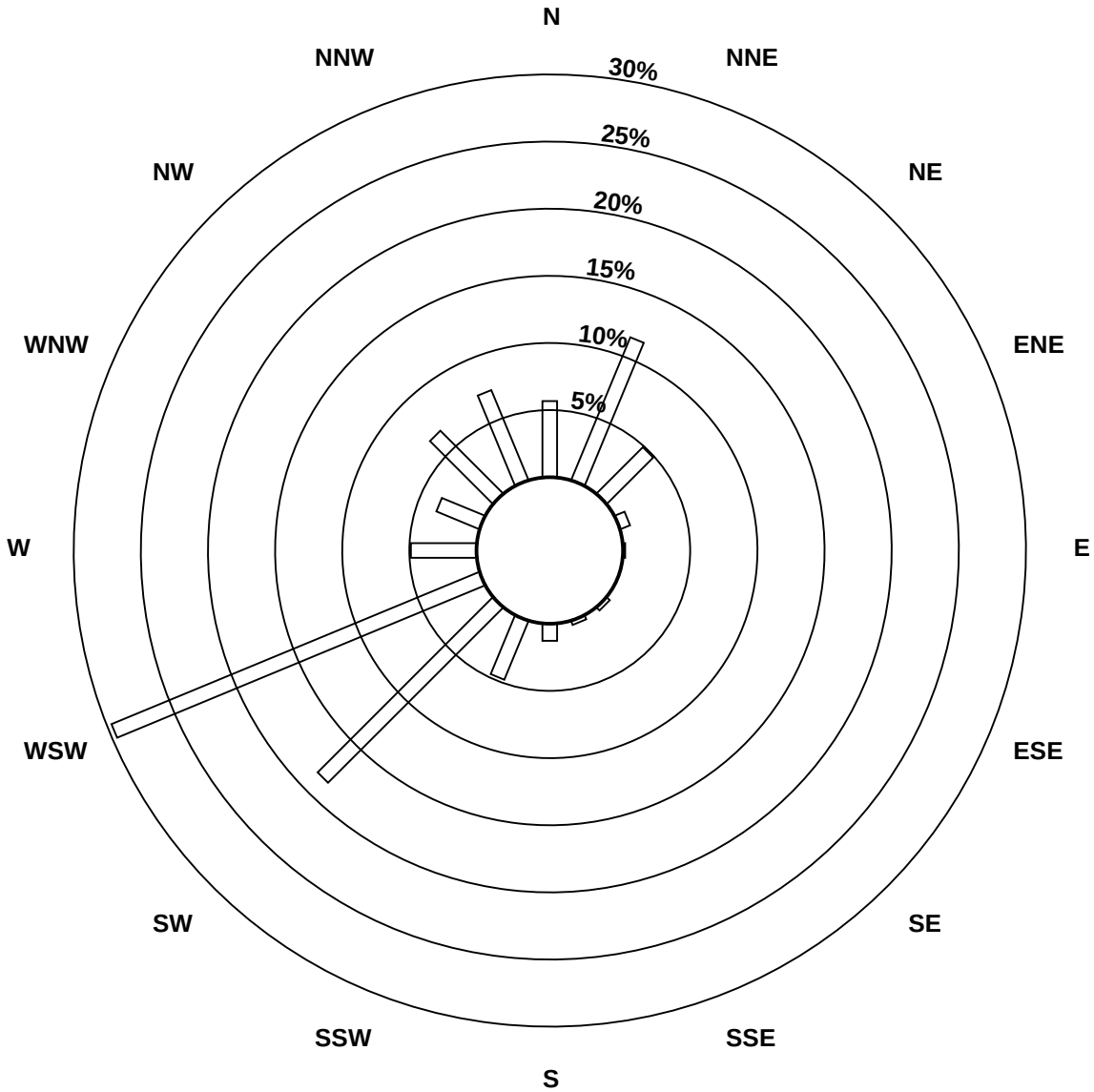
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - February 2011



Pollutant Classes (ppb)

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

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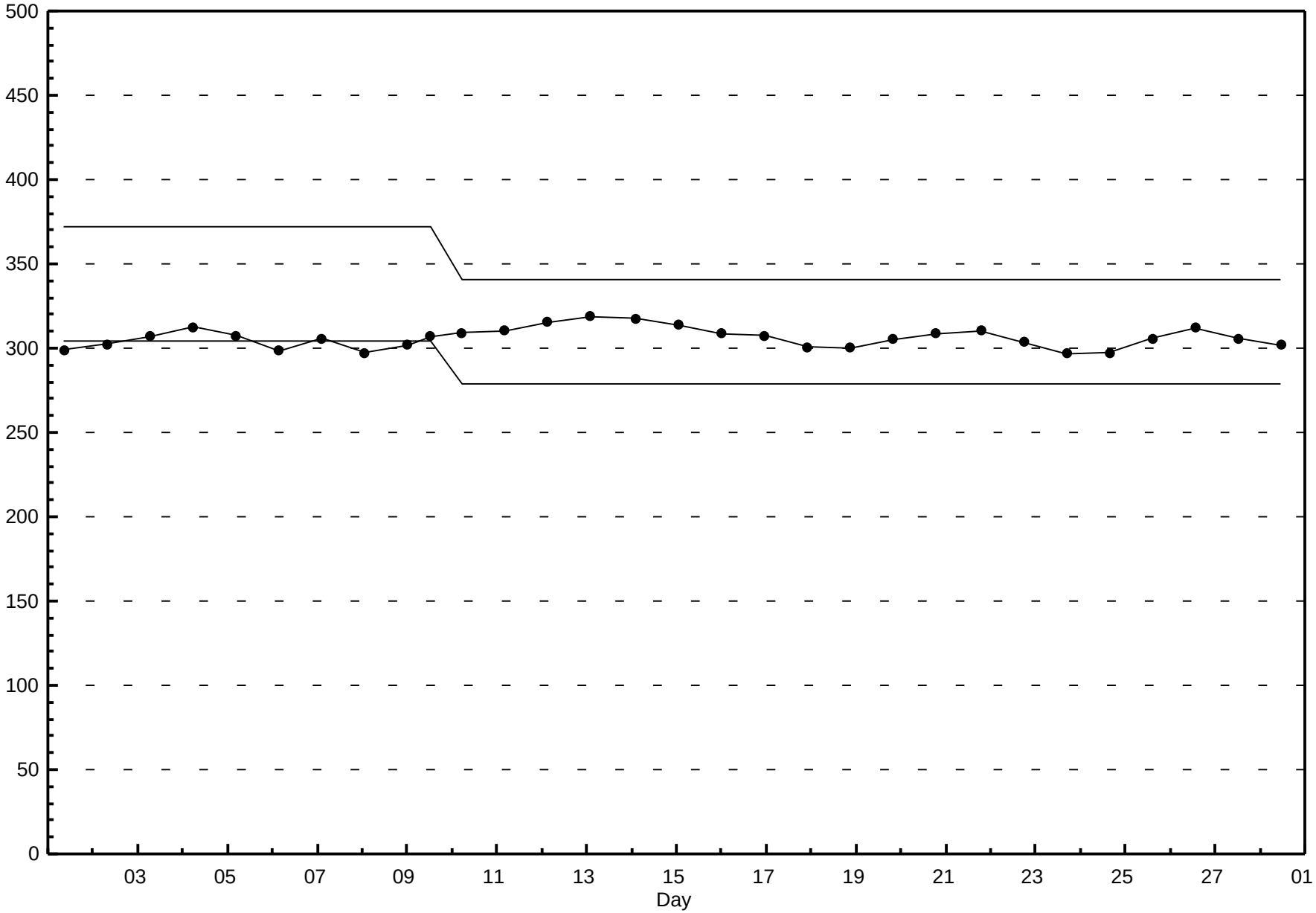
Span Responses

Sulphur Dioxide (SO_2)

Smoky Heights - February 2011



FOCUS AIR QUALITY MONITORING

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Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 0.9 ppb on Feb 20 23:00 Maximum Daily Average: 0.5 ppb on Feb 8

Minimum Value: 0 ppb on Feb 12 06:00 Minimum Daily Average: 0.1 ppb on Feb 28
Maximum Diurnal Average: 0.3 ppb at hour 4 Minimum Diurnal Average: 0.3 ppb at hour 20
Monthly Average: 0.31 ppb Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.2 Median = 0.3 Q_3 = 0.4 P_{90} = 0.5 P_{99} = 0.7

Hours in Service:	672
Hours of Data:	635
Hours of Missing Data:	37
Hours of Calibration:	32
Percent Operational Time:	99.3

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	1	1	0	A	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0.5	0.7
2-Feb	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
3-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
4-Feb	0	0	0	0	0	A	0	0	0	P	P	P	1	0	0	0	0	0	0	1	1	0	1	0	0.4	0.7
5-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
6-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
7-Feb	0	0	A	0	0	1	1	1	1	0	0	1	1	1	1	0	1	0	0	0	1	1	1	1	0.5	0.7
8-Feb	0	A	1	1	0	1	1	1	1	1	1	1	1	0	0	0	1	0	1	1	1	1	0	0	0.5	0.6
9-Feb	A	0	0	0	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0.3	0.5
10-Feb	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	0.6
11-Feb	0	0	1	0	A	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0.4	0.6
12-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
13-Feb	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
14-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	P	P	0	0	1	1	0	0	0	1	1	0.4	0.6
15-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
16-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.5
17-Feb	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	1	0.2	0.7
18-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.5
19-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.4
20-Feb	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	A	1	1	1	1	0.5	0.9
21-Feb	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	0.7
22-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	1	0.3	0.5
23-Feb	0	0	0	1	0	0	0	1	1	1	1	0	0	1	1	1	A	0	0	0	0	0	0	1	0.5	0.8
24-Feb	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.4	0.6
25-Feb	0	0	0	0	0	0	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	0.6
26-Feb	0	0	0	1	1	1	1	1	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0.4	0.7
27-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
28-Feb	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
	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	
	0.6	0.6	0.7	0.7	0.8	0.7	0.6	0.7	0.6	0.8	0.8	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.7	0.5	0.8	0.7	0.9	0.7	Diurnal Maximum	

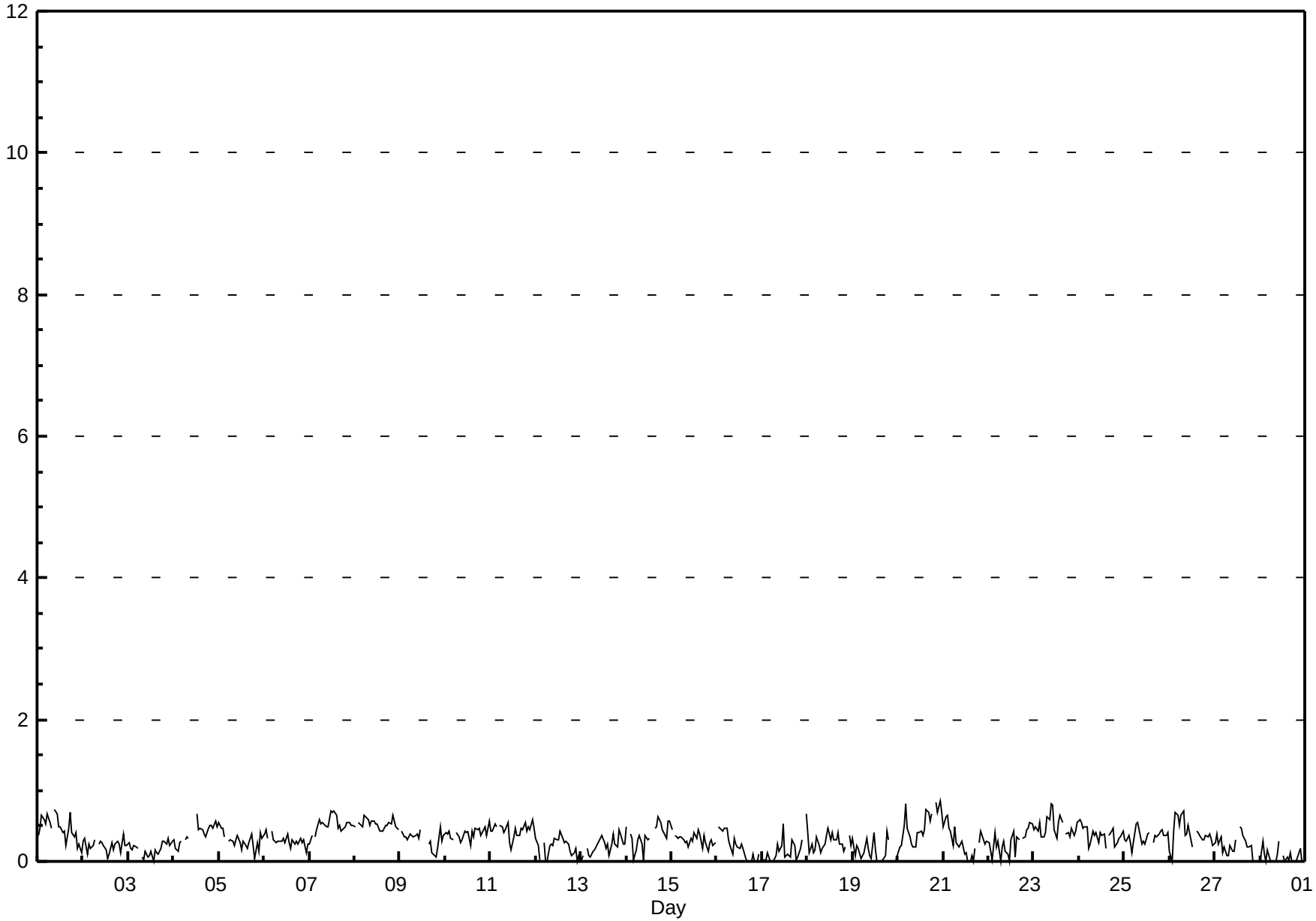
C - Calibration P - Power Failure A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

PASZA
Peace Air Shed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - February 2011

Maximum Value: 1.5 ppb on Feb 14 13:00

Maximum Daily Average: 1.1 ppb on Feb 20

Minimum Value: 0 ppb on Mar 1 00:00

Minimum Daily Average: 0.5 ppb on Feb 28

Maximum Diurnal Average: 0.9 ppb at hour 18

Minimum Diurnal Average: 0.8 ppb at hour 15

Monthly Average: 0.82 ppb

Percentiles: $P_1 = 0.4$ $P_{10} = 0.6$ $Q_1 = 0.7$ Median = 0.8 $Q_3 = 0.9$ $P_{90} = 1.1$ $P_{99} = 1.3$

Hours in Service:	672
Hours of Data:	635
Hours of Missing Data:	37
Hours of Calibration:	32
Percent Operational Time:	99.3

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

C - Calibration P - Power Failure A - Automated Daily Zero Span

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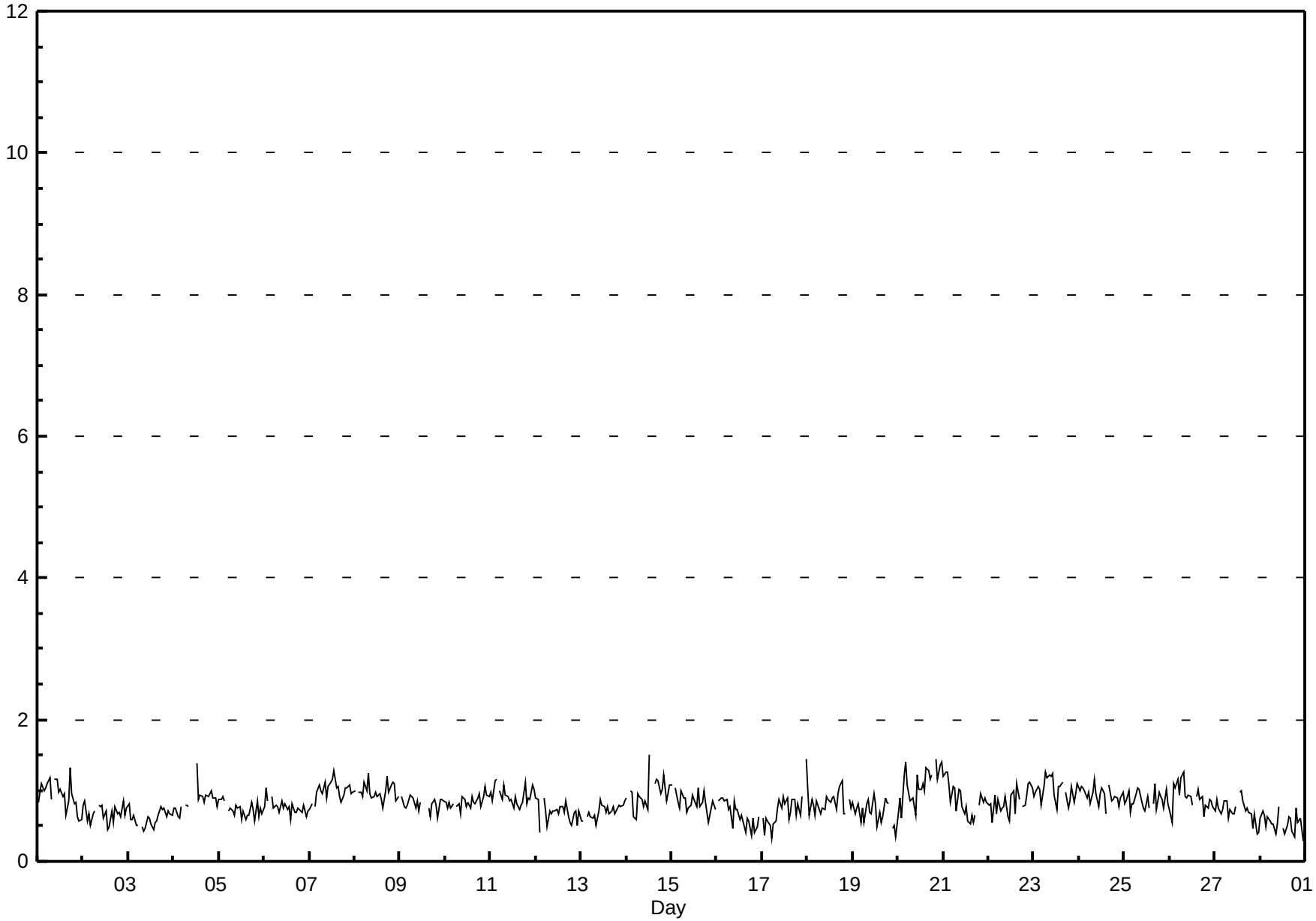
Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - February 2011



FOCUS AIR QUALITY MONITORING

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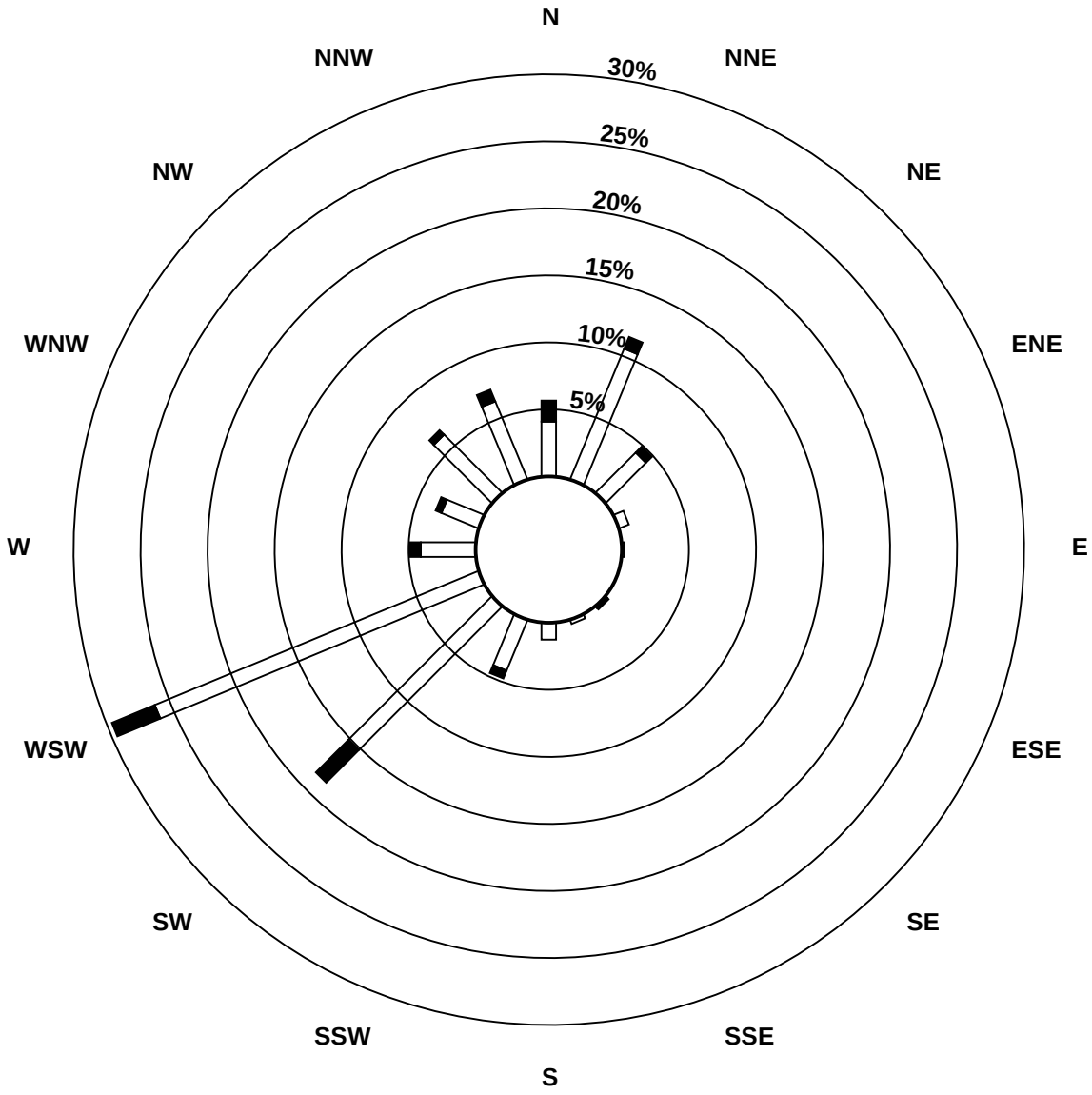
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - February 2011



Pollutant Classes (ppb)

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

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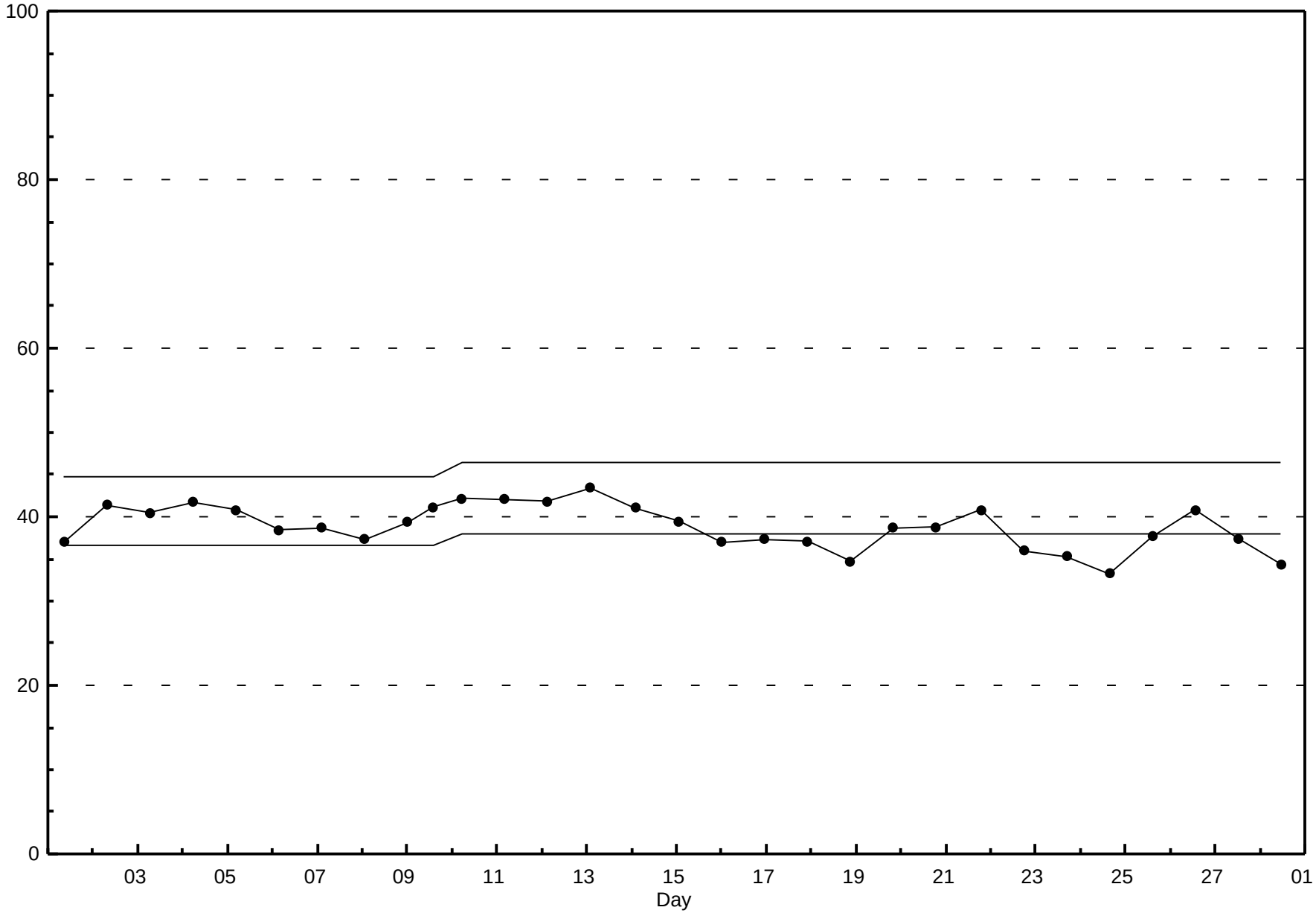
Span Responses

Total Reduced Sulphur (TRS)

Smoky Heights - February 2011



FOCUS AIR QUALITY MONITORING

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Hourly Averages

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

Smoky Heights - February 2011

Number of Exceedences: 1-hr: 0 24-hr: 0
Maximum Value: 35.5 $\mu g/m^3$ on Feb 17 09:00
Maximum Daily Average: 9.3 $\mu g/m^3$ on Feb 1

Minimum Value: 0 $\mu g/m^3$ on Feb 1 23:00
Maximum Diurnal Average: 4.2 $\mu g/m^3$ at hour 9
Monthly Average: 3.00 $\mu g/m^3$

Minimum Daily Average: 0.0 $\mu g/m^3$ on Feb 3
Minimum Diurnal Average: 2.1 $\mu g/m^3$ at hour 7
Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.6 Median = 2.0 Q_3 = 4.0 P_{90} = 7.5 P_{99} = 14.6

Hours in Service:	672
Hours of Data:	662
Hours of Missing Data:	10
Hours of Calibration:	2
Percent Operational Time:	98.8

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	12	11	13	13	13	12	10	13	13	13	13	9	8	8	7	10	10	8	5	5	2	0	0	9.3	14.3
2-Feb	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.0
3-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.4
4-Feb	0	0	0	0	0	0	0	0	0	P	P	P	P	P	2	2	3	3	5	2	1	2	3	3	1.3	4.6
5-Feb	3	2	1	1	0	0	1	1	1	2	2	2	1	1	1	0	1	2	1	1	4	0	2	1	1.2	3.5
6-Feb	4	6	2	3	2	1	0	0	0	7	6	0	0	0	0	1	0	0	0	2	1	0	3	3	1.8	7.4
7-Feb	2	2	3	4	5	5	5	4	6	4	5	7	5	5	4	4	6	4	4	2	3	4	5	15	4.7	14.6
8-Feb	3	3	4	2	2	3	3	2	3	5	6	5	3	5	6	13	10	8	9	9	13	15	17	11	6.7	16.6
9-Feb	3	1	1	0	0	0	0	1	0	1	1	1	C	C	11	8	5	5	4	3	3	3	4	3	2.6	10.6
10-Feb	3	3	2	3	2	1	2	1	2	1	2	2	2	2	2	2	2	2	2	1	1	1	1	2	1.7	2.8
11-Feb	1	1	1	1	0	0	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0.4	1.5
12-Feb	4	4	1	0	0	0	1	0	0	0	0	0	0	0	2	2	2	0	0	0	0	0	1	2	0.8	3.7
13-Feb	3	3	3	2	2	2	2	1	2	2	2	2	2	2	1	0	0	0	0	1	1	2	1	1	1.5	2.9
14-Feb	2	3	2	4	6	6	2	2	10	7	8	6	8	P	P	3	1	1	0	0	2	2	3	2	3.6	10.3
15-Feb	5	3	4	4	5	0	2	1	2	2	2	3	2	3	2	2	2	1	2	1	1	1	2	1	2.2	5.2
16-Feb	1	1	1	2	2	2	2	3	3	4	3	2	2	4	3	2	5	4	3	2	3	3	3	4	2.7	4.8
17-Feb	5	11	7	4	4	4	3	11	35	9	8	9	7	7	7	4	3	3	3	4	4	4	4	4	6.8	35.5
18-Feb	3	2	2	2	4	3	4	4	5	6	6	6	5	5	4	5	5	4	4	5	5	3	3	1	3.9	5.8
19-Feb	3	1	1	1	2	2	2	3	4	8	6	10	8	6	5	10	10	19	10	6	4	5	5	5	5.7	19.0
20-Feb	12	12	12	15	14	10	7	8	6	5	5	5	6	9	8	8	6	7	9	5	4	6	4	3	7.7	14.6
21-Feb	4	6	1	0	0	0	0	0	0	0	0	0	0	0	1	2	2	2	4	0	0	0	1	4	1.2	6.3
22-Feb	1	0	1	1	1	1	1	1	1	2	1	2	0	1	0	1	3	2	0	3	2	5	17	8	2.3	16.8
23-Feb	0	1	1	1	1	1	2	2	2	2	2	2	2	1	2	2	2	1	2	2	3	2	2	2	1.7	3.1
24-Feb	1	1	1	1	1	0	1	0	2	4	3	2	5	11	2	1	0	0	0	0	3	2	2	4	2.1	10.6
25-Feb	6	16	10	3	1	1	0	0	2	2	1	0	0	0	0	0	1	0	0	BD	0	0	1	0	1.9	15.6
26-Feb	1	2	1	0	1	2	2	2	2	2	2	2	2	1	1	2	2	1	2	2	2	0	0	0	1.4	2.5
27-Feb	1	1	1	1	2	3	5	4	6	10	4	4	3	3	4	3	2	1	2	4	13	2	3	2	3.6	13.4
28-Feb	9	5	3	2	1	2	1	4	10	8	5	6	6	6	7	5	5	6	3	3	3	5	4	3	4.8	9.6
	3.3	3.7	2.9	2.5	2.6	2.3	2.1	2.4	4.2	3.9	3.5	3.3	3.0	3.2	3.1	3.3	3.1	3.2	2.8	2.4	2.9	2.5	3.2	3.0	Diurnal Average	
	14.3	15.6	12.3	14.6	13.9	12.7	11.9	11.5	35.5	12.7	13.3	13.2	8.8	10.6	10.6	12.6	10.4	19.0	10.2	9.0	13.4	14.9	16.8	14.6	Diurnal Maximum	

C - Calibration P - Power Failure BD - Baseline Drift
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

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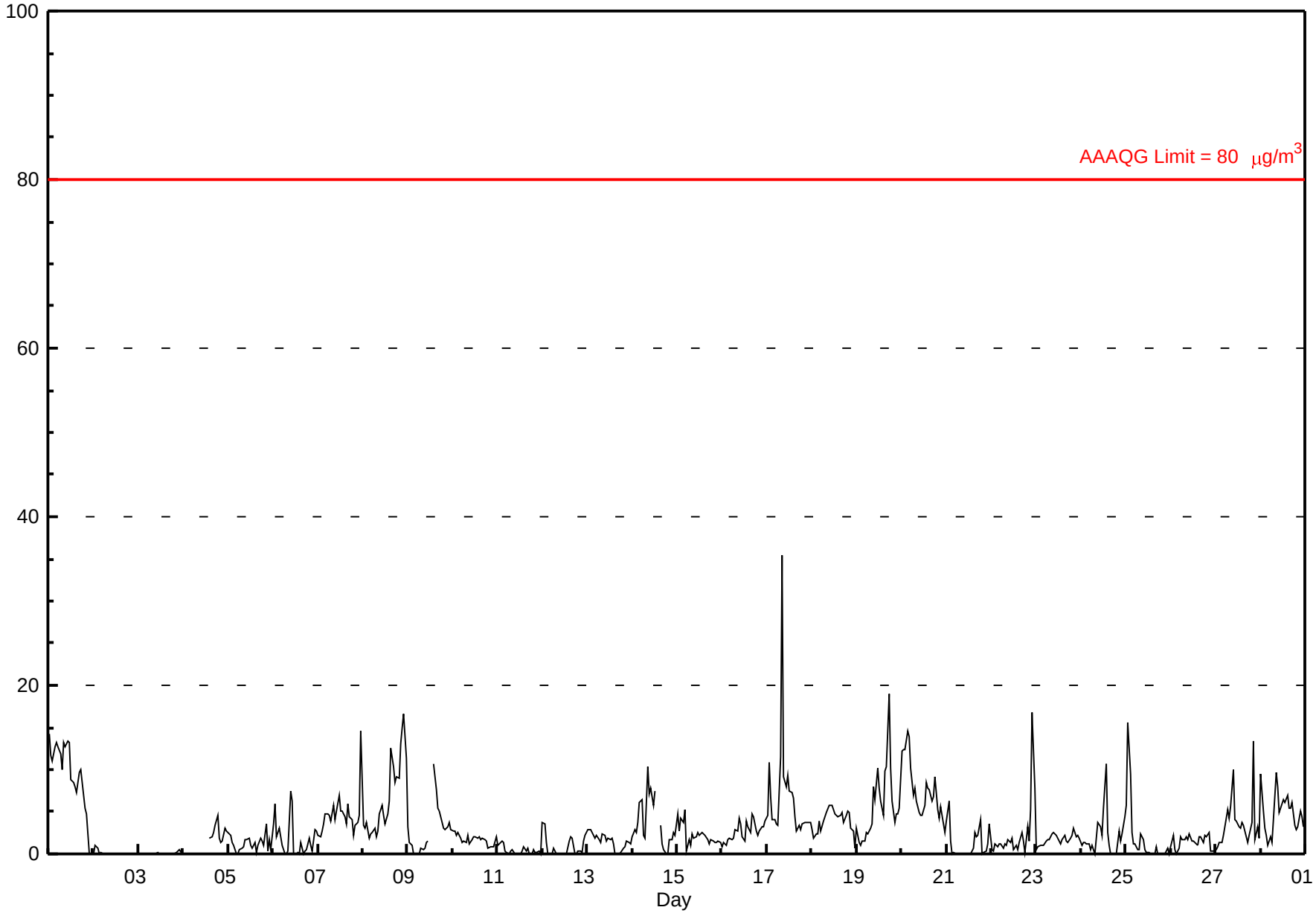
Peace Air Shed Zone Association

Hourly Averages

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

Smoky Heights - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Maximums

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

Smoky Heights - February 2011

Maximum Value: 62.0 $\mu g/m^3$ on Feb 22 23:00

Maximum Daily Average: 13.6 $\mu g/m^3$ on Feb 17

Minimum Value: 0 $\mu g/m^3$ on Feb 2 06:00

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

Maximum Diurnal Average: 8.7 $\mu g/m^3$ at hour 9

Minimum Diurnal Average: 4.6 $\mu g/m^3$ at hour 7

Monthly Average: 6.35 $\mu g/m^3$

Percentiles: $P_1 = 0.1$ $P_{10} = 1.7$ $Q_1 = 3.1$ Median = 4.6 $Q_3 = 7.8$ $P_{90} = 12.8$ $P_{99} = 29.8$

Hours in Service:	672
Hours of Data:	663
Hours of Missing Data:	9
Hours of Calibration:	2
Percent Operational Time:	99.0

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	18	17	15	15	16	16	15	13	17	16	16	17	14	14	10	10	11	13	14	12	11	13	1	1	13.1	18.0
2-Feb	1	6	3	2	5	0	2	2	4	5	0	2	2	1	1	1	1	3	0	2	2	2	1	2	2.0	6.0
3-Feb	1	0	0	1	1	2	3	2	3	3	3	1	1	0	0	1	1	1	0	1	2	2	4	5	1.6	4.6
4-Feb	4	0	1	3	4	0	0	0	1	P	P	P	P	P	3	4	5	6	7	3	4	3	6	5	3.1	7.1
5-Feb	4	4	3	2	3	3	3	3	4	4	4	4	4	5	4	2	3	3	4	4	12	4	4	3	3.9	12.0
6-Feb	9	25	11	8	7	5	4	5	6	17	17	4	1	3	1	5	2	3	3	3	3	2	5	5	6.3	24.6
7-Feb	5	4	5	6	7	8	8	6	12	6	8	17	9	9	7	6	15	7	8	7	9	9	8	43	9.4	42.9
8-Feb	9	7	8	6	6	6	8	5	8	9	10	7	6	7	12	15	16	13	14	13	16	18	20	16	10.7	19.9
9-Feb	7	4	3	2	3	3	3	3	3	6	6	3	C	C	21	10	12	7	6	5	4	5	6	6	5.9	20.9
10-Feb	5	4	4	5	3	3	3	3	5	3	3	4	4	3	3	3	3	3	2	2	2	3	2	5	3.4	5.3
11-Feb	3	3	3	3	1	2	1	2	2	1	1	0	1	2	3	2	3	1	1	2	2	1	2	2	1.8	3.5
12-Feb	8	7	3	2	2	2	4	1	2	0	1	5	2	3	4	4	5	2	1	2	2	2	3	4	3.0	8.0
13-Feb	4	4	5	4	4	4	4	4	5	4	4	4	4	5	5	2	2	2	2	3	3	4	3	3	3.6	5.2
14-Feb	5	4	5	6	17	26	4	4	32	21	22	20	14	P	P	6	4	2	2	3	7	6	6	5	10.0	32.3
15-Feb	12	11	9	9	14	7	4	4	4	5	5	5	4	5	4	4	4	4	4	4	4	4	4	4	5.7	13.8
16-Feb	3	3	3	6	6	5	4	5	5	9	7	4	4	8	8	5	8	8	5	5	5	6	5	9	5.6	9.3
17-Feb	11	18	13	7	7	7	6	36	56	35	14	14	25	12	10	11	5	6	6	6	7	6	6	6	13.6	55.9
18-Feb	6	5	5	6	7	5	6	8	9	9	9	8	8	7	7	8	8	8	8	8	8	7	7	8	7.3	9.3
19-Feb	9	6	5	6	6	7	8	7	8	12	10	13	12	10	7	15	22	28	14	12	7	12	12	9	10.8	28.2
20-Feb	18	15	15	19	19	17	10	10	10	8	7	7	9	11	12	10	8	9	13	8	8	9	6	4	10.9	19.0
21-Feb	8	10	4	3	2	1	1	1	1	1	2	2	2	1	4	7	8	5	8	2	3	3	3	8	3.7	10.1
22-Feb	3	3	3	3	4	4	3	3	3	5	3	5	2	3	5	3	4	5	3	6	9	12	62	30	7.8	62.0
23-Feb	6	3	4	3	3	4	4	4	5	6	5	5	5	4	5	6	4	4	5	5	7	4	5	5	4.5	6.6
24-Feb	4	4	4	4	4	3	3	2	7	7	6	6	9	15	8	4	3	2	1	4	7	4	6	8	5.2	14.8
25-Feb	12	23	14	7	4	5	3	5	5	3	2	2	3	2	1	2	5	5	3	2	3	2	4	2	4.9	22.9
26-Feb	3	7	3	2	3	4	4	4	4	4	4	4	4	4	3	4	4	3	5	6	5	3	2	3	3.9	7.0
27-Feb	3	2	3	3	4	5	8	6	8	17	7	6	5	5	9	8	5	4	5	7	20	10	7	5	6.8	19.8
28-Feb	15	8	6	5	4	4	4	13	16	12	8	9	11	9	10	10	8	10	6	8	7	12	8	7	8.6	15.9
	7.0	7.4	5.7	5.4	5.9	5.6	4.6	5.8	8.7	8.4	6.9	6.6	6.3	5.9	6.1	5.9	6.4	5.9	5.3	5.2	6.4	6.0	7.5	7.6	Diurnal Average	
	18.4	24.6	15.3	19.0	19.0	25.5	14.7	36.0	55.9	34.6	21.9	19.7	24.5	14.8	20.9	14.8	21.8	28.2	14.3	13.1	19.8	17.9	62.0	42.9	Diurnal Maximum	

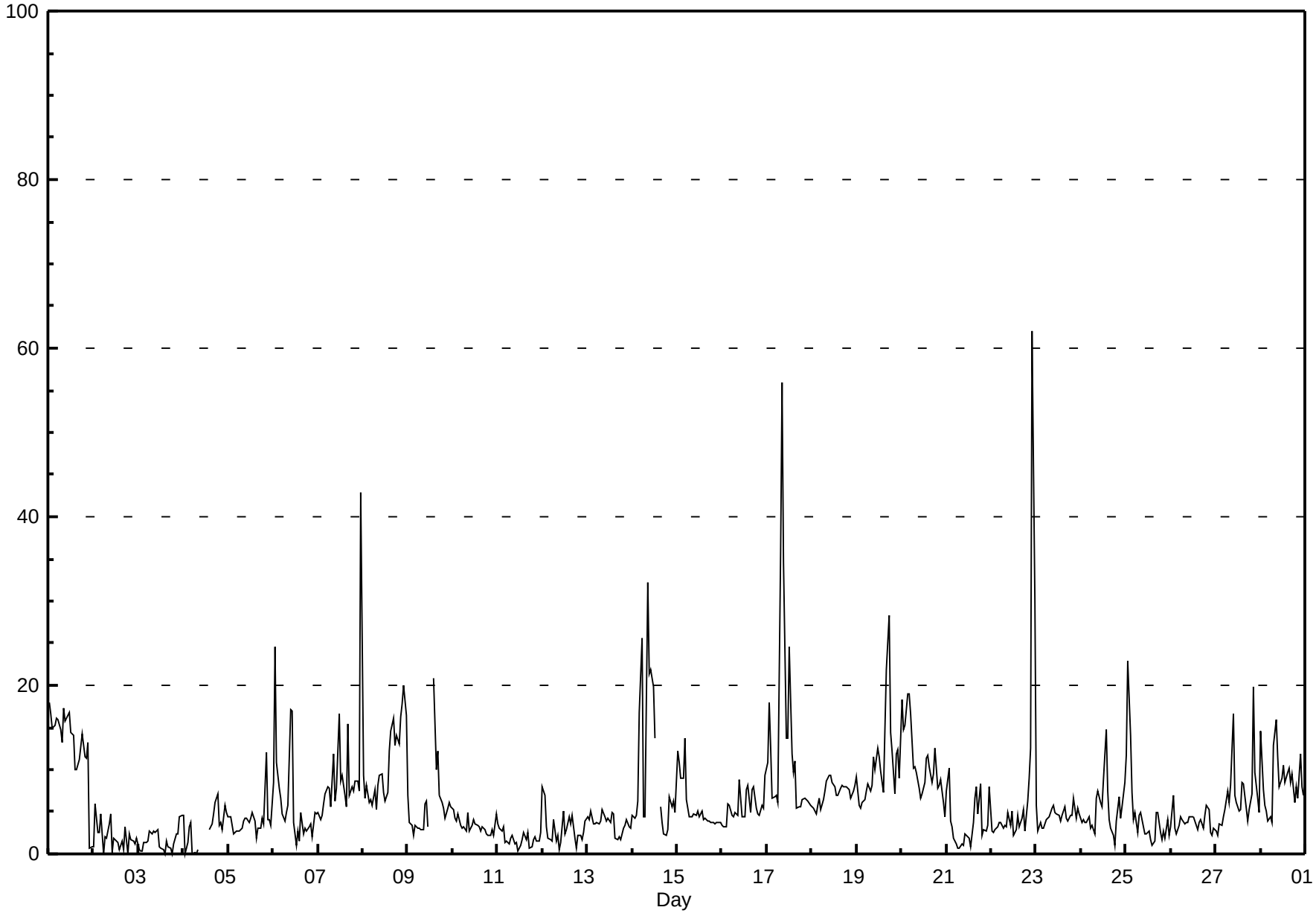
C - Calibration P - Power Failure

PASZA
Peace Air Shed Zone Association

Hourly Maximums

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

Smoky Heights - February 2011



FOCUS AIR QUALITY MONITORING

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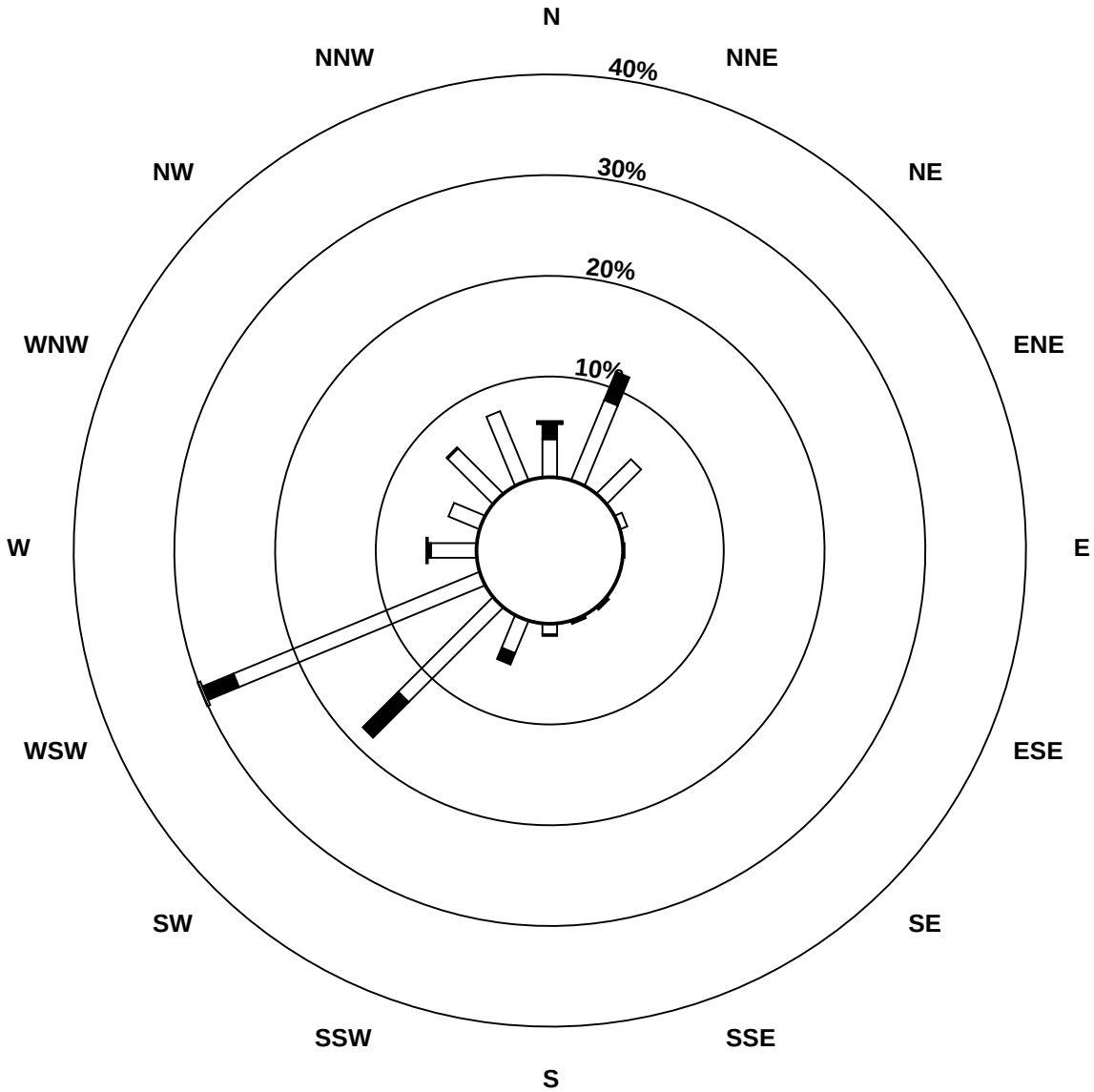
Peace Air Shed Zone Association

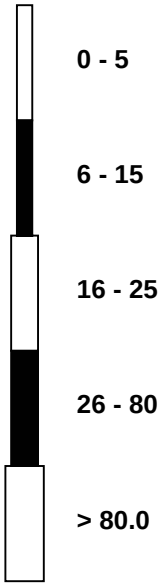
Pollutant Rose

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

Smoky Heights - February 2011



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



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Smoky Heights - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 5.8 ^{o}C on Feb 2 15:00 Maximum Daily Average: 3.5 ^{o}C on Feb 2

Minimum Value: -33 ^{o}C on Feb 18 08:00 Minimum Daily Average: -27.4 ^{o}C on Feb 18
Maximum Diurnal Average: -8.9 ^{o}C at hour 16 Minimum Diurnal Average: -14.0 ^{o}C at hour 10
Monthly Average: -11.78 ^{o}C Percentiles: P_1 = -32.0 P_{10} = -24.6 Q_1 = -21.5 Median = -12.5 Q_3 = -0.8 P_{90} = 2.7 P_{99} = 4.9

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	-27	-26	-26	-25	-24	-23	-24	-25	-26	-26	-23	-20	-17	-14	-12	-10	-11	-12	-12	-8	-5	0	0	0	-16.5	0.4
2-Feb	0	1	1	1	3	3	3	3	4	5	4	5	5	5	6	6	5	4	4	3	4	3	3	4	3.5	5.8
3-Feb	4	4	5	3	1	1	4	4	5	4	4	4	4	5	5	4	3	3	2	1	2	2	2	2	3.2	4.6
4-Feb	2	1	1	1	5	5	4	4	4	P	P	P	4	5	5	5	5	5	3	3	2	2	2	1	3.3	5.0
5-Feb	1	1	1	1	0	-2	-3	-4	-6	-7	-7	-8	-9	-9	-9	-10	-10	-9	-9	-9	-10	-10	-11	-12	-6.3	1.4
6-Feb	-13	-14	-16	-16	-16	-17	-19	-21	-21	-19	-15	-12	-13	-13	-11	-11	-12	-13	-13	-12	-12	-12	-12	-12	-14.4	-11.3
7-Feb	-13	-13	-14	-14	-15	-15	-15	-16	-16	-17	-15	-14	-13	-11	-11	-10	-11	-14	-16	-19	-20	-20	-21	-21	-15.2	-10.5
8-Feb	-22	-23	-23	-23	-24	-24	-24	-25	-24	-24	-22	-20	-17	-15	-14	-14	-15	-17	-19	-20	-20	-21	-20	-16	-20.2	-14.1
9-Feb	-13	-12	-11	-11	-10	-10	-11	-10	-9	-9	-8	-6	-5	-3	-2	-1	-1	-2	-3	-2	-3	-2	-1	-1	-6.1	-0.9
10-Feb	-1	-1	-1	0	0	-1	-1	-1	0	0	0	1	2	2	3	4	4	3	3	2	1	-1	-1	-2	0.6	3.8
11-Feb	-2	-2	0	0	1	1	1	1	2	3	4	5	5	4	4	5	4	4	4	4	3	2	2	1	2.3	5.0
12-Feb	0	1	0	1	0	-1	-1	-1	-1	-1	0	0	1	1	2	2	2	3	3	3	2	1	1	1	0.7	3.1
13-Feb	1	1	0	-1	-1	-1	-1	-1	-1	-1	0	0	2	2	2	2	1	2	1	1	1	1	1	0	0.5	2.0
14-Feb	-1	-1	-2	-3	-3	-3	-5	-4	-3	-3	-2	-1	1	P	P	3	-3	-7	-10	-12	-13	-14	-15	-16	-5.2	2.6
15-Feb	-16	-16	-16	-16	-17	-17	-18	-19	-19	-20	-19	-19	-19	-19	-19	-20	-21	-21	-22	-22	-22	-22	-22	-23	-19.3	-15.9
16-Feb	-24	-26	-26	-28	-27	-27	-28	-27	-26	-25	-23	-22	-22	-21	-20	-21	-21	-22	-22	-23	-23	-22	-22	-22	-23.9	-20.5
17-Feb	-22	-22	-23	-23	-23	-23	-23	-23	-23	-23	-22	-22	-22	-22	-21	-21	-22	-22	-23	-24	-23	-23	-23	-23	-22.5	-21.1
18-Feb	-23	-26	-28	-30	-30	-32	-32	-33	-33	-32	-29	-27	-24	-23	-23	-22	-23	-24	-27	-28	-27	-27	-27	-29	-27.4	-22.3
19-Feb	-26	-27	-28	-29	-29	-30	-31	-32	-31	-29	-27	-25	-22	-20	-19	-19	-18	-18	-19	-16	-16	-18	-19	-22	-23.7	-16.4
20-Feb	-19	-18	-18	-18	-18	-17	-17	-18	-17	-17	-15	-14	-12	-10	-8	-8	-8	-10	-10	-11	-13	-12	-13	-13	-13.9	-7.6
21-Feb	-12	-11	-7	-5	-5	-4	-4	-5	-6	-5	-4	-3	-3	-3	-3	-3	-4	-5	-6	-6	-7	-8	-8	-9	-5.6	-2.5
22-Feb	-11	-12	-14	-15	-15	-15	-15	-15	-16	-15	-13	-11	-12	-12	-11	-11	-12	-12	-12	-13	-14	-15	-16	-16	-13.6	-10.7
23-Feb	-17	-17	-18	-18	-18	-18	-19	-19	-20	-20	-19	-19	-18	-18	-18	-18	-18	-19	-21	-21	-21	-21	-23	-23	-19.2	-16.6
24-Feb	-23	-24	-25	-25	-25	-26	-27	-29	-31	-29	-27	-25	-25	-24	-22	-21	-21	-22	-23	-26	-25	-24	-23	-22	-24.8	-21.1
25-Feb	-22	-21	-20	-20	-20	-20	-19	-20	-18	-15	-14	-12	-11	-10	-8	-8	-8	-7	-6	-6	-7	-7	-6	-6	-13.0	-5.7
26-Feb	-5	-6	-7	-7	-6	-6	-6	-6	-6	-6	-5	-5	-5	-4	-5	-4	-5	-5	-6	-6	-6	-6	-7	-8	-5.7	-4.3
27-Feb	-9	-11	-12	-13	-16	-18	-20	-20	-21	-21	-21	-21	-21	-21	-22	-22	-22	-22	-23	-23	-23	-23	-23	-23	-19.6	-9.3
28-Feb	-23	-23	-24	-24	-24	-24	-25	-25	-25	-25	-25	-23	-23	-23	-23	-23	-23	-23	-26	-30	-30	-30	-30	-32	-25.2	-22.7
	-12.0	-12.2	-12.5	-12.7	-12.7	-13.0	-13.4	-13.7	-13.8	-14.0	-12.8	-11.7	-10.3	-10.1	-9.4	-8.9	-9.4	-10.2	-11.0	-11.5	-11.6	-11.7	-11.9	-12.2	Diurnal Average	
	3.6	3.5	4.6	3.2	4.9	4.9	4.1	4.4	4.6	4.6	4.5	4.7	5.0	5.1	5.8	5.6	5.2	5.0	3.9	3.7	3.7	3.0	2.8	4.4	Diurnal Maximum	

P - Power Failure

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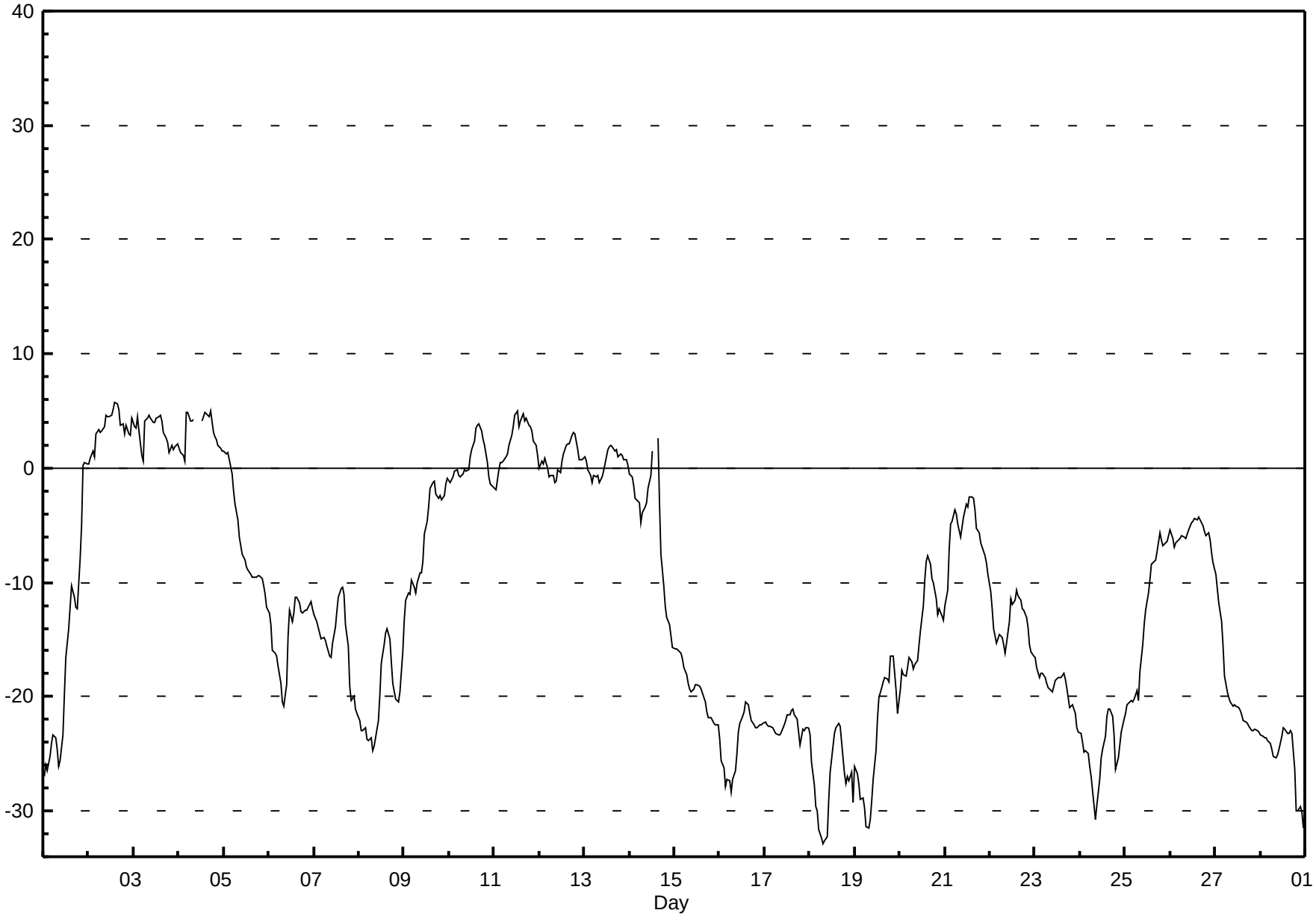
Hourly Averages

External Temperature (ET) - ^{o}C

Smoky Heights - February 2011



FOCUS AIR QUALITY MONITORING

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Peace Air Shed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Smoky Heights - February 2011

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	12	12	10	12	15	15	15	13	12	12	13	13	15	14	12	11	13	10	14	21	19	29	31	27	14.8	31.4
Dir	222	223	233	233	225	222	221	223	222	222	209	224	248	241	231	209	190	196	214	206	197	241	239	240	224.1	239.4
2 Spd	29	28	19	22	22	24	19	15	16	27	29	29	26	25	16	14	13	12	13	16	15	15	8	14	19.0	29.4
Dir	235	240	235	217	234	239	246	250	251	272	262	254	255	253	236	234	240	235	237	224	232	222	254	238	243.0	262.1
3 Spd	14	15	19	14	11	14	21	27	36	35	28	26	30	27	23	18	16	13	13	10	9	7	5	8	17.7	35.9
Dir	225	250	236	241	247	243	241	242	253	254	256	259	258	256	261	251	234	247	252	258	239	237	222	158	247.8	253.1
4 Spd	7	6	13	20	28	24	26	27	26	P	P	P	21	22	25	21	22	28	19	21	24	24	25	22	18.7	28.4
Dir	199	209	217	224	229	240	250	244	237	P	P	P	256	251	248	258	267	284	295	296	300	300	304	301	261.8	284.1
5 Spd	18	21	21	21	19	23	20	19	20	22	20	18	18	20	19	18	17	15	13	10	7	10	9	8	15.4	22.5
Dir	303	305	316	322	327	328	337	326	335	337	347	348	347	333	325	322	324	321	322	324	12	53	57	63	332.5	328.2
6 Spd	4	4	4	7	7	6	4	3	3	7	7	7	10	13	13	14	15	14	15	16	14	13	14	18	9.3	17.9
Dir	24	28	27	27	32	34	25	1	352	23	27	33	25	29	34	34	42	38	44	47	49	57	58	47	38.0	46.9
7 Spd	22	28	25	23	21	20	20	14	13	12	14	13	12	11	11	11	10	8	9	3	9	10	2	1	11.1	27.9
Dir	51	49	48	46	45	47	46	39	26	26	26	22	17	15	6	8	4	338	333	281	257	269	349	132	29.1	49.5
8 Spd	7	7	8	6	10	9	10	8	10	7	9	10	11	8	11	9	15	11	11	8	13	15	16	23	10.1	22.9
Dir	250	217	230	250	219	221	235	239	236	215	209	229	231	237	219	219	238	239	231	231	260	229	250	251	234.5	250.8
9 Spd	24	28	28	30	32	24	21	24	22	22	21	25	21	26	33	34	35	30	28	29	30	32	32	31	27.2	35.1
Dir	249	252	256	245	255	249	233	237	235	227	233	239	236	243	247	246	250	249	251	251	256	258	260	258	247.5	250.3
10 Spd	32	32	32	30	29	26	26	27	25	23	26	29	28	27	22	21	24	24	21	20	23	23	20	19	25.1	32.0
Dir	258	257	258	259	259	260	258	260	260	260	258	251	241	240	236	235	247	242	246	252	255	258	260	253	253.1	257.8
11 Spd	14	12	16	12	11	16	20	17	19	21	18	21	16	13	10	15	11	19	20	24	19	20	23	22	16.9	24.1
Dir	247	251	246	244	239	240	234	257	242	244	245	231	231	248	264	234	241	246	245	236	229	234	233	228	240.1	236.1
12 Spd	20	23	21	23	19	14	19	20	18	17	20	19	19	18	15	4	5	12	10	5	11	5	9	14	13.7	23.2
Dir	222	223	225	234	232	207	202	242	257	253	239	234	225	228	223	213	126	173	179	196	291	272	235	235	228.0	233.6
13 Spd	21	18	20	22	24	26	23	30	27	29	30	32	39	42	23	21	17	14	16	15	15	17	16	14	21.8	42.2
Dir	247	243	256	248	243	241	240	241	243	246	239	239	243	241	238	240	212	208	205	207	195	189	185	186	233.2	241.4
14 Spd	16	13	17	15	2	3	8	12	2	1	3	9	7	P	P	16	29	31	34	48	42	32	20	19	9.2	47.5
Dir	197	214	206	205	215	318	218	209	165	199	2	29	17	P	P	25	29	34	28	30	30	23	9	350	22.7	29.6
15 Spd	19	20	18	16	13	13	12	13	13	12	14	12	11	9	9	10	10	15	12	10	12	13	8	8	11.9	20.3
Dir	334	351	358	355	334	351	330	325	323	310	298	302	302	330	356	332	329	313	309	313	314	302	304	299	326.0	351.0
16 Spd	4	4	3	4	4	3	2	2	0	0	4	6	7	7	8	9	12	11	10	9	10	7	7	7	4.2	11.9
Dir	281	248	259	217	244	269	281	63	315	83	31	34	53	22	34	24	18	26	36	31	31	37	42	33	22.7	17.5
17 Spd	8	9	8	8	8	8	7	7	8	11	10	11	10	10	9	8	8	7	4	5	6	5	7	9	6.0	11.4
Dir	34	13	3	7	15	34	28	16	9	21	17	15	354	5	2	347	346	346	345	295	278	252	243	230	358.5	14.8
18 Spd	10	9	10	8	14	7	9	8	7	9	10	12	11	11	10	9	10	9	5	8	9	10	9	7	8.9	13.6
Dir	244	256	242	252	271	272	255	245	215	219	225	235	243	233	244	253	260	247	239	253	241	247	231	231	244.4	270.5
19 Spd	10	12	10	7	7	8	6	7	8	8	9	9	10	11	11	13	12	14	13	13	13	9	8	8	9.4	14.0
Dir	233	227	223	200	222	242	222	223	217	223	233	238	240	251	251	256	255	271	259	264	255	252	222	219	241.0	271.1
20 Spd	8	8	9	8	9	12	12	13	15	12	9	9	8	6	5	3	4	9	9	9	12	18	13	14	9.4	18.1
Dir	237	231	245	245	221	214	226	227	212	206	215	190	198	234	234	243	233	254	240	236	236	259	245	231	229.6	258.7
21 Spd	10	9	20	25	26	33	26	23	24	26	23	26	21	25	28	14	17	14	15	21	14	16	17	16	15.9	33.2
Dir	212	195	232	252	256	251	254	243	229	231	227	237	244	249	257	289	317	337	337	323	329	315	328	340	263.1	251.1
22 Spd	15	16	8	9	15	18	20	23	19	12	12	1	16	20	19	24	21	17	21	17	16	8	7	8	14.3	23.9
Dir	355	351	340	288	304	311	316	311	303	305	321	282	319	305	318	324	326	325	325	339	350	6	11	2	324.2	323.8

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Peace Air Shed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Smoky Heights - February 2011

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	11	10	10	14	19	23	20	18	18	17	17	18	18	15	15	15	15	11	10	12	12	11	9	10	14.3	22.8
Dir	343	335	321	336	340	343	348	358	352	348	354	355	347	345	341	345	345	335	322	337	333	343	340	335	343.3	343.0
24 Spd	11	13	11	9	11	12	4	3	6	10	8	11	18	18	19	19	18	13	9	7	9	10	10	10	8.9	19.2
Dir	325	324	325	332	324	314	336	183	249	239	220	250	252	250	244	241	238	236	234	247	231	228	226	230	258.6	241.0
25 Spd	12	14	11	13	13	18	20	11	14	15	20	22	23	22	17	15	12	15	28	33	31	25	25	29	19.0	33.3
Dir	244	244	224	230	230	245	248	248	235	242	239	239	235	239	244	248	247	230	236	236	240	235	237	248	239.2	235.7
26 Spd	42	36	29	36	36	34	29	24	18	15	12	12	13	9	10	8	9	6	3	6	14	22	25	25	12.8	41.9
Dir	261	261	253	253	257	261	264	264	260	264	249	241	250	245	236	237	245	256	348	38	34	47	39	40	266.6	261.1
27 Spd	28	32	33	32	34	37	36	30	26	24	24	24	23	21	21	23	19	17	17	21	21	22	21	16	25.0	36.8
Dir	36	36	33	34	27	26	30	28	21	18	26	22	24	22	20	22	24	29	24	18	17	25	24	27	26.2	25.8
28 Spd	12	11	11	11	13	13	13	12	13	15	15	13	14	13	12	10	9	7	6	1	5	9	6	5	9.0	15.2
Dir	14	13	12	18	21	27	20	10	13	17	20	14	9	13	6	1	3	8	353	211	270	281	279	208	7.9	17.5
Spd	8.3	8.1	8.4	8.9	9.7	9.5	9.2	9.7	9.9	9.3	8.7	9.0	10.4	11.2	9.8	8.1	7.3	7.2	6.9	6.8	7.0	7.2	6.6	6.7	Diurnal Average	
Dir	265.6	270.6	265.0	263.9	269.7	273.0	268.1	266.7	264.7	268.7	266.6	263.2	266.3	266.7	269.1	278.9	284.5	282.7	281.2	281.3	282.7	276.2	274.8	266.5		
Spd	41.9	36.1	32.8	35.9	35.8	36.8	35.8	30.2	35.9	34.5	30.1	32.1	38.9	42.2	33.3	33.8	35.1	31.4	34.1	47.5	41.7	32.5	32.4	30.8	Diurnal Maximum	
Dir	261.1	261.0	33.3	252.8	256.8	25.8	29.6	27.5	253.1	253.9	239.2	239.1	243.1	241.4	246.9	245.9	250.3	34.0	27.6	29.6	30.4	22.6	260.0	258.1		

Maximum Speed Value: 48 km/h on Feb 14 20:00
Maximum Daily Speed Average: 27.2 km/h on Feb 9
Maximum Diurnal Speed Average: 11.2 km/h at hour 14

Minimum Speed Value: 0 km/h on Feb 16 10:00
Minimum Daily Speed Average: 4.2 km/h on Feb 16
Minimum Diurnal Speed Average: 6.6 km/h at hour 23

Monthly Average Velocity: 8.44 km/h 270.88 deg

Speed Percentiles: P_1 = 1.5 P_{10} = 6.8 Q_1 = 9.5 Median = 13.9 Q_3 = 21.1 P_{90} = 27.6 P_{99} = 35.9

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

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

P - Power Failure

Frequency Distribution

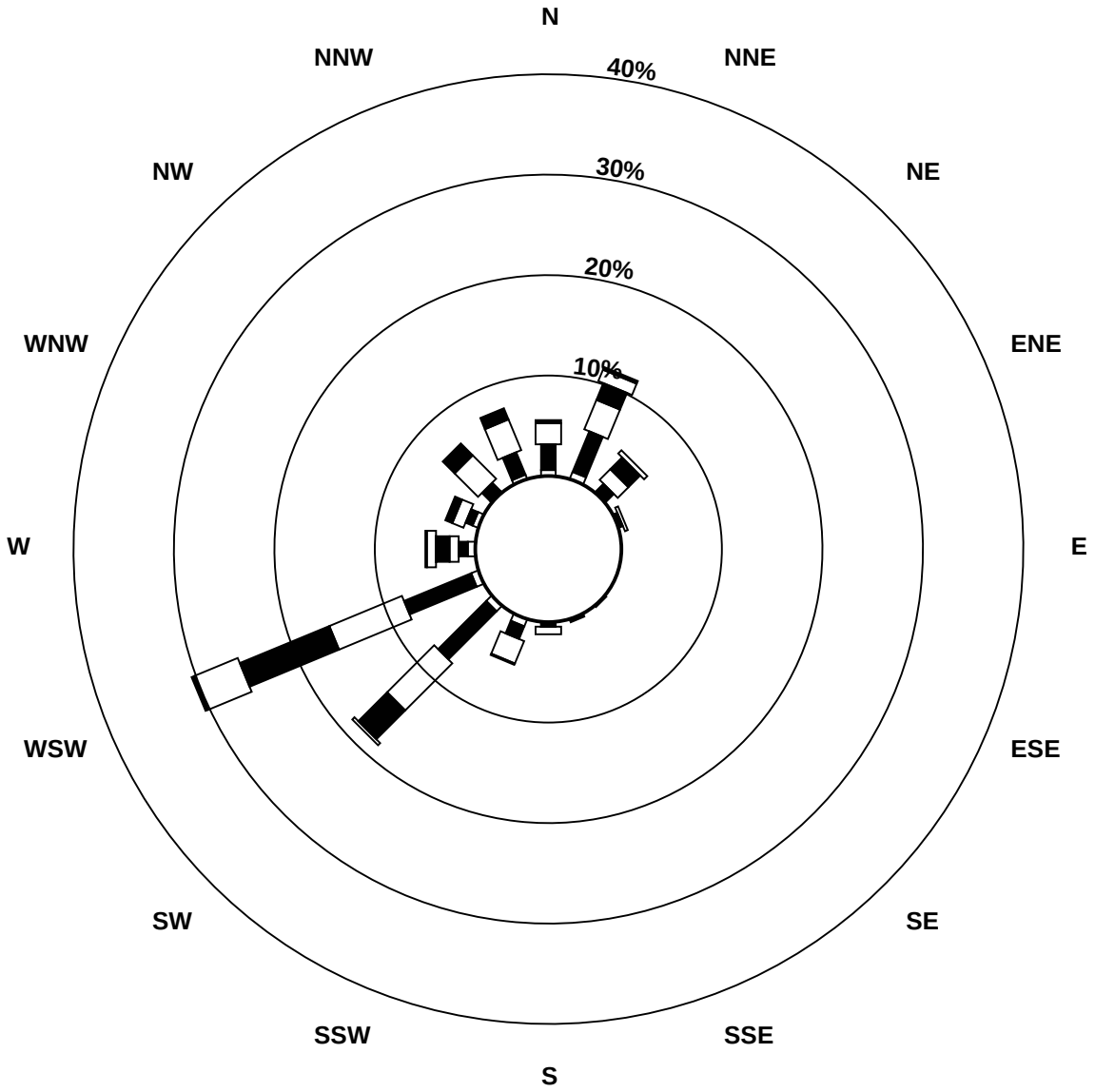
Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	6	32	42	13	0	0	93
NorthEast	6	25	23	14	12	2	82
East	1	0	0	0	0	0	1
SouthEast	2	0	0	0	0	0	2
South	3	9	8	1	0	0	21
SouthWest	9	76	83	68	14	2	252
West	8	25	34	37	29	1	134
NorthWest	4	16	38	24	0	0	82
Total	39	183	228	157	55	5	667

PASZA
Peace Air Shed Zone Association

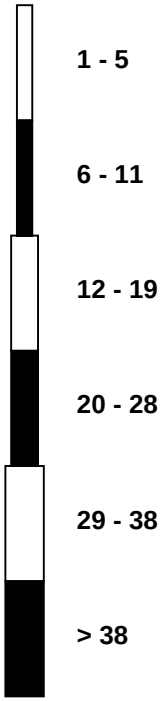
Wind Rose

Wind Speed (WS) (km/h)

Smoky Heights - February 2011



Wind Speed Classes (km/h)



PASZA
Peace Air Shed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Smoky Heights - February 2011

Maximum Speed: 48 km/h on Feb 14 20:00

Maximum Daily Speed Average: 27.6 km/h on Feb 9

Minimum Speed: 1 km/h on Feb 16 10:00

Minimum Daily Speed Average: 6.1 km/h on Feb 16

Maximum Diurnal Speed Average: 17.5 km/h at hour 6

Minimum Diurnal Speed Average: 14.4 km/h at hour 19

Monthly Average Speed: 15.91 km/h

Percentiles: P_1 = 3.0 P_{10} = 7.0 Q_1 = 9.6 Median = 14.1 Q_3 = 21.2 P_{90} = 27.6 P_{99} = 36.0

Hours in Service: 672
Hours of Data: 667
Hours of Missing Data: 5

Percent Operational Time: 99.3

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	13	12	10	12	15	15	15	13	12	12	13	13	15	14	13	12	13	10	14	22	19	29	32	27	15.6	31.6
2-Feb	29	28	20	22	23	25	19	15	17	27	30	29	26	25	17	15	14	13	13	16	15	15	9	14	19.8	29.7
3-Feb	14	16	19	14	11	14	21	27	36	35	28	26	30	27	23	18	16	14	13	10	9	8	6	8	18.4	36.0
4-Feb	8	6	14	20	28	24	26	27	26	P	P	P	21	22	25	21	22	29	19	21	24	24	25	22	21.6	28.5
5-Feb	18	21	21	22	19	23	21	19	20	22	20	18	18	21	19	19	17	15	13	10	8	10	9	8	17.1	22.7
6-Feb	4	4	4	7	7	6	4	3	4	7	7	7	10	13	14	14	15	14	15	16	14	13	14	18	9.6	17.9
7-Feb	22	28	25	23	21	20	20	14	13	12	14	13	12	11	11	11	10	8	9	4	9	10	4	2	13.5	27.9
8-Feb	7	7	8	6	10	10	10	8	10	7	9	10	11	8	11	9	15	11	11	8	13	15	17	23	10.6	23.0
9-Feb	24	28	28	30	32	24	21	24	22	22	21	25	22	26	33	34	35	30	28	29	30	32	32	31	27.6	35.2
10-Feb	32	32	32	30	29	26	26	27	25	23	26	29	28	27	22	22	24	24	21	20	23	23	20	19	25.4	32.0
11-Feb	14	12	16	12	11	16	20	17	19	21	19	21	16	13	11	15	11	19	20	24	19	20	23	22	17.2	24.2
12-Feb	20	23	21	23	19	14	20	20	18	18	20	19	19	19	15	6	5	12	10	6	12	6	9	14	15.3	23.3
13-Feb	21	18	20	23	24	26	23	30	27	29	30	32	39	42	23	22	17	15	17	15	15	17	16	14	23.1	42.2
14-Feb	16	13	17	15	5	5	9	12	7	5	5	9	7	P	P	16	29	32	34	48	42	33	21	19	18.0	47.6
15-Feb	19	21	18	16	13	14	13	14	13	12	14	12	11	9	9	11	10	16	12	10	13	13	8	8	12.8	20.6
16-Feb	5	5	3	4	4	3	3	2	1	1	4	6	7	7	8	9	12	11	10	9	10	7	7	7	6.1	11.9
17-Feb	8	9	8	8	9	8	7	7	8	11	10	12	10	10	9	8	8	7	4	5	6	5	7	9	8.1	11.6
18-Feb	10	10	10	9	14	8	9	8	7	9	10	12	11	11	10	9	10	9	6	8	9	10	9	8	9.3	13.6
19-Feb	10	12	10	7	8	8	6	7	8	8	9	9	10	11	11	13	12	14	13	14	13	9	8	8	10.0	14.1
20-Feb	9	8	10	9	9	12	13	13	15	12	10	9	8	6	5	3	4	9	9	10	12	18	14	14	10.0	18.1
21-Feb	11	10	21	25	26	33	26	23	24	26	23	26	22	25	28	15	18	14	16	21	14	16	17	16	20.7	33.2
22-Feb	15	16	9	9	15	18	20	23	20	12	12	6	17	20	20	24	22	17	22	17	16	8	7	8	15.5	24.2
23-Feb	12	10	10	14	19	23	20	18	18	17	18	18	18	15	15	15	15	11	10	12	12	11	9	10	14.6	22.8
24-Feb	11	13	11	10	11	12	5	4	7	11	8	11	18	18	19	19	18	13	9	8	9	10	10	11	11.5	19.3
25-Feb	13	14	11	13	13	18	20	11	14	15	20	22	23	22	17	15	12	16	29	33	31	25	25	29	19.2	33.4
26-Feb	42	36	29	36	36	34	29	24	18	15	13	12	13	9	10	8	9	6	4	6	14	22	25	25	19.7	42.0
27-Feb	28	32	33	32	34	37	36	30	26	24	24	24	23	22	21	23	19	17	17	21	21	22	21	16	25.2	36.9
28-Feb	12	11	11	11	13	13	13	13	13	15	15	13	14	13	12	11	9	8	6	3	5	9	6	5	10.5	15.3
	16.0	16.1	16.0	16.4	17.0	17.5	16.9	16.1	16.0	15.9	16.0	16.4	17.1	17.3	16.0	14.9	15.1	14.7	14.4	15.2	15.6	15.7	14.7	14.8	Diurnal Average	
	42.0	36.1	32.9	35.9	35.9	36.9	35.8	30.2	36.0	34.7	30.2	32.2	39.0	42.2	33.3	33.9	35.2	31.5	34.3	47.6	41.8	32.6	32.4	30.8	Diurnal Maximum	

P - Power Failure
All monthly, daily, and diurnal averages have been calculated using scalar methods

PASZA
Peace Air Shed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Smoky Heights - February 2011

Maximum Value: 86.9 deg on Feb 14 10:00

Minimum Value: 1.6 deg on Feb 10 01:00

Percentiles: P_1 = 1.8 P_{10} = 3.2 Q_1 = 4.5 Median = 6.8 Q_3 = 10.8 P_{90} = 17.0 P_{99} = 75.2

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

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	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	24	6	9	6	6	4	3	7	5	9	7	10	8	6	5	17	4	13	6	8	12	14	5	5	23.6
2-Feb	6	6	19	10	17	7	4	6	18	12	8	3	3	2	12	13	10	17	19	9	13	7	14	10	19.3
3-Feb	10	19	8	7	8	7	4	5	3	5	4	3	3	4	3	6	7	4	9	6	16	20	38	11	37.8
4-Feb	20	26	25	13	4	5	4	2	8	P	P	P	3	6	5	9	9	7	7	5	6	5	5	5	26.3
5-Feb	5	5	5	6	10	6	8	9	7	7	8	11	8	12	8	7	6	6	8	7	28	9	9	9	28.3
6-Feb	15	13	20	6	6	12	21	30	24	6	6	6	3	4	5	4	5	5	5	3	4	6	7	5	29.7
7-Feb	4	3	3	3	4	3	3	5	5	5	3	5	4	6	8	7	9	9	11	40	10	7	58	72	71.6
8-Feb	14	23	18	14	16	4	7	13	12	11	16	10	7	6	13	22	5	7	8	14	9	9	7	4	22.7
9-Feb	4	3	4	2	5	5	7	6	3	5	4	4	5	7	3	3	4	4	2	3	4	3	2	2	7.2
10-Feb	2	2	2	3	2	2	2	2	3	3	2	4	2	4	2	6	3	5	2	4	2	2	2	5	6.4
11-Feb	5	8	4	9	8	6	4	14	12	7	11	4	6	12	13	6	12	8	10	5	8	3	7	5	14.2
12-Feb	2	2	5	5	4	9	13	5	3	14	2	8	6	9	4	82	27	10	6	47	18	45	20	10	82.2
13-Feb	4	6	14	7	3	3	4	3	4	3	4	4	3	4	6	7	9	12	6	4	6	4	3	6	13.8
14-Feb	4	4	5	5	74	54	29	7	79	87	54	12	8	P	P	6	3	5	6	3	3	6	9	10	86.9
15-Feb	9	11	10	11	11	20	11	10	7	12	8	13	16	17	13	14	10	8	9	8	11	7	13	7	20.1
16-Feb	16	17	11	18	19	17	53	33	79	82	35	13	8	10	10	9	6	9	8	4	4	6	5	7	81.8
17-Feb	10	9	10	8	10	12	8	13	8	6	8	11	13	11	14	14	12	11	11	12	20	14	15	6	20.2
18-Feb	5	10	9	11	6	19	11	16	15	14	15	12	8	7	9	8	5	8	23	4	6	4	8	12	23.2
19-Feb	6	3	7	14	10	9	10	10	6	17	3	5	5	6	4	4	5	4	6	9	9	21	13	12	21.1
20-Feb	12	13	20	14	13	14	11	4	5	5	6	4	7	16	20	44	18	6	11	15	15	4	9	5	44.5
21-Feb	24	15	18	7	4	2	4	6	5	3	4	4	7	5	4	34	20	7	10	6	10	8	11	6	33.5
22-Feb	8	7	17	8	9	4	3	5	5	16	10	85	11	10	12	10	8	8	7	10	11	12	7	11	85.3
23-Feb	6	6	8	5	5	4	7	8	8	6	7	10	9	14	8	12	7	7	11	4	6	4	6	3	13.7
24-Feb	8	4	4	5	8	3	50	44	25	33	17	5	6	3	4	4	4	6	20	22	7	7	3	4	50.1
25-Feb	14	7	7	6	7	2	3	6	4	4	4	4	6	5	3	7	5	8	4	4	3	5	6	5	13.9
26-Feb	5	3	3	2	3	2	2	2	3	8	9	9	12	11	5	7	4	13	44	6	5	7	6	6	43.8
27-Feb	5	4	4	5	6	6	3	3	5	6	5	5	6	7	7	6	6	5	5	4	4	4	4	4	7.4
28-Feb	6	5	6	5	5	5	5	6	4	4	4	7	8	9	10	16	11	10	13	76	10	7	14	17	75.7
	23.9	26.3	25.5	18.3	73.6	53.7	52.5	43.8	78.8	86.9	53.8	85.3	16.3	17.3	20.5	82.2	26.7	16.9	43.8	75.7	28.3	44.8	57.6	71.6	

P - Power Failure

PASZA
Beaverlodge Station
Monthly Summary Tables, Graphs and Roses

PASZA
Peace Air Shed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8.3 ppb on Feb 27 13:00 Maximum Daily Average: 1.5 ppb on Feb 17

Minimum Value: 0 ppb on Feb 3 12:00 Minimum Daily Average: 0.1 ppb on Feb 11
Maximum Diurnal Average: 0.8 ppb at hour 13 Minimum Diurnal Average: 0.3 ppb at hour 5
Monthly Average: 0.49 ppb Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.1 Median = 0.3 Q_3 = 0.6 P_{90} = 1.1 P_{99} = 1.9

Hours in Service:	672
Hours of Data:	633
Hours of Missing Data:	39
Hours of Calibration:	33
Percent Operational Time:	99.1

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	1	1	0	7	A	3	1	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0.8	7.3
2-Feb	0	0	0	A	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
3-Feb	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
4-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
5-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.3
6-Feb	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	1	1	1	1	0	0	1	A	2	0.6	2.4
7-Feb	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	3	2	2	2	2	2	A	1	1	1.4	2.5
8-Feb	1	1	1	1	0	0	0	0	0	0	N	N	N	N	N	N	1	1	0	1	0	0	0	0	0.4	0.7
9-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
10-Feb	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
11-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
12-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0	0	0.3	2.1
13-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0.2	1.7
14-Feb	0	0	0	0	A	1	0	0	0	0	1	1	2	1	1	1	1	1	1	1	0	0	0	0	0.6	1.5
15-Feb	0	0	0	0	A	0	0	0	0	1	1	1	A	A	0	0	0	0	0	0	1	1	1	1	0.5	1.2
16-Feb	1	1	1	1	A	1	1	1	1	1	2	1	1	1	2	4	1	1	1	1	1	1	1	2	1.2	3.6
17-Feb	4	3	2	1	A	2	2	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1.5	4.3
18-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.4
19-Feb	1	0	1	1	A	1	1	1	0	0	0	0	1	1	1	1	1	1	0	0	1	0	0	0	0.5	0.8
20-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
21-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0.2	0.7
22-Feb	0	0	0	0	A	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.2
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	0.2	0.4
24-Feb	1	1	0	0	A	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8
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	0	0	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0.3	0.8
27-Feb	0	0	0	0	A	0	1	1	2	0	1	7	8	1	1	1	1	1	1	0	0	0	0	0	1.3	8.3
28-Feb	0	0	0	1	A	1	1	1	1	0	1	1	1	0	0	1	0	1	0	0	0	0	0	0	0.6	1.5
	0.5	0.4	0.4	0.6	0.3	0.5	0.5	0.4	0.4	0.4	0.5	0.7	0.8	0.5	0.5	0.6	0.5	0.5	0.5	0.4	0.5	0.4	0.4	0.5	Diurnal Average	
	4.3	2.7	1.7	7.3	0.7	2.5	1.7	1.5	1.7	1.2	1.8	7.4	8.3	1.8	2.3	3.6	2.3	2.3	2.1	2.0	1.7	1.2	1.4	2.4	Diurnal Maximum	

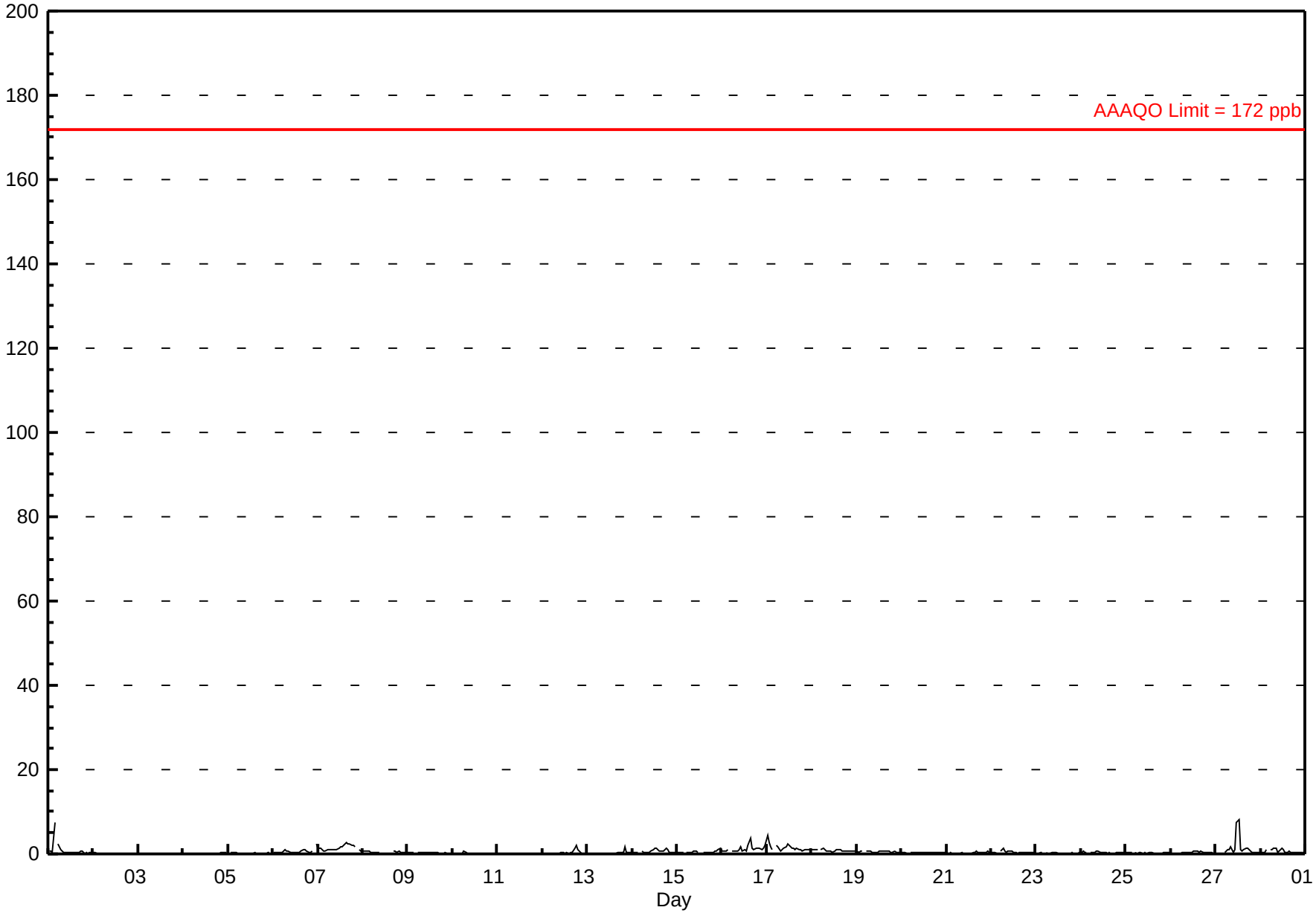
C - Calibration N - Not Valid A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

PASZA
Peace Air Shed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - February 2011

Maximum Value: 81.9 ppb on Feb 27 12:00

Maximum Daily Average: 8.0 ppb on Feb 27

Minimum Value: 0 ppb on Feb 13 10:00

Minimum Daily Average: 0.2 ppb on Feb 11

Maximum Diurnal Average: 3.7 ppb at hour 12

Minimum Diurnal Average: 0.5 ppb at hour 5

Monthly Average: 1.04 ppb

Percentiles: P_1 = 0.1 P_{10} = 0.2 Q_1 = 0.3 Median = 0.5 Q_3 = 0.9 P_{90} = 1.8 P_{99} = 5.5

Hours in Service:	672
Hours of Data:	633
Hours of Missing Data:	39
Hours of Calibration:	33
Percent Operational Time:	99.1

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	1	1	1	15	A	5	2	1	1	1	1	1	0	0	0	3	0	3	3	0	0	0	0	0	1.8	15.3
2-Feb	0	0	0	A	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
3-Feb	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
4-Feb	0	A	0	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
5-Feb	A	1	1	1	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	A	0.4	0.6
6-Feb	1	1	1	1	1	0	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	3	0.9	3.2
7-Feb	2	2	1	1	1	1	1	1	1	1	1	2	2	2	3	3	3	3	2	2	2	A	1	1	1.6	2.9
8-Feb	1	1	1	1	1	0	0	0	0	0	N	N	N	N	N	N	1	1	1	1	1	1	1	1	0.6	0.9
9-Feb	1	1	0	1	A	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0.5	1.1
10-Feb	0	0	0	0	A	0	9	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8	8.6
11-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
12-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	2	2	2	0	0	0	0	0.6	2.5
13-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	1	1	1	0.5	4.0
14-Feb	1	1	0	0	A	1	1	0	1	1	1	1	3	2	1	1	1	2	5	3	1	1	1	0	1.2	4.6
15-Feb	0	0	0	1	A	0	0	0	1	1	1	1	A	A	1	1	1	0	1	1	1	1	2	2	0.7	1.7
16-Feb	1	1	1	2	A	1	1	1	1	2	3	1	1	1	4	6	3	1	2	2	2	1	3	4	1.9	5.5
17-Feb	6	4	2	2	A	3	3	1	1	2	2	3	3	2	2	2	2	1	1	1	1	1	2	2	2.1	5.6
18-Feb	2	1	1	2	A	2	2	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1.2	1.9
19-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.4
20-Feb	1	0	0	0	A	0	1	1	1	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0.5	1.1
21-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	1	1	1	0.5	0.9
22-Feb	0	0	0	0	A	1	2	1	1	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0.6	1.7
23-Feb	0	0	0	1	A	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
24-Feb	1	1	1	0	A	1	1	1	1	2	1	1	1	1	0	0	0	0	0	1	1	1	1	0	0.6	1.8
25-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0.4	0.7
26-Feb	0	0	0	0	A	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0.6	1.3
27-Feb	0	0	0	0	A	2	2	2	2	2	2	82	74	3	2	2	2	2	2	0	0	0	1	0	8.0	81.9
28-Feb	0	1	0	2	A	3	2	3	3	0	1	2	2	1	1	1	1	1	1	1	0	0	1	1	1.1	2.9
	0.8	0.7	0.6	1.1	0.5	0.9	1.1	0.9	0.7	0.7	0.8	3.7	3.6	0.8	0.9	1.0	0.8	0.9	0.9	0.7	0.8	0.6	0.7	0.8	Diurnal Average	
	5.6	3.9	2.2	15.3	0.9	5.3	8.6	5.8	2.9	2.0	2.8	81.9	73.6	2.5	4.5	5.5	2.6	3.0	4.6	2.6	4.0	1.5	2.6	3.6	Diurnal Maximum	

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

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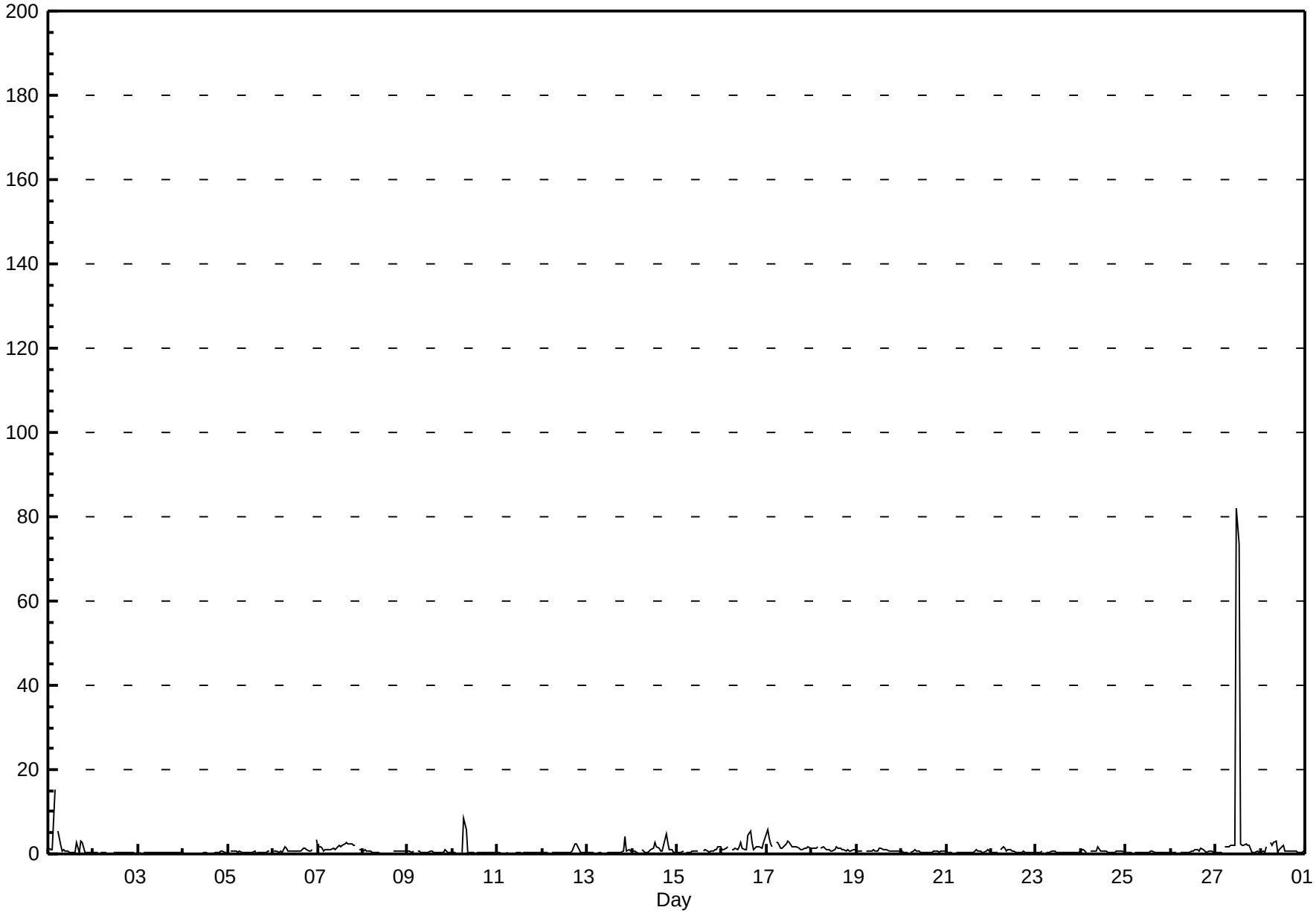
Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - February 2011



FOCUS AIR QUALITY MONITORING

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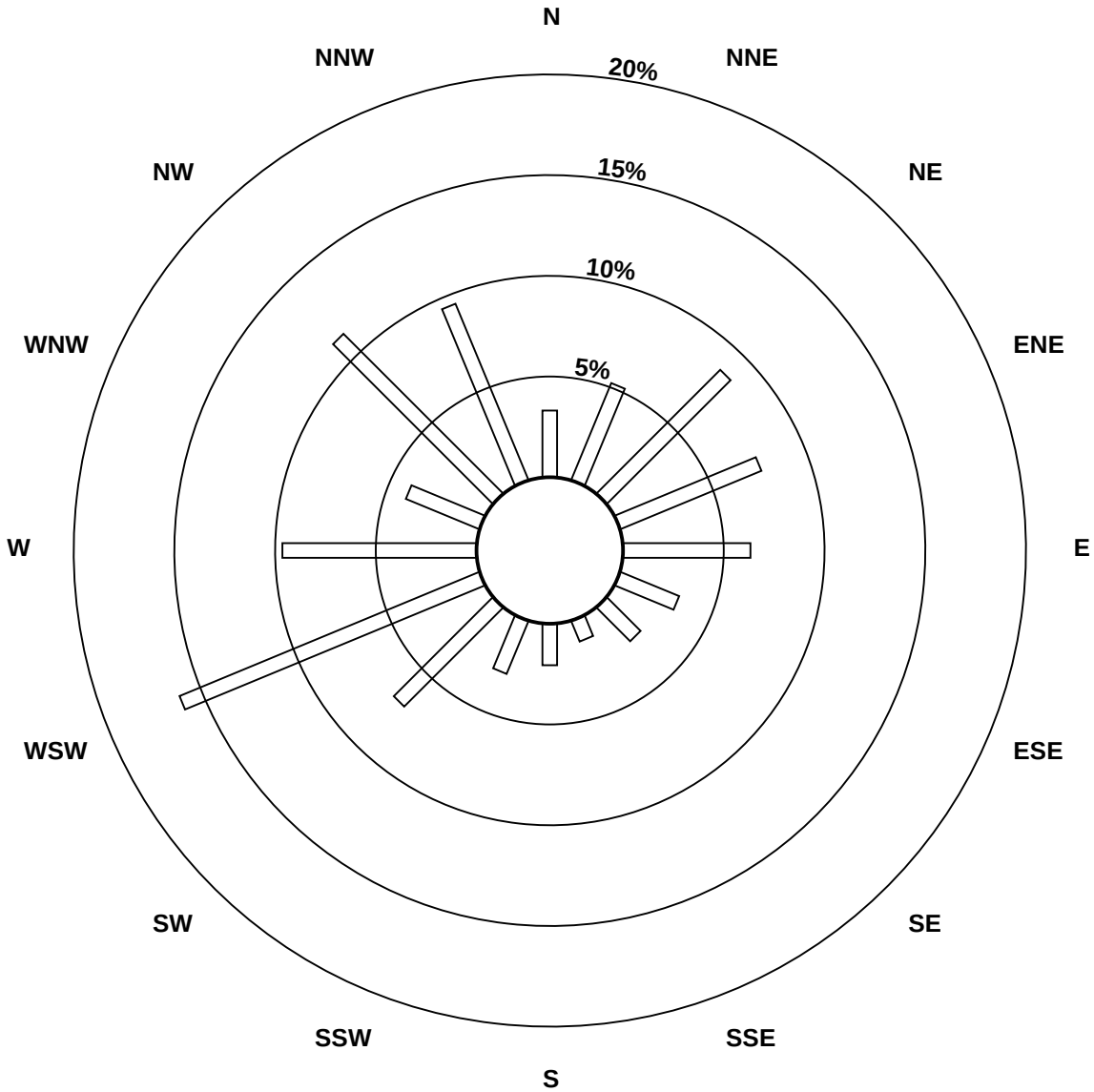
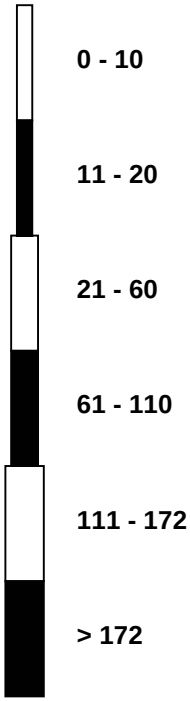
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - February 2011



Pollutant Classes (ppb)



FOCUS AIR QUALITY MONITORING

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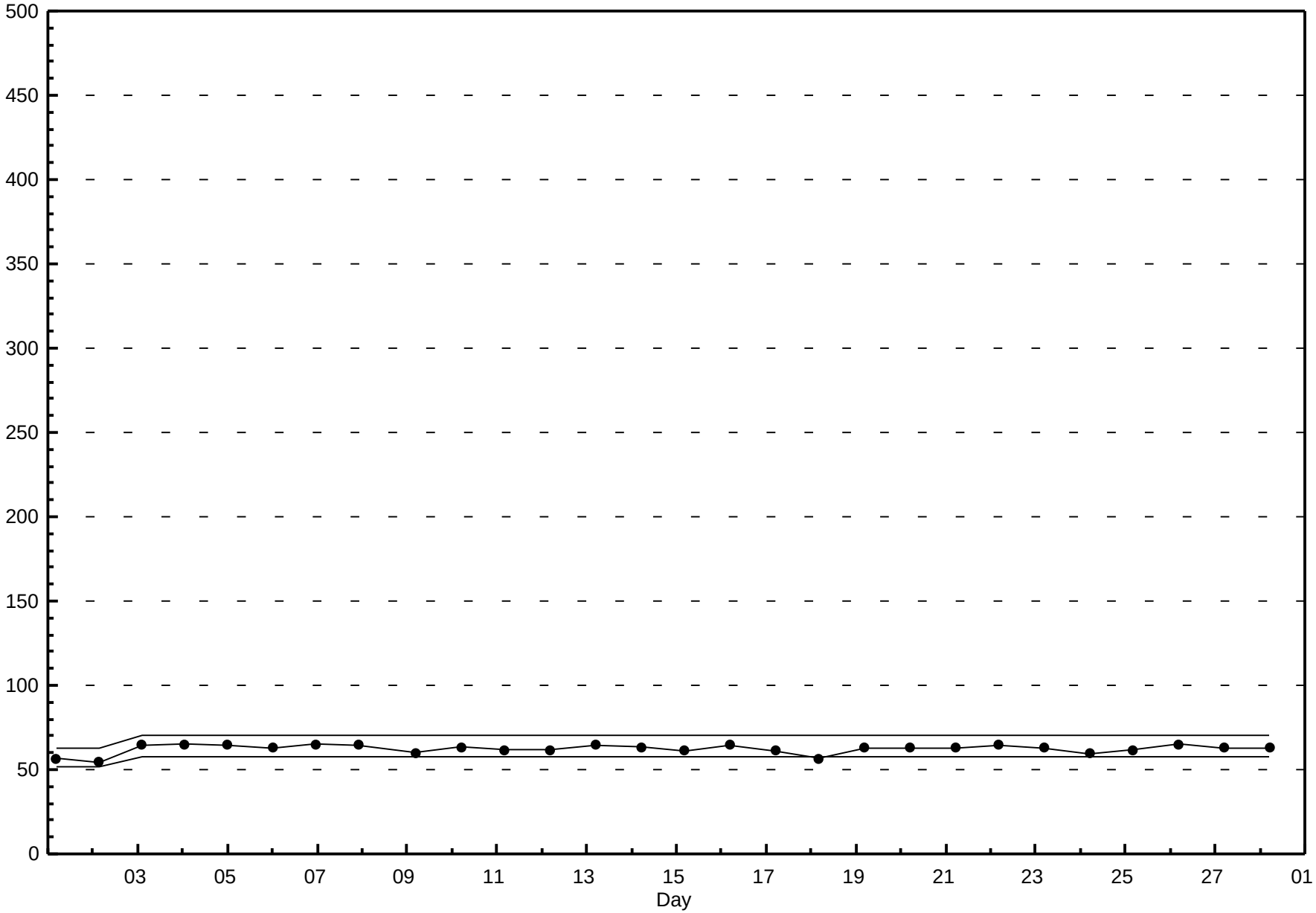
Span Responses

Sulphur Dioxide (SO_2)

Beaverlodge - February 2011



FOCUS AIR QUALITY MONITORING

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Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 27.9 ppb on Feb 1 01:00 Maximum Daily Average: 10.9 ppb on Feb 19

Minimum Value: 0 ppb on Feb 10 04:00 Minimum Daily Average: 0.6 ppb on Feb 27
Maximum Diurnal Average: 4.7 ppb at hour 8 Minimum Diurnal Average: 2.3 ppb at hour 5
Monthly Average: 3.56 ppb Percentiles: P_1 = 0.4 P_{10} = 0.7 Q_1 = 1.2 Median = 2.3 Q_3 = 4.6 P_{90} = 8.2 P_{99} = 15.8

Hours in Service:	672
Hours of Data:	631
Hours of Missing Data:	41
Hours of Calibration:	35
Percent Operational Time:	99.1

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	28	23	17	14	A	15	14	10	12	10	9	13	11	10	8	11	8	10	4	2	2	1	2	3	10.3	27.9
2-Feb	3	1	2	A	2	1	2	2	C	C	C	C	C	1	1	1	4	2	2	1	2	2	3	2	1.9	3.7
3-Feb	2	2	A	2	2	1	1	1	1	1	1	1	1	1	3	3	6	9	5	5	8	3	5	4	3.0	9.1
4-Feb	2	A	1	1	0	1	4	2	2	1	2	1	1	1	1	2	1	1	3	2	3	2	2	2	1.7	4.1
5-Feb	A	3	3	2	1	1	1	1	1	2	1	1	1	1	1	1	1	2	2	2	2	3	5	A	1.8	5.4
6-Feb	2	4	3	2	3	3	5	5	4	2	2	1	1	1	1	2	2	3	2	2	2	2	A	4	2.6	5.4
7-Feb	2	2	1	1	2	2	2	2	2	2	3	3	2	2	2	3	3	4	11	10	12	A	6	6	3.7	12.4
8-Feb	6	6	7	5	7	8	10	12	12	14	N	N	N	N	N	N	6	7	12	11	9	5	4	3	7.9	14.1
9-Feb	2	1	1	1	A	2	2	9	9	4	2	2	2	1	1	2	3	1	1	1	1	1	1	1	2.2	9.2
10-Feb	0	0	0	0	A	1	1	1	2	3	1	1	1	1	1	1	1	3	4	2	2	2	2	1	1.3	3.7
11-Feb	1	1	1	1	A	1	1	2	3	5	5	3	2	1	1	1	2	1	1	1	1	1	3	4	1.8	5.0
12-Feb	3	2	1	1	A	2	2	1	2	2	3	2	2	4	8	5	5	5	3	3	4	2	5	4	3.1	8.0
13-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	3	3	2	2	2	2	2	2	1.3	2.7
14-Feb	2	1	2	1	A	2	2	2	4	9	7	3	3	5	2	1	2	2	2	1	1	3	2	2	2.6	9.3
15-Feb	2	1	1	2	A	2	2	3	3	2	2	2	A	A	2	2	2	3	3	4	3	3	3	2	2.4	3.8
16-Feb	2	4	3	4	A	3	7	5	6	4	2	2	1	1	1	1	2	1	2	2	2	3	3	4	2.9	7.0
17-Feb	3	3	3	3	A	3	2	3	3	3	4	4	4	3	3	3	3	5	6	6	6	6	6	13	4.3	13.3
18-Feb	13	7	5	12	A	4	5	18	10	7	5	4	4	3	4	5	4	2	2	2	2	3	4	8	5.9	17.7
19-Feb	8	10	10	8	A	8	10	9	8	9	6	7	11	10	12	14	12	13	16	15	13	13	13	16	10.9	16.3
20-Feb	10	5	4	5	A	4	8	8	11	7	7	7	6	5	3	3	2	3	8	7	8	9	8	7	6.4	10.7
21-Feb	5	1	1	1	A	1	2	2	1	1	1	1	1	2	1	1	2	2	2	3	3	4	3	2	1.8	4.8
22-Feb	2	2	2	3	A	3	6	5	4	4	3	2	2	2	1	1	1	2	4	5	5	4	3	1	2.9	6.4
23-Feb	1	2	2	5	A	6	9	8	1	2	1	1	1	1	1	1	1	1	2	3	4	4	7	3	2.8	8.7
24-Feb	5	5	3	3	A	11	7	8	18	14	8	5	4	3	1	2	3	4	15	6	9	7	6	5	6.6	18.0
25-Feb	8	6	6	8	A	5	6	8	3	3	2	1	2	2	2	1	1	1	1	1	1	1	1	1	3.1	8.3
26-Feb	1	1	1	1	A	1	2	1	1	1	1	2	1	1	1	2	3	4	7	5	6	3	1	0	2.0	6.7
27-Feb	1	1	0	0	A	1	0	1	1	1	0	0	0	0	0	0	0	1	1	1	0	1	1	1	0.6	0.8
28-Feb	1	1	1	2	A	1	1	1	1	1	1	1	1	1	1	1	1	2	3	6	7	3	7	5	2.1	7.2
	4.3	3.5	3.0	3.3	2.3	3.5	4.1	4.7	4.6	4.3	3.1	2.8	2.6	2.4	2.4	2.6	3.0	3.5	4.5	4.0	4.3	3.4	3.9	3.9	Diurnal Average	
	27.9	23.1	16.8	14.0	6.8	14.7	13.9	17.7	18.0	14.5	9.1	13.1	11.2	9.9	12.0	14.0	11.9	13.0	16.2	14.9	13.0	13.5	13.2	16.3	Diurnal Maximum	

C - Calibration N - Not Valid A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 212 ppb 24-hr 106 ppb

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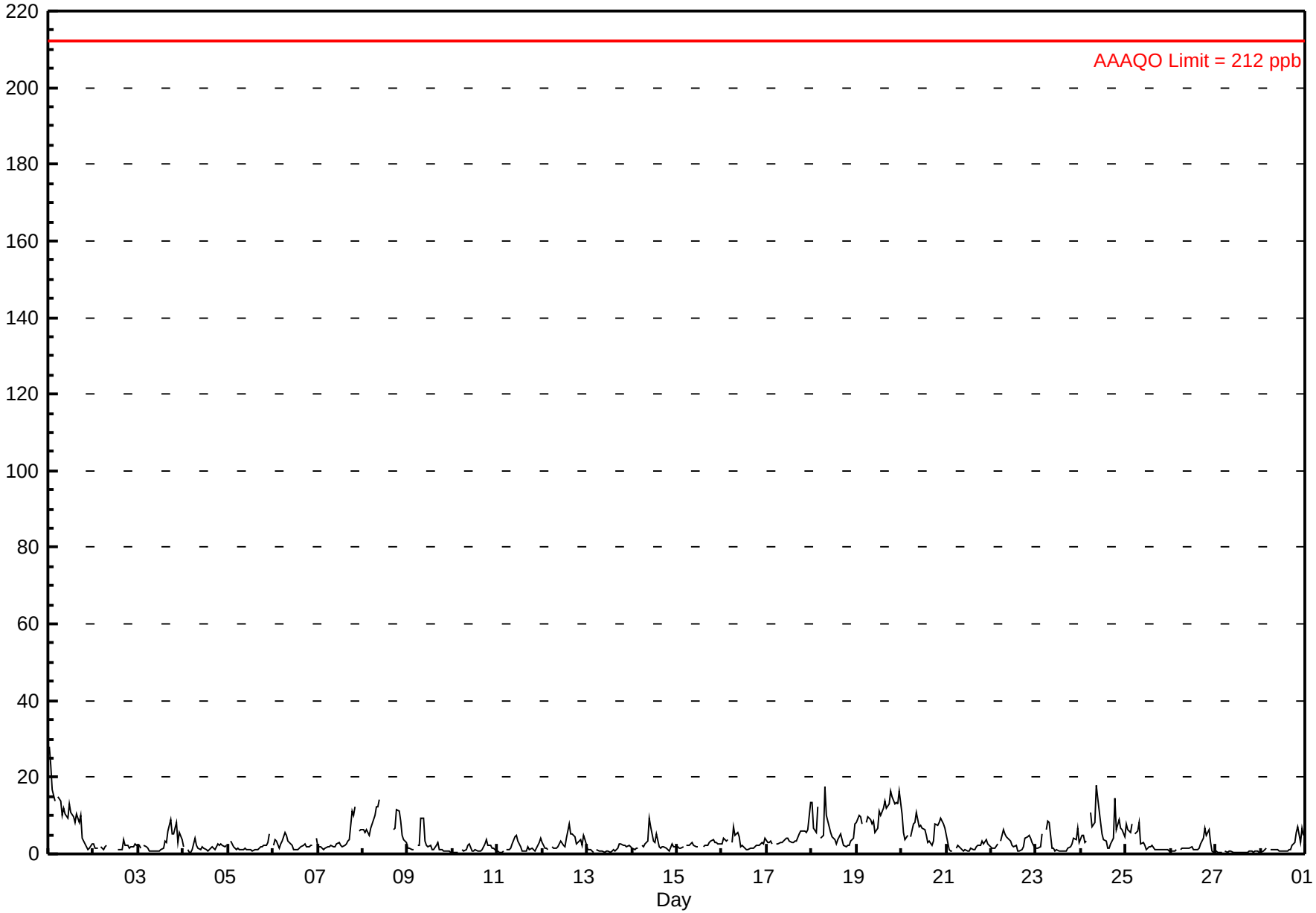
Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - February 2011



FOCUS AIR QUALITY MONITORING

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Peace Air Shed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - February 2011

Maximum Value: 41.1 ppb on Feb 18 04:00

Maximum Daily Average: 16.8 ppb on Feb 1

Minimum Value: 1 ppb on Feb 27 03:00

Minimum Daily Average: 1.0 ppb on Feb 27

Maximum Diurnal Average: 9.4 ppb at hour 8

Minimum Diurnal Average: 4.2 ppb at hour 5

Monthly Average: 6.34 ppb

Percentiles: P_1 = 0.7 P_{10} = 1.8 Q_1 = 2.7 Median = 4.3 Q_3 = 7.6 P_{90} = 14.3 P_{99} = 30.1

Hours in Service:	672
Hours of Data:	631
Hours of Missing Data:	41
Hours of Calibration:	35
Percent Operational Time:	99.1

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	31	31	30	19	A	26	33	20	23	23	16	16	12	13	10	16	12	16	9	6	5	5	4	12	16.8	32.6
2-Feb	9	3	8	A	4	4	7	7	C	C	C	C	C	2	3	3	9	5	6	8	5	6	8	4	5.6	9.1
3-Feb	4	5	A	4	6	4	2	2	4	3	3	3	3	5	8	6	13	20	10	11	16	4	21	8	7.2	21.0
4-Feb	4	A	3	1	3	6	13	8	6	3	8	4	4	2	4	4	3	2	5	3	4	3	2	5	4.4	13.5
5-Feb	A	5	6	5	2	3	2	2	2	2	2	1	2	1	2	2	2	3	3	3	3	4	8	A	3.0	7.6
6-Feb	4	7	5	2	4	5	7	7	5	3	4	2	3	3	3	5	3	3	3	2	3	3	A	6	4.0	7.5
7-Feb	3	2	3	1	2	2	4	7	4	3	5	6	3	3	3	4	6	6	16	16	23	A	7	7	5.8	22.8
8-Feb	8	9	17	7	9	10	15	18	18	25	N	N	N	N	N	N	7	8	33	14	13	9	7	6	12.8	33.4
9-Feb	4	2	3	3	A	5	5	18	19	7	5	5	6	3	3	7	6	3	3	2	3	3	2	2	5.1	19.0
10-Feb	1	2	1	1	A	3	2	3	6	6	2	2	3	2	2	2	3	7	6	4	3	3	4	2	3.1	6.7
11-Feb	1	1	2	3	A	4	3	7	8	10	8	7	4	4	3	2	6	4	5	3	4	4	5	8	4.6	9.7
12-Feb	6	3	2	2	A	3	6	3	5	4	6	3	3	14	15	9	10	7	5	12	13	4	11	10	6.8	15.3
13-Feb	3	3	3	1	A	3	2	1	4	2	2	1	3	3	3	3	3	5	5	6	4	3	4	3	3.0	6.3
14-Feb	2	2	4	3	A	4	3	4	10	15	12	6	5	8	5	4	3	3	2	3	1	3	2	2	4.7	14.8
15-Feb	2	2	2	7	A	3	3	4	4	4	3	3	A	A	2	3	3	4	5	6	5	4	4	4	3.6	7.2
16-Feb	4	5	5	7	A	5	12	11	9	8	3	4	2	2	2	2	3	2	3	4	3	4	3	5	4.7	12.0
17-Feb	4	5	5	4	A	4	3	5	4	5	5	5	4	3	3	4	5	7	7	7	7	7	8	24	5.9	24.0
18-Feb	18	14	9	41	A	10	10	40	18	11	7	8	6	4	6	8	7	4	3	3	3	4	7	9	10.8	41.1
19-Feb	12	15	14	9	A	11	11	10	8	23	15	12	18	11	16	17	14	16	23	22	20	19	16	20	15.4	23.4
20-Feb	16	7	5	6	A	10	16	11	37	18	19	8	8	6	6	4	4	12	24	12	9	11	9	9	11.6	36.8
21-Feb	7	2	2	2	A	3	8	7	3	3	4	3	2	4	2	2	2	3	3	6	4	5	4	3	3.7	7.8
22-Feb	3	3	2	3	A	5	9	7	7	5	5	4	3	3	1	1	2	5	6	6	7	7	9	3	4.6	8.8
23-Feb	2	2	3	7	A	11	13	15	2	3	1	2	1	1	1	1	2	3	3	7	8	5	8	5	4.6	14.9
24-Feb	11	8	4	4	A	18	9	15	27	31	17	8	6	4	5	3	4	5	23	13	13	7	8	6	10.8	31.2
25-Feb	10	7	7	13	A	14	11	23	6	8	4	4	4	4	5	3	5	3	3	3	3	4	5	4	6.7	23.4
26-Feb	3	2	2	2	A	2	3	3	3	3	4	3	3	4	4	4	5	9	13	7	12	5	2	1	4.2	12.7
27-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1.0	1.5
28-Feb	1	1	2	3	A	3	3	2	2	4	2	1	1	1	2	2	2	5	7	10	14	4	13	7	3.9	14.0
	6.4	5.6	5.5	5.9	4.2	6.5	7.7	9.4	9.0	8.6	6.2	4.7	4.3	4.3	4.4	4.5	5.2	6.1	8.4	7.2	7.5	5.3	6.7	6.6	Diurnal Average	
	30.7	31.2	30.0	41.1	8.9	25.6	32.6	39.6	36.8	31.2	19.1	16.4	17.7	14.5	16.0	17.2	13.8	20.2	33.4	22.5	22.8	19.1	21.0	24.0	Diurnal Maximum	

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

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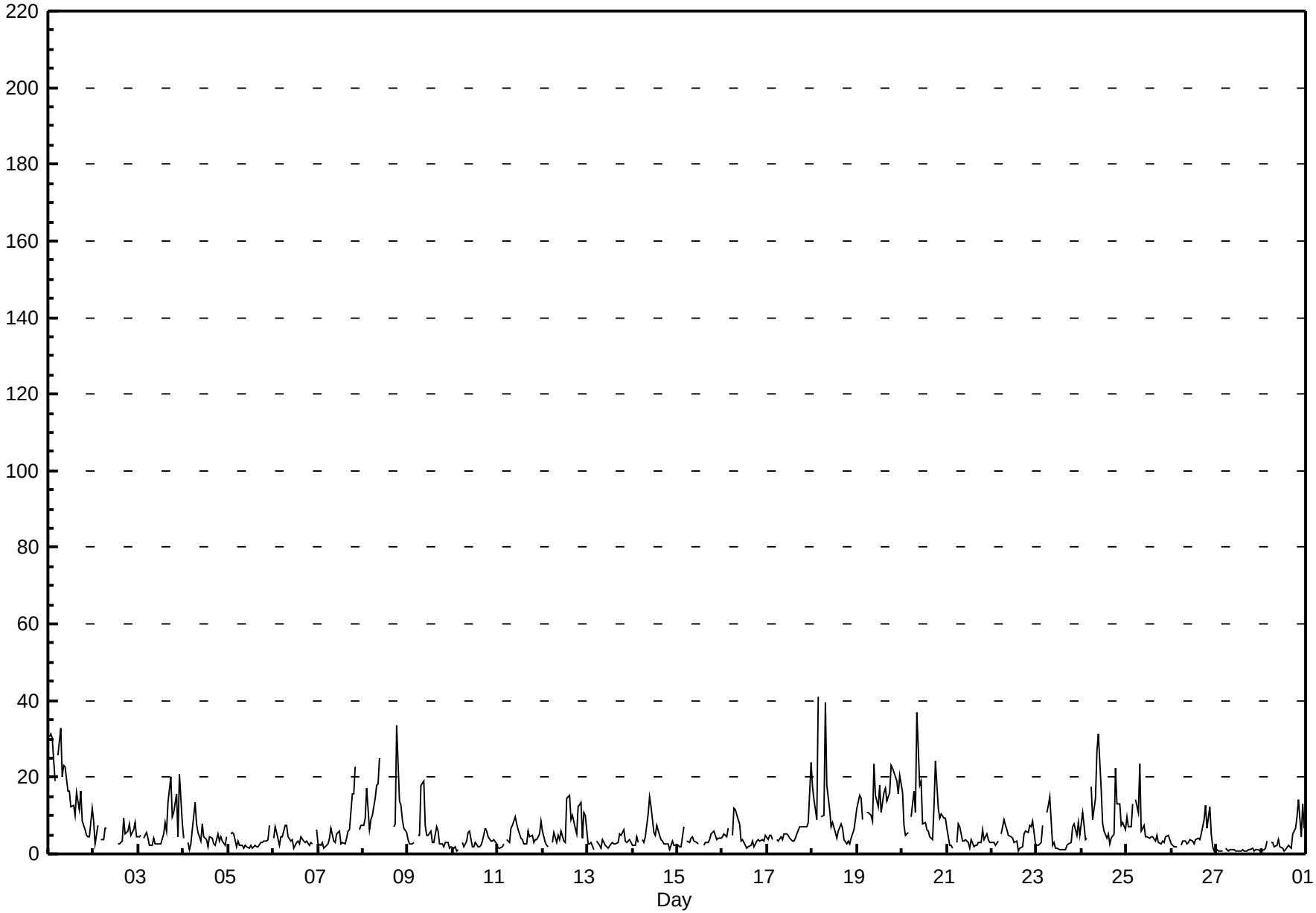
Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - February 2011



FOCUS AIR QUALITY MONITORING

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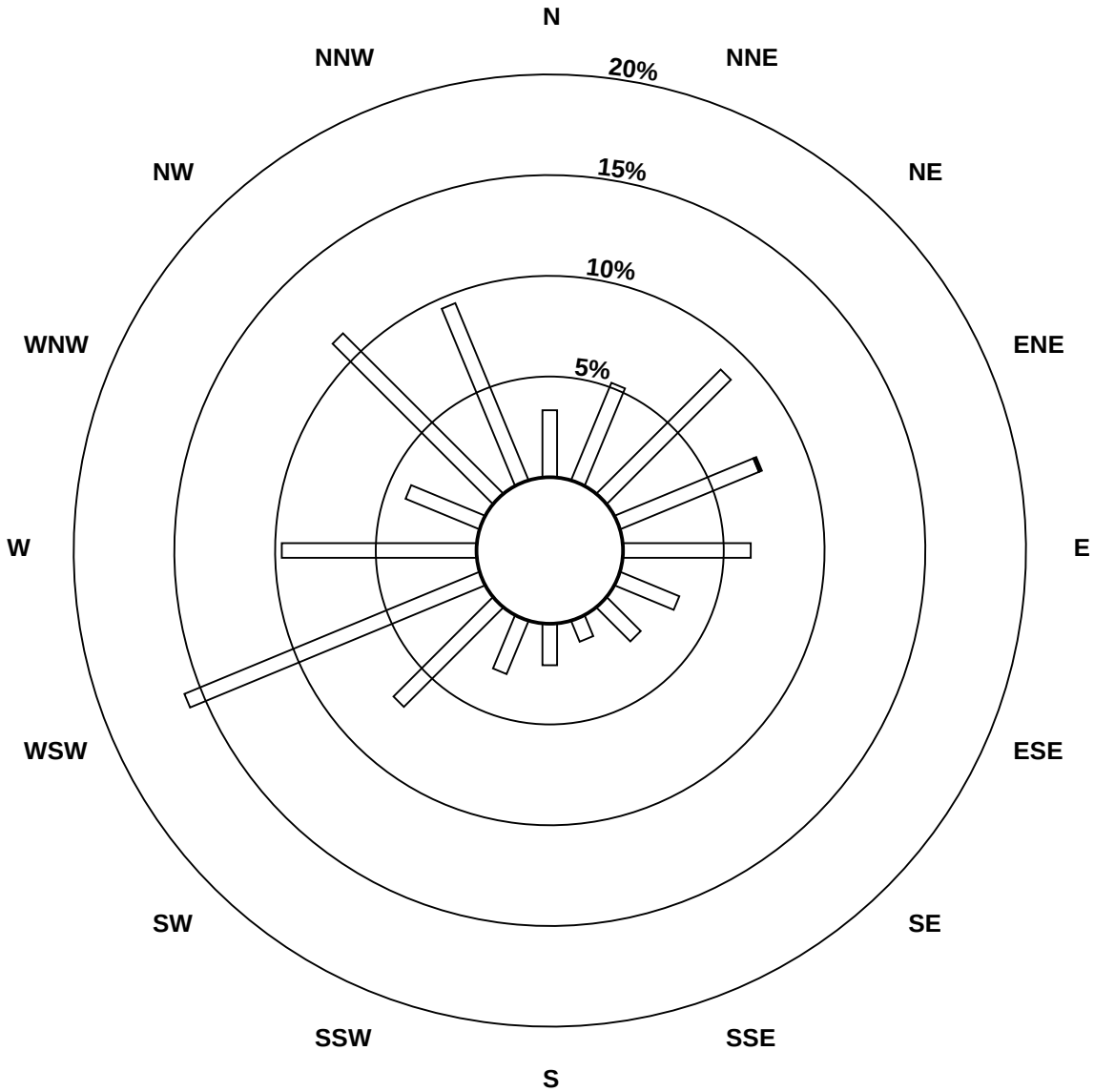
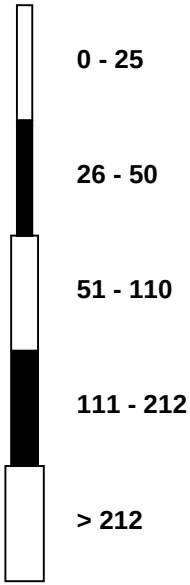
Pollutant Rose

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - February 2011



Pollutant Classes (ppb)



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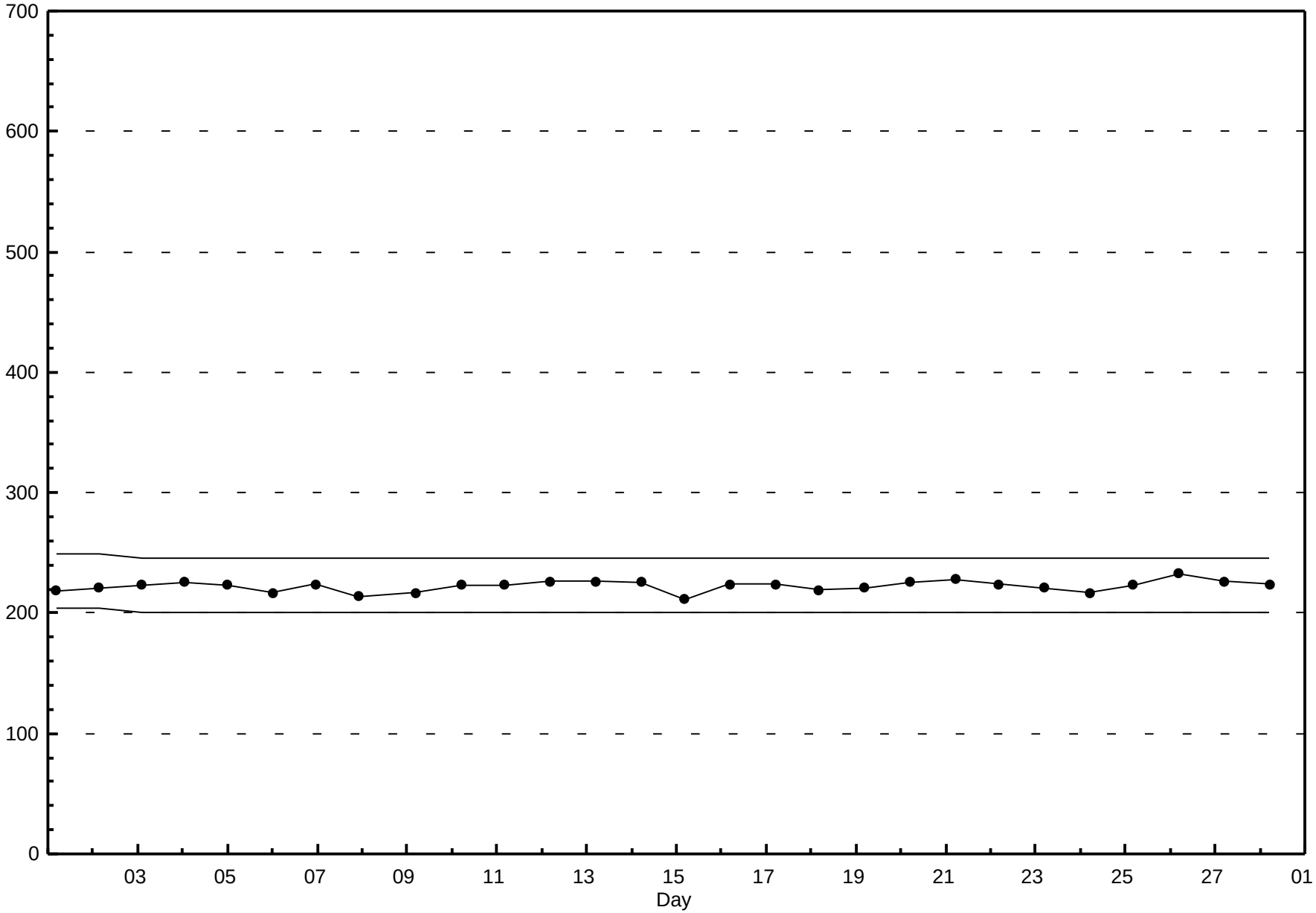
Span Responses

Nitrogen Dioxide (NO_2)

Beaverlodge - February 2011



FOCUS AIR QUALITY MONITORING

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Peace Air Shed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Beaverlodge - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 18.5 ppb on Feb 19 13:00
Maximum Daily Average: 4.4 ppb on Feb 19

Minimum Value: 0 ppb on Feb 2 01:00
Maximum Diurnal Average: 2.3 ppb at hour 13
Monthly Average: 0.66 ppb

Minimum Daily Average: 0.1 ppb on Feb 27
Minimum Diurnal Average: 0.0 ppb at hour 5
Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.0$ Median = 0.1 $Q_3 = 0.4$ $P_{90} = 1.3$ $P_{99} = 6.3$

Hours in Service:	672
Hours of Data:	631
Hours of Missing Data:	41
Hours of Calibration:	35
Percent Operational Time:	99.1

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	8	4	1	0	A	0	0	0	0	1	4	9	8	6	5	5	1	0	0	0	0	0	0	0	2.4	9.1
2-Feb	0	0	0	A	0	0	0	0	C	C	C	C	C	0	0	0	1	0	0	0	0	0	0	0	0.1	0.6
3-Feb	0	0	A	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0.2	1.2
4-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.1	0.7
5-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.4
6-Feb	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	1	0	0	0	0	0	0	A	0	0.2	0.7
7-Feb	0	0	0	0	0	0	0	0	0	0	1	2	1	1	1	1	1	0	0	0	0	A	0	0	0.4	2.0
8-Feb	0	0	0	0	0	0	0	0	1	6	N	N	N	N	N	N	3	1	0	0	0	0	0	0	0.6	5.8
9-Feb	0	0	0	0	A	0	0	0	0	1	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0.2	1.3
10-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
11-Feb	0	0	0	0	A	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	1.4
12-Feb	0	0	0	0	A	0	0	0	0	0	1	1	1	2	3	1	1	0	0	0	0	0	0	0	0.4	2.5
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	0.1	0.3
14-Feb	0	0	0	0	A	0	0	0	0	2	2	1	1	2	0	0	0	0	0	0	0	0	0	0	0.4	1.9
15-Feb	0	0	0	0	A	0	0	0	0	1	1	1	A	A	1	1	1	0	0	0	0	0	0	0	0.3	1.2
16-Feb	0	0	0	0	A	0	0	0	0	1	1	2	1	1	1	1	0	0	0	0	0	0	0	0	0.3	1.7
17-Feb	0	0	0	0	A	0	0	0	0	1	2	3	3	2	2	2	2	1	0	0	0	0	0	0	0.8	3.5
18-Feb	0	0	0	0	A	0	0	3	1	4	6	6	6	4	4	5	2	0	0	0	0	0	0	0	1.8	6.4
19-Feb	0	0	0	0	A	0	0	0	1	5	5	9	18	15	17	18	9	3	1	0	0	0	0	0	4.4	18.5
20-Feb	0	0	0	0	A	0	0	0	1	2	4	4	4	3	1	1	1	0	0	0	0	0	0	0	0.9	4.2
21-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0.2	0.8
22-Feb	0	0	0	0	A	0	0	0	0	1	2	2	1	2	0	0	0	0	0	0	0	0	0	0	0.4	2.0
23-Feb	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
24-Feb	0	0	0	0	A	0	0	0	6	16	10	8	5	4	1	1	2	1	1	0	0	0	0	0	2.4	15.7
25-Feb	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.4	1.4
26-Feb	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.3	0.7
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	0.1	0.2
28-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0.2	0.7
	0.3	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.4	1.7	1.8	2.1	2.3	1.9	1.6	1.6	1.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0	Diurnal Average	
	8.2	3.6	0.9	0.4	0.0	0.2	0.4	2.6	5.7	15.7	10.2	9.1	18.5	15.1	17.1	17.6	8.6	3.4	0.6	0.1	0.2	0.1	0.1	0.1	Diurnal Maximum	

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

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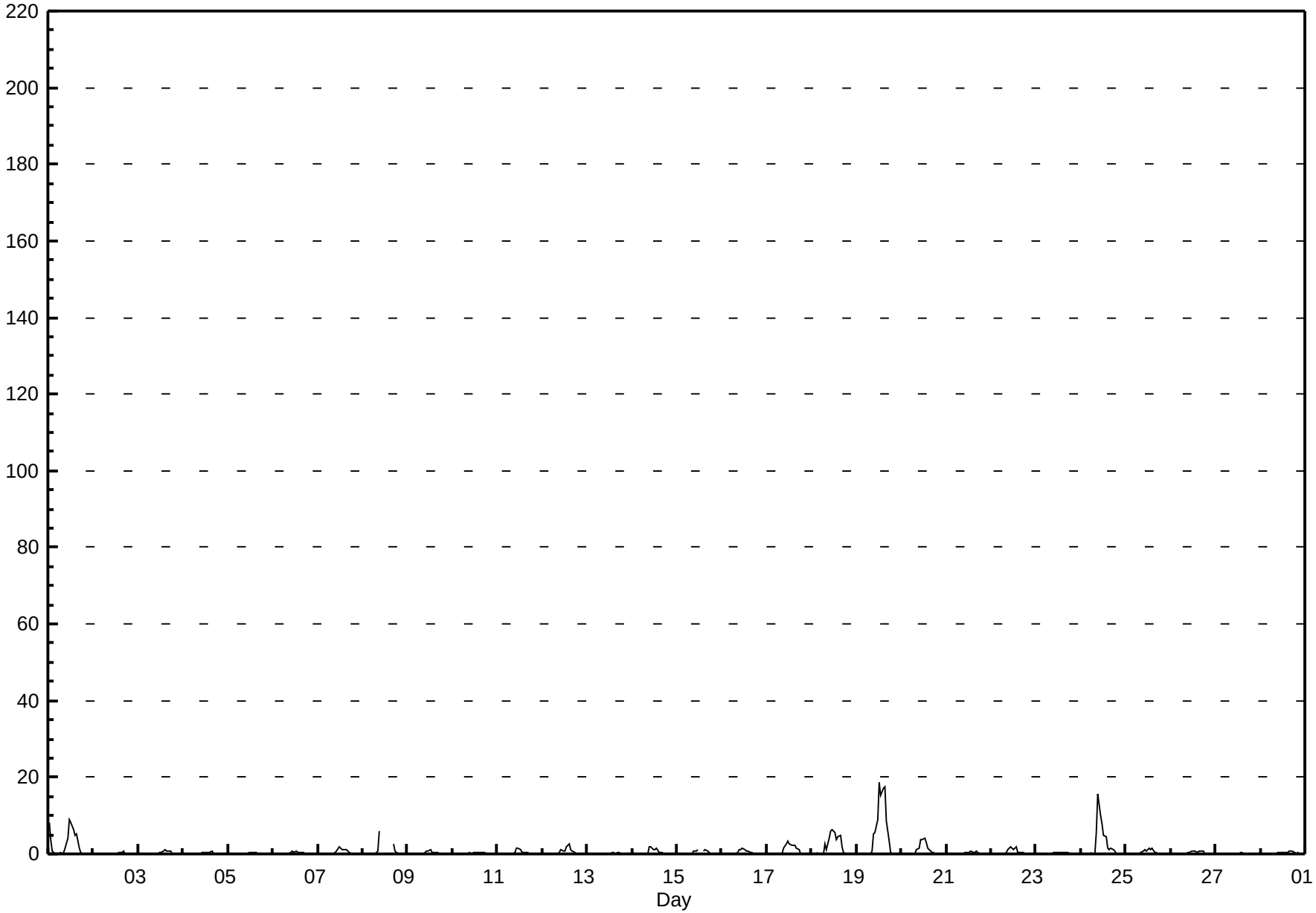
Peace Air Shed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Beaverlodge - February 2011



FOCUS AIR QUALITY MONITORING

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Hourly Maximums

Nitrogen Oxide (NO) - ppb

Beaverlodge - February 2011

Maximum Value: 42.8 ppb on Feb 24 10:00

Maximum Daily Average: 7.8 ppb on Feb 19

Minimum Value: 0 ppb on Feb 5 21:00

Minimum Daily Average: 0.3 ppb on Feb 5

Maximum Diurnal Average: 4.5 ppb at hour 11

Minimum Diurnal Average: 0.2 ppb at hour 5

Monthly Average: 1.62 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.2$ Median = 0.4 $Q_3 = 1.3$ $P_{90} = 3.3$ $P_{99} = 20.3$

Hours in Service:	672
Hours of Data:	631
Hours of Missing Data:	41
Hours of Calibration:	35
Percent Operational Time:	99.1

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	21	22	14	0	A	1	5	2	1	4	12	12	10	10	6	20	4	1	0	0	0	0	0	0	6.4	21.6
2-Feb	0	0	0	A	0	0	0	0	C	C	C	C	C	1	1	1	1	0	1	0	0	0	0	0	0.5	1.5
3-Feb	0	0	A	0	0	1	0	0	1	1	1	1	1	2	3	2	3	3	0	0	0	0	1	0	0.9	3.3
4-Feb	0	A	1	0	0	0	0	1	1	1	2	1	2	1	2	2	0	0	0	0	0	0	0	0	0.7	2.2
5-Feb	A	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	A	0.3	1.1
6-Feb	0	0	0	0	0	0	1	0	0	1	1	1	2	2	1	1	1	0	0	0	0	0	A	0	0.5	1.7
7-Feb	0	0	1	0	0	0	0	1	0	1	2	5	2	2	2	3	1	1	0	0	0	A	0	0	1.0	4.8
8-Feb	0	0	0	0	0	0	1	3	6	9	N	N	N	N	N	N	3	1	7	0	1	1	0	0	1.9	8.8
9-Feb	0	0	0	0	A	0	0	0	0	2	2	2	3	1	1	2	2	0	0	0	0	0	0	0	0.8	3.5
10-Feb	0	0	0	0	A	0	1	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.5	1.1
11-Feb	0	0	0	0	A	0	1	1	0	2	3	2	2	2	1	1	2	1	1	1	1	0	0	0	0.9	2.6
12-Feb	0	0	0	0	A	0	0	0	0	1	3	2	1	7	7	2	1	0	0	0	0	0	0	0	1.2	7.4
13-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	0.4	1.3
14-Feb	0	0	0	0	A	0	0	0	1	4	3	2	2	3	2	1	1	0	1	0	0	0	0	0	0.9	3.8
15-Feb	0	0	0	1	A	0	0	1	1	1	1	3	A	A	1	1	1	1	0	0	0	0	0	0	0.6	2.5
16-Feb	0	0	0	0	A	0	0	0	1	3	2	3	2	1	2	1	1	0	0	0	0	0	0	0	0.8	3.1
17-Feb	0	0	0	0	A	0	0	0	0	3	4	4	4	3	3	3	3	2	0	0	0	0	0	1	1.3	4.0
18-Feb	0	0	0	7	A	0	0	18	7	7	8	14	10	6	6	7	5	1	1	0	0	0	0	0	4.3	17.9
19-Feb	0	0	0	0	A	0	0	0	2	19	14	21	35	18	24	23	14	6	2	0	0	1	0	0	7.8	34.7
20-Feb	0	0	0	0	A	0	0	0	9	4	15	5	6	5	3	2	1	2	1	1	0	0	0	0	2.3	14.9
21-Feb	0	0	0	0	A	0	0	1	1	1	2	1	1	2	1	1	1	1	0	0	0	0	0	0	0.6	2.2
22-Feb	0	0	0	0	A	0	0	0	1	2	3	3	2	3	0	1	1	0	0	0	0	0	0	0	0.8	3.1
23-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	0.5	1.4
24-Feb	0	1	0	0	A	1	1	1	11	43	30	11	9	6	5	3	3	2	2	0	0	0	0	0	5.6	42.8
25-Feb	0	0	0	0	A	0	0	1	1	4	3	3	4	3	4	2	2	1	1	1	0	1	0	0	1.2	3.7
26-Feb	0	0	0	0	A	0	0	0	0	1	1	1	1	2	2	1	2	1	1	0	0	0	0	0	0.7	2.5
27-Feb	0	0	0	0	A	0	1	1	1	1	1	0	1	1	1	3	0	0	0	1	0	0	0	0	0.6	3.4
28-Feb	0	0	0	0	A	2	3	1	1	2	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1.0	2.7
	0.9	1.0	0.7	0.4	0.2	0.3	0.6	1.2	1.8	4.4	4.5	3.9	4.1	3.3	3.1	3.3	2.0	1.0	0.7	0.3	0.3	0.2	0.2	0.2	Diurnal Average	
	20.9	21.6	13.6	6.9	0.4	2.3	5.2	17.9	11.3	42.8	30.3	21.0	34.7	17.7	24.3	23.3	14.3	5.6	7.3	1.3	1.5	0.7	0.9	0.6	Diurnal Maximum	

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

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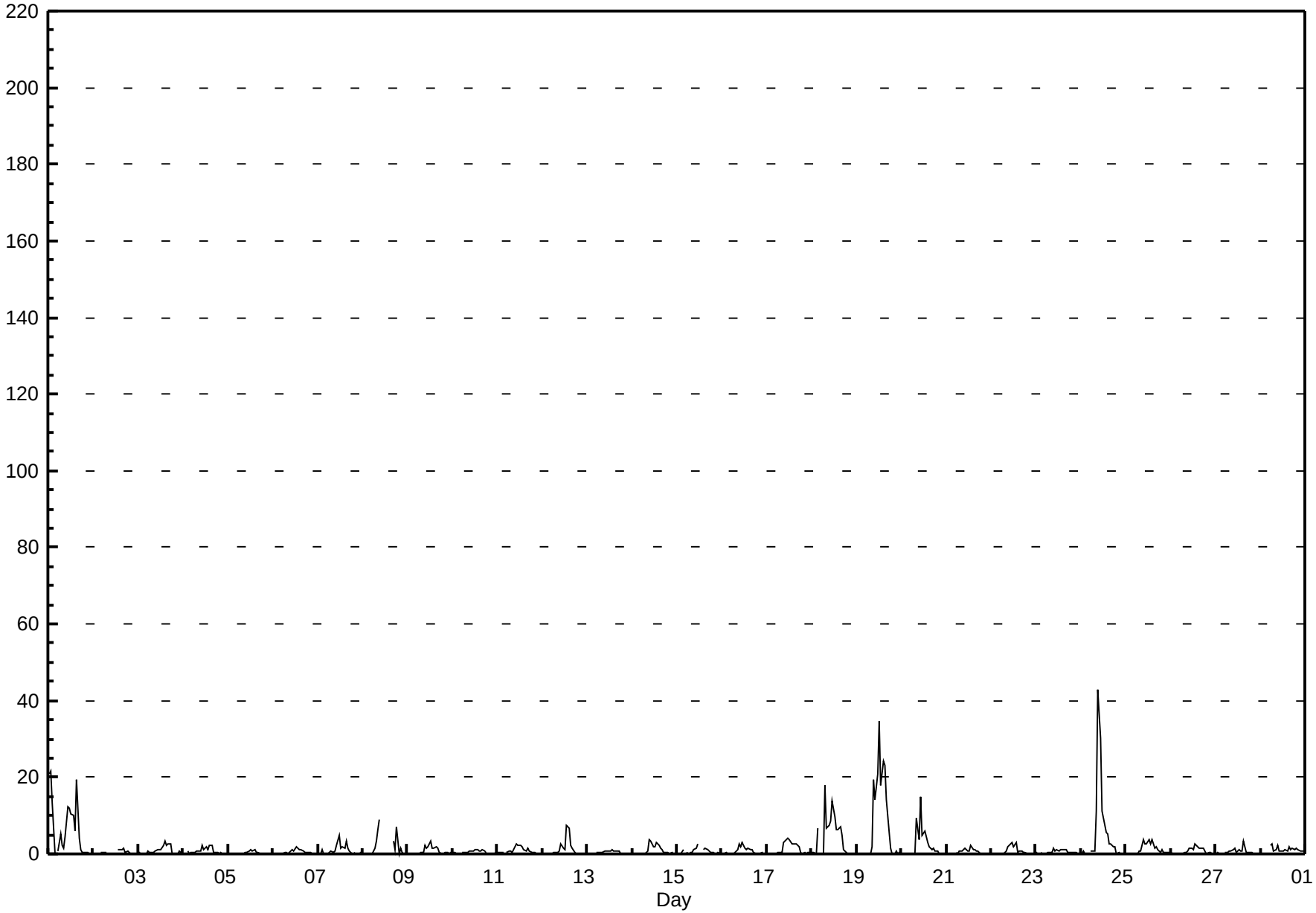
Hourly Maximums

Nitrogen Oxide (NO) - ppb

Beaverlodge - February 2011



FOCUS AIR QUALITY MONITORING

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Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 36.2 ppb on Feb 1 01:00
Maximum Daily Average: 15.3 ppb on Feb 19

Minimum Value: 0 ppb on Feb 10 04:00
Maximum Diurnal Average: 6.0 ppb at hour 10
Monthly Average: 4.23 ppb

Minimum Daily Average: 0.6 ppb on Feb 27
Minimum Diurnal Average: 2.4 ppb at hour 5
Percentiles: P_1 = 0.5 P_{10} = 0.9 Q_1 = 1.5 Median = 2.5 Q_3 = 5.2 P_{90} = 9.9 P_{99} = 24.8

Hours in Service:	672
Hours of Data:	631
Hours of Missing Data:	41
Hours of Calibration:	35
Percent Operational Time:	99.1

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	36	27	18	14	A	15	14	10	12	12	13	22	19	16	13	16	10	10	4	3	2	1	2	3	12.7	36.2
2-Feb	3	1	2	A	2	1	2	2	C	C	C	C	C	1	2	1	4	2	2	1	2	2	3	2	2.0	4.3
3-Feb	2	2	A	2	2	2	1	1	1	1	1	1	1	2	5	4	7	10	5	5	8	3	5	4	3.2	9.6
4-Feb	2	A	1	0	0	1	4	2	2	1	2	2	2	1	1	3	2	1	3	2	3	2	2	2	1.9	4.1
5-Feb	A	3	3	2	1	1	1	1	1	2	1	1	2	1	1	1	1	2	2	2	2	3	5	A	1.9	5.3
6-Feb	2	4	3	2	3	3	5	5	4	3	3	2	2	2	2	2	3	3	2	2	2	2	A	4	2.8	5.4
7-Feb	2	2	1	1	2	2	2	2	2	2	4	5	4	3	3	4	4	4	11	10	12	A	6	6	4.1	12.4
8-Feb	6	6	7	5	7	8	10	12	13	20	N	N	N	N	N	N	9	7	12	11	9	5	4	3	8.5	19.9
9-Feb	2	1	1	1	A	2	2	9	9	4	3	3	4	2	1	3	4	1	1	1	1	1	1	1	2.5	9.2
10-Feb	0	1	0	0	A	1	1	1	2	3	1	1	2	1	1	1	1	3	4	2	2	2	2	1	1.5	3.7
11-Feb	1	1	1	1	A	1	1	2	3	5	6	5	3	1	1	1	2	1	1	1	1	1	3	4	2.1	6.5
12-Feb	3	2	2	1	A	2	2	1	2	3	4	3	3	6	11	7	6	5	3	3	4	2	5	4	3.5	10.5
13-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	2	3	3	2	2	2	2	2	1.4	2.9
14-Feb	2	1	2	1	A	2	2	2	4	11	9	4	4	7	2	2	2	2	2	1	1	3	2	2	3.0	11.0
15-Feb	2	1	1	2	A	2	2	3	3	3	3	3	A	A	3	3	3	3	4	4	3	3	3	2	2.7	3.8
16-Feb	2	4	3	4	A	3	7	5	6	5	3	4	2	2	2	2	2	1	2	2	2	3	3	4	3.3	7.0
17-Feb	3	3	3	3	A	3	2	3	3	5	7	8	6	5	5	5	5	6	6	6	6	6	6	13	5.2	13.3
18-Feb	13	7	5	13	A	4	5	20	11	11	11	11	10	6	8	10	6	3	2	2	2	3	4	8	7.7	20.2
19-Feb	8	10	10	8	A	8	10	9	9	14	11	16	30	25	29	32	21	16	17	15	13	13	13	16	15.3	31.7
20-Feb	10	5	4	5	A	4	8	8	12	9	11	10	11	8	4	4	3	4	8	7	8	9	8	7	7.3	11.7
21-Feb	5	1	1	1	A	1	2	2	1	1	1	1	1	2	2	2	2	2	2	3	3	4	3	2	2.0	4.8
22-Feb	2	2	2	3	A	3	6	5	5	5	5	4	3	4	1	1	1	2	4	5	5	4	3	1	3.3	6.4
23-Feb	2	2	2	5	A	6	9	8	2	2	1	1	1	1	1	1	1	2	2	3	4	4	7	3	3.0	8.7
24-Feb	5	5	3	3	A	11	7	8	24	30	18	13	9	8	3	3	4	5	15	6	9	7	6	5	9.0	30.2
25-Feb	8	6	6	8	A	5	6	8	3	4	3	2	3	3	4	2	1	1	1	1	1	1	1	1	3.5	8.3
26-Feb	1	1	1	1	A	1	2	1	1	2	2	2	2	2	2	2	3	5	7	5	6	3	1	0	2.3	6.9
27-Feb	1	1	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0.6	0.8
28-Feb	1	1	1	2	A	1	1	1	1	1	1	1	1	1	1	2	2	3	3	6	7	3	7	5	2.3	7.4
	4.6	3.7	3.1	3.3	2.4	3.5	4.1	4.9	5.0	6.0	4.9	5.0	5.0	4.3	4.1	4.3	4.0	3.9	4.6	4.1	4.3	3.4	3.9	3.9	Diurnal Average	
	36.2	26.8	17.7	14.0	6.8	14.9	14.3	20.2	23.6	30.2	18.3	22.3	29.8	25.1	29.2	31.7	20.5	16.3	16.6	14.8	12.9	13.4	13.1	16.2	Diurnal Maximum	

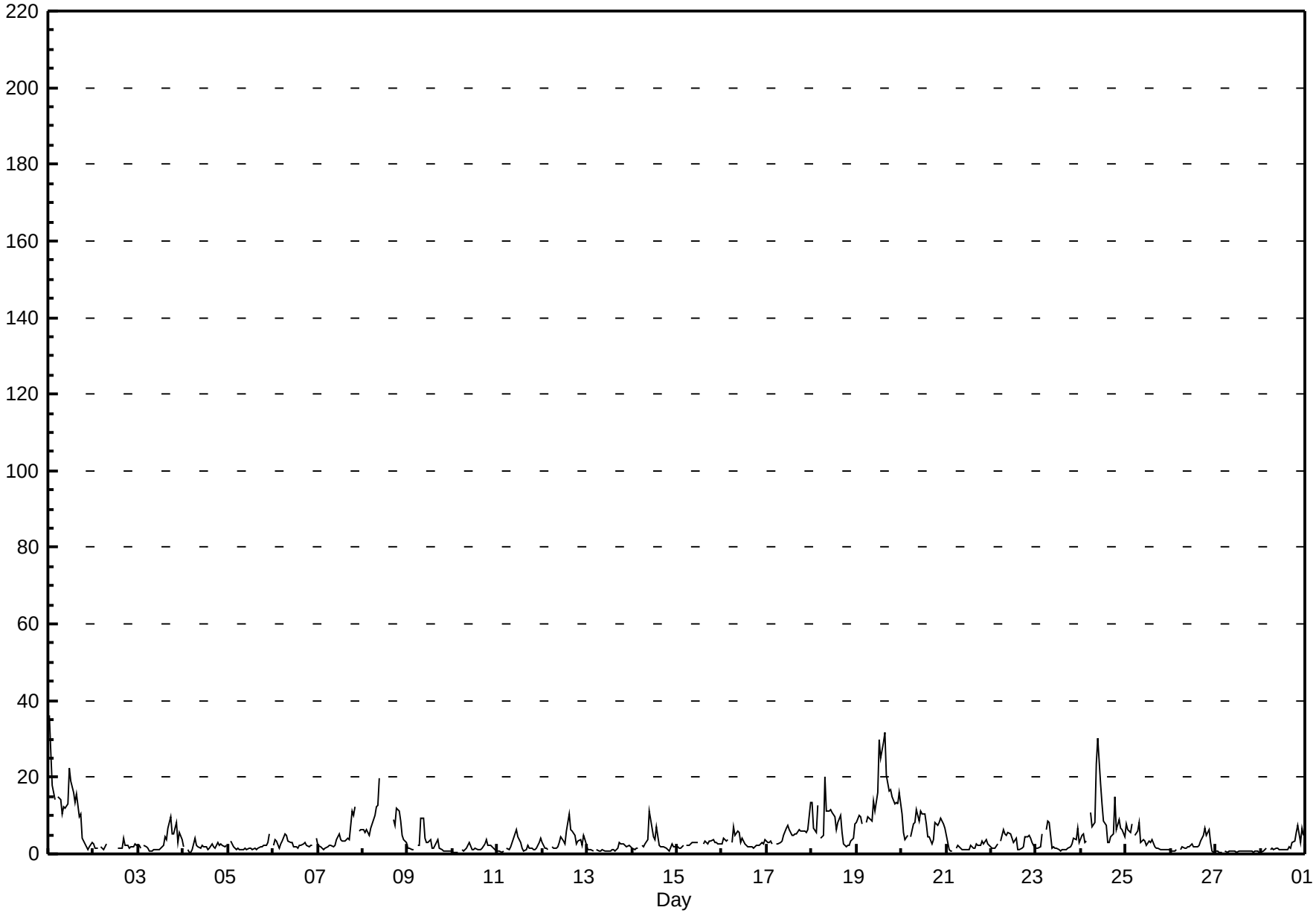
C - Calibration N - Not Valid A - Automated Daily Zero Span

PASZA
Peace Air Shed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - February 2011

Maximum Value: 73.1 ppb on Feb 24 10:00

Maximum Daily Average: 22.7 ppb on Feb 19

Minimum Value: 1 ppb on Feb 27 03:00

Minimum Daily Average: 1.4 ppb on Feb 27

Maximum Diurnal Average: 12.6 ppb at hour 10

Minimum Diurnal Average: 4.3 ppb at hour 5

Monthly Average: 7.78 ppb

Percentiles: P_1 = 0.8 P_{10} = 2.1 Q_1 = 3.2 Median = 5.0 Q_3 = 8.6 P_{90} = 15.9 P_{99} = 44.8

Hours in Service:	672
Hours of Data:	631
Hours of Missing Data:	41
Hours of Calibration:	35
Percent Operational Time:	99.1

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	51	50	43	19	A	26	38	22	25	27	28	28	22	22	16	29	16	17	9	6	5	5	4	12	22.6	51.4
2-Feb	9	3	8	A	4	4	7	7	C	C	C	C	C	4	4	4	10	5	7	8	5	6	8	4	5.9	10.3
3-Feb	4	5	A	4	6	4	2	3	4	4	4	3	4	8	12	8	16	22	10	11	16	4	22	8	7.9	22.0
4-Feb	4	A	4	1	3	6	14	8	6	4	10	5	6	3	7	6	3	2	5	3	4	3	2	5	5.0	13.6
5-Feb	A	5	6	5	2	3	2	2	2	3	2	2	3	2	3	2	2	3	3	3	3	4	8	A	3.2	7.6
6-Feb	4	7	5	2	4	5	8	8	5	4	5	2	5	5	4	6	4	4	4	2	3	3	A	6	4.5	7.9
7-Feb	3	2	4	2	2	3	4	8	4	3	8	11	4	5	4	7	7	7	16	15	23	A	7	7	6.7	22.8
8-Feb	8	9	17	6	9	10	16	21	22	31	N	N	N	N	N	N	10	9	38	14	14	9	7	6	14.2	37.7
9-Feb	4	3	3	3	A	5	5	18	19	10	6	7	9	4	4	9	8	3	3	2	3	3	2	2	5.9	19.3
10-Feb	2	2	1	1	A	3	2	4	6	7	3	3	4	3	2	3	4	7	6	4	3	3	4	3	3.5	6.9
11-Feb	2	2	2	3	A	4	4	7	8	11	11	8	7	6	4	3	8	5	5	3	4	4	5	8	5.4	10.9
12-Feb	6	3	2	2	A	3	6	3	5	4	8	5	4	22	22	11	11	7	5	12	13	4	11	10	7.9	22.1
13-Feb	3	3	3	1	A	4	3	2	4	3	2	2	3	4	3	3	3	6	5	6	4	3	4	3	3.3	6.3
14-Feb	2	2	4	3	A	4	3	4	11	17	16	7	7	11	7	5	4	3	2	3	1	3	2	2	5.4	17.2
15-Feb	2	2	2	8	A	3	3	4	5	5	5	5	A	A	3	4	4	4	5	6	5	4	4	4	4.1	7.9
16-Feb	4	5	5	7	A	5	12	11	10	10	5	7	4	3	3	3	4	2	3	4	3	4	3	5	5.3	12.0
17-Feb	4	5	5	4	A	4	3	5	4	8	8	9	8	6	6	7	7	9	8	7	8	7	9	24	7.0	24.4
18-Feb	18	14	9	45	A	9	10	55	24	18	15	21	14	10	12	14	11	4	3	3	3	4	6	9	14.5	55.0
19-Feb	12	15	14	9	A	11	11	10	9	42	28	33	53	29	40	39	28	18	24	22	20	19	16	20	22.7	52.6
20-Feb	16	7	5	6	A	10	16	11	45	21	34	12	14	11	9	6	5	13	24	13	9	11	9	9	13.7	45.4
21-Feb	7	2	2	2	A	3	8	7	4	4	5	4	2	6	3	4	3	3	3	6	4	5	4	3	4.1	7.8
22-Feb	3	3	2	3	A	5	9	8	7	6	7	7	5	6	1	2	2	6	6	6	7	7	9	3	5.3	8.9
23-Feb	3	2	3	8	A	11	13	15	2	4	2	3	1	2	2	2	3	3	3	7	8	5	8	5	5.0	14.9
24-Feb	11	8	4	4	A	18	10	15	38	73	47	19	14	10	10	5	6	7	23	13	13	7	8	6	16.1	73.1
25-Feb	10	7	7	13	A	14	11	24	7	11	6	7	7	7	8	5	7	4	3	4	4	5	5	4	7.8	23.7
26-Feb	3	2	2	2	A	2	4	3	3	4	5	5	4	6	6	5	7	10	13	7	12	5	2	1	4.9	12.7
27-Feb	1	1	1	1	A	2	1	1	2	2	1	1	2	1	2	4	1	1	1	2	1	1	1	1	1.4	3.8
28-Feb	1	1	2	3	A	5	6	2	3	5	2	2	1	2	3	4	3	7	8	10	15	5	13	7	4.7	14.6
	7.2	6.3	6.1	6.2	4.3	6.6	8.2	10.3	10.5	12.6	10.5	8.4	8.3	7.5	7.4	7.5	7.1	6.8	8.8	7.3	7.6	5.4	6.8	6.6	Diurnal Average	
	51.4	49.8	43.2	44.9	8.7	26.2	37.9	55.0	45.4	73.1	47.0	33.0	52.6	28.5	40.2	39.4	28.2	22.0	37.7	22.4	22.8	19.4	21.7	24.4	Diurnal Maximum	

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

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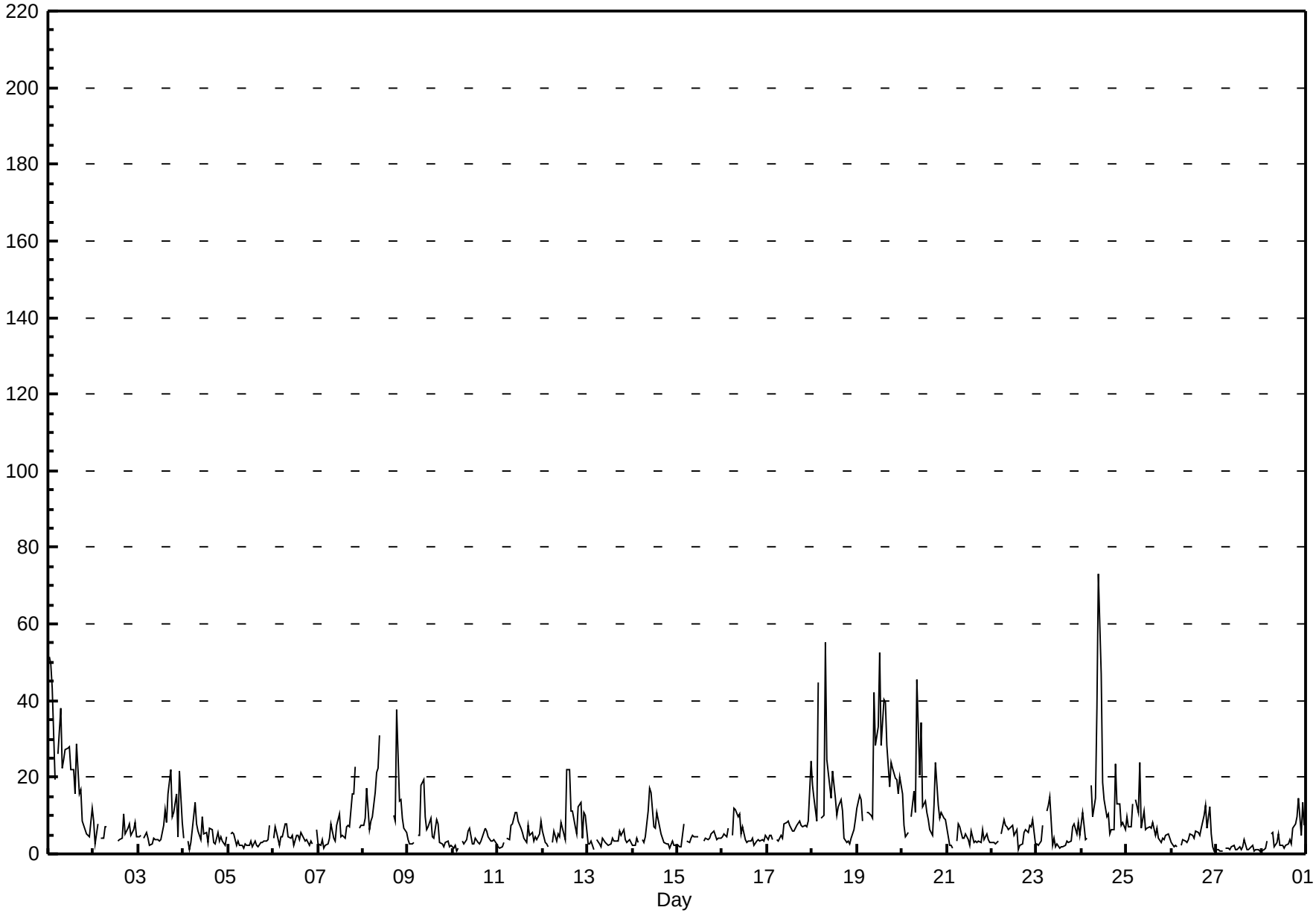
Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - February 2011



FOCUS AIR QUALITY MONITORING

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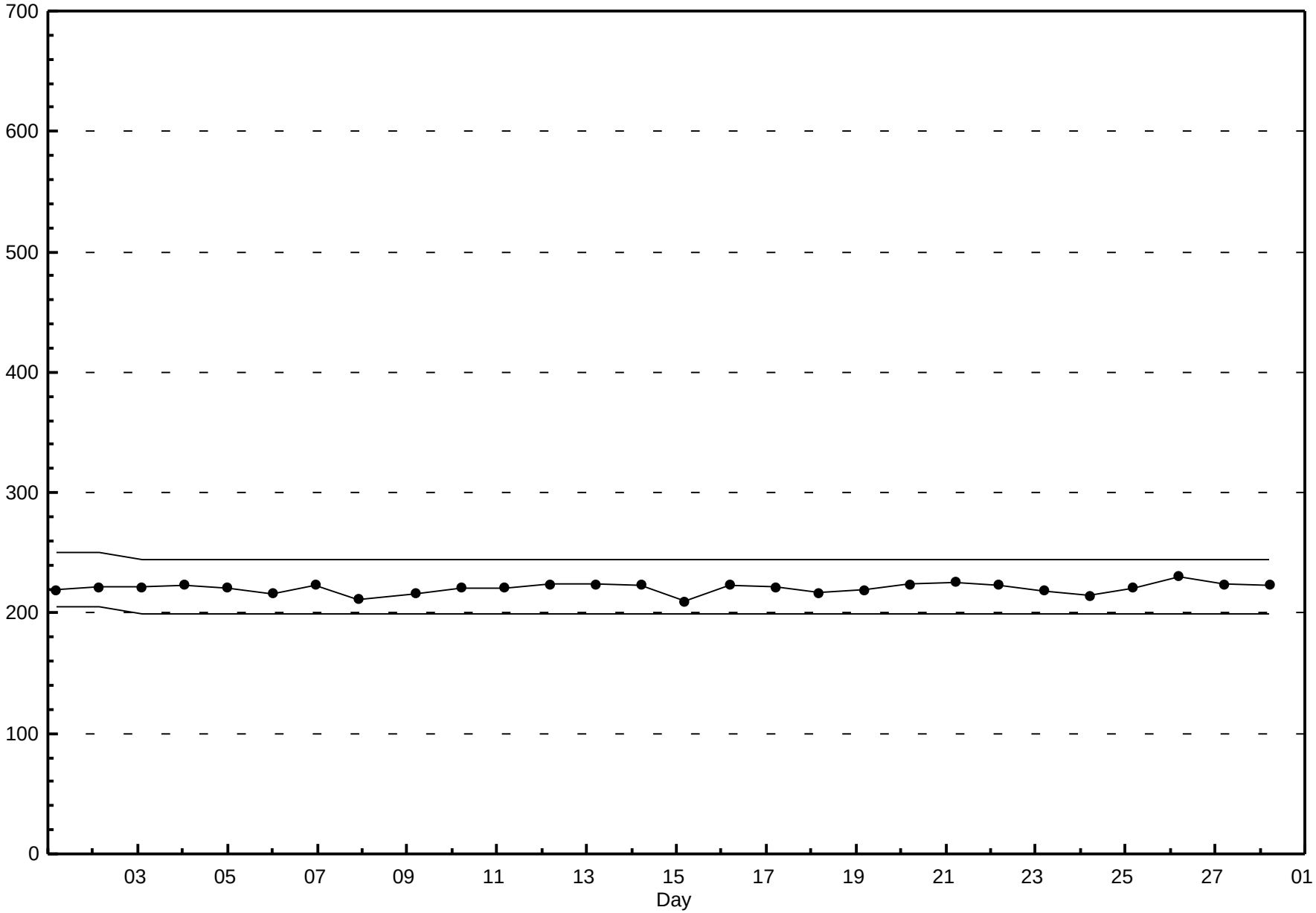
Span Responses

Oxides of Nitrogen (NO_X)

Beaverlodge - February 2011



FOCUS AIR QUALITY MONITORING

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Hourly Averages

Ozone (O_3) - ppb

Beaverlodge - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 47.4 ppb on Feb 21 03:00 Maximum Daily Average: 42.9 ppb on Feb 13

Minimum Value: 2 ppb on Feb 1 01:00 Minimum Daily Average: 26.2 ppb on Feb 19
Maximum Diurnal Average: 39.0 ppb at hour 15 Minimum Diurnal Average: 34.8 ppb at hour 8
Monthly Average: 36.77 ppb Percentiles: P_1 = 19.1 P_{10} = 28.6 Q_1 = 33.5 Median = 38.1 Q_3 = 41.0 P_{90} = 43.4 P_{99} = 46.3

Hours in Service:	672
Hours of Data:	633
Hours of Missing Data:	39
Hours of Calibration:	33
Percent Operational Time:	99.1

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	2	7	13	19	A	21	25	32	30	35	36	33	36	36	38	34	37	35	42	43	44	45	44	43	31.8	45.0
2-Feb	42	42	42	A	42	42	41	40	41	42	C	C	C	43	42	41	39	41	41	43	42	42	41	41	41.6	43.2
3-Feb	42	42	A	42	42	42	42	42	41	40	40	40	40	39	37	37	34	31	34	33	30	35	32	34	37.9	42.5
4-Feb	37	A	42	43	43	41	38	40	40	40	39	39	39	40	40	40	40	39	36	36	37	38	39	38	39.3	43.1
5-Feb	A	37	37	37	36	34	36	38	39	40	39	39	39	40	40	40	40	39	39	38	38	37	34	A	38.0	40.1
6-Feb	37	35	34	36	34	36	34	34	34	35	36	38	38	39	39	39	38	37	38	40	40	40	A	37	36.9	40.1
7-Feb	41	41	41	41	40	40	39	39	39	39	38	38	39	39	40	40	39	38	30	31	28	A	34	33	37.7	41.3
8-Feb	31	31	30	31	28	25	22	19	20	17	N	N	N	N	N	N	28	28	22	22	26	33	37	39	27.2	39.0
9-Feb	40	41	41	40	A	39	39	32	32	38	39	40	41	42	42	41	40	42	42	42	42	42	41	41	40.0	42.5
10-Feb	41	41	41	41	A	41	41	40	39	39	42	42	41	41	40	40	39	37	35	36	35	36	36	37	39.2	41.8
11-Feb	37	39	41	41	A	43	42	41	41	38	38	41	44	46	46	45	44	44	43	43	43	42	40	39	41.8	45.9
12-Feb	39	40	40	41	A	41	40	41	40	38	38	39	40	38	34	36	37	38	39	38	37	39	36	36	38.5	40.9
13-Feb	39	39	38	40	A	40	41	42	44	44	44	45	45	45	45	46	44	44	44	44	43	44	43	44	42.9	46.0
14-Feb	44	45	44	44	A	43	43	42	42	34	37	42	43	41	46	47	46	45	36	36	38	33	34	34	40.8	46.7
15-Feb	33	34	34	34	A	34	34	34	34	34	34	34	A	A	35	35	35	34	34	34	35	35	35	35	34.3	35.5
16-Feb	35	34	34	34	A	34	29	32	31	32	35	35	36	36	37	37	36	36	35	34	34	33	33	32	34.1	37.0
17-Feb	33	33	32	33	A	33	33	32	32	30	29	30	31	32	32	32	32	30	29	29	30	31	30	25	30.9	33.0
18-Feb	24	30	30	24	A	31	30	18	24	26	28	28	30	33	33	33	36	37	38	38	37	35	34	30	30.7	38.5
19-Feb	29	27	27	28	A	26	24	25	26	26	29	29	27	28	27	25	27	26	22	22	24	26	28	26	26.2	29.2
20-Feb	32	37	40	38	A	40	36	34	30	35	36	38	40	43	46	44	45	44	39	37	35	33	34	36	37.9	45.9
21-Feb	40	47	47	47	A	45	44	44	44	44	43	42	43	42	42	41	41	41	42	40	41	39	40	40	42.4	47.4
22-Feb	41	41	41	39	A	39	36	37	38	38	39	41	42	42	42	43	43	42	39	38	38	38	39	42	39.9	42.7
23-Feb	42	42	41	37	A	36	33	33	40	39	40	40	40	40	39	39	38	38	37	35	33	33	30	33	37.4	42.1
24-Feb	31	31	32	31	A	24	28	26	18	22	26	29	31	33	36	36	36	35	26	33	30	32	32	33	30.1	36.3
25-Feb	30	31	32	29	A	38	37	36	41	41	41	43	43	44	44	44	43	43	44	44	45	46	46	46	40.4	45.6
26-Feb	46	45	45	44	A	44	44	43	43	43	43	43	43	43	43	43	42	40	38	40	37	39	44	43	42.6	45.6
27-Feb	42	42	41	38	A	29	24	22	22	24	25	28	32	34	35	35	36	37	38	39	39	39	38	39	33.8	42.2
28-Feb	39	38	38	37	A	38	38	37	36	36	35	34	34	33	32	32	31	31	30	28	27	31	28	29	33.6	38.7
	35.9	36.7	37.0	36.7	38.0	36.5	35.4	34.8	35.0	35.3	36.6	37.3	38.2	38.8	39.0	38.7	38.1	37.6	36.2	36.4	36.0	36.9	36.3	36.5	Diurnal Average	
	45.6	46.9	47.4	46.7	42.5	45.4	43.7	43.7	44.1	43.6	44.4	45.3	45.2	45.5	46.3	46.7	46.4	44.7	44.0	44.1	45.2	45.6	45.5	45.6	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

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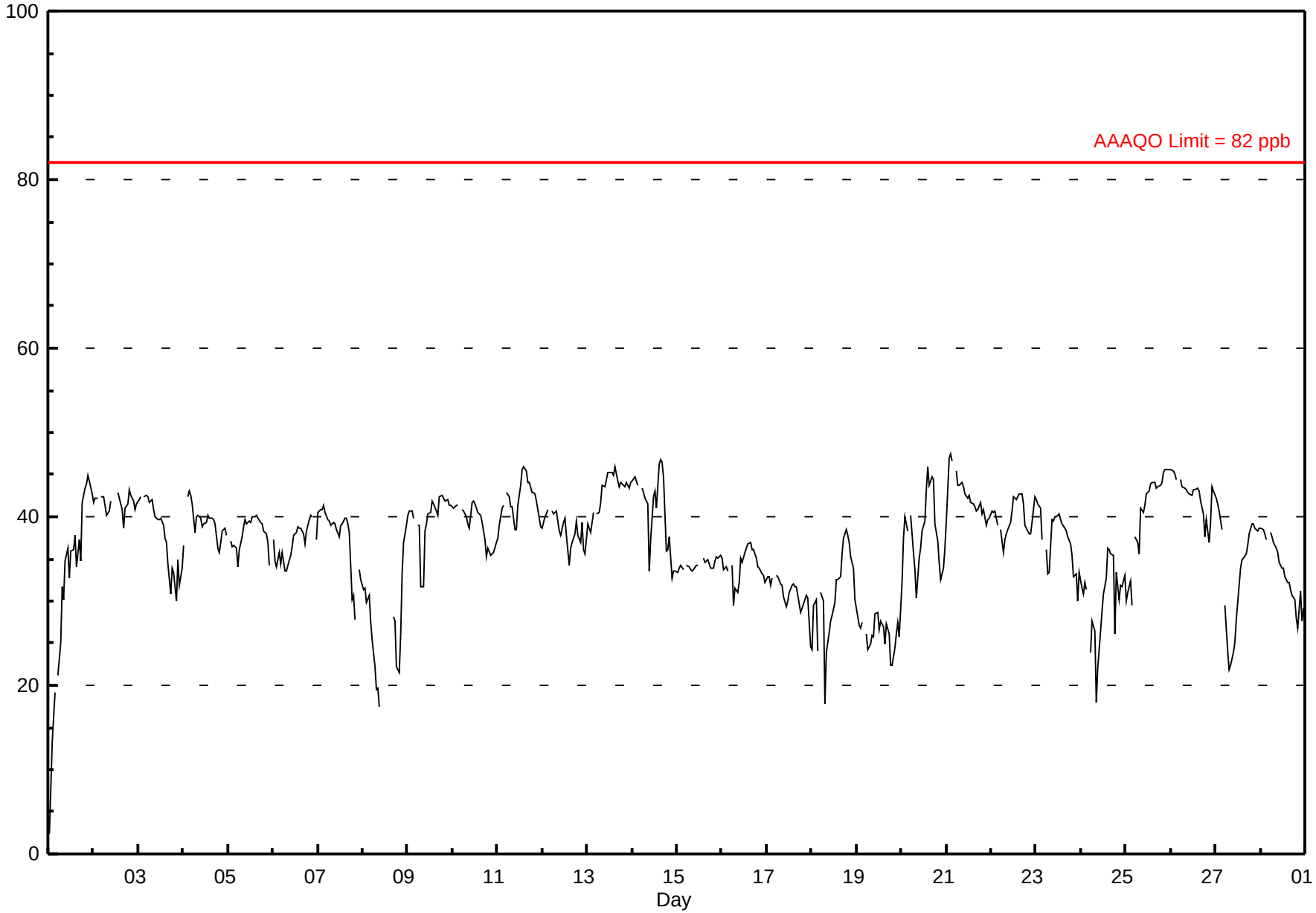
Hourly Averages

Ozone (O_3) - ppb

Beaverlodge - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

Beaverlodge - February 2011

Maximum Value: 48.4 ppb on Feb 21 02:00

Maximum Daily Average: 44.2 ppb on Feb 13

Minimum Value: 9 ppb on Feb 1 01:00

Minimum Daily Average: 28.0 ppb on Feb 19

Maximum Diurnal Average: 40.1 ppb at hour 15

Minimum Diurnal Average: 37.1 ppb at hour 8

Monthly Average: 38.44 ppb

Percentiles: P_1 = 22.2 P_{10} = 30.3 Q_1 = 35.1 Median = 39.7 Q_3 = 42.4 P_{90} = 44.8 P_{99} = 47.7

Hours in Service:	672
Hours of Data:	633
Hours of Missing Data:	39
Hours of Calibration:	33
Percent Operational Time:	99.1

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	9	12	16	25	A	29	31	36	37	38	40	36	37	38	39	38	40	42	45	46	45	46	46	44	35.4	46.1
2-Feb	44	43	44	A	44	43	43	42	42	43	C	C	C	44	43	43	42	42	44	44	44	43	43	44	43.2	44.4
3-Feb	43	44	A	43	44	44	43	43	43	41	40	40	41	40	40	39	38	35	38	38	35	36	35	36	39.9	44.0
4-Feb	39	A	43	44	43	42	41	42	42	41	41	40	41	41	41	41	41	40	38	37	38	40	39	39	40.7	43.9
5-Feb	A	39	39	39	38	36	38	38	40	40	41	40	41	41	40	41	41	40	40	40	39	38	36	A	39.3	40.9
6-Feb	38	38	36	37	36	37	37	34	35	36	38	39	39	40	39	39	39	38	39	41	41	41	A	40	38.1	40.8
7-Feb	42	41	42	42	42	40	40	40	40	40	39	39	39	40	40	40	40	40	37	35	32	A	35	34	39.2	41.9
8-Feb	32	33	32	32	30	28	24	22	22	22	N	N	N	N	N	N	29	29	28	24	31	37	40	41	29.8	41.1
9-Feb	41	42	42	41	A	41	41	37	38	41	41	42	42	43	42	42	42	43	43	43	42	43	42	42	41.6	43.5
10-Feb	42	42	42	42	A	42	42	41	41	41	42	43	42	41	41	41	40	40	37	38	37	37	37	38	40.4	42.8
11-Feb	38	40	42	42	A	44	43	44	45	41	40	44	46	47	47	46	46	45	44	44	44	43	42	41	43.4	46.6
12-Feb	40	42	42	42	A	42	42	42	41	40	40	40	41	40	40	39	40	40	40	40	40	41	40	40	40.6	42.4
13-Feb	40	40	40	41	A	41	41	43	45	45	45	46	46	46	46	47	45	46	46	46	45	45	45	45	44.2	47.0
14-Feb	45	46	46	45	A	44	44	44	43	43	41	44	45	45	48	48	47	47	38	38	38	35	34	34	42.8	47.7
15-Feb	35	35	35	35	A	35	35	34	35	34	35	35	A	A	36	35	35	35	35	36	36	36	37	37	35.3	37.0
16-Feb	36	35	36	36	A	36	34	34	33	35	36	36	37	37	38	38	37	37	36	35	34	34	34	33	35.5	38.2
17-Feb	34	34	33	33	A	34	33	33	33	33	30	31	32	33	32	32	32	30	30	30	31	31	31	30	32.1	34.3
18-Feb	28	32	32	31	A	33	31	28	27	30	28	30	32	35	34	35	37	38	39	39	38	37	35	32	33.2	39.4
19-Feb	30	30	28	28	A	28	25	26	27	29	30	30	29	28	29	27	28	27	26	26	27	28	30	29	28.0	30.4
20-Feb	36	40	41	41	A	42	41	36	36	38	38	39	41	46	47	45	48	48	45	39	37	36	37	38	40.5	47.7
21-Feb	45	48	48	47	A	46	45	45	45	44	44	43	43	43	43	42	42	43	43	42	42	41	41	41	43.7	48.4
22-Feb	42	42	41	40	A	40	37	39	39	39	40	42	43	43	43	43	43	43	40	39	39	39	42	43	41.0	43.3
23-Feb	43	42	42	41	A	37	38	39	40	40	40	41	41	41	40	39	39	38	38	37	34	34	32	34	38.8	42.8
24-Feb	33	33	33	32	A	29	29	28	26	28	30	30	32	36	37	37	37	36	36	36	32	33	32	34	32.6	36.9
25-Feb	32	32	34	33	A	41	41	42	43	42	43	44	44	45	45	46	44	44	44	45	46	47	46	46	42.2	46.8
26-Feb	46	46	46	45	A	45	44	44	44	44	44	44	44	44	44	44	43	43	41	41	39	42	45	43	43.8	46.3
27-Feb	43	42	41	40	A	32	27	22	23	25	26	31	34	35	35	36	37	38	40	40	40	40	39	39	34.9	43.3
28-Feb	39	39	39	38	A	39	38	38	37	36	36	34	34	34	33	33	32	32	32	30	31	33	30	30	34.5	38.9
	37.7	38.2	38.4	38.4	39.5	38.2	37.5	37.1	37.1	37.5	38.1	38.6	39.4	40.1	40.1	39.9	39.5	39.3	38.6	38.2	37.9	38.3	38.0	38.1	Diurnal Average	
	46.3	48.4	48.2	47.4	44.0	46.2	45.5	45.2	45.2	44.8	45.5	46.1	46.4	46.6	47.7	47.7	47.7	47.7	45.7	45.7	46.3	46.8	46.3	46.3	Diurnal Maximum	

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

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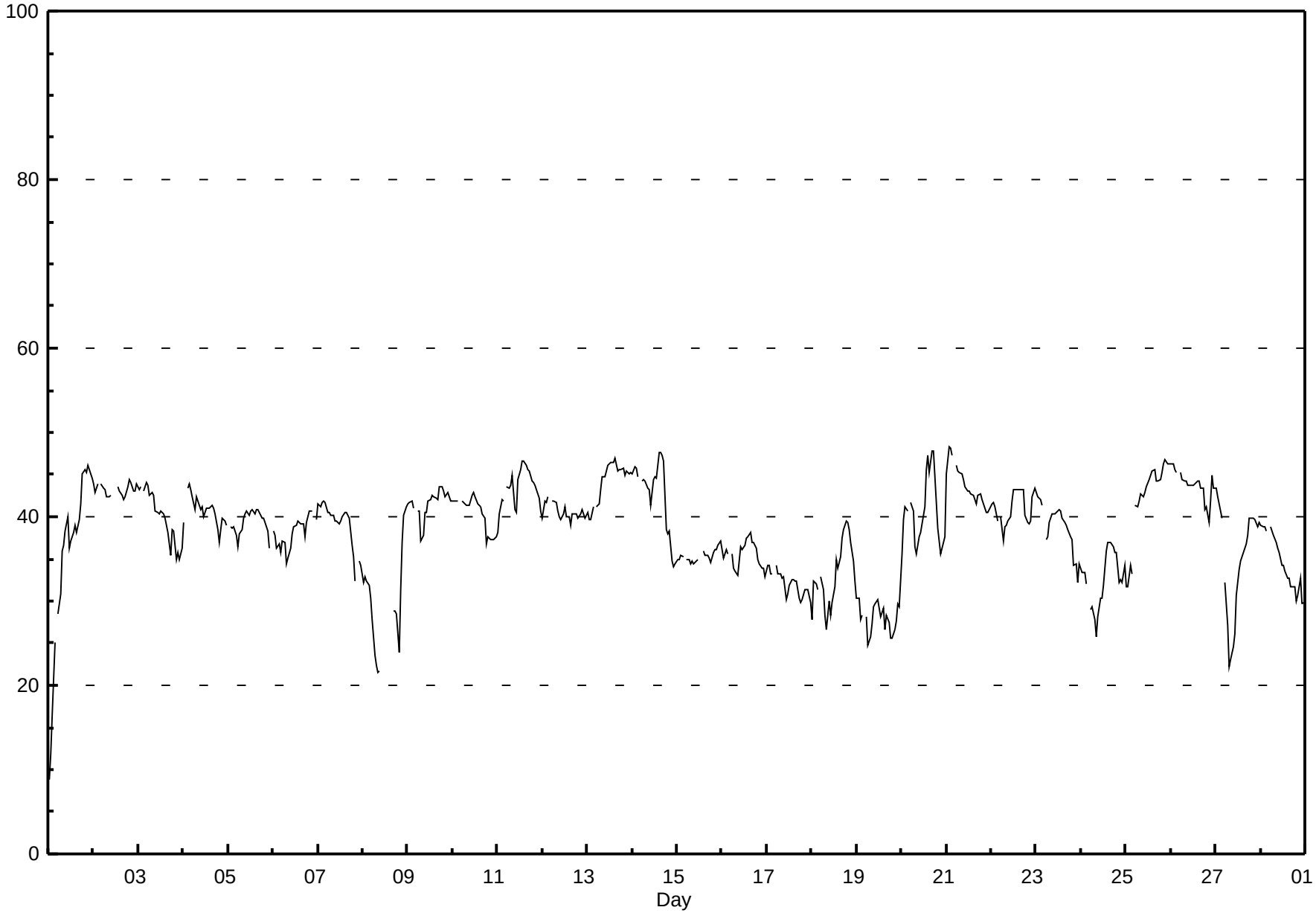
Hourly Maximums

Ozone (O_3) - ppb

Beaverlodge - February 2011



FOCUS AIR QUALITY MONITORING

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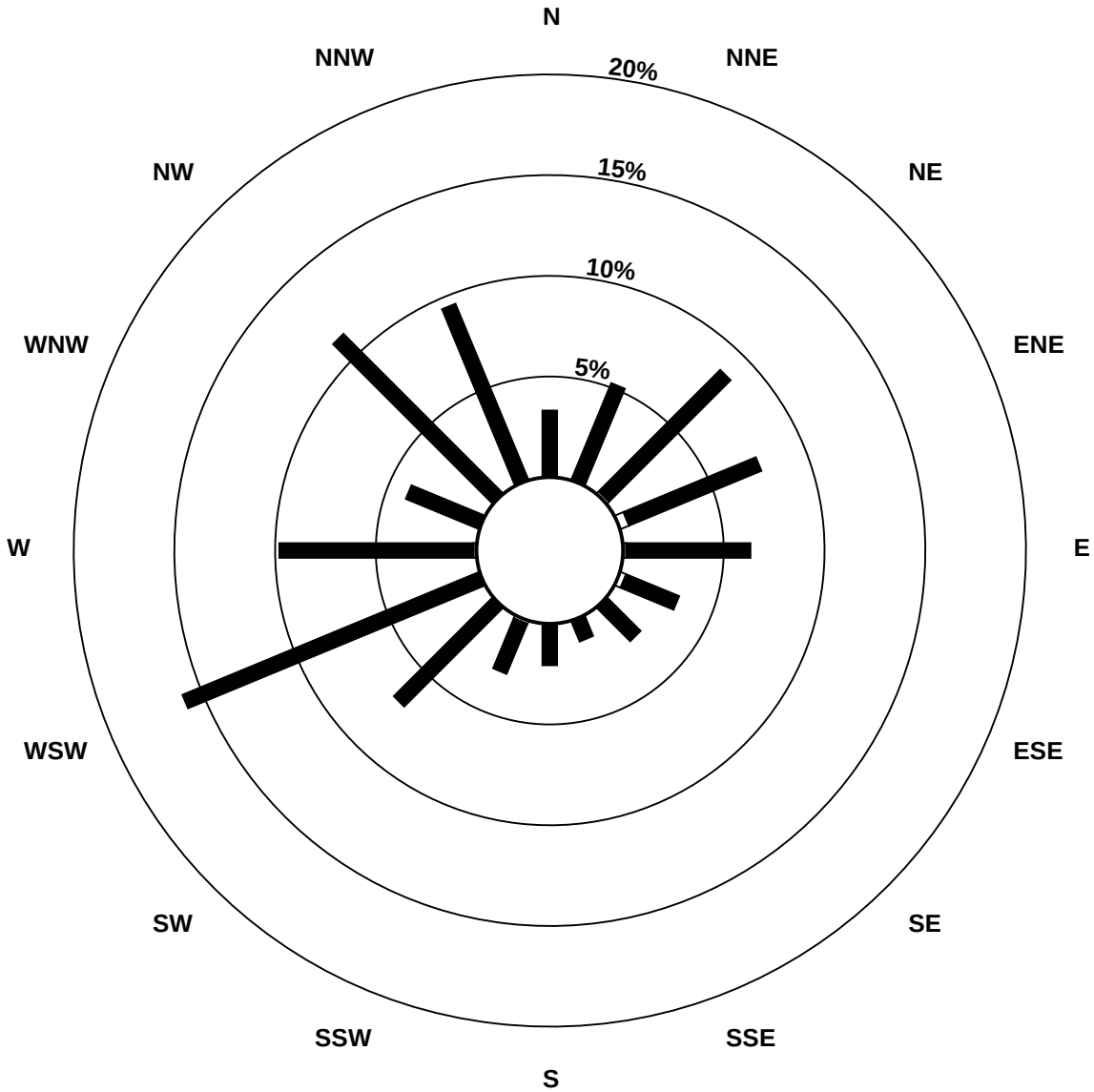
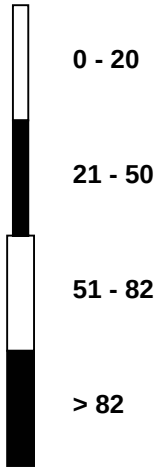
Pollutant Rose

Ozone (O_3) - ppb

Beaverlodge - February 2011



Pollutant Classes (ppb)



FOCUS AIR QUALITY MONITORING

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Eight Hour Running Averages

Ozone (O_3) - ppb

Beaverlodge - February 2011

Maximum Value: 45.4 ppb on Feb 21 09:00

Minimum Value: 3.1 ppb on Feb 1 01:00

Percentiles: P_1 = 13.5 P_{10} = 28.6 Q_1 = 33.8 Median = 37.9 Q_3 = 40.7 P_{90} = 42.9 P_{99} = 44.9

Hours in Service:	672
Hours of Data:	657
Hours of Missing Data:	15
Hours of Calibration:	6
Percent Operational Time:	98.7

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Feb	3	4	5	7	8	10	13	17	21	25	28	30	31	33	34	35	36	36	36	38	39	40	41	42	41.6
2-Feb	42	43	43	43	43	43	42	42	42	42	41	41	N	N	N	N	N	N	41	41	42	41	41	41	43.2
3-Feb	42	42	42	42	42	42	42	42	42	42	41	41	41	40	40	39	38	37	36	36	34	34	33	33	42.2
4-Feb	33	34	35	36	38	39	40	41	41	41	41	40	40	39	40	40	40	39	39	39	38	38	38	38	41.1
5-Feb	38	37	37	37	37	37	36	36	37	37	37	38	38	39	39	40	40	40	40	40	39	39	38	38	39.7
6-Feb	38	37	36	36	35	35	35	35	35	35	35	35	36	36	37	37	38	38	38	38	39	39	39	39	38.8
7-Feb	39	40	40	40	40	40	40	40	40	40	40	39	39	39	39	39	39	39	38	37	36	35	34	33	40.3
8-Feb	32	31	31	31	31	30	29	27	26	24	23	22	N	N	N	N	N	N	N	N	N	26	28	29	32.1
9-Feb	31	32	35	37	39	39	40	39	38	37	37	37	37	38	38	39	40	41	41	41	42	42	42	42	41.7
10-Feb	42	42	42	41	41	41	41	41	41	40	40	40	41	41	40	40	41	40	40	39	38	37	37	36	41.9
11-Feb	36	36	37	38	38	39	40	41	41	41	41	41	41	42	42	42	43	44	44	44	44	44	43	42	44.3
12-Feb	41	41	41	40	40	40	40	40	40	40	40	40	40	39	38	38	38	38	38	38	37	37	38	38	41.4
13-Feb	38	38	38	38	38	38	39	40	41	41	42	43	43	44	44	45	45	45	45	45	44	44	44	44	44.9
14-Feb	44	44	44	44	44	44	44	44	43	42	41	40	41	40	41	41	42	43	43	43	42	41	39	38	44.1
15-Feb	36	35	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	35	35	34	35	35	35	35	35.9
16-Feb	35	35	35	35	35	34	34	33	33	32	32	33	33	33	34	35	35	36	36	36	36	35	35	34	35.9
17-Feb	34	33	33	33	33	33	33	33	32	32	32	31	31	31	31	31	31	31	31	31	31	30	30	29	33.8
18-Feb	28	28	29	28	28	28	28	27	27	26	26	26	27	27	27	29	31	32	33	35	36	36	36	36	36.1
19-Feb	35	34	32	31	30	29	27	27	26	26	26	26	26	27	27	27	27	27	26	26	25	25	25	25	34.9
20-Feb	26	27	29	31	32	35	36	37	37	36	36	36	36	37	38	39	41	42	42	42	42	40	39	38	42.3
21-Feb	37	37	39	40	40	42	44	45	45	45	44	44	43	43	43	42	42	42	42	41	41	41	41	40	45.4
22-Feb	40	40	40	40	40	40	39	39	39	38	38	38	39	39	40	41	41	42	42	41	41	40	40	40	41.7
23-Feb	40	40	40	40	40	40	39	38	37	37	37	37	38	38	39	40	39	39	39	38	37	37	35	35	40.2
24-Feb	34	33	32	32	32	30	30	29	27	26	25	25	26	27	28	29	31	33	33	33	33	33	33	32	33.9
25-Feb	31	31	32	31	31	32	33	33	35	36	38	39	40	41	42	43	43	43	44	44	44	44	44	45	44.6
26-Feb	45	45	45	45	45	45	45	45	44	44	44	43	43	43	43	43	43	43	42	42	41	40	40	40	45.3
27-Feb	40	40	41	41	41	40	37	34	31	29	26	25	26	26	28	29	31	33	34	36	37	37	38	38	41.3
28-Feb	38	39	39	38	38	38	38	38	38	37	37	36	36	35	35	34	33	33	32	31	31	30	30	29	38.6
Diurnal Maximums	44.8	45.1	45.3	45.3	45.3	45.2	44.9	44.8	45.4	44.9	44.3	43.6	43.5	43.7	44.3	44.8	44.9	44.9	44.8	44.6	44.4	44.3	44.4	44.6	

N - Not Valid

PASZA
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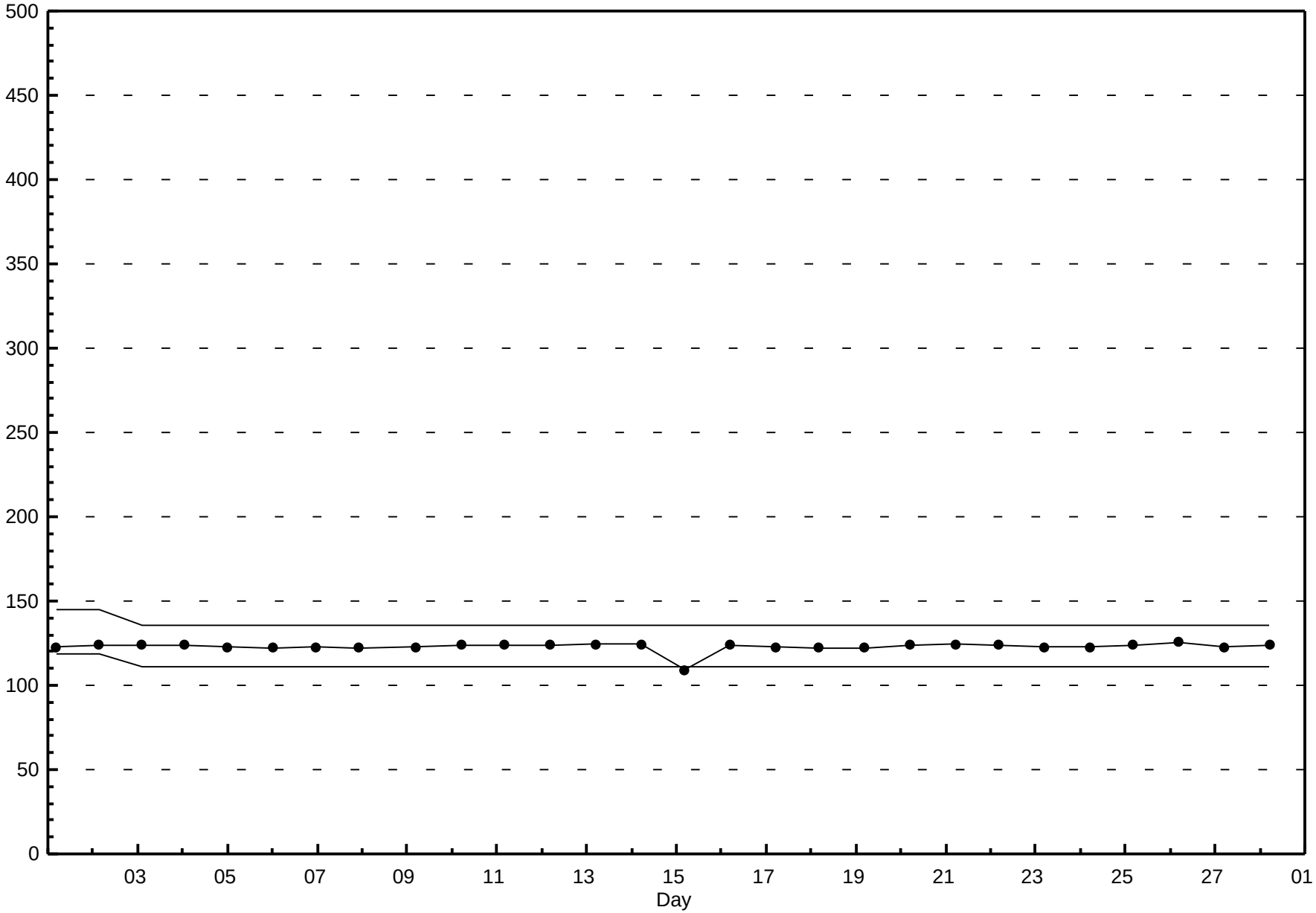
Span Responses

Ozone (O_3)

Beaverlodge - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Averages

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

Beaverlodge - February 2011

Number of Exceedences: 1-hr: 0 24-hr: 0
Maximum Value: 16.3 $\mu g/m^3$ on Feb 19 16:00
Maximum Daily Average: 10.0 $\mu g/m^3$ on Feb 19

Minimum Value: 0 $\mu g/m^3$ on Feb 4 10:00
Maximum Diurnal Average: 5.1 $\mu g/m^3$ at hour 21
Monthly Average: 4.04 $\mu g/m^3$

Minimum Daily Average: 2.1 $\mu g/m^3$ on Feb 23
Minimum Diurnal Average: 3.3 $\mu g/m^3$ at hour 6
Percentiles: $P_1 = 0.6$ $P_{10} = 1.9$ $Q_1 = 2.5$ Median = 3.5 $Q_3 = 4.9$ $P_{90} = 6.8$ $P_{99} = 12.9$

Hours in Service:	672
Hours of Data:	664
Hours of Missing Data:	8
Hours of Calibration:	0
Percent Operational Time:	98.8

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	10	11	9	10	8	7	5	3	3	5	3	3	3	4	4	5	4	6	3	4	3	2	3	2	5.1	11.4
2-Feb	3	2	2	3	2	3	3	4	2	0	0	2	2	2	2	3	3	4	2	3	5	3	3	2	2.5	4.9
3-Feb	3	2	3	2	3	3	2	6	2	4	6	3	3	4	2	4	4	3	6	2	4	5	3	5	3.4	6.2
4-Feb	4	5	3	3	2	2	4	4	2	0	1	2	3	4	2	2	1	3	5	5	4	5	6	4	3.1	6.0
5-Feb	3	3	4	3	2	2	2	1	2	3	2	3	2	2	2	2	2	2	3	3	3	3	2	2	2.4	4.1
6-Feb	3	2	2	4	3	3	4	8	6	7	7	6	6	5	6	5	6	6	5	6	10	10	7	6	5.6	10.2
7-Feb	5	6	5	4	4	6	5	6	6	6	6	6	7	7	6	7	7	6	7	6	7	7	6	5	5.9	7.3
8-Feb	6	6	6	7	9	5	3	5	8	6	N	N	N	N	N	N	13	15	14	15	15	9	7	4	8.5	15.0
9-Feb	4	4	4	3	6	3	4	4	4	4	2	1	5	5	4	3	4	4	3	1	4	3	2	2	3.6	5.6
10-Feb	3	1	2	0	2	3	2	2	2	2	1	3	2	3	3	4	5	4	3	2	2	3	4	3	2.5	4.7
11-Feb	3	3	3	3	5	2	3	1	3	4	3	3	3	3	2	5	4	4	2	2	4	4	2	2	3.1	4.7
12-Feb	2	2	3	3	3	2	1	1	3	2	3	1	2	4	3	4	3	4	4	5	4	3	4	4	3.0	5.2
13-Feb	2	2	4	3	4	3	4	3	4	3	2	2	2	3	3	3	3	3	3	3	5	4	4	5	3.3	5.4
14-Feb	5	8	7	5	5	5	7	5	4	5	6	4	6	8	7	6	6	2	3	6	6	4	4	4	5.3	7.7
15-Feb	7	6	1	N	N	3	2	0	2	4	3	3	1	3	3	2	2	4	4	5	2	3	3	2	2.9	6.7
16-Feb	2	3	3	3	4	3	3	2	4	3	4	3	4	4	2	3	5	3	5	5	3	3	4	5	3.5	5.2
17-Feb	8	4	4	3	3	4	3	3	3	3	5	6	5	4	3	4	4	5	5	6	6	4	4	6	4.3	7.8
18-Feb	10	9	5	6	6	5	4	5	6	5	4	4	2	3	6	5	4	2	2	2	4	3	4	5	4.6	10.1
19-Feb	7	7	8	9	8	8	9	9	7	6	7	7	11	12	13	16	15	13	13	13	12	12	9	8	10.0	16.3
20-Feb	9	6	3	1	2	2	4	8	8	5	4	5	7	8	9	6	5	3	5	5	5	7	8	6	5.3	8.9
21-Feb	5	3	2	2	2	2	1	2	2	2	3	3	3	2	3	2	2	4	3	4	2	2	4	4	2.8	5.1
22-Feb	4	3	3	2	3	2	4	4	4	5	3	2	3	2	4	3	2	2	2	2	3	3	3	3	3.0	4.6
23-Feb	1	2	1	2	3	2	2	1	2	2	2	1	2	3	2	3	3	2	2	2	2	2	3	2	2.1	3.2
24-Feb	2	3	4	2	2	1	2	3	4	5	6	1	2	4	3	3	3	3	3	4	8	7	7	9	3.8	8.6
25-Feb	7	5	6	5	3	3	2	3	2	1	2	3	2	3	5	1	2	4	10	6	5	5	2	5	3.7	9.5
26-Feb	2	2	4	3	1	1	3	4	3	3	3	3	4	4	4	4	4	4	4	5	5	4	4	2	3.4	5.5
27-Feb	1	1	1	3	3	4	5	6	4	5	5	5	5	4	4	4	4	5	3	3	3	4	4	4	3.7	5.9
28-Feb	3	3	2	2	2	2	2	2	2	2	5	4	4	5	5	4	3	5	4	5	6	5	5	4	3.6	6.2
	4.4	4.0	3.8	3.6	3.8	3.3	3.4	3.7	3.7	3.6	3.6	3.3	3.7	4.2	4.2	4.3	4.4	4.4	4.5	4.6	5.1	4.6	4.4	4.1	Diurnal Average	
	10.1	11.4	9.5	10.4	8.9	7.9	8.5	8.5	7.8	6.8	7.0	6.8	10.8	12.3	12.7	16.3	15.1	15.0	14.3	14.6	14.8	12.1	9.4	8.6	Diurnal Maximum	

N - Not Valid
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

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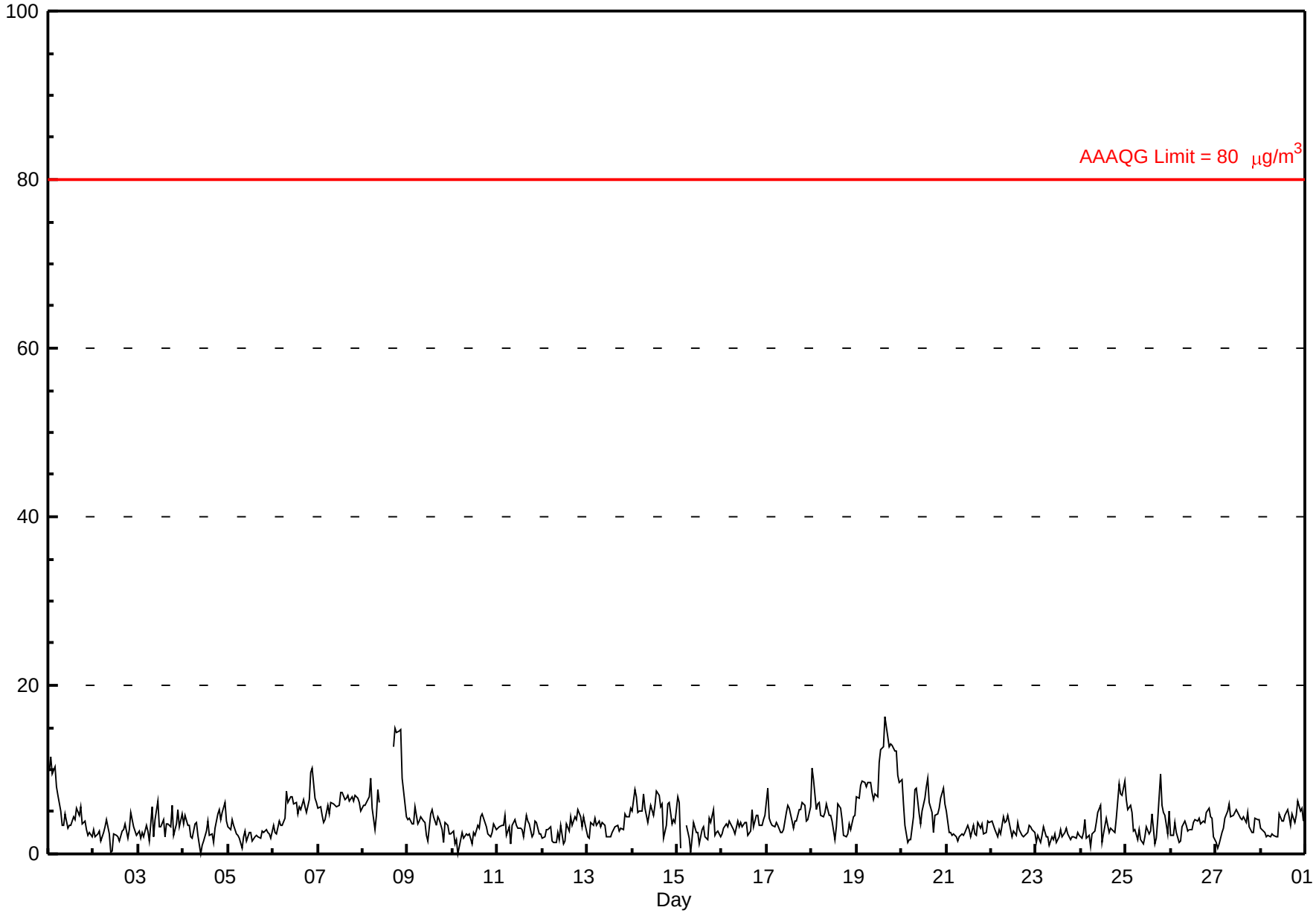
Hourly Averages

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

Beaverlodge - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Maximums

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

Beaverlodge - February 2011

Maximum Value: 17.9 $\mu g/m^3$ on Feb 19 16:00

Maximum Daily Average: 11.2 $\mu g/m^3$ on Feb 19

Minimum Value: 1 $\mu g/m^3$ on Feb 15 08:00

Minimum Daily Average: 2.7 $\mu g/m^3$ on Feb 23

Maximum Diurnal Average: 6.0 $\mu g/m^3$ at hour 21

Minimum Diurnal Average: 4.2 $\mu g/m^3$ at hour 6

Monthly Average: 5.00 $\mu g/m^3$

Percentiles: P_1 = 1.7 P_{10} = 2.6 Q_1 = 3.3 Median = 4.3 Q_3 = 6.0 P_{90} = 7.9 P_{99} = 15.2

Hours in Service:	672
Hours of Data:	664
Hours of Missing Data:	8
Hours of Calibration:	0
Percent Operational Time:	98.8

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	10	12	11	11	10	7	7	6	5	6	4	4	4	5	5	6	6	6	6	5	4	4	4	3	6.3	11.9
2-Feb	3	3	3	4	2	4	5	5	3	1	1	4	3	3	2	3	3	4	3	5	5	4	4	4	3.4	5.5
3-Feb	4	4	4	3	4	4	5	6	4	5	7	6	4	5	4	4	4	5	7	4	6	7	5	6	4.9	7.4
4-Feb	4	5	5	4	3	2	5	5	4	1	2	2	5	5	3	3	2	4	5	6	5	6	7	5	4.0	6.6
5-Feb	4	4	5	5	3	3	2	2	3	4	2	3	3	2	4	3	3	4	3	3	4	4	4	3	3.3	4.6
6-Feb	5	4	3	5	4	5	7	8	7	8	8	7	7	6	6	8	7	6	6	8	11	12	8	7	6.8	11.6
7-Feb	6	6	6	5	5	7	5	7	6	7	6	7	8	8	7	7	7	7	8	8	9	9	7	6	6.7	8.6
8-Feb	7	7	7	8	10	7	4	7	8	7	N	N	N	N	N	N	14	16	15	15	16	12	8	6	9.7	16.2
9-Feb	5	5	4	5	6	4	5	6	5	5	3	2	6	7	6	4	5	5	3	3	5	4	3	3	4.5	6.7
10-Feb	3	2	2	1	3	3	3	3	3	3	2	3	3	4	4	5	5	4	4	3	3	3	4	4	3.2	5.2
11-Feb	4	4	4	5	6	4	4	3	4	5	5	4	4	4	3	6	5	4	3	4	4	4	4	3	4.0	6.0
12-Feb	3	2	4	4	4	2	2	2	4	3	4	3	4	4	5	5	5	5	5	6	5	4	5	4	3.9	6.0
13-Feb	3	2	5	5	5	4	4	4	5	4	2	3	3	3	4	4	4	3	4	5	5	5	5	6	4.0	6.0
14-Feb	6	8	8	6	6	7	8	6	5	6	7	5	6	8	9	6	7	4	6	7	7	6	5	6	6.4	8.7
15-Feb	9	9	2	N	N	5	3	1	4	5	3	3	2	4	4	3	5	5	4	6	4	3	3	3	4.1	9.0
16-Feb	3	4	4	4	5	4	3	4	4	4	5	4	5	4	3	6	6	4	5	5	4	4	5	6	4.3	6.1
17-Feb	9	6	4	4	4	4	4	3	3	4	7	6	6	4	4	4	5	6	6	7	6	6	5	8	5.3	8.7
18-Feb	11	11	6	7	7	5	5	6	6	6	5	5	3	5	7	6	6	3	3	4	4	3	5	6	5.6	11.1
19-Feb	8	8	8	9	9	9	11	10	8	7	7	9	12	14	16	18	16	14	14	13	13	13	12	9	11.2	17.9
20-Feb	10	7	5	2	2	2	7	9	9	6	4	6	7	9	9	8	6	4	5	5	6	8	9	7	6.4	9.6
21-Feb	6	4	3	3	3	3	3	3	3	3	4	4	3	3	4	3	4	4	4	4	3	4	4	4	3.5	6.0
22-Feb	4	4	3	3	3	3	6	5	4	5	4	3	4	3	4	4	3	2	3	3	4	4	4	3	3.6	5.5
23-Feb	2	3	2	4	4	2	3	2	3	3	3	2	3	3	3	3	4	3	2	2	3	3	3	3	2.7	4.1
24-Feb	3	4	5	3	3	2	3	3	6	6	7	4	5	6	4	3	4	3	4	8	9	8	9	10	5.1	9.7
25-Feb	7	6	6	5	4	3	3	4	4	2	3	4	4	4	5	5	3	9	12	7	6	5	4	6	5.0	12.3
26-Feb	5	3	5	3	3	3	4	5	4	3	3	3	4	5	4	5	4	5	4	6	6	5	5	3	4.2	6.3
27-Feb	3	2	2	3	4	5	7	8	5	5	6	6	5	5	5	5	4	5	5	3	3	6	6	5	4.7	7.7
28-Feb	3	3	3	3	3	2	3	3	3	4	5	4	4	6	6	5	4	5	4	6	7	6	6	5	4.3	6.5
	5.3	5.1	4.6	4.5	4.7	4.2	4.6	4.9	4.8	4.5	4.4	4.3	4.8	5.1	5.1	5.3	5.4	5.4	5.5	5.7	6.0	5.8	5.3	5.1	Diurnal Average	
	11.1	11.9	11.3	11.2	9.9	8.7	10.9	10.4	9.4	7.9	7.9	9.3	12.4	14.0	15.5	17.9	15.5	15.7	15.3	15.2	16.2	13.1	11.6	9.7	Diurnal Maximum	

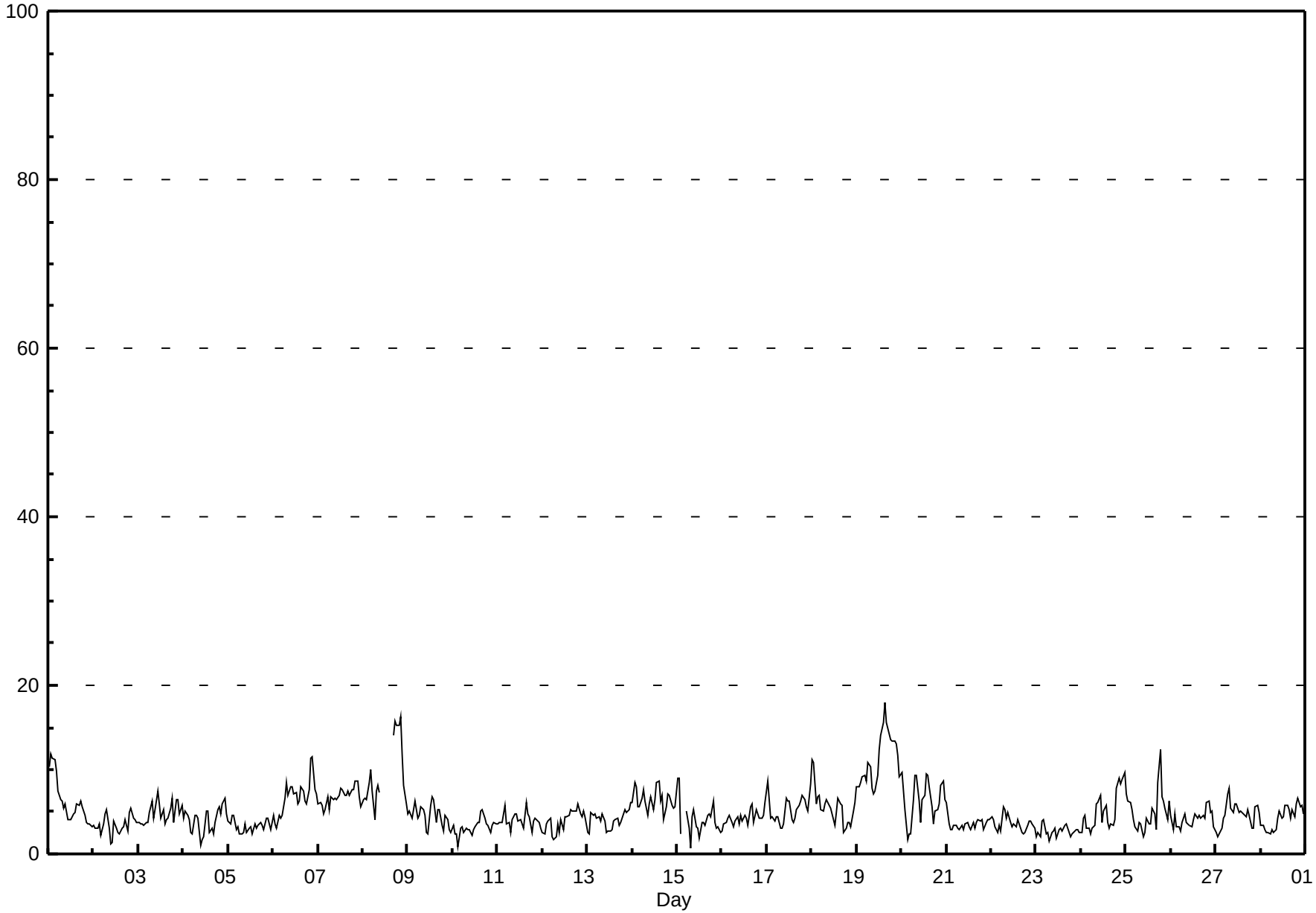
N - Not Valid

PASZA
Peace Air Shed Zone Association

Hourly Maximums

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

Beaverlodge - February 2011



FOCUS AIR QUALITY MONITORING

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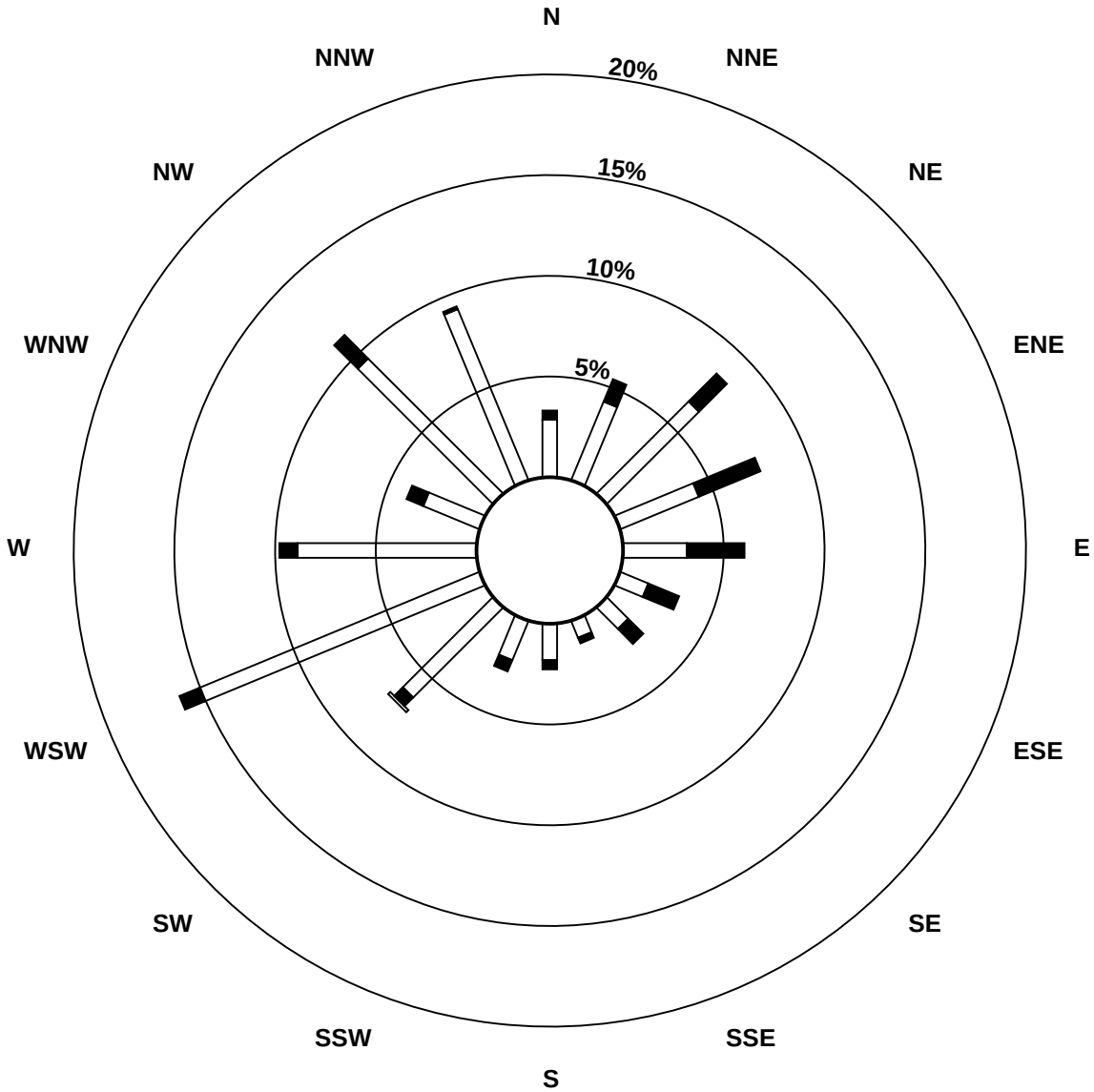
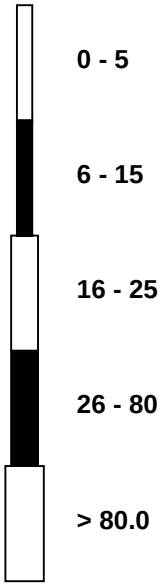
Pollutant Rose

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

Beaverlodge - February 2011



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



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Beaverlodge - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7.9 ^{o}C on Feb 2 15:00 Maximum Daily Average: 4.9 ^{o}C on Feb 2

Minimum Value: -29 ^{o}C on Mar 1 00:00 Minimum Daily Average: -25.1 ^{o}C on Feb 28
Maximum Diurnal Average: -7.4 ^{o}C at hour 15 Minimum Diurnal Average: -12.0 ^{o}C at hour 8
Monthly Average: -10.20 ^{o}C Percentiles: P_1 = -27.1 P_{10} = -23.6 Q_1 = -20.1 Median = -10.9 Q_3 = 0.0 P_{90} = 3.8 P_{99} = 6.5

Hours in Service:	672
Hours of Data:	661
Hours of Missing Data:	11
Hours of Calibration:	0
Percent Operational Time:	98.4

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	-21	-21	-20	-19	-19	-19	-17	-14	-14	-11	-9	-7	-6	-3	-2	0	0	-1	2	1	-1	1	1	0	-8.3	2.2
2-Feb	1	0	3	2	3	4	4	4	5	5	5	6	7	8	8	8	6	7	6	6	5	5	5	5	4.9	7.9
3-Feb	6	5	5	5	5	5	5	5	4	4	4	4	4	5	5	5	5	4	4	5	3	4	3	4	4.5	5.9
4-Feb	5	5	5	6	5	5	5	5	5	4	5	5	5	6	7	6	5	3	2	1	N	N	1	1	4.4	6.6
5-Feb	1	1	0	0	-1	-3	-4	-6	-7	-8	-9	-9	-10	-10	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-7.3	0.7
6-Feb	-11	-11	-11	-12	-13	-14	-14	-14	-14	-13	-12	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-12	-11.8	-10.5
7-Feb	-12	-12	-13	-13	-13	-13	-13	-14	-14	-14	-13	-11	-11	-11	-11	-11	-12	-13	-15	-15	-16	-16	-17	-17	-13.4	-10.7
8-Feb	-18	-19	-20	-21	-21	-21	-21	-22	-22	-18	N	N	N	N	N	N	-12	-12	-13	-15	-13	-12	-10	-9	-16.6	-9.0
9-Feb	-9	-8	-8	-9	-9	-9	-8	-8	-7	-6	-5	-3	0	-2	-2	-2	-2	0	0	0	0	0	0	0	-4.1	0.2
10-Feb	1	1	1	1	0	1	2	2	1	1	3	4	5	5	5	5	4	3	1	1	1	1	2	3	2.2	4.9
11-Feb	3	4	4	3	3	3	3	3	3	2	3	4	5	6	6	6	5	5	4	3	3	2	1	1	3.6	6.3
12-Feb	0	1	1	0	0	-1	-1	-1	-1	-1	0	1	3	3	4	3	3	3	3	2	2	N	N	N	1.2	3.6
13-Feb	0	-1	-1	-1	-1	0	-1	-1	-1	-1	0	1	2	2	3	3	2	1	1	0	0	0	0	-1	0.2	2.8
14-Feb	-1	1	0	-2	-2	-2	-1	-2	-1	-3	-2	1	2	2	3	2	2	1	-5	-8	-9	-14	-16	-17	-3.1	2.6
15-Feb	-18	-19	-20	-21	-22	-22	-22	-22	-23	-22	-22	-22	-22	-22	-22	-22	-22	-22	-22	-22	-23	-23	-23	-23	-21.7	-18.4
16-Feb	-23	-23	-24	-25	-25	-25	-25	-25	-25	-25	-23	-22	-22	-21	-21	-22	-22	-22	-22	-22	-22	-22	-22	-23	-23.1	-21.2
17-Feb	-23	-23	-23	-23	-23	-23	-23	-23	-23	-22	-23	-23	-23	-23	-22	-22	-22	-23	-23	-24	-24	-24	-24	-24	-23.0	-22.1
18-Feb	-25	-25	-25	-26	-27	-27	-26	-28	-28	-26	-25	-23	-18	-17	-16	-17	-19	-20	-22	-24	-23	-24	-23	-24	-23.3	-15.8
19-Feb	-25	-26	-27	-26	-26	-27	-27	-26	-24	-22	-20	-18	-18	-14	-13	-13	-13	-14	-15	-15	-13	-11	-11	-11	-19.0	-11.0
20-Feb	-11	-11	-11	-11	-11	-11	-13	-15	-14	-12	-10	-9	-7	-6	-4	-4	-4	-5	-7	-8	-8	-8	-8	-7	-9.0	-3.9
21-Feb	-7	-4	-4	-3	-4	-5	-6	-5	-5	-4	-5	-4	-3	-3	-3	-4	-6	-8	-8	-9	-10	-10	-10	-10	-5.8	-3.0
22-Feb	-11	-12	-12	-13	-13	-14	-15	-15	-15	-14	-13	-13	-12	-11	-10	-10	-11	-12	-14	-15	-15	-16	-16	-16	-13.3	-10.3
23-Feb	-18	-18	-18	-19	-19	-19	-20	-20	-20	-20	-19	-19	-18	-18	-18	-18	-19	-20	-21	-22	-22	-23	-23	-23	-19.8	-17.9
24-Feb	-24	-25	-25	-26	-26	-27	-27	-27	-27	-24	-21	-18	-15	-13	-20	-18	-15	-17	-21	-22	-22	-21	-21	-20	-21.8	-13.1
25-Feb	-19	-20	-19	-19	-19	-16	-16	-15	-14	-14	-12	-10	-8	-6	-5	-5	-6	-6	-7	-7	-7	-6	-6	-6	-11.1	-4.6
26-Feb	-6	-5	-6	-7	-7	-7	-7	-7	-7	-7	-7	-6	-5	-5	-5	-5	-4	-5	-6	-5	-5	-6	-7	-9	-6.0	-4.3
27-Feb	-10	-10	-11	-13	-14	-16	-18	-19	-20	-20	-20	-20	-20	-20	-21	-22	-22	-23	-23	-23	-23	-24	-24	-24	-19.2	-9.5
28-Feb	-24	-24	-24	-24	-24	-24	-25	-25	-26	-26	-25	-24	-23	-23	-24	-23	-24	-24	-26	-27	-28	-28	-29	-29	-25.1	-23.1
	-10.7	-10.7	-10.9	-11.3	-11.5	-11.7	-11.9	-12.0	-11.9	-11.4	-10.2	-9.1	-8.1	-7.5	-7.4	-7.5	-7.9	-8.6	-9.6	-10.1	-10.9	-11.4	-11.1	-11.2	Diurnal Average	
	5.9	5.5	5.3	5.8	5.4	5.0	4.8	5.4	4.8	5.3	5.5	6.0	6.8	7.7	7.9	7.5	6.4	6.7	6.3	5.9	5.4	5.5	5.0	5.5	Diurnal Maximum	

N - Not Valid

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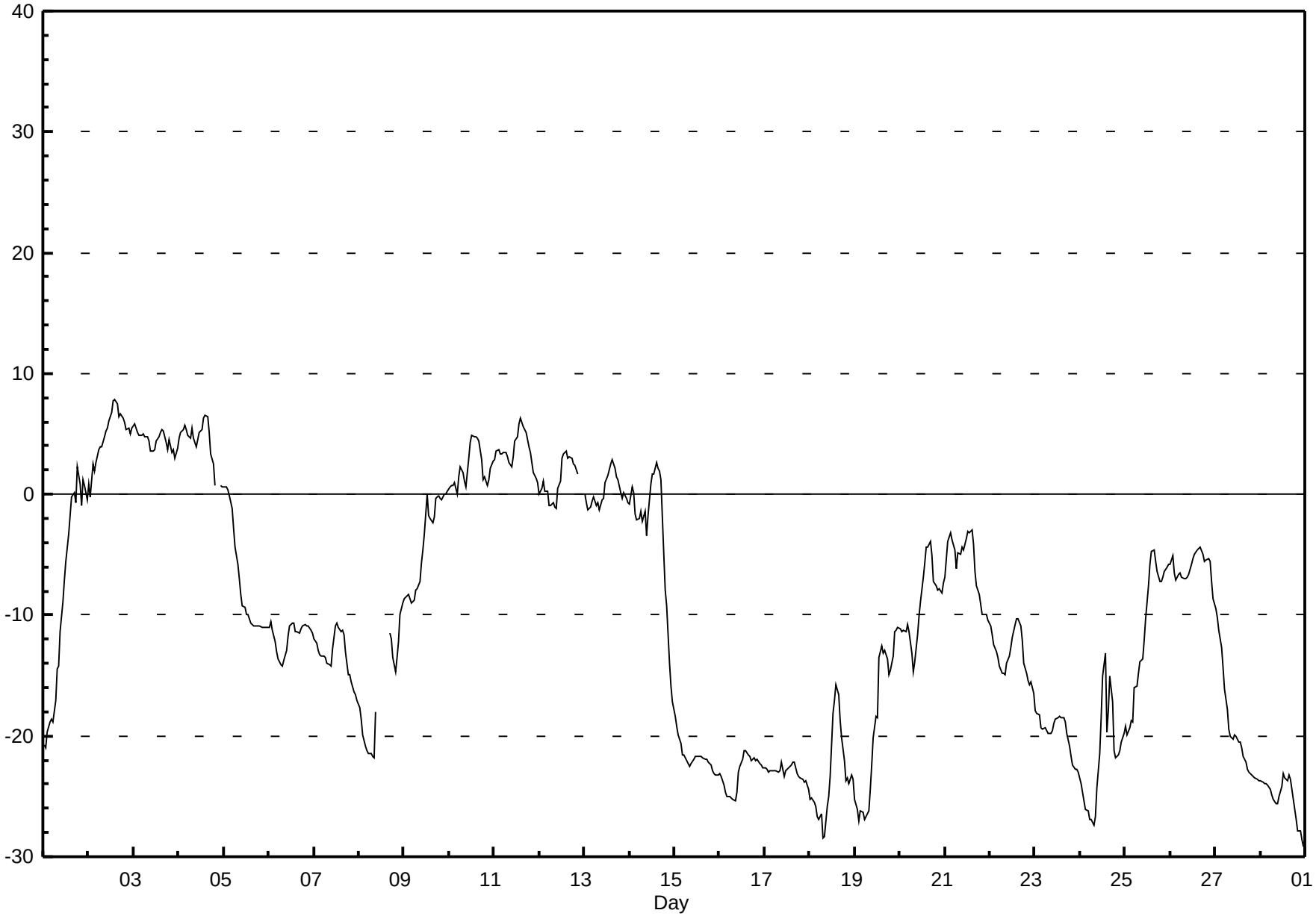
Hourly Averages

External Temperature (ET) - ^{o}C

Beaverlodge - February 2011



FOCUS AIR QUALITY MONITORING

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Peace Air Shed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Beaverlodge - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 93.0 % on Feb 4 20:00 Maximum Daily Average: 81.5 % on Feb 26

Minimum Value: 29 % on Feb 24 14:00 Minimum Daily Average: 53.9 % on Feb 20
Maximum Diurnal Average: 73.1 % at hour 5 Minimum Diurnal Average: 55.6 % at hour 14
Monthly Average: 66.94 % Percentiles: P_1 = 36.7 P_{10} = 53.2 Q_1 = 60.6 Median = 68.0 Q_3 = 74.3 P_{90} = 80.1 P_{99} = 88.6

Hours in Service:	672
Hours of Data:	661
Hours of Missing Data:	11
Hours of Calibration:	0
Percent Operational Time:	98.4

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	79	79	78	82	80	81	81	84	78	73	59	46	43	40	41	47	51	60	62	65	70	68	69	75	66.3	83.6
2-Feb	72	78	69	71	71	68	67	68	64	62	61	59	57	53	53	55	60	60	61	63	64	63	65	64	63.6	78.0
3-Feb	62	63	65	65	65	65	67	68	70	75	75	74	69	67	65	63	62	66	69	67	71	70	75	70	67.7	74.7
4-Feb	68	67	66	66	69	70	70	65	70	73	68	64	60	55	54	52	60	77	83	93	N	N	87	89	69.4	93.0
5-Feb	89	88	88	87	84	82	78	79	79	76	81	75	76	72	72	73	74	75	75	76	77	77	78	78	78.7	88.5
6-Feb	78	77	82	84	85	86	87	88	87	81	74	72	72	72	74	74	76	78	77	75	74	72	68	66	77.4	87.5
7-Feb	66	73	77	70	67	64	64	65	68	67	61	54	52	55	57	57	59	65	74	72	71	70	70	73	65.5	76.8
8-Feb	77	80	81	83	84	83	82	82	80	71	N	N	N	N	N	N	57	63	69	71	73	70	61	59	73.7	83.7
9-Feb	58	58	59	61	65	65	63	64	64	64	62	61	53	61	63	66	66	61	59	59	60	61	62	63	61.6	66.3
10-Feb	62	62	64	63	68	64	61	62	65	67	60	57	55	55	55	55	57	63	69	66	69	69	66	66	62.4	68.9
11-Feb	68	64	62	61	61	60	62	67	69	68	62	59	61	56	52	55	57	57	63	67	70	72	74	74	63.4	73.8
12-Feb	75	70	69	72	71	77	79	79	80	80	71	70	64	64	64	66	66	66	67	68	81	N	N	N	71.5	81.1
13-Feb	83	82	81	76	73	69	69	64	64	63	62	57	53	52	52	51	58	61	61	65	67	65	66	69	65.1	83.1
14-Feb	70	65	67	75	78	78	76	79	76	78	74	64	62	62	59	60	62	66	86	85	84	84	81	78	72.8	86.0
15-Feb	75	72	71	71	76	73	69	69	68	66	63	61	60	66	69	69	69	70	71	69	67	64	65	65	68.2	75.9
16-Feb	65	67	69	70	74	74	75	74	74	71	65	63	58	53	52	58	63	68	72	74	70	71	71	73	67.8	74.9
17-Feb	72	71	73	72	72	71	72	74	72	68	70	67	66	68	69	68	68	70	71	72	73	75	74	77	71.0	76.6
18-Feb	76	75	74	76	76	76	77	75	73	64	58	54	37	35	34	39	49	54	60	61	65	69	70	72	62.5	76.7
19-Feb	76	75	78	78	77	78	77	76	72	63	52	46	46	37	37	37	37	43	51	51	53	50	54	58	58.3	78.1
20-Feb	57	55	54	55	53	55	61	66	63	58	54	52	47	45	42	43	43	47	56	57	59	59	58	54	53.9	66.3
21-Feb	48	48	55	56	60	62	66	65	69	67	69	59	51	48	52	67	73	75	76	79	81	79	80	85	65.4	84.5
22-Feb	80	72	70	74	74	75	74	70	69	64	62	59	54	48	41	39	41	46	55	62	69	80	79	69	63.6	80.1
23-Feb	68	72	74	77	76	77	77	77	74	72	66	64	58	61	61	59	61	59	61	66	71	73	71	67	68.4	77.1
24-Feb	69	71	73	74	75	76	76	75	72	63	49	37	30	29	49	43	34	38	51	54	55	57	59	59	57.0	75.8
25-Feb	59	72	78	78	81	76	72	74	71	69	60	53	47	46	48	50	53	57	60	59	59	59	58	58	62.5	80.9
26-Feb	59	55	74	87	80	81	82	82	82	80	79	76	78	80	81	84	84	89	92	93	92	92	88	85	81.5	92.7
27-Feb	83	80	82	81	80	79	77	75	74	71	67	66	66	66	64	64	67	70	71	70	68	69	71	71	72.3	83.4
28-Feb	74	74	74	75	74	73	72	72	70	69	64	59	56	56	57	55	55	53	61	66	65	63	65	63	65.2	75.2
	70.4	70.2	71.7	73.0	73.1	72.7	72.6	72.6	72.0	69.4	64.7	60.2	56.8	55.6	56.3	57.4	59.3	62.7	67.4	68.7	69.5	69.3	69.8	69.6	Diurnal Average	
	88.5	87.6	88.4	87.4	85.3	85.7	86.7	87.5	87.0	80.6	81.1	75.9	78.4	79.7	80.6	83.8	83.8	88.6	92.4	93.0	92.0	92.1	88.4	88.7	Diurnal Maximum	

N - Not Valid

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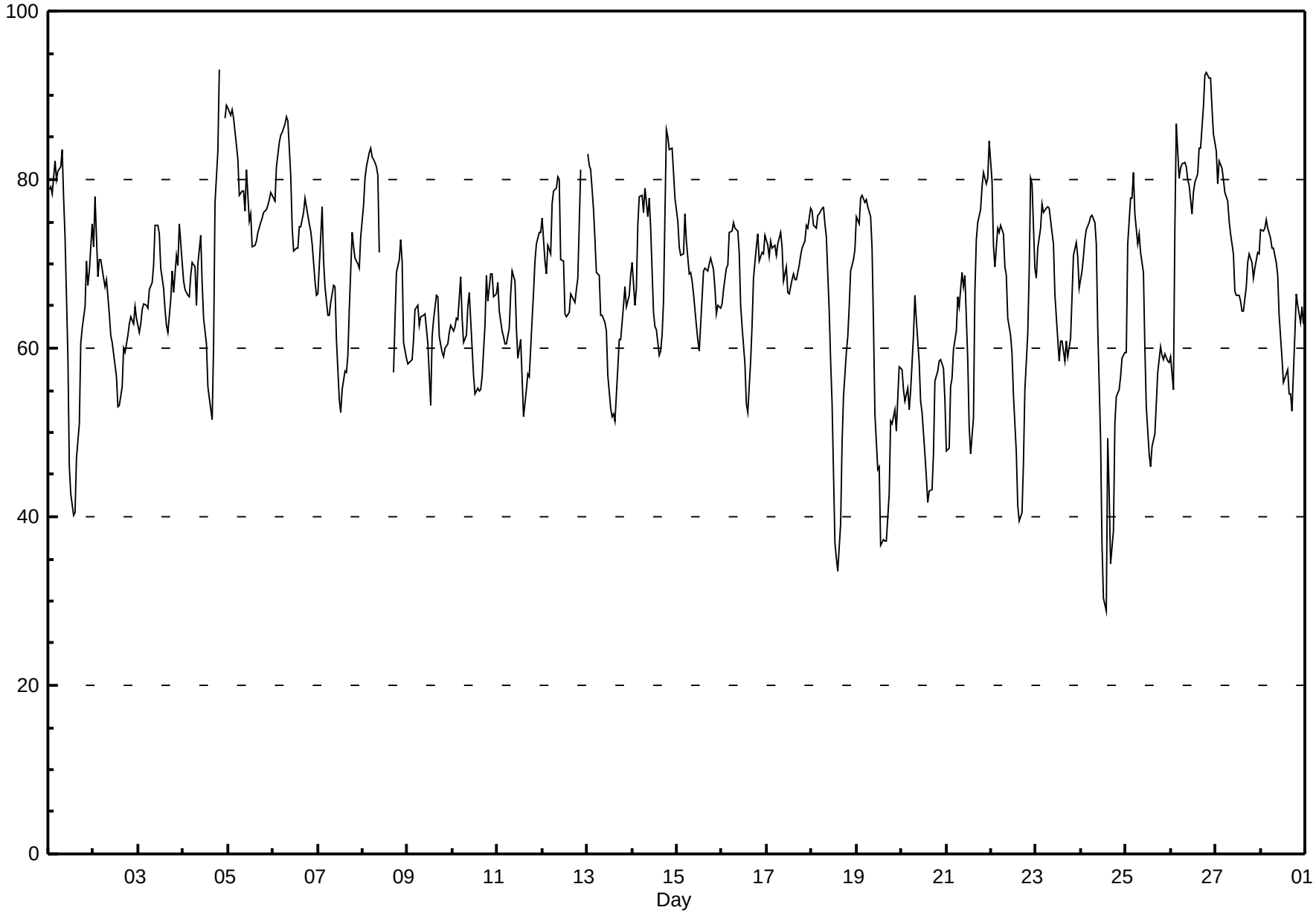
Hourly Averages

Relative Humidity (RH) - %

Beaverlodge - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Beaverlodge - February 2011

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	3	2	3	4	3	5	4	3	4	4	4	6	3	3	3	3	9	23	20	17	19	11	4	2.3	23.2
Dir	61	101	210	67	64	56	47	52	64	55	62	61	54	73	58	262	201	256	272	253	239	241	237	231	256	272
2 Spd	5	1	6	5	12	19	15	17	17	25	21	23	27	26	20	25	14	19	19	17	13	8	9	12	15.1	27.4
Dir	271	285	301	223	243	242	231	225	251	268	261	251	257	271	271	271	260	266	251	250	240	234	232	277	256	257
3 Spd	13	10	8	10	16	22	29	38	41	38	37	26	13	12	10	6	7	2	4	6	3	2	6	9	13.9	40.8
Dir	289	264	274	291	266	264	255	265	250	240	242	244	243	242	238	261	278	266	247	215	107	108	117	204	252	250
4 Spd	12	23	30	32	25	19	13	17	20	19	18	17	25	33	30	25	19	22	20	15	16	17	15	13	18.5	33.0
Dir	220	236	248	256	244	234	220	252	231	241	243	258	258	259	270	288	306	302	286	304	303	303	304	296	264	259
5 Spd	11	13	10	14	17	21	23	18	17	18	21	19	17	20	22	18	14	12	11	8	8	7	5	3	14.2	23.4
Dir	297	300	300	317	330	337	335	335	328	331	326	329	332	323	316	319	323	320	322	334	325	320	333	354	324	335
6 Spd	2	1	3	4	6	10	12	12	9	9	8	9	11	20	21	19	25	24	25	26	27	25	24	23	14.7	27.3
Dir	359	149	80	66	72	85	95	86	85	90	100	110	97	94	94	88	87	85	79	75	73	78	76	77	84	73
7 Spd	22	24	24	24	19	13	10	11	13	11	5	4	8	11	11	9	6	3	1	6	10	13	12	11	8.7	24.2
Dir	73	70	66	68	63	55	54	45	42	46	16	297	20	16	15	15	7	27	133	295	308	318	322	318	36	66
8 Spd	11	2	2	4	5	5	4	6	4	2	N	N	N	N	N	N	5	4	2	1	1	4	11	13	1.5	13.1
Dir	318	319	99	53	47	48	54	45	61	104	N	N	N	N	N	N	67	94	205	131	243	260	272	279	354	279
9 Spd	13	14	12	9	8	11	8	3	2	8	8	9	9	20	23	16	9	23	25	29	29	24	21	25	14.3	29.1
Dir	271	267	254	237	236	238	234	188	160	225	227	248	255	248	245	220	233	269	272	269	258	253	258	261	253	269
10 Spd	31	29	23	19	12	22	30	23	17	8	26	30	32	30	33	30	28	17	9	9	7	15	14	23	21.0	32.6
Dir	266	265	255	252	235	254	259	252	238	226	263	275	278	271	269	271	265	253	231	249	240	257	267	258	261	269
11 Spd	21	27	29	23	19	17	23	21	12	7	6	8	15	26	35	27	18	29	23	27	20	11	6	8	18.5	34.9
Dir	252	262	257	251	254	254	251	247	231	195	186	213	234	250	258	267	268	257	248	244	246	244	227	225	250	258
12 Spd	3	9	8	1	1	1	15	17	12	3	4	6	4	5	5	4	3	4	4	2	6	6	7	7	3.1	16.6
Dir	202	233	241	75	172	199	244	239	231	228	128	146	199	212	204	109	138	60	64	19	330	337	289	247	231	239
13 Spd	11	17	15	23	24	30	20	24	21	31	33	30	33	22	15	19	21	20	13	10	7	4	5	7	17.6	32.7
Dir	257	255	247	240	250	245	241	262	242	242	237	239	248	246	239	238	224	219	217	184	172	144	150	146	238	237
14 Spd	5	6	5	6	3	4	2	3	5	5	7	11	15	4	16	21	24	22	24	20	19	24	25	26	7.5	25.9
Dir	108	202	193	187	143	73	81	89	55	146	55	33	32	102	62	61	61	60	17	358	356	317	322	319	23	319
15 Spd	24	22	21	26	17	21	20	18	17	15	15	18	17	15	17	15	13	10	8	10	11	12	10	7	15.6	26.5
Dir	316	324	321	306	307	313	313	312	313	319	318	310	317	323	318	318	325	326	332	338	338	320	332	326	318	306
16 Spd	6	5	6	6	5	5	1	5	7	6	4	5	6	8	11	10	8	8	6	5	4	6	8	8	5.3	10.7
Dir	329	339	353	18	32	20	355	16	23	19	357	328	349	21	13	23	37	44	101	107	61	35	40	36	23	13
17 Spd	6	7	6	8	7	7	6	7	8	9	12	12	12	13	14	12	12	13	11	12	12	11	10	4	8.7	13.5
Dir	23	22	11	15	23	6	3	3	6	347	326	326	322	319	318	314	313	315	319	322	319	313	304	291	332	318
18 Spd	3	4	1	1	1	3	7	1	2	2	3	4	2	3	2	3	5	6	6	8	8	8	5	4	2.1	8.3
Dir	291	304	28	269	151	249	268	87	53	81	76	62	89	90	107	96	67	85	78	96	83	94	96	191	85	96
19 Spd	3	2	2	2	3	3	4	2	2	3	2	2	4	1	1	2	1	1	1	1	2	1	2	2	1.0	4.2
Dir	191	156	126	123	137	86	77	108	126	104	218	261	267	41	286	223	229	60	83	179	144	216	77	115	133	77
20 Spd	3	6	5	5	2	1	1	3	2	2	3	4	4	4	4	4	3	2	1	0	1	4	1	3	2.4	5.7
Dir	119	136	124	140	119	129	125	94	97	65	58	77	81	71	66	56	67	85	189	69	80	61	74	80	93	136
21 Spd	2	17	14	14	21	18	9	24	25	25	26	29	30	20	22	24	26	20	14	11	10	12	11	10	15.5	30.4
Dir	199	244	244	261	250	247	224	249	251	242	236	252	274	281	291	293	311	314	325	327	318	306	319	334	273	274
22 Spd	9	11	11	12	12	11	10	10	8	9	10	13	16	13	14	12	11	9	9	7	7	9	14	14	10.6	16.0
Dir	337	347	334	325	318	315	307	324	332	327	326	326	327	327	2	337	345	330	330	328	323	334	348	348	332	327

PASZA
Peace Air Shed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Beaverlodge - February 2011

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	13	12	11	9	9	11	11	13	11	15	16	13	14	12	11	8	9	12	14	7	5	11.2	16.0
Dir	339	346	337	333	330	324	322	323	336	335	341	343	352	6	353	357	348	346	335	327	324	327	326	352	340	6
24 Spd	5	11	14	8	8	8	9	4	2	3	3	3	1	3	10	6	4	3	6	4	3	3	2	2	1.3	13.6
Dir	324	333	322	342	340	343	331	313	279	257	188	183	158	162	193	192	171	129	116	88	91	106	100	227	317	322
25 Spd	0	4	3	1	1	7	4	7	13	9	10	14	10	10	12	24	26	28	30	25	21	20	17	20	12.1	29.6
Dir	57	39	41	110	190	258	236	279	253	238	233	222	211	186	205	228	230	235	238	237	238	240	243	242	234	238
26 Spd	23	27	28	27	28	27	26	24	21	15	16	14	14	12	11	7	4	4	5	3	2	8	32	35	11.1	35.0
Dir	250	275	281	271	272	277	273	271	273	283	282	277	276	277	250	222	224	220	228	257	325	36	62	58	279	58
27 Spd	31	25	26	27	31	28	24	23	17	17	16	17	18	19	21	20	20	18	17	22	23	22	18	18	21.4	30.7
Dir	56	52	46	42	37	39	37	41	42	41	37	32	44	49	43	47	37	36	37	47	52	43	40	40	43	37
28 Spd	13	12	8	6	11	14	17	18	19	18	14	14	13	15	13	11	11	6	6	9	12	10	10	7	11.0	19.4
Dir	39	40	38	15	29	35	33	33	32	30	28	34	28	13	15	19	7	9	340	323	335	341	322	341	19	32
Spd	4.6	5.6	5.7	5.4	4.9	6.0	6.0	6.3	5.4	5.1	6.4	6.8	7.4	6.9	6.8	6.3	4.7	4.8	4.8	4.5	4.4	5.1	4.4	4.2	Diurnal Average	
Dir	304	292	291	292	293	290	284	285	279	276	275	280	291	290	293	296	310	298	293	293	306	308	325	311		
Spd	31.0	29.2	30.4	32.0	30.7	30.2	29.7	37.8	40.8	37.9	36.9	30.0	32.7	33.0	34.9	29.7	27.7	28.8	29.6	29.1	28.6	25.0	32.2	35.0	Diurnal Maximum	
Dir	266	265	248	256	37	245	259	265	250	240	242	275	248	259	258	271	265	257	238	269	258	78	62	58		

Maximum Speed Value: 41 km/h on Feb 3 09:00
Maximum Daily Speed Average: 21.4 km/h on Feb 27
Maximum Diurnal Speed Average: 7.4 km/h at hour 13

Minimum Speed Value: 0 km/h on Feb 25 01:00
Minimum Daily Speed Average: 1.0 km/h on Feb 19
Minimum Diurnal Speed Average: 4.2 km/h at hour 24

Monthly Average Velocity: 5.40 km/h 292.8 deg

Speed Percentiles: $P_1 = 0.9$ $P_{10} = 2.5$ $Q_1 = 5.1$ Median = 10.8 $Q_3 = 18.8$ $P_{90} = 25.0$ $P_{99} = 32.7$

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

Hours in Service:	672
Hours of Data:	666
Hours of Missing Data:	6
Percent Operational Time:	99.1

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	7	35	16	3	0	0	61
NorthEast	35	20	27	16	5	0	103
East	43	14	3	14	0	0	74
SouthEast	23	6	0	0	0	0	29
South	18	10	0	0	0	0	28
SouthWest	17	28	31	24	8	0	108
West	15	16	26	51	22	1	131
NorthWest	5	46	62	19	0	0	132
Total	163	175	165	127	35	1	666

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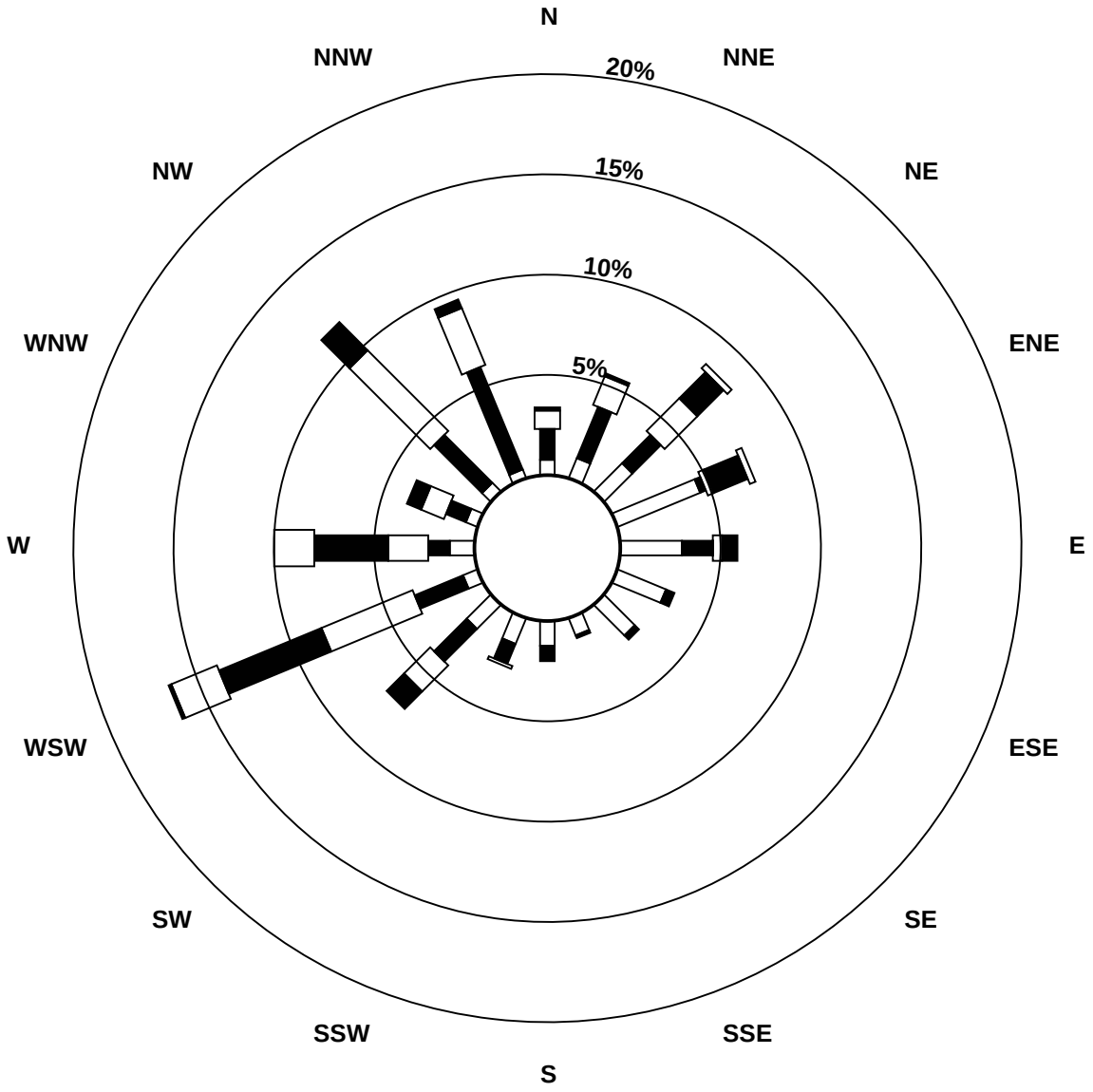
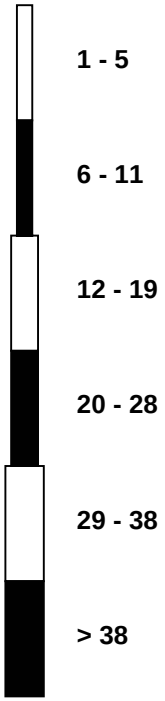
Wind Rose

Wind Speed (WS) (km/h)

Beaverlodge - February 2011



Wind Speed Classes (km/h)



PASZA
Peace Air Shed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Beaverlodge - February 2011

Maximum Speed: 41 km/h on Feb 3 09:00

Maximum Daily Speed Average: 21.7 km/h on Feb 10

Minimum Speed: 1 km/h on Feb 6 02:00

Minimum Daily Speed Average: 2.6 km/h on Feb 19

Maximum Diurnal Speed Average: 15.3 km/h at hour 15

Minimum Diurnal Speed Average: 11.3 km/h at hour 1

Monthly Average Speed: 12.75 km/h

Percentiles: P_1 = 1.7 P_{10} = 3.1 Q_1 = 5.5 Median = 11.0 Q_3 = 19.0 P_{90} = 25.2 P_{99} = 32.9

Hours in Service: 672
Hours of Data: 666
Hours of Missing Data: 6

Percent Operational Time: 99.1

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	4	3	2	3	4	4	5	5	3	4	4	5	6	3	4	5	4	10	23	21	17	19	12	6	7.3	23.4
2-Feb	5	3	8	5	12	19	15	17	18	25	21	23	28	26	20	25	15	19	20	18	14	9	9	12	16.2	27.5
3-Feb	13	10	9	10	17	22	29	38	41	38	37	26	13	12	10	8	8	6	7	7	3	3	7	10	16.1	41.2
4-Feb	12	23	31	32	25	19	13	17	20	20	19	17	25	33	30	26	20	22	20	15	16	18	15	13	20.8	33.2
5-Feb	11	13	11	15	17	21	23	18	17	18	21	19	17	20	22	18	14	12	11	8	8	7	5	3	14.6	23.5
6-Feb	2	1	3	5	7	10	12	12	10	9	8	9	12	20	21	19	25	24	25	26	27	25	24	24	15.1	27.4
7-Feb	22	24	24	24	19	13	10	11	13	11	6	5	8	11	11	9	6	3	2	6	10	13	12	11	11.8	24.3
8-Feb	11	4	2	4	5	5	4	6	4	3	N	N	N	N	N	N	5	4	3	4	4	5	11	13	5.5	13.1
9-Feb	13	14	12	10	8	11	8	4	3	8	8	9	9	20	23	16	10	24	25	29	29	24	21	25	15.1	29.2
10-Feb	31	29	23	19	13	22	30	23	18	9	26	30	32	30	33	30	28	17	9	10	8	15	14	23	21.7	32.6
11-Feb	21	27	29	24	19	17	23	21	13	8	6	8	15	26	35	28	18	29	23	27	20	11	7	8	19.3	35.0
12-Feb	3	9	8	3	3	2	15	17	12	5	5	7	5	6	5	4	4	4	4	4	7	7	7	7	6.5	16.6
13-Feb	11	18	15	23	24	30	20	24	21	31	33	30	33	22	15	19	21	20	13	11	7	5	5	7	19.1	32.8
14-Feb	6	7	6	6	4	5	3	3	5	6	7	11	15	6	16	21	24	23	25	20	19	24	25	26	13.0	26.1
15-Feb	25	22	21	27	20	21	20	18	17	15	15	18	17	16	17	15	13	10	8	10	11	12	10	7	16.0	26.9
16-Feb	6	5	6	6	5	5	2	5	7	6	5	6	6	8	11	10	8	8	6	6	4	6	8	8	6.3	10.9
17-Feb	6	7	6	8	7	7	6	7	8	10	12	12	12	13	14	13	13	13	11	12	12	11	10	4	9.7	13.6
18-Feb	3	5	2	2	2	3	7	3	4	2	3	4	3	3	3	4	5	6	6	9	8	8	6	4	4.3	8.6
19-Feb	3	2	2	2	3	4	4	2	2	3	2	2	4	2	2	2	2	1	2	2	3	3	3	3	2.6	4.3
20-Feb	4	6	5	5	2	2	2	3	3	2	4	4	4	4	4	4	3	2	2	3	2	4	2	3	3.3	6.3
21-Feb	4	17	14	15	21	18	9	24	26	25	26	29	31	20	22	24	26	20	14	12	10	12	12	10	18.4	30.7
22-Feb	10	11	11	12	12	11	10	10	8	9	10	13	16	14	15	12	11	10	9	7	7	10	14	14	11.0	16.0
23-Feb	13	14	12	13	12	11	9	9	11	11	13	12	16	16	14	14	13	11	8	9	12	14	7	6	11.6	16.3
24-Feb	6	11	14	10	8	9	9	4	2	4	3	3	2	3	10	6	4	3	6	4	3	3	3	3	5.5	13.7
25-Feb	2	4	3	2	3	7	4	7	13	10	11	14	10	10	12	24	26	28	30	25	21	20	17	21	13.5	29.6
26-Feb	23	27	28	27	28	27	26	24	21	15	16	14	14	12	12	7	5	4	5	3	3	8	32	35	17.3	35.1
27-Feb	31	25	26	27	31	28	24	23	17	17	16	17	18	19	21	21	20	18	18	22	23	22	18	18	21.6	30.8
28-Feb	13	12	8	6	11	14	17	18	19	18	14	15	13	15	13	11	11	6	6	9	12	10	10	7	12.0	19.4
Diurnal Average	11.3	12.6	12.3	12.2	12.1	13.0	12.9	13.4	12.7	12.2	13.1	13.4	14.2	14.5	15.3	14.6	12.9	12.8	12.2	12.0	11.5	11.6	11.6	11.9		
Diurnal Maximum	31.1	29.3	30.6	32.1	30.8	30.3	29.8	37.9	41.2	37.9	37.0	30.2	32.7	33.2	35.0	29.8	27.7	28.9	29.6	29.2	28.8	25.1	32.2	35.1		

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

PASZA
Peace Air Shed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Beaverlodge - February 2011

Maximum Value: 88.7 deg on Feb 25 01:00

Minimum Value: 2.2 deg on Feb 3 10:00

Percentiles: P_1 = 2.8 P_{10} = 4.0 Q_1 = 5.4 Median = 8.3 Q_3 = 18.8 P_{90} = 44.6 P_{99} = 84.9

Hours in Service:	672
Hours of Data:	666
Hours of Missing Data:	6
Hours of Calibration:	0
Percent Operational Time:	99.1

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	28	38	20	52	10	25	12	13	20	9	17	26	11	14	22	77	56	26	8	20	8	9	26	64	76.9
2-Feb	71	81	52	37	10	4	7	8	40	8	6	5	6	5	7	7	18	7	13	9	29	11	17	8	81.1
3-Feb	10	8	20	10	10	12	3	3	8	2	3	3	10	7	12	60	57	77	84	38	46	48	32	46	83.6
4-Feb	14	5	6	5	7	7	12	9	9	6	19	13	7	5	7	5	9	15	6	7	4	3	3	6	19.1
5-Feb	4	5	7	16	9	6	5	8	10	8	6	8	9	7	6	7	7	6	9	10	11	10	14	22	21.7
6-Feb	20	68	27	9	8	6	4	6	11	5	7	8	8	5	3	4	4	4	4	4	3	6	5	6	67.9
7-Feb	5	6	3	3	5	10	10	4	4	11	10	58	23	4	4	4	7	45	55	56	4	4	2	2	58.3
8-Feb	4	72	40	10	11	7	8	4	8	40	N	N	N	N	N	N	6	15	47	69	88	64	25	5	87.5
9-Feb	5	6	9	10	13	10	7	29	47	13	5	10	29	6	4	10	17	12	5	5	7	5	6	6	46.9
10-Feb	3	3	4	4	14	9	4	4	20	26	4	6	4	4	3	3	3	18	6	16	39	5	4	5	38.8
11-Feb	3	3	3	7	6	6	6	5	23	13	15	16	6	8	5	5	9	5	3	4	4	10	25	8	24.8
12-Feb	57	23	18	87	85	86	3	3	7	71	34	16	33	11	27	22	32	13	6	63	28	27	19	10	86.7
13-Feb	10	8	9	5	4	5	7	9	4	4	3	5	3	4	5	6	4	3	6	22	11	26	30	28	29.9
14-Feb	40	41	29	10	47	42	60	44	8	41	27	6	8	47	9	4	3	14	7	9	9	5	4	7	60.0
15-Feb	6	7	6	11	28	5	5	5	7	7	8	8	7	9	7	7	7	8	12	10	10	7	9	9	28.2
16-Feb	14	13	6	17	6	6	68	9	3	12	28	20	16	23	11	7	8	9	12	9	26	6	5	6	68.1
17-Feb	10	7	8	7	6	13	9	7	8	19	8	8	6	6	6	6	7	6	4	5	6	5	4	9	19.3
18-Feb	41	10	57	64	54	39	12	72	51	51	23	13	23	22	10	25	11	11	16	14	5	7	21	18	71.7
19-Feb	34	27	36	22	20	24	14	38	38	26	33	76	41	57	87	28	84	73	53	69	54	78	52	48	87.3
20-Feb	40	27	8	16	33	82	45	22	33	38	42	15	12	11	16	7	11	35	70	85	73	52	72	33	85.3
21-Feb	76	4	6	13	6	6	13	16	6	5	7	7	9	7	5	8	4	7	6	8	9	6	8	6	75.8
22-Feb	9	8	7	5	5	5	3	10	6	6	7	7	6	12	13	11	8	11	5	5	6	14	6	7	14.3
23-Feb	4	5	5	4	5	7	6	7	7	7	8	11	12	10	13	11	10	8	8	7	4	4	35	19	34.7
24-Feb	16	6	4	41	14	20	10	54	54	30	31	20	66	22	5	8	19	15	19	19	16	12	43	39	65.6
25-Feb	89	9	13	65	68	12	43	43	14	16	7	5	20	9	6	4	5	4	3	3	4	4	6	9	88.7
26-Feb	10	7	4	4	5	4	5	4	5	5	4	5	5	5	25	3	16	8	8	8	58	6	4	4	58.1
27-Feb	4	7	7	5	4	5	5	6	6	7	6	3	8	6	4	6	5	4	4	7	5	4	4	4	8.3
28-Feb	4	7	8	4	12	6	3	3	4	3	5	5	10	7	8	10	12	17	5	7	6	7	3	28	27.8
	88.7	81.1	57.4	86.7	85.0	85.6	68.1	71.7	54.4	70.8	42.1	75.9	65.6	57.3	87.3	76.9	84.4	77.0	83.6	85.3	87.5	77.7	72.5	64.4	

N - Not Valid

PASZA
Portable – Bonanza Station
Monthly Summary Tables, Graphs and Roses

PASZA
Peace Air Shed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Portable-Bonanza - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.9 ppb on Feb 26 20:00
Maximum Daily Average: 0.8 ppb on Feb 19

Minimum Value: 0 ppb on Feb 4 05:00
Maximum Diurnal Average: 0.5 ppb at hour 14
Monthly Average: 0.38 ppb

Minimum Daily Average: 0.1 ppb on Feb 12
Minimum Diurnal Average: 0.3 ppb at hour 19
Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.1$ Median = 0.3 $Q_3 = 0.6$ $P_{90} = 0.8$ $P_{99} = 1.5$

Hours in Service:	672
Hours of Data:	637
Hours of Missing Data:	35
Hours of Calibration:	33
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	0	0	0	0	0	1	1	1	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.4	0.7
2-Feb	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
3-Feb	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
4-Feb	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.2	1.0
5-Feb	0	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.2	0.6
6-Feb	0	0	0	0	A	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.4	0.6
7-Feb	0	0	0	A	0	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0.6	1.2
8-Feb	1	1	A	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0.5	1.1
9-Feb	1	A	0	0	0	0	0	1	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.4	0.8
10-Feb	A	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	1	1	0	0	1	1	0	A	0.4	0.7
11-Feb	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.8
12-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.3
13-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.4
14-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.4
15-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.3
16-Feb	0	0	0	0	0	0	0	0	0	1	C	C	M	M	1	1	1	0	0	0	0	0	0	0	0.3	1.3
17-Feb	0	0	0	0	1	1	0	0	0	0	C	C	C	0	0	0	0	0	0	0	2	1	1	2	0.4	1.9
18-Feb	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	0	0	1	1	1	1	0.7	1.3
19-Feb	1	1	1	2	1	0	0	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0.8	1.6
20-Feb	0	1	1	1	1	1	1	0	A	1	1	1	1	1	1	1	1	1	1	1	2	1	1	0	0.8	1.5
21-Feb	0	0	0	0	0	0	0	A	0	0	1	1	0	1	1	1	1	0	0	0	1	0	0	0	0.4	0.9
22-Feb	0	1	2	0	0	0	A	1	1	1	1	1	1	1	0	0	0	0	0	1	0	0	0	0	0.5	1.5
23-Feb	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0.3	0.7
24-Feb	0	0	0	0	A	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0.5	1.2
25-Feb	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.6	1.3
26-Feb	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	0	0	0	0.8	1.9
27-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
28-Feb	A	0	0	0	0	0	0	1	0	0	0	1	2	1	1	0	0	0	0	0	0	0	0	A	0.4	1.7
	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	Diurnal Average	
	1.2	1.3	1.5	1.6	1.0	0.8	0.9	0.9	1.2	1.2	1.3	1.2	1.7	1.3	1.3	1.2	1.3	0.9	1.0	1.9	1.8	1.0	1.3	1.9	Diurnal Maximum	

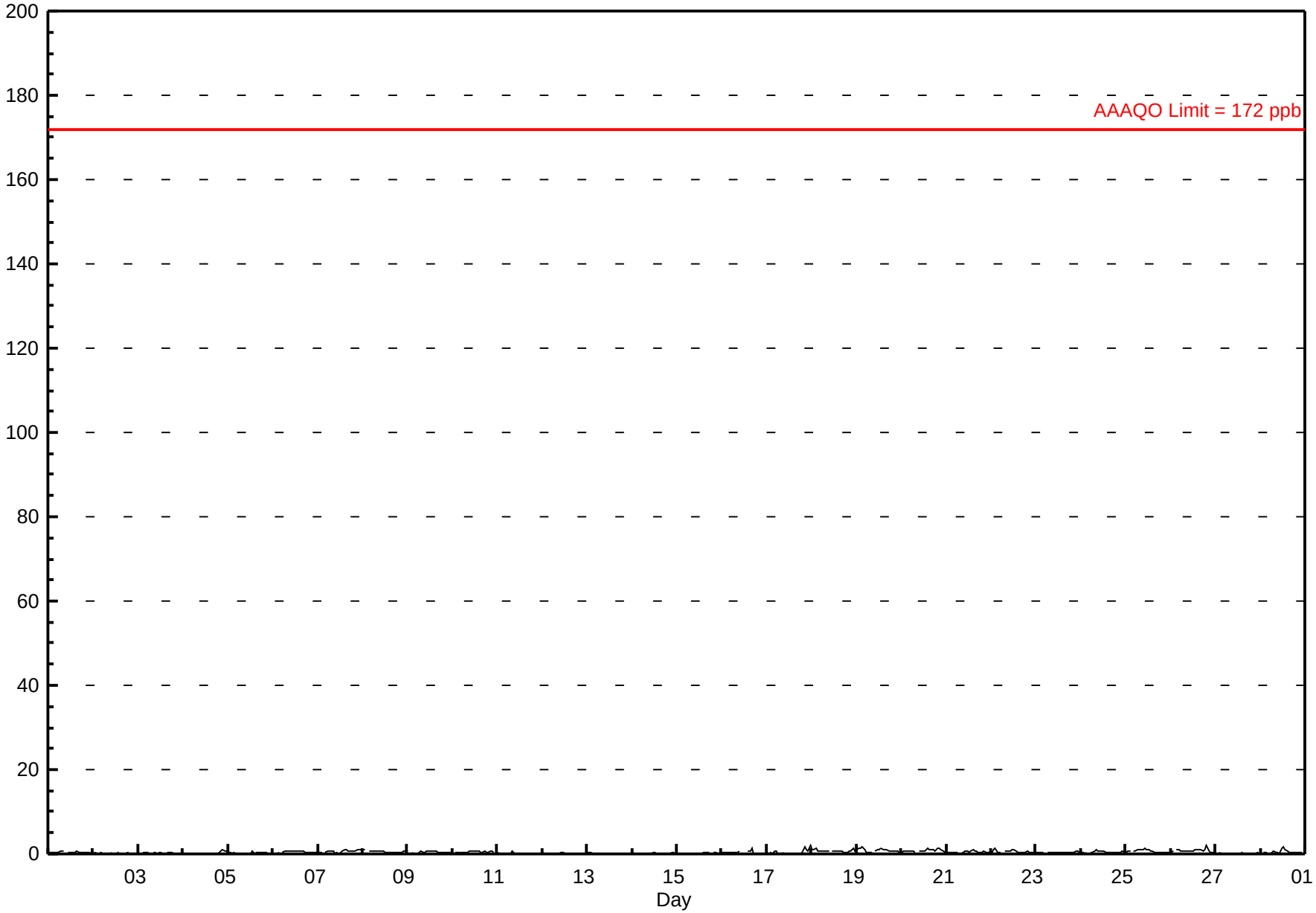
C - Calibration M - Maintenance A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

PASZA
Peace Air Shed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Portable-Bonanza - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Portable-Bonanza - February 2011

Maximum Value: 5.0 ppb on Feb 17 05:00

Maximum Daily Average: 1.2 ppb on Feb 26

Minimum Value: 0 ppb on Feb 17 15:00

Minimum Daily Average: 0.2 ppb on Feb 12

Maximum Diurnal Average: 1.0 ppb at hour 14

Minimum Diurnal Average: 0.6 ppb at hour 7

Monthly Average: 0.74 ppb

Percentiles: $P_1 = 0.1$ $P_{10} = 0.2$ $Q_1 = 0.4$ Median = 0.7 $Q_3 = 0.8$ $P_{90} = 1.3$ $P_{99} = 3.0$

Hours in Service:	672
Hours of Data:	637
Hours of Missing Data:	35
Hours of Calibration:	33
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	1	1	1	1	0	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2
2-Feb	1	1	1	1	1	1	1	1	A	1	1	1	0	1	1	0	0	0	1	1	0	0	1	0	0.5	0.7
3-Feb	0	1	0	1	1	1	0	A	0	0	0	0	1	0	0	0	1	1	1	0	0	1	0	0	0.4	0.7
4-Feb	0	0	0	0	0	0	A	0	0	1	0	1	0	0	0	1	0	0	0	1	1	1	1	1	0.4	1.2
5-Feb	1	1	0	0	0	A	0	0	0	0	0	1	0	5	1	1	1	1	1	1	1	1	0	0	0.6	4.5
6-Feb	0	0	0	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
7-Feb	1	1	1	A	1	1	1	1	1	1	1	0	1	1	1	2	1	1	1	1	1	1	1	2	1.0	2.1
8-Feb	2	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.6
9-Feb	1	A	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
10-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.7	1.1
11-Feb	1	1	0	1	0	0	0	0	4	1	0	1	0	0	0	0	0	0	0	0	1	1	A	0	0.5	4.1
12-Feb	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	A	1	0	0.2	0.7
13-Feb	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0.3	0.7
14-Feb	1	0	0	0	1	0	0	1	0	1	1	1	1	1	1	1	1	0	0	A	1	1	1	1	0.5	0.9
15-Feb	0	0	0	0	0	1	0	0	0	0	0	0	1	1	1	1	1	1	A	1	1	1	1	1	0.4	0.7
16-Feb	1	1	1	1	1	1	1	1	1	1	C	C	M	M	1	2	3	0	0	0	0	0	0	0	0.8	3.5
17-Feb	1	0	1	0	5	1	0	1	0	0	C	C	C	0	0	0	0	0	0	2	3	2	2	3	1.0	5.0
18-Feb	1	1	2	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	2	1	1.1	1.8
19-Feb	2	2	2	2	2	1	1	1	1	A	1	2	1	2	2	1	2	1	1	1	1	1	1	1	1.2	2.2
20-Feb	1	1	1	1	1	1	1	1	A	1	1	1	1	2	2	2	1	1	1	2	2	2	1	1	1.2	2.2
21-Feb	1	1	0	1	0	0	0	A	0	1	1	1	1	2	2	1	2	1	1	1	1	1	1	1	0.9	2.3
22-Feb	1	4	3	1	1	1	A	1	1	1	1	2	2	1	1	1	1	1	1	2	1	1	0	1	1.2	3.7
23-Feb	1	1	1	1	1	A	1	1	1	0	1	1	1	0	1	1	0	1	1	0	1	1	1	1	0.6	0.9
24-Feb	1	1	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.4
25-Feb	1	1	1	A	1	1	1	1	1	2	2	1	1	1	1	1	1	1	0	1	1	1	1	1	1.0	1.8
26-Feb	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	2	1	0	0	1.2	2.8
27-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	1	1	0.4	1.7
28-Feb	A	1	1	1	0	0	1	1	1	1	1	3	3	2	1	1	1	1	1	1	1	1	1	A	0.9	2.6
	0.7	0.8	0.7	0.7	0.8	0.6	0.6	0.6	0.7	0.7	0.7	0.9	0.8	1.0	0.8	0.8	0.8	0.6	0.6	0.8	0.9	0.8	0.8	0.7	Diurnal Average	
	1.7	3.7	3.2	2.2	5.0	1.3	1.3	1.3	4.1	1.6	1.8	2.6	2.6	4.5	1.7	2.1	3.5	1.3	1.8	2.8	2.6	2.1	1.7	2.6	Diurnal Maximum	

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

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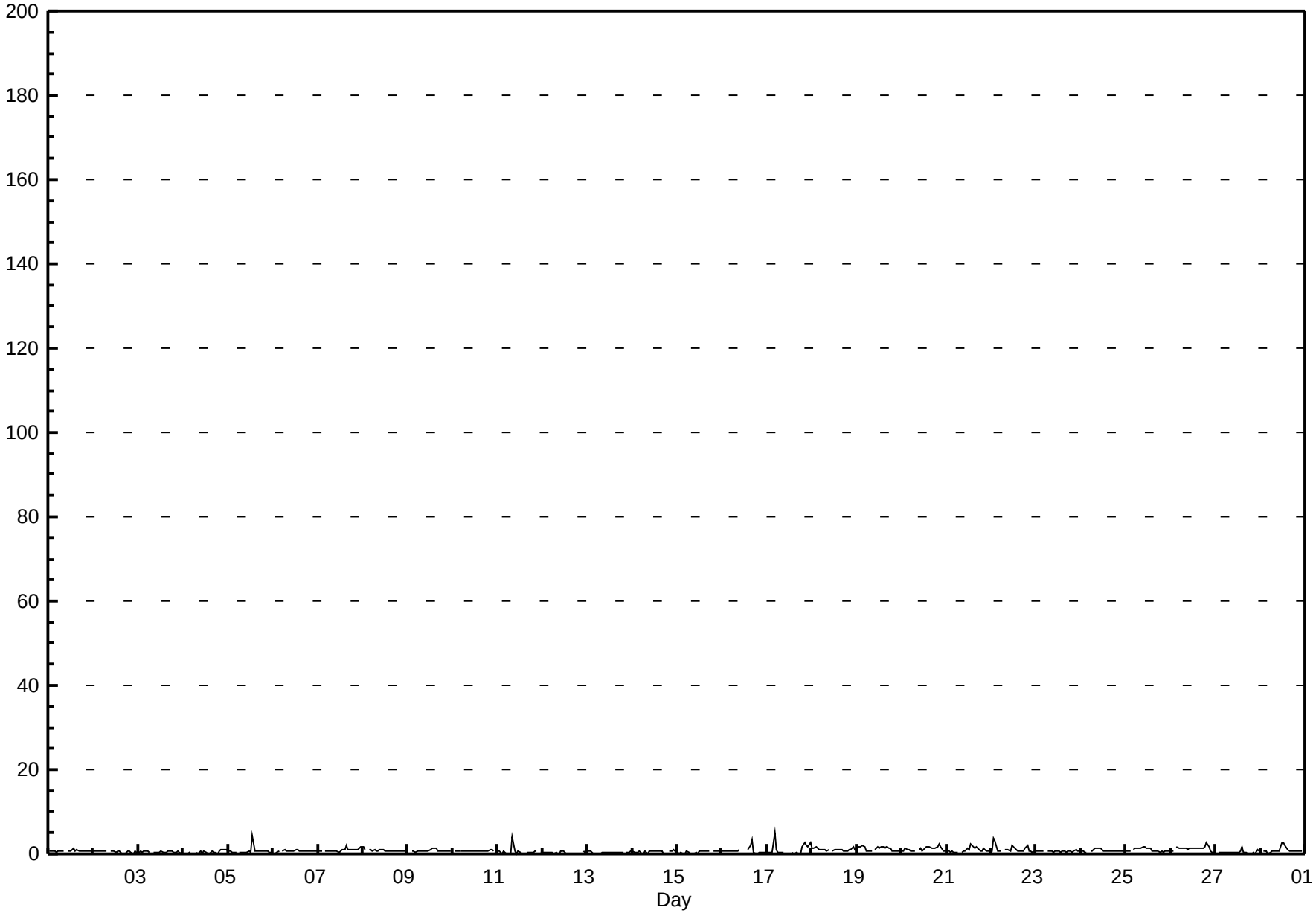
Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Portable-Bonanza - February 2011



FOCUS AIR QUALITY MONITORING

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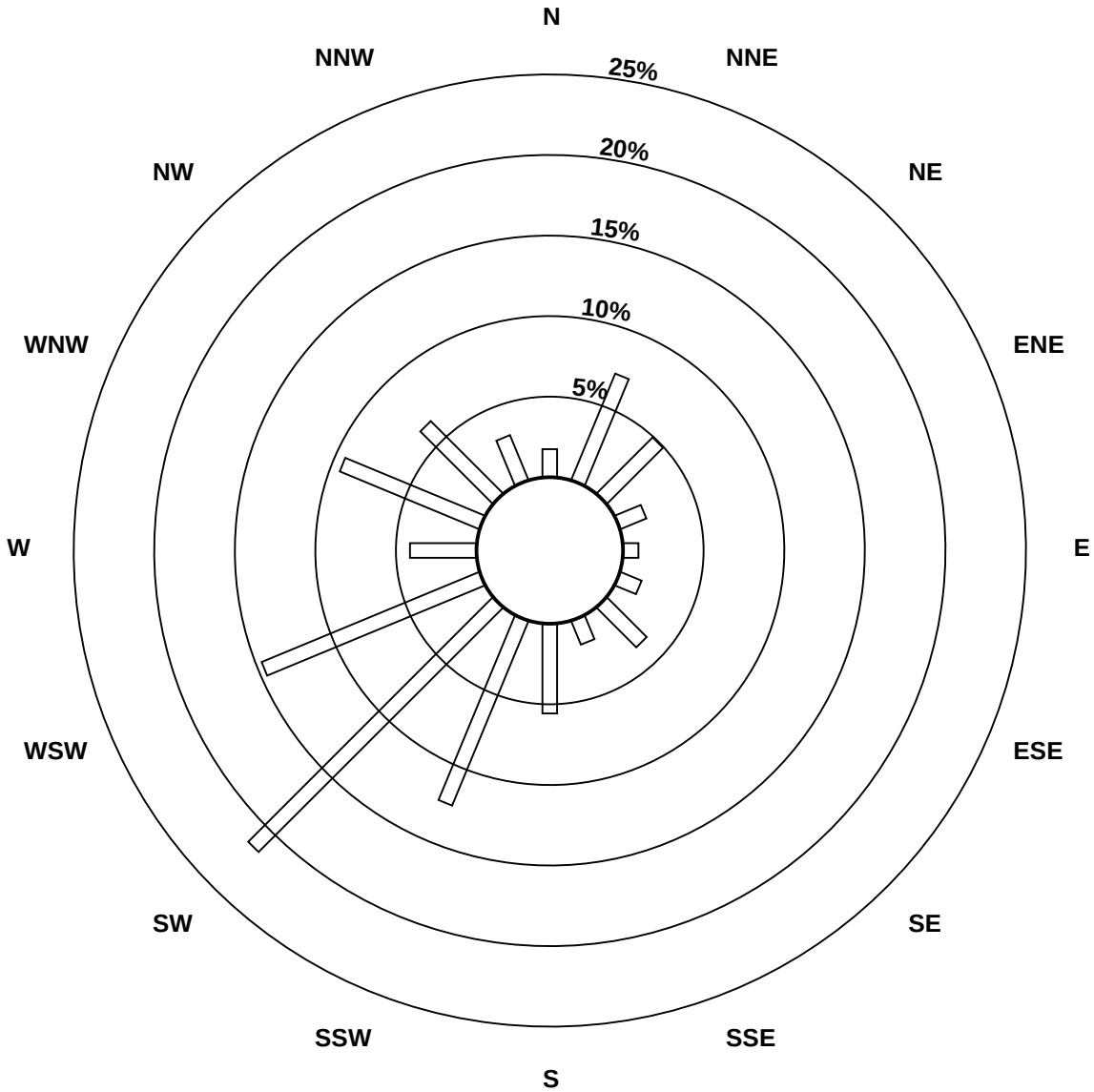
Peace Air Shed Zone Association

Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Portable-Bonanza - February 2011



Pollutant Classes (ppb)

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

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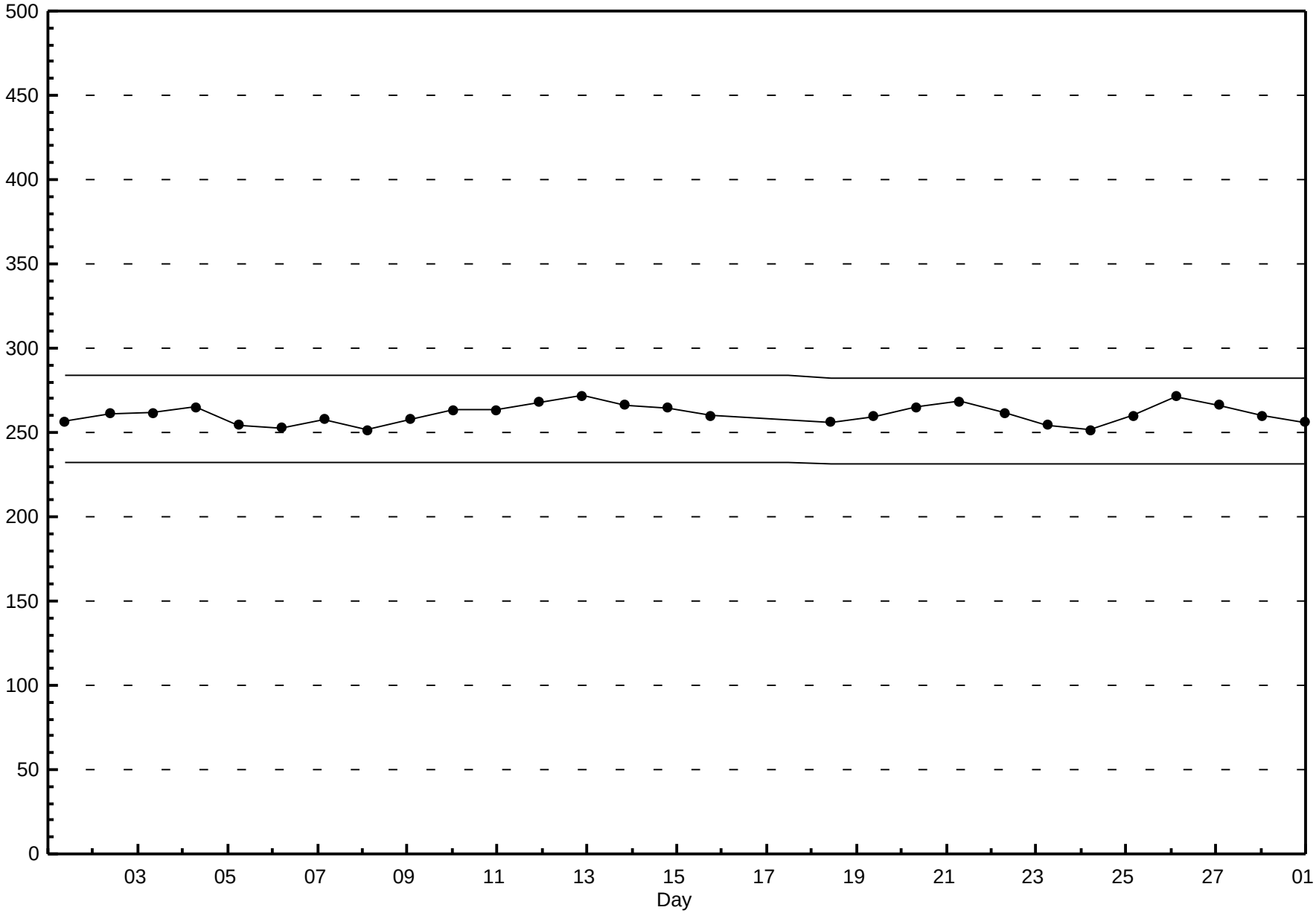
Span Responses

Sulphur Dioxide (SO_2)

Portable-Bonanza - February 2011



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Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Portable-Bonanza - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 0.8 ppb on Feb 16 05:00 Maximum Daily Average: 0.6 ppb on Feb 19

Minimum Value: 0 ppb on Feb 14 02:00 Minimum Daily Average: 0.4 ppb on Feb 12
Maximum Diurnal Average: 0.5 ppb at hour 14 Minimum Diurnal Average: 0.5 ppb at hour 4
Monthly Average: 0.51 ppb Percentiles: $P_1 = 0.3$ $P_{10} = 0.4$ $Q_1 = 0.4$ Median = 0.5 $Q_3 = 0.6$ $P_{90} = 0.6$ $P_{99} = 0.8$

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	31
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	1	1	1	1	1	1	1	0	A	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0.5	0.7
2-Feb	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.5
3-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
4-Feb	0	0	0	0	0	0	A	0	0	0	0	1	0	1	0	0	0	1	1	1	1	1	1	1	0.5	0.6
5-Feb	1	0	1	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1	0.5	0.8
6-Feb	1	1	0	0	A	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	0	1	0.5	0.8
7-Feb	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.6
8-Feb	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0.6	0.8
9-Feb	0	A	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	1	0	0	1	1	1	1	0.5	0.8
10-Feb	A	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.6	0.8
11-Feb	1	1	1	0	0	0	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0.5	0.6
12-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0.4	0.5
13-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.4	0.4
14-Feb	0	0	0	0	0	0	1	0	0	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	0.5	0.6
15-Feb	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.5	0.5
16-Feb	0	0	0	0	1	1	1	1	1	1	1	1	M	M	1	1	0	1	0	0	0	0	0	0	0.5	0.8
17-Feb	0	0	0	0	0	0	1	0	0	0	0	A	1	1	C	C	1	1	1	1	1	1	1	1	0.5	0.8
18-Feb	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	0.6	0.8
19-Feb	1	1	1	1	1	1	1	1	1	A	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.7
20-Feb	1	0	0	1	1	1	1	1	A	1	1	0	0	1	0	0	0	0	0	1	1	0	1	1	0.5	0.6
21-Feb	1	1	1	1	1	0	1	A	1	1	1	1	1	1	0	1	0	0	1	0	0	0	0	0	0.5	0.6
22-Feb	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.4	0.5
23-Feb	0	0	1	1	0	A	1	1	1	0	0	0	0	0	1	0	1	0	1	1	1	0	1	1	0.5	0.6
24-Feb	1	1	1	1	A	1	1	1	1	1	1	0	1	1	0	1	1	0	1	1	0	0	0	0	0.5	0.6
25-Feb	0	0	1	A	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.5	0.7
26-Feb	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0.6	0.7
27-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.4	0.5
28-Feb	A	0	1	0	0	1	1	0	0	0	0	0	1	1	0	0	1	0	1	1	0	0	1	A	0.5	0.6
	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	Diurnal Average	
	0.8	0.7	0.7	0.7	0.8	0.6	0.7	0.7	0.6	0.6	0.7	0.8	0.7	0.8	0.8	0.7	0.7	0.8	0.7	0.7	0.8	0.7	0.7	0.8	Diurnal Maximum	

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

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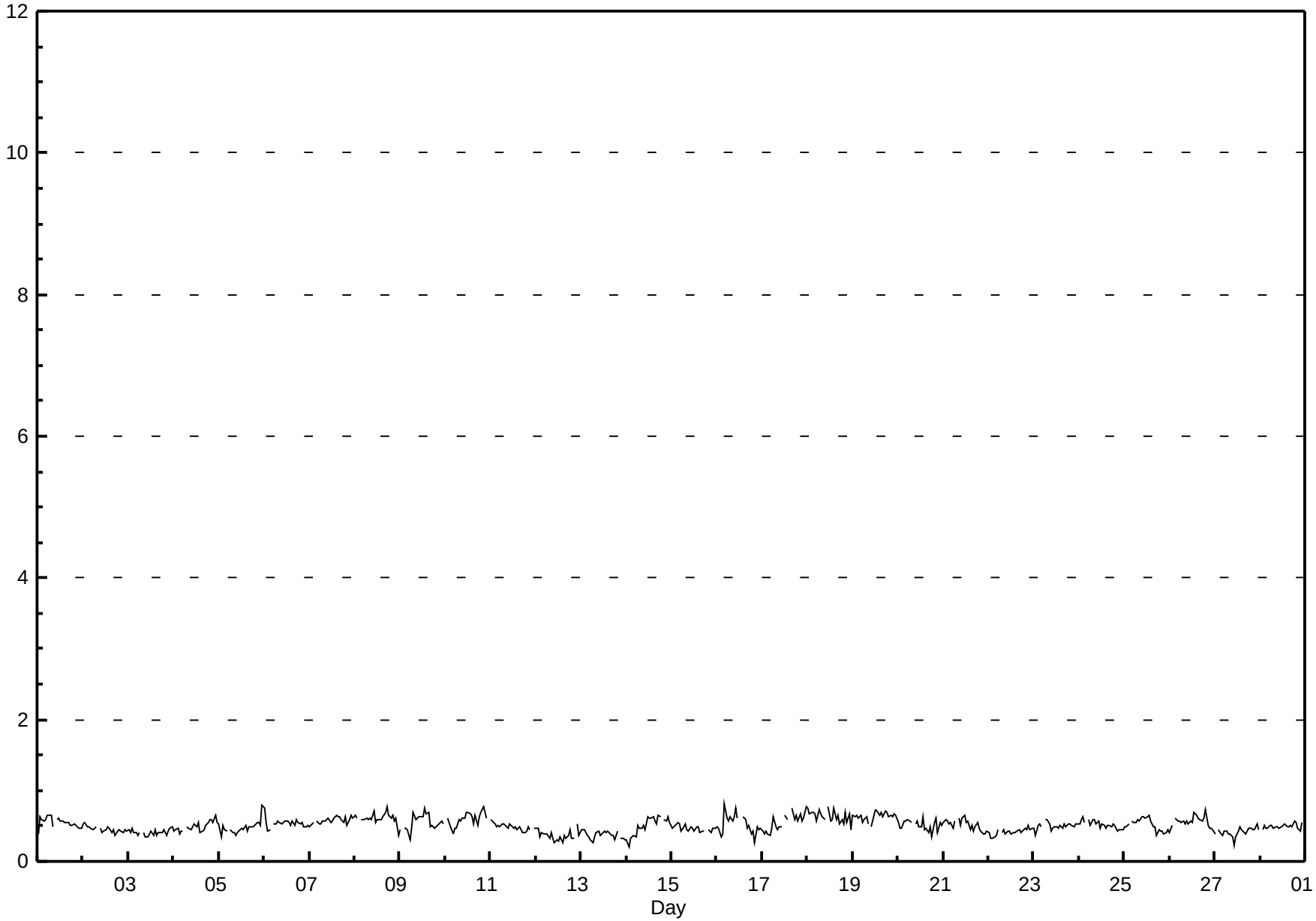
Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Portable-Bonanza - February 2011



FOCUS AIR QUALITY MONITORING

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Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Portable-Bonanza - February 2011

Maximum Value: 1.6 ppb on Feb 18 15:00

Maximum Daily Average: 1.0 ppb on Feb 18

Minimum Value: 1 ppb on Feb 13 06:00

Minimum Daily Average: 0.7 ppb on Feb 27

Maximum Diurnal Average: 1.0 ppb at hour 23

Minimum Diurnal Average: 0.8 ppb at hour 3

Monthly Average: 0.87 ppb

Percentiles: $P_1 = 0.6$ $P_{10} = 0.7$ $Q_1 = 0.8$ Median = 0.9 $Q_3 = 1.0$ $P_{90} = 1.1$ $P_{99} = 1.4$

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	31
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	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.4
2-Feb	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
3-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
4-Feb	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
5-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	1.4
6-Feb	2	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	1.5
7-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
8-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	1.2
9-Feb	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.2
10-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	1.3
11-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
12-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	1.4
13-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	1.1
14-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	1.2
15-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.8	1.2
16-Feb	1	1	1	1	2	1	1	1	1	1	1	1	M	M	1	1	1	1	1	1	1	1	1	1	0.9	1.6
17-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	1	C	C	1	1	1	1	1	1	1	1	0.9	1.3
18-Feb	1	1	1	1	1	1	1	1	1	1	A	1	1	1	2	1	1	1	1	1	1	1	1	1	1.0	1.6
19-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	1.3
20-Feb	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.1
21-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
22-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
23-Feb	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
24-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
25-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	1.0
26-Feb	1	1	A	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1.0	1.6
27-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	1.0
28-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	1.0
	0.9	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.9	0.9	0.9	0.9	0.9	1.0	1.0	Diurnal Average	
	1.5	1.0	1.0	1.0	1.6	1.4	1.1	1.1	1.1	1.2	1.2	1.4	1.1	1.6	1.6	1.1	1.1	1.1	1.4	1.1	1.3	1.2	1.3	1.4	Diurnal Maximum	

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

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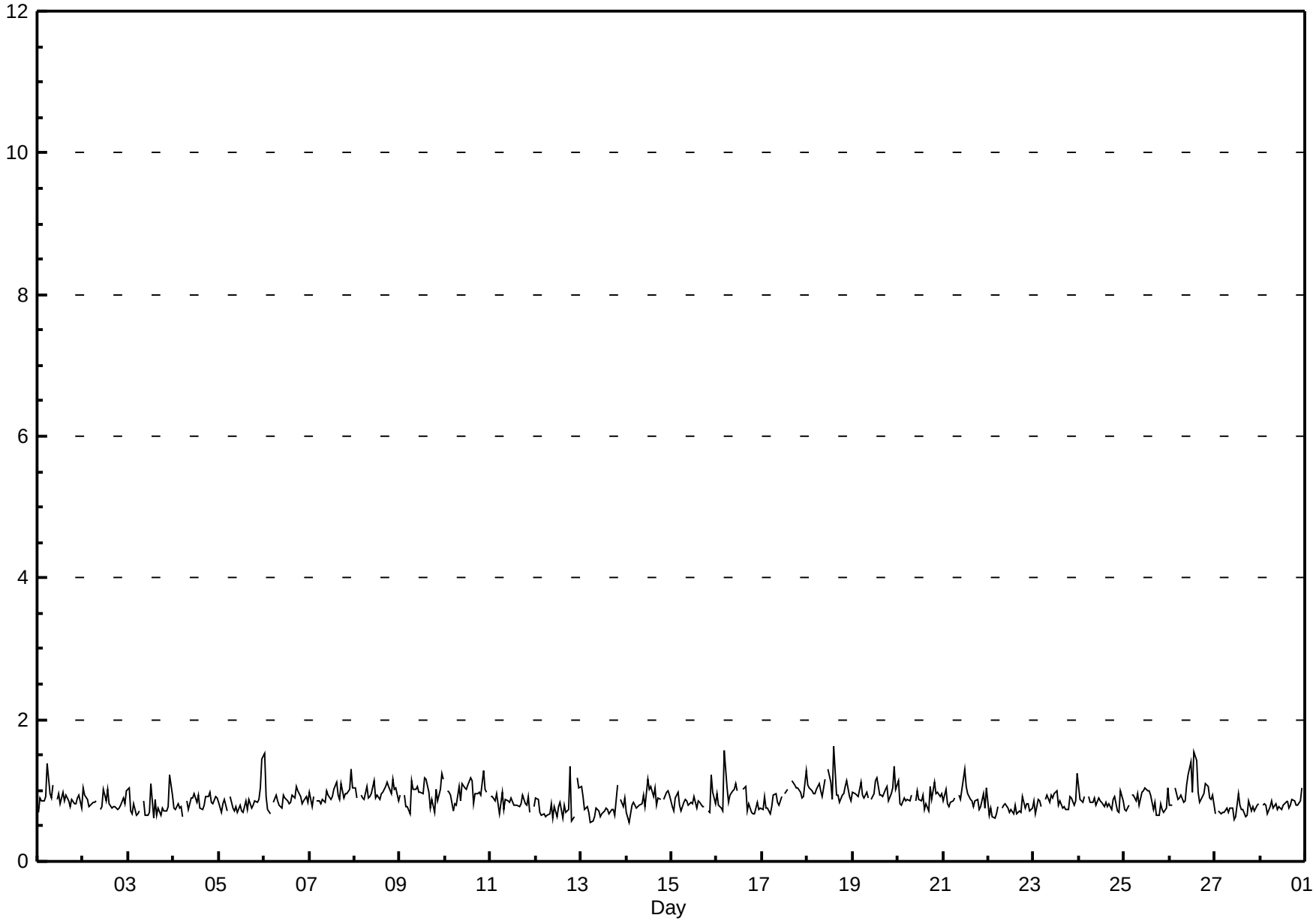
Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Portable-Bonanza - February 2011



FOCUS AIR QUALITY MONITORING

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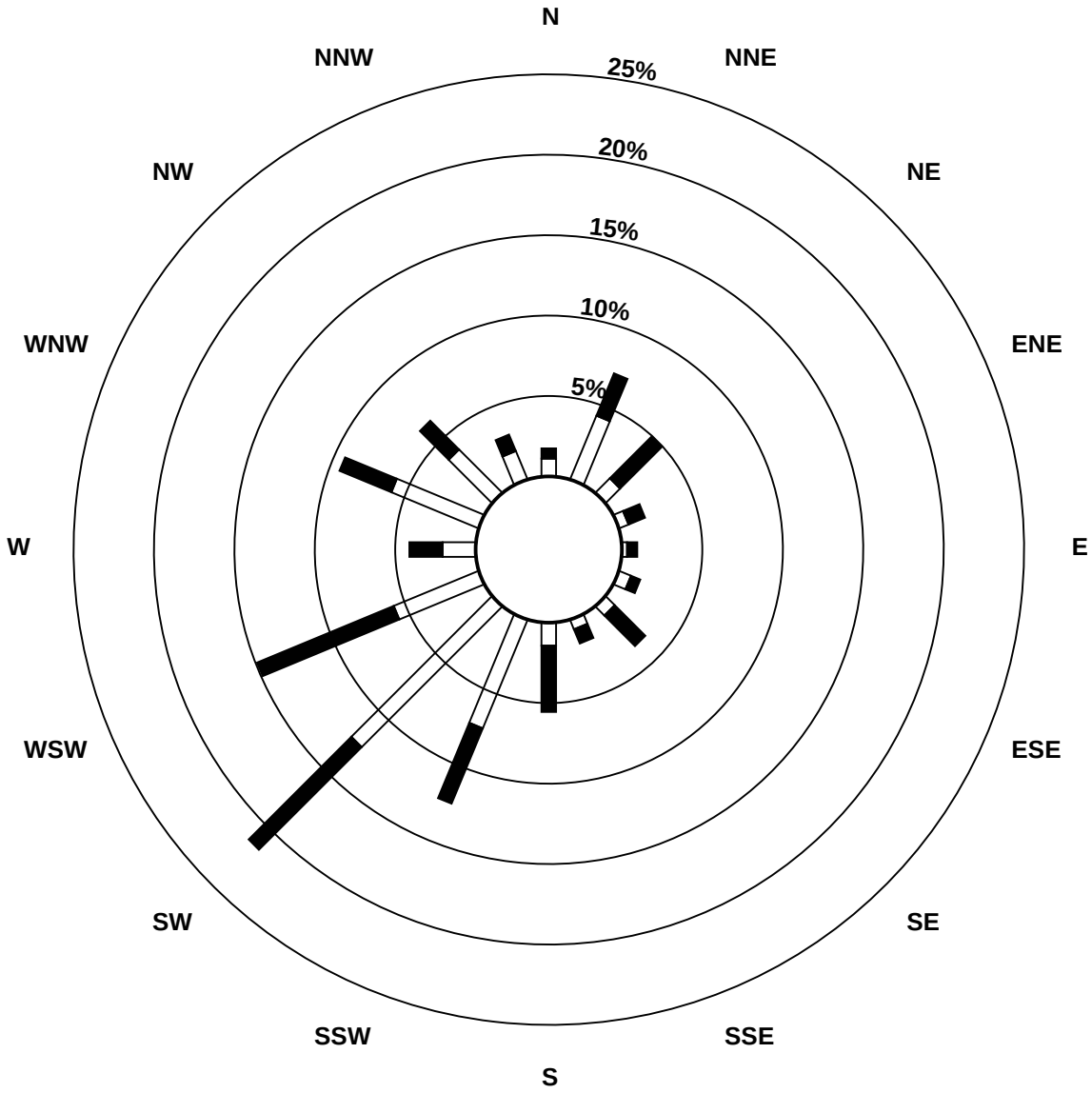
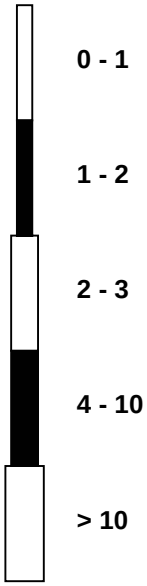
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Portable-Bonanza - February 2011



Pollutant Classes (ppb)



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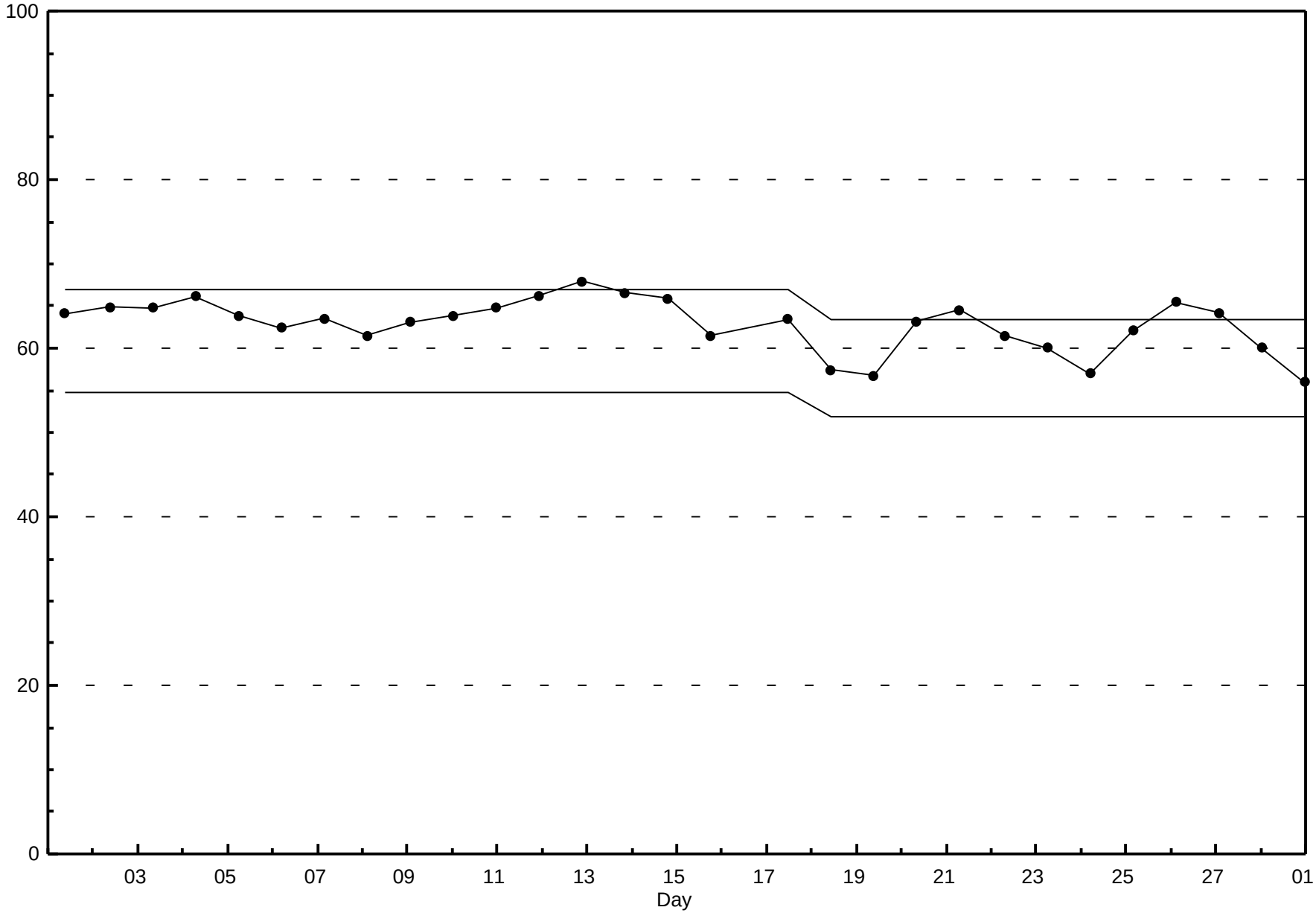
Span Responses

Total Reduced Sulphur (TRS)

Portable-Bonanza - February 2011



FOCUS AIR QUALITY MONITORING

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Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Portable-Bonanza - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 23.6 ppb on Feb 1 07:00
Maximum Daily Average: 10.7 ppb on Feb 19

Minimum Value: 0 ppb on Feb 23 00:00
Maximum Diurnal Average: 5.3 ppb at hour 8
Monthly Average: 3.26 ppb

Minimum Daily Average: 0.9 ppb on Feb 15
Minimum Diurnal Average: 2.0 ppb at hour 15
Percentiles: $P_1 = 0.4$ $P_{10} = 0.6$ $Q_1 = 0.9$ Median = 1.6 $Q_3 = 4.1$ $P_{90} = 8.7$ $P_{99} = 16.8$

Hours in Service:	672
Hours of Data:	615
Hours of Missing Data:	57
Hours of Calibration:	36
Percent Operational Time:	96.9

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	15	18	16	16	13	22	24	20	6	A	4	3	3	2	1	1	1	1	1	1	1	1	1	1	7.5	23.6
2-Feb	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	2	4	3	1	1	1	1.2	4.1
3-Feb	1	1	2	1	1	1	1	A	1	1	1	2	1	1	2	2	1	2	4	5	5	4	4	2	2.1	5.4
4-Feb	1	1	1	1	1	1	A	1	1	2	1	1	1	1	1	2	1	1	1	2	2	2	2	2	1.3	2.2
5-Feb	2	2	3	2	1	A	3	2	2	2	1	1	1	0	0	0	0	1	1	2	3	3	4	6	1.9	5.6
6-Feb	4	4	3	5	A	7	5	4	7	5	5	6	6	2	2	1	1	2	2	2	1	2	2	2	3.5	7.2
7-Feb	1	1	2	A	2	2	3	4	5	6	3	3	5	4	3	5	4	5	5	4	7	6	6	5	4.0	7.2
8-Feb	7	7	A	6	8	11	15	12	20	14	10	7	7	6	7	12	12	17	17	13	11	5	2	1	9.9	20.3
9-Feb	1	A	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.6
10-Feb	A	2	2	1	1	0	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	A	1.1	3.4
11-Feb	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	2	1	3	3	1	1	1	A	1	1.3	3.2
12-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	4	4	4	3	5	A	3	2	1.7	5.2
13-Feb	11	5	1	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	A	1	1	1	1.3	10.8
14-Feb	1	1	1	1	1	1	3	11	3	5	6	6	2	1	1	1	1	1	1	A	1	1	2	2	2.3	10.9
15-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	2	0.9	2.0
16-Feb	3	3	4	3	4	6	6	11	13	5	C	C	C	C	N	N	N	N	N	N	N	N	N	N	--	12.9
17-Feb	N	N	N	N	N	N	N	N	N	N	N	C	C	C	C	1	2	2	2	2	3	3	4	4	--	4.5
18-Feb	3	4	4	4	5	4	7	12	6	6	A	4	4	3	3	3	5	5	7	6	9	11	9	7	5.7	12.1
19-Feb	9	14	16	14	7	7	11	10	11	A	8	6	10	7	6	6	9	12	16	13	13	11	19	12	10.7	19.3
20-Feb	11	9	12	13	13	12	14	15	A	13	11	8	9	10	10	9	12	11	6	6	7	7	5	5	9.9	14.5
21-Feb	6	4	2	1	1	2	2	A	1	2	1	1	1	1	2	1	1	1	2	1	2	2	2	2	1.8	6.3
22-Feb	1	2	3	2	2	6	A	10	12	7	3	1	1	1	1	1	1	2	2	1	0	0	1	0	2.6	11.7
23-Feb	0	0	1	2	2	A	1	3	1	1	0	0	0	1	1	1	1	1	1	1	2	3	2	1	1.1	2.8
24-Feb	2	3	8	6	A	6	7	4	5	5	5	3	2	2	1	2	3	3	9	6	3	4	3	2	4.2	8.7
25-Feb	3	3	3	A	2	1	1	2	2	1	3	2	3	4	3	3	2	2	2	1	1	1	1	1	1.9	3.8
26-Feb	1	1	A	1	1	1	1	1	1	1	1	2	1	1	2	2	2	2	4	6	1	1	1	1	1.4	5.9
27-Feb	1	A	1	1	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	5	7	2	1.2	7.0
28-Feb	A	1	3	6	3	8	4	2	3	1	1	3	1	2	1	1	1	1	1	1	2	3	3	A	2.3	7.6
	3.5	3.5	3.6	3.6	2.8	4.1	4.6	5.3	4.3	3.4	2.9	2.6	2.6	2.1	2.0	2.3	2.6	3.1	3.6	3.4	3.4	3.1	3.3	2.5	Diurnal Average	
	15.0	17.8	16.2	16.4	12.8	21.6	23.6	20.4	20.3	14.4	11.1	8.3	10.4	10.0	10.1	11.6	12.3	17.0	17.0	12.9	12.7	10.7	19.3	11.8	Diurnal Maximum	

C - Calibration N - Not Valid A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 212 ppb 24-hr 106 ppb

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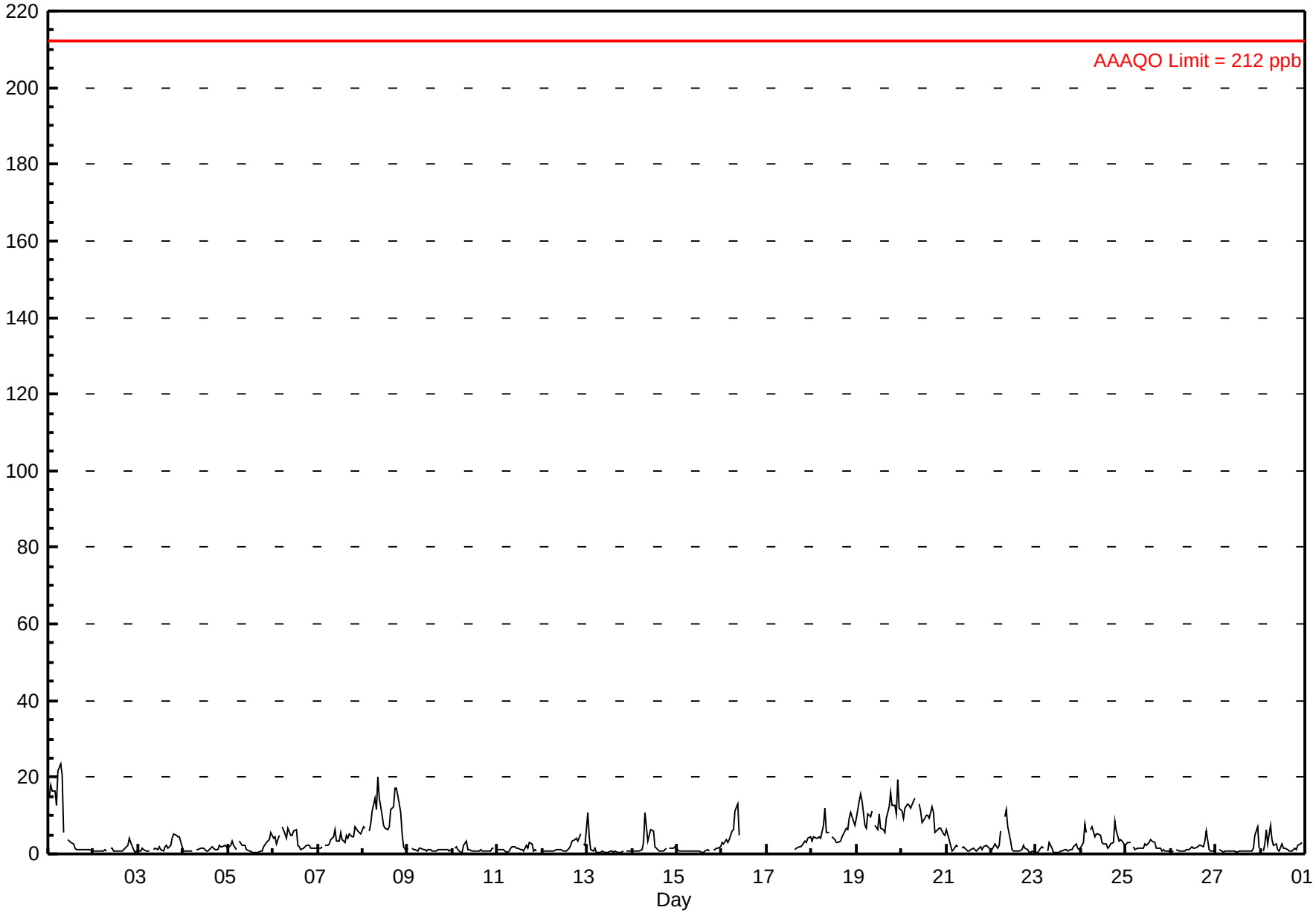
Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Portable-Bonanza - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
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Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Portable-Bonanza - February 2011

Maximum Value: 76.2 ppb on Feb 25 14:00

Maximum Daily Average: 21.9 ppb on Feb 19

Minimum Value: 0 ppb on Feb 23 00:00

Minimum Daily Average: 1.6 ppb on Feb 15

Maximum Diurnal Average: 14.3 ppb at hour 7

Minimum Diurnal Average: 5.2 ppb at hour 24

Monthly Average: 8.10 ppb

Percentiles: $P_1 = 0.6$ $P_{10} = 1.2$ $Q_1 = 2.2$ Median = 4.6 $Q_3 = 10.8$ $P_{90} = 20.2$ $P_{99} = 34.9$

Hours in Service:	672
Hours of Data:	615
Hours of Missing Data:	57
Hours of Calibration:	36
Percent Operational Time:	96.9

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	20	32	22	25	21	30	29	28	14	A	13	6	8	3	4	2	1	4	2	2	3	2	3	4	12.1	32.1
2-Feb	1	1	1	1	1	2	3	1	A	9	4	1	8	2	3	8	4	9	6	8	6	3	1	1	3.7	9.4
3-Feb	2	2	7	4	1	3	6	A	3	4	2	5	5	2	4	7	7	5	10	23	19	7	14	3	6.3	23.1
4-Feb	1	1	1	1	1	2	A	2	4	4	4	4	4	4	5	6	5	2	2	3	2	2	4	4	2.9	5.7
5-Feb	3	7	7	5	5	A	7	6	7	6	7	4	4	0	1	1	1	1	1	3	7	7	6	9	4.6	9.1
6-Feb	7	15	6	7	A	15	23	9	13	13	11	14	22	3	3	3	3	4	3	4	2	3	2	3	8.2	23.1
7-Feb	2	3	3	A	4	4	9	7	8	23	14	7	20	16	7	7	11	14	8	11	16	8	7	6	9.4	23.4
8-Feb	8	8	A	8	11	21	37	18	30	20	11	10	12	14	14	28	17	30	33	16	12	10	5	2	16.3	36.5
9-Feb	3	A	9	1	1	2	8	5	6	5	5	2	4	1	1	5	5	3	2	3	2	3	1	2	3.5	9.1
10-Feb	A	2	4	3	4	1	5	6	9	6	1	2	3	1	3	4	2	2	3	2	4	4	4	A	3.4	8.9
11-Feb	4	2	3	3	1	1	5	4	5	4	3	2	3	3	1	12	5	12	12	1	5	4	A	2	4.1	11.6
12-Feb	1	1	1	1	1	1	3	5	4	2	5	1	2	2	2	8	14	24	12	11	34	A	20	4	6.9	33.6
13-Feb	24	23	11	3	6	1	3	1	5	3	2	1	1	9	1	4	1	1	3	2	A	1	2	1	4.7	23.7
14-Feb	1	1	1	2	2	2	17	36	20	20	25	13	5	4	1	1	1	1	4	A	5	3	3	3	7.4	36.3
15-Feb	2	1	1	2	2	2	1	1	2	1	1	1	1	1	1	1	2	2	A	2	2	2	3	3	1.6	2.7
16-Feb	5	5	10	5	24	12	15	26	57	7	C	C	C	C	N	N	N	N	N	N	N	N	N	N	--	57.0
17-Feb	N	N	N	N	N	N	N	N	N	N	N	C	C	C	C	2	2	5	4	7	7	3	5	5	--	7.1
18-Feb	5	37	7	8	8	8	48	35	8	12	A	6	11	19	9	11	12	20	17	15	16	15	14	17	15.5	47.8
19-Feb	21	22	23	19	9	10	39	12	25	A	14	9	31	25	8	9	20	21	30	35	20	28	56	18	21.9	55.9
20-Feb	13	15	22	18	17	15	18	30	A	22	19	10	16	17	17	18	19	13	10	9	14	13	8	8	15.7	29.8
21-Feb	12	5	4	1	1	8	16	A	6	3	2	3	1	2	4	3	3	4	17	2	5	6	5	4	5.1	17.5
22-Feb	4	4	4	4	8	22	A	31	25	24	13	2	1	1	1	1	5	7	5	7	1	1	2	0	7.6	31.1
23-Feb	1	1	5	6	6	A	2	7	6	2	1	1	2	3	4	3	8	2	3	4	6	6	3	5	3.7	8.3
24-Feb	8	6	24	11	A	29	33	17	9	7	6	4	13	4	18	9	10	9	35	19	8	9	5	5	13.0	35.4
25-Feb	26	5	6	A	11	2	16	2	12	3	25	4	11	76	13	8	4	5	10	4	2	2	2	1	10.9	76.2
26-Feb	1	1	A	2	1	1	1	1	4	11	2	12	12	2	9	35	9	3	6	10	4	1	1	1	5.6	34.6
27-Feb	1	A	5	3	1	1	2	2	2	3	2	3	3	8	6	1	5	5	1	2	4	22	18	19	5.2	22.3
28-Feb	A	1	24	30	13	18	12	11	12	2	4	9	3	5	4	2	2	3	14	2	6	8	4	A	8.6	30.0
	7.1	8.0	8.5	6.8	6.3	8.5	14.3	12.2	11.8	8.7	7.9	5.3	7.9	8.8	5.6	7.3	6.6	7.9	9.8	8.0	8.1	6.6	7.6	5.2	Diurnal Average	
	26.0	36.6	24.2	30.0	23.7	29.9	47.8	36.3	57.0	24.1	25.4	13.7	31.3	76.2	18.2	34.6	20.0	30.3	35.4	35.1	33.6	27.6	55.9	19.2	Diurnal Maximum	

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

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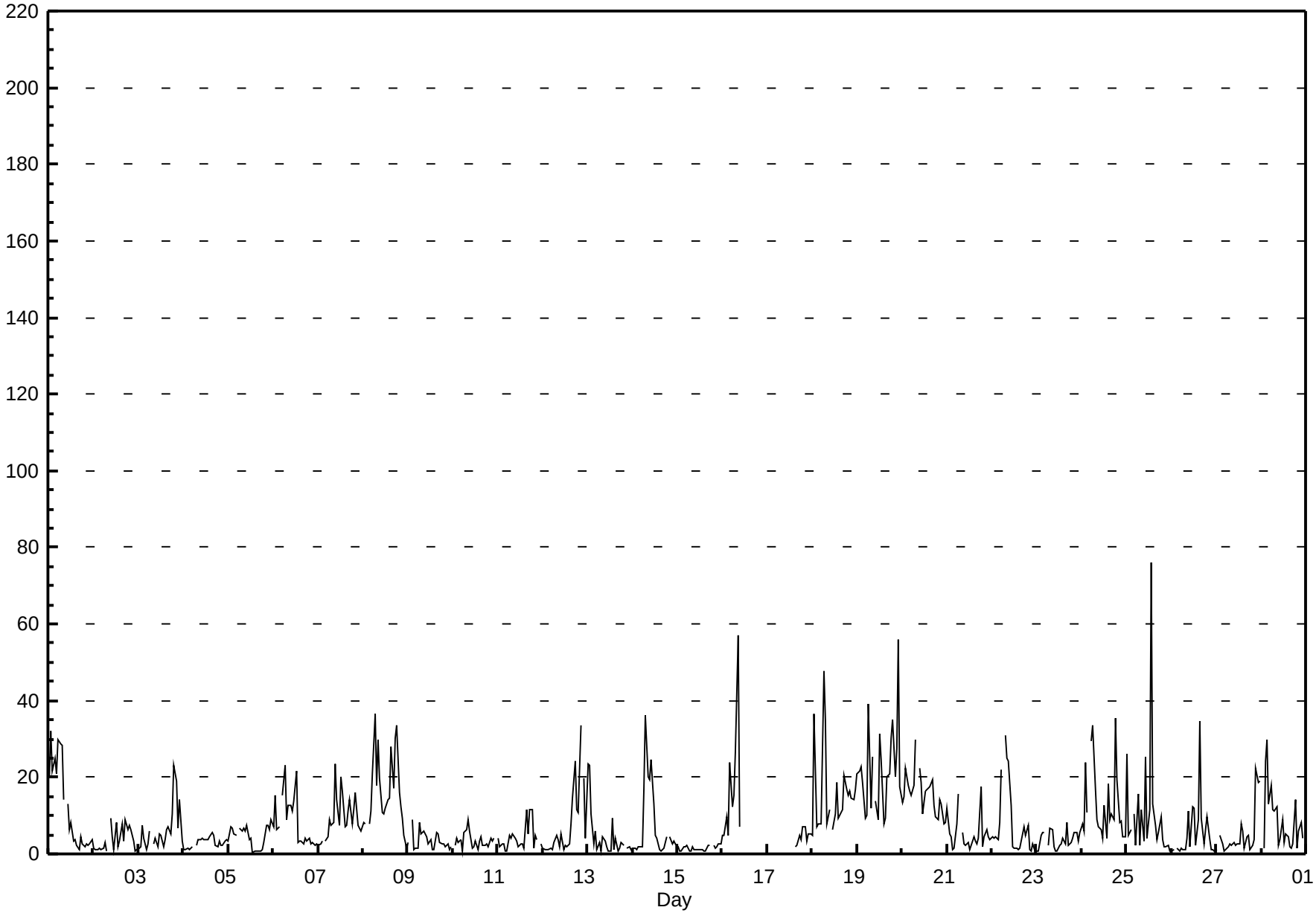
Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Portable-Bonanza - February 2011



FOCUS AIR QUALITY MONITORING

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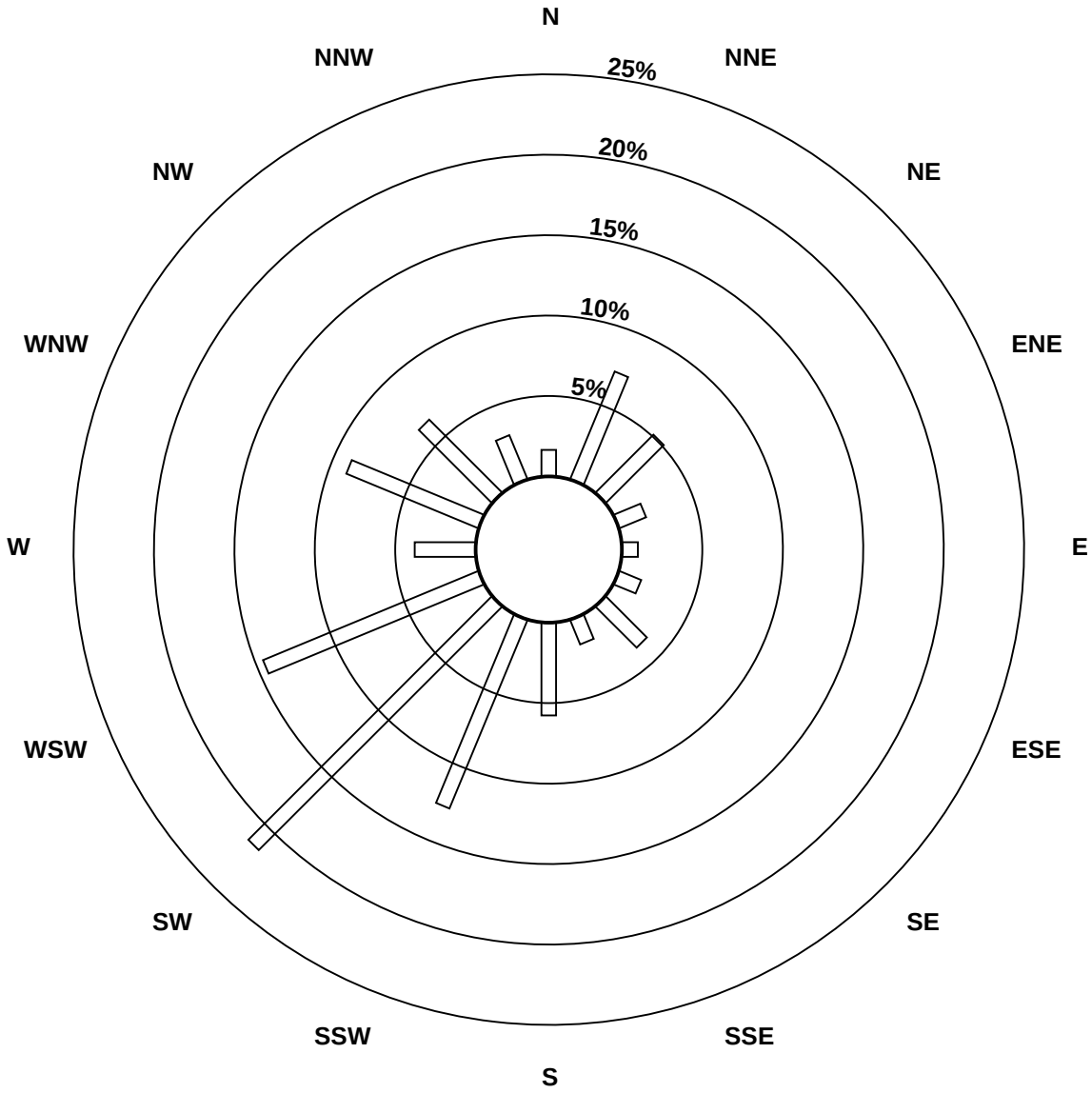
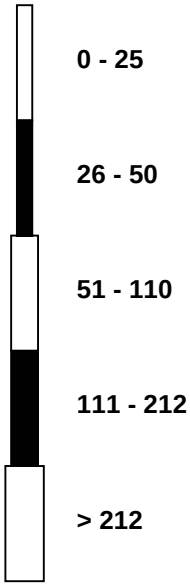
Pollutant Rose

Nitrogen Dioxide (NO_2) - ppb

Portable-Bonanza - February 2011



Pollutant Classes (ppb)



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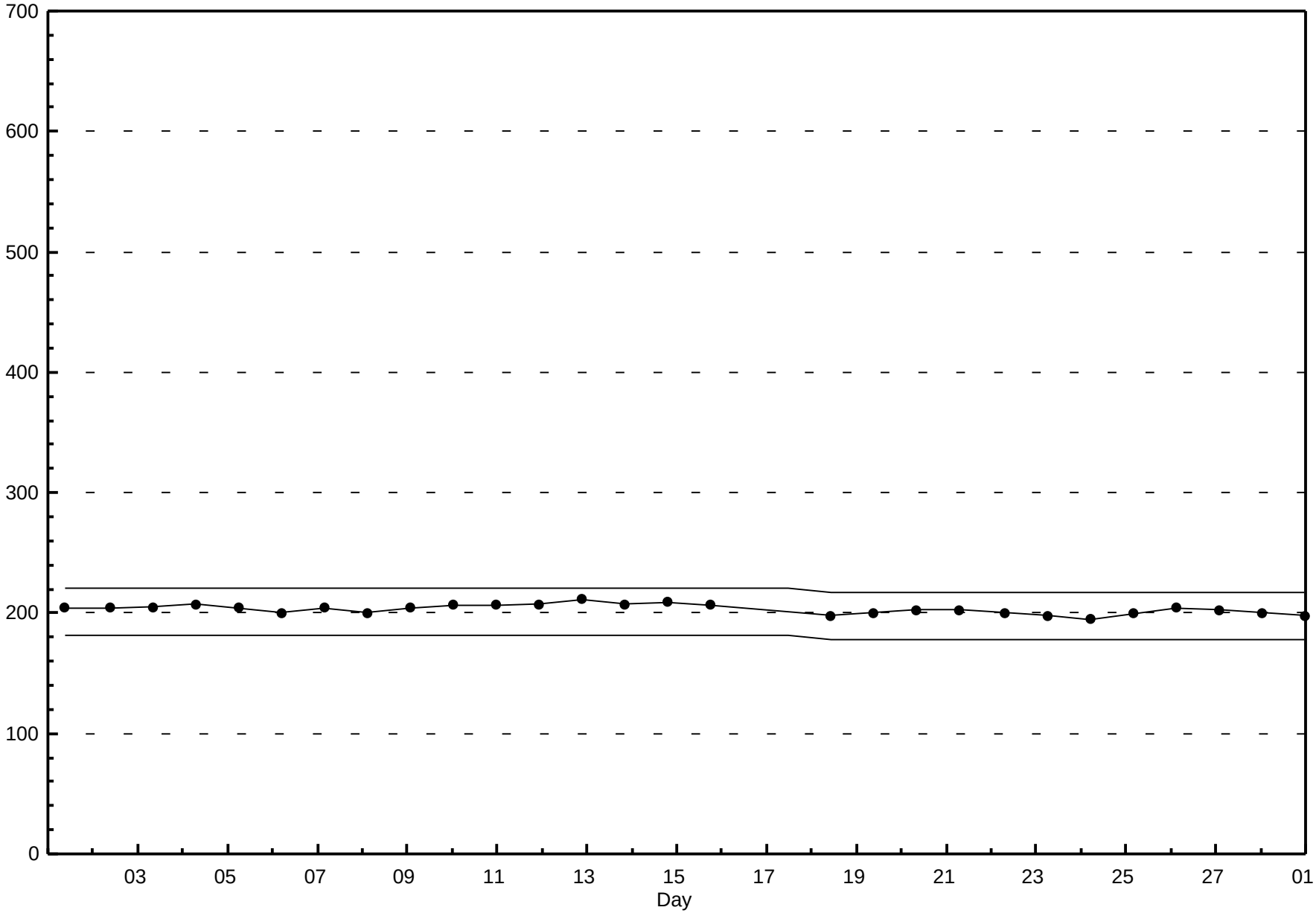
Span Responses

Nitrogen Dioxide (NO_2)

Portable-Bonanza - February 2011



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Hourly Averages

Nitrogen Oxide (NO) - ppb

Portable-Bonanza - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 14.8 ppb on Feb 19 13:00
Maximum Daily Average: 3.1 ppb on Feb 19

Minimum Value: 0 ppb on Feb 1 21:00
Maximum Diurnal Average: 2.2 ppb at hour 13
Monthly Average: 0.79 ppb

Minimum Daily Average: 0.1 ppb on Feb 15
Minimum Diurnal Average: 0.1 ppb at hour 24
Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.1$ Median = 0.2 $Q_3 = 0.7$ $P_{90} = 2.3$ $P_{99} = 7.2$

Hours in Service:	672
Hours of Data:	615
Hours of Missing Data:	57
Hours of Calibration:	36
Percent Operational Time:	96.9

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	1	6	1	2	1	3	7	3	1	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1.3	6.6
2-Feb	0	0	0	0	0	0	0	0	A	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
3-Feb	0	0	0	0	0	0	1	A	0	0	0	1	0	0	1	1	1	0	0	1	1	0	1	0	0.4	1.1
4-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	1.0
5-Feb	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
6-Feb	0	0	0	0	A	0	1	0	0	1	2	3	5	1	1	0	0	0	0	0	0	0	0	0	0.8	5.3
7-Feb	0	0	1	A	0	0	0	1	1	2	2	2	5	3	2	2	1	1	1	0	1	0	0	0	1.1	5.0
8-Feb	0	0	A	0	0	0	3	1	3	6	8	8	6	6	6	8	5	5	2	0	0	0	0	0	3.0	8.4
9-Feb	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
10-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.5
11-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	0	0.2	0.7
12-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	2	A	1	0	0.4	1.8
13-Feb	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	A	0	0	0	0.5	4.2
14-Feb	0	0	0	0	0	0	0	3	0	1	2	2	1	1	0	0	0	0	0	A	0	0	0	0	0.5	3.4
15-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.5
16-Feb	0	0	0	0	1	0	0	2	7	2	C	C	C	C	N	N	N	N	N	N	N	N	N	N	--	7.4
17-Feb	N	N	N	N	N	N	N	N	N	N	N	C	C	C	C	1	1	0	0	0	0	0	0	0	--	0.6
18-Feb	0	1	0	0	0	0	4	4	1	2	A	4	4	3	2	2	2	1	1	1	1	2	1	1	1.7	4.3
19-Feb	1	2	3	1	0	0	2	1	2	A	6	6	15	8	5	4	5	3	3	1	0	0	2	0	3.1	14.8
20-Feb	0	0	1	0	1	0	1	2	A	5	7	6	7	7	6	4	4	2	0	0	0	0	0	0	2.4	7.3
21-Feb	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.2	0.7
22-Feb	0	0	0	0	0	0	A	3	2	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0.6	3.1
23-Feb	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
24-Feb	0	0	1	0	A	2	2	1	1	3	5	3	2	3	1	2	2	1	2	1	0	0	0	0	1.4	4.6
25-Feb	0	0	0	A	0	0	0	0	0	0	2	1	2	2	2	1	0	0	0	0	0	0	0	0	0.7	2.3
26-Feb	0	0	A	0	0	0	0	0	0	0	0	1	1	0	1	1	1	0	0	0	0	0	0	0	0.3	1.2
27-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0.3	1.4
28-Feb	A	0	0	3	0	2	1	0	1	0	0	3	1	2	1	0	0	0	1	0	0	0	0	A	0.8	2.7
	0.3	0.6	0.3	0.3	0.2	0.4	1.0	1.0	0.9	1.1	1.6	1.8	2.2	1.6	1.2	1.2	0.9	0.6	0.5	0.2	0.3	0.2	0.3	0.1	Diurnal Average	
	4.2	5.5	2.7	2.6	1.4	3.2	6.6	4.3	7.4	5.7	8.4	7.7	14.8	7.9	6.0	8.2	5.0	5.4	3.3	1.2	1.8	1.5	2.3	0.7	Diurnal Maximum	

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

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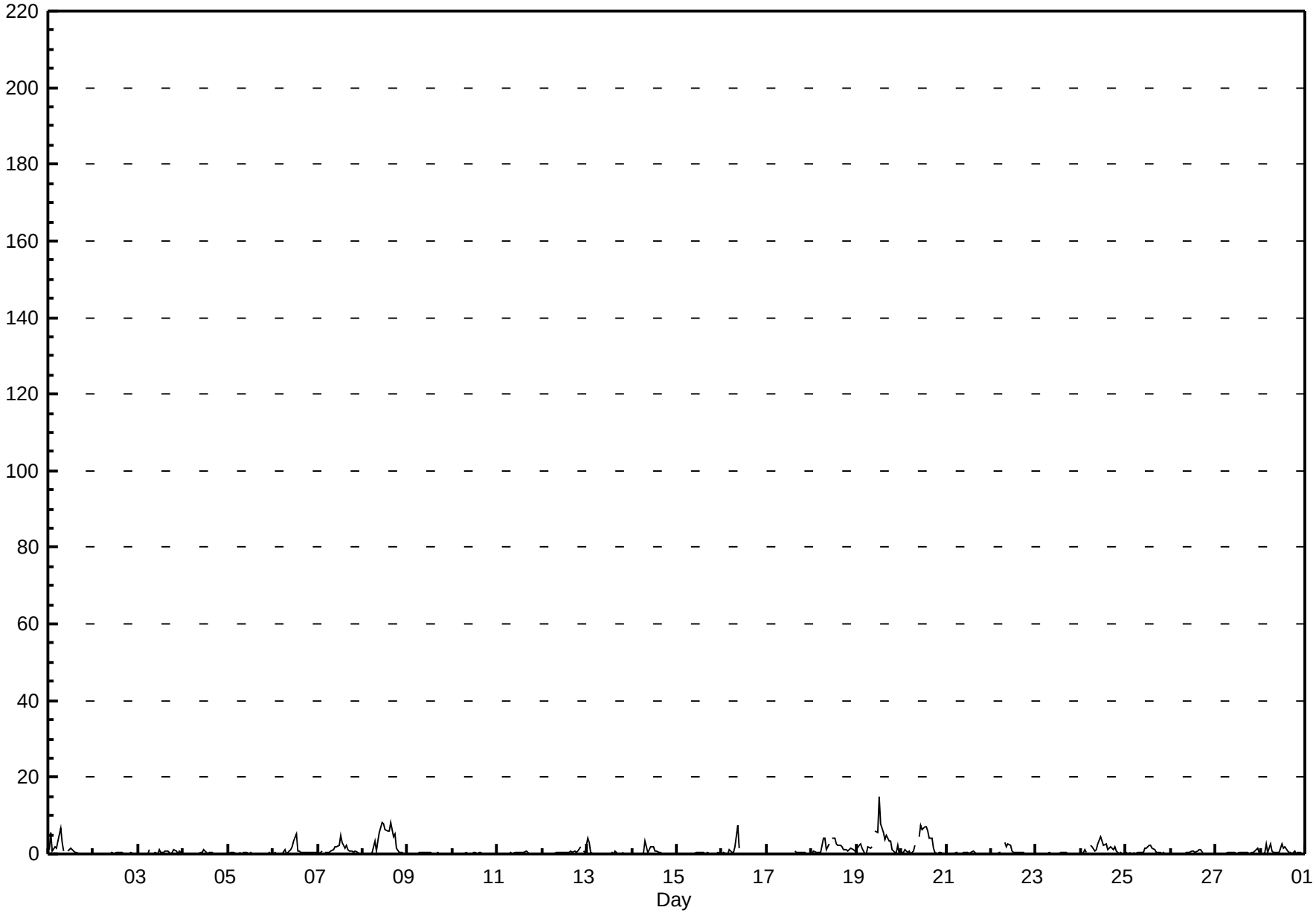
Peace Air Shed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Portable-Bonanza - February 2011



FOCUS AIR QUALITY MONITORING

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Hourly Maximums

Nitrogen Oxide (NO) - ppb

Portable-Bonanza - February 2011

Maximum Value: 121.5 ppb on Feb 19 19:00

Maximum Daily Average: 22.7 ppb on Feb 19

Minimum Value: 0 ppb on Feb 15 20:00

Minimum Daily Average: 0.8 ppb on Feb 23

Maximum Diurnal Average: 12.9 ppb at hour 7

Minimum Diurnal Average: 1.0 ppb at hour 24

Monthly Average: 5.87 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.5$ Median = 1.9 $Q_3 = 6.3$ $P_{90} = 15.0$ $P_{99} = 52.6$

Hours in Service:	672
Hours of Data:	615
Hours of Missing Data:	57
Hours of Calibration:	36
Percent Operational Time:	96.9

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	7	40	2	7	10	14	24	18	14	A	6	4	8	3	2	4	2	3	0	1	0	0	0	2	7.5	39.6
2-Feb	0	0	0	0	0	1	1	0	A	15	1	0	9	7	3	5	1	2	2	3	6	0	0	0	2.5	15.0
3-Feb	2	1	1	1	0	0	19	A	0	2	1	11	2	1	5	5	9	1	4	19	19	0	22	0	5.5	21.5
4-Feb	0	0	1	0	1	1	A	2	5	4	8	13	7	2	4	1	1	0	0	0	0	0	0	0	2.2	13.4
5-Feb	0	1	1	1	1	A	1	1	2	2	2	1	2	0	0	0	0	0	0	0	1	1	6	0	1.0	5.7
6-Feb	0	5	0	1	A	2	18	2	3	6	7	11	35	2	2	3	1	2	1	1	1	1	1	1	4.5	35.2
7-Feb	1	1	1	A	1	1	2	2	3	11	13	6	27	22	4	4	8	9	4	3	6	2	0	0	5.7	26.7
8-Feb	1	1	A	2	2	5	34	12	37	9	11	11	15	17	15	37	11	49	23	1	2	10	1	0	13.3	49.2
9-Feb	1	A	2	0	0	3	15	5	13	5	5	4	2	1	1	4	5	2	1	4	4	0	0	1	3.5	14.9
10-Feb	A	3	1	1	3	0	4	7	5	3	1	3	1	1	6	3	2	2	2	1	1	1	2	A	2.3	6.7
11-Feb	3	1	1	1	0	0	4	4	2	4	3	0	1	3	1	7	4	2	5	0	4	0	A	0	2.3	6.6
12-Feb	0	0	0	0	1	0	2	2	5	2	4	5	2	3	1	6	4	14	3	14	26	A	12	5	4.9	26.1
13-Feb	11	27	10	3	0	3	4	0	2	1	2	0	0	6	1	14	0	1	2	6	A	0	3	2	4.4	27.1
14-Feb	0	1	0	0	1	1	3	49	2	13	17	5	3	2	1	0	0	0	0	A	0	0	0	0	4.3	48.7
15-Feb	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	A	0	0	0	22	0	1.2	21.7
16-Feb	2	2	1	1	28	6	13	13	56	3	C	C	C	C	N	N	N	N	N	N	N	N	N	N	--	56.1
17-Feb	N	N	N	N	N	N	N	N	N	N	N	C	C	C	C	1	1	3	12	6	5	0	0	0	--	11.6
18-Feb	1	25	3	4	3	4	89	31	27	9	A	6	17	21	12	11	6	13	17	6	12	16	9	3	15.0	89.1
19-Feb	5	6	5	3	1	0	38	5	11	A	13	12	88	65	7	6	16	8	122	38	3	5	61	0	22.7	121.5
20-Feb	3	3	10	3	2	1	3	26	A	12	25	9	14	15	15	13	9	3	2	1	5	4	1	1	7.8	25.9
21-Feb	0	1	0	0	0	21	13	A	8	1	1	2	0	1	2	2	0	1	3	0	0	1	0	0	2.6	20.9
22-Feb	0	0	0	0	5	4	A	37	9	18	13	1	1	1	1	1	2	1	1	1	0	0	0	0	4.2	36.9
23-Feb	0	0	0	1	1	A	0	1	0	0	0	0	1	3	1	3	4	0	0	0	0	0	0	0	0.8	3.8
24-Feb	3	2	6	1	A	24	14	20	21	5	16	4	8	8	28	23	22	5	17	11	5	2	1	1	10.7	28.0
25-Feb	19	1	2	A	8	1	14	4	5	3	20	3	12	28	10	6	3	2	12	4	23	0	0	0	7.7	28.4
26-Feb	0	0	A	0	0	0	0	0	19	8	1	12	13	1	11	29	13	1	0	1	1	0	0	0	4.8	29.4
27-Feb	1	A	1	1	0	1	1	5	2	2	2	2	1	10	5	2	3	3	0	1	1	6	7	5	2.8	10.2
28-Feb	A	0	14	20	4	9	6	5	6	1	4	9	7	12	8	2	1	2	29	0	3	7	0	A	6.8	29.5
	2.4	4.9	2.6	2.1	2.8	4.1	12.9	10.0	10.3	5.6	7.0	5.3	10.7	9.0	5.6	7.1	4.7	4.8	10.1	4.8	5.1	2.2	5.7	1.0	Diurnal Average	
	19.0	39.6	13.6	20.5	27.5	23.7	89.1	48.7	56.1	17.7	24.9	13.4	88.4	65.1	28.0	36.8	21.9	49.2	121.5	38.4	26.1	16.2	61.4	5.0	Diurnal Maximum	

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

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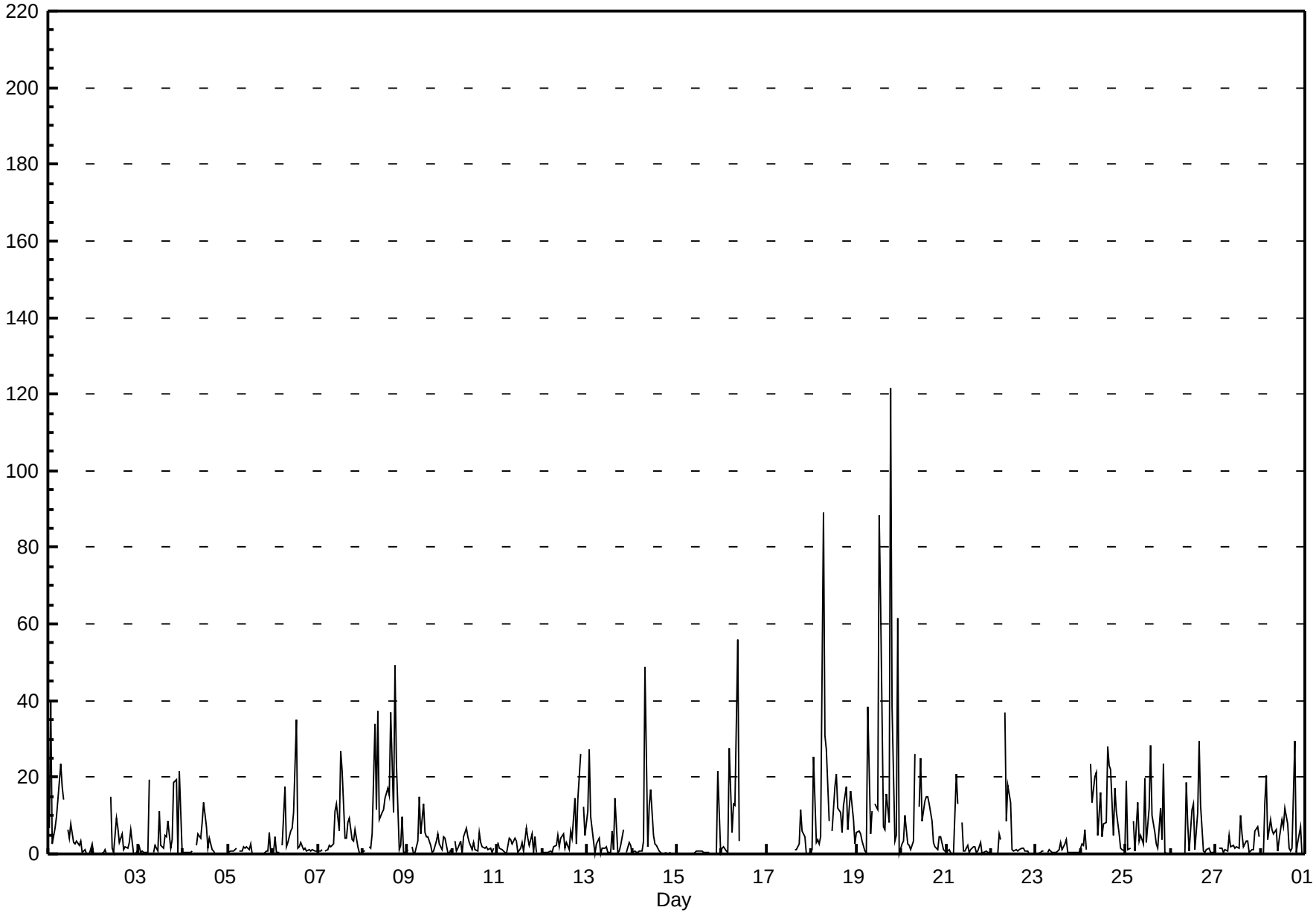
Hourly Maximums

Nitrogen Oxide (NO) - ppb

Portable-Bonanza - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Portable-Bonanza - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 30.5 ppb on Feb 1 07:00
Maximum Daily Average: 14.0 ppb on Feb 19

Minimum Value: 0 ppb on Feb 23 00:00
Maximum Diurnal Average: 6.3 ppb at hour 8
Monthly Average: 4.06 ppb

Minimum Daily Average: 1.0 ppb on Feb 15
Minimum Diurnal Average: 2.6 ppb at hour 24
Percentiles: $P_1 = 0.4$ $P_{10} = 0.7$ $Q_1 = 1.0$ Median = 1.8 $Q_3 = 5.1$ $P_{90} = 11.9$ $P_{99} = 23.3$

Hours in Service:	672
Hours of Data:	615
Hours of Missing Data:	57
Hours of Calibration:	36
Percent Operational Time:	96.9

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	16	23	17	18	14	25	30	24	6	A	5	4	4	3	2	1	1	1	1	1	1	1	1	1	8.8	30.5
2-Feb	1	1	1	1	1	1	1	1	A	2	2	1	1	1	1	1	1	1	2	4	3	1	1	1	1.3	4.2
3-Feb	1	1	1	1	1	1	2	A	1	1	1	3	1	1	3	3	2	2	4	6	6	4	5	2	2.4	6.3
4-Feb	1	1	1	1	1	1	A	1	1	2	2	2	1	1	1	2	1	1	1	2	2	2	2	2	1.4	2.4
5-Feb	2	3	4	3	1	A	3	2	3	2	1	1	1	0	0	0	0	1	1	2	3	3	4	6	2.0	5.7
6-Feb	4	5	3	5	A	7	7	4	7	6	7	9	12	3	2	2	2	2	3	3	2	2	2	2	4.3	11.7
7-Feb	1	2	3	A	2	3	3	4	5	8	5	5	10	7	5	7	5	6	5	5	8	6	6	5	5.1	10.4
8-Feb	7	7	A	6	8	12	18	13	24	20	19	15	13	12	13	20	17	23	19	13	11	5	2	1	13.0	23.8
9-Feb	2	A	1	1	1	1	2	2	2	2	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1.3	1.9
10-Feb	A	2	2	1	1	0	2	4	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	A	1.2	3.6
11-Feb	1	1	1	1	1	0	1	2	2	2	2	2	2	1	1	3	2	3	3	1	1	1	A	1	1.5	3.3
12-Feb	1	1	1	1	1	1	1	1	1	1	2	1	1	1	2	3	4	4	4	4	7	A	3	2	2.1	7.0
13-Feb	15	8	1	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	A	1	1	1	1.7	15.0
14-Feb	1	1	1	1	1	1	3	14	4	6	8	7	3	2	1	1	1	1	1	A	1	1	2	2	2.8	14.4
15-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	2	2	1.0	2.0
16-Feb	3	3	4	3	5	7	7	13	21	7	C	C	C	C	N	N	N	N	N	N	N	N	N	N	--	20.7
17-Feb	N	N	N	N	N	N	N	N	N	N	N	C	C	C	C	2	2	2	2	2	4	3	4	4	--	4.5
18-Feb	3	5	5	4	5	5	12	16	7	8	A	9	8	6	5	6	6	7	8	7	11	12	10	8	7.5	16.4
19-Feb	10	16	19	15	8	7	13	11	13	A	14	12	25	15	12	9	14	16	20	14	13	11	22	12	14.0	25.4
20-Feb	12	10	13	14	13	12	15	17	A	18	19	15	17	17	16	13	17	13	6	6	7	7	5	5	12.5	18.7
21-Feb	6	4	2	1	1	3	2	A	2	2	2	1	1	1	2	1	1	1	2	1	2	2	2	2	1.9	6.3
22-Feb	1	2	3	2	3	6	A	13	14	10	6	2	1	1	1	1	1	2	2	1	0	0	1	0	3.2	13.6
23-Feb	0	0	1	2	2	A	1	3	1	1	1	1	1	1	1	1	1	1	1	1	2	3	2	1	1.3	3.2
24-Feb	3	3	9	6	A	9	9	5	7	8	9	6	5	5	3	3	5	4	11	7	3	4	4	2	5.6	10.8
25-Feb	3	3	3	A	2	1	2	2	2	2	4	4	5	6	5	4	2	2	2	1	1	1	1	1	2.6	6.2
26-Feb	0	1	A	1	1	1	1	1	1	2	2	3	2	2	2	3	3	2	4	6	1	1	1	1	1.7	6.1
27-Feb	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	6	9	2	1.6	8.5
28-Feb	A	1	3	9	3	10	5	3	3	1	1	5	3	4	2	1	1	1	2	1	3	3	3	A	3.1	10.2
	3.9	4.1	4.0	4.0	3.1	4.6	5.6	6.3	5.2	4.6	4.5	4.3	4.7	3.7	3.3	3.5	3.6	3.8	4.1	3.6	3.7	3.3	3.6	2.6	Diurnal Average	
	16.1	23.5	18.6	18.5	14.3	25.0	30.5	23.7	23.8	20.3	18.7	15.2	25.4	17.3	16.3	20.0	17.1	22.6	19.6	13.9	13.2	12.4	21.9	11.9	Diurnal Maximum	

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

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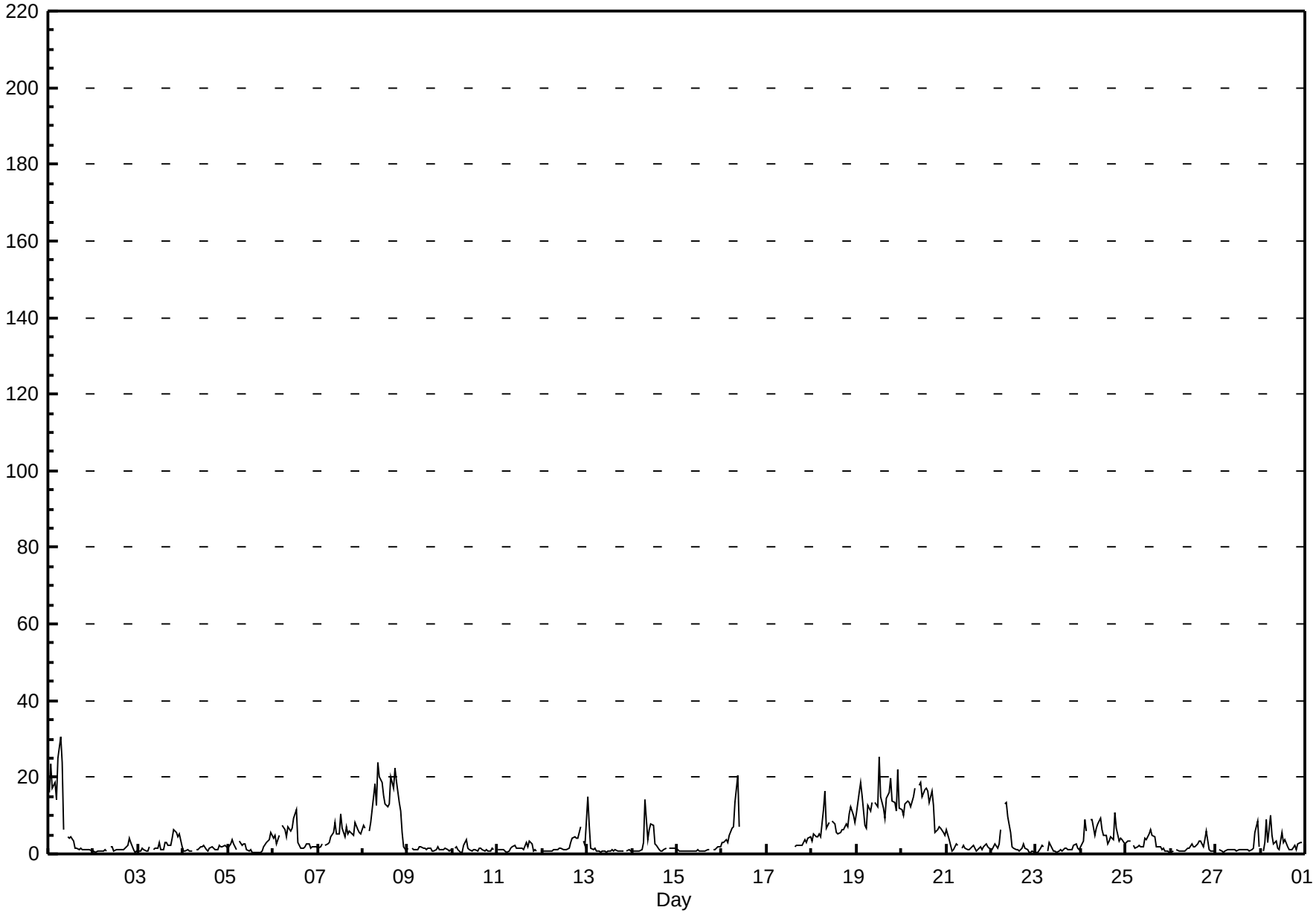
Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Portable-Bonanza - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Portable-Bonanza - February 2011

Maximum Value: 137.6 ppb on Feb 18 07:00

Maximum Daily Average: 42.6 ppb on Feb 19

Minimum Value: 0 ppb on Feb 23 00:00

Minimum Daily Average: 2.6 ppb on Feb 15

Maximum Diurnal Average: 25.7 ppb at hour 7

Minimum Diurnal Average: 6.0 ppb at hour 24

Monthly Average: 13.33 ppb

Percentiles: P_1 = 0.6 P_{10} = 1.5 Q_1 = 2.9 Median = 6.7 Q_3 = 18.1 P_{90} = 31.4 P_{99} = 102.0

Hours in Service:	672
Hours of Data:	615
Hours of Missing Data:	57
Hours of Calibration:	36
Percent Operational Time:	96.9

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	27	72	24	32	27	44	50	39	26	A	19	8	14	5	6	5	3	7	2	2	3	2	3	6	18.6	71.7
2-Feb	1	1	1	1	1	2	4	1	A	24	6	2	18	5	5	13	5	11	7	10	11	3	1	1	5.8	24.2
3-Feb	3	2	8	4	1	3	21	A	3	7	2	11	7	3	8	10	15	7	14	42	38	7	36	3	11.1	41.6
4-Feb	1	1	2	1	2	3	A	3	6	7	8	14	10	5	8	7	6	2	2	3	2	2	4	4	4.5	14.4
5-Feb	4	8	7	6	6	A	7	7	9	7	9	5	7	1	1	1	1	1	1	3	8	8	12	9	5.5	12.1
6-Feb	7	20	7	7	A	18	41	9	13	19	18	25	57	4	5	6	4	6	4	5	3	4	3	3	12.4	56.6
7-Feb	3	3	4	A	4	6	11	9	11	35	27	13	47	38	11	11	19	24	11	15	22	9	7	6	15.1	46.8
8-Feb	9	8	A	9	12	24	70	30	53	29	21	22	25	31	29	65	27	79	57	18	13	17	5	2	28.4	79.5
9-Feb	4	A	11	1	2	5	22	10	18	11	9	6	5	1	2	9	11	4	3	5	4	3	1	3	6.5	22.4
10-Feb	A	4	5	3	7	0	9	13	13	9	2	4	4	2	9	7	4	4	4	2	5	3	5	A	5.4	13.5
11-Feb	7	2	3	4	1	1	6	6	8	8	5	2	4	5	2	18	9	12	16	2	9	4	A	2	5.9	18.1
12-Feb	2	1	1	2	2	1	4	7	8	3	7	5	4	3	3	10	19	39	14	24	60	A	24	8	10.8	59.8
13-Feb	33	49	20	6	6	3	7	1	6	4	3	1	1	15	2	18	1	2	4	5	A	2	4	3	8.5	49.0
14-Feb	2	2	2	2	2	2	18	85	21	29	41	17	7	6	2	1	1	2	5	A	5	3	3	3	11.4	84.9
15-Feb	2	1	1	2	2	2	1	1	2	1	2	2	2	2	1	1	3	3	A	2	1	2	23	3	2.6	22.8
16-Feb	6	7	11	5	52	18	28	37	103	11	C	C	C	C	N	N	N	N	N	N	N	N	N	N	--	103.0
17-Feb	N	N	N	N	N	N	N	N	N	N	N	C	C	C	C	3	3	7	16	13	12	4	5	5	--	15.6
18-Feb	6	62	10	12	9	11	138	61	22	20	A	13	28	40	21	22	17	33	28	22	29	26	21	20	29.2	137.6
19-Feb	27	28	29	22	10	10	58	17	34	A	26	21	111	90	15	15	36	30	136	74	24	33	118	18	42.6	135.9
20-Feb	16	18	32	19	19	17	21	56	A	34	44	19	31	31	32	31	28	15	11	10	19	17	9	8	23.3	55.9
21-Feb	12	6	4	1	1	19	29	A	14	4	3	4	1	3	6	5	3	5	21	2	5	7	5	4	7.1	28.9
22-Feb	4	4	4	4	13	25	A	68	32	42	24	3	2	3	2	2	7	8	5	8	1	1	3	0	11.5	68.2
23-Feb	1	1	5	6	6	A	3	8	7	2	1	1	3	6	5	5	12	2	3	4	6	6	3	6	4.5	12.3
24-Feb	11	7	30	12	A	41	44	29	18	11	17	8	17	11	38	32	31	12	53	26	14	10	5	5	21.0	52.9
25-Feb	43	6	8	A	19	2	29	6	17	5	37	7	23	105	23	11	6	7	22	6	18	2	2	1	17.6	104.7
26-Feb	1	1	A	2	1	1	1	1	19	19	2	23	25	3	20	63	20	3	6	10	4	1	1	1	10.0	63.4
27-Feb	2	A	6	3	1	2	2	7	4	5	3	5	3	18	10	3	8	9	2	3	4	29	26	24	7.8	28.6
28-Feb	A	1	38	51	17	26	18	17	19	3	7	18	10	16	12	3	2	4	38	2	9	16	4	A	15.0	50.8
	9.3	12.6	10.9	8.6	8.9	11.4	25.7	21.1	19.4	14.0	13.8	9.9	17.9	17.4	10.7	14.0	11.1	12.5	18.7	12.2	12.6	8.5	12.8	6.0	Diurnal Average	
	42.5	71.7	38.1	50.8	51.9	44.1	137.6	84.9	103.0	42.1	43.6	24.6	111.5	104.7	37.9	64.8	35.6	79.5	135.9	73.8	59.8	32.7	117.8	24.0	Diurnal Maximum	

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

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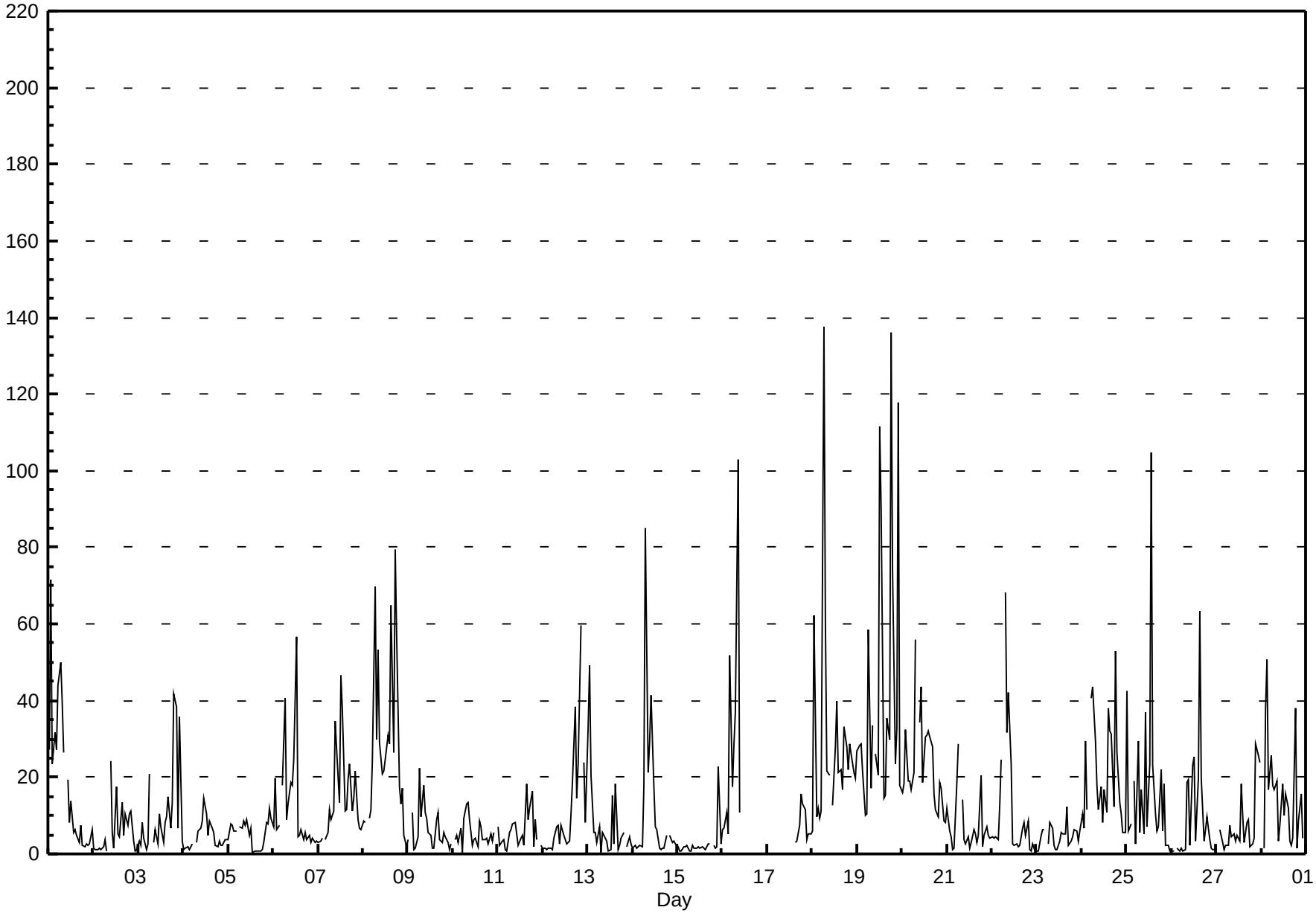
Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Portable-Bonanza - February 2011



FOCUS AIR QUALITY MONITORING

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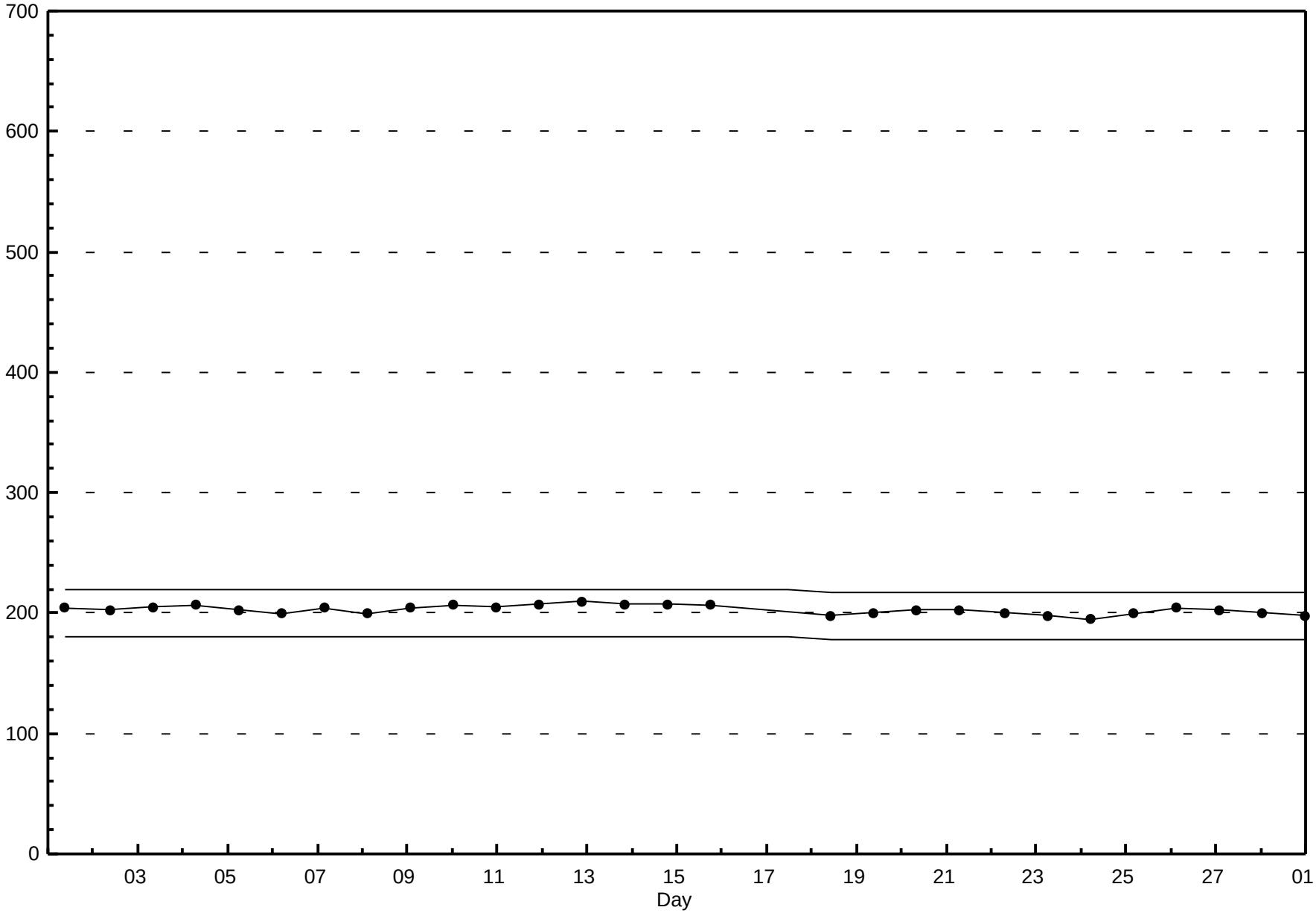
Span Responses

Oxides of Nitrogen (NO_X)

Portable-Bonanza - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Portable-Bonanza - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 45.5 ppb on Feb 25 16:00 Maximum Daily Average: 42.4 ppb on Feb 13

Minimum Value: 6 ppb on Feb 1 07:00 Minimum Daily Average: 24.6 ppb on Feb 19
Maximum Diurnal Average: 37.6 ppb at hour 15 Minimum Diurnal Average: 32.1 ppb at hour 8
Monthly Average: 34.99 ppb Percentiles: P_1 = 10.3 P_{10} = 24.2 Q_1 = 31.6 Median = 36.9 Q_3 = 40.1 P_{90} = 41.9 P_{99} = 44.2

Hours in Service:	672
Hours of Data:	632
Hours of Missing Data:	40
Hours of Calibration:	39
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	9	8	10	9	11	7	6	14	37	A	41	42	42	43	43	43	43	43	43	43	43	43	43	43	30.7	43.5
2-Feb	43	43	42	42	42	42	41	41	A	40	40	41	41	41	41	40	39	39	38	35	37	41	42	42	40.6	42.6
3-Feb	42	41	40	41	40	40	40	A	39	38	38	38	39	39	38	37	38	37	35	32	31	32	31	33	37.2	41.6
4-Feb	36	37	38	38	40	39	A	39	38	37	37	37	38	39	39	39	40	41	40	38	37	37	37	37	38.2	40.5
5-Feb	36	35	33	33	35	A	38	38	38	38	38	39	39	39	39	39	39	39	39	37	35	33	33	30	36.6	39.4
6-Feb	31	30	33	31	A	30	32	33	30	32	32	30	29	34	38	39	38	37	36	36	37	37	36	37	33.8	39.3
7-Feb	38	38	38	A	38	38	37	36	35	32	34	34	33	35	36	35	35	34	34	34	32	32	31	31	34.9	38.3
8-Feb	28	29	A	30	28	23	20	22	15	19	21	24	26	27	28	25	24	19	18	22	27	35	38	38	25.5	38.5
9-Feb	39	A	39	39	39	39	39	39	40	40	41	41	41	41	41	40	40	39	39	38	38	39	39	38	39.5	41.2
10-Feb	A	38	38	39	39	39	37	37	39	39	40	40	39	39	38	38	37	37	36	35	35	34	35	A	37.7	40.0
11-Feb	34	35	35	37	39	40	41	41	41	41	42	41	40	40	41	41	41	40	40	41	41	40	A	40	39.7	41.5
12-Feb	41	41	41	40	39	40	40	40	40	40	40	41	41	41	40	39	37	36	35	36	35	A	36	37	38.9	41.3
13-Feb	37	39	40	40	39	40	41	43	43	43	44	44	44	44	45	44	44	43	43	43	A	44	44	44	42.4	44.9
14-Feb	44	43	43	43	43	43	41	34	40	37	36	36	33	31	31	31	31	32	32	A	34	33	33	33	36.4	43.7
15-Feb	33	34	34	34	34	34	34	34	34	34	34	34	35	35	36	35	35	35	A	35	35	35	34	34	34.4	35.5
16-Feb	33	33	31	32	31	28	28	24	23	28	27	C	C	C	M	23	21	23	22	22	21	21	21	21	25.7	33.1
17-Feb	21	20	19	19	19	19	19	19	19	20	C	C	C	C	C	C	C	C	32	32	31	32	32	31	--	32.2
18-Feb	32	32	31	31	30	30	28	24	28	29	A	30	32	35	35	35	35	35	33	33	29	27	29	30	31.1	35.4
19-Feb	28	24	23	24	28	27	24	25	23	A	27	29	26	29	30	30	26	23	19	22	21	23	15	20	24.6	30.4
20-Feb	21	22	19	18	18	18	16	15	A	20	21	23	27	30	30	30	27	31	40	39	38	37	38	39	26.9	40.2
21-Feb	39	43	44	45	44	42	42	A	40	39	39	40	40	39	38	41	41	41	39	40	40	40	39	40	40.6	45.4
22-Feb	39	38	38	39	38	34	A	31	29	33	37	40	41	41	41	41	41	41	40	41	41	42	42	41	38.6	41.8
23-Feb	41	41	40	40	39	A	39	39	39	39	38	37	37	36	36	36	36	35	35	35	33	32	32	33	36.8	41.1
24-Feb	31	30	25	27	A	28	28	29	29	30	30	32	34	35	37	37	36	37	30	33	36	35	35	36	32.1	36.9
25-Feb	37	36	37	A	40	40	41	40	40	41	41	41	42	42	44	46	43	42	42	43	43	43	43	44	41.3	45.5
26-Feb	43	43	A	42	43	42	42	42	41	41	41	41	41	43	43	43	42	42	39	36	42	41	41	40	41.5	43.4
27-Feb	40	A	36	32	25	23	23	25	28	31	33	34	35	36	37	38	39	39	39	38	37	33	32	37	33.4	39.6
28-Feb	A	38	36	32	35	29	31	31	30	31	31	30	31	31	32	32	32	32	32	32	31	30	30	A	31.9	38.1
	34.4	34.3	34.0	33.6	34.5	32.8	32.6	32.1	33.9	34.3	35.4	36.1	36.3	37.1	37.6	37.0	36.4	35.9	35.2	35.3	34.8	35.3	34.8	35.7	Diurnal Average	
	43.7	43.4	44.5	45.4	44.3	42.6	42.1	42.6	43.0	43.0	43.6	43.8	43.7	44.3	44.9	45.5	44.1	43.4	43.5	43.4	42.9	44.0	43.9	43.8	Diurnal Maximum	

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

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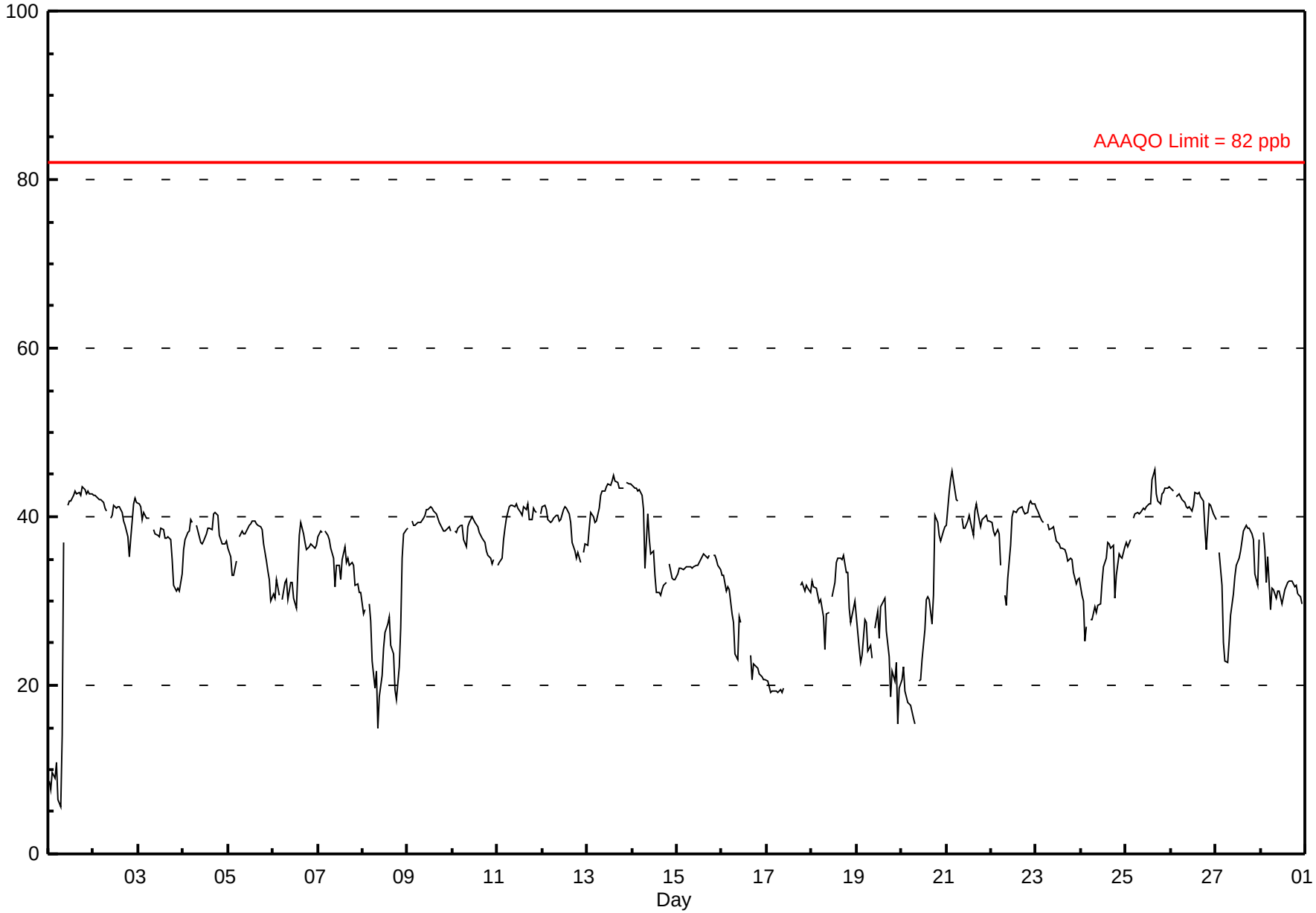
Hourly Averages

Ozone (O_3) - ppb

Portable-Bonanza - February 2011



FOCUS AIR QUALITY MONITORING

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Hourly Maximums

Ozone (O_3) - ppb

Portable-Bonanza - February 2011

Maximum Value: 58.9 ppb on Feb 14 10:00

Maximum Daily Average: 43.2 ppb on Feb 13

Minimum Value: 9 ppb on Feb 1 06:00

Minimum Daily Average: 27.6 ppb on Feb 16

Maximum Diurnal Average: 38.8 ppb at hour 15

Minimum Diurnal Average: 34.3 ppb at hour 7

Monthly Average: 36.46 ppb

Percentiles: P_1 = 13.2 P_{10} = 27.9 Q_1 = 33.0 Median = 38.3 Q_3 = 40.9 P_{90} = 42.8 P_{99} = 45.8

Hours in Service:	672
Hours of Data:	632
Hours of Missing Data:	40
Hours of Calibration:	39
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	11	13	14	13	13	9	10	29	39	A	42	43	43	43	44	43	43	43	44	44	43	43	43	43	32.9	44.0
2-Feb	43	43	43	42	42	42	41	41	A	40	42	42	41	42	42	41	40	40	39	37	41	42	43	42	41.4	42.9
3-Feb	42	42	41	41	41	40	40	A	39	38	38	39	39	39	38	38	39	38	37	35	33	33	33	35	38.3	41.9
4-Feb	37	38	39	39	40	40	A	39	39	38	38	38	38	39	39	40	41	41	41	39	38	37	38	38	39.0	41.5
5-Feb	37	36	34	34	36	A	39	39	38	38	39	39	40	40	40	40	39	39	39	38	37	36	35	34	37.7	39.9
6-Feb	33	33	34	33	A	34	34	34	33	34	48	33	33	34	40	40	39	38	37	37	37	37	37	37	36.1	48.1
7-Feb	38	39	39	A	39	39	38	37	37	36	35	35	36	38	38	37	37	37	37	35	34	34	32	32	36.5	39.3
8-Feb	31	30	A	31	30	26	26	25	19	22	22	27	27	28	30	28	26	23	24	26	29	38	39	39	28.3	39.0
9-Feb	39	A	40	39	39	40	40	40	40	41	41	41	42	41	41	41	40	40	39	39	39	39	39	39	40.1	41.9
10-Feb	A	39	39	39	39	39	39	39	39	40	40	40	40	39	39	38	38	38	37	36	35	35	35	A	38.4	40.4
11-Feb	35	35	36	39	39	41	42	42	42	42	42	42	42	41	42	42	42	42	41	41	41	41	A	41	40.6	42.4
12-Feb	42	42	42	40	40	40	40	41	41	40	41	41	42	42	41	40	40	40	37	38	38	A	39	38	40.2	41.8
13-Feb	39	41	41	40	40	40	42	43	43	43	44	44	45	45	45	45	44	44	44	44	A	44	44	44	43.2	45.4
14-Feb	44	44	44	43	44	43	43	43	43	59	40	39	38	32	32	31	32	33	34	A	37	33	34	34	38.9	58.9
15-Feb	34	34	34	34	35	35	35	35	35	35	35	35	35	36	36	36	36	36	A	36	36	35	35	34	34.9	36.1
16-Feb	34	34	33	32	33	32	30	29	31	31	28	C	C	C	M	25	24	23	23	23	22	21	21	21	27.6	34.1
17-Feb	21	20	20	20	20	20	20	20	20	20	C	C	C	C	C	C	C	C	32	33	32	33	32	32	--	32.9
18-Feb	33	32	32	31	31	31	31	29	29	30	A	31	34	36	36	36	37	39	38	37	31	31	31	32	33.1	39.4
19-Feb	32	30	26	28	28	29	27	26	26	A	29	30	29	31	31	31	29	28	24	24	23	25	24	21	27.6	32.2
20-Feb	24	24	23	20	20	19	19	17	A	28	24	25	30	35	33	32	31	36	42	41	39	38	40	41	29.6	41.8
21-Feb	44	44	46	46	45	44	43	A	40	39	40	40	41	41	41	42	43	41	40	41	41	41	40	40	41.8	45.8
22-Feb	40	40	40	39	39	38	A	35	35	38	40	41	41	41	41	41	41	41	41	42	42	42	42	42	40.2	42.3
23-Feb	41	41	41	40	40	A	39	39	39	39	39	38	37	37	37	37	36	36	36	36	34	33	33	33	37.5	41.3
24-Feb	33	31	30	29	A	30	30	30	30	30	31	33	35	36	38	38	37	37	37	36	36	36	36	38	33.9	37.8
25-Feb	38	37	39	A	40	41	41	41	41	42	42	42	42	43	50	49	43	43	43	43	44	44	44	44	42.4	49.5
26-Feb	44	43	A	43	43	43	42	42	42	42	42	42	42	45	44	44	44	43	41	39	43	42	41	41	42.4	44.8
27-Feb	40	A	38	35	28	23	23	27	30	32	35	35	36	37	38	39	39	39	39	39	38	38	39	39	35.1	40.3
28-Feb	A	38	38	38	38	34	34	33	32	32	32	31	31	33	33	32	33	33	32	32	32	31	30	A	33.3	38.4
	35.8	35.6	35.5	35.1	35.5	34.3	34.3	34.6	35.5	36.6	37.3	37.2	37.7	38.3	38.8	38.1	37.6	37.5	37.0	36.8	36.2	36.5	36.3	36.7	Diurnal Average	
	44.0	44.5	45.8	45.8	44.8	43.8	43.0	43.4	43.4	58.9	48.1	44.3	44.9	45.4	49.5	49.3	44.4	43.9	44.0	44.0	43.7	44.4	44.4	44.4	Diurnal Maximum	

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

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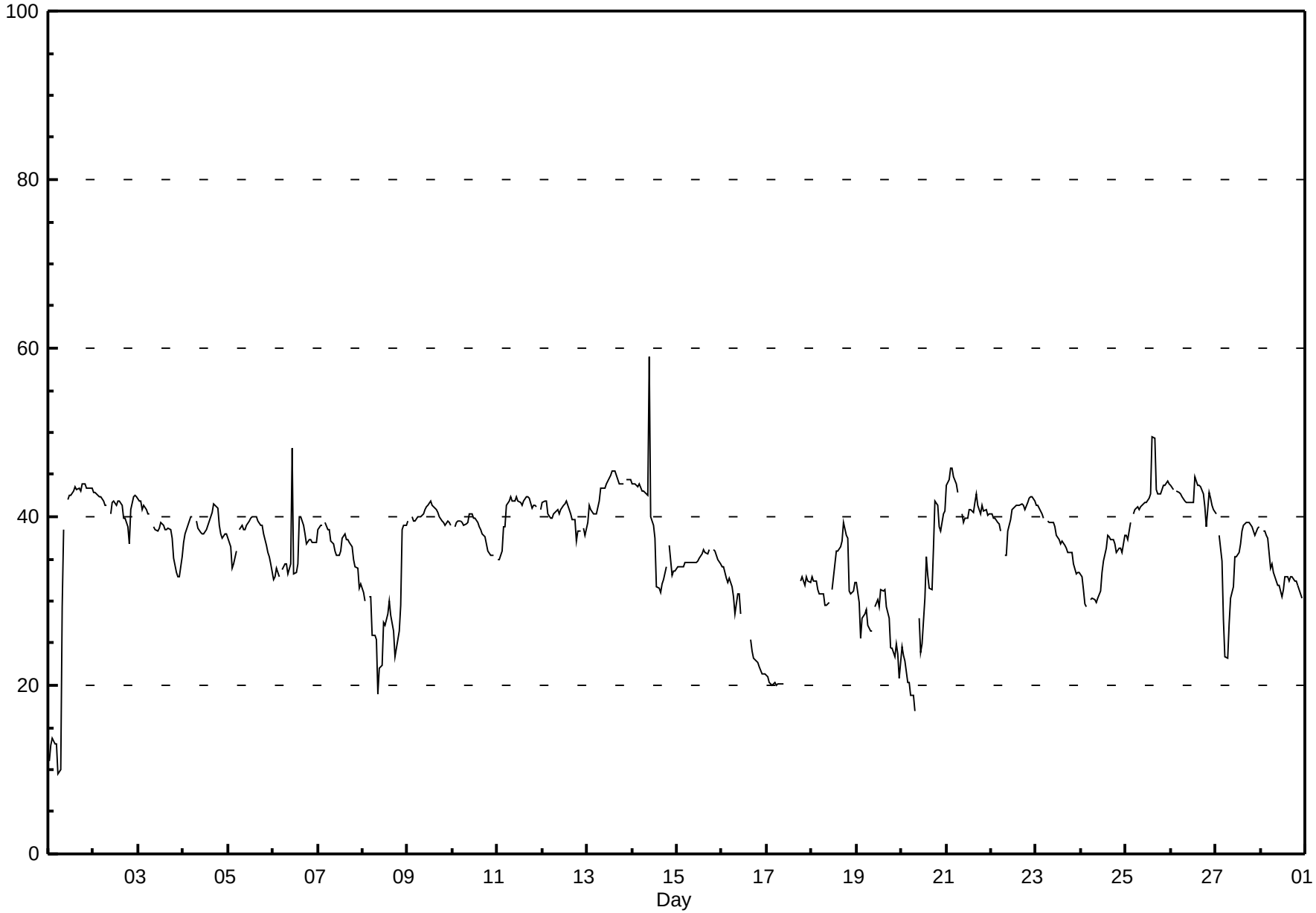
Hourly Maximums

Ozone (O_3) - ppb

Portable-Bonanza - February 2011



FOCUS AIR QUALITY MONITORING

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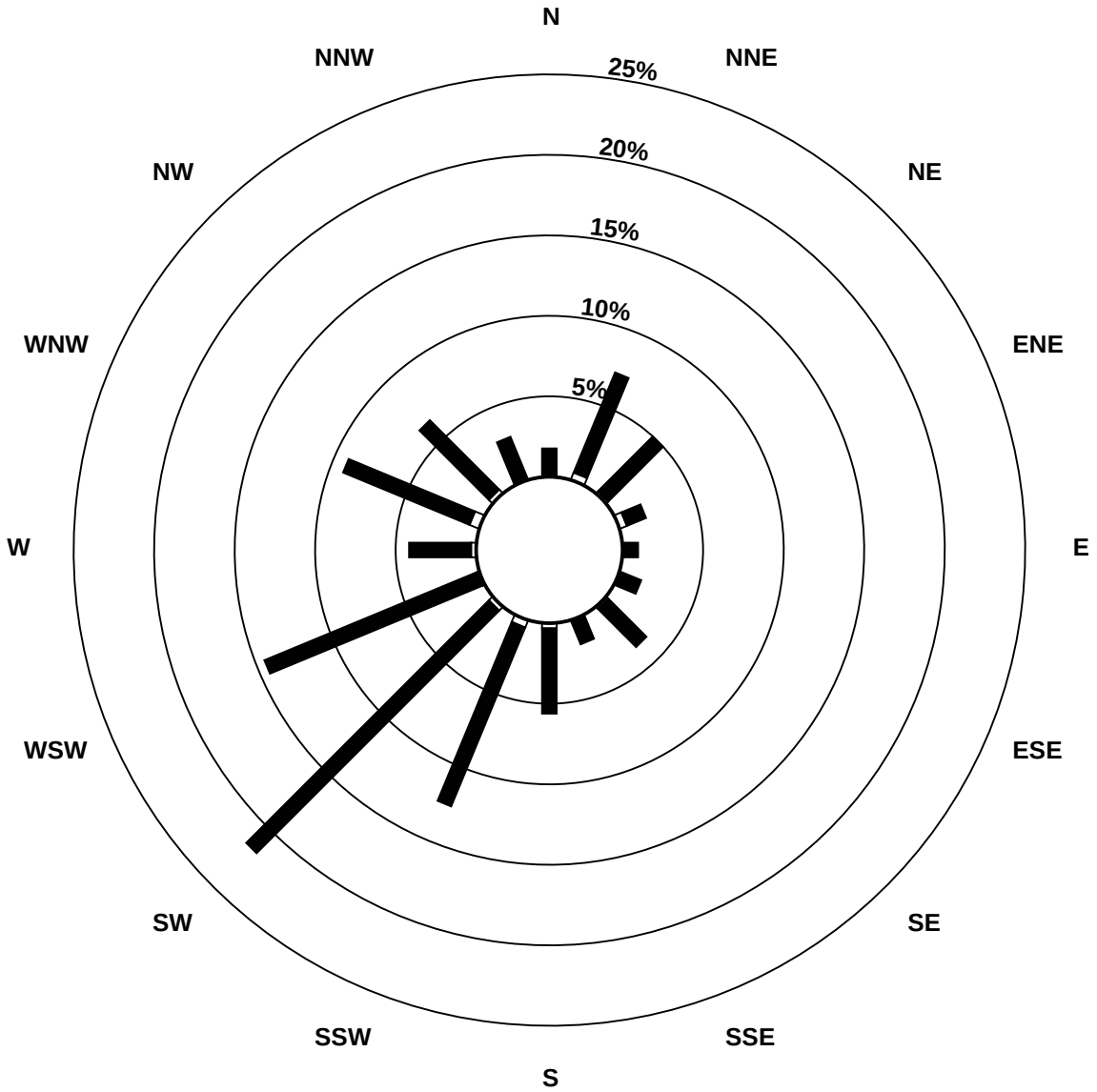
Pollutant Rose

Ozone (O_3) - ppb

Portable-Bonanza - February 2011



Pollutant Classes (ppb)

- 0 - 20
- 21 - 50
- 51 - 82
- > 82

FOCUS AIR QUALITY MONITORING

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Eight Hour Running Averages

Ozone (O_3) - ppb

Portable-Bonanza - February 2011

Maximum Value: 44.0 ppb on Feb 13 18:00

Minimum Value: 8.6 ppb on Feb 1 07:00

Percentiles: P_1 = 9.8 P_{10} = 25.6 Q_1 = 31.8 Median = 36.7 Q_3 = 39.9 P_{90} = 41.8 P_{99} = 43.8

Hours in Service:	672
Hours of Data:	654
Hours of Missing Data:	18
Hours of Calibration:	18
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	11	10	10	10	10	9	9	9	13	13	18	22	27	32	37	41	42	42	43	43	43	43	43	43	43.0
2-Feb	43	43	43	43	42	42	42	42	42	41	41	41	41	41	41	41	41	40	40	39	39	39	39	39	42.9
3-Feb	40	40	40	41	41	41	41	40	40	39	39	39	39	38	38	38	38	38	37	37	36	35	34	34	41.0
4-Feb	33	33	34	35	36	37	37	38	39	39	38	38	38	38	38	38	38	39	39	39	39	39	39	38	39.1
5-Feb	38	37	36	36	35	35	35	36	36	36	37	38	38	38	39	39	39	39	39	39	38	37	37	35	39.1
6-Feb	34	33	33	32	32	31	31	31	31	32	31	31	31	32	32	33	34	35	35	36	37	37	37	37	37.3
7-Feb	37	37	37	37	37	38	38	38	37	36	36	36	35	35	34	34	34	35	35	35	35	34	33	33	37.7
8-Feb	32	32	31	30	30	29	27	26	24	22	22	21	21	22	23	23	24	24	24	24	24	25	26	28	32.2
9-Feb	30	31	34	36	38	39	39	39	39	39	40	40	40	40	40	41	41	41	40	40	40	39	39	39	40.6
10-Feb	39	38	38	38	39	39	38	38	38	38	39	39	39	39	39	39	39	39	38	37	37	36	36	36	39.0
11-Feb	35	35	35	35	36	36	37	38	39	39	40	41	41	41	41	41	41	41	41	41	41	41	41	40	41.0
12-Feb	40	41	41	41	40	40	40	40	40	40	40	40	40	40	40	40	40	39	39	38	37	37	36	36	40.8
13-Feb	36	36	37	38	38	38	39	40	41	41	42	42	43	43	44	44	44	44	44	44	44	44	44	44	44.0
14-Feb	44	44	44	44	44	43	43	42	41	41	40	39	37	36	35	34	33	33	32	32	32	32	32	33	43.7
15-Feb	33	33	33	33	33	33	34	34	34	34	34	34	34	34	34	35	35	35	35	35	35	35	35	35	35.4
16-Feb	35	34	34	33	33	32	31	30	29	28	28	27	26	N	N	N	N	N	N	N	22	22	22	21	34.6
17-Feb	21	21	21	20	20	20	20	20	19	19	19	19	N	N	N	N	N	N	N	N	N	N	N	32	31.6
18-Feb	32	32	32	31	31	31	31	30	29	29	29	29	29	30	31	32	33	34	34	34	34	33	32	32	34.3
19-Feb	31	29	28	27	27	27	26	25	25	25	25	26	26	26	27	28	28	28	27	26	25	24	22	21	30.7
20-Feb	20	20	20	20	19	19	19	18	18	18	18	19	20	22	24	26	26	27	30	32	33	34	35	36	36.2
21-Feb	38	39	40	40	41	42	42	43	43	42	42	41	40	40	39	39	40	40	40	40	40	40	40	40	43.0
22-Feb	40	39	39	39	39	38	38	37	35	34	34	35	35	36	36	38	39	40	41	41	41	41	41	41	41.1
23-Feb	41	41	41	41	41	40	40	40	39	39	39	39	38	38	38	37	37	36	36	36	35	35	34	34	41.1
24-Feb	33	33	31	30	30	29	29	28	28	28	29	29	30	31	32	33	34	35	35	35	35	35	35	35	35.1
25-Feb	35	35	36	36	37	37	38	39	39	40	40	41	41	41	41	42	42	42	43	43	43	43	43	43	43.1
26-Feb	43	43	43	43	43	43	43	43	42	42	42	42	41	42	42	42	42	42	42	41	41	41	41	40	43.2
27-Feb	40	40	39	39	36	34	31	29	27	28	27	28	29	31	32	34	35	36	37	38	38	38	37	37	40.0
28-Feb	36	36	36	35	35	34	34	33	33	32	32	31	31	31	31	31	31	31	32	32	32	32	31	31	36.4
Diurnal Maximums	43.7	43.7	43.7	43.6	43.6	43.4	43.0	42.8	43.0	42.4	41.8	42.0	42.6	43.1	43.6	43.8	44.0	44.0	44.0	43.9	44.0	43.9	43.8	43.7	

N - Not Valid

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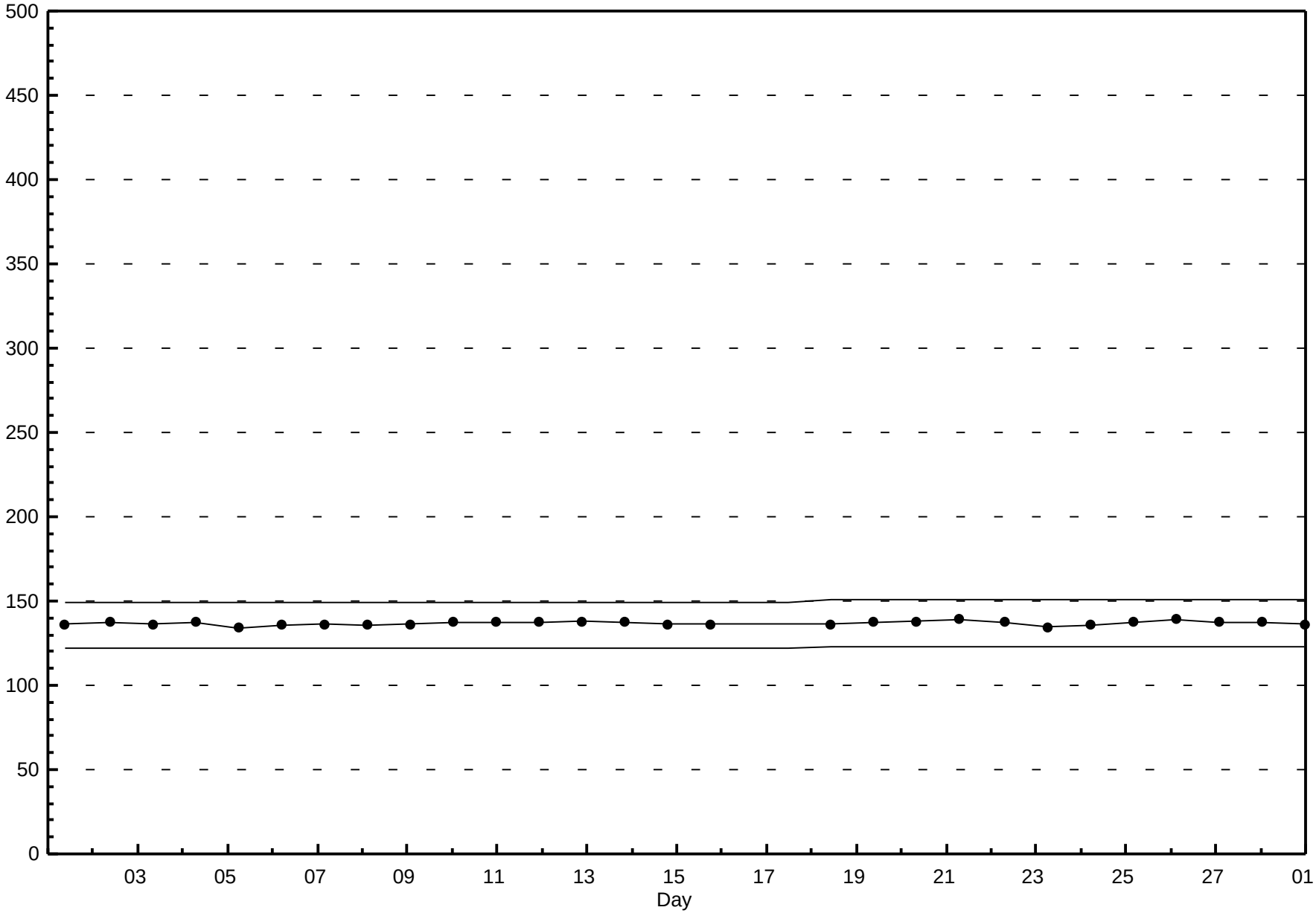
Span Responses

Ozone (O_3)

Portable-Bonanza - February 2011



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Hourly Averages

External Temperature (ET) - ^{o}C

Portable-Bonanza - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 6.1 ^{o}C on Feb 3 01:00 Maximum Daily Average: 3.5 ^{o}C on Feb 3

Minimum Value: -33 ^{o}C on Feb 19 07:00 Minimum Daily Average: -26.7 ^{o}C on Feb 28
Maximum Diurnal Average: -8.3 ^{o}C at hour 15 Minimum Diurnal Average: -13.3 ^{o}C at hour 7
Monthly Average: -11.26 ^{o}C Percentiles: P_1 = -30.3 P_{10} = -25.2 Q_1 = -20.9 Median = -12.0 Q_3 = 0.1 P_{90} = 3.1 P_{99} = 4.8

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	-27	-27	-25	-25	-26	-25	-23	-20	-11	-9	-6	-4	-3	-1	1	1	1	1	1	1	1	1	0	1	-9.2	1.3
2-Feb	2	2	2	3	3	3	3	4	4	3	3	4	4	4	5	5	4	3	3	2	4	4	4	5	3.5	5.0
3-Feb	6	5	2	4	4	4	4	4	4	3	4	4	4	4	4	4	3	3	3	1	1	2	3	4	3.5	6.1
4-Feb	5	5	4	3	5	4	5	5	3	4	4	4	4	4	4	4	2	2	2	2	2	2	2	1	3.4	4.9
5-Feb	1	0	-2	-3	-5	-6	-8	-9	-10	-10	-11	-11	-11	-11	-10	-10	-10	-10	-11	-12	-13	-15	-16	-15	-9.1	0.6
6-Feb	-15	-17	-17	-17	-16	-16	-15	-16	-17	-15	-14	-14	-15	-14	-11	-11	-12	-13	-14	-14	-14	-13	-13	-13	-14.4	-10.9
7-Feb	-13	-13	-14	-13	-13	-13	-14	-15	-16	-17	-16	-12	-11	-9	-7	-9	-12	-14	-16	-16	-17	-17	-18	-18	-13.8	-6.9
8-Feb	-19	-19	-19	-19	-19	-21	-21	-22	-22	-23	-22	-19	-15	-15	-12	-10	-11	-15	-17	-18	-12	-14	-13	-12	-17.0	-10.1
9-Feb	-11	-10	-10	-10	-10	-9	-7	-6	-6	-6	-4	-2	-1	-2	-1	-2	-2	-2	-2	-2	-1	-1	0	0	-4.5	-0.4
10-Feb	0	0	0	0	1	1	1	0	1	2	3	3	4	4	4	4	4	3	3	3	2	1	1	0	1.9	3.8
11-Feb	0	2	3	2	3	3	3	2	2	3	3	3	3	3	5	4	4	3	3	3	3	2	1	2	2.7	4.7
12-Feb	2	3	3	3	3	2	2	2	1	-1	0	3	4	4	3	3	3	2	1	0	1	0	0	0	1.8	4.1
13-Feb	-1	-1	-2	-1	0	0	0	0	-1	-1	0	1	1	2	2	2	3	2	1	2	2	2	2	2	0.7	2.7
14-Feb	2	2	2	1	1	1	0	-1	0	-2	-1	1	-4	-6	-8	-9	-10	-10	-11	-11	-13	-16	-18	-19	-5.4	1.6
15-Feb	-19	-20	-20	-21	-22	-22	-22	-23	-23	-23	-23	-23	-23	-22	-22	-23	-23	-23	-23	-23	-23	-23	-25	-26	-22.6	-19.3
16-Feb	-26	-27	-28	-29	-28	-30	-30	-30	-29	-26	-26	-24	-21	M	-21	-21	-21	-23	-24	-24	-24	-24	-23	-23	-25.3	-20.9
17-Feb	-23	-23	-23	-23	-24	-25	-25	-25	-25	-25	-24	-24	-23	-23	-23	-23	-23	-23	-24	-24	-23	-23	-25	-26	-23.8	-22.8
18-Feb	-25	-26	-26	-28	-28	-29	-29	-30	-29	-29	-27	-24	-22	-20	-17	-17	-17	-21	-24	-24	-23	-23	-23	-23	-24.3	-16.8
19-Feb	-24	-24	-24	-25	-29	-32	-33	-33	-33	-32	-27	-22	-18	-16	-13	-13	-14	-17	-20	-21	-22	-21	-21	-22	-23.1	-12.8
20-Feb	-21	-20	-19	-19	-19	-18	-18	-17	-16	-13	-12	-9	-6	-5	-4	-4	-5	-6	-4	-5	-6	-5	-4	-5	-10.9	-4.1
21-Feb	-6	-5	-5	-4	-5	-7	-8	-6	-6	-6	-5	-5	-5	-6	-7	-7	-7	-8	-10	-10	-10	-10	-11	-12	-7.1	-4.3
22-Feb	-14	-16	-17	-17	-17	-19	-21	-21	-20	-19	-17	-15	-14	-13	-12	-12	-12	-13	-14	-13	-14	-15	-16	-17	-15.8	-12.3
23-Feb	-17	-19	-20	-19	-18	-19	-19	-20	-20	-20	-20	-20	-20	-19	-19	-19	-19	-22	-22	-23	-25	-26	-26	-28	-20.7	-17.3
24-Feb	-28	-27	-30	-30	-30	-28	-29	-29	-29	-28	-27	-25	-22	-21	-20	-19	-18	-19	-21	-21	-19	-18	-18	-18	-23.8	-17.6
25-Feb	-17	-17	-16	-16	-17	-16	-14	-14	-14	-15	-12	-10	-8	-6	-4	-6	-6	-5	-6	-6	-6	-5	-5	-6	-10.3	-4.2
26-Feb	-6	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7	-6	-5	-5	-5	-5	-5	-5	-5	-5	-6	-8	-9	-9	-6.5	-4.7
27-Feb	-10	-11	-12	-14	-17	-19	-19	-20	-20	-19	-19	-20	-19	-19	-20	-20	-20	-21	-21	-22	-23	-23	-23	-23	-18.9	-10.1
28-Feb	-23	-24	-24	-25	-27	-28	-28	-28	-28	-28	-28	-28	-26	-24	-23	-23	-24	-26	-29	-30	-28	-28	-29	-30	-26.7	-23.1
	-11.8	-11.9	-12.3	-12.5	-12.7	-13.3	-13.3	-13.3	-13.1	-12.8	-11.8	-10.5	-9.5	-8.5	-8.3	-8.4	-8.8	-10.0	-10.8	-11.1	-10.9	-11.2	-11.6	-11.8	Diurnal Average	
	6.1	4.9	3.9	3.5	4.6	4.4	4.8	4.5	3.7	4.2	4.2	4.4	4.4	4.5	5.0	4.5	4.3	3.2	3.0	3.1	4.0	4.4	4.2	5.0	Diurnal Maximum	

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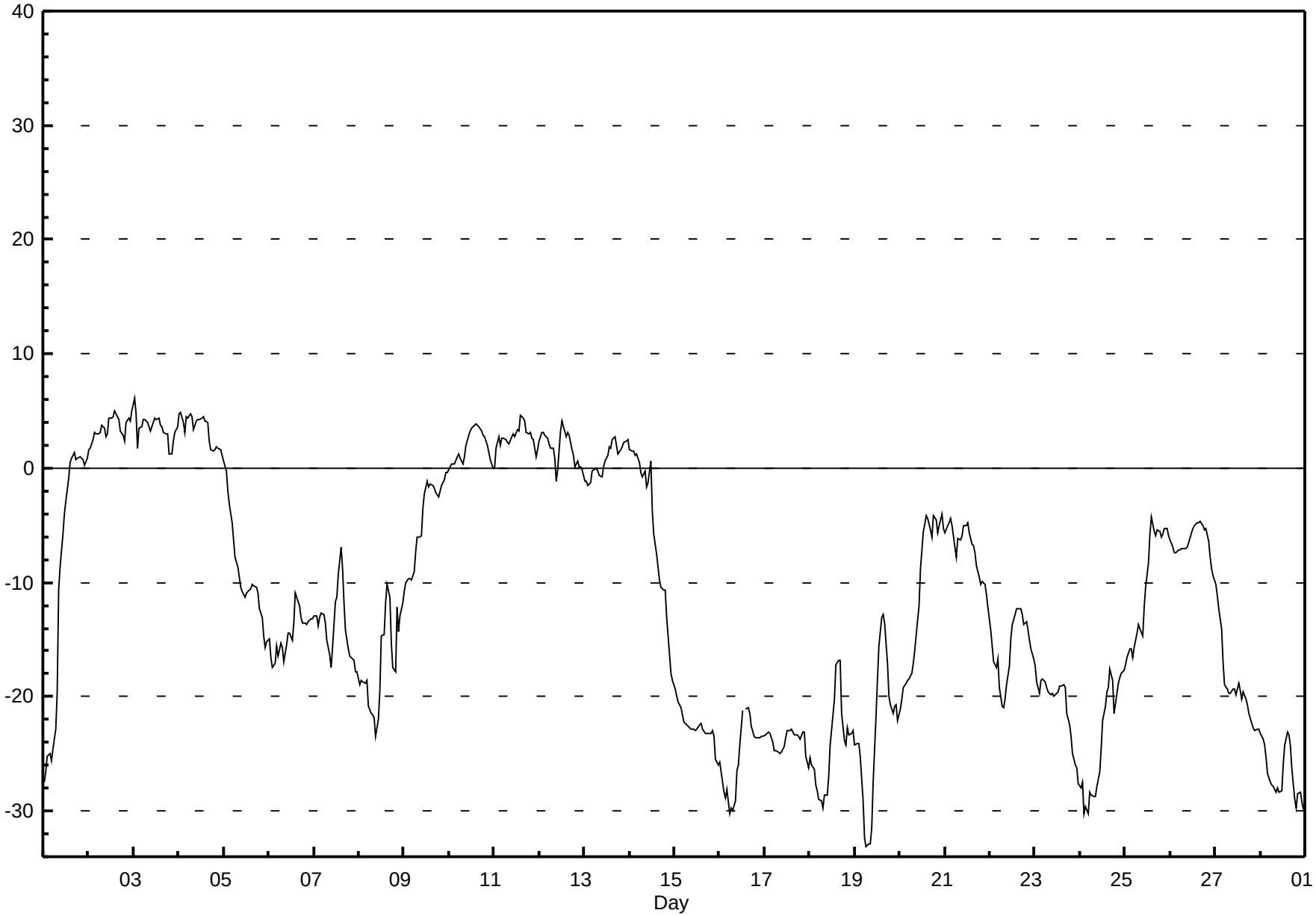
Hourly Averages

External Temperature (ET) - ^{o}C

Portable-Bonanza - February 2011



FOCUS AIR QUALITY MONITORING

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Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Portable-Bonanza - February 2011

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	N	N	N	N	N	N	N	N	12	12	13	15	17	17	23	29	27	39	45	37	30	33	33	30	--	45.2
Dir	N	N	N	N	N	N	N	N	179	172	185	200	215	222	232	240	236	240	226	232	240	239	239	246	--	226
2 Spd	26	18	22	35	30	30	34	48	40	24	27	41	42	24	31	29	29	15	8	9	12	22	16	15	25.8	48.2
Dir	235	229	231	241	238	241	241	231	234	244	244	244	243	230	242	242	256	254	217	213	207	228	235	211	237	231
3 Spd	21	13	14	20	15	19	28	26	23	16	11	14	18	23	20	15	13	10	6	5	6	8	10	10	13.5	27.8
Dir	198	205	241	223	236	210	222	222	218	216	205	213	228	236	232	222	210	206	191	123	117	128	138	162	213	222
4 Spd	18	18	12	11	21	16	12	17	19	25	28	23	27	33	28	20	23	18	16	17	18	19	21	22	16.7	32.6
Dir	196	198	206	192	211	220	208	211	221	235	234	230	241	248	252	295	300	288	283	286	280	282	288	298	248	248
5 Spd	19	25	29	26	27	24	29	26	26	28	29	28	25	25	24	23	19	16	12	6	2	4	4	3	18.8	29.1
Dir	298	313	316	319	327	327	318	315	313	317	308	309	309	303	303	301	297	300	299	299	227	174	165	157	310	318
6 Spd	3	4	5	9	11	6	12	11	12	8	4	5	9	7	13	17	15	13	9	9	12	12	10	10	7.4	17.1
Dir	128	68	106	115	118	136	137	135	124	118	66	7	21	25	86	91	52	58	59	51	47	45	45	39	77	91
7 Spd	11	11	9	6	6	10	10	8	7	7	8	7	8	7	3	2	4	6	7	9	9	10	9	7	2.8	10.8
Dir	38	48	53	39	39	44	41	44	35	31	51	50	16	12	39	253	246	220	202	183	183	192	185	183	61	48
8 Spd	9	11	12	9	9	9	10	10	7	7	5	6	1	3	2	2	5	6	1	2	12	18	15	15	5.9	17.8
Dir	189	180	184	186	188	186	183	167	146	193	204	232	137	277	243	55	52	75	212	171	214	230	238	244	200	230
9 Spd	14	17	15	11	14	18	15	21	23	18	29	31	32	36	37	34	31	37	36	39	42	40	37	36	27.3	42.2
Dir	221	225	234	238	225	222	233	238	228	225	241	242	239	246	247	247	248	245	241	236	237	238	233	233	238	237
10 Spd	37	35	33	38	39	37	32	27	26	29	32	33	32	33	31	31	30	31	29	27	21	15	18	11	29.2	39.0
Dir	234	237	236	240	248	246	238	241	238	230	240	244	246	244	246	247	248	248	249	247	249	219	232	248	242	248
11 Spd	11	12	12	16	23	20	18	12	15	12	16	12	11	10	9	12	20	23	24	24	16	11	6	22	15.0	24.1
Dir	229	208	209	214	216	222	222	209	215	218	230	232	250	262	248	217	225	234	236	222	219	216	241	221	225	236
12 Spd	22	20	23	22	22	25	26	22	16	14	14	20	24	19	15	10	2	6	6	3	7	9	17	22	14.6	25.6
Dir	220	209	207	208	202	211	210	208	210	225	224	213	210	217	232	209	76	79	64	100	246	234	221	225	213	210
13 Spd	21	22	19	19	28	26	32	34	32	28	33	32	31	22	21	18	21	21	20	11	14	20	16	20	22.9	33.5
Dir	226	227	216	222	229	217	225	228	226	218	221	223	223	226	225	206	203	208	211	195	199	199	193	203	217	228
14 Spd	16	15	17	9	12	9	7	7	9	5	5	5	17	17	17	19	19	15	16	21	19	24	26	28	7.8	28.0
Dir	211	203	190	185	186	169	164	168	171	89	120	331	319	313	298	304	303	298	309	359	329	298	295	294	284	294
15 Spd	28	22	24	25	22	23	25	24	22	20	20	21	23	21	21	19	18	16	14	10	9	10	8	6	18.5	27.9
Dir	292	291	294	288	292	293	297	304	303	294	293	293	289	293	285	295	298	295	290	261	268	259	261	265	291	292
16 Spd	6	5	4	5	6	4	5	5	4	5	4	2	3	M	3	6	3	2	3	4	4	3	5	5	2.6	6.2
Dir	235	211	195	191	199	184	177	174	166	216	240	239	318	M	327	19	1	257	242	272	251	235	221	217	220	19
17 Spd	3	1	3	6	13	11	7	10	9	11	11	9	8	10	11	11	11	9	10	9	10	8	7	9	7.7	12.6
Dir	224	236	204	301	310	301	273	278	288	288	285	291	288	258	286	282	257	249	235	232	221	249	259	238	269	310
18 Spd	8	7	7	7	7	6	7	6	7	5	6	6	6	6	2	1	3	6	9	14	14	13	16	13	6.1	15.7
Dir	225	212	220	194	205	201	188	191	192	202	197	187	215	208	234	14	105	118	124	130	139	139	140	143	170	140
19 Spd	12	12	12	6	3	3	1	6	0	1	2	4	5	6	6	5	4	4	2	2	2	4	2	4	2.2	12.3
Dir	137	137	137	136	299	291	27	55	259	349	31	38	22	34	42	30	27	40	24	86	32	109	176	308	79	137
20 Spd	3	5	5	5	1	2	4	5	2	3	5	5	4	2	6	3	1	4	11	10	8	10	12	11	1.0	11.7
Dir	35	41	29	30	56	247	68	69	82	223	19	29	60	346	33	70	143	186	186	201	205	213	196	234	169	196
21 Spd	9	13	16	26	25	18	14	23	21	22	26	26	25	26	25	27	24	19	11	15	17	22	20	19	16.1	27.3
Dir	238	232	224	222	230	230	234	222	219	217	231	241	261	280	299	305	301	303	267	297	312	315	321	323	263	305
22 Spd	16	17	11	7	7	3	3	0	2	3	6	12	14	13	16	19	22	19	15	24	25	24	15	15	11.4	25.1
Dir	322	310	295	267	247	274	174	25	267	200	251	299	299	299	292	293	308	314	312	329	335	351	343	333	311	335

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Peace Air Shed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Portable-Bonanza - February 2011

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	20	18	14	19	20	24	23	20	19	19	20	23	23	16	15	16	12	15	16	15	14	13	14	14	17.3	24.4
Dir	335	330	313	314	317	322	326	317	321	342	337	331	333	317	329	321	341	304	316	322	317	320	318	321	324	322
24 Spd	3	7	4	5	7	8	9	10	9	10	11	12	11	14	13	9	7	9	6	10	11	12	9	7	8.1	14.1
Dir	235	202	186	170	165	178	192	186	187	185	205	208	208	212	221	239	212	207	163	144	146	153	166	219	192	212
25 Spd	8	9	10	18	15	17	17	16	16	15	12	11	10	5	5	10	17	18	18	21	19	25	31	37	15.5	36.7
Dir	230	221	210	232	215	215	212	210	218	221	215	231	234	238	248	217	224	229	217	219	218	229	243	241	225	241
26 Spd	34	27	28	32	28	29	26	16	12	11	13	10	14	13	11	9	9	5	2	5	29	30	26	27	9.5	33.9
Dir	241	244	244	246	257	257	264	270	258	240	239	248	245	236	231	209	212	229	260	24	44	39	33	34	261	241
27 Spd	23	23	28	24	26	21	17	15	13	13	15	17	19	19	22	16	16	12	15	13	7	9	13	13	17.0	27.6
Dir	31	26	20	23	26	27	32	23	27	28	18	14	34	25	19	31	33	26	27	32	24	12	16	6	25	20
28 Spd	13	13	13	11	10	7	9	12	7	7	8	7	6	7	6	7	9	9	8	9	9	9	7	8	3.6	12.9
Dir	4	5	8	18	9	24	11	4	1	349	334	310	274	215	225	261	261	262	254	249	214	199	193	189	315	4
Spd	8.5	7.6	7.7	9.2	9.7	9.5	9.3	9.4	9.1	8.1	9.6	10.6	11.1	11.5	10.7	9.5	9.3	9.2	8.3	6.5	6.2	7.2	7.5	8.6	Diurnal Average	
Dir	244	242	242	242	245	244	241	238	235	240	247	254	259	259	264	266	267	259	248	248	248	245	247	251		
Spd	36.8	35.2	33.5	37.6	39.0	36.7	34.5	48.2	40.5	29.2	32.8	41.3	41.6	36.2	36.9	34.0	30.6	39.1	45.2	38.8	42.2	39.7	36.8	36.7	Diurnal Maximum	
Dir	234	237	236	240	248	246	241	231	234	230	221	244	243	246	247	247	248	240	226	236	237	238	233	241		

Maximum Speed Value: 48 km/h on Feb 2 08:00
Minimum Speed Value: 0 km/h on Feb 19 09:00
Maximum Daily Speed Average: 29.2 km/h on Feb 10
Minimum Daily Speed Average: 1.0 km/h on Feb 16
Maximum Diurnal Speed Average: 11.5 km/h at hour 14
Minimum Diurnal Speed Average: 6.2 km/h at hour 21

Monthly Average Velocity: 8.80 km/h 249.6 deg
Speed Percentiles: P_1 = 1.2 P_{10} = 4.2 Q_1 = 7.5 Median = 13.2 Q_3 = 21.6 P_{90} = 28.5 P_{99} = 39.6
All monthly, daily, and diurnal averages have been calculated using vector methods

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

M - Maintenance 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	6	11	11	4	0	0	32
NorthEast	19	26	15	7	2	0	69
East	11	3	2	0	0	0	16
SouthEast	4	15	12	0	0	0	31
South	12	47	14	3	0	0	76
SouthWest	18	47	79	64	47	9	264
West	11	30	12	13	8	1	75
NorthWest	5	5	37	48	5	0	100
Total	86	184	182	139	62	10	663

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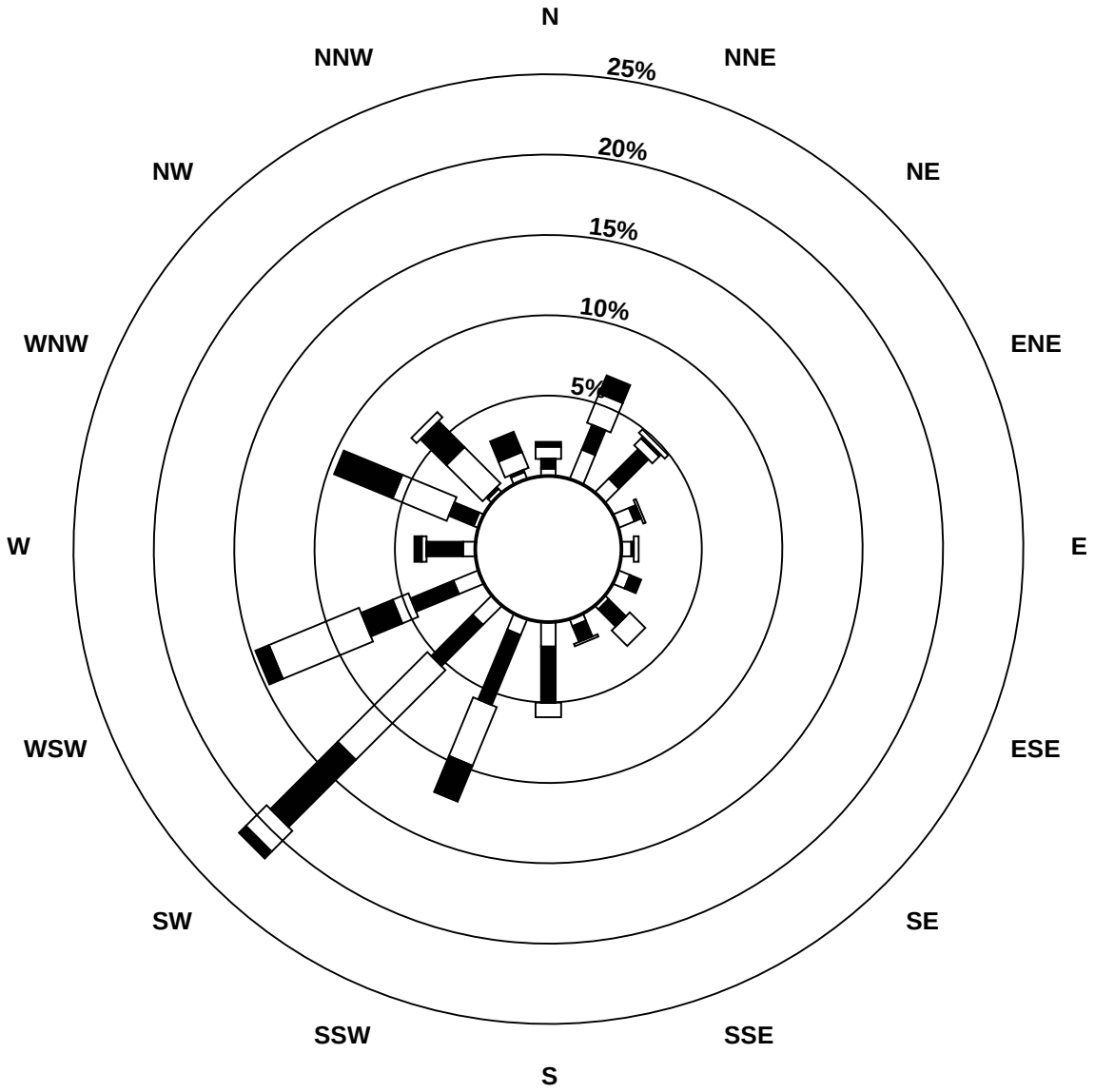
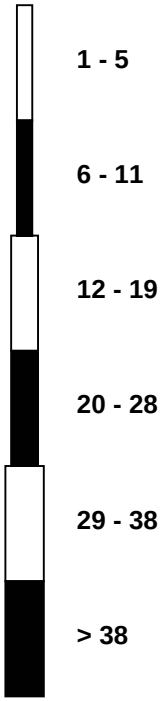
Wind Rose

Wind Speed (WS) (km/h)

Portable-Bonanza - February 2011



Wind Speed Classes (km/h)



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Peace Air Shed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Portable-Bonanza - February 2011

Maximum Speed: 48 km/h on Feb 2 08:00

Maximum Daily Speed Average: 29.5 km/h on Feb 10

Minimum Speed: 2 km/h on Feb 17 02:00

Minimum Daily Speed Average: 4.3 km/h on Feb 16

Maximum Diurnal Speed Average: 16.8 km/h at hour 13

Minimum Diurnal Speed Average: 13.7 km/h at hour 19

Monthly Average Speed: 15.39 km/h

Percentiles: $P_1 = 2.5$ $P_{10} = 4.7$ $Q_1 = 7.7$ Median = 13.3 $Q_3 = 21.7$ $P_{90} = 28.6$ $P_{99} = 39.6$

Hours in Service: 672
Hours of Data: 663
Hours of Missing Data: 9

Percent Operational Time: 98.7

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	N	N	N	N	N	N	N	N	12	12	13	15	17	17	23	29	27	39	45	37	30	33	33	30	--	45.3
2-Feb	26	18	23	35	30	30	35	48	41	24	27	41	42	25	31	29	29	15	8	9	12	22	16	15	26.4	48.3
3-Feb	21	13	14	20	16	19	28	26	24	16	11	14	18	23	20	15	13	11	7	6	6	8	10	11	15.5	27.9
4-Feb	18	18	12	11	21	16	13	17	19	25	28	23	27	33	28	21	23	18	16	18	18	19	21	22	20.3	32.7
5-Feb	19	25	29	26	28	25	29	26	26	28	29	28	25	25	24	23	19	16	12	6	3	4	5	3	20.2	29.2
6-Feb	3	4	5	9	11	7	12	11	12	8	5	5	9	7	13	17	15	13	10	9	12	12	10	10	9.6	17.2
7-Feb	11	11	9	6	6	10	10	8	7	8	8	7	8	7	4	4	4	6	7	9	9	10	9	7	7.7	10.9
8-Feb	9	11	12	9	9	9	10	10	7	7	6	6	3	5	3	4	5	6	3	6	13	18	15	15	8.4	17.9
9-Feb	14	17	15	11	14	18	15	21	23	18	29	31	32	36	37	34	31	37	36	39	42	40	37	36	27.7	42.2
10-Feb	37	35	34	38	39	37	32	27	26	29	32	33	32	33	31	31	30	31	29	27	21	15	18	12	29.5	39.0
11-Feb	11	13	12	16	23	20	18	13	15	13	16	12	11	11	11	12	20	23	24	24	16	11	6	22	15.5	24.2
12-Feb	22	20	23	22	22	25	26	22	17	14	14	20	24	20	15	10	5	6	6	5	7	9	17	22	16.3	25.7
13-Feb	21	22	19	19	28	26	32	34	32	28	33	32	31	22	21	19	21	21	20	11	14	20	16	20	23.3	33.6
14-Feb	16	15	17	9	12	9	8	7	9	7	6	9	17	17	17	19	20	15	16	22	21	24	26	28	15.3	28.1
15-Feb	28	22	24	25	23	23	25	24	22	21	21	21	23	21	21	19	18	16	14	10	9	10	8	6	19.0	28.0
16-Feb	6	5	4	5	6	5	6	5	4	5	4	2	3	M	3	6	3	2	3	4	4	3	5	5	4.3	6.3
17-Feb	3	2	3	7	13	11	8	10	9	11	11	9	9	10	11	11	11	10	10	9	10	8	7	9	8.7	12.7
18-Feb	8	7	7	8	7	6	7	7	7	5	6	6	6	6	3	3	3	6	9	14	14	13	16	13	7.9	15.7
19-Feb	12	12	12	7	4	4	4	6	3	2	2	4	5	6	6	6	4	4	3	3	3	5	3	5	5.2	12.3
20-Feb	4	5	6	5	2	3	4	5	3	3	5	5	4	3	6	4	3	5	12	10	8	10	12	12	5.8	11.9
21-Feb	9	13	16	26	25	18	14	23	21	22	26	26	25	27	26	27	25	19	12	15	17	22	20	19	20.6	27.4
22-Feb	16	17	11	8	7	5	4	4	3	4	7	12	15	13	16	19	23	19	15	24	25	24	15	15	13.4	25.3
23-Feb	20	18	14	19	20	24	23	20	19	19	20	23	23	16	15	16	12	15	16	15	14	13	14	14	17.7	24.4
24-Feb	6	7	4	5	7	8	9	10	10	10	11	13	11	14	13	10	8	9	6	10	11	12	10	7	9.2	14.1
25-Feb	8	9	10	18	16	17	17	16	16	15	12	11	10	5	5	10	17	18	18	21	19	25	31	37	15.9	36.8
26-Feb	34	27	29	32	28	29	27	16	12	12	13	10	14	13	11	9	9	5	2	5	29	30	26	27	18.7	33.9
27-Feb	23	23	28	24	26	22	17	16	13	13	16	18	19	19	22	16	17	12	16	13	7	9	13	13	17.2	27.7
28-Feb	13	13	13	11	10	7	9	12	7	7	8	7	6	7	6	8	10	10	8	9	9	9	7	8	8.9	12.9
	15.4	15.0	15.0	16.0	16.8	16.1	16.2	16.5	15.0	13.8	15.0	15.9	16.8	16.3	15.8	15.5	15.1	14.7	13.7	13.9	14.4	15.6	15.2	15.8	Diurnal Average	
	36.8	35.3	33.5	37.7	39.0	36.7	34.7	48.3	41.0	29.2	32.8	41.4	41.7	36.3	37.0	34.1	30.6	39.1	45.3	38.9	42.2	39.7	36.9	36.8	Diurnal Maximum	

M - Maintenance N - Not Valid

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

PASZA
Peace Air Shed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Portable-Bonanza - February 2011

Maximum Value: 93.5 deg on Feb 7 16:00

Minimum Value: 1.7 deg on Feb 10 18:00

Percentiles: P_1 = 2.2 P_{10} = 3.4 Q_1 = 4.6 Median = 7.1 Q_3 = 12.5 P_{90} = 27.2 P_{99} = 81.1

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

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	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	N	N	N	N	N	N	N	N	5	5	7	5	4	12	8	6	3	4	4	2	5	6	5	8	12.4
2-Feb	5	9	9	5	4	5	7	4	10	3	2	2	4	8	6	6	3	14	16	14	10	4	8	15	16.3
3-Feb	3	15	10	10	27	7	6	3	8	6	9	7	6	4	3	10	16	24	31	23	6	11	8	21	31.2
4-Feb	3	3	26	9	4	20	29	6	3	5	4	3	4	3	3	16	8	4	4	5	3	5	3	4	29.5
5-Feb	9	5	4	4	7	8	4	4	5	5	5	3	4	4	5	5	4	4	6	21	46	28	39	27	46.1
6-Feb	40	53	22	5	9	41	3	7	7	29	49	17	6	8	26	8	6	5	9	11	5	5	6	5	53.2
7-Feb	5	7	6	12	7	5	5	7	13	12	5	8	5	4	51	93	18	6	10	4	7	4	7	13	93.5
8-Feb	9	4	5	5	8	7	12	15	24	26	34	13	81	54	26	69	23	27	89	84	8	5	12	12	89.1
9-Feb	8	10	3	8	5	5	8	3	4	7	4	4	4	5	3	3	4	4	2	2	3	3	3	3	10.0
10-Feb	3	2	2	3	2	2	4	3	5	3	4	2	2	2	3	2	2	2	2	2	7	12	11	13	13.2
11-Feb	8	10	6	6	5	5	5	10	9	17	11	9	16	9	30	13	7	7	5	3	4	14	20	2	29.6
12-Feb	3	3	5	3	3	5	3	3	4	11	12	5	4	3	5	24	61	24	14	78	20	16	9	4	78.5
13-Feb	3	4	3	10	7	5	4	2	3	4	3	3	3	6	7	8	3	4	4	7	4	3	5	7	9.9
14-Feb	6	7	4	15	4	13	35	17	15	43	24	76	7	9	7	7	8	7	15	9	28	5	6	5	76.0
15-Feb	5	6	6	10	9	6	5	4	5	6	7	8	8	9	8	12	6	7	9	6	5	5	3	9	11.6
16-Feb	12	10	10	18	7	30	18	13	22	9	12	28	19	M	22	10	29	28	17	7	23	8	5	7	30.0
17-Feb	23	31	14	26	8	5	11	9	9	7	4	8	12	14	7	8	7	14	6	11	7	14	9	5	31.3
18-Feb	10	8	10	7	8	7	8	14	12	6	9	7	11	10	46	73	28	11	4	6	4	3	4	5	72.8
19-Feb	5	3	3	77	56	21	73	11	79	51	42	15	10	11	9	18	32	39	58	66	58	12	55	46	78.7
20-Feb	27	29	15	15	75	61	39	18	74	23	27	9	18	83	18	52	87	51	5	11	20	14	11	15	86.7
21-Feb	10	11	15	4	4	5	16	11	5	6	5	4	10	18	9	4	7	7	18	17	11	4	3	4	18.5
22-Feb	6	6	10	17	15	70	34	91	42	40	20	8	9	10	7	5	12	6	8	11	8	6	15	3	91.3
23-Feb	5	5	9	4	5	5	4	3	7	9	5	4	7	13	10	7	12	10	9	4	3	4	6	4	12.6
24-Feb	50	16	21	11	9	5	9	8	8	5	5	4	5	3	11	13	9	8	13	5	5	7	17	12	50.0
25-Feb	15	13	12	3	5	4	5	4	6	6	7	17	9	18	28	11	6	13	6	5	8	4	8	3	28.2
26-Feb	4	5	3	4	6	4	5	6	12	9	8	6	7	4	8	5	4	11	23	16	10	5	4	4	23.2
27-Feb	5	6	4	6	6	6	4	6	7	7	17	14	4	7	4	6	5	7	6	4	8	5	3	5	17.1
28-Feb	4	4	4	4	8	10	11	4	7	11	8	7	16	8	20	34	20	17	10	6	14	7	7	7	33.6
	50.0	53.2	25.6	76.5	74.8	70.4	72.9	91.3	78.7	50.6	48.9	76.0	81.3	83.0	51.4	93.5	86.7	50.9	89.1	84.5	58.1	28.3	55.3	45.5	

M - Maintenance N - Not Valid

PASZA
Valleyview Station
Monthly Summary Tables, Graphs and Roses

PASZA
Peace Air Shed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Valleyview - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 28.3 ppb on Feb 10 06:00
Maximum Daily Average: 5.9 ppb on Feb 10

Minimum Value: 0 ppb on Feb 3 09:00
Maximum Diurnal Average: 2.0 ppb at hour 14
Monthly Average: 0.95 ppb

Minimum Daily Average: 0.0 ppb on Feb 23
Minimum Diurnal Average: 0.4 ppb at hour 22
Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.2 Q_3 = 0.7 P_{90} = 2.4 P_{99} = 10.7

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	A	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.6	0.8
2-Feb	A	0	0	0	0	0	0	0	0	0	0	0	1	15	4	3	0	1	0	0	0	0	0	0	1.2	14.5
3-Feb	A	0	0	0	0	0	0	0	0	6	C	C	C	1	0	0	0	1	1	1	1	0	0	0	0.6	6.0
4-Feb	A	0	0	0	0	0	0	0	0	0	0	11	14	4	2	0	0	0	3	1	0	0	0	0	1.6	14.0
5-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
6-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0.4	1.3
7-Feb	A	1	0	0	1	0	0	1	1	0	1	3	4	4	2	2	1	1	1	1	0	0	0	0	1.1	3.7
8-Feb	A	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0.3	0.9
9-Feb	A	0	5	4	0	1	0	0	0	0	0	0	3	9	7	6	5	1	3	4	5	3	6	6	3.1	9.3
10-Feb	A	10	11	6	11	28	18	5	12	9	5	2	0	0	0	1	1	2	4	4	3	1	1	0	5.9	28.3
11-Feb	A	0	0	0	1	0	0	0	0	0	1	0	0	0	3	2	0	0	0	0	0	0	0	0	0.5	3.2
12-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
13-Feb	A	1	2	5	0	0	5	1	1	2	0	1	1	0	6	6	0	0	0	0	0	0	0	0	1.3	5.7
14-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
15-Feb	A	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0.4	0.8
16-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
17-Feb	A	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
18-Feb	A	1	0	0	0	0	0	0	0	0	0	2	1	5	5	2	4	2	1	0	0	0	0	0	1.0	5.5
19-Feb	A	0	0	0	0	0	0	0	0	0	2	2	2	3	2	2	3	3	2	1	1	1	2	2	1.3	3.5
20-Feb	A	2	2	3	2	3	2	2	2	2	2	2	2	2	2	2	2	1	1	1	2	3	2	2	1.9	2.5
21-Feb	A	2	2	2	2	1	2	2	1	1	1	9	11	6	1	3	0	0	0	0	0	0	0	0	2.1	11.3
22-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
23-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
24-Feb	A	0	0	0	0	0	0	0	0	0	0	0	2	3	2	0	2	3	1	0	0	0	0	0	0.6	3.5
25-Feb	A	0	0	0	0	0	0	0	0	3	6	8	7	1	0	0	0	0	0	0	0	0	0	1	1.3	8.3
26-Feb	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
27-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
28-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
	--	0.7	1.0	0.9	0.7	1.3	1.1	0.5	0.7	1.0	0.9	1.7	1.9	2.0	1.5	1.2	0.8	0.7	0.7	0.6	0.6	0.4	0.6	0.6	Diurnal Average	
	--	10.4	11.0	6.0	10.5	28.3	18.4	5.3	11.9	8.7	5.7	10.6	14.0	14.5	7.2	6.4	5.1	3.5	3.7	4.3	5.4	3.0	6.5	6.2	Diurnal Maximum	

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

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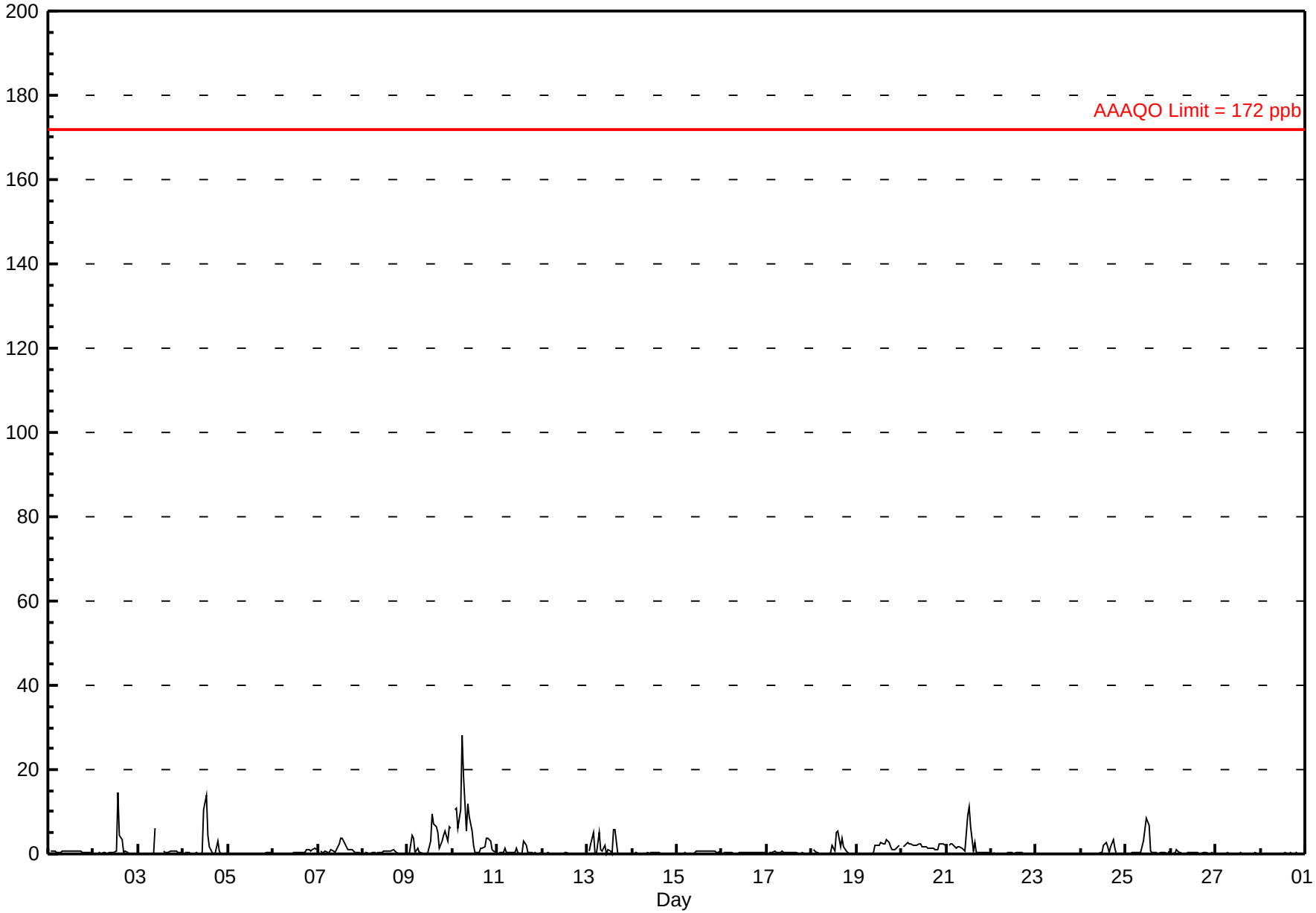
Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Valleyview - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Valleyview - February 2011

Maximum Value: 40.2 ppb on Feb 2 15:00

Maximum Daily Average: 16.4 ppb on Feb 10

Minimum Value: 0 ppb on Feb 5 12:00

Minimum Daily Average: 0.5 ppb on Feb 23

Maximum Diurnal Average: 6.0 ppb at hour 15

Minimum Diurnal Average: 1.4 ppb at hour 8

Monthly Average: 3.00 ppb

Percentiles: P_1 = 0.2 P_{10} = 0.5 Q_1 = 0.6 Median = 0.7 Q_3 = 1.5 P_{90} = 7.3 P_{99} = 32.5

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	A	1	1	1	1	1	1	1	1	1	1	2	1	1	1	2	2	1	1	1	1	1	1	1	1.1	2.1
2-Feb	A	1	1	1	1	1	1	0	0	1	1	1	2	33	40	25	2	1	1	0	1	0	1	1	5.0	40.2
3-Feb	A	1	1	1	1	1	1	1	1	21	C	C	C	2	1	1	1	2	1	1	1	1	1	1	1.9	21.4
4-Feb	A	1	1	0	0	0	0	0	0	1	2	25	25	24	3	3	1	2	11	3	0	0	1	1	4.6	25.0
5-Feb	A	1	1	0	1	0	0	0	0	0	0	0	1	1	0	0	1	1	1	1	1	1	1	1	0.5	1.1
6-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	2	2	1	0.9	2.0
7-Feb	A	1	1	1	1	1	1	1	1	1	2	5	5	5	3	3	2	2	1	2	1	1	1	1	1.8	5.1
8-Feb	A	1	1	0	0	1	1	0	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	0	0.9	1.6
9-Feb	A	1	21	17	1	7	1	1	1	1	0	1	16	22	25	25	24	8	17	25	26	18	22	22	13.1	25.8
10-Feb	A	31	32	23	24	36	33	12	38	22	17	7	1	1	3	10	17	10	13	24	15	4	2	1	16.4	38.3
11-Feb	A	1	1	4	5	1	1	1	1	1	11	1	1	2	14	22	1	1	1	1	1	0	0	1	3.0	22.4
12-Feb	A	1	0	1	1	0	0	0	1	1	1	1	1	1	1	1	0	0	0	1	0	0	0	0	0.5	0.8
13-Feb	A	7	12	20	3	0	13	8	5	11	1	10	9	0	25	34	1	1	1	0	1	1	1	1	7.1	33.9
14-Feb	A	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	0	0	1	0	1	1	0	0.7	1.6
15-Feb	A	1	1	1	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	2	1.1	5.2
16-Feb	A	1	1	1	0	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.5
17-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	0.9	2.1
18-Feb	A	3	1	1	1	1	1	1	0	1	1	7	1	11	18	3	9	3	2	1	1	1	1	1	2.8	18.4
19-Feb	A	1	1	1	1	1	1	1	1	1	3	3	3	3	3	3	4	3	3	2	2	2	3	3	1.9	4.1
20-Feb	A	2	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2	2	2	3	3	3	3	3	2.6	3.1
21-Feb	A	3	3	3	3	2	2	2	2	2	6	29	24	19	5	18	1	1	1	1	1	1	1	1	5.5	28.6
22-Feb	A	1	1	0	0	1	1	0	1	1	1	1	0	1	1	1	1	1	0	1	1	0	0	1	0.6	0.8
23-Feb	A	0	0	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	0.5	0.6
24-Feb	A	1	1	1	1	1	1	0	1	1	1	1	14	14	13	4	7	8	3	1	1	1	1	1	3.1	14.3
25-Feb	A	1	1	1	1	1	1	1	1	16	21	21	24	1	1	1	1	1	1	1	1	1	1	7	4.4	24.0
26-Feb	A	1	1	5	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0.9	4.8
27-Feb	A	0	0	1	0	0	1	0	0	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	0.5	0.8
28-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9
	--	2.2	3.1	3.1	2.1	2.3	2.3	1.4	2.3	3.2	3.0	4.5	5.1	5.4	6.0	6.0	3.0	1.9	2.4	2.7	2.2	1.5	1.6	1.9	Diurnal Average	
	--	31.4	32.3	22.8	24.2	35.7	32.5	12.3	38.3	22.1	21.0	28.6	25.0	32.5	40.2	33.9	24.1	10.3	17.2	24.7	25.8	17.9	22.2	22.1	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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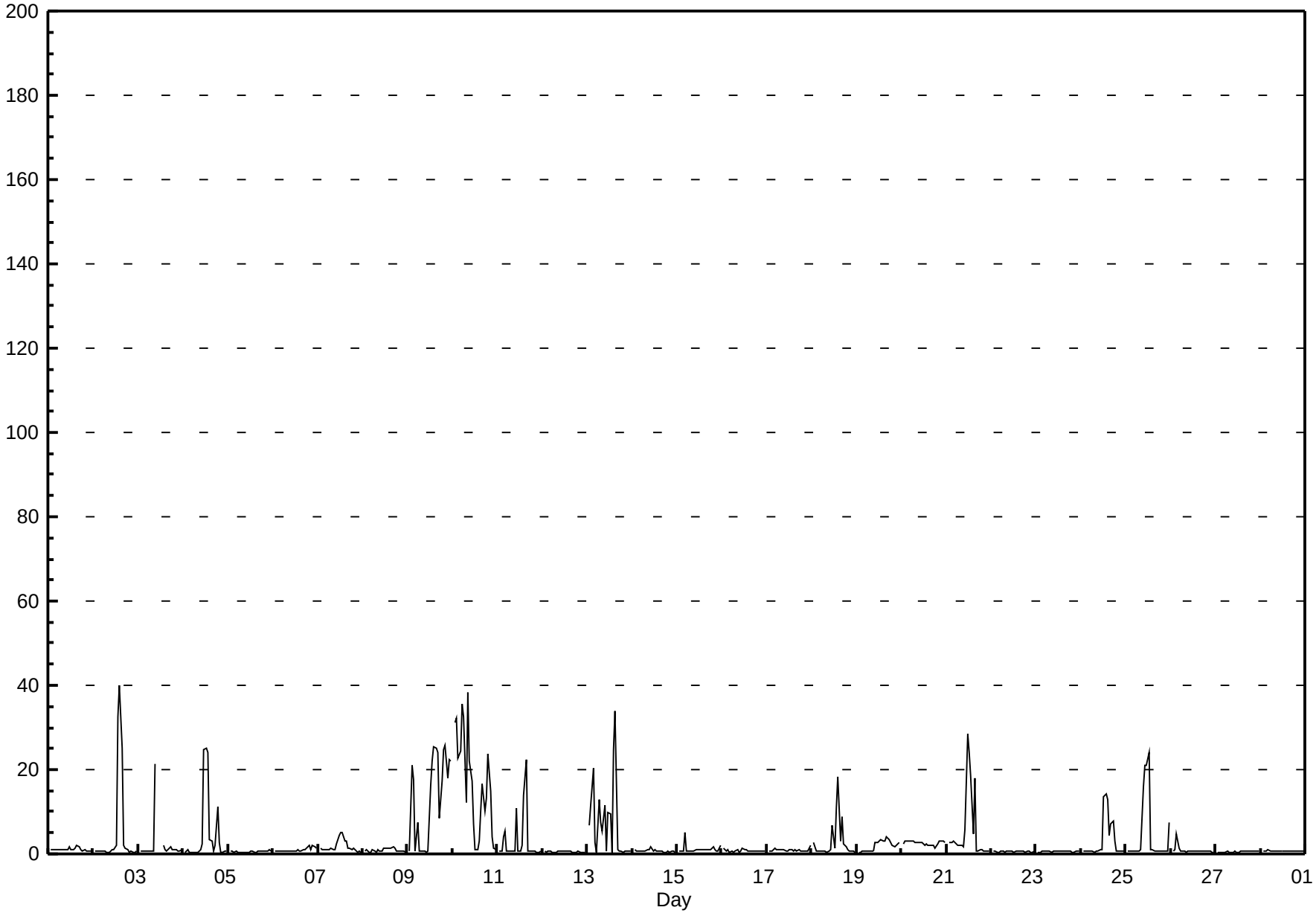
Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Valleyview - February 2011



FOCUS AIR QUALITY MONITORING

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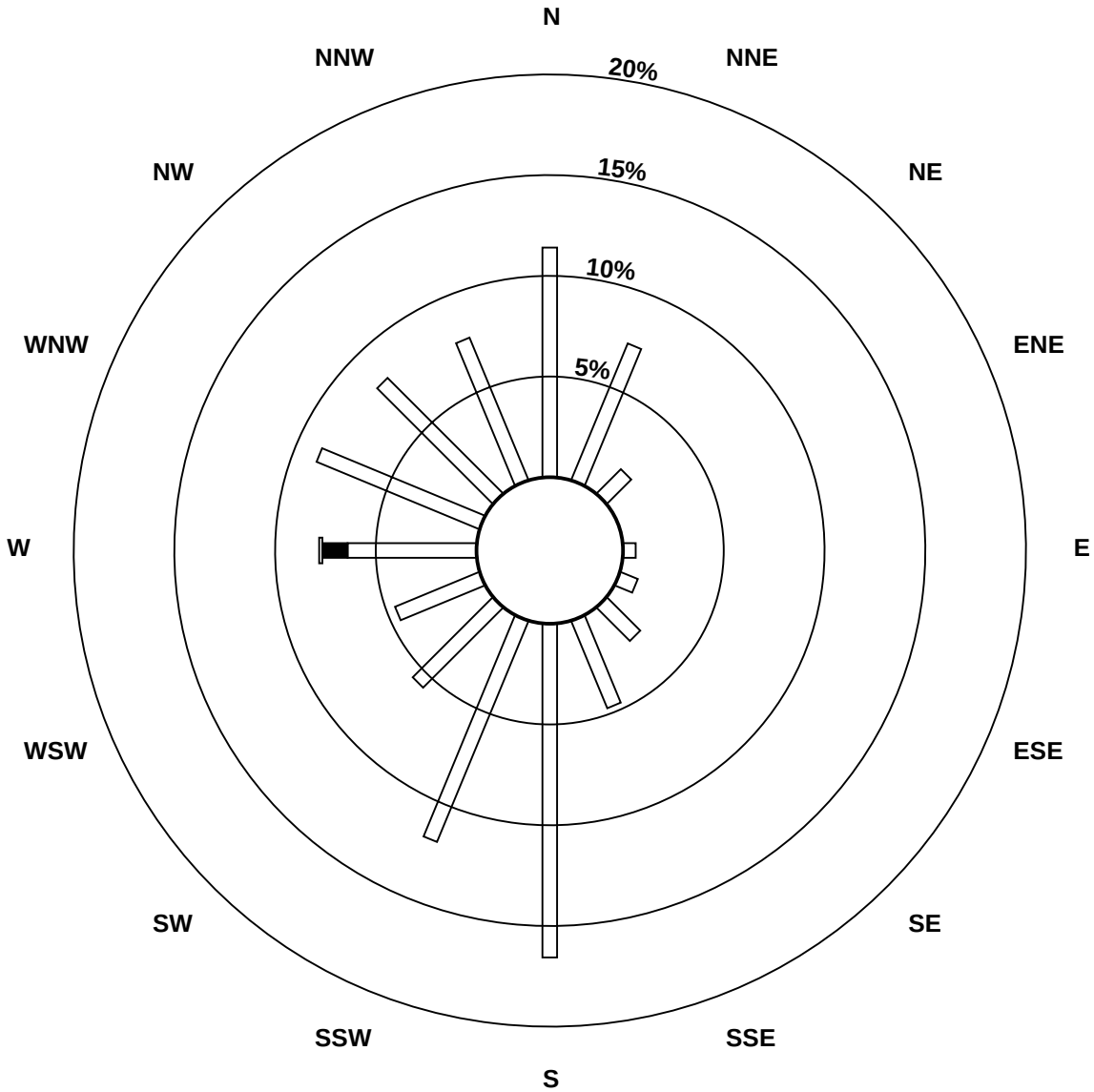
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Valleyview - February 2011



Pollutant Classes (ppb)

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

FOCUS AIR QUALITY MONITORING

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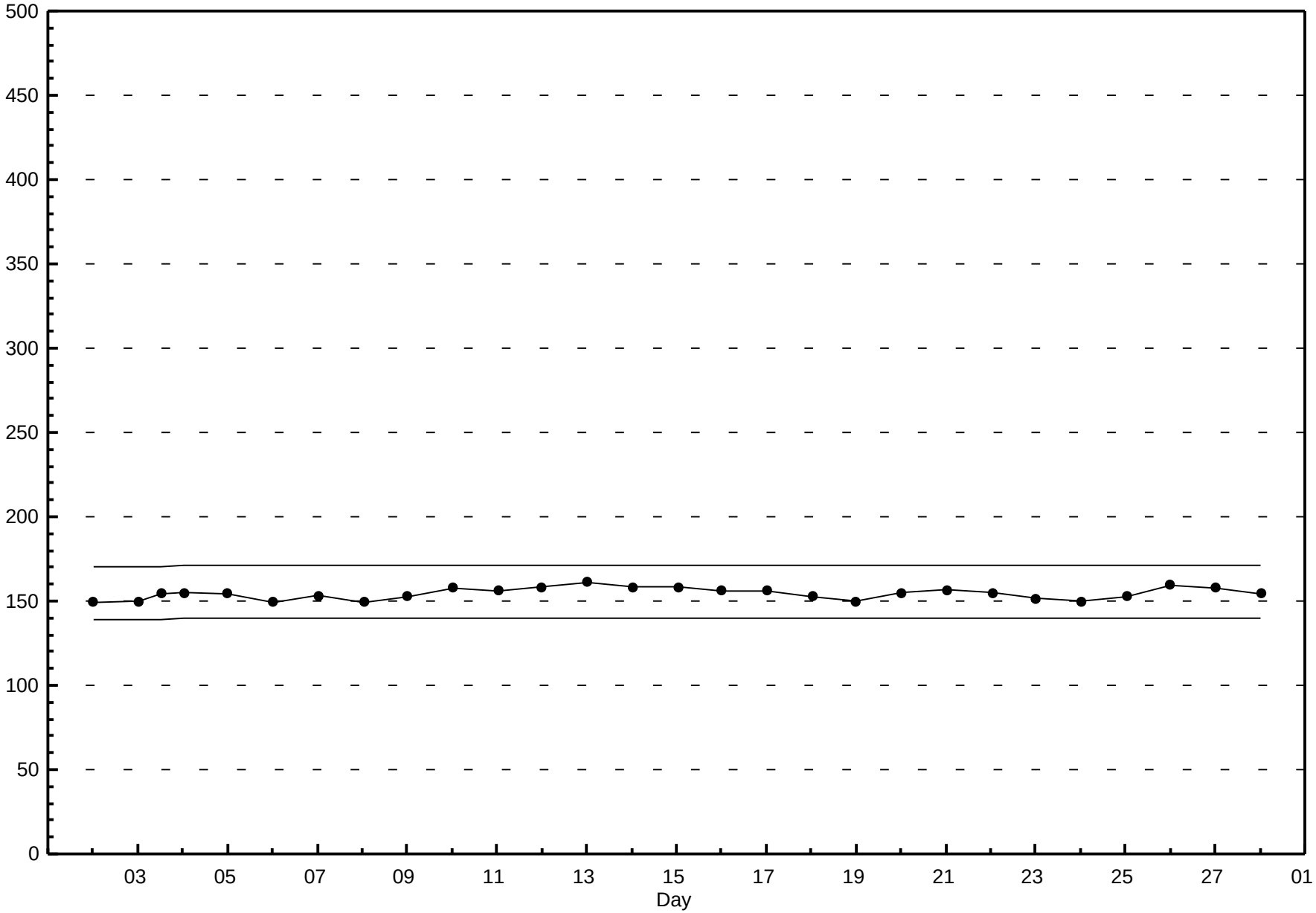
Span Responses

Sulphur Dioxide (SO_2)

Valleyview - February 2011



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Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Valleyview - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.9 ppb on Feb 10 06:00 Maximum Daily Average: 1.1 ppb on Feb 10

Minimum Value: 0 ppb on Feb 1 11:00 Minimum Daily Average: 0.1 ppb on Feb 28
Maximum Diurnal Average: 0.5 ppb at hour 21 Minimum Diurnal Average: 0.2 ppb at hour 17
Monthly Average: 0.33 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.2 Q_3 = 0.4 P_{90} = 0.7 P_{99} = 2.0

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
2-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	1	1	0	0	0	0	0	0.3	1.8
3-Feb	A	0	0	1	1	1	1	0	0	1	1	C	C	C	C	0	0	0	1	0	0	0	1	0	0.5	1.3
4-Feb	A	0	0	0	0	0	0	0	0	0	0	1	2	1	1	0	0	0	1	0	0	0	0	0	0.4	2.3
5-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
6-Feb	A	1	1	1	1	1	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.5	1.0
7-Feb	A	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	4	1	0	1	0.5	3.6
8-Feb	A	1	1	0	1	1	1	1	1	0	0	0	1	1	0	1	0	0	0	0	1	0	1	1	0.5	0.9
9-Feb	A	0	1	1	0	1	0	0	0	0	0	0	0	1	1	1	1	0	0	0	1	0	1	1	0.4	1.2
10-Feb	A	1	2	1	1	4	3	1	2	2	1	1	0	0	0	0	0	1	1	1	1	1	1	0	1.1	3.9
11-Feb	A	1	1	1	0	1	1	0	0	1	0	0	0	0	0	1	1	0	0	1	1	1	0	0	0.5	1.4
12-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
13-Feb	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.2	1.5
14-Feb	A	0	0	0	0	1	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0.3	2.1
15-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
16-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
17-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
18-Feb	A	1	0	0	0	0	1	1	0	0	0	0	0	1	1	0	1	0	0	0	1	1	0	0	0.4	1.1
19-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.3	0.5
20-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0.4	0.8
21-Feb	A	0	0	0	0	0	0	0	0	0	0	2	2	2	1	3	0	0	0	0	0	0	0	0	0.6	3.1
22-Feb	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.2	0.6
23-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
24-Feb	A	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	1	1	0	0	1	1	0	0.4	0.8
25-Feb	A	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	1.4
26-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
27-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
28-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
	--	0.3	0.3	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.4	0.4	0.2	0.3	0.3	0.3	0.5	0.3	0.3	0.2	Diurnal Average	
	--	1.3	1.6	1.4	1.0	3.9	3.4	0.8	1.8	2.2	1.4	2.1	2.3	1.9	1.4	3.1	1.2	0.9	1.3	1.4	3.6	0.8	0.9	0.6	Diurnal Maximum	

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

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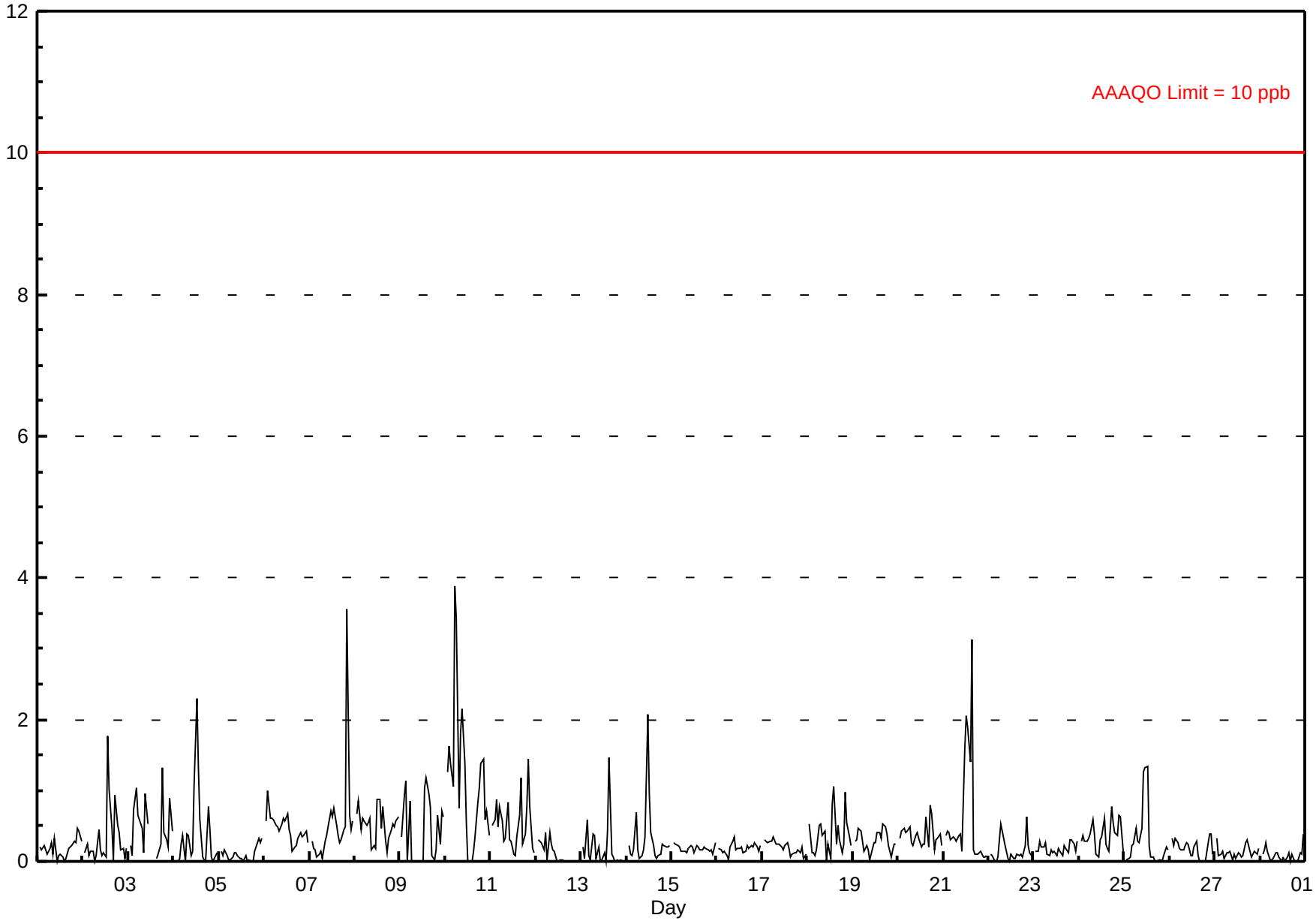
Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Valleyview - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Maximums

Hydrogen Sulphide (H_2S) - ppb

Valleyview - February 2011

Maximum Value: 33.5 ppb on Feb 21 16:00

Maximum Daily Average: 2.8 ppb on Feb 21

Minimum Value: 0 ppb on Feb 10 14:00

Minimum Daily Average: 0.5 ppb on Feb 5

Maximum Diurnal Average: 2.1 ppb at hour 16

Minimum Diurnal Average: 0.7 ppb at hour 11

Monthly Average: 0.96 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.4$ $Q_1 = 0.5$ Median = 0.7 $Q_3 = 1.0$ $P_{90} = 1.7$ $P_{99} = 4.6$

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	A	1	1	1	1	0	1	1	1	1	0	0	1	1	0	0	1	1	1	1	1	1	1	1	0.7	1.2
2-Feb	A	1	1	1	1	1	0	0	1	1	0	0	0	4	2	1	1	2	2	1	1	1	0	1	1.0	3.6
3-Feb	A	1	0	2	4	1	2	1	1	2	2	C	C	C	C	0	0	1	3	1	1	0	2	2	1.4	4.2
4-Feb	A	0	0	0	4	1	1	1	1	1	1	2	4	2	1	0	0	0	3	1	0	0	0	1	1.2	4.2
5-Feb	A	1	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0.5	0.8
6-Feb	A	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.6
7-Feb	A	1	1	1	1	0	0	0	1	1	1	2	1	1	1	2	1	1	1	1	8	2	1	1	1.2	8.2
8-Feb	A	2	2	1	1	1	1	1	1	1	1	1	3	2	1	2	1	1	1	1	1	1	2	2	1.3	3.2
9-Feb	A	1	3	3	0	3	0	0	0	0	0	0	1	2	2	2	2	1	1	1	2	1	2	1	1.2	2.7
10-Feb	A	2	3	3	2	5	5	2	3	3	2	1	0	0	0	1	1	2	2	2	3	3	1	1	2.0	4.9
11-Feb	A	1	1	3	2	4	1	1	1	2	1	1	1	0	1	2	4	1	1	1	2	2	1	1	1.6	4.3
12-Feb	A	1	1	1	1	2	1	1	1	1	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0.6	1.8
13-Feb	A	1	1	1	0	0	1	1	1	1	0	0	1	0	2	3	1	0	0	0	0	0	0	0	0.8	3.2
14-Feb	A	1	1	0	1	1	1	0	1	0	1	6	3	1	1	0	1	1	1	1	1	1	0	1	1.0	5.6
15-Feb	A	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	0.5	0.7
16-Feb	A	1	1	1	0	0	0	1	1	1	0	1	1	1	0	0	1	0	1	1	1	1	1	1	0.5	0.8
17-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	0	1	1	0	1	0.6	0.9
18-Feb	A	1	1	0	0	1	1	1	1	2	0	1	0	2	2	1	1	1	1	2	1	1	1	1	1.0	2.2
19-Feb	A	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1
20-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	3	1	1	1	1	1	1	0.9	2.7
21-Feb	A	1	1	1	1	1	1	1	1	1	1	3	3	3	11	33	1	0	0	1	1	1	0	1	2.8	33.5
22-Feb	A	0	0	0	0	1	1	1	1	1	0	0	1	0	0	1	0	0	1	1	1	1	1	0	0.6	1.1
23-Feb	A	0	0	1	1	1	1	0	0	1	0	1	1	1	0	0	1	1	1	1	1	1	0	1	0.6	0.9
24-Feb	A	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.4
25-Feb	A	0	0	0	1	1	1	1	1	1	2	2	2	1	0	0	0	0	0	0	1	0	1	1	0.8	2.4
26-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	0.6	0.9
27-Feb	A	1	0	0	0	0	1	1	1	0	1	0	0	0	0	0	1	1	1	0	1	1	1	1	0.6	0.8
28-Feb	A	1	1	1	1	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	1	0	1	0.5	1.4
	--	0.8	0.8	1.0	1.0	1.1	0.9	0.8	0.8	0.9	0.7	1.0	1.1	1.0	1.2	2.1	0.8	0.8	0.9	0.8	1.1	0.8	0.8	0.8	Diurnal Average	
	--	2.1	3.1	2.9	4.2	4.9	4.7	1.9	3.1	2.9	2.4	5.6	4.2	3.6	11.4	33.5	4.3	2.7	2.9	1.9	8.2	2.6	2.4	1.6	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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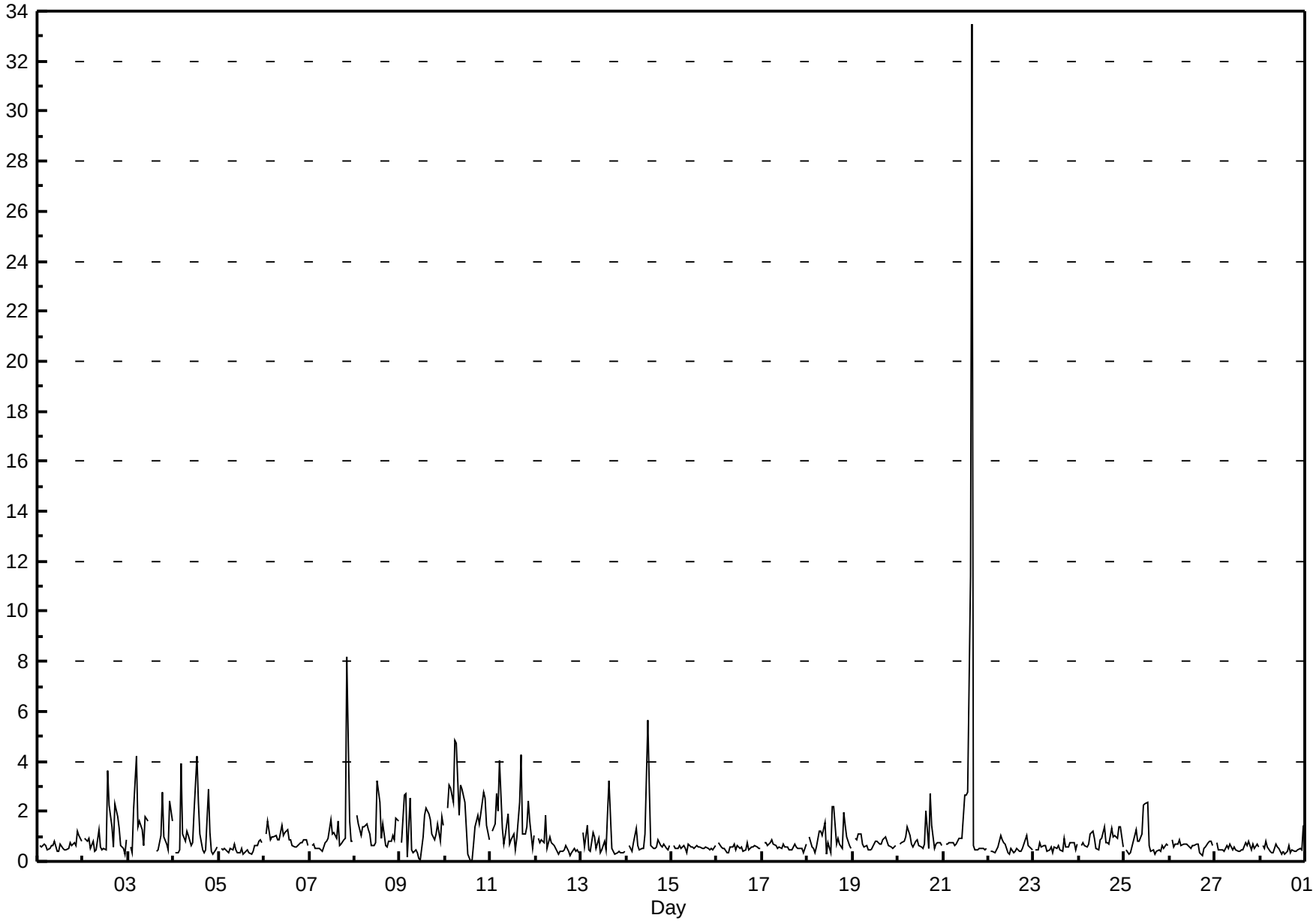
Hourly Maximums

Hydrogen Sulphide (H_2S) - ppb

Valleyview - February 2011



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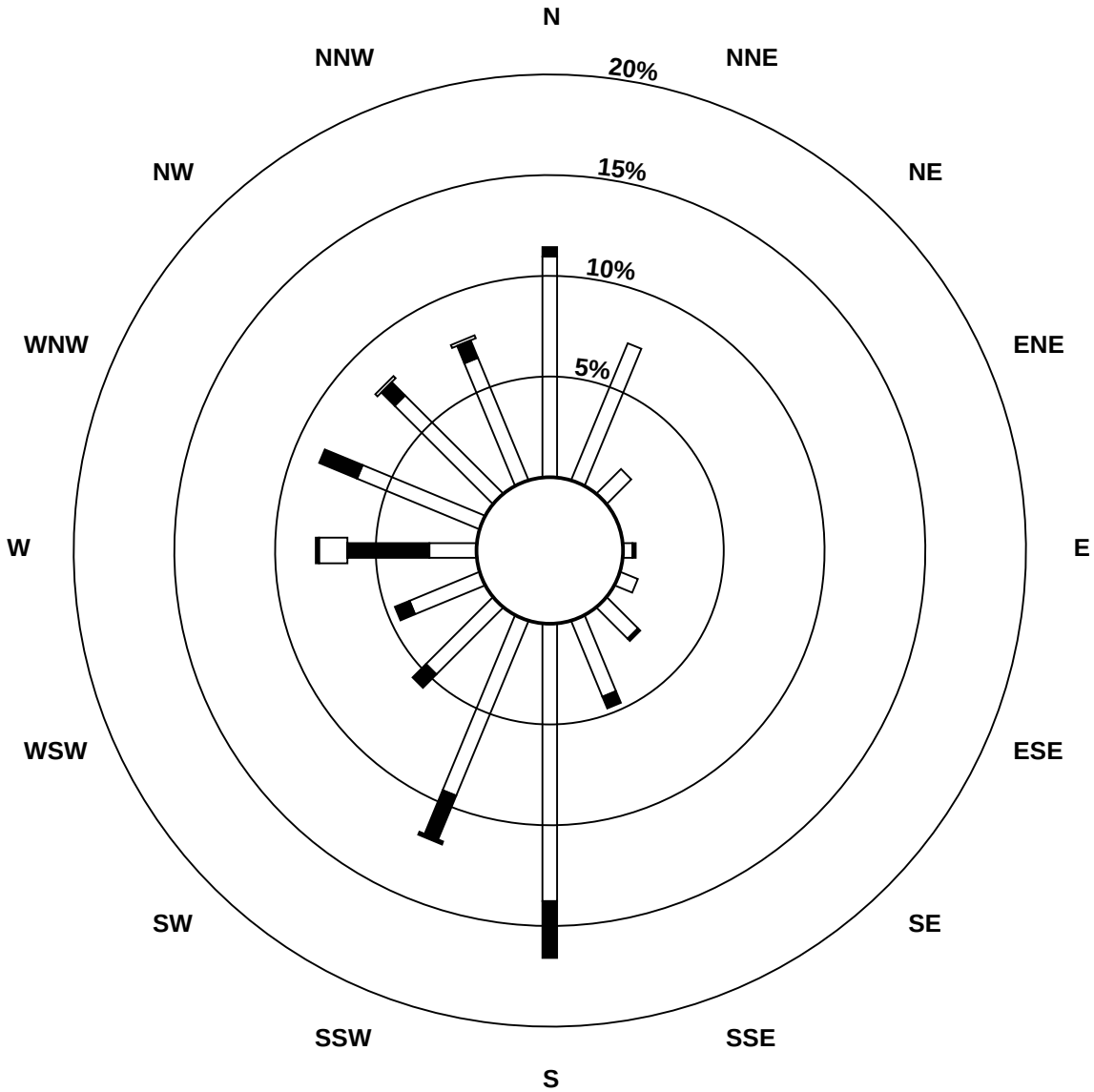
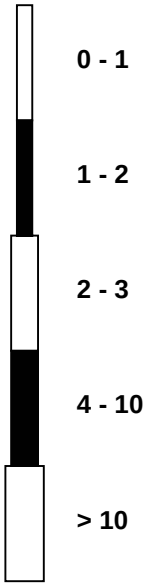
Pollutant Rose

Hydrogen Sulphide (H_2S) - ppb

Valleyview - February 2011



Pollutant Classes (ppb)



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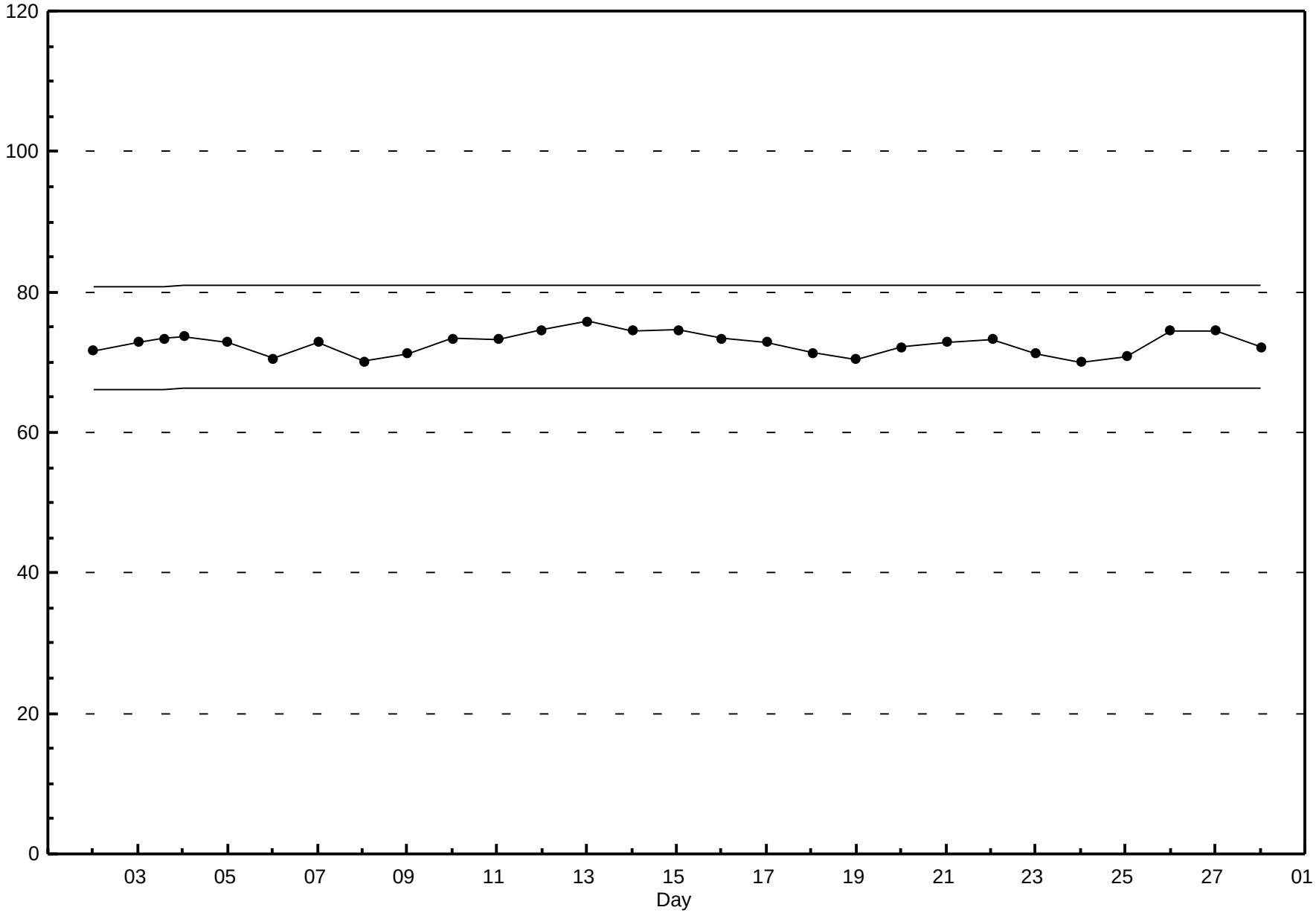
Span Responses

Hydrogen Sulphide (H_2S)

Valleyview - February 2011



FOCUS AIR QUALITY MONITORING

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Hourly Averages

External Temperature (ET) - ^{o}C

Valleyview - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 9.9 ^{o}C on Feb 2 16:00 Maximum Daily Average: 3.8 ^{o}C on Feb 11

Minimum Value: -35 ^{o}C on Feb 24 08:00 Minimum Daily Average: -25.5 ^{o}C on Feb 24
Maximum Diurnal Average: -6.5 ^{o}C at hour 16 Minimum Diurnal Average: -14.4 ^{o}C at hour 9
Monthly Average: -10.86 ^{o}C Percentiles: P_1 = -31.6 P_{10} = -23.8 Q_1 = -20.8 Median = -11.2 Q_3 = 0.5 P_{90} = 3.2 P_{99} = 8.4

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

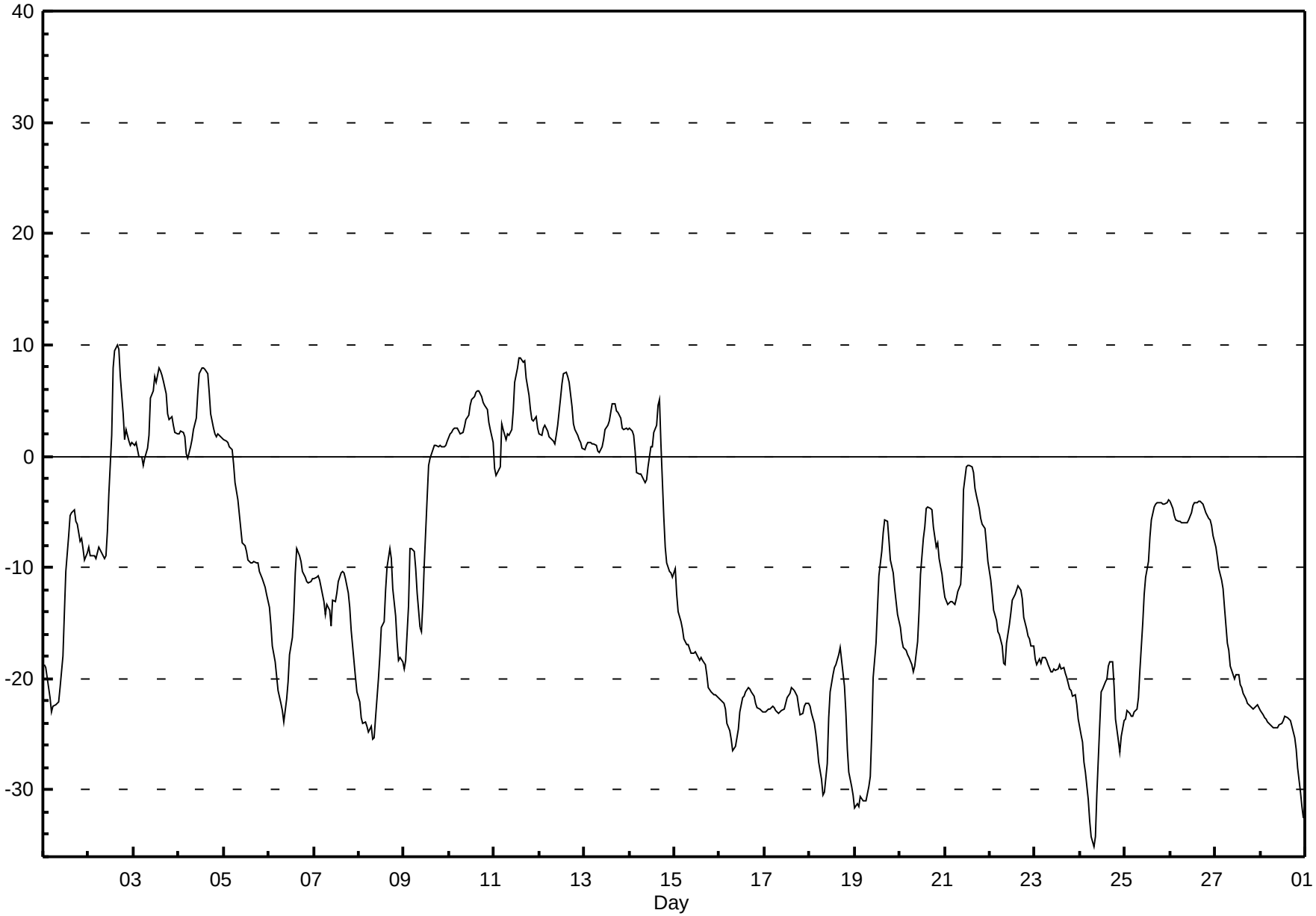
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-19	-19	-20	-22	-23	-22	-22	-22	-22	-21	-18	-14	-10	-7	-5	-5	-5	-6	-6	-8	-7	-8	-9	-9	-13.8	-4.8
2-Feb	-8	-9	-9	-9	-9	-8	-8	-9	-9	-9	-7	-3	2	8	9	10	10	7	4	1	2	1	1	1	-1.7	9.9
3-Feb	1	1	1	0	0	-1	0	1	2	5	6	7	7	8	8	7	7	6	4	3	3	3	2	2	3.4	7.9
4-Feb	2	2	2	2	0	0	1	1	2	3	6	7	8	8	8	7	6	4	3	2	2	2	2	2	3.4	8.0
5-Feb	1	1	1	1	1	-1	-2	-4	-5	-6	-8	-8	-9	-9	-10	-10	-9	-10	-10	-10	-11	-11	-12	-12	-6.3	1.5
6-Feb	-14	-15	-17	-18	-20	-21	-22	-23	-24	-22	-20	-18	-16	-14	-10	-8	-9	-10	-10	-11	-11	-11	-11	-11	-15.3	-8.4
7-Feb	-11	-11	-11	-11	-12	-13	-14	-13	-14	-15	-13	-13	-12	-11	-10	-10	-10	-11	-12	-14	-16	-18	-20	-21	-13.3	-10.4
8-Feb	-22	-23	-24	-24	-24	-25	-24	-25	-25	-23	-20	-18	-15	-15	-12	-10	-8	-9	-12	-14	-17	-18	-18	-19	-18.6	-8.3
9-Feb	-19	-18	-13	-8	-8	-9	-10	-12	-15	-16	-13	-10	-4	-1	0	1	1	1	1	1	1	1	1	1	-6.2	1.4
10-Feb	2	2	2	3	2	2	2	2	3	3	4	5	5	5	6	6	6	5	5	5	4	3	2	1	3.5	5.9
11-Feb	-1	-2	-1	-1	3	2	2	2	2	2	4	7	8	9	9	8	9	7	5	4	3	3	4	3	3.8	8.9
12-Feb	2	2	3	3	2	2	2	1	1	2	3	5	7	7	8	7	7	4	3	2	2	2	1	1	3.2	7.6
13-Feb	1	1	1	1	1	1	1	0	0	1	1	2	3	3	4	5	5	4	4	3	3	2	3	2	2.2	4.7
14-Feb	3	2	2	0	-1	-2	-2	-2	-2	-2	-1	1	1	2	3	5	5	1	-5	-8	-10	-10	-11	-11	-1.8	5.1
15-Feb	-10	-12	-14	-15	-16	-16	-17	-17	-17	-18	-18	-18	-18	-18	-18	-18	-19	-20	-21	-21	-21	-21	-21	-22	-17.8	-10.1
16-Feb	-22	-22	-22	-23	-24	-25	-25	-26	-26	-25	-25	-23	-22	-22	-21	-21	-21	-21	-22	-22	-23	-23	-23	-23	-22.9	-20.8
17-Feb	-23	-23	-23	-23	-22	-23	-23	-23	-23	-23	-23	-22	-22	-21	-21	-21	-21	-22	-22	-23	-23	-22	-22	-22	-22.4	-20.8
18-Feb	-22	-23	-24	-25	-26	-27	-29	-30	-30	-28	-23	-21	-20	-19	-19	-18	-17	-18	-21	-23	-26	-28	-30	-30	-24.2	-17.2
19-Feb	-32	-31	-31	-31	-31	-31	-31	-30	-29	-25	-20	-17	-14	-11	-9	-7	-6	-6	-8	-9	-11	-12	-13	-14	-19.0	-5.8
20-Feb	-15	-16	-17	-17	-18	-18	-19	-19	-19	-17	-14	-11	-7	-6	-5	-5	-5	-5	-6	-8	-8	-9	-11	-12	-12.0	-4.6
21-Feb	-13	-13	-13	-13	-13	-13	-13	-12	-11	-9	-3	-1	-1	-1	-1	-2	-3	-4	-5	-6	-6	-6	-8	-9	-7.5	-0.8
22-Feb	-11	-12	-14	-15	-16	-16	-17	-19	-19	-17	-15	-14	-13	-12	-12	-12	-12	-13	-14	-15	-16	-16	-17	-17	-14.8	-11.2
23-Feb	-18	-19	-18	-19	-18	-18	-18	-19	-19	-19	-19	-19	-19	-19	-19	-19	-20	-20	-21	-21	-22	-21	-22	-24	-19.6	-18.1
24-Feb	-25	-26	-28	-28	-31	-33	-34	-35	-34	-30	-24	-21	-21	-20	-20	-19	-19	-19	-21	-24	-26	-27	-25	-24	-25.5	-18.5
25-Feb	-24	-23	-23	-23	-23	-23	-23	-22	-19	-15	-12	-11	-9	-7	-6	-5	-4	-4	-4	-4	-4	-4	-4	-4	-12.6	-3.9
26-Feb	-4	-5	-5	-6	-6	-6	-6	-6	-6	-6	-6	-5	-4	-4	-4	-4	-4	-4	-5	-5	-6	-6	-6	-7	-5.2	-4.0
27-Feb	-8	-9	-10	-11	-12	-14	-17	-17	-19	-20	-20	-20	-20	-21	-21	-21	-22	-22	-22	-23	-23	-23	-22	-23	-18.3	-8.1
28-Feb	-23	-23	-23	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-23	-24	-24	-24	-24	-25	-26	-28	-30	-32	-33	-25.1	-22.9
	-11.9	-12.3	-12.5	-12.7	-13.1	-13.6	-14.1	-14.4	-14.4	-13.3	-11.5	-9.9	-8.6	-7.6	-6.9	-6.5	-6.6	-7.4	-8.7	-9.8	-10.5	-11.1	-11.5	-11.9	Diurnal Average	
	2.5	2.3	2.6	2.7	2.9	2.4	2.0	2.1	2.6	5.3	5.9	7.4	8.0	8.9	9.4	9.9	9.6	7.2	5.4	4.6	4.1	3.2	3.6	2.5	Diurnal Maximum	

PASZA
Peace Air Shed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Valleyview - February 2011



FOCUS AIR QUALITY MONITORING

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Hourly Averages

Relative Humidity (RH) - %

Valleyview - February 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 96.4 % on Feb 13 01:00 Maximum Daily Average: 82.1 % on Feb 26

Minimum Value: 30 % on Feb 20 15:00 Minimum Daily Average: 47.8 % on Feb 20
Maximum Diurnal Average: 73.7 % at hour 7 Minimum Diurnal Average: 52.5 % at hour 16
Monthly Average: 66.27 % Percentiles: P_1 = 35.7 P_{10} = 47.2 Q_1 = 56.4 Median = 67.7 Q_3 = 75.4 P_{90} = 82.6 P_{99} = 94.7

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

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	75	75	75	77	78	77	76	75	75	72	66	56	50	46	46	49	52	60	67	74	79	84	87	89	69.2	88.8
2-Feb	88	89	88	87	87	87	87	86	87	85	81	77	62	55	48	45	47	56	68	77	73	77	80	80	74.9	88.5
3-Feb	81	80	82	84	83	84	83	79	76	65	64	57	60	54	54	56	58	64	70	72	71	79	89	93	72.4	93.1
4-Feb	95	95	95	95	95	96	94	88	84	79	66	58	55	51	48	50	61	79	89	91	92	89	87	83	79.8	95.8
5-Feb	81	83	83	88	89	89	90	82	81	78	80	78	83	79	77	76	77	72	74	80	74	75	75	77	80.0	90.1
6-Feb	82	83	83	82	79	77	76	75	77	74	75	74	72	66	60	58	55	50	44	46	47	45	41	41	65.0	83.3
7-Feb	45	46	45	48	51	57	62	64	67	69	61	62	59	56	53	53	53	55	60	64	71	77	78	77	59.7	78.3
8-Feb	77	76	76	76	76	76	76	75	75	73	69	68	62	62	56	52	49	54	64	73	78	81	82	82	70.4	82.2
9-Feb	81	81	72	58	59	60	67	73	75	73	64	57	51	50	51	51	50	52	54	55	55	54	54	56	60.5	81.0
10-Feb	55	56	56	56	58	60	60	61	60	58	56	53	53	52	51	49	50	52	54	55	57	60	62	66	56.3	66.4
11-Feb	76	79	76	75	68	74	77	71	68	65	57	47	43	40	41	42	42	49	56	63	63	62	60	64	60.7	78.5
12-Feb	65	64	59	57	59	62	62	62	63	60	58	51	48	44	44	45	48	70	88	92	93	94	96	96	65.8	96.4
13-Feb	96	93	86	81	79	73	68	69	69	66	61	53	50	48	46	44	42	43	42	45	47	46	45	45	59.9	96.4
14-Feb	45	46	47	53	61	61	61	63	66	65	61	55	55	54	51	46	44	61	74	76	78	79	80	81	60.9	81.0
15-Feb	79	75	74	73	70	76	75	71	68	66	68	65	63	69	60	58	60	62	64	67	68	66	65	66	67.8	78.5
16-Feb	67	68	67	69	73	75	75	75	74	74	73	68	64	62	63	65	68	70	71	73	73	72	73	73	70.2	75.2
17-Feb	73	72	72	73	72	73	74	74	73	71	69	67	66	65	65	64	63	64	67	70	71	70	69	71	69.6	74.1
18-Feb	71	72	74	74	74	74	72	71	69	69	62	56	54	52	50	47	46	50	58	67	73	73	73	72	64.7	74.1
19-Feb	72	72	71	72	72	72	71	72	70	69	58	52	47	43	40	38	36	39	45	46	45	47	50	53	56.3	72.4
20-Feb	56	59	60	61	62	63	66	68	65	58	49	41	34	33	30	30	30	32	36	41	37	41	45	50	47.8	67.6
21-Feb	53	56	57	58	59	61	60	59	60	52	42	44	41	36	37	41	50	56	69	88	90	89	87	82	59.4	90.2
22-Feb	76	76	72	71	75	77	77	79	79	74	67	61	57	55	50	48	48	63	78	81	81	81	80	77	70.2	81.4
23-Feb	74	73	73	73	74	72	75	74	70	67	65	60	59	64	65	58	58	58	59	60	65	64	67	72	66.7	74.5
24-Feb	75	75	74	74	71	70	68	68	67	67	61	57	58	51	49	45	45	45	52	62	67	69	68	66	62.7	75.3
25-Feb	66	64	64	65	66	70	75	76	76	70	70	69	67	61	55	51	51	50	50	50	50	51	53	51	61.4	76.4
26-Feb	64	78	82	85	86	84	86	84	84	84	82	77	75	75	77	77	78	82	87	89	90	90	88	86	82.1	90.3
27-Feb	86	81	81	81	82	80	78	74	75	72	68	64	62	70	69	70	71	71	72	72	72	73	73	71	73.7	86.5
28-Feb	69	70	70	72	72	72	72	72	71	70	67	66	63	58	61	61	60	60	65	65	70	72	71	70	67.5	72.4
	72.3	72.7	72.0	72.1	72.6	73.3	73.7	73.0	72.2	69.5	65.1	60.4	57.6	55.4	53.4	52.5	53.3	57.8	63.5	67.6	69.0	70.1	70.6	71.0	Diurnal Average	
	96.4	95.0	94.5	94.7	94.9	95.8	93.6	88.3	86.6	84.7	82.4	77.5	83.5	78.6	77.4	76.6	77.9	82.0	89.1	91.7	93.3	94.5	95.9	96.4	Diurnal Maximum	

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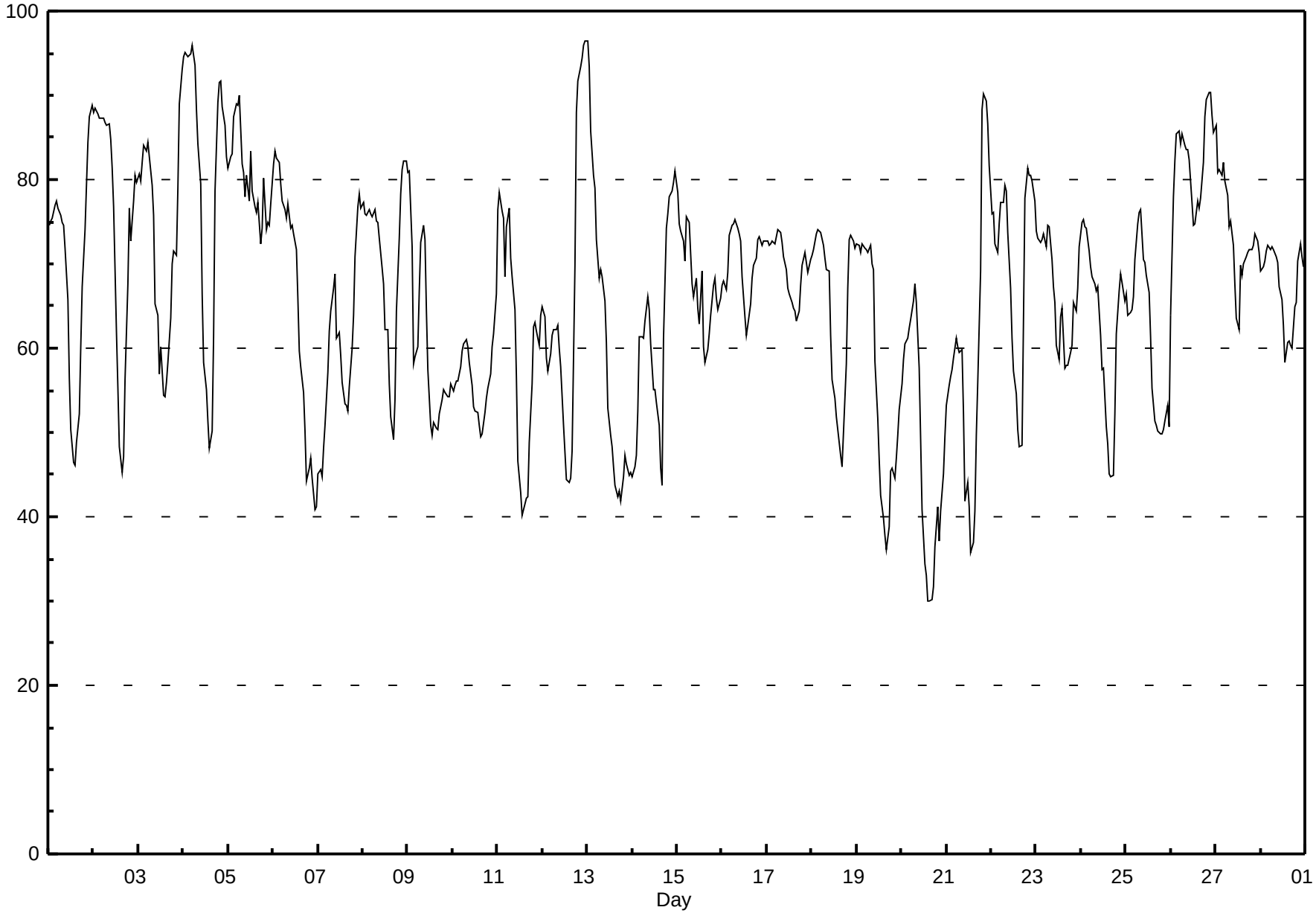
Hourly Averages

Relative Humidity (RH) - %

Valleyview - February 2011



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Valleyview - February 2011

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	3	2	1	2	2	2	2	3	4	3	3	3	2	2	2	2	3	1	3	2	3	4	2.5	4.7
Dir	193	188	200	220	220	214	219	217	204	202	190	188	189	190	219	248	212	221	210	269	213	207	208	201	205	188
2 Spd	2	3	4	4	4	5	3	2	3	1	3	3	4	9	11	7	4	1	3	3	5	4	3	2	2.9	11.4
Dir	184	231	206	185	187	189	201	192	194	212	191	207	234	273	289	297	299	242	212	213	238	189	168	190	229	289
3 Spd	2	0	1	2	1	1	1	3	3	8	9	10	7	11	9	5	1	0	2	1	2	2	2	2	2.3	11.1
Dir	205	205	202	177	220	192	221	207	179	278	276	290	315	290	313	331	343	28	173	172	212	156	182	179	272	290
4 Spd	2	4	3	1	1	3	3	3	4	3	9	15	15	17	16	16	15	16	16	12	11	12	12	12	7.6	16.9
Dir	198	184	192	219	226	193	196	165	198	184	250	269	275	285	286	301	315	309	282	287	294	308	311	308	284	285
5 Spd	12	11	10	8	8	13	13	16	20	18	20	17	16	17	15	15	11	14	11	11	12	10	10	3	12.1	20.5
Dir	314	313	306	314	319	354	13	12	7	7	8	10	12	10	7	6	354	330	337	8	12	10	9	13	357	8
6 Spd	1	0	1	0	0	0	1	0	3	1	2	3	4	2	3	9	10	10	12	10	10	11	11	9	3.5	12.2
Dir	310	142	178	268	165	315	177	278	351	323	4	347	340	318	123	127	134	138	138	142	146	132	130	124	131	138
7 Spd	7	8	6	5	4	2	4	4	1	1	1	4	5	6	6	9	7	4	5	3	1	1	1	1	1.4	8.9
Dir	117	118	113	101	102	40	48	114	85	312	207	339	344	336	320	346	340	310	330	314	192	178	172	176	25	346
8 Spd	1	1	3	2	1	2	2	1	2	2	3	3	2	5	3	2	2	1	1	1	1	1	2	3	1.2	4.7
Dir	208	159	185	191	210	210	209	198	200	179	186	248	318	348	336	302	244	226	196	196	186	228	205	205	223	348
9 Spd	3	4	7	20	16	7	3	2	3	4	4	4	3	4	10	19	18	16	17	19	23	23	19	17	9.9	23.1
Dir	197	210	277	290	294	281	170	202	189	183	183	170	256	266	281	279	282	286	282	283	283	279	278	278	276	283
10 Spd	16	16	19	18	15	13	10	7	8	11	15	17	17	14	15	16	16	14	15	14	9	8	5	2	12.7	18.8
Dir	280	279	279	280	272	266	261	254	270	275	278	285	292	298	293	287	285	281	277	278	283	260	262	222	279	279
11 Spd	1	2	1	2	5	2	2	2	3	3	3	5	5	7	7	5	2	2	1	1	2	4	4	3	2.2	7.4
Dir	185	162	180	216	291	220	183	179	168	179	222	230	221	244	258	264	309	22	218	184	202	193	189	171	223	258
12 Spd	4	4	4	3	3	4	3	4	4	4	3	4	5	3	2	2	5	8	2	3	2	3	3	6	2.4	7.6
Dir	183	179	188	189	173	166	161	162	153	165	138	168	224	220	196	216	184	169	161	140	136	344	357	345	176	169
13 Spd	9	4	7	9	10	13	13	9	10	12	14	16	17	22	15	10	5	3	4	4	4	4	5	6	8.0	22.3
Dir	328	267	256	257	252	252	262	251	253	256	251	261	258	254	263	259	248	199	178	161	165	172	169	165	250	254
14 Spd	3	5	3	1	1	3	3	2	0	1	1	2	5	7	6	5	8	14	15	15	16	14	15	17	4.7	16.7
Dir	177	179	181	207	209	184	213	202	265	243	298	336	352	2	339	5	42	18	17	17	15	19	2	348	8	348
15 Spd	14	15	15	14	13	14	12	13	14	13	8	9	11	11	12	11	11	10	7	7	6	4	4	4	10.2	15.1
Dir	317	317	328	320	298	336	338	338	336	335	312	305	300	314	325	323	325	324	303	303	298	310	296	270	319	328
16 Spd	5	3	4	1	1	1	0	1	2	3	6	6	7	10	11	11	11	10	8	9	7	6	6	7	5.2	11.1
Dir	262	306	331	296	208	146	133	9	17	347	339	354	356	345	344	354	2	4	11	3	9	12	6	5	354	2
17 Spd	7	5	4	4	5	5	7	6	4	6	8	8	8	8	7	7	7	5	4	4	3	3	4	4	5.0	8.2
Dir	1	7	354	335	2	354	345	8	11	8	350	350	342	5	18	21	14	13	355	334	313	313	295	284	355	350
18 Spd	4	2	1	1	2	3	2	1	1	2	3	1	4	2	3	2	1	2	1	0	1	1	1	1	0.7	4.3
Dir	284	277	207	208	154	167	176	187	194	193	181	217	240	280	352	45	88	50	345	210	166	194	184	212	217	284
19 Spd	2	1	0	0	1	1	0	1	1	2	7	8	9	8	9	9	7	4	8	12	11	10	9	8	5.2	11.6
Dir	175	185	87	90	212	185	221	192	228	194	179	174	174	174	173	174	176	178	175	178	180	179	179	180	177	178
20 Spd	6	3	4	4	6	5	5	4	5	8	8	7	4	4	3	4	4	0	1	2	8	8	8	6	4.4	8.4
Dir	186	195	192	193	185	193	188	203	187	174	173	178	181	231	261	257	268	222	203	180	176	174	174	177	189	174
21 Spd	5	5	4	2	1	2	2	2	2	3	4	12	15	18	16	14	13	12	9	7	9	10	9	15	5.3	18.5
Dir	180	190	179	184	235	206	200	192	206	181	235	276	271	276	283	304	316	318	324	312	343	347	9	7	299	276
22 Spd	19	13	9	4	3	2	1	1	1	6	9	9	10	12	12	15	19	15	7	2	2	4	4	6	6.8	19.2
Dir	6	5	2	339	347	292	232	188	234	314	332	330	310	295	299	319	326	340	10	309	292	343	350	330	332	326

FOCUS AIR QUALITY MONITORING

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Peace Air Shed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Valleyview - February 2011

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
23 Spd	7	7	6	5	7	9	7	9	12	13	12	16	10	11	13	13	13	7	3	3	5	8	3	1	7.6	16.0
Dir	326	346	335	303	301	317	320	16	8	2	3	4	13	5	13	12	14	9	310	303	340	4	347	276	355	4
24 Spd	1	2	1	1	2	2	2	N	2	2	3	3	6	7	5	4	2	1	1	2	1	2	3	1	1.5	6.7
Dir	231	276	2	153	165	162	175	N	181	165	166	208	248	277	308	239	280	326	177	177	206	193	193	217	228	277
25 Spd	2	3	2	3	3	3	3	3	3	3	8	8	7	7	7	5	6	5	5	4	4	3	2	4	3.4	7.7
Dir	188	185	189	187	181	179	162	146	159	230	275	271	259	242	232	198	185	184	179	182	185	177	195	247	211	271
26 Spd	7	13	13	17	21	19	17	15	14	12	12	11	11	8	7	6	5	3	2	4	6	5	11	11	8.8	20.9
Dir	292	290	289	281	284	289	293	296	299	297	296	300	304	308	301	313	308	318	16	7	11	15	36	38	305	284
27 Spd	13	16	16	18	15	17	22	19	15	15	15	13	15	20	21	19	18	17	14	14	15	12	10	10	15.4	22.2
Dir	29	41	36	35	38	16	6	15	13	19	25	29	13	2	3	356	358	355	4	4	6	8	19	21	15	6
28 Spd	12	11	9	6	7	6	7	7	7	8	7	8	9	8	11	11	11	6	5	2	1	1	1	1	6.3	11.6
Dir	19	23	26	23	14	17	17	21	33	25	25	19	16	19	359	1	4	10	3	348	206	177	162	188	16	19
Spd	2.3	1.9	2.2	2.8	2.8	2.5	2.0	1.6	1.7	2.2	2.8	4.1	5.0	6.2	6.4	5.7	4.9	4.1	2.7	2.3	2.0	1.7	1.3	1.7	Diurnal Average	
Dir	315	307	302	291	288	296	307	332	329	314	301	302	302	305	312	319	326	329	315	310	309	319	325	321		
Spd	18.8	16.4	18.8	20.0	20.9	19.2	22.2	19.3	19.5	17.9	20.5	17.3	17.2	22.3	20.9	19.0	19.2	16.9	16.8	19.4	23.1	22.6	19.3	17.4	Diurnal Maximum	
Dir	6	279	279	290	284	289	6	15	7	7	8	10	258	254	3	279	326	355	282	283	283	279	278	278		

Maximum Speed Value: 23 ppb on Feb 9 21:00
Maximum Daily Speed Average: 15.4 ppb on Feb 27
Maximum Diurnal Speed Average: 6.4 ppb at hour 15

Minimum Speed Value: 0 ppb on Feb 6 08:00
Minimum Daily Speed Average: 0.7 ppb on Feb 18
Minimum Diurnal Speed Average: 1.3 ppb at hour 23

Monthly Average Velocity: 2.98 ppb 310.8 deg

Speed Percentiles: $P_1 = 0.3$ $P_{10} = 1.2$ $Q_1 = 2.5$ Median = 4.7 $Q_3 = 10.3$ $P_{90} = 15.1$ $P_{99} = 20.4$

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

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

N - Not Valid

Frequency Distribution

Direction	Speed Range (ppb) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	35	59	44	7	0	0	145
NorthEast	5	7	9	0	0	0	21
East	6	0	0	0	0	0	6
SouthEast	13	10	2	0	0	0	25
South	151	28	1	0	0	0	180
SouthWest	80	6	0	0	0	0	86
West	25	29	40	9	0	0	103
NorthWest	33	34	37	1	0	0	105
Total	348	173	133	17	0	0	671

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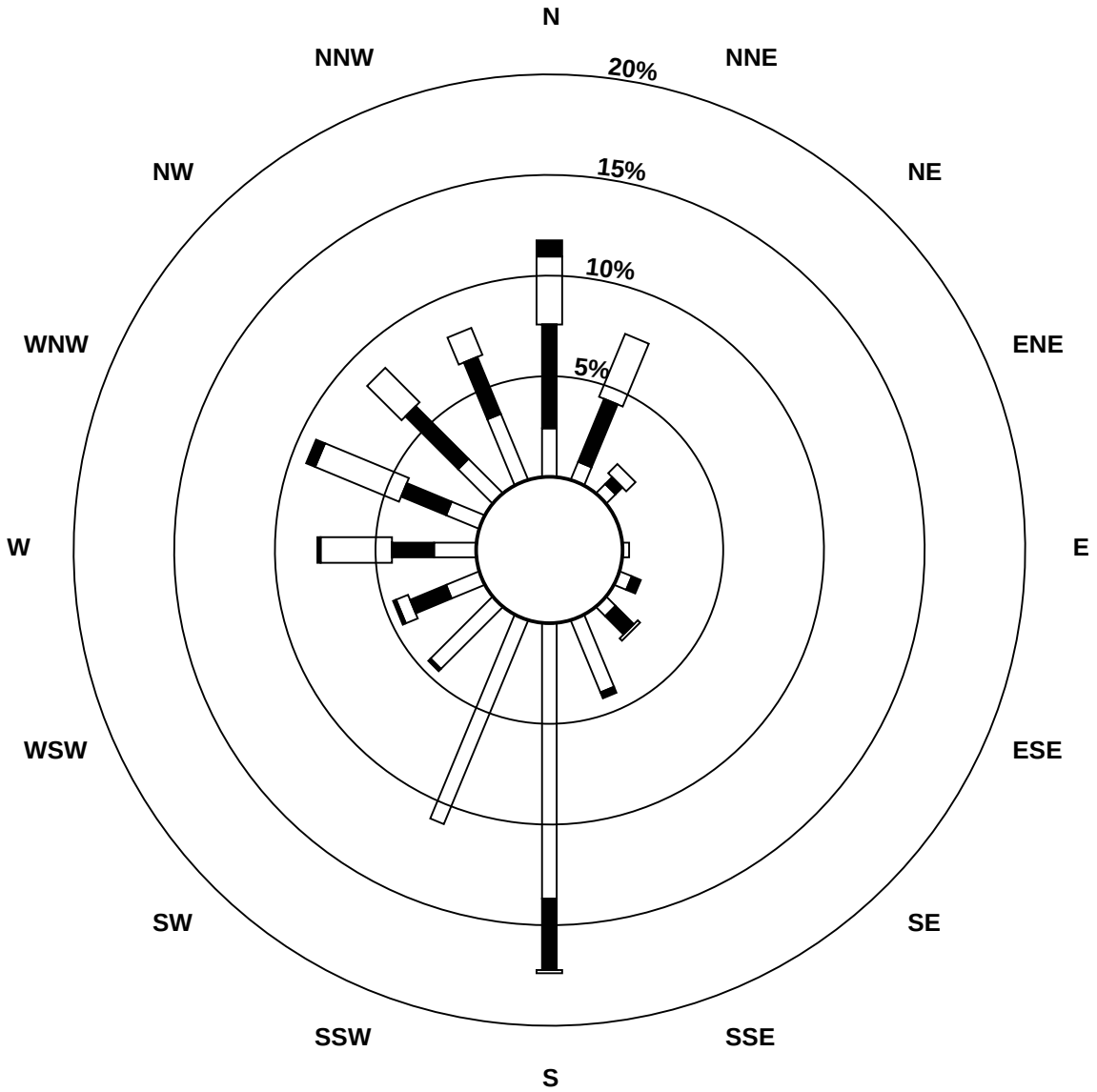
Peace Air Shed Zone Association

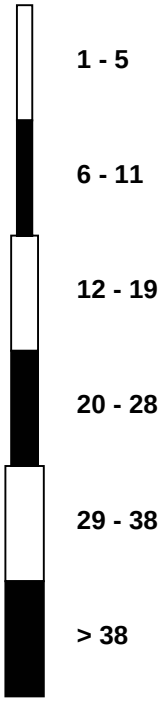
Wind Rose

Wind Speed (WS) (km/h)

Valleyview - February 2011



Wind Speed Classes (km/h)



PASZA
Peace Air Shed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Valleyview - February 2011

Maximum Speed: 23 km/h on Feb 9 21:00

Maximum Daily Speed Average: 16.0 km/h on Feb 27

Minimum Speed: 1 km/h on Feb 19 07:00

Minimum Daily Speed Average: 2.1 km/h on Feb 18

Maximum Diurnal Speed Average: 9.5 km/h at hour 14

Minimum Diurnal Speed Average: 5.4 km/h at hour 8

Monthly Average Speed: 6.89 km/h

Percentiles: $P_1 = 0.7$ $P_{10} = 1.5$ $Q_1 = 2.6$ Median = 4.8 $Q_3 = 10.5$ $P_{90} = 15.4$ $P_{99} = 20.6$

Hours in Service: 672
Hours of Data: 671
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	4	5	3	2	1	2	2	2	3	3	4	3	3	3	3	2	2	2	3	2	3	2	4	4	2.8	4.7
2-Feb	3	3	4	4	5	5	3	2	3	4	3	3	5	9	12	7	4	2	3	3	5	4	3	3	4.2	11.5
3-Feb	2	1	1	2	2	2	2	3	3	9	9	10	7	11	9	5	2	1	2	2	2	2	2	2	3.9	11.3
4-Feb	2	4	3	2	2	3	3	3	4	3	9	15	16	17	16	16	15	17	16	12	11	12	12	12	9.4	17.1
5-Feb	12	11	10	8	8	14	13	16	20	18	21	17	16	17	16	15	12	14	11	11	12	10	10	3	13.1	20.7
6-Feb	1	1	2	1	1	1	1	1	3	1	2	3	4	2	4	10	11	10	12	10	10	12	11	9	5.1	12.4
7-Feb	7	8	6	5	4	3	4	4	2	1	2	5	5	6	6	9	7	4	5	3	1	1	2	1	4.3	9.0
8-Feb	1	2	3	2	1	2	2	1	2	2	3	4	3	5	3	3	2	1	1	1	1	2	2	4	2.2	4.7
9-Feb	3	4	10	20	16	8	3	3	3	4	4	4	5	4	10	19	18	17	17	20	23	23	19	18	11.4	23.2
10-Feb	16	17	19	18	15	13	10	7	8	11	15	17	17	15	15	16	16	14	15	14	9	9	5	2	13.0	18.9
11-Feb	1	2	1	2	5	2	2	2	3	3	3	5	5	7	8	5	2	3	1	1	2	4	4	3	3.2	7.6
12-Feb	4	4	4	4	4	4	3	4	4	4	4	4	5	3	2	3	6	8	2	3	3	4	3	6	3.8	7.7
13-Feb	9	5	7	9	10	13	13	10	10	12	14	16	17	22	15	10	5	3	4	4	4	4	5	6	9.5	22.4
14-Feb	4	5	3	2	2	3	3	2	1	1	2	2	6	7	6	5	8	14	15	15	16	14	16	17	7.0	16.8
15-Feb	15	15	16	14	14	14	13	13	15	13	8	9	11	12	13	12	11	10	7	7	6	4	4	5	10.8	15.6
16-Feb	5	4	4	2	1	1	1	1	2	4	6	6	7	11	11	11	11	10	8	9	7	6	6	7	5.8	11.2
17-Feb	7	5	4	4	5	5	7	6	4	6	8	8	8	8	7	7	7	5	4	4	3	3	4	4	5.5	8.4
18-Feb	4	3	2	2	2	3	2	1	1	2	3	2	4	3	4	2	2	2	1	1	1	1	1	1	2.1	4.4
19-Feb	2	1	1	1	1	1	1	1	1	2	7	9	9	8	9	9	7	4	8	12	11	11	9	8	5.4	11.6
20-Feb	6	3	4	4	6	5	5	4	5	8	8	7	4	4	3	4	4	1	1	3	8	8	8	6	5.0	8.4
21-Feb	5	5	4	2	1	2	2	3	2	3	4	12	16	19	16	16	14	12	9	7	9	11	10	15	8.3	18.7
22-Feb	19	13	9	4	3	2	2	1	2	6	9	9	10	12	13	16	19	16	7	2	3	4	4	6	7.9	19.2
23-Feb	7	7	6	5	7	9	7	9	12	13	12	16	11	11	13	13	13	7	4	3	5	8	3	1	8.5	16.1
24-Feb	1	2	1	1	2	2	2	N	2	2	3	4	7	7	6	4	3	1	1	2	1	2	3	1	2.6	7.5
25-Feb	2	3	2	3	4	3	3	3	3	4	8	8	8	7	8	5	6	5	5	4	4	3	3	4	4.4	8.1
26-Feb	8	13	14	17	21	19	17	15	14	13	12	11	11	8	7	6	5	3	2	4	6	5	12	11	10.6	21.0
27-Feb	13	16	17	18	15	18	22	20	15	15	15	13	16	20	21	19	18	17	14	14	15	12	10	10	16.0	22.3
28-Feb	12	11	9	6	7	6	7	8	7	8	8	8	9	8	11	11	11	6	5	2	1	1	1	1	6.8	11.7
	6.2	6.1	6.1	5.9	5.8	5.9	5.5	5.4	5.5	6.3	7.3	8.4	8.7	9.5	9.5	9.4	8.6	7.4	6.6	6.1	6.5	6.4	6.2	6.0	Diurnal Average	
	18.9	16.5	18.9	20.1	21.0	19.4	22.3	19.8	19.7	18.0	20.7	17.5	17.3	22.4	21.0	19.2	19.2	17.0	17.0	19.5	23.2	22.7	19.5	17.5	Diurnal Maximum	

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

PASZA
Peace Air Shed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Valleyview - February 2011

Maximum Value: 94.3 deg on Feb 6 08:00

Minimum Value: 3.2 deg on Feb 16 11:00

Percentiles: P_1 = 5.1 P_{10} = 6.9 Q_1 = 8.4 Median = 11.9 Q_3 = 20.8 P_{90} = 43.5 P_{99} = 81.1

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

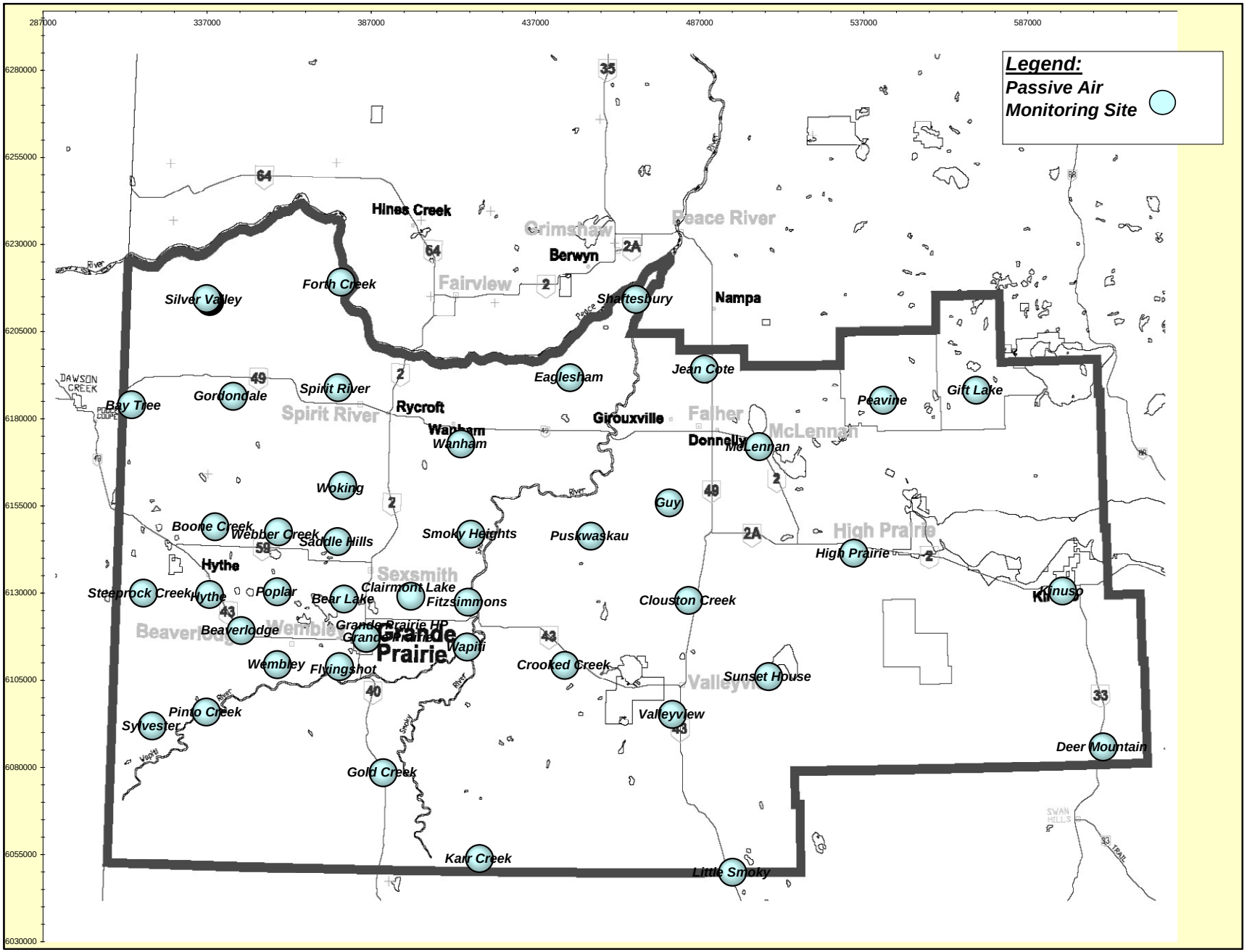
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Feb	5	6	9	21	20	10	8	14	7	9	8	10	12	12	23	41	29	34	12	64	21	21	33	13	64.5
2-Feb	68	36	14	13	14	10	14	32	21	73	28	10	28	14	10	13	19	44	35	13	9	17	9	34	72.9
3-Feb	9	77	77	20	65	71	47	9	13	18	19	23	19	11	10	21	54	91	23	36	18	21	17	28	90.8
4-Feb	19	15	14	71	50	12	12	30	8	12	22	9	10	9	8	11	8	13	7	8	9	10	7	8	71.3
5-Feb	6	6	10	8	8	25	9	8	8	6	8	7	8	9	8	8	14	5	13	9	8	9	6	37	37.5
6-Feb	66	78	50	94	61	83	37	94	13	60	36	22	20	13	80	8	9	10	9	10	11	9	8	9	94.3
7-Feb	10	10	13	14	15	42	19	21	45	51	67	12	6	7	9	11	11	8	12	37	16	34	57	55	66.6
8-Feb	14	24	10	9	12	23	7	32	11	11	9	29	53	5	19	48	14	27	23	35	21	57	10	16	57.2
9-Feb	18	20	69	6	5	43	13	18	12	14	14	13	65	40	20	8	7	8	10	7	5	5	7	7	69.3
10-Feb	8	8	6	6	7	6	8	8	11	8	9	8	7	9	8	7	7	8	6	6	10	8	15	18	17.8
11-Feb	16	26	22	23	15	30	14	20	11	7	46	18	18	15	15	18	22	65	23	34	14	6	7	25	64.6
12-Feb	9	8	10	8	8	9	15	12	12	9	16	13	19	25	17	43	22	8	19	11	58	15	20	8	57.7
13-Feb	7	37	18	12	8	6	9	15	19	10	7	9	7	5	7	11	14	16	10	14	9	9	7	6	37.4
14-Feb	18	9	11	44	46	14	15	35	72	46	66	61	8	9	7	32	9	14	7	7	8	7	7	7	72.0
15-Feb	16	11	15	19	17	15	6	8	9	8	14	12	11	14	11	9	12	8	12	12	12	9	16	16	18.7
16-Feb	17	20	10	59	81	44	76	61	27	11	3	17	11	8	5	8	8	7	8	6	6	12	6	6	81.1
17-Feb	10	16	12	7	16	11	4	8	13	15	11	10	7	18	14	12	10	11	11	15	11	19	14	12	18.8
18-Feb	10	33	26	59	38	15	14	22	14	10	16	90	30	62	36	37	65	27	59	73	29	13	13	33	89.9
19-Feb	29	46	66	93	29	60	44	31	72	10	10	8	8	8	7	9	8	6	6	5	7	5	6	7	93.5
20-Feb	10	10	9	14	10	11	8	7	13	7	9	11	23	32	17	12	20	93	36	29	6	7	6	7	92.6
21-Feb	10	7	8	19	36	26	21	47	53	10	23	11	10	9	9	26	11	10	10	10	12	22	9	6	53.0
22-Feb	6	7	10	8	20	23	41	44	53	17	7	14	9	11	11	14	6	25	18	12	48	12	13	21	52.9
23-Feb	17	8	7	10	9	8	13	9	8	9	12	8	14	13	9	8	8	8	16	13	22	9	27	29	28.9
24-Feb	40	26	60	23	29	10	22	N	16	8	13	39	20	26	34	29	39	57	14	18	15	9	7	46	59.5
25-Feb	9	11	12	12	10	17	11	15	8	34	19	18	21	14	21	19	7	8	7	8	8	11	13	27	34.3
26-Feb	35	13	15	10	6	8	8	10	9	10	8	12	10	10	11	9	10	20	17	12	10	9	10	10	34.6
27-Feb	10	10	8	7	9	15	6	12	9	8	10	13	16	6	6	6	6	6	7	5	5	6	9	9	15.8
28-Feb	9	10	10	11	8	9	8	10	11	11	11	17	12	12	11	9	7	8	7	25	52	18	37	14	51.7
	68.0	78.5	76.7	93.9	81.1	82.6	76.0	94.3	72.0	72.9	66.6	89.9	65.1	61.7	79.6	48.0	65.4	92.6	58.6	73.0	57.7	57.2	56.8	54.5	

N - Not Valid

PASZA

Monthly Passive Data Summary

Location of PASZA Passive Monitoring Stations



PASZA Passive Results for February 2011

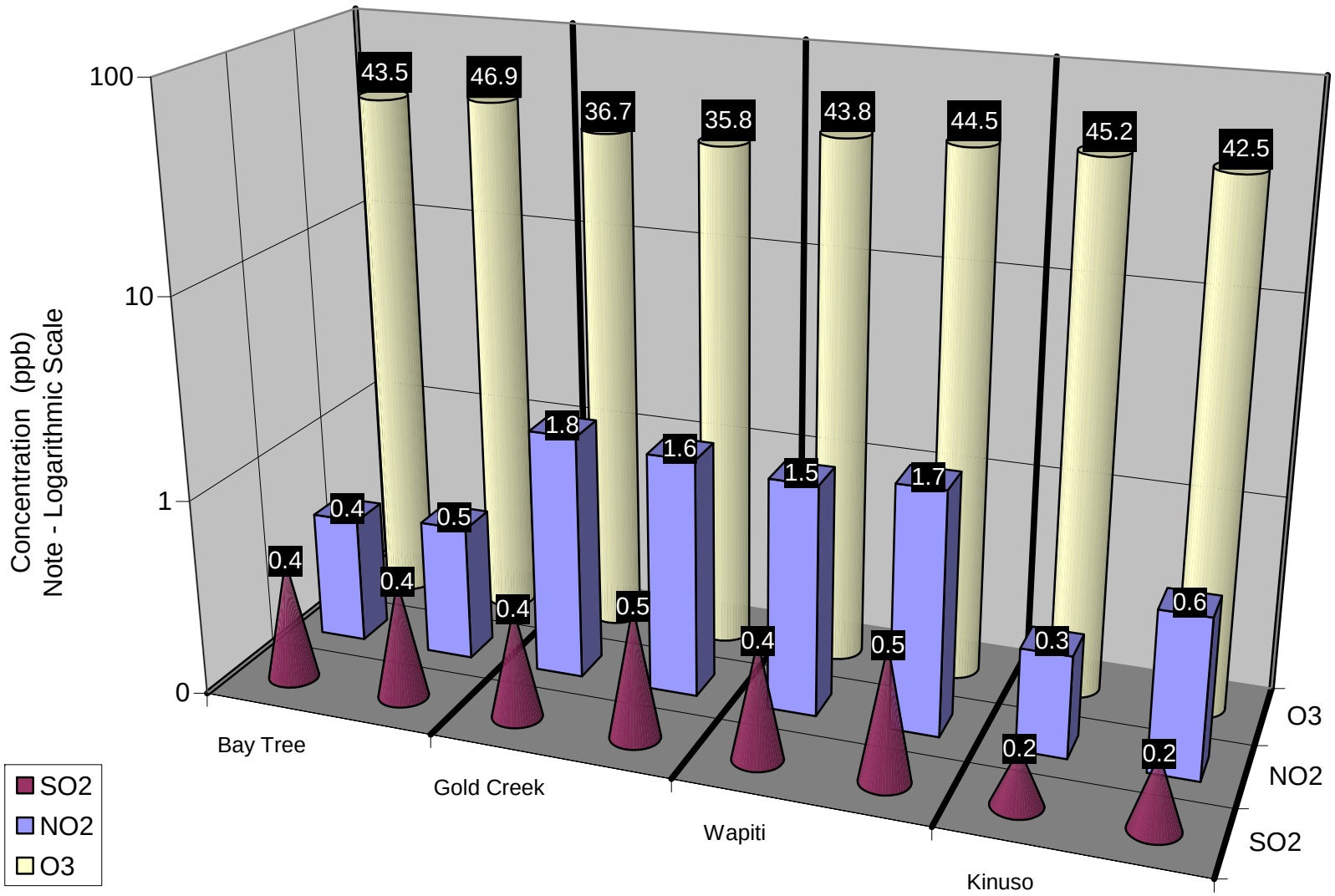
Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	Site Legal
Duplicates					
2a	Bay Tree	**0.4**	**43.5**	**0.4**	
2b	Bay Tree	**0.4**	**46.9**	**0.5**	
32a	Gold Creek	**0.4**	**36.7**	**1.8**	
32b	Gold Creek	**0.5**	**35.8**	**1.6**	
33a	Wapiti	**0.4**	**43.8**	**1.5**	
33b	Wapiti	**0.5**	**44.5**	**1.7**	
47a	Kinuso	**0.2**	**45.2**	**0.3**	
47b	Kinuso	**0.2**	**42.5**	**0.6**	
1	Silver Valley	**0.6**	**40.9**	**0.8**	08-27-081-11 W6M
2	Bay Tree	**0.4**	**45.2**	**0.5**	13-16-078-13 W6M
3	Fourth Creek	**0.6**	**48.1**	**0.5**	04-13-082-07 W6M
4	Gordondale	**0.4**	**46.0**	**0.6**	04-34-078-10 W6M
5	Boone Creek	**0.4**	**44.3**	**1.0**	16-36-074-11 W6M
7	Steeprock Creek	**0.4**	**43.0**	**0.4**	09-35-072-13 W6M
9	Spirit River	**0.5**	**42.3**	**n/a**	08-12-079-07 W6M
10	Woking	**0.8**	**45.4**	**0.5**	01-13-076-07 W6M
11	Webber Creek	**0.7**	**47.4**	**1.3**	09-36-074-09 W6M
12	Hythe	**0.4**	**46.6**	**1.3**	14-36-072-11 W6M
14	Sylvester	**0.2**	**37.2**	**0.8**	08-06-069-12 W6M
16	Beaverlodge	**0.6**	**42.5**	**1.9**	15-36-071-10 W6M
17	Poplar	**0.5**	**44.3**	**1.2**	13-06-073-08 W6M
18	Saddle Hills	**0.4**	**43.8**	**0.5**	04-25-074-07 W6M
19	Wanham	**0.6**	**46.6**	**0.6**	16-22-077-03 W6M
20	Shaftesbury	**0.4**	**43.1**	**0.5**	04-03-082-23 W5M
21	Eaglesham	**0.4**	**40.7**	**0.7**	16-21-079-25 W5M
23	Bear Lake	**0.7**	**48.3**	**1.6**	15-31-072-06 W6M

PASZA Passive Results for February 2011 (Continued)

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	Site Legal
24	Wembley	**0.4**	**45.2**	**1.3**	12-31-070-08 W6M
25	Pinto Creek	**0.3**	**43.0**	**0.8**	04-24-069-11 W6M
26	Flyingshot	**0.5**	**41.7**	**1.5**	15-36-070-07 W6M
27	Grande Prairie I	**0.6**	**35.7**	**4.3**	08-15-071-06 W6M
28	Clairmont Lake	**0.6**	**49.9**	**1.0**	09-06-073-04 W6M
29	Smoky Heights	**0.9**	**40.9**	**1.8**	04-06-075-02 W6M
30	Fitzsimmons	**0.3**	**42.6**	**1.1**	15-36-072-03 W6M
32	Gold Creek	**0.4**	**36.3**	**1.7**	06-33-067-05 W6M
33	Wapiti	**0.4**	**44.1**	**1.6**	02-25-071-03 W6M
34	Puskwaskau	**0.3**	**38.0**	**0.8**	15-35-074-25 W5M
35	Jean Cote	**0.6**	**49.7**	**0.6**	12-35-079-21 W5M
36	Guy	**0.4**	**42.5**	**0.3**	03-04-076-22 W5M
37	Crooked Creek	**0.4**	**46.5**	**1.1**	16-01-071-26 W5M
38	Karr Creek	**0.2**	**38.9**	**0.7**	10-16-065-02 W6M
39	Clouston Creek	**0.4**	**50.1**	**0.6**	12-01-073-22 W5M
40	McLennan	**0.4**	**41.0**	**0.5**	03-29-077-19 W5M
41	Valleyview	**0.5**	**45.2**	**0.5**	09-30-069-22 W5M
42	Sunset House	**0.6**	**48.2**	**0.3**	05-32-070-19 W5M
43	High Prairie	**0.5**	**47.5**	**1.0**	16-13-074-17 W5M
44	Peavine	**0.3**	**43.6**	**0.5**	03-05-079-15 W5M
45	Gift Lake	**0.2**	**41.3**	**0.6**	10-07-079-12 W5M
46	Little Smoky	**0.4**	**43.8**	**2.5**	12-01-065-21 W5M
47	Kinuso	**0.2**	**43.8**	**0.5**	12-10-073-10 W5M
48	Deer Mountain	**0.3**	**44.7**	**0.6**	15-22-068-09 W5M
49	Grande Prairie HP	**0.4**	**32.8**	**6.9**	17-26-071-06 W6M

*BDL = Below Detection Level

Shaftesbury and McLennan results are based on two (2) month sample period due to samples not collected in January as roads were inaccessable due to heavy snow conditions.



Duplicate Summary Chart

Passive Summary for February 2011

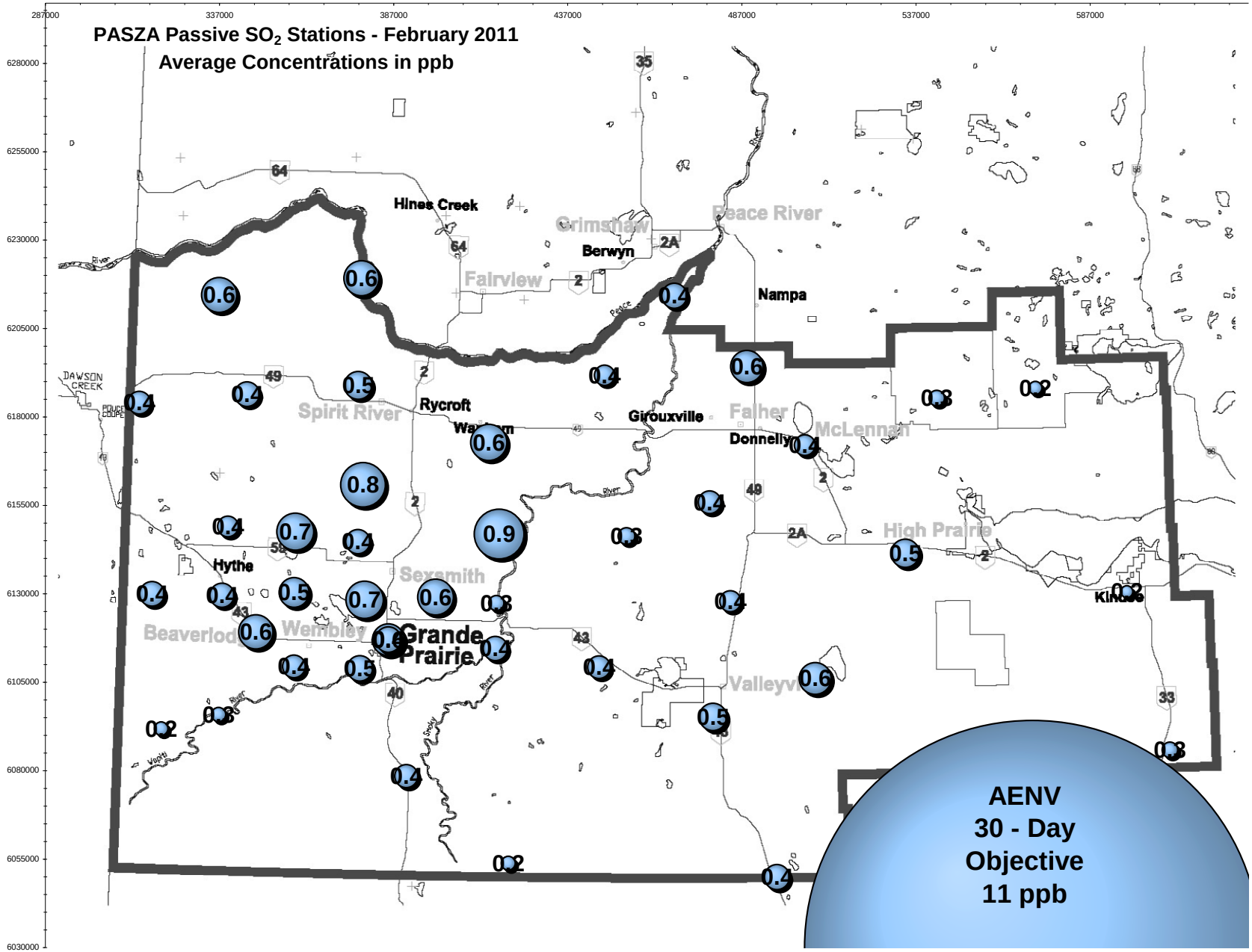
Stats	Sulphur Dioxide SO_2	Ozone O_3	Nitrogen Dioxide NO_2
	ppb	ppb	ppb
	Passive Summary for February 2011 (PASZA Zone)		
Mean	**0.5**	**43.6**	**1.1**
Standard Deviation	**0.2**	**3.9**	**1.2**
Minimum	**0.2**	**32.8**	**0.3**
Minimum At	**Kinuso (#47)**	**Grande Prairie HP (#49)**	**Guy (#36)**
Maximum	**0.9**	**50.1**	**6.9**
Maximum At	**Smoky Heights (#29)**	**Clouston Creek (#39)**	**Grande Prairie HP (#49)**

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

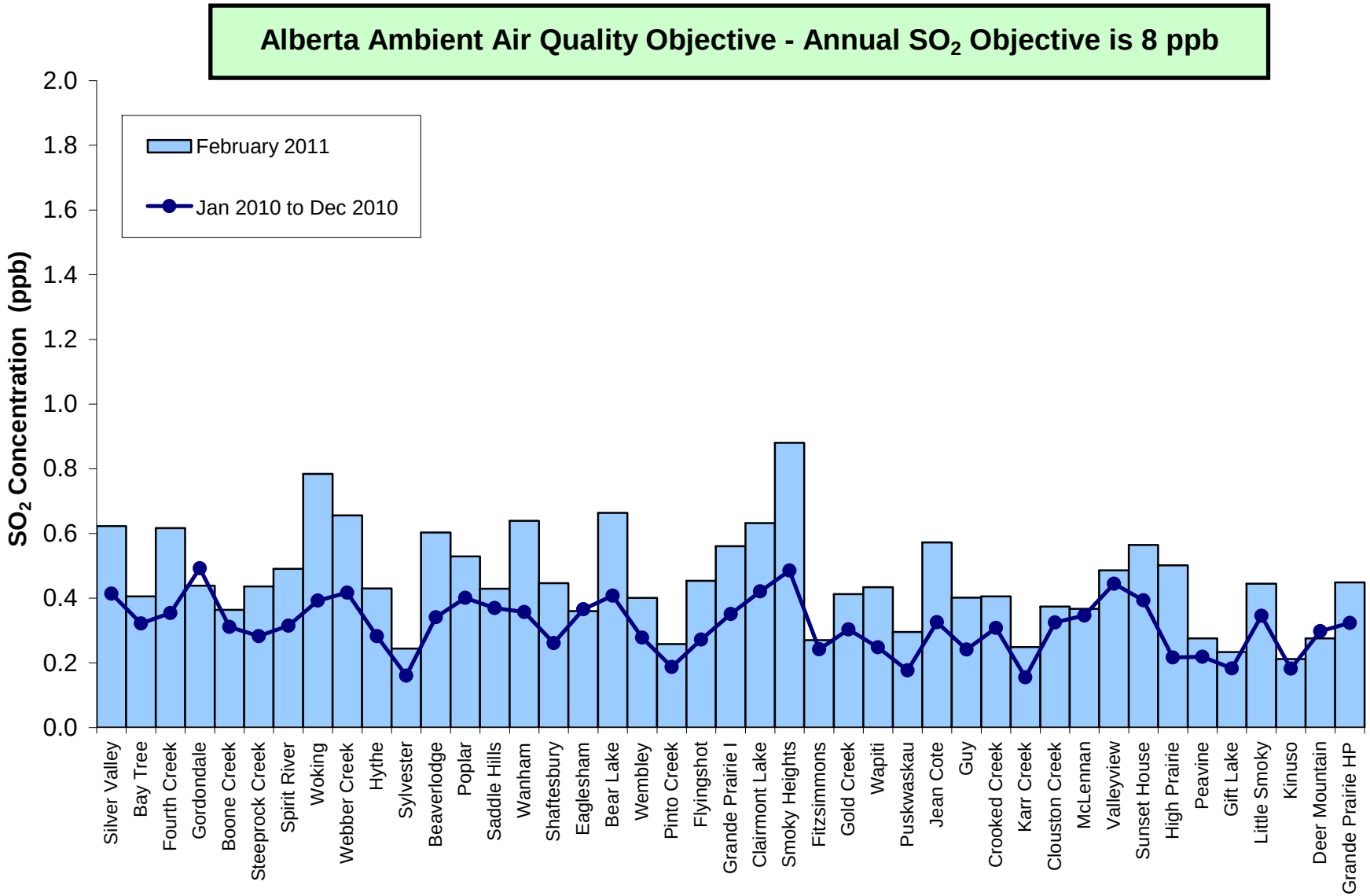
	SO_2	O_3	NO_2
PASZA Beaverlodge station	**0.5**	**36.8**	**3.6**
PASZA Beaverlodge passive	**0.6**	**42.5**	**1.9**

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

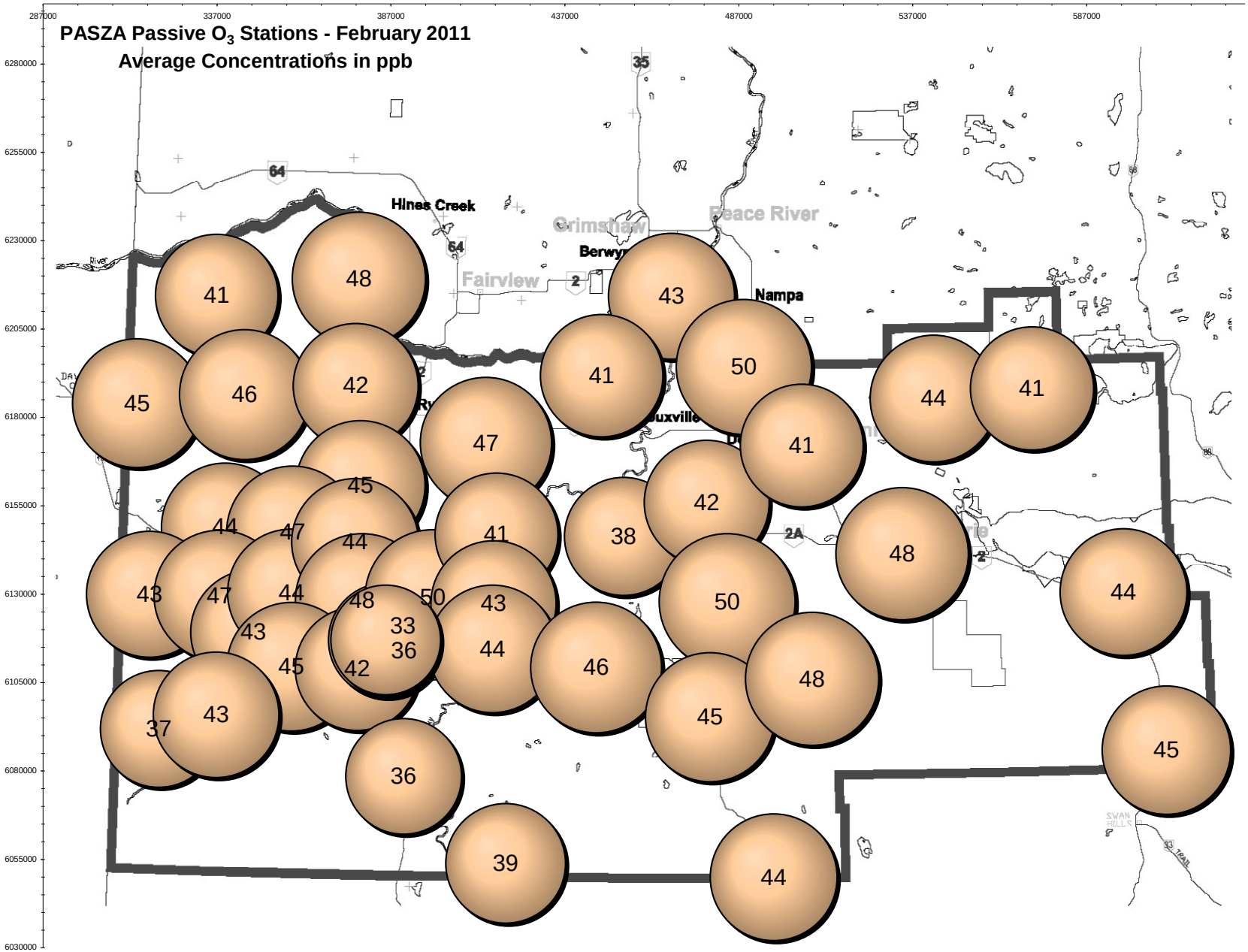
	SO_2	O_3	NO_2
PASZA Henry Pirker station	**0.4**	**27.3**	**12.5**
PASZA Grande Prairie passive	**0.4**	**32.8**	**6.9**



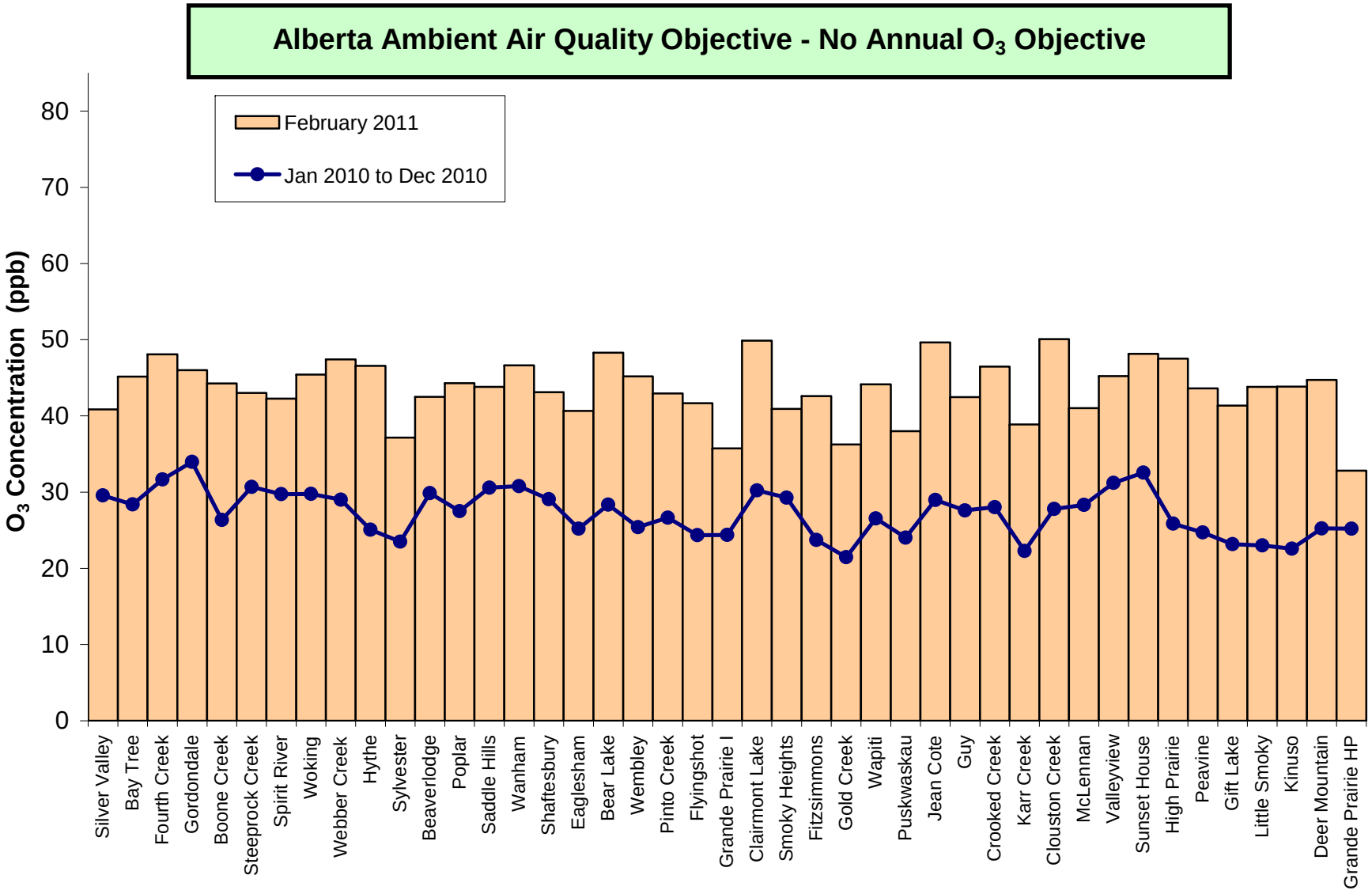
SO_2 Bubble Chart



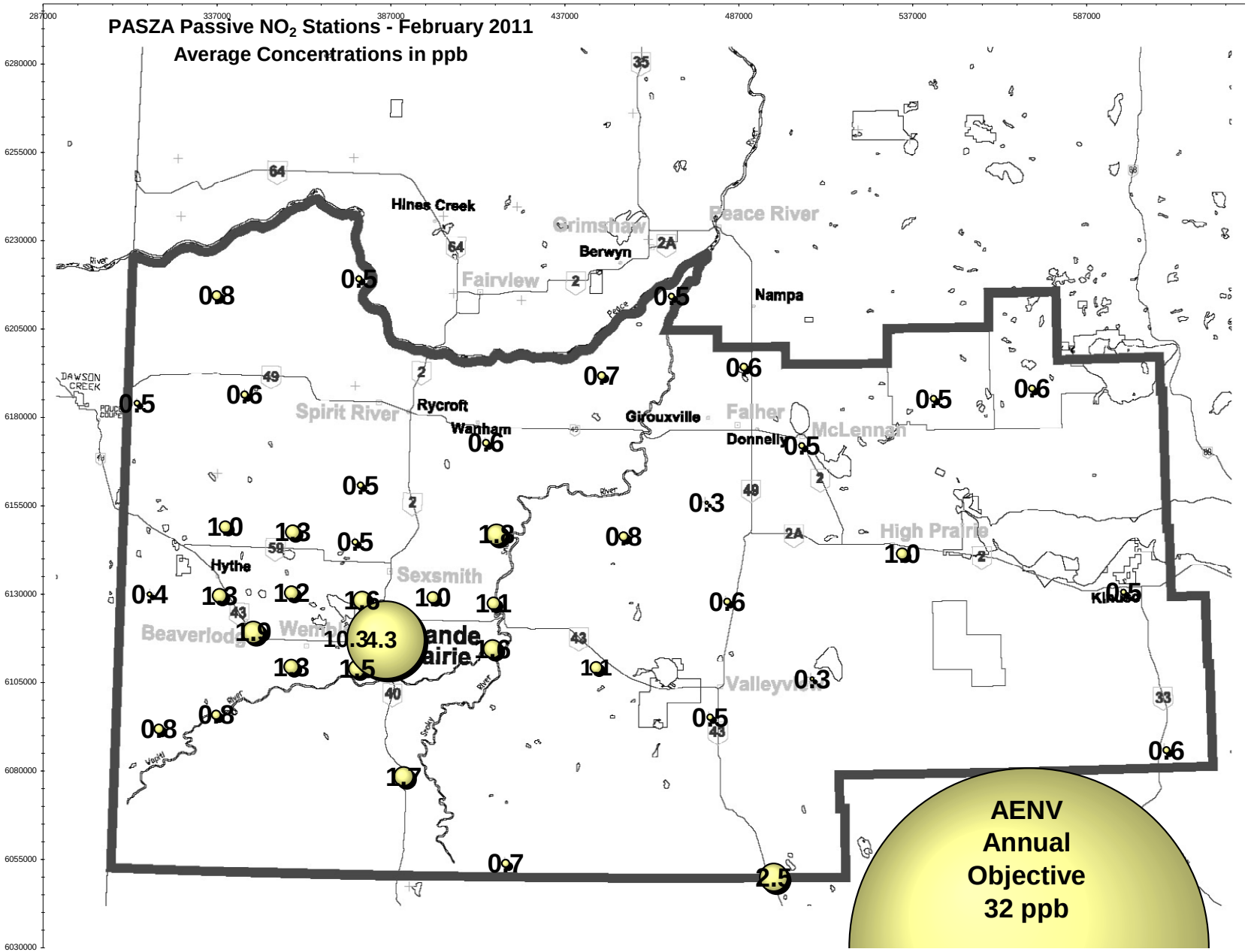
SO_2 Summary Chart



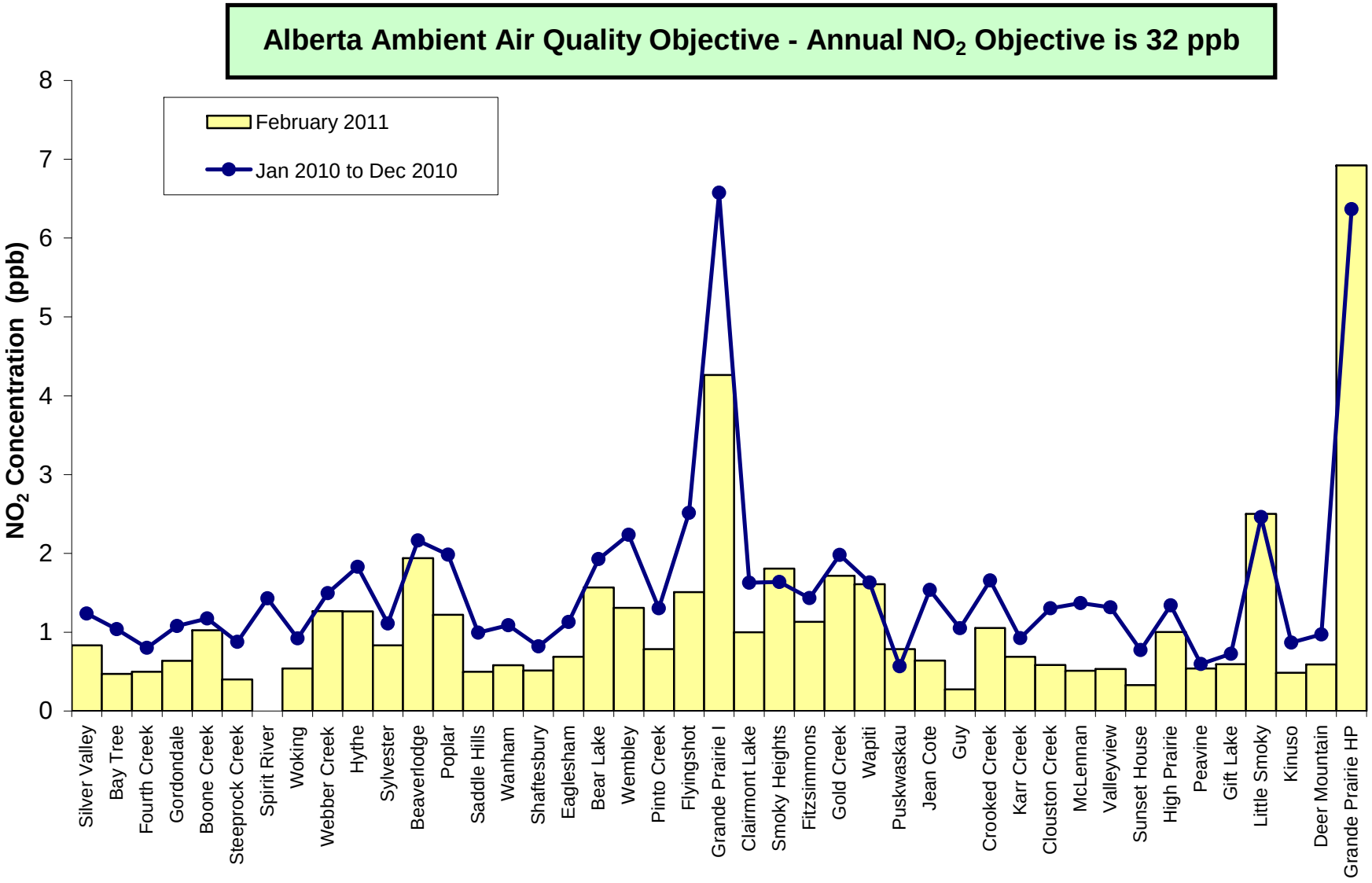
O_3 Bubble Chart



O_3 Summary Chart



NO_2 Bubble Chart



NO_2 Summary Chart

PASZA

ALBERTA ENVIRONMENT
INCIDENCE REPORTS

February 2011

Air Monitoring Directive Non-Compliance 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:	245269	**Reported To (AENV Contact):**	Christie
Date & Time Incident Reported to AENV:	February 2011	**Reported By:**	Sharon Whiteley
Reported on Behalf of:	PASZA	**Approval Number (if applicable):**	
Location(s) of Incident:	PASZA Henry Pirker Monitoring Station - Grande Prairie		
Start Date & Time of Incident:	February 1,2011	**End Date & Time of Incident:**	February 28, 2011

Details of Non-Compliance:

The PM2.5 analyzer (FDMS TEOM) housed within the Henry Pirker station, in Muskoseepi Park, (Grande Prairie) was at non-conformance level (operational time less than 90%). During the QAQC process of the data it was determined that many hours were to be flagged invalid due to baseline drift or unusual spiking. The unusual spiking was caused by adverse weather conditions, while the baseline drift issue is under ongoing investigation. A total of seventy hours (70) were invalidated.

Immediate Actions Taken:

Follow-up Details:

The issues have been related to FDMS upgrades for NAPS. Technicians are aware of issue and communication and follow-up with factory is ongoing

Actions Taken to Prevent Reoccurrence (if any):

Not Applicable

Additional Actions Required (if any):

Not applicable

Report Completed By:	Sharon Whiteley	Date Report Submitted:	March 22, 2011
7-Day Letter Due Date:	March 29, 2011		

Air Monitoring Directive Non-Compliance 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:	245270	**Reported To (AENV Contact):**	Christie
Date & Time Incident Reported to AENV:	February 2011	**Reported By:**	Sharon Whiteley
Reported on Behalf of:	PASZA	**Approval Number (if applicable):**	
Location(s) of Incident:	PASZA Evergreen Park Monitoring Station - Grande Prairie		
Start Date & Time of Incident:	February 1,2011	**End Date & Time of Incident:**	February 28, 2011

Details of Non-Compliance:

The PM2.5 analyzer (TEOM) housed within the Evergreen Park station, located South of Grande Prairie at LSD 5-6-071-05 W6, was at non-conformance level (operational time less than 90%). During the QAQC process of the data it was determined that many hours were to be flagged invalid due to baseline drift or unusual spiking. The unusual spiking was caused by adverse weather conditions. A total of one hundred and eighteen hours (118) were invalidated.

Immediate Actions Taken:

Follow-up Details:

Technicians are aware of issue and follow-up is ongoing.

Actions Taken to Prevent Reoccurrence (if any):

Not Applicable

Additional Actions Required (if any):

Not applicable

Report Completed By:	Sharon Whiteley	Date Report Submitted:	March 22, 2011
7-Day Letter Due Date:	March 29, 2011		

February 2011 Calibration Reports

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

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

PASZA – Smoky Heights Station with the following calibrations:
SO_2, TRS

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

PASZA – Kinuso (Portable) Station with the following calibrations:
SO_2, TRS, NO, NO_2, NO_x & O_3,

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

Calibration Report

Parameter **SO2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 8, 2011	Previous Calibration	January 26, 2011
Station Number	1	Station Location	Henry Pirker
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	9:10	End Time (MST)	12:05
Barometric Pressure	0.936 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Conc	50.6 ppb	Cal Gas Cert Date	4/6/2012
		Cal Gas Cylinder #	LL34002
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	10
	Before		After
Calculated slope	1.019473	Calculated slope	0.996688
Calculated intercept	-0.172462	Calculated intercept	-1.736121
Analyzer make	TEI 43C	Analyzer serial #	610816292

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	8.6		8.6	
Coefficient	.796		.796	
Pressure	643.9	mm Hg	644.2	mm Hg
Flow	0.474	lpm	0.468	lpm
Lamp Voltage	43704	Hz	42998	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)
4991	0.00	0.0	0.0	N/A
4991	39.83	400.6	402.7	0.9947
4991	19.89	200.8	204.3	0.9833
4991	9.93	100.5	104.3	0.9636
4991	0.00	0.0	0.0	As Found Zero
4991	39.83	400.6	402.7	As Found Span
			Average Correction Factor	0.9805

Calculated value of As Found Response: 410.4 ppb Percent Change of As Found: -2.5%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.1	ppb
Auto span	239.8	ppb	239.9	ppb

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **SO2**

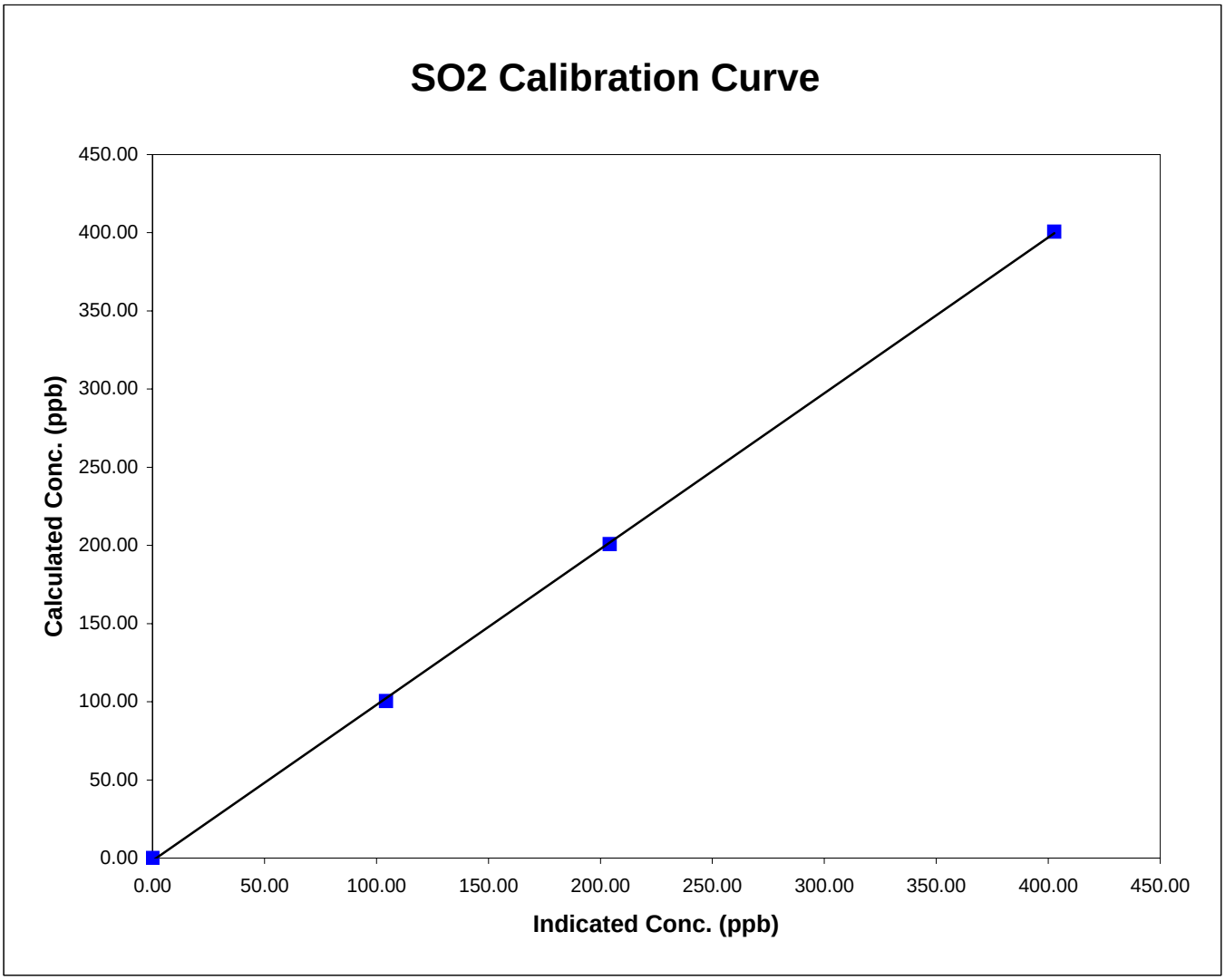
Air Monitoring Network **PASZA**

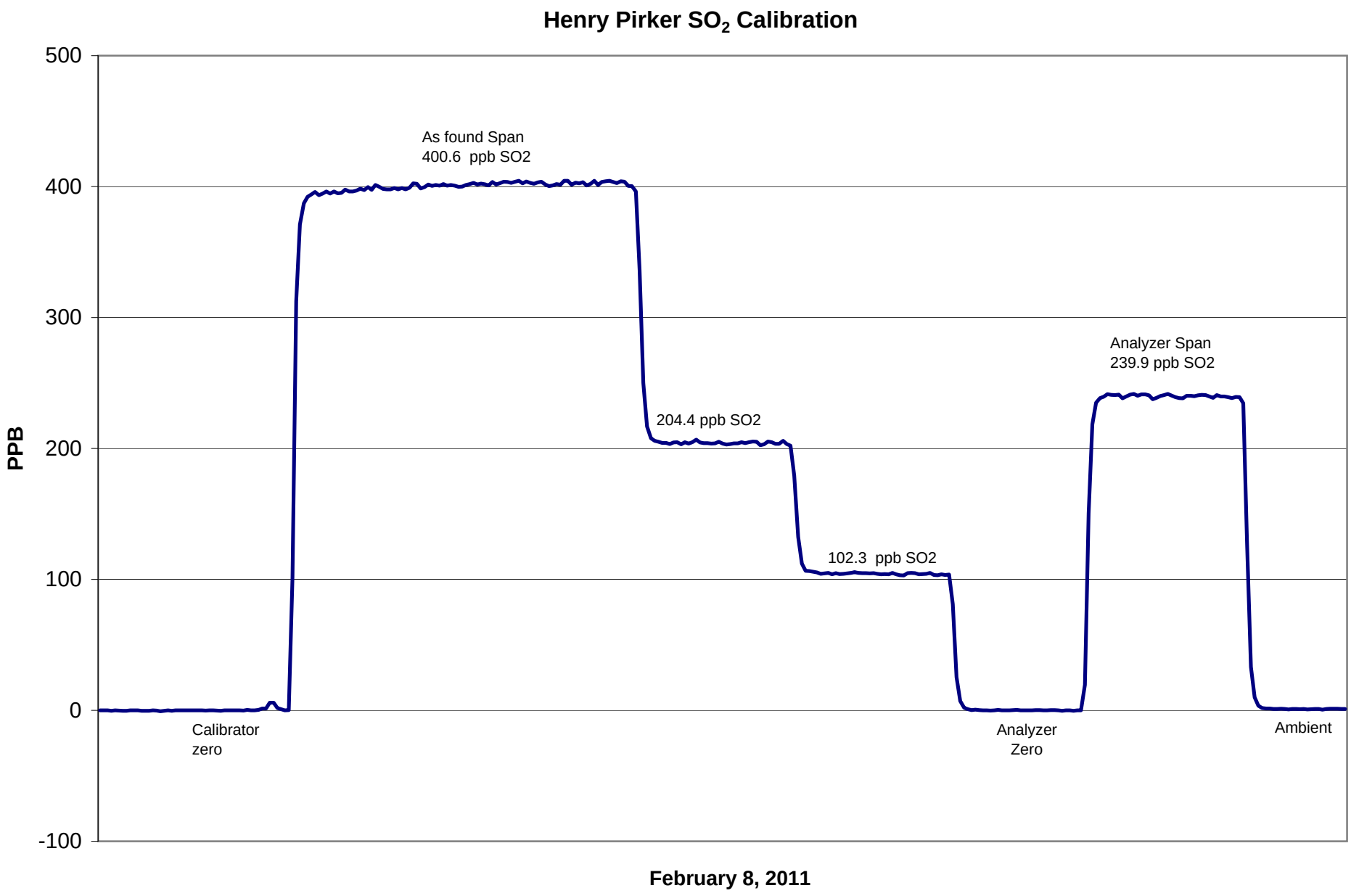
Station Information

Calibration Date	February 8, 2011	Previous Calibration	January 26, 2011
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:10	End Time (MST)	12:05
Analyzer make/model	TEI 43C	Analyzer serial #	610816292

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
400.6	402.7	0.9947	Correlation Coefficient	0.999909
200.8	204.3	0.9833		
100.5	104.3	0.9636	Slope	0.996688
			Intercept	-1.736121




Henry Pirker SO_2 Calibration
500
400
300
200
100
0
-100
PPB
As found Span
400.6 ppb SO2
204.4 ppb SO2
102.3 ppb SO2
Analyzer Span
239.9 ppb SO2
Calibrator
zero
Analyzer
Zero
Ambient
February 8, 2011

Calibration Report

Parameter **TRS**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 7, 2011	Previous Calibration	January 26, 2011
Station Number	1	Station Location	Henry Pirker
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	12:00	End Time (MST)	14:22
Barometric Pressure	0.936 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Conc	5.15 ppb	Cal Gas Expiry Date	7/31/2008
		Cal Gas Cylinder #	ALM013295
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	1.050906	Calculated slope	1.041882
Calculated intercept	-0.422151	Calculated intercept	-0.556163
Analyzer make	TEI 45C	Analyzer serial #	630718528

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Coefficient	1.037		1.037	
Background	10.3		10.3	
Pressure	652.9	mm Hg	657.2	mm Hg
Flow	0.456	ccm	0.461	ccm
Lamp Voltage	829	V	829	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)
4991	0.00	0.00	-0.05	N/A
4991	79.78	81.03	77.81	1.0414
4991	39.87	40.81	40.61	1.0050
4991	9.93	10.23	10.52	0.9720
4991	0.00	0.00	-0.05	As Found Zero
4991	79.78	81.03	77.81	As Found Span
			Average Correction Factor	1.0061

Calculated value of As Found Response: 81.4 ppb Percent Change of As Found: -0.5%

	before calibration		after calibration	
Auto zero	-0.29	ppb	-0.23	ppb
Auto span	26.30	ppb	30.55	ppb

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **TRS**

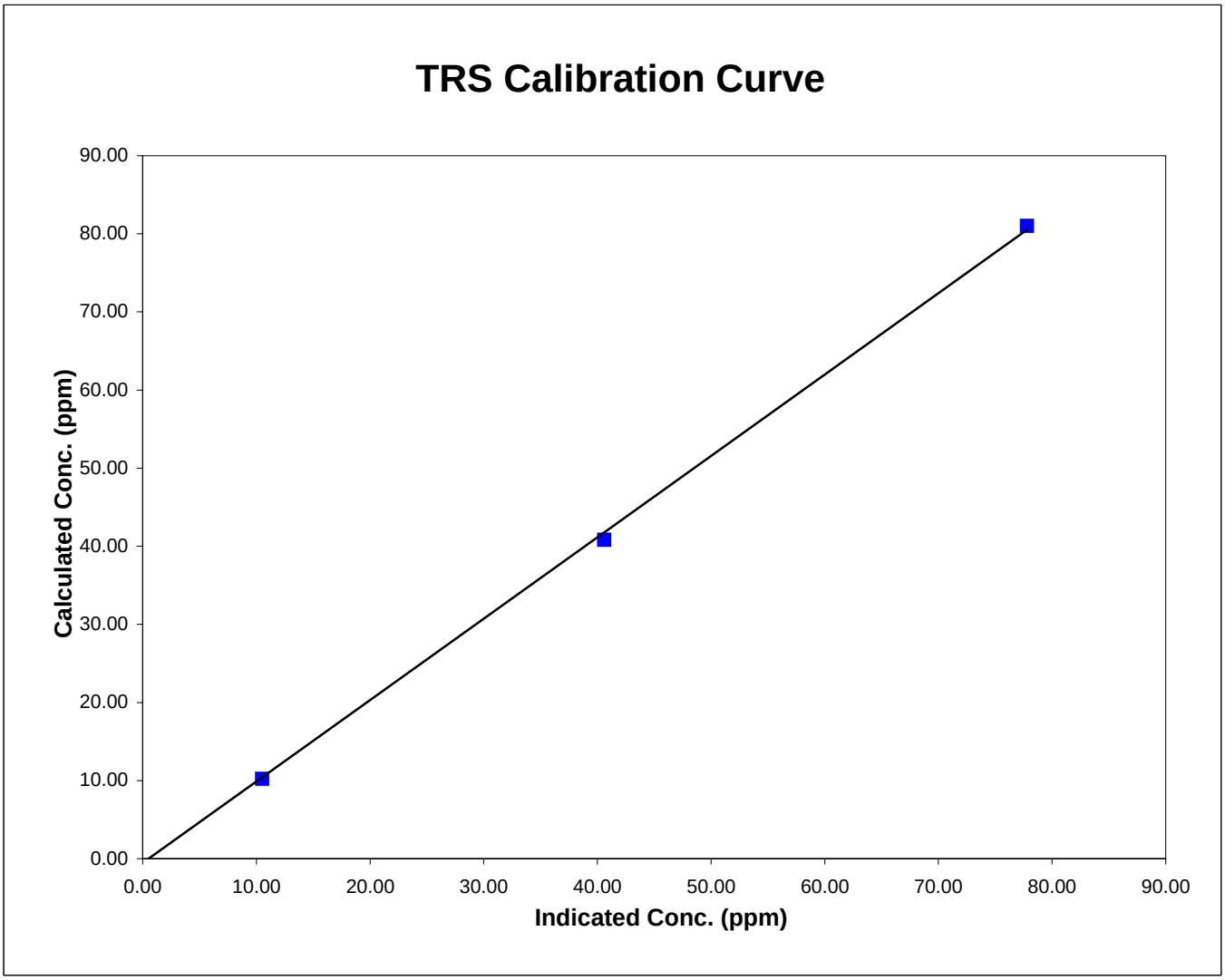
Air Monitoring Network **PASZA**

Station Information

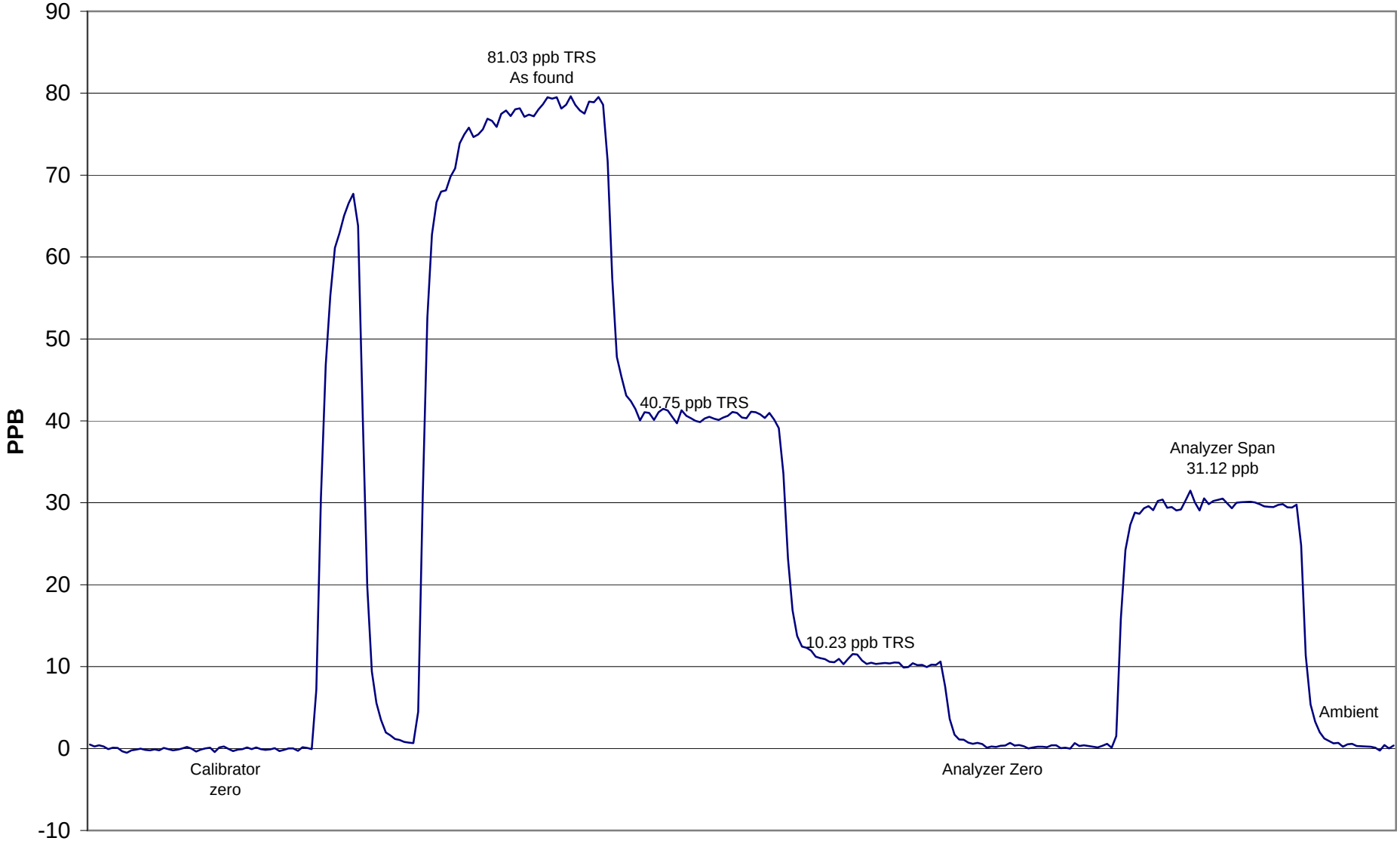
Calibration Date	February 7, 2011	Previous Calibration	January 26, 2011
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:00	End Time (MST)	14:22
Analyzer make/model	TEI 45C	Analyzer serial #	630718528

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	-0.046	N/A		
81.026	77.809	1.0414	Correlation Coefficient	0.999611
40.814	40.609	1.0050		
10.226	10.521	0.9720	Slope	1.041882
			Intercept	-0.556163



Henry Pirker TRS Calibration



February 7, 2011

Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 8, 2011	Previous Calibration	January 26, 2011
Station Number	1	Station Location	Henry Pirker

Reason: Routine Installation Removal Other:

Start Time (MST)	9:10		End Time (MST)	13:30	
Barometric Pressure	0.936	Atm	Station Temperature	20.0	Deg C
Calibrator	Environics		Serial Number	3474	
NO Cal Gas Conc	51.4	ppm	Cal Gas Expiry Date	April 6, 2012	
NOx Cal Gas Conc	51.4	ppm	Cal Gas Serial #	LL34002	

DACS Information

DACS make: Focus AP1000 DACS serial No.:

Parameter		NO2	NOx	NO
Before	Data Slope	0.996679	1.047321	1.043774
	Data Offset	0.083816	-0.093011	-0.348629
After	Data Slope	0.994793	1.006496	1.004201
	Data Offset	0.505660	-2.090707	-2.268367
Channel #		8	6	7
Voltage Range		0 - 10 VDC	0 - 10 VDC	0 - 10 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	9.8	mV	9.8	mV
NOx bkgnd	10.2	mV	10.2	mV
NO coefficient	0.735		0.735	
NOx coefficient	0.997		0.997	
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	175.3	in Hg	175.3	in Hg
Sample Flow	0.750	ccm	0.750	ccm

Notes:

Calibration Report

Parameter **NOx-NO-NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: February 8, 2011 Station Location: Henry Pirker

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4991	0.00	0.0	0.0	0.0	0.0	0.0	0.0	N/A	N/A
1	4991	39.83	406.9	406.9	0.0	405.2	406.2	-1.8	1.0043	1.0018
2	4991	19.89	204.0	204.0	0.0	206.1	206.9	-1.2	0.9897	0.9861
3	4991	9.93	102.1	102.1	0.0	105.4	106.0	-0.8	0.9686	0.9630
AFZ	4991	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0000	0.0000
AFS	4991	39.83	406.9	406.9	0.0	395.4	386.3	8.3	1.0292	1.0533
							Average Correction Factor		0.9875	0.9837

As Found Concentrations: NO_X= 395.3 NO= 386.0 As Found Percent Change NO_X= -2.9% NO= -5.1%

GPT Calibration Data

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	0.0	0.0	0.0	N/A	N/A	N/A	N/A
NO point	406.2	406.2	0.0	406.3	406.2	-0.8	0.9999	1.0000	N/A	N/A
300	406.2	173.1	233.1	407.7	173.1	233.7	0.9964	1.0000	0.9974	100.3%
200	406.2	251.4	154.9	407.4	251.4	155.2	0.9973	1.0000	0.9979	100.2%
100	406.2	326.7	79.6	407.3	326.7	79.8	0.9974	1.0000	0.9976	100.2%
					Average Correction Factor		0.9970	1.0000	0.9976	100.2%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.1	0.0	0.0	ppb	0.0	-0.2	0.2	ppb
Auto span	168.4	169.5	1.2	ppb	161.5	160.1	1.0	ppb

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

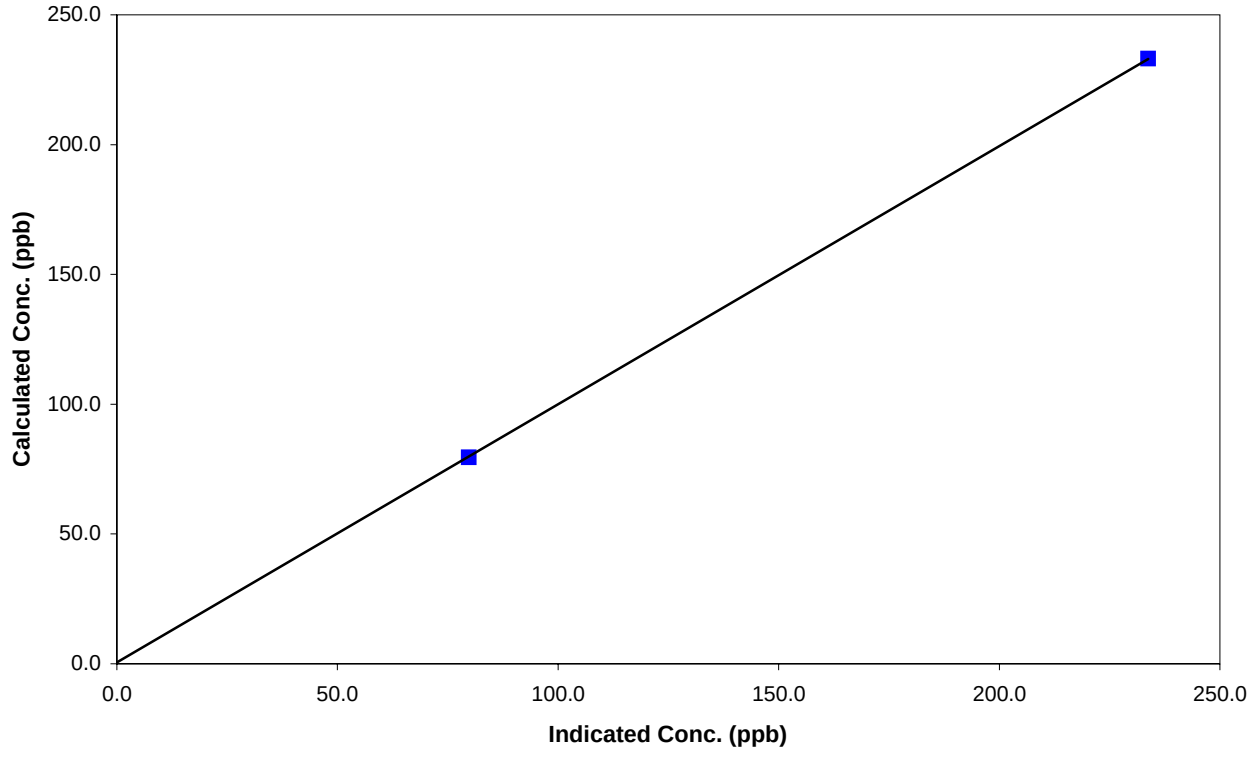
Station Information

Calibration Date	February 8, 2011	Previous Calibration	January 26, 2011
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:10	End Time (MST)	13:30
Analyzer make	TEI 42C	Analyzer serial #	508011073

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
233.1	233.7	0.9974	Correlation Coefficient	0.999980
0.0	-1.2	0.0000		
79.6	79.8	0.9976	Slope	0.994793
			Intercept	0.505660

NO_2 Calibration Curve



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

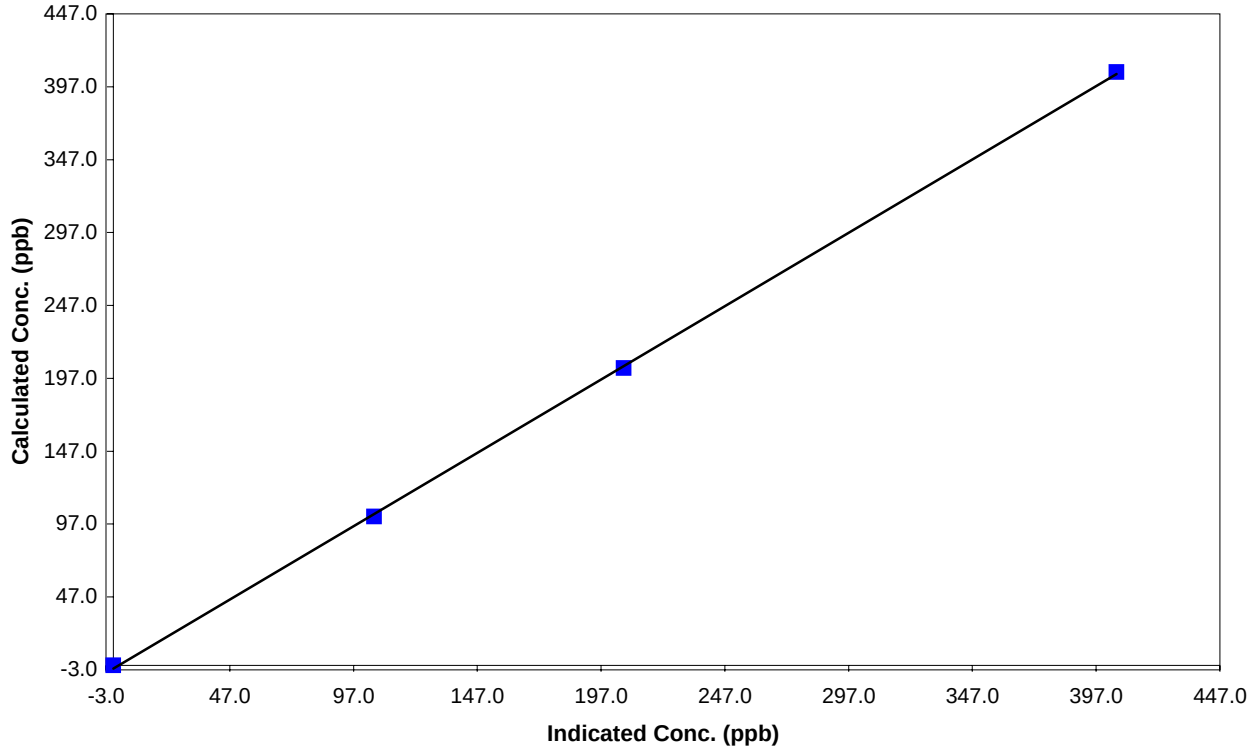
Station Information

Calibration Date	February 8, 2011	Previous Calibration	January 26, 2011
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:10	End Time (MST)	13:30
Analyzer make	TEI 42C	Analyzer serial #	508011073

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
406.9	405.2	1.0043	Correlation Coefficient	0.999876
204.0	206.1	0.9897		
102.1	105.4	0.9686	Slope	1.006496
			Intercept	-2.090707

NOx Calibration Curve



Calibration Summary

Parameter **NO**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

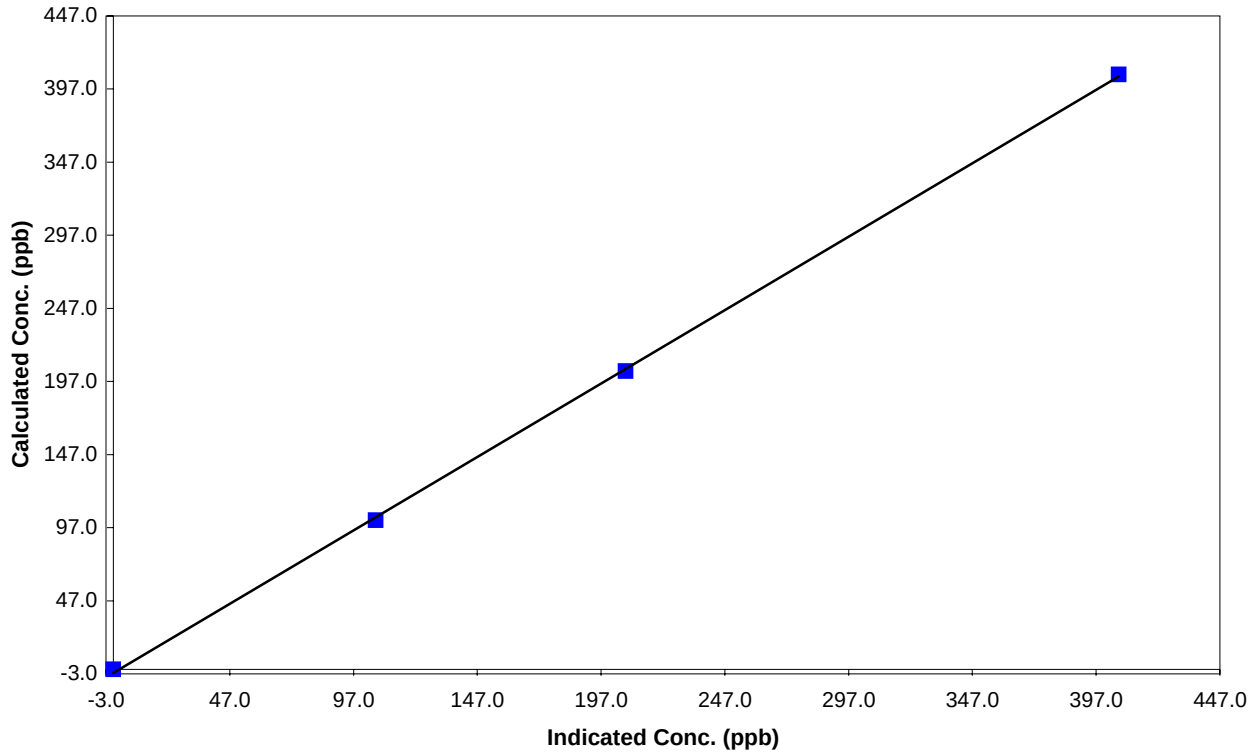
Station Information

Calibration Date	February 8, 2011	Previous Calibration	January 26, 2011
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:10	End Time (MST)	13:30
Analyzer make	TEI 42C	Analyzer serial #	508011073

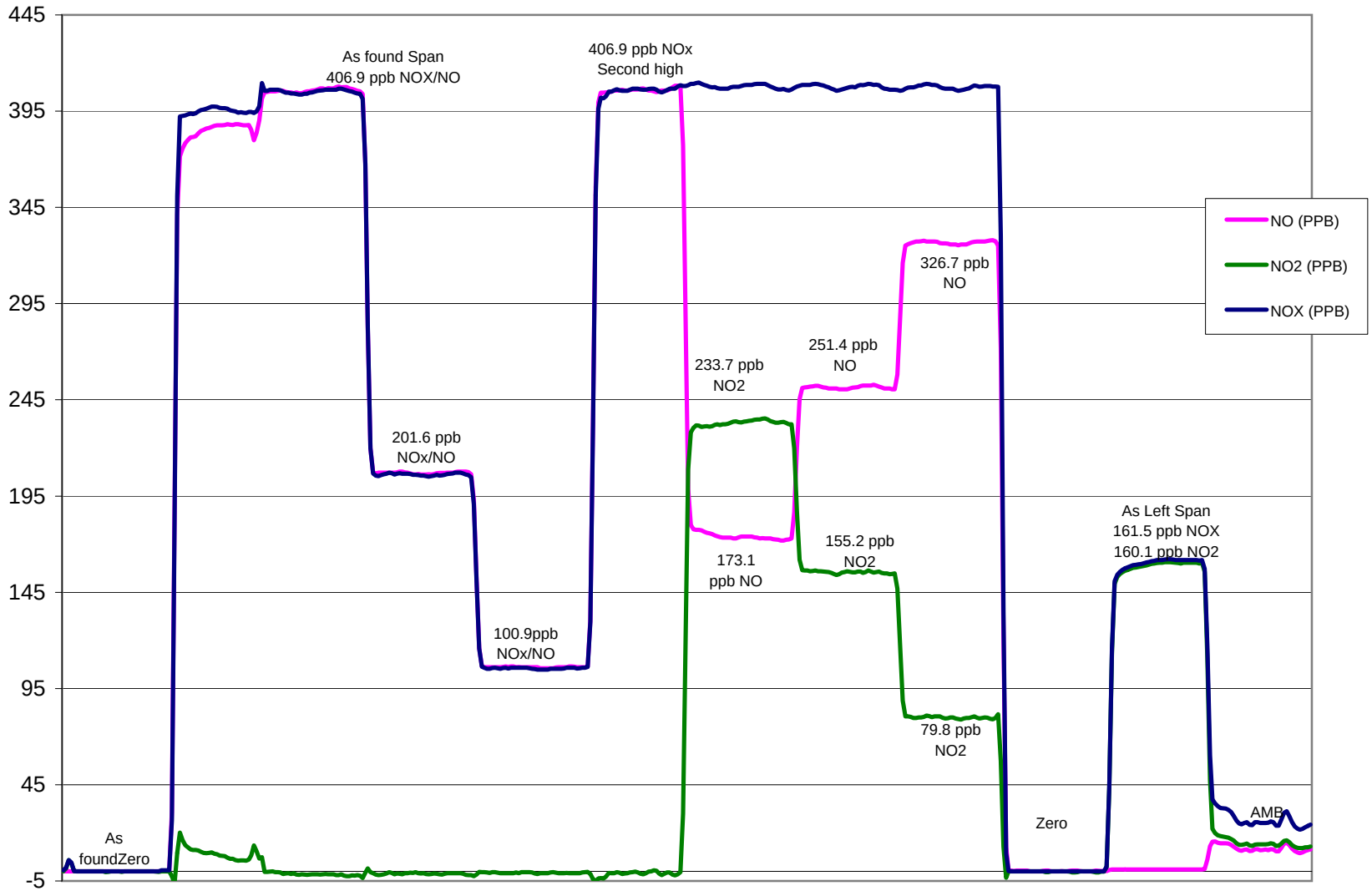
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
406.9	406.2	1.0018	Correlation Coefficient	0.999852
204.0	206.9	0.9861		
102.1	106.0	0.9630	Slope	1.004201
			Intercept	-2.268367

NO Calibration Curve



Henry Pirker NO_X Calibration



February 8, 2011

Calibration Report

Parameter **O3**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 8, 2011	Previous Calibration	January 26, 2011
Station Number	1	Station Location	Henry Pirker
Reason: Routine	Install	Removal	Other:
Start Time (MST)	12:10	End Time (MST)	14:26
Barometric Pressure	0.936 atm	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	Focus AP1000	DACS serial No.	45269
DACS voltage range	0 - 1 volt	DACS channel #	5
	Before		After
Calculated slope	0.979117	Calculated slope	1.065963
Calculated intercept	-0.565003	Calculated intercept	-0.292547
Analyzer make	TECO 49C	Analyzer serial #	607415761

	before		after	
Concentration range	500	ppb	500	ppb
offset	-0.6	ppb	-0.6	ppb
slope	0.986		0.986	
O3 Lamp temp	71.1	Deg C	71.1	Deg C
Intensities	85226/74185	mV	85134/74092	mV
Pressure	676.2	inches Hg	689.8	inches Hg
Flow A	0.713	ccm	0.722	ccm
Flow B	0.729	ccm	0.737	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	4991	0.0	-0.1	N/A
300	4991	233.1	218.6	1.0663
200	4991	154.9	145.8	1.0621
100	4991	79.6	75.5	1.0548
0	4991	0.0	-0.1	As found zero
300	4991	233.1	218.6	As found span
			Average Correction Factor	1.0611

Calculated value of As Found Response: 213.6 ppm Percent Change of As Found: -8.4%

	before calibration		after calibration	
Auto zero	0.3	ppb	0.3	ppb
Auto span	153.1	ppb	151.7	ppb

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **O3**

Air Monitoring Network **PASZA**

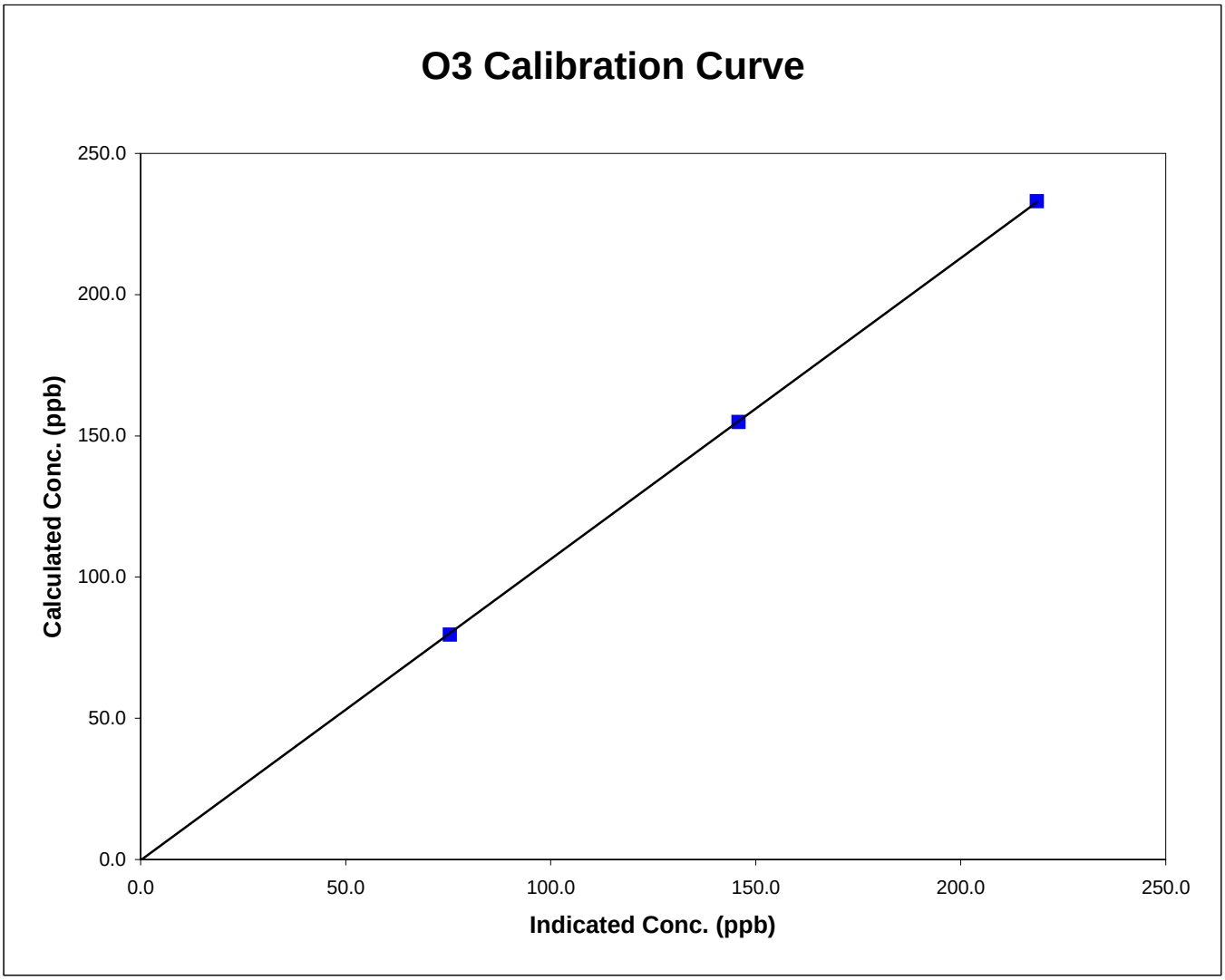
FOCUS AIR QUALITY MONITORING

Station Information

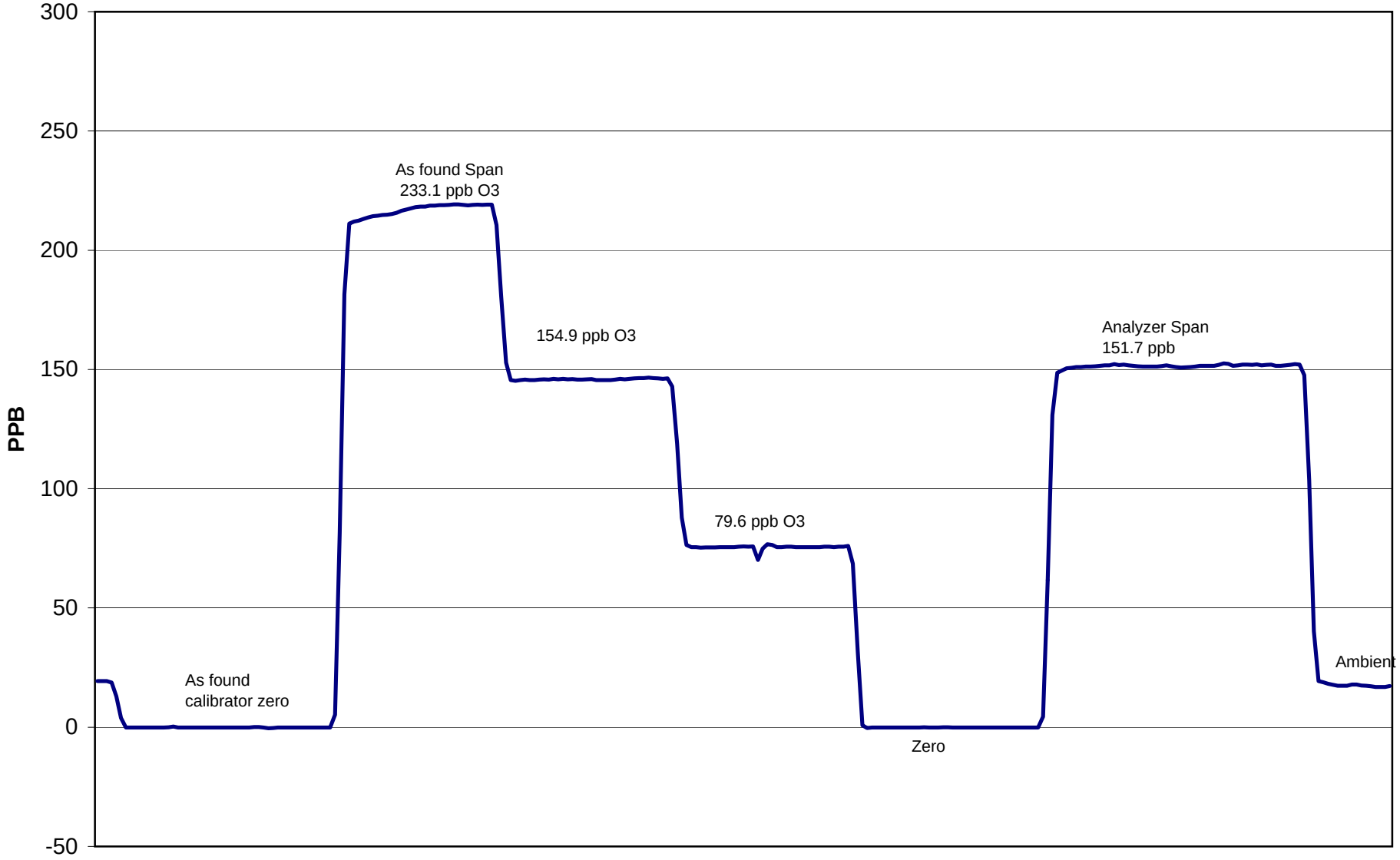
Calibration Date	February 8, 2011	Previous Calibration	January 26, 2011
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:10	End Time (MST)	14:26
Analyzer make/model	TECO 49C	Analyzer serial #	607415761

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	NA		
233.1	218.6	1.0663	Correlation Coefficient	0.999976
154.9	145.8	1.0621		
79.6	75.5	1.0548	Slope	1.065963
			Intercept	-0.292547



Henry Pirker O_3 Calibration



February 8, 2011

Calibration Report

Parameter **CO**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 7, 2011	Previous Calibration	January 26, 2011
Station Number	1	Station Location	Henry Pirker
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	11:00	End Time (MST)	13:16
Barometric Pressure	0.936 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Conc	3000 ppm	Cal Gas Expiry Date	AUG 28/05
		Cal Gas Cylinder #	AAL20565
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	0.996321	Calculated slope	0.984830
Calculated intercept	-0.308242	Calculated intercept	-0.675400
Analyzer make	TEI Model 48C	Analyzer serial #	508011062

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO span setting	1.077		1.077	
CO zero setting	0.184		0.184	
Sample pressure	675.1	mm Hg	675.4	mm Hg
Sample Flow	1.134	LPM	1.132	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)
4991	0.00	0.00	0.56	N/A
4991	39.84	23.76	24.75	0.9600
4991	19.90	11.91	12.84	0.9281
4991	9.95	5.97	6.88	0.8675
4991	0.00	0.00	0.56	As Found Zero
4991	39.84	23.76	24.75	As Found Span
			Average Correction Factor	0.9186

Calculated value of As Found Response: 23.789 ppm Percent Change of As Found: -0.1%

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	19.12	ppm	18.89	ppm

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **CO**

Air Monitoring Network **PASZA**

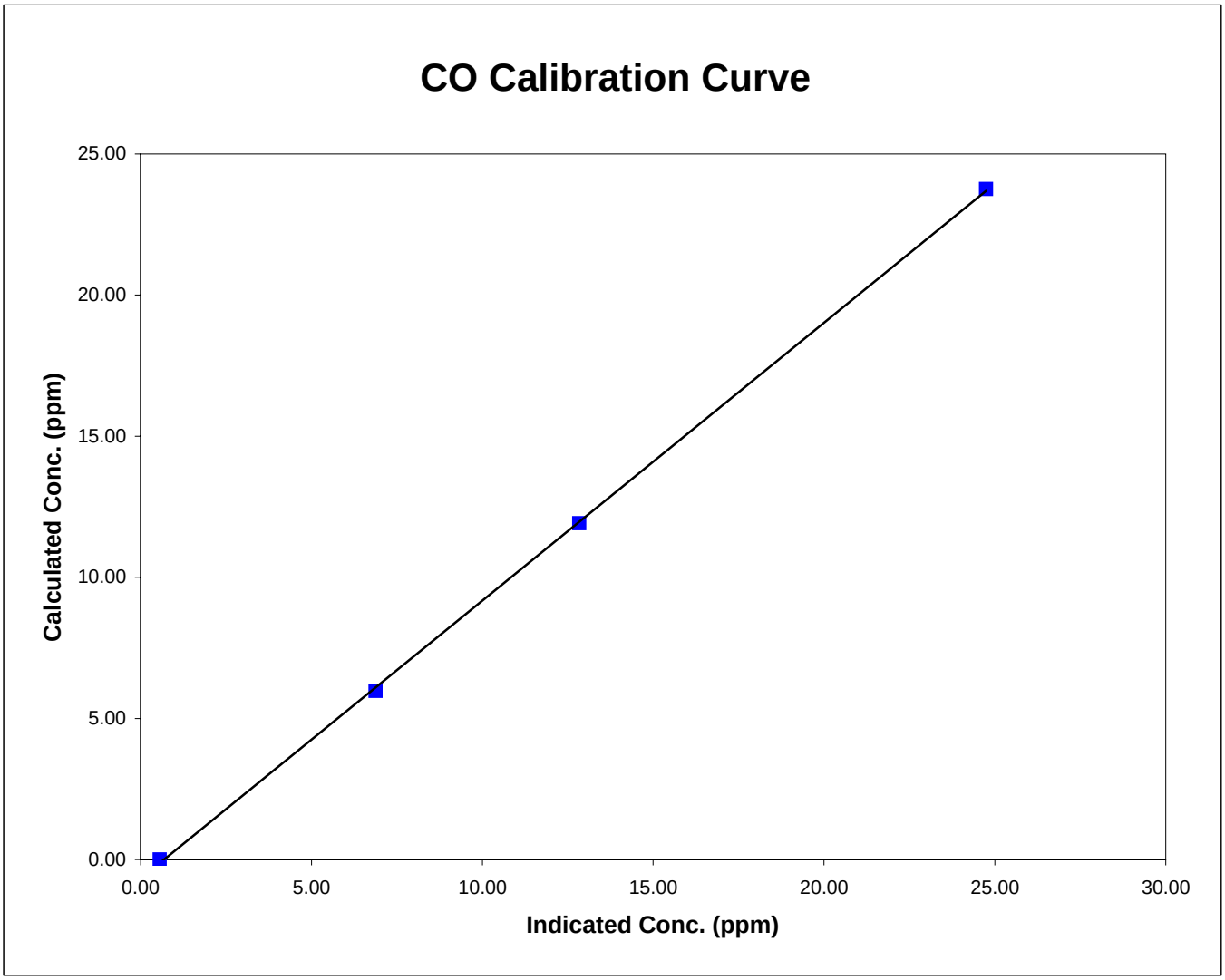
FOCUS AIR QUALITY MONITORING

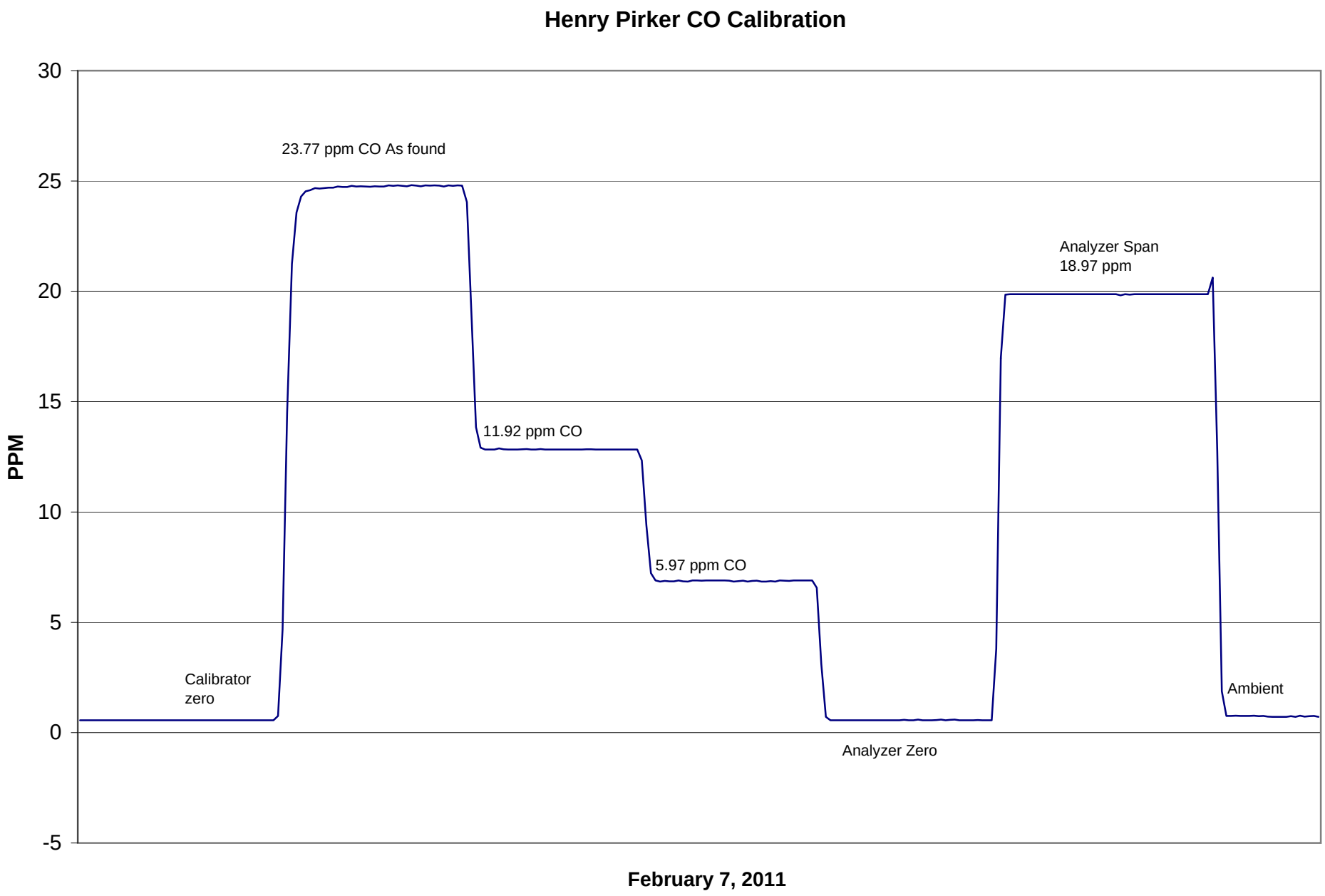
Station Information

Calibration Date	February 7, 2011	Previous Calibration	January 26, 2011
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	11:00	End Time (MST)	13:16
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	0.561	N/A		
23.757	24.747	0.9600	Correlation Coefficient	0.999874
11.914	12.837	0.9281		
5.969	6.880	0.8675	Slope	0.984830
			Intercept	-0.675400




Henry Pirker CO Calibration
30
25
20
15
10
5
0
-5
PPM
23.77 ppm CO As found
11.92 ppm CO
5.97 ppm CO
Analyzer Span
18.97 ppm
Calibrator
zero
Analyzer Zero
Ambient
February 7, 2011

Calibration Report

Parameter **THC**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 7, 2011	Previous Calibration	January 26, 2011
Station Number	1	Station Location	Henry Pirker
Reason: Routine	Install	Removal	Other:
Start Time (MST)	9:30	End Time (MST)	11:46
Barometric Pressure	0.936 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	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	1.006442	Calculated slope	1.034953
Calculated intercept	0.150385	Calculated intercept	-0.043363
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	9617	capture	9616	capture
THC zero counts	448	capture	446	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)
4988	0.00	0.00	0.03	N/A
4991	69.73	20.99	20.34	1.0317
4991	29.90	9.07	8.73	1.0387
4991	9.92	3.02	3.02	0.9997
4991	0.00	0.00	0.03	As Found Zero
4991	69.73	20.99	20.34	As Found Span
			Average Correction Factor	1.0234

Calculated value of As Found Response: 20.593 ppm Percent Change of As Found: 1.9%

	before calibration		after calibration	
Auto zero	0.10	ppm	0.00	ppm
Auto span	20.65	ppm	22.94	ppm

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **THC**

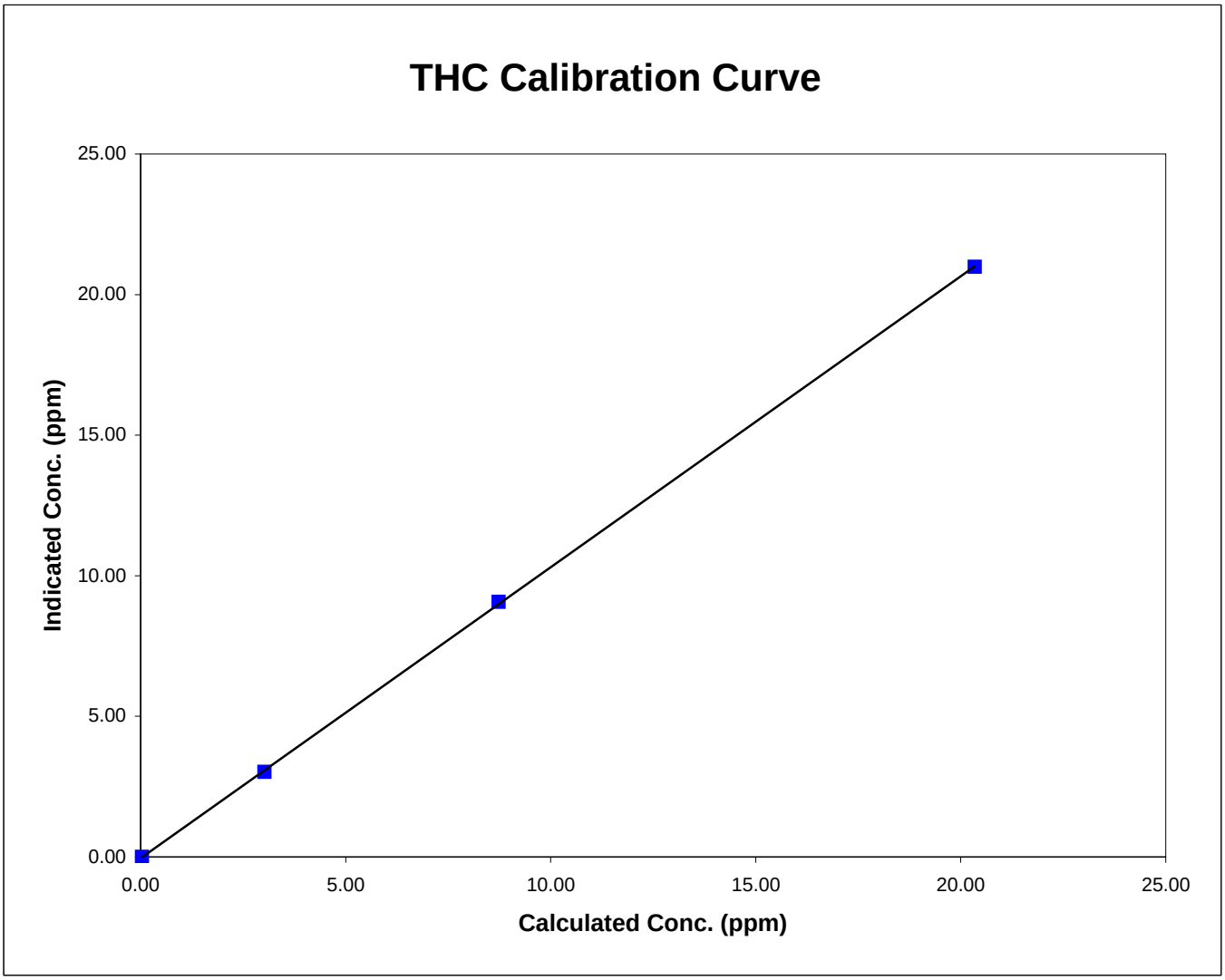
Air Monitoring Network **PASZA**

Station Information

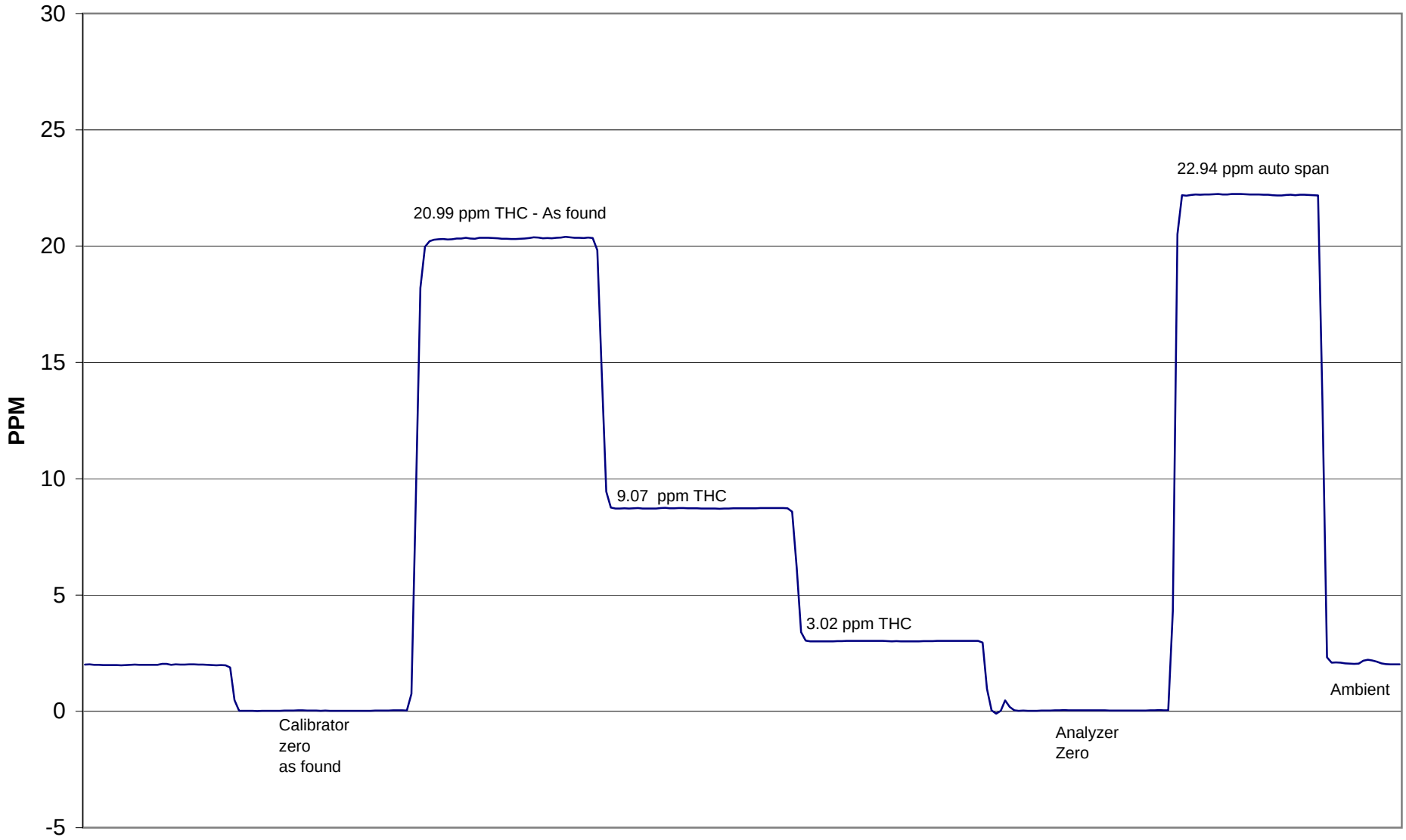
Calibration Date	February 7, 2011	Previous Calibration	January 26, 2011
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:30	End Time (MST)	11:46
Analyzer make/model	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.032	N/A		
20.988	20.344	1.0317	Correlation Coefficient	0.999959
9.071	8.733	1.0387		
3.022	3.023	0.9997	Slope	1.034953
			Intercept	-0.043363



Henry Pirker THC Calibration



February 7, 2011

Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **SO_2**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	February 4, 2011	Previous Calibration	January 25, 2011
Station Number	2	Station Location	Evergreen Park
Reason: Routine	Install	Removal	Other:
Start Time (MST)	9:45	End Time (MST)	12:07
Barometric Pressure	0.934 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	50.6 ppm	Cal Gas Expiry Date	4/6/2012
Correction factor	0.031749	Cal Gas Cylinder #	SGAL3245
DACS make	Focus AP1000	DACS serial No.	52620
DACS voltage range	0 - 10 volt	DACS channel #	6
	Before		After
Calculated slope	0.990969	Calculated slope	0.992163
Calculated intercept	-1.948025	Calculated intercept	-2.123875
Analyzer make	Teco 43i	Analyzer serial #	701120008

	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
Background	11.2		11.2	
coefficient	1.081		1.081	
Lamp Voltage	832	volts	832	volts
Chamber Temp	45	Deg C	45.2	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	665.3	mm Hg	659.2	mm Hg
Sample Flow	0.453	ccm	0.449	ccm
Lamp Intensity	93	%	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)
4990	0.0	0.00	0.4	N/A
4991	39.85	400.81	405.0	0.9895
4991	19.91	201.05	206.1	0.9754
4991	9.96	100.78	105.2	0.9577
	0.0			
4991	0.0	0.00	0.4	As Found Zero
4991	39.85	400.81	405.0	As Found Span
			Average Correction Factor	0.9742

Calculated value of As Found Response: 399.080 ppm Percent Change of As Found: 0.4%

	before calibration		after calibration	
Auto zero	0.7	ppm	0.4	ppm
Auto span	286.9	ppm	297.2	ppm

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **SO2**

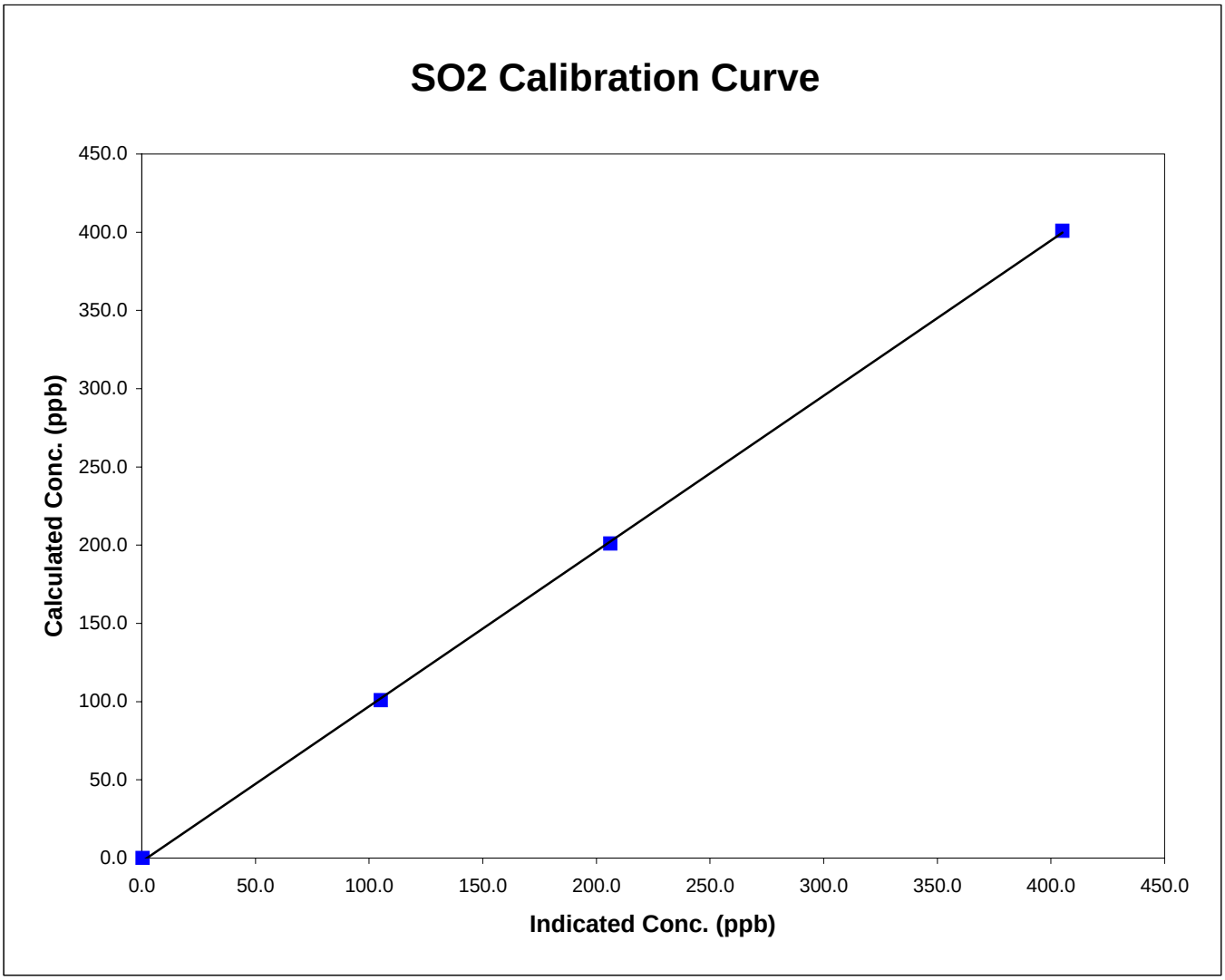
Air Monitoring Network **PASZA**

Station Information

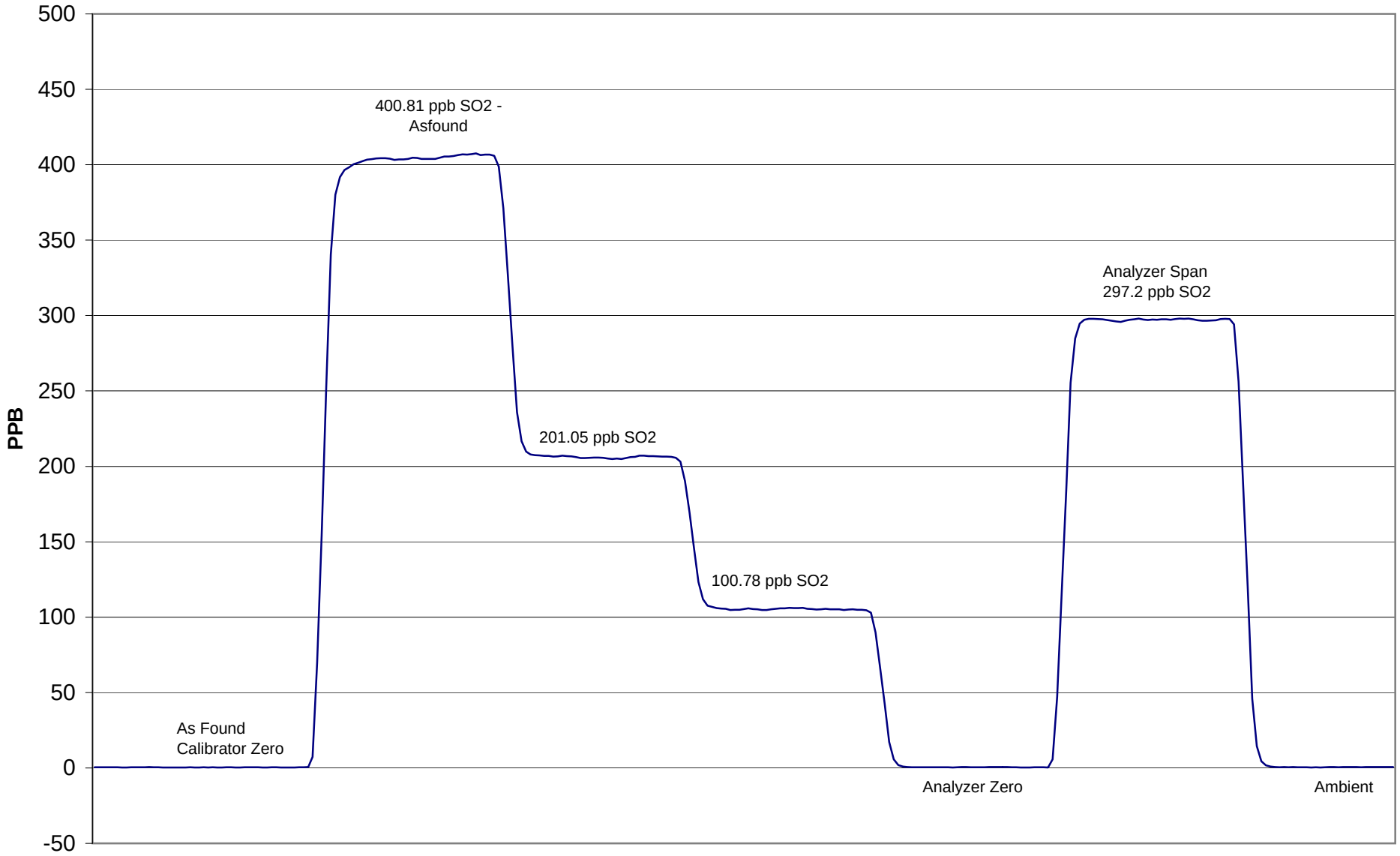
Calibration Date	February 4, 2011	Previous Calibration	January 25, 2011
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	9:45	End Time (MST)	12:07
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A		
400.8	405.0	0.9895	Correlation Coefficient	0.999906
201.1	206.1	0.9754		
100.8	105.2	0.9577	Slope	0.992163
			Intercept	-2.123875



Evergreen Park SO_2 Calibration



February 4, 2011

Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **TRS**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	February 4, 2011	Previous Calibration	January 25, 2011
Station Number	2	Station Location	Evergreen Park
Reason: Routine	Install	Removal	Other:

Start Time (MST)	10:55	End Time (MST)	13:08
Barometric Pressure	0.934 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Conc	5.15 ppm	Cal Gas Expiry Date	4/2/2009
Correction factor	0.031749	Cal Gas Cylinder #	ALM 013295
DACS make	Focus AP1000	DACS serial No.	52620
DACS voltage range	0 - 10 volt	DACS channel #	5
	Before		After
Calculated slope	1.000900	Calculated slope	1.007566
Calculated intercept	-0.726106	Calculated intercept	-0.626815

Analyzer make	TEI Model 43C	Analyzer serial #	436610005

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	16	ppb	16	ppb
coefficient	0.859		0.859	
Lamp Voltage	808	volts	808	volts
Chamber Temp	44.1	Deg C	45	Deg C
Perm Gas Temp	45.02	Deg C	45.01	Deg C
Pressure	645.8	mm Hg	648.3	mm Hg
Sample Flow	0.479	ccm	0.481	ccm
Lamp Intensity	45,619	mv	46,031	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)
4990	0.00	0.00	0.5	N/A
4991	79.79	81.04	80.9	1.0013
4991	39.87	40.81	41.4	0.9870
4991	9.95	10.25	10.8	0.9450
4990	0.00	0.00	0.5	As Found Zero
4991	79.79	81.04	80.9	As Found Span
			Average Correction Factor	0.9778

Calculated value of As Found Response: 79.81 ppm Percent Change of As Found: 1.5%

	before calibration		after calibration	
Auto zero	-0.5	ppm	-0.3	ppm
Auto span	62.0	ppm	67.3	ppm

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **TRS**

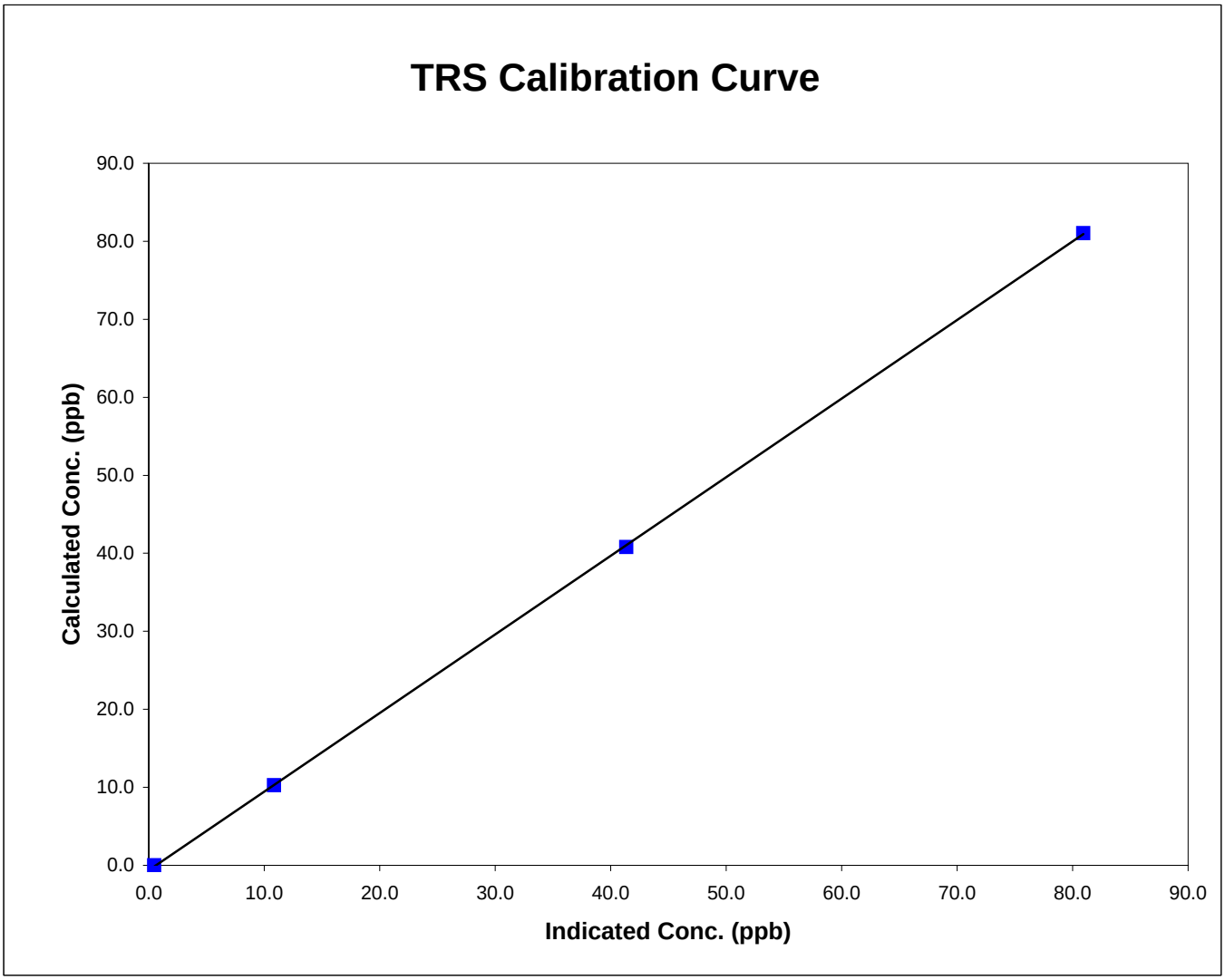
Air Monitoring Network **PASZA**

Station Information

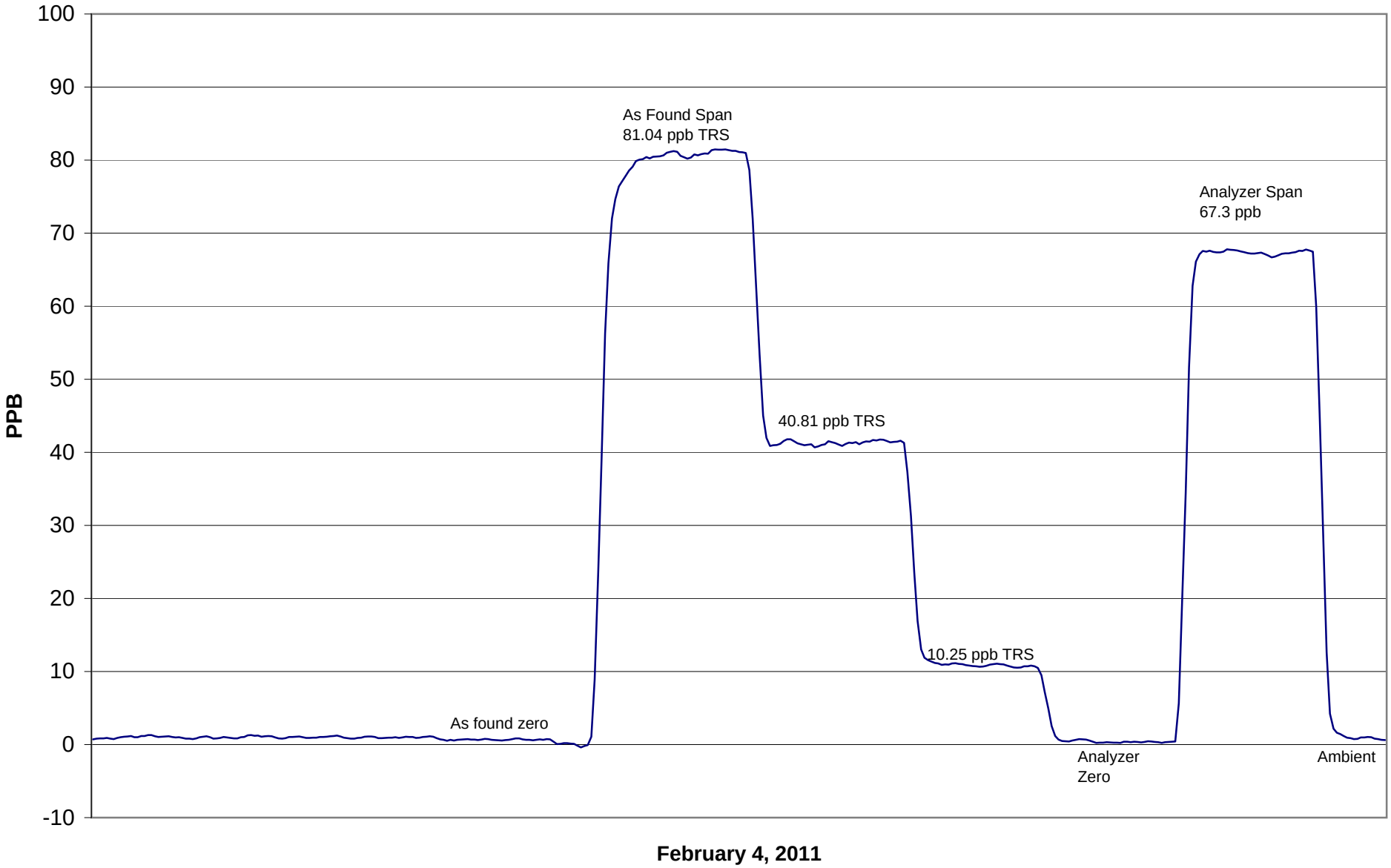
Calibration Date	February 4, 2011	Previous Calibration	January 25, 2011
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	10:55	End Time (MST)	13:08
Analyzer make/model	TEI Model 43C	Analyzer serial #	436610005

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A		
81.0	80.9	1.0013	Correlation Coefficient	0.999977
40.8	41.4	0.9870		
10.2	10.8	0.9450	Slope	1.007566
			Intercept	-0.626815



Evergreen Park TRS Calibration



Calibration Report

Parameter **SO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 9, 2011	Previous Calibration	January 11, 2011
Station Number	3	Station Location	Smoky Heights

Reason: Routine | Install | Removal | Other:

Start Time (MST)	10:25	End Time (MST)	13:19
Barometric Pressure	0.936 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentratior	50.6 ppm	Cal Gas Cert Date	11/29/2010
Correction factor	0.031817	Cal Gas Cylinder #	LL34002
DACS make	Focus AP1000	DACS serial No.	45272
DACS voltage range	0 - 10 volt	DACS channel #	6
	Before		After
Calculated slope	1.006705	Calculated slope	1.006740
Calculated intercept	-1.891558	Calculated intercept	-2.210069

Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	9.2		9.4	
coefficient	0.684		0.690	
Lamp Voltage	926	volts	927	volts
Chamber Temp	45	Deg C	45.01	Deg C
Perm Gas Temp	45	Deg C	44.99	Deg C
Pressure	675.9	mm Hg	665.7	mm Hg
Sample Flow	0.445	ccm	0.439	ccm
Lamp Intensity	88	%	89	%

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	0.3	N/A
4989	39.84	400.87	399.4	1.0036
4989	19.91	201.13	202.9	0.9912
4989	9.95	100.72	104.1	0.9674
4989	0.0	0.00	0.3	As Found Zero
4989	39.84	400.87	383.8	As Found Span
			Average Correction Factor	0.9874

Calculated value of As Found Response: 384.155 ppm Percent Change of As Found: 4.2%

	before calibration		after calibration	
Auto zero	0.4	ppb	0.3	ppb
Auto span	311.6	ppb	306.3	ppb

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **SO2**

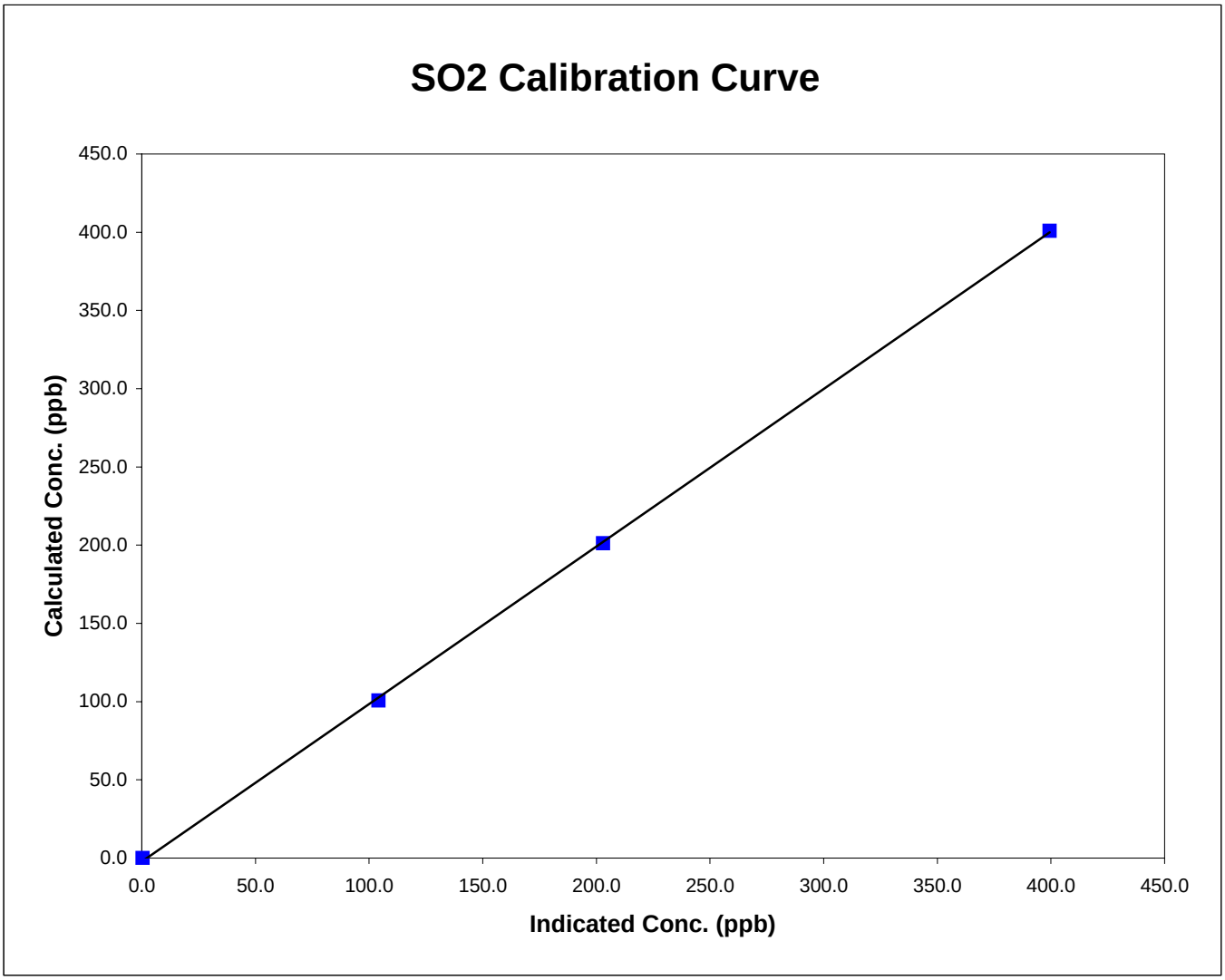
Air Monitoring Network **PASZA**

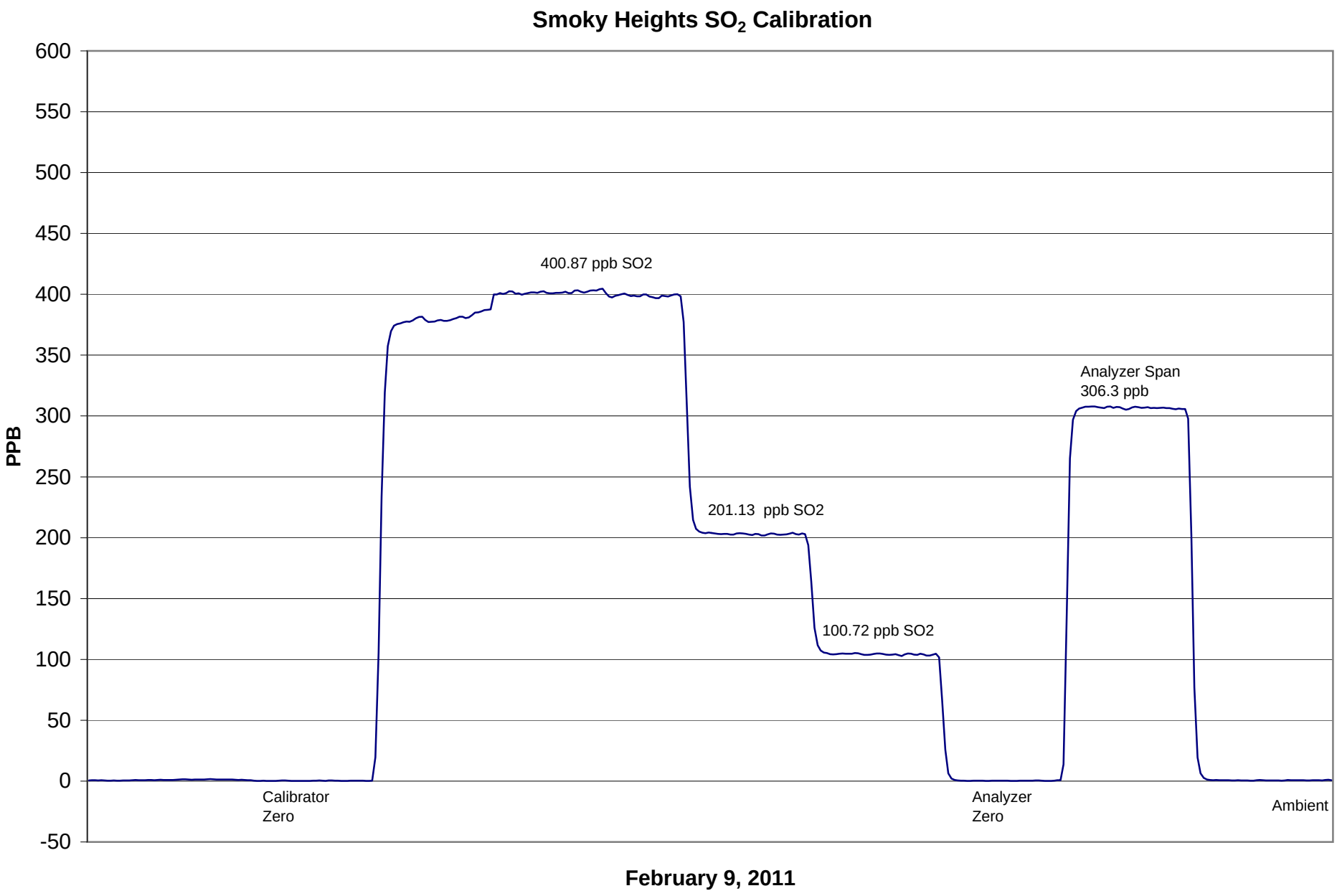
Station Information

Calibration Date	February 9, 2011	Previous Calibration	January 11, 2011
Station Number	3	Station Location	Smoky Heights
Start Time (MST)	10:25	End Time (MST)	13:19
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	0.3	N/A		
400.9	399.4	1.0036	Correlation Coefficient	0.999899
201.1	202.9	0.9912		
100.7	104.1	0.9674	Slope	1.006740
			Intercept	-2.210069




Smoky Heights SO_2 Calibration
600
550
500
450
400
350
300
250
200
150
100
50
0
-50
PPB
400.87 ppb SO2
201.13 ppb SO2
100.72 ppb SO2
Analyzer Span
306.3 ppb
Calibrator
Zero
Analyzer
Zero
Ambient
February 9, 2011

Calibration Report

Parameter **TRS**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 9, 2011	Previous Calibration	January 6, 2011
Station Number	3	Station Location	Smoky Heights
Reason: Routine	Install	Removal	Other:

Start Time (MST)	11:50	End Time (MST)	14:13
Barometric Pressure	0.936 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Conc	5.15 ppm	Cal Gas Expiry Date	4/2/2009
Correction factor	0.031817	Cal Gas Cylinder #	ALM013295
DACS make	Focus AP1000	DACS serial No.	52620
DACS voltage range	0 - 10 volt	DACS channel #	5
	Before		After
Calculated slope	1.006366	Calculated slope	1.006424
Calculated intercept	-0.173267	Calculated intercept	0.167468

Analyzer make	TEI Model 43C	Analyzer serial #	0436610005

	before		after	
Concentration range	100	ppb	100	ppb
Background	15.2	ppb	15.2	ppb
coefficient	1.068		1.068	
Lamp Voltage	771	volts	770	volts
Chamber Temp	43.9	Deg C	44.99	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	494.2	mm Hg	492.6	mm Hg
Sample Flow	0.718	ccm	0.711	ccm
Lamp Intensity	32,788	mv	31,984	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	-0.1	N/A
4990	79.77	81.03	80.2	1.0103
4990	39.85	40.80	40.7	1.0020
4990	9.94	10.24	9.8	1.0495
4990	0.0	0.00	-0.1	As Found Zero
4990	79.77	81.03	80.2	As Found Span
			Average Correction Factor	1.0206

Calculated value of As Found Response: 80.66 ppm Percent Change of As Found: 0.5%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.1	ppm
Auto span	41.9	ppm	41.6	ppm

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **TRS**

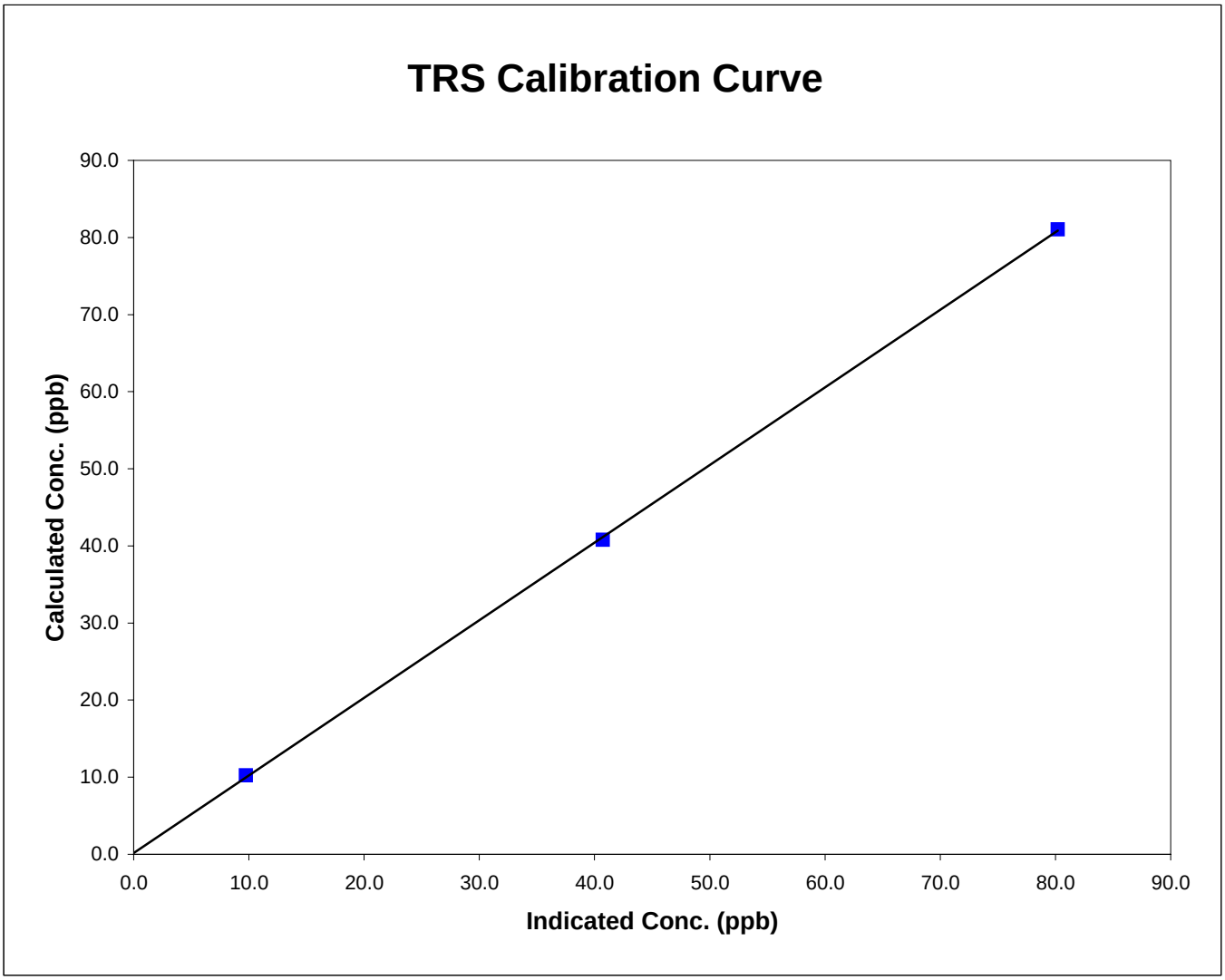
Air Monitoring Network **PASZA**

Station Information

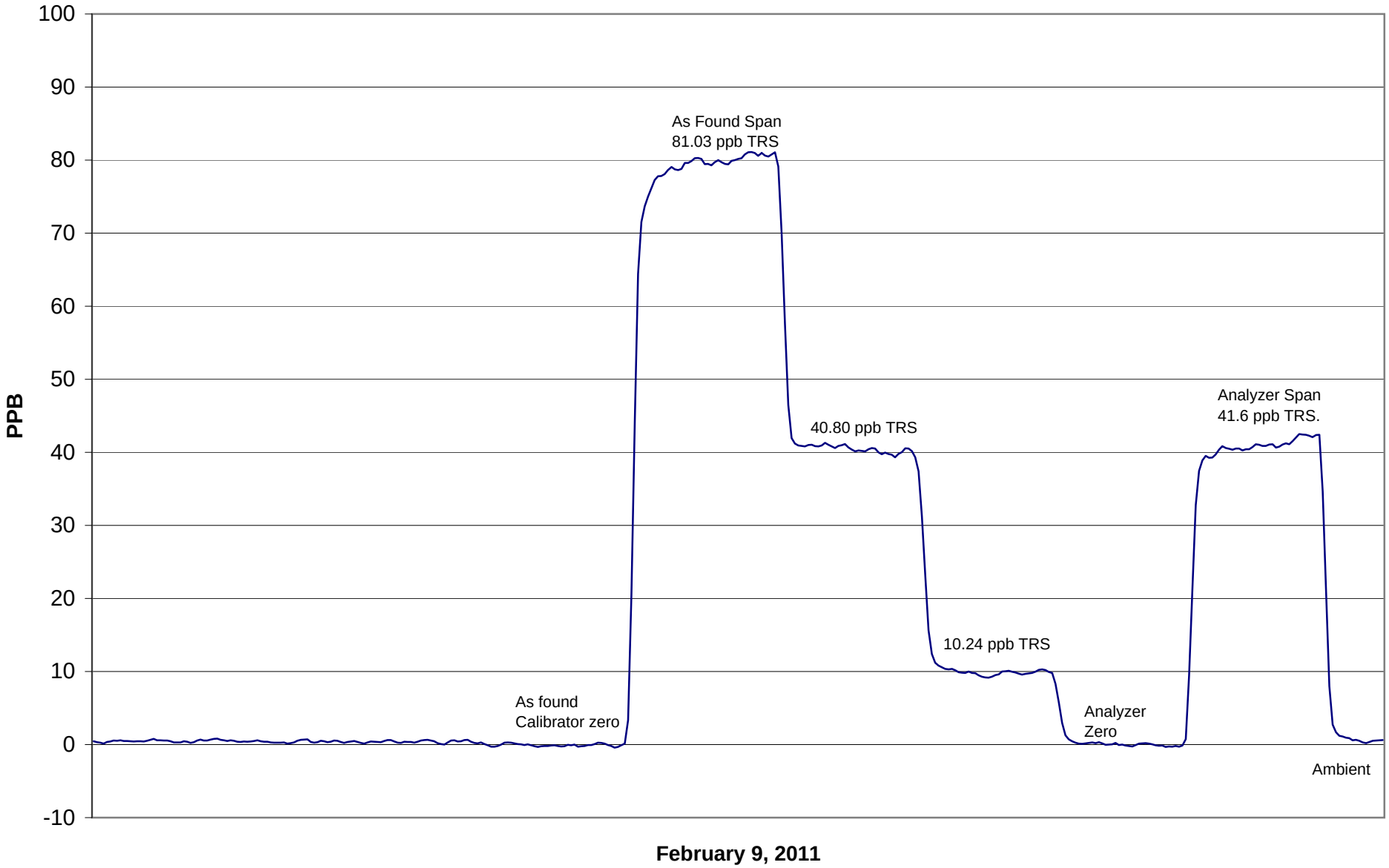
Calibration Date	February 9, 2011	Previous Calibration	January 6, 2011
Station Number	3	Station Location	Smoky Heights
Start Time (MST)	11:50	End Time (MST)	14:13
Analyzer make/model	TEI Model 43C	Analyzer serial #	0436610005

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A		
81.0	80.2	1.0103	Correlation Coefficient	0.999948
40.8	40.7	1.0020		
10.2	9.8	1.0495	Slope	1.006424
			Intercept	0.167468



Smoky Heights TRS Calibration



Calibration Report

Parameter **SO2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 2, 2011	Previous Calibration	January 27, 2011
Station Number	4	Station Location	Beaverlodge
Reason: Routine	Install	Removal	Other:
Start Time (MST)	8:00	End Time (MST)	10:36
Barometric Pressure	0.912 atm	Station Temperature	23.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	10.06 ppm	Cal Gas Expiry Date	7/27/2009
Gas Cert Reference	CC 114395		
DACS make	Focus AP1000	DACS serial No.	45269
DACS voltage range	0 - 10 volt	DACS channel #	5
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.991036	Calculated slope	1.048269
Calculated intercept	0.008364	Calculated intercept	0.254094
Analyzer make	TEI Model 43i-TLE	Analyzer serial #	713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.59		2.59	
Coefficient	1.021		0.959	
PMT	-787.4	V	-787.4	V
UV Lamp Voltage	1129	V	1153	V
Chamber Temp	44.9	Deg C	45.2	Deg C
Pressure	657.7	mm Hg	667.9	mm Hg
Sample Flow	0.518	LPM	0.518	LPM
Lamp Intesity	96%	%	96%	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.0	-0.1	N/A
4988	39.82	79.7	75.8	1.0511
4988	19.90	40.0	37.9	1.0549
4988	9.93	20.0	18.7	1.0701
4988	0.00	0.0	-0.1	As found zero
4988	39.82	79.7	75.8	As found span
			Average Correction Factor	1.0587

Calculated value of As Found Response: 75.259 ppm Percent Change of As Found: 5.5%

	before calibration		after calibration	
Auto zero	-0.3	ppb	0.2	ppb
Auto span	59.7	ppb	61.3	ppb

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **SO2**

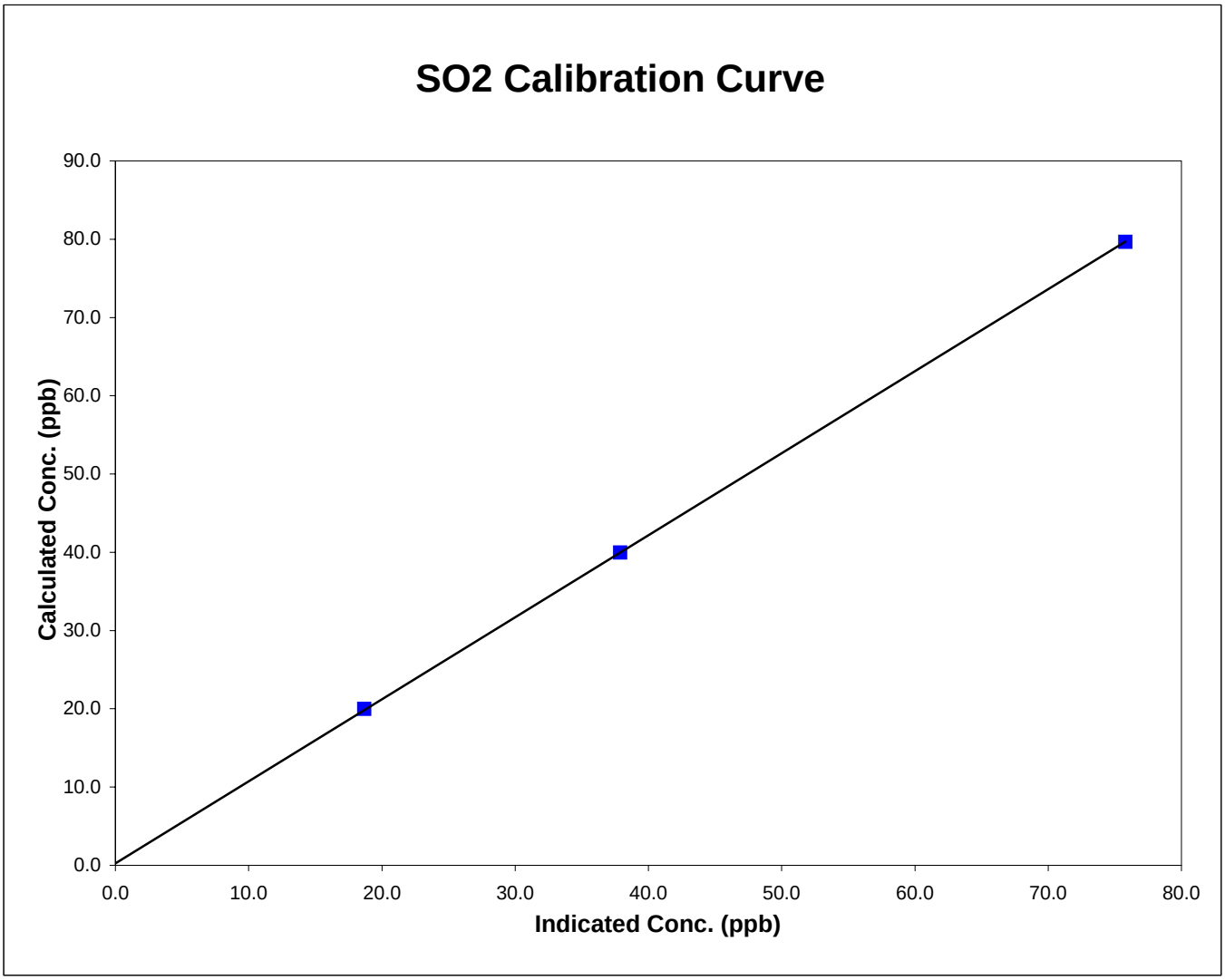
Air Monitoring Network **PASZA**

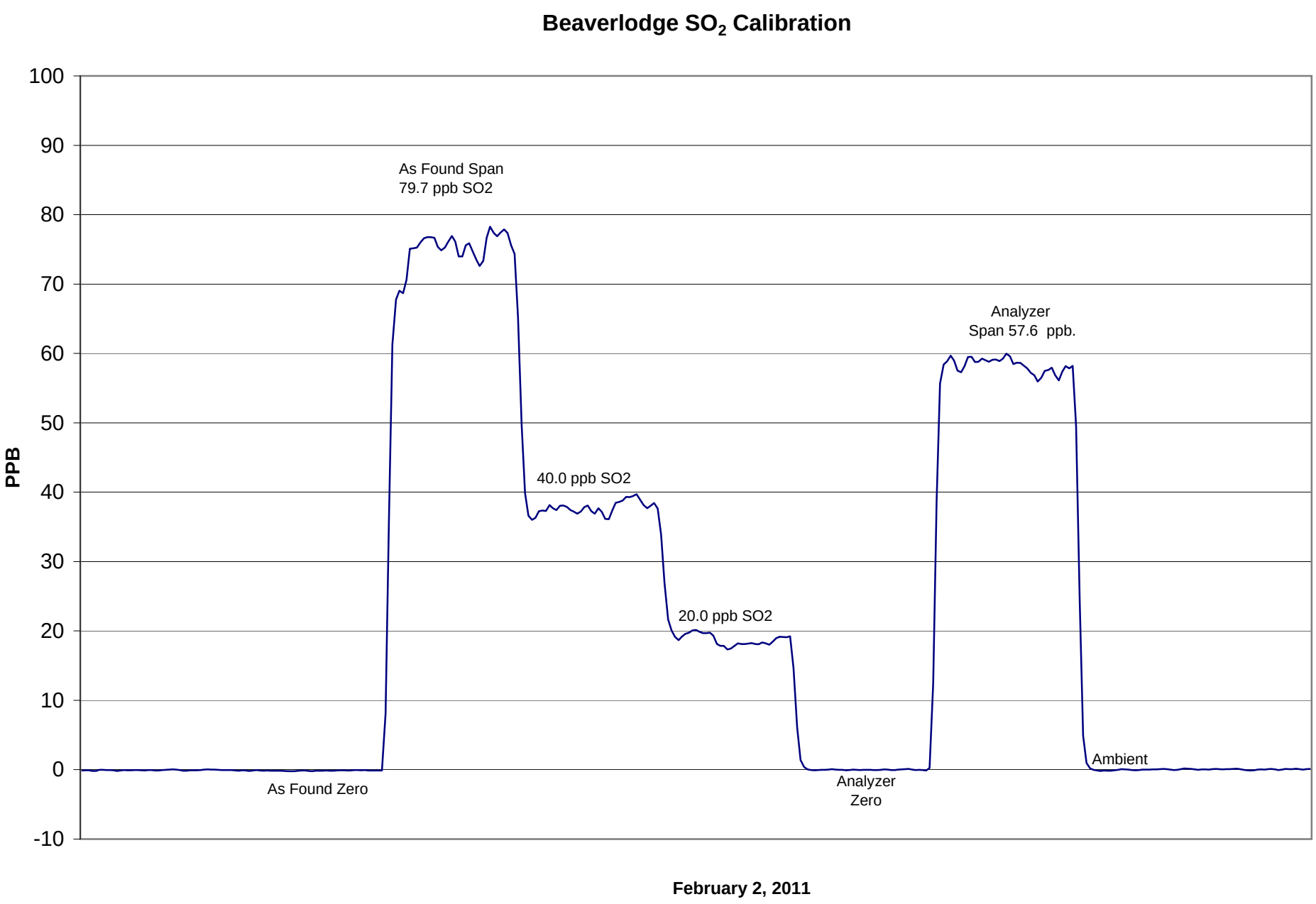
Station Information

Calibration Date	February 2, 2011	Previous Calibration	January 27, 2011
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:00	End Time (MST)	10:36
Analyzer make/model	TEI Model 43i-TLE	Analyzer serial #	713021137

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A		
79.7	75.8	1.0511	Correlation Coefficient	0.999989
40.0	37.9	1.0549		
20.0	18.7	1.0701	Slope	1.048269
			Intercept	0.254094




Beaverlodge SO_2 Calibration
100
90
80
70
60
50
40
30
20
10
0
-10
PPB
As Found Span
79.7 ppb SO2
40.0 ppb SO2
20.0 ppb SO2
Analyzer
Span 57.6 ppb.
Ambient
As Found Zero
Analyzer
Zero
February 2, 2011

Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 2, 2011	Previous Calibration	January 27, 2011
Station Number	4	Station Location	BeaverLodge

Reason: Routine | Installation | Removal | Other:

Start Time (MST)	8:00		End Time (MST)	12:01	
Barometric Pressure	0.912	Atm	Station Temperature	23.0	Deg C
Calibrator	Environics		Serial Number	2844	
NO Cal Gas Conc	50.1	ppm	Cal Gas Expiry Date		
NOx Cal Gas Conc	50.2	ppm	Cal Gas Serial #	CC-114395	

DACS Information

DACS make: AP1000 DACS serial No.:

Parameter		NO2	NOx	NO
Before	Data Slope	1.020893	0.990627	0.975273
	Data Offset	-0.014515	0.011901	0.165379
After	Data Slope	1.006862	1.000979	0.992443
	Data Offset	0.631275	-1.644850	-0.732594
Channel #		8	6	7
Voltage Range		0 - 10 VDC	0 - 10 VDC	0 - 10 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	2.5	mV	2.5	mV
NOx bkgnd	2.8	mV	2.8	mV
NO coefficient	1.474		1.474	
NOx coefficient	0.997		0.997	
NO2 conv temp	323.7	Deg C	323.7	Deg C
PMT Temp	-3.0	Deg C	-3.0	Deg C
PMT Volt	-676.4	mV	-676.4	mV
R Cell Press	176.4	in Hg	182.1	in Hg
Sample Flow	0.689	ccm	0.691	ccm

Calibration Report

Parameter **NOX-NO-NO2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: February 2, 2011 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	-0.1	-0.1	0.0	N/A	N/A
1	4988	39.82	397.6	396.8	0.8	397.9	400.2	-3.7	0.9992	0.9914
2	4988	19.90	199.5	199.1	0.4	201.9	201.4	-0.7	0.9879	0.9884
3	4988	9.93	99.7	99.5	0.2	103.0	102.1	0.5	0.9688	0.9747
AFZ	4988	0.00	0.0	0.0	0.0	-0.1	-0.1	0.0	0.0000	0.0000
AFS	4988	39.84	397.8	397.0	0.8	397.9	400.2	-3.7	0.9997	0.9919
							Average Correction Factor		0.9853	0.9848

As Found Concentrations: NO_X= 398.0 NO= 400.5 As Found Percent Change NO_X= 0.1% NO= 0.9%

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	-0.1	-0.1	0.0	N/A	N/A	N/A	N/A
NO point	400.2	400.2	0.0	397.9	400.2	-3.7	1.0058	1.0000	N/A	N/A
300	400.2	88.0	312.2	399.1	88.0	309.8	1.0028	1.0000	1.0076	99.2%
200	400.2	185.6	214.6	399.2	185.6	212.5	1.0024	1.0000	1.0099	99.0%
100	400.2	281.5	118.8	398.8	281.5	116.3	1.0035	1.0000	1.0210	97.9%
					Average Correction Factor		1.0029	1.0000	1.0128	98.7%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.2	-0.3	-0.2	ppb	0.0	0.2	0.3	ppb
Auto span	238.0	235.5	1.6	ppb	222.4	219.8	1.2	ppb

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

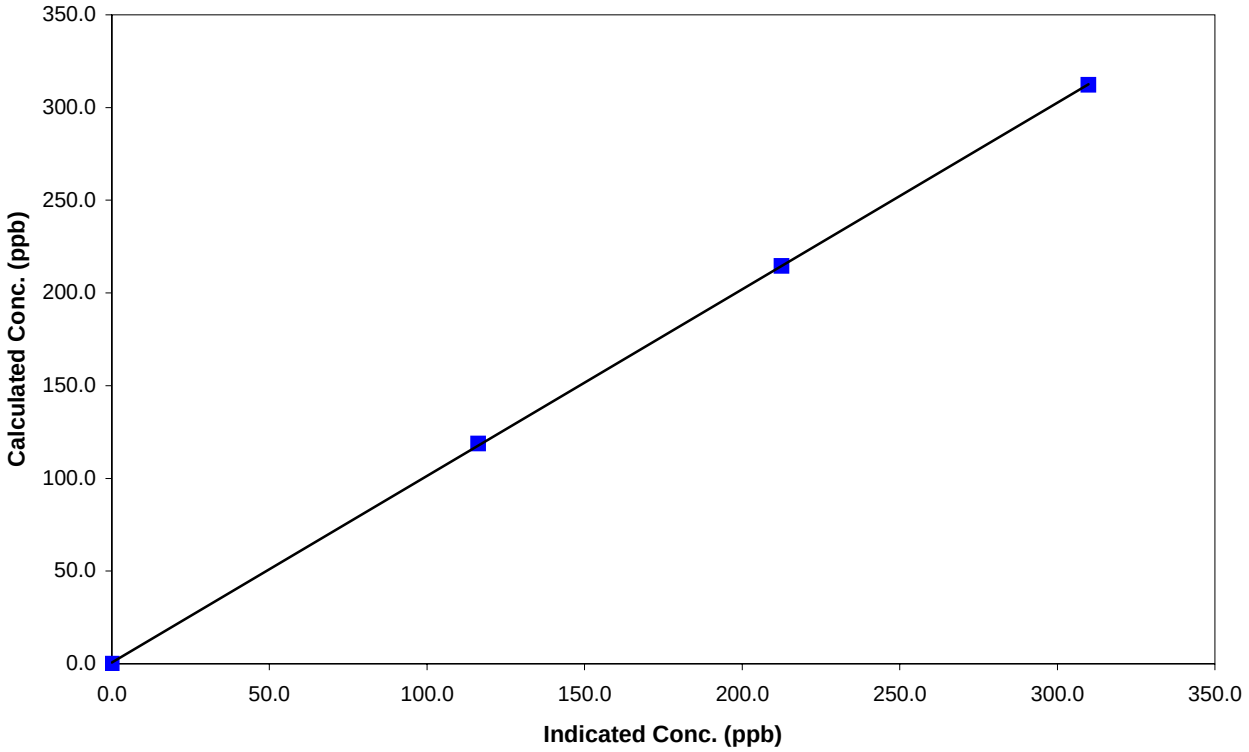
Station Information

Calibration Date	February 2, 2011	Previous Calibration	January 27, 2011
Station Number	4	Station Location	BeaverLodge
Start Time (MST)	8:00	End Time (MST)	12:01
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		
312.2	309.8	1.0076	Correlation Coefficient	0.999970
214.6	212.5	1.0099		
118.8	116.3	1.0210	Slope	1.006862
			Intercept	0.631275

NO_2 Calibration Curve



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

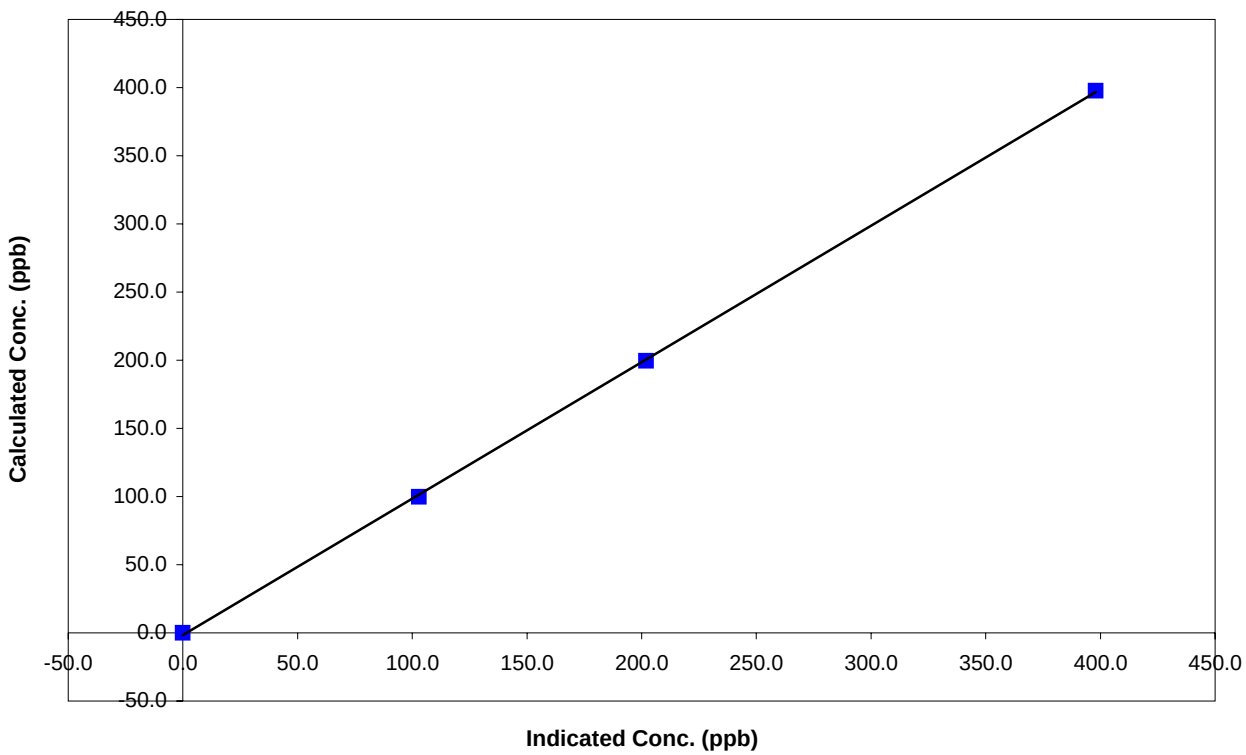
Station Information

Calibration Date	February 2, 2011	Previous Calibration	January 27, 2011
Station Number	4	Station Location	BeaverLodge
Start Time (MST)	8:00	End Time (MST)	12:01
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		
397.6	397.9	0.9992	Correlation Coefficient	0.999912
199.5	201.9	0.9879		
99.7	103.0	0.9688	Slope	1.000979
			Intercept	-1.644850

NOx Calibration Curve



Calibration Summary

Parameter **NO**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

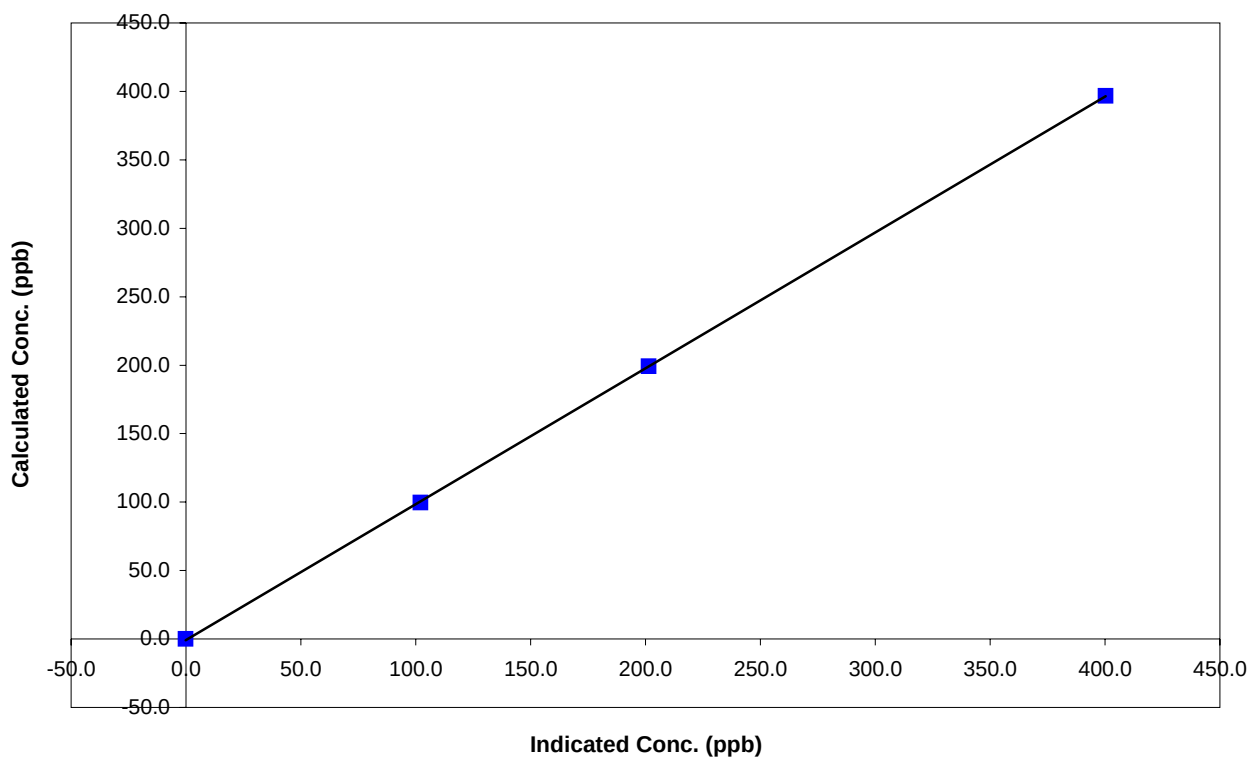
Station Information

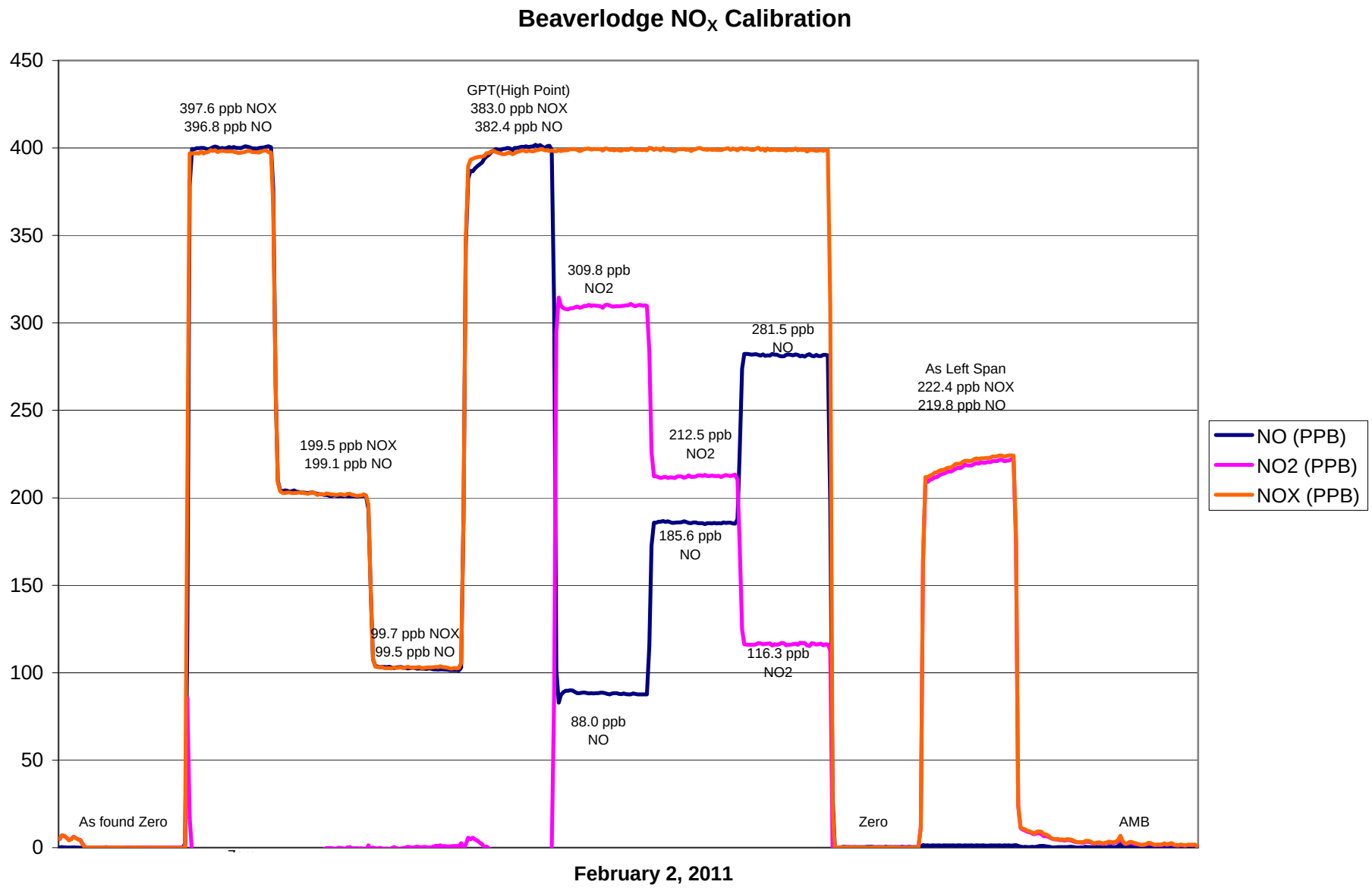
Calibration Date	February 2, 2011	Previous Calibration	January 27, 2011
Station Number	4	Station Location	BeaverLodge
Start Time (MST)	8:00	End Time (MST)	12:01
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A		
396.8	400.2	0.9914	Correlation Coefficient	0.999977
199.1	201.4	0.9884		
99.5	102.1	0.9747	Slope	0.992443
			Intercept	-0.732594

NO Calibration Curve




Beaverlodge NOX Calibration
450
400
350
300
250
200
150
100
50
0
397.6 ppb NOX
396.8 ppb NO
GPT(High Point)
383.0 ppb NOX
382.4 ppb NO
309.8 ppb
NO2
281.5 ppb
NO
As Left Span
222.4 ppb NOX
219.8 ppb NO
199.5 ppb NOX
199.1 ppb NO
212.5 ppb
NO2
185.6 ppb
NO
99.7 ppb NOX
99.5 ppb NO
116.3 ppb
NO2
88.0 ppb
NO
As found Zero
Zero
AMB
NO (PPB)
NO2 (PPB)
NOX (PPB)
February 2, 2011

Calibration Report

Parameter **O3**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 2, 2011	Previous Calibration	January 27, 2011
Station Number	4	Station Location	Beaverlodge
Reason: Routine	Install	Removal	Other:
Start Time (MST)	10:17	End Time (MST)	12:39
Barometric Pressure	0.912 atm	Station Temperature	23.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	Focus AP1000	DACS serial No.	45269
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	1.075563	Calculated slope	1.014264
Calculated intercept	-0.089989	Calculated intercept	0.168097
Analyzer make	Teco 49C	Analyzer serial #	49C-76443-383

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-1.40	ppb	-0.80	ppb
slope	1.008		1.008	
Lamp temp	56.5	mV	56.5	mV
Lamp Intensity A/B	64809/67244	mV	64643/67081	mV
Pressure	678.3	mm Hg	641.9	mm Hg
Flow A	0.708	ccm	0.679	ccm
Flow B	0.655	ccm	0.622	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)
4990	0.00	0.0	0.1	N/A
4990	0.00	312.2	307.6	1.0151
4990	0.00	214.6	211.9	1.0127
4990	0.00	118.8	116.3	1.0215
4990	0.00	0.0	0.1	As found zero
4990	0.00	312.2	307.6	As found span
			Average Correction Factor	1.0164

Calculated value of As Found Response: 330.6 ppm Percent Change of As Found: 5.9%

	before calibration		after calibration	
Auto zero	0.1	ppb	-0.2	ppb
Auto span	114.3	ppb	122.3	ppb

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **O3**

Air Monitoring Network **PASZA**

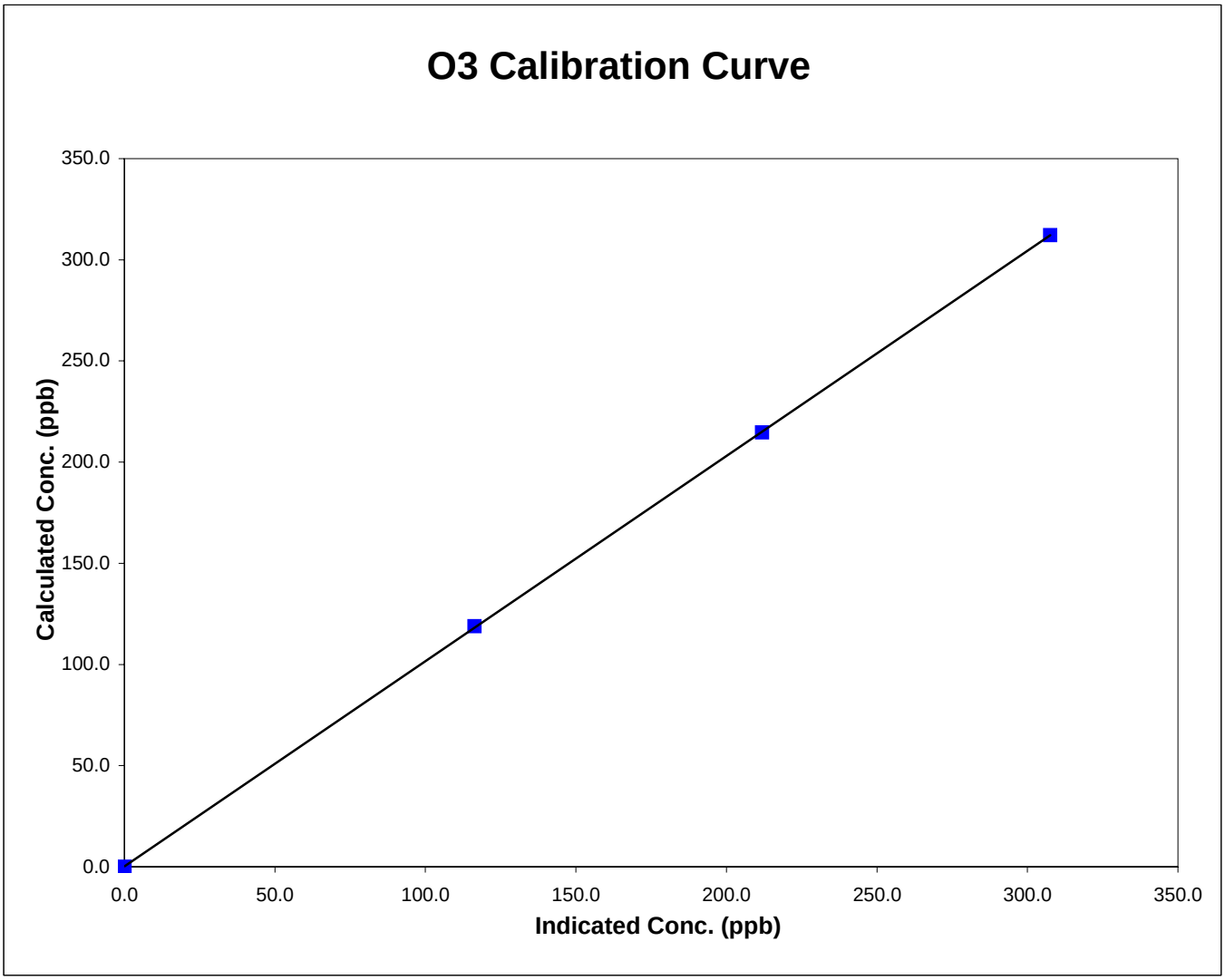
FOCUS AIR QUALITY MONITORING

Station Information

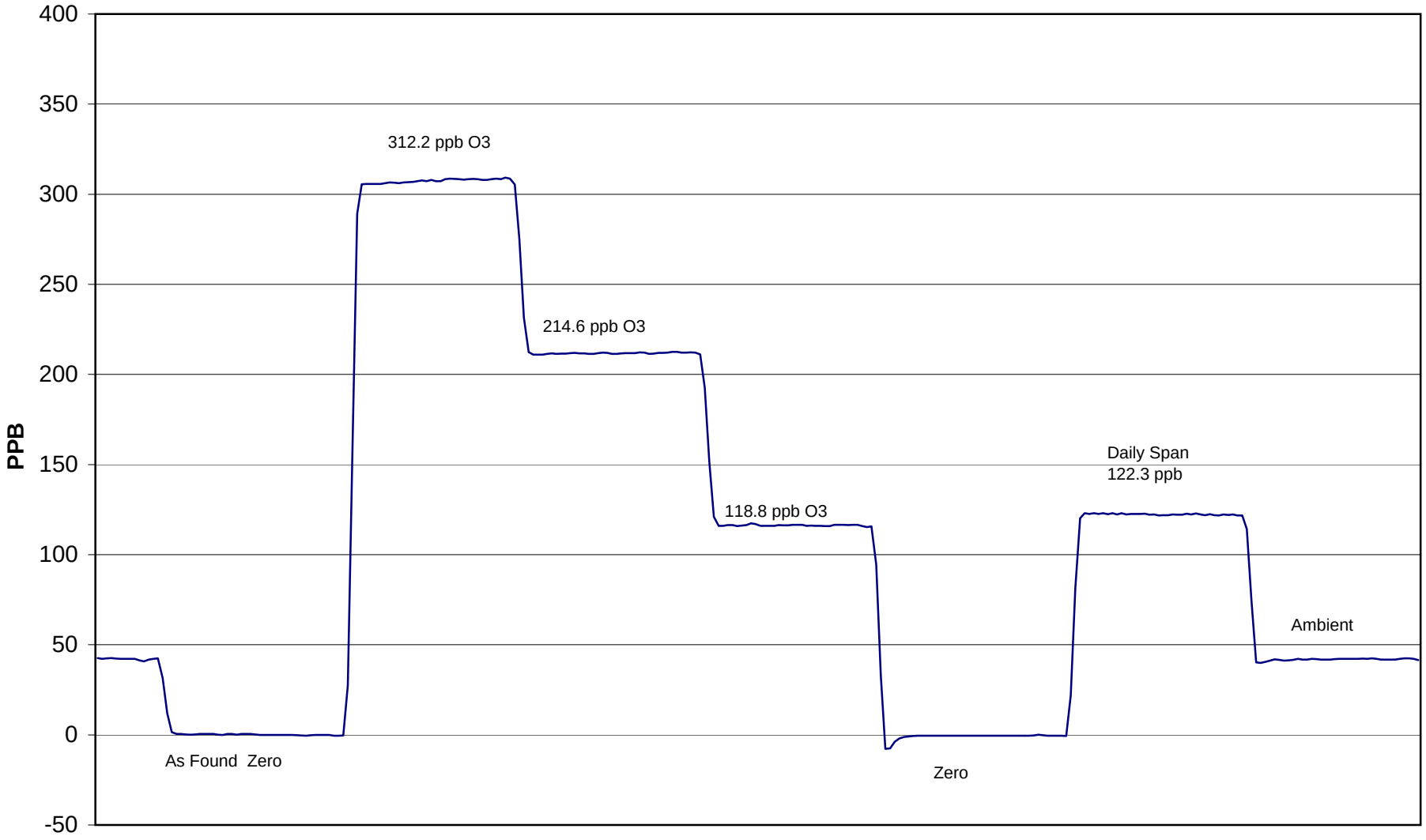
Calibration Date	February 2, 2011	Previous Calibration	January 27, 2011
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	10:17	End Time (MST)	12:39
Analyzer make/model	Teco 49C	Analyzer serial #	49C-76443-383

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	NA		
312.2	307.6	1.0151	Correlation Coefficient	0.999986
214.6	211.9	1.0127		
118.8	116.3	1.0215	Slope	1.014264
			Intercept	0.168097



Beaverlodge O_3 Calibration



February 2, 2011

Calibration Report

Parameter **SO2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 16, 2011	Previous Calibration	January 12, 2011
Station Number	9	Station Location	Rover - Bonanza
Reason: Routine	Install	Removal	Other: Datalogger Upgrade
Start Time (MST)	9:58	End Time (MST)	10:37
Barometric Pressure	31.70 inches Hg	Station Temperature	15.7 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentratior	50.6 ppm	Cal Gas Expiry Date	4/6/2012
Gas Cert Reference	SGAL3245		
DACS make	Focus AP1000	DACS serial No.	52662
DACS voltage range	0 - 10 volt	DACS channel #	9
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.997106	Calculated slope	0.991995
Calculated intercept	-0.816870	Calculated intercept	0.235808
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	9.5		9.5	
Coefficient	0.985		0.985	
UV Lamp Voltage	797	V	798	V
Chamber Temp	44.2	C	44.3	C
Perm Gas Temp	45	C	45	C
Pressure	664.1	mm Hg	677.1	mm Hg
Sample Flow	0.484	LPM	0.489	LPM
Lamp Intesity	47521	Hz	47535	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)
4991	0.00	0.0	-0.2	N/A
4991	39.84	400.7	403.7	0.9926
4991	0.00	0.0	-0.2	As found zero
4991	39.84	400.7	403.7	As found span
			Average Correction Factor	0.9926

Calculated value of As Found Response: 401.957 ppm Percent Change of As Found: -0.3%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	264.0	ppm	259.9	ppm

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **SO2**

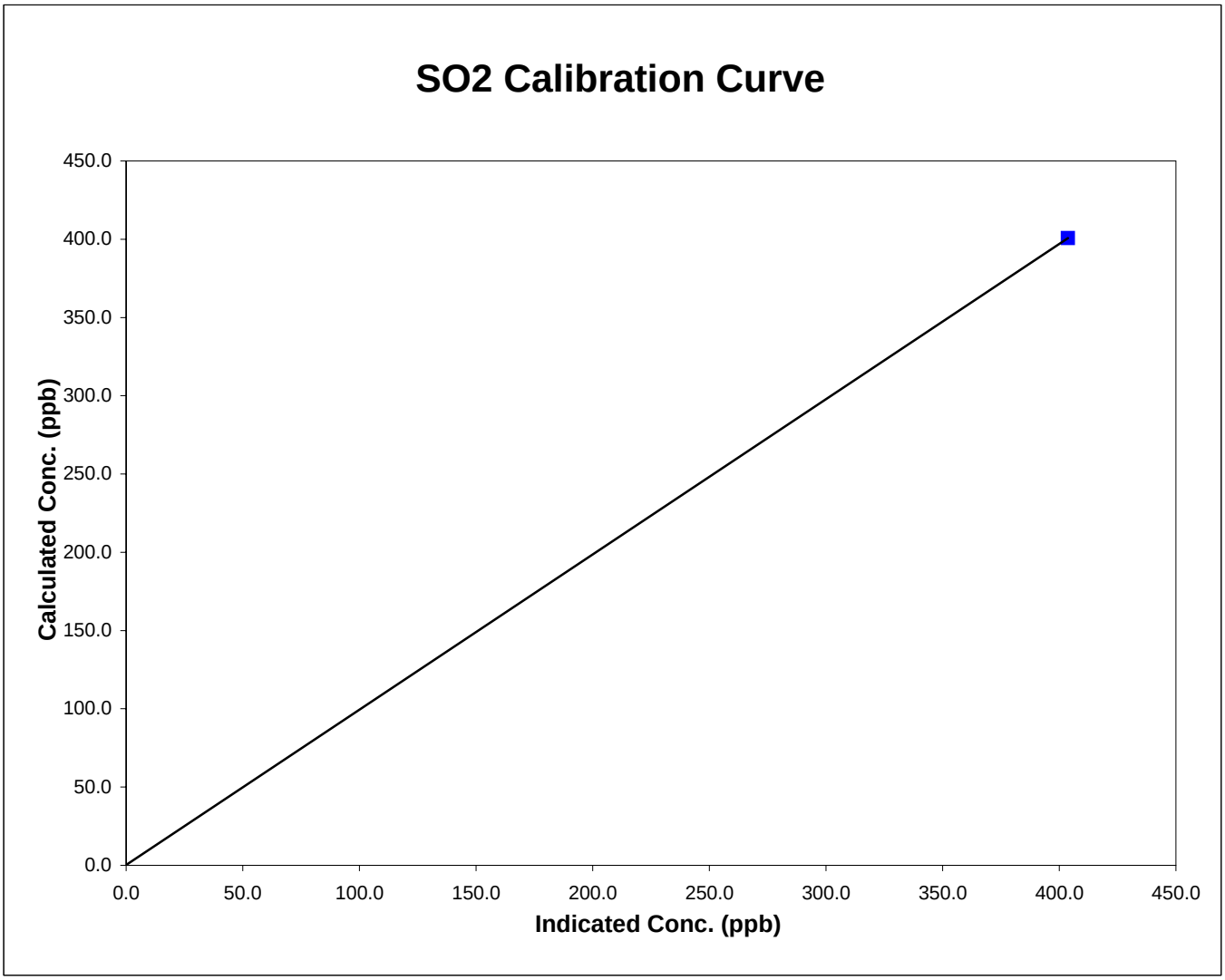
Air Monitoring Network **PASZA**

Station Information

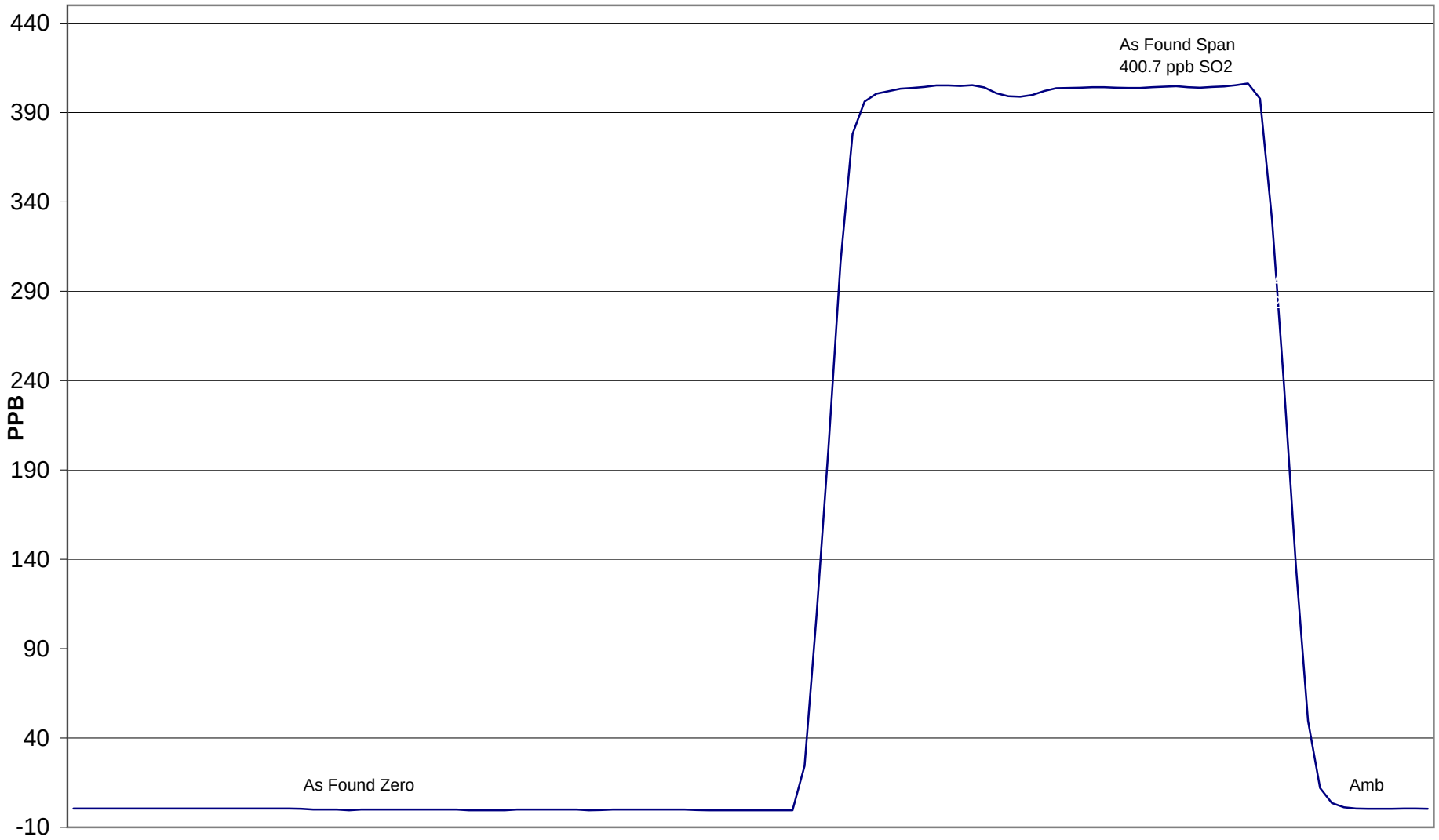
Calibration Date	February 16, 2011	Previous Calibration	January 12, 2011
Station Number	9	Station Location	Rover - Bonanza
Start Time (MST)	9:58	End Time (MST)	10:37
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.2	N/A		
400.7	403.7	0.9926	Correlation Coefficient	1.000000
			Slope	0.991995
			Intercept	0.235808



Bonanza SO_2 Calibration



February 16, 2011

Calibration Report

Parameter **SO2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 17, 2011	Previous Calibration	February 16, 2011
Station Number	9	Station Location	Rover - Bonanza
Reason: Routine	Install	Removal	Other:
Start Time (MST)	10:35	End Time (MST)	13:08
Barometric Pressure	31.70 inches Hg	Station Temperature	15.7 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentratior	50.6 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	NA	Calculated slope	1.010510
Calculated intercept	NA	Calculated intercept	-1.741452
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	9.5		9.5	
Coefficient	0.985		0.985	
UV Lamp Voltage	798	V	798	V
Chamber Temp	44.3	C	44.2	C
Perm Gas Temp	45	C	45	C
Pressure	677.1	mm Hg	676.3	mm Hg
Sample Flow	0.489	LPM	0.489	LPM
Lamp Intesity	47535	Hz	48323	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)
4991	0.00	0.0	0.0	N/A
4991	39.84	400.7	397.4	1.0083
4991	19.90	200.9	201.3	0.9980
4991	9.93	100.5	103.0	0.9759
				As found zero
				As found span
			Average Correction Factor	0.9941

Calculated value of As Found Response: NA

Percent Change of As Found: NA

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	264.0	ppm	259.9	ppm

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PASZA**

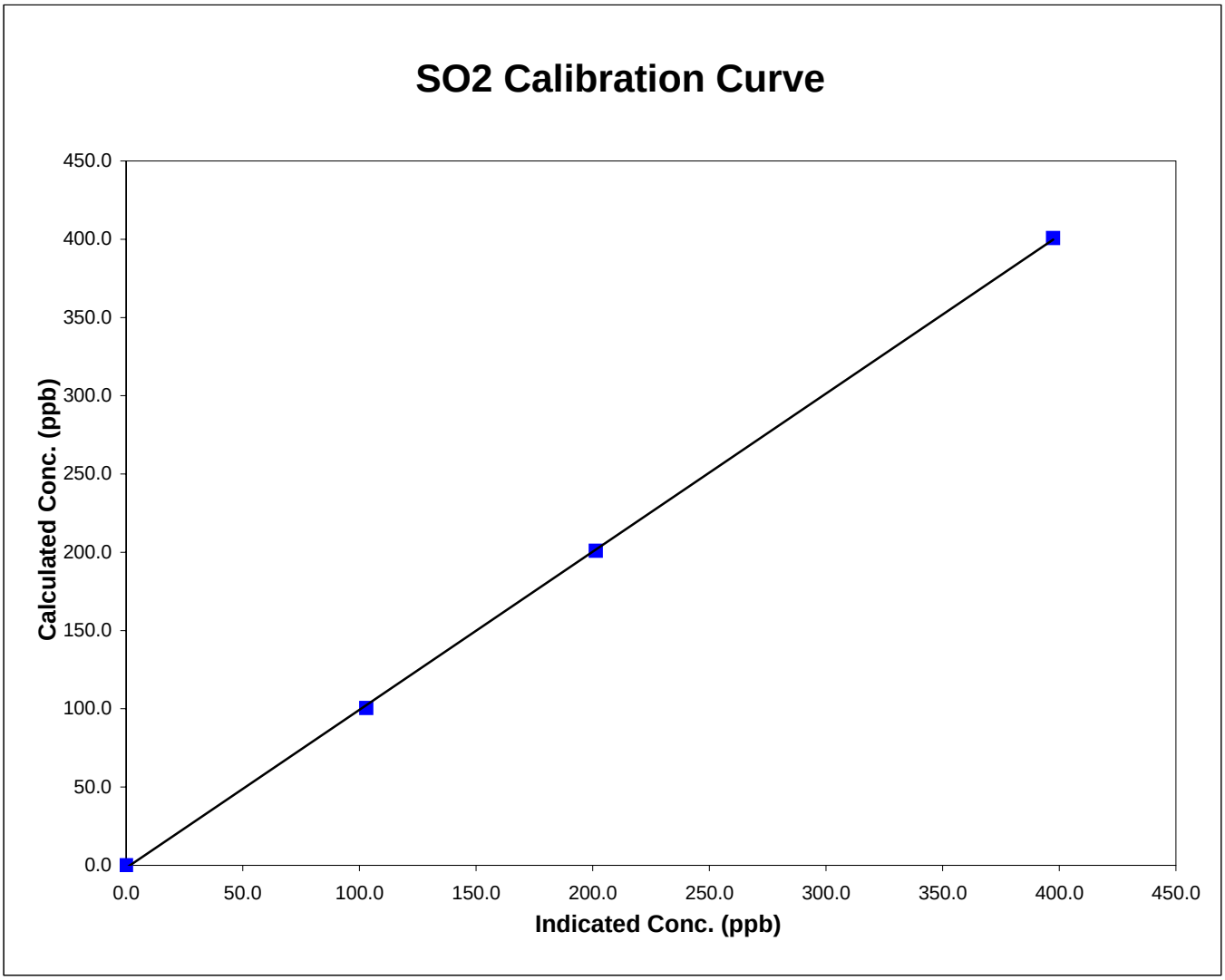
FOCUS AIR QUALITY MONITORING

Station Information

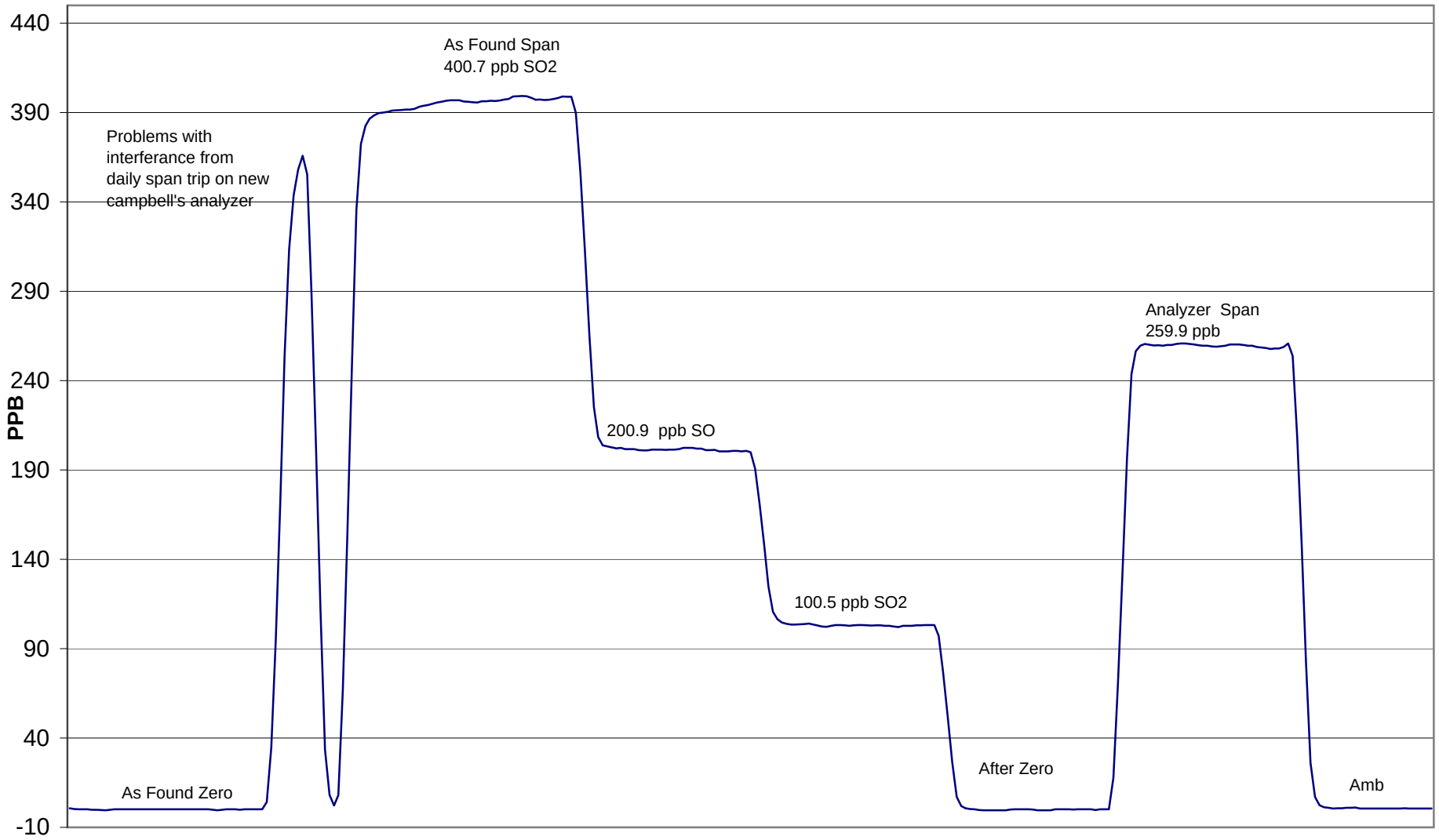
Calibration Date	February 17, 2011	Previous Calibration	February 16, 2011
Station Number	9	Station Location	Rover - Bonanza
Start Time (MST)	10:35	End Time (MST)	13:08
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
400.7	397.4	1.0083	Correlation Coefficient	0.999913
200.9	201.3	0.9980		
100.5	103.0	0.9759	Slope	1.010510
			Intercept	-1.741452



Bonanza SO_2 Calibration



February 17, 2011

Calibration Report

Parameter **TRS**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 16, 2011	Previous Calibration	January 12, 2011
Station Number	9	Station Location	Rover-Bonanza
Reason: Routine	Install	Removal	Other: Datalogger upgrade
Start Time (MST)	12:10	End Time (MST)	13:17
Barometric Pressure	27.5 inches Hg	Station Temperature	15.7 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentratior	5.15 ppm	Cal Gas Expiry Date	11/15/2005
Gas Cert Reference	ALM013295		
DACS make	Focus AP1000	DACS serial No.	52662
DACS voltage range	0 - 5 volt	DACS channel #	8
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.998804	Calculated slope	1.023833
Calculated intercept	0.234649	Calculated intercept	0.198739
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	11.4	ppb	11.4	ppb
Coefficient	1.460		1.460	
Lamp Voltage	791	V	792	V
Chamber Temp	44.0	C	43.9	C
Perm gas Temp	45.00	C	45.0	C
Pressure	647.9	mmHg	648.7	mmHg
Sample Flow	.430	ccm	.433	ccm
Lamp Intensity	39580.0	Hz	39034.0	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)
4989	0.0	0.0	-0.2	N/A
4991	79.74	81.0	78.9	1.0264
4991	0.00	0.0	-0.2	As found zero
4991	79.74	81.0	78.9	As found span
			Average Correction Factor	1.0264

Calculated value of As Found Response: 79.24 ppm Percent Change of As Found: 2.2%

	before calibration		after calibration	
Auto zero	-0.6	ppm	NA	ppm
Auto span	65.9	ppm	64.8	ppm

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **TRS**

Air Monitoring Network **PASZA**

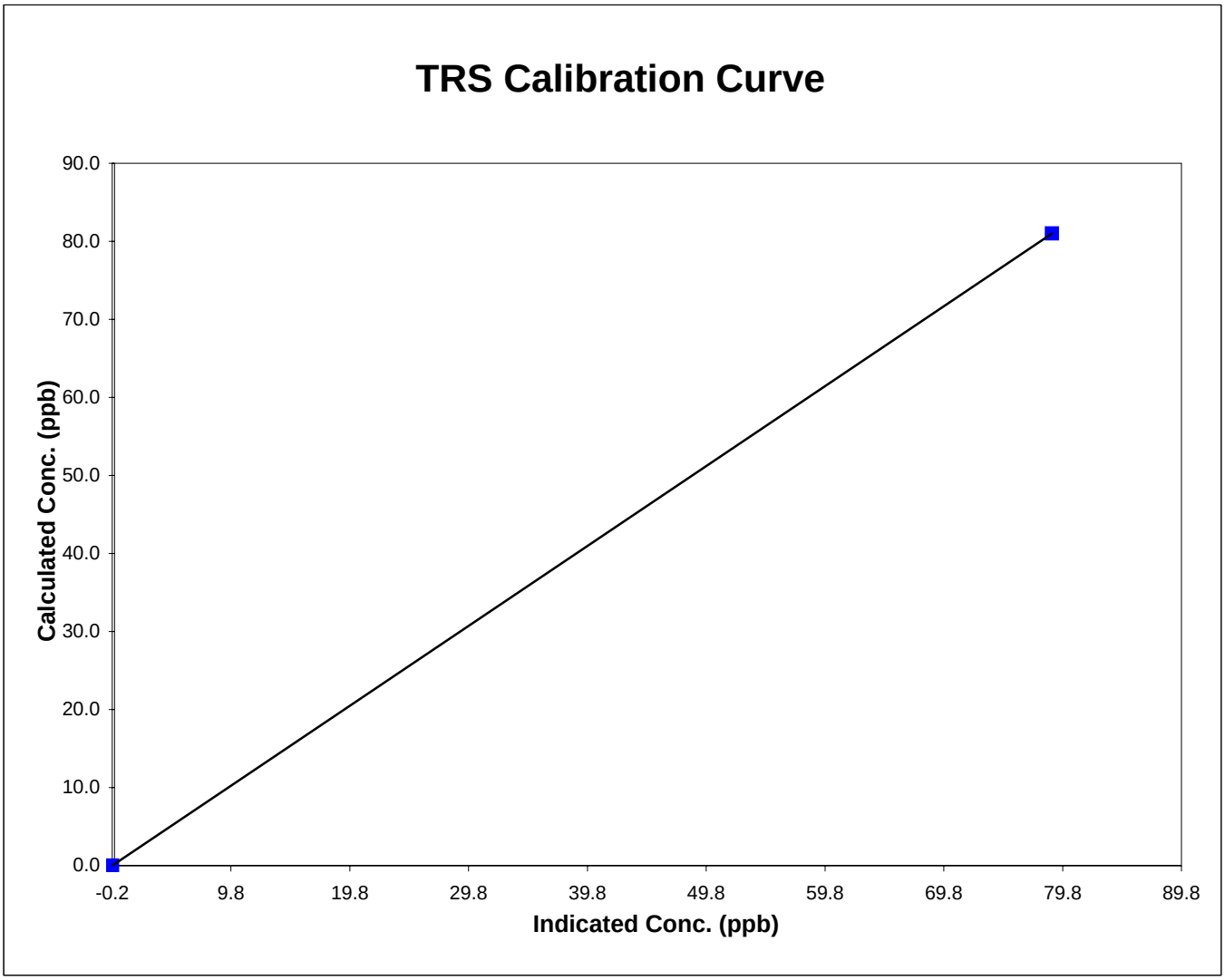
FOCUS AIR QUALITY MONITORING

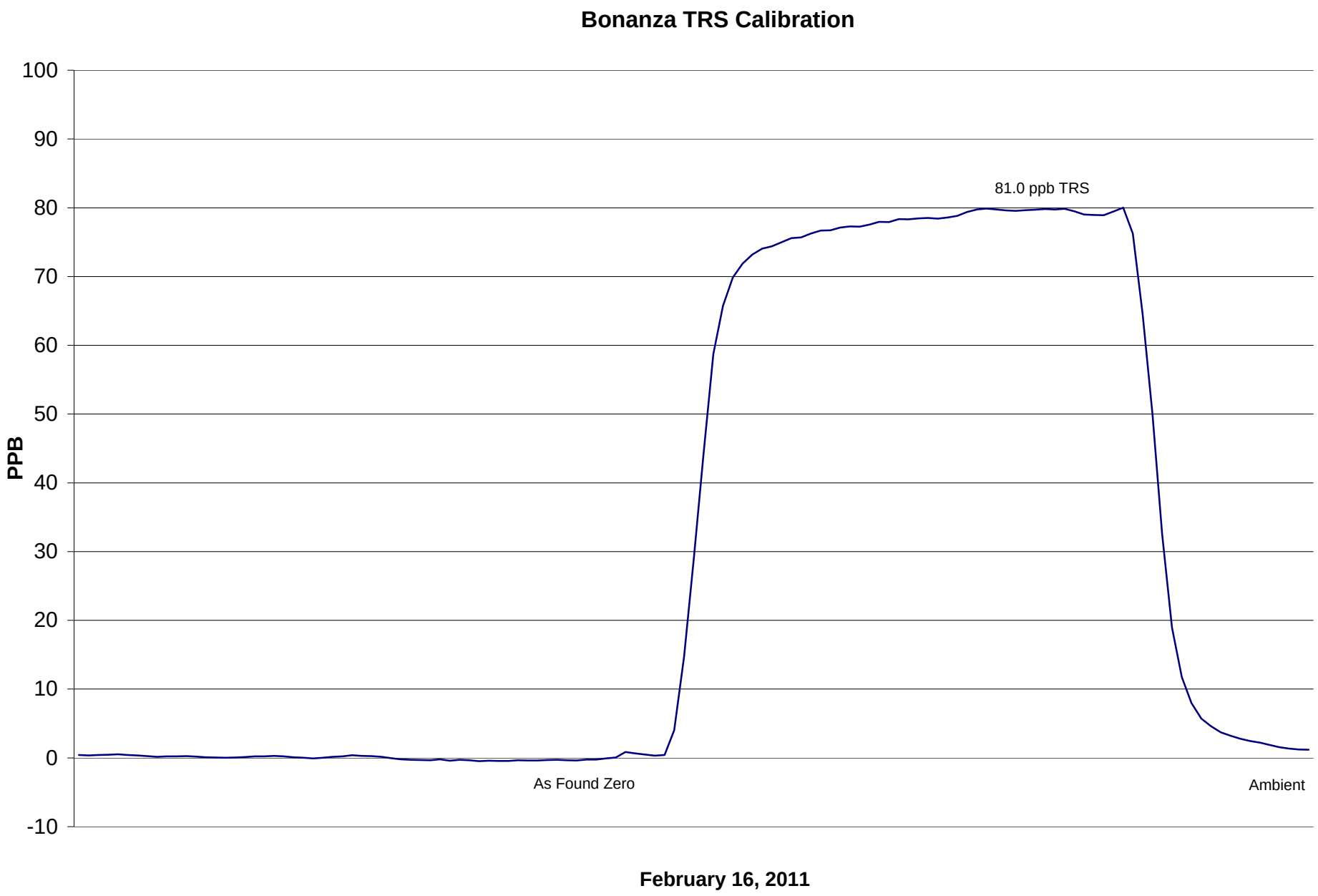
Station Information

Calibration Date	February 16, 2011	Previous Calibration	January 12, 2011
Station Number	9	Station Location	Rover-Bonanza
Start Time (MST)	12:10	End Time (MST)	13:17
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.2	N/A		
81.0	78.9	1.0264	Correlation Coefficient	1.000000
			Slope	1.023833
			Intercept	0.198739




Bonanza TRS Calibration
100
90
80
70
60
50
40
30
20
10
0
-10
PPB
81.0 ppb TRS
As Found Zero
Ambient
February 16, 2011

Calibration Report

Parameter **TRS**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 17, 2011	Previous Calibration	February 16, 2011
Station Number	9	Station Location	Rover-Bonanza
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	13:55	End Time (MST)	16:15
Barometric Pressure	27.5 inches Hg	Station Temperature	15.7 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentratior	5.15 ppm	Cal Gas Expiry Date	11/15/2005
Gas Cert Reference	ALM013295		
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 1 Volt	DACS channel #	1
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	NA	Calculated slope	0.996452
Calculated intercept	NA	Calculated intercept	-0.372421
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	11.4	ppb	11.4	ppb
Coefficient	1.460		1.460	
Lamp Voltage	792	V	792	V
Chamber Temp	43.9	C	43.9	C
Perm gas Temp	45.0	C	45.0	C
Pressure	648.7	mmHg	648.7	mmHg
Sample Flow	.433	ccm	.433	ccm
Lamp Intensity	39034.0	Hz	39034.0	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)
4989	0.0	0.0	-0.1	N/A
4991	79.74	81.0	81.2	0.9974
4991	39.80	40.7	42.1	0.9674
4991	9.93	10.2	10.7	0.9571
				As found zero
				As found span
			Average Correction Factor	0.9739

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

	before calibration		after calibration	
Auto zero	-0.6	ppm	0.1	ppm
Auto span	65.9	ppm	64.8	ppm

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **TRS**

Air Monitoring Network **PASZA**

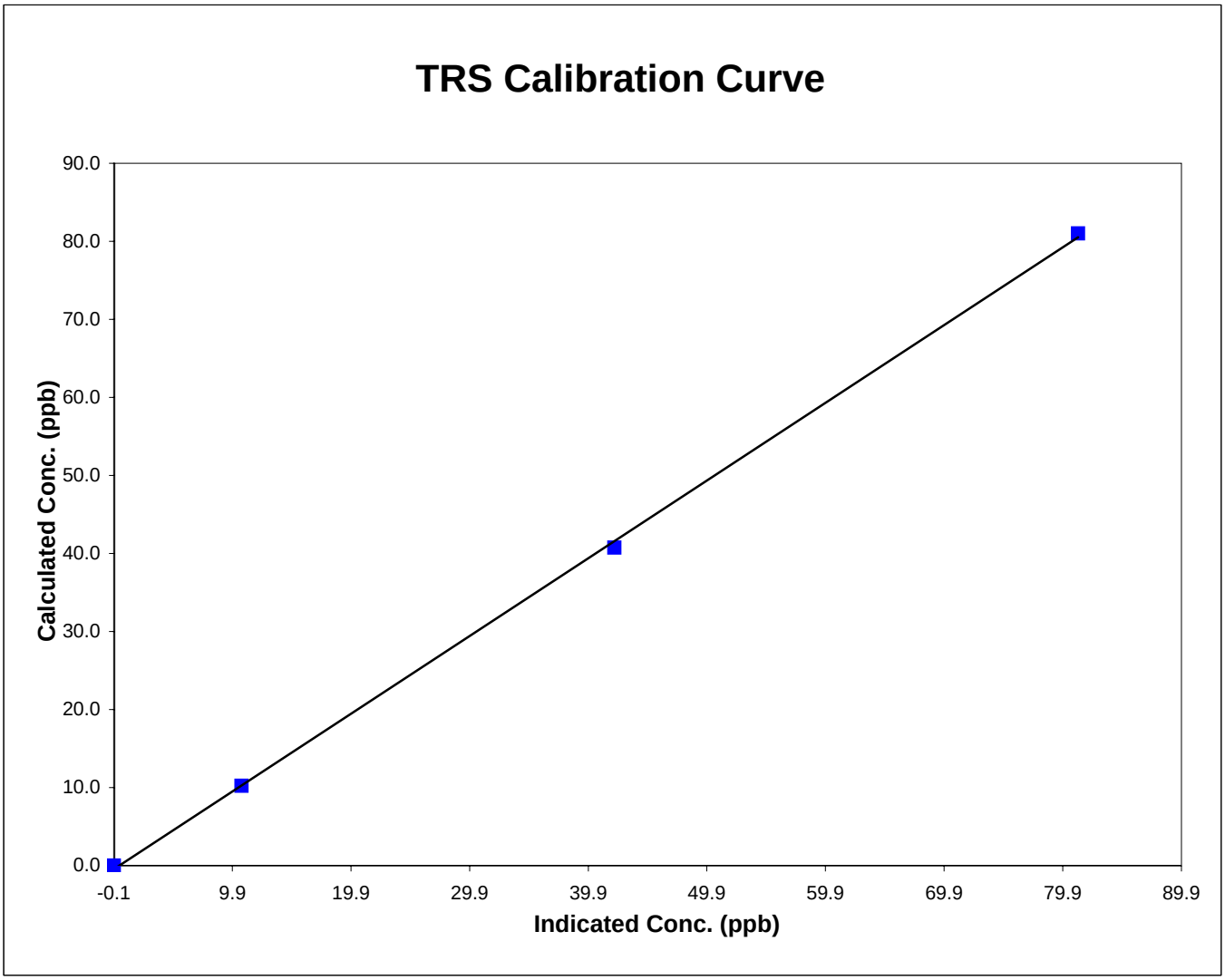
FOCUS AIR QUALITY MONITORING

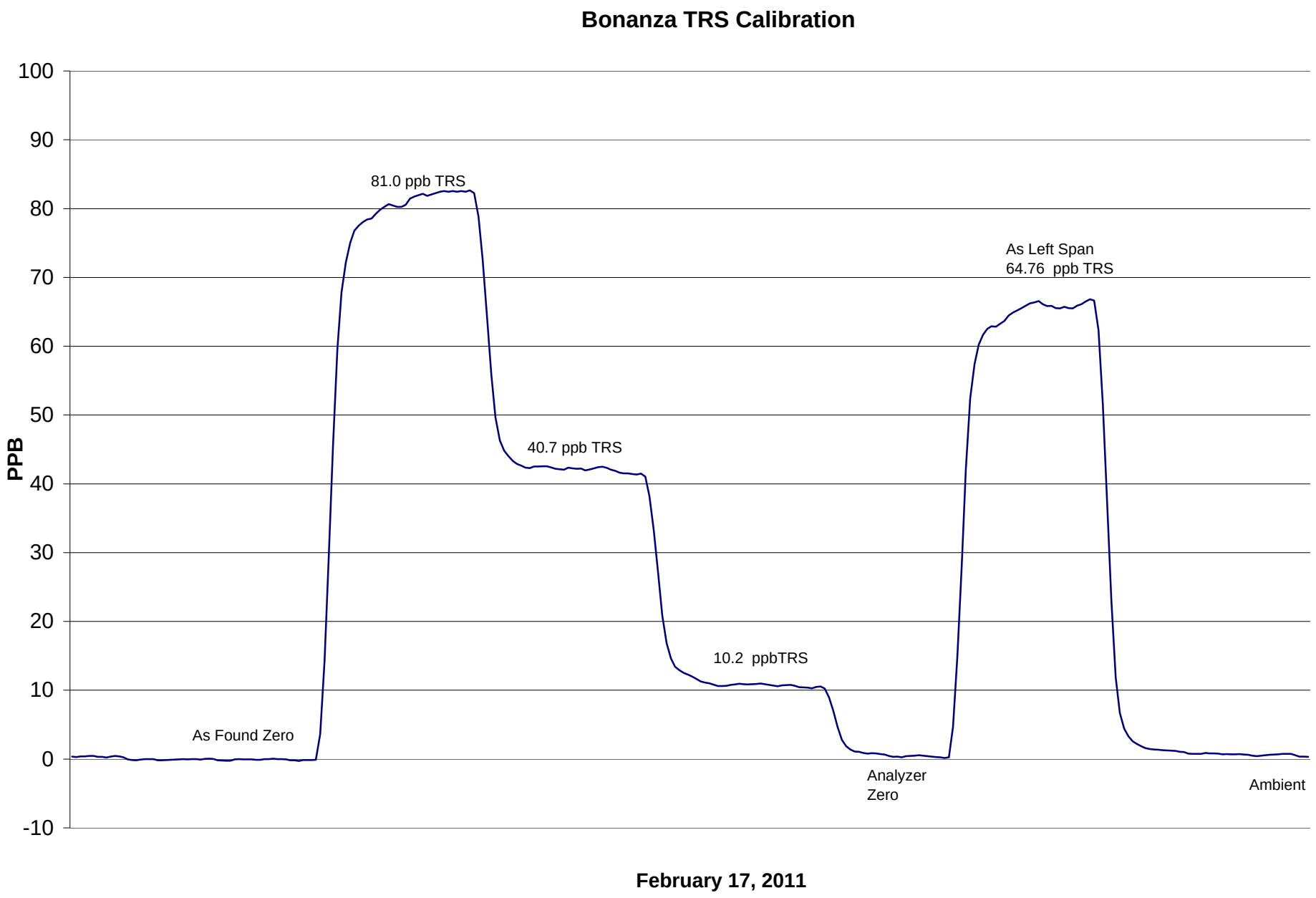
Station Information

Calibration Date	February 17, 2011	Previous Calibration	February 16, 2011
Station Number	9	Station Location	Rover-Bonanza
Start Time (MST)	13:55	End Time (MST)	16:15
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		
81.0	81.2	0.9974	Correlation Coefficient	0.999715
40.7	42.1	0.9674		
10.2	10.7	0.9571	Slope	0.996452
			Intercept	-0.372421




Bonanza TRS Calibration
PPB
100
90
80
70
60
50
40
30
20
10
0
-10
81.0 ppb TRS
40.7 ppb TRS
10.2 ppbTRS
As Left Span
64.76 ppb TRS
As Found Zero
Analyzer
Zero
Ambient
February 17, 2011

Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 16, 2011	Previous Calibration	January 14, 2011
Station Number	9	Station Location	Rover - Bonanza

Reason: Routine Installation Removal Other: Datalogger Upgrade

Start Time (MST)	9:45		End Time (MST)	12:05	
Barometric Pressure	0.927	Atm	Station Temperature	20.0	Deg C
Calibrator	Environics 6100		Serial Number	3474	
NO Cal Gas Conc	51.4	ppm	Cal Gas Expiry Date	April 6, 2012	
NOx Cal Gas Conc	51.4	ppm	Cal Gas Serial #	SGAL 3245	

DACS Information

DACS make	Focus AP1000	DACS serial No.	52662

Parameter		NO2	NOx	NO
Before	Data Slope	0.997616	0.997182	1.005094
	Data Offset	1.168949	-2.474983	-3.315597
After	Data Slope	0.996795	0.994963	1.004597
	Data Offset	1.584261	0.815715	-0.255388
Channel #		8	6	7
Voltage Range		0 - 10 VDC	0 - 10 VDC	0 - 10 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	4.4	mV	4.4	mV
NOx bkgnd	5.2	mV	5.2	mV
NO coefficient	1.122		1.099	
NOx coefficient	0.999		0.992	
NO2 conv temp	325.3	Deg C	325.3	Deg C
PMT Temp	-2.7	Deg C	-2.6	Deg C
PMT Volt	-772.9	mV	-772.0	mV
R Cell Press	156.3	in Hg	151.2	in Hg
Sample Flow	0.932	ccm	0.927	ccm

Notes:

Calibration Report

Parameter **NOx-NO-NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: February 16, 2011 Station Location: Rover - Bonanza

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	5000	0.00	0.0	0.0	0.0	-0.8	0.3	-1.6	N/A	N/A
1	4988	39.88	407.7	407.7	0.0	408.9	406.1	-0.3	0.9970	1.0040
2										
3										
AFZ	4988	0.00	0.0	0.0	0.0	-0.8	0.3	-1.6	0.0000	0.0000
AFS	4989	39.88	407.6	407.6	0.0	420.0	414.7	2.0	0.9706	0.9830
							Average Correction Factor		0.9970	1.0040

As Found Concentrations: NO_X= 418.3 NO= 411.1 As Found Percent Change NO_X= 2.6% NO= 0.9%

GPT Calibration Data

Dilution Flow 4988 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	0.3	0.3	0.0	-0.8	0.3	-1.6	N/A	N/A	N/A	N/A
NO point	406.1	406.1	0.0	408.9	406.1	-0.3	0.9930	1.0000	N/A	N/A
300	406.1	168.5	237.5	407.5	168.5	236.7	0.9966	1.0000	1.0035	99.7%
200										
100										
					Average Correction Factor		0.9966	1.0000	1.0035	99.7%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.4	-0.9	0.7	ppb	0.0	0.0	0.0	ppb
Auto span	275.6	274.9	2.9	ppb	0.0	0.0	0.0	ppb

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **NO_2**

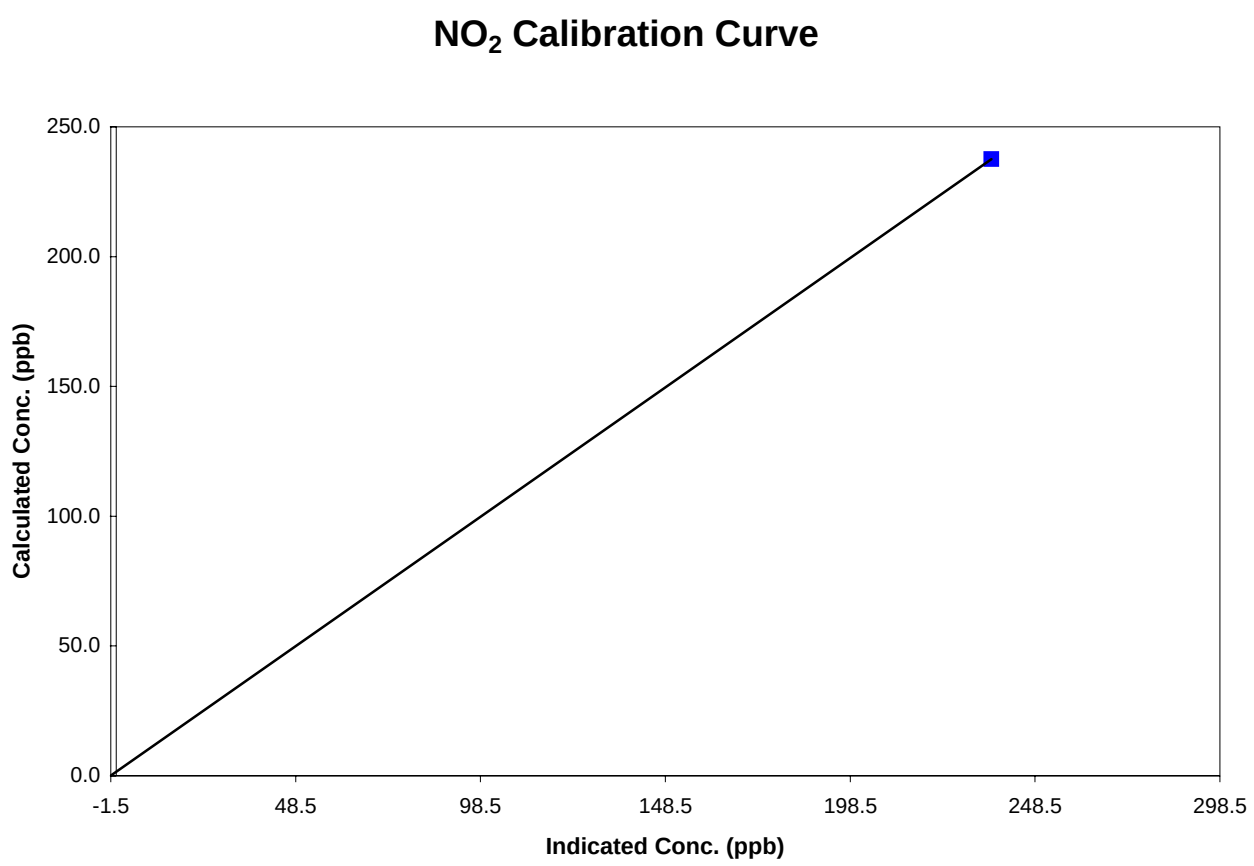
Air Monitoring Network **PASZA**

Station Information

Calibration Date	February 16, 2011	Previous Calibration	January 14, 2011
Station Number	9	Station Location	Rover - Bonanza
Start Time (MST)	9:45	End Time (MST)	13:12
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	-1.6	N/A		
237.5	236.7	1.0035	Correlation Coefficient	1.000000
			Slope	0.996795
			Intercept	1.584261



Calibration Summary

Parameter **NO_x**

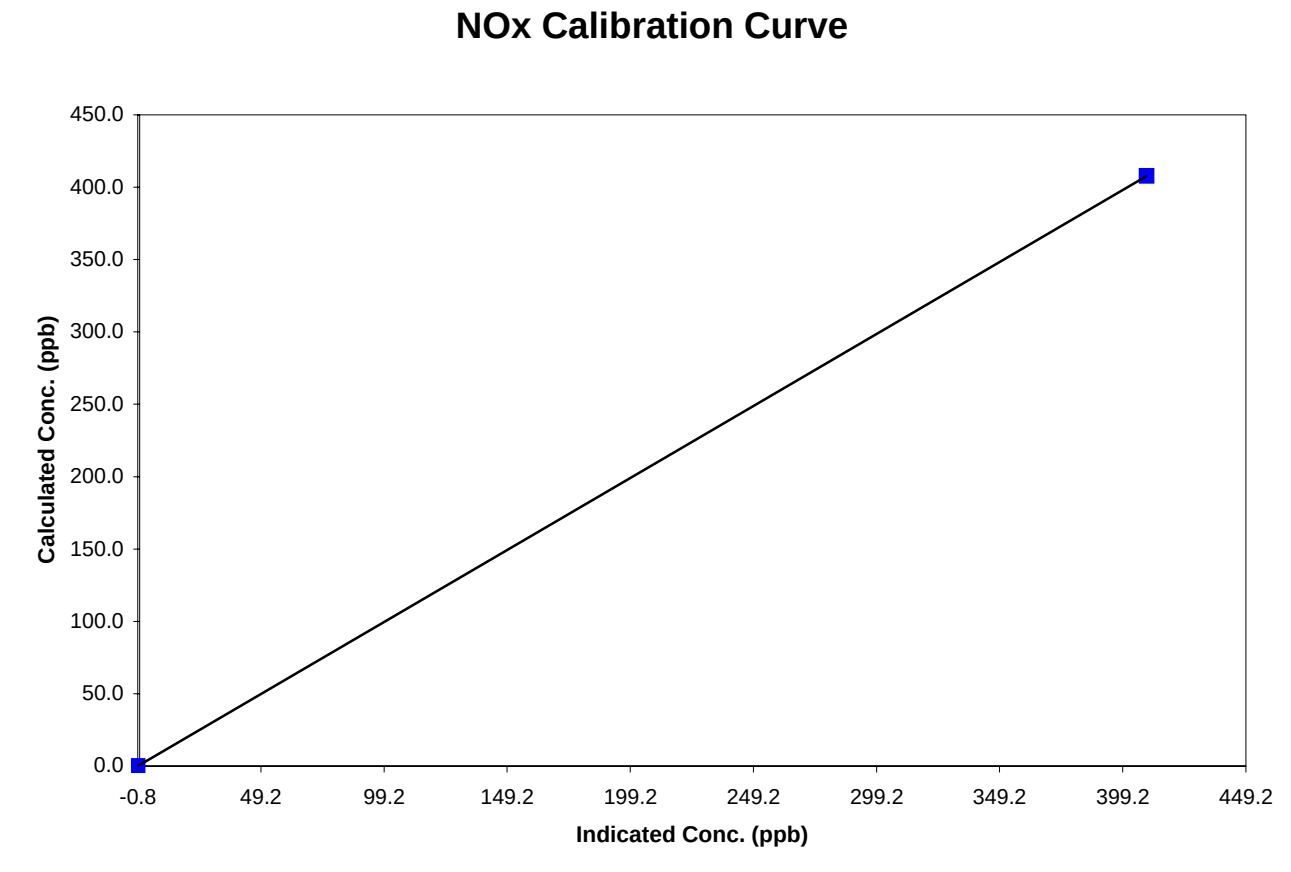
Air Monitoring Network **PASZA**

Station Information

Calibration Date	February 16, 2011	Previous Calibration	January 14, 2011
Station Number	9	Station Location	Rover - Bonanza
Start Time (MST)	9:45	End Time (MST)	13:12
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	-0.8	N/A		
407.7	408.9	0.9970	Correlation Coefficient	1.000000
			Slope	0.994963
			Intercept	0.815715



Calibration Summary

Parameter **NO**

Air Monitoring Network **PASZA**

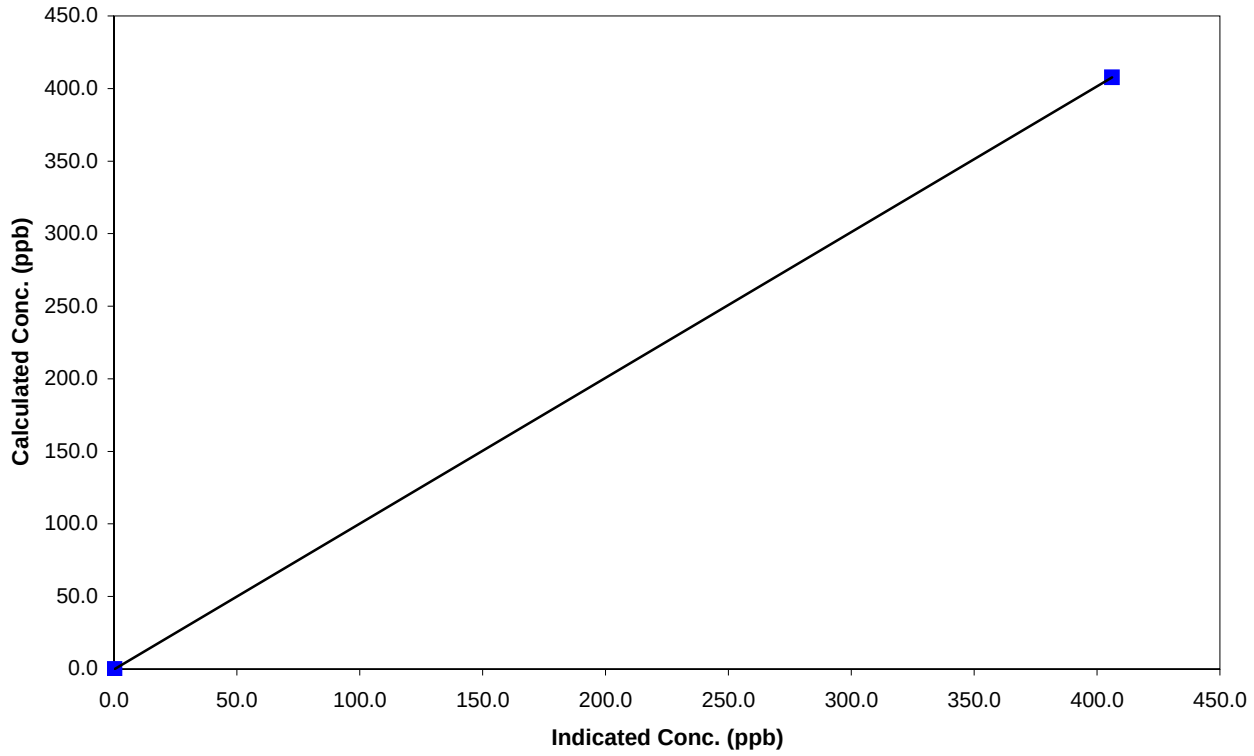
Station Information

Calibration Date	February 16, 2011	Previous Calibration	January 14, 2011
Station Number	9	Station Location	Rover - Bonanza
Start Time (MST)	9:45	End Time (MST)	13:12
Analyzer make	TEI 42i	Analyzer serial #	0701120011

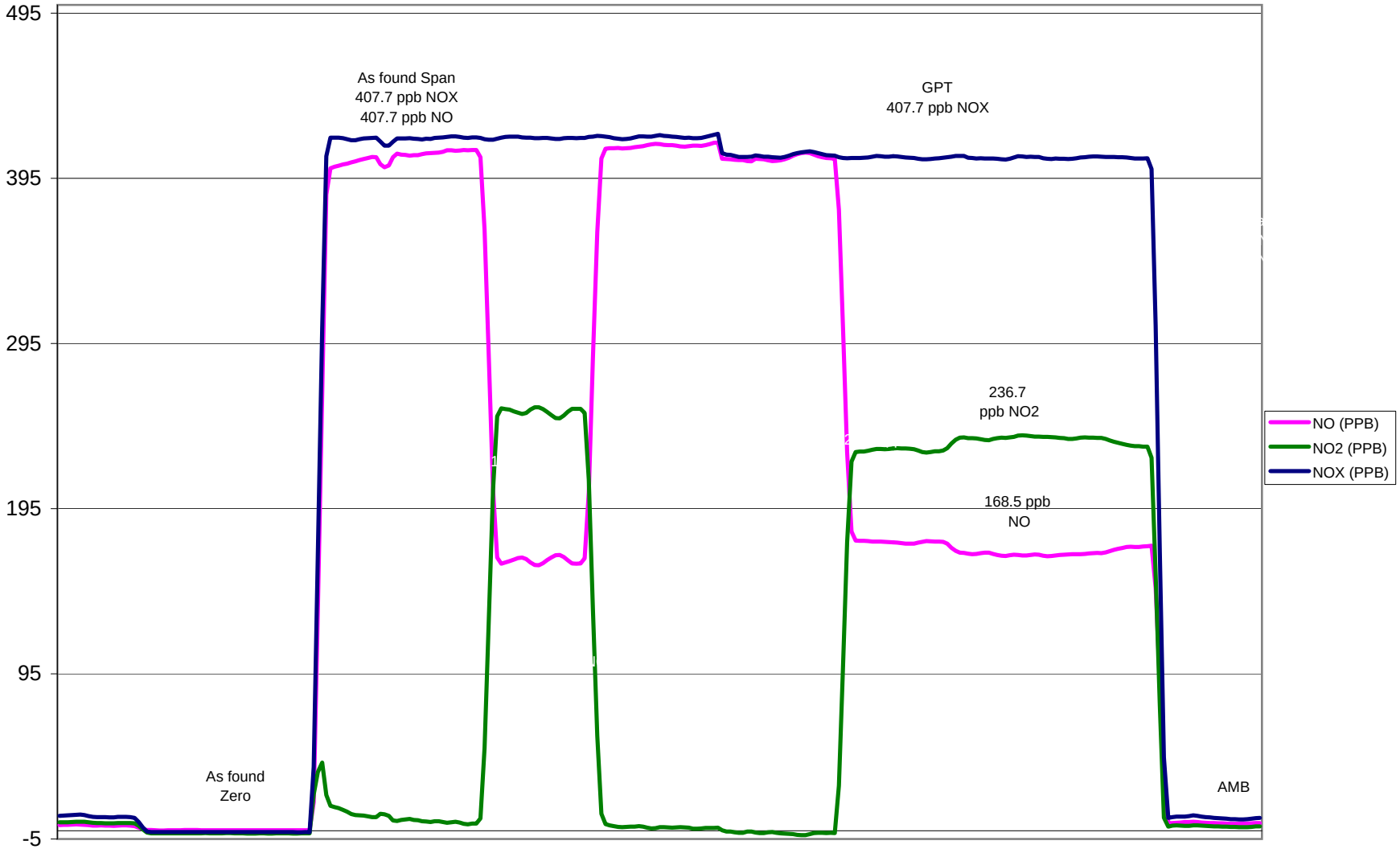
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A		
407.7	406.1	1.0040	Correlation Coefficient	1.000000
			Slope	1.004597
			Intercept	-0.255388

NO Calibration Curve



Bonanza NO_X Calibration



February 16, 2011

Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 17, 2011	Previous Calibration	February 16, 2011
Station Number	9	Station Location	Rover - Bonanza

Reason: Routine Installation Removal Other:

Start Time (MST)	10:35		End Time (MST)	14:45	
Barometric Pressure	0.927	Atm	Station Temperature	20.0	Deg C
Calibrator	Environics 6100		Serial Number	3474	
NO Cal Gas Conc	51.4	ppm	Cal Gas Expiry Date	April 6, 2012	
NOx Cal Gas Conc	51.4	ppm	Cal Gas Serial #	SGAL 3245	

DACS Information

DACS make	CR3000	DACS serial No.	5407

Parameter		NO2	NOx	NO
Before	Data Slope	NA	NA	NA
	Data Offset	NA	NA	NA
After	Data Slope	1.008783	1.004603	1.000151
	Data Offset	-1.276739	-3.389987	-2.692598
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	4.4	mV	4.1	mV
NOx bkgnd	5.2	mV	4.2	mV
NO coefficient	1.099		1.091	
NOx coefficient	0.992		0.999	
NO2 conv temp	325.3	Deg C	325.3	Deg C
PMT Temp	-2.6	Deg C	-2.6	Deg C
PMT Volt	-772.0	mV	-772.0	mV
R Cell Press	151.2	in Hg	151.2	in Hg
Sample Flow	0.927	ccm	0.924	ccm

Notes:

Calibration Report

Parameter **NOx-NO-NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: February 17, 2011 Station Location: Rover - Bonanza

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	5000	0.00	0.0	0.0	0.0	0.5	0.1	1.0	N/A	N/A
1	4988	39.88	407.7	407.7	0.0	407.5	408.9	1.0	1.0004	0.9969
2	4988	19.89	204.1	204.1	0.0	208.5	208.2	1.7	0.9791	0.9806
3	4988	9.93	102.1	102.1	0.0	107.6	107.4	1.6	0.9489	0.9511
AFZ										
AFS										
							Average Correction Factor		0.9761	0.9762

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

GPT Calibration Data

Dilution Flow 4988 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				0.5	0.1	1.0	N/A	N/A	N/A	N/A
NO point	407.8	407.8	0.0	407.1	407.8	1.7	1.0017	1.0000	N/A	N/A
300	407.8	174.9	232.9	406.7	174.9	232.3	1.0027	1.0000	1.0027	99.7%
200	407.8	249.3	158.5	406.0	249.3	157.8	1.0044	1.0000	1.0048	99.5%
100	407.8	322.2	85.6	406.2	322.2	85.8	1.0040	1.0000	0.9981	100.2%
					Average Correction Factor		1.0037	1.0000	1.0019	99.8%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.4	-0.9	0.7	ppb	1.6	1.8	0.5	ppb
Auto span	275.6	274.9	2.9	ppb	197.7	195.6	1.7	ppb

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **PASZA**

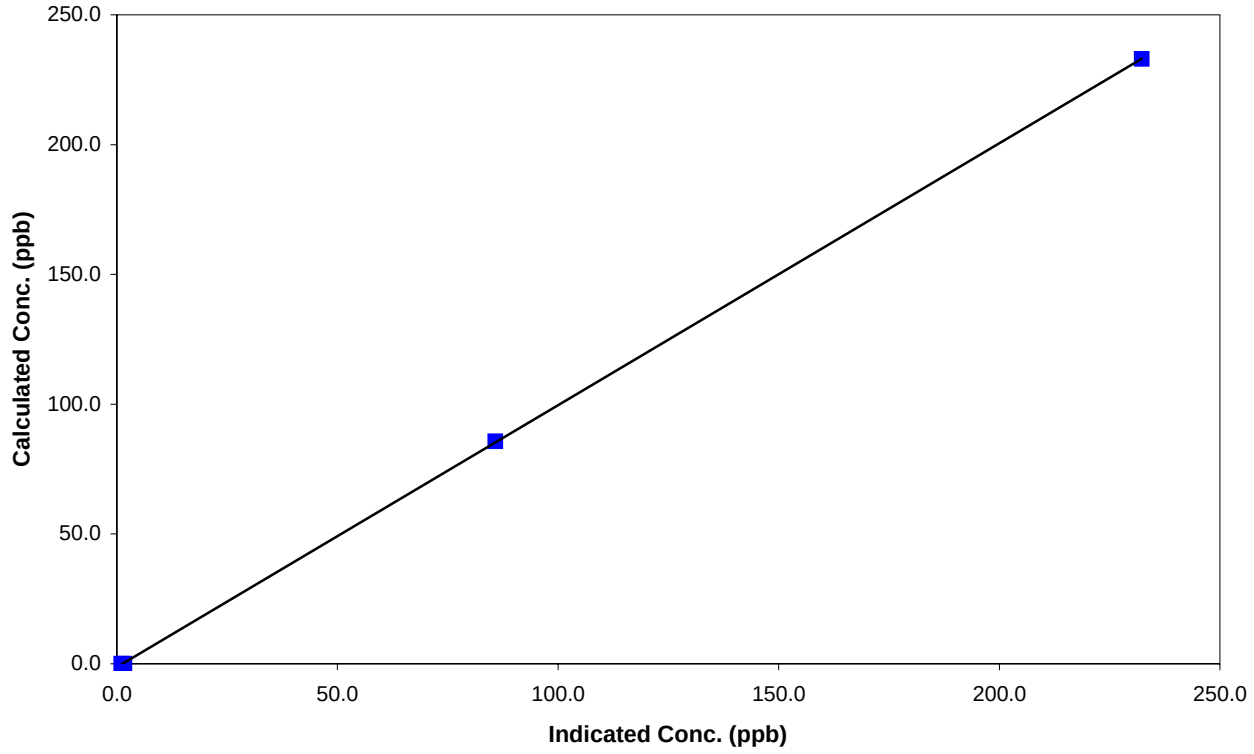
Station Information

Calibration Date	February 17, 2011	Previous Calibration	February 16, 2011
Station Number	9	Station Location	Rover - Bonanza
Start Time (MST)	10:35	End Time (MST)	13:12
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	1.0	N/A		
232.9	232.3	1.0027	Correlation Coefficient	0.999989
0.0	1.7	0.0000		
85.6	85.8	0.9981	Slope	1.008783
			Intercept	-1.276739

NO_2 Calibration Curve



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

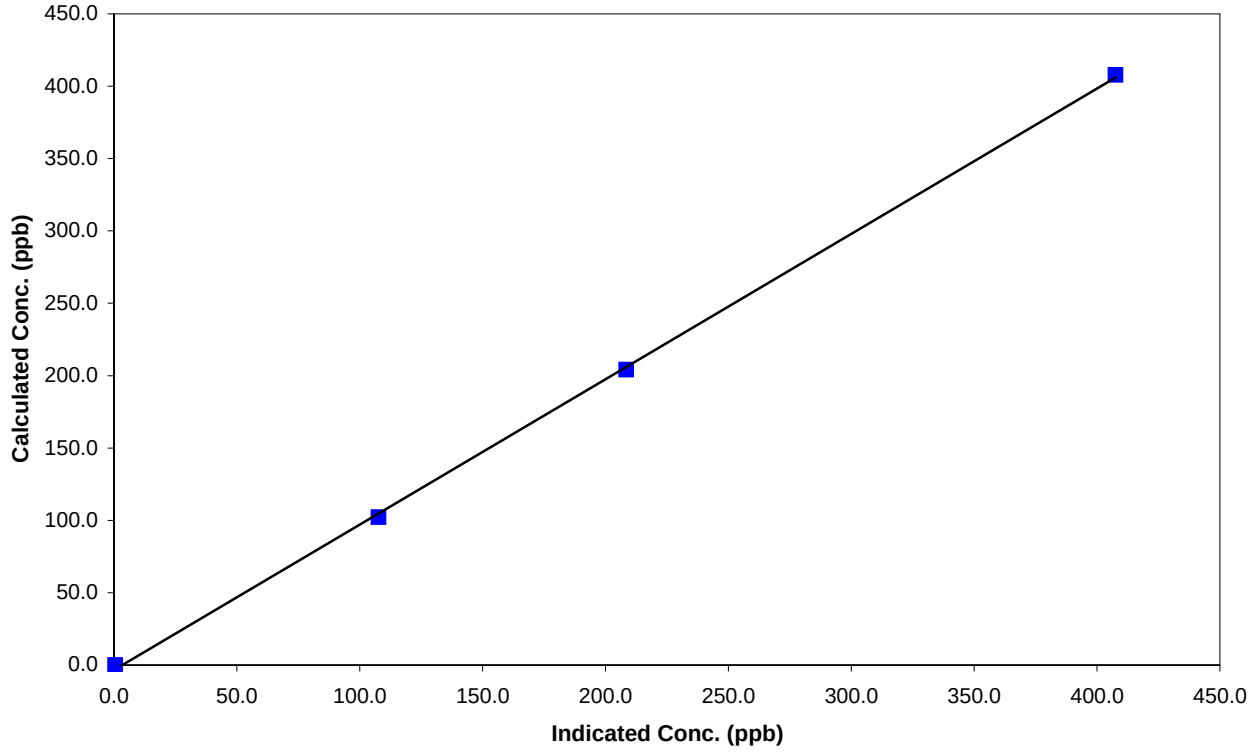
Station Information

Calibration Date	February 17, 2011	Previous Calibration	February 16, 2011
Station Number	9	Station Location	Rover - Bonanza
Start Time (MST)	10:35	End Time (MST)	13:12
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	0.5	N/A		
407.7	407.5	1.0004	Correlation Coefficient	0.999764
204.1	208.5	0.9791		
102.1	107.6	0.9489	Slope	1.004603
			Intercept	-3.389987

NOx Calibration Curve



Calibration Summary

Parameter **NO**

Air Monitoring Network **PASZA**

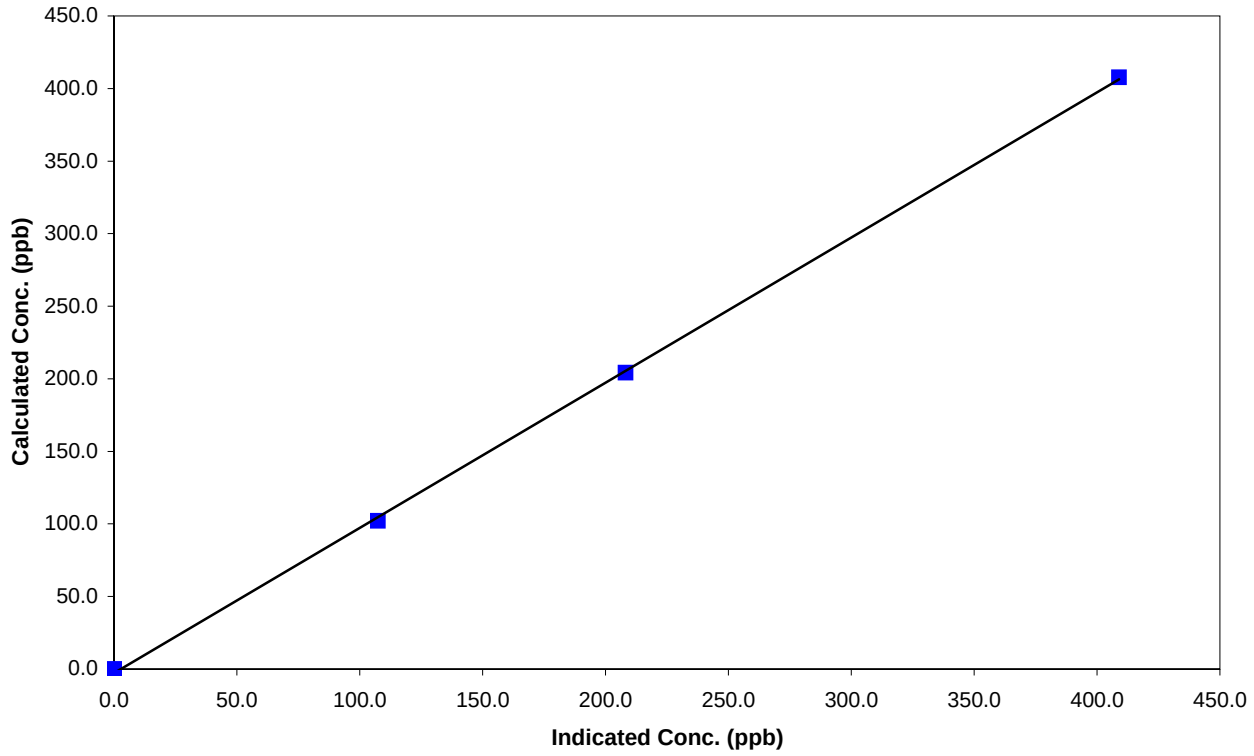
Station Information

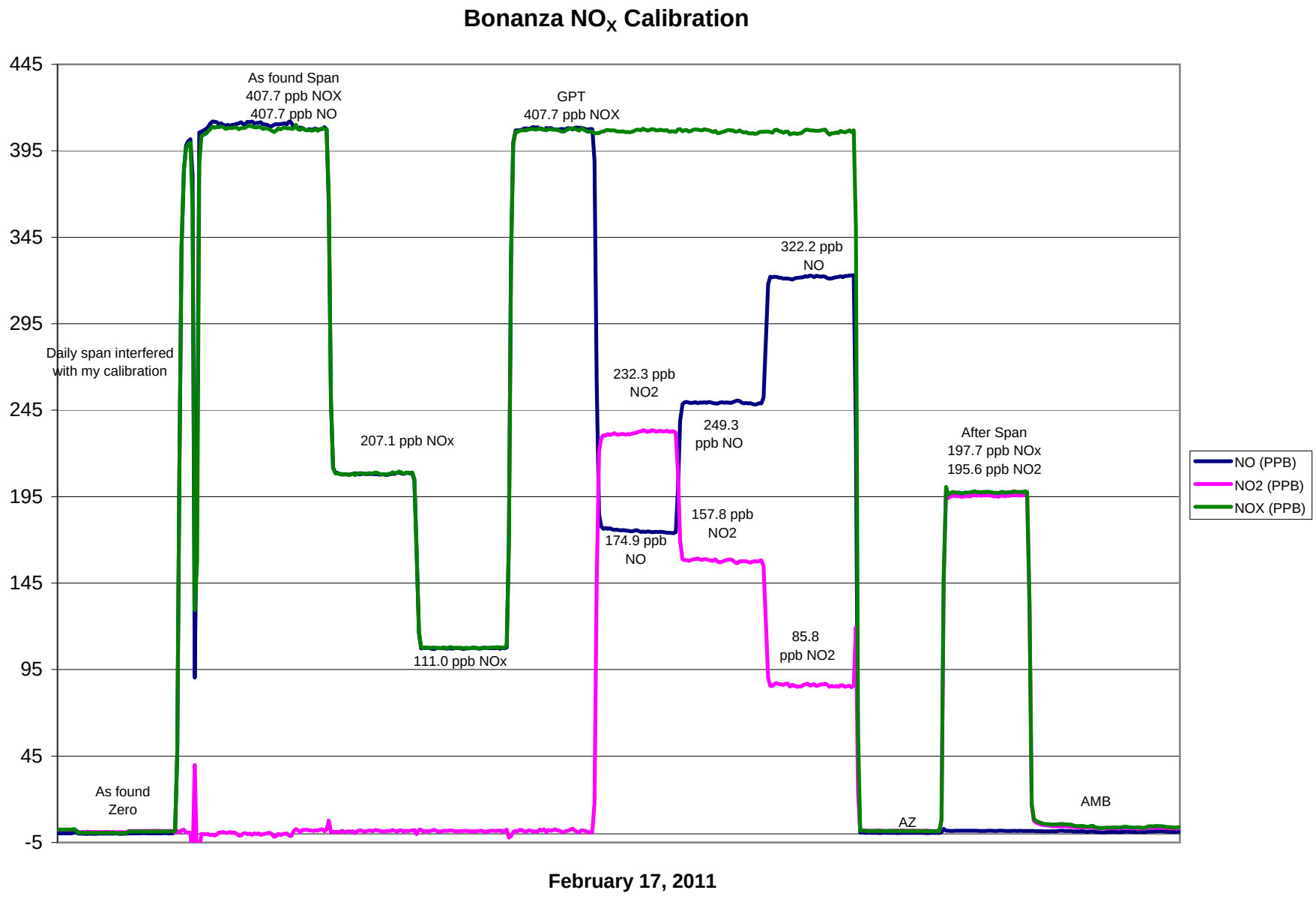
Calibration Date	February 17, 2011	Previous Calibration	February 16, 2011
Station Number	9	Station Location	Rover - Bonanza
Start Time (MST)	10:35	End Time (MST)	13:12
Analyzer make	TEI 42i	Analyzer serial #	0701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A		
407.7	408.9	0.9969	Correlation Coefficient	0.999812
204.1	208.2	0.9806		
102.1	107.4	0.9511	Slope	1.000151
			Intercept	-2.692598

NO Calibration Curve




Bonanza NOX Calibration
445
395
345
295
245
195
145
95
45
-5
As found Span
407.7 ppb NOX
407.7 ppb NO
GPT
407.7 ppb NOX
322.2 ppb
NO
Daily span interfered
with my calibration
232.3 ppb
NO2
249.3
ppb NO
207.1 ppb NOx
After Span
197.7 ppb NOx
195.6 ppb NO2
157.8 ppb
NO2
174.9 ppb
NO
85.8
ppb NO2
111.0 ppb NOx
As found
Zero
AZ
AMB
NO (PPB)
NO2 (PPB)
NOX (PPB)
February 17, 2011

Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **O3**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	February 16, 2011	Previous Calibration	January 14, 2011
Station Number	12:00	Station Location	Rover - Bonanza
Reason: Routine	Install	Removal remove	Other: Datalogger Upgrade
Start Time (MST)	11:35	End Time (MST)	12:20
Barometric Pressure	0.927 atm	Station Temperature	15.7 Deg C
Calibrator	Environics 6100	Serial Number	3474
DACS make	Focus AP1000	DACS serial No.	52662
DACS voltage range	0-5	DACS channel #	7
	Before		After
Calculated slope	0.999923	Calculated slope	1.084585
Calculated intercept	-1.077668	Calculated intercept	-0.326960
Analyzer make	TEI Model 49C	Analyzer serial #	49C-71577-369

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	0.4	ppb	0.4	ppb
Span	0.991		0.991	
Cell A intensity	86370	Hz	85814	Hz
Cell B intensity	89373	Hz	87731	Hz
Pressure	716.00	in Hg	680.41	in Hg
CellA Flow	0.795	ccm	0.773	ccm
Cell B Flow	0.702	cmm	0.683	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	0.3	N/A
4989	0.30	237.5	219.3	1.0831
4989	0.00	0.0	0.3	As found zero
4989	0.30	237.5	219.3	As found span
			Average Correction Factor	1.0831

Calculated value of As Found Response: 217.9 ppm Percent Change of As Found: -8.3%

	before calibration		after calibration	
Auto zero	0.6	ppb		ppb
Auto span	141.4	ppb	0.0	ppb

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **O3**

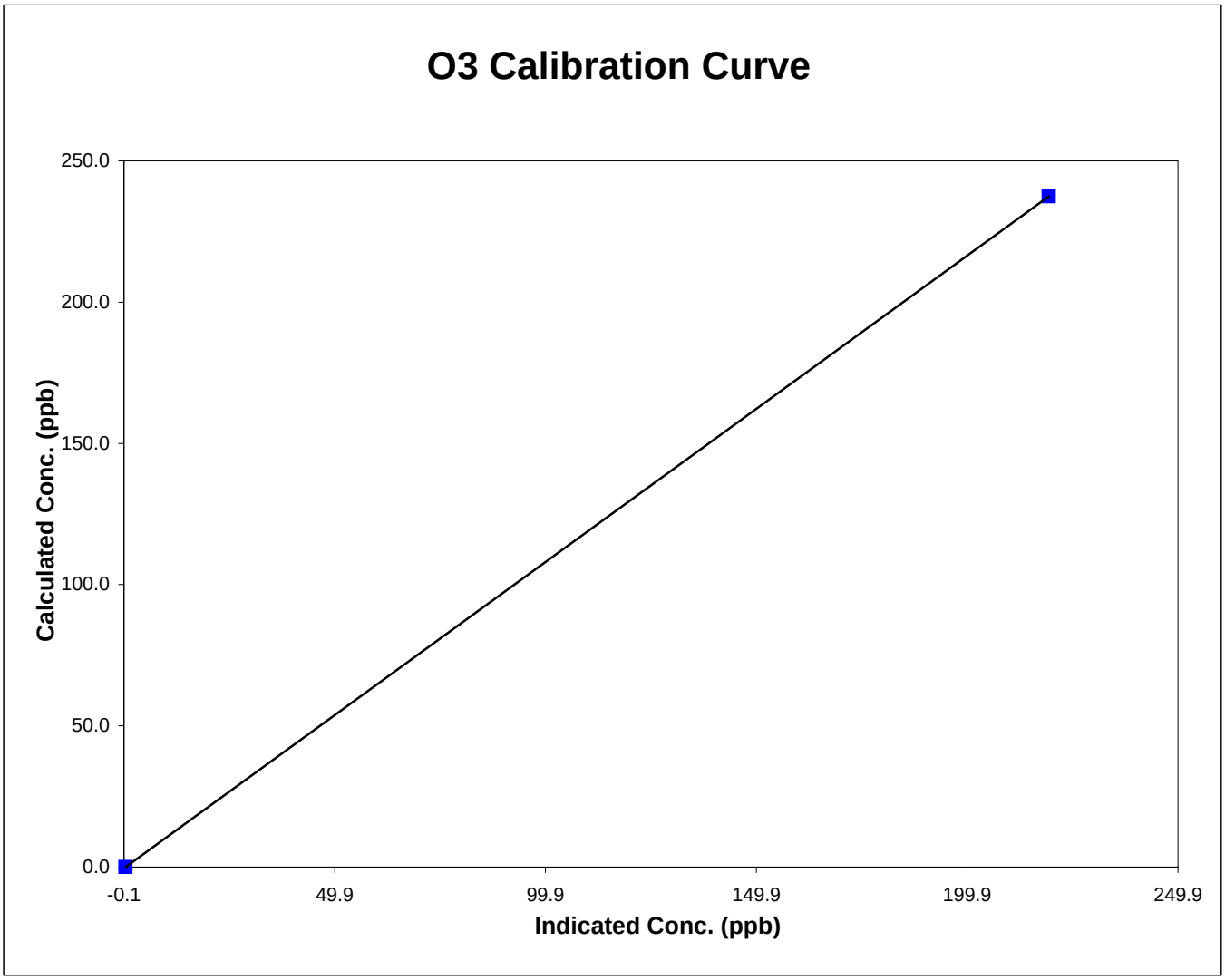
Air Monitoring Network **PASZA**

Station Information

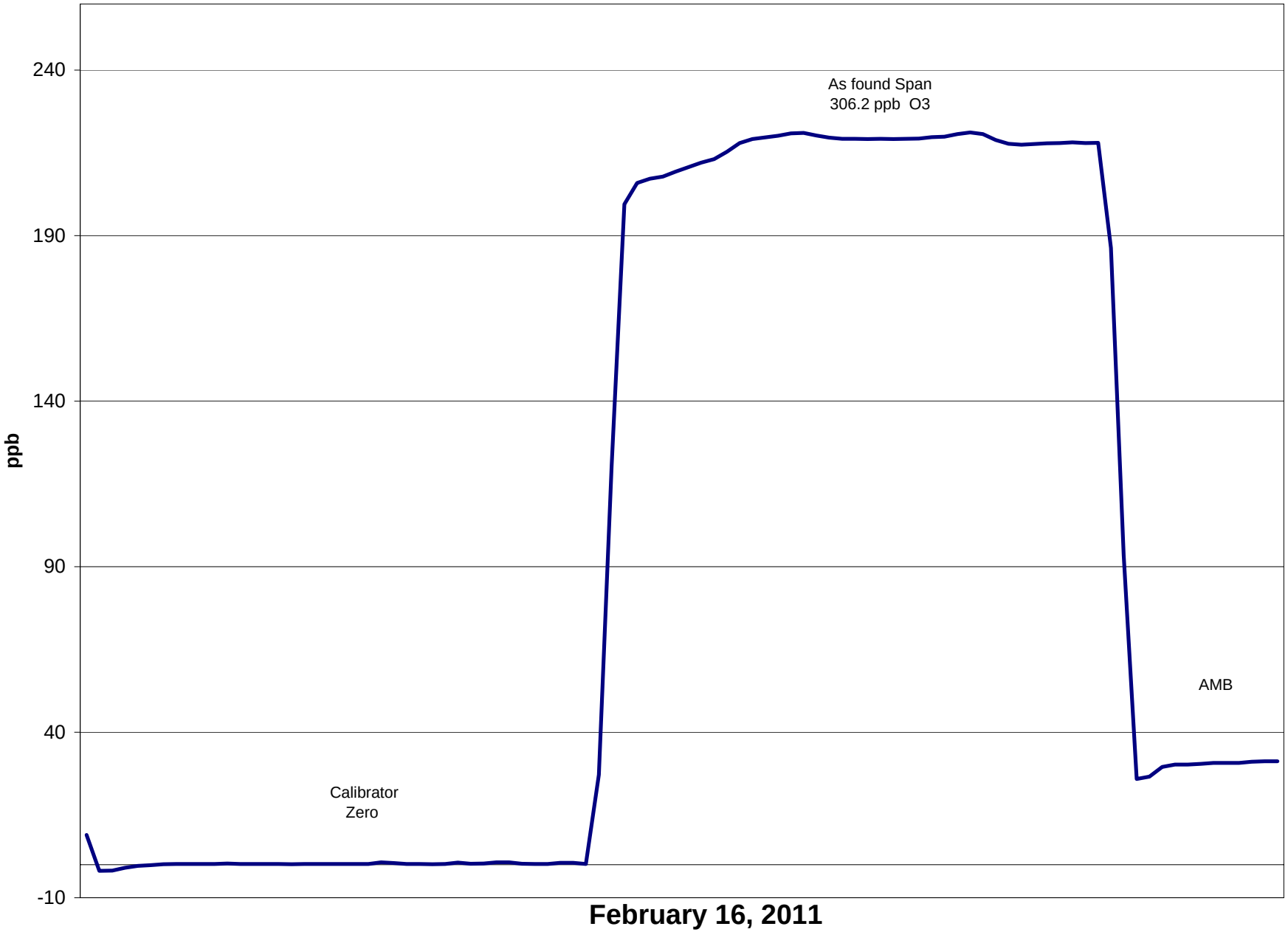
Calibration Date	February 16, 2011	Previous Calibration	January 14, 2011
Station Number	0.5	Station Location	Rover - Bonanza
Start Time (MST)	11:35	End Time (MST)	12:20
Analyzer make/model	TEI Model 49C	Analyzer serial #	49C-71577-369

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	NA		
237.5	219.3	1.0831	Correlation Coefficient	1.000000
			Slope	1.084585
			Intercept	-0.326960



Bonanza O_3 Calibration



Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **O3**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	February 17, 2011	Previous Calibration	February 16, 2011
Station Number	12:00	Station Location	Rover - Bonanza
Reason: Routine	Install	Removal remove	Other:
Start Time (MST)	16:00	End Time (MST)	18:00
Barometric Pressure	0.927 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	NA	Calculated slope	0.997007
Calculated intercept	NA	Calculated intercept	0.531382
Analyzer make	TEI Model 49C	Analyzer serial #	49C-71577-369

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	0.3	ppb	0.4	ppb
Span	1.005		0.991	
Cell A intensity	83025	Hz	85814	Hz
Cell B intensity	86795	Hz	87731	Hz
Pressure	709.70	in Hg	680.41	in Hg
CellA Flow	0.792	ccm	0.773	ccm
Cell B Flow	0.702	cmm	0.683	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	-0.4	N/A
4989	0.30	232.9	233.4	0.9977
4989	0.20	158.5	157.8	1.0044
4989	0.10	85.6	85.5	1.0012
				As found zero
				As found span
			Average Correction Factor	1.0011

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

	before calibration		after calibration	
Auto zero	0.6	ppb	0.2	ppb
Auto span	141.4	ppb	135.4	ppb

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **O3**

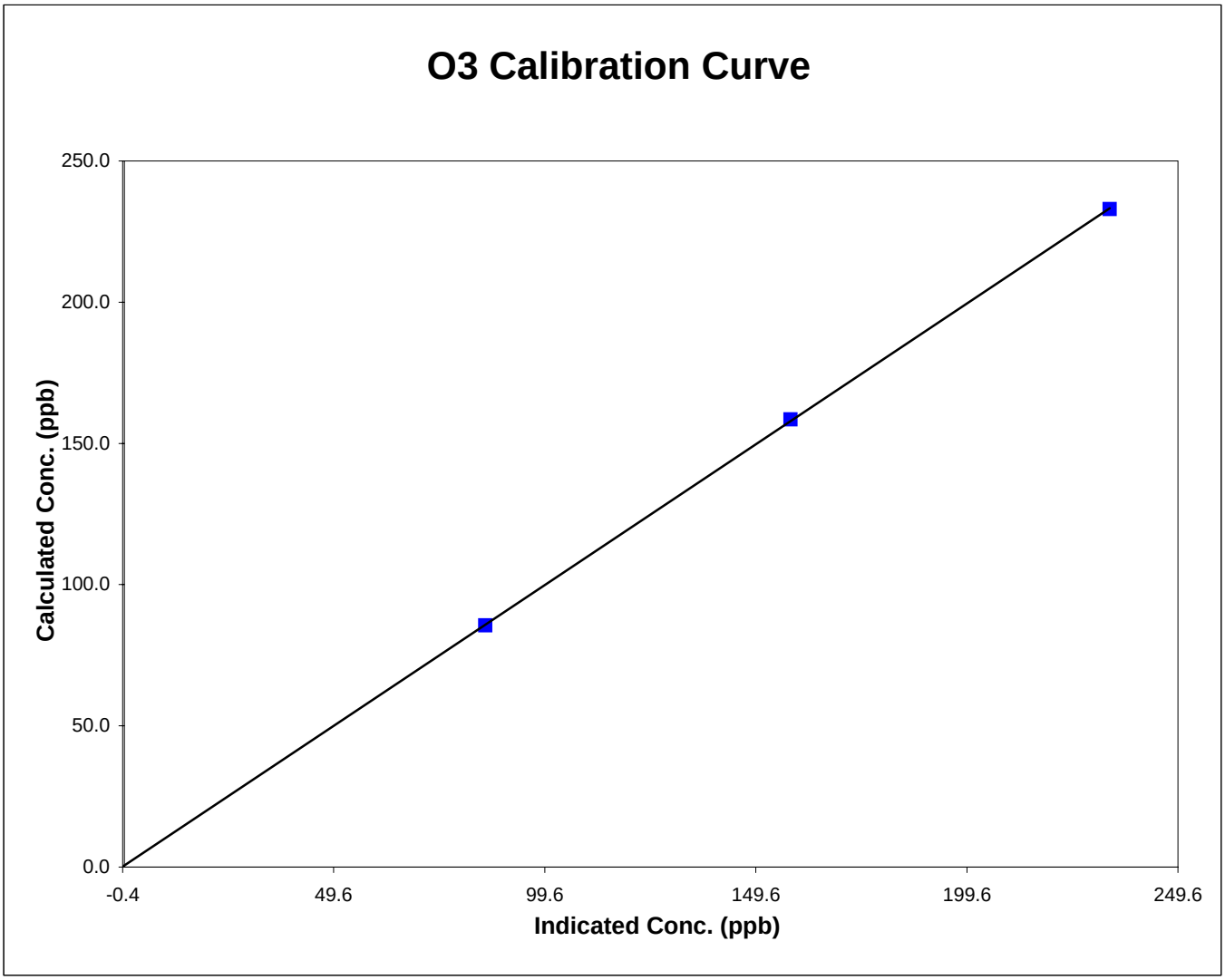
Air Monitoring Network **PASZA**

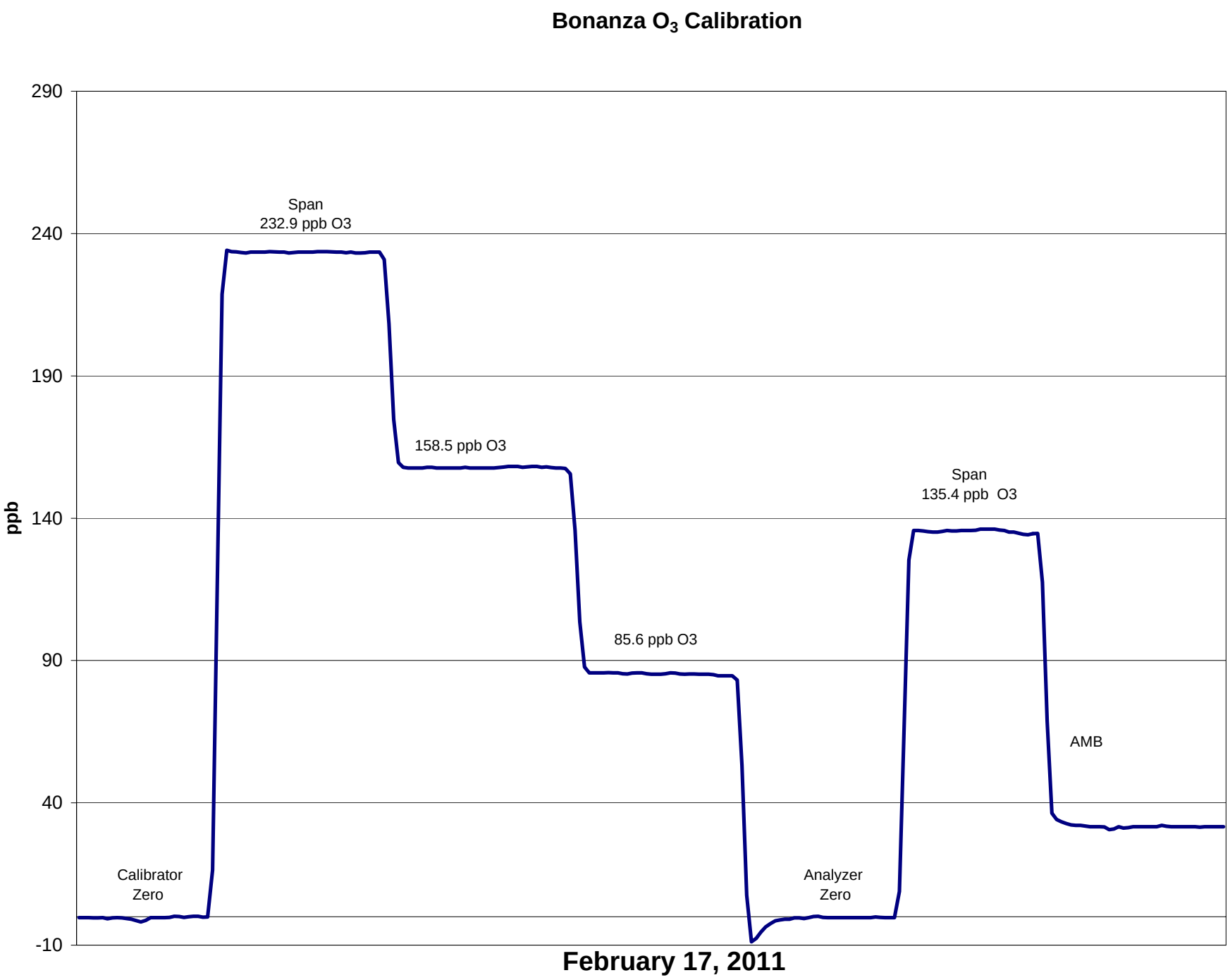
Station Information

Calibration Date	February 17, 2011	Previous Calibration	February 16, 2011
Station Number	0.5	Station Location	Rover - Bonanza
Start Time (MST)	16:00	End Time (MST)	18:00
Analyzer make/model	TEI Model 49C	Analyzer serial #	49C-71577-369

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.4	NA		
232.9	233.4	0.9977	Correlation Coefficient	0.999981
158.5	157.8	1.0044		
85.6	85.5	1.0012	Slope	0.997007
			Intercept	0.531382




Bonanza O_3 Calibration
290
240
190
140
90
40
-10
ppb
Span
232.9 ppb O3
158.5 ppb O3
85.6 ppb O3
Span
135.4 ppb O3
AMB
Calibrator
Zero
Analyzer
Zero
February 17, 2011

Calibration Report

Parameter **SO2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 3, 2011	Previous Calibration	January 21, 2010
Station Number	6	Station Location	Valleyview
Reason: Routine	Install	Removal	Other:
Start Time (MST)	10:37	End Time (MST)	12:39
Barometric Pressure	702.00 mm	Station Temperature	14.7 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentratior	50.6 ppm	Cal Gas Cert Date	7/23/2010
Gas Cert Reference	SGAL3245		
DACS make	Focus AP1000	DACS serial No.	45274
DACS voltage range	0 - 10 volt	DACS channel #	4
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.004126	Calculated slope	1.022744
Calculated intercept	-2.778761	Calculated intercept	-1.769626
Analyzer make	TEI 45C	Analyzer serial #	45C-57531-313

	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
Background	27		26.7	
Coefficient	0.851		0.851	
UV Lamp Voltage	948	LPM	947	LPM
Chamber Temp	44.3	V	44.5	V
Perm Gas Temp	35.1	C	35.1	C
Pressure	603.9	in Hg	613.2	in Hg
Sample Flow	0.465	LPM	0.468	LPM
Lamp Intensity	48935	Hz	48114	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)
4991	0.00	0.0	0.0	N/A
4989	39.85	401.0	392.6	1.0213
4989	19.89	200.9	199.8	1.0054
4989	9.94	100.6	101.4	0.9926
4989	0.00	0.0	0.0	As found zero
4989	39.85	401.0	392.6	As found span
			Average Correction Factor	1.0064

Calculated value of As Found Response: 391.470 ppm Percent Change of As Found: 2.4%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.0	ppm
Auto span	155.5	ppm	152.6	ppm

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **SO2**

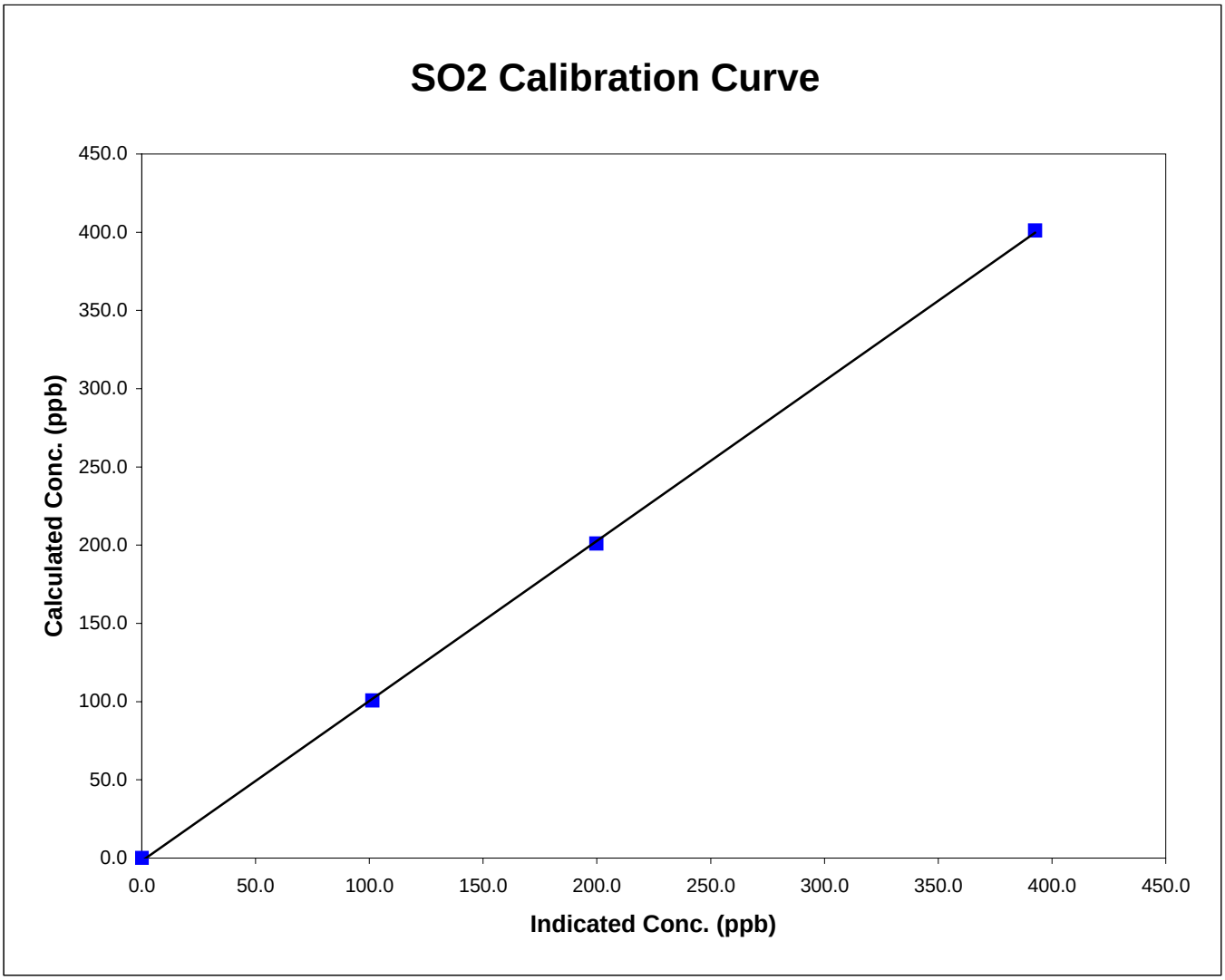
Air Monitoring Network **PASZA**

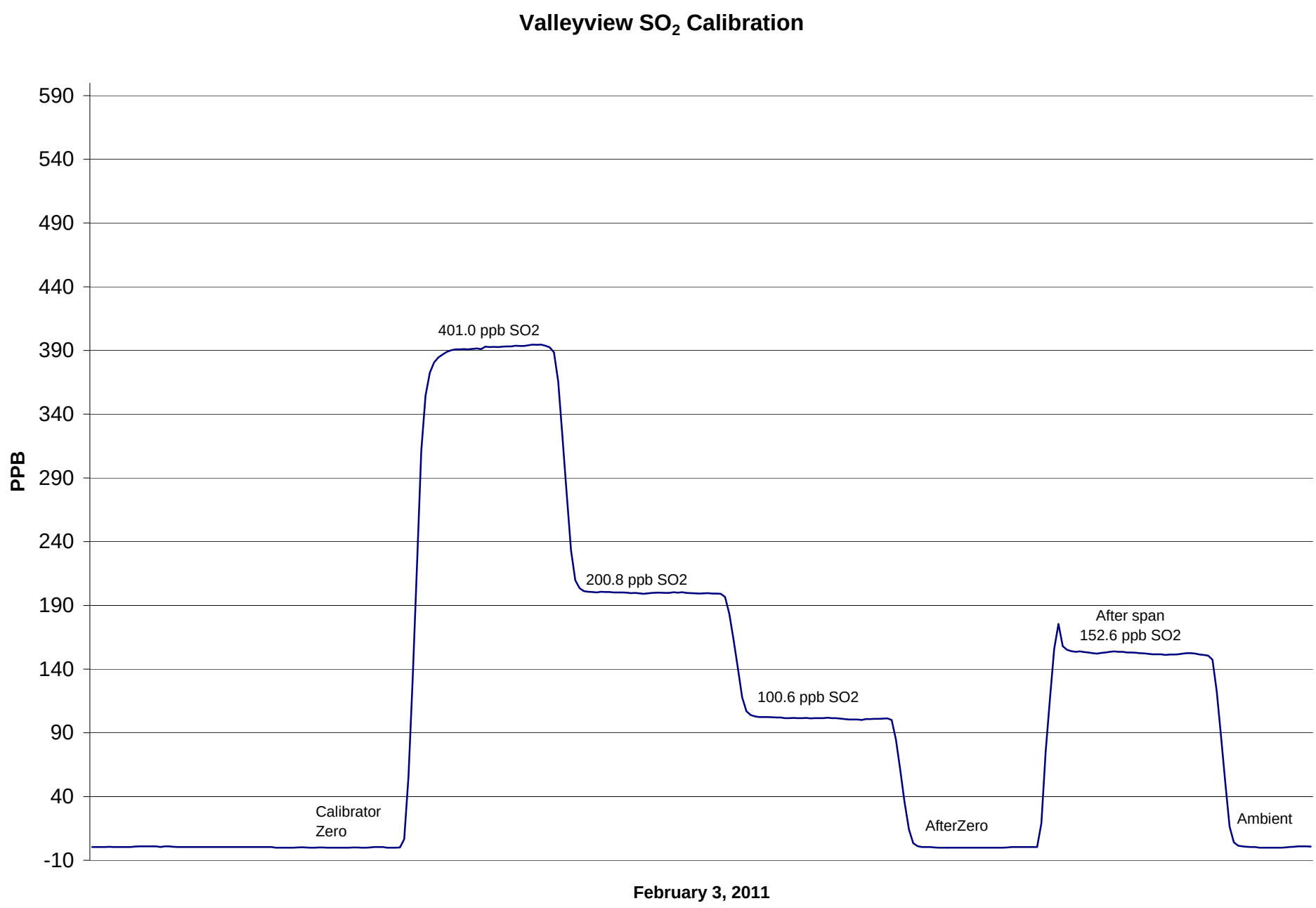
Station Information

Calibration Date	February 3, 2011	Previous Calibration	January 21, 2010
Station Number	6	Station Location	Valleyview
Start Time (MST)	10:37	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	0.0	N/A		
401.0	392.6	1.0213	Correlation Coefficient	0.999896
200.9	199.8	1.0054		
100.6	101.4	0.9926	Slope	1.022744
			Intercept	-1.769626




Valleyview SO_2 Calibration
590
540
490
440
390
340
290
240
190
140
90
40
-10
PPB
401.0 ppb SO2
200.8 ppb SO2
100.6 ppb SO2
After span
152.6 ppb SO2
Calibrator
Zero
AfterZero
Ambient
February 3, 2011

Calibration Report

Parameter **H2S**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	February 3, 2011	Previous Calibration	January 24, 2011
Station Number	5	Station Location	Valleyview
Reason: Routine	Install	Removal	Other:
Start Time (MST)	11:27	End Time (MST)	14:09
Barometric Pressure	702.00 mm	Station Temperature	21.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentratior	5.15 ppm	Cal Gas Expiry Date	4/4/2009
Gas Cert Reference	ALM013295		
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 10 volt	DACS channel #	9
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.005186	Calculated slope	1.000219
Calculated intercept	-0.404501	Calculated intercept	-0.153569
Analyzer make	TEI Model 43i - APSCB	Analyzer serial #	701120010

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	7.0	ppb	7.0	ppb
Coefficient	1.384		1.384	
Lamp Voltage	786	V	786	V
Chamber Temp	45.01	c	44.9	c
Perm Oven Temp	45.01	c	45.00	c
Pressure	632.80	mm Hg	633.80	mm Hg
Sample Flow	.428	ccm	.428	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)
4988	0.00	0.0	0.1	N/A
4989	79.75	81.0	81.2	0.9983
4989	39.83	40.8	40.9	0.9970
4989	9.93	10.2	10.4	0.9807
4989	0.00	0.0	0.1	As found zero
4989	79.75	81.0	81.2	As found span
			Average Correction Factor	0.9920

Calculated value of As Found Response: 81.06 ppm Percent Change of As Found: 0.0%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.0	ppm
Auto span	70.6	ppm	73.2	ppm

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **H2S**

Air Monitoring Network **PASZA**

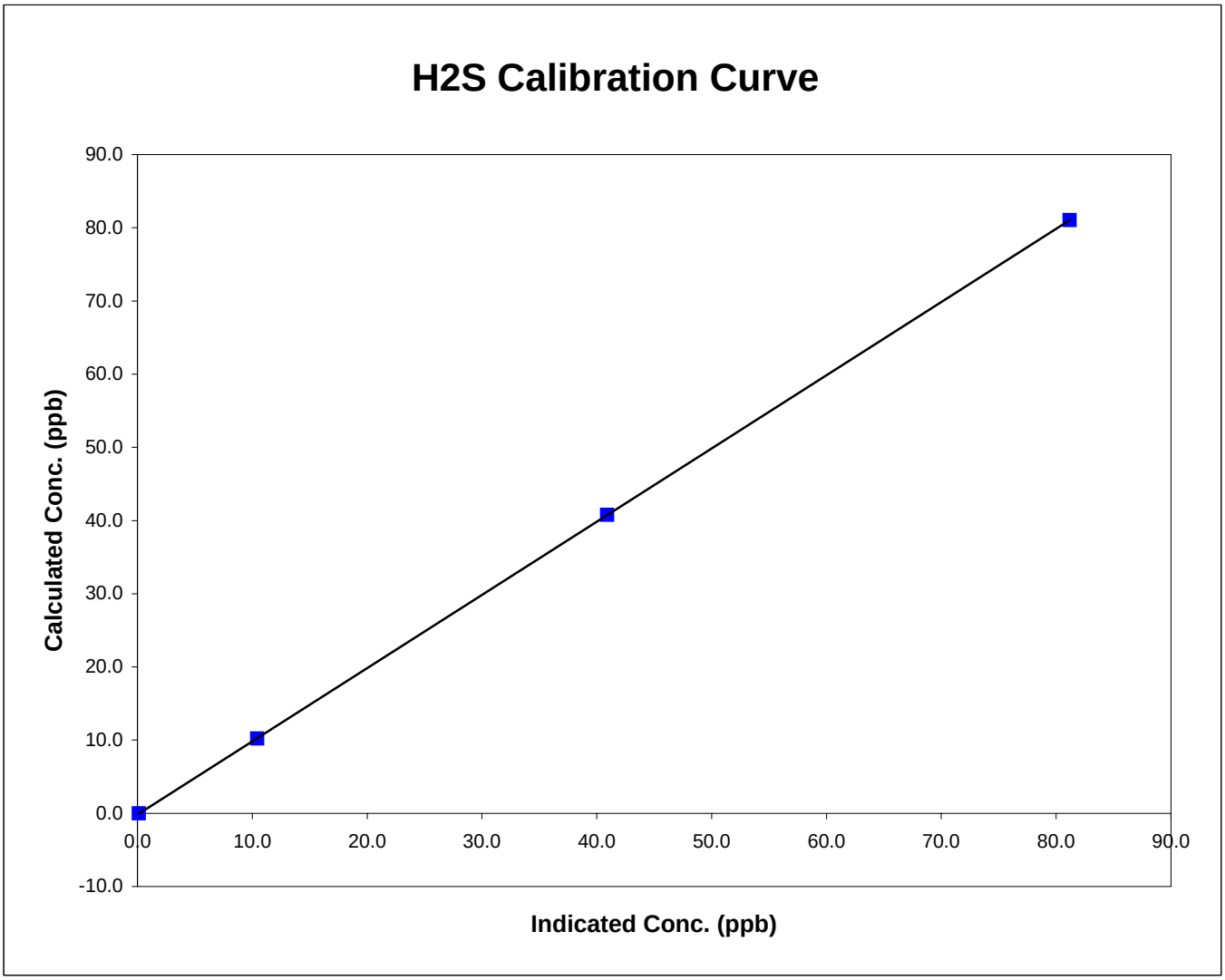
FOCUS AIR QUALITY MONITORING

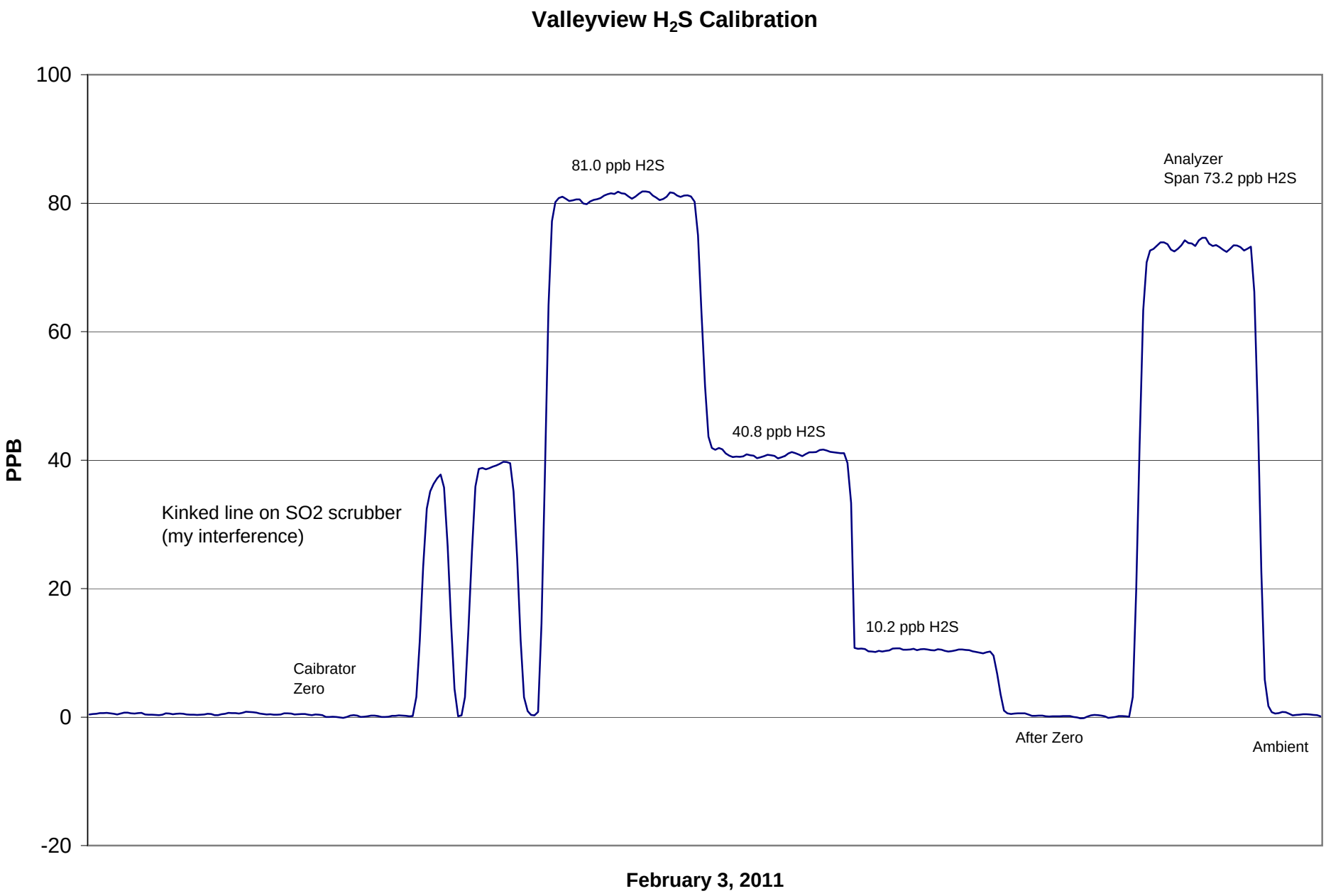
Station Information

Calibration Date	February 3, 2011	Previous Calibration	January 24, 2011
Station Number	5	Station Location	Valleyview
Start Time (MST)	11:27	End Time (MST)	14:09
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		
81.0	81.2	0.9983	Correlation Coefficient	0.999999
40.8	40.9	0.9970		
10.2	10.4	0.9807	Slope	1.000219
			Intercept	-0.153569




Valleyview H2S Calibration
100
80
60
40
20
0
-20
PPB
81.0 ppb H2S
Analyzer
Span 73.2 ppb H2S
40.8 ppb H2S
Kinked line on SO2 scrubber
(my interference)
10.2 ppb H2S
Caibrator
Zero
After Zero
Ambient
February 3, 2011