



Peace AirShed Zone Association

Ambient Air Monitoring Network Summary

Continuous Ambient Air Quality Monitoring Program

Monthly Report

March 2011

Operations and Reporting



April 28, 2011

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

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

Enclosed is the PASZA Ambient Monitoring Network Report for the month of **March 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
Taq 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 **March** 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 March with the exception of the TEOM - **Alberta Environment Reference #246477**.

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 March with the exception of the TEOM - **Alberta Environment Reference #246478**.

Smoky Heights Station:

- ◆ The measured ambient air quality was within the AAAQO for SO₂ at the Smoky Heights station, however the PM_{2.5} had one 1-hour exceedence on March 28: 20:00 183.3 µg/m³ - **Alberta Environment Reference #246434**.
- ◆ All analyzers / sensors at the Smoky Heights station had an operational uptime greater than 90% for the month of March.

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 March.

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 of 100% for the month of March.

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 March.

Passive Monitoring - 43 Stations throughout the PASZA zone:

There were four duplicate sites sampled in the month of March: Woking, Bear Lake, Clairmont Lake and Peavine. The passive samples at McLennan were not collected in March as roads were inaccessible due to heavy snow conditions. There is no NO₂ sample result for Silver Valley; sample was missing at site. The passive sample analyses were performed by MAXXAM Analytics Inc.

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

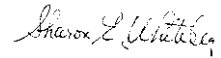
- Monthly average concentrations for SO₂ passives ranged from 0.4 ppb to 1.1 ppb, with a mean of 0.7 ppb.
- Monthly average concentrations for NO₂ passives ranged from 0.2 ppb to 6.1 ppb, with a mean of 0.9 ppb.
- Monthly average concentrations for O₃ passives ranged from 34.9 ppb to 51.4 ppb, with a mean of 43.7 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

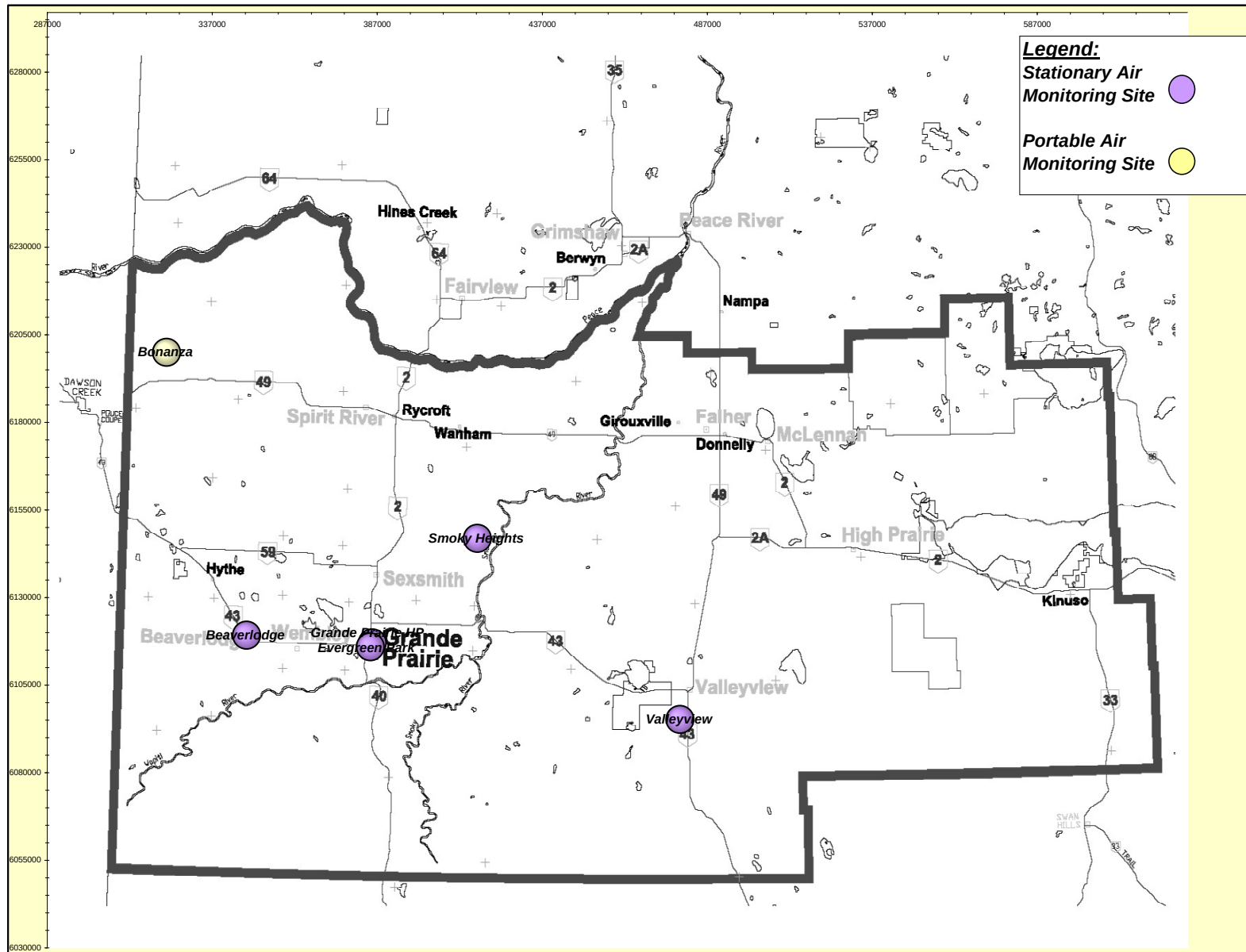


Shelly Pruden
Program Manager



Sharon Whiteley, B.Sc.
FOCUS AQM Data Specialist

Location of PASZA Continuous Monitoring Stations



PASZA Monthly Continuous Data Summary

Mar-2011 Peace Airshed Zone Association							Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
Pollutant (units)	Objectives		Station	Monthly Average	Exceedence		Conc	Day	Conc	Day	Operational Time (%)
	1-hr	24-hr			1-hr	24-hr					
SO ₂ (ppb)	172	48	Henry Pirker	0.7	0	0	3.2	Mar-23 21:00	1.2	Mar-27	100.0%
SO ₂ (ppb)	172	48	Evergreen Park	0.6	0	0	3.1	Mar-05 16:00	1.2	Mar-03	95.8%
SO ₂ (ppb)	172	48	Smoky Heights	1.1	0	0	12.1	Mar-12 22:00	2.6	Mar-07	100.0%
SO ₂ (ppb)	172	48	Beaverlodge	1.2	0	0	36.1	Mar-15 18:00	5.3	Mar-15	99.9%
SO ₂ (ppb)	172	48	Portable-Bonanza	0.6	0	0	6.3	Mar-30 20:00	1.0	Mar-14	100.0%
SO ₂ (ppb)	172	48	Valleyview	1.1	0	0	14.9	Mar-31 22:00	3.1	Mar-30	99.9%
NO (ppb)			Henry Pirker	4.7	0	0	144.2	Mar-17 09:00	19.8	Mar-17	100.0%
NO ₂ (ppb)	212	106	Henry Pirker	13.8	0	0	53.6	Mar-17 09:00	25.3	Mar-01	100.0%
NO _x (ppb)			Henry Pirker	18.6	0	0	198.0	Mar-17 09:00	45.1	Mar-17	100.0%
NO (ppb)			Beaverlodge	1.6	0	0	57.0	Mar-08 11:00	7.5	Mar-08	99.9%
NO ₂ (ppb)	212	106	Beaverlodge	5.7	0	0	31.6	Mar-08 11:00	14.0	Mar-08	99.9%
NO _x (ppb)			Beaverlodge	7.3	0	0	88.8	Mar-08 11:00	21.5	Mar-08	99.9%
NO (ppb)			Portable-Bonanza	1.2	0	0	26.4	Mar-07 21:00	6.3	Mar-07	100.0%
NO ₂ (ppb)	212	106	Portable-Bonanza	4.6	0	0	27.0	Mar-08 05:00	13.3	Mar-08	100.0%
NO _x (ppb)			Portable-Bonanza	5.8	0	0	47.3	Mar-07 21:00	18.4	Mar-08	100.0%
O ₃ (ppb)	82		Henry Pirker	28.1	0	-	51.4	Mar-28 17:00	43.3	Mar-31	100.0%
O ₃ (ppb) - 8-hr			Henry Pirker		0				46.5	Mar-27	
O ₃ (ppb)	82		Beaverlodge	36.5	0	-	59.1	Mar-28 18:00	49.4	Mar-31	99.9%
O ₃ (ppb) - 8-hr			Beaverlodge		0				53.8	Mar-28	
O ₃ (ppb)	82		Portable-Bonanza	35.6	0	-	55.3	Mar-28 21:00	48.8	Mar-31	100.0%
O ₃ (ppb) - 8-hr			Portable-Bonanza		0				53.7	Mar-28	
CO (ppm)	13		Henry Pirker	0.25	-	-	1.4	Mar-17 08:00	0.4	Mar-17	100.0%
CO (ppm) - 8-hr	5		Henry Pirker		0				0.7	Mar-17	
THC (ppm)			Henry Pirker	2.26	-	-	3.3	Mar-18 10:00	2.7	Mar-07	100.0%
TRS (ppb)			Henry Pirker	0.4	-	-	1.8	Mar-30 11:00	0.5	Mar-17	100.0%
TRS (ppb)			Evergreen Park	0.7	-	-	3.4	Mar-18 09:00	0.9	Mar-08	95.8%
TRS (ppb)			Smoky Heights	0.4	-	-	1.3	Mar-22 19:00	0.7	Mar-21	100.0%
TRS (ppb)			Portable-Bonanza	0.5	-	-	1.4	Mar-29 08:00	0.7	Mar-10	100.0%
H ₂ S (ppb)	10	3	Valleyview	0.2	0	0	1.8	Mar-23 10:00	0.6	Mar-17	99.9%

PASZA Monthly Continuous Data Summary – continued

Mar-2011Peace Airshed Zone Association							Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
PM2.5 (µg/m3)	80	30	Henry Pirker	13.6	0	0	55.4	Mar-04 04:00	23.8	Mar-28	81.6%
PM2.5 (µg/m3)	80	30	Evergreen Park	7.7	0	0	27.1	Mar-21 20:00	13.3	Mar-07	88.7%
PM2.5 (µg/m3)	80	30	Smoky Heights	6.6	0	1	183.3	Mar-28 20:00	18.3	Mar-28	99.9%
PM2.5 (µg/m3)	80	30	Beaverlodge	10.4	0	0	32.2	Mar-08 12:00	22.4	Mar-28	99.9%
RH (%)			Henry Pirker	67.9	-	-	88.2	Mar-23 21:00	79.4	Mar-20	100.0%
RH (%)			Evergreen Park	74.7	-	-	95.0	Mar-24 03:00	89.0	Mar-20	95.7%
RH (%)			Beaverlodge	71.7	-	-	92.9	Mar-23 03:00	85.0	Mar-21	99.9%
RH (%)			Valleyview	71.1	-	-	93.7	Mar-23 03:00	88.5	Mar-16	99.9%
SR (W/m²)			Henry Pirker	95.8	-	-	573.8	Mar-29 13:00	152.3	Mar-30	100.0%
Temp (°C)			Henry Pirker	-9.0	-	-	9.8	Mar-29 18:00	3.5	Mar-31	100.0%
Temp (°C)			Evergreen Park	-8.8	-	-	9.9	Mar-29 18:00	4.9	Mar-31	95.7%
Temp (°C)			Smoky Heights	-9.1	-	-	10.0	Mar-29 16:00	2.0	Mar-31	100.0%
Temp (°C)			Beaverlodge	-8.2	-	-	12.2	Mar-29 14:00	3.2	Mar-29	99.9%
Temp (°C)			Portable-Bonanza	-9.6	-	-	10.0	Mar-29 18:00	3.4	Mar-30	100.0%
Temp (°C)			Valleyview	-7.7	-	-	10.7	Mar-29 15:00	4.3	Mar-31	99.9%
WSPD s (km/hr)			Henry Pirker	7.9	-	-	39.0	Mar-30 17:00	16.4	Mar-30	100.0%
WSPD s (km/hr)			Evergreen Park	4.8	-	-	30.0	Mar-30 17:00	13.9	Mar-31	95.7%
WSPD s (km/hr)			Smoky Heights	11.2	-	-	37.0	Mar-30 18:00	22.1	Mar-31	100.0%
WSPD s (km/hr)			Beaverlodge	8.4	-	-	51.0	Mar-30 15:00	23.4	Mar-21	99.9%
WSPD s (km/hr)			Portable-Bonanza	9.1	-	-	41.0	Mar-30 14:00	22.7	Mar-30	100.0%
WSPD s (km/hr)			Valleyview	5.9	-	-	24.0	Mar-30 17:00	11.3	Mar-30	99.5%
WSPD v (km/hr)			Henry Pirker	2.8	-	-	39.0	Mar-30 17:00	14.8	Mar-30	100.0%
WSPD v (km/hr)			Evergreen Park	1.6	-	-	30.0	Mar-30 17:00	12.8	Mar-31	95.7%
WSPD v (km/hr)			Smoky Heights	4.7	-	-	37.0	Mar-30 18:00	21.1	Mar-31	100.0%
WSPD v (km/hr)			Beaverlodge	2.6	-	-	51.0	Mar-30 15:00	23.1	Mar-21	99.9%
WSPD v (km/hr)			Portable-Bonanza	2.1	-	-	40.0	Mar-30 14:00	19.6	Mar-30	100.0%
WSPD v (km/hr)			Valleyview	0.6	-	-	24.0	Mar-30 17:00	9.2	Mar-30	99.5%
WDIR			Henry Pirker	NE	-	-	-	-	-	-	100.0%
WDIR			Evergreen Park	NNE	-	-	-	-	-	-	95.7%
WDIR			Smoky Heights	N	-	-	-	-	-	-	100.0%
WDIR			Beaverlodge	NE	-	-	-	-	-	-	99.9%
WDIR			Portable-Bonanza	E	-	-	-	-	-	-	100.0%
WDIR			Valleyview	NE	-	-	-	-	-	-	99.5%

Continuous Network Equipment Summary

PASZA – Henry Pirker Station

General Station Issues

Routine monthly calibrations were performed on March 14th (TRS, CO & THC) and March 16th (SO₂, NO_x & O₃).

Parameter	Make	Model	Notes
SO ₂	TEI	43C	No operational issues observed.
NO _x /NO/NO ₂	TEI	42C	No operational issues observed.
O ₃	TEI	49C	Spans were outside the target on March 15 th , 16 th , 30 th & 31 st – reason was not determined.
CO	TEI	48C	No operational issues observed.
THC	TEI	51-CLT	No operational issues observed.
TRS	TEI	45C/43C	Spans were outside the target on March 1 st & 9 th - influences from external temperature.
PM _{2.5}	R&P	1400AB	One hundred and thirty-seven (135) hours were flagged for baseline drift. Two (2) hours were flagged invalid due to loading issue from adverse weather conditions. AE Reference #246477.
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 March 22nd (SO₂, TRS & PM_{2.5}). There were a number of hours flagged invalid due to DACS / communication errors for all parameters during the month of March – the datalogger was replaced on April 13th 2011.

Parameter	Make	Model	Notes
SO ₂	TEI	43i	Thirty-one (31) hours were flagged invalid due to above noted DACS error; otherwise there were no other operational issues observed.
TRS	TEI	43C	Thirty-one (31) hours were flagged invalid due to above noted DACS error; otherwise there were no other operational issues observed.
PM _{2.5}	R&P	1400AB	Thirty-two (32) hours were flagged invalid due to above noted DACS error. Fifty-two (52) hours were flagged invalid due to unusual spiking caused by loading issues in adverse weather conditions. AE Reference #2464778.
ET	Met One/Gill	083D	Thirty-two (32) hours were flagged invalid due to above noted DACS error; otherwise there were no other operational issues observed.
RH	Met One/Gill		Thirty-two (32) hours were flagged invalid due to above noted DACS error; otherwise there were no other operational issues observed.
WS / WD	Met One/ Gill		Thirty-two (32) hours were flagged invalid due to above noted DACS error; otherwise there were no other operational issues observed.

PASZA – Smoky Heights Station

General Station Issues

Routine monthly calibrations were performed on March 18th (SO₂, TRS & PM_{2.5}).

Parameter	Make	Model	Notes
SO ₂	TEI	43C	There were no zero / spans on March 19 th , 20 th & 21 st – due to a configuration error. The configuration was reloaded into the datalogger on March 23 rd .
TRS	TEI	43C	Spans were outside the target range from March 1 st to 8 th – influences from external temperatures. There were no zero / spans on March 19 th , 20 th & 21 st – due to a configuration error. The configuration was reloaded into the datalogger on March 23 rd .
PM _{2.5}	R&P	1400AB	One (1) hour was flagged due to baseline drift. One 1-hour exceedence on March 28: 183 µg/m ³ – AE Reference #246434 .
ET	Met One	083D	No operational issues observed.
WS / WD	Met One	010C/020C	No operational issues observed.

PASZA – Beaverlodge Station

General Station Issues

Routine monthly calibrations were performed on March 1st (PM_{2.5}) and March 10th (SO₂, O₃ & NO_x). On March 15th a configuration error in datalogger was noted and fixed; one (1) hour was flagged invalid for all parameters.

Parameter	Make	Model	Notes
SO ₂	TEI	43CTL	No operational issues other than above noted error.
NOx/NO/NO ₂	TEI	42C	No operational issues other than above noted error.
O ₃	TEI	49C	No operational issues other than above noted error.
PM _{2.5}	R&P	1400AB	No operational issues other than above noted error.
ET	n/a	n/a	No operational issues other than above noted error.
RH	n/a	n/a	No operational issues other than above noted error.
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 March 29th (SO₂, TRS, NO_x & O₃).

Parameter	Make	Model	Notes
SO ₂	TEI	43C	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
NO _x /NO/NO ₂	TEI	42I	No operational issues observed.
O ₃	TEI	49C	No operational issues observed.
ET	Met One		No operational issues observed.
WS / WD	Met One	010C/020C	No operational issues observed.

PASZA – Valleyview Station

General Station Issues

Routine monthly calibrations were performed on March 24th (SO₂ & H₂S).

Parameter	Make	Model	Notes
SO ₂	TEI	43i	One (1) hour was flagged invalid for maintenance as data & configurations were downloaded.
H ₂ S	TEI	43A	One (1) hour was flagged invalid for maintenance as data & configurations were downloaded.
ET	Gill	Met Pak 3	One (1) hour was flagged invalid for maintenance as data & configurations were downloaded.
RH	Gill	Met Pak 3	One (1) hour was flagged invalid for maintenance as data & configurations were downloaded.
WS	Gill	Met Pak 3	Three (3) hours were flagged invalid due to intermittent spiking caused by fog/snow conditions. One (1) hour was flagged invalid for maintenance as data & configurations were downloaded.
WD	Gill	Met Pak 3	Three (3) hours were flagged invalid due to intermittent spiking caused by fog/snow conditions. One (1) hour was flagged invalid for maintenance as data & configurations were downloaded.

PASZA
Henry Pirker Station
Monthly Summary Tables, Graphs and
Roses

**PASZA**

Peace Air Shed Zone Association

Hourly Averages

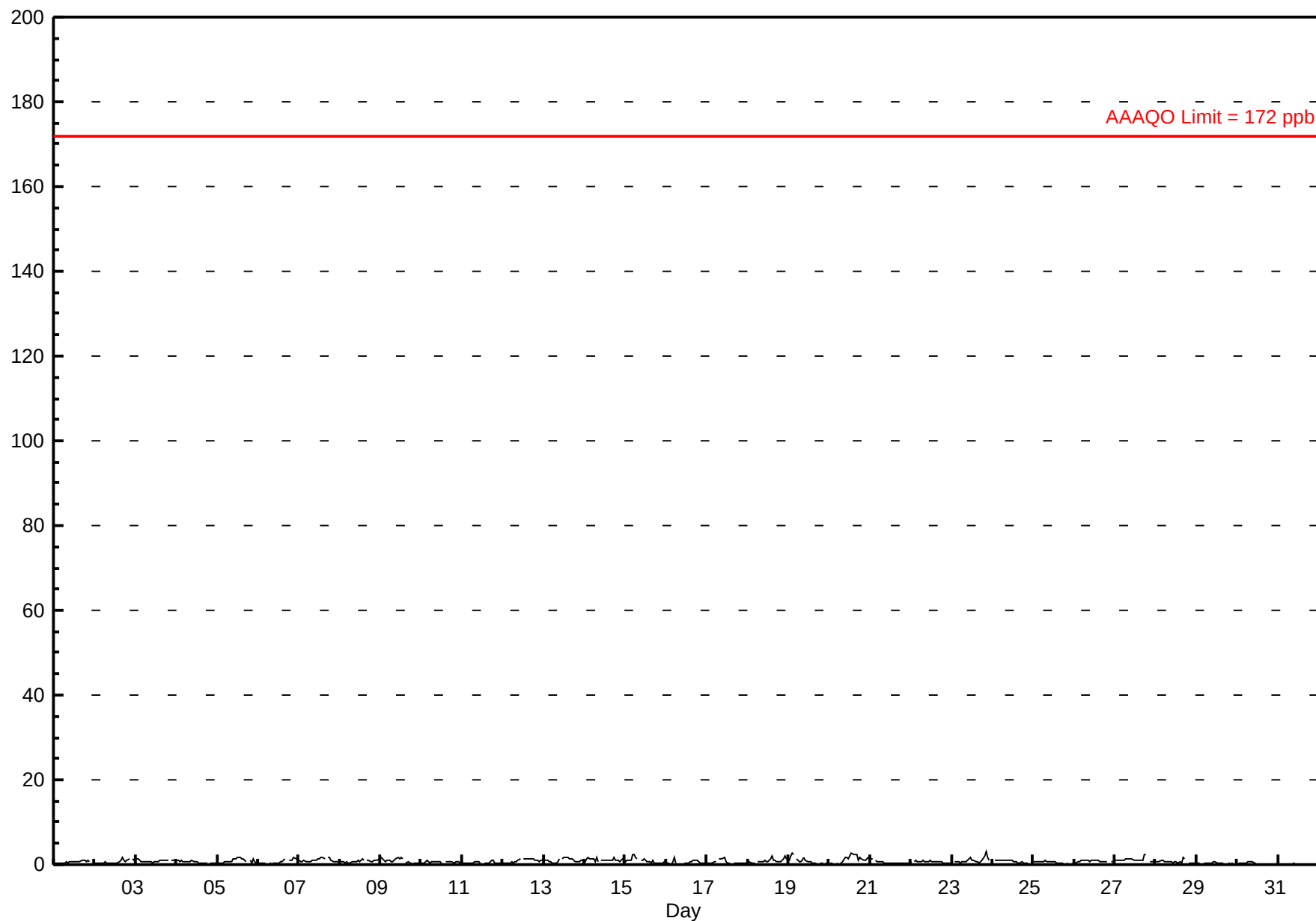
Sulphur Dioxide (SO₂) - ppb**Henry Pirker - March 2011**

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 3.2 ppb on Mar 23 21:00 Maximum Daily Average: 1.2 ppb on Mar 27																				Hours in Service: 744 Hours of Data: 703 Hours of Missing Data: 41 Hours of Calibration: 41 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Mar 6 07:00 Minimum Daily Average: 0.1 ppb on Mar 31 Maximum Diurnal Average: 0.8 ppb at hour 11 Minimum Diurnal Average: 0.6 ppb at hour 7 Monthly Average: 0.73 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.2 Q ₁ = 0.4 Median = 0.6 Q ₃ = 1.0 P ₉₀ = 1.4 P ₉₉ = 2.4																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0	0.6	1.0
2-Mar	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	2	1	1	1	1	A	1	1	0.7	1.6
3-Mar	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	A	1	1	1	0.9	1.4
4-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	A	0	0	0	0	0.6	1.0
5-Mar	0	0	0	0	1	1	1	1	1	1	1	1	2	2	1	1	1	1	A	1	0	1	1	0	0.9	1.9
6-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	A	1	1	1	2	1	1	0.6	1.6
7-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	A	2	2	1	1	1	1	1	1.0	1.8
8-Mar	1	1	1	0	1	0	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.8	1.5
9-Mar	2	1	1	1	1	1	1	1	1	1	2	2	2	1	A	1	1	0	0	0	0	0	0	0	0.8	1.7
10-Mar	0	0	0	1	1	0	1	1	1	1	1	1	0	A	1	1	1	1	1	0	1	1	1	0	0.5	0.9
11-Mar	0	0	0	0	0	0	0	1	1	1	1	0	A	0	0	0	0	1	1	0	0	0	1	0	0.5	1.0
12-Mar	0	0	0	0	0	1	0	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.5
13-Mar	1	1	1	1	1	0	0	0	1	1	A	2	2	2	2	1	2	1	1	1	1	1	1	1	1.0	1.8
14-Mar	1	1	2	1	1	1	1	2	1	A	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1.1	1.8
15-Mar	1	1	1	1	2	2	2	1	A	1	1	1	1	1	1	0	1	0	0	0	0	0	0	1	0.9	2.4
16-Mar	0	0	0	0	1	2	0	A	C	C	C	0	0	0	1	1	1	1	1	1	0	0	0	0	0.6	1.7
17-Mar	0	0	0	0	1	1	A	1	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.6
18-Mar	1	1	0	0	0	A	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	2	1	0.9	2.1
19-Mar	1	2	3	2	A	1	1	1	1	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.8	2.7
20-Mar	0	0	0	A	0	0	0	0	1	2	2	2	2	3	2	2	2	1	2	1	1	1	1	2	1.2	2.6
21-Mar	1	1	A	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.4
22-Mar	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0.7	0.9
23-Mar	A	A	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	2	3	2	1	A	1.0	3.2
24-Mar	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0	0	0	A	A	0.8	1.1
25-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	A	A	0	0.6	0.9
26-Mar	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	A	1	1	0.8	1.1
27-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	A	A	1	1	1	1.2	2.4
28-Mar	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	0	2	1	A	0	0	0	0	0	0.7	1.6
29-Mar	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.6
30-Mar	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.7
31-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.2
0.7 0.7 0.7 0.7 0.7 0.7 0.6 0.7 0.7 0.8 0.8 0.8 0.8 0.8 0.8 0.8 0.8 0.8 0.7 0.6 0.6 0.6 0.7 0.6																								Diurnal Average		
1.7 2.0 2.7 2.4 2.2 2.4 1.7 1.6 1.5 1.7 1.7 1.6 2.1 2.6 2.3 2.3 2.4 2.4 2.4 2.1 3.2 1.6 2.1 1.7																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										

Hourly Averages

Sulphur Dioxide (SO₂) - ppb

Henry Pirker - March 2011



**PASZA**

Peace Air Shed Zone Association

Hourly Maximums

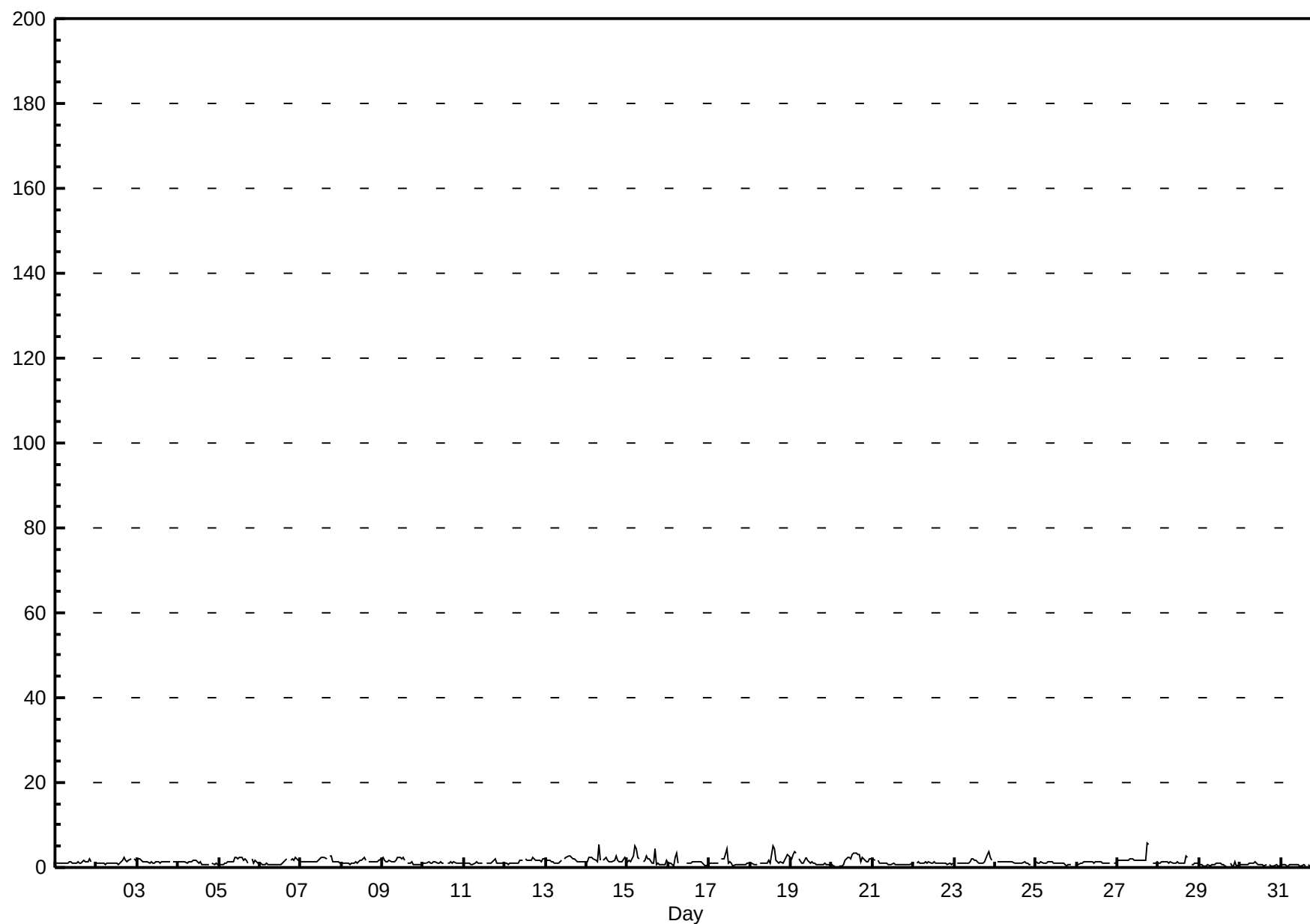
Sulphur Dioxide (SO₂) - ppb**Henry Pirker - March 2011**

Maximum Value: 5.8 ppb on Mar 27 18:00																				Maximum Daily Average: 2.0 ppb on Mar 14										Hours in Service: 744	
Minimum Value: 0 ppb on Mar 31 18:00																				Minimum Daily Average: 0.5 ppb on Mar 31										Hours of Data: 703	
Maximum Diurnal Average: 1.5 ppb at hour 14																				Minimum Diurnal Average: 1.1 ppb at hour 7										Hours of Missing Data: 41	
Monthly Average: 1.29 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.6 Q ₁ = 0.9 Median = 1.1 Q ₃ = 1.5 P ₉₀ = 2.1 P ₉₉ = 4.2										Hours of Calibration: 41	
																														Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	2	1	A	1	1.2	1.9					
2-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	2	2	A	2	2	1.2	2.3					
3-Mar	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.4	2.0					
4-Mar	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	A	1	1	1	1	1.1	1.7					
5-Mar	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	1	A	2	1	2	1	1	1.5	2.3					
6-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	A	2	2	2	2	2	2	1.2	2.2					
7-Mar	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	A	3	3	1	1	1	1	1	1.6	2.7					
8-Mar	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	A	1	1	1	1	1	1	2	2	1.3	2.3					
9-Mar	2	2	1	1	2	1	1	1	2	2	2	2	2	2	A	1	1	1	1	1	1	1	1	1	1.4	2.3					
10-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1.1	1.4					
11-Mar	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	2	2	1	1	1	1	1	1.0	1.9					
12-Mar	1	1	1	1	1	1	1	1	1	2	2	A	2	2	2	2	2	2	2	2	2	1	2	2	1.5	2.3					
13-Mar	2	2	2	1	1	1	1	1	1	2	A	2	2	3	3	2	2	2	1	1	1	1	1	1	1.7	2.8					
14-Mar	1	2	2	2	2	2	1	5	2	A	2	3	2	1	1	2	2	3	2	1	1	1	2	2	2.0	5.4					
15-Mar	1	2	1	3	5	4	2	2	A	1	2	3	2	2	1	1	4	1	1	1	1	1	1	2	1.9	5.0					
16-Mar	1	1	1	0	2	4	1	A	C	C	C	1	1	1	1	1	1	1	1	1	1	0	1	1.1	3.5						
17-Mar	1	1	1	1	1	1	A	2	2	2	4	1	1	1	1	1	1	1	1	1	1	1	1	1.1	4.5						
18-Mar	1	1	1	1	1	A	1	1	1	1	1	2	1	5	4	2	1	1	1	1	2	3	3	1.7	5.1						
19-Mar	2	3	4	4	A	2	1	1	2	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1.4	3.7						
20-Mar	1	1	1	A	1	1	1	1	2	2	2	2	3	4	3	3	3	2	3	2	1	2	2	2	1.8	3.5					
21-Mar	2	2	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	2.0						
22-Mar	1	A	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.5						
23-Mar	A	A	1	1	1	1	1	1	1	2	2	2	2	2	1	1	1	1	2	3	4	3	2	A	1.5	3.7					
24-Mar	A	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	A	1.2	1.5					
25-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	A	A	1	1.0	1.4					
26-Mar	1	1	1	1	2	2	2	2	2	1	1	1	2	2	2	1	1	1	1	1	A	A	1	1	1.2	1.5					
27-Mar	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	6	5	A	A	1	1	1	1	1.9	5.8					
28-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	2	A	1	1	1	1	1	1	1.2	2.8					
29-Mar	1	1	0	0	0	1	0	1	1	1	1	1	1	1	1	0	0	A	1	0	1	2	1	1	0.7	1.5					
30-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	1	0	0	0	1	0	0	0.6	1.4					
31-Mar	1	1	1	0	0	1	1	1	1	1	1	0	1	1	1	A	1	0	0	0	0	1	0	0	0.5	0.7					
1.2 1.2 1.2 1.3 1.3 1.3 1.1 1.3 1.2 1.4 1.4 1.4 1.4 1.5 1.4 1.2 1.5 1.4 1.4 1.2 1.1 1.2 1.2 1.2																									Diurnal Average						
2.3 3.0 3.7 3.5 5.0 4.2 2.3 5.4 2.0 2.5 4.5 2.7 3.2 5.1 4.3 3.0 4.3 5.8 5.5 3.0 3.7 2.5 3.1 2.6																									Diurnal Maximum						
C - Calibration																									A - Automated Daily Zero Span						

Hourly Maximums

Sulphur Dioxide (SO₂) - ppb

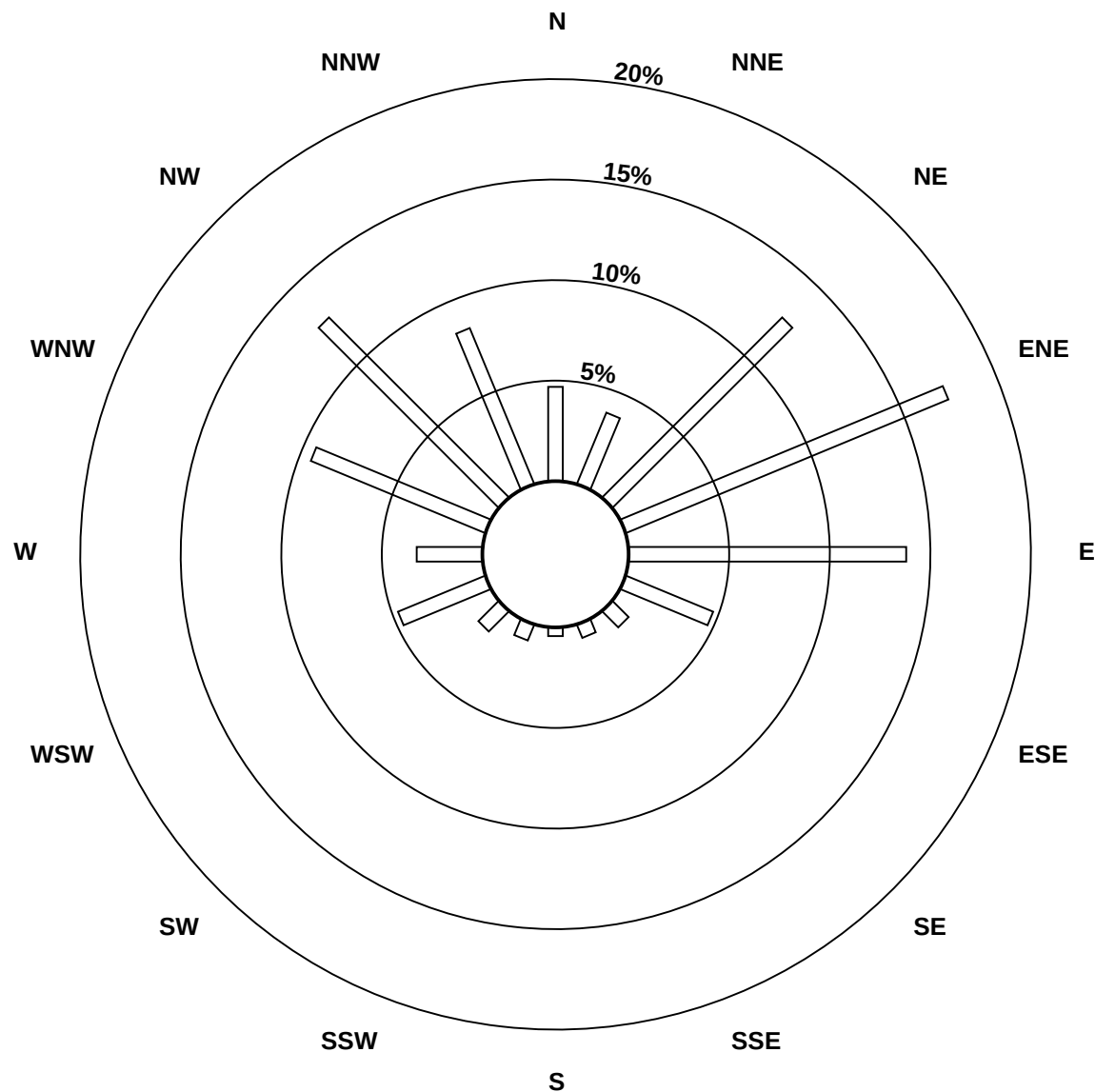
Henry Pirker - March 2011



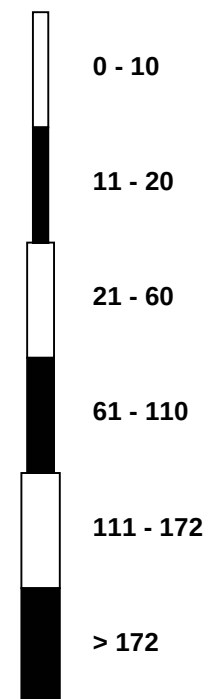
Pollutant Rose

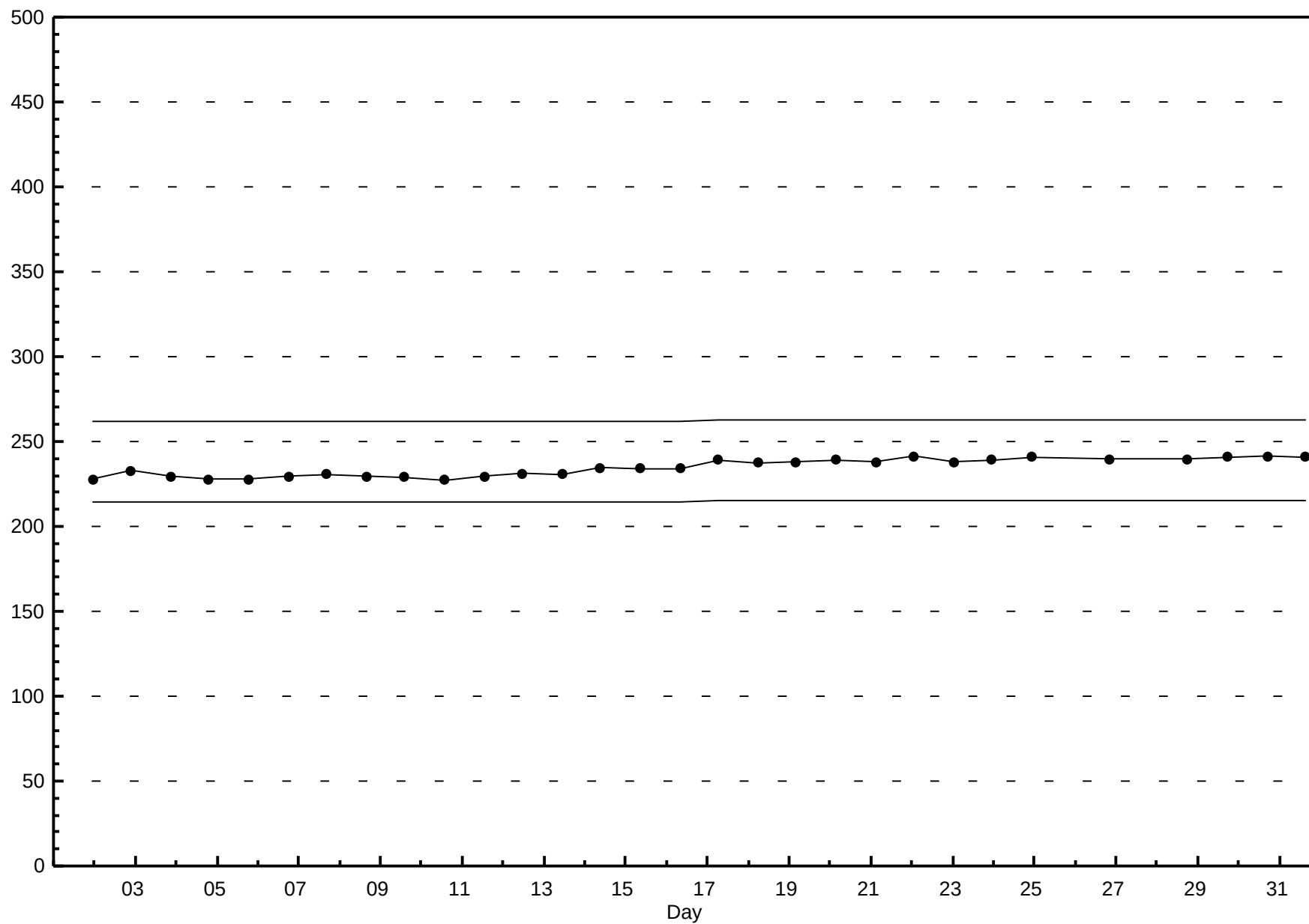
Sulphur Dioxide (SO₂) - ppb

Henry Pirker - March 2011



Pollutant Classes (ppb)





**PASZA**

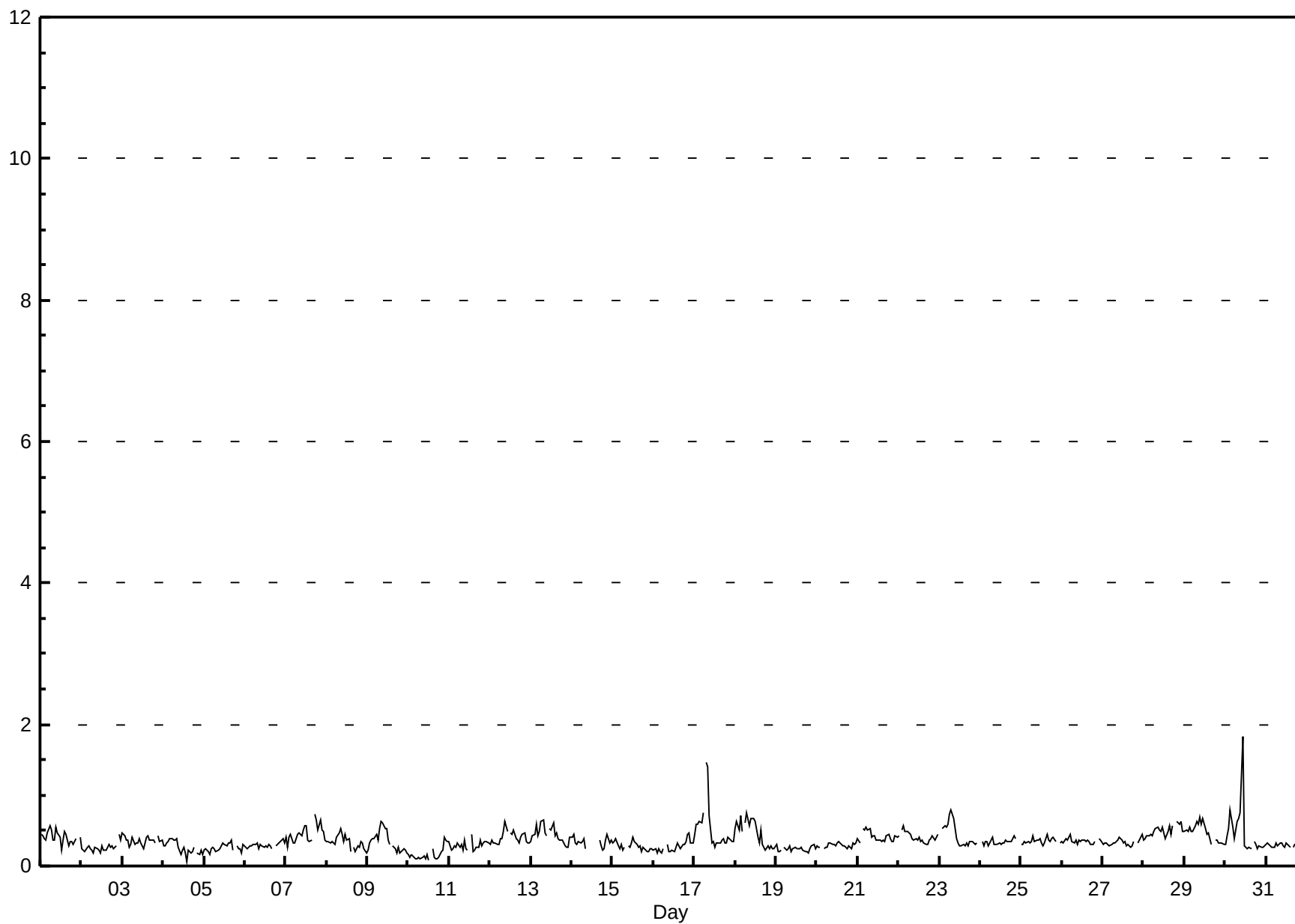
Peace Air Shed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - March 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 1.8 ppb on Mar 30 11:00 Maximum Daily Average: 0.5 ppb on Mar 17																				Hours in Service: 744 Hours of Data: 701						
Minimum Value: 0 ppb on Mar 4 15:00 Minimum Daily Average: 0.2 ppb on Mar 10 Maximum Diurnal Average: 0.4 ppb at hour 8 Minimum Diurnal Average: 0.3 ppb at hour 17 Monthly Average: 0.36 ppb Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.3 Q ₃ = 0.4 P ₉₀ = 0.5 P ₉₉ = 0.7																				Hours of Missing Data: 43 Hours of Calibration: 43 Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.4	0.6
2-Mar	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
3-Mar	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	0.5
4-Mar	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
5-Mar	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
6-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	1	0	0	0.3	0.4
7-Mar	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	A	1	1	1	1	1	0	0	0.5	0.7
8-Mar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	0.5
9-Mar	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	0.6
10-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.4
11-Mar	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
12-Mar	0	0	0	0	0	0	0	0	0	1	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0.4	0.6
13-Mar	0	0	0	1	0	0	1	1	0	0	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0.4	0.7
14-Mar	0	0	0	0	0	0	0	0	0	A	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0.3	0.5
15-Mar	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
16-Mar	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
17-Mar	0	1	1	1	1	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.5
18-Mar	1	1	1	1	0	A	A	1	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0.5	0.7
19-Mar	0	0	0	0	A	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
20-Mar	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.3
21-Mar	0	0	A	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
22-Mar	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
23-Mar	A	A	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8
24-Mar	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0.3	0.4
25-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0.4	0.4
26-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0	0.4	0.4
27-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0	0	0.3	0.4
28-Mar	0	0	0	0	0	0	0	1	1	1	0	1	0	0	1	0	1	A	1	1	1	1	0	0	0.5	0.6
29-Mar	0	0	0	1	0	0	1	1	1	1	1	1	1	0	0	0	0	A	0	0	0	0	0	0	0.5	0.7
30-Mar	0	0	1	1	1	0	1	1	1	1	2	0	0	0	0	0	A	0	0	0	0	0	0	0	0.5	1.8
31-Mar	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	0.3
0.3 0.3 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3																								Diurnal Average		
0.5 0.6 0.6 0.8 0.6 0.8 0.7 1.5 1.4 0.8 1.8 0.7 0.6 0.6 0.5 0.6 0.4 0.7 0.6 0.6 0.7 0.6 0.6 0.5																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																										

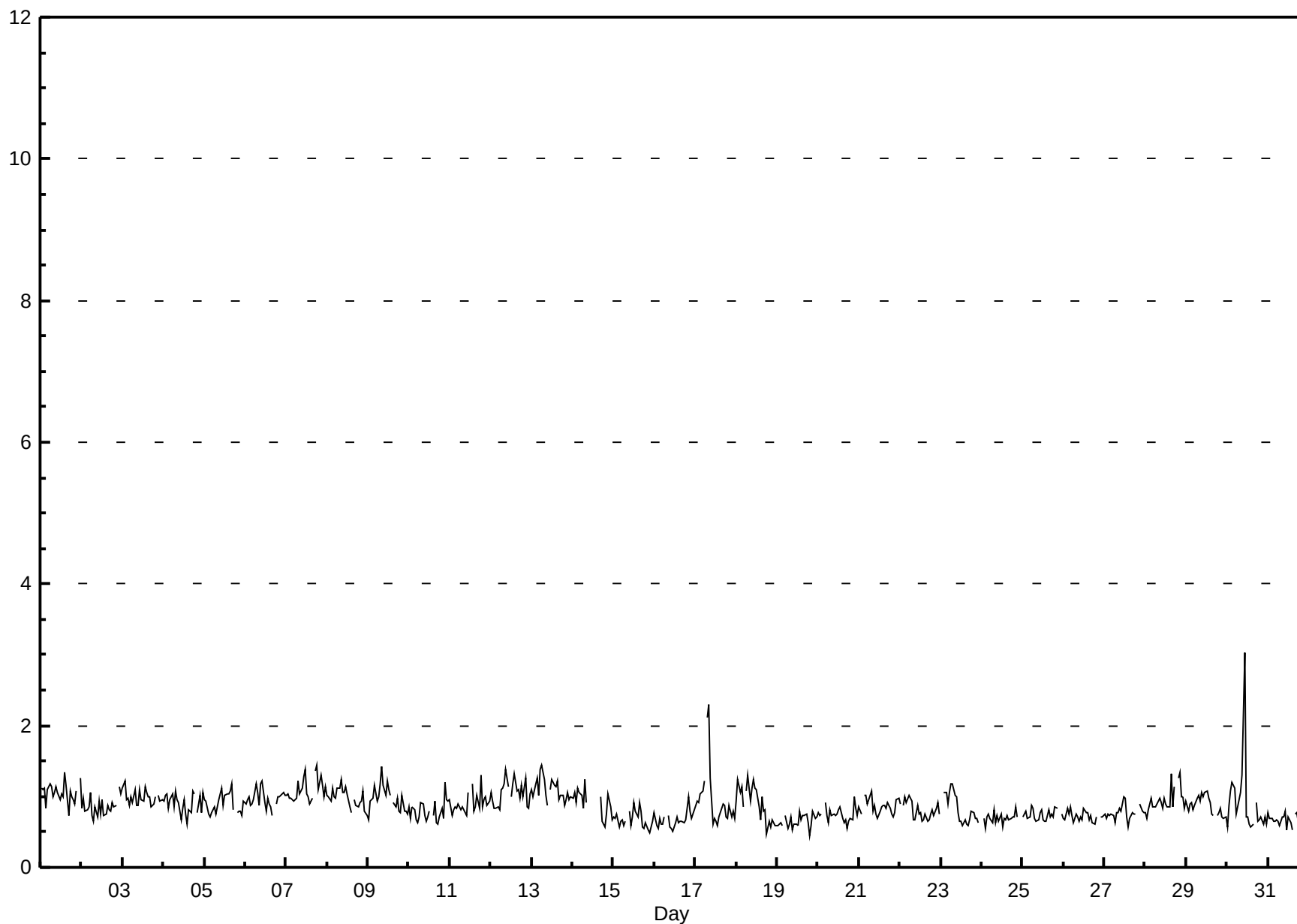


**PASZA**

Peace Air Shed Zone Association

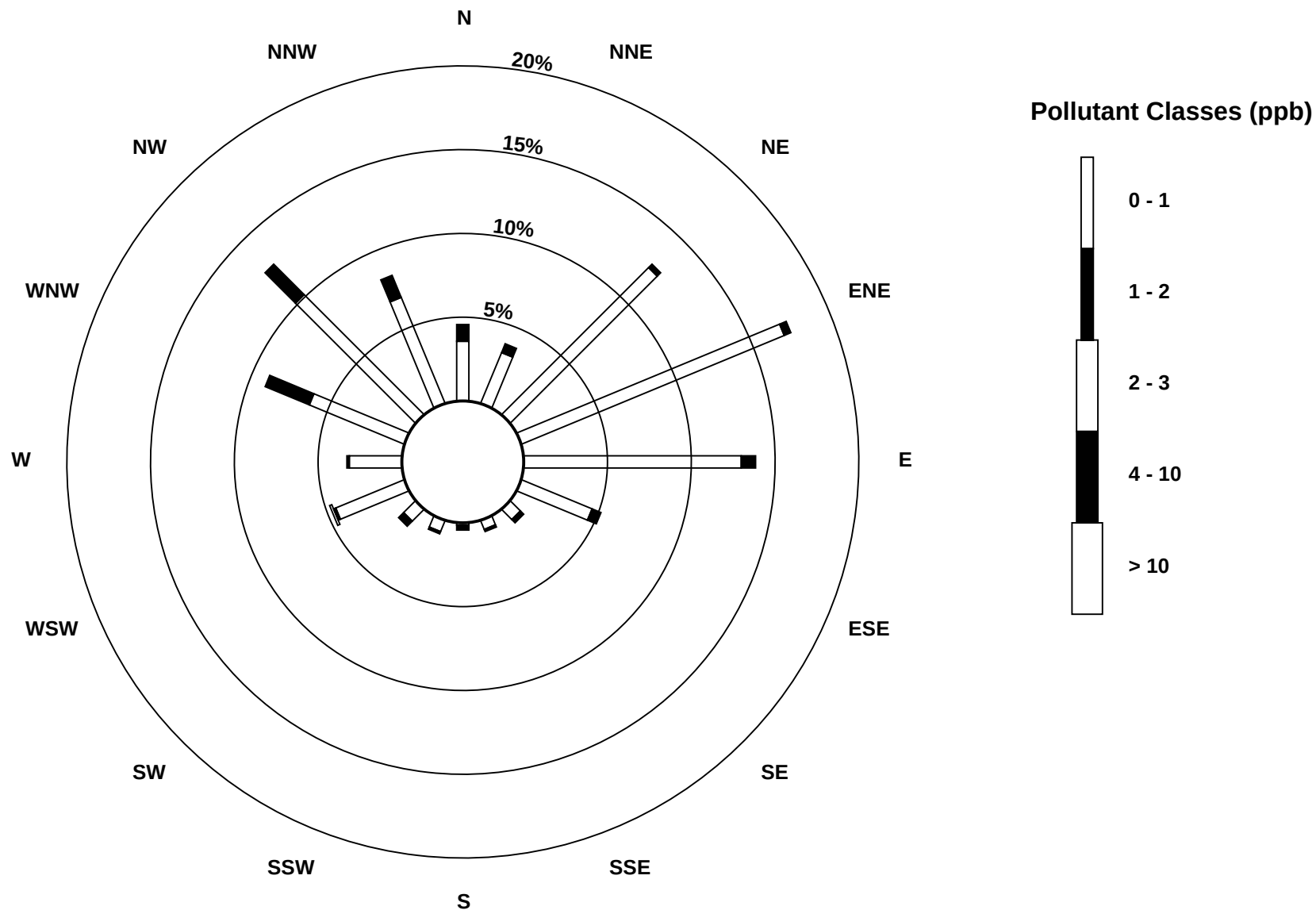
Hourly Maximums**Total Reduced Sulphur (TRS) - ppb****Henry Pirker - March 2011**

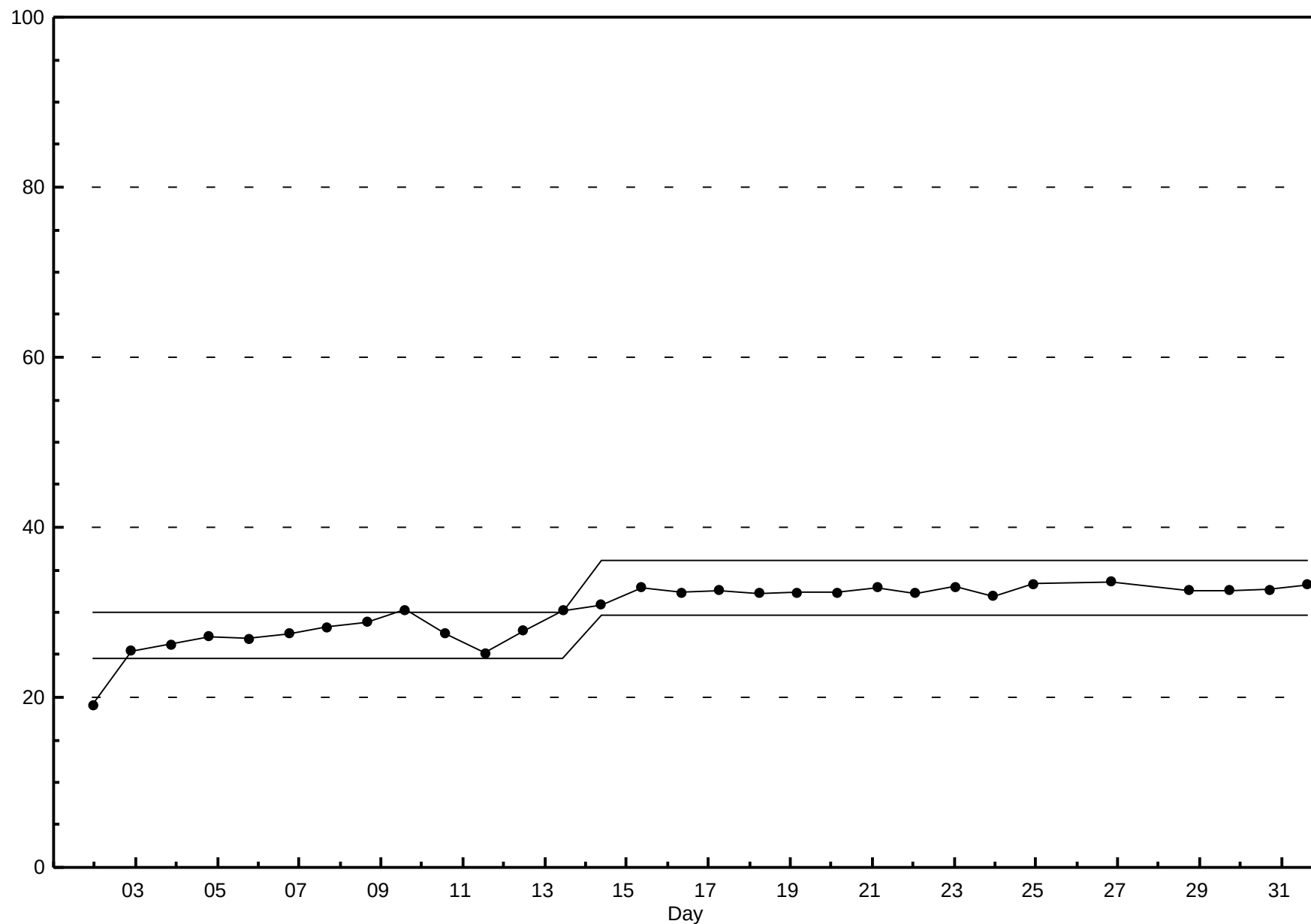
Maximum Value: 3.0 ppb on Mar 30 11:00																				Maximum Daily Average: 1.1 ppb on Mar 7										Hours in Service: 744	
Minimum Value: 0 ppb on Mar 19 20:00																				Minimum Daily Average: 0.7 ppb on Mar 19										Hours of Data: 701	
Maximum Diurnal Average: 1.0 ppb at hour 8																				Minimum Diurnal Average: 0.8 ppb at hour 15										Hours of Missing Data: 43	
Monthly Average: 0.87 ppb																				Percentiles: P ₁ = 0.5 P ₁₀ = 0.6 Q ₁ = 0.7 Median = 0.8 Q ₃ = 1.0 P ₉₀ = 1.1 P ₉₉ = 1.4										Hours of Calibration: 43	
																				Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1.1	1.3					
2-Mar	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	1.1					
3-Mar	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					
4-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.9	1.1					
5-Mar	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					
6-Mar	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	1.2					
7-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1.1	1.5					
8-Mar	1	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	1.2					
9-Mar	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	1.4					
10-Mar	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2					
11-Mar	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3					
12-Mar	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					
13-Mar	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.4					
14-Mar	1	1	1	1	1	1	1	1	1	A	1	C	C	C	C	C	1	1	1	1	1	1	1	1	0.9	1.2					
15-Mar	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0.7	0.9					
16-Mar	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0					
17-Mar	1	1	1	1	1	1	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.3					
18-Mar	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0.9	1.3					
19-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0.7	0.8					
20-Mar	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0					
21-Mar	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	1.1					
22-Mar	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	1.0					
23-Mar	A	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	1.2					
24-Mar	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	A	0.7	0.9					
25-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	A	1	0.7	0.9					
26-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	A	A	1	1	0.7	0.9					
27-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	A	1	1	1	0.8	1.0					
28-Mar	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	1.4					
29-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.9	1.1					
30-Mar	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	A	1	1	1	1	1	1	1	0.9	3.0					
31-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.7	0.8					
0.9 0.9 0.9 0.9 0.9 0.9 0.9 1.0 0.9 0.9 0.9 0.9 0.9 0.8 0.8 0.9 0.8 0.8 0.8 0.8 0.8 0.9 0.8 0.8																								Diurnal Average							
1.1 1.2 1.2 1.3 1.2 1.4 1.4 2.1 2.3 1.4 3.0 1.4 1.2 1.2 1.3 1.3 1.2 1.4 1.5 1.3 1.4 1.2 1.1 1.3																								Diurnal Maximum							
C - Calibration A - Automated Daily Zero Span																															



Pollutant Rose

Total Reduced Sulphur (TRS) - ppb
Henry Pirker - March 2011





**PASZA**

Peace Air Shed Zone Association

Hourly Averages

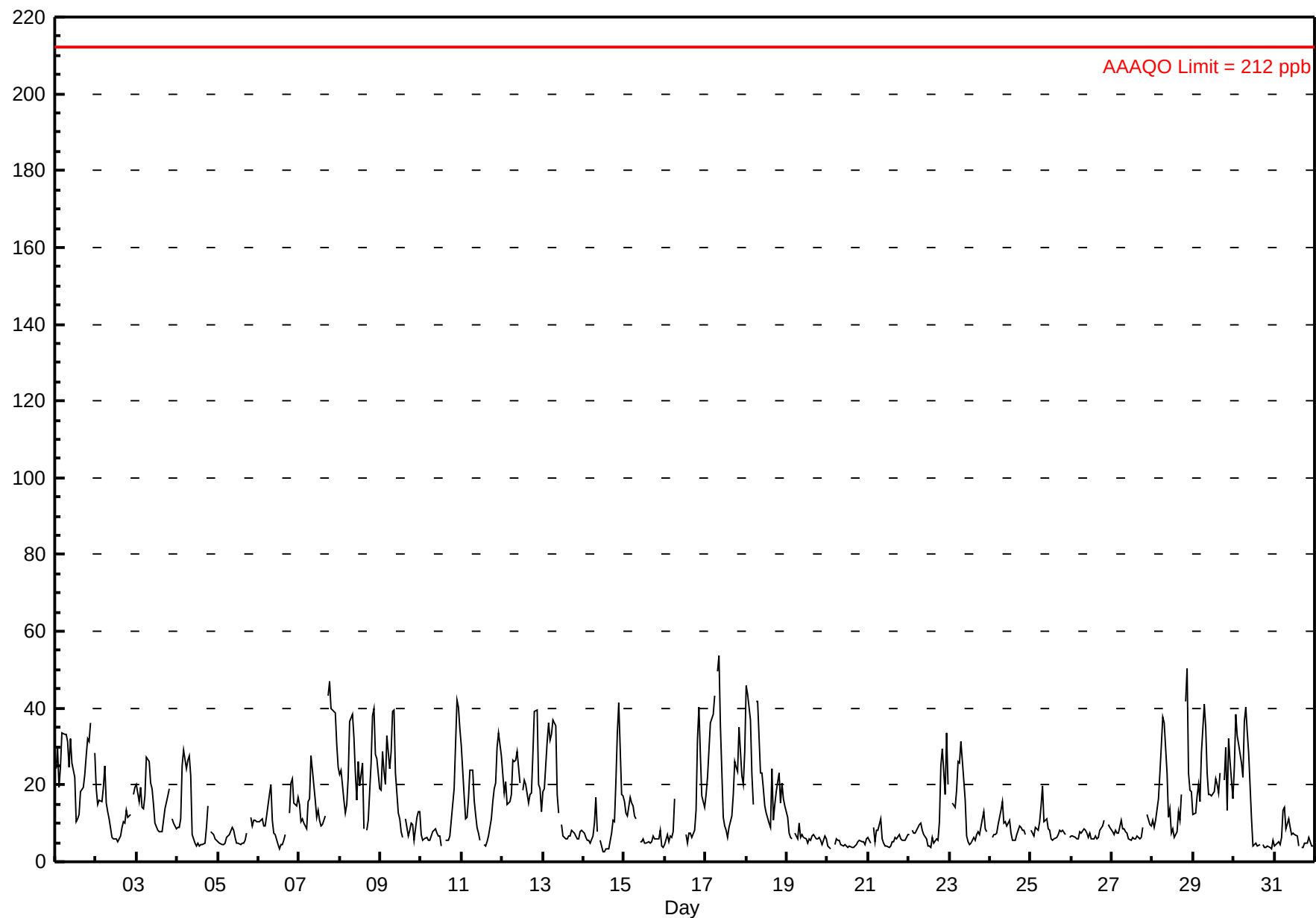
Nitrogen Dioxide (NO₂) - ppb**Henry Pirker - March 2011**

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 53.6 ppb on Mar 17 09:00 Maximum Daily Average: 25.3 ppb on Mar 1																				Hours in Service: 744 Hours of Data: 702 Hours of Missing Data: 42 Hours of Calibration: 42 Percent Operational Time: 100.0						
Minimum Value: 3 ppb on Mar 14 12:00 Maximum Diurnal Average: 22.5 ppb at hour 8 Monthly Average: 13.83 ppb										Minimum Daily Average: 4.6 ppb on Mar 20 Minimum Diurnal Average: 7.2 ppb at hour 15 Percentiles: P ₁ = 3.5 P ₁₀ = 4.8 Q ₁ = 6.2 Median = 9.8 Q ₃ = 19.0 P ₉₀ = 29.6 P ₉₉ = 42.9																
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-Mar	24	29	19	25	33	33	33	31	25	32	26	22	11	11	12	18	20	23	28	32	32	36	A	28	25.3	36.1
2-Mar	19	15	16	16	20	25	15	13	11	6	6	6	6	5	7	9	10	10	13	12	12	A	17	19	12.6	25.2
3-Mar	20	16	19	14	14	17	27	26	20	19	15	10	8	8	8	8	11	14	17	19	A	11	10	9	14.8	27.3
4-Mar	9	9	11	25	29	24	26	27	22	7	5	4	5	4	4	5	5	9	15	A	8	7	6	6	11.8	29.0
5-Mar	5	5	4	4	5	6	7	7	9	8	6	5	5	4	5	5	6	8	A	12	9	11	11	11	6.9	11.6
6-Mar	10	11	11	9	9	12	18	20	11	8	7	5	4	4	5	6	7	A	13	20	22	15	15	17	11.2	21.6
7-Mar	15	10	11	10	9	16	16	28	24	16	12	13	11	9	10	12	A	43	47	40	39	39	31	25	21.1	46.9
8-Mar	23	24	16	13	15	22	37	39	33	23	16	26	20	26	9	A	8	11	26	38	40	28	27	19	23.3	39.9
9-Mar	19	29	23	20	33	24	29	39	39	23	13	11	8	6	A	11	7	8	10	10	6	11	13	13	17.6	39.3
10-Mar	7	5	6	6	5	5	7	8	8	7	7	7	4	A	6	5	6	7	11	19	31	42	40	35	12.4	42.1
11-Mar	30	17	11	12	16	24	24	16	12	9	7	6	A	5	4	5	7	11	16	19	21	30	34	28	15.8	33.5
12-Mar	23	18	21	15	16	18	26	26	27	29	21	A	19	21	20	15	18	18	28	39	40	20	19	13	22.1	39.7
13-Mar	18	19	31	36	32	33	37	35	17	13	A	10	7	6	6	7	7	8	8	7	6	6	8	8	15.8	37.0
14-Mar	7	6	5	5	5	7	10	17	8	A	6	3	3	3	3	3	7	11	10	21	33	41	18	17	10.9	41.4
15-Mar	16	13	12	17	15	15	12	11	A	5	5	6	5	5	5	5	5	7	6	6	6	8	4	4	8.3	16.9
16-Mar	4	7	5	7	6	8	16	A	C	C	C	C	7	5	7	7	6	8	13	32	40	28	17	14	12.6	40.2
17-Mar	18	22	29	36	39	43	A	50	54	35	11	9	8	6	9	12	18	26	25	23	35	22	20	29	25.2	53.6
18-Mar	46	44	37	23	15	A	42	42	23	23	19	15	13	10	9	24	11	15	18	23	15	20	17	15	22.5	45.7
19-Mar	12	7	6	6	A	7	6	10	6	7	6	6	5	6	5	7	7	6	6	7	6	4	7	6	6.6	11.6
20-Mar	4	4	3	A	4	6	6	6	4	4	5	4	4	4	4	4	4	4	5	6	5	5	5	6	4.6	6.1
21-Mar	6	5	A	9	5	8	8	11	6	5	4	4	4	4	5	5	6	6	7	6	6	6	6	7	6.1	11.1
22-Mar	7	A	8	8	8	9	10	10	8	7	6	4	4	4	6	5	6	6	10	25	29	18	34	20	10.9	33.7
23-Mar	A	A	15	14	19	26	26	31	21	16	7	5	5	5	6	5	7	8	7	11	13	9	8	A	12.6	31.1
24-Mar	A	6	7	7	8	10	13	16	10	10	9	11	7	6	6	5	7	9	9	8	8	7	A	A	8.6	15.7
25-Mar	8	7	7	9	8	10	15	20	10	11	9	8	6	6	6	6	7	8	8	8	7	A	A	6	8.7	19.6
26-Mar	7	7	7	6	6	8	8	9	8	8	6	7	6	6	7	6	6	8	9	11	A	A	10	9	7.4	11.0
27-Mar	8	7	8	7	7	11	9	9	8	7	6	6	6	6	6	7	6	6	9	A	A	12	10	9	7.7	12.3
28-Mar	11	9	11	17	23	30	37	36	23	11	14	8	9	6	8	13	11	18	A	42	50	23	19	18	19.4	50.2
29-Mar	12	13	17	20	16	28	41	35	23	17	17	17	18	22	20	18	23	A	21	30	14	32	26	16	21.6	41.0
30-Mar	25	38	33	31	26	22	37	40	34	28	11	4	5	5	4	4	A	4	4	4	4	4	3	6	16.3	40.2
31-Mar	4	5	5	4	6	13	14	9	11	9	7	8	7	7	4	A	4	4	5	5	6	5	4	4	6.5	14.2
14.4 14.0 13.9 14.3 15.1 17.4 20.4 22.5 17.8 14.0 9.9 8.6 7.5 7.5 7.2 8.4 8.7 11.1 13.9 18.4 19.4 17.9 15.6 14.3																								Diurnal Average		
45.7 43.6 37.0 36.1 38.5 43.1 41.7 49.5 53.6 35.4 25.6 26.1 19.9 25.9 20.3 24.1 23.0 43.1 46.9 41.7 50.2 42.1 40.3 34.5																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 212 ppb 24-hr 106 ppb																										

Hourly Averages

Nitrogen Dioxide (NO₂) - ppb

Henry Pirker - March 2011



Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb

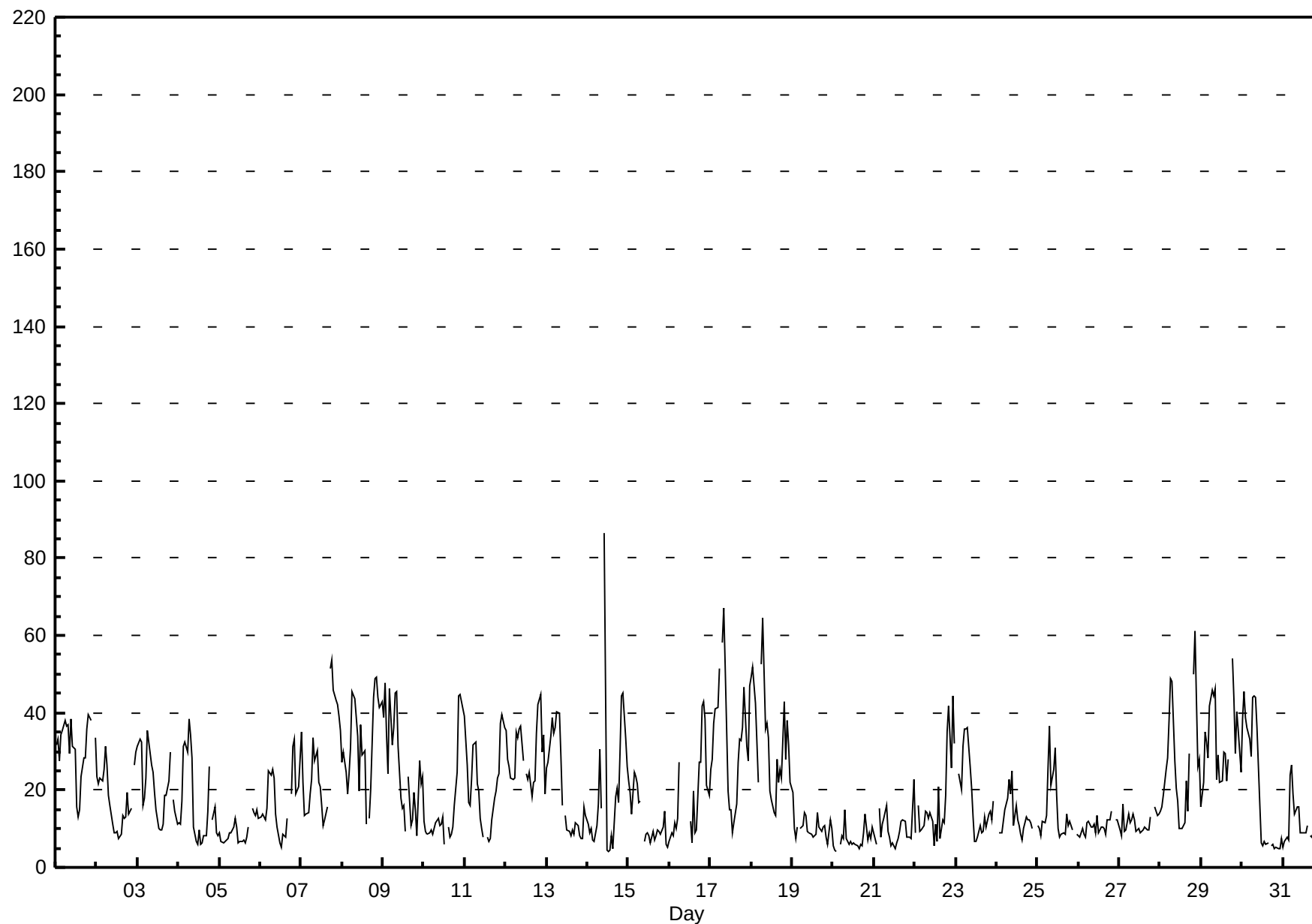
Henry Pirker - March 2011

Maximum Value: 86.5 ppb on Mar 14 11:00																				Maximum Daily Average: 33.5 ppb on Mar 17										Hours in Service: 744	
Minimum Value: 4 ppb on Mar 14 13:00																				Minimum Daily Average: 7.3 ppb on Mar 20										Hours of Data: 702	
Maximum Diurnal Average: 29.4 ppb at hour 8																				Minimum Diurnal Average: 10.4 ppb at hour 14										Hours of Missing Data: 42	
Monthly Average: 19.61 ppb																				Percentiles: P ₁ = 4.8 P ₁₀ = 7.0 Q ₁ = 9.4 Median = 14.7 Q ₃ = 28.0 P ₉₀ = 38.7 P ₉₉ = 53.4										Hours of Calibration: 42	
																				Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Mar	32	33	28	34	36	38	36	37	29	39	31	31	16	13	15	24	28	28	36	39	39	38	A	33	31.0	39.5					
2-Mar	24	22	23	22	26	31	27	19	16	11	9	9	9	7	9	13	13	13	19	14	15	A	27	30	17.7	31.5					
3-Mar	31	33	33	16	18	23	35	29	27	25	20	15	10	10	10	11	19	19	22	30	A	18	14	11	20.8	35.5					
4-Mar	12	11	17	31	32	30	38	34	28	11	7	6	10	6	6	8	8	14	26	A	12	16	9	8	16.6	38.4					
5-Mar	9	7	6	7	7	8	9	9	10	13	10	6	7	7	7	6	8	10	A	15	14	13	15	13	9.4	15.5					
6-Mar	13	14	13	12	15	25	24	25	23	14	11	6	5	9	8	8	13	A	19	31	33	19	21	28	16.9	33.1					
7-Mar	35	22	13	14	14	19	23	34	28	30	22	21	16	11	12	16	A	51	54	46	43	42	39	35	27.9	53.6					
8-Mar	27	30	24	19	24	31	46	44	39	34	20	37	29	30	11	A	13	20	44	49	49	44	41	43	32.5	49.3					
9-Mar	39	48	34	24	46	32	36	45	45	31	18	15	16	9	A	23	11	12	19	15	8	28	22	23	26.2	47.7					
10-Mar	12	9	9	9	10	8	10	12	13	11	11	13	6	A	11	8	9	10	16	25	44	45	43	41	16.7	44.9					
11-Mar	39	26	17	16	23	32	32	22	20	13	10	8	A	8	7	7	12	18	20	23	24	37	40	36	21.3	39.6					
12-Mar	35	28	26	23	23	23	35	33	36	36	27	A	24	23	24	18	22	22	35	42	45	30	34	19	28.9	44.6					
13-Mar	26	27	34	39	35	36	40	40	29	16	A	13	10	9	8	10	9	12	11	8	8	7	16	13	19.8	40.2					
14-Mar	11	9	10	7	7	11	16	31	15	A	86	5	4	4	8	5	18	20	17	29	44	45	33	26	20.1	86.5					
15-Mar	22	19	14	25	23	22	17	17	A	7	8	9	8	7	9	7	8	10	9	9	11	15	6	5	12.5	24.7					
16-Mar	7	9	8	12	10	13	27	A	C	C	C	C	12	6	20	9	10	27	27	42	43	38	21	19	18.9	42.9					
17-Mar	25	28	37	41	42	51	A	58	67	52	20	15	15	9	12	16	27	33	33	36	47	31	27	47	33.5	67.2					
18-Mar	49	52	43	33	22	A	52	65	36	37	34	20	18	14	13	28	22	26	23	43	28	38	32	22	32.5	64.7					
19-Mar	19	10	7	10	A	10	11	14	13	9	9	9	8	8	8	14	10	9	10	11	8	6	12	10	10.4	19.3					
20-Mar	5	4	4	A	6	8	7	15	7	6	7	6	6	6	5	5	6	5	9	14	7	9	7	10	7.3	14.8					
21-Mar	9	6	A	15	8	11	13	16	9	8	5	6	5	6	8	9	12	12	12	8	8	8	7	23	9.8	22.7					
22-Mar	9	A	16	9	10	11	15	14	13	14	12	5	11	7	21	8	12	11	18	35	42	26	45	32	17.2	44.5					
23-Mar	A	A	24	20	31	36	36	36	26	20	13	7	7	8	11	9	9	13	11	14	14	12	17	A	17.9	36.3					
24-Mar	A	9	9	9	12	15	18	23	19	25	11	16	12	11	9	7	10	13	12	12	11	10	A	A	13.0	25.1					
25-Mar	11	10	8	12	11	13	26	37	21	25	31	19	10	8	8	9	9	14	11	12	10	A	A	8	14.7	36.7					
26-Mar	8	8	10	8	8	12	12	10	10	11	9	13	9	11	10	10	9	12	12	15	A	A	A	12	12	10.6	14.6				
27-Mar	10	8	16	9	10	14	12	12	14	12	9	10	9	9	10	10	10	10	13	A	A	16	14	14	11.4	16.4					
28-Mar	15	16	19	25	28	38	49	48	28	21	17	10	10	10	12	23	14	29	A	50	61	43	26	28	26.9	61.3					
29-Mar	16	22	35	32	28	42	46	45	46	23	29	22	22	30	30	23	28	A	54	44	29	40	36	25	32.4	53.9					
30-Mar	38	46	39	36	33	29	44	44	44	36	16	6	6	7	6	6	A	6	6	5	5	5	5	7	20.7	45.6					
31-Mar	5	7	8	7	24	26	19	14	16	16	9	9	9	9	11	A	8	8	9	7	9	7	6	6	10.8	26.5					
20.5 19.7 19.5 19.3 20.7 23.3 27.0 29.4 25.1 20.9 18.0 12.7 11.3 10.4 11.3 12.1 13.3 16.9 21.0 24.9 25.5 24.5 22.4 21.7																									Diurnal Average						
49.0 51.9 42.6 40.9 46.2 51.3 52.4 64.7 67.2 51.9 86.5 36.9 29.1 30.3 29.5 28.0 28.5 51.3 53.9 50.1 61.3 45.2 44.5 46.8																									Diurnal Maximum						
C - Calibration A - Automated Daily Zero Span																															

Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb

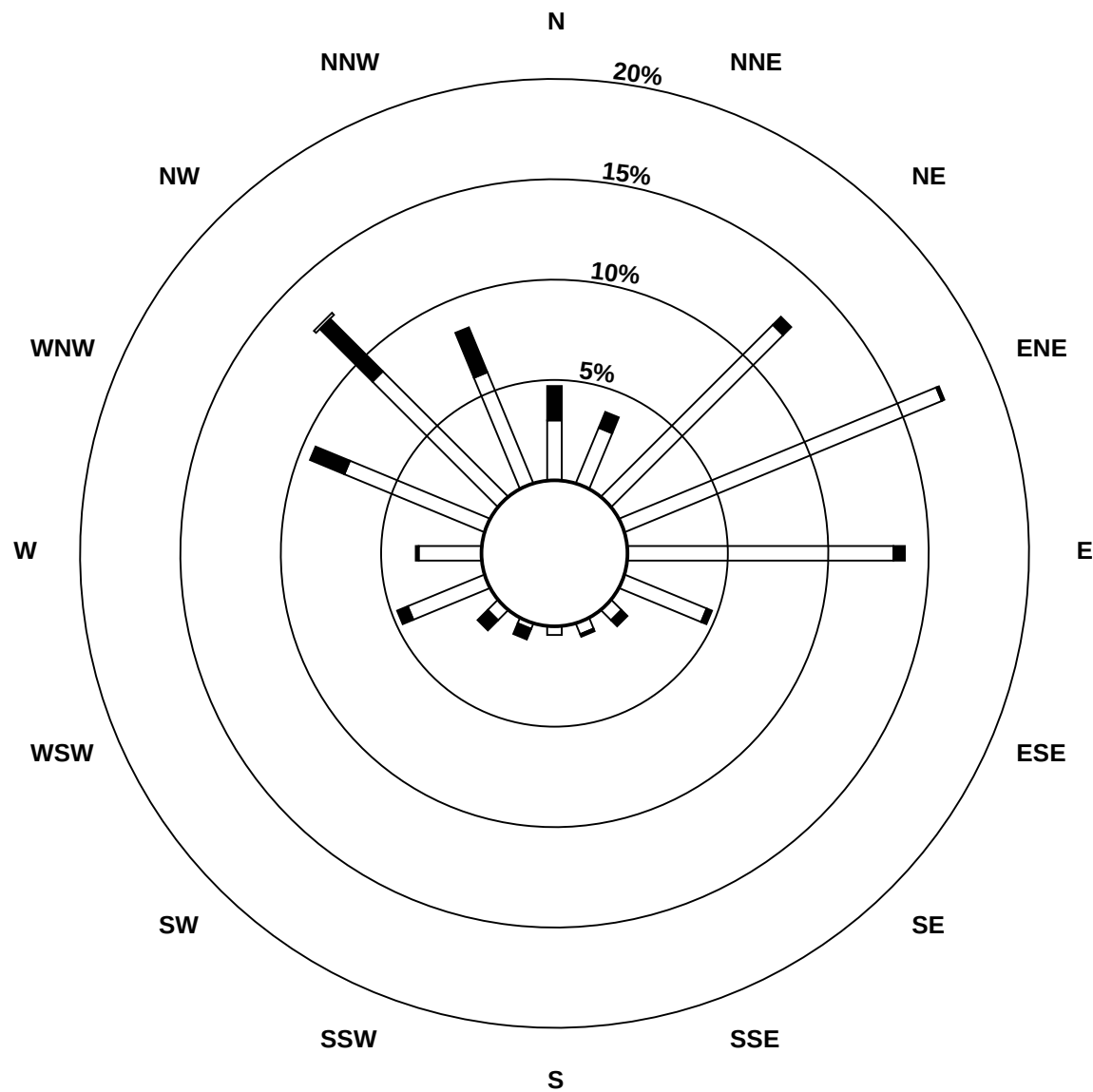
Henry Pirker - March 2011



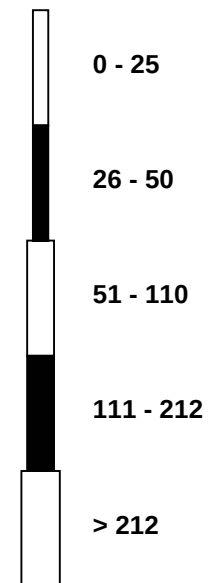
Pollutant Rose

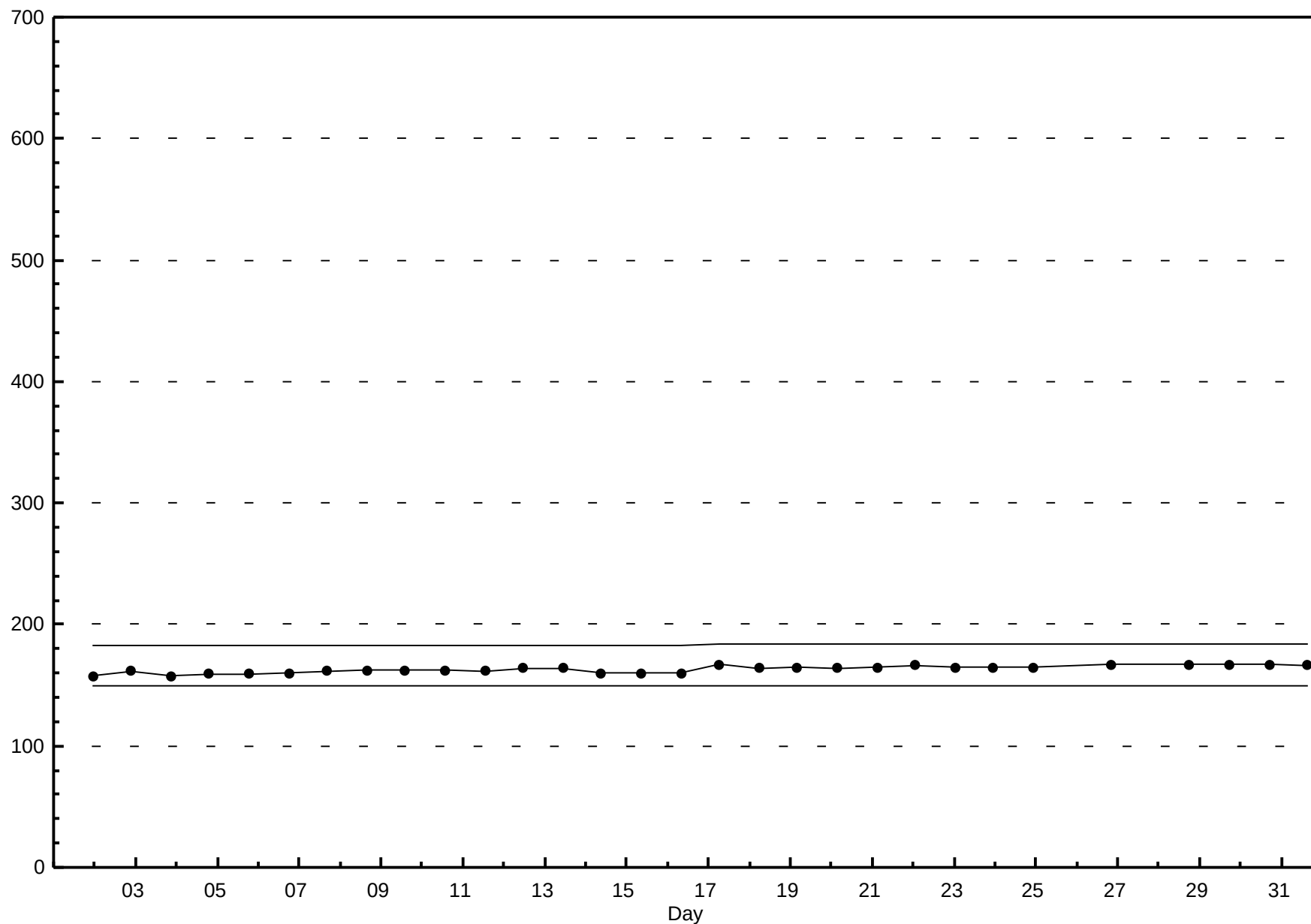
Nitrogen Dioxide (NO₂) - ppb

Henry Pirker - March 2011



Pollutant Classes (ppb)





**PASZA**

Peace Air Shed Zone Association

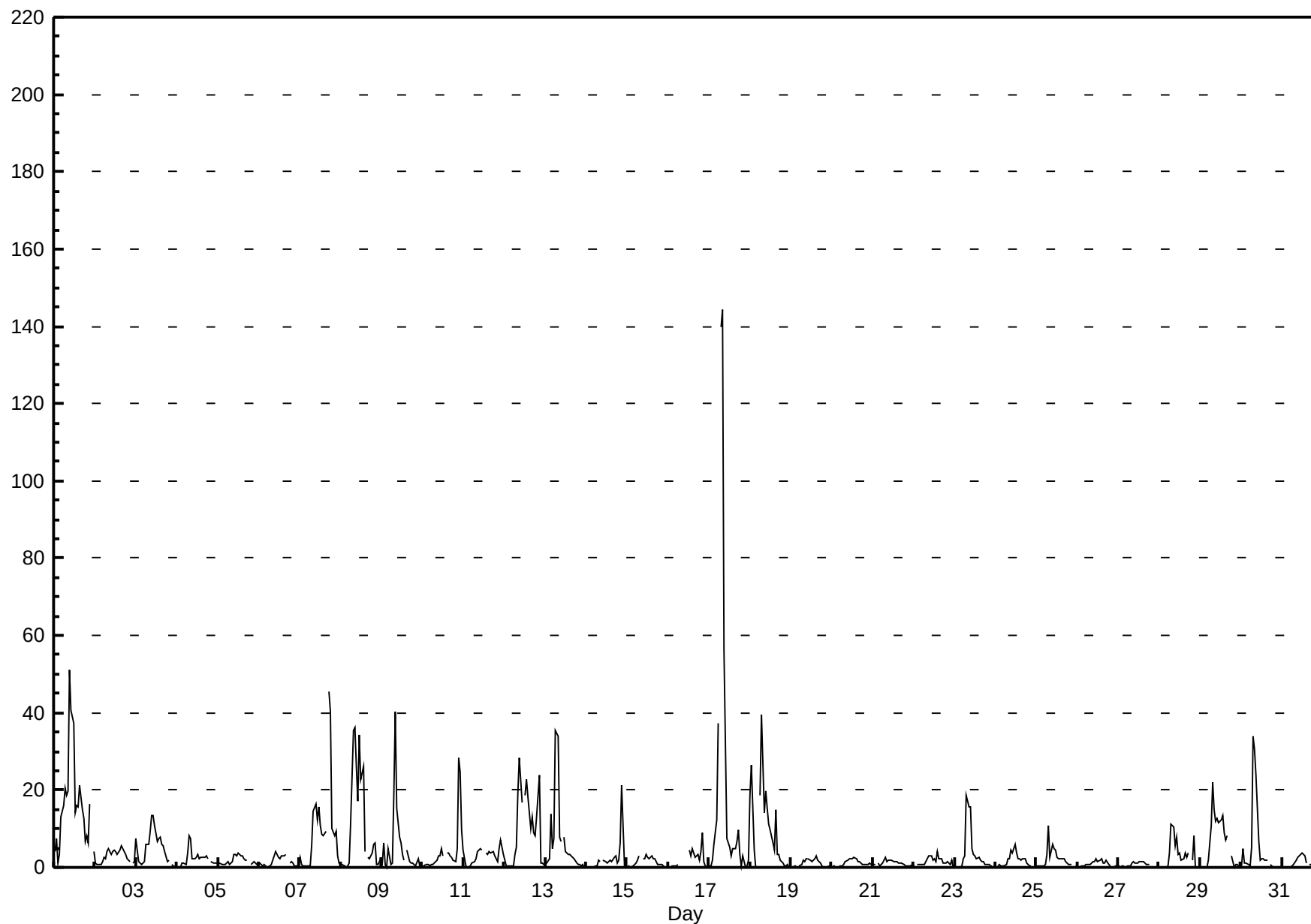
Hourly Averages

Nitrogen Oxide (NO) - ppb**Henry Pirker - March 2011**

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 144.2 ppb on Mar 17 09:00 Maximum Daily Average: 19.8 ppb on Mar 17																				Hours in Service: 744 Hours of Data: 702 Hours of Missing Data: 42 Hours of Calibration: 42 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Mar 29 21:00 Minimum Daily Average: 0.7 ppb on Mar 27 Maximum Diurnal Average: 14.4 ppb at hour 8 Minimum Diurnal Average: 0.7 ppb at hour 3 Monthly Average: 4.65 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.2 Q ₁ = 0.6 Median = 1.7 Q ₃ = 4.0 P ₉₀ = 12.4 P ₉₉ = 40.0																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	4	7	1	3	13	16	20	19	20	51	41	37	14	16	16	21	15	13	7	8	6	16	A	4	16.0	51.1
2-Mar	1	1	1	1	1	3	2	4	5	4	4	4	4	4	5	6	5	4	3	2	1	A	1	1	2.9	5.6
3-Mar	7	2	1	1	1	2	6	6	9	14	14	11	7	7	8	6	6	4	1	2	A	1	1	0	5.0	13.6
4-Mar	0	0	0	1	1	1	4	8	7	2	2	3	3	2	2	3	3	3	2	A	2	1	1	1	2.3	8.0
5-Mar	1	1	1	1	1	1	1	1	2	3	3	3	4	3	3	2	2	2	A	1	1	1	1	1	1.8	3.6
6-Mar	1	1	0	1	0	0	0	1	2	3	4	3	2	3	3	3	3	A	1	1	1	0	0	1	1.6	4.0
7-Mar	3	1	0	0	0	0	0	6	15	16	12	16	11	8	8	9	A	45	40	10	8	9	3	1	9.7	45.4
8-Mar	1	1	0	0	0	1	11	35	36	26	17	34	23	26	4	A	3	2	4	6	6	1	1	2	10.5	36.2
9-Mar	1	6	1	0	5	1	1	19	40	15	8	6	3	2	A	5	1	1	1	1	0	2	1	0	5.3	40.1
10-Mar	0	0	1	1	0	1	1	1	2	3	3	5	3	A	4	4	3	2	2	2	5	28	25	10	4.5	28.2
11-Mar	5	0	0	0	0	1	1	2	4	5	5	5	A	4	3	4	4	4	3	2	1	5	7	3	3.0	7.2
12-Mar	2	0	0	0	0	0	3	5	19	28	17	A	19	23	18	10	13	9	8	13	24	1	1	1	9.4	28.3
13-Mar	1	1	2	14	5	8	35	34	8	7	A	8	4	3	3	3	3	2	1	1	1	1	1	0	6.3	35.5
14-Mar	0	0	0	0	0	0	0	2	2	A	2	1	1	2	2	1	3	3	1	2	6	21	1	0	2.2	21.3
15-Mar	0	0	0	0	1	1	2	3	A	2	2	4	3	2	3	2	2	2	1	1	1	0	0	0	1.4	3.5
16-Mar	0	0	0	0	0	0	1	A	C	C	C	C	4	3	5	4	3	3	2	4	9	1	0	0	2.2	9.0
17-Mar	0	0	2	6	12	37	A	140	144	56	8	6	5	3	5	5	7	10	3	0	3	0	0	2	19.8	144.2
18-Mar	19	27	4	0	0	A	19	39	14	20	15	11	10	6	5	15	4	3	2	1	0	0	1	0	9.4	39.5
19-Mar	0	0	0	0	A	0	1	2	1	2	2	2	2	2	2	3	2	1	0	0	0	0	0	1	1.1	2.9
20-Mar	0	0	0	A	0	0	0	1	1	2	2	2	2	3	2	2	1	1	1	1	1	1	1	1	1.1	2.6
21-Mar	1	1	A	1	1	1	1	3	2	2	2	2	1	1	2	1	1	1	1	0	0	0	0	1	1.1	2.5
22-Mar	1	A	1	1	1	1	1	2	2	3	3	2	2	1	4	2	2	1	1	1	1	1	2	0	1.5	4.0
23-Mar	A	A	0	0	0	2	3	19	16	15	5	3	3	2	3	2	2	2	1	1	1	0	0	A	3.8	18.5
24-Mar	A	1	1	0	0	0	1	2	2	5	4	6	4	2	2	2	2	2	1	1	0	0	A	A	1.8	5.9
25-Mar	0	0	0	0	0	1	3	11	3	6	5	4	2	2	2	2	2	2	1	1	1	A	A	0	2.3	10.8
26-Mar	0	0	0	0	0	1	1	1	1	1	1	2	2	2	1	1	2	1	0	A	A	A	0	0	0.9	2.4
27-Mar	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	A	A	0	0	0	0	0.7	1.5
28-Mar	0	0	0	0	0	0	4	11	10	5	8	3	4	2	2	4	3	4	A	2	8	0	0	0	3.0	11.3
29-Mar	0	0	0	0	0	2	11	22	15	12	13	12	12	13	9	7	8	A	3	2	0	1	1	0	6.2	22.1
30-Mar	0	5	1	1	1	0	5	34	31	24	7	2	2	2	2	2	A	1	0	0	0	0	0	0	5.2	33.8
31-Mar	0	0	0	0	0	0	0	1	2	3	3	3	4	3	1	A	1	1	1	0	0	0	0	0	1.0	3.6
1.7 1.9 0.7 1.2 1.6 2.7 4.7 14.4 14.3 11.6 7.3 7.0 5.4 5.2 4.4 4.5 3.6 4.5 3.3 2.2 3.2 3.4 1.8 1.1 18.7 26.6 4.4 13.9 13.1 37.1 35.5 139.8 144.2 56.2 40.6 37.1 22.9 26.1 18.2 21.2 14.8 45.4 40.2 13.0 23.8 28.2 24.6 9.8 C - Calibration A - Automated Daily Zero Span Diurnal Average Diurnal Maximum																										

Hourly Averages

Nitrogen Oxide (NO) - ppb
Henry Pirker - March 2011



**PASZA**

Peace Air Shed Zone Association

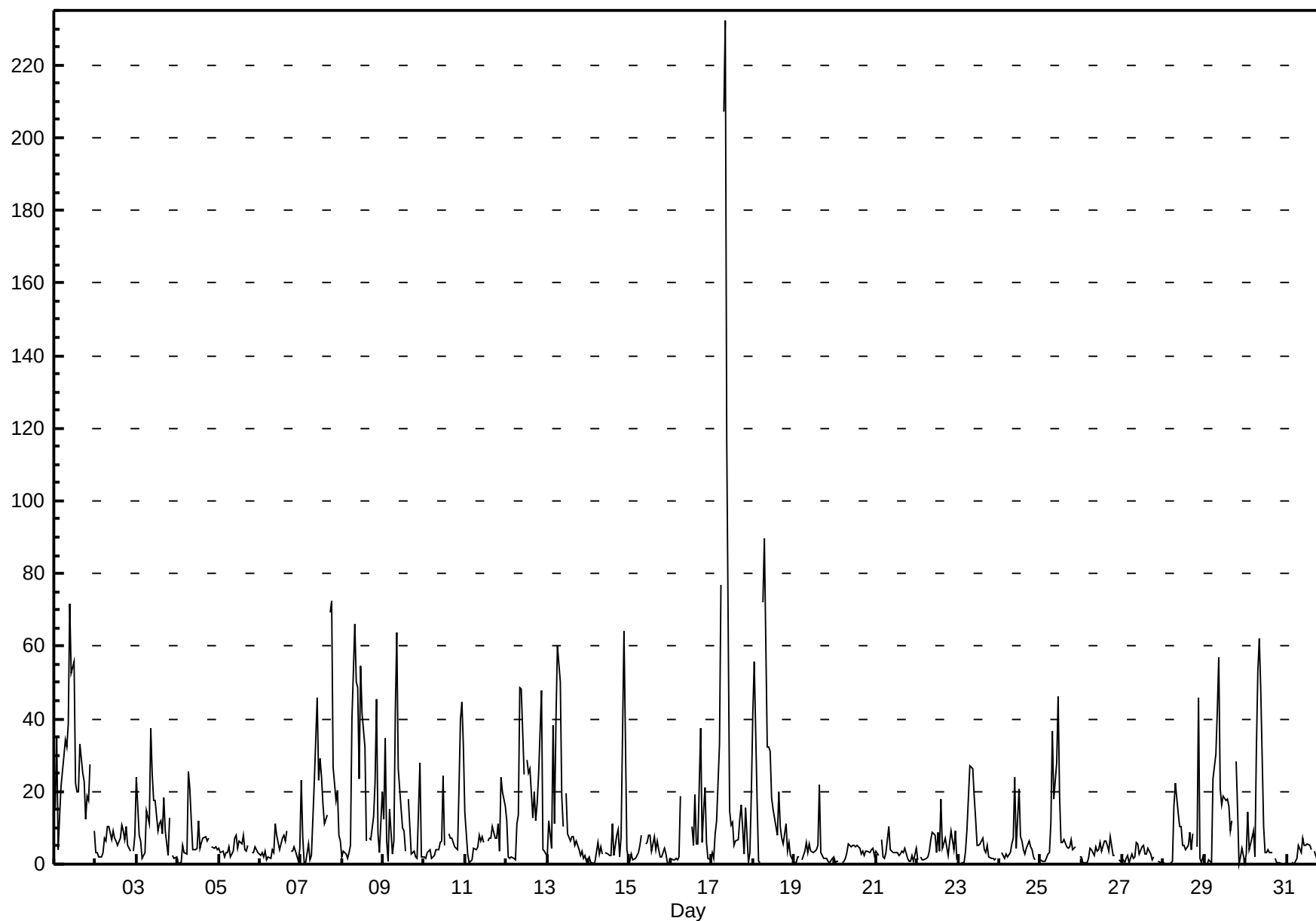
Hourly Maximums

Nitrogen Oxide (NO) - ppb**Henry Pirker - March 2011**

Maximum Value: 232.2 ppb on Mar 17 09:00																					Maximum Daily Average: 35.9 ppb on Mar 17										Hours in Service: 744	
Minimum Value: 0 ppb on Mar 31 05:00																					Minimum Daily Average: 2.2 ppb on Mar 31										Hours of Data: 702	
Maximum Diurnal Average: 27.8 ppb at hour 9																					Minimum Diurnal Average: 2.7 ppb at hour 3										Hours of Missing Data: 42	
Monthly Average: 10.45 ppb																					Percentiles: P ₁ = 0.0 P ₁₀ = 1.0 Q ₁ = 2.4 Median = 4.7 Q ₃ = 10.9 P ₉₀ = 25.9 P ₉₉ = 71.8										Hours of Calibration: 42	
																					Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24								
1-Mar	16	35	4	13	22	30	34	32	38	72	53	56	22	20	20	33	25	23	13	19	18	27	A	9	27.5	71.5						
2-Mar	3	3	2	2	3	7	7	10	10	7	9	7	7	5	7	11	9	7	11	5	3	A	4	8	6.4	10.9						
3-Mar	24	8	7	1	2	3	15	11	38	25	18	18	9	11	12	8	18	9	2	13	A	2	2	2	11.2	37.6						
4-Mar	0	0	0	5	3	3	25	21	12	4	4	5	12	4	6	7	8	7	7	A	5	4	5	4	6.6	25.3						
5-Mar	4	3	3	2	3	3	5	2	3	7	8	4	6	6	8	4	4	5	A	3	3	5	4	3	4.3	8.0						
6-Mar	2	3	2	4	1	2	1	4	3	11	8	4	6	7	8	7	9	A	4	4	5	4	1	4	4.5	11.0						
7-Mar	23	8	0	0	6	1	2	13	23	46	23	29	24	16	11	14	A	69	72	27	17	20	8	7	20.0	72.5						
8-Mar	2	4	3	1	3	5	40	66	50	49	23	55	41	32	6	A	7	7	13	23	45	9	3	20	22.1	66.3						
9-Mar	12	35	7	1	15	3	6	42	64	26	15	10	9	4	A	18	3	3	4	2	1	28	2	2	13.5	63.6						
10-Mar	2	1	3	4	1	2	2	4	4	6	7	24	5	A	8	7	7	6	5	4	21	40	45	33	10.5	44.6						
11-Mar	14	3	0	1	1	4	4	5	8	6	7	6	A	7	7	7	10	7	7	11	4	24	20	16	7.9	23.8						
12-Mar	12	2	2	2	2	1	11	14	49	48	25	A	29	25	26	13	20	12	17	25	48	4	4	3	17.0	48.8						
13-Mar	2	12	4	38	11	40	60	50	19	11	A	20	8	6	7	8	5	6	4	2	3	1	2	1	14.0	60.0						
14-Mar	2	0	0	0	1	6	3	5	3	A	3	3	2	2	11	2	8	10	2	8	36	64	4	1	7.7	64.0						
15-Mar	1	3	1	1	2	3	5	8	A	6	6	8	8	4	7	4	6	4	2	2	4	3	0	0	3.9	8.0						
16-Mar	1	1	1	2	1	2	19	A	C	C	C	C	10	5	19	6	6	37	6	15	21	6	2	1	8.4	37.3						
17-Mar	3	1	9	12	33	77	A	207	232	117	15	11	12	5	6	7	12	16	10	3	15	0	3	20	35.9	232.2						
18-Mar	41	56	17	1	0	A	72	90	32	32	31	18	15	11	8	20	11	7	6	11	3	6	2	1	21.4	89.5						
19-Mar	0	0	2	2	A	1	4	6	3	6	4	3	4	4	5	22	3	2	2	1	1	0	1	2	3.4	21.8						
20-Mar	0	1	1	A	0	1	1	3	5	5	5	5	5	5	4	3	4	2	4	3	3	4	4	2	3.2	5.4						
21-Mar	3	2	A	7	2	1	3	10	4	3	3	3	3	2	3	4	3	4	2	1	1	2	1	4	3.3	10.4						
22-Mar	1	A	2	1	1	2	2	3	7	9	8	3	9	4	18	4	7	5	2	6	9	4	9	1	5.1	18.0						
23-Mar	A	A	0	0	3	9	18	27	26	19	13	5	5	5	7	4	3	5	2	1	1	1	1	A	7.6	27.2						
24-Mar	A	3	2	1	3	2	3	5	7	24	5	21	7	7	4	3	4	6	5	4	2	1	A	A	5.7	23.9						
25-Mar	1	1	1	1	3	3	12	37	18	28	46	19	6	6	7	5	4	5	7	4	5	A	A	2	10.0	46.3						
26-Mar	2	0	0	0	1	5	4	3	5	3	4	6	3	6	7	5	3	8	2	2	A	A	1	1	3.3	7.7						
27-Mar	1	0	1	2	0	3	2	2	6	6	3	5	5	3	3	5	3	1	2	A	A	1	0	0	2.5	6.2						
28-Mar	0	0	0	0	0	1	16	22	14	10	11	5	5	4	5	9	4	8	A	5	46	2	0	2	7.4	45.9						
29-Mar	1	0	1	1	0	24	30	42	57	21	16	19	18	18	16	9	12	A	28	15	0	2	5	0	14.6	57.1						
30-Mar	3	14	4	6	9	2	32	53	62	48	11	3	3	4	3	3	A	1	0	0	0	0	0	0	11.4	62.2						
31-Mar	0	0	0	0	0	1	1	5	3	7	5	5	6	5	4	A	4	3	1	0	0	0	0	0	2.2	7.3						
6.2 7.0 2.7 3.8 4.5 8.2 14.7 26.7 27.8 22.8 13.3 13.0 10.1 8.1 8.9 8.6 7.7 9.9 8.3 7.6 11.5 9.5 4.8 5.2																									Diurnal Average							
40.9 55.7 16.9 38.3 32.9 76.7 72.0 207.3 232.2 116.6 52.7 55.7 41.3 32.4 26.1 32.9 25.2 69.4 72.5 26.7 48.0 64.0 44.6 32.6																									Diurnal Maximum							
C - Calibration																									A - Automated Daily Zero Span							

Hourly Maximums

Nitrogen Oxide (NO) - ppb
Henry Pirker - March 2011



**PASZA**

Peace Air Shed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

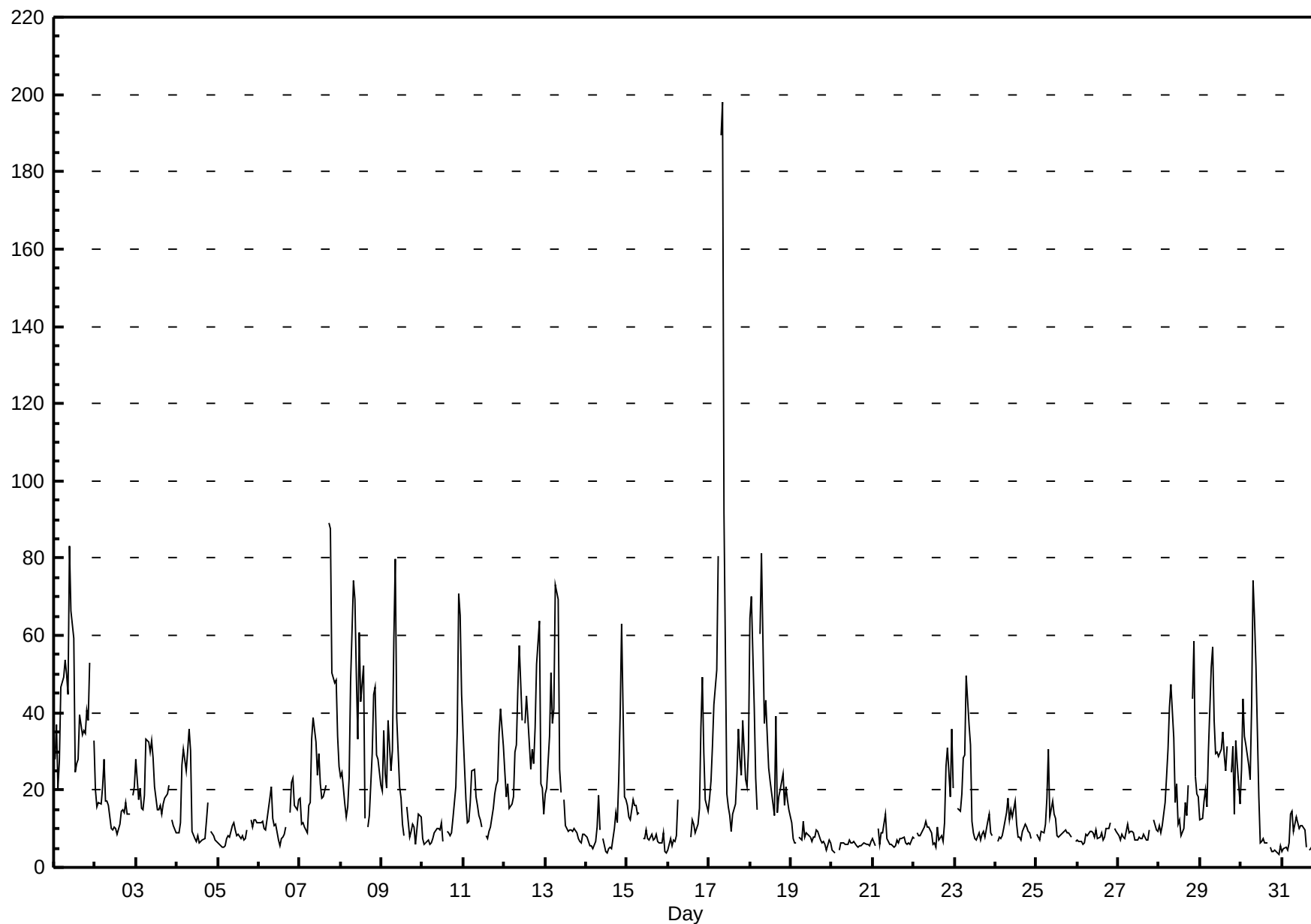
Henry Pirker - March 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 198.0 ppb on Mar 17 09:00 Maximum Daily Average: 45.1 ppb on Mar 17																								Hours in Service: 744 Hours of Data: 701 Hours of Missing Data: 43 Hours of Calibration: 43 Percent Operational Time: 100.0		
Minimum Value: 3 ppb on Mar 30 23:00 Minimum Daily Average: 5.8 ppb on Mar 20 Maximum Diurnal Average: 37.0 ppb at hour 8 Minimum Diurnal Average: 11.7 ppb at hour 15 Monthly Average: 18.58 ppb Percentiles: P ₁ = 3.9 P ₁₀ = 6.2 Q ₁ = 7.7 Median = 11.8 Q ₃ = 23.0 P ₉₀ = 38.5 P ₉₉ = 80.1																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Mar	28	37	20	28	47	49	54	50	45	83	66	59	25	27	28	39	34	35	35	40	38	53	A	33	41.5	83.3
2-Mar	20	16	17	16	21	28	17	17	16	10	10	10	10	9	11	15	15	14	17	14	14	A	19	21	15.5	28.0
3-Mar	28	18	21	15	15	19	33	32	30	33	28	21	15	15	16	14	16	18	19	21	A	12	11	9	19.9	33.3
4-Mar	9	9	11	27	31	25	30	36	30	9	7	7	8	7	7	7	8	12	17	A	9	8	7	7	14.2	35.7
5-Mar	6	6	5	5	6	7	8	8	11	12	10	8	9	7	8	7	8	10	A	12	10	12	12	11	8.7	12.4
6-Mar	11	12	12	10	10	12	18	21	13	11	11	7	6	7	8	9	11	A	14	22	23	16	15	18	12.8	23.1
7-Mar	18	11	12	10	9	16	17	33	39	33	24	29	22	18	18	21	A	89	88	50	48	49	34	26	31.0	89.1
8-Mar	24	25	17	13	15	23	48	74	69	50	33	61	43	52	13	A	11	13	29	45	47	29	28	21	34.0	74.3
9-Mar	20	35	24	20	38	25	30	59	80	39	21	18	11	8	A	16	8	9	11	10	6	14	13	13	23.0	79.9
10-Mar	7	6	6	7	6	6	8	9	10	10	10	12	7	A	9	9	8	9	12	21	36	71	65	45	16.9	70.8
11-Mar	35	18	11	12	17	25	25	18	16	13	12	10	A	8	8	9	10	15	19	21	22	35	41	31	18.9	41.1
12-Mar	25	18	21	15	16	18	30	32	46	57	38	A	37	44	39	25	31	27	36	53	64	21	20	14	31.7	63.9
13-Mar	19	20	34	50	37	41	73	70	25	19	A	18	11	9	10	10	9	10	9	7	7	6	8	8	22.3	72.9
14-Mar	8	7	6	6	5	7	10	19	10	A	7	4	4	5	5	5	10	14	12	23	40	63	18	18	13.2	63.1
15-Mar	16	13	12	17	16	16	14	14	A	7	8	10	7	7	9	7	7	9	7	6	6	9	4	4	9.8	17.4
16-Mar	4	7	5	7	7	8	17	A	C	C	C	C	C	8	12	11	9	11	15	36	49	30	18	14	15.1	49.3
17-Mar	18	22	31	42	51	80	A	190	198	92	19	16	13	9	14	17	24	36	28	24	38	23	21	31	45.1	198.0
18-Mar	65	70	41	23	15	A	61	81	37	43	34	26	22	17	14	39	14	18	20	24	16	21	17	15	31.9	81.2
19-Mar	12	8	7	6	A	8	7	12	8	9	9	8	7	8	8	10	9	7	6	7	6	5	7	6	7.7	12.0
20-Mar	4	4	4	A	5	6	6	6	6	6	7	6	6	7	6	5	6	6	6	6	6	6	6	7	5.8	7.0
21-Mar	7	6	A	10	6	9	9	14	7	7	6	6	5	6	7	6	8	7	8	6	6	6	6	8	7.2	13.6
22-Mar	8	A	9	8	8	10	11	12	11	10	9	6	6	5	11	7	8	7	11	26	31	18	36	20	12.5	35.6
23-Mar	A	A	15	14	19	28	29	50	37	32	12	9	7	7	9	7	9	9	8	12	14	9	8	A	16.4	49.8
24-Mar	A	7	8	8	8	10	14	18	12	15	13	17	11	8	8	7	9	11	10	9	9	7	A	A	10.5	17.8
25-Mar	9	8	7	9	9	11	18	31	13	17	14	13	8	8	8	9	9	10	9	9	8	A	A	7	11.0	30.5
26-Mar	7	7	7	6	6	8	8	9	9	9	8	10	8	8	9	7	8	10	10	11	A	A	10	9	8.4	11.5
27-Mar	8	7	8	8	8	11	9	9	9	9	7	7	8	8	8	8	7	7	10	A	A	12	10	9	8.5	12.5
28-Mar	11	9	11	17	23	31	41	47	34	17	21	11	12	8	10	17	13	21	A	44	59	23	19	18	22.5	58.5
29-Mar	12	13	17	20	16	30	52	57	38	29	30	29	31	35	29	25	31	A	25	31	14	33	27	16	27.9	57.2
30-Mar	25	43	34	32	27	23	42	74	64	52	18	6	7	7	6	6	A	5	4	4	4	4	3	6	21.7	74.2
31-Mar	4	5	5	4	6	14	15	9	13	12	10	11	11	10	5	A	5	5	6	5	6	5	4	4	7.5	14.6
16.2 16.0 14.7 15.6 16.7 20.2 25.2 37.0 32.3 25.7 17.3 15.6 13.0 12.7 11.7 12.9 12.3 15.7 17.3 20.8 22.7 21.5 17.5 15.5 64.5 70.3 41.5 50.3 51.0 80.4 72.9 189.5 198.0 91.7 66.3 60.8 43.0 52.2 38.5 39.4 34.5 89.1 87.8 52.7 63.9 70.8 65.2 44.6																								Diurnal Average	Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

Henry Pirker - March 2011



Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

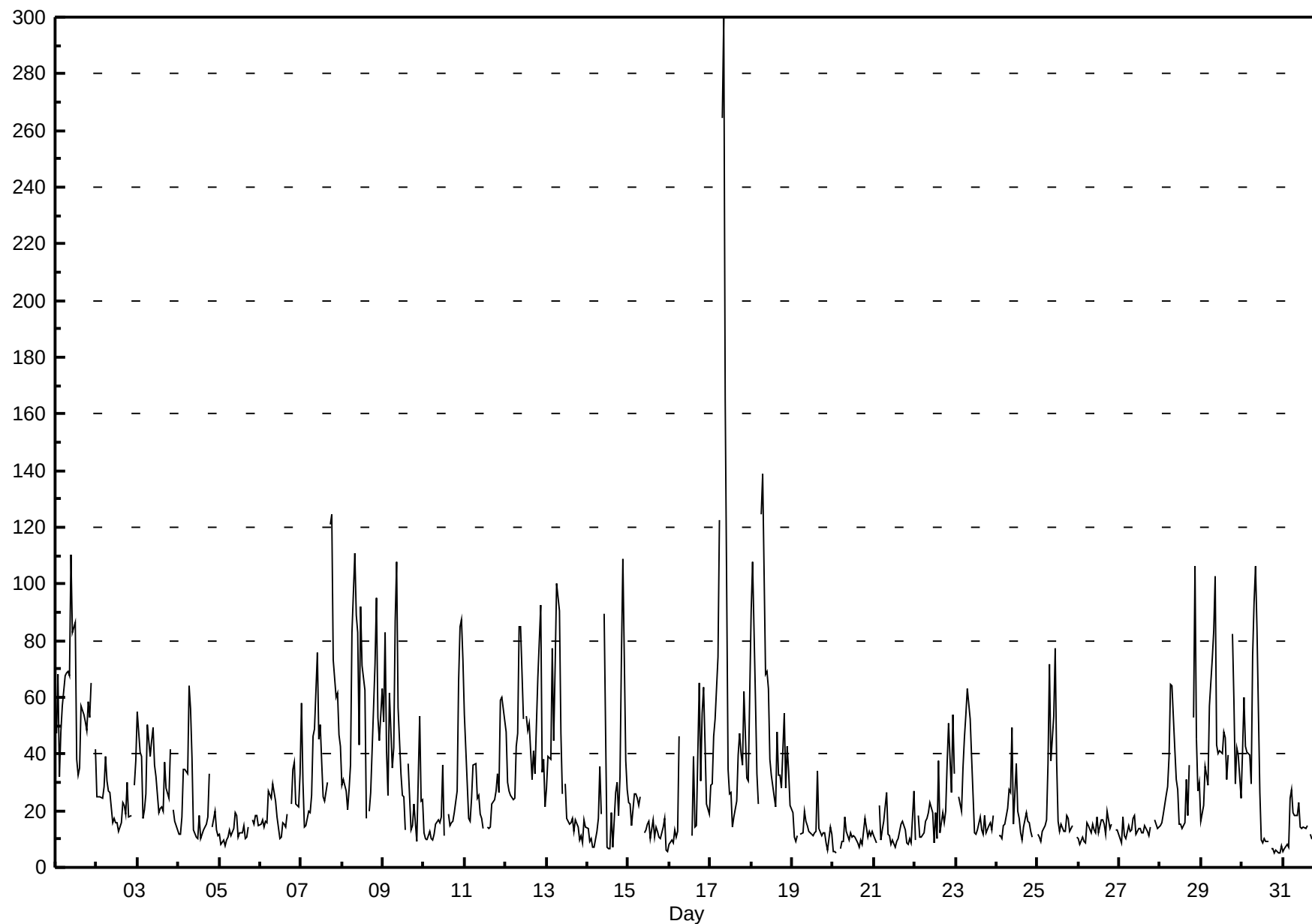
Henry Pirker - March 2011

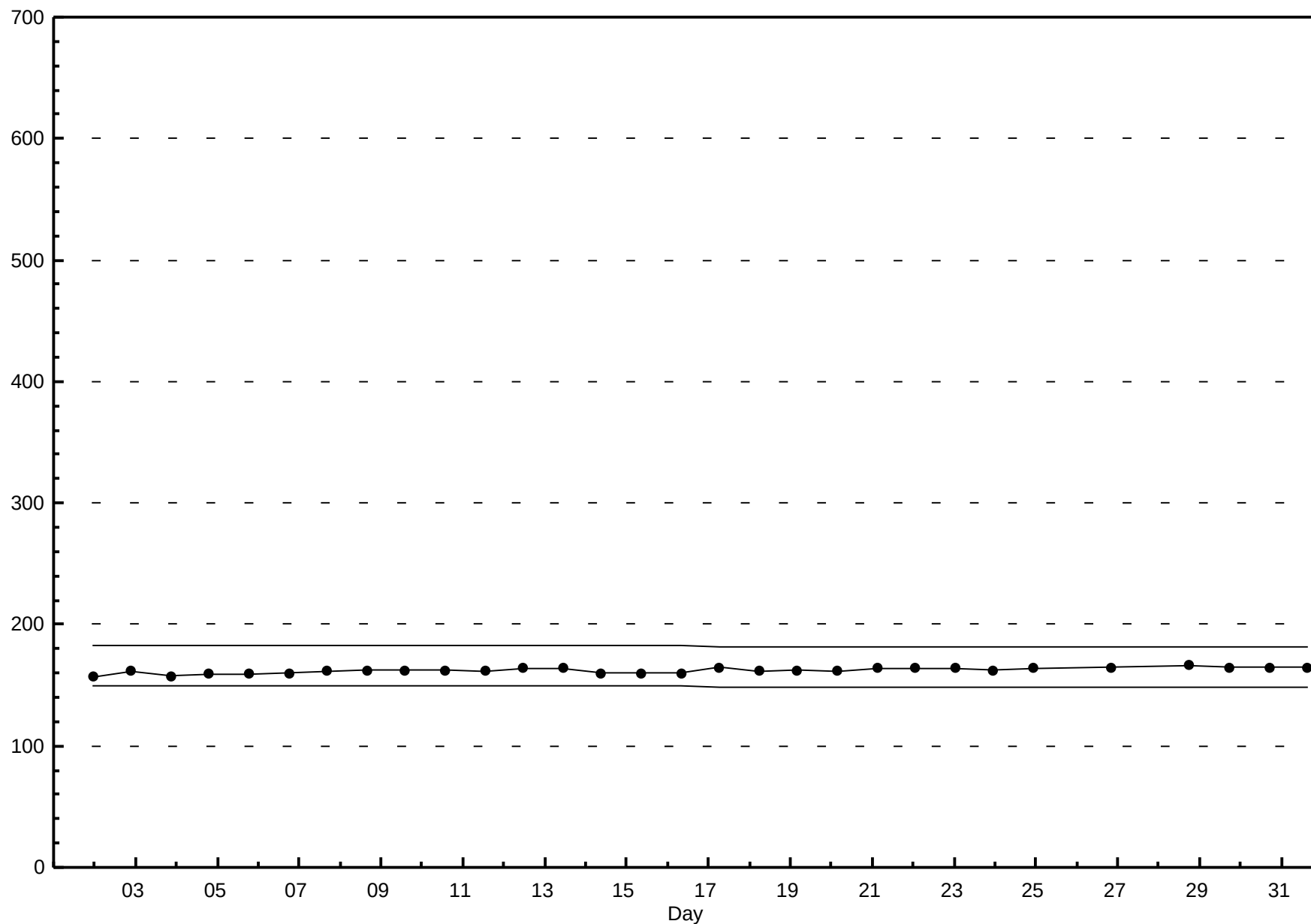
Maximum Value: 299.8 ppb on Mar 17 09:00																					Maximum Daily Average: 68.4 ppb on Mar 17					Hours in Service: 744	
Minimum Value: 5 ppb on Mar 30 23:00																					Minimum Daily Average: 10.3 ppb on Mar 20					Hours of Data: 701	
Maximum Diurnal Average: 54.9 ppb at hour 8																					Minimum Diurnal Average: 18.3 ppb at hour 14					Hours of Missing Data: 43	
Monthly Average: 29.57 ppb																					Percentiles: P ₁ = 5.6 P ₁₀ = 9.9 Q ₁ = 12.9 Median = 19.4 Q ₃ = 37.6 P ₉₀ = 62.1 P ₉₉ = 121.3					Hours of Calibration: 43	
																					Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Mar	47	68	32	48	57	67	69	69	67	110	83	87	38	33	35	57	54	51	48	59	53	65	A	42	58.2	110.4	
2-Mar	25	25	25	25	29	39	31	27	26	16	18	16	16	13	16	23	22	19	30	18	18	A	29	38	23.5	39.1	
3-Mar	55	41	39	18	20	26	51	39	45	49	36	32	19	21	21	20	37	28	24	42	A	20	16	13	31.0	54.8	
4-Mar	12	12	18	35	35	33	64	56	39	13	11	10	18	10	12	13	15	18	33	A	14	20	13	11	22.3	64.1	
5-Mar	12	8	10	8	10	11	13	11	14	19	18	10	12	12	15	10	11	14	A	17	15	18	18	15	13.1	19.1	
6-Mar	15	17	14	16	16	27	25	29	26	23	18	10	11	16	15	14	19	A	23	34	37	22	22	33	21.0	37.0	
7-Mar	58	30	14	15	20	20	26	46	49	76	45	50	37	25	23	30	A	121	125	73	60	61	47	43	47.5	124.5	
8-Mar	29	31	27	20	28	36	83	111	89	83	43	92	71	62	18	A	20	27	56	72	95	53	45	63	54.4	110.6	
9-Mar	52	83	41	25	62	35	42	87	108	56	33	25	25	13	A	37	13	15	22	16	9	53	23	24	39.2	107.7	
10-Mar	12	10	10	13	10	9	12	16	17	16	18	36	11	A	19	15	16	16	19	27	66	85	87	73	26.6	87.2	
11-Mar	54	30	17	16	24	36	36	24	25	19	17	14	A	14	14	14	23	24	27	33	27	59	60	52	28.6	59.9	
12-Mar	48	30	27	25	24	24	43	47	85	85	52	A	53	48	51	31	41	33	50	67	93	33	38	21	45.7	92.8	
13-Mar	28	39	38	77	45	71	100	90	47	26	A	30	17	15	16	17	12	17	14	10	11	8	17	14	33.1	100.4	
14-Mar	14	9	10	7	7	13	17	36	19	A	89	7	7	7	20	7	27	30	18	32	75	109	37	27	27.1	108.6	
15-Mar	23	23	15	26	26	24	22	25	A	12	13	15	16	10	17	10	14	13	11	10	14	18	6	5	16.0	26.1	
16-Mar	8	10	9	13	11	13	46	A	C	C	C	C	C	11	39	14	15	65	30	55	64	44	22	19	27.1	64.8	
17-Mar	29	30	46	52	74	122	A	264	300	165	35	26	26	14	18	23	39	47	40	36	62	32	30	60	68.4	299.8	
18-Mar	90	108	60	33	22	A	124	139	68	69	63	38	33	25	21	48	33	33	28	54	28	42	34	22	52.8	138.9	
19-Mar	19	11	9	11	A	11	12	20	16	15	13	11	11	12	13	34	14	11	12	12	9	6	14	12	13.4	34.1	
20-Mar	6	5	5	A	7	9	9	18	13	10	12	11	11	11	9	7	10	8	13	17	11	13	11	13	10.3	17.7	
21-Mar	11	9	A	22	10	13	16	26	12	11	8	10	7	9	10	13	15	16	13	9	8	10	9	27	12.8	26.9	
22-Mar	10	A	18	11	11	12	16	17	19	23	20	9	19	10	38	12	19	16	20	37	51	26	54	33	21.8	53.7	
23-Mar	A	A	25	20	35	46	54	63	53	39	26	12	12	13	18	13	12	19	12	15	16	13	18	A	25.4	63.0	
24-Mar	A	11	11	10	15	15	21	27	26	49	15	37	20	17	12	9	14	19	16	16	13	11	A	A	18.4	49.3	
25-Mar	12	11	9	13	15	17	37	72	38	53	77	37	16	13	15	13	13	18	18	13	15	A	A	10	24.2	77.4	
26-Mar	10	8	11	9	9	16	15	12	15	13	12	18	12	17	17	15	12	20	13	15	A	A	13	13	13.4	20.0	
27-Mar	10	9	18	11	10	15	13	13	17	18	12	14	13	12	12	15	12	11	14	A	A	17	14	14	13.4	18.1	
28-Mar	15	16	19	25	29	39	64	64	42	31	27	15	15	14	16	31	18	36	A	53	106	45	27	30	33.8	106.4	
29-Mar	16	22	36	33	29	57	74	83	103	43	40	41	40	48	46	31	40	A	82	59	30	42	40	25	46.0	102.6	
30-Mar	41	60	43	41	40	30	75	93	106	84	26	10	9	10	9	9	A	7	7	5	6	5	5	7	31.7	106.2	
31-Mar	5	7	8	7	24	27	19	18	18	23	14	14	14	14	15	A	12	10	10	8	9	7	7	6	12.9	27.3	
																									Diurnal Average		
																									Diurnal Maximum		
C - Calibration																									A - Automated Daily Zero Span		

Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

Henry Pirker - March 2011





**PASZA**

Peace Air Shed Zone Association

Hourly Averages

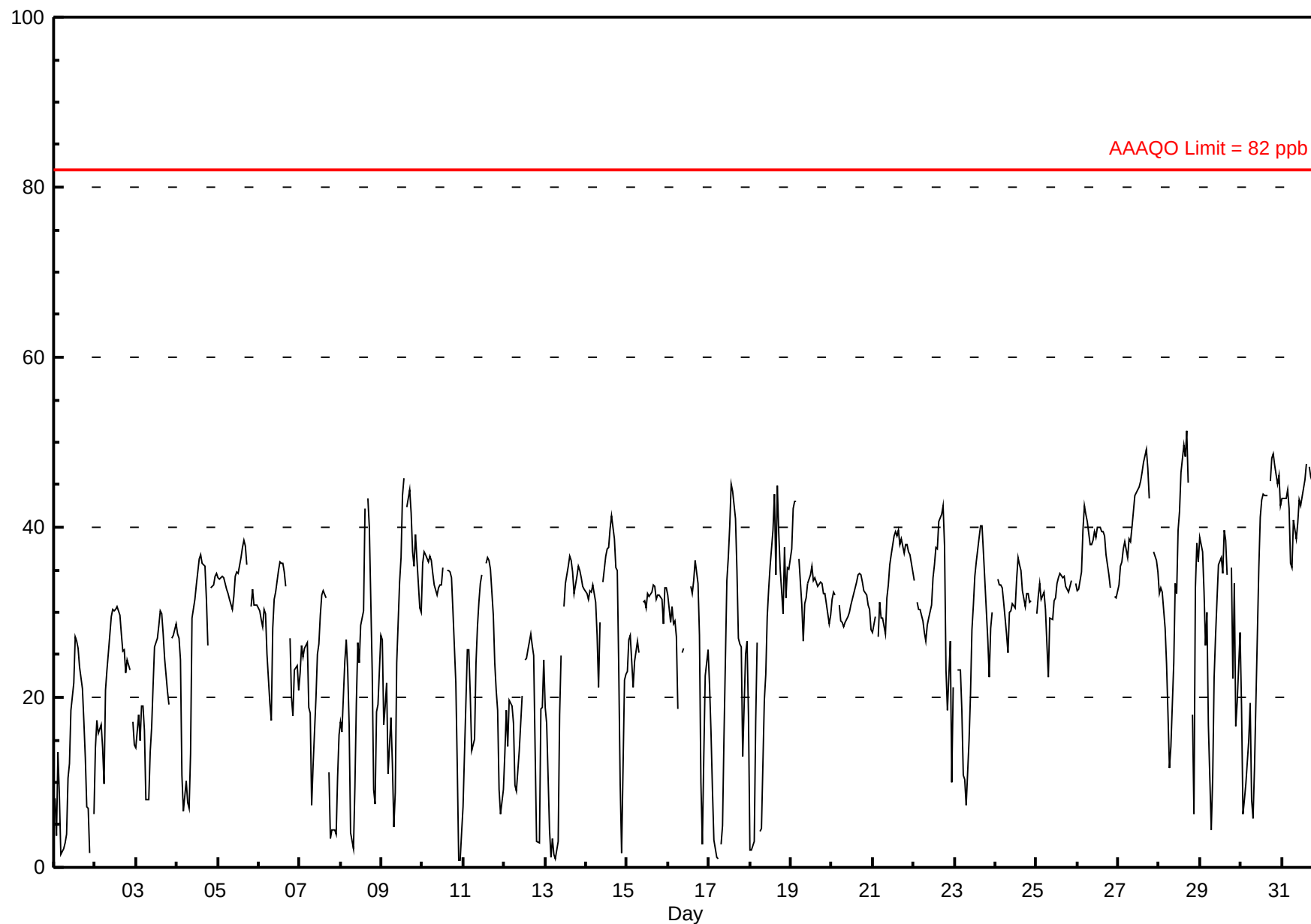
Ozone (O₃) - ppb

Henry Pirker - March 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 51.4 ppb on Mar 28 17:00 Maximum Daily Average: 43.3 ppb on Mar 31																					Hours in Service: 744					
Minimum Value: 1 ppb on Mar 10 22:00 Maximum Diurnal Average: 37.2 ppb at hour 15 Monthly Average: 28.09 ppb																					Hours of Data: 703					
Minimum Daily Average: 12.3 ppb on Mar 1 Minimum Diurnal Average: 18.0 ppb at hour 8 Percentiles: P ₁ = 1.5 P ₁₀ = 10.1 Q ₁ = 21.8 Median = 30.9 Q ₃ = 35.3 P ₉₀ = 40.4 P ₉₉ = 47.2																					Hours of Missing Data: 41					
																					Hours of Calibration: 41					
																					Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Mar	8	4	13	9	2	2	3	4	10	12	19	22	27	27	26	24	21	17	13	7	7	2	A	6	12.3	27.2
2-Mar	14	17	16	17	14	10	21	23	25	29	30	30	30	31	30	27	25	26	23	24	23	A	17	14	22.5	30.6
3-Mar	14	18	15	19	19	16	8	8	13	17	21	26	27	29	30	30	28	25	21	19	A	27	27	29	21.1	30.2
4-Mar	27	27	24	11	7	10	8	7	13	29	32	33	35	36	37	36	36	32	26	A	33	33	34	35	26.1	36.9
5-Mar	34	34	34	34	33	33	32	32	30	32	34	35	35	36	38	39	38	36	A	31	33	31	31	31	33.6	38.5
6-Mar	30	29	28	30	30	25	19	17	28	32	32	35	36	36	35	33	A	27	20	18	23	24	21	28.0	36.0	
7-Mar	23	26	25	26	26	19	18	7	12	20	25	26	30	32	32	A	11	3	4	4	4	11	16	18.8	32.5	
8-Mar	17	16	24	27	23	17	4	2	9	19	26	24	29	30	42	A	43	40	23	9	7	18	19	27	21.7	43.4
9-Mar	27	17	19	22	11	18	12	5	9	24	34	36	44	46	A	42	44	42	37	35	39	33	31	30	28.5	45.8
10-Mar	36	37	37	36	37	36	35	33	32	33	33	33	35	A	35	35	35	34	30	22	12	1	1	4	28.7	37.1
11-Mar	7	20	26	26	20	14	15	24	28	31	33	34	A	36	36	36	35	30	24	21	19	9	6	9	23.4	36.4
12-Mar	13	18	14	20	19	17	10	9	11	14	20	A	24	25	26	27	26	25	14	3	3	19	19	24	17.4	27.4
13-Mar	19	17	4	1	3	2	1	3	18	25	A	31	33	35	37	36	35	32	34	35	35	34	33	33	23.4	36.7
14-Mar	32	31	33	32	33	31	27	21	29	A	34	37	37	38	40	41	39	35	35	24	10	2	22	23	29.8	41.3
15-Mar	23	27	27	21	24	25	27	25	A	31	31	31	32	32	32	33	33	32	32	32	31	29	33	33	29.4	33.2
16-Mar	32	29	31	29	29	27	19	A	25	26	C	C	C	33	32	34	36	33	27	10	3	13	23	26	25.8	36.1
17-Mar	21	16	9	3	1	1	A	3	5	15	34	37	40	45	44	41	35	27	26	26	13	25	27	18	22.3	45.1
18-Mar	2	2	3	17	26	A	4	5	20	23	29	33	35	40	44	34	45	39	35	30	38	32	35	35	26.3	44.8
19-Mar	37	42	43	43	A	36	31	27	31	32	33	34	35	34	34	34	33	34	33	32	32	31	29	30	33.9	43.1
20-Mar	32	32	32	A	31	29	29	28	29	29	30	31	32	32	34	34	35	34	34	33	32	31	30	28	31.3	34.6
21-Mar	28	29	A	27	31	29	29	27	32	33	36	37	39	40	39	40	38	39	37	38	38	37	37	35	34.5	39.6
22-Mar	34	A	31	30	30	29	28	27	28	29	31	34	36	38	37	41	41	43	38	23	19	27	10	21	30.6	42.5
23-Mar	A	A	23	23	19	11	10	7	15	20	28	31	34	36	39	40	40	37	34	27	22	28	30	A	26.4	40.2
24-Mar	A	34	33	33	33	31	27	25	30	30	31	30	34	36	36	35	32	31	32	32	31	31	A	A	31.9	36.4
25-Mar	30	32	33	32	32	30	26	22	29	29	31	32	33	34	35	34	34	33	33	32	34	A	A	33	31.6	34.5
26-Mar	33	33	35	40	43	41	41	38	38	39	40	39	40	40	39	40	39	37	34	33	A	A	32	32	37.4	42.5
27-Mar	33	35	36	37	38	36	39	38	40	42	44	44	45	45	47	48	49	47	43	A	A	37	36	35	40.7	49.2
28-Mar	32	33	32	28	24	18	12	14	24	33	32	40	42	46	50	48	51	45	A	18	6	33	38	36	32.0	51.4
29-Mar	39	37	32	26	30	17	4	11	22	27	32	36	36	35	40	38	34	A	35	22	33	17	20	28	28.3	39.6
30-Mar	19	6	8	10	15	19	8	6	12	20	35	41	43	44	44	44	A	45	48	49	47	45	46	43	30.3	48.7
31-Mar	43	43	43	44	42	36	35	41	39	41	43	43	44	46	47	A	47	46	45	46	45	45	46	46	43.3	47.4
25.5 25.6 25.5 25.1 24.2 22.2 19.4 18.0 22.9 27.2 31.5 33.6 35.3 36.4 37.2 36.5 36.6 34.0 30.3 25.4 23.8 24.9 26.6 26.8																								Diurnal Average		
43.4 43.3 43.5 44.4 42.5 41.5 40.8 40.9 40.1 41.8 43.7 44.4 44.7 46.5 49.7 48.3 51.4 47.0 48.2 48.7 47.2 45.5 46.1 45.7																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na																										

Hourly Averages

Ozone (O₃) - ppb
Henry Pirker - March 2011



Hourly Maximums

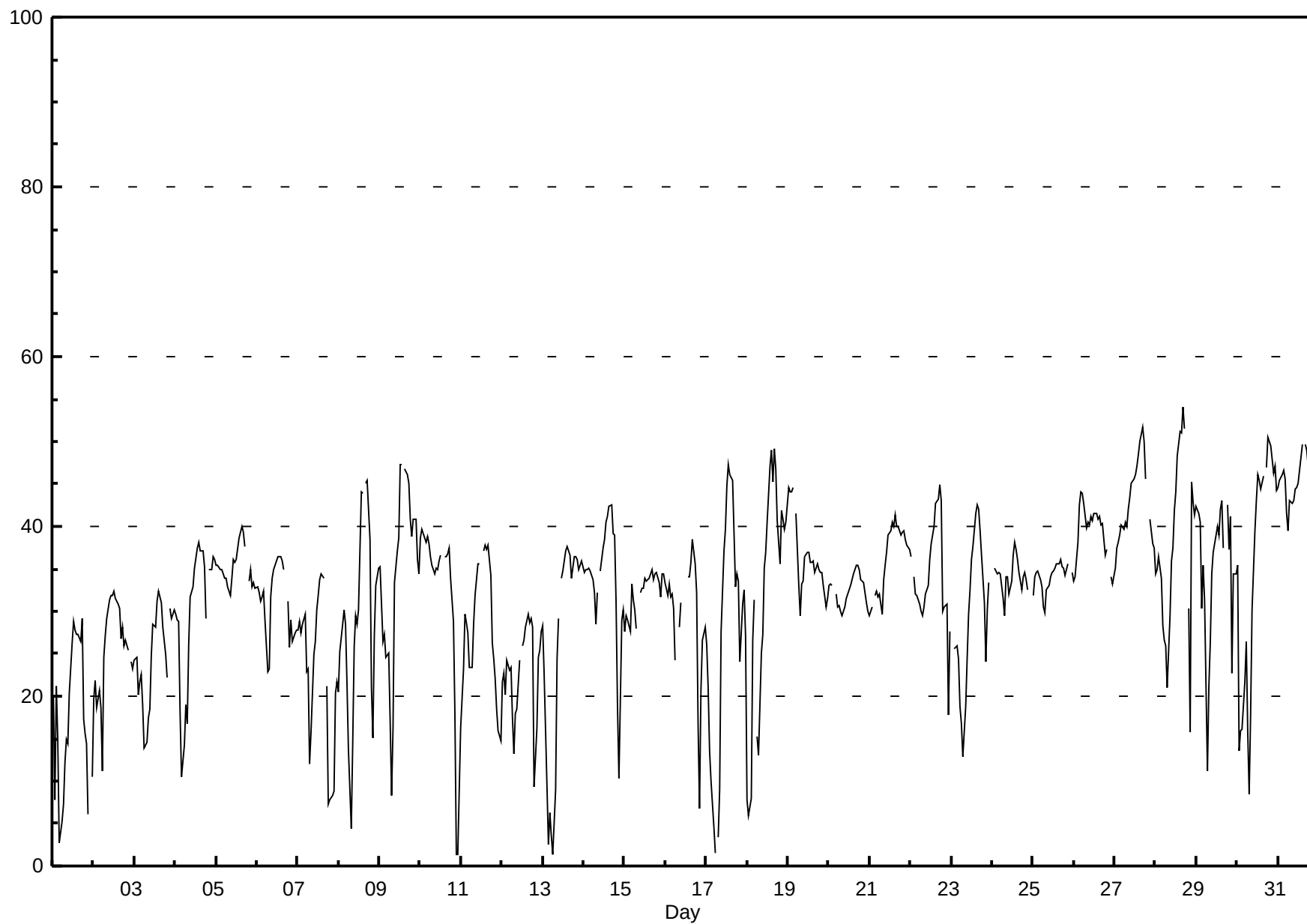
Ozone (O₃) - ppb

Henry Pirker - March 2011

Maximum Value: 54.1 ppb on Mar 28 17:00																					Maximum Daily Average: 45.7 ppb on Mar 31										Hours in Service: 744	
Minimum Value: 1 ppb on Mar 10 22:00																					Minimum Daily Average: 17.3 ppb on Mar 1										Hours of Data: 703	
Maximum Diurnal Average: 39.0 ppb at hour 17																					Minimum Diurnal Average: 22.5 ppb at hour 8										Hours of Missing Data: 41	
Monthly Average: 31.77 ppb																					Percentiles: P ₁ = 3.2 P ₁₀ = 17.4 Q ₁ = 27.2 Median = 33.5 Q ₃ = 37.5 P ₉₀ = 43.8 P ₉₉ = 49.8										Hours of Calibration: 41	
																					Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24								
1-Mar	20	8	21	15	3	5	7	12	15	14	20	26	29	28	27	27	29	17	16	14	6	A	11	17.3	29.2							
2-Mar	20	22	19	21	19	11	25	27	29	31	32	32	32	31	30	27	28	26	27	25	A	24	23	25.7	32.4							
3-Mar	24	25	20	22	23	19	14	15	17	18	25	28	28	31	32	32	31	28	25	22	A	30	29	30	24.7	32.3						
4-Mar	30	29	29	18	10	14	19	17	26	32	33	35	36	37	38	37	37	35	29	A	35	35	36	36	29.8	38.2						
5-Mar	35	35	35	35	34	34	34	33	32	34	36	36	36	39	39	40	39	38	A	34	35	33	33	33	35.3	40.1						
6-Mar	33	32	31	32	32	29	23	23	32	34	35	36	37	37	37	36	35	A	31	26	29	26	27	28	31.3	36.5						
7-Mar	28	29	28	28	30	23	23	12	16	25	26	30	32	34	34	34	A	21	7	8	8	9	20	22	22.9	34.4						
8-Mar	21	25	29	30	29	22	14	4	15	26	29	28	30	44	44	A	45	45	39	21	15	27	33	35	28.2	45.4						
9-Mar	35	31	26	27	25	25	17	8	16	33	37	39	47	47	A	47	46	45	41	39	41	41	36	34	34.1	47.2						
10-Mar	39	40	39	38	39	38	37	35	34	35	35	36	37	A	36	36	37	37	34	29	18	1	1	9	31.3	39.7						
11-Mar	16	23	30	29	28	23	23	28	32	34	36	36	A	37	38	37	38	34	26	24	22	19	16	15	28.0	37.7						
12-Mar	22	23	20	24	23	23	17	13	18	19	24	A	26	27	28	30	29	29	28	9	16	25	25	28	22.9	29.7						
13-Mar	28	23	9	3	6	4	1	9	24	29	A	34	35	37	38	37	37	34	37	36	36	35	35	36	26.2	37.6						
14-Mar	35	35	35	35	35	34	32	28	32	A	35	37	39	40	41	42	42	39	39	31	19	10	29	30	33.7	42.5						
15-Mar	28	30	29	28	33	31	30	28	A	32	33	33	34	34	34	34	35	34	34	35	33	32	34	34	32.2	34.9						
16-Mar	33	32	33	32	32	30	24	A	28	31	C	C	C	34	34	36	39	36	32	17	7	21	27	28	29.3	38.5						
17-Mar	26	21	14	10	5	1	A	3	9	28	37	40	45	47	46	45	39	33	34	34	24	31	33	27	27.5	47.2						
18-Mar	8	6	8	27	31	A	15	13	25	27	35	37	41	47	49	45	49	47	41	36	42	41	40	41	32.6	49.2						
19-Mar	45	44	44	45	A	42	33	29	33	34	37	37	37	36	36	36	35	36	35	35	35	33	31	32	36.3	44.6						
20-Mar	33	33	33	A	32	30	31	30	29	30	31	32	32	33	34	35	35	35	35	34	33	32	31	30	32.5	35.5						
21-Mar	29	30	A	32	32	32	32	30	34	35	37	39	40	41	40	41	40	40	39	39	40	38	38	37	36.3	41.4						
22-Mar	36	A	34	32	32	31	30	29	30	32	33	36	38	39	40	43	43	45	43	30	30	31	18	28	34.1	44.9						
23-Mar	A	A	26	26	24	19	17	13	19	24	30	33	36	38	42	43	42	40	37	31	24	30	33	A	29.7	42.6						
24-Mar	A	35	35	34	35	34	32	30	34	34	32	34	37	38	37	36	35	33	34	35	34	32	A	A	34.2	38.1						
25-Mar	32	34	35	35	34	33	31	30	33	33	34	35	35	35	36	36	36	35	35	34	36	A	A	35	34.0	36.1						
26-Mar	34	34	38	43	44	44	43	40	41	40	41	41	42	41	41	41	40	40	37	37	A	A	34	33	39.4	44.1						
27-Mar	35	37	38	39	40	40	40	40	42	43	45	46	46	47	48	50	52	50	46	A	A	41	38	37	42.8	51.8						
28-Mar	34	35	36	34	28	27	26	21	29	36	37	42	44	48	51	51	54	52	A	30	16	45	43	41	37.5	54.1						
29-Mar	42	41	40	30	35	31	11	21	26	34	37	38	40	39	42	43	37	A	42	37	41	23	34	34	34.9	43.0						
30-Mar	35	14	16	16	22	26	16	9	18	30	39	43	46	45	44	46	A	47	51	50	50	46	47	44	34.8	50.5						
31-Mar	45	45	46	47	46	41	40	43	43	43	44	45	45	48	50	A	50	49	47	48	47	48	48	47	45.7	49.6						
30.4 29.4 29.2 28.8 28.0 26.6 24.5 22.5 27.1 31.1 34.0 35.9 37.2 38.7 38.9 38.9 39.0 37.7 34.5 30.4 28.7 29.3 31.3 31.0																									Diurnal Average							
44.6 45.4 46.0 46.5 45.6 43.9 42.8 43.0 42.7 43.3 45.1 45.6 47.2 48.2 51.2 51.1 54.1 51.6 50.5 50.0 49.5 47.6 47.6 47.1																									Diurnal Maximum							
C - Calibration A - Automated Daily Zero Span																																

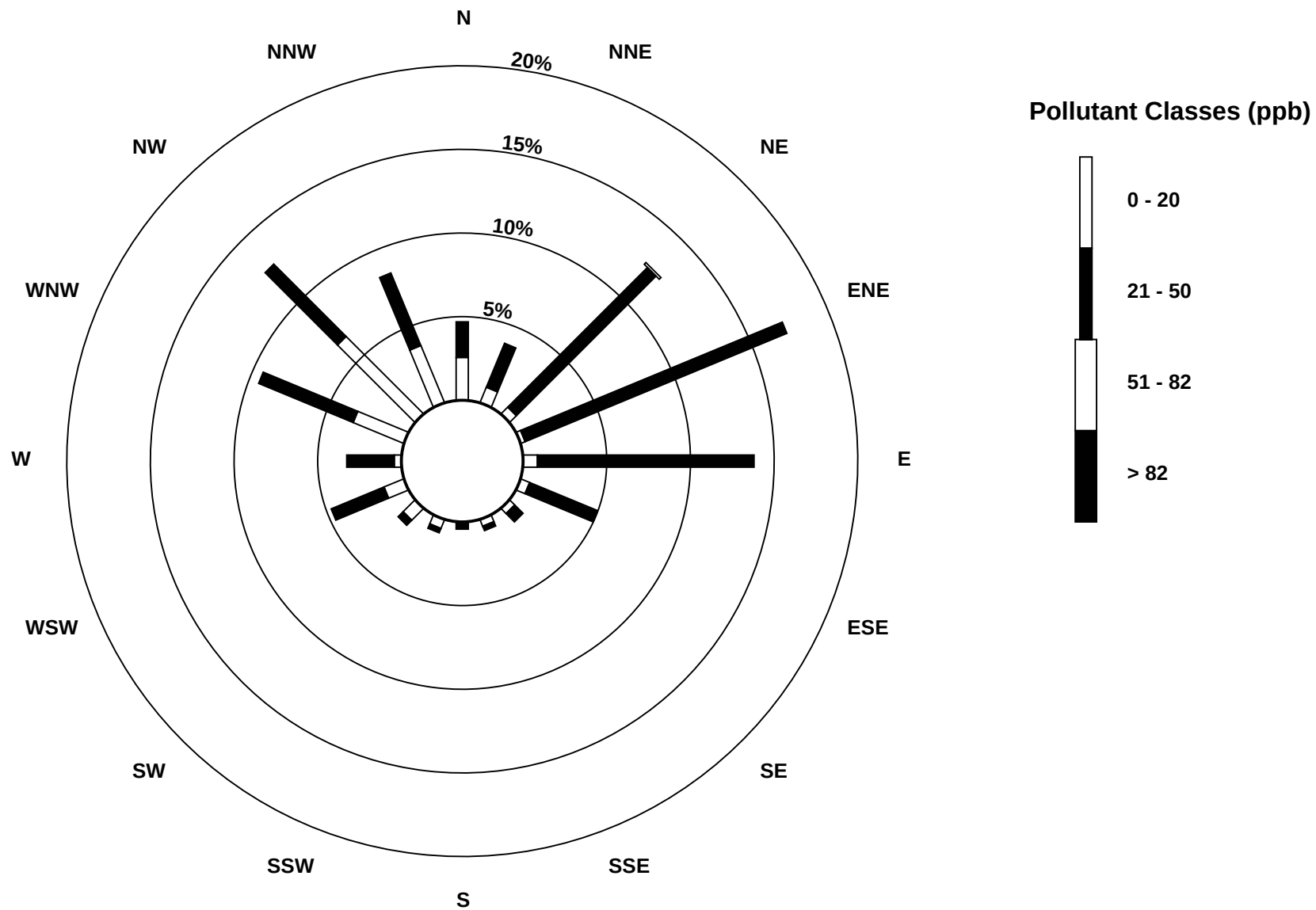
Hourly Maximums

Ozone (O₃) - ppb
Henry Pirker - March 2011



Pollutant Rose

Ozone (O_3) - ppb
Henry Pirker - March 2011



**PASZA**

Peace Air Shed Zone Association

Eight Hour Running Averages

Ozone (O₃) - ppb

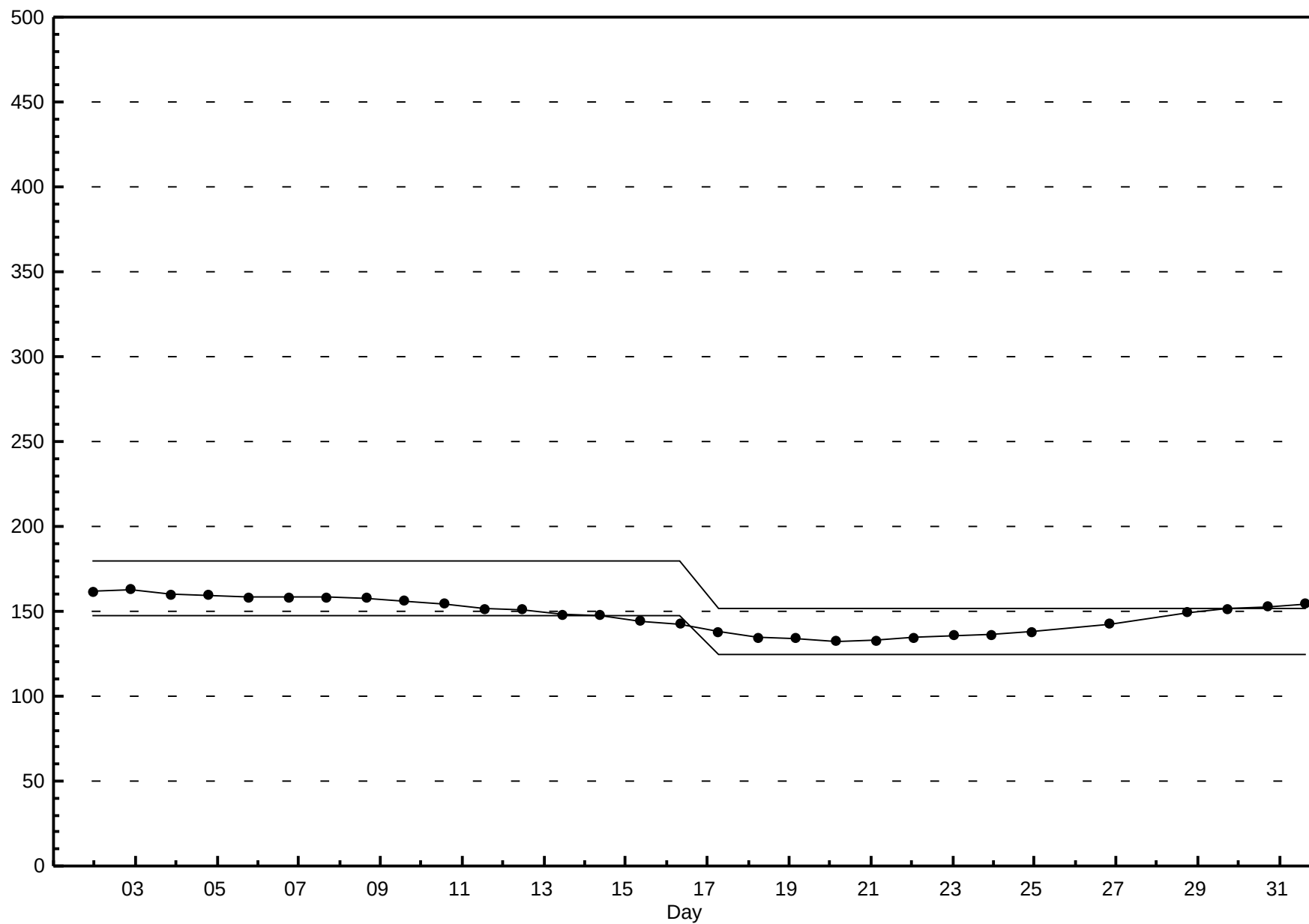
Henry Pirker - March 2011

Maximum Value: 46.5 ppb on Mar 27 21:00																								Hours in Service: 744	
Minimum Value: 5.3 ppb on Mar 17 10:00																								Hours of Data: 737	
																								Hours of Missing Data: 7	
Percentiles: P ₁ = 6.2 P ₁₀ = 14.5 Q ₁ = 21.2 Median = 30.1 Q ₃ = 33.9 P ₉₀ = 38.4 P ₉₉ = 46.0																								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-Mar	9	6	6	7	7	6	6	6	6	7	8	9	12	15	18	21	22	23	22	20	18	15	13	10	22.7
2-Mar	9	9	10	11	12	13	14	16	18	19	21	23	25	28	29	29	29	29	28	27	26	26	24	22	29.2
3-Mar	20	19	18	17	17	17	15	15	15	14	15	16	17	19	21	24	26	27	27	26	26	26	25	25	26.9
4-Mar	25	25	26	25	22	20	18	15	13	14	15	17	21	24	28	31	34	34	34	34	34	33	33	33	34.4
5-Mar	32	33	34	34	34	34	34	33	33	33	33	33	33	33	34	35	36	36	36	36	36	35	34	33	36.5
6-Mar	32	31	30	30	30	29	28	26	26	26	27	27	28	29	31	34	34	35	34	32	29	27	26	24	34.7
7-Mar	22	23	22	23	24	24	23	21	20	19	19	19	20	21	23	26	28	27	24	21	17	13	10	8	28.2
8-Mar	9	9	12	15	17	19	18	16	15	16	16	16	16	18	23	26	31	34	33	31	28	26	23	23	33.5
9-Mar	21	19	18	20	20	20	19	16	14	15	17	19	23	26	28	34	39	41	42	42	41	39	38	36	41.7
10-Mar	35	35	35	35	34	35	35	36	35	35	34	34	34	33	34	34	34	34	34	32	29	25	21	17	35.7
11-Mar	14	12	11	12	13	15	16	19	22	23	24	25	26	29	32	34	35	34	33	31	30	26	22	19	34.6
12-Mar	16	15	14	14	14	15	15	15	15	14	15	14	15	16	18	21	23	25	24	21	19	18	17	17	24.8
13-Mar	16	15	14	13	13	11	9	6	6	7	8	12	16	21	26	31	33	34	34	35	35	35	34	34	35.0
14-Mar	34	34	33	33	33	32	32	30	30	30	30	30	31	32	34	36	38	38	38	36	33	28	26	24	37.8
15-Mar	22	21	20	19	21	24	25	25	25	26	26	28	29	30	31	32	32	32	32	32	32	32	32	32	32.3
16-Mar	32	31	31	31	30	30	28	28	27	26	26	N	N	N	N	N	N	N	33	29	26	24	22	21	32.6
17-Mar	19	17	15	14	14	12	11	8	5	5	9	14	19	25	28	33	36	38	37	36	32	30	27	25	37.8
18-Mar	20	17	14	13	15	14	10	8	11	14	18	20	21	24	28	32	35	37	38	38	38	37	36	36	38.2
19-Mar	35	36	37	38	38	39	38	37	36	35	33	32	32	32	33	33	34	34	34	34	33	33	32	32	38.9
20-Mar	32	31	31	31	31	31	31	30	30	30	29	30	30	30	31	31	32	33	33	33	33	33	33	32	33.4
21-Mar	31	31	30	29	29	29	29	29	29	30	31	32	33	34	35	37	38	38	38	39	38	38	38	37	38.6
22-Mar	37	36	36	35	33	32	31	30	29	29	29	30	30	31	33	34	36	38	38	37	35	34	30	28	38.4
23-Mar	26	23	20	20	20	18	18	16	16	16	17	18	20	23	26	30	34	36	36	36	34	33	32	31	36.4
24-Mar	30	29	29	30	32	32	32	31	31	30	30	30	30	31	32	33	33	33	33	34	33	33	32	32	33.5
25-Mar	31	31	32	32	32	32	31	30	30	29	29	29	29	30	31	32	33	33	33	34	34	34	33	33	33.6
26-Mar	33	33	33	34	36	37	37	38	39	39	40	40	39	39	39	39	39	39	39	38	37	37	36	34	39.8
27-Mar	33	33	33	34	35	35	36	37	38	38	39	40	41	42	43	44	45	46	46	46	47	45	43	41	46.5
28-Mar	38	36	34	33	32	30	27	24	23	23	23	25	27	30	35	39	43	44	46	43	38	36	34	33	46.1
29-Mar	31	30	30	31	34	32	28	25	22	21	21	22	23	25	30	33	35	36	36	34	34	31	29	27	36.3
30-Mar	25	22	19	18	15	16	14	11	10	12	16	19	23	26	31	35	39	42	44	45	46	46	46	46	46.4
31-Mar	46	46	45	44	44	43	41	41	40	40	40	40	40	41	43	43	44	45	45	46	46	46	46	46	46.0
45.8 45.6 45.0 44.5 43.8 42.7 41.3 41.1 40.5 40.1 40.1 40.2 41.0 42.1 43.1 44.3 45.4 46.1 46.1 46.3 46.5 46.0 46.4 46.2																									
Diurnal Maximums																									
N - Not Valid																									

Span Responses

Ozone (O₃)

Henry Pirker - March 2011



Hourly Averages

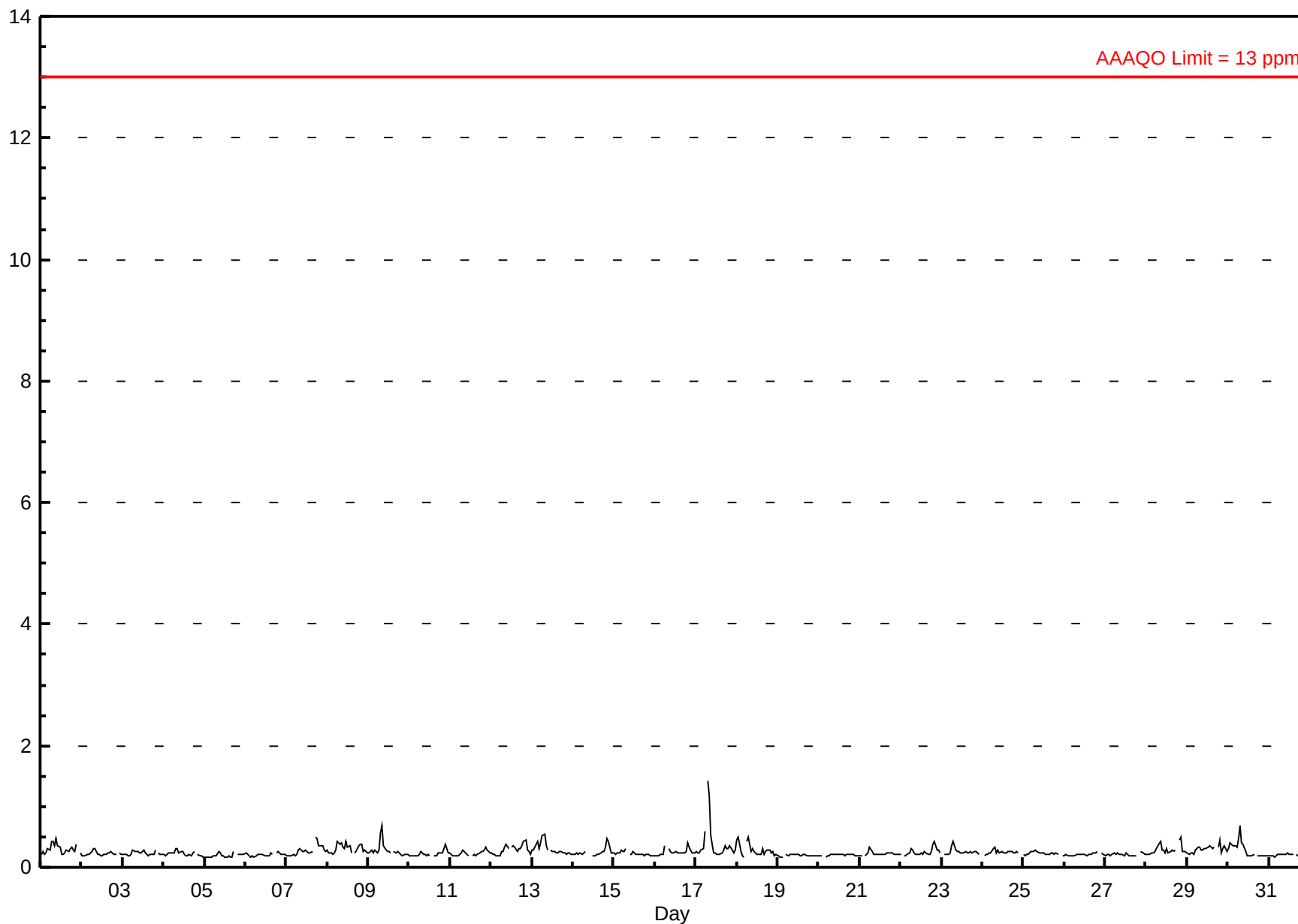
Carbon Monoxide (CO) - ppm

Henry Pirker - March 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 1.43 ppm on Mar 17 08:00 Maximum Daily Average: 0.38 ppm on Mar 17																					Hours in Service: 744 Hours of Data: 704 Hours of Missing Data: 40 Hours of Calibration: 40 Percent Operational Time: 100.0					
Minimum Value: 0.2 ppm on Mar 19 03:00 Maximum Diurnal Average: 0.36 ppm at hour 8 Monthly Average: 0.252 ppm										Minimum Daily Average: 0.20 ppm on Mar 5 Minimum Diurnal Average: 0.22 ppm at hour 3 Percentiles: P ₁ = 0.17 P ₁₀ = 0.19 Q ₁ = 0.20 Median = 0.23 Q ₃ = 0.27 P ₉₀ = 0.34 P ₉₉ = 0.52																
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-Mar	0.2	0.3	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.5	0.4	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	A	0.2	0.30	0.47
2-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	A	0.2	0.2	0.23	0.32
3-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	A	0.2	0.2	0.2	0.23	0.28
4-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	A	0.2	0.2	0.2	0.2	0.23	0.30
5-Mar	0.2	0.2	0.2	0.2	0.2	0.2	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	0.20	0.25
6-Mar	0.2	0.2	0.2	0.2	0.2	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	0.3	0.2	0.2	0.2	0.2	0.21	0.26
7-Mar	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	0.2	0.2	0.3	A	0.5	0.5	0.3	0.4	0.3	0.3	0.3	0.28	0.49
8-Mar	0.3	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.3	0.3	0.4	0.3	0.4	0.2	A	0.2	0.3	0.4	0.4	0.4	0.3	0.3	0.2	0.31	0.43
9-Mar	0.2	0.3	0.3	0.2	0.3	0.2	0.3	0.6	0.7	0.3	0.3	0.3	0.2	0.2	A	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.29	0.69
10-Mar	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	A	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.2	0.22	0.38
11-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.23	0.34
12-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.3	A	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.3	0.3	0.2	0.29	0.46
13-Mar	0.3	0.3	0.4	0.4	0.3	0.4	0.5	0.5	0.4	0.3	A	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.30	0.54
14-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	C	C	C	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.5	0.4	0.2	0.2	0.25	0.47
15-Mar	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	A	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23	0.30
16-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.3	A	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.2	0.2	0.25	0.40
17-Mar	0.2	0.2	0.2	0.3	0.3	0.6	A	1.4	1.2	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.4	0.3	0.2	0.3	0.38	1.43
18-Mar	0.5	0.5	0.3	0.2	0.2	A	0.4	0.5	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.28	0.50
19-Mar	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	0.2	0.2	0.2	0.20	0.22
20-Mar	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	0.2	0.2	0.2	0.2	0.20	0.22
21-Mar	0.2	0.2	A	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22	0.32
22-Mar	0.2	A	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.4	0.4	0.3	0.3	0.2	0.25	0.43
23-Mar	A	A	0.2	0.2	0.2	0.2	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.2	A	0.25	0.44
24-Mar	A	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.2	A	A	0.25	0.32
25-Mar	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	A	0.2	0.23	0.28
26-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	A	A	0.2	0.2	0.21	0.26
27-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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	A	0.3	0.2	0.2	0.21	0.26
28-Mar	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.3	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.3	A	0.5	0.5	0.3	0.3	0.3	0.29	0.49
29-Mar	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	0.4	0.3	0.3	0.3	A	0.3	0.5	0.2	0.3	0.4	0.3	0.30	0.45
30-Mar	0.3	0.4	0.4	0.4	0.4	0.3	0.5	0.7	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.29	0.70
31-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20	0.23
0.23 0.23 0.22 0.22 0.23 0.25 0.29 0.36 0.33 0.27 0.25 0.24 0.24 0.23 0.23 0.23 0.23 0.25 0.26 0.28 0.28 0.26 0.23 0.22																								Diurnal Average		
0.45 0.49 0.37 0.44 0.36 0.58 0.53 1.43 1.16 0.53 0.36 0.42 0.34 0.37 0.34 0.31 0.34 0.49 0.49 0.46 0.49 0.42 0.36 0.29																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm 24-hr na																										

Hourly Averages

Carbon Monoxide (CO) - ppm
Henry Pirker - March 2011

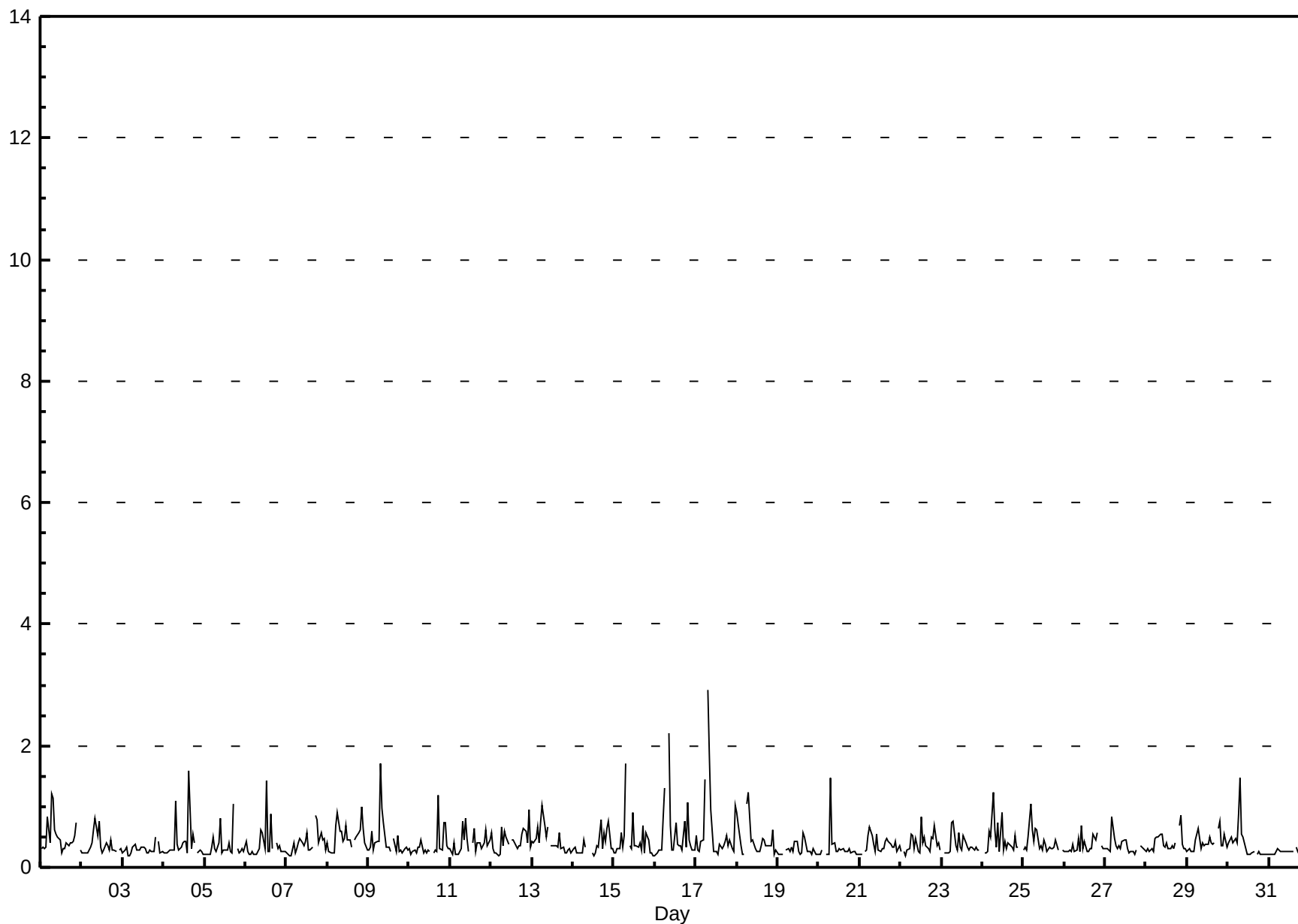


Hourly Maximums

Carbon Monoxide (CO) - ppm

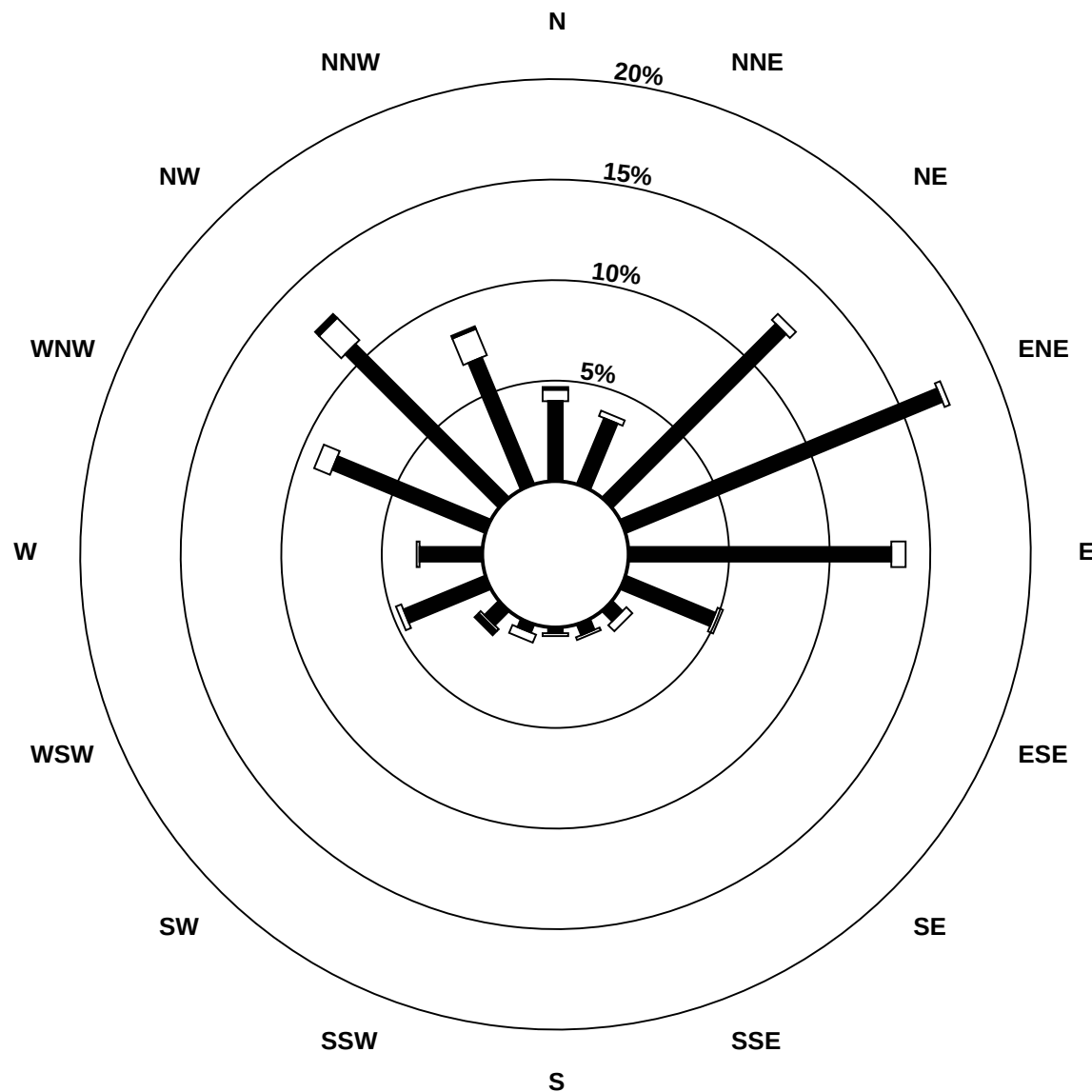
Henry Pirker - March 2011

Maximum Value: 2.91 ppm on Mar 17 08:00																					Maximum Daily Average: 0.63 ppm on Mar 17				Hours in Service: 744	
Minimum Value: 0.2 ppm on Mar 16 01:00																					Minimum Daily Average: 0.25 ppm on Mar 31				Hours of Data: 704	
Maximum Diurnal Average: 0.76 ppm at hour 8																					Minimum Diurnal Average: 0.28 ppm at hour 4				Hours of Missing Data: 40	
Monthly Average: 0.402 ppm																					Percentiles: P ₁ = 0.20 P ₁₀ = 0.23 Q ₁ = 0.26 Median = 0.32 Q ₃ = 0.44 P ₉₀ = 0.67 P ₉₉ = 1.40				Hours of Calibration: 40	
																					Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	0.3	0.3	0.3	0.3	0.8	0.4	1.2	1.1	0.6	0.5	0.5	0.4	0.2	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.5	0.7	A	0.3	0.49	1.22
2-Mar	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.6	0.8	0.5	0.8	0.3	0.2	0.3	0.4	0.4	0.3	0.4	0.3	0.3	A	A	0.3	0.3	0.37	0.80
3-Mar	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.5	A	0.4	0.2	0.2	0.29	0.50
4-Mar	0.2	0.2	0.2	0.3	0.3	0.3	0.3	1.1	0.4	0.3	0.3	0.4	0.4	0.4	0.2	1.6	0.3	0.6	0.4	A	0.2	0.3	0.3	0.2	0.40	1.58
5-Mar	0.2	0.2	0.2	0.2	0.3	0.5	0.3	0.3	0.4	0.8	0.2	0.3	0.3	0.3	0.4	0.3	0.2	1.0	A	0.3	0.2	0.3	0.3	0.3	0.34	1.04
6-Mar	0.4	0.3	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.6	0.6	0.3	1.4	0.3	0.3	0.9	0.3	A	0.4	0.3	0.3	0.2	0.2	0.2	0.38	1.42
7-Mar	0.2	0.2	0.2	0.2	0.4	0.2	0.3	0.4	0.5	0.4	0.3	0.4	0.6	0.3	0.3	0.3	A	0.9	0.8	0.4	0.6	0.4	0.5	0.3	0.40	0.85
8-Mar	0.4	0.3	0.2	0.2	0.2	0.7	0.9	0.6	0.6	0.4	0.5	0.7	0.4	0.4	0.3	A	0.5	0.5	0.6	0.6	1.0	0.6	0.4	0.3	0.50	0.99
9-Mar	0.3	0.3	0.6	0.3	0.4	0.4	0.4	1.7	1.0	0.7	0.3	0.3	0.3	0.3	A	0.5	0.3	0.5	0.3	0.3	0.2	0.3	0.3	0.3	0.45	1.70
10-Mar	0.3	0.2	0.3	0.3	0.2	0.3	0.3	0.4	0.2	0.3	0.2	0.3	0.3	A	0.2	0.3	0.3	1.2	0.3	0.3	0.7	0.7	0.4	0.3	0.36	1.18
11-Mar	0.3	0.2	0.4	0.2	0.2	0.2	0.3	0.8	0.5	0.8	0.5	0.3	A	0.4	0.6	0.2	0.4	0.4	0.3	0.4	0.4	0.6	0.3	0.5	0.40	0.82
12-Mar	0.6	0.3	0.2	0.2	0.2	0.2	0.7	0.3	0.6	0.5	0.4	A	0.4	0.4	0.4	0.3	0.3	0.3	0.5	0.6	0.6	0.4	0.9	0.3	0.43	0.94
13-Mar	0.4	0.4	0.5	0.7	0.4	0.7	1.0	0.7	0.5	0.7	A	0.3	0.4	0.4	0.3	0.3	0.6	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.45	1.03
14-Mar	0.3	0.3	0.2	0.2	0.2	0.2	0.4	0.3	C	C	C	0.2	0.2	0.2	0.4	0.3	0.8	0.3	0.6	0.4	0.7	0.8	0.3	0.3	0.37	0.79
15-Mar	0.2	0.2	0.3	0.3	0.6	0.3	0.5	1.7	A	0.4	0.3	0.9	0.3	0.3	0.3	0.4	0.3	0.7	0.2	0.6	0.5	0.2	0.2	0.2	0.44	1.71
16-Mar	0.2	0.2	0.3	0.3	0.3	0.8	1.3	A	2.2	0.7	0.3	0.3	0.7	0.4	0.4	0.4	0.3	0.8	0.3	1.1	0.4	0.4	0.3	0.3	0.54	2.20
17-Mar	0.5	0.3	0.3	0.4	0.4	1.4	A	2.9	1.9	1.0	0.3	0.3	0.3	0.2	0.4	0.3	0.4	0.4	0.5	0.4	0.5	0.3	0.3	1.0	0.63	2.91
18-Mar	0.9	0.7	0.4	0.2	0.2	A	1.0	1.2	0.4	0.5	0.4	0.3	0.3	0.3	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.6	0.2	0.3	0.46	1.24
19-Mar	0.2	0.2	0.2	0.2	A	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.2	0.2	0.6	0.5	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.28	0.57
20-Mar	0.2	0.2	0.3	A	0.2	0.2	0.2	1.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.31	1.46
21-Mar	0.2	0.2	A	0.3	0.3	0.5	0.7	0.5	0.4	0.3	0.6	0.3	0.3	0.3	0.3	0.4	0.5	0.4	0.4	0.3	0.3	0.4	0.3	0.4	0.37	0.67
22-Mar	0.3	A	0.2	0.2	0.3	0.3	0.6	0.5	0.3	0.5	0.2	0.2	0.8	0.4	0.5	0.3	0.3	0.3	0.5	0.5	0.7	0.4	0.4	0.3	0.39	0.82
23-Mar	A	A	0.2	0.2	0.2	0.3	0.7	0.7	0.3	0.3	0.6	0.3	0.3	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	A	0.37	0.75
24-Mar	A	0.2	0.2	0.3	0.6	0.5	1.2	0.6	0.3	0.7	0.3	0.9	0.3	0.4	0.3	0.4	0.4	0.3	0.3	0.5	0.3	0.3	A	A	0.45	1.23
25-Mar	0.3	0.3	0.3	0.5	1.0	0.6	0.4	0.6	0.6	0.3	0.4	0.3	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.3	A	A	0.3	0.41	1.04
26-Mar	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.5	0.3	0.7	0.3	0.4	0.3	0.3	0.3	0.3	0.6	0.5	0.6	A	A	0.4	0.3	0.36	0.69
27-Mar	0.3	0.3	0.3	0.3	0.8	0.5	0.3	0.3	0.4	0.3	0.4	0.5	0.5	0.3	0.2	0.3	0.3	0.2	0.3	A	A	0.4	0.3	0.3	0.35	0.83
28-Mar	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.5	0.5	0.6	0.4	0.3	0.4	0.3	0.3	0.4	0.3	0.4	A	0.7	0.9	0.4	0.3	0.3	0.40	0.85
29-Mar	0.3	0.3	0.3	0.3	0.3	0.5	0.6	0.5	0.3	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	A	0.6	0.7	0.4	0.4	0.6	0.3	0.41	0.75
30-Mar	0.4	0.5	0.5	0.4	0.5	0.4	0.9	1.5	0.6	0.5	0.3	0.2	0.2	0.2	0.2	0.3	A	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.39	1.46
31-Mar	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	A	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.25	0.34
0.32 0.29 0.29 0.28 0.37 0.43 0.57 0.76 0.56 0.48 0.39 0.37 0.40 0.33 0.33 0.40 0.36 0.45 0.38 0.43 0.42 0.40 0.32 0.31																									Diurnal Average	
0.90 0.71 0.59 0.67 1.04 1.45 1.30 2.91 2.20 0.96 0.76 0.90 1.42 0.53 0.64 1.58 0.79 1.18 0.77 1.08 0.99 0.75 0.94 1.03																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

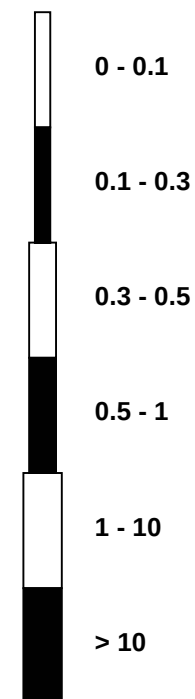


Pollutant Rose

Carbon Monoxide (CO) - ppm
Henry Pirker - March 2011



Pollutant Classes (ppm)

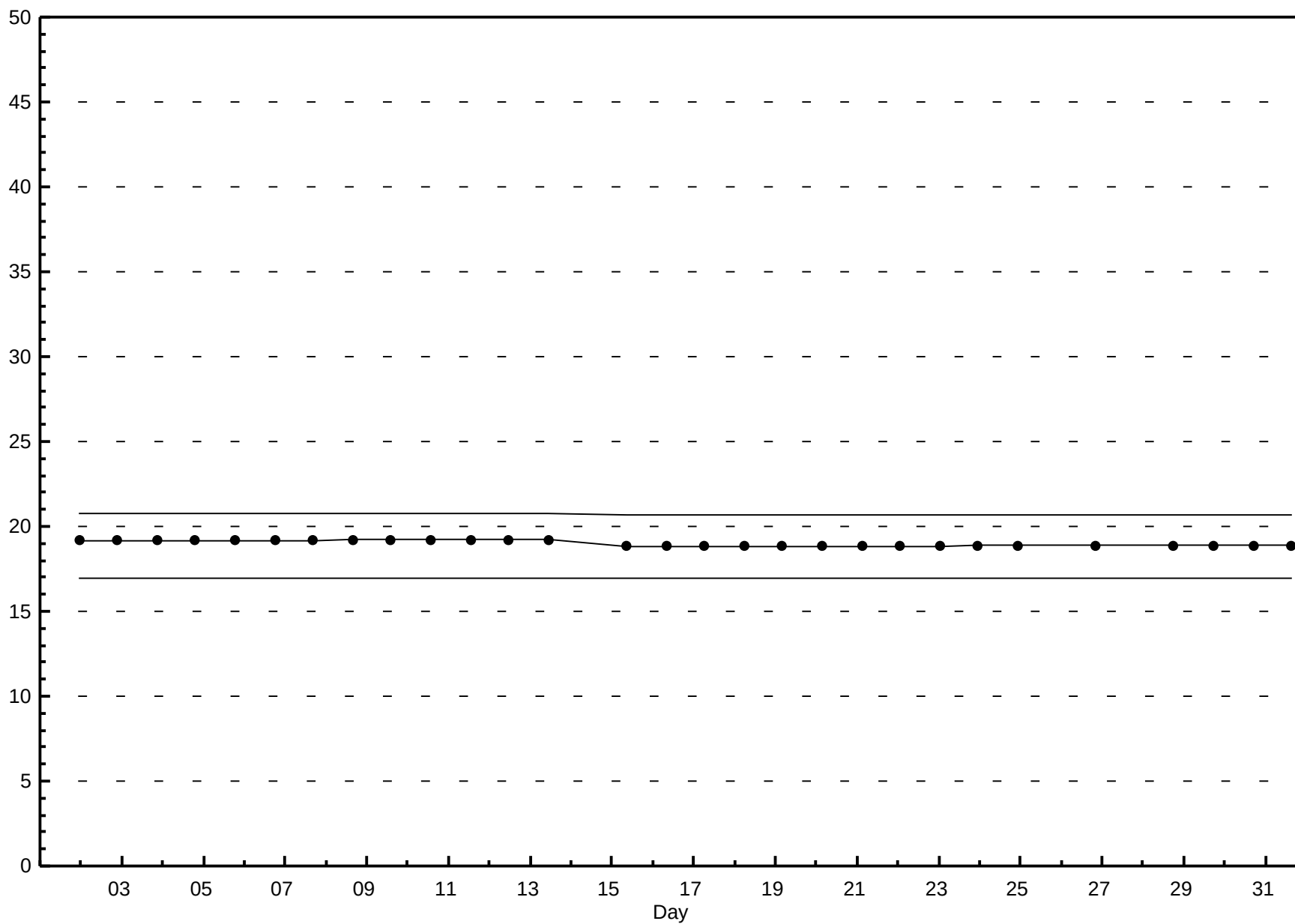


**PASZA**

Peace Air Shed Zone Association

Eight Hour Running Averages**Carbon Monoxide (CO) - ppm****Henry Pirker - March 2011**

Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 0.65 ppm on Mar 17 11:00																								Hours in Service: 744	
Minimum Value: 0.18 ppm on Mar 5 06:00																								Hours of Data: 738	
Percentiles: P ₁ = 0.18 P ₁₀ = 0.20 Q ₁ = 0.21 Median = 0.24 Q ₃ = 0.28 P ₉₀ = 0.33 P ₉₉ = 0.49																								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-Mar	0.3	0.3	0.3	0.3	0.2	0.2	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	0.37
2-Mar	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	0.29
3-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26
4-Mar	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26
5-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21
6-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
7-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.37
8-Mar	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.37
9-Mar	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	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.38
10-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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	0.27
11-Mar	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	0.3	0.3	0.3	0.27
12-Mar	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.35
13-Mar	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.41
14-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	N	N	N	N	N	N	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.31
15-Mar	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.31
16-Mar	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	0.3	0.3	0.3	0.3	0.3	0.28
17-Mar	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.65
18-Mar	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.36
19-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.24
20-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21
21-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.24
22-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.29
23-Mar	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.32
24-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.27
25-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.25
26-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.33
29-Mar	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.35
30-Mar	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.42
31-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21
0.36 0.34 0.34 0.32 0.34 0.34 0.36 0.47 0.60 0.65 0.65 0.64 0.62 0.57 0.53 0.38 0.32 0.33 0.33 0.35 0.35 0.36 0.37 0.37																									
Diurnal Maximums																									
N - Not Valid																									
Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 5 ppm																									



**PASZA**

Peace Air Shed Zone Association

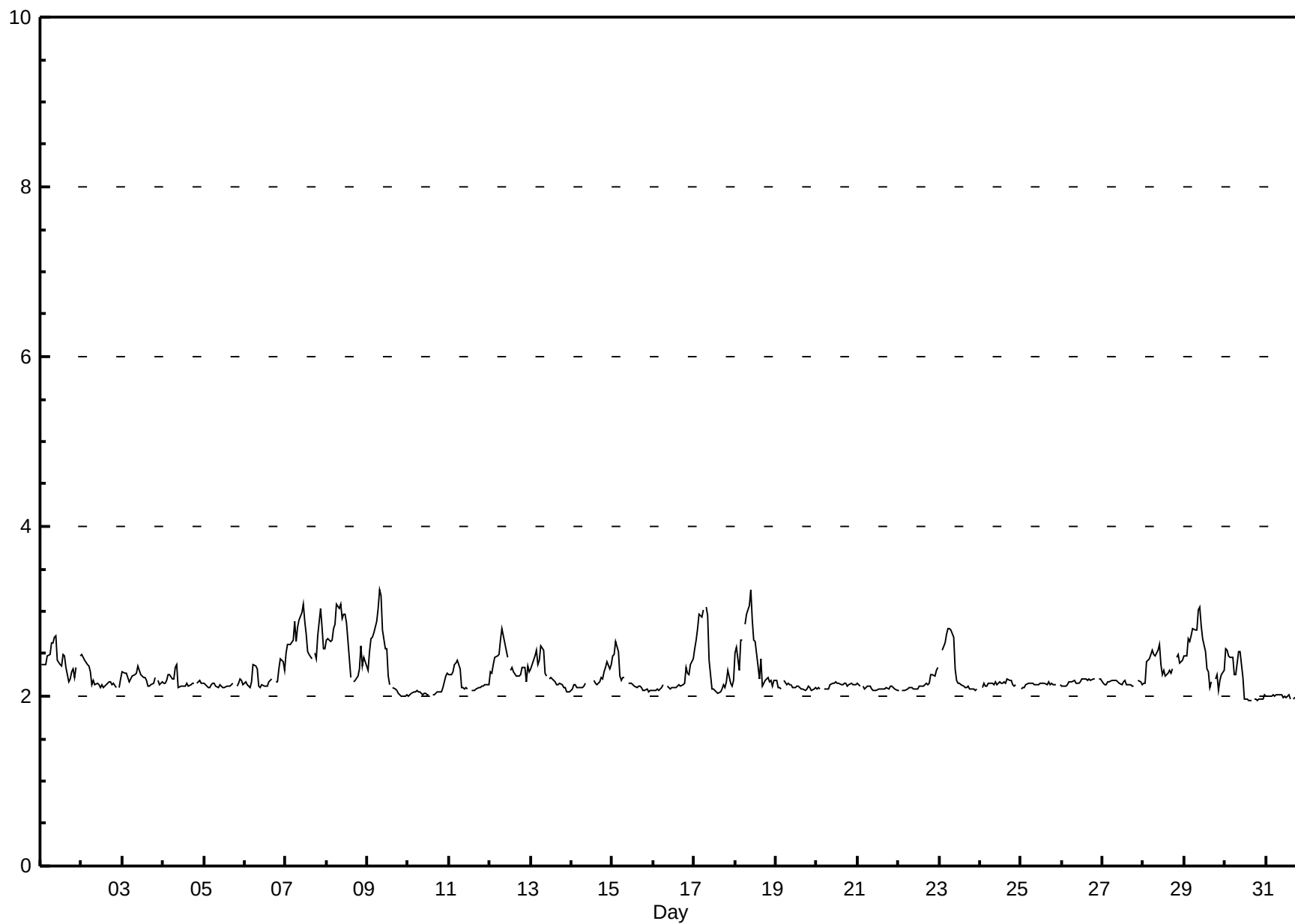
Hourly Averages

Total Hydrocarbons (THC) - ppm**Henry Pirker - March 2011**

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 3.26 ppm on Mar 18 10:00 Maximum Daily Average: 2.70 ppm on Mar 7																					Hours in Service: 744 Hours of Data: 703 Hours of Missing Data: 41 Hours of Calibration: 41 Percent Operational Time: 100.0						
Minimum Value: 2.0 ppm on Mar 30 16:00 Maximum Diurnal Average: 2.41 ppm at hour 8 Monthly Average: 2.256 ppm										Minimum Daily Average: 2.00 ppm on Mar 31 Minimum Diurnal Average: 2.14 ppm at hour 17 Percentiles: P ₁ = 1.96 P ₁₀ = 2.06 Q ₁ = 2.11 Median = 2.16 Q ₃ = 2.35 P ₉₀ = 2.63 P ₉₉ = 3.05																	
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-Mar	2.4	2.4	2.4	2.4	2.5	2.5	2.6	2.6	2.7	2.7	2.4	2.4	2.4	2.5	2.5	2.3	2.2	2.2	2.3	2.3	2.2	2.3	A	2.5	2.42	2.71	
2-Mar	2.5	2.5	2.4	2.4	2.4	2.3	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	A	2.1	2.2	2.21	2.48	
3-Mar	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.2	A	2.2	2.1	2.2	2.22	2.36	
4-Mar	2.1	2.2	2.2	2.2	2.3	2.2	2.2	2.3	2.4	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	A	2.2	2.2	2.2	2.1	2.18	2.38	
5-Mar	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	A	2.1	2.1	2.2	2.2	2.1	2.13	2.19	
6-Mar	2.2	2.1	2.1	2.1	2.2	2.4	2.4	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	A	2.2	2.2	2.3	2.4	2.4	2.3	2.21	2.43	
7-Mar	2.5	2.6	2.6	2.6	2.7	2.9	2.6	2.8	2.9	3.0	3.1	2.9	2.7	2.5	2.5	2.4	A	2.5	2.4	2.7	3.0	2.8	2.6	2.6	2.70	3.08	
8-Mar	2.7	2.7	2.6	2.7	2.8	2.9	3.1	3.0	3.1	2.9	3.0	3.0	2.9	2.4	2.2	A	2.2	2.2	2.2	2.3	2.6	2.4	2.5	2.4	2.63	3.08	
9-Mar	2.3	2.5	2.7	2.7	2.7	2.9	3.0	3.3	3.2	2.8	2.6	2.6	2.2	2.1	A	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.43	3.26	
10-Mar	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.2	2.2	2.3	2.06	2.27	
11-Mar	2.3	2.2	2.3	2.4	2.4	2.4	2.3	2.1	2.1	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	2.1	2.17	2.42	
12-Mar	2.3	2.3	2.4	2.5	2.5	2.5	2.7	2.8	2.7	2.6	2.5	A	2.3	2.3	2.3	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.4	2.3	2.39	2.80	
13-Mar	2.3	2.4	2.5	2.5	2.4	2.4	2.6	2.5	2.3	2.2	A	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.0	2.1	2.25	2.60	
14-Mar	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	A	C	C	2.2	2.2	2.1	2.2	2.2	2.2	2.3	2.3	2.4	2.3	2.4	2.19	2.41	
15-Mar	2.5	2.5	2.6	2.5	2.2	2.2	2.2	2.2	A	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.20	2.65	
16-Mar	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.2	2.4	2.4	2.15	2.45	
17-Mar	2.6	2.7	2.8	3.0	2.9	3.0	A	3.1	3.0	2.4	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.1	2.2	2.39	3.06	
18-Mar	2.5	2.6	2.3	2.7	2.7	A	2.8	3.0	3.1	3.3	2.9	2.7	2.6	2.4	2.2	2.4	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.49	3.26	
19-Mar	2.2	2.1	2.1	2.1	A	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.11	2.19	
20-Mar	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.13	2.17	
21-Mar	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.10	2.15	
22-Mar	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.2	2.3	2.3	2.14	2.35	
23-Mar	A	A	2.5	2.6	2.7	2.8	2.8	2.8	2.7	2.3	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.32	2.80	
24-Mar	A	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	A	A	2.15	2.21	
25-Mar	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.2	2.1	2.2	2.1	2.2	2.1	2.1	A	A	2.1	2.14	2.16	
26-Mar	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	A	A	2.2	2.2	2.17	2.21
27-Mar	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	A	A	2.2	2.2	2.1	2.16	2.19	
28-Mar	2.2	2.2	2.4	2.4	2.5	2.5	2.5	2.5	2.5	2.6	2.4	2.3	2.3	2.2	2.3	2.3	2.3	2.3	A	2.5	2.5	2.4	2.4	2.4	2.38	2.61	
29-Mar	2.5	2.5	2.7	2.7	2.7	2.8	2.8	2.8	3.0	3.0	2.8	2.7	2.5	2.3	2.3	2.1	2.2	A	2.2	2.3	2.1	2.2	2.3	2.3	2.50	3.04	
30-Mar	2.6	2.5	2.5	2.5	2.5	2.3	2.3	2.4	2.5	2.5	2.2	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	2.19	2.56	
31-Mar	2.0	2.0	2.0	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	2.00	2.02	
2.26 2.28 2.31 2.34 2.34 2.36 2.36 2.41 2.40 2.36 2.28 2.24 2.22 2.19 2.16 2.15 2.14 2.15 2.15 2.19 2.21 2.20 2.20 2.22																								Diurnal Average			
2.65 2.67 2.80 2.96 2.94 3.02 3.08 3.26 3.18 3.26 3.08 2.97 2.86 2.53 2.50 2.45 2.27 2.51 2.44 2.71 3.04 2.81 2.56 2.56																								Diurnal Maximum			
C - Calibration A - Automated Daily Zero Span																											

Hourly Averages

Total Hydrocarbons (THC) - ppm
Henry Pirker - March 2011

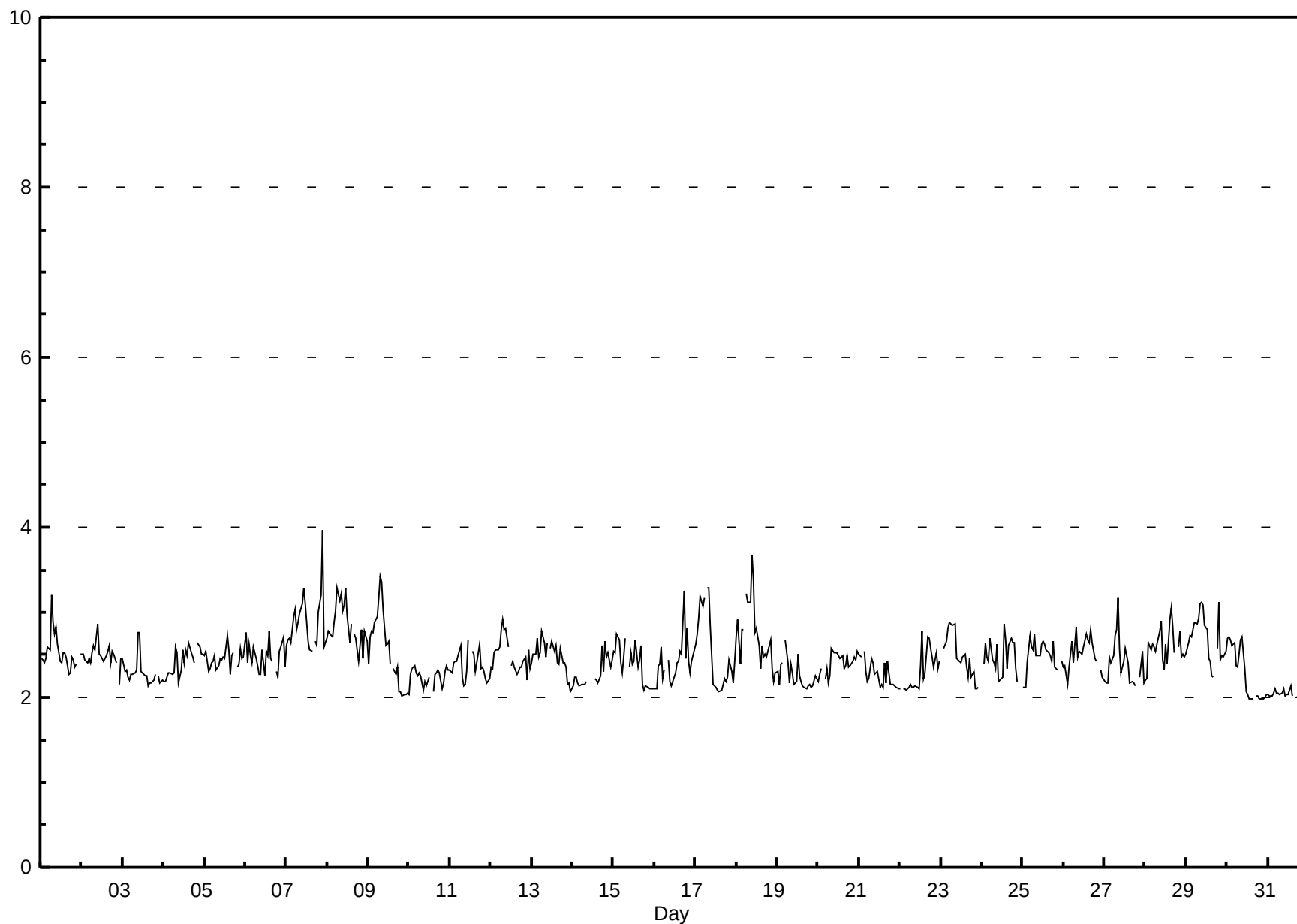


Hourly Maximums

Total Hydrocarbons (THC) - ppm

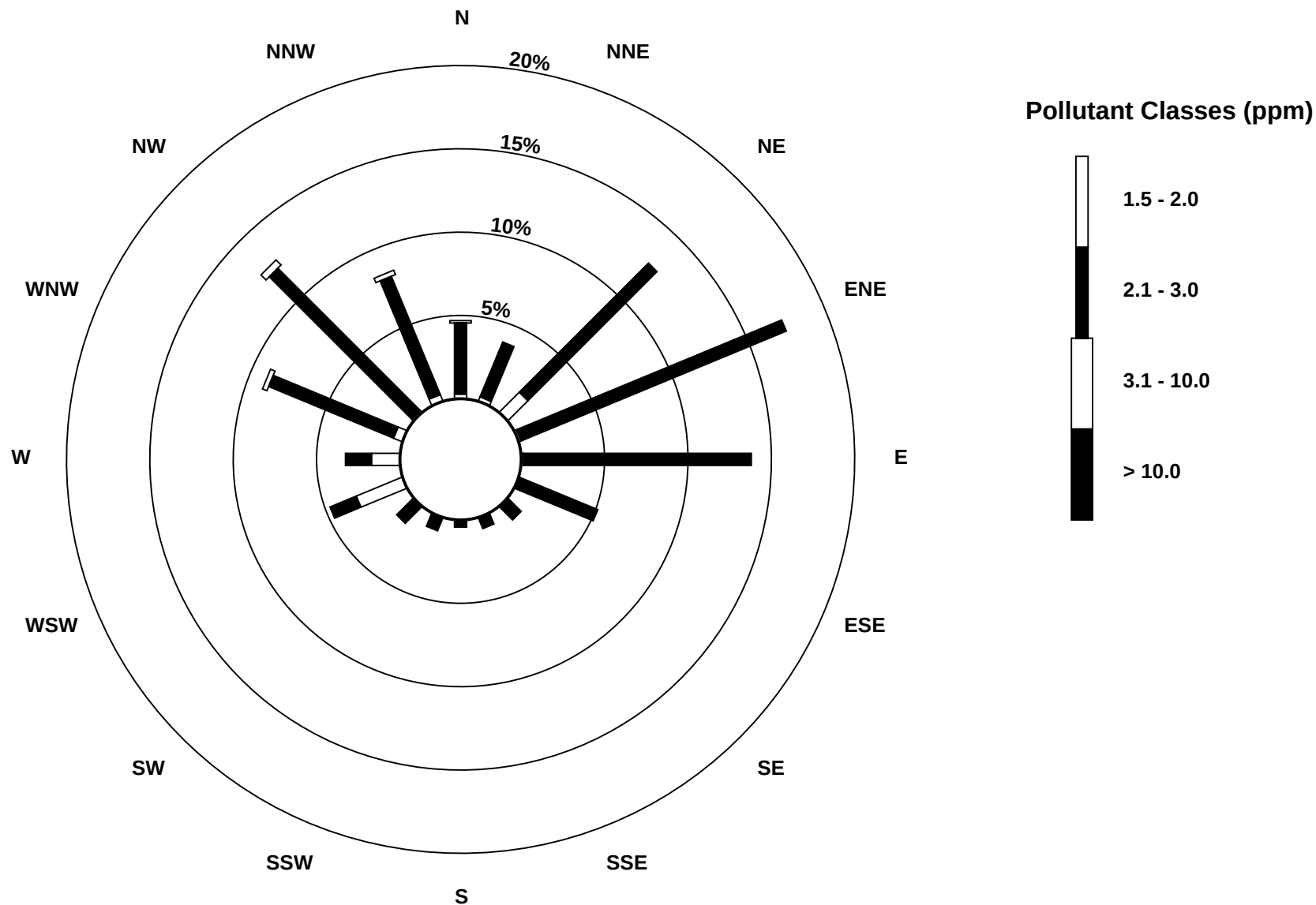
Henry Pirker - March 2011

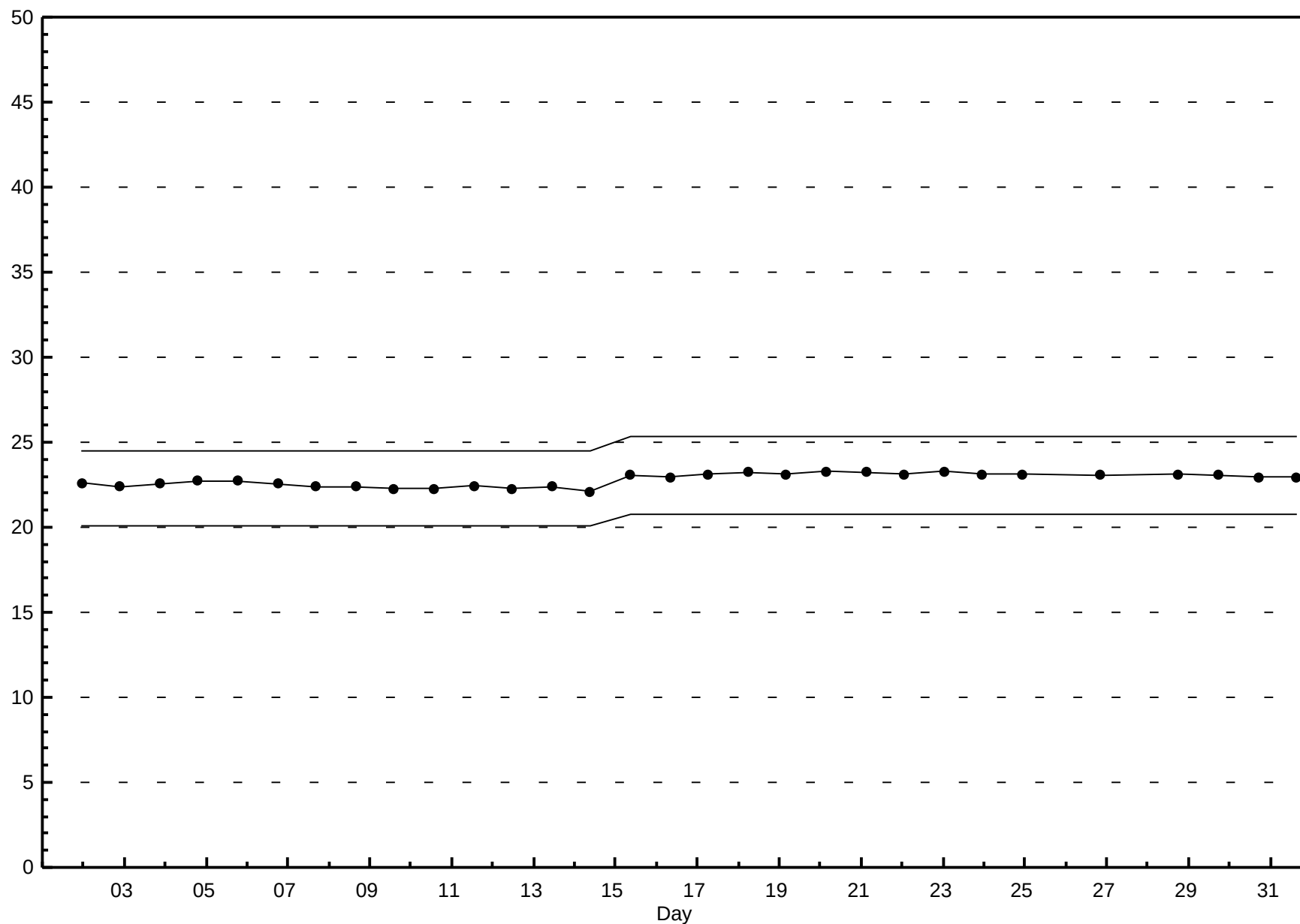
Maximum Value: 3.97 ppm on Mar 7 22:00																					Maximum Daily Average: 2.87 ppm on Mar 7				Hours in Service: 744	
Minimum Value: 2.0 ppm on Mar 30 20:00																					Minimum Daily Average: 2.04 ppm on Mar 31				Hours of Data: 703	
Maximum Diurnal Average: 2.62 ppm at hour 8																					Minimum Diurnal Average: 2.32 ppm at hour 23				Hours of Missing Data: 41	
Monthly Average: 2.454 ppm																					Percentiles: P ₁ = 2.00 P ₁₀ = 2.12 Q ₁ = 2.24 Median = 2.43 Q ₃ = 2.61 P ₉₀ = 2.80 P ₉₉ = 3.28				Hours of Calibration: 41	
																					Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	2.5	2.4	2.4	2.5	2.6	2.6	3.2	2.9	2.8	2.8	2.6	2.4	2.4	2.5	2.5	2.5	2.3	2.3	2.5	2.4	2.4	2.4	A	2.5	2.53	3.20
2-Mar	2.5	2.5	2.4	2.4	2.5	2.4	2.5	2.6	2.6	2.9	2.5	2.5	2.5	2.4	2.5	2.5	2.6	2.4	2.5	2.5	2.4	A	2.2	2.5	2.49	2.86
3-Mar	2.5	2.3	2.3	2.2	2.2	2.3	2.3	2.3	2.3	2.8	2.8	2.3	2.3	2.3	2.2	2.1	2.2	2.2	2.2	2.3	A	2.3	2.2	2.2	2.30	2.77
4-Mar	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.6	2.5	2.2	2.3	2.6	2.4	2.6	2.5	2.6	2.5	2.5	2.4	A	2.6	2.6	2.5	2.5	2.42	2.65
5-Mar	2.5	2.5	2.3	2.3	2.4	2.4	2.5	2.3	2.4	2.5	2.4	2.5	2.5	2.7	2.6	2.3	2.5	2.5	A	2.4	2.4	2.6	2.4	2.5	2.45	2.73
6-Mar	2.8	2.4	2.6	2.5	2.4	2.6	2.5	2.4	2.3	2.3	2.6	2.2	2.5	2.5	2.8	2.5	2.4	A	2.3	2.2	2.5	2.6	2.7	2.4	2.47	2.79
7-Mar	2.6	2.7	2.7	2.6	2.9	3.0	2.8	2.9	3.0	3.1	3.3	3.1	2.9	2.7	2.6	2.5	A	2.7	2.6	3.0	3.2	4.0	2.6	2.7	2.87	3.97
8-Mar	2.7	2.8	2.7	2.7	2.9	3.0	3.3	3.1	3.2	3.0	3.1	3.3	3.0	2.6	2.9	A	2.8	2.7	2.4	2.6	2.8	2.5	2.8	2.7	2.85	3.29
9-Mar	2.4	2.7	2.8	2.8	2.9	2.9	3.2	3.4	3.4	3.0	2.6	2.6	2.7	2.4	A	2.3	2.3	2.4	2.1	2.1	2.0	2.0	2.0	2.1	2.57	3.42
10-Mar	2.0	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.1	2.2	2.1	2.2	2.2	A	2.1	2.3	2.3	2.3	2.3	2.1	2.2	2.3	2.4	2.3	2.24	2.38
11-Mar	2.3	2.3	2.4	2.4	2.4	2.5	2.6	2.2	2.1	2.1	2.3	2.7	A	2.5	2.5	2.3	2.4	2.6	2.3	2.4	2.3	2.2	2.2	2.2	2.37	2.67
12-Mar	2.4	2.3	2.5	2.6	2.6	2.6	2.8	2.9	2.8	2.8	2.6	A	2.4	2.4	2.4	2.3	2.3	2.4	2.4	2.4	2.5	2.2	2.6	2.3	2.49	2.92
13-Mar	2.4	2.5	2.5	2.7	2.5	2.5	2.8	2.6	2.5	2.6	A	2.6	2.7	2.5	2.6	2.4	2.4	2.6	2.4	2.4	2.4	2.2	2.2	2.1	2.48	2.78
14-Mar	2.1	2.2	2.2	2.2	2.1	2.2	2.2	2.1	2.2	A	A	C	C	2.2	2.2	2.2	2.3	2.6	2.3	2.7	2.5	2.5	2.4	2.4	2.29	2.66
15-Mar	2.5	2.5	2.8	2.7	2.4	2.3	2.5	2.7	A	2.4	2.5	2.4	2.4	2.7	2.4	2.4	2.6	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.39	2.75
16-Mar	2.1	2.1	2.4	2.4	2.6	2.2	2.3	A	2.4	2.2	2.1	2.2	2.3	2.4	2.4	2.5	2.5	3.3	2.5	2.8	2.4	2.3	2.4	2.6	2.41	3.25
17-Mar	2.6	2.7	2.9	3.2	3.1	3.2	A	3.3	3.3	2.8	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.4	2.3	2.2	2.4	2.52	3.29
18-Mar	2.7	2.9	2.4	2.8	2.8	A	3.2	3.1	3.1	3.7	3.4	2.8	2.8	2.6	2.3	2.6	2.5	2.5	2.5	2.6	2.7	2.3	2.2	2.3	2.73	3.68
19-Mar	2.3	2.2	2.4	2.4	A	2.7	2.4	2.2	2.4	2.3	2.1	2.2	2.5	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.3	2.2	2.26	2.67
20-Mar	2.2	2.3	2.3	A	2.2	2.3	2.2	2.3	2.6	2.5	2.5	2.5	2.5	2.5	2.5	2.3	2.4	2.5	2.4	2.4	2.4	2.5	2.4	2.5	2.40	2.58
21-Mar	2.5	2.5	A	2.5	2.3	2.2	2.2	2.5	2.4	2.3	2.3	2.3	2.1	2.2	2.1	2.4	2.2	2.4	2.2	2.1	2.2	2.1	2.1	2.1	2.27	2.54
22-Mar	2.1	A	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.4	2.8	2.2	2.3	2.7	2.7	2.6	2.5	2.4	2.5	2.3	2.4	2.31	2.78
23-Mar	A	A	2.6	2.7	2.8	2.9	2.9	2.8	2.9	2.5	2.4	2.4	2.4	2.5	2.5	2.4	2.2	2.5	2.2	2.3	2.1	2.1	2.1	A	2.48	2.88
24-Mar	A	2.4	2.6	2.5	2.4	2.7	2.4	2.4	2.3	2.6	2.2	2.2	2.2	2.9	2.7	2.3	2.6	2.7	2.6	2.7	2.3	2.2	A	A	2.48	2.87
25-Mar	2.1	2.1	2.1	2.4	2.7	2.6	2.6	2.8	2.5	2.5	2.5	2.6	2.7	2.6	2.6	2.5	2.5	2.4	2.7	2.3	2.3	A	A	2.4	2.48	2.75
26-Mar	2.4	2.4	2.2	2.4	2.5	2.7	2.4	2.8	2.5	2.5	2.5	2.5	2.6	2.8	2.7	2.6	2.8	2.6	2.5	2.4	A	A	2.3	2.2	2.51	2.83
27-Mar	2.2	2.2	2.2	2.5	2.4	2.5	2.7	2.8	3.2	2.6	2.3	2.4	2.6	2.5	2.4	2.2	2.2	2.2	2.1	A	A	2.2	2.5	2.2	2.41	3.17
28-Mar	2.2	2.2	2.6	2.6	2.6	2.6	2.5	2.6	2.8	2.9	2.4	2.3	2.6	2.4	2.9	3.1	2.8	2.5	A	2.6	2.8	2.5	2.5	2.5	2.59	3.05
29-Mar	2.5	2.6	2.7	2.7	2.8	2.9	2.9	2.9	3.1	3.1	3.1	2.8	2.8	2.5	2.4	2.3	2.2	A	2.6	3.1	2.4	2.5	2.5	2.6	2.70	3.12
30-Mar	2.7	2.7	2.7	2.6	2.6	2.4	2.4	2.5	2.7	2.7	2.3	2.1	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.28	2.71
31-Mar	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.04	2.13
2.38 2.42 2.45 2.50 2.52 2.52 2.56 2.62 2.61 2.60 2.49 2.45 2.46 2.47 2.42 2.38 2.40 2.44 2.34 2.41 2.39 2.36 2.32 2.34																									Diurnal Average	
2.77 2.92 2.93 3.19 3.08 3.17 3.28 3.42 3.36 3.68 3.38 3.29 2.96 2.87 2.92 3.05 2.83 3.25 2.66 3.12 3.20 3.97 2.77 2.66																									Diurnal Maximum	
C - Calibration																									A - Automated Daily Zero Span	



Pollutant Rose

Total Hydrocarbons (THC) - ppm
Henry Pirker - March 2011





**PASZA**

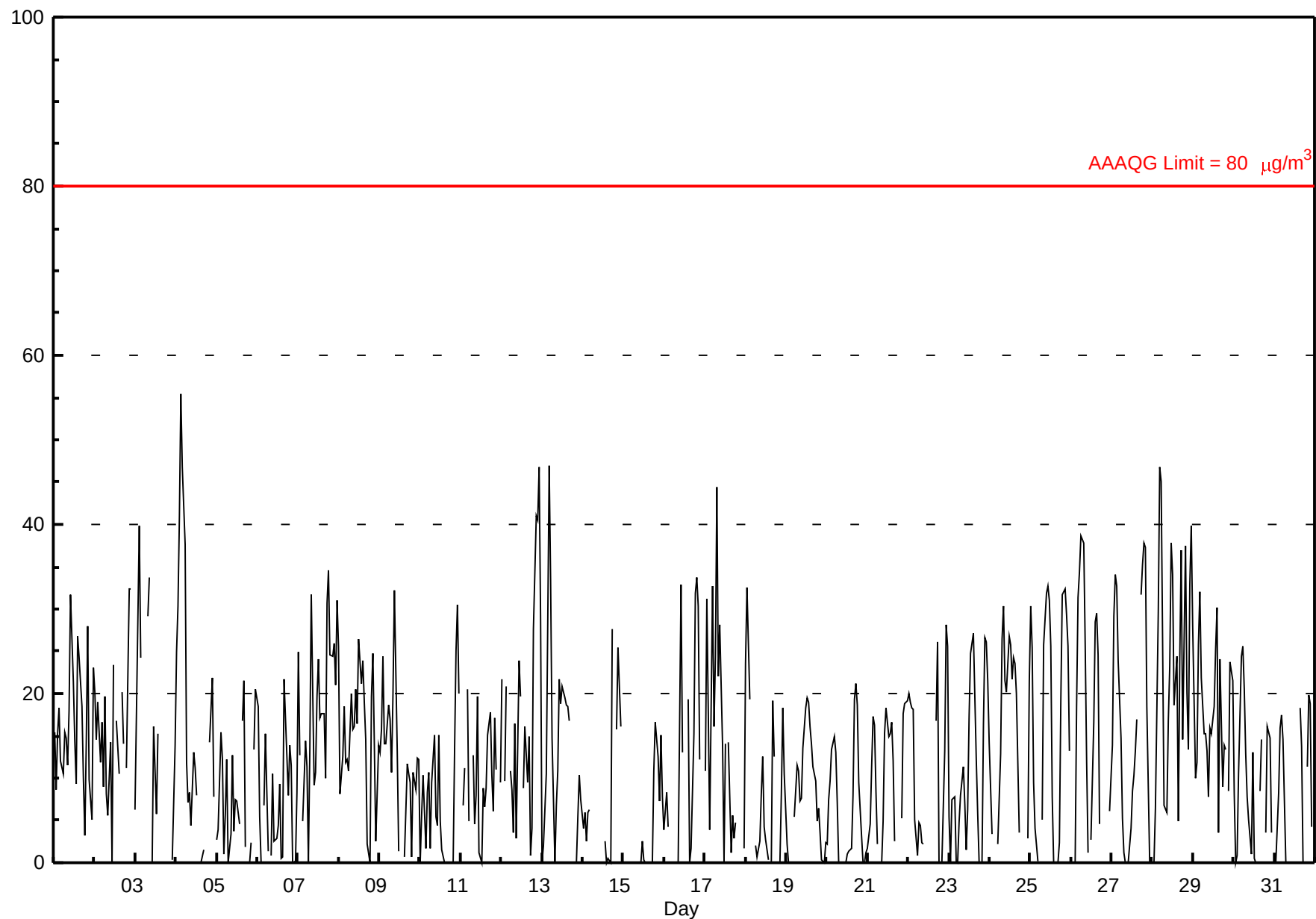
Peace Air Shed Zone Association

Hourly Averages

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

Henry Pirker - March 2011

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 55.4 µg/m³ on Mar 4 04:00 Minimum Value: 0 µg/m³ on Mar 2 11:00 Maximum Diurnal Average: 18.8 µg/m³ at hour 5 Monthly Average: 13.61 µg/m³																					Maximum Daily Average: 23.8 µg/m³ on Mar 28 Minimum Daily Average: 6.6 µg/m³ on Mar 20 Minimum Diurnal Average: 11.1 µg/m³ at hour 16 Percentiles: P ₁ = 0.0 P ₁₀ = 0.3 Q ₁ = 4.7 Median = 12.5 Q ₃ = 19.8 P ₉₀ = 29.1 P ₉₉ = 44.0					Hours in Service: 744 Hours of Data: 607 Hours of Missing Data: 137 Hours of Calibration: 0 Percent Operational Time: 81.6	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Mar	15	9	15	18	12	11	15	15	12	18	32	21	14	9	27	24	19	10	3	14	28	10	5	23	15.8	31.6	
2-Mar	20	15	19	12	17	9	20	8	6	14	0	23	BD	17	11	BD	20	14	BD	11	32	32	BD	BD	15.8	32.4	
3-Mar	6	29	40	24	BD	BD	BD	29	34	BD	0	16	6	15	BD	BD	BD	BD	BD	BD	BD	BD	0	14	--	39.8	
4-Mar	25	30	41	55	47	38	12	7	8	4	13	11	8	BD	BD	0	2	BD	BD	BD	14	22	8	BD	19.2	55.4	
5-Mar	3	4	15	12	1	6	12	0	3	13	4	8	7	5	BD	17	21	2	BD	0	2	BD	13	20	8.0	21.5	
6-Mar	18	5	0	BD	7	15	1	BD	1	11	3	3	4	9	0	1	22	13	8	14	11	0	0	8	7.0	21.7	
7-Mar	25	13	BD	5	14	11	0	13	32	9	11	20	24	17	18	18	10	31	35	25	24	26	21	31	18.8	34.5	
8-Mar	26	8	13	19	12	12	11	20	16	16	20	17	26	21	24	19	15	2	0	20	25	14	2	14	15.4	26.4	
9-Mar	13	16	24	14	14	19	17	11	20	32	13	1	BD	BD	BD	1	12	11	9	1	11	9	12	12	12.9	32.3	
10-Mar	0	6	10	2	8	11	2	9	15	5	4	15	5	1	0	BD	BD	BD	BD	0	13	25	30	20	9.1	30.5	
11-Mar	BD	7	11	BD	21	5	BD	13	5	8	20	1	0	9	7	9	15	18	10	6	17	11	BD	10	10.0	20.6	
12-Mar	22	BD	10	21	BD	11	9	4	16	3	24	20	BD	9	16	10	15	1	4	28	41	41	47	29	18.0	46.8	
13-Mar	0	2	10	28	47	33	15	0	7	11	22	19	21	20	19	18	17	BD	BD	BD	0	5	10	7	14.8	47.0	
14-Mar	4	6	3	6	6	BD	BD	BD	BD	BD	BD	BD	BD	2	0	1	0	28	BD	BD	16	25	16	BD	--	27.7	
15-Mar	BD	BD	BD	BD	BD	BD	BD	BD	BD	N	0	3	0	0	BD	BD	BD	0	11	17	13	7	15	8	--	16.6	
16-Mar	4	8	4	BD	BD	BD	BD	BD	0	16	33	13	BD	BD	19	0	2	15	32	34	30	12	BD	BD	--	33.7	
17-Mar	11	31	18	4	33	16	24	44	22	28	14	0	14	BD	14	1	6	3	5	BD	BD	BD	BD	2	15.3	44.5	
18-Mar	24	33	19	BD	BD	BD	2	1	2	8	12	4	3	0	BD	0	19	12	BD	0	0	8	18	11	9.3	32.6	
19-Mar	2	0	0	BD	BD	5	11	11	7	8	13	18	20	19	16	14	11	10	5	6	4	0	0	2	8.3	19.6	
20-Mar	2	7	10	13	15	13	7	0	BD	0	0	0	1	1	2	8	19	21	19	10	3	0	0	1	6.6	21.1	
21-Mar	2	5	11	17	16	8	2	BD	0	5	15	18	15	15	17	12	3	BD	BD	BD	5	18	19	19	11.1	19.2	
22-Mar	20	19	18	18	5	1	5	4	2	2	BD	BD	BD	BD	0	BD	17	26	0	BD	0	13	28	26	11.4	28.1	
23-Mar	5	0	7	8	0	0	5	8	11	7	2	6	17	25	27	20	12	6	0	0	16	27	26	22	10.7	27.1	
24-Mar	14	3	BD	BD	BD	2	13	26	30	21	20	27	26	22	24	24	20	4	BD	BD	BD	BD	3	21	--	30.4	
25-Mar	30	25	9	4	0	BD	BD	5	26	32	33	31	26	8	0	BD	0	2	19	32	32	29	26	13	18.2	32.7	
26-Mar	BD	BD	0	18	31	34	39	38	26	12	1	BD	3	17	28	29	25	4	BD	BD	BD	BD	BD	6	--	38.6	
27-Mar	14	29	34	33	24	15	5	1	0	0	0	4	9	10	13	17	N	32	35	38	37	18	0	BD	16.7	37.7	
28-Mar	BD	0	6	30	47	45	26	7	6	17	23	38	34	19	24	5	24	37	14	37	20	13	33	40	23.8	46.8	
29-Mar	28	10	12	26	32	22	15	15	13	8	16	15	18	25	30	4	24	9	14	13	BD	9	24	22	17.6	32.0	
30-Mar	8	0	1	10	24	26	21	13	8	5	1	13	0	0	BD	8	15	BD	BD	4	16	15	4	BD	9.5	25.5	
31-Mar	BD	0	8	16	17	15	7	0	BD	BD	BD	BD	BD	4	BD	18	14	0	BD	11	20	19	4	BD	--	19.9	
13.1 11.4 13.2 17.2 18.8 15.3 11.9 11.7 12.1 11.6 12.4 13.5 12.6 11.5 14.6 11.1 13.9 12.4 12.4 14.5 16.6 15.7 14.1 15.9																									Diurnal Average		
30.3 32.6 41.0 55.4 47.0 45.0 38.6 44.5 33.8 32.3 32.9 37.7 34.0 25.3 30.1 29.4 24.6 37.0 35.3 37.7 41.0 40.5 46.8 39.9																									Diurnal Maximum		
N - Not Valid BD - Baseline Drift Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																											



**PASZA**

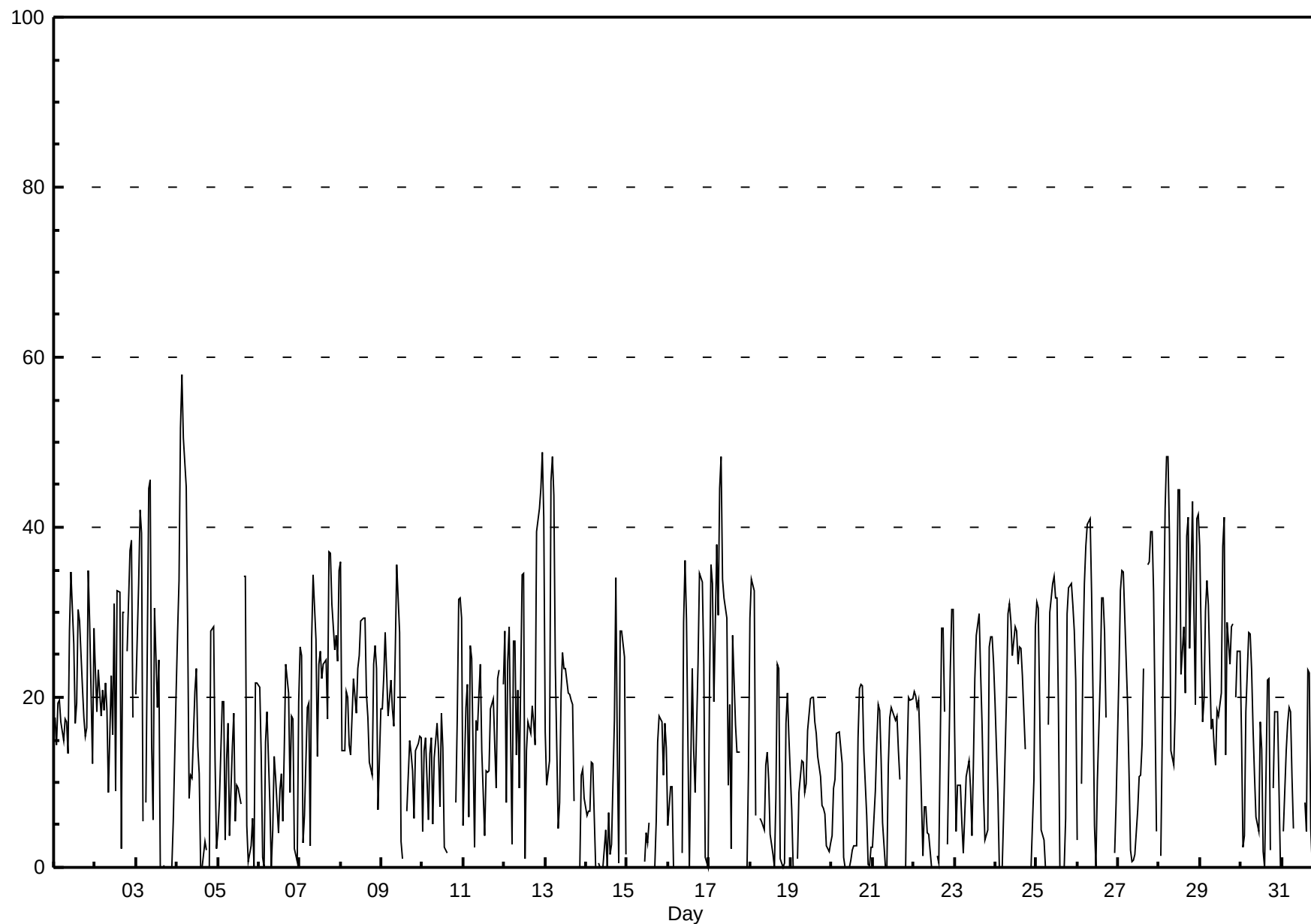
Peace Air Shed Zone Association

Hourly Maximums

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

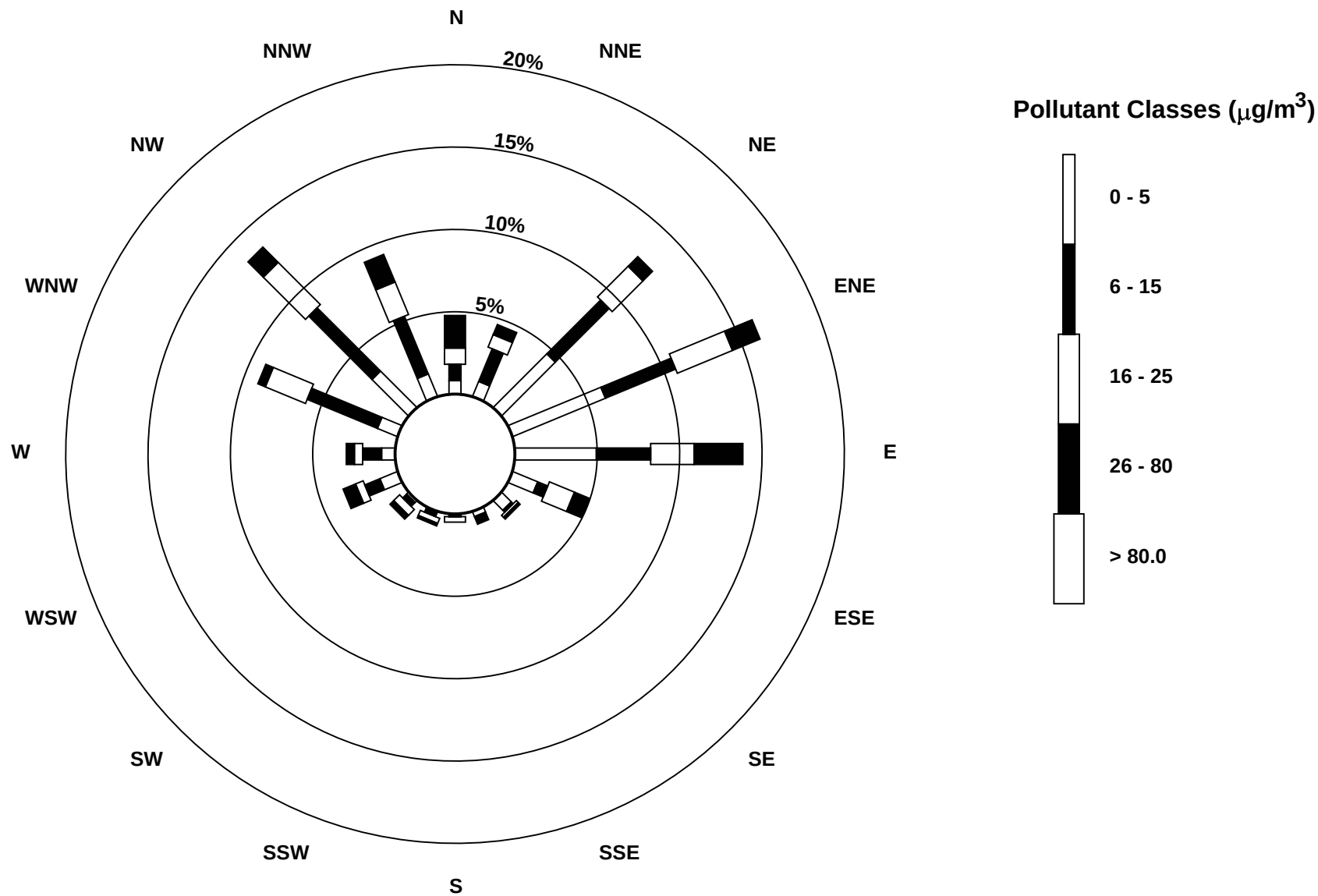
Henry Pirker - March 2011

Maximum Value: 58.0 μg/m³ on Mar 4 04:00																				Maximum Daily Average: 30.9 μg/m³ on Mar 28										Hours in Service: 744	
Minimum Value: 0 μg/m³ on Mar 3 15:00																				Minimum Daily Average: 8.0 μg/m³ on Mar 20										Hours of Data: 678	
Maximum Diurnal Average: 21.0 μg/m³ at hour 21																				Minimum Diurnal Average: 14.6 μg/m³ at hour 13										Hours of Missing Data: 66	
Monthly Average: 17.12 μg/m³																				Percentiles: P ₁ = 0.0 P ₁₀ = 1.5 Q ₁ = 7.0 Median = 16.9 Q ₃ = 24.9 P ₉₀ = 33.4 P ₉₉ = 48.3										Hours of Calibration: 0	
																														Percent Operational Time: 91.1	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Mar	18	14	19	20	17	15	17	17	13	28	35	26	17	19	30	29	21	18	15	16	35	29	12	28	21.3	34.8					
2-Mar	23	18	23	18	21	19	22	19	9	22	16	31	9	32	32	2	30	30	BD	25	37	39	18	BD	22.5	38.5					
3-Mar	20	33	42	39	5	BD	8	45	46	14	6	30	19	24	0	BD	0	0	BD	BD	BD	0	5	21	18.9	45.6					
4-Mar	28	34	52	58	50	45	28	8	11	11	21	23	14	11	0	0	3	2	BD	0	28	28	12	2	20.4	58.0					
5-Mar	4	8	20	20	3	13	17	4	14	18	5	10	9	7	BD	34	34	5	1	3	6	0	22	22	12.1	34.2					
6-Mar	21	13	1	0	15	18	8	0	4	13	11	4	9	11	5	14	24	21	9	18	17	2	1	20	10.8	24.0					
7-Mar	26	25	3	6	19	19	2	27	34	27	13	24	25	22	24	24	17	37	37	31	26	27	24	35	23.2	37.1					
8-Mar	36	14	14	21	20	14	13	22	20	18	23	25	29	29	29	20	18	12	11	24	26	23	7	19	20.3	35.9					
9-Mar	19	22	28	23	18	22	19	17	26	36	28	3	1	BD	BD	7	15	13	11	6	14	15	15	15	16.8	35.6					
10-Mar	4	14	15	6	13	15	5	13	17	14	7	18	14	2	2	BD	BD	BD	BD	8	18	31	32	29	13.9	31.7					
11-Mar	5	19	21	6	26	25	2	17	16	20	24	14	4	11	11	11	19	20	14	9	22	23	BD	21	15.8	26.2					
12-Mar	28	8	24	28	3	27	27	13	21	9	34	35	1	14	17	16	19	17	14	40	42	45	49	41	23.8	48.8					
13-Mar	16	10	13	45	48	44	24	5	8	21	25	23	23	21	20	20	19	8	BD	0	0	11	12	8	18.4	48.3					
14-Mar	6	7	7	12	12	0	BD	0	0	0	0	4	0	6	1	3	17	34	14	1	28	28	25	1	9.0	34.1					
15-Mar	BD	BD	BD	BD	BD	BD	BD	BD	BD	N	1	4	3	5	BD	0	0	5	15	18	17	11	17	14	--	17.9					
16-Mar	5	10	10	0	BD	BD	BD	BD	2	29	36	29	0	12	23	14	9	24	35	34	34	24	1	0	16.5	36.1					
17-Mar	22	36	33	20	38	30	45	48	34	32	29	10	19	2	27	17	14	13	14	BD	BD	BD	0	11	23.5	48.3					
18-Mar	29	34	33	6	BD	BD	6	5	4	12	14	10	4	2	0	8	24	23	1	0	1	17	21	15	12.2	33.9					
19-Mar	7	0	0	BD	1	9	13	12	9	10	16	20	20	20	17	16	13	11	7	7	6	2	2	3	9.6	20.1					
20-Mar	4	9	10	16	16	14	12	1	0	0	0	1	2	3	3	15	21	22	21	14	6	0	0	2	8.0	21.5					
21-Mar	2	9	15	19	19	13	5	0	0	12	18	19	18	17	18	14	10	BD	0	0	13	20	20	20	12.1	20.0					
22-Mar	21	20	19	20	14	1	7	7	4	4	0	BD	BD	BD	1	1	28	28	18	BD	3	23	30	30	14.0	30.3					
23-Mar	16	4	10	10	5	2	6	11	13	9	4	12	22	27	30	23	17	9	3	4	26	27	27	24	14.2	29.8					
24-Mar	20	9	0	BD	0	6	20	30	31	29	25	28	28	24	26	26	22	14	BD	BD	BD	0	10	28	18.8	31.0					
25-Mar	31	31	19	4	3	0	BD	17	30	33	34	32	32	19	0	BD	0	6	30	33	33	31	28	22	21.2	34.2					
26-Mar	3	BD	10	25	33	38	40	41	32	20	5	0	10	22	32	32	28	18	BD	BD	BD	BD	2	8	20.9	41.0					
27-Mar	23	32	35	35	30	19	11	2	1	1	2	7	11	11	14	23	N	36	36	40	40	32	4	BD	20.1	39.6					
28-Mar	BD	1	15	42	48	48	39	14	12	19	31	44	44	23	28	20	39	41	26	43	30	19	41	42	30.9	48.3					
29-Mar	38	17	20	30	34	31	16	17	14	12	18	18	21	38	41	13	29	24	28	29	BD	20	25	25	24.3	41.2					
30-Mar	15	2	4	18	28	28	23	16	11	6	4	17	14	2	0	22	22	2	BD	9	18	18	9	0	12.6	27.6					
31-Mar	BD	4	14	17	19	18	11	5	BD	BD	BD	BD	BD	8	4	23	23	5	0	19	22	22	12	0	12.5	23.2					
17.5 15.8 17.5 20.1 20.0 19.7 16.5 14.9 15.0 16.5 16.1 18.0 14.6 15.4 15.7 16.0 18.5 17.1 15.7 16.5 21.0 19.6 16.1 17.5																										Diurnal Average					
37.8 35.7 51.7 58.0 50.5 48.3 44.6 48.3 45.6 35.6 36.1 44.4 44.4 37.9 41.2 34.2 39.0 41.2 37.0 43.0 42.2 44.7 48.8 41.5																										Diurnal Maximum					
N - Not Valid BD - Baseline Drift																															



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Henry Pirker - March 2011



Hourly Averages

External Temperature (ET) - °C

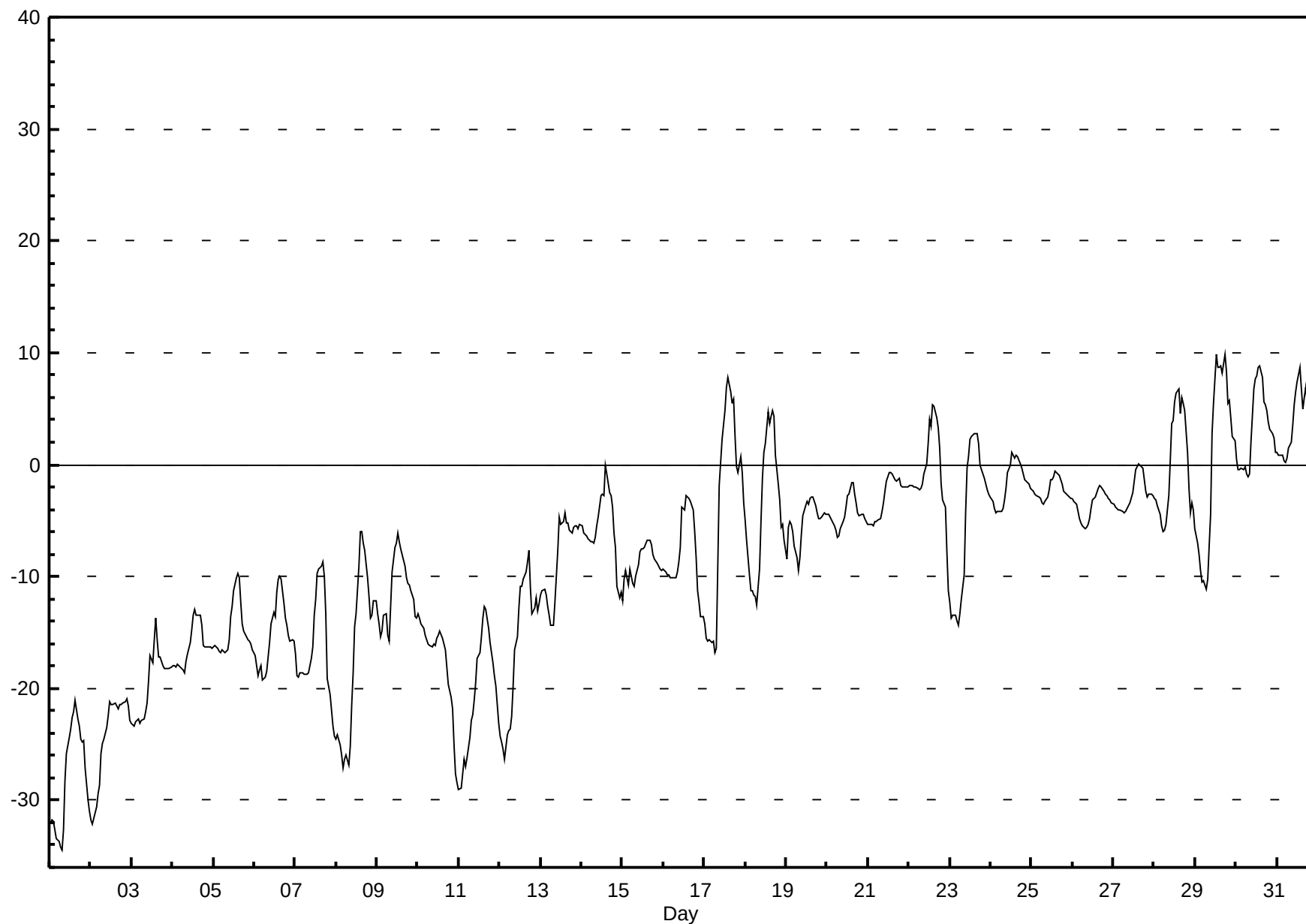
Henry Pirker - March 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 9.8 °C on Mar 29 18:00 Maximum Daily Average: 3.5 °C on Mar 31																								Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: -34 °C on Mar 1 08:00 Maximum Diurnal Average: -4.0 °C at hour 15 Monthly Average: -8.95 °C												Minimum Daily Average: -28.0 °C on Mar 1 Minimum Diurnal Average: -13.0 °C at hour 7 Percentiles: P ₁ = -32.0 P ₁₀ = -22.2 Q ₁ = -15.7 Median = -7.2 Q ₃ = -2.4 P ₉₀ = 2.2 P ₉₉ = 8.7														
Day	Hourly Period Ending At (MST)																							Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	-32	-32	-32	-33	-33	-34	-34	-34	-33	-28	-26	-24	-23	-22	-21	-22	-23	-23	-25	-25	-25	-27	-30	-31	-28.0	-21.0
2-Mar	-32	-32	-32	-31	-29	-29	-26	-25	-25	-24	-23	-21	-21	-21	-21	-22	-22	-22	-21	-21	-21	-21	-22	-23	-24.4	-20.9
3-Mar	-23	-23	-23	-23	-23	-23	-23	-23	-22	-21	-19	-17	-18	-16	-14	-16	-17	-17	-18	-18	-18	-18	-18	-18	-19.6	-13.7
4-Mar	-18	-18	-18	-18	-18	-18	-18	-19	-18	-17	-16	-15	-13	-13	-13	-13	-14	-14	-16	-16	-16	-16	-16	-16	-16.2	-12.9
5-Mar	-16	-16	-16	-17	-17	-17	-17	-17	-17	-16	-14	-13	-11	-10	-10	-10	-12	-14	-15	-15	-16	-16	-16	-17	-14.7	-9.7
6-Mar	-17	-18	-19	-18	-18	-19	-19	-18	-17	-16	-14	-13	-14	-11	-10	-10	-10	-12	-14	-14	-15	-16	-16	-16	-15.2	-9.9
7-Mar	-17	-19	-19	-19	-19	-19	-19	-19	-19	-17	-16	-13	-12	-10	-9	-9	-9	-10	-13	-19	-21	-22	-23	-24	-16.5	-8.7
8-Mar	-25	-24	-25	-26	-27	-26	-26	-27	-25	-21	-19	-15	-13	-9	-6	-6	-7	-8	-10	-12	-14	-14	-12	-12	-17.0	-5.9
9-Mar	-13	-14	-15	-15	-13	-13	-15	-16	-13	-10	-7	-7	-6	-7	-8	-8	-9	-10	-11	-11	-11	-12	-14	-14	-11.3	-6.1
10-Mar	-13	-14	-14	-15	-15	-16	-16	-16	-16	-16	-16	-16	-15	-15	-15	-16	-17	-18	-20	-21	-22	-25	-28	-28	-17.6	-13.4
11-Mar	-29	-29	-28	-26	-27	-26	-24	-23	-22	-21	-19	-17	-17	-15	-14	-13	-13	-15	-16	-17	-18	-19	-20	-23	-20.5	-12.7
12-Mar	-24	-25	-25	-26	-24	-24	-24	-22	-20	-17	-15	-13	-11	-11	-10	-10	-9	-8	-11	-13	-13	-12	-13	-12	-16.3	-7.7
13-Mar	-12	-11	-11	-12	-13	-13	-14	-14	-12	-10	-8	-5	-5	-5	-4	-5	-5	-6	-6	-6	-6	-5	-6	-5	-8.3	-4.3
14-Mar	-5	-6	-6	-6	-7	-7	-7	-7	-7	-5	-5	-3	-3	-3	0	-1	-3	-3	-4	-6	-7	-11	-12	-11	-5.6	-0.1
15-Mar	-12	-10	-10	-11	-9	-10	-11	-11	-10	-9	-8	-7	-8	-7	-7	-7	-7	-7	-8	-8	-9	-9	-9	-9	-8.9	-6.7
16-Mar	-9	-10	-10	-10	-10	-10	-10	-10	-10	-9	-7	-4	-4	-3	-3	-3	-3	-4	-6	-8	-11	-12	-14	-14	-8.1	-2.8
17-Mar	-14	-15	-16	-16	-16	-16	-17	-16	-9	-2	2	4	5	7	8	6	5	6	3	0	-1	1	-1	-3	-4.0	7.8
18-Mar	-5	-7	-10	-11	-11	-12	-12	-13	-9	-5	-1	1	2	5	4	4	5	4	1	-2	-3	-6	-5	-7	-3.9	4.8
19-Mar	-8	-6	-5	-5	-6	-7	-8	-9	-8	-6	-5	-4	-3	-4	-3	-3	-3	-4	-4	-5	-5	-5	-4	-4	-5.2	-2.8
20-Mar	-4	-4	-5	-5	-5	-6	-6	-6	-6	-5	-5	-4	-3	-3	-2	-2	-3	-3	-4	-5	-4	-4	-5	-5	-4.3	-1.6
21-Mar	-5	-5	-5	-6	-5	-5	-5	-5	-4	-3	-2	-2	-1	-1	-1	-1	-1	-1	-1	-2	-2	-2	-2	-2	-2.9	-0.6
22-Mar	-2	-2	-2	-2	-2	-2	-2	-2	-2	-1	0	2	4	3	5	5	4	3	1	-2	-3	-4	-8	-11	-0.7	5.4
23-Mar	-12	-14	-13	-13	-14	-14	-13	-12	-10	-4	0	1	2	3	3	3	3	2	0	-1	-1	-2	-2	-3	-4.8	2.8
24-Mar	-3	-3	-4	-4	-4	-4	-4	-4	-3	-2	-1	0	1	1	1	1	1	0	0	-1	-1	-1	-2	-2	-1.7	1.1
25-Mar	-2	-2	-3	-3	-3	-3	-3	-4	-3	-3	-2	-1	-1	-1	-1	-1	-1	-1	-2	-2	-3	-3	-3	-3	-2.3	-0.6
26-Mar	-3	-3	-4	-4	-5	-5	-5	-6	-6	-5	-5	-4	-3	-3	-3	-2	-2	-2	-2	-3	-3	-3	-3	-3	-3.6	-1.9
27-Mar	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-3	-3	-2	0	0	0	0	-1	-2	-3	-3	-3	-3	-3	-2.6	0.0
28-Mar	-3	-3	-4	-4	-5	-6	-6	-5	-3	0	4	4	6	6	7	5	6	6	5	1	-2	-4	-3	-4	-0.2	6.8
29-Mar	-6	-7	-8	-9	-11	-10	-11	-10	-7	-4	3	5	10	9	9	9	8	10	8	5	6	4	3	2	0.3	9.8
30-Mar	0	0	0	0	0	0	-1	-1	-1	2	7	8	8	9	9	8	6	5	5	4	3	3	2	1	3.1	8.8
31-Mar	1	1	1	1	0	0	1	1	2	3	5	7	7	9	7	5	6	7	6	5	4	3	3	2	3.5	8.7
																								Diurnal Average		
																								Diurnal Maximum		

Hourly Averages

External Temperature (ET) - °C

Henry Pirker - March 2011



**PASZA**

Peace Air Shed Zone Association

Hourly Averages

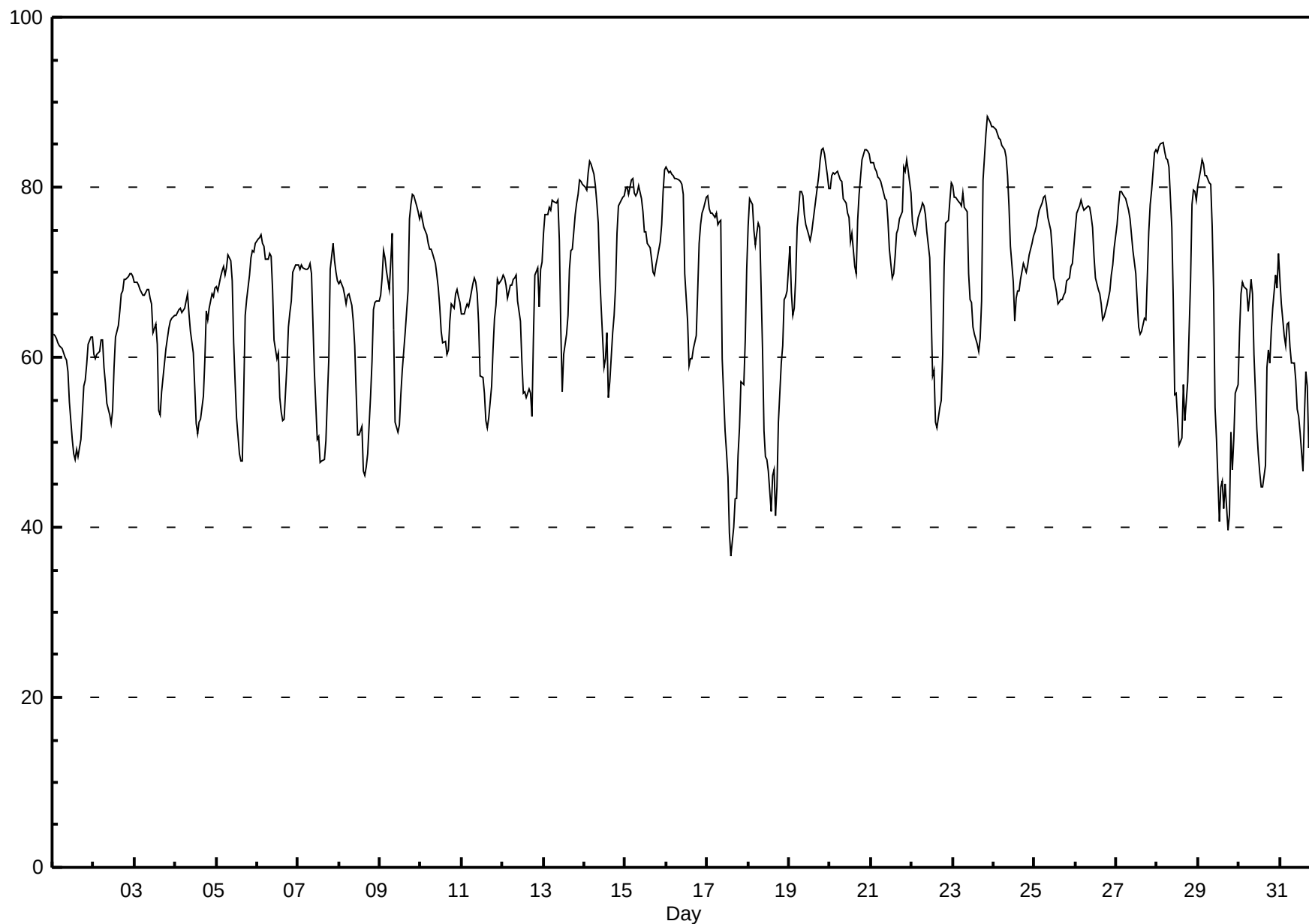
Relative Humidity (RH) - %

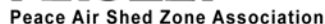
Henry Pirker - March 2011

Number of Exceedences (AAQO): 1-hr: 0 24-hr: 0 Maximum Value: 88.2 % on Mar 23 21:00 Maximum Daily Average: 79.4 % on Mar 20																								Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 37 % on Mar 17 15:00 Maximum Diurnal Average: 74.1 % at hour 3 Monthly Average: 67.91 %												Minimum Daily Average: 57.2 % on Mar 1 Minimum Diurnal Average: 57.1 % at hour 15 Percentiles: P ₁ = 41.9 P ₁₀ = 52.4 Q ₁ = 61.0 Median = 68.9 Q ₃ = 76.7 P ₉₀ = 80.8 P ₉₉ = 85.8														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	63	63	62	62	61	61	61	60	60	58	55	50	49	48	49	48	50	53	57	57	59	61	62	62	57.2	62.8
2-Mar	60	60	60	61	62	62	59	57	55	53	52	54	59	62	64	65	67	68	69	69	69	70	70	70	62.4	69.8
3-Mar	69	69	68	68	68	67	67	68	68	67	66	63	64	61	54	53	56	58	61	62	63	64	65	65	63.9	68.8
4-Mar	65	65	66	66	65	66	67	67	65	63	60	56	52	51	52	53	55	60	65	64	66	67	67	68	62.2	68.1
5-Mar	68	68	70	70	71	70	71	72	71	69	62	57	53	49	48	48	56	65	67	70	72	72	72	73	65.1	73.3
6-Mar	74	74	74	73	73	72	72	72	72	68	62	60	60	55	54	53	53	59	64	65	67	70	71	71	66.1	74.4
7-Mar	71	70	71	71	70	70	70	71	70	58	54	50	51	48	48	48	50	55	60	70	73	71	70	69	63.0	73.4
8-Mar	69	69	68	67	66	67	67	66	64	61	56	51	51	52	47	46	47	49	55	59	66	66	67	67	60.2	68.9
9-Mar	67	69	73	72	70	68	71	75	63	52	51	52	56	59	61	63	68	76	78	79	79	78	77	76	68.0	79.1
10-Mar	77	76	75	74	73	73	73	72	71	70	68	66	63	62	62	60	61	64	66	66	67	68	67	66	68.4	77.0
11-Mar	65	65	66	66	66	67	69	69	69	67	64	58	58	56	53	52	53	57	61	65	66	69	69	69	63.2	69.3
12-Mar	70	69	68	67	69	69	69	69	70	67	64	59	56	56	55	56	56	53	62	70	71	66	70	71	64.7	71.2
13-Mar	75	77	77	78	77	79	78	78	79	74	63	56	60	63	65	70	73	73	77	78	79	81	81	80	73.7	80.8
14-Mar	80	80	82	83	83	81	80	78	76	70	66	59	60	63	55	57	63	65	68	75	78	78	79	79	72.4	83.1
15-Mar	80	80	79	81	81	79	79	79	80	79	77	75	75	73	73	72	70	70	71	72	74	76	80	82	76.5	82.0
16-Mar	82	82	82	81	81	81	81	81	81	80	79	70	64	59	60	60	61	63	68	73	76	77	77	79	74.1	82.4
17-Mar	79	78	77	77	76	77	76	76	76	60	51	49	46	39	37	40	43	43	48	52	57	57	62	70	60.3	78.9
18-Mar	75	79	78	75	73	75	76	75	61	51	48	48	47	42	46	47	41	45	52	59	61	67	67	68	60.7	78.7
19-Mar	73	68	65	66	69	75	80	80	79	77	76	74	74	75	76	77	79	81	83	84	85	84	81	80	76.7	84.6
20-Mar	80	81	82	82	82	81	81	81	79	78	77	76	74	75	71	70	76	79	81	83	84	84	84	84	79.4	84.4
21-Mar	83	83	82	82	81	81	81	79	79	79	76	73	69	70	72	75	75	76	77	82	82	83	82	79	78.4	83.2
22-Mar	76	75	74	75	76	78	78	78	77	75	72	65	58	59	52	52	54	55	60	71	76	76	79	81	69.6	80.5
23-Mar	80	79	79	78	78	78	79	78	77	70	67	66	63	63	62	61	62	67	81	86	88	88	88	87	75.2	88.2
24-Mar	87	87	86	86	86	85	84	84	81	78	73	69	64	67	68	68	69	71	70	70	71	72	73	74	76.0	87.2
25-Mar	75	75	76	77	78	79	79	78	77	75	73	69	69	68	66	67	67	67	68	69	69	71	71	73	72.3	79.0
26-Mar	75	77	78	78	78	77	77	78	78	77	75	72	69	68	67	66	64	65	66	67	68	70	71	73	72.3	78.4
27-Mar	76	78	79	79	79	79	78	77	76	74	72	70	67	64	63	63	65	64	70	75	78	80	84	84	73.9	84.4
28-Mar	84	85	85	85	84	83	83	82	75	67	56	56	53	50	51	57	52	55	57	69	78	80	80	78	70.2	85.3
29-Mar	80	82	83	83	81	81	81	80	75	68	54	50	41	45	45	42	45	40	42	51	47	50	56	57	60.8	83.2
30-Mar	63	67	69	68	68	65	67	69	68	60	52	49	47	45	45	47	59	61	59	63	66	70	68	72	61.1	72.3
31-Mar	69	66	63	61	64	64	61	59	59	57	54	53	51	47	53	58	57	49	52	54	58	58	58	59	57.8	69.1
73.9 74.0 74.1 74.0 73.9 73.9 74.0 73.9 71.9 67.8 63.8 60.5 58.7 57.7 57.1 57.9 59.6 61.4 65.0 68.7 70.7 71.8 72.5 73.2																								Diurnal Average		
87.2 86.8 86.3 85.8 85.6 84.9 84.4 83.6 81.4 80.4 79.1 76.4 74.8 74.6 75.9 77.3 78.7 81.3 83.2 86.3 88.2 88.0 87.6 87.2																								Diurnal Maximum		

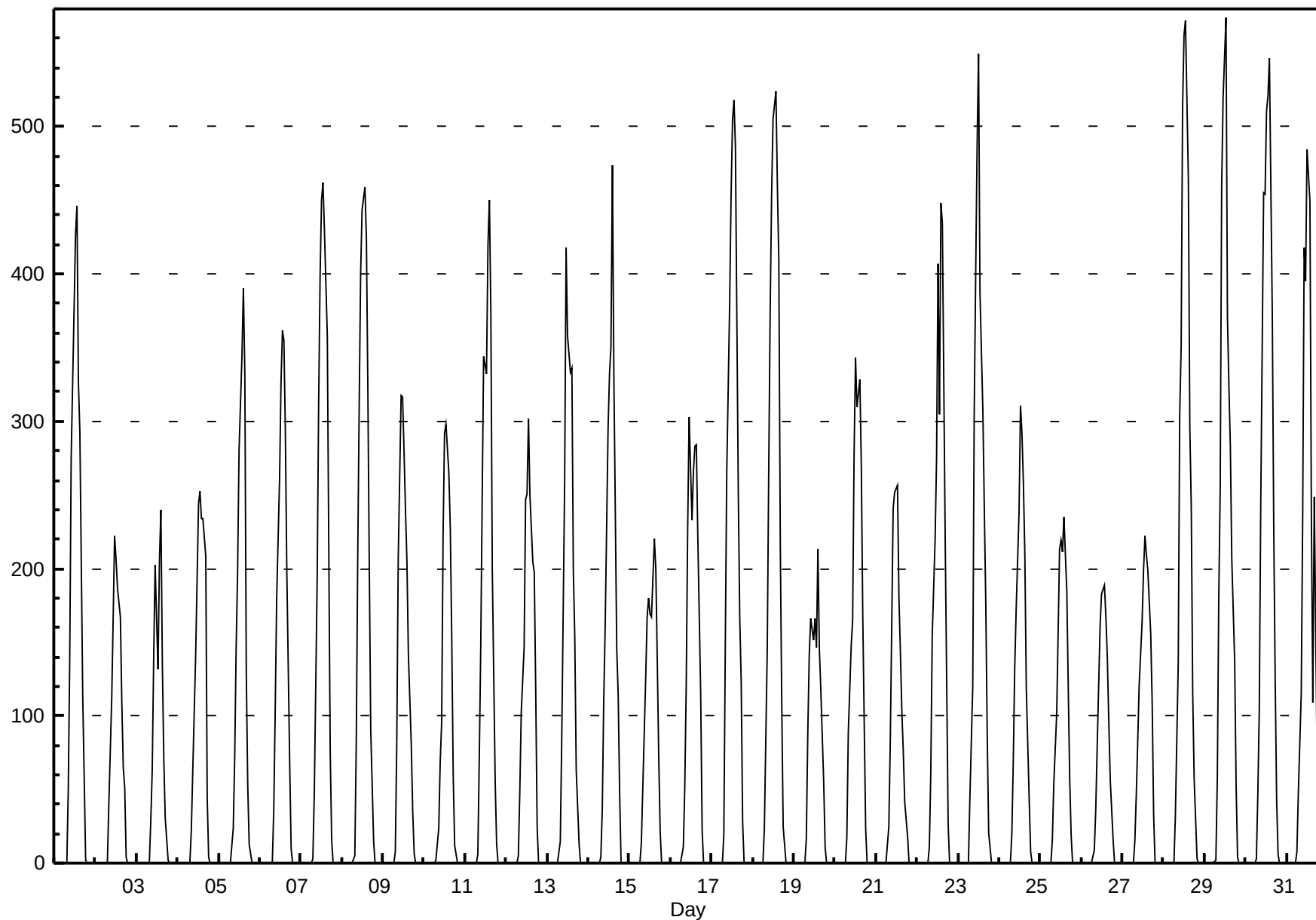
Hourly Averages

Relative Humidity (RH) - %
Henry Pirker - March 2011





Henry Pirker - March 2011



**PASZA**

Peace Air Shed Zone Association

Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	3	4	4	4	4	5	5	5	4	3	3	4	5	5	6	7	6	5	5	5	5	4	5	5	3.8	6.6
Dir	318	330	293	285	295	297	307	308	314	292	252	298	291	287	295	334	359	3	41	16	8	333	317	325	319.5	334.0
2 Spd	5	4	4	5	4	5	5	7	9	8	8	7	10	10	9	10	10	10	7	7	5	4	3	6	5.3	10.4
Dir	320	301	314	306	355	2	59	72	83	69	72	55	64	65	58	57	62	67	59	66	55	56	358	316	48.9	56.8
3 Spd	5	3	5	7	8	8	5	5	6	6	6	5	5	4	6	6	6	4	4	6	7	8	7	4	4.3	7.8
Dir	318	262	239	233	249	261	249	242	251	242	247	277	295	318	309	300	315	341	318	353	356	345	344	331	289.1	261.5
4 Spd	4	4	4	4	2	2	1	4	1	6	7	6	7	8	9	9	11	7	8	7	11	12	10	11	4.9	12.4
Dir	296	308	341	8	349	354	284	301	252	134	113	85	64	56	59	72	73	62	54	61	71	75	65	70	62.5	74.7
5 Spd	11	9	9	9	9	9	8	6	7	6	7	6	7	7	9	9	9	8	5	6	6	7	6	5	7.4	10.9
Dir	69	63	54	54	54	62	65	51	50	55	57	76	75	59	43	37	59	65	52	49	59	66	67	62	58.3	69.5
6 Spd	5	4	3	5	3	2	2	1	4	4	5	6	8	6	6	6	5	7	4	4	3	5	6	4	3.1	8.2
Dir	69	58	48	72	54	325	312	214	138	85	35	79	100	66	69	54	52	33	51	31	340	310	338	316	48.3	99.8
7 Spd	6	6	6	5	5	3	4	4	5	7	7	7	7	6	6	6	6	6	3	5	5	5	5	5	5.1	6.9
Dir	315	322	334	326	303	314	306	321	304	301	290	301	328	326	295	298	341	352	342	321	346	338	318	311	318.3	328.4
8 Spd	4	4	6	5	5	3	3	4	5	5	5	5	7	7	6	6	6	5	4	3	5	5	4	6	3.6	7.1
Dir	335	343	321	316	319	305	345	316	311	305	282	321	289	359	60	42	70	69	35	1	348	301	312	344	339.6	359.2
9 Spd	4	2	5	3	1	5	3	3	4	6	7	6	10	10	14	13	12	11	10	8	11	10	6	5	5.3	13.8
Dir	306	324	301	325	290	333	324	308	338	355	327	293	67	52	34	40	52	50	25	348	338	356	338	317	6.3	33.9
10 Spd	7	7	6	5	8	8	9	9	9	9	9	10	11	10	9	9	7	7	6	6	4	4	4	4	6.8	10.5
Dir	3	43	66	63	48	53	50	49	42	45	38	36	42	44	35	29	40	51	60	42	33	324	323	314	38.5	42.1
11 Spd	5	4	5	4	4	1	3	7	8	7	8	7	9	11	11	11	10	6	6	5	3	4	3	4	4.0	10.9
Dir	338	316	307	322	336	342	121	119	116	110	102	91	76	89	76	76	63	52	51	49	75	355	351	327	65.6	75.8
12 Spd	4	4	4	5	3	3	4	3	3	4	6	4	3	6	5	3	6	1	2	2	3	2	7	9	3.4	8.5
Dir	314	300	346	304	313	314	309	316	300	289	286	322	249	284	294	314	289	15	326	352	98	38	338	337	311.9	337.1
13 Spd	4	0	2	3	3	1	3	2	4	4	4	4	8	9	11	11	11	9	10	11	16	11	8	3	5.6	15.5
Dir	156	128	348	44	2	92	165	146	92	50	19	52	59	75	76	71	74	77	77	64	71	94	97	17	73.6	70.9
14 Spd	6	8	7	7	8	7	5	8	8	9	9	9	9	9	7	6	5	5	8	4	3	4	5	3	4.9	9.3
Dir	317	331	319	293	313	317	292	281	303	290	292	291	294	293	327	359	6	76	110	64	45	344	329	303	316.1	291.2
15 Spd	4	5	4	2	5	7	9	10	11	10	10	11	10	10	12	10	8	8	10	10	8	6	4	5	6.4	12.0
Dir	326	335	325	40	40	34	53	76	69	55	54	50	62	46	45	56	60	356	344	344	358	345	328	340	31.8	45.3
16 Spd	6	3	6	5	5	4	2	4	4	5	5	2	4	5	6	6	7	8	5	2	4	6	5	5	3.1	7.7
Dir	345	42	87	98	95	116	99	104	111	123	113	58	49	62	47	52	81	84	64	29	315	327	330	332	62.2	83.7
17 Spd	4	4	2	3	1	1	4	2	1	4	11	11	13	15	13	12	8	6	6	3	6	6	1	2	4.8	15.4
Dir	333	337	353	20	360	234	331	352	312	257	271	263	272	255	261	260	280	283	298	301	192	225	315	13	274.5	255.4
18 Spd	1	2	4	4	4	2	4	5	5	3	3	5	5	6	7	6	6	4	5	6	5	5	8	4	3.0	8.0
Dir	346	262	325	303	319	313	345	325	311	303	289	317	293	311	351	0	72	63	73	49	72	26	19	325	350.3	19.4
19 Spd	6	8	10	9	8	8	9	10	12	8	11	9	11	13	13	10	9	9	9	9	10	9	6	7	7.5	12.8
Dir	26	35	55	71	94	73	52	25	41	41	33	34	46	28	14	13	11	341	315	313	322	337	27	42	25.2	28.5
20 Spd	8	10	11	10	8	5	7	7	9	10	10	12	12	13	13	13	13	13	13	13	13	13	14	13	10.9	14.5
Dir	47	50	50	51	53	26	30	39	54	71	70	68	69	64	60	53	57	56	56	58	64	67	69	72	58.5	68.6
21 Spd	14	14	12	11	12	12	14	11	14	15	16	15	17	16	17	17	13	14	13	15	15	14	16	14	13.9	16.8
Dir	69	69	68	75	89	89	93	84	83	85	88	87	95	94	94	95	90	81	102	94	96	99	104	110	89.5	94.9
22 Spd	12	12	13	12	13	11	11	11	11	11	11	6	4	5	6	6	6	6	4	3	4	4	3	5	6.6	13.3
Dir	104	106	114	115	116	114	113	107	112	114	120	121	58	54	46	39	55	67	58	63	61	63	321	325	96.3	114.3

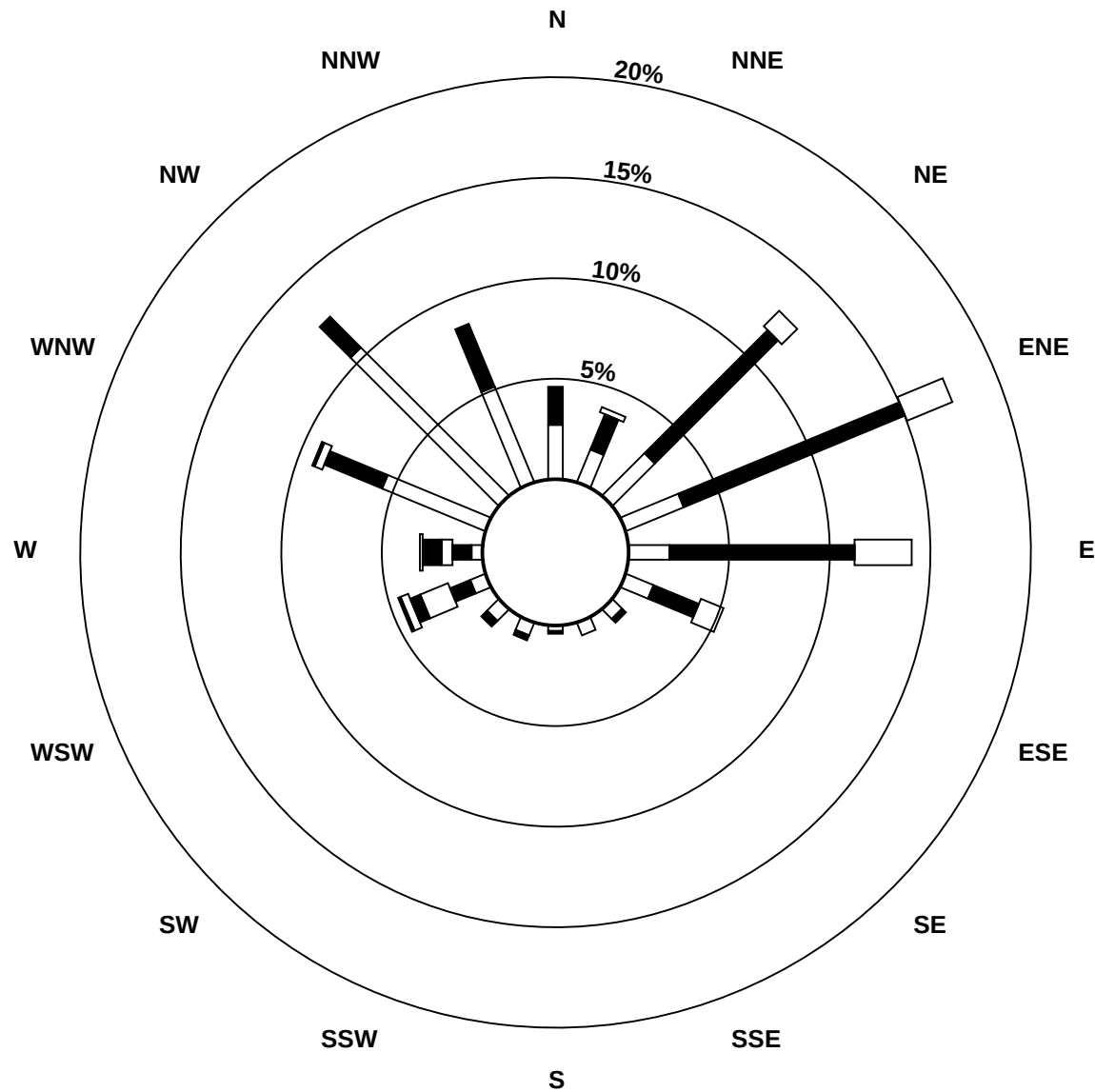


Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - March 2011

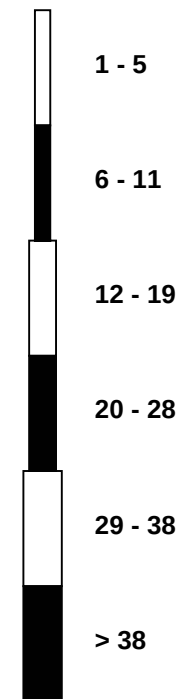
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	5	5	5	5	4	6	6	5	4	4	7	13	16	14	12	14	11	11	15	12	12	11	12	10	5.8	16.0
Dir	326	321	322	310	315	298	332	326	296	282	93	87	87	77	77	76	52	64	84	89	97	102	102	93	69.2	86.9
24 Spd	8	8	7	7	6	5	5	4	5	4	2	4	7	7	9	8	9	9	9	10	10	10	10	10	6.7	10.3
Dir	73	73	68	79	79	81	86	80	94	99	214	352	36	86	90	85	84	64	70	82	89	89	89	92	80.0	82.0
25 Spd	10	11	10	5	6	8	8	9	9	9	9	8	10	9	10	11	11	10	9	10	10	8	7	9	9.0	11.5
Dir	104	109	111	85	82	78	76	79	83	85	85	77	85	72	77	86	85	88	77	86	84	78	79	82	85.2	85.6
26 Spd	9	9	10	11	9	7	9	9	9	10	10	8	7	9	8	7	6	8	8	7	8	8	9	9	8.4	11.1
Dir	87	91	96	97	84	72	79	78	80	80	88	71	69	75	68	79	76	83	89	90	92	92	94	99	84.4	97.1
27 Spd	10	9	9	7	6	6	7	7	8	9	10	7	6	5	6	7	8	8	8	7	4	4	6	6	5.9	10.1
Dir	97	96	95	79	81	85	86	88	75	80	88	80	67	54	35	16	24	37	17	333	331	109	97	100	69.0	88.5
28 Spd	5	3	5	3	4	3	4	5	3	4	2	6	5	6	7	7	5	5	3	4	4	6	4	4	0.9	7.2
Dir	121	167	283	264	235	217	207	205	171	177	207	113	71	55	55	27	47	23	32	19	325	315	355	328	35.7	27.1
29 Spd	4	4	4	5	5	4	4	4	5	4	3	4	3	3	5	7	3	2	2	5	7	6	4	6	1.6	7.4
Dir	335	289	328	323	311	329	309	302	317	298	297	302	296	290	130	137	354	193	151	141	209	231	206	183	272.1	209.1
30 Spd	5	4	4	4	3	5	4	1	4	2	9	26	27	23	25	29	39	30	32	29	24	20	21	12	13.9	38.7
Dir	161	119	111	94	88	117	135	232	303	232	254	261	259	263	261	259	255	255	257	254	252	251	258	241	253.5	255.2
31 Spd	15	13	11	10	10	10	14	20	11	13	19	16	12	8	18	27	16	26	20	22	19	15	14	13	14.8	26.5
Dir	243	243	257	275	264	246	248	258	251	260	256	251	283	285	304	297	297	270	273	262	256	255	247	246	265.0	297.2
Spd	2.3	2.3	2.5	2.2	2.1	1.9	2.1	1.8	2.5	2.2	1.8	2.1	3.4	4.0	4.8	4.8	4.6	4.1	3.4	3.1	2.6	2.2	2.4	2.0	Diurnal Average	
Dir	31.8	36.0	33.6	35.1	35.9	39.3	51.7	41.7	55.7	63.4	53.9	30.1	43.4	39.4	35.8	33.6	39.8	40.3	40.3	30.3	39.4	26.6	25.2	21.9	Diurnal Maximum	
Spd	15.0	14.0	13.3	12.0	12.7	11.5	14.1	20.3	13.9	14.7	19.2	26.2	27.0	22.7	25.2	29.5	38.7	30.2	32.1	29.4	24.2	20.1	21.3	13.7	Diurnal Maximum	
Dir	243.1	68.8	114.3	114.7	115.7	89.2	247.9	258.0	82.9	85.4	256.1	261.4	259.0	262.8	261.0	258.9	255.2	254.9	257.2	254.2	251.6	251.4	258.3	109.7		
Maximum Speed Value: 39 km/h on Mar 30 17:00								Minimum Speed Value: 0 km/h on Mar 13 02:00												Hours in Service:				744		
Maximum Daily Speed Average: 14.8 km/h on Mar 30								Minimum Daily Speed Average: 0.9 km/h on Mar 12												Hours of Data:				744		
Maximum Diurnal Speed Average: 4.8 km/h at hour 15								Minimum Diurnal Speed Average: 1.8 km/h at hour 8												Hours of Missing Data:				0		
Monthly Average Velocity: 2.77 km/h 38.24 deg								Speed Percentiles: P ₁ = 1.2 P ₁₀ = 3.3 Q ₁ = 4.4 Median = 6.4 Q ₃ = 9.5 P ₉₀ = 12.5 P ₉₉ = 26.1												Percent Operational Time:				100.0		
All monthly, daily, and diurnal averages have been calculated using vector methods																										
Frequency Distribution																										
Speed Range (km/h)																										
Direction	0 to 5		5 to 11		11 to 19		19 to 28		28 to 38		> 38		Total													
North	39		37		2		0		0		0		78													
NorthEast	32		120		20		0		0		0		172													
East	18		125		49		0		0		0		192													
SouthEast	12		10		7		0		0		0		29													
South	5		3		0		0		0		0		8													
SouthWest	11		9		5		0		0		0		25													
West	19		24		11		13		4		1		72													
NorthWest	107		58		2		1		0		0		168													
Total	243		386		96		14		4		1		744													

Wind Rose

Wind Speed (WS) (km/h)
Henry Pirker - March 2011



Wind Speed Classes (km/h)



**PASZA**

Peace Air Shed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Henry Pirker - March 2011

Maximum Speed: 39 km/h on Mar 30 17:00																				Maximum Daily Speed Average: 16.4 km/h on Mar 30										Hours in Service: 744	
Minimum Speed: 2 km/h on Mar 17 05:00																				Minimum Daily Speed Average: 4.8 km/h on Mar 1										Hours of Data: 744	
Maximum Diurnal Speed Average: 10.4 km/h at hour 16																				Minimum Diurnal Speed Average: 5.9 km/h at hour 6										Hours of Missing Data: 0	
Monthly Average Speed: 7.85 km/h																				Percentiles: P ₁ = 2.5 P ₁₀ = 4.0 Q ₁ = 5.0 Median = 6.7 Q ₃ = 9.7 P ₉₀ = 12.8 P ₉₉ = 26.8										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Mar	3	4	4	4	4	5	5	6	4	3	3	4	5	5	6	7	7	6	5	5	5	4	5	5	4.8	7.1					
2-Mar	5	4	4	5	5	5	6	8	9	9	8	8	10	10	10	11	10	11	7	8	5	4	3	6	7.1	10.7					
3-Mar	5	4	5	7	8	8	5	6	7	7	6	6	6	5	6	6	6	5	4	6	7	8	7	4	6.0	7.9					
4-Mar	4	4	4	4	2	2	2	4	3	7	8	7	8	8	9	10	11	7	8	8	11	13	10	11	6.9	12.6					
5-Mar	11	9	9	10	9	10	9	6	7	6	7	7	8	8	9	10	9	8	6	6	7	7	6	5	7.8	11.1					
6-Mar	5	4	4	5	4	3	3	2	5	4	6	7	9	7	7	6	6	7	5	5	6	6	6	4	5.1	8.5					
7-Mar	6	6	6	6	6	4	4	4	5	7	7	7	7	6	6	6	6	6	4	5	5	5	5	6	5.6	7.3					
8-Mar	5	5	6	5	6	5	4	5	5	5	5	6	7	8	6	6	7	6	4	4	5	5	6	6	5.5	7.9					
9-Mar	5	3	5	3	4	5	4	4	5	6	7	6	11	11	14	13	12	12	10	9	11	10	7	5	7.6	14.1					
10-Mar	7	7	6	5	8	8	9	9	9	9	10	10	11	10	10	10	8	7	6	6	5	4	4	4	7.6	10.8					
11-Mar	5	4	5	4	4	3	4	7	8	7	8	7	10	11	11	11	11	7	6	5	3	4	4	4	6.5	11.2					
12-Mar	5	4	4	5	4	4	6	4	4	4	6	6	4	6	6	5	6	4	5	5	6	6	8	9	5.3	9.0					
13-Mar	7	10	4	4	4	3	4	4	4	5	4	6	9	9	12	12	11	10	10	12	16	11	8	4	7.6	15.8					
14-Mar	7	8	8	8	8	8	6	8	8	9	9	9	9	9	8	7	6	6	9	5	4	5	6	4	7.2	9.4					
15-Mar	5	5	5	4	6	7	9	10	11	10	10	11	10	11	12	11	8	9	10	10	9	6	5	5	8.3	12.3					
16-Mar	6	4	6	5	5	4	2	4	4	5	6	3	5	5	6	7	8	8	6	3	5	6	6	5	5.2	7.9					
17-Mar	4	4	3	4	2	3	4	3	3	5	11	12	14	15	14	12	8	6	7	4	6	7	5	2	6.6	15.5					
18-Mar	3	3	5	4	4	3	4	5	5	4	3	5	5	6	8	6	6	4	5	6	6	5	8	5	4.9	8.2					
19-Mar	7	8	10	9	8	8	9	10	12	8	11	9	12	13	13	10	9	10	9	9	10	9	6	7	9.4	13.0					
20-Mar	9	10	12	11	8	6	7	8	10	10	11	12	13	14	14	13	14	13	13	13	13	13	15	13	11.4	14.7					
21-Mar	14	14	12	11	12	12	14	12	14	15	16	16	17	16	17	17	14	14	13	15	15	14	16	14	14.3	17.0					
22-Mar	12	12	13	12	13	11	11	11	11	11	11	7	6	6	6	7	7	6	4	4	4	4	4	5	8.3	13.4					
23-Mar	5	5	5	5	5	6	6	5	5	4	8	13	16	14	12	14	11	11	15	12	12	11	12	10	9.3	16.3					
24-Mar	8	8	7	8	6	5	6	5	5	5	3	5	7	7	9	9	9	9	9	11	10	10	10	10	7.5	10.5					
25-Mar	10	11	10	6	6	8	8	9	9	10	10	8	10	9	10	12	11	11	10	10	10	8	7	9	9.3	11.7					
26-Mar	9	9	10	11	9	8	9	9	9	10	10	8	8	9	9	7	6	8	8	7	8	8	9	9	8.7	11.2					
27-Mar	10	9	9	7	6	7	7	7	8	9	10	8	7	6	7	7	8	9	8	8	4	4	6	7	7.4	10.2					
28-Mar	5	3	5	4	4	4	4	5	4	5	3	7	6	7	7	8	6	6	4	4	4	7	6	5	5.0	7.7					
29-Mar	4	4	5	5	5	4	4	4	5	5	3	4	3	4	6	7	6	4	3	7	8	6	5	6	4.9	8.0					
30-Mar	5	4	4	4	3	5	5	3	5	4	10	26	27	23	25	30	39	30	32	30	24	20	21	12	16.4	38.9					
31-Mar	15	13	11	11	11	10	14	20	11	14	19	16	13	9	20	27	17	26	20	22	19	16	15	13	15.9	27.4					
6.8 6.5 6.7 6.4 6.1 5.9 6.3 6.6 6.9 7.2 8.1 8.6 9.4 9.3 10.1 10.4 9.7 9.2 8.6 8.4 8.5 8.0 7.8 7.0																								Diurnal Average							
15.1 14.1 13.4 12.0 12.8 11.6 14.2 20.4 14.0 14.9 19.4 26.4 27.1 22.9 25.3 29.5 38.9 30.3 32.3 29.5 24.4 20.4 21.4 13.8																								Diurnal Maximum							
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg

Henry Pirker - March 2011

Maximum Value: 90.9 deg on Mar 12 18:00																			Hours in Service: 744						
Minimum Value: 4.4 deg on Mar 30 16:00																			Hours of Data: 744						
Percentiles: P ₁ = 5.5 P ₁₀ = 8.2 Q ₁ = 11.5 Median = 16.5 Q ₃ = 25.6 P ₉₀ = 43.8 P ₉₉ = 81.6																			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-Mar	34	11	10	13	11	10	14	14	10	28	26	6	9	9	7	23	20	30	14	18	16	17	13	9	33.9
2-Mar	14	13	13	16	23	12	19	13	10	12	16	19	13	16	14	14	14	11	15	14	26	46	38	10	46.1
3-Mar	10	33	12	10	12	11	16	15	11	11	13	26	9	30	14	16	24	37	18	18	15	15	12	29	37.0
4-Mar	13	23	19	15	40	49	71	26	65	19	20	17	21	20	14	20	13	20	15	16	11	10	10	9	71.3
5-Mar	9	17	17	12	15	11	13	27	20	19	21	25	27	21	17	16	17	15	21	25	20	11	21	22	27.2
6-Mar	23	26	56	27	58	45	57	55	19	31	26	34	17	23	23	26	33	12	21	25	59	13	14	17	59.1
7-Mar	13	9	14	20	23	33	29	21	11	16	12	8	18	13	16	11	23	12	28	8	18	14	18	16	32.8
8-Mar	28	28	23	21	27	45	38	20	19	16	15	33	12	31	27	24	17	22	25	36	17	15	46	25	46.0
9-Mar	40	44	20	40	78	27	56	54	38	26	15	15	27	19	12	16	15	15	16	19	11	15	19	30	78.2
10-Mar	22	16	22	25	15	16	15	18	17	17	16	14	15	17	17	14	25	20	22	13	18	8	17	14	24.9
11-Mar	8	15	16	27	13	82	44	14	9	13	15	21	15	14	13	12	20	35	23	26	50	48	43	21	82.3
12-Mar	34	26	19	15	46	28	46	69	52	21	23	55	58	27	21	59	16	91	80	61	66	78	40	20	90.9
13-Mar	71	90	71	52	66	76	50	78	26	31	34	48	19	17	12	14	16	20	22	15	12	14	17	62	90.0
14-Mar	34	17	19	17	13	19	39	17	11	5	7	8	15	10	34	25	22	24	11	23	43	38	45	52	52.5
15-Mar	30	18	45	61	31	18	15	12	14	16	17	16	18	16	15	19	19	25	9	10	11	15	16	17	61.0
16-Mar	18	52	11	14	15	13	30	18	22	19	21	57	30	32	29	25	19	12	22	45	39	12	16	12	57.2
17-Mar	24	21	69	70	72	83	13	55	87	58	18	9	13	6	6	7	15	17	9	40	12	12	86	40	87.1
18-Mar	87	56	15	26	28	55	19	13	27	34	24	21	13	10	18	24	21	32	18	19	45	40	14	42	87.4
19-Mar	21	17	13	25	14	19	23	10	16	18	14	23	16	13	13	10	16	13	9	6	6	6	39	31	39.0
20-Mar	21	16	13	21	26	37	26	25	19	12	11	10	12	10	14	14	12	13	15	14	12	9	9	9	37.1
21-Mar	8	8	10	8	9	7	7	10	8	9	8	9	8	9	8	8	8	9	11	7	7	7	7	7	10.9
22-Mar	7	7	6	7	7	6	6	6	7	8	11	40	56	38	25	27	24	21	21	17	16	18	39	13	55.6
23-Mar	6	9	15	21	27	24	20	29	26	39	47	11	10	13	14	10	17	18	8	9	7	10	9	11	47.1
24-Mar	11	10	10	13	13	15	16	16	19	33	34	58	21	21	15	15	15	13	12	10	7	8	7	8	58.4
25-Mar	8	7	8	30	11	10	9	9	11	10	11	12	13	14	15	12	11	12	10	9	9	12	12	11	30.3
26-Mar	11	10	8	7	21	16	11	10	11	10	12	15	19	16	15	21	19	14	11	10	8	9	9	8	20.9
27-Mar	5	7	7	14	9	11	9	10	11	13	10	18	23	34	31	18	15	14	14	13	36	18	9	9	36.4
28-Mar	21	14	22	22	10	39	29	19	25	25	59	31	26	22	19	24	24	28	49	28	23	22	48	53	58.8
29-Mar	30	18	48	28	27	24	20	22	26	27	37	13	16	25	41	14	80	71	36	41	22	18	37	18	80.3
30-Mar	8	27	18	13	57	16	45	82	42	59	27	6	5	7	6	4	6	5	6	6	7	9	5	8	81.9
31-Mar	7	7	11	24	25	13	10	4	10	37	6	8	12	18	31	14	14	8	7	8	6	7	8	7	36.6
87.4 90.0 70.7 70.2 78.2 83.0 71.3 81.9 87.1 58.8 58.8 58.4 57.8 37.8 41.4 59.4 80.3 90.9 79.7 61.5 65.9 78.2 86.5 61.7																									

PASZA
Evergreen Park Station
Monthly Summary Tables, Graphs and
Roses

**PASZA**

Peace Air Shed Zone Association

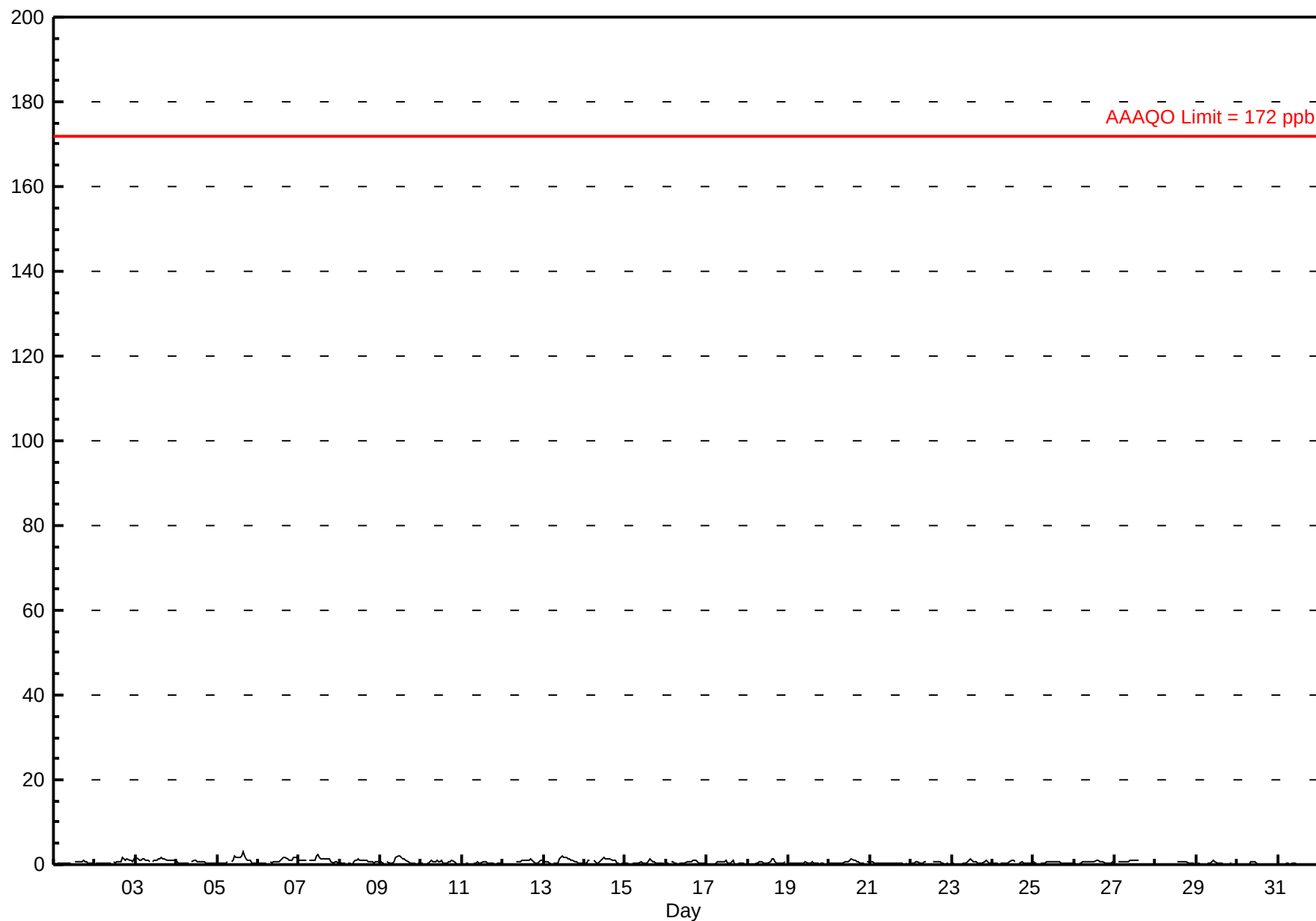
Hourly Averages

Sulphur Dioxide (SO₂) - ppb**Evergreen Park - March 2011**

Number of Exceedences (AAAQO): Maximum Value: 3.1 ppb on Mar 5 16:00																			1-hr: 0 24-hr: 0 Maximum Daily Average: 1.2 ppb on Mar 3					Hours in Service: 744 Hours of Data: 680 Hours of Missing Data: 64 Hours of Calibration: 33 Percent Operational Time: 95.8				
Minimum Value: 0 ppb on Mar 30 04:00 Maximum Diurnal Average: 0.9 ppb at hour 12 Monthly Average: 0.57 ppb																			Minimum Daily Average: 0.1 ppb on Mar 31 Minimum Diurnal Average: 0.4 ppb at hour 21 Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.5 Q ₃ = 0.8 P ₉₀ = 1.2 P ₉₉ = 1.9									
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-Mar	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	1	1	1	1	0	0	0	0	0.4	0.9		
2-Mar	0	0	0	0	0	0	0	0	0	0	A	1	0	1	1	1	2	1	1	1	1	1	1	1	0.6	1.8		
3-Mar	2	1	1	1	1	1	1	1	1	A	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1.2	1.7		
4-Mar	1	0	0	0	0	0	0	0	A	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.5	1.2		
5-Mar	0	0	0	0	0	0	1	A	1	1	2	2	2	2	2	3	2	1	1	1	0	0	0	0	1.0	3.1		
6-Mar	0	0	0	0	0	0	A	1	1	1	1	1	1	1	1	2	2	1	1	1	1	2	2	1	0.9	1.8		
7-Mar	1	1	1	1	1	A	1	1	1	1	2	2	2	1	1	1	1	1	1	1	0	1	1	0	1.1	2.3		
8-Mar	1	0	0	0	A	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0.7	1.3		
9-Mar	1	0	0	A	1	0	0	0	1	2	2	2	2	1	1	1	1	0	0	0	0	0	0	0	0.7	2.1		
10-Mar	0	0	A	0	0	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	0	0	0	0	0.5	1.1		
11-Mar	0	A	0	0	0	0	0	0	0	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0.3	0.5		
12-Mar	A	D	D	D	D	D	D	D	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	--	1.3		
13-Mar	1	1	1	0	0	A	0	0	0	1	2	2	2	2	1	1	1	1	1	1	0	0	0	0	0.9	1.9		
14-Mar	0	0	1	1	A	1	1	0	0	1	1	2	2	1	1	1	1	1	1	0	0	0	0	0	0.8	1.5		
15-Mar	0	0	0	A	0	0	0	0	1	1	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0.5	1.4		
16-Mar	0	0	A	1	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0.5	1.1		
17-Mar	0	A	0	0	0	0	1	1	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0.4	1.1		
18-Mar	A	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	1	0	1	0	0	0	0	1	A	0.5	1.3	
19-Mar	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	A	1	0.3	0.6		
20-Mar	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	A	1	1	0.6	1.2		
21-Mar	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	0.7		
22-Mar	0	0	0	1	1	0	0	0	1	1	C	C	C	1	1	1	1	1	0	0	0	0	0	0	0.4	0.8		
23-Mar	0	0	0	0	0	A	0	0	0	1	1	1	1	1	1	0	0	0	0	1	1	1	0	0	0.5	1.2		
24-Mar	0	0	0	0	A	0	0	0	0	0	1	1	1	1	D	D	0	1	0	0	0	0	0	0	0.4	1.0		
25-Mar	1	0	0	A	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.5	0.7		
26-Mar	0	0	A	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	0.6	0.9		
27-Mar	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	D	D	D	D	D	D	D	D	D	--	1.0		
28-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	1	1	1	1	1	1	0	0	0	0	0	--	0.7		
29-Mar	0	0	0	0	0	A	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.1		
30-Mar	0	0	0	0	A	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7		
31-Mar	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4		
																									Diurnal Average			
																									Diurnal Maximum			
C - Calibration D - DAS Failure A - Automated Daily Zero Span																												
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																												

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Evergreen Park - March 2011



Hourly Maximums

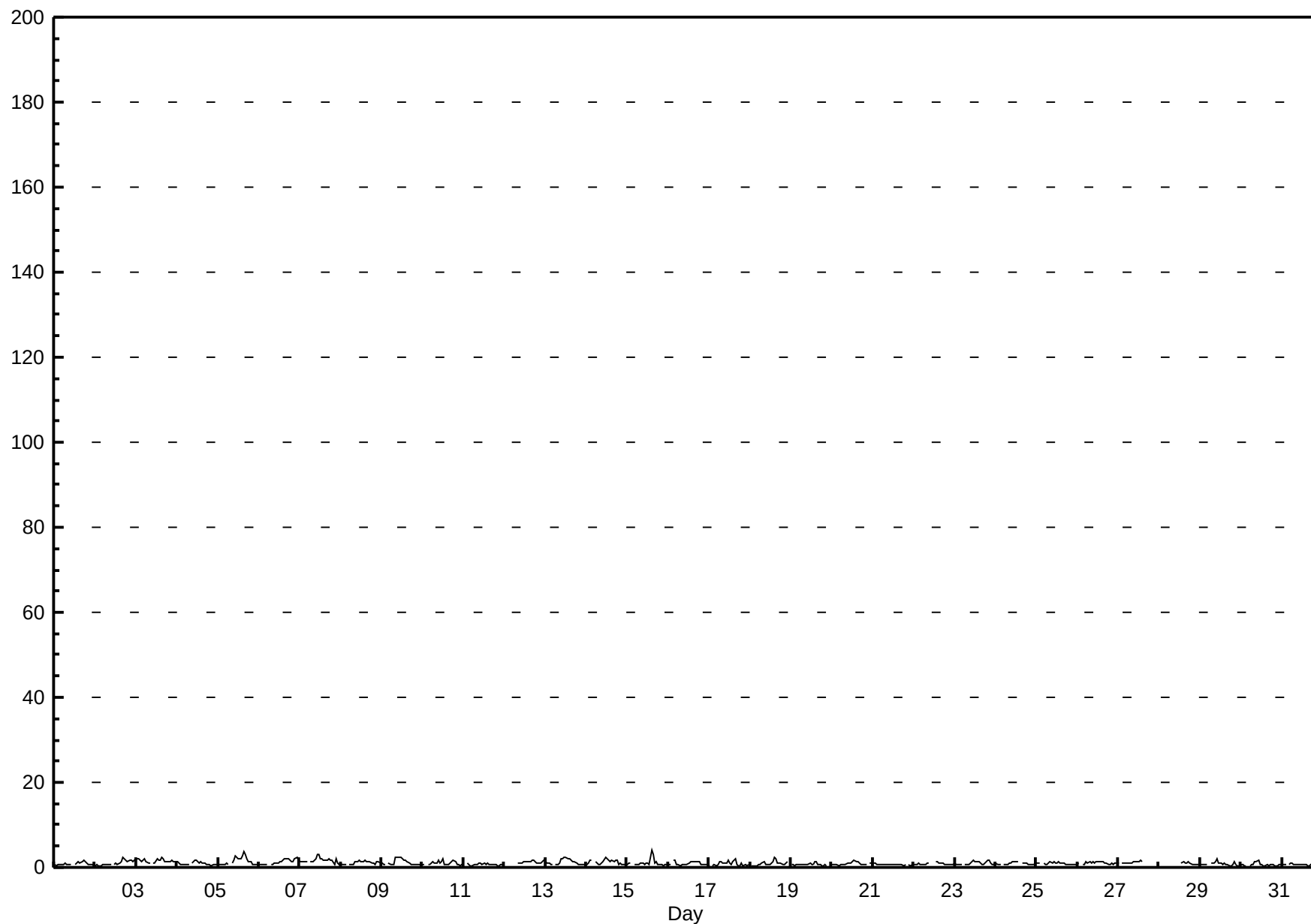
Sulphur Dioxide (SO₂) - ppb

Evergreen Park - March 2011

Maximum Value: 4.1 ppb on Mar 15 15:00																				Maximum Daily Average: 1.6 ppb on Mar 7										Hours in Service: 744									
Minimum Value: 0 ppb on Mar 2 01:00																				Minimum Daily Average: 0.6 ppb on Mar 21										Hours of Data: 680									
Maximum Diurnal Average: 1.5 ppb at hour 15																				Minimum Diurnal Average: 0.8 ppb at hour 3										Hours of Missing Data: 64									
Monthly Average: 1.02 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.9 Q ₃ = 1.3 P ₉₀ = 1.7 P ₉₉ = 2.9										Hours of Calibration: 33									
																				Percent Operational Time: 95.8																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Mar	1	0	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	2	1	1	1	1	1	0	0.8	1.6													
2-Mar	0	1	0	0	1	1	1	1	1	1	A	1	1	1	1	1	2	2	2	1	2	2	2	2	1.1	2.3													
3-Mar	2	2	2	1	2	2	1	1	1	A	1	1	2	2	2	3	2	2	1	1	1	2	1	1	1.6	2.5													
4-Mar	1	1	1	1	1	1	1	1	A	1	2	2	1	1	1	1	1	1	1	1	0	1	1	1	0.9	1.8													
5-Mar	1	1	1	1	1	1	1	A	1	2	3	2	2	2	3	4	3	2	1	1	1	1	1	1	1.5	3.8													
6-Mar	1	1	1	1	1	1	A	1	1	1	1	1	1	2	2	2	2	2	2	2	1	2	2	2	1.3	2.3													
7-Mar	1	1	1	1	1	A	1	1	1	2	3	3	2	2	2	2	2	2	2	2	1	2	1	1	1.6	3.1													
8-Mar	1	1	1	1	A	1	1	1	1	1	1	2	1	2	1	2	1	1	1	1	1	1	1	1	1.1	1.6													
9-Mar	1	1	1	A	1	1	1	1	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	0	1.2	2.5													
10-Mar	1	1	A	1	1	1	1	1	1	2	1	1	2	1	1	1	1	1	2	1	1	1	0	1	1.0	1.9													
11-Mar	1	A	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0.7	1.0													
12-Mar	A	D	D	D	D	D	D	D	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	2	--	1.8													
13-Mar	2	1	1	1	1	A	1	1	1	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1.3	2.4													
14-Mar	1	1	2	2	A	1	1	1	1	1	1	2	2	2	1	2	1	2	2	1	1	1	1	1	1.2	2.3													
15-Mar	1	1	1	A	1	1	1	1	1	1	1	1	1	1	4	3	1	1	1	1	1	1	1	1	1.0	4.1													
16-Mar	1	1	A	2	2	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.6													
17-Mar	0	A	0	1	1	1	1	1	1	1	1	2	1	1	1	2	1	0	0	1	0	1	0	1	0.8	2.2													
18-Mar	A	0	0	0	0	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	A	0.9	2.2													
19-Mar	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	A	1	0.7	1.3													
20-Mar	1	1	1	1	0	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	A	1	1	0.9	1.5													
21-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	1	0.6	1.0													
22-Mar	1	1	1	1	1	1	1	1	1	1	C	C	C	1	1	1	1	1	1	1	1	1	1	1	0.8	1.3													
23-Mar	1	1	1	1	1	A	1	1	1	1	2	2	2	1	1	1	1	1	1	2	2	1	1	1	1.0	1.7													
24-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	1	D	D	1	1	1	1	1	1	1	1	0.9	1.4													
25-Mar	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.4													
26-Mar	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.5													
27-Mar	1	A	1	1	1	1	1	1	1	1	1	1	1	2	1	D	D	D	D	D	D	D	D	D	--	1.6													
28-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	1	1	1	1	1	1	1	1	1	1	1	--	1.3													
29-Mar	1	1	1	1	1	A	1	1	1	1	2	1	1	1	1	1	1	0	0	1	1	1	0	0	0.8	2.0													
30-Mar	1	1	0	0	A	0	1	1	1	1	2	1	1	0	0	1	0	1	1	1	0	1	1	1	0.7	1.8													
31-Mar	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0	4	1	1	1	0.7	4.1													
0.8 0.8 0.8 0.8 0.8 0.8 0.8 0.8 0.8 1.0 1.1 1.3 1.3 1.3 1.2 1.5 1.4 1.2 1.1 1.0 0.9 0.9 0.8 0.8 0.8																									Diurnal Average														
1.9 1.9 1.8 1.6 1.7 2.0 1.3 1.2 2.2 2.2 2.9 3.1 2.4 2.1 4.1 3.8 3.1 2.2 1.7 1.6 4.1 2.0 2.3 1.7																									Diurnal Maximum														
C - Calibration					D - DAS Failure					A - Automated Daily Zero Span																													

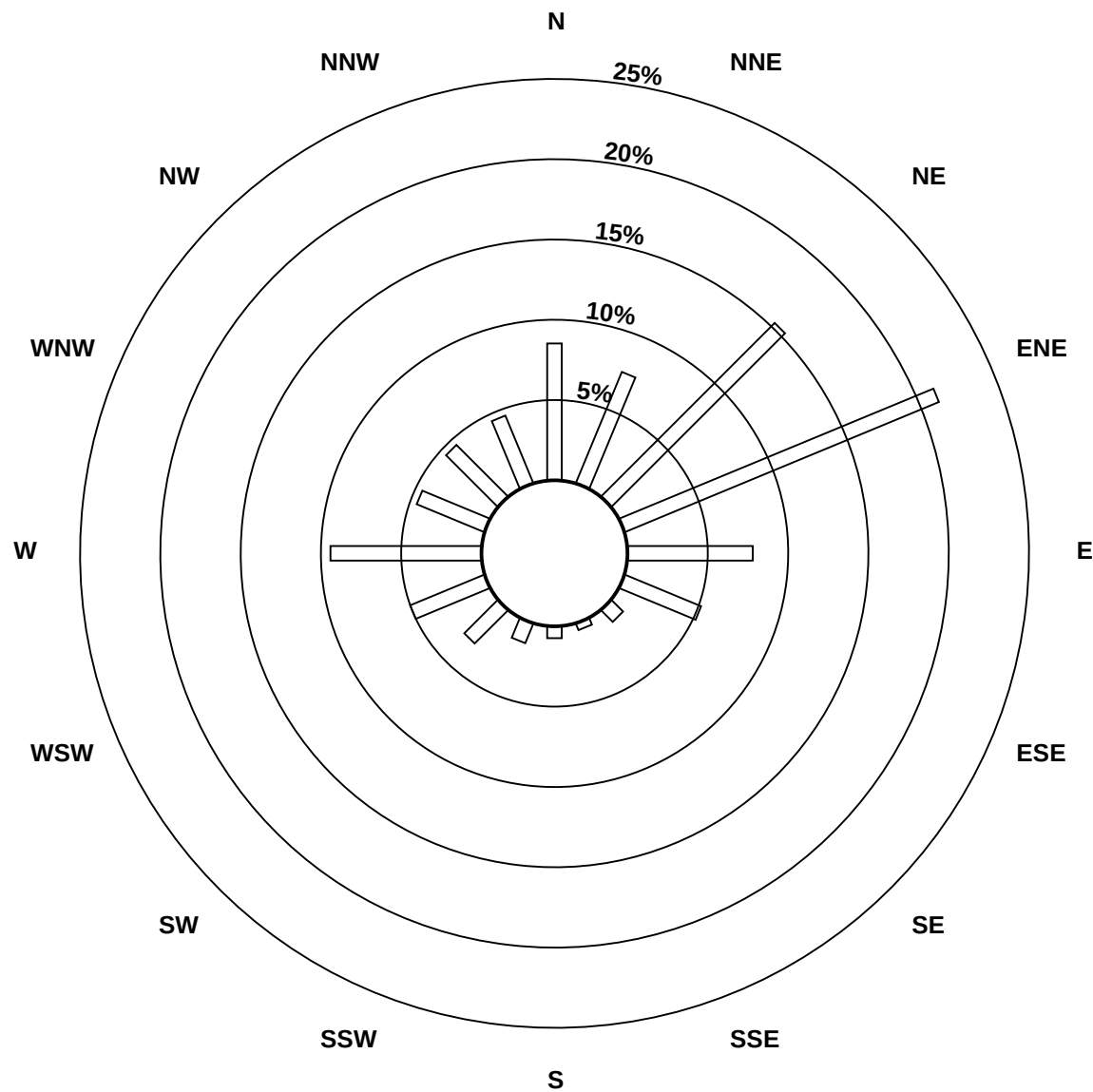
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Evergreen Park - March 2011

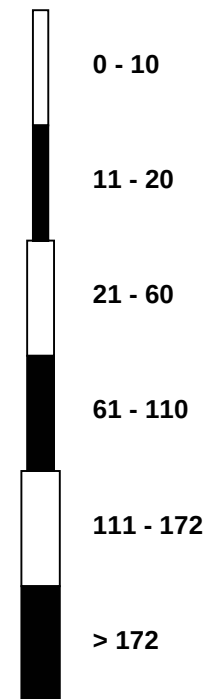


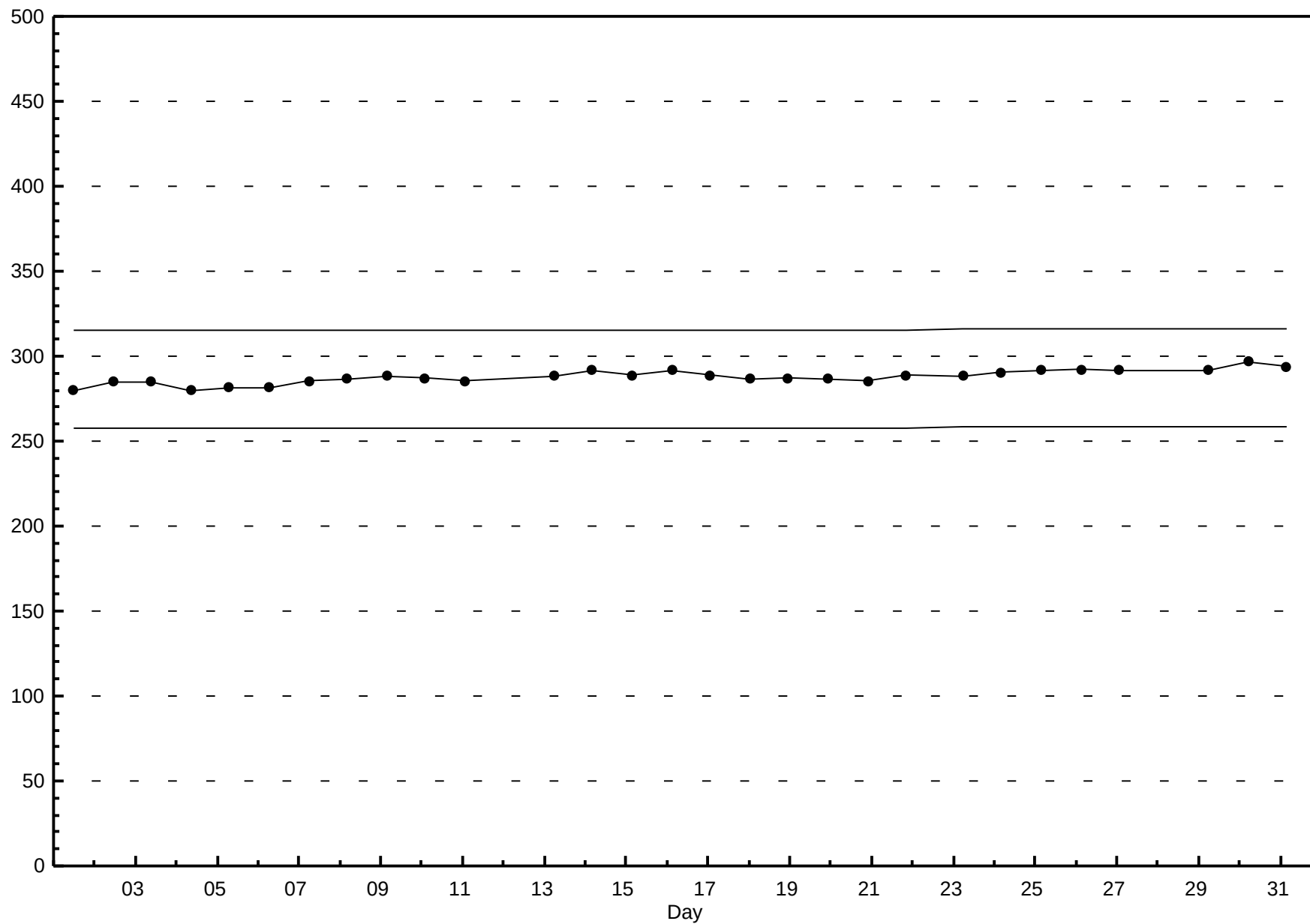
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Evergreen Park - March 2011



Pollutant Classes (ppb)





**PASZA**

Peace Air Shed Zone Association

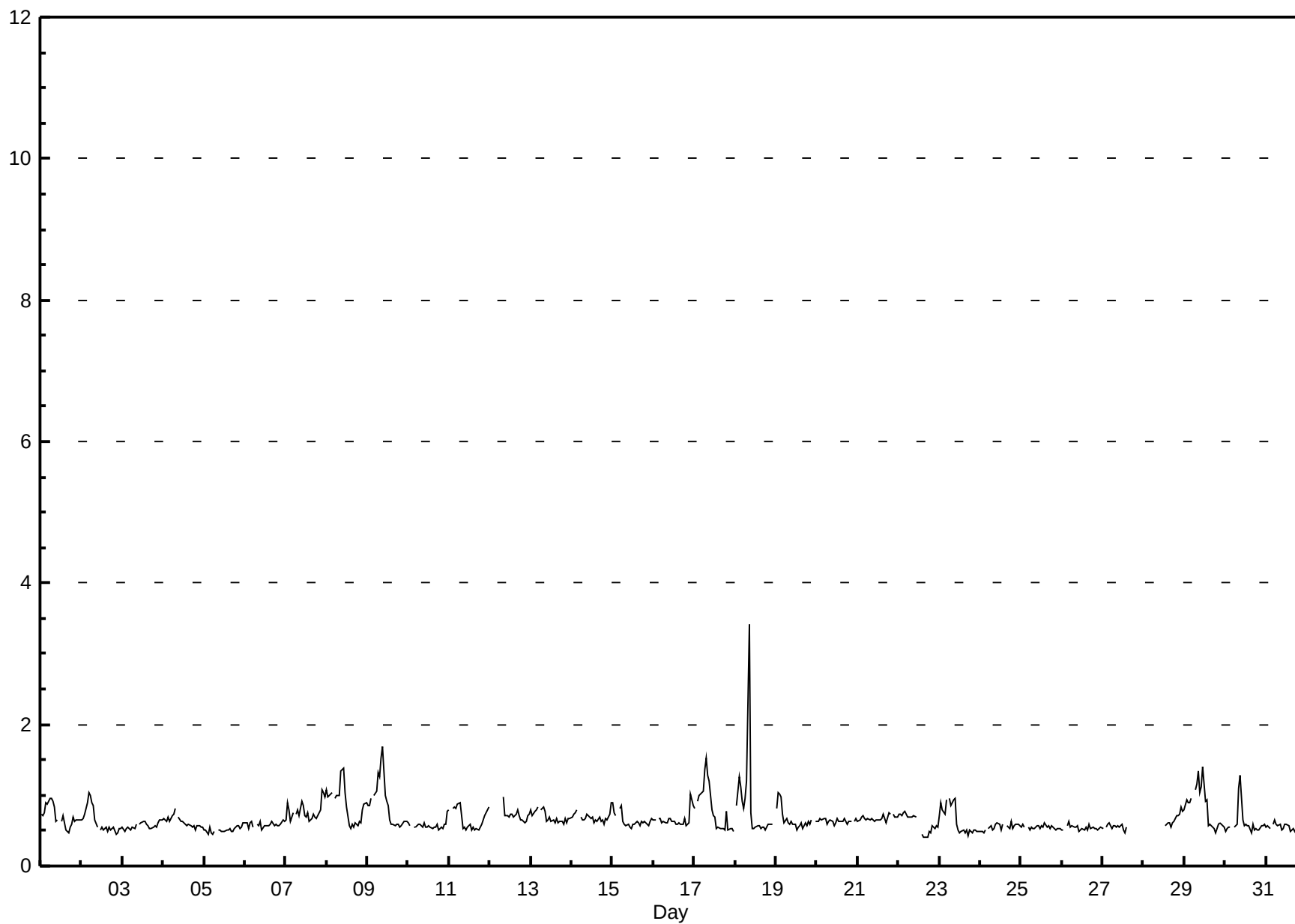
Hourly Averages

Total Reduced Sulphur (TRS) - ppb**Evergreen Park - March 2011**

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 3.4 ppb on Mar 18 09:00 Maximum Daily Average: 0.9 ppb on Mar 8																				Hours in Service: 744 Hours of Data: 680 Hours of Missing Data: 64 Hours of Calibration: 33 Percent Operational Time: 95.8						
Minimum Value: 0 ppb on Mar 22 17:00 Maximum Diurnal Average: 0.9 ppb at hour 9 Monthly Average: 0.66 ppb										Minimum Daily Average: 0.5 ppb on Mar 5 Minimum Diurnal Average: 0.6 ppb at hour 18 Percentiles: P ₁ = 0.5 P ₁₀ = 0.5 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.7 P ₉₀ = 0.9 P ₉₉ = 1.4																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	1	1	1	1	1	1	1	0.7	1.0
2-Mar	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	1	0	1	1	0	0	1	1	0.6	1.0
3-Mar	1	0	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.7
4-Mar	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8
5-Mar	1	1	0	1	0	0	0	A	1	1	0	0	0	1	1	1	0	0	1	1	1	1	1	1	0.5	0.6
6-Mar	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.6
7-Mar	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
8-Mar	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
9-Mar	1	1	1	A	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.7
10-Mar	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8
11-Mar	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
12-Mar	A	D	D	D	D	D	D	D	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	--	1.0
13-Mar	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
14-Mar	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
15-Mar	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9
16-Mar	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
17-Mar	1	A	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0.8	1.5
18-Mar	A	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	3.4
19-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.7	1.0
20-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.6	0.7
21-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	0.8
22-Mar	1	1	1	1	1	1	1	1	1	1	1	C	C	C	0	0	0	0	0	0	1	1	1	1	0.6	0.8
23-Mar	1	1	1	1	1	A	1	1	1	1	1	0	0	0	0	0	1	0	1	0	1	1	0	0	0.6	1.0
24-Mar	0	0	0	0	A	1	1	1	1	1	1	1	1	1	D	D	1	1	1	1	1	1	1	1	0.5	0.6
25-Mar	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.5	0.6
26-Mar	0	1	A	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	0.5	0.6
27-Mar	1	A	1	1	1	1	1	1	1	1	1	1	1	0	1	D	D	D	D	D	D	D	D	D	--	0.6
28-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	1	1	1	1	1	1	1	1	1	1	1	--	0.8
29-Mar	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0.8	1.4
30-Mar	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0.6	1.3
31-Mar	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	1	1	1	0	1	0.6	0.7
Diurnal Average																										
Diurnal Maximum																										
C - Calibration D - DAS Failure A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																										

Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Evergreen Park - March 2011

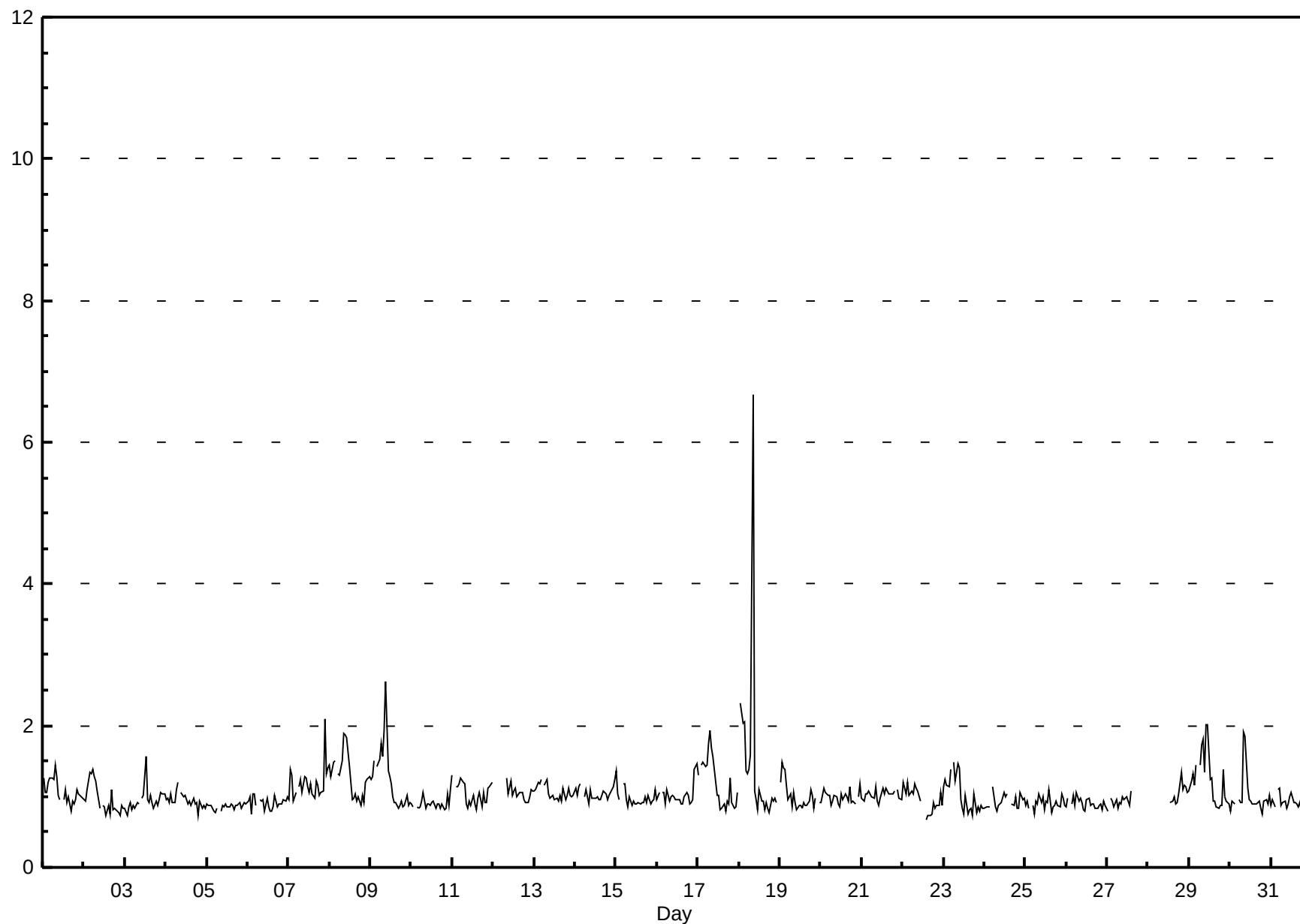


Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

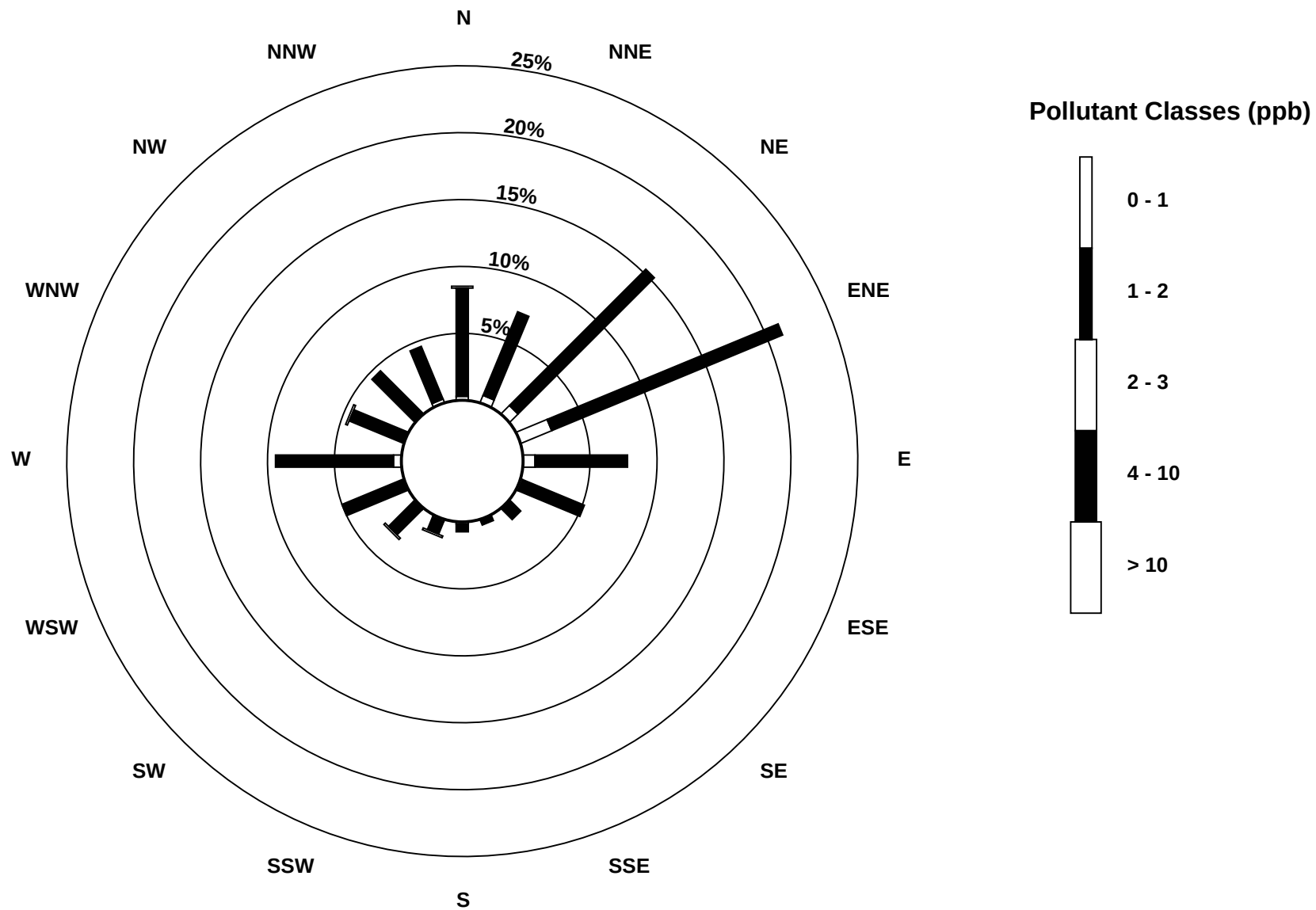
Evergreen Park - March 2011

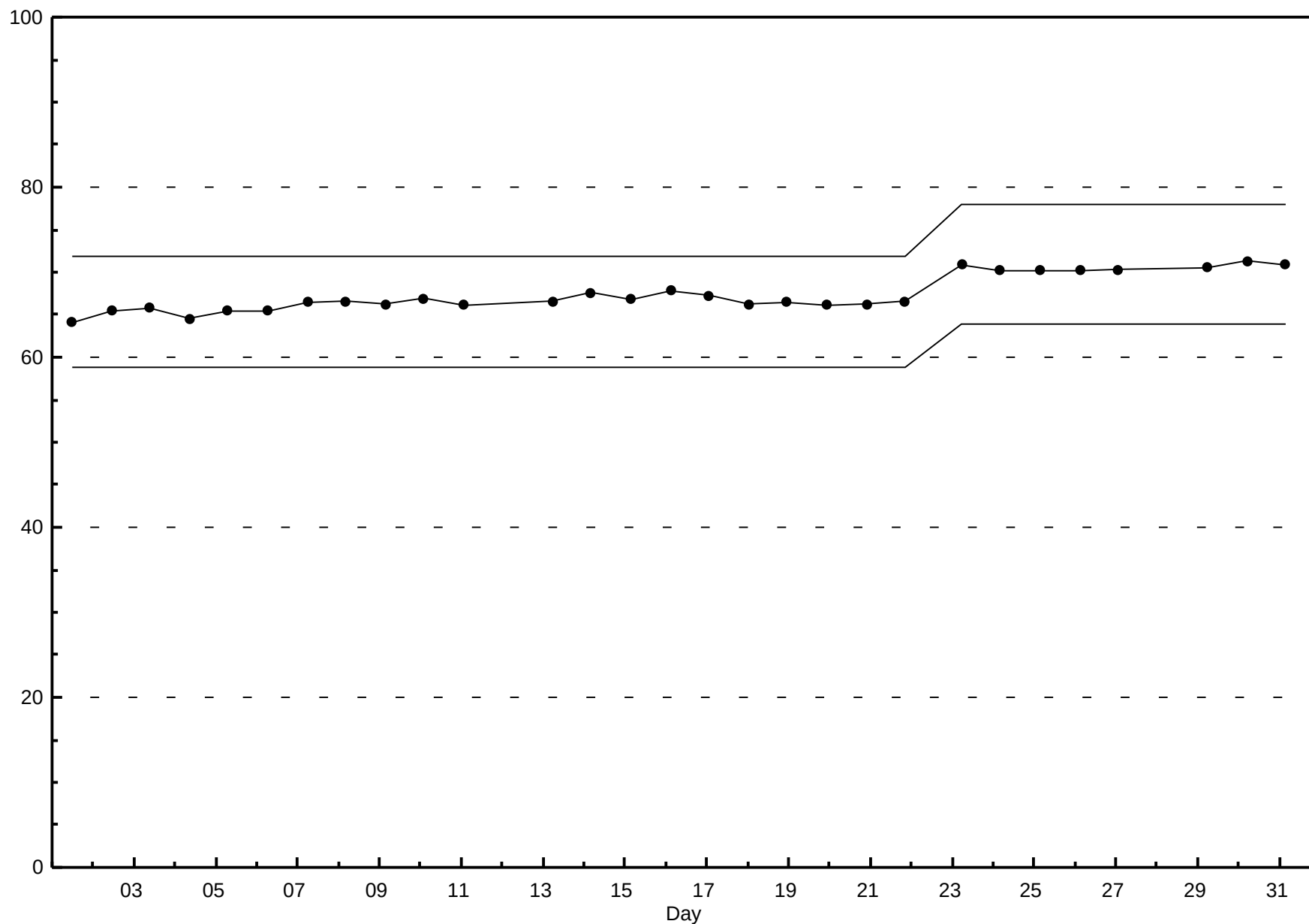
Maximum Value: 6.7 ppb on Mar 18 09:00																				Maximum Daily Average: 1.4 ppb on Mar 18					Hours in Service: 744	
Minimum Value: 1 ppb on Mar 22 15:00																				Minimum Daily Average: 0.9 ppb on Mar 5					Hours of Data: 680	
Maximum Diurnal Average: 1.4 ppb at hour 9																				Minimum Diurnal Average: 0.9 ppb at hour 16					Hours of Missing Data: 64	
Monthly Average: 1.04 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 = 2.0					Hours of Calibration: 33	
																				Percent Operational Time: 95.8						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.5
2-Mar	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
3-Mar	1	1	1	1	1	1	1	1	1	A	1	1	2	1	1	1	1	1	1	1	1	1	1	1	0.9	1.6
4-Mar	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
5-Mar	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	0.9
6-Mar	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	1.0
7-Mar	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1.2	2.1
8-Mar	1	1	1	2	A	1	1	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1.3	1.9
9-Mar	1	1	1	A	1	2	2	2	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	2.6
10-Mar	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	1.1
11-Mar	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	1.3
12-Mar	A	D	D	D	D	D	D	D	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	--	1.3
13-Mar	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.2
14-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.2
15-Mar	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	1.4
16-Mar	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.5
17-Mar	1	A	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	1.9
18-Mar	A	2	2	2	1	1	1	2	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1.4	6.7
19-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1.0	1.5
20-Mar	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
21-Mar	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	1.1
22-Mar	1	1	1	1	1	1	1	1	1	1	1	C	C	C	1	1	1	1	1	1	1	1	1	1	1.0	1.2
23-Mar	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	1.5
24-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	1	D	D	1	1	1	1	1	1	1	1	0.9	1.1
25-Mar	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	1.1
26-Mar	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	1.1
27-Mar	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	D	D	D	D	D	D	D	D	D	--	1.1
28-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	1	1	1	1	1	1	1	1	1	1	1	--	1.3
29-Mar	1	1	1	1	1	A	1	2	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1.2	2.0
30-Mar	1	1	1	1	A	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.9
31-Mar	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1.0	2.6
																								Diurnal Average		
																								Diurnal Maximum		
C - Calibration D - DAS Failure A - Automated Daily Zero Span																										



Pollutant Rose

Total Reduced Sulphur (TRS) - ppb
Evergreen Park - March 2011





**PASZA**

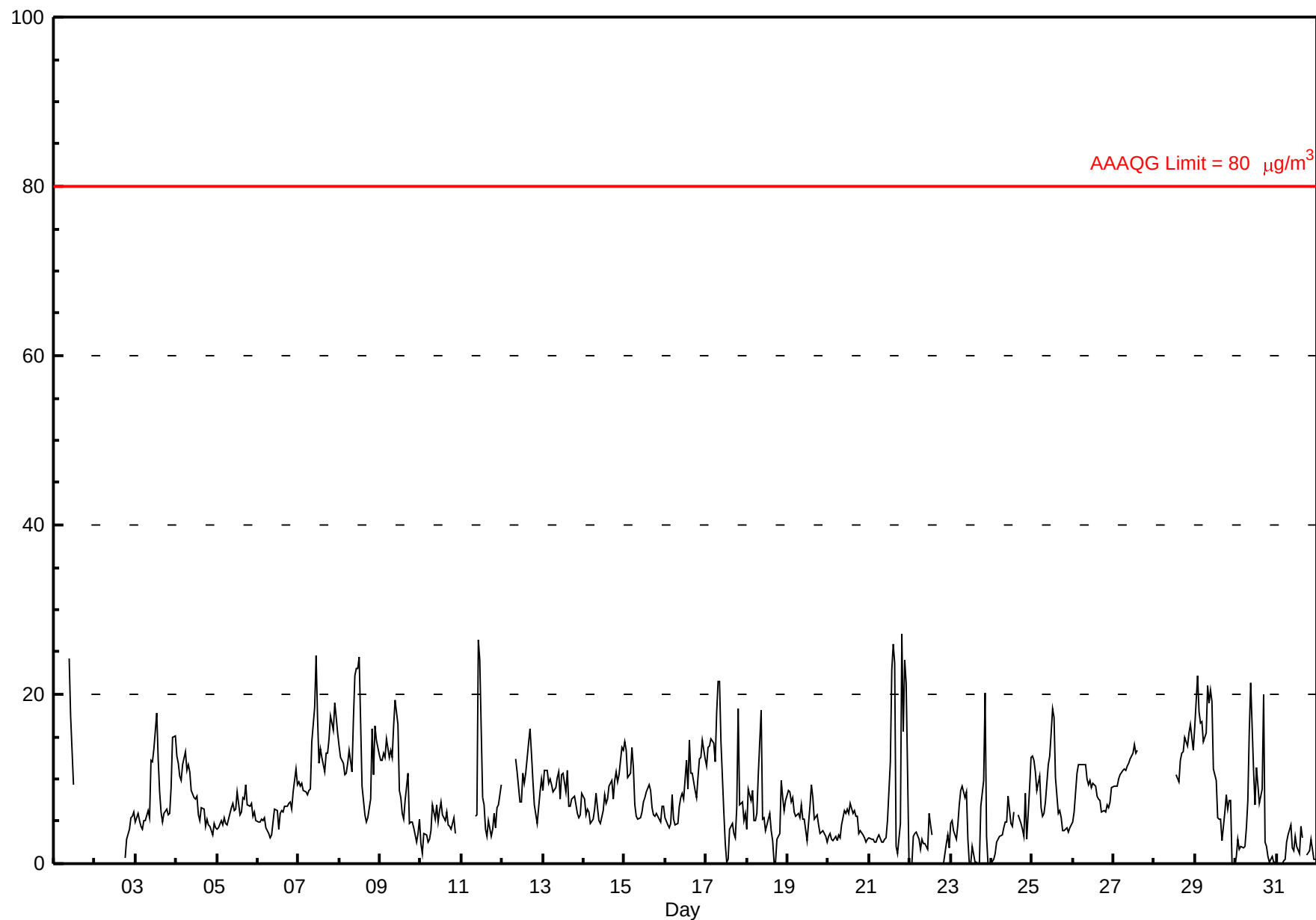
Peace Air Shed Zone Association

Hourly Averages

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

Evergreen Park - March 2011

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 27.1 µg/m³ on Mar 21 20:00 Minimum Value: 0 µg/m³ on Mar 22 00:00 Maximum Diurnal Average: 10.2 µg/m³ at hour 10 Monthly Average: 7.72 µg/m³																				Hours in Service: 744 Hours of Data: 658 Hours of Missing Data: 86 Hours of Calibration: 2 Percent Operational Time: 88.7						
Maximum Daily Average: 13.3 µg/m³ on Mar 7 Minimum Daily Average: 1.7 µg/m³ on Mar 31 Minimum Diurnal Average: 5.7 µg/m³ at hour 18 Percentiles: P ₁ = 0.0 P ₁₀ = 2.5 Q ₁ = 4.3 Median = 6.5 Q ₃ = 10.6 P ₉₀ = 14.4 P ₉₉ = 24.1																										
Day	Hourly Period Ending At (MST)																							Daily Average	Daily Maximum	
1-Mar	N	N	N	N	N	N	N	N	N	24	17	9	N	N	N	N	N	N	N	N	N	N	N	N	--	24.2
2-Mar	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1	3	4	5	6	6	--	6.2
3-Mar	5	6	5	4	4	5	5	6	5	12	12	14	18	12	8	6	5	6	6	6	6	9	15	15	8.2	17.8
4-Mar	13	12	10	10	12	13	11	12	11	9	8	8	8	6	5	7	6	4	5	5	4	3	5	4	7.9	13.2
5-Mar	4	4	5	5	5	5	4	5	7	7	6	6	9	6	6	8	8	9	7	7	7	6	6	5	6.1	9.3
6-Mar	5	5	5	5	6	4	4	3	3	5	6	6	4	6	6	6	7	7	7	7	6	9	11	9	6.0	11.2
7-Mar	10	9	9	9	8	8	9	9	14	18	25	17	12	13	13	11	13	13	15	17	16	19	17	15	13.3	24.6
8-Mar	14	13	12	11	11	12	13	11	17	22	23	23	24	9	7	6	5	5	8	16	11	16	15	13	13.2	24.5
9-Mar	12	12	13	13	15	12	13	13	16	19	16	9	8	6	5	7	11	5	5	5	4	3	4	5	9.6	19.3
10-Mar	2	1	4	3	3	3	4	7	5	7	5	6	7	6	5	6	5	4	4	5	4	N	N	N	4.6	7.3
11-Mar	N	N	N	N	N	N	N	N	6	6	27	24	8	7	4	3	5	3	4	6	4	7	7	9	--	26.5
12-Mar	D	D	D	D	D	D	D	D	12	11	7	7	11	9	11	14	16	13	10	7	5	7	8	10	--	15.9
13-Mar	9	11	11	9	10	9	8	9	10	11	8	10	11	9	11	7	7	8	8	7	6	5	6	8	8.7	11.1
14-Mar	8	6	7	6	5	5	6	8	7	5	5	6	8	7	8	9	10	8	10	11	10	11	14	13	7.9	13.7
15-Mar	14	13	10	11	14	11	7	6	5	5	6	7	8	8	9	9	7	6	6	6	5	5	7	7	8.0	14.4
16-Mar	5	5	4	5	8	5	5	5	7	8	8	8	12	9	15	11	11	9	8	10	12	13	15	12	8.6	14.6
17-Mar	12	14	14	15	14	12	18	22	21	14	6	2	0	0	4	5	4	3	7	18	7	7	5	6	9.6	21.5
18-Mar	4	9	7	9	5	5	6	11	18	5	5	4	5	6	4	3	0	0	3	4	10	8	6	7	6.0	18.2
19-Mar	9	9	7	8	6	6	6	5	7	5	5	3	5	7	9	8	5	6	5	4	4	4	3	3	5.7	9.4
20-Mar	3	4	3	3	3	3	3	3	5	6	6	6	6	7	6	6	6	6	4	4	3	3	3	3	4.3	7.1
21-Mar	3	3	3	3	2	3	3	3	3	3	3	5	12	23	26	24	2	1	5	27	16	24	21	0	9.0	27.1
22-Mar	0	0	3	4	4	3	2	3	2	2	2	6	5	3	C	C	0	0	0	0	0	2	3	2	2.1	5.9
23-Mar	5	5	4	3	5	7	9	9	8	8	3	0	0	2	0	0	0	0	7	10	20	3	0	0	4.5	20.1
24-Mar	0	1	1	2	3	3	3	4	5	5	8	5	4	6	D	D	6	5	4	3	8	3	9	13	4.6	12.6
25-Mar	13	12	11	9	10	7	6	6	7	12	13	15	18	17	10	6	6	5	4	4	4	4	4	5	8.7	18.3
26-Mar	5	6	11	12	12	12	12	12	10	9	10	9	9	9	8	8	8	6	6	6	7	7	7	9	8.7	11.8
27-Mar	9	9	9	10	11	11	11	11	12	12	12	13	14	13	13	D	D	D	D	D	D	D	D	D	--	14.1
28-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	11	10	12	13	13	15	14	15	16	15	13	--	16.5
29-Mar	16	22	18	17	17	14	15	21	19	21	19	11	10	5	5	5	3	6	8	6	8	7	0	0	11.4	22.2
30-Mar	1	3	2	2	2	2	4	7	16	21	11	7	11	9	7	9	20	3	2	1	0	1	0	0	5.9	21.4
31-Mar	0	0	0	0	0	1	3	3	5	2	2	3	2	1	4	3	N	N	1	2	3	2	0	0	1.7	4.6
																								Diurnal Average	Diurnal Maximum	
C - Calibration D - DAS Failure N - Not Valid Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																										

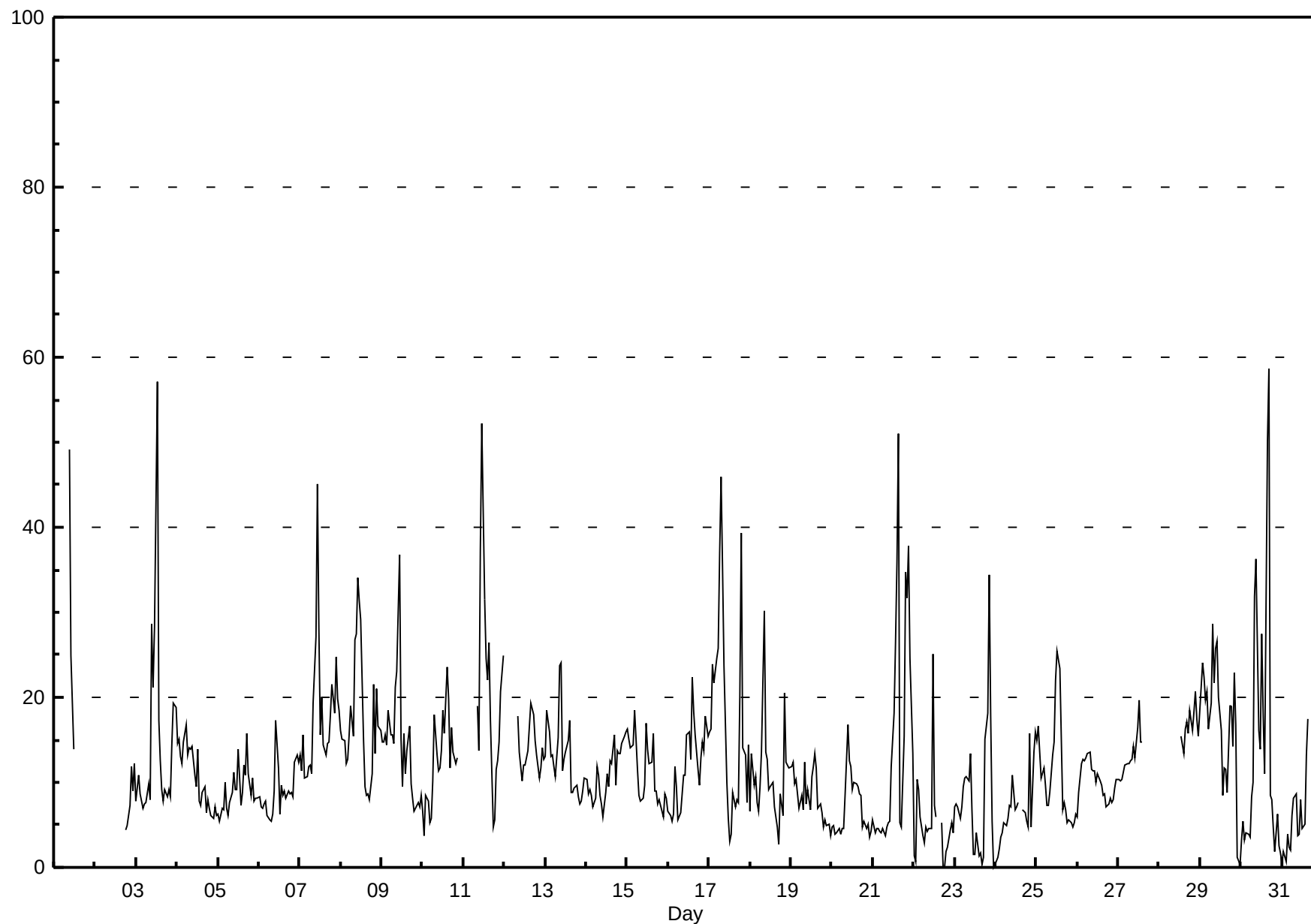


Hourly Maximums

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

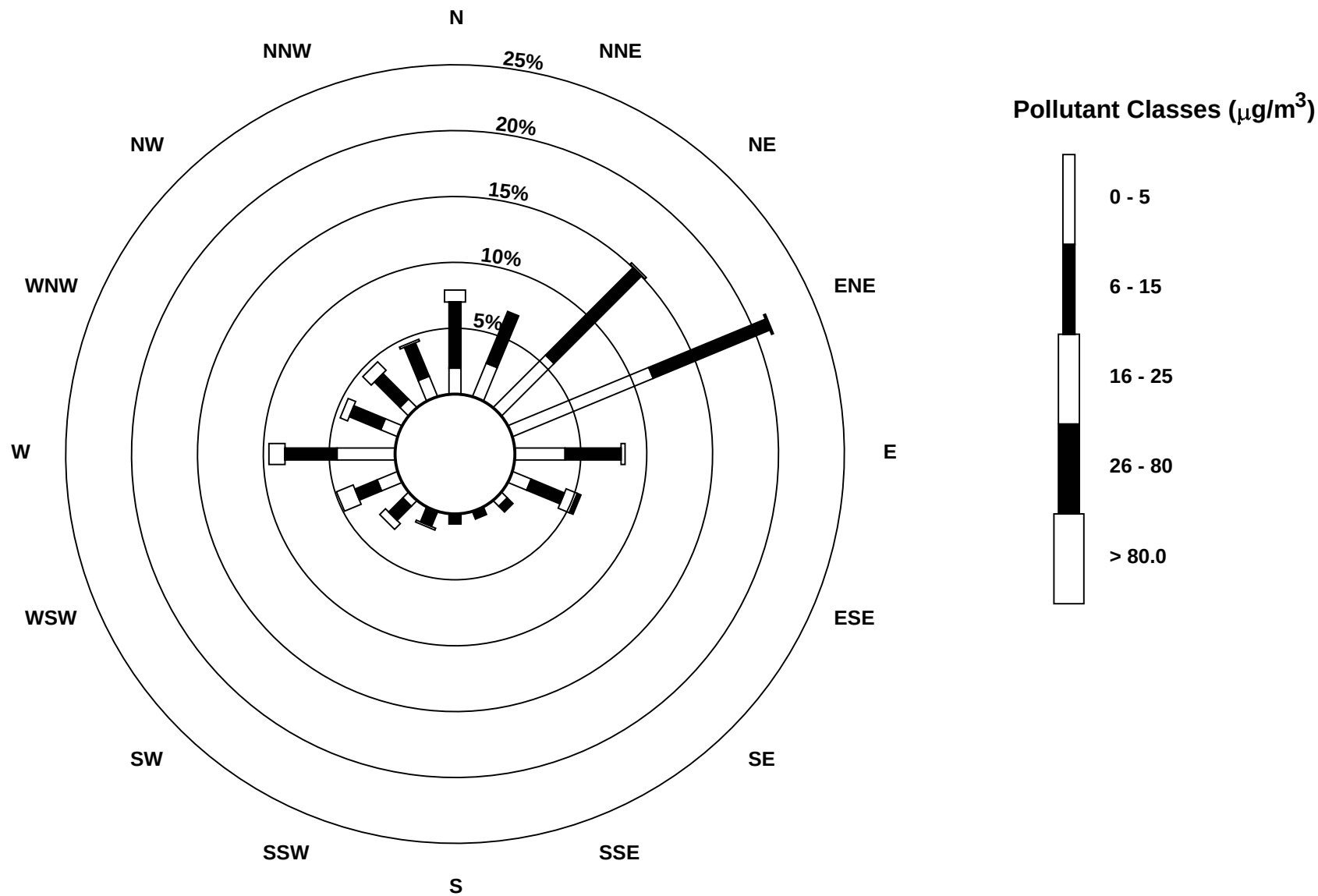
Evergreen Park - March 2011

Maximum Value: 58.7 μg/m³ on Mar 30 17:00																								Maximum Daily Average: 18.0 μg/m³ on Mar 17				Hours in Service: 744	
Minimum Value: 0 μg/m³ on Mar 22 18:00																								Minimum Daily Average: 5.2 μg/m³ on Mar 22				Hours of Data: 658	
Maximum Diurnal Average: 16.4 μg/m³ at hour 10																								Minimum Diurnal Average: 9.2 μg/m³ at hour 18				Hours of Missing Data: 86	
Monthly Average: 12.10 μg/m³																								Percentiles: P ₁ = 0.6 P ₁₀ = 4.5 Q ₁ = 7.1 Median = 10.5 Q ₃ = 15.0 P ₉₀ = 21.2 P ₉₉ = 45.7				Hours of Calibration: 2	
																								Percent Operational Time: 88.7					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Mar	N	N	N	N	N	N	N	N	N	49	25	14	N	N	N	N	N	N	N	N	N	N	N	N	--	49.2			
2-Mar	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	4	5	7	12	9	12	--	12.2			
3-Mar	8	11	9	8	7	8	8	10	8	29	21	28	57	17	13	9	8	9	8	9	8	14	19	19	14.4	57.2			
4-Mar	14	15	13	12	15	17	13	14	14	14	11	10	14	8	7	9	10	6	8	7	6	6	7	6	10.7	16.7			
5-Mar	6	5	7	7	10	7	6	8	9	11	9	9	14	7	9	12	11	16	11	9	10	8	8	8	9.1	15.8			
6-Mar	8	7	7	7	8	6	6	5	6	9	17	12	6	10	8	9	8	9	9	9	8	12	13	12	8.9	17.3			
7-Mar	13	11	16	10	11	12	12	11	19	27	45	28	16	20	14	13	15	15	18	22	18	25	20	18	17.9	45.1			
8-Mar	16	15	15	12	13	16	19	15	27	27	34	31	29	15	10	8	9	8	11	21	13	21	17	16	17.5	34.1			
9-Mar	15	15	16	14	18	16	16	15	21	23	37	15	9	16	11	14	17	10	8	7	7	8	7	9	14.2	36.8			
10-Mar	7	4	8	8	5	6	10	18	13	11	12	14	19	16	24	20	12	16	14	12	13	N	N	N	12.4	23.6			
11-Mar	N	N	N	N	N	N	N	N	19	14	37	52	32	25	22	26	17	5	6	12	13	15	21	25	--	52.1			
12-Mar	D	D	D	D	D	D	D	D	18	13	10	12	12	13	14	19	19	18	15	13	11	12	14	13	--	19.4			
13-Mar	13	19	16	13	13	12	11	15	24	24	11	13	13	15	17	9	9	9	10	8	7	8	9	11	12.9	24.1			
14-Mar	10	9	9	8	7	8	12	11	9	7	6	9	11	10	13	12	16	10	14	13	13	15	15	16	10.9	15.9			
15-Mar	16	15	14	14	18	15	11	8	8	8	10	17	14	12	12	16	9	9	7	8	7	6	9	8	11.4	18.4			
16-Mar	7	6	5	6	12	9	6	6	9	11	11	16	16	13	22	18	16	12	10	13	15	14	18	15	11.9	22.4			
17-Mar	16	16	24	22	24	26	37	46	35	24	10	6	3	4	9	7	8	8	20	39	14	13	8	14	18.0	45.9			
18-Mar	7	13	10	11	8	7	9	14	30	13	13	9	10	10	7	6	5	3	9	6	20	12	12	12	10.6	30.1			
19-Mar	12	12	10	10	9	7	8	7	12	7	9	7	11	12	13	12	7	7	6	5	6	5	5	4	8.5	13.3			
20-Mar	5	5	4	4	5	4	5	5	8	17	13	12	9	10	10	9	9	8	5	5	5	5	4	4	7.0	16.7			
21-Mar	6	4	5	5	4	4	5	4	5	5	5	12	18	26	36	51	5	5	15	35	32	38	24	13	15.1	51.0			
22-Mar	1	1	10	9	6	4	3	5	4	5	5	25	7	6	C	C	5	0	0	2	2	4	5	4	5.2	25.1			
23-Mar	7	8	7	6	7	10	11	11	10	13	7	2	2	4	1	2	0	1	15	18	34	18	5	0	8.3	34.5			
24-Mar	0	1	2	4	4	5	5	6	7	7	11	7	7	8	D	D	7	7	5	5	16	5	14	16	6.7	15.9			
25-Mar	15	17	14	11	12	10	7	7	9	13	15	22	25	24	23	7	8	7	5	6	5	5	5	6	11.6	25.4			
26-Mar	6	9	12	13	13	13	13	14	11	11	11	10	11	10	10	9	9	7	7	8	8	8	9	10	10.1	13.6			
27-Mar	10	10	10	11	12	12	12	13	13	14	13	16	20	15	15	D	D	D	D	D	D	D	D	D	--	19.7			
28-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	15	13	16	17	16	18	16	18	21	17	15	--	20.7			
29-Mar	18	24	22	20	21	16	19	29	22	26	27	20	16	9	12	11	9	19	19	14	23	17	1	0	17.2	28.7			
30-Mar	3	5	3	4	4	4	8	10	32	36	16	14	27	18	11	50	59	8	8	5	2	6	3	2	14.1	58.7			
31-Mar	0	2	1	4	2	2	6	8	9	4	4	8	5	5	13	17	N	N	4	4	11	5	2	2	5.3	17.5			
9.3 10.0 10.3 9.7 10.3 9.7 10.7 12.0 14.7 16.4 15.7 15.5 15.5 12.8 13.7 15.1 11.8 9.2 10.0 11.6 12.2 12.0 10.7 10.4																								Diurnal Average					
18.2 24.0 23.9 21.7 24.5 25.7 37.0 45.9 35.2 49.2 45.1 52.1 57.2 26.5 35.9 51.0 58.7 18.9 20.2 39.3 34.5 37.8 24.5 24.9																								Diurnal Maximum					
C - Calibration D - DAS Failure N - Not Valid																													



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Evergreen Park - March 2011



Hourly Averages

External Temperature (ET) - °C

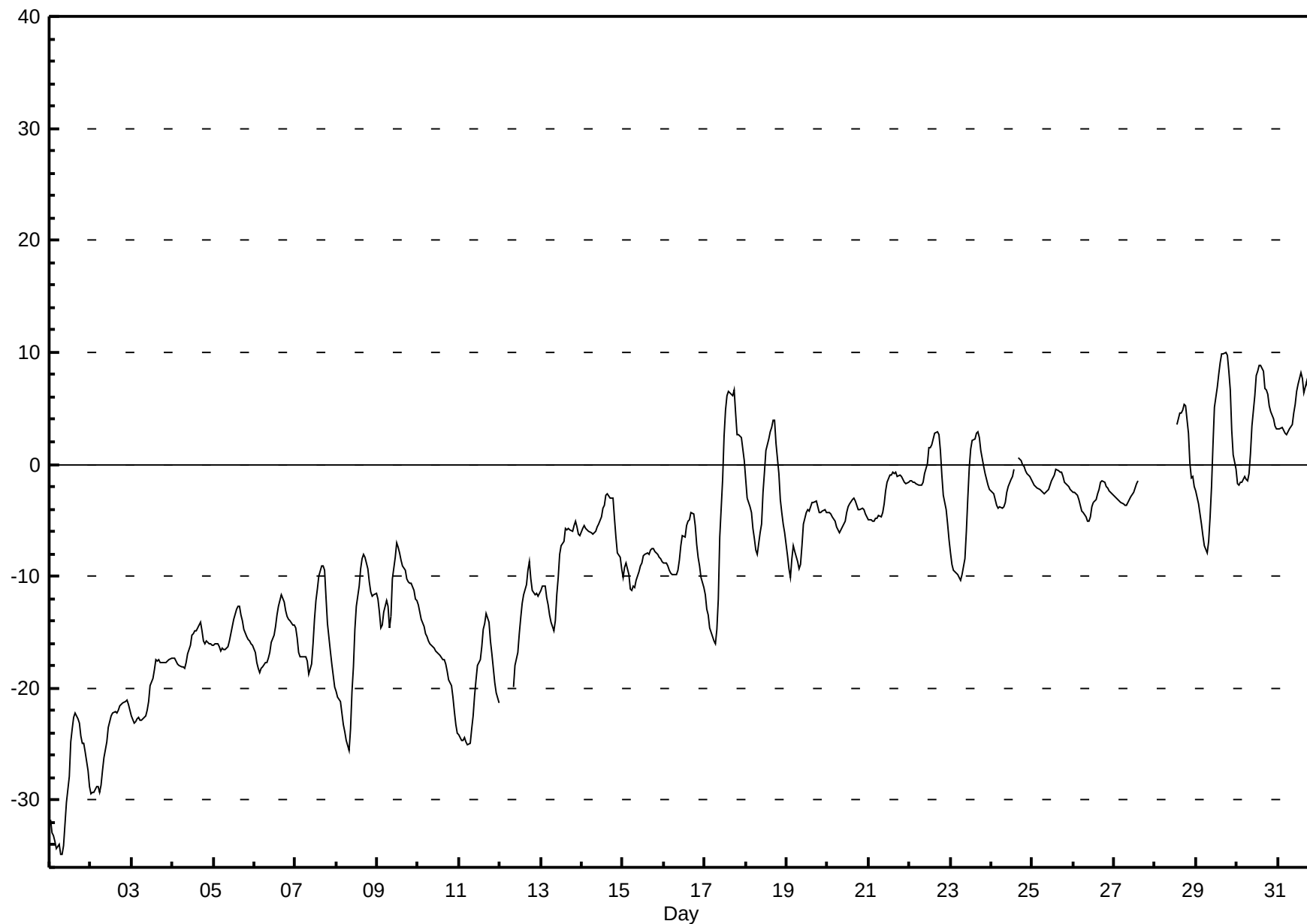
Evergreen Park - March 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 9.9 °C on Mar 29 18:00 Maximum Daily Average: 4.9 °C on Mar 31																								Hours in Service: 744 Hours of Data: 712 Hours of Missing Data: 32 Hours of Calibration: 0 Percent Operational Time: 95.7		
Minimum Value: -35 °C on Mar 1 08:00 Minimum Daily Average: -28.7 °C on Mar 1 Maximum Diurnal Average: -5.1 °C at hour 17 Minimum Diurnal Average: -12.1 °C at hour 7 Monthly Average: -8.75 °C Percentiles: P ₁ = -33.2 P ₁₀ = -21.5 Q ₁ = -15.7 Median = -7.7 Q ₃ = -2.2 P ₉₀ = 2.7 P ₉₉ = 8.8																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	-32	-33	-33	-34	-34	-34	-35	-35	-34	-32	-30	-28	-25	-24	-23	-22	-23	-23	-24	-25	-25	-26	-27	-29	-28.7	-22.2
2-Mar	-29	-29	-29	-29	-29	-29	-29	-27	-26	-25	-23	-23	-22	-22	-22	-22	-22	-22	-22	-21	-21	-21	-21	-22	-24.6	-21.0
3-Mar	-23	-23	-23	-23	-23	-23	-23	-23	-22	-22	-21	-20	-19	-18	-17	-18	-18	-18	-18	-18	-18	-18	-18	-17	-20.0	-17.4
4-Mar	-17	-17	-18	-18	-18	-18	-18	-18	-18	-17	-16	-15	-15	-15	-15	-15	-14	-15	-16	-16	-16	-16	-16	-16	-16.4	-14.1
5-Mar	-16	-16	-16	-16	-17	-16	-16	-17	-16	-16	-15	-15	-14	-13	-13	-13	-13	-14	-15	-15	-16	-16	-16	-16	-15.2	-12.6
6-Mar	-17	-18	-18	-19	-18	-18	-18	-18	-17	-17	-16	-15	-15	-13	-13	-12	-12	-12	-13	-14	-14	-14	-14	-14	-15.3	-11.6
7-Mar	-15	-16	-17	-17	-17	-17	-17	-18	-19	-18	-16	-14	-12	-11	-10	-9	-9	-9	-12	-14	-17	-18	-19	-20	-15.0	-9.0
8-Mar	-20	-21	-21	-22	-23	-24	-25	-26	-24	-20	-18	-15	-13	-11	-9	-8	-8	-8	-9	-10	-11	-12	-12	-12	-15.9	-8.1
9-Mar	-12	-13	-15	-14	-13	-12	-13	-15	-14	-10	-8	-7	-7	-8	-9	-9	-9	-10	-11	-11	-11	-11	-12	-12	-11.1	-7.0
10-Mar	-13	-13	-14	-15	-15	-15	-16	-16	-16	-16	-17	-17	-17	-17	-17	-17	-18	-19	-19	-20	-21	-22	-23	-24	-17.4	-12.6
11-Mar	-24	-25	-25	-24	-25	-25	-25	-24	-22	-21	-19	-18	-17	-16	-15	-14	-13	-14	-16	-17	-18	-20	-20	-21	-20.0	-13.4
12-Mar	D	D	D	D	D	D	D	D	D	-20	-18	-17	-15	-14	-12	-12	-11	-9	-9	-10	-11	-12	-12	-12	--	-8.7
13-Mar	-11	-11	-11	-12	-12	-13	-14	-15	-14	-12	-10	-8	-7	-7	-6	-6	-6	-6	-6	-6	-5	-6	-6	-6	-9.0	-5.1
14-Mar	-6	-5	-6	-6	-6	-6	-6	-6	-6	-6	-5	-5	-4	-4	-3	-3	-3	-3	-3	-5	-6	-8	-8	-9	-5.3	-2.7
15-Mar	-10	-9	-9	-10	-11	-11	-11	-11	-10	-10	-9	-9	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-9	-9.0	-7.5
16-Mar	-9	-9	-9	-10	-10	-10	-10	-10	-9	-9	-7	-6	-7	-5	-5	-5	-4	-4	-5	-7	-8	-9	-10	-11	-7.9	-4.3
17-Mar	-12	-13	-13	-15	-15	-16	-16	-15	-12	-6	-1	2	5	6	6	6	6	7	5	3	3	2	1	0	-3.4	6.6
18-Mar	-1	-3	-4	-4	-6	-7	-8	-8	-6	-5	-2	-1	1	2	3	3	4	4	2	-1	-3	-4	-5	-6	-2.3	3.9
19-Mar	-8	-9	-10	-8	-7	-8	-9	-9	-9	-7	-5	-4	-4	-4	-4	-3	-3	-3	-4	-4	-4	-4	-4	-4	-5.9	-3.3
20-Mar	-4	-4	-4	-5	-5	-6	-6	-6	-6	-5	-5	-4	-4	-4	-3	-3	-3	-4	-4	-4	-4	-4	-4	-5	-4.4	-3.1
21-Mar	-5	-5	-5	-5	-5	-5	-5	-5	-4	-4	-2	-2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-2	-2	-2	-2.7	-0.7
22-Mar	-1	-2	-2	-2	-2	-2	-2	-2	-2	-1	0	1	2	2	2	3	3	3	1	-1	-3	-4	-5	-7	-0.8	2.9
23-Mar	-8	-9	-9	-10	-10	-10	-10	-10	-8	-6	-3	0	1	2	2	3	3	2	1	0	-1	-1	-2	-2	-3.5	2.9
24-Mar	-2	-3	-3	-4	-4	-4	-4	-4	-3	-3	-2	-1	-1	0	D	D	1	0	0	0	-1	-1	-1	-1	-1.9	0.6
25-Mar	-2	-2	-2	-2	-2	-2	-3	-3	-2	-2	-2	-1	-1	-1	0	-1	-1	-1	-1	-2	-2	-2	-2	-2	-1.7	-0.4
26-Mar	-2	-2	-3	-3	-4	-4	-4	-5	-5	-5	-5	-4	-3	-3	-3	-2	-2	-2	-2	-2	-2	-2	-2	-3	-3.1	-1.5
27-Mar	-3	-3	-3	-3	-3	-4	-4	-4	-3	-3	-3	-2	-2	-2	-1	D	D	D	D	D	D	D	D	D	--	-1.4
28-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	4	5	5	5	5	5	3	0	-1	-1	-2	--	5.4
29-Mar	-2	-3	-4	-5	-6	-7	-8	-7	-5	-2	2	5	7	8	9	10	10	10	10	8	7	3	1	0	1.6	9.9
30-Mar	-2	-2	-2	-2	-1	-1	-1	-1	1	3	6	8	8	9	9	8	7	7	6	5	5	4	3	3	3.4	8.9
31-Mar	3	3	3	3	3	3	3	3	4	5	5	6	7	8	8	6	7	7	7	6	5	5	4	4	4.9	8.2
																									Diurnal Average	
																									Diurnal Maximum	
D - DAS Failure																										

Hourly Averages

External Temperature (ET) - °C

Evergreen Park - March 2011



**PASZA**

Peace Air Shed Zone Association

Hourly Averages

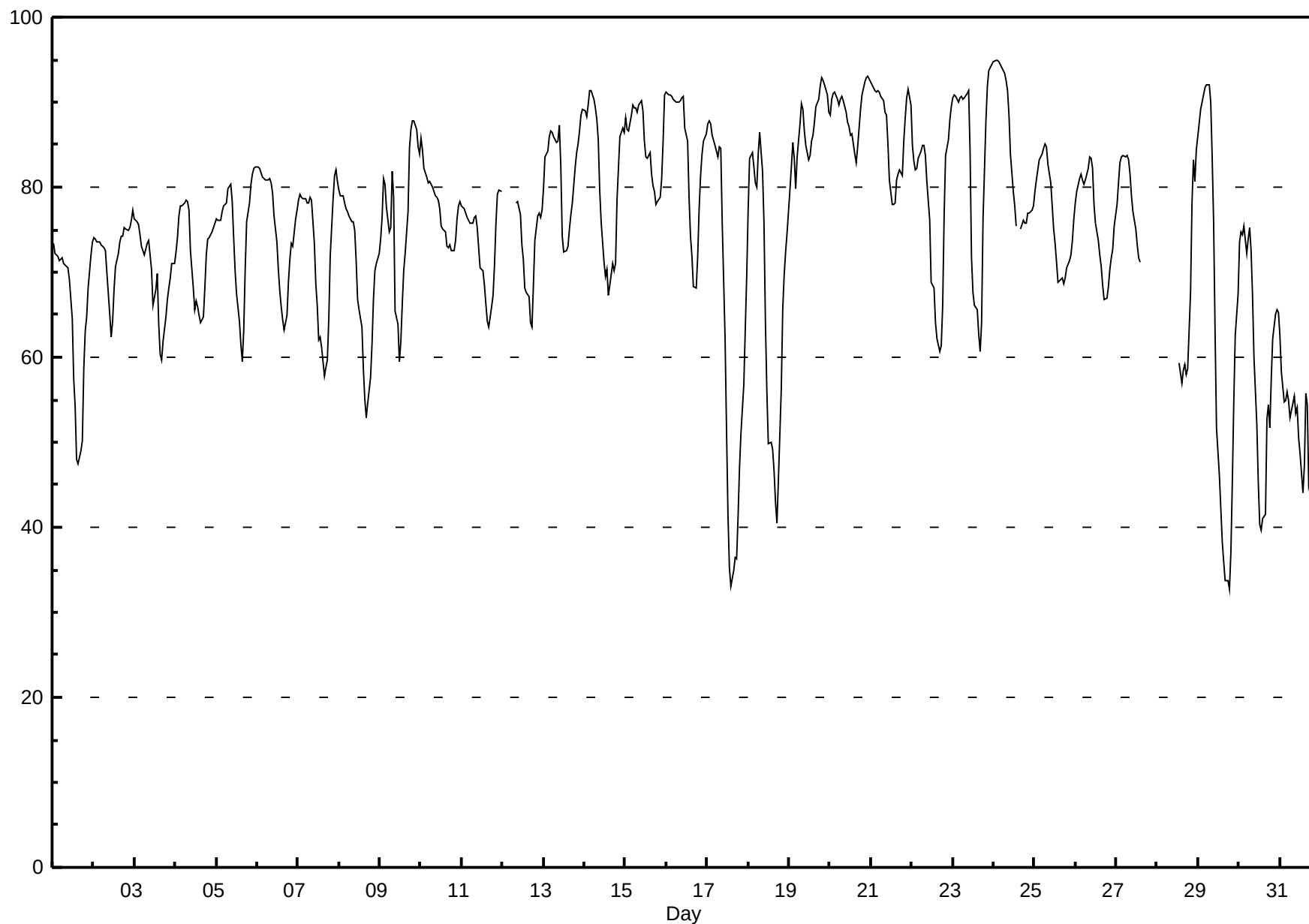
Relative Humidity (RH) - %

Evergreen Park - March 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 95.0 % on Mar 24 03:00 Maximum Daily Average: 89.0 % on Mar 20																								Hours in Service: 744 Hours of Data: 712 Hours of Missing Data: 32 Hours of Calibration: 0 Percent Operational Time: 95.7		
Minimum Value: 33 % on Mar 29 19:00 Maximum Diurnal Average: 82.0 % at hour 4 Monthly Average: 74.72 %												Minimum Daily Average: 52.1 % on Mar 31 Minimum Diurnal Average: 63.6 % at hour 16 Percentiles: P ₁ = 36.2 P ₁₀ = 57.5 Q ₁ = 68.4 Median = 76.4 Q ₃ = 83.8 P ₉₀ = 89.9 P ₉₉ = 93.9														
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-Mar	73	72	72	72	71	72	71	71	71	70	69	65	57	54	48	48	49	50	59	63	65	68	72	74	64.8	73.6
2-Mar	74	74	74	74	73	73	73	73	70	65	62	64	68	71	72	73	74	74	75	75	75	75	76	77	72.3	77.3
3-Mar	76	76	76	74	73	73	72	73	74	72	70	66	68	70	64	60	60	62	65	67	68	69	71	71	69.6	76.2
4-Mar	72	74	77	78	78	78	78	78	77	73	68	66	67	66	65	64	65	68	72	74	74	75	75	76	72.4	78.5
5-Mar	76	76	76	77	78	78	78	80	80	78	74	70	67	64	62	60	63	70	76	78	80	81	82	82	74.5	82.3
6-Mar	82	82	82	81	81	81	81	81	81	79	77	74	70	68	66	64	63	65	69	72	73	73	76	77	74.9	82.4
7-Mar	78	79	79	79	79	78	78	79	79	73	69	66	62	62	61	58	59	60	64	72	79	81	82	81	72.3	82.0
8-Mar	80	79	79	78	78	77	77	76	76	75	71	67	66	64	59	55	53	55	58	62	67	70	71	72	69.2	79.7
9-Mar	74	76	81	80	78	75	75	82	79	65	64	60	62	66	70	72	77	85	87	88	88	87	85	84	76.6	87.9
10-Mar	86	84	82	81	81	81	80	80	79	79	78	78	75	75	75	73	73	73	73	73	74	76	78	78	77.7	85.8
11-Mar	78	78	77	76	76	76	76	76	77	75	73	71	70	68	66	64	64	66	67	71	76	79	80	79	73.3	79.7
12-Mar	D	D	D	D	D	D	D	D	78	78	77	73	72	68	68	67	64	64	68	74	77	77	77	77	--	78.3
13-Mar	80	84	84	86	87	87	86	85	85	87	83	74	72	73	73	75	77	78	82	84	85	87	88	89	82.1	89.1
14-Mar	89	88	90	91	91	90	89	88	86	80	76	71	69	70	67	68	71	70	71	78	82	86	87	86	80.7	91.4
15-Mar	88	87	87	88	90	89	89	89	90	90	89	85	84	83	84	82	80	80	78	78	79	81	85	91	85.3	90.8
16-Mar	91	91	91	91	90	90	90	90	90	91	91	87	85	79	74	72	68	68	72	77	81	84	85	86	84.0	91.2
17-Mar	88	88	88	86	85	84	84	85	85	76	62	52	42	35	33	35	36	36	41	47	51	57	63	70	62.8	87.8
18-Mar	77	83	84	82	80	80	84	86	82	76	64	56	50	50	49	47	43	40	46	56	66	70	72	75	66.6	86.4
19-Mar	80	82	85	83	80	84	88	90	89	87	85	83	84	85	86	88	89	90	92	93	93	92	91	89	87.0	92.8
20-Mar	89	90	91	91	90	90	90	91	90	89	88	87	86	86	84	83	85	87	89	91	92	93	93	93	89.0	93.1
21-Mar	92	92	91	91	91	91	90	89	88	85	81	78	78	78	81	81	82	81	85	88	91	92	90	90	86.6	92.3
22-Mar	85	83	82	82	83	84	85	85	84	81	76	69	69	68	64	62	61	61	66	77	84	86	88	90	77.2	89.6
23-Mar	90	91	91	90	90	91	90	91	91	91	84	72	68	66	66	63	61	64	76	88	92	94	94	94	82.8	94.4
24-Mar	95	95	95	95	94	94	93	93	91	89	84	79	78	75	D	D	75	76	76	76	77	77	77	78	84.6	95.0
25-Mar	80	81	82	83	84	85	85	85	83	81	78	75	73	71	69	69	69	69	69	71	71	72	74	76	76.4	85.1
26-Mar	78	79	81	82	81	80	81	82	84	83	82	78	76	74	72	71	68	67	67	68	70	72	73	75	76.0	83.6
27-Mar	78	81	83	84	84	84	84	83	82	79	77	75	73	72	71	D	D	D	D	D	D	D	D	D	--	83.7
28-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	59	57	58	59	58	59	68	78	83	81	84	--	84.4
29-Mar	86	89	90	91	92	92	92	90	84	76	63	52	46	42	38	36	34	34	33	37	45	55	63	67	63.6	92.0
30-Mar	74	75	74	75	72	74	75	73	67	60	52	45	40	40	41	42	53	54	52	57	62	65	66	65	60.6	75.4
31-Mar	63	58	55	55	56	55	53	54	55	53	54	50	49	44	47	56	54	45	46	47	49	50	50	52	52.1	62.6
81.1 81.6 82.0 82.0 81.6 81.5 81.7 82.0 80.9 78.0 74.2 69.7 67.5 66.1 64.3 63.6 64.3 65.0 67.6 71.5 74.7 76.8 78.2 79.3																								Diurnal Average		
94.8 95.0 95.0 94.8 94.5 94.0 93.5 92.6 91.3 91.3 90.7 87.1 86.0 86.2 86.2 87.6 89.4 90.4 91.9 92.8 92.6 93.7 94.1 94.4																								Diurnal Maximum		
D - DAS Failure																										

Hourly Averages

Relative Humidity (RH) - %
Evergreen Park - March 2011



**PASZA**

Peace Air Shed Zone Association

Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	2	1	0	0	1	1	1	1	2	4	4	4	3	5	5	5	5	5	3	2	2	1	1	0	1.1	5.0
Dir	225	221	205	254	203	250	225	244	259	269	263	267	9	359	7	27	21	38	43	39	47	6	2	12	340.3	7.4
2 Spd	0	1	0	1	1	0	0	0	2	5	5	7	7	8	8	8	7	7	6	3	1	1	2	5	2.8	8.0
Dir	30	44	355	330	302	74	70	192	112	74	69	65	67	68	74	65	61	69	63	64	354	336	243	276	62.2	68.2
3 Spd	4	4	5	5	5	5	6	6	5	6	5	5	4	4	5	5	3	3	1	2	2	2	2	1	2.6	5.6
Dir	283	264	253	257	265	270	270	257	270	274	277	269	277	13	359	8	23	8	29	47	52	20	25	35	294.3	256.9
4 Spd	1	0	1	0	0	1	1	1	1	2	1	1	6	6	9	9	7	7	4	5	6	7	6	5	3.2	8.9
Dir	191	50	50	308	220	228	326	219	201	130	121	65	52	58	62	57	60	59	47	65	77	76	66	67	65.7	62.2
5 Spd	5	5	5	5	4	4	4	4	3	5	6	6	6	5	7	6	7	6	5	4	3	3	2	3	4.6	6.8
Dir	73	73	66	62	65	71	77	72	81	73	64	52	55	44	54	55	66	65	55	56	53	60	67	57	62.5	65.7
6 Spd	1	1	1	1	1	1	1	1	1	3	4	6	7	7	6	5	5	6	3	2	1	2	2	1	2.7	7.0
Dir	52	20	2	23	48	66	80	88	64	19	53	51	51	42	55	42	44	52	52	27	24	321	353	351	42.0	51.1
7 Spd	1	2	2	2	2	2	1	2	3	3	5	5	4	4	4	3	4	3	3	1	1	1	1	2	1.8	4.7
Dir	315	311	329	356	318	291	280	322	275	245	268	279	349	10	2	4	32	35	23	360	324	324	306	282	328.1	267.8
8 Spd	1	1	1	1	1	1	1	0	2	1	4	4	5	4	6	5	7	5	3	2	1	2	1	2	1.5	6.8
Dir	345	345	303	311	254	262	45	10	254	237	249	342	7	12	13	37	63	62	59	357	29	272	281	338	5.6	62.7
9 Spd	2	1	0	0	1	2	1	0	2	3	5	6	8	10	11	14	10	10	6	5	7	5	3	2	3.8	13.6
Dir	265	214	212	196	237	325	276	134	234	9	1	63	70	63	54	61	62	53	42	9	1	22	23	5	43.2	61.4
10 Spd	4	7	6	5	5	5	6	7	8	7	8	9	9	9	10	8	6	8	6	4	1	0	1	1	5.7	9.6
Dir	38	44	65	59	57	62	55	61	54	56	57	57	55	52	44	48	63	58	57	51	37	314	345	266	53.8	44.0
11 Spd	1	1	1	1	1	0	0	1	3	2	3	5	7	7	7	9	7	7	3	2	1	1	1	0	2.3	8.7
Dir	321	335	302	329	284	273	353	117	125	131	60	53	59	57	56	58	67	63	34	1	255	262	248	41	57.4	58.2
12 Spd	D	D	D	D	D	D	D	D	2	1	2	2	3	4	3	3	2	2	2	1	1	1	5	3	--	4.5
Dir	D	D	D	D	D	D	D	D	256	299	291	343	284	264	298	20	307	20	42	34	97	38	355	347	--	354.9
13 Spd	3	1	1	2	1	1	1	1	3	2	3	4	7	7	7	9	9	7	6	5	6	4	0	4	2.9	8.8
Dir	188	193	29	50	360	203	170	35	45	37	38	20	56	74	66	67	71	80	70	57	79	95	298	273	65.1	70.7
14 Spd	3	2	3	4	4	4	2	3	3	4	5	4	6	6	6	5	4	4	3	2	1	2	2	2	2.4	5.7
Dir	283	343	313	299	339	326	331	273	305	303	334	298	278	343	356	19	40	47	85	45	34	7	343	228	333.4	343.1
15 Spd	2	1	1	0	1	2	6	7	8	9	8	9	6	8	8	8	7	4	5	3	4	1	1	3	4.1	9.2
Dir	351	353	353	308	273	33	60	73	71	64	60	65	77	62	51	59	46	41	8	5	3	38	320	342	49.6	65.4
16 Spd	2	2	2	3	2	2	1	2	1	1	1	2	4	4	5	6	6	6	4	2	2	1	2	2	2.1	6.3
Dir	348	79	69	74	74	71	67	68	108	160	162	315	12	63	26	56	62	57	57	14	360	339	329	330	47.3	62.0
17 Spd	1	0	1	1	1	1	2	1	1	2	3	4	9	13	12	9	7	5	4	3	5	6	6	3	3.4	12.6
Dir	256	289	251	216	317	196	223	213	214	92	331	310	283	285	278	280	287	301	284	245	223	228	221	208	269.3	285.1
18 Spd	1	1	1	3	2	1	1	1	2	4	6	6	4	5	5	5	4	5	4	2	1	3	3	1	1.5	5.5
Dir	234	257	307	258	259	255	262	284	284	275	275	279	293	1	12	17	25	63	69	56	316	11	16	352	337.5	279.3
19 Spd	0	1	0	1	4	4	3	5	6	3	7	5	8	9	7	5	5	4	6	6	7	6	4	6	4.1	8.9
Dir	337	306	64	163	70	63	40	52	48	38	52	30	45	44	39	37	31	358	340	340	339	348	35	41	29.1	44.1
20 Spd	6	4	3	3	5	3	3	4	4	6	5	5	8	9	11	11	11	10	10	10	9	9	9	8	6.9	11.5
Dir	49	56	59	53	53	39	48	56	58	65	75	81	75	69	63	62	65	65	65	64	69	71	76	76	65.0	61.5
21 Spd	8	8	6	5	5	5	5	5	6	6	7	7	8	9	8	7	5	6	7	6	7	7	7	6	6.3	8.8
Dir	77	78	71	79	86	85	90	75	79	82	92	98	104	103	106	97	90	82	117	105	102	101	102	109	92.9	103.3
22 Spd	5	5	6	6	5	5	5	4	5	5	4	1	3	4	6	5	5	4	4	1	1	1	1	1	2.6	6.4
Dir	108	110	120	126	123	123	129	122	123	129	128	154	2	23	6	20	34	47	52	45	41	20	349	1	88.6	126.0

**PASZA**

Peace Air Shed Zone Association

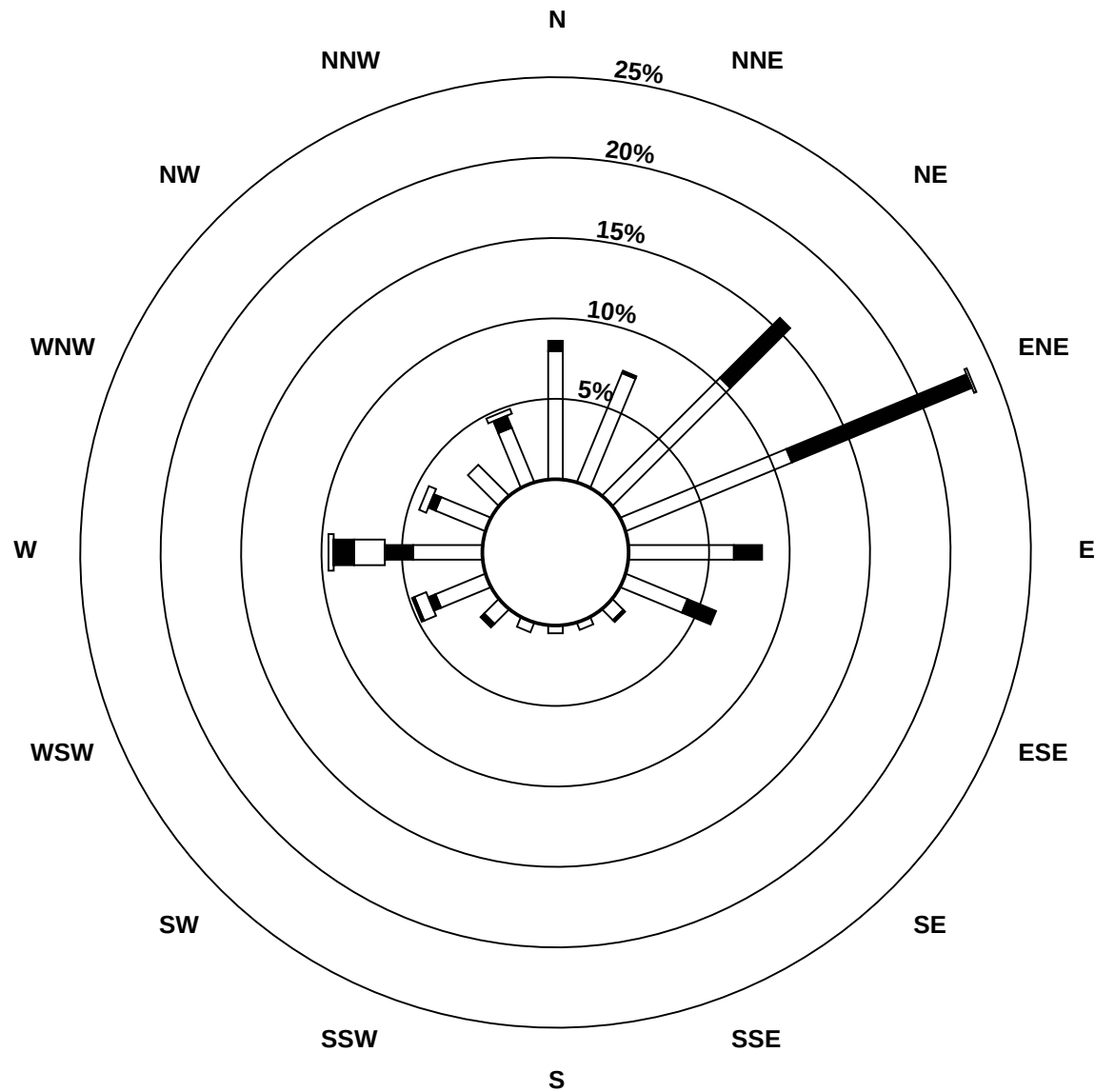
Hourly Averages

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

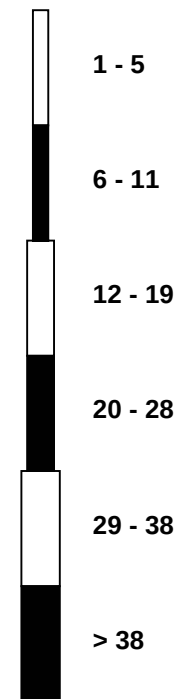
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
23 Spd	1	1	1	2	1	2	2	2	2	3	3	5	8	7	7	7	6	8	7	7	6	5	5	5	3.0	7.7			
Dir	316	319	350	2	317	303	352	15	327	269	346	27	72	89	67	72	84	79	103	107	105	105	93	92	73.4	79.3			
24 Spd	3	4	4	4	3	2	2	1	2	1	1	3	4	4	D	D	4	5	4	4	4	5	5	4	3.0	5.4			
Dir	75	66	68	73	74	48	56	59	52	312	282	19	27	52	D	D	60	65	76	87	83	92	100	106	69.1	65.0			
25 Spd	5	3	4	4	3	3	3	3	4	5	4	4	5	4	5	6	6	4	5	4	5	3	4	4	3.9	6.3			
Dir	105	103	102	105	91	76	80	79	92	97	121	123	106	104	61	61	65	82	68	73	71	70	73	80	86.3	60.5			
26 Spd	3	3	4	5	4	5	3	4	4	5	5	4	6	6	5	4	2	3	2	3	2	3	3	3	3.5	6.1			
Dir	90	94	104	102	108	104	102	66	65	64	57	55	52	51	56	47	52	96	95	92	84	84	96	105	77.3	51.9			
27 Spd	3	3	3	2	3	3	3	2	3	3	4	4	5	4	4	D	D	D	D	D	D	D	D	D	--	5.1			
Dir	92	85	93	90	91	96	86	83	77	76	56	45	51	37	20	D	D	D	D	D	D	D	D	D	--	51.0			
28 Spd	D	D	D	D	D	D	D	D	D	D	D	D	D	6	5	5	4	3	3	2	1	3	1	0	--	5.7			
Dir	D	D	D	D	D	D	D	D	D	D	D	D	D	11	13	16	7	16	46	21	359	316	6	15	--	11.1			
29 Spd	0	2	1	1	1	1	1	1	1	2	3	3	3	4	2	2	5	5	2	6	1	1	1	1	1.0	6.0			
Dir	226	251	9	299	258	336	233	308	303	244	264	11	7	10	355	277	213	242	176	247	235	189	86	99	269.8	247.3			
30 Spd	1	1	1	1	1	2	1	0	1	1	12	23	26	26	25	27	30	24	29	27	20	17	13	13	12.8	30.2			
Dir	222	73	53	66	69	59	218	283	252	297	272	274	272	275	273	271	267	267	260	260	257	258	257	259	266.9	266.7			
31 Spd	12	12	11	6	6	9	12	11	11	17	15	18	14	11	14	18	13	22	18	17	17	17	14	14	12.7	21.7			
Dir	255	256	263	267	270	253	257	260	259	264	272	270	282	289	330	342	298	276	278	272	266	263	262	262	274.1	276.2			
Spd	0.5	0.7	0.9	0.8	0.7	0.7	0.6	0.9	0.8	0.8	1.3	2.0	2.9	3.7	4.5	4.7	3.5	3.1	2.0	1.2	0.8	0.7	0.7	0.6	Diurnal Average				
Dir	55.0	52.4	51.5	59.8	54.3	53.4	58.4	56.8	57.4	39.0	7.2	2.6	22.1	28.9	24.4	32.5	37.4	39.1	35.8	8.5	14.8	6.6	17.3	350.7	Diurnal Maximum				
Spd	12.4	12.0	11.1	6.4	5.6	9.0	12.1	10.6	10.5	17.1	14.7	23.4	26.2	25.5	24.6	26.6	30.2	24.3	29.2	26.8	20.5	17.3	14.4	13.6					
Dir	254.7	256.0	263.3	126.0	269.9	252.7	257.2	260.5	259.3	264.4	271.7	274.3	272.4	274.7	273.3	271.1	266.7	266.9	260.4	259.7	257.0	262.7	262.2	262.4					
Maximum Speed Value: 30 km/h on Mar 30 17:00																		Minimum Speed Value: 0 km/h on Mar 2 06:00										Hours in Service: 744	
Maximum Daily Speed Average: 12.8 km/h on Mar 31																		Minimum Daily Speed Average: 1.0 km/h on Mar 29										Hours of Data: 712	
Maximum Diurnal Speed Average: 4.7 km/h at hour 16																		Minimum Diurnal Speed Average: 0.5 km/h at hour 1										Hours of Missing Data: 32	
Monthly Average Velocity: 1.58 km/h 30.69 deg																		Speed Percentiles: P ₁ = 0.2 P ₁₀ = 0.9 Q ₁ = 1.7 Median = 3.9 Q ₃ = 5.7 P ₉₀ = 8.1 P ₉₉ = 24.1										Percent Operational Time: 95.7	
All monthly, daily, and diurnal averages have been calculated using vector methods																													
D - DAS Failure																													
Frequency Distribution																													
Speed Range (km/h)																													
Direction	0 to 5		5 to 11		11 to 19		19 to 28		28 to 38		> 38		Total																
North	92		15		1		0		0		0		108																
NorthEast	118		99		3		0		0		0		220																
East	86		56		0		0		0		0		142																
SouthEast	13		6		0		0		0		0		19																
South	13		0		0		0		0		0		13																
SouthWest	34		3		0		0		0		0		37																
West	59		21		20		9		2		0		111																
NorthWest	58		2		2		0		0		0		62																
Total	473		202		26		9		2		0		712																

Wind Rose

Wind Speed (WS) (km/h)
Evergreen Park - March 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 - March 2011**

Maximum Speed: 30 km/h on Mar 30 17:00																				Maximum Daily Speed Average: 13.9 km/h on Mar 31										Hours in Service: 744	
Minimum Speed: 1 km/h on Mar 2 07:00																				Minimum Daily Speed Average: 2.6 km/h on Mar 29										Hours of Data: 712	
Maximum Diurnal Speed Average: 7.8 km/h at hour 16																				Minimum Diurnal Speed Average: 2.9 km/h at hour 5										Hours of Missing Data: 32	
Monthly Average Speed: 4.82 km/h																				Percentiles: P ₁ = 0.8 P ₁₀ = 1.4 Q ₁ = 2.2 Median = 4.2 Q ₃ = 6.0 P ₉₀ = 8.4 P ₉₉ = 24.2										Percent Operational Time: 95.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Mar	2	1	1	1	1	2	2	2	2	4	4	5	3	5	5	5	5	3	2	2	1	1	1	1	2.7	5.3					
2-Mar	1	1	1	1	1	1	1	1	2	5	5	7	7	8	8	8	7	7	6	3	1	2	2	5	3.9	8.2					
3-Mar	4	4	5	6	6	5	6	6	5	6	5	5	5	5	5	5	3	3	2	2	2	2	1	4.1	5.7						
4-Mar	1	1	1	1	1	1	1	1	1	3	3	3	6	6	9	9	8	7	4	5	6	7	7	5	4.0	9.2					
5-Mar	5	5	6	5	4	4	5	4	3	5	6	6	6	6	7	7	7	6	5	4	3	3	2	3	4.8	7.1					
6-Mar	1	2	1	2	1	1	1	1	2	3	4	6	7	7	6	6	5	6	3	2	1	3	2	1	3.2	7.2					
7-Mar	1	3	3	3	2	2	2	3	3	3	5	5	5	4	4	3	4	3	3	1	1	1	1	2	2.8	5.0					
8-Mar	2	2	2	2	1	1	1	1	2	2	4	5	5	5	6	6	7	5	3	2	2	2	3	2	2.9	7.0					
9-Mar	2	2	1	1	2	2	1	2	3	4	5	7	9	10	11	14	10	11	7	5	7	5	4	3	5.3	13.8					
10-Mar	4	7	6	5	5	5	7	7	8	8	8	9	9	9	10	8	7	8	6	4	1	1	1	1	6.0	9.8					
11-Mar	1	1	1	2	1	1	1	1	3	3	4	6	7	7	7	9	8	7	3	2	1	1	1	1	3.4	8.9					
12-Mar	D	D	D	D	D	D	D	D	2	2	3	4	4	4	4	3	3	3	3	3	3	4	6	4	--	6.0					
13-Mar	4	6	2	2	2	2	2	2	3	3	4	5	7	7	7	9	9	7	6	5	6	4	3	4	4.6	9.0					
14-Mar	4	3	4	4	4	4	3	4	3	5	6	5	6	7	6	5	4	4	3	2	2	2	2	3	3.9	6.9					
15-Mar	2	2	2	2	2	2	6	7	8	9	8	10	6	8	8	8	7	5	5	4	4	2	1	3	5.0	9.6					
16-Mar	2	2	3	3	2	2	1	2	2	2	2	2	5	5	5	6	7	6	4	2	2	2	2	2	3.0	6.5					
17-Mar	2	1	1	2	1	2	2	1	2	3	4	4	10	13	13	9	7	6	4	4	5	6	6	3	4.5	12.7					
18-Mar	1	1	1	3	3	1	1	1	3	5	6	6	5	5	5	5	4	6	5	2	2	3	3	2	3.3	5.9					
19-Mar	1	2	2	3	4	4	3	5	6	4	7	5	8	9	7	6	5	4	6	7	7	6	4	6	5.0	9.0					
20-Mar	6	4	3	3	5	4	4	4	4	6	6	6	8	9	11	12	11	10	10	10	9	9	9	8	7.1	11.6					
21-Mar	8	8	7	5	5	5	5	5	6	6	7	7	8	9	8	7	5	6	8	7	7	7	7	6	6.6	9.1					
22-Mar	5	5	6	7	6	6	5	5	5	6	5	3	5	4	6	6	5	4	4	1	1	1	1	2	4.3	6.6					
23-Mar	1	2	2	2	2	3	3	3	2	3	3	6	8	8	7	7	6	8	8	7	6	5	5	5	4.6	8.0					
24-Mar	3	4	4	4	3	2	2	2	2	2	2	3	5	4	D	D	4	6	4	4	4	5	5	4	3.5	5.5					
25-Mar	5	4	4	4	3	3	3	3	4	5	5	5	5	5	5	6	6	5	5	5	5	4	4	4	4.4	6.4					
26-Mar	3	3	4	5	5	5	3	4	4	6	6	4	6	6	5	4	3	3	2	3	2	3	3	3	4.0	6.3					
27-Mar	3	3	3	2	3	3	3	2	3	4	4	4	5	5	4	D	D	D	D	D	D	D	D	D	--	5.3					
28-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	6	5	5	5	4	3	2	1	3	3	2	--	5.9					
29-Mar	2	2	1	2	3	2	1	2	2	2	3	3	4	4	2	2	5	5	2	7	2	2	1	1	2.6	6.9					
30-Mar	1	1	2	2	2	2	1	1	1	2	12	24	26	26	25	27	30	24	29	27	21	17	13	13	13.7	30.5					
31-Mar	12	12	11	6	6	9	12	11	11	17	15	18	14	11	16	18	14	22	19	17	17	17	14	14	13.9	21.8					
3.1 3.2 3.1 3.0 2.9 2.9 3.0 3.2 3.6 4.5 5.3 6.3 7.2 7.3 7.7 7.8 7.1 6.8 5.8 5.0 4.4 4.4 4.0 3.8																									Diurnal Average						
12.4 12.1 11.1 6.6 5.8 9.0 12.2 10.7 10.6 17.3 14.8 23.6 26.4 25.6 24.8 26.8 30.5 24.4 29.3 27.0 20.6 17.4 14.4 13.7																									Diurnal Maximum						
D - DAS Failure																															
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

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Peace Air Shed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Evergreen Park - March 2011

Maximum Value: 98.0 deg on Mar 15 04:00																		Hours in Service: 744							
Minimum Value: 4.7 deg on Mar 30 23:00																		Hours of Data: 712							
																		Hours of Missing Data: 32							
Percentiles: P ₁ = 5.3 P ₁₀ = 10.7 Q ₁ = 14.2 Median = 21.0 Q ₃ = 39.6 P ₉₀ = 66.7 P ₉₉ = 91.6																		Hours of Calibration: 0							
																		Percent Operational Time: 95.7							
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-Mar	29	89	93	76	46	44	73	67	15	11	13	34	29	22	22	19	29	12	8	25	18	66	48	70	93.3
2-Mar	79	75	61	28	42	92	83	87	27	16	28	13	17	14	16	11	14	12	12	25	31	45	21	10	92.3
3-Mar	10	12	8	9	9	11	10	11	11	12	11	14	30	24	20	20	18	19	27	16	25	26	22	38	38.2
4-Mar	41	90	34	71	92	69	45	57	48	68	67	77	27	21	16	12	23	10	13	12	13	12	12	13	91.6
5-Mar	15	18	18	11	13	13	14	16	18	20	20	23	33	29	20	24	17	15	13	9	8	9	11	9	33.4
6-Mar	12	17	31	29	50	22	40	43	47	34	25	21	14	17	23	21	21	13	15	48	68	23	28	28	67.7
7-Mar	27	20	28	33	34	39	45	19	13	11	12	12	34	24	23	34	23	18	13	46	53	34	56	43	55.9
8-Mar	51	46	34	36	38	56	79	57	73	49	9	39	16	20	20	25	15	15	10	29	44	24	79	43	79.0
9-Mar	55	85	86	89	56	43	83	92	72	32	23	27	20	14	13	9	11	10	15	20	22	23	33	42	91.8
10-Mar	17	10	15	13	11	12	12	13	13	15	15	14	15	16	13	15	15	12	11	13	58	72	49	64	71.8
11-Mar	22	30	41	67	66	81	92	52	21	41	48	24	17	19	20	13	17	14	17	27	66	68	70	90	91.9
12-Mar	D	D	D	D	D	D	D	D	52	57	46	53	41	19	41	39	55	49	48	62	72	70	66	52	72.1
13-Mar	49	85	73	36	64	55	75	71	23	42	34	34	14	22	19	12	14	22	19	28	15	25	81	16	85.3
14-Mar	49	43	38	24	17	27	56	37	29	24	34	36	26	39	26	33	18	25	25	37	37	59	46	64	63.6
15-Mar	59	55	59	98	75	28	10	13	14	12	15	17	22	14	13	12	25	21	25	24	27	27	39	19	98.0
16-Mar	36	32	19	15	24	20	25	24	43	51	70	50	23	31	25	19	18	14	16	16	49	57	35	27	70.1
17-Mar	46	96	44	85	72	95	15	82	84	61	48	31	14	10	7	8	11	20	9	22	8	7	6	20	96.4
18-Mar	66	63	60	13	52	67	58	42	31	34	11	21	51	16	19	20	25	20	9	37	68	14	13	35	68.3
19-Mar	72	61	83	91	12	9	14	11	17	32	16	24	14	12	13	15	15	23	11	11	8	13	19	12	91.2
20-Mar	12	15	37	16	13	16	14	16	22	13	23	23	18	17	13	10	11	11	10	9	10	11	12	11	36.7
21-Mar	10	11	10	16	12	13	14	11	13	17	21	19	20	17	16	19	18	19	16	15	14	13	13	14	20.8
22-Mar	13	14	13	16	23	23	16	16	19	19	30	76	46	21	18	19	27	17	12	15	14	26	32	23	75.7
23-Mar	57	62	44	32	62	53	51	59	45	17	20	35	17	39	20	20	21	17	16	14	14	16	19	15	61.7
24-Mar	15	11	12	17	23	20	17	38	22	71	40	41	24	26	D	D	18	14	11	15	13	14	14	14	70.8
25-Mar	18	18	14	16	20	13	15	19	18	21	23	32	24	29	40	15	15	21	15	17	14	21	17	16	39.7
26-Mar	17	19	17	14	17	22	26	21	16	16	17	27	20	15	29	26	51	33	25	21	30	10	23	19	51.0
27-Mar	15	15	16	21	22	18	17	23	22	26	24	20	20	25	18	D	D	D	D	D	D	D	D	D	26.0
28-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	17	19	25	19	21	17	36	52	38	68	93	92.8
29-Mar	87	29	36	64	85	67	63	75	67	22	13	36	20	23	41	58	21	22	31	35	67	40	70	50	87.0
30-Mar	68	68	76	47	44	19	61	89	52	56	14	7	5	6	6	7	8	6	5	7	7	5	5	5	88.8
31-Mar	5	6	6	16	16	5	6	7	6	7	7	7	10	18	28	13	26	6	7	8	5	5	5	6	27.5
87.0 96.4 93.3 98.0 91.6 95.5 91.9 91.8 84.0 70.8 70.1 76.9 51.0 39.3 41.0 57.6 54.7 49.1 47.8 62.2 72.1 71.8 81.4 92.8																									
D - DAS Failure																									

PASZA
Smoky Heights Station
Monthly Summary Tables, Graphs and
Roses

**PASZA**

Peace Air Shed Zone Association

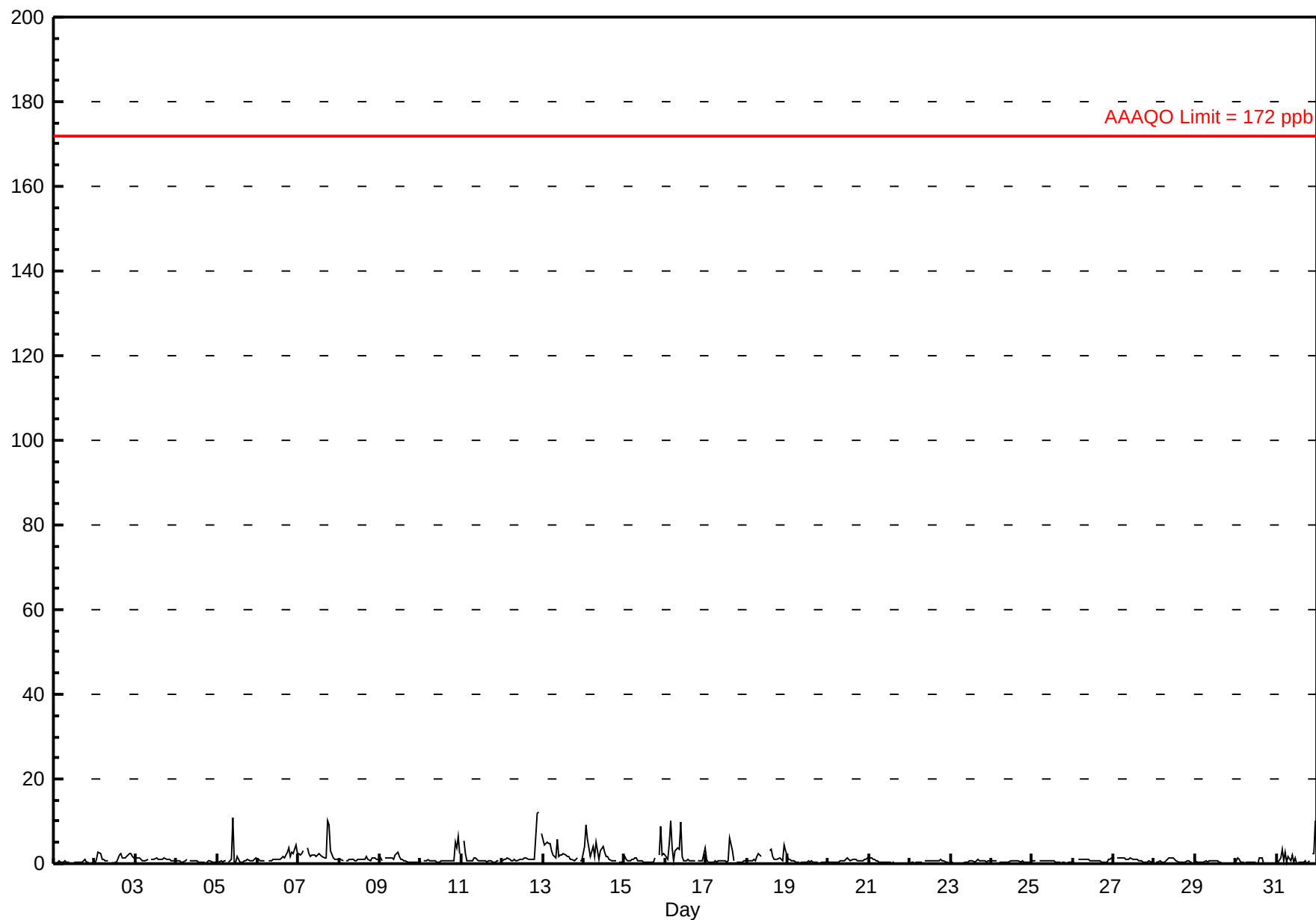
Hourly Averages

Sulphur Dioxide (SO₂) - ppb**Smoky Heights - March 2011**

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 12.1 ppb on Mar 12 22:00 Maximum Daily Average: 2.6 ppb on Mar 7																					Hours in Service: 744 Hours of Data: 711 Hours of Missing Data: 33 Hours of Calibration: 33 Percent Operational Time: 100.0					
Minimum Value: 0 ppb on Mar 30 19:00 Maximum Diurnal Average: 1.6 ppb at hour 10 Monthly Average: 1.09 ppb										Minimum Daily Average: 0.3 ppb on Mar 1 Minimum Diurnal Average: 0.7 ppb at hour 17 Percentiles: P ₁ = 0.0 P ₁₀ = 0.2 Q ₁ = 0.4 Median = 0.7 Q ₃ = 1.1 P ₉₀ = 2.2 P ₉₉ = 9.6																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	0	0	0	1	0	0	1	0	0	0	A	0	0	0	0	0	0	1	1	0	0	0	0	0	0.3	0.9
2-Mar	0	1	3	2	1	1	1	1	1	A	0	0	0	0	2	3	1	1	1	2	2	2	2	1	1.3	2.9
3-Mar	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
4-Mar	1	1	1	0	0	1	1	A	1	1	1	1	1	0	0	0	0	0	0	1	1	0	0	0	0.5	0.9
5-Mar	0	0	1	0	1	1	A	0	1	11	0	0	2	0	0	0	1	1	1	1	1	1	1	1	1.1	10.9
6-Mar	1	1	1	1	1	A	1	1	1	1	1	1	1	1	2	1	3	4	2	3	2	4	2	1.5	4.4	
7-Mar	2	2	2	3	A	4	2	2	2	2	2	2	2	2	2	1	10	9	3	1	1	1	1	2.6	10.2	
8-Mar	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1.0	1.8	
9-Mar	1	1	A	1	1	1	1	1	1	2	3	2	1	1	1	1	0	0	0	0	0	0	0	1.0	2.8	
10-Mar	1	A	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	5	4	6	2	1.3	6.4
11-Mar	A	5	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	A	1.0	5.5	
12-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	12	12	A	7	2.2	12.1	
13-Mar	6	4	5	5	5	3	2	1	6	2	2	2	2	2	2	2	1	1	1	1	1	A	1	1	2.5	5.8
14-Mar	4	9	6	4	2	4	2	5	3	1	3	4	3	2	2	1	1	1	1	1	A	0	0	1	2.5	9.2
15-Mar	2	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1	A	2	9	2	2	1.3	8.7
16-Mar	2	1	5	10	4	1	3	4	3	10	2	1	1	1	1	1	1	A	1	1	1	1	4	2.5	10.1	
17-Mar	1	0	0	0	0	1	0	1	1	1	1	0	1	6	3	1	A	0	0	0	0	1	1	0.9	6.2	
18-Mar	1	1	1	1	1	1	2	2	2	C	C	C	C	3	3	2	1	1	1	1	1	4	3	1.6	4.4	
19-Mar	1	1	1	1	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0.4	0.9	
20-Mar	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.3	
21-Mar	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.4	
22-Mar	0	0	0	0	0	0	0	0	A	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0.4	1.0	
23-Mar	0	0	0	0	0	A	0	0	0	0	0	1	1	1	0	1	1	1	1	1	1	0	1	1	0.5	1.0
24-Mar	1	1	1	1	A	0	0	0	0	0	0	1	1	1	1	1	1	0	1	0	0	0	0	0.5	0.8	
25-Mar	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.5	0.8	
26-Mar	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	0.7	1.3	
27-Mar	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	0	0	0.9	1.4	
28-Mar	A	0	0	1	1	0	1	1	2	1	1	1	1	1	0	0	0	0	0	1	1	0	0	0.6	1.5	
29-Mar	1	0	0	0	0	0	1	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	A	0	0.3	0.7
30-Mar	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	A	0	0	0.4	1.5
31-Mar	0	0	1	3	1	3	0	2	1	2	0	1	0	0	0	0	0	1	0	1	A	2	2	10	1.4	10.1
1.1 1.3 1.3 1.5 0.9 1.1 0.9 1.1 1.1 1.6 1.0 0.9 0.9 0.8 1.1 0.9 0.7 1.0 1.0 0.7 1.3 1.5 1.2 1.5																									Diurnal Average	
5.8 9.2 5.7 10.1 4.7 4.1 3.2 5.0 5.6 10.9 3.2 4.2 2.7 3.1 6.2 3.1 1.8 10.2 9.0 2.9 11.8 12.1 6.4 10.1																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Smoky Heights - March 2011



Hourly Maximums

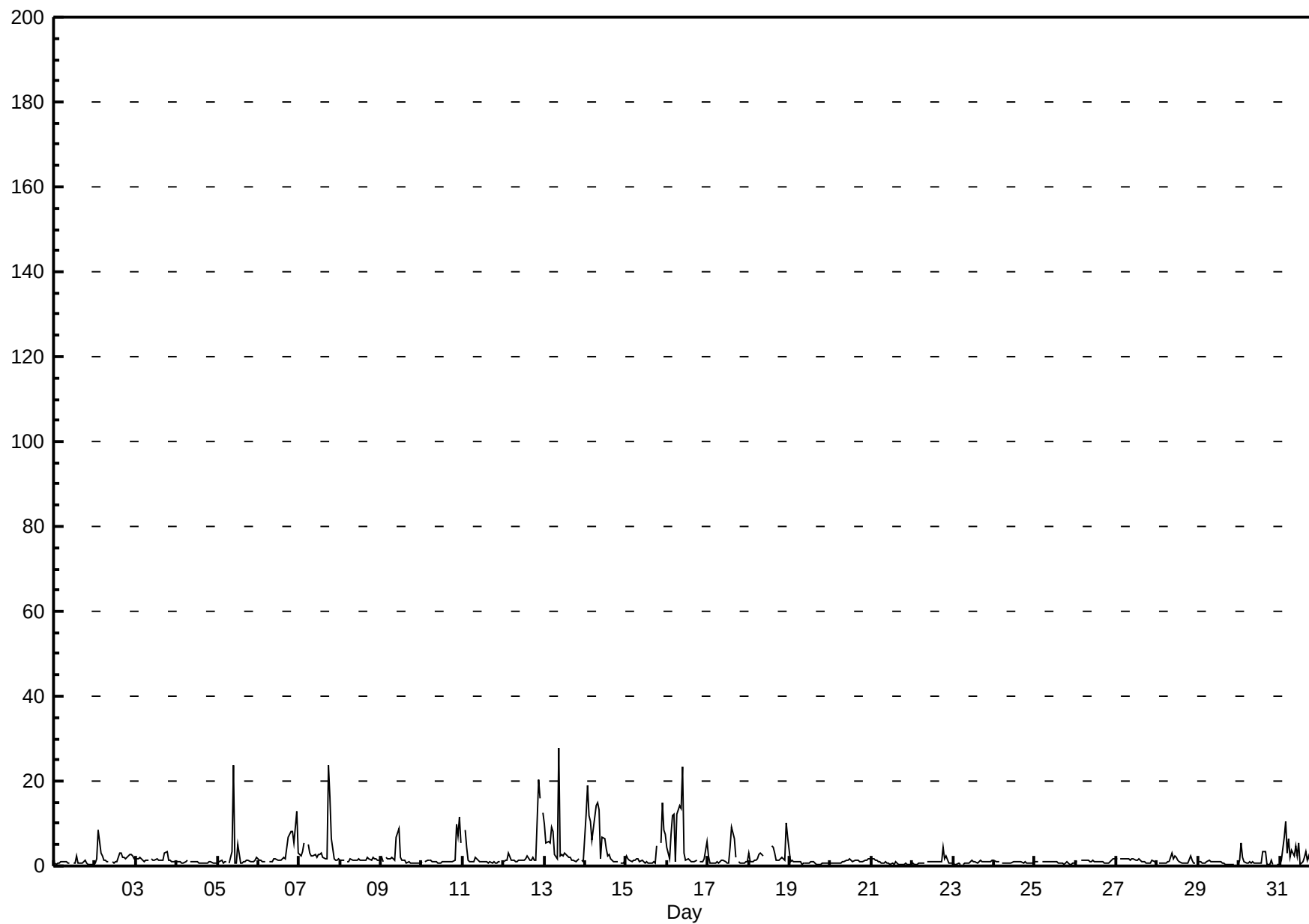
Sulphur Dioxide (SO₂) - ppb

Smoky Heights - March 2011

Maximum Value: 27.9 ppb on Mar 13 09:00																				Maximum Daily Average: 6.3 ppb on Mar 14					Hours in Service: 744	
Minimum Value: 0 ppb on Mar 29 20:00																				Minimum Daily Average: 0.7 ppb on Mar 29					Hours of Data: 711	
Maximum Diurnal Average: 3.1 ppb at hour 9																				Minimum Diurnal Average: 1.1 ppb at hour 17					Hours of Missing Data: 33	
Monthly Average: 2.09 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.6 Q ₁ = 0.8 Median = 1.1 Q ₃ = 1.7 P ₉₀ = 4.5 P ₉₉ = 18.2					Hours of Calibration: 33	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	1	0	1	1	1	1	1	1	1	1	A	1	1	2	1	1	1	1	1	1	0	0	0	0	0.8	2.4
2-Mar	1	2	9	3	2	1	1	1	1	A	1	1	1	1	3	3	2	2	2	2	3	3	2	2	2.1	8.5
3-Mar	2	2	2	2	1	1	1	1	A	2	1	2	2	1	1	1	1	3	3	1	1	1	1	1	1.5	3.4
4-Mar	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
5-Mar	1	1	1	1	1	1	A	1	3	24	1	1	5	1	1	1	1	1	1	1	1	1	1	2	2.3	23.6
6-Mar	1	1	1	1	1	A	1	1	1	2	2	1	1	1	2	2	2	7	7	8	8	5	13	3	3.2	13.0
7-Mar	3	2	3	5	A	5	3	2	2	3	2	3	3	3	2	2	2	24	16	6	2	1	1	2	4.3	23.9
8-Mar	1	1	1	A	1	1	2	1	1	1	1	2	2	1	1	2	2	2	1	2	2	2	1	1	1.5	2.2
9-Mar	2	1	A	2	2	2	2	2	1	7	9	2	2	1	1	1	1	1	1	1	1	1	1	1	1.8	8.8
10-Mar	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10	7	12	6	2.3	11.5
11-Mar	A	9	5	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1.5	8.6
12-Mar	1	1	1	3	1	1	1	1	1	1	1	1	1	2	2	1	1	2	1	1	20	16	A	13	3.4	20.3
13-Mar	10	5	6	5	9	8	3	2	28	3	3	2	3	2	2	2	1	1	1	1	2	A	1	1	4.4	27.9
14-Mar	12	19	12	10	6	12	14	15	13	2	7	7	4	2	3	2	1	1	1	1	A	1	1	1	6.3	19.1
15-Mar	2	2	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	5	A	6	15	8	7	2.7	15.1
16-Mar	5	2	7	12	12	1	12	14	14	23	3	1	2	1	1	1	1	1	A	1	1	1	2	6	5.4	23.2
17-Mar	2	1	1	1	1	1	1	1	1	1	1	1	1	5	9	7	2	A	1	1	1	1	1	1	1.8	9.2
18-Mar	3	1	1	1	1	2	3	3	2	C	C	C	C	5	4	3	1	1	1	2	2	1	10	7	2.8	10.3
19-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	0.8	1.2
20-Mar	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	2	2	2	1.1	1.8
21-Mar	2	2	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0	0	0	1	0	0	0	0.8	1.7
22-Mar	1	0	0	0	1	1	1	1	A	1	1	1	1	1	1	1	1	1	4	2	2	1	1	1	1.0	4.3
23-Mar	1	1	0	1	0	A	0	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	0.9	1.5
24-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
25-Mar	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0	1	1	0.8	1.2
26-Mar	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1.1	1.7
27-Mar	2	A	2	2	2	2	2	2	2	2	2	2	1	2	1	1	1	1	1	1	1	1	1	0	1.3	1.7
28-Mar	A	1	1	1	1	1	1	1	3	2	2	2	1	1	1	1	1	1	1	2	1	1	1	A	1.1	3.1
29-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	A	0	0.7	1.2
30-Mar	1	5	2	1	1	1	1	1	1	1	1	1	1	1	3	3	0	0	0	1	0	A	0	0	1.2	5.4
31-Mar	0	1	7	10	3	6	2	4	2	5	2	5	0	1	2	4	1	2	1	3	A	6	11	19	4.3	18.5
2.1 2.3 2.5 2.5 2.0 2.0 2.1 2.2 3.1 3.1 1.7 1.5 1.4 1.5 1.7 1.5 1.1 2.0 2.0 1.6 2.4 2.5 2.7 2.8																									Diurnal Average	
12.2 19.1 11.8 11.7 12.2 11.6 14.3 14.8 27.9 23.6 8.8 6.5 5.2 4.8 9.2 6.6 2.2 23.9 16.2 8.1 20.3 16.0 13.0 18.5																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

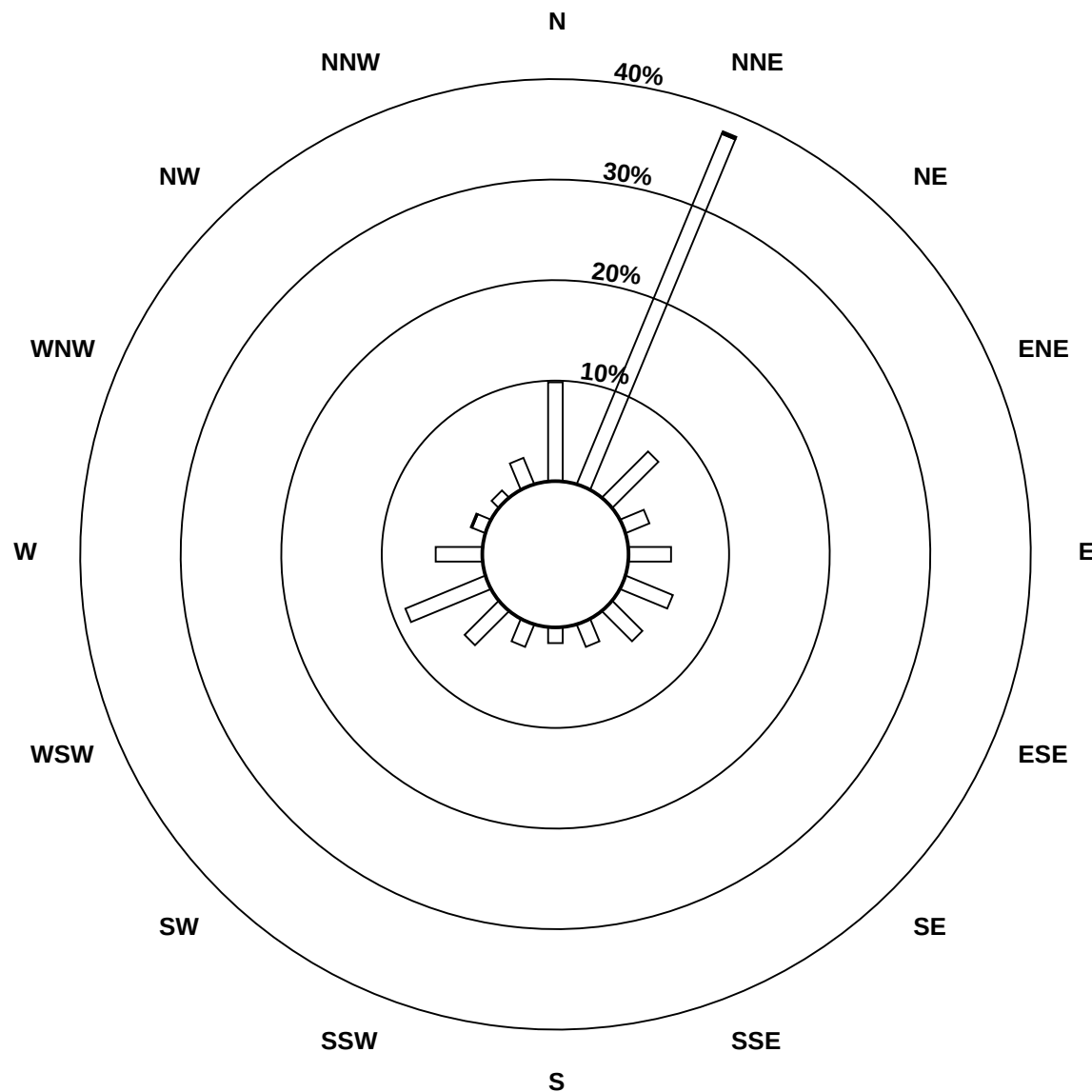
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Smoky Heights - March 2011

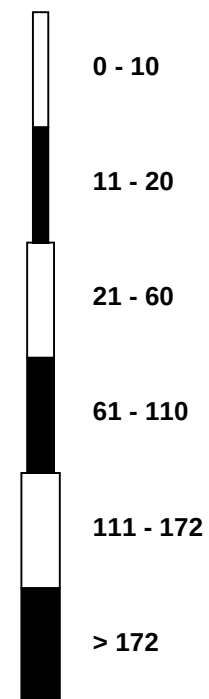


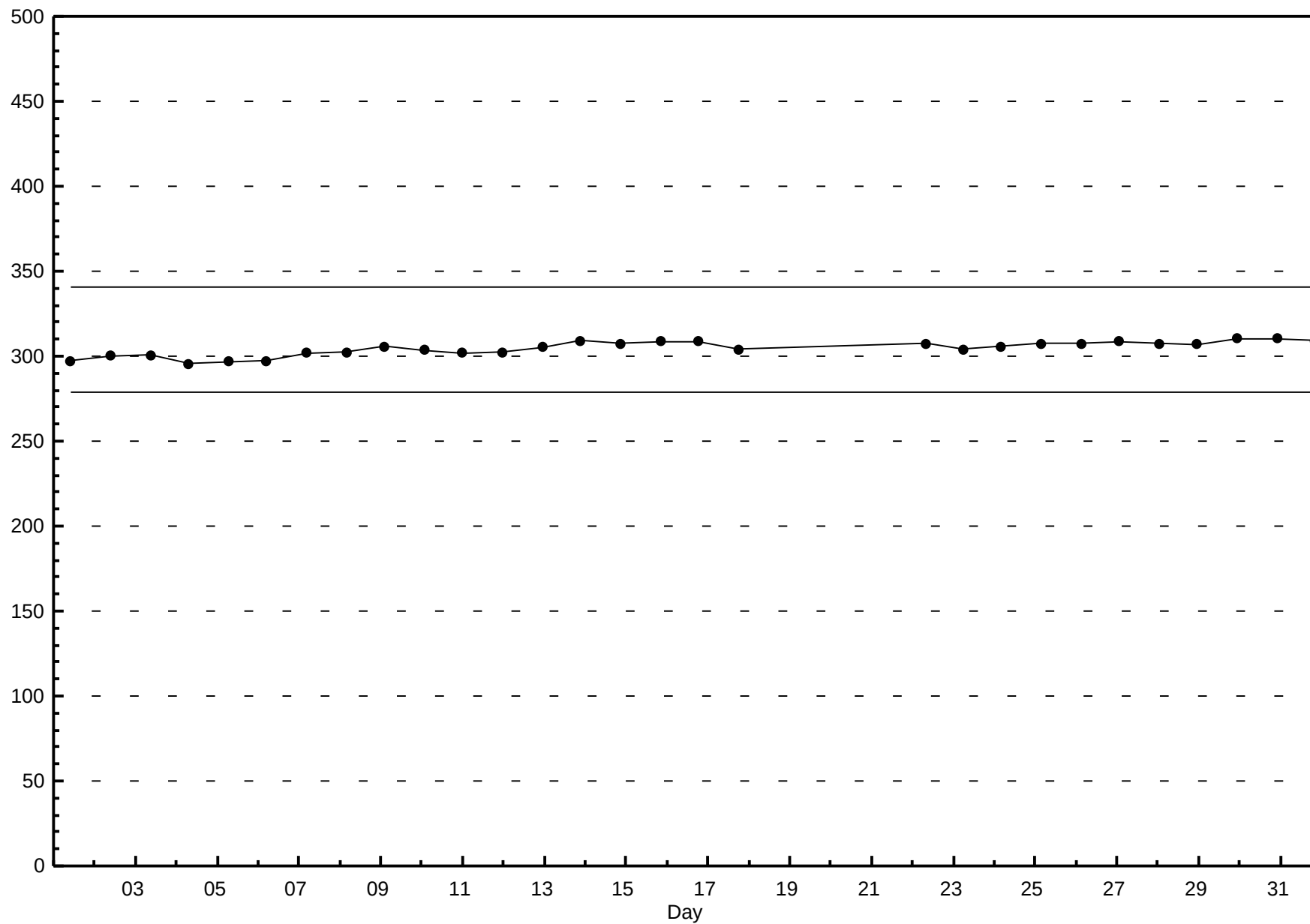
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Smoky Heights - March 2011



Pollutant Classes (ppb)





**PASZA**

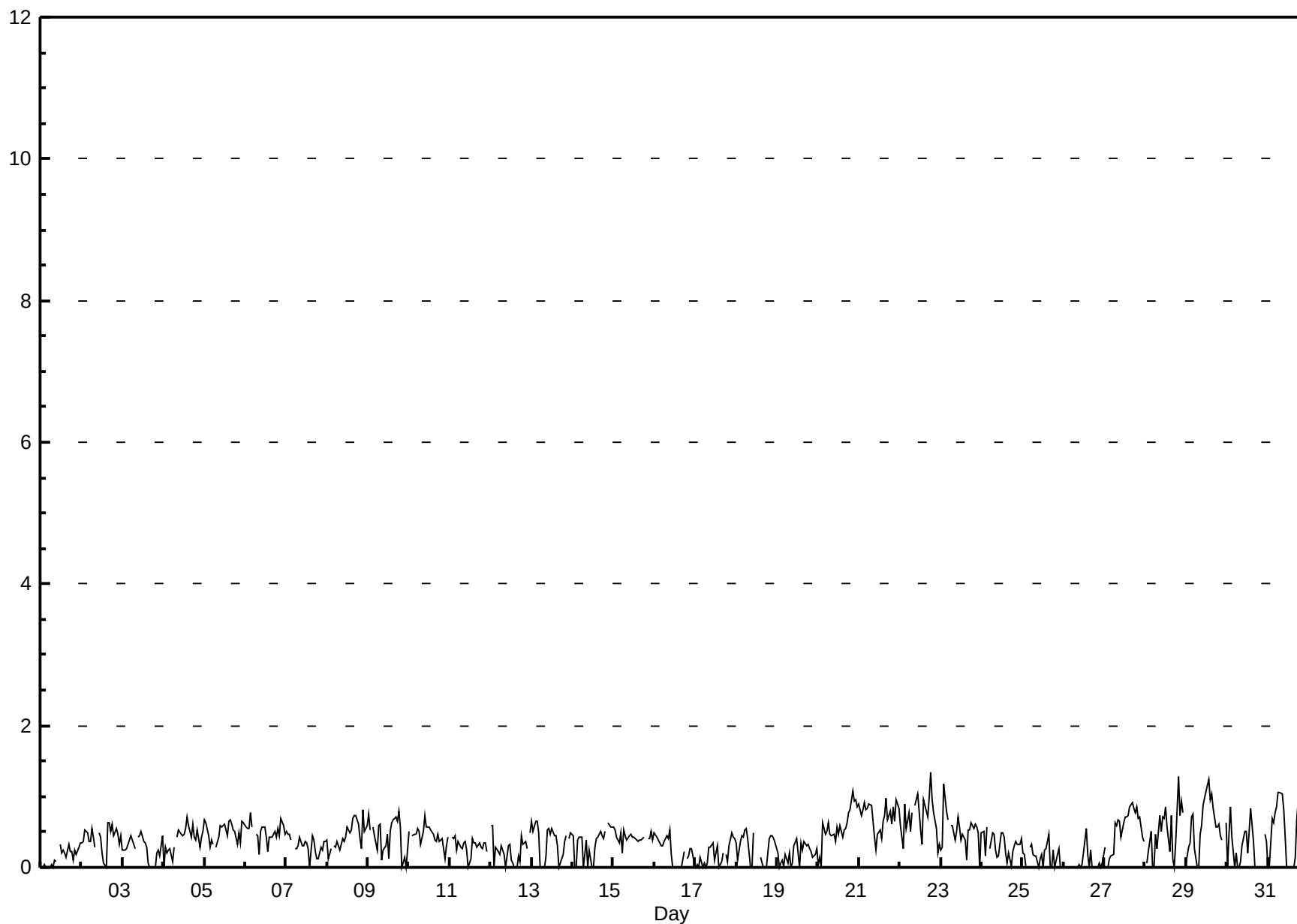
Peace Air Shed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - March 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 744						
Maximum Value: 1.3 ppb on Mar 22 19:00																				Maximum Daily Average: 0.7 ppb on Mar 21		Hours of Data: 712				
Minimum Value: 0 ppb on Mar 1 01:00																				Minimum Daily Average: 0.1 ppb on Mar 26		Hours of Missing Data: 32				
Maximum Diurnal Average: 0.4 ppb at hour 4																				Minimum Diurnal Average: 0.3 ppb at hour 2		Hours of Calibration: 32				
Monthly Average: 0.38 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.2 Median = 0.4 Q ₃ = 0.5 P ₉₀ = 0.7 P ₉₉ = 1.0		Percent Operational Time: 100.0				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
2-Mar	0	0	1	0	0	0	1	0	0	A	0	0	0	0	0	1	1	1	1	0	1	0	0	0	0.4	0.6
3-Mar	0	0	0	0	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
4-Mar	0	0	0	0	0	0	0	A	0	1	0	0	0	1	1	1	0	1	0	0	1	0	0	1	0.4	0.7
5-Mar	1	1	0	0	0	0	A	0	0	1	1	1	1	0	1	1	1	1	1	0	0	0	1	1	0.5	0.7
6-Mar	1	1	1	1	1	A	0	0	0	1	1	1	0	0	0	0	0	0	0	1	0	1	1	0	0.5	0.8
7-Mar	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	0.5
8-Mar	0	0	0	A	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	0	0	1	1	1	0.5	0.8
9-Mar	1	1	A	1	0	0	1	1	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0.4	0.8
10-Mar	1	A	0	0	0	1	1	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.4	0.7
11-Mar	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.3	0.4
12-Mar	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.6
13-Mar	1	1	1	1	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	A	0	0	0.4	0.7
14-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	A	1	1	1	0.3	0.6
15-Mar	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.4	0.6
16-Mar	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.5
17-Mar	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	0.5
18-Mar	0	0	0	0	0	1	1	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0.3	0.6
19-Mar	0	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
20-Mar	0	0	0	1	0	1	1	0	0	0	0	1	0	1	0	1	1	1	1	1	1	1	1	1	0.6	1.1
21-Mar	1	1	1	1	1	1	1	1	1	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	0.7	1.0
22-Mar	1	0	0	1	1	1	1	1	A	1	1	1	1	0	1	1	1	1	1	1	1	1	0	0	0.7	1.3
23-Mar	0	0	1	1	1	A	1	1	0	1	1	1	0	0	0	0	1	1	1	1	1	1	0	0	0.5	1.2
24-Mar	0	1	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
25-Mar	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
26-Mar	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.1	0.6
27-Mar	0	A	0	0	0	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0.6	0.9
28-Mar	A	0	0	1	0	0	0	0	1	1	1	1	1	1	0	1	0	0	0	1	1	1	1	A	0.5	1.3
29-Mar	0	0	0	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	A	1	0.6	1.2
30-Mar	0	0	1	0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	0	0	0	A	0	0	0.3	0.9
31-Mar	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	1	1	A	1	1	1	0.5	1.1
0.3 0.3 0.3 0.4 0.4 0.3 0.4 0.3 0.3 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4																								Diurnal Average		
0.9 0.7 1.2 0.9 0.8 0.9 1.1 1.1 1.0 0.9 1.0 1.0 1.2 1.2 1.0 1.0 1.0 1.0 1.0 1.3 1.3 1.1 0.9 1.0 0.9																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																										

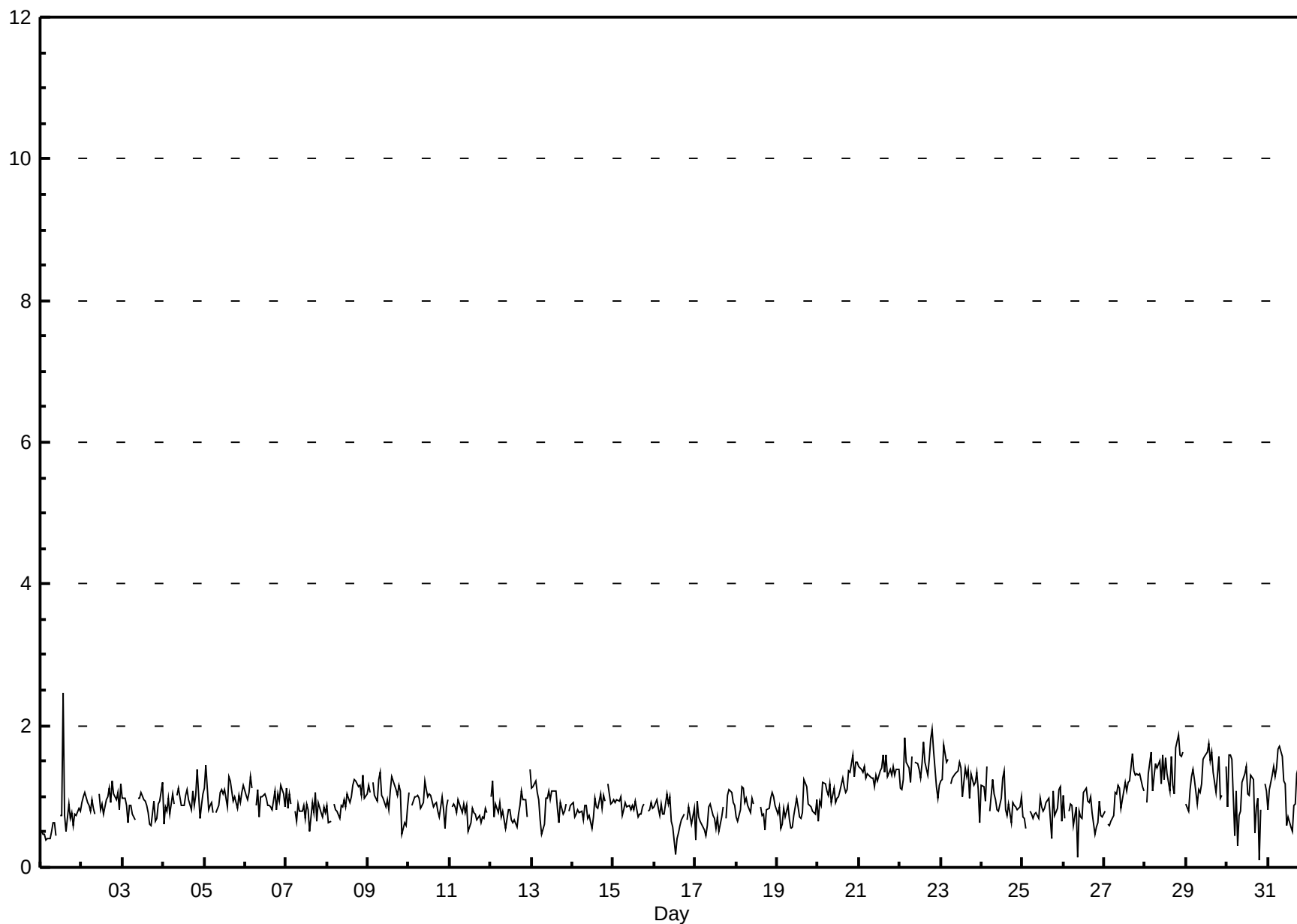


Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

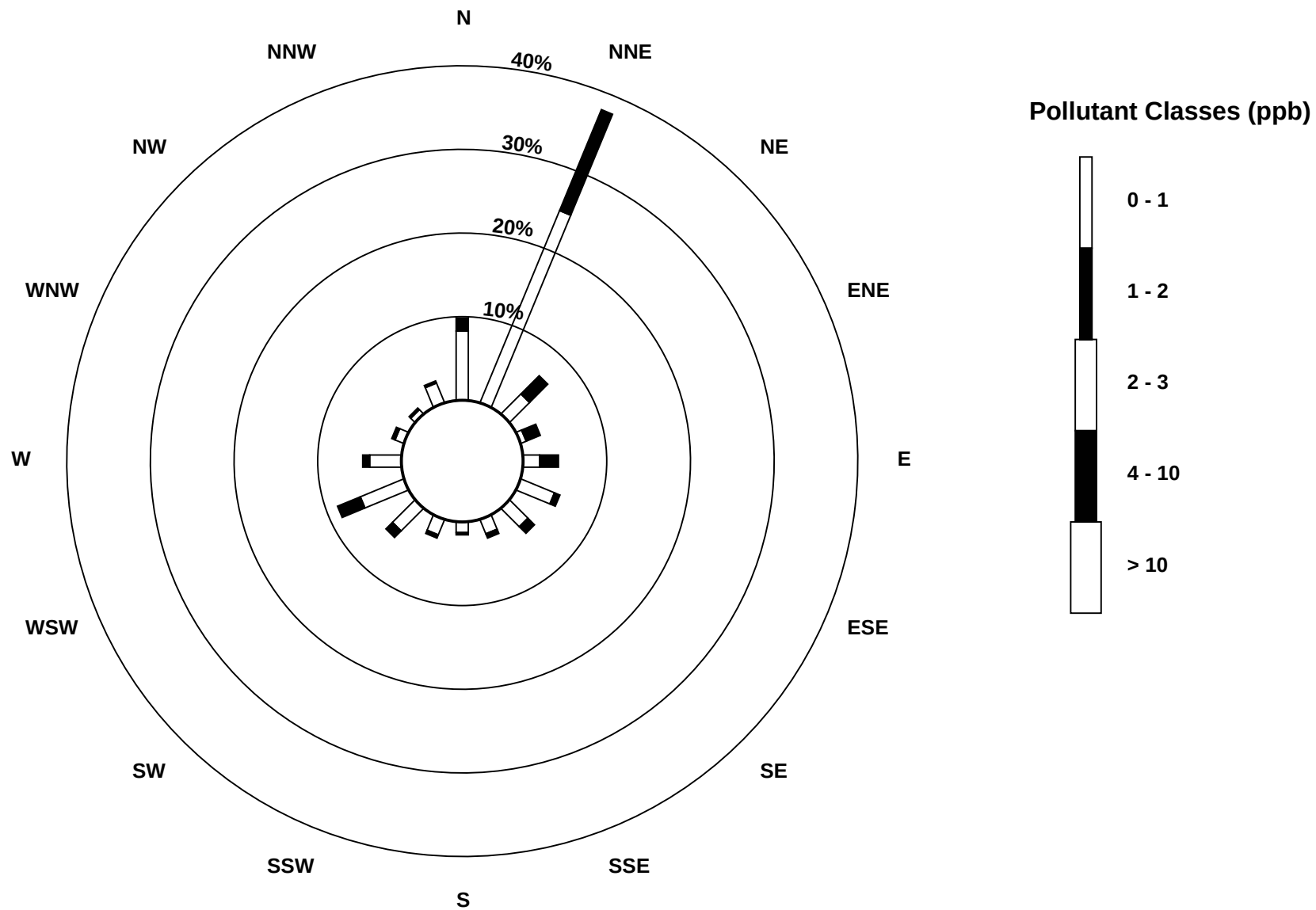
Smoky Heights - March 2011

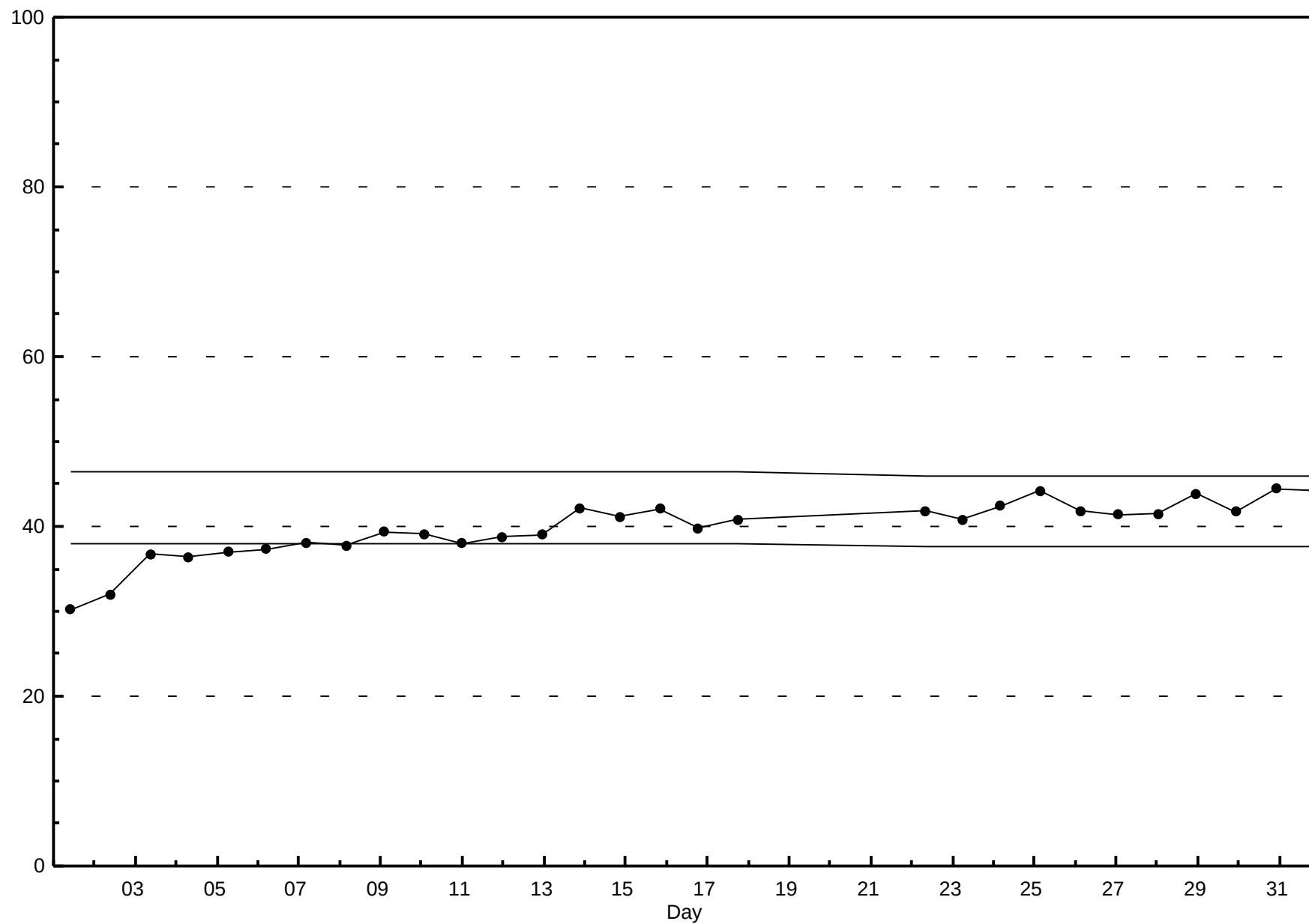
Maximum Value: 2.5 ppb on Mar 1 14:00																				Maximum Daily Average: 1.4 ppb on Mar 22										Hours in Service: 744									
Minimum Value: 0 ppb on Mar 30 20:00																				Minimum Daily Average: 0.7 ppb on Mar 1										Hours of Data: 712									
Maximum Diurnal Average: 1.0 ppb at hour 4																				Minimum Diurnal Average: 0.9 ppb at hour 7										Hours of Missing Data: 32									
Monthly Average: 0.97 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.7 Q ₁ = 0.8 Median = 0.9 Q ₃ = 1.1 P ₉₀ = 1.4 P ₉₉ = 1.7										Hours of Calibration: 32									
																				Percent Operational Time: 100.0																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Mar	1	0	0	0	0	0	0	1	1	0	A	1	1	2	1	1	1	1	1	1	1	1	1	1	0.7	2.5													
2-Mar	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2													
3-Mar	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2													
4-Mar	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	1.4													
5-Mar	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.4													
6-Mar	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	1.3													
7-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1													
8-Mar	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	1.3													
9-Mar	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1.0	1.3													
10-Mar	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	1.2													
11-Mar	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	0.9													
12-Mar	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	1.4													
13-Mar	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.9	1.2													
14-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.2													
15-Mar	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	1.0													
16-Mar	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	A	1	1	1	1	1	0.7	1.0													
17-Mar	0	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.7	1.1													
18-Mar	1	1	1	1	1	1	1	1	1	1	1	C	C	C	1	1	1	1	1	1	1	1	1	1	0.9	1.1													
19-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2													
20-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1.1	1.6													
21-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2	1	1	1	1	1	1	1	1.3	1.6													
22-Mar	1	1	1	2	1	1	1	2	A	1	1	1	1	1	2	1	1	2	2	2	2	1	1	1	1.4	1.9													
23-Mar	1	1	2	1	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.3	1.7													
24-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.4													
25-Mar	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0.8	1.1													
26-Mar	1	1	A	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0.8	1.1													
27-Mar	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1.1	1.6													
28-Mar	A	1	1	2	1	1	1	1	2	1	2	1	2	1	1	2	1	1	2	2	2	2	2	A	1.4	1.9													
29-Mar	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	1	1	1	2	1	1	A	1	1.3	1.7													
30-Mar	1	2	2	2	0	1	0	1	1	1	1	1	1	1	1	1	0	1	1	0	1	A	1	1	1.0	1.6													
31-Mar	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1.2	1.7													
0.9 1.0 1.0 1.0 0.9 0.9 0.9 1.0 0.9 1.0 1.0 0.9 1.0 1.0 1.0 1.0 1.0 0.9 1.0 1.0 1.0 1.0 1.0 1.0																									Diurnal Average														
1.4 1.6 1.7 1.8 1.5 1.4 1.7 1.7 1.6 1.5 1.6 1.6 1.6 2.5 1.8 1.6 1.6 1.5 1.8 1.9 1.6 1.7 1.6 1.5																									Diurnal Maximum														
C - Calibration																									A - Automated Daily Zero Span														



Pollutant Rose

Total Reduced Sulphur (TRS) - ppb
Smoky Heights - March 2011





**PASZA**

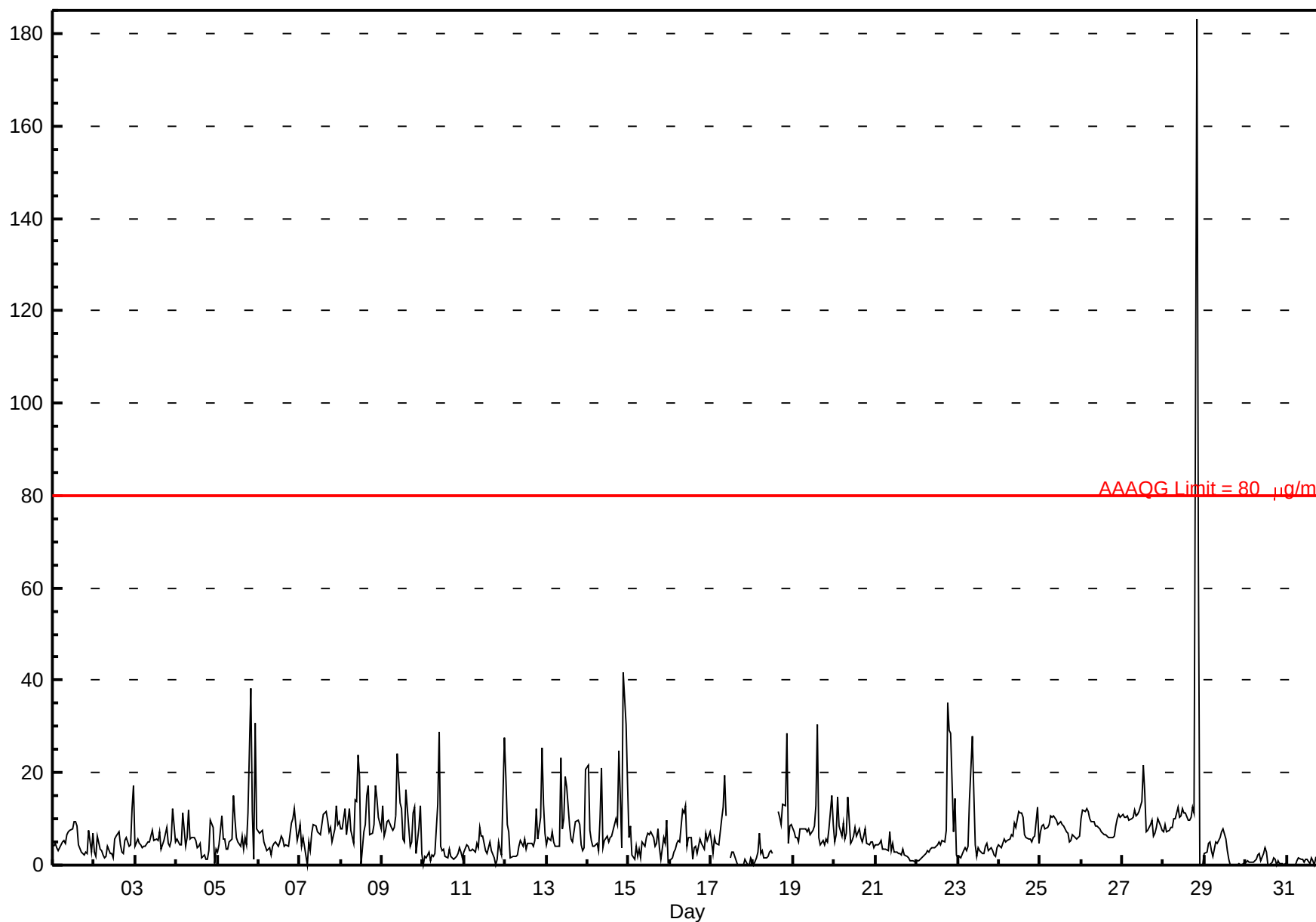
Peace Air Shed Zone Association

Hourly Averages

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

Smoky Heights - March 2011

Number of Exceedences: 1-hr: 1 24-hr: 0 Maximum Value: 183.3 µg/m³ on Mar 28 20:00 Minimum Value: 0 µg/m³ on Mar 7 05:00 Maximum Diurnal Average: 12.7 µg/m³ at hour 20 Monthly Average: 6.63 µg/m³																					Maximum Daily Average: 18.3 µg/m³ on Mar 28 Minimum Daily Average: 0.7 µg/m³ on Mar 31 Minimum Diurnal Average: 4.8 µg/m³ at hour 4 Percentiles: P ₁ = 0.0 P ₁₀ = 1.2 Q ₁ = 3.0 Median = 5.2 Q ₃ = 8.2 P ₉₀ = 11.8 P ₉₉ = 29.9					Hours in Service: 744 Hours of Data: 741 Hours of Missing Data: 3 Hours of Calibration: 2 Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Mar	4	5	4	3	4	5	5	5	7	7	8	8	9	9	8	4	3	3	2	3	3	8	3	7	5.2	9.4	
2-Mar	3	2	6	3	3	2	2	2	4	2	3	2	6	6	7	4	3	3	5	6	4	4	12	17	4.7	17.2	
3-Mar	4	6	5	4	4	4	4	5	5	6	8	5	6	5	7	3	5	5	8	5	4	5	12	5	5.5	12.4	
4-Mar	6	5	4	4	11	4	6	12	6	6	6	5	4	4	5	2	2	1	1	3	10	8	0	4	5.0	11.8	
5-Mar	3	4	11	6	6	3	3	5	6	15	10	6	5	4	6	4	6	4	11	38	12	1	31	8	8.7	38.2	
6-Mar	7	7	8	5	4	3	4	2	4	5	5	4	5	6	6	4	4	4	7	9	10	12	5	7	5.7	12.4	
7-Mar	9	4	6	4	0	5	3	7	9	8	7	7	7	9	11	12	10	7	8	5	8	13	9	10	7.3	12.9	
8-Mar	8	8	12	7	9	12	8	5	14	14	24	19	0	7	9	15	17	7	7	9	17	14	10	8	10.8	23.9	
9-Mar	13	6	8	9	10	8	8	8	11	24	13	12	6	5	16	12	4	5	11	12	2	8	13	3	9.5	24.2	
10-Mar	0	2	1	3	1	2	2	3	13	29	4	3	3	2	2	4	2	2	1	2	3	4	3	2	3.8	28.8	
11-Mar	3	4	4	3	3	3	3	5	4	8	6	6	3	2	4	5	3	2	0	1	5	3	2	28	4.6	27.7	
12-Mar	19	9	7	1	2	2	2	2	4	5	4	6	3	5	5	5	4	5	12	6	10	26	13	7	6.8	25.5	
13-Mar	4	6	5	7	5	4	4	4	23	8	10	19	17	8	6	5	7	9	10	9	4	3	4	21	8.5	23.3	
14-Mar	22	7	5	4	4	5	3	10	21	4	5	6	5	6	6	8	10	9	25	15	4	42	30	18	11.4	41.6	
15-Mar	6	9	2	1	4	2	3	2	5	4	6	7	6	7	6	4	5	8	4	1	6	5	10	1	4.7	9.6	
16-Mar	1	1	3	4	5	5	5	12	11	13	4	6	6	1	4	4	3	6	5	4	3	7	5	7	5.2	12.9	
17-Mar	5	2	6	5	4	7	10	12	19	11	BD	2	3	3	2	0	0	0	0	1	0	0	1	1	4.1	19.3	
18-Mar	1	0	2	3	7	2	3	1	2	2	3	3	3	C	C	11	10	9	13	13	28	5	8	9	6.3	28.4	
19-Mar	7	6	6	5	8	8	8	8	7	8	6	7	8	13	30	6	4	5	4	6	5	8	15	9	8.3	30.3	
20-Mar	5	6	15	9	6	9	6	7	15	5	5	6	8	6	8	6	5	6	8	5	4	5	5	4	6.8	14.8	
21-Mar	4	4	5	5	3	3	3	3	7	3	5	3	3	2	3	2	3	2	2	1	1	1	1	1	3.0	7.2	
22-Mar	1	1	1	2	2	2	3	3	3	4	4	4	4	5	4	5	5	8	35	29	29	7	15	2	7.4	35.1	
23-Mar	2	2	2	3	4	3	4	14	28	16	4	2	4	3	2	2	4	5	3	4	3	2	2	4	5.1	28.0	
24-Mar	4	4	5	6	5	5	6	7	6	9	8	12	11	11	10	7	6	6	6	5	6	6	12	5	7.0	12.5	
25-Mar	7	8	9	8	8	9	11	10	11	10	9	9	9	9	8	7	7	5	5	6	6	6	6	6	7.9	10.8	
26-Mar	10	12	12	12	11	10	9	9	8	8	8	8	7	6	7	6	6	6	6	6	8	10	11	10	8.7	12.3	
27-Mar	11	10	10	11	10	10	10	12	11	11	12	14	22	16	7	7	9	10	6	7	8	10	8	8	10.4	21.6	
28-Mar	7	9	7	8	8	8	10	10	13	10	11	12	11	11	10	10	10	12	11	183	67	0	0	0	18.3	183.3	
29-Mar	2	3	5	5	3	2	5	5	5	6	7	8	6	3	1	0	0	0	0	0	0	0	0	1	2.8	7.8	
30-Mar	1	1	1	1	1	1	1	2	3	1	2	4	3	0	0	1	2	1	0	1	0	0	0	0	1.1	3.7	
31-Mar	0	0	0	0	0	0	1	1	1	1	1	1	1	0	1	1	0	1	1	0	2	0	0	1	0.7	1.8	
5.8 5.0 5.7 4.8 5.0 4.9 5.0 6.2 9.2 8.5 7.0 7.0 6.3 5.9 6.7 5.4 5.2 5.0 7.0 12.7 8.8 7.2 8.0 6.8																									Diurnal Average		
21.7 11.9 14.8 12.3 11.5 12.3 10.8 14.1 28.0 28.8 23.9 19.1 21.6 15.7 30.3 15.1 17.4 12.4 35.1 183.3 66.9 41.6 30.8 27.7																									Diurnal Maximum		
C - Calibration BD - Baseline Drift Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																											

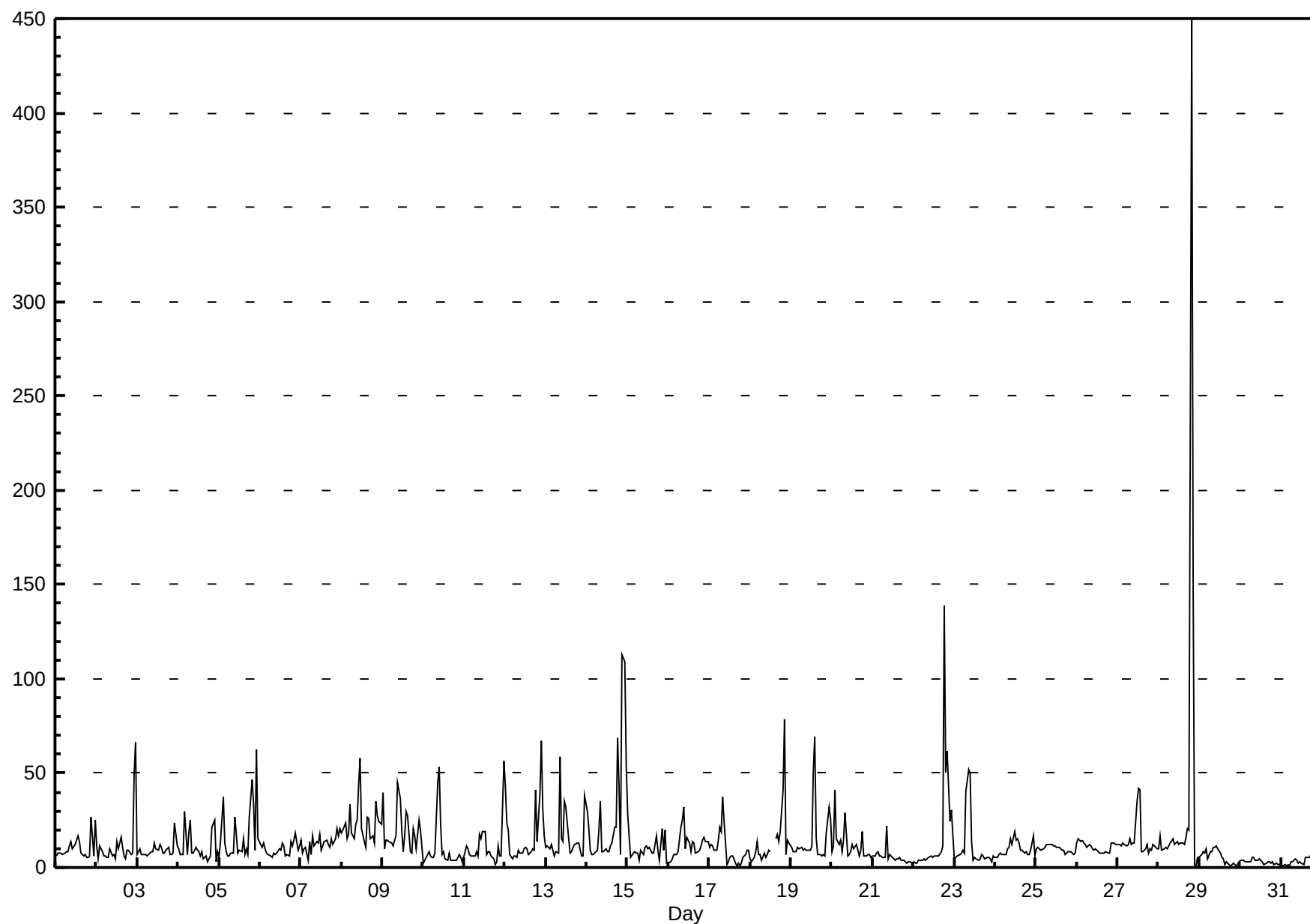


Hourly Maximums

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

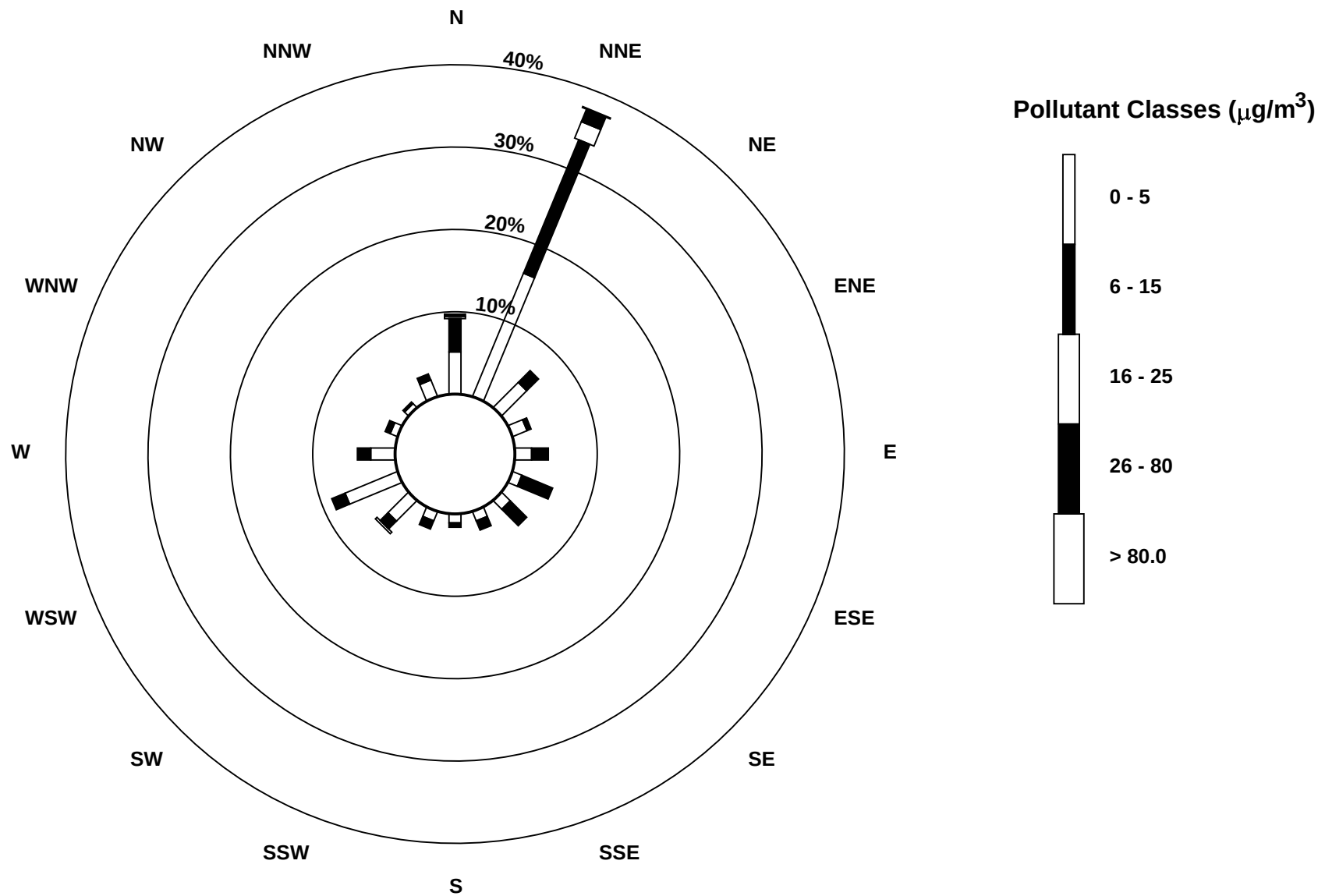
Smoky Heights - March 2011

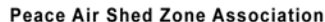
Maximum Value: 449.0 μg/m³ on Mar 28 20:00																				Maximum Daily Average: 35.5 μg/m³ on Mar 28					Hours in Service: 744	
Minimum Value: 0 μg/m³ on Mar 28 22:00																				Minimum Daily Average: 3.1 μg/m³ on Mar 30					Hours of Data: 742	
Maximum Diurnal Average: 26.6 μg/m³ at hour 20																				Minimum Diurnal Average: 8.6 μg/m³ at hour 18					Hours of Missing Data: 2	
Monthly Average: 13.06 μg/m³																				Percentiles: P ₁ = 1.0 P ₁₀ = 3.7 Q ₁ = 6.1 Median = 8.8 Q ₃ = 13.3 P ₉₀ = 23.2 P ₉₉ = 60.5					Hours of Calibration: 2	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	6	7	8	7	7	8	8	9	12	14	10	12	14	17	14	8	6	7	6	5	6	27	6	25	10.4	27.0
2-Mar	12	5	11	8	6	6	5	5	10	6	7	5	14	10	16	11	6	5	9	9	7	8	49	67	12.4	66.6
3-Mar	7	10	7	7	7	7	6	7	8	9	13	10	9	12	11	7	8	9	11	7	7	8	23	12	9.3	23.4
4-Mar	10	7	7	7	30	7	18	25	7	8	11	9	8	6	9	5	6	3	4	6	21	25	3	8	10.5	30.0
5-Mar	6	14	37	13	8	6	6	8	8	26	18	8	9	8	15	7	10	7	27	47	34	9	62	16	17.0	62.3
6-Mar	12	11	13	10	8	6	6	5	8	7	8	10	9	13	11	6	7	6	14	12	15	18	9	12	9.8	18.0
7-Mar	15	7	10	10	4	14	7	17	11	14	13	18	9	12	14	15	12	11	16	12	15	21	17	20	13.0	20.7
8-Mar	18	20	24	15	17	34	18	15	23	25	44	58	20	13	11	26	26	16	17	13	35	28	25	23	23.5	58.2
9-Mar	40	10	15	14	13	13	11	15	17	45	36	20	9	17	30	27	8	7	20	16	10	25	20	11	18.8	45.0
10-Mar	2	4	5	8	6	5	5	8	45	54	23	7	8	5	4	8	4	4	4	4	5	7	5	3	9.7	53.5
11-Mar	5	11	10	7	6	6	6	8	6	17	15	19	19	7	9	8	6	5	2	3	11	6	6	57	10.7	56.8
12-Mar	43	24	20	7	5	6	6	6	9	8	7	10	11	10	7	8	10	9	41	14	39	67	31	17	17.3	67.2
13-Mar	11	11	10	12	9	6	8	8	59	15	14	35	32	15	8	8	10	12	13	13	9	6	6	38	15.4	58.8
14-Mar	30	20	10	7	7	8	9	20	35	9	8	10	9	9	12	13	21	21	69	42	7	113	109	54	27.2	113.2
15-Mar	28	17	5	8	8	7	8	4	9	7	10	11	10	11	8	8	13	17	9	4	21	9	19	3	10.5	28.4
16-Mar	3	3	4	7	7	7	8	21	25	32	10	16	13	8	14	13	8	8	9	12	14	16	14	13	11.9	32.0
17-Mar	10	12	11	9	9	15	21	19	37	25	2	3	6	6	6	2	1	2	1	2	6	7	9	9	9.6	37.2
18-Mar	5	3	5	9	14	7	7	4	7	6	7	9	8	C	C	15	17	14	19	41	78	7	14	13	14.0	78.4
19-Mar	11	9	8	9	11	10	11	9	10	9	9	9	11	51	69	16	7	7	6	7	6	18	32	26	15.4	69.1
20-Mar	8	12	41	15	12	15	8	15	29	6	7	9	12	10	12	9	6	9	19	6	6	7	7	5	11.9	41.3
21-Mar	6	6	7	8	6	6	6	5	22	4	7	6	4	4	4	4	5	4	4	3	3	3	3	2	5.6	22.0
22-Mar	3	2	2	4	4	4	4	4	5	5	6	5	6	6	6	6	8	12	138	51	62	24	31	17	17.3	138.5
23-Mar	5	6	6	7	8	9	7	40	52	50	14	4	5	5	4	4	7	6	4	5	6	4	3	6	11.2	52.1
24-Mar	6	5	7	7	7	7	7	10	11	15	12	19	14	15	13	9	9	8	8	7	7	9	17	6	9.9	19.4
25-Mar	10	10	10	9	10	10	12	12	12	12	11	11	11	11	11	9	9	7	8	8	8	7	7	8	9.7	12.2
26-Mar	13	15	14	15	13	12	11	12	11	10	9	10	9	8	8	8	8	9	8	8	13	13	13	13	10.9	15.0
27-Mar	12	12	12	13	12	12	13	15	12	13	13	35	42	41	8	9	10	12	8	10	9	12	11	10	14.8	42.2
28-Mar	10	17	9	10	10	10	12	13	15	12	13	14	12	13	13	12	16	21	20	449	146	0	1	6	35.5	449.0
29-Mar	6	7	8	8	10	5	9	8	11	10	11	10	7	6	5	1	3	2	1	2	2	1	1	3	5.7	11.1
30-Mar	4	4	4	3	3	3	3	5	6	4	4	5	4	3	1	2	3	3	2	3	2	2	1	2	3.1	5.6
31-Mar	2	1	2	1	2	1	3	3	5	4	2	3	2	2	6	5	6	5	7	2	6	2	2	3	3.2	7.4
11.5 9.7 11.1 8.8 9.0 8.7 8.7 11.5 17.3 15.5 12.0 13.3 11.6 11.7 11.9 9.4 9.0 8.6 16.9 26.6 19.8 16.5 18.0 16.3																									Diurnal Average	
42.9 23.5 41.3 15.3 30.0 33.5 21.4 40.2 58.8 53.5 43.6 58.2 42.2 50.9 69.1 27.5 26.3 21.3 138.5 449.0 145.6 113.2 109.2 66.6																									Diurnal Maximum	
C - Calibration																										



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Smoky Heights - March 2011

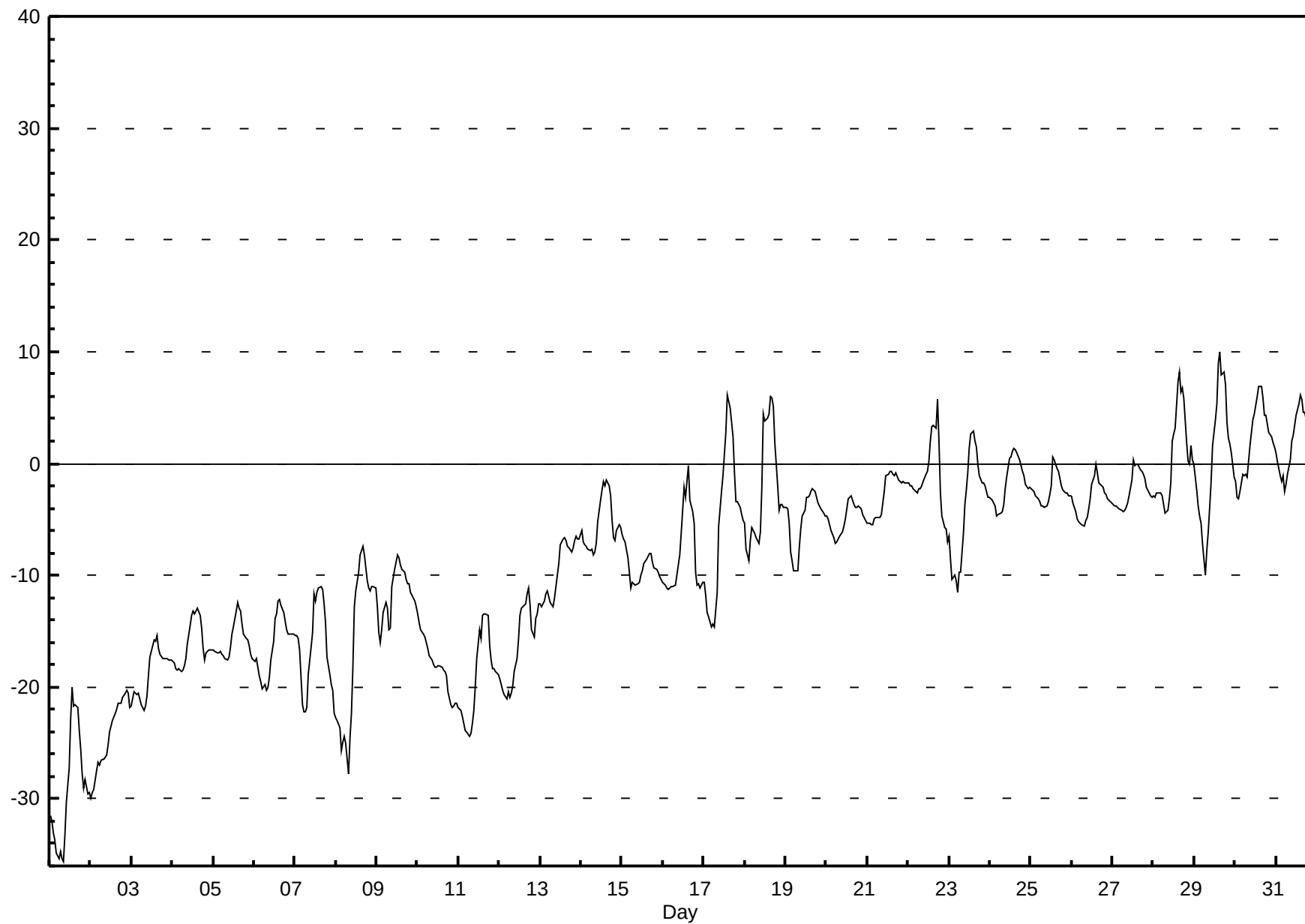




External Temperature (ET) - °C

Smoky Heights - March 2011

FOCUS
AIR QUALITY MONITORING



**PASZA**

Peace Air Shed Zone Association

Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	4	6	5	8	6	5	4	3	5	6	6	6	3	1	2	4	5	8	6	4	4	5	4	5	2.0	8.4
Dir	217	216	257	252	221	211	207	203	208	182	161	125	97	111	275	277	273	268	304	327	0	14	10	11	242.9	267.7
2 Spd	7	5	6	10	10	11	14	16	15	16	18	19	18	16	18	16	14	14	13	12	11	9	7	5	12.4	19.5
Dir	28	30	22	18	17	20	19	26	22	24	25	29	23	20	27	30	36	31	25	23	33	35	28	359	25.2	29.1
3 Spd	5	3	1	3	3	4	5	4	5	4	3	2	2	2	5	5	6	6	7	6	6	4	4	5	1.3	7.4
Dir	352	3	304	214	209	150	143	171	223	204	176	132	193	349	19	12	339	353	17	29	45	30	14	43	22.8	16.6
4 Spd	2	2	2	2	2	2	4	5	4	2	1	1	2	7	8	12	15	14	13	12	11	12	14	16	6.3	16.0
Dir	35	63	298	323	17	317	351	19	39	56	152	293	149	21	26	44	50	48	44	45	31	28	38	33	35.6	33.0
5 Spd	17	17	14	13	12	13	12	9	11	13	11	10	11	10	9	10	11	14	11	11	10	8	8	8	11.2	17.0
Dir	33	31	28	26	17	17	14	16	13	16	17	11	8	354	355	358	13	19	17	14	19	19	15	11	16.3	32.8
6 Spd	8	10	10	9	10	10	9	8	8	8	8	7	9	8	9	10	10	9	7	8	8	9	9	8	8.5	10.1
Dir	13	14	10	12	12	16	15	24	31	33	35	27	28	15	18	351	353	354	9	16	13	12	26	16	15.0	10.1
7 Spd	8	6	5	4	3	7	8	7	6	3	6	6	10	11	10	10	9	9	4	5	5	5	4	2	4.4	10.5
Dir	17	36	23	355	293	259	272	254	245	199	223	274	276	269	272	275	273	266	297	319	333	27	358	4	288.8	268.6
8 Spd	1	5	3	2	1	2	2	1	3	1	1	1	6	8	8	11	8	9	10	12	8	9	6	6	4.3	11.6
Dir	142	297	12	244	153	343	319	188	265	122	224	33	25	23	20	18	14	27	25	22	19	18	14	32	15.8	21.8
9 Spd	2	6	6	11	12	12	5	1	2	2	15	15	14	15	19	22	20	23	25	23	17	18	14	18	9.0	25.1
Dir	11	219	224	229	216	225	247	71	83	17	17	16	12	7	17	27	24	23	17	15	353	355	8	27	9.0	17.3
10 Spd	22	19	16	17	20	20	20	21	21	21	21	19	18	18	17	14	13	11	9	9	9	6	9	10	15.4	21.6
Dir	30	28	20	17	19	23	21	20	19	18	20	23	21	24	23	4	353	354	347	340	342	356	345	347	14.5	29.5
11 Spd	10	11	12	9	9	9	8	8	7	6	4	4	3	9	9	10	11	11	14	13	9	11	14	14	9.1	14.3
Dir	353	2	6	8	9	16	26	21	36	31	29	81	14	18	22	14	17	31	33	30	15	10	17	15	18.4	17.4
12 Spd	15	14	12	14	14	13	14	14	15	16	14	12	13	10	12	12	10	9	7	3	3	4	7	1	10.4	16.3
Dir	16	16	16	20	25	28	21	20	29	22	23	19	39	10	18	23	19	25	24	328	296	26	344	352	19.5	21.9
13 Spd	5	6	2	4	5	9	9	6	9	10	11	11	12	15	18	20	20	22	24	24	26	23	23	22	13.0	25.8
Dir	75	199	178	305	38	31	43	2	5	29	30	23	17	18	20	18	16	19	20	23	26	25	20	15	21.6	26.3
14 Spd	18	17	17	16	10	9	8	9	9	10	7	5	5	3	6	6	6	5	5	5	4	6	8	7	8.1	18.3
Dir	14	12	7	7	353	336	0	354	18	29	33	34	31	18	15	2	341	21	20	17	353	9	12	22	9.5	13.6
15 Spd	9	10	11	11	13	14	14	19	18	21	24	25	25	21	20	26	21	14	12	12	15	16	12	11	16.0	26.2
Dir	10	7	8	20	19	26	33	31	32	23	23	23	23	22	17	24	24	8	346	342	358	359	1	343	16.1	24.0
16 Spd	11	9	8	7	5	5	5	4	4	6	5	2	0	1	2	3	7	6	1	6	6	9	10	11	2.3	11.2
Dir	342	342	343	348	1	8	11	5	358	21	37	153	187	152	228	131	147	158	219	269	285	253	257	250	318.4	250.4
17 Spd	13	14	13	8	7	8	9	5	9	13	20	18	18	11	6	11	14	13	12	13	14	5	13	12	10.7	19.7
Dir	247	242	241	248	255	227	185	193	216	231	223	223	233	258	271	223	227	236	261	268	276	252	273	268	241.3	222.9
18 Spd	12	6	10	9	11	8	8	8	8	10	5	1	2	3	3	1	3	7	9	11	10	11	12	13	2.6	12.7
Dir	267	196	187	219	209	230	244	238	205	226	264	115	281	262	270	249	2	6	8	12	11	356	3	10	281.7	10.2
19 Spd	12	14	15	16	19	20	25	28	24	24	23	22	16	20	25	25	25	17	16	19	21	25	20	19	20.2	28.5
Dir	10	14	17	26	21	28	28	22	25	30	34	30	33	22	18	21	22	13	6	16	17	19	13	12	21.4	22.2
20 Spd	18	21	22	23	21	19	21	25	21	19	19	18	17	18	19	22	21	21	16	19	19	20	18	20	19.6	24.7
Dir	12	19	17	19	18	14	16	19	21	26	28	24	19	13	15	19	17	22	32	43	42	39	38	39	23.5	19.4
21 Spd	18	17	16	12	12	14	14	13	11	11	12	12	14	20	20	19	18	18	15	16	16	16	9	9	13.7	19.7
Dir	37	35	25	19	46	67	65	49	27	37	25	67	78	81	77	66	60	79	71	81	81	80	73	91	60.4	76.9
22 Spd	9	9	12	15	12	11	14	17	20	20	19	18	15	9	6	4	3	4	6	6	7	7	6	3	7.9	19.8
Dir	92	66	83	102	96	95	120	127	129	130	132	144	142	143	117	118	324	26	19	23	16	17	20	32	106.4	130.5

**PASZA**

Peace Air Shed Zone Association

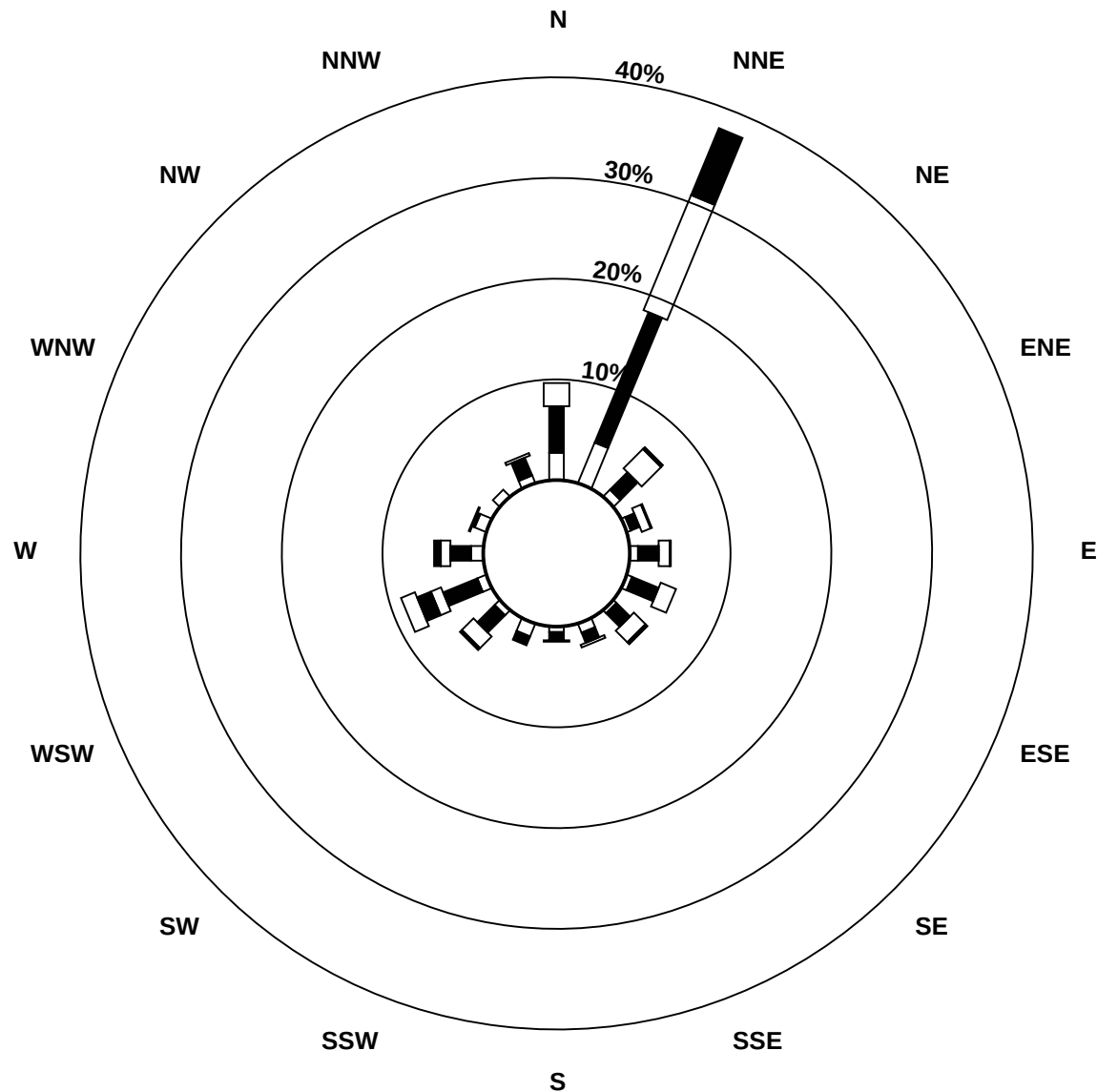
Hourly Averages

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

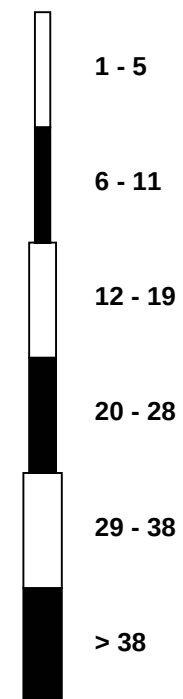
Hourly Period Ending At (MST)																									Daily Average	Daily Maximum
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	2	4	3	5	5	4	5	5	5	6	8	12	11	11	14	18	17	14	13	11	10	10	12	11	7.6	17.8
Dir	257	296	328	22	21	19	14	24	18	22	28	28	29	25	32	53	54	52	42	51	95	100	102	96	46.4	53.1
24 Spd	9	8	9	7	7	8	8	7	9	8	7	5	7	6	8	10	9	8	13	15	12	10	8	8	7.5	14.8
Dir	85	56	56	42	27	23	23	25	28	23	21	23	19	28	29	45	39	53	104	100	87	50	31	105	50.9	100.0
25 Spd	9	12	14	12	9	12	9	11	13	13	12	11	9	4	7	8	9	12	12	12	12	9	8	6	9.7	14.1
Dir	117	119	117	116	117	122	119	127	132	131	137	135	133	104	95	97	112	115	117	114	112	87	55	61	115.6	117.3
26 Spd	11	12	12	13	10	9	9	10	8	10	10	9	7	8	3	7	10	11	11	9	12	8	12	12	9.4	12.6
Dir	138	147	126	128	128	122	116	126	118	121	120	120	102	100	147	143	151	128	115	120	124	140	137	126	126.7	127.8
27 Spd	11	11	9	8	9	9	9	5	8	8	6	6	7	12	13	14	12	10	9	10	8	7	6	6	6.9	14.0
Dir	132	121	117	111	110	117	115	81	63	62	89	37	22	20	26	34	27	21	56	79	94	87	38	31	69.1	34.3
28 Spd	7	5	4	9	7	7	8	13	12	8	8	4	4	4	3	3	2	3	4	7	6	8	13	8	1.7	13.0
Dir	36	27	87	131	167	210	236	225	236	250	267	275	293	294	104	96	326	4	359	16	28	145	152	187	209.1	224.6
29 Spd	6	9	11	10	8	9	12	9	7	7	8	8	9	7	4	4	6	2	6	7	5	8	7	9	6.3	11.6
Dir	156	190	209	234	216	222	253	245	246	245	251	254	266	252	249	168	175	193	156	165	221	228	239	241	225.5	253.5
30 Spd	9	10	8	8	6	7	7	8	8	12	19	21	16	23	30	29	35	37	35	32	31	31	29	29	19.7	37.3
Dir	238	248	211	225	247	241	269	247	243	188	223	239	241	240	246	245	238	241	243	244	245	242	242	247	240.2	241.1
31 Spd	30	28	27	24	24	21	19	14	14	9	13	21	23	18	21	22	26	27	25	17	25	24	25	25	21.1	30.2
Dir	250	255	259	258	258	259	265	223	216	245	231	234	237	238	265	269	253	243	283	247	266	254	256	258	252.8	249.8
Spd	4.2	3.7	3.6	3.4	3.3	3.3	4.1	4.1	3.8	4.3	4.0	3.9	4.3	5.3	6.7	7.0	6.0	5.5	6.2	5.9	5.5	5.3	5.2	4.6	Diurnal Average	
Dir	17.1	14.1	18.3	14.1	18.5	20.7	21.5	27.9	30.4	37.6	32.7	30.5	18.4	10.3	11.5	17.8	12.0	14.4	15.8	20.8	14.7	16.5	7.5	7.2	Diurnal Maximum	
Spd	30.2	28.4	26.5	24.2	24.3	21.3	24.8	28.5	24.0	23.8	23.7	24.7	24.7	23.0	30.1	29.4	34.8	37.3	35.3	31.6	31.3	30.9	29.5	29.3	Diurnal Maximum	
Dir	249.8	254.9	258.9	257.8	257.9	259.3	28.0	22.2	24.5	29.7	23.0	23.4	23.2	240.3	246.3	245.0	237.6	241.1	242.6	244.0	244.5	241.5	241.9	247.1		
Maximum Speed Value: 37 km/h on Mar 30 18:00																		Minimum Speed Value: 0 km/h on Mar 16 13:00							Hours in Service: 744	
Maximum Daily Speed Average: 21.1 km/h on Mar 31																		Minimum Daily Speed Average: 1.3 km/h on Mar 3							Hours of Data: 744	
Maximum Diurnal Speed Average: 7.0 km/h at hour 16																		Minimum Diurnal Speed Average: 3.3 km/h at hour 6							Hours of Missing Data: 0	
Monthly Average Velocity: 4.67 km/h 18.05 deg																		Speed Percentiles: P ₁ = 0.8 P ₁₀ = 3.7 Q ₁ = 6.3 Median = 9.6 Q ₃ = 14.1 P ₉₀ = 20.5 P ₉₉ = 29.6							Percent Operational Time: 100.0	
All monthly, daily, and diurnal averages have been calculated using vector methods																										
Frequency Distribution																										
Speed Range (km/h)																										
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																			
North	33	106	70	36	1	0	246																			
NorthEast	12	71	70	27	0	0	180																			
East	9	21	16	2	0	0	48																			
SouthEast	13	30	27	2	0	0	72																			
South	10	12	1	0	0	0	23																			
SouthWest	14	35	21	7	10	0	87																			
West	10	31	10	12	2	0	65																			
NorthWest	18	5	0	0	0	0	23																			
Total	119	311	215	86	13	0	744																			

Wind Rose

Wind Speed (WS) (km/h)
Smoky Heights - March 2011



Wind Speed Classes (km/h)



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Peace Air Shed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Smoky Heights - March 2011

Maximum Speed: 37 km/h on Mar 30 18:00																				Maximum Daily Speed Average: 22.1 km/h on Mar 31										Hours in Service: 744	
Minimum Speed: 2 km/h on Mar 4 01:00																				Minimum Daily Speed Average: 4.5 km/h on Mar 3										Hours of Data: 744	
Maximum Diurnal Speed Average: 13.1 km/h at hour 17																				Minimum Diurnal Speed Average: 10.1 km/h at hour 5										Hours of Missing Data: 0	
Monthly Average Speed: 11.20 km/h																				Percentiles: P ₁ = 1.8 P ₁₀ = 4.2 Q ₁ = 6.6 Median = 9.7 Q ₃ = 14.2 P ₉₀ = 20.5 P ₉₉ = 29.6										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Mar	5	6	5	8	6	5	4	3	5	6	6	6	3	2	3	4	5	8	6	4	4	6	4	5	5.0	8.5					
2-Mar	7	6	6	10	10	11	14	16	15	16	18	20	18	16	18	16	14	14	13	12	11	9	7	6	12.6	19.5					
3-Mar	5	3	2	3	4	4	5	4	5	5	3	2	2	3	5	5	7	7	8	6	6	4	4	5	4.5	7.6					
4-Mar	2	2	2	2	2	2	4	5	4	3	2	2	5	8	8	12	16	14	13	12	11	12	14	16	7.2	16.1					
5-Mar	17	17	14	13	12	13	12	9	11	14	11	10	11	10	9	10	12	14	11	11	10	8	8	8	11.4	17.1					
6-Mar	8	10	10	9	10	10	9	8	8	8	8	7	9	8	9	10	10	9	8	8	8	9	9	8	8.7	10.1					
7-Mar	8	6	6	4	4	7	8	7	6	4	7	6	10	11	10	10	9	9	4	5	6	5	4	3	6.7	10.6					
8-Mar	4	5	4	2	2	2	3	3	4	2	2	2	7	8	9	11	8	9	11	12	8	9	6	6	5.7	11.7					
9-Mar	3	6	6	12	12	12	7	3	5	4	15	15	14	15	19	22	21	23	25	23	18	18	14	18	13.8	25.2					
10-Mar	22	19	16	18	20	21	20	21	21	21	21	19	19	18	17	14	13	11	9	9	9	7	9	10	15.9	21.6					
11-Mar	10	12	12	9	9	9	8	8	7	6	4	5	4	9	9	10	11	11	14	13	9	11	14	14	9.4	14.3					
12-Mar	15	14	12	14	14	13	14	14	15	16	14	12	13	10	12	12	10	9	7	4	6	6	9	4	11.2	16.4					
13-Mar	6	8	6	5	7	9	9	7	9	10	11	11	12	15	18	20	20	23	24	24	26	23	23	22	14.5	25.8					
14-Mar	18	17	17	16	11	10	8	9	9	10	7	5	5	4	6	7	6	5	5	5	4	6	9	7	8.6	18.4					
15-Mar	9	10	11	12	13	14	14	19	18	21	24	25	25	21	20	26	21	14	13	13	15	16	12	11	16.6	26.3					
16-Mar	11	9	8	7	5	5	6	5	4	7	6	2	2	2	2	3	7	6	2	6	6	9	10	11	5.8	11.3					
17-Mar	13	14	13	9	7	8	9	5	9	13	20	18	18	13	6	11	14	13	12	14	14	9	13	12	11.9	19.8					
18-Mar	12	7	10	9	11	8	9	9	9	10	5	2	2	3	3	2	4	7	9	11	10	11	12	13	7.9	12.8					
19-Mar	12	14	15	16	19	20	25	29	24	24	23	22	17	20	25	25	25	18	16	19	21	25	20	19	20.4	28.5					
20-Mar	18	21	22	23	21	19	21	25	21	19	19	18	18	18	19	22	21	21	16	19	19	20	19	20	19.9	24.7					
21-Mar	18	17	16	12	12	14	14	13	11	12	12	13	15	20	20	20	18	19	16	16	16	16	10	9	14.9	19.8					
22-Mar	10	9	12	15	13	11	14	17	20	20	19	18	15	9	6	4	4	4	6	6	7	7	7	4	10.7	19.9					
23-Mar	2	5	3	5	5	4	5	5	5	6	8	12	11	11	14	18	18	15	13	11	11	10	12	11	9.2	18.1					
24-Mar	9	9	9	7	7	8	8	8	9	8	7	5	7	7	8	11	10	9	13	15	12	10	8	9	8.8	15.1					
25-Mar	9	12	14	12	9	12	10	11	13	13	12	11	9	5	7	8	9	12	13	12	12	10	8	6	10.4	14.2					
26-Mar	11	12	12	13	10	9	9	10	8	10	10	10	7	8	4	7	10	11	11	9	12	8	12	12	9.7	12.7					
27-Mar	11	11	9	8	9	9	9	6	8	8	6	6	7	12	13	14	12	10	9	10	8	7	6	6	9.1	14.1					
28-Mar	7	5	4	9	8	7	8	13	12	8	8	4	5	4	4	3	3	3	4	7	6	8	13	9	6.8	13.0					
29-Mar	7	9	12	10	9	11	12	9	7	7	8	8	9	7	4	5	7	2	6	7	5	8	7	9	7.7	11.7					
30-Mar	10	10	8	8	7	8	7	8	9	13	20	21	16	23	30	30	35	37	35	32	31	31	30	29	20.3	37.4					
31-Mar	30	28	27	24	24	21	19	14	14	9	13	22	23	18	23	24	28	27	25	17	25	24	25	25	22.1	30.3					
10.6 10.7 10.5 10.5 10.1 10.2 10.4 10.4 10.5 10.7 11.2 10.9 10.9 10.9 11.6 12.7 13.1 12.7 12.1 12.0 11.8 11.7 11.5 11.2																								Diurnal Average							
30.3 28.5 26.5 24.3 24.3 21.3 24.8 28.5 24.0 23.8 23.7 24.7 24.8 23.1 30.2 29.5 34.8 37.4 35.3 31.7 31.3 31.0 29.5 29.4																								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

Smoky Heights - March 2011

Maximum Value: 88.6 deg on Mar 8 10:00																		Hours in Service: 744							
Minimum Value: 2.1 deg on Mar 31 03:00																		Hours of Data: 744							
Percentiles: P ₁ = 2.5 P ₁₀ = 3.6 Q ₁ = 4.8 Median = 8.2 Q ₃ = 14.8 P ₉₀ = 28.8 P ₉₉ = 79.3																		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-Mar	28	13	9	11	9	10	16	9	24	18	19	12	15	78	25	19	7	4	15	10	16	17	4	13	78.4
2-Mar	13	5	7	3	3	3	3	4	5	3	4	5	9	8	6	4	5	4	4	5	4	5	9	14	13.9
3-Mar	7	22	49	13	45	14	8	15	10	18	27	22	16	81	13	24	19	15	11	6	8	6	11	14	80.8
4-Mar	16	56	16	17	13	24	16	7	10	24	56	71	62	36	14	10	6	5	4	4	10	5	3	6	70.7
5-Mar	3	4	3	3	4	4	5	5	6	5	5	9	11	10	11	12	7	3	4	3	3	3	4	4	11.7
6-Mar	5	3	4	4	3	3	4	4	3	5	7	6	7	9	5	9	9	10	7	5	6	9	6	12	11.6
7-Mar	8	9	18	10	29	10	7	14	17	32	24	8	3	5	3	4	4	3	15	5	10	14	30	37	36.6
8-Mar	77	16	52	55	80	54	37	79	57	89	85	80	40	3	5	3	4	5	4	3	7	5	13	15	88.6
9-Mar	71	21	18	15	4	9	51	85	76	79	11	6	13	9	4	5	5	4	3	5	10	13	8	5	84.7
10-Mar	4	5	5	4	4	4	3	3	4	4	5	4	5	6	7	11	7	7	6	4	8	12	4	4	11.8
11-Mar	7	8	4	7	6	8	6	7	12	11	15	30	42	6	15	7	4	8	4	6	8	6	4	4	42.4
12-Mar	3	6	6	5	3	4	6	5	7	4	6	6	14	12	11	12	18	16	10	64	69	43	35	89	88.5
13-Mar	33	50	71	51	56	14	12	29	18	5	7	8	4	6	4	3	4	3	4	3	4	4	4	6	70.6
14-Mar	7	8	6	6	14	25	19	13	10	5	8	16	13	49	26	28	17	17	14	15	19	13	21	17	49.2
15-Mar	9	8	7	5	5	4	3	4	4	4	4	4	4	5	5	4	5	11	13	10	8	7	14	8	13.6
16-Mar	7	6	6	9	12	11	8	15	22	14	38	35	78	56	20	20	15	16	64	12	8	5	8	8	78.3
17-Mar	5	7	8	19	17	18	16	25	15	21	5	3	9	36	20	7	6	4	6	5	8	52	10	8	52.4
18-Mar	6	32	9	15	6	15	20	28	13	14	12	68	70	32	44	56	40	7	6	9	17	7	6	6	69.9
19-Mar	4	3	4	3	4	3	3	3	3	3	4	4	6	6	5	4	3	7	6	5	3	3	3	5	7.0
20-Mar	5	4	3	3	4	4	4	2	3	3	3	3	3	6	5	3	3	3	6	6	5	4	4	5	5.9
21-Mar	6	5	6	7	19	7	7	8	7	12	4	22	16	9	6	7	7	13	6	7	6	7	12	16	21.8
22-Mar	20	13	10	5	9	10	8	6	6	6	8	7	7	15	12	26	37	16	7	9	8	6	6	46	45.8
23-Mar	36	21	36	25	18	19	13	14	5	4	4	4	8	8	9	11	8	13	5	8	14	8	8	7	35.8
24-Mar	12	10	5	8	6	5	5	4	5	4	4	7	8	19	10	9	11	28	8	11	12	10	14	13	27.6
25-Mar	10	8	7	10	12	7	9	7	6	6	7	10	11	22	18	17	15	13	11	8	12	18	7	26	26.0
26-Mar	10	9	12	7	10	7	7	10	9	7	7	11	13	13	30	12	7	12	5	6	7	10	10	7	29.9
27-Mar	9	12	8	12	12	10	12	35	18	13	14	23	13	6	7	7	7	11	15	10	8	16	7	7	34.6
28-Mar	9	12	33	6	20	15	7	4	4	9	4	30	12	16	71	27	43	28	20	8	21	14	8	34	71.5
29-Mar	30	10	12	12	12	28	5	5	5	11	7	9	4	8	37	34	22	65	13	12	14	18	17	19	64.9
30-Mar	17	21	13	19	33	20	10	17	20	13	17	3	4	4	5	5	4	2	3	3	2	4	4	4	33.1
31-Mar	4	3	2	3	3	4	5	13	7	10	8	3	3	3	23	20	22	8	13	9	9	4	3	2	23.0
77.2 56.4 70.6 55.5 79.8 54.4 51.0 84.7 76.2 88.6 85.3 80.4 78.3 80.8 71.5 56.0 43.3 64.9 63.5 63.6 68.8 52.4 35.1 88.5																									

PASZA
Beaverlodge Station
Monthly Summary Tables, Graphs and
Roses

**PASZA**

Peace Air Shed Zone Association

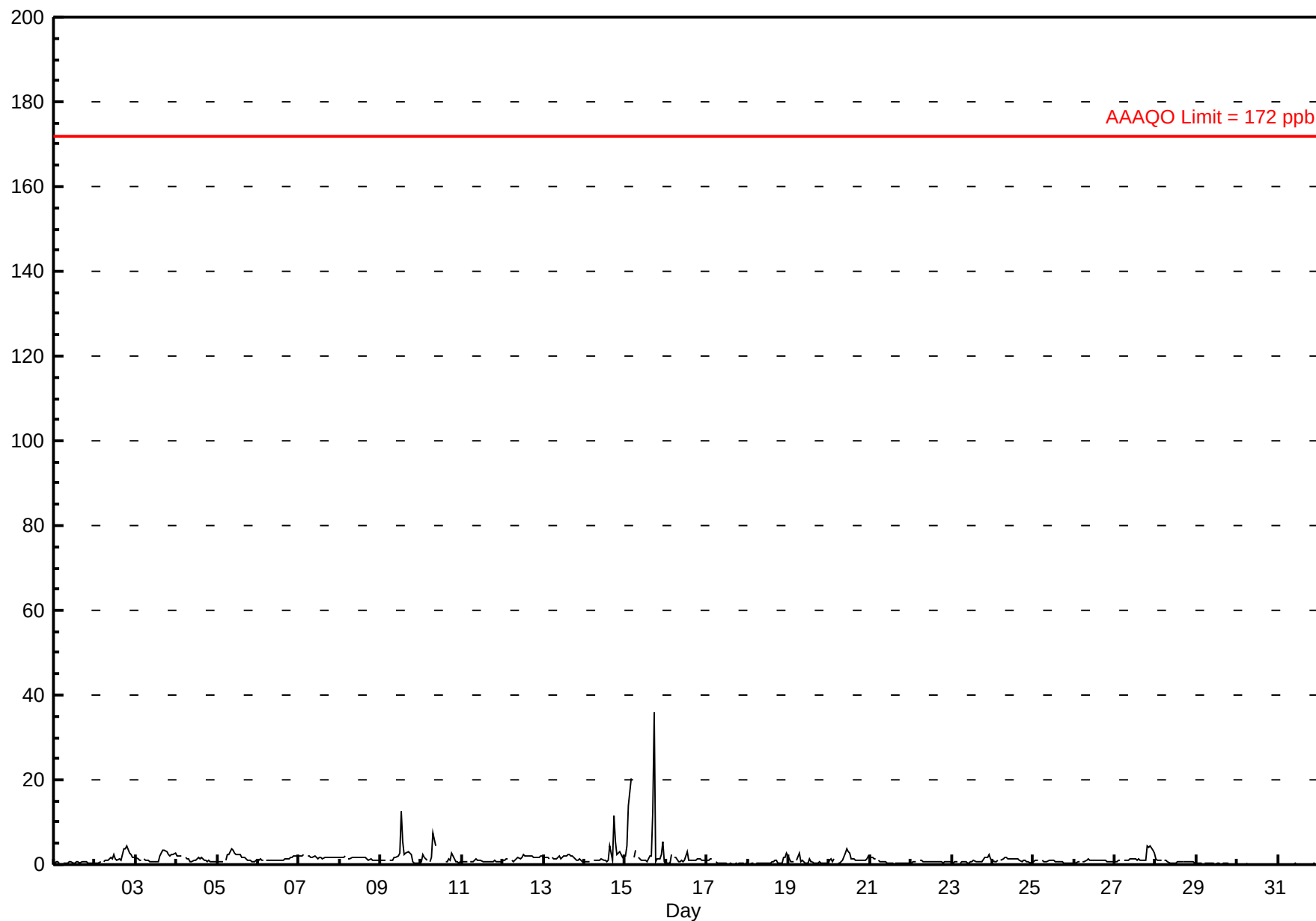
Hourly Averages

Sulphur Dioxide (SO₂) - ppb**Beaverlodge - March 2011**

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 36.1 ppb on Mar 15 18:00 Maximum Daily Average: 5.3 ppb on Mar 15																				Hours in Service: 744 Hours of Data: 707						
Minimum Value: 0 ppb on Mar 29 16:00 Maximum Diurnal Average: 2.6 ppb at hour 18 Monthly Average: 1.22 ppb																				Minimum Daily Average: 0.1 ppb on Mar 30 Minimum Diurnal Average: 0.9 ppb at hour 1 Percentiles: P ₁ = 0.0 P ₁₀ = 0.2 Q ₁ = 0.5 Median = 0.9 Q ₃ = 1.5 P ₉₀ = 2.2 P ₉₉ = 5.1		Hours of Missing Data: 37 Hours of Calibration: 36 Percent Operational Time: 99.9				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Mar	0	1	1	0	A	0	0	0	0	1	1	0	0	1	1	0	1	1	1	1	0	0	0	0	0.5	0.7
2-Mar	0	0	0	1	A	1	1	1	1	2	2	2	1	1	1	1	3	4	4	4	3	2	2	2	1.7	4.4
3-Mar	2	1	1	1	A	1	1	1	1	1	1	1	1	1	2	3	3	3	3	3	2	2	2	3	1.7	3.4
4-Mar	2	2	2	2	A	2	1	1	1	1	1	1	1	2	1	2	1	1	1	1	1	1	1	1	1.2	2.1
5-Mar	1	1	1	1	A	1	2	3	4	3	3	2	2	2	2	2	2	1	1	1	1	1	1	1	1.6	3.7
6-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	1.2	2.2
7-Mar	2	2	2	2	A	2	2	2	2	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	1.8	2.3
8-Mar	2	2	2	2	A	1	1	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1.5	2.1
9-Mar	1	1	1	1	A	1	1	1	2	2	2	3	12	5	2	3	3	3	3	1	1	0	0	0	2.1	12.5
10-Mar	1	2	2	1	A	1	2	7	4	C	C	C	C	C	1	1	1	1	3	1	1	1	0	1	1.7	7.5
11-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
12-Mar	1	1	1	1	A	1	1	1	1	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1.6	2.2
13-Mar	2	2	2	1	A	2	1	1	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1.6	2.4
14-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	4	1	12	5	2	3	3	2	2	2.1	11.5
15-Mar	2	4	14	20	A	2	4	N	2	1	1	1	1	1	2	2	13	36	1	1	1	2	6	1	5.3	36.1
16-Mar	0	0	0	2	A	2	2	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1.1	3.0
17-Mar	1	1	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.5
18-Mar	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	2	2	3	0.6	2.6
19-Mar	1	1	1	1	A	1	3	1	1	1	0	0	1	1	1	0	0	0	1	0	0	0	0	0	0.7	2.6
20-Mar	1	1	1	1	A	0	0	1	1	3	4	3	3	1	1	1	1	1	1	1	1	1	1	2	1.4	3.9
21-Mar	2	2	2	1	A	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	1.6
22-Mar	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0.7	1.0
23-Mar	1	0	1	1	A	0	1	1	1	1	0	1	1	1	1	1	1	1	1	2	2	2	2	1	0.9	2.4
24-Mar	1	1	1	1	A	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1.0	1.6
25-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.7	1.0
26-Mar	0	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
27-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	4	4	3	3	1.7	4.4
28-Mar	1	1	1	1	A	1	1	1	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0.7	1.3
29-Mar	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
30-Mar	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
31-Mar	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
0.9 1.0 1.3 1.6 -- 0.9 1.1 1.1 1.1 1.1 1.1 1.1 1.5 1.1 1.0 1.2 1.5 2.6 1.2 1.1 1.1 1.1 1.2 1.0 Diurnal Average																										
2.1 4.5 14.0 20.4 -- 2.0 3.5 7.5 4.4 3.2 3.9 3.1 12.5 5.5 2.4 4.5 12.6 36.1 5.5 4.4 4.0 4.4 5.6 2.8 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																										

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - March 2011



**PASZA**

Peace Air Shed Zone Association

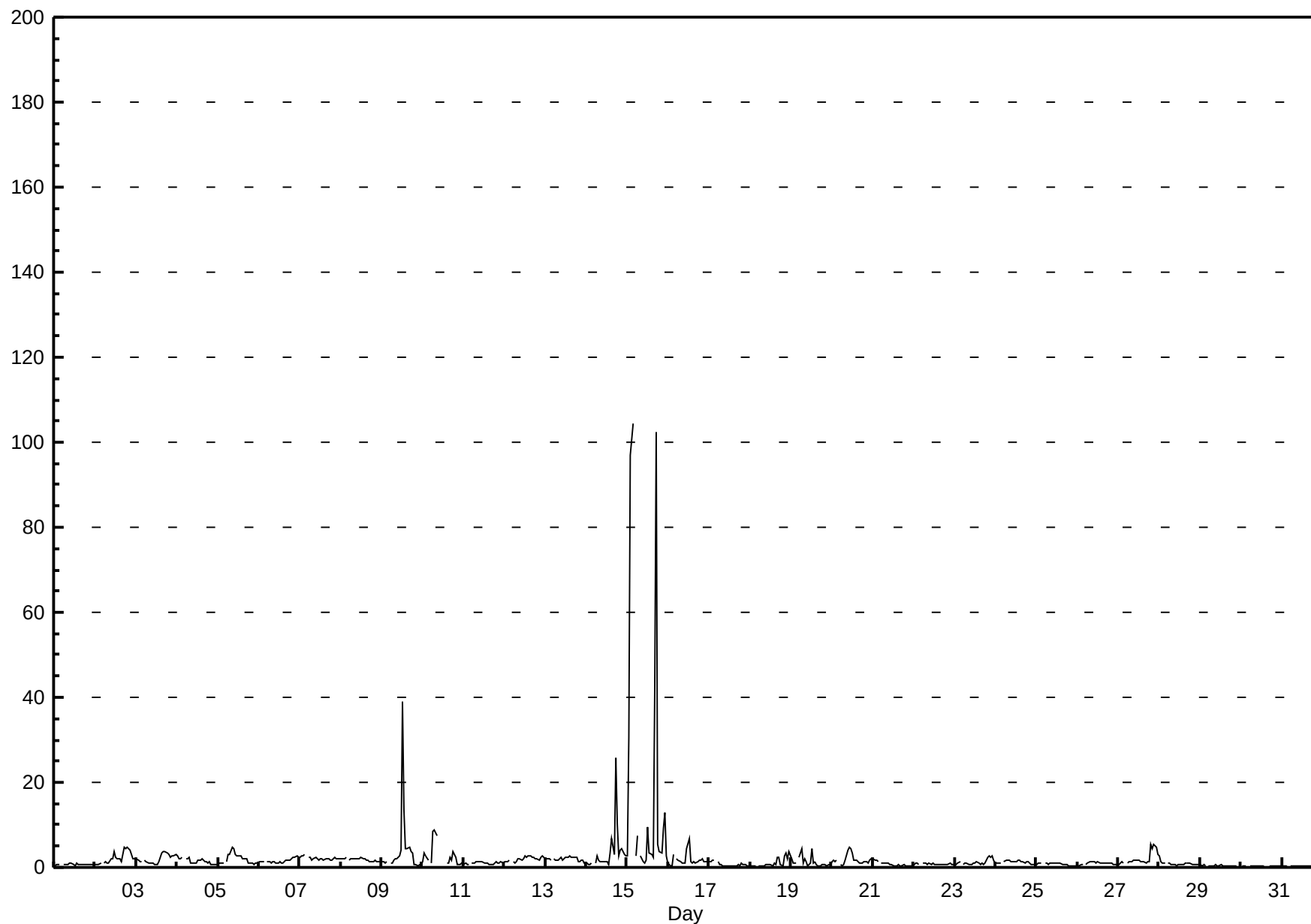
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb**Beaverlodge - March 2011**

Maximum Value: 104.3 ppb on Mar 15 04:00																				Maximum Daily Average: 20.6 ppb on Mar 15					Hours in Service: 744	
Minimum Value: 0 ppb on Mar 30 01:00																				Minimum Daily Average: 0.2 ppb on Mar 30					Hours of Data: 707	
Maximum Diurnal Average: 5.5 ppb at hour 18																				Minimum Diurnal Average: 1.2 ppb at hour 6					Hours of Missing Data: 37	
Monthly Average: 2.11 ppb																				Percentiles: P ₁ = 0.2 P ₁₀ = 0.4 Q ₁ = 0.7 Median = 1.1 Q ₃ = 2.0 P ₉₀ = 2.9 P ₉₉ = 23.2					Hours of Calibration: 36	
																				Percent Operational Time: 99.9						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	0	1	1	1	A	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1
2-Mar	1	1	1	1	A	1	1	1	1	2	2	4	2	2	2	1	3	5	4	5	4	3	2	2	2.2	4.8
3-Mar	2	2	1	1	A	2	1	1	1	1	1	1	1	1	2	3	4	4	3	3	2	3	3	3	2.0	3.7
4-Mar	3	2	2	2	A	2	2	2	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1.5	2.7
5-Mar	1	1	1	1	A	1	3	3	5	4	3	3	3	3	2	2	2	2	1	1	1	1	1	1	2.0	4.6
6-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	3	2	1.5	2.6
7-Mar	2	3	3	3	A	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.1	2.9
8-Mar	2	2	2	2	A	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	2	1	1	1	1.8	2.3
9-Mar	1	1	1	1	A	1	1	2	2	2	3	4	39	13	5	4	5	4	3	1	1	1	1	1	4.2	38.9
10-Mar	1	3	3	2	A	1	8	9	7	C	C	C	C	C	1	1	2	2	4	2	1	1	1	1	2.7	8.9
11-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.4
12-Mar	1	1	1	2	A	1	1	1	2	2	2	2	3	2	3	3	2	2	2	2	2	2	3	2	2.0	2.7
13-Mar	2	2	2	2	A	2	2	2	2	2	2	2	2	2	3	2	2	2	2	1	2	2	2	1	2.0	2.7
14-Mar	1	1	1	1	A	1	3	2	1	1	1	1	1	1	3	7	3	26	10	3	4	5	3	3	3.6	25.8
15-Mar	3	30	97	104	A	3	8	N	3	1	1	2	9	3	3	2	43	103	5	4	3	9	13	3	20.6	104.3
16-Mar	1	0	0	3	A	2	2	1	1	1	1	5	7	1	1	1	1	1	2	2	2	1	1	1	1.7	6.8
17-Mar	1	1	2	2	A	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	1	1	0	0	0.7	1.8
18-Mar	0	0	0	0	A	0	0	0	0	1	1	1	1	0	1	1	2	2	1	0	3	3	2	4	1.1	3.7
19-Mar	2	1	1	1	A	2	4	1	2	1	1	1	4	1	1	1	0	0	1	1	1	0	1	1	1.3	4.5
20-Mar	1	2	1	2	A	1	0	1	2	4	5	4	3	2	2	1	1	1	1	1	1	1	2	2	1.8	4.7
21-Mar	2	2	2	1	A	1	1	1	1	1	1	1	0	0	0	1	1	0	1	0	0	0	0	0	0.8	2.0
22-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1
23-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	2	3	2	1.2	2.9
24-Mar	1	1	1	1	A	1	2	2	2	1	1	1	1	2	2	1	1	1	1	2	1	1	1	1	1.3	1.8
25-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0.8	1.1
26-Mar	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.4
27-Mar	1	1	1	1	A	1	1	1	1	2	2	2	2	1	1	1	1	1	1	5	5	5	5	3	2.0	5.3
28-Mar	3	1	1	1	A	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	2.6
29-Mar	1	1	1	1	A	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
30-Mar	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
31-Mar	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
1.3 2.1 4.3 4.6 -- 1.2 1.8 1.5 1.5 1.4 1.3 1.6 3.1 1.7 1.5 1.5 2.9 5.5 1.8 1.5 1.5 1.7 1.7 1.3																									Diurnal Average	
2.8 30.5 97.1 104.3 -- 2.6 8.4 8.9 7.3 4.3 4.7 4.5 38.9 13.5 4.5 6.8 43.0 102.5 10.2 5.3 4.5 9.1 12.7 3.7																									Diurnal Maximum	
C - Calibration					N - Not Valid					A - Automated Daily Zero Span																

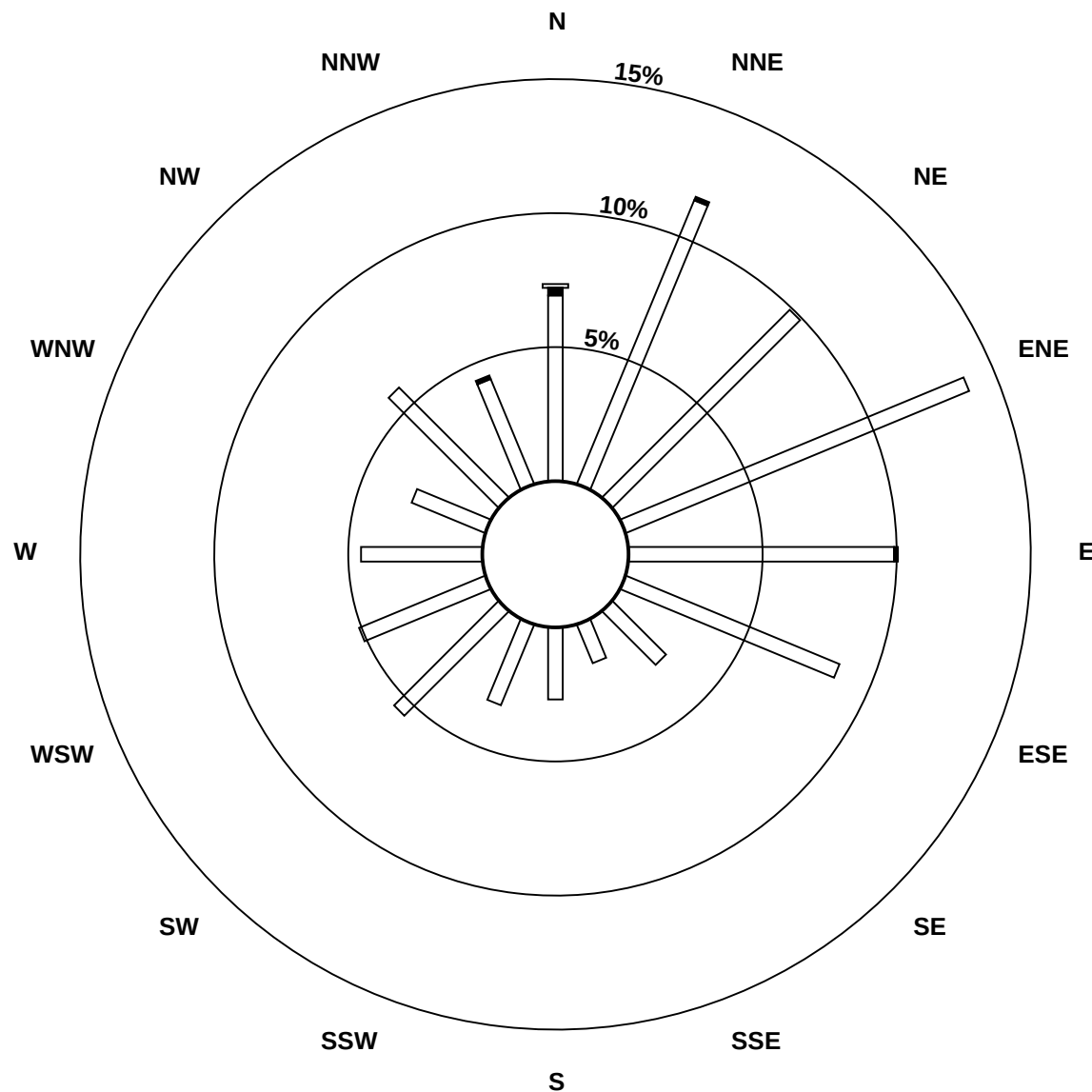
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - March 2011

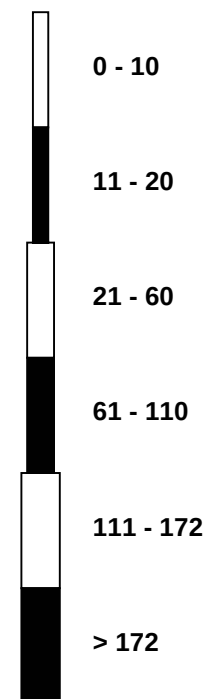


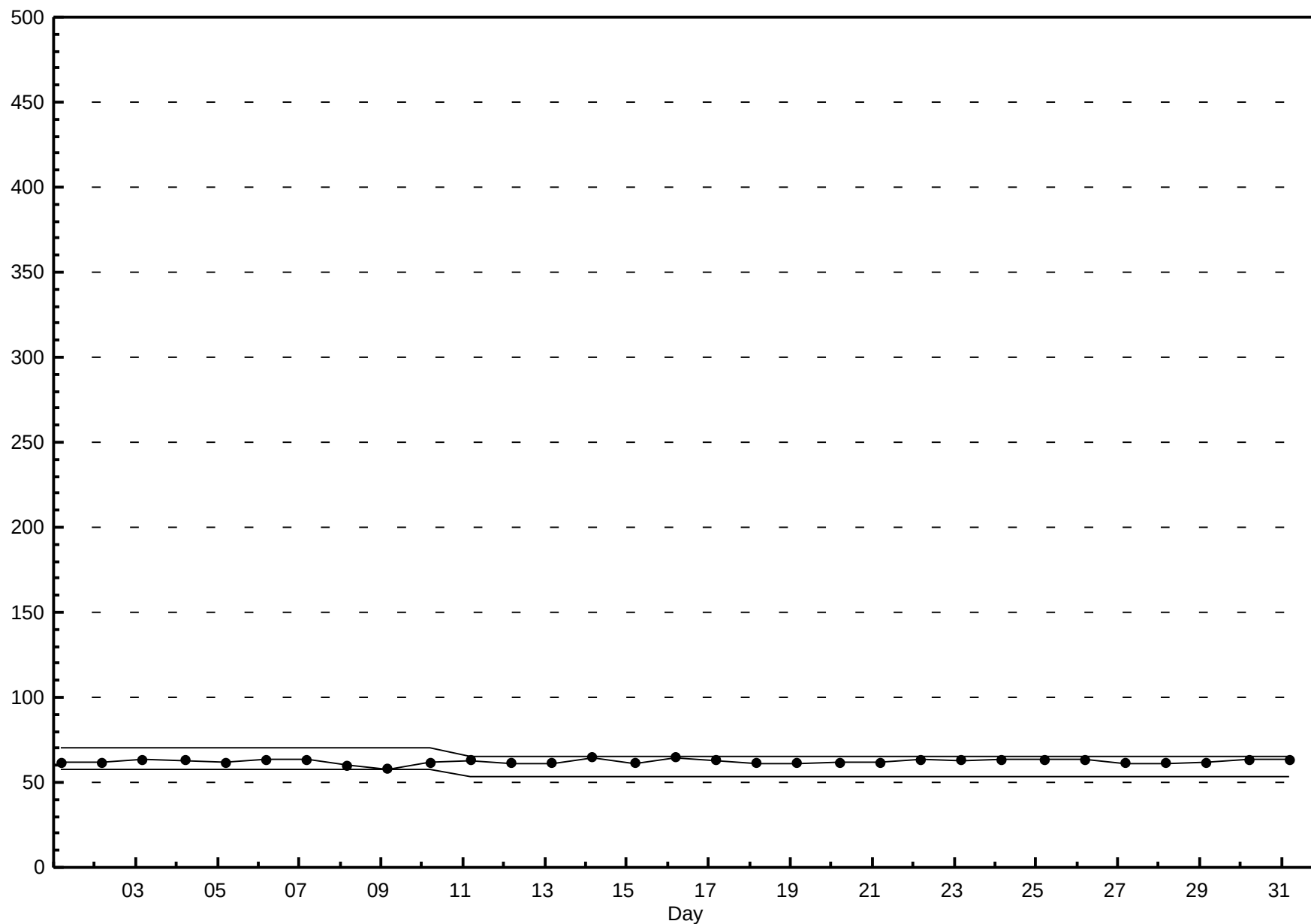
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - March 2011



Pollutant Classes (ppb)





**PASZA**

Peace Air Shed Zone Association

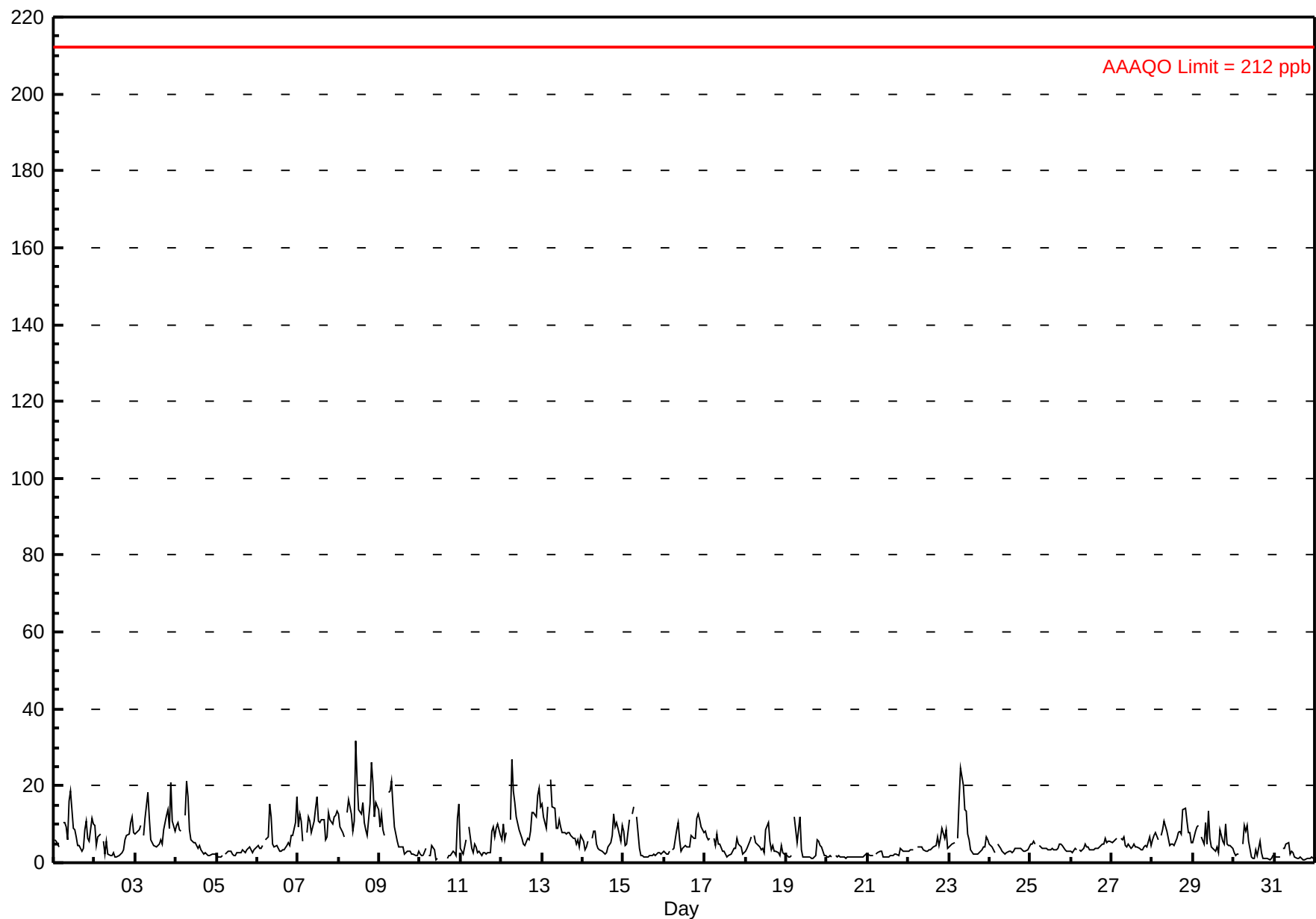
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb**Beaverlodge - March 2011**

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 31.6 ppb on Mar 8 11:00 Maximum Daily Average: 14.0 ppb on Mar 8																				Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 36 Percent Operational Time: 99.9						
Minimum Value: 1 ppb on Mar 10 10:00 Minimum Daily Average: 1.5 ppb on Mar 20 Maximum Diurnal Average: 9.2 ppb at hour 8 Minimum Diurnal Average: 3.9 ppb at hour 17 Monthly Average: 5.74 ppb Percentiles: P ₁ = 1.0 P ₁₀ = 1.7 Q ₁ = 2.7 Median = 4.3 Q ₃ = 7.7 P ₉₀ = 11.8 P ₉₉ = 21.1																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	6	5	5	4	A	11	10	9	6	16	19	9	9	7	4	5	3	4	9	11	6	6	12	10	8.0	18.7
2-Mar	10	4	7	8	A	5	2	6	2	2	2	2	2	2	2	2	3	3	6	7	7	10	12	8	4.9	11.9
3-Mar	7	8	9	10	A	7	12	18	12	6	5	5	4	4	5	6	5	9	12	14	9	21	11	8	9.0	20.7
4-Mar	10	10	9	8	A	12	21	17	9	6	5	5	5	4	5	3	2	3	2	2	2	2	2	2	6.3	21.2
5-Mar	2	2	2	2	A	2	3	3	3	2	2	2	3	3	2	3	3	2	4	4	3	3	3	4	2.7	4.0
6-Mar	5	4	4	4	A	6	7	15	12	5	4	5	4	3	3	3	3	5	5	5	7	7	11	17	6.2	17.0
7-Mar	9	13	11	6	A	8	12	11	8	11	14	17	11	10	11	11	6	7	13	11	10	12	12	13	10.7	17.1
8-Mar	13	9	8	7	A	13	16	13	8	11	32	21	14	13	16	10	8	7	15	26	21	12	16	14	14.0	31.6
9-Mar	9	13	9	7	A	18	19	21	15	9	6	4	4	4	4	2	3	3	3	2	2	2	2	3	7.2	21.1
10-Mar	2	2	2	4	A	2	2	5	3	1	1	C	C	C	C	C	1	2	2	3	2	2	12	15	3.4	15.1
11-Mar	4	2	4	6	A	9	4	3	5	4	3	3	2	3	3	2	3	3	8	9	7	9	10	7	4.8	10.0
12-Mar	6	10	6	8	A	11	27	19	16	12	9	7	6	5	4	6	6	8	13	13	12	18	19	14	11.1	27.0
13-Mar	15	12	9	15	A	22	15	14	9	9	11	9	8	8	7	8	8	7	6	6	5	6	4	7	9.6	21.5
14-Mar	6	4	4	6	A	6	8	8	5	4	3	3	3	2	3	4	5	7	13	9	11	9	6	10	5.9	12.5
15-Mar	8	5	5	11	A	13	15	N	12	4	2	2	2	1	2	2	2	2	2	2	3	3	2	3	4.5	14.6
16-Mar	3	2	2	3	A	4	4	8	10	6	3	4	4	4	4	4	7	6	6	12	13	11	9	8	6.0	12.7
17-Mar	8	7	6	6	A	6	4	7	5	5	3	3	2	2	2	2	3	4	4	6	5	4	2	3	4.3	8.4
18-Mar	3	4	6	7	A	7	5	5	4	3	4	3	8	10	6	3	4	3	3	3	2	5	3	2	4.5	10.3
19-Mar	2	2	1	2	A	12	5	9	12	3	1	1	1	1	1	1	1	2	6	6	4	4	2	2	3.6	12.1
20-Mar	1	2	2	2	A	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1.5	2.1
21-Mar	2	2	2	2	A	2	2	3	3	2	1	2	1	2	2	2	2	2	2	4	3	3	3	3	2.3	3.8
22-Mar	3	3	3	3	A	4	4	4	4	3	3	3	3	3	4	4	4	7	5	6	9	6	9	4	4.5	8.9
23-Mar	4	4	5	5	A	6	16	25	20	14	13	8	6	3	2	2	2	2	3	3	4	4	7	6	7.2	24.8
24-Mar	5	4	3	3	A	5	4	3	3	2	3	3	3	3	3	4	4	4	4	3	3	3	3	4	3.4	4.8
25-Mar	5	5	5	5	A	5	4	4	4	4	3	3	3	4	4	3	4	5	5	5	3	3	3	3	3.9	5.4
26-Mar	3	3	4	3	A	3	3	4	5	4	4	3	3	4	4	4	4	4	5	5	6	5	5	6	4.1	6.5
27-Mar	5	5	6	6	A	6	6	7	4	4	5	4	4	5	4	4	4	3	3	4	4	4	7	5	4.8	6.9
28-Mar	6	7	8	6	A	7	9	11	8	6	5	5	5	5	6	8	8	7	14	14	11	8	8	5	7.6	14.0
29-Mar	5	8	9	10	A	7	5	11	5	13	6	4	3	3	4	3	9	6	5	10	5	4	5	4	6.2	13.4
30-Mar	3	2	2	2	A	5	10	8	10	6	1	1	1	3	2	6	3	1	1	1	1	1	1	2	3.1	9.9
31-Mar	2	1	2	1	A	4	4	5	5	2	3	2	1	1	1	1	1	1	1	1	1	1	2	1	2.0	5.3
5.5 5.3 5.1 5.5 -- 7.4 8.3 9.2 7.3 5.8 5.7 4.8 4.2 4.1 4.0 4.1 3.9 4.2 5.8 6.7 6.0 6.1 6.6 6.2 Diurnal Average																										
15.2 12.7 10.9 14.6 -- 21.5 27.0 24.8 20.1 15.9 31.6 21.4 13.6 12.7 15.6 11.4 8.5 8.6 15.3 25.9 20.9 20.7 19.5 17.0 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																										

Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - March 2011



Hourly Maximums

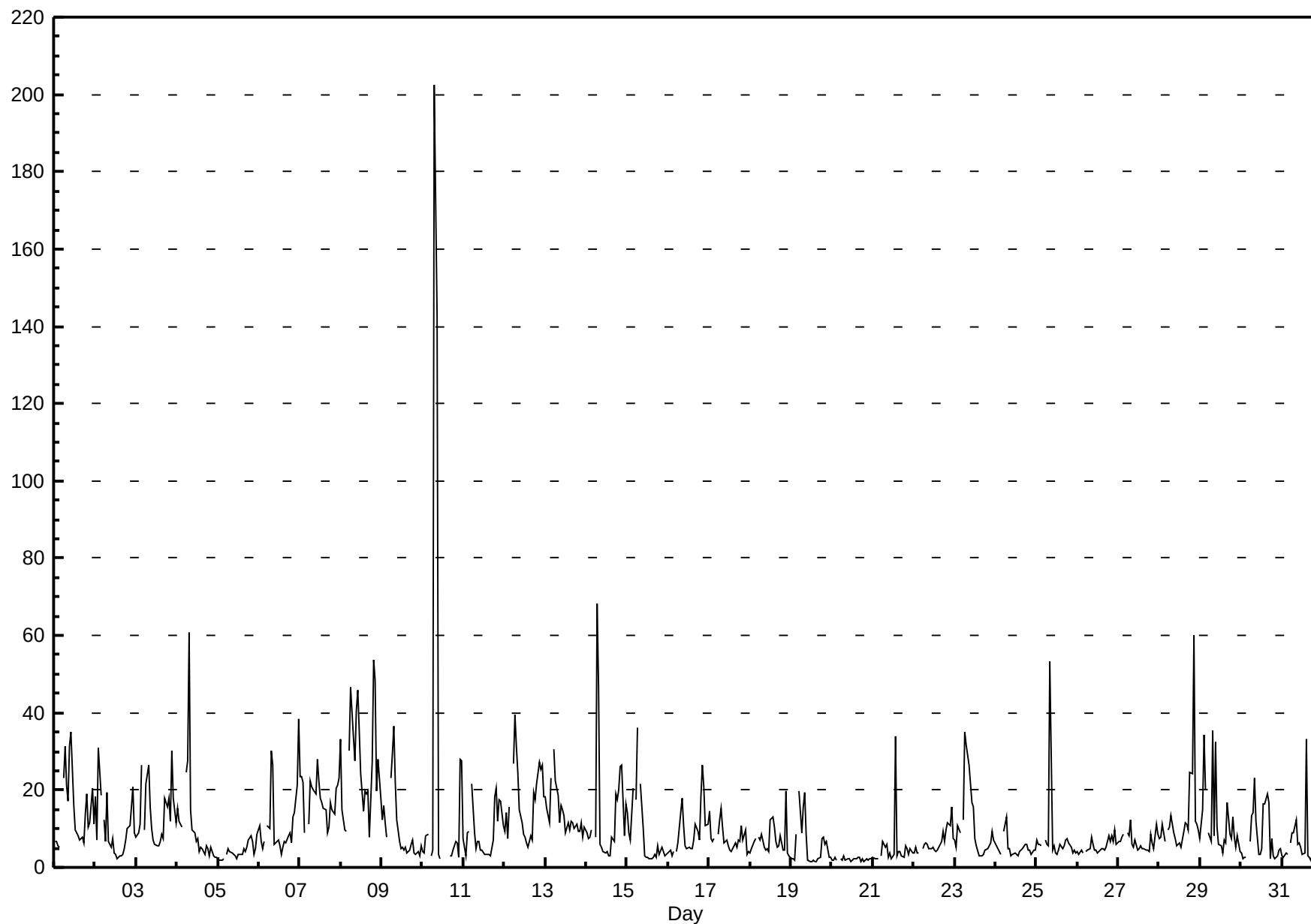
Nitrogen Dioxide (NO₂) - ppb

Beaverlodge - March 2011

Maximum Value: 202.4 ppb on Mar 10 08:00																								Maximum Daily Average: 27.3 ppb on Mar 8								Hours in Service: 744	
Minimum Value: 2 ppb on Mar 19 13:00																								Minimum Daily Average: 2.1 ppb on Mar 20								Hours of Data: 707	
Maximum Diurnal Average: 25.2 ppb at hour 8																								Minimum Diurnal Average: 6.2 ppb at hour 13								Hours of Missing Data: 37	
Monthly Average: 10.45 ppb																								Percentiles: P ₁ = 1.7 P ₁₀ = 2.9 Q ₁ = 4.3 Median = 6.8 Q ₃ = 12.0 P ₉₀ = 21.8 P ₉₉ = 52.9								Hours of Calibration: 36	
																								Percent Operational Time: 99.9									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24									
1-Mar	7	7	6	5	A	23	31	21	17	31	35	16	10	9	8	7	8	6	14	19	11	12	21	11	14.5	34.9							
2-Mar	18	7	31	19	A	12	7	20	7	5	7	4	3	2	3	3	3	5	7	10	11	16	21	9	10.0	31.1							
3-Mar	8	9	11	26	A	10	21	27	16	10	7	6	6	6	7	9	8	18	16	18	12	30	18	12	13.4	30.3							
4-Mar	15	12	11	11	A	25	28	61	15	10	9	7	7	4	5	5	3	6	5	3	5	3	3	3	11.1	60.8							
5-Mar	2	2	2	2	A	3	5	4	4	3	3	2	3	3	3	5	4	5	7	8	7	3	5	9	4.2	8.7							
6-Mar	11	7	5	7	A	11	10	30	27	6	6	7	6	4	5	7	6	8	9	6	13	14	21	38	11.5	38.2							
7-Mar	24	24	22	9	A	11	22	21	20	19	28	22	18	17	15	15	9	10	17	15	14	20	21	23	18.1	27.9							
8-Mar	33	15	10	9	A	30	47	34	28	41	46	35	24	15	20	19	20	8	27	54	49	20	28	18	27.3	53.9							
9-Mar	12	16	11	8	A	23	30	36	22	12	7	5	5	5	5	4	4	6	7	4	3	4	3	6	10.4	36.5							
10-Mar	4	4	8	8	A	3	4	202	143	3	2	C	C	C	C	C	3	3	4	7	6	3	28	28	25.8	202.4							
11-Mar	7	3	9	9	A	22	9	5	7	7	4	4	4	3	3	4	3	7	18	20	12	18	17	11	9.0	21.7							
12-Mar	9	14	7	16	A	27	40	31	25	15	11	9	8	6	5	8	7	19	17	22	27	25	26	18	17.2	39.6							
13-Mar	18	15	12	23	A	31	22	18	11	16	15	13	9	11	10	12	11	10	11	9	9	12	8	10	13.8	30.6							
14-Mar	9	7	8	10	A	8	68	47	6	5	4	4	4	3	3	8	7	19	18	20	26	26	8	17	14.5	68.2							
15-Mar	14	9	7	21	A	18	36	N	22	10	3	2	2	2	2	2	3	3	6	4	5	4	3	3	8.3	36.0							
16-Mar	4	4	3	4	A	4	6	14	18	11	6	5	5	5	5	7	11	9	7	18	26	21	11	11	9.4	26.3							
17-Mar	14	8	7	7	A	8	12	15	10	6	7	6	5	4	5	6	5	7	7	11	7	10	3	4	7.6	15.4							
18-Mar	4	5	7	7	A	8	7	9	5	5	5	4	12	13	10	7	5	5	8	5	5	20	4	3	7.0	19.7							
19-Mar	2	2	2	9	A	20	9	15	19	9	2	2	2	2	2	2	2	3	8	8	6	7	3	3	5.9	19.6							
20-Mar	2	2	3	2	A	2	2	3	2	2	2	2	2	2	2	3	3	2	2	2	2	2	2	2	2.1	2.8							
21-Mar	3	2	2	2	A	3	7	5	6	3	4	2	3	34	3	4	4	3	3	5	5	3	5	4	5.0	33.8							
22-Mar	4	5	4	4	A	5	6	6	6	5	5	5	4	4	4	5	7	9	7	10	12	11	16	8	6.5	15.6							
23-Mar	7	5	11	9	A	12	35	32	26	22	17	16	7	5	3	3	3	3	4	5	6	6	9	7	11.1	35.1							
24-Mar	6	5	4	3	A	9	13	5	5	3	3	4	3	3	4	4	5	6	6	4	4	3	4	4	5.0	13.1							
25-Mar	7	6	6	6	A	7	6	6	53	5	6	4	4	5	6	5	5	7	7	6	5	4	4	4	7.5	53.2							
26-Mar	4	3	4	4	A	4	4	5	8	6	5	4	4	4	5	5	4	5	8	7	8	7	10	6	5.4	9.7							
27-Mar	7	7	8	8	A	9	8	12	6	5	7	4	5	6	5	5	4	4	4	9	7	5	11	8	6.7	12.2							
28-Mar	8	8	11	7	A	10	10	13	9	7	6	6	6	5	9	12	11	10	25	24	60	12	11	10	12.6	59.9							
29-Mar	8	15	34	20	A	9	7	35	8	33	10	6	6	4	7	6	17	8	7	13	8	5	8	4	12.1	35.3							
30-Mar	4	2	3	3	A	7	14	14	23	12	3	3	5	17	16	19	17	2	8	3	2	3	5	5	8.2	23.1							
31-Mar	3	2	4	3	A	6	9	9	12	6	6	5	3	4	33	3	3	2	3	2	3	3	6	5	5.9	33.3							
9.0 7.5 8.8 9.0 -- 12.3 17.3 25.2 18.9 10.7 9.1 7.2 6.2 6.9 7.2 6.7 6.7 7.1 9.6 11.3 12.1 10.7 11.0 9.8																								Diurnal Average									
33.1 23.6 34.3 26.3 -- 30.6 68.2 202.4 142.7 40.8 46.0 35.4 24.2 33.8 33.3 18.8 19.7 19.5 27.3 53.9 59.9 30.3 28.1 38.2																								Diurnal Maximum									
C - Calibration N - Not Valid A - Automated Daily Zero Span																																	

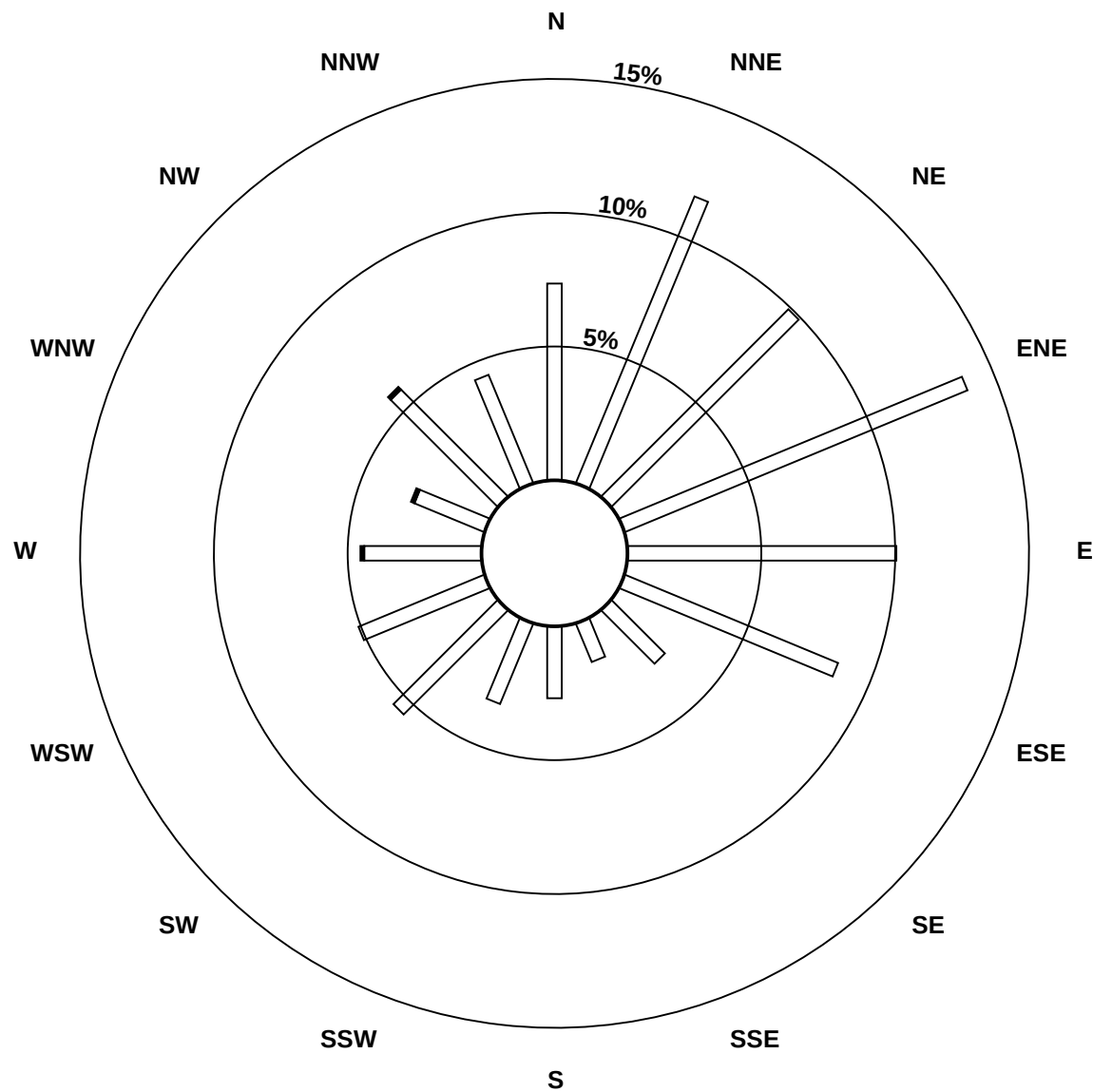
Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - March 2011

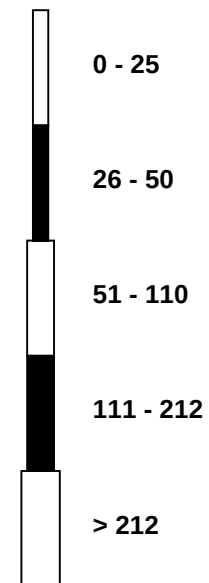


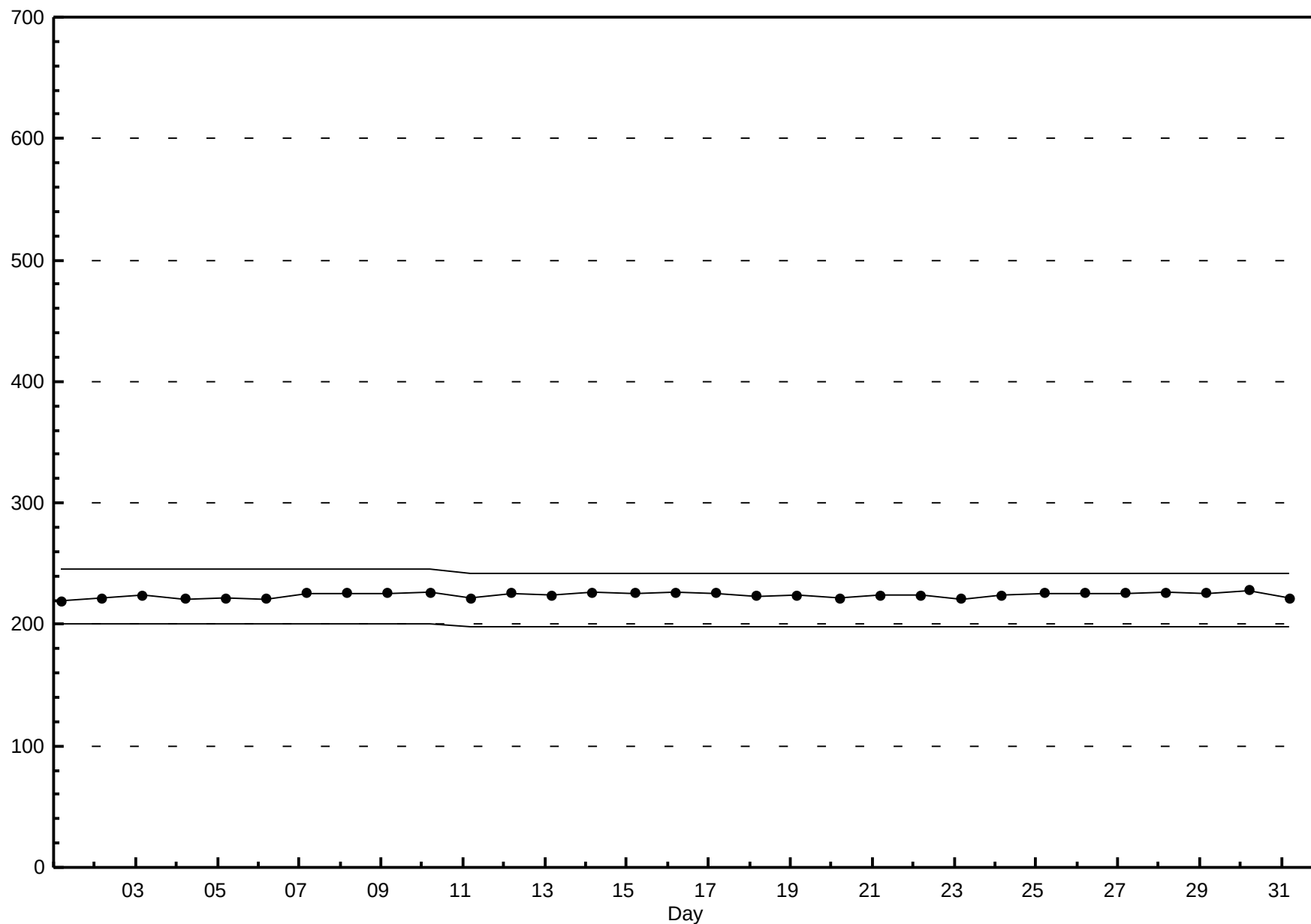
Pollutant Rose

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - March 2011



Pollutant Classes (ppb)





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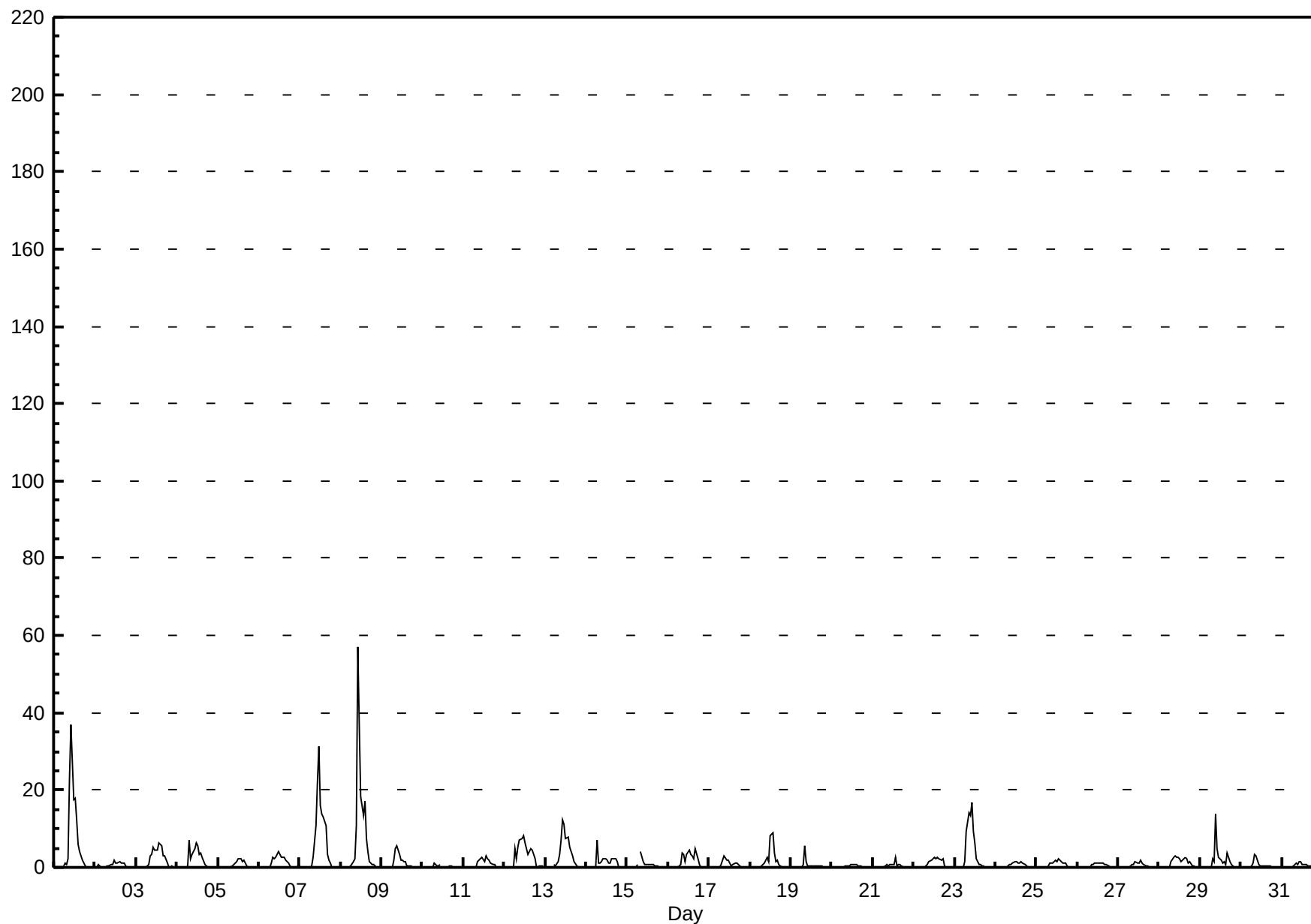
Hourly Averages

Nitrogen Oxide (NO) - ppb**Beaverlodge - March 2011**

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 57.0 ppb on Mar 8 11:00 Maximum Daily Average: 7.5 ppb on Mar 8																				Hours in Service: 744 Hours of Data: 708						
Minimum Value: 0 ppb on Mar 4 23:00 Minimum Daily Average: 0.2 ppb on Mar 20 Maximum Diurnal Average: 6.5 ppb at hour 11 Minimum Diurnal Average: 0.0 ppb at hour 2 Monthly Average: 1.59 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.3 Q ₃ = 1.4 P ₉₀ = 3.5 P ₉₉ = 16.2																				Hours of Missing Data: 36 Hours of Calibration: 35 Percent Operational Time: 99.9						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	0	0	0	0	A	0	1	1	2	23	37	18	18	12	6	4	2	1	0	0	0	0	0	0	5.4	37.1
2-Mar	0	0	1	0	A	0	0	0	0	1	1	2	1	1	1	1	1	1	0	0	0	0	0	0	0.5	1.9
3-Mar	0	0	0	0	A	0	0	1	3	3	5	4	5	6	6	6	3	3	1	0	0	0	0	0	2.1	6.4
4-Mar	0	0	0	0	A	0	1	7	2	3	5	6	6	3	4	2	1	1	0	0	0	0	0	0	1.8	7.2
5-Mar	0	0	0	0	A	0	0	0	0	1	1	1	2	2	1	2	1	0	0	0	0	0	0	0	0.6	2.2
6-Mar	0	0	0	0	A	0	0	1	3	2	3	4	4	3	2	3	2	1	0	0	0	0	0	1	1.2	4.0
7-Mar	0	0	0	0	A	0	0	0	2	11	22	31	16	14	13	11	3	2	1	0	0	0	0	0	5.5	31.5
8-Mar	0	0	0	0	A	0	0	1	2	11	57	37	18	13	17	7	4	1	1	1	0	0	0	0	7.5	57.0
9-Mar	0	0	0	0	A	0	0	2	5	6	3	2	2	2	1	0	0	0	0	0	0	0	0	0	1.1	5.5
10-Mar	0	0	0	0	A	0	0	1	1	0	1	C	C	C	C	0	0	0	0	0	0	0	0	0	0.2	1.2
11-Mar	0	0	0	0	A	0	0	0	1	2	2	3	2	3	2	2	1	1	1	0	0	0	0	0	0.9	2.9
12-Mar	0	0	0	0	A	0	5	2	5	7	7	8	6	5	3	5	4	3	2	0	0	0	0	0	2.8	8.2
13-Mar	0	0	0	0	A	1	0	2	3	7	12	11	7	8	5	4	3	1	0	0	0	0	0	0	2.9	12.2
14-Mar	0	0	0	0	A	0	7	1	1	2	2	2	2	1	1	2	2	2	2	0	0	0	0	0	1.3	7.3
15-Mar	0	0	0	0	A	0	1	N	4	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.6	4.2
16-Mar	0	0	0	0	A	0	0	1	4	3	2	3	4	3	3	2	5	2	1	0	0	0	0	0	1.5	4.9
17-Mar	0	0	0	0	A	0	0	1	2	3	2	2	1	1	1	1	1	1	0	0	0	0	0	0	0.7	3.1
18-Mar	0	0	0	0	A	0	0	0	1	2	3	2	8	9	4	2	2	1	0	0	0	0	0	0	1.5	9.1
19-Mar	0	0	0	0	A	0	0	1	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	5.5
20-Mar	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.2	0.7
21-Mar	0	0	0	0	A	0	0	0	1	1	1	1	1	2	1	1	1	0	0	0	0	0	0	0	0.4	2.4
22-Mar	0	0	0	0	A	0	0	0	1	1	2	2	3	2	3	2	2	2	0	0	0	0	0	0	1.0	2.7
23-Mar	0	0	0	0	A	0	1	9	14	14	17	9	6	2	1	1	0	0	0	0	0	0	0	0	3.3	16.9
24-Mar	0	0	0	0	A	0	0	0	1	1	1	2	1	1	1	1	1	1	0	0	0	0	0	0	0.5	1.7
25-Mar	0	0	0	0	A	0	0	0	1	1	1	2	2	2	2	1	1	1	0	0	0	0	0	0	0.7	2.1
26-Mar	0	0	0	0	A	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.5	1.3
27-Mar	0	0	0	0	A	0	0	0	1	1	1	1	1	2	1	1	1	0	0	0	0	0	0	0	0.5	1.8
28-Mar	0	0	0	0	A	0	0	1	3	3	3	3	2	1	2	3	2	1	1	0	0	0	0	0	1.2	3.1
29-Mar	0	0	0	0	A	0	0	2	1	14	5	3	2	1	2	1	4	1	1	0	0	0	0	0	1.6	13.9
30-Mar	0	0	0	0	A	0	0	1	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	3.5
31-Mar	0	0	0	0	A	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.4	1.4
0.0 0.0 0.1 0.0 -- 0.1 0.6 1.3 2.5 4.2 6.5 5.5 4.1 3.5 2.9 2.2 1.6 1.0 0.5 0.1 0.1 0.1 0.1 0.1																									Diurnal Average	
0.3 0.1 0.6 0.2 -- 0.7 7.3 9.3 14.2 22.7 57.0 37.2 18.4 13.9 17.0 11.0 4.9 3.4 2.3 0.9 0.3 0.3 0.2 1.2																									Diurnal Maximum	
C - Calibration N - Not Valid A - Automated Daily Zero Span																										

Hourly Averages

Nitrogen Oxide (NO) - ppb
Beaverlodge - March 2011



**PASZA**

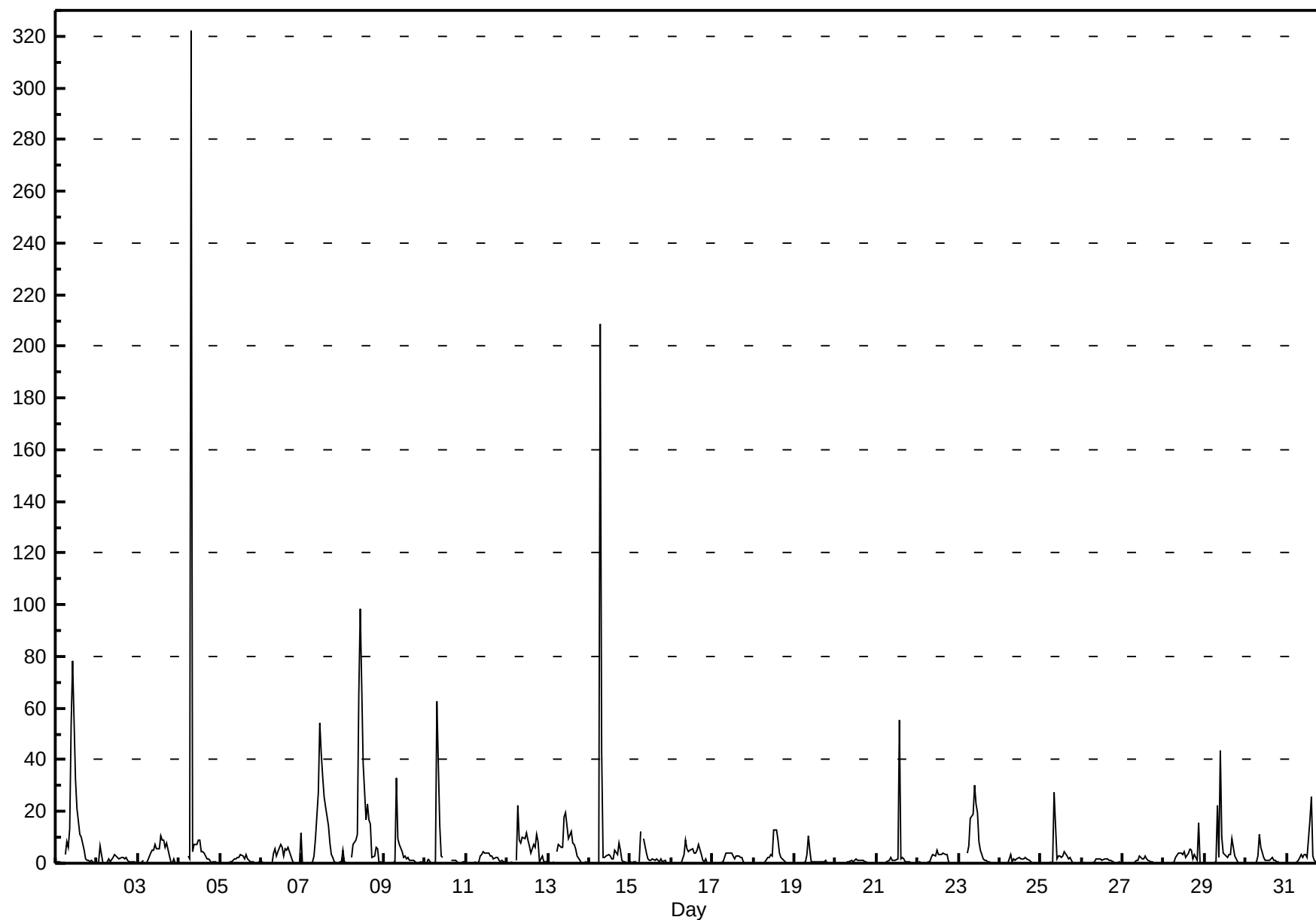
Peace Air Shed Zone Association

Hourly Maximums**Nitrogen Oxide (NO) - ppb****Beaverlodge - March 2011**

Maximum Value: 322.4 ppb on Mar 4 08:00																								Maximum Daily Average: 17.2 ppb on Mar 8								Hours in Service: 744	
Minimum Value: 0 ppb on Mar 5 04:00																								Minimum Daily Average: 0.5 ppb on Mar 20								Hours of Data: 708	
Maximum Diurnal Average: 18.8 ppb at hour 8																								Minimum Diurnal Average: 0.2 ppb at hour 2								Hours of Missing Data: 36	
Monthly Average: 4.41 ppb																								Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.9 Q ₃ = 3.2 P ₉₀ = 8.9 P ₉₉ = 60.8								Hours of Calibration: 35	
																								Percent Operational Time: 99.9									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24									
1-Mar	0	0	0	0	A	3	9	6	14	54	78	32	21	16	11	10	5	2	1	1	1	1	0	0	11.6	78.3							
2-Mar	0	0	7	0	A	0	0	2	1	2	3	3	3	2	2	2	2	2	1	0	1	1	0	0	1.5	6.6							
3-Mar	0	0	0	1	A	0	1	4	5	5	7	6	6	11	9	9	6	8	3	0	0	1	0	0	3.6	10.8							
4-Mar	0	0	0	0	A	3	2	322	4	7	7	9	9	4	4	4	2	2	1	0	1	0	0	0	16.7	322.4							
5-Mar	0	0	0	0	A	0	1	1	1	1	2	2	3	3	2	3	2	1	1	1	0	0	0	1	1.1	3.3							
6-Mar	1	0	0	0	A	0	0	4	6	3	5	7	6	3	5	5	6	3	1	0	0	0	0	12	2.9	11.7							
7-Mar	0	0	0	0	A	0	0	3	9	28	54	43	33	26	22	15	8	3	2	1	0	0	1	1	10.8	54.3							
8-Mar	5	0	0	0	A	2	7	9	11	65	99	69	38	17	23	17	15	2	3	6	6	0	0	0	17.2	98.6							
9-Mar	0	0	0	0	A	0	1	33	9	8	4	2	3	2	2	1	1	1	1	0	0	0	0	0	3.0	32.8							
10-Mar	0	0	2	0	A	0	1	62	14	3	2	C	C	C	C	1	1	1	1	0	0	0	1	0	4.8	62.5							
11-Mar	0	0	0	0	A	1	0	1	3	3	4	4	4	4	3	3	2	2	2	1	1	1	0	0	1.7	4.4							
12-Mar	0	0	0	0	A	1	22	9	8	10	9	12	9	7	4	7	6	11	8	1	3	1	1	0	5.6	22.2							
13-Mar	1	0	0	1	A	5	7	6	6	18	20	14	9	12	8	7	6	3	1	0	0	0	0	0	5.4	19.6							
14-Mar	0	0	0	0	A	0	209	43	2	2	3	3	3	2	2	5	3	8	5	1	0	0	0	0	12.7	208.6							
15-Mar	0	0	0	0	A	1	13	N	10	4	2	1	1	2	1	2	1	1	2	0	1	0	0	0	1.9	12.6							
16-Mar	0	0	0	0	A	0	0	3	9	6	4	5	6	4	4	5	7	3	1	1	2	0	0	0	2.7	9.1							
17-Mar	0	0	0	0	A	0	1	2	4	4	4	4	3	2	3	3	2	2	1	0	0	0	0	0	1.6	4.1							
18-Mar	0	0	0	0	A	0	0	1	2	2	4	3	13	13	9	4	2	2	1	0	0	0	0	0	2.5	13.0							
19-Mar	0	0	0	0	A	0	0	3	11	5	1	1	1	1	1	1	1	0	1	0	0	0	0	0	1.2	10.5							
20-Mar	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							
21-Mar	0	0	0	0	A	0	1	1	2	1	1	1	2	55	1	2	2	1	1	1	0	0	0	0	3.2	55.3							
22-Mar	0	0	0	0	A	0	0	1	2	3	3	5	4	3	3	4	3	4	1	0	0	0	0	0	1.6	4.9							
23-Mar	0	0	0	0	A	4	7	17	19	30	23	20	9	5	2	1	1	1	0	0	0	0	0	0	6.1	30.4							
24-Mar	0	0	0	0	A	0	3	1	2	1	2	2	2	2	2	2	1	1	1	0	0	0	0	0	1.0	3.2							
25-Mar	0	0	0	0	A	1	0	1	27	2	3	3	2	3	4	3	2	2	1	0	0	0	0	0	2.4	27.5							
26-Mar	0	0	0	0	A	0	0	0	2	2	2	1	1	2	2	2	1	1	1	0	0	0	0	0	0.8	1.9							
27-Mar	0	0	0	0	A	0	0	1	1	1	3	2	2	3	2	1	1	1	0	0	0	0	0	0	0.8	2.6							
28-Mar	0	0	0	0	A	0	0	2	4	4	4	4	4	2	4	6	5	2	3	1	16	0	0	0	2.7	15.8							
29-Mar	0	0	0	0	A	0	0	22	2	44	10	4	3	2	3	4	10	3	2	1	0	0	0	0	4.8	43.9							
30-Mar	0	0	0	0	A	0	1	3	11	6	2	1	1	1	1	2	1	1	1	0	0	0	0	0	1.4	10.9							
31-Mar	0	0	0	0	A	0	1	1	3	2	3	3	2	17	26	3	1	1	0	0	0	0	0	0	2.9	25.6							
0.4 0.2 0.4 0.2 -- 0.7 9.3 18.8 6.6 10.6 11.9 8.9 6.8 7.5 5.5 4.3 3.4 2.4 1.6 0.6 1.1 0.3 0.3 0.6																								Diurnal Average									
5.3 0.4 6.6 1.0 -- 4.6 208.6 322.4 27.5 65.4 98.6 69.1 38.4 55.3 25.6 17.0 15.0 11.4 8.3 6.4 15.8 1.5 0.8 11.7																								Diurnal Maximum									
C - Calibration N - Not Valid A - Automated Daily Zero Span																																	

Hourly Maximums

Nitrogen Oxide (NO) - ppb
Beaverlodge - March 2011



**PASZA**

Peace Air Shed Zone Association

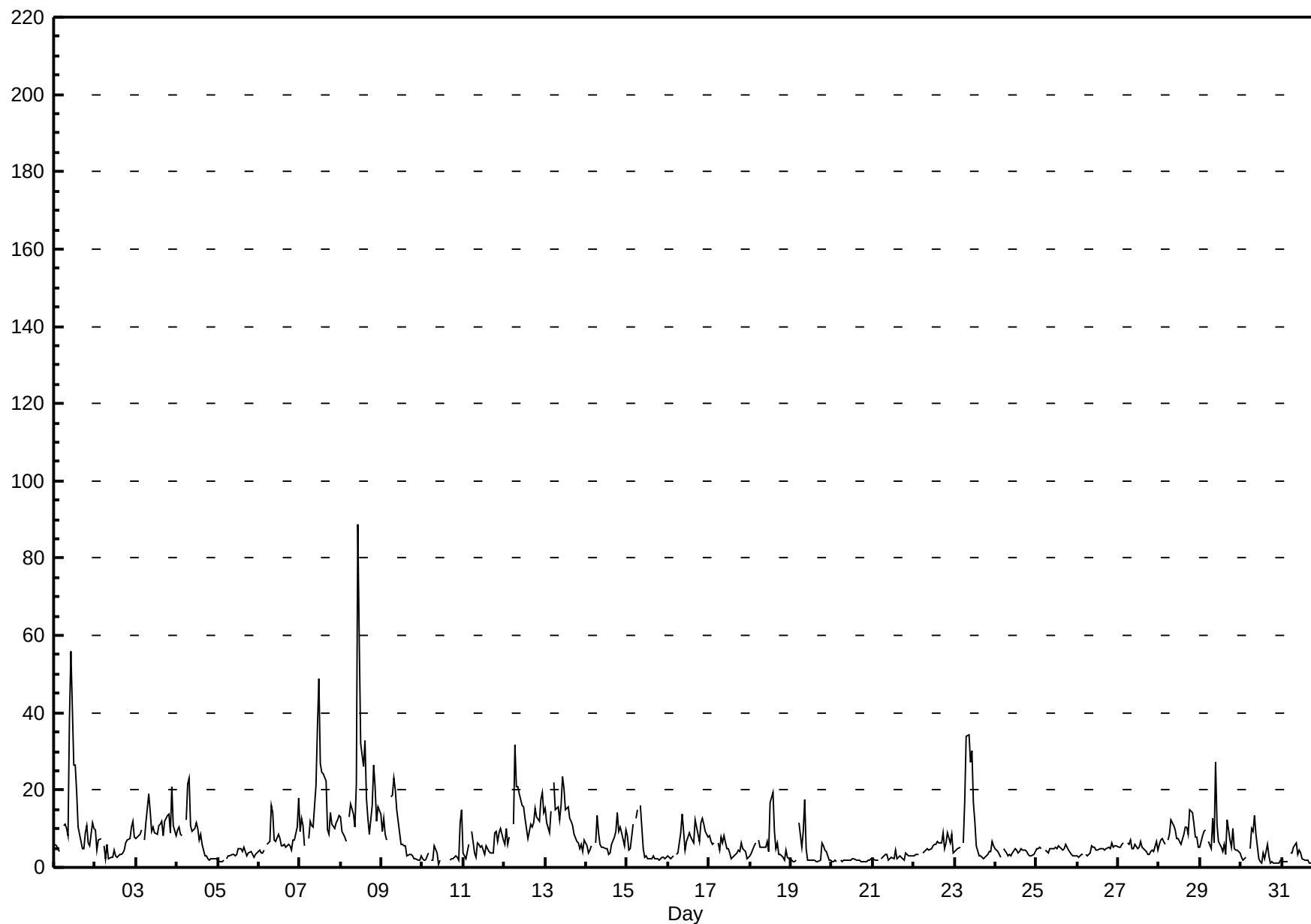
Hourly Averages**Oxides of Nitrogen (NO_x) - ppb****Beaverlodge - March 2011**

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 88.8 ppb on Mar 8 11:00 Maximum Daily Average: 21.5 ppb on Mar 8																								Hours in Service: 744 Hours of Data: 707		
Minimum Value: 1 ppb on Mar 10 10:00 Minimum Daily Average: 1.8 ppb on Mar 20 Maximum Diurnal Average: 12.2 ppb at hour 11 Minimum Diurnal Average: 5.1 ppb at hour 3 Monthly Average: 7.32 ppb Percentiles: P ₁ = 1.1 P ₁₀ = 1.9 Q ₁ = 3.2 Median = 5.2 Q ₃ = 9.1 P ₉₀ = 14.2 P ₉₉ = 33.2																								Hours of Missing Data: 37 Hours of Calibration: 36 Percent Operational Time: 99.9		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Mar	6	5	5	4	A	11	11	10	8	39	56	27	26	19	10	9	5	5	9	11	6	6	11	10	13.4	55.9
2-Mar	10	4	7	8	A	5	2	6	2	3	3	4	3	3	3	3	4	4	6	7	7	10	12	8	5.5	11.9
3-Mar	7	8	9	10	A	7	12	19	14	9	10	9	9	11	11	12	8	12	13	14	9	21	11	8	11.0	20.8
4-Mar	10	10	9	8	A	12	22	23	11	9	10	12	10	7	8	6	3	3	2	2	2	2	2	2	8.1	22.9
5-Mar	2	2	2	2	A	2	3	3	3	3	3	3	5	5	4	5	4	3	4	4	3	3	3	4	3.3	5.1
6-Mar	5	4	4	4	A	6	7	16	14	7	7	9	7	6	6	6	5	6	5	5	7	7	11	18	7.4	18.1
7-Mar	9	13	11	6	A	8	12	11	10	21	36	49	27	24	24	22	10	9	14	11	10	12	12	13	16.3	48.8
8-Mar	13	9	8	7	A	13	17	14	10	22	89	59	32	26	33	18	13	8	16	27	21	12	16	14	21.5	88.8
9-Mar	9	13	9	7	A	18	19	23	20	15	9	6	6	6	5	3	3	3	3	2	2	2	2	3	8.2	23.0
10-Mar	2	2	2	4	A	2	2	6	4	1	2	C	C	C	C	C	2	2	2	3	3	2	12	15	3.6	15.1
11-Mar	4	2	4	6	A	9	4	3	6	6	5	5	3	6	5	4	4	4	9	9	7	9	10	7	5.7	10.0
12-Mar	6	10	6	8	A	11	32	21	21	19	16	16	13	10	8	11	10	12	15	13	12	18	20	14	13.9	31.6
13-Mar	15	12	9	15	A	22	15	16	12	16	23	21	15	16	13	12	11	8	7	6	5	6	4	7	12.4	23.4
14-Mar	6	4	4	6	A	6	13	9	6	5	5	5	5	3	4	6	8	9	14	9	11	9	6	10	7.1	14.0
15-Mar	8	4	5	11	A	13	15	N	16	5	3	3	2	2	2	3	2	2	2	2	3	3	2	3	5.1	16.1
16-Mar	3	2	2	3	A	4	4	9	14	9	5	7	9	8	7	6	12	8	7	12	13	11	9	8	7.5	14.0
17-Mar	8	7	6	6	A	6	4	8	6	8	5	5	4	2	3	3	4	4	4	7	5	4	2	3	5.0	8.3
18-Mar	3	4	6	6	A	7	5	5	5	5	7	4	17	19	9	5	6	4	3	3	2	5	3	2	5.9	19.4
19-Mar	2	2	1	2	A	12	5	9	18	5	2	2	2	2	2	2	2	2	6	6	4	4	2	2	4.1	17.6
20-Mar	1	2	2	2	A	2	1	2	2	2	2	2	2	2	2	2	2	2	1	1	1	2	2	2	1.8	2.2
21-Mar	2	2	2	2	A	2	3	3	3	2	2	3	2	4	2	3	3	3	2	4	3	3	3	3	2.7	4.3
22-Mar	3	3	3	3	A	4	4	5	5	5	5	5	6	6	7	6	6	9	5	6	9	6	9	4	5.4	8.9
23-Mar	4	4	5	5	A	6	17	34	34	27	30	17	12	6	3	3	3	2	3	3	4	4	7	6	10.4	34.3
24-Mar	5	4	3	3	A	5	4	3	3	3	4	5	4	4	4	5	5	4	4	3	3	3	3	4	3.9	4.9
25-Mar	5	5	5	5	A	5	4	4	5	5	5	5	5	6	5	4	5	6	5	5	3	3	3	3	4.6	6.1
26-Mar	3	3	4	3	A	3	3	4	6	5	5	5	5	5	5	5	4	5	5	5	6	5	5	6	4.6	6.4
27-Mar	5	5	6	6	A	6	6	7	5	5	6	5	5	7	5	5	4	4	3	4	4	4	7	5	5.2	7.2
28-Mar	6	7	8	6	A	7	9	12	11	10	7	7	7	6	9	10	10	9	15	14	11	8	8	5	8.8	15.0
29-Mar	5	8	9	10	A	7	5	13	6	27	11	7	5	4	6	3	12	7	5	10	5	4	4	4	7.8	27.3
30-Mar	3	2	2	2	A	5	10	9	13	9	2	1	1	4	2	6	3	1	1	1	1	1	1	2	3.6	13.4
31-Mar	2	2	2	2	A	4	4	5	6	3	4	4	2	2	2	2	1	1	1	1	1	1	2	1	2.4	6.4
																								Diurnal Average		
																								Diurnal Maximum		
C - Calibration N - Not Valid A - Automated Daily Zero Span																										

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

Beaverlodge - March 2011



Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

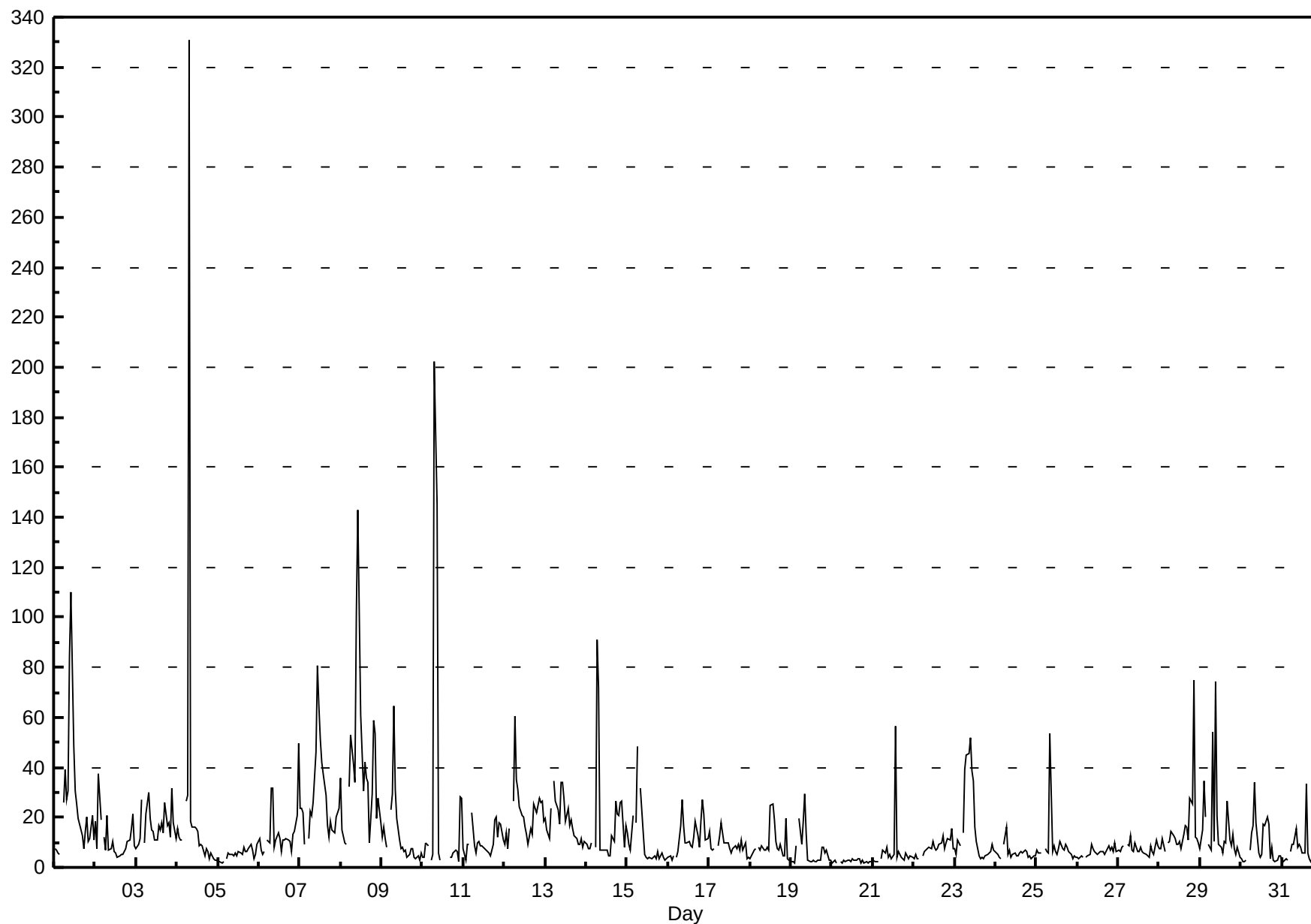
Beaverlodge - March 2011

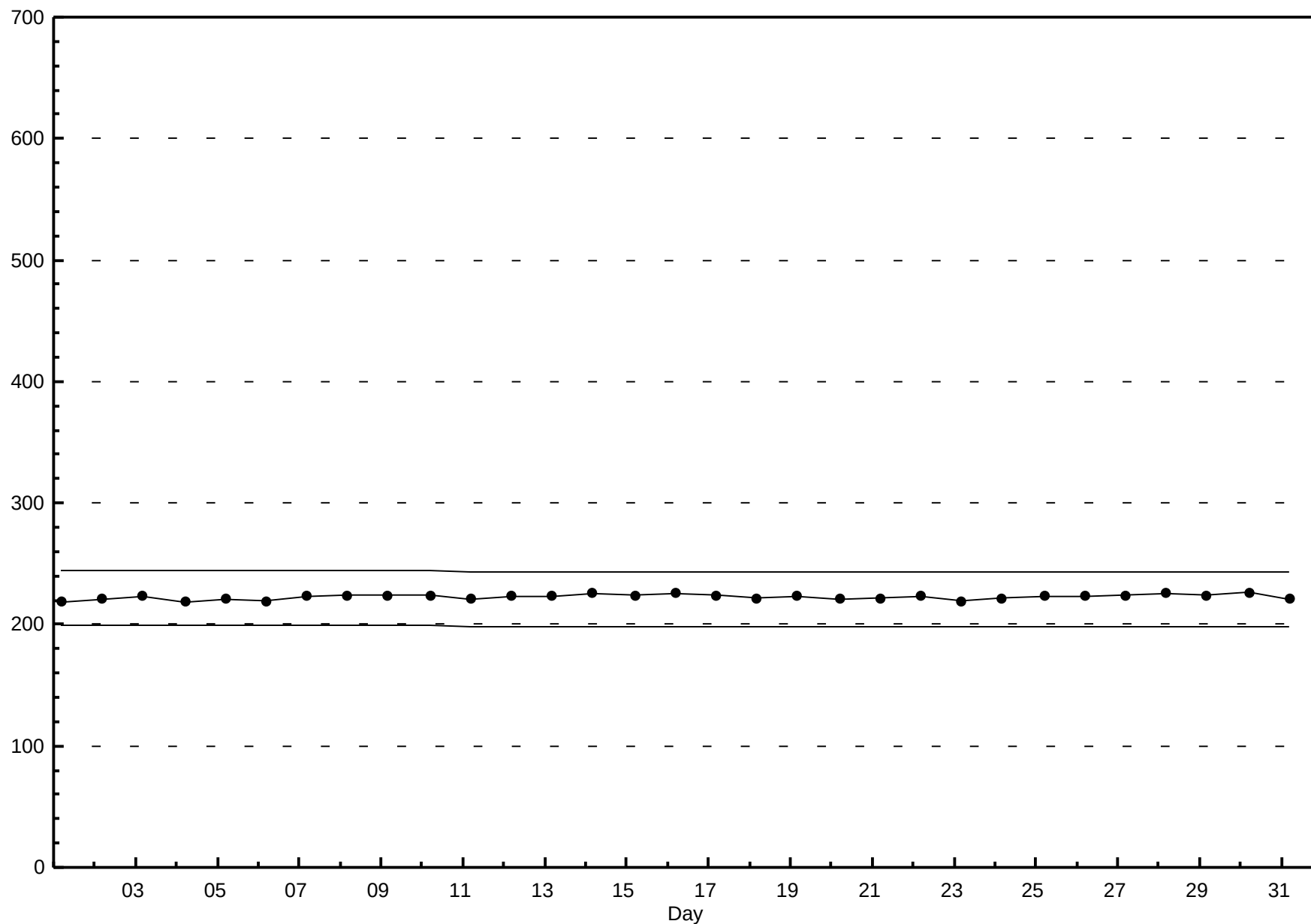
Maximum Value: 330.7 ppb on Mar 4 08:00																				Maximum Daily Average: 43.4 ppb on Mar 8										Hours in Service: 744	
Minimum Value: 2 ppb on Mar 20 20:00																				Minimum Daily Average: 2.5 ppb on Mar 20										Hours of Data: 707	
Maximum Diurnal Average: 38.6 ppb at hour 8																				Minimum Diurnal Average: 7.5 ppb at hour 2										Hours of Missing Data: 37	
Monthly Average: 13.96 ppb																				Percentiles: P ₁ = 2.0 P ₁₀ = 3.3 Q ₁ = 5.2 Median = 8.2 Q ₃ = 15.7 P ₉₀ = 27.7 P ₉₉ = 101.0										Hours of Calibration: 36	
																				Percent Operational Time: 99.9											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
1-Mar	7	7	6	5	A	26	39	27	31	84	110	49	31	25	19	17	13	7	14	20	11	12	21	11	25.7	110.0					
2-Mar	18	7	37	19	A	12	7	21	7	8	11	6	6	4	5	5	5	6	7	10	11	16	21	9	11.2	37.4					
3-Mar	8	9	11	27	A	10	22	30	20	15	14	11	11	16	15	18	14	26	17	18	12	32	18	12	16.7	31.5					
4-Mar	15	12	11	11	A	26	29	331	19	16	16	16	15	8	9	9	5	8	6	3	6	3	3	3	25.2	330.7					
5-Mar	2	2	2	2	A	4	6	5	5	5	6	4	7	6	5	8	6	6	8	9	7	4	5	9	5.3	9.3					
6-Mar	12	7	5	7	A	11	10	32	32	8	11	14	12	6	11	11	12	11	10	6	13	14	21	50	14.1	49.7					
7-Mar	24	24	22	9	A	11	22	21	26	46	81	65	51	42	37	29	17	12	18	15	14	20	22	24	28.3	80.8					
8-Mar	36	15	10	9	A	32	53	42	34	102	143	103	61	30	42	36	34	10	30	59	54	20	28	18	43.4	142.8					
9-Mar	12	16	12	8	A	23	29	65	31	20	11	7	8	6	7	4	5	7	8	4	3	5	3	6	13.1	64.7					
10-Mar	4	4	10	8	A	3	5	202	145	6	3	C	C	C	C	C	4	4	6	7	6	3	28	28	26.4	202.3					
11-Mar	7	3	9	9	A	22	9	6	10	10	9	8	7	7	6	6	5	9	19	20	12	18	17	11	10.5	22.0					
12-Mar	9	14	8	16	A	27	61	35	31	24	21	20	16	13	9	16	13	25	24	22	28	26	26	18	21.8	60.6					
13-Mar	20	15	12	23	A	35	27	23	17	34	34	28	18	23	17	19	16	13	12	9	9	12	8	10	18.8	34.6					
14-Mar	9	8	8	10	A	8	91	72	7	7	7	7	7	4	4	13	10	27	21	21	26	27	8	16	18.1	91.3					
15-Mar	14	9	7	21	A	18	48	N	32	14	5	4	4	4	3	4	4	3	7	4	6	4	3	3	10.0	48.3					
16-Mar	4	4	3	4	A	4	6	17	27	16	10	10	10	9	8	12	18	13	8	18	27	21	11	11	11.9	27.2					
17-Mar	14	8	7	7	A	8	13	18	14	10	10	10	8	6	8	9	7	9	7	11	7	10	3	4	9.0	17.8					
18-Mar	4	5	7	7	A	8	7	9	7	7	8	7	25	26	19	11	7	7	9	5	5	20	4	3	9.3	25.5					
19-Mar	2	2	2	8	A	20	9	19	30	14	3	2	2	3	2	2	3	3	8	8	6	7	3	3	6.9	29.5					
20-Mar	2	2	3	2	A	2	2	3	2	3	3	2	3	3	3	4	4	2	3	2	2	2	2	2	2.5	3.6					
21-Mar	3	2	2	2	A	3	7	6	8	4	5	4	5	56	4	6	5	4	3	6	5	4	5	4	6.6	56.4					
22-Mar	4	5	4	4	A	5	6	7	8	8	8	10	8	7	7	9	10	13	7	10	11	11	15	8	8.0	15.5					
23-Mar	7	5	11	9	A	14	39	45	45	52	39	35	16	11	4	4	4	4	5	5	6	7	9	7	16.6	51.9					
24-Mar	6	5	4	3	A	9	16	5	7	4	5	6	5	5	6	6	6	7	6	4	4	3	4	4	5.8	16.2					
25-Mar	7	6	6	6	A	7	6	6	53	6	8	7	5	8	10	7	7	9	8	7	5	4	4	4	8.5	53.5					
26-Mar	4	3	4	4	A	4	4	5	9	7	6	6	5	6	7	6	5	6	9	7	8	6	10	6	6.1	10.0					
27-Mar	7	7	8	8	A	9	8	13	7	6	10	6	7	8	6	6	5	5	4	9	6	5	11	8	7.4	12.5					
28-Mar	8	8	11	7	A	10	10	14	13	11	9	9	10	7	13	17	16	11	28	25	75	12	11	10	15.0	75.1					
29-Mar	8	15	34	20	A	9	7	54	10	74	21	9	8	6	10	10	26	11	9	13	8	5	8	4	16.5	74.1					
30-Mar	4	2	3	3	A	7	14	17	34	18	6	4	5	17	17	20	17	3	8	3	2	3	5	5	9.4	34.1					
31-Mar	3	2	4	3	A	6	9	9	16	8	9	8	6	6	34	6	4	2	3	2	3	3	6	5	6.9	33.7					
9.1 7.5 9.1 9.1 -- 12.7 20.1 38.6 23.7 20.9 20.6 15.9 12.7 12.6 11.7 10.9 9.9 9.1 10.7 11.7 12.9 10.8 11.1 10.2																									Diurnal Average						
35.6 23.6 37.4 27.2 -- 34.6 91.3 330.7 145.2 101.6 142.8 102.6 61.3 56.4 42.2 35.6 34.2 26.5 29.6 58.7 75.1 31.5 28.0 49.7																									Diurnal Maximum						
C - Calibration N - Not Valid A - Automated Daily Zero Span																															

Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

Beaverlodge - March 2011





**PASZA**

Peace Air Shed Zone Association

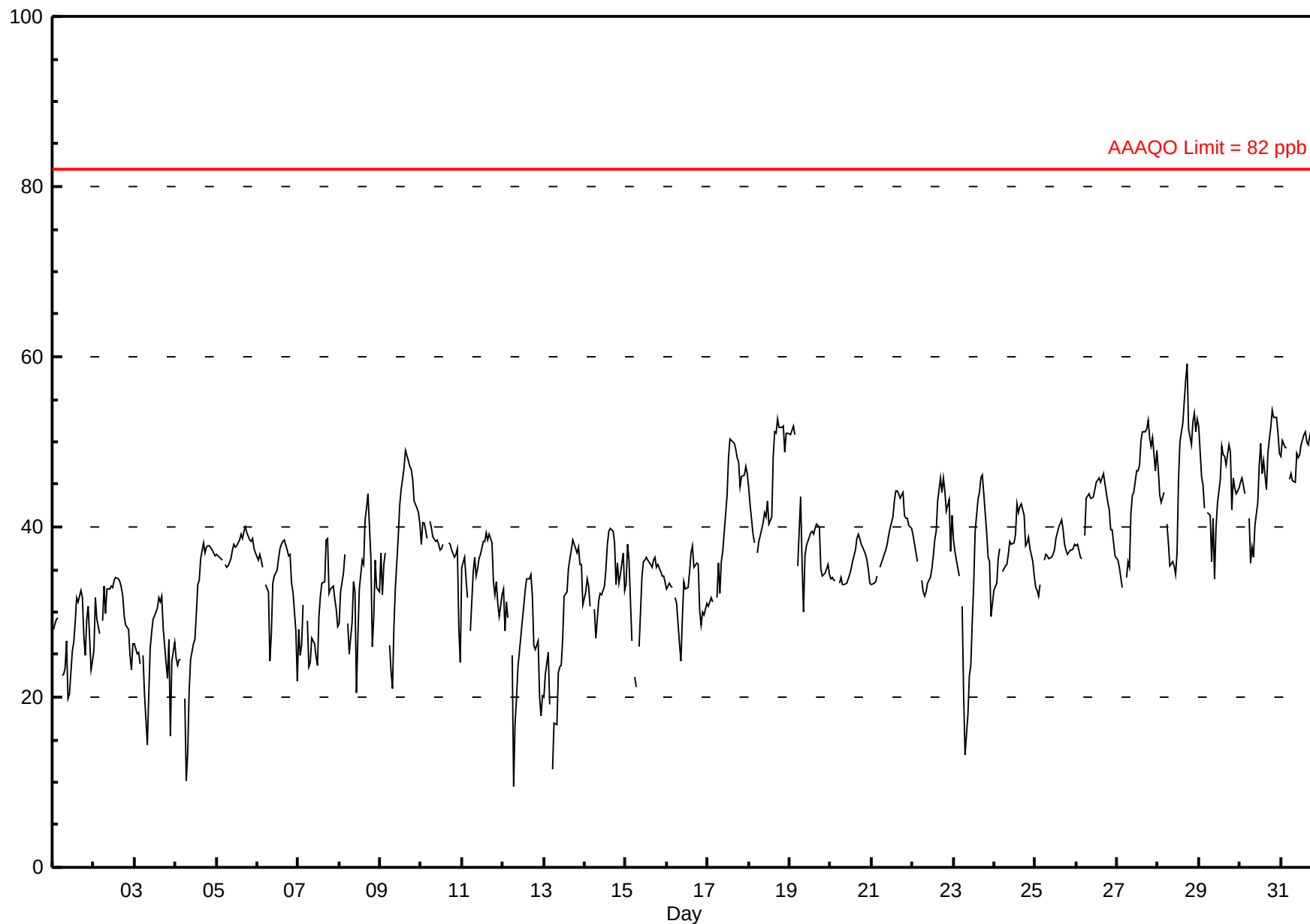
Hourly Averages

Ozone (O₃) - ppb**Beaverlodge - March 2011**

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 59.1 ppb on Mar 28 18:00 Maximum Daily Average: 49.4 ppb on Mar 31																				Hours in Service: 744 Hours of Data: 710 Hours of Missing Data: 34 Hours of Calibration: 33 Percent Operational Time: 99.9						
Minimum Value: 9 ppb on Mar 12 07:00 Maximum Diurnal Average: 41.9 ppb at hour 17 Monthly Average: 36.46 ppb										Minimum Daily Average: 25.5 ppb on Mar 3 Minimum Diurnal Average: 30.2 ppb at hour 8 Percentiles: P ₁ = 16.8 P ₁₀ = 25.8 Q ₁ = 32.0 Median = 36.4 Q ₃ = 41.3 P ₉₀ = 48.2 P ₉₉ = 52.7																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	28	29	29	29	A	23	23	23	27	20	20	25	26	29	32	31	33	32	27	25	29	31	23	24	26.9	32.6
2-Mar	26	32	29	27	A	29	33	30	33	33	33	34	34	34	34	33	32	29	29	28	25	23	26	30.3	34.1	
3-Mar	26	25	25	24	A	25	21	14	20	26	28	29	30	31	32	31	32	28	24	22	27	15	24	26	25.5	31.9
4-Mar	25	24	24	24	A	20	10	13	21	24	26	27	30	33	34	36	38	37	38	38	38	37	37	37	29.2	38.1
5-Mar	37	37	36	36	A	36	35	35	36	37	38	38	38	38	39	39	39	40	39	38	38	39	37	37	37.6	40.0
6-Mar	36	37	36	35	A	33	32	24	27	33	34	35	36	37	38	38	38	37	37	37	33	32	28	22	33.8	38.4
7-Mar	28	25	26	31	A	29	24	24	27	26	25	24	30	32	33	33	38	39	32	33	33	32	30	28	29.6	38.7
8-Mar	29	32	35	37	A	29	25	29	34	32	20	27	33	36	36	41	42	44	36	26	29	36	33	32	32.7	43.8
9-Mar	37	32	36	37	A	26	23	21	28	33	39	43	44	46	47	49	48	47	47	46	43	42	42	40	38.9	49.0
10-Mar	38	41	40	39	A	41	40	39	38	38	38	37	37	38	C	C	38	38	37	36	37	37	28	24	37.2	40.7
11-Mar	35	36	34	32	A	28	35	36	34	35	36	37	38	38	39	39	39	38	34	32	34	31	30	32	34.9	39.3
12-Mar	33	28	31	29	A	25	9	17	20	24	27	29	31	33	34	34	34	32	26	26	27	20	18	20	26.3	34.4
13-Mar	20	23	25	19	A	12	17	17	23	24	24	27	32	32	35	36	37	38	38	37	38	36	36	31	28.5	38.4
14-Mar	32	34	33	31	A	30	27	29	31	32	32	33	35	38	39	40	40	38	33	36	33	34	37	32	34.0	39.8
15-Mar	33	38	36	27	A	22	21	N	26	34	36	36	37	36	36	35	36	36	35	36	35	34	34	34	33.3	37.9
16-Mar	33	33	33	33	A	32	31	26	24	29	34	33	33	35	37	38	35	36	36	30	28	30	30	31	32.1	37.8
17-Mar	31	31	32	31	A	32	36	32	36	37	41	44	48	50	50	50	49	48	48	45	46	46	47	46	41.6	50.3
18-Mar	45	42	39	38	A	37	38	39	41	42	41	43	40	41	48	51	51	53	52	52	52	49	51	51	45.0	52.8
19-Mar	51	51	52	51	A	36	44	36	30	37	38	39	39	39	39	40	40	40	35	34	34	35	36	34	39.5	51.8
20-Mar	34	34	34	34	A	33	34	33	33	33	34	34	35	36	37	39	39	39	38	38	37	36	35	33	35.3	39.2
21-Mar	33	33	34	34	A	35	36	37	37	38	39	40	41	43	44	44	44	43	44	41	41	41	40	40	39.3	44.3
22-Mar	39	38	37	36	A	34	32	32	32	33	34	35	37	38	40	43	46	44	46	44	42	43	37	41	38.4	45.8
23-Mar	38	37	36	34	A	31	20	13	18	23	24	29	33	39	43	44	46	46	44	39	37	36	29	31	33.5	46.1
24-Mar	33	33	36	38	A	35	35	36	37	38	38	38	39	43	42	42	43	41	38	38	39	37	36	34	37.8	42.8
25-Mar	33	33	32	33	A	36	37	37	36	36	37	37	39	39	40	41	40	38	37	37	37	37	37	38	36.8	40.8
26-Mar	38	38	36	36	A	39	43	44	43	43	44	44	45	46	45	46	46	45	43	42	40	40	38	37	41.8	46.3
27-Mar	36	35	34	33	A	34	36	35	42	44	44	47	47	47	50	51	51	52	53	51	50	51	47	49	44.2	52.6
28-Mar	47	44	43	44	A	40	38	35	36	35	34	37	45	50	52	55	57	59	52	50	52	53	51	53	46.2	59.1
29-Mar	52	46	45	42	A	42	41	36	41	34	40	43	46	50	49	48	47	50	49	42	46	44	44	45	44.3	51.9
30-Mar	45	46	45	44	A	41	36	38	36	40	43	47	50	46	48	44	49	50	52	54	53	53	51	49	46.0	53.7
31-Mar	48	50	49	49	A	46	46	45	45	49	48	48	50	51	51	50	50	51	52	52	53	51	50	50	49.4	52.5
35.4 35.4 35.3 34.4 -- 31.9 30.9 30.2 32.0 33.7 34.5 36.1 38.0 39.5 40.8 41.4 41.9 41.6 39.6 38.2 38.3 37.6 36.1 35.8 Diurnal Average																										
51.9 51.4 51.8 50.8 -- 45.6 46.3 45.5 45.3 48.6 48.1 48.5 49.8 50.9 52.1 54.8 57.3 59.1 52.6 53.7 52.9 53.4 51.2 52.7 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																										

Hourly Averages

Ozone (O₃) - ppb
Beaverlodge - March 2011



**PASZA**

Peace Air Shed Zone Association

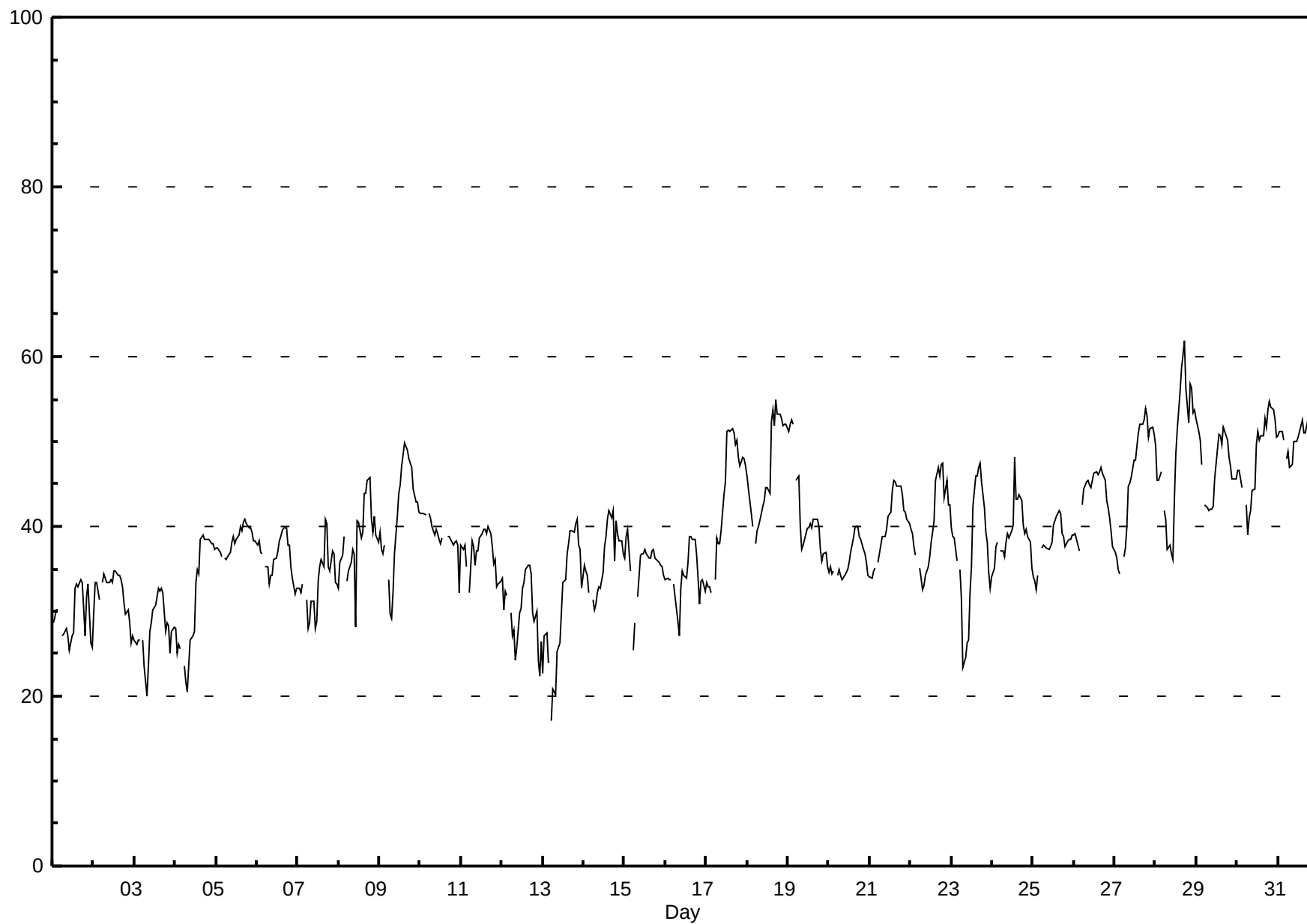
Hourly Maximums

Ozone (O₃) - ppb**Beaverlodge - March 2011**

Maximum Value: 61.8 ppb on Mar 28 18:00																				Maximum Daily Average: 50.8 ppb on Mar 31				Hours in Service: 744		
Minimum Value: 17 ppb on Mar 13 06:00																				Minimum Daily Average: 28.0 ppb on Mar 3				Hours of Data: 710		
Maximum Diurnal Average: 43.4 ppb at hour 17																				Minimum Diurnal Average: 34.1 ppb at hour 8				Hours of Missing Data: 34		
Monthly Average: 38.68 ppb																				Percentiles: P ₁ = 22.3 P ₁₀ = 28.9 Q ₁ = 33.8 Median = 38.1 Q ₃ = 43.0 P ₉₀ = 50.5 P ₉₉ = 55.7				Hours of Calibration: 33		
																								Percent Operational Time: 99.9		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	29	29	30	30	A	27	27	28	28	27	25	27	28	33	33	33	34	33	30	27	32	33	26	26	29.4	33.8
2-Mar	30	33	33	31	A	33	34	34	33	33	34	33	35	35	34	34	34	33	31	30	30	29	26	27	32.2	34.8
3-Mar	27	26	27	27	A	27	24	20	24	28	29	30	31	32	33	32	33	32	28	29	28	25	28	28	28.0	32.7
4-Mar	28	25	26	26	A	24	22	21	24	27	27	28	33	35	34	38	39	38	38	38	38	38	38	37	31.4	38.9
5-Mar	37	37	37	36	A	36	36	36	37	38	39	38	38	39	40	39	40	41	40	40	40	39	38	38	38.4	40.9
6-Mar	38	38	37	37	A	35	35	33	34	34	36	36	37	38	39	39	40	40	38	38	35	34	32	33	36.4	39.9
7-Mar	33	33	32	33	A	31	28	29	31	31	28	29	34	35	36	35	41	40	35	35	37	37	33	33	33.5	40.8
8-Mar	33	36	37	39	A	34	35	36	37	37	28	41	41	39	39	44	44	45	46	41	39	41	39	38	38.5	45.7
9-Mar	39	37	37	38	A	34	30	29	32	37	41	44	45	47	48	50	49	48	48	47	44	43	43	42	41.4	49.8
10-Mar	41	42	41	41	A	41	41	40	39	40	39	38	38	39	C	C	39	39	38	38	38	38	38	32	39.1	41.6
11-Mar	38	37	38	35	A	32	38	38	35	37	37	39	39	40	40	39	40	39	38	36	36	33	33	33	37.0	40.1
12-Mar	34	30	32	32	A	30	27	28	24	26	30	30	33	33	35	35	35	34	30	29	30	24	22	26	30.1	35.5
13-Mar	23	27	27	24	A	17	21	20	25	26	26	30	33	34	37	38	39	39	39	40	41	38	37	33	31.1	40.9
14-Mar	35	35	34	32	A	31	30	31	32	33	33	35	38	39	41	42	41	42	36	41	39	38	38	37	36.2	41.9
15-Mar	36	39	40	35	A	25	29	N	32	37	37	37	37	37	36	36	37	37	36	36	36	35	35	34	35.4	39.6
16-Mar	34	34	34	34	A	33	32	29	27	33	35	34	34	36	39	39	38	38	37	34	31	34	34	32	34.1	38.9
17-Mar	33	33	33	32	A	34	39	38	38	39	44	45	51	51	51	51	51	50	50	48	47	48	48	47	43.6	51.5
18-Mar	46	44	42	40	A	38	39	40	42	42	43	45	45	44	52	54	52	55	53	53	53	52	52	52	46.8	55.0
19-Mar	51	52	53	52	A	45	46	40	37	38	39	40	40	40	40	41	41	41	40	37	36	37	37	35	41.7	52.5
20-Mar	35	35	34	35	A	34	35	34	34	34	35	35	36	37	39	40	40	40	39	38	37	37	36	34	36.2	40.0
21-Mar	34	34	35	35	A	36	37	39	39	39	40	41	42	44	45	45	45	45	45	44	42	42	41	40	40.3	45.4
22-Mar	40	39	38	37	A	35	34	33	33	34	35	36	38	39	41	45	47	46	47	47	43	45	43	43	39.9	47.4
23-Mar	40	39	39	36	A	35	31	23	25	26	27	32	35	42	46	46	47	47	45	42	39	38	35	33	36.9	47.4
24-Mar	34	35	38	38	A	37	37	36	38	39	39	39	40	48	43	43	44	43	40	39	40	39	38	35	39.3	48.1
25-Mar	34	34	33	34	A	37	38	38	37	37	38	38	40	41	41	42	42	39	39	38	38	38	38	39	38.0	41.9
26-Mar	39	39	38	37	A	42	44	45	45	45	45	45	46	46	46	46	47	46	45	43	42	41	39	38	43.2	47.0
27-Mar	37	36	35	34	A	36	37	40	45	45	46	48	48	50	51	52	52	53	54	53	51	52	52	51	45.9	53.9
28-Mar	50	45	45	46	A	42	41	37	38	37	36	43	49	51	56	59	60	62	56	52	57	56	53	54	48.9	61.8
29-Mar	53	51	50	47	A	43	42	42	42	42	42	46	49	51	51	50	52	51	50	48	47	46	46	46	47.2	52.8
30-Mar	47	47	46	45	A	42	39	41	42	44	44	50	51	50	51	51	53	52	54	55	54	54	52	51	48.3	54.7
31-Mar	51	51	51	50	A	48	49	47	47	50	50	50	51	52	53	51	51	52	53	53	53	53	51	51	50.8	53.5
37.3 37.2 37.1 36.4 -- 34.7 34.7 34.1 34.8 36.0 36.3 38.1 39.8 41.2 42.3 43.0 43.4 43.3 41.9 40.9 40.5 39.9 38.8 38.0 Diurnal Average																										
52.8 52.1 52.5 52.1 -- 47.9 48.8 46.9 47.4 49.9 50.0 50.0 51.1 51.9 55.9 58.7 60.2 61.8 56.2 54.7 56.7 56.3 53.5 53.7 Diurnal Maximum																										
C - Calibration N - Not Valid A - Automated Daily Zero Span																										

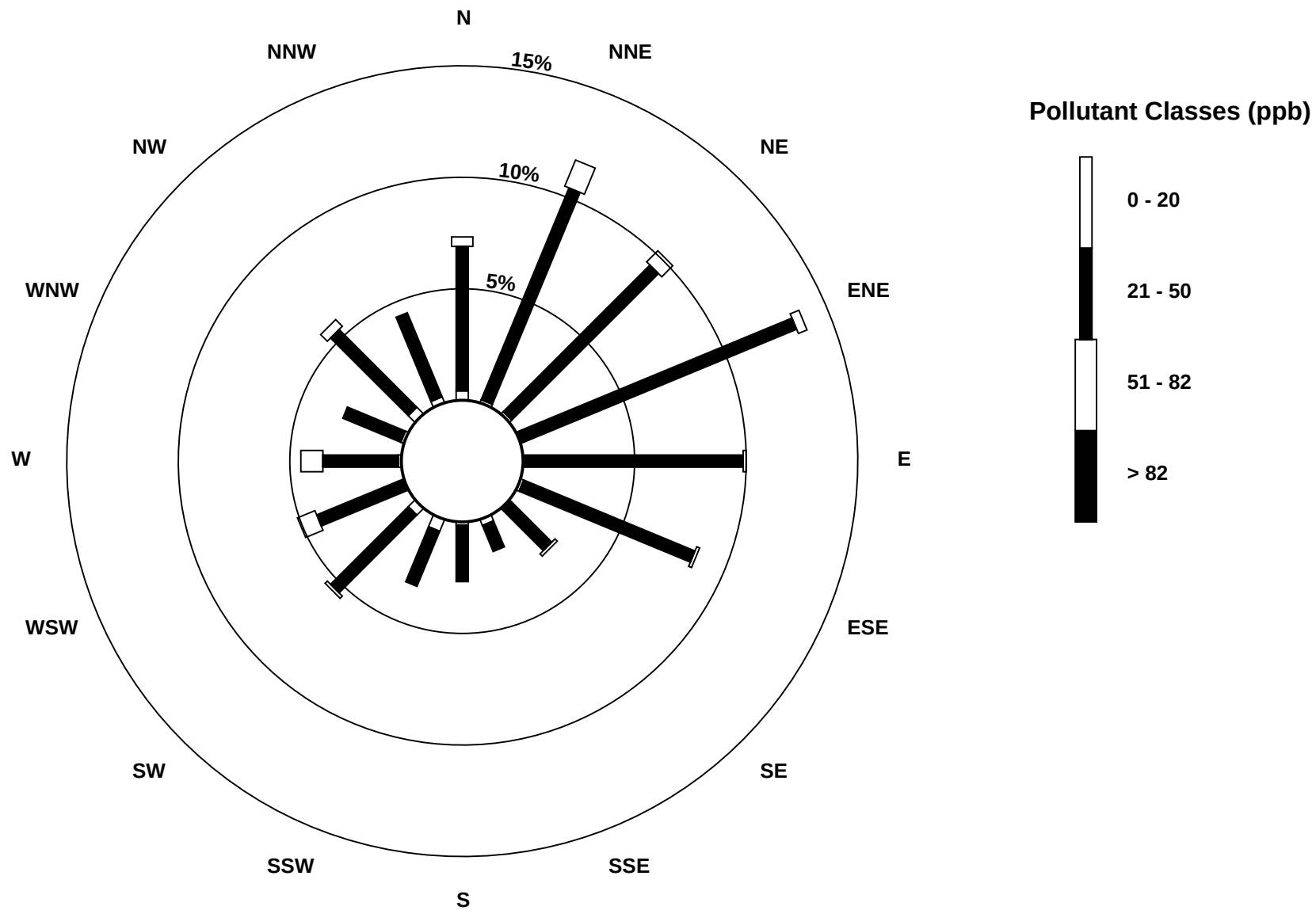
Hourly Maximums

Ozone (O₃) - ppb
Beaverlodge - March 2011



Pollutant Rose

Ozone (O₃) - ppb
Beaverlodge - March 2011



**PASZA**

Peace Air Shed Zone Association

Eight Hour Running Averages

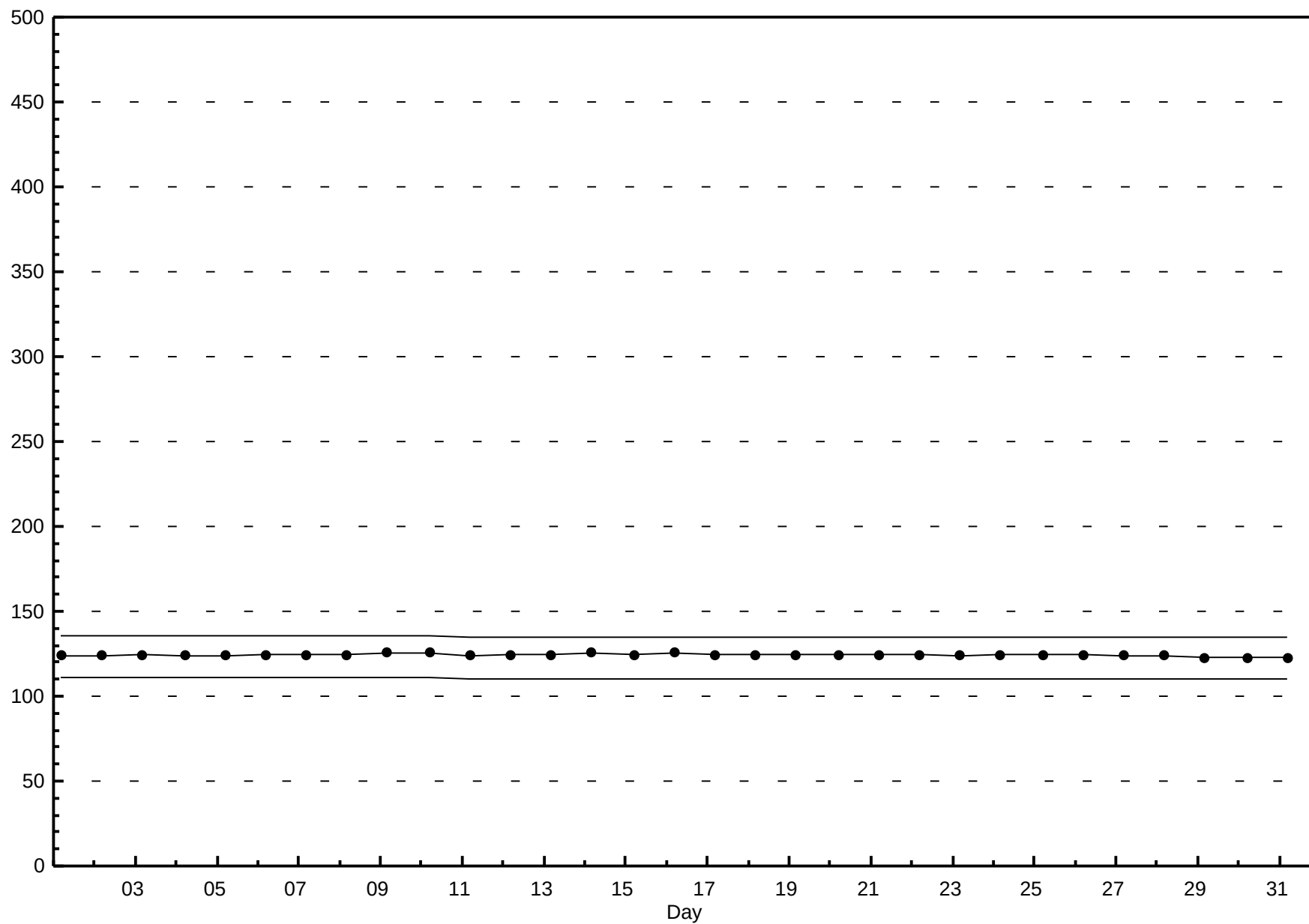
Ozone (O₃) - ppb

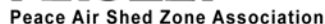
Beaverlodge - March 2011

Maximum Value: 53.8 ppb on Mar 28 22:00																								Hours in Service: 744	
Minimum Value: 18.9 ppb on Mar 13 08:00																								Hours of Data: 744	
																								Hours of Missing Data: 0	
Percentiles: P ₁ = 19.6 P ₁₀ = 26.6 Q ₁ = 31.4 Median = 36.1 Q ₃ = 40.6 P ₉₀ = 47.1 P ₉₉ = 50.0																								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-Mar	29	29	29	29	29	28	27	26	26	25	24	23	23	24	25	26	27	29	29	29	30	30	29	28	29.9
2-Mar	27	27	27	28	27	27	29	29	30	31	31	32	32	33	33	33	33	33	33	32	32	30	29	28	33.4
3-Mar	27	26	26	25	25	25	25	23	22	22	22	23	24	25	26	28	30	30	30	29	28	26	25	25	30.0
4-Mar	24	23	23	24	23	24	22	20	20	20	20	20	21	23	26	29	31	33	34	35	36	37	37	37	37.4
5-Mar	37	37	37	37	37	36	36	36	36	36	36	37	37	37	37	38	38	39	39	39	39	39	39	39	39.0
6-Mar	38	38	37	37	37	36	35	33	32	32	31	31	32	33	33	35	36	37	37	37	37	36	35	33	38.2
7-Mar	32	30	29	28	27	27	26	27	27	27	27	26	26	26	28	29	30	32	33	34	34	34	34	33	34.2
8-Mar	32	31	31	32	32	31	31	31	31	31	29	28	29	29	31	32	33	35	37	37	36	36	36	35	36.8
9-Mar	34	33	33	34	35	33	32	30	29	29	30	30	32	35	38	41	43	45	46	47	46	46	45	44	46.7
10-Mar	43	42	41	41	40	40	40	40	40	39	39	39	39	38	38	38	38	38	38	38	37	37	36	35	43.1
11-Mar	34	34	34	33	32	31	32	34	34	33	34	34	35	36	37	37	38	38	38	37	37	36	34	34	38.1
12-Mar	33	32	31	31	30	30	27	25	23	22	22	22	23	24	27	29	31	32	32	31	31	29	27	25	32.8
13-Mar	24	22	22	21	21	19	19	19	19	19	19	20	22	24	27	29	31	33	34	36	36	37	37	36	36.9
14-Mar	36	35	34	34	33	32	31	31	31	31	30	31	31	32	34	35	36	37	37	37	37	37	36	35	37.4
15-Mar	35	35	35	34	34	32	30	30	28	28	28	29	30	32	34	34	36	36	36	36	36	35	35	35	36.0
16-Mar	35	34	34	34	33	33	33	32	30	30	30	30	30	31	31	33	34	35	35	35	34	34	33	32	35.2
17-Mar	31	31	30	30	31	31	32	32	33	34	35	37	38	41	42	45	46	48	48	48	48	48	47	47	48.5
18-Mar	46	46	45	44	43	42	41	40	39	39	40	40	41	42	43	45	46	47	48	50	51	51	51	51	51.2
19-Mar	51	51	51	51	51	49	48	46	43	41	39	37	37	38	37	38	39	39	39	38	38	37	37	36	51.2
20-Mar	35	35	34	34	34	34	34	34	34	34	34	34	34	34	35	35	36	37	37	38	38	38	38	37	37.8
21-Mar	36	35	35	34	34	34	34	35	35	36	37	37	38	39	40	41	42	42	43	43	43	43	42	42	43.2
22-Mar	41	41	40	39	39	38	37	35	34	34	33	33	34	34	35	37	38	40	41	42	43	43	43	43	43.4
23-Mar	42	41	40	39	38	36	34	30	27	25	23	22	24	25	28	32	35	38	41	42	42	42	40	39	42.3
24-Mar	37	35	34	34	34	34	34	35	36	36	37	37	37	38	39	40	40	41	41	41	41	40	39	38	40.8
25-Mar	37	36	35	35	34	34	34	34	35	35	36	37	37	37	38	38	39	39	39	39	39	38	38	38	38.9
26-Mar	37	37	37	37	37	38	38	39	40	41	42	43	43	44	44	45	45	45	45	45	44	43	42	41	45.2
27-Mar	40	39	38	37	36	35	35	35	36	37	38	40	41	43	44	46	48	49	50	50	50	51	50	50	50.9
28-Mar	50	49	47	47	46	45	44	42	40	39	38	37	38	39	41	43	46	49	51	52	53	54	54	53	53.8
29-Mar	53	51	50	49	49	47	46	43	42	40	39	40	40	41	42	44	44	46	48	47	47	47	46	46	52.7
30-Mar	46	45	45	45	45	44	43	42	41	40	40	40	41	42	44	44	46	47	48	49	49	50	51	51	51.2
31-Mar	51	51	51	50	50	49	48	48	47	47	47	47	47	48	48	49	50	50	50	51	51	51	51	51	51.2
52.7 51.1 51.1 51.0 50.8 48.9 48.2 47.8 47.4 47.1 46.9 46.8 47.2 47.9 48.5 49.0 49.6 49.9 50.9 52.5 53.4 53.8 53.7 53.4																									
Diurnal Maximums																									

Span Responses

Ozone (O₃)
Beaverlodge - March 2011





Beaverlodge - March 2011

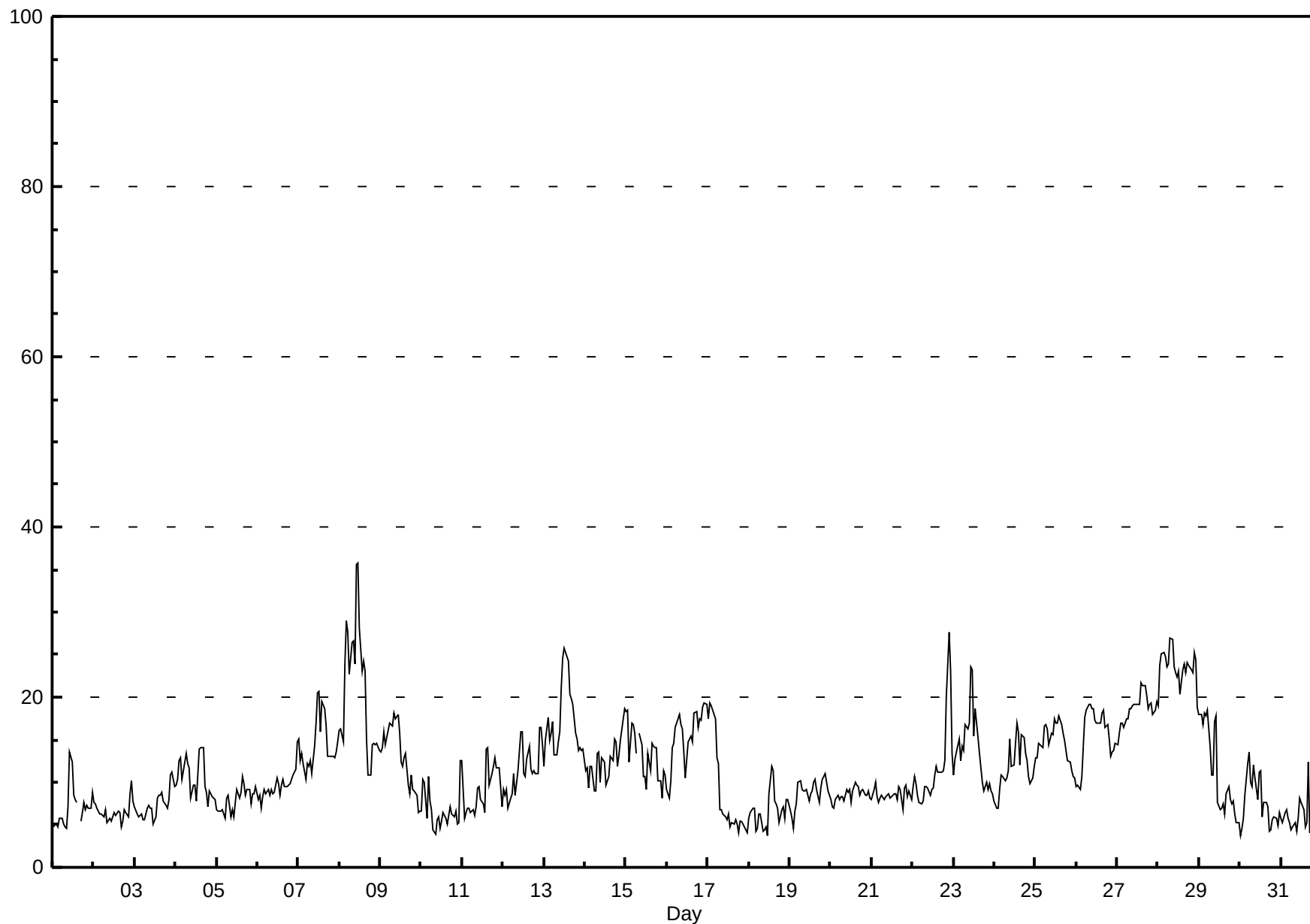


Hourly Maximums

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

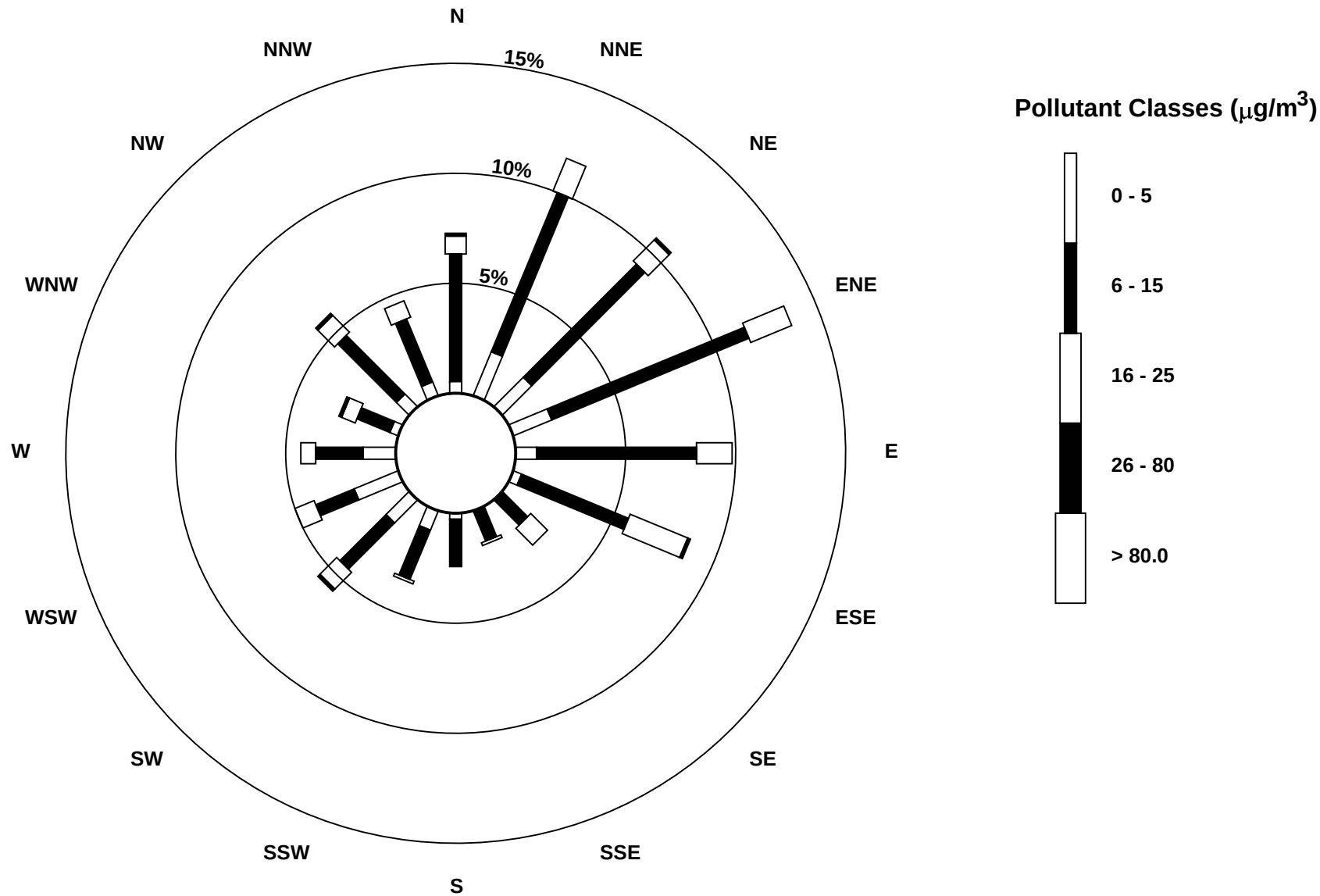
Beaverlodge - March 2011

Maximum Value: 35.7 μg/m³ on Mar 8 12:00																								Maximum Daily Average: 23.5 μg/m³ on Mar 28								Hours in Service: 744	
Minimum Value: 4 μg/m³ on Mar 18 12:00																								Minimum Daily Average: 5.8 μg/m³ on Mar 31								Hours of Data: 742	
Maximum Diurnal Average: 12.9 μg/m³ at hour 11																								Minimum Diurnal Average: 10.5 μg/m³ at hour 1								Hours of Missing Data: 2	
Monthly Average: 11.57 μg/m³																								Percentiles: P ₁ = 4.2 P ₁₀ = 5.8 Q ₁ = 7.6 Median = 10.2 Q ₃ = 14.8 P ₉₀ = 18.7 P ₉₉ = 26.4								Hours of Calibration: 1	
Percent Operational Time: 99.9																																	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum							
1-Mar	5	5	5	5	6	6	5	5	7	14	12	8	8	C	5	6	8	7	7	7	7	9	6.9	13.6									
2-Mar	8	8	7	6	6	6	6	7	5	6	6	6	7	6	5	5	7	6	6	9	10	8	6.6	10.1									
3-Mar	7	6	6	6	6	6	6	7	7	7	5	6	8	8	8	9	8	7	7	8	11	11	9	7.4	11.2								
4-Mar	10	10	13	13	10	12	13	12	12	8	10	10	8	11	14	14	14	9	9	7	9	8	8	8	10.5	14.0							
5-Mar	7	7	7	7	6	6	8	8	6	7	6	8	9	8	9	11	10	8	9	9	8	9	9	7.9	10.6								
6-Mar	8	8	7	8	9	9	9	8	9	9	9	10	10	8	10	10	9	9	10	10	10	11	12	15	9.5	14.7							
7-Mar	15	13	13	12	10	12	12	13	11	14	17	21	21	16	19	19	17	13	13	13	13	13	13	15	14.5	20.7							
8-Mar	16	16	15	24	29	28	23	26	27	24	36	36	28	23	24	23	15	11	11	14	15	14	15	14	21.1	35.7							
9-Mar	14	14	16	14	15	17	17	17	18	17	18	16	12	12	13	13	10	9	11	9	9	8	6	7	13.0	18.2							
10-Mar	7	10	10	6	11	8	7	4	4	6	6	5	5	7	6	5	6	7	6	6	7	5	5	13	6.7	12.6							
11-Mar	13	6	6	7	7	6	7	6	7	9	9	8	8	6	14	14	10	11	12	13	12	12	12	7	9.2	14.0							
12-Mar	9	9	9	7	8	9	11	8	10	11	16	16	11	11	13	14	12	11	11	11	11	16	16	14	11.5	16.4							
13-Mar	12	15	18	15	16	17	13	13	15	16	21	25	26	25	24	20	20	19	16	15	14	14	14	14	17.3	25.8							
14-Mar	11	12	9	12	12	9	9	13	14	10	13	12	10	10	11	13	13	15	15	12	13	15	17	19	12.4	18.6							
15-Mar	18	18	12	17	17	16	13	N	16	14	11	11	9	13	11	15	14	14	14	10	10	8	11	11	13.3	18.4							
16-Mar	9	8	10	14	15	16	17	18	17	16	14	11	15	15	15	15	18	18	16	17	17	19	19	19	15.4	19.4							
17-Mar	17	19	19	18	17	13	12	7	7	6	6	6	6	5	5	5	6	5	4	5	6	5	4	4	8.7	19.4							
18-Mar	6	6	7	7	4	5	6	6	4	4	5	4	9	12	11	8	7	7	5	7	7	6	8	8	6.7	11.9							
19-Mar	7	6	5	7	7	10	10	9	9	9	9	8	9	9	10	10	9	8	9	10	11	11	9	8	8.7	11.1							
20-Mar	8	7	7	8	8	8	8	8	8	9	9	9	8	9	10	10	9	8	9	9	8	8	9	8	8.5	9.9							
21-Mar	8	9	10	8	8	8	8	8	8	8	9	8	8	9	9	8	9	9	7	9	10	8	9	8	8.5	10.1							
22-Mar	9	11	10	8	8	7	8	9	9	9	8	9	9	11	12	11	11	11	11	13	20	28	23	13	11.7	27.7							
23-Mar	11	13	13	15	13	14	14	17	16	17	24	23	15	19	15	13	12	10	9	10	9	10	9	9	13.7	23.6							
24-Mar	8	7	7	9	11	11	10	10	11	15	12	12	15	17	16	12	16	15	13	13	11	10	10	12	11.8	17.0							
25-Mar	13	13	15	14	14	17	17	16	14	16	16	17	17	17	18	17	16	15	14	13	12	11	11	10	14.7	17.7							
26-Mar	10	10	9	11	14	18	18	19	19	19	19	17	17	17	17	18	18	16	17	15	13	13	14	15	15.5	19.1							
27-Mar	14	16	17	17	16	17	17	19	19	19	19	19	19	19	22	21	21	20	19	19	19	18	18	19	18.6	21.6							
28-Mar	19	24	25	25	25	24	24	27	27	24	23	22	23	20	23	24	23	24	24	23	23	25	24	19	23.5	27.0							
29-Mar	18	18	17	18	18	18	14	11	11	17	18	8	7	7	7	6	9	9	8	7	8	6	5	5	11.3	18.4							
30-Mar	4	5	6	8	12	14	10	10	12	10	8	11	11	6	8	8	7	4	4	6	6	6	5	6	7.8	13.6							
31-Mar	6	5	7	7	6	5	4	5	5	4	6	8	8	7	5	5	12	4	5	4	5	4	6	6	5.8	12.4							
10.5 10.7 10.8 11.4 11.8 12.0 11.5 11.6 11.7 11.9 12.9 12.6 12.1 11.9 12.7 12.6 12.0 11.1 10.7 10.7 10.8 11.3 11.3 11.0																								Diurnal Average									
18.9 23.7 25.0 25.3 29.0 27.7 24.0 27.0 26.7 24.0 35.7 35.7 28.2 24.7 24.3 23.8 22.8 24.1 23.8 23.3 22.8 27.7 24.5 19.4																								Diurnal Maximum									
C - Calibration N - Not Valid																																	



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Beaverlodge - March 2011



**PASZA**

Peace Air Shed Zone Association

Hourly Averages

External Temperature (ET) - °C

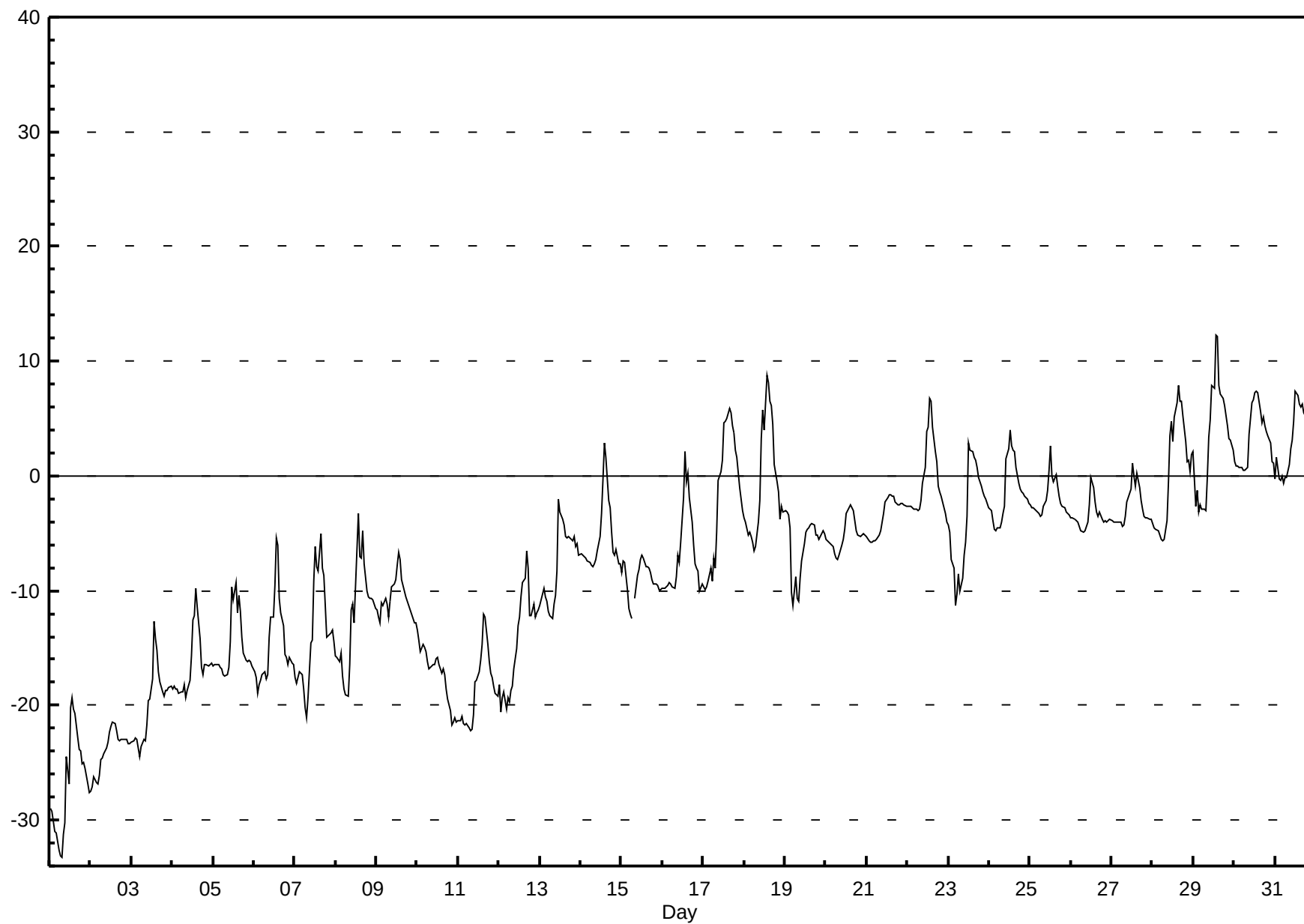
Beaverlodge - March 2011

Number of Exceedences (AAQO): 1-hr: 0 24-hr: 0 Maximum Value: 12.2 °C on Mar 29 14:00 Maximum Daily Average: 3.2 °C on Mar 29																								Hours in Service: 744 Hours of Data: 743 Hours of Missing Data: 1 Hours of Calibration: 0 Percent Operational Time: 99.9		
Minimum Value: -33 °C on Mar 1 08:00 Maximum Diurnal Average: -3.3 °C at hour 14 Monthly Average: -8.17 °C												Minimum Daily Average: -26.8 °C on Mar 1 Minimum Diurnal Average: -11.6 °C at hour 8 Percentiles: P ₁ = -30.2 P ₁₀ = -20.2 Q ₁ = -15.4 Median = -6.7 Q ₃ = -2.4 P ₉₀ = 2.3 P ₉₉ = 7.9														
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-Mar	-29	-29	-30	-31	-31	-33	-33	-33	-31	-30	-24	-27	-20	-19	-20	-21	-23	-24	-24	-25	-25	-25	-27	-28	-26.8	-19.4
2-Mar	-27	-27	-26	-27	-27	-26	-25	-25	-24	-24	-23	-22	-22	-21	-22	-22	-23	-23	-23	-23	-23	-23	-23	-23	-24.0	-21.5
3-Mar	-23	-23	-23	-23	-24	-24	-24	-24	-23	-23	-22	-20	-19	-18	-13	-14	-15	-17	-18	-19	-19	-19	-18	-18	-19.9	-12.6
4-Mar	-19	-18	-19	-19	-19	-19	-19	-18	-19	-19	-18	-16	-13	-12	-10	-11	-14	-17	-17	-16	-16	-17	-16	-16	-16.5	-9.8
5-Mar	-17	-16	-16	-16	-17	-17	-17	-17	-17	-17	-14	-10	-11	-9	-12	-10	-12	-14	-15	-16	-16	-16	-16	-17	-14.9	-9.3
6-Mar	-17	-18	-19	-18	-18	-17	-17	-18	-17	-14	-12	-12	-10	-5	-6	-11	-12	-13	-16	-16	-16	-16	-16	-16	-14.6	-5.5
7-Mar	-18	-18	-18	-17	-17	-19	-20	-21	-19	-14	-14	-9	-6	-8	-8	-5	-8	-9	-11	-14	-14	-14	-13	-14	-13.7	-5.1
8-Mar	-16	-16	-16	-15	-17	-19	-19	-19	-16	-12	-11	-13	-10	-3	-7	-7	-5	-8	-10	-11	-11	-11	-11	-12	-12.2	-3.3
9-Mar	-12	-12	-13	-11	-11	-11	-11	-12	-11	-10	-9	-9	-8	-7	-7	-9	-10	-11	-11	-11	-12	-12	-13	-13	-10.6	-6.7
10-Mar	-13	-14	-15	-15	-15	-15	-16	-17	-17	-16	-16	-16	-16	-16	-17	-17	-17	-19	-19	-21	-22	-21	-21	-22	-17.3	-13.4
11-Mar	-21	-21	-21	-22	-22	-22	-22	-22	-22	-21	-18	-18	-17	-16	-15	-12	-12	-15	-16	-17	-18	-18	-19	-19	-18.6	-12.0
12-Mar	-18	-21	-19	-19	-20	-19	-20	-19	-18	-17	-15	-13	-12	-11	-9	-9	-7	-8	-12	-12	-11	-12	-12	-12	-14.4	-6.5
13-Mar	-11	-11	-10	-11	-11	-12	-12	-12	-11	-10	-8	-2	-3	-4	-4	-5	-5	-5	-6	-6	-5	-6	-6	-7	-7.7	-2.0
14-Mar	-7	-7	-7	-7	-7	-7	-8	-8	-8	-7	-7	-5	-3	0	3	2	-2	-3	-5	-7	-7	-6	-8	-8	-5.4	2.9
15-Mar	-8	-7	-8	-10	-12	-12	-12	N	-11	-9	-8	-7	-7	-7	-8	-8	-8	-8	-9	-9	-9	-10	-10	-10	-9.0	-6.9
16-Mar	-10	-10	-10	-10	-9	-9	-10	-10	-9	-7	-7	-6	-2	2	-1	0	-2	-4	-6	-8	-8	-8	-10	-9	-6.7	2.1
17-Mar	-10	-10	-10	-9	-8	-9	-7	-8	-5	0	0	1	5	5	5	6	6	4	4	2	2	-1	-2	-3	-1.8	5.9
18-Mar	-4	-4	-5	-5	-5	-6	-7	-6	-4	-2	3	6	4	9	8	6	6	4	1	0	-1	-4	-3	-3	-0.5	8.8
19-Mar	-3	-3	-3	-4	-10	-11	-9	-11	-11	-9	-7	-6	-5	-5	-4	-4	-4	-4	-5	-5	-6	-5	-5	-5	-6.1	-3.1
20-Mar	-5	-6	-6	-6	-6	-7	-7	-7	-7	-6	-6	-5	-3	-3	-2	-3	-3	-4	-5	-5	-5	-5	-5	-5	-5.1	-2.5
21-Mar	-5	-6	-6	-6	-6	-6	-6	-5	-5	-4	-3	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-3	-3	-3.5	-1.6
22-Mar	-3	-3	-3	-3	-3	-3	-3	-3	-2	-1	1	4	4	7	6	4	2	1	-1	-1	-2	-3	-3	-4	-0.4	6.7
23-Mar	-4	-5	-7	-8	-11	-10	-9	-10	-9	-7	-6	-3	3	2	2	2	1	1	0	-1	-1	-2	-2	-2	-3.6	2.8
24-Mar	-3	-3	-4	-5	-5	-4	-5	-4	-3	-3	1	2	4	3	2	2	1	-1	-1	-1	-2	-2	-2	-2	-1.4	4.0
25-Mar	-3	-3	-3	-3	-3	-3	-3	-3	-3	-2	-1	0	3	0	0	0	-1	-2	-2	-3	-3	-3	-3	-3	-2.0	2.6
26-Mar	-4	-4	-4	-4	-4	-4	-5	-5	-5	-4	-4	-2	0	-1	-2	-3	-3	-3	-4	-4	-4	-4	-4	-4	-3.6	-0.2
27-Mar	-4	-4	-4	-4	-4	-4	-4	-4	-3	-2	-2	-1	1	0	-1	0	-1	-2	-3	-4	-4	-4	-4	-4	-2.7	1.1
28-Mar	-4	-5	-5	-5	-5	-6	-6	-6	-4	0	3	5	3	5	6	8	6	6	5	3	1	1	0	2	0.5	7.9
29-Mar	2	-3	-1	-3	-2	-3	-3	-3	0	3	5	8	8	12	12	8	7	7	6	5	4	3	3	2	3.2	12.2
30-Mar	1	1	1	1	1	0	1	1	1	4	6	7	7	7	7	6	5	5	4	4	4	3	1	1	3.2	7.4
31-Mar	0	2	0	0	0	-1	0	0	1	2	3	5	7	7	6	6	6	6	5	4	4	2	1	1	2.8	7.3
																									Diurnal Average	
																									Diurnal Maximum	
N - Not Valid																										

Hourly Averages

External Temperature (ET) - °C

Beaverlodge - March 2011



Hourly Averages

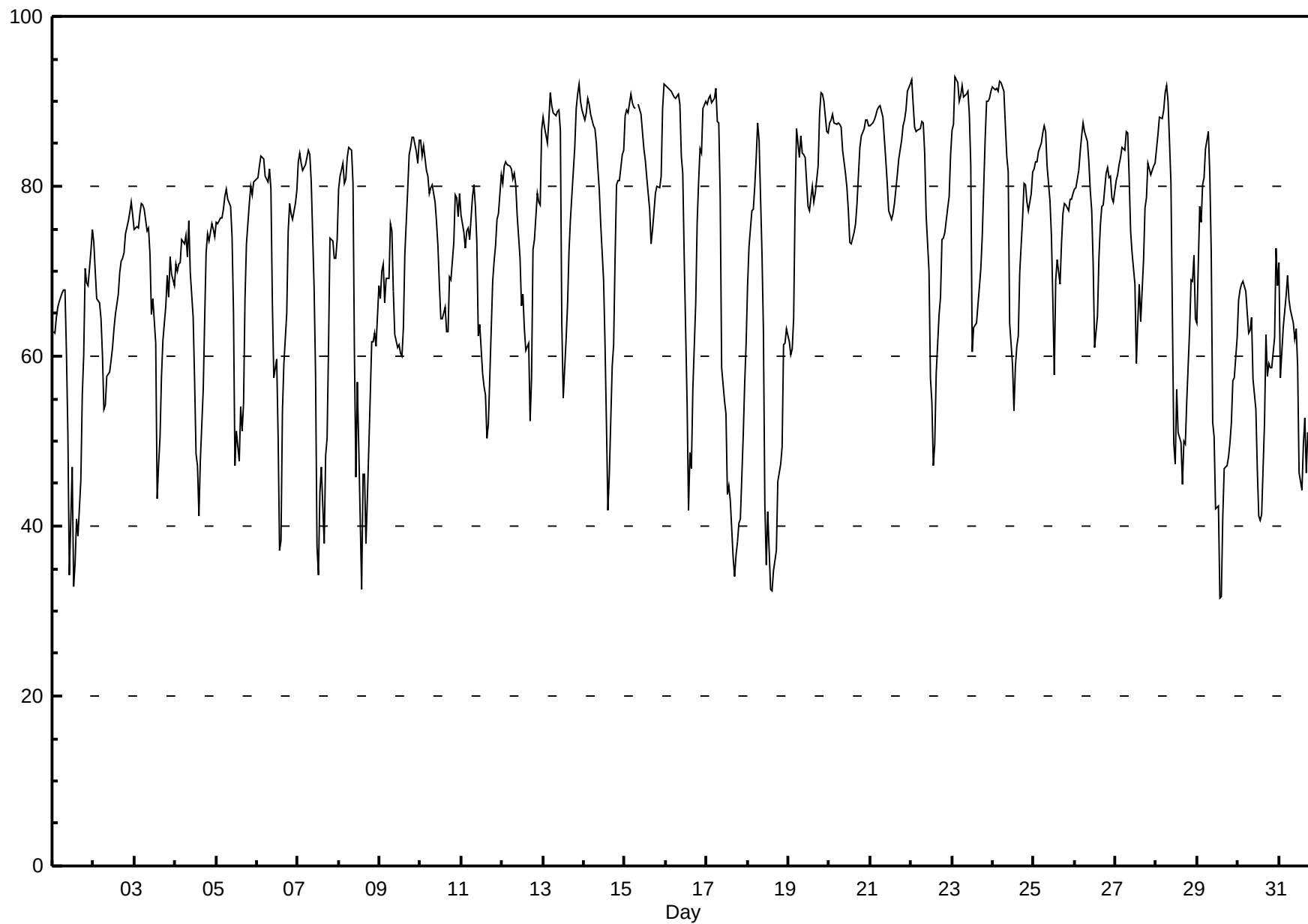
Relative Humidity (RH) - %

Beaverlodge - March 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 92.9 % on Mar 23 03:00 Maximum Daily Average: 85.0 % on Mar 21																								Hours in Service: 744 Hours of Data: 743 Hours of Missing Data: 1 Hours of Calibration: 0 Percent Operational Time: 99.9		
Minimum Value: 32 % on Mar 29 14:00 Maximum Diurnal Average: 82.1 % at hour 7 Monthly Average: 71.72 %												Minimum Daily Average: 57.6 % on Mar 1 Minimum Diurnal Average: 54.0 % at hour 14 Percentiles: P ₁ = 34.2 P ₁₀ = 49.6 Q ₁ = 62.4 Median = 75.0 Q ₃ = 83.3 P ₉₀ = 88.5 P ₉₉ = 92.1														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	63	63	65	66	66	68	68	68	60	51	34	47	33	36	41	39	45	55	60	70	69	68	72	75	57.6	75.0
2-Mar	73	70	67	66	64	60	54	54	58	58	59	61	63	65	67	70	71	72	72	74	76	77	78	77	67.0	78.1
3-Mar	75	75	75	77	78	78	77	75	75	72	65	67	62	43	47	50	58	62	66	70	67	72	70	68	67.6	78.0
4-Mar	71	70	71	71	74	73	74	72	76	70	65	57	48	47	41	48	56	64	72	74	74	76	75	74	66.4	75.9
5-Mar	76	76	76	76	77	79	80	79	78	74	65	47	51	48	54	51	54	67	73	78	80	79	81	81	70.0	80.6
6-Mar	81	82	84	83	83	81	80	82	80	66	57	60	51	37	38	53	59	65	75	78	77	76	78	79	70.3	83.6
7-Mar	83	84	83	82	83	83	84	84	80	68	58	38	34	44	47	38	48	50	61	74	74	72	72	74	66.5	84.2
8-Mar	80	81	83	80	81	83	85	84	80	60	46	57	49	33	46	46	38	43	55	62	62	63	61	68	63.6	84.5
9-Mar	67	70	71	66	69	69	76	75	68	62	61	61	60	60	63	72	80	84	85	86	86	84	83	85	72.6	85.8
10-Mar	85	84	85	82	81	79	80	80	78	76	73	68	64	64	66	63	63	69	69	73	79	79	76	79	74.8	85.5
11-Mar	77	75	73	75	75	74	79	80	78	73	62	64	58	56	55	50	52	63	69	71	73	76	77	81	69.4	81.4
12-Mar	80	82	83	82	82	82	81	81	80	77	72	66	67	63	61	61	52	57	72	74	79	78	78	87	74.1	86.7
13-Mar	88	87	85	88	91	90	89	88	89	89	87	64	55	62	66	72	76	79	85	89	91	92	90	89	82.5	92.0
14-Mar	88	89	90	90	88	87	87	85	82	80	76	69	62	52	42	46	59	61	72	80	81	81	84	84	75.5	90.4
15-Mar	88	89	89	91	90	89	89	N	90	88	87	84	83	81	77	73	75	77	79	80	80	81	89	92	84.4	92.1
16-Mar	92	92	91	91	91	91	90	91	90	83	82	72	55	42	49	47	56	66	76	80	84	84	89	90	78.0	91.8
17-Mar	90	90	91	90	90	91	88	87	79	59	55	53	44	45	43	36	34	37	38	40	41	51	57	61	62.0	91.5
18-Mar	68	73	77	77	80	83	88	85	72	63	42	35	42	33	32	35	36	37	45	47	49	61	62	63	57.8	87.5
19-Mar	62	60	61	64	78	87	83	86	84	84	83	78	77	79	80	78	79	82	88	91	91	90	86	86	79.9	91.1
20-Mar	87	88	89	87	87	88	87	87	84	82	80	77	73	73	75	76	78	81	85	86	87	88	88	87	83.3	88.5
21-Mar	87	87	88	88	89	89	90	88	86	83	80	77	76	77	78	80	81	83	85	87	88	89	91	92	85.0	92.1
22-Mar	93	90	87	86	87	87	88	87	84	77	70	57	55	47	50	58	65	67	74	74	75	78	79	84	74.8	92.5
23-Mar	87	87	93	92	90	91	92	91	91	91	89	82	61	63	64	66	68	70	74	86	90	90	90	91	82.9	92.9
24-Mar	92	91	92	91	92	92	91	87	83	82	64	59	54	59	61	62	70	76	80	80	78	77	79	82	78.1	92.4
25-Mar	82	83	83	84	85	86	87	86	82	78	74	67	58	69	71	69	73	77	78	78	77	78	78	79	77.6	87.1
26-Mar	80	80	82	84	86	88	86	85	83	79	77	71	61	65	71	75	78	78	81	82	81	81	79	78	78.8	87.5
27-Mar	81	81	83	83	85	84	86	86	81	75	72	69	59	64	69	64	71	77	79	83	82	81	82	83	77.5	86.4
28-Mar	84	86	88	88	89	91	92	90	80	65	50	47	56	51	50	45	50	50	55	63	69	69	72	64	68.5	91.8
29-Mar	64	78	76	80	81	84	86	81	72	52	51	42	42	32	32	41	47	47	48	50	52	57	57	62	59.0	86.4
30-Mar	67	68	68	69	68	65	63	63	65	57	54	47	41	41	41	52	63	58	59	59	59	62	73	68	59.5	72.6
31-Mar	71	58	63	65	67	70	67	65	64	62	63	59	46	44	50	53	46	51	49	51	52	59	65	64	58.5	70.9
79.4 79.6 80.3 80.5 81.5 82.0 82.1 81.2 78.4 72.1 66.2 61.3 56.1 54.0 55.7 57.1 60.7 64.8 69.7 73.3 74.2 75.7 77.1 78.4																								Diurnal Average		
92.5 91.6 92.9 92.1 92.4 92.1 91.9 90.8 90.9 91.3 88.5 84.5 83.0 81.0 80.0 79.6 81.4 83.6 88.5 91.1 90.9 92.0 91.2 92.1																								Diurnal Maximum		
N - Not Valid																										

Hourly Averages

Relative Humidity (RH) - %
Beaverlodge - March 2011



**PASZA**

Peace Air Shed Zone Association

Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	9	6	8	9	12	0	1	3	5	1	1	6	3	3	4	3	5	4	1	3	6	1	2	1	1.9	11.7
Dir	328	334	332	325	322	236	80	330	323	207	199	281	60	236	228	187	169	104	201	38	14	37	195	138	323	322
2 Spd	1	3	1	2	2	7	9	3	11	15	13	14	16	17	14	14	15	12	9	9	10	7	10	11	7.2	17.2
Dir	21	31	45	47	31	45	58	31	86	80	59	59	65	64	59	51	30	23	5	337	324	315	323	317	38	64
3 Spd	12	10	8	4	4	1	1	2	2	3	4	4	3	2	3	4	4	5	3	3	1	4	3	2	1.6	12.1
Dir	321	312	306	240	221	226	352	202	219	212	209	223	216	199	198	177	188	165	162	62	10	299	7	18	256	321
4 Spd	4	2	3	2	1	2	2	1	4	3	4	4	4	3	2	5	9	10	12	14	16	19	11	8	4.0	18.7
Dir	292	352	34	33	204	29	222	151	171	168	176	193	178	170	33	85	95	59	60	69	70	80	66	23	77	80
5 Spd	8	9	8	9	7	7	7	8	10	9	6	1	4	2	9	3	6	7	5	3	3	7	5	6	5.1	9.6
Dir	3	3	22	42	20	20	22	13	12	16	14	220	229	221	19	108	112	70	42	36	14	34	15	17	25	12
6 Spd	4	3	2	2	2	1	1	4	2	1	2	2	3	1	2	4	5	5	3	0	2	1	3	4	1.0	5.4
Dir	15	6	36	339	247	227	186	243	232	143	32	287	251	293	217	222	255	283	50	285	167	251	14	312	287	283
7 Spd	3	1	1	1	1	1	1	3	5	1	1	1	2	2	3	3	4	3	1	2	1	1	1	1	1.0	4.6
Dir	38	17	7	16	347	58	67	58	37	27	91	119	96	258	236	90	59	75	191	115	87	201	260	42	60	37
8 Spd	1	1	1	4	1	3	2	2	3	1	1	3	3	1	4	3	0	0	2	1	4	2	7	3	0.8	6.8
Dir	83	24	347	29	7	51	45	76	38	250	308	287	229	73	252	251	59	176	344	293	275	221	293	44	323	293
9 Spd	2	2	3	1	3	4	3	10	11	9	11	11	13	10	14	20	14	10	9	9	10	10	6	5	7.5	19.9
Dir	63	220	53	82	71	34	332	338	332	346	338	350	16	25	39	32	27	9	351	347	354	4	2	1	7	32
10 Spd	9	13	8	3	6	9	9	13	11	13	13	14	14	15	18	15	14	16	6	3	4	3	1	4	9.3	17.6
Dir	27	32	20	15	35	33	35	33	23	35	35	31	35	34	44	41	45	50	46	89	88	93	0	332	37	44
11 Spd	6	6	1	1	3	4	10	13	11	10	11	13	16	13	13	9	6	7	6	6	2	1	4	4	5.1	15.6
Dir	7	32	40	222	165	153	113	113	110	98	104	112	114	122	114	102	89	105	273	252	242	358	317	42	107	114
12 Spd	1	2	1	5	3	2	4	3	6	4	5	4	8	5	4	3	4	4	6	1	12	6	3	2.3	12.2	
Dir	267	59	44	277	328	0	263	339	317	333	301	288	268	303	338	271	168	212	105	77	106	316	357	39	313	316
13 Spd	3	4	2	8	9	5	5	4	2	4	3	1	3	4	6	7	10	8	8	7	4	3	6	13	2.4	13.2
Dir	180	38	358	328	24	194	147	106	84	317	283	117	62	314	227	268	281	263	270	326	220	229	343	324	300	324
14 Spd	11	9	10	13	12	12	8	8	10	10	10	9	4	4	3	2	1	3	5	3	3	7	4	4	5.2	13.0
Dir	346	359	326	309	316	314	314	308	322	313	314	323	322	292	105	187	239	89	135	78	32	315	71	313	325	309
15 Spd	5	9	11	12	9	5	5	N	5	8	12	9	11	16	14	14	11	9	10	10	10	8	6	7	8.2	15.7
Dir	18	22	1	335	335	335	13	N	272	61	45	43	65	60	23	13	4	4	14	19	33	21	358	15	19	60
16 Spd	7	5	4	3	1	1	1	2	1	3	7	7	5	2	4	3	7	7	5	1	2	4	3	3	1.8	7.3
Dir	18	24	38	157	105	122	20	241	219	107	169	125	114	108	64	88	120	117	111	341	239	274	34	48	98	117
17 Spd	2	1	3	4	4	5	0	4	5	2	10	13	12	17	15	11	16	14	11	9	6	3	2	4	4.3	17.0
Dir	248	107	79	63	232	54	264	67	94	124	228	225	224	238	245	248	281	290	288	281	277	192	194	72	252	238
18 Spd	3	4	2	4	4	3	2	3	3	4	1	1	2	1	4	4	5	4	5	8	11	2	11	14	3.6	13.9
Dir	90	76	120	63	51	64	59	55	55	65	81	172	255	177	61	69	104	43	78	28	27	67	27	23	51	23
19 Spd	12	11	15	15	3	5	7	15	13	16	13	11	13	16	16	16	14	10	8	8	12	10	10	11	10.4	16.0
Dir	38	43	36	26	48	32	356	327	334	357	0	335	349	7	14	13	9	355	306	305	317	326	347	2	359	13
20 Spd	9	6	8	11	11	11	12	11	12	11	12	12	9	10	9	12	12	16	18	21	27	30	31	31	13.0	30.9
Dir	3	349	346	3	360	3	3	3	2	355	7	8	18	49	34	41	42	45	39	48	59	61	65	72	35	72
21 Spd	27	26	26	21	22	21	23	22	20	21	24	24	22	24	25	26	24	21	17	21	23	27	27	27	23.1	27.5
Dir	76	74	73	76	68	81	87	88	83	83	86	86	81	84	87	88	90	82	79	85	93	96	101	104	85	76
22 Spd	23	20	15	15	14	11	11	10	6	7	5	3	3	2	5	8	11	11	9	7	7	7	2	1	8.2	23.3
Dir	106	105	104	105	109	111	103	102	98	92	117	117	221	169	99	118	135	129	92	50	56	72	72	118	105	106

**PASZA**

Peace Air Shed Zone Association

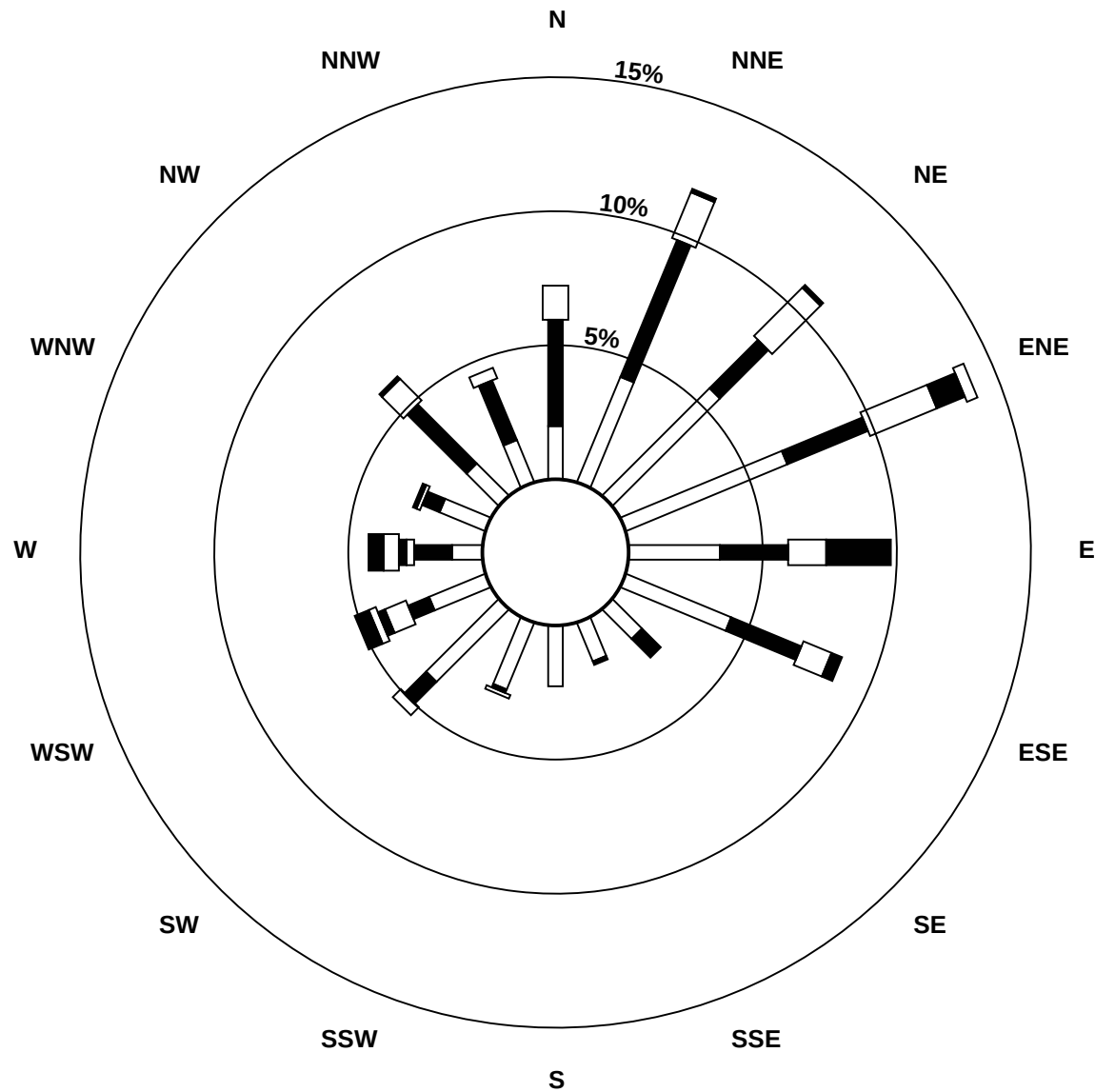
Hourly Averages

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

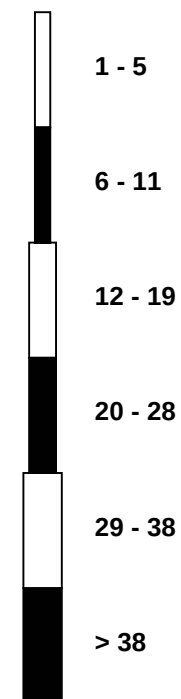
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	1	2	1	1	3	2	4	1	2	4	6	6	0	12	16	18	19	17	18	20	20	16	9	8	6.7	20.4
Dir	211	309	65	191	213	38	7	231	352	292	296	284	106	92	76	69	71	59	51	69	70	57	61	75	62	70
24 Spd	5	3	7	7	5	5	8	5	6	7	1	1	1	4	2	1	8	12	13	17	16	14	14	17	6.6	17.3
Dir	50	19	26	52	56	14	29	47	16	38	74	180	41	35	145	189	96	90	71	73	73	71	82	90	66	90
25 Spd	12	10	10	13	8	9	8	7	6	8	11	8	4	8	11	9	13	12	10	9	11	8	9	7	8.7	12.8
Dir	85	72	82	79	71	65	66	74	85	88	96	92	103	126	119	106	98	93	70	76	72	59	59	40	83	98
26 Spd	7	6	5	7	7	6	5	4	6	5	6	5	2	4	6	7	9	7	6	6	2	4	6	6	4.4	8.6
Dir	32	29	24	29	39	41	44	14	106	129	130	119	138	143	126	117	111	95	77	68	59	39	53	76	74	111
27 Spd	7	5	6	5	4	1	2	1	4	2	4	3	2	3	4	1	2	7	9	8	5	6	5	6	2.6	9.0
Dir	87	70	88	70	81	105	77	318	15	43	125	117	157	218	218	214	350	20	31	29	8	8	336	2	45	31
28 Spd	7	8	7	2	2	2	2	3	4	3	3	5	9	8	4	2	2	3	1	1	6	5	4	4	1.2	9.4
Dir	316	319	324	28	194	71	116	111	97	123	83	105	112	116	134	319	11	86	269	252	267	319	69	49	62	112
29 Spd	3	2	5	3	3	3	3	2	3	2	4	4	5	3	4	13	11	7	8	4	6	3	4	4	2.4	12.6
Dir	17	73	39	63	106	95	76	94	63	129	64	86	67	82	205	213	126	98	112	142	218	203	196	207	123	213
30 Spd	3	4	3	4	5	6	3	3	6	6	17	40	47	49	51	46	40	36	39	35	30	28	13	10	19.4	51.0
Dir	78	104	111	84	89	98	136	184	209	219	241	257	266	260	262	245	253	259	252	254	252	255	243	255	253	262
31 Spd	1	11	3	5	7	11	11	7	7	8	12	10	19	23	22	24	46	36	36	30	27	23	18	14	15.8	45.8
Dir	57	266	57	230	233	227	247	236	245	222	225	248	278	278	310	282	261	262	260	262	264	243	238	243	260	261
Spd	4.2	4.2	4.3	3.4	2.7	2.8	2.9	2.5	2.7	2.9	1.8	0.8	0.9	1.0	1.9	1.5	1.6	2.7	2.3	3.0	2.8	2.7	3.4	3.9	Diurnal Average	
Dir	37	34	36	32	35	50	52	42	34	50	49	12	13	34	34	52	60	44	20	26	27	29	39	38	Diurnal Maximum	
Spd	27.5	25.7	25.7	20.6	22.3	21.0	23.0	22.2	20.2	20.6	24.3	40.0	47.4	49.0	51.0	45.8	45.8	36.3	39.0	35.4	29.7	30.1	30.5	30.9	Diurnal Maximum	
Dir	76	74	73	76	68	81	87	88	83	83	86	257	266	260	262	245	261	262	252	254	252	61	65	72		
Maximum Speed Value: 51 km/h on Mar 30 15:00																								Hours in Service: 744		
Maximum Daily Speed Average: 23.1 km/h on Mar 21																								Hours of Data: 743		
Maximum Diurnal Speed Average: 4.3 km/h at hour 3																								Hours of Missing Data: 1		
Minimum Speed Value: 0 km/h on Mar 8 17:00																								Percent Operational Time: 99.9		
Minimum Daily Speed Average: 0.8 km/h on Mar 7																										
Minimum Diurnal Speed Average: 0.8 km/h at hour 12																										
Monthly Average Velocity: 2.60 km/h 37.4 deg																										
Speed Percentiles: P ₁ = 0.5 P ₁₀ = 1.4 Q ₁ = 3.0 Median = 5.5 Q ₃ = 10.6 P ₉₀ = 15.7 P ₉₉ = 40.0																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										
N - Not Valid																										
Frequency Distribution																										
Speed Range (km/h)																										
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																			
North	38	58	15	0	0	0	111																			
NorthEast	78	50	39	3	2	0	172																			
East	65	46	26	27	1	0	165																			
SouthEast	28	15	6	0	0	0	49																			
South	36	4	0	0	0	0	40																			
SouthWest	47	11	11	1	0	1	71																			
West	25	19	5	4	6	7	66																			
NorthWest	23	31	14	1	0	0	69																			
Total	340	234	116	36	9	8	743																			

Wind Rose

Wind Speed (WS) (km/h)
Beaverlodge - March 2011



Wind Speed Classes (km/h)



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Peace Air Shed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Beaverlodge - March 2011

Maximum Speed: 51 km/h on Mar 30 15:00																				Maximum Daily Speed Average: 23.4 km/h on Mar 21										Hours in Service: 744	
Minimum Speed: 1 km/h on Mar 2 00:00																				Minimum Daily Speed Average: 2.7 km/h on Mar 7										Hours of Data: 743	
Maximum Diurnal Speed Average: 11.5 km/h at hour 17																				Minimum Diurnal Speed Average: 5.8 km/h at hour 6										Hours of Missing Data: 1	
Monthly Average Speed: 8.39 km/h																				Percentiles: P ₁ = 1.4 P ₁₀ = 2.3 Q ₁ = 3.7 Median = 6.1 Q ₃ = 10.8 P ₉₀ = 16.0 P ₉₉ = 40.0										Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Mar	9	6	8	9	12	3	2	5	6	3	1	6	3	3	4	3	5	4	2	3	6	3	2	1	4.5	11.8					
2-Mar	2	4	2	2	2	7	9	4	11	15	13	14	16	17	14	14	15	12	9	9	10	7	10	11	9.6	17.4					
3-Mar	12	10	8	5	4	2	2	2	2	3	4	4	3	2	4	4	4	5	3	3	3	4	3	2	4.2	12.1					
4-Mar	4	2	3	3	1	2	2	1	4	3	4	4	4	3	2	5	9	10	12	14	16	19	12	9	6.3	18.8					
5-Mar	9	10	9	9	8	7	7	8	10	9	6	2	4	4	9	5	6	8	6	3	3	7	5	6	6.6	9.6					
6-Mar	5	3	3	4	2	2	2	4	3	1	2	4	3	2	2	4	5	6	4	1	2	2	4	5	3.2	5.9					
7-Mar	4	2	1	2	3	1	2	3	5	3	3	2	2	4	4	3	4	4	1	2	2	2	2	3	2.7	4.6					
8-Mar	2	3	2	4	4	4	4	3	3	3	3	6	3	2	5	3	1	1	3	3	6	3	7	4	3.5	7.1					
9-Mar	4	3	4	1	4	4	4	5	10	12	9	11	11	13	11	14	20	14	10	9	11	10	8	6	8.8	19.9					
10-Mar	9	13	9	4	6	9	9	13	11	13	13	14	14	16	18	15	14	16	6	3	4	4	1	4	9.8	17.7					
11-Mar	6	6	2	2	3	4	10	13	11	10	11	13	16	14	13	9	6	7	6	6	3	3	6	4	7.8	15.7					
12-Mar	4	3	1	6	7	4	5	5	6	5	5	5	8	6	6	5	4	5	6	7	9	13	11	10	6.1	12.8					
13-Mar	9	5	3	8	11	6	5	5	2	5	3	2	3	6	6	8	10	9	9	10	9	3	7	13	6.6	13.3					
14-Mar	12	10	10	13	12	12	8	8	10	10	10	9	5	4	3	3	2	4	5	4	4	8	7	7	7.6	13.1					
15-Mar	7	9	12	12	10	6	6	N	5	9	12	9	12	16	14	14	11	9	10	11	10	8	6	8	9.8	16.0					
16-Mar	7	5	4	3	1	1	1	2	2	3	7	7	5	2	4	4	7	7	5	4	4	5	4	3	4.1	7.4					
17-Mar	3	2	4	4	4	5	4	5	6	4	10	13	13	17	15	11	16	14	11	9	6	4	2	4	7.7	17.0					
18-Mar	3	4	3	4	4	3	3	3	3	4	2	2	2	1	4	4	5	4	6	8	11	6	11	14	4.7	13.9					
19-Mar	12	11	15	16	5	5	8	15	14	16	14	11	13	16	16	16	14	11	8	8	12	10	10	11	11.9	16.2					
20-Mar	9	6	8	11	11	11	12	11	12	11	12	12	9	11	9	12	12	17	18	21	27	30	31	31	14.8	31.0					
21-Mar	28	26	26	21	22	21	23	22	20	21	24	25	22	24	25	26	24	21	17	21	24	27	27	27	23.4	27.5					
22-Mar	23	20	15	15	14	11	11	10	6	7	5	4	3	2	5	8	11	11	9	7	7	8	5	2	9.2	23.3					
23-Mar	2	3	3	2	3	2	6	3	4	4	6	6	3	13	16	18	19	17	18	20	20	16	10	8	9.3	20.4					
24-Mar	5	3	7	7	5	5	8	6	6	7	2	2	2	4	4	3	8	12	13	17	16	14	14	17	7.8	17.3					
25-Mar	12	11	10	13	8	9	9	7	7	9	11	8	4	8	11	9	13	12	10	9	11	8	9	7	9.3	12.9					
26-Mar	7	6	5	7	7	7	5	4	7	5	6	5	2	4	6	7	9	7	6	6	2	4	6	7	5.8	8.7					
27-Mar	7	6	6	5	4	2	5	2	4	3	4	3	2	3	4	2	5	7	9	8	5	6	5	6	4.7	9.0					
28-Mar	7	8	7	3	2	3	3	4	4	3	3	5	9	8	5	4	5	4	4	3	11	7	5	4	5.1	11.1					
29-Mar	4	6	7	3	4	3	3	4	3	3	4	5	5	3	5	13	12	7	8	4	6	5	5	4	5.3	13.5					
30-Mar	5	4	4	4	5	6	3	4	6	7	17	41	48	49	51	46	41	36	39	36	30	28	13	11	22.2	51.1					
31-Mar	5	11	5	6	7	11	11	7	7	8	12	10	19	24	22	26	46	37	36	30	27	23	18	14	17.6	45.9					
7.6 7.1 6.6 6.8 6.4 5.8 6.3 6.4 6.8 7.0 7.8 8.5 8.8 9.7 10.3 10.5 11.5 10.8 10.0 9.7 10.3 9.6 8.5 8.5																									Diurnal Average						
27.5 25.7 25.7 20.7 22.3 21.1 23.1 22.2 20.3 20.6 24.4 40.5 47.6 49.2 51.1 46.3 45.9 36.7 39.3 35.6 30.1 30.1 30.6 31.0																									Diurnal Maximum						
N - Not Valid																															
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

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Peace Air Shed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Beaverlodge - March 2011

Maximum Value: 92.9 deg on Mar 8 17:00																		Hours in Service: 744							
Minimum Value: 1.9 deg on Mar 22 04:00																		Hours of Data: 743							
Percentiles: P ₁ = 2.7 P ₁₀ = 4.7 Q ₁ = 7.6 Median = 16.4 Q ₃ = 42.7 P ₉₀ = 70.0 P ₉₉ = 87.6																		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-Mar	4	7	10	6	4	86	79	69	61	67	70	42	35	16	24	16	5	25	84	17	10	78	32	45	86.1
2-Mar	67	35	77	75	43	10	10	77	12	9	5	11	9	8	9	7	7	4	12	24	11	10	6	5	77.4
3-Mar	3	4	9	30	7	85	58	21	11	7	7	6	21	27	18	33	21	8	28	10	55	18	25	22	84.6
4-Mar	21	44	5	41	74	15	22	64	17	14	6	9	15	34	54	21	8	10	11	16	6	5	29	50	74.0
5-Mar	27	13	29	11	16	10	5	7	3	3	6	70	14	61	11	42	17	21	8	18	26	6	11	5	70.1
6-Mar	28	34	85	62	64	54	37	24	45	48	14	76	41	55	45	11	11	24	46	85	52	71	52	46	84.7
7-Mar	17	73	77	74	73	54	38	41	7	88	81	69	52	73	47	34	10	42	39	32	74	79	75	82	87.7
8-Mar	64	66	63	33	87	58	84	74	58	64	68	67	13	81	23	36	93	86	66	83	66	73	16	33	92.9
9-Mar	67	74	70	72	41	22	65	16	19	27	13	15	3	12	9	3	5	6	11	13	15	12	43	36	74.4
10-Mar	10	4	10	79	13	6	18	5	5	5	4	7	9	4	5	4	5	3	21	19	17	20	33	14	78.6
11-Mar	22	7	81	44	30	12	8	5	5	10	5	9	7	8	8	8	11	6	29	22	74	71	50	15	81.5
12-Mar	75	58	65	44	71	57	68	68	39	54	44	38	15	46	41	35	45	46	55	47	87	20	54	92	92.2
13-Mar	82	54	51	17	50	36	22	37	55	38	42	67	17	52	16	30	16	26	22	39	76	59	26	7	82.2
14-Mar	20	32	14	7	6	10	15	11	7	7	8	19	27	56	42	61	74	42	22	38	65	64	65	65	74.4
15-Mar	63	7	11	18	54	58	25	N	21	32	17	16	24	13	19	4	11	16	5	4	4	24	17	7	63.0
16-Mar	7	7	15	20	45	79	56	9	70	14	11	13	15	25	12	27	7	8	39	90	68	54	44	36	89.5
17-Mar	74	50	23	17	43	20	91	58	28	45	12	13	14	4	6	8	6	4	7	5	5	40	38	13	91.1
18-Mar	29	32	36	16	8	35	46	52	41	12	33	60	49	64	15	10	18	31	29	10	4	76	10	3	76.4
19-Mar	9	8	3	17	51	31	17	5	19	17	19	9	15	7	5	5	6	15	13	7	5	11	10	11	50.9
20-Mar	8	11	11	8	11	6	7	9	7	7	3	4	8	12	9	12	10	7	5	6	3	3	3	3	12.3
21-Mar	3	3	3	4	3	5	3	3	4	4	5	5	5	5	4	3	4	4	4	4	3	4	3	4	5.4
22-Mar	4	2	3	2	3	4	3	4	6	10	18	43	20	33	12	17	7	5	21	7	9	16	80	58	79.6
23-Mar	80	62	80	75	23	68	66	81	52	35	7	6	89	68	9	10	8	9	6	6	3	7	8	9	88.5
24-Mar	15	23	2	14	8	24	9	19	7	9	47	71	92	27	68	76	13	10	7	4	3	2	8	3	91.7
25-Mar	6	10	9	14	13	5	8	7	8	11	4	5	7	11	11	8	7	9	7	7	5	6	6	17	17.1
26-Mar	9	12	14	11	9	12	18	20	18	14	7	25	26	23	11	7	6	6	13	9	32	26	8	13	32.4
27-Mar	12	17	16	22	22	69	75	72	11	42	16	15	21	20	23	69	80	6	4	5	9	15	24	16	79.9
28-Mar	6	4	4	40	51	33	38	13	23	13	20	18	6	11	45	81	59	51	88	90	70	78	35	38	89.9
29-Mar	50	85	51	59	35	36	21	59	62	48	11	9	7	45	29	20	17	14	6	16	22	85	30	22	84.8
30-Mar	64	16	27	21	25	13	40	24	16	35	28	10	4	5	3	8	13	9	8	6	9	6	7	22	64.4
31-Mar	84	12	72	55	59	14	22	12	14	20	7	5	27	14	8	23	4	9	6	3	6	5	3	8	84.1
	84.1	84.6	84.7	78.6	86.7	86.1	91.1	81.2	70.1	87.7	80.6	75.5	91.7	81.0	67.9	81.3	92.9	85.5	87.6	89.9	87.3	84.8	79.6	92.2	
N - Not Valid																									

PASZA

Portable – Bonanza Station

Monthly Summary Tables, Graphs and
Roses

**PASZA**

Peace Air Shed Zone Association

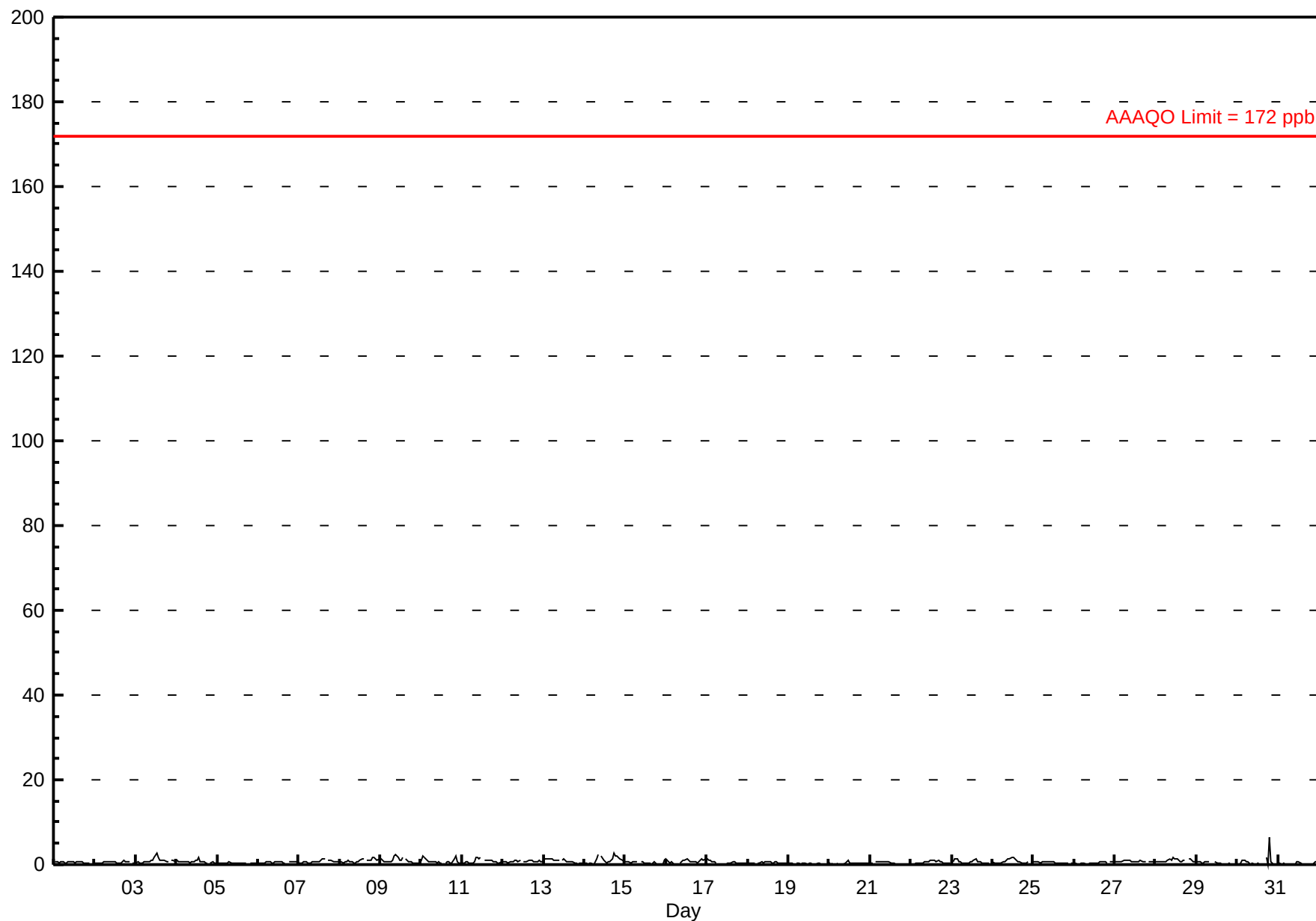
Hourly Averages

Sulphur Dioxide (SO₂) - ppb**Portable-Bonanza - March 2011**

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 6.3 ppb on Mar 30 20:00 Maximum Daily Average: 1.0 ppb on Mar 14																				Hours in Service: 744 Hours of Data: 709 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Mar 30 00:00 Maximum Diurnal Average: 0.8 ppb at hour 12 Monthly Average: 0.61 ppb										Minimum Daily Average: 0.2 ppb on Mar 19 Minimum Diurnal Average: 0.5 ppb at hour 23 Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.5 Q ₃ = 0.8 P ₉₀ = 1.1 P ₉₉ = 2.0																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	1	1	1	0	1	1	0	0	1	1	1	1	0	1	1	1	1	0	0	0	0	0	A	0	0.5	0.7
2-Mar	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	A	0	0	0.6	1.0
3-Mar	0	1	0	0	0	1	1	1	1	1	1	2	3	2	1	1	1	1	1	1	A	1	1	1	0.9	2.6
4-Mar	1	1	1	1	1	1	1	1	0	1	1	1	1	2	1	1	1	0	0	A	0	1	0	0	0.7	1.6
5-Mar	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	0.5
6-Mar	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1	0	0	A	1	1	1	1	1	1	0.5	0.8
7-Mar	0	0	0	1	1	0	0	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.7	1.4
8-Mar	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	A	1	1	1	1	2	2	1	1	0.9	1.7
9-Mar	1	1	1	1	1	1	1	1	2	2	2	1	1	2	A	1	1	1	1	0	0	0	0	0	0.9	2.4
10-Mar	1	2	2	1	1	1	1	1	1	0	1	0	0	A	0	1	1	0	0	1	2	1	0	0	0.8	2.0
11-Mar	0	0	1	1	0	0	0	1	2	2	1	2	A	1	1	1	1	1	1	1	1	0	0	1	0.8	1.8
12-Mar	1	1	1	0	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1
13-Mar	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0.8	1.5
14-Mar	0	0	0	0	0	0	1	1	2	A	2	1	1	0	1	1	1	3	2	2	2	1	1	1	1.0	2.6
15-Mar	1	1	1	0	1	1	1	1	A	1	1	0	0	0	0	0	0	1	0	0	0	0	0	1	0.5	0.9
16-Mar	1	1	0	1	0	0	0	A	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0.7	1.2
17-Mar	1	1	1	1	1	0	A	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0.4	1.5
18-Mar	0	0	0	0	0	A	0	0	1	0	1	1	1	0	0	0	1	1	0	0	0	0	0	0	0.4	0.8
19-Mar	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
20-Mar	0	0	0	A	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9
21-Mar	0	0	A	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8
22-Mar	0	A	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	1	0.6	1.0
23-Mar	A	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	A	0.6	1.5
24-Mar	1	0	0	0	0	0	1	1	1	1	1	2	2	1	1	1	1	0	0	0	0	1	A	1	0.7	1.7
25-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0.5	0.8
26-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	A	1	1	1	0.4	0.7
27-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.8	1.1
28-Mar	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	A	1	1	1	1	1	1.0	1.7
29-Mar	1	1	1	1	0	1	1	1	C	C	C	1	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.7
30-Mar	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	A	2	0	6	1	0	0	0	0.6	6.3
31-Mar	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	A	0	0	0	0	0	0	1	1	0.2	0.7
0.5 0.5 0.5 0.6 0.5 0.5 0.5 0.6 0.7 0.7 0.8 0.8 0.7 0.8 0.6 0.6 0.6 0.7 0.5 0.8 0.6 0.5 0.5 0.5																									Diurnal Average	
1.5 1.9 1.8 1.5 1.3 1.2 1.1 1.5 2.3 2.4 1.9 1.7 2.6 1.8 1.5 1.4 1.2 2.6 2.1 6.3 2.0 1.4 1.2 1.4																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Portable-Bonanza - March 2011



**PASZA**

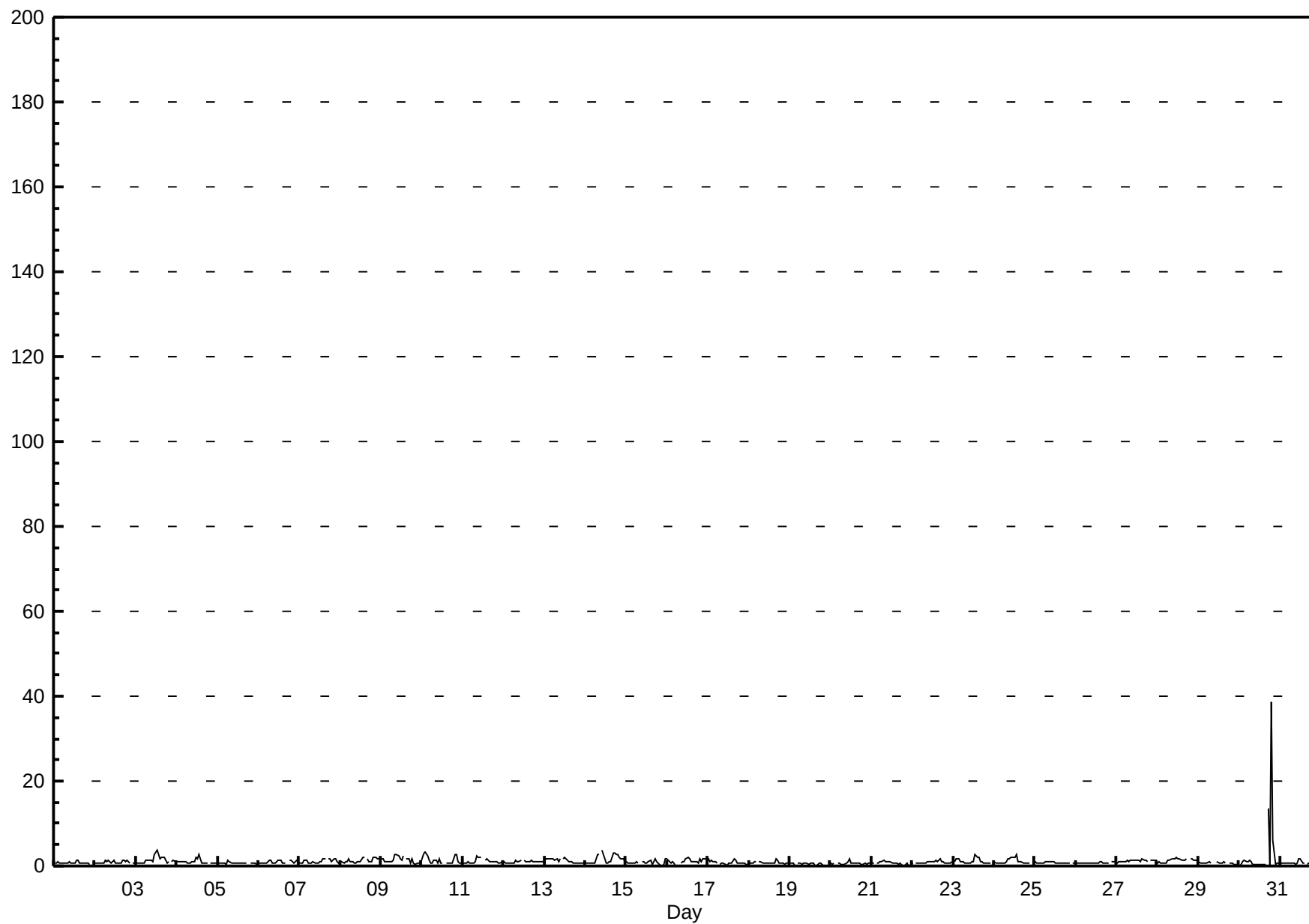
Peace Air Shed Zone Association

Hourly Maximums**Sulphur Dioxide (SO₂) - ppb****Portable-Bonanza - March 2011**

Maximum Value: 38.7 ppb on Mar 30 20:00																				Maximum Daily Average: 3.1 ppb on Mar 30				Hours in Service: 744		
Minimum Value: 0 ppb on Mar 30 01:00																				Minimum Daily Average: 0.5 ppb on Mar 19				Hours of Data: 709		
Maximum Diurnal Average: 2.3 ppb at hour 20																				Minimum Diurnal Average: 0.8 ppb at hour 6				Hours of Missing Data: 35		
Monthly Average: 1.05 ppb																				Percentiles: P ₁ = 0.2 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.8 Q ₃ = 1.2 P ₉₀ = 1.6 P ₉₉ = 3.1				Hours of Calibration: 35		
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	1	0.7	1.2
2-Mar	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	1.3
3-Mar	1	1	1	1	1	1	1	1	1	1	1	3	4	3	2	2	2	2	1	1	A	1	1	1	1.4	3.7
4-Mar	1	1	1	1	1	1	1	1	1	1	1	2	2	3	2	1	1	1	1	A	1	1	1	1	1.1	2.8
5-Mar	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	0.7	1.2
6-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.9	1.2
7-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	A	2	2	2	1	2	2	1	1	1.1	1.6
8-Mar	1	1	1	1	1	2	1	1	1	1	1	1	2	2	A	2	2	1	1	2	2	2	2	2	1.3	2.1
9-Mar	2	2	1	1	1	1	1	1	3	3	2	2	1	2	A	2	2	1	2	1	0	1	1	1	1.4	2.7
10-Mar	2	3	3	2	1	1	1	1	1	1	2	1	1	A	1	1	1	1	1	3	3	1	1	1	1.3	3.2
11-Mar	1	1	1	1	1	1	1	1	2	2	2	2	A	1	2	1	1	1	1	1	1	1	1	1	1.1	2.4
12-Mar	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	2	1	1	1	1	1	1	1	1.1	1.5
13-Mar	1	2	2	2	2	2	1	2	1	2	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1.2	2.1
14-Mar	1	1	1	1	1	1	2	3	3	A	4	2	1	1	1	1	3	3	3	3	2	2	2	1	1.7	3.7
15-Mar	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	1	2	1	1	0	0	0	2	0.8	1.6
16-Mar	2	1	1	1	1	0	0	A	1	1	1	2	2	2	1	1	1	1	1	2	1	2	2	2	1.1	2.1
17-Mar	2	1	1	1	1	1	A	0	1	1	0	0	1	1	1	2	1	1	1	1	1	1	0	0	0.8	1.7
18-Mar	0	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	2	1	1	1	1	0	1	1	0.8	1.8
19-Mar	1	1	1	0	A	1	1	0	1	1	1	0	1	1	1	0	0	1	1	0	0	0	0	0	0.5	0.7
20-Mar	1	0	1	A	1	1	0	0	0	1	1	2	1	1	1	1	1	1	0	0	1	0	1	1	0.6	1.7
21-Mar	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0	1	0	0	0.7	1.2
22-Mar	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	0.9	1.6
23-Mar	A	1	2	2	1	1	1	1	1	1	1	1	1	3	2	2	1	1	1	1	1	1	1	A	1.1	2.6
24-Mar	1	1	1	1	1	1	1	1	2	2	2	2	2	3	1	1	1	1	1	1	1	1	A	1	1.1	2.7
25-Mar	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	1.2
26-Mar	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
27-Mar	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	2	1	1	1	A	1	1	1	1	1.2	1.7
28-Mar	1	1	1	1	1	1	1	1	2	2	2	2	2	2	1	1	1	2	A	2	2	1	1	1	1.3	2.2
29-Mar	1	1	1	1	1	1	1	1	C	C	C	1	1	1	1	1	1	A	1	1	1	0	0	0	0.7	1.0
30-Mar	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	A	14	0	39	6	1	1	1	3.1	38.7
31-Mar	1	1	1	1	1	1	1	1	1	0	1	2	2	1	1	A	0	1	1	1	0	1	1	1	0.6	1.5
0.9 0.9 0.9 0.9 0.8 0.8 0.9 1.0 1.1 1.0 1.2 1.2 1.1 1.3 1.1 1.0 1.1 1.5 0.9 2.3 1.1 0.8 0.8 0.8																								Diurnal Average		
1.7 2.7 3.2 2.2 1.6 1.6 1.6 2.7 2.7 2.7 3.7 2.7 3.7 2.8 2.1 2.1 3.2 13.5 2.7 38.7 6.1 1.9 1.7 1.6																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

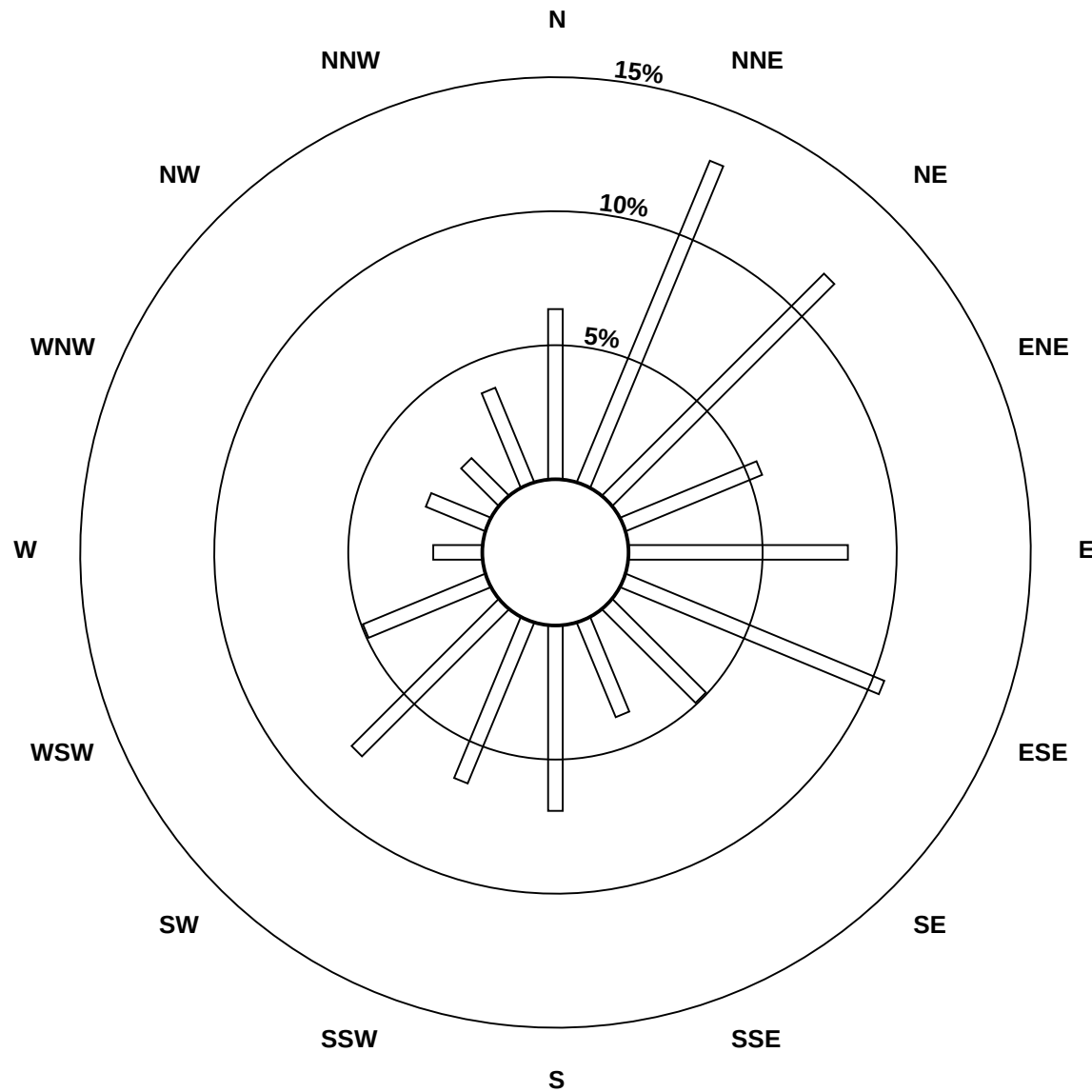
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Portable-Bonanza - March 2011

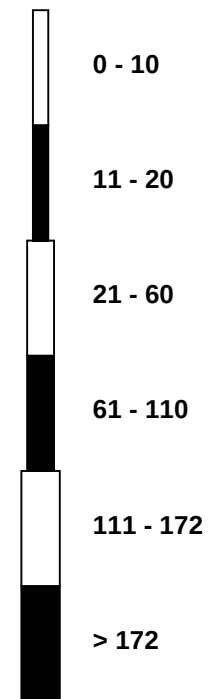


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Portable-Bonanza - March 2011

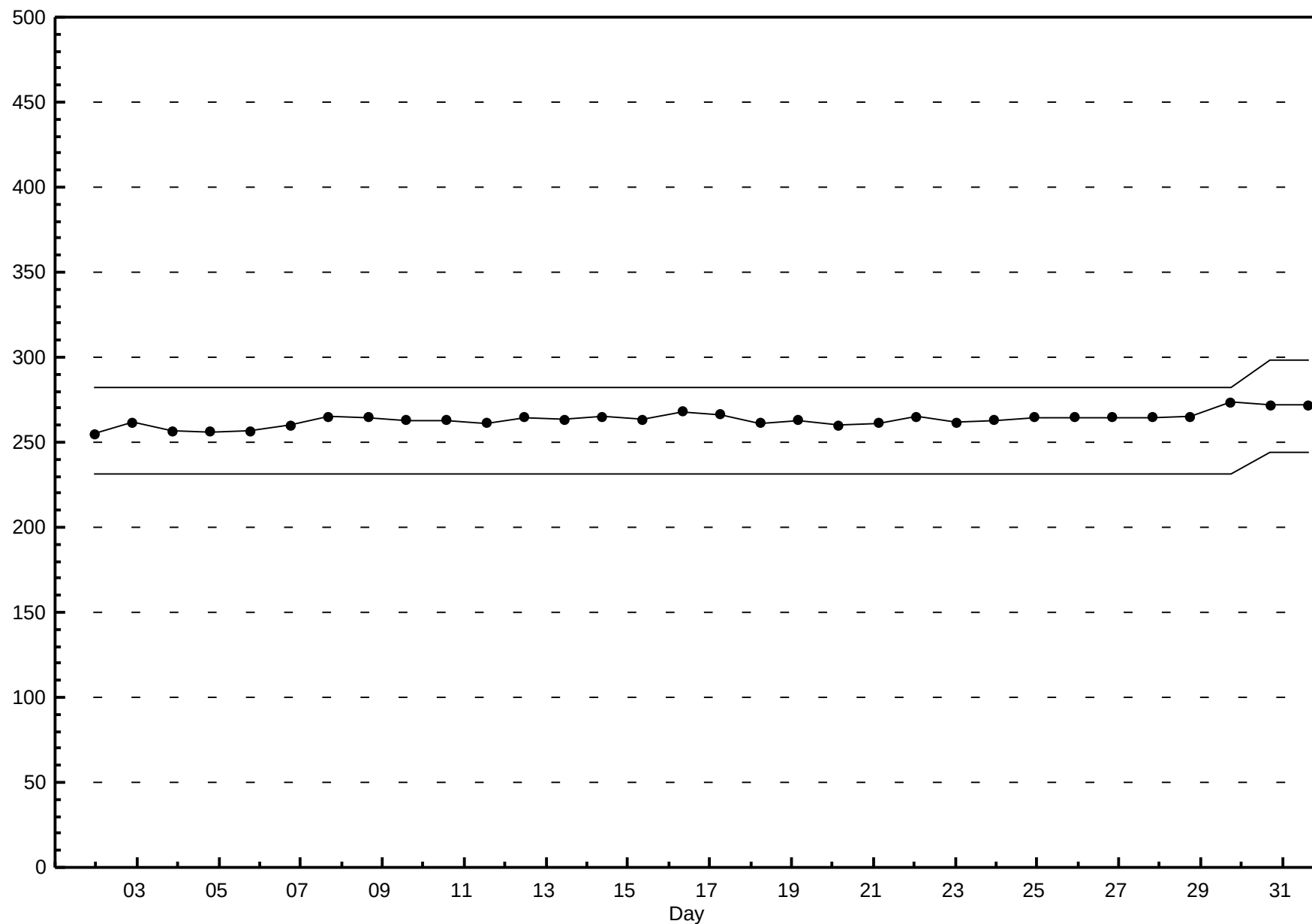


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Portable-Bonanza - March 2011



**PASZA**

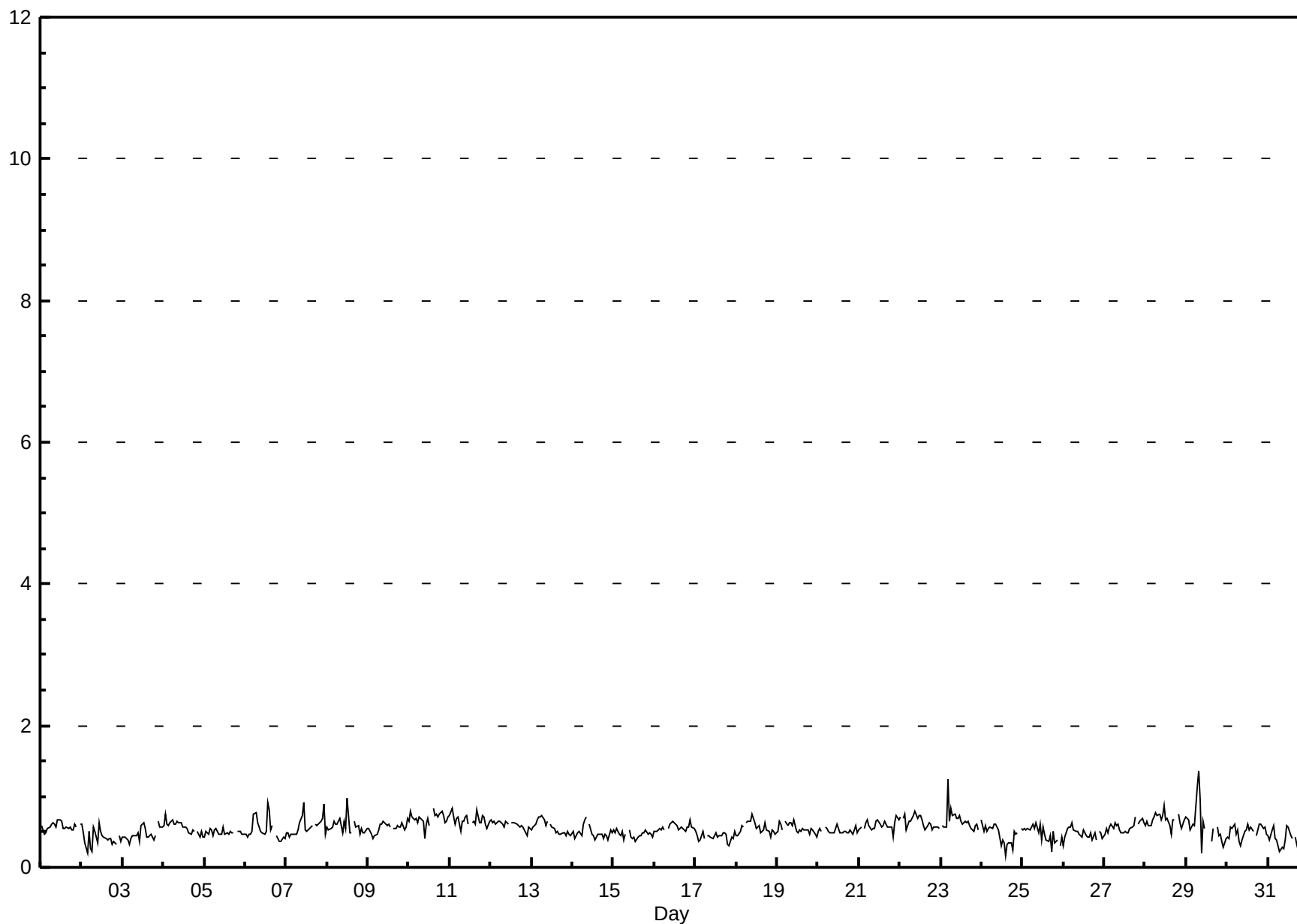
Peace Air Shed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Portable-Bonanza - March 2011

Number of Exceedences (AAAQO): Maximum Value: 1.4 ppb on Mar 29 08:00																				1-hr: 0 24-hr: 0 Maximum Daily Average: 0.7 ppb on Mar 10				Hours in Service: 744 Hours of Data: 709 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0		
Minimum Value: 0 ppb on Mar 31 22:00 Maximum Diurnal Average: 0.6 ppb at hour 8 Monthly Average: 0.54 ppb										Minimum Daily Average: 0.4 ppb on Mar 31 Minimum Diurnal Average: 0.5 ppb at hour 24 Percentiles: P ₁ = 0.2 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.5 Q ₃ = 0.6 P ₉₀ = 0.7 P ₉₉ = 0.9																
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-Mar	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.6	0.7
2-Mar	1	0	0	0	1	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	A	A	0	0.4	0.6
3-Mar	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	A	1	1	1	0.5	0.7
4-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	A	1	0	1	0	0.6	0.7
5-Mar	0	1	0	1	1	0	1	1	0	0	0	1	0	0	0	1	0	0	A	1	1	1	0	0	0.5	0.6
6-Mar	0	0	0	0	1	1	1	1	1	1	0	0	1	1	1	1	1	A	0	0	0	0	0	0	0.5	0.9
7-Mar	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	0.6	0.9
8-Mar	1	1	1	1	1	1	1	1	1	0	1	1	1	0	0	A	1	1	1	0	1	0	0	1	0.6	1.0
9-Mar	1	0	0	0	0	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	1	1	0.6	0.7
10-Mar	1	1	1	1	1	1	1	1	1	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.7	0.8
11-Mar	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8
12-Mar	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	0	1	1	0.6	0.7
13-Mar	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	1	0	0	0	0	0	1	0	0	0.6	0.7
14-Mar	1	0	0	0	1	0	1	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0.5	0.7
15-Mar	1	0	1	0	0	1	0	0	A	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.5	0.5
16-Mar	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.7
17-Mar	1	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	0.5
18-Mar	0	0	0	1	1	A	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	0	0.6	0.7
19-Mar	1	1	1	1	A	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	0	0	0.5	0.7
20-Mar	1	1	1	A	1	1	1	0	0	0	1	1	1	0	0	1	0	0	0	1	0	1	1	0	0.5	0.6
21-Mar	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0.6	0.7
22-Mar	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8
23-Mar	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	1.2
24-Mar	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	0	0	A	1	0.5	0.7
25-Mar	1	1	1	1	1	1	1	1	1	0	1	0	1	0	0	0	0	0	1	0	0	A	0	0	0.5	0.6
26-Mar	0	0	1	1	1	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	A	1	0	0	0.5	0.6
27-Mar	0	1	0	1	1	1	1	1	1	1	0	0	1	0	0	1	1	1	1	A	1	1	1	1	0.6	0.7
28-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	A	1	1	1	1	1	0.7	0.9
29-Mar	1	1	1	1	1	1	1	1	1	0	1	1	C	C	C	0	1	A	1	0	0	0	0	0	0.6	1.4
30-Mar	0	0	1	1	1	0	1	0	0	0	1	1	1	1	1	1	A	0	1	1	1	1	1	0	0.5	0.6
31-Mar	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	A	0	0	0	0	0	0	0	0	0.4	0.6
0.5 0.5 0.5 0.5 0.6 0.6 0.6 0.6 0.6 0.5 0.6 0.6 0.6 0.6 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5																									Diurnal Average	
0.7 0.8 0.7 0.7 1.2 0.7 1.1 1.4 1.0 0.8 0.9 0.9 1.0 0.9 0.8 0.7 0.8 0.7 0.7 0.7 0.8 0.7 0.7 0.9 0.7																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																										

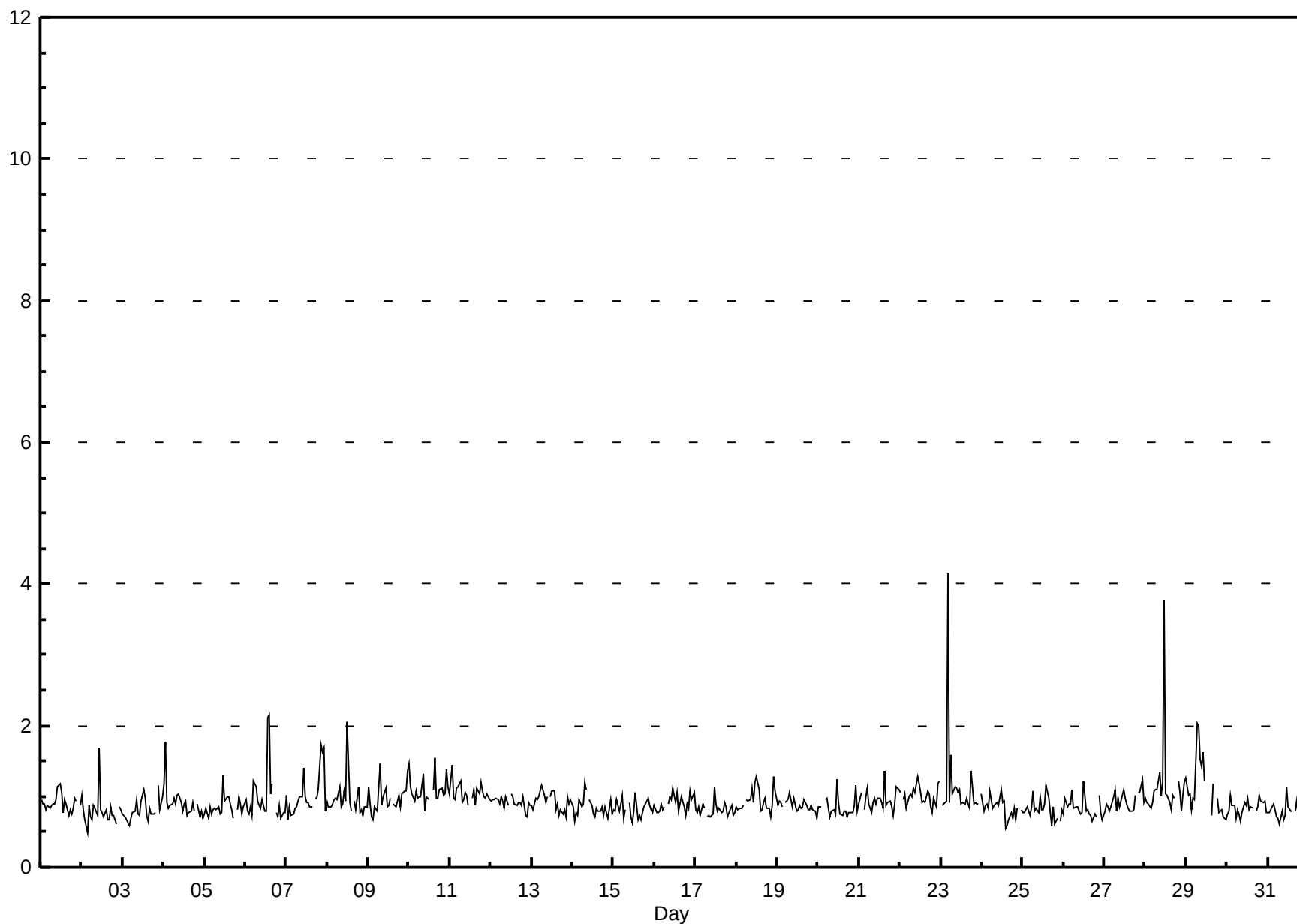


Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

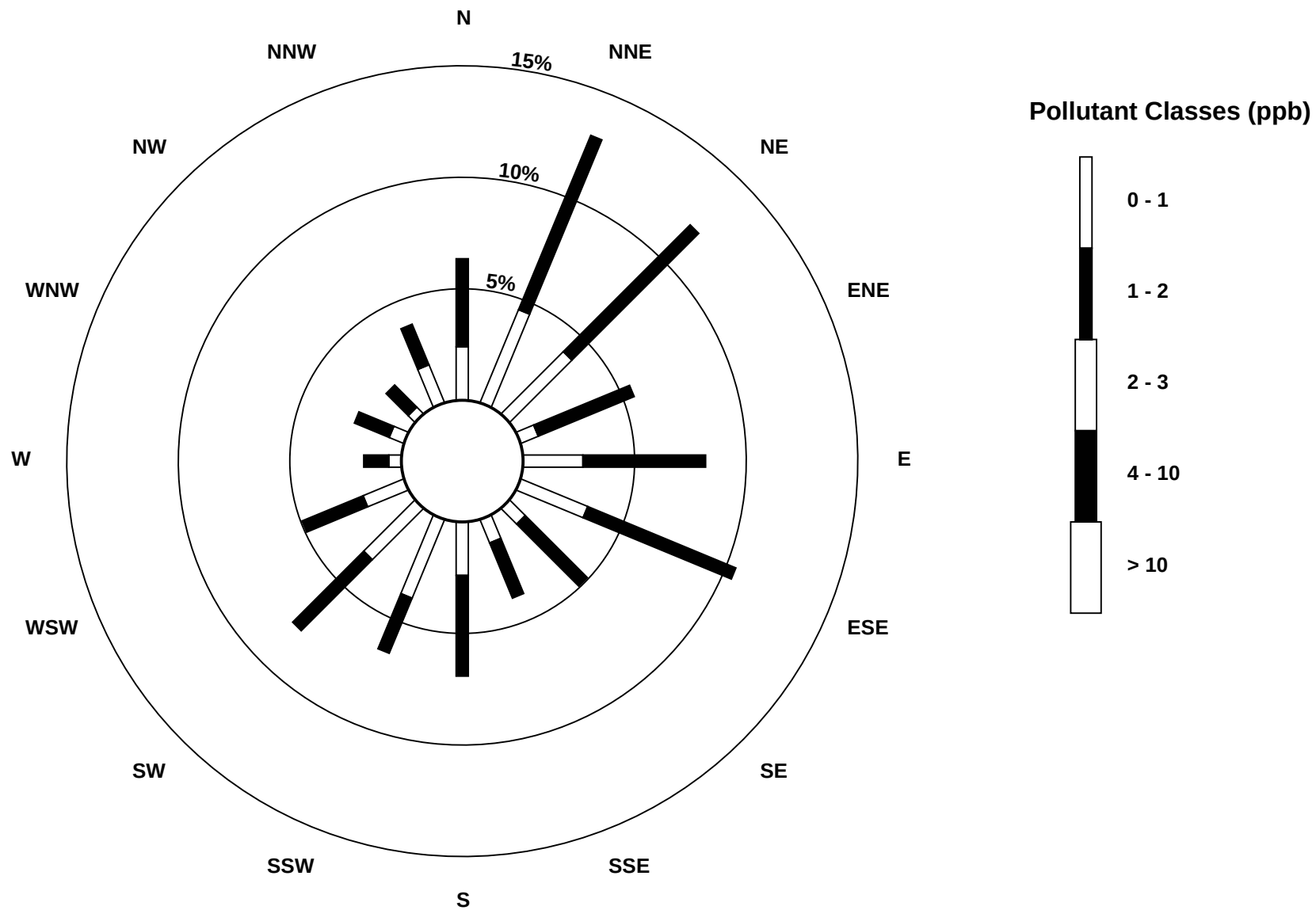
Portable-Bonanza - March 2011

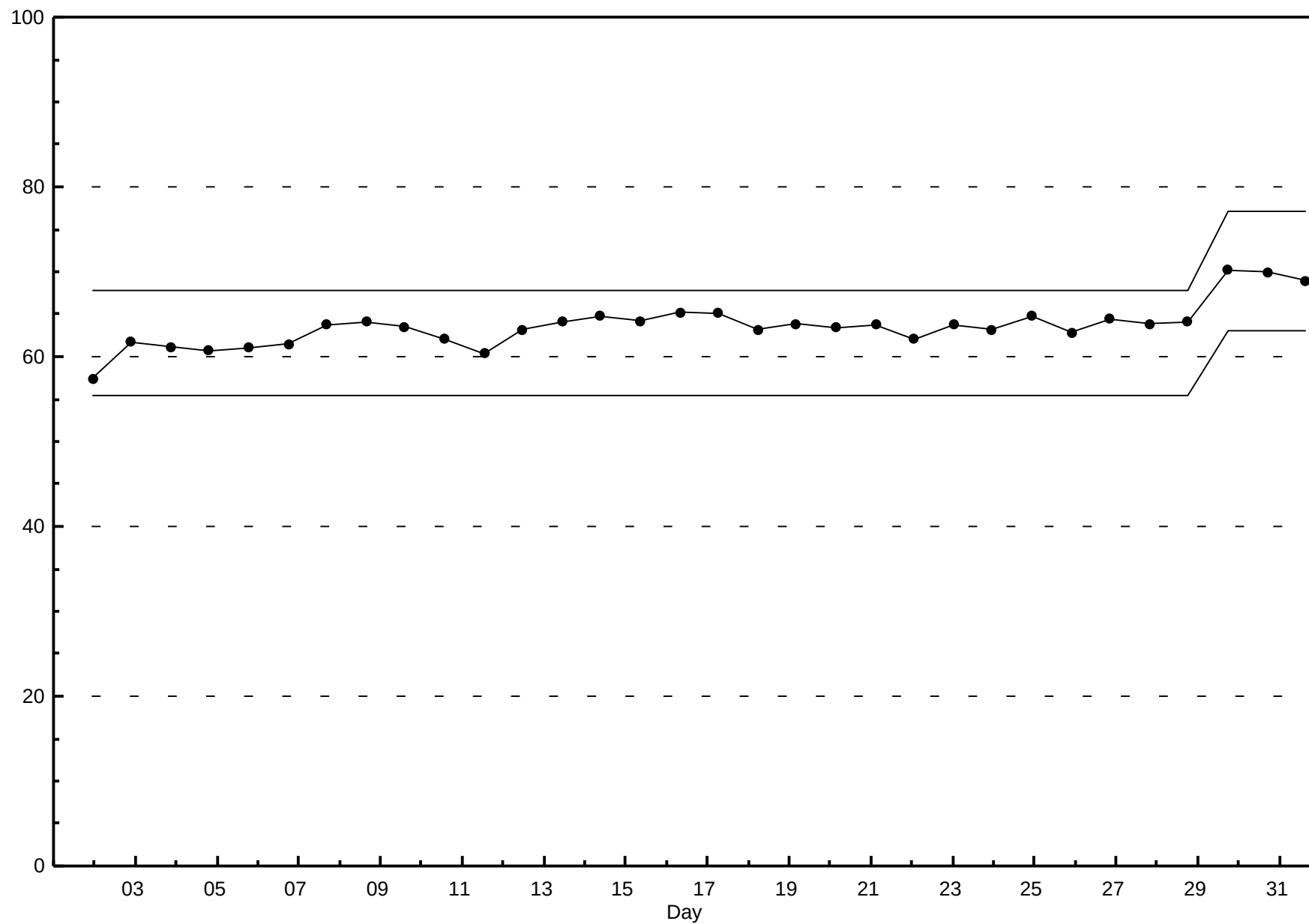
Maximum Value: 4.1 ppb on Mar 23 05:00																				Maximum Daily Average: 1.1 ppb on Mar 23										Hours in Service: 744	
Minimum Value: 0 ppb on Mar 2 04:00																				Minimum Daily Average: 0.8 ppb on Mar 31										Hours of Data: 709	
Maximum Diurnal Average: 1.1 ppb at hour 12																				Minimum Diurnal Average: 0.8 ppb at hour 4										Hours of Missing Data: 35	
Monthly Average: 0.92 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 = 2.0										Hours of Calibration: 35	
																				Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.9	1.2					
2-Mar	1	1	1	0	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	A	1	0.8	1.7					
3-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.2					
4-Mar	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.9	1.8					
5-Mar	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					
6-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	A	1	1	1	1	1	1	1.0	2.2					
7-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	2	2	2	1	1.0	1.7					
8-Mar	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	A	1	1	1	1	1	1	1	1	1.0	2.1					
9-Mar	1	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	1.5					
10-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	2	1	1	1	1	1	1	1	1	1.1	1.5					
11-Mar	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	1.4					
12-Mar	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.0					
13-Mar	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2					
14-Mar	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2					
15-Mar	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	1.1					
16-Mar	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.1					
17-Mar	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1					
18-Mar	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3					
19-Mar	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	1.1					
20-Mar	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	1.2					
21-Mar	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	1.4					
22-Mar	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	1.3					
23-Mar	A	1	1	1	4	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1.1	4.1					
24-Mar	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	1.1					
25-Mar	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	1.2					
26-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.2					
27-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.9	1.2					
28-Mar	1	1	1	1	1	1	1	1	1	1	1	4	1	1	1	1	1	1	A	1	1	1	1	1	1.1	3.8					
29-Mar	1	1	1	1	1	1	2	2	2	1	2	1	C	C	C	1	1	A	1	1	1	1	1	1	1.1	2.0					
30-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.8	1.0					
31-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.8	1.1					
																								Diurnal Average							
																								Diurnal Maximum							
C - Calibration																								A - Automated Daily Zero Span							



Pollutant Rose

Total Reduced Sulphur (TRS) - ppb
Portable-Bonanza - March 2011





**PASZA**

Peace Air Shed Zone Association

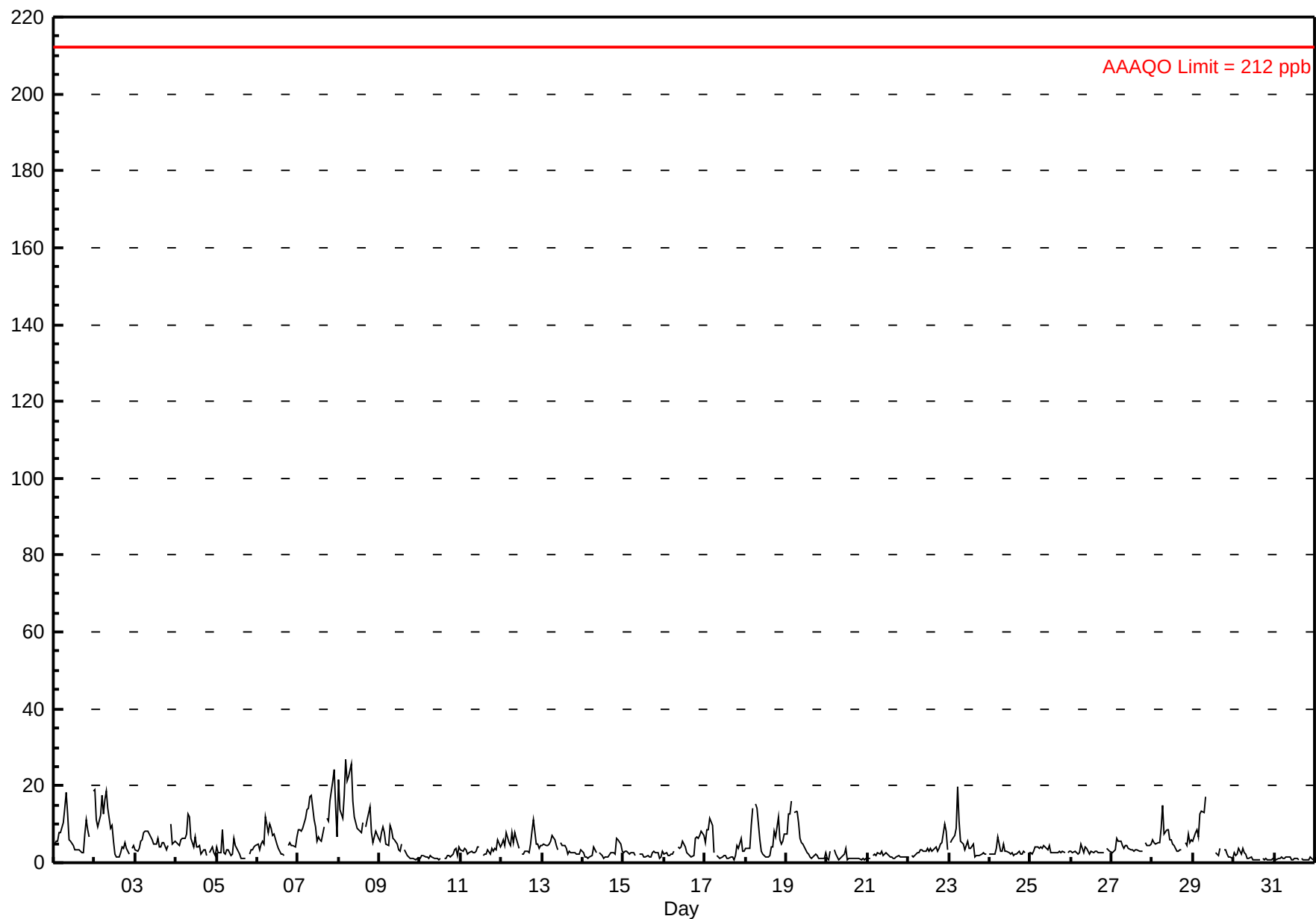
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb**Portable-Bonanza - March 2011**

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 27.0 ppb on Mar 8 05:00 Maximum Daily Average: 13.3 ppb on Mar 8																				Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 37 Percent Operational Time: 100.0								
Minimum Value: 1 ppb on Mar 31 19:00 Maximum Diurnal Average: 7.6 ppb at hour 7 Monthly Average: 4.57 ppb										Minimum Daily Average: 1.0 ppb on Mar 31 Minimum Diurnal Average: 2.5 ppb at hour 16 Percentiles: P ₁ = 0.7 P ₁₀ = 1.2 Q ₁ = 2.1 Median = 3.3 Q ₃ = 5.6 P ₉₀ = 9.4 P ₉₉ = 21.0																		
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-Mar	5	6	6	8	8	10	14	18	13	6	6	4	3	3	3	3	3	7	11	9	7	A	A	19	7.6	18.8		
2-Mar	19	11	9	12	18	13	17	19	14	9	10	6	2	1	1	3	4	4	5	4	2	A	A	4	5	8.3	18.9	
3-Mar	3	3	4	5	6	8	8	8	8	7	6	5	5	6	4	4	5	5	4	4	A	A	10	5	5.6	10.2		
4-Mar	5	5	5	6	6	6	8	13	12	6	4	7	4	4	4	2	3	3	2	A	A	3	4	3	2	5.1	12.8	
5-Mar	4	3	3	8	3	2	3	3	2	2	6	4	4	2	1	1	1	1	A	A	2	3	3	4	5	3.2	8.5	
6-Mar	5	3	5	6	5	12	8	10	9	7	7	5	4	3	2	2	2	A	A	4	5	4	4	4	7	5.4	11.9	
7-Mar	9	8	8	9	12	14	14	17	18	11	9	6	7	6	6	9	A	A	12	11	16	21	24	15	7	11.7	24.4	
8-Mar	22	14	11	18	27	21	22	26	16	12	10	9	9	8	11	A	A	9	11	14	8	5	7	8	6	13.3	27.0	
9-Mar	6	8	9	8	5	5	10	8	6	6	5	3	3	5	A	A	3	2	1	1	1	1	1	1	1	4.3	9.7	
10-Mar	1	2	2	1	2	1	2	1	1	1	1	1	1	A	A	1	3	1	2	2	1	2	3	4	2	1.7	3.9	
11-Mar	4	3	4	3	2	3	3	2	3	3	4	4	A	A	2	2	2	3	2	4	3	4	3	6	4	3.2	5.9	
12-Mar	5	6	5	8	5	5	8	5	8	6	4	A	A	2	2	3	3	3	5	8	11	5	5	4	5	5.2	11.0	
13-Mar	5	5	5	5	5	5	7	6	4	3	A	A	5	4	5	4	2	3	3	3	3	2	2	2	3	4.0	7.1	
14-Mar	2	2	1	1	1	2	4	3	3	A	A	2	2	1	1	2	2	2	2	2	2	6	6	5	3	2.6	6.4	
15-Mar	3	3	3	2	3	3	2	2	A	A	2	2	2	2	2	1	2	3	3	3	2	1	1	1	3	2.2	3.0	
16-Mar	2	2	2	2	2	2	3	A	A	4	4	4	6	4	3	2	2	2	2	6	7	6	7	8	7	3.9	8.4	
17-Mar	5	8	9	11	10	3	A	A	2	2	1	1	2	2	1	1	1	1	1	2	4	4	6	3	3	3.7	11.5	
18-Mar	4	4	4	10	14	A	A	15	14	6	3	2	2	2	2	4	4	8	7	12	6	5	6	7	6.1	15.3		
19-Mar	8	13	13	16	A	A	13	13	10	6	5	5	3	3	2	1	1	1	2	2	1	1	1	1	3	5.5	16.0	
20-Mar	1	1	3	A	A	3	2	2	1	1	2	2	4	1	1	1	1	1	1	1	1	1	1	1	1	1.5	3.7	
21-Mar	1	1	A	A	2	2	2	2	3	2	2	2	2	2	1	1	1	1	2	2	2	1	1	1	1	1.8	3.0	
22-Mar	1	A	A	2	2	2	3	3	3	3	3	4	3	4	3	3	4	3	4	5	5	10	8	3	3.7	10.2		
23-Mar	A	A	5	6	7	9	20	11	6	5	3	5	6	4	4	5	2	2	2	2	3	2	2	A	A	5.0	19.9	
24-Mar	2	2	2	2	4	7	3	3	5	3	3	3	2	3	2	2	2	3	2	2	3	3	A	A	3	2.9	6.8	
25-Mar	2	2	3	4	4	4	4	4	4	4	3	4	3	3	2	3	3	3	3	3	3	A	A	3	3	3.2	4.4	
26-Mar	3	3	3	3	2	3	5	3	4	4	3	2	3	3	3	3	3	3	3	3	A	A	4	3	3	3.0	4.9	
27-Mar	3	3	3	6	6	6	5	4	4	4	4	4	3	3	3	4	3	3	3	3	A	A	5	4	5	4.0	6.2	
28-Mar	6	5	5	5	5	9	15	7	8	9	6	6	5	4	3	3	3	3	A	A	5	5	7	5	6	6.0	15.0	
29-Mar	6	8	8	7	13	14	13	17	C	C	C	C	C	C	3	2	2	4	A	A	3	3	2	2	1	1	6.0	17.3
30-Mar	3	2	2	4	2	4	3	2	1	1	1	1	1	1	1	1	A	A	1	1	1	1	1	1	1	1.5	3.8	
31-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	A	1	1	1	1	1	1	1	1	1.0	1.4	
4.8 4.7 4.8 6.1 6.2 6.7 7.6 7.4 6.0 4.5 4.2 3.9 3.1 3.0 2.7 2.5 2.8 3.2 3.8 4.4 4.1 4.8 3.9 4.2																								Diurnal Average	Diurnal Maximum			
21.7 13.8 12.5 17.6 27.0 21.3 22.3 25.9 17.7 11.8 10.4 9.0 8.7 8.0 10.5 9.4 9.4 11.6 14.4 16.1 21.1 24.4 14.7 18.8																												
C - Calibration A - Automated Daily Zero Span																												
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 212 ppb 24-hr 106 ppb																												

Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Portable-Bonanza - March 2011



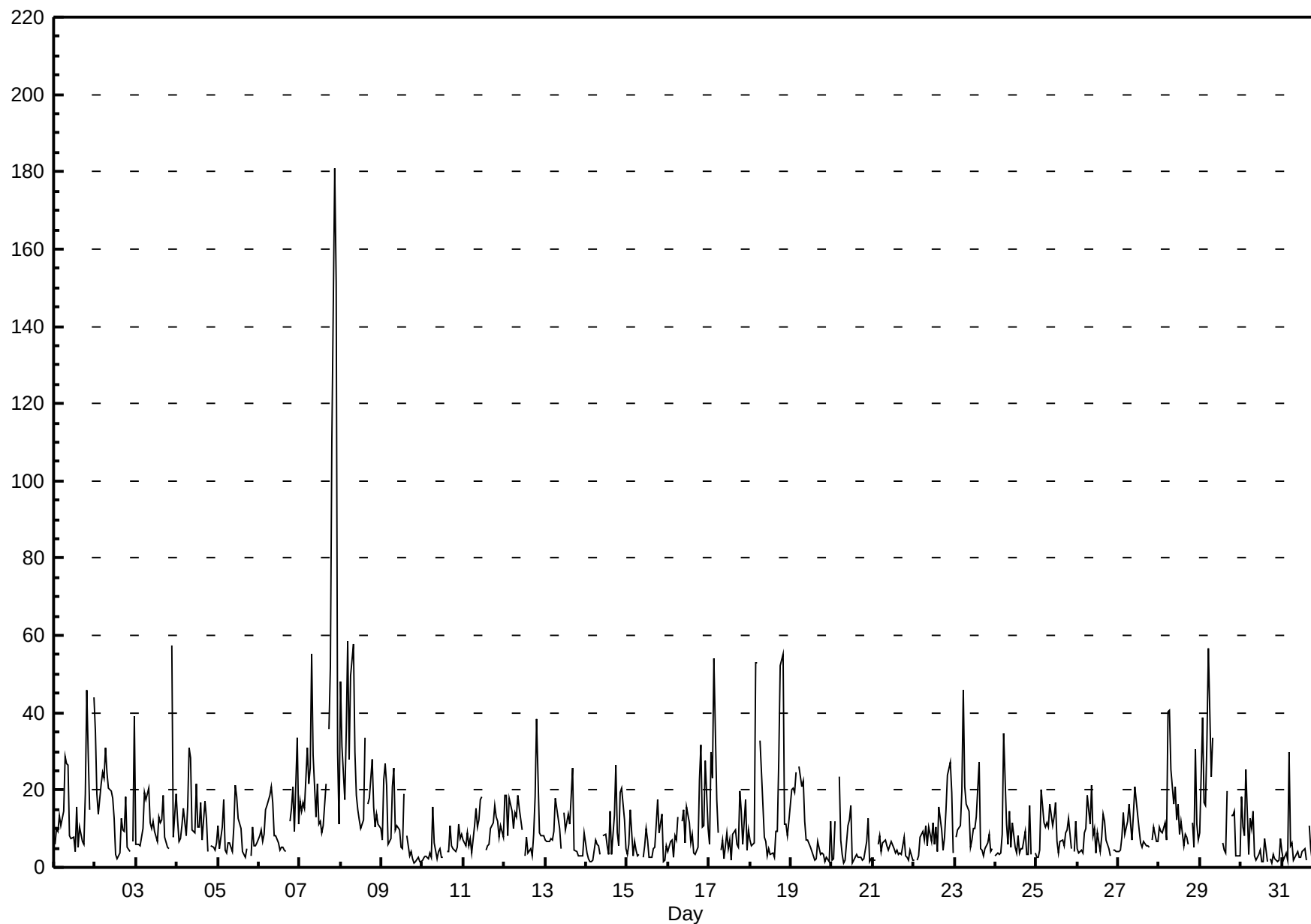
Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb Portable-Bonanza - March 2011

Maximum Value: 180.9 ppb on Mar 7 21:00																				Maximum Daily Average: 39.0 ppb on Mar 7					Hours in Service: 744	
Minimum Value: 1 ppb on Mar 30 19:00																				Minimum Daily Average: 4.5 ppb on Mar 21					Hours of Data: 707	
Maximum Diurnal Average: 17.5 ppb at hour 8																				Minimum Diurnal Average: 6.5 ppb at hour 13					Hours of Missing Data: 37	
Monthly Average: 11.66 ppb																				Percentiles: P ₁ = 1.5 P ₁₀ = 2.7 Q ₁ = 4.5 Median = 8.2 Q ₃ = 14.3 P ₉₀ = 23.2 P ₉₉ = 56.2					Hours of Calibration: 37	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Mar	6	10	9	13	11	15	29	27	27	8	7	8	4	15	5	10	7	6	19	46	30	15	A	44	16.2	45.9
2-Mar	35	19	14	21	25	23	31	25	20	20	18	13	3	2	4	13	10	9	18	5	4	A	7	39	16.4	39.3
3-Mar	6	6	6	8	10	19	18	21	11	10	12	9	7	13	11	12	19	8	5	5	A	58	8	19	13.1	57.6
4-Mar	12	7	7	11	15	8	16	31	28	10	9	22	10	11	17	7	17	13	4	A	6	5	4	6	12.0	30.9
5-Mar	11	5	10	17	5	4	6	6	4	10	21	18	13	10	4	3	3	5	A	3	11	6	5	6	8.1	21.4
6-Mar	8	10	7	9	15	16	19	21	17	8	8	6	4	5	5	5	4	A	12	15	21	9	34	11	11.7	33.6
7-Mar	17	15	17	15	31	21	26	55	29	13	22	11	12	9	11	22	A	36	52	110	181	151	30	11	39.0	180.9
8-Mar	48	31	18	35	59	28	50	58	30	18	15	12	10	12	34	A	16	18	28	16	11	14	11	10	25.3	58.6
9-Mar	7	23	27	21	6	7	21	26	10	11	10	5	5	19	A	8	3	4	2	1	2	3	2	2	9.7	26.8
10-Mar	2	3	3	2	4	3	16	7	2	4	5	3	3	A	4	4	11	6	5	4	5	11	8	8	5.2	15.6
11-Mar	7	6	9	5	7	4	11	15	11	12	18	18	A	5	6	6	10	12	16	13	12	8	11	8	9.9	18.3
12-Mar	19	18	8	18	14	10	14	13	19	15	10	A	3	8	4	5	3	9	18	38	9	8	8	8	12.2	38.5
13-Mar	7	7	7	8	7	9	18	13	10	5	A	14	10	14	11	18	26	5	4	3	3	3	3	9	9.2	25.6
14-Mar	4	2	2	2	2	7	6	5	3	A	8	9	6	4	14	3	13	27	9	5	20	20	12	5	8.2	26.6
15-Mar	3	6	15	3	7	4	3	3	A	3	6	10	7	3	3	5	5	11	18	9	14	2	2	6	6.3	17.7
16-Mar	4	7	7	3	8	7	13	A	12	15	6	16	12	6	9	4	4	5	23	32	10	11	28	10	10.9	31.7
17-Mar	6	30	23	54	17	9	A	4	7	2	9	5	7	2	9	10	6	5	20	14	6	17	5	10	12.1	53.9
18-Mar	7	6	6	53	53	A	33	25	8	7	3	5	3	4	3	9	9	27	52	55	11	11	8	12	17.9	55.4
19-Mar	20	20	19	24	A	26	21	22	12	7	7	5	4	3	2	2	7	3	4	3	2	3	1	12	10.1	26.1
20-Mar	2	2	12	A	24	7	3	1	2	11	12	16	1	2	3	2	2	2	2	2	7	13	2	2	5.8	23.5
21-Mar	2	2	A	6	8	4	6	7	6	5	6	7	5	4	5	3	4	3	8	3	3	2	4	2	4.5	8.2
22-Mar	2	A	2	3	8	9	7	11	6	11	7	11	6	10	4	16	10	5	8	15	24	27	19	4	9.7	27.1
23-Mar	A	8	10	11	20	46	21	16	15	5	7	10	10	13	27	5	4	3	5	6	9	4	5	A	11.8	45.9
24-Mar	3	4	3	4	8	35	11	6	15	5	12	5	4	8	4	5	5	9	3	3	16	3	A	4	7.6	34.7
25-Mar	3	3	4	20	12	10	12	10	16	11	13	17	7	4	7	7	6	9	10	13	5	A	4	12	9.3	20.2
26-Mar	5	4	4	4	9	10	19	11	21	8	10	4	9	4	8	14	12	7	5	3	A	4	4	4	8.0	21.1
27-Mar	4	5	8	14	8	12	16	12	7	14	21	13	10	6	5	7	6	6	5	A	7	10	7	7	9.1	20.7
28-Mar	10	9	9	12	7	40	41	25	16	21	12	16	9	12	6	9	8	6	A	12	5	31	11	7	14.5	40.5
29-Mar	9	39	17	16	33	57	24	33	C	C	C	C	C	6	5	4	20	A	13	14	15	3	3	3	17.4	56.7
30-Mar	18	10	8	25	3	13	10	14	3	2	3	5	2	2	8	1	A	2	1	3	2	1	2	7	6.4	25.3
31-Mar	4	2	4	2	30	6	6	2	3	4	3	3	4	5	2	A	11	5	2	2	2	7	13	1	5.2	29.7
9.7 10.5 9.8 14.6 15.5 15.7 17.5 17.5 12.7 9.5 10.3 10.2 6.5 7.4 7.9 7.6 8.9 9.2 12.8 15.7 15.5 15.9 9.0 9.7																									Diurnal Average	
48.0 38.9 26.8 53.9 58.6 56.7 49.7 57.6 29.7 21.0 21.8 21.6 12.6 18.8 33.6 21.7 25.6 35.7 52.4 110.3 180.9 151.3 33.6 44.0																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

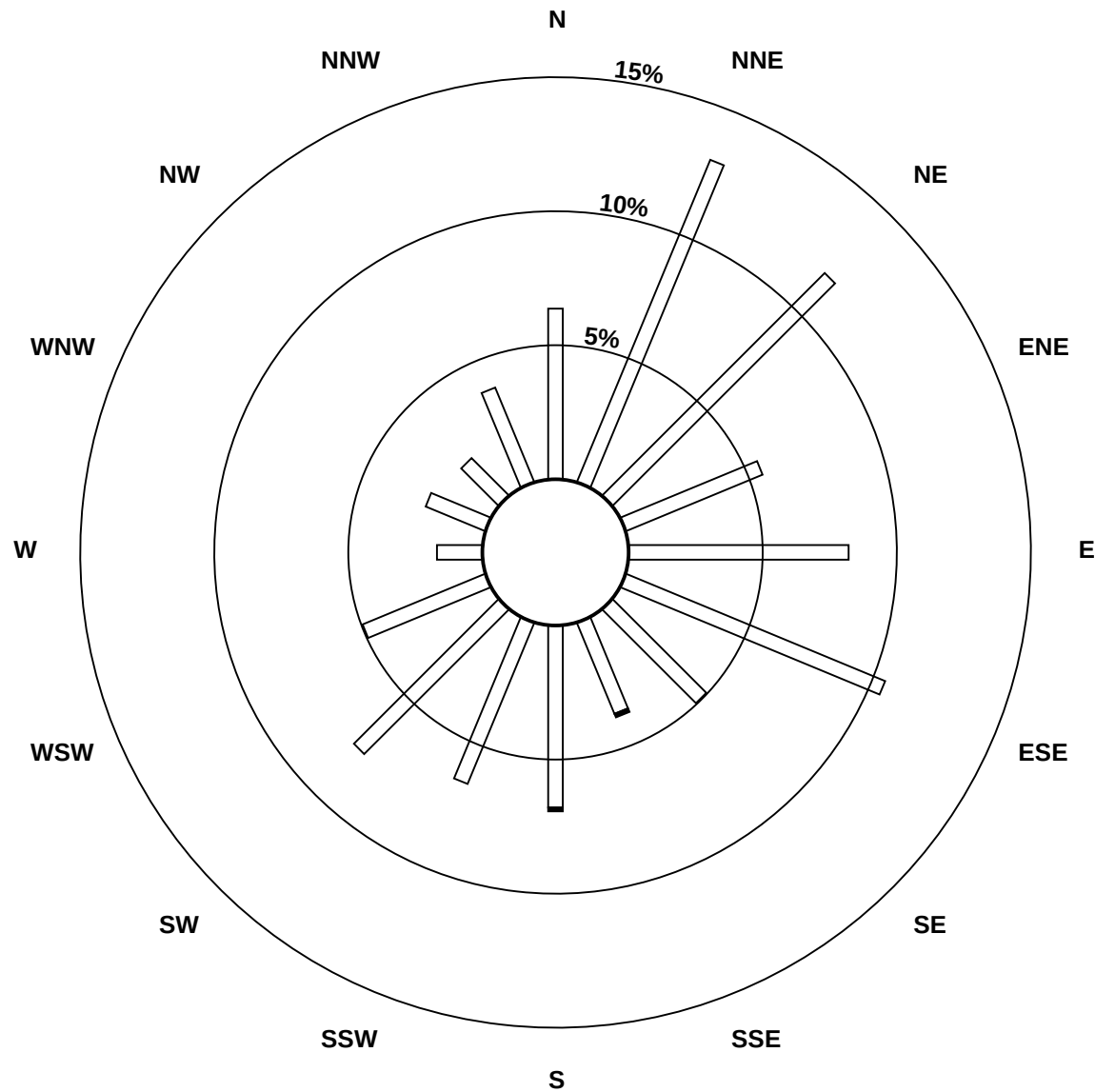
Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb
Portable-Bonanza - March 2011

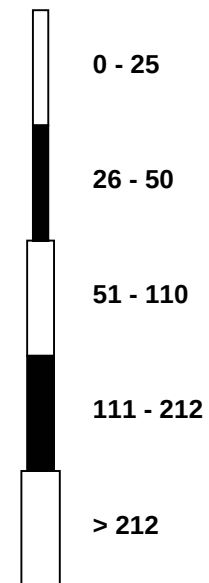


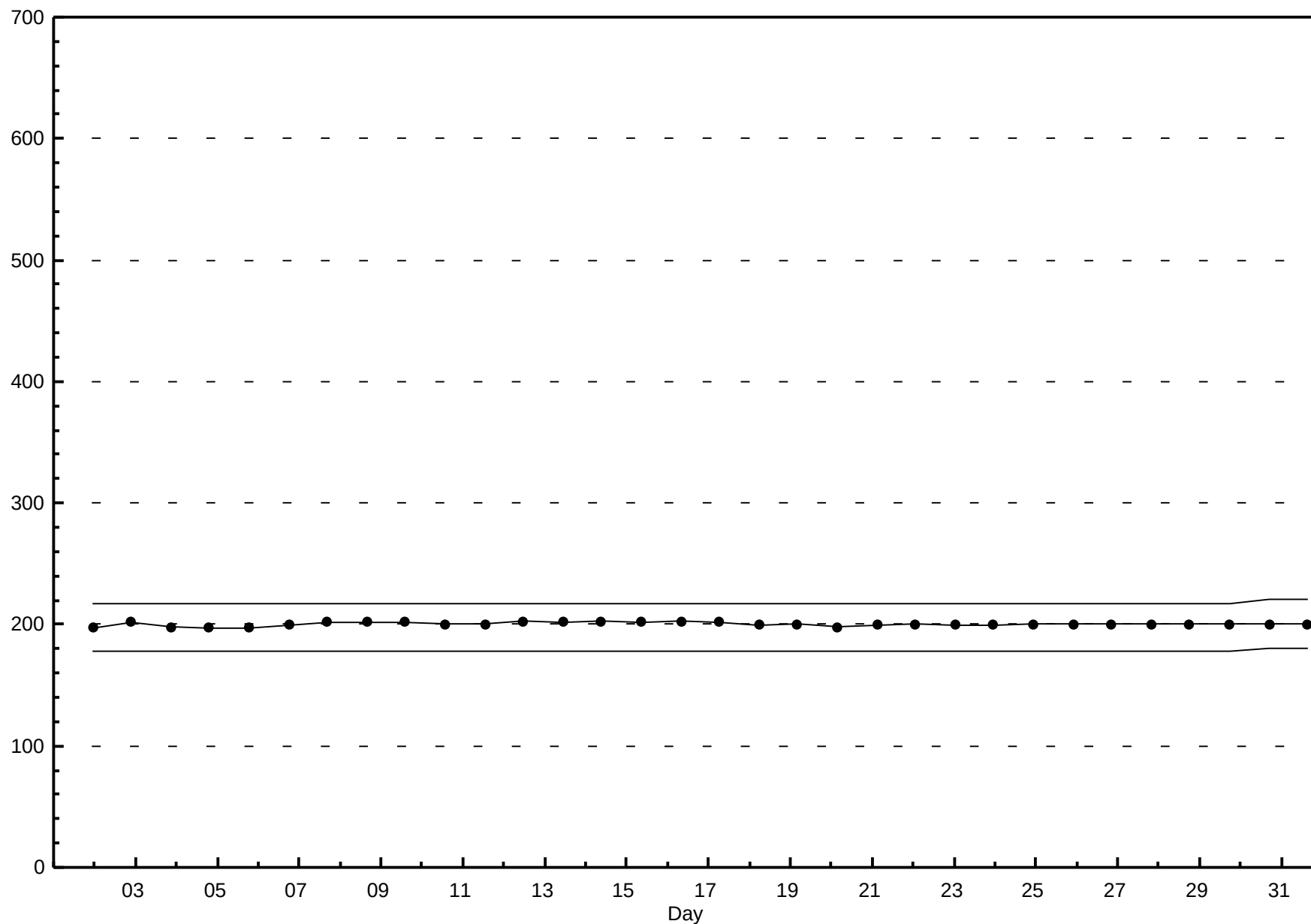
Pollutant Rose

Nitrogen Dioxide (NO₂) - ppb
Portable-Bonanza - March 2011



Pollutant Classes (ppb)





**PASZA**

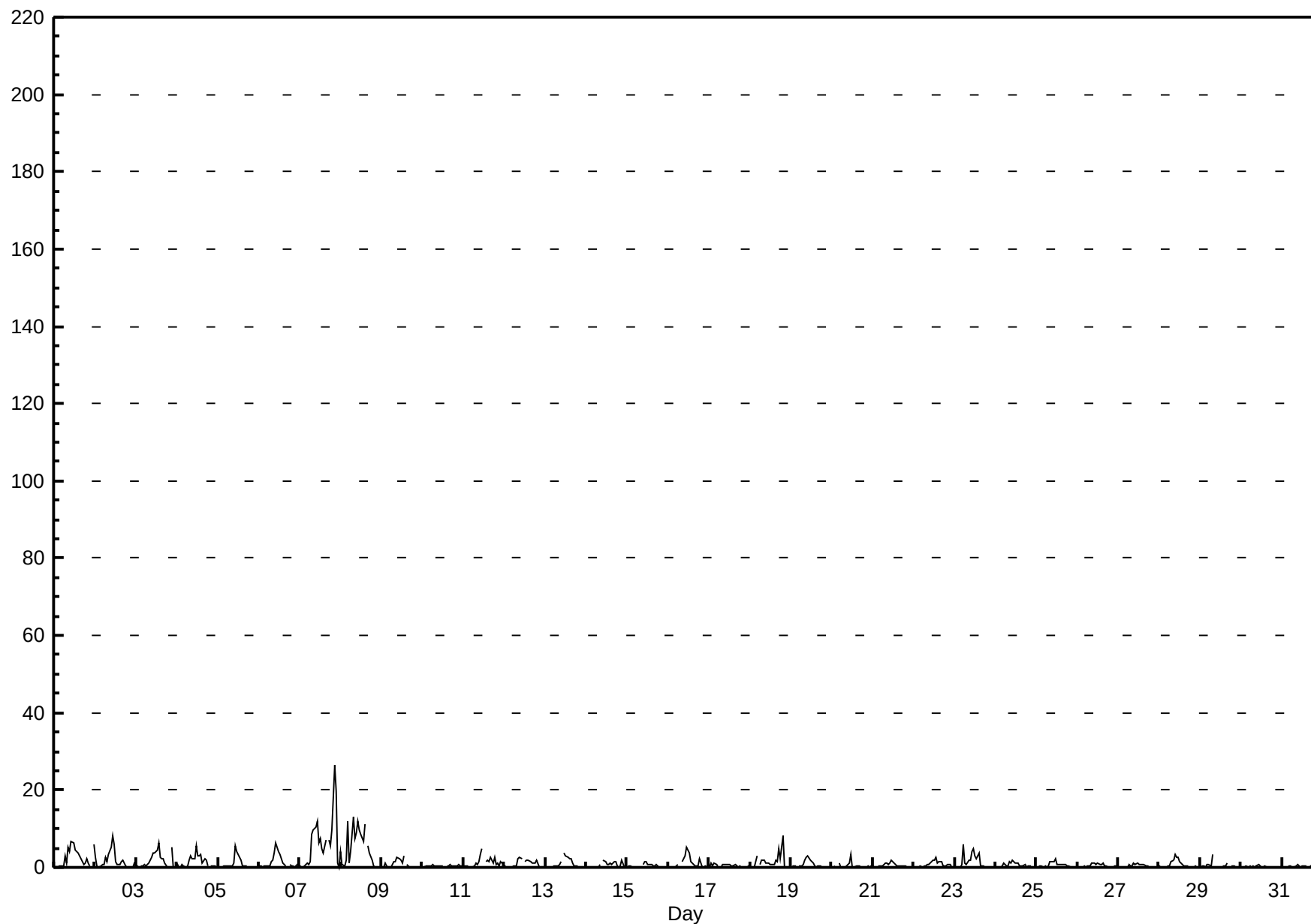
Peace Air Shed Zone Association

Hourly Averages**Nitrogen Oxide (NO) - ppb****Portable-Bonanza - March 2011**

Number of Exceedences (AAAQO): Maximum Value: 26.4 ppb on Mar 7 21:00																				1-hr: 0 24-hr: 0 Maximum Daily Average: 6.3 ppb on Mar 7				Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 37 Percent Operational Time: 100.0																								
Minimum Value: 0 ppb on Mar 2 21:00 Maximum Diurnal Average: 3.2 ppb at hour 11 Monthly Average: 1.18 ppb																				Minimum Daily Average: 0.1 ppb on Mar 30 Minimum Diurnal Average: 0.2 ppb at hour 3 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.4 Q ₃ = 1.2 P ₉₀ = 3.0 P ₉₉ = 10.8																												
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Mar	0	0	0	0	0	1	3	1	5	4	7	6	5	4	4	3	1	1	1	2	1	0	A	A	6	2.4	6.8																					
2-Mar	3	0	0	0	1	1	3	2	4	5	8	6	2	1	1	1	2	1	0	0	0	A	A	0	1	1.8	8.3																					
3-Mar	1	0	0	0	0	1	0	1	2	3	4	4	5	6	3	2	2	1	0	0	A	5	0	0	0	1.8	6.4																					
4-Mar	1	0	0	1	1	0	0	2	3	2	2	6	3	3	3	1	2	2	0	A	0	0	0	0	0	1.5	5.8																					
5-Mar	0	0	0	1	0	0	0	0	1	1	6	4	3	2	1	0	0	0	A	0	0	0	0	0	0	0.9	5.6																					
6-Mar	0	0	0	0	0	0	1	1	2	4	6	4	3	2	1	1	1	A	1	0	0	0	1	0	1.3	6.2																						
7-Mar	0	0	0	0	1	1	1	9	10	11	12	6	8	5	4	7	A	7	5	10	26	20	1	0	6.3	26.4																						
8-Mar	4	1	0	2	12	1	4	13	7	9	12	10	9	7	11	A	5	4	2	0	0	0	0	0	4.9	12.9																						
9-Mar	0	0	1	0	0	0	1	2	1	3	2	2	1	3	A	1	0	0	0	0	0	0	0	0	0	0.8	2.8																					
10-Mar	0	0	0	0	0	0	1	0	0	0	1	0	0	A	1	0	1	0	0	0	0	1	0	0	0	0.4	0.9																					
11-Mar	0	0	0	0	0	0	1	1	1	2	3	5	A	1	2	1	3	1	2	1	1	1	2	1	1.3	4.8																						
12-Mar	0	0	0	0	0	0	0	0	2	2	2	A	2	2	2	2	1	1	1	2	0	0	0	0	0	0.9	2.5																					
13-Mar	0	0	0	0	0	0	0	0	1	1	A	4	3	3	2	2	1	1	0	0	0	0	0	0	0	0.9	3.9																					
14-Mar	0	0	0	0	0	0	0	0	1	A	2	1	1	1	1	1	2	2	0	0	0	2	0	0	0	0.6	1.9																					
15-Mar	0	0	0	0	0	0	0	0	A	1	2	1	1	1	1	0	0	1	1	0	0	0	0	0	0	0.4	1.5																					
16-Mar	0	0	0	0	0	0	1	A	1	2	3	5	4	2	1	1	0	0	2	1	0	0	0	0	0	1.0	5.1																					
17-Mar	0	1	0	1	1	0	A	0	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0.4	1.3																					
18-Mar	0	0	0	2	3	A	1	2	2	1	1	1	1	1	2	2	5	2	8	0	0	0	0	0	0	1.5	8.3																					
19-Mar	0	0	0	0	A	0	0	1	2	3	3	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0.7	2.8																					
20-Mar	0	0	0	A	1	0	0	0	0	1	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	3.3																					
21-Mar	0	0	A	0	0	0	0	1	1	1	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0.5	1.9																					
22-Mar	0	A	0	0	0	0	0	1	1	1	2	2	2	3	1	1	2	0	0	0	1	1	0	0	0	0.7	2.5																					
23-Mar	A	0	0	0	1	6	1	1	2	2	4	5	3	2	4	0	0	0	0	0	0	0	0	A	0	1.4	5.9																					
24-Mar	0	0	0	0	0	1	0	0	2	1	2	1	1	1	0	0	1	1	0	0	0	0	A	0	0	0.6	1.8																					
25-Mar	0	0	0	0	0	0	0	0	2	1	1	2	1	1	1	1	1	1	0	0	0	A	0	0	0	0.6	2.2																					
26-Mar	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	A	0	0	0	0	0.4	1.1																					
27-Mar	0	0	0	0	0	0	1	0	0	1	1	1	1	1	1	1	0	0	0	A	0	0	0	0	0	0.4	1.1																					
28-Mar	0	0	0	0	0	0	0	1	2	3	3	3	1	1	0	0	0	0	A	0	0	1	0	0	0	0.8	3.4																					
29-Mar	0	0	0	0	1	1	0	3	C	C	C	C	C	1	0	0	1	A	0	0	0	0	0	0	0	0.5	3.4																					
30-Mar	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.7																					
31-Mar	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.6																					
Diurnal Average																									0.4	0.2	0.2	0.3	0.8	0.5	0.7	1.5	1.9	2.3	3.2	3.0	2.2	1.8	1.6	1.1	1.1	1.1	0.8	0.9	1.1	1.1	0.2	0.3
Diurnal Maximum																									4.1	1.2	1.1	1.7	12.0	5.9	3.9	12.9	9.6	10.5	12.0	9.7	8.6	6.8	11.2	7.0	5.5	7.2	5.4	9.7	26.4	19.9	1.6	5.9
C - Calibration																									A - Automated Daily Zero Span																							

Hourly Averages

Nitrogen Oxide (NO) - ppb
Portable-Bonanza - March 2011



Hourly Maximums

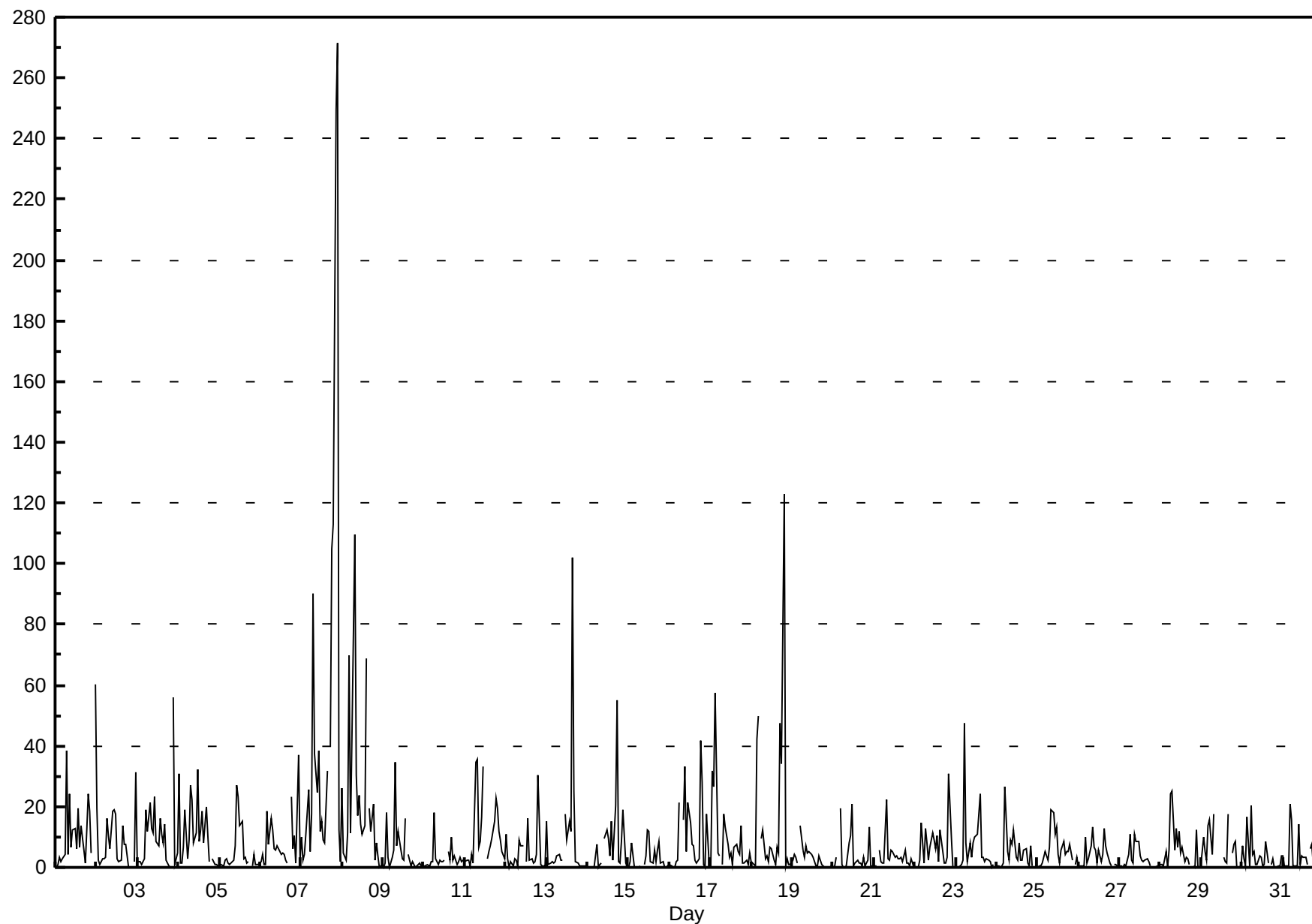
Nitrogen Oxide (NO) - ppb

Portable-Bonanza - March 2011

Maximum Value: 271.6 ppb on Mar 7 22:00																				Maximum Daily Average: 49.4 ppb on Mar 7					Hours in Service: 744				
Minimum Value: 0 ppb on Mar 29 22:00																				Minimum Daily Average: 2.9 ppb on Mar 27					Hours of Data: 707				
Maximum Diurnal Average: 15.7 ppb at hour 8																				Minimum Diurnal Average: 2.8 ppb at hour 2					Hours of Missing Data: 37				
Monthly Average: 8.70 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.3 Q ₁ = 1.1 Median = 3.2 Q ₃ = 9.4 P ₉₀ = 19.5 P ₉₉ = 100.6					Hours of Calibration: 37				
																									Percent Operational Time: 100.0				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Mar	0	1	3	2	3	4	38	4	24	7	12	13	6	20	7	14	6	1	12	24	18	5	A	60	12.4	60.5			
2-Mar	19	3	1	3	3	3	16	10	6	18	19	17	3	2	3	14	8	8	4	0	0	A	2	31	8.4	31.5			
3-Mar	2	2	1	2	3	19	12	22	13	11	23	8	7	16	11	8	14	2	0	0	A	56	1	5	10.4	55.9			
4-Mar	31	1	2	7	19	3	9	27	22	8	11	32	9	12	18	8	20	11	2	A	3	1	1	1	11.2	32.4			
5-Mar	1	1	0	2	3	1	1	1	2	7	27	23	14	15	3	3	1	2	A	0	4	1	1	1	5.1	27.2			
6-Mar	2	4	1	1	19	8	16	12	6	6	7	5	4	5	4	2	1	A	23	6	11	1	37	3	8.0	37.0			
7-Mar	10	2	4	11	26	5	18	90	38	25	38	12	15	9	8	32	A	40	105	113	249	272	12	2	49.4	271.6			
8-Mar	26	5	3	11	70	11	43	110	30	17	24	14	11	14	69	A	20	12	21	2	8	4	0	1	22.8	109.6			
9-Mar	0	1	18	3	0	3	6	34	7	12	6	3	2	16	A	4	1	2	1	0	0	1	0	0	5.3	34.5			
10-Mar	0	1	1	1	2	2	18	3	1	2	2	2	2	A	5	2	10	3	4	1	2	3	2	2	3.1	18.3			
11-Mar	2	3	2	0	4	1	35	35	7	9	17	33	A	3	5	7	9	15	23	19	12	9	5	3	11.3	35.4			
12-Mar	11	3	0	2	0	3	2	1	9	7	7	A	2	16	2	3	1	2	4	30	1	1	1	0	4.8	30.4			
13-Mar	15	1	1	2	1	2	4	4	2	2	A	18	9	15	12	102	25	2	1	1	0	0	0	0	9.7	102.3			
14-Mar	0	0	0	0	0	8	0	1	1	A	10	12	9	4	15	3	20	55	2	2	9	19	1	0	7.5	55.0			
15-Mar	0	2	8	0	0	0	0	0	A	1	4	12	12	2	2	6	2	6	9	2	2	0	0	0	3.0	12.5			
16-Mar	1	1	0	0	2	2	21	A	15	33	5	21	15	7	7	2	2	3	42	28	1	0	18	0	9.8	41.5			
17-Mar	0	32	27	58	5	4	A	1	18	13	8	3	5	1	6	8	5	4	14	1	2	2	1	5	9.6	57.6			
18-Mar	2	1	0	42	50	A	9	12	3	4	2	7	6	3	1	6	5	48	34	123	1	3	1	1	15.8	122.8			
19-Mar	3	4	3	2	A	14	6	3	7	5	5	4	3	2	1	1	4	1	0	0	0	0	0	1	3.0	13.7			
20-Mar	0	0	3	A	19	1	0	0	0	8	11	21	0	2	2	2	2	1	3	0	2	13	1	1	4.0	21.0			
21-Mar	1	1	A	6	2	1	1	23	3	2	6	5	4	4	3	3	3	2	6	2	1	0	3	0	3.5	22.5			
22-Mar	0	A	0	2	15	1	13	8	2	6	11	9	6	10	2	13	5	1	1	3	31	9	0	0	6.6	31.0			
23-Mar	A	0	0	1	2	48	8	2	8	3	8	10	10	11	24	3	4	2	3	2	2	0	1	A	6.9	47.7			
24-Mar	0	0	0	0	1	26	5	2	9	8	13	4	2	8	2	2	6	6	1	1	7	1	A	1	4.6	26.4			
25-Mar	0	0	1	2	5	4	2	7	19	18	11	13	4	2	6	9	4	5	5	7	2	A	1	3	5.7	19.1			
26-Mar	1	0	0	0	10	2	3	7	13	6	6	2	6	2	4	13	7	5	1	0	A	1	1	0	3.9	13.5			
27-Mar	1	0	0	1	0	4	11	2	1	11	8	9	4	2	2	2	3	2	1	A	0	0	0	0	2.9	10.8			
28-Mar	1	1	1	5	0	6	24	25	6	13	7	12	5	7	2	3	3	1	A	0	0	12	1	0	5.8	25.1			
29-Mar	1	10	5	3	14	16	4	18	C	C	C	C	C	C	3	2	2	18	A	5	7	9	0	1	6.4	17.6			
30-Mar	7	3	0	17	0	21	4	5	1	1	4	3	0	1	8	1	A	1	3	0	0	0	0	4	3.8	20.5			
31-Mar	4	1	1	0	21	16	1	0	1	14	1	4	3	3	1	A	6	7	1	0	0	4	14	0	4.5	20.9			
4.7 2.8 2.9 6.2 9.9 7.9 11.1 15.7 9.5 9.6 10.8 11.5 6.2 7.2 7.9 9.6 7.4 8.6 11.4 13.0 13.1 14.5 3.6 4.3																									Diurnal Average				
30.8 32.0 26.6 57.6 69.9 47.7 43.1 109.6 37.7 33.1 38.4 33.2 15.3 19.5 68.7 102.3 25.2 55.0 105.1 122.8 249.4 271.6 37.0 60.5																									Diurnal Maximum				
C - Calibration A - Automated Daily Zero Span																													

Hourly Maximums

Nitrogen Oxide (NO) - ppb
Portable-Bonanza - March 2011



**PASZA**

Peace Air Shed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

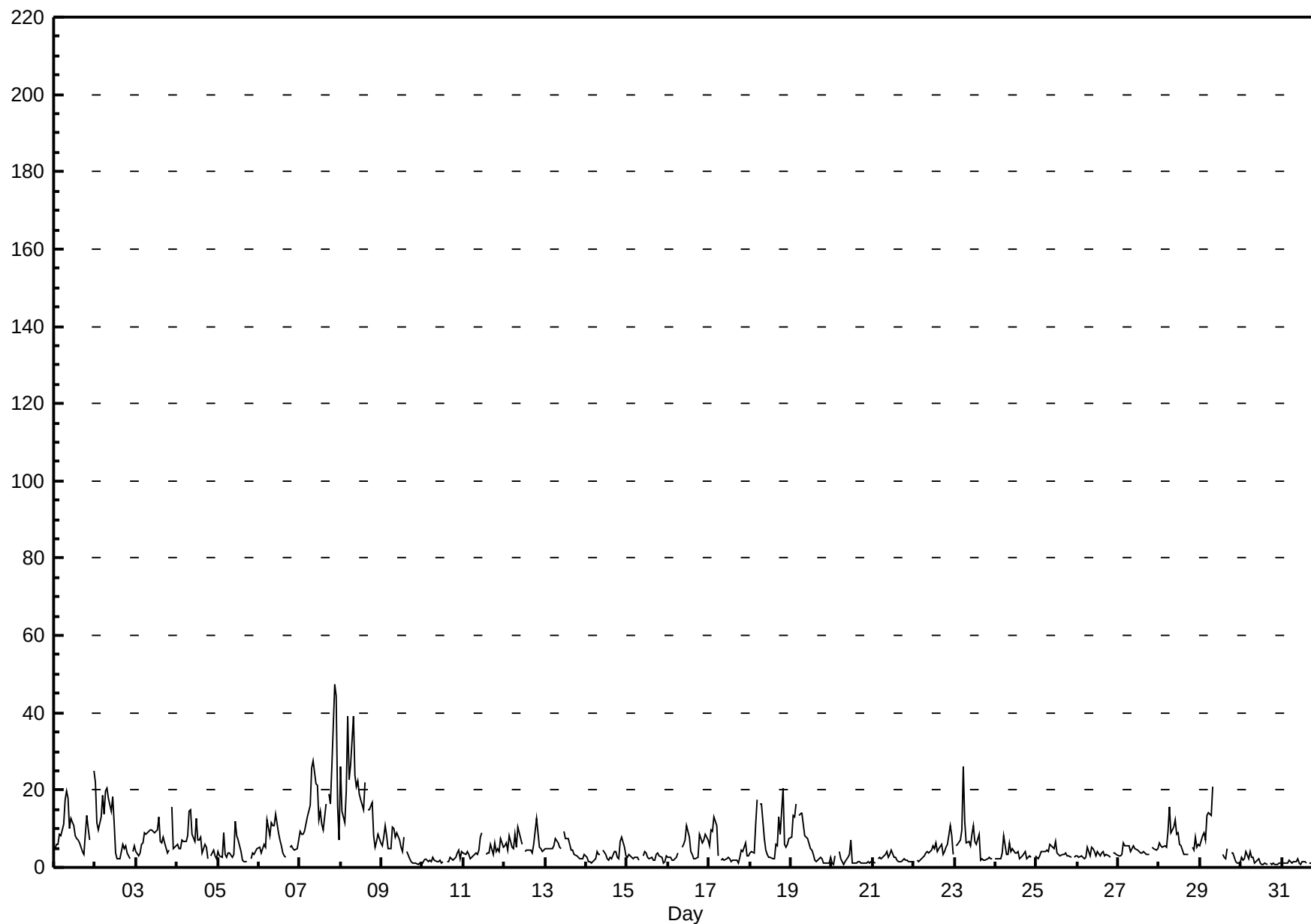
Portable-Bonanza - March 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 47.3 ppb on Mar 7 21:00 Maximum Daily Average: 18.4 ppb on Mar 8																				Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 37 Percent Operational Time: 100.0						
Minimum Value: 1 ppb on Mar 31 19:00 Minimum Daily Average: 1.2 ppb on Mar 31 Maximum Diurnal Average: 9.0 ppb at hour 8 Minimum Diurnal Average: 3.7 ppb at hour 16 Monthly Average: 5.79 ppb Percentiles: P ₁ = 0.8 P ₁₀ = 1.5 Q ₁ = 2.4 Median = 4.0 Q ₃ = 7.0 P ₉₀ = 12.5 P ₉₉ = 25.7																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Mar	5	6	6	8	8	11	18	20	18	10	13	11	8	7	7	6	4	3	8	14	10	7	A	25	10.1	25.0
2-Mar	22	11	10	13	18	14	20	20	18	14	18	12	4	2	2	4	6	5	6	4	2	A	4	6	10.2	21.9
3-Mar	4	3	4	6	6	9	9	9	10	10	9	9	10	13	7	6	8	6	4	4	A	16	5	6	7.5	15.6
4-Mar	6	5	5	7	7	7	8	15	15	9	7	13	7	7	8	4	6	5	2	A	3	5	3	2	6.6	14.8
5-Mar	4	3	3	9	3	3	4	4	3	3	12	8	7	4	2	2	2	1	A	2	4	4	4	5	4.1	11.8
6-Mar	5	4	5	6	5	12	8	11	11	11	14	9	7	6	4	3	3	A	5	5	5	4	5	7	6.8	13.9
7-Mar	9	9	9	9	13	14	16	26	28	22	21	12	14	11	10	16	A	19	16	26	47	45	16	7	18.1	47.3
8-Mar	26	15	12	20	39	23	27	39	24	21	22	19	18	15	22	A	15	15	17	8	5	7	8	7	18.4	39.3
9-Mar	6	8	11	8	5	5	10	10	8	9	7	5	4	8	A	4	2	2	1	1	1	1	1	1	5.1	10.7
10-Mar	1	2	2	2	2	2	3	2	2	2	2	1	1	A	2	2	3	2	2	2	4	5	2	4	2.2	4.6
11-Mar	4	3	4	3	2	3	3	4	4	5	8	9	A	3	4	4	6	3	6	4	5	4	8	5	4.5	9.1
12-Mar	6	6	5	8	5	5	8	5	10	9	6	A	4	4	5	5	4	6	9	13	5	5	4	5	6.2	12.8
13-Mar	5	5	5	5	5	6	8	6	5	5	A	9	7	7	6	4	4	3	3	3	2	2	2	3	4.9	9.3
14-Mar	2	2	1	1	1	2	4	3	3	A	4	3	2	2	3	2	4	4	3	2	7	8	5	3	3.2	7.9
15-Mar	3	3	3	2	3	3	2	2	A	3	4	4	2	2	2	2	2	3	4	3	3	1	1	3	2.6	3.9
16-Mar	2	3	2	2	2	3	4	A	5	6	7	11	8	4	3	2	2	2	9	8	6	7	9	7	5.0	10.8
17-Mar	5	10	9	13	11	3	A	2	2	2	2	3	2	1	2	2	2	1	2	5	4	6	3	3	4.1	12.9
18-Mar	4	4	4	11	18	A	16	16	8	4	3	3	3	2	2	6	6	13	9	20	6	5	6	7	7.7	20.4
19-Mar	8	13	13	17	A	14	14	11	8	8	8	5	4	3	2	1	2	3	2	1	1	1	1	3	6.2	16.5
20-Mar	1	1	3	A	4	2	2	1	1	3	3	7	1	1	1	2	1	1	1	1	1	1	1	2	1.9	7.0
21-Mar	2	1	A	2	2	2	3	3	4	3	3	4	3	2	2	2	2	2	2	2	2	1	1	1	2.3	4.4
22-Mar	1	A	2	2	2	3	3	4	4	4	5	6	5	6	4	5	6	3	4	5	6	11	8	3	4.4	10.9
23-Mar	A	5	6	7	10	26	12	6	7	5	9	11	7	6	9	2	2	2	2	2	3	2	2	A	6.5	25.9
24-Mar	2	2	2	2	4	8	3	3	6	4	5	4	4	4	2	3	3	4	2	3	3	3	A	3	3.5	8.0
25-Mar	2	2	3	4	4	4	4	4	6	5	5	7	4	3	3	3	3	4	3	3	3	A	3	3	3.7	6.6
26-Mar	3	3	3	3	2	3	5	3	5	5	4	3	4	3	4	4	3	3	3	3	A	4	4	3	3.4	5.4
27-Mar	3	3	3	6	6	6	5	4	5	5	5	4	4	4	4	4	4	3	3	A	5	5	4	5	4.4	6.4
28-Mar	6	5	5	5	5	9	16	9	11	12	9	9	6	6	3	3	4	3	A	5	5	8	5	6	6.8	15.7
29-Mar	6	8	9	7	14	14	13	21	C	C	C	C	C	3	3	2	5	A	4	4	2	2	1	1	6.6	20.9
30-Mar	3	2	2	4	2	4	3	3	1	1	2	1	1	1	1	1	A	1	1	1	1	1	1	1	1.7	4.1
31-Mar	1	1	1	1	2	1	1	1	2	2	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1.2	2.1
5.3 4.9 5.0 6.5 7.1 7.3 8.4 9.0 8.0 6.9 7.5 7.0 5.3 4.8 4.3 3.7 3.9 4.3 4.6 5.3 5.2 5.9 4.2 4.6																								Diurnal Average		
26.0 14.6 13.1 19.7 39.3 25.9 26.5 39.1 27.6 21.7 22.5 18.9 17.5 15.0 22.0 16.5 15.0 19.0 16.7 26.0 47.3 44.5 16.1 25.0																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

Portable-Bonanza - March 2011



Hourly Maximums

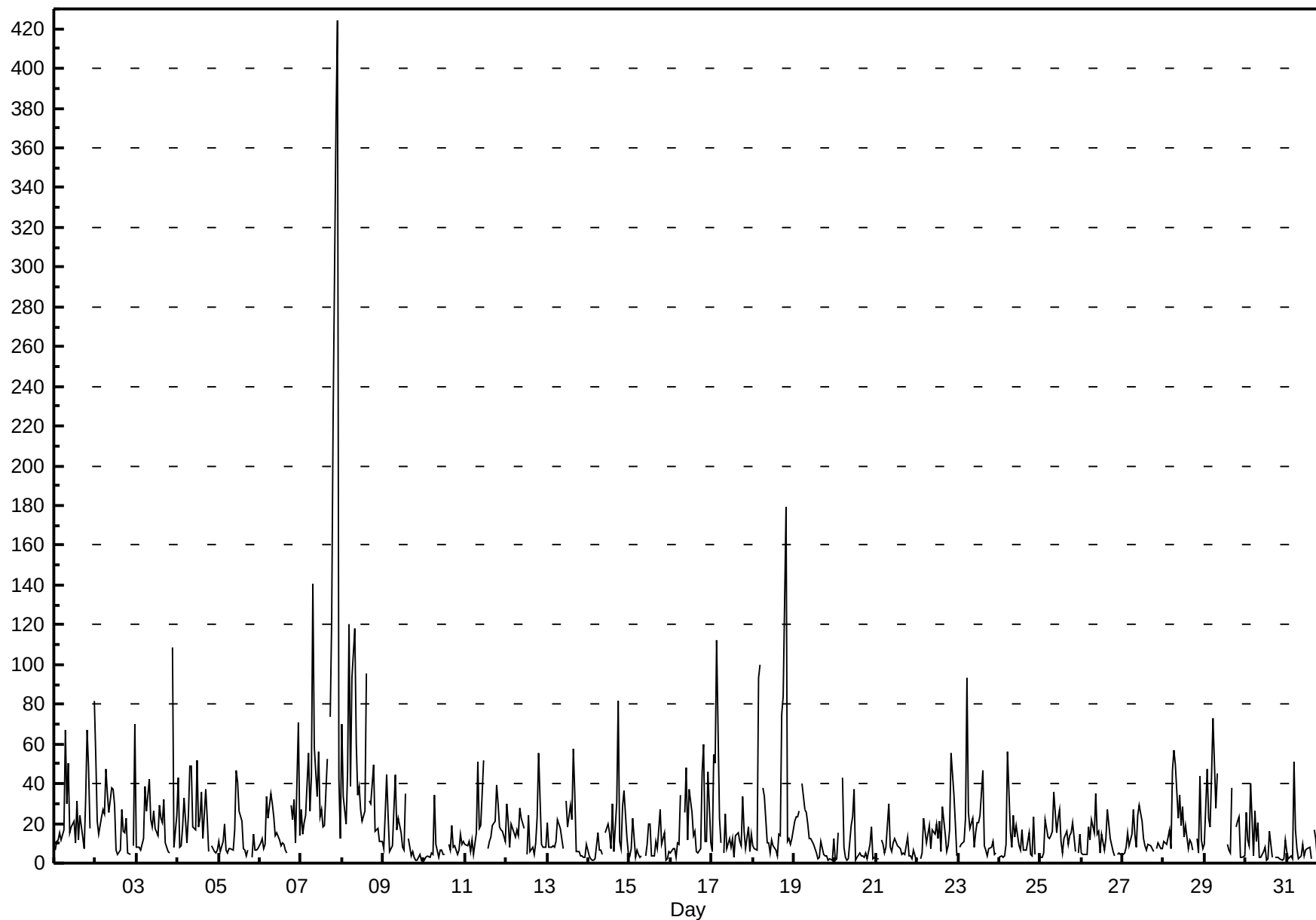
Oxides of Nitrogen (NO_x) - ppb

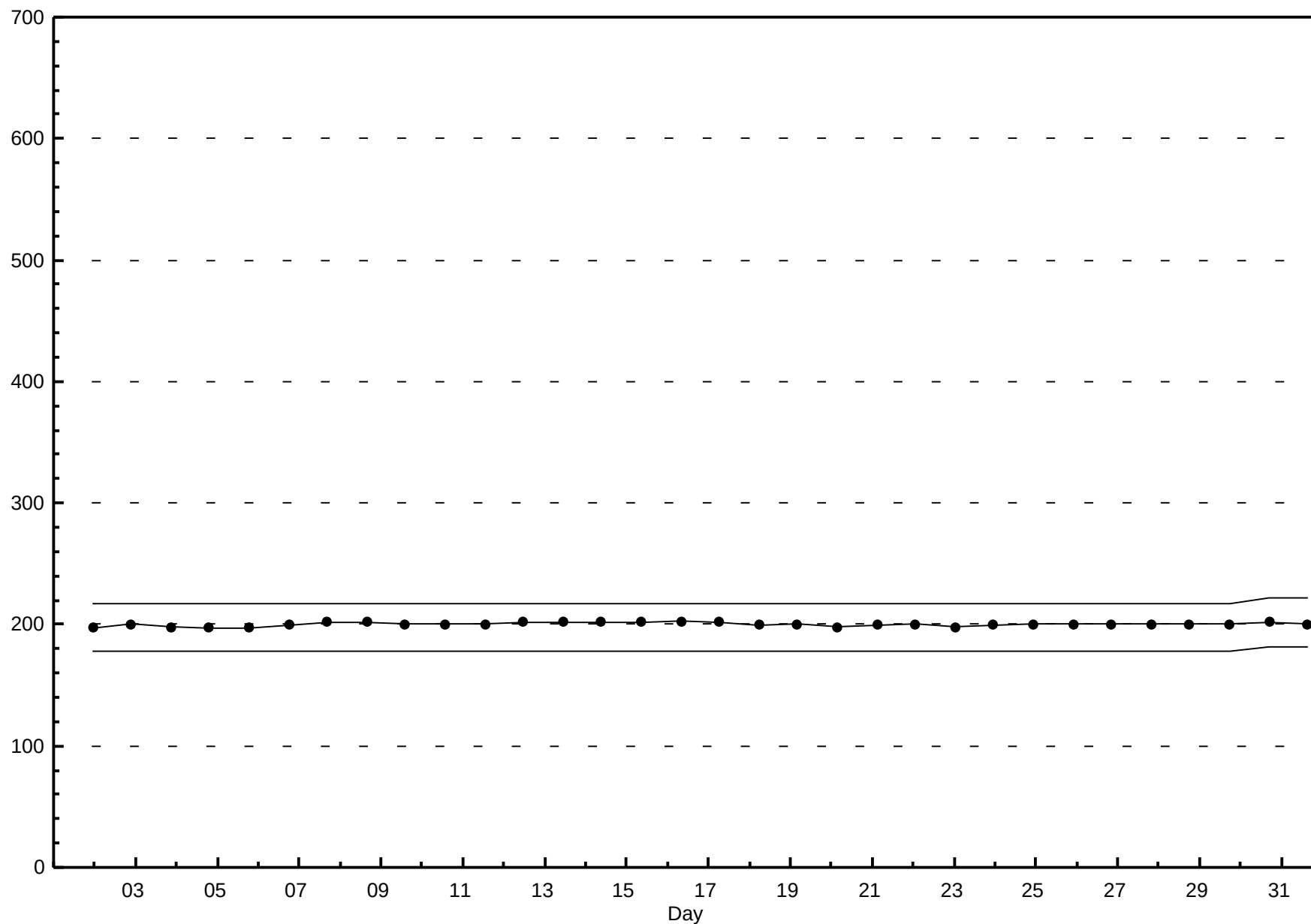
Portable-Bonanza - March 2011

Maximum Value: 423.9 ppb on Mar 7 22:00																					Maximum Daily Average: 83.1 ppb on Mar 7				Hours in Service: 744	
Minimum Value: 1 ppb on Mar 9 20:00																					Minimum Daily Average: 7.6 ppb on Mar 21				Hours of Data: 707	
Maximum Diurnal Average: 30.0 ppb at hour 8																					Minimum Diurnal Average: 12.5 ppb at hour 23				Hours of Missing Data: 37	
Monthly Average: 19.36 ppb																					Percentiles: P ₁ = 1.5 P ₁₀ = 3.3 Q ₁ = 6.2 Median = 11.6 Q ₃ = 22.6 P ₉₀ = 40.3 P ₉₉ = 119.0				Hours of Calibration: 37	
																					Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	6	11	12	15	12	17	67	30	50	15	18	21	10	31	12	24	13	7	32	67	48	17	A	82	26.9	81.7
2-Mar	54	21	15	23	27	25	47	35	26	38	37	29	6	5	6	27	16	16	22	5	4	A	8	70	24.5	70.0
3-Mar	8	8	7	9	13	38	27	42	22	18	27	18	14	29	23	21	32	10	6	5	A	109	8	24	22.4	108.6
4-Mar	43	8	9	18	33	10	24	49	48	18	17	52	18	22	35	13	37	22	6	A	8	6	5	6	22.1	51.6
5-Mar	11	6	11	20	7	5	8	7	6	17	46	41	26	21	7	7	4	7	A	3	15	6	6	7	12.8	46.5
6-Mar	10	13	8	10	33	23	35	30	23	14	15	12	9	10	10	7	5	A	29	22	32	10	71	14	19.3	71.0
7-Mar	27	15	20	24	55	26	44	140	59	34	56	23	27	18	19	53	A	74	122	224	373	424	43	13	83.1	423.9
8-Mar	70	34	20	46	120	38	93	118	60	34	39	27	21	27	96	A	31	30	49	16	17	18	11	11	44.6	119.9
9-Mar	7	24	45	24	6	9	27	45	17	23	16	8	7	35	A	13	3	6	3	1	2	4	2	2	14.2	44.6
10-Mar	2	3	4	3	5	5	34	9	3	6	7	4	5	A	10	6	19	8	8	5	7	15	10	11	8.2	34.0
11-Mar	9	8	11	6	12	5	15	51	17	19	35	52	A	7	11	13	19	21	39	30	18	17	16	11	19.2	51.9
12-Mar	30	21	8	20	15	13	17	14	28	23	17	A	5	24	6	8	4	10	23	55	9	8	8	8	16.3	55.2
13-Mar	20	8	8	9	8	11	22	17	12	7	A	32	18	29	22	57	35	6	6	4	3	3	3	9	15.2	57.4
14-Mar	4	2	2	2	2	15	6	6	4	A	15	19	15	7	30	6	31	82	11	7	28	36	13	5	15.2	81.8
15-Mar	3	8	23	3	7	4	3	3	A	4	9	20	19	4	4	11	7	17	27	10	15	2	2	6	9.1	26.7
16-Mar	5	7	8	3	10	10	34	A	25	48	12	37	26	13	16	6	5	7	46	60	11	11	46	10	19.8	60.0
17-Mar	6	55	50	112	22	10	A	5	25	7	12	8	12	3	14	16	11	9	34	16	7	18	6	15	20.5	111.9
18-Mar	9	7	7	94	100	A	38	34	10	10	5	12	9	6	4	15	14	75	84	179	11	12	9	13	32.9	179.0
19-Mar	21	23	23	26	A	40	27	25	19	12	13	10	8	5	2	3	11	4	4	3	1	3	1	13	13.0	40.1
20-Mar	2	2	16	A	43	8	3	1	2	19	23	37	2	3	5	4	4	3	5	2	9	18	2	3	9.4	42.9
21-Mar	2	2	A	12	9	5	8	30	8	6	10	12	9	8	7	4	5	4	13	4	4	2	7	2	7.6	29.6
22-Mar	2	A	2	5	23	11	14	19	7	17	15	20	12	21	6	28	15	6	9	17	55	34	20	4	15.7	55.1
23-Mar	A	8	10	11	23	93	26	18	22	8	15	20	21	24	47	8	6	4	7	8	11	4	5	A	18.1	93.2
24-Mar	3	4	3	4	9	56	16	8	24	13	19	9	6	17	6	7	7	16	4	4	23	4	A	4	11.5	55.9
25-Mar	3	3	5	22	13	13	14	16	36	15	22	27	11	5	13	16	9	14	15	20	6	A	5	15	13.9	35.6
26-Mar	5	4	5	4	18	12	22	15	35	15	16	5	15	6	12	27	19	12	6	3	A	5	5	4	11.8	34.7
27-Mar	4	5	8	15	9	14	27	14	8	24	29	21	13	9	7	9	9	8	6	A	7	10	7	7	11.8	29.5
28-Mar	11	10	10	17	7	46	57	49	23	34	19	29	13	19	8	12	10	7	A	12	5	43	12	7	20.0	57.1
29-Mar	10	48	23	18	44	73	28	45	C	C	C	C	C	10	7	5	38	A	18	21	23	3	3	3	23.3	72.6
30-Mar	26	12	9	40	4	26	11	20	3	3	6	8	2	2	16	3	A	3	3	3	2	2	2	12	9.4	40.4
31-Mar	6	2	4	2	51	17	7	2	4	9	4	6	7	8	3	A	17	12	3	2	2	11	27	2	9.0	50.8
14.0 12.7 12.7 20.5 24.6 22.6 26.7 30.0 21.7 17.7 19.8 21.3 12.6 14.3 15.3 14.7 15.1 17.3 22.0 27.9 26.2 29.5 12.5 13.1																									Diurnal Average	
70.2 54.5 50.1 111.9 119.9 93.2 93.0 140.4 60.2 48.2 55.8 51.9 27.2 34.9 95.7 57.4 37.7 81.8 121.5 224.1 372.8 423.9 71.0 81.7																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb
Portable-Bonanza - March 2011





**PASZA**

Peace Air Shed Zone Association

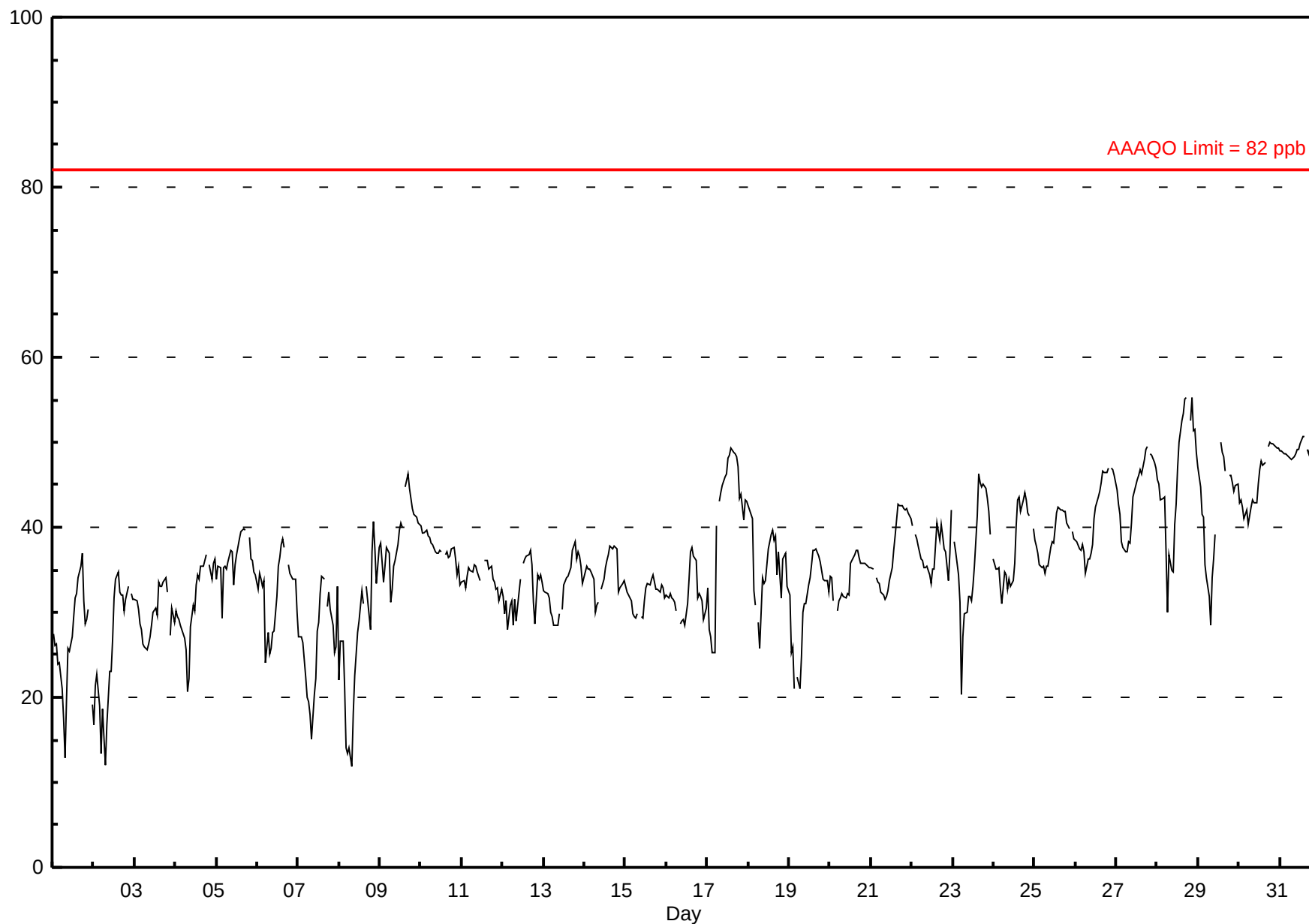
Hourly Averages

Ozone (O₃) - ppb**Portable-Bonanza - March 2011**

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 55.3 ppb on Mar 28 21:00 Maximum Daily Average: 48.8 ppb on Mar 31																				Hours in Service: 744 Hours of Data: 710 Hours of Missing Data: 34 Hours of Calibration: 34 Percent Operational Time: 100.0						
Minimum Value: 12 ppb on Mar 8 08:00 Maximum Diurnal Average: 40.1 ppb at hour 17 Monthly Average: 35.68 ppb										Minimum Daily Average: 25.4 ppb on Mar 2 Minimum Diurnal Average: 30.0 ppb at hour 7 Percentiles: P ₁ = 15.1 P ₁₀ = 27.2 Q ₁ = 31.7 Median = 35.3 Q ₃ = 40.0 P ₉₀ = 46.5 P ₉₉ = 50.9																
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-Mar	27	26	26	24	24	21	17	13	20	26	25	27	29	32	32	34	35	37	31	29	29	30	A	19	26.7	36.9
2-Mar	17	21	23	19	13	19	15	12	17	23	23	27	32	34	35	32	32	30	31	33	A	32	31	25.4	34.7	
3-Mar	32	31	30	29	28	26	26	26	26	27	28	30	31	30	34	33	33	34	32	A	27	30	29	29.8	34.1	
4-Mar	30	29	29	29	28	27	26	21	22	28	31	30	33	34	34	35	35	36	37	A	36	34	36	36	31.2	36.8
5-Mar	34	35	35	29	35	35	35	36	37	37	33	36	37	39	39	40	40	40	A	39	36	36	35	34	36.2	39.9
6-Mar	33	35	34	33	34	24	28	25	26	28	28	32	35	37	38	39	38	A	36	35	34	34	34	30	32.5	38.7
7-Mar	27	27	27	26	22	20	20	18	15	20	22	28	29	32	34	34	A	31	32	30	29	25	26	33	26.5	34.2
8-Mar	22	27	27	21	14	13	14	12	18	23	25	28	29	32	31	A	33	31	28	37	41	37	33	38	26.7	40.7
9-Mar	38	36	34	35	38	37	31	33	35	36	38	40	40	40	A	45	46	44	43	42	41	41	40	40	39.0	46.3
10-Mar	40	39	39	40	39	39	38	38	37	37	37	37	37	A	37	37	36	37	38	38	36	34	35	33	37.3	40.2
11-Mar	34	34	33	34	35	35	35	36	35	35	34	34	A	36	36	36	35	35	34	34	33	33	31	33	34.3	36.1
12-Mar	32	30	31	28	31	31	29	31	29	31	34	A	36	36	37	37	37	36	31	29	34	34	34	33	32.7	37.3
13-Mar	33	32	32	32	30	29	28	28	28	30	A	30	33	34	34	35	35	37	38	36	37	37	35	33	33.0	38.4
14-Mar	35	35	35	35	35	34	30	31	31	A	33	34	35	36	37	38	38	38	38	37	32	33	33	34	34.6	37.8
15-Mar	33	32	32	31	30	30	29	30	A	30	29	31	33	33	33	34	34	33	33	33	32	33	33	32	31.9	34.5
16-Mar	32	32	32	32	32	31	30	A	29	29	29	29	31	34	37	38	37	36	32	32	32	31	29	30	32.0	37.6
17-Mar	33	28	27	25	25	40	A	43	44	45	46	46	48	48	49	49	49	48	47	43	44	41	43	43	41.6	49.3
18-Mar	43	42	41	33	31	A	29	26	34	33	34	36	37	39	40	38	39	34	37	32	36	37	37	33	35.7	42.6
19-Mar	32	25	26	21	A	22	21	25	30	31	31	33	34	36	37	37	37	37	36	35	34	34	34	32	31.3	37.4
20-Mar	34	34	31	A	30	31	32	32	32	32	32	32	36	36	37	37	37	36	36	36	36	36	35	35	34.2	37.3
21-Mar	35	35	A	34	34	33	32	32	32	32	33	34	35	37	39	41	43	43	43	42	42	42	42	41	37.2	42.6
22-Mar	40	A	39	39	38	36	36	35	35	35	34	33	35	35	38	41	39	40	39	37	37	34	37	42	37.2	42.1
23-Mar	A	38	37	34	31	20	27	30	30	32	32	31	33	35	41	46	45	45	45	45	43	42	39	A	36.5	46.3
24-Mar	36	35	35	35	33	31	35	34	33	34	33	34	36	40	43	44	42	43	44	43	42	41	A	40	37.7	44.1
25-Mar	38	38	37	36	35	35	35	35	35	38	38	38	40	42	42	42	42	42	42	41	40	A	40	39	38.7	42.4
26-Mar	39	38	37	37	38	37	35	36	36	37	38	41	42	43	44	45	47	46	46	47	A	47	47	46	41.4	46.9
27-Mar	44	43	42	38	38	37	37	38	38	40	44	45	46	46	47	46	48	49	50	A	49	48	48	47	43.8	49.5
28-Mar	46	45	43	43	43	37	30	37	35	35	40	43	47	50	53	53	55	55	A	53	55	51	52	49	45.7	55.3
29-Mar	47	45	41	41	36	34	32	28	34	36	39	C	C	50	49	48	47	A	46	46	45	44	45	45	41.9	50.0
30-Mar	43	43	42	41	42	40	41	42	43	43	43	45	47	48	47	48	A	49	50	50	50	49	49	49	45.5	49.9
31-Mar	49	49	49	49	49	48	48	48	48	49	49	49	50	51	51	A	49	49	50	48	48	48	49	49	48.8	50.8
35.2 34.7 34.3 32.8 32.3 31.2 30.0 30.4 31.6 33.0 33.9 34.9 36.8 38.6 39.5 40.1 40.1 39.8 38.8 38.3 38.5 37.8 37.7 37.0																								Diurnal Average		
49.0 48.9 48.7 48.6 48.6 48.3 48.1 47.9 48.3 48.7 49.1 49.2 49.9 50.7 52.6 53.3 55.1 55.3 49.9 52.6 55.3 51.4 51.5 49.3																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na																										

Hourly Averages

Ozone (O₃) - ppb
Portable-Bonanza - March 2011



Hourly Maximums

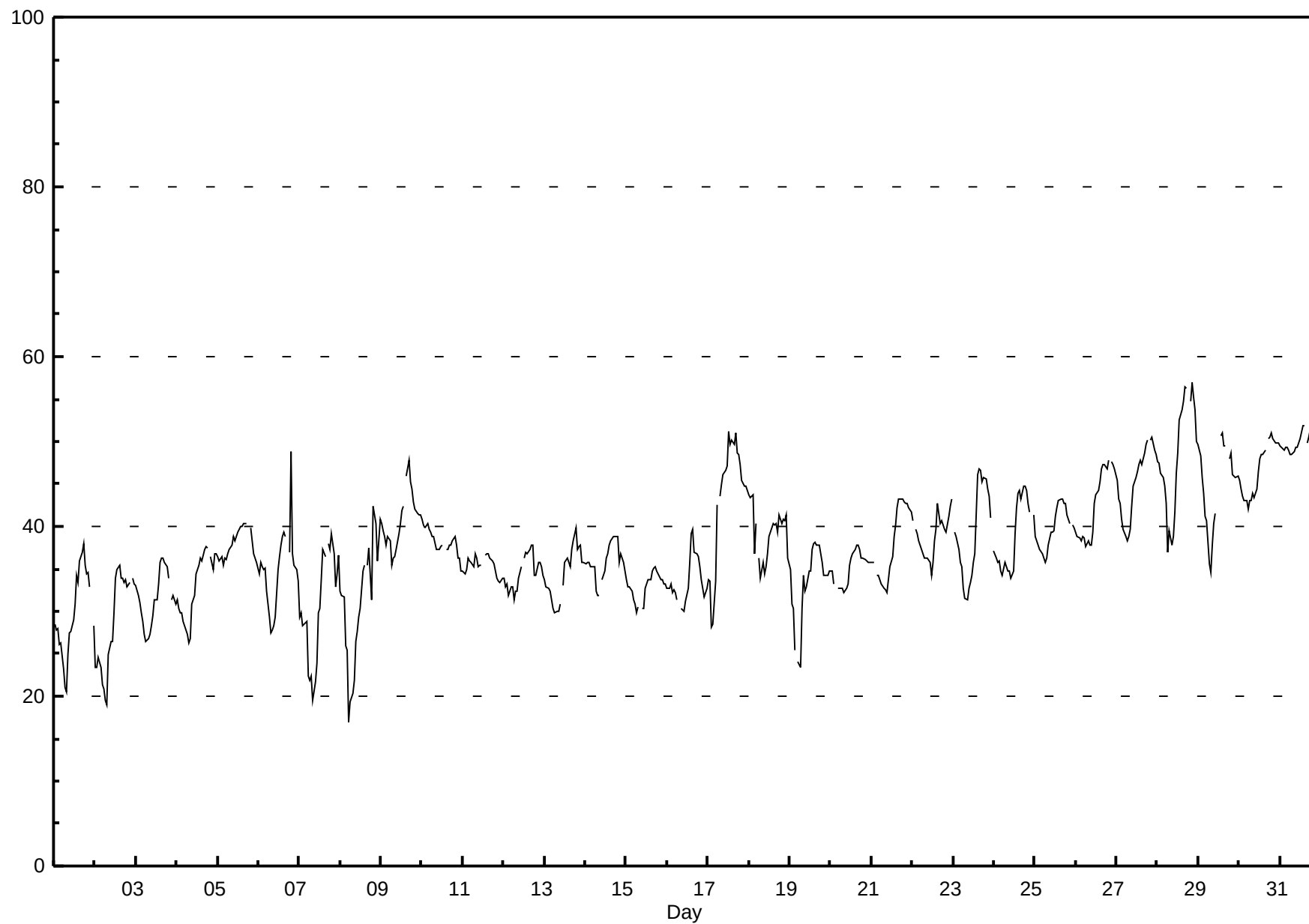
Ozone (O₃) - ppb

Portable-Bonanza - March 2011

Maximum Value: 57.0 ppb on Mar 28 21:00																					Maximum Daily Average: 49.6 ppb on Mar 31				Hours in Service: 744	
Minimum Value: 17 ppb on Mar 8 06:00																					Minimum Daily Average: 28.5 ppb on Mar 2				Hours of Data: 710	
Maximum Diurnal Average: 41.5 ppb at hour 17																					Minimum Diurnal Average: 32.4 ppb at hour 7				Hours of Missing Data: 34	
Monthly Average: 37.55 ppb																					Percentiles: P ₁ = 20.9 P ₁₀ = 29.9 Q ₁ = 33.8 Median = 36.7 Q ₃ = 41.3 P ₉₀ = 47.7 P ₉₉ = 53.1				Hours of Calibration: 34	
																					Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	28	28	28	26	26	23	21	20	25	27	28	29	31	34	33	36	37	38	35	34	35	33	A	28	29.8	37.9
2-Mar	23	23	25	23	21	21	19	19	25	26	26	30	34	35	35	34	34	33	34	33	33	A	34	33	28.5	35.4
3-Mar	33	32	31	30	29	27	27	27	27	28	30	31	31	33	36	36	36	36	35	34	A	31	32	31	31.5	36.3
4-Mar	31	30	30	30	29	28	27	26	27	31	32	34	35	35	36	36	37	38	37	A	36	35	37	37	32.8	37.6
5-Mar	36	36	36	35	36	36	37	37	38	39	38	39	39	40	40	40	40	40	A	40	38	37	36	36	37.9	40.3
6-Mar	34	36	35	35	35	32	29	28	28	28	29	35	36	38	39	39	39	A	37	49	37	35	35	34	34.9	48.8
7-Mar	29	30	28	29	29	22	22	22	19	22	24	30	30	34	37	36	A	38	37	39	37	33	34	37	30.4	39.2
8-Mar	32	32	32	26	25	17	19	20	22	26	28	29	30	35	35	A	35	38	31	42	41	40	36	41	31.1	42.3
9-Mar	40	40	39	38	39	38	35	36	36	37	39	40	42	42	35	A	46	48	45	44	43	42	41	41	40.7	47.8
10-Mar	41	40	40	40	40	39	39	39	37	37	37	38	38	A	37	37	38	38	38	39	38	36	36	35	38.2	40.8
11-Mar	35	34	35	36	36	36	35	37	36	35	35	35	A	37	37	37	36	36	36	35	34	34	33	34	35.4	36.8
12-Mar	34	33	33	32	33	33	31	32	32	34	35	A	36	37	37	37	38	38	34	34	36	36	35	34	34.6	37.8
13-Mar	34	33	33	32	31	30	30	30	30	31	A	33	36	36	36	35	37	38	40	37	38	38	36	36	34.3	39.8
14-Mar	36	36	36	35	35	35	32	32	32	A	34	35	36	37	38	38	39	39	39	39	36	37	36	35	35.9	38.8
15-Mar	34	33	33	32	31	31	30	31	A	30	30	33	33	34	34	35	35	35	35	34	34	34	33	33	32.9	35.3
16-Mar	33	33	33	32	33	32	31	A	30	30	30	31	33	36	39	40	37	37	36	35	34	33	32	33	33.6	39.7
17-Mar	34	34	28	28	34	43	A	44	45	46	47	47	51	50	50	50	51	49	49	47	45	45	45	44	43.6	51.2
18-Mar	44	43	44	37	40	A	36	34	36	34	35	37	39	40	40	40	40	39	41	40	41	41	41	36	39.1	43.8
19-Mar	35	31	30	25	A	24	23	30	34	32	33	35	35	37	38	38	38	38	37	36	34	34	34	35	33.4	38.1
20-Mar	35	35	33	A	33	33	33	33	32	33	33	35	36	37	37	38	38	37	36	36	36	36	36	36	35.1	37.8
21-Mar	36	36	A	34	34	34	33	33	33	32	34	35	36	39	40	42	43	43	43	43	43	43	42	42	38.0	43.2
22-Mar	41	A	40	39	38	37	37	36	36	36	36	34	36	38	40	43	40	41	40	40	39	41	42	43	38.9	43.2
23-Mar	A	39	39	37	36	35	33	32	31	33	33	34	36	37	46	47	47	45	46	46	44	44	41	A	39.1	46.8
24-Mar	37	36	36	36	35	34	36	35	35	35	34	35	39	42	44	44	43	45	45	44	43	42	A	41	38.9	44.7
25-Mar	39	38	38	37	37	36	36	36	38	39	39	39	41	42	43	43	43	43	43	41	40	A	40	40	39.7	43.3
26-Mar	39	39	39	38	39	39	38	38	38	38	39	43	44	44	45	47	47	47	47	48	A	48	47	47	42.5	47.7
27-Mar	45	43	43	41	40	39	38	39	40	42	45	46	46	47	48	47	49	50	50	A	50	51	49	48	45.0	50.5
28-Mar	48	48	46	46	45	43	37	39	38	39	42	46	49	52	54	55	56	56	A	55	57	55	54	50	48.2	57.0
29-Mar	50	48	46	44	41	41	36	35	38	40	42	C	C	51	51	49	49	A	48	49	46	46	46	46	44.8	51.0
30-Mar	45	44	43	43	43	42	43	43	44	43	44	46	48	48	48	49	A	50	51	51	50	50	50	50	46.6	51.0
31-Mar	50	49	49	49	49	49	48	48	49	49	49	50	50	52	52	A	50	50	51	49	49	49	49	49	49.6	51.9
37.0 36.4 36.0 34.9 35.1 33.7 32.4 33.1 33.7 34.5 35.4 36.8 38.2 40.0 40.9 41.2 41.5 41.4 40.6 41.1 40.2 39.9 39.4 38.8																									Diurnal Average	
49.7 49.4 48.9 49.3 49.4 48.9 48.4 48.4 48.7 49.4 49.4 49.9 51.2 52.5 53.7 54.7 56.4 56.3 51.4 54.7 57.0 55.2 53.7 50.1																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

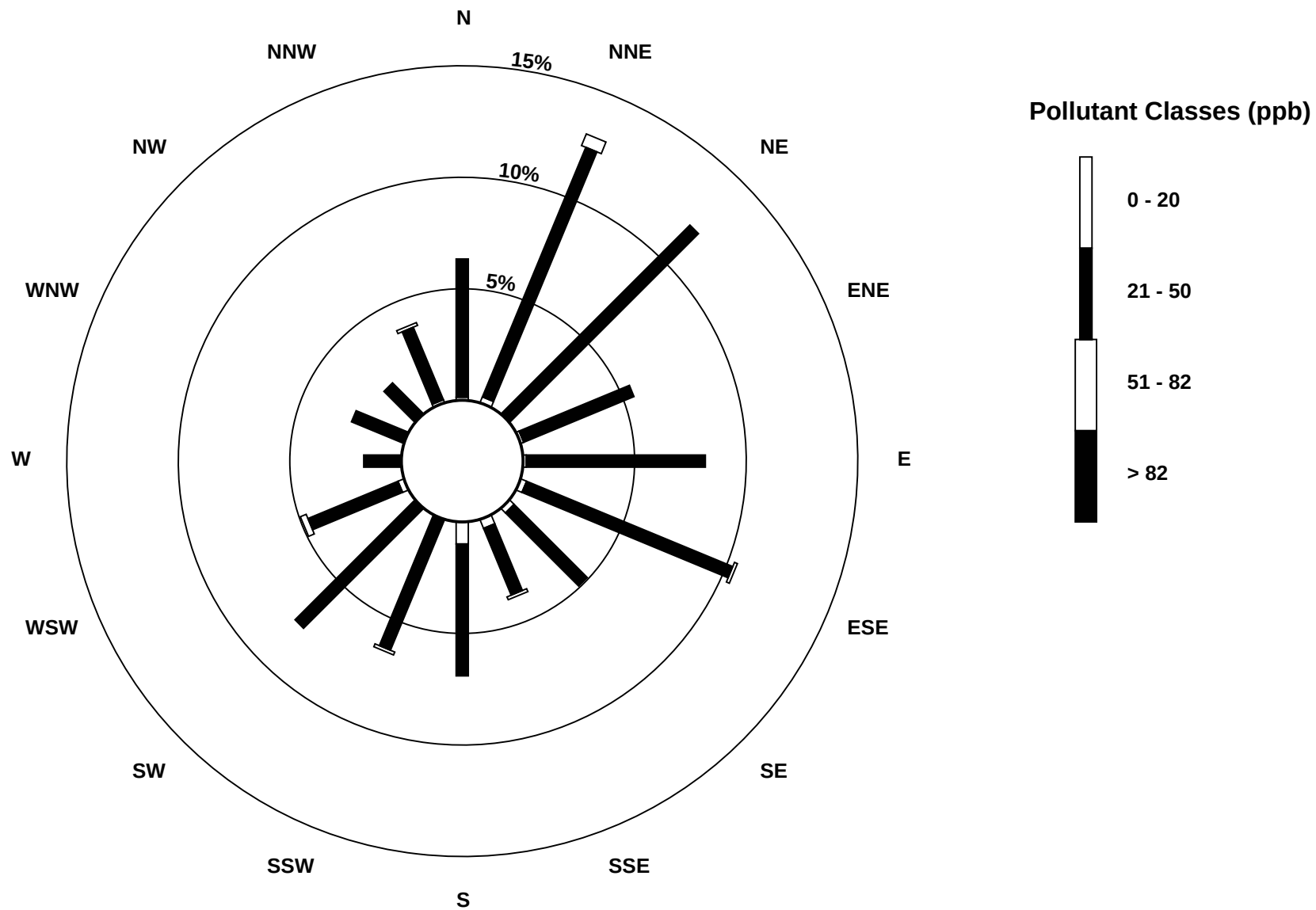
Hourly Maximums

Ozone (O₃) - ppb
Portable-Bonanza - March 2011



Pollutant Rose

Ozone (O₃) - ppb
Portable-Bonanza - March 2011



**PASZA**

Peace Air Shed Zone Association

Eight Hour Running Averages

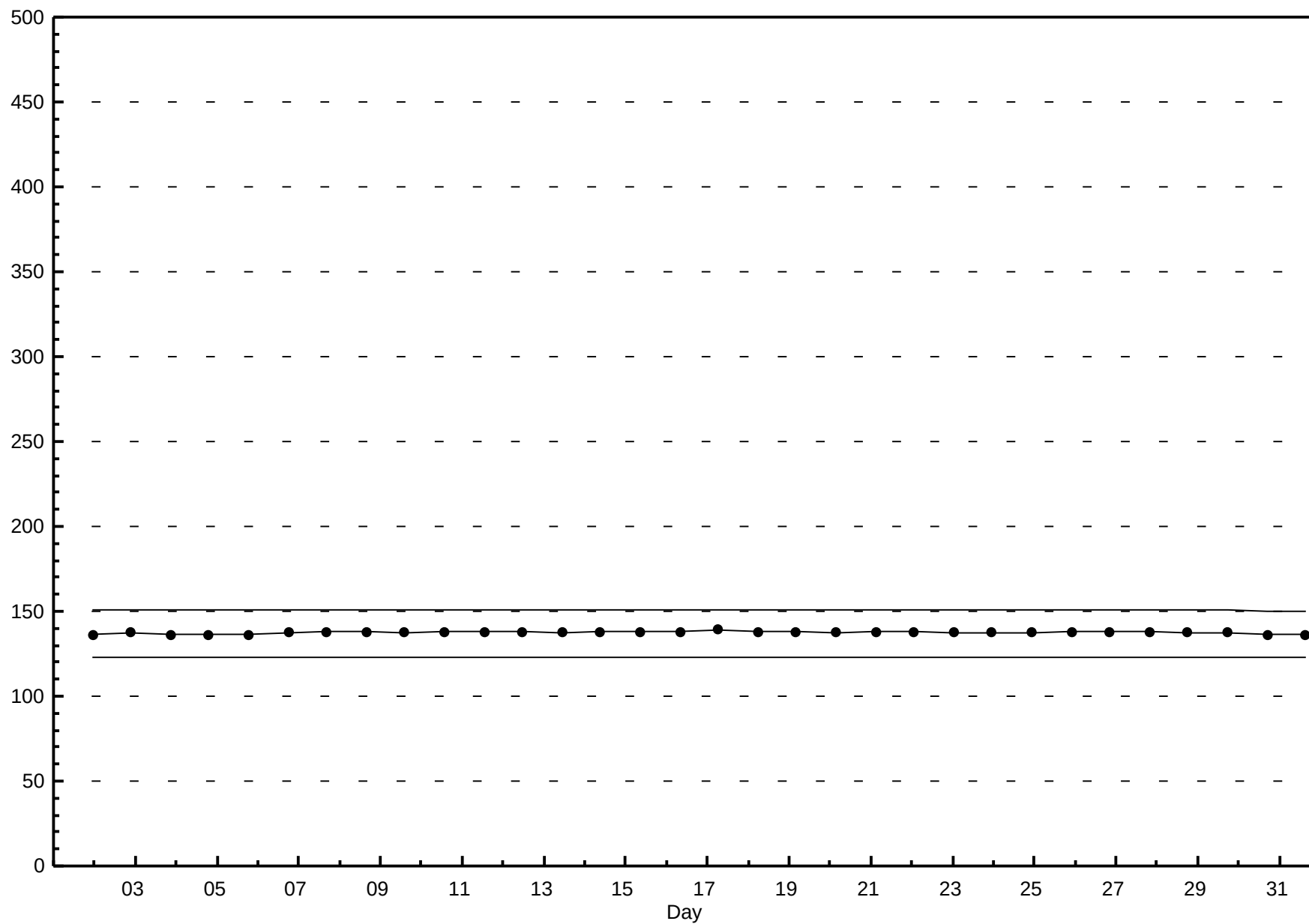
Ozone (O₃) - ppb

Portable-Bonanza - March 2011

Maximum Value: 53.7 ppb on Mar 28 22:00																								Hours in Service:	744
Minimum Value: 17.4 ppb on Mar 2 08:00																								Hours of Data:	742
Percentiles: P ₁ = 18.3 P ₁₀ = 28.1 Q ₁ = 31.7 Median = 35.2 Q ₃ = 39.3 P ₉₀ = 45.6 P ₉₉ = 50.0																								Hours of Missing Data:	2
																								Hours of Calibration:	2
																								Percent Operational Time:	100.0
Day	Hourly Period Ending At (MST)																								Daily Maximum
1-Mar	31	30	29	28	27	25	24	22	21	21	21	22	22	24	26	28	30	32	32	32	32	32	32	30	32.5
2-Mar	27	25	24	23	20	19	18	17	17	18	18	19	21	23	25	28	30	31	32	32	32	32	32	32	32.4
3-Mar	32	32	32	31	30	30	29	28	28	27	27	27	28	28	29	30	31	31	32	32	33	32	32	31	32.7
4-Mar	31	30	30	29	29	29	28	27	26	26	26	27	27	28	29	31	33	34	34	35	35	35	36	36	35.7
5-Mar	35	35	35	34	34	35	34	34	35	35	35	36	36	36	37	37	38	38	39	39	39	39	38	37	39.0
6-Mar	36	35	35	34	34	33	32	31	30	29	28	28	28	30	31	33	34	35	36	37	36	36	35	34	36.6
7-Mar	33	32	31	30	28	27	25	23	22	21	21	21	21	23	25	27	29	30	31	32	32	31	30	29	32.8
8-Mar	29	28	27	26	24	23	21	19	18	18	18	18	20	23	25	27	29	30	30	32	33	34	34	35	34.8
9-Mar	35	36	37	37	36	36	36	35	35	35	35	36	36	37	37	39	41	42	43	43	43	43	43	43	43.4
10-Mar	42	41	41	40	40	40	39	39	39	38	38	38	38	37	37	37	37	37	37	37	37	37	36	36	41.7
11-Mar	36	35	35	34	34	34	34	34	35	35	35	35	35	35	35	35	35	35	35	35	35	34	34	33	35.6
12-Mar	33	32	32	31	31	31	31	30	30	30	30	31	32	32	33	34	35	36	36	35	35	34	34	34	36.0
13-Mar	33	33	33	33	33	32	31	31	30	30	29	29	30	30	31	32	33	34	35	35	36	36	36	36	36.4
14-Mar	36	36	36	35	35	35	34	34	33	33	33	32	33	33	34	35	36	36	37	37	37	36	36	35	37.0
15-Mar	35	34	33	33	32	32	31	31	31	30	30	30	30	31	31	32	32	33	33	33	33	33	33	33	34.8
16-Mar	33	32	32	32	32	32	32	32	31	31	30	30	30	30	31	32	33	34	34	35	35	34	33	32	34.7
17-Mar	32	31	30	30	29	30	30	32	33	36	38	41	45	46	46	47	48	48	48	48	47	46	46	45	48.1
18-Mar	44	43	43	41	40	39	37	35	34	32	31	32	33	34	35	36	37	37	38	37	37	37	36	36	44.1
19-Mar	35	34	32	31	30	28	26	25	24	25	26	28	28	30	32	34	35	35	36	36	36	36	35	35	36.2
20-Mar	34	34	34	33	33	32	32	32	32	31	32	32	32	33	34	34	35	35	36	36	36	36	36	36	36.4
21-Mar	36	35	35	35	35	35	34	34	33	33	33	33	33	33	34	35	37	38	39	40	41	42	42	42	42.1
22-Mar	42	42	41	41	40	39	38	38	37	37	36	35	35	35	35	36	36	37	37	38	38	38	38	38	41.8
23-Mar	38	38	38	37	36	34	33	31	31	30	30	29	29	31	33	35	37	39	40	42	43	44	44	43	44.1
24-Mar	42	41	39	38	37	35	34	34	34	34	33	33	34	35	36	37	38	39	41	42	43	43	43	42	42.8
25-Mar	42	41	40	39	38	37	37	36	36	36	36	36	37	38	39	39	40	41	41	42	42	42	41	41	41.7
26-Mar	40	40	39	39	38	38	37	37	37	37	37	37	38	39	40	41	42	43	45	45	46	46	46	47	46.6
27-Mar	46	46	45	44	43	42	41	40	39	39	39	40	41	42	43	44	45	46	47	47	48	48	48	48	48.3
28-Mar	48	47	47	46	45	44	42	41	39	38	38	38	38	40	42	44	47	50	51	52	53	54	54	53	53.7
29-Mar	52	50	49	48	45	43	41	38	36	35	35	34	34	37	39	43	45	N	N	48	47	46	46	45	51.7
30-Mar	45	45	44	44	43	43	42	42	42	42	42	42	43	44	45	45	46	47	48	48	49	49	49	50	49.6
31-Mar	50	49	49	49	49	49	49	49	48	48	48	49	49	49	49	50	50	50	50	50	49	49	49	49	49.7
51.7 50.2 49.3 49.2 49.0 48.8 48.7 48.5 48.4 48.4 48.4 48.5 48.7 49.0 49.3 49.5 49.6 49.6 50.8 52.3 53.5 53.7 53.5 52.9																									
Diurnal Maximums																									
N - Not Valid																									

Span Responses

Ozone (O₃)
Portable-Bonanza - March 2011



**PASZA**

Peace Air Shed Zone Association

Hourly Averages

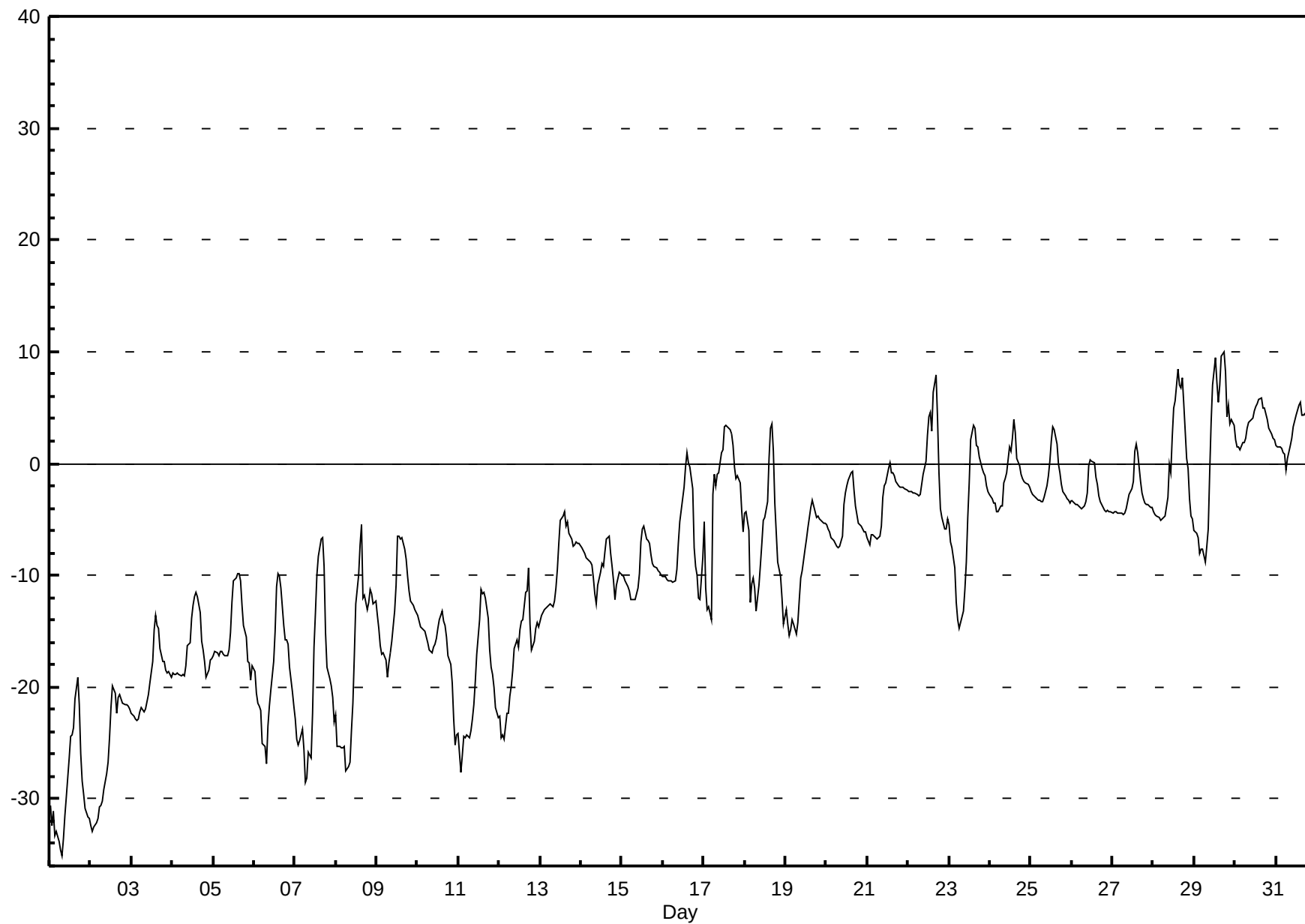
External Temperature (ET) - °C

Portable-Bonanza - March 2011

Number of Exceedences (AAQO): 1-hr: 0 24-hr: 0 Maximum Value: 10.0 °C on Mar 29 18:00 Maximum Daily Average: 3.4 °C on Mar 30																								Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: -35 °C on Mar 1 08:00 Maximum Diurnal Average: -4.1 °C at hour 16 Monthly Average: -9.59 °C												Minimum Daily Average: -29.0 °C on Mar 1 Minimum Diurnal Average: -13.4 °C at hour 7 Percentiles: P ₁ = -32.5 P ₁₀ = -22.8 Q ₁ = -16.3 Median = -8.5 Q ₃ = -2.6 P ₉₀ = 2.0 P ₉₉ = 7.3														
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-Mar	-31	-32	-31	-33	-33	-34	-35	-35	-34	-32	-30	-26	-24	-24	-24	-21	-19	-22	-26	-28	-30	-31	-32	-32	-29.0	-19.2
2-Mar	-32	-33	-32	-32	-32	-31	-31	-30	-29	-28	-27	-25	-22	-20	-21	-22	-21	-21	-21	-21	-22	-22	-22	-22	-25.7	-20.0
3-Mar	-22	-23	-23	-23	-23	-22	-22	-22	-22	-21	-21	-20	-18	-15	-14	-14	-15	-17	-18	-18	-18	-19	-19	-19	-19.4	-13.6
4-Mar	-19	-19	-19	-19	-19	-19	-19	-19	-18	-16	-16	-14	-13	-12	-11	-12	-13	-16	-17	-18	-19	-19	-18	-17	-16.6	-11.5
5-Mar	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-15	-12	-11	-10	-10	-10	-10	-13	-15	-16	-18	-18	-19	-18	-15.2	-9.9
6-Mar	-19	-21	-21	-22	-22	-25	-25	-27	-24	-22	-20	-18	-15	-11	-10	-10	-11	-14	-16	-16	-16	-18	-20	-22	-18.5	-9.8
7-Mar	-23	-25	-25	-25	-24	-26	-28	-28	-26	-26	-22	-16	-13	-10	-8	-7	-7	-9	-15	-18	-19	-20	-21	-23	-19.4	-6.6
8-Mar	-23	-25	-25	-25	-25	-25	-28	-27	-27	-24	-21	-17	-13	-10	-7	-5	-12	-12	-13	-12	-11	-12	-13	-12	-17.7	-5.5
9-Mar	-14	-15	-16	-17	-17	-18	-19	-18	-17	-16	-13	-11	-6	-6	-7	-7	-8	-9	-10	-11	-12	-13	-13	-13	-12.7	-6.5
10-Mar	-14	-14	-15	-15	-15	-15	-16	-17	-17	-16	-16	-16	-15	-14	-13	-14	-14	-15	-17	-18	-20	-23	-25	-24	-16.6	-13.3
11-Mar	-24	-28	-26	-24	-25	-24	-25	-24	-23	-22	-20	-17	-14	-11	-12	-12	-12	-14	-17	-18	-19	-20	-22	-23	-19.7	-11.2
12-Mar	-23	-25	-24	-25	-22	-22	-21	-20	-19	-17	-16	-16	-15	-14	-14	-11	-11	-9	-14	-17	-16	-15	-14	-15	-17.3	-9.3
13-Mar	-14	-14	-13	-13	-13	-13	-13	-13	-12	-11	-9	-7	-5	-5	-4	-6	-5	-6	-7	-7	-7	-7	-7	-7	-9.1	-4.3
14-Mar	-7	-8	-8	-8	-9	-9	-9	-10	-12	-13	-11	-10	-9	-9	-8	-7	-7	-8	-9	-10	-12	-11	-10	-10	-9.3	-6.5
15-Mar	-10	-10	-10	-11	-11	-12	-12	-12	-12	-11	-10	-7	-6	-6	-7	-7	-7	-8	-9	-9	-9	-10	-10	-10	-9.5	-5.6
16-Mar	-10	-10	-10	-11	-11	-10	-11	-11	-9	-7	-5	-4	-2	0	1	0	0	-2	-8	-9	-10	-12	-12	-8	-7.2	0.9
17-Mar	-5	-11	-13	-13	-14	-3	-1	-2	-1	-1	1	1	3	3	3	3	3	2	0	-1	-1	-2	-4	-6	-2.5	3.5
18-Mar	-4	-4	-6	-12	-11	-10	-11	-13	-11	-9	-7	-5	-5	-3	0	3	4	1	-4	-9	-10	-10	-12	-14	-6.8	3.5
19-Mar	-13	-14	-15	-15	-14	-14	-15	-14	-12	-10	-10	-8	-7	-6	-5	-4	-3	-4	-5	-5	-5	-5	-5	-5	-8.9	-3.3
20-Mar	-5	-6	-6	-7	-7	-7	-7	-7	-7	-6	-4	-3	-2	-1	-1	-1	-2	-4	-5	-5	-6	-6	-6	-6	-4.9	-0.8
21-Mar	-7	-7	-6	-6	-6	-7	-7	-6	-6	-3	-2	-2	0	0	-1	-1	-1	-2	-2	-2	-2	-2	-2	-2	-3.5	0.1
22-Mar	-2	-2	-3	-3	-3	-3	-3	-3	-2	-1	0	2	4	5	3	6	8	4	-1	-4	-5	-6	-6	-5	-0.7	8.0
23-Mar	-5	-7	-8	-9	-12	-14	-15	-14	-13	-11	-9	-5	-2	2	3	3	2	1	1	0	-1	-1	-2	-3	-5.0	3.5
24-Mar	-3	-3	-3	-3	-4	-4	-4	-4	-2	-1	-1	1	1	2	4	3	1	0	-1	-1	-2	-2	-2	-2	-1.3	3.9
25-Mar	-2	-3	-3	-3	-3	-3	-3	-3	-3	-2	-1	0	2	3	3	2	0	-1	-2	-2	-3	-3	-3	-4	-1.6	3.3
26-Mar	-3	-3	-4	-4	-4	-4	-4	-4	-3	-3	0	0	0	0	-1	-2	-3	-3	-4	-4	-4	-4	-4	-4	-2.9	0.4
27-Mar	-4	-4	-4	-4	-4	-4	-5	-4	-4	-3	-3	-2	-2	1	2	1	-2	-3	-3	-3	-4	-4	-4	-4	-3.0	1.7
28-Mar	-4	-5	-5	-5	-5	-5	-5	-5	-3	0	-1	2	5	6	8	7	7	8	5	0	0	-3	-5	-5	-0.3	8.4
29-Mar	-6	-6	-7	-8	-8	-8	-9	-7	-6	-1	4	7	9	7	5	7	10	10	8	4	5	4	4	3	0.9	10.0
30-Mar	2	2	1	1	2	2	2	3	4	4	4	5	5	5	6	6	5	5	4	4	3	3	2	2	3.4	5.9
31-Mar	2	1	1	1	1	1	-1	0	2	2	3	4	4	5	5	4	4	4	4	3	2	2	1	1	2.5	5.5
																									Diurnal Average	
																									Diurnal Maximum	

Hourly Averages

External Temperature (ET) - °C
Portable-Bonanza - March 2011



**PASZA**

Peace Air Shed Zone Association

Hourly Averages**Wind Speed (km/h)****Wind Direction (deg)****Portable-Bonanza - March 2011**

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	8	6	7	5	5	6	3	5	5	6	6	3	3	5	6	3	1	3	1	4	6	4	4	6	3.9	8.4
Dir	186	176	182	185	189	189	190	190	191	193	203	234	239	235	219	248	224	245	170	158	120	89	148	128	186	186
2 Spd	3	1	1	2	2	2	1	2	3	6	8	8	10	14	15	17	9	4	5	6	6	5	3	4	4.2	17.2
Dir	130	161	341	120	101	75	100	336	12	18	10	4	21	31	30	6	22	92	10	343	328	293	263	219	14	6
3 Spd	6	5	5	6	5	5	6	5	5	6	5	5	3	3	5	5	5	4	5	2	3	5	3	2	2.6	6.1
Dir	217	224	185	203	194	205	226	224	205	205	213	233	228	354	41	10	9	326	303	294	243	233	198	190	228	226
4 Spd	5	5	4	6	5	5	3	2	2	2	2	6	9	10	9	12	12	12	12	17	11	8	7	6	4.0	16.8
Dir	194	195	176	207	187	179	187	169	166	158	301	12	15	19	35	52	86	92	83	107	98	49	51	34	82	107
5 Spd	8	9	7	9	9	8	9	10	9	9	9	9	9	10	12	13	12	10	9	6	6	6	5	5	7.8	13.2
Dir	37	37	22	23	37	36	31	30	27	19	12	15	14	9	9	19	19	23	47	82	113	90	102	94	32	19
6 Spd	4	4	7	4	3	4	6	3	1	1	3	4	4	7	7	6	5	5	6	5	3	8	9	6	1.1	8.8
Dir	68	89	100	92	151	228	215	139	268	288	315	345	336	11	13	9	7	247	207	155	103	126	133	169	102	133
7 Spd	6	4	2	2	4	2	1	2	3	1	2	1	2	3	4	0	2	1	3	3	5	7	4	2	1.2	7.0
Dir	128	129	279	208	171	183	11	154	184	243	241	285	1	10	54	37	219	280	99	156	186	191	101	22	155	191
8 Spd	2	1	1	1	3	5	3	3	1	2	1	2	7	7	6	2	8	5	3	7	9	6	1	5	0.8	8.8
Dir	161	37	267	218	174	191	163	151	251	4	318	11	21	15	16	36	237	232	269	125	116	119	281	100	119	116
9 Spd	2	3	6	3	4	4	6	8	10	7	5	3	5	8	9	13	15	15	19	20	19	17	11	14	5.8	20.2
Dir	141	357	18	53	340	191	193	197	208	206	197	297	23	16	16	23	37	37	39	38	39	40	33	37	35	38
10 Spd	13	13	15	12	12	15	12	13	16	13	16	15	13	11	12	11	8	7	9	8	6	7	7	5	10.7	15.6
Dir	38	32	34	31	52	47	53	36	38	29	32	30	30	30	35	34	20	21	29	34	46	96	105	112	39	32
11 Spd	6	7	8	8	16	20	23	22	20	17	14	12	10	10	13	14	14	15	19	16	13	6	6	6	12.6	23.1
Dir	96	110	118	116	125	124	122	124	124	118	109	100	97	92	98	95	96	104	99	94	95	75	50	78	107	122
12 Spd	5	3	3	4	2	1	2	4	2	3	4	5	5	6	5	3	2	1	1	3	5	3	4	5	1.6	6.2
Dir	93	307	302	338	323	343	17	257	352	24	322	255	236	231	228	260	243	36	120	240	209	183	173	240	257	231
13 Spd	4	6	4	5	3	2	3	7	8	8	10	10	10	12	17	17	11	9	10	16	13	14	9	6	6.8	16.7
Dir	228	166	181	174	165	77	46	10	15	2	7	13	12	17	26	35	48	84	57	43	40	35	25	12	34	26
14 Spd	8	10	11	9	5	6	10	10	9	8	10	11	12	10	9	6	5	5	4	5	2	4	4	6	4.8	11.6
Dir	2	357	353	346	346	279	290	296	277	242	240	235	238	241	239	221	216	239	226	226	197	196	185	229	265	238
15 Spd	6	5	4	5	8	8	3	7	6	7	6	12	14	12	13	12	10	10	9	8	6	6	7	7	5.6	14.0
Dir	228	205	217	291	297	301	310	333	296	348	341	50	38	30	30	29	23	13	16	11	8	344	343	12	1	38
16 Spd	7	3	6	7	5	6	5	7	7	5	1	6	7	9	10	11	11	8	3	6	1	3	3	11	4.2	11.1
Dir	29	32	13	20	29	45	57	110	112	110	34	6	10	12	18	35	34	29	55	122	208	312	140	152	46	35
17 Spd	12	4	6	3	1	20	16	17	14	20	20	17	11	16	26	22	19	18	11	6	9	11	8	7	10.4	26.1
Dir	155	33	61	54	349	202	193	179	198	208	209	228	247	239	232	244	241	250	254	184	178	170	182	192	214	232
18 Spd	8	11	6	0	6	3	4	5	7	5	5	4	8	6	1	3	3	3	6	3	2	3	1	2	2.7	10.5
Dir	195	176	186	82	146	188	220	216	224	175	177	221	237	236	342	110	64	47	68	102	164	158	216	47	184	176
19 Spd	5	2	4	2	1	1	2	1	1	3	3	3	6	8	11	13	12	13	10	6	4	3	7	7	3.7	13.5
Dir	206	191	59	124	116	217	190	156	174	190	260	282	302	323	335	335	325	311	318	330	331	328	333	7	320	311
20 Spd	8	10	13	13	11	10	10	12	12	14	15	16	15	17	15	18	20	21	15	17	16	15	13	16	13.8	20.8
Dir	28	25	18	17	21	358	354	356	359	5	18	16	35	37	36	42	41	42	39	39	35	37	44	52	28	42
21 Spd	18	13	15	13	12	11	7	10	10	6	9	16	17	15	18	18	16	16	16	15	16	14	16	18	13.4	18.5
Dir	49	37	64	64	39	47	25	78	79	29	70	90	76	73	72	73	74	63	69	71	79	83	88	92	69	72
22 Spd	19	18	17	19	21	22	22	20	7	8	8	5	4	6	4	3	8	8	6	9	15	11	10	10	9.8	22.4
Dir	99	103	104	110	117	120	124	125	105	102	107	101	353	4	334	5	38	28	64	104	125	133	131	141	107	120

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Peace Air Shed Zone Association

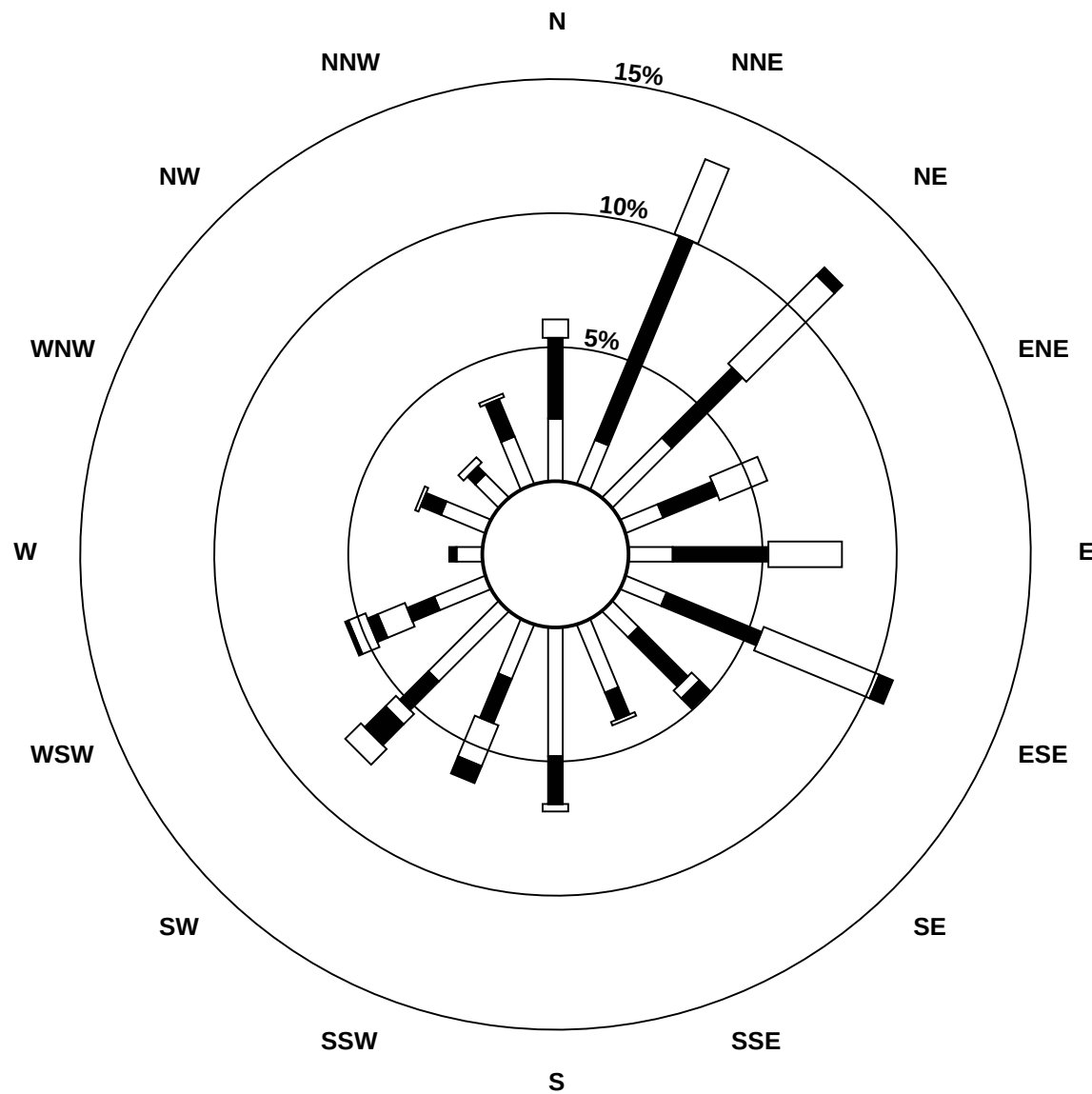
Hourly Averages

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

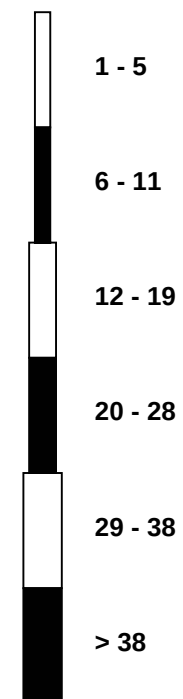
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	9	6	5	2	5	1	4	2	2	1	2	4	9	12	12	16	17	14	12	8	7	6	9	9	5.5	17.1
Dir	142	133	133	342	25	20	36	319	229	240	259	358	11	18	73	88	65	66	72	72	57	56	36	54	62	65
24 Spd	6	5	6	5	4	4	10	9	4	12	12	3	7	11	12	11	14	15	13	9	8	8	11	14	7.3	14.6
Dir	35	27	21	32	65	130	109	104	85	116	112	40	354	12	36	35	102	94	89	77	82	81	88	96	76	94
25 Spd	18	14	7	5	2	4	4	9	11	11	12	8	7	8	10	9	15	13	17	16	17	18	12	7	9.7	18.4
Dir	109	101	85	48	2	66	141	116	105	108	114	101	89	24	30	91	116	102	104	102	109	111	106	103	99	111
26 Spd	7	6	7	6	7	3	3	4	8	7	6	8	8	9	13	16	16	18	18	16	15	9	8	8	8.8	17.9
Dir	83	87	104	81	88	110	40	84	115	106	46	34	61	81	111	116	105	103	105	106	107	89	87	71	95	105
27 Spd	6	10	10	9	10	11	12	12	13	11	14	15	13	6	6	7	12	12	9	3	2	4	3	5	7.9	15.0
Dir	98	100	113	138	137	128	122	129	122	112	114	119	109	60	52	71	115	109	97	71	56	28	348	44	108	119
28 Spd	4	4	2	2	3	2	2	4	3	2	5	8	9	10	10	10	10	8	6	1	11	1	3	3	3.1	11.2
Dir	51	43	50	170	237	185	156	128	99	34	349	10	17	16	29	20	22	27	34	342	115	198	161	199	39	115
29 Spd	2	3	2	3	1	1	3	3	3	3	1	3	5	9	12	6	5	2	6	9	9	10	12	11	1.8	12.4
Dir	302	80	119	298	350	67	34	177	301	39	50	214	275	309	285	197	162	148	75	128	187	164	172	184	187	285
30 Spd	10	11	10	11	11	9	10	10	15	17	25	29	36	40	34	37	37	33	31	33	29	27	21	15	19.6	40.5
Dir	163	151	147	144	144	143	146	156	195	212	234	241	241	236	236	241	241	236	220	226	224	218	211	206	220	236
31 Spd	17	16	17	20	17	15	15	19	23	22	27	30	24	15	17	19	29	22	16	17	15	19	20	20	18.8	30.0
Dir	207	206	206	206	209	202	216	221	216	218	236	244	249	258	255	240	227	240	257	213	222	209	215	220	225	244
Spd	3.4	3.0	3.0	2.1	2.4	2.6	2.6	3.0	2.1	1.7	0.5	1.2	2.7	4.1	4.0	3.8	3.0	2.9	4.0	4.2	4.1	3.2	2.9	3.1	Diurnal Average	
Dir	112	98	87	88	107	136	131	132	145	136	172	346	356	359	17	34	62	62	70	93	106	109	113	110	Diurnal Maximum	
Spd	19.3	18.1	17.2	19.8	21.1	22.4	23.1	22.5	23.2	21.7	26.6	30.0	36.2	40.5	33.7	37.4	36.8	33.5	31.1	33.4	28.6	27.3	20.8	19.9	Diurnal Maximum	
Dir	99	103	104	206	117	120	122	124	216	218	236	244	241	236	236	241	241	236	220	226	224	218	211	220		
Maximum Speed Value: 40 km/h on Mar 30 14:00																								Hours in Service: 744		
Maximum Daily Speed Average: 19.6 km/h on Mar 30																								Hours of Data: 744		
Maximum Diurnal Speed Average: 4.2 km/h at hour 20																								Hours of Missing Data: 0		
Minimum Speed Value: 0 km/h on Mar 7 16:00																								Percent Operational Time: 100.0		
Minimum Daily Speed Average: 0.8 km/h on Mar 7																										
Minimum Diurnal Speed Average: 0.5 km/h at hour 11																										
Monthly Average Velocity: 2.11 km/h 86.3 deg																										
Speed Percentiles: P ₁ = 0.7 P ₁₀ = 2.3 Q ₁ = 4.2 Median = 7.1 Q ₃ = 12.0 P ₉₀ = 16.7 P ₉₉ = 33.3																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										
Frequency Distribution																										
Speed Range (km/h)																										
Direction	0 to 5		5 to 11		11 to 19		19 to 28		28 to 38		> 38		Total													
North	31		68		13		0		0		0		112													
NorthEast	34		56		59		3		0		0		152													
East	24		55		53		2		0		0		134													
SouthEast	22		32		17		8		0		0		79													
South	43		35		6		1		0		0		85													
SouthWest	36		36		14		16		11		1		114													
West	19		4		5		1		0		0		29													
NorthWest	21		15		3		0		0		0		39													
Total	230		301		170		31		11		1		744													

Wind Rose

Wind Speed (WS) (km/h)
Portable-Bonanza - March 2011



Wind Speed Classes (km/h)



**PASZA**

Peace Air Shed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)**Portable-Bonanza - March 2011**

Maximum Speed: 41 km/h on Mar 30 14:00																				Maximum Daily Speed Average: 22.7 km/h on Mar 30										Hours in Service: 744	
Minimum Speed: 1 km/h on Mar 6 10:00																				Minimum Daily Speed Average: 3.4 km/h on Mar 7										Hours of Data: 744	
Maximum Diurnal Speed Average: 11.9 km/h at hour 17																				Minimum Diurnal Speed Average: 7.1 km/h at hour 4										Hours of Missing Data: 0	
Monthly Average Speed: 9.11 km/h																				Percentiles: P ₁ = 1.7 P ₁₀ = 3.2 Q ₁ = 4.8 Median = 7.4 Q ₃ = 12.2 P ₉₀ = 17.0 P ₉₉ = 33.4										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Mar	8	6	7	5	5	6	4	5	5	6	6	4	4	5	6	3	2	3	2	4	7	5	5	6	5.0	8.4					
2-Mar	3	2	2	3	3	3	3	3	4	6	8	8	11	14	15	17	9	5	5	6	6	5	4	5	6.3	17.2					
3-Mar	6	5	5	6	5	5	6	5	5	6	5	5	3	3	5	5	5	4	6	3	3	5	3	2	4.6	6.1					
4-Mar	5	5	4	6	5	5	3	2	2	3	4	6	9	10	9	12	13	12	12	17	12	8	7	7	7.5	16.9					
5-Mar	8	10	8	9	9	8	9	10	9	9	9	9	9	10	12	13	12	10	10	6	6	6	5	6	8.7	13.2					
6-Mar	4	4	7	5	5	4	6	4	2	1	3	4	4	7	7	6	5	5	6	5	4	8	9	7	5.1	9.4					
7-Mar	6	5	3	3	4	3	2	3	3	2	2	2	3	3	4	2	2	2	3	3	5	7	6	4	3.4	7.2					
8-Mar	3	3	2	3	4	5	4	4	2	2	2	3	7	7	3	8	5	3	7	9	7	3	6	6	4.4	9.0					
9-Mar	4	3	6	5	5	4	6	8	10	7	6	5	6	8	10	13	15	15	19	20	19	17	11	14	9.9	20.3					
10-Mar	13	13	15	12	13	15	12	13	16	13	16	15	13	11	12	11	8	7	9	8	7	7	7	6	11.4	15.7					
11-Mar	6	7	8	8	16	20	23	23	20	17	14	12	10	10	13	14	14	15	19	16	13	6	6	7	13.3	23.1					
12-Mar	6	4	3	4	3	4	3	4	3	3	4	5	5	6	5	3	2	2	2	4	6	6	9	13	4.7	12.6					
13-Mar	6	6	4	5	4	3	4	8	8	8	10	10	10	12	17	17	12	10	11	16	13	15	9	6	9.2	17.1					
14-Mar	8	10	11	9	6	7	10	11	10	8	10	11	12	10	9	6	6	5	4	5	3	4	5	6	7.7	11.7					
15-Mar	6	6	4	6	8	8	4	7	6	8	6	12	14	12	13	12	10	10	9	8	6	7	7	7	8.2	14.3					
16-Mar	7	3	6	7	5	6	5	7	7	5	4	6	7	9	10	11	11	8	4	6	3	4	4	11	6.5	11.3					
17-Mar	12	8	6	4	6	20	16	17	14	20	20	17	11	17	26	22	19	18	11	7	9	11	8	7	13.6	26.2					
18-Mar	8	11	8	4	6	4	4	5	7	6	6	5	8	6	3	4	3	3	6	4	3	4	5	3	5.2	10.6					
19-Mar	6	3	4	3	3	2	2	2	3	3	3	3	6	8	11	13	13	13	10	7	5	4	7	7	5.8	13.5					
20-Mar	8	10	13	13	11	10	10	12	12	15	15	16	15	17	15	18	20	21	15	17	16	15	13	16	14.4	20.8					
21-Mar	18	13	15	13	13	11	7	10	10	7	10	16	17	15	19	18	17	16	16	15	16	15	16	18	14.3	18.9					
22-Mar	19	18	17	19	21	22	22	20	8	8	8	5	4	6	5	4	8	8	7	9	15	12	10	10	11.9	22.4					
23-Mar	9	6	6	3	5	2	4	3	2	1	2	4	10	12	15	17	18	14	12	9	7	6	9	9	7.7	17.6					
24-Mar	6	5	6	5	4	4	10	9	5	12	12	5	7	11	12	11	14	15	13	10	8	8	11	14	9.1	14.8					
25-Mar	18	14	7	6	5	5	5	9	11	11	12	8	7	8	10	12	15	14	17	16	18	18	12	8	11.1	18.5					
26-Mar	7	6	7	7	7	4	4	5	8	7	6	8	9	10	13	16	16	18	18	17	15	10	8	8	9.6	18.1					
27-Mar	6	10	10	9	10	11	12	12	13	11	14	15	13	7	7	7	12	12	9	4	4	5	4	5	9.2	15.0					
28-Mar	4	4	3	6	3	2	3	5	4	2	5	8	9	10	10	10	10	8	6	4	11	5	4	5	5.8	11.5					
29-Mar	5	4	3	4	2	4	5	3	5	4	2	3	5	9	13	8	5	4	7	10	9	10	12	11	6.2	13.3					
30-Mar	10	11	10	11	11	10	10	11	15	18	26	29	36	41	34	37	37	34	31	34	29	27	21	15	22.7	40.6					
31-Mar	18	16	17	20	17	15	16	19	23	22	27	30	24	15	17	19	29	25	18	17	15	19	20	20	19.9	30.1					
8.2 7.5 7.4 7.1 7.3 7.5 7.6 8.3 8.1 8.2 8.9 9.4 10.0 10.6 11.8 11.7 11.9 11.0 10.3 10.1 9.7 9.2 8.5 8.5																									Diurnal Average						
19.5 18.1 17.3 19.9 21.2 22.4 23.1 22.5 23.2 21.7 26.8 30.1 36.3 40.6 33.7 37.4 36.8 33.8 31.2 33.5 28.6 27.3 20.9 20.0																									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

Portable-Bonanza - March 2011

Maximum Value: 93.5 deg on Mar 7 16:00																		Hours in Service: 744							
Minimum Value: 2.1 deg on Mar 11 06:00																		Hours of Data: 744							
Percentiles: P ₁ = 2.7 P ₁₀ = 4.5 Q ₁ = 6.4 Median = 11.1 Q ₃ = 27.5 P ₉₀ = 53.0 P ₉₉ = 84.9																		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-Mar	5	5	6	14	16	7	19	15	9	9	8	20	16	10	9	17	43	13	52	21	25	37	19	12	51.9
2-Mar	44	74	67	59	59	74	76	33	28	13	6	11	30	5	6	5	25	43	10	9	12	7	30	11	76.0
3-Mar	11	19	12	10	8	7	7	11	5	7	6	11	15	29	13	9	13	19	24	38	17	18	17	31	38.2
4-Mar	13	11	6	6	8	4	9	53	35	35	57	6	4	5	15	8	20	7	8	6	20	7	8	13	56.6
5-Mar	15	7	9	7	8	7	4	4	6	7	4	3	3	5	6	5	5	7	8	15	11	8	10	17	16.8
6-Mar	12	18	7	64	63	36	13	36	52	13	11	23	13	13	4	5	12	32	11	22	72	18	22	28	72.0
7-Mar	8	53	48	44	10	70	76	39	32	67	28	17	37	24	11	93	39	63	49	23	8	15	52	85	93.5
8-Mar	46	74	67	70	42	26	37	34	39	45	45	57	7	12	5	68	25	19	28	67	11	73	86	38	86.1
9-Mar	79	37	14	40	45	50	16	18	10	15	23	53	18	5	9	6	4	6	5	5	4	5	6	4	79.4
10-Mar	4	5	4	7	10	8	15	6	5	6	5	6	4	6	7	5	11	8	8	6	29	11	19	19	28.8
11-Mar	19	24	11	9	3	2	2	4	3	4	7	9	11	13	9	7	8	7	6	11	10	25	10	31	30.9
12-Mar	44	40	39	30	33	72	59	35	62	53	25	18	27	12	18	19	36	85	93	49	36	57	65	64	92.7
13-Mar	49	12	17	11	50	62	38	16	7	7	5	6	7	6	11	6	34	28	10	6	5	10	7	7	62.3
14-Mar	7	7	6	9	17	16	8	20	13	15	5	5	3	4	6	8	15	19	17	17	57	13	47	10	56.6
15-Mar	10	17	12	37	7	11	35	9	22	21	26	22	12	7	5	7	7	5	3	8	11	6	7	5	37.2
16-Mar	9	24	6	6	7	7	23	7	6	9	74	8	8	5	7	4	4	5	37	34	62	38	85	36	84.9
17-Mar	7	60	13	68	83	13	5	5	15	8	7	9	13	13	4	5	4	9	4	31	5	6	8	13	82.6
18-Mar	8	5	62	88	19	38	15	7	23	13	13	29	12	19	78	37	34	37	27	62	63	52	85	83	88.0
19-Mar	29	77	38	61	92	43	27	46	63	23	24	29	10	9	6	10	23	4	4	11	16	31	7	16	92.2
20-Mar	6	6	4	4	6	10	5	6	6	5	3	6	5	5	4	6	3	3	4	4	4	4	6	6	9.9
21-Mar	5	9	12	17	11	13	30	12	12	44	26	13	14	11	12	9	11	7	9	10	10	10	10	10	43.7
22-Mar	7	4	4	4	4	3	2	3	35	14	6	17	17	8	15	49	8	8	17	20	4	7	7	5	49.3
23-Mar	8	6	35	65	25	77	45	44	12	20	24	46	15	4	39	20	14	11	9	12	13	21	11	6	77.3
24-Mar	11	7	5	6	30	63	8	9	28	7	7	53	22	7	6	11	8	9	10	12	11	11	11	10	62.8
25-Mar	5	8	16	35	81	41	50	4	8	9	5	9	28	11	7	41	5	10	6	9	6	6	8	14	81.4
26-Mar	14	18	13	14	36	38	23	37	9	10	17	11	25	23	6	6	6	7	8	6	9	11	9	12	38.1
27-Mar	23	13	15	8	5	7	4	4	3	6	5	4	11	27	27	23	7	10	9	50	81	43	58	6	80.5
28-Mar	7	26	51	81	63	24	25	7	24	52	17	7	8	6	8	5	5	7	17	79	24	84	68	51	83.6
29-Mar	69	59	69	38	78	85	55	38	73	27	90	29	33	5	21	42	19	75	33	19	10	8	7	8	89.9
30-Mar	9	7	6	4	5	5	6	9	11	9	4	5	3	4	3	3	3	8	3	5	3	3	5	6	10.8
31-Mar	5	4	4	4	4	5	8	5	3	2	7	3	3	10	10	5	8	30	28	7	13	5	3	4	29.8
79.4 77.0 68.7 88.0 92.2 85.5 76.3 52.6 73.2 66.6 89.9 56.7 37.5 28.6 77.8 93.5 43.4 84.6 92.7 78.8 80.5 83.6 86.1 84.7																									

PASZA

Valleyview Station

Monthly Summary Tables, Graphs and Roses

**PASZA**

Peace Air Shed Zone Association

Hourly Averages

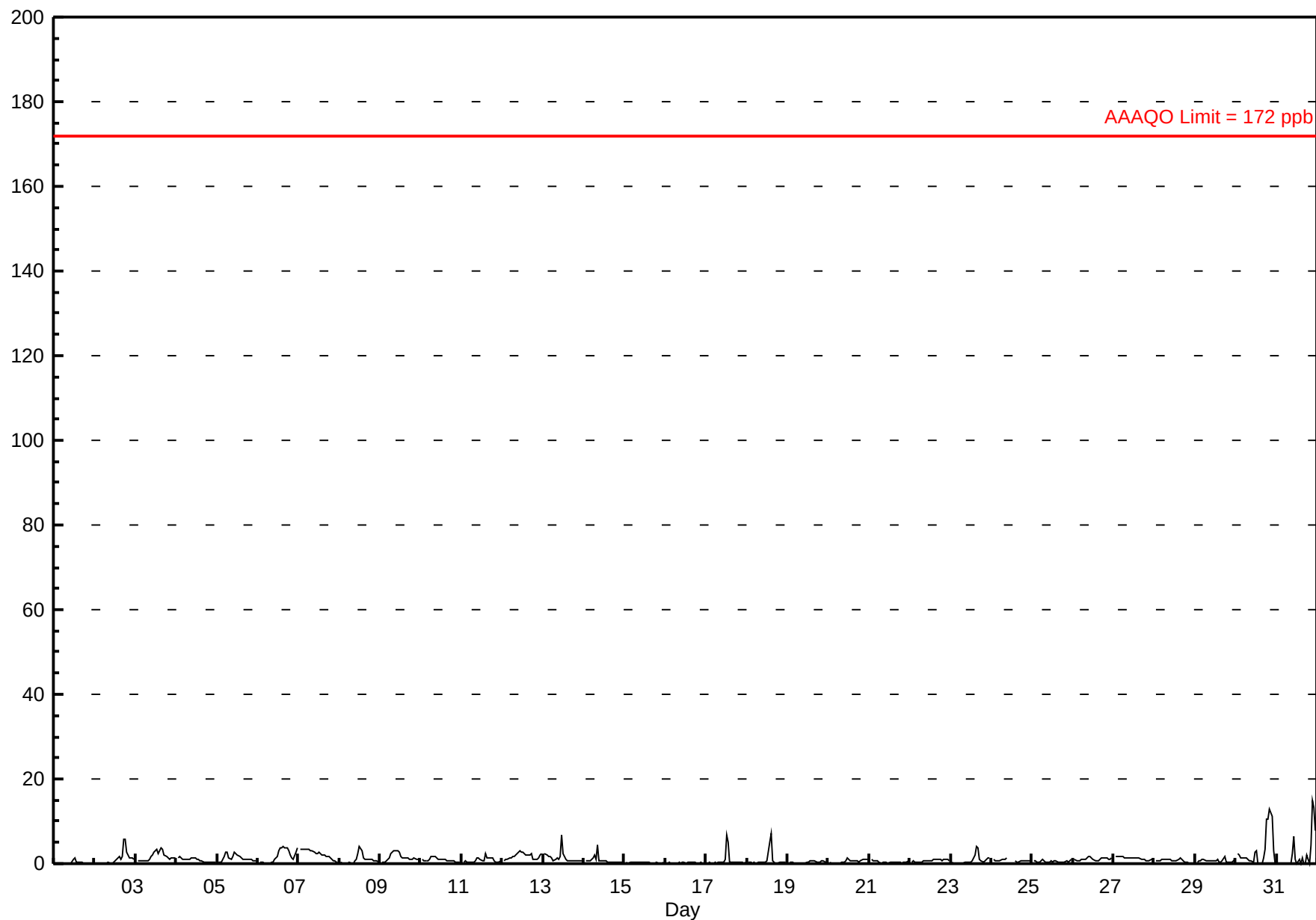
Sulphur Dioxide (SO₂) - ppb**Valleyview - March 2011**

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 14.9 ppb on Mar 31 22:00 Maximum Daily Average: 3.1 ppb on Mar 30																				Hours in Service: 744 Hours of Data: 709 Hours of Missing Data: 35 Hours of Calibration: 34 Percent Operational Time: 99.9						
Minimum Value: 0 ppb on Mar 1 20:00 Maximum Diurnal Average: 1.5 ppb at hour 13 Monthly Average: 1.05 ppb										Minimum Daily Average: 0.2 ppb on Mar 16 Minimum Diurnal Average: 0.7 ppb at hour 4 Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.3 Median = 0.7 Q ₃ = 1.2 P ₉₀ = 2.3 P ₉₉ = 6.1																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	A	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0.2	1.5
2-Mar	A	0	0	0	0	0	0	0	0	0	0	0	1	1	2	1	2	6	6	3	1	1	1	1	1.1	5.9
3-Mar	A	1	1	1	1	1	1	1	1	2	2	3	3	2	3	4	3	2	2	1	1	1	1	1	1.7	3.6
4-Mar	A	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.8	1.8
5-Mar	A	0	0	1	2	3	3	1	1	2	3	3	2	2	1	1	1	1	1	1	1	1	1	1	1.3	2.9
6-Mar	A	0	0	0	0	0	0	0	0	0	1	2	3	4	4	4	4	4	3	2	1	1	3	4	1.7	3.9
7-Mar	A	3	3	3	3	3	3	3	3	3	2	2	3	2	2	2	2	2	2	1	1	1	0	0	2.2	3.4
8-Mar	A	0	0	0	0	0	0	0	0	1	1	2	4	3	1	1	1	1	1	1	1	1	1	0	0.9	4.0
9-Mar	A	0	0	0	1	1	3	3	3	3	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1.5	3.2
10-Mar	A	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0.9	1.9
11-Mar	A	0	1	0	0	0	0	0	1	1	1	1	1	1	2	1	1	1	1	1	0	0	0	1	0.8	2.3
12-Mar	A	1	1	1	1	1	2	2	2	2	3	3	3	2	2	2	2	2	1	1	1	1	2	2	1.8	2.9
13-Mar	A	2	2	2	2	1	1	1	1	1	2	7	2	1	1	1	1	1	1	1	1	1	1	1	1.4	6.9
14-Mar	A	1	1	1	1	1	2	1	4	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.8	4.5
15-Mar	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-Mar	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-Mar	A	0	0	0	0	0	0	0	0	0	0	1	7	5	0	0	0	0	0	0	0	0	0	0	0.8	6.6
18-Mar	A	0	0	0	0	0	0	0	0	0	0	0	1	5	7	1	0	0	0	0	0	0	0	0	0.8	7.2
19-Mar	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	1	1	0	0	0.4	0.8
20-Mar	A	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0.6	1.2
21-Mar	A	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.4	0.9
22-Mar	A	1	1	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1
23-Mar	A	0	0	0	0	0	0	0	0	0	0	0	0	1	2	4	4	1	1	0	1	1	1	1	0.8	4.1
24-Mar	A	1	1	1	1	1	1	1	1	1	C	C	C	M	1	0	0	1	1	1	1	1	1	1	0.7	1.2
25-Mar	A	1	1	0	0	1	1	1	0	0	0	1	0	1	1	0	0	0	0	0	1	0	1	1	0.5	0.9
26-Mar	A	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.7
27-Mar	A	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.3	1.7
28-Mar	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.7	1.2
29-Mar	A	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	2	0	0	0	0	0	1	0.7	1.6
30-Mar	A	2	2	1	1	1	1	1	1	1	0	3	3	0	0	0	2	3	10	11	13	11	3	0	3.1	12.8
31-Mar	A	0	0	0	0	0	0	0	0	2	7	1	0	1	0	1	0	0	2	0	5	15	13	8	2.4	14.9
--		0.7	0.7	0.7	0.7	0.8	0.9	0.8	0.9	1.0	1.2	1.4	1.5	1.4	1.3	1.1	1.0	1.1	1.3	1.0	1.2	1.4	1.2	1.0	Diurnal Average	
--		3.3	3.3	3.4	3.3	3.3	3.3	3.2	4.5	2.9	6.6	6.9	6.6	5.1	7.2	4.1	3.8	5.9	10.5	10.7	12.8	14.9	13.4	7.8	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																										

Hourly Averages

Sulphur Dioxide (SO₂) - ppb

Valleyview - March 2011



**PASZA**

Peace Air Shed Zone Association

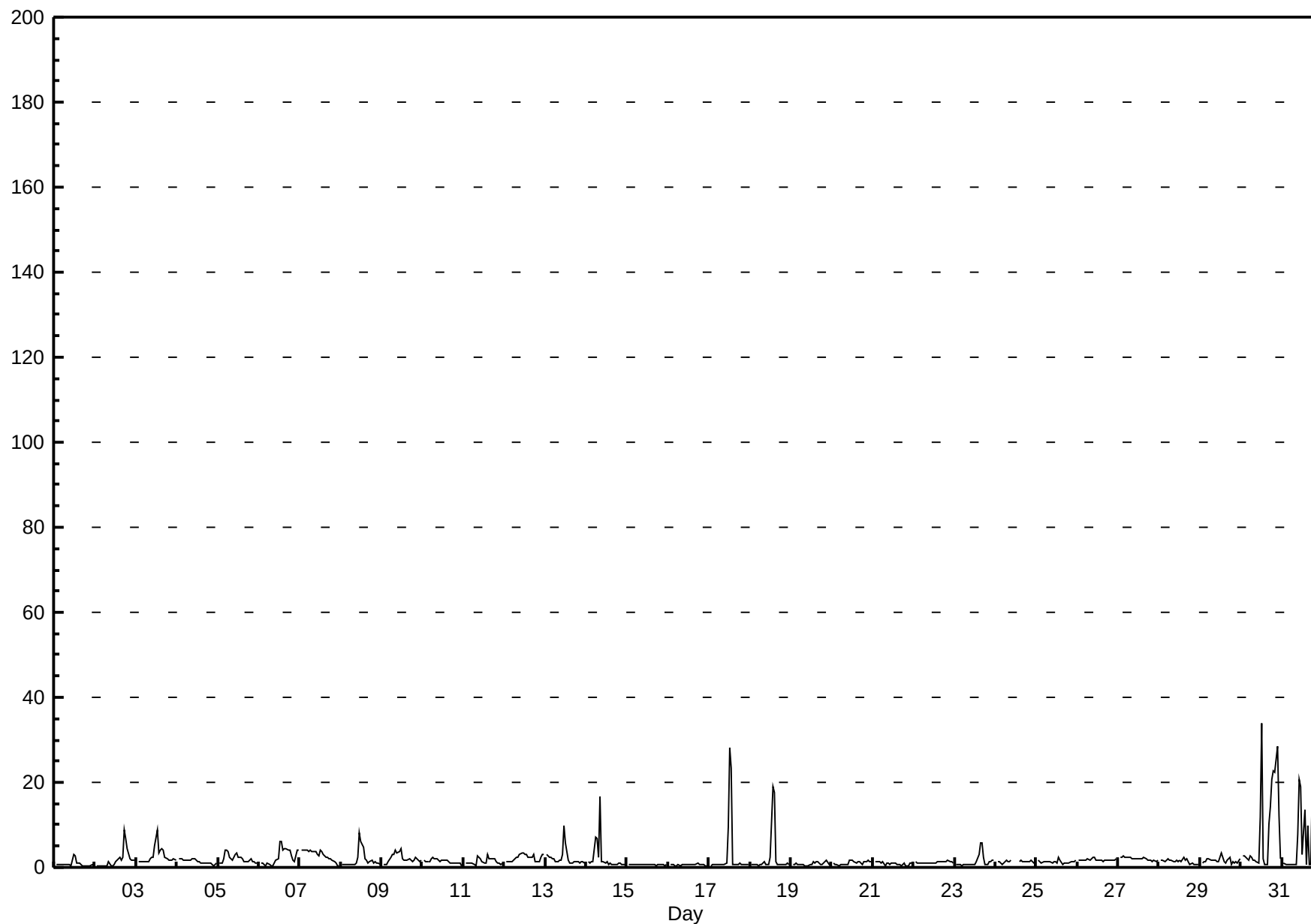
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb**Valleyview - March 2011**

Maximum Value: 33.9 ppb on Mar 30 13:00																				Maximum Daily Average: 8.8 ppb on Mar 30					Hours in Service: 744	
Minimum Value: 0 ppb on Mar 2 05:00																				Minimum Daily Average: 0.7 ppb on Mar 16					Hours of Data: 709	
Maximum Diurnal Average: 4.4 ppb at hour 13																				Minimum Diurnal Average: 1.2 ppb at hour 4					Hours of Missing Data: 35	
Monthly Average: 2.15 ppb																				Percentiles: P ₁ = 0.2 P ₁₀ = 0.6 Q ₁ = 0.8 Median = 1.3 Q ₃ = 1.9 P ₉₀ = 3.5 P ₉₉ = 22.1					Hours of Calibration: 34	
																				Percent Operational Time: 99.9						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	A	1	1	1	1	1	1	1	1	1	0	3	3	1	1	1	0	0	0	0	0	0	1	0	0.8	3.0
2-Mar	A	0	0	0	0	0	0	0	1	0	0	1	1	2	2	2	2	9	7	4	2	2	2	2	1.8	8.9
3-Mar	A	1	1	1	1	1	1	1	2	2	2	5	9	3	4	5	4	3	2	2	2	2	2	2	2.6	8.8
4-Mar	A	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	0	1	1	1.4	2.1
5-Mar	A	1	1	2	4	4	4	2	2	2	3	3	2	2	2	1	1	1	1	2	1	1	1	1	2.1	4.1
6-Mar	A	1	1	1	0	1	1	0	0	1	2	2	6	6	4	5	4	4	4	3	2	2	4	4	2.5	6.1
7-Mar	A	4	4	4	4	4	4	4	4	4	3	3	4	4	3	3	3	2	2	2	2	1	1	0	2.8	4.1
8-Mar	A	1	1	1	1	1	1	1	1	1	2	8	6	5	2	2	1	1	2	1	1	1	1	1	1.7	8.2
9-Mar	A	1	1	1	2	2	3	3	4	3	4	5	2	2	2	2	2	2	1	2	2	2	1	2	2.1	4.5
10-Mar	A	2	1	1	1	2	2	2	2	2	1	2	2	2	2	1	1	1	1	1	1	1	1	0	1.4	2.4
11-Mar	A	1	1	1	1	1	1	0	3	3	2	1	1	1	3	2	2	2	2	1	1	1	1	1	1.4	3.0
12-Mar	A	1	1	1	1	2	2	2	2	3	3	4	3	3	3	2	2	3	1	1	1	2	3	3	2.3	3.5
13-Mar	A	3	2	2	2	2	1	2	2	2	3	10	6	2	1	1	1	1	1	1	1	1	1	1	2.2	9.7
14-Mar	A	1	1	1	1	7	7	2	17	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2.2	16.6
15-Mar	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	1	0.7	0.7
16-Mar	A	1	1	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0.7	0.9
17-Mar	A	0	1	1	1	1	1	1	1	1	1	9	28	24	1	1	1	1	1	1	1	1	1	1	3.3	28.1
18-Mar	A	1	1	1	1	0	1	1	1	1	1	1	2	19	18	1	1	1	1	1	1	1	1	1	2.4	19.0
19-Mar	A	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	2	1	1	0.9	1.6
20-Mar	A	1	1	1	0	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	2	1	1	1.1	1.8
21-Mar	A	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0	1	0	0	1	1	1	0.9	1.5
22-Mar	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1.2	1.8
23-Mar	A	1	1	1	0	1	1	1	1	1	1	1	1	1	3	6	6	2	1	1	1	1	2	2	1.5	5.9
24-Mar	A	1	1	1	1	1	2	1	1	2	C	C	C	M	1	2	1	1	1	1	1	2	1	1	1.3	1.8
25-Mar	A	2	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	2	1.3	2.2
26-Mar	A	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	1.8	2.2
27-Mar	A	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	1	2	2.0	2.6
28-Mar	A	2	2	1	2	2	2	2	2	1	2	1	2	1	2	2	2	1	1	1	1	1	1	1	1.4	2.2
29-Mar	A	1	1	1	2	2	2	2	2	2	1	1	3	2	1	1	2	2	1	1	1	1	1	2	1.6	3.3
30-Mar	A	3	3	2	2	3	2	2	2	1	1	12	34	2	1	1	10	14	21	23	22	28	12	2	8.8	33.9
31-Mar	A	1	1	1	1	1	1	1	1	8	21	19	3	14	1	10	1	1	17	1	22	27	29	19	8.5	28.9
--	1.3	1.2	1.2	1.3	1.6	1.6	1.3	2.0	1.7	2.3	3.5	4.4	3.7	2.2	2.0	2.0	2.1	2.6	2.0	2.6	2.9	2.5	1.9	Diurnal Average		
--	4.1	4.0	3.9	4.1	7.2	6.9	3.6	16.6	7.6	20.6	19.1	33.9	23.5	17.6	9.7	10.3	14.1	20.5	22.6	22.4	28.3	28.9	18.8	Diurnal Maximum		
C - Calibration		M - Maintenance					A - Automated Daily Zero Span																			

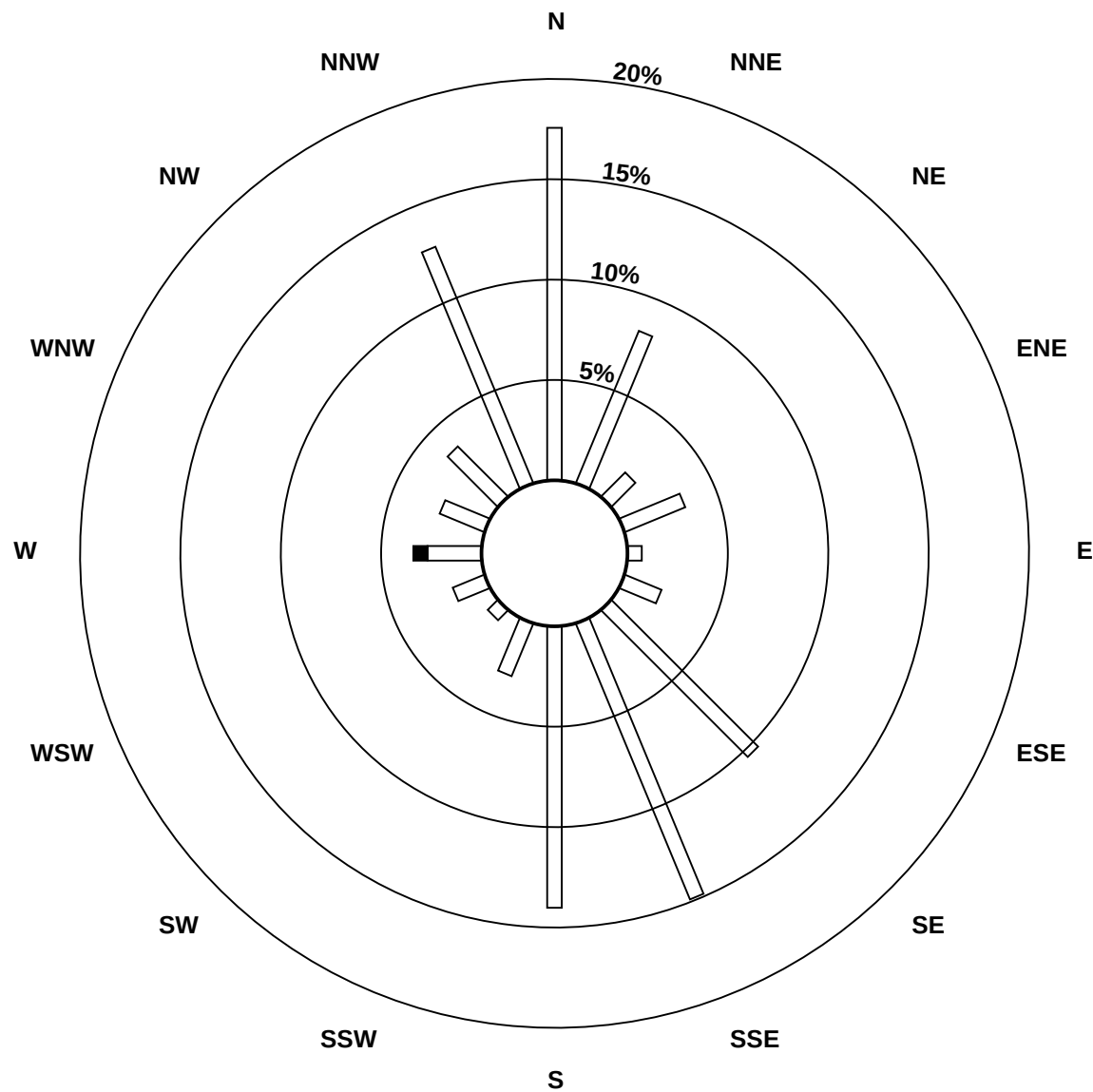
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Valleyview - March 2011

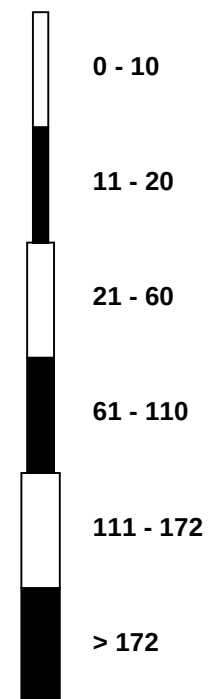


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Valleyview - March 2011

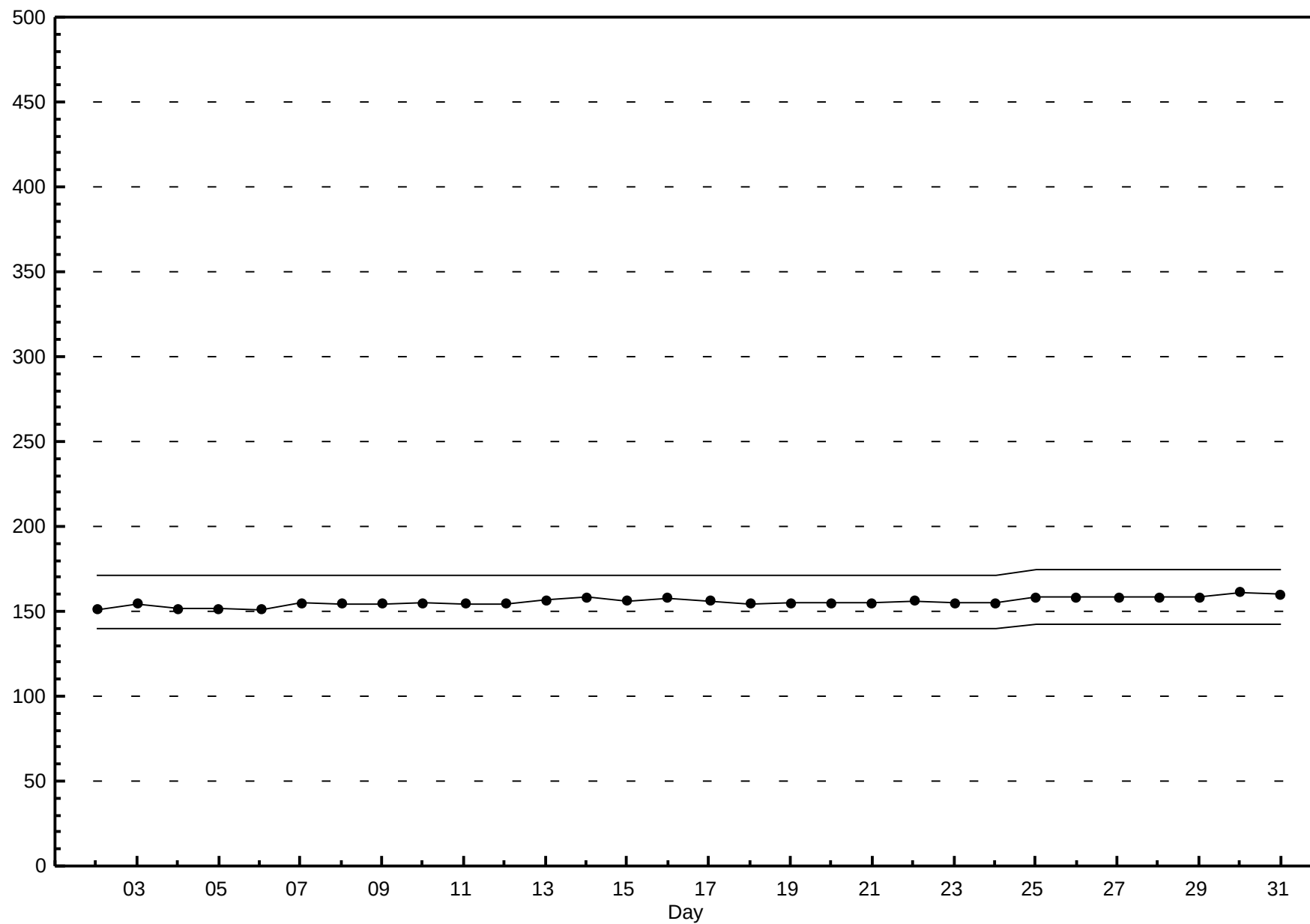


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Valleyview - March 2011



**PASZA**

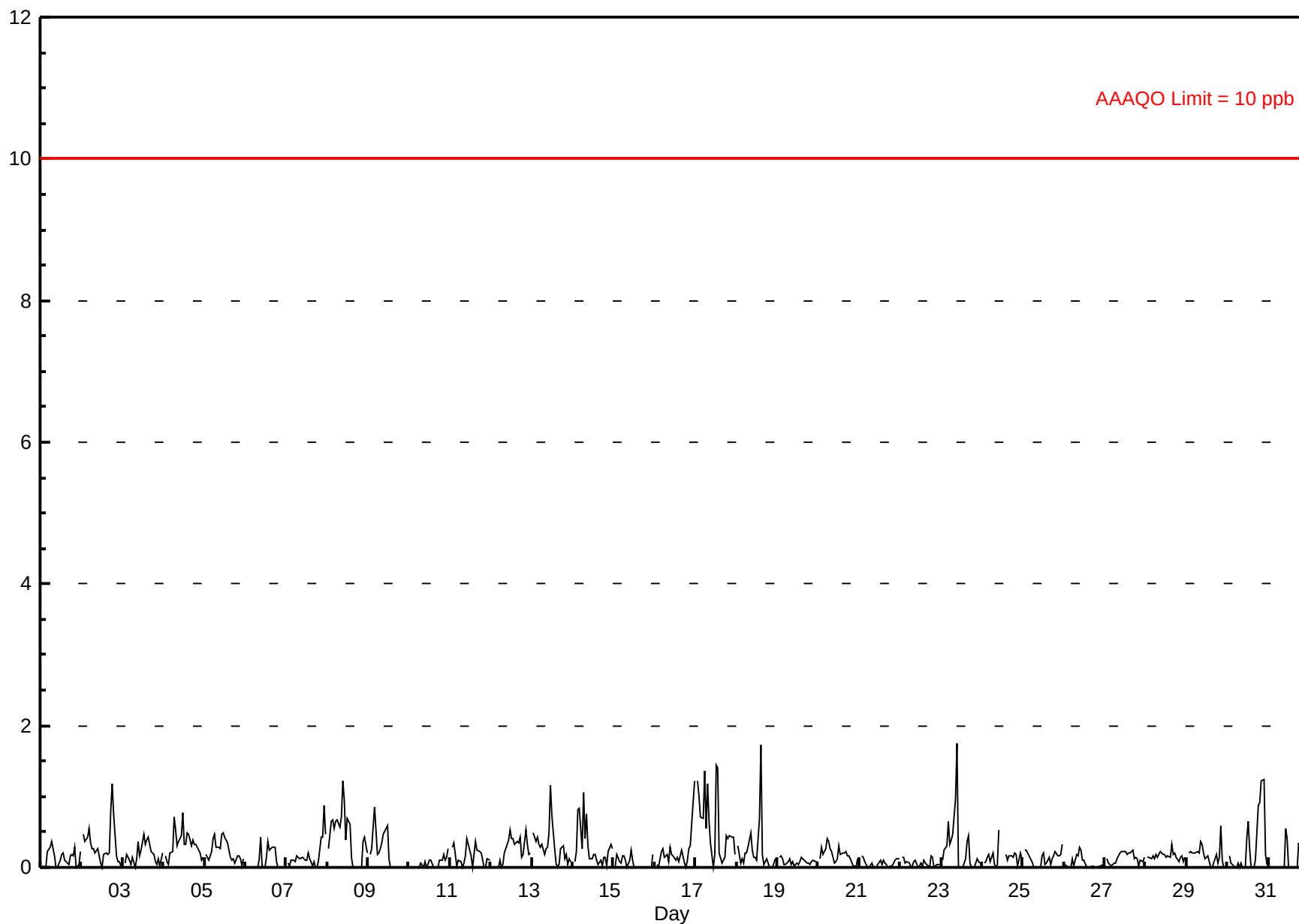
Peace Air Shed Zone Association

Hourly Averages**Hydrogen Sulphide (H₂S) - ppb****Valleyview - March 2011**

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 744						
Maximum Value: 1.8 ppb on Mar 23 10:00																				Maximum Daily Average: 0.6 ppb on Mar 17		Hours of Data: 710				
Minimum Value: 0 ppb on Mar 1 03:00																				Minimum Daily Average: 0.1 ppb on Mar 10		Hours of Missing Data: 34				
Maximum Diurnal Average: 0.3 ppb at hour 10																				Minimum Diurnal Average: 0.1 ppb at hour 17		Hours of Calibration: 33				
Monthly Average: 0.20 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.5 P ₉₉ = 1.2		Percent Operational Time: 99.9				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	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
2-Mar	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0.3	1.2
3-Mar	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
4-Mar	A	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8
5-Mar	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
6-Mar	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
7-Mar	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.2	0.9
8-Mar	A	0	1	1	1	1	1	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0.4	1.2
9-Mar	A	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8
10-Mar	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
11-Mar	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
12-Mar	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0.2	0.5
13-Mar	A	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	1.2
14-Mar	A	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.1
15-Mar	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
16-Mar	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.2	1.2
17-Mar	A	1	1	1	1	1	1	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0.6	1.5
18-Mar	A	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0.2	1.7
19-Mar	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
20-Mar	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
21-Mar	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
22-Mar	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
23-Mar	A	0	0	0	1	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.8
24-Mar	A	0	0	0	0	0	0	0	0	0	1	C	C	M	0	0	0	0	0	0	0	0	0	0	0.1	0.5
25-Mar	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
26-Mar	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
27-Mar	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
28-Mar	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
29-Mar	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.2	0.6
30-Mar	A	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1	1	0	0	0.3	1.2
31-Mar	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	0.2	1.4
--		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Diurnal Average	
--		1.2	1.0	0.8	0.8	1.4	1.1	1.2	1.0	1.8	1.0	1.2	1.5	1.4	1.7	0.5	0.4	0.8	1.2	0.9	1.2	1.4	1.0	1.2	Diurnal Maximum	
C - Calibration		M - Maintenance										A - Automated Daily Zero Span														
Alberta Ambient Air Quality Objectives (AAAQO):		1-hr 10 ppb					24-hr 3 ppb																			

Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Valleyview - March 2011



Hourly Maximums

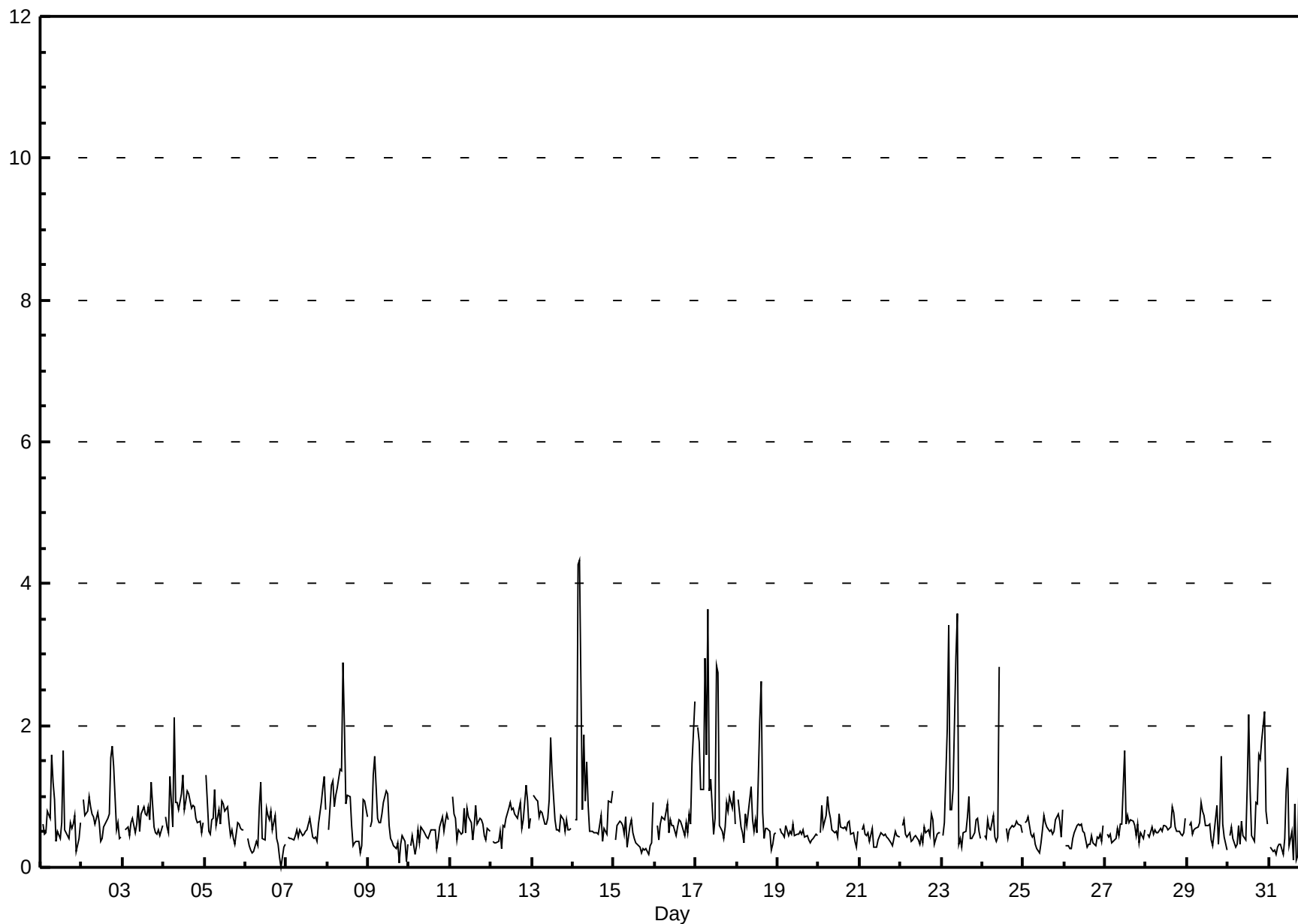
Hydrogen Sulphide (H₂S) - ppb

Valleyview - March 2011

Maximum Value: 4.3 ppb on Mar 14 05:00																				Maximum Daily Average: 1.3 ppb on Mar 17										Hours in Service: 744	
Minimum Value: 0 ppb on Mar 6 22:00																				Minimum Daily Average: 0.4 ppb on Mar 26										Hours of Data: 710	
Maximum Diurnal Average: 0.8 ppb at hour 10																				Minimum Diurnal Average: 0.5 ppb at hour 17										Hours of Missing Data: 34	
Monthly Average: 0.67 ppb																				Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.4 Median = 0.6 Q ₃ = 0.7 P ₉₀ = 1.1 P ₉₉ = 2.9										Hours of Calibration: 33	
																				Percent Operational Time: 99.9											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Mar	A	1	0	0	1	1	2	1	1	0	1	0	1	2	1	0	0	1	1	1	1	0	0	1	0.7	1.6					
2-Mar	A	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	2	2	1	1	1	0	0	0.8	1.7					
3-Mar	A	1	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	1	0.6	1.2					
4-Mar	A	1	1	0	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0.9	2.1					
5-Mar	A	1	0	0	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	1	1	1	1	1	0.7	1.3					
6-Mar	A	0	0	0	0	0	0	0	1	1	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0.5	1.2					
7-Mar	A	0	0	0	0	0	1	0	1	0	0	1	1	1	1	0	0	0	0	1	1	1	1	1	0.6	1.3					
8-Mar	A	1	1	1	1	1	1	1	1	3	2	1	1	1	1	0	0	0	0	0	0	1	1	1	0.9	2.9					
9-Mar	A	1	1	1	2	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.6	1.6					
10-Mar	A	0	0	0	0	1	0	1	1	0	0	0	0	1	1	1	0	0	1	1	1	1	1	1	0.5	0.8					
11-Mar	A	1	1	1	0	1	0	0	1	0	1	1	1	0	1	1	1	1	1	1	0	0	1	1	0.6	1.0					
12-Mar	A	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2					
13-Mar	A	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.8					
14-Mar	A	1	1	4	4	1	2	1	1	1	1	1	0	0	0	0	1	0	1	1	0	1	1	1	1.1	4.3					
15-Mar	A	0	1	1	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	0.9					
16-Mar	A	1	0	1	1	1	1	1	0	1	1	1	0	1	1	1	1	0	1	0	1	1	1	2	0.7	2.3					
17-Mar	A	2	2	1	1	3	2	4	1	1	0	1	3	3	1	1	0	1	1	1	1	1	1	1	1.3	3.6					
18-Mar	A	1	1	0	0	1	1	1	1	1	1	1	0	2	3	1	0	1	1	1	0	0	0	0	0.7	2.6					
19-Mar	A	1	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0.5	0.6					
20-Mar	A	0	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	0	0	0	0	1	0.6	1.0					
21-Mar	A	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.4	0.6					
22-Mar	A	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	0	0	0	0	0.5	0.8					
23-Mar	A	0	1	2	3	1	1	1	3	4	0	0	0	0	1	1	1	0	0	0	1	1	1	0	1.0	3.6					
24-Mar	A	0	0	1	1	1	1	0	0	0	3	C	C	M	1	0	1	1	1	1	1	1	1	0	0.6	2.8					
25-Mar	A	1	1	1	0	0	0	0	0	0	0	1	1	1	1	1	1	0	1	1	1	1	0	1	0.5	0.8					
26-Mar	A	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0.4	0.6					
27-Mar	A	0	0	0	0	0	0	1	0	1	1	2	1	1	1	1	1	1	0	1	0	0	0	1	0.6	1.7					
28-Mar	A	0	0	1	0	1	0	0	1	0	1	1	1	1	1	1	1	1	0	1	0	0	0	1	0.5	0.8					
29-Mar	A	1	1	0	1	1	1	1	1	1	1	1	1	1	0	0	0	1	0	1	2	1	0	0	0.6	1.6					
30-Mar	A	0	1	0	0	0	1	0	1	0	0	1	2	1	0	0	1	1	2	2	2	2	1	1	0.9	2.2					
31-Mar	A	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1	0	0	1	1	1	2	2	2	0.7	2.0					
--		0.6	0.6	0.7	0.8	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.8	0.6	0.6	0.5	0.6	0.6	0.6	0.6	0.7	0.6	0.7	Diurnal Average						
--		2.0	1.8	4.3	4.3	2.9	2.1	3.6	3.0	3.6	2.8	1.8	2.8	2.8	2.6	1.0	1.0	1.5	1.7	1.5	1.8	2.2	1.6	2.3	Diurnal Maximum						
C - Calibration		M - Maintenance						A - Automated Daily Zero Span																							

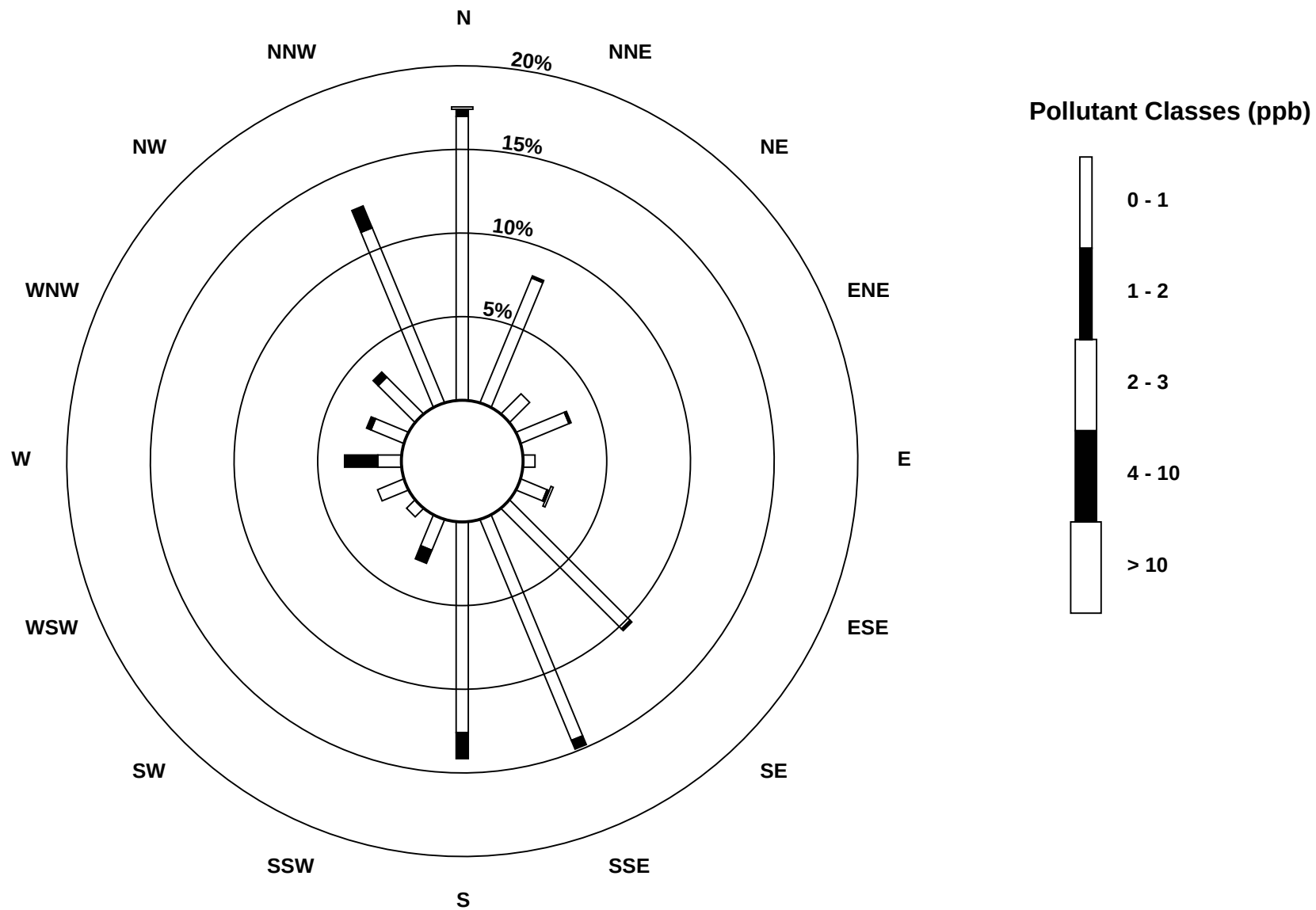
Hourly Maximums

Hydrogen Sulphide (H₂S) - ppb
Valleyview - March 2011



Pollutant Rose

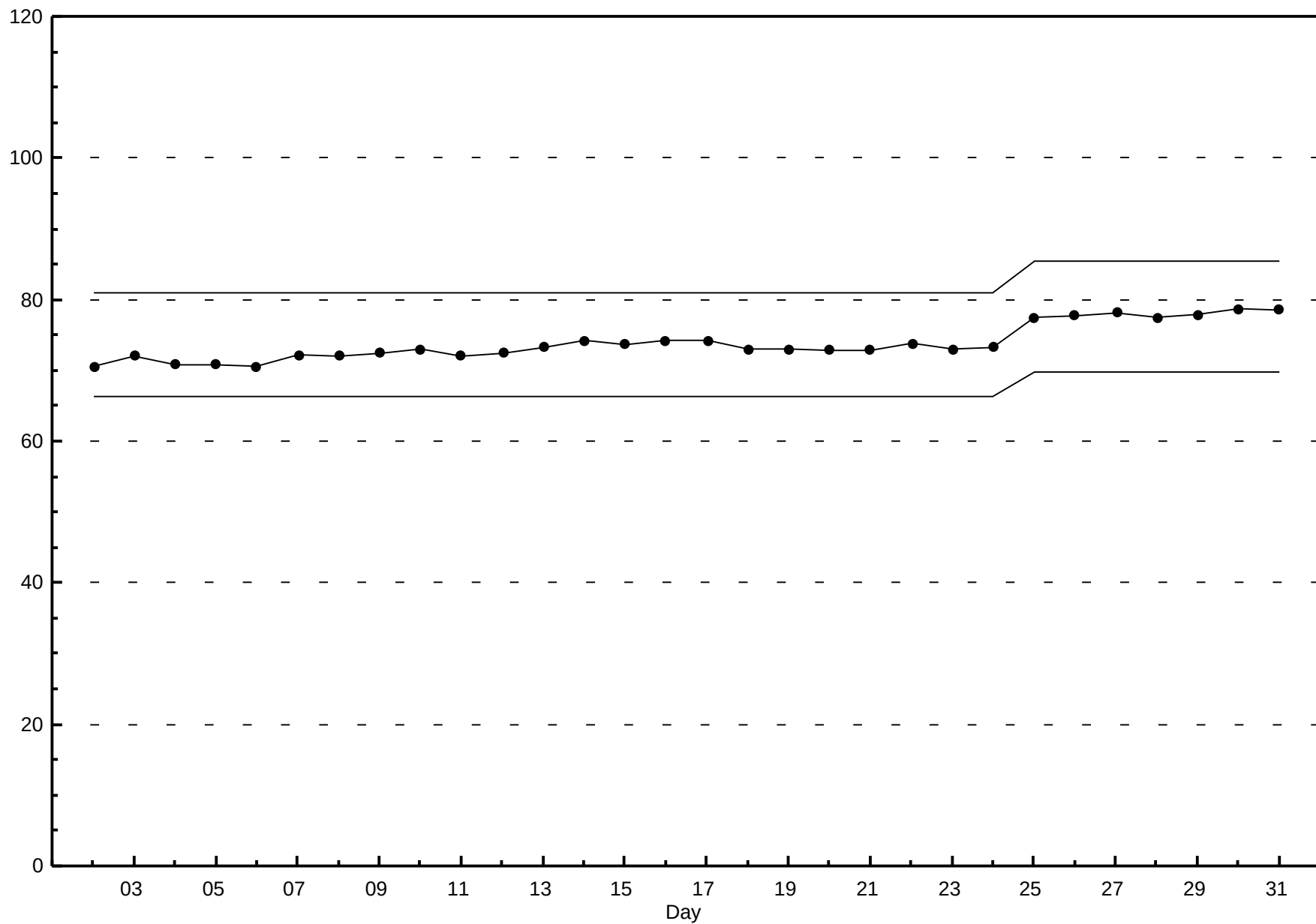
Hydrogen Sulphide (H₂S) - ppb
Valleyview - March 2011



Span Responses

Hydrogen Sulphide (H₂S)

Valleyview - March 2011

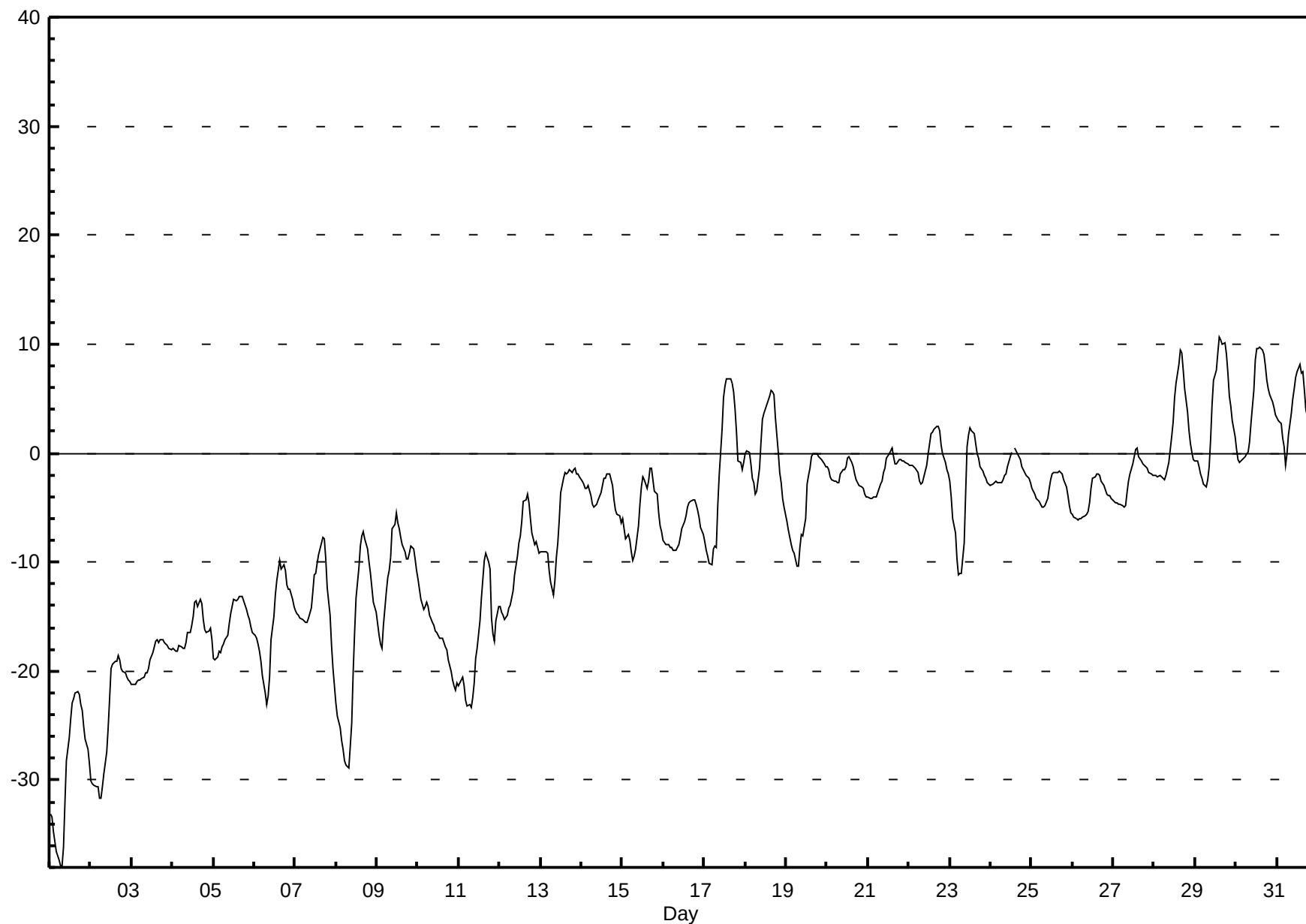


Hourly Averages

External Temperature (ET) - °C

Valleyview - March 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 10.7 °C on Mar 29 15:00 Maximum Daily Average: 4.3 °C on Mar 31																								Hours in Service: 744 Hours of Data: 743 Hours of Missing Data: 1 Hours of Calibration: 0 Percent Operational Time: 99.9		
Minimum Value: -38 °C on Mar 1 08:00 Maximum Diurnal Average: -3.7 °C at hour 16 Monthly Average: -7.69 °C												Minimum Daily Average: -29.1 °C on Mar 1 Minimum Diurnal Average: -11.5 °C at hour 7 Percentiles: P ₁ = -33.3 P ₁₀ = -20.6 Q ₁ = -14.6 Median = -5.0 Q ₃ = -1.4 P ₉₀ = 2.2 P ₉₉ = 9.6														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Mar	-33	-33	-35	-36	-37	-37	-38	-38	-36	-32	-28	-26	-24	-23	-22	-22	-22	-23	-24	-25	-26	-27	-28	-29.1	-21.9	
2-Mar	-30	-30	-30	-31	-31	-32	-32	-31	-29	-27	-25	-23	-20	-19	-19	-19	-19	-20	-20	-20	-21	-21	-21	-24.5	-18.6	
3-Mar	-21	-21	-21	-21	-21	-21	-21	-21	-20	-20	-20	-19	-18	-18	-17	-17	-17	-17	-17	-18	-18	-18	-18	-19.0	-17.1	
4-Mar	-18	-18	-18	-18	-18	-18	-18	-18	-17	-16	-16	-16	-15	-14	-14	-14	-13	-14	-15	-16	-16	-16	-17	-16.3	-13.4	
5-Mar	-19	-19	-19	-18	-18	-18	-17	-17	-17	-16	-15	-14	-13	-14	-13	-13	-13	-13	-14	-14	-15	-15	-16	-15.7	-13.1	
6-Mar	-17	-17	-18	-18	-19	-20	-22	-23	-22	-21	-17	-15	-13	-12	-11	-10	-11	-10	-11	-12	-12	-12	-13	-14	-15.4	-9.9
7-Mar	-14	-15	-15	-15	-15	-15	-16	-15	-15	-14	-13	-11	-11	-10	-9	-8	-8	-8	-10	-12	-15	-18	-20	-21	-13.5	-7.7
8-Mar	-23	-24	-25	-26	-27	-28	-29	-29	-27	-25	-20	-16	-13	-11	-9	-8	-7	-8	-9	-10	-11	-12	-14	-15	-17.7	-7.2
9-Mar	-16	-17	-18	-18	-16	-13	-11	-11	-10	-7	-6	-6	-6	-7	-8	-8	-9	-10	-10	-9	-8	-9	-10	-11	-10.5	-5.5
10-Mar	-12	-13	-13	-14	-14	-14	-14	-15	-15	-16	-16	-16	-17	-17	-17	-17	-18	-18	-19	-20	-21	-21	-22	-21	-16.7	-11.5
11-Mar	-21	-21	-21	-21	-23	-23	-23	-23	-22	-21	-19	-18	-15	-13	-12	-10	-9	-10	-11	-15	-17	-17	-15	-14	-17.3	-9.1
12-Mar	-14	-15	-15	-15	-15	-14	-14	-13	-13	-11	-9	-8	-8	-6	-4	-4	-4	-5	-6	-7	-8	-8	-9	-9	-9.8	-3.7
13-Mar	-9	-9	-9	-9	-9	-11	-12	-13	-12	-10	-8	-6	-4	-2	-2	-2	-2	-1	-2	-1	-1	-2	-2	-2	-5.8	-1.4
14-Mar	-3	-3	-3	-3	-3	-4	-5	-5	-5	-5	-4	-4	-3	-2	-2	-2	-2	-2	-3	-4	-5	-6	-6	-6	-3.7	-1.9
15-Mar	-6	-7	-8	-7	-8	-9	-10	-9	-9	-7	-5	-3	-2	-2	-3	-3	-1	-1	-2	-4	-4	-5	-7	-7	-5.4	-1.3
16-Mar	-8	-8	-8	-8	-9	-9	-9	-9	-9	-8	-8	-7	-6	-6	-5	-5	-4	-4	-4	-5	-5	-6	-7	-7	-6.9	-4.3
17-Mar	-8	-9	-9	-10	-10	-9	-9	-9	-5	-2	2	5	6	7	7	7	6	6	4	2	-1	-1	-2	-1	-1.3	6.9
18-Mar	0	0	0	-1	-2	-3	-4	-3	-1	1	3	4	4	5	5	6	6	5	3	0	-2	-3	-4	-5	0.6	5.7
19-Mar	-6	-7	-8	-8	-9	-9	-10	-10	-9	-7	-8	-6	-3	-2	-1	0	0	0	0	0	0	-1	-1	-1	-4.5	-0.1
20-Mar	-1	-1	-2	-2	-3	-3	-3	-3	-2	-1	-1	-1	0	0	-1	-1	-2	-2	-3	-3	-3	-4	-4	-4	-2.1	-0.3
21-Mar	-4	-4	-4	-4	-4	-4	-4	-3	-3	-2	-1	0	0	0	0	0	-1	-1	-1	-1	-1	-1	-1	-1	-1.8	0.5
22-Mar	-1	-1	-1	-1	-1	-2	-3	-3	-3	-2	-1	0	1	2	2	2	2	2	2	1	0	-1	-1	-2	-0.4	2.4
23-Mar	-3	-4	-6	-7	-10	-11	-11	-11	-8	-4	1	2	2	2	2	1	0	-1	-1	-2	-2	-2	-3	-3	-3.3	2.4
24-Mar	-3	-3	-3	-3	-3	-3	-3	-2	-2	-2	-1	0	0	M	0	0	0	-1	-1	-2	-2	-2	-2	-3	-1.7	0.5
25-Mar	-3	-4	-4	-4	-4	-5	-5	-5	-5	-4	-3	-2	-2	-2	-2	-2	-2	-2	-2	-2	-3	-4	-5	-5	-3.4	-1.7
26-Mar	-6	-6	-6	-6	-6	-6	-6	-6	-6	-5	-5	-3	-2	-2	-2	-2	-2	-3	-3	-3	-4	-4	-4	-4	-4.2	-1.9
27-Mar	-4	-5	-5	-5	-5	-5	-5	-4	-3	-2	-1	0	0	0	0	0	-1	-1	-1	-1	-1	-2	-2	-2	-2.4	0.4
28-Mar	-2	-2	-2	-2	-2	-2	-2	-1	0	2	3	5	6	8	10	9	8	6	4	2	1	0	-1	-1	1.9	9.5
29-Mar	-1	-1	-1	-2	-2	-3	-3	-2	-1	1	4	7	8	9	11	10	10	10	9	7	5	4	3	2	3.5	10.7
30-Mar	0	-1	-1	-1	-1	0	0	0	1	3	6	9	10	10	10	10	9	8	7	6	5	5	4	3	4.2	9.7
31-Mar	3	3	3	1	1	-1	0	2	4	5	6	7	8	8	7	8	6	4	5	5	5	5	5	4	4.3	8.1
																									Diurnal Average	
																									Diurnal Maximum	
M - Maintenance																										



Hourly Averages

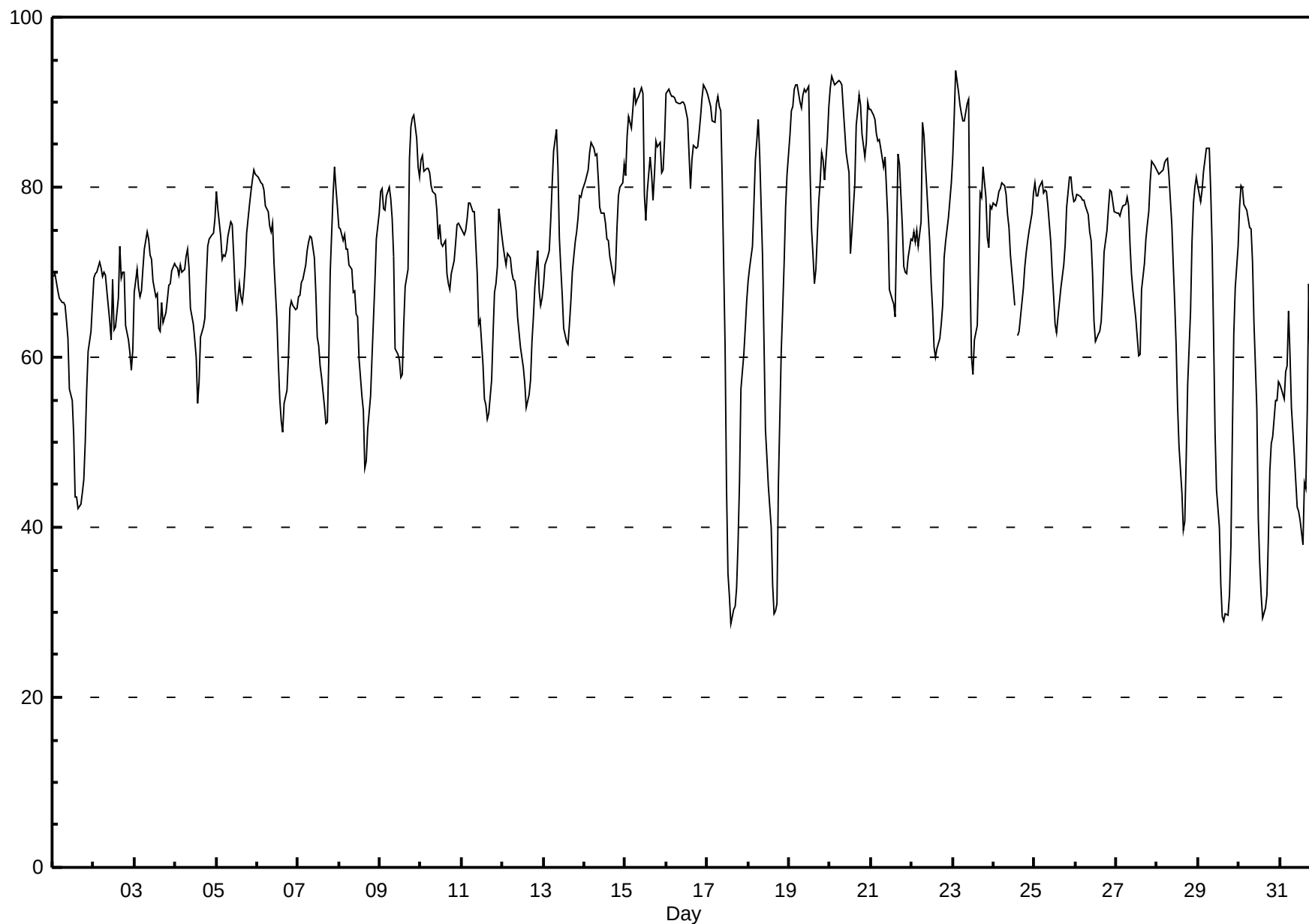
Relative Humidity (RH) - %

Valleyview - March 2011

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 93.7 % on Mar 23 03:00 Maximum Daily Average: 88.5 % on Mar 16																								Hours in Service: 744 Hours of Data: 743 Hours of Missing Data: 1 Hours of Calibration: 0 Percent Operational Time: 99.9		
Minimum Value: 29 % on Mar 17 15:00 Maximum Diurnal Average: 79.7 % at hour 7 Monthly Average: 71.07 %												Minimum Daily Average: 51.5 % on Mar 31 Minimum Diurnal Average: 58.3 % at hour 15 Percentiles: P ₁ = 30.1 P ₁₀ = 53.9 Q ₁ = 64.4 Median = 72.9 Q ₃ = 80.1 P ₉₀ = 87.6 P ₉₉ = 91.9														
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-Mar	70	70	69	68	67	66	66	66	64	62	56	55	51	44	44	42	43	44	46	50	56	61	63	66	57.8	69.8
2-Mar	69	70	70	71	70	70	70	70	68	64	62	69	63	64	67	73	69	70	70	64	62	60	58	61	66.9	73.0
3-Mar	68	70	68	67	68	70	73	75	74	72	71	69	67	67	63	63	66	64	65	67	68	69	70	71	68.6	74.7
4-Mar	71	70	70	71	70	70	72	73	70	66	64	62	60	55	57	62	64	65	69	73	74	74	75	76	68.0	76.3
5-Mar	79	77	74	72	72	72	73	74	76	76	72	68	65	69	67	66	68	71	75	78	79	81	82	82	73.7	82.0
6-Mar	81	81	81	80	80	78	77	75	75	76	71	64	59	55	53	51	55	56	60	66	67	66	66	66	68.2	81.2
7-Mar	67	67	69	69	71	72	74	74	74	72	68	62	61	59	58	54	52	52	60	70	79	82	80	78	67.7	82.4
8-Mar	75	75	74	74	73	73	71	70	68	68	65	65	60	55	54	47	48	52	55	60	64	69	74	77	65.2	77.0
9-Mar	79	80	77	77	79	80	79	76	72	61	60	60	58	58	64	68	70	83	87	88	88	86	82	81	74.8	88.4
10-Mar	83	84	82	82	82	82	80	80	79	77	74	76	73	73	74	70	69	68	70	71	73	76	76	75	76.2	83.8
11-Mar	75	74	75	76	78	78	77	77	73	70	64	64	59	55	54	53	53	57	63	68	69	71	77	74	68.2	78.1
12-Mar	73	72	71	72	72	70	69	69	68	65	61	60	59	57	54	56	57	62	65	68	73	68	66	67	65.5	73.1
13-Mar	68	71	72	73	76	80	84	87	82	74	70	67	63	62	62	64	67	70	74	75	77	79	79	80	73.1	86.7
14-Mar	81	81	82	84	85	85	84	84	81	78	77	77	76	74	74	72	70	69	70	75	79	80	81	83	78.3	85.2
15-Mar	81	86	88	87	89	92	90	90	91	92	91	79	76	79	84	82	78	82	85	85	85	82	82	86	85.1	91.7
16-Mar	91	92	91	91	91	90	90	90	90	90	90	90	88	84	80	83	85	85	85	86	88	91	92	91	88.5	92.1
17-Mar	91	90	89	88	88	90	91	90	89	81	61	45	34	32	29	30	31	33	38	45	56	60	63	67	62.9	90.9
18-Mar	69	70	73	78	83	85	88	84	72	62	51	48	45	40	33	30	30	31	45	61	66	71	78	82	61.5	88.0
19-Mar	86	89	90	92	92	92	90	89	91	92	91	92	82	75	72	69	70	78	81	84	83	81	86	90	84.8	92.0
20-Mar	92	93	93	92	92	92	92	92	89	84	83	82	72	75	80	87	89	91	90	86	84	85	90	89	87.3	93.0
21-Mar	89	88	88	86	85	86	85	82	84	80	76	68	67	66	65	74	84	83	76	71	70	70	72	74	77.8	89.1
22-Mar	74	75	74	75	73	76	88	86	83	80	74	69	66	61	60	61	62	64	66	72	74	76	78	80	72.7	87.6
23-Mar	84	88	94	91	90	89	88	88	90	90	70	60	58	62	64	71	79	79	82	79	74	73	78	77	79.0	93.7
24-Mar	78	78	78	79	80	80	80	79	77	75	72	68	66	M	62	63	65	68	71	72	74	75	77	79	73.8	80.4
25-Mar	80	79	79	80	81	79	80	80	78	74	70	67	64	63	65	68	69	71	73	78	81	81	79	78	74.9	81.2
26-Mar	79	79	79	79	79	78	78	77	75	74	70	64	62	63	63	64	68	72	75	77	80	79	78	77	73.7	79.6
27-Mar	77	77	77	77	78	78	79	78	73	70	68	65	62	60	60	68	71	74	76	77	81	83	83	82	73.9	83.1
28-Mar	82	81	82	82	83	83	83	81	76	71	66	61	54	49	44	40	41	48	57	65	74	78	80	81	68.5	83.4
29-Mar	80	78	80	82	83	85	85	79	73	62	51	44	40	33	29	29	30	30	32	38	51	63	68	73	58.3	84.6
30-Mar	78	80	80	78	77	76	75	75	71	64	54	41	36	32	29	30	32	39	47	50	51	55	55	57	56.8	80.1
31-Mar	57	56	55	58	59	65	60	54	48	45	42	42	41	38	45	45	54	69	58	54	51	44	46	47	51.5	68.7
																									Diurnal Average	
																									Diurnal Maximum	
M - Maintenance																										

Hourly Averages

Relative Humidity (RH) - %
Valleyview - March 2011



**PASZA**

Peace Air Shed Zone Association

Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	2	N	N	N	1	1	1	1	1	2	0	2	3	4	4	4	5	5	3	3	4	2	3	3	1.7	4.8
Dir	190	N	N	N	171	184	182	193	189	174	77	3	345	343	338	318	326	346	15	26	6	6	355	360	348	326
2 Spd	1	1	1	1	0	0	0	0	1	2	4	5	9	10	7	4	4	4	5	6	3	5	4	4	2.1	9.8
Dir	161	27	346	4	102	143	334	156	14	29	348	0	117	122	116	81	121	158	176	166	162	158	164	167	128	122
3 Spd	3	3	3	3	2	2	2	1	1	3	2	1	2	3	3	5	5	5	3	4	5	4	4	3	1.1	5.3
Dir	171	162	173	191	170	168	171	168	212	250	320	271	3	352	13	347	344	356	18	11	27	15	360	20	359	344
4 Spd	2	3	2	2	0	0	0	0	0	0	2	4	4	5	5	10	7	7	7	7	5	4	3	4	3.2	10.1
Dir	8	340	331	13	255	37	69	188	247	160	350	345	350	64	344	336	356	19	19	16	20	22	34	15	6	336
5 Spd	4	4	2	2	2	1	2	1	3	3	3	4	5	8	10	10	8	7	6	6	6	6	6	5	4.5	10.4
Dir	355	5	24	61	360	10	21	343	342	345	348	336	320	337	347	359	0	10	32	17	11	8	6	9	0	359
6 Spd	3	3	2	3	1	0	1	0	1	4	4	6	7	7	8	5	5	2	2	5	0	6	9	10	1.6	9.9
Dir	18	20	18	9	349	33	348	196	15	354	346	338	337	348	336	299	315	310	304	348	275	175	170	172	334	172
7 Spd	8	8	6	6	4	4	4	3	3	2	3	0	4	5	6	4	3	3	4	4	1	1	1	1	0.7	7.9
Dir	165	171	164	173	173	170	171	174	167	151	152	237	349	347	350	352	2	345	338	346	347	354	176	188	168	171
8 Spd	0	1	0	0	0	1	1	1	1	2	2	3	4	7	9	11	8	8	6	4	1	1	0	0	2.6	11.0
Dir	177	188	31	263	332	171	188	166	359	353	345	354	338	335	341	345	352	349	352	351	294	180	204	229	344	345
9 Spd	1	1	0	1	2	3	3	1	2	1	4	7	12	14	16	14	13	11	11	12	11	18	14	13	6.4	17.5
Dir	215	141	187	180	212	181	202	234	266	159	337	348	350	358	6	9	11	14	17	11	349	338	343	339	355	338
10 Spd	10	9	9	4	6	9	11	11	12	11	13	12	14	14	14	17	18	13	9	6	4	1	1	0	9.2	17.5
Dir	356	358	345	320	349	9	10	11	12	13	10	10	5	4	360	358	350	356	6	10	353	321	165	239	1	350
11 Spd	0	0	1	4	5	2	1	2	1	0	1	4	2	1	4	3	2	5	4	8	4	1	2	5	1.3	7.6
Dir	181	126	13	16	355	338	345	345	358	102	2	346	349	320	150	131	116	349	2	350	326	3	171	173	360	350
12 Spd	4	7	8	5	8	11	11	8	8	11	9	8	6	3	1	3	5	7	5	3	1	6	5	5	4.2	11.5
Dir	169	176	175	179	177	176	177	178	178	174	179	174	178	193	9	347	353	359	1	6	292	177	175	169	177	174
13 Spd	3	1	2	4	1	3	2	3	2	2	4	5	7	9	11	10	8	7	8	7	7	6	6	5	4.3	11.5
Dir	273	150	180	175	189	352	355	353	333	320	338	342	341	347	359	4	15	11	11	8	23	18	31	5	1	359
14 Spd	4	3	3	2	6	5	5	4	5	6	7	6	5	7	9	8	8	6	4	3	2	2	0	5	4.2	9.4
Dir	333	324	343	321	319	273	279	264	277	314	328	346	353	352	354	344	352	5	344	349	312	333	360	356	332	354
15 Spd	3	3	2	5	4	2	5	7	9	7	9	12	12	12	17	12	12	11	15	12	9	8	7	5	7.6	16.9
Dir	3	310	7	8	346	341	12	14	5	18	10	1	5	353	346	12	10	5	338	328	327	295	289	306	351	346
16 Spd	7	7	5	3	6	4	3	2	2	3	2	1	3	3	3	3	4	3	2	1	1	1	0	0	2.7	7.4
Dir	336	338	325	330	349	8	21	18	14	356	16	19	350	342	335	346	340	329	320	352	353	256	269	127	346	336
17 Spd	1	1	1	1	1	2	1	2	2	3	4	6	8	6	7	6	6	4	1	1	2	2	2	2	1.0	8.5
Dir	294	205	154	201	182	213	189	200	196	185	189	238	280	288	337	31	354	344	228	203	195	160	144	145	265	280
18 Spd	0	2	1	1	0	1	1	1	2	3	0	2	4	3	6	5	5	6	6	8	5	5	4	1	2.0	7.7
Dir	140	229	199	182	235	153	192	175	157	169	121	351	354	3	349	355	12	14	5	358	7	7	344	359	1	358
19 Spd	2	3	2	3	3	4	7	5	8	9	11	13	11	15	15	12	11	11	9	10	9	8	7	4	7.2	15.3
Dir	0	357	14	10	22	17	14	15	18	1	358	1	8	5	1	3	20	43	49	57	57	70	74	77	21	1
20 Spd	1	0	1	1	1	1	1	1	1	6	7	8	9	9	10	7	10	10	10	12	12	8	8	9	5.5	11.7
Dir	108	64	198	185	178	199	194	9	16	54	50	34	37	66	49	60	62	66	52	52	56	73	73	68	58	56
21 Spd	7	6	5	5	4	5	5	5	4	4	6	10	10	10	12	10	7	7	7	8	11	10	7	7	6.5	12.2
Dir	71	68	77	74	64	70	89	110	84	101	102	129	131	126	127	124	120	124	128	130	130	132	129	129	114	127
22 Spd	9	9	9	6	6	7	6	8	8	8	8	7	7	6	7	6	5	4	4	4	5	4	5	4	6.2	9.3
Dir	131	131	136	142	140	143	131	130	134	131	131	142	150	172	167	160	158	153	149	144	158	173	169	172	145	131

**PASZA**

Peace Air Shed Zone Association

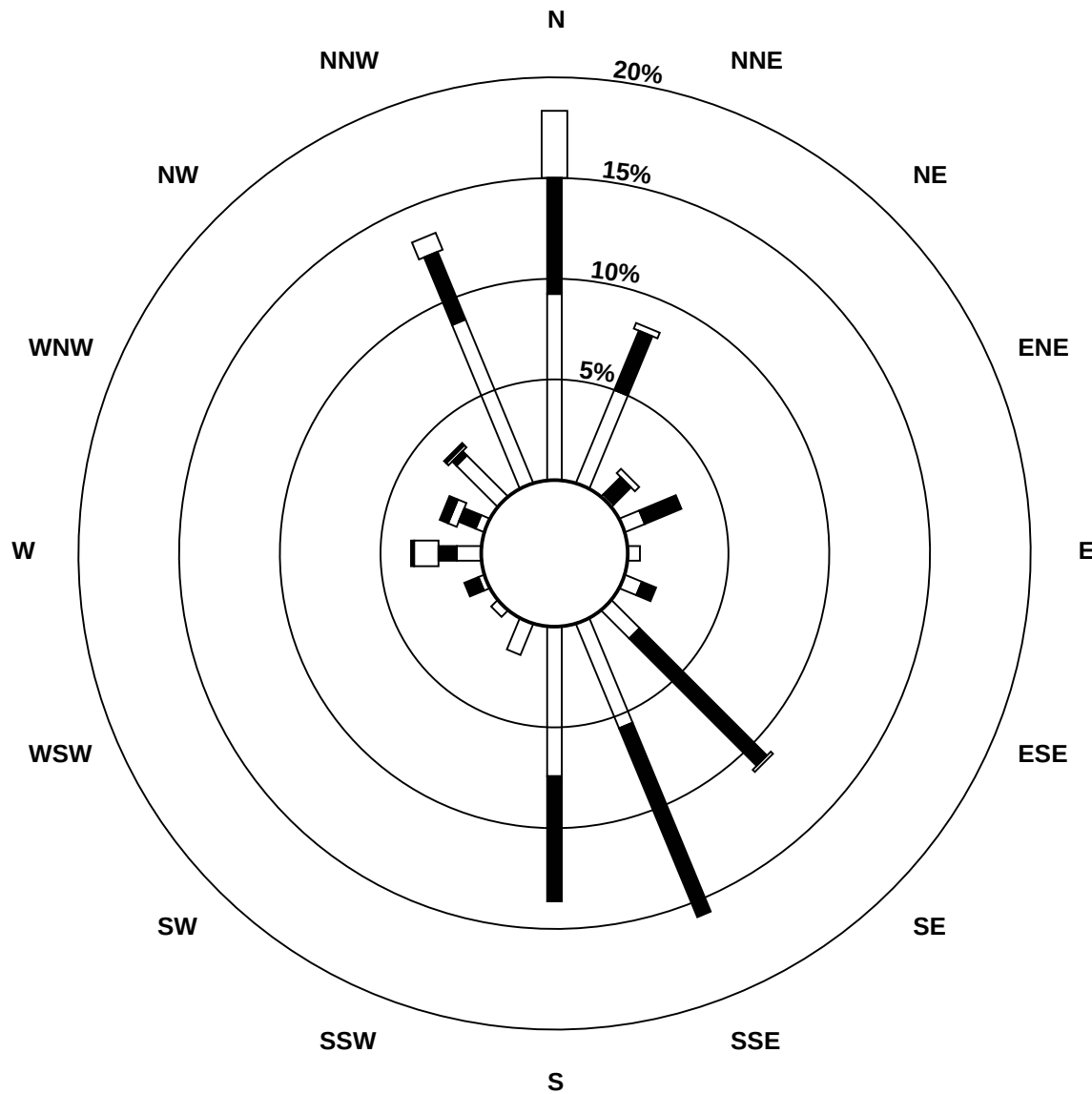
Hourly Averages

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

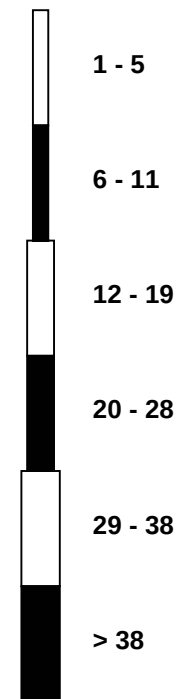
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	2	1	2	0	2	3	1	0	0	3	8	8	8	9	9	10	9	10	8	8	7	7	5	4	4.4	10.1
Dir	165	339	318	305	344	335	341	69	321	122	134	140	141	138	129	125	129	132	144	137	138	141	147	145	135	125
24 Spd	4	5	5	5	5	5	4	5	5	9	8	7	7	M	7	8	8	8	8	8	8	7	7	9	6.4	9.0
Dir	130	134	143	141	144	154	166	167	171	168	173	162	144	M	145	150	153	129	127	136	137	141	137	142	147	168
25 Spd	8	8	8	7	10	9	9	9	9	8	8	8	7	7	7	7	6	7	7	9	8	9	10	7	7.9	9.6
Dir	151	155	159	153	165	164	159	162	159	166	170	165	155	156	152	160	165	157	142	140	146	148	151	147	156	151
26 Spd	5	6	6	6	5	5	4	5	6	8	8	7	8	8	8	10	8	8	8	7	7	8	7	8	6.9	10.1
Dir	144	148	151	151	160	171	169	155	162	167	166	160	151	144	151	165	150	141	136	144	138	146	154	150	153	165
27 Spd	7	7	6	5	6	5	4	4	5	7	9	8	8	8	8	9	8	8	7	7	6	8	8	7	6.8	9.0
Dir	148	154	157	149	155	154	147	145	151	143	136	137	135	143	147	149	156	156	150	150	148	143	144	150	147	136
28 Spd	8	9	7	5	7	7	9	9	7	6	8	8	6	7	5	4	6	7	6	8	7	8	7	5	6.8	9.4
Dir	157	157	161	169	171	175	170	173	182	179	166	168	164	161	159	159	172	162	152	158	166	169	170	171	166	173
29 Spd	3	7	9	8	8	6	5	6	8	5	4	1	2	3	0	1	4	3	1	1	4	10	10	9	3.8	10.3
Dir	173	177	177	174	173	173	176	172	172	161	167	88	352	348	110	289	351	337	339	168	170	171	176	172	173	171
30 Spd	9	7	4	3	5	5	3	5	4	3	1	13	14	18	20	20	24	20	19	19	18	11	11	11	8.6	23.9
Dir	173	177	175	176	172	169	174	170	176	172	103	279	280	290	291	293	283	277	269	268	270	270	264	254	265	283
31 Spd	10	10	11	8	3	3	2	4	3	1	3	8	9	13	10	14	18	22	10	11	8	16	12	12	7.6	21.7
Dir	260	255	252	243	236	150	171	145	160	178	271	296	297	298	327	287	313	319	281	297	275	271	270	262	282	319
Spd	1.2	1.4	1.4	1.4	1.2	1.5	1.2	1.4	1.1	1.2	0.9	1.1	1.8	2.6	3.4	3.1	3.3	3.0	2.0	1.9	0.9	0.8	1.3	1.3	Diurnal Average	
Dir	150	159	164	159	165	159	152	148	146	134	86	5	4	0	5	1	0	11	21	25	51	146	155	157	Diurnal Maximum	
Spd	10.3	10.1	10.5	8.2	9.5	10.6	10.7	10.9	12.1	11.5	12.9	12.7	13.9	17.6	19.7	20.2	23.9	21.7	19.3	18.8	18.1	17.5	13.9	12.7	Diurnal Maximum	
Dir	260	255	252	243	165	176	177	11	12	174	10	1	280	290	291	293	283	319	269	268	270	338	343	339		
Maximum Speed Value: 24 ppb on Mar 30 17:00																								Minimum Speed Value: 0 ppb on Mar 23 08:00		
Maximum Daily Speed Average: 9.2 ppb on Mar 30																								Minimum Daily Speed Average: 0.7 ppb on Mar 11		
Maximum Diurnal Speed Average: 3.4 ppb at hour 15																								Minimum Diurnal Speed Average: 0.8 ppb at hour 22		
Monthly Average Velocity: 0.58 ppb 56.0 deg																								Speed Percentiles: P ₁ = 0.2 P ₁₀ = 0.9 Q ₁ = 2.6 Median = 5.1 Q ₃ = 7.9 P ₉₀ = 10.3 P ₉₉ = 18.3		
All monthly, daily, and diurnal averages have been calculated using vector methods																								Percent Operational Time: 99.5		
M - Maintenance N - Not Valid																										
Frequency Distribution																										
Speed Range (ppb)																										
Direction	0 to 5		5 to 11		11 to 19		19 to 28		28 to 38		> 38		Total													
North	136		72		37		0		0		0		245													
NorthEast	13		18		2		0		0		0		33													
East	16		10		0		0		0		0		26													
SouthEast	33		107		1		0		0		0		141													
South	96		81		1		0		0		0		178													
SouthWest	16		2		0		0		0		0		18													
West	14		12		10		4		0		0		40													
NorthWest	34		20		3		2		0		0		59													
Total	358		322		54		6		0		0		740													

Wind Rose

Wind Speed (WS) (km/h)
Valleyview - March 2011



Wind Speed Classes (km/h)



**PASZA**

Peace Air Shed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Valleyview - March 2011

Maximum Speed: 24 km/h on Mar 30 17:00																				Maximum Daily Speed Average: 11.3 km/h on Mar 30										Hours in Service: 744	
Minimum Speed: 0 km/h on Mar 4 05:00																				Minimum Daily Speed Average: 2.8 km/h on Mar 1										Hours of Data: 740	
Maximum Diurnal Speed Average: 8.8 km/h at hour 15																				Minimum Diurnal Speed Average: 3.8 km/h at hour 7										Hours of Missing Data: 4	
Monthly Average Speed: 5.87 km/h																				Percentiles: P ₁ = 0.6 P ₁₀ = 1.4 Q ₁ = 2.8 Median = 5.4 Q ₃ = 8.1 P ₉₀ = 10.5 P ₉₉ = 18.4										Percent Operational Time: 99.5	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Mar	2	N	N	N	1	1	1	1	2	2	2	2	3	4	5	5	5	5	4	4	4	2	3	3	2.8	5.0					
2-Mar	1	1	1	1	1	1	1	1	2	2	4	5	9	10	8	4	5	5	5	6	3	5	4	4	3.6	10.0					
3-Mar	3	3	3	3	2	2	2	1	2	3	3	2	2	4	4	5	5	5	4	4	5	4	4	3	3.2	5.4					
4-Mar	2	3	2	2	0	1	0	1	1	1	3	4	4	5	6	10	8	8	8	7	5	4	4	4	3.9	10.2					
5-Mar	4	4	2	3	3	1	2	1	3	3	3	4	5	9	10	10	8	7	6	6	6	6	6	5	4.8	10.5					
6-Mar	3	3	2	3	2	1	1	1	2	4	4	6	7	7	9	5	6	3	2	5	2	6	9	10	4.1	10.0					
7-Mar	8	8	6	6	4	4	4	3	3	2	3	3	5	5	6	4	3	3	4	4	1	2	1	1	3.8	8.0					
8-Mar	1	1	1	1	1	1	1	1	1	2	2	3	4	7	9	11	8	8	6	4	1	1	1	1	3.2	11.1					
9-Mar	1	1	1	1	3	4	3	2	2	2	4	7	12	14	16	15	13	11	11	12	11	18	14	13	8.0	17.7					
10-Mar	10	9	9	4	7	9	11	11	12	11	13	12	14	14	14	17	18	13	9	6	4	1	1	1	9.6	17.6					
11-Mar	1	1	2	4	5	3	2	2	2	1	2	4	4	3	4	3	3	5	4	8	4	1	2	5	3.0	7.6					
12-Mar	5	8	8	6	8	11	11	8	8	12	9	8	6	3	2	4	5	7	6	4	2	6	6	5	6.5	11.6					
13-Mar	5	2	2	4	4	3	3	3	2	2	5	6	7	9	12	11	8	7	8	8	7	6	6	5	5.6	11.5					
14-Mar	4	3	3	4	7	5	6	4	5	6	7	6	5	7	10	8	8	6	4	4	2	2	1	5	5.2	9.6					
15-Mar	3	3	2	5	4	3	5	7	9	7	9	12	13	13	17	12	12	11	15	13	9	8	7	6	8.5	17.2					
16-Mar	8	7	5	4	6	4	3	2	2	3	2	2	3	4	3	3	4	3	2	1	1	1	2	1	3.1	7.6					
17-Mar	1	2	1	1	1	2	1	2	2	3	4	6	9	6	7	6	6	4	2	1	2	2	2	2	3.1	8.8					
18-Mar	2	3	2	1	1	1	1	1	2	3	2	3	4	4	6	5	5	6	7	8	5	5	4	2	3.4	7.7					
19-Mar	2	3	2	3	3	4	7	5	8	9	12	13	11	15	15	12	11	11	9	10	9	8	7	4	8.1	15.4					
20-Mar	1	1	1	1	1	1	1	1	2	6	8	8	9	9	10	8	10	10	10	12	12	8	8	9	6.1	11.8					
21-Mar	7	6	5	5	4	5	5	5	4	4	6	10	10	10	12	10	7	7	7	9	11	10	7	8	7.3	12.4					
22-Mar	9	9	9	7	7	8	6	8	8	8	8	8	7	6	7	6	5	5	5	4	5	4	5	4	6.5	9.4					
23-Mar	2	3	3	1	2	3	1	1	1	4	8	8	8	10	10	10	9	10	8	8	7	7	5	4	5.5	10.2					
24-Mar	4	5	5	5	5	5	4	5	6	9	8	7	7	M	7	8	8	8	8	8	8	7	8	9	6.8	9.1					
25-Mar	8	8	8	8	10	9	9	9	9	8	8	8	7	7	8	7	6	7	7	9	8	9	10	8	8.1	9.8					
26-Mar	5	6	6	7	6	5	4	5	7	9	8	7	9	9	9	10	8	8	8	8	7	8	7	8	7.2	10.3					
27-Mar	7	7	6	5	6	5	4	4	5	7	9	8	8	9	8	9	8	9	7	7	6	8	8	8	7.0	9.3					
28-Mar	9	9	7	5	7	7	9	10	7	6	8	8	7	7	6	4	6	7	6	8	7	8	7	5	7.0	9.5					
29-Mar	3	7	9	8	8	6	5	6	8	5	4	3	2	3	2	3	4	3	2	1	4	10	10	9	5.3	10.4					
30-Mar	9	7	4	4	5	5	3	6	4	4	2	13	14	18	20	21	24	20	19	19	18	11	11	11	11.3	24.1					
31-Mar	10	10	11	8	4	3	2	4	3	2	4	8	10	14	10	14	18	22	10	11	9	16	12	12	9.5	21.9					
4.5 4.8 4.3 3.9 4.0 4.0 3.8 3.9 4.2 4.8 5.6 6.6 7.3 8.1 8.8 8.4 8.3 7.9 6.9 6.9 6.0 6.3 5.8 5.5																									Diurnal Average						
10.4 10.1 10.6 8.3 9.6 10.7 10.8 11.0 12.2 11.6 13.1 13.0 14.2 17.9 19.9 20.5 24.1 21.9 19.4 18.9 18.2 17.7 14.1 12.8																									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

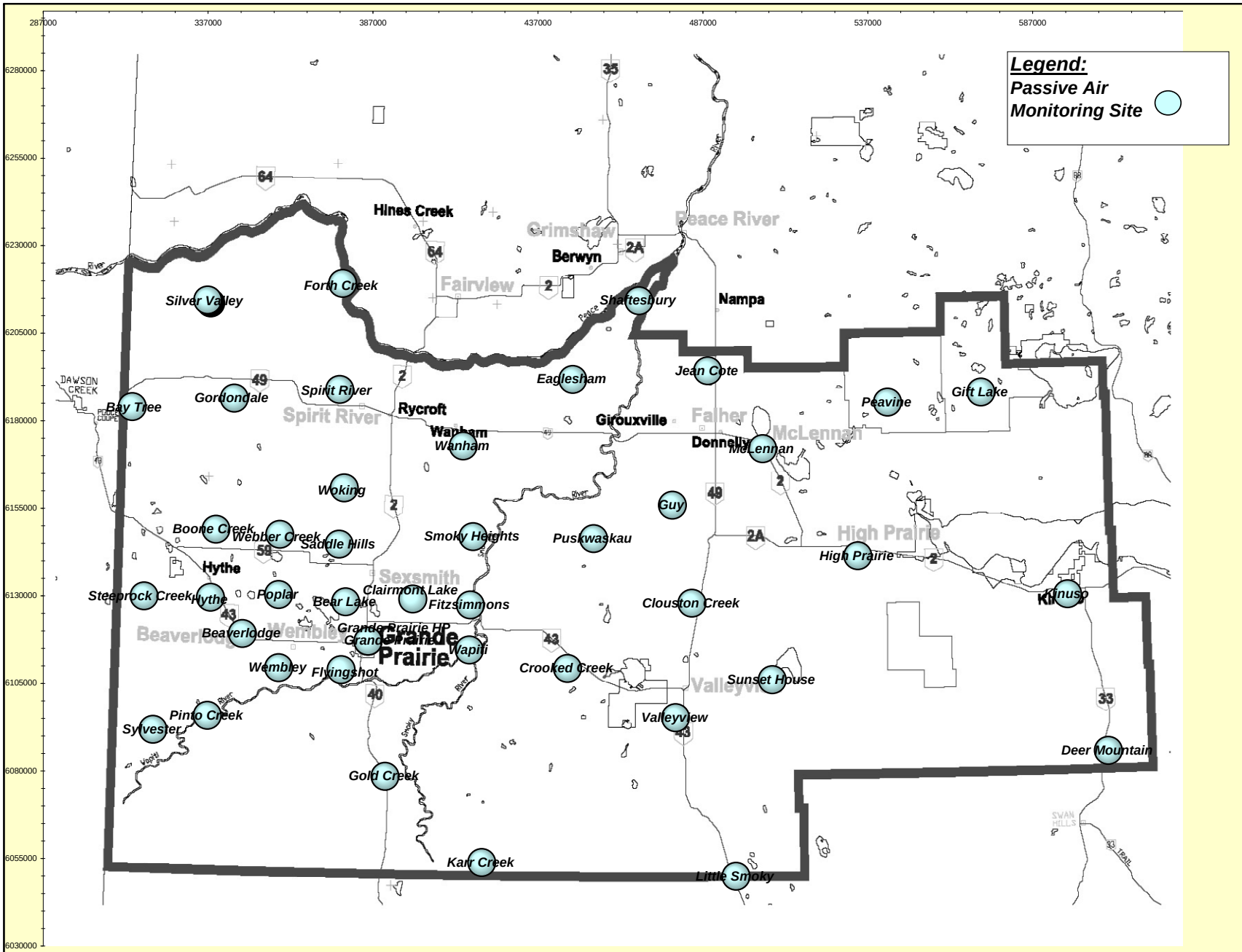
Valleyview - March 2011

Maximum Value: 95.4 deg on Mar 2 07:00																			Hours in Service: 744						
Minimum Value: 2.3 deg on Mar 8 15:00																			Hours of Data: 740						
																			Hours of Missing Data: 4						
Percentiles: P ₁ = 4.9 P ₁₀ = 7.3 Q ₁ = 9.2 Median = 12.9 Q ₃ = 23.6 P ₉₀ = 57.2 P ₉₉ = 91.2																			Hours of Calibration: 0						
																			Percent Operational Time: 99.5						
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-Mar	13	N	N	N	30	43	38	31	53	17	83	18	9	9	17	14	10	23	7	13	5	21	9	13	83.4
2-Mar	80	57	27	20	94	85	95	89	68	45	13	25	13	11	22	25	29	19	11	8	17	14	11	14	95.4
3-Mar	9	11	9	12	11	10	9	13	32	22	42	67	44	22	28	8	8	11	15	9	16	13	7	18	66.7
4-Mar	26	15	12	22	69	52	79	57	66	78	42	11	25	29	38	6	24	8	7	5	8	9	9	13	79.4
5-Mar	16	10	12	12	88	27	16	16	7	7	7	15	15	17	9	9	7	11	10	7	6	7	5	6	88.0
6-Mar	7	9	14	13	47	84	33	62	45	18	9	6	11	13	22	21	22	33	44	10	87	14	8	8	86.8
7-Mar	10	7	10	8	9	13	11	11	14	18	24	88	13	6	5	15	31	12	12	9	45	62	41	67	87.6
8-Mar	63	36	86	82	92	52	46	40	83	15	18	17	9	8	2	4	5	4	9	9	48	49	92	66	92.0
9-Mar	55	48	70	28	35	41	39	59	57	79	14	11	6	8	5	6	7	8	6	6	15	7	9	7	78.7
10-Mar	14	10	8	14	19	8	7	8	7	9	9	10	8	8	12	8	5	7	6	4	13	62	31	57	62.0
11-Mar	47	60	49	9	6	21	23	39	89	81	71	14	81	81	43	45	80	15	17	6	16	71	64	11	89.1
12-Mar	11	8	7	10	7	7	8	7	8	8	9	14	14	18	84	44	36	16	10	74	56	26	12	17	83.7
13-Mar	65	61	28	22	85	46	77	17	15	45	33	7	5	7	5	7	9	8	8	15	10	10	10	9	84.8
14-Mar	36	26	22	55	28	22	21	29	23	14	11	17	19	20	13	5	14	9	14	23	42	68	95	25	94.9
15-Mar	22	32	58	20	41	68	23	9	11	10	11	7	9	16	11	10	9	11	6	6	8	14	12	17	67.9
16-Mar	13	8	7	17	10	9	15	17	28	22	27	43	36	16	21	10	7	4	7	39	38	71	78	81	81.4
17-Mar	91	56	26	46	19	18	21	12	13	11	16	15	17	25	22	12	8	13	40	53	10	14	21	42	91.4
18-Mar	79	51	48	18	73	49	33	68	19	16	88	17	13	23	11	18	18	8	8	7	27	13	13	45	87.7
19-Mar	26	8	12	7	10	10	6	8	10	13	8	10	10	7	6	8	16	10	8	8	10	11	13	23	25.7
20-Mar	47	81	25	52	45	37	35	32	35	12	18	14	17	17	10	14	12	13	8	8	8	14	15	10	81.1
21-Mar	13	16	16	17	21	15	24	29	36	37	31	10	9	9	9	10	14	11	8	10	9	10	7	9	37.4
22-Mar	9	9	10	13	12	10	10	8	10	11	11	14	15	17	13	13	14	13	17	8	11	7	8	8	16.9
23-Mar	12	84	52	89	33	24	46	92	73	70	15	13	16	14	12	7	8	9	11	10	13	13	14	14	92.3
24-Mar	12	12	11	12	13	11	12	12	9	8	8	12	12	M	12	16	11	9	8	10	13	13	10	13	16.2
25-Mar	11	12	12	12	8	8	9	10	10	13	10	13	19	17	14	18	11	15	10	11	12	9	12	11	18.6
26-Mar	12	12	11	11	11	9	14	14	11	11	12	16	12	17	16	11	17	11	11	11	9	11	11	10	17.2
27-Mar	11	11	11	11	11	13	14	15	14	13	12	13	15	17	15	16	11	12	9	13	12	10	10	12	17.1
28-Mar	10	9	9	11	9	8	7	6	9	11	16	12	16	14	15	17	10	16	10	10	8	7	7	7	17.5
29-Mar	15	7	7	7	6	8	7	8	7	9	21	79	19	18	91	88	18	24	90	57	12	5	5	6	90.7
30-Mar	6	6	9	19	9	25	29	30	17	65	70	18	12	10	10	10	8	8	7	6	7	8	7	5	70.0
31-Mar	8	7	7	6	64	24	44	18	29	86	49	15	13	13	18	16	9	9	12	14	17	8	8	9	85.8
91.4 83.7 86.3 89.2 94.0 85.2 95.4 92.3 89.1 85.8 87.7 87.6 80.7 80.9 90.7 87.8 79.7 32.9 89.6 73.6 86.8 71.0 94.9 81.4																									
M - Maintenance N - Not Valid																									

PASZA

Monthly Passive Data Summary

Location of PASZA Passive Monitoring Stations



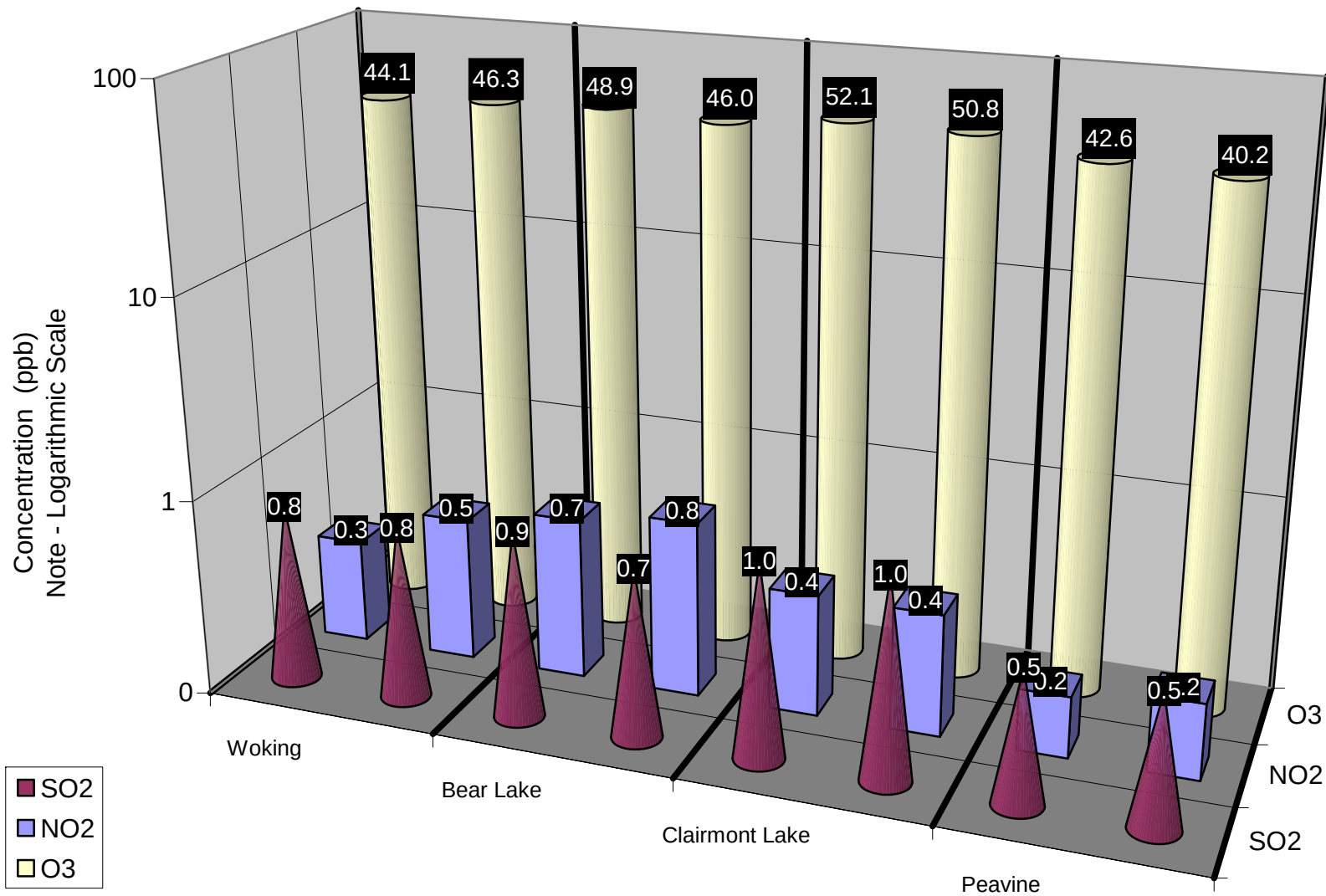
PASZA Passive Results for March 2011

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	Site Legal
Duplicates					
10a	Woking	0.8	44.1	0.3	
10b	Woking	0.8	46.3	0.5	
23a	Bear Lake	0.9	48.9	0.7	
23b	Bear Lake	0.7	46.0	0.8	
28a	Clairmont Lake	1.0	52.1	0.4	
28b	Clairmont Lake	1.0	50.8	0.4	
44a	Peavine	0.5	42.6	0.2	
44b	Peavine	0.5	40.2	0.2	
1	Silver Valley	0.7	48.4	N/A	08-27-081-11 W6M
2	Bay Tree	1.0	40.1	0.6	13-16-078-13 W6M
3	Fourth Creek	0.7	42.7	0.3	04-13-082-07 W6M
4	Gordondale	0.8	46.6	0.4	04-34-078-10 W6M
5	Boone Creek	0.7	39.9	0.8	16-36-074-11 W6M
7	Steeprock Creek	0.7	44.2	0.5	09-35-072-13 W6M
9	Spirit River	0.5	45.6	0.3	08-12-079-07 W6M
10	Woking	0.8	45.2	0.4	01-13-076-07 W6M
11	Webber Creek	0.7	45.7	0.7	09-36-074-09 W6M
12	Hythe	0.7	43.9	0.9	14-36-072-11 W6M
14	Sylvester	0.7	34.9	1.0	08-06-069-12 W6M
16	Beaverlodge	1.1	43.0	1.4	15-36-071-10 W6M
17	Poplar	1.0	47.4	0.7	13-06-073-08 W6M
18	Saddle Hills	0.8	46.4	0.4	04-25-074-07 W6M
19	Wanham	0.8	42.7	0.3	16-22-077-03 W6M
20	Shaftesbury	0.6	38.9	0.3	04-03-082-23 W5M
21	Eaglesham	0.8	40.7	0.2	16-21-079-25 W5M
23	Bear Lake	0.8	47.5	0.7	15-31-072-06 W6M

PASZA Passive Results for March 2011 (Continued)

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	Site Legal
24	Wembley	0.7	49.6	1.2	12-31-070-08 W6M
25	Pinto Creek	0.8	41.6	0.7	04-24-069-11 W6M
26	Flyingshot	0.7	40.6	1.4	15-36-070-07 W6M
27	Grande Prairie I	0.9	39.0	6.1	08-15-071-06 W6M
28	Clairmont Lake	1.0	51.4	0.4	09-06-073-04 W6M
29	Smoky Heights	0.9	40.8	0.7	04-06-075-02 W6M
30	Fitzsimmons	0.5	47.0	0.6	15-36-072-03 W6M
32	Gold Creek	0.7	37.1	1.2	06-33-067-05 W6M
33	Wapiti	0.7	48.1	0.5	02-25-071-03 W6M
34	Puskwaskau	0.4	43.5	0.2	15-35-074-25 W5M
35	Jean Cote	0.5	51.3	0.3	12-35-079-21 W5M
36	Guy	0.6	44.5	0.3	03-04-076-22 W5M
37	Crooked Creek	0.7	46.5	0.5	16-01-071-26 W5M
38	Karr Creek	0.4	36.8	0.8	10-16-065-02 W6M
39	Clouston Creek	0.6	44.3	0.3	12-01-073-22 W5M
40	McLennan	N/A	N/A	N/A	03-29-077-19 W5M
41	Valleyview	0.9	45.5	0.6	09-30-069-22 W5M
42	Sunset House	0.8	49.6	0.2	05-32-070-19 W5M
43	High Prairie	0.6	49.6	0.3	16-13-074-17 W5M
44	Peavine	0.5	41.4	0.2	03-05-079-15 W5M
45	Gift Lake	0.5	39.3	0.3	10-07-079-12 W5M
46	Little Smoky	0.8	46.4	1.4	12-01-065-21 W5M
47	Kinuso	0.6	37.6	0.3	12-10-073-10 W5M
48	Deer Mountain	0.5	42.2	0.4	15-22-068-09 W5M
49	Grande Prairie HP	0.9	38.5	6.1	17-26-071-06 W6M

*BDL = Below Detection Level



Duplicate Summary Chart

Passive Summary for March 2011

Stats	Sulphur Dioxide SO ₂	Ozone O ₃	Nitrogen Dioxide NO ₂
	ppb	ppb	ppb

Passive Summary for March 2011 (PASZA Zone)			
Mean	0.7	43.7	0.9
Standard Deviation	0.2	4.2	1.2
Minimum	0.4	34.9	0.2
Minimum At	Karr Creek (#38)	Sylvester (#14)	Eaglesham (#21)
Maximum	1.1	51.4	6.1
Maximum At	Beaverlodge (#16)	Clairmont Lake (#28)	Grande Prairie HP (#49)

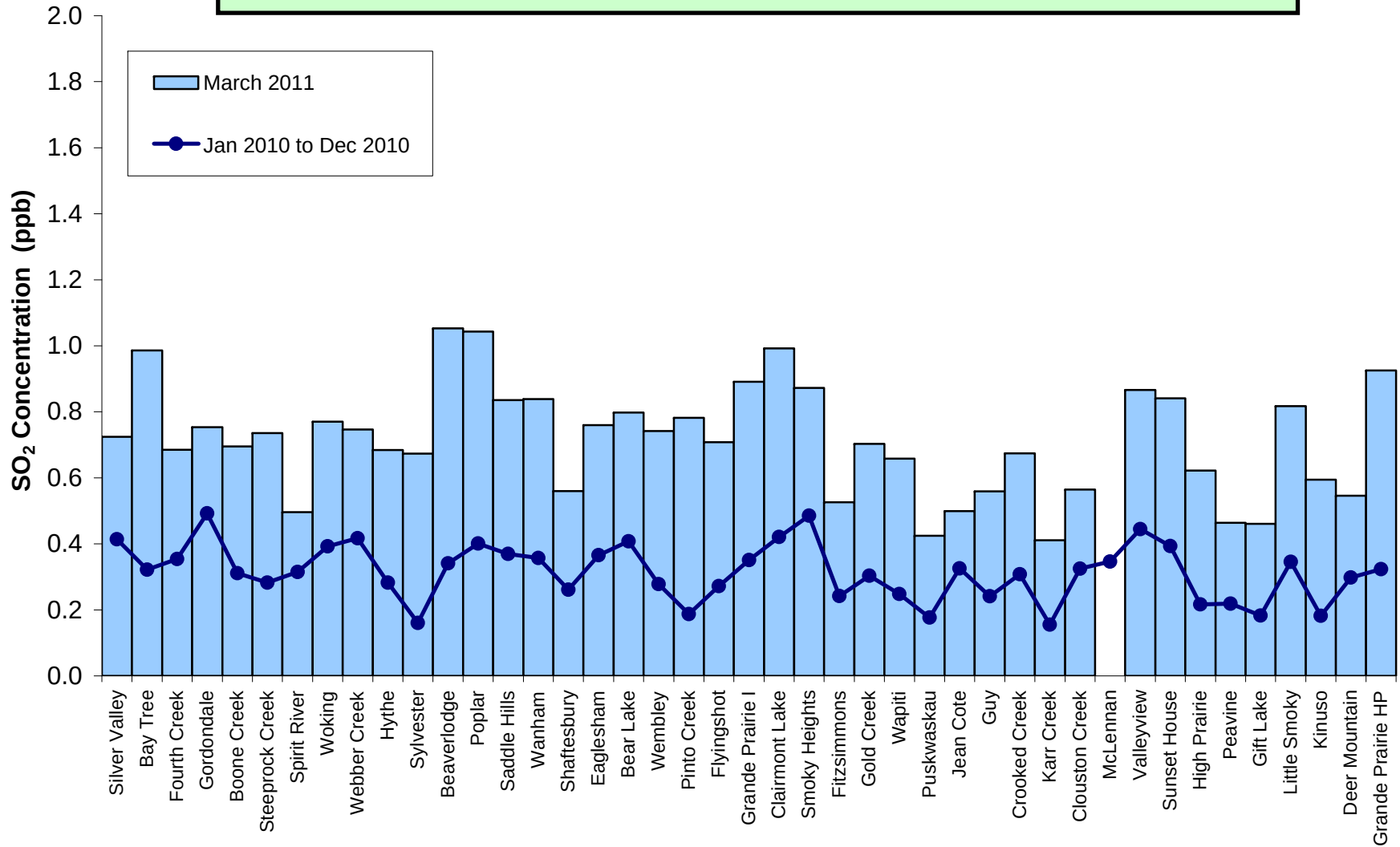
Comparison between Continuous and Passive monitoring at Beaverlodge (passive #16 Beaverlodge)

	SO ₂	O ₃	NO ₂
PASZA Beaverlodge station	1.2	36.5	5.7
PASZA Beaverlodge passive	1.1	43.0	1.4

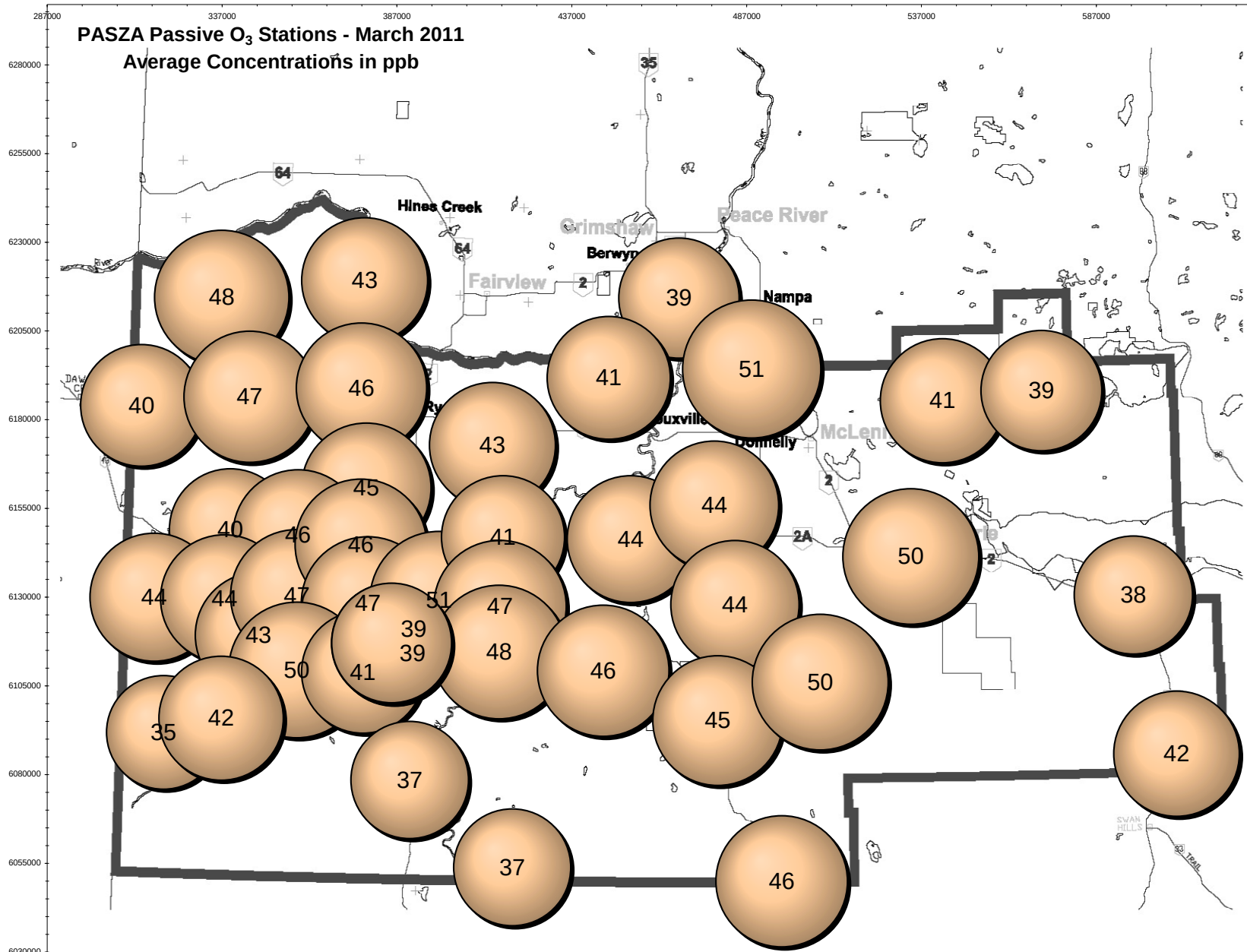
Comparison between Continuous and Passive monitoring at Henry Pirker (passive #49 Grande Prairie HP)

	SO ₂	O ₃	NO ₂
PASZA Henry Pirker station	0.7	28.1	13.8
PASZA Grande Prairie passive	0.9	38.5	6.1

Alberta Ambient Air Quality Objective - Annual SO₂ Objective is 8 ppb

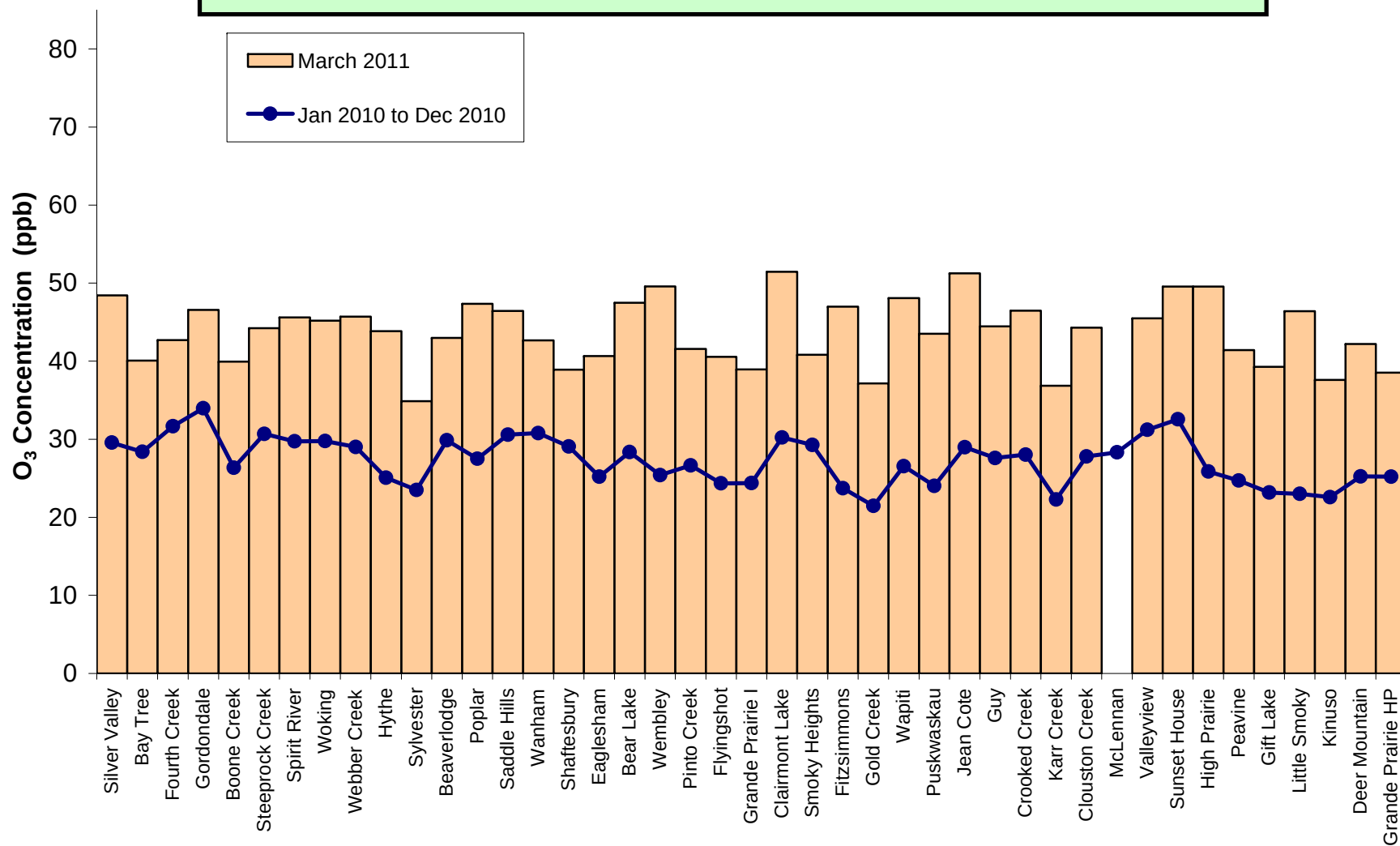


SO₂ Summary Chart



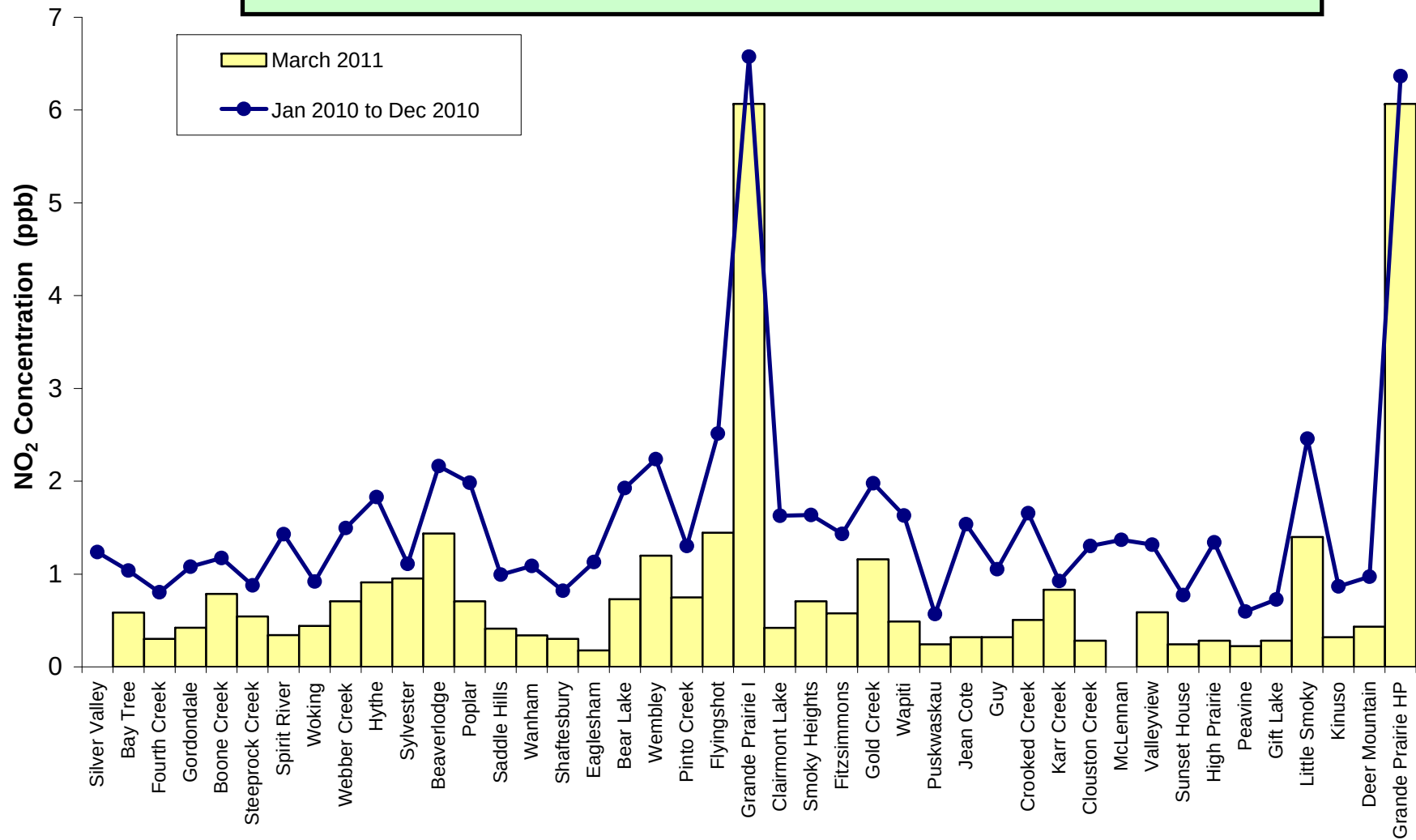
O₃ Bubble Chart

Alberta Ambient Air Quality Objective - No Annual O₃ Objective



O₃ Summary Chart

Alberta Ambient Air Quality Objective - Annual NO₂ Objective is 32 ppb



NO₂ Summary Chart

PASZA

ALBERTA ENVIRONMENT INCIDENCE REPORTS

March 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:	246477	Reported To (AENV Contact):	Krysta
Date & Time Incident Reported to AENV:	April 27, 2011 14:50	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:	March 1, 2011	End Date & Time of Incident:	March 31, 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 one hundred and thirty-seven hours (137) were invalidated.			
Immediate Actions Taken:			
Follow-up Details:			
The issues have been related to FDMS upgrades for NAPS. On April 5th the analyzer was replaced with a new unit and it has been determined that the mass transducer is the issue. A new part will be ordered.			
Actions Taken to Prevent Reoccurrence (if any):			
Not applicable.			
Additional Actions Required (if any):			
Not applicable.			
Report Completed By:	Sharon Whiteley	Date Report Submitted:	April 27, 2011
7-Day Letter Due Date:	May 3, 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:	246478	Reported To (AENV Contact):	Krysta
Date & Time Incident Reported to AENV:	April 27, 2011 14:50	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:	March 1, 2011	End Date & Time of Incident:	March 31, 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 two issues: baseline drift or unusual spiking and DACS/communication failure. The unusual spiking was caused by adverse weather conditions. The DACS failure has been resolved by replacing AP1000 with a new Campbell's datalogger. A total of one eighty-four (84) hours were invalidated.			
Immediate Actions Taken:			
Follow-up Details:			
Technicians are aware of the unusual spiking issue. The DACS has been replaced.			
Actions Taken to Prevent Reoccurrence (if any):			
Not Applicable			
Additional Actions Required (if any):			
Not applicable			
Report Completed By:	Sharon Whiteley	Date Report Submitted:	April 27, 2011
7-Day Letter Due Date:	May 3, 2011		

Air Monitoring Directive Exceedence Report

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

Reference Number:	246434	Reported To (AENV Contact):	Laura
Date & Time Incident Reported to AENV:	April 26, 2011	Reported By:	Focus-Brad Moyles
Reported on Behalf of:	PASZA	Approval Number (if applicable):	Not applicable
Location(s) of Incident: Smokey Heights Air Quality station			
Start Date & Time of Incident:	March 28, 2011 @ 19:00MST.	End Date & Time of Incident:	March 28, 2011 @ 20:00 MST.
Reason or Nature of Incident:			
The PM_{2.5} analyzer (TEOM) within the Smoky Heights station, currently located east, North East of Grande Prairie, exceeded the AENV hourly average PM_{2.5} hourly guideline (80 µg/m³): March 28, 2011 19:00–20:00 MST PM_{2.5} = 183.3 µg/m³ WS = 6.9 km/h WD = 15.8 deg			
Immediate Actions Taken:			
Confirmed validity of data and reported to AENV Environmental Service Response Centre.			
Investigation Details:			
Operation of the PM _{2.5} analyzer appear normal during the time of this report.			
Actions Taken to Prevent Reoccurrence (if any):			
Not applicable			
Additional Actions Required (if any):			
Not applicable			
Report Completed By:	Brad Moyles	Date Report Submitted:	August 24, 2010
7-Day Letter Due Date:	May 2, 2011		

March 2011 Calibration Reports

PASZA - Henry Pirker Station with the following calibrations:

SO₂, NO, NO₂, NO_x, O₃, CO, THC, TRS

PASZA – Evergreen Park Station with the following calibrations:

SO₂, TRS

PASZA – Smoky Heights Station with the following calibrations:

SO₂, TRS

PASZA – Beaverlodge Station with the following calibrations:

SO₂, NO, NO₂, NO_x, O₃

PASZA – Kinuso (Portable) Station with the following calibrations:

SO₂, TRS, NO, NO₂, NO_x & O₃,

PASZA – Valleyview Station with the following calibrations:

SO₂ & H₂S

Calibration Report

Parameter SO2

Air Monitoring Network PASZA



Station Information

Calibration Date	March 16, 2011	Previous Calibration	February 8, 2011
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	8:05	End Time (MST)	10:20
Barometric Pressure	0.915 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	0.996688	Calculated slope	1.001551
Calculated intercept	-1.736121	Calculated intercept	-0.164281
Analyzer make	TEI 43C	Analyzer serial #	610816292

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	8.0		8.6	
Coefficient	.796		.796	
Pressure	636.0	mm Hg	644.2	mm Hg
Flow	0.476	lpm	0.468	lpm
Lamp Voltage	44660	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)
4989	0.00	0.0	0.0	N/A
4989	39.83	400.8	400.3	1.0012
4989	19.90	201.0	200.8	1.0010
4989	9.93	100.5	100.8	0.9973
4989	0.00	0.0	0.0	As Found Zero
4989	39.83	400.8	392.7	As Found Span
Average Correction Factor				0.9998

Calculated value of As Found Response: 389.6 ppb Percent Change of As Found: 2.8%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.1	ppb
Auto span	239.8	ppb	240.3	ppb

Notes: Span adjustment made.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PASZA



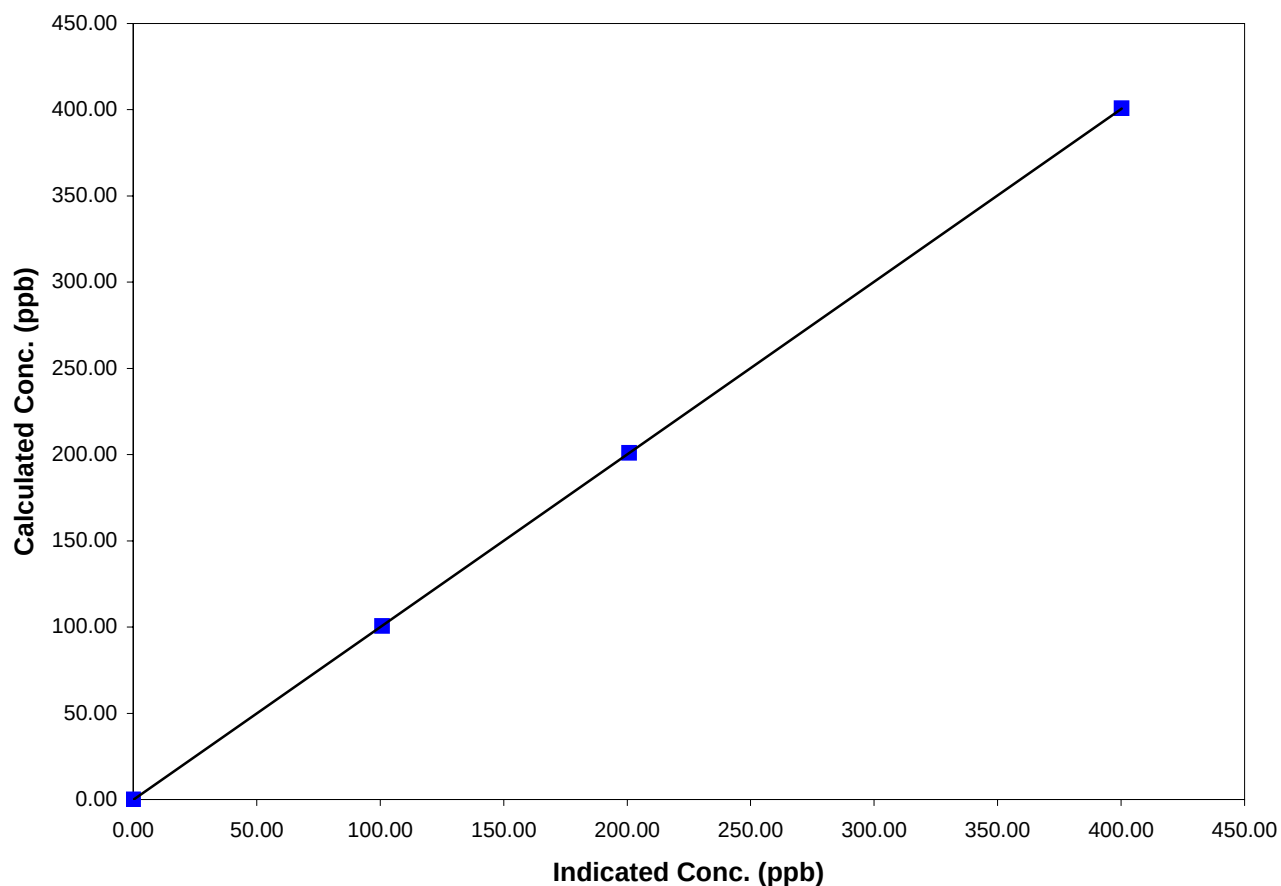
Station Information

Calibration Date	March 16, 2011	Previous Calibration	February 8, 2011
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:05	End Time (MST)	10:20
Analyzer make/model	TEI 43C	Analyzer serial #	610816292

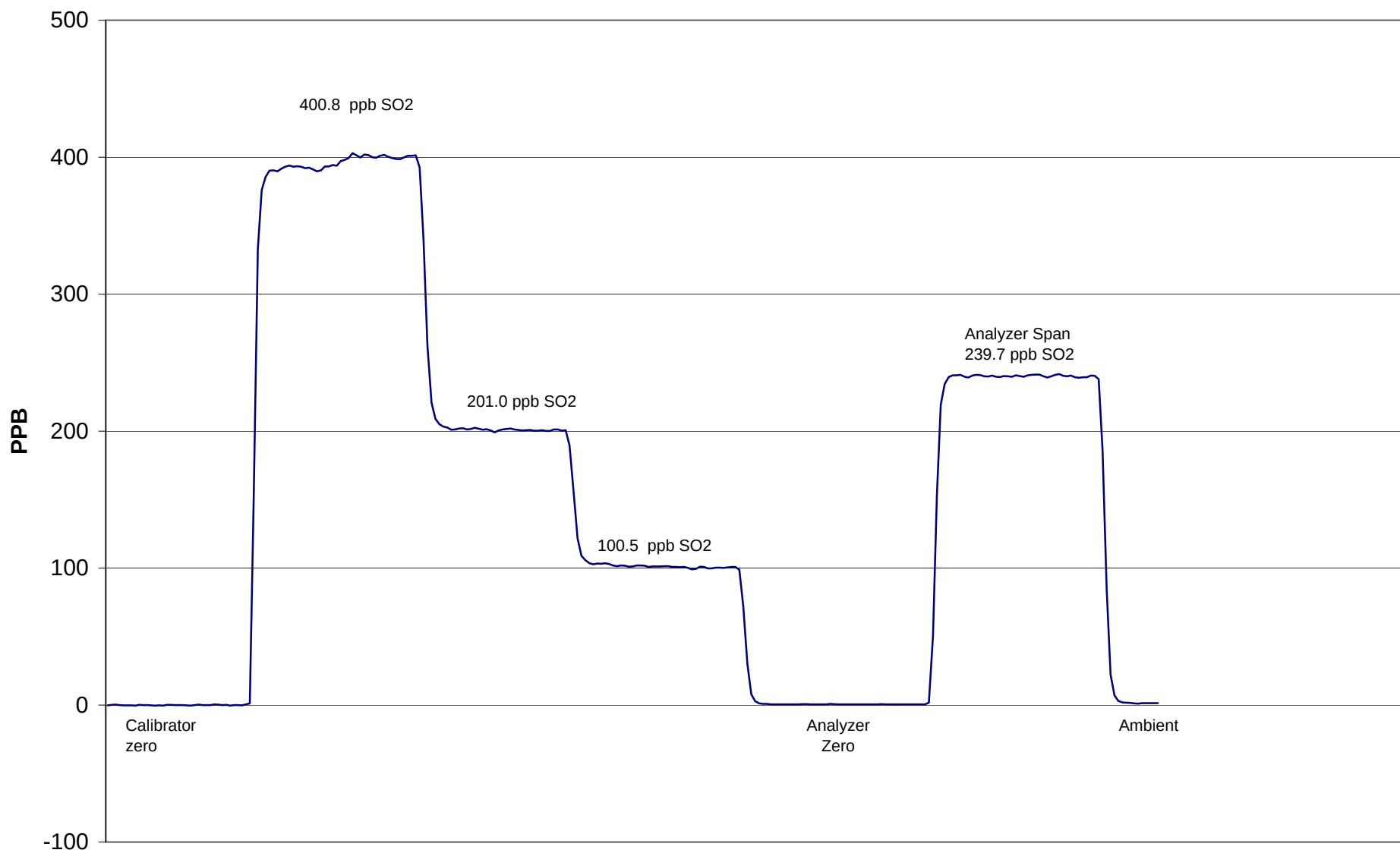
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999999
400.8	400.3	1.0012		
201.0	200.8	1.0010		
100.5	100.8	0.9973	Slope	1.001551
			Intercept	-0.164281

SO2 Calibration Curve



Henry Pirker SO₂ Calibration



March 16, 2011

Air Monitoring Network PASZA

Calibration Summary

Parameter TRS

Air Monitoring Network PASZA



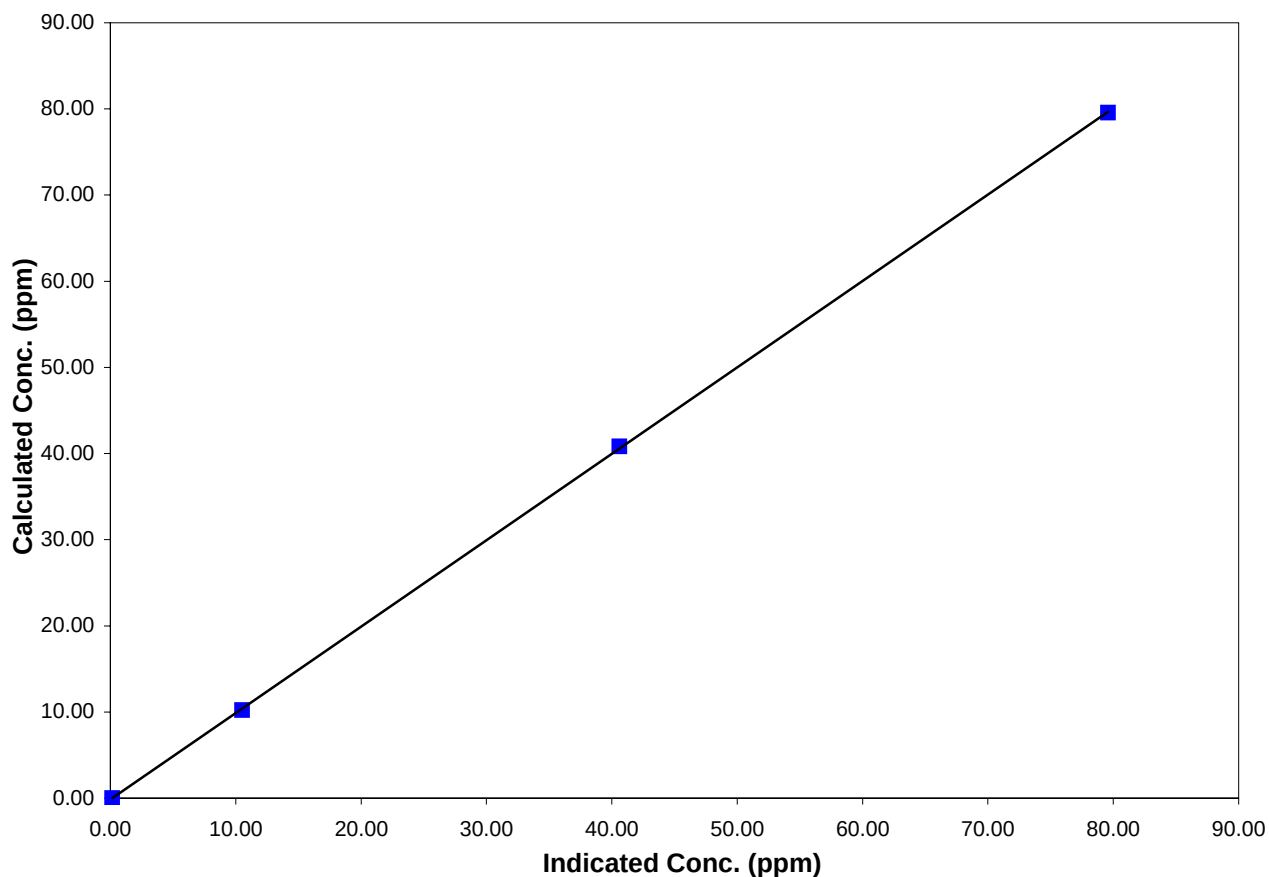
Station Information

Calibration Date	March 14, 2011	Previous Calibration	February 7, 2011
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:00	End Time (MST)	14:20
Analyzer make/model	TEI 45C	Analyzer serial #	630718528

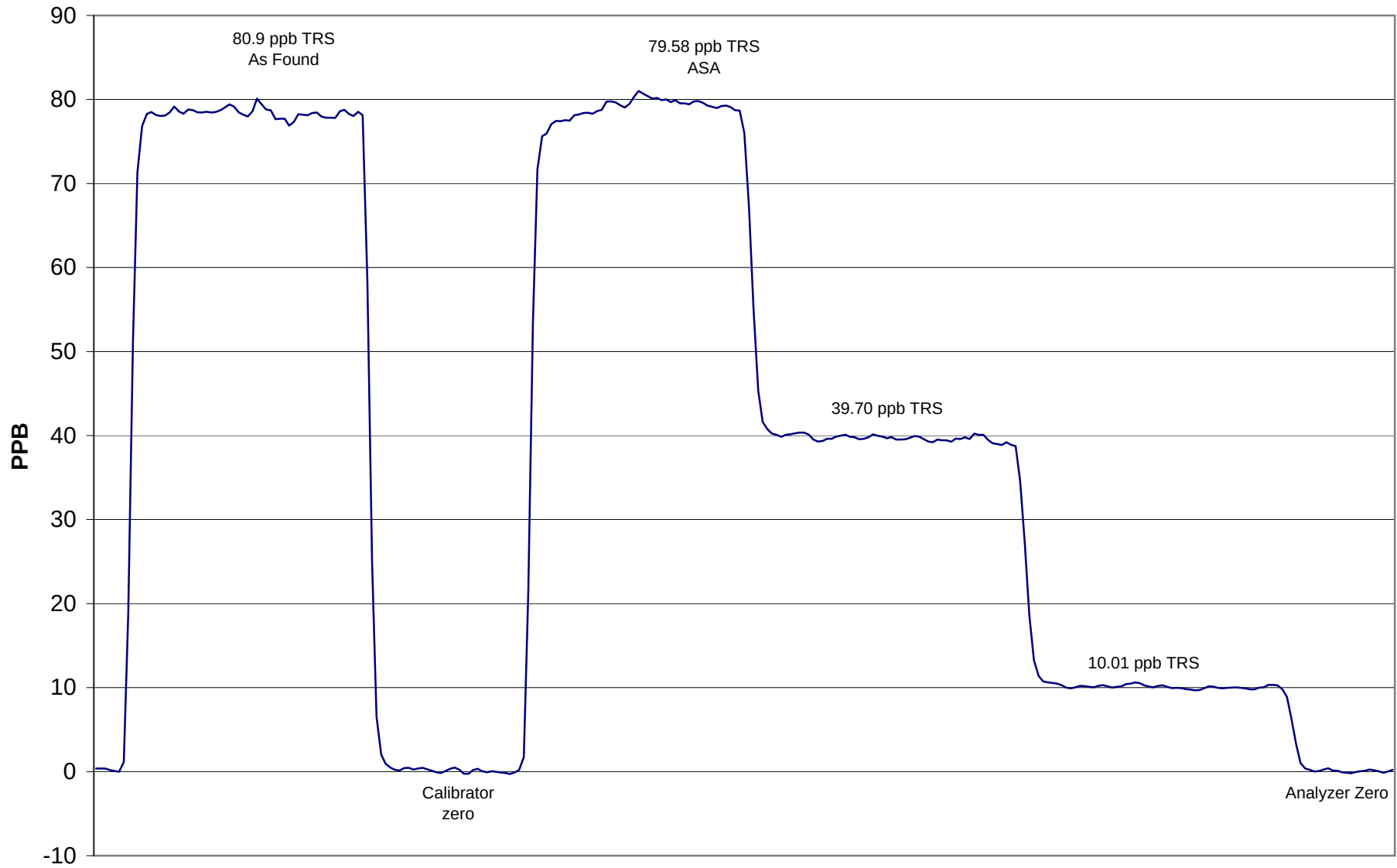
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.160	N/A	Correlation Coefficient	0.999977
79.579	79.577	1.0000		
40.810	40.610	1.0049		
10.230	10.520	0.9724	Slope	1.003491
			Intercept	-0.176240

TRS Calibration Curve



Henry Pirker TRS Calibration



March 14, 2011

Calibration Report

Parameter

NO_x-NO-NO₂

Air Monitoring Network

PASZA



Station Information

Calibration Date	March 16, 2011	Previous Calibration	February 8, 2011
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Installation	☐ Removal
Start Time (MST)	8:05	End Time (MST)	12:07
Barometric Pressure	0.915 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.	
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Parameter		NO2	NOx	NO
Before	Data Slope	0.994793	1.006496	1.004201
	Data Offset	0.505660	-2.090707	-2.268367
After	Data Slope	1.001131	1.003659	1.003257
	Data Offset	0.338660	-2.606314	-2.542975
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
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Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	10.2	mV	9.8	mV
NOx bkgnd	10.6	mV	10.2	mV
NO coefficient	0.762		0.735	
NOx coefficient	0.993		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	184.8	in Hg	183.3	in Hg

Calibration Report

Parameter **NOx-NO-NO₂**
Air Monitoring Network **PASZA**



Station Information

Calibration Date: March 16, 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	4989	0.00	0.0	0.0	0.0	0.1	0.1	0.0	N/A	N/A
1	4989	39.83	407.1	407.1	0.0	406.9	407.0	-0.1	1.0006	1.0004
2	4989	19.90	204.2	204.2	0.0	207.4	207.5	-0.2	0.9846	0.9840
3	4989	9.93	102.1	102.1	0.0	106.8	106.7	0.0	0.9556	0.9568
AFZ	4989	0.00	0.0	0.0	0.0	0.1	0.0	0.1	0.0000	0.0000
AFS	4989	39.83	407.1	407.1	0.0	394.3	396.9	-2.7	1.0326	1.0256
Average Correction Factor									0.9803	0.9804

As Found Concentrations: NO_x= 392.0 NO= 394.7 As Found Percent Change NO_x= -3.7% NO= -3.0%

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	0.1	0.1	0.0	N/A	N/A	N/A	N/A
NO point	405.6	405.6	0.0	405.6	405.6	0.0	1.0001	1.0000	N/A	N/A
300	405.6	154.2	251.4	404.7	154.2	250.6	1.0024	1.0000	1.0031	99.7%
200	405.6	234.4	171.2	404.2	234.4	169.9	1.0035	1.0000	1.0074	99.3%
100	405.6	313.3	92.3	404.2	313.3	90.9	1.0035	1.0000	1.0157	98.5%
Average Correction Factor							1.0032	1.0000	1.0087	99.1%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.1	0.0	0.0	ppb	0.1	0.1	0.0	ppb
Auto span	168.4	169.5	1.2	ppb	165.0	164.3	1.0	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter NO₂

Air Monitoring Network PASZA



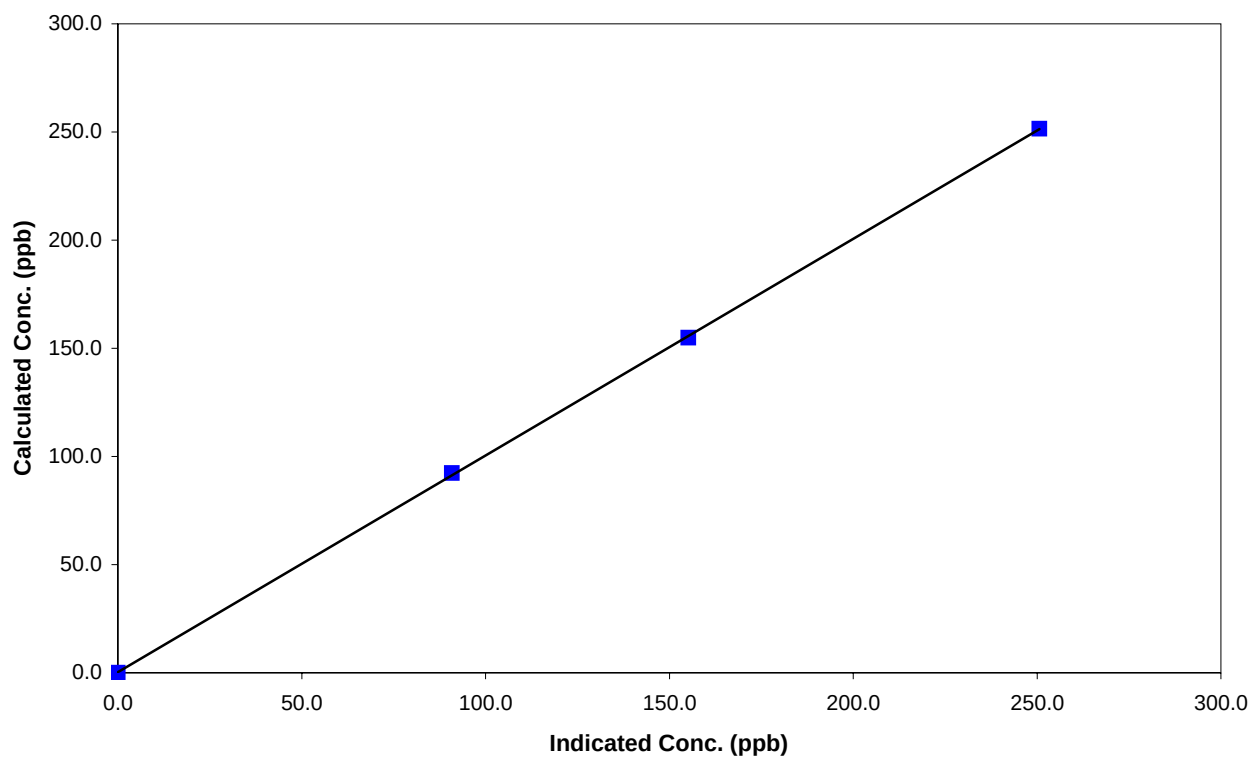
Station Information

Calibration Date	March 16, 2011	Previous Calibration	February 8, 2011
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:05	End Time (MST)	12:07
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	Correlation Coefficient	0.999948
251.4	250.6	1.0031		
154.9	155.2	0.9981		
92.3	90.9	1.0157	Slope	1.001131
			Intercept	0.338660

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PASZA



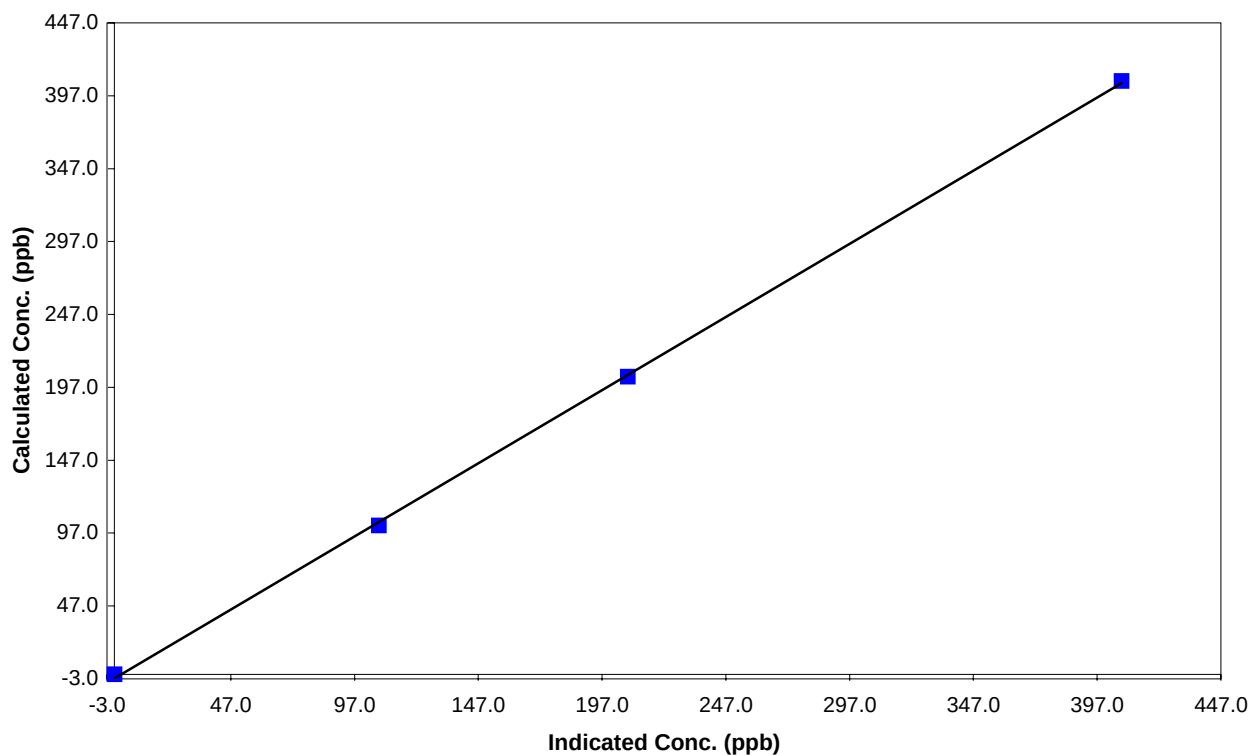
Station Information

Calibration Date	March 16, 2011	Previous Calibration	February 8, 2011
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:05	End Time (MST)	12:07
Analyzer make	TEI 42C	Analyzer serial #	508011073

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999818
407.1	406.9	1.0006		
204.2	207.4	0.9846		
102.1	106.8	0.9556	Slope	1.003659
			Intercept	-2.606314

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PASZA



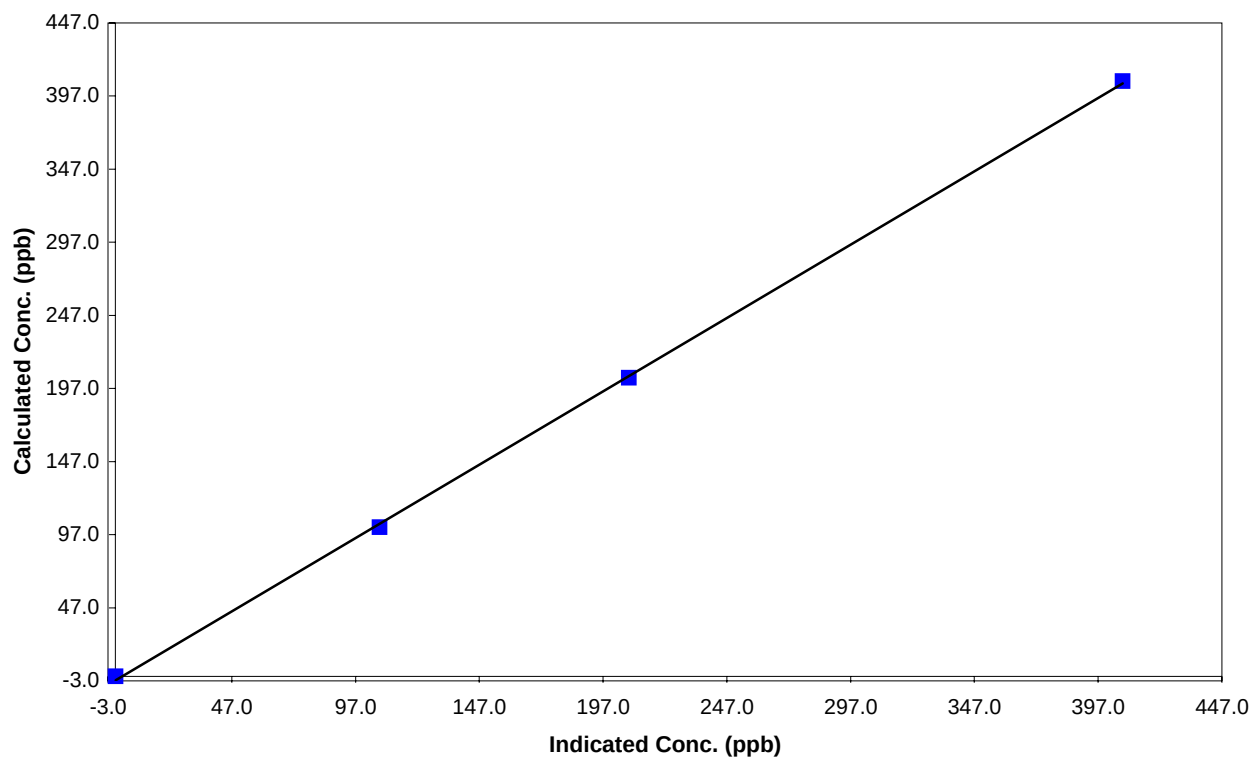
Station Information

Calibration Date	March 16, 2011	Previous Calibration	February 8, 2011
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:05	End Time (MST)	12:07
Analyzer make	TEI 42C	Analyzer serial #	508011073

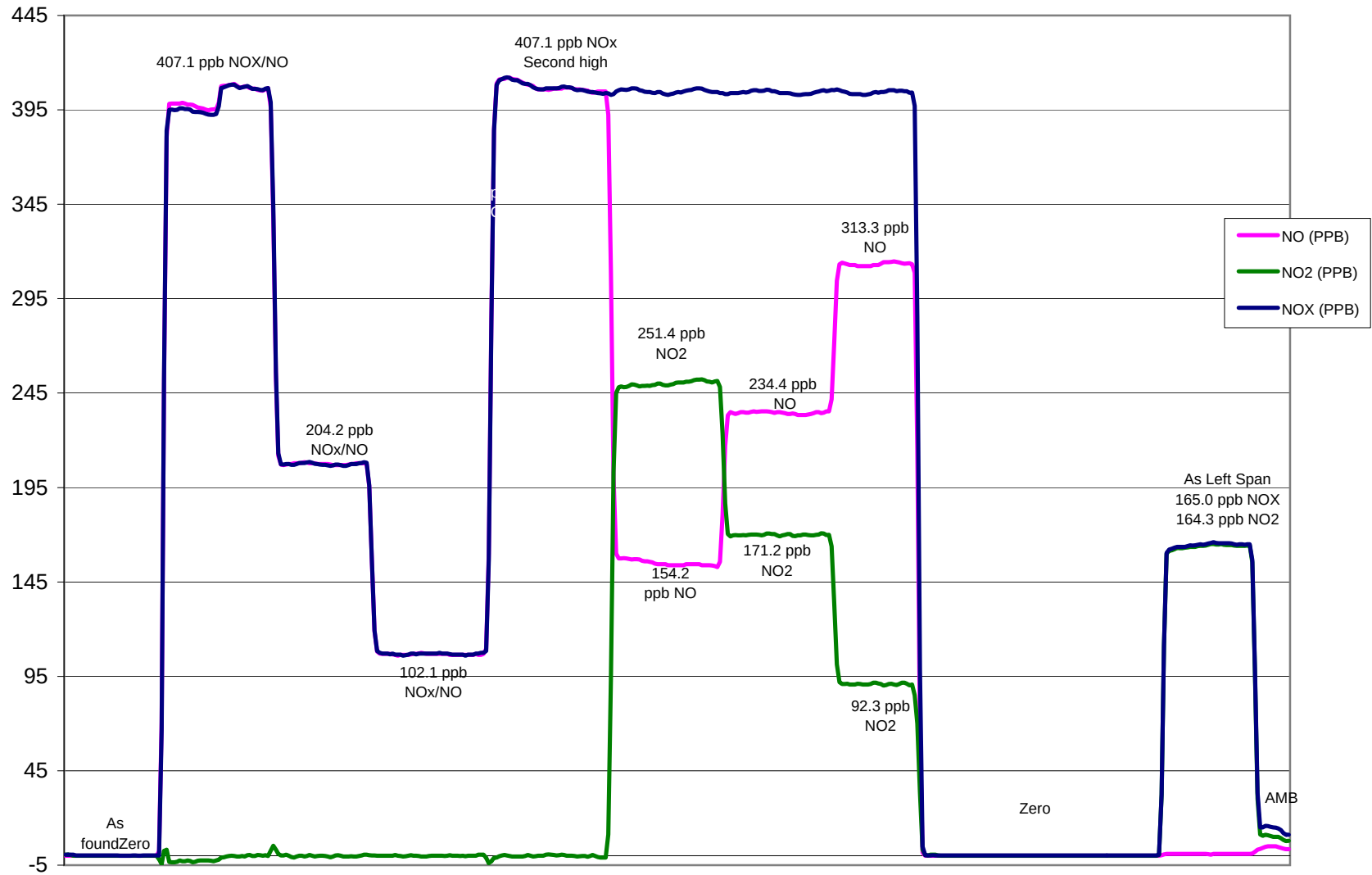
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999823
407.1	407.0	1.0004		
204.2	207.5	0.9840		
102.1	106.7	0.9568	Slope	1.003257
			Intercept	-2.542975

NO Calibration Curve



Henry Pirker NO_x Calibration



March 16, 2011

Calibration Report

Parameter 03

Air Monitoring Network PASZA



Station Information

Calibration Date	March 16, 2011	Previous Calibration	February 8, 2011
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
		Other:	
Start Time (MST)	10:30	End Time (MST)	12:39
Barometric Pressure	0.915 atm	Station Temperature	20.0 Deg C
Calibrator	Envionics 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	1.065963	Calculated slope	1.006492
Calculated intercept	-0.292547	Calculated intercept	0.450874
Analyzer make	TECO 49C	Analyzer serial #	607415761

	before		after	
Concentration range	500	ppb	500	ppb
offset	-0.6	ppb	-0.6	ppb
slope	0.985		0.986	
O3 Lamp temp	71.1	Deg C	71.1	Deg C
Intensities	83742/73205	mV	85134/74092	mV
Pressure	674.9	inches Hg	689.8	inches Hg
Flow A	0.712	ccm	0.722	ccm
Flow B	0.727	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	4989	0.0	0.2	N/A
300	4989	251.4	249.9	1.0058
200	4989	171.2	169.2	1.0119
100	4989	92.3	90.4	1.0208
0	4989	0.0	0.2	As found zero
300	4989	251.4	249.9	As found span
Average Correction Factor				1.0128

Calculated value of As Found Response: 265.9 ppm Percent Change of As Found: 5.8%

	before calibration		after calibration	
Auto zero	0.3	ppb	0.3	ppb
Auto span	153.1	ppb	135.4	ppb

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter O3

Air Monitoring Network PASZA



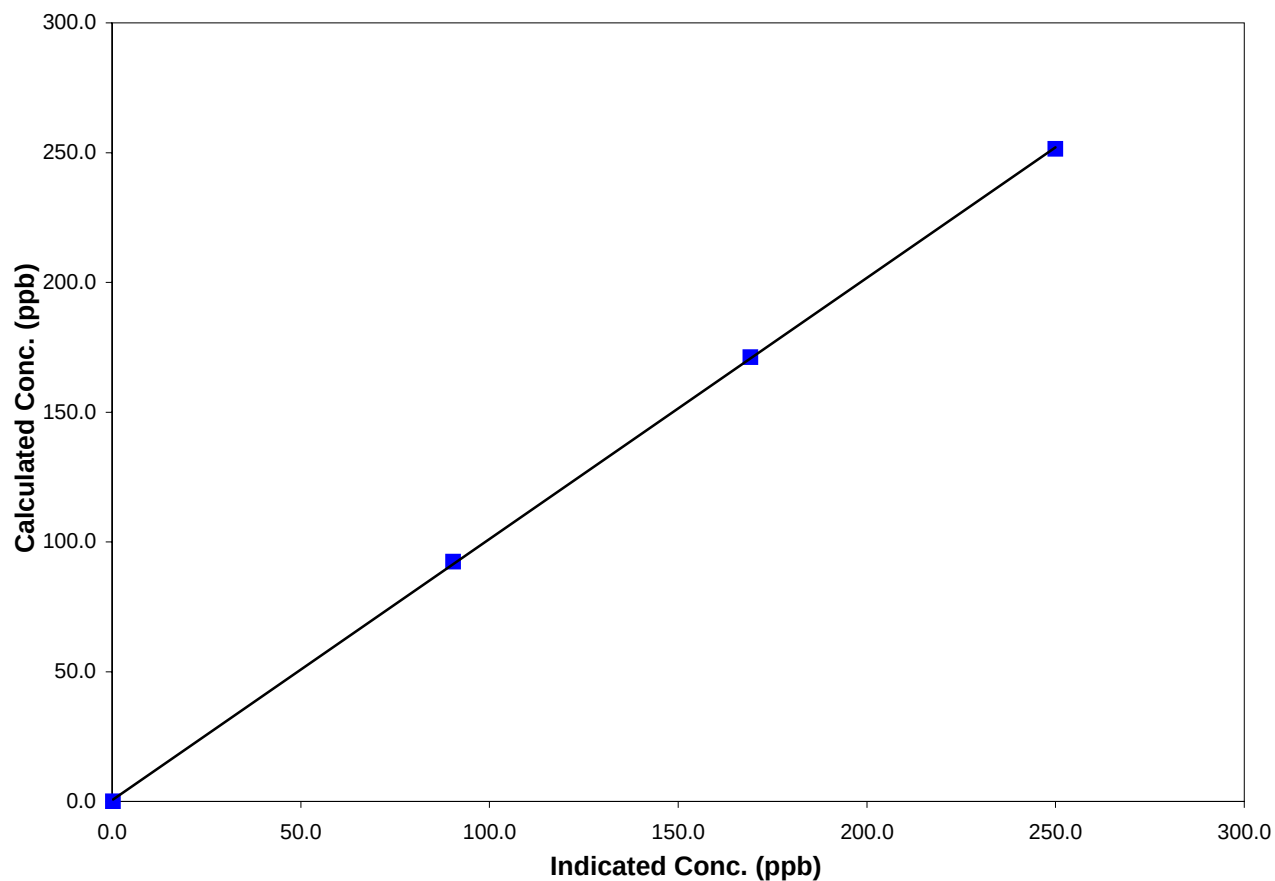
Station Information

Calibration Date	March 16, 2011	Previous Calibration	February 8, 2011
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:30	End Time (MST)	12:39
Analyzer make/model	TECO 49C	Analyzer serial #	607415761

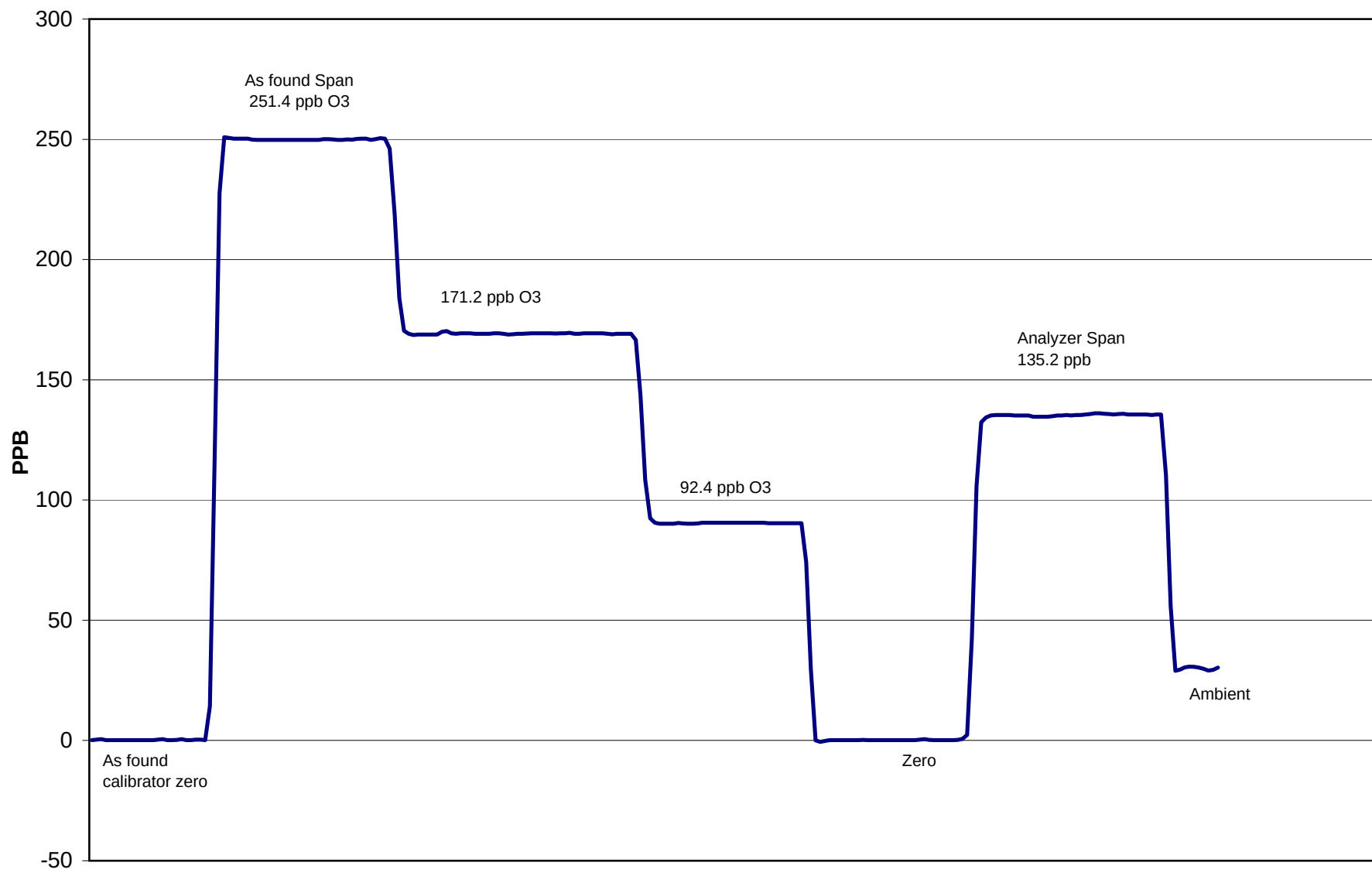
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	NA	Correlation Coefficient	0.999949
251.4	249.9	1.0058		
171.2	169.2	1.0119		
92.3	90.4	1.0208	Slope	1.006492
			Intercept	0.450874

O3 Calibration Curve



Henry Pirker O₃ Calibration



March 16, 2011

Calibration Report

Parameter CO

Air Monitoring Network PASZA



Station Information

Calibration Date	March 14, 2011	Previous Calibration	February 7, 2011
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	8:00	End Time (MST)	10:50
Barometric Pressure	0.916 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	0.984830	Calculated slope	1.007165
Calculated intercept	-0.675400	Calculated intercept	-0.747373
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	0.753		0.759	
Sample pressure	676.6	mm Hg	668.9	mm Hg
Sample Flow	1.136	LPM	1.128	LPM

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.00	0.46	N/A
4988	39.84	23.77	24.15	0.9845
4988	19.90	11.92	12.45	0.9578
4988	9.93	5.96	6.64	0.8976
4988	0.00	0.00	0.46	As Found Zero
4988	39.84	23.77	24.14	As Found Span
Average Correction Factor				0.9466

Calculated value of As Found Response: 22.652 ppm Percent Change of As Found: 4.7%

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	19.12	ppm	18.80	ppm

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter CO

Air Monitoring Network PASZA



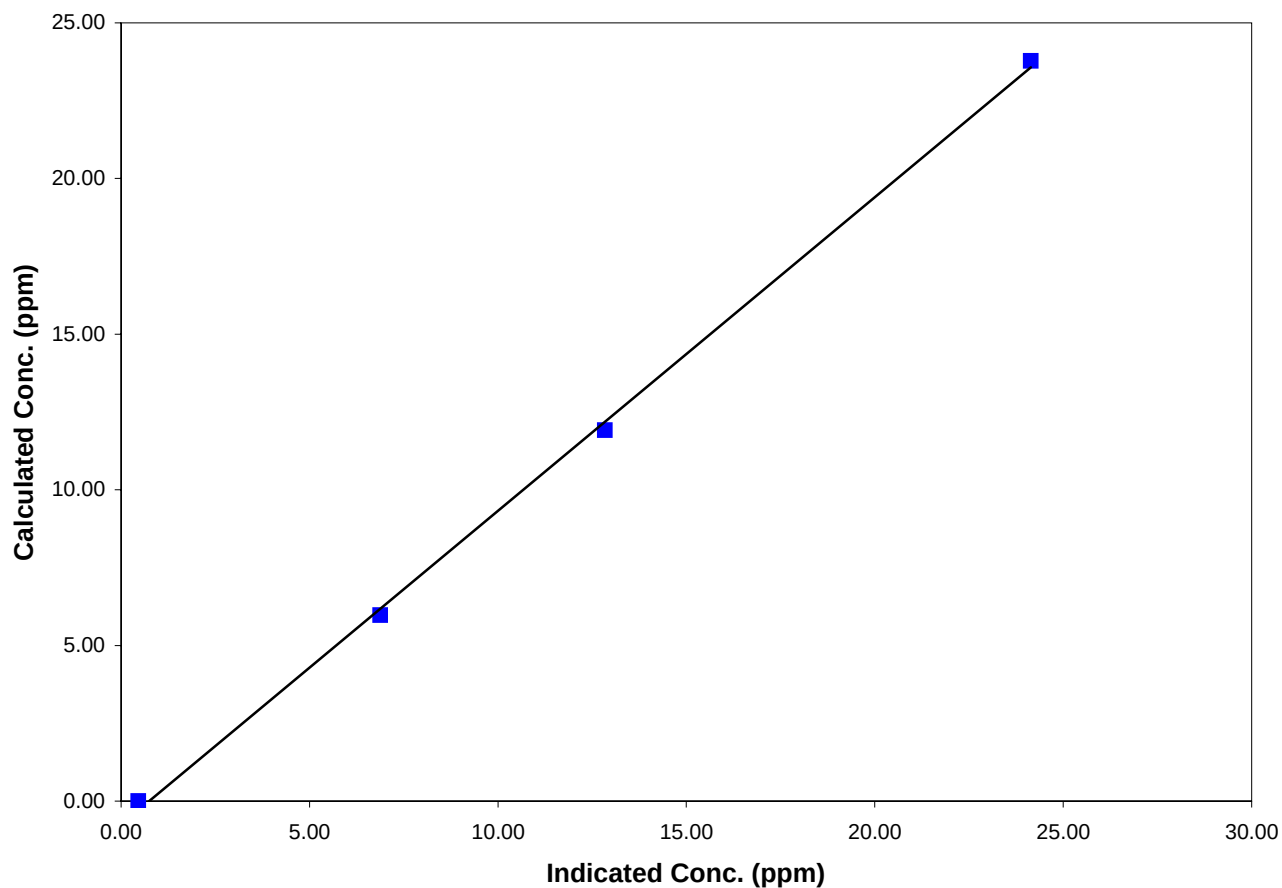
Station Information

Calibration Date	March 14, 2011	Previous Calibration	February 7, 2011
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:00	End Time (MST)	10:50
Analyzer make/model	TEI Model 48C	Analyzer serial #	508011062

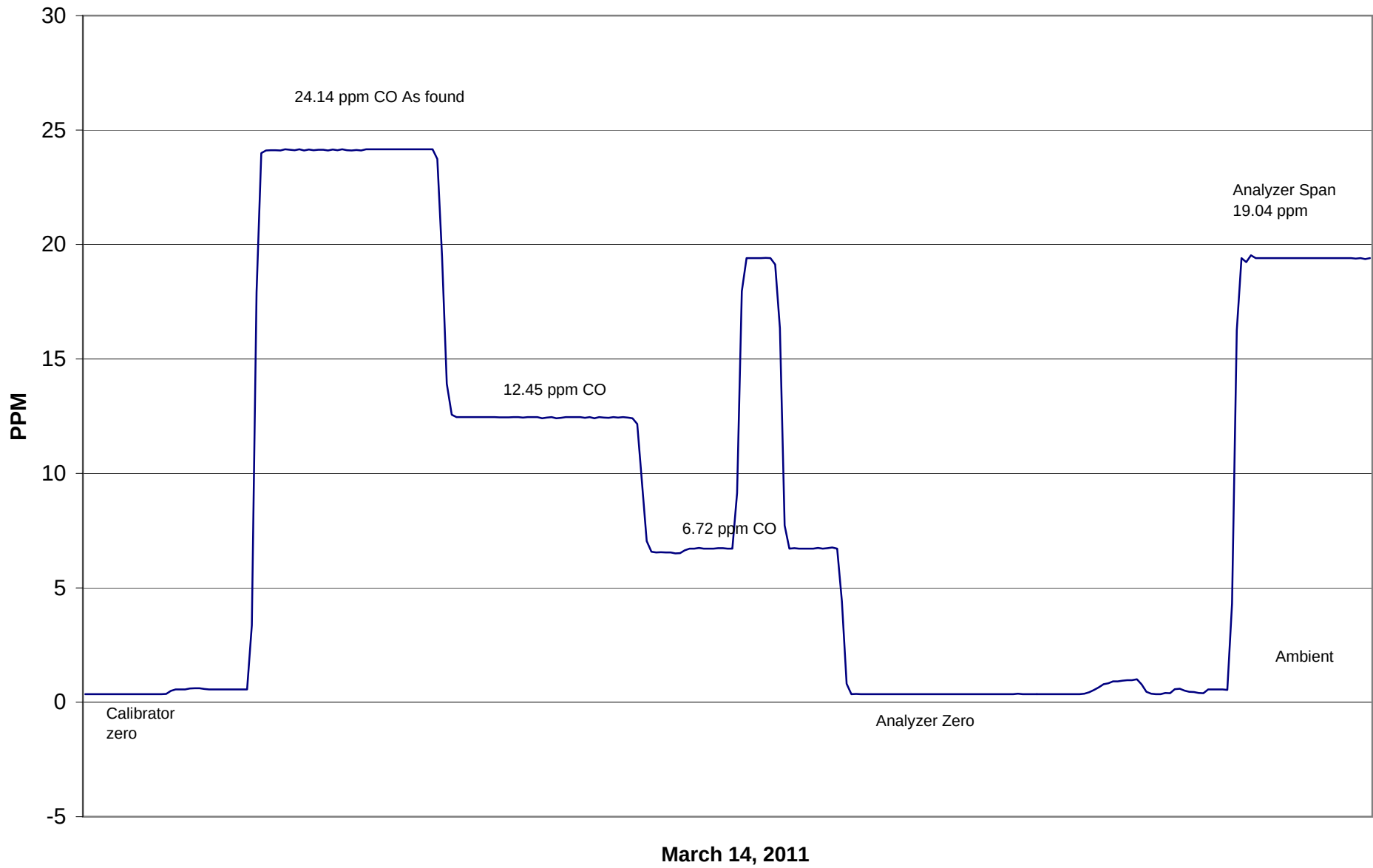
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.459	N/A	Correlation Coefficient	0.999216
23.772	24.145	0.9845		
11.910	12.840	0.9276		
5.970	6.880	0.8677	Slope	1.007165
			Intercept	-0.747373

CO Calibration Curve



Henry Pirker CO Calibration



Calibration Report

Parameter THC

Air Monitoring Network PASZA



Station Information

Calibration Date	March 14, 2011	Previous Calibration	February 7, 2011
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
			☐ Other:
Start Time (MST)	9:40	End Time (MST)	12:30
Barometric Pressure	0.916 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	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	1.034953	Calculated slope	1.062736
Calculated intercept	-0.043363	Calculated intercept	0.188112
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	-0.17	N/A
4988	69.75	21.01	19.62	1.0708
4988	29.87	9.07	8.27	1.0960
4988	9.92	3.02	2.72	1.1117
4988	0.00	0.00	-0.15	As Found Zero
4988	69.75	20.99	19.62	As Found Span
Average Correction Factor				1.0928

Calculated value of As Found Response: 20.412 ppm Percent Change of As Found: 2.8%

	before calibration		after calibration	
Auto zero	0.10	ppm	0.00	ppm
Auto span	20.65	ppm	22.97	ppm

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter THC

Air Monitoring Network PASZA



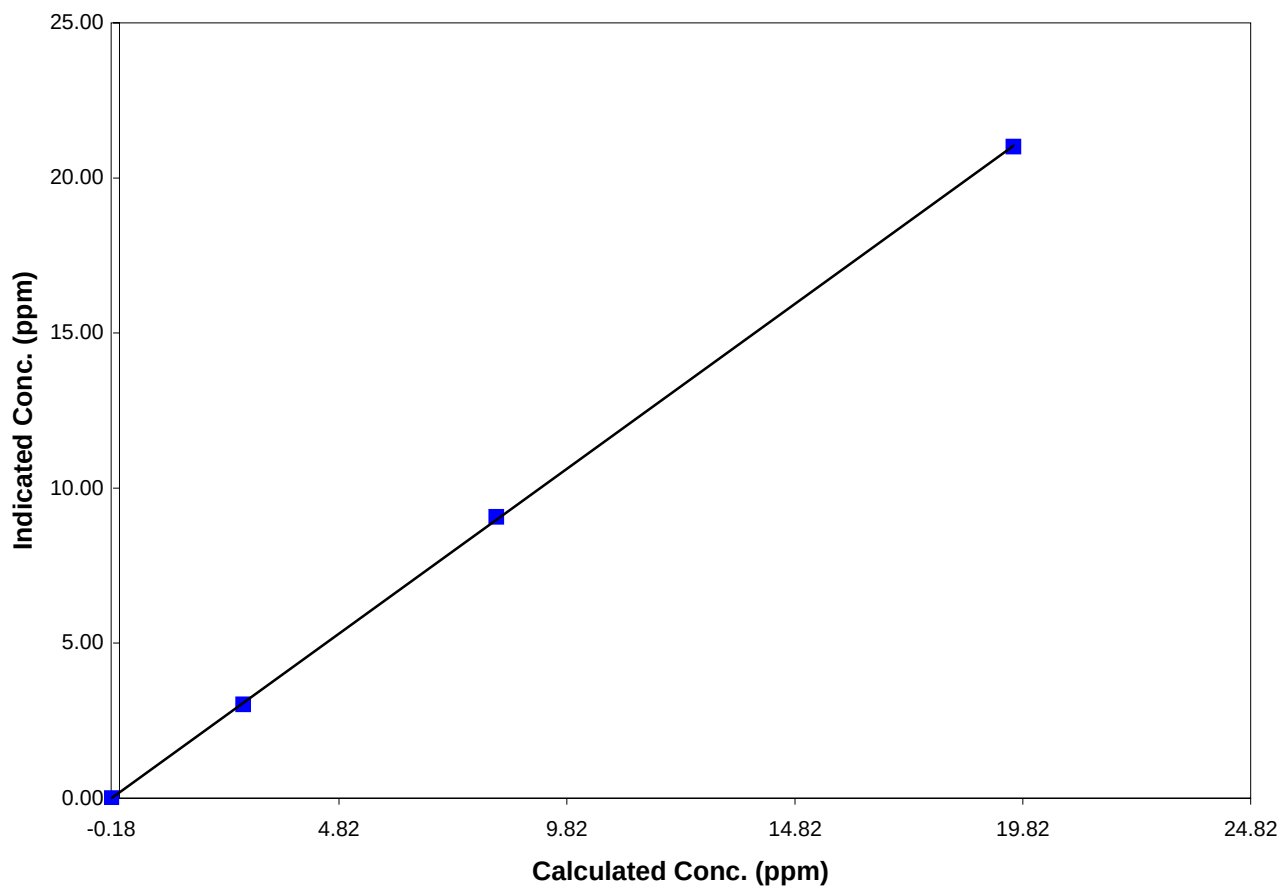
Station Information

Calibration Date	March 14, 2011	Previous Calibration	February 7, 2011
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:40	End Time (MST)	12:30
Analyzer make/model	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

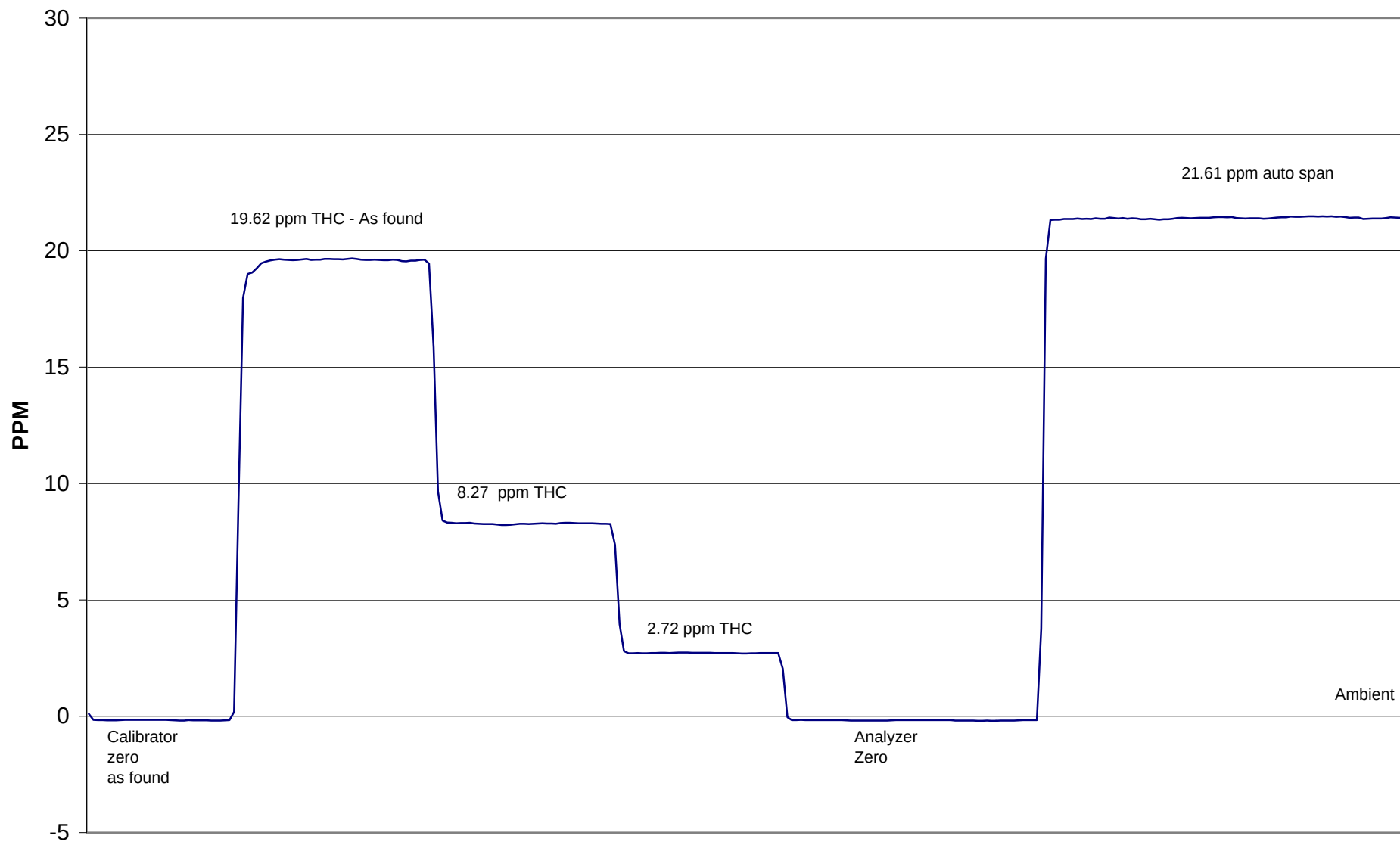
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	-0.174	N/A		
21.007	19.617	1.0708	Correlation Coefficient	0.999956
9.067	8.273	1.0960		
3.023	2.720	1.1117	Slope	1.062736
			Intercept	0.188112

THC Calibration Curve



Henry Pirker THC Calibration



March 14, 2011

Calibration Report



Parameter SO₂

Air Monitoring Network PASZA

Station Information

Calibration Date	March 22, 2011	Previous Calibration	February 4, 2011
Station Number	2	Station Location	Evergreen Park
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	10:05	End Time (MST)	12:15
Barometric Pressure	0.921 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	0.031307	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	0.992163	Calculated slope	0.995861
Calculated intercept	-2.123875	Calculated intercept	-0.806875
Analyzer make	Teco 43i	Analyzer serial #	701120008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	11.2		11.2	
coefficient	1.001		1.001	
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	665.9	mm Hg	655.2	mm Hg
Sample Flow	0.453	ccm	0.452	ccm
Lamp Intensity	90	%	90	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4989	0.0	0.00	0.5	N/A
4989	39.83	400.77	403.2	0.9940
4989	19.91	201.13	202.7	0.9924
4989	9.96	100.82	102.6	0.9831
	0.0			
4989	0.0	0.00	0.5	As Found Zero
4989	39.83	400.77	403.2	As Found Span
Average Correction Factor				0.9898

Calculated value of As Found Response: 397.412 ppm Percent Change of As Found: 0.8%

	before calibration		after calibration	
Auto zero	0.7	ppm	0.6	ppm
Auto span	286.9	ppm	293.4	ppm

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PASZA



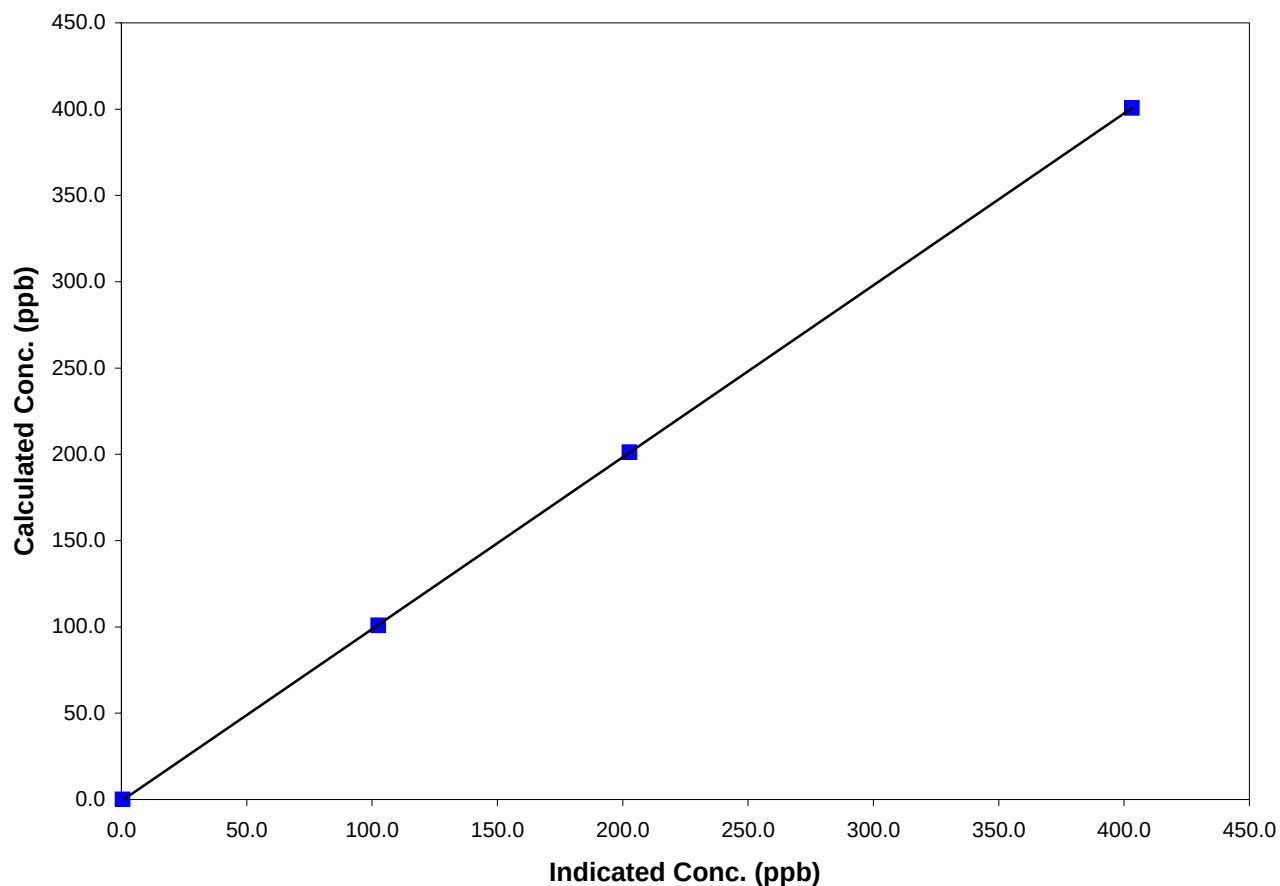
Station Information

Calibration Date	March 22, 2011	Previous Calibration	February 4, 2011
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	10:05	End Time (MST)	12:15
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

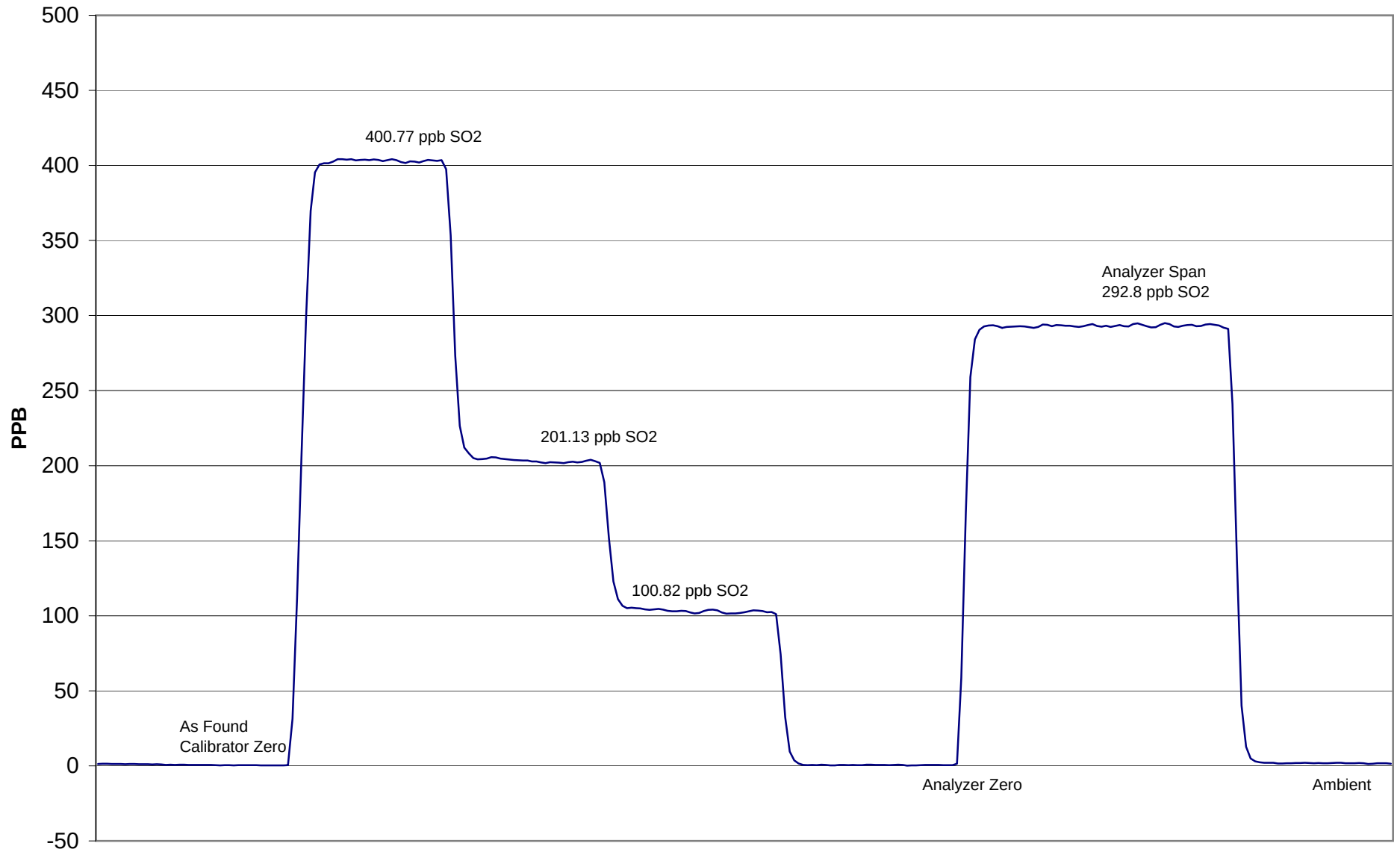
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A	Correlation Coefficient	0.999996
400.8	403.2	0.9940		
201.1	202.7	0.9924		
100.8	102.6	0.9831	Slope	0.995861
			Intercept	-0.806875

SO2 Calibration Curve



Evergreen Park SO₂ Calibration



March 22, 2011

Calibration Report



Parameter TRS

Air Monitoring Network PASZA

Station Information

Calibration Date	March 22, 2011	Previous Calibration	February 4, 2011
Station Number	2	Station Location	Evergreen Park
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	11:05	End Time (MST)	13:50
Barometric Pressure	0.921 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Conc	5.77 ppm	Cal Gas Expiry Date	9/3/2011
Correction factor	0.031307	Cal Gas Cylinder #	BLM001434
DACS make	Focus AP1000	DACS serial No.	52620
DACS voltage range	0 - 10 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
Calculated slope	1.007566	Calculated slope	1.004846
Calculated intercept	-0.626815	Calculated intercept	-0.345593

Analyzer make TEI Model 43C Analyzer serial # 436610005

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	16.3	ppb	17.1	ppb
coefficient	0.859		0.903	
Lamp Voltage	810	volts	809	volts
Chamber Temp	44.3	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45.01	Deg C
Pressure	641	mm Hg	641.3	mm Hg
Sample Flow	0.477	ccm	0.477	ccm
Lamp Intensity	45,430	mv	46,421	mv

Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4989	0.00	0.00	0.5	N/A
4989	69.74	79.55	79.6	0.9987
4989	34.86	40.04	39.9	1.0030
4989	8.94	10.32	10.5	0.9787
4989	0.00	0.00	0.5	As Found Zero
4989	69.74	79.55	75.2	As Found Span
Average Correction Factor				0.9935

Calculated value of As Found Response: 74.64 ppm Percent Change of As Found: 6.2%

	before calibration		after calibration	
Auto zero	-0.5	ppm	0.2	ppm
Auto span	62.0	ppm	71.5	ppm

Notes: Lower response with new gas - adjust span following 80% point.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter TRS

Air Monitoring Network PASZA



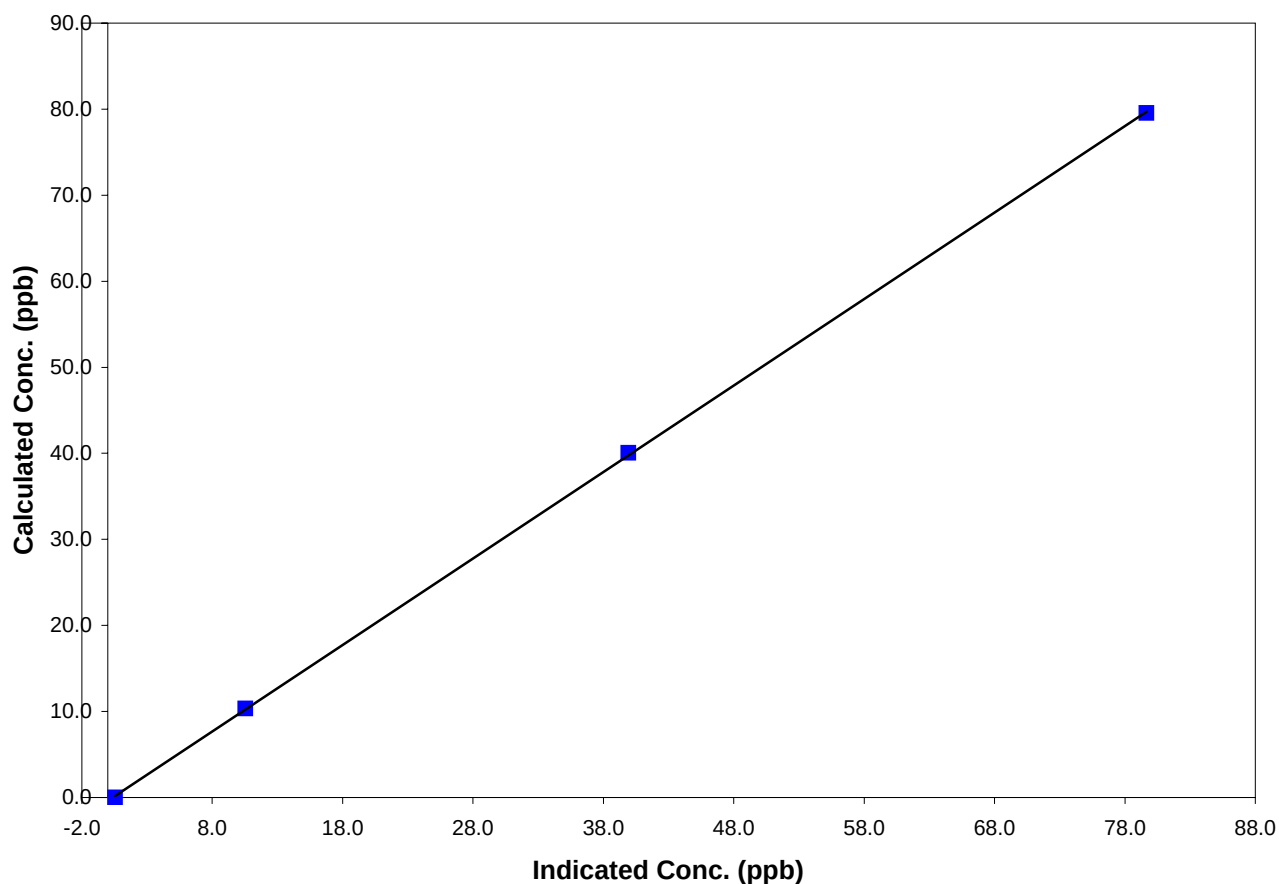
Station Information

Calibration Date	March 22, 2011	Previous Calibration	February 4, 2011
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	11:05	End Time (MST)	13:50
Analyzer make/model	TEI Model 43C	Analyzer serial #	436610005

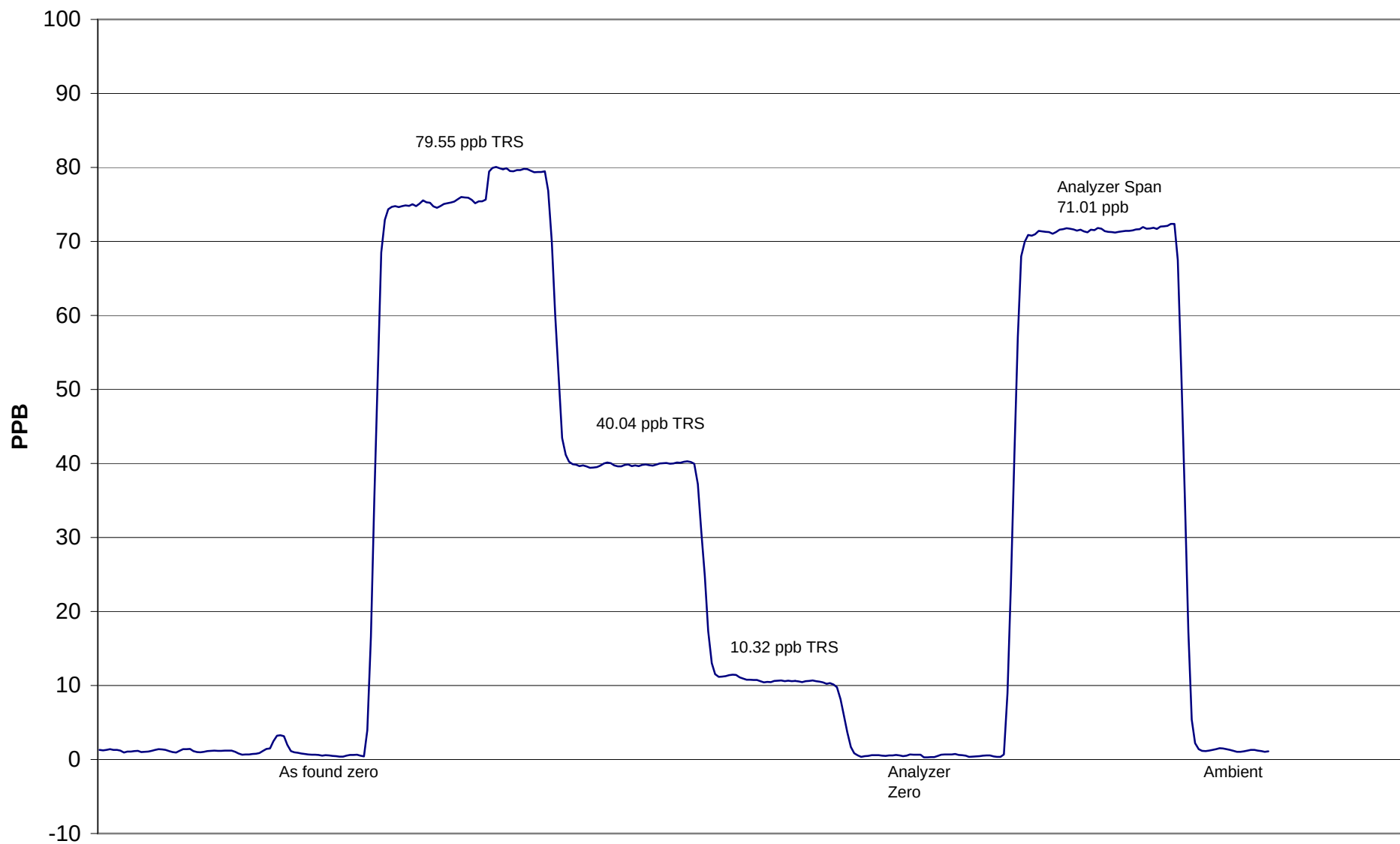
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A	Correlation Coefficient	0.999964
79.5	79.6	0.9987		
40.0	39.9	1.0030		
10.3	10.5	0.9787	Slope	1.004846
			Intercept	-0.345593

TRS Calibration Curve



Evergreen Park TRS Calibration



March 22, 2011

Calibration Report



Parameter SO₂

Air Monitoring Network PASZA

Station Information

Calibration Date	March 17, 2011	Previous Calibration	February 9, 2011
Station Number	3	Station Location	Smoky Heights
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	9:00	End Time (MST)	12:21
Barometric Pressure	0.926 ATM	Station Temperature	20.0 Deg C
Calibrator	Enviroics 6100	Serial Number	3474
Cal Gas Concentration	50.6 ppm	Cal Gas Cert Date	11/29/2010
Correction factor	0.031477	Cal Gas Cylinder #	LL34002
DACS make	Focus AP1000	DACS serial No.	45272
DACS voltage range	0 - 10 volt	DACS channel #	6
	<u>Before</u>		<u>After</u>
Calculated slope	1.006740	Calculated slope	0.998218
Calculated intercept	-2.210069	Calculated intercept	-0.479661
Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	9.3		9.5	
coefficient	0.69		0.998	
Lamp Voltage	926	volts	927	volts
Chamber Temp	45	Deg C	45.01	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	671.1	mm Hg	673.5	mm Hg
Sample Flow	0.443	ccm	0.445	ccm
Lamp Intensity	88	%	88	%

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	0.4	N/A
4989	39.84	400.87	402.2	0.9967
4989	19.91	201.13	201.5	0.9981
4989	9.95	100.72	101.8	0.9897
4989	0.0	0.00	0.4	As Found Zero
4989	39.84	400.87	394.8	As Found Span
Average Correction Factor				0.9948

Calculated value of As Found Response: 394.859 ppm Percent Change of As Found: 1.5%

	before calibration		after calibration	
Auto zero	0.4	ppb	0.2	ppb
Auto span	306.6	ppb	305.4	ppb

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PASZA



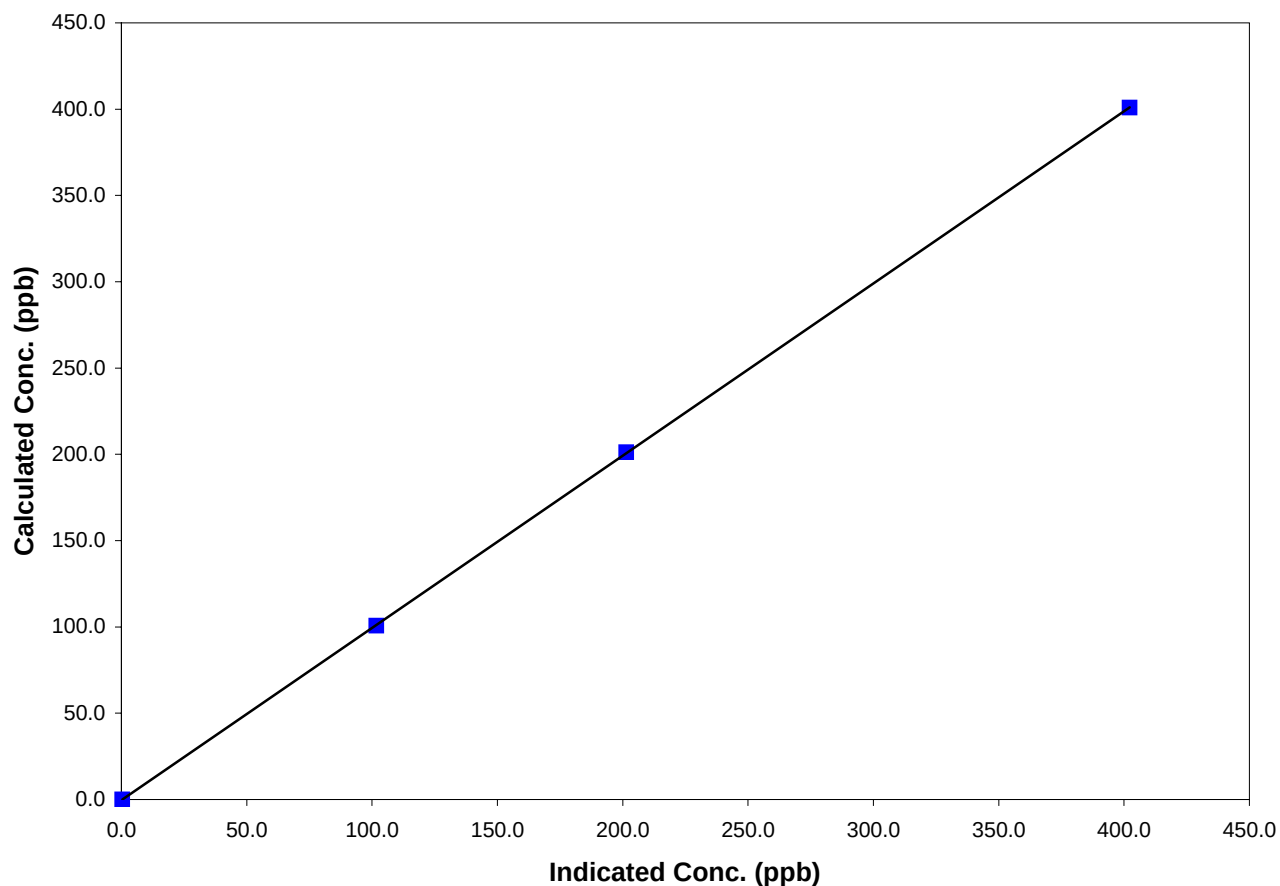
Station Information

Calibration Date	March 17, 2011	Previous Calibration	February 9, 2011
Station Number	3	Station Location	Smoky Heights
Start Time (MST)	9:00	End Time (MST)	12:21
Analyzer make/model	Teco 43i	Analyzer serial #	701120009

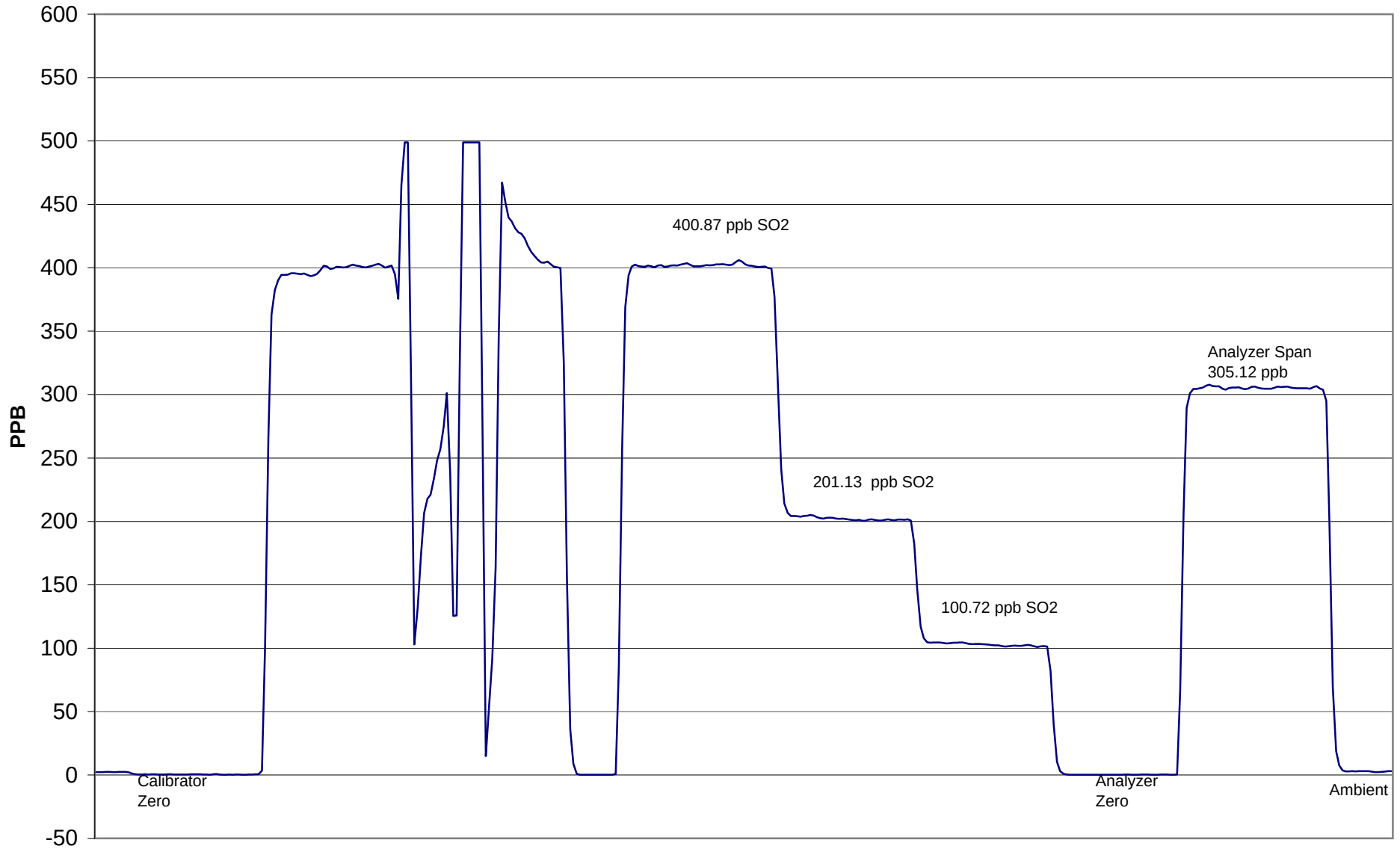
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A	Correlation Coefficient	0.999996
400.9	402.2	0.9967		
201.1	201.5	0.9981		
100.7	101.8	0.9897	Slope	0.998218
			Intercept	-0.479661

SO2 Calibration Curve



Smoky Heights SO₂ Calibration



March 17, 2011

Calibration Report



Parameter TRS

Air Monitoring Network PASZA

Station Information

Calibration Date	March 18, 2011	Previous Calibration	February 9, 2011
Station Number	3	Station Location	Smoky Heights
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	11:00	End Time (MST)	13:30
Barometric Pressure	0.926 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Conc	5.77 ppm	Cal Gas Expiry Date	9/3/2011
Correction factor	0.031477	Cal Gas Cylinder #	BLM001434
DACS make	Focus AP1000	DACS serial No.	52620
DACS voltage range	0 - 10 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
Calculated slope	1.006424	Calculated slope	0.997347
Calculated intercept	0.167468	Calculated intercept	0.152751

Analyzer make TEI Model 43C Analyzer serial # 0436610005

	before		after	
Concentration range	100	ppb	100	ppb
Background	15.1	ppb	15.2	ppb
coefficient	1.068		1.068	
Lamp Voltage	773	volts	770	volts
Chamber Temp	44	Deg C	44.99	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	507.2	mm Hg	492.6	mm Hg
Sample Flow	0.742	ccm	0.711	ccm
Lamp Intensity	32,462	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
4989	69.77	79.58	79.9	0.9961
4989	34.88	40.06	39.5	1.0137
4989	8.96	10.34	10.2	1.0167
4989	0.0	0.00	0.1	As Found Zero
4989	69.77	79.58	76.4	As Found Span
Average Correction Factor				1.0088

Calculated value of As Found Response: 76.95 ppm Percent Change of As Found: 3.3%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.2	ppm
Auto span	41.9	ppm	45.4	ppm

Notes: _____

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter TRS

Air Monitoring Network PASZA



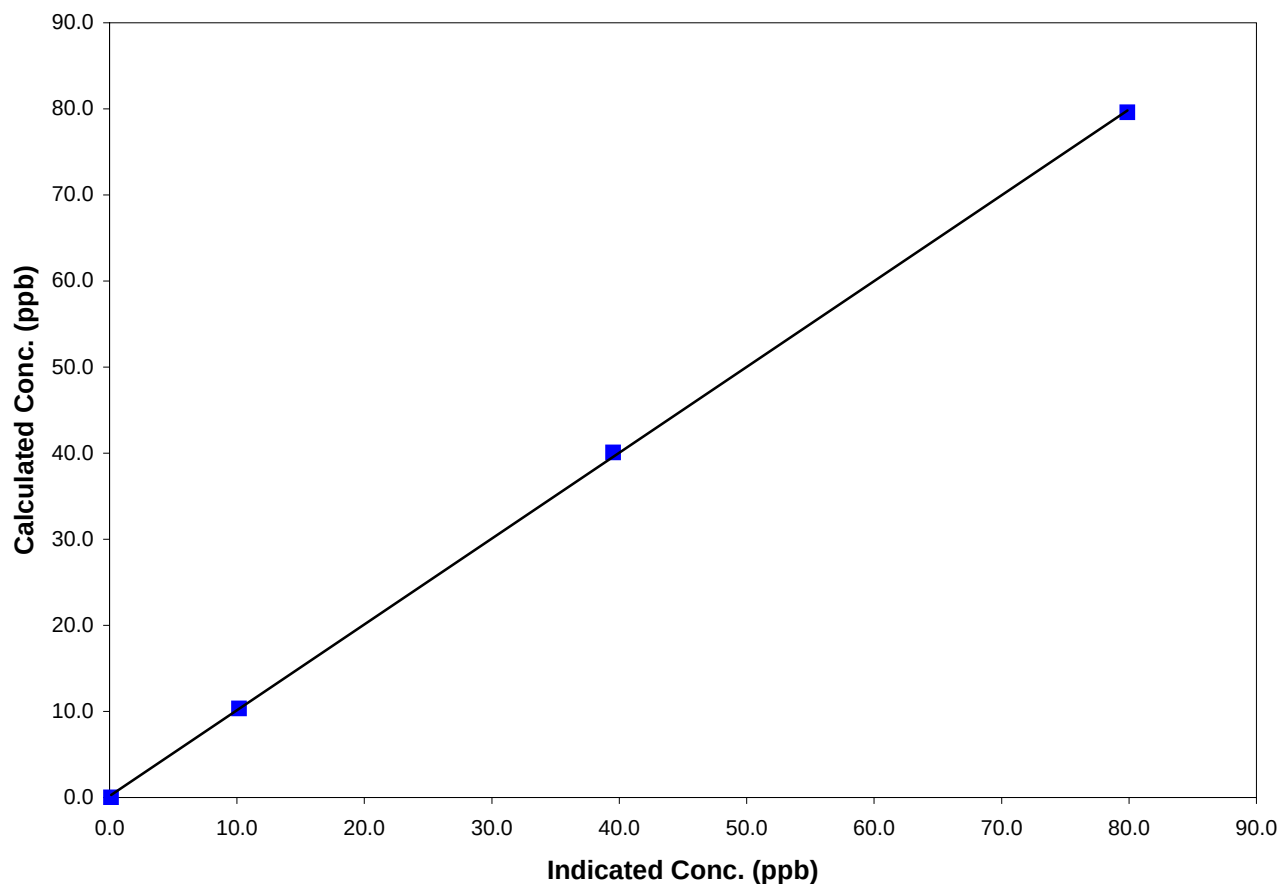
Station Information

Calibration Date	March 18, 2011	Previous Calibration	February 9, 2011
Station Number	3	Station Location	Smoky Heights
Start Time (MST)	11:00	End Time (MST)	13:30
Analyzer make/model	TEI Model 43C	Analyzer serial #	0436610005

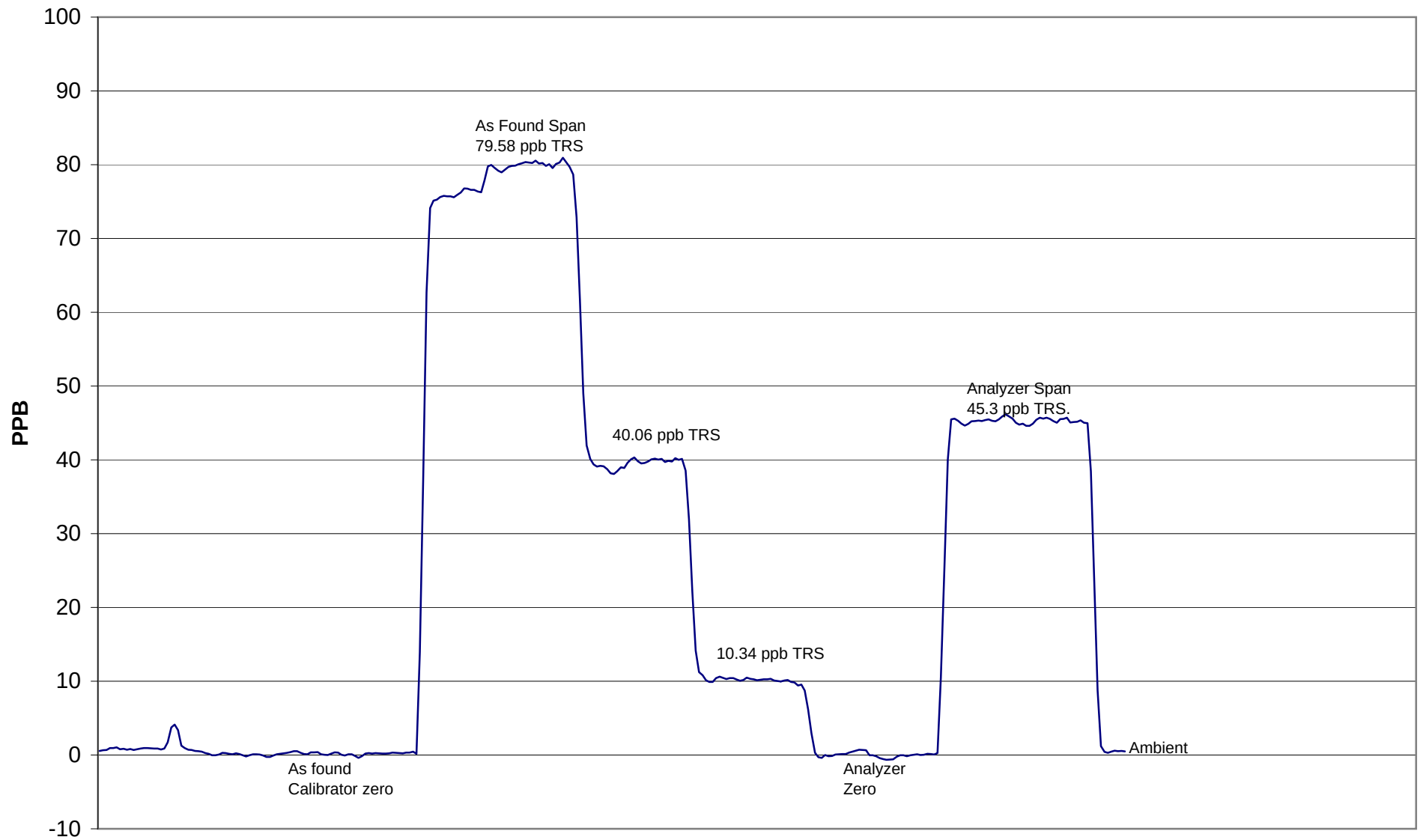
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999898
79.6	79.9	0.9961		
40.1	39.5	1.0137		
10.3	10.2	1.0167	Slope	0.997347
			Intercept	0.152751

TRS Calibration Curve



Smoky Heights TRS Calibration



March 18, 2011

Calibration Report

Parameter SO2

Air Monitoring Network PASZA



Station Information

Calibration Date	March 10, 2011	Previous Calibration	February 2, 2011
Station Number	4	Station Location	Beaverlodge
Reason:	☐ Routine	☐ Install	☐ Removal
		☒ Other:	Maintenance
Start Time (MST)	9:00	End Time (MST)	11:15
Barometric Pressure	0.907 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
	<u>Before</u>		<u>After</u>
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.048269	Calculated slope	1.000712
Calculated intercept	0.254094	Calculated intercept	-0.163264
Analyzer make	TEI Model 43i-TLE	Analyzer serial #	713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.76		2.59	
Coefficient	1.021		0.959	
PMT	-787.4	V	-787.4	V
UV Lamp Voltage	1132	V	1153	V
Chamber Temp	45	Deg C	45.2	Deg C
Pressure	660.1	mm Hg	667.9	mm Hg
Sample Flow	0.526	LPM	0.518	LPM
Lamp Intesity	88%	%	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	0.2	N/A
4988	39.82	79.7	79.9	0.9976
4988	19.90	40.0	39.9	1.0019
4988	9.93	20.0	20.2	0.9883
4988	0.00	0.0	0.2	As found zero
4988	39.82	79.7	79.9	As found span
Average Correction Factor				0.9959

Calculated value of As Found Response: 83.812 ppm Percent Change of As Found: -5.2%

	before calibration		after calibration	
Auto zero	-0.3	ppb	0.0	ppb
Auto span	59.7	ppb	58.8	ppb

Notes: _____

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PASZA



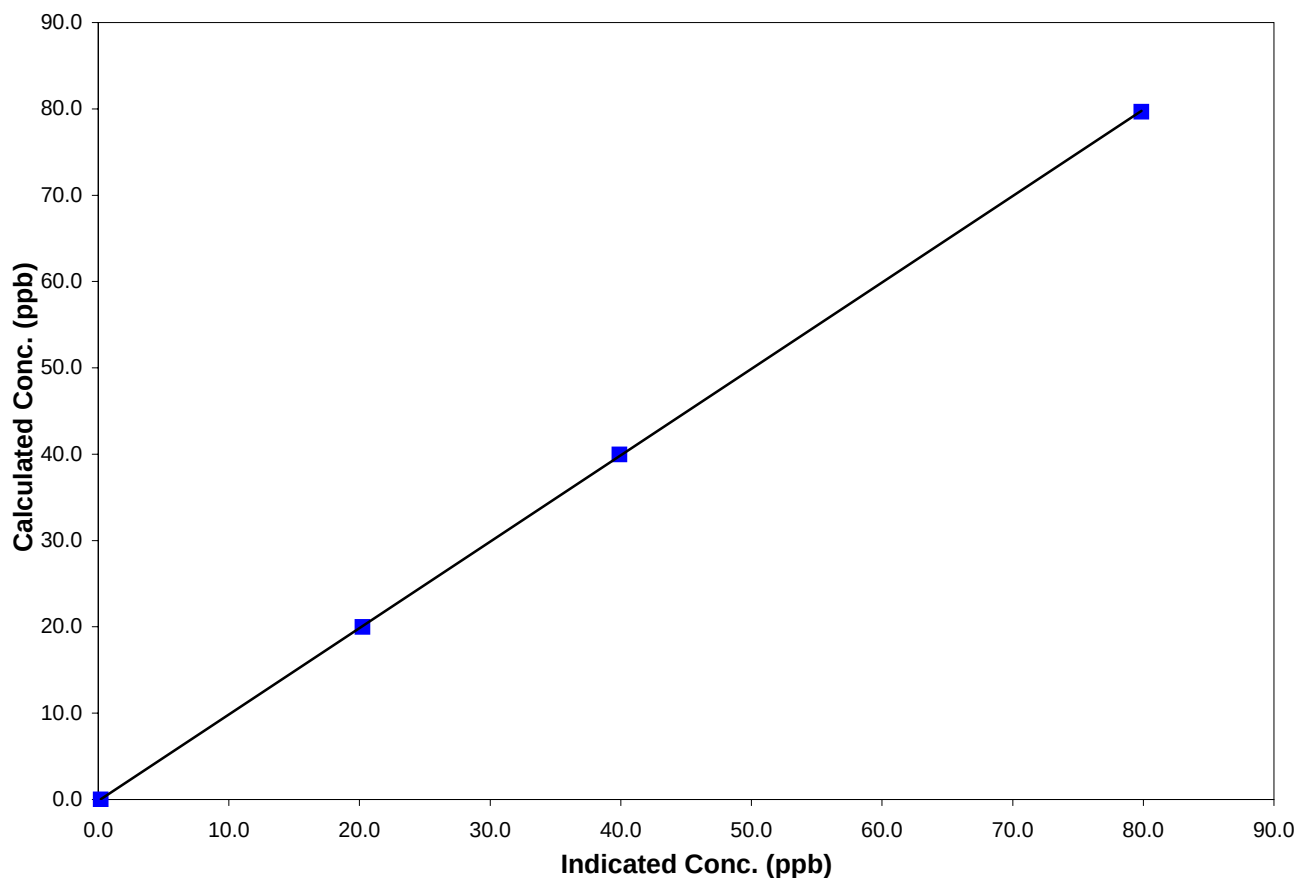
Station Information

Calibration Date	March 10, 2011	Previous Calibration	February 2, 2011
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	9:00	End Time (MST)	11:15
Analyzer make/model	TEI Model 43i-TLE	Analyzer serial #	713021137

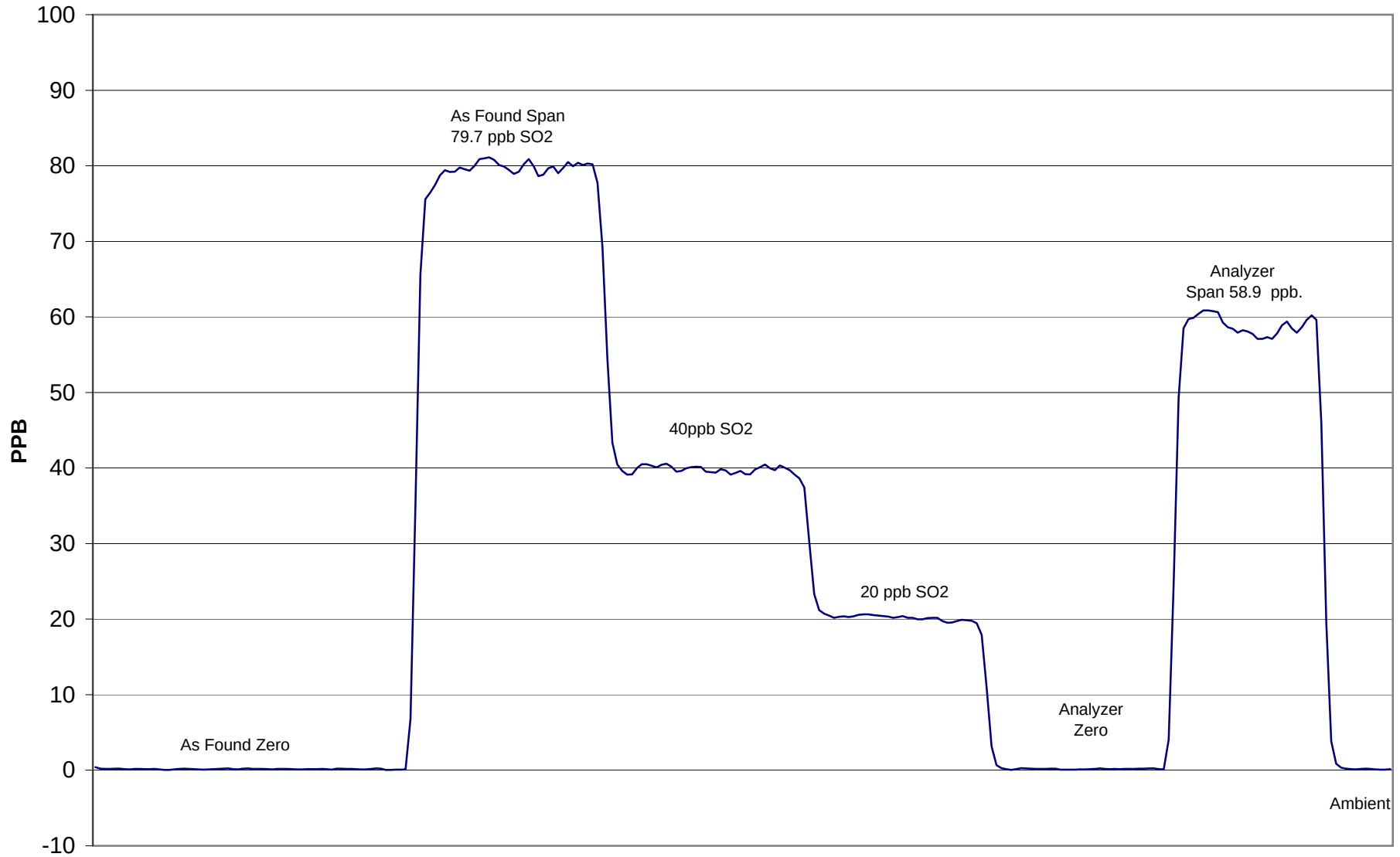
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999983
79.7	79.9	0.9976		
40.0	39.9	1.0019		
20.0	20.2	0.9883	Slope	1.000712
			Intercept	-0.163264

SO2 Calibration Curve



Beaverlodge SO₂ Calibration



March 10, 2011

Calibration Report

Parameter SO2
Air Monitoring Network PASZA



Station Information

Calibration Date	March 10, 2011	Previous Calibration	February 2, 2011
Station Number	4	Station Location	Beaverlodge
Reason:	☒ Routine	☐ Install	☐ Removal
			☐ Other:
Start Time (MST)	11:15	End Time (MST)	13:44
Barometric Pressure	0.907 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
	<u>Before</u>		<u>After</u>
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	NA	Calculated slope	0.989072
Calculated intercept	NA	Calculated intercept	0.284381
Analyzer make	TEI Model 43i-TLE	Analyzer serial #	713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.76		2.59	
Coefficient	1.021		0.959	
PMT	-787.4	V	-787.4	V
UV Lamp Voltage	1132	V	1153	V
Chamber Temp	45	Deg C	45.2	Deg C
Pressure	660.1	mm Hg	667.9	mm Hg
Sample Flow	0.526	LPM	0.518	LPM
Lamp Intesity	88%	%	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	80.4	0.9909
4988	19.90	40.0	39.9	1.0023
4988	9.93	20.0	19.9	1.0064
				As found zero
				As found span
Average Correction Factor				0.9999

Calculated value of As Found Response: NA

Percent Change of As Found: NA

	before calibration		after calibration	
Auto zero	-0.3	ppb	0.4	ppb
Auto span	59.7	ppb	58.8	ppb

Notes: Recalibrated following Trigger Pack install 43i.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PASZA



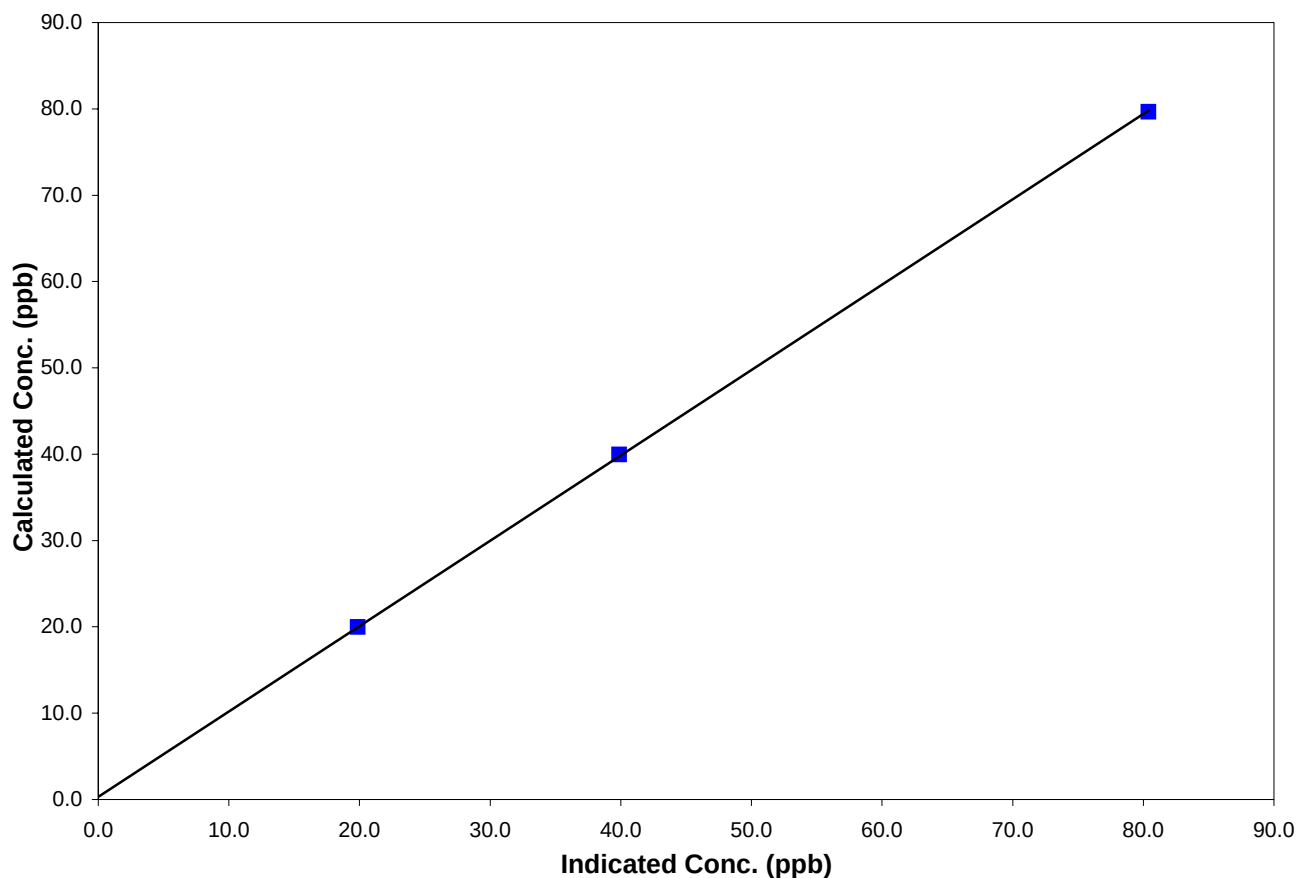
Station Information

Calibration Date	March 10, 2011	Previous Calibration	February 2, 2011
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	11:15	End Time (MST)	13:44
Analyzer make/model	TEI Model 43i-TLE	Analyzer serial #	713021137

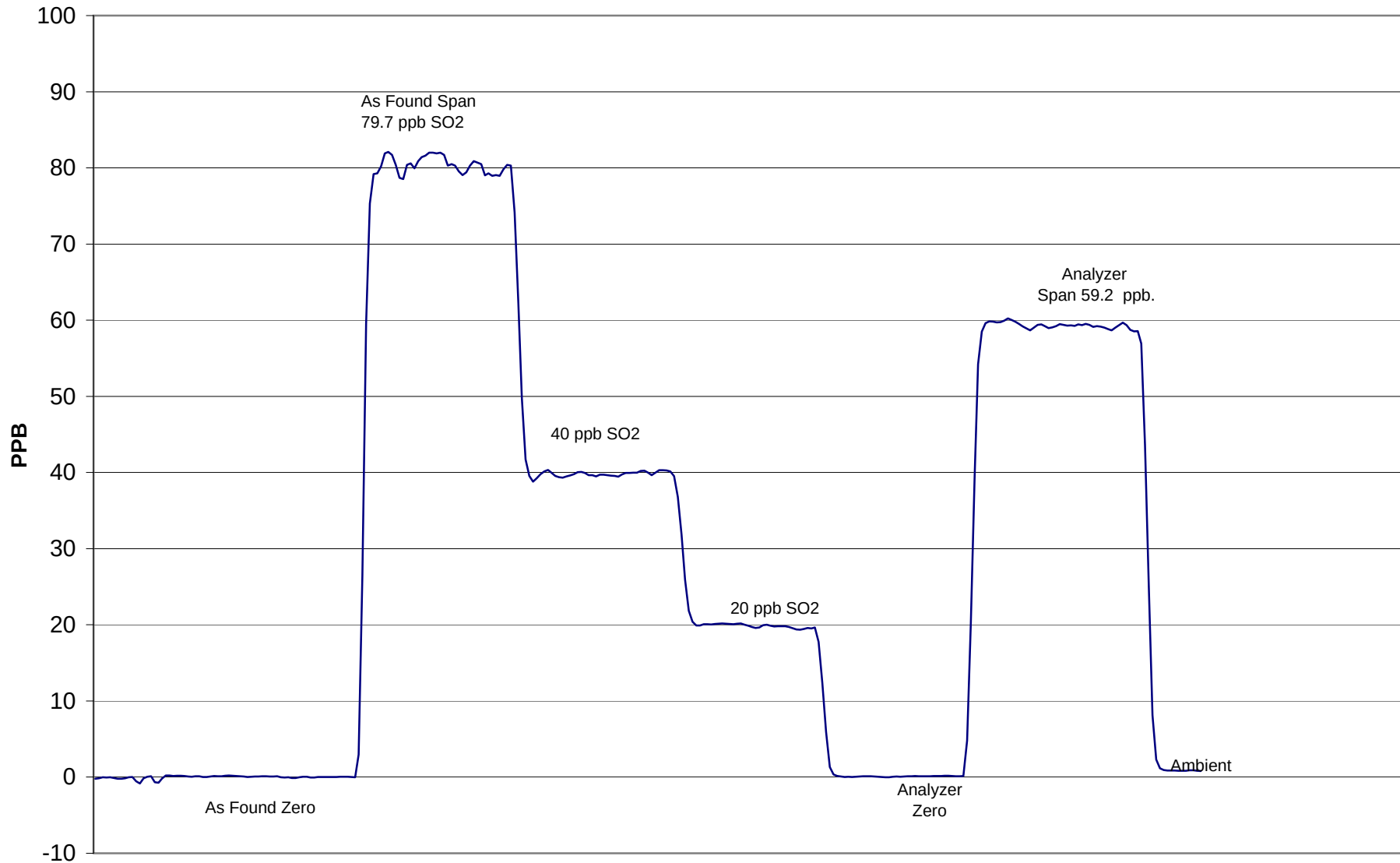
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A	Correlation Coefficient	0.999968
79.7	80.4	0.9909		
40.0	39.9	1.0023		
20.0	19.9	1.0064	Slope	0.989072
			Intercept	0.284381

SO2 Calibration Curve



Beaverlodge SO₂ Calibration



March 10, 2011

Calibration Report

Parameter

NO_x-NO-NO₂

Air Monitoring Network

PASZA



Station Information

Calibration Date March 10, 2011

Previous Calibration February 2, 2011

Station Number 4

Station Location BeaverLodge

Reason:

☒ Routine

☐ Installation

☐ Removal

☐ Other:

Start Time (MST) 11:15

End Time (MST) 15:00

Barometric Pressure 0.907 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	1.006862	1.000979	0.992443
	Data Offset	0.631275	-1.644850	-0.732594
After	Data Slope	0.998577	1.005646	1.002086
	Data Offset	0.228378	-2.188839	-2.463466
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	2.2	mV
NOx bkgnd	2.7	mV	2.5	mV
NO coefficient	1.474		1.430	
NOx coefficient	0.983		0.999	
NO2 conv temp	326.8	Deg C	326.2	Deg C
PMT Temp	-3.1	Deg C	-3.0	Deg C
PMT Volt	-676.4	mV	-676.4	mV
R Cell Press	177.7	in Hg	175.3	in Hg
Sample Flow	0.700	ccm	0.732	ccm

Calibration Report

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



Station Information

Calibration Date: March 10, 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	-0.2	N/A	N/A
1	4988	39.82	397.6	396.8	0.8	396.3	397.1	-1.0	1.0032	0.9993
2	4988	19.90	199.5	199.1	0.4	201.8	202.4	-1.1	0.9885	0.9835
3	4988	9.93	99.7	99.5	0.2	103.6	104.4	-0.7	0.9628	0.9530
AFZ	4988	0.00	0.0	0.0	0.0	-0.1	-0.2	-0.1	0.0000	0.0000
AFS	4988	39.82	397.6	396.8	0.8	401.4	408.5	-7.1	0.9906	0.9714
Average Correction Factor									0.9849	0.9786

As Found Concentrations: NO_x= 399.8 NO= 408.0 As Found Percent Change NO_x= 0.6% NO= 2.8%

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	-0.2	-0.2	0.0	-0.1	-0.1	-0.2	N/A	N/A	N/A	N/A
NO point	396.7	396.7	0.0	396.1	396.7	-0.5	1.0016	1.0000	N/A	N/A
300	396.7	165.5	231.2	396.6	165.5	231.3	1.0004	1.0000	0.9998	100.0%
200	396.7	239.6	157.2	396.5	239.6	157.3	1.0006	1.0000	0.9990	100.1%
100	396.7	311.7	85.0	395.9	311.7	84.8	1.0022	1.0000	1.0031	99.7%
Average Correction Factor							1.0011	1.0000	1.0006	99.9%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.2	-0.3	-0.2	ppb	0.0	0.1	0.3	ppb
Auto span	238.0	235.5	1.6	ppb	221.1	219.5	1.2	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter NO₂

Air Monitoring Network PASZA



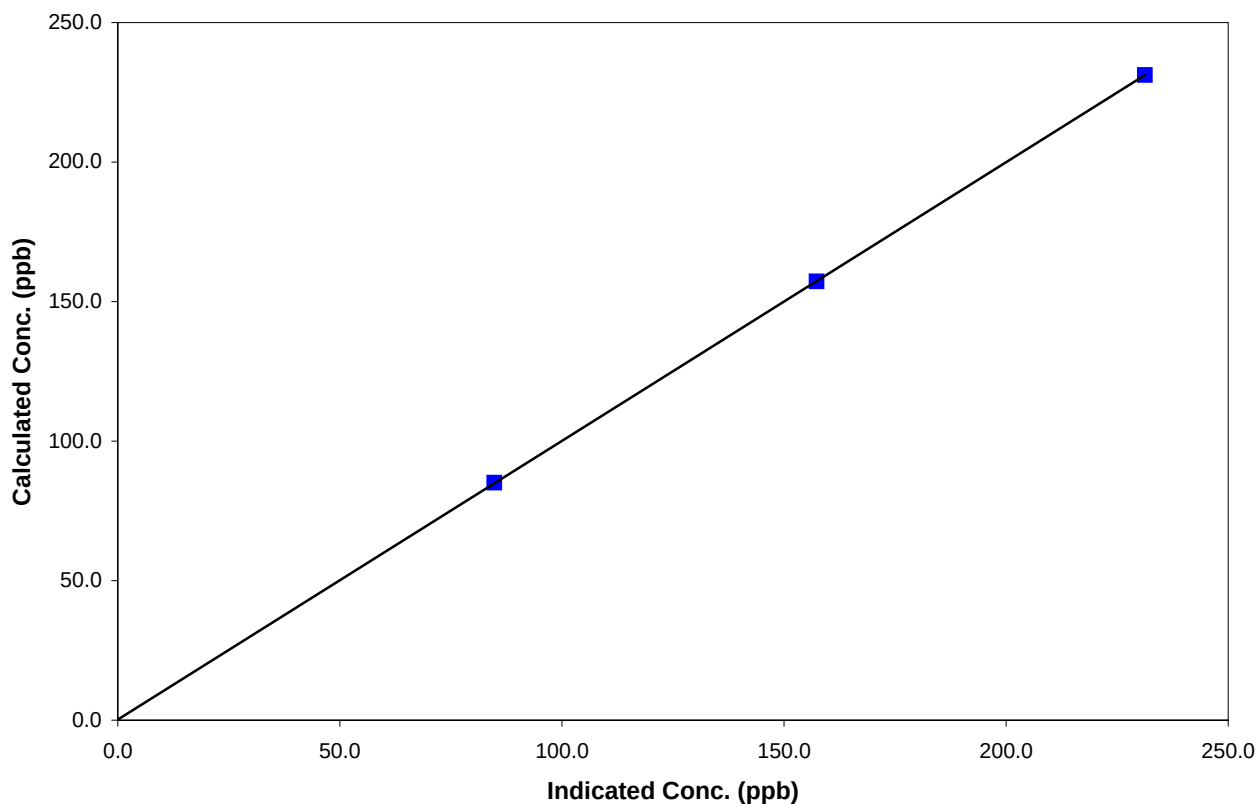
Station Information

Calibration Date	March 10, 2011	Previous Calibration	February 2, 2011
Station Number	4	Station Location	BeaverLodge
Start Time (MST)	11:15	End Time (MST)	15:00
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.2	N/A	Correlation Coefficient	0.999998
231.2	231.3	0.9998		
157.2	157.3	0.9990		
85.0	84.8	1.0031	Slope	0.998577
			Intercept	0.228378

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PASZA



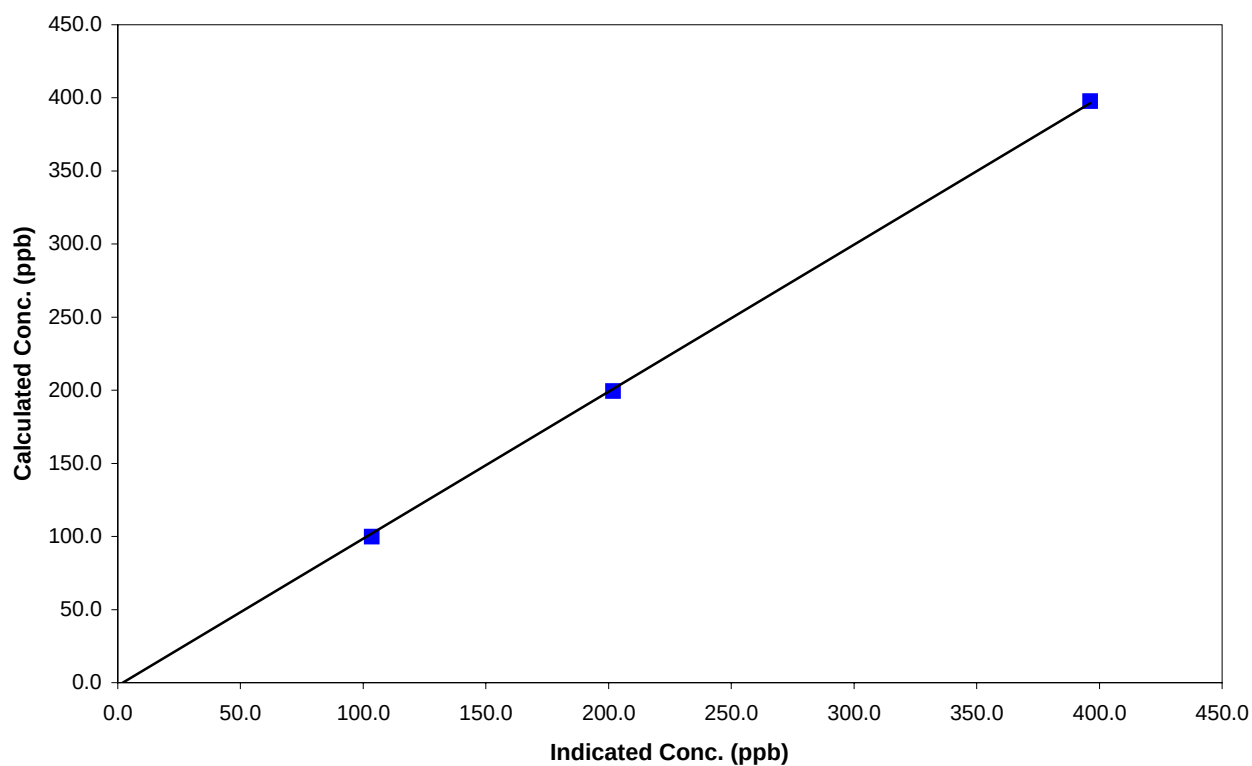
Station Information

Calibration Date	March 10, 2011	Previous Calibration	February 2, 2011
Station Number	4	Station Location	BeaverLodge
Start Time (MST)	11:15	End Time (MST)	15:00
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A	Correlation Coefficient	0.999845
397.6	396.3	1.0032		
199.5	201.8	0.9885		
99.7	103.6	0.9628	Slope	1.005646
			Intercept	-2.188839

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PASZA



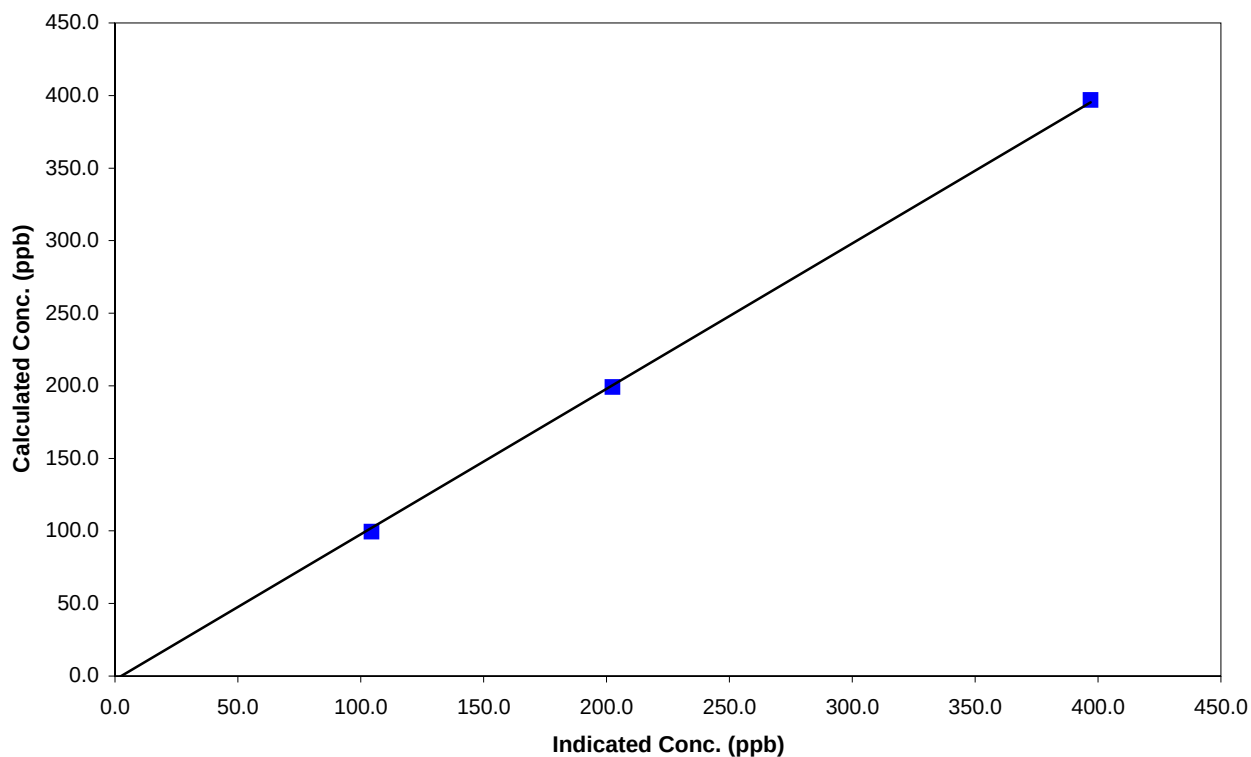
Station Information

Calibration Date	March 10, 2011	Previous Calibration	February 2, 2011
Station Number	4	Station Location	BeaverLodge
Start Time (MST)	11:15	End Time (MST)	15:00
Analyzer make	TEI 42i	Analyzer serial #	906535068

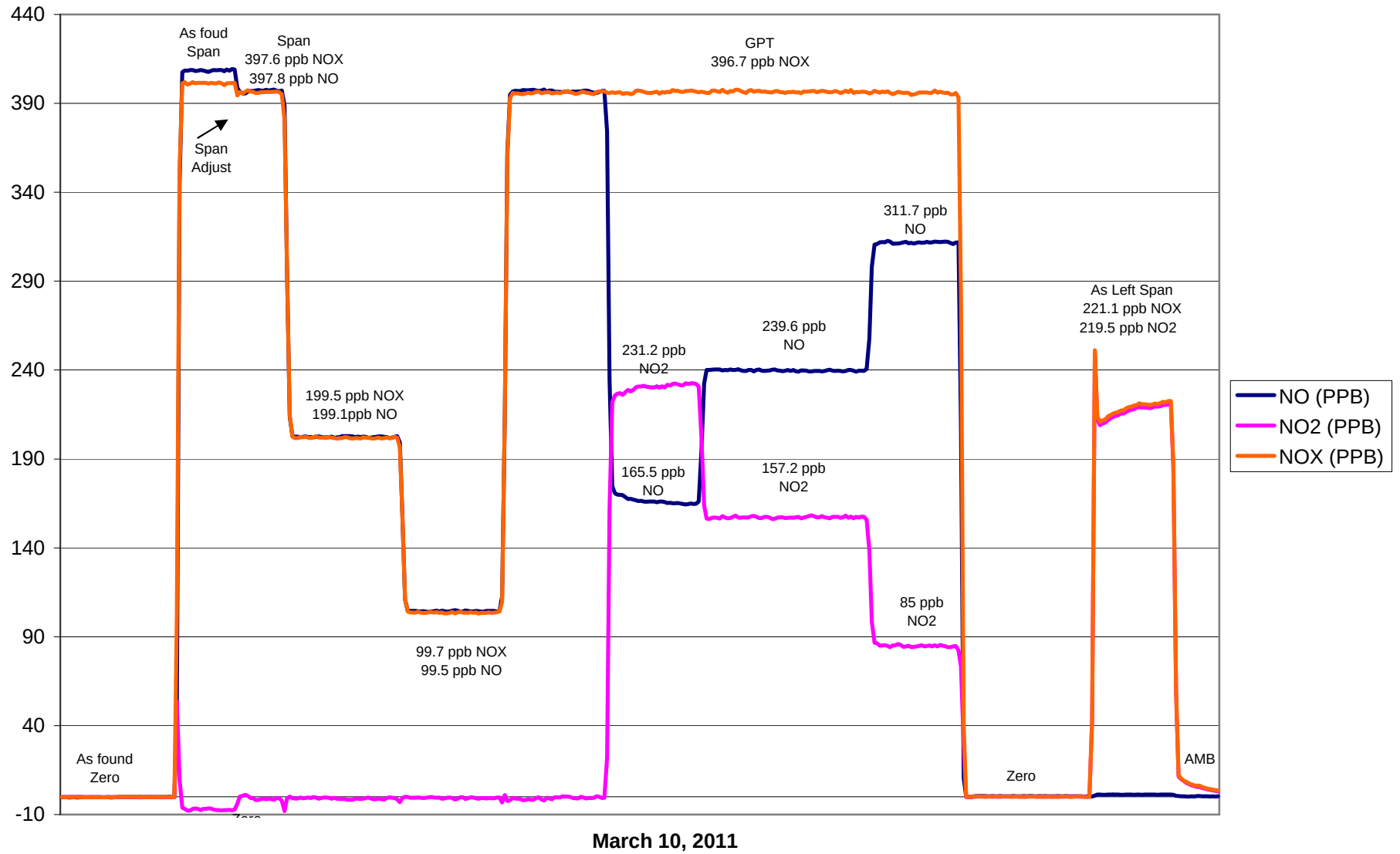
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A	Correlation Coefficient	0.999798
396.8	397.1	0.9993		
199.1	202.4	0.9835		
99.5	104.4	0.9530	Slope	1.002086
			Intercept	-2.463466

NO Calibration Curve



Beaverlodge NO_x Calibration



Calibration Report

Parameter 03

Air Monitoring Network PASZA



Station Information

Calibration Date	March 10, 2011	Previous Calibration	February 2, 2011
Station Number	4	Station Location	Beaverlodge
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	

Start Time (MST)	14:00	End Time (MST)	16:00
Barometric Pressure	0.907 atm	Station Temperature	23.0 Deg C
Calibrator	Envionics 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	1.014264	Calculated slope	0.997813
Calculated intercept	0.168097	Calculated intercept	0.442791

Analyzer make	Teco 49C	Analyzer serial #	49C-76443-383
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	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-0.70	ppb	-1.10	ppb
slope	1.024		1.016	
Lamp temp	56.3	mV	56.5	mV
Lamp Intensity A/B	64809/67244	mV	64643/67081	mV
Pressure	683.9	mm Hg	683.9	mm Hg
Flow A	0.711	ccm	0.717	ccm
Flow B	0.661	ccm	0.666	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	231.2	231.8	0.9975
4990	0.00	157.2	156.7	1.0033
4990	0.00	85.0	84.1	1.0106
4990	0.00	0.0	0.0	As found zero
4990	0.00	231.2	234.4	As found span
Average Correction Factor				1.0038

Calculated value of As Found Response: 237.9 ppm Percent Change of As Found: 2.9%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.1	ppb
Auto span	114.3	ppb	121.6	ppb

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter O3

Air Monitoring Network PASZA



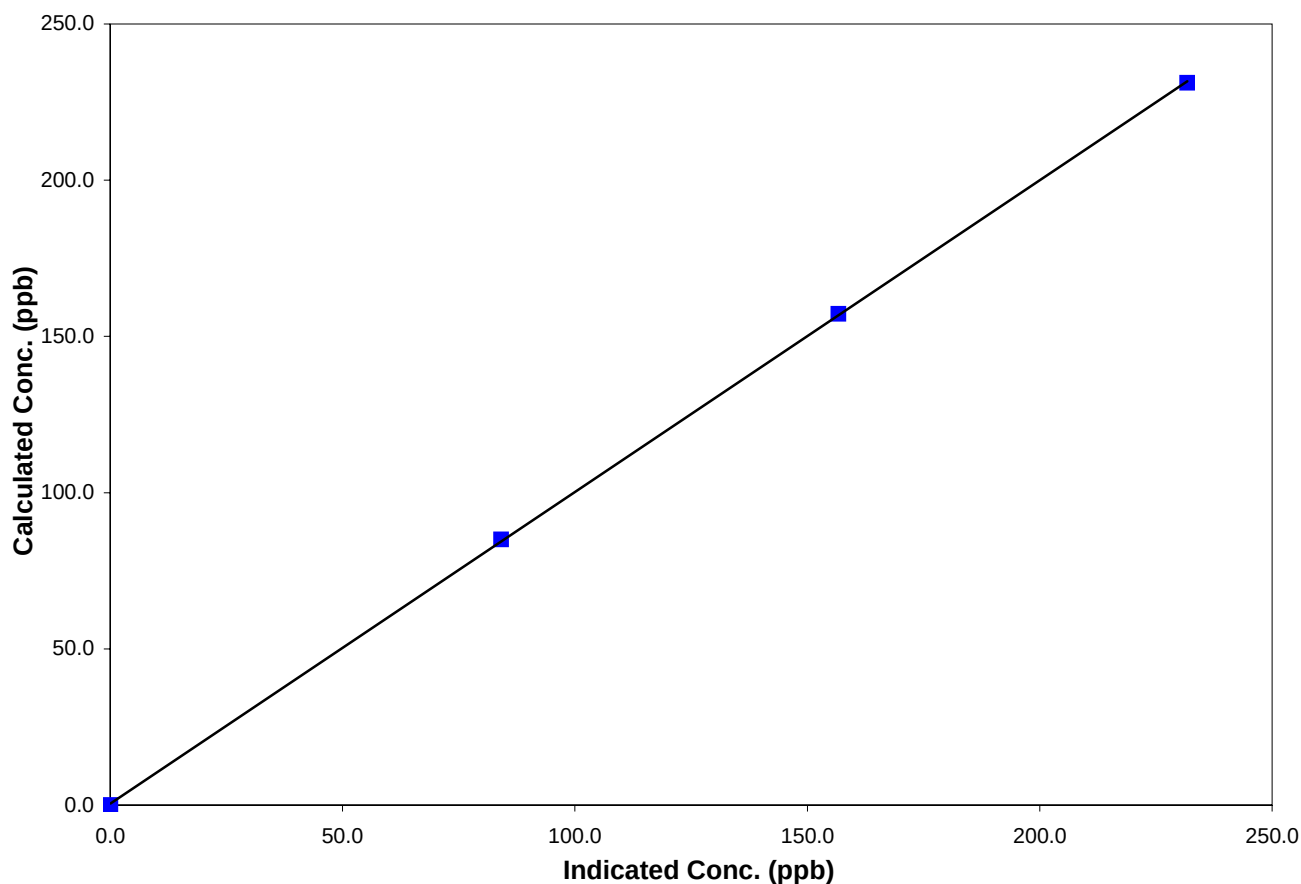
Station Information

Calibration Date	March 10, 2011	Previous Calibration	February 2, 2011
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	14:00	End Time (MST)	16:00
Analyzer make/model	Teco 49C	Analyzer serial #	49C-76443-383

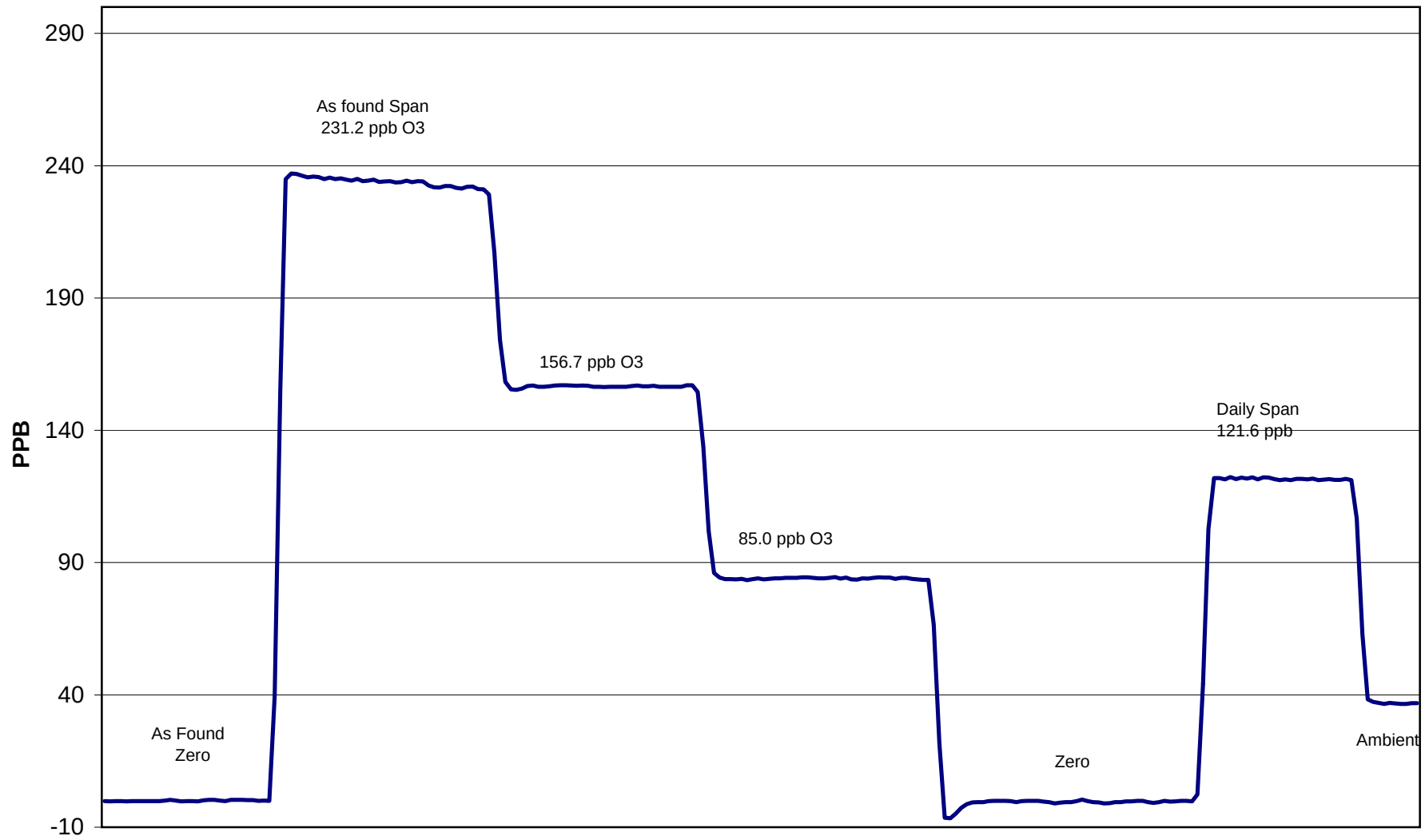
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	NA	Correlation Coefficient	0.999961
231.2	231.8	0.9975		
157.2	156.7	1.0033		
85.0	84.1	1.0106	Slope	0.997813
			Intercept	0.442791

O3 Calibration Curve



Beaverlodge O₃ Calibration



March 10, 2011

Calibration Report

Parameter SO2
Air Monitoring Network PASZA



Station Information

Calibration Date	March 29, 2011	Previous Calibration	February 17, 2011
Station Number	9	Station Location	Rover - Bonanza
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	8:30	End Time (MST)	10:50
Barometric Pressure	31.70 inches Hg	Station Temperature	15.7 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	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
	<u>Before</u>		<u>After</u>
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.010510	Calculated slope	0.995909
Calculated intercept	-1.741452	Calculated intercept	2.668246
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	9.3		9.6	
Coefficient	0.984		1.002	
UV Lamp Voltage	796	V	798	V
Chamber Temp	44.3	C	44.2	C
Perm Gas Temp	45	C	45	C
Pressure	672.2	mm Hg	672.3	mm Hg
Sample Flow	0.487	LPM	0.488	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)
4989	0.00	0.0	-0.2	N/A
4989	39.83	400.8	401.5	0.9982
4989	19.90	201.0	196.2	1.0246
4989	9.93	100.5	97.0	1.0365
4989	0.00	0.0	0.1	As found zero
4989	39.83	400.8	391.1	As found span
Average Correction Factor				1.0198

Calculated value of As Found Response: 393.393 ppm Percent Change of As Found: 1.8%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	264.0	ppm	265.6	ppm

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PASZA



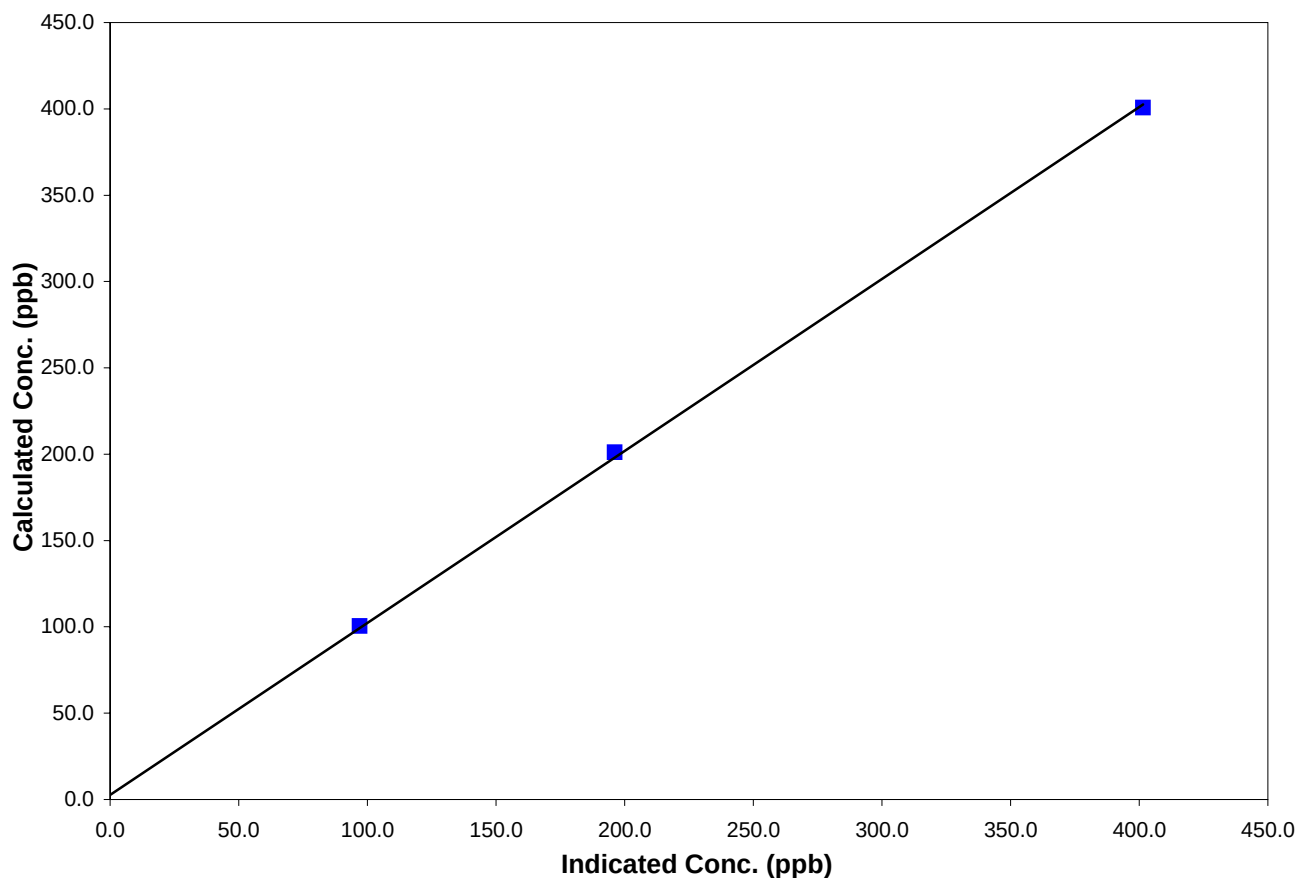
Station Information

Calibration Date	March 29, 2011	Previous Calibration	February 17, 2011
Station Number	9	Station Location	Rover - Bonanza
Start Time (MST)	8:30	End Time (MST)	10:50
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

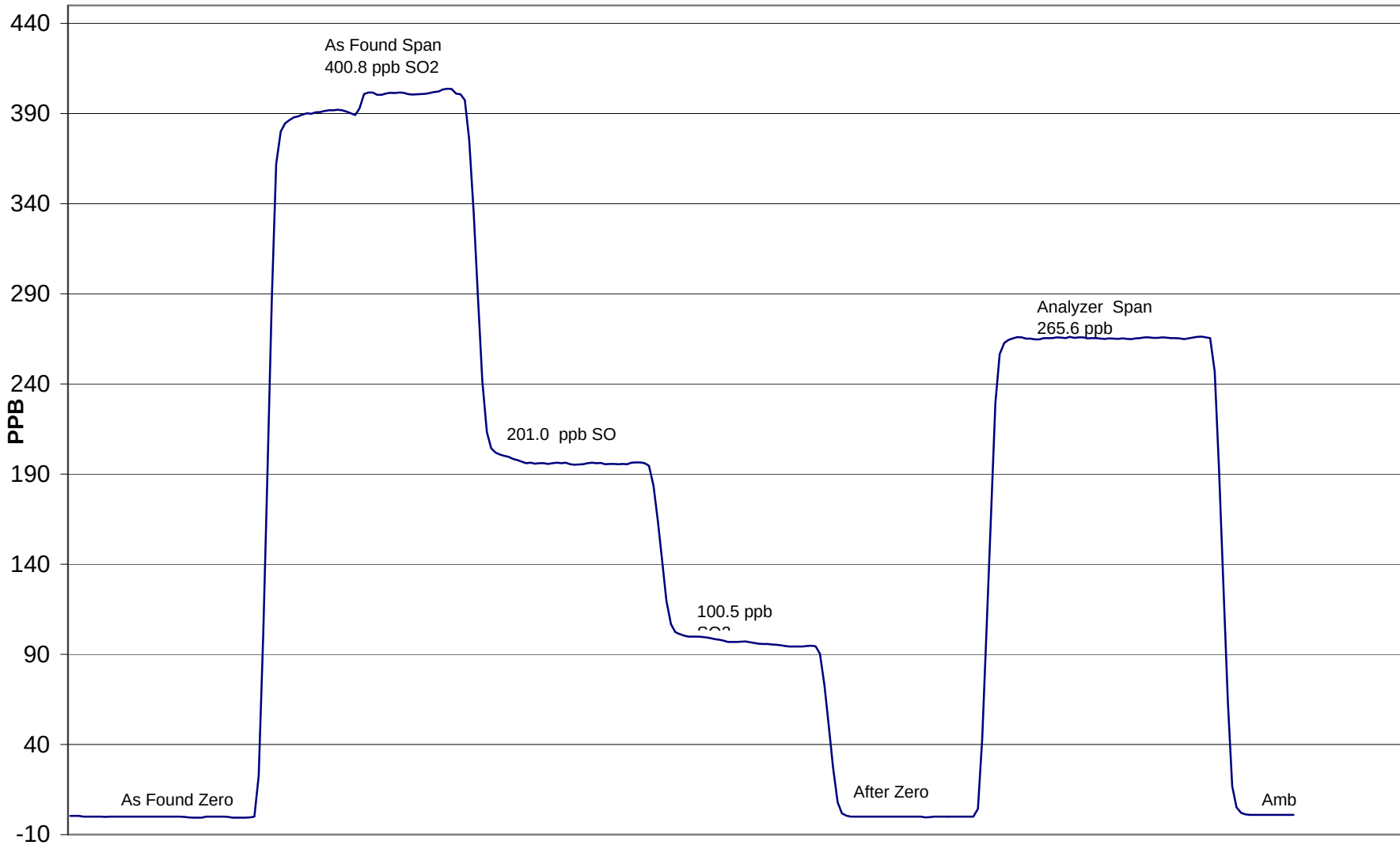
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.2	N/A	Correlation Coefficient	0.999776
400.8	401.5	0.9982		
201.0	196.2	1.0246		
100.5	97.0	1.0365	Slope	0.995909
			Intercept	2.668246

SO2 Calibration Curve



Bonanza SO₂ Calibration



March 29, 2011

Calibration Report

Parameter **TRS**
Air Monitoring Network

PASZA



Station Information

Calibration Date	March 29, 2011	Previous Calibration	February 17, 2011
Station Number	9	Station Location	Rover-Bonanza
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	12:15	End Time (MST)	14:41
Barometric Pressure	27.5 inches Hg	Station Temperature	15.7 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	5.77 ppm	Cal Gas Expiry Date	9/13/2011
Gas Cert Reference	BLM001434		
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 1 Volt	DACS channel #	1
	<u>Before</u>		<u>After</u>
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.996452	Calculated slope	1.007098
Calculated intercept	-0.372421	Calculated intercept	0.448574
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	11.3	ppb	11.4	ppb
Coefficient	1.460		1.490	
Lamp Voltage	791	V	792	V
Chamber Temp	43.9	C	43.9	C
Perm gas Temp	45.0	C	45.0	C
Pressure	654.9	mmHg	655.5	mmHg
Sample Flow	.436	ccm	.436	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)
4988	0.0	0.0	-0.5	N/A
4988	69.72	79.5	78.6	1.0117
4988	34.83	40.0	39.1	1.0241
4988	8.93	10.3	10.0	1.0343
4988	0.00	0.0	-0.5	As found zero
4988	69.72	79.5	76.6	As found span
Average Correction Factor				1.0234

Calculated value of As Found Response: 76.41 ppm Percent Change of As Found: 3.9%

	before calibration		after calibration	
Auto zero	-0.6	ppm	0.0	ppm
Auto span	65.9	ppm	69.6	ppm

Notes: SOx Material was checked & replaced.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter TRS

Air Monitoring Network PASZA



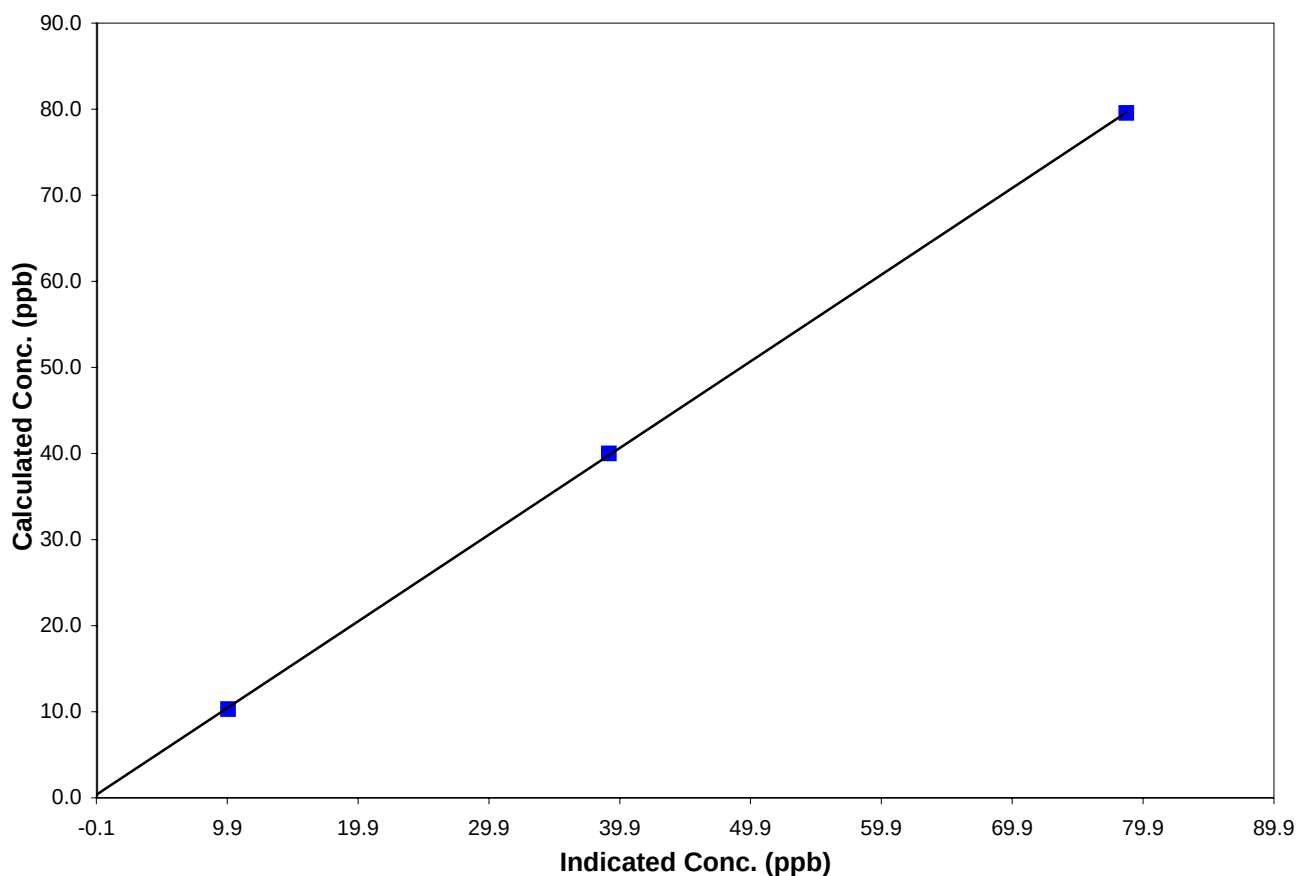
Station Information

Calibration Date	March 29, 2011	Previous Calibration	February 17, 2011
Station Number	9	Station Location	Rover-Bonanza
Start Time (MST)	12:15	End Time (MST)	14:41
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

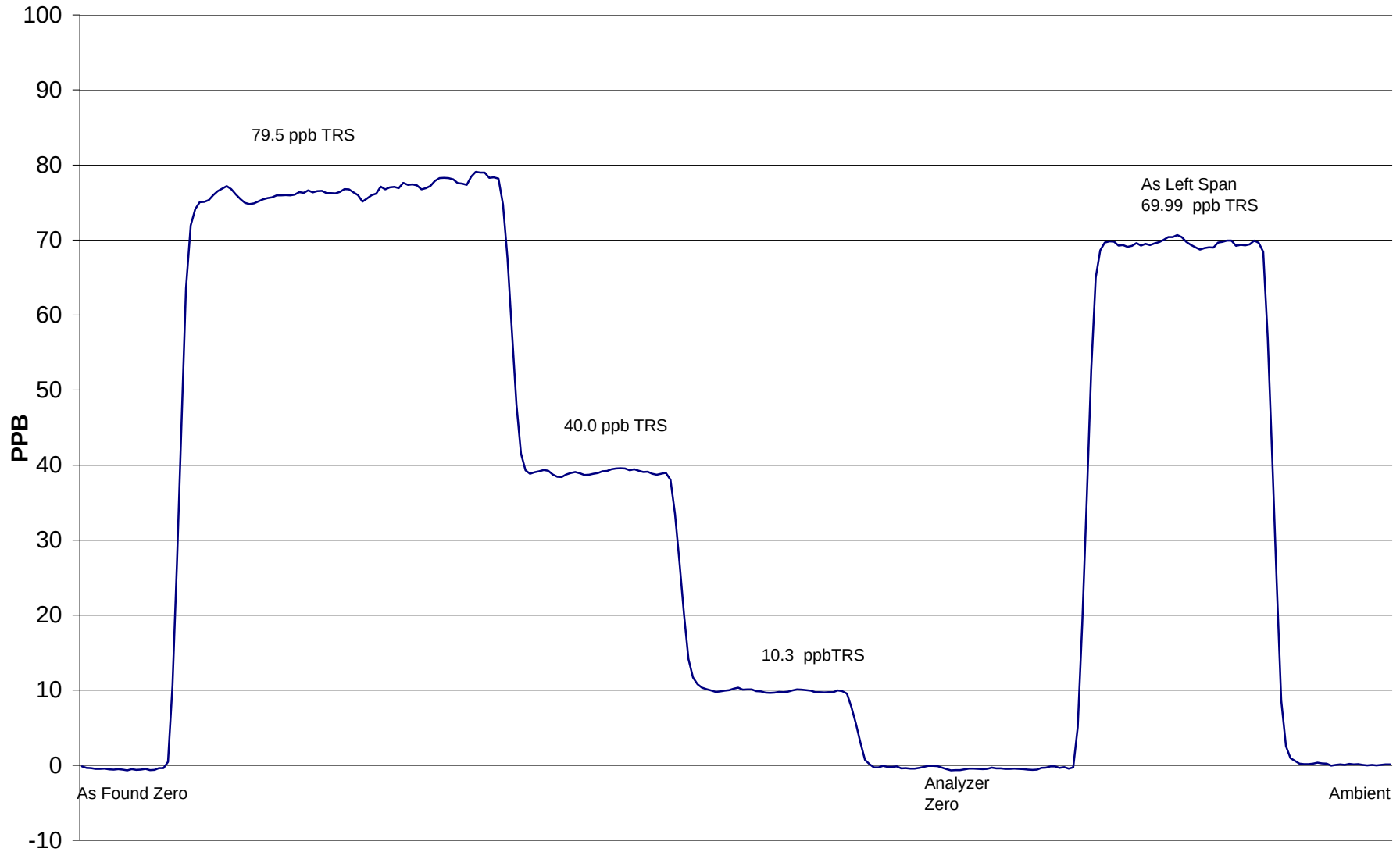
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.5	N/A	Correlation Coefficient	0.999977
79.5	78.6	1.0117		
40.0	39.1	1.0241		
10.3	10.0	1.0343	Slope	1.007098
			Intercept	0.448574

TRS Calibration Curve



Bonanza TRS Calibration



March 29, 2011

Calibration Report

Parameter

NO_x-NO-NO₂

Air Monitoring Network

PASZA



Station Information

Calibration Date March 29, 2011

Previous Calibration February 17, 2011

Station Number 9

Station Location Rover-Bonanza

Reason:

☒ Routine

☐ Installation

☐ Removal

☐ Other:

Start Time (MST) 8:30

End Time (MST) 14:35

Barometric Pressure 0.927 Atm

Station Temperature 20.0 Deg C

Calibrator Environics

Serial Number 3474

NO Cal Gas Conc 51.4 ppm

Cal Gas Expiry Date April 6th, 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	1.008783	1.004603	1.000151
	Data Offset	-1.276739	-3.389987	-2.692598
After	Data Slope	0.999392	1.001567	1.006706
	Data Offset	-0.567552	-3.368570	-3.510755
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	4.1	mV	4.1	mV
NOx bkgnd	4.2	mV	4.2	mV
NO coefficient	1.091		1.091	
NOx coefficient	0.999		0.999	
NO2 conv temp	323.9	Deg C	325.3	Deg C
PMT Temp	-2.6	Deg C	-2.6	Deg C
PMT Volt	-773.3	mV	-772.0	mV
R Cell Press	151.8	in Hg	151.2	in Hg
Sample Flow	0.925	ccm	0.924	ccm

Calibration Report

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



Station Information

Calibration Date: March 29, 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	4989	0.00	0.0	0.0	0.0	0.9	0.8	0.4	N/A	N/A
1	4989	39.83	407.1	407.1	0.0	408.5	406.5	0.8	0.9965	1.0016
2	4989	19.90	204.2	204.2	0.0	208.5	207.7	0.2	0.9792	0.9834
3	4989	9.93	102.1	102.1	0.0	107.7	107.7	0.2	0.9477	0.9481
AFZ	4989	0.00	0.0	0.0	0.0	0.9	0.8	0.4	0.0000	0.0000
AFS	4989	39.83	407.1	407.1	0.8	408.5	406.5	0.8	0.9965	1.0016
Average Correction Factor									0.9745	0.9777

As Found Concentrations: NO_x= 404.2 NO= 403.0 As Found Percent Change NO_x= -0.7% NO= -1.0%

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	0.8	0.8	0.0	0.9	0.8	0.4	N/A	N/A	N/A	N/A
NO point	407.5	407.5	0.0	408.6	407.5	-0.2	0.9972	1.0000	N/A	N/A
300	407.5	185.0	222.5	409.3	185.0	222.8	0.9956	1.0000	0.9988	100.1%
200	407.5	260.8	146.7	410.8	260.8	148.0	0.9920	1.0000	0.9910	100.9%
100	407.5	330.5	77.0	409.3	330.5	77.6	0.9955	1.0000	0.9923	100.8%
Average Correction Factor							0.9944	1.0000	0.9941	100.6%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.2	-0.3	-0.2	ppb	0.9	0.3	0.8	ppb
Auto span	238.0	235.5	1.6	ppb	200.0	197.1	2.0	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter NO₂

Air Monitoring Network PASZA



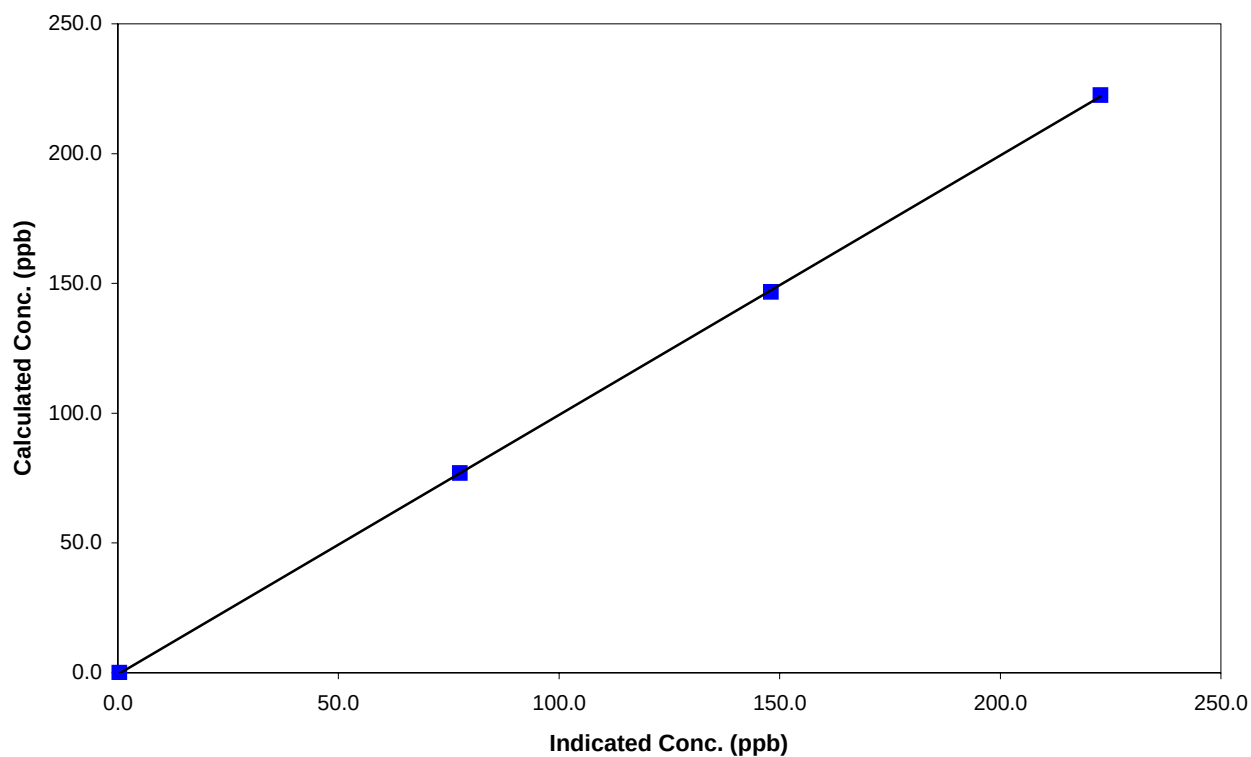
Station Information

Calibration Date	March 29, 2011	Previous Calibration	February 17, 2011
Station Number	9	Station Location	Rover-Bonanza
Start Time (MST)	8:30	End Time (MST)	14:35
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	0.4	N/A	Correlation Coefficient	0.999975
222.5	222.8	0.9988		
146.7	148.0	0.9910		
77.0	77.6	0.9923	Slope	0.999392
			Intercept	-0.567552

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PASZA



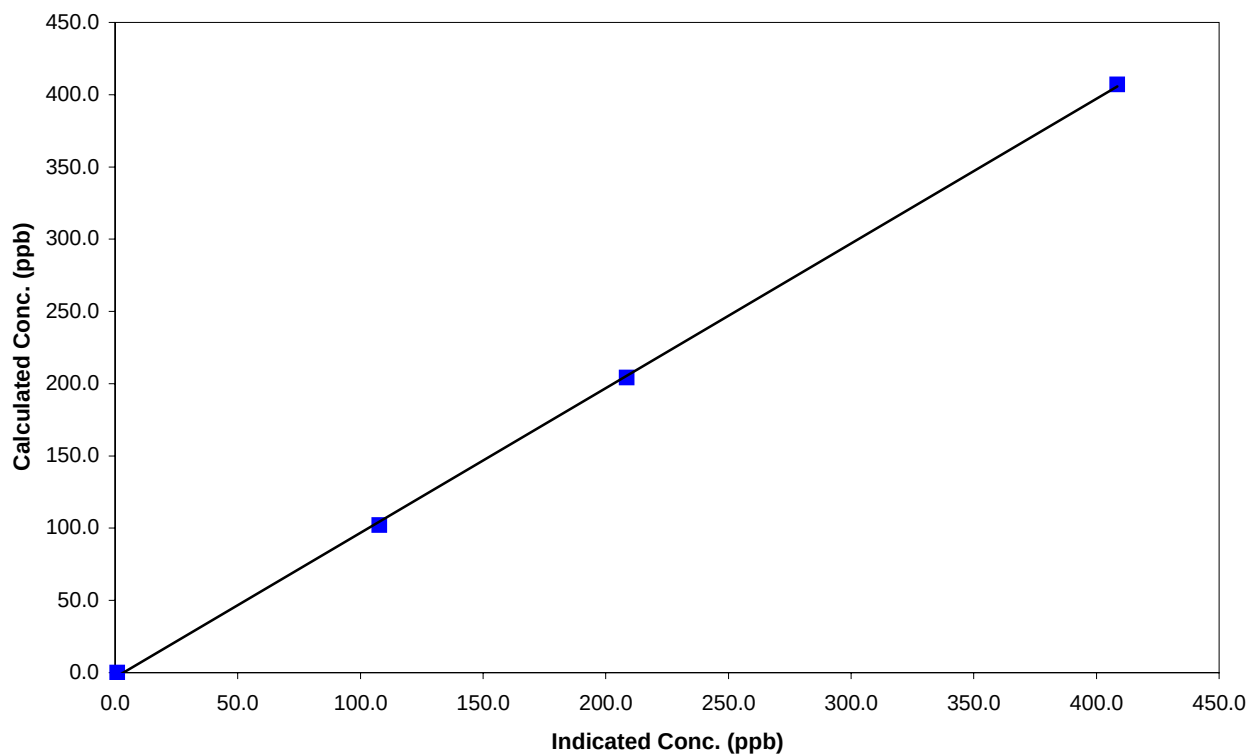
Station Information

Calibration Date	March 29, 2011	Previous Calibration	February 17, 2011
Station Number	9	Station Location	Rover-Bonanza
Start Time (MST)	8:30	End Time (MST)	14:35
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	0.9	N/A	Correlation Coefficient	0.999833
407.1	408.5	0.9965		
204.2	208.5	0.9792		
102.1	107.7	0.9477	Slope	1.001567
			Intercept	-3.368570

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PASZA



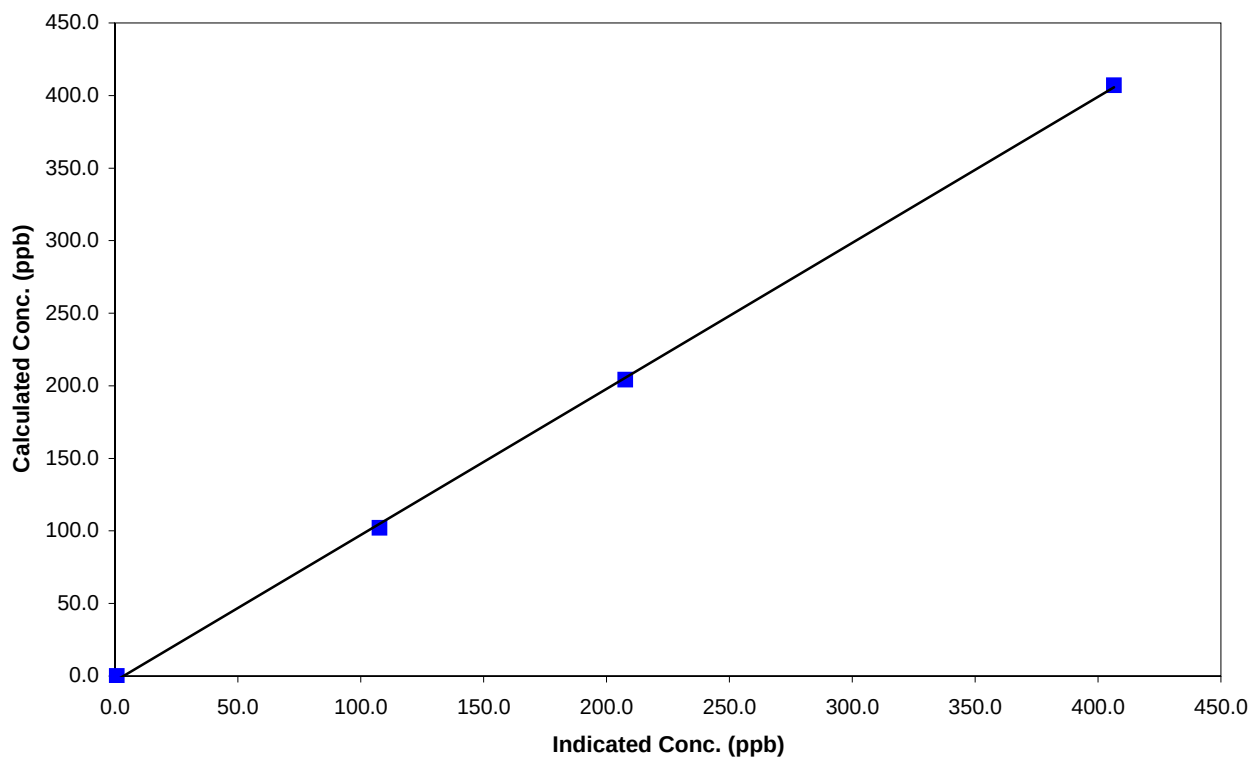
Station Information

Calibration Date	March 29, 2011	Previous Calibration	February 17, 2011
Station Number	9	Station Location	Rover-Bonanza
Start Time (MST)	8:30	End Time (MST)	14:35
Analyzer make	TEI 42i	Analyzer serial #	0701120011

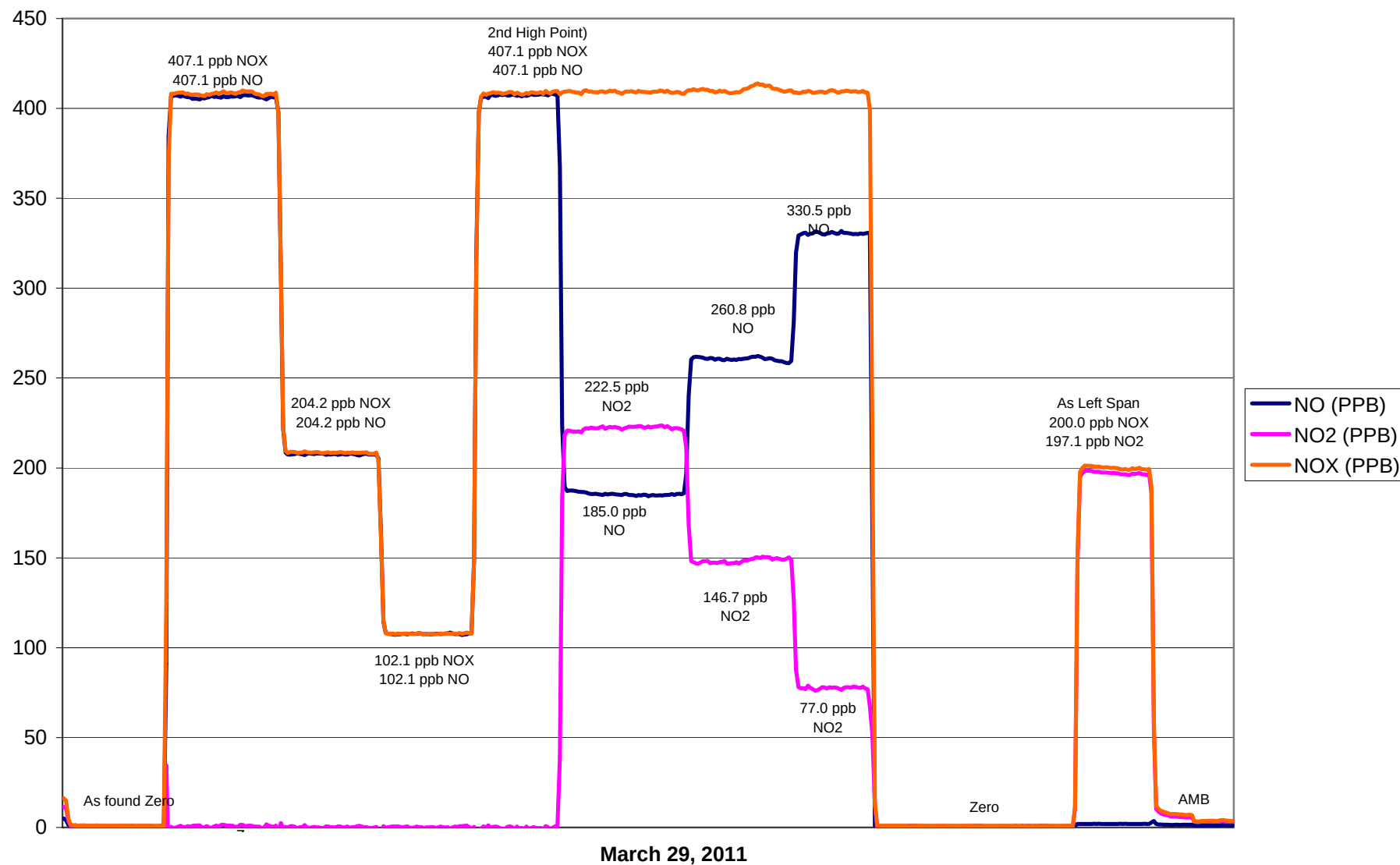
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.8	N/A	Correlation Coefficient	0.999790
407.1	406.5	1.0016		
204.2	207.7	0.9834		
102.1	107.7	0.9481	Slope	1.006706
			Intercept	-3.510755

NO Calibration Curve



Bonanza NO_x Calibration



Calibration Report



Parameter 03

Air Monitoring Network PASZA

Station Information

Calibration Date	March 29, 2011	Previous Calibration	February 17, 2011
Station Number	9	Station Location	Rover - Bonanza
Reason:	Routine	☐ Install	☐ Removal remove ☐ Other:

Start Time (MST)	11:10	End Time (MST)	13:16
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	0.997007	Calculated slope	0.993045
Calculated intercept	0.531382	Calculated intercept	0.002736

Analyzer make	TEI Model 49C	Analyzer serial #	49C-71577-369
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	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	0.3	ppb	0.3	ppb
Span	1.005		1.005	
Cell A intensity	83025	Hz	85814	Hz
Cell B intensity	86795	Hz	87731	Hz
Pressure	685.70	in Hg	683.41	in Hg
CellA Flow	0.776	ccm	0.775	ccm
Cell B Flow	0.683	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	222.5	224.6	0.9905
4989	0.20	146.7	146.8	0.9992
4989	0.10	77.0	77.6	0.9926
4989	0.00	0.0	0.4	As found zero
4989	0.30	222.5	224.7	As found span
Average Correction Factor				0.9941

Calculated value of As Found Response: 224.2 ppm Percent Change of As Found: 0.7%

	before calibration		after calibration	
Auto zero	0.6	ppb	0.2	ppb
Auto span	141.4	ppb	137.7	ppb

Notes: _____

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter 03

Air Monitoring Network PASZA



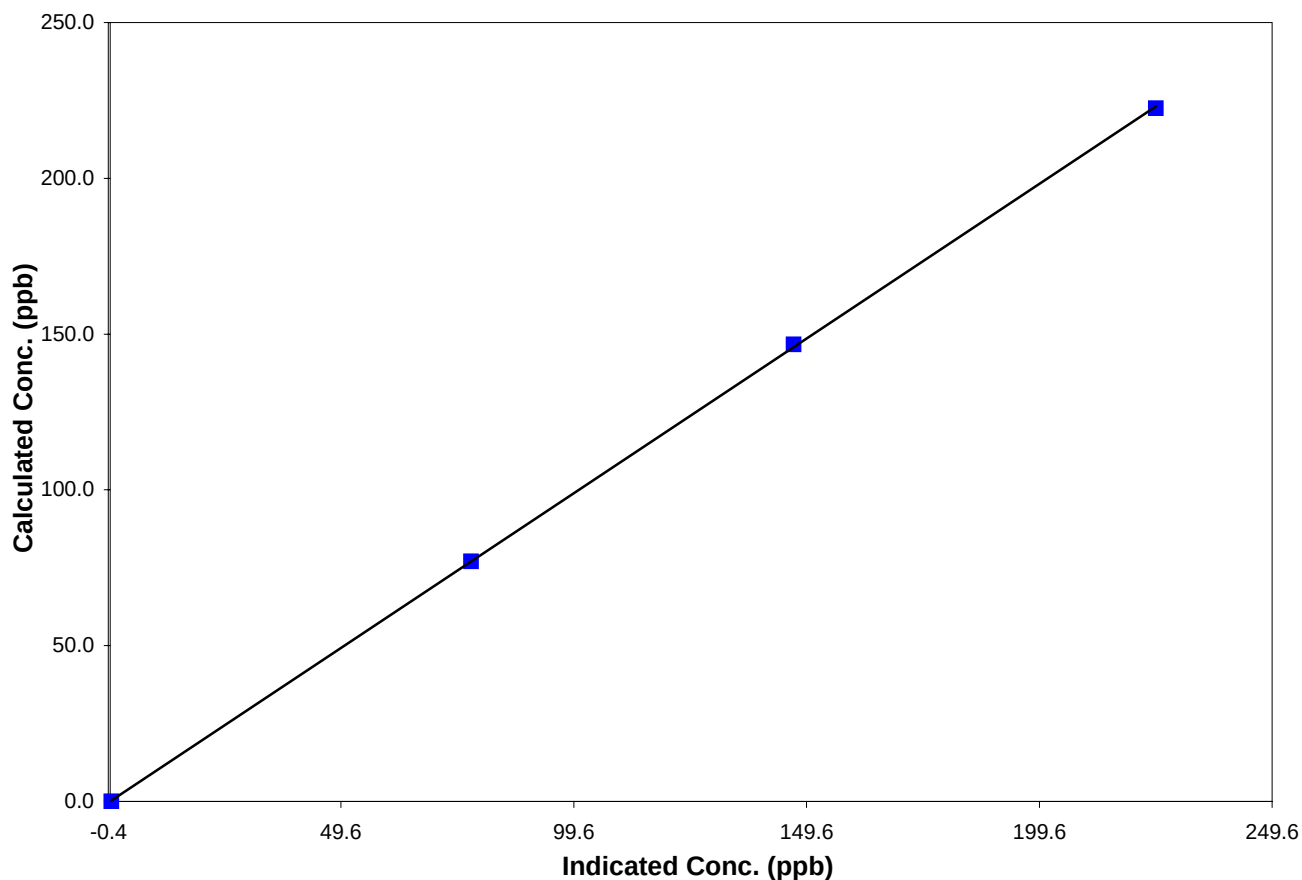
Station Information

Calibration Date	March 29, 2011	Previous Calibration	February 17, 2011
Station Number	9	Station Location	Rover - Bonanza
Start Time (MST)	11:10	End Time (MST)	13:16
Analyzer make/model	TEI Model 49C	Analyzer serial #	49C-71577-369

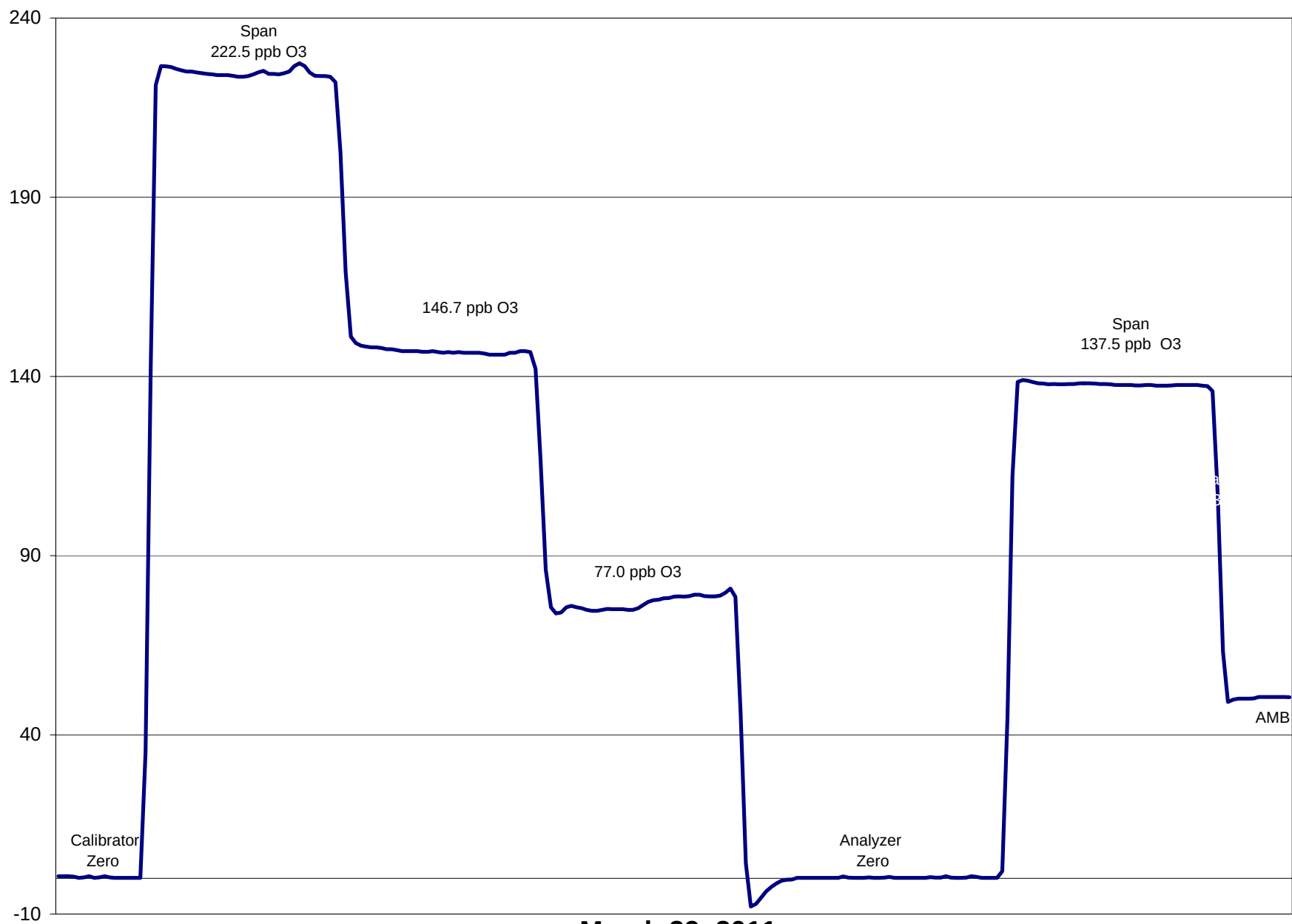
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	NA	Correlation Coefficient	0.999955
222.5	224.6	0.9905		
146.7	146.8	0.9992		
77.0	77.6	0.9926	Slope	0.993045
			Intercept	0.002736

O3 Calibration Curve



Bonanza O₃ Calibration



March 29, 2011

Calibration Report

Parameter SO2
Air Monitoring Network PASZA



Station Information

Calibration Date	March 24, 2011	Previous Calibration	February 3, 2011
Station Number	6	Station Location	Valleyview
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	10:20	End Time (MST)	12:47
Barometric Pressure	702.00 mm	Station Temperature	14.7 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	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
	<u>Before</u>		<u>After</u>
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.022744	Calculated slope	0.999304
Calculated intercept	-1.769626	Calculated intercept	-0.210459
Analyzer make	TEI 45C	Analyzer serial #	45C-57531-313

	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
Background	26.7		28.1	
Coefficient	0.851		0.882	
UV Lamp Voltage	952	LPM	951	LPM
Chamber Temp	44.3	V	44.5	V
Perm Gas Temp	35.1	C	35.1	C
Pressure	611.7	in Hg	612.2	in Hg
Sample Flow	0.466	LPM	0.468	LPM
Lamp Intensity	48228	Hz	48314	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4989	0.00	0.0	0.1	N/A
4989	39.84	400.9	401.4	0.9986
4989	19.89	200.9	200.9	1.0001
4989	9.94	100.6	101.3	0.9932
4989	0.00	0.0	0.1	As found zero
4989	39.84	400.9	387.7	As found span
Average Correction Factor				0.9973

Calculated value of As Found Response: 394.634 ppm Percent Change of As Found: 1.6%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.0	ppm
Auto span	155.5	ppm	158.0	ppm

Notes: span adjustment made

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PASZA



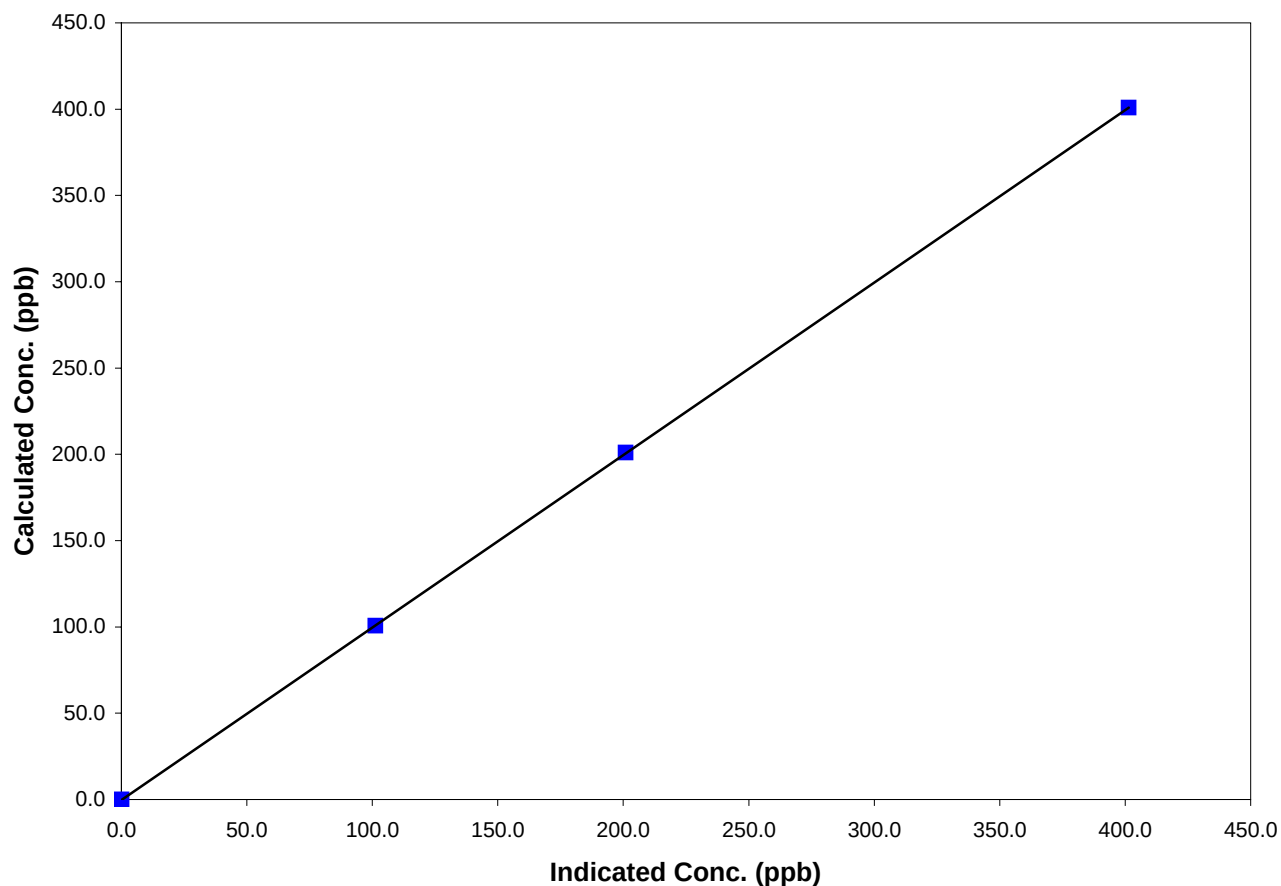
Station Information

Calibration Date	March 24, 2011	Previous Calibration	February 3, 2011
Station Number	6	Station Location	Valleyview
Start Time (MST)	10:20	End Time (MST)	14:42
Analyzer make/model	TEI 45C	Analyzer serial #	45C-57531-313

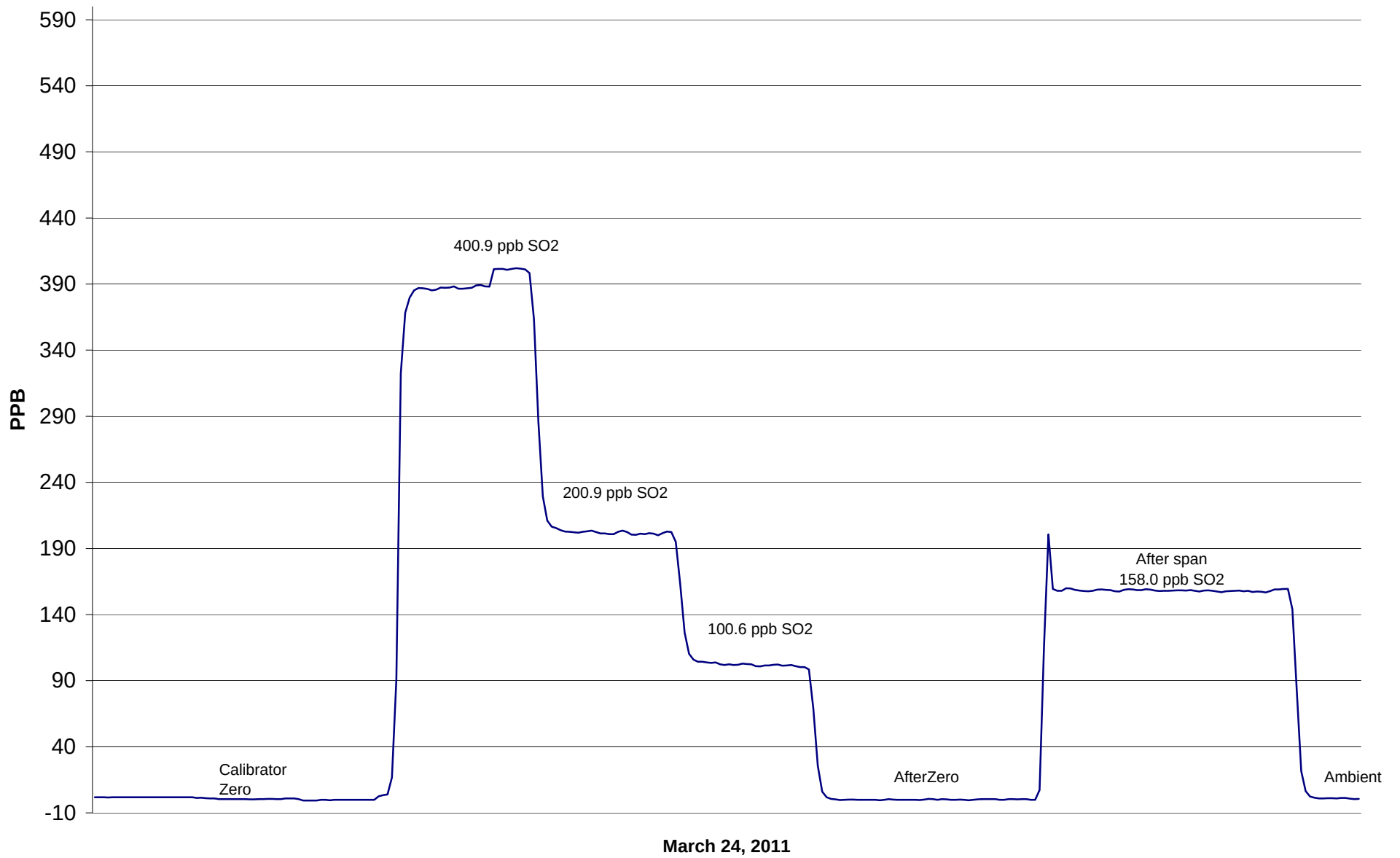
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999996
400.9	401.4	0.9986		
200.9	200.9	1.0001		
100.6	101.3	0.9932	Slope	0.999304
			Intercept	-0.210459

SO2 Calibration Curve



Valleyview SO₂ Calibration



Calibration Report

Parameter H2S
Air Monitoring Network

PASZA



Station Information

Calibration Date	March 24, 2011	Previous Calibration	February 3, 2011
Station Number	5	Station Location	Valleyview
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	11:00	End Time (MST)	14:09
Barometric Pressure	702.00 mm	Station Temperature	21.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	5.77 ppm	Cal Gas Expiry Date	9/3/2012
Gas Cert Reference	BLM001434		
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 10 volt	DACS channel #	9
	<u>Before</u>		<u>After</u>
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.000219	Calculated slope	1.002596
Calculated intercept	-0.153569	Calculated intercept	-0.046932
Analyzer make	TEI Model 43i - APSCB	Analyzer serial #	701120010

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	7.0	ppb	7.3	ppb
Coefficient	1.384		1.453	
Lamp Voltage	786	v	786	v
Chamber Temp	45.01	c	44.9	c
Perm Oven Temp	45.01	c	45.00	c
Pressure	636.50	mm Hg	636.80	mm Hg
Sample Flow	.430	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	0.2	N/A
4988	69.72	79.5	79.4	1.0018
4988	34.84	40.0	40.0	1.0011
4988	8.94	10.3	10.2	1.0170
4988	0.00	0.0	0.2	As found zero
4988	69.72	79.5	75.2	As found span
Average Correction Factor				1.0066

Calculated value of As Found Response: 74.84 ppm Percent Change of As Found: 5.9%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.1	ppm
Auto span	70.6	ppm	77.8	ppm

Notes: Span adjustment made...

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter H2S

Air Monitoring Network PASZA



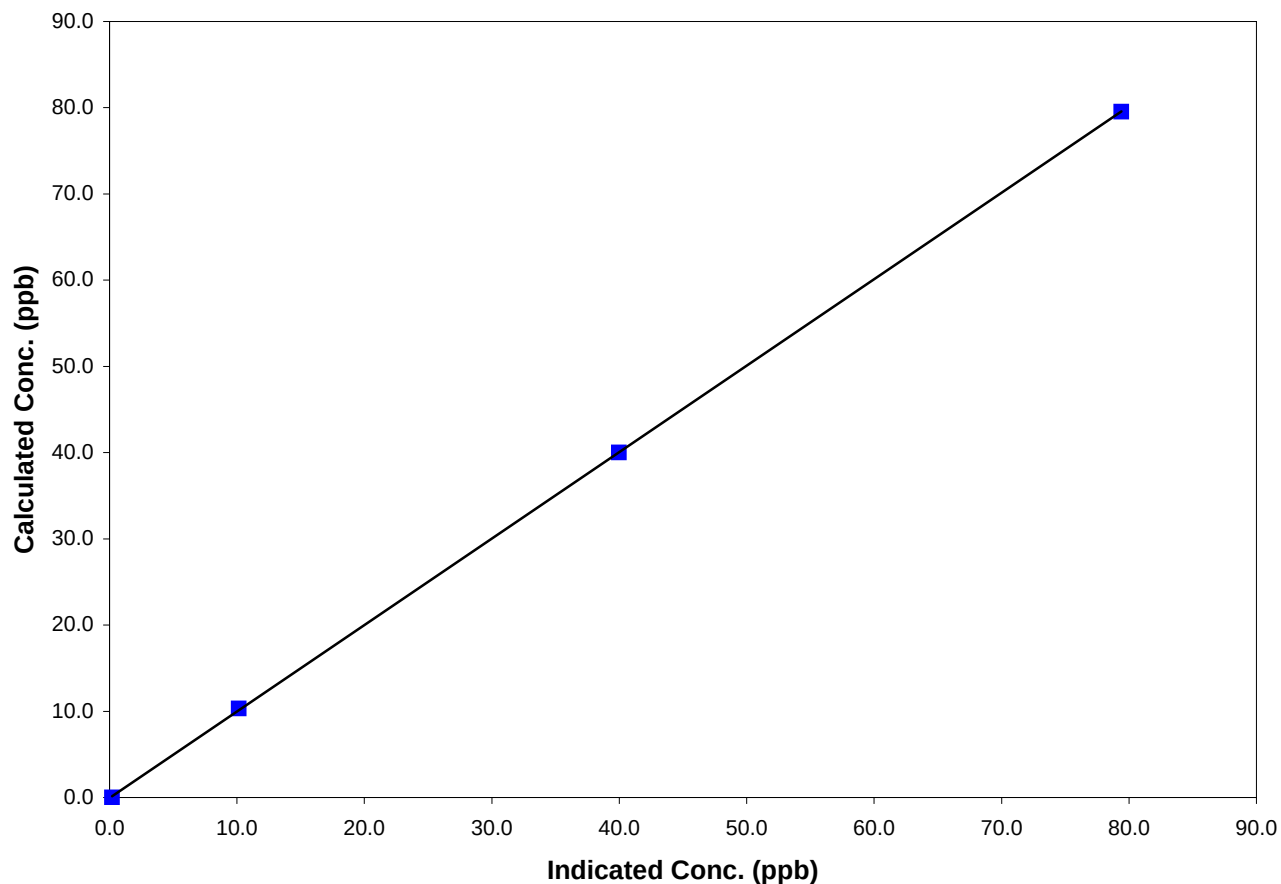
Station Information

Calibration Date	March 24, 2011	Previous Calibration	February 3, 2011
Station Number	5	Station Location	Valleyview
Start Time (MST)	11:00	End Time (MST)	14:09
Analyzer make/model	TEI Model 43i - APSCB	Analyzer serial #	701120010

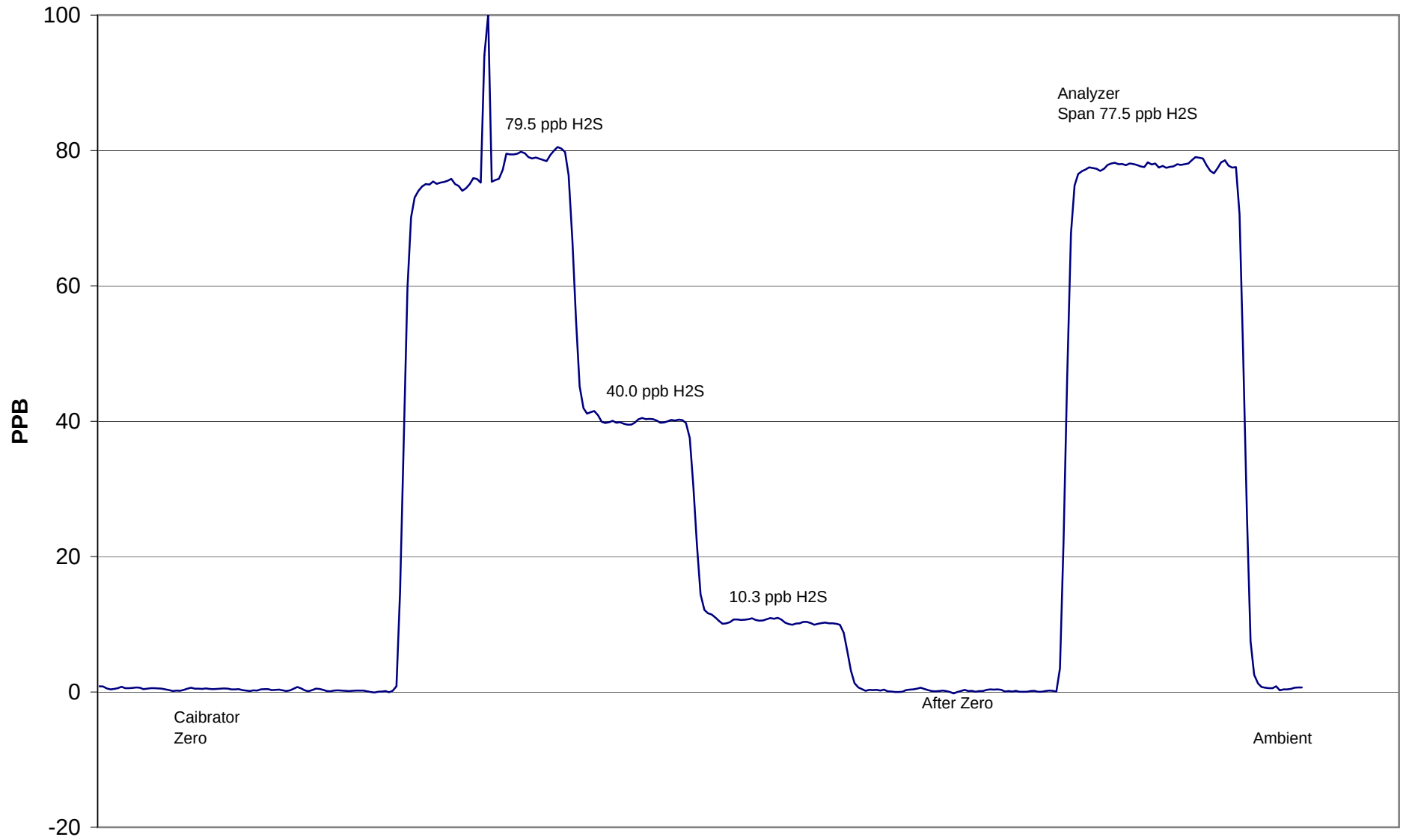
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999983
79.5	79.4	1.0018		
40.0	40.0	1.0011		
10.3	10.2	1.0170	Slope	1.002596
			Intercept	-0.046932

H2S Calibration Curve



Valleyview H₂S Calibration



March 24, 2011