Peace AirShed Zone Association

Ambient Air Monitoring Network Summary

Continuous Ambient Air Quality Monitoring Program
Monthly Report
March 2010

Operations and Reporting

FOCUS
AIR QUALITY MONITORING

PASZA
Peace AirShed Zone Association

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April 29, 2010

Alberta Environment
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Edmonton Alberta T6B 2X3

RE: Peace Airshed Zone Association (PASZA) – March 2010 Ambient Air Report

Enclosed is the PASZA Ambient Monitoring Network Report for the month of **March 2010**.

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

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 Summary" and "Continuous Monitoring" pages of the report.

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.

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.

Smoky Heights Station:

- The measured ambient air quality was within the AAAQO for the Smoky Heights station.
- All analyzers / sensors at the Smoky Heights station had an operational uptime of 100% 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 – Kinuso Station:

- The measured ambient air quality was within the AAAQO for the Kinuso station.
- All analyzers / sensors at the Kinuso station had an operational uptime greater than 90% 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 of 100% for the month of March.

Passive Monitoring - 43 Stations throughout the PASZA zone:

There were four duplicate sites sampled in the month of March: Fourth Creek, Woking, Webber Creek and Deer Mountain. The O_3 passive sample was found damaged at the Shaftesbury Site; consequently there is no passive result for said sample. The passive sample analyses were performed by MAXXAM Analytics Inc.

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

- Monthly average concentrations for SO_2 passives ranged from 0.1 ppb to 0.6 ppb, with a mean of 0.3 ppb.
- Monthly average concentrations for NO_2 passives ranged from 0.2 ppb to 5.9 ppb, with a mean of 0.8 ppb.
- Monthly average concentrations for O_3 passives ranged from 30.8 ppb to 48.2 ppb, with a mean of 39.4 ppb.

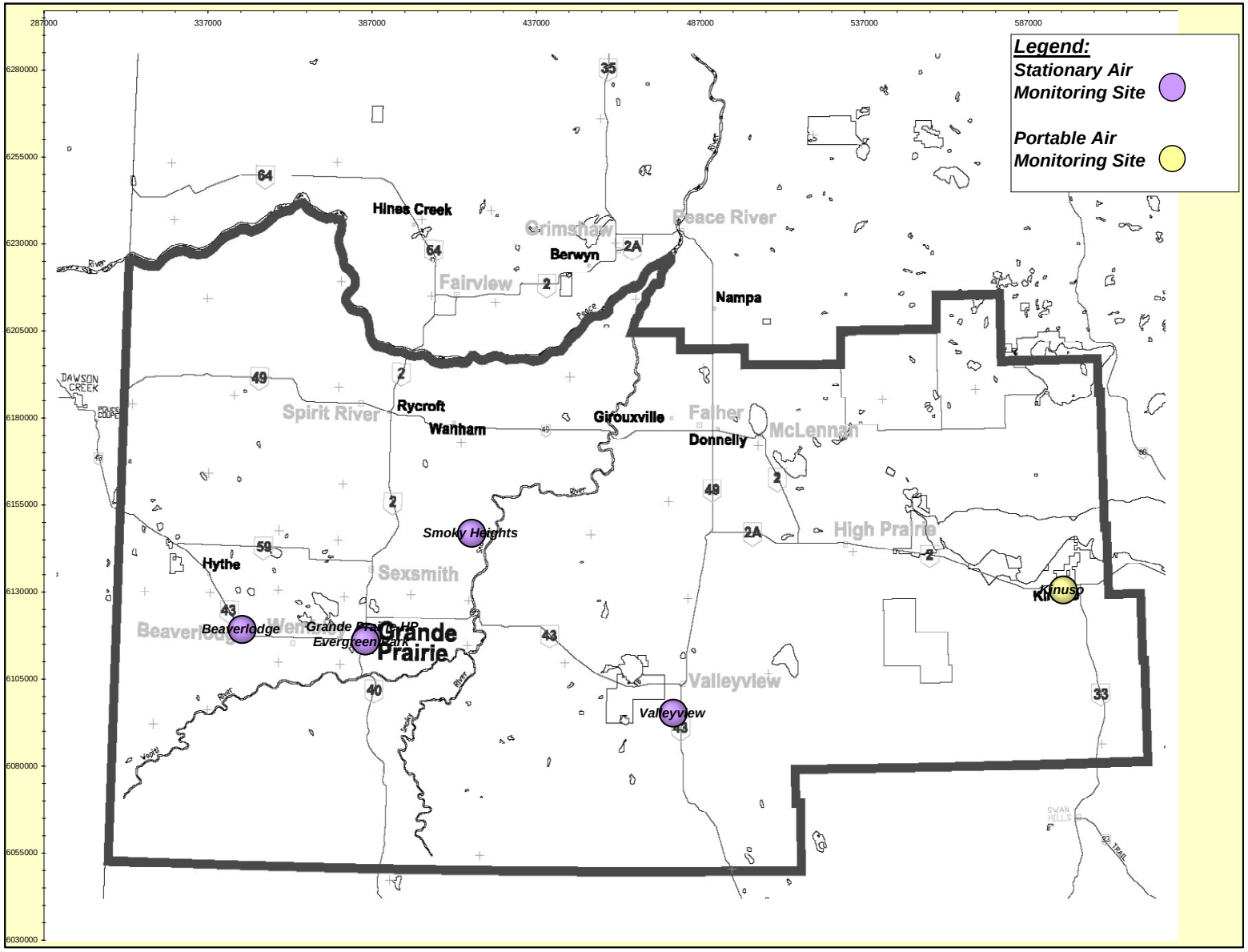
If you have any questions or concerns, please contact Shelly Pruden, PASZA Program Manager at 780.833.4343 or 780.882.4071.

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-2010	Peace Airshed Zone Assocation						Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
Pollutant (units)	Objectives 1-hr	Objectives 24-hr	Station	Monthly Average	Exceedence 1-hr	Exceedence 24-hr	Conc	Day	Conc	Day	Operational Time (%)
SO_2 (ppb)	172	57	Henry Pirker	0.4	0	0	6.7	Mar-25 14:00	1.3	Mar-25	100.0%
SO_2 (ppb)	172	57	Evergreen Park	0.2	0	0	4.7	Mar-25 15:00	0.9	Mar-25	99.6%
SO_2 (ppb)	172	57	Smoky Heights	0.6	0	0	9.2	Mar-02 17:00	1.9	Mar-31	100.0%
SO_2 (ppb)	172	57	Beaverlodge	0.5	0	0	11.7	Mar-26 20:00	1.7	Mar-26	99.9%
SO_2 (ppb)	172	57	Portable-Kinuso	0.4	0	0	4.5	Mar-02 13:00	1.2	Mar-02	92.6%
SO_2 (ppb)	172	57	Valleyview	0.1	0	0	1.1	Mar-07 15:00	0.6	Mar-02	100.0%
NO (ppb)			Henry Pirker	7.4	-	-	84.8	Mar-15 08:00	25.1	Mar-15	100.0%
NO_2 (ppb)	212	106	Henry Pirker	16.4	0	0	51.9	Mar-02 21:00	31.7	Mar-02	100.0%
NO_X (ppb)			Henry Pirker	24.0	-	-	137.0	Mar-02 21:00	56.4	Mar-02	100.0%
NO (ppb)			Beaverlodge	1.1	-	-	20.6	Mar-01 13:00	5.9	Mar-01	99.9%
NO_2 (ppb)	212	106	Beaverlodge	4.3	0	0	27.3	Mar-01 17:00	15.7	Mar-01	99.9%
NO_X (ppb)			Beaverlodge	5.6	-	-	42.6	Mar-01 17:00	21.7	Mar-01	99.9%
NO (ppb)			Portable-Kinuso	0.2	-	-	12.2	Mar-02 08:00	1.7	Mar-02	92.6%
NO_2 (ppb)	212	106	Portable-Kinuso	2.1	0	0	19.1	Mar-02 08:00	7.1	Mar-02	92.6%
NO_X (ppb)			Portable-Kinuso	2.3	-	-	31.5	Mar-02 08:00	8.8	Mar-02	92.6%
O_3 (ppb)	82		Henry Pirker	25.0	0	-	52.1	Mar-20 15:00	40.7	Mar-30	100.0%
O_3 (ppb) - 8-hr			Henry Pirker		0				48.4	Mar-20	
O_3 (ppb)	82		Beaverlodge	37.9	0	-	54.4	Mar-29 17:00	47.9	Mar-20	99.9%
O_3 (ppb) - 8-hr			Beaverlodge		0				52.3	Mar-20	
O_3 (ppb)	82		Portable-Kinuso	35.5	0	-	55.2	Mar-29 22:00	45.0	Mar-30	92.6%
O_3 (ppb) - 8-hr			Portable-Kinuso		0				49.4	Mar-30	
CO (ppm)	13		Henry Pirker	0.28	0	-	1.0	Mar-02 21:00	0.5	Mar-02	100.0%
CO (ppm) - 8-hr	5		Henry Pirker		0				0.7	Mar-03	
THC (ppm)			Henry Pirker	2.28	-	-	3.4	Mar-03 04:00	2.8	Mar-02	100.0%
TRS (ppb)			Henry Pirker	0.3	-	-	1.0	Mar-02 21:00	0.5	Mar-02	100.0%
TRS (ppb)			Evergreen Park	0.6	-	-	2.6	Mar-28 07:00	1.0	Mar-07	99.6%
TRS (ppb)			Smoky Heights	0.2	-	-	1.2	Mar-28 10:00	0.4	Mar-30	100.0%
TRS (ppb)			Portable-Kinuso	0.5	-	-	0.6	Mar-15 13:00	0.6	Mar-23	92.6%
H_2S (ppb)	10	3	Valleyview	0.1	0	0	1.2	Mar-06 23:00	0.2	Mar-03	100.0%
$PM_{2.5}$ ($\mu g/m^3$)	80	30	Henry Pirker	12.6	0	0	75.3	Mar-29 19:00	26.2	Mar-19	93.8%
$PM_{2.5}$ ($\mu g/m^3$)	80	30	Evergreen Park	7.6	0	0	58.4	Mar-10 13:00	19.5	Mar-15	97.7%
$PM_{2.5}$ ($\mu g/m^3$)	80	30	Smoky Heights	2.8	0	0	74.0	Mar-10 23:00	8.8	Mar-25	100.0%
$PM_{2.5}$ ($\mu g/m^3$)	80	30	Beaverlodge	10.5	0	0	50.7	Mar-02 14:00	25.7	Mar-02	99.5%

PASZA Monthly Continuous Data Summary – continued

Mar-2010	Peace Airshed Zone Assocation						Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
RH (%)			Henry Pirker	61.9	-	-	88.6	Mar-11 23:00	76.0	Mar-21	100.0%
RH (%)			Evergreen Park	63.3	-	-	97.3	Mar-18 04:00	85.0	Mar-18	99.6%
RH (%)			Beaverlodge	58.5	-	-	96.2	Mar-11 20:00	77.8	Mar-21	99.9%
RH (%)			Valleyview	58.4	-	-	95.2	Mar-18 03:00	84.8	Mar-22	100.0%
SR (W/m^2)			Henry Pirker	113.4	-	-	588.5	Mar-29 14:00	177.3	Mar-31	100.0%
Temp (°C)			Henry Pirker	-1.0	-	-	14.8	Mar-06 16:00	5.7	Mar-28	100.0%
Temp (°C)			Evergreen Park	-0.2	-	-	13.4	Mar-15 14:00	6.5	Mar-28	99.6%
Temp (°C)			Smoky Heights	-1.2	-	-	11.7	Mar-15 17:00	5.0	Mar-28	100.0%
Temp (°C)			Beaverlodge	0.4	-	-	15.9	Mar-06 16:00	6.3	Mar-27	99.9%
Temp (°C)			Portable-Kinuso	1.3	-	-	16.1	Mar-15 16:00	7.2	Mar-28	92.6%
Temp (°C)			Valleyview	0.8	-	-	16.6	Mar-15 17:00	7.3	Mar-28	100.0%
WSPD s (km/hr)			Henry Pirker	7.5	-	-	26.0	Mar-17 15:00	15.7	Mar-30	100.0%
WSPD s (km/hr)			Evergreen Park	5.2	-	-	24.0	Mar-17 16:00	11.9	Mar-30	99.6%
WSPD s (km/hr)			Smoky Heights	11.1	-	-	30.0	Mar-27 08:00	19.2	Mar-08	100.0%
WSPD s (km/hr)			Beaverlodge	9.0	-	-	46.0	Mar-17 15:00	20.5	Mar-17	99.6%
WSPD s (km/hr)			Portable-Kinuso	7.8	-	-	20.0	Mar-29 12:00	14.6	Mar-24	92.6%
WSPD s (km/hr)			Valleyview	6.6	-	-	21.0	Mar-30 15:00	11.7	Mar-24	100.0%
WSPD v (km/hr)			Henry Pirker	2.6	-	-	26.0	Mar-17 15:00	15.4	Mar-30	100.0%
WSPD v (km/hr)			Evergreen Park	2.1	-	-	24.0	Mar-17 16:00	11.6	Mar-30	99.6%
WSPD v (km/hr)			Smoky Heights	5.0	-	-	30.0	Mar-27 08:00	18.7	Mar-08	100.0%
WSPD v (km/hr)			Beaverlodge	2.0	-	-	46.0	Mar-17 15:00	17.2	Mar-17	99.6%
WSPD v (km/hr)			Portable-Kinuso	2.5	-	-	20.0	Mar-29 12:00	12.2	Mar-24	92.6%
WSPD v (km/hr)			Valleyview	1.5	-	-	21.0	Mar-30 15:00	9.7	Mar-24	100.0%
WDIR			Henry Pirker	WNW	-	-	-	-	-	-	100.0%
WDIR			Evergreen Park	WNW	-	-	-	-	-	-	99.6%
WDIR			Smoky Heights	W	-	-	-	-	-	-	100.0%
WDIR			Beaverlodge	W	-	-	-	-	-	-	99.6%
WDIR			Portable-Kinuso	SSW	-	-	-	-	-	-	92.6%
WDIR			Valleyview	WNW	-	-	-	-	-	-	100.0%

Continuous Network Equipment Summary

PASZA – Henry Pirker Station

General Station Issues

Routine monthly calibrations were performed on March 9th (TRS, THC, CO & $PM_{2.5}$) and March10th (SO_2, NO_X & O_3).

Parameter	Make	Model	Notes
SO_2	TEI	43C	No operational issues observed.
NOx/NO/NO_2	TEI	42C	One (1) hour flagged maintenance on February 19th.
O_3	TEI	49C	Spans were outside target from March 6th to 10th – reason undetermined, however calibration was done on March 10th and no adjustments were made and no other issues were observed.
CO	TEI	48C	No operational issues observed.
THC	TEI	51-CLT	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
$PM_{2.5}$	R&P	1400AB	Forty-six (46) hours were flagged invalid due to baseline drift.
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	Met One	010C	No operational issues observed.
WD	Met One	020C	No operational issues observed.

PASZA – Evergreen Park Station

General Station Issues

Routine monthly calibrations were performed on March15th (SO_2, TRS & $PM_{2.5}$). There was a DACS/communication error on March 15th which resulted in three (3) hours of invalid data for all parameters.

Parameter	Make	Model	Notes
SO_2	TEI	43i	No operational issues observed, other than above noted DACS error.
TRS	TEI	43C	No operational issues observed, other than above noted DACS error.
$PM_{2.5}$	R&P	1400AB	Thirteen (13) hours were flagged for baseline drift. One (1) hour was flagged invalid due to possible moisture on filter. Three (3) hours flagged invald due to above noted DACS error.
ET	Met One/Gill	083D	No operational issues observed, other than above noted DACS error.
RH	Met One/Gill		No operational issues observed, other than above noted DACS error.
WS	Met One/ Gill	010C	No operational issues observed, other than above noted DACS error.
WD	Met One/ Gill	020C	No operational issues observed, other than above noted DACS error.

PASZA – Smoky Heights Station

General Station Issues

Routine monthly calibrations were performed on March 19th (TRS, SO_2 & $PM_{2.5}$).

Parameter	Make	Model	Notes
SO_2	TEI	43C	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
$PM_{2.5}$	R&P	1400AB	No operational issues observed.
ET	Met One	083D	No operational issues observed.
WS	Met One	010C	No operational issues observed.
WD	Met One	020C	No operational issues observed.

PASZA – Beaverlodge Station

General Station Issues

Routine monthly calibrations were performed on March 11th (SO_2, O_3 & NO_X & $PM_{2.5}$). One (1) hour of data was flagged invalid due to communication/DACS error on March 1st – for all parameters.

Parameter	Make	Model	Notes
SO_2	TEI	43CTL	No other operational issues observed.
NOx/NO/NO_2	TEI	42C	No other operational issues observed.
O_3	TEI	49C	No other operational issues observed.
$PM_{2.5}$	R&P	1400AB	Three (3) hour was flagged for baseline drift.
ET	n/a	n/a	No other operational issues observed.
RH	n/a	n/a	No other operational issues observed.
WS	Blue Sky	857	Two (2) hours were flagged invalid due to intermittent spiking – probably due to snow, fog &/or frost.
WD	Blue Sky	857	Two (2) hours were flagged invalid due to intermittent spiking – probably due to snow, fog &/or frost.

PASZA – Kinuso (Portable) Station

General Station Issues

Routine monthly calibrations were performed on March 16th (TRS) and March 17th (SO_2, NO_X & O_3). From March 13th to March 15th the DACS failed resulting in fifty-five (55) hours of invalid data for all parameters.

Parameter	Make	Model	Notes
SO_2	TEI	43C	No operational issues observed, other than above noted DACS failure.
TRS	TEI	43C	No operational issues observed, other than above noted DACS failure.
NOx/NO/NO_2	TEI	42I	No operational issues observed, other than above noted DACS failure.
O_3	TEI	49C	No operational issues observed, other than above noted DACS failure.
ET	Met One		No operational issues observed, other than above noted DACS failure.
WS	Met One		No operational issues observed, other than above noted DACS failure.
WD	Met One		No operational issues observed, other than above noted DACS failure.

PASZA – Valleyview Station

General Station Issues

Routine monthly calibrations were performed March 18th (SO_2 & H_2S).

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

PASZA
Henry Pirker Station
Monthly Summary Tables, Graphs and Roses

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - March 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 6.7 ppb on Mar 25 14:00 Maximum Daily Average: 1.3 ppb on Mar 25

Minimum Value: 0 ppb on Mar 4 23:00 Minimum Daily Average: 0.1 ppb on Mar 31
Maximum Diurnal Average: 0.7 ppb at hour 14 Minimum Diurnal Average: 0.3 ppb at hour 5
Monthly Average: 0.42 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.2$ Median = 0.4 $Q_3 = 0.5$ $P_{90} = 0.7$ $P_{99} = 1.6$

Hours in Service:	744
Hours of Data:	710
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

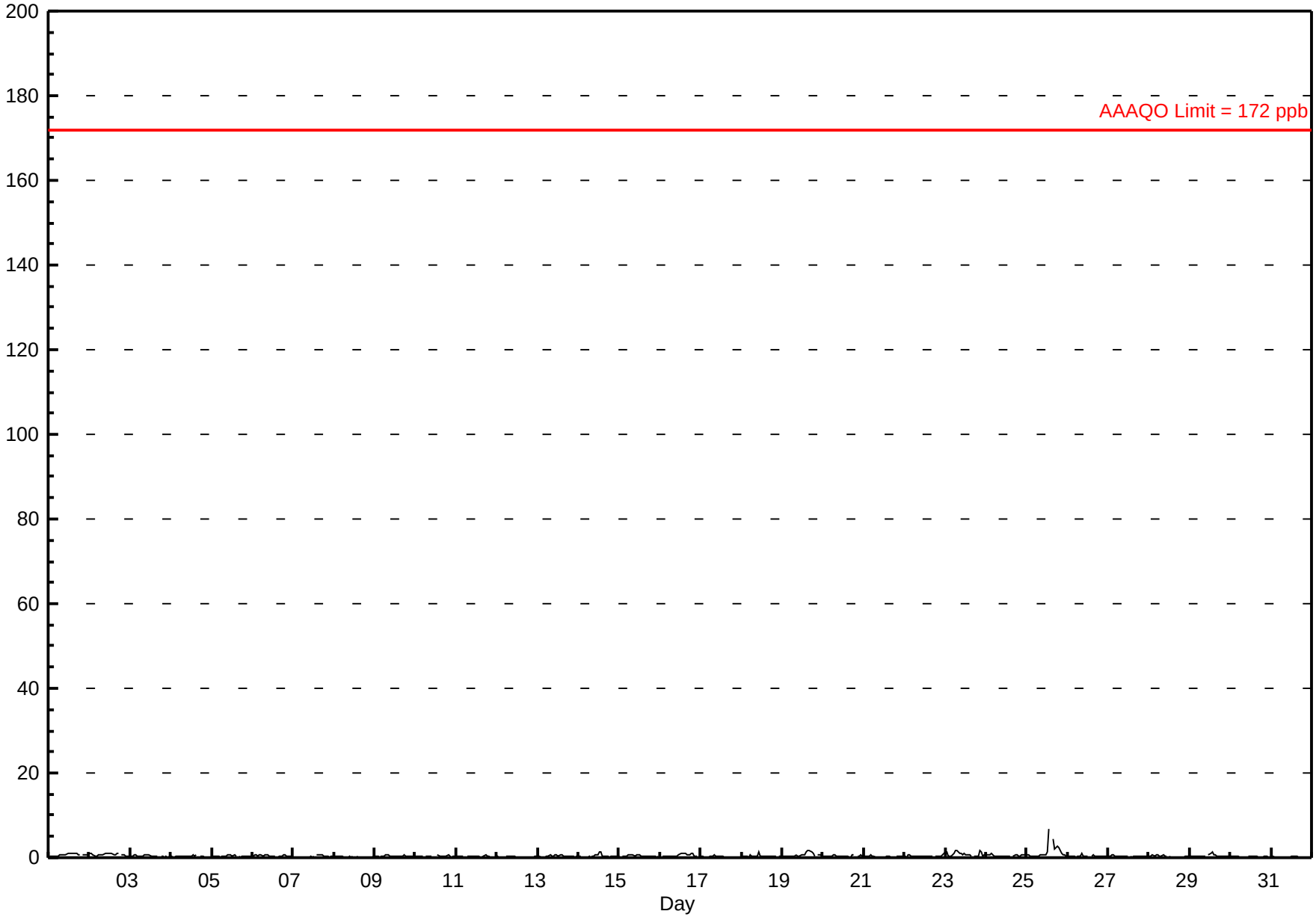
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	0	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.7	1.1
2-Mar	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	0	0	0.8	1.2
3-Mar	0	0	1	1	0	0	0	0	1	1	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0.4	0.7
4-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	A	0	0	0	0	0	0	0	0.3	0.6
5-Mar	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0	A	0	0	0	0	0	0	0	0	0.3	0.7
6-Mar	0	1	1	0	1	1	0	1	1	1	0	0	0	0	A	0	0	0	1	1	0	0	0	0	0.4	0.8
7-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	1	0	0	0	0	0	0.2	0.7
8-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	0.2	0.5
9-Mar	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.4	0.6
10-Mar	0	0	0	0	0	A	0	0	1	0	C	C	C	1	0	0	0	0	0	1	0	0	0	0	0.4	0.6
11-Mar	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.3	0.7
12-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	0.4
13-Mar	0	0	0	A	0	0	0	1	0	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0.4	0.7
14-Mar	0	0	A	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.4	1.4
15-Mar	0	A	0	0	0	1	1	1	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0.4	0.8
16-Mar	A	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	A	0.6	1.1
17-Mar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.5
18-Mar	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0.4	1.5
19-Mar	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	2	2	1	1	1	A	1	1	0	0.7	1.8
20-Mar	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	A	0	0	1	0	0.4	0.8
21-Mar	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	0.6
22-Mar	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	1	0.4	1.1
23-Mar	1	1	0	0	1	1	2	2	1	1	1	1	1	1	1	0	A	0	0	0	2	2	0	1	0.9	1.8
24-Mar	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	1	1	0	0	1	1	1	0.5	1.0
25-Mar	1	1	1	0	0	0	0	0	1	1	1	1	1	7	A	4	2	2	3	2	1	1	1	0	1.3	6.7
26-Mar	0	0	0	0	0	0	0	0	1	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0.4	0.9
27-Mar	0	0	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
28-Mar	0	0	1	0	1	1	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8
29-Mar	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	1	0	0	0	0	0	0	0	0	0.5	1.3
30-Mar	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
31-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	0.1	0.4
	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.7	0.5	0.6	0.4	0.5	0.5	0.4	0.4	0.3	0.3	0.3	Diurnal Average	
	1.3	1.3	0.8	1.0	0.8	1.2	1.8	1.5	1.0	1.1	1.5	1.0	1.3	6.7	1.4	4.3	2.2	2.5	2.6	2.4	1.7	1.5	0.6	1.1	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 57 ppb

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - March 2010



Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - March 2010

Maximum Value: 14.8 ppb on Mar 25 14:00

Maximum Daily Average: 2.2 ppb on Mar 25

Minimum Value: 0 ppb on Mar 30 18:00

Minimum Daily Average: 0.4 ppb on Mar 31

Maximum Diurnal Average: 1.4 ppb at hour 14

Minimum Diurnal Average: 0.6 ppb at hour 23

Monthly Average: 0.79 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.4$ $Q_1 = 0.5$ Median = 0.6 $Q_3 = 0.9$ $P_{90} = 1.4$ $P_{99} = 2.8$

Hours in Service:	744
Hours of Data:	710
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	A	1	1	1	1	1.1	1.7
2-Mar	1	1	1	1	1	1	1	1	1	2	1	1	1	2	1	1	1	1	A	1	1	0	1	1	1.2	1.9
3-Mar	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0	0	A	1	0	0	0	0	0	0.7	0.9
4-Mar	0	0	0	0	0	0	0	1	1	1	1	1	0	1	1	1	A	1	0	1	0	0	0	0	0.6	0.9
5-Mar	0	1	0	0	0	0	0	0	1	1	1	1	1	1	1	A	1	0	0	0	0	0	1	0	0.6	1.0
6-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	0.8	1.0
7-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	0.6	1.0
8-Mar	1	1	1	1	1	1	1	0	1	1	1	1	A	1	1	1	1	1	1	0	0	1	1	1	0.5	0.7
9-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0.7	1.0
10-Mar	1	1	1	1	1	A	1	1	1	1	C	C	C	1	1	0	1	1	0	1	1	0	0	1	0.7	1.0
11-Mar	1	1	0	0	0	A	0	0	0	0	1	1	1	1	0	0	0	2	1	1	0	0	0	0	0.7	2.4
12-Mar	0	0	0	0	A	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.9
13-Mar	0	0	0	A	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0.7	1.1
14-Mar	0	0	A	0	0	0	0	0	0	0	1	1	2	2	0	0	0	0	0	0	0	0	0	1	0.7	2.4
15-Mar	1	A	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	0.8	1.4
16-Mar	A	0	0	1	0	0	1	0	1	1	1	1	1	2	1	1	1	1	1	2	1	0	1	A	0.9	1.9
17-Mar	1	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0.5	1.0
18-Mar	0	0	1	1	0	1	1	0	0	1	4	0	1	1	1	1	1	0	1	0	2	A	0	0	0.9	3.6
19-Mar	0	0	0	0	0	0	0	1	1	1	1	1	1	1	2	3	2	2	1	1	A	1	1	1	1.1	2.9
20-Mar	0	1	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	1	1	A	1	1	1	0	0.7	1.5
21-Mar	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	A	0	0	0	1	1	0.6	1.5
22-Mar	1	0	1	1	1	1	1	0	0	0	0	0	1	1	1	1	1	A	1	1	1	1	2	2	0.8	2.0
23-Mar	2	2	1	1	1	2	2	2	1	1	1	1	1	1	1	1	A	1	1	1	2	2	1	1	1.4	2.5
24-Mar	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	A	1	1	1	0	1	1	1	1	0.8	1.5
25-Mar	1	1	1	0	0	1	1	1	1	1	1	1	2	15	A	7	3	3	3	3	1	1	1	1	2.2	14.8
26-Mar	1	1	0	0	0	0	1	1	1	1	1	1	1	A	1	1	1	1	1	0	0	1	1	1	0.7	1.4
27-Mar	1	1	1	2	1	0	0	0	1	1	0	0	A	0	0	0	0	1	1	1	1	0	0	1	0.7	1.7
28-Mar	1	1	1	1	1	1	1	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.6	1.3
29-Mar	0	0	1	1	0	0	0	1	1	1	A	1	2	2	1	1	0	1	0	0	0	1	1	1	0.8	2.4
30-Mar	1	1	1	1	1	0	1	1	1	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.5	0.7
31-Mar	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.4	0.9
	0.7	0.7	0.7	0.7	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.9	1.4	0.9	1.0	0.8	0.9	0.8	0.7	0.8	0.6	0.6	0.7	Diurnal Average	
	2.0	2.0	1.5	1.7	1.5	2.0	2.2	2.5	1.4	1.9	3.6	1.5	2.2	14.8	2.4	6.8	2.8	3.3	2.8	3.3	2.5	2.5	2.0	2.0	Diurnal Maximum	

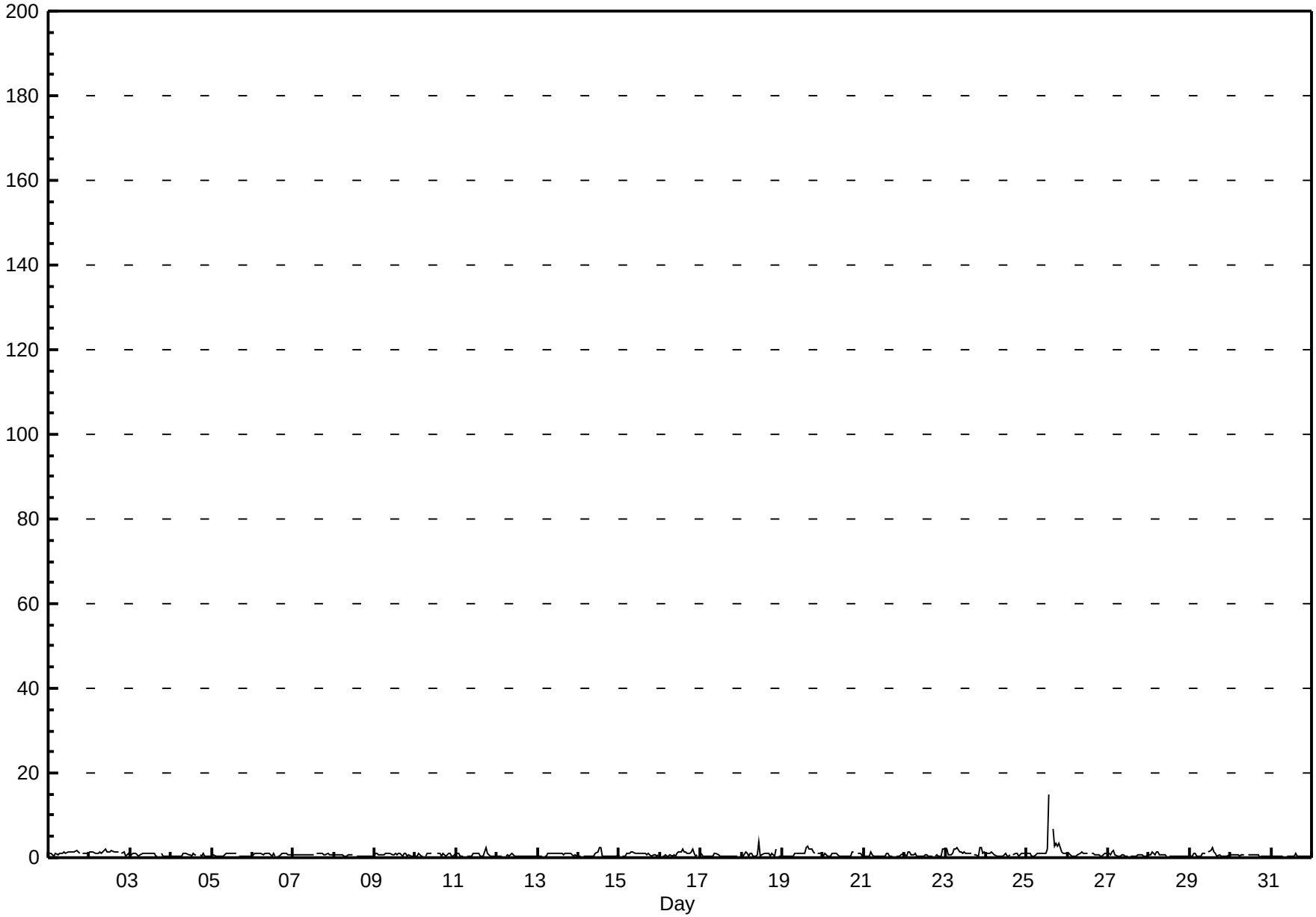
C - Calibration

A - Automated Daily Zero Span

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

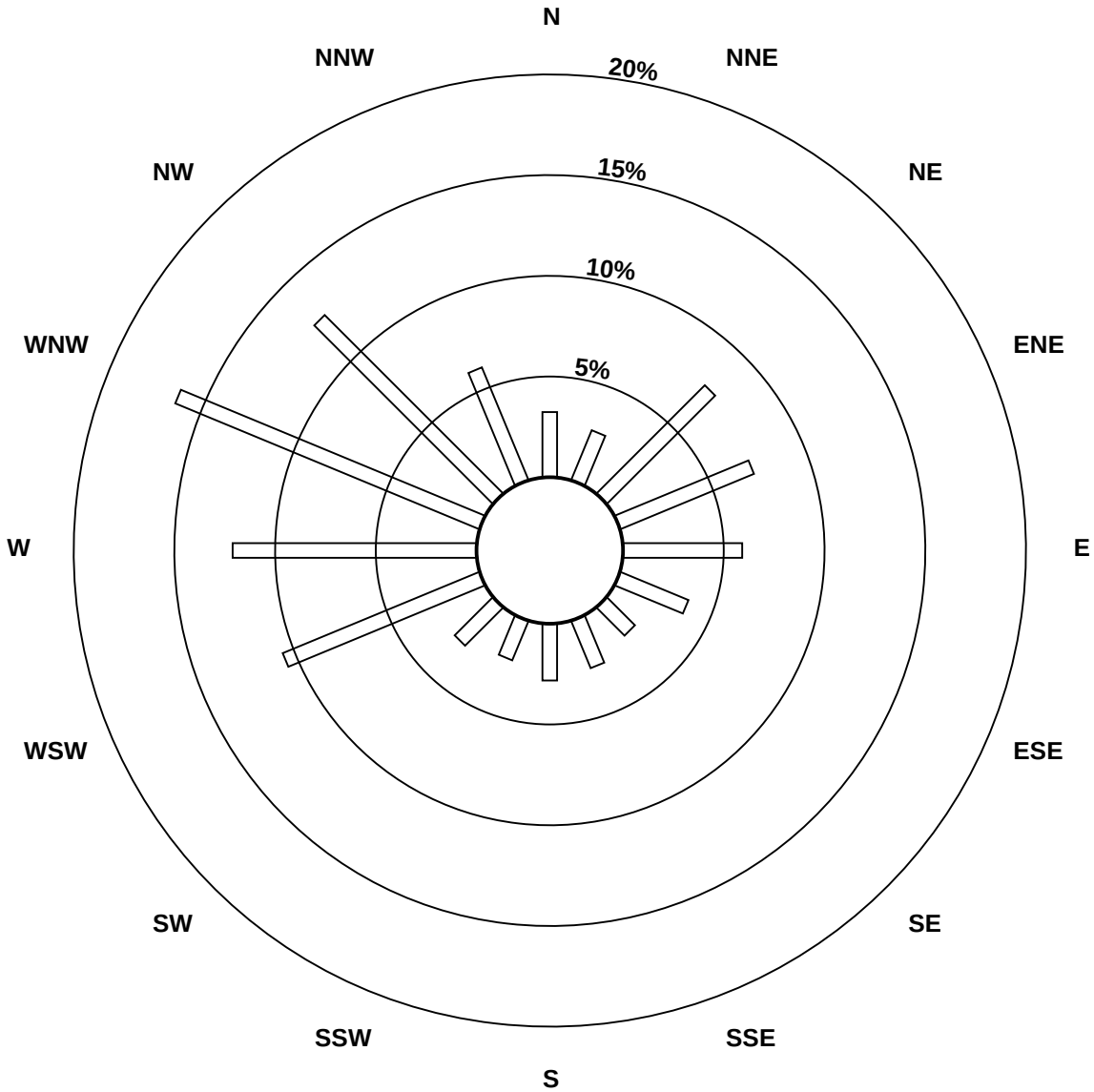
Henry Pirker - March 2010



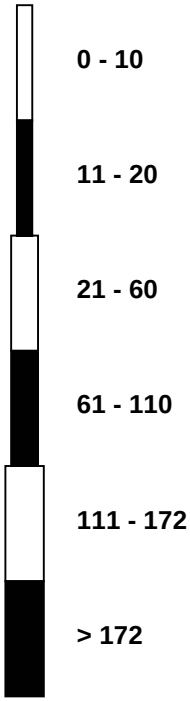
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - March 2010



Pollutant Classes (ppb)



Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - March 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.0 ppb on Mar 2 21:00 Maximum Daily Average: 0.5 ppb on Mar 2

Minimum Value: 0 ppb on Mar 20 23:00 Minimum Daily Average: 0.1 ppb on Mar 24
Maximum Diurnal Average: 0.4 ppb at hour 9 Minimum Diurnal Average: 0.3 ppb at hour 17
Monthly Average: 0.31 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.2$ Median = 0.3 $Q_3 = 0.4$ $P_{90} = 0.5$ $P_{99} = 0.7$

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

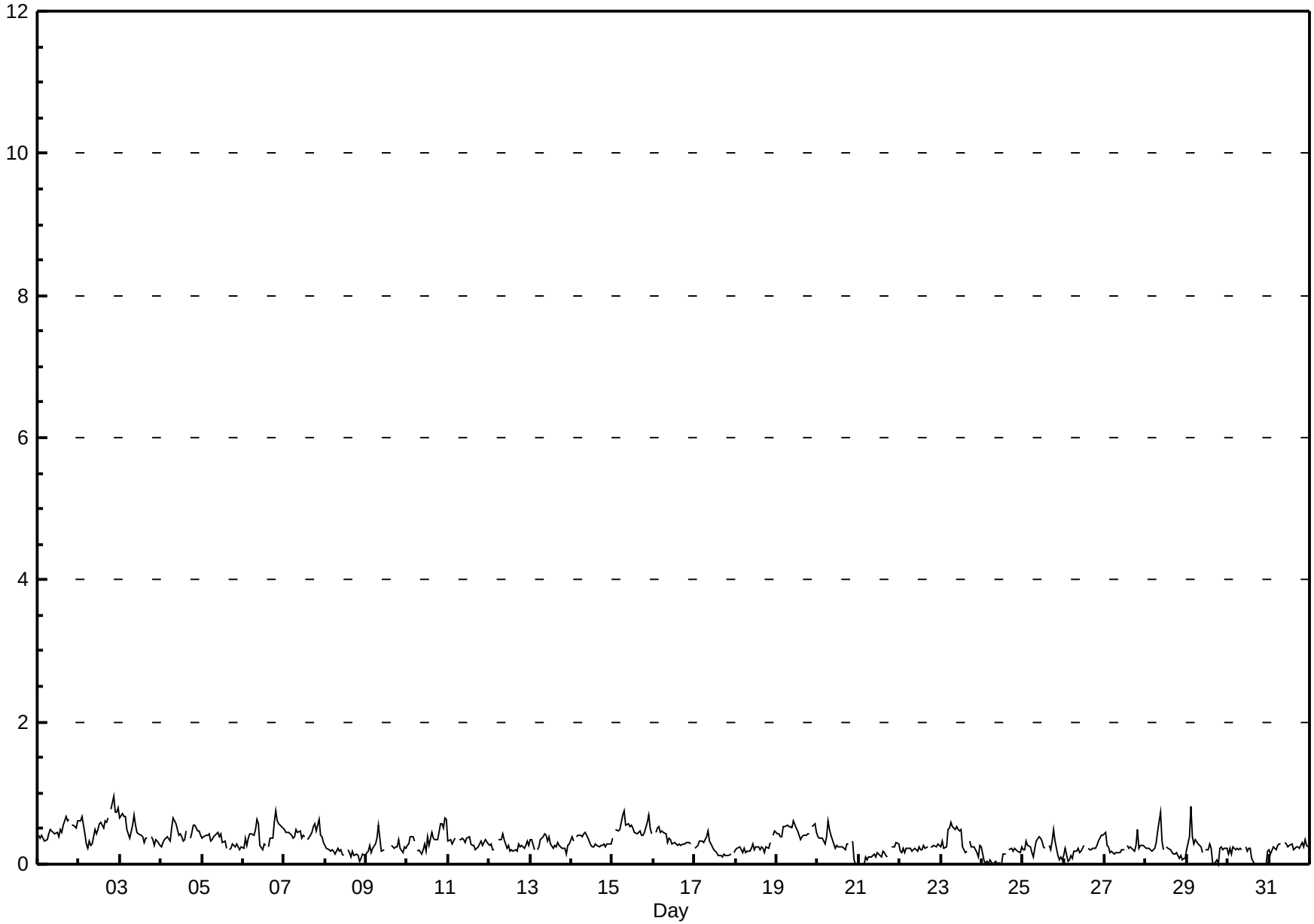
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	A	1	1	1	1	0.5	0.7
2-Mar	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	A	1	1	1	1	1	0.5	1.0
3-Mar	1	1	1	1	0	0	0	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.4	0.7
4-Mar	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	A	0	0	1	1	0	0	0	0.4	0.7
5-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	0.4
6-Mar	0	0	0	0	0	0	0	0	1	1	0	0	0	0	A	0	0	0	1	1	1	1	1	1	0.4	0.8
7-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	1	0	1	0	0	0	0.4	0.6
8-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	0.2	0.3
9-Mar	0	0	0	0	0	0	0	1	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0.3	0.5
10-Mar	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0.4	0.6
11-Mar	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
12-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
13-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	0.4
14-Mar	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
15-Mar	0	A	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	1	1	0	0.5	0.8
16-Mar	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.4	0.5
17-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.5
18-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	0.2	0.5
19-Mar	0	0	0	0	1	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	A	1	1	0	0.5	0.6
20-Mar	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.3	0.6
21-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	0.1	0.3
22-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	0.3
23-Mar	0	0	0	0	0	1	1	1	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.6
24-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
25-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.5
26-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
27-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	0.2	0.5
28-Mar	0	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
29-Mar	0	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8
30-Mar	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
31-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
	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	Diurnal Average	
	0.6	0.7	0.8	0.7	0.5	0.6	0.7	0.8	0.7	0.6	0.6	0.5	0.6	0.6	0.5	0.6	0.7	0.6	0.6	0.8	1.0	0.7	0.7	0.8	Diurnal Maximum	

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

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - March 2010



Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - March 2010

Maximum Value: 1.4 ppb on Mar 2 21:00

Maximum Daily Average: 1.0 ppb on Mar 2

Minimum Value: 0 ppb on Mar 30 18:00

Minimum Daily Average: 0.4 ppb on Mar 24

Maximum Diurnal Average: 0.7 ppb at hour 8

Minimum Diurnal Average: 0.6 ppb at hour 14

Monthly Average: 0.67 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.5$ $Q_1 = 0.5$ Median = 0.6 $Q_3 = 0.8$ $P_{90} = 0.9$ $P_{99} = 1.2$

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

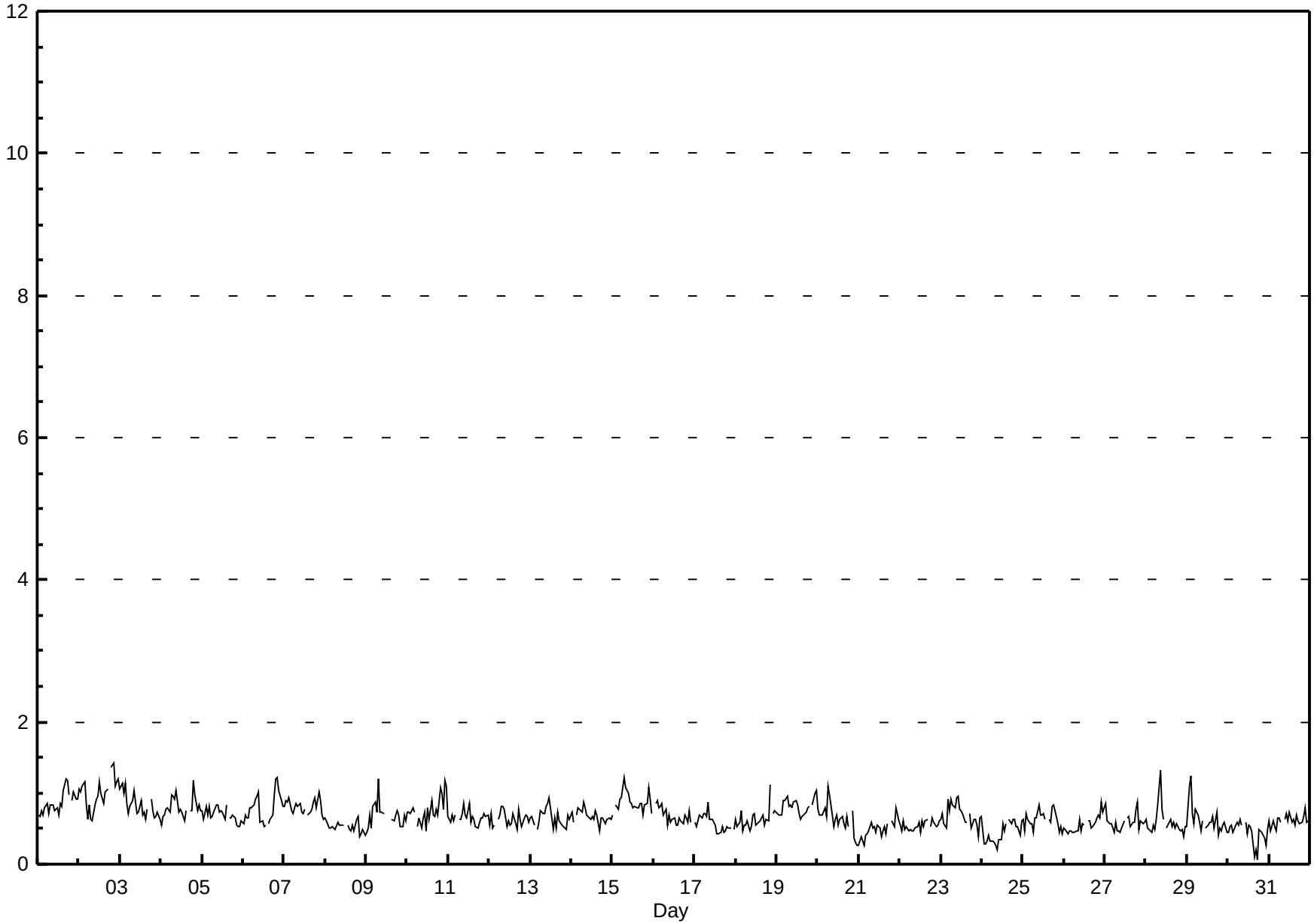
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.9	1.2
2-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1.0	1.4
3-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1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

C - Calibration A - Automated Daily Zero Span

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

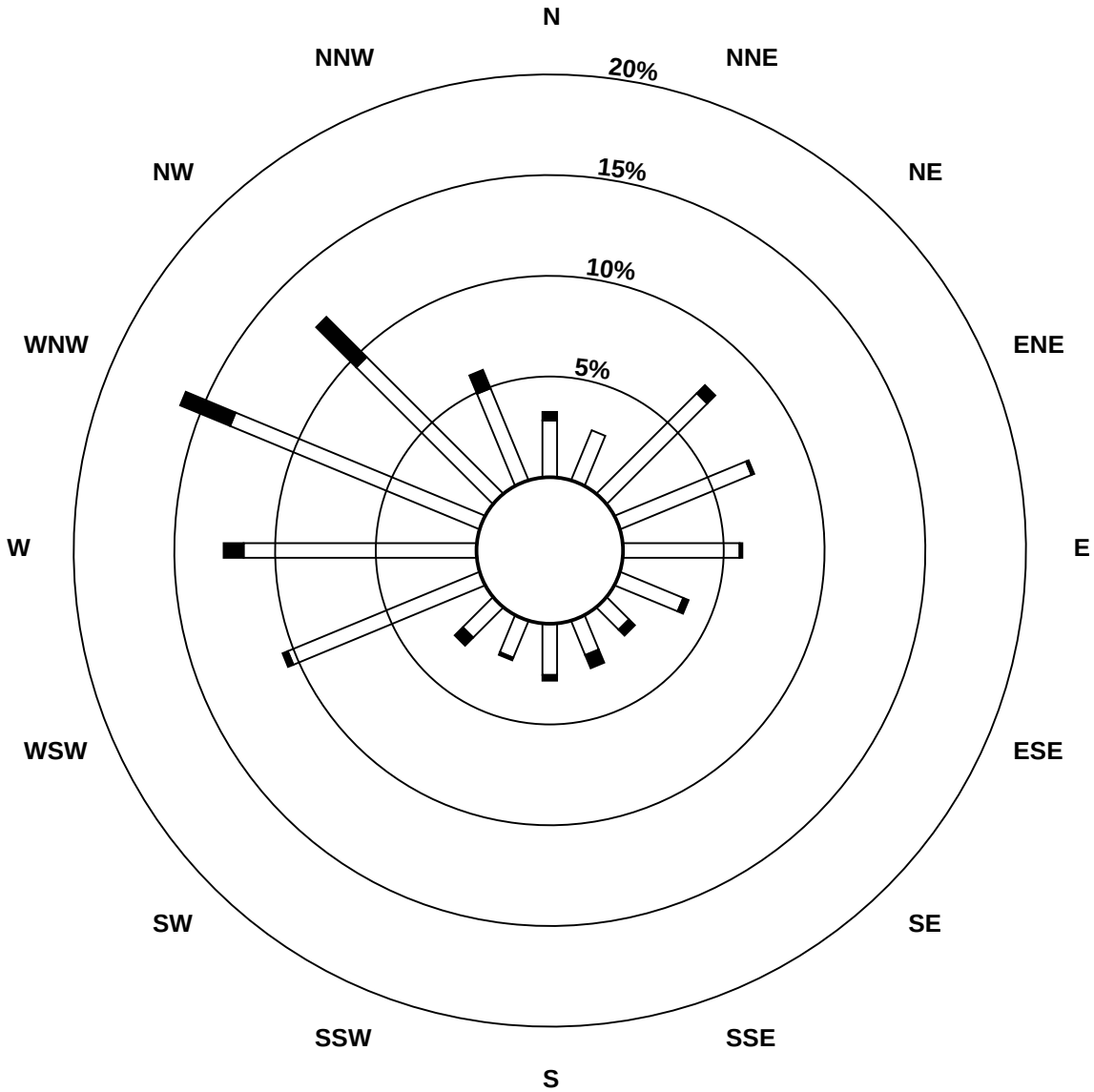
Henry Pirker - March 2010



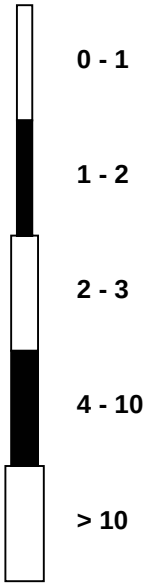
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - March 2010



Pollutant Classes (ppb)



PASZA
Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - March 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 51.9 ppb on Mar 2 21:00 Maximum Daily Average: 31.7 ppb on Mar 2

Minimum Value: 2 ppb on Mar 31 15:00 Minimum Daily Average: 4.2 ppb on Mar 21
Maximum Diurnal Average: 23.7 ppb at hour 8 Minimum Diurnal Average: 7.9 ppb at hour 14
Monthly Average: 16.42 ppb Percentiles: P_1 = 2.0 P_{10} = 3.8 Q_1 = 5.7 Median = 12.9 Q_3 = 25.0 P_{90} = 35.9 P_{99} = 46.0

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

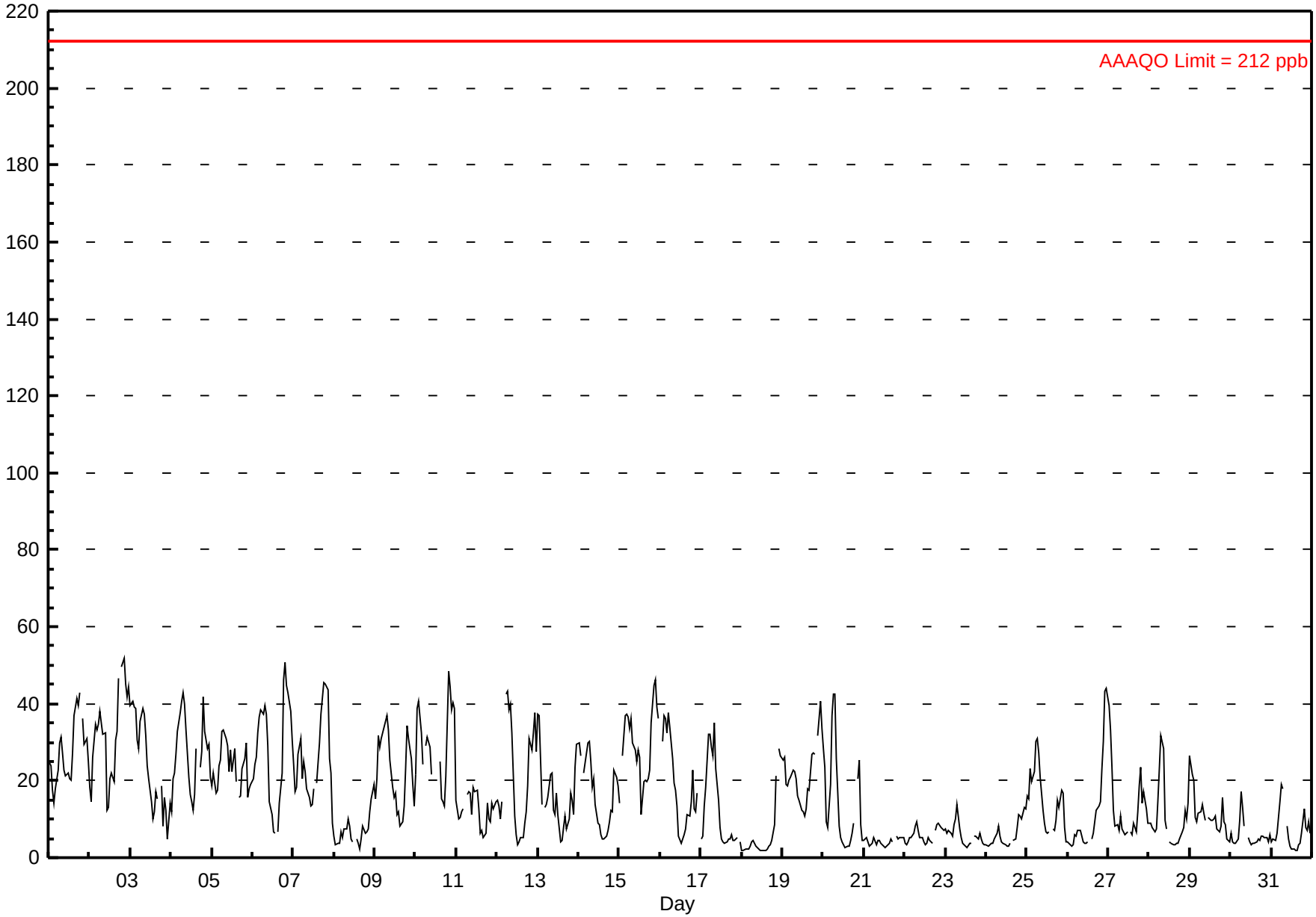
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	25	24	18	14	18	23	30	31	27	23	21	22	20	20	27	37	41	40	43	A	36	29	31	25	27.2	43.0
2-Mar	18	15	26	35	33	35	38	35	32	32	12	13	21	22	20	30	33	47	A	49	52	45	42	44	31.7	51.9
3-Mar	40	41	39	39	31	28	35	39	37	32	24	20	15	10	12	17	15	A	19	8	16	12	5	14	23.8	40.7
4-Mar	12	21	22	27	33	38	41	43	40	33	21	16	15	12	16	28	A	23	28	42	33	28	29	21	27.0	42.9
5-Mar	18	22	17	17	24	25	33	33	31	29	23	28	22	28	20	A	16	16	23	26	30	16	18	19	23.2	33.2
6-Mar	20	24	26	32	37	38	37	40	37	29	14	11	7	6	A	7	14	22	46	51	45	43	38	31	28.5	50.7
7-Mar	24	17	18	27	31	21	25	23	18	16	13	14	18	A	19	30	37	41	45	45	44	26	22	9	25.4	45.4
8-Mar	6	3	4	4	7	5	8	7	10	8	5	4	A	5	4	2	5	8	6	7	8	12	15	19	7.0	19.0
9-Mar	15	21	32	29	31	34	35	37	33	25	18	16	17	11	12	8	9	13	23	34	31	26	19	13	22.6	37.0
10-Mar	21	39	41	32	24	A	29	31	29	22	C	C	C	C	25	15	15	14	21	48	45	39	40	39	29.9	48.3
11-Mar	15	10	10	12	13	A	16	17	17	11	18	17	18	13	6	7	5	6	14	10	9	14	13	15	12.5	18.2
12-Mar	15	13	10	15	A	42	43	38	40	33	11	6	4	4	5	5	9	12	19	31	28	32	38	28	20.9	43.3
13-Mar	37	37	14	A	13	14	16	22	22	12	11	17	11	4	5	8	11	7	10	17	15	11	24	30	15.9	37.2
14-Mar	30	27	A	22	25	30	30	25	18	21	14	9	9	6	5	5	6	7	9	12	12	23	21	19	16.6	30.1
15-Mar	14	A	26	37	37	37	34	36	30	28	25	28	26	11	20	20	20	21	23	35	45	46	39	36	29.3	46.1
16-Mar	A	30	37	36	32	38	34	26	20	18	13	6	4	5	6	8	11	11	14	23	13	12	17	A	18.7	37.7
17-Mar	5	6	13	18	32	32	29	26	35	23	15	8	5	4	4	4	5	5	6	4	5	5	A	4	12.7	35.0
18-Mar	2	2	2	2	2	3	4	4	3	3	2	2	2	2	2	2	3	3	4	9	21	A	28	26	5.9	28.3
19-Mar	26	26	19	19	20	21	23	22	21	16	15	12	12	11	12	18	18	27	27	27	A	32	41	33	21.6	40.6
20-Mar	28	24	9	8	19	37	43	42	26	8	5	4	3	3	3	3	5	6	9	A	20	26	9	4	14.9	42.7
21-Mar	4	5	4	3	3	4	5	3	4	5	4	3	3	3	3	4	5	4	A	5	5	5	5	5	4.2	5.5
22-Mar	4	3	4	5	5	6	8	9	7	5	5	4	3	4	5	5	4	A	7	9	9	8	7	7	5.9	9.2
23-Mar	7	6	7	6	6	9	10	14	8	5	4	3	3	3	4	4	A	6	6	5	6	5	4	3	5.8	13.9
24-Mar	3	3	3	4	4	5	6	8	6	4	4	4	3	3	4	A	4	5	8	11	11	10	13	13	6.0	13.1
25-Mar	16	15	23	20	22	30	31	27	21	12	9	7	6	7	A	7	7	10	15	13	17	17	8	4	15.0	30.8
26-Mar	4	4	3	3	6	5	7	7	6	4	4	4	4	A	5	6	9	12	13	14	23	30	43	44	11.4	43.9
27-Mar	40	33	24	12	8	9	7	11	7	7	6	7	A	7	6	9	7	12	18	23	14	17	13	9	13.3	39.6
28-Mar	9	9	8	7	8	15	23	32	29	10	8	A	4	4	3	3	4	4	5	7	8	12	10	14	10.2	31.8
29-Mar	27	22	20	10	9	12	12	14	11	10	A	10	10	10	10	11	7	7	8	16	9	9	5	4	11.4	26.7
30-Mar	7	4	4	4	5	10	17	13	8	A	5	4	3	4	4	4	5	5	6	6	5	5	4	6	5.9	17.0
31-Mar	4	5	4	7	10	14	19	18	A	8	5	3	2	2	2	2	3	4	6	13	8	7	9	6	7.0	18.9
	16.5	17.0	16.3	16.8	18.3	21.3	23.5	23.7	21.1	16.4	11.5	10.4	9.6	7.9	9.3	10.7	11.4	13.7	16.7	20.7	20.7	20.0	20.3	18.2	Diurnal Average	
	39.6	40.7	40.5	38.8	37.4	42.5	43.3	42.9	40.0	33.3	24.8	28.1	26.2	28.2	27.1	37.0	41.5	46.6	46.4	50.7	51.9	46.1	43.1	44.4	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 (NO_2) - ppb

Henry Pirker - March 2010



Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - March 2010

Maximum Value: 66.5 ppb on Mar 18 21:00

Maximum Daily Average: 39.6 ppb on Mar 2

Minimum Value: 3 ppb on Mar 18 13:00

Maximum Diurnal Average: 30.4 ppb at hour 8

Monthly Average: 22.53 ppb

Minimum Daily Average: 6.7 ppb on Mar 21

Minimum Diurnal Average: 12.9 ppb at hour 14

Percentiles: P_1 = 3.3 P_{10} = 6.0 Q_1 = 9.6 Median = 20.6 Q_3 = 34.4 P_{90} = 42.6 P_{99} = 54.6

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

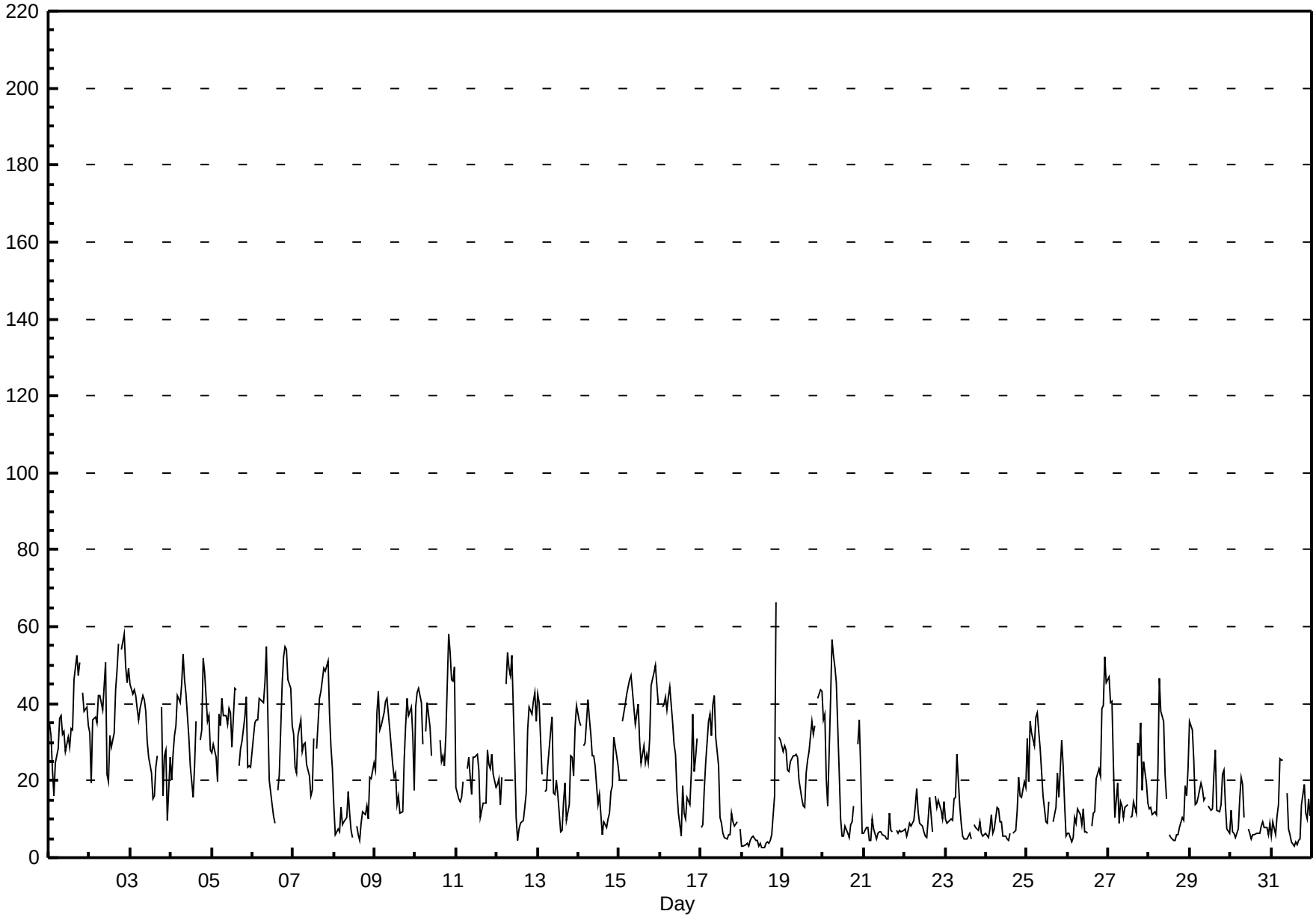
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	35	32	23	16	25	28	36	37	32	33	28	31	29	34	33	46	53	48	51	A	43	38	39	34	34.9	52.6
2-Mar	32	19	36	36	35	42	42	40	38	51	22	20	32	29	33	44	49	55	A	54	58	49	46	49	39.6	58.2
3-Mar	45	42	44	42	39	36	39	42	41	38	30	26	22	15	16	24	26	A	39	16	27	28	10	26	31.0	45.2
4-Mar	20	27	32	34	42	40	45	53	46	42	31	24	20	16	24	36	A	31	33	52	48	36	37	28	34.6	52.8
5-Mar	27	29	26	20	37	34	41	37	37	35	39	38	29	44	44	A	24	28	30	37	42	23	24	24	32.5	43.9
6-Mar	31	35	36	36	41	41	40	46	55	38	20	14	11	9	A	18	22	45	52	55	54	46	44	34	35.7	54.8
7-Mar	32	23	22	32	36	28	29	30	24	21	16	17	31	A	28	41	43	46	49	48	51	37	29	23	32.1	51.0
8-Mar	14	6	7	7	13	9	9	10	17	12	7	5	A	8	6	5	9	12	11	14	10	21	21	25	11.2	24.5
9-Mar	23	37	43	33	34	38	41	41	37	33	24	21	22	14	16	12	12	25	34	42	37	39	32	17	29.5	43.3
10-Mar	39	43	44	40	29	A	33	40	34	26	C	C	C	C	30	25	26	24	32	58	53	46	46	50	37.9	58.2
11-Mar	18	15	15	16	20	A	23	26	21	16	26	26	27	23	10	12	14	14	28	24	23	27	21	18	20.2	28.0
12-Mar	19	21	14	21	A	45	53	49	47	53	25	11	5	8	9	10	13	17	33	39	37	41	43	35	28.1	53.4
13-Mar	43	40	22	A	17	18	24	33	37	17	16	20	16	7	7	15	19	10	14	27	26	21	34	40	22.6	42.6
14-Mar	35	34	A	29	30	41	36	32	26	27	24	14	17	11	6	9	8	10	12	17	18	31	26	24	22.6	41.1
15-Mar	20	A	35	40	43	44	46	47	43	35	37	40	30	25	29	25	27	25	31	45	48	50	45	40	37.0	50.0
16-Mar	A	39	40	42	38	42	44	35	29	27	17	11	5	19	11	10	16	14	22	37	22	26	31	A	26.3	44.3
17-Mar	8	9	17	25	35	37	32	40	42	31	24	10	9	6	5	5	6	6	11	9	8	9	A	7	17.1	42.1
18-Mar	3	3	3	4	3	5	5	6	4	4	3	4	3	3	4	4	4	4	6	16	66	A	31	31	9.5	66.5
19-Mar	28	29	28	23	23	25	27	26	27	26	20	15	14	13	22	25	28	35	32	34	A	41	43	43	27.3	43.5
20-Mar	36	37	20	13	41	56	53	49	45	22	10	6	6	8	6	5	9	9	13	A	29	36	23	7	23.5	56.5
21-Mar	6	8	8	4	4	10	7	5	6	7	7	6	6	5	5	12	7	7	A	7	6	7	7	7	6.7	11.6
22-Mar	7	5	7	9	8	10	13	18	12	9	8	7	5	5	10	16	7	A	16	13	15	12	10	15	10.3	17.9
23-Mar	10	9	9	10	10	15	16	27	13	9	6	5	5	5	6	5	A	8	8	7	9	6	5	6	9.1	26.8
24-Mar	6	5	7	11	6	7	13	13	9	9	6	6	5	4	6	A	6	7	12	21	16	16	20	18	10.1	20.8
25-Mar	31	20	36	32	29	37	38	33	28	16	13	9	9	14	A	9	11	13	22	16	31	24	14	6	21.3	37.7
26-Mar	6	6	4	5	10	9	13	11	9	13	7	7	7	A	8	12	12	20	23	21	39	39	52	46	16.5	52.2
27-Mar	47	40	40	24	10	19	9	15	13	10	13	14	A	11	11	15	12	30	26	35	18	25	19	14	20.4	47.1
28-Mar	13	13	11	12	11	22	47	38	36	22	15	A	6	5	4	4	6	6	8	10	10	18	16	23	15.5	46.6
29-Mar	35	33	25	14	14	16	19	18	15	16	A	13	12	13	22	28	12	12	14	22	23	14	7	6	17.5	35.3
30-Mar	12	7	6	5	7	15	21	19	11	A	8	6	5	6	6	6	6	6	8	9	8	8	6	9	8.8	20.8
31-Mar	5	9	6	11	14	26	25	25	A	17	7	6	4	3	4	3	4	5	14	19	11	10	15	11	11.2	25.6
	22.9	22.6	22.3	21.5	23.5	27.4	29.7	30.4	27.9	23.8	17.6	14.9	13.9	12.9	14.6	16.6	16.9	19.8	23.6	27.8	29.6	27.5	26.5	23.9	Diurnal Average	
	47.1	42.9	43.9	42.2	42.6	56.5	53.4	52.8	54.6	52.7	38.7	39.8	31.8	43.9	43.7	46.4	52.6	55.5	52.4	58.2	66.5	50.0	52.2	49.5	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

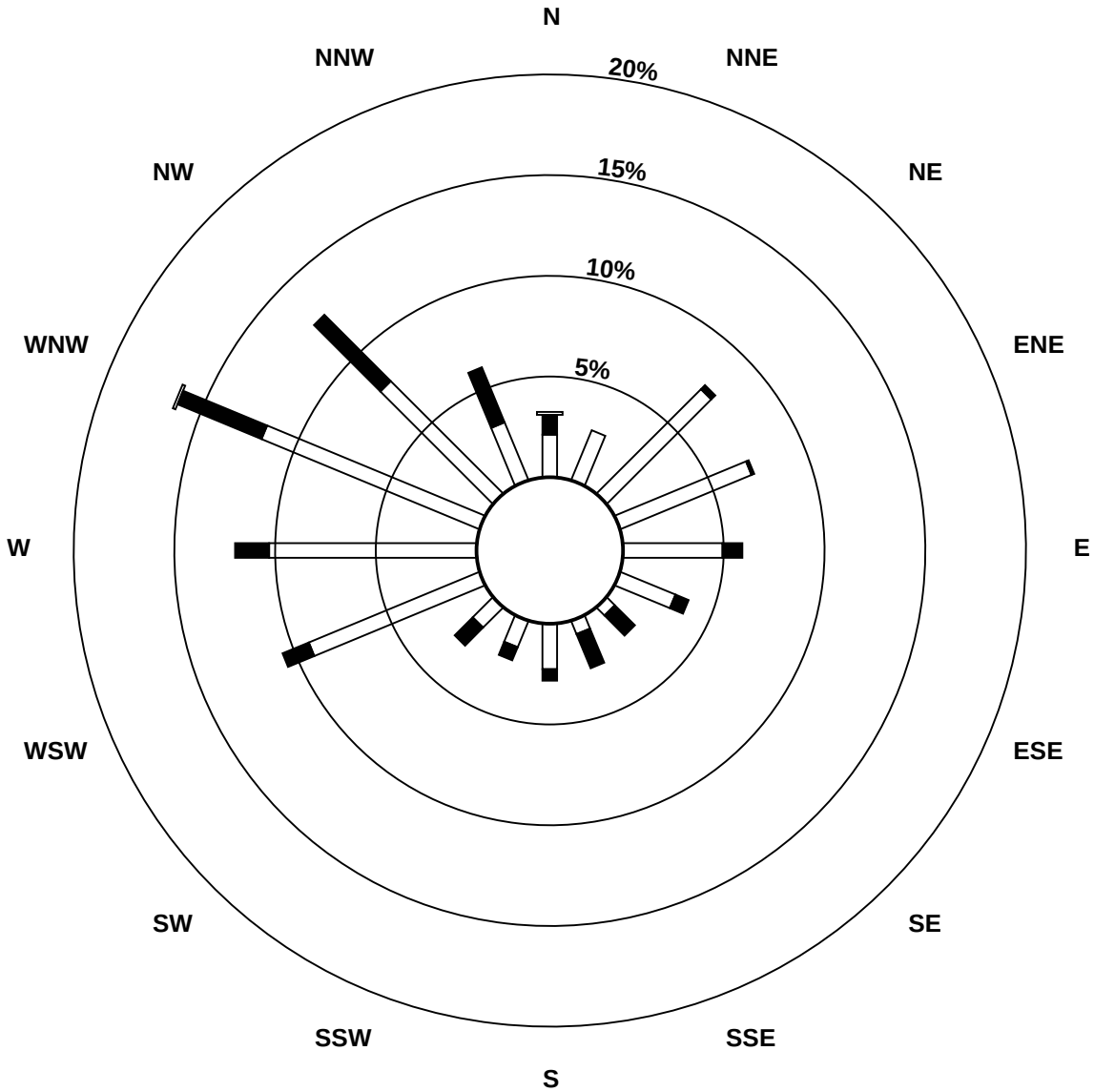
Henry Pirker - March 2010



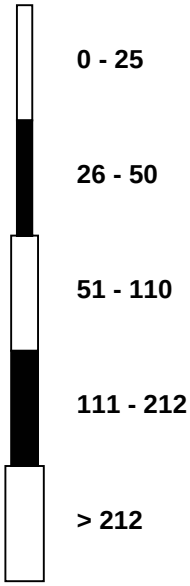
Pollutant Rose

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - March 2010



Pollutant Classes (ppb)



PASZA
Pasco Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Henry Pirker - March 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 84.8 ppb on Mar 15 08:00
Maximum Daily Average: 25.1 ppb on Mar 15

Minimum Value: 0 ppb on Mar 12 03:00
Maximum Diurnal Average: 19.8 ppb at hour 9
Monthly Average: 7.39 ppb

Minimum Daily Average: 0.7 ppb on Mar 30
Minimum Diurnal Average: 2.7 ppb at hour 1
Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.5$ Median = 1.8 $Q_3 = 8.3$ $P_{90} = 23.6$ $P_{99} = 57.1$

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

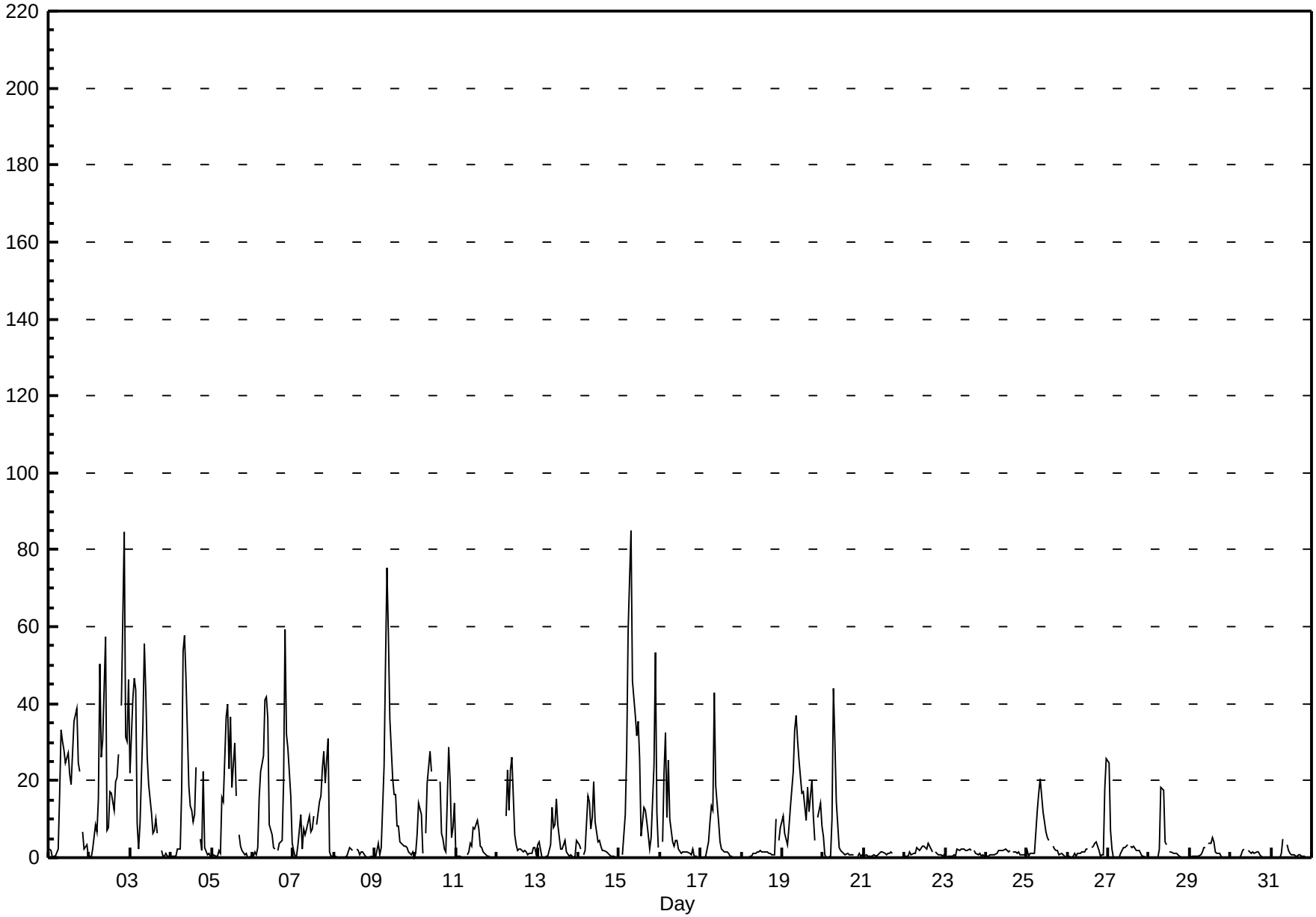
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	2	2	0	0	0	2	16	33	30	28	25	27	21	19	27	36	39	25	22	A	7	2	3	1	16.0	38.9
2-Mar	0	0	2	9	7	15	50	26	31	57	7	8	17	17	12	20	21	27	A	39	84	32	30	46	24.3	84.5
3-Mar	22	41	47	44	9	2	9	34	55	43	26	19	12	6	7	10	6	A	2	0	0	1	0	0	17.3	55.5
4-Mar	0	0	0	0	2	2	18	54	58	47	19	13	12	9	11	24	A	5	2	22	3	1	1	0	13.2	57.9
5-Mar	0	1	0	0	2	1	16	14	37	40	23	36	18	30	16	A	6	3	2	1	1	0	0	0	10.8	39.9
6-Mar	0	2	1	3	16	22	26	41	42	36	8	6	3	2	A	2	4	4	20	59	32	28	16	4	16.4	59.3
7-Mar	2	0	0	3	11	2	7	6	8	11	7	8	11	A	9	15	16	23	28	19	31	1	0	0	9.5	30.9
8-Mar	0	0	0	0	0	0	0	0	2	3	2	2	A	2	2	1	1	2	1	0	0	0	0	0	0.8	2.7
9-Mar	0	2	4	1	2	24	51	75	58	36	21	16	16	8	8	4	3	3	3	3	1	1	1	0	14.2	75.5
10-Mar	1	6	14	11	1	A	6	20	27	22	C	C	C	C	20	6	5	2	2	29	20	5	8	14	11.6	28.8
11-Mar	0	0	0	0	0	A	1	2	4	3	8	8	10	7	3	3	1	1	1	0	0	0	0	0	2.2	9.8
12-Mar	0	0	0	0	A	11	23	12	23	26	6	3	2	2	2	2	2	1	1	1	1	2	3	1	5.4	25.9
13-Mar	3	4	0	A	0	0	0	3	13	8	9	15	8	2	2	3	4	1	1	1	1	0	0	4	3.7	15.5
14-Mar	3	2	A	1	2	16	15	7	10	20	9	4	5	3	2	2	1	1	1	1	0	1	0	0	4.6	19.8
15-Mar	0	A	1	11	28	59	72	85	46	37	32	35	26	6	13	12	9	6	2	5	24	53	12	3	25.1	84.8
16-Mar	A	4	22	32	10	25	10	4	3	5	4	2	1	2	2	1	1	1	1	2	0	0	0	A	6.1	32.5
17-Mar	0	0	0	0	4	9	13	12	43	19	9	4	2	2	2	1	1	1	0	0	0	0	A	0	5.4	43.0
18-Mar	0	0	0	0	0	0	1	1	1	2	2	2	1	1	1	1	1	1	1	1	10	A	4	8	1.8	10.2
19-Mar	11	6	5	3	8	13	22	33	37	30	25	17	17	14	10	18	12	20	11	4	A	11	14	8	15.2	36.8
20-Mar	5	1	0	0	0	10	44	30	15	3	2	1	1	1	1	1	1	1	1	A	0	1	0	1	5.2	44.0
21-Mar	0	1	1	0	0	0	1	1	1	1	2	2	1	1	1	1	2	1	A	0	0	0	0	0	0.7	1.6
22-Mar	0	0	0	1	1	1	1	3	2	2	3	3	3	2	4	3	1	A	1	1	1	1	1	1	1.6	3.6
23-Mar	0	0	0	0	0	1	1	2	2	2	2	2	2	2	2	2	A	2	1	1	1	1	1	1	1.2	2.4
24-Mar	0	0	1	1	1	1	1	2	2	2	2	2	2	2	2	A	2	2	1	1	1	1	1	1	1.2	2.2
25-Mar	2	0	1	1	1	7	12	17	20	12	9	7	5	4	A	3	2	2	2	1	1	1	0	0	4.8	20.3
26-Mar	0	0	0	0	1	0	1	1	1	2	2	2	2	A	2	3	4	4	2	0	1	1	18	26	3.2	25.8
27-Mar	25	7	2	0	0	0	0	1	2	3	3	3	A	3	3	3	2	2	2	1	0	0	0	0	2.7	24.5
28-Mar	0	0	0	0	0	0	2	18	17	4	3	A	1	1	1	1	1	1	0	0	0	0	0	0	2.3	18.4
29-Mar	0	0	0	0	0	0	1	1	2	3	A	4	4	5	4	2	1	1	0	0	0	0	0	0	1.3	5.2
30-Mar	0	0	0	0	0	0	1	2	2	A	2	1	1	1	1	1	1	1	1	0	0	0	0	0	0.7	2.2
31-Mar	0	0	0	0	0	0	1	5	A	3	2	1	1	1	1	0	1	1	1	0	0	0	0	0	0.7	4.7
	2.7	2.7	3.4	4.2	3.6	7.8	13.6	17.6	19.8	16.9	9.4	8.8	7.4	5.6	5.9	6.2	5.3	5.0	3.8	6.7	7.4	4.8	3.8	4.0	Diurnal Average	
	24.5	41.4	46.5	43.8	27.9	59.4	72.2	84.8	57.9	57.4	31.8	36.5	25.8	29.8	27.1	35.6	38.9	26.8	27.7	59.3	84.5	53.3	30.2	46.4	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

Hourly Averages

Nitrogen Oxide (NO) - ppb

Henry Pirker - March 2010



Hourly Maximums

Nitrogen Oxide (NO) - ppb

Henry Pirker - March 2010

Maximum Value: 262.4 ppb on Mar 18 21:00

Maximum Daily Average: 49.4 ppb on Mar 2

Minimum Value: 0 ppb on Mar 31 03:00

Minimum Daily Average: 1.2 ppb on Mar 30

Maximum Diurnal Average: 38.0 ppb at hour 9

Minimum Diurnal Average: 6.7 ppb at hour 2

Monthly Average: 16.37 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.5$ $Q_1 = 2.0$ Median = 5.0 $Q_3 = 20.1$ $P_{90} = 49.9$ $P_{99} = 105.9$

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	27	11	1	1	2	13	61	52	55	63	45	50	41	41	41	70	64	64	74	A	33	11	18	5	36.6	73.9
2-Mar	2	2	10	14	13	36	87	60	69	139	20	20	36	29	40	46	56	48	A	73	131	61	68	76	49.4	138.9
3-Mar	41	56	57	51	37	8	24	49	84	75	37	32	23	11	11	18	15	A	7	2	1	15	0	1	28.4	83.7
4-Mar	0	1	0	1	7	13	47	84	81	87	40	23	19	20	22	34	A	8	4	90	29	3	4	1	26.9	89.9
5-Mar	1	3	3	1	14	7	54	29	74	75	56	63	29	66	65	A	12	5	6	3	4	1	1	1	24.8	75.3
6-Mar	4	13	6	10	56	49	35	71	88	66	18	8	6	4	A	6	20	20	37	129	93	59	40	11	36.8	129.3
7-Mar	8	1	1	24	70	11	24	25	14	21	9	11	41	A	20	25	29	41	47	40	79	6	1	1	23.9	79.0
8-Mar	1	0	0	0	0	0	0	1	5	4	10	3	A	5	3	2	3	3	2	1	1	1	1	0	1.9	9.7
9-Mar	0	12	25	3	4	47	101	97	88	65	31	27	26	12	12	7	5	7	11	7	5	5	9	1	25.3	100.9
10-Mar	8	17	34	26	3	A	15	61	40	26	C	C	C	C	24	18	13	6	8	90	71	20	29	43	29.2	90.4
11-Mar	1	2	1	1	1	A	2	5	6	6	13	15	20	19	5	6	6	2	1	1	1	1	1	1	5.1	20.1
12-Mar	0	1	0	1	A	16	59	29	59	82	17	6	2	5	4	4	3	2	2	2	6	9	18	4	14.5	82.4
13-Mar	17	10	0	A	0	2	2	20	35	13	21	21	14	4	4	8	20	3	1	1	1	1	2	19	9.7	35.1
14-Mar	10	8	A	4	5	47	31	20	23	35	25	6	12	7	3	4	3	2	1	1	1	4	1	0	11.2	46.6
15-Mar	1	A	4	23	55	97	110	157	116	67	76	69	41	18	28	18	18	9	7	16	44	75	39	8	47.7	156.9
16-Mar	A	21	29	56	22	49	28	11	10	10	12	5	3	16	4	5	3	4	2	9	2	2	5	A	14.1	55.9
17-Mar	1	0	0	2	6	35	40	42	75	34	16	6	5	4	2	2	1	1	2	0	0	0	A	0	12.1	74.7
18-Mar	0	0	0	1	1	1	1	2	3	5	2	4	3	2	4	2	2	2	1	2	262	A	10	17	14.3	262.4
19-Mar	19	11	14	10	18	23	40	50	56	54	36	22	20	18	13	29	20	34	22	11	A	34	28	32	26.7	55.8
20-Mar	16	4	1	1	4	62	57	43	45	18	4	2	2	5	7	3	2	4	3	A	2	4	2	4	12.9	61.7
21-Mar	2	2	4	2	2	8	2	1	2	3	5	5	3	2	2	4	4	3	A	1	0	0	0	0	2.7	8.3
22-Mar	5	1	1	6	3	5	3	13	6	8	5	6	4	3	9	14	3	A	3	7	3	4	4	5	5.3	13.6
23-Mar	2	1	1	3	4	2	3	12	5	6	4	4	5	3	6	4	A	4	3	3	8	2	3	2	4.0	11.6
24-Mar	1	1	5	3	3	3	4	5	4	6	3	5	5	2	4	A	2	4	4	15	3	3	5	4	4.2	15.2
25-Mar	27	1	10	5	6	33	38	30	42	16	15	10	9	10	A	5	5	3	13	2	6	6	1	1	12.9	41.6
26-Mar	2	2	1	2	4	2	6	6	3	8	4	5	5	A	5	8	6	8	4	1	7	16	73	33	9.2	72.9
27-Mar	47	16	16	1	0	0	1	2	11	6	8	8	A	6	6	6	4	7	5	5	1	1	1	1	6.9	47.4
28-Mar	1	1	1	1	1	1	24	43	32	14	8	A	2	2	1	2	2	1	1	0	0	1	0	0	6.1	42.5
29-Mar	1	1	1	1	1	1	3	3	5	8	A	7	7	10	13	7	2	2	1	0	0	0	0	0	3.3	13.0
30-Mar	0	0	0	0	0	0	1	3	3	A	2	2	2	2	2	2	2	2	1	0	0	0	0	0	1.2	3.0
31-Mar	0	0	0	0	0	1	3	11	A	8	3	2	1	1	2	1	1	1	1	2	0	0	0	0	1.9	11.1
	8.2	6.7	7.7	8.5	11.5	19.8	29.2	33.4	38.0	34.4	18.9	15.6	13.8	11.8	12.5	12.4	11.3	10.4	9.5	17.8	26.5	11.6	12.2	9.0	Diurnal Average	
	47.4	56.3	56.5	55.9	69.8	97.1	109.5	156.9	115.8	138.9	76.3	69.4	41.2	65.8	65.1	70.5	64.0	63.9	73.9	129.3	262.4	75.4	72.9	76.3	Diurnal Maximum	

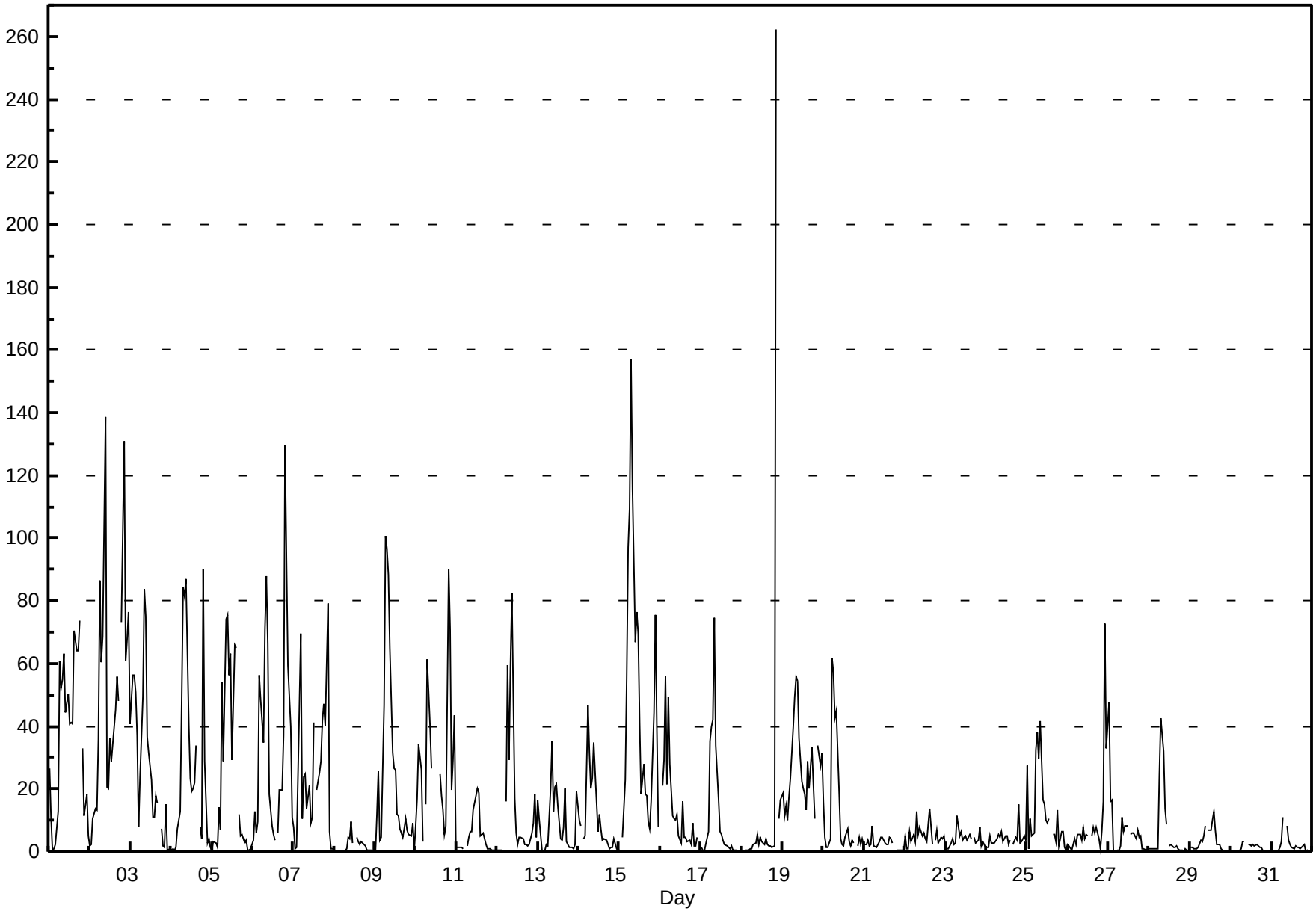
C - Calibration

A - Automated Daily Zero Span

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Henry Pirker - March 2010



Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - March 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 137.0 ppb on Mar 2 21:00 Maximum Daily Average: 56.4 ppb on Mar 2

Minimum Value: 2 ppb on Mar 18 01:00 Minimum Daily Average: 4.9 ppb on Mar 21
Maximum Diurnal Average: 41.6 ppb at hour 8 Minimum Diurnal Average: 13.6 ppb at hour 14
Monthly Average: 23.99 ppb Percentiles: P_1 = 2.5 P_{10} = 4.7 Q_1 = 7.2 Median = 15.2 Q_3 = 32.8 P_{90} = 58.3 P_{99} = 97.5

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

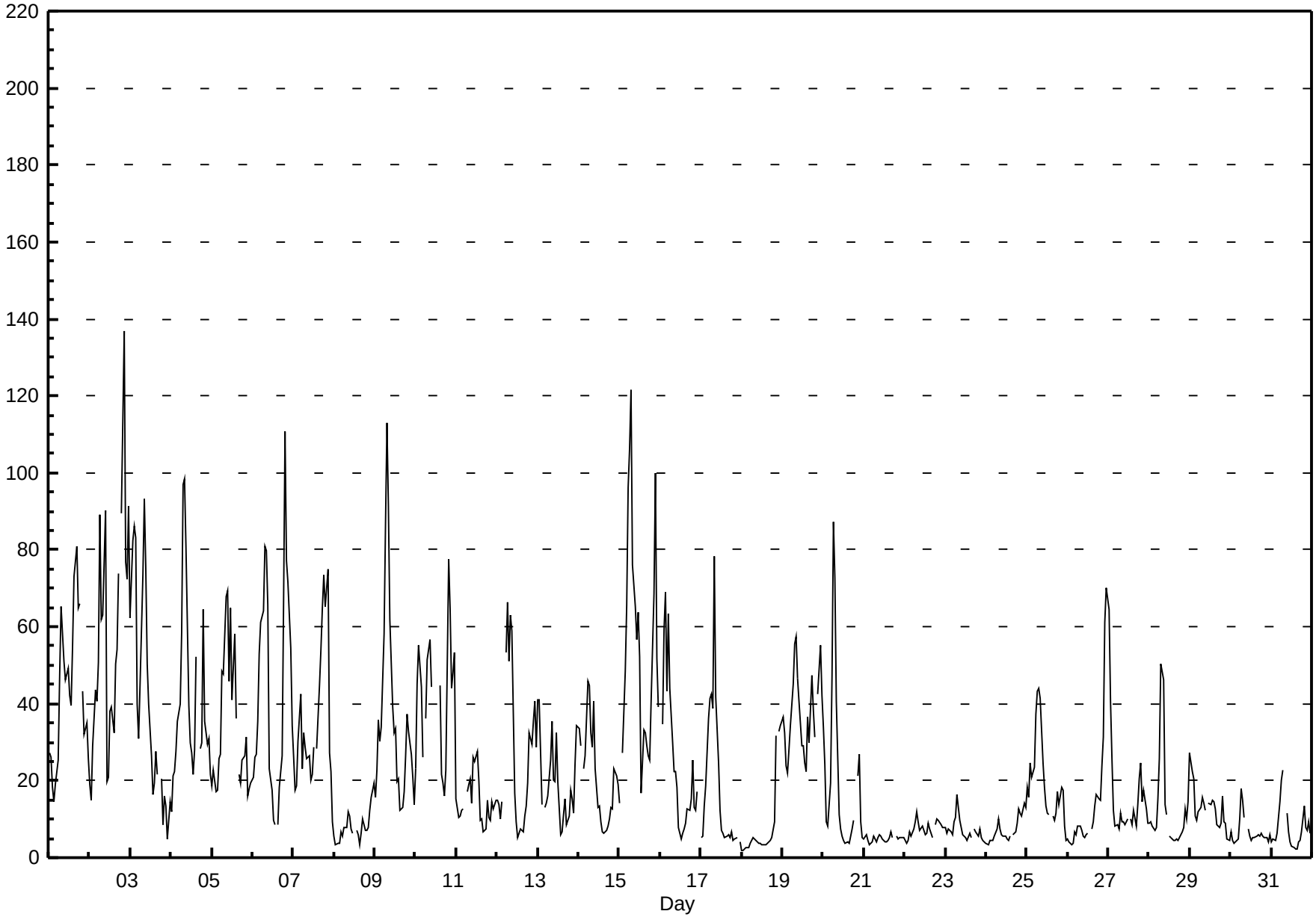
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	27	26	18	14	19	25	47	65	58	51	46	49	42	39	55	73	81	65	66	A	43	32	35	26	43.7	81.0
2-Mar	19	15	29	44	41	51	89	62	63	90	20	21	38	39	33	50	54	74	A	89	137	77	72	91	56.4	137.0
3-Mar	62	83	86	83	40	31	45	73	93	75	50	40	26	17	19	28	21	A	20	9	16	13	5	14	41.3	93.3
4-Mar	12	21	22	27	35	40	58	97	98	80	40	30	27	22	28	52	A	28	30	64	36	29	31	22	40.5	98.3
5-Mar	19	23	17	18	26	27	49	48	68	69	46	65	41	58	36	A	22	19	25	26	31	16	18	19	34.2	69.2
6-Mar	21	26	27	36	53	61	64	81	80	66	23	18	10	9	A	9	18	26	67	111	77	72	54	34	45.3	110.6
7-Mar	26	18	19	30	42	23	33	29	26	26	20	22	29	A	28	45	54	65	74	65	75	27	22	9	35.1	74.9
8-Mar	6	3	4	4	7	6	8	8	12	11	7	6	A	7	6	3	6	10	7	7	8	12	16	19	8.0	19.4
9-Mar	16	23	36	30	34	58	87	113	91	62	39	32	34	20	20	12	13	17	27	37	33	27	21	14	37.3	113.2
10-Mar	23	45	55	44	26	A	36	52	57	44	C	C	C	C	45	21	19	16	23	77	65	44	48	53	41.8	77.5
11-Mar	15	10	11	12	13	A	17	19	21	14	26	25	28	20	10	10	7	7	15	10	10	15	13	15	14.8	27.5
12-Mar	15	14	10	15	A	53	66	51	63	59	17	9	5	6	8	7	11	13	19	32	29	35	41	29	26.5	66.3
13-Mar	41	41	14	A	13	14	16	25	35	20	20	33	20	6	7	11	15	9	11	18	15	12	24	34	19.7	41.2
14-Mar	33	29	A	23	27	46	45	33	29	41	23	13	13	9	7	7	7	8	10	13	13	23	21	19	21.3	46.0
15-Mar	14	A	27	48	66	96	106	121	76	65	57	64	52	17	33	33	29	27	25	41	69	100	52	39	54.7	121.4
16-Mar	A	35	59	69	43	63	44	30	23	22	18	8	5	6	7	9	13	12	15	25	13	12	17	A	25.0	69.1
17-Mar	5	6	14	19	36	42	43	39	78	42	24	12	7	6	5	6	6	5	7	5	5	5	A	4	18.3	78.3
18-Mar	2	2	3	2	2	4	5	5	4	4	4	4	3	3	3	4	4	4	5	9	32	A	33	34	7.7	34.4
19-Mar	36	33	24	22	28	34	45	56	58	47	41	29	29	24	22	36	30	47	38	31	A	42	55	42	37.0	57.6
20-Mar	34	24	9	8	19	47	87	73	40	11	8	6	5	4	4	4	5	7	10	A	21	27	9	5	20.3	87.1
21-Mar	5	6	4	3	4	4	6	4	5	6	5	5	4	4	5	5	7	5	A	6	5	5	5	5	4.9	6.6
22-Mar	4	4	5	7	6	7	9	12	9	7	8	7	6	6	9	8	5	A	9	10	10	9	8	8	7.5	11.9
23-Mar	8	7	7	7	6	9	11	16	10	8	6	5	5	5	6	5	A	7	7	6	8	5	4	4	7.0	16.3
24-Mar	4	4	4	4	5	6	7	10	7	6	5	6	5	5	6	A	6	7	9	13	11	11	14	13	7.2	14.0
25-Mar	18	16	24	21	24	37	43	44	41	25	18	14	12	11	A	11	10	12	17	14	18	18	8	4	20.0	44.0
26-Mar	5	4	3	4	7	6	8	8	7	6	5	6	7	A	7	9	13	16	15	15	24	31	61	70	14.7	70.0
27-Mar	64	41	26	12	8	9	7	12	9	9	9	10	A	10	9	12	8	14	21	25	15	17	13	9	16.0	64.4
28-Mar	9	9	8	7	8	15	26	51	46	14	11	A	6	5	5	4	5	4	5	7	8	13	10	15	12.6	50.5
29-Mar	27	22	21	11	10	12	13	15	14	12	A	14	14	15	15	13	9	8	9	16	9	9	5	4	12.9	27.1
30-Mar	7	4	4	4	5	10	18	15	11	A	7	6	4	5	5	6	6	5	6	6	5	5	4	6	6.7	17.7
31-Mar	4	5	4	7	10	15	20	23	A	12	7	4	3	3	2	2	4	4	7	13	8	7	9	6	7.8	22.8
	19.4	19.9	19.9	21.2	22.0	29.4	37.3	41.6	41.1	33.5	21.1	19.4	17.1	13.6	15.3	17.1	16.8	18.8	20.6	27.6	28.3	25.1	24.3	22.3	Diurnal Average	
	64.4	82.6	86.3	83.1	65.6	96.4	106.3	121.4	98.3	90.4	56.8	64.9	52.2	58.3	54.8	73.3	81.0	74.0	73.5	110.6	137.0	99.8	72.4	91.3	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - March 2010



PASZA
Pasco Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - March 2010

Maximum Value: 307.4 ppb on Mar 18 21:00

Maximum Daily Average: 88.0 ppb on Mar 2

Minimum Value: 3 ppb on Mar 18 01:00

Minimum Daily Average: 9.2 ppb on Mar 21

Maximum Diurnal Average: 65.4 ppb at hour 9

Minimum Diurnal Average: 24.6 ppb at hour 14

Monthly Average: 38.43 ppb

Percentiles: P_1 = 4.7 P_{10} = 8.0 Q_1 = 12.9 Median = 25.1 Q_3 = 50.1 P_{90} = 89.7 P_{99} = 153.6

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	61	40	24	17	27	41	98	90	87	96	73	81	70	75	74	114	114	111	124	A	74	50	58	40	71.4	124.1
2-Mar	35	20	47	50	48	76	127	101	107	190	42	41	68	58	57	90	105	104	A	126	184	110	113	126	88.0	189.9
3-Mar	84	98	98	92	75	43	61	90	123	113	66	58	45	27	27	41	42	A	47	18	28	43	11	27	59.0	123.5
4-Mar	20	27	32	36	47	53	90	130	127	129	72	48	39	31	46	69	A	35	37	142	78	38	41	29	60.8	142.4
5-Mar	28	33	28	20	52	39	93	65	111	110	96	100	58	109	109	A	36	34	36	39	46	24	24	25	57.2	111.2
6-Mar	35	48	40	45	97	87	73	117	143	103	39	22	17	13	A	24	33	65	88	179	146	104	84	45	71.6	178.6
7-Mar	40	25	23	56	100	39	52	55	38	41	25	28	72	A	48	66	72	88	96	86	124	44	29	24	55.2	124.1
8-Mar	14	6	8	7	13	9	10	11	22	15	11	8	A	13	10	7	12	14	13	14	11	22	22	25	12.9	25.1
9-Mar	23	49	69	36	38	81	141	139	126	97	56	48	47	26	28	19	16	33	46	49	42	45	41	18	54.8	141.3
10-Mar	47	60	78	67	33	A	49	100	72	53	C	C	C	C	55	43	40	29	33	149	123	66	75	94	66.6	149.2
11-Mar	19	17	15	17	20	A	25	31	26	23	40	41	47	41	15	18	21	16	29	25	24	28	22	19	25.1	46.9
12-Mar	19	21	14	21	A	61	113	78	107	135	41	17	7	12	13	14	16	19	35	42	40	48	59	40	42.3	134.8
13-Mar	57	50	22	A	18	20	26	53	72	30	37	42	31	11	11	22	33	13	14	28	27	22	36	58	31.9	72.2
14-Mar	45	42	A	33	34	88	67	52	50	61	49	20	28	19	10	13	10	12	13	18	19	35	27	24	33.5	88.2
15-Mar	21	A	40	63	93	142	156	196	159	101	114	109	71	43	58	43	45	34	36	61	88	126	82	48	83.8	195.9
16-Mar	A	61	69	97	59	87	72	46	40	37	26	16	8	35	16	14	18	16	25	46	24	28	36	A	39.8	96.8
17-Mar	9	9	18	26	41	72	71	81	116	66	40	17	14	10	8	7	8	7	13	10	9	10	A	8	29.1	115.5
18-Mar	3	3	4	4	4	5	6	8	7	10	5	8	5	5	8	7	6	6	7	18	307	A	42	47	22.8	307.4
19-Mar	45	40	41	33	39	48	66	73	83	81	56	38	34	32	28	54	48	69	52	45	A	75	67	70	52.9	82.7
20-Mar	51	42	21	14	46	117	109	84	87	41	14	8	8	13	13	9	10	13	15	A	31	39	25	10	35.6	117.4
21-Mar	9	10	12	6	7	18	9	6	8	10	11	10	8	7	7	16	11	10	A	8	7	7	7	7	9.2	18.5
22-Mar	10	6	8	15	11	14	16	31	15	16	12	13	9	8	19	29	10	A	20	20	17	16	15	19	15.2	31.1
23-Mar	11	9	10	12	13	17	19	38	17	14	9	9	9	8	11	9	A	13	10	11	17	8	8	8	12.6	38.4
24-Mar	7	6	12	14	9	10	16	17	12	16	8	10	10	7	10	A	9	11	14	35	18	19	23	20	13.6	35.0
25-Mar	54	21	45	38	35	70	76	58	70	33	28	19	18	25	A	14	16	15	33	17	35	28	15	6	33.4	75.6
26-Mar	9	8	5	7	13	10	18	14	12	20	11	12	12	A	13	20	17	28	28	22	46	47	125	79	25.1	125.4
27-Mar	91	55	55	25	10	20	9	16	22	17	21	22	A	16	17	20	15	37	30	39	18	25	20	15	26.8	91.0
28-Mar	14	14	12	13	11	23	71	80	68	35	23	A	7	8	6	6	7	7	8	10	10	19	16	23	21.5	79.5
29-Mar	36	35	26	15	16	17	23	20	19	21	A	19	19	23	35	35	15	15	15	22	23	14	7	6	20.7	36.3
30-Mar	13	7	6	6	8	16	22	22	14	A	10	9	7	8	8	8	8	8	9	10	8	8	6	9	10.0	22.2
31-Mar	6	9	6	11	14	27	28	35	A	25	11	8	6	4	6	5	6	6	15	22	12	10	16	11	12.9	35.0
	30.5	29.2	29.5	29.8	34.4	46.6	58.5	62.5	65.4	57.9	36.1	30.4	27.6	24.6	26.4	28.9	27.6	29.9	32.5	45.2	54.5	38.6	38.5	32.7	Diurnal Average	
	91.0	98.0	98.3	96.8	100.5	142.0	155.8	195.9	159.5	189.9	113.6	109.3	72.3	109.4	109.1	114.1	114.3	111.0	124.1	178.6	307.4	125.5	125.4	126.2	Diurnal Maximum	

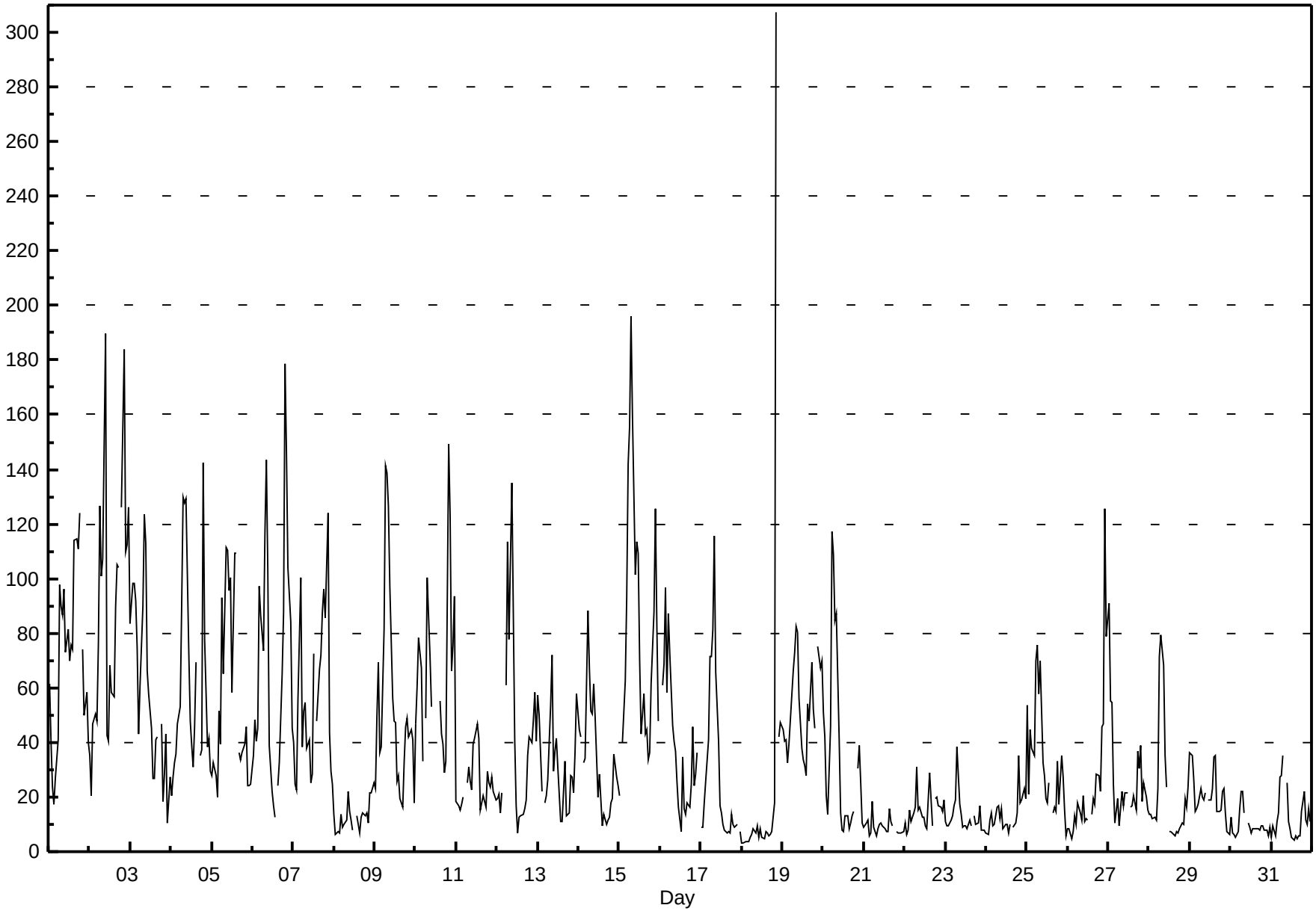
C - Calibration

A - Automated Daily Zero Span

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - March 2010



PASZA
Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Henry Pirker - March 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 52.1 ppb on Mar 20 15:00
Maximum Daily Average: 40.7 ppb on Mar 30

Minimum Value: 0 ppb on Mar 2 04:00
Maximum Diurnal Average: 36.4 ppb at hour 14
Monthly Average: 25.00 ppb

Minimum Daily Average: 9.5 ppb on Mar 19
Minimum Diurnal Average: 14.0 ppb at hour 7
Percentiles: P_1 = 0.6 P_{10} = 3.0 Q_1 = 13.6 Median = 28.2 Q_3 = 36.3 P_{90} = 41.0 P_{99} = 48.1

Hours in Service:	744
Hours of Data:	710
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

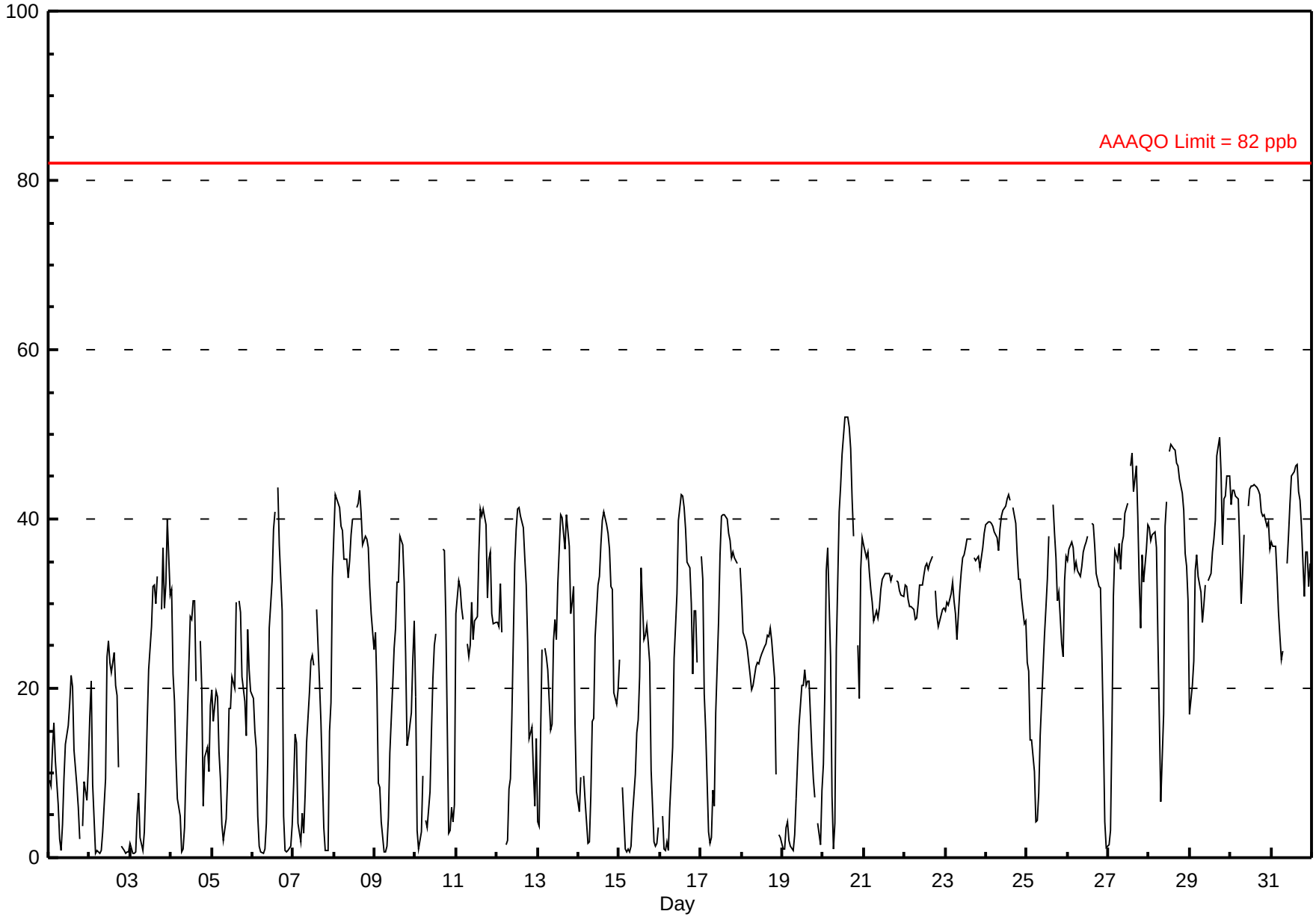
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	9	8	13	16	11	6	2	1	4	9	13	16	18	22	20	13	9	6	2	A	4	9	7	11	9.9	21.6
2-Mar	17	21	9	0	1	1	1	1	3	9	24	26	23	22	24	20	19	11	A	1	1	1	1	1	10.2	25.6
3-Mar	2	1	1	1	5	8	2	1	3	9	16	22	27	32	32	30	33	A	29	37	29	32	40	31	18.4	40.0
4-Mar	32	22	18	12	7	5	1	1	4	11	23	28	28	30	30	21	A	26	20	6	12	13	10	18	16.4	31.8
5-Mar	20	16	20	19	13	9	4	2	5	9	18	18	21	20	30	A	30	29	21	18	14	27	22	20	17.6	30.4
6-Mar	19	15	13	5	1	1	1	1	4	12	27	33	39	41	A	44	37	29	5	1	1	1	1	4	14.5	43.8
7-Mar	9	15	14	4	2	5	3	7	14	20	23	24	23	A	29	21	16	10	4	1	1	15	18	33	13.4	33.1
8-Mar	38	43	42	41	39	39	35	35	33	35	38	40	A	41	42	43	41	37	38	38	37	32	29	25	37.4	43.3
9-Mar	27	20	9	8	4	1	1	1	5	12	20	25	27	33	33	38	37	33	24	13	14	17	23	28	18.9	38.0
10-Mar	19	3	1	3	10	A	4	4	8	15	21	25	26	C	C	C	36	36	28	3	3	6	4	6	13.1	36.4
11-Mar	29	33	32	29	28	A	25	24	25	30	26	28	29	36	41	40	41	39	31	35	36	29	28	28	31.4	41.2
12-Mar	28	27	32	27	A	2	2	8	9	17	35	39	41	41	40	39	35	32	25	14	16	10	6	14	23.5	41.3
13-Mar	4	4	25	A	25	24	22	15	16	26	28	26	32	41	40	38	36	40	37	29	30	32	16	8	25.8	40.5
14-Mar	5	9	A	10	7	2	2	7	16	16	26	32	33	37	40	41	39	38	36	32	32	19	18	20	22.6	40.8
15-Mar	23	A	8	1	1	1	1	1	5	10	15	16	21	34	26	26	28	25	23	10	2	1	2	4	12.4	34.3
16-Mar	A	5	1	1	2	1	6	13	24	27	31	40	43	43	41	39	35	34	30	22	29	29	23	A	23.6	42.9
17-Mar	36	33	19	15	3	2	2	8	6	17	28	36	40	41	41	40	38	37	35	36	35	35	A	34	26.9	40.6
18-Mar	31	27	26	25	23	22	20	20	23	23	23	23	24	25	25	26	26	27	26	21	10	A	3	2	21.7	30.8
19-Mar	1	1	4	4	2	1	1	3	7	11	16	20	20	22	20	21	21	13	9	7	A	4	1	8	9.5	22.3
20-Mar	11	19	34	37	24	7	1	4	25	41	44	48	50	52	52	51	48	42	38	A	25	19	34	38	32.3	52.1
21-Mar	37	35	36	34	32	30	28	29	28	29	32	33	34	34	34	33	33	33	A	33	33	32	31	31	32.3	37.0
22-Mar	32	32	31	30	30	29	28	28	30	32	32	33	34	35	34	35	36	A	31	29	27	29	29	30	31.1	35.7
23-Mar	29	30	30	31	33	30	29	26	32	34	35	36	37	38	38	38	A	35	35	36	34	35	37	38	33.7	38.2
24-Mar	39	40	40	40	39	38	38	36	39	40	41	42	42	43	42	A	41	39	36	33	33	31	28	28	37.7	43.0
25-Mar	23	22	14	14	10	4	4	8	14	22	26	29	33	38	A	42	38	35	30	31	25	24	33	36	24.2	41.7
26-Mar	35	36	37	37	34	35	34	33	34	36	37	37	38	A	40	39	37	34	32	32	24	15	4	1	31.4	39.6
27-Mar	2	3	15	31	36	35	37	34	37	38	41	42	A	46	48	43	46	40	33	27	36	32	36	39	33.9	47.8
28-Mar	39	38	38	38	37	26	16	7	17	39	42	A	48	49	48	48	47	46	45	43	41	36	34	30	37.1	48.9
29-Mar	17	20	23	34	36	33	31	28	30	32	A	33	33	36	38	40	47	50	45	37	42	43	45	45	35.6	49.6
30-Mar	42	43	43	43	42	37	30	34	38	A	42	43	44	44	44	44	43	43	41	40	41	39	40	36	40.7	44.0
31-Mar	37	37	37	33	29	26	23	24	A	35	38	42	45	46	46	46	43	42	39	31	36	36	32	35	36.5	46.4
	23.0	21.9	22.1	20.7	18.8	15.8	14.0	14.3	17.9	23.2	28.7	31.1	33.0	36.4	36.4	35.7	35.1	32.6	28.6	24.0	23.4	22.8	21.2	22.7	Diurnal Average	
	41.7	43.4	43.4	42.7	42.4	38.7	37.8	36.3	38.9	40.8	43.9	47.6	49.8	52.0	52.1	50.8	48.2	49.6	45.4	43.0	42.5	42.8	45.1	45.1	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 (O_3) - ppb

Henry Pirker - March 2010



Hourly Maximums

Ozone (O_3) - ppb

Henry Pirker - March 2010

Maximum Value: 54.0 ppb on Mar 20 15:00

Maximum Daily Average: 43.0 ppb on Mar 30

Minimum Value: 1 ppb on Mar 6 07:00

Minimum Daily Average: 13.6 ppb on Mar 19

Maximum Diurnal Average: 39.6 ppb at hour 15

Minimum Diurnal Average: 18.4 ppb at hour 8

Monthly Average: 29.40 ppb

Percentiles: P_1 = 1.2 P_{10} = 8.5 Q_1 = 21.2 Median = 32.9 Q_3 = 39.3 P_{90} = 43.7 P_{99} = 50.9

Hours in Service:	744
Hours of Data:	710
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

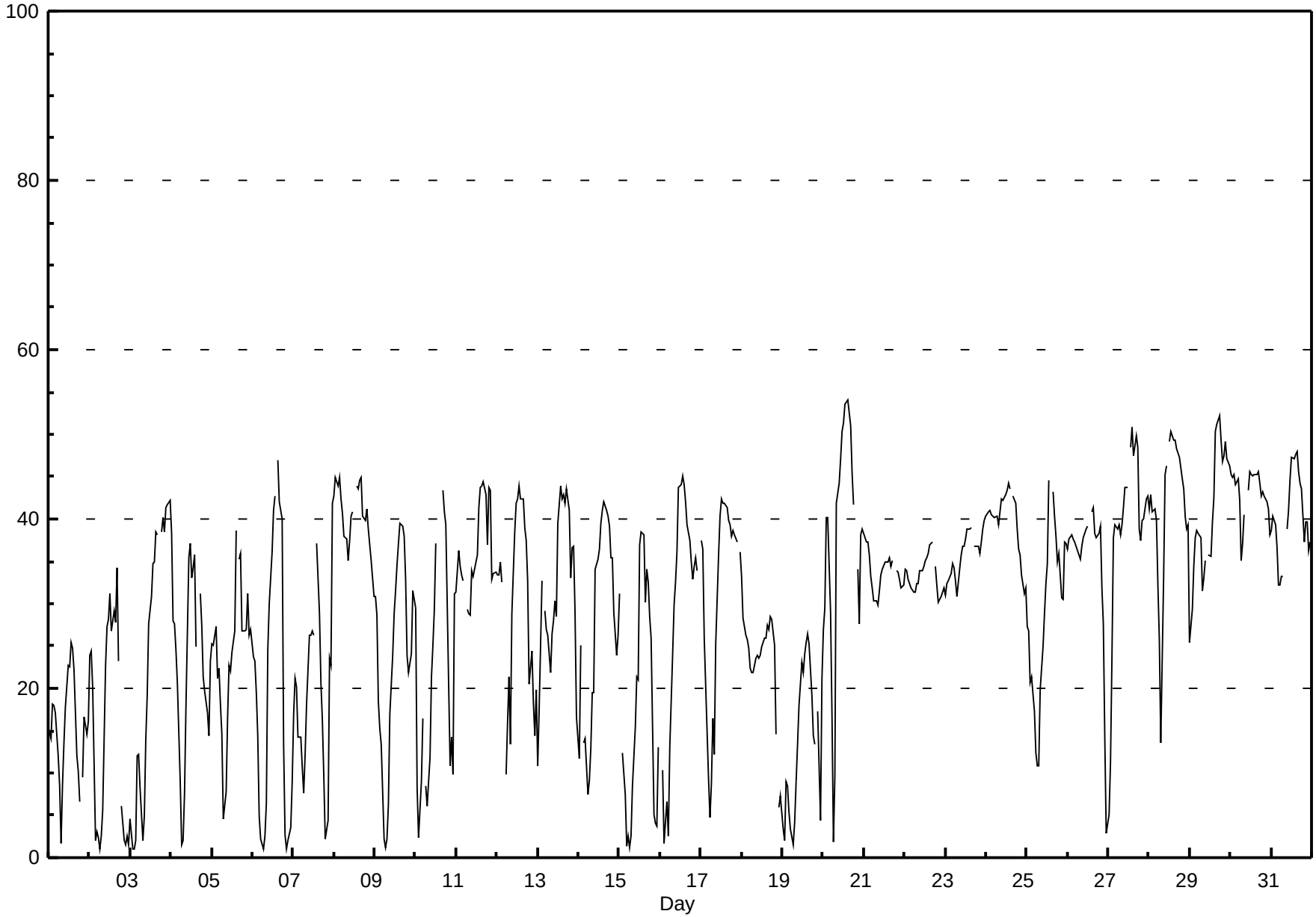
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	15	14	18	18	17	12	9	2	9	14	18	23	23	25	25	22	12	10	7	A	10	17	15	16	15.1	25.4
2-Mar	24	24	20	2	3	2	1	3	6	23	27	28	31	27	29	28	34	23	A	6	2	1	2	2	15.2	34.2
3-Mar	5	1	1	2	12	12	8	2	5	14	19	28	31	35	35	39	38	A	38	40	39	41	42	42	23.0	42.3
4-Mar	38	28	28	25	21	9	2	2	8	18	35	37	33	34	36	25	A	31	27	21	20	17	14	23	23.2	38.3
5-Mar	25	25	27	21	22	18	15	5	8	17	23	22	24	27	39	A	35	36	27	27	27	31	26	27	24.0	38.6
6-Mar	24	23	19	14	5	2	1	3	6	25	30	36	41	43	A	47	42	40	14	3	1	2	4	9	18.8	46.9
7-Mar	17	21	20	14	14	11	8	12	18	26	26	27	26	A	37	29	21	16	10	2	4	24	23	42	19.5	41.9
8-Mar	43	45	44	45	42	41	38	38	35	37	40	41	A	44	44	45	45	40	40	41	39	37	35	31	40.4	45.0
9-Mar	31	29	18	15	13	2	1	2	6	17	24	29	31	34	37	40	39	38	33	24	22	24	32	31	23.9	39.6
10-Mar	30	8	2	9	16	A	9	6	12	21	25	29	37	C	C	C	43	41	39	20	11	14	10	31	20.8	43.4
11-Mar	31	36	34	33	33	A	29	29	29	34	33	34	36	41	44	44	44	43	37	44	43	33	34	34	36.2	44.4
12-Mar	33	33	35	32	A	10	16	21	13	29	38	42	42	44	42	42	39	38	33	21	24	18	14	20	29.6	43.9
13-Mar	11	17	33	A	29	27	26	22	26	28	30	28	40	44	42	43	42	44	41	33	37	37	29	17	31.5	43.8
14-Mar	12	25	A	13	14	7	9	13	20	19	34	35	36	40	41	42	41	40	39	35	35	29	24	26	27.5	42.0
15-Mar	31	A	12	8	1	2	1	2	8	15	21	21	37	39	38	30	34	33	29	26	5	4	4	13	18.1	38.5
16-Mar	A	10	2	4	7	3	13	24	30	33	36	44	44	45	44	42	39	37	35	33	34	35	34	A	28.6	45.0
17-Mar	37	36	26	20	9	5	9	16	12	25	36	40	42	42	42	41	40	39	38	39	38	37	A	36	30.7	42.3
18-Mar	33	28	26	26	25	22	22	22	24	24	24	24	25	26	26	27	27	29	28	25	15	A	6	7	23.5	33.2
19-Mar	3	2	9	8	5	3	2	4	9	13	18	23	22	24	26	27	25	19	14	13	A	17	4	21	13.6	26.5
20-Mar	27	29	40	40	29	17	2	10	42	44	47	50	51	54	54	53	51	46	42	A	34	28	38	39	37.6	54.0
21-Mar	38	37	37	36	33	32	30	30	30	32	33	34	35	35	35	35	34	35	A	34	34	33	32	32	33.8	38.3
22-Mar	34	34	33	32	32	31	31	32	32	34	34	34	35	35	36	37	37	A	34	32	30	31	31	32	33.3	37.4
23-Mar	31	32	33	34	35	34	33	31	34	36	37	37	38	39	39	39	A	37	37	37	36	37	39	40	35.7	39.8
24-Mar	40	41	41	41	40	40	40	39	41	42	42	43	43	44	44	A	43	42	39	36	36	33	31	32	39.7	44.2
25-Mar	27	27	21	21	17	12	11	11	20	25	29	32	35	45	A	43	40	38	35	36	31	31	37	37	28.7	44.6
26-Mar	36	38	38	38	37	37	36	35	37	38	38	39	39	A	41	41	38	38	38	39	32	28	14	3	34.7	41.3
27-Mar	5	11	24	38	39	39	39	38	39	41	44	44	A	49	51	47	50	48	39	37	40	40	42	43	38.6	50.8
28-Mar	41	43	41	41	40	32	26	14	33	45	46	A	49	50	49	49	48	48	47	45	44	40	39	39	41.3	50.3
29-Mar	25	29	34	38	39	38	38	31	33	35	A	36	36	40	43	50	51	52	49	47	47	49	47	46	40.6	52.2
30-Mar	45	45	45	44	45	42	35	37	40	A	43	46	45	45	45	45	46	44	43	43	43	42	41	38	43.0	45.7
31-Mar	39	40	39	37	32	32	33	33	A	39	41	45	47	47	48	48	46	44	44	37	40	40	36	37	40.1	47.9
	27.8	27.2	26.7	25.0	23.6	19.9	18.4	18.4	22.2	28.1	32.4	34.3	36.4	39.1	39.6	39.3	38.8	36.9	33.6	30.2	28.4	28.4	26.0	28.2	Diurnal Average	
	45.3	45.0	45.3	44.9	44.7	42.2	40.3	39.3	41.9	45.3	47.1	50.3	51.3	53.6	54.0	52.5	51.2	52.2	49.2	46.7	47.5	49.2	47.0	46.2	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

Hourly Maximums

Ozone (O_3) - ppb

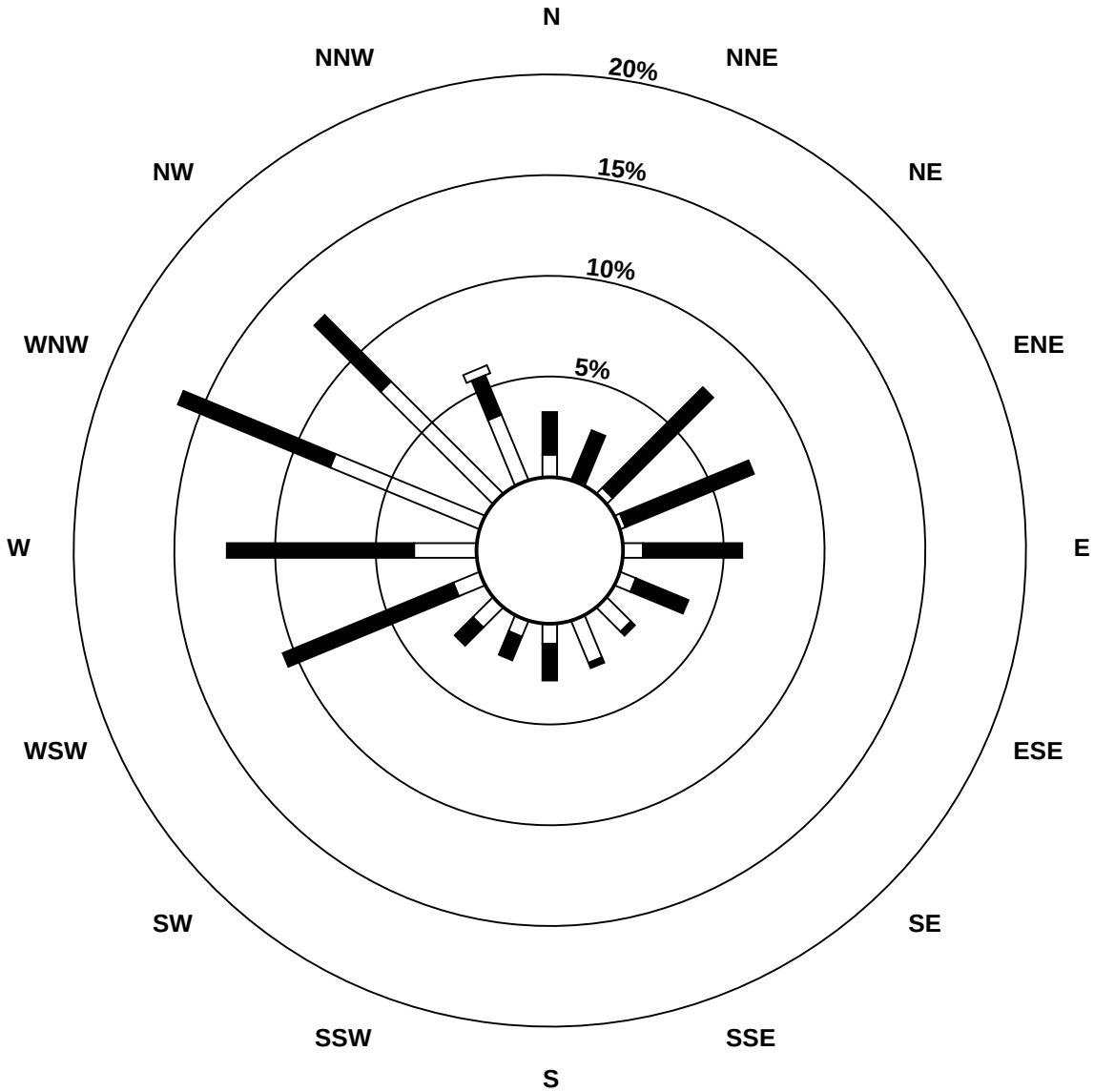
Henry Pirker - March 2010



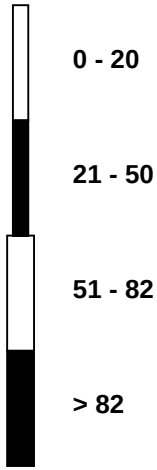
Pollutant Rose

Ozone (O_3) - ppb

Henry Pirker - March 2010



Pollutant Classes (ppb)



Eight Hour Running Averages

Ozone (O_3) - ppb

Henry Pirker - March 2010

Maximum Value: 48.4 ppb on Mar 20 18:00

Minimum Value: 0.7 ppb on Mar 3 04:00

Percentiles: P_1 = 2.2 P_{10} = 8.1 Q_1 = 14.7 Median = 27.1 Q_3 = 35.0 P_{90} = 39.2 P_{99} = 46.6

Hours in Service:	744
Hours of Data:	738
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	14	13	11	12	12	11	10	8	8	8	8	8	9	11	13	14	15	15	13	13	11	9	7	7	14.9
2-Mar	8	10	11	10	9	8	7	6	4	3	5	8	11	14	16	19	21	21	21	17	14	11	8	5	21.1
3-Mar	2	1	1	1	1	2	2	2	3	4	6	8	11	14	18	21	25	28	29	32	32	32	33	33	33.1
4-Mar	33	32	30	27	24	21	16	12	9	7	8	10	12	16	19	22	25	27	26	23	21	18	15	15	32.9
5-Mar	16	14	14	16	16	16	15	13	11	10	10	10	11	12	15	17	21	24	24	24	23	24	23	23	24.4
6-Mar	21	20	19	17	15	12	9	7	5	5	6	10	15	20	22	28	33	36	32	28	22	17	15	10	35.6
7-Mar	6	4	6	6	6	7	7	7	8	9	10	12	15	16	20	22	22	21	18	15	12	12	11	12	22.2
8-Mar	15	19	24	29	34	37	39	39	38	37	37	37	36	37	38	39	40	40	40	40	40	38	37	34	40.3
9-Mar	33	31	27	23	19	15	12	9	6	5	7	9	11	15	19	24	28	31	31	30	28	26	25	24	32.6
10-Mar	21	18	15	14	13	12	10	6	5	6	9	12	15	15	16	N	N	N	N	N	N	19	17	15	21.5
11-Mar	14	14	14	18	21	23	26	29	28	28	27	27	27	28	30	32	34	35	36	37	37	37	35	33	37.5
12-Mar	32	30	30	29	28	24	21	18	15	14	14	16	19	24	29	33	36	38	37	34	30	27	22	19	37.9
13-Mar	15	12	12	11	13	14	17	17	19	22	22	23	24	26	28	31	33	35	36	37	36	35	32	29	36.7
14-Mar	25	21	19	16	12	8	6	6	8	9	11	14	17	21	26	30	33	36	37	37	37	35	32	29	37.1
15-Mar	27	26	22	17	13	10	8	5	3	3	4	6	9	13	16	19	22	24	25	24	22	18	15	12	27.4
16-Mar	10	7	4	2	2	2	3	4	7	9	13	18	23	28	33	36	37	38	38	36	34	32	30	29	38.2
17-Mar	29	29	27	26	23	19	16	15	11	9	10	13	17	22	27	31	35	38	39	39	38	37	37	36	38.6
18-Mar	35	33	32	30	29	27	26	24	23	23	22	22	22	23	23	24	25	25	25	25	23	23	20	16	34.9
19-Mar	13	9	6	4	2	2	2	2	3	4	6	8	10	13	15	17	19	19	18	17	16	14	11	9	19.1
20-Mar	8	9	12	16	17	18	18	17	19	21	23	24	27	33	39	45	48	48	48	48	44	39	37	35	48.4
21-Mar	33	32	32	32	33	34	34	33	32	31	30	30	30	31	32	32	33	33	33	33	33	33	32	32	34.5
22-Mar	32	32	32	31	31	31	30	30	30	30	30	30	31	32	32	33	34	34	34	33	32	31	31	30	34.2
23-Mar	29	29	29	29	30	30	30	30	30	30	31	32	32	33	34	36	36	37	37	37	36	36	36	36	36.6
24-Mar	36	37	37	38	38	39	39	39	39	39	39	39	40	40	41	41	42	42	41	40	38	36	34	34	41.7
25-Mar	31	29	26	24	21	18	15	12	11	11	13	15	18	22	24	29	33	35	35	35	34	32	32	32	35.4
26-Mar	31	31	32	33	34	35	35	35	35	35	35	35	36	36	36	37	38	37	37	36	34	32	27	22	37.7
27-Mar	18	14	12	12	13	16	20	24	29	33	36	38	38	39	41	42	43	44	43	40	40	38	37	36	43.8
28-Mar	35	35	36	37	37	36	34	30	27	27	28	26	28	31	36	42	46	47	47	47	46	44	43	40	47.3
29-Mar	37	33	31	30	29	29	28	28	29	31	32	32	32	32	33	35	37	40	40	41	42	43	44	44	44.4
30-Mar	44	43	43	43	43	43	41	39	39	38	38	38	38	39	41	43	43	43	43	43	42	42	41	40	43.6
31-Mar	40	39	38	37	36	34	32	31	30	30	30	31	33	36	39	43	43	44	44	42	41	40	38	37	43.7
Diurnal Maximums	43.6	42.9	42.6	43.3	43.3	42.6	40.7	39.3	38.8	38.7	38.9	39.2	39.6	40.1	41.2	45.2	48.1	48.4	47.6	47.6	45.9	44.3	43.7	44.4	

N - Not Valid

PASZA
Peace Airshed Zone Association

Hourly Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - March 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.03 ppm on Mar 2 21:00 Maximum Daily Average: 0.48 ppm on Mar 2

Minimum Value: 0.1 ppm on Mar 8 14:00 Minimum Daily Average: 0.17 ppm on Mar 21
Maximum Diurnal Average: 0.37 ppm at hour 8 Minimum Diurnal Average: 0.23 ppm at hour 14
Monthly Average: 0.276 ppm Percentiles: $P_1 = 0.15$ $P_{10} = 0.17$ $Q_1 = 0.20$ Median = 0.24 $Q_3 = 0.31$ $P_{90} = 0.43$ $P_{99} = 0.75$

Hours in Service:	744
Hours of Data:	710
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

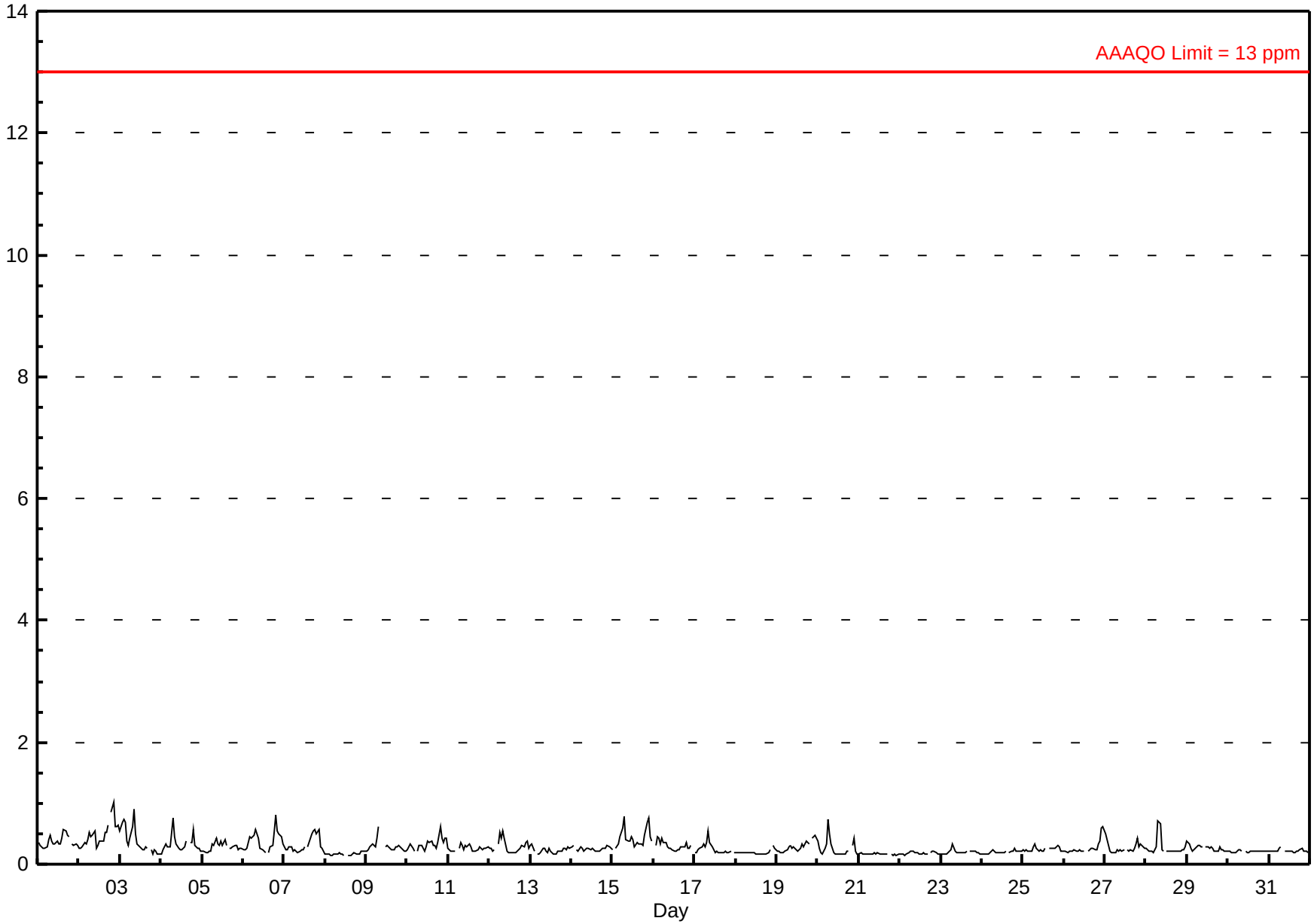
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.4	0.3	0.3	0.4	0.3	0.3	0.4	0.6	0.6	0.5	0.5	A	0.3	0.3	0.3	0.3	0.37	0.56
2-Mar	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.5	0.6	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.6	A	0.9	1.0	0.6	0.6	0.7	0.48	1.03
3-Mar	0.5	0.7	0.7	0.7	0.4	0.3	0.4	0.6	0.9	0.5	0.3	0.3	0.3	0.2	0.2	0.3	0.3	A	0.2	0.2	0.2	0.2	0.2	0.2	0.39	0.89
4-Mar	0.2	0.2	0.3	0.3	0.3	0.3	0.5	0.8	0.4	0.3	0.3	0.2	0.2	0.3	0.3	0.4	A	0.4	0.3	0.6	0.3	0.3	0.3	0.2	0.33	0.76
5-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.3	0.4	0.3	0.4	0.3	A	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.29	0.43
6-Mar	0.2	0.2	0.3	0.4	0.5	0.4	0.5	0.6	0.5	0.4	0.3	0.2	0.2	0.2	A	0.2	0.3	0.3	0.5	0.8	0.5	0.5	0.5	0.3	0.38	0.81
7-Mar	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	A	0.3	0.4	0.5	0.5	0.6	0.5	0.6	0.3	0.3	0.2	0.32	0.58
8-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	A	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.17	0.22
9-Mar	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.6	C	C	C	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.29	0.62
10-Mar	0.2	0.3	0.3	0.3	0.2	A	0.2	0.3	0.3	0.3	0.2	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.6	0.4	0.4	0.4	0.4	0.33	0.62
11-Mar	0.3	0.2	0.2	0.2	0.2	A	0.3	0.4	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.26	0.35
12-Mar	0.3	0.3	0.2	0.2	A	0.3	0.5	0.4	0.5	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.3	0.29	0.55
13-Mar	0.3	0.3	0.2	A	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.23	0.33
14-Mar	0.3	0.3	A	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.25	0.30
15-Mar	0.2	A	0.3	0.3	0.4	0.5	0.6	0.8	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.5	0.7	0.8	0.4	0.4	0.43	0.77
16-Mar	A	0.3	0.5	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	A	0.30	0.46
17-Mar	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.6	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.25	0.55
18-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	A	0.3	0.3	0.19	0.32
19-Mar	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	0.3	0.3	0.3	0.4	0.3	0.3	A	0.4	0.5	0.4	0.28	0.49
20-Mar	0.4	0.3	0.2	0.2	0.3	0.3	0.7	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.3	0.4	0.2	0.2	0.26	0.72
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	A	0.2	0.2	0.2	0.2	0.2	0.17	0.19
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	A	0.2	0.2	0.2	0.2	0.2	0.2	0.18	0.22
23-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	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20	0.33
24-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	0.25
25-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	A	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.25	0.33
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	A	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.4	0.6	0.6	0.27	0.62
27-Mar	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.27	0.50
28-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.7	0.7	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.26	0.72
29-Mar	0.4	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	A	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.26	0.39
30-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21	0.23
31-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.22	0.28
	0.26	0.25	0.25	0.25	0.24	0.26	0.32	0.37	0.34	0.28	0.24	0.24	0.24	0.23	0.24	0.26	0.26	0.28	0.28	0.33	0.32	0.30	0.29	0.27	Diurnal Average	
	0.54	0.69	0.73	0.70	0.45	0.51	0.72	0.77	0.89	0.56	0.37	0.44	0.39	0.40	0.43	0.56	0.55	0.64	0.58	0.86	1.03	0.76	0.61	0.65	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 2010



Hourly Maximums

Carbon Monoxide (CO) - ppm

Henry Pirker - March 2010

Maximum Value: 2.95 ppm on Mar 3 08:00

Maximum Daily Average: 0.73 ppm on Mar 2

Minimum Value: 0.2 ppm on Mar 8 14:00

Minimum Daily Average: 0.20 ppm on Mar 8

Maximum Diurnal Average: 0.79 ppm at hour 8

Minimum Diurnal Average: 0.31 ppm at hour 14

Monthly Average: 0.412 ppm

Percentiles: $P_1 = 0.18$ $P_{10} = 0.21$ $Q_1 = 0.25$ Median = 0.32 $Q_3 = 0.46$ $P_{90} = 0.69$ $P_{99} = 1.51$

Hours in Service:	744
Hours of Data:	710
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	0.5	0.4	0.4	0.3	0.4	0.4	1.0	1.0	0.6	0.4	0.4	0.5	0.4	0.5	0.5	1.4	0.7	0.7	0.7	A	0.5	0.4	0.4	0.4	0.57	1.39
2-Mar	0.3	0.3	0.3	0.5	0.4	0.5	0.7	1.3	0.7	0.9	0.3	0.4	0.5	0.4	0.5	1.3	0.9	0.9	A	1.2	1.6	0.9	0.9	0.8	0.73	1.56
3-Mar	0.7	0.9	0.8	0.8	0.6	0.4	1.3	2.9	1.5	0.7	0.4	0.4	0.4	0.3	0.3	0.4	0.4	A	0.3	0.2	0.3	0.4	0.2	0.2	0.64	2.95
4-Mar	0.2	0.3	0.4	0.4	0.5	0.4	1.5	1.6	0.6	0.5	0.4	0.3	0.3	0.3	0.4	0.5	A	0.5	0.5	1.2	0.5	0.3	0.3	0.3	0.52	1.59
5-Mar	0.2	0.3	0.3	0.2	0.2	0.2	0.9	0.5	1.2	0.6	0.5	0.5	0.4	0.7	0.6	A	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.43	1.16
6-Mar	0.3	0.3	0.4	0.5	0.6	0.5	0.6	0.6	1.0	0.5	0.3	0.3	0.3	0.2	A	0.3	0.6	0.5	1.0	1.9	1.3	0.6	0.7	0.4	0.59	1.95
7-Mar	0.4	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.4	0.3	0.5	A	0.4	0.6	0.5	0.6	0.7	0.8	1.1	0.4	0.3	0.3	0.44	1.14
8-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	A	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.20	0.29
9-Mar	0.3	0.3	0.4	0.3	0.4	0.4	1.0	2.2	C	C	C	0.3	0.4	0.3	0.3	0.3	0.3	1.0	0.4	0.4	0.3	0.4	0.3	0.2	0.48	2.19
10-Mar	0.4	0.3	0.4	0.4	0.3	A	0.3	0.5	0.5	0.4	0.3	0.3	0.5	0.4	0.4	0.4	0.4	0.3	0.5	1.4	0.8	0.5	0.8	0.7	0.47	1.41
11-Mar	0.3	0.3	0.3	0.4	0.3	A	0.3	0.7	0.5	0.3	0.4	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.4	0.34	0.67
12-Mar	0.3	0.4	0.3	0.3	A	0.5	0.9	0.8	0.8	1.1	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.4	1.3	0.5	0.6	0.47	1.32
13-Mar	0.5	0.5	0.3	A	0.2	0.2	0.3	1.3	0.5	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.35	1.29
14-Mar	0.4	0.5	A	0.3	0.3	0.4	0.3	0.4	0.3	0.4	0.3	0.5	0.4	0.4	0.3	0.3	0.6	0.3	0.3	0.5	0.4	0.4	0.3	0.3	0.37	0.64
15-Mar	0.3	A	0.3	0.5	0.7	0.8	1.3	1.5	1.1	0.6	0.7	0.7	0.5	0.4	0.9	0.5	0.4	0.5	0.5	1.0	1.0	0.9	0.6	0.6	0.70	1.53
16-Mar	A	0.5	0.5	0.5	0.4	1.3	0.5	0.6	0.5	0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.5	0.4	0.8	0.4	0.4	0.5	A	0.46	1.28
17-Mar	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.7	1.0	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	A	0.2	0.33	1.02
18-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	A	0.4	0.5	0.24	0.52
19-Mar	0.2	0.3	0.3	0.2	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.6	0.5	0.5	A	0.7	0.7	0.7	0.41	0.70
20-Mar	0.5	0.4	0.3	0.2	0.4	0.6	1.2	0.7	0.7	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.3	A	0.4	0.8	0.4	0.2	0.40	1.21
21-Mar	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.4	0.3	0.4	1.1	0.7	0.3	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.30	1.11
22-Mar	0.2	0.3	0.2	0.2	0.3	0.3	0.6	0.3	0.4	0.6	0.5	0.2	0.2	0.2	0.3	0.3	0.3	A	0.2	0.3	0.3	0.3	0.2	0.2	0.30	0.64
23-Mar	0.3	0.2	0.2	0.2	0.2	0.3	0.4	1.0	0.6	0.3	0.2	0.2	0.5	0.2	0.3	0.3	A	0.3	0.3	0.4	0.2	0.2	0.2	0.2	0.31	1.00
24-Mar	0.2	0.2	0.2	0.2	0.3	0.4	0.6	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	A	0.3	0.3	0.3	0.6	0.3	0.3	0.4	0.2	0.30	0.61
25-Mar	0.7	0.3	0.4	0.3	0.3	0.3	0.6	0.5	0.3	0.3	0.3	0.3	0.3	0.6	A	0.3	0.3	0.3	0.4	0.3	0.5	0.8	0.3	0.3	0.38	0.82
26-Mar	0.3	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.3	0.4	0.3	0.3	0.3	A	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.5	1.0	0.8	0.37	1.04
27-Mar	0.6	0.7	0.5	0.3	0.2	0.3	0.2	0.3	0.3	0.4	0.3	0.3	A	0.3	0.3	0.3	0.3	0.6	0.4	0.6	0.4	0.5	0.5	0.3	0.38	0.70
28-Mar	0.4	0.3	0.3	0.4	0.2	0.3	0.5	2.1	1.3	0.4	0.3	A	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.6	0.41	2.08
29-Mar	0.5	0.6	0.4	0.3	0.4	0.4	0.7	0.4	0.4	0.4	A	0.4	0.4	0.4	0.7	0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.2	0.2	0.38	0.66
30-Mar	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	A	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.22	0.26
31-Mar	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.4	A	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.25	0.39
	0.34	0.34	0.32	0.32	0.33	0.40	0.59	0.79	0.59	0.43	0.33	0.34	0.34	0.31	0.33	0.38	0.35	0.39	0.38	0.55	0.48	0.45	0.41	0.37	Diurnal Average	
	0.69	0.88	0.83	0.78	0.75	1.28	1.51	2.95	1.52	1.15	0.65	1.11	0.71	0.66	0.89	1.39	0.89	1.01	1.01	1.95	1.56	1.32	1.04	0.83	Diurnal Maximum	

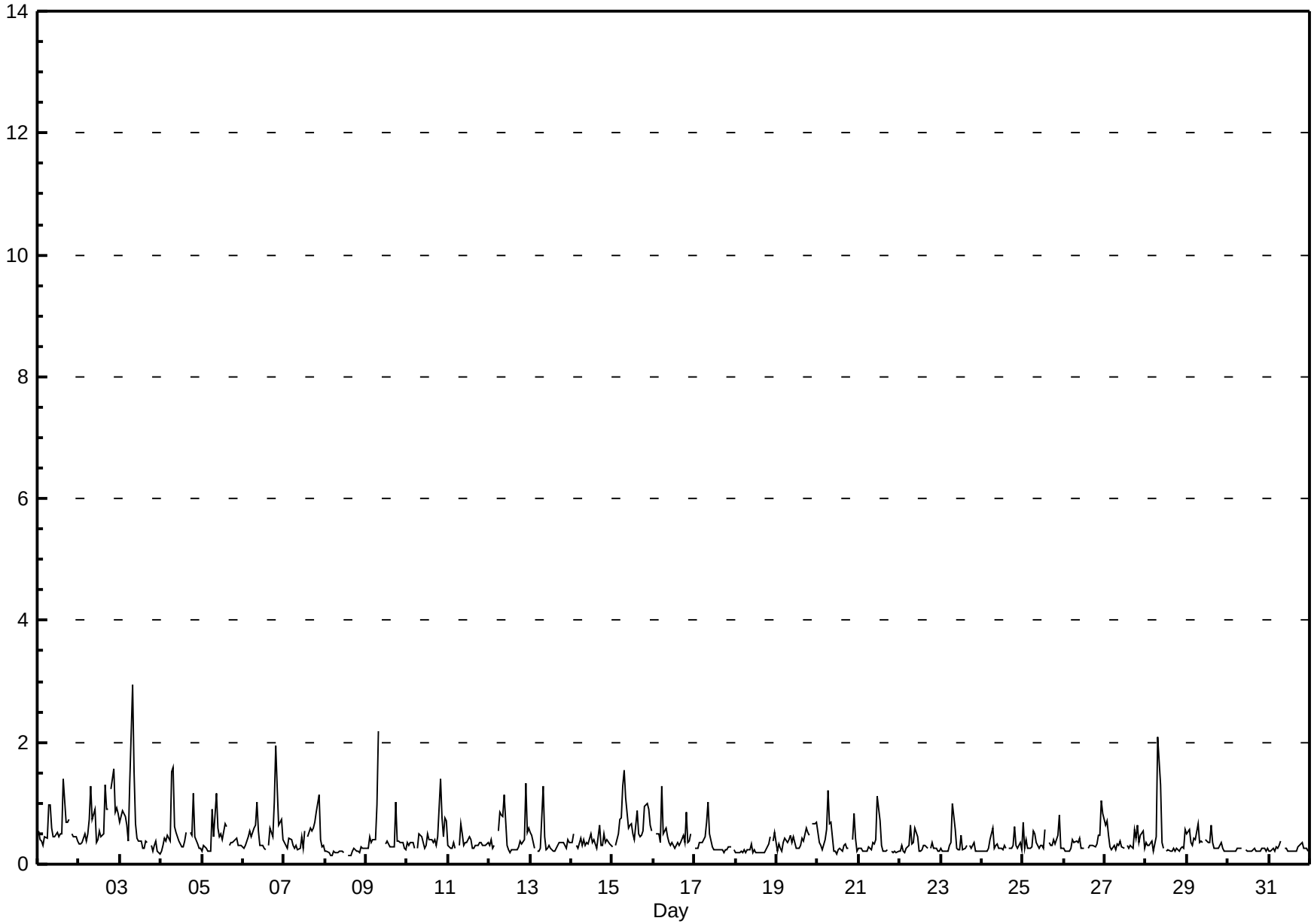
C - Calibration

A - Automated Daily Zero Span

Hourly Maximums

Carbon Monoxide (CO) - ppm

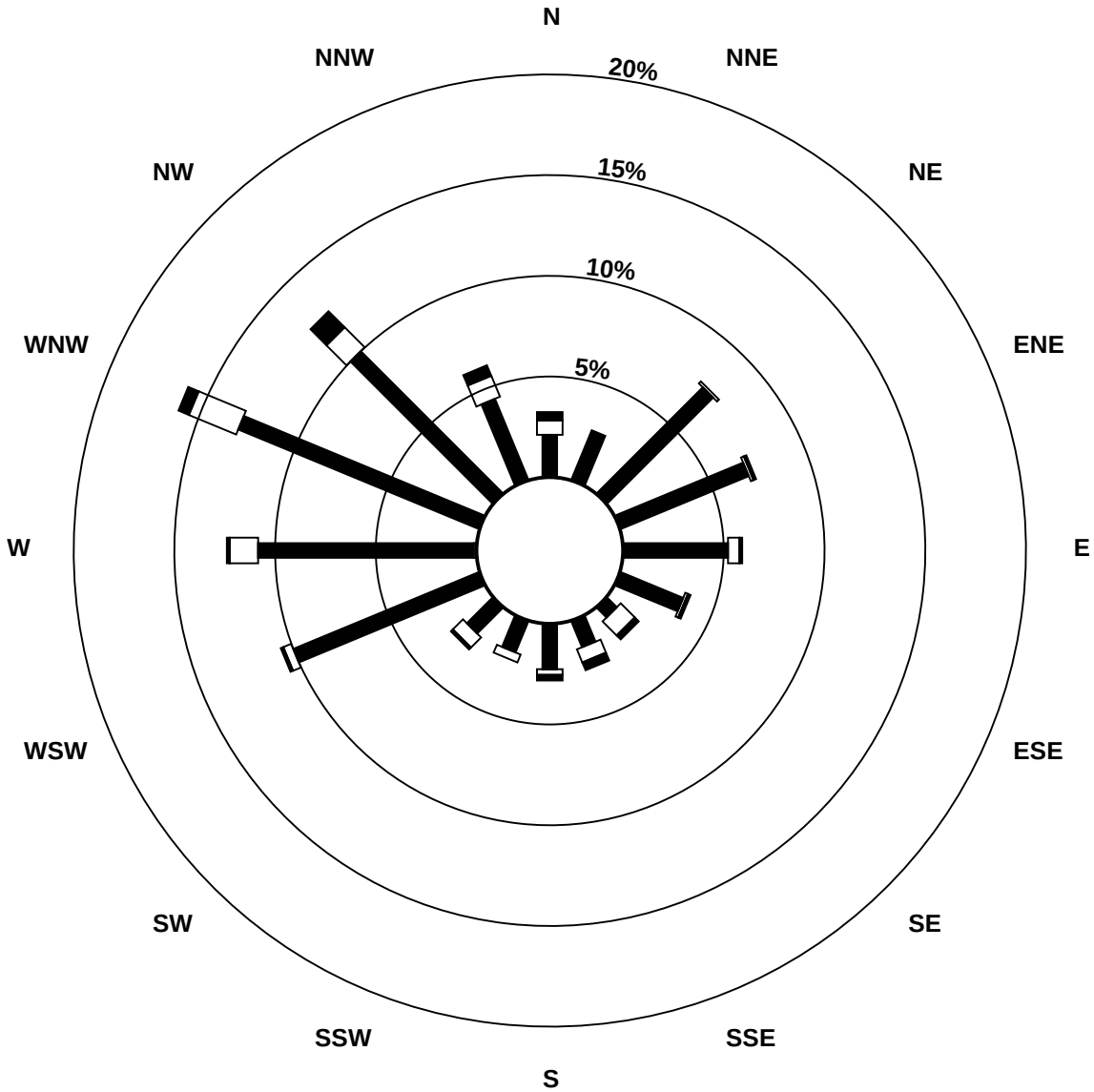
Henry Pirker - March 2010



Pollutant Rose

Carbon Monoxide (CO) - ppm

Henry Pirker - March 2010



Pollutant Classes (ppm)

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

Eight Hour Running Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - March 2010

Number of Exceedences (AAAQO): 8-hr: 0
Maximum Value: 0.72 ppm on Mar 3 03:00

Minimum Value: 0.16 ppm on Mar 8 17:00

Percentiles: P_1 = 0.16 P_{10} = 0.18 Q_1 = 0.21 Median = 0.25 Q_3 = 0.32 P_{90} = 0.40 P_{99} = 0.62

Hours in Service:	744
Hours of Data:	738
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	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.45
2-Mar	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.7	0.7	0.7	0.71
3-Mar	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.72
4-Mar	0.2	0.2	0.2	0.2	0.2	0.2	0.3	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	0.4	0.4	0.4	0.3	0.40
5-Mar	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	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.35
6-Mar	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.3	0.4	0.4	0.5	0.5	0.5	0.47
7-Mar	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.48
8-Mar	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.39
9-Mar	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	N	N	N	N	N	N	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.38
10-Mar	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.40
11-Mar	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.39
12-Mar	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	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.39
13-Mar	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.31
14-Mar	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.27
15-Mar	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.49
16-Mar	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.50
17-Mar	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.34
18-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	0.22
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	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.39
20-Mar	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.40
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	0.25
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	0.2	0.2	0.2	0.2	0.2	0.20
23-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	0.22
24-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	0.22
25-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	0.3	0.3	0.3	0.3	0.3	0.27
26-Mar	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	0.3	0.3	0.3	0.4	0.36
27-Mar	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.42
28-Mar	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.36
29-Mar	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.29
30-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	0.22
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	0.23
Diurnal Maximums	0.71	0.71	0.72	0.70	0.62	0.58	0.55	0.55	0.59	0.57	0.52	0.49	0.48	0.45	0.43	0.41	0.41	0.42	0.45	0.53	0.62	0.65	0.69	0.71	

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

PASZA
Peace Airshed Zone Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Henry Pirker - March 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.36 ppm on Mar 3 04:00
Maximum Daily Average: 2.84 ppm on Mar 2

Minimum Value: 1.9 ppm on Mar 29 18:00
Maximum Diurnal Average: 2.42 ppm at hour 9
Monthly Average: 2.279 ppm

Minimum Daily Average: 2.00 ppm on Mar 30
Minimum Diurnal Average: 2.14 ppm at hour 17
Percentiles: P_1 = 1.96 P_{10} = 2.01 Q_1 = 2.06 Median = 2.14 Q_3 = 2.45 P_{90} = 2.73 P_{99} = 3.11

Hours in Service:	744
Hours of Data:	710
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

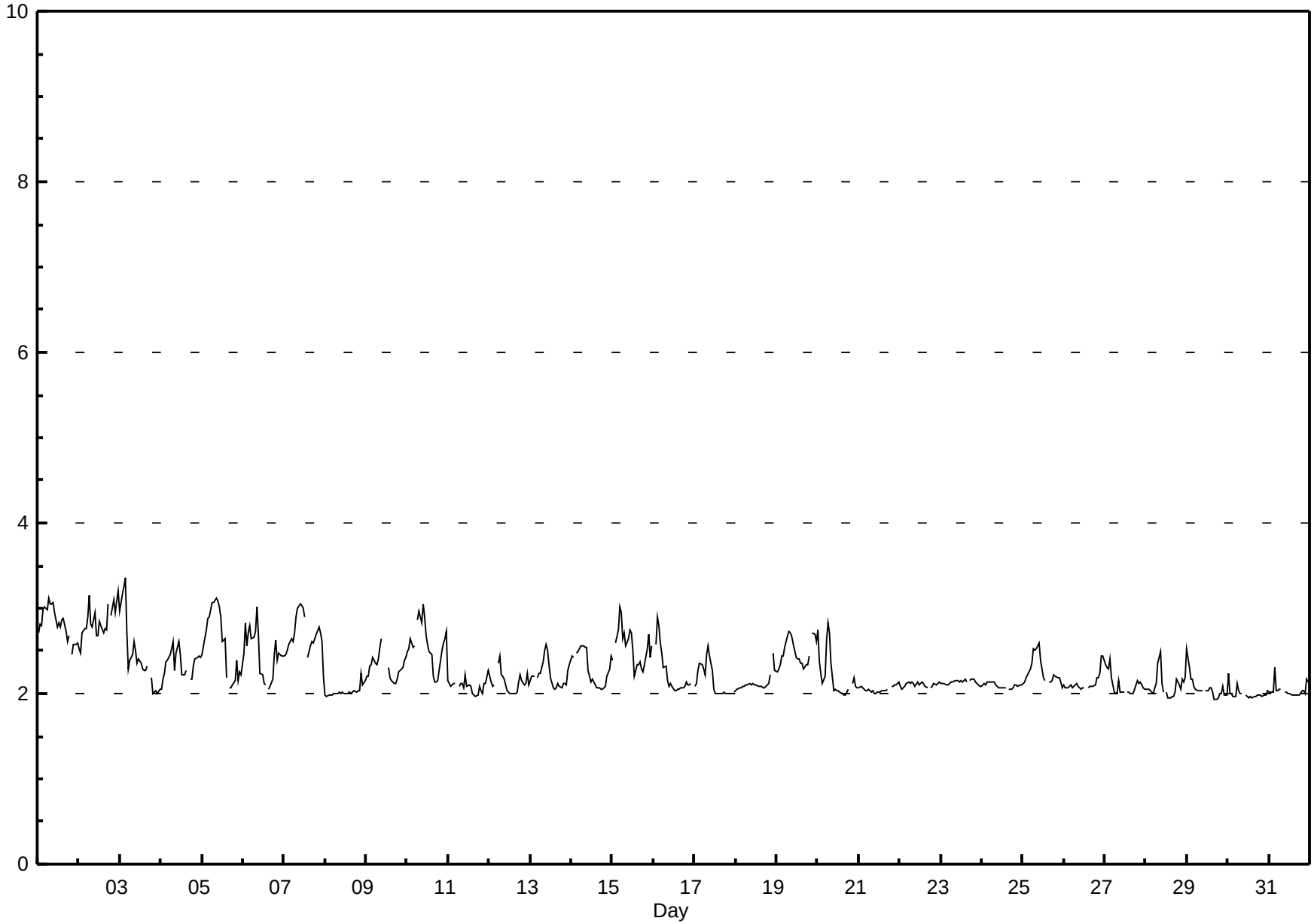
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	2.7	2.8	2.8	3.0	3.0	3.0	3.1	3.0	3.1	3.1	2.9	2.8	2.8	2.8	2.9	2.9	2.7	2.6	2.7	A	2.5	2.6	2.6	2.6	2.82	3.12
2-Mar	2.5	2.5	2.7	2.8	2.8	2.9	3.1	2.8	2.8	2.9	2.7	2.7	2.8	2.8	2.7	2.8	2.7	3.1	A	2.9	3.1	3.0	3.1	3.2	2.84	3.21
3-Mar	3.0	3.2	3.3	3.4	2.7	2.3	2.4	2.5	2.6	2.5	2.3	2.4	2.4	2.3	2.3	2.3	2.3	A	2.2	2.0	2.0	2.0	2.0	2.0	2.45	3.36
4-Mar	2.0	2.2	2.2	2.4	2.4	2.5	2.5	2.6	2.3	2.5	2.6	2.5	2.2	2.2	2.2	2.3	A	2.2	2.2	2.3	2.4	2.4	2.4	2.4	2.34	2.62
5-Mar	2.5	2.6	2.7	2.9	2.9	3.0	3.1	3.1	3.1	3.1	3.0	2.9	2.6	2.6	2.2	A	2.1	2.1	2.1	2.1	2.4	2.1	2.3	2.2	2.59	3.12
6-Mar	2.5	2.8	2.6	2.7	2.8	2.6	2.7	2.7	3.0	2.7	2.2	2.2	2.1	2.1	A	2.0	2.1	2.2	2.5	2.6	2.4	2.5	2.4	2.4	2.47	3.02
7-Mar	2.4	2.5	2.5	2.6	2.7	2.6	2.7	2.9	3.0	3.0	3.0	3.0	2.9	A	2.4	2.6	2.6	2.6	2.6	2.7	2.8	2.7	2.6	2.2	2.68	3.05
8-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	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.1	2.03	2.24
9-Mar	2.2	2.2	2.3	2.3	2.4	2.4	2.3	2.4	2.5	2.6	C	C	C	2.3	2.2	2.2	2.1	2.1	2.2	2.3	2.3	2.3	2.4	2.4	2.31	2.64
10-Mar	2.5	2.5	2.6	2.5	2.6	A	2.9	3.0	2.8	3.1	2.9	2.7	2.6	2.5	2.5	2.2	2.1	2.1	2.2	2.4	2.5	2.6	2.6	2.7	2.57	3.05
11-Mar	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.3	2.09	2.27
12-Mar	2.2	2.1	2.1	2.1	A	2.3	2.4	2.2	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.1	2.1	2.2	2.1	2.13	2.44
13-Mar	2.1	2.2	2.2	A	2.2	2.2	2.2	2.4	2.5	2.6	2.5	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.3	2.22	2.57
14-Mar	2.4	2.4	A	2.5	2.5	2.6	2.6	2.6	2.5	2.5	2.3	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.4	2.29	2.56
15-Mar	2.4	A	2.6	2.7	3.0	3.0	2.6	2.7	2.6	2.6	2.7	2.7	2.5	2.2	2.3	2.3	2.4	2.3	2.3	2.3	2.5	2.7	2.4	2.6	2.55	3.02
16-Mar	A	2.6	2.9	2.8	2.6	2.5	2.3	2.3	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.24	2.89
17-Mar	2.1	2.1	2.3	2.4	2.3	2.3	2.2	2.5	2.6	2.4	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.15	2.55
18-Mar	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	A	2.5	2.3	2.12	2.47
19-Mar	2.3	2.3	2.3	2.4	2.4	2.5	2.7	2.7	2.7	2.7	2.6	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.4	A	2.7	2.7	2.6	2.48	2.73
20-Mar	2.7	2.4	2.2	2.1	2.2	2.6	2.8	2.7	2.4	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.1	2.2	2.1	2.1	2.21	2.83
21-Mar	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	A	2.1	2.1	2.1	2.1	2.1	2.05	2.14
22-Mar	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	A	2.1	2.1	2.1	2.1	2.1	2.1	2.10	2.14
23-Mar	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.1	2.2	2.1	2.2	2.1	A	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.13	2.17
24-Mar	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	A	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.09	2.14
25-Mar	2.1	2.1	2.2	2.2	2.3	2.4	2.5	2.5	2.5	2.6	2.4	2.3	2.2	2.1	A	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.26	2.59
26-Mar	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	A	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.4	2.4	2.13	2.45
27-Mar	2.3	2.3	2.3	2.4	2.2	2.0	2.0	2.0	2.2	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.1	2.1	2.1	2.11	2.41
28-Mar	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.4	2.5	2.1	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.0	2.2	2.1	2.2	2.09	2.49
29-Mar	2.5	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	A	2.0	2.0	2.1	2.1	2.0	1.9	1.9	2.0	2.0	2.0	2.1	2.0	2.0	2.07	2.52
30-Mar	2.2	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.00	2.24
31-Mar	2.0	2.0	2.0	2.3	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.04	2.31
	2.28	2.29	2.32	2.38	2.36	2.36	2.39	2.41	2.42	2.40	2.33	2.27	2.24	2.18	2.16	2.15	2.14	2.15	2.16	2.20	2.22	2.26	2.29	2.28	Diurnal Average	
	2.97	3.16	3.26	3.36	3.02	2.99	3.15	3.07	3.12	3.09	3.03	3.00	2.90	2.80	2.86	2.88	2.74	3.06	2.67	2.92	3.11	2.95	3.09	3.21	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

Hourly Averages

Total Hydrocarbons (THC) - ppm

Henry Pirker - March 2010



PASZA
Peace Airshed Zone Association

Hourly Maximums

Total Hydrocarbons (THC) - ppm

Henry Pirker - March 2010

Maximum Value: 4.69 ppm on Mar 3 04:00

Maximum Daily Average: 3.09 ppm on Mar 2

Minimum Value: 2.0 ppm on Mar 28 14:00

Minimum Daily Average: 2.11 ppm on Mar 30

Maximum Diurnal Average: 2.66 ppm at hour 4

Minimum Diurnal Average: 2.30 ppm at hour 16

Monthly Average: 2.483 ppm

Percentiles: P_1 = 1.99 P_{10} = 2.04 Q_1 = 2.15 Median = 2.43 Q_3 = 2.69 P_{90} = 3.03 P_{99} = 3.55

Hours in Service:	744
Hours of Data:	710
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	2.8	2.9	2.9	3.1	3.1	3.2	3.3	3.1	3.1	3.1	3.1	3.0	2.9	2.9	3.0	3.0	2.9	2.7	2.8	A	2.6	2.6	2.6	2.7	2.93	3.28
2-Mar	2.7	2.6	3.0	2.9	2.9	3.1	3.8	3.1	3.2	3.3	2.8	2.8	3.0	2.9	2.9	3.1	3.1	3.4	A	3.1	3.4	3.1	3.6	3.5	3.09	3.75
3-Mar	3.4	3.3	3.5	4.7	3.2	2.4	2.6	2.8	2.8	2.7	2.5	2.7	2.5	2.4	2.4	2.5	2.6	A	2.4	2.0	2.1	2.1	2.1	2.1	2.68	4.69
4-Mar	2.1	2.3	2.4	2.6	2.6	2.6	2.8	3.0	2.3	2.6	2.9	2.6	2.3	2.4	2.3	2.3	A	2.9	2.3	2.5	2.5	2.5	2.5	2.5	2.51	2.96
5-Mar	2.5	2.7	2.9	2.9	3.0	3.1	3.2	3.2	3.2	3.2	3.1	3.1	2.7	2.8	2.6	A	2.1	2.1	2.2	2.3	2.7	2.2	2.5	2.4	2.72	3.23
6-Mar	3.0	3.1	2.7	2.9	2.9	2.8	2.8	2.8	3.3	3.1	2.3	2.3	2.2	2.2	A	2.1	2.2	2.9	2.6	3.3	2.7	2.6	2.5	2.5	2.69	3.34
7-Mar	2.5	2.5	2.5	2.7	2.8	2.7	2.9	3.0	3.1	3.2	3.2	3.0	3.0	A	2.6	2.8	2.8	2.8	2.7	2.8	2.9	2.9	2.7	2.6	2.81	3.22
8-Mar	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1	3.6	2.2	2.4	2.13	3.56
9-Mar	2.4	2.3	2.4	2.4	2.6	2.6	2.5	2.6	2.6	2.7	C	C	C	2.5	2.3	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.5	2.5	2.42	2.72
10-Mar	2.5	2.7	2.7	2.7	2.7	A	3.1	3.0	2.9	3.1	3.0	2.8	2.7	2.7	2.5	2.3	2.2	2.8	2.3	3.2	2.6	2.6	3.9	4.0	2.84	3.97
11-Mar	2.2	2.2	2.1	2.4	2.3	A	2.1	2.6	2.1	2.1	3.2	2.1	2.2	2.2	2.0	2.0	2.0	2.0	2.5	2.3	2.2	2.6	2.3	2.5	2.27	3.18
12-Mar	2.4	2.4	2.3	2.2	A	2.4	3.6	2.4	2.4	2.3	2.1	2.1	2.0	2.0	2.1	2.0	2.2	2.4	3.0	2.5	2.2	2.4	2.5	2.2	2.35	3.55
13-Mar	2.2	2.8	2.2	A	2.3	2.3	2.3	2.6	2.6	2.6	2.6	2.5	2.3	2.1	2.1	2.2	2.6	2.2	2.1	2.2	2.2	2.2	2.4	2.5	2.34	2.83
14-Mar	2.5	2.6	A	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.5	2.7	2.7	2.5	2.6	2.6	2.3	2.1	2.1	2.1	2.1	3.1	2.4	2.7	2.52	3.11
15-Mar	2.9	A	2.8	3.1	3.2	3.3	2.9	3.0	2.8	2.7	2.9	2.8	2.6	2.4	2.5	2.4	2.5	2.4	2.3	2.8	2.8	2.9	2.6	2.8	2.76	3.31
16-Mar	A	2.9	3.2	3.1	2.8	2.6	2.4	2.4	2.3	2.1	2.3	2.3	2.1	2.2	2.5	2.3	2.3	2.3	2.4	2.2	2.2	2.3	2.3	A	2.43	3.18
17-Mar	2.1	2.5	2.6	2.6	2.5	2.4	2.3	2.7	2.7	3.1	2.4	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.28	3.08
18-Mar	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	2.2	2.3	A	3.0	2.4	2.18	3.04
19-Mar	2.4	2.3	2.4	2.5	2.5	2.7	2.7	2.9	2.9	2.8	2.9	2.5	2.5	2.5	2.8	2.5	2.4	2.5	2.4	2.5	A	4.0	3.1	2.9	2.68	4.01
20-Mar	3.6	2.9	2.7	2.3	2.3	3.3	3.0	3.2	3.5	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.5	2.2	A	2.2	2.3	2.4	2.5	2.49	3.56
21-Mar	2.6	2.5	2.4	2.5	2.2	2.2	2.3	2.0	2.1	2.0	2.0	2.2	2.1	2.1	2.1	2.1	2.3	2.8	A	2.1	2.1	2.1	2.1	2.2	2.22	2.76
22-Mar	2.4	2.7	2.6	2.5	2.6	2.8	2.6	2.7	2.8	2.4	2.8	2.6	2.6	2.7	2.6	2.6	2.6	A	2.4	2.3	2.5	2.5	2.7	2.7	2.60	2.82
23-Mar	2.2	2.1	2.2	2.2	2.5	2.3	2.5	2.4	2.8	2.6	3.0	2.6	2.6	2.7	2.5	2.6	A	2.6	2.6	2.6	2.5	2.4	2.4	2.6	2.50	3.03
24-Mar	2.4	2.5	2.5	2.5	2.5	2.5	2.5	2.4	2.5	2.4	2.4	2.5	2.4	2.3	2.3	A	2.3	2.4	2.3	2.4	2.4	2.3	2.4	2.2	2.42	2.54
25-Mar	2.3	2.2	2.3	2.3	2.3	2.5	2.6	2.6	2.6	2.7	2.5	2.3	2.3	2.2	A	2.4	2.8	2.4	2.6	2.8	2.2	2.3	2.5	2.4	2.44	2.83
26-Mar	2.6	2.3	2.3	2.6	2.7	2.4	2.5	2.7	2.4	2.4	2.1	2.7	2.4	A	2.2	2.3	2.1	2.1	2.2	2.3	2.3	2.3	2.7	2.6	2.41	2.74
27-Mar	2.5	2.5	2.9	3.3	2.6	2.1	2.0	2.1	2.7	2.3	2.3	2.1	A	2.2	2.1	2.0	2.0	3.2	3.5	2.2	2.1	2.3	2.2	2.1	2.41	3.46
28-Mar	2.1	2.1	2.1	2.2	2.0	2.1	2.2	2.8	2.7	2.3	2.1	A	2.6	2.0	2.0	2.0	2.0	2.2	2.5	2.5	2.5	3.2	2.3	2.5	2.30	3.20
29-Mar	2.6	2.6	2.3	2.4	2.6	2.1	2.1	2.1	2.6	2.7	A	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.2	2.3	2.7	2.0	2.0	2.26	2.67
30-Mar	2.8	2.1	2.3	2.0	2.1	2.7	2.2	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.11	2.83
31-Mar	2.0	2.0	2.0	3.5	2.1	2.1	2.1	2.1	A	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.8	3.3	2.19	3.54
	2.49	2.49	2.52	2.66	2.56	2.54	2.60	2.62	2.66	2.59	2.53	2.44	2.40	2.32	2.32	2.30	2.30	2.42	2.38	2.41	2.37	2.55	2.54	2.55	Diurnal Average	
	3.56	3.33	3.49	4.69	3.24	3.31	3.75	3.22	3.53	3.32	3.20	3.09	2.99	2.92	2.95	3.08	3.07	3.42	3.46	3.34	3.42	4.01	3.92	3.97	Diurnal Maximum	

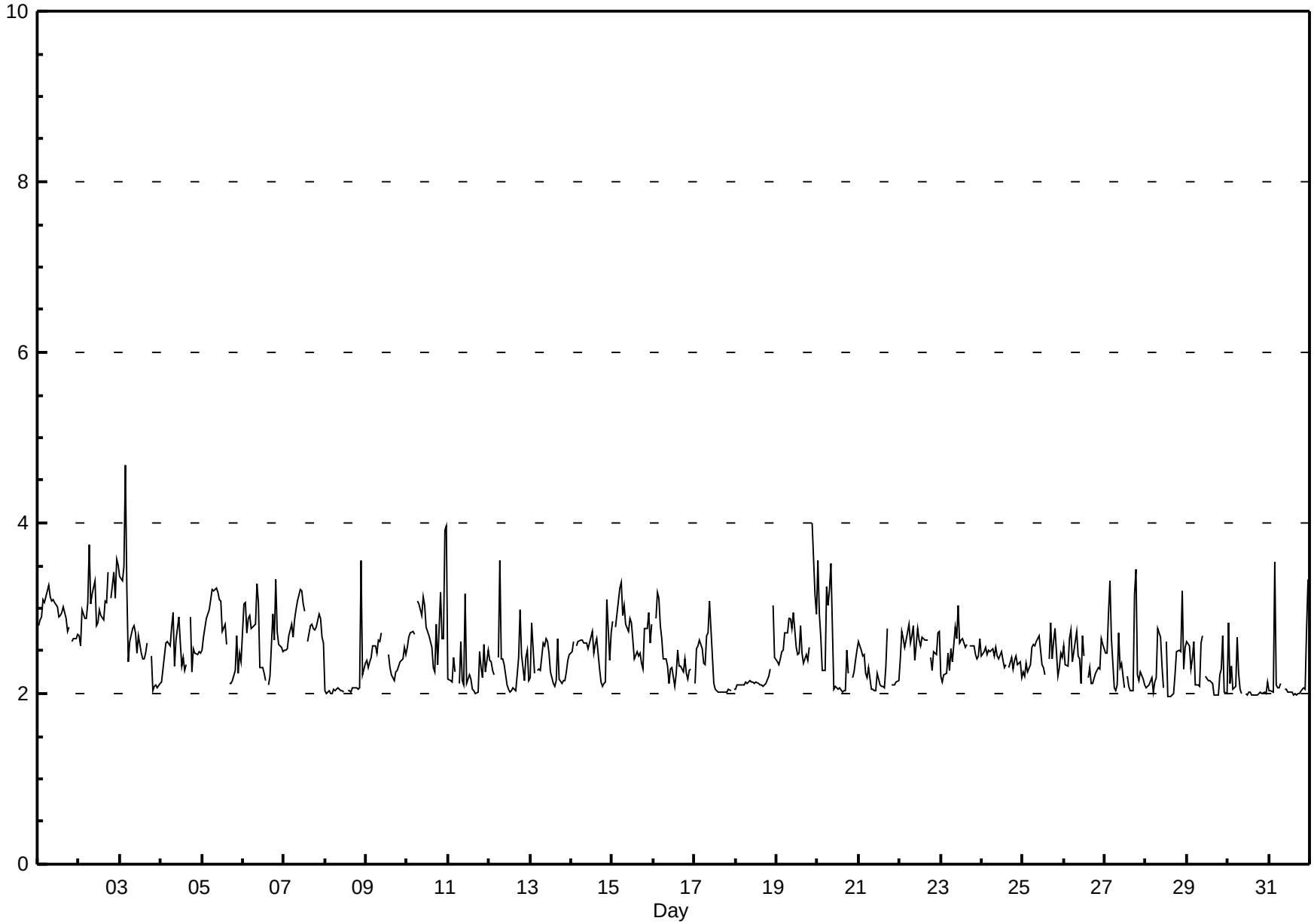
C - Calibration

A - Automated Daily Zero Span

Hourly Maximums

Total Hydrocarbons (THC) - ppm

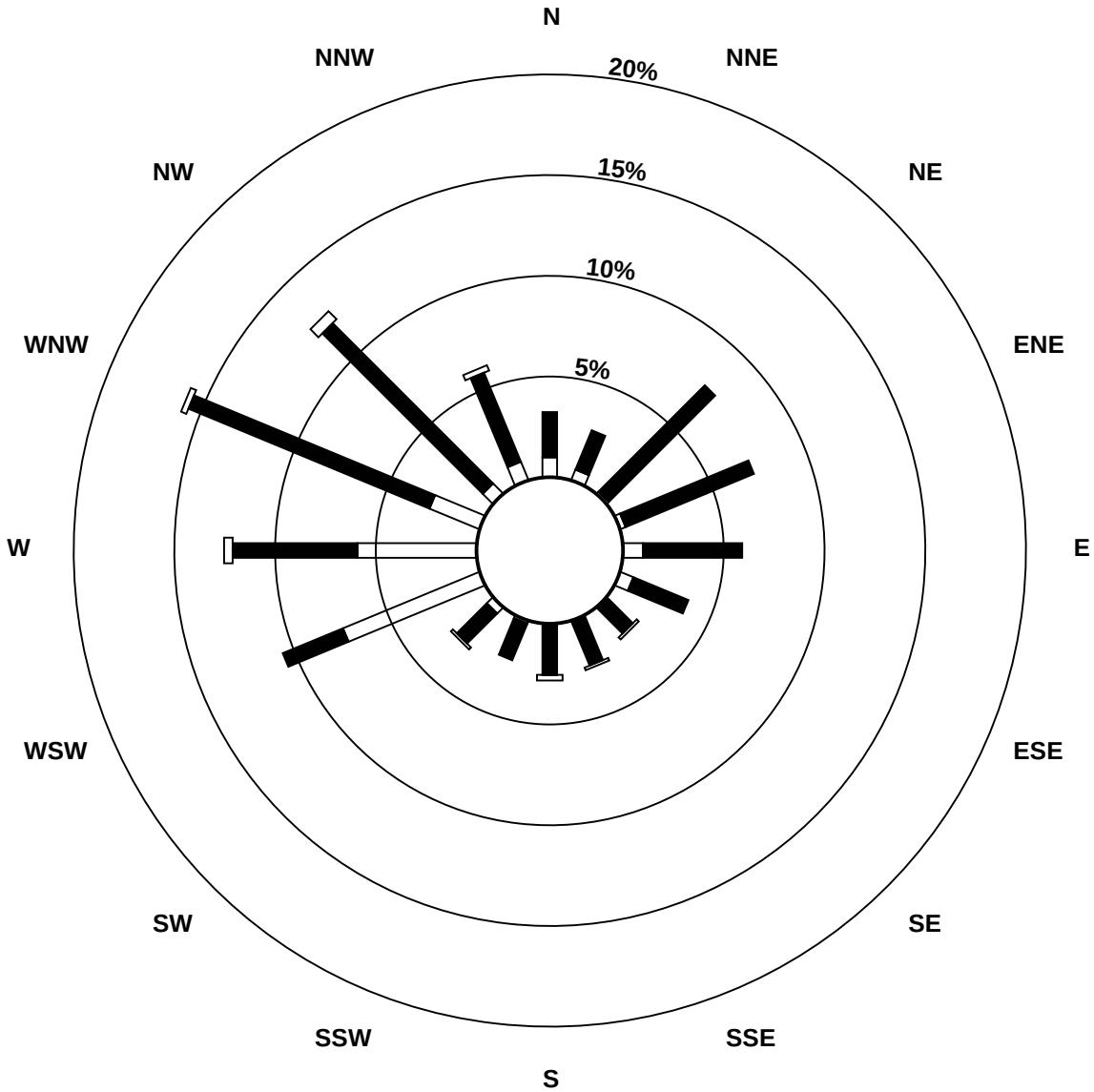
Henry Pirker - March 2010



Pollutant Rose

Total Hydrocarbons (THC) - ppm

Henry Pirker - March 2010



Pollutant Classes (ppm)

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

PASZA
Peace Airshed Zone Association

Hourly Averages

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

Henry Pirker - March 2010

Number of Exceedences: 1-hr: 0 24-hr: 0
Maximum Value: 75.3 $\mu g/m^3$ on Mar 19 19:00
Maximum Daily Average: 26.2 $\mu g/m^3$ on Mar 19

Minimum Value: 0 $\mu g/m^3$ on Mar 9 17:00
Maximum Diurnal Average: 19.6 $\mu g/m^3$ at hour 19
Monthly Average: 12.59 $\mu g/m^3$

Minimum Daily Average: 4.4 $\mu g/m^3$ on Mar 23
Minimum Diurnal Average: 9.1 $\mu g/m^3$ at hour 4
Percentiles: $P_1 = 0.0$ $P_{10} = 3.4$ $Q_1 = 5.4$ Median = 10.1 $Q_3 = 17.0$ $P_{90} = 25.7$ $P_{99} = 51.9$

Hours in Service:	744
Hours of Data:	697
Hours of Missing Data:	47
Hours of Calibration:	1
Percent Operational Time:	93.8

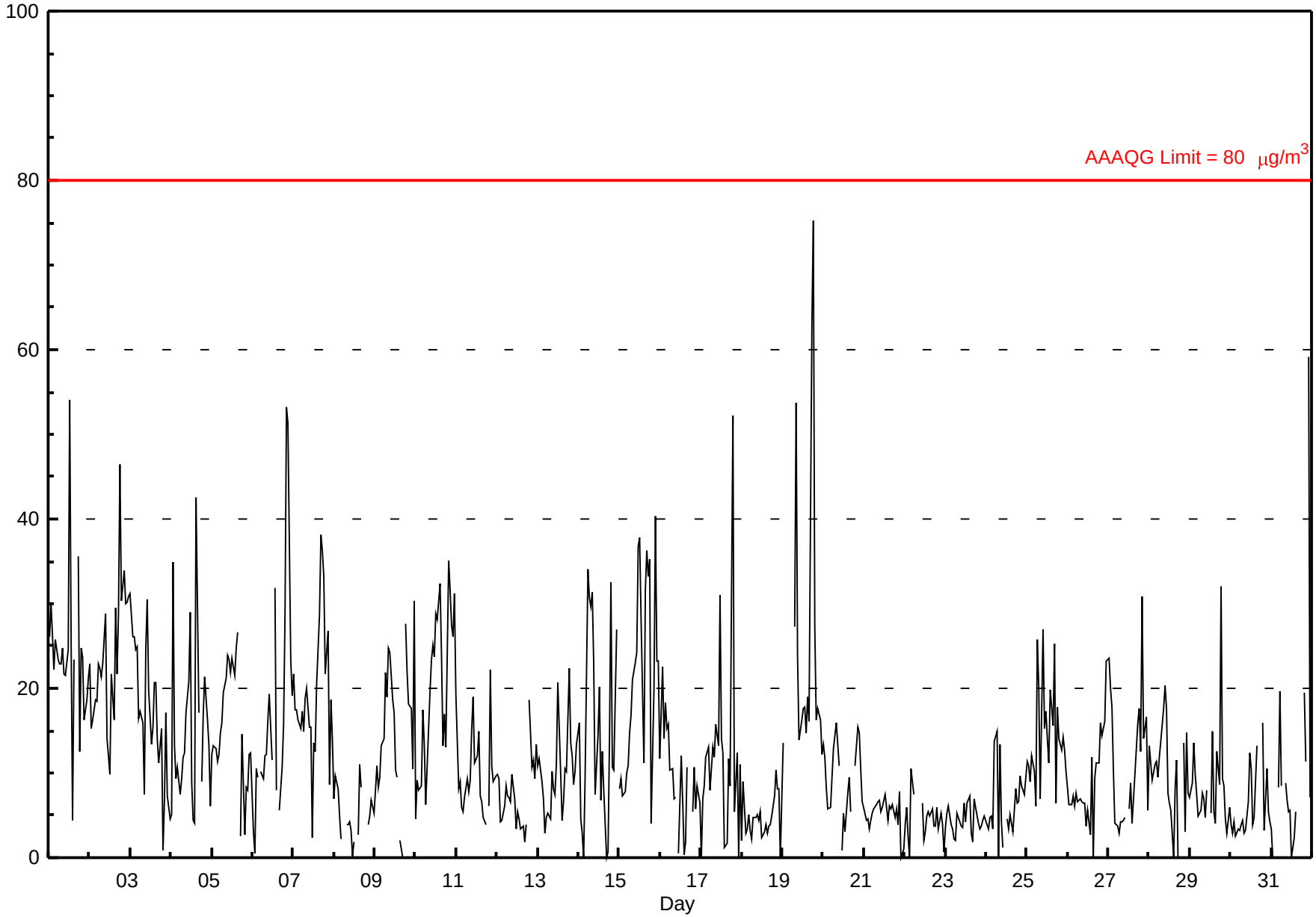
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	26	30	26	22	26	23	23	23	25	22	22	25	54	26	4	23	P	36	12	25	24	16	19	21	24.0	54.2
2-Mar	23	15	16	19	19	23	22	21	23	29	14	12	10	22	16	30	22	29	46	30	34	30	30	31	23.6	46.4
3-Mar	31	26	26	25	25	17	17	16	7	25	31	20	13	15	21	21	14	11	15	1	7	17	7	5	17.2	31.1
4-Mar	5	35	13	9	11	7	9	12	12	17	21	29	9	4	4	43	17	BD	9	17	21	16	13	6	14.8	42.6
5-Mar	12	13	13	11	12	15	16	20	21	24	23	22	23	21	25	27	BD	3	15	3	8	8	12	12	15.6	26.6
6-Mar	3	1	10	10	BD	10	9	12	12	16	19	11	BD	32	8	BD	6	11	16	29	53	51	23	19	17.2	53.2
7-Mar	22	17	17	16	15	17	15	19	20	15	15	2	14	13	20	29	38	36	33	22	27	9	19	14	19.4	38.2
8-Mar	7	10	8	5	2	BD	BD	4	4	4	3	0	2	BD	3	11	8	BD	BD	BD	4	5	7	5	5.1	11.0
9-Mar	8	11	8	9	13	14	22	19	25	24	19	17	10	9	C	2	0	BD	28	22	18	18	10	30	15.3	30.3
10-Mar	5	9	8	8	17	13	6	11	20	23	25	24	29	28	32	24	13	17	13	35	32	27	26	31	19.9	35.1
11-Mar	19	8	9	6	5	7	9	8	9	15	19	11	12	15	7	7	5	4	BD	6	22	11	9	10	10.2	22.1
12-Mar	10	9	4	4	6	9	7	7	7	10	7	3	5	5	3	4	2	4	BD	19	11	11	9	13	7.4	18.7
13-Mar	11	12	9	7	3	5	5	5	10	8	7	11	21	10	4	7	10	10	22	14	12	9	10	13	9.8	22.4
14-Mar	16	5	3	0	9	34	31	30	31	23	7	14	20	7	13	8	0	1	14	32	11	10	27	BD	15.0	34.0
15-Mar	8	9	7	8	10	11	15	17	21	23	24	37	38	28	11	32	36	33	35	4	20	40	23	23	21.4	40.4
16-Mar	12	23	14	18	15	16	10	10	7	7	BD	0	12	7	0	2	11	BD	BD	5	11	6	8	6	9.6	22.6
17-Mar	0	7	8	12	13	8	11	13	12	16	13	31	14	12	1	2	12	8	31	52	5	12	0	11	12.7	52.3
18-Mar	2	9	3	3	5	3	2	5	5	5	4	5	2	3	4	3	4	4	5	7	10	8	8	0	4.6	10.3
19-Mar	14	BD	36	BD	BD	BD	BD	27	54	24	14	16	18	18	15	19	16	63	75	27	16	18	16	12	26.2	75.3
20-Mar	13	12	8	6	6	10	13	14	16	11	BD	1	5	3	8	10	5	BD	BD	11	15	15	11	7	9.5	16.0
21-Mar	6	4	5	3	4	5	6	6	7	7	5	6	8	6	4	6	6	6	5	6	4	8	0	1	5.2	7.8
22-Mar	4	6	3	0	11	7	BD	BD	BD	BD	7	2	3	5	5	5	6	4	4	6	3	5	4	1	4.5	10.5
23-Mar	3	5	6	4	3	2	2	5	4	4	3	6	4	7	7	3	2	7	6	4	3	4	4	5	4.4	7.3
24-Mar	4	3	5	5	3	14	15	0	13	4	1	BD	5	3	5	4	3	8	6	7	10	8	7	9	6.3	14.9
25-Mar	11	11	9	12	10	6	26	20	7	27	15	17	14	11	20	16	25	6	18	14	13	14	13	10	14.4	26.9
26-Mar	8	6	6	7	6	8	7	7	7	6	6	4	6	3	12	0	9	11	11	16	14	15	16	23	9.0	23.2
27-Mar	24	20	18	10	4	4	3	4	4	4	5	BD	6	9	4	7	13	16	18	13	31	14	17	6	10.9	30.8
28-Mar	13	11	9	11	11	10	12	14	18	20	18	8	7	6	0	8	12	0	0	BD	13	3	15	8	9.8	20.3
29-Mar	7	9	14	10	7	5	6	8	7	5	8	BD	5	15	5	4	13	9	32	9	9	5	3	6	8.6	32.1
30-Mar	4	3	4	3	3	3	4	4	3	3	7	12	10	4	5	13	BD	BD	BD	16	3	10	5	4	6.0	16.0
31-Mar	3	0	BD	BD	8	20	9	BD	9	7	5	6	0	2	5	BD	BD	BD	BD	19	11	BD	59	7	--	59.1
	10.8	11.3	10.9	9.1	9.9	11.2	11.8	12.4	14.0	14.3	12.7	12.7	12.6	11.6	9.1	12.6	11.4	14.0	19.6	16.2	15.4	14.2	13.9	11.7	Diurnal Average	
	31.1	34.9	36.5	24.5	25.7	34.0	30.7	29.6	53.7	28.8	30.5	36.7	54.2	31.8	32.3	42.6	38.2	63.1	75.3	52.3	53.2	51.3	59.1	31.1	Diurnal Maximum	

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

Hourly Averages

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

Henry Pirker - March 2010



PASZA
Pasco Airshed Zone Association

Hourly Maximums

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

Henry Pirker - March 2010

Maximum Value: 111.1 $\mu g/m^3$ on Mar 31 23:00

Maximum Daily Average: 36.0 $\mu g/m^3$ on Mar 19

Minimum Value: 0 $\mu g/m^3$ on Mar 22 10:00

Minimum Daily Average: 6.9 $\mu g/m^3$ on Mar 23

Maximum Diurnal Average: 23.7 $\mu g/m^3$ at hour 20

Minimum Diurnal Average: 13.0 $\mu g/m^3$ at hour 4

Monthly Average: 18.66 $\mu g/m^3$

Percentiles: P_1 = 2.0 P_{10} = 6.0 Q_1 = 8.8 Median = 14.7 Q_3 = 24.1 P_{90} = 35.6 P_{99} = 77.3

Hours in Service:	744
Hours of Data:	733
Hours of Missing Data:	11
Hours of Calibration:	1
Percent Operational Time:	98.7

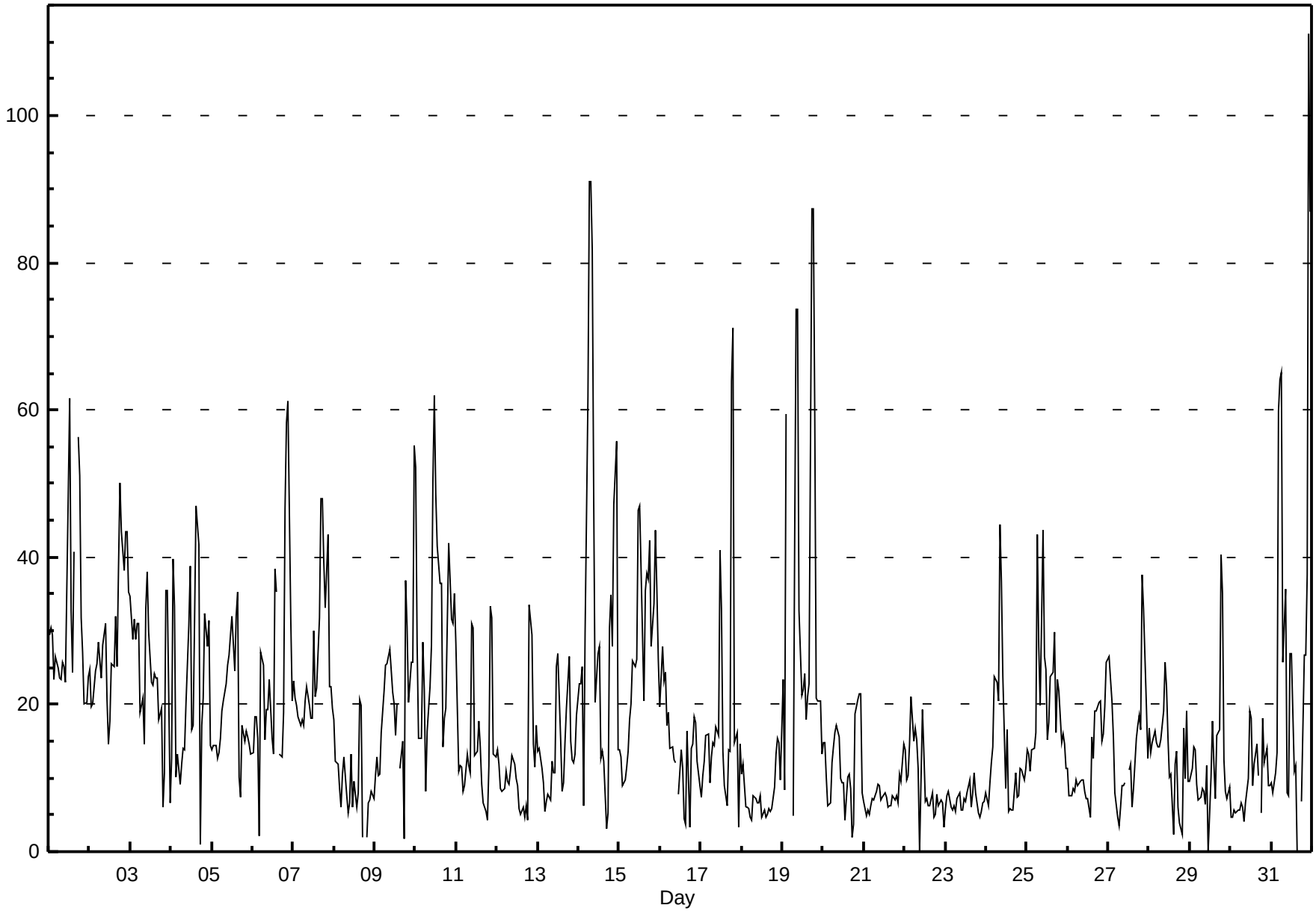
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	29	30	29	23	27	25	24	23	26	25	23	49	62	33	24	41	P	56	51	32	27	20	20	24	31.5	61.6
2-Mar	25	20	20	25	26	29	26	24	28	31	21	15	18	25	25	32	25	38	50	43	38	43	43	35	29.4	50.1
3-Mar	35	29	32	29	31	31	19	21	15	33	38	30	23	23	24	24	24	18	19	6	11	36	35	7	24.6	38.1
4-Mar	13	40	33	10	13	9	12	14	14	20	31	39	17	17	32	47	42	1	17	21	32	28	31	14	22.8	46.9
5-Mar	14	14	14	13	13	15	19	21	23	25	27	29	32	24	32	35	10	7	17	15	16	16	15	13	19.2	35.2
6-Mar	13	18	18	15	2	27	25	15	19	19	23	15	13	38	35	BD	13	13	19	47	58	61	32	21	24.5	61.3
7-Mar	23	21	20	18	17	18	17	20	22	20	18	18	30	21	22	32	48	48	39	33	43	22	22	20	25.6	48.0
8-Mar	18	12	12	9	6	11	13	8	5	7	13	6	10	6	8	21	20	2	BD	2	7	7	8	7	9.4	20.7
9-Mar	10	13	10	11	16	22	25	25	26	27	22	20	16	20	C	11	15	2	37	31	20	26	26	55	21.2	55.2
10-Mar	52	28	15	15	29	22	8	16	22	28	50	62	49	42	37	36	14	18	20	42	37	32	31	35	30.9	62.0
11-Mar	28	11	12	11	8	9	13	12	11	31	30	13	14	18	14	9	7	5	4	12	33	32	13	13	15.2	33.3
12-Mar	14	12	9	8	9	11	10	9	11	13	12	10	9	6	5	6	5	6	4	34	29	15	11	17	11.4	33.5
13-Mar	14	14	11	9	5	7	8	7	12	11	11	25	27	15	8	9	15	20	27	15	12	12	13	18	13.6	26.9
14-Mar	23	23	25	6	30	62	91	91	82	48	20	27	28	13	14	12	3	5	30	35	28	47	56	14	33.8	90.9
15-Mar	14	13	9	10	11	14	18	20	26	25	26	46	47	38	20	35	38	37	42	28	34	44	36	26	27.4	46.9
16-Mar	20	28	23	24	17	19	14	14	12	12	BD	8	14	11	4	4	16	3	14	15	18	17	12	9	14.4	27.8
17-Mar	7	10	12	16	16	9	13	15	14	17	16	41	33	14	9	6	14	14	64	71	15	16	3	15	19.2	71.2
18-Mar	10	12	6	6	6	5	4	8	7	7	7	8	5	6	5	5	6	5	6	9	13	15	15	10	7.7	15.5
19-Mar	23	8	59	BD	BD	BD	5	42	74	74	33	21	22	24	18	21	23	87	87	59	21	20	20	13	36.0	87.4
20-Mar	15	15	10	6	7	12	14	16	17	16	10	9	9	4	10	11	9	2	4	19	21	22	22	8	11.9	21.5
21-Mar	7	5	6	5	6	7	7	8	9	9	7	7	8	7	6	6	6	8	7	8	7	11	10	15	7.5	14.7
22-Mar	14	10	10	15	21	15	17	15	11	0	19	13	7	7	6	6	8	5	5	8	6	7	7	3	9.8	21.0
23-Mar	6	8	8	6	6	6	5	7	8	6	6	7	7	8	10	6	8	11	8	5	5	5	7	7	6.9	10.7
24-Mar	8	6	9	12	14	24	23	21	44	37	24	9	16	5	6	6	6	11	7	8	11	11	10	11	14.1	44.5
25-Mar	14	13	11	14	14	16	43	28	20	44	26	25	15	18	24	24	30	16	23	22	15	16	15	11	20.7	43.6
26-Mar	11	8	8	9	8	10	9	10	10	10	8	7	7	5	16	13	19	19	20	20	15	16	20	26	12.6	25.8
27-Mar	26	23	20	16	8	5	3	6	9	9	9	BD	11	12	6	9	15	17	19	17	38	33	20	13	14.9	37.6
28-Mar	17	13	15	16	15	14	14	15	19	26	22	16	10	11	2	12	14	6	4	2	17	10	19	10	13.3	25.8
29-Mar	10	11	14	14	9	7	7	9	8	6	12	0	10	18	12	7	16	17	40	35	12	8	7	9	12.5	40.3
30-Mar	5	5	6	5	6	6	7	6	4	7	10	19	18	9	12	15	10	BD	5	18	12	14	9	9	9.4	19.1
31-Mar	9	8	11	13	60	64	65	26	36	8	8	27	27	11	12	0	0	BD	7	27	27	38	111	87	29.6	111.1
	17.0	15.5	16.1	13.0	15.2	17.7	18.7	18.5	20.8	21.0	19.4	20.7	19.8	16.4	15.3	16.7	15.9	17.2	23.3	23.7	21.9	22.6	22.5	18.5	Diurnal Average	
	52.2	39.7	59.4	28.9	59.8	64.2	90.9	90.9	81.7	73.7	50.3	62.0	61.6	41.5	36.5	46.9	48.0	87.4	87.3	71.2	58.3	61.3	111.1	87.0	Diurnal Maximum	

C - Calibration P - Power Failure BD - Baseline Drift

Hourly Maximums

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

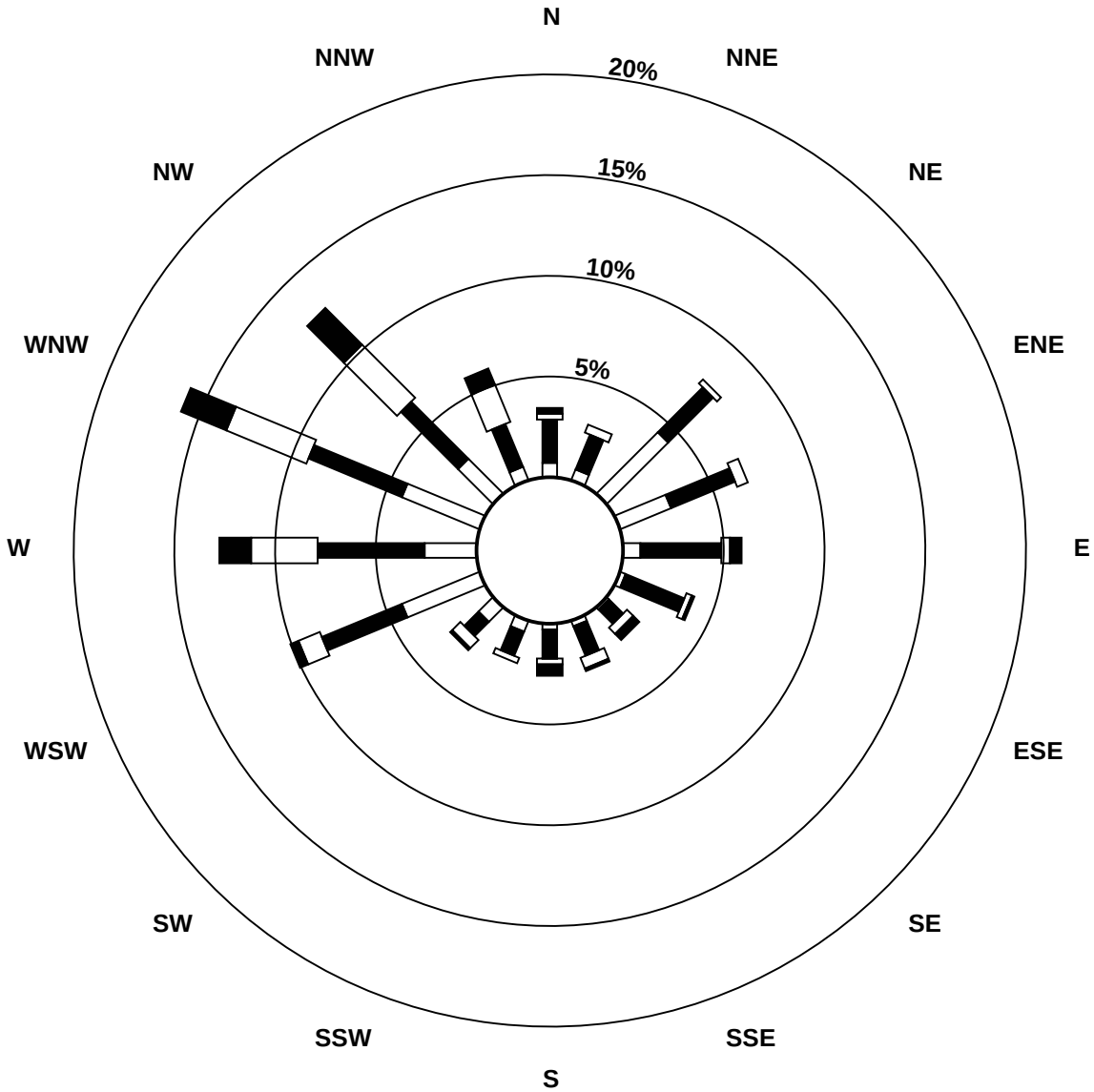
Henry Pirker - March 2010



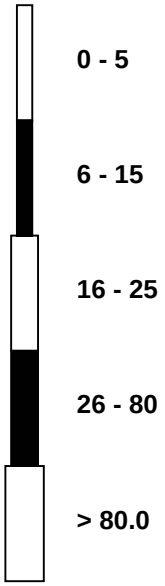
Pollutant Rose

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

Henry Pirker - March 2010



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



Hourly Averages

External Temperature (ET) - ^{o}C

Henry Pirker - March 2010

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

Maximum Value: 14.8 ^{o}C on Mar 6 16:00 Maximum Daily Average: 5.7 ^{o}C on Mar 28

Minimum Value: -18 ^{o}C on Mar 10 07:00 Minimum Daily Average: -8.8 ^{o}C on Mar 22

Maximum Diurnal Average: 5.2 ^{o}C at hour 15 Minimum Diurnal Average: -6.1 ^{o}C at hour 7

Monthly Average: -0.95 ^{o}C Percentiles: P_1 = -16.0 P_{10} = -9.4 Q_1 = -5.4 Median = -0.6 Q_3 = 3.6 P_{90} = 7.5 P_{99} = 11.7

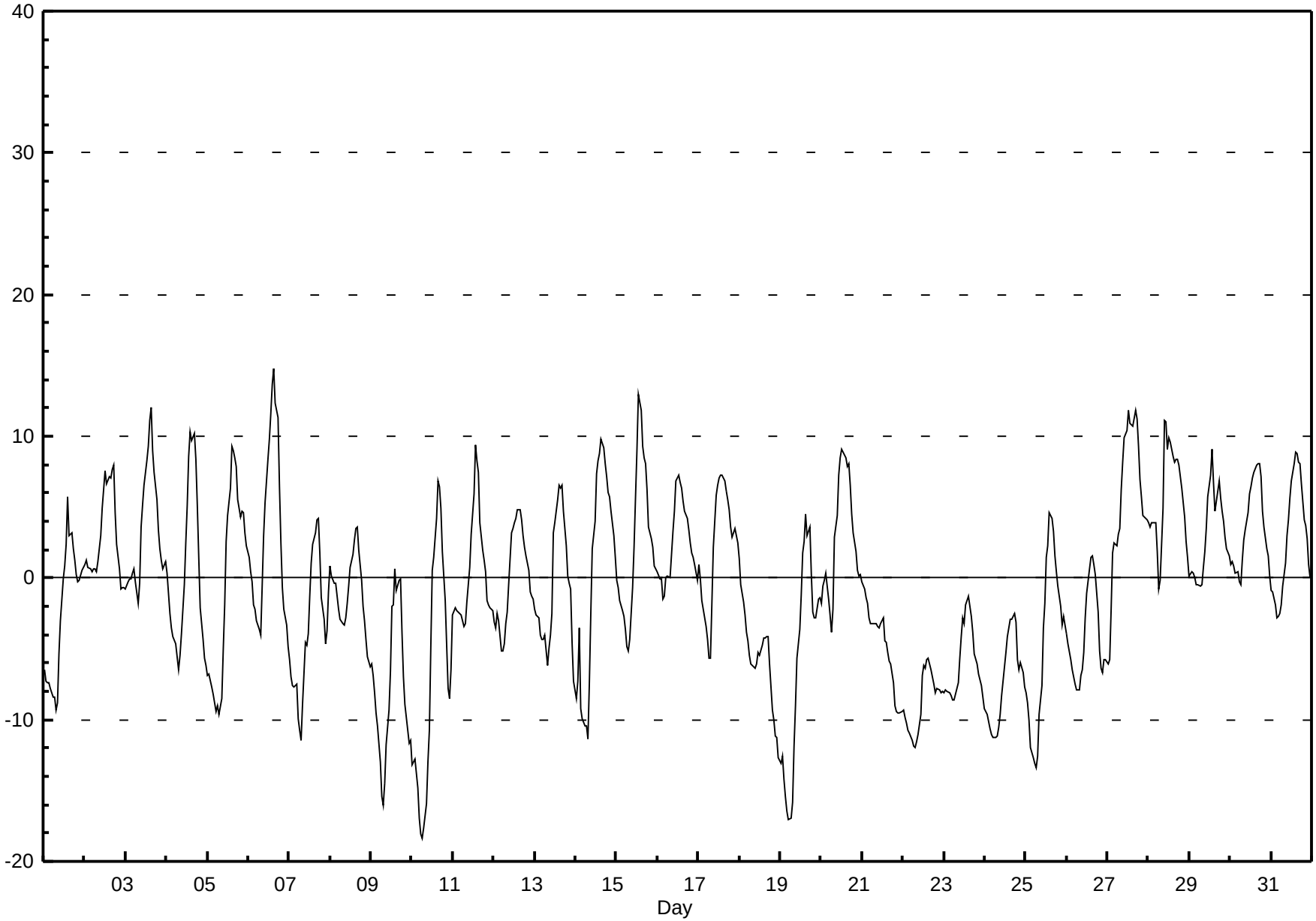
Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-6	-7	-7	-7	-8	-8	-8	-9	-9	-5	-3	0	1	2	6	3	3	2	1	0	0	0	1	1	-2.5	5.7
2-Mar	1	1	1	1	0	1	1	0	1	3	5	6	8	7	7	7	8	8	5	2	1	-1	-1	-1	2.9	8.0
3-Mar	-1	0	0	0	0	1	0	-2	0	4	5	7	8	9	11	12	9	7	5	3	2	1	1	1	3.5	12.0
4-Mar	0	-1	-3	-4	-4	-5	-6	-6	-5	-4	0	2	5	9	10	10	10	8	5	1	-2	-4	-6	-6	0.2	10.3
5-Mar	-7	-7	-8	-8	-9	-9	-9	-10	-9	-5	-2	3	4	6	9	9	8	8	5	4	5	5	3	2	-0.4	9.3
6-Mar	1	0	0	-2	-2	-3	-4	-4	-1	3	5	8	10	12	14	15	12	11	6	2	-1	-2	-3	-5	3.1	14.8
7-Mar	-6	-7	-8	-8	-8	-10	-11	-11	-9	-5	-5	-4	-1	1	2	3	4	4	2	-1	-3	-5	-4	-1	-3.7	4.2
8-Mar	1	0	0	0	-1	-2	-3	-3	-3	-3	-2	-1	1	2	3	3	4	2	0	-2	-3	-4	-6	-6	-1.0	3.6
9-Mar	-6	-7	-8	-10	-10	-13	-15	-16	-15	-12	-9	-7	-2	-2	1	-1	0	0	-4	-7	-9	-11	-12	-11	-7.7	0.6
10-Mar	-13	-13	-13	-15	-17	-18	-18	-18	-16	-13	-11	-5	1	1	4	7	6	5	2	-2	-5	-8	-9	-6	-7.2	6.8
11-Mar	-3	-2	-2	-2	-2	-3	-3	-3	-2	0	1	3	6	9	8	7	4	2	1	0	-2	-2	-2	-2	0.5	9.4
12-Mar	-3	-3	-3	-3	-5	-5	-5	-3	-2	0	3	3	4	4	5	5	4	3	2	2	1	-1	-1	-1	0.0	4.9
13-Mar	-2	-3	-3	-4	-4	-4	-4	-6	-5	-4	-2	3	4	5	6	6	7	5	2	0	0	-1	-5	-7	-0.7	6.5
14-Mar	-9	-7	-3	-9	-10	-10	-10	-11	-7	-2	2	4	7	8	9	10	9	8	7	6	6	5	3	1	0.2	9.8
15-Mar	0	-1	-2	-2	-3	-4	-5	-5	-4	-1	2	6	9	13	12	9	9	8	6	4	3	2	1	1	2.4	12.9
16-Mar	0	0	0	-1	-1	0	0	0	2	3	5	7	7	7	6	5	5	4	3	2	2	1	1	0	2.4	7.3
17-Mar	1	0	-2	-2	-3	-4	-6	-6	-2	2	6	7	7	7	7	7	6	5	5	4	3	3	3	2	2.1	7.2
18-Mar	1	0	-2	-3	-4	-4	-5	-6	-6	-6	-6	-5	-5	-5	-4	-4	-4	-4	-6	-9	-10	-11	-11	-13	-5.6	1.3
19-Mar	-13	-13	-14	-15	-16	-17	-17	-16	-12	-9	-6	-4	-1	2	3	5	3	4	0	-2	-3	-3	-2	-1	-6.2	4.5
20-Mar	-2	-1	0	0	-2	-3	-4	-2	3	4	7	9	9	9	8	8	8	7	5	3	2	1	0	0	2.9	9.1
21-Mar	0	-1	-1	-2	-3	-3	-3	-3	-3	-3	-4	-3	-3	-4	-5	-5	-6	-6	-7	-9	-9	-10	-9	-9	-4.7	-0.3
22-Mar	-9	-10	-10	-11	-11	-11	-12	-12	-12	-11	-10	-7	-6	-6	-6	-6	-6	-7	-8	-8	-8	-8	-8	-8	-8.8	-5.7
23-Mar	-8	-8	-8	-8	-8	-9	-9	-8	-7	-6	-4	-3	-3	-2	-1	-2	-3	-4	-5	-6	-7	-7	-8	-8	-5.9	-1.2
24-Mar	-9	-10	-10	-11	-11	-11	-11	-11	-11	-10	-8	-6	-5	-4	-3	-3	-3	-3	-3	-6	-6	-6	-7	-8	-7.3	-2.6
25-Mar	-8	-9	-10	-12	-13	-13	-13	-13	-10	-8	-4	-2	1	2	5	4	3	2	0	-1	-2	-3	-3	-3	-4.5	4.6
26-Mar	-4	-5	-6	-6	-7	-8	-8	-8	-7	-6	-5	-3	-1	1	1	2	1	0	-2	-5	-6	-7	-6	-6	-4.2	1.6
27-Mar	-6	-6	-2	2	2	2	3	3	6	8	10	10	12	11	11	11	12	11	9	7	6	4	4	4	5.7	11.9
28-Mar	4	4	4	4	4	2	-1	0	5	11	11	9	10	10	9	8	8	8	8	6	5	4	3	1	5.7	11.2
29-Mar	0	0	0	0	0	0	-1	0	1	2	4	6	7	9	7	5	5	7	6	5	4	3	2	2	3.0	9.1
30-Mar	1	1	1	0	0	0	0	1	3	3	5	6	6	7	7	8	8	8	7	5	4	2	2	0	3.5	8.1
31-Mar	-1	-1	-2	-3	-3	-3	-2	-1	1	3	4	6	7	8	9	9	8	8	7	4	4	3	1	0	2.8	8.9
	-3.4	-3.7	-3.9	-4.6	-5.1	-5.7	-6.1	-6.1	-4.4	-2.2	-0.2	1.8	3.4	4.5	5.2	5.1	4.6	4.0	2.1	0.1	-1.0	-1.9	-2.5	-2.9	Diurnal Average	
	3.9	3.6	3.9	3.9	3.9	2.2	3.0	3.5	6.2	11.2	11.0	10.4	11.8	12.9	13.6	14.8	12.4	11.3	9.3	6.9	5.8	4.7	4.2	4.1	Diurnal Maximum	

Hourly Averages

External Temperature (ET) - ^{o}C

Henry Pirker - March 2010



Hourly Averages

Relative Humidity (RH) - %

Henry Pirker - March 2010

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

Maximum Value: 88.6 % on Mar 11 23:00 Maximum Daily Average: 76.0 % on Mar 21

Minimum Value: 20 % on Mar 13 15:00 Minimum Daily Average: 43.1 % on Mar 13

Maximum Diurnal Average: 74.3 % at hour 7 Minimum Diurnal Average: 46.0 % at hour 15

Monthly Average: 61.88 % Percentiles: P_1 = 25.9 P_{10} = 40.1 Q_1 = 51.3 Median = 63.3 Q_3 = 75.0 P_{90} = 79.6 P_{99} = 87.2

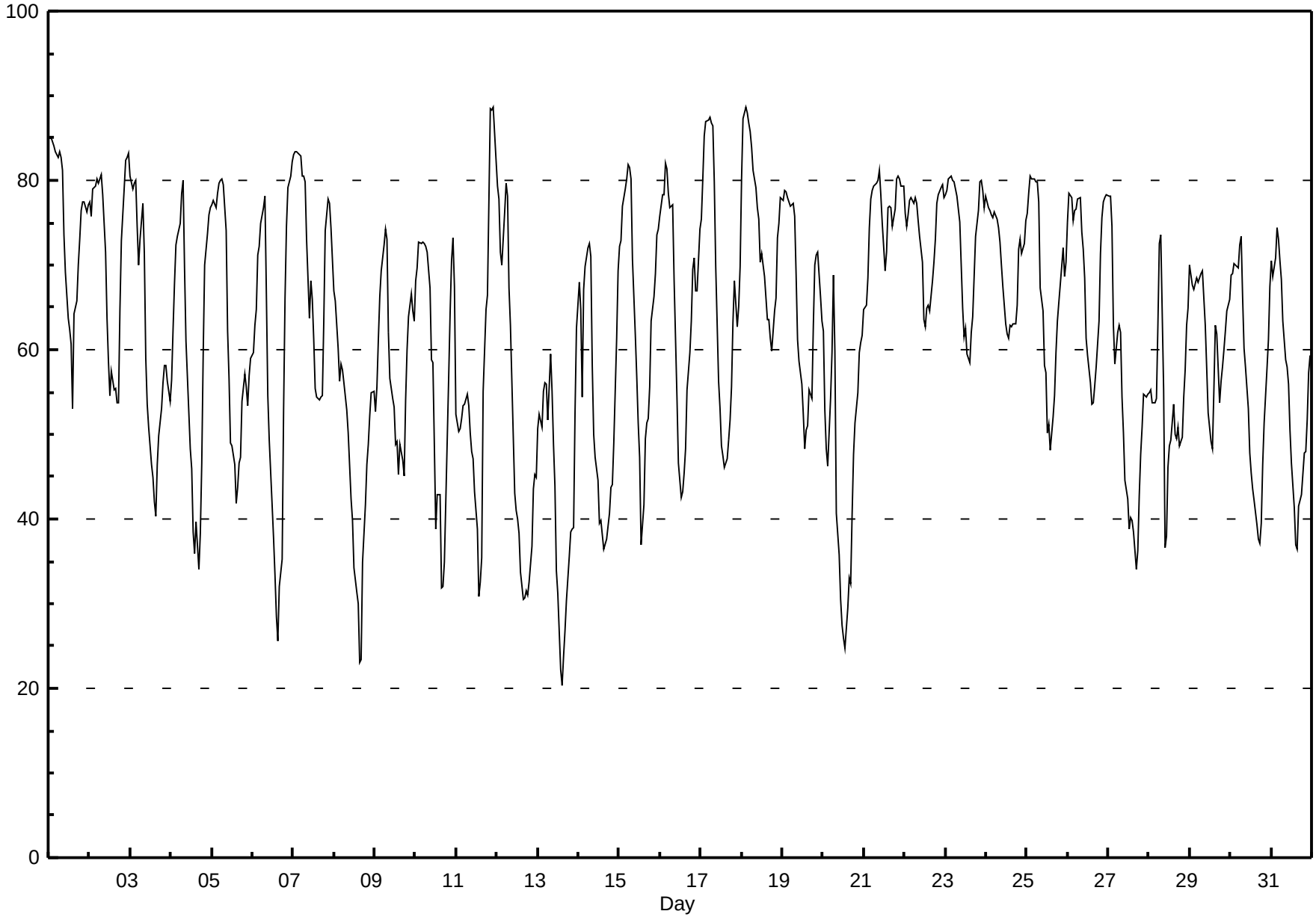
Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	85	85	85	84	83	83	83	83	81	74	69	64	62	61	53	64	66	70	73	76	78	77	76	77	74.7	85.1
2-Mar	77	76	79	79	80	80	80	81	78	72	64	59	55	57	55	56	54	54	65	73	79	82	83	83	70.8	83.2
3-Mar	81	79	80	80	75	70	73	77	71	59	54	51	46	45	42	40	47	50	53	56	58	58	56	54	60.6	80.5
4-Mar	56	62	68	72	73	75	78	80	70	61	52	48	46	38	36	40	34	38	47	60	70	74	76	77	59.7	79.9
5-Mar	77	78	77	79	80	80	80	80	74	62	57	49	49	46	42	44	47	47	54	57	56	53	57	59	61.8	80.2
6-Mar	60	63	65	71	72	75	77	78	67	55	49	42	38	33	28	26	32	35	53	66	75	79	81	82	58.4	82.1
7-Mar	83	83	83	83	83	81	80	80	73	64	68	66	61	55	54	54	54	54	63	74	78	77	74	71	70.8	83.3
8-Mar	67	66	60	56	58	58	56	53	50	46	42	40	34	31	30	23	23	35	42	46	49	52	55	55	47.0	67.0
9-Mar	53	56	61	66	69	72	74	73	62	57	54	53	49	49	45	49	47	45	54	60	64	67	65	63	58.6	74.2
10-Mar	68	70	73	73	73	73	72	72	67	59	58	49	39	43	43	32	32	35	42	57	64	71	73	67	58.5	73.2
11-Mar	52	50	51	52	53	54	55	53	50	48	47	43	39	31	33	35	55	65	66	78	89	88	89	82	56.6	88.6
12-Mar	79	78	71	70	76	80	78	67	63	56	43	41	40	38	34	31	31	31	31	33	37	44	45	45	51.8	79.7
13-Mar	51	52	51	55	56	56	52	60	55	49	44	34	31	22	20	24	27	30	36	39	39	39	52	63	43.1	62.6
14-Mar	68	65	54	67	70	72	73	71	58	50	47	45	39	40	38	36	38	39	41	44	44	49	61	69	53.2	72.5
15-Mar	72	73	77	79	80	82	81	80	71	62	57	51	47	37	42	49	51	52	56	63	66	69	74	74	64.4	81.9
16-Mar	76	78	78	82	81	78	77	77	68	61	54	47	43	43	45	48	55	60	63	69	71	67	67	74	65.2	82.0
17-Mar	75	80	85	87	87	88	87	86	80	70	56	53	49	47	46	47	49	52	56	63	68	63	65	70	67.1	87.5
18-Mar	80	87	89	88	87	86	84	81	79	77	75	70	71	69	66	64	64	61	60	65	66	73	75	78	74.8	88.6
19-Mar	78	79	79	78	77	77	77	76	69	61	59	56	52	48	51	51	55	54	63	70	71	71	66	63	65.9	78.8
20-Mar	62	53	48	46	54	60	69	60	41	36	30	27	26	25	30	33	32	40	48	51	55	60	61	62	46.2	68.9
21-Mar	65	65	69	74	78	79	79	80	80	81	78	75	69	72	77	77	77	75	77	80	80	80	79	79	76.0	81.2
22-Mar	76	75	76	78	78	77	78	77	75	73	70	63	63	65	65	65	68	70	73	77	78	79	80	78	73.3	79.5
23-Mar	78	79	80	80	80	80	79	78	75	70	65	62	63	60	58	62	64	69	73	76	80	80	79	77	72.8	80.5
24-Mar	78	77	76	76	76	76	75	74	73	70	67	63	62	61	63	63	63	63	65	72	73	71	73	75	70.3	78.2
25-Mar	76	78	81	80	80	80	80	77	67	65	58	57	50	51	48	52	55	60	63	66	70	72	69	70	66.9	80.5
26-Mar	75	79	78	75	76	77	78	78	74	72	69	61	59	56	54	54	56	58	63	71	76	77	78	78	69.6	78.5
27-Mar	78	78	75	63	58	62	63	62	54	50	45	42	39	40	40	38	34	36	43	48	51	55	54	55	52.6	78.2
28-Mar	55	55	54	54	54	63	73	74	55	37	38	46	49	49	53	50	49	51	49	50	54	58	63	65	54.0	73.5
29-Mar	70	68	67	68	68	68	69	69	66	63	58	53	49	48	55	63	62	54	56	58	60	62	65	66	61.9	70.1
30-Mar	69	69	70	70	70	72	73	66	60	58	53	48	45	43	42	39	38	37	39	46	51	58	61	67	56.1	73.4
31-Mar	71	69	71	74	73	70	68	63	59	58	56	50	47	41	37	36	42	42	43	48	48	52	57	59	55.6	74.4
	70.7	71.1	71.3	72.3	72.9	73.6	74.3	73.1	66.7	60.4	56.1	51.9	48.7	46.7	46.0	46.6	48.4	50.4	55.2	61.0	64.4	66.4	68.0	69.0	Diurnal Average	
	84.9	87.3	88.6	88.0	87.1	87.5	86.9	86.4	81.2	81.2	78.2	75.0	71.3	71.5	76.8	76.9	76.8	74.6	76.6	80.2	88.5	88.3	88.6	83.2	Diurnal Maximum	

Hourly Averages

Relative Humidity (RH) - %

Henry Pirker - March 2010



PASZA
Pasco Airshed Zone Association

Hourly Averages

Solar Radiation (SR) - W/m^2

Henry Pirker - March 2010

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

Maximum Value: 588.5 W/m^2 on Mar 29 14:00

Maximum Daily Average: 177.3 W/m^2 on Mar 31

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

Minimum Daily Average: 50.8 W/m^2 on Mar 22

Maximum Diurnal Average: 410.7 W/m^2 at hour 14

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

Monthly Average: 113.42 W/m^2

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 2.8 Q_3 = 212.4 P_{90} = 387.9 P_{99} = 530.3

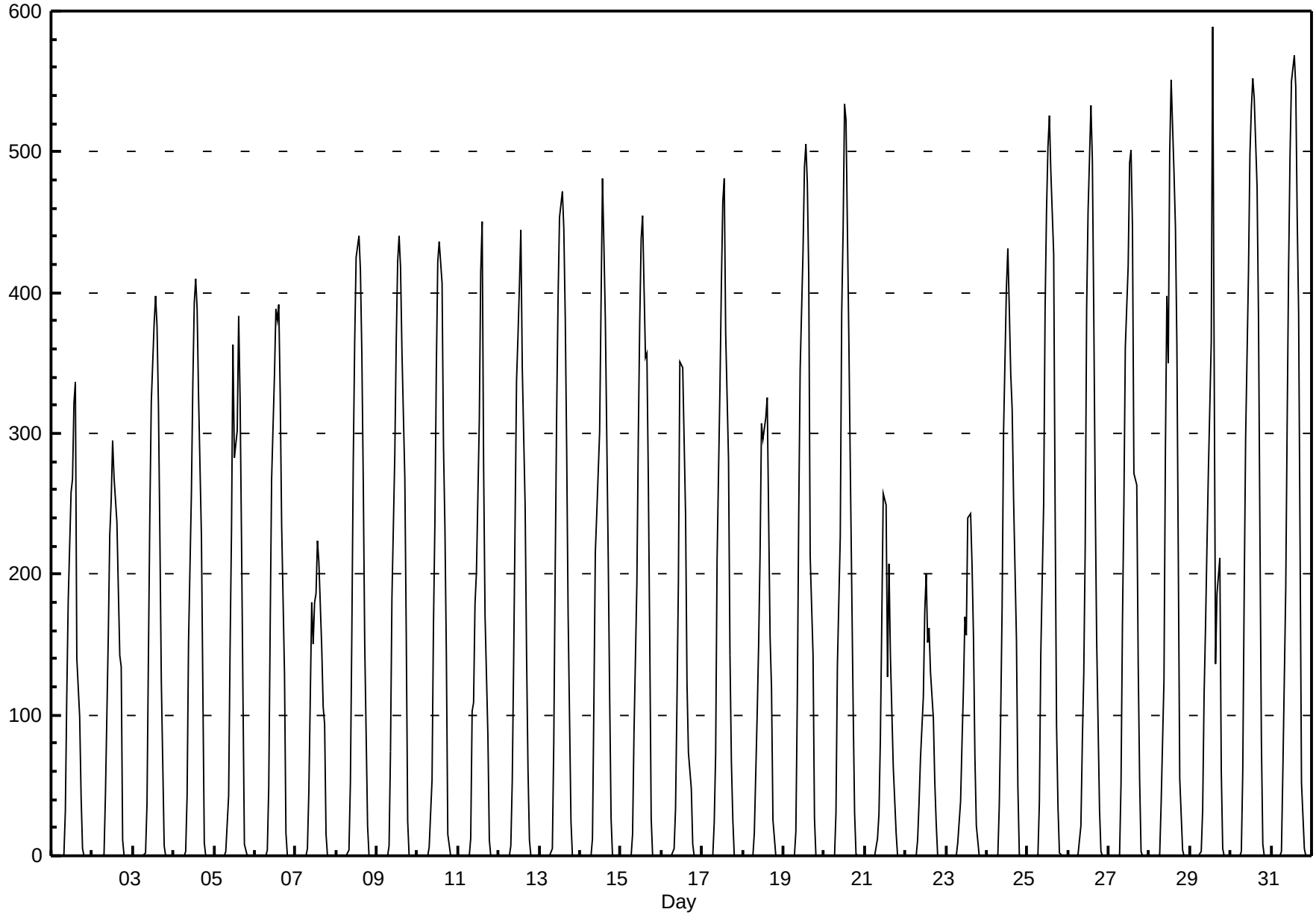
Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0	0	0	0	0	0	0	1	31	113	181	258	268	321	337	140	98	42	5	0	0	0	0	0	74.7	336.6
2-Mar	0	0	0	0	0	0	0	1	44	157	227	252	295	269	237	189	142	134	12	0	0	0	0	0	81.7	295.0
3-Mar	0	0	0	0	0	0	0	2	36	143	244	322	379	397	377	319	227	124	7	0	0	0	0	0	107.3	397.4
4-Mar	0	0	0	0	0	0	0	3	43	151	257	335	393	410	388	326	227	118	9	0	0	0	0	0	110.9	410.0
5-Mar	0	0	0	0	0	0	0	3	43	148	231	363	282	302	383	324	223	114	8	0	0	0	0	0	101.1	382.9
6-Mar	0	0	0	0	0	0	0	4	49	163	267	341	388	381	392	327	235	129	17	0	0	0	0	0	112.2	391.9
7-Mar	0	0	0	0	0	0	0	5	46	180	151	180	186	224	208	147	106	94	16	0	0	0	0	0	64.3	223.9
8-Mar	0	0	0	0	0	0	0	4	52	157	280	365	425	440	416	356	264	150	22	0	0	0	0	0	122.1	440.3
9-Mar	0	0	0	0	0	0	0	7	75	183	285	366	423	440	418	358	268	156	24	0	0	0	0	0	125.1	440.1
10-Mar	0	0	0	0	0	0	0	7	54	163	237	347	422	436	407	291	233	143	16	0	0	0	0	0	114.8	436.4
11-Mar	0	0	0	0	0	0	0	12	103	109	179	202	309	415	451	277	171	85	11	0	0	0	0	0	96.8	450.9
12-Mar	0	0	0	0	0	0	0	7	53	140	338	369	405	444	347	248	143	61	12	0	0	0	0	0	106.9	444.1
13-Mar	0	0	0	0	0	0	0	6	82	206	314	396	453	472	446	382	288	172	25	0	0	0	0	0	135.1	472.4
14-Mar	0	0	0	0	0	0	0	12	109	215	243	301	392	481	433	380	213	114	26	0	0	0	0	0	121.7	481.2
15-Mar	0	0	0	0	0	0	0	15	87	193	297	380	438	455	354	357	268	151	26	0	0	0	0	0	125.9	455.0
16-Mar	0	0	0	0	0	0	0	6	34	110	195	351	346	295	243	122	73	48	8	0	0	0	0	0	76.3	350.9
17-Mar	0	0	0	0	0	0	0	24	72	210	332	406	464	481	371	281	143	66	25	0	0	0	0	0	119.9	481.3
18-Mar	0	0	0	0	0	0	0	17	100	149	214	308	296	311	325	240	156	119	25	0	0	0	0	0	94.1	325.3
19-Mar	0	0	0	0	0	0	0	18	110	242	346	430	489	505	478	412	212	143	26	0	0	0	0	0	142.2	505.4
20-Mar	0	0	0	0	0	0	0	31	135	227	385	446	534	523	367	276	191	105	30	1	0	0	0	0	135.4	533.9
21-Mar	0	0	0	0	0	0	0	12	29	83	168	257	249	127	207	143	103	63	16	0	0	0	0	0	60.7	257.4
22-Mar	0	0	0	0	0	0	0	11	37	69	112	174	201	151	162	130	97	52	22	0	0	0	0	0	50.8	200.7
23-Mar	0	0	0	0	0	0	0	9	38	80	119	170	157	240	243	207	156	71	22	0	0	0	0	0	63.0	242.6
24-Mar	0	0	0	0	0	0	0	35	100	177	301	404	431	389	343	318	253	154	49	1	0	0	0	0	123.1	431.0
25-Mar	0	0	0	0	0	0	1	37	143	251	389	459	504	526	486	428	245	93	35	2	0	0	0	0	149.9	526.1
26-Mar	0	0	0	0	0	0	1	22	82	129	220	389	457	533	494	384	253	154	32	3	0	0	0	0	131.3	532.6
27-Mar	0	0	0	0	0	0	1	51	165	250	361	419	493	501	447	271	264	136	54	3	0	0	0	0	142.2	501.0
28-Mar	0	0	0	0	0	0	1	36	125	289	397	350	499	551	485	447	363	211	54	4	0	0	0	0	158.9	551.2
29-Mar	0	0	0	0	0	0	3	33	114	163	220	273	365	589	357	136	186	211	60	5	0	0	0	0	113.1	588.5
30-Mar	0	0	0	0	0	0	3	60	187	296	415	498	531	552	538	475	380	226	81	9	0	0	0	0	177.2	552.2
31-Mar	0	0	0	0	0	0	3	61	189	308	417	498	550	568	546	453	385	222	52	5	0	0	0	0	177.3	568.4
	0.0	0.0	0.0	0.0	0.0	0.0	0.4	17.7	82.8	176.0	268.5	342.2	387.8	410.7	376.9	295.0	211.8	124.6	26.6	1.1	0.0	0.0	0.0	0.0	Diurnal Average	
	0.0	0.0	0.0	0.0	0.0	0.0	3.1	60.5	189.1	307.7	416.6	498.2	550.2	588.5	545.9	475.3	385.4	226.3	81.3	8.5	0.0	0.0	0.0	0.0	Diurnal Maximum	

Hourly Averages

Solar Radiation (SR) - W/m^2

Henry Pirker - March 2010



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - March 2010

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1 Spd	4	4	4	4	3	4	2	4	4	4	5	4	5	5	4	5	4	4	2	3	4	4	2	3	3.6	5.2
Dir	305	330	305	330	314	286	330	335	303	310	312	301	278	300	292	311	339	309	296	312	296	314	306	319	309.4	311.7
2 Spd	6	5	2	1	1	1	2	3	1	6	5	4	4	8	5	4	1	3	4	0	4	3	2	2	2.7	7.5
Dir	301	304	215	297	296	144	273	341	258	282	282	307	251	276	280	282	269	190	288	0	302	313	265	227	282.2	275.6
3 Spd	1	2	2	2	5	6	4	1	3	3	4	4	4	5	3	4	11	7	11	12	9	11	13	15	4.9	14.6
Dir	270	132	150	186	218	242	193	306	161	200	275	243	275	307	281	281	277	297	270	284	275	291	281	276	270.3	276.2
4 Spd	5	4	4	3	4	4	3	1	2	4	4	4	5	3	3	3	4	4	4	3	6	5	4	6	1.8	5.7
Dir	269	142	171	192	239	224	162	243	273	292	274	270	291	289	270	301	19	64	89	348	328	313	309	315	285.6	314.6
5 Spd	4	5	6	4	3	1	3	1	3	4	2	4	4	3	10	13	10	10	9	6	9	8	8	7	4.1	13.0
Dir	318	322	299	337	293	305	310	330	316	304	271	298	274	264	243	251	242	248	257	227	196	203	184	178	252.7	250.8
6 Spd	8	7	4	4	4	5	6	5	2	4	6	7	8	6	4	0	6	4	3	2	3	3	3	3	2.2	8.1
Dir	163	156	153	144	131	143	146	159	152	152	168	188	179	187	201	96	13	39	358	357	306	339	303	302	162.3	179.5
7 Spd	3	3	2	2	0	3	3	5	4	5	5	4	3	3	4	2	2	3	2	3	4	7	5	13	3.1	12.6
Dir	310	290	313	336	166	332	314	306	298	309	295	272	287	279	296	169	173	145	315	332	319	318	301	283	298.7	283.2
8 Spd	16	22	20	15	11	15	17	20	18	18	20	18	15	14	11	7	9	14	20	18	15	11	8	4	14.6	21.7
Dir	261	271	273	270	267	249	248	253	262	260	247	252	257	259	273	279	249	249	262	256	254	240	231	220	257.5	270.7
9 Spd	4	5	4	4	3	1	2	2	3	6	6	7	7	9	8	10	9	7	7	5	5	6	8	7	3.9	10.2
Dir	181	139	130	108	97	259	324	296	278	302	297	287	291	317	330	313	315	331	311	324	341	292	323	322	311.7	313.2
10 Spd	5	1	2	4	4	4	4	5	4	4	6	3	2	6	4	4	4	7	4	4	5	4	1	5	2.0	6.9
Dir	279	110	155	321	313	294	294	317	304	280	279	263	260	281	298	42	55	76	63	340	302	320	288	116	314.6	76.2
11 Spd	6	8	7	5	4	6	7	6	8	10	8	8	4	5	14	12	18	11	6	13	6	6	6	8	1.7	18.0
Dir	108	103	104	87	112	102	106	99	107	106	118	123	89	268	252	258	298	327	180	266	270	184	160	201	167.0	297.8
12 Spd	7	8	10	3	4	2	3	3	2	3	5	6	8	10	8	6	4	5	4	5	4	3	3	5	3.1	9.7
Dir	203	180	187	196	43	39	91	340	359	342	258	280	287	278	262	258	251	181	217	242	270	291	253	278	248.9	186.8
13 Spd	3	3	5	7	6	6	6	4	6	6	5	5	7	6	6	6	6	8	8	7	9	6	2	1	1.8	8.8
Dir	258	249	260	298	312	335	326	285	302	283	276	265	277	294	320	348	25	76	92	101	107	112	122	168	320.2	106.6
14 Spd	2	4	5	4	0	2	1	5	4	3	4	5	5	8	11	10	11	11	12	9	9	2	3	4	3.3	12.1
Dir	272	106	124	313	64	302	97	317	284	299	100	66	46	59	72	59	70	79	87	96	103	230	251	268	72.4	86.7
15 Spd	5	1	1	1	1	0	2	1	4	4	5	4	3	5	5	6	7	6	3	4	1	2	2	0	2.3	7.2
Dir	290	222	164	84	356	315	325	316	307	285	286	298	303	90	350	307	317	320	345	292	70	332	320	134	314.3	317.1
16 Spd	4	2	1	4	3	3	8	7	7	6	6	5	8	9	8	8	5	6	4	6	3	4	2	14	3.6	13.5
Dir	319	149	315	329	3	358	327	319	328	347	17	54	28	29	58	64	66	42	38	11	340	71	101	265	9.4	264.7
17 Spd	12	2	4	1	3	4	4	2	1	4	5	12	24	25	26	23	22	21	19	14	11	14	15	10	10.5	26.4
Dir	328	302	178	190	337	313	301	300	352	151	261	271	267	263	250	252	251	253	260	281	285	253	249	269	263.2	250.0
18 Spd	16	15	14	17	17	16	15	16	16	17	16	16	16	16	16	18	16	15	11	9	5	2	1	4	13.2	18.0
Dir	311	303	298	304	307	308	300	299	298	300	299	301	297	294	295	285	283	287	302	293	316	337	298	299	298.8	284.5
19 Spd	3	1	3	4	4	4	3	4	4	5	5	6	5	6	6	4	5	3	5	3	3	3	1	5	3.5	6.2
Dir	332	342	312	295	301	309	286	309	301	283	283	281	279	311	284	293	289	266	302	333	338	231	216	194	292.2	281.0
20 Spd	7	4	7	5	1	1	3	5	7	9	6	8	11	14	12	10	7	8	7	6	4	5	7	10	2.5	13.9
Dir	215	193	271	352	113	263	114	220	239	272	293	314	322	331	343	336	345	66	89	99	80	43	50	62	342.1	330.6
21 Spd	9	8	9	12	11	11	11	14	12	11	11	10	8	11	10	9	9	5	5	10	8	7	7	7	7.6	13.7
Dir	66	58	49	51	44	28	5	355	351	0	4	3	360	301	323	343	19	34	0	313	316	310	308	309	0.7	355.4
22 Spd	6	7	8	7	5	7	6	6	6	7	5	6	7	6	7	7	9	9	9	8	5	6	8	7	6.7	9.4
Dir	63	79	82	70	59	61	62	56	67	76	68	51	55	53	60	65	83	71	75	82	62	37	33	33	63.6	74.9

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - March 2010

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
23 Spd	5	6	5	4	4	4	4	4	5	5	6	7	8	8	8	7	8	9	10	9	10	11	12	13	7.0	13.3
Dir	360	9	26	39	45	45	44	37	45	45	49	48	52	59	49	51	48	49	54	50	47	48	50	50	45.5	49.6
24 Spd	10	10	10	8	10	9	11	12	11	12	13	12	13	12	14	15	16	14	10	7	6	7	6	3	10.3	16.3
Dir	43	48	55	54	51	58	63	68	69	81	78	72	65	65	73	71	71	70	68	47	49	66	16	25	63.2	71.1
25 Spd	5	3	3	4	4	4	4	4	4	6	6	6	5	6	6	9	9	6	5	5	6	5	6	6	3.4	9.1
Dir	327	3	281	309	300	297	307	311	281	288	303	273	284	323	23	69	61	30	27	21	338	350	36	38	345.0	69.5
26 Spd	7	7	8	9	8	7	6	5	5	8	7	6	6	8	8	7	4	5	5	5	3	2	1	2	4.4	8.6
Dir	47	40	41	54	60	38	46	55	73	83	89	83	64	52	22	29	21	316	297	300	309	96	295	321	42.5	54.0
27 Spd	3	1	5	8	5	7	10	4	6	3	8	12	9	15	13	8	7	2	5	7	7	8	6	6	3.4	15.5
Dir	317	289	264	227	212	267	245	267	235	294	256	244	258	266	276	267	280	337	94	98	98	109	100	107	249.3	266.3
28 Spd	7	6	8	8	8	0	1	3	5	10	16	22	21	19	23	23	16	12	10	10	11	9	7	3	6.9	22.9
Dir	105	96	103	98	113	355	44	100	146	189	257	266	249	252	251	251	242	230	211	211	203	202	172	145	225.2	251.2
29 Spd	3	6	5	6	6	8	9	9	5	6	5	3	3	6	9	12	10	12	11	8	13	9	11	11	1.7	13.0
Dir	148	128	89	94	89	95	104	104	90	83	96	91	83	303	311	279	280	260	261	246	242	238	245	245	230.2	241.7
30 Spd	9	12	12	16	17	12	11	14	18	17	19	18	21	19	19	19	17	15	15	17	17	16	14	11	15.4	20.9
Dir	224	236	243	243	243	237	234	242	245	247	248	256	257	254	254	249	248	252	250	251	247	244	244	239	246.5	257.5
31 Spd	7	9	7	3	6	8	10	7	7	12	10	8	10	11	10	11	12	9	8	8	15	12	8	9	8.6	14.9
Dir	288	265	298	255	270	275	269	306	279	261	282	280	289	291	301	288	286	284	287	272	247	263	238	240	275.3	247.1
Spd	2.0	0.4	0.7	1.4	1.2	1.8	1.6	2.4	2.4	2.7	3.5	3.9	4.5	5.5	5.1	4.4	3.7	2.1	2.0	2.9	2.7	2.3	2.0	2.4	Diurnal Average	
Dir	300.1	287.5	272.1	326.6	329.1	311.0	306.2	313.7	293.9	288.3	281.4	282.2	287.1	292.4	292.6	293.1	303.3	306.1	290.5	288.7	279.9	274.2	272.9	274.1		
Spd	15.9	21.7	19.5	16.8	17.0	16.2	17.2	19.8	18.1	17.7	20.5	22.0	23.7	25.1	26.4	23.0	21.7	20.5	20.3	18.1	16.7	16.1	15.2	14.6	Diurnal Maximum	
Dir	261.1	270.7	272.5	303.8	306.8	307.6	248.2	253.5	261.7	260.3	247.4	266.4	267.1	263.2	250.0	251.6	251.0	253.3	262.0	255.8	247.4	243.7	248.9	276.2		

Maximum Speed Value: 26 km/h on Mar 17 15:00
Maximum Daily Speed Average: 15.4 km/h on Mar 30
Maximum Diurnal Speed Average: 5.5 km/h at hour 14

Minimum Speed Value: 0 km/h on Mar 6 16:00
Minimum Daily Speed Average: 1.7 km/h on Mar 15
Minimum Diurnal Speed Average: 0.4 km/h at hour 2

Monthly Average Velocity: 2.57 km/h 292.07 deg

Speed Percentiles: $P_1 = 0.5$ $P_{10} = 2.4$ $Q_1 = 3.8$ Median = 5.8 $Q_3 = 9.2$ $P_{90} = 14.3$ $P_{99} = 21.4$

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

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

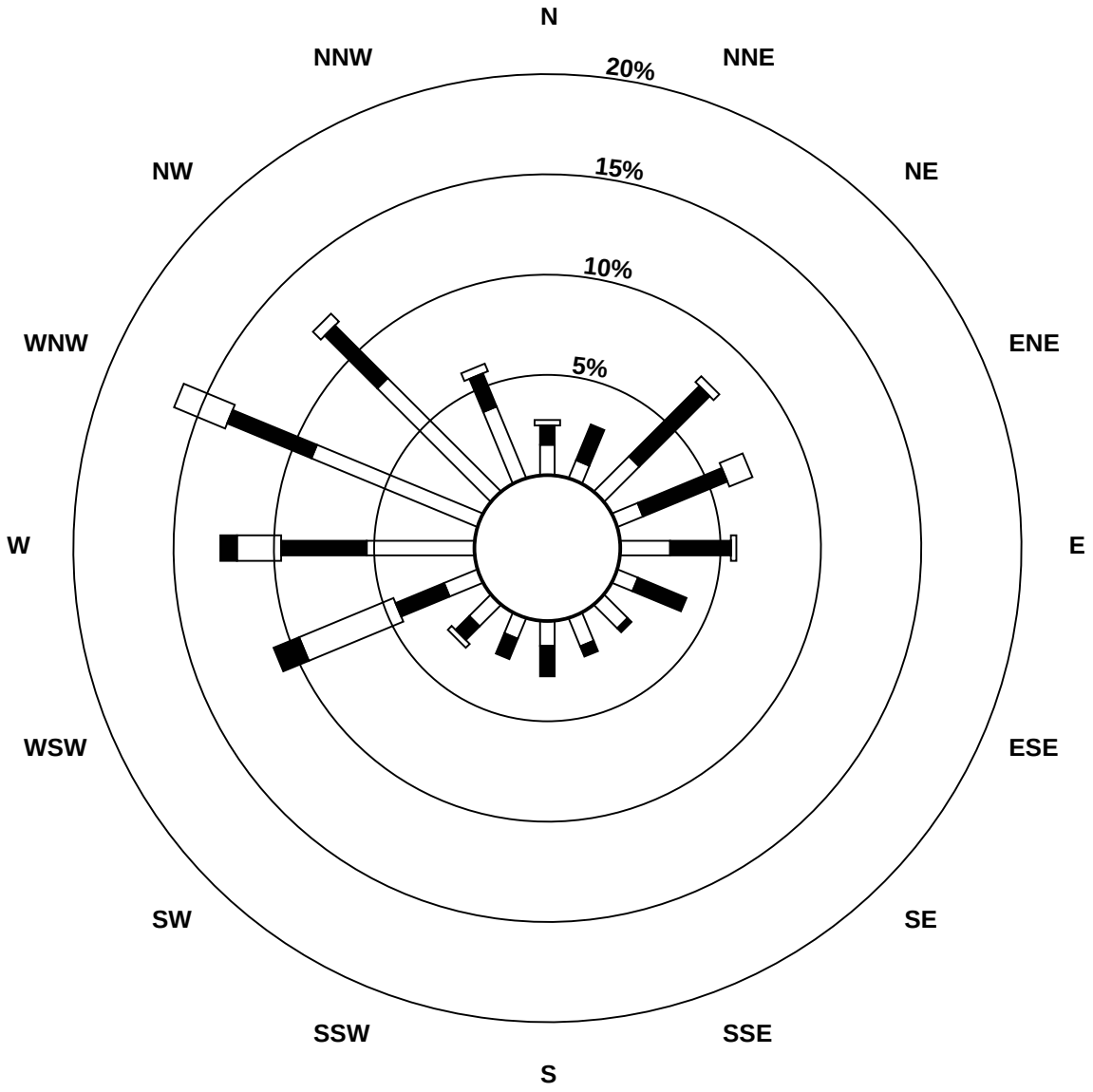
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	27	17	6	0	0	0	50
NorthEast	20	74	6	0	0	0	100
East	23	53	11	0	0	0	87
SouthEast	23	8	0	0	0	0	31
South	20	19	0	0	0	0	39
SouthWest	14	23	20	1	0	0	58
West	62	64	46	19	0	0	191
NorthWest	107	60	21	0	0	0	188
Total	296	318	110	20	0	0	744

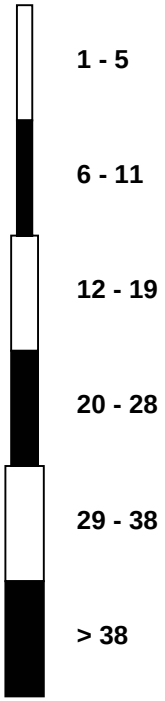
Wind Rose

Wind Speed (WS) (km/h)

Henry Pirker - March 2010



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Henry Pirker - March 2010

Maximum Speed: 26 km/h on Mar 17 15:00

Maximum Daily Speed Average: 15.7 km/h on Mar 30

Minimum Speed: 2 km/h on Mar 19 23:00

Minimum Daily Speed Average: 4.3 km/h on Mar 7

Maximum Diurnal Speed Average: 9.9 km/h at hour 15

Minimum Diurnal Speed Average: 6.0 km/h at hour 5

Monthly Average Speed: 7.54 km/h

Percentiles: $P_1 = 2.3$ $P_{10} = 3.3$ $Q_1 = 4.3$ Median = 6.3 $Q_3 = 9.4$ $P_{90} = 14.4$ $P_{99} = 21.8$

Hours in Service: 744

Hours of Data: 744

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	4	5	4	5	3	5	4	5	5	4	6	5	5	5	5	5	5	5	3	3	4	4	3	4	4.5	5.7
2-Mar	7	5	3	3	4	4	4	5	5	7	6	5	5	8	6	5	2	3	4	3	4	4	4	3	4.6	7.8
3-Mar	3	3	2	3	5	6	4	3	3	4	4	5	5	6	4	4	11	8	11	13	9	11	13	15	6.4	14.6
4-Mar	7	4	4	4	4	4	3	3	3	5	4	5	6	3	3	3	5	4	5	5	6	5	4	6	4.4	6.9
5-Mar	4	6	6	4	4	3	3	3	4	4	3	4	4	4	10	13	10	10	9	7	9	8	8	7	6.1	13.1
6-Mar	8	7	4	4	5	5	6	5	2	5	6	7	8	6	4	4	6	4	4	3	3	3	3	3	4.8	8.3
7-Mar	3	3	2	3	3	4	3	5	4	6	5	4	4	4	4	3	2	4	3	4	4	8	5	13	4.3	12.7
8-Mar	16	22	20	16	12	15	17	20	18	18	21	18	15	14	11	8	9	14	20	18	15	11	8	4	15.0	21.8
9-Mar	4	5	4	4	3	3	2	3	3	6	6	7	7	10	9	10	9	7	7	6	5	7	8	7	5.9	10.3
10-Mar	5	3	2	4	4	4	4	5	5	5	6	4	3	6	5	4	5	7	4	5	5	5	3	5	4.5	7.0
11-Mar	7	8	7	5	4	6	7	6	8	10	8	8	5	7	14	13	20	11	8	17	8	7	6	9	8.7	19.9
12-Mar	8	8	10	6	5	3	4	4	3	3	6	7	8	10	9	7	5	6	4	6	5	4	4	5	5.7	10.1
13-Mar	3	4	5	7	7	6	6	5	6	6	5	5	7	6	6	6	6	8	8	7	9	6	3	2	5.8	8.8
14-Mar	2	4	5	5	2	3	4	5	4	3	5	5	5	8	11	10	11	11	12	9	9	5	3	4	6.1	12.1
15-Mar	6	3	3	3	2	3	3	4	4	4	5	4	5	6	6	7	7	6	4	4	4	4	3	3	4.3	7.5
16-Mar	4	3	2	4	4	4	8	7	7	7	7	6	9	9	8	9	6	6	4	6	4	5	3	14	6.1	14.3
17-Mar	14	4	5	3	4	4	5	4	3	4	6	12	24	25	26	23	22	21	19	14	12	15	15	12	12.4	26.5
18-Mar	16	15	14	17	17	16	15	16	16	17	17	16	16	16	16	18	16	15	11	9	6	4	3	4	13.6	18.1
19-Mar	3	2	4	4	4	4	4	4	4	5	5	6	5	6	6	5	5	3	5	4	3	3	2	5	4.3	6.2
20-Mar	7	5	8	5	4	3	3	5	7	9	6	8	11	14	12	10	7	8	8	6	4	5	7	10	7.2	14.2
21-Mar	9	8	9	12	11	11	11	14	12	11	11	11	9	12	11	10	9	6	7	10	8	7	7	7	9.7	13.9
22-Mar	7	8	8	7	5	7	6	6	6	7	6	6	7	6	7	8	10	9	10	8	6	6	8	7	7.1	9.6
23-Mar	5	6	5	5	4	4	4	5	5	5	6	7	8	9	8	8	8	9	10	9	10	11	12	14	7.4	13.5
24-Mar	10	10	10	9	10	9	11	12	11	13	13	13	14	12	15	15	16	14	11	7	7	7	7	4	10.8	16.5
25-Mar	5	4	3	4	4	4	5	4	5	6	6	6	5	7	7	9	9	6	6	6	6	6	7	7	5.7	9.4
26-Mar	7	7	8	9	8	7	6	5	5	8	8	6	7	8	9	7	5	7	6	5	4	3	3	3	6.3	8.9
27-Mar	3	3	5	8	6	8	10	5	7	6	9	12	9	16	13	8	7	4	6	7	7	8	6	7	7.5	15.5
28-Mar	7	6	8	8	8	4	2	4	5	11	17	22	21	20	23	23	17	12	10	11	11	9	7	4	11.3	23.1
29-Mar	3	6	5	6	7	8	9	9	6	6	5	4	4	9	9	12	10	12	11	8	13	10	11	11	8.2	13.1
30-Mar	9	12	13	16	17	12	11	14	18	17	19	18	21	19	19	19	18	15	15	17	17	16	14	11	15.7	21.0
31-Mar	9	9	7	4	6	8	10	7	7	12	10	9	11	12	10	11	12	9	8	8	15	12	8	9	9.3	14.9
	6.6	6.4	6.4	6.4	6.0	6.1	6.4	6.6	6.5	7.5	8.0	8.3	8.8	9.7	9.9	9.6	9.4	8.6	8.2	7.9	7.5	7.0	6.4	7.0	Diurnal Average	
	16.3	21.8	19.6	16.9	17.0	16.2	17.2	19.9	18.2	17.7	20.6	22.3	23.8	25.2	26.5	23.1	21.7	20.6	20.4	18.3	16.8	16.1	15.2	14.6	Diurnal Maximum	

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

Hourly Standard Deviations

Wind Direction (WD) - deg

Henry Pirker - March 2010

Maximum Value: 97.0 deg on Mar 15 06:00

Minimum Value: 3.0 deg on Mar 18 17:00

Percentiles: P_1 = 4.4 P_{10} = 6.9 Q_1 = 10.6 Median = 17.5 Q_3 = 32.2 P_{90} = 56.3 P_{99} = 92.6

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	37	32	34	19	47	54	81	29	49	34	23	42	37	26	34	30	35	36	71	35	44	19	42	42	80.9
2-Mar	40	36	46	96	87	83	70	65	80	42	38	39	45	13	26	34	73	30	37	95	21	34	75	70	96.4
3-Mar	76	37	41	73	26	12	39	83	57	41	25	36	26	13	41	25	10	13	11	10	8	19	9	4	83.4
4-Mar	44	27	21	20	32	12	34	79	48	13	12	38	19	31	45	51	35	20	59	59	10	16	12	16	79.0
5-Mar	26	17	18	28	32	74	49	96	39	14	55	31	32	27	8	8	10	9	8	32	11	7	8	10	95.5
6-Mar	7	5	55	19	11	7	8	8	22	16	6	15	12	15	28	94	24	26	42	42	13	35	11	14	93.6
7-Mar	29	58	56	61	93	41	40	17	19	10	17	20	31	42	33	28	55	51	67	68	30	10	22	7	92.6
8-Mar	12	5	5	11	8	5	5	4	7	6	5	7	11	10	11	10	24	6	8	8	7	6	10	32	32.0
9-Mar	14	11	12	14	14	67	56	66	40	16	13	12	18	12	25	7	8	12	18	24	19	11	16	34	67.4
10-Mar	29	83	36	14	17	20	21	21	25	21	10	54	52	16	52	27	31	14	13	41	21	28	79	22	83.2
11-Mar	8	8	7	23	39	19	10	10	9	14	13	10	46	63	19	25	27	9	50	47	36	24	14	11	63.1
12-Mar	17	9	16	71	43	57	52	62	65	39	37	22	10	7	14	20	28	12	31	14	25	30	25	17	71.2
13-Mar	27	19	13	11	17	10	13	32	13	13	8	18	6	19	17	21	19	17	10	8	5	15	26	68	67.8
14-Mar	47	68	10	30	81	75	87	23	15	30	31	30	27	16	12	11	8	6	4	5	9	74	53	37	87.2
15-Mar	37	69	88	87	91	97	58	89	30	33	32	26	64	59	42	24	19	15	41	44	72	74	84	91	97.0
16-Mar	20	57	82	26	27	34	19	11	15	26	22	29	23	16	16	13	23	18	26	17	56	51	67	28	82.2
17-Mar	27	84	30	80	52	26	33	73	92	29	45	9	6	6	5	7	4	6	7	13	14	13	5	27	91.8
18-Mar	6	6	5	5	4	5	5	4	4	5	7	7	6	6	7	6	3	6	8	8	27	57	58	20	57.6
19-Mar	27	75	19	26	27	34	50	12	8	15	7	4	14	12	11	38	21	45	18	28	38	32	51	21	75.0
20-Mar	12	23	38	43	75	72	31	23	17	16	16	20	11	12	10	12	19	20	19	12	26	11	16	6	74.5
21-Mar	10	7	9	7	15	15	11	9	9	10	10	15	20	22	30	26	14	23	39	7	9	9	7	9	38.8
22-Mar	24	12	14	12	15	13	16	15	14	11	17	22	16	16	16	19	13	11	9	9	23	17	12	12	24.4
23-Mar	26	20	25	20	21	28	21	19	17	16	18	18	16	16	16	15	13	12	10	10	15	9	8	10	28.3
24-Mar	12	11	13	15	11	17	9	9	8	13	12	11	14	12	11	11	8	9	24	23	16	12	31	54	54.3
25-Mar	17	48	28	25	21	22	25	18	20	13	21	15	12	34	30	16	17	37	28	36	15	23	19	15	48.4
26-Mar	15	15	13	11	12	16	15	19	22	16	15	23	23	18	20	21	42	63	18	25	39	61	83	72	83.4
27-Mar	42	89	22	8	27	23	8	36	40	53	30	12	22	6	7	10	13	55	26	10	7	6	8	15	89.3
28-Mar	7	16	10	14	21	93	55	37	25	35	12	9	6	7	6	7	9	15	8	11	5	7	10	24	92.6
29-Mar	25	8	15	29	17	11	8	9	43	24	22	43	42	77	22	13	11	10	13	11	8	14	7	7	76.7
30-Mar	12	6	11	6	5	7	7	6	5	6	7	7	7	8	8	8	7	7	6	6	7	5	6	8	12.3
31-Mar	28	16	14	47	25	13	9	16	16	17	7	13	11	10	16	13	7	8	9	14	4	12	11	8	47.4
	76.4	89.3	87.9	96.4	92.6	97.0	87.2	95.5	91.8	52.8	55.2	54.0	64.3	76.7	51.5	93.6	73.1	63.4	71.1	95.2	72.4	74.0	83.9	90.7	

PASZA
Evergreen Park Station
Monthly Summary Tables, Graphs and Roses

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - March 2010

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

Maximum Value: 4.7 ppb on Mar 25 15:00

Maximum Daily Average: 0.9 ppb on Mar 25

Minimum Value: 0 ppb on Mar 6 07:00

Minimum Daily Average: 0.0 ppb on Mar 12

Maximum Diurnal Average: 0.5 ppb at hour 15

Minimum Diurnal Average: 0.1 ppb at hour 4

Monthly Average: 0.22 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.1$ Median = 0.2 $Q_3 = 0.3$ $P_{90} = 0.4$ $P_{99} = 1.0$

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	35
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	A	0	0	0	0	1	1	0.4	0.8
2-Mar	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	A	1	1	0	0	0	0	0	0.5	1.0
3-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	0.2	0.5
4-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.3
5-Mar	0	0	0	0	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0.3	0.5
6-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	0.2	0.4
7-Mar	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
8-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	0.4
9-Mar	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
10-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	0.2	0.5
11-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	0.1	0.4
12-Mar	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.3
13-Mar	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
14-Mar	0	0	0	0	A	0	0	0	0	0	1	0	1	1	0	1	1	0	0	0	0	0	0	0	0.3	1.2
15-Mar	0	0	0	A	D	D	D	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	--	0.3
16-Mar	0	0	0	0	0	A	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0.2	0.7
17-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	0.3
18-Mar	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
19-Mar	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0.3	0.7
20-Mar	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
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	A	0.1	0.2
22-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.5
23-Mar	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.6
24-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	0.2	0.4
25-Mar	0	0	0	0	0	0	0	0	1	1	1	1	1	3	5	3	1	1	1	A	1	1	1	1	0.9	4.7
26-Mar	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0.3	0.6
27-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	0.1	0.3
28-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.4
29-Mar	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	A	0	0	0	0	0	0	0	0	0.1	0.6
30-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.3
31-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	0.1	0.5
Diurnal Average	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.5	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1		
Diurnal Maximum	0.5	0.5	0.4	0.3	0.4	0.3	0.4	0.4	0.6	0.9	0.8	0.9	0.9	2.7	4.7	2.6	1.3	1.2	0.9	0.3	0.6	0.6	0.6	0.6		

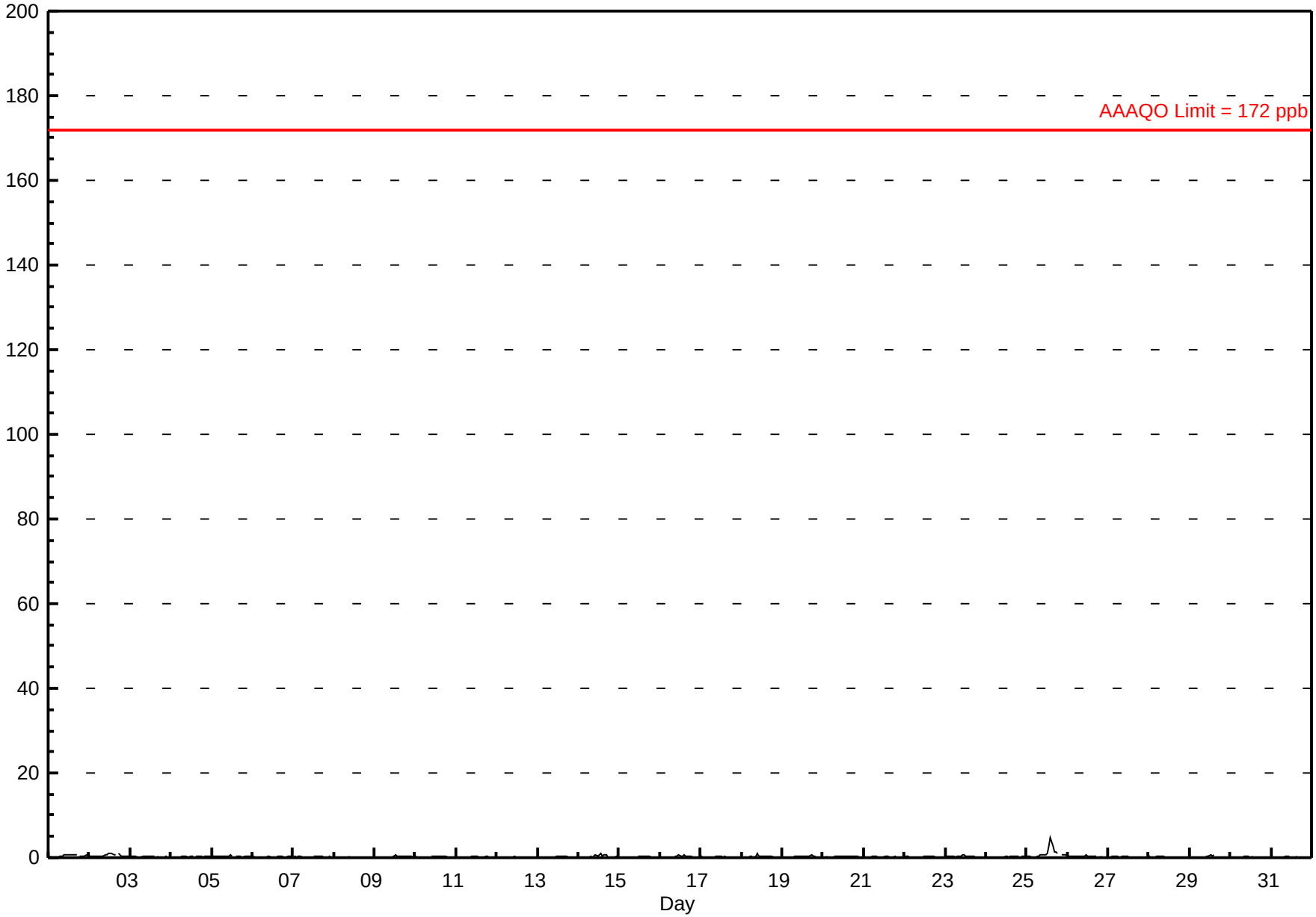
C - Calibration D - DAS Failure A - Automated Daily Zero Span

Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 57 ppb

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - March 2010



Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - March 2010

Maximum Value: 7.0 ppb on Mar 25 15:00

Maximum Daily Average: 1.6 ppb on Mar 25

Minimum Value: 0 ppb on Mar 16 05:00

Minimum Daily Average: 0.4 ppb on Mar 12

Maximum Diurnal Average: 0.9 ppb at hour 14

Minimum Diurnal Average: 0.4 ppb at hour 20

Monthly Average: 0.59 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.3$ $Q_1 = 0.4$ Median = 0.5 $Q_3 = 0.7$ $P_{90} = 1.0$ $P_{99} = 2.0$

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	35
Percent Operational Time:	99.6

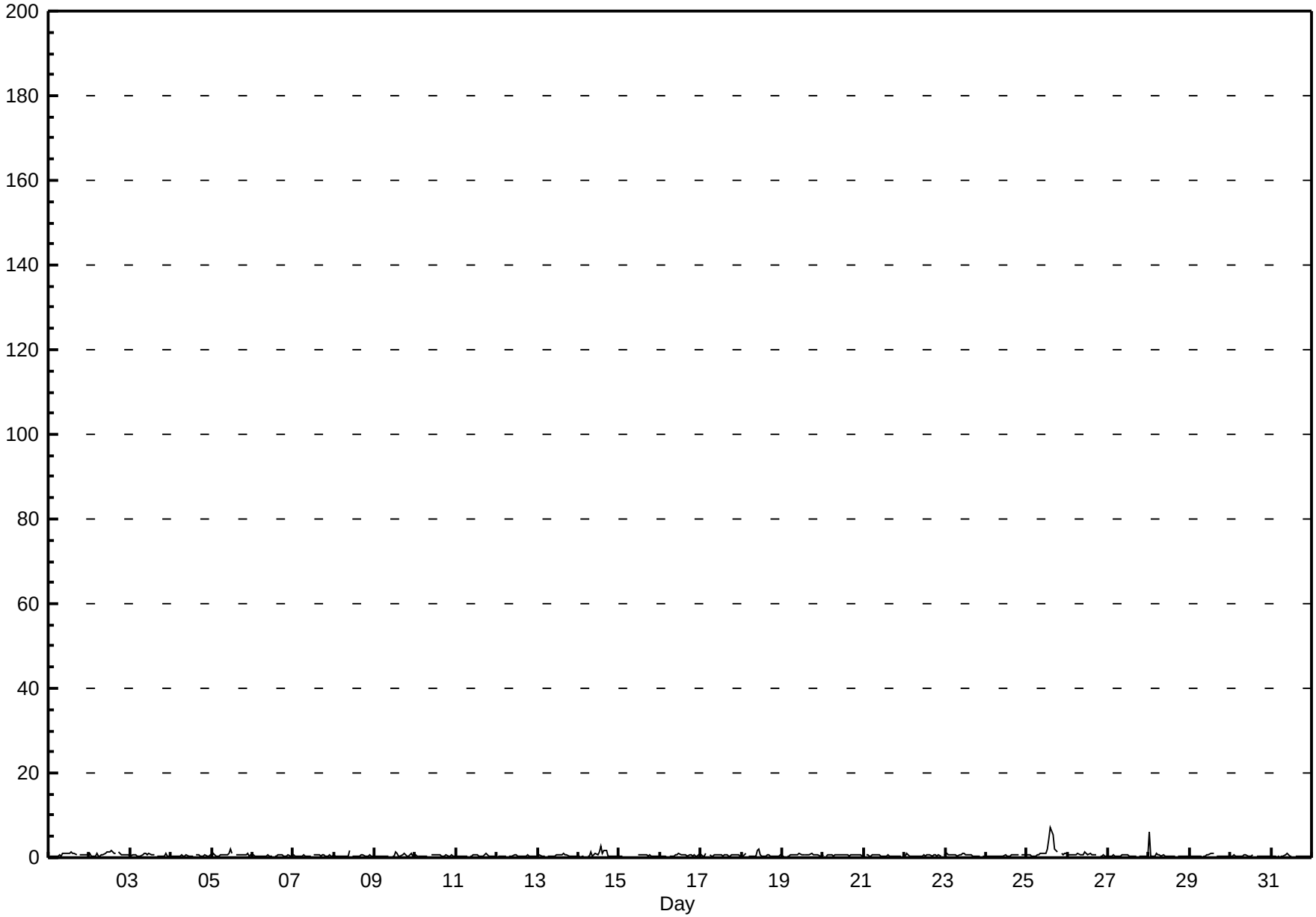
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.8	1.3
2-Mar	1	0	0	0	1	0	0	1	1	1	1	1	1	2	1	1	A	1	1	1	1	1	1	1	0.9	1.6
3-Mar	0	1	1	1	0	0	0	1	1	1	1	1	1	1	1	A	0	0	0	0	0	1	0	0	0.6	1.0
4-Mar	0	0	0	0	0	0	1	0	0	1	0	0	0	0	A	1	1	0	0	0	1	0	0	1	0.5	0.7
5-Mar	0	1	0	0	0	1	1	1	1	1	1	2	1	A	1	1	1	1	1	1	1	1	1	1	0.7	2.0
6-Mar	1	0	0	0	0	0	0	0	0	1	0	0	A	0	0	1	1	1	0	0	0	1	0	0	0.5	0.8
7-Mar	1	0	0	0	0	0	1	0	0	0	0	A	1	1	1	1	0	1	1	0	0	1	0	0	0.5	0.8
8-Mar	1	0	0	0	0	0	0	0	0	2	A	0	0	0	0	0	1	1	0	0	0	1	0	0	0.5	1.6
9-Mar	0	0	0	0	0	0	0	0	0	A	0	0	1	1	0	0	1	1	1	0	0	1	0	0	0.5	1.3
10-Mar	1	0	0	0	0	0	0	0	A	1	1	1	1	1	1	0	0	0	1	0	0	1	0	0	0.5	0.8
11-Mar	0	0	0	0	0	0	0	A	0	0	1	1	1	0	0	0	0	1	1	0	0	0	0	0	0.5	1.0
12-Mar	0	0	0	0	0	0	A	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0.4	0.6
13-Mar	0	1	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0.5	0.9
14-Mar	0	0	0	0	A	0	0	1	0	1	1	1	1	3	1	2	2	0	0	0	0	0	0	0	0.7	2.7
15-Mar	0	0	0	A	D	D	D	1	C	C	C	1	1	1	1	1	1	0	1	0	0	0	0	0	--	0.7
16-Mar	0	0	0	0	0	A	0	0	0	1	1	1	1	1	1	1	1	1	1	0	1	0	0	1	0.5	1.0
17-Mar	1	0	0	1	A	1	0	0	1	1	1	1	1	0	1	1	0	0	1	1	1	1	1	0	0.5	1.1
18-Mar	0	0	1	A	0	1	0	0	0	2	2	1	0	0	0	1	1	0	0	0	0	0	0	1	0.6	2.0
19-Mar	0	0	A	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0.6	1.1
20-Mar	1	A	0	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	0.6	0.8
21-Mar	A	1	1	1	0	1	1	1	1	1	0	0	1	1	1	1	0	0	0	0	1	0	0	A	0.5	0.8
22-Mar	0	1	1	0	0	0	0	0	1	0	0	1	0	1	1	1	0	1	1	0	1	0	A	1	0.5	1.0
23-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	A	0	0	0.6	1.1
24-Mar	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	1	1	1	1	A	1	1	1	0.5	0.7
25-Mar	1	1	1	0	0	0	1	1	1	1	1	1	2	4	7	5	2	2	1	A	1	1	1	1	1.6	7.0
26-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0	0	1	0	0	0.7	1.3
27-Mar	0	0	0	1	0	0	0	0	1	1	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0.4	0.7
28-Mar	6	0	0	0	1	1	1	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.7	6.1
29-Mar	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0.5	1.0
30-Mar	0	0	1	0	0	0	0	0	1	1	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0.5	0.7
31-Mar	0	0	0	0	0	0	0	0	1	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0.4	1.1
	0.7	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.6	0.7	0.7	0.7	0.7	0.9	0.9	0.8	0.6	0.6	0.6	0.4	0.5	0.5	0.5	0.5	Diurnal Average	
	6.1	1.0	1.0	1.1	1.2	0.7	1.0	1.2	1.0	1.6	2.0	2.0	2.1	4.3	7.0	5.4	1.9	1.6	1.3	0.7	1.0	1.1	1.0	1.0	Diurnal Maximum	

C - Calibration D - DAS Failure A - Automated Daily Zero Span

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

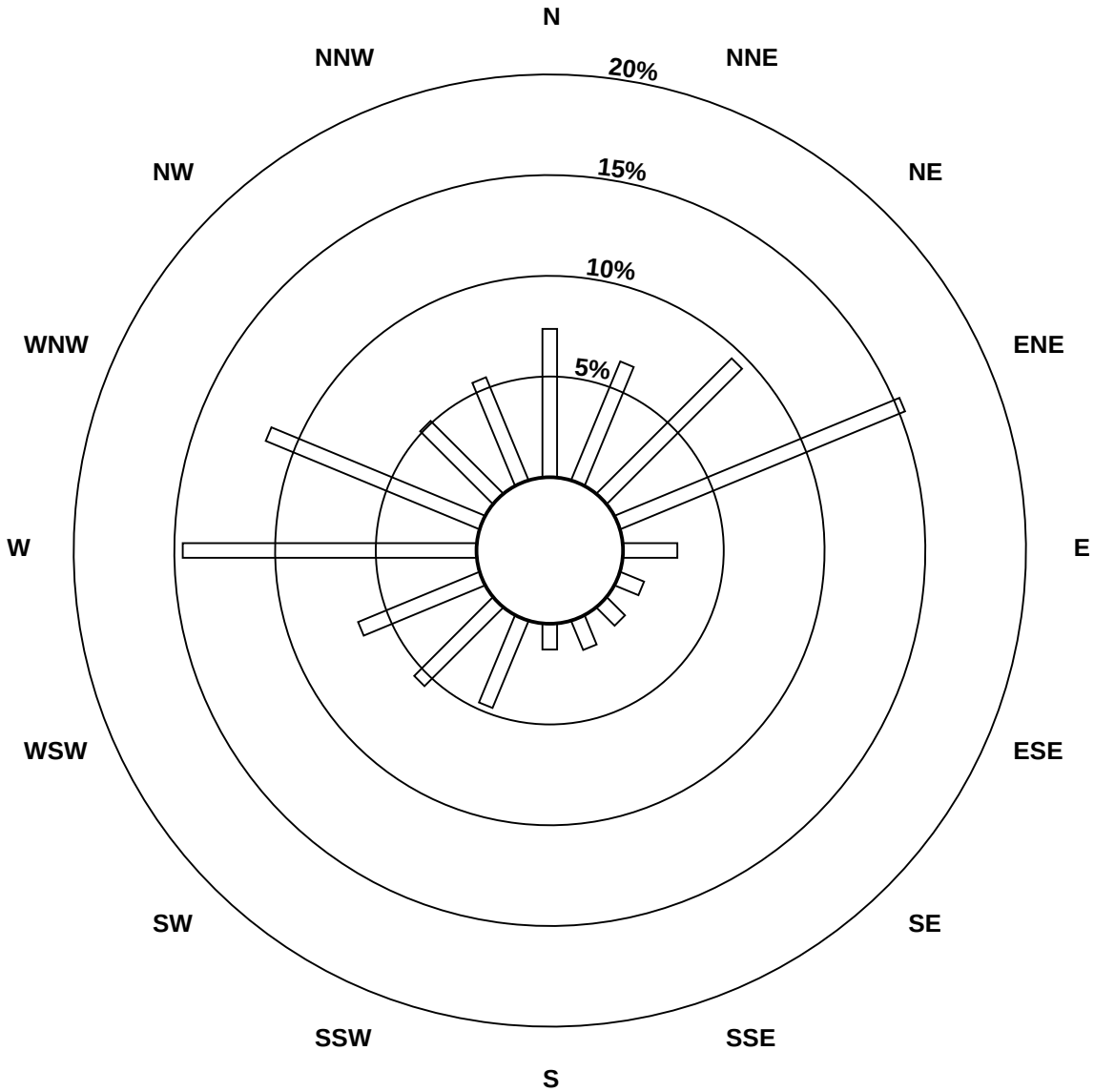
Evergreen Park - March 2010



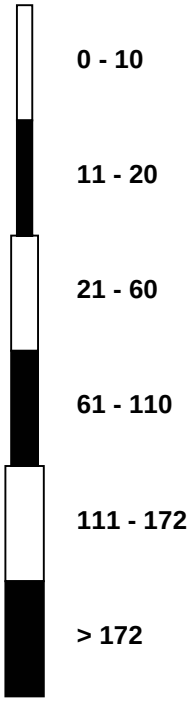
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - March 2010



Pollutant Classes (ppb)



Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - March 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 2.6 ppb on Mar 28 07:00
Maximum Daily Average: 1.0 ppb on Mar 7

Minimum Value: 0 ppb on Mar 24 14:00
Maximum Diurnal Average: 0.8 ppb at hour 7
Monthly Average: 0.64 ppb

Minimum Daily Average: 0.5 ppb on Mar 24
Minimum Diurnal Average: 0.5 ppb at hour 17
Percentiles: $P_1 = 0.4$ $P_{10} = 0.5$ $Q_1 = 0.5$ Median = 0.6 $Q_3 = 0.7$ $P_{90} = 0.9$ $P_{99} = 1.5$

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	35
Percent Operational Time:	99.6

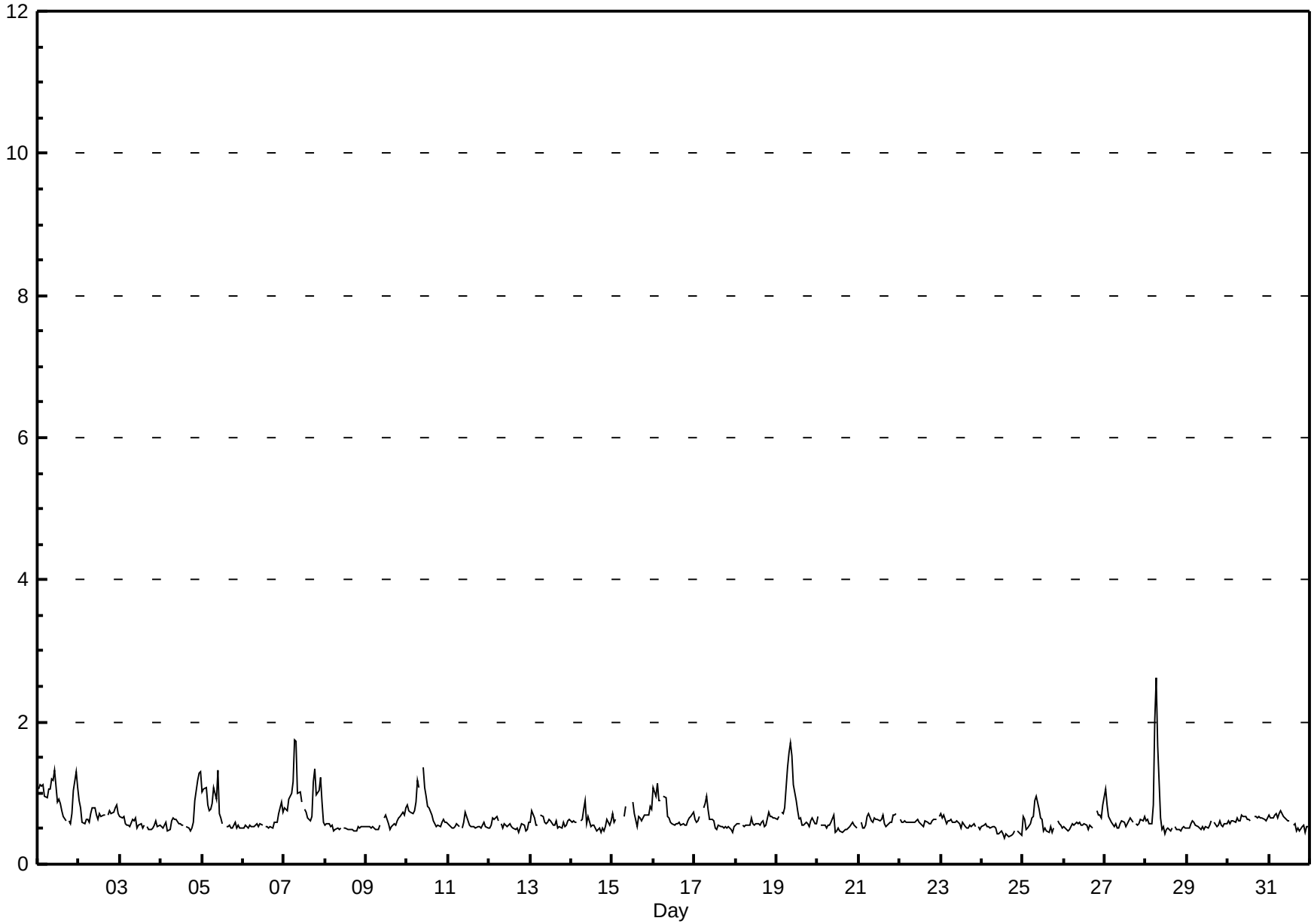
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1.0	1.3
2-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.7	0.9
3-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	0	1	1	1	1	1	0.6	0.7
4-Mar	1	1	1	1	0	0	1	1	1	1	1	1	1	1	A	1	1	0	1	1	1	1	1	1	0.7	1.3
5-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	0.7	1.3
6-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	0.6	0.9
7-Mar	1	1	1	1	1	1	2	2	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.8
8-Mar	1	1	1	1	1	0	0	1	0	1	A	1	1	0	0	0	0	0	0	1	1	1	1	1	0.5	0.6
9-Mar	1	1	1	1	1	0	0	0	1	A	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0.6	0.8
10-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	1.4
11-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
12-Mar	0	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	0	0	1	1	1	0	0	1	0.5	0.7
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	0.6	0.7
14-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0	1	1	1	1	0.6	0.9
15-Mar	1	1	1	A	D	D	D	1	1	C	C	C	1	1	1	1	1	1	1	1	1	1	1	1	--	0.9
16-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	1.1
17-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	0	1	0.6	1.0
18-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	0.7
19-Mar	1	1	A	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.7
20-Mar	1	A	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0	1	1	1	1	1	1	0.5	0.7
21-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	0.6	0.7
22-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	0.6	0.7
23-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	0.6	0.7
24-Mar	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.5	0.6
25-Mar	1	1	0	1	1	1	1	1	1	1	1	1	0	1	0	0	1	0	1	A	1	1	1	1	0.6	1.0
26-Mar	1	1	0	0	1	1	1	1	1	1	1	1	1	1	0	1	1	0	A	1	1	1	1	1	0.6	0.8
27-Mar	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.6	1.1
28-Mar	1	1	1	1	1	2	3	2	1	0	1	0	0	1	0	1	A	1	0	0	0	1	1	1	0.7	2.6
29-Mar	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	A	1	1	1	1	1	1	1	1	0.5	0.6
30-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	0.6	0.7
31-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	1	0	1	1	0	1	1	0.6	0.7
	0.7	0.7	0.6	0.6	0.6	0.7	0.8	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.6	Diurnal Average	
	1.1	1.1	1.1	1.1	1.0	2.0	2.6	1.7	1.7	1.5	1.3	1.0	0.9	0.9	0.7	0.7	0.7	1.2	1.3	1.0	1.0	1.2	1.3	1.3	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 2010



Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - March 2010

Maximum Value: 4.3 ppb on Mar 28 06:00

Maximum Daily Average: 1.4 ppb on Mar 7

Minimum Value: 1 ppb on Mar 24 14:00

Minimum Daily Average: 0.8 ppb on Mar 24

Maximum Diurnal Average: 1.2 ppb at hour 8

Minimum Diurnal Average: 0.9 ppb at hour 16

Monthly Average: 1.01 ppb

Percentiles: $P_1 = 0.7$ $P_{10} = 0.8$ $Q_1 = 0.9$ Median = 0.9 $Q_3 = 1.0$ $P_{90} = 1.3$ $P_{99} = 2.1$

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	35
Percent Operational Time:	99.6

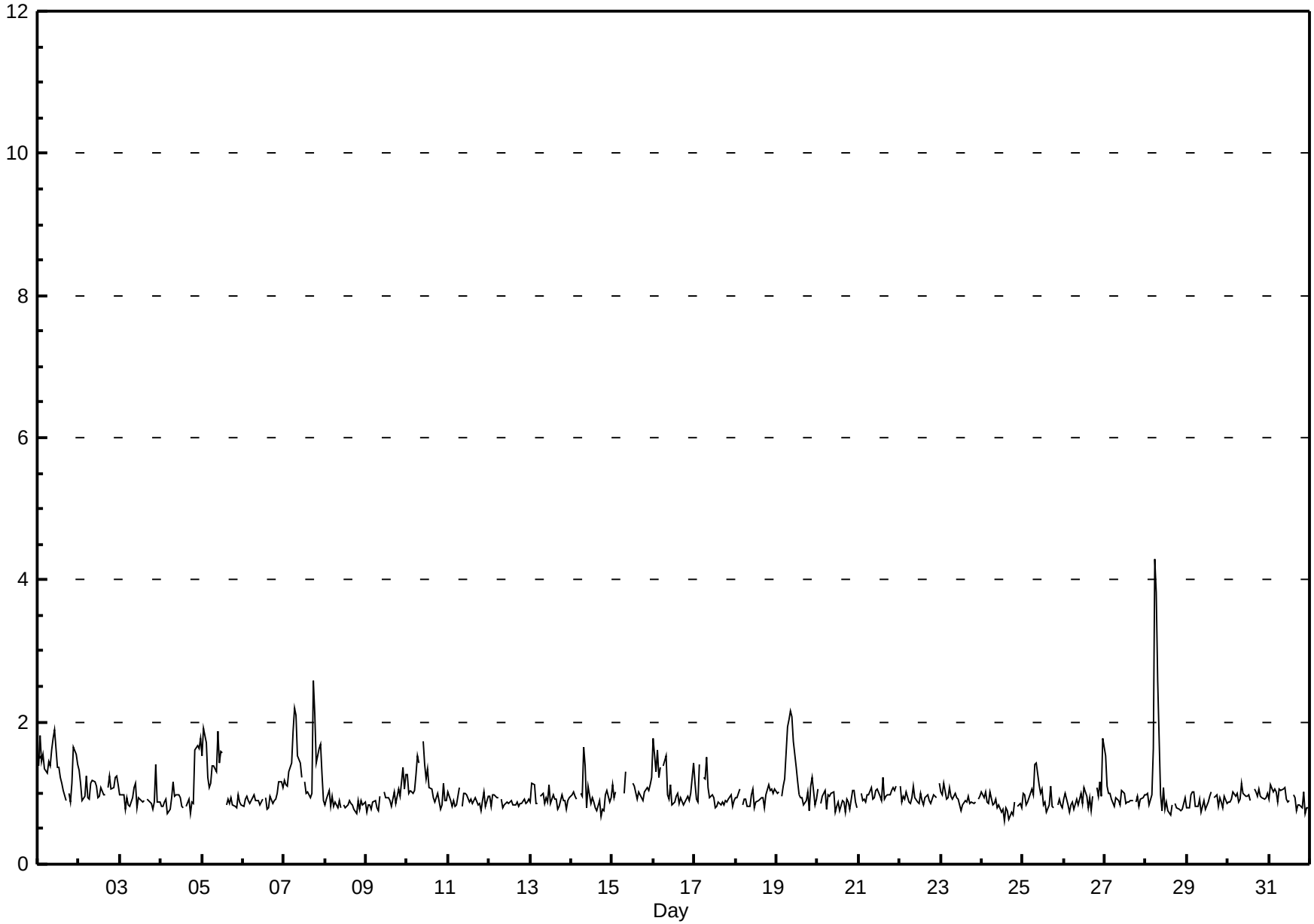
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	1	2	1	2	1	1	1	1	2	2	2	1	1	1	1	1	1	A	1	1	1	2	2	1	1.4	1.9
2-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1.1	1.3
3-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.9	1.4
4-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	2	2	2	2	1.0	1.8
5-Mar	2	2	2	1	1	1	1	1	1	2	1	2	2	A	1	1	1	1	1	1	1	1	1	1	1.2	1.9
6-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	0.9	1.2
7-Mar	1	1	1	1	1	2	2	2	2	1	1	A	1	1	1	1	1	3	2	1	2	2	1	1	1.4	2.6
8-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	0.8	1.0
9-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	1.4
10-Mar	1	1	1	1	1	1	2	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.7
11-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
12-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
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	0.9	1.1
14-Mar	1	1	1	1	A	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.7
15-Mar	1	1	1	A	D	D	D	1	1	C	C	C	1	1	1	1	1	1	1	1	1	1	1	1	--	1.3
16-Mar	2	1	2	1	1	A	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.8
17-Mar	1	1	1	1	A	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.5
18-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
19-Mar	1	1	A	1	1	1	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	2.1
20-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	1.1
21-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	1.0	1.2
22-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	1.1
23-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
24-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	1.0
25-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	1.0	1.4
26-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	2	1.0	1.8
27-Mar	2	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	1.5
28-Mar	1	1	1	1	2	4	4	3	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1.2	4.3
29-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	0.9	1.0
30-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	1.1
31-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	0.9	1.1
Diurnal Average	1.1	1.0	1.0	1.0	1.0	1.1	1.2	1.2	1.1	1.1	1.1	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.1	1.0	1.0		
Diurnal Maximum	1.8	1.9	1.7	1.5	1.6	4.3	3.8	2.6	2.1	2.1	1.9	1.6	1.6	1.2	1.2	1.1	1.1	2.6	2.1	1.4	1.6	1.7	1.6	1.8		

C - Calibration D - DAS Failure A - Automated Daily Zero Span

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

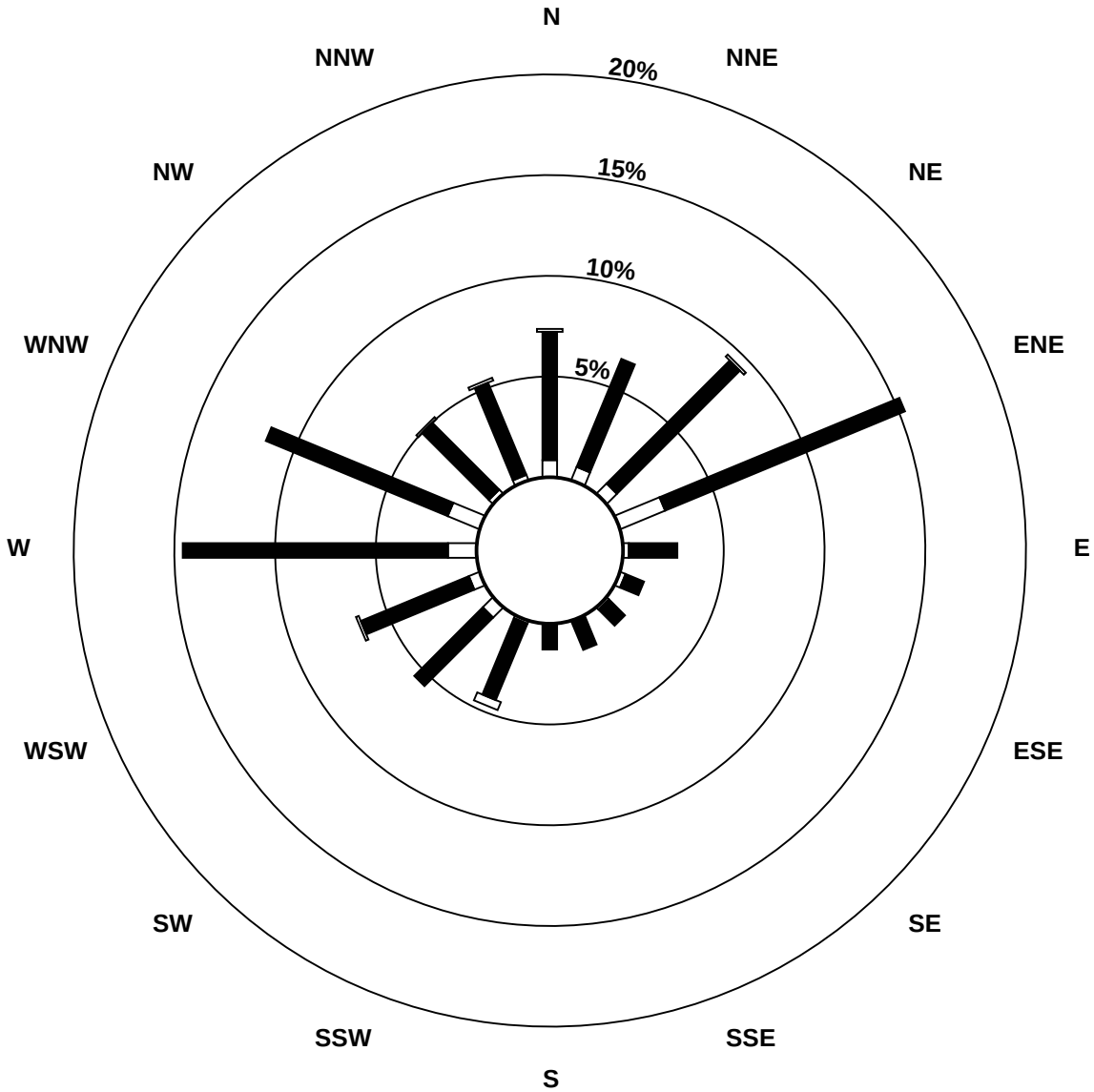
Evergreen Park - March 2010



Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - March 2010



Pollutant Classes (ppb)

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

PASZA
Peace Airshed Zone Association

Hourly Averages

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

Evergreen Park - March 2010

Number of Exceedences: 1-hr: 0 24-hr: 0
Maximum Value: 58.4 $\mu g/m^3$ on Mar 10 13:00
Maximum Daily Average: 19.5 $\mu g/m^3$ on Mar 15

Minimum Value: 0 $\mu g/m^3$ on Mar 3 20:00
Maximum Diurnal Average: 13.9 $\mu g/m^3$ at hour 11
Monthly Average: 7.55 $\mu g/m^3$

Minimum Daily Average: 2.3 $\mu g/m^3$ on Mar 23
Minimum Diurnal Average: 4.1 $\mu g/m^3$ at hour 5
Percentiles: $P_1 = 0.0$ $P_{10} = 1.2$ $Q_1 = 2.5$ Median = 5.4 $Q_3 = 10.4$ $P_{90} = 16.2$ $P_{99} = 35.9$

Hours in Service:	744
Hours of Data:	725
Hours of Missing Data:	19
Hours of Calibration:	2
Percent Operational Time:	97.7

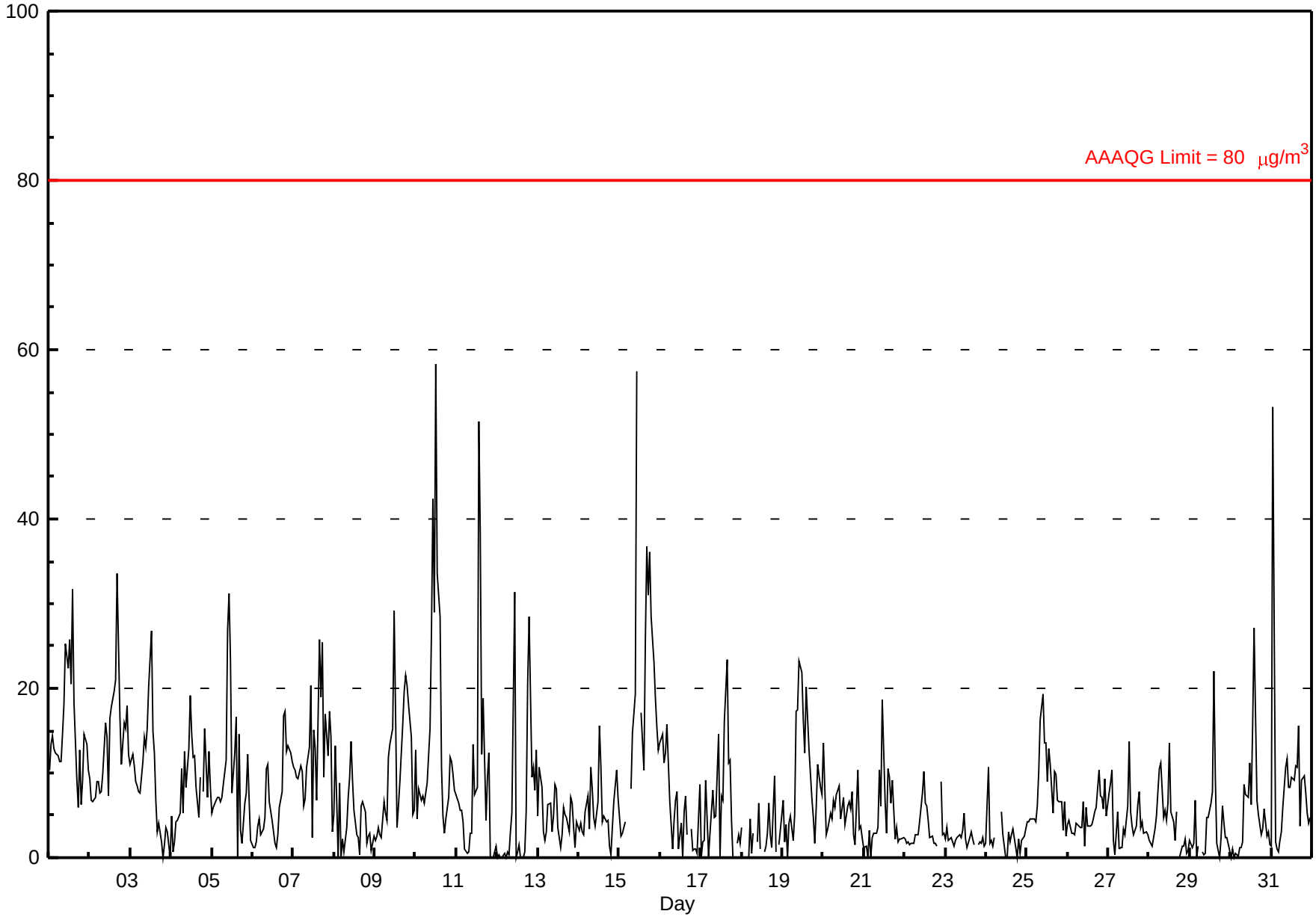
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	10	13	14	13	12	12	11	11	15	18	25	22	26	21	32	18	9	6	13	6	9	15	13	10	14.8	31.8
2-Mar	9	7	7	7	9	9	8	8	10	16	14	7	16	18	20	21	34	25	17	11	16	15	18	12	13.9	33.6
3-Mar	11	12	11	9	8	8	8	11	14	13	15	20	27	15	12	7	3	4	2	0	1	3	3	0	9.1	26.7
4-Mar	5	1	2	4	4	5	11	5	12	8	13	19	15	12	12	8	5	9	BD	8	15	7	12	8	8.8	19.1
5-Mar	5	6	7	7	7	7	7	9	12	27	31	23	8	12	17	0	15	3	2	6	8	12	7	2	9.9	31.2
6-Mar	1	1	2	4	5	3	3	5	11	11	7	4	3	2	1	3	6	8	17	17	13	13	12	11	6.8	17.3
7-Mar	11	10	9	9	11	10	6	7	11	13	20	2	15	13	7	26	19	25	10	17	12	17	14	3	12.4	25.8
8-Mar	5	13	0	9	0	2	1	4	7	9	14	9	6	3	2	0	6	7	5	2	3	3	1	3	4.7	13.7
9-Mar	2	3	4	3	2	7	5	4	12	13	15	29	17	3	6	9	16	20	22	20	18	14	5	6	10.6	29.1
10-Mar	13	5	8	7	7	6	8	9	15	27	42	29	58	34	29	11	5	3	5	7	12	11	10	8	15.3	58.4
11-Mar	8	6	6	6	4	1	1	1	3	3	13	7	8	52	38	12	19	4	9	12	0	0	0	1	8.9	51.6
12-Mar	0	0	0	0	0	0	1	0	3	5	31	0	1	2	0	0	1	6	20	28	9	11	8	13	5.8	31.3
13-Mar	5	11	8	3	2	3	6	6	3	5	9	8	4	1	3	6	5	5	3	7	7	4	1	4	4.9	10.7
14-Mar	3	4	3	3	5	7	3	11	8	5	4	7	16	11	4	5	4	4	1	0	3	7	10	7	5.7	15.6
15-Mar	5	2	3	4	D	D	D	8	15	19	57	C	C	17	10	26	37	31	36	29	23	19	15	13	19.5	57.5
16-Mar	14	14	11	12	16	11	7	1	4	7	8	1	4	0	5	7	3	BD	3	1	1	1	1	9	6.1	15.7
17-Mar	0	2	2	9	0	3	5	8	5	5	14	0	7	7	16	23	11	12	4	0	BD	2	3	2	6.1	23.5
18-Mar	4	N	BD	0	0	5	1	3	BD	2	6	1	BD	1	1	3	6	3	1	10	1	BD	1	3	2.7	9.6
19-Mar	7	2	4	0	4	5	2	5	17	17	23	22	16	12	20	16	13	7	5	2	6	11	8	7	9.7	23.2
20-Mar	14	8	3	3	5	5	7	6	7	8	5	6	7	4	6	7	6	8	3	2	10	3	4	2	5.7	13.6
21-Mar	1	1	0	3	0	2	3	3	4	10	6	19	7	3	11	10	6	9	2	4	2	2	2	2	4.7	18.7
22-Mar	2	2	2	2	2	2	3	3	3	4	8	10	6	6	4	2	3	2	2	1	BD	9	3	3	3.6	10.1
23-Mar	2	4	2	2	2	1	2	2	3	2	3	5	2	1	2	3	2	2	BD	2	2	2	2	1	2.3	5.2
24-Mar	2	11	2	2	1	2	BD	5	BD	5	3	0	0	3	2	3	3	1	0	2	0	2	3	3	2.5	10.7
25-Mar	4	4	5	5	5	4	6	10	16	19	14	14	9	13	11	5	10	10	7	7	7	3	7	3	8.2	19.3
26-Mar	4	4	3	3	3	4	4	3	4	7	1	6	4	4	4	5	5	6	10	7	7	6	9	5	4.9	10.4
27-Mar	8	9	10	2	0	5	1	1	1	3	3	6	14	5	4	3	4	6	8	4	4	3	3	3	4.6	13.7
28-Mar	2	2	1	3	5	8	11	11	5	6	4	6	14	5	4	2	5	BD	0	1	1	2	0	1	4.4	13.6
29-Mar	2	1	2	7	0	1	BD	1	0	0	5	5	6	8	22	9	2	0	2	6	4	2	2	1	3.9	22.0
30-Mar	0	1	0	0	0	1	1	2	9	8	7	11	6	16	27	7	5	4	3	3	6	3	3	2	5.2	27.1
31-Mar	1	53	2	1	1	2	3	6	11	12	8	8	9	9	11	11	16	4	9	10	8	5	4	5	8.6	53.2
	5.1	7.1	4.4	4.6	4.1	4.7	4.8	5.5	8.2	10.0	13.9	10.3	11.4	10.0	11.1	8.6	9.1	8.0	7.6	7.5	7.2	6.9	6.0	4.9	Diurnal Average	
	13.6	53.2	14.4	12.8	15.7	12.0	11.4	11.3	17.3	26.9	57.5	29.1	58.4	51.6	38.1	25.8	36.8	31.0	36.1	28.5	23.1	18.8	18.0	12.7	Diurnal Maximum	

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

Hourly Averages

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

Evergreen Park - March 2010



PASZA
Peace Airshed Zone Association

Hourly Maximums

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

Evergreen Park - March 2010

Maximum Value: 309.0 $\mu g/m^3$ on Mar 31 02:00

Maximum Daily Average: 33.0 $\mu g/m^3$ on Mar 15

Minimum Value: 0 $\mu g/m^3$ on Mar 18 03:00

Minimum Daily Average: 9.0 $\mu g/m^3$ on Mar 29

Maximum Diurnal Average: 31.5 $\mu g/m^3$ at hour 11

Minimum Diurnal Average: 9.2 $\mu g/m^3$ at hour 3

Monthly Average: 17.08 $\mu g/m^3$

Percentiles: P_1 = 2.3 P_{10} = 4.5 Q_1 = 6.5 Median = 12.1 Q_3 = 20.5 P_{90} = 34.3 P_{99} = 82.5

Hours in Service:	744
Hours of Data:	738
Hours of Missing Data:	6
Hours of Calibration:	2
Percent Operational Time:	99.5

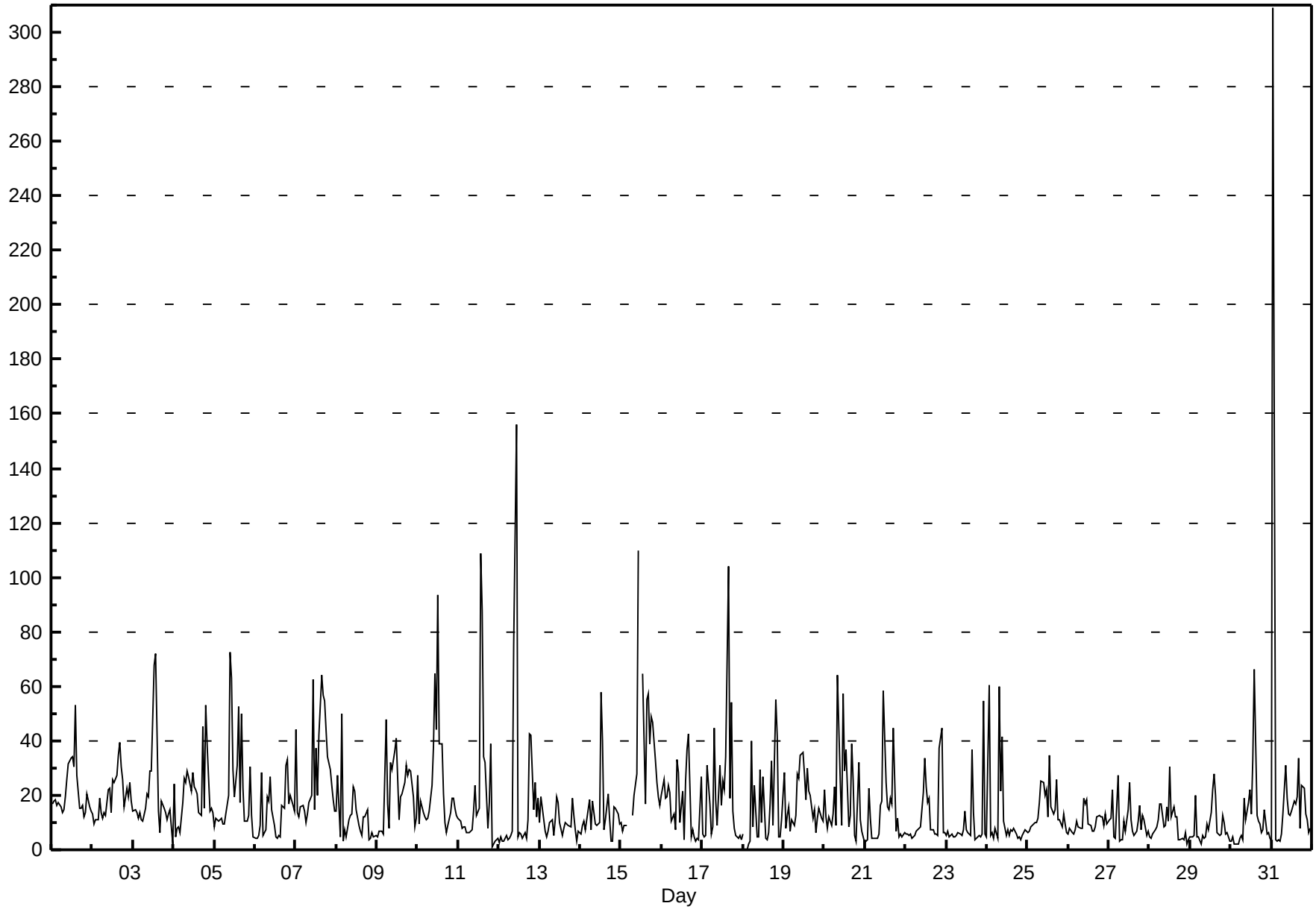
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	17	18	19	16	17	16	14	14	20	26	31	34	34	30	53	27	15	15	17	12	14	20	16	14	21.2	53.1
2-Mar	13	10	11	11	19	14	12	14	12	22	23	14	26	24	27	35	39	30	26	16	23	19	25	18	20.0	39.4
3-Mar	14	15	13	11	14	11	10	15	21	19	29	29	68	72	43	14	7	18	15	14	11	13	14	2	20.6	72.0
4-Mar	24	5	8	8	6	17	26	25	29	27	22	29	23	22	21	14	13	45	15	53	38	14	15	14	21.3	53.3
5-Mar	9	12	10	11	11	10	9	13	20	72	63	30	19	31	53	18	50	23	11	10	12	30	12	5	22.7	72.4
6-Mar	4	4	5	9	28	5	7	19	18	27	15	9	5	4	5	5	16	15	31	33	17	20	16	14	13.9	33.4
7-Mar	44	14	12	16	16	14	10	13	17	20	62	15	38	20	42	64	57	55	44	34	29	24	18	14	28.9	64.1
8-Mar	14	27	5	50	3	7	4	11	12	13	23	22	15	9	7	5	12	12	15	4	4	6	5	5	12.1	49.9
9-Mar	5	7	7	7	6	48	17	8	32	29	36	41	26	11	19	21	25	31	27	29	29	20	8	12	20.9	47.8
10-Mar	27	9	18	13	12	11	11	14	24	38	65	44	93	39	39	20	10	6	9	14	19	19	15	12	24.3	93.3
11-Mar	12	10	8	8	8	7	6	7	7	14	24	13	15	109	88	34	32	8	17	39	1	2	3	4	19.9	108.7
12-Mar	2	5	3	3	5	4	4	5	7	75	156	5	6	6	4	6	4	11	43	42	15	25	12	19	19.5	156.3
13-Mar	10	20	11	7	5	7	10	11	5	11	20	17	10	5	8	10	10	9	8	19	12	7	3	7	10.1	19.7
14-Mar	6	9	10	7	11	18	8	18	14	9	9	10	58	40	8	11	20	11	3	3	16	15	13	9	14.1	58.0
15-Mar	10	7	9	9	D	D	D	13	20	28	110	C	C	65	17	55	57	39	49	47	33	24	20	16	33.0	109.6
16-Mar	20	26	19	19	24	21	11	13	8	33	29	10	21	4	25	37	42	5	7	5	3	4	4	27	17.3	42.3
17-Mar	6	5	5	31	17	6	9	45	18	9	31	16	25	22	34	104	19	54	14	8	5	4	5	4	20.7	104.0
18-Mar	6	N	0	2	3	40	8	23	5	5	29	10	27	4	4	7	17	33	9	55	42	5	5	11	15.1	55.1
19-Mar	28	8	13	16	7	11	9	12	28	26	35	36	28	19	30	22	20	11	15	6	12	15	12	10	17.8	35.9
20-Mar	22	12	8	12	9	13	23	9	64	25	9	57	29	37	9	12	39	25	5	3	32	11	7	4	19.9	64.0
21-Mar	3	4	23	12	4	4	4	4	6	16	18	59	24	16	15	19	17	44	7	11	5	6	5	6	13.8	58.5
22-Mar	6	6	5	6	4	5	7	8	8	9	21	34	23	17	19	7	7	6	6	5	37	45	6	6	12.5	44.8
23-Mar	5	7	5	6	5	5	5	6	6	5	7	14	7	6	5	37	14	4	4	5	5	6	55	6	9.6	54.8
24-Mar	5	60	5	6	4	8	4	60	21	41	11	5	7	5	7	7	8	6	4	5	4	5	7	7	12.7	60.3
25-Mar	6	7	8	9	10	10	11	17	25	25	20	22	12	34	16	13	15	26	11	11	8	13	10	6	14.5	34.5
26-Mar	6	8	6	6	7	11	8	8	8	19	17	18	9	9	7	7	9	12	13	12	12	9	13	10	10.1	18.7
27-Mar	11	11	22	5	4	28	3	4	4	11	7	15	25	11	7	5	7	10	16	7	13	11	5	7	10.4	27.5
28-Mar	5	4	6	7	8	11	17	17	8	9	16	10	31	12	16	12	12	4	4	4	4	7	2	4	9.5	30.6
29-Mar	5	5	5	20	5	5	2	6	4	5	9	7	13	22	28	20	7	5	6	13	10	6	6	3	9.0	28.1
30-Mar	3	5	2	2	2	4	5	4	19	11	17	22	13	33	66	13	11	9	6	7	15	6	6	4	11.9	66.0
31-Mar	3	309	4	3	4	3	6	13	31	19	13	13	14	18	17	19	33	8	24	23	13	11	6	8	25.6	309.0
	11.3	21.6	9.2	11.3	9.3	12.5	9.4	14.5	16.8	22.5	31.5	21.9	24.9	24.4	23.8	21.9	20.7	19.1	15.5	17.8	15.8	13.6	11.3	9.3	Diurnal Average	
	43.9	309.0	22.7	49.9	28.2	47.8	26.5	59.9	64.0	75.4	156.3	58.5	93.3	108.7	87.6	104.0	57.4	54.8	49.0	55.1	41.6	44.8	54.8	26.8	Diurnal Maximum	

C - Calibration D - DAS Failure N - Not Valid

Hourly Maximums

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

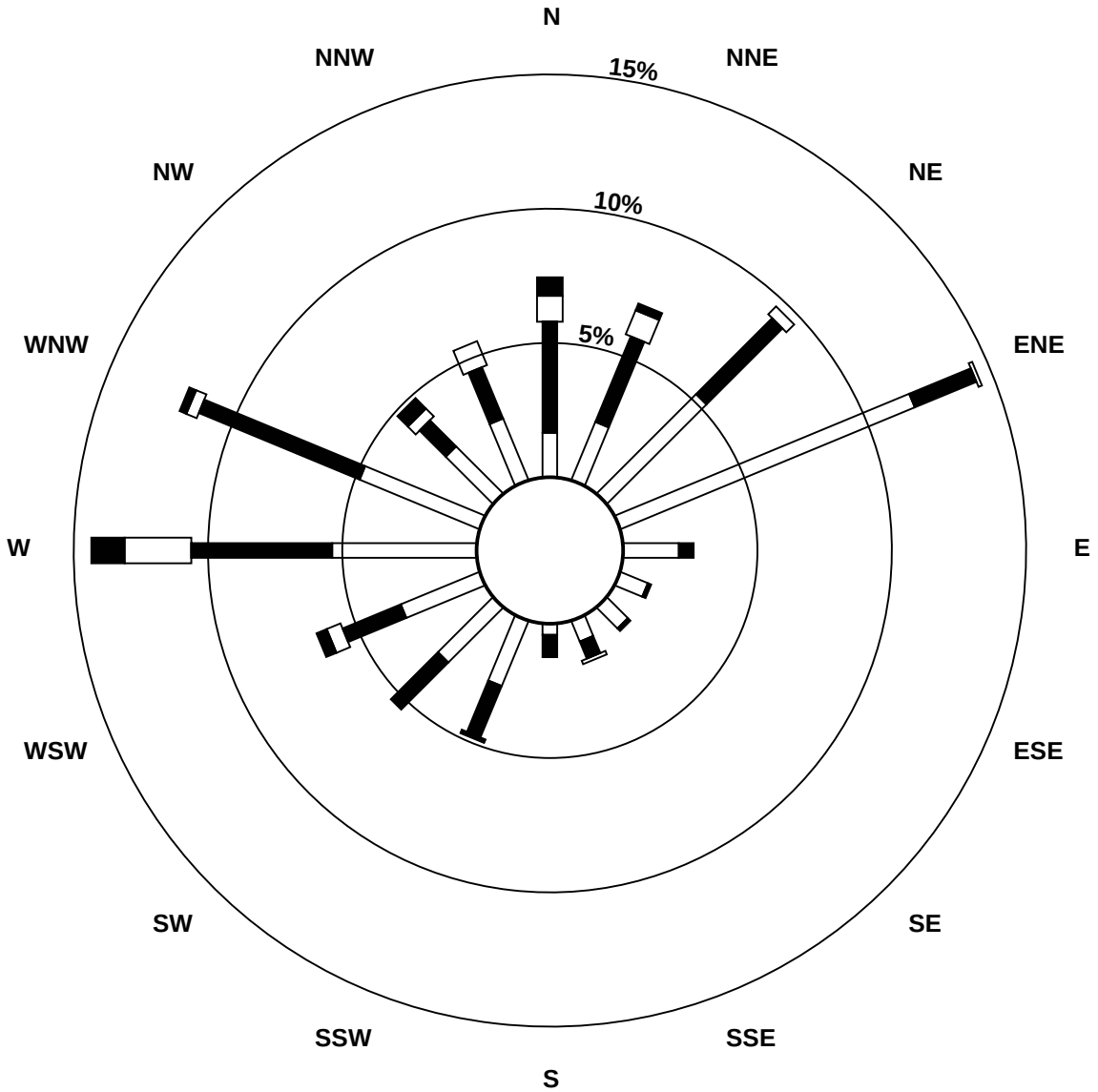
Evergreen Park - March 2010



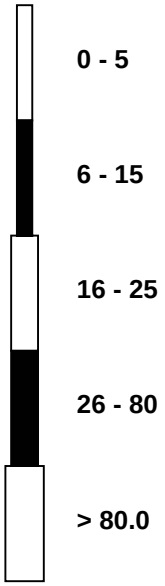
Pollutant Rose

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

Evergreen Park - March 2010



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



PASZA
Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Evergreen Park - March 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 13.4 ^{o}C on Mar 15 14:00
Maximum Daily Average: 6.5 ^{o}C on Mar 28

Minimum Value: -15 ^{o}C on Mar 10 08:00
Maximum Diurnal Average: 5.1 ^{o}C at hour 16
Monthly Average: -0.21 ^{o}C

Minimum Daily Average: -9.1 ^{o}C on Mar 22
Minimum Diurnal Average: -4.9 ^{o}C at hour 7
Percentiles: P_1 = -13.6 P_{10} = -7.9 Q_1 = -4.4 Median = -0.3 Q_3 = 4.5 P_{90} = 8.0 P_{99} = 12.1

Hours in Service:	744
Hours of Data:	741
Hours of Missing Data:	3
Hours of Calibration:	0
Percent Operational Time:	99.6

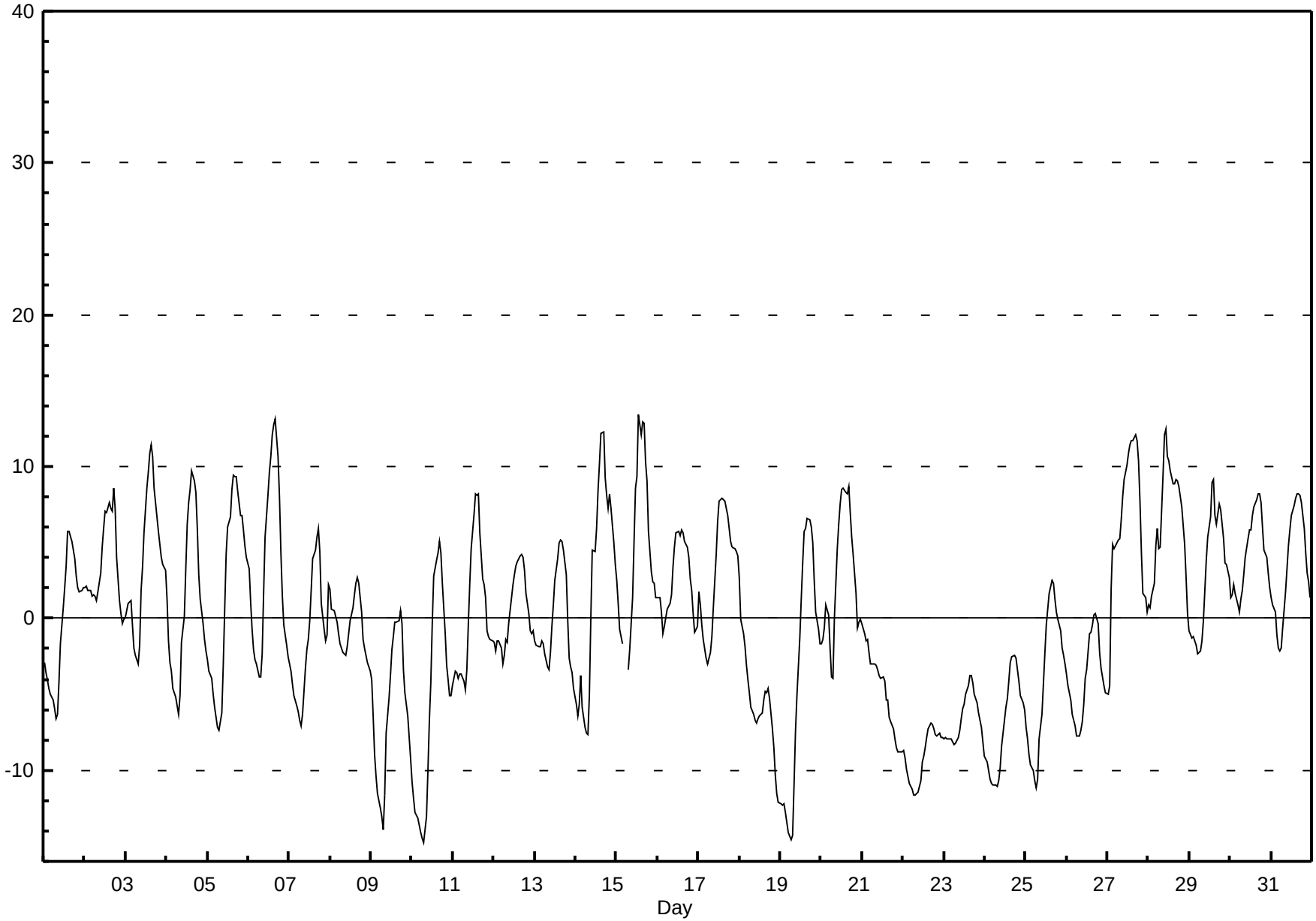
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-3	-4	-4	-5	-5	-5	-6	-7	-6	-4	-2	1	2	3	6	6	5	4	4	3	2	2	2	2	-0.4	5.8
2-Mar	2	2	2	2	1	2	1	1	2	3	5	6	7	7	8	7	7	9	7	4	1	0	0	0	3.6	8.6
3-Mar	0	1	1	1	0	-2	-2	-3	-2	2	3	6	9	10	11	11	11	9	7	6	5	4	4	3	3.9	11.5
4-Mar	1	-2	-3	-3	-5	-5	-6	-6	-5	-2	0	3	6	8	9	10	9	8	6	3	1	0	-1	-2	1.0	9.7
5-Mar	-3	-3	-4	-5	-6	-7	-7	-7	-6	-3	1	4	6	7	8	9	9	9	8	7	7	6	5	4	1.6	9.4
6-Mar	3	1	-1	-2	-3	-3	-4	-4	-2	2	5	8	10	11	12	13	13	11	8	4	1	0	-2	-3	3.3	13.2
7-Mar	-3	-3	-4	-5	-6	-6	-7	-7	-6	-3	-2	-1	0	2	4	4	5	6	4	1	-1	-1	-1	2	-1.2	5.9
8-Mar	2	1	1	0	0	-1	-2	-2	-2	-2	-2	-1	0	1	2	2	3	2	0	-1	-2	-2	-3	-3	-0.5	2.7
9-Mar	-4	-6	-9	-10	-12	-12	-13	-14	-12	-8	-5	-4	-2	-1	0	0	0	1	0	-3	-5	-6	-8	-9	-6.0	0.5
10-Mar	-11	-12	-13	-13	-14	-14	-14	-15	-13	-10	-7	-4	0	3	4	4	5	4	2	-1	-3	-4	-5	-5	-5.6	5.0
11-Mar	-4	-3	-4	-4	-4	-4	-4	-5	-3	0	2	5	7	8	8	8	6	3	2	1	-1	-1	-1	-1	0.4	8.2
12-Mar	-2	-2	-1	-1	-2	-3	-2	-1	-2	0	1	2	3	3	4	4	4	4	3	2	0	-1	-1	-1	0.5	4.2
13-Mar	-1	-2	-2	-2	-1	-2	-2	-3	-3	-2	-1	1	3	4	5	5	5	4	3	0	-3	-3	-4	-5	-0.2	5.2
14-Mar	-6	-6	-6	-4	-6	-7	-8	-8	-5	0	5	4	6	8	10	12	12	9	8	7	8	7	5	4	2.2	12.3
15-Mar	3	1	-1	-2	D	D	D	-3	-2	1	5	9	9	13	12	13	13	10	9	6	3	2	2	1	5.0	13.4
16-Mar	1	1	0	-1	0	0	1	1	2	3	5	6	6	5	6	6	5	5	4	3	2	0	-1	-1	2.4	5.8
17-Mar	2	1	0	-1	-3	-3	-3	-2	-1	1	4	6	8	8	8	8	7	7	6	5	5	5	4	4	3.1	7.9
18-Mar	3	0	-1	-2	-3	-4	-5	-6	-6	-7	-7	-7	-6	-6	-5	-5	-5	-5	-5	-7	-8	-10	-12	-12	-5.5	2.7
19-Mar	-12	-12	-12	-13	-13	-14	-15	-14	-11	-7	-5	-1	1	4	6	6	7	6	6	5	3	0	-1	-2	-3.7	6.6
20-Mar	-2	-1	-1	1	0	-2	-4	-4	0	5	6	7	8	9	8	8	9	7	5	4	2	-1	0	0	2.7	8.7
21-Mar	0	-1	-1	-1	-2	-3	-3	-3	-3	-3	-4	-4	-4	-4	-5	-5	-7	-7	-7	-8	-9	-9	-9	-9	-4.6	-0.4
22-Mar	-9	-9	-10	-10	-11	-11	-12	-12	-12	-11	-11	-9	-9	-9	-8	-7	-7	-7	-7	-8	-8	-8	-8	-8	-9.1	-6.9
23-Mar	-8	-8	-8	-8	-8	-8	-8	-8	-8	-7	-7	-6	-6	-5	-4	-4	-4	-4	-5	-6	-6	-7	-7	-8	-6.6	-3.7
24-Mar	-9	-9	-10	-11	-11	-11	-11	-11	-11	-10	-8	-7	-6	-5	-4	-3	-3	-2	-3	-3	-4	-5	-6	-6	-7.0	-2.4
25-Mar	-7	-8	-9	-10	-10	-11	-11	-11	-8	-6	-4	-2	0	1	2	2	2	1	0	0	-1	-2	-2	-3	-4.0	2.5
26-Mar	-4	-4	-5	-6	-7	-7	-8	-8	-7	-7	-6	-4	-3	-1	-1	0	0	0	0	-2	-3	-4	-4	-5	-4.0	0.3
27-Mar	-5	-4	2	5	5	5	5	5	7	8	9	10	11	11	12	12	12	12	10	8	4	2	1	0	6.1	12.1
28-Mar	1	1	2	2	5	6	5	5	9	12	12	11	10	10	9	9	9	9	9	7	6	5	3	0	6.5	12.5
29-Mar	-1	-1	-1	-1	-2	-2	-2	-1	0	2	4	5	7	9	9	7	6	8	7	6	5	4	4	3	3.0	9.1
30-Mar	1	2	2	2	1	0	1	2	3	4	5	6	6	7	7	8	8	8	8	6	4	4	3	2	4.2	8.2
31-Mar	1	1	0	-1	-2	-2	-2	-1	2	3	5	6	7	7	8	8	8	8	8	6	4	3	2	1	3.4	8.2
	-2.3	-3.0	-3.2	-3.5	-4.1	-4.6	-4.9	-4.9	-3.7	-1.6	0.3	1.8	3.0	4.1	4.8	5.1	5.1	4.5	3.5	1.7	0.4	-0.7	-1.3	-1.8	Diurnal Average	
	3.3	2.1	2.2	4.9	4.7	5.9	5.2	5.3	9.4	12.1	12.5	10.7	10.9	13.4	12.1	12.9	13.2	11.7	10.4	7.7	8.2	7.3	5.0	4.1	Diurnal Maximum	

D - DAS Failure

Hourly Averages

External Temperature (ET) - ^{o}C

Evergreen Park - March 2010



Hourly Averages

Relative Humidity (RH) - %

Evergreen Park - March 2010

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

Maximum Value: 97.3 % on Mar 18 04:00

Maximum Daily Average: 85.0 % on Mar 18

Minimum Value: 16 % on Mar 8 16:00

Minimum Daily Average: 41.8 % on Mar 8

Maximum Diurnal Average: 78.6 % at hour 7

Minimum Diurnal Average: 45.1 % at hour 16

Monthly Average: 63.28 %

Percentiles: P_1 = 24.3 P_{10} = 36.3 Q_1 = 47.6 Median = 64.8 Q_3 = 79.9 P_{90} = 87.0 P_{99} = 94.0

Hours in Service:	744
Hours of Data:	741
Hours of Missing Data:	3
Hours of Calibration:	0
Percent Operational Time:	99.6

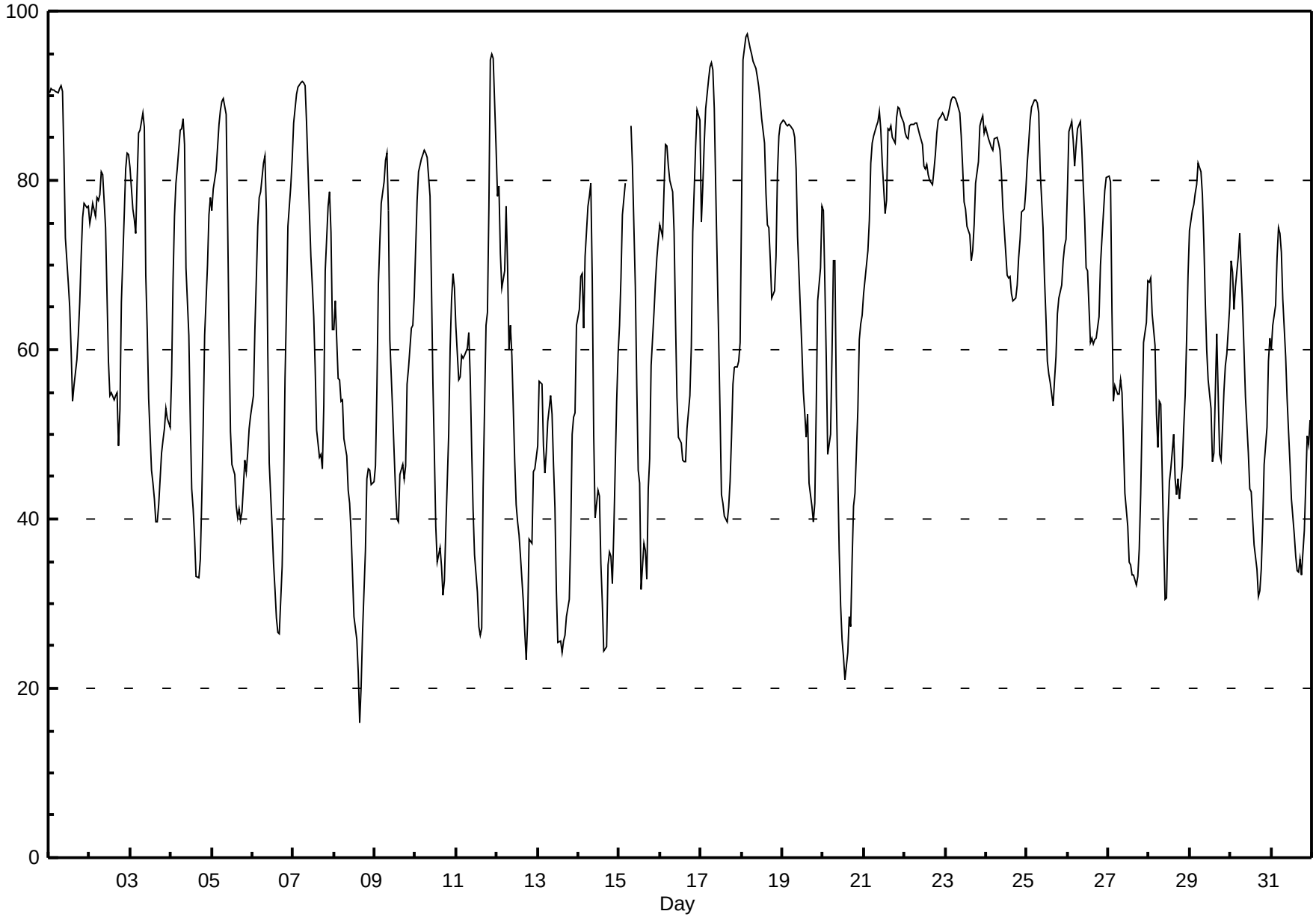
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	90	91	91	91	91	90	91	91	91	83	73	68	65	60	54	56	59	62	66	71	76	77	77	77	76.6	91.3
2-Mar	75	76	77	76	78	78	78	81	81	74	66	59	55	55	54	55	55	49	53	66	76	81	83	83	69.3	83.2
3-Mar	81	77	75	74	80	86	86	88	86	69	62	54	46	44	42	40	40	42	48	49	51	53	52	51	61.5	87.9
4-Mar	57	68	76	80	81	86	86	87	84	70	62	52	44	41	38	33	33	35	42	51	62	70	76	78	62.2	87.3
5-Mar	76	79	81	84	87	88	89	90	88	75	62	50	46	45	42	40	41	40	41	47	46	48	51	52	62.0	89.7
6-Mar	54	62	68	75	78	79	82	83	76	60	47	39	35	32	28	27	27	34	43	57	65	75	79	83	57.8	82.9
7-Mar	87	88	90	91	91	92	91	91	87	76	71	68	64	58	51	47	48	46	53	69	77	79	74	62	73.0	91.6
8-Mar	62	66	57	56	54	54	49	47	43	42	38	33	28	26	22	16	20	27	36	45	46	46	44	44	41.8	65.7
9-Mar	46	55	68	73	77	80	82	83	76	61	53	48	43	40	40	45	46	45	46	56	58	63	63	66	58.9	83.1
10-Mar	72	78	81	83	83	84	83	83	78	68	56	48	39	35	37	34	31	33	39	50	60	66	69	67	60.6	83.6
11-Mar	63	57	57	59	59	59	60	62	57	48	41	36	31	27	26	27	44	63	64	77	94	95	94	84	57.7	94.9
12-Mar	78	79	71	67	69	77	70	60	63	59	47	42	40	38	36	30	27	23	28	38	37	46	46	47	50.7	79.4
13-Mar	49	56	56	49	45	48	52	55	52	46	41	31	25	26	24	26	26	28	31	38	50	52	53	63	42.6	62.8
14-Mar	65	69	69	63	71	77	78	80	68	50	40	43	43	35	30	24	25	35	36	36	32	38	54	59	50.8	79.7
15-Mar	63	68	76	80	D	D	D	86	82	67	56	46	44	32	37	36	33	44	47	58	64	68	71	73	58.6	86.4
16-Mar	75	73	79	84	84	82	80	79	74	63	54	50	49	47	47	47	51	55	60	74	79	84	88	87	68.5	88.4
17-Mar	75	79	84	89	92	93	94	93	89	79	62	53	43	42	40	40	41	44	50	56	58	58	59	61	65.6	93.9
18-Mar	77	94	97	97	96	96	95	94	93	92	91	89	87	84	79	75	74	71	66	67	71	81	85	87	85.0	97.3
19-Mar	87	87	87	86	87	87	86	85	81	73	69	60	55	53	50	52	44	41	40	42	53	66	70	77	67.4	87.2
20-Mar	77	68	59	48	50	60	71	71	55	36	30	26	24	21	24	29	27	35	41	43	53	61	63	64	47.2	76.5
21-Mar	67	70	72	75	82	84	85	86	87	88	86	82	76	78	86	86	86	85	84	88	89	89	88	87	82.7	88.6
22-Mar	86	85	85	86	87	87	87	87	86	85	84	82	81	82	81	80	80	81	83	86	87	88	88	88	84.6	88.0
23-Mar	87	87	88	89	90	90	90	89	88	85	81	77	77	75	74	71	72	75	80	82	87	87	88	86	83.0	89.8
24-Mar	86	85	84	84	83	85	85	84	84	81	77	71	69	69	69	67	66	66	68	71	73	76	77	79	76.6	86.3
25-Mar	82	84	87	89	89	89	89	88	81	74	68	64	59	57	56	53	56	59	64	66	68	71	72	73	72.5	89.5
26-Mar	79	86	87	85	82	84	86	87	84	79	75	70	69	61	61	61	61	61	64	70	73	76	79	80	75.0	87.0
27-Mar	80	80	65	54	56	55	55	56	55	49	43	39	35	35	33	33	32	33	36	43	52	61	63	68	50.5	80.4
28-Mar	68	69	64	61	52	48	54	53	37	30	31	39	44	46	50	45	43	45	42	46	51	54	61	69	50.2	68.9
29-Mar	74	76	77	79	80	82	81	78	73	66	60	57	53	47	48	55	62	48	47	51	55	58	60	65	63.7	82.0
30-Mar	70	69	65	67	71	74	69	65	60	54	48	44	43	40	37	34	31	31	34	39	47	51	59	61	52.7	73.7
31-Mar	60	63	65	71	74	74	72	66	59	54	50	47	42	38	36	34	34	35	33	39	44	50	49	52	51.7	74.5
	72.6	75.0	75.4	75.6	76.7	78.2	78.6	78.4	74.1	65.8	58.9	53.7	50.2	47.3	46.1	45.1	45.6	47.4	50.6	57.1	62.3	66.6	68.8	70.1	Diurnal Average	
	90.3	94.2	97.0	97.3	96.5	95.7	94.9	94.0	93.2	92.2	91.0	89.3	87.3	84.5	86.2	86.0	86.5	85.0	84.4	87.5	94.2	94.9	94.4	87.6	Diurnal Maximum	

D - DAS Failure

Hourly Averages

Relative Humidity (RH) - %

Evergreen Park - March 2010



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Evergreen Park - March 2010

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1 Spd	0	1	1	1	1	1	1	1	1	1	1	2	2	3	4	3	3	2	1	1	1	1	1	1	1.0	3.8
Dir	305	352	283	327	313	256	16	11	304	288	269	357	288	339	350	23	28	16	356	11	247	278	276	290	340.4	349.9
2 Spd	2	2	2	1	0	2	1	1	1	4	5	3	3	6	4	4	3	2	3	0	1	1	1	2	1.8	6.1
Dir	298	255	244	271	247	161	305	12	172	279	272	328	271	277	279	272	258	267	327	133	246	221	238	251	273.5	277.2
3 Spd	1	2	2	2	1	1	1	1	2	2	5	4	3	4	3	4	9	11	7	7	6	5	6	5	3.4	11.1
Dir	160	183	201	202	217	216	167	239	208	227	279	280	280	299	330	285	289	291	288	286	306	282	286	282	279.1	290.7
4 Spd	3	0	0	1	3	2	2	2	1	3	6	2	2	3	3	3	5	4	1	1	2	1	1	1	0.8	6.3
Dir	217	79	100	217	222	235	220	211	297	260	280	279	312	1	3	7	49	65	74	41	344	317	274	299	307.0	280.3
5 Spd	2	1	1	0	0	0	0	0	1	2	2	4	6	5	8	9	8	10	11	3	8	8	7	5	3.6	11.1
Dir	277	304	227	202	48	69	4	277	206	350	259	285	287	303	281	277	284	263	257	259	234	225	212	205	260.4	257.5
6 Spd	5	2	1	1	0	0	0	2	3	4	5	6	8	8	6	4	1	3	2	1	1	0	1	0	2.1	8.4
Dir	200	196	156	224	128	167	63	222	220	214	207	216	221	225	213	212	243	28	2	336	241	238	235	249	217.2	220.7
7 Spd	0	0	0	0	0	1	1	1	1	1	2	3	2	2	1	1	0	1	0	1	1	2	3	9	1.2	9.0
Dir	278	237	342	53	29	344	342	304	315	267	311	297	262	263	294	273	337	165	54	24	282	317	291	311	301.4	311.5
8 Spd	15	16	10	10	8	12	13	13	13	12	16	16	12	11	11	8	9	11	12	11	9	8	7	8	11.0	16.1
Dir	279	285	291	293	283	273	274	278	281	286	272	279	288	294	282	293	282	281	288	284	269	263	245	233	279.4	285.4
9 Spd	4	0	0	1	1	0	1	1	2	2	3	4	5	5	5	7	6	4	2	2	2	3	3	2	2.1	7.4
Dir	221	114	33	46	32	16	38	39	42	19	8	354	18	31	25	350	345	356	3	339	349	281	314	332	357.8	350.5
10 Spd	2	0	0	1	1	1	0	1	1	1	2	3	2	3	4	4	4	4	1	0	0	1	1	1	1.0	4.4
Dir	226	163	33	30	351	356	282	0	331	267	289	318	314	1	15	17	66	74	60	1	3	42	44	103	12.5	73.5
11 Spd	2	3	3	3	1	3	1	3	2	2	4	5	2	17	21	17	12	5	4	10	4	3	2	7	2.7	21.3
Dir	73	74	77	71	68	79	75	80	75	94	174	172	184	267	259	257	313	351	224	278	258	209	201	226	259.3	258.8
12 Spd	4	6	7	5	0	0	4	6	1	0	7	7	6	5	6	6	3	2	1	2	1	1	0	1	2.3	7.4
Dir	229	206	224	201	229	323	206	223	58	115	279	293	286	315	312	312	304	218	250	250	192	32	328	282	260.2	224.2
13 Spd	0	1	2	4	6	3	2	2	3	7	7	8	7	5	4	5	5	5	3	1	0	1	1	1	2.0	8.1
Dir	328	259	270	288	292	286	287	261	292	283	285	280	278	283	352	34	46	74	80	97	70	70	62	46	305.6	280.4
14 Spd	0	1	1	1	1	2	1	1	2	2	3	5	4	7	5	6	5	5	4	4	4	3	3	2	1.6	7.4
Dir	69	63	173	163	29	38	53	8	33	63	142	6	12	55	96	133	127	62	78	96	141	251	276	296	74.0	55.5
15 Spd	3	0	1	1	D	D	D	0	2	1	1	2	4	2	4	4	6	4	1	1	1	1	1	0	1.1	6.5
Dir	292	142	220	203	D	D	D	23	17	17	325	332	14	56	12	306	281	351	27	201	50	47	223	7	336.3	281.0
16 Spd	1	0	0	1	1	1	2	2	3	3	4	3	5	7	5	5	4	4	3	2	1	2	0	9	1.8	9.3
Dir	160	172	346	40	14	9	353	349	331	33	49	40	23	35	56	61	72	60	65	37	300	211	137	279	28.6	279.0
17 Spd	4	2	4	0	1	1	3	2	0	2	5	10	17	19	23	24	22	20	16	9	11	12	13	12	9.2	24.3
Dir	352	192	213	30	15	307	292	289	37	280	298	281	288	289	277	275	274	274	279	282	277	277	271	283	279.4	274.8
18 Spd	10	11	9	11	11	13	9	9	10	11	12	10	10	11	9	10	10	8	8	4	2	3	1	0	7.8	13.5
Dir	343	346	336	343	339	343	333	327	325	328	338	328	324	330	325	295	286	285	335	311	13	217	196	217	327.0	343.2
19 Spd	1	0	1	1	1	1	0	1	0	1	2	2	3	2	2	3	4	2	7	4	2	0	0	1	1.1	6.7
Dir	65	133	28	17	20	332	290	40	4	256	268	281	270	11	351	15	275	289	266	290	334	197	68	191	301.5	265.9
20 Spd	2	0	3	1	1	1	0	0	1	2	8	10	10	12	8	6	4	6	4	2	1	2	3	5	2.1	11.9
Dir	221	160	214	320	307	166	56	87	37	359	285	297	341	346	6	4	28	67	86	110	38	52	61	72	358.3	346.1
21 Spd	4	3	5	6	8	7	6	7	8	7	8	9	8	5	7	6	6	5	4	3	5	3	3	2	5.1	8.6
Dir	75	65	64	67	57	51	42	37	40	43	40	43	46	22	353	41	35	45	62	24	346	340	320	341	38.5	42.9
22 Spd	2	4	4	4	3	4	4	4	4	4	4	6	6	7	7	6	5	5	5	3	4	4	5	3	4.4	7.1
Dir	73	81	75	73	69	78	63	62	74	64	63	52	61	50	55	58	58	69	74	73	63	61	46	50	63.1	55.0

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Evergreen Park - March 2010

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
23 Spd	2	2	5	2	2	2	2	3	4	6	7	7	8	8	8	9	8	9	7	7	8	9	8	11	5.8	11.1
Dir	1	9	57	57	53	37	32	53	67	66	58	65	56	65	56	52	58	64	64	64	61	62	67	62	58.8	62.1
24 Spd	10	9	7	8	7	6	5	6	6	6	6	6	6	9	9	8	8	8	6	4	4	2	2	1	6.0	9.6
Dir	60	64	63	61	65	69	70	79	76	70	102	104	71	62	74	69	69	71	81	72	61	58	36	350	69.9	59.9
25 Spd	1	2	2	0	1	0	1	1	1	3	3	3	3	5	6	8	8	6	4	4	6	3	4	7	2.2	7.7
Dir	310	247	243	270	31	336	238	353	265	276	289	285	355	10	15	64	61	59	42	52	44	39	39	43	27.9	61.3
26 Spd	7	6	6	6	5	5	5	4	5	5	4	4	6	4	7	6	4	3	2	3	1	1	1	1	3.5	7.1
Dir	49	61	62	65	68	57	56	62	84	65	66	26	5	44	34	39	6	1	330	290	217	23	212	51	45.7	48.6
27 Spd	1	1	9	9	7	15	11	8	12	10	18	20	21	13	11	5	3	2	3	1	1	1	1	1	6.5	21.4
Dir	45	223	246	244	251	254	252	246	243	239	257	253	261	279	285	312	311	36	93	108	121	43	64	75	257.9	260.9
28 Spd	1	2	3	2	5	6	2	3	9	12	14	17	18	18	20	20	19	11	11	11	9	5	2	0	7.3	19.8
Dir	116	68	79	67	176	197	213	195	199	212	265	281	277	285	279	280	261	259	242	240	230	221	212	161	255.7	279.8
29 Spd	0	1	3	1	1	2	1	2	2	3	2	3	3	4	6	11	6	10	7	2	6	3	8	6	2.1	10.6
Dir	186	94	73	96	100	77	87	96	50	60	11	12	359	7	331	283	317	277	279	276	273	232	254	246	298.6	282.6
30 Spd	3	7	10	11	10	5	11	12	11	12	14	16	14	17	19	19	18	13	11	11	11	13	9	6	11.6	18.8
Dir	238	241	250	261	259	255	258	261	280	284	281	282	285	275	276	276	276	279	278	273	268	271	275	265	271.7	275.6
31 Spd	7	8	5	3	1	2	2	3	9	12	13	14	14	14	14	14	11	7	7	4	6	7	8	2	7.2	14.2
Dir	257	260	274	358	13	349	18	25	280	288	282	287	283	285	283	293	297	316	292	287	281	265	262	261	285.9	284.5
Spd	0.9	0.5	0.7	0.7	0.8	0.9	1.1	1.0	1.2	1.7	3.6	4.1	4.4	4.7	4.6	4.1	3.6	2.4	2.0	1.8	1.7	1.6	1.6	1.5	Diurnal Average	
Dir	298.1	307.9	280.8	336.7	334.6	317.5	299.9	307.4	300.0	298.0	287.4	296.7	303.5	314.2	311.0	308.3	310.3	323.4	303.8	294.6	285.6	272.6	275.8	289.0		
Spd	14.9	16.1	10.5	11.2	10.7	15.4	13.5	13.5	13.3	12.0	17.7	19.7	21.4	19.1	22.7	24.3	22.3	19.7	15.9	11.1	11.1	13.1	12.8	12.3	Diurnal Maximum	
Dir	278.6	285.4	249.6	261.1	339.2	253.9	274.0	278.3	280.6	288.3	256.9	252.9	260.9	288.7	276.5	274.8	273.9	274.2	279.5	239.6	268.0	271.0	271.4	283.1		

Maximum Speed Value: 24 km/h on Mar 17 16:00
Maximum Daily Speed Average: 11.6 km/h on Mar 30
Maximum Diurnal Speed Average: 4.7 km/h at hour 14

Minimum Speed Value: 0 km/h on Mar 20 07:00
Minimum Daily Speed Average: 0.8 km/h on Mar 1
Minimum Diurnal Speed Average: 0.5 km/h at hour 2

Monthly Average Velocity: 2.09 km/h 302.74 deg

Speed Percentiles: $P_1 = 0.2$ $P_{10} = 0.6$ $Q_1 = 1.3$ Median = 3.4 $Q_3 = 7.0$ $P_{90} = 10.9$ $P_{99} = 19.7$

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

Hours in Service:	744
Hours of Data:	741
Hours of Missing Data:	3
Percent Operational Time:	99.6

D - DAS Failure

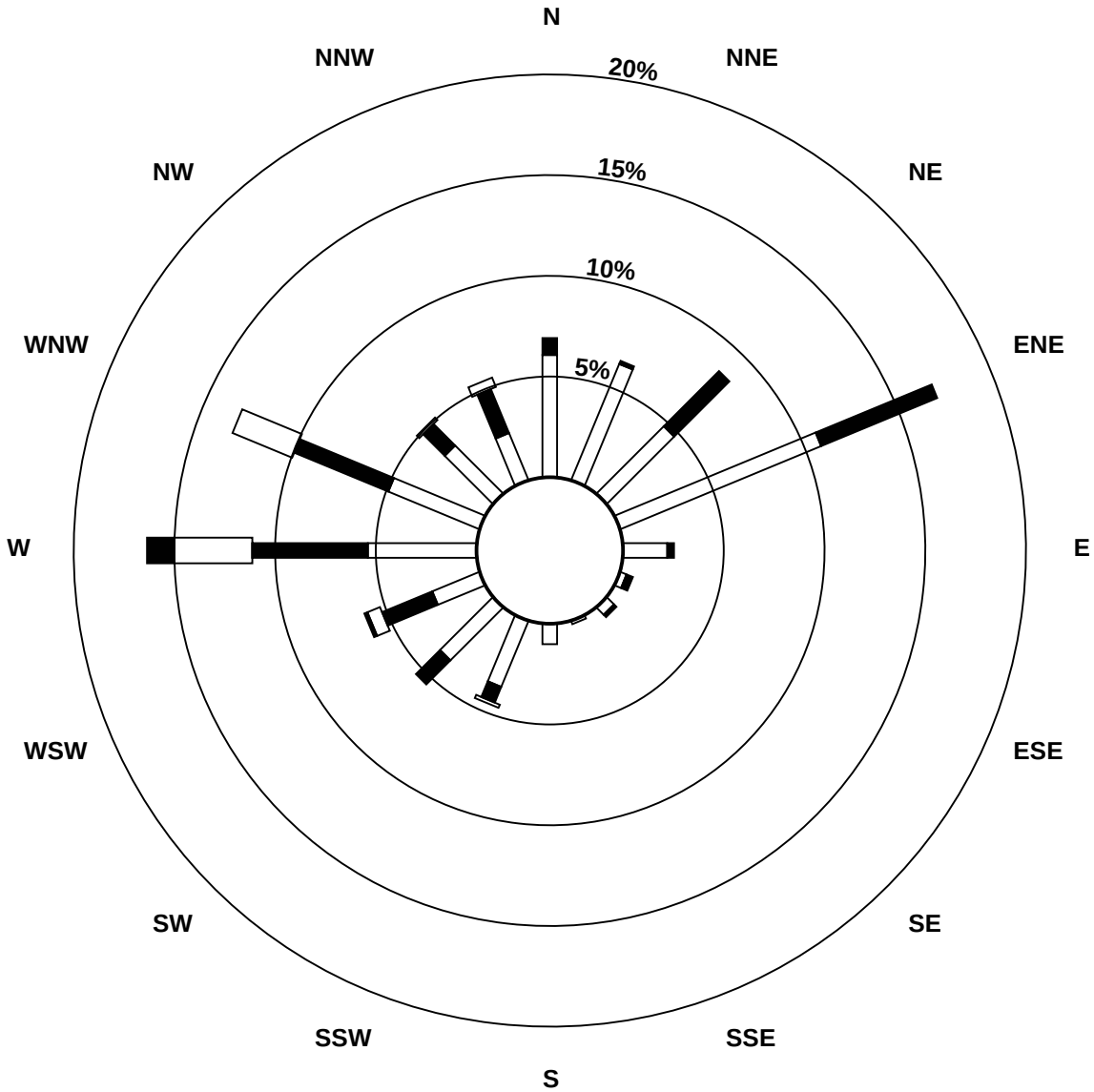
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	79	14	5	0	0	0	98
NorthEast	103	59	1	0	0	0	163
East	53	17	0	0	0	0	70
SouthEast	13	1	0	0	0	0	14
South	32	4	0	0	0	0	36
SouthWest	58	22	3	0	0	0	83
West	78	61	48	11	0	0	198
NorthWest	52	23	4	0	0	0	79
Total	468	201	61	11	0	0	741

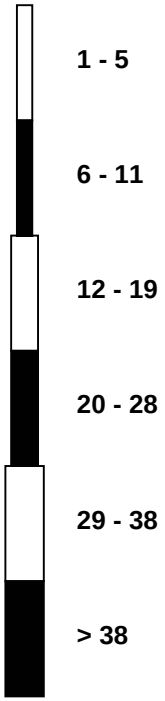
Wind Rose

Wind Speed (WS) (km/h)

Evergreen Park - March 2010



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Evergreen Park - March 2010

Maximum Speed: 24 km/h on Mar 17 16:00

Maximum Daily Speed Average: 11.9 km/h on Mar 30

Minimum Speed: 1 km/h on Mar 9 03:00

Minimum Daily Speed Average: 2.0 km/h on Mar 1

Maximum Diurnal Speed Average: 8.5 km/h at hour 15

Minimum Diurnal Speed Average: 3.5 km/h at hour 2

Monthly Average Speed: 5.21 km/h

Percentiles: $P_1 = 0.9$ $P_{10} = 1.3$ $Q_1 = 1.9$ Median = 3.9 $Q_3 = 7.2$ $P_{90} = 11.1$ $P_{99} = 19.9$

Hours in Service: 744

Hours of Data: 741

Hours of Missing Data: 3

Percent Operational Time: 99.6

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	1	1	2	1	2	2	2	2	2	2	2	3	3	4	4	4	3	2	1	2	1	1	1	1	2.0	3.9
2-Mar	3	2	3	2	2	2	2	3	3	4	5	4	4	6	5	4	3	2	3	2	2	1	2	2	3.0	6.3
3-Mar	1	2	3	2	2	2	1	2	2	3	5	4	4	5	3	5	9	11	8	7	7	5	6	5	4.4	11.2
4-Mar	4	1	2	1	3	2	2	3	2	3	7	3	2	3	4	4	5	4	2	2	2	1	2	1	2.7	6.6
5-Mar	2	1	1	1	1	1	1	1	1	2	2	4	7	6	8	9	9	10	11	3	8	8	7	5	4.6	11.4
6-Mar	5	2	1	1	1	1	1	2	3	4	5	6	9	8	6	5	3	3	2	1	1	1	1	1	3.1	8.6
7-Mar	1	1	1	1	1	2	1	1	1	2	3	3	3	2	2	2	1	1	1	1	1	3	4	9	2.0	9.2
8-Mar	15	16	10	10	8	12	14	14	13	12	16	16	13	11	11	8	9	11	12	11	9	8	7	8	11.5	16.3
9-Mar	4	1	1	1	1	1	1	1	2	3	3	4	5	6	6	8	6	4	2	3	2	3	3	2	3.0	7.9
10-Mar	2	1	1	1	1	1	1	1	2	2	3	3	3	4	5	5	5	5	2	1	1	1	1	1	2.2	4.7
11-Mar	2	3	3	4	2	3	2	3	2	3	4	5	3	18	22	17	15	7	4	13	5	4	2	7	6.3	21.8
12-Mar	5	6	7	5	3	2	4	6	2	2	7	7	6	6	6	6	3	2	1	2	1	1	1	1	3.9	7.5
13-Mar	1	1	2	4	6	3	3	3	4	7	7	8	7	6	5	6	6	5	3	2	1	1	1	1	3.9	8.3
14-Mar	1	1	1	2	2	2	2	1	2	3	3	6	5	8	6	7	6	5	5	4	4	4	3	3	3.6	7.8
15-Mar	4	1	2	2	D	D	D	1	2	2	2	2	4	4	5	5	7	5	2	2	1	2	2	1	2.7	6.6
16-Mar	2	1	1	1	1	1	2	2	3	3	4	4	6	7	6	5	4	5	3	3	2	3	1	10	3.4	10.0
17-Mar	6	3	4	2	2	2	3	3	2	3	6	10	17	19	23	24	22	20	16	9	11	12	13	13	10.2	24.5
18-Mar	10	11	9	11	11	14	10	10	10	11	12	11	11	12	10	11	11	9	9	4	2	3	1	1	8.9	13.6
19-Mar	1	1	2	1	1	1	1	1	1	1	2	2	3	2	2	3	4	3	7	5	2	1	1	1	2.1	6.9
20-Mar	2	1	4	4	2	2	1	2	1	3	8	11	10	12	8	7	5	7	4	3	1	2	3	5	4.5	12.2
21-Mar	4	3	5	7	8	7	6	7	8	7	8	9	8	6	8	7	6	5	4	3	5	3	3	3	5.9	8.8
22-Mar	2	4	4	4	4	5	4	4	4	4	4	6	7	7	7	7	5	6	5	3	4	4	5	4	4.7	7.3
23-Mar	2	3	5	2	2	2	2	3	4	6	7	8	8	8	8	9	8	9	7	8	8	9	8	11	6.1	11.3
24-Mar	10	9	7	8	7	6	5	7	6	6	6	6	7	9	9	8	8	8	6	4	4	2	3	2	6.5	9.8
25-Mar	2	2	2	1	1	1	2	2	1	3	4	4	4	6	6	8	8	6	5	5	6	3	4	7	3.9	7.9
26-Mar	7	6	6	6	5	5	5	4	5	5	5	5	7	6	7	7	4	3	3	3	2	2	3	1	4.6	7.2
27-Mar	1	1	9	9	7	16	12	8	12	11	18	20	22	13	11	5	4	3	3	2	1	1	1	1	8.0	21.7
28-Mar	1	2	3	3	5	6	3	4	9	12	16	17	18	18	20	20	20	11	11	11	9	5	2	1	9.4	19.9
29-Mar	1	1	3	2	2	2	1	2	2	3	2	3	4	4	7	11	6	10	7	3	6	3	8	6	4.3	11.0
30-Mar	4	7	11	11	10	5	11	12	11	12	14	16	14	17	19	19	18	14	11	11	11	13	9	6	11.9	19.1
31-Mar	7	8	5	3	1	2	2	3	9	12	13	14	15	15	14	14	12	8	7	5	6	7	8	3	8.1	14.6
	3.7	3.5	3.9	3.7	3.5	3.7	3.6	3.8	4.2	5.0	6.6	7.3	7.6	8.3	8.5	8.3	7.6	6.6	5.4	4.4	4.2	3.9	3.8	4.0	Diurnal Average	
	15.1	16.3	10.5	11.3	10.9	15.5	13.5	13.6	13.5	12.2	18.0	20.0	21.7	19.3	22.9	24.5	22.4	19.8	16.2	12.8	11.2	13.2	12.8	12.6	Diurnal Maximum	

D - DAS Failure

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

Hourly Standard Deviations

Wind Direction (WD) - deg

Evergreen Park - March 2010

Maximum Value: 97.4 deg on Mar 2 05:00

Minimum Value: 4.7 deg on Mar 30 04:00

Percentiles: P_1 = 5.4 P_{10} = 9.4 Q_1 = 14.5 Median = 25.2 Q_3 = 53.5 P_{90} = 77.3 P_{99} = 91.6

Hours in Service:	744
Hours of Data:	741
Hours of Missing Data:	3
Hours of Calibration:	0
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	78	63	61	75	71	67	84	53	78	92	66	37	47	33	11	20	27	23	75	65	66	56	76	86	91.6
2-Mar	53	57	33	67	97	64	77	78	89	25	27	53	40	16	22	16	18	52	33	89	78	50	82	34	97.4
3-Mar	54	28	38	45	62	95	59	66	23	45	13	28	44	36	37	27	12	10	23	16	20	17	22	13	95.3
4-Mar	58	80	88	52	42	44	46	77	60	27	16	38	49	21	21	42	16	19	61	83	42	39	82	40	87.5
5-Mar	32	58	28	88	86	91	88	79	57	50	59	38	13	25	9	10	13	14	19	23	5	6	6	7	91.1
6-Mar	5	39	60	64	76	76	77	67	10	7	8	12	10	11	20	31	77	24	40	59	72	94	69	87	94.4
7-Mar	93	75	88	65	84	83	58	71	56	54	41	40	34	18	49	70	84	76	89	51	72	38	21	12	93.0
8-Mar	10	8	10	24	10	6	6	7	9	11	7	10	12	14	12	21	14	10	9	9	6	8	6	6	24.5
9-Mar	26	74	89	39	37	88	37	44	25	23	26	22	23	20	22	25	16	32	36	21	17	40	26	25	88.6
10-Mar	60	74	80	47	56	52	77	50	60	58	26	53	49	27	24	20	26	17	64	84	76	83	57	75	83.7
11-Mar	15	14	20	32	53	33	62	17	24	61	24	15	71	21	13	11	37	71	21	42	43	61	40	9	71.1
12-Mar	40	6	6	7	89	80	9	41	56	83	22	19	22	40	26	22	44	43	35	24	48	45	78	64	88.7
13-Mar	87	33	20	22	12	27	38	33	22	14	13	11	22	24	35	29	21	16	13	76	92	57	46	32	91.9
14-Mar	92	61	77	82	29	40	44	77	32	48	46	20	22	23	43	27	42	11	9	14	25	47	29	53	91.6
15-Mar	29	86	88	81	D	D	D	89	30	42	57	56	19	73	32	52	9	45	50	60	82	68	78	81	88.6
16-Mar	89	75	75	60	29	61	30	21	21	30	32	58	22	16	24	23	22	14	25	46	73	73	80	30	88.7
17-Mar	54	73	23	88	90	62	31	64	90	72	29	14	9	8	8	6	5	6	9	11	10	9	6	12	89.8
18-Mar	16	8	15	10	11	8	14	14	15	15	14	18	16	17	24	23	10	16	16	18	45	31	73	92	91.7
19-Mar	85	77	34	43	60	85	79	55	90	51	14	32	18	34	43	41	31	20	16	24	51	83	89	76	90.2
20-Mar	25	78	63	73	72	60	95	86	80	61	13	26	18	15	21	25	33	19	15	34	63	11	14	9	95.4
21-Mar	8	7	6	10	9	12	12	14	16	12	12	12	18	28	35	15	12	22	15	28	16	19	30	34	35.0
22-Mar	34	23	16	18	20	17	17	16	22	21	25	23	24	19	17	18	21	18	17	18	19	16	15	24	34.3
23-Mar	30	26	22	23	45	34	23	16	24	22	19	18	19	18	18	16	12	10	11	11	11	10	10	10	45.5
24-Mar	10	13	14	11	14	16	16	17	22	20	27	34	25	17	18	19	18	13	14	17	13	11	22	46	46.4
25-Mar	38	11	38	88	72	78	69	60	37	20	40	51	55	28	22	18	15	18	24	29	9	12	11	11	87.7
26-Mar	10	12	14	13	16	15	15	23	21	21	54	56	40	47	18	19	22	30	50	34	86	59	92	58	91.6
27-Mar	56	69	12	7	14	6	6	8	8	15	10	10	10	11	16	30	50	42	19	47	76	68	45	47	76.4
28-Mar	78	54	51	30	20	13	31	82	10	11	24	7	9	10	8	8	10	17	11	6	9	13	60	73	82.1
29-Mar	80	74	29	48	70	30	63	47	32	29	42	22	25	31	24	17	29	14	16	17	16	28	6	15	79.9
30-Mar	30	11	6	5	6	27	5	6	10	10	12	9	11	9	8	7	7	7	6	5	7	7	11	8	30.3
31-Mar	5	5	15	25	44	15	52	30	14	13	11	10	12	13	12	13	22	30	21	28	18	18	5	23	52.1
	93.0	85.9	88.6	87.7	97.4	95.3	95.4	88.6	90.2	91.6	66.2	58.2	71.1	72.5	48.6	70.5	83.9	76.0	89.2	89.0	91.9	94.4	91.6	91.7	

D - DAS Failure

PASZA
Smoky Heights Station
Monthly Summary Tables, Graphs and Roses

PASZA
Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - March 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 9.2 ppb on Mar 2 17:00 Maximum Daily Average: 1.9 ppb on Mar 31

Minimum Value: 0 ppb on Mar 8 21:00 Minimum Daily Average: 0.1 ppb on Mar 21
Maximum Diurnal Average: 1.0 ppb at hour 17 Minimum Diurnal Average: 0.3 ppb at hour 7
Monthly Average: 0.63 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.2$ Median = 0.3 $Q_3 = 0.7$ $P_{90} = 1.5$ $P_{99} = 4.6$

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

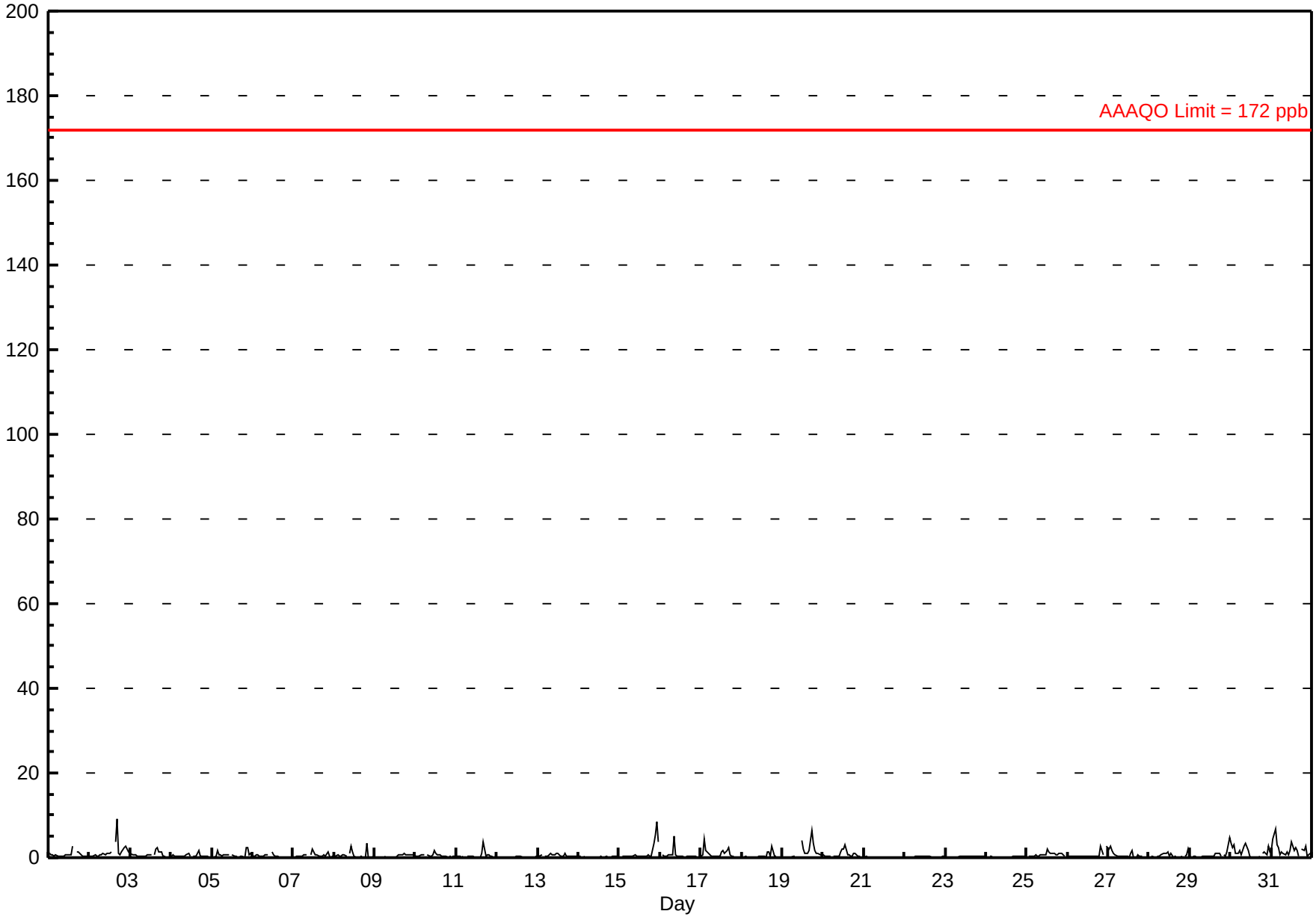
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	1	1	1	0	1	0	0	0	0	0	1	1	1	1	3	A	1	1	1	1	0	0	0	0	0.7	2.7
2-Mar	0	0	0	1	0	0	1	1	1	1	1	1	1	1	A	4	9	1	1	1	2	3	2	1	1.5	9.2
3-Mar	1	1	1	1	0	0	0	0	0	0	1	1	1	A	1	2	2	1	2	0	0	0	0	0	0.7	2.4
4-Mar	0	1	0	0	0	0	0	0	0	1	1	0	A	0	0	0	2	0	0	0	0	0	0	0	0.4	1.8
5-Mar	0	0	0	2	1	1	0	1	1	1	1	A	1	0	0	0	0	0	0	0	2	2	1	1	0.6	2.3
6-Mar	0	0	1	1	0	0	0	1	1	1	A	2	1	0	0	0	0	0	0	0	0	0	0	0	0.4	1.5
7-Mar	0	0	0	0	0	1	1	1	1	A	1	2	2	1	1	0	0	0	1	0	1	0	0	0	0.6	2.0
8-Mar	0	0	1	0	0	1	1	0	A	1	3	1	0	0	0	0	0	0	0	3	0	0	0	0	0.6	3.3
9-Mar	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0.4	0.9
10-Mar	0	0	0	1	1	1	A	1	0	0	1	2	1	1	1	0	0	0	0	0	0	0	0	0	0.5	1.6
11-Mar	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	4	0	1	1	0	0	0	0	0.4	3.6
12-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	0.3
13-Mar	0	1	1	A	0	0	0	1	1	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0.5	1.2
14-Mar	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
15-Mar	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	4	5	8	4	1.2	8.4
16-Mar	A	1	0	0	0	1	1	1	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.6	5.1
17-Mar	0	1	4	2	1	1	0	0	0	0	0	0	1	2	1	2	2	1	0	0	0	0	A	0	0.9	4.3
18-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	3	0	0	A	0	0	0.4	2.6
19-Mar	0	0	0	0	0	0	0	0	C	C	C	4	2	1	1	1	2	6	3	2	1	1	1	1	1.3	6.5
20-Mar	1	0	0	0	0	A	0	0	0	0	1	2	2	3	1	1	0	0	1	1	0	0	0	0	0.7	3.1
21-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
22-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
23-Mar	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
24-Mar	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
25-Mar	A	0	0	0	0	1	0	0	1	1	1	1	2	1	1	1	1	1	1	1	1	1	0	A	0.7	2.0
26-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	1	A	3	0.6	2.9
27-Mar	2	3	2	1	1	0	0	0	0	0	0	0	0	1	2	0	0	1	0	0	0	A	0	0	0.7	2.6
28-Mar	0	0	0	0	0	0	0	1	1	1	1	1	0	1	0	0	0	0	0	0	A	0	1	2	0.5	2.1
29-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	A	1	0	1	5	0.6	4.8
30-Mar	3	2	3	1	1	2	1	2	3	3	2	0	0	0	0	0	0	0	A	1	1	1	3	1	1.3	3.3
31-Mar	2	4	7	3	2	1	1	1	1	1	1	2	4	2	2	2	1	A	2	2	3	0	1	1	1.9	6.8
	0.5	0.6	0.8	0.5	0.4	0.4	0.3	0.4	0.6	0.6	0.6	0.8	0.7	0.6	0.6	0.7	1.0	0.7	0.6	0.6	0.7	0.6	0.7	0.8	Diurnal Average	
	3.2	4.3	6.8	3.0	2.4	1.6	1.3	1.6	5.1	3.3	2.7	4.2	3.9	3.1	2.7	3.6	9.2	6.5	3.3	3.3	3.6	5.5	8.4	4.8	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 57 ppb

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - March 2010



Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - March 2010

Maximum Value: 24.5 ppb on Mar 2 17:00

Maximum Daily Average: 4.2 ppb on Mar 30

Minimum Value: 0 ppb on Mar 8 22:00

Minimum Daily Average: 0.4 ppb on Mar 21

Maximum Diurnal Average: 2.4 ppb at hour 17

Minimum Diurnal Average: 0.9 ppb at hour 7

Monthly Average: 1.50 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.4$ $Q_1 = 0.5$ Median = 0.7 $Q_3 = 1.3$ $P_{90} = 3.5$ $P_{99} = 11.6$

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

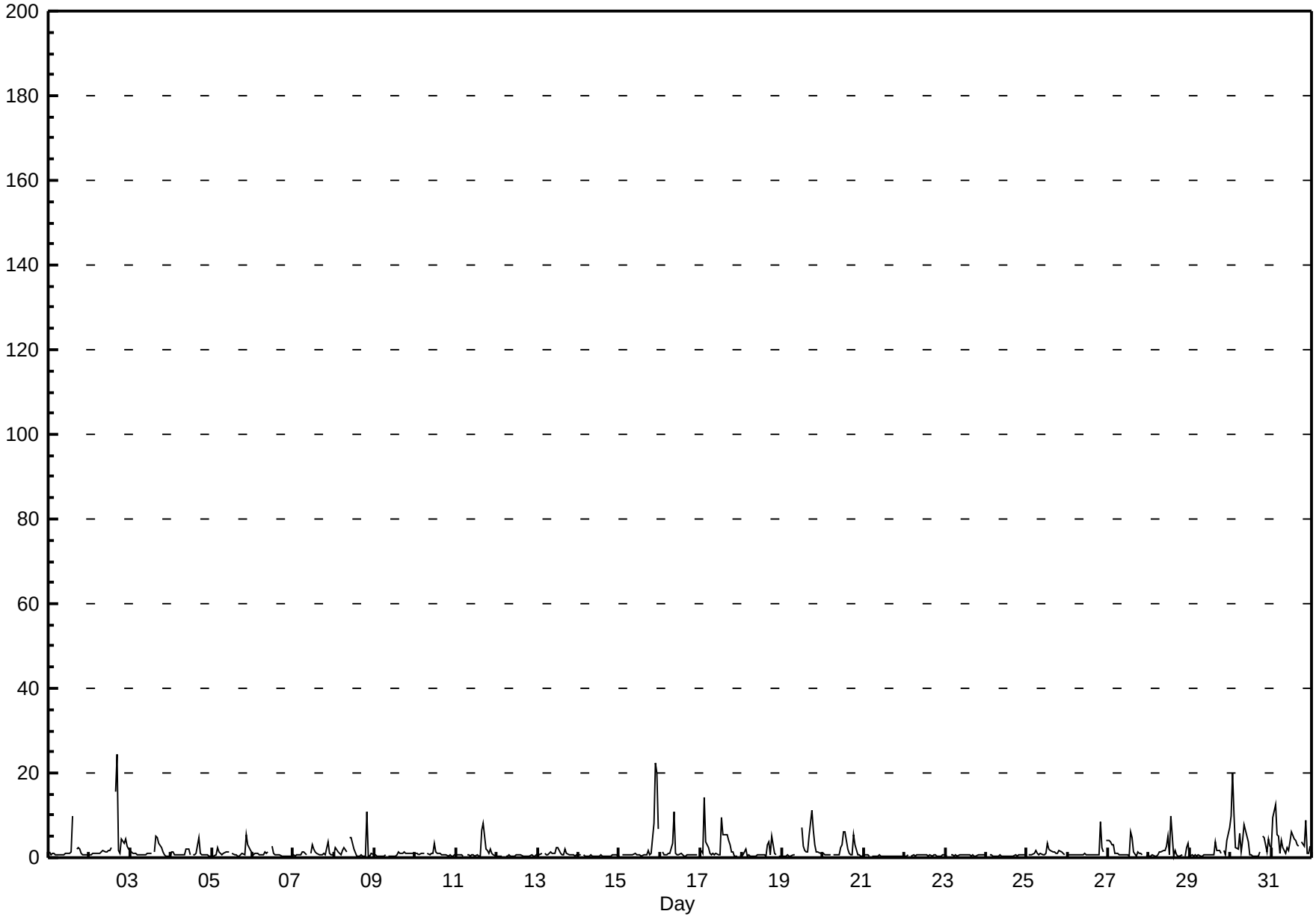
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10	A	2	2	2	1	1	1	1	1	1.4	10.0
2-Mar	1	1	1	1	1	1	1	1	2	1	1	2	2	2	A	16	24	2	1	4	3	4	3	2	3.3	24.5
3-Mar	2	1	1	1	1	1	1	1	1	1	1	1	1	A	1	5	5	3	3	1	1	0	0	1	1.4	5.2
4-Mar	1	1	1	1	1	1	1	1	1	2	2	1	A	1	1	1	5	1	1	1	1	1	0	0	1.0	4.7
5-Mar	0	0	1	2	1	1	1	1	1	1	1	A	1	1	1	0	0	1	1	1	6	3	2	2	1.3	5.6
6-Mar	1	1	1	1	1	1	1	1	1	1	A	3	1	1	1	1	1	0	0	0	0	0	0	0	0.8	2.7
7-Mar	1	0	1	1	1	1	1	1	1	A	1	3	2	1	1	1	1	1	1	1	4	1	1	1	1.1	3.6
8-Mar	1	2	1	1	1	2	2	1	A	5	5	3	2	0	0	0	1	0	0	11	0	0	1	1	1.8	10.8
9-Mar	1	0	0	0	0	0	1	A	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0.7	1.3
10-Mar	1	1	1	1	1	1	A	1	1	1	1	4	1	1	1	1	1	1	1	0	1	0	0	1	0.9	3.5
11-Mar	1	1	1	1	0	A	1	1	0	1	1	1	1	0	0	7	8	2	2	1	2	1	1	0	1.3	8.0
12-Mar	0	0	0	0	A	0	0	1	0	0	0	1	1	1	1	0	0	0	0	0	1	0	0	1	0.5	0.7
13-Mar	1	1	1	A	1	1	1	1	1	1	1	2	2	1	1	1	2	1	1	1	1	1	0	1	1.0	2.3
14-Mar	1	1	A	1	0	0	0	1	0	0	0	0	0	1	0	1	1	0	0	1	1	1	1	1	0.5	0.8
15-Mar	0	A	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	2	1	1	8	22	20	7	3.1	22.3
16-Mar	A	1	1	1	1	1	1	3	11	1	1	1	1	1	0	0	1	1	1	1	1	1	1	A	1.3	10.8
17-Mar	2	1	14	4	2	1	1	1	1	1	1	1	10	5	5	6	4	3	1	1	0	1	A	1	2.8	14.2
18-Mar	1	1	2	0	1	0	0	0	0	1	1	1	1	1	0	3	4	1	5	1	1	A	0	0	1.1	5.3
19-Mar	0	0	0	1	0	0	1	1	C	C	C	7	3	2	1	2	5	11	6	3	1	1	1	1	2.3	11.1
20-Mar	1	1	1	1	1	A	1	1	1	1	3	3	6	6	2	1	1	1	5	3	1	1	0	0	1.7	6.2
21-Mar	1	1	1	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
22-Mar	0	0	1	A	0	1	0	1	1	1	1	1	1	1	0	1	0	1	1	0	0	0	1	1	0.5	0.8
23-Mar	1	0	A	1	1	0	1	0	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	0.6	0.8
24-Mar	1	A	1	1	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	1	1	1	1	1	0.5	0.6
25-Mar	A	1	1	1	1	2	1	1	1	1	1	1	3	2	2	1	1	1	1	2	1	1	1	A	1.2	3.5
26-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	8	3	1	A	4	1.2	8.3
27-Mar	4	4	3	3	1	1	1	1	1	1	1	1	0	6	5	1	0	1	1	1	1	A	0	1	1.6	6.0
28-Mar	1	0	1	0	0	1	1	1	2	2	3	5	1	10	0	2	1	0	0	1	A	0	2	4	1.6	9.8
29-Mar	0	1	0	1	0	1	0	0	1	1	1	1	1	1	1	4	2	2	1	A	2	1	4	7	1.3	7.2
30-Mar	10	20	10	2	2	6	1	4	8	6	4	1	1	0	0	0	0	1	A	5	5	1	5	3	4.2	19.9
31-Mar	2	9	13	5	5	1	4	2	1	2	2	4	6	4	4	3	3	A	4	3	9	1	1	3	4.0	12.6
	1.2	1.8	2.0	1.1	0.9	0.9	0.9	1.0	1.3	1.2	1.2	1.6	1.7	1.7	1.5	2.0	2.4	1.4	1.4	1.8	1.8	1.7	1.7	1.5	Diurnal Average	
	9.8	19.9	14.2	5.4	5.1	5.8	3.9	4.0	10.8	6.3	4.8	7.0	9.6	9.8	10.0	15.7	24.5	11.1	6.3	10.8	9.0	22.3	20.1	7.2	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

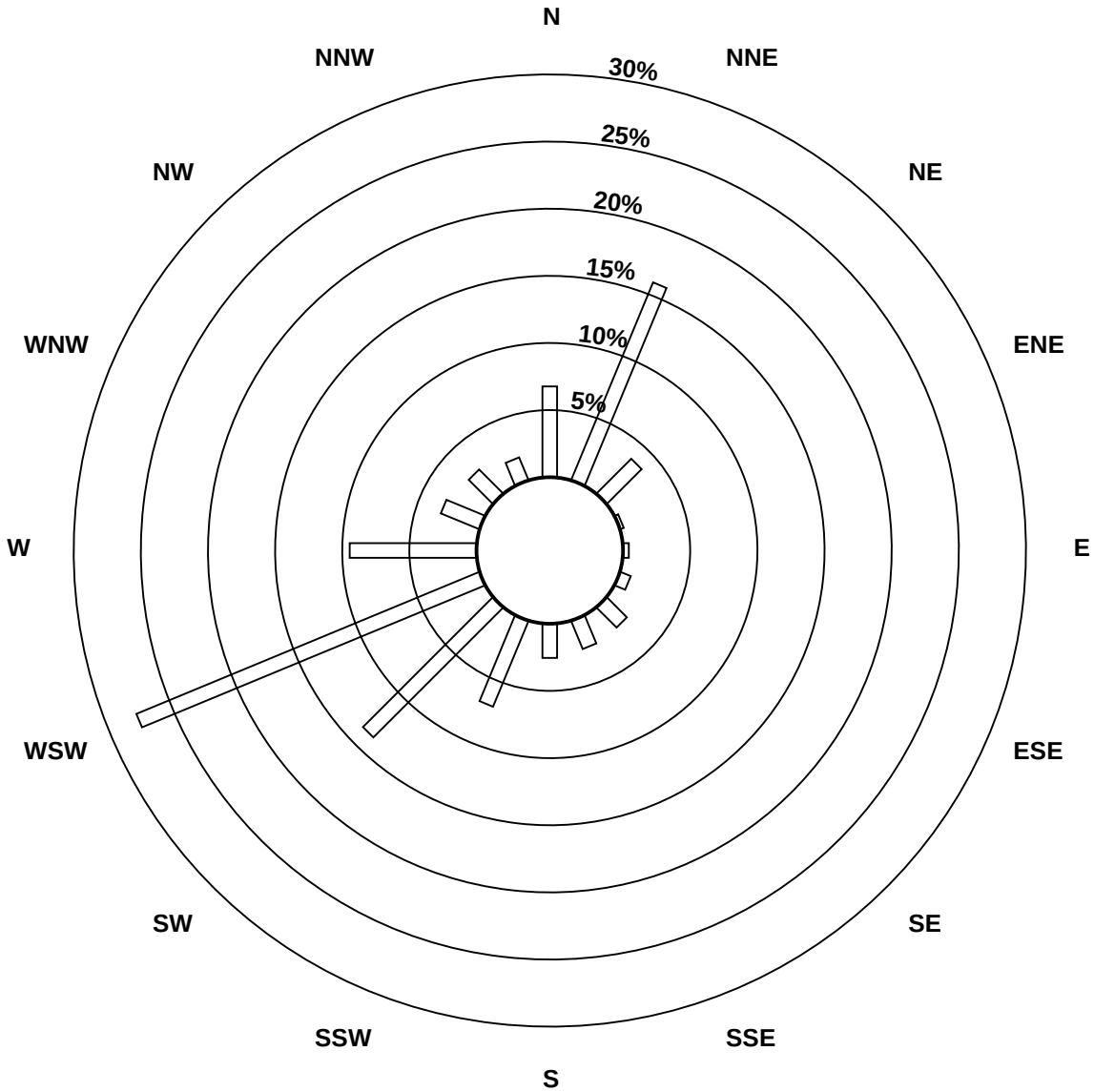
Smoky Heights - March 2010



Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - March 2010



Pollutant Classes (ppb)

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

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - March 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.2 ppb on Mar 28 10:00 Maximum Daily Average: 0.4 ppb on Mar 30

Minimum Value: 0 ppb on Mar 5 02:00 Minimum Daily Average: 0.0 ppb on Mar 5
Maximum Diurnal Average: 0.2 ppb at hour 10 Minimum Diurnal Average: 0.2 ppb at hour 1
Monthly Average: 0.21 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.1$ Median = 0.2 $Q_3 = 0.3$ $P_{90} = 0.4$ $P_{99} = 0.5$

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

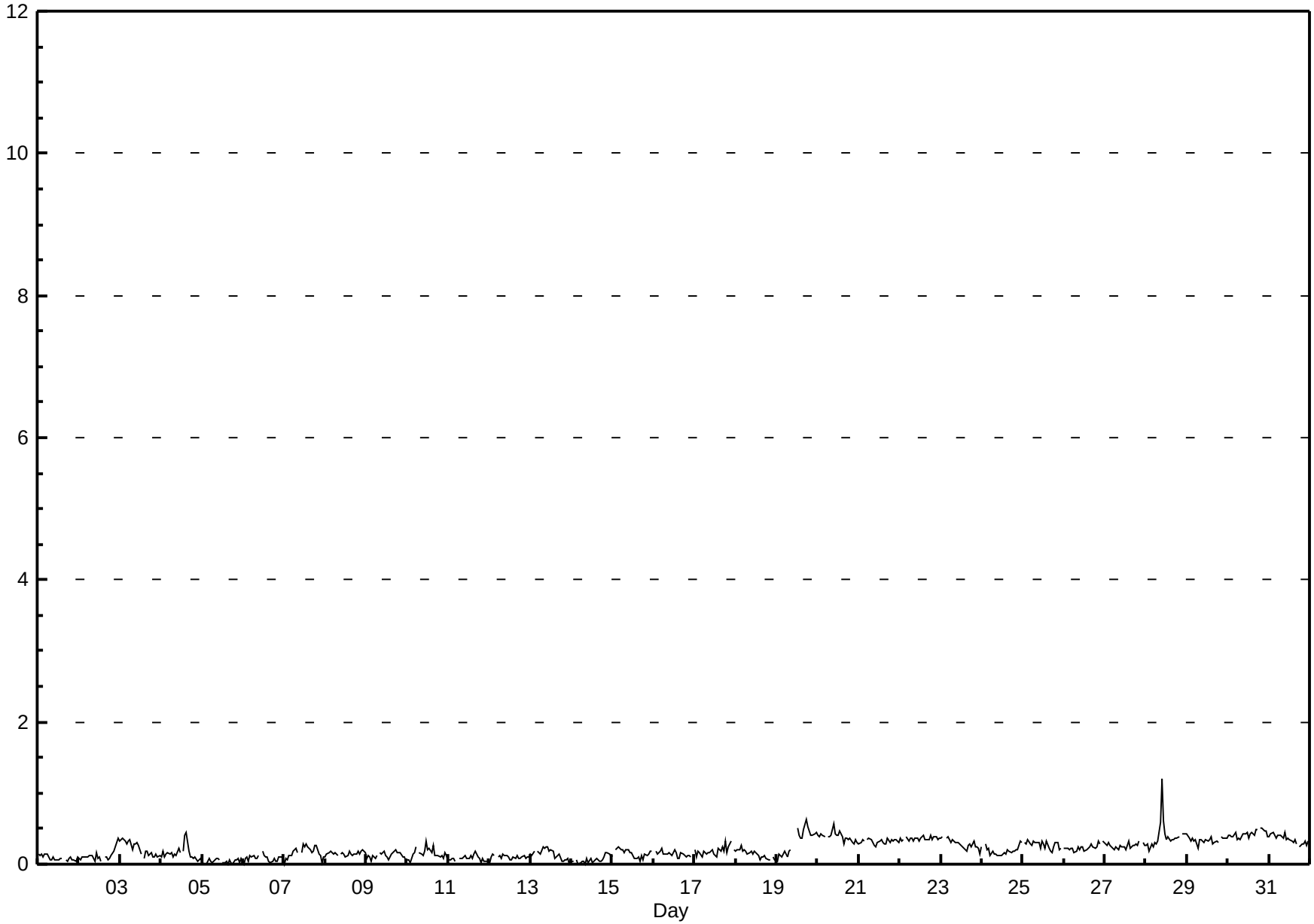
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.1
2-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.4
3-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.4
4-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	0.2	0.4
5-Mar	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
6-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	0.2
7-Mar	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
8-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	0.1	0.2
9-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	0.1	0.2
10-Mar	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
11-Mar	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
12-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	0.1
13-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	0.3
14-Mar	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
15-Mar	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
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	A	0.1	0.2
17-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.3
18-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	0.1	0.3
19-Mar	0	0	0	0	0	0	0	0	0	C	C	C	1	0	0	0	0	1	1	0	0	0	0	0	0.3	0.6
20-Mar	0	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
21-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
22-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	0.4	0.4
23-Mar	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
24-Mar	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
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	A	0.3	0.4
26-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.3
27-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	0.3
28-Mar	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0.4	1.2
29-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
30-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	0	0	0	0.4	0.5
31-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	0.4	0.5
	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Diurnal Average	
	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.6	1.2	0.6	0.4	0.5	0.5	0.4	0.4	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.4	Diurnal Maximum	

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

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - March 2010



Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - March 2010

Maximum Value: 1.7 ppb on Mar 28 10:00

Maximum Daily Average: 0.8 ppb on Mar 28

Minimum Value: 0 ppb on Mar 14 09:00

Minimum Daily Average: 0.4 ppb on Mar 5

Maximum Diurnal Average: 0.6 ppb at hour 10

Minimum Diurnal Average: 0.6 ppb at hour 5

Monthly Average: 0.60 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.4$ $Q_1 = 0.5$ Median = 0.6 $Q_3 = 0.7$ $P_{90} = 0.8$ $P_{99} = 1.0$

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

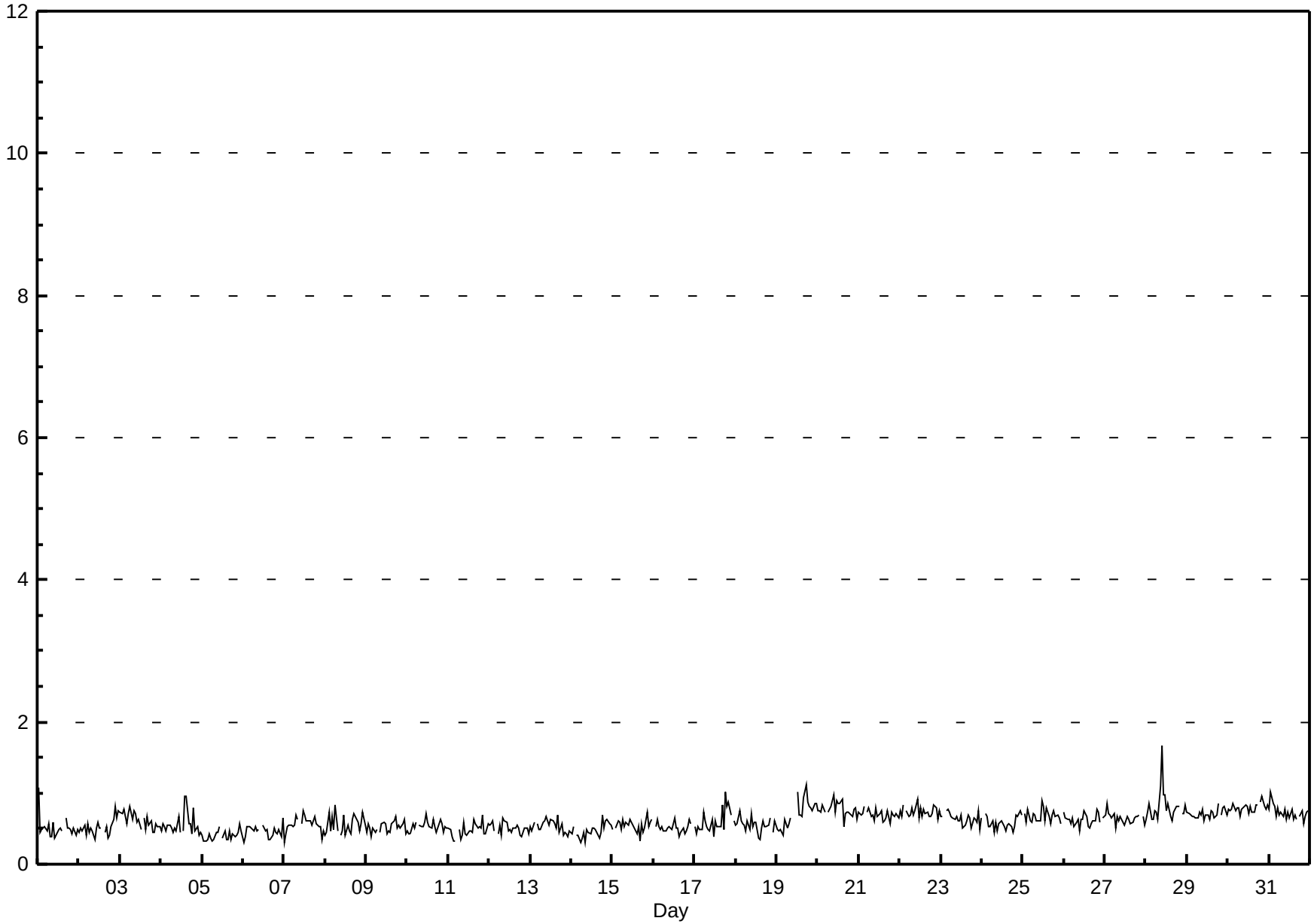
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	1	0	0	1	1	0	1	0	0	1	0	0	0	0	0	A	1	1	1	0	0	1	0	0	0.5	1.1
2-Mar	0	1	0	1	0	1	0	1	0	0	1	1	1	1	A	0	1	0	0	1	1	1	1	1	0.5	0.8
3-Mar	1	1	1	1	1	1	1	1	1	1	1	1	0	A	1	0	1	1	1	0	0	1	1	1	0.6	0.8
4-Mar	0	1	1	0	1	1	1	0	1	0	1	0	A	0	1	1	1	1	0	1	0	1	0	0	0.6	1.0
5-Mar	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	1	0	0.4	0.6
6-Mar	0	0	1	1	1	1	0	1	0	0	A	1	1	0	0	0	0	0	1	0	0	0	0	1	0.5	0.7
7-Mar	0	0	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0.6	0.8
8-Mar	0	0	1	0	1	0	1	0	A	0	0	1	0	1	0	0	1	1	1	1	0	1	1	1	0.6	0.8
9-Mar	0	1	1	0	1	0	0	A	0	1	1	1	0	0	0	1	1	1	1	1	1	1	1	0	0.5	0.7
10-Mar	0	0	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0	1	1	0.5	0.7
11-Mar	1	0	0	0	0	A	0	0	0	1	0	0	0	0	0	1	1	0	1	1	1	0	0	1	0.5	0.7
12-Mar	1	1	1	0	A	0	1	0	1	1	1	0	0	0	1	1	1	1	0	0	1	1	0	0	0.5	0.6
13-Mar	1	0	1	A	1	0	0	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0.5	0.7
14-Mar	0	1	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1	1	0.5	0.7
15-Mar	0	A	1	1	1	0	1	1	1	1	1	1	1	1	0	1	0	1	0	1	1	1	1	1	0.5	0.7
16-Mar	A	1	1	1	0	1	0	0	1	1	1	0	1	1	1	0	0	1	0	0	1	1	1	A	0.5	0.6
17-Mar	1	0	1	0	0	1	1	1	0	0	1	0	1	1	1	1	1	0	1	1	1	1	A	1	0.6	1.0
18-Mar	1	1	1	1	1	1	0	1	0	1	1	1	1	0	0	0	1	1	1	1	1	A	0	1	0.6	0.8
19-Mar	0	0	0	0	0	1	1	1	1	C	C	C	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1
20-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	1.0
21-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	0.8
22-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	0.9
23-Mar	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0.6	0.8
24-Mar	1	A	1	1	1	1	1	0	1	0	1	1	1	1	0	1	1	1	0	1	1	1	1	1	0.6	0.8
25-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	0.9
26-Mar	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.6	0.8
27-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	0.8
28-Mar	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.7
29-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	0.7	0.9
30-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	0.8	1.0
31-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	0.7	1.0
	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	Diurnal Average	
	1.1	1.0	0.9	0.9	0.8	0.8	0.8	0.8	1.1	1.7	1.0	1.0	1.0	0.9	1.0	1.0	0.9	1.1	1.0	0.9	1.0	0.8	0.8	0.8	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

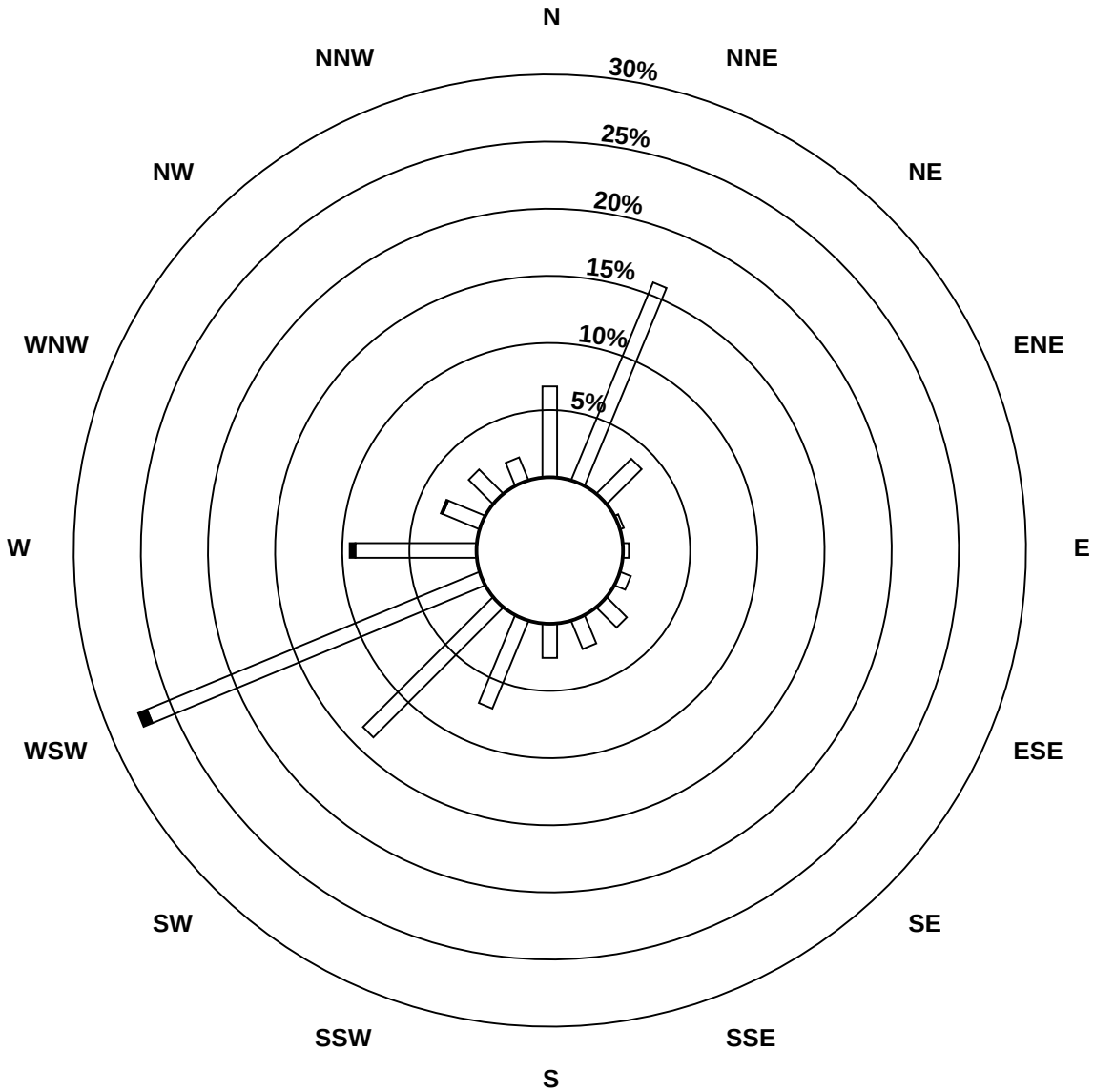
Smoky Heights - March 2010



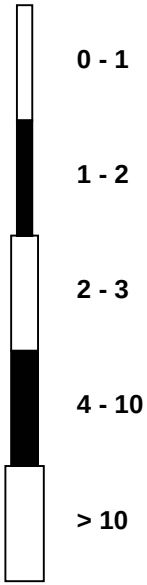
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - March 2010



Pollutant Classes (ppb)



PASZA
Peace Airshed Zone Association

Hourly Averages

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

Smoky Heights - March 2010

Number of Exceedences: 1-hr: 0 24-hr: 0
Maximum Value: 74.0 $\mu g/m^3$ on Mar 10 23:00
Maximum Daily Average: 8.8 $\mu g/m^3$ on Mar 25

Minimum Value: 0 $\mu g/m^3$ on Mar 1 02:00
Maximum Diurnal Average: 5.2 $\mu g/m^3$ at hour 23
Monthly Average: 2.83 $\mu g/m^3$

Minimum Daily Average: 0.8 $\mu g/m^3$ on Mar 8
Minimum Diurnal Average: 1.6 $\mu g/m^3$ at hour 2
Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.8$ Median = 1.9 $Q_3 = 3.3$ $P_{90} = 5.8$ $P_{99} = 15.0$

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	1
Percent Operational Time:	100.0

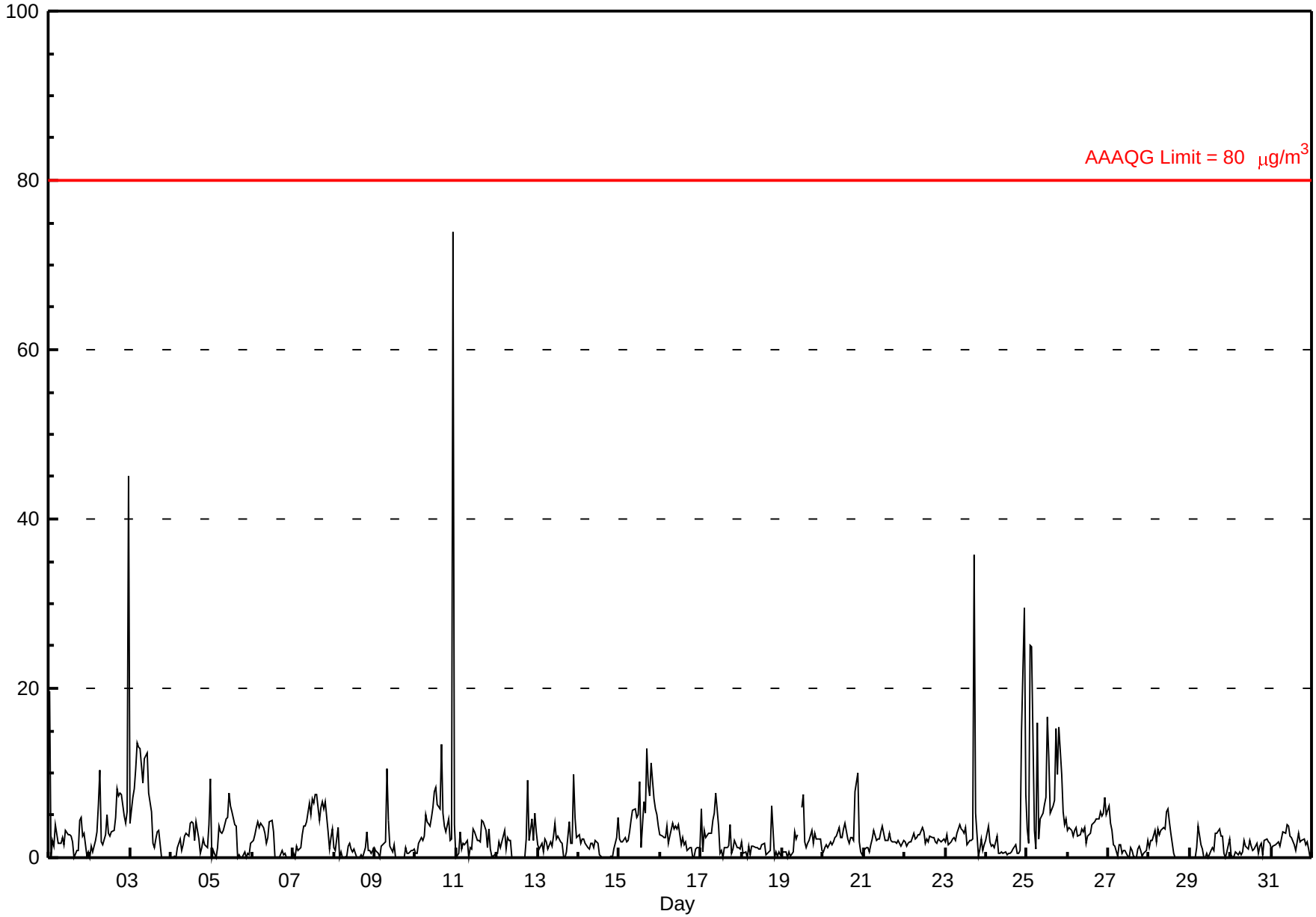
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	20	0	2	1	4	2	2	2	2	1	3	3	3	3	2	0	1	1	4	5	2	3	0	1	2.8	19.7
2-Mar	0	1	1	2	3	6	10	2	2	3	5	3	3	3	3	5	8	7	8	7	5	4	5	45	5.9	45.1
3-Mar	4	7	8	10	14	13	13	9	12	12	12	8	5	2	1	2	3	3	0	0	0	0	0	0	5.8	13.6
4-Mar	0	0	0	0	1	2	1	2	2	3	3	4	4	4	2	4	2	0	1	2	2	1	4	9	2.3	9.3
5-Mar	0	1	0	1	4	3	3	3	5	5	8	6	5	4	4	0	0	0	0	1	0	0	0	2	2.3	7.7
6-Mar	2	3	3	4	3	4	4	3	2	2	4	4	3	0	0	0	0	1	0	0	0	0	0	0	1.8	4.4
7-Mar	1	0	1	1	1	3	4	4	4	6	5	7	6	7	7	4	6	7	6	7	3	1	2	3	4.1	7.4
8-Mar	1	1	4	0	1	0	0	0	1	2	1	1	1	0	0	0	0	0	1	3	1	1	1	1	0.8	3.6
9-Mar	1	1	1	0	1	2	2	11	4	1	1	2	0	0	0	0	0	0	1	1	0	1	1	1	1.3	10.6
10-Mar	0	1	2	2	2	3	5	4	4	5	6	8	8	6	6	13	5	4	3	5	2	2	74	4	7.2	74.0
11-Mar	0	0	3	1	2	2	2	0	1	1	3	3	2	2	2	4	4	3	1	3	1	0	0	0	1.8	4.4
12-Mar	0	2	1	2	3	1	2	2	2	0	0	0	0	0	0	0	0	2	9	2	5	2	5	3	1.9	9.1
13-Mar	1	1	2	1	2	2	1	2	1	2	4	2	3	2	2	0	0	1	4	2	2	10	5	2	2.2	9.9
14-Mar	3	2	2	2	2	1	1	2	2	1	2	2	0	0	0	0	0	0	0	0	0	1	2	5	1.2	4.7
15-Mar	2	2	2	2	2	2	3	4	6	6	5	5	9	1	7	5	13	9	7	11	7	6	5	4	5.2	12.9
16-Mar	3	3	2	2	4	2	3	4	3	4	3	4	1	2	1	2	1	1	1	0	0	1	1	1	2.1	4.1
17-Mar	6	1	3	2	3	3	3	4	5	8	4	0	1	0	1	1	1	4	1	1	2	1	1	1	2.4	7.7
18-Mar	2	1	1	0	1	0	1	1	1	1	1	1	2	2	0	0	1	1	6	0	1	0	1	0	1.0	6.0
19-Mar	1	1	1	0	1	0	1	3	2	3	C	6	8	2	1	2	2	3	2	3	2	2	2	1	2.0	7.5
20-Mar	1	1	2	1	2	2	2	2	3	4	2	2	3	4	2	2	2	2	2	8	10	2	1	0	2.6	10.0
21-Mar	1	1	1	1	1	2	3	2	2	2	3	4	2	2	2	3	2	2	2	2	2	2	1	2	2.0	3.8
22-Mar	2	1	2	2	2	3	2	2	3	3	4	3	2	2	2	3	2	2	2	2	2	2	2	2	2.2	3.6
23-Mar	2	3	1	2	2	2	2	3	4	3	3	3	3	2	2	2	2	36	5	0	1	2	1	1	3.7	35.8
24-Mar	2	4	2	1	1	1	3	0	1	1	0	1	0	1	0	1	1	2	0	0	1	15	30	7	3.1	29.6
25-Mar	3	2	25	25	3	1	16	2	5	5	6	7	17	12	5	6	7	15	10	15	10	6	4	5	8.8	25.1
26-Mar	3	4	3	3	3	4	3	3	3	3	3	2	2	3	4	4	4	5	5	5	5	5	7	5	3.8	7.1
27-Mar	6	4	3	2	1	0	2	2	1	1	1	0	0	1	1	0	0	1	1	1	0	1	1	2	1.3	6.1
28-Mar	1	2	2	3	2	3	3	3	4	3	5	6	4	3	1	0	0	0	0	0	0	0	0	0	1.9	5.8
29-Mar	0	0	0	0	1	4	1	1	0	0	0	0	1	1	1	3	3	3	3	3	1	0	1	2	1.2	3.7
30-Mar	0	0	0	1	0	1	0	1	2	1	1	2	1	1	1	2	0	1	2	0	2	2	2	2	1.1	2.2
31-Mar	1	1	2	2	2	1	2	3	3	4	4	3	2	1	1	2	3	2	2	2	2	2	1	0	2.0	4.0
	2.2	1.6	2.6	2.5	2.4	2.4	3.2	2.8	2.9	3.1	3.5	3.2	3.3	2.3	2.0	2.3	2.4	3.8	2.9	2.9	2.3	2.4	5.2	3.6	Diurnal Average	
	19.7	7.2	25.1	24.8	13.6	13.0	15.9	10.6	11.7	12.1	12.4	7.8	16.6	11.8	7.4	13.3	12.9	35.8	9.8	15.4	10.0	14.9	74.0	45.1	Diurnal Maximum	

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

Hourly Averages

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

Smoky Heights - March 2010



PASZA
Peace Airshed Zone Association

Hourly Maximums

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

Smoky Heights - March 2010

Maximum Value: 233.2 $\mu g/m^3$ on Mar 3 00:00

Maximum Daily Average: 22.1 $\mu g/m^3$ on Mar 25

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

Minimum Daily Average: 3.1 $\mu g/m^3$ on Mar 8

Maximum Diurnal Average: 15.8 $\mu g/m^3$ at hour 23

Minimum Diurnal Average: 4.1 $\mu g/m^3$ at hour 2

Monthly Average: 7.33 $\mu g/m^3$

Percentiles: $P_1 = 0.9$ $P_{10} = 2.2$ $Q_1 = 3.1$ Median = 4.4 $Q_3 = 6.7$ $P_{90} = 11.1$ $P_{99} = 67.8$

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	1
Percent Operational Time:	100.0

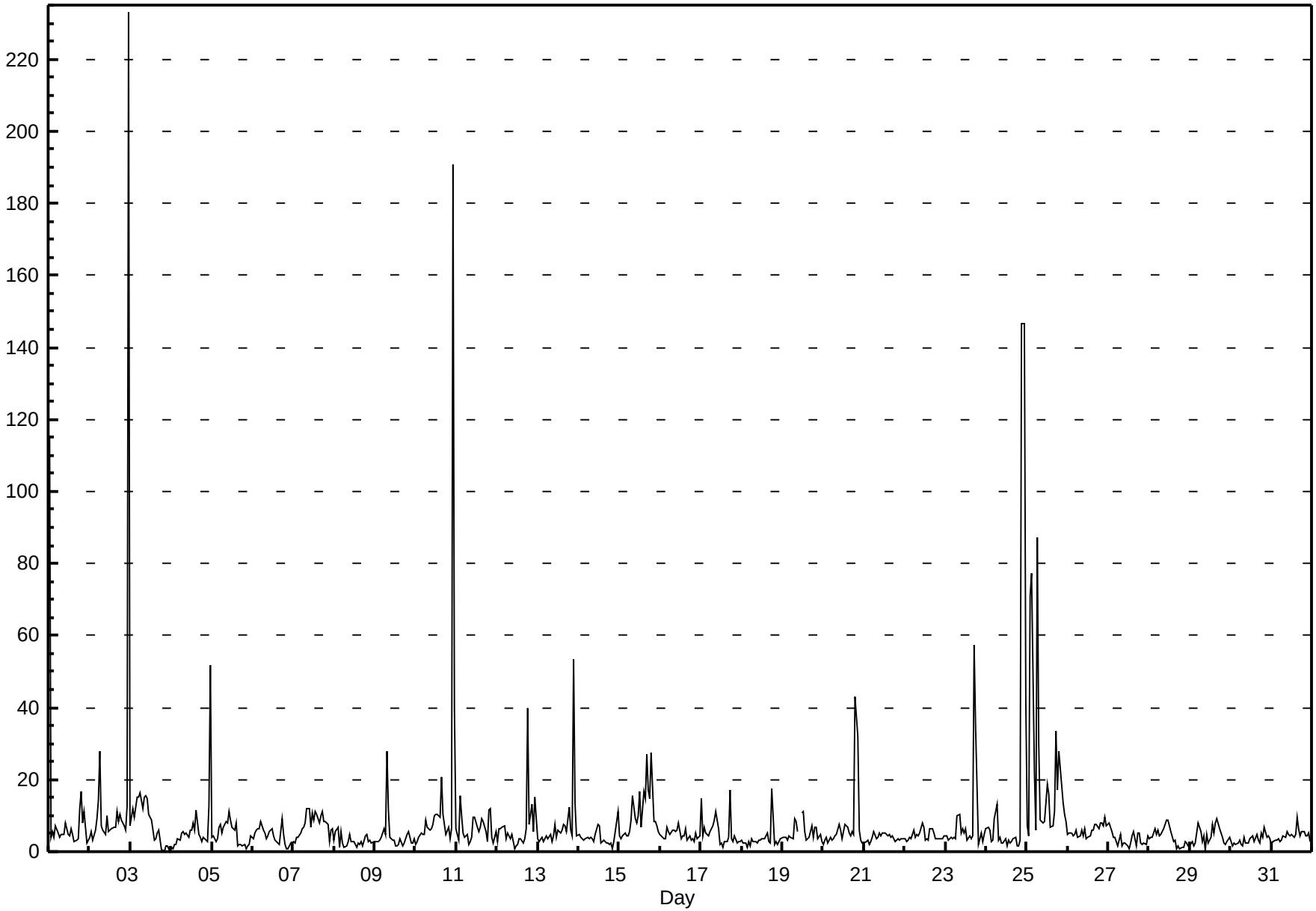
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	115	4	5	4	7	5	4	5	5	5	8	5	5	7	5	3	3	4	12	17	8	11	2	3	10.4	115.4
2-Mar	4	6	3	6	9	14	28	7	6	5	10	6	6	7	7	7	11	8	10	9	7	6	13	233	17.8	233.2
3-Mar	7	12	10	12	15	15	16	12	15	16	15	10	9	6	3	4	5	6	1	0	0	2	2	0	8.0	16.2
4-Mar	1	1	2	2	3	3	5	6	5	5	4	6	6	8	6	11	5	4	3	4	4	3	13	52	6.7	51.8
5-Mar	4	4	3	4	7	7	5	7	8	8	11	9	7	6	8	1	2	2	2	2	1	2	2	4	4.8	11.2
6-Mar	4	5	6	6	6	8	6	5	4	4	6	6	4	3	3	2	2	9	5	2	1	1	2	3	4.3	9.1
7-Mar	3	2	4	4	5	6	7	8	12	12	7	11	9	11	10	8	10	11	8	8	7	3	6	7	7.5	12.1
8-Mar	3	5	7	1	6	2	1	2	3	5	3	3	3	1	2	2	3	2	4	5	3	3	2	3	3.1	7.0
9-Mar	3	3	3	3	4	6	5	28	12	4	3	3	1	2	2	3	2	3	3	5	5	3	2	4	4.6	28.1
10-Mar	2	3	4	5	5	5	9	7	6	6	8	10	11	11	10	21	10	8	5	7	3	6	191	40	16.3	190.9
11-Mar	6	3	16	10	5	4	5	2	3	4	10	9	7	6	7	9	8	5	3	12	12	4	2	6	6.6	15.7
12-Mar	3	6	6	7	7	4	5	4	4	5	1	2	2	4	4	2	3	6	40	8	13	6	15	9	6.9	39.8
13-Mar	4	3	4	3	3	4	4	5	3	4	8	4	6	5	6	8	7	6	12	6	4	53	13	4	7.5	53.4
14-Mar	5	4	4	3	4	4	4	4	4	3	5	8	7	2	3	3	3	2	2	2	1	3	8	11	4.1	11.2
15-Mar	4	3	4	5	4	4	5	9	16	9	8	10	17	7	17	15	27	17	15	27	9	9	7	6	10.6	27.4
16-Mar	5	4	4	4	7	6	5	6	6	6	6	8	3	4	5	6	3	4	3	3	3	5	4	4	4.7	8.0
17-Mar	15	4	7	5	4	6	6	7	9	11	7	2	2	1	3	3	4	17	3	3	4	2	3	3	5.5	17.3
18-Mar	3	3	2	1	3	1	3	3	3	2	3	3	3	4	4	5	3	2	17	2	3	2	3	3	3.5	17.4
19-Mar	4	4	4	3	4	4	4	9	8	5	C	11	11	6	3	4	4	7	4	7	7	3	5	3	5.4	11.3
20-Mar	2	3	4	3	4	3	4	4	5	8	6	4	6	8	7	5	4	6	5	43	32	6	3	2	7.3	43.1
21-Mar	2	3	3	2	3	4	5	4	4	5	4	5	5	5	4	5	4	4	3	3	4	3	4	4	3.8	5.4
22-Mar	4	3	3	4	4	6	4	5	4	5	8	7	3	4	3	7	6	5	3	3	4	4	3	4	4.4	7.8
23-Mar	4	4	3	4	4	4	4	10	10	5	6	5	6	3	4	4	5	57	35	2	3	5	3	5	8.1	57.2
24-Mar	6	7	6	3	3	9	13	3	4	3	2	4	2	3	3	3	4	4	2	1	3	147	147	42	17.6	146.6
25-Mar	7	4	71	77	22	6	87	30	9	8	8	13	19	16	7	7	11	33	17	28	18	14	10	8	22.1	87.3
26-Mar	5	5	5	5	5	6	4	4	6	4	6	3	4	4	6	6	7	8	7	8	8	7	10	7	5.8	9.5
27-Mar	8	7	5	4	4	2	3	5	2	2	3	1	1	3	4	6	2	5	5	2	2	2	2	4	3.5	7.8
28-Mar	4	4	4	6	5	6	4	5	6	8	9	9	7	6	3	3	1	1	1	1	1	3	2	2	4.2	8.9
29-Mar	2	3	2	2	5	8	5	3	4	0	5	3	4	8	5	8	9	6	5	4	2	2	3	4	4.3	9.0
30-Mar	3	1	2	2	2	3	2	2	4	2	2	4	4	4	3	5	3	2	5	4	7	4	4	3	3.2	6.6
31-Mar	2	3	3	3	4	3	3	4	4	5	5	4	5	4	5	9	6	4	6	6	4	4	5	3	4.4	9.4
	7.8	4.1	6.8	6.6	5.6	5.5	8.6	6.9	6.2	5.6	6.2	6.0	5.9	5.4	5.2	6.0	5.7	8.4	7.9	7.6	5.9	10.5	15.8	15.7	Diurnal Average	
	115.4	12.1	70.7	77.2	21.8	15.1	87.3	29.8	15.7	15.7	14.7	13.4	18.7	16.1	16.9	20.9	27.1	57.2	39.8	43.1	32.0	146.6	190.9	233.2	Diurnal Maximum	

C - Calibration

Hourly Maximums

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

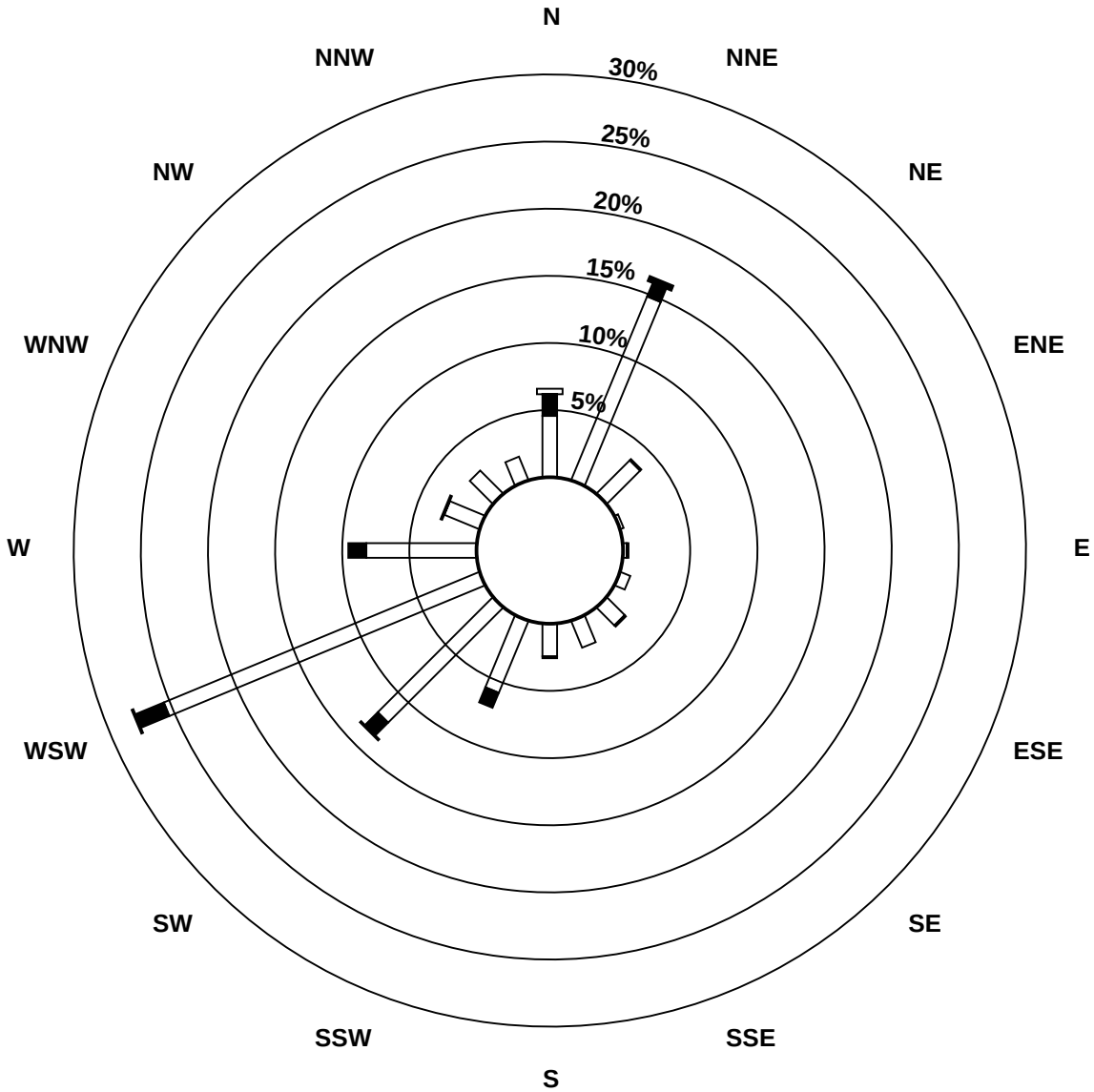
Smoky Heights - March 2010



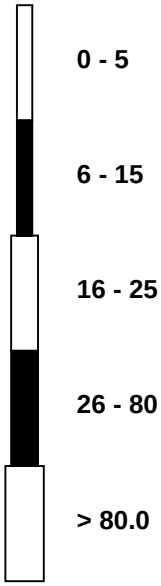
Pollutant Rose

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

Smoky Heights - March 2010



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



PASZA
Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Smoky Heights - March 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 11.7 ^{o}C on Mar 15 17:00
Maximum Daily Average: 5.0 ^{o}C on Mar 28

Minimum Value: -15 ^{o}C on Mar 19 06:00
Maximum Diurnal Average: 3.6 ^{o}C at hour 16
Monthly Average: -1.20 ^{o}C

Minimum Daily Average: -9.6 ^{o}C on Mar 22
Minimum Diurnal Average: -5.3 ^{o}C at hour 7
Percentiles: P_1 = -14.2 P_{10} = -8.8 Q_1 = -5.1 Median = -1.1 Q_3 = 3.0 P_{90} = 5.8 P_{99} = 9.6

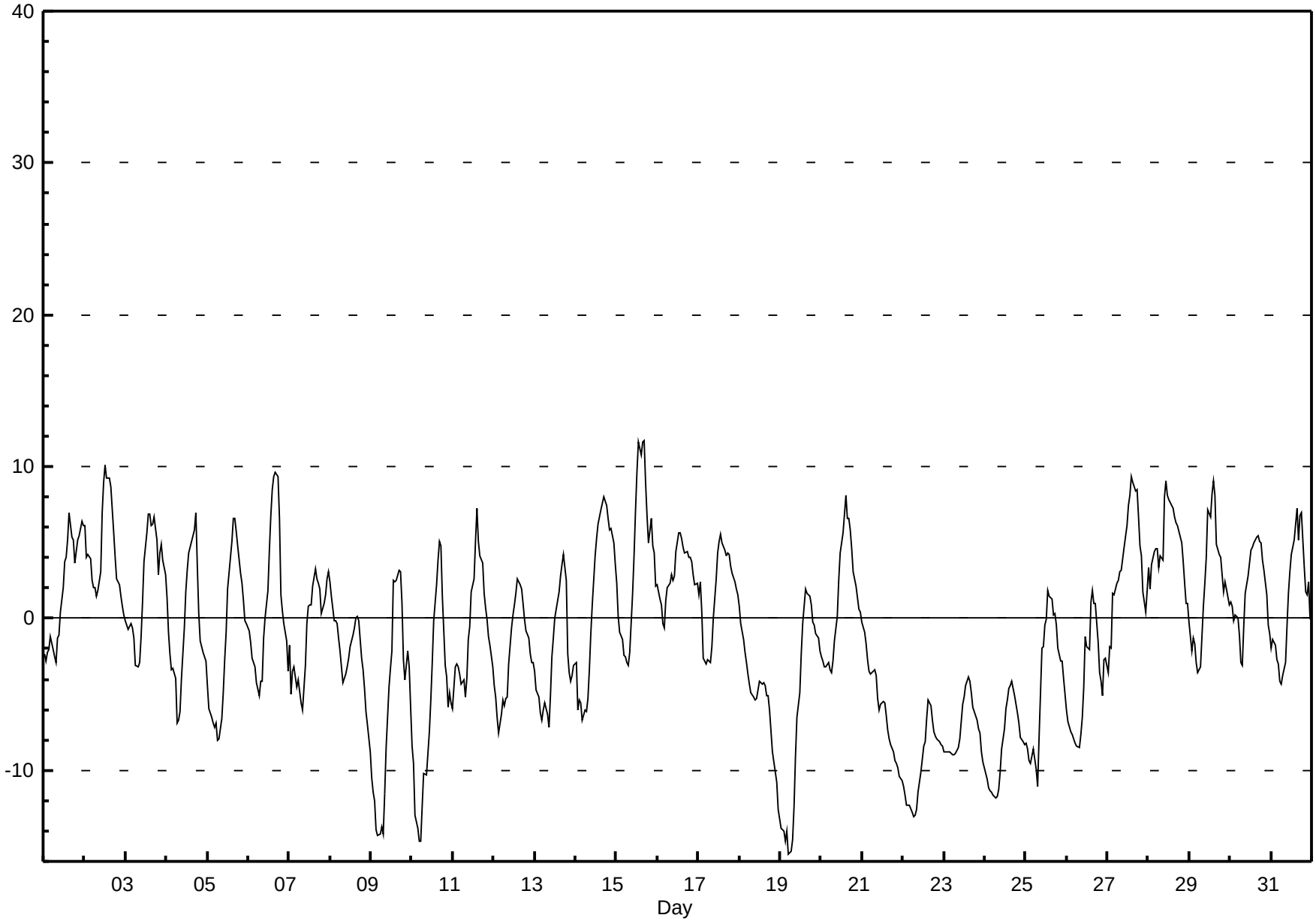
Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-2	-3	-2	-2	-1	-2	-3	-3	-1	-1	0	2	4	4	5	7	5	5	4	4	5	5	6	6	1.8	7.0
2-Mar	6	4	4	4	2	2	2	1	2	3	7	9	10	9	9	9	7	6	4	3	2	1	1	0	4.5	10.1
3-Mar	0	-1	-1	0	-1	-1	-3	-3	-3	-1	1	4	6	7	7	6	6	7	5	3	4	5	4	3	2.2	6.9
4-Mar	1	-1	-2	-3	-3	-4	-7	-7	-6	-4	-1	2	3	4	5	5	6	7	3	0	-1	-2	-2	-3	-0.4	7.0
5-Mar	-4	-6	-6	-7	-7	-7	-8	-8	-7	-5	-3	-1	2	4	5	7	7	6	5	3	2	1	0	0	-1.2	6.6
6-Mar	-1	-2	-3	-3	-3	-4	-5	-4	-4	-1	0	2	4	7	8	9	10	9	7	2	1	0	-2	-4	1.0	9.6
7-Mar	-2	-5	-3	-3	-4	-4	-5	-6	-6	-3	0	1	1	1	2	3	3	2	2	0	1	2	3	3	-0.8	3.3
8-Mar	2	2	0	0	0	-1	-2	-4	-4	-4	-3	-3	-2	-1	-1	0	0	0	-3	-3	-5	-6	-7	-9	-2.2	2.4
9-Mar	-11	-11	-12	-14	-14	-14	-14	-14	-12	-9	-5	-3	-2	3	2	3	3	3	1	-3	-4	-2	-3	-6	-5.7	3.2
10-Mar	-8	-10	-13	-14	-15	-15	-12	-10	-10	-9	-7	-5	-3	0	2	4	5	5	1	-3	-4	-6	-5	-6	-5.7	5.1
11-Mar	-6	-3	-3	-3	-4	-4	-4	-5	-4	-1	-1	2	3	5	7	5	4	4	2	1	0	-1	-2	-3	-0.5	7.2
12-Mar	-4	-5	-6	-8	-6	-5	-6	-5	-5	-3	-1	0	1	2	3	2	2	1	0	-1	-1	-2	-3	-3	-2.3	2.6
13-Mar	-4	-5	-5	-6	-7	-6	-6	-6	-7	-5	-3	-1	0	1	2	3	4	4	3	-2	-4	-4	-4	-3	-2.5	4.3
14-Mar	-3	-6	-5	-6	-7	-6	-6	-5	-3	-1	1	4	5	6	7	7	8	8	7	7	6	6	5	4	1.3	8.1
15-Mar	2	0	-1	-1	-2	-3	-3	-3	-2	2	4	7	10	12	11	12	12	9	7	5	7	5	4	2	3.9	11.7
16-Mar	2	1	1	0	-1	1	2	2	3	2	3	4	6	6	5	5	4	4	4	4	4	3	2	2	2.9	5.7
17-Mar	2	2	0	-3	-3	-3	-3	-3	-2	0	3	4	5	6	5	5	4	4	4	3	3	2	2	2	1.7	5.6
18-Mar	1	0	-1	-2	-3	-4	-4	-5	-5	-5	-5	-5	-4	-4	-4	-4	-5	-5	-6	-9	-9	-10	-11	-13	-5.2	0.8
19-Mar	-14	-14	-14	-15	-14	-15	-15	-15	-12	-9	-7	-5	-2	0	1	2	2	1	1	0	0	-1	-1	-2	-6.2	1.9
20-Mar	-3	-3	-3	-3	-3	-3	-4	-3	-2	0	2	4	5	6	8	7	7	6	5	3	2	1	1	0	1.3	8.1
21-Mar	0	-1	-2	-3	-3	-4	-4	-3	-4	-5	-6	-6	-5	-6	-6	-7	-8	-8	-9	-9	-10	-10	-10	-11	-5.8	-0.2
22-Mar	-11	-12	-12	-12	-12	-13	-13	-13	-13	-11	-10	-9	-8	-8	-7	-5	-6	-7	-7	-8	-8	-8	-8	-8	-9.6	-5.3
23-Mar	-9	-9	-9	-9	-9	-9	-9	-9	-9	-8	-7	-6	-5	-4	-4	-4	-5	-6	-6	-7	-7	-8	-9	-9	-7.2	-3.8
24-Mar	-10	-11	-11	-11	-11	-12	-12	-12	-11	-10	-9	-7	-6	-5	-5	-4	-4	-5	-6	-6	-7	-8	-8	-8	-8.3	-4.2
25-Mar	-8	-9	-9	-10	-9	-9	-10	-11	-8	-2	-2	0	0	2	1	1	0	0	0	-2	-3	-3	-4	-5	-4.1	1.9
26-Mar	-6	-7	-7	-8	-8	-8	-8	-8	-8	-7	-5	-1	-2	-2	1	2	1	1	-2	-4	-4	-5	-3	-3	-4.1	1.8
27-Mar	-4	-2	-2	2	2	2	3	3	3	4	5	6	7	8	9	9	8	9	7	5	4	2	0	2	3.8	9.4
28-Mar	3	2	4	4	5	5	3	4	4	8	9	8	8	8	7	7	6	6	6	5	4	2	1	1	5.0	9.0
29-Mar	0	-2	-1	-2	-3	-4	-3	-1	1	2	4	7	7	8	9	8	5	4	4	3	2	2	2	1	2.2	9.1
30-Mar	1	1	0	0	0	-1	-3	-3	-1	2	3	4	4	5	5	5	5	5	5	4	3	2	0	-1	1.9	5.4
31-Mar	-2	-1	-2	-3	-3	-4	-4	-4	-3	-1	2	3	4	5	6	7	5	7	7	3	2	2	2	0	1.2	7.3
	-2.9	-3.7	-4.2	-4.5	-4.8	-5.0	-5.3	-5.2	-4.5	-2.7	-0.9	0.7	1.8	2.8	3.5	3.6	3.3	3.0	1.7	0.0	-0.5	-1.1	-1.6	-2.3	Diurnal Average	
	6.1	4.0	4.3	4.4	4.6	4.6	3.4	4.1	3.9	8.0	9.0	8.9	10.1	11.6	10.8	11.6	11.7	9.4	7.5	6.5	6.6	5.9	6.4	6.1	Diurnal Maximum	

Hourly Averages

External Temperature (ET) - ^{o}C

Smoky Heights - March 2010



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Smoky Heights - March 2010

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1 Spd	1	4	4	7	10	6	10	11	9	8	8	5	5	9	7	4	4	6	4	7	6	2	5	7	4.2	10.8
Dir	259	241	247	226	220	234	231	248	251	253	256	251	227	247	249	275	316	315	41	8	17	152	195	176	247.4	248.0
2 Spd	5	10	6	2	1	2	1	5	2	1	4	0	1	1	5	7	8	10	5	10	11	6	8	3	2.4	11.0
Dir	218	248	192	283	269	129	86	288	277	340	3	314	206	349	7	353	360	22	17	268	260	264	269	214	291.7	260.3
3 Spd	8	10	10	10	8	9	11	10	8	10	9	8	11	14	13	11	10	13	15	14	15	22	20	16	10.7	22.2
Dir	238	249	203	193	203	208	202	195	208	206	231	220	199	223	237	245	263	227	217	198	248	273	268	254	229.4	272.9
4 Spd	12	7	12	9	12	12	9	9	6	8	6	10	9	7	7	6	5	2	1	3	5	4	2	3	5.7	12.4
Dir	236	235	211	239	245	226	209	203	252	231	213	174	186	229	253	253	288	317	236	293	307	290	317	351	232.9	226.0
5 Spd	2	4	9	6	8	9	11	10	7	7	9	11	13	15	15	20	19	18	17	14	12	4	6	7	10.0	20.4
Dir	282	233	239	227	211	247	192	215	218	239	228	244	224	228	235	222	231	242	242	257	260	262	283	276	235.7	222.5
6 Spd	8	9	10	11	12	6	7	7	10	9	11	10	10	13	9	11	11	5	4	4	3	4	4	4	6.4	12.9
Dir	255	245	233	248	253	240	215	235	209	214	247	247	250	223	228	189	155	125	6	339	305	269	263	243	233.6	223.0
7 Spd	4	6	7	8	8	10	11	9	8	8	9	9	9	10	8	7	7	6	9	10	12	14	15	15	8.2	15.4
Dir	238	173	205	220	222	230	242	251	231	231	226	245	245	250	232	246	268	263	258	268	286	286	289	278	250.5	288.8
8 Spd	16	21	24	15	19	12	24	21	23	21	23	28	24	24	24	21	18	13	10	19	19	15	13	13	18.7	27.5
Dir	273	264	263	271	282	251	255	258	251	250	248	249	240	238	242	239	232	229	229	257	264	260	242	247	251.8	249.1
9 Spd	13	12	10	8	7	9	9	7	6	6	2	3	4	1	8	12	10	8	7	5	2	12	13	4	3.9	13.1
Dir	254	238	209	239	238	224	248	241	231	223	188	297	295	221	153	124	119	104	43	34	165	158	158	209	199.9	254.3
10 Spd	5	5	9	10	10	13	10	10	9	11	9	10	9	8	5	2	2	2	7	2	4	4	6	4	4.7	12.6
Dir	217	194	213	224	227	252	244	221	203	211	223	230	245	238	262	264	292	13	326	3	20	357	18	52	237.6	252.2
11 Spd	2	3	2	4	2	3	4	5	5	7	6	11	9	3	5	16	14	17	8	14	22	12	16	14	5.7	21.6
Dir	338	218	229	167	351	192	220	247	231	160	189	176	174	168	263	268	265	298	96	231	264	198	200	195	226.2	264.2
12 Spd	10	9	9	10	15	15	17	15	11	15	21	24	17	10	8	11	9	10	10	10	7	7	10	11	11.3	23.7
Dir	228	225	235	205	210	215	222	218	213	207	226	226	236	254	240	242	251	267	265	272	243	225	263	272	232.8	225.7
13 Spd	5	7	9	9	12	10	10	8	10	8	6	9	11	14	13	7	6	3	1	2	1	2	4	2	6.3	14.3
Dir	187	223	253	253	263	264	259	246	262	225	252	258	242	234	236	254	258	196	166	150	38	36	180	223	244.4	234.1
14 Spd	4	4	5	5	5	6	6	8	6	5	6	1	4	8	14	14	14	11	14	14	20	18	13	5	6.1	20.0
Dir	205	248	260	258	249	226	245	255	221	206	181	129	113	129	141	135	131	113	113	137	145	158	167	200	161.5	144.5
15 Spd	9	6	9	10	9	7	5	5	7	5	5	2	1	4	2	3	6	9	7	4	13	11	9	2	3.3	12.6
Dir	230	243	241	237	200	202	232	277	248	218	163	237	249	127	208	319	259	255	273	359	351	359	2	68	257.9	351.3
16 Spd	5	8	5	5	3	8	10	11	15	18	16	9	12	12	15	15	14	10	11	11	16	14	11	9	10.8	18.0
Dir	13	31	27	11	356	14	12	7	354	9	18	16	11	13	16	21	18	13	16	15	21	24	23	22	15.2	9.2
17 Spd	12	9	6	6	10	11	12	11	8	11	14	19	21	22	23	18	14	18	22	22	21	18	17	14	12.7	22.6
Dir	276	356	45	221	262	272	261	199	175	185	212	238	254	255	257	258	252	250	249	263	256	255	271	317	253.6	257.3
18 Spd	16	8	8	15	16	15	16	15	14	14	14	10	6	10	11	12	14	15	10	7	11	10	10	5	10.6	15.9
Dir	322	13	359	337	326	329	334	332	337	321	331	335	324	318	289	337	345	343	349	291	287	273	274	239	325.2	325.8
19 Spd	6	6	6	8	8	9	11	9	9	11	12	12	12	17	15	11	12	12	11	13	10	13	14	12	10.2	17.5
Dir	218	220	238	212	217	206	217	200	204	221	237	251	245	224	240	254	264	265	260	256	261	253	257	236	238.1	224.3
20 Spd	12	12	10	14	15	12	11	12	12	10	14	19	17	18	10	14	14	10	8	6	8	12	10	12	6.1	19.3
Dir	239	248	258	244	255	247	250	240	232	249	239	242	251	264	17	359	4	2	2	15	19	39	31	32	279.5	241.8
21 Spd	12	14	18	19	20	22	22	23	21	20	18	17	16	16	15	13	12	12	11	9	8	8	10	10	15.1	23.0
Dir	26	22	25	28	19	17	21	23	15	359	10	15	1	6	1	1	13	18	18	18	24	31	24	34	16.4	22.7
22 Spd	7	8	6	7	10	10	9	9	8	8	7	6	8	8	7	7	7	8	8	8	11	12	12	11	8.3	12.4
Dir	40	36	39	39	32	24	22	21	21	22	19	14	19	18	16	16	12	18	34	47	29	28	17	19	25.0	27.8

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Smoky Heights - March 2010

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
23 Spd	12	10	10	7	8	6	6	8	9	8	8	10	10	10	11	12	12	12	12	14	16	18	24	23	11.5	23.9
Dir	16	14	17	19	16	8	14	12	23	21	21	19	18	20	19	16	11	15	27	28	29	28	30	27	21.3	30.0
24 Spd	22	22	20	19	16	16	14	14	14	12	10	10	12	14	13	14	14	15	15	13	12	11	8	8	13.9	22.3
Dir	24	20	22	26	33	43	43	44	45	48	45	22	24	28	33	35	41	30	36	37	35	26	16	15	32.0	24.2
25 Spd	8	8	6	6	7	8	5	2	3	1	5	4	7	9	14	14	14	12	12	14	12	18	20	20	8.4	20.3
Dir	25	29	11	8	12	22	4	8	250	243	236	256	295	350	351	350	355	8	6	10	18	18	20	21	5.2	20.1
26 Spd	18	15	15	14	14	12	13	14	10	8	6	1	7	9	5	6	9	6	9	17	14	17	17	15	2.7	17.9
Dir	17	13	18	15	23	25	32	30	34	30	18	94	152	144	125	134	153	231	252	257	250	254	241	245	348.2	17.4
27 Spd	13	11	10	23	21	26	29	30	24	21	21	23	22	18	9	12	15	6	3	4	1	2	2	5	13.8	29.5
Dir	229	248	240	241	245	238	246	245	237	235	239	235	240	250	246	240	247	276	174	144	300	24	14	196	240.5	245.4
28 Spd	9	2	15	16	11	11	12	10	8	7	15	27	25	23	20	22	24	23	19	17	12	11	12	12	13.5	26.9
Dir	172	192	173	172	187	240	252	244	250	281	255	258	266	243	247	250	235	226	217	210	224	246	246	252	234.8	258.1
29 Spd	7	5	4	4	4	2	3	2	2	4	4	3	5	4	4	16	19	13	14	13	10	16	16	13	6.3	18.5
Dir	254	194	219	241	273	313	251	257	244	315	264	64	102	51	355	252	247	224	240	251	251	241	258	255	248.7	246.8
30 Spd	18	20	18	21	19	17	16	13	16	18	23	23	24	25	24	18	19	21	13	9	14	16	16	19	18.2	24.9
Dir	250	246	260	248	249	249	238	252	236	240	241	243	240	240	241	244	243	238	258	283	242	250	262	263	246.7	239.6
31 Spd	20	23	18	18	18	17	18	20	15	15	18	19	19	20	15	5	13	7	4	2	5	12	14	12	13.8	22.5
Dir	258	253	255	257	262	260	257	259	262	248	248	246	245	248	263	304	267	332	354	244	297	254	226	253	256.9	252.6
Spd	4.5	4.1	4.1	4.8	5.6	5.3	6.0	5.6	5.0	5.0	6.2	7.3	7.0	6.9	5.6	5.1	4.9	4.2	2.9	4.0	4.8	4.2	4.6	4.0	Diurnal Average	
Dir	271.9	271.4	257.3	255.2	262.6	259.7	257.8	258.8	254.0	249.6	250.1	250.6	250.3	251.4	262.5	269.5	272.0	284.5	288.4	279.7	288.0	281.0	279.2	281.4		
Spd	22.3	22.5	23.8	23.1	21.4	26.0	28.8	29.5	24.1	21.0	23.2	27.5	24.9	24.9	24.0	21.9	23.7	23.2	22.4	22.0	21.6	22.2	23.9	22.6	Diurnal Maximum	
Dir	24.2	252.6	263.4	241.3	244.8	238.0	245.6	245.4	237.3	235.0	240.9	249.1	266.1	239.6	241.5	250.4	235.5	226.3	249.0	262.8	264.2	272.9	30.0	27.1		

Maximum Speed Value: 30 km/h on Mar 27 08:00
Maximum Daily Speed Average: 18.7 km/h on Mar 8
Maximum Diurnal Speed Average: 7.3 km/h at hour 12

Minimum Speed Value: 0 km/h on Mar 2 12:00
Minimum Daily Speed Average: 2.4 km/h on Mar 2
Minimum Diurnal Speed Average: 2.9 km/h at hour 19

Hours in Service: 744
Hours of Data: 744
Hours of Missing Data: 0

Monthly Average Velocity: 4.95 km/h 264.07 deg

Speed Percentiles: $P_1 = 1.2$ $P_{10} = 3.9$ $Q_1 = 6.6$ Median = 10.1 $Q_3 = 14.2$ $P_{90} = 19.1$ $P_{99} = 24.8$

Percent Operational Time: 100.0

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

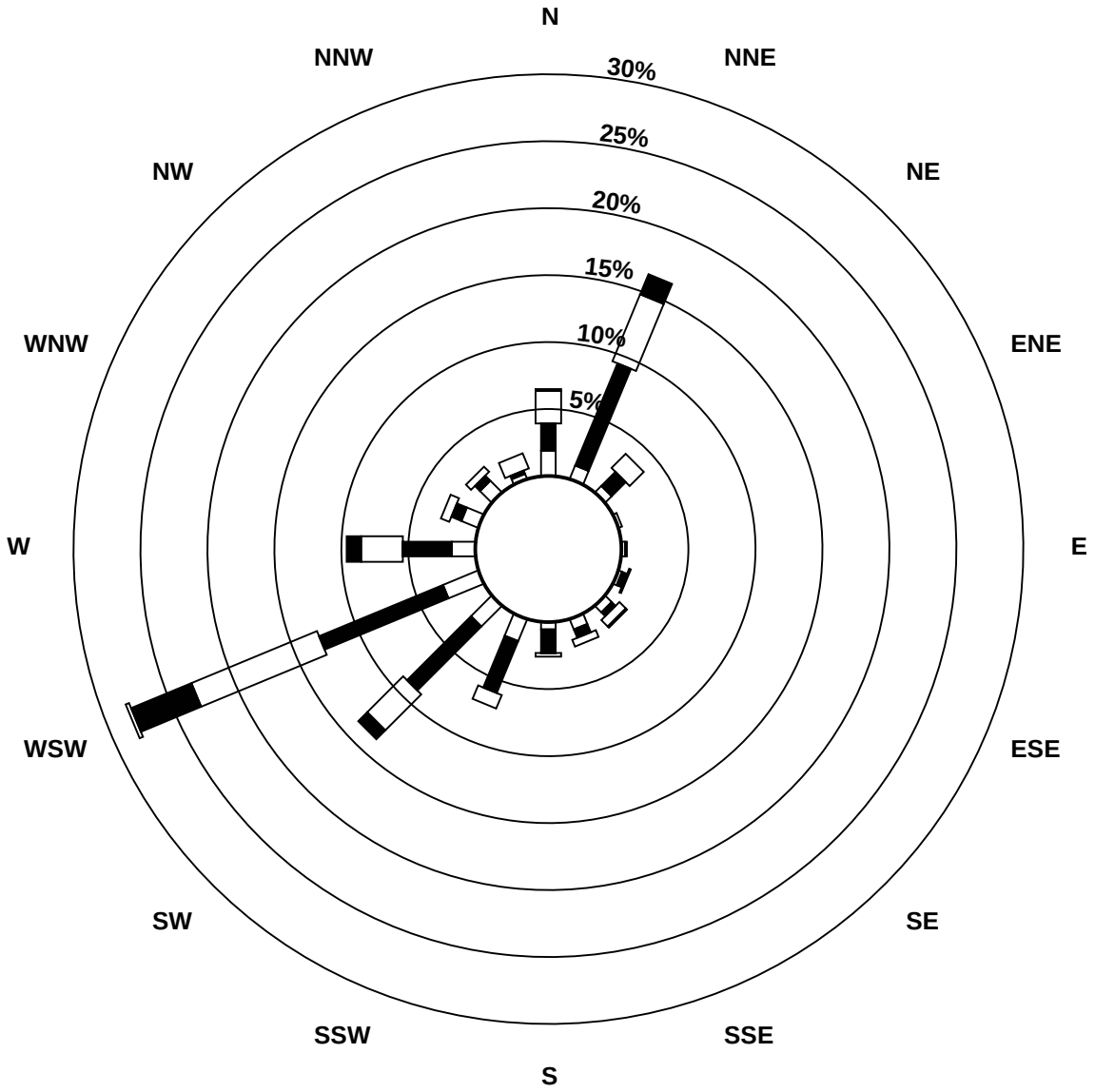
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	18	63	44	9	0	0	134
NorthEast	8	25	31	5	0	0	69
East	3	3	0	0	0	0	6
SouthEast	8	10	6	1	0	0	25
South	14	24	13	0	0	0	51
SouthWest	28	107	65	30	2	0	232
West	23	72	69	29	0	0	193
NorthWest	14	8	12	0	0	0	34
Total	116	312	240	74	2	0	744

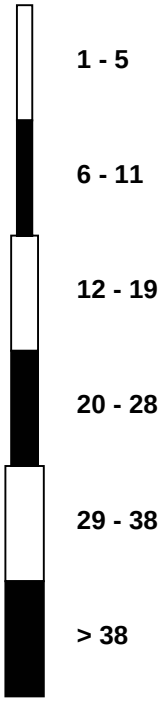
Wind Rose

Wind Speed (WS) (km/h)

Smoky Heights - March 2010



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Smoky Heights - March 2010

Maximum Speed: 30 km/h on Mar 27 08:00

Maximum Daily Speed Average: 19.2 km/h on Mar 8

Minimum Speed: 1 km/h on Mar 13 19:00

Minimum Daily Speed Average: 6.0 km/h on Mar 2

Maximum Diurnal Speed Average: 12.5 km/h at hour 14

Minimum Diurnal Speed Average: 10.0 km/h at hour 19

Monthly Average Speed: 11.13 km/h

Percentiles: P_1 = 2.2 P_{10} = 4.5 Q_1 = 7.1 Median = 10.2 Q_3 = 14.4 P_{90} = 19.3 P_{99} = 24.8

Hours in Service: 744

Hours of Data: 744

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	2	4	4	7	10	6	10	11	9	9	8	5	5	9	7	4	4	7	5	7	7	3	6	8	6.5	11.0
2-Mar	6	10	9	3	5	5	3	6	8	3	4	2	2	3	5	7	8	10	6	10	11	6	8	4	6.0	11.0
3-Mar	8	10	11	10	8	9	11	10	8	11	9	8	12	14	13	11	10	13	15	14	17	22	20	17	12.2	22.2
4-Mar	12	8	12	10	12	12	9	9	7	8	6	10	9	8	7	6	5	2	2	4	5	4	4	4	7.4	12.5
5-Mar	2	4	9	7	9	10	11	10	7	7	10	11	13	16	15	20	19	18	17	14	12	5	6	7	10.9	20.4
6-Mar	9	10	11	11	12	6	7	8	10	10	11	10	10	13	9	11	11	6	4	5	3	4	4	5	8.3	12.9
7-Mar	5	7	7	8	8	10	11	9	8	8	9	10	9	10	8	7	7	7	9	10	12	14	15	15	9.4	15.4
8-Mar	16	22	24	15	20	13	24	21	23	21	23	28	24	24	24	21	18	13	10	19	19	15	13	13	19.2	27.7
9-Mar	13	13	10	8	7	9	10	7	7	6	2	4	4	2	9	13	10	9	8	5	3	12	13	5	7.9	13.3
10-Mar	5	5	9	10	11	13	10	10	9	11	10	11	9	8	5	3	3	3	7	5	5	4	6	5	7.3	12.7
11-Mar	3	4	4	5	2	3	4	5	6	7	8	11	9	4	7	16	14	18	9	15	22	12	16	14	9.2	21.9
12-Mar	10	11	11	10	15	15	17	15	11	15	21	24	17	10	8	11	9	10	10	11	9	7	10	11	12.4	23.7
13-Mar	6	7	9	9	12	10	11	9	11	8	6	9	11	14	13	8	6	4	1	2	2	3	4	3	7.5	14.3
14-Mar	4	4	5	5	5	6	6	8	6	5	7	3	4	8	14	14	14	11	14	15	20	18	13	5	9.0	20.1
15-Mar	10	7	9	10	10	7	5	5	7	6	5	3	3	5	3	4	7	9	8	5	13	11	10	4	7.0	12.8
16-Mar	5	8	5	5	4	8	10	12	15	18	16	9	12	13	15	15	14	10	11	11	16	14	11	9	11.1	18.0
17-Mar	16	9	7	7	10	11	12	12	9	11	14	19	21	22	23	18	14	19	23	22	21	18	18	14	15.4	22.7
18-Mar	16	8	9	15	16	15	16	15	14	14	14	10	7	10	11	13	15	16	10	7	11	10	10	7	12.0	16.0
19-Mar	7	6	6	8	8	10	11	9	9	11	12	12	12	18	15	12	12	12	11	13	10	13	14	13	11.0	17.5
20-Mar	12	12	10	14	15	12	11	12	12	10	14	19	17	18	11	14	14	10	8	7	8	12	10	12	12.4	19.4
21-Mar	12	14	18	19	20	22	22	23	21	20	18	17	16	16	15	14	12	12	11	9	8	9	10	10	15.4	23.1
22-Mar	7	8	6	7	10	10	9	9	9	8	7	6	8	9	7	7	7	8	8	8	11	12	12	11	8.4	12.4
23-Mar	12	11	10	7	8	6	6	8	9	8	8	10	10	10	11	12	12	12	13	14	16	18	24	23	11.6	23.9
24-Mar	22	22	20	19	16	16	14	14	14	12	10	10	12	14	13	14	14	15	15	13	12	11	8	8	14.1	22.4
25-Mar	8	8	7	6	8	8	5	3	3	2	5	5	7	10	14	14	14	13	12	14	12	18	20	20	9.8	20.4
26-Mar	18	15	15	14	14	12	13	14	10	8	6	3	7	9	5	6	9	8	9	17	14	17	17	15	11.5	18.0
27-Mar	14	11	10	23	22	26	29	30	24	21	21	23	22	18	10	12	15	6	4	4	2	3	3	5	14.9	29.6
28-Mar	9	3	15	16	11	12	12	10	9	7	16	27	25	23	21	22	24	23	20	17	13	11	12	13	15.4	27.1
29-Mar	8	6	5	4	5	3	4	3	3	4	4	3	6	5	6	17	19	14	14	13	10	16	16	13	8.4	18.7
30-Mar	18	20	18	21	19	18	16	13	16	18	23	23	24	25	24	19	19	21	14	11	14	16	16	19	18.5	24.9
31-Mar	20	23	18	18	18	17	19	20	15	16	18	19	19	20	16	7	15	8	4	3	5	13	15	12	14.9	22.5
	10.3	10.0	10.4	10.8	11.2	11.0	11.6	11.2	10.5	10.4	11.3	11.8	11.9	12.5	11.8	12.0	12.1	11.1	10.0	10.5	11.1	11.4	11.8	10.4	Diurnal Average	
	22.4	22.5	24.0	23.2	21.5	26.0	28.8	29.6	24.2	21.0	23.2	27.7	25.0	24.9	24.1	22.0	23.8	23.3	22.5	22.0	21.9	22.2	23.9	22.7	Diurnal Maximum	

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

Hourly Standard Deviations

Wind Direction (WD) - deg

Smoky Heights - March 2010

Maximum Value: 96.2 deg on Mar 2 12:00

Minimum Value: 1.2 deg on Mar 31 04:00

Percentiles: P_1 = 2.1 P_{10} = 4.1 Q_1 = 5.9 Median = 9.7 Q_3 = 18.4 P_{90} = 37.3 P_{99} = 77.3

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	70	31	24	11	6	17	8	10	11	13	7	16	21	12	18	29	17	14	42	12	26	66	23	12	70.1
2-Mar	31	19	43	74	77	78	72	38	76	76	37	96	80	80	17	12	18	4	20	13	7	16	32	49	96.2
3-Mar	13	19	19	7	11	10	12	12	13	7	10	21	14	10	11	6	11	6	7	5	32	4	5	6	31.9
4-Mar	5	35	9	25	7	5	21	10	17	16	12	21	7	25	9	11	14	54	45	37	18	29	74	45	74.1
5-Mar	50	31	17	33	18	23	7	12	12	15	18	16	7	14	9	4	8	3	5	11	5	29	15	9	50.2
6-Mar	14	12	18	12	17	19	17	13	15	18	11	6	8	6	16	19	23	48	23	18	28	18	12	21	48.0
7-Mar	15	34	14	13	18	13	8	10	13	8	4	15	12	18	11	15	19	29	11	5	10	12	3	8	33.7
8-Mar	8	8	7	6	12	13	3	2	5	5	6	6	5	3	3	3	5	3	10	8	5	4	7	6	12.7
9-Mar	8	22	16	12	10	17	8	5	13	18	47	59	10	66	38	11	9	18	12	25	57	6	5	34	65.9
10-Mar	24	24	6	6	19	3	9	6	14	13	7	16	7	16	22	27	56	57	8	71	47	16	10	41	70.6
11-Mar	54	22	55	68	45	27	22	47	22	33	54	9	6	77	70	7	4	23	35	34	10	20	10	5	77.4
12-Mar	18	34	26	17	11	15	8	13	11	8	3	4	6	12	11	8	12	6	5	12	42	20	8	22	41.6
13-Mar	48	15	12	12	9	11	31	30	15	19	7	5	6	4	5	8	19	29	61	37	55	45	30	53	60.7
14-Mar	20	12	10	11	11	18	19	12	18	12	22	93	24	10	7	7	5	11	6	17	5	4	31	18	92.9
15-Mar	33	20	9	14	10	12	20	20	11	25	25	39	60	30	52	47	23	9	21	83	9	7	30	74	83.5
16-Mar	18	8	11	14	55	16	10	7	10	4	5	6	6	6	4	4	5	5	4	6	8	5	7	7	54.7
17-Mar	49	16	36	40	9	8	9	15	17	18	9	6	6	4	2	4	9	9	5	3	5	4	10	9	49.2
18-Mar	12	11	14	7	6	8	8	9	10	11	8	13	30	17	7	27	8	7	11	21	6	7	5	44	44.1
19-Mar	18	10	11	6	9	11	8	7	4	7	5	7	9	4	5	8	2	4	8	6	11	14	6	7	18.2
20-Mar	5	4	5	6	6	6	4	12	5	7	6	3	9	6	23	9	7	8	12	40	17	5	3	5	40.0
21-Mar	13	4	5	3	5	3	4	4	10	10	7	9	11	14	12	10	8	7	9	4	8	7	8	6	13.8
22-Mar	7	9	6	9	6	7	4	4	5	6	6	8	4	7	9	11	12	10	7	7	5	5	6	5	12.3
23-Mar	6	9	5	6	6	10	10	8	4	4	6	6	5	6	7	7	7	5	6	3	4	4	4	4	10.3
24-Mar	3	4	3	3	5	7	6	7	7	8	12	8	8	8	9	6	5	5	6	5	9	6	11	13	12.9
25-Mar	9	7	13	7	10	7	14	51	45	69	20	34	10	24	8	8	8	12	10	5	6	5	4	4	68.6
26-Mar	6	6	6	6	6	6	6	5	7	8	13	66	18	10	20	10	12	36	10	4	6	4	4	10	66.1
27-Mar	19	7	7	5	5	2	3	3	5	4	2	3	3	7	18	11	5	26	60	35	72	41	46	31	71.9
28-Mar	10	50	5	10	8	19	16	15	11	24	24	8	5	6	9	5	6	5	4	4	8	16	12	14	49.8
29-Mar	33	29	28	24	28	70	37	36	56	17	47	56	21	29	61	20	8	9	8	8	9	4	11	9	69.6
30-Mar	7	5	9	4	5	7	7	5	3	4	3	3	3	2	3	6	5	2	8	34	11	8	4	3	33.6
31-Mar	2	2	2	1	5	3	2	3	3	4	6	4	4	5	27	59	31	25	26	50	15	19	19	13	58.7
	70.1	49.8	55.0	74.0	76.8	77.5	72.5	51.2	75.9	76.1	54.2	96.2	79.5	79.5	70.3	58.7	55.7	56.9	60.7	83.5	71.9	65.8	74.1	73.8	

PASZA
Beaverlodge Station
Monthly Summary Tables, Graphs and Roses

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - March 2010

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

Maximum Value: 11.7 ppb on Mar 26 20:00

Maximum Daily Average: 1.7 ppb on Mar 26

Minimum Value: 0 ppb on Mar 27 15:00

Minimum Daily Average: 0.1 ppb on Mar 30

Maximum Diurnal Average: 0.7 ppb at hour 20

Minimum Diurnal Average: 0.3 ppb at hour 18

Monthly Average: 0.45 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.1$ Median = 0.3 $Q_3 = 0.5$ $P_{90} = 0.9$ $P_{99} = 2.6$

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	34
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	N	1	1	1	A	0	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.1
2-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	2	1	1	1	1.0	2.7
3-Mar	0	1	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
4-Mar	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0.4	2.0
5-Mar	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
6-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
7-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
8-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
9-Mar	0	0	0	0	A	0	0	0	0	0	0	1	1	1	2	1	0	0	0	0	1	0	1	1	0.5	1.8
10-Mar	0	0	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8
11-Mar	0	0	1	1	A	1	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
12-Mar	0	0	0	0	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.4
13-Mar	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.3	0.6
14-Mar	1	1	0	0	A	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	1	1	1	0.6	1.5
15-Mar	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.4	1.2
16-Mar	1	1	0	1	A	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.6	1.5
17-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	0.4
18-Mar	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0.3	0.6
19-Mar	0	1	1	1	A	1	1	1	1	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0.5	1.0
20-Mar	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.2	0.6
21-Mar	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0.4	1.3
22-Mar	0	0	0	1	A	1	1	1	1	1	1	1	0	1	0	0	1	1	0	0	0	0	1	1	0.6	1.2
23-Mar	2	1	0	1	A	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0.6	2.1
24-Mar	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0.3	0.6
25-Mar	0	0	0	1	A	1	1	1	1	1	1	2	2	1	1	1	2	2	2	1	1	1	2	1	1.1	2.4
26-Mar	0	0	0	0	A	1	1	1	0	0	0	1	1	1	1	1	1	0	8	12	6	2	0	0	1.7	11.7
27-Mar	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	1	0.3	3.2
28-Mar	1	2	2	0	A	3	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	2.6
29-Mar	0	0	0	0	A	1	1	1	1	1	2	3	2	3	2	0	0	0	0	0	0	0	0	0	0.7	2.7
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	0.1
31-Mar	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
	0.4	0.4	0.4	0.4	--	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.6	0.7	0.5	0.4	0.4	0.4	Diurnal Average	
	2.1	1.5	2.2	1.0	--	2.6	2.0	1.7	1.4	1.5	1.5	2.5	2.1	2.7	1.8	1.4	2.0	2.0	8.3	11.7	6.2	3.2	1.7	2.0	Diurnal Maximum	

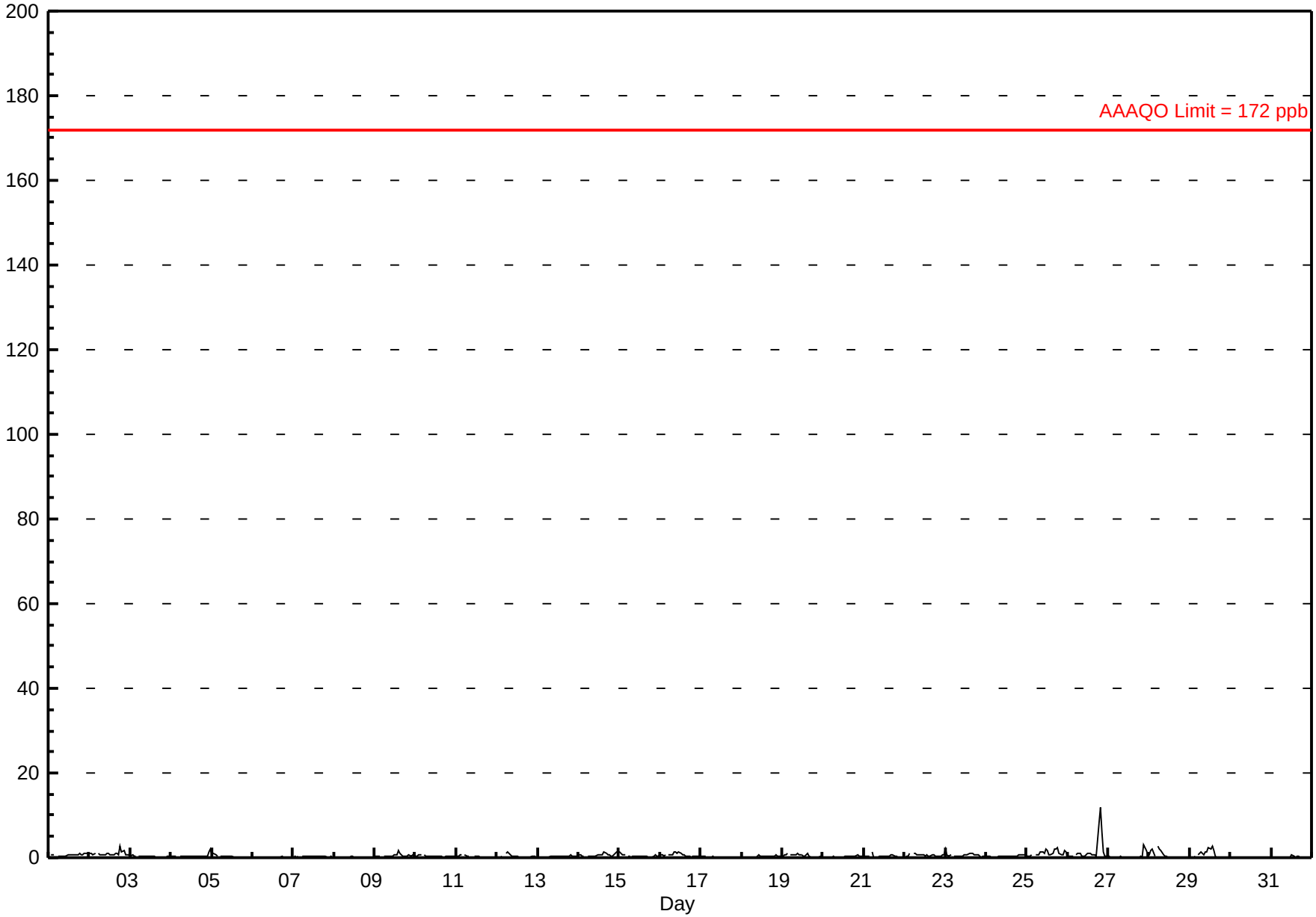
C - Calibration N - Not Valid A - Automated Daily Zero Span

Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 57 ppb

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - March 2010



PASZA
Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - March 2010

Maximum Value: 19.6 ppb on Mar 26 19:00

Maximum Daily Average: 2.7 ppb on Mar 26

Minimum Value: 0 ppb on Mar 17 21:00

Minimum Daily Average: 0.2 ppb on Mar 30

Maximum Diurnal Average: 1.2 ppb at hour 19

Minimum Diurnal Average: 0.5 ppb at hour 18

Monthly Average: 0.69 ppb

Percentiles: $P_1 = 0.1$ $P_{10} = 0.2$ $Q_1 = 0.2$ Median = 0.4 $Q_3 = 0.7$ $P_{90} = 1.3$ $P_{99} = 5.0$

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	34
Percent Operational Time:	99.9

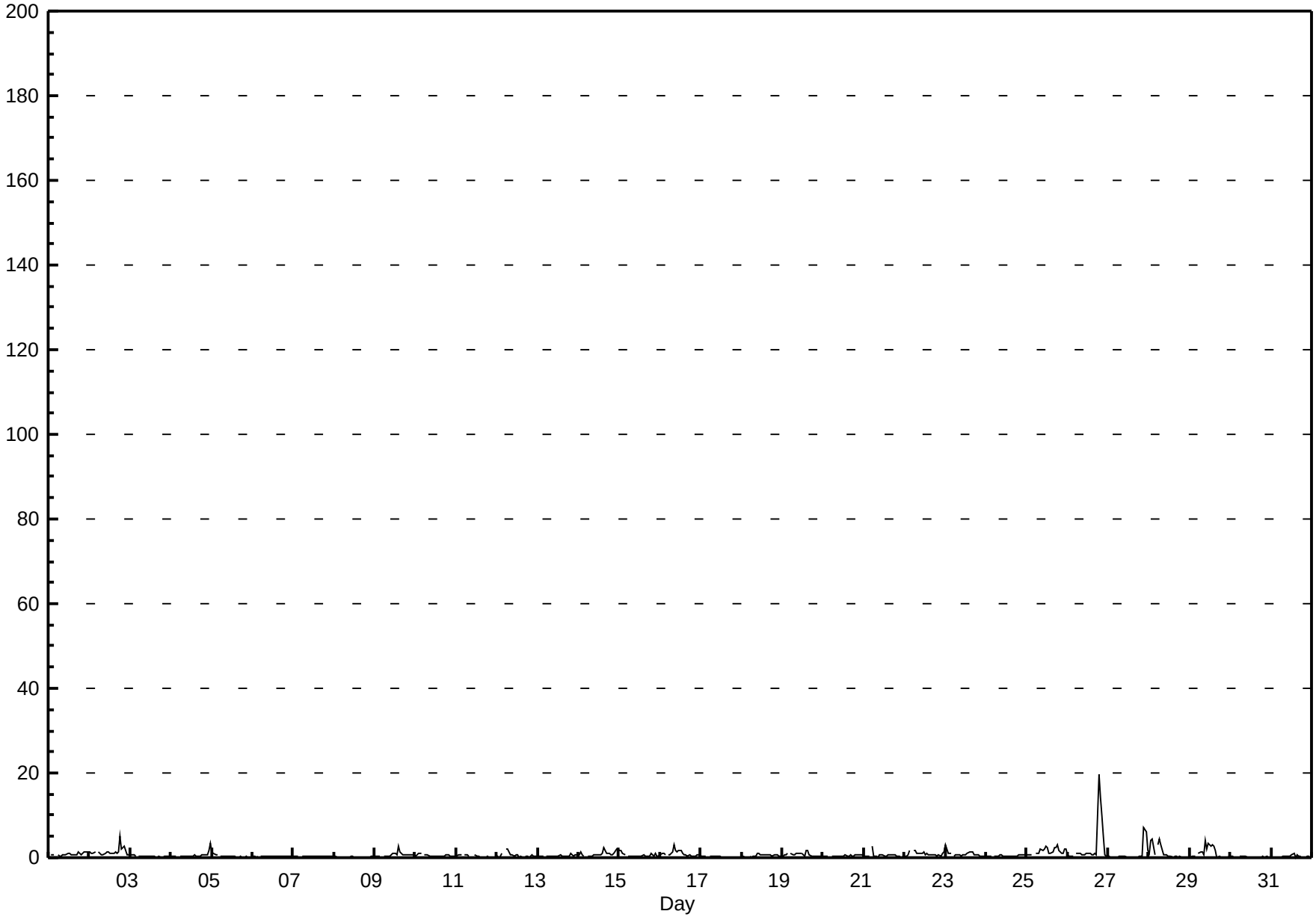
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	N	1	1	1	A	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.5
2-Mar	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	5	2	3	2	1	1	1.4	5.1
3-Mar	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
4-Mar	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	1	2	3	0.6	3.3
5-Mar	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.5
6-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
7-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	0.5
8-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
9-Mar	0	0	0	0	A	0	0	0	0	0	1	1	1	1	3	1	1	1	1	1	1	1	1	1	0.7	2.7
10-Mar	0	1	1	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0.5	0.9
11-Mar	0	1	1	1	A	1	1	0	C	C	C	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8
12-Mar	0	0	0	1	A	2	2	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0.6	2.1
13-Mar	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	1	0	0	0	1	1	0	1	1	0.4	0.9
14-Mar	1	1	1	0	A	0	0	0	0	1	1	1	1	1	1	2	1	1	1	1	1	1	2	2	0.9	2.3
15-Mar	2	2	1	1	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0	0.6	1.7
16-Mar	1	1	1	1	A	1	1	1	3	2	1	2	2	1	1	1	0	1	0	0	0	0	1	1	0.9	3.1
17-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
18-Mar	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	1	1	1	0	1	1	1	0	0	0.5	1.0
19-Mar	0	1	1	1	A	1	1	1	1	1	1	1	1	0	2	2	1	0	0	0	0	0	0	0	0.7	1.6
20-Mar	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	1	1	1	0.4	0.7
21-Mar	0	0	0	0	A	3	0	0	0	1	1	1	0	0	1	1	1	1	1	0	0	0	0	0	0.5	2.9
22-Mar	0	0	1	2	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	2	0.9	1.7
23-Mar	3	2	1	1	A	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0.9	3.0
24-Mar	0	0	0	0	A	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0.5	0.7
25-Mar	1	1	1	1	A	1	1	1	2	2	2	3	2	1	1	1	2	2	3	2	1	1	2	2	1.5	3.0
26-Mar	1	0	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	20	14	10	5	1	0	2.7	19.6
27-Mar	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	6	2	0.8	7.0
28-Mar	1	4	4	1	A	3	4	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1.1	4.3
29-Mar	0	0	0	0	A	1	1	1	1	4	2	3	3	3	3	2	0	0	0	0	0	0	0	0	1.2	4.0
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	1	1	0	1	0	0	0	0	0	0	0	0	0.2	0.9
	0.6	0.7	0.6	0.5	--	0.7	0.7	0.6	0.6	0.7	0.6	0.7	0.7	0.6	0.7	0.6	0.5	0.5	1.2	1.0	0.8	0.8	0.7	0.7	Diurnal Average	
	3.0	3.9	4.3	1.7	--	3.1	4.2	3.1	3.1	4.0	2.2	3.5	2.8	3.1	2.8	2.3	2.4	2.4	19.6	14.2	10.0	7.0	6.1	3.3	Diurnal Maximum	

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

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

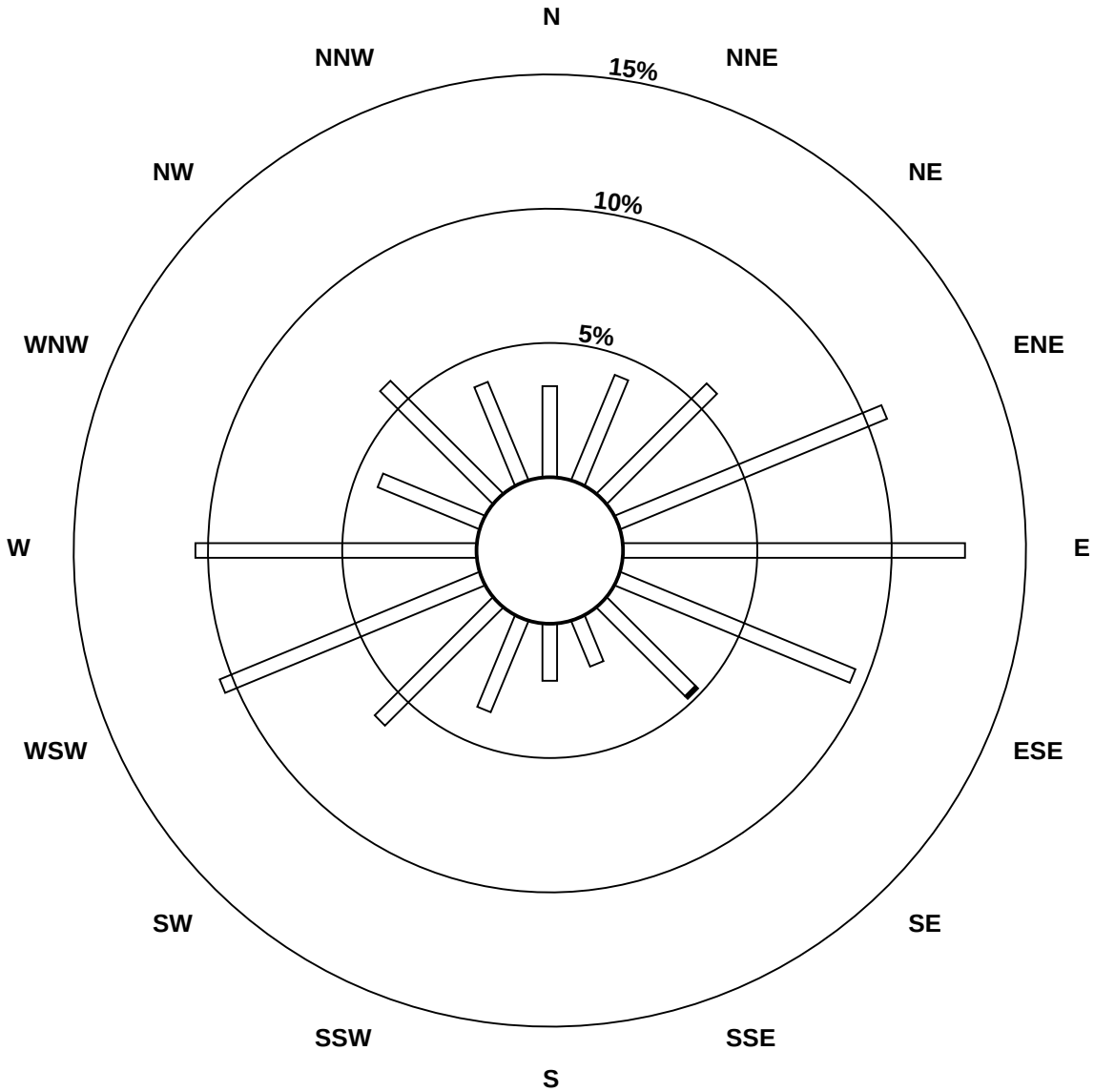
Beaverlodge - March 2010



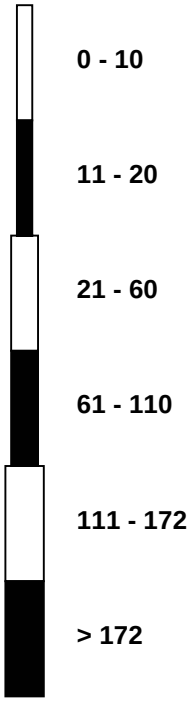
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - March 2010



Pollutant Classes (ppb)



PASZA
Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - March 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 27.3 ppb on Mar 1 17:00
Maximum Daily Average: 15.7 ppb on Mar 1

Minimum Value: 0 ppb on Mar 24 03:00
Maximum Diurnal Average: 5.6 ppb at hour 8
Monthly Average: 4.32 ppb

Minimum Daily Average: 1.5 ppb on Mar 20
Minimum Diurnal Average: 3.2 ppb at hour 16
Percentiles: P_1 = 0.6 P_{10} = 0.9 Q_1 = 1.6 Median = 3.1 Q_3 = 5.7 P_{90} = 8.9 P_{99} = 18.5

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

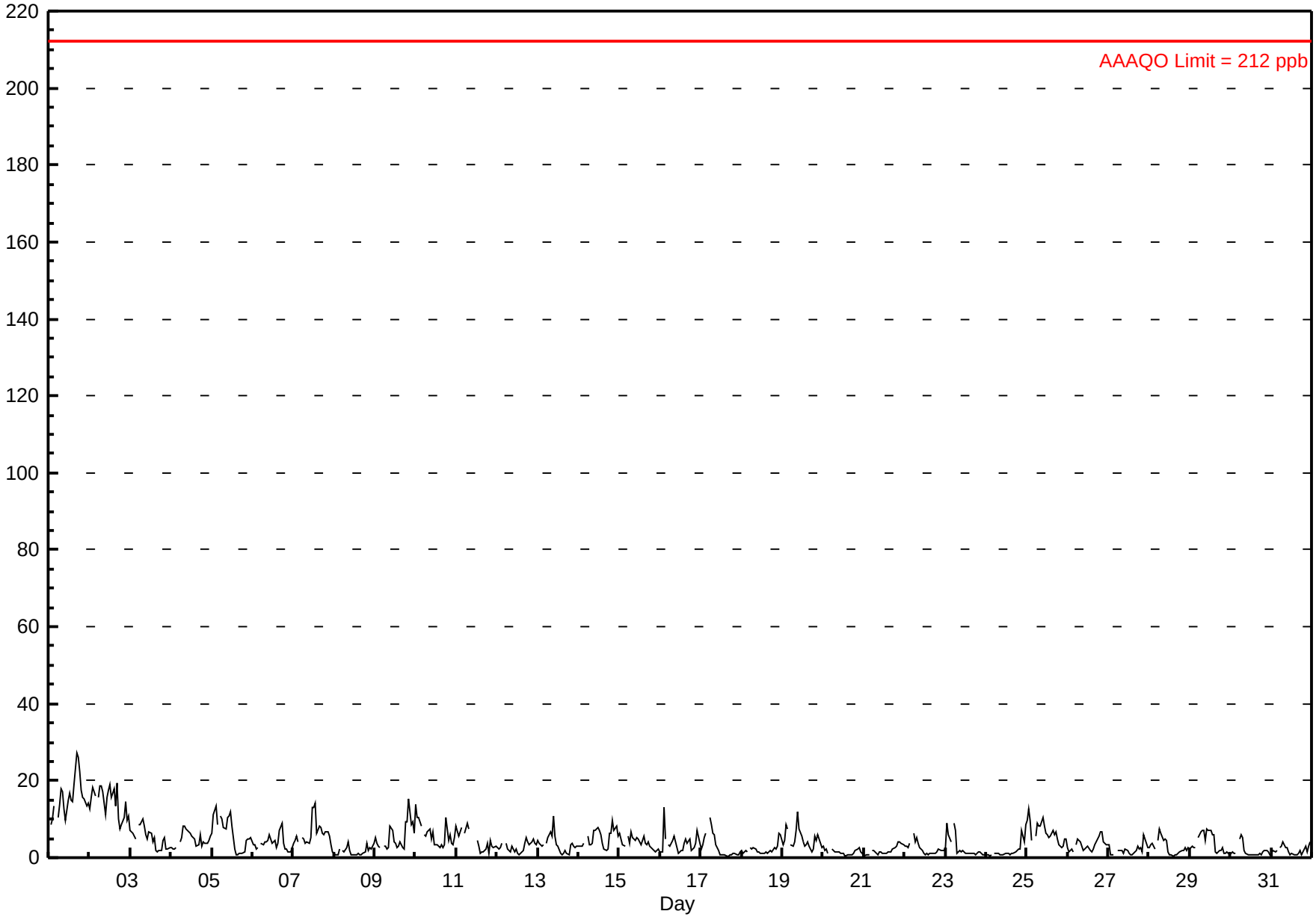
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	N	9	10	14	A	10	14	18	17	13	10	15	17	15	15	19	27	26	22	18	16	15	13	14	15.7	27.3
2-Mar	13	16	18	16	A	16	19	19	17	11	16	17	19	16	18	13	19	10	7	9	10	14	10	11	14.5	19.5
3-Mar	7	6	5	5	A	9	9	10	8	6	5	7	6	4	5	2	2	2	2	4	5	2	2	3	5.0	9.9
4-Mar	3	2	2	3	A	4	5	8	8	8	7	6	6	5	5	3	3	6	3	4	4	4	4	6	4.7	8.1
5-Mar	6	11	13	8	A	11	10	8	8	11	11	12	8	2	1	1	1	1	1	2	5	5	5	5	6.3	13.3
6-Mar	4	3	2	3	A	4	4	4	4	5	6	4	4	4	3	4	7	9	4	2	2	1	2	3	3.8	8.9
7-Mar	4	5	6	4	A	5	5	4	4	4	5	13	13	14	6	8	8	6	6	7	7	5	3	2	6.2	14.2
8-Mar	1	1	1	2	A	2	2	3	4	2	1	1	1	1	1	1	1	1	1	4	2	3	2	4	1.7	4.2
9-Mar	5	4	3	3	A	3	3	2	3	8	7	4	4	3	3	4	3	2	9	9	15	8	9	6	5.3	15.1
10-Mar	14	10	10	8	A	6	6	7	8	5	7	4	3	3	3	3	2	3	10	5	6	4	4	5	5.9	13.8
11-Mar	8	6	7	8	A	6	9	8	C	C	C	C	4	3	1	1	2	2	4	1	5	3	3	3	4.4	8.9
12-Mar	2	2	3	4	A	4	2	2	2	3	1	2	1	1	1	2	4	5	4	3	4	5	4	3	2.8	5.1
13-Mar	4	4	3	4	A	4	5	7	6	11	5	3	3	1	1	1	2	1	1	3	4	3	3	3	3.5	10.8
14-Mar	3	3	3	4	A	5	4	3	4	7	7	8	7	6	4	2	2	2	6	6	10	7	8	6	5.1	9.7
15-Mar	7	5	3	3	A	5	4	7	5	4	5	5	4	3	6	4	3	4	3	2	2	2	2	2	3.9	6.5
16-Mar	1	1	13	5	A	3	3	4	6	4	3	1	2	2	4	5	4	5	2	2	3	4	7	4	3.8	13.1
17-Mar	2	3	5	6	A	10	9	6	6	3	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2.8	10.4
18-Mar	2	1	2	2	A	3	2	3	2	2	1	1	1	1	1	1	2	2	1	3	2	3	6	6	2.2	6.4
19-Mar	3	5	9	7	A	3	3	4	7	12	7	5	4	3	3	4	3	2	2	5	5	6	4	3	4.8	12.1
20-Mar	3	2	2	1	A	2	2	2	2	1	1	1	1	1	1	1	1	1	1	2	2	3	2	1	1.5	3.1
21-Mar	1	1	1	1	A	2	2	1	1	1	1	1	1	1	1	2	2	2	3	3	4	4	4	3	1.9	4.2
22-Mar	3	3	2	4	A	6	4	5	4	3	2	1	1	1	1	1	1	1	1	2	2	2	2	2	2.3	6.4
23-Mar	2	9	6	4	A	9	7	1	2	2	2	1	1	1	1	1	1	1	1	2	1	1	1	1	2.5	9.0
24-Mar	1	1	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	7	4	8	1.8	8.5
25-Mar	10	13	10	5	A	6	9	8	8	10	8	6	6	5	6	7	6	7	5	3	3	3	5	5	6.7	12.8
26-Mar	3	2	2	2	A	3	5	4	3	2	2	3	3	2	2	2	3	4	6	7	7	4	4	3	3.3	6.8
27-Mar	3	1	1	1	A	2	2	2	2	1	2	2	1	1	1	1	2	3	2	3	1	6	4	2	2.0	6.1
28-Mar	2	3	4	2	A	4	7	6	5	5	4	1	1	1	1	1	1	1	1	2	2	3	2	3	2.7	7.3
29-Mar	2	3	3	2	A	5	7	7	7	5	7	7	7	6	6	1	1	2	2	2	1	1	1	1	3.8	7.4
30-Mar	1	1	1	1	A	5	6	5	2	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1.6	5.9
31-Mar	1	2	1	2	A	3	3	4	3	3	1	1	1	1	1	1	1	2	1	2	3	2	3	4	1.9	4.2
	4.1	4.4	4.9	4.3	--	5.2	5.5	5.6	5.2	5.1	4.7	4.5	4.3	3.5	3.3	3.2	3.7	3.8	3.8	3.9	4.4	4.3	4.0	4.0	Diurnal Average	
	13.8	15.6	18.3	16.0	--	15.8	18.7	18.6	17.2	12.8	15.6	17.4	18.9	15.8	17.7	18.9	27.3	26.0	22.3	17.6	15.8	15.1	13.3	14.0	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 (NO_2) - ppb

Beaverlodge - March 2010



Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - March 2010

Maximum Value: 47.0 ppb on Mar 30 06:00

Maximum Daily Average: 24.0 ppb on Mar 1

Minimum Value: 1 ppb on Mar 24 03:00

Minimum Daily Average: 2.6 ppb on Mar 21

Maximum Diurnal Average: 10.2 ppb at hour 8

Minimum Diurnal Average: 5.0 ppb at hour 14

Monthly Average: 7.56 ppb

Percentiles: P_1 = 1.0 P_{10} = 1.7 Q_1 = 3.0 Median = 5.2 Q_3 = 9.1 P_{90} = 16.2 P_{99} = 34.4

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

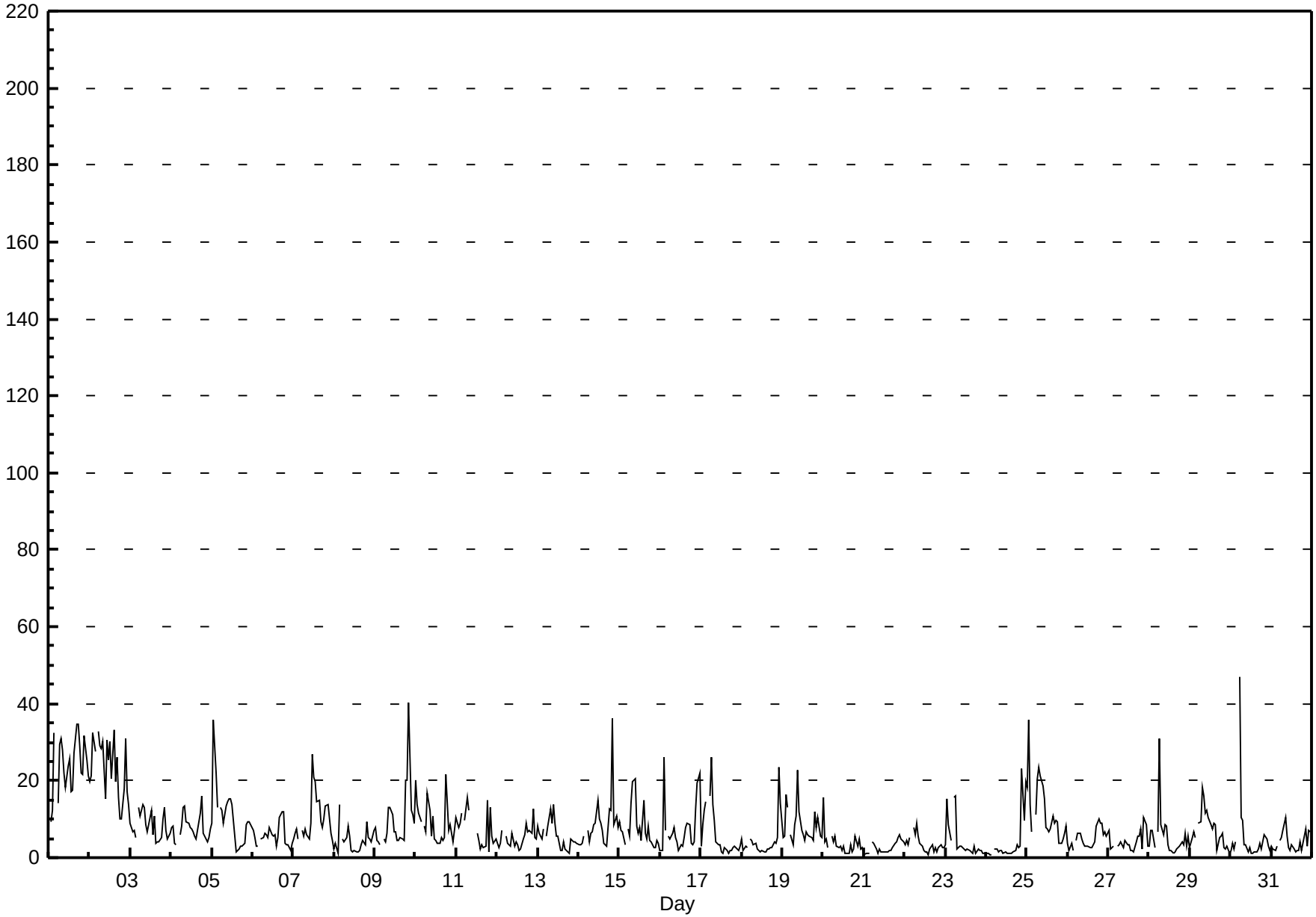
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	N	9	12	32	A	14	29	31	28	22	18	24	26	17	18	27	35	35	29	22	22	32	25	21	24.0	34.8
2-Mar	20	21	33	28	A	33	29	28	30	15	30	25	30	20	33	20	26	16	10	10	18	31	17	14	23.4	33.1
3-Mar	9	7	7	5	A	13	11	14	13	9	7	9	12	6	11	4	4	4	5	10	13	7	5	7	8.2	13.8
4-Mar	8	8	4	3	A	6	8	13	13	9	9	8	7	7	6	5	9	12	16	6	6	4	5	8	7.8	16.2
5-Mar	9	36	22	13	A	13	12	9	14	15	15	15	14	6	2	2	2	3	3	4	9	9	9	9	10.6	35.9
6-Mar	7	5	3	3	A	5	5	6	6	5	8	6	5	6	3	5	10	12	12	4	3	3	2	4	5.7	12.0
7-Mar	5	6	7	5	A	7	6	8	6	5	9	27	21	20	15	15	9	8	10	13	14	10	6	4	10.2	26.8
8-Mar	2	4	1	14	A	5	4	5	8	6	2	1	2	1	2	2	3	4	3	9	5	5	4	7	4.4	13.8
9-Mar	8	5	4	3	A	5	4	6	13	13	11	7	7	4	4	5	5	4	20	20	40	12	11	9	9.6	40.4
10-Mar	20	14	12	9	A	8	7	17	12	6	11	5	4	4	4	5	4	5	22	7	9	6	4	7	8.8	21.7
11-Mar	10	8	9	11	A	10	16	12	C	C	C	C	6	4	2	3	3	3	15	1	13	6	4	5	7.4	15.6
12-Mar	4	3	4	7	A	5	4	3	3	6	3	4	3	2	2	5	6	9	7	7	6	13	5	5	5.0	12.7
13-Mar	8	6	5	7	A	6	8	13	9	14	9	6	5	2	2	4	2	2	1	5	4	4	4	4	5.7	13.9
14-Mar	3	4	4	5	A	7	4	6	7	9	9	15	10	9	7	4	3	8	13	12	36	9	11	8	8.8	36.3
15-Mar	9	7	7	4	A	7	6	14	20	21	8	6	8	4	15	6	5	8	5	4	3	3	4	4	7.7	20.6
16-Mar	2	2	26	7	A	6	5	6	8	5	4	2	3	3	5	8	9	9	4	3	4	13	19	22	7.6	26.0
17-Mar	3	8	12	15	A	16	26	14	10	4	3	4	1	1	3	2	1	2	2	3	3	2	2	3	6.1	25.9
18-Mar	5	2	3	3	A	5	4	3	4	2	2	2	2	2	2	2	2	3	3	4	4	5	23	14	4.4	23.4
19-Mar	5	6	16	13	A	6	3	9	11	23	12	7	6	5	7	6	6	5	5	12	8	10	6	5	8.3	22.7
20-Mar	15	4	5	3	A	6	4	6	3	3	3	2	3	1	1	1	3	2	2	5	3	5	2	3	3.7	15.5
21-Mar	1	1	1	1	A	4	4	2	1	2	2	2	1	1	2	2	2	2	4	4	5	6	5	4	2.6	5.9
22-Mar	4	4	4	5	A	8	6	9	6	4	3	2	2	1	1	2	3	1	2	2	3	3	3	3	3.5	8.9
23-Mar	3	15	8	4	A	16	16	2	3	3	2	2	2	2	2	2	1	3	1	2	2	2	1	1	4.2	15.9
24-Mar	1	1	1	1	A	2	2	1	2	2	1	1	1	1	1	1	1	2	3	2	3	23	10	20	3.7	23.2
25-Mar	18	36	14	7	A	11	21	23	21	19	15	8	8	7	7	11	9	10	9	4	4	5	6	8	12.2	35.8
26-Mar	4	2	4	2	A	5	6	7	5	4	3	3	3	3	3	3	4	8	10	9	9	6	7	5	4.9	10.1
27-Mar	7	2	3	3	A	3	3	4	3	3	5	3	3	2	2	1	4	5	5	8	2	10	9	3	4.1	10.3
28-Mar	3	7	7	3	A	7	31	9	6	9	8	3	2	2	1	1	2	3	3	4	3	6	3	6	5.6	30.9
29-Mar	3	5	7	5	A	9	9	18	16	11	12	11	9	8	9	9	2	5	6	6	3	2	3	1	7.4	18.4
30-Mar	2	4	2	4	A	47	11	10	3	3	2	3	1	1	1	2	2	4	2	4	6	5	3	2	5.4	47.0
31-Mar	3	2	2	3	A	4	5	7	10	6	3	2	3	2	2	2	2	4	2	6	7	3	7	7	4.1	10.4
	6.7	7.9	8.0	7.4	--	9.6	10.0	10.2	9.8	8.5	7.6	7.1	6.8	5.0	5.6	5.4	5.9	6.4	7.5	6.9	8.7	8.4	7.3	7.1	Diurnal Average	
	20.3	35.9	32.5	32.4	--	47.0	30.9	31.1	30.1	22.7	30.5	26.8	30.2	20.3	33.1	27.2	34.6	34.8	29.2	21.9	40.4	31.8	25.3	22.2	Diurnal Maximum	

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

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

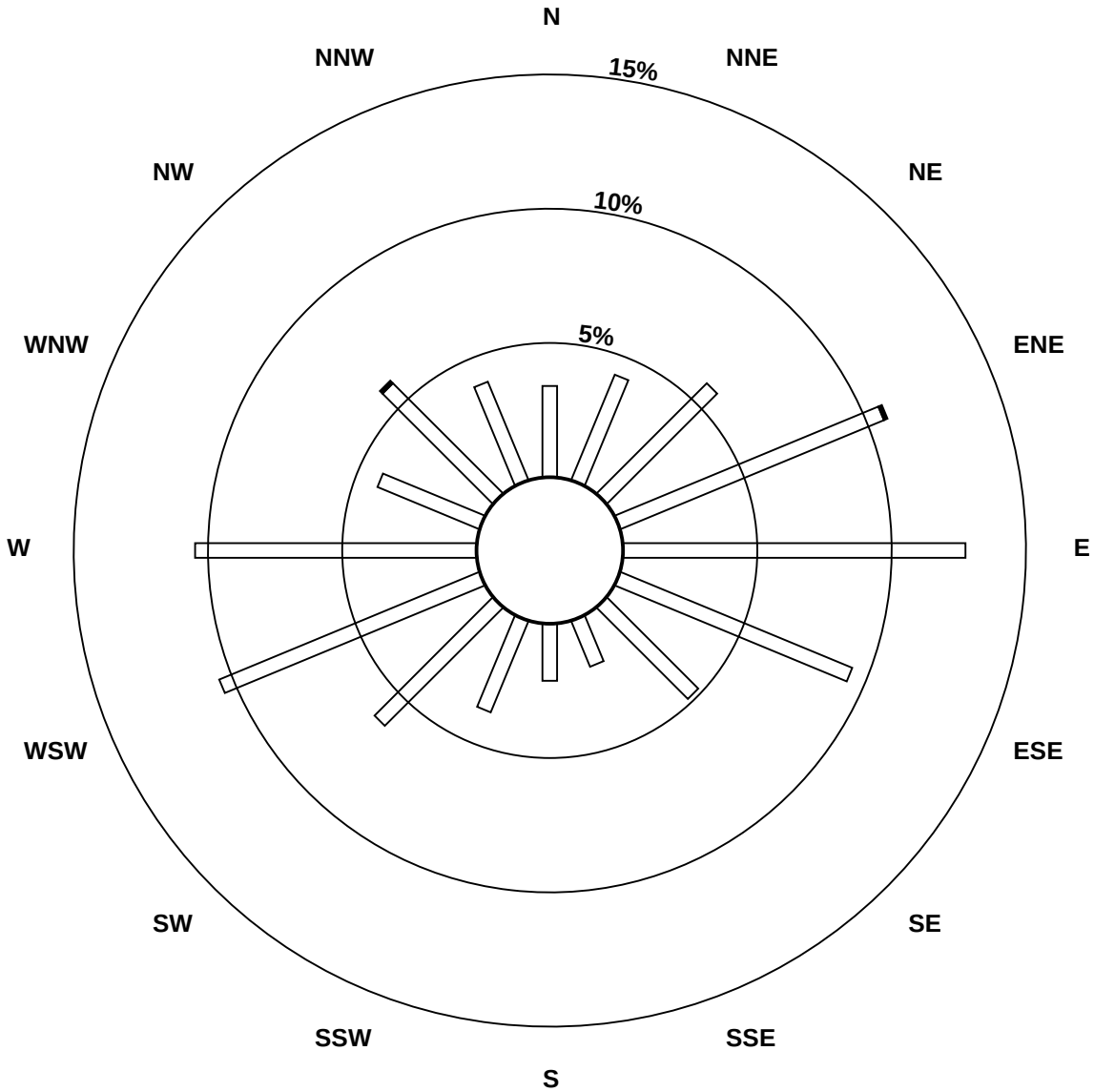
Beaverlodge - March 2010



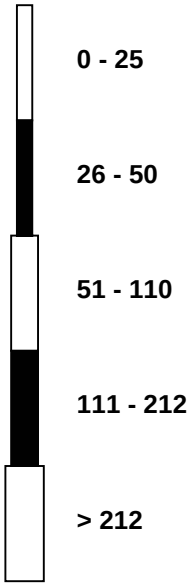
Pollutant Rose

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - March 2010



Pollutant Classes (ppb)



Hourly Averages

Nitrogen Oxide (NO) - ppb

Beaverlodge - March 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 20.6 ppb on Mar 1 13:00 Maximum Daily Average: 5.9 ppb on Mar 1

Minimum Value: 0 ppb on Mar 1 02:00 Minimum Daily Average: 0.1 ppb on Mar 20
Maximum Diurnal Average: 3.9 ppb at hour 12 Minimum Diurnal Average: 0.0 ppb at hour 1
Monthly Average: 1.11 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.0$ Median = 0.1 $Q_3 = 0.9$ $P_{90} = 3.2$ $P_{99} = 14.4$

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

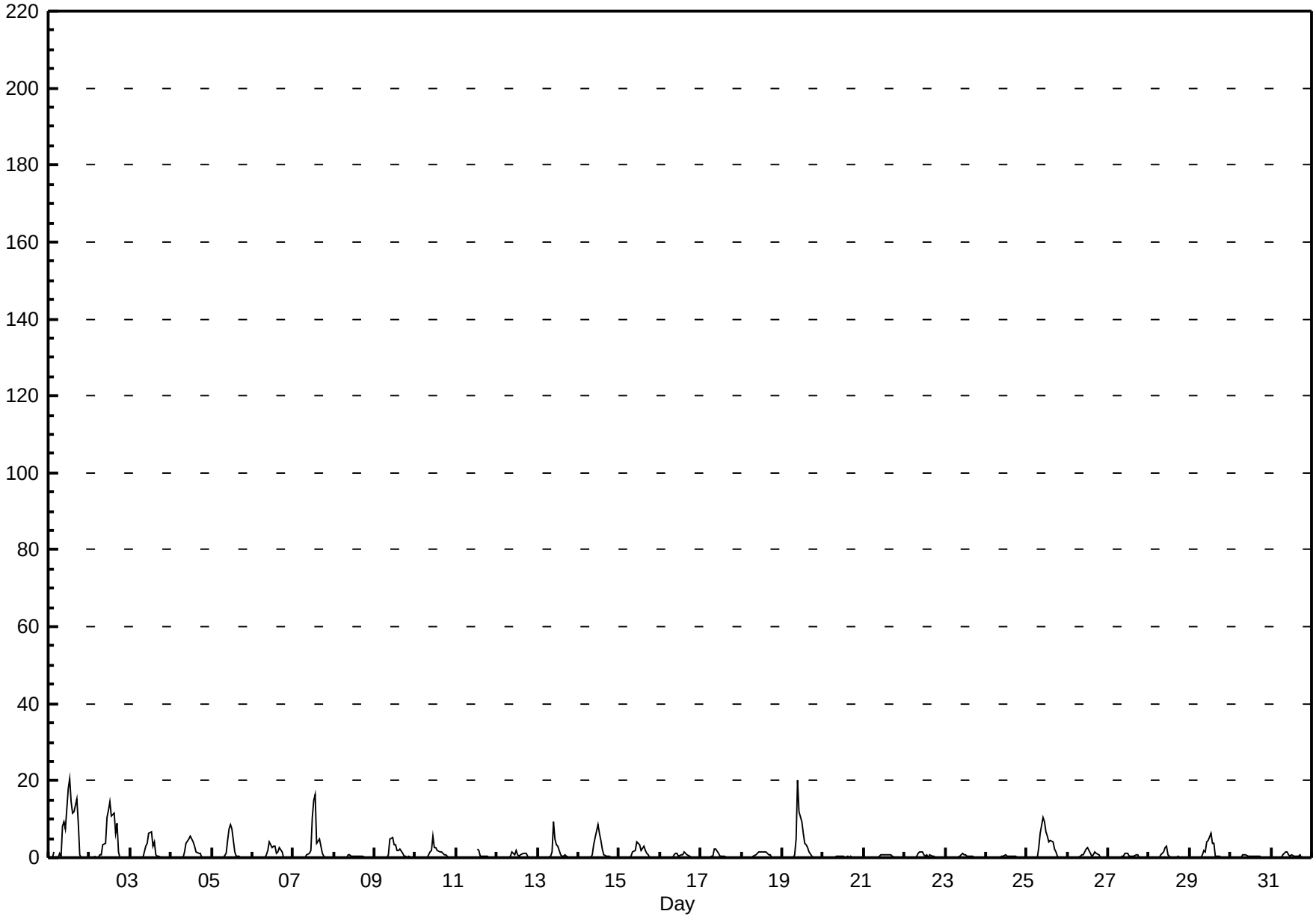
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	N	0	0	1	A	0	1	1	8	9	8	18	21	15	11	12	15	9	1	0	0	0	0	0	5.9	20.6
2-Mar	0	0	0	0	A	0	1	1	3	4	10	12	15	11	12	6	9	2	0	0	0	0	0	0	3.7	14.6
3-Mar	0	0	0	0	A	0	0	0	1	3	4	6	7	3	4	1	1	0	0	0	0	0	0	0	1.3	6.7
4-Mar	0	0	0	0	A	0	0	0	1	4	5	5	5	4	3	1	1	1	0	0	0	0	0	0	1.4	5.4
5-Mar	0	0	0	0	A	0	0	0	1	4	7	9	8	1	0	0	0	0	0	0	0	0	0	0	1.4	8.5
6-Mar	0	0	0	0	A	0	0	0	1	2	4	3	3	3	1	2	2	2	0	0	0	0	0	0	1.0	4.1
7-Mar	0	0	0	0	A	0	0	0	1	1	2	10	15	16	4	5	3	1	0	0	0	0	0	0	2.5	16.4
8-Mar	0	0	0	0	A	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.2	0.9
9-Mar	0	0	0	0	A	0	0	0	1	5	5	3	3	2	2	2	1	0	0	0	0	0	0	0	1.1	5.4
10-Mar	0	0	0	0	A	0	0	0	1	2	5	3	3	2	1	2	1	1	1	0	0	0	0	0	0.9	5.5
11-Mar	0	0	0	0	A	0	0	0	C	C	C	C	2	2	0	0	0	0	0	0	0	0	0	0	0.3	2.4
12-Mar	0	0	0	0	A	0	0	0	0	1	1	2	1	1	1	1	1	1	0	0	0	0	0	0	0.4	1.7
13-Mar	0	0	0	0	A	0	0	0	2	9	5	3	3	1	0	0	1	0	0	0	0	0	0	0	1.1	9.3
14-Mar	0	0	0	0	A	0	0	0	1	3	5	8	6	5	2	1	0	0	0	0	0	0	0	0	1.4	8.4
15-Mar	0	0	0	0	A	0	0	0	1	2	4	4	3	2	3	2	1	1	0	0	0	0	0	0	1.0	4.1
16-Mar	0	0	0	0	A	0	0	0	1	1	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0.4	1.3
17-Mar	0	0	0	0	A	0	0	0	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.3
18-Mar	0	0	0	0	A	0	0	0	1	1	2	1	1	2	1	1	1	1	0	0	0	0	0	0	0.5	1.6
19-Mar	0	0	0	0	A	0	0	1	5	20	12	9	6	4	3	3	1	0	0	0	0	0	0	0	2.8	20.1
20-Mar	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
21-Mar	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.3	0.9
22-Mar	0	0	0	0	A	0	0	1	1	2	2	1	1	1	0	1	0	0	0	0	0	0	0	0	0.3	1.6
23-Mar	0	0	0	0	A	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.2	1.0
24-Mar	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
25-Mar	0	0	0	0	A	0	0	3	6	11	9	7	6	4	4	4	2	1	0	0	0	0	0	0	2.5	10.6
26-Mar	0	0	0	0	A	0	0	0	1	1	1	2	3	1	1	1	1	1	1	0	0	0	0	0	0.6	2.5
27-Mar	0	0	0	0	A	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0.3	1.3
28-Mar	0	0	0	0	A	0	0	1	1	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	3.0
29-Mar	0	0	0	0	A	0	0	1	2	2	4	4	6	4	4	0	0	0	0	0	0	0	0	0	1.2	6.4
30-Mar	0	0	0	0	A	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
31-Mar	0	0	0	0	A	0	0	1	1	2	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0.3	1.6
	0.0	0.0	0.0	0.1	--	0.0	0.1	0.3	1.6	3.2	3.6	3.9	3.9	2.8	2.0	1.6	1.6	0.9	0.2	0.0	0.0	0.0	0.0	0.0	Diurnal Average	
	0.0	0.2	0.2	1.4	--	0.2	1.0	2.8	8.0	20.1	11.8	18.0	20.6	16.4	11.5	11.8	15.1	8.8	0.9	0.1	0.2	0.1	0.0	0.1	Diurnal Maximum	

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

Hourly Averages

Nitrogen Oxide (NO) - ppb

Beaverlodge - March 2010



PASZA
Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Beaverlodge - March 2010

Maximum Value: 40.7 ppb on Mar 1 12:00

Maximum Daily Average: 12.7 ppb on Mar 1

Minimum Value: 0 ppb on Mar 3 01:00

Minimum Daily Average: 0.4 ppb on Mar 24

Maximum Diurnal Average: 7.7 ppb at hour 12

Minimum Diurnal Average: 0.1 ppb at hour 1

Monthly Average: 2.46 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.0$ Median = 0.5 $Q_3 = 2.0$ $P_{90} = 6.7$ $P_{99} = 30.3$

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

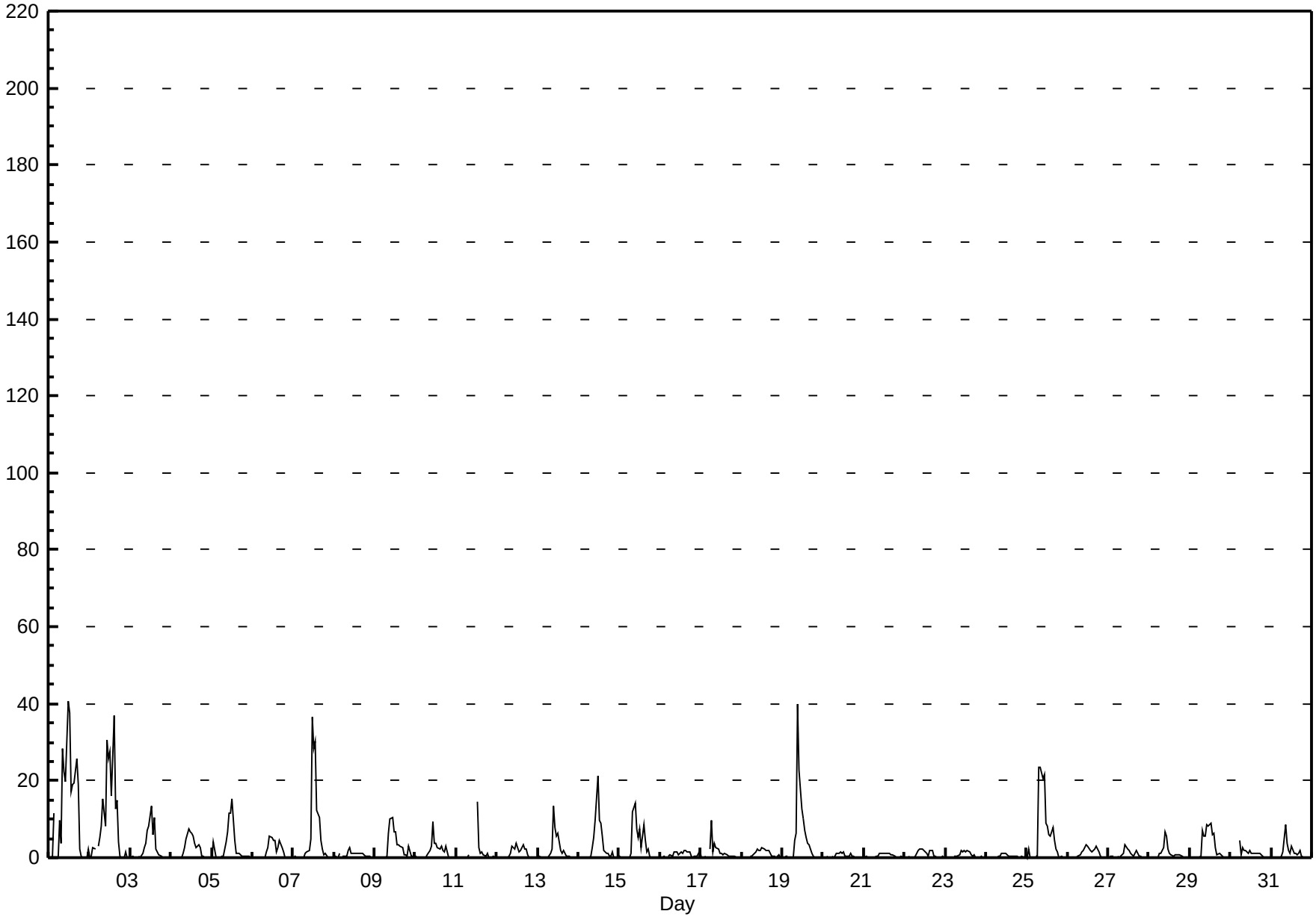
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	N	0	0	12	A	0	10	4	28	22	20	41	38	17	19	20	26	19	2	0	0	0	0	2	12.7	40.7
2-Mar	0	0	2	2	A	3	5	8	15	8	30	26	27	16	37	13	15	4	0	0	0	2	0	0	9.4	36.7
3-Mar	0	0	0	0	A	0	0	1	3	4	7	8	13	6	10	2	2	1	0	0	0	0	0	0	2.5	13.3
4-Mar	0	0	0	0	A	0	0	1	3	5	7	7	6	6	4	3	3	2	0	0	0	0	0	0	2.1	7.4
5-Mar	0	4	0	0	A	0	0	0	4	7	12	12	15	5	1	1	1	1	0	0	0	0	0	0	2.8	15.2
6-Mar	0	0	0	0	A	0	0	0	2	3	6	5	4	4	1	3	5	3	1	0	0	0	0	0	1.6	5.7
7-Mar	0	0	0	0	A	0	0	1	1	2	5	36	28	30	12	10	4	2	1	1	0	0	0	0	5.9	36.4
8-Mar	0	0	0	1	A	0	0	0	2	2	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.7	2.5
9-Mar	0	0	0	0	A	0	0	0	6	10	10	7	7	3	3	3	2	1	1	0	3	0	0	0	2.5	10.3
10-Mar	0	0	0	0	A	0	0	1	2	3	9	4	4	2	2	3	2	1	3	0	0	0	0	0	1.6	9.4
11-Mar	0	0	0	0	A	0	0	1	C	C	C	C	14	3	1	1	1	0	1	0	0	0	0	0	1.2	14.4
12-Mar	0	0	0	0	A	0	0	0	1	3	2	4	3	1	2	3	2	2	1	0	0	0	0	0	1.1	3.8
13-Mar	0	0	0	0	A	0	0	1	2	13	8	5	6	2	1	2	1	0	0	0	0	0	0	0	1.9	13.2
14-Mar	0	0	0	0	A	0	0	0	2	5	10	21	10	9	5	2	1	1	0	0	2	0	0	0	3.0	21.4
15-Mar	0	0	0	0	A	0	0	1	12	14	8	5	8	2	9	4	1	2	0	0	0	0	0	0	2.9	14.3
16-Mar	0	0	0	0	A	0	1	0	1	2	1	1	1	1	2	2	1	1	0	0	0	0	0	2	0.8	2.0
17-Mar	0	0	0	0	A	2	10	1	4	2	2	1	1	1	1	1	1	0	0	0	0	0	0	0	1.2	9.6
18-Mar	0	0	0	0	A	0	0	1	1	2	2	2	2	2	2	2	2	1	0	0	0	0	1	0	0.9	2.5
19-Mar	0	0	0	0	A	0	0	4	6	40	23	13	10	7	5	4	3	1	0	0	0	0	0	0	5.1	40.0
20-Mar	0	0	0	0	A	0	0	0	1	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0.4	1.4
21-Mar	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.5	1.2
22-Mar	0	0	0	0	A	0	0	1	2	2	2	2	1	1	0	2	2	0	0	0	0	0	0	0	0.7	2.2
23-Mar	0	0	0	0	A	0	0	0	1	2	1	2	1	2	1	1	0	1	0	0	0	0	0	0	0.6	2.0
24-Mar	0	0	0	0	A	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0.4	1.2
25-Mar	0	2	0	0	A	0	0	23	24	21	22	9	8	6	6	8	4	2	1	0	0	0	0	0	6.0	23.6
26-Mar	0	0	0	0	A	0	0	1	1	2	3	3	3	2	1	2	2	3	1	0	0	0	0	0	1.1	3.4
27-Mar	0	0	0	0	A	0	0	0	1	1	3	2	2	1	1	0	2	1	0	0	0	0	0	0	0.7	3.3
28-Mar	0	0	0	0	A	0	1	1	3	7	6	2	1	1	0	1	1	1	1	0	0	0	0	0	1.1	6.9
29-Mar	0	0	0	0	A	0	0	7	5	6	9	8	9	6	6	2	1	1	1	0	0	0	0	0	2.7	8.9
30-Mar	0	0	0	0	A	4	1	3	2	2	1	2	1	1	1	1	1	1	1	0	0	0	0	0	0.9	4.3
31-Mar	0	0	0	0	A	0	0	1	9	4	2	1	3	1	1	1	1	2	0	0	0	0	0	0	1.1	8.6
	0.1	0.3	0.1	0.5	--	0.4	1.0	2.1	4.8	6.5	7.2	7.7	7.5	4.6	4.5	3.2	2.9	1.9	0.7	0.2	0.2	0.1	0.1	0.2	Diurnal Average	
	0.2	4.1	2.5	11.5	--	4.3	9.8	23.4	28.2	40.0	30.4	40.7	37.7	30.3	36.7	19.5	25.8	19.2	2.9	1.1	3.1	1.6	0.7	2.2	Diurnal Maximum	

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

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Beaverlodge - March 2010



Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - March 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 42.6 ppb on Mar 1 17:00
Maximum Daily Average: 21.7 ppb on Mar 1

Minimum Value: 0 ppb on Mar 24 03:00
Maximum Diurnal Average: 8.6 ppb at hour 12
Monthly Average: 5.56 ppb

Minimum Daily Average: 1.7 ppb on Mar 20
Minimum Diurnal Average: 4.0 ppb at hour 20
Percentiles: P_1 = 0.7 P_{10} = 1.2 Q_1 = 2.0 Median = 3.6 Q_3 = 6.9 P_{90} = 11.7 P_{99} = 30.1

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

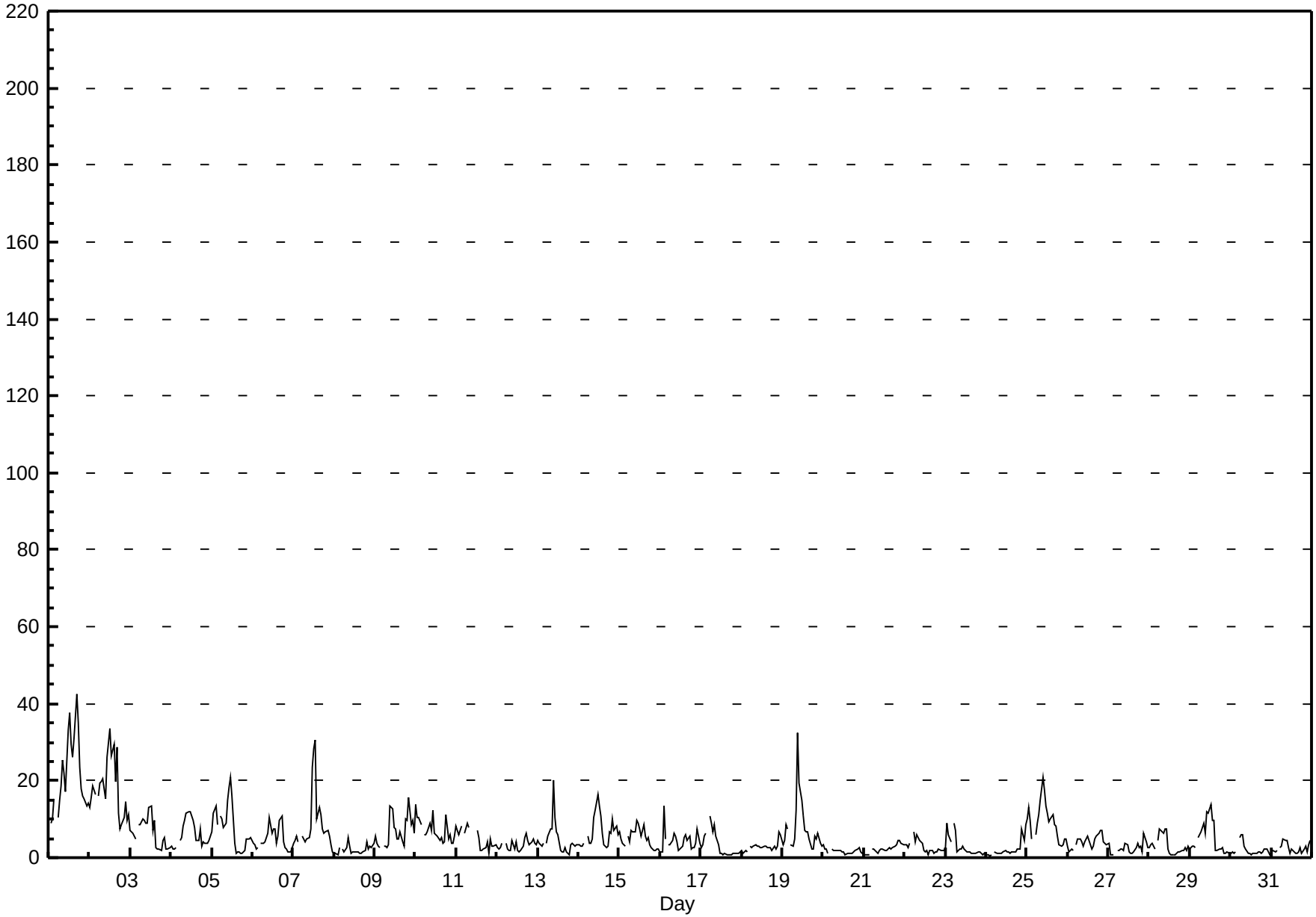
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	N	9	10	15	A	10	15	19	25	22	17	33	38	30	26	31	43	35	23	18	16	15	13	14	21.7	42.6
2-Mar	13	16	19	16	A	16	19	20	21	15	26	30	34	27	29	20	29	12	8	9	10	15	10	11	18.4	33.6
3-Mar	7	6	6	5	A	9	9	10	10	9	9	13	13	7	10	3	2	2	2	5	5	2	2	3	6.4	13.3
4-Mar	3	2	2	3	A	4	5	8	10	11	12	12	11	10	8	4	5	8	3	4	4	4	4	6	6.2	12.0
5-Mar	7	11	13	9	A	11	10	8	9	15	18	21	16	4	1	1	2	1	1	2	5	5	5	5	7.8	20.8
6-Mar	4	3	2	3	A	4	4	4	5	6	10	6	8	8	4	6	10	11	4	2	2	2	2	3	4.9	10.7
7-Mar	4	5	6	4	A	5	5	4	5	5	7	23	28	31	10	13	11	7	6	7	7	6	3	2	8.9	30.8
8-Mar	1	1	1	2	A	2	2	3	5	3	1	1	1	1	2	1	1	2	2	4	2	3	2	4	2.1	5.2
9-Mar	5	4	3	3	A	3	3	3	3	13	13	8	7	5	5	7	4	3	10	10	16	9	10	6	6.6	15.6
10-Mar	14	11	11	8	A	6	6	7	9	7	12	6	6	5	4	5	4	4	11	5	6	4	4	5	7.0	14.0
11-Mar	8	6	7	8	A	6	9	8	C	C	C	C	7	5	2	2	2	3	4	1	5	3	3	3	4.9	9.0
12-Mar	3	2	3	4	A	4	2	2	2	4	2	4	2	1	2	3	5	6	5	4	4	5	4	3	3.3	6.3
13-Mar	4	4	3	4	A	4	5	7	7	20	10	7	6	2	1	2	3	1	1	4	4	3	3	3	4.7	20.2
14-Mar	3	3	3	4	A	6	4	4	5	11	12	16	14	11	6	3	3	3	7	6	10	7	8	6	6.7	16.5
15-Mar	7	5	4	3	A	6	4	7	7	7	10	9	8	5	9	6	4	5	3	3	2	2	2	2	5.1	9.7
16-Mar	1	1	13	5	A	3	3	5	6	5	4	2	3	3	5	6	5	5	2	2	3	4	7	4	4.3	13.3
17-Mar	2	3	6	6	A	11	9	7	8	6	3	1	1	1	1	1	1	1	1	1	1	1	1	2	3.3	10.7
18-Mar	2	1	2	2	A	3	2	3	3	3	3	3	3	3	3	2	3	3	2	3	2	3	7	6	2.9	6.6
19-Mar	3	5	9	8	A	3	3	5	12	32	19	15	11	7	7	7	5	2	2	6	5	6	4	3	7.7	32.4
20-Mar	3	2	2	1	A	2	2	2	2	2	2	2	2	1	1	1	1	1	1	2	2	3	2	1	1.7	3.3
21-Mar	1	1	1	1	A	2	2	1	1	2	2	2	2	2	2	3	2	3	3	3	4	4	4	4	2.3	4.4
22-Mar	3	3	3	4	A	7	4	6	5	4	4	2	1	2	1	2	2	1	1	2	2	2	2	2	2.8	6.5
23-Mar	2	9	6	4	A	9	7	1	2	2	3	2	2	2	1	1	1	1	1	2	1	1	1	1	2.8	9.0
24-Mar	1	1	0	1	A	1	1	1	1	1	1	2	2	1	1	1	2	2	2	2	2	7	4	9	2.1	8.7
25-Mar	10	13	10	5	A	6	9	11	15	21	18	13	11	9	10	11	8	8	6	3	3	3	5	5	9.3	21.0
26-Mar	3	2	2	2	A	3	5	5	4	3	4	5	6	3	2	3	5	6	6	7	7	4	4	3	4.1	6.9
27-Mar	4	1	1	1	A	2	2	2	2	2	4	3	2	1	1	2	3	4	3	3	1	6	4	3	2.4	6.2
28-Mar	3	3	4	2	A	4	7	7	6	7	8	2	1	1	1	1	1	1	2	2	2	3	2	3	3.2	7.6
29-Mar	2	3	3	3	A	5	7	8	9	7	12	12	14	10	10	2	2	2	2	3	1	1	2	1	5.2	13.7
30-Mar	1	1	1	1	A	5	6	6	3	2	1	1	1	1	1	1	1	1	1	1	2	2	1	1	2.0	6.1
31-Mar	1	2	2	2	A	3	3	5	4	4	2	1	2	1	1	1	1	3	1	2	3	2	3	4	2.4	4.9
	4.2	4.5	5.0	4.4	--	5.4	5.6	6.0	6.9	8.5	8.4	8.6	8.4	6.4	5.4	4.9	5.4	4.8	4.1	4.0	4.5	4.4	4.1	4.1	Diurnal Average	
	14.0	15.8	18.6	16.5	--	16.1	19.4	19.6	25.5	32.4	26.0	33.2	37.6	30.8	29.4	31.0	42.6	35.0	23.3	17.8	16.0	15.3	13.4	14.2	Diurnal Maximum	

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

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - March 2010



PASZA
Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - March 2010

Maximum Value: 70.0 ppb on Mar 2 15:00

Maximum Daily Average: 36.2 ppb on Mar 1

Minimum Value: 1 ppb on Mar 24 03:00

Minimum Daily Average: 3.1 ppb on Mar 21

Maximum Diurnal Average: 14.9 ppb at hour 11

Minimum Diurnal Average: 6.9 ppb at hour 1

Monthly Average: 10.03 ppb

Percentiles: P_1 = 1.2 P_{10} = 2.4 Q_1 = 3.7 Median = 6.2 Q_3 = 12.1 P_{90} = 21.7 P_{99} = 60.6

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

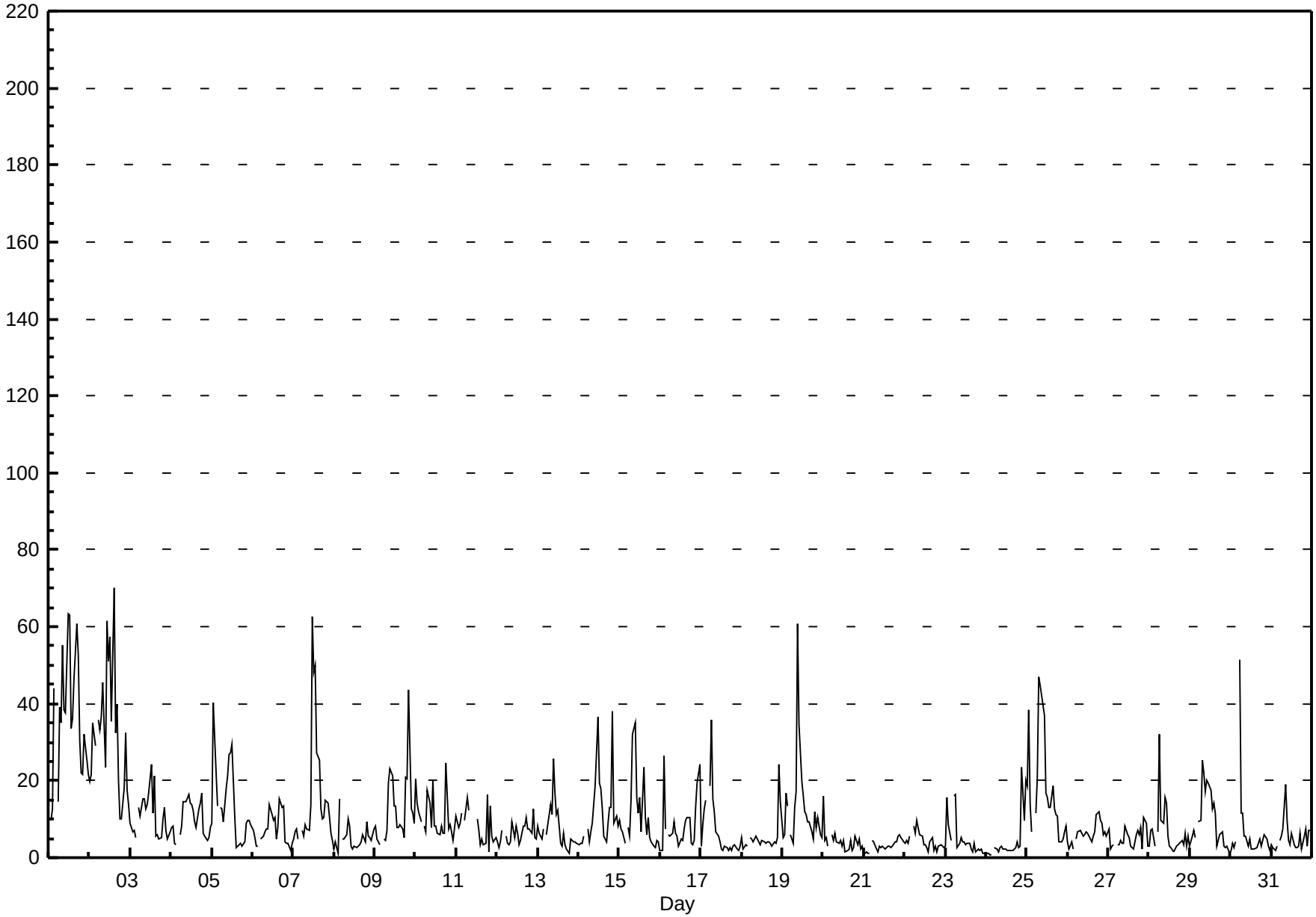
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	N	10	13	44	A	15	39	35	55	39	38	63	63	34	36	47	61	53	31	22	22	32	25	22	36.2	63.3
2-Mar	20	22	35	29	A	36	33	37	46	23	61	51	57	36	70	32	40	20	10	10	18	33	17	14	32.6	70.0
3-Mar	9	7	7	5	A	13	11	15	15	13	14	17	24	12	21	6	6	5	5	10	13	7	5	7	10.7	24.4
4-Mar	8	8	4	4	A	6	8	14	14	14	16	14	14	12	10	8	13	14	17	6	6	5	5	8	9.9	16.7
5-Mar	9	40	22	13	A	13	13	9	18	21	27	27	29	10	3	3	3	4	3	4	9	10	10	9	13.4	40.3
6-Mar	7	5	3	3	A	5	6	7	8	8	14	11	10	11	5	8	15	13	13	4	4	4	2	4	7.3	15.1
7-Mar	5	7	8	5	A	7	6	8	7	7	14	63	48	50	27	25	13	10	10	15	14	10	6	5	16.1	62.6
8-Mar	2	4	1	15	A	5	5	6	10	8	3	2	3	3	3	3	4	6	4	9	6	5	4	7	5.2	15.1
9-Mar	8	5	4	3	A	5	5	7	19	23	21	13	13	8	8	8	7	5	21	21	44	13	12	9	12.3	43.8
10-Mar	21	14	12	9	A	8	7	18	14	8	20	8	8	7	6	8	6	6	25	7	9	7	4	7	10.4	24.7
11-Mar	11	8	9	12	A	10	16	12	C	C	C	C	10	7	3	5	3	4	16	2	13	6	4	5	8.2	16.3
12-Mar	4	3	4	7	A	5	4	4	4	9	5	8	6	3	4	8	8	11	8	7	6	13	5	5	6.2	12.8
13-Mar	8	6	5	8	A	6	8	14	11	26	17	11	12	4	3	6	3	2	1	5	4	4	4	4	7.5	25.7
14-Mar	3	4	4	6	A	7	4	7	9	14	19	36	20	18	13	6	4	9	13	13	38	9	11	8	11.9	38.1
15-Mar	10	7	7	4	A	8	6	15	32	35	16	11	16	7	24	11	6	11	5	4	3	3	5	4	10.7	35.1
16-Mar	2	2	27	7	A	6	5	7	9	6	5	3	5	4	7	10	11	10	4	3	4	13	20	24	8.5	26.6
17-Mar	3	9	13	15	A	19	36	15	12	7	6	4	2	2	3	3	2	3	2	3	3	2	2	3	7.3	35.9
18-Mar	5	2	3	3	A	5	5	4	6	5	4	3	4	4	4	4	4	4	3	4	4	5	24	14	5.4	24.2
19-Mar	5	6	17	13	A	6	4	13	17	61	35	20	16	12	11	9	9	7	5	12	8	11	6	5	13.4	60.9
20-Mar	16	4	5	3	A	6	4	6	4	4	4	3	4	2	2	2	4	2	3	5	3	5	2	3	4.3	15.9
21-Mar	1	1	1	1	A	4	4	2	2	3	3	3	2	2	3	3	3	3	4	4	5	6	5	4	3.1	6.0
22-Mar	4	4	4	5	A	8	6	10	8	6	6	3	3	2	1	4	5	2	3	2	3	3	3	3	4.3	9.8
23-Mar	3	15	8	4	A	16	16	3	4	5	4	4	3	4	4	2	2	4	1	2	2	2	1	1	4.9	16.5
24-Mar	1	1	1	1	A	3	2	1	2	3	2	2	2	2	2	2	2	3	4	3	3	24	10	20	4.1	23.6
25-Mar	18	38	14	7	A	12	21	47	45	39	37	17	16	13	13	19	13	11	11	4	4	5	7	8	18.2	47.1
26-Mar	4	2	4	2	A	5	7	7	6	5	6	7	7	5	4	5	7	11	12	10	9	6	7	6	6.2	11.8
27-Mar	7	2	3	3	A	3	3	4	4	4	8	6	5	3	3	2	6	7	6	8	2	10	9	3	4.9	10.4
28-Mar	3	7	7	3	A	7	32	10	9	16	14	6	3	2	1	2	3	3	4	4	3	6	3	6	6.8	32.1
29-Mar	3	5	7	5	A	9	10	25	22	17	20	19	17	13	14	11	3	6	6	7	3	3	3	1	10.0	25.5
30-Mar	2	4	2	4	A	52	11	11	5	6	3	5	2	2	2	3	4	5	3	4	6	5	3	2	6.4	51.6
31-Mar	3	2	2	3	A	5	6	8	19	10	5	3	6	4	3	3	3	6	2	6	8	3	7	7	5.3	19.2
	6.9	8.3	8.2	8.0	--	10.1	11.0	12.3	14.6	14.8	14.9	14.9	14.0	9.5	10.1	8.6	8.8	8.4	8.2	7.1	9.0	8.6	7.5	7.3	Diurnal Average	
	20.7	40.3	35.0	44.1	--	51.6	39.1	47.1	55.4	60.9	61.5	63.3	63.1	50.0	70.0	46.7	60.7	52.5	30.5	22.2	43.8	32.5	25.4	24.4	Diurnal Maximum	

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

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - March 2010



Hourly Averages

Ozone (O_3) - ppb

Beaverlodge - March 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 54.4 ppb on Mar 29 17:00
Maximum Daily Average: 47.9 ppb on Mar 20

Minimum Value: 13 ppb on Mar 2 08:00
Maximum Diurnal Average: 42.3 ppb at hour 16
Monthly Average: 37.91 ppb

Minimum Daily Average: 22.4 ppb on Mar 1
Minimum Diurnal Average: 33.3 ppb at hour 8
Percentiles: P_1 = 18.5 P_{10} = 26.7 Q_1 = 34.2 Median = 39.2 Q_3 = 43.0 P_{90} = 45.7 P_{99} = 51.8

Hours in Service:	744
Hours of Data:	710
Hours of Missing Data:	34
Hours of Calibration:	33
Percent Operational Time:	99.9

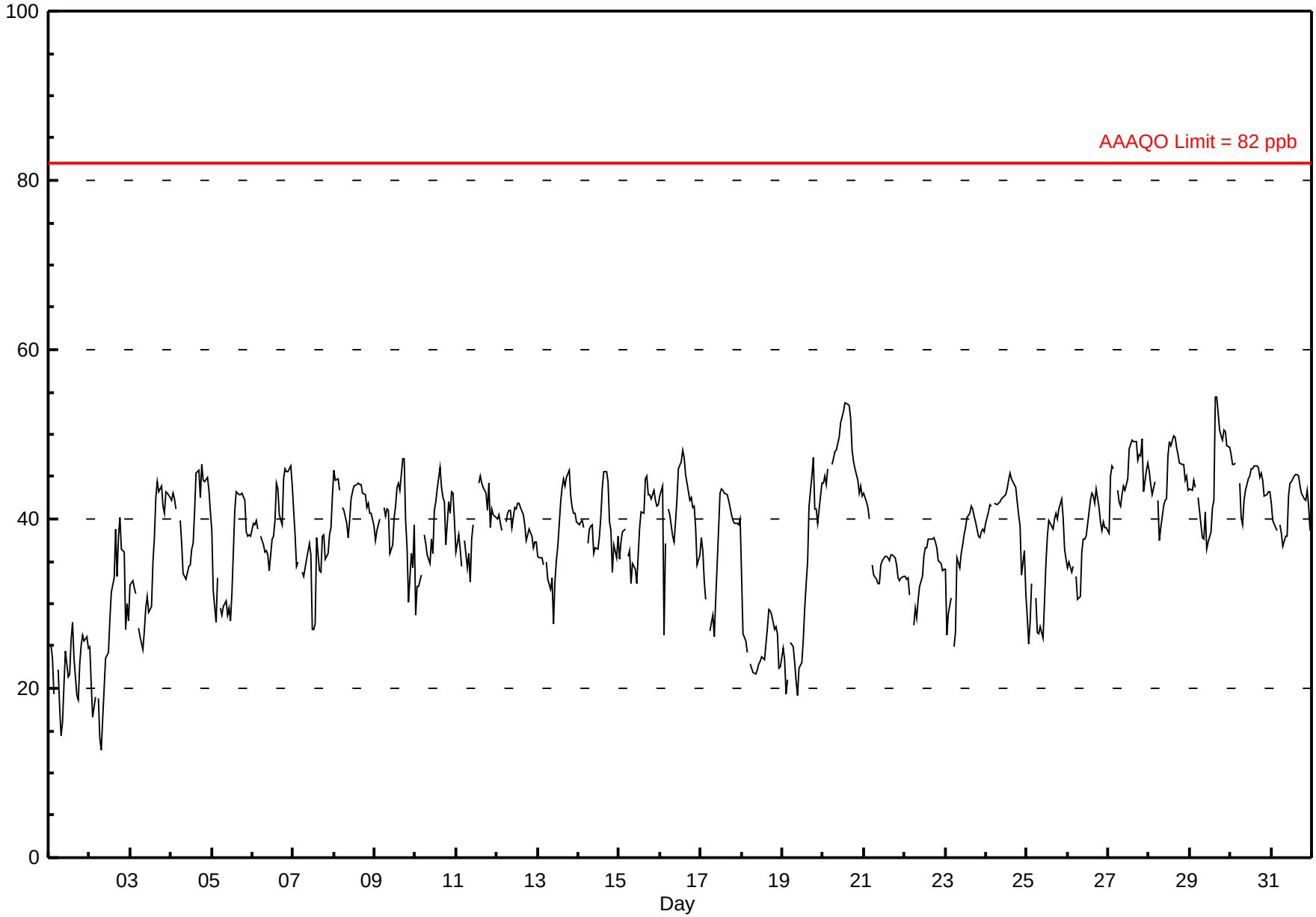
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	N	25	24	19	A	22	18	14	16	20	24	21	22	26	28	24	19	19	23	25	26	26	26	25	22.4	27.9
2-Mar	25	20	17	19	A	19	14	13	16	23	24	24	28	31	33	39	33	38	40	36	36	27	30	28	26.7	40.1
3-Mar	32	33	32	31	A	27	26	25	27	29	31	29	30	35	38	42	44	43	44	41	41	43	43	43	35.2	44.4
4-Mar	42	43	42	41	A	40	37	34	33	33	34	35	36	37	41	45	46	42	46	45	44	45	43	41	40.3	46.4
5-Mar	39	32	28	33	A	29	29	30	30	29	29	28	31	41	43	43	43	43	43	42	38	38	38	38	35.5	43.2
6-Mar	40	39	40	39	A	38	37	36	36	36	34	38	38	40	44	44	41	39	45	46	46	46	46	44	40.4	46.2
7-Mar	41	38	34	35	A	34	33	34	35	37	36	27	27	28	38	34	34	38	38	35	36	38	39	43	35.3	42.8
8-Mar	46	45	45	43	A	41	41	40	38	40	42	43	44	44	44	44	44	43	43	41	42	41	41	39	42.3	45.7
9-Mar	37	39	39	40	A	41	40	41	41	36	37	40	41	44	44	43	47	47	40	37	30	36	34	39	39.8	47.2
10-Mar	29	32	32	33	A	38	37	36	35	38	36	41	42	44	46	44	43	42	37	42	41	43	43	40	38.8	46.2
11-Mar	36	38	36	34	A	38	34	36	33	38	39	C	C	44	45	44	44	43	41	44	39	41	41	40	39.5	45.0
12-Mar	40	41	39	39	A	40	41	41	41	39	41	41	42	42	41	41	39	37	38	39	38	37	37	37	39.6	41.8
13-Mar	36	35	35	35	A	35	33	32	33	28	33	35	37	42	44	45	44	45	46	43	41	41	41	40	38.1	45.8
14-Mar	39	40	40	39	A	37	39	39	39	36	37	36	38	40	44	46	46	44	40	39	34	37	35	38	39.2	45.6
15-Mar	35	37	38	39	A	36	36	32	35	34	32	36	39	41	41	45	45	43	43	42	43	42	42	42	39.1	45.1
16-Mar	43	44	26	37	A	41	41	38	37	40	42	46	47	48	47	45	44	42	42	41	42	39	35	36	41.0	48.1
17-Mar	38	36	33	30	A	27	28	29	26	31	39	43	44	43	43	43	42	41	41	40	40	39	39	40	37.1	43.6
18-Mar	33	26	26	24	A	23	22	22	22	22	23	23	24	23	25	27	29	29	29	27	27	26	22	23	25.2	33.4
19-Mar	25	23	19	21	A	25	25	23	21	19	22	23	26	30	32	35	42	45	47	41	41	40	43	44	31.0	47.3
20-Mar	44	45	44	46	A	46	47	48	48	50	51	52	53	54	54	53	52	48	47	46	45	43	44	43	47.9	53.8
21-Mar	43	42	41	40	A	34	33	33	32	32	35	35	36	36	35	35	36	36	35	35	33	33	33	33	35.5	43.0
22-Mar	33	33	33	31	A	27	29	28	30	32	33	36	37	37	38	38	38	38	37	37	35	35	34	34	34.0	37.7
23-Mar	34	26	29	31	A	25	27	35	34	36	37	38	39	40	41	42	41	40	40	38	38	39	39	38	35.9	41.5
24-Mar	39	41	42	42	A	42	42	42	42	42	43	43	44	45	45	45	44	44	42	41	39	33	36	31	41.2	45.3
25-Mar	29	25	28	32	A	31	27	26	27	26	30	35	38	40	39	39	40	41	40	41	42	40	37	35	34.3	42.4
26-Mar	34	35	34	34	A	33	30	31	36	38	38	38	39	42	43	43	42	44	41	40	39	40	39	39	37.9	43.5
27-Mar	38	45	46	46	A	43	42	42	43	44	43	45	48	49	49	49	49	47	48	47	49	43	46	47	45.6	49.4
28-Mar	46	44	43	44	A	42	38	39	42	42	42	47	49	49	50	50	48	48	47	46	46	45	45	43	45.0	49.8
29-Mar	44	43	45	44	A	43	39	38	38	41	37	37	38	41	42	54	54	51	50	49	51	50	49	49	44.6	54.4
30-Mar	48	46	46	47	A	44	40	39	42	43	45	45	46	46	46	46	46	45	45	45	43	43	43	43	44.5	47.7
31-Mar	42	40	39	39	A	39	38	37	38	38	43	44	44	45	45	45	45	44	43	42	42	43	42	39	41.6	45.2
	37.6	36.5	35.3	35.7	--	34.9	33.7	33.3	33.8	34.6	35.9	36.8	38.2	40.2	41.6	42.3	42.1	41.6	41.3	40.4	39.6	39.1	38.8	38.5	Diurnal Average	
	47.7	46.4	46.5	46.7	--	46.5	47.1	48.0	48.1	49.6	51.4	52.1	52.6	53.8	53.6	54.3	54.4	50.5	49.9	49.4	50.6	50.3	48.6	48.5	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 (O_3) - ppb

Beaverlodge - March 2010



Hourly Maximums

Ozone (O_3) - ppb

Beaverlodge - March 2010

Maximum Value: 57.0 ppb on Mar 29 16:00

Maximum Daily Average: 49.4 ppb on Mar 20

Minimum Value: 20 ppb on Mar 1 08:00

Minimum Daily Average: 26.9 ppb on Mar 18

Maximum Diurnal Average: 44.4 ppb at hour 17

Minimum Diurnal Average: 35.8 ppb at hour 8

Monthly Average: 40.14 ppb

Percentiles: P_1 = 23.4 P_{10} = 30.7 Q_1 = 36.3 Median = 41.2 Q_3 = 44.6 P_{90} = 47.2 P_{99} = 53.6

Hours in Service:	744
Hours of Data:	710
Hours of Missing Data:	34
Hours of Calibration:	33
Percent Operational Time:	99.9

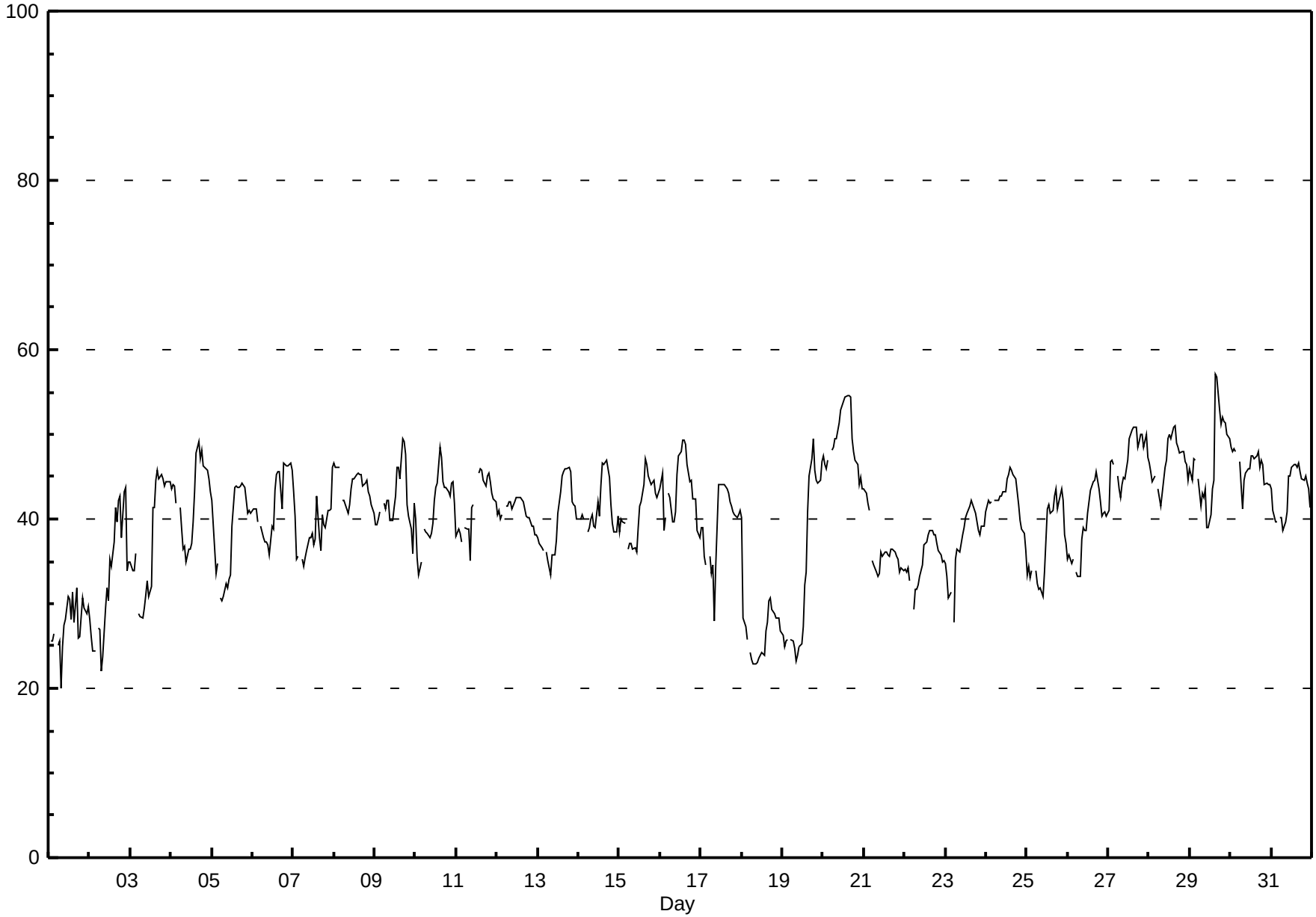
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	N	26	26	27	A	25	26	20	25	27	28	31	30	28	31	28	32	26	26	28	31	29	29	30	27.7	31.9
2-Mar	28	26	24	24	A	27	27	22	24	29	32	30	35	34	37	41	40	42	43	38	43	44	34	35	33.1	43.8
3-Mar	35	34	34	36	A	29	29	28	30	31	33	31	32	41	41	45	46	45	45	45	44	44	44	44	37.6	45.8
4-Mar	44	44	44	42	A	41	39	36	37	35	36	36	37	40	43	48	49	47	48	46	46	46	45	43	42.3	49.2
5-Mar	42	39	33	35	A	31	30	31	32	32	33	33	39	44	44	44	44	44	44	44	42	41	41	41	38.4	44.2
6-Mar	41	41	41	40	A	39	38	37	37	37	36	39	39	43	45	46	46	41	47	46	46	46	47	46	41.9	46.7
7-Mar	43	40	35	36	A	35	34	35	36	38	38	38	37	38	43	38	36	40	39	39	41	41	41	46	38.7	46.2
8-Mar	47	46	46	46	A	42	42	41	41	42	44	45	45	45	45	45	45	44	44	45	43	43	42	41	43.9	46.7
9-Mar	39	39	40	41	A	42	41	42	42	40	40	41	43	46	46	45	50	49	48	42	40	39	36	42	42.3	49.6
10-Mar	40	35	33	35	A	39	39	38	38	38	39	42	44	44	48	47	44	44	44	43	43	44	44	42	41.3	48.5
11-Mar	38	39	38	37	A	39	39	39	35	41	42	C	C	46	46	46	45	44	45	46	44	43	42	42	41.7	46.0
12-Mar	41	41	40	41	A	42	42	42	42	41	42	43	43	43	43	42	41	40	40	40	39	39	38	38	40.9	42.6
13-Mar	38	37	37	36	A	36	35	33	36	36	36	37	41	43	45	46	46	46	46	46	42	42	42	40	40.0	46.0
14-Mar	40	40	41	40	A	39	39	40	41	39	39	42	40	44	47	46	47	46	45	42	39	39	39	40	41.4	47.0
15-Mar	38	40	40	40	A	36	37	37	36	37	36	39	42	42	44	47	46	45	45	44	45	43	43	43	41.1	47.1
16-Mar	44	45	39	40	A	43	43	40	40	41	45	47	48	49	49	49	46	44	44	42	42	42	39	38	43.5	49.3
17-Mar	39	39	36	35	A	36	34	35	28	34	44	44	44	44	44	44	43	42	42	41	41	40	40	41	39.5	44.2
18-Mar	40	28	27	26	A	24	23	23	23	23	24	24	24	24	27	28	30	31	29	29	28	28	28	27	26.9	40.1
19-Mar	26	25	26	26	A	26	26	25	23	24	25	25	27	32	34	41	45	47	49	46	45	44	45	47	33.8	49.5
20-Mar	47	46	46	47	A	48	48	49	49	51	53	53	54	54	55	55	54	49	48	47	46	44	45	44	49.4	54.7
21-Mar	44	43	42	41	A	35	35	34	33	34	36	36	36	36	36	36	36	37	36	36	35	34	34	34	36.4	43.5
22-Mar	34	34	34	33	A	29	32	32	32	33	35	37	37	37	38	39	39	38	38	37	36	36	35	35	35.2	38.7
23-Mar	35	33	31	31	A	28	35	36	36	37	38	39	40	41	42	42	42	41	41	39	38	39	39	39	37.5	42.1
24-Mar	41	42	42	42	A	42	42	42	43	43	43	43	45	45	46	46	45	45	43	42	40	39	38	36	42.4	46.2
25-Mar	33	34	33	34	A	34	32	32	32	31	34	37	41	42	41	41	43	44	41	42	44	42	38	37	37.5	43.6
26-Mar	35	36	35	35	A	34	33	33	38	39	39	39	41	43	44	44	45	46	44	42	40	41	41	40	39.3	45.5
27-Mar	41	47	47	47	A	45	44	43	44	45	45	47	50	50	50	51	51	49	49	50	50	49	50	47	47.3	50.8
28-Mar	47	46	44	45	A	44	43	42	45	46	47	49	50	49	51	51	49	48	48	48	48	47	46	45	46.8	51.0
29-Mar	46	45	47	47	A	45	42	43	43	44	39	39	41	44	45	57	57	53	51	52	52	51	50	49	46.9	57.0
30-Mar	48	48	48	48	A	47	44	41	45	45	46	46	47	47	47	48	48	46	47	47	44	44	44	44	46.1	48.5
31-Mar	44	41	40	40	A	40	40	39	40	41	45	45	46	46	46	46	47	46	45	45	45	44	44	41	43.2	46.6
	39.9	38.7	37.7	37.7	--	36.8	36.5	35.8	36.3	37.2	38.4	39.3	40.6	42.1	43.3	44.2	44.4	43.5	43.4	42.5	42.0	41.5	40.7	40.6	Diurnal Average	
	48.5	48.0	48.3	48.0	--	48.1	48.5	49.4	49.4	51.4	52.9	53.4	53.9	54.4	54.6	57.0	56.8	52.9	51.2	52.1	51.6	51.4	50.0	49.5	Diurnal Maximum	

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

Hourly Maximums

Ozone (O_3) - ppb

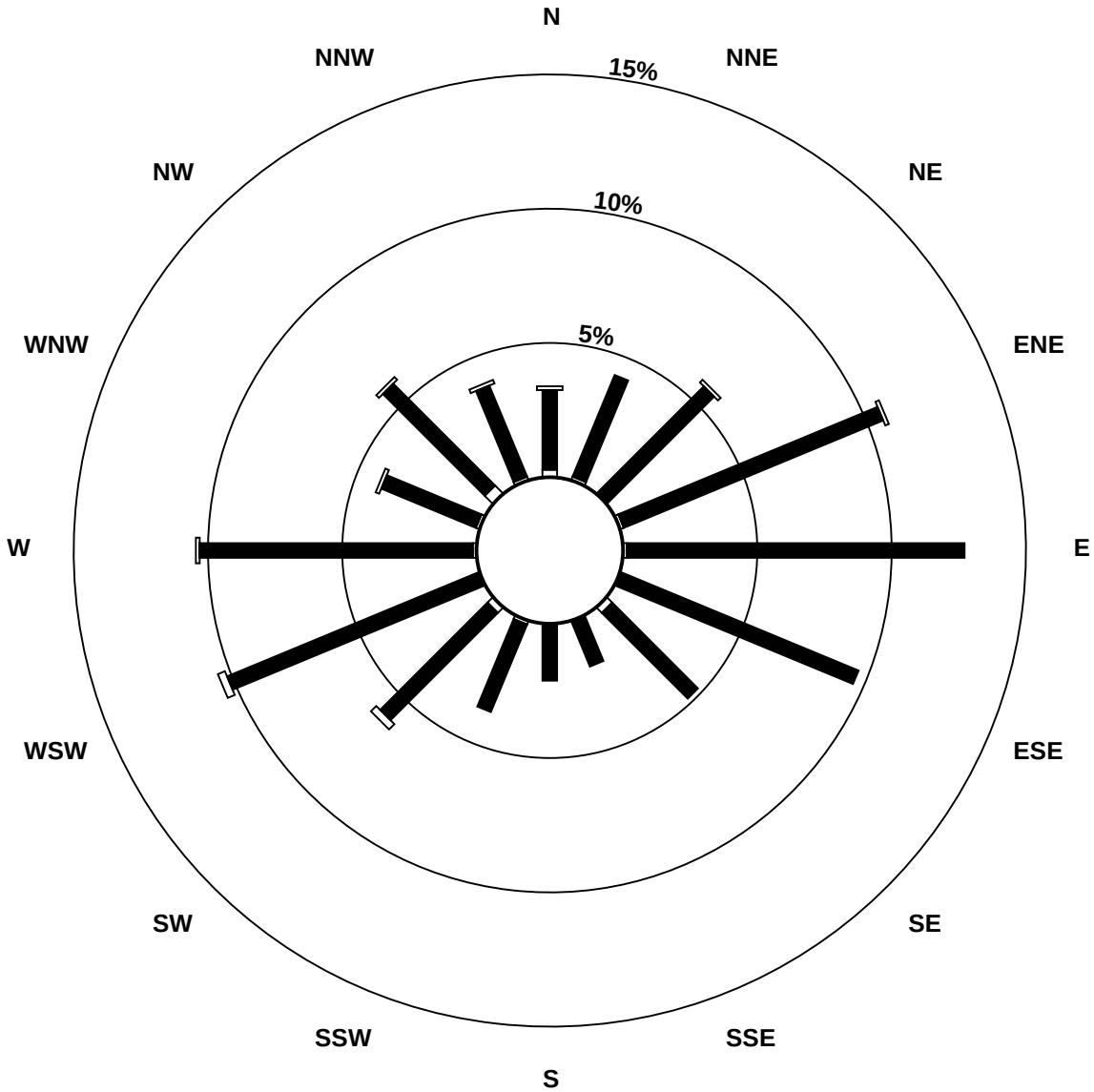
Beaverlodge - March 2010



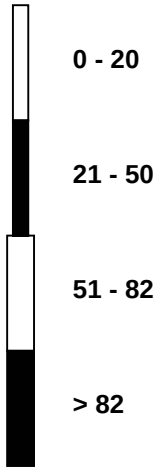
Pollutant Rose

Ozone (O_3) - ppb

Beaverlodge - March 2010



Pollutant Classes (ppb)



Eight Hour Running Averages

Ozone (O_3) - ppb

Beaverlodge - March 2010

Maximum Value: 52.3 ppb on Mar 20 17:00

Minimum Value: 16.9 ppb on Mar 2 09:00

Percentiles: P_1 = 19.5 P_{10} = 28.0 Q_1 = 34.3 Median = 39.4 Q_3 = 42.3 P_{90} = 44.4 P_{99} = 50.6

Hours in Service:	744
Hours of Data:	744
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	29	28	27	26	25	24	22	20	20	19	19	20	20	20	21	23	23	23	23	23	24	24	23	24	28.7
2-Mar	24	25	24	23	22	22	20	18	17	17	18	19	20	22	24	27	30	31	33	35	36	35	35	34	35.9
3-Mar	33	33	32	31	30	30	30	29	29	28	28	28	28	29	30	33	35	37	38	40	41	42	43	43	42.8
4-Mar	43	42	42	42	43	42	41	40	39	37	36	35	35	35	35	37	38	40	41	42	43	44	45	44	44.7
5-Mar	43	42	40	38	37	35	33	31	30	30	30	29	29	31	33	34	36	38	39	41	42	42	41	40	43.2
6-Mar	40	40	39	39	39	39	39	38	38	37	37	36	37	37	38	39	39	40	41	42	43	44	44	44	44.0
7-Mar	44	44	43	41	41	39	37	36	35	35	35	34	33	32	33	33	32	33	33	34	35	36	36	38	44.1
8-Mar	39	40	41	42	43	43	43	43	42	41	41	41	41	41	42	42	43	44	44	43	43	43	42	42	43.7
9-Mar	41	40	40	40	39	40	39	40	40	40	40	40	40	40	41	41	42	43	43	43	42	41	39	39	43.4
10-Mar	36	35	34	33	34	34	34	34	35	36	36	37	38	38	40	41	42	42	42	42	42	42	42	41	42.4
11-Mar	40	40	40	39	39	38	37	36	36	36	36	36	36	37	39	40	42	43	44	44	43	43	42	42	43.7
12-Mar	41	41	41	40	40	40	40	40	40	40	40	41	41	41	41	41	41	41	40	40	39	39	38	38	41.1
13-Mar	37	37	37	36	36	36	35	34	34	33	32	33	33	34	35	37	38	40	42	43	44	44	43	42	43.7
14-Mar	42	41	40	40	40	39	39	39	39	38	38	38	38	38	39	39	40	41	42	42	41	41	40	39	42.0
15-Mar	38	37	37	37	37	37	37	36	36	36	35	34	35	36	36	38	39	40	41	42	43	43	43	43	43.2
16-Mar	42	43	41	40	39	39	39	39	38	37	39	41	41	42	43	44	45	45	45	45	44	43	41	40	45.3
17-Mar	39	39	37	36	35	33	33	32	30	29	30	32	33	35	37	39	41	42	43	42	42	41	41	40	42.5
18-Mar	39	37	35	33	33	30	28	25	24	23	23	22	23	23	23	24	25	26	26	27	27	28	27	27	39.2
19-Mar	26	25	24	23	23	23	23	23	23	22	22	23	23	24	25	26	29	32	35	37	39	40	42	43	42.9
20-Mar	43	43	43	43	44	45	45	46	46	47	48	49	49	50	51	52	52	52	52	51	50	48	47	46	52.3
21-Mar	45	44	43	43	42	41	40	38	37	35	34	34	34	34	34	35	35	35	35	35	35	35	34	34	44.8
22-Mar	34	34	33	33	33	32	31	31	30	30	30	31	32	33	34	35	36	37	37	37	37	37	36	36	37.3
23-Mar	35	34	33	32	32	30	29	30	30	31	32	33	34	36	38	38	39	40	40	40	40	40	40	39	40.1
24-Mar	39	39	39	40	40	40	41	41	42	42	42	42	42	43	43	44	44	44	44	44	43	42	41	39	44.0
25-Mar	37	35	33	32	31	30	29	28	28	28	29	29	30	31	33	34	36	38	39	40	40	40	40	40	40.3
26-Mar	39	38	37	36	36	35	34	33	33	34	34	35	35	37	38	40	40	41	42	42	42	41	41	40	41.7
27-Mar	40	40	41	41	42	42	43	43	44	44	43	43	44	44	45	46	47	47	48	48	48	48	47	47	48.5
28-Mar	47	46	46	45	45	44	43	42	42	41	41	42	43	43	45	46	47	48	48	48	48	47	47	46	48.4
29-Mar	45	45	45	44	44	44	43	42	41	41	40	39	39	39	39	41	43	44	46	48	49	50	51	50	51.0
30-Mar	49	49	48	48	48	47	46	44	44	43	43	43	43	43	44	45	45	46	46	46	45	45	45	44	49.4
31-Mar	44	43	42	41	41	41	40	39	39	38	39	40	40	41	42	43	44	44	45	44	44	44	43	43	44.5
	49.4	48.9	48.5	48.2	47.8	46.9	45.7	45.8	46.4	47.0	48.1	49.0	49.4	50.3	51.1	51.8	52.3	52.1	51.5	50.8	49.8	50.2	51.0	50.3	
	Diurnal Maximums																								

PASZA
Peace Airshed Zone Association

Hourly Averages

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

Beaverlodge - March 2010

Number of Exceedences: 1-hr: 0 24-hr: 0
Maximum Value: 50.7 $\mu g/m^3$ on Mar 2 14:00
Maximum Daily Average: 25.7 $\mu g/m^3$ on Mar 2

Minimum Value: 1 $\mu g/m^3$ on Mar 11 18:00
Maximum Diurnal Average: 12.9 $\mu g/m^3$ at hour 14
Monthly Average: 10.49 $\mu g/m^3$

Minimum Daily Average: 4.9 $\mu g/m^3$ on Mar 8
Minimum Diurnal Average: 9.0 $\mu g/m^3$ at hour 8
Percentiles: P_1 = 2.9 P_{10} = 5.5 Q_1 = 6.6 Median = 8.8 Q_3 = 12.7 P_{90} = 17.4 P_{99} = 40.9

Hours in Service:	744
Hours of Data:	739
Hours of Missing Data:	5
Hours of Calibration:	1
Percent Operational Time:	99.5

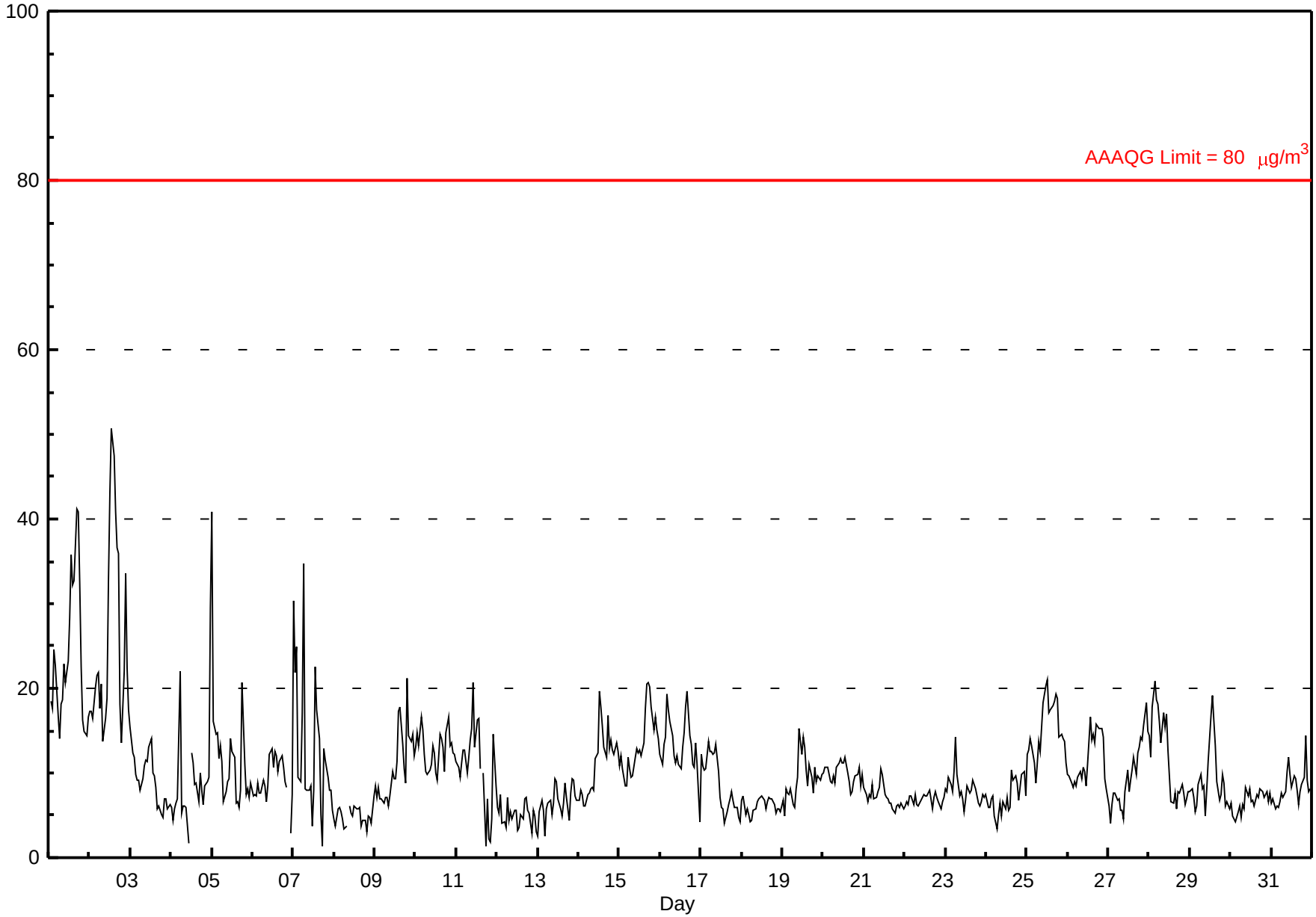
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	N	18	18	25	23	17	14	18	19	23	21	23	28	36	32	33	41	41	32	23	16	15	14	17	23.7	41.2
2-Mar	17	17	16	20	22	22	18	21	14	16	19	33	43	51	47	41	37	36	18	13	22	34	22	17	25.7	50.7
3-Mar	15	12	12	10	9	9	8	9	11	12	11	13	14	10	10	8	6	6	5	5	7	7	6	6	9.2	15.4
4-Mar	6	4	6	7	7	22	5	6	6	6	2	BD	12	11	9	9	7	10	8	6	8	9	10	29	8.9	29.4
5-Mar	41	16	15	15	12	13	11	7	8	9	9	14	13	12	6	7	6	8	21	11	7	8	7	9	11.8	40.9
6-Mar	7	7	7	9	8	8	9	8	7	9	12	13	11	13	12	10	11	12	11	9	8	BD	3	7	9.2	12.9
7-Mar	30	22	25	10	9	17	35	8	8	8	8	4	8	22	17	14	5	1	13	11	10	8	8	6	12.8	34.7
8-Mar	5	4	6	6	5	4	3	4	BD	6	5	5	6	6	6	6	4	4	4	3	5	5	4	7	4.9	7.3
9-Mar	8	7	8	7	7	6	7	7	6	7	10	9	9	11	17	18	13	10	9	21	14	14	15	12	10.6	21.1
10-Mar	13	15	13	17	15	12	10	10	10	11	13	12	10	9	15	14	13	10	15	17	13	14	12	12	12.7	16.6
11-Mar	11	11	10	11	13	13	10	12	14	15	21	13	16	17	10	C	10	1	7	2	2	5	15	8	10.7	20.6
12-Mar	6	5	7	4	4	3	7	4	5	5	6	6	3	4	5	4	7	7	6	5	3	6	5	3	5.0	7.4
13-Mar	3	5	7	6	2	6	6	7	5	6	9	9	7	6	5	6	9	7	4	8	9	9	7	7	6.5	9.3
14-Mar	7	8	8	6	6	7	8	8	8	8	12	12	20	18	16	13	12	17	13	14	13	12	14	13	11.3	19.7
15-Mar	11	12	10	8	8	12	11	9	10	12	13	12	13	12	13	18	20	21	20	18	15	17	15	14	13.5	20.6
16-Mar	12	11	13	14	19	18	16	14	12	11	12	11	11	13	15	18	20	14	13	11	11	14	11	4	13.3	19.7
17-Mar	12	11	10	10	14	13	13	12	12	13	10	7	6	6	4	5	6	7	8	7	6	6	5	4	8.7	13.8
18-Mar	7	7	5	6	5	4	4	6	6	7	7	7	7	7	6	7	7	7	7	6	5	6	6	5	6.1	7.4
19-Mar	7	5	8	8	7	8	6	6	8	9	15	12	14	13	10	8	11	9	8	11	9	10	9	10	9.3	15.2
20-Mar	10	11	11	11	9	9	10	9	11	11	12	11	11	12	10	9	7	8	9	10	10	11	9	10	9.9	11.8
21-Mar	8	7	7	7	7	9	7	7	8	8	10	10	7	7	7	6	6	6	5	6	6	6	6	6	7.2	10.5
22-Mar	6	7	6	7	7	6	7	6	6	6	7	7	7	7	8	8	6	7	8	7	7	6	7	7	6.9	7.9
23-Mar	8	8	10	9	8	10	14	10	7	8	7	5	7	9	8	8	9	9	8	7	6	7	7	7	8.1	14.3
24-Mar	7	6	6	7	7	5	3	5	6	5	7	6	7	6	6	10	9	10	9	7	8	10	10	7	7.1	10.3
25-Mar	12	13	14	13	11	9	11	14	13	18	19	20	21	17	17	18	19	19	19	14	15	14	14	11	15.3	21.0
26-Mar	10	10	9	8	9	9	10	10	9	11	10	8	11	17	14	15	14	16	15	15	15	14	9	8	11.5	16.6
27-Mar	6	4	6	8	8	7	7	6	6	5	8	10	8	9	10	12	10	12	13	14	14	16	18	15	9.6	18.3
28-Mar	14	12	18	21	19	18	16	13	17	15	17	13	10	7	6	8	6	8	8	9	8	6	7	8	11.8	20.9
29-Mar	8	8	7	5	6	9	10	8	8	5	8	11	17	19	16	13	9	7	8	10	9	6	7	6	9.2	19.2
30-Mar	6	5	5	4	5	6	5	6	6	8	7	8	7	7	6	8	7	8	8	8	7	8	7	8	6.7	8.2
31-Mar	6	7	6	6	6	7	8	7	8	10	12	10	8	10	9	8	6	8	9	9	14	9	8	8	8.3	14.4
	10.7	9.5	9.9	9.8	9.6	10.2	10.0	9.0	9.1	9.8	11.0	11.2	12.0	12.9	12.1	12.1	11.4	11.2	11.0	10.2	9.8	10.3	9.5	9.4	Diurnal Average	
	40.9	21.9	24.9	24.6	22.7	22.0	34.7	20.5	18.6	22.8	20.6	32.6	43.1	50.7	47.4	40.9	41.2	40.9	32.4	22.6	22.0	33.5	22.4	29.4	Diurnal Maximum	

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

Hourly Averages

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

Beaverlodge - March 2010



PASZA
Peace Airshed Zone Association

Hourly Maximums

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

Beaverlodge - March 2010

Maximum Value: 54.4 $\mu g/m^3$ on Mar 2 14:00

Maximum Daily Average: 30.1 $\mu g/m^3$ on Mar 2

Minimum Value: 3 $\mu g/m^3$ on Mar 8 09:00

Minimum Daily Average: 6.0 $\mu g/m^3$ on Mar 8

Maximum Diurnal Average: 14.3 $\mu g/m^3$ at hour 14

Minimum Diurnal Average: 10.1 $\mu g/m^3$ at hour 9

Monthly Average: 12.17 $\mu g/m^3$

Percentiles: P_1 = 4.6 P_{10} = 6.5 Q_1 = 7.6 Median = 9.9 Q_3 = 14.5 P_{90} = 20.0 P_{99} = 46.3

Hours in Service:	744
Hours of Data:	742
Hours of Missing Data:	2
Hours of Calibration:	1
Percent Operational Time:	99.9

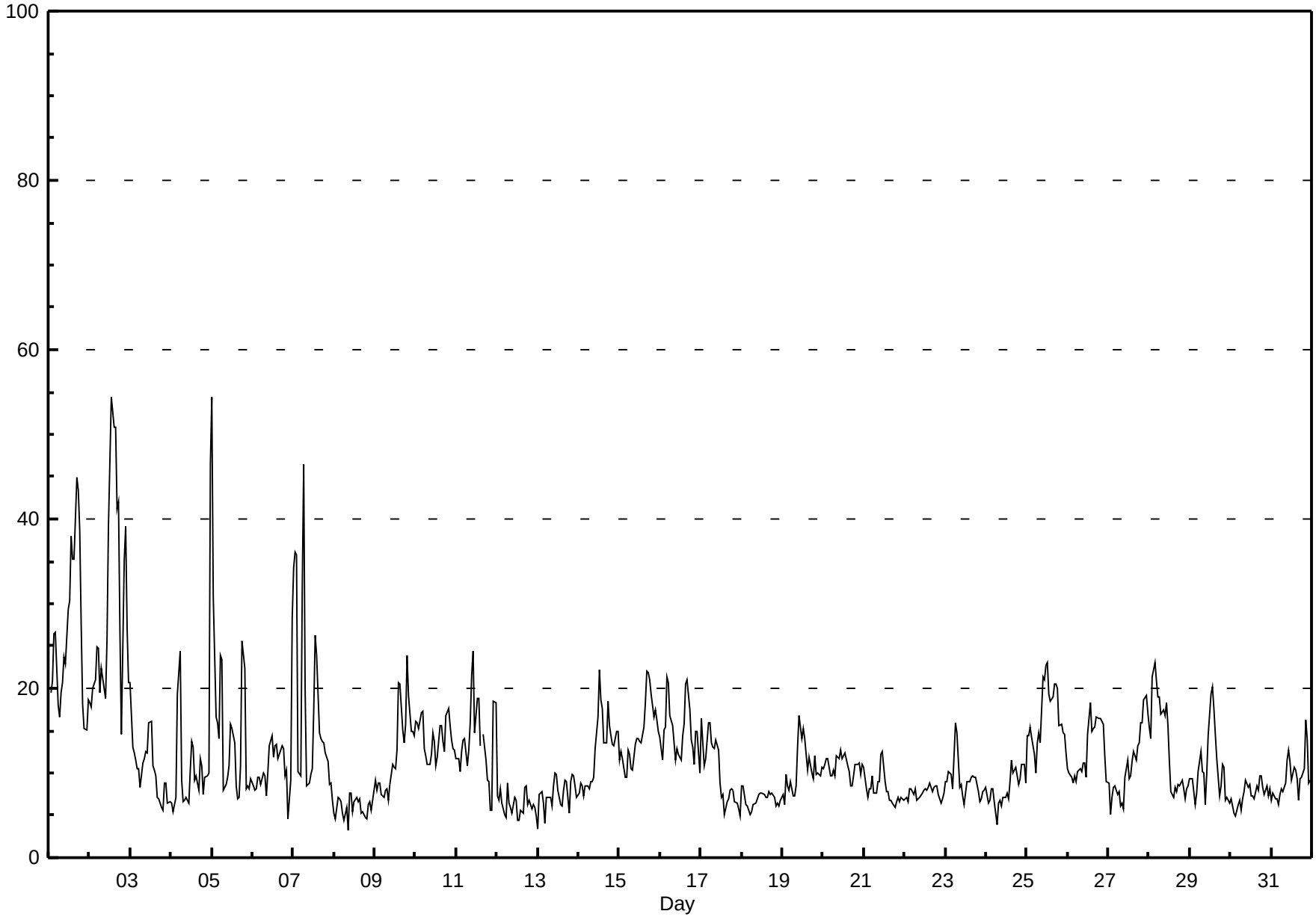
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	N	20	21	27	27	18	17	20	21	24	23	29	30	38	35	35	45	43	39	28	18	15	15	19	26.3	44.9
2-Mar	18	18	20	21	25	25	20	22	21	19	26	39	47	54	51	51	41	42	27	15	35	39	27	21	30.1	54.4
3-Mar	21	13	12	12	11	10	8	11	12	13	12	16	16	11	10	10	7	7	6	6	9	9	6	7	10.6	20.6
4-Mar	6	5	6	7	19	24	9	7	7	7	6	10	14	13	9	10	8	12	11	7	9	10	10	46	11.4	46.4
5-Mar	54	31	17	16	14	24	23	8	9	10	11	16	15	14	8	7	7	11	26	22	8	8	8	9	15.7	54.3
6-Mar	9	8	8	9	9	9	10	10	7	10	13	14	12	13	13	12	12	13	13	10	10	5	9	28	11.1	28.4
7-Mar	34	36	36	10	10	32	46	20	8	9	10	11	17	26	24	15	14	14	14	12	11	9	9	7	18.0	46.4
8-Mar	5	5	7	7	7	5	4	6	3	8	8	5	7	7	7	7	5	5	5	5	6	7	6	8	6.0	8.0
9-Mar	9	8	9	9	8	7	8	8	7	9	11	11	10	13	21	21	15	14	16	24	19	15	15	14	12.4	24.0
10-Mar	16	16	15	17	17	13	12	11	11	12	15	14	11	12	16	16	14	13	17	18	16	14	13	13	14.1	17.6
11-Mar	12	12	10	13	14	14	11	13	16	22	24	15	19	19	13	C	15	11	9	9	6	6	18	18	13.8	24.5
12-Mar	7	7	8	6	5	5	9	6	6	5	7	7	4	4	6	5	8	8	6	7	6	6	6	5	6.3	8.8
13-Mar	3	8	8	6	4	7	7	7	6	9	10	10	8	6	6	8	9	9	5	9	10	10	8	7	7.5	9.9
14-Mar	8	9	8	7	8	8	8	9	9	9	13	17	22	19	18	14	14	18	16	14	13	13	15	15	12.7	22.1
15-Mar	11	13	12	10	9	13	12	10	10	13	14	14	14	14	15	18	22	22	21	19	17	17	16	15	14.7	22.1
16-Mar	14	11	15	15	21	21	17	16	14	12	13	12	11	14	16	21	21	17	14	13	11	15	15	10	15.0	21.4
17-Mar	16	14	11	12	16	16	14	13	13	14	13	9	7	7	5	7	7	8	8	8	7	6	6	5	10.0	16.5
18-Mar	8	8	6	6	6	5	5	6	6	7	8	8	8	7	7	7	8	7	8	7	6	6	6	7	6.9	8.4
19-Mar	8	6	10	9	8	9	7	7	9	13	17	14	15	14	12	10	12	10	9	12	10	10	10	11	10.5	16.8
20-Mar	10	11	12	12	10	10	10	10	12	12	13	12	12	12	11	10	8	9	10	11	11	11	10	11	10.8	12.7
21-Mar	11	8	7	8	8	10	8	8	9	9	12	12	9	8	8	7	7	6	6	7	7	7	7	7	8.1	12.5
22-Mar	7	7	7	8	8	7	8	7	7	7	8	8	8	8	8	9	8	8	8	8	7	6	7	8	7.6	8.8
23-Mar	9	9	10	10	8	12	16	15	8	9	7	6	8	9	9	10	10	9	9	8	7	7	8	8	9.2	15.9
24-Mar	8	6	7	8	8	7	4	6	7	6	7	7	8	7	9	11	10	11	10	9	9	11	11	9	8.1	11.5
25-Mar	14	14	15	14	12	10	14	15	14	21	21	23	23	19	18	19	21	21	20	16	16	15	15	12	16.7	23.1
26-Mar	10	10	9	9	10	9	10	11	10	11	11	10	15	18	15	15	15	17	16	16	16	16	12	9	12.5	18.3
27-Mar	9	5	7	8	8	7	8	6	6	6	10	12	9	10	11	13	12	13	14	16	16	19	19	17	10.9	19.2
28-Mar	15	14	21	23	21	19	19	17	17	17	18	16	11	8	7	8	8	9	8	9	8	7	8	8	13.3	23.0
29-Mar	9	9	8	6	8	10	12	10	10	6	10	14	19	20	18	15	12	7	8	11	11	7	7	6	10.6	20.1
30-Mar	7	6	5	5	6	7	6	7	8	9	8	9	7	7	7	8	8	10	10	8	7	8	7	8	7.5	9.7
31-Mar	7	8	7	7	6	7	8	8	9	12	13	11	9	11	10	9	7	9	10	11	16	14	9	9	9.4	16.2
	12.6	11.4	11.5	10.9	11.3	12.3	12.0	10.6	10.1	11.2	12.6	13.2	13.8	14.3	13.7	13.5	13.2	13.4	12.8	12.1	11.6	11.2	10.9	12.2	Diurnal Average	
	54.3	36.2	35.7	26.5	26.6	31.8	46.4	22.4	21.2	23.7	25.8	39.2	46.7	54.4	50.9	50.8	44.9	43.3	38.7	27.7	35.1	39.2	27.1	46.4	Diurnal Maximum	

C - Calibration N - Not Valid

Hourly Maximums

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

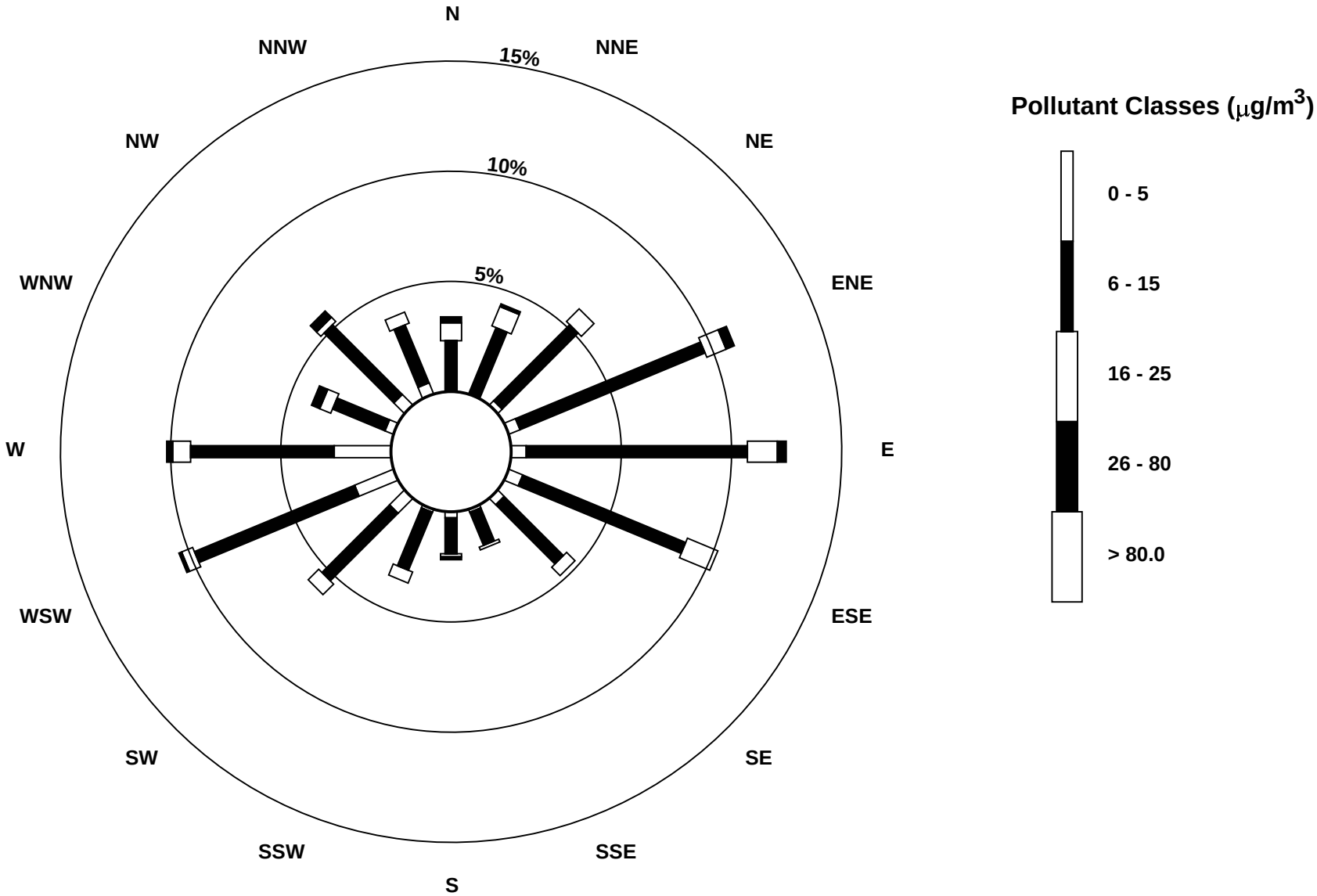
Beaverlodge - March 2010



Pollutant Rose

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

Beaverlodge - March 2010



PASZA
Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Beaverlodge - March 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 15.9 ^{o}C on Mar 6 16:00 Maximum Daily Average: 6.3 ^{o}C on Mar 27

Minimum Value: -11 ^{o}C on Mar 24 08:00 Minimum Daily Average: -8.3 ^{o}C on Mar 22
Maximum Diurnal Average: 4.9 ^{o}C at hour 15 Minimum Diurnal Average: -3.4 ^{o}C at hour 7
Monthly Average: 0.36 ^{o}C Percentiles: P_1 = -10.9 P_{10} = -8.0 Q_1 = -3.2 Median = 1.0 Q_3 = 4.4 P_{90} = 6.9 P_{99} = 11.3

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

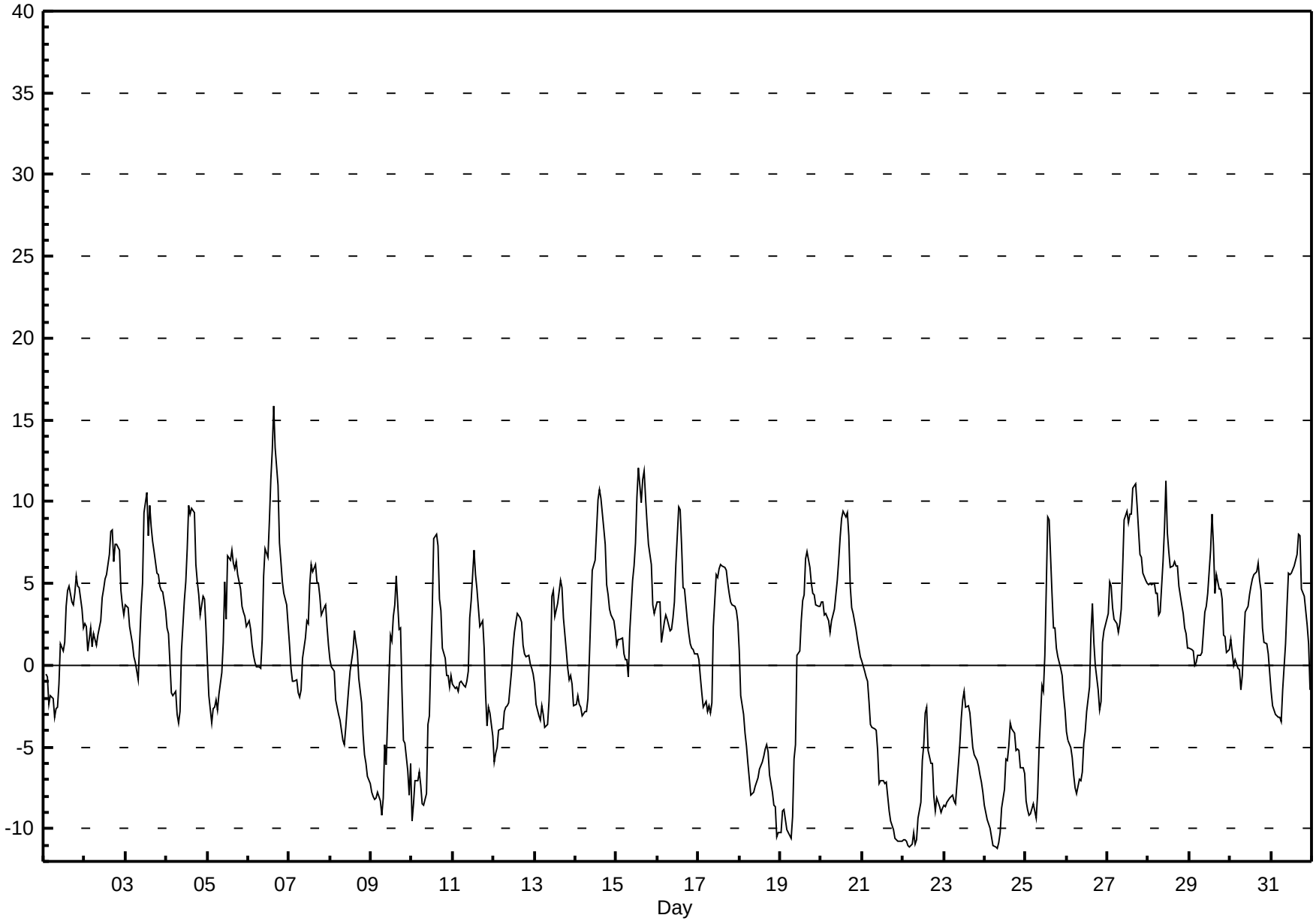
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	N	-1	-1	-2	-2	-2	-3	-3	-3	-1	1	1	1	4	5	5	4	4	4	5	5	5	3	2	1.4	5.4
2-Mar	3	2	1	2	1	2	2	1	2	3	4	5	5	5	7	8	8	6	7	7	7	5	4	3	4.2	8.3
3-Mar	4	4	2	2	1	1	0	-1	1	3	5	9	11	8	10	8	8	7	6	6	5	5	4	3	4.6	10.6
4-Mar	2	2	0	-2	-2	-2	-3	-4	-3	1	4	5	7	10	9	10	9	6	5	4	3	4	4	2	3.1	9.8
5-Mar	0	-2	-4	-3	-3	-2	-3	-2	0	1	5	3	7	6	7	6	6	6	6	5	4	3	3	2	2.2	7.0
6-Mar	3	2	1	1	0	0	0	0	2	5	7	7	9	11	13	16	13	11	7	6	5	4	4	2	5.4	15.9
7-Mar	1	0	-1	-1	-1	-2	-2	-2	0	2	3	3	5	6	6	6	5	5	4	3	4	4	2	1	2.1	6.2
8-Mar	0	0	0	-2	-3	-3	-3	-5	-5	-4	-3	-1	0	1	2	1	1	-1	-2	-4	-5	-6	-7	-7	-2.4	2.1
9-Mar	-8	-8	-8	-8	-8	-8	-9	-8	-5	-6	-1	2	1	3	4	5	2	2	-2	-5	-5	-6	-8	-6	-3.7	5.5
10-Mar	-10	-9	-7	-7	-7	-7	-8	-9	-8	-4	-3	0	3	8	8	7	4	3	1	0	-1	-1	-1	-1	-1.9	8.0
11-Mar	-1	-1	-1	-2	-1	-1	-1	-1	-1	0	3	4	7	6	5	3	2	3	1	-2	-4	-3	-3	-4	0.3	7.0
12-Mar	-6	-5	-5	-4	-4	-4	-3	-3	-2	-2	0	1	2	3	3	3	3	1	1	0	1	0	0	-1	-0.9	3.1
13-Mar	-1	-2	-3	-3	-2	-3	-4	-4	-2	0	4	5	3	4	4	5	5	3	1	0	-1	-1	-1	-2	0.1	5.2
14-Mar	-2	-2	-2	-3	-3	-3	-3	-2	0	3	6	6	8	10	11	10	8	7	5	4	3	3	3	2	3.0	10.8
15-Mar	1	2	2	2	1	0	0	-1	2	5	6	7	10	12	10	11	12	10	9	7	6	4	3	4	5.2	12.0
16-Mar	4	4	1	2	3	3	3	2	2	3	4	6	10	10	7	5	5	3	2	1	1	1	1	1	3.4	9.7
17-Mar	0	-1	-2	-3	-2	-3	-3	-3	-2	2	6	5	6	6	6	6	6	5	4	4	4	4	3	3	2.2	6.1
18-Mar	1	-2	-3	-4	-5	-6	-7	-8	-8	-7	-7	-7	-6	-6	-6	-5	-5	-5	-7	-8	-9	-9	-11	-10	-6.2	0.8
19-Mar	-10	-9	-9	-9	-10	-10	-11	-9	-6	-5	1	1	3	4	4	6	7	6	5	4	4	4	4	4	-1.3	6.9
20-Mar	4	4	3	3	3	2	3	3	3	5	6	8	9	9	9	9	8	5	4	3	2	2	1	0	4.5	9.4
21-Mar	0	0	-1	-1	-2	-4	-4	-4	-4	-5	-7	-7	-7	-7	-7	-8	-9	-10	-10	-11	-11	-11	-11	-11	-6.3	0.3
22-Mar	-11	-11	-11	-11	-11	-11	-10	-11	-11	-9	-8	-6	-5	-3	-3	-5	-6	-6	-8	-9	-8	-9	-9	-9	-8.3	-2.6
23-Mar	-9	-9	-8	-8	-8	-8	-8	-8	-6	-5	-3	-2	-2	-3	-3	-3	-4	-5	-5	-6	-6	-7	-7	-8	-5.9	-1.6
24-Mar	-9	-9	-10	-10	-10	-11	-11	-11	-11	-10	-9	-8	-6	-6	-5	-4	-4	-4	-5	-5	-5	-6	-6	-7	-7.6	-3.6
25-Mar	-8	-9	-9	-9	-8	-9	-9	-8	-5	-1	-2	1	5	9	9	4	2	2	1	1	0	-1	-2	-3	-2.1	9.0
26-Mar	-4	-5	-5	-6	-7	-7	-8	-7	-7	-7	-5	-4	-3	-1	2	4	1	0	-1	-3	-2	1	2	2	-2.9	3.8
27-Mar	3	5	5	4	3	3	2	3	3	6	9	9	9	9	9	11	11	10	8	7	7	6	5	5	6.3	11.1
28-Mar	5	5	5	5	4	4	3	3	6	8	11	8	7	6	6	6	6	6	5	4	3	2	2	1	5.1	11.3
29-Mar	1	1	1	0	0	1	1	1	2	3	4	4	7	9	7	4	6	5	5	4	2	2	1	1	2.9	9.3
30-Mar	2	1	0	0	0	0	-2	-1	1	3	4	4	5	5	6	6	6	5	5	2	1	1	1	0	2.3	6.2
31-Mar	-2	-3	-3	-3	-3	-3	-3	-2	1	4	6	6	6	6	6	7	8	8	5	4	3	2	1	-1	2.1	8.0
	-1.5	-1.8	-2.3	-2.6	-2.8	-3.0	-3.4	-3.3	-2.0	-0.3	1.6	2.4	3.8	4.7	4.9	4.9	4.2	3.2	1.9	1.0	0.4	0.1	-0.5	-1.0	Diurnal Average	
	4.9	5.1	4.9	5.0	4.4	4.4	3.1	3.2	6.3	8.3	11.3	9.4	10.6	12.0	13.1	15.9	13.3	11.0	8.7	7.4	7.0	5.6	5.2	5.1	Diurnal Maximum	

N - Not Valid

Hourly Averages

External Temperature (ET) - ^{o}C

Beaverlodge - March 2010



Hourly Averages

Relative Humidity (RH) - %

Beaverlodge - March 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 96.2 % on Mar 11 20:00 Maximum Daily Average: 77.8 % on Mar 21

Minimum Value: 19 % on Mar 20 14:00 Minimum Daily Average: 35.9 % on Mar 20
Maximum Diurnal Average: 70.3 % at hour 7 Minimum Diurnal Average: 43.6 % at hour 15
Monthly Average: 58.51 % Percentiles: P_1 = 23.6 P_{10} = 34.9 Q_1 = 45.8 Median = 58.1 Q_3 = 70.2 P_{90} = 83.6 P_{99} = 94.6

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

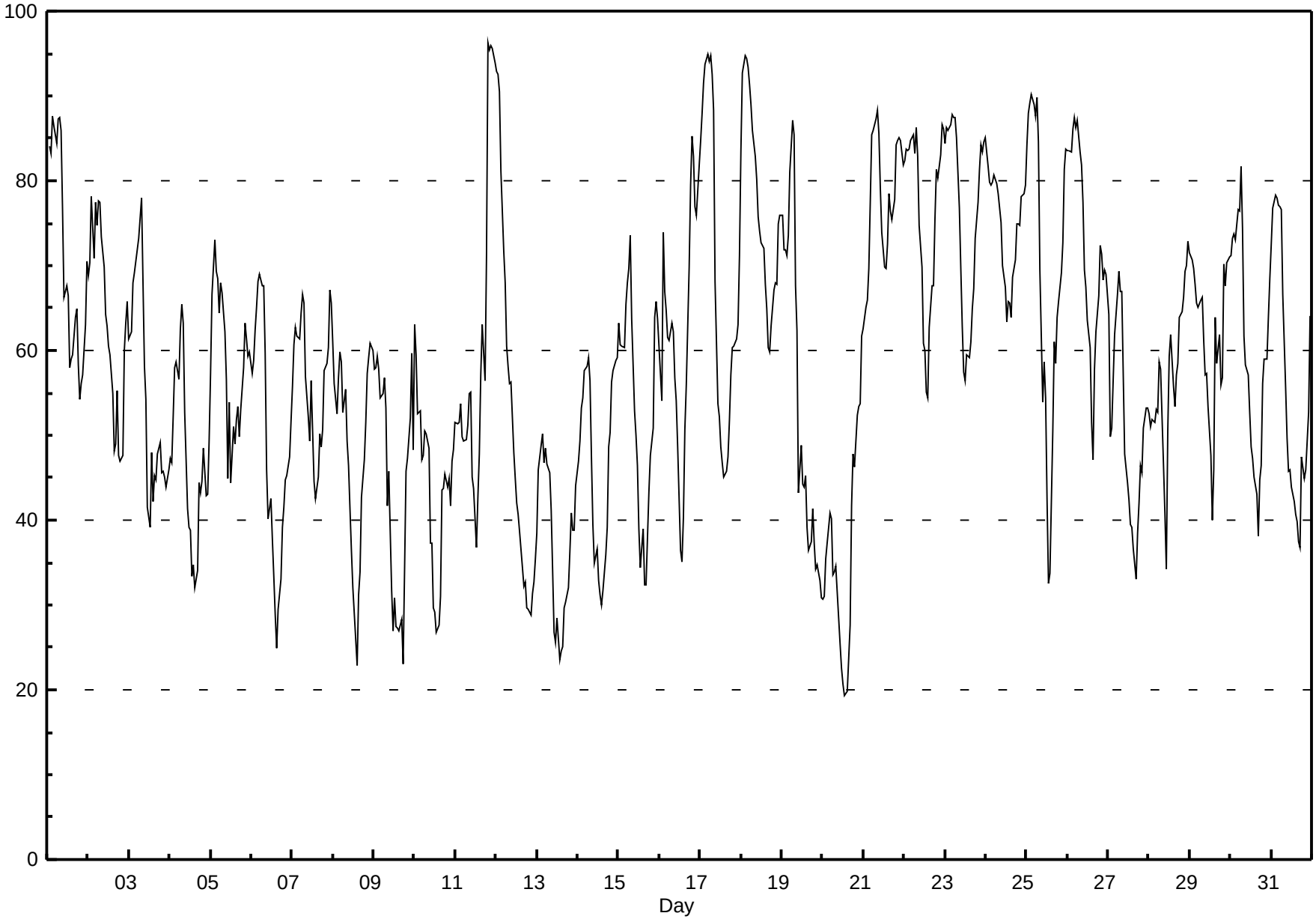
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	N	84	83	88	86	84	87	87	86	77	66	68	66	58	59	59	64	65	58	54	56	57	63	71	70.8	87.6
2-Mar	69	70	78	71	78	75	78	77	73	70	64	63	61	59	55	48	49	55	48	47	48	60	63	66	63.5	78.1
3-Mar	61	62	68	69	70	72	73	78	68	58	54	42	39	48	42	45	45	48	49	46	46	45	44	46	54.9	78.1
4-Mar	47	47	52	58	59	57	62	65	63	53	41	39	39	33	35	32	34	44	43	45	48	43	43	49	47.2	65.5
5-Mar	57	67	73	69	68	64	68	67	62	57	45	54	44	51	49	52	53	50	53	58	63	61	59	60	58.6	73.0
6-Mar	57	59	62	65	68	69	68	68	60	46	40	43	38	33	29	25	30	33	39	42	45	45	47	52	48.4	69.0
7-Mar	56	61	63	62	61	64	67	66	57	52	49	56	51	45	43	45	50	49	51	58	58	60	67	66	56.5	67.0
8-Mar	61	56	53	57	60	59	53	55	49	46	41	36	32	26	23	31	34	43	47	51	57	59	61	60	48.0	61.0
9-Mar	58	58	59	58	54	55	57	53	42	46	32	27	31	27	27	27	28	23	34	46	47	52	60	48	43.7	59.6
10-Mar	63	59	53	53	47	48	51	50	48	37	37	30	29	27	28	31	44	44	45	44	45	42	47	48	43.7	63.1
11-Mar	52	51	52	54	50	49	49	51	55	55	45	44	37	43	48	57	63	57	71	96	95	96	96	94	60.8	96.2
12-Mar	93	93	91	81	72	68	60	58	56	56	48	45	42	41	39	34	32	33	30	29	29	31	33	35	51.2	92.9
13-Mar	38	46	49	50	47	48	47	46	41	34	27	26	29	24	25	25	30	30	32	36	41	39	39	44	37.1	50.2
14-Mar	47	49	53	54	58	58	59	56	47	39	35	37	33	31	30	32	36	39	49	50	56	58	59	59	46.9	59.2
15-Mar	63	61	61	60	65	68	70	74	64	53	50	47	39	34	39	32	32	38	43	48	51	64	66	64	53.5	73.5
16-Mar	61	54	74	67	65	62	61	63	62	57	54	49	36	35	40	51	56	70	80	85	83	77	76	82	62.4	85.3
17-Mar	85	88	92	94	95	94	95	93	88	68	54	52	49	47	45	46	47	52	57	60	61	61	63	71	69.0	94.9
18-Mar	84	93	95	94	93	91	89	86	83	80	76	74	73	72	68	65	60	60	63	67	68	68	75	76	77.2	94.8
19-Mar	76	72	72	71	74	81	87	85	68	62	43	49	44	44	45	39	36	37	41	37	34	35	33	31	54.1	87.1
20-Mar	31	31	35	37	41	40	34	34	35	29	25	23	21	19	20	24	28	42	48	46	52	53	54	62	35.9	61.7
21-Mar	63	65	66	70	77	85	86	87	88	86	79	74	70	70	73	78	77	75	78	84	85	85	85	82	77.8	88.3
22-Mar	82	84	84	84	85	85	83	86	83	75	70	61	60	55	54	63	68	68	75	81	80	83	87	86	75.9	86.6
23-Mar	84	86	86	87	88	87	87	85	77	70	63	57	56	60	59	61	65	67	73	77	81	84	83	85	75.4	87.8
24-Mar	85	82	80	79	80	81	80	78	77	75	70	67	63	66	66	64	69	71	75	75	75	78	78	80	74.7	85.1
25-Mar	84	88	89	90	89	88	90	85	70	54	59	54	42	32	34	50	61	59	64	66	69	73	81	84	68.9	90.2
26-Mar	84	84	83	86	88	86	87	83	82	77	69	67	64	60	51	47	58	62	66	72	71	68	70	69	72.4	87.5
27-Mar	64	50	51	56	62	67	69	67	67	57	48	44	42	39	39	37	33	38	42	46	46	51	53	53	51.0	69.3
28-Mar	53	51	52	51	53	53	59	58	47	41	34	51	59	62	56	53	57	58	64	65	66	69	70	73	56.4	72.9
29-Mar	71	71	70	68	66	65	66	66	61	57	57	53	48	40	46	64	59	62	56	57	70	68	70	71	61.7	71.5
30-Mar	71	73	74	73	77	76	82	74	62	58	57	53	49	47	45	43	38	45	46	56	59	59	64	68	60.4	81.7
31-Mar	73	77	78	78	77	77	77	67	56	50	46	46	44	42	41	40	38	37	47	45	46	49	53	64	56.1	78.3
	65.8	66.8	68.7	68.9	69.4	69.6	70.3	69.4	63.7	57.3	51.0	49.4	46.1	44.2	43.6	45.2	47.5	50.1	53.8	57.1	59.1	60.5	62.6	64.4	Diurnal Average	
	92.9	92.7	94.8	94.3	94.9	94.1	94.7	92.6	88.3	85.6	79.2	74.0	72.7	72.1	72.5	78.5	76.5	75.4	79.5	96.2	95.4	96.0	95.7	94.0	Diurnal Maximum	

N - Not Valid

Hourly Averages

Relative Humidity (RH) - %

Beaverlodge - March 2010



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Beaverlodge - March 2010

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1 Spd	N	3	3	1	2	0	1	0	2	2	0	4	3	3	2	1	2	4	3	4	4	1	6	9	0.6	8.6
Dir	N	93	207	4	69	97	126	298	276	333	73	34	242	88	89	357	322	62	179	158	272	283	314	351	356	351
2 Spd	5	1	5	4	4	4	4	2	11	7	6	3	3	5	3	2	4	7	9	10	9	5	5	4	3.7	10.6
Dir	350	231	26	316	19	1	132	206	324	8	318	1	299	294	11	271	298	310	332	331	7	277	251	44	332	324
3 Spd	2	4	4	1	2	3	3	3	3	3	3	2	2	3	11	18	22	19	20	12	11	11	7	10	4.5	22.1
Dir	55	67	58	76	93	95	128	125	194	88	52	128	114	44	267	257	262	263	261	270	261	270	271	233	259	262
4 Spd	9	10	1	2	2	1	3	3	4	2	3	3	4	3	4	5	6	8	4	1	3	5	4	3	2.1	9.8
Dir	247	252	154	136	173	75	126	115	81	86	90	82	113	106	79	69	98	102	86	31	60	67	64	58	97	252
5 Spd	3	2	5	1	6	3	4	2	1	2	2	3	5	19	24	24	21	26	25	18	15	15	13	8	7.6	25.8
Dir	305	23	55	73	54	110	96	156	212	85	100	81	206	246	255	245	244	260	252	229	215	217	216	202	237	260
6 Spd	8	5	2	3	2	3	2	3	2	2	3	4	4	3	2	4	4	2	3	4	5	3	2	3	2.1	8.0
Dir	213	214	192	76	149	91	80	59	87	106	104	69	76	87	92	165	125	116	75	56	57	81	104	94	104	213
7 Spd	3	3	3	5	4	4	5	4	4	4	2	1	1	2	3	4	2	3	4	3	2	7	14	21	1.3	21.2
Dir	96	104	90	81	100	119	60	65	54	53	68	50	138	99	70	160	117	63	50	75	328	308	303	282	35	282
8 Spd	26	25	26	13	18	21	21	16	11	15	25	22	23	17	12	23	24	27	22	10	13	5	1	2	16.8	27.1
Dir	280	270	273	275	261	260	267	256	253	254	263	277	277	285	286	260	264	259	259	239	237	223	123	108	265	259
9 Spd	3	4	5	4	2	2	5	4	1	4	1	1	2	4	3	2	4	3	2	6	7	12	9	3	1.8	12.0
Dir	83	106	99	103	81	93	88	92	129	234	134	216	224	86	79	121	79	90	312	37	296	325	37	16	59	325
10 Spd	3	5	3	3	2	3	4	2	1	1	2	4	4	3	3	4	8	3	4	8	6	9	10	9	2.8	9.8
Dir	183	63	121	72	115	100	134	146	204	186	46	66	75	109	81	204	240	191	109	58	67	77	88	117	101	88
11 Spd	9	10	7	5	4	5	4	7	7	9	9	5	1	14	24	18	12	5	N	6	8	5	3	4	2.6	24.5
Dir	115	107	118	97	103	65	107	95	121	119	127	106	125	227	224	262	314	280	N	341	174	138	166	222	165	224
12 Spd	5	2	2	7	4	3	8	4	7	8	14	10	14	15	13	8	6	7	6	8	7	6	9	8	6.2	14.7
Dir	167	169	216	276	240	270	217	218	224	228	261	207	243	237	227	228	211	220	246	262	288	305	305	322	244	237
13 Spd	2	3	1	3	6	4	2	4	4	2	3	2	4	6	8	7	8	8	8	8	9	7	7	7	3.1	9.5
Dir	313	169	205	246	262	28	330	295	320	202	125	88	68	64	65	71	96	91	88	79	79	104	98	104	81	79
14 Spd	8	7	7	5	6	6	5	6	5	3	2	0	1	2	4	7	7	2	4	4	6	10	7	2	2.4	9.7
Dir	99	98	100	117	108	106	105	92	97	129	120	52	46	21	43	78	69	92	252	296	276	323	324	51	80	323
15 Spd	2	1	4	4	3	4	4	2	3	2	2	5	7	5	2	10	9	13	14	7	10	13	4	3	1.6	14.1
Dir	181	94	61	63	108	70	79	156	191	212	216	88	110	100	224	271	327	292	297	340	4	18	50	103	360	297
16 Spd	4	4	3	6	6	8	10	14	18	16	13	9	1	2	3	5	4	5	8	10	11	6	2	17	5.2	17.7
Dir	62	35	171	77	64	55	17	1	10	16	23	27	86	229	214	220	113	85	40	24	32	44	294	287	23	10
17 Spd	16	8	3	3	4	2	4	2	4	2	14	39	33	37	46	44	43	38	29	23	20	23	22	22	17.2	46.3
Dir	29	262	302	102	57	263	50	101	66	72	241	245	256	261	263	264	264	266	270	263	264	268	275	289	266	263
18 Spd	17	10	N	8	12	13	14	14	11	12	15	14	14	14	14	15	15	9	8	7	6	5	2	1	9.9	16.8
Dir	308	326	N	285	331	336	324	321	323	320	315	320	316	311	308	298	301	332	15	26	34	33	47	247	322	308
19 Spd	2	4	5	5	7	4	4	4	3	3	1	4	4	5	6	1	8	18	17	11	9	12	11	10	2.0	18.0
Dir	77	112	96	118	103	108	121	131	177	229	109	80	73	64	57	244	239	257	282	279	273	266	269	276	255	257
20 Spd	11	7	10	14	19	19	11	17	12	12	21	15	11	11	9	5	8	16	12	5	6	8	12	14	5.4	20.8
Dir	296	277	247	254	246	248	263	263	260	264	276	295	307	342	350	60	42	21	26	75	83	59	52	72	299	276
21 Spd	11	12	15	16	14	12	14	17	17	16	23	19	19	17	15	15	17	16	14	11	11	10	9	9	12.5	23.0
Dir	62	28	34	50	26	339	359	11	17	325	312	322	324	325	332	326	325	325	327	324	328	327	330	328	344	312
22 Spd	8	6	7	8	8	5	2	6	7	7	10	8	7	5	6	7	8	9	11	11	2	4	11	10	3.8	11.3
Dir	331	339	0	360	359	16	131	163	133	126	119	110	113	95	108	126	117	105	106	90	339	355	13	8	74	90

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Beaverlodge - March 2010

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
23 Spd	8	8	6	7	4	4	5	6	3	2	2	7	10	13	11	11	11	10	12	13	10	12	10	8	5.6	12.8
Dir	5	308	1	19	52	136	133	109	97	228	227	146	126	122	115	115	94	73	94	76	66	57	53	44	83	122
24 Spd	14	16	10	7	9	11	10	12	12	16	16	16	12	12	17	13	15	13	13	14	11	3	2	4	10.4	16.9
Dir	45	46	49	58	73	72	77	85	94	90	96	95	95	90	93	83	81	76	69	89	83	302	277	288	78	93
25 Spd	3	1	1	5	5	2	1	2	1	0	3	3	2	2	1	4	5	4	12	12	10	6	12	12	2.7	12.4
Dir	20	342	62	44	45	47	22	63	279	102	242	261	220	105	205	197	217	294	28	8	18	1	344	330	360	8
26 Spd	13	12	11	9	12	13	10	2	9	9	9	11	11	11	7	4	7	6	6	4	3	10	4	5	0.8	12.8
Dir	335	351	346	335	319	326	329	355	147	125	126	128	109	107	86	116	169	171	178	142	64	240	220	224	71	335
27 Spd	5	28	28	24	23	20	10	1	10	8	5	8	19	20	18	3	8	4	7	8	9	12	13	6	7.4	28.1
Dir	203	258	250	250	248	248	247	159	232	239	199	189	243	248	251	244	247	99	89	79	74	90	98	103	237	250
28 Spd	7	7	8	10	6	3	1	4	3	4	5	19	24	33	29	24	20	15	16	14	8	5	4	5	7.6	32.9
Dir	99	94	92	107	111	107	126	133	104	226	261	241	235	236	239	248	245	206	209	204	211	200	175	69	218	236
29 Spd	4	4	4	7	7	9	9	6	6	7	3	3	3	1	6	18	10	12	8	14	12	16	5	4	3.2	17.7
Dir	105	110	77	94	94	108	126	125	126	111	259	278	272	96	250	240	226	230	263	254	241	254	240	250	212	240
30 Spd	9	10	14	13	10	12	6	3	8	14	17	23	25	25	23	24	24	16	23	16	13	12	11	9	14.5	25.0
Dir	243	229	246	258	239	226	205	51	220	234	240	237	249	242	238	251	258	243	252	249	252	262	260	243	245	249
31 Spd	3	5	5	4	3	5	3	4	3	4	17	22	15	16	21	11	3	2	15	10	17	8	12	3	5.7	21.6
Dir	240	49	53	54	68	58	72	57	74	65	278	277	280	275	270	313	354	237	246	273	269	295	263	201	282	277
Spd	1.8	1.4	0.9	0.9	0.8	0.7	0.6	0.9	0.3	0.4	2.7	2.8	3.9	4.3	5.2	6.1	5.0	4.1	3.8	2.0	2.2	2.8	2.3	2.4	Diurnal Average	
Dir	343	316	341	4	348	335	41	56	61	255	269	259	256	256	257	254	262	265	276	303	298	301	313	307		
Spd	25.8	27.6	28.1	24.0	23.4	21.3	21.0	17.5	17.7	16.1	25.4	38.6	33.3	36.7	46.3	43.9	43.0	37.7	28.6	22.8	20.3	22.6	21.6	22.5	Diurnal Maximum	
Dir	280	258	250	250	248	260	267	263	10	325	263	245	256	261	263	264	264	266	270	263	264	268	275	289		

Maximum Speed Value: 46 km/h on Mar 17 15:00
Maximum Daily Speed Average: 17.2 km/h on Mar 17
Maximum Diurnal Speed Average: 6.1 km/h at hour 16

Minimum Speed Value: 0 km/h on Mar 25 10:00
Minimum Daily Speed Average: 0.6 km/h on Mar 1
Minimum Diurnal Speed Average: 0.3 km/h at hour 9

Monthly Average Velocity: 2.03 km/h 278.7 deg

Speed Percentiles: $P_1 = 0.8$ $P_{10} = 2.0$ $Q_1 = 3.3$ Median = 6.4 $Q_3 = 11.6$ $P_{90} = 17.5$ $P_{99} = 30.2$

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

Hours in Service:	744
Hours of Data:	741
Hours of Missing Data:	3
Percent Operational Time:	99.6

N - Not Valid

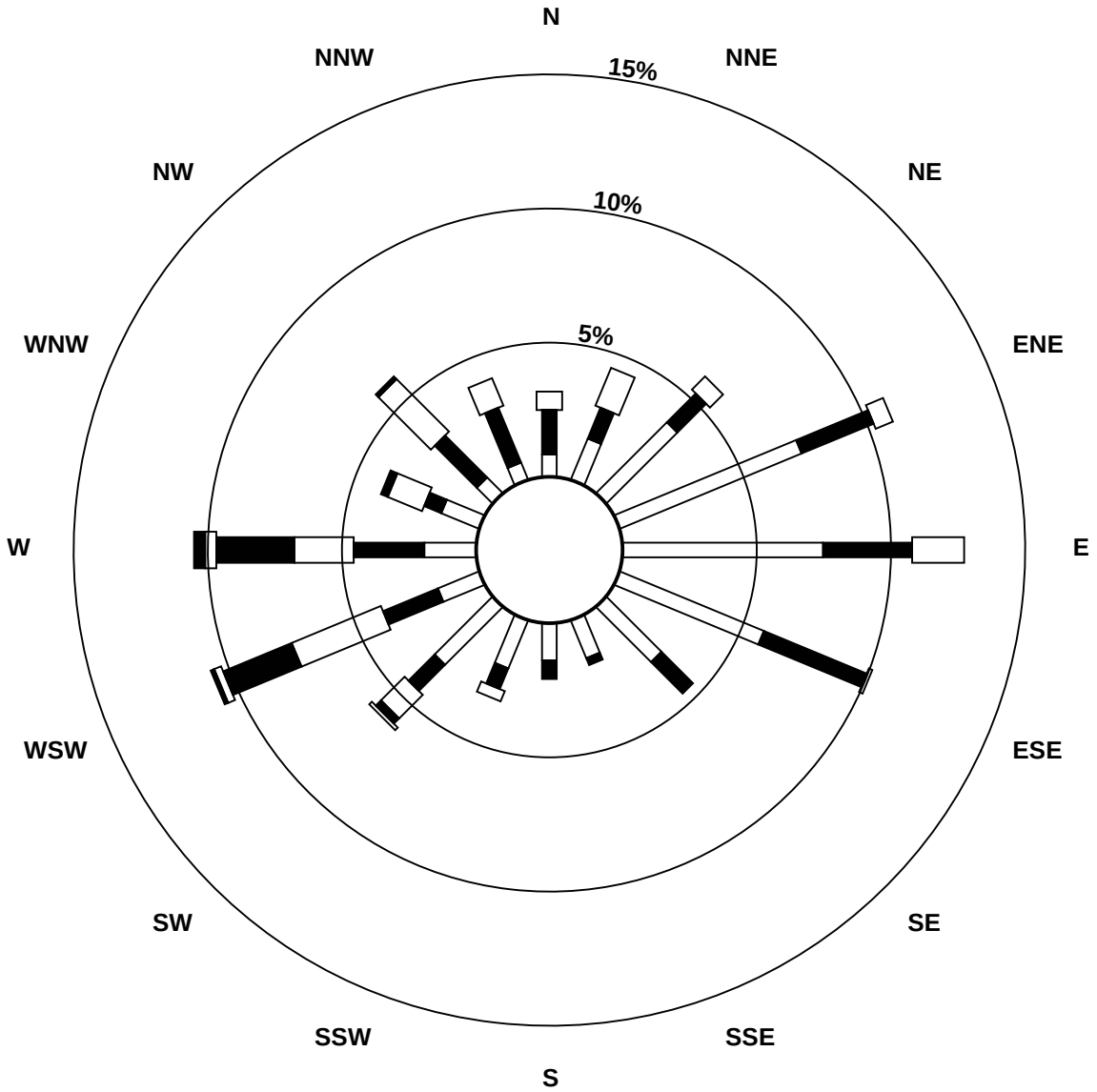
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	17	22	12	0	0	0	51
NorthEast	56	28	14	0	0	0	98
East	107	54	23	0	0	0	184
SouthEast	40	25	3	0	0	0	68
South	24	8	0	0	0	0	32
SouthWest	37	33	24	10	2	1	107
West	17	25	33	37	5	3	120
NorthWest	18	29	32	2	0	0	81
Total	316	224	141	49	7	4	741

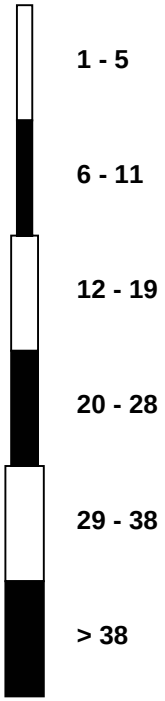
Wind Rose

Wind Speed (WS) (km/h)

Beaverlodge - March 2010



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Beaverlodge - March 2010

Maximum Speed: 46 km/h on Mar 17 15:00

Maximum Daily Speed Average: 20.5 km/h on Mar 17

Minimum Speed: 1 km/h on Mar 25 15:00

Minimum Daily Speed Average: 3.5 km/h on Mar 6

Maximum Diurnal Speed Average: 11.7 km/h at hour 15

Minimum Diurnal Speed Average: 6.4 km/h at hour 8

Monthly Average Speed: 8.95 km/h

Percentiles: $P_1 = 1.9$ $P_{10} = 2.9$ $Q_1 = 4.2$ Median = 6.8 $Q_3 = 11.9$ $P_{90} = 17.7$ $P_{99} = 30.6$

Hours in Service: 744

Hours of Data: 741

Hours of Missing Data: 3

Percent Operational Time: 99.6

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	N	3	3	5	4	4	4	3	5	4	3	5	4	3	3	2	4	4	4	4	5	4	7	11	4.3	11.2
2-Mar	7	3	7	6	6	5	5	7	13	9	8	6	6	6	5	3	6	10	9	11	10	7	6	5	6.8	12.7
3-Mar	3	4	5	3	5	6	4	4	3	3	5	2	3	5	11	18	22	19	20	12	11	11	7	11	8.2	22.2
4-Mar	9	10	4	2	2	3	4	3	4	3	3	4	4	4	4	5	6	8	5	2	3	5	4	3	4.4	10.0
5-Mar	4	6	6	2	6	4	4	3	2	3	2	3	5	20	24	24	21	26	25	18	15	16	13	8	10.8	25.9
6-Mar	8	5	4	3	2	3	2	3	3	3	4	5	4	4	2	4	4	3	3	4	5	3	3	3	3.5	8.2
7-Mar	4	4	4	5	5	5	5	4	4	5	2	2	2	3	5	5	4	5	4	4	4	7	14	21	5.3	21.4
8-Mar	26	26	26	13	18	21	21	16	11	15	25	22	23	18	12	23	24	27	22	12	13	5	2	2	17.7	27.3
9-Mar	4	5	5	4	3	2	5	4	2	4	2	2	2	4	3	2	4	3	2	8	9	14	9	4	4.3	13.9
10-Mar	5	5	3	4	2	3	4	2	2	2	4	4	4	3	3	6	9	6	6	8	6	9	10	10	4.9	10.0
11-Mar	9	10	7	5	4	5	5	8	7	10	9	6	5	14	25	23	12	6	N	7	8	6	5	6	8.8	24.5
12-Mar	5	5	4	7	6	6	9	6	7	9	14	10	14	15	13	8	6	7	6	9	7	6	9	8	8.1	14.7
13-Mar	3	3	2	5	7	4	3	5	5	3	3	3	4	6	8	7	8	8	8	8	10	7	8	7	5.7	9.6
14-Mar	8	7	7	6	7	7	5	6	5	3	3	4	3	2	5	7	7	4	5	5	7	10	9	4	5.6	9.8
15-Mar	3	4	4	4	3	4	5	2	4	2	3	6	7	5	5	10	9	13	14	7	11	13	5	3	6.1	14.2
16-Mar	5	4	4	6	6	8	11	15	18	16	13	9	2	2	3	5	4	6	9	10	11	9	5	22	8.4	21.9
17-Mar	16	10	5	4	5	4	4	4	4	3	15	39	34	37	46	44	43	38	29	23	20	23	22	23	20.5	46.4
18-Mar	18	13	N	11	12	13	15	14	11	12	15	14	14	14	14	15	15	9	8	7	6	5	3	2	11.4	17.7
19-Mar	3	4	5	6	7	4	4	4	4	3	2	4	4	5	6	3	9	18	17	11	9	12	11	10	6.9	18.1
20-Mar	11	8	10	14	19	19	11	18	12	13	21	15	12	11	9	7	9	16	12	6	6	8	12	14	12.1	21.0
21-Mar	12	12	15	16	15	12	14	17	17	17	23	19	19	17	15	16	17	16	15	11	11	10	9	9	14.8	23.1
22-Mar	8	6	7	8	8	5	3	7	7	7	10	8	7	5	6	7	8	9	11	11	3	5	11	10	7.3	11.5
23-Mar	8	8	6	7	5	4	6	6	3	2	3	7	10	13	11	11	12	10	12	13	10	12	10	9	8.2	12.9
24-Mar	14	16	10	8	9	11	10	12	13	16	16	16	12	13	17	13	15	13	13	14	11	6	2	5	11.8	17.0
25-Mar	5	3	2	5	5	3	3	2	2	2	3	4	2	2	1	5	5	4	12	12	10	7	12	12	5.2	12.5
26-Mar	13	13	11	9	12	13	10	3	9	10	10	11	11	11	7	5	8	6	6	4	4	11	6	6	8.7	12.9
27-Mar	6	28	28	24	24	20	10	2	10	8	6	9	19	20	18	6	9	5	8	8	9	12	13	6	12.8	28.4
28-Mar	7	7	8	10	7	4	5	5	4	6	7	20	24	33	29	25	20	15	16	14	8	6	4	5	12.1	33.0
29-Mar	5	6	4	8	7	9	9	8	7	9	4	3	4	3	6	18	10	12	8	15	13	16	5	5	8.1	17.8
30-Mar	9	11	14	14	10	12	6	3	9	14	17	23	25	25	23	24	24	16	24	16	13	12	11	9	15.1	25.5
31-Mar	4	5	5	4	3	5	3	4	3	4	18	22	15	16	21	12	5	6	15	10	17	8	12	3	9.3	21.7
	8.0	8.2	7.5	7.3	7.5	7.4	6.7	6.4	6.7	7.0	8.7	9.8	9.8	11.0	11.7	11.7	11.6	11.3	11.6	9.8	9.2	9.2	8.4	8.2	Diurnal Average	
	26.0	27.8	28.4	24.1	23.6	21.3	21.0	17.6	17.7	17.4	25.4	38.7	33.6	36.8	46.4	43.9	43.1	37.8	28.8	22.9	20.3	22.6	21.6	22.6	Diurnal Maximum	

N - Not Valid

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

Hourly Standard Deviations

Wind Direction (WD) - deg

Beaverlodge - March 2010

Maximum Value: 94.5 deg on Mar 16 23:00

Minimum Value: 2.5 deg on Mar 30 12:00

Percentiles: P_1 = 3.1 P_{10} = 5.4 Q_1 = 7.7 Median = 16.6 Q_3 = 40.8 P_{90} = 64.8 P_{99} = 89.8

Hours in Service:	744
Hours of Data:	741
Hours of Missing Data:	3
Hours of Calibration:	0
Percent Operational Time:	99.6

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	N	30	41	91	70	86	73	83	81	59	90	42	48	45	69	70	77	42	27	29	33	88	65	40	91.2
2-Mar	53	70	38	44	54	60	56	79	34	28	55	69	64	59	60	53	55	47	9	8	30	45	54	57	79.4
3-Mar	78	10	53	67	75	52	52	37	36	26	63	39	46	50	17	5	6	8	4	11	11	18	12	10	77.9
4-Mar	16	12	74	44	44	88	43	24	17	47	30	39	23	24	19	10	12	10	53	70	45	7	9	30	87.8
5-Mar	51	72	51	83	27	29	26	36	79	43	45	33	24	12	5	4	3	5	6	5	4	7	7	7	82.7
6-Mar	13	15	77	32	22	36	31	21	32	23	32	15	13	19	25	8	29	29	12	5	7	12	28	21	77.2
7-Mar	20	40	46	17	32	26	17	20	12	23	43	64	69	54	49	35	60	52	20	51	76	26	8	6	76.3
8-Mar	6	7	4	6	4	3	5	6	10	6	4	7	5	6	16	12	9	8	4	30	9	20	59	44	58.8
9-Mar	27	16	11	19	33	37	12	6	44	12	52	52	44	26	14	32	14	30	47	51	75	38	6	50	74.8
10-Mar	65	18	20	14	43	23	18	35	67	69	85	17	19	23	29	44	19	61	55	5	27	9	17	7	85.3
11-Mar	11	10	12	17	38	13	28	17	9	35	7	26	76	7	4	38	12	25	N	41	20	19	57	79	79.4
12-Mar	39	81	72	22	56	79	16	70	24	18	12	14	7	5	3	10	11	9	6	16	6	11	6	7	80.7
13-Mar	66	25	70	90	62	11	65	15	41	42	28	35	6	5	5	12	5	10	7	9	7	17	12	6	90.1
14-Mar	6	7	9	27	20	15	9	9	17	41	72	91	77	53	25	15	8	78	45	68	35	11	50	68	91.0
15-Mar	58	78	24	27	30	11	33	56	23	37	60	19	18	37	92	25	14	7	7	14	19	13	34	30	92.3
16-Mar	21	28	43	9	11	6	15	8	5	4	7	7	76	49	16	10	32	38	14	7	9	61	95	48	94.5
17-Mar	9	44	68	42	56	73	14	69	39	42	60	4	7	4	4	3	3	3	7	4	3	3	4	5	73.4
18-Mar	18	42	N	47	9	7	7	5	7	7	7	7	6	5	8	6	8	21	7	9	6	8	78	62	78.0
19-Mar	55	33	23	22	15	13	14	14	20	12	75	33	16	15	10	92	33	7	10	7	5	6	8	6	91.9
20-Mar	11	28	9	4	3	6	13	8	9	8	8	8	20	13	12	48	23	3	9	27	15	6	8	15	48.0
21-Mar	21	7	11	6	24	8	9	5	5	24	6	6	7	7	10	7	6	5	6	6	7	7	7	7	24.2
22-Mar	9	17	8	7	7	16	54	17	6	8	5	7	7	17	17	9	8	5	3	9	47	74	5	8	74.4
23-Mar	13	10	14	6	33	14	20	13	23	39	63	13	10	6	3	6	15	18	5	6	13	5	9	11	62.6
24-Mar	6	6	9	27	20	12	6	11	8	5	6	7	9	10	4	7	7	7	4	7	6	76	37	52	76.2
25-Mar	48	63	69	12	9	55	74	27	72	89	39	58	42	33	79	43	24	19	16	5	5	18	6	12	89.5
26-Mar	8	8	8	9	5	4	7	49	9	11	7	10	5	6	17	24	21	20	14	32	69	53	56	34	69.0
27-Mar	22	13	9	3	8	3	33	76	18	19	39	31	6	9	8	70	40	43	21	14	5	7	5	17	76.2
28-Mar	7	15	19	9	26	60	85	38	47	60	60	9	5	4	3	15	12	15	4	5	21	38	22	13	84.8
29-Mar	32	37	43	22	15	16	19	40	30	44	53	38	68	76	29	5	11	4	16	21	14	10	30	67	75.5
30-Mar	8	15	8	10	10	9	9	50	20	12	4	2	11	9	3	9	6	7	11	4	7	4	8	9	49.8
31-Mar	80	10	10	24	55	13	32	15	15	44	57	6	8	9	9	24	83	83	5	7	6	19	23	30	83.4
	79.7	80.7	77.2	91.2	74.6	87.8	84.8	83.4	81.1	89.5	90.5	91.0	77.0	75.5	92.3	91.9	82.9	83.4	55.1	69.7	76.3	87.9	94.5	79.4	

N - Not Valid

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

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Portable-Kinuso - March 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 4.5 ppb on Mar 2 13:00 Maximum Daily Average: 1.2 ppb on Mar 2

Minimum Value: 0 ppb on Mar 18 06:00 Minimum Daily Average: 0.0 ppb on Mar 19
Maximum Diurnal Average: 0.6 ppb at hour 11 Minimum Diurnal Average: 0.3 ppb at hour 8
Monthly Average: 0.40 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.2$ Median = 0.3 $Q_3 = 0.4$ $P_{90} = 0.8$ $P_{99} = 3.0$

Hours in Service:	744
Hours of Data:	657
Hours of Missing Data:	87
Hours of Calibration:	32
Percent Operational Time:	92.6

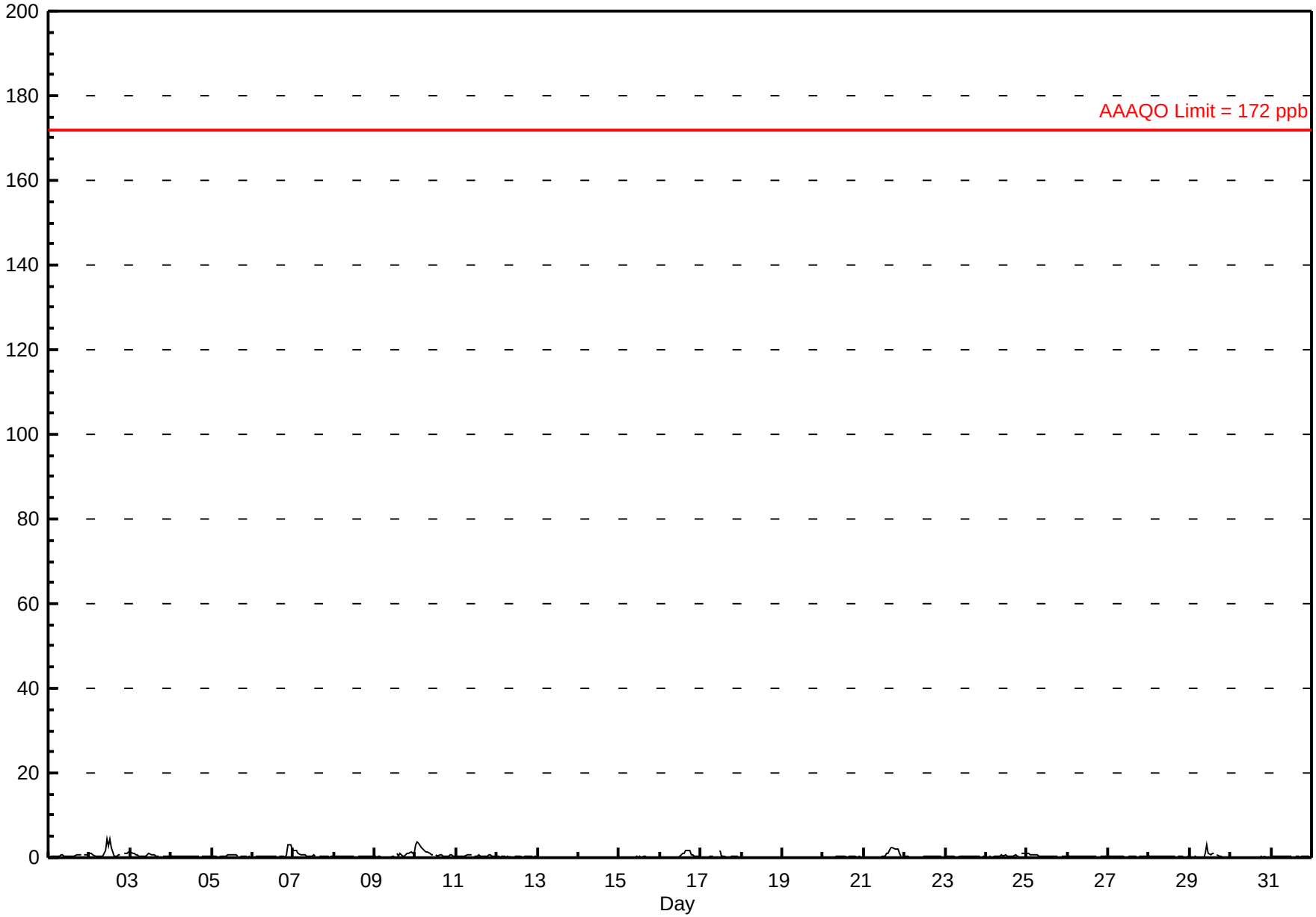
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	1	1	A	1	1	1	0.5	0.8
2-Mar	1	1	1	0	0	0	0	0	0	2	4	3	4	2	0	0	0	1	1	A	1	1	1	1	1.2	4.5
3-Mar	1	1	1	1	1	0	0	0	0	0	1	1	1	1	1	0	0	0	A	0	0	0	0	0	0.6	1.3
4-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	0.3	0.4
5-Mar	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	A	0	0	0	0	0	0	0	0.4	0.8
6-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	3	3	2	0.6	3.1
7-Mar	2	2	2	1	1	1	1	1	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0.6	1.8
8-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	0.3	0.4
9-Mar	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	1	0	0	1	1	1	1	1	1	0.5	1.3
10-Mar	3	4	3	3	2	2	1	1	1	1	1	A	1	0	1	1	0	0	0	0	1	1	0	0	1.2	3.8
11-Mar	0	0	0	0	0	0	1	1	1	1	A	0	0	1	0	0	0	0	0	1	1	0	0	0	0.4	0.8
12-Mar	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
13-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
14-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
15-Mar	D	D	D	D	D	D	D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	--	0.2
16-Mar	0	0	0	0	0	A	0	0	0	0	0	0	1	1	1	2	2	2	1	1	0	0	0	0	0.5	1.8
17-Mar	0	0	0	A	0	0	0	0	C	C	C	2	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.7
18-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	0.0	0.1
19-Mar	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
20-Mar	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
21-Mar	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2	2	2	2	2	1	0	A	0.8	2.3
22-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.3
23-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	0.2	0.3
24-Mar	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	A	1	1	1	0.4	1.1
25-Mar	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.5	0.9
26-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	0.2	0.3
27-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	0.3
28-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.4
29-Mar	0	0	0	0	0	0	0	0	0	1	3	1	1	1	1	A	1	0	0	0	0	0	0	0	0.5	3.1
30-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.2
31-Mar	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.3	0.5
Diurnal Average	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4		
Diurnal Maximum	3.0	3.8	3.4	2.5	1.9	1.6	1.3	1.2	1.0	1.8	4.4	2.8	4.5	2.4	1.2	1.7	2.3	2.2	2.0	2.2	2.1	3.1	3.0	2.2		

C - Calibration D - DAS Failure A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 57 ppb

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Portable-Kinuso - March 2010



Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Portable-Kinuso - March 2010

Maximum Value: 6.5 ppb on Mar 2 13:00

Maximum Daily Average: 1.9 ppb on Mar 2

Minimum Value: 0 ppb on Mar 20 01:00

Minimum Daily Average: 0.2 ppb on Mar 19

Maximum Diurnal Average: 0.9 ppb at hour 10

Minimum Diurnal Average: 0.5 ppb at hour 9

Monthly Average: 0.66 ppb

Percentiles: $P_1 = 0.1$ $P_{10} = 0.2$ $Q_1 = 0.3$ Median = 0.4 $Q_3 = 0.8$ $P_{90} = 1.3$ $P_{99} = 3.9$

Hours in Service:	744
Hours of Data:	657
Hours of Missing Data:	87
Hours of Calibration:	32
Percent Operational Time:	92.6

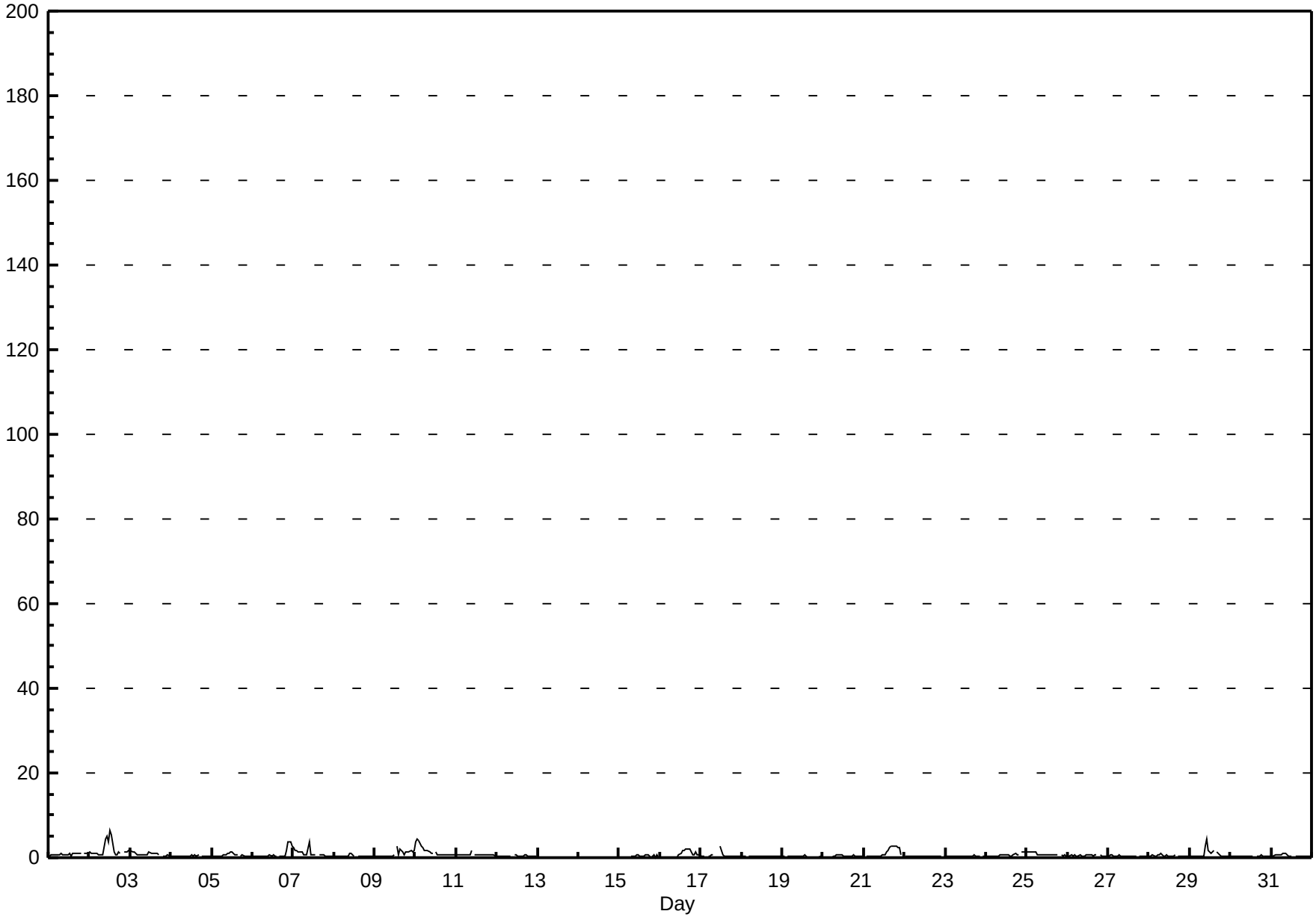
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	A	1	1	1	0.8	1.1
2-Mar	1	1	1	1	1	1	1	1	1	4	5	4	6	5	1	1	1	1	1	A	1	1	1	2	1.9	6.5
3-Mar	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0	0	0	1	0	0.9	1.7
4-Mar	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	A	0	0	0	0	0	0	0.4	0.7
5-Mar	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	A	0	1	0	0	0	0	0	0.6	1.3
6-Mar	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	A	0	0	0	0	2	4	4	3	0.8	3.8
7-Mar	2	2	2	1	1	1	1	1	1	4	1	1	1	1	A	1	1	1	1	0	0	0	0	0	1.0	3.9
8-Mar	0	0	0	0	0	0	0	0	0	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0.4	0.9
9-Mar	0	0	0	0	0	0	0	0	0	0	0	1	A	3	1	2	1	1	1	1	1	2	1	2	0.9	2.8
10-Mar	4	4	4	3	2	2	2	2	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1.5	4.3
11-Mar	1	1	1	1	1	1	1	1	1	2	A	1	1	1	1	1	1	1	1	1	1	1	1	0	0.8	1.7
12-Mar	0	0	0	0	0	0	0	0	0	A	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0.4	0.7
13-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
14-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
15-Mar	D	D	D	D	D	D	D	0	0	0	1	1	0	0	0	1	1	1	0	0	1	0	1	0	--	0.7
16-Mar	0	0	0	0	0	A	0	0	0	0	0	1	1	2	2	2	2	2	1	1	1	1	1	1	0.8	2.2
17-Mar	0	0	0	A	0	0	1	1	C	C	C	3	2	1	0	0	0	0	0	0	0	0	0	0	0.5	2.7
18-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	0.2
19-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	0.2	0.5
20-Mar	0	A	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0.3	0.7
21-Mar	A	0	0	0	0	0	0	0	0	0	0	1	1	1	2	2	3	3	3	3	2	2	1	A	1.2	2.7
22-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.3	0.5
23-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	A	0	0	0.3	0.6
24-Mar	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	1	1	1	1	A	1	1	1	0.7	1.3
25-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	1	0	0.9	1.3
26-Mar	0	0	1	0	1	0	0	1	0	0	0	1	1	1	1	0	1	1	A	1	0	0	0	0	0.5	0.8
27-Mar	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.4	0.7
28-Mar	0	0	1	0	0	1	1	1	0	0	1	1	0	0	0	1	A	0	0	0	0	0	0	0	0.4	0.9
29-Mar	0	0	0	0	0	0	0	0	0	3	5	2	1	1	2	A	1	1	0	0	0	0	0	0	0.8	4.5
30-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0.2	0.7
31-Mar	0	0	1	1	1	1	1	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.5	0.9
	0.6	0.6	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.9	0.9	0.8	0.8	0.9	0.6	0.7	0.7	0.7	0.7	0.6	0.6	0.7	0.6	0.6	Diurnal Average	
	3.8	4.3	4.0	2.8	2.3	1.8	1.8	1.6	1.3	4.3	5.1	3.8	6.5	5.3	1.7	2.2	2.7	2.7	2.7	2.7	2.4	3.8	3.8	2.8	Diurnal Maximum	

C - Calibration D - DAS Failure A - Automated Daily Zero Span

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

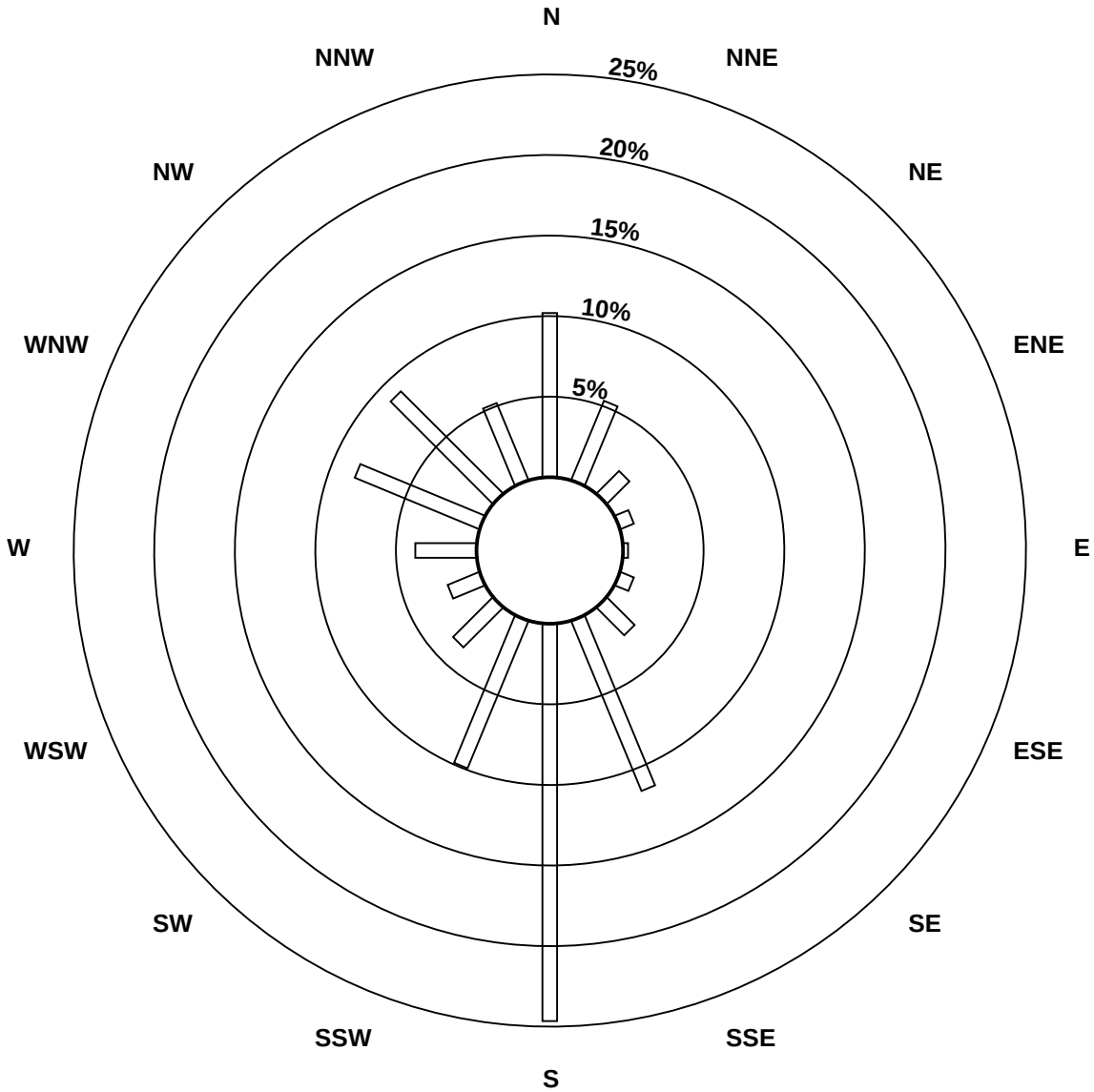
Portable-Kinuso - March 2010



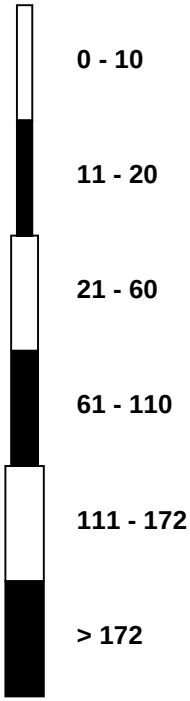
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Portable-Kinuso - March 2010



Pollutant Classes (ppb)



PASZA
Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Portable-Kinuso - March 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 0.6 ppb on Mar 15 13:00 Maximum Daily Average: 0.6 ppb on Mar 23

Minimum Value: 0 ppb on Mar 4 06:00 Minimum Daily Average: 0.3 ppb on Mar 7
Maximum Diurnal Average: 0.5 ppb at hour 14 Minimum Diurnal Average: 0.4 ppb at hour 3
Monthly Average: 0.45 ppb Percentiles: $P_1 = 0.3$ $P_{10} = 0.3$ $Q_1 = 0.4$ Median = 0.5 $Q_3 = 0.5$ $P_{90} = 0.6$ $P_{99} = 0.6$

Hours in Service:	744
Hours of Data:	657
Hours of Missing Data:	87
Hours of Calibration:	32
Percent Operational Time:	92.6

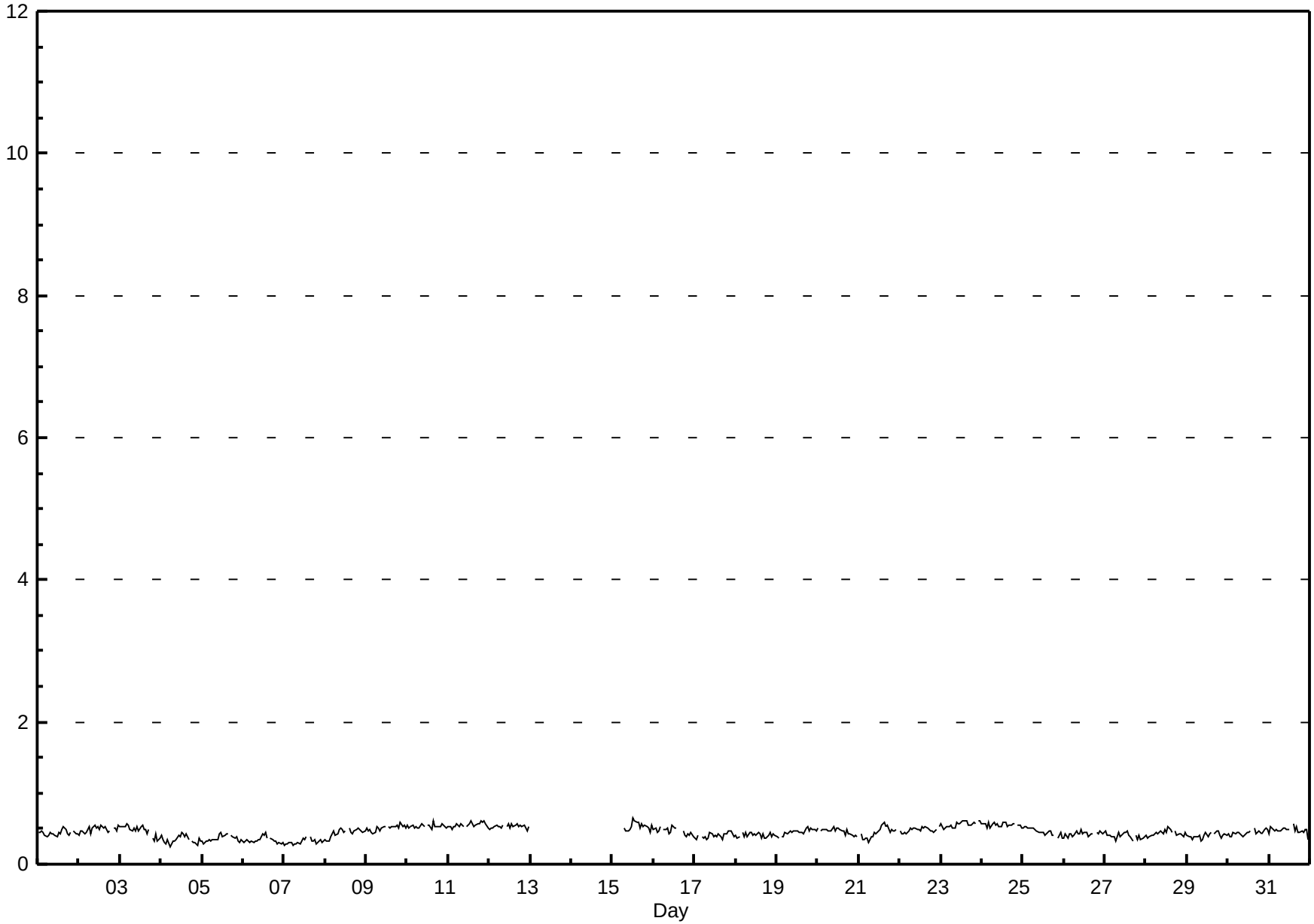
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	A	0	0	0	0.4	0.5
2-Mar	0	0	0	0	0	0	1	0	1	1	1	1	0	1	1	1	0	0	0	A	1	1	0	1	0.5	0.6
3-Mar	1	1	1	1	1	1	0	0	1	0	1	0	1	1	0	0	0	0	A	0	0	0	0	0	0.5	0.6
4-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	0.3	0.4
5-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.4	0.4
6-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	0.4
7-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	0.4
8-Mar	0	0	0	0	0	0	0	0	0	1	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0.4	0.5
9-Mar	1	0	0	0	0	0	1	1	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.5	0.6
10-Mar	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	1	1	1	1	1	1	1	1	1	0.5	0.6
11-Mar	1	1	0	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.6
12-Mar	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0.5	0.6
13-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
14-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
15-Mar	D	D	D	D	D	D	D	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	1	--	0.6
16-Mar	0	1	0	0	1	A	0	0	1	0	0	1	1	1	C	C	C	0	0	0	0	0	0	0	0.5	0.5
17-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	0.4	0.5
18-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	0.4	0.5
19-Mar	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0.4	0.5
20-Mar	1	A	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.5	0.5
21-Mar	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	A	0.4	0.6
22-Mar	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	1	1	0	0	0	0	0	A	1	0.5	0.5
23-Mar	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.6	0.6
24-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	0.6	0.6
25-Mar	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.5	0.5
26-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	0.4	0.5
27-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	0.4	0.5
28-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0	0.4	0.5
29-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	0.4	0.5
30-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	1	0	0.4	0.5
31-Mar	0	1	0	0	0	0	0	0	1	1	0	0	0	A	1	0	1	0	0	0	0	0	0	0	0.5	0.6
	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	Diurnal Average	
	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	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

Portable-Kinuso - March 2010



Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Portable-Kinuso - March 2010

Maximum Value: 1.1 ppb on Mar 9 01:00

Maximum Daily Average: 0.9 ppb on Mar 23

Minimum Value: 1 ppb on Mar 7 06:00

Minimum Daily Average: 0.6 ppb on Mar 7

Maximum Diurnal Average: 0.8 ppb at hour 23

Minimum Diurnal Average: 0.7 ppb at hour 6

Monthly Average: 0.77 ppb

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

Hours in Service:	744
Hours of Data:	657
Hours of Missing Data:	87
Hours of Calibration:	32
Percent Operational Time:	92.6

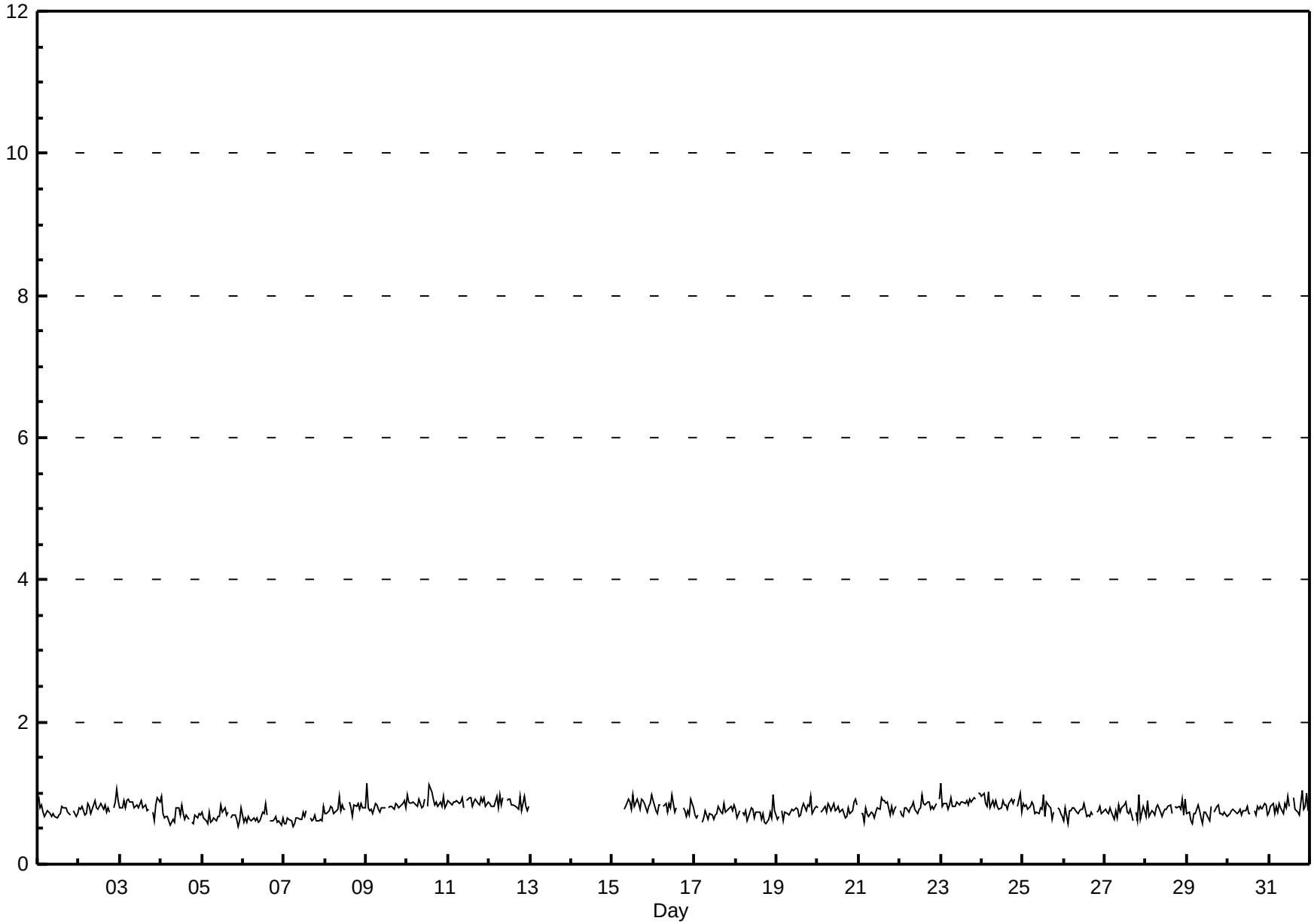
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	1.0
2-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.8	1.1
3-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.8	0.9
4-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	0.7	1.0
5-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	0.7	0.8
6-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	0.6	0.8
7-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	0.6	0.8
8-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	0.8	1.0
9-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	1.1
10-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	1.1
11-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	0.9	0.9
12-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	1.0
13-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
14-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
15-Mar	D	D	D	D	D	D	D	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	--	1.0
16-Mar	1	1	1	1	1	A	1	1	1	1	1	1	1	1	C	C	C	1	1	1	1	1	1	1	0.8	1.0
17-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	0.9
18-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
19-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	0.8	0.9
20-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	0.9
21-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
22-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	1.0
23-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
24-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	1.0
25-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	1.0
26-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	0.7	0.8
27-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	0.7	1.0
28-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	0.9
29-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
30-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	0.8	0.8
31-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	0.8	1.0
	0.8	0.8	0.7	0.7	0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	Diurnal Average	
	1.1	1.0	0.9	0.9	1.0	0.9	1.0	0.9	1.0	0.9	0.9	1.0	1.0	1.1	1.0	0.9	0.9	0.9	1.0	1.0	1.0	0.9	1.1	1.0	Diurnal Maximum	

C - Calibration D - DAS Failure A - Automated Daily Zero Span

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

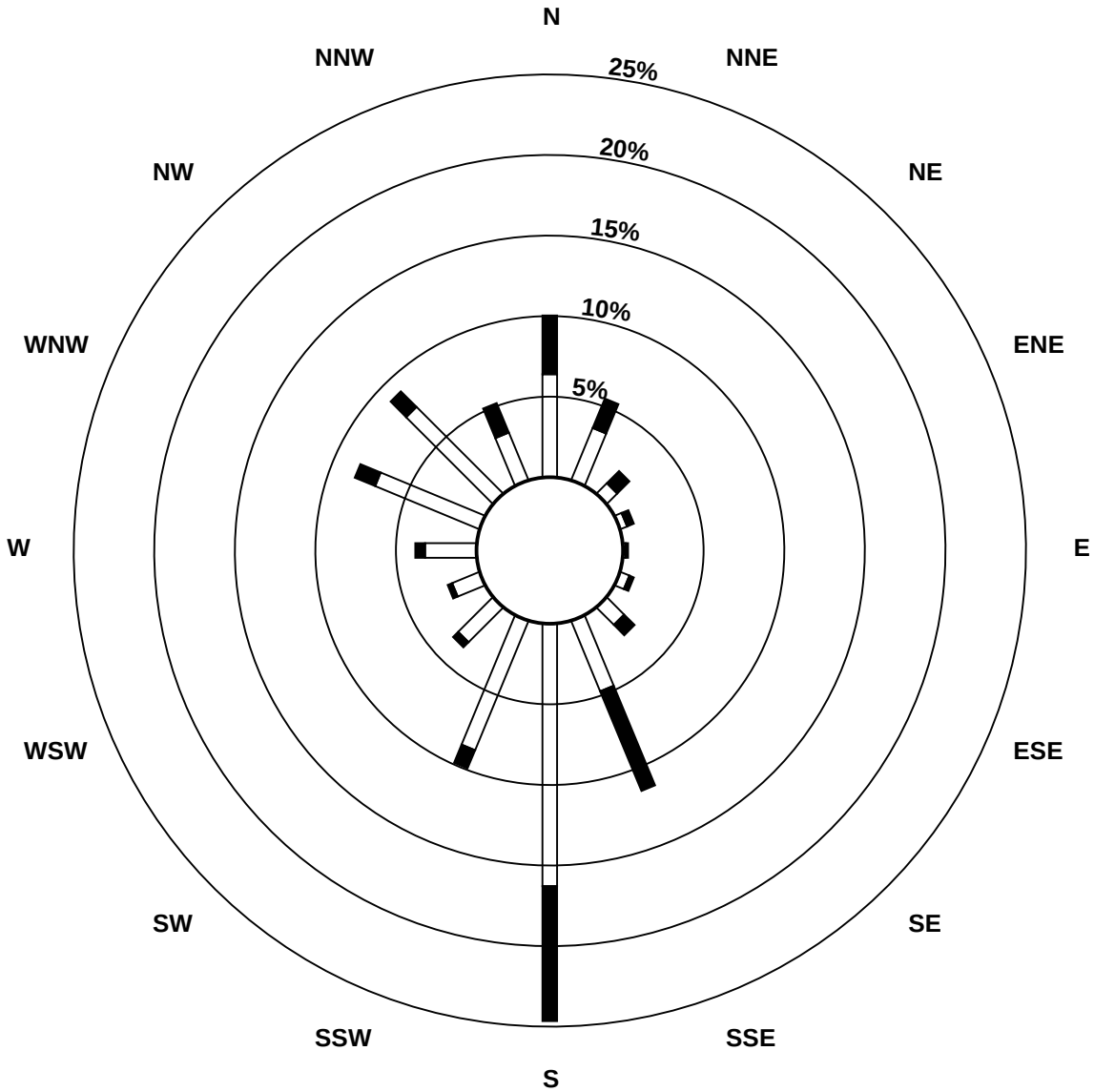
Portable-Kinuso - March 2010



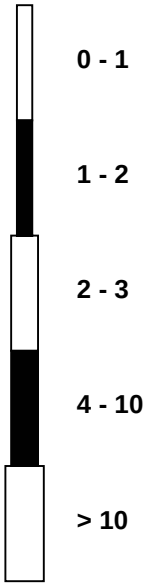
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Portable-Kinuso - March 2010



Pollutant Classes (ppb)



PASZA
Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Portable-Kinuso - March 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 19.1 ppb on Mar 2 08:00 Maximum Daily Average: 7.1 ppb on Mar 2

Minimum Value: 0 ppb on Mar 18 12:00 Minimum Daily Average: 0.6 ppb on Mar 18
Maximum Diurnal Average: 2.8 ppb at hour 20 Minimum Diurnal Average: 1.4 ppb at hour 15
Monthly Average: 2.11 ppb Percentiles: $P_1 = 0.4$ $P_{10} = 0.6$ $Q_1 = 0.8$ Median = 1.5 $Q_3 = 2.7$ $P_{90} = 4.4$ $P_{99} = 8.6$

Hours in Service:	744
Hours of Data:	654
Hours of Missing Data:	90
Hours of Calibration:	35
Percent Operational Time:	92.6

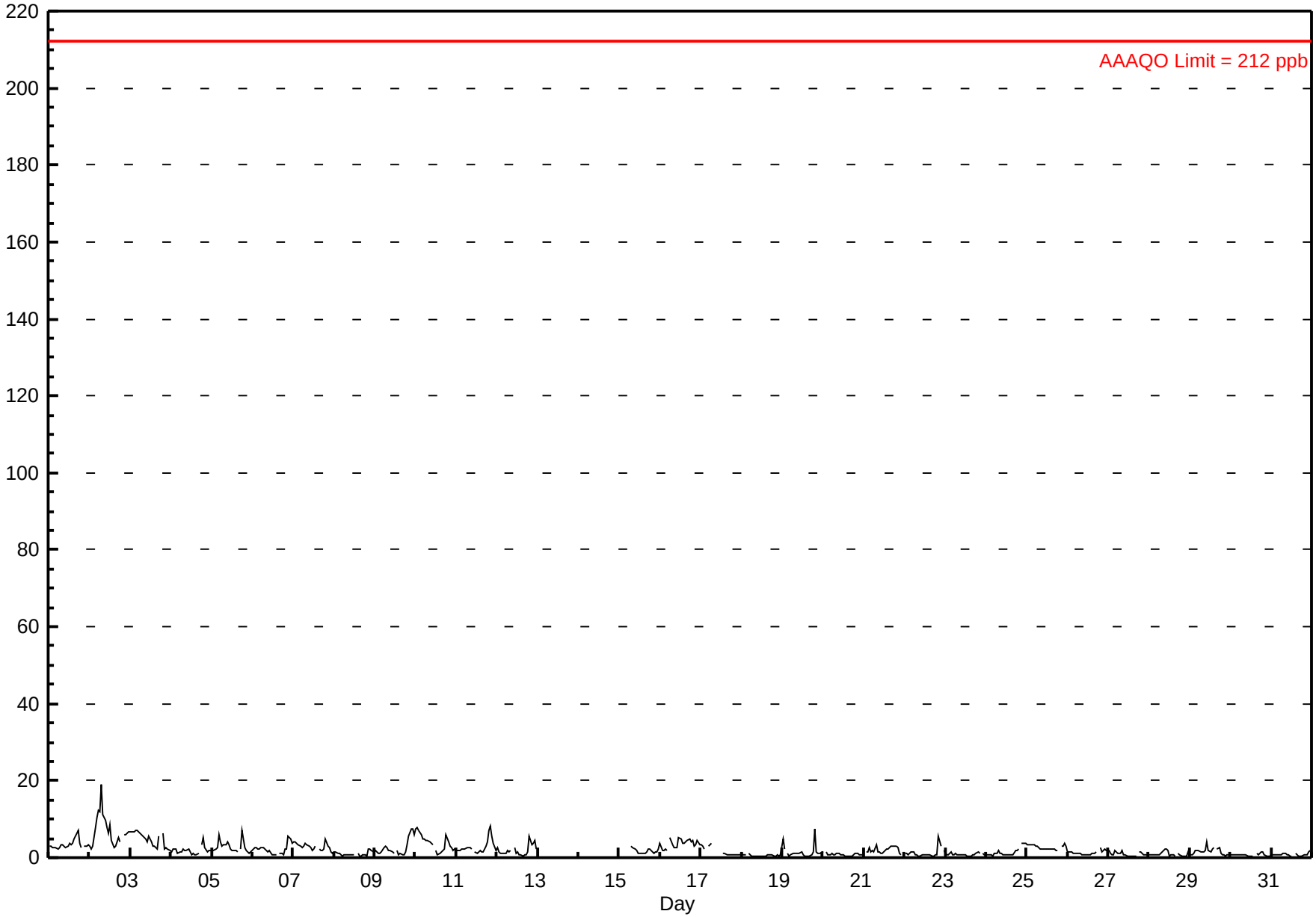
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	3	3	3	3	3	2	3	3	3	3	3	3	4	3	4	5	6	7	4	3	A	3	3	3	3.4	7.0
2-Mar	3	2	3	8	11	12	12	19	11	10	8	6	9	5	3	3	4	5	4	A	6	6	6	7	7.1	19.1
3-Mar	7	7	7	7	7	7	6	6	5	5	4	6	4	3	3	3	2	6	A	6	2	3	2	2	4.8	7.1
4-Mar	2	2	2	2	1	2	2	2	2	2	2	2	1	1	1	1	1	A	3	5	3	2	2	2	1.9	5.1
5-Mar	2	2	2	3	6	4	3	3	3	4	3	2	2	2	2	2	A	2	7	3	2	1	1	1	2.7	7.0
6-Mar	2	3	3	2	2	3	3	2	2	2	2	1	1	1	1	A	1	1	1	2	2	5	5	4	2.2	5.4
7-Mar	4	4	4	3	3	3	3	4	3	3	3	2	2	3	A	2	2	2	2	5	3	3	1	1	2.8	4.9
8-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	0	1	1	1	2	2	2	1	1.0	2.3
9-Mar	2	1	1	1	2	2	3	3	2	2	2	1	A	2	1	1	1	1	2	3	6	7	7	6	2.6	7.4
10-Mar	8	8	7	6	5	5	4	4	4	4	3	A	2	1	1	1	2	2	6	4	3	3	2	2	3.8	7.8
11-Mar	2	2	2	2	2	2	3	3	3	2	A	2	1	1	2	1	1	3	4	7	8	6	4	2	2.8	8.1
12-Mar	3	1	1	1	1	1	2	1	2	A	2	1	1	1	1	0	1	1	2	6	3	4	5	2	1.9	5.8
13-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
14-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
15-Mar	D	D	D	D	D	D	D	3	2	2	2	1	1	1	1	1	1	2	2	2	1	1	1	2	--	2.9
16-Mar	4	2	2	2	2	A	5	3	3	3	3	5	5	4	4	4	4	5	4	4	3	3	4	3	3.5	5.4
17-Mar	4	3	2	A	3	3	4	C	C	C	C	C	C	1	1	1	1	1	1	1	1	1	1	1	--	3.7
18-Mar	1	1	1	A	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	1	1	1	0.6	1.1
19-Mar	5	2	A	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	2	7	1	1	1	1	1.4	7.4
20-Mar	2	A	2	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0	1	1	1	1	1	1	0.9	1.6
21-Mar	A	1	2	2	1	2	1	4	2	1	1	1	2	2	2	3	3	3	3	3	2	1	1	A	2.0	3.5
22-Mar	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	0	0	1	1	6	3	A	2	1.1	5.5
23-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	1.4
24-Mar	1	1	1	1	0	1	1	2	1	1	1	1	1	1	1	1	1	2	2	2	A	4	4	4	1.4	3.7
25-Mar	3	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	A	3	3	4	3	2.7	3.6
26-Mar	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	3	2	2	2	2	1.3	2.7
27-Mar	2	1	1	1	2	1	1	1	2	1	1	0	0	0	0	0	0	A	2	1	1	1	1	1	0.9	1.9
28-Mar	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1	A	1	1	1	1	1	0	2	1.0	2.1
29-Mar	1	1	1	2	2	2	2	1	1	2	4	2	1	2	2	A	2	2	1	1	1	0	1	1	1.5	4.2
30-Mar	1	1	1	1	1	1	1	1	1	1	1	0	0	0	A	1	1	1	1	1	1	1	0	0	0.7	1.4
31-Mar	1	1	1	1	1	1	1	1	1	1	1	0	0	A	1	1	1	0	0	1	1	1	1	2	0.8	1.8
	2.4	2.1	2.0	2.2	2.3	2.4	2.5	2.7	2.3	2.1	2.0	1.7	1.7	1.5	1.4	1.4	1.6	2.0	2.2	2.8	2.4	2.4	2.3	2.1	Diurnal Average	
	7.5	7.8	7.1	7.7	10.6	12.4	12.1	19.1	11.1	9.5	8.0	6.4	8.6	4.6	3.8	4.7	6.4	7.0	7.0	7.4	8.1	7.4	7.3	6.7	Diurnal Maximum	

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

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Portable-Kinuso - March 2010



Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Portable-Kinuso - March 2010

Maximum Value: 46.7 ppb on Mar 2 07:00

Maximum Daily Average: 11.4 ppb on Mar 2

Minimum Value: 0 ppb on Mar 18 11:00

Minimum Daily Average: 0.9 ppb on Mar 18

Maximum Diurnal Average: 7.3 ppb at hour 20

Minimum Diurnal Average: 1.9 ppb at hour 16

Monthly Average: 3.66 ppb

Percentiles: $P_1 = 0.5$ $P_{10} = 0.8$ $Q_1 = 1.2$ Median = 2.4 $Q_3 = 4.1$ $P_{90} = 7.7$ $P_{99} = 20.8$

Hours in Service:	744
Hours of Data:	654
Hours of Missing Data:	90
Hours of Calibration:	35
Percent Operational Time:	92.6

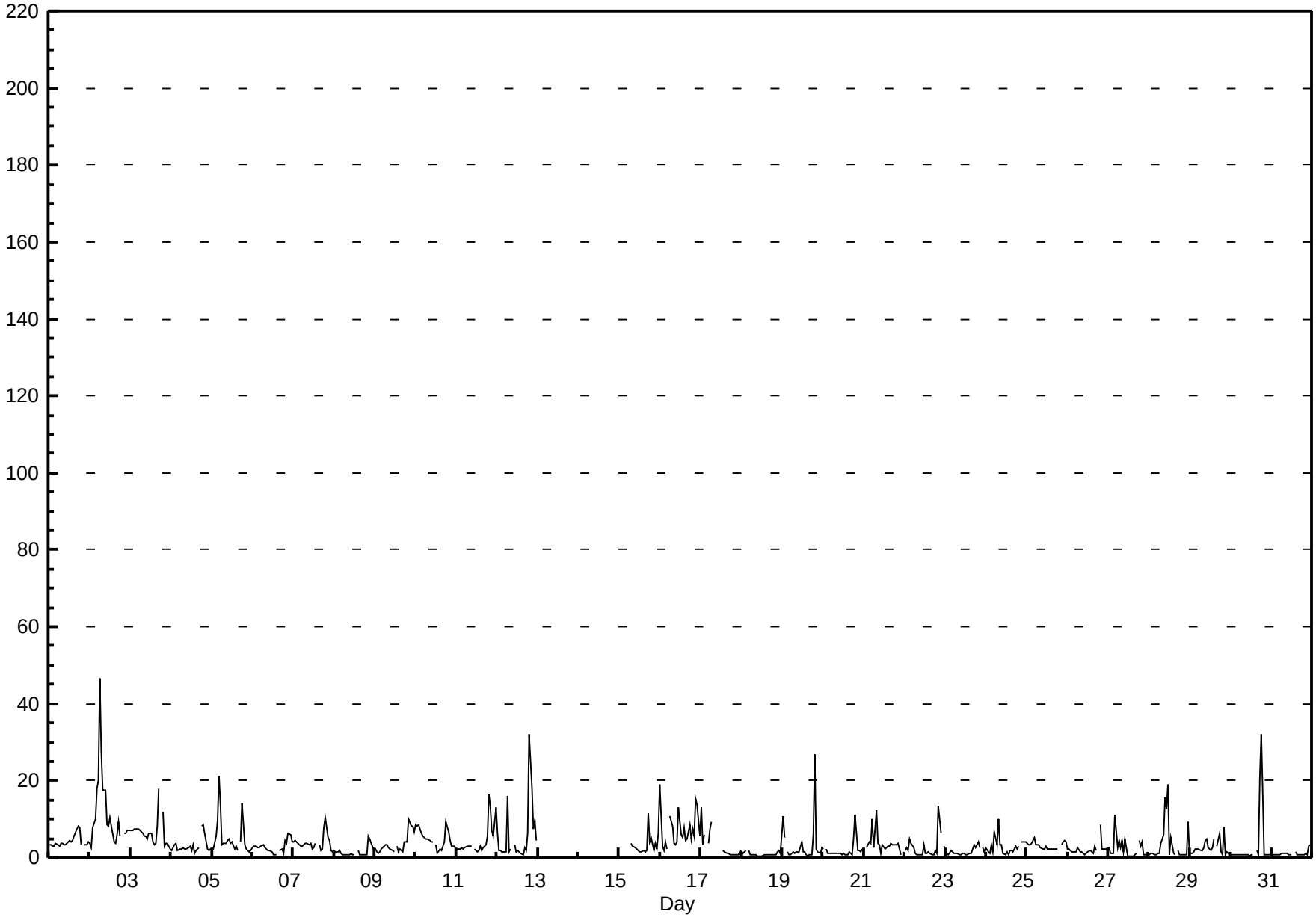
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	3	3	3	3	4	3	3	4	4	3	3	4	4	4	5	6	8	8	8	3	A	3	3	4	4.2	8.4
2-Mar	4	3	8	10	18	20	47	27	18	17	8	8	11	8	4	4	6	9	5	A	6	6	7	7	11.4	46.7
3-Mar	7	7	7	7	8	7	7	6	6	6	5	6	6	4	3	4	8	18	A	12	3	4	4	2	6.5	17.8
4-Mar	2	3	3	4	2	2	2	2	2	2	3	3	2	3	1	2	2	A	8	8	6	2	2	2	3.1	8.4
5-Mar	2	2	6	10	21	14	3	4	4	4	5	4	4	2	3	2	A	4	14	3	2	2	1	2	5.2	21.3
6-Mar	3	3	3	3	3	3	3	3	2	2	2	2	1	1	1	A	2	2	1	4	4	6	6	4	2.7	6.3
7-Mar	4	4	4	4	3	3	3	4	4	3	4	2	3	4	A	3	2	2	8	11	5	4	2	2	3.8	10.6
8-Mar	2	2	2	2	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	6	5	4	2	1.6	5.6
9-Mar	2	2	1	1	2	3	3	3	3	2	2	2	A	3	2	2	1	4	4	4	10	8	8	7	3.5	10.2
10-Mar	9	8	9	7	6	5	5	5	4	4	4	A	3	1	2	2	3	4	9	7	4	3	3	3	4.8	9.3
11-Mar	2	2	2	2	2	3	3	3	3	3	A	2	1	2	3	2	3	3	6	16	13	7	6	13	4.5	16.3
12-Mar	6	2	2	1	1	2	16	2	2	A	3	2	2	1	1	1	2	2	6	32	18	7	10	4	5.5	32.2
13-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
14-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
15-Mar	D	D	D	D	D	D	D	4	3	3	2	2	1	2	2	1	2	12	4	5	2	4	2	7	--	11.6
16-Mar	19	3	2	4	2	A	11	8	4	3	4	13	6	5	8	5	5	9	5	7	6	15	14	6	7.1	19.1
17-Mar	13	3	6	A	4	7	9	C	C	C	C	C	C	2	1	1	1	1	1	1	1	1	1	2	--	13.1
18-Mar	1	1	2	A	2	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1	2	1	0.9	1.8
19-Mar	11	5	A	2	1	1	1	1	1	2	1	4	2	1	1	0	1	1	6	27	2	1	1	3	3.3	27.0
20-Mar	2	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	11	2	2	2	2	1.9	11.1
21-Mar	A	3	3	4	4	10	3	12	4	3	1	3	2	3	3	3	4	3	3	3	4	2	1	A	3.7	12.3
22-Mar	2	3	2	5	4	3	1	1	1	1	1	3	1	1	1	1	1	1	2	1	13	6	A	3	2.5	13.5
23-Mar	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	2	3	3	4	3	A	2	2	1.6	4.0
24-Mar	3	2	1	4	1	7	3	10	3	3	1	1	2	1	2	2	1	3	2	3	A	4	4	4	2.9	9.9
25-Mar	4	3	3	4	5	3	3	3	3	2	2	3	2	2	2	2	2	2	2	A	3	4	5	4	3.1	5.2
26-Mar	2	2	2	1	2	2	3	1	1	1	1	1	2	2	2	1	3	2	A	8	2	2	2	2	2.1	8.4
27-Mar	3	1	1	1	11	3	4	3	4	2	5	1	1	1	1	1	1	A	5	3	4	1	1	1	2.4	11.3
28-Mar	1	1	1	1	1	1	1	4	6	16	13	19	1	5	1	1	A	2	1	1	1	1	1	9	3.8	19.0
29-Mar	1	1	2	2	2	2	2	2	3	4	5	2	2	3	5	A	3	6	1	1	8	1	2	1	2.6	7.8
30-Mar	1	1	1	1	1	1	1	1	1	1	1	0	1	1	A	2	1	21	32	17	1	1	1	1	3.7	32.3
31-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	3	4	1.1	3.5
	4.1	2.7	2.9	3.3	4.0	4.1	5.1	4.2	3.2	3.4	3.0	3.4	2.3	2.4	2.2	1.9	2.5	4.6	5.4	7.3	4.9	3.8	3.5	3.6	Diurnal Average	
	19.1	8.4	8.6	10.2	21.3	20.1	46.7	27.5	17.6	17.4	12.9	19.0	10.6	8.3	7.7	5.5	8.4	20.8	32.3	32.2	18.2	15.1	13.8	13.2	Diurnal Maximum	

C - Calibration D - DAS Failure A - Automated Daily Zero Span

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

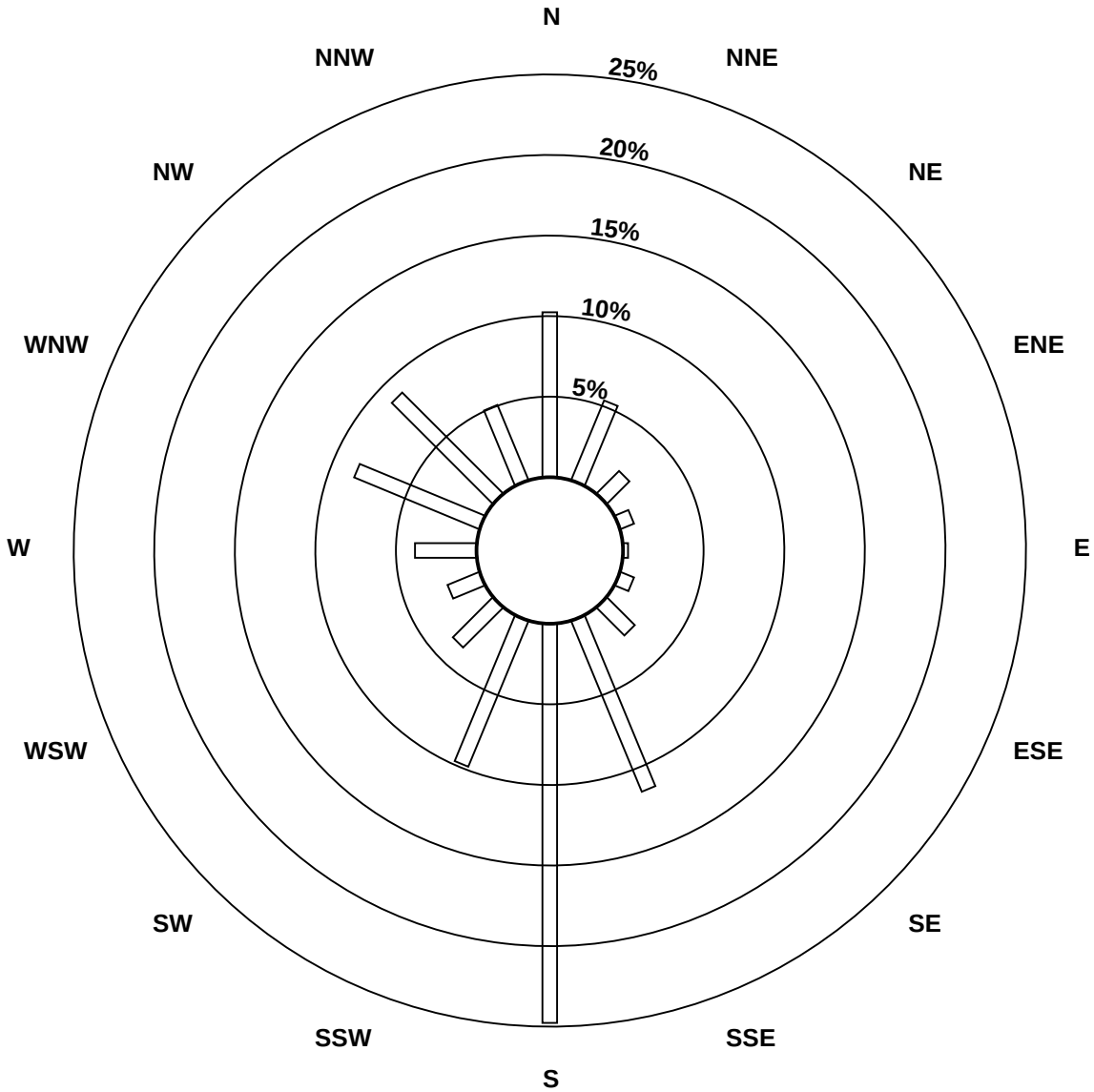
Portable-Kinuso - March 2010



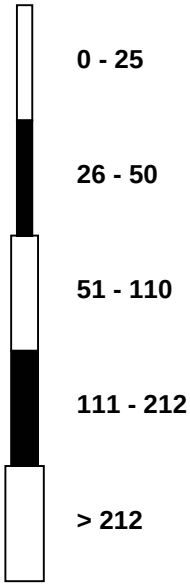
Pollutant Rose

Nitrogen Dioxide (NO_2) - ppb

Portable-Kinuso - March 2010



Pollutant Classes (ppb)



Hourly Averages

Nitrogen Oxide (NO) - ppb

Portable-Kinuso - March 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 12.2 ppb on Mar 2 08:00
Maximum Daily Average: 1.7 ppb on Mar 2

Minimum Value: 0 ppb on Mar 1 01:00
Maximum Diurnal Average: 0.7 ppb at hour 11
Monthly Average: 0.23 ppb

Minimum Daily Average: 0.0 ppb on Mar 20
Minimum Diurnal Average: 0.0 ppb at hour 24
Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.0$ Median = 0.1 $Q_3 = 0.2$ $P_{90} = 0.5$ $P_{99} = 2.7$

Hours in Service:	744
Hours of Data:	654
Hours of Missing Data:	90
Hours of Calibration:	35
Percent Operational Time:	92.6

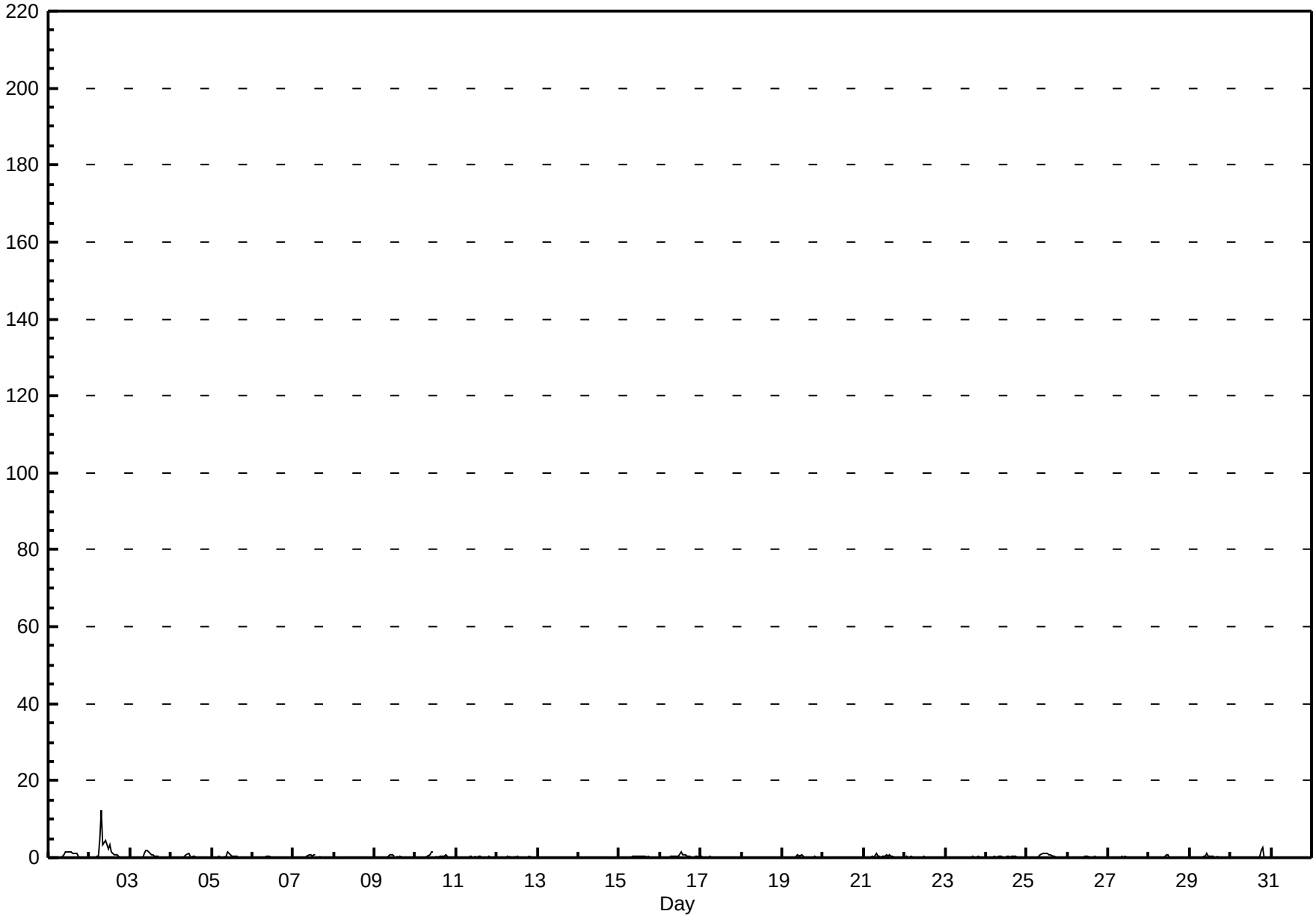
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	0	0	0	0	0	0	0	0	0	1	1	2	2	1	1	1	1	1	0	0	A	0	0	0	0.5	1.6
2-Mar	0	0	0	0	0	0	5	12	3	4	3	2	4	2	1	1	1	1	0	A	0	0	0	0	1.7	12.2
3-Mar	0	0	0	0	0	0	0	0	1	2	2	2	1	1	1	0	0	0	A	0	0	0	0	0	0.4	2.0
4-Mar	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.9
5-Mar	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0.2	1.4
6-Mar	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.5
7-Mar	0	0	0	0	0	0	0	0	0	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0.2	0.9
8-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	0.0	0.1
9-Mar	0	0	0	0	0	0	0	0	0	1	1	0	A	1	0	0	0	0	0	0	0	0	0	0	0.2	0.7
10-Mar	0	0	0	0	0	0	0	0	1	1	1	A	0	0	0	0	0	0	1	0	0	0	0	0	0.3	1.4
11-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	0.2	0.5
12-Mar	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
13-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
14-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
15-Mar	D	D	D	D	D	D	D	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	--	0.5
16-Mar	0	0	0	0	0	A	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0.3	1.5
17-Mar	0	0	0	A	0	0	0	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	--	0.3
18-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	0.0	0.1
19-Mar	0	0	A	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
20-Mar	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
21-Mar	A	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	A	0.3	1.0
22-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.2
23-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	0.1	0.3
24-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	0.2	0.5
25-Mar	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	A	0	0	0	0	0.4	1.2
26-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	0.1	0.4
27-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	0.1	0.4
28-Mar	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.7
29-Mar	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	A	0	0	0	0	0	0	0	0	0.2	1.1
30-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	2	3	0	0	0	0	0.3	2.7
31-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	0.1	0.1
	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.6	0.4	0.7	0.7	0.5	0.5	0.4	0.3	0.2	0.2	0.2	0.1	0.2	0.0	0.0	0.0	0.0	Diurnal Average	
	0.2	0.2	0.2	0.1	0.4	0.4	4.7	12.2	3.3	4.5	3.2	2.1	3.5	1.5	1.1	1.0	1.0	0.5	2.0	2.7	0.2	0.2	0.3	0.1	Diurnal Maximum	

C - Calibration D - DAS Failure A - Automated Daily Zero Span

Hourly Averages

Nitrogen Oxide (NO) - ppb

Portable-Kinuso - March 2010



Hourly Maximums

Nitrogen Oxide (NO) - ppb

Portable-Kinuso - March 2010

Maximum Value: 100.7 ppb on Mar 2 07:00

Maximum Daily Average: 9.4 ppb on Mar 2

Minimum Value: 0 ppb on Mar 5 01:00

Minimum Daily Average: 0.1 ppb on Mar 31

Maximum Diurnal Average: 4.2 ppb at hour 7

Minimum Diurnal Average: 0.1 ppb at hour 24

Monthly Average: 1.08 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.1$ Median = 0.2 $Q_3 = 0.6$ $P_{90} = 1.6$ $P_{99} = 9.7$

Hours in Service:	744
Hours of Data:	654
Hours of Missing Data:	90
Hours of Calibration:	35
Percent Operational Time:	92.6

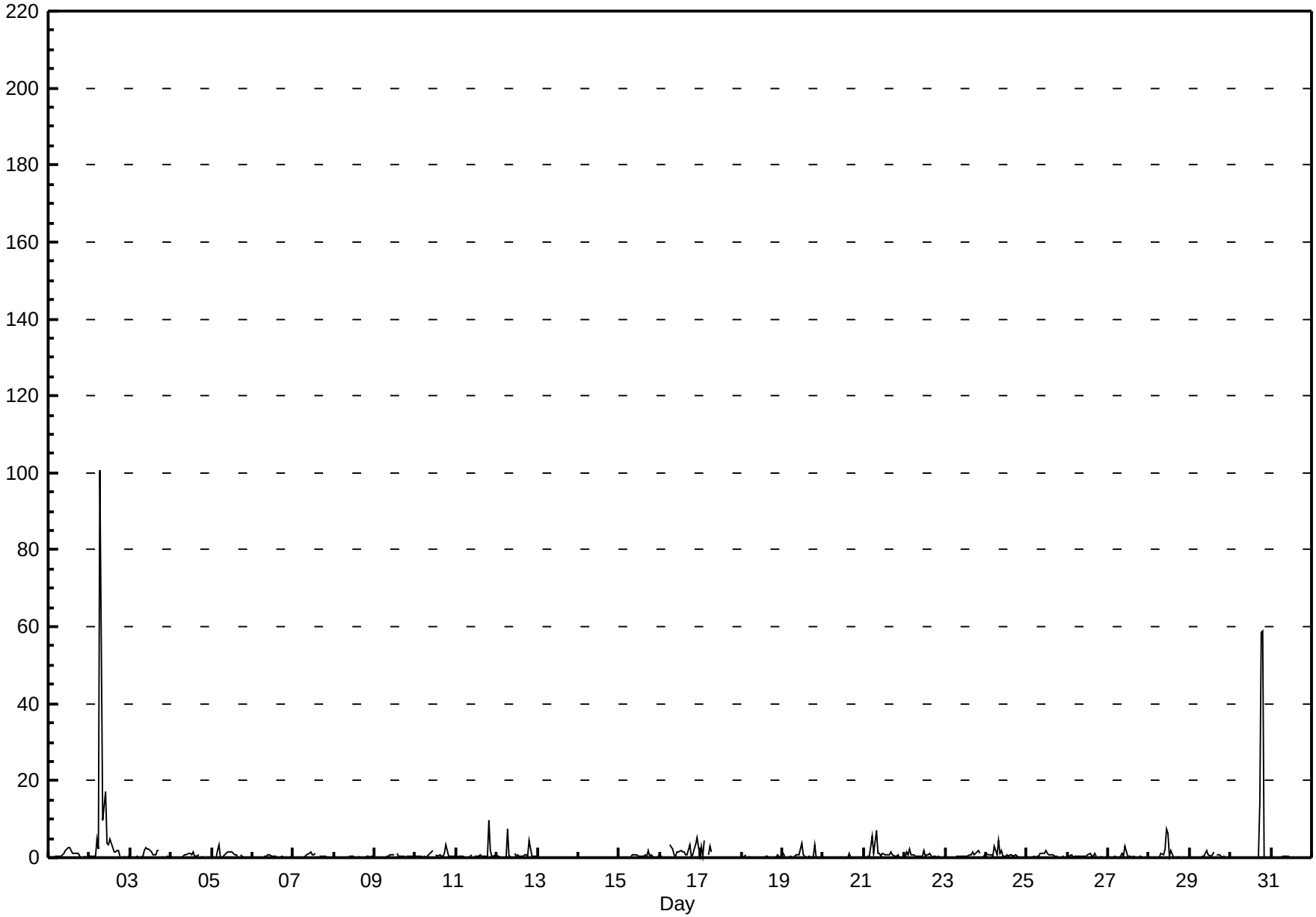
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	0	0	0	0	0	0	0	0	1	1	2	2	3	2	1	1	1	1	0	0	A	0	0	0	0.8	2.6
2-Mar	0	0	0	0	5	2	101	56	10	17	4	3	5	4	2	2	2	2	0	A	0	0	0	0	9.4	100.7
3-Mar	0	0	0	0	0	0	0	0	2	3	2	2	2	1	1	1	2	2	A	0	0	0	0	0	0.8	2.6
4-Mar	0	0	0	0	0	0	0	0	1	1	1	1	1	2	0	0	1	A	0	0	0	0	0	0	0.4	1.5
5-Mar	0	0	0	2	3	0	0	0	1	2	1	1	2	1	1	0	A	1	0	0	0	0	0	0	0.7	3.3
6-Mar	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.7
7-Mar	0	0	0	0	0	0	0	0	1	1	1	1	1	1	A	1	0	0	0	0	0	0	0	0	0.4	1.4
8-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	0.2
9-Mar	0	0	0	0	0	0	0	0	1	1	1	1	A	1	0	1	0	0	0	0	0	0	0	0	0.4	1.2
10-Mar	0	0	0	0	0	0	0	1	1	2	2	A	1	0	1	1	1	1	3	0	0	0	0	0	0.6	3.4
11-Mar	0	0	0	0	0	0	0	0	0	1	A	0	0	0	1	0	0	0	0	10	2	0	0	1	0.8	9.6
12-Mar	0	0	0	0	0	0	7	0	0	A	1	1	1	1	0	0	1	1	0	5	0	1	0	0	0.9	7.3
13-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
14-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
15-Mar	D	D	D	D	D	D	D	0	1	1	1	0	0	0	0	1	0	2	0	1	0	0	0	0	--	1.8
16-Mar	1	0	0	0	0	A	3	2	1	0	2	1	2	1	1	1	1	3	0	1	2	3	5	0	1.4	5.0
17-Mar	3	0	4	A	1	3	2	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	--	4.3
18-Mar	0	0	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.2	0.8
19-Mar	1	0	A	0	0	0	0	0	1	1	1	4	1	0	0	0	0	0	0	3	0	0	0	0	0.6	3.7
20-Mar	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.2	1.1
21-Mar	A	0	0	0	3	6	1	7	1	1	0	1	1	1	1	1	1	1	0	0	1	0	0	A	1.3	7.2
22-Mar	0	1	1	2	1	1	0	0	0	0	0	2	0	1	1	1	0	0	0	0	0	0	A	0	0.6	2.1
23-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	2	1	A	0	0	0.5	1.9
24-Mar	1	1	1	1	0	3	1	4	1	2	0	0	1	0	1	1	0	1	0	0	A	0	0	0	0.9	4.4
25-Mar	0	0	0	0	0	0	0	1	1	1	1	2	1	1	1	1	1	0	0	A	0	0	0	0	0.5	2.0
26-Mar	0	1	1	0	0	1	0	1	0	0	0	0	1	1	1	0	1	0	A	0	0	0	0	0	0.4	1.3
27-Mar	0	0	0	0	1	0	0	1	1	0	3	0	0	0	0	0	0	A	0	0	0	0	0	0	0.4	2.9
28-Mar	0	0	0	0	0	0	0	1	1	2	7	6	0	2	0	0	A	0	0	0	0	0	0	0	0.9	7.4
29-Mar	0	0	0	0	0	0	0	0	0	1	2	1	0	1	1	A	1	1	0	0	1	0	0	0	0.4	1.7
30-Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	14	59	59	0	0	0	0	5.8	58.9
31-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	0.1	0.2
	0.3	0.2	0.4	0.3	0.6	0.6	4.2	2.8	1.0	1.5	1.3	1.2	0.9	0.8	0.6	0.5	0.6	1.2	2.5	3.1	0.4	0.3	0.3	0.1	Diurnal Average	
	3.0	1.5	4.3	2.1	4.8	5.8	100.7	56.5	9.8	17.3	7.4	6.5	4.7	3.6	1.6	1.5	1.9	14.1	58.6	58.9	2.3	3.3	5.0	0.6	Diurnal Maximum	

C - Calibration D - DAS Failure A - Automated Daily Zero Span

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Portable-Kinuso - March 2010



Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Portable-Kinuso - March 2010

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

Maximum Value: 31.5 ppb on Mar 2 08:00

Maximum Daily Average: 8.8 ppb on Mar 2

Minimum Value: 0 ppb on Mar 19 16:00

Minimum Daily Average: 0.6 ppb on Mar 18

Maximum Diurnal Average: 3.3 ppb at hour 8

Minimum Diurnal Average: 1.6 ppb at hour 16

Monthly Average: 2.31 ppb

Percentiles: $P_1 = 0.4$ $P_{10} = 0.5$ $Q_1 = 0.8$ Median = 1.6 $Q_3 = 2.9$ $P_{90} = 4.9$ $P_{99} = 11.3$

Hours in Service:	744
Hours of Data:	654
Hours of Missing Data:	90
Hours of Calibration:	35
Percent Operational Time:	92.6

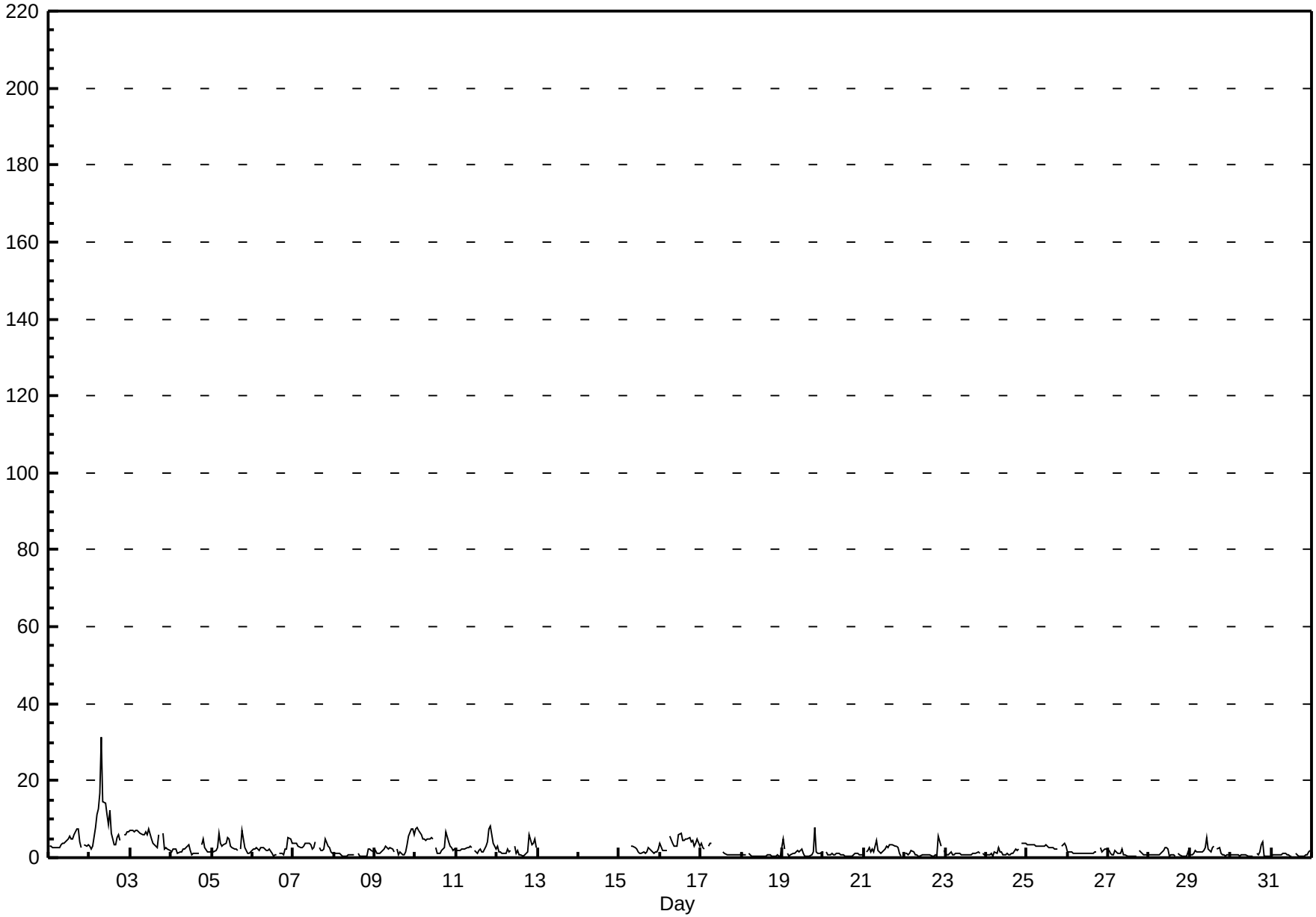
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	3	3	3	3	3	2	3	3	4	4	4	5	5	5	5	6	8	8	4	3	A	3	3	3	4.0	7.6
2-Mar	3	2	3	8	11	13	17	31	15	14	11	9	12	6	3	3	5	6	4	A	6	6	7	7	8.8	31.5
3-Mar	7	7	7	7	7	7	7	6	6	7	6	7	5	4	3	3	3	6	A	7	2	3	2	2	5.2	7.3
4-Mar	2	2	2	2	1	2	2	2	2	3	3	2	1	1	1	1	1	A	3	5	3	2	2	2	2.0	5.0
5-Mar	2	2	2	3	6	4	3	3	4	5	5	3	2	2	2	2	A	2	7	2	2	1	1	1	2.9	7.0
6-Mar	2	2	2	2	2	3	3	2	2	2	2	1	1	1	1	A	1	1	1	2	2	5	5	4	2.1	5.3
7-Mar	4	4	4	3	3	3	3	4	4	4	3	2	3	4	A	3	2	2	2	5	3	3	1	1	2.9	4.9
8-Mar	1	1	1	1	1	0	1	1	1	1	1	1	1	A	1	0	0	0	1	0	2	2	2	1	0.9	2.3
9-Mar	2	1	1	1	2	2	3	3	2	3	2	2	A	2	1	1	1	1	2	3	6	7	7	6	2.7	7.4
10-Mar	8	8	7	6	5	5	5	5	5	5	5	A	2	1	1	2	2	3	7	4	3	3	2	2	4.1	7.9
11-Mar	2	2	2	2	2	2	3	3	3	3	A	2	1	2	2	1	2	3	4	7	8	6	4	2	3.0	8.4
12-Mar	3	1	1	1	1	1	2	1	2	A	3	1	2	1	1	0	1	1	2	6	3	4	5	2	2.0	6.1
13-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
14-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
15-Mar	D	D	D	D	D	D	D	3	3	3	2	1	1	1	1	1	1	2	2	2	1	1	1	2	--	3.0
16-Mar	4	2	2	2	2	A	6	4	3	3	3	6	6	4	4	5	5	5	4	5	3	4	5	3	3.8	6.3
17-Mar	4	3	2	A	3	4	4	C	C	C	C	C	C	1	1	1	1	1	1	1	1	1	1	1	--	3.8
18-Mar	1	1	1	A	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	1	1	1	0.6	1.2
19-Mar	5	2	A	1	0	1	1	1	2	2	1	2	1	1	0	0	0	1	2	8	1	1	1	1	1.6	7.7
20-Mar	2	A	2	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0	1	1	1	1	1	1	0.9	1.5
21-Mar	A	1	2	2	2	2	1	4	2	2	1	1	2	3	3	3	3	3	3	3	2	1	1	A	2.2	4.5
22-Mar	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	0	0	1	1	6	3	A	2	1.2	5.6
23-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	A	1	1	0.9	1.6
24-Mar	1	1	1	1	0	1	1	2	1	1	1	1	1	1	1	1	1	2	2	2	A	4	4	4	1.5	3.7
25-Mar	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	A	3	3	4	3	3.0	3.7
26-Mar	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	A	3	2	2	2	2	1.4	2.7
27-Mar	2	1	1	1	2	1	1	1	2	1	1	0	1	0	0	0	0	A	2	1	1	1	1	1	1.0	2.3
28-Mar	1	1	1	1	1	1	1	1	2	2	3	2	1	1	1	1	A	1	1	0	0	0	0	2	1.0	2.8
29-Mar	1	1	1	2	2	2	2	1	2	2	5	2	2	3	3	A	2	3	1	1	1	0	1	1	1.7	5.3
30-Mar	1	1	1	1	1	1	1	1	1	1	1	0	0	0	A	1	1	2	3	4	1	0	0	0	0.9	4.0
31-Mar	0	1	1	1	1	1	1	1	1	1	1	0	0	A	1	1	0	0	0	0	1	1	1	2	0.7	1.8
	2.4	2.1	2.0	2.3	2.4	2.4	2.6	3.3	2.7	2.7	2.6	2.2	2.1	1.9	1.6	1.6	1.8	2.2	2.3	2.9	2.4	2.4	2.3	2.1	Diurnal Average	
	7.6	7.9	7.2	7.8	11.1	12.8	16.9	31.5	14.6	14.2	11.3	8.6	12.3	6.2	4.9	5.8	7.5	7.6	7.0	7.7	8.4	7.4	7.4	6.8	Diurnal Maximum	

C - Calibration D - DAS Failure A - Automated Daily Zero Span

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Portable-Kinuso - March 2010



Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Portable-Kinuso - March 2010

Maximum Value: 147.6 ppb on Mar 2 07:00

Maximum Daily Average: 20.5 ppb on Mar 2

Minimum Value: 0 ppb on Mar 18 11:00

Minimum Daily Average: 1.0 ppb on Mar 18

Maximum Diurnal Average: 9.2 ppb at hour 7

Minimum Diurnal Average: 2.3 ppb at hour 16

Monthly Average: 4.53 ppb

Percentiles: $P_1 = 0.5$ $P_{10} = 0.7$ $Q_1 = 1.3$ Median = 2.6 $Q_3 = 4.7$ $P_{90} = 8.4$ $P_{99} = 34.4$

Hours in Service:	744
Hours of Data:	654
Hours of Missing Data:	90
Hours of Calibration:	35
Percent Operational Time:	92.6

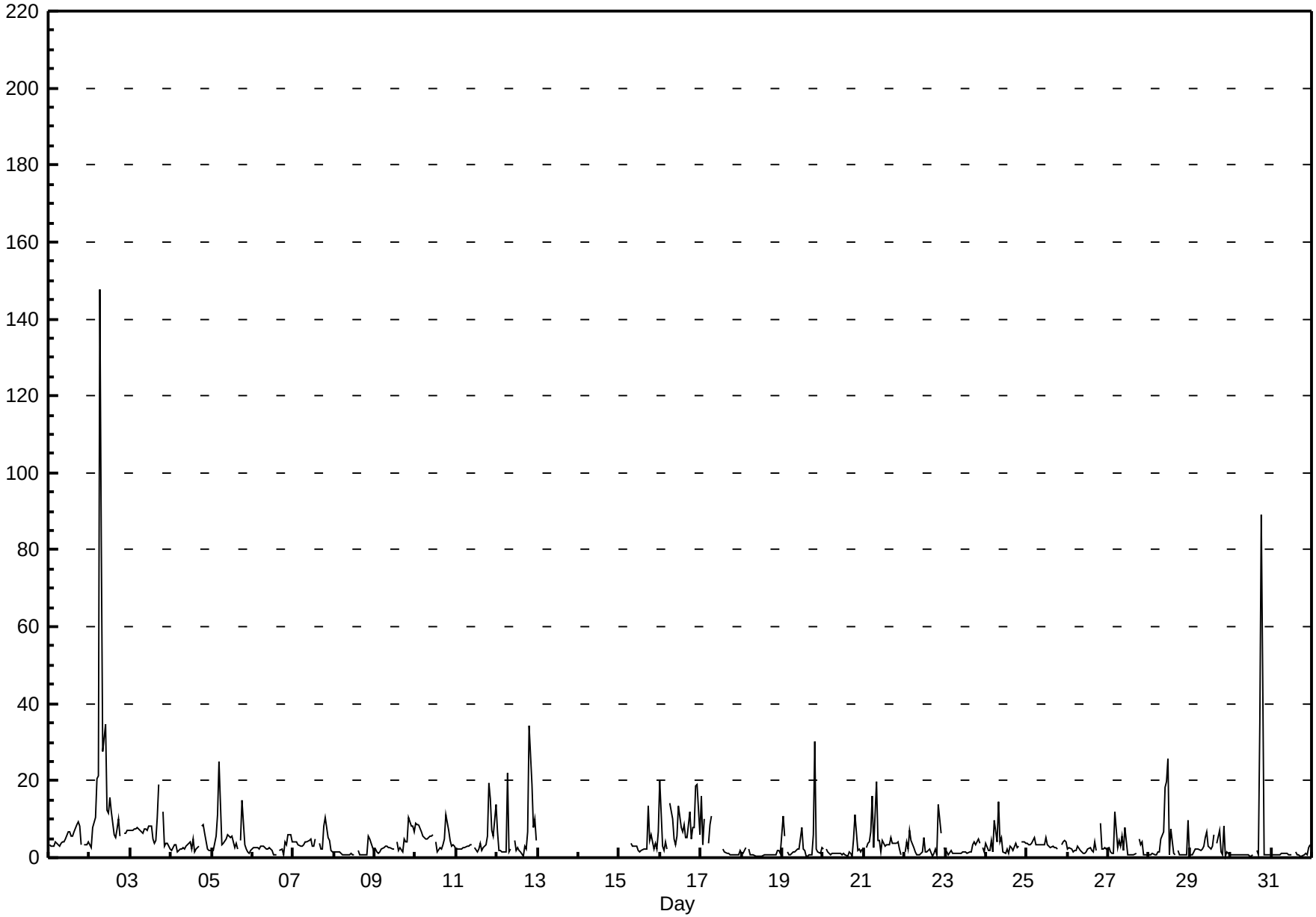
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	3	3	3	3	4	4	3	4	4	4	5	7	7	5	5	7	9	9	8	3	A	4	3	4	4.8	9.4
2-Mar	3	3	8	11	20	21	148	83	28	35	12	12	16	12	6	5	8	10	6	A	6	6	7	7	20.5	147.6
3-Mar	7	7	7	8	8	8	7	6	8	8	7	8	8	5	4	4	10	19	A	12	3	4	4	2	7.1	18.9
4-Mar	2	3	3	4	2	2	2	3	2	3	4	4	2	5	1	2	3	A	8	8	6	2	2	2	3.3	8.4
5-Mar	2	2	6	11	25	14	3	4	5	6	6	5	6	3	4	2	A	4	15	3	2	2	1	2	5.7	24.8
6-Mar	3	3	3	3	2	3	3	2	2	2	3	2	1	1	1	A	2	2	1	4	3	6	6	4	2.7	6.1
7-Mar	4	4	4	3	3	3	3	4	4	4	5	3	3	5	A	4	2	2	8	11	5	4	2	1	4.0	10.6
8-Mar	1	1	1	2	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	6	5	4	2	1.5	5.5
9-Mar	2	1	1	1	2	3	3	3	3	3	2	2	A	4	2	2	2	5	4	4	11	8	8	7	3.7	10.6
10-Mar	9	8	9	7	6	5	5	5	5	5	6	A	4	2	3	2	3	5	11	7	4	3	3	3	5.3	11.3
11-Mar	2	2	2	2	2	3	3	3	3	3	A	3	2	2	4	2	3	3	6	19	15	7	6	14	4.9	19.3
12-Mar	7	2	2	1	1	1	22	2	2	A	4	2	2	2	1	1	3	2	7	34	19	8	10	4	6.1	34.4
13-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
14-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
15-Mar	D	D	D	D	D	D	D	4	3	3	3	2	2	2	2	2	2	14	4	6	2	4	2	7	--	13.5
16-Mar	20	3	2	4	2	A	14	10	5	3	6	13	8	7	9	5	5	12	5	8	8	19	19	6	8.4	20.2
17-Mar	16	3	10	A	4	8	11	C	C	C	C	C	C	2	2	1	1	1	1	1	1	1	1	2	--	16.2
18-Mar	1	1	2	A	2	1	1	1	0	1	0	0	0	1	1	1	1	1	1	1	1	2	2	1	1.0	2.5
19-Mar	11	6	A	2	1	1	1	1	2	2	2	8	2	2	0	0	1	1	6	30	2	1	1	3	3.8	30.3
20-Mar	2	A	2	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	5	11	2	2	1	2	1.9	11.2
21-Mar	A	3	4	4	7	16	3	20	5	4	1	5	3	3	3	4	5	4	4	4	4	2	1	A	4.9	19.7
22-Mar	2	4	2	7	4	3	1	1	1	1	1	5	1	2	2	2	1	1	2	1	14	6	A	3	2.9	13.9
23-Mar	2	1	1	2	1	1	1	1	1	1	1	2	1	1	2	2	3	4	3	5	4	A	2	2	1.9	4.7
24-Mar	4	2	2	4	2	10	4	14	4	5	2	1	2	1	3	3	2	4	2	3	A	4	4	4	3.7	14.4
25-Mar	4	3	3	4	5	3	3	3	3	3	3	5	3	3	3	3	3	2	2	A	3	4	5	4	3.5	5.3
26-Mar	2	3	2	1	2	2	3	2	2	1	1	1	2	3	2	1	4	2	A	9	2	2	2	2	2.4	8.9
27-Mar	3	1	1	1	12	3	5	3	6	2	8	1	1	1	1	1	1	A	5	3	4	1	1	1	2.7	11.8
28-Mar	1	1	1	1	1	1	1	5	7	18	20	26	1	7	1	1	A	2	1	1	1	1	1	10	4.6	25.7
29-Mar	1	1	1	2	2	2	2	2	3	5	7	3	2	3	6	A	4	7	1	1	8	0	2	1	2.9	8.4
30-Mar	1	1	1	1	1	1	1	1	1	1	1	0	0	1	A	2	1	35	89	47	1	1	1	1	8.1	89.1
31-Mar	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	0	0	1	1	1	3	4	1.0	3.5
	4.3	2.7	3.2	3.5	4.4	4.5	9.2	6.8	4.0	4.8	4.2	4.5	3.1	3.1	2.6	2.3	3.0	5.7	7.7	8.8	5.2	3.9	3.7	3.7	Diurnal Average	
	20.2	8.4	10.1	11.3	24.8	21.4	147.6	82.9	27.7	34.7	19.8	25.7	15.6	12.0	8.7	6.5	10.3	35.0	89.1	46.8	19.0	18.5	19.0	13.9	Diurnal Maximum	

C - Calibration D - DAS Failure A - Automated Daily Zero Span

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Portable-Kinuso - March 2010



PASZA
Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Portable-Kinuso - March 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 55.2 ppb on Mar 29 22:00
Maximum Daily Average: 45.0 ppb on Mar 30

Minimum Value: 6 ppb on Mar 2 08:00
Maximum Diurnal Average: 41.5 ppb at hour 16
Monthly Average: 35.48 ppb

Minimum Daily Average: 26.0 ppb on Mar 21
Minimum Diurnal Average: 30.2 ppb at hour 8
Percentiles: P_1 = 15.1 P_{10} = 25.4 Q_1 = 30.4 Median = 35.7 Q_3 = 41.6 P_{90} = 45.3 P_{99} = 50.1

Hours in Service:	744
Hours of Data:	656
Hours of Missing Data:	88
Hours of Calibration:	33
Percent Operational Time:	92.6

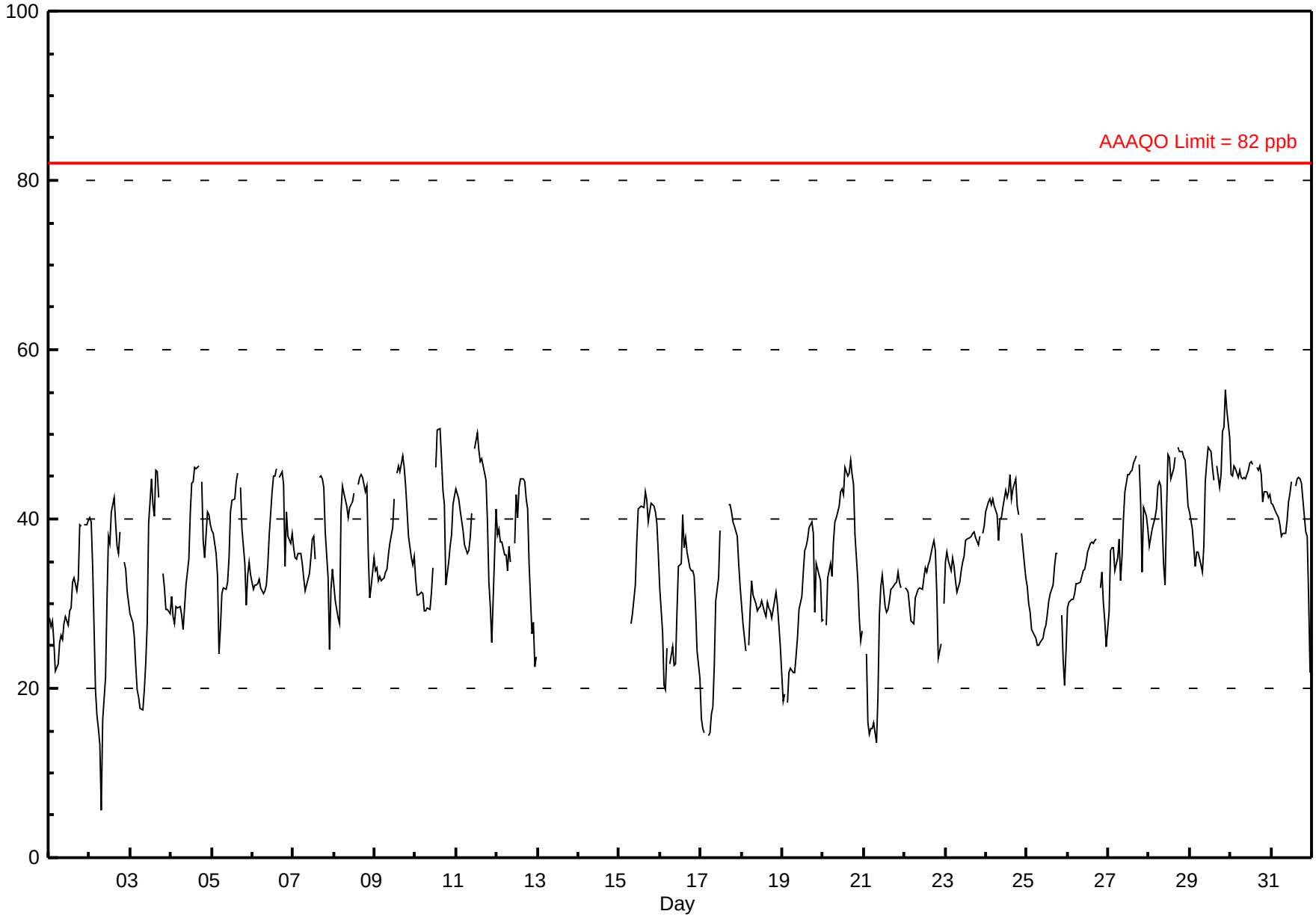
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	28	27	28	25	22	23	26	26	26	28	28	27	29	30	33	33	31	33	39	39	A	39	39	40	30.5	39.8
2-Mar	40	40	34	20	17	15	13	6	16	21	31	38	37	41	43	40	37	36	39	A	35	34	32	30	30.1	42.5
3-Mar	29	28	26	23	20	19	18	17	20	23	28	40	45	42	40	46	46	42	A	34	32	29	29	29	30.6	45.8
4-Mar	31	29	28	30	29	30	29	27	30	32	35	41	44	44	46	46	46	A	44	37	35	41	40	39	36.3	46.2
5-Mar	39	38	36	33	24	27	31	32	32	32	35	41	42	42	44	45	A	44	39	35	30	33	35	33	35.8	45.5
6-Mar	32	32	32	32	33	32	31	32	32	35	38	43	45	45	46	A	45	46	44	34	41	38	37	38	37.5	46.0
7-Mar	37	35	35	36	36	35	33	32	32	34	35	38	38	35	A	45	45	45	44	38	33	25	32	34	36.1	45.1
8-Mar	32	30	28	28	41	44	43	41	40	41	42	42	43	A	44	45	45	45	43	44	36	31	32	35	39.0	45.3
9-Mar	34	34	33	33	33	33	34	34	36	37	39	42	A	45	46	46	47	46	44	41	38	35	35	36	38.3	47.4
10-Mar	33	31	31	31	31	29	29	29	29	31	34	A	46	51	51	47	43	42	32	35	37	38	42	43	36.8	50.6
11-Mar	44	42	41	40	39	37	36	36	38	41	A	48	50	48	47	47	46	45	40	33	30	25	31	41	40.1	50.1
12-Mar	38	39	37	37	36	36	34	37	35	A	37	43	40	44	45	45	44	42	41	35	26	28	23	24	36.7	44.7
13-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
14-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
15-Mar	D	D	D	D	D	D	D	28	29	32	37	41	41	41	41	43	42	40	41	42	42	41	40	36	--	43.2
16-Mar	32	27	20	20	25	A	23	25	23	23	29	34	35	40	37	38	36	34	34	34	33	29	24	21	29.4	40.5
17-Mar	16	15	15	A	14	15	17	18	23	30	33	39	C	C	C	C	42	42	41	40	39	38	35	32	28.6	41.8
18-Mar	30	28	24	A	25	29	33	31	30	29	30	30	30	29	28	30	30	29	28	30	31	30	27	25	29.0	32.7
19-Mar	18	19	A	18	22	22	22	22	24	26	29	31	34	36	37	38	39	40	38	29	35	34	33	28	29.3	39.7
20-Mar	28	A	27	33	35	33	37	40	40	42	43	44	43	46	45	45	47	45	44	38	33	28	26	27	37.8	47.0
21-Mar	A	24	16	15	15	15	16	14	19	29	32	33	30	29	29	30	32	32	32	33	34	33	32	A	26.0	33.8
22-Mar	32	32	31	30	28	28	31	31	32	32	32	33	34	34	35	35	37	37	36	31	24	25	A	30	31.7	37.5
23-Mar	35	36	35	34	35	34	33	31	33	34	35	36	37	38	38	38	38	38	38	37	38	A	38	39	36.0	39.1
24-Mar	41	42	42	42	42	42	41	38	40	40	41	43	43	43	45	42	43	45	42	41	A	38	35	33	41.0	45.2
25-Mar	32	30	29	27	26	26	25	25	25	26	27	28	29	30	31	32	34	36	36	A	29	23	20	24	28.3	35.9
26-Mar	29	30	30	30	31	32	32	33	33	34	34	35	36	37	37	37	37	38	A	32	34	30	28	25	32.9	37.6
27-Mar	29	36	37	37	34	35	38	33	36	40	43	45	45	46	46	47	47	A	46	42	34	41	40	39	39.8	47.4
28-Mar	37	38	39	40	41	44	44	44	35	32	41	48	47	45	46	47	A	49	48	48	47	47	44	42	43.1	48.5
29-Mar	41	39	37	34	36	36	35	34	37	44	47	48	48	46	45	A	46	44	45	50	51	55	53	50	43.5	55.2
30-Mar	45	45	46	46	45	46	45	45	45	45	46	47	47	46	A	46	46	46	45	42	43	43	43	43	45.0	46.8
31-Mar	42	42	41	41	40	39	38	38	38	40	42	43	44	A	44	45	45	45	44	40	38	38	31	22	40.0	44.9
	33.5	32.9	31.9	31.3	30.5	31.0	30.9	30.2	31.2	33.3	35.9	39.3	40.1	40.5	41.1	41.5	41.4	40.9	40.3	37.5	35.4	34.7	34.1	33.5	Diurnal Average	
	45.2	45.0	46.3	45.9	44.9	45.7	44.9	44.8	45.0	44.8	46.5	48.4	50.1	50.5	50.6	47.3	47.4	48.5	48.0	50.4	50.8	55.2	52.9	49.6	Diurnal Maximum	

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

Hourly Averages

Ozone (O_3) - ppb

Portable-Kinuso - March 2010



Hourly Maximums

Ozone (O_3) - ppb

Portable-Kinuso - March 2010

Maximum Value: 57.4 ppb on Mar 29 22:00

Maximum Daily Average: 47.1 ppb on Mar 30

Minimum Value: 15 ppb on Mar 2 08:00

Minimum Daily Average: 29.9 ppb on Mar 21

Maximum Diurnal Average: 43.7 ppb at hour 16

Minimum Diurnal Average: 33.0 ppb at hour 8

Monthly Average: 38.27 ppb

Percentiles: P_1 = 19.4 P_{10} = 29.0 Q_1 = 33.1 Median = 38.7 Q_3 = 44.2 P_{90} = 47.6 P_{99} = 51.7

Hours in Service:	744
Hours of Data:	656
Hours of Missing Data:	88
Hours of Calibration:	33
Percent Operational Time:	92.6

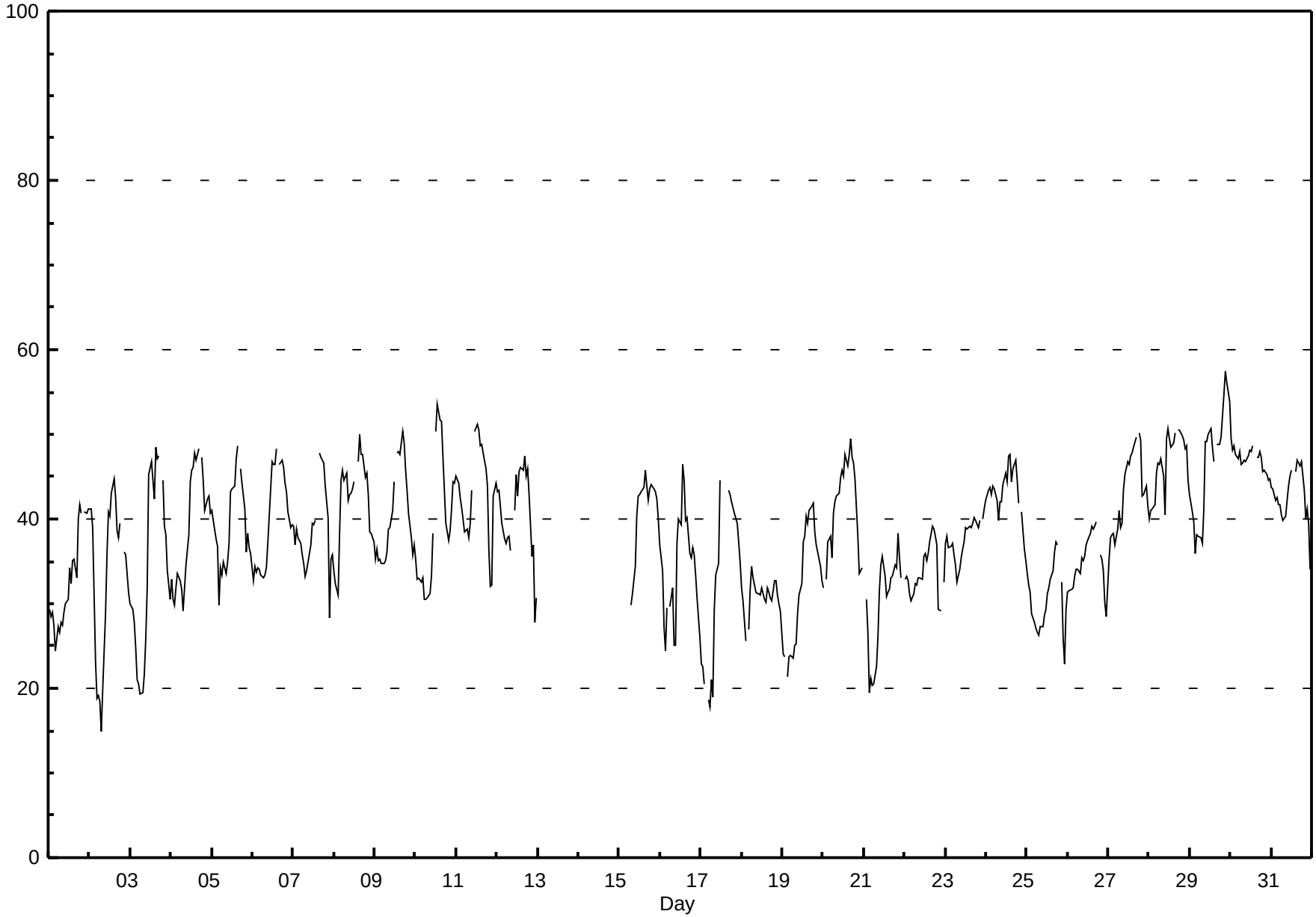
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	29	28	29	28	24	27	27	28	27	29	30	31	34	32	35	35	33	40	42	41	A	41	41	41	32.7	41.7
2-Mar	41	41	39	23	19	19	19	15	20	29	36	41	40	43	45	43	39	38	40	A	36	36	33	31	33.3	44.8
3-Mar	30	29	28	25	21	20	19	19	22	26	32	45	47	45	42	49	47	47	A	45	39	38	34	31	33.9	48.6
4-Mar	33	31	30	32	34	33	32	29	32	35	38	44	46	46	48	47	48	A	47	45	41	42	43	41	38.9	48.2
5-Mar	41	40	38	37	30	34	33	35	34	35	37	43	44	44	47	49	A	46	44	41	36	38	37	36	39.0	48.7
6-Mar	33	34	34	34	34	33	33	33	34	37	40	47	46	47	48	A	46	47	46	44	43	41	39	39	39.8	48.4
7-Mar	39	37	39	38	37	36	35	33	34	36	37	39	39	40	A	48	47	47	47	44	40	28	35	36	38.7	47.8
8-Mar	34	32	31	38	45	46	45	45	42	43	43	44	44	A	47	50	48	48	45	45	43	38	38	37	42.2	50.0
9-Mar	35	36	35	35	35	35	35	36	39	39	41	44	A	48	48	48	50	49	46	43	41	38	36	37	40.4	50.3
10-Mar	35	33	33	33	33	31	31	31	31	33	38	A	50	53	52	51	47	43	40	37	39	41	44	44	39.3	53.5
11-Mar	45	44	43	41	40	39	39	38	39	43	A	50	51	51	49	49	48	46	44	36	32	32	43	44	42.9	51.1
12-Mar	43	43	41	40	38	37	38	38	36	A	41	45	43	46	46	46	47	45	46	43	36	37	28	31	40.6	47.5
13-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
14-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
15-Mar	D	D	D	D	D	D	D	30	31	34	40	43	43	43	44	46	44	42	44	44	44	43	42	40	--	45.7
16-Mar	37	34	27	24	29	A	30	32	25	25	37	40	39	46	44	40	40	36	35	37	36	33	31	26	34.1	46.5
17-Mar	23	23	21	A	19	18	21	19	29	33	35	45	C	C	C	C	43	43	42	41	41	40	37	35	31.9	44.6
18-Mar	32	30	26	A	27	32	34	33	31	31	31	31	32	31	30	32	31	31	30	33	33	31	30	29	30.9	34.5
19-Mar	24	24	A	21	24	24	24	25	25	29	31	32	37	38	40	39	41	41	42	38	37	36	34	33	32.2	41.8
20-Mar	32	A	33	37	38	36	41	42	43	43	45	46	45	48	46	48	49	47	47	45	38	34	34	34	41.3	49.4
21-Mar	A	31	27	19	21	20	21	22	26	32	35	36	33	31	31	32	33	33	35	34	38	35	33	A	29.9	38.3
22-Mar	33	33	33	31	30	31	32	32	33	33	33	36	36	35	36	37	39	39	38	37	29	29	A	33	33.9	39.1
23-Mar	37	38	37	37	37	36	35	33	34	35	36	37	39	39	39	39	40	40	40	39	40	A	40	41	37.7	41.2
24-Mar	42	43	44	43	44	44	42	40	42	42	44	45	44	47	48	44	46	47	44	42	A	41	36	35	43.1	47.6
25-Mar	34	32	31	29	28	27	27	26	27	27	29	29	31	32	33	34	36	37	37	A	33	26	23	29	30.3	37.2
26-Mar	31	32	32	32	33	34	34	34	35	35	36	37	37	38	39	39	39	40	A	36	35	34	30	28	34.8	39.7
27-Mar	35	38	38	38	37	39	41	39	39	43	45	47	46	47	48	48	50	A	50	49	43	43	44	41	43.1	50.1
28-Mar	40	41	41	42	45	47	46	47	45	41	49	51	50	49	49	50	A	51	50	50	49	48	49	45	46.7	50.6
29-Mar	43	41	40	36	38	38	38	37	41	49	49	50	51	49	47	A	49	49	50	52	55	57	56	54	46.4	57.4
30-Mar	49	48	49	48	47	48	46	47	47	47	48	48	48	49	A	47	47	48	47	46	46	45	45	45	47.1	49.5
31-Mar	44	44	42	43	42	42	40	40	40	42	44	45	46	A	46	47	47	46	47	43	40	41	40	34	42.8	46.9
	36.1	35.6	34.7	34.0	33.2	33.5	33.4	33.0	34.0	36.0	38.6	41.8	42.3	42.9	43.3	43.7	43.6	43.2	43.1	41.9	39.3	38.1	37.6	36.8	Diurnal Average	
	49.5	48.1	48.7	47.6	47.2	47.9	46.5	47.1	47.0	49.1	49.5	50.6	51.1	53.5	51.8	51.5	50.3	50.5	50.4	52.3	54.8	57.4	56.1	53.9	Diurnal Maximum	

C - Calibration D - DAS Failure A - Automated Daily Zero Span

Hourly Maximums

Ozone (O_3) - ppb

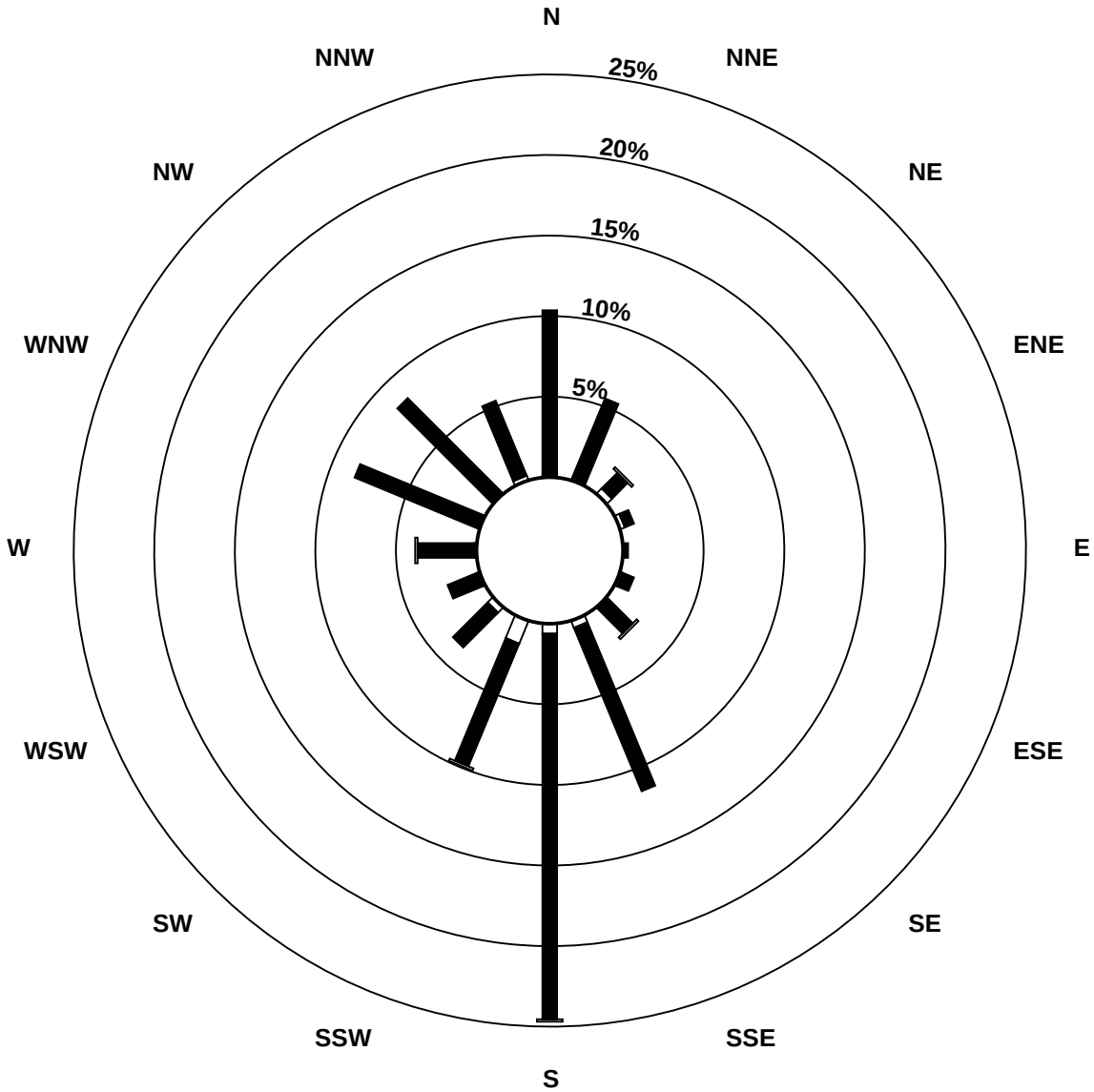
Portable-Kinuso - March 2010



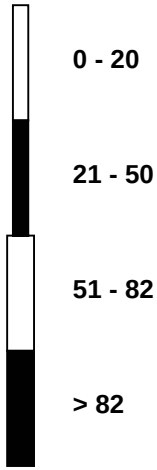
Pollutant Rose

Ozone (O_3) - ppb

Portable-Kinuso - March 2010



Pollutant Classes (ppb)



Eight Hour Running Averages

Ozone (O_3) - ppb

Portable-Kinuso - March 2010

Maximum Value: 49.4 ppb on Mar 30 03:00

Minimum Value: 15.7 ppb on Mar 17 08:00

Percentiles: P_1 = 17.0 P_{10} = 26.6 Q_1 = 31.0 Median = 35.9 Q_3 = 40.8 P_{90} = 44.0 P_{99} = 47.9

Hours in Service:	744
Hours of Data:	679
Hours of Missing Data:	65
Hours of Calibration:	7
Percent Operational Time:	92.2

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	33	31	30	28	27	27	26	26	25	25	26	26	27	27	28	29	30	31	32	33	34	35	36	37	37.3
2-Mar	39	40	39	36	34	31	27	23	20	18	17	20	22	25	29	33	36	38	39	39	38	37	36	35	39.5
3-Mar	33	32	30	30	28	26	24	22	21	21	21	23	26	29	32	35	39	41	43	42	40	38	37	34	42.9
4-Mar	32	30	30	29	29	29	29	29	29	29	30	32	33	35	37	40	42	43	45	44	43	42	42	41	44.6
5-Mar	40	39	38	38	36	35	33	33	32	31	31	32	34	36	38	39	40	42	43	42	40	39	37	36	42.5
6-Mar	35	34	33	32	33	33	32	32	32	32	33	34	36	38	39	41	42	44	45	44	43	42	41	40	44.8
7-Mar	39	38	37	37	37	36	36	35	34	34	34	34	35	35	35	37	39	40	41	41	41	39	38	37	41.4
8-Mar	35	34	32	30	31	34	35	36	37	38	40	42	42	42	42	42	43	44	44	44	43	42	40	39	44.2
9-Mar	37	36	35	34	33	33	34	33	34	34	35	36	36	38	40	42	43	45	45	45	44	43	41	40	45.3
10-Mar	38	37	35	34	33	32	31	31	30	30	31	31	33	36	39	41	43	45	45	43	42	41	40	39	44.8
11-Mar	39	39	40	41	41	41	40	39	39	38	38	39	41	42	44	46	47	47	46	44	42	39	37	36	47.3
12-Mar	35	35	34	35	36	37	37	37	36	36	36	37	37	39	40	41	43	42	43	42	40	38	36	33	43.0
13-Mar	31	29	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	31.3
14-Mar	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--
15-Mar	N	N	N	N	N	N	N	N	N	N	N	N	35	36	36	38	40	41	41	42	42	41	41	40	41.5
16-Mar	39	37	35	32	30	28	26	24	23	23	24	26	27	29	31	32	34	35	36	36	36	34	33	31	39.0
17-Mar	28	26	24	22	19	17	16	16	17	19	21	24	25	27	N	N	N	N	N	N	N	40	39	38	40.2
18-Mar	37	35	33	32	30	29	29	29	29	29	30	30	30	30	30	30	30	29	29	29	30	30	30	29	37.0
19-Mar	27	26	26	24	23	22	21	21	21	22	23	25	26	28	30	32	34	35	37	36	36	36	36	34	36.5
20-Mar	33	32	31	31	31	31	32	33	35	36	38	39	40	42	43	44	44	45	45	44	43	41	38	36	44.9
21-Mar	34	31	27	24	22	20	18	16	17	17	19	22	23	25	27	29	31	31	31	31	31	32	32	32	34.4
22-Mar	32	32	32	32	31	30	30	30	30	30	30	31	32	32	33	33	34	35	35	35	34	33	32	32	35.2
23-Mar	31	31	31	31	33	34	34	34	34	34	34	34	34	35	35	36	37	37	38	38	38	38	38	38	38.1
24-Mar	39	39	40	40	41	41	41	41	41	41	41	41	41	41	42	42	43	43	43	43	43	42	41	39	43.3
25-Mar	38	36	34	32	31	30	29	28	27	26	26	26	26	27	28	29	30	31	32	33	33	32	30	29	37.8
26-Mar	28	27	27	27	27	29	30	31	32	32	33	33	34	34	35	35	36	36	37	36	36	35	34	32	36.8
27-Mar	31	31	31	32	32	33	34	35	36	36	37	38	39	41	42	43	45	46	46	46	44	43	43	41	46.1
28-Mar	40	40	39	38	39	40	40	41	41	40	40	41	42	42	42	43	44	46	47	47	47	47	47	46	47.4
29-Mar	46	44	43	41	40	39	37	36	36	37	38	40	41	42	44	45	46	46	46	46	47	48	49	49	49.3
30-Mar	49	49	49	49	48	47	46	45	45	45	45	45	46	46	46	46	46	46	46	46	45	45	44	44	49.4
31-Mar	43	43	42	42	42	41	41	40	40	39	40	40	40	41	41	42	43	44	44	44	43	42	41	38	44.3
	49.1	49.3	49.4	48.9	48.1	46.9	45.9	45.3	45.3	45.3	45.2	45.3	45.5	45.6	45.7	45.9	46.7	47.3	47.1	47.1	47.1	48.0	49.2	49.3	
	Diurnal Maximums																								

N - Not Valid

PASZA
Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - °C

Portable-Kinuso - March 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 16.1 °C on Mar 15 16:00
Maximum Daily Average: 7.2 °C on Mar 28

Minimum Value: -14 °C on Mar 22 07:00
Maximum Diurnal Average: 6.7 °C at hour 16
Monthly Average: 1.30 °C

Minimum Daily Average: -9.1 °C on Mar 22
Minimum Diurnal Average: -3.0 °C at hour 7
Percentiles: P_1 = -13.0 P_{10} = -6.9 Q_1 = -2.6 Median = 0.9 Q_3 = 5.6 P_{90} = 9.6 P_{99} = 14.5

Hours in Service:	744
Hours of Data:	689
Hours of Missing Data:	55
Hours of Calibration:	0
Percent Operational Time:	92.6

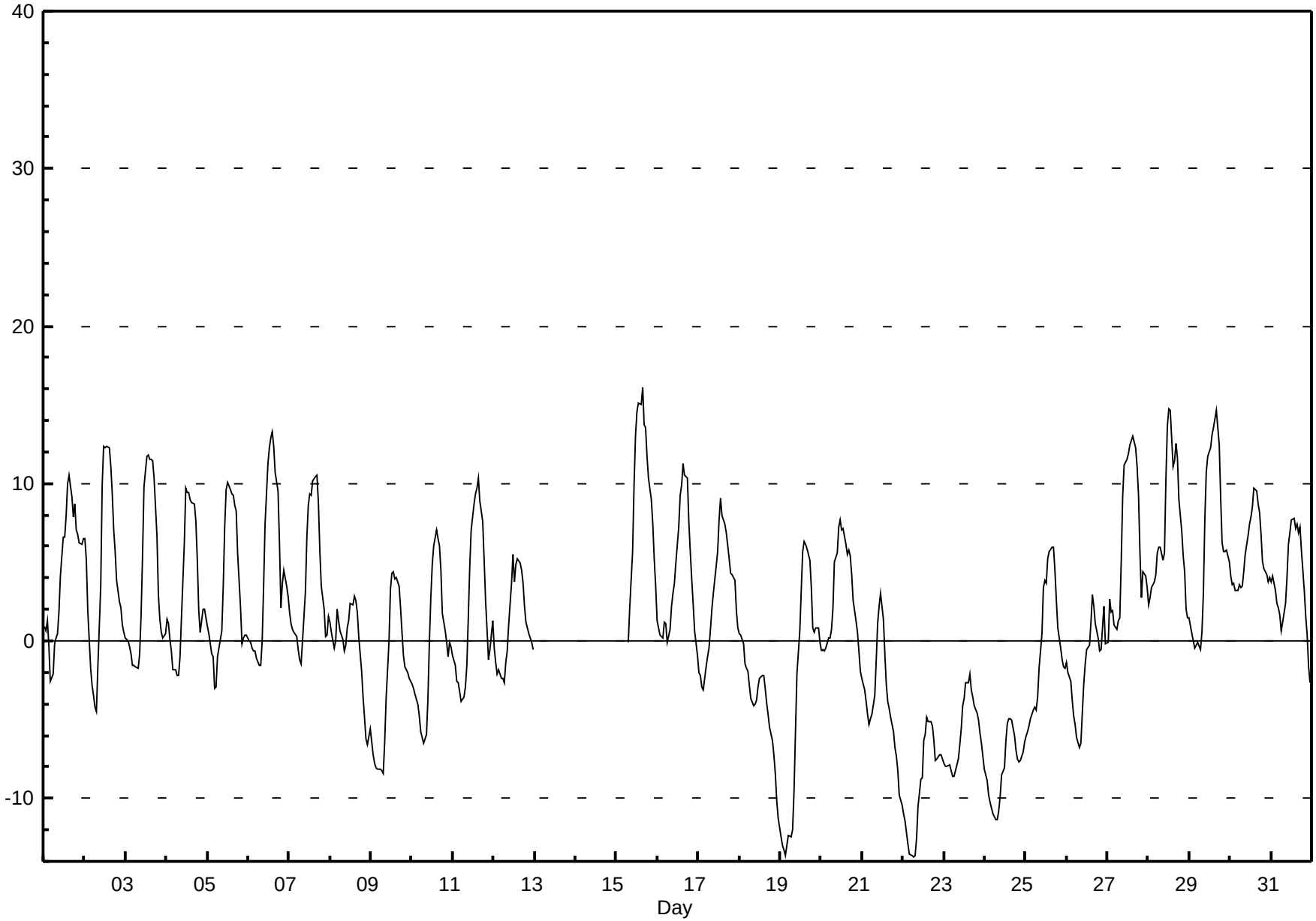
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	1	1	1	0	-3	-2	0	0	0	2	4	7	7	8	10	11	9	8	9	7	7	6	6	6	4.4	10.6
2-Mar	7	5	2	-2	-3	-3	-4	-4	-2	4	10	12	12	12	12	11	9	7	6	4	3	2	1	1	4.2	12.4
3-Mar	0	0	0	-1	-2	-2	-2	-2	-1	2	5	10	12	12	12	12	11	10	7	3	1	1	0	1	3.7	11.8
4-Mar	1	1	0	-1	-2	-2	-2	-2	-1	1	6	10	9	9	9	9	9	8	5	2	1	2	2	1	3.2	9.7
5-Mar	1	0	-1	-1	-3	-3	-1	0	1	4	7	10	10	10	9	9	9	8	6	2	0	0	0	0	3.2	10.0
6-Mar	0	0	0	-1	-1	-1	-2	-2	0	3	7	11	12	13	13	12	11	10	6	2	4	4	4	3	4.6	13.3
7-Mar	2	1	1	1	0	-1	-1	-1	0	3	7	9	9	9	10	10	11	9	6	4	2	0	0	2	3.8	10.5
8-Mar	1	1	0	0	2	1	1	0	-1	0	1	1	2	2	3	3	2	0	-2	-4	-5	-6	-7	-6	-0.4	2.8
9-Mar	-6	-7	-8	-8	-8	-8	-8	-8	-6	-4	0	3	4	4	4	4	3	2	1	-1	-2	-2	-2	-3	-2.3	4.4
10-Mar	-3	-3	-3	-4	-5	-6	-6	-7	-6	-4	0	3	5	6	7	6	6	4	2	1	0	-1	0	0	-0.3	7.1
11-Mar	-1	-2	-3	-3	-3	-4	-4	-3	-2	1	5	7	9	9	10	10	9	8	5	3	1	-1	-1	1	2.2	10.3
12-Mar	0	-1	-2	-2	-2	-2	-3	-1	-1	1	4	5	4	5	5	5	4	4	2	1	0	0	0	-1	1.1	5.5
13-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
14-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
15-Mar	D	D	D	D	D	D	D	0	2	6	10	13	15	15	15	16	14	14	12	10	9	7	5	3	--	16.1
16-Mar	1	0	0	0	1	1	0	1	2	3	4	5	7	9	10	11	11	10	8	6	4	2	1	-1	4.0	11.3
17-Mar	-2	-2	-3	-3	-2	-1	0	1	2	3	5	6	8	9	8	7	7	6	5	4	4	4	2	1	2.8	9.1
18-Mar	0	0	0	-1	-2	-2	-3	-4	-4	-4	-4	-3	-2	-2	-2	-3	-4	-5	-5	-6	-7	-8	-10	-11	-3.9	0.4
19-Mar	-12	-13	-13	-14	-13	-12	-12	-12	-10	-6	-2	1	3	6	6	6	6	5	3	1	1	1	1	0	-3.3	6.3
20-Mar	-1	-1	-1	0	0	0	1	2	5	6	7	8	7	7	6	5	6	5	4	3	1	1	-1	-2	2.9	7.7
21-Mar	-2	-3	-4	-5	-5	-5	-5	-3	-1	1	2	3	1	-1	-3	-4	-4	-5	-6	-7	-7	-8	-10	-10	-3.8	3.0
22-Mar	-11	-11	-12	-13	-14	-14	-14	-14	-13	-11	-9	-9	-6	-6	-5	-5	-5	-5	-6	-8	-8	-7	-7	-8	-9.1	-4.9
23-Mar	-8	-8	-8	-8	-8	-9	-9	-8	-7	-7	-6	-4	-4	-3	-3	-2	-3	-4	-4	-5	-5	-6	-7	-7	-5.8	-2.1
24-Mar	-8	-9	-10	-10	-11	-11	-11	-11	-11	-10	-8	-8	-6	-5	-5	-5	-5	-6	-7	-7	-8	-8	-7	-6	-8.1	-4.9
25-Mar	-6	-6	-5	-5	-4	-4	-4	-4	-2	0	3	4	4	5	6	6	6	4	3	1	0	-1	-2	-2	-0.1	6.0
26-Mar	-1	-2	-3	-4	-5	-5	-6	-7	-6	-5	-3	-1	-1	0	1	3	2	1	0	-1	-1	1	2	0	-1.6	2.9
27-Mar	0	3	2	2	1	1	1	1	5	9	11	12	12	12	13	13	12	11	9	6	3	4	4	3	6.3	13.0
28-Mar	2	3	3	4	4	6	6	6	5	6	10	14	15	15	11	11	12	12	9	7	5	4	2	1	7.2	14.7
29-Mar	1	0	0	0	0	0	-1	1	3	8	11	12	12	13	14	14	15	12	9	6	6	6	6	5	6.3	14.6
30-Mar	4	4	4	3	3	4	3	3	4	5	7	7	8	9	10	10	9	8	7	5	5	4	4	4	5.5	9.7
31-Mar	4	4	3	2	2	2	1	1	2	4	6	7	8	8	7	7	7	7	6	3	2	0	-2	-3	3.7	7.8
	-1.3	-1.6	-2.1	-2.6	-2.9	-2.9	-3.0	-2.7	-1.4	0.8	3.5	5.3	6.1	6.6	6.7	6.7	6.1	5.2	3.4	1.4	0.5	0.1	-0.5	-0.9	Diurnal Average	
	6.5	5.2	3.6	3.8	4.2	5.6	6.0	6.0	5.1	9.1	11.2	13.6	14.7	15.1	15.0	16.1	14.6	13.5	11.7	10.3	9.0	7.5	6.1	6.5	Diurnal Maximum	

D - DAS Failure

Hourly Averages

External Temperature (ET) - ^{o}C

Portable-Kinuso - March 2010



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Portable-Kinuso - March 2010

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1 Spd	12	11	11	6	1	5	13	11	10	11	9	1	5	4	4	4	4	1	9	8	13	11	13	12	6.1	13.4
Dir	186	193	191	198	182	188	190	180	184	175	187	334	352	320	317	322	316	181	162	167	175	161	168	166	183	190
2 Spd	11	7	4	3	0	2	3	1	3	4	7	10	13	14	14	14	15	13	13	11	12	13	8	12	7.5	14.7
Dir	169	180	254	331	7	174	273	45	107	158	176	163	158	159	148	139	142	145	167	180	179	178	201	183	165	142
3 Spd	11	9	9	11	7	11	11	12	11	10	6	4	3	7	7	6	4	2	2	3	4	5	7	7	4.7	12.0
Dir	186	185	190	187	197	191	194	194	190	189	200	203	127	22	10	10	6	29	158	212	235	199	201	197	192	194
4 Spd	10	12	11	7	6	5	7	13	15	12	5	2	6	6	10	10	6	4	1	2	6	12	9	9	4.2	15.1
Dir	187	186	183	184	197	191	194	188	181	184	185	143	6	14	19	20	15	350	11	196	192	173	184	196	182	181
5 Spd	9	7	6	6	1	5	11	11	12	9	3	2	4	8	6	5	3	3	4	3	3	7	10	12	3.7	12.4
Dir	196	210	199	181	174	189	191	190	188	192	209	47	22	18	8	344	340	329	123	214	222	199	190	178	193	178
6 Spd	12	12	10	12	12	12	9	6	6	11	9	4	5	3	2	7	6	4	3	3	11	12	11	12	6.0	12.4
Dir	176	176	175	172	174	172	179	198	199	179	176	207	278	269	305	10	358	358	249	200	164	163	169	166	179	176
7 Spd	9	11	11	11	9	10	12	12	12	7	4	3	6	5	5	6	4	2	1	1	3	3	6	11	4.3	12.5
Dir	186	187	194	188	189	181	179	180	178	159	143	8	339	327	354	0	350	315	267	188	215	211	197	186	190	180
8 Spd	7	6	4	2	8	7	7	7	7	6	7	9	9	9	8	9	8	7	3	2	2	4	8	11	4.4	11.3
Dir	193	211	201	260	291	289	285	293	292	299	298	304	309	320	297	300	313	322	285	242	198	197	182	174	278	174
9 Spd	10	7	7	8	11	13	14	14	14	12	10	11	14	16	14	13	17	13	11	11	12	15	14	16	12.2	16.9
Dir	179	180	197	190	185	178	175	174	177	173	173	178	177	181	174	178	164	162	159	158	164	166	162	162	173	164
10 Spd	15	15	14	12	8	8	8	11	11	10	8	7	6	6	3	7	9	6	5	7	10	10	12	13	6.9	15.1
Dir	158	159	166	172	184	197	190	181	184	180	177	166	174	174	129	16	11	357	54	166	169	168	163	162	167	159
11 Spd	11	12	11	11	14	11	12	13	13	13	18	18	16	17	9	6	6	12	3	6	1	4	4	3	8.9	17.9
Dir	163	169	177	186	177	186	173	177	167	173	173	168	174	170	168	258	192	171	265	22	126	219	262	275	178	173
12 Spd	6	6	9	11	10	8	7	10	10	5	2	6	11	9	7	9	6	3	2	1	1	2	2	2	1.8	11.3
Dir	156	175	178	185	190	190	186	182	183	169	148	8	10	14	12	11	10	323	174	219	227	196	203	244	177	10
13 Spd	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
Dir	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
14 Spd	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
Dir	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
15 Spd	D	D	D	D	D	D	D	8	9	12	8	5	4	5	8	3	8	7	7	11	9	8	6	3	--	12.1
Dir	D	D	D	D	D	D	D	198	189	180	183	179	166	8	31	6	14	72	143	151	166	172	186	330	--	180
16 Spd	2	2	3	3	8	5	2	3	5	2	2	4	3	5	4	2	7	10	6	8	3	1	1	2	0.7	10.4
Dir	140	131	218	204	187	199	133	186	180	229	18	314	21	328	338	358	360	18	360	25	346	26	148	189	354	18
17 Spd	1	2	1	3	4	2	5	6	4	6	5	6	9	11	11	10	11	10	9	6	9	8	5	3	4.4	11.3
Dir	157	229	207	194	165	188	179	201	348	13	3	327	305	310	308	314	309	301	307	304	301	306	304	318	304	310
18 Spd	4	4	10	9	5	6	8	8	8	7	8	7	7	6	6	6	7	9	9	10	7	4	2	2	5.8	9.7
Dir	15	10	26	21	6	328	334	330	323	317	315	314	318	310	289	309	309	305	310	334	350	358	275	251	330	26
19 Spd	2	2	3	4	9	12	13	14	13	11	9	8	6	4	6	7	8	6	2	4	9	11	7	1	5.4	13.7
Dir	194	196	216	202	179	175	176	175	173	175	164	155	162	227	272	285	296	282	310	155	179	172	184	184	188	175
20 Spd	5	4	3	3	3	4	2	3	4	5	7	6	8	10	10	8	7	4	2	3	2	3	3	3	2.9	10.0
Dir	196	202	182	193	229	228	243	258	275	293	295	306	327	317	322	317	310	281	248	151	208	208	220	153	278	317
21 Spd	3	1	1	1	2	1	2	2	3	2	6	3	10	14	10	11	9	8	10	9	8	8	7	7	4.4	13.8
Dir	172	208	250	236	54	147	70	56	60	136	130	142	2	9	350	1	355	7	8	7	9	7	353	4	11	9
22 Spd	7	7	5	3	3	4	4	4	4	1	2	5	3	5	5	7	6	3	2	1	1	2	3	4	3.5	7.1
Dir	358	10	14	3	360	357	349	348	359	331	15	19	30	11	358	11	332	350	337	282	148	277	319	327	357	10

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Portable-Kinuso - March 2010

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
23 Spd	5	3	2	3	3	3	3	3	4	5	5	5	7	6	6	5	7	8	6	7	8	9	13	15	5.4	15.4
Dir	357	337	306	328	331	320	326	330	352	329	351	342	14	354	0	357	2	31	20	19	18	33	42	40	8	40
24 Spd	15	16	16	9	9	9	9	7	11	13	11	14	15	16	15	16	18	18	17	17	16	18	19	19	10.0	18.9
Dir	41	40	44	43	64	76	81	104	150	134	168	169	164	176	168	160	164	167	160	161	165	168	168	168	144	168
25 Spd	19	17	16	14	15	12	7	4	8	9	6	7	8	6	6	5	5	6	3	2	3	2	4	7	3.0	19.0
Dir	169	170	166	161	163	180	189	195	181	191	184	27	14	329	322	325	324	323	298	264	288	292	343	4	185	169
26 Spd	9	9	10	7	8	6	8	8	6	4	1	2	4	7	3	2	8	7	2	2	7	7	7	2	3.3	9.9
Dir	11	10	8	344	358	2	3	4	348	316	348	73	358	8	36	10	14	16	274	164	195	194	182	224	1	8
27 Spd	3	3	3	4	6	5	6	7	7	4	7	10	10	10	9	8	7	6	2	4	5	11	12	13	4.0	13.3
Dir	221	250	236	209	184	202	171	172	158	222	283	289	286	295	284	283	276	277	90	116	182	178	182	175	226	175
28 Spd	13	13	9	9	7	8	7	3	2	1	2	3	5	6	9	5	4	7	5	5	5	5	5	9	3.6	13.3
Dir	185	171	180	183	195	173	177	152	347	123	230	224	275	315	307	287	303	318	291	275	236	244	204	167	215	185
29 Spd	12	11	13	14	13	13	11	9	12	16	18	20	15	12	8	2	3	1	7	6	6	6	0	3	8.3	19.7
Dir	170	180	175	181	179	178	183	185	168	166	166	171	172	165	108	132	177	304	286	259	196	272	34	227	178	171
30 Spd	4	3	4	3	4	6	5	6	7	8	10	12	11	10	10	12	10	8	7	3	4	4	5	6	6.4	11.9
Dir	199	249	273	268	285	290	282	283	293	294	299	302	306	309	304	313	316	301	305	298	281	281	284	292	295	313
31 Spd	6	7	7	7	6	4	4	5	6	6	6	9	9	10	9	9	9	8	7	4	4	3	3	3	5.9	10.2
Dir	292	294	293	288	287	277	270	281	288	289	296	311	306	307	311	309	302	306	309	306	302	238	207	203	296	307
Spd	5.1	4.4	4.0	4.1	4.0	4.6	4.6	4.8	4.9	4.7	3.6	1.6	1.2	2.2	2.6	3.3	2.9	1.8	0.8	1.3	3.3	4.3	4.6	4.5	Diurnal Average	
Dir	174	180	184	188	188	191	189	191	187	187	194	215	294	314	327	332	330	326	253	182	190	186	185	177		
Spd	19.0	16.6	16.5	13.8	14.6	12.7	13.6	13.9	15.1	15.8	17.9	19.7	16.0	16.8	14.8	15.8	18.2	18.4	17.2	17.0	16.3	17.9	18.9	18.9	Diurnal Maximum	
Dir	169	170	166	161	163	178	175	174	181	166	173	171	174	170	168	160	164	167	160	161	165	168	168	168		

Maximum Speed Value: 20 km/h on Mar 29 12:00
Maximum Daily Speed Average: 12.2 km/h on Mar 24
Maximum Diurnal Speed Average: 5.1 km/h at hour 1

Minimum Speed Value: 0 km/h on Mar 29 23:00
Minimum Daily Speed Average: 0.7 km/h on Mar 22
Minimum Diurnal Speed Average: 0.8 km/h at hour 19

Monthly Average Velocity: 2.45 km/h 196.5 deg

Speed Percentiles: $P_1 = 0.7$ $P_{10} = 2.3$ $Q_1 = 3.9$ Median = 6.9 $Q_3 = 10.2$ $P_{90} = 12.9$ $P_{99} = 17.8$

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

Hours in Service:	744
Hours of Data:	689
Hours of Missing Data:	55
Percent Operational Time:	92.6

D - DAS Failure

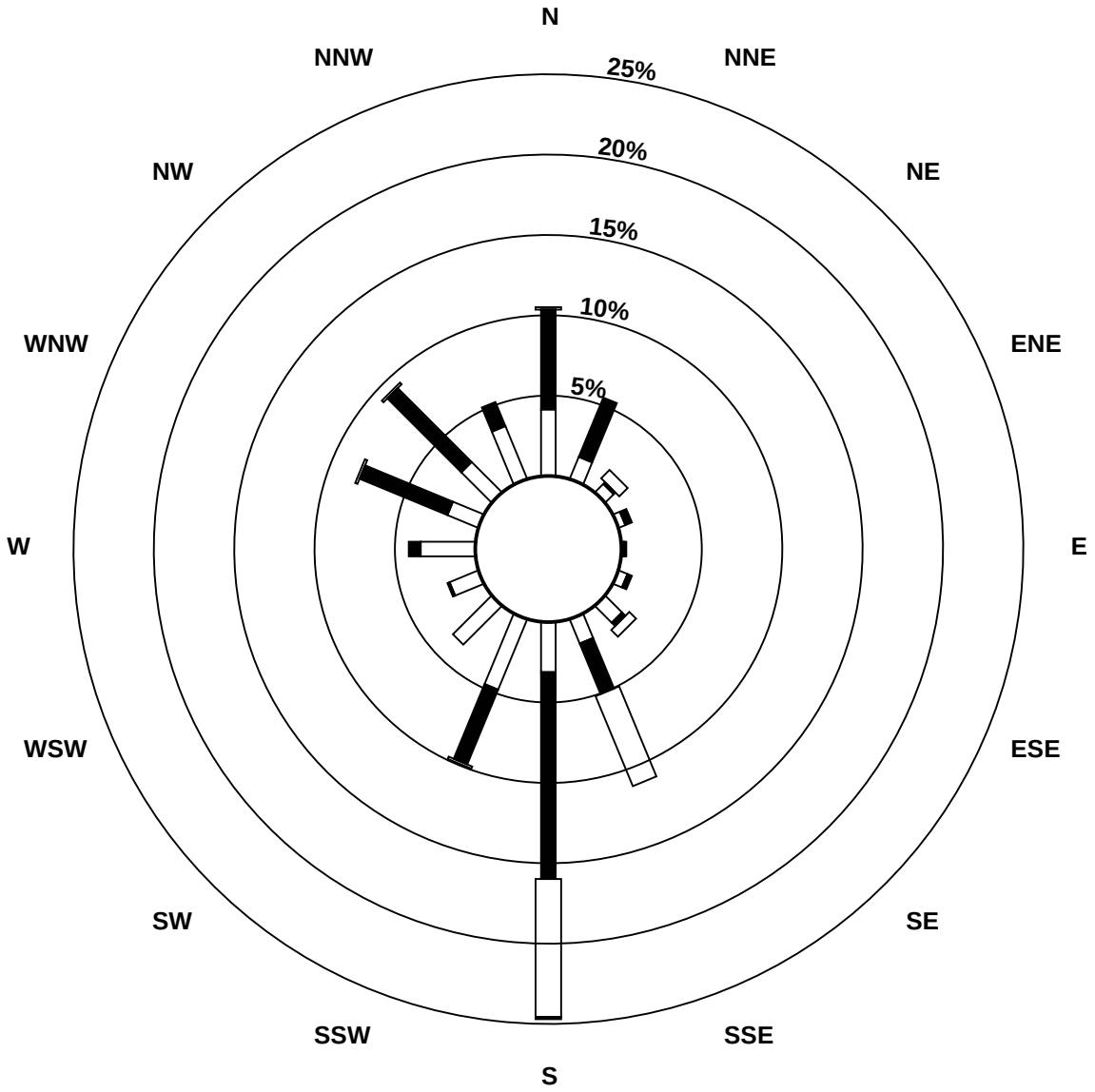
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	36	76	2	0	0	0	114
NorthEast	10	9	5	0	0	0	24
East	4	5	0	0	0	0	9
SouthEast	23	5	6	0	0	0	34
South	39	131	112	1	0	0	283
SouthWest	44	2	0	0	0	0	46
West	34	33	0	0	0	0	67
NorthWest	35	74	3	0	0	0	112
Total	225	335	128	1	0	0	689

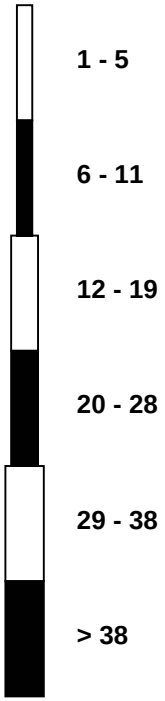
Wind Rose

Wind Speed (WS) (km/h)

Portable-Kinuso - March 2010



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Portable-Kinuso - March 2010

Maximum Speed: 20 km/h on Mar 29 12:00

Maximum Daily Speed Average: 14.6 km/h on Mar 24

Minimum Speed: 1 km/h on Mar 12 21:00

Minimum Daily Speed Average: 4.4 km/h on Mar 22

Maximum Diurnal Speed Average: 9.0 km/h at hour 14

Minimum Diurnal Speed Average: 6.0 km/h at hour 20

Monthly Average Speed: 7.76 km/h

Percentiles: P_1 = 1.9 P_{10} = 3.3 Q_1 = 4.5 Median = 7.2 Q_3 = 10.3 P_{90} = 12.9 P_{99} = 18.0

Hours in Service:	744
Hours of Data:	689
Hours of Missing Data:	55
Percent Operational Time:	92.6

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	12	11	11	7	3	6	13	11	11	11	10	4	6	4	4	4	4	4	9	8	13	11	13	12	8.4	13.4
2-Mar	11	7	4	4	3	3	3	2	4	5	7	10	13	15	14	14	15	13	13	11	12	13	8	12	9.0	14.9
3-Mar	11	9	9	11	7	11	11	12	11	10	6	4	3	7	8	6	4	3	3	3	5	5	7	8	7.3	12.2
4-Mar	10	12	11	7	6	6	8	13	15	12	5	4	7	7	10	10	6	4	2	3	6	12	10	9	8.1	15.1
5-Mar	10	7	7	7	3	5	12	11	12	10	3	2	5	8	6	6	5	4	5	3	3	8	10	13	6.7	12.6
6-Mar	12	12	10	12	12	12	9	7	6	11	9	5	5	4	4	7	6	5	3	4	11	12	11	12	8.4	12.5
7-Mar	10	11	11	11	9	11	12	13	12	8	5	4	6	5	6	6	5	3	2	2	3	3	7	11	7.3	12.5
8-Mar	7	6	4	3	8	8	7	8	7	6	8	9	9	9	8	9	8	7	4	2	3	4	8	11	6.9	11.4
9-Mar	10	7	7	8	11	13	14	14	14	12	10	11	15	16	15	14	17	13	12	11	12	15	14	16	12.5	17.1
10-Mar	15	15	14	12	8	8	9	11	11	10	8	7	7	6	4	8	9	7	6	7	10	10	12	13	9.4	15.1
11-Mar	11	12	11	11	14	12	12	13	13	14	18	18	16	17	11	6	7	13	10	8	4	4	5	5	11.0	18.0
12-Mar	7	7	9	11	10	8	7	10	10	6	4	7	12	9	8	9	6	3	2	2	1	2	3	3	6.5	11.7
13-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
14-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
15-Mar	D	D	D	D	D	D	D	8	10	12	9	5	5	6	8	4	9	7	8	11	11	9	8	4	--	12.2
16-Mar	3	3	3	3	8	6	3	4	5	3	4	5	5	5	5	4	7	11	7	8	4	4	4	4	5.0	10.6
17-Mar	3	3	4	5	6	4	6	6	5	6	5	6	9	12	11	10	11	10	9	6	9	9	5	4	6.8	11.6
18-Mar	4	4	10	9	6	6	8	8	8	7	8	7	7	7	7	6	7	9	9	10	7	5	2	2	6.7	10.1
19-Mar	2	3	3	4	9	13	13	14	13	11	10	8	7	6	7	7	8	6	5	5	9	11	8	3	7.6	13.7
20-Mar	5	4	4	4	3	4	2	3	5	6	7	7	8	10	10	9	7	4	2	3	2	3	4	4	5.0	10.3
21-Mar	4	3	2	2	3	3	3	2	4	4	6	6	10	14	10	11	10	8	10	9	9	9	8	7	6.6	14.2
22-Mar	7	7	5	4	4	4	4	5	4	3	4	6	4	6	6	8	6	4	2	2	2	2	3	4	4.4	7.9
23-Mar	5	4	3	3	3	3	3	4	5	5	5	6	8	7	7	6	7	8	6	7	8	9	13	16	6.3	15.5
24-Mar	15	16	16	9	9	9	9	8	12	13	12	15	15	17	15	16	18	19	17	17	17	18	19	19	14.6	19.0
25-Mar	19	17	17	14	15	12	7	4	8	9	6	7	9	6	6	6	5	6	3	2	3	3	5	7	8.2	19.1
26-Mar	9	10	10	7	8	7	8	8	6	4	4	4	5	7	4	4	8	7	3	4	7	8	8	3	6.4	10.2
27-Mar	4	4	3	4	6	5	6	7	7	6	7	10	11	10	9	8	7	6	4	5	6	11	12	13	7.1	13.3
28-Mar	13	14	10	10	8	9	8	6	4	5	5	4	7	6	9	6	4	7	6	5	5	5	5	9	7.0	13.5
29-Mar	12	11	13	14	14	13	11	9	13	16	18	20	15	13	9	4	6	5	8	7	8	7	3	3	10.5	19.9
30-Mar	4	3	4	3	4	6	5	6	8	9	10	12	11	10	10	12	10	9	7	3	4	5	5	6	7.0	12.1
31-Mar	6	7	7	7	6	5	4	5	6	6	7	9	9	11	9	9	9	8	7	4	4	3	3	3	6.5	10.5
	8.6	8.1	7.9	7.3	7.4	7.5	7.8	8.0	8.5	8.3	7.6	7.6	8.6	9.0	8.3	7.9	8.1	7.3	6.4	6.0	6.8	7.6	7.6	8.1	Diurnal Average	
	19.1	16.7	16.7	14.0	14.8	12.8	13.6	13.9	15.1	16.0	18.1	19.9	16.5	17.1	15.1	16.1	18.4	18.7	17.5	17.1	16.5	18.1	19.0	19.0	Diurnal Maximum	

D - DAS Failure

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

Hourly Standard Deviations

Wind Direction (WD) - deg

Portable-Kinuso - March 2010

Maximum Value: 93.0 deg on Mar 29 23:00

Minimum Value: 4.0 deg on Mar 9 06:00

Percentiles: P_1 = 4.4 P_{10} = 7.0 Q_1 = 10.5 Median = 15.6 Q_3 = 27.5 P_{90} = 51.6 P_{99} = 85.3

Hours in Service:	744
Hours of Data:	689
Hours of Missing Data:	55
Hours of Calibration:	0
Percent Operational Time:	92.6

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	6	5	5	26	69	35	6	13	21	10	14	77	26	29	23	24	15	85	6	13	10	7	7	6	85.0
2-Mar	9	13	34	47	92	54	23	88	35	42	11	15	12	11	11	7	9	7	9	9	10	8	15	10	91.8
3-Mar	6	11	9	8	14	6	6	9	17	8	12	8	44	11	25	23	24	55	42	17	26	21	10	11	55.4
4-Mar	13	6	10	17	25	32	25	8	5	5	11	60	30	26	9	6	21	27	78	45	25	8	14	6	77.8
5-Mar	9	29	40	37	68	15	8	12	6	9	25	69	30	11	33	23	73	54	41	18	28	18	14	8	72.7
6-Mar	6	5	8	5	6	4	7	21	18	8	9	51	28	49	63	19	22	34	36	21	4	5	4	5	62.6
7-Mar	10	7	4	6	6	8	4	5	7	19	24	53	21	12	23	20	27	29	50	66	16	18	18	8	65.8
8-Mar	20	20	21	63	17	18	15	13	15	13	12	13	12	17	21	14	15	13	22	21	48	11	12	7	63.4
9-Mar	6	11	9	7	9	4	5	4	6	9	9	15	15	13	15	14	10	11	11	6	7	7	5	6	14.9
10-Mar	5	5	14	10	11	9	15	8	8	8	12	19	18	23	51	29	12	15	33	11	10	10	7	5	51.1
11-Mar	6	7	5	6	5	10	12	6	7	8	7	9	14	11	47	22	34	7	66	50	78	34	26	78	78.0
12-Mar	23	27	17	11	8	10	16	7	10	18	71	45	17	25	26	17	28	27	40	33	17	44	46	29	70.9
13-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--
14-Mar	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--
15-Mar	D	D	D	D	D	D	D	11	8	8	13	36	53	52	23	81	23	17	19	6	61	45	38	51	80.8
16-Mar	61	64	23	26	11	36	62	47	29	51	72	29	88	28	45	73	19	11	13	11	31	84	84	63	87.6
17-Mar	78	25	67	44	63	76	41	33	35	26	40	15	11	12	10	11	11	10	11	11	12	11	13	49	78.2
18-Mar	28	11	11	11	21	13	10	10	12	12	12	14	15	13	15	15	15	10	11	16	16	19	24	13	27.9
19-Mar	26	31	21	18	6	5	4	4	6	7	11	15	22	47	25	20	16	13	66	34	8	5	10	76	76.0
20-Mar	12	20	18	21	37	13	21	16	21	18	16	18	19	14	10	14	16	22	33	46	38	42	35	55	54.8
21-Mar	58	84	45	69	69	67	57	76	38	64	32	80	17	14	16	17	16	16	11	12	14	14	17	18	84.3
22-Mar	18	18	21	31	21	19	21	20	31	82	62	29	62	52	39	30	18	38	42	32	77	27	36	16	81.9
23-Mar	15	30	20	18	16	9	13	14	23	12	20	23	26	28	26	38	22	12	16	11	14	8	7	7	37.7
24-Mar	7	6	7	7	8	11	9	21	11	9	19	12	13	11	11	12	9	10	9	8	8	9	7	8	21.1
25-Mar	7	8	10	9	9	10	19	26	11	14	17	47	21	12	14	11	11	9	15	32	21	31	35	13	46.6
26-Mar	11	13	16	15	14	13	14	15	24	28	90	69	45	27	52	81	18	19	38	81	14	20	21	46	89.9
27-Mar	38	20	18	18	14	18	22	9	10	51	25	15	13	12	16	16	14	14	85	42	25	6	7	6	85.2
28-Mar	4	10	13	10	17	30	30	73	75	86	69	33	36	25	16	34	43	18	16	12	11	14	24	7	85.9
29-Mar	6	9	5	8	6	7	9	10	16	8	11	8	11	20	29	74	79	90	18	45	46	35	93	36	93.0
30-Mar	22	25	19	17	24	18	18	15	16	12	13	9	12	13	13	10	11	11	12	25	18	15	15	14	25.4
31-Mar	11	12	14	12	18	32	35	17	13	18	17	14	14	14	12	13	11	12	12	12	17	29	19	18	34.7
	78.2	84.3	67.5	69.3	91.8	76.1	61.9	87.8	74.8	85.9	89.9	79.7	87.6	52.3	62.6	80.8	79.3	90.0	85.2	81.1	77.7	83.8	93.0	78.0	

D - DAS Failure

PASZA
Valleyview Station
Monthly Summary Tables, Graphs and Roses

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Valleyview - March 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.1 ppb on Mar 7 15:00 Maximum Daily Average: 0.6 ppb on Mar 2

Minimum Value: 0 ppb on Mar 1 02:00 Minimum Daily Average: 0.0 ppb on Mar 8
Maximum Diurnal Average: 0.2 ppb at hour 13 Minimum Diurnal Average: 0.1 ppb at hour 20
Monthly Average: 0.11 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.2 P_{90} = 0.3 P_{99} = 0.9

Hours in Service:	744
Hours of Data:	710
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

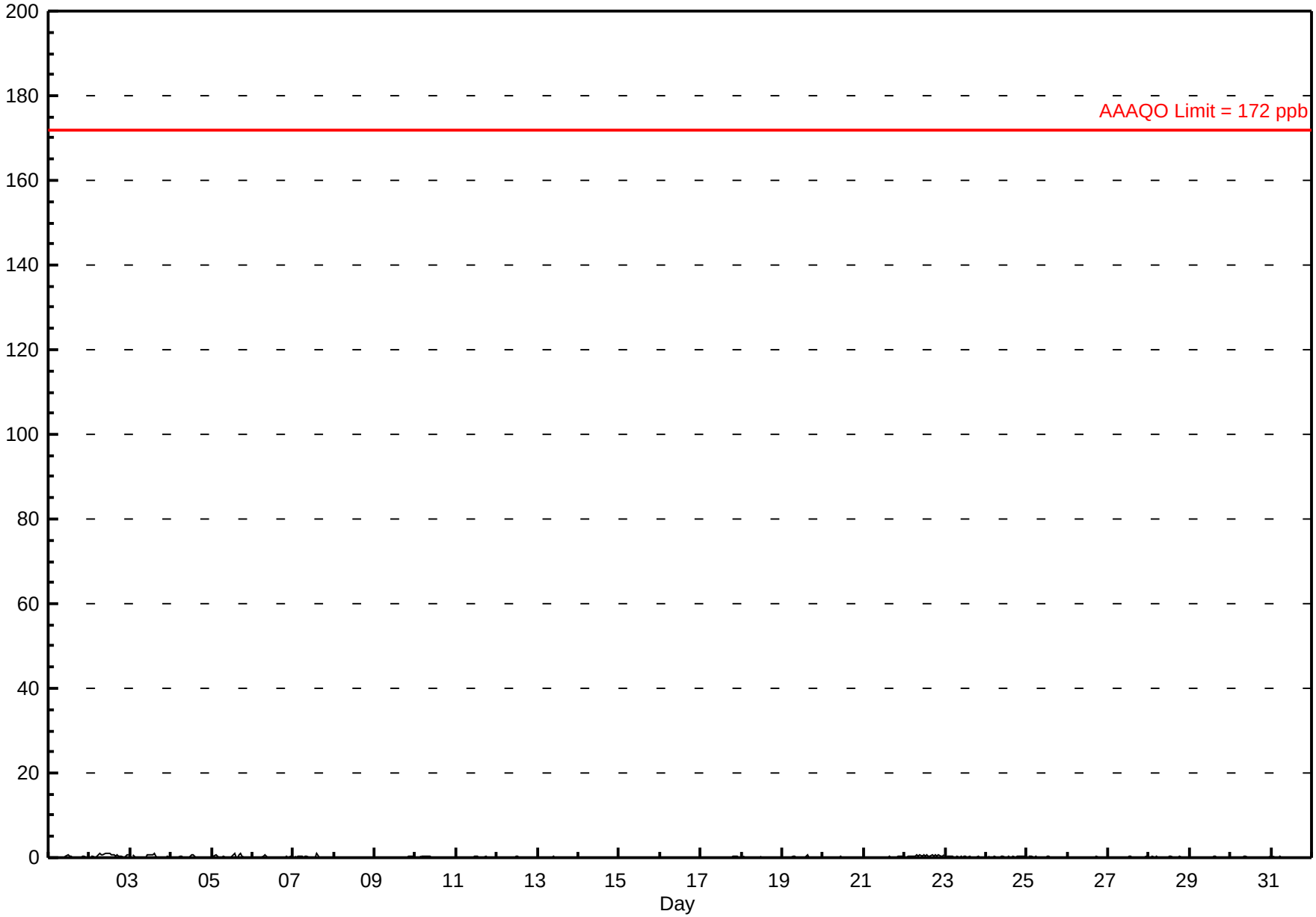
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7
2-Mar	A	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	1	1	0.6	0.9
3-Mar	A	1	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.3	0.9
4-Mar	A	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0.1	0.7
5-Mar	A	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0.2	0.9
6-Mar	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
7-Mar	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.1	1.1
8-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	0.0	0.0
9-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
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	0.4
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	0.0	0.3
12-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
13-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	0.0	0.2
14-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	0.0	0.0
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	0.0	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	0	0	0.0	0.1
17-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
18-Mar	A	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
19-Mar	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.1	0.8
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	0.0	0.3
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	0.3
22-Mar	A	0	0	0	0	0	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1	0	0	1	0.4	0.6
23-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
24-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
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	0.4
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	0.0	0.2
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	0.5
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	0.1	0.3
29-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	0.0	0.3
30-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
31-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	0.0	0.5
	--	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	Diurnal Average	
	--	0.8	0.5	0.4	0.4	0.8	0.9	0.7	0.8	0.9	0.9	0.9	0.8	0.9	1.1	0.8	0.8	0.9	0.5	0.4	0.5	0.4	0.6	0.7	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 57 ppb

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Valleyview - March 2010



Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Valleyview - March 2010

Maximum Value: 3.8 ppb on Mar 7 15:00

Maximum Daily Average: 1.1 ppb on Mar 5

Minimum Value: 0 ppb on Apr 1 00:00

Minimum Daily Average: 0.5 ppb on Mar 26

Maximum Diurnal Average: 0.9 ppb at hour 15

Minimum Diurnal Average: 0.7 ppb at hour 19

Monthly Average: 0.81 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.5$ $Q_1 = 0.7$ Median = 0.8 $Q_3 = 0.9$ $P_{90} = 1.0$ $P_{99} = 1.9$

Hours in Service:	744
Hours of Data:	710
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-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	1.7
2-Mar	A	1	1	1	1	1	1	1	1	2	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1.1	2.4
3-Mar	A	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	2	1	1.0	1.9
4-Mar	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
5-Mar	A	2	2	1	1	1	1	1	1	1	1	1	1	3	1	2	3	2	1	1	1	1	1	1	1.1	2.8
6-Mar	A	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2	1	0.9	1.9
7-Mar	A	1	1	1	1	1	1	1	1	1	1	1	1	1	4	1	1	1	1	1	1	1	1	1	1.0	3.8
8-Mar	A	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.7
9-Mar	A	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0.5	1.2
10-Mar	A	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.7
11-Mar	A	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	0.7	1.7
12-Mar	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.0
13-Mar	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	0.9
14-Mar	A	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8
15-Mar	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.0
16-Mar	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0.9	1.0
17-Mar	A	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.0
18-Mar	A	1	1	1	1	1	1	1	C	C	C	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.0
19-Mar	A	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1.0	2.0
20-Mar	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.0
21-Mar	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	0.8
22-Mar	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	0.9
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	1	0.8	0.9
24-Mar	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	0.9
25-Mar	A	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	0	0	0	0	0	0	0	0	0.6	1.6
26-Mar	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0.5	0.6
27-Mar	A	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	0.9	1.8
28-Mar	A	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1.0	1.9
29-Mar	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.0
30-Mar	A	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.0
31-Mar	A	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.5	0.8
	--	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8	Diurnal Average	
	--	1.7	1.6	1.0	1.5	1.0	1.2	1.8	1.2	1.9	1.2	1.7	1.8	2.7	3.8	2.0	2.8	1.8	1.0	1.0	1.9	1.0	1.9	1.0	Diurnal Maximum	

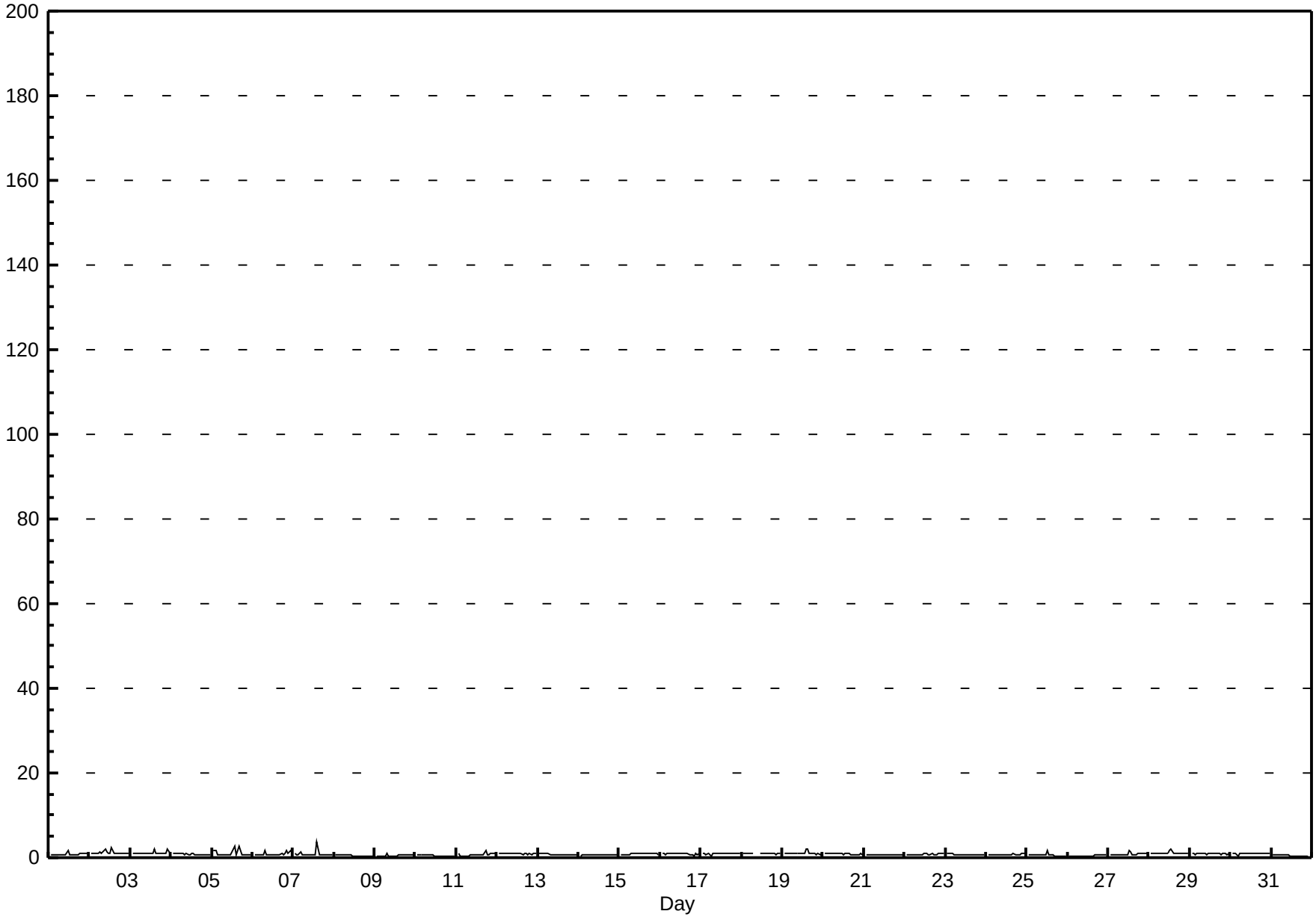
C - Calibration

A - Automated Daily Zero Span

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

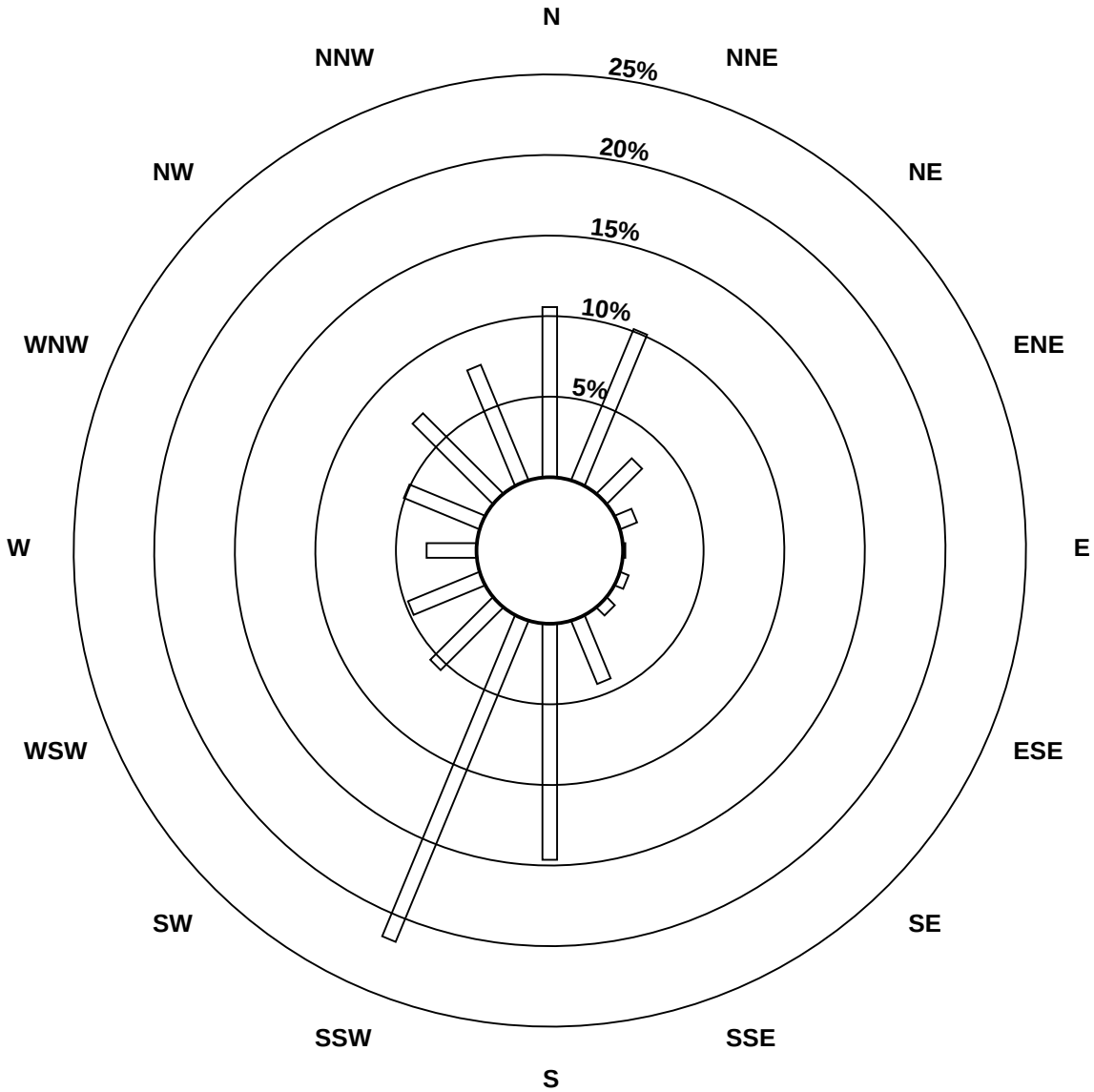
Valleyview - March 2010



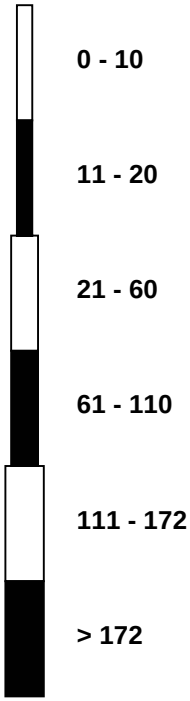
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Valleyview - March 2010



Pollutant Classes (ppb)



PASZA
Peace Airshed Zone Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Valleyview - March 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.2 ppb on Mar 6 23:00 Maximum Daily Average: 0.2 ppb on Mar 3

Minimum Value: 0 ppb on Mar 5 11:00 Minimum Daily Average: 0.0 ppb on Mar 8
Maximum Diurnal Average: 0.1 ppb at hour 8 Minimum Diurnal Average: 0.1 ppb at hour 16
Monthly Average: 0.09 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.1 P_{90} = 0.2 P_{99} = 0.5

Hours in Service:	744
Hours of Data:	710
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

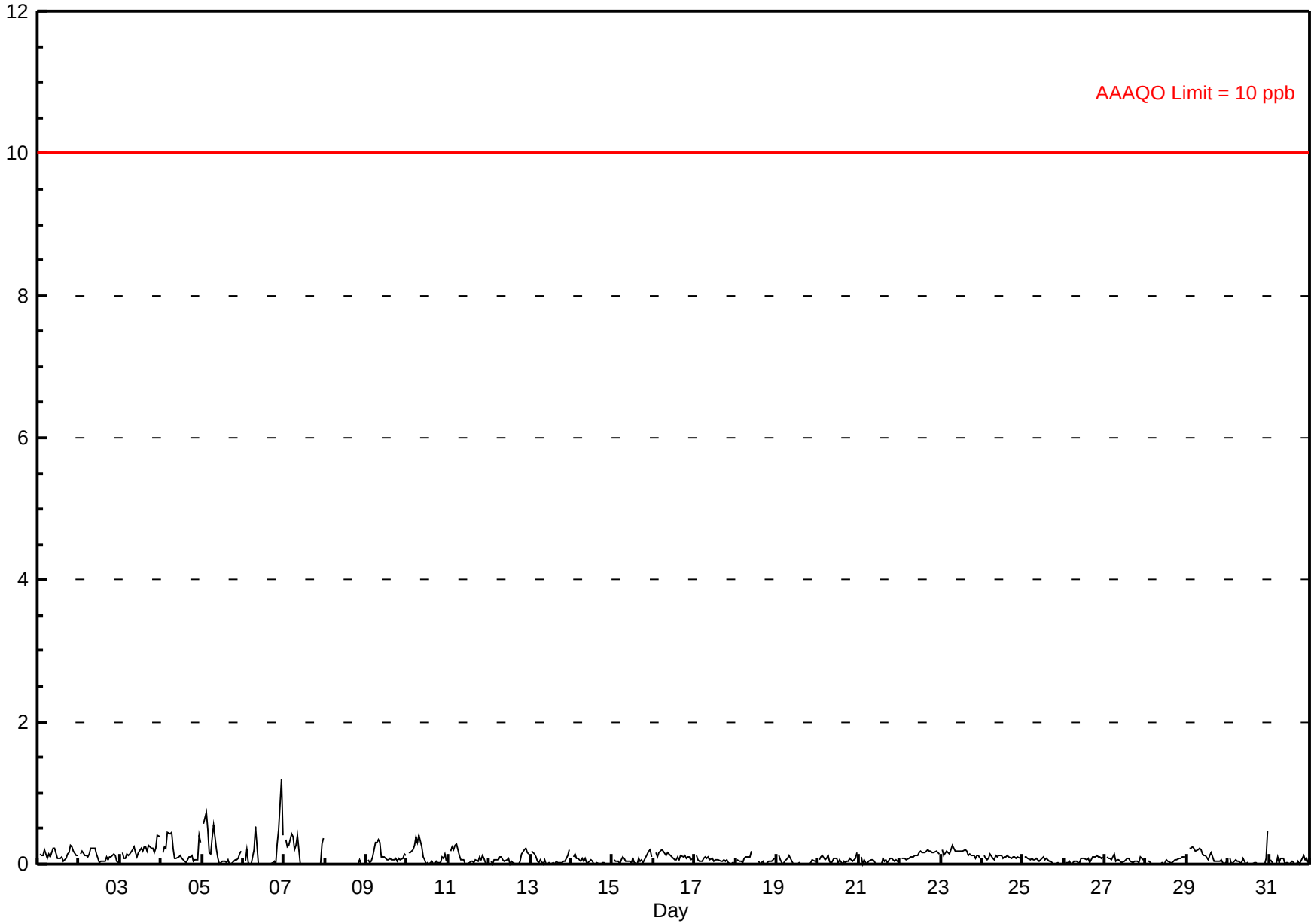
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
2-Mar	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
3-Mar	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
4-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
5-Mar	A	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
6-Mar	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.2	1.2
7-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
8-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	0.0	0.1
9-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
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	0.4
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	0.1	0.3
12-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
13-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
14-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	0.0	0.1
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	0	0	0.1	0.2
17-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	0.1
18-Mar	A	0	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
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	0.0	0.1
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	0.1	0.2
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	0.0	0.1
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
24-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	0.1
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	0.1
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	0.1
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	0.1
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	0.0	0.1
29-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
30-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	0.0	0.5
31-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	0.0	0.1
	--	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	Diurnal Average	
	--	0.6	0.7	0.5	0.4	0.4	0.4	0.6	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.5	1.2	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

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Valleyview - March 2010



Hourly Maximums

Hydrogen Sulphide (H_2S) - ppb

Valleyview - March 2010

Maximum Value: 4.1 ppb on Mar 6 23:00

Maximum Daily Average: 0.8 ppb on Mar 6

Minimum Value: 0 ppb on Mar 8 12:00

Minimum Daily Average: 0.3 ppb on Mar 8

Maximum Diurnal Average: 0.7 ppb at hour 23

Minimum Diurnal Average: 0.4 ppb at hour 12

Monthly Average: 0.49 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.3$ $Q_1 = 0.4$ Median = 0.4 $Q_3 = 0.5$ $P_{90} = 0.7$ $P_{99} = 1.4$

Hours in Service:	744
Hours of Data:	710
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

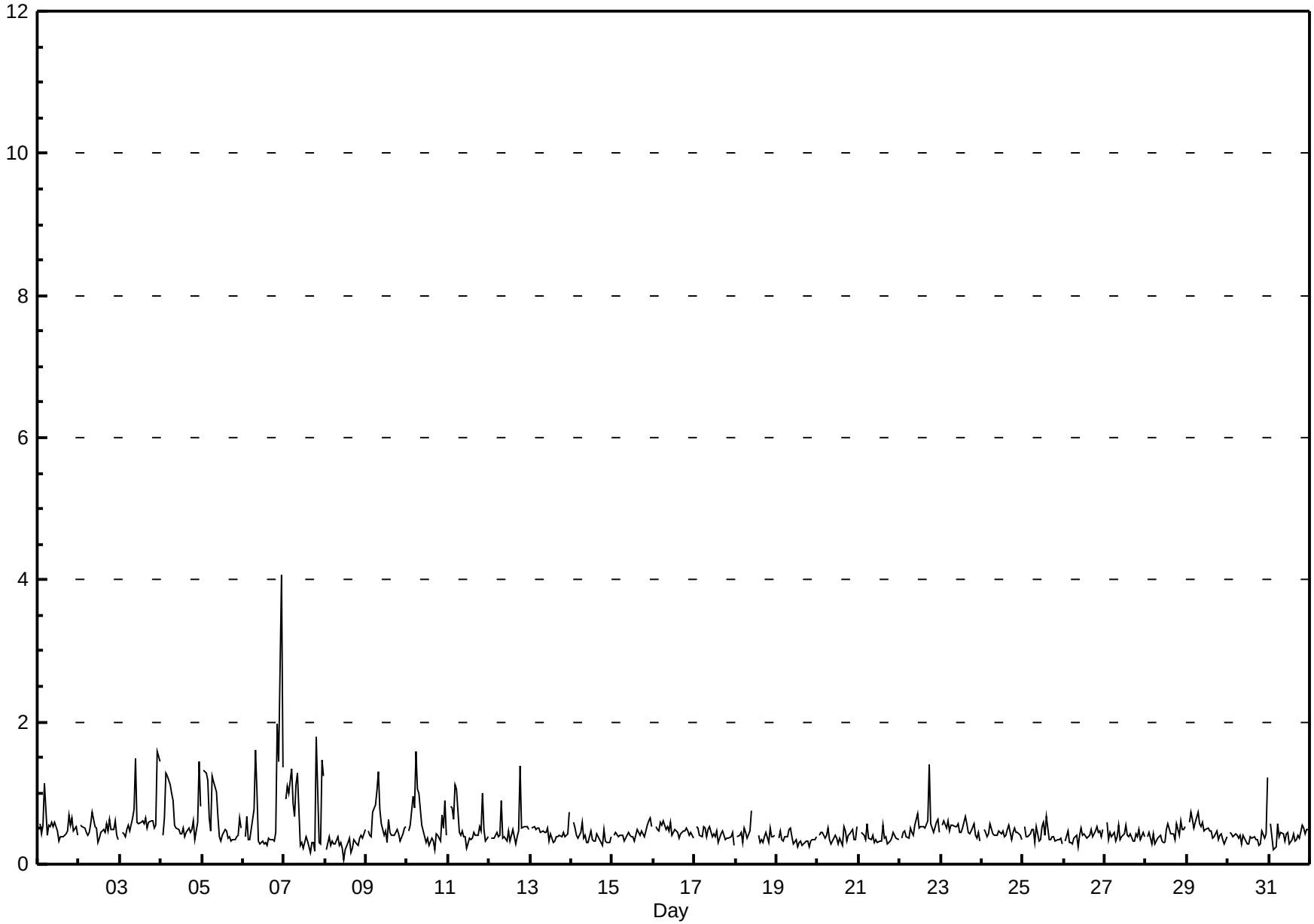
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	A	1	0	1	1	0	1	1	1	1	1	0	0	0	0	0	0	0	1	1	1	0	1	0	0.5	1.1
2-Mar	A	1	1	1	0	0	0	1	1	1	1	0	0	0	0	0	1	0	1	0	0	1	0	0	0.5	0.7
3-Mar	A	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	2	1	0.7	1.6
4-Mar	A	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1	0	0	1	0	1	1	1	0.7	1.4
5-Mar	A	1	1	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.6	1.3
6-Mar	A	0	1	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	2	1	4	1	0.8	4.1
7-Mar	A	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	2	0	0	1	1	0.7	1.8
8-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	0.3	0.5
9-Mar	A	0	0	0	1	1	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0.6	1.3
10-Mar	A	0	1	1	1	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0.6	1.6
11-Mar	A	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0.5	1.1
12-Mar	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0.5	1.4
13-Mar	A	1	1	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	0.7
14-Mar	A	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
15-Mar	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.4	0.6
16-Mar	A	1	0	0	1	1	1	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.5	0.6
17-Mar	A	1	1	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
18-Mar	A	0	0	0	0	1	0	0	0	1	C	C	C	0	0	0	0	0	0	0	1	0	0	0	0.4	0.8
19-Mar	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
20-Mar	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.4	0.5
21-Mar	A	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.4	0.6
22-Mar	A	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0.5	1.4
23-Mar	A	1	1	1	1	0	1	1	1	1	1	0	0	1	1	1	0	0	0	1	0	0	0	0	0.5	0.7
24-Mar	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0.4	0.6
25-Mar	A	1	0	0	0	0	0	0	1	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0.4	0.7
26-Mar	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.4	0.5
27-Mar	A	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
28-Mar	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0	1	0.4	0.6
29-Mar	A	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.5	0.7
30-Mar	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	1.2
31-Mar	A	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0.4	0.6
	--	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.7	0.6	Diurnal Average	
	--	1.3	1.3	1.3	1.4	1.6	1.2	1.6	1.3	1.5	0.7	0.6	0.6	0.6	0.7	0.7	0.6	1.4	1.4	1.8	2.0	1.4	4.1	1.4	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

Hourly Maximums

Hydrogen Sulphide (H_2S) - ppb

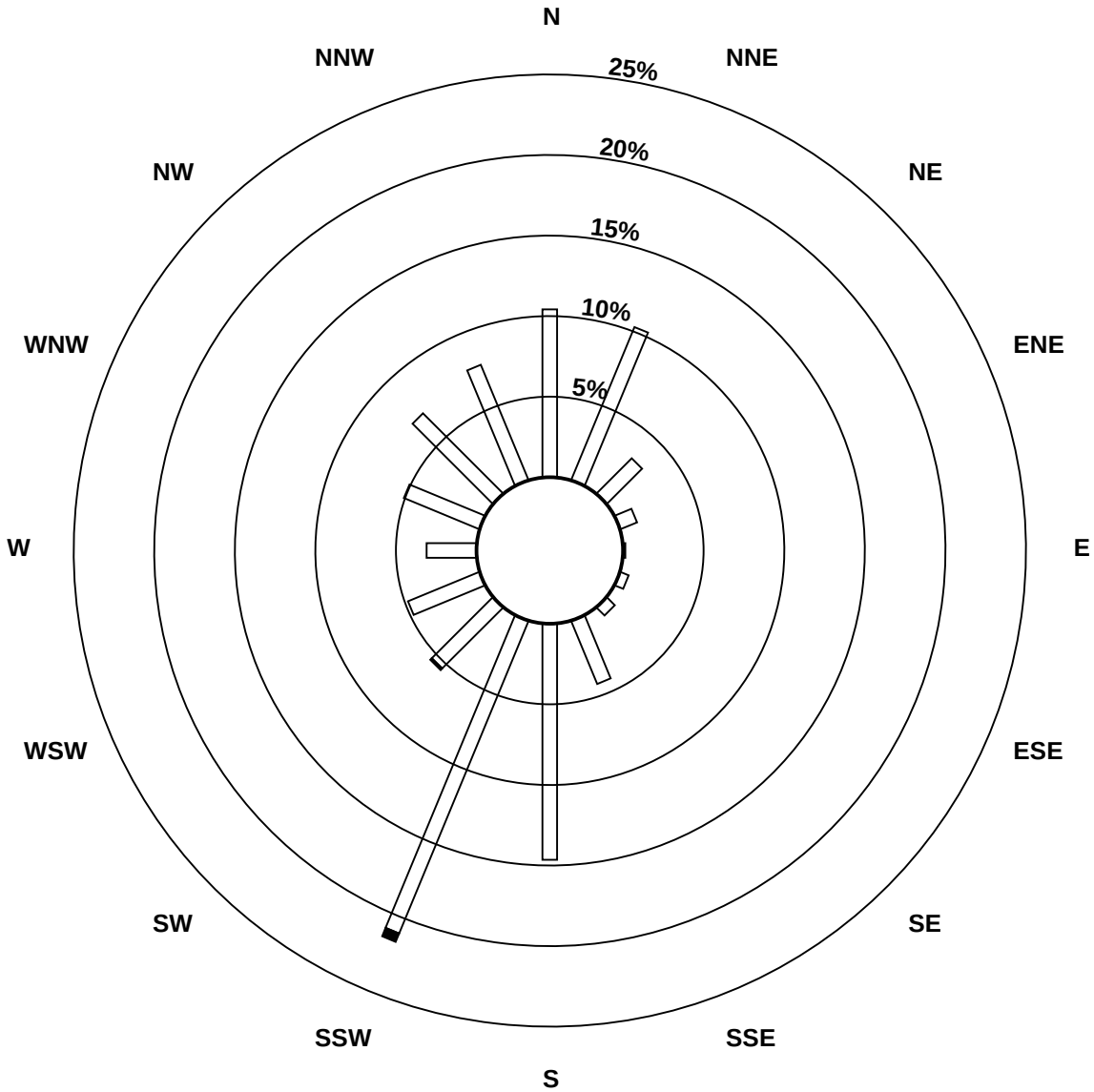
Valleyview - March 2010



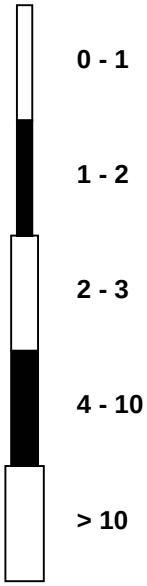
Pollutant Rose

Hydrogen Sulphide (H_2S) - ppb

Valleyview - March 2010



Pollutant Classes (ppb)



Hourly Averages

External Temperature (ET) - ^{o}C

Valleyview - March 2010

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

Maximum Value: 16.6 ^{o}C on Mar 15 17:00

Maximum Daily Average: 7.3 ^{o}C on Mar 28

Minimum Value: -13 ^{o}C on Mar 19 07:00

Minimum Daily Average: -9.5 ^{o}C on Mar 22

Maximum Diurnal Average: 6.2 ^{o}C at hour 16

Minimum Diurnal Average: -3.9 ^{o}C at hour 8

Monthly Average: 0.80 ^{o}C

Percentiles: P_1 = -12.4 P_{10} = -7.2 Q_1 = -3.2 Median = 0.8 Q_3 = 5.1 P_{90} = 8.4 P_{99} = 13.1

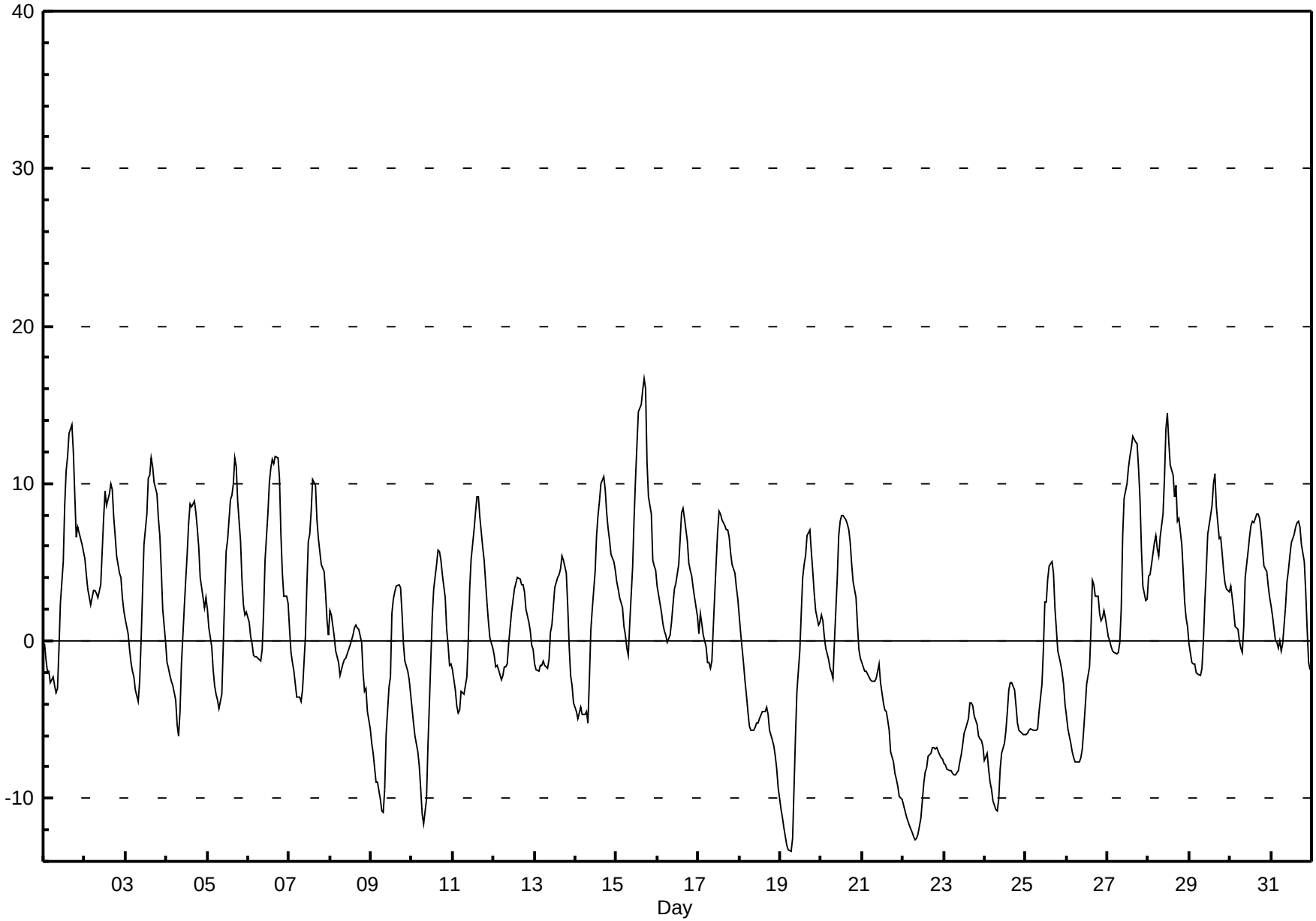
Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0	-1	-2	-2	-3	-2	-3	-3	-3	-1	2	5	9	11	12	13	14	12	9	7	7	7	6	6	4.1	13.8
2-Mar	5	4	3	2	3	3	3	3	3	4	6	8	9	9	9	10	10	8	7	5	4	4	3	2	5.3	9.9
3-Mar	1	0	-1	-1	-2	-2	-3	-4	-3	0	3	6	8	10	11	12	11	10	9	8	7	4	2	0	3.6	11.6
4-Mar	-1	-2	-2	-3	-3	-4	-5	-6	-4	-1	2	4	6	7	9	9	9	8	7	6	4	3	2	3	1.9	8.8
5-Mar	2	1	0	-2	-3	-3	-4	-4	-3	0	3	6	6	9	9	10	12	11	9	6	4	2	2	2	3.1	11.7
6-Mar	1	0	0	-1	-1	-1	-1	-1	-1	2	5	8	10	11	12	11	12	12	10	7	4	3	3	2	4.5	11.7
7-Mar	1	-1	-1	-2	-4	-4	-4	-4	-3	0	4	6	7	8	10	10	8	6	6	5	4	3	1	0	2.4	10.2
8-Mar	2	2	0	-1	-1	-1	-2	-1	-1	-1	-1	-1	0	0	1	1	1	1	0	-2	-3	-3	-4	-6	-0.9	1.9
9-Mar	-6	-7	-8	-9	-9	-10	-11	-11	-9	-6	-3	-2	2	3	3	3	4	3	2	0	-1	-2	-2	-3	-3.4	3.6
10-Mar	-4	-5	-6	-7	-8	-9	-11	-12	-10	-7	-4	-1	2	3	5	6	6	5	4	3	1	0	-2	-1	-2.3	5.8
11-Mar	-2	-3	-4	-5	-4	-3	-3	-3	-2	0	3	5	7	8	9	9	8	6	5	4	2	1	0	0	1.6	9.2
12-Mar	-1	-2	-2	-2	-2	-2	-2	-2	-1	0	2	3	3	4	4	4	4	4	3	2	1	1	0	-1	0.7	4.1
13-Mar	-1	-2	-2	-2	-2	-1	-2	-2	-1	1	1	2	3	4	4	5	5	5	4	2	0	-2	-3	-4	0.6	5.4
14-Mar	-5	-5	-5	-4	-5	-5	-5	-5	-2	1	2	4	7	8	9	10	10	10	8	7	6	5	5	4	2.4	10.4
15-Mar	4	3	3	2	1	0	0	-1	1	5	8	10	12	15	15	16	17	16	11	9	8	5	5	5	7.1	16.6
16-Mar	3	2	2	1	1	0	0	0	1	2	3	4	5	6	8	8	8	6	5	4	4	3	3	2	3.5	8.5
17-Mar	0	2	1	0	0	-1	-1	-2	-1	1	5	7	8	8	8	7	7	7	7	6	5	4	3	3	3.5	8.3
18-Mar	2	0	-1	-3	-4	-5	-5	-6	-6	-5	-5	-5	-5	-4	-4	-4	-4	-5	-6	-6	-7	-7	-8	-9	-4.7	1.6
19-Mar	-11	-11	-12	-12	-13	-13	-13	-13	-9	-6	-3	-1	2	4	5	5	7	7	6	4	3	2	1	1	-2.9	7.0
20-Mar	2	1	0	0	-1	-2	-2	-2	0	4	7	8	8	8	8	7	7	6	5	4	3	1	-1	-1	2.9	8.0
21-Mar	-1	-2	-2	-2	-2	-2	-3	-3	-2	-2	-1	-3	-4	-4	-4	-5	-6	-7	-8	-8	-9	-9	-10	-10	-4.6	-1.4
22-Mar	-10	-11	-11	-11	-12	-12	-12	-13	-13	-12	-11	-10	-9	-8	-8	-7	-7	-7	-7	-7	-7	-7	-7	-7	-9.5	-6.7
23-Mar	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-7	-7	-6	-6	-5	-4	-4	-4	-5	-5	-6	-6	-6	-7	-6.6	-4.0
24-Mar	-8	-7	-8	-9	-9	-10	-11	-11	-10	-8	-7	-7	-6	-4	-3	-3	-3	-3	-4	-5	-6	-6	-6	-6	-6.6	-2.6
25-Mar	-6	-6	-6	-6	-6	-6	-6	-6	-4	-3	-1	2	2	4	5	5	4	2	1	-1	-1	-2	-3	-4	-1.6	5.1
26-Mar	-5	-6	-7	-7	-7	-8	-8	-8	-7	-7	-6	-4	-3	-2	1	4	4	3	3	2	1	1	2	1	-2.5	3.8
27-Mar	0	0	0	-1	-1	-1	-1	0	2	7	9	10	11	12	12	13	13	13	11	9	6	4	3	3	5.5	13.0
28-Mar	4	4	5	6	7	6	5	7	8	10	13	14	13	11	11	9	10	8	8	6	4	3	1	1	7.3	14.5
29-Mar	0	-1	-1	-1	-2	-2	-2	-2	0	2	4	7	8	9	10	11	9	7	7	6	4	4	3	3	3.3	10.6
30-Mar	3	3	2	1	1	0	0	-1	1	4	6	7	7	8	7	8	8	8	7	6	5	4	4	3	4.2	8.1
31-Mar	2	2	0	0	0	0	-1	0	2	4	5	5	6	7	7	8	8	7	6	5	3	1	-1	-2	3.0	7.6
	-1.2	-1.7	-2.4	-2.8	-3.2	-3.5	-3.9	-3.9	-2.8	-0.7	1.4	3.0	4.2	5.1	5.7	6.2	6.1	5.3	4.2	2.8	1.7	0.7	-0.2	-0.7	Diurnal Average	
	5.2	4.3	4.9	6.3	6.7	5.9	5.4	6.6	8.1	10.4	13.4	14.5	12.6	14.5	15.1	15.9	16.6	16.1	11.4	9.2	8.0	6.8	6.2	5.7	Diurnal Maximum	

Hourly Averages

External Temperature (ET) - ^{o}C

Valleyview - March 2010



PASZA
Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Valleyview - March 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 95.2 % on Mar 18 03:00 Maximum Daily Average: 84.8 % on Mar 22

Minimum Value: 16 % on Mar 9 16:00 Minimum Daily Average: 40.5 % on Mar 9
Maximum Diurnal Average: 74.7 % at hour 7 Minimum Diurnal Average: 40.5 % at hour 16
Monthly Average: 58.35 % Percentiles: P_1 = 20.9 P_{10} = 31.1 Q_1 = 41.4 Median = 57.9 Q_3 = 77.1 P_{90} = 85.5 P_{99} = 91.6

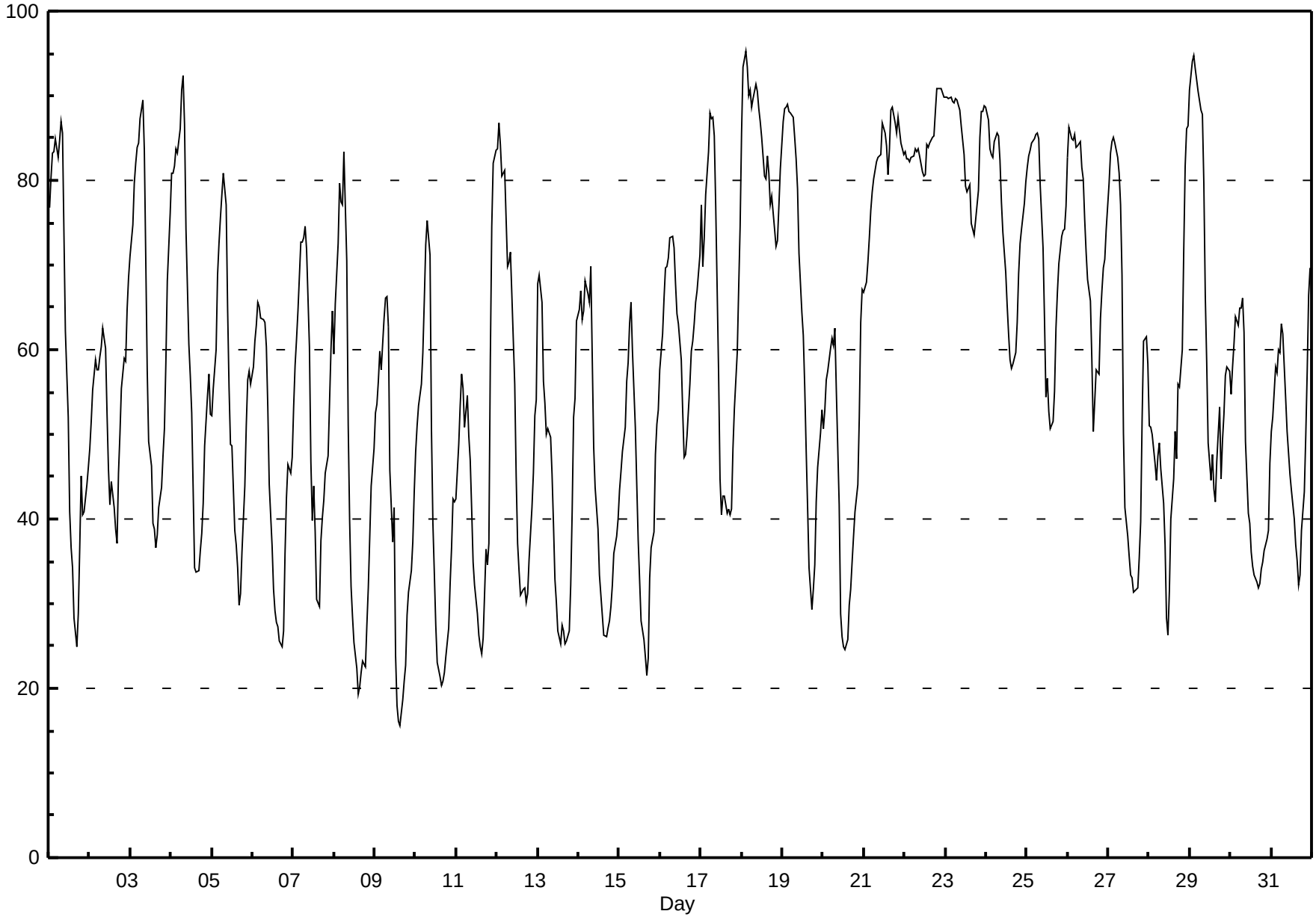
Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	77	80	83	83	85	83	85	87	86	74	62	52	41	37	34	28	25	29	37	45	40	41	44	46	57.6	86.9
2-Mar	48	51	55	59	58	58	59	60	62	60	53	46	42	44	41	39	37	45	50	55	59	59	65	69	53.1	68.5
3-Mar	71	75	80	82	84	84	87	90	84	71	58	49	46	39	39	37	38	41	44	47	51	58	68	76	62.5	89.5
4-Mar	81	81	82	84	83	86	91	92	87	74	61	57	53	44	34	34	34	36	38	42	49	55	57	52	61.9	92.4
5-Mar	52	55	60	69	73	76	78	81	77	65	56	49	49	39	37	34	30	31	36	44	51	56	57	56	54.6	80.8
6-Mar	58	61	63	66	65	64	64	63	60	53	44	37	32	29	28	27	26	25	27	36	43	46	45	47	46.2	65.6
7-Mar	53	58	61	65	73	73	73	75	72	60	47	40	44	38	30	30	37	40	42	45	47	54	60	65	53.4	74.6
8-Mar	59	65	72	80	78	77	83	70	51	40	32	28	26	22	19	20	22	23	22	27	32	38	44	48	45.0	83.4
9-Mar	53	53	56	60	58	64	66	66	63	46	37	41	24	18	16	16	19	21	23	29	31	34	37	43	40.5	66.2
10-Mar	48	51	53	56	60	66	72	75	71	51	40	34	27	23	21	20	21	22	24	27	32	37	42	42	42.3	75.2
11-Mar	42	49	53	57	55	51	55	50	47	41	35	32	29	26	25	24	26	36	35	37	59	75	82	84	46.0	83.5
12-Mar	84	87	84	80	81	75	70	70	72	66	56	45	37	34	31	32	32	30	31	35	41	45	52	54	55.3	86.8
13-Mar	68	69	66	56	54	50	51	50	45	39	33	30	27	25	27	27	25	26	27	32	41	52	54	63	43.2	68.8
14-Mar	65	67	64	65	68	67	66	70	59	49	44	39	33	31	29	26	26	27	28	30	32	36	38	40	45.7	69.9
15-Mar	43	46	48	51	56	58	63	66	60	51	44	38	33	28	26	24	21	24	33	37	38	48	51	53	43.3	65.6
16-Mar	58	62	66	70	70	71	73	73	72	68	64	63	59	53	47	48	50	56	60	61	63	66	67	71	62.9	73.5
17-Mar	77	70	73	78	83	88	87	87	85	77	57	45	41	43	43	41	41	40	41	48	53	60	67	75	62.5	87.9
18-Mar	86	93	95	93	90	91	89	90	91	90	88	87	85	81	80	83	81	77	78	74	72	73	77	81	84.4	95.2
19-Mar	87	89	89	89	88	88	87	85	83	79	71	64	62	56	48	41	34	29	32	35	42	46	50	53	63.6	88.9
20-Mar	51	53	56	58	60	61	60	63	55	42	29	26	25	25	26	30	32	35	38	41	44	52	63	67	45.4	67.2
21-Mar	67	68	70	73	76	79	80	82	83	83	83	87	86	84	81	84	88	89	87	86	87	86	84	83	81.5	88.6
22-Mar	83	83	83	82	83	83	84	83	84	83	81	80	81	84	84	84	85	85	88	91	91	91	90	90	84.8	90.8
23-Mar	90	90	90	90	89	89	90	90	88	86	85	83	79	79	80	75	74	74	75	79	85	88	88	89	84.3	89.9
24-Mar	89	87	84	83	83	85	86	85	82	77	74	69	65	62	59	58	58	60	63	69	72	74	77	80	74.2	88.6
25-Mar	82	83	84	84	85	85	86	85	79	72	64	54	57	53	51	52	55	63	67	70	73	74	74	77	71.2	85.7
26-Mar	83	86	85	85	85	84	84	85	82	80	75	72	68	66	59	50	54	58	57	64	67	70	71	74	72.6	86.2
27-Mar	80	83	85	85	84	83	81	77	69	50	41	38	36	33	33	31	32	32	35	40	52	61	62	58	56.7	85.1
28-Mar	51	51	50	47	45	47	49	46	42	37	28	26	32	40	45	50	47	56	56	60	72	82	86	86	51.2	86.5
29-Mar	91	94	95	93	92	91	88	88	80	66	58	49	45	48	44	42	47	53	45	49	52	57	58	58	65.9	94.8
30-Mar	55	58	61	64	63	65	65	66	62	49	41	40	36	34	33	33	32	32	34	35	36	38	39	47	46.5	66.1
31-Mar	50	52	58	57	60	60	63	62	54	50	48	45	43	40	37	35	32	33	39	43	50	57	66	70	50.2	69.6
	67.1	69.4	71.1	72.3	73.1	73.5	74.7	74.6	70.5	62.3	54.5	49.8	46.4	43.8	41.5	40.5	40.7	42.9	44.9	48.8	53.5	58.3	61.9	64.4	Diurnal Average	
	90.6	94.1	95.2	93.3	91.9	90.7	90.7	92.4	91.4	90.5	88.4	87.0	85.5	84.2	83.9	84.5	88.3	88.6	88.2	90.8	90.8	90.8	90.4	89.9	Diurnal Maximum	

Hourly Averages

Relative Humidity (RH) - %

Valleyview - March 2010



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Valleyview - March 2010

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1 Spd	1	1	1	3	3	2	1	0	1	1	3	5	6	2	2	6	3	2	2	1	4	4	7	8	2.2	7.5
Dir	233	242	222	258	188	247	232	253	326	244	202	186	190	231	277	175	161	38	21	206	180	189	188	181	197	181
2 Spd	10	2	2	3	6	5	4	4	6	5	6	5	4	4	3	3	3	6	3	1	3	5	4	6	2.5	10.0
Dir	176	236	262	215	192	202	199	194	180	191	184	182	237	316	349	339	12	359	341	60	196	198	194	185	203	176
3 Spd	7	5	4	5	4	3	1	2	3	4	5	3	1	3	4	4	8	5	1	4	1	2	2	2	1.0	7.5
Dir	191	200	200	199	206	198	221	241	207	203	182	190	345	7	27	39	0	346	321	354	174	220	178	209	217	0
4 Spd	3	4	4	3	4	1	1	4	3	3	3	1	3	4	4	10	7	7	4	2	3	1	2	3	0.7	9.7
Dir	195	212	204	196	205	244	209	211	213	197	175	330	341	353	4	353	1	10	31	70	339	243	189	217	294	353
5 Spd	4	2	2	1	2	2	2	1	1	3	3	2	2	4	7	5	1	2	2	3	4	3	3	5	1.7	7.0
Dir	186	198	209	220	221	213	221	222	211	200	189	189	332	324	329	320	279	318	255	281	209	206	215	203	241	329
6 Spd	4	5	3	4	4	5	4	4	4	3	4	4	6	6	4	5	6	4	3	1	1	3	5	6	3.7	6.0
Dir	211	208	202	212	206	197	202	205	207	204	183	196	195	200	194	168	171	165	102	41	302	192	202	196	194	196
7 Spd	3	3	4	2	1	2	3	2	1	2	5	3	3	4	4	5	10	7	5	0	3	2	2	1	1.4	9.6
Dir	213	216	210	223	237	225	200	256	229	199	187	194	335	347	358	336	346	331	326	355	303	320	213	233	285	346
8 Spd	10	15	18	11	9	14	8	7	13	11	14	20	17	15	14	14	12	7	5	2	3	4	4	4	9.7	19.9
Dir	295	315	312	299	302	297	307	276	298	298	296	301	302	297	300	316	327	328	321	182	244	279	209	196	301	301
9 Spd	4	5	4	3	5	3	4	2	2	6	3	3	13	16	14	11	11	8	9	10	9	8	8	10	6.4	15.7
Dir	204	209	215	218	205	215	199	208	200	185	168	345	186	184	179	175	176	163	147	149	154	166	182	186	180	184
10 Spd	9	8	6	5	4	2	2	1	1	5	6	4	5	6	5	2	5	4	2	1	2	4	4	7	3.7	9.2
Dir	190	191	197	196	198	216	272	207	239	185	190	206	173	177	162	149	127	124	35	276	171	195	190	184	183	190
11 Spd	4	1	2	0	1	1	1	6	5	8	9	8	9	5	0	5	12	9	4	3	13	4	4	6	3.5	12.8
Dir	197	6	332	141	10	198	280	194	202	187	184	181	190	175	227	282	283	263	245	276	283	213	182	191	224	283
12 Spd	6	7	10	8	1	4	2	1	1	2	2	4	6	6	3	7	6	3	2	2	4	2	1	1	0.1	9.9
Dir	192	197	191	192	78	172	153	169	158	198	165	349	356	11	38	17	9	36	4	336	335	338	157	248	218	191
13 Spd	0	1	2	2	3	3	2	1	2	1	5	5	4	7	6	4	2	3	3	1	0	1	1	1	1.2	6.6
Dir	207	158	211	228	274	313	289	322	210	238	306	353	2	323	1	37	27	42	81	41	16	202	210	199	332	323
14 Spd	1	2	3	2	2	4	3	1	2	10	13	11	11	11	11	12	10	10	10	11	14	13	7	7	7.5	13.8
Dir	238	207	200	192	200	200	196	157	192	187	186	188	182	177	180	188	175	172	157	168	181	179	185	193	182	181
15 Spd	10	6	5	3	4	2	3	3	3	4	6	5	5	2	4	5	5	3	9	5	2	3	5	3	2.1	9.9
Dir	187	200	203	209	200	201	212	208	194	187	183	163	173	162	168	180	247	304	337	342	294	341	33	30	204	187
16 Spd	2	3	3	2	3	0	1	1	1	3	6	7	7	7	6	8	10	10	9	6	7	6	3	2	4.2	10.0
Dir	24	344	323	329	349	224	205	191	349	32	6	345	333	356	339	357	6	358	346	359	15	14	43	135	357	6
17 Spd	3	4	3	3	2	2	3	3	4	3	10	17	16	15	16	15	16	13	16	15	13	13	9	9	7.7	16.6
Dir	247	342	198	165	200	213	196	203	201	205	295	294	306	328	336	320	308	302	300	309	300	313	321	307	304	294
18 Spd	13	10	12	11	15	16	15	14	12	11	9	9	8	10	11	9	10	16	14	11	9	6	5	2	9.4	16.0
Dir	291	299	4	11	19	19	17	19	22	26	19	22	6	321	317	332	318	333	353	355	358	340	310	284	353	19
19 Spd	2	3	3	2	2	3	2	2	3	9	7	6	6	7	10	10	4	2	3	4	3	4	4	4	3.5	10.0
Dir	156	199	205	202	218	214	214	195	194	183	175	199	200	252	283	277	257	222	187	183	229	193	211	216	217	283
20 Spd	4	5	5	6	5	4	4	5	4	3	8	11	17	15	16	13	8	7	7	4	2	2	0	4	2.8	16.5
Dir	211	207	198	193	206	204	212	209	200	203	288	321	324	327	329	331	27	52	49	57	32	2	326	353	315	324
21 Spd	5	5	5	5	6	7	8	11	10	10	13	18	15	14	12	12	12	12	13	11	9	8	9	7	9.7	17.7
Dir	9	15	23	25	26	33	32	25	26	16	2	356	7	10	24	16	10	24	18	23	16	25	32	28	17	356
22 Spd	8	8	8	7	9	7	7	7	7	7	5	5	4	4	6	6	6	5	5	4	4	6	8	10	6.1	10.1
Dir	29	31	32	31	27	28	14	11	360	352	354	354	353	2	18	13	353	351	348	19	63	18	31	19	15	19

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Valleyview - March 2010

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
23 Spd	7	10	13	11	9	6	6	6	6	6	6	7	9	9	7	6	7	8	7	8	9	9	10	11	7.8	12.5
Dir	24	4	357	0	12	4	10	8	21	11	5	359	356	357	6	15	21	31	32	33	33	30	28	20	14	357
24 Spd	12	11	14	9	9	10	8	8	6	6	10	12	9	13	11	12	13	14	13	12	12	17	17	16	6.2	17.0
Dir	16	38	46	44	40	40	34	34	68	156	168	175	150	169	170	137	142	150	154	158	169	177	180	179	136	177
25 Spd	15	15	14	14	11	9	8	9	11	11	10	4	6	6	11	11	13	11	13	14	11	9	13	10	0.3	14.9
Dir	177	180	181	181	184	187	189	191	189	184	185	170	343	344	350	2	11	5	6	13	19	20	14	7	119	177
26 Spd	11	13	16	12	11	10	7	9	5	5	3	3	3	3	2	6	7	7	2	3	4	4	5	6	4.0	15.7
Dir	5	7	6	12	8	18	15	12	24	12	38	48	55	62	70	182	349	352	296	230	211	209	206	206	9	6
27 Spd	5	6	5	5	4	5	4	6	3	6	9	12	11	12	8	7	6	3	4	1	0	1	3	2	4.2	12.1
Dir	208	207	203	208	215	203	180	201	194	240	248	258	264	277	258	267	257	251	30	122	41	304	201	210	238	277
28 Spd	5	7	7	9	12	7	7	7	8	4	8	11	15	17	14	14	13	14	2	5	5	4	4	4	3.7	16.6
Dir	189	190	186	186	188	199	194	202	199	204	237	240	280	335	329	350	345	318	232	187	190	201	201	176	246	335
29 Spd	1	1	0	1	1	1	0	2	2	1	4	6	3	3	2	7	14	15	4	2	3	3	4	6	2.1	14.6
Dir	315	111	226	191	226	242	266	315	189	206	197	198	209	343	4	312	325	322	317	213	230	211	238	254	281	322
30 Spd	5	2	3	3	3	2	3	3	2	10	21	18	18	16	21	16	17	15	9	6	5	6	6	11	8.0	21.3
Dir	270	180	228	211	241	172	212	215	219	287	297	298	301	320	332	314	324	326	326	303	297	310	280	285	302	332
31 Spd	8	8	2	3	5	9	4	7	18	17	17	17	16	19	19	19	19	18	11	5	1	2	3	2	8.8	19.0
Dir	278	274	172	207	249	274	250	273	289	303	309	317	322	328	317	328	327	337	338	307	204	187	196	159	308	328
Spd	2.0	1.4	0.9	1.0	0.8	0.9	0.6	0.8	1.1	1.9	2.7	3.1	3.6	4.2	4.4	4.1	4.7	4.3	3.0	1.3	0.8	0.9	1.3	1.9	Diurnal Average	
Dir	227	250	257	224	242	262	254	257	253	231	250	283	297	317	326	328	336	342	354	355	283	237	204	211		
Spd	14.9	14.9	17.9	13.8	15.0	16.0	15.2	13.8	18.1	16.6	20.6	19.9	17.8	19.0	21.3	18.7	18.7	17.5	16.0	14.5	13.8	17.0	16.8	16.2	Diurnal Maximum	
Dir	177	315	312	181	19	19	17	19	289	303	297	301	301	328	332	328	327	337	300	309	181	177	180	179		

Maximum Speed Value: 21 ppb on Mar 30 15:00
Maximum Daily Speed Average: 9.7 ppb on Mar 24
Maximum Diurnal Speed Average: 4.7 ppb at hour 17

Minimum Speed Value: 0 ppb on Mar 20 23:00
Minimum Daily Speed Average: 0.1 ppb on Mar 13
Minimum Diurnal Speed Average: 0.6 ppb at hour 7

Monthly Average Velocity: 1.52 ppb 296.0 deg

Speed Percentiles: $P_1 = 0.4$ $P_{10} = 1.6$ $Q_1 = 2.9$ Median = 5.1 $Q_3 = 8.9$ $P_{90} = 13.3$ $P_{99} = 18.7$

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

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

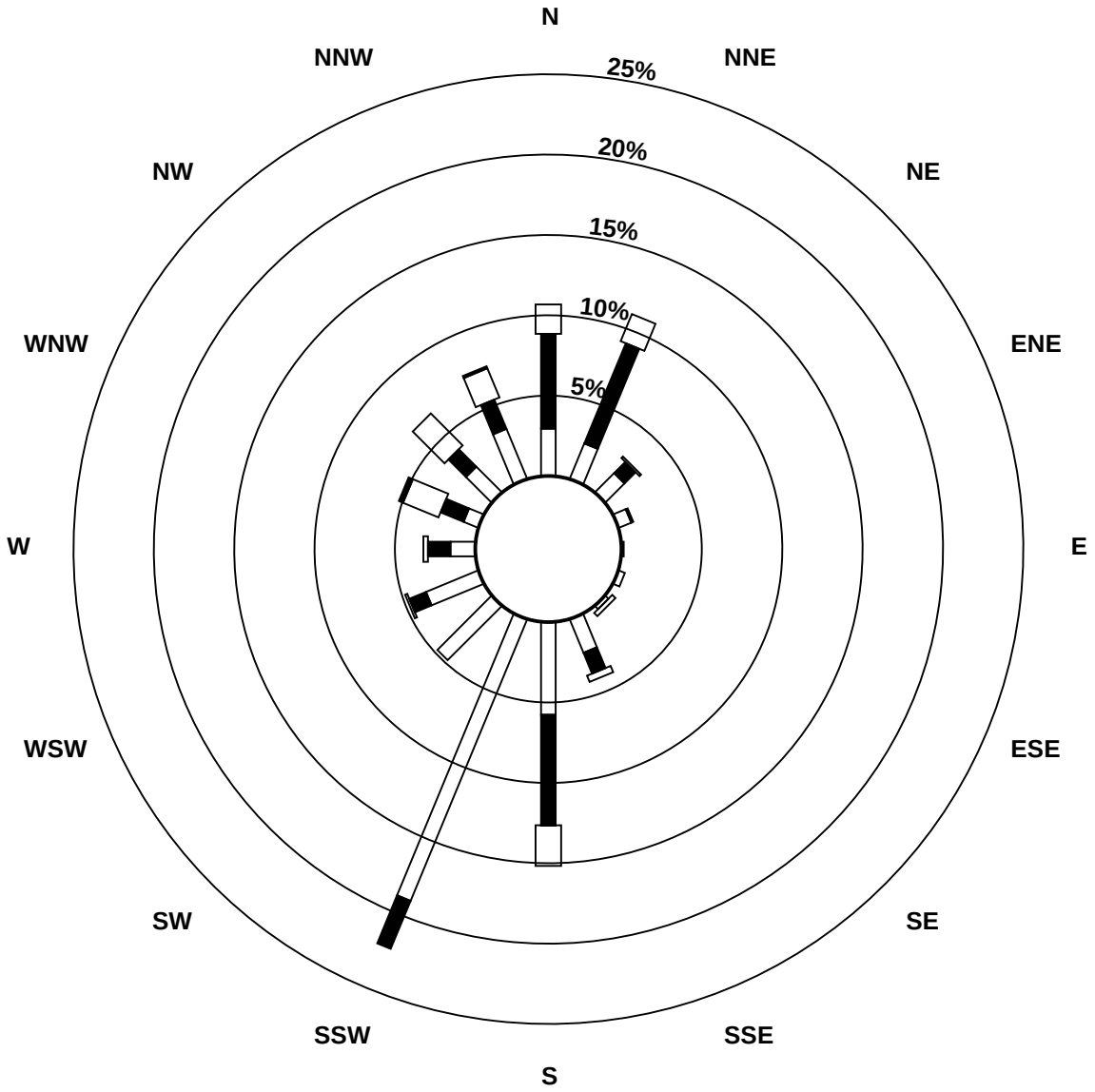
Frequency Distribution

Direction	Speed Range (ppb) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	40	69	33	0	0	0	142
NorthEast	27	36	3	0	0	0	66
East	6	1	0	0	0	0	7
SouthEast	9	7	4	0	0	0	20
South	105	85	24	0	0	0	214
SouthWest	127	11	0	0	0	0	138
West	21	22	7	0	0	0	50
NorthWest	30	25	48	4	0	0	107
Total	365	256	119	4	0	0	744

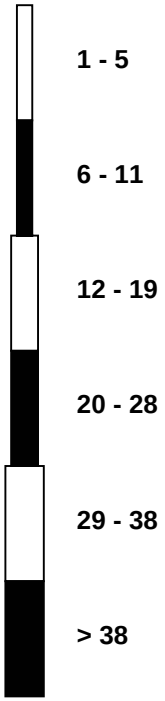
Wind Rose

Wind Speed (WS) (km/h)

Valleyview - March 2010



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Valleyview - March 2010

Maximum Speed: 21 km/h on Mar 30 15:00

Maximum Daily Speed Average: 11.7 km/h on Mar 24

Minimum Speed: 1 km/h on Mar 13 01:00

Minimum Daily Speed Average: 3.0 km/h on Mar 13

Maximum Diurnal Speed Average: 9.3 km/h at hour 17

Minimum Diurnal Speed Average: 4.4 km/h at hour 7

Monthly Average Speed: 6.60 km/h

Percentiles: $P_1 = 1.2$ $P_{10} = 2.2$ $Q_1 = 3.2$ Median = 5.3 $Q_3 = 9.2$ $P_{90} = 13.5$ $P_{99} = 18.7$

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Mar	1	2	1	3	3	3	1	2	2	2	3	5	6	3	3	6	3	2	2	2	4	5	7	8	3.3	7.6
2-Mar	10	4	3	4	7	6	4	4	6	5	7	5	5	5	3	3	3	6	3	2	4	5	4	7	4.8	10.1
3-Mar	7	5	4	5	4	3	1	3	3	4	5	4	2	3	4	4	8	5	2	5	3	2	2	2	3.8	7.7
4-Mar	3	4	4	3	4	2	2	4	3	3	3	3	3	4	5	10	7	7	4	2	3	2	2	3	3.8	9.8
5-Mar	4	2	2	2	2	2	2	2	1	3	3	3	3	4	7	5	2	3	2	4	4	3	3	5	3.1	7.2
6-Mar	4	5	3	4	4	5	4	4	4	3	4	4	6	6	5	5	6	4	3	2	1	3	5	6	4.2	6.0
7-Mar	3	3	4	2	1	2	3	2	2	2	5	4	3	4	4	5	10	7	5	4	4	3	2	2	3.6	9.7
8-Mar	10	15	18	12	9	14	8	7	14	11	14	20	17	15	15	14	12	7	5	2	4	5	4	4	10.6	20.0
9-Mar	4	5	4	3	5	3	4	2	2	6	4	5	13	16	14	12	11	8	9	10	9	8	8	10	7.3	15.9
10-Mar	9	8	6	5	4	2	2	1	2	6	6	4	5	7	5	3	6	5	3	2	3	4	4	7	4.6	9.3
11-Mar	4	2	2	1	2	2	2	6	5	8	9	9	9	5	5	7	12	9	4	4	13	4	5	6	5.7	13.4
12-Mar	6	7	10	8	3	4	3	3	2	3	2	5	6	6	4	7	7	3	2	3	4	2	2	1	4.3	9.9
13-Mar	1	1	2	2	4	3	2	2	3	3	6	5	4	7	6	4	3	3	3	1	1	1	2	2	3.0	7.4
14-Mar	2	2	3	2	3	4	3	2	2	10	13	11	11	11	12	12	11	10	10	11	14	13	7	7	7.8	13.9
15-Mar	10	6	5	4	4	2	3	3	3	4	6	6	5	3	5	5	6	3	9	6	3	4	5	3	4.7	10.0
16-Mar	2	3	3	3	3	3	2	1	2	4	6	7	8	7	6	8	10	10	9	7	7	6	4	2	5.2	10.1
17-Mar	4	7	3	3	2	2	4	3	4	4	11	17	16	16	16	16	16	14	16	15	13	14	9	9	9.7	16.7
18-Mar	13	11	13	11	15	16	15	14	12	11	9	9	8	11	11	9	10	16	15	11	10	6	5	2	11.0	16.2
19-Mar	3	3	4	2	3	3	2	2	3	9	7	6	6	7	10	10	5	2	3	4	3	4	4	4	4.5	10.2
20-Mar	4	5	5	6	5	4	4	5	4	4	8	12	17	15	16	14	9	8	7	4	3	2	2	4	7.0	16.8
21-Mar	5	5	5	5	7	7	8	11	10	10	13	18	15	15	12	12	12	12	13	11	9	8	9	8	10.0	17.8
22-Mar	8	8	8	7	9	7	7	7	7	7	5	5	5	4	6	6	6	5	5	5	4	6	8	10	6.5	10.3
23-Mar	7	10	13	11	9	6	6	6	6	6	6	8	9	9	7	6	7	8	7	8	9	9	10	11	8.2	12.6
24-Mar	12	11	14	9	9	10	8	8	6	7	10	13	10	13	11	12	13	15	13	12	12	17	17	16	11.7	17.1
25-Mar	15	15	14	14	11	9	9	9	11	11	10	4	6	6	11	11	13	12	13	14	11	9	13	10	10.8	15.0
26-Mar	11	13	16	12	11	10	7	9	6	5	3	3	4	3	3	6	8	7	2	4	4	4	5	6	6.8	15.8
27-Mar	6	6	5	5	4	5	4	6	3	7	9	12	11	12	9	7	6	3	4	2	1	2	3	3	5.6	12.5
28-Mar	6	7	7	9	12	7	7	7	8	4	8	11	16	18	15	14	14	15	3	5	5	4	4	4	8.7	17.9
29-Mar	2	2	1	2	2	2	2	2	3	2	4	6	3	3	2	7	15	15	5	2	4	4	5	6	4.1	14.8
30-Mar	6	3	3	3	3	2	4	3	2	11	21	18	18	17	21	17	18	15	10	7	6	6	6	11	9.6	21.4
31-Mar	9	8	4	3	6	9	4	7	18	17	18	18	17	19	19	19	19	18	12	5	2	2	3	3	10.8	19.4
	6.2	6.1	6.2	5.4	5.5	5.2	4.4	4.7	5.1	6.1	7.8	8.3	8.6	8.9	8.8	9.0	9.3	8.3	6.5	5.6	5.7	5.4	5.5	5.8	Diurnal Average	
	15.0	15.1	18.1	13.9	15.1	16.2	15.3	13.9	18.2	16.9	20.8	20.0	18.3	19.4	21.4	19.4	19.0	17.7	16.1	14.8	13.9	17.1	16.9	16.4	Diurnal Maximum	

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

Hourly Standard Deviations

Wind Direction (WD) - deg

Valleyview - March 2010

Maximum Value: 98.1 deg on Mar 13 01:00

Minimum Value: 2.8 deg on Mar 6 01:00

Percentiles: P_1 = 4.2 P_{10} = 7.3 Q_1 = 9.4 Median = 14.5 Q_3 = 27.7 P_{90} = 52.9 P_{99} = 88.1

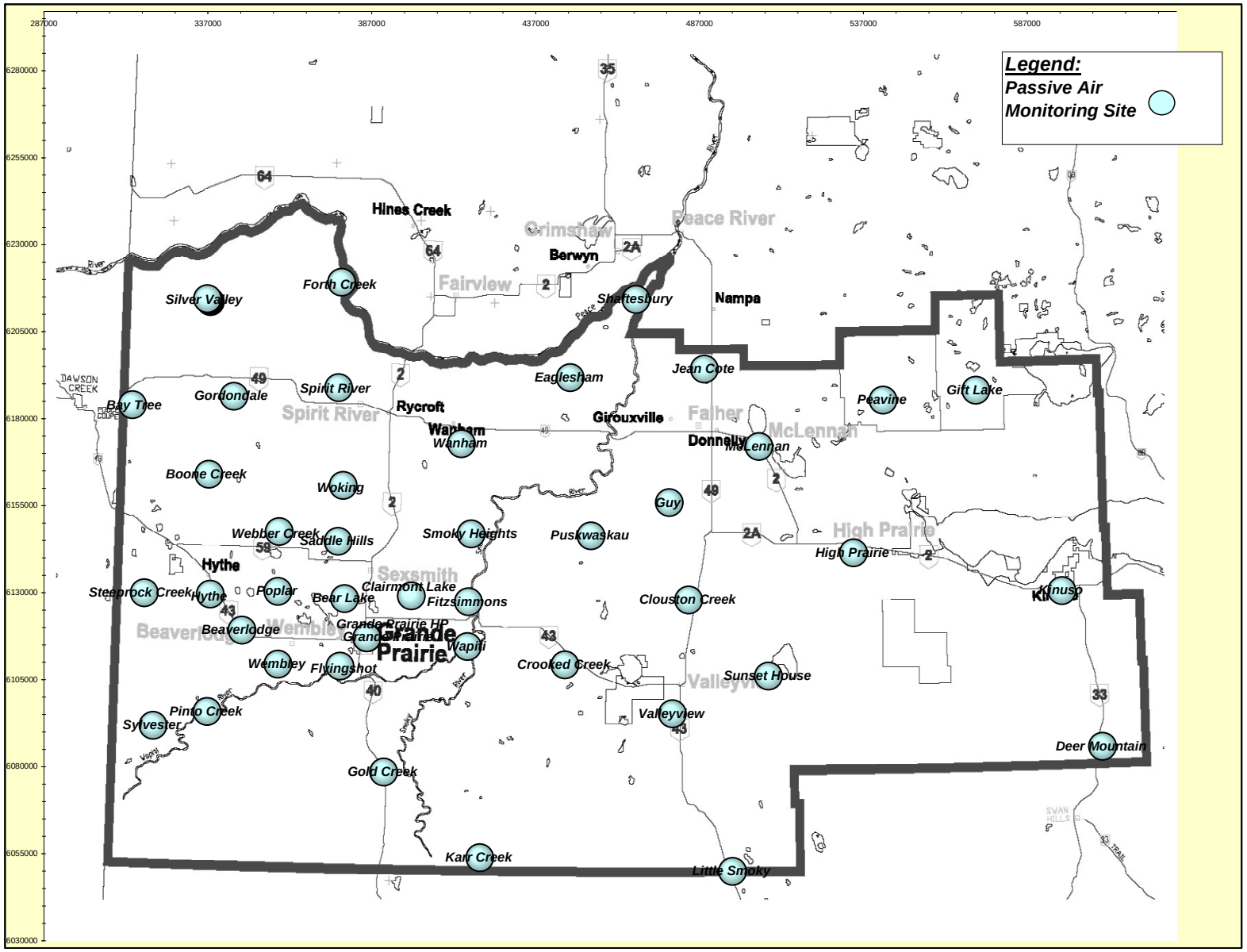
Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	55	28	48	31	28	49	60	82	59	55	16	11	12	39	52	12	33	65	45	67	27	37	11	9	81.6
2-Mar	7	53	53	35	17	19	24	19	22	22	16	11	34	40	14	18	22	11	24	78	25	10	16	11	77.8
3-Mar	10	11	10	9	10	16	27	32	9	13	12	62	52	27	13	17	12	9	78	35	88	40	59	37	88.3
4-Mar	13	10	16	19	11	58	43	6	5	13	30	86	30	13	17	7	5	15	14	41	39	44	45	17	85.7
5-Mar	9	22	13	33	10	6	9	17	16	15	14	48	54	52	14	21	66	61	37	34	10	30	11	8	65.5
6-Mar	3	3	10	6	8	7	6	7	9	7	13	15	14	14	28	18	16	15	22	47	53	20	7	5	53.0
7-Mar	11	7	6	26	24	17	17	43	50	35	11	67	48	15	20	27	10	11	20	93	49	70	29	35	93.4
8-Mar	26	8	9	15	15	9	13	15	9	10	9	7	10	10	11	11	9	8	8	70	33	13	21	18	69.6
9-Mar	11	4	4	4	5	9	8	25	17	11	46	54	10	9	13	18	15	19	9	8	7	12	8	6	54.1
10-Mar	8	7	10	6	11	30	32	42	56	14	15	23	26	19	22	41	24	21	55	72	36	45	15	6	71.9
11-Mar	18	68	34	82	83	55	40	9	8	9	19	15	11	21	92	40	25	20	44	53	20	15	25	17	91.6
12-Mar	8	10	6	7	75	18	57	94	62	34	49	54	13	17	27	18	15	11	30	55	54	44	46	54	94.2
13-Mar	98	46	26	20	32	31	28	78	39	63	17	21	27	30	27	29	38	25	24	56	93	68	34	58	98.1
14-Mar	28	25	15	43	57	20	37	57	36	9	7	9	9	10	10	12	10	11	8	9	7	7	13	9	57.5
15-Mar	9	17	13	13	19	49	10	12	18	11	11	18	15	51	24	18	26	48	11	22	62	63	24	35	63.4
16-Mar	28	35	15	21	24	90	68	94	87	56	11	7	15	8	20	17	7	12	15	27	18	14	48	30	94.4
17-Mar	53	53	37	32	41	36	34	36	24	24	30	7	12	20	8	8	9	8	8	11	9	10	11	10	52.9
18-Mar	9	20	9	8	9	8	7	8	8	9	12	11	21	20	10	9	9	8	12	11	12	7	10	59	59.3
19-Mar	39	15	20	31	17	4	14	12	15	9	11	16	15	26	15	16	23	27	8	12	14	19	10	7	38.5
20-Mar	5	5	10	7	9	13	9	5	8	29	24	14	10	11	10	10	31	15	7	19	69	28	88	26	87.6
21-Mar	8	4	6	7	7	10	7	8	10	12	10	8	8	12	11	10	8	8	9	9	8	11	10	12	12.5
22-Mar	11	12	16	12	11	14	12	9	8	7	10	17	17	23	15	18	12	15	8	12	14	19	12	12	22.6
23-Mar	14	8	5	5	7	8	12	7	12	16	15	7	9	8	13	29	10	11	10	9	8	8	8	10	29.2
24-Mar	8	10	8	9	8	8	10	9	16	51	15	12	18	19	20	13	13	13	12	12	11	8	7	8	50.7
25-Mar	7	8	9	7	8	9	8	7	7	10	8	37	14	6	4	8	4	6	9	7	9	8	9	6	37.1
26-Mar	6	7	6	10	7	8	14	11	21	23	24	22	22	25	61	21	66	38	42	42	29	10	6	6	66.2
27-Mar	5	5	10	10	12	7	16	7	34	19	11	11	13	15	12	20	11	26	26	44	76	77	17	10	77.4
28-Mar	8	7	9	9	6	18	10	6	7	23	17	17	21	25	9	23	12	28	43	8	9	11	14	48	47.8
29-Mar	62	69	87	37	45	70	89	35	43	74	25	14	14	55	28	13	18	9	39	47	26	13	19	15	88.9
30-Mar	32	29	15	11	21	37	14	15	15	24	9	11	14	17	8	14	12	14	8	12	40	13	9	6	40.4
31-Mar	9	9	57	23	17	10	19	14	7	12	11	12	15	12	11	16	10	8	7	12	55	27	11	49	57.4
	98.1	68.7	86.8	82.4	82.8	89.8	88.9	94.4	86.9	74.0	49.4	85.7	54.4	55.3	91.6	41.1	66.2	65.2	77.6	93.4	93.5	77.4	87.6	59.3	

PASZA

Monthly Passive Data Summary

Location of PASZA Passive Monitoring Stations



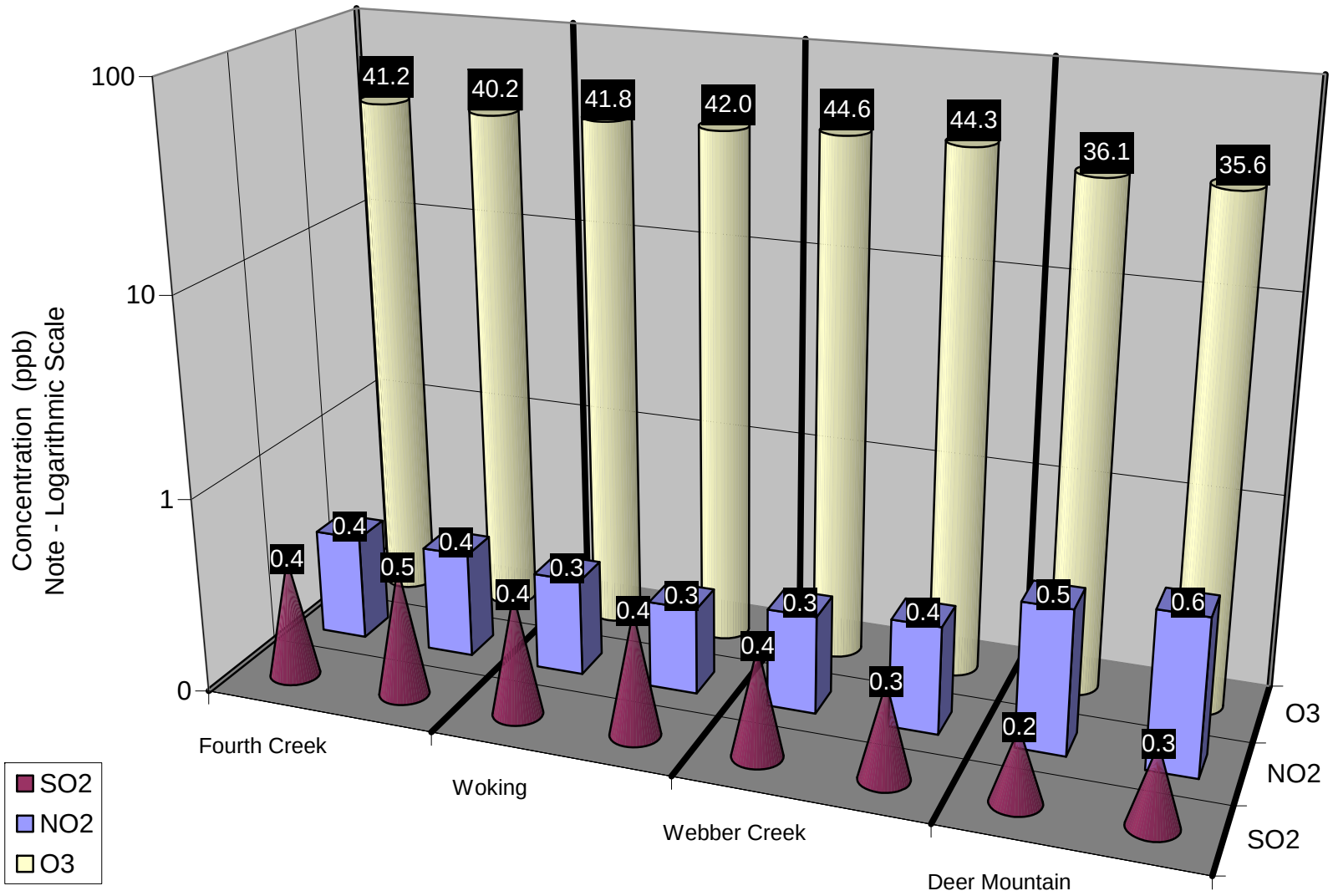
PASZA Passive Results for March 2010

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	Site Legal
Duplicates					
3a	Fourth Creek	**0.4**	**41.2**	**0.4**	
3b	Fourth Creek	**0.5**	**40.2**	**0.4**	
10a	Woking	**0.4**	**41.8**	**0.3**	
10b	Woking	**0.4**	**42.0**	**0.3**	
11a	Webber Creek	**0.4**	**44.6**	**0.3**	
11b	Webber Creek	**0.3**	**44.3**	**0.4**	
48a	Deer Mountain	**0.2**	**36.1**	**0.5**	
48b	Deer Mountain	**0.3**	**35.6**	**0.6**	
1	Silver Valley	**0.4**	**44.2**	**0.3**	08-27-081-11 W6M
2	Bay Tree	**0.3**	**41.5**	**0.5**	13-16-078-13 W6M
3	Fourth Creek	**0.4**	**40.7**	**0.4**	04-13-082-07 W6M
4	Gordondale	**0.4**	**42.5**	**0.3**	04-34-078-10 W6M
5	Boone Creek	**0.3**	**35.8**	**0.5**	01-23-076-11 W6M
7	Steeprock Creek	**0.2**	**41.8**	**0.3**	09-35-072-13 W6M
9	Spirit River	**0.4**	**42.0**	**0.6**	08-12-079-07 W6M
10	Woking	**0.4**	**41.9**	**0.3**	01-13-076-07 W6M
11	Webber Creek	**0.3**	**44.5**	**0.3**	09-36-074-09 W6M
12	Hythe	**0.4**	**41.2**	**0.7**	14-36-072-11 W6M
14	Sylvester	**0.1**	**37.1**	**0.3**	08-06-069-12 W6M
16	Beaverlodge	**0.4**	**38.5**	**0.9**	15-36-071-10 W6M
17	Poplar	**0.5**	**46.2**	**0.6**	13-06-073-08 W6M
18	Saddle Hills	**0.3**	**44.1**	**0.3**	04-25-074-07 W6M
19	Wanham	**0.6**	**40.8**	**0.3**	16-22-077-03 W6M
20	Shaftesbury	**0.4**	**N/A**	**0.8**	04-03-082-23 W5M
21	Eaglesham	**0.3**	**37.4**	**0.3**	16-21-079-25 W5M
23	Bear Lake	**0.5**	**48.2**	**0.6**	15-31-072-06 W6M

PASZA Passive Results for March 2010 (Continued)

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	Site Legal
24	Wembley	**0.2**	**46.1**	**0.9**	12-31-070-08 W6M
25	Pinto Creek	**0.2**	**41.5**	**0.3**	04-24-069-11 W6M
26	Flyingshot	**0.2**	**37.4**	**1.3**	15-36-070-07 W6M
27	Grande Prairie I	**0.3**	**34.7**	**4.9**	08-15-071-06 W6M
28	Clairmont Lake	**0.5**	**41.5**	**0.5**	09-06-073-04 W6M
29	Smoky Heights	**0.6**	**41.6**	**0.8**	04-06-075-02 W6M
30	Fitzsimmons	**0.2**	**36.2**	**0.4**	15-36-072-03 W6M
32	Gold Creek	**0.3**	**35.0**	**1.2**	06-33-067-05 W6M
33	Wapiti	**0.2**	**42.6**	**0.6**	02-25-071-03 W6M
34	Puskwaskau	**0.2**	**37.7**	**0.2**	15-35-074-25 W5M
35	Jean Cote	**0.4**	**41.4**	**0.6**	12-35-079-21 W5M
36	Guy	**0.3**	**39.2**	**0.4**	03-04-076-22 W5M
37	Crooked Creek	**0.2**	**39.1**	**0.7**	16-01-071-26 W5M
38	Karr Creek	**0.2**	**37.3**	**0.2**	10-16-065-02 W6M
39	Clouston Creek	**0.3**	**38.4**	**0.4**	12-01-073-22 W5M
40	McLennan	**0.4**	**38.3**	**0.5**	03-29-077-19 W5M
41	Valleyview	**0.3**	**39.1**	**0.7**	09-30-069-22 W5M
42	Sunset House	**0.4**	**45.9**	**0.3**	05-32-070-19 W5M
43	High Prairie	**0.3**	**36.5**	**0.7**	16-13-074-17 W5M
44	Peavine	**0.2**	**32.0**	**0.4**	03-05-079-15 W5M
45	Gift Lake	**0.2**	**30.8**	**0.6**	10-07-079-12 W5M
46	Little Smoky	**0.3**	**31.8**	**1.6**	12-01-065-21 W5M
47	Kinuso	**0.2**	**32.8**	**0.6**	12-10-073-10 W5M
48	Deer Mountain	**0.2**	**35.8**	**0.6**	15-22-068-09 W5M
49	Grande Prairie HP	**0.2**	**34.1**	**5.9**	17-26-071-06 W6M

*BDL = Below Detection Level



Duplicate Summary Chart

Passive Summary for March 2010

Stats	Sulphur Dioxide SO_2	Ozone O_3	Nitrogen Dioxide NO_2
	ppb	ppb	ppb
	Passive Summary for March 2010 (PASZA Zone)		
Mean	**0.3**	**39.4**	**0.8**
Standard Deviation	**0.1**	**4.2**	**1.1**
Minimum	**0.1**	**30.8**	**0.2**
Minimum At	**Sylvester (#14)**	**Gift Lake (#45)**	**Puskwaskau (#34)**
Maximum	**0.6**	**48.2**	**5.9**
Maximum At	**Wanham (#19)**	**Bear Lake (#23)**	**Grande Prairie HP (#49)**

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

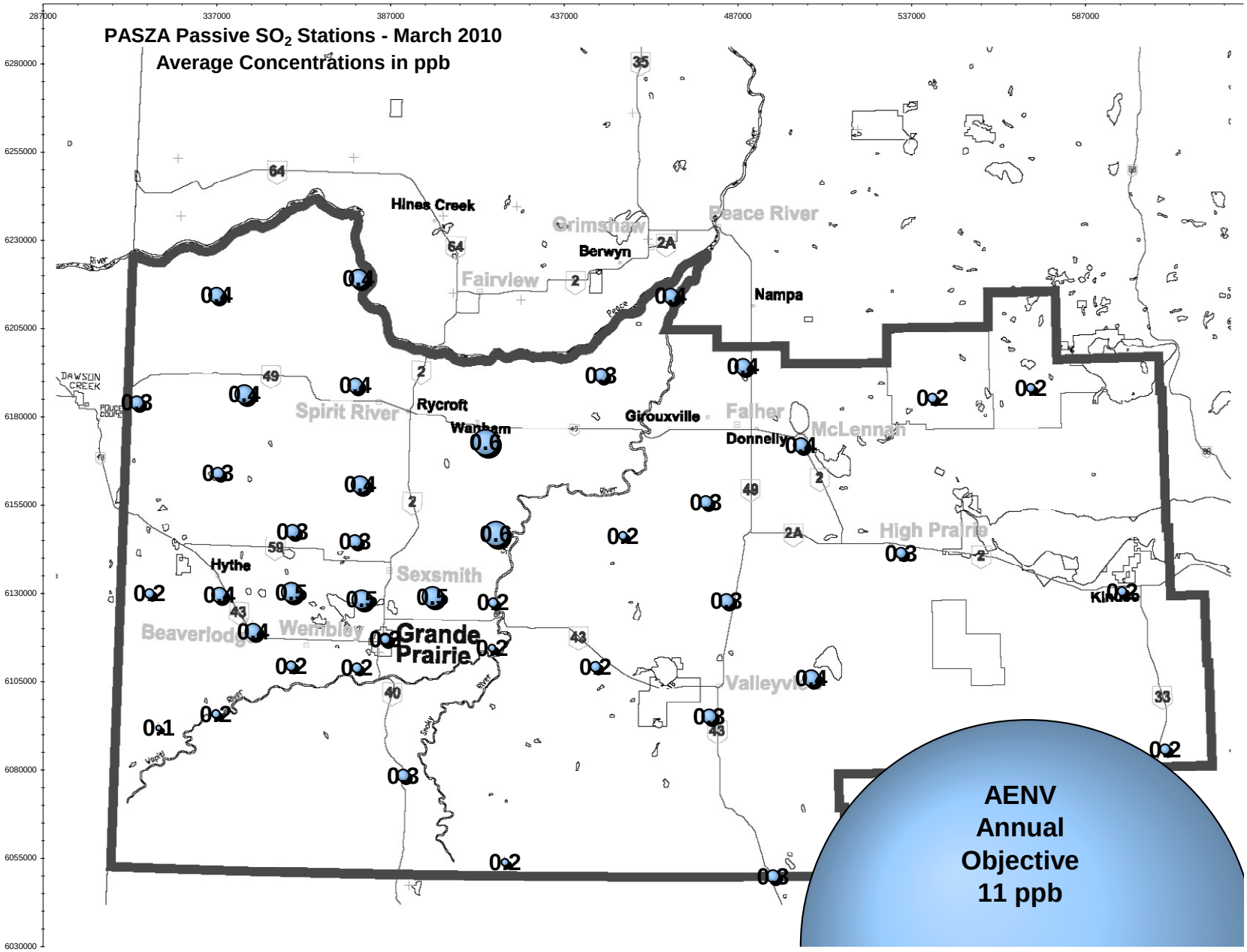
	SO_2	O_3	NO_2
PASZA Beaverlodge station	**0.5**	**37.9**	**4.3**
PASZA Beaverlodge passive	**0.4**	**38.5**	**0.9**

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

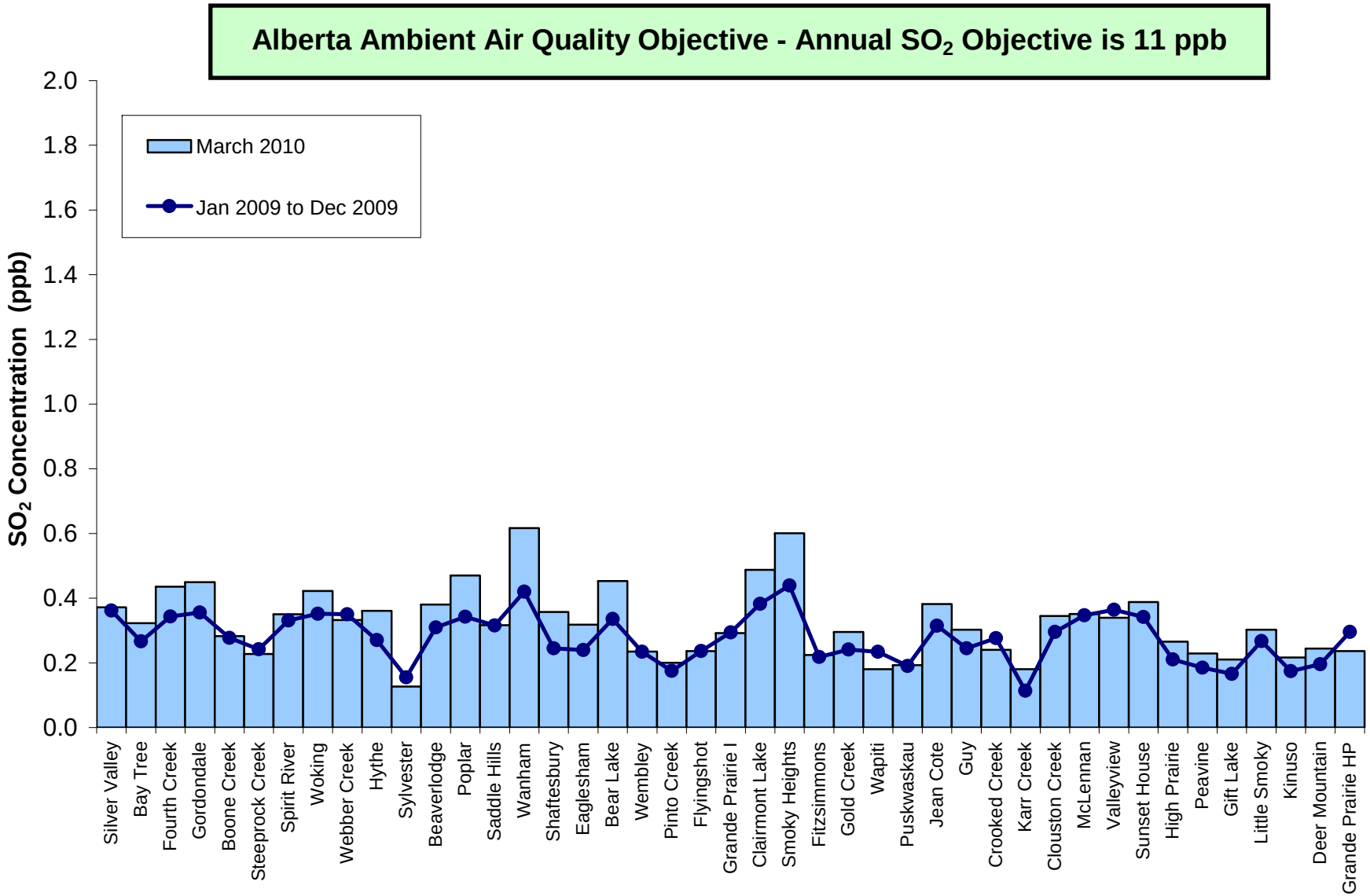
	SO_2	O_3	NO_2
PASZA Henry Pirker station	**0.4**	**25.0**	**16.4**
PASZA Grande Prairie passive	**0.2**	**34.1**	**5.9**

Comparison between Continuous and Passive monitoring at Kinuso (passive #47 Kinuso)

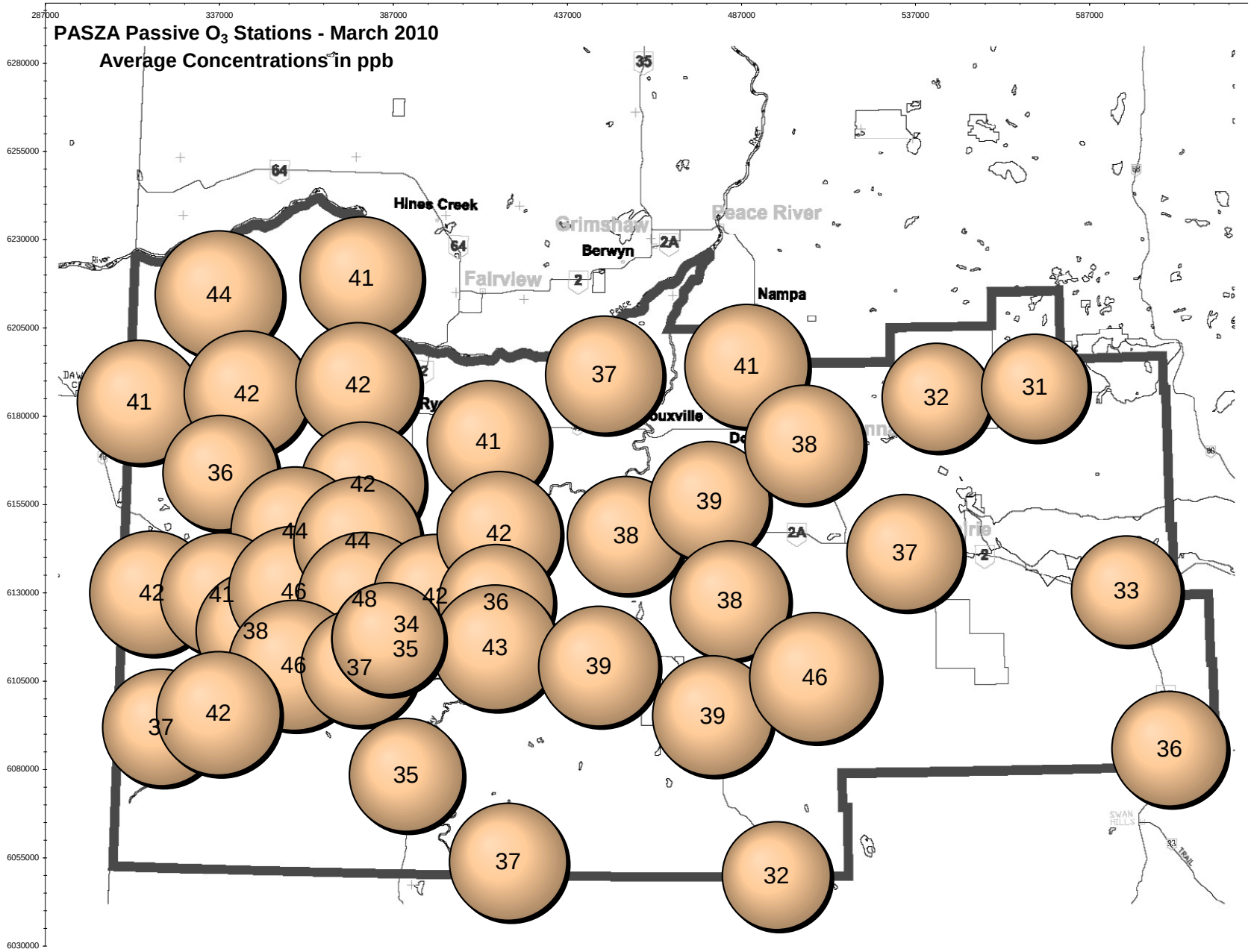
	SO_2	O_3	NO_2
PASZA Portable Kinuso station	**0.4**	**35.5**	**2.1**
PASZA Kinuso passive	**0.2**	**32.8**	**0.6**



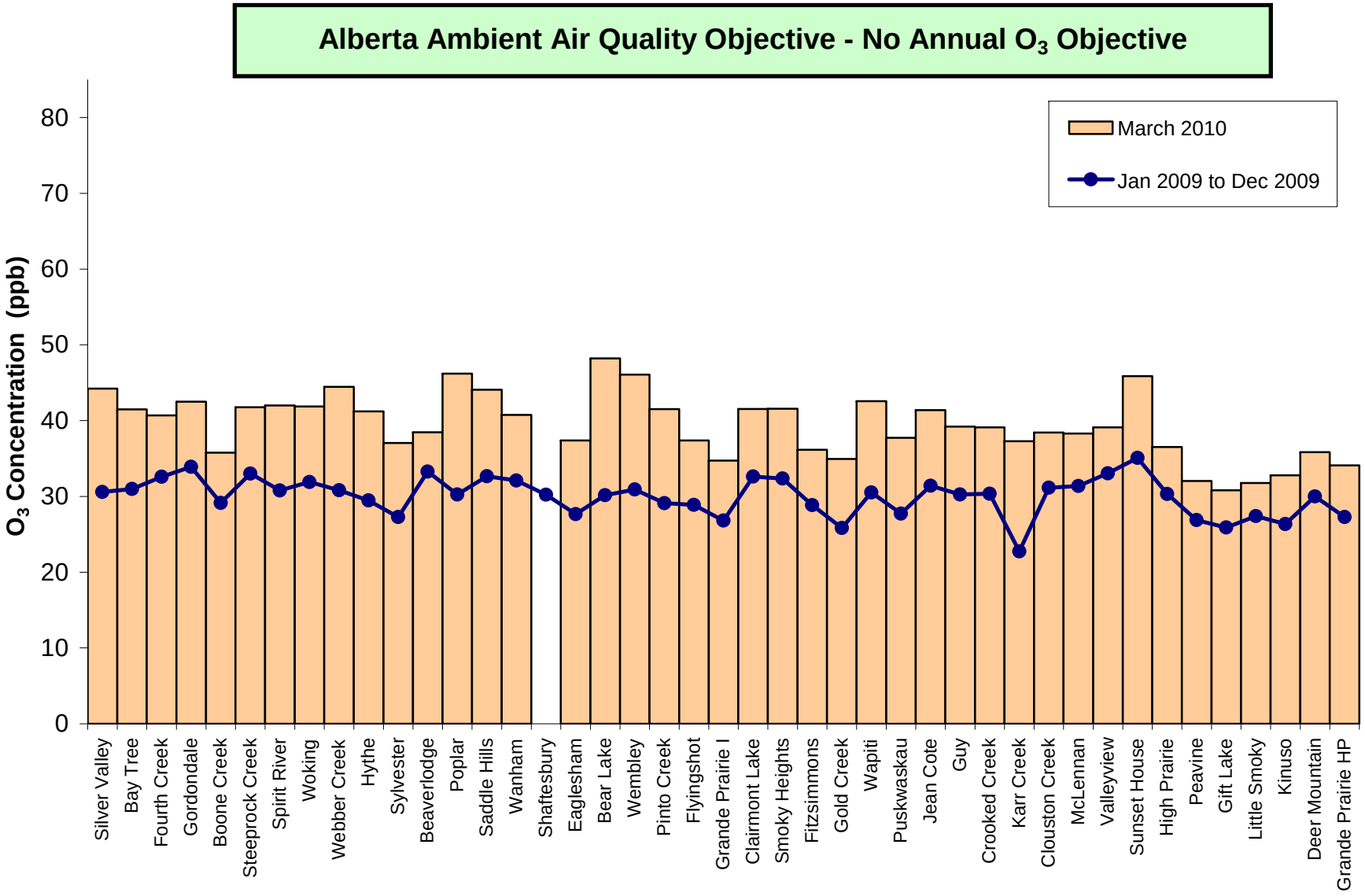
SO_2 Bubble Chart



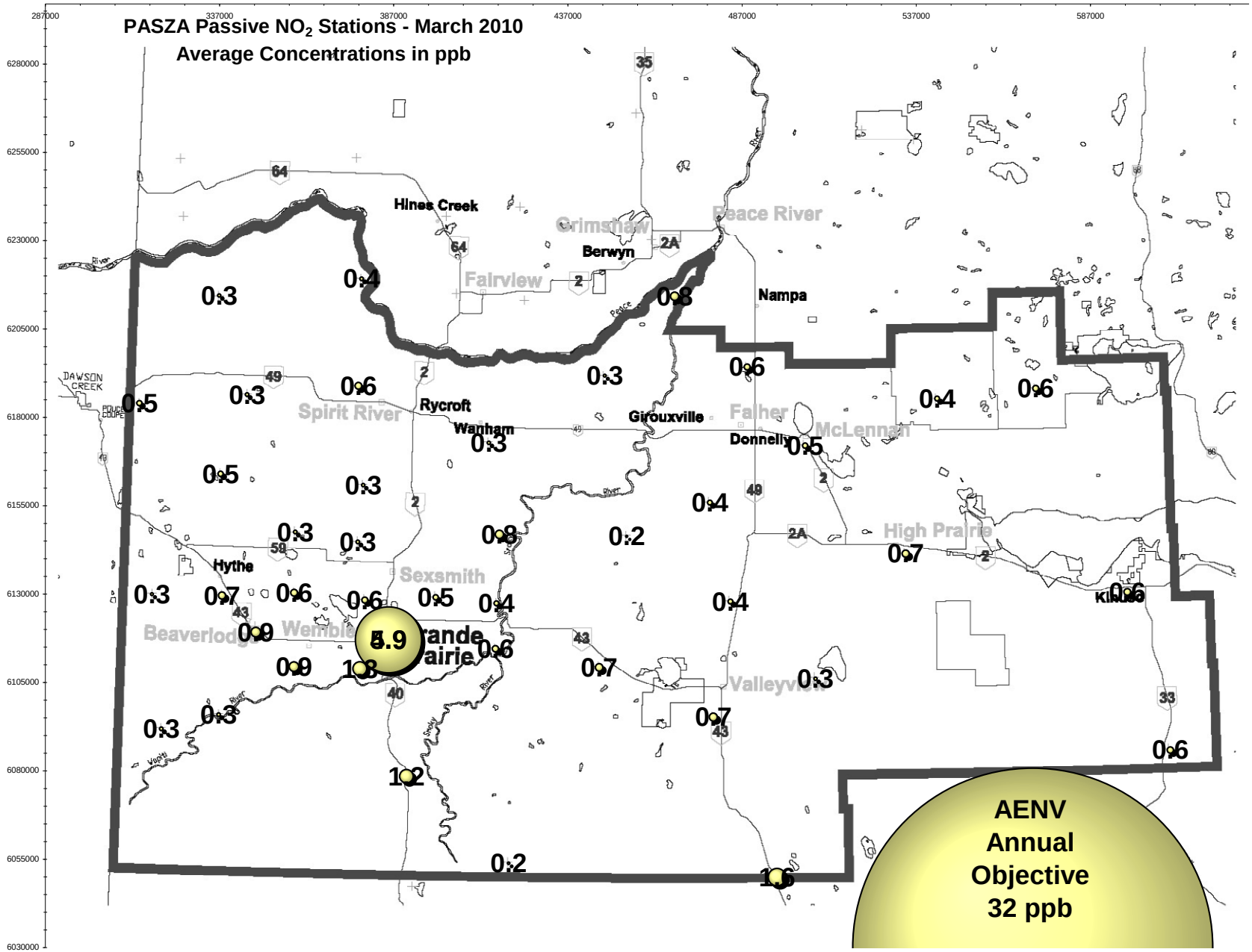
SO_2 Summary Chart



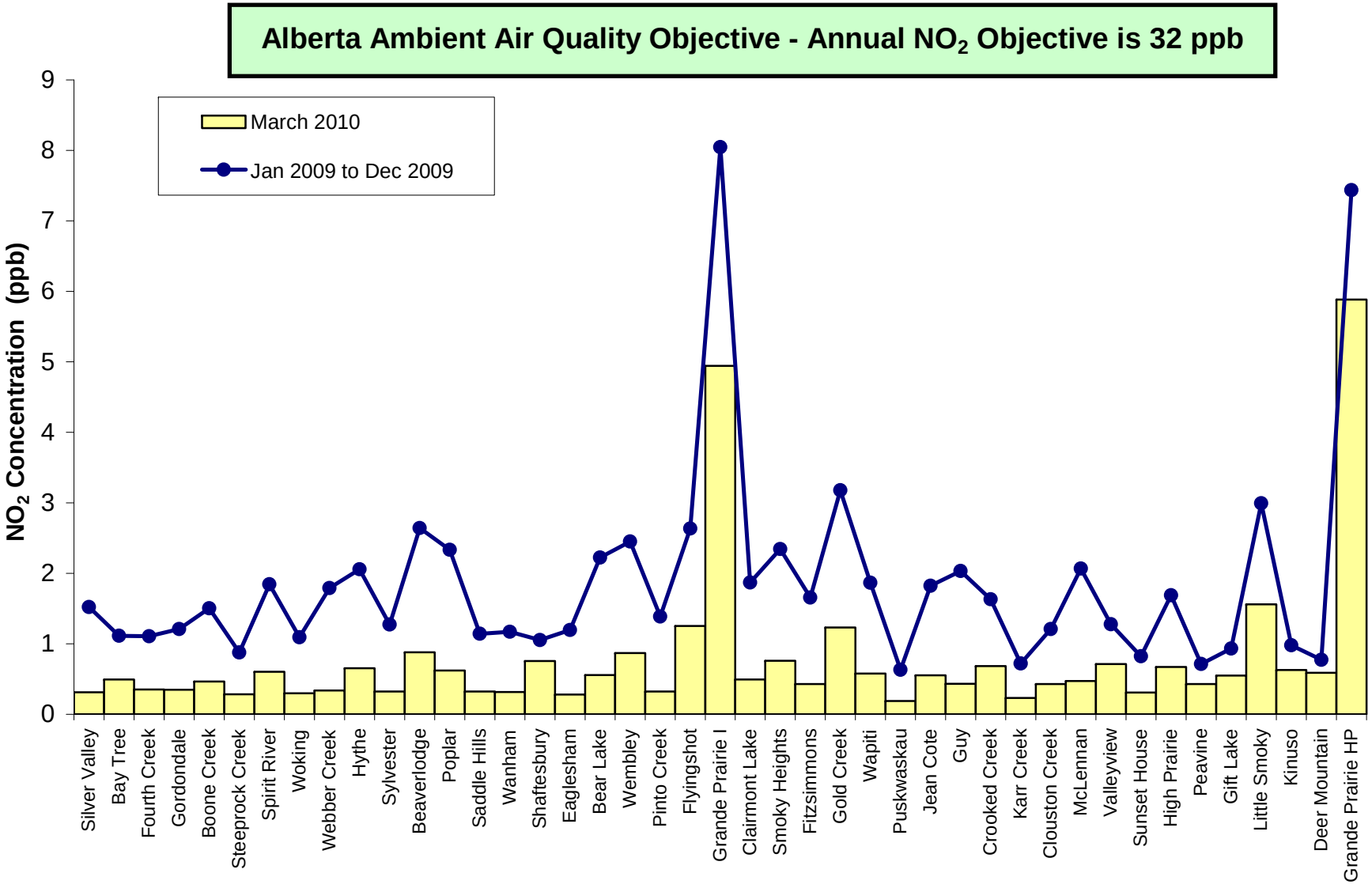
O_3 Bubble Chart



O_3 Summary Chart



NO_2 Bubble Chart



NO_2 Summary Chart

March 2010 Calibration Reports

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

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

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

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

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

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

Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **SO2**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	March 10, 2010	Previous Calibration	February 10, 2010
Station Number	1	Station Location	Henry Pirker
Reason: Routine	Install	Removal	Other:
Start Time (MST)	9:45	End Time (MST)	12:22
Barometric Pressure	0.918 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Conc	50.6 ppb	Cal Gas Cert Date	13/3/2009
		Cal Gas Cylinder #	AAL 15377
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	10
	Before		After
Calculated slope	1.004809	Calculated slope	1.000451
Calculated intercept	-0.913416	Calculated intercept	-1.065511
Analyzer make	TEI 43C	Analyzer serial #	610816292

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	8.8		8.6	
Coefficient	.819		.819	
Pressure	639.1	mm Hg	642.1	mm Hg
Flow	0.476	lpm	0.475	lpm
Lamp Voltage	44433	Hz	44501	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	0.3	N/A
4988	39.83	400.8	401.4	0.9986
4988	19.91	201.2	202.3	0.9945
4988	9.95	100.7	102.7	0.9807
4989	0.00	0.0	0.0	As Found Zero
4988	39.83	400.8	401.4	As Found Span
			Average Correction Factor	0.9913

Calculated value of As Found Response: 402.4 ppb Percent Change of As Found: -0.4%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.1	ppb
Auto span	239.8	ppb	236.7	ppb

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **SO2**

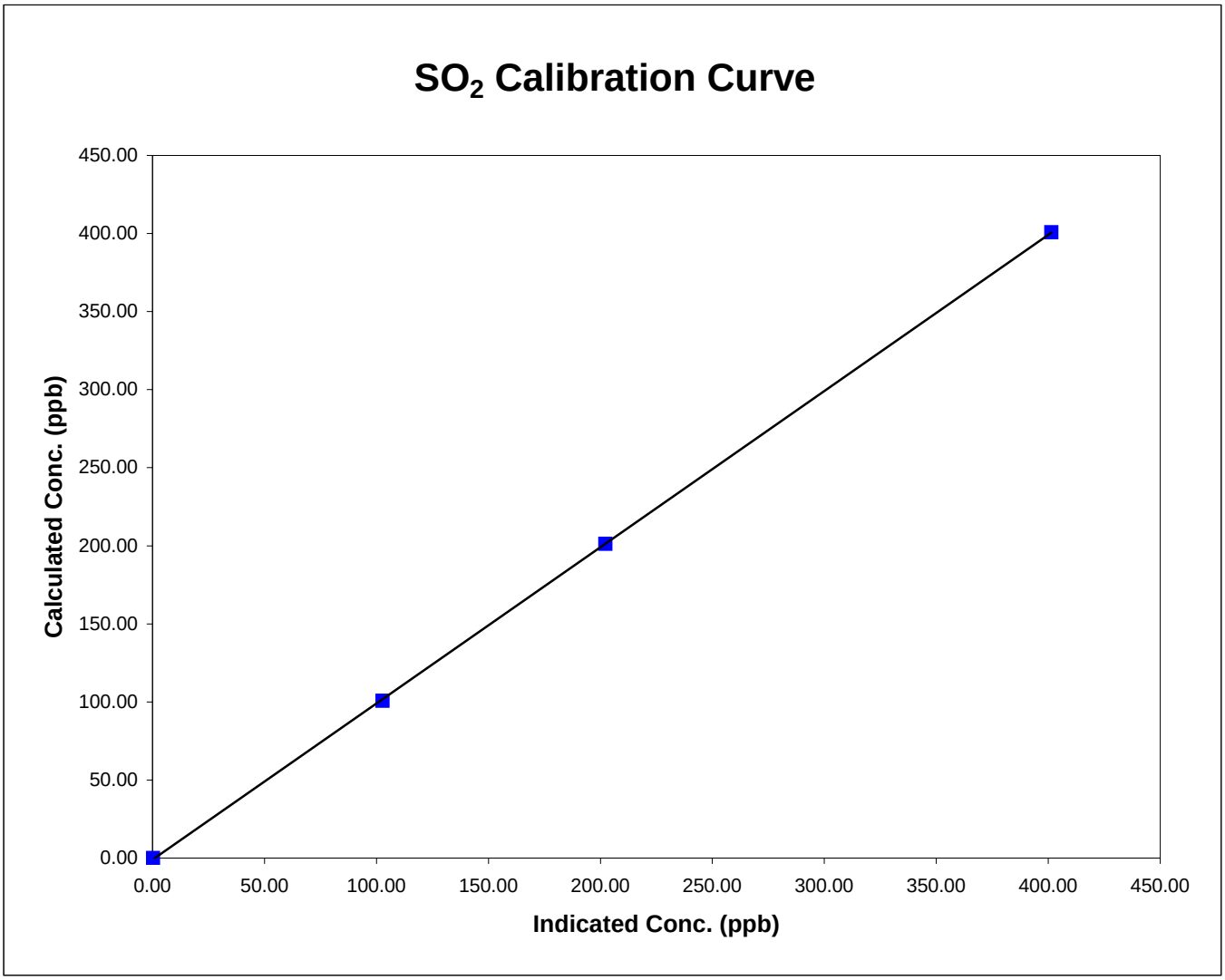
Air Monitoring Network **PASZA**

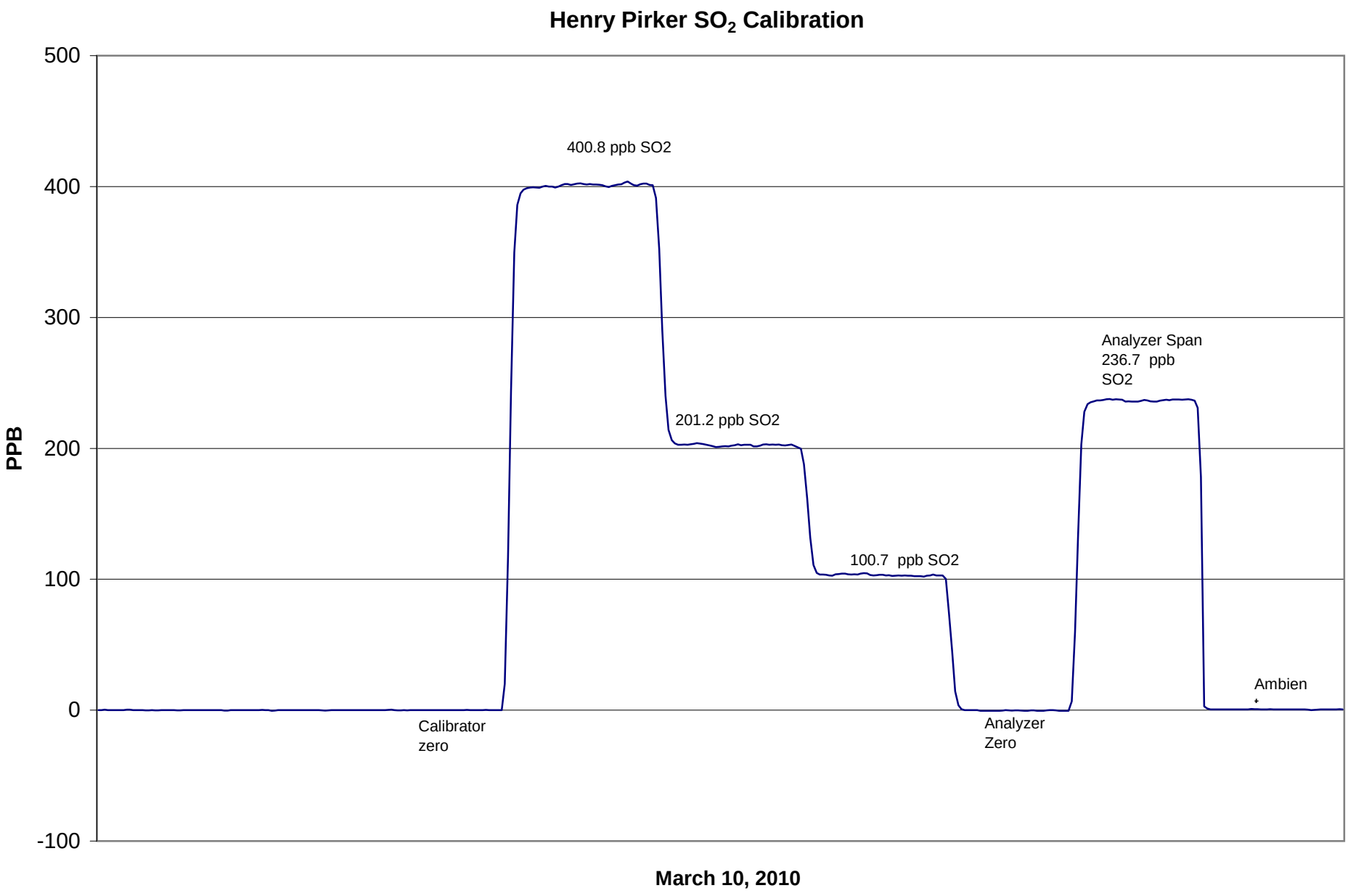
Station Information

Calibration Date	March 10, 2010	Previous Calibration	February 10, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:45	End Time (MST)	12:22
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	0.3	N/A		
400.8	401.4	0.9986	Correlation Coefficient	0.999981
201.2	202.3	0.9945		
100.7	102.7	0.9807	Slope	1.000451
			Intercept	-1.065511




Henry Pirker SO_2 Calibration
500
400
300
200
100
0
-100
PPB
400.8 ppb SO2
201.2 ppb SO2
100.7 ppb SO2
Analyzer Span
236.7 ppb
SO2
Ambien
Calibrator
zero
Analyzer
Zero
March 10, 2010

Calibration Report

Parameter **TRS**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	March 9, 2010	Previous Calibration	February 9, 2010
Station Number	1	Station Location	Henry Pirker
Reason: Routine	Install	Removal	Other:
Start Time (MST)	11:45	End Time (MST)	14:40
Barometric Pressure	0.924 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Conc	5.15 ppb	Cal Gas Expiry Date	7/31/2008
		Cal Gas Cylinder #	ALM013295
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	0.995496	Calculated slope	0.998399
Calculated intercept	-0.340668	Calculated intercept	-0.239132
Analyzer make	TEI 45C	Analyzer serial #	630718528

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Coefficient	0.844		.812	
Background	18.0		17.5	
Pressure	662.5	mm Hg	650.8	mm Hg
Flow	471	ccm	466	ccm
Lamp Voltage	849	V	850	V

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.00	-0.03	N/A
4988	79.83	81.12	81.41	0.9965
4988	39.81	40.78	41.19	0.9901
4988	9.93	10.23	10.74	0.9530
4988	0.00	0.00	-0.06	As Found Zero
4988	79.77	81.06	83.56	As Found Span
			Average Correction Factor	0.9799

Calculated value of As Found Response: 82.9 ppb Percent Change of As Found: -2.3%

	before calibration		after calibration	
Auto zero	-0.29	ppb	-0.15	ppb
Auto span	21.32	ppb	21.82	ppb

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **TRS**

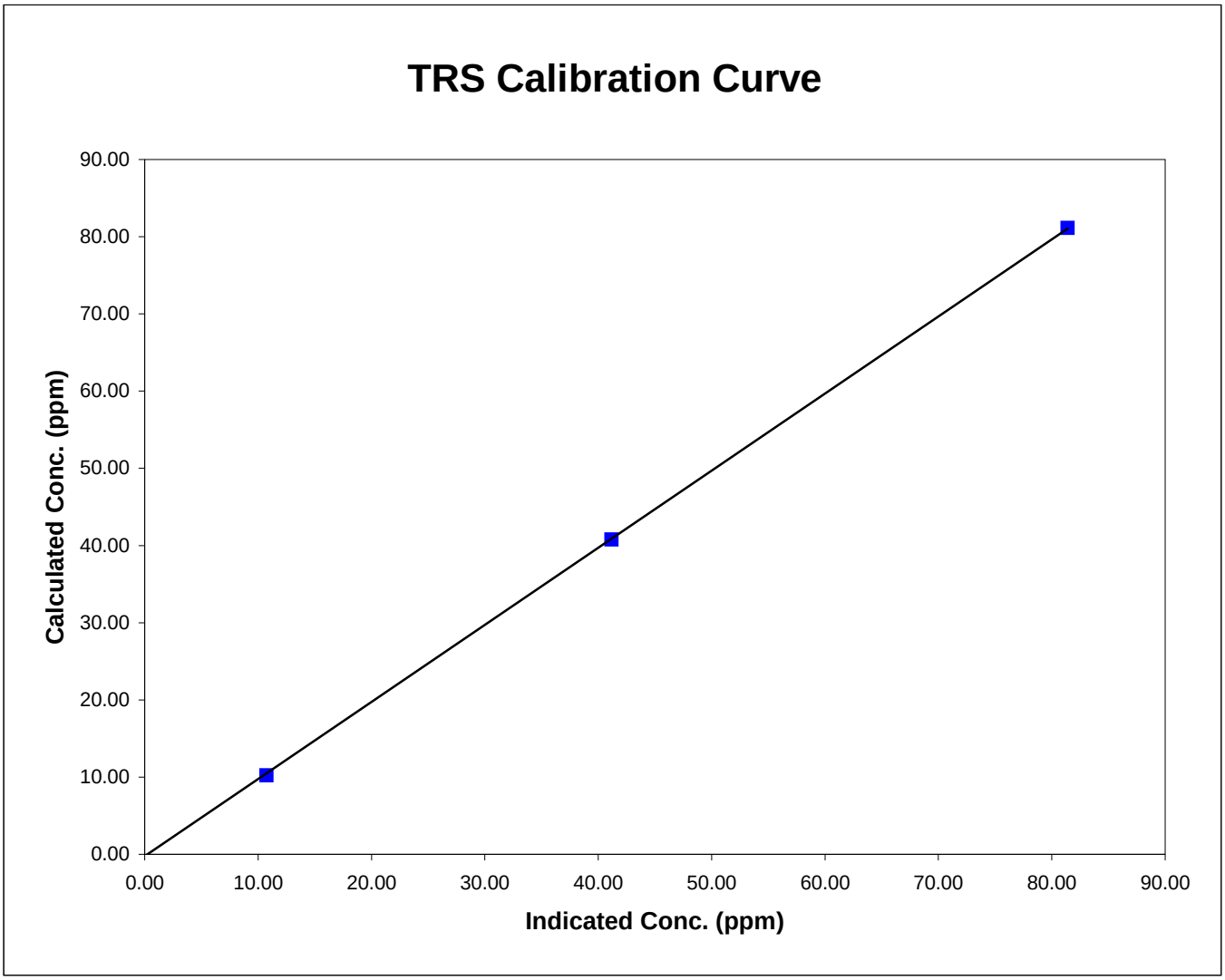
Air Monitoring Network **PASZA**

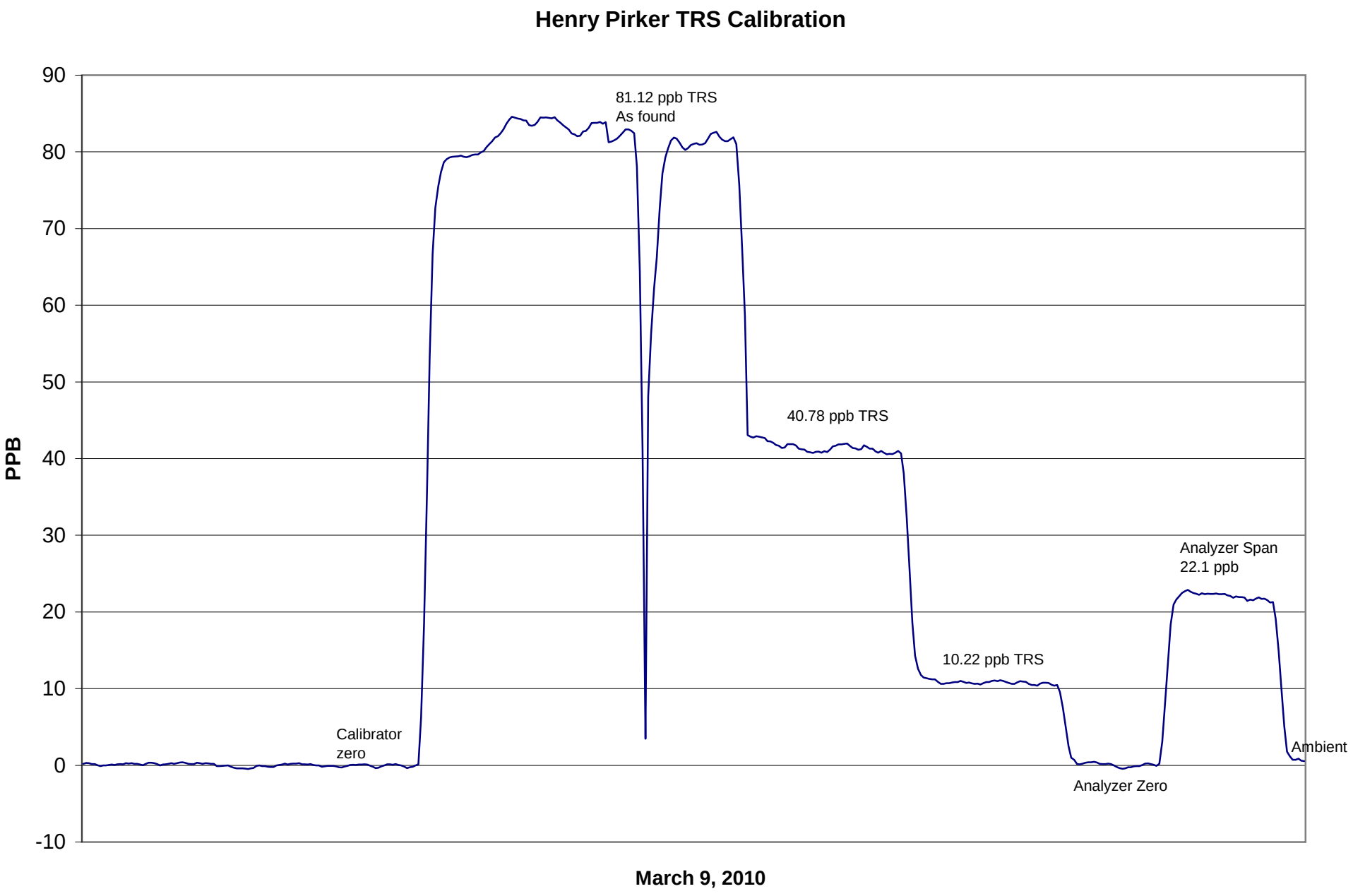
Station Information

Calibration Date	March 9, 2010	Previous Calibration	February 9, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	11:45	End Time (MST)	14:40
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	-0.027	N/A		
81.124	81.409	0.9965	Correlation Coefficient	0.999962
40.777	41.186	0.9901		
10.232	10.736	0.9530	Slope	0.998399
			Intercept	-0.239132




Henry Pirker TRS Calibration
PPB
90
80
70
60
50
40
30
20
10
0
-10
81.12 ppb TRS
As found
40.78 ppb TRS
10.22 ppb TRS
Analyzer Span
22.1 ppb
Calibrator
zero
Analyzer Zero
Ambient
March 9, 2010

Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	March 10, 2010	Previous Calibration	February 10, 2010
Station Number	1	Station Location	Henry Pirker

Reason: **Routine** Installation Removal Other:

Start Time (MST)	9:45		End Time (MST)	13:53	
Barometric Pressure	0.918	Atm	Station Temperature	25.0	Deg C
Calibrator	Environics		Serial Number	3474	
NO Cal Gas Conc	49.6	ppm	Cal Gas Expiry Date	June 8, 2008	
NOx Cal Gas Conc	49.6	ppm	Cal Gas Serial #	AAL 15377	

DACS Information

DACS make: Focus AP1000 DACS serial No.:

Parameter		NO2	NOx	NO
Before	Data Slope	0.999145	1.006663	1.004880
	Data Offset	-0.198753	-2.455020	-2.210996
After	Data Slope	0.996508	1.003114	1.001595
	Data Offset	-0.186576	-2.039715	-2.204082
Channel #		8	6	7
Voltage Range		0 - 10 VDC	0 - 10 VDC	0 - 10 VDC

Analyzer Information

Analyzer make/model: TEI 42C Analyzer serial #: 508011073

Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	10.2	mV	10.1	mV
NOx bkgnd	11.1	mV	10.3	mV
NO coefficient	0.744		0.750	
NOx coefficient	1.001		1.004	
NO2 conv temp	318.0	Deg C	319.0	Deg C
PMT Temp	-2.5	Deg C	-2.5	Deg C
PMT Volt	-786.0	mV	-786.0	mV
R Cell Press	171.0	in Hg	171.6	in Hg

Calibration Report

Parameter **NOx-NO-NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: March 10, 2010 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	0.1	N/A	N/A
1	4988	39.82	392.8	392.8	0.0	392.6	393.2	-0.5	1.0005	0.9991
2	4988	19.87	196.8	196.8	0.0	199.2	199.9	-0.7	0.9878	0.9843
3	4988	9.91	98.3	98.3	0.0	102.0	102.6	-0.6	0.9638	0.9581
AFZ	4991	0.00	0.0	0.0	0.0	0.1	-0.1	0.2	0.0000	0.0000
AFS	4988	39.84	393.0	393.0	0.0	392.6	393.2	-0.6	1.0010	0.9995
							Average Correction Factor		0.9841	0.9805

As Found Concentrations: NO_X= 390.1 NO= 391.1 As Found Percent Change NO_X= -0.7% NO= -0.5%

GPT Calibration Data

Dilution Flow 4989 ccm Source Gas Flow 39.84 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	-0.1	-0.1	0.0	0.1	-0.1	0.1	N/A	N/A	N/A	N/A
NO point	392.3	392.3	0.0	392.4	392.3	0.1	0.9996	1.0000	N/A	N/A
300	392.3	143.3	248.9	393.1	143.3	250.0	0.9980	1.0000	0.9959	100.4%
200	392.3	221.1	171.2	392.8	221.1	172.0	0.9986	1.0000	0.9954	100.5%
100	392.3	298.0	94.3	392.7	298.0	94.9	0.9989	1.0000	0.9937	100.6%
					Average Correction Factor		0.9985	1.0000	0.9950	100.5%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.1	0.0	0.0	ppb	0.1	0.0	0.0	ppb
Auto span	168.4	169.5	1.2	ppb	177.3	176.4	1.0	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **NO_2**

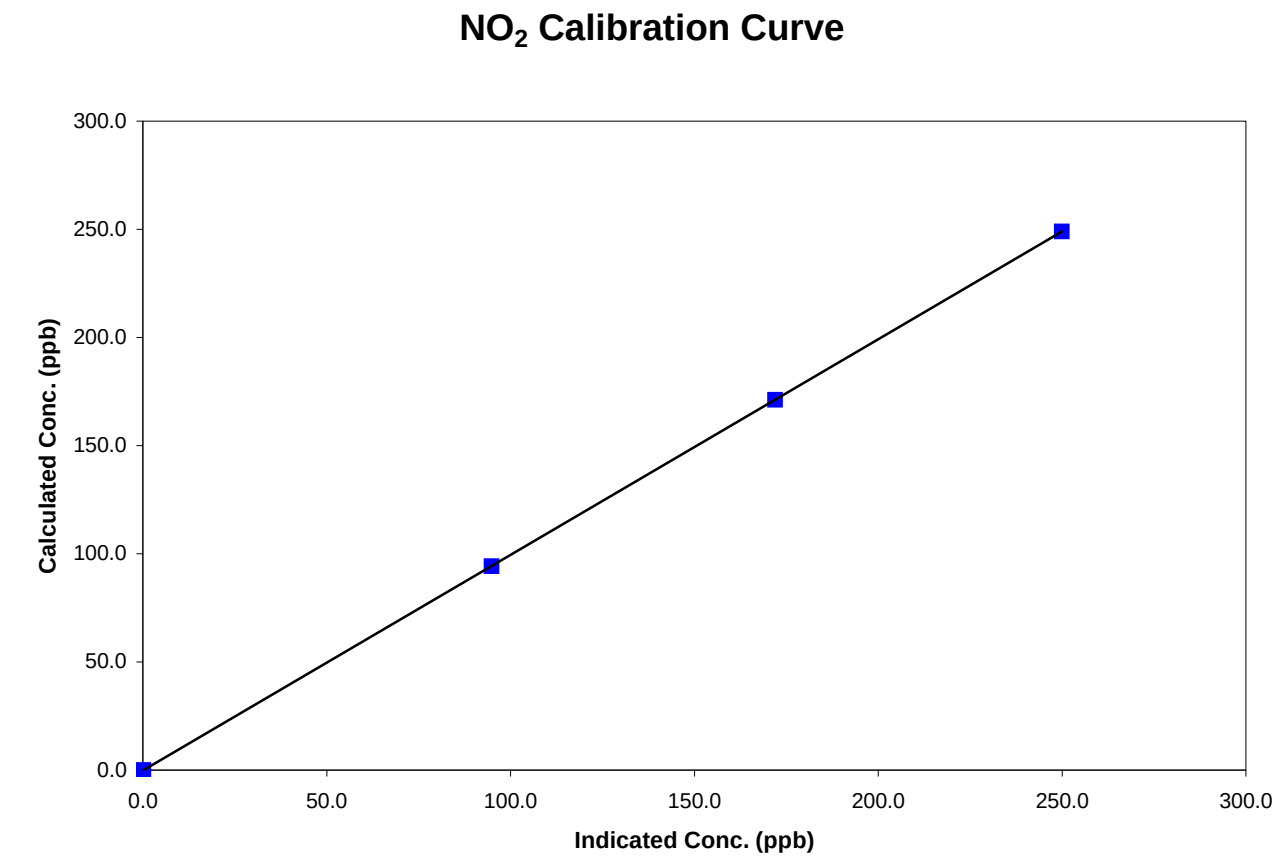
Air Monitoring Network **PASZA**

Station Information

Calibration Date	March 10, 2010	Previous Calibration	February 10, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:45	End Time (MST)	13:53
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		
248.9	250.0	0.9959	Correlation Coefficient	1.000000
171.2	172.0	0.9954		
94.3	94.9	0.9937	Slope	0.996508
			Intercept	-0.186576



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **PASZA**

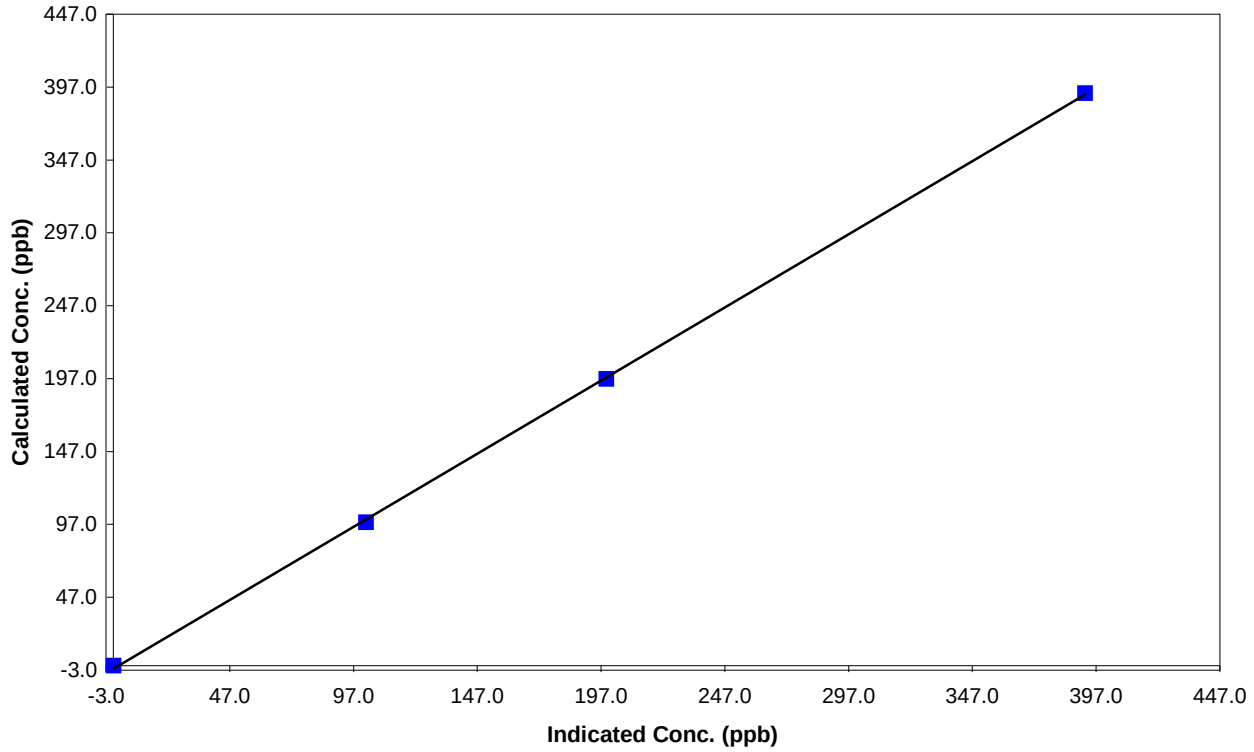
Station Information

Calibration Date	March 10, 2010	Previous Calibration	February 10, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:45	End Time (MST)	13:53
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		
392.8	392.6	1.0005	Correlation Coefficient	0.999884
196.8	199.2	0.9878		
98.3	102.0	0.9638	Slope	1.003114
			Intercept	-2.039715

NOx Calibration Curve



Calibration Summary

Parameter **NO**

Air Monitoring Network **PASZA**

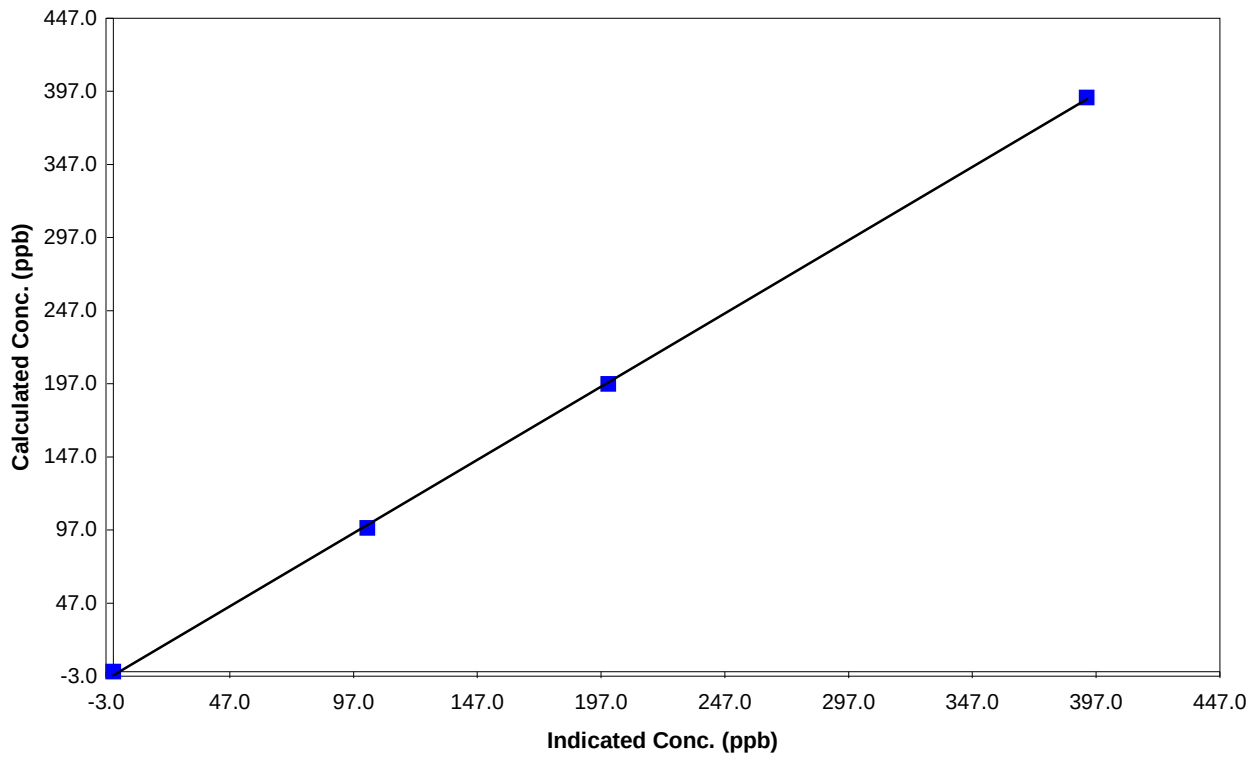
Station Information

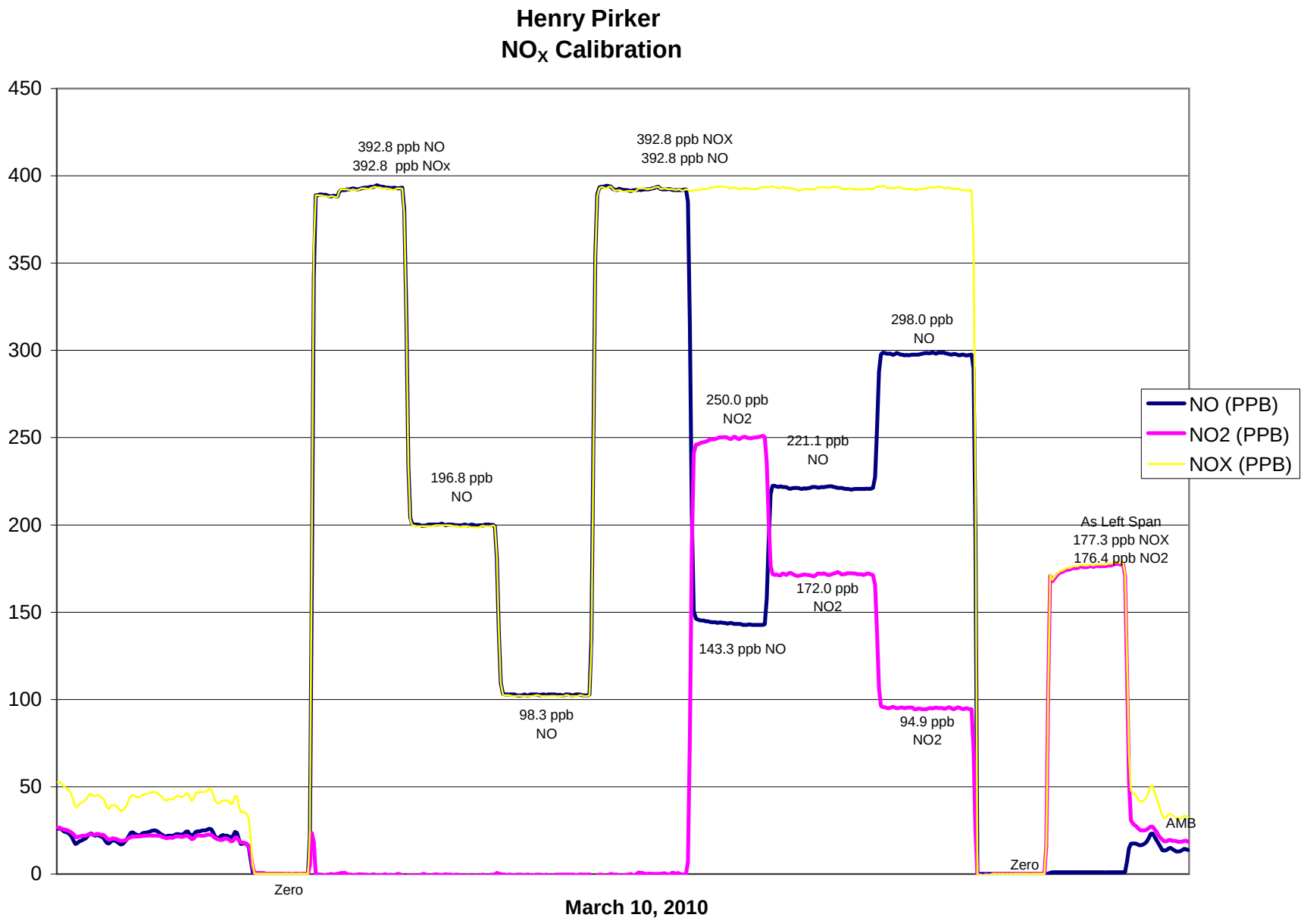
Calibration Date	March 10, 2010	Previous Calibration	February 10, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:45	End Time (MST)	13:53
Analyzer make	TEI 42C	Analyzer serial #	508011073

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A		
392.8	393.2	0.9991	Correlation Coefficient	0.999841
196.8	199.9	0.9843		
98.3	102.6	0.9581	Slope	1.001595
			Intercept	-2.204082

NO Calibration Curve




Henry Pirker
NOX Calibration
450
400
350
300
250
200
150
100
50
0
392.8 ppb NO
392.8 ppb NOx
392.8 ppb NOX
392.8 ppb NO
298.0 ppb
NO
250.0 ppb
NO2
221.1 ppb
NO
196.8 ppb
NO
As Left Span
177.3 ppb NOX
176.4 ppb NO2
172.0 ppb
NO2
143.3 ppb NO
98.3 ppb
NO
94.9 ppb
NO2
AMB
Zero
Zero
NO (PPB)
NO2 (PPB)
NOX (PPB)
March 10, 2010

Calibration Report

Parameter **O3**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	March 10, 2010	Previous Calibration	February 10, 2010
Station Number	1	Station Location	Henry Pirker
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	12:54	End Time (MST)	15:15
Barometric Pressure	0.920 atm	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	Focus AP1000	DACS serial No.	45269
DACS voltage range	0 - 1 volt	DACS channel #	5
	Before		After
Calculated slope	1.008120	Calculated slope	1.002025
Calculated intercept	0.278954	Calculated intercept	0.299052
Analyzer make	TECO 49C	Analyzer serial #	607415761

	before		after	
Concentration range	500	ppb	500	ppb
offset	-1.9	ppb	-0.5	ppb
slope	1.014		1.014	
O3 Lamp temp	71.1	Deg C	71	Deg C
Intensities	89281/76660	mV	90903/80527	mV
Pressure	681.5	inches Hg	683.5	inches Hg
Flow A	0.715	ccm	0.716	ccm
Flow B	0.731	Deg C	0.732	Deg C

Calibration Data

Referenced concentration (ppb)	Dilution air flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
0	4991	0.0	0.1	N/A
300	4988	248.9	248.8	1.0004
200	4988	171.2	169.6	1.0094
100	4988	94.3	93.7	1.0069
0	4991	0.0	0.1	As found zero
300	4988	248.9	248.7	As found span
			Average Correction Factor	1.0055

Calculated value of As Found Response: 250.8 ppm Percent Change of As Found: 0.8%

	before calibration		after calibration	
Auto zero	0.3	ppb	0.3	ppb
Auto span	138.2	ppb	153.0	ppb

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **O3**

Air Monitoring Network **PASZA**

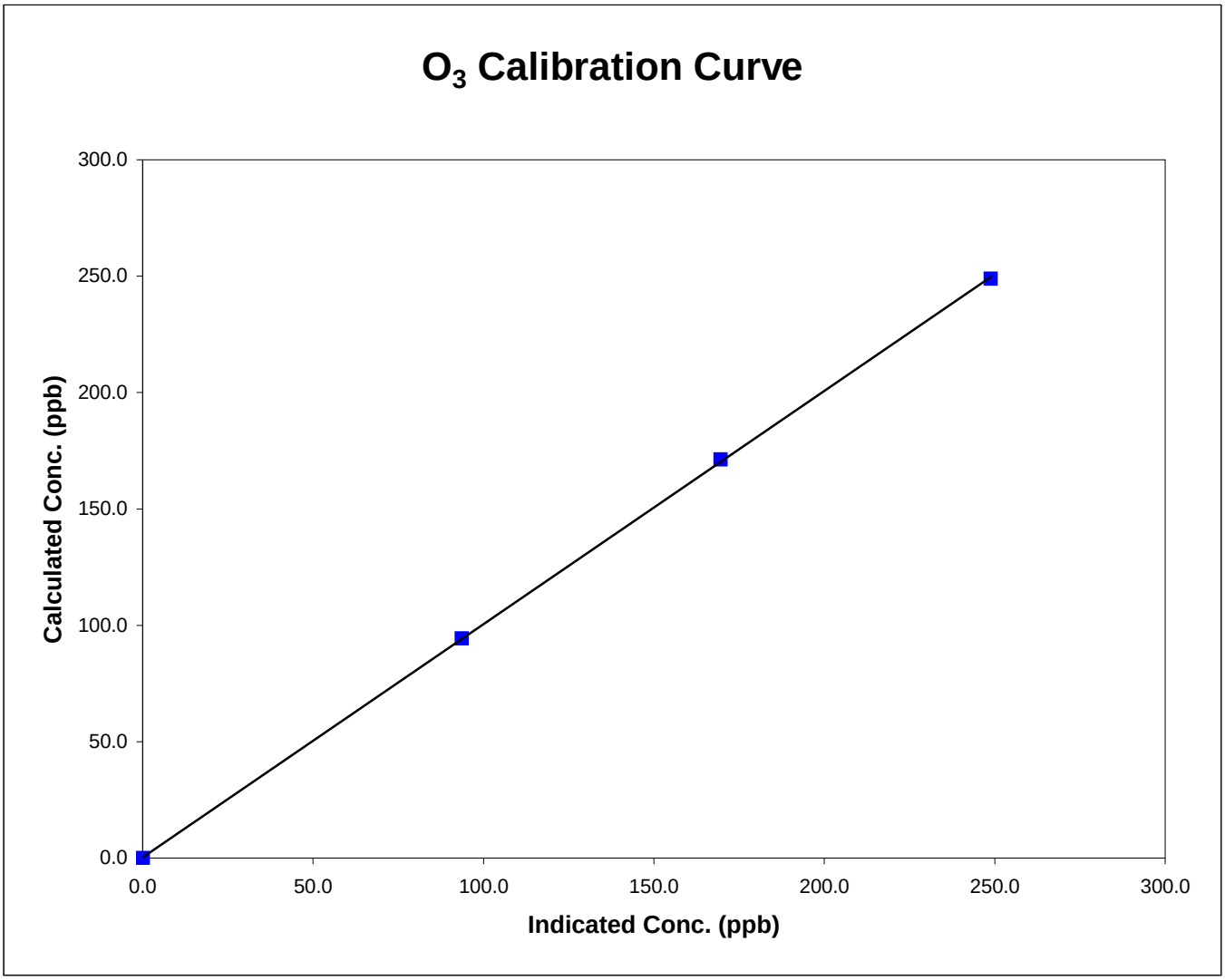
FOCUS AIR QUALITY MONITORING

Station Information

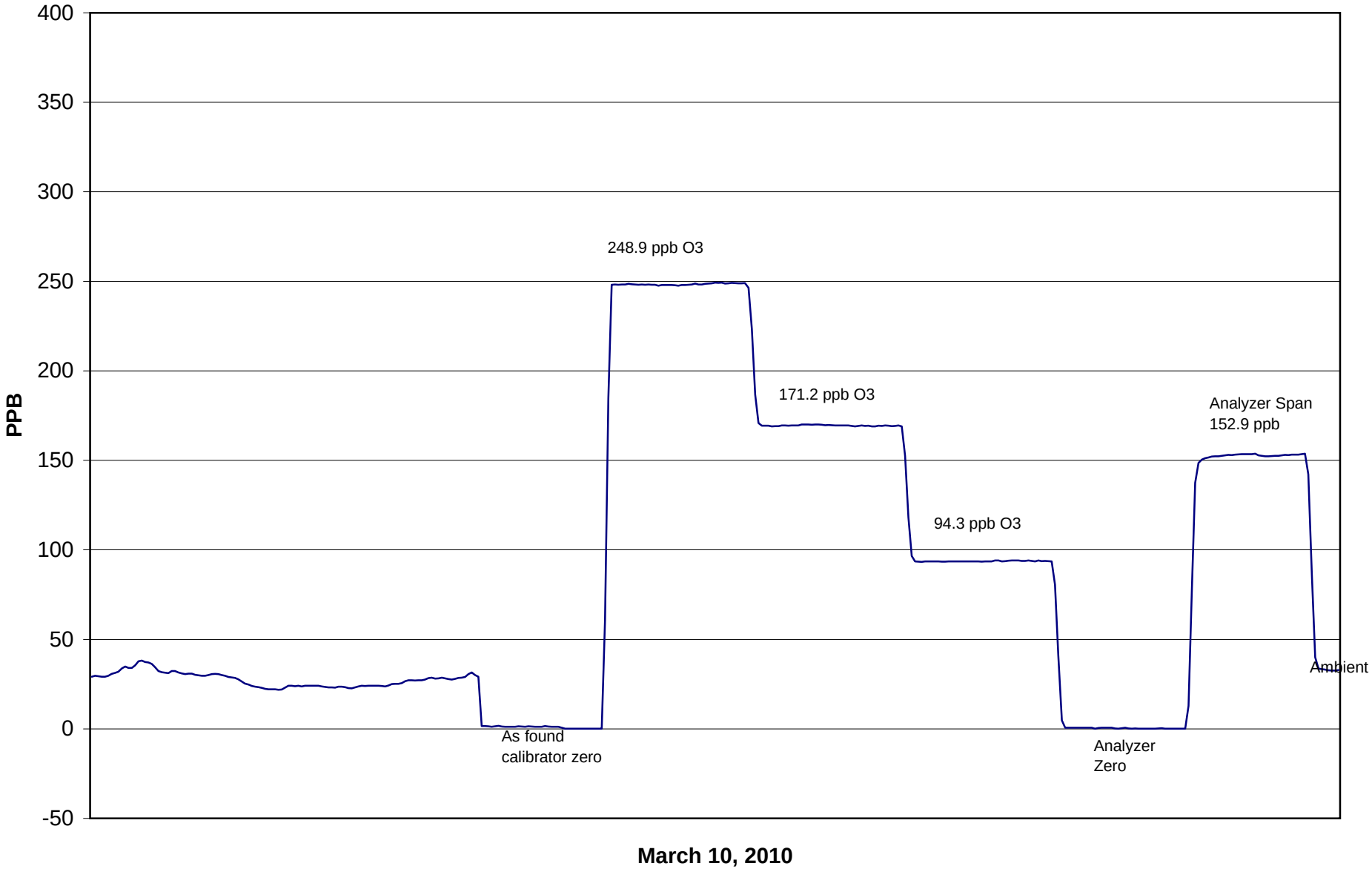
Calibration Date	March 10, 2010	Previous Calibration	February 10, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:54	End Time (MST)	15:15
Analyzer make/model	TECO 49C	Analyzer serial #	607415761

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	NA		
248.9	248.8	1.0004	Correlation Coefficient	0.999953
171.2	169.6	1.0094		
94.3	93.7	1.0069	Slope	1.002025
			Intercept	0.299052



Henry Pirker O_3 Calibration



Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **CO**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	March 9, 2010	Previous Calibration	February 9, 2010
Station Number	1	Station Location	Henry Pirker
Reason: Routine	Install	Removal	Other:
Start Time (MST)	8:15	End Time (MST)	11:26
Barometric Pressure	0.924 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	1.030147	Calculated slope	1.008042
Calculated intercept	-0.574396	Calculated intercept	-0.167987
Analyzer make	TEI Model 48C	Analyzer serial #	508011062

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO span setting	1.037		1.062	
CO zero setting	8.831		9.230	
Sample pressure	685	mm Hg	685.5	mm Hg
Sample Flow	1.135	LPM	1.135	LPM

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4991	0.00	0.00	0.10	N/A
4988	39.83	23.77	23.71	1.0023
4988	19.90	11.92	12.02	0.9917
4988	9.94	5.97	6.15	0.9698
4990	0.00	0.00	0.05	As Found Zero
4988	39.83	23.77	22.92	As Found Span
			Average Correction Factor	0.9879

Calculated value of As Found Response: 22.985 ppm Percent Change of As Found: 3.3%

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	19.80	ppm	18.72	ppm

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **CO**

Air Monitoring Network **PASZA**

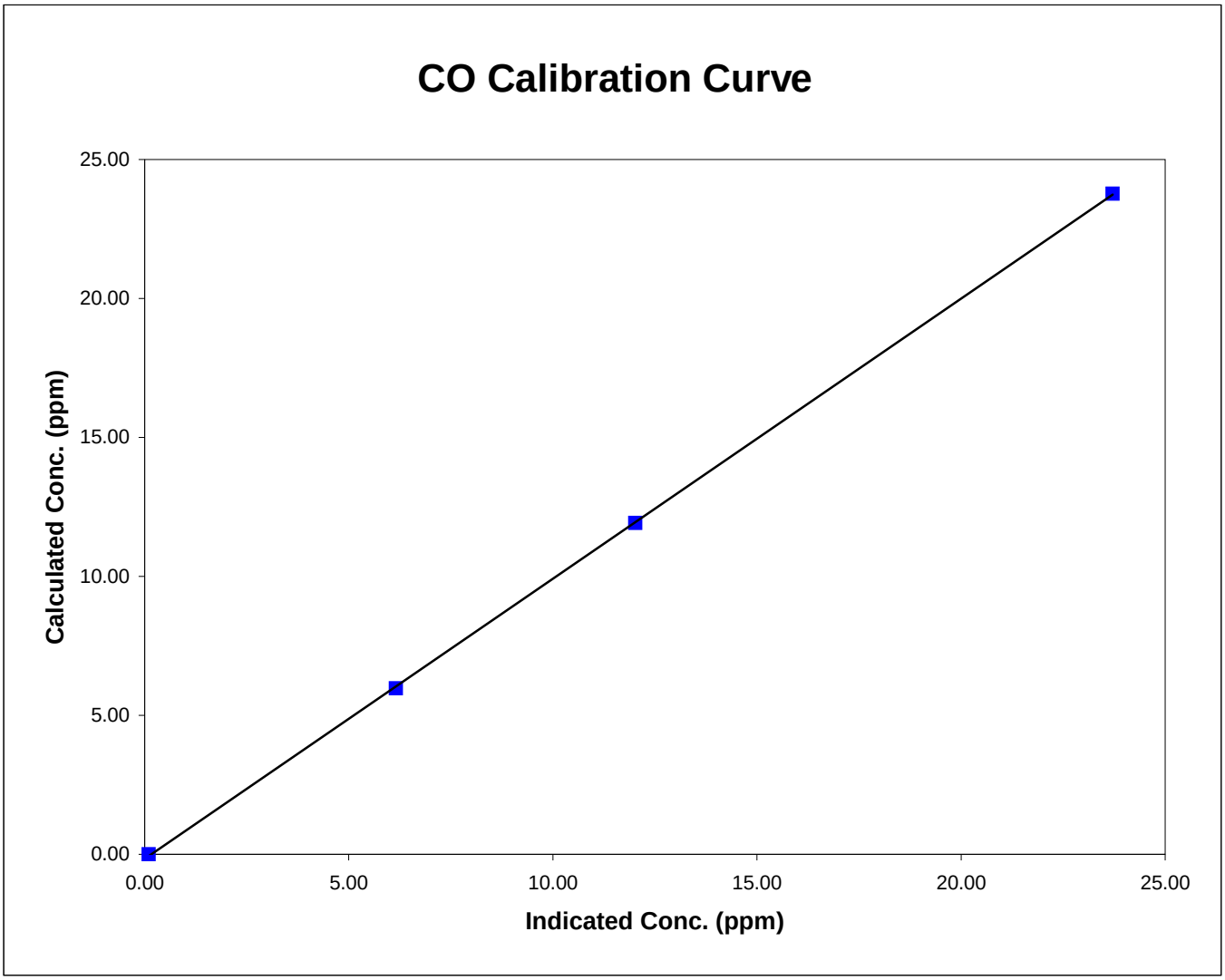
FOCUS AIR QUALITY MONITORING

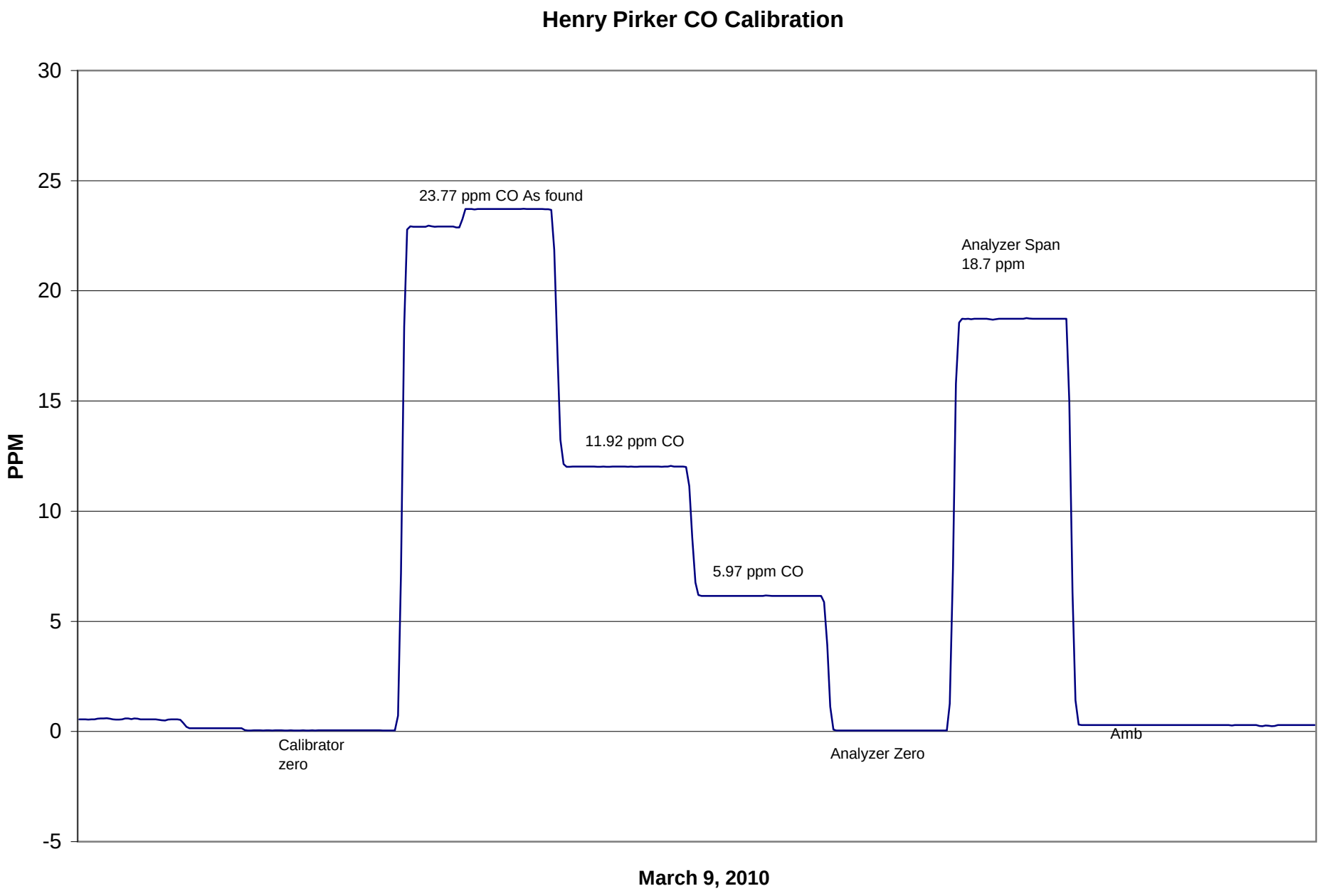
Station Information

Calibration Date	March 9, 2010	Previous Calibration	February 9, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:15	End Time (MST)	11:26
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	0.103	N/A		
23.766	23.711	1.0023	Correlation Coefficient	0.999966
11.921	12.021	0.9917		
5.966	6.153	0.9698	Slope	1.008042
			Intercept	-0.167987




Henry Pirker CO Calibration
30
25
20
15
10
5
0
-5
PPM
23.77 ppm CO As found
Analyzer Span
18.7 ppm
11.92 ppm CO
5.97 ppm CO
Calibrator
zero
Analyzer Zero
Amb
March 9, 2010

Calibration Report

FOCUS
AIR QUALITY MONITORING

Parameter **THC**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	March 9, 2010	Previous Calibration	February 9, 2010
Station Number	1	Station Location	Henry Pirker
Reason: Routine	Install	Removal	Other:
Start Time (MST)	10:20	End Time (MST)	12:31
Barometric Pressure	0.924 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	1.019968	Calculated slope	1.021605
Calculated intercept	-0.019944	Calculated intercept	-0.048490
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	9615	capture	9615	capture
THC zero counts	431	capture	431	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	0.07	N/A
4988	69.50	20.93	20.58	1.0170
4989	29.94	9.09	8.82	1.0306
4988	9.92	3.02	3.06	0.9875
4988	0.00	0.00	0.07	As Found Zero
4988	69.50	20.93	20.58	As Found Span
			Average Correction Factor	1.0117

Calculated value of As Found Response: 20.903 ppm Percent Change of As Found: 0.1%

	before calibration		after calibration	
Auto zero	0.10	ppm	0.00	ppm
Auto span	21.34	ppm	21.48	ppm

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **THC**

Air Monitoring Network **PASZA**

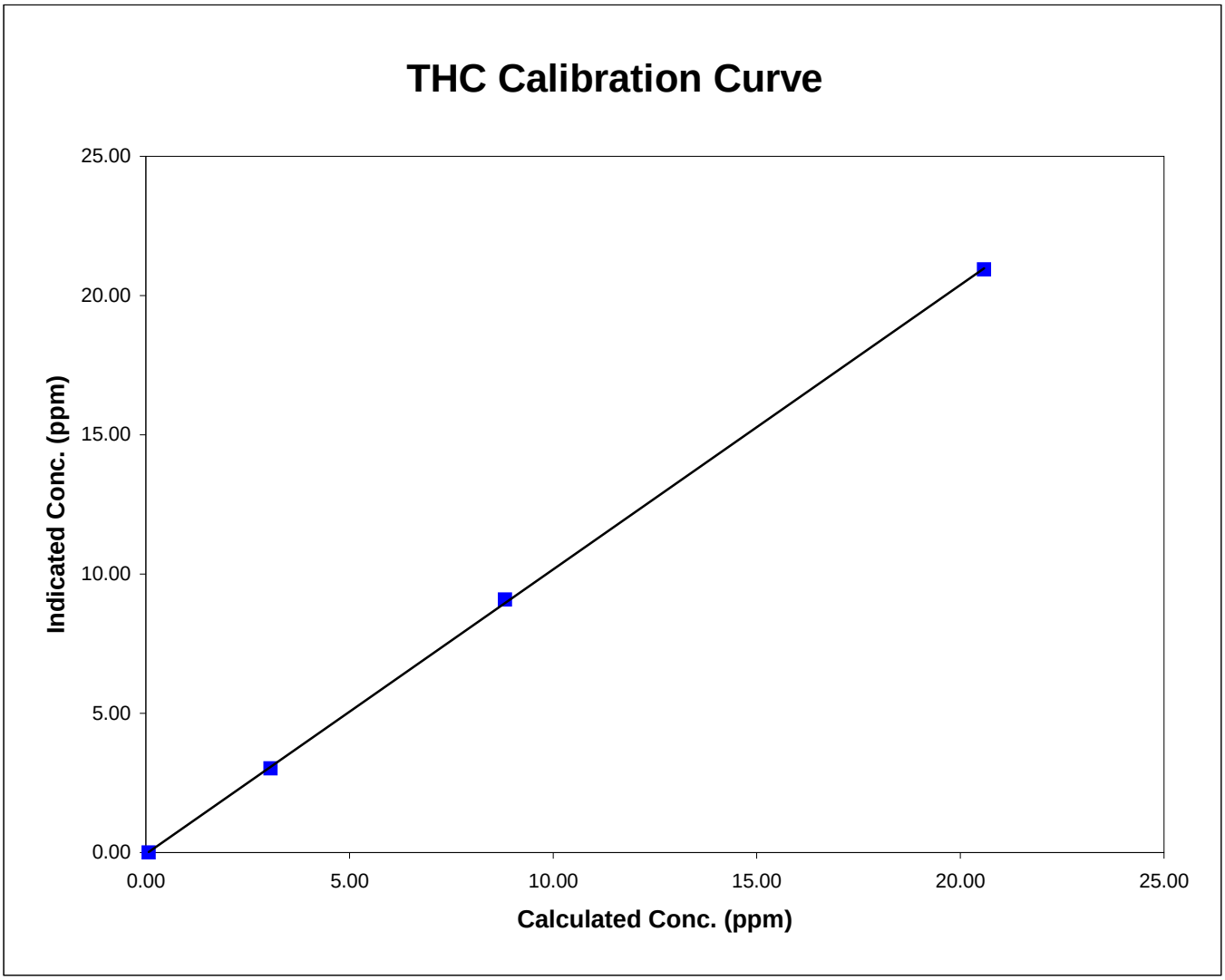
FOCUS AIR QUALITY MONITORING

Station Information

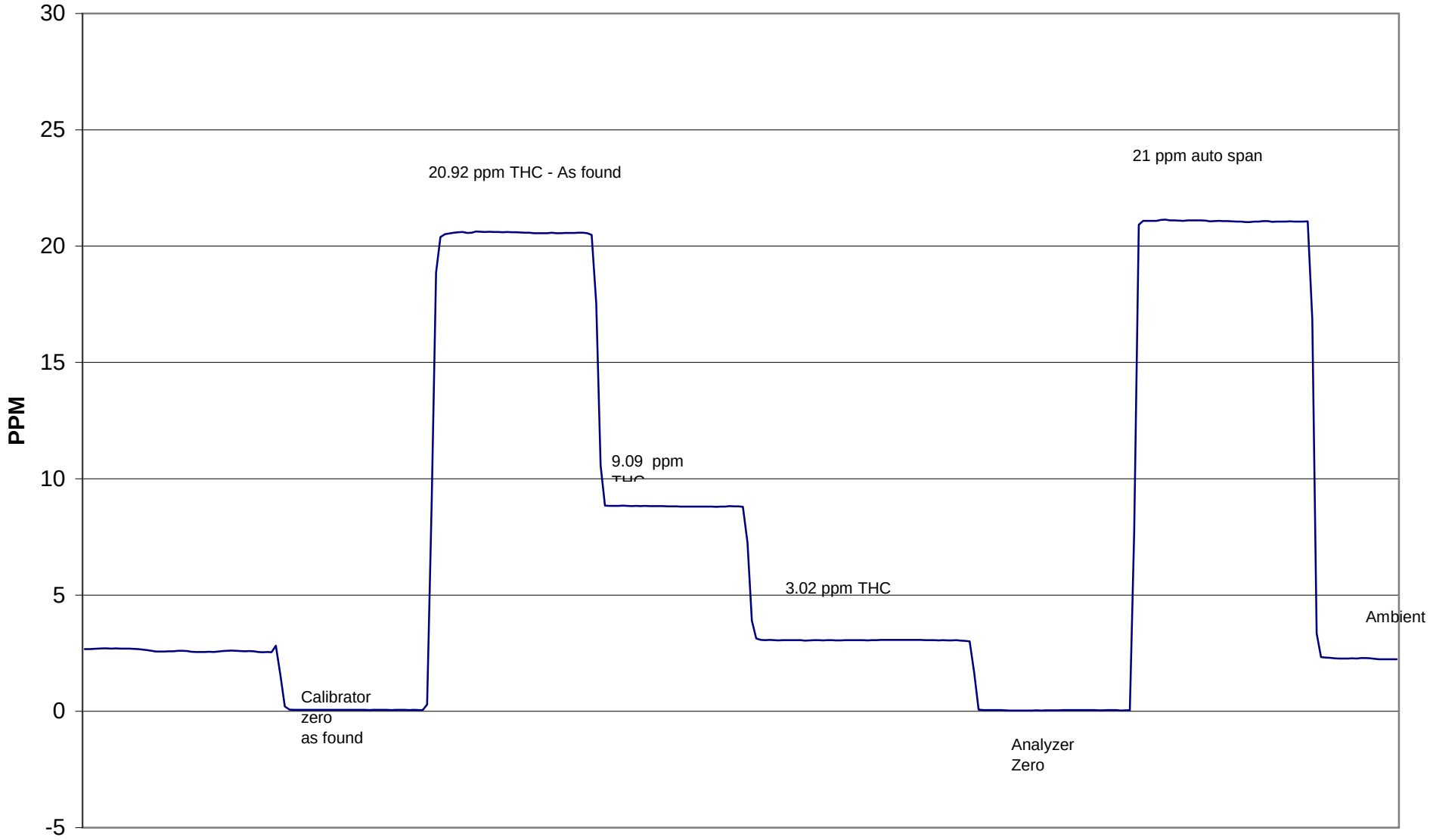
Calibration Date	March 9, 2010	Previous Calibration	February 9, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:20	End Time (MST)	12:31
Analyzer make/model	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.072	N/A		
20.932	20.583	1.0170	Correlation Coefficient	0.999913
9.087	8.817	1.0306		
3.023	3.062	0.9875	Slope	1.021605
			Intercept	-0.048490



Henry Pirker THC Calibration



March 9, 2010

FDMS AB TEOM PM2.5 AUDIT

FOCUS AIR QUALITY MONITORING

STATION: **Henry Pirker**

LOCATION: PASZA - Grande Prairie

OPERATOR: Grover Christiansen

DATE: 9-Mar-10

MONITOR INFO / PARAMETER VALUES:

Make/Model	TEOM AB
Configuration	PM2.5
Serial Number	AMU 1697
Site Number	1
Inlet Type	PM 10 / SCC
FAdj. Main Setting	0.975
FAdj. Aux. Setting	0.960
T-Case Indicated / Set Point	30/30
T-Air Indicated / Set Point	30/30
T-Cap Indicated / Set Point	30/30
Splitter Assembly Alignment (cm)	15.5

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

RECENT CALIBRATION AND AUDIT HISTORY

Previous Audit	17-Jan-10
Previous Calibration	NA

PUMP CAPACITY CHECK *	PASS

* capacity test or pump on timed test utilized to verify pump integrity

"FAIL" indicates that pump requires service.

LEAK CHECK	Indicated Flow (lpm)	
	Main	Auxiliary
PUMP ON	0.070	0.010
PUMP OFF	0.000	0.000
NET	0.070	0.010
LIMITS	*<0.15*	*<0.60*

]

		Ambient Temp. (^{0}C)	Ambient Pres. (atm)	Ko *	Bypass flow (lpm)	Sample flow (lpm)
	SET POINT (S)	na	na	13020	13.67	3.000
	INDICATED (I)	2.8	0.920		13.67	3.000
As Found Data	MEASURED (AF)	1.9	0.919		13.68	3.001
Adjusted Data	MEASURED (M)	1.9	0.919	12935	13.68	3.001
	DIFFERENCE (M-I)	-0.9	-0.001	-0.7%	0.07	0.03
	LIMITS	*± 2 ^{0} C*	*± 0.005 atm*	*± 2.5 %*	*± 1.0 L/min*	*± 0.2 L/min*

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

COMMENTS: Pass - Oscillating sample filter was replaced and seated - audit identical to previous for February.

Running well still seeing negative values on data sets however.

New filter settled at 17% - Frequency:239.30210

Sample Head Inspection Or Cleaning:

PM10: Cleaned

PM2.5: Cleaned

TEOM / FDMS IN LINE FILTER INSPECTION OR REPLACEMENT:

TEOM IN LINE: FDMS Water knck out:Good

Main: Good

AUX: Replace next cal. FDMS 47 mm Filter Cassette: Replaced

Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **SO_2**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	March 15, 2010	Previous Calibration	February 17, 2010
Station Number	2	Station Location	Evergreen Park
Reason: Routine	Install	Removal	Other:

Start Time (MST)	8:30	End Time (MST)	10:09
Barometric Pressure	0.929 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentratior	50.6 ppm	Cal Gas Expiry Date	1/2/2009
Correction factor	0.031579	Cal Gas Cylinder #	LL16161
DACS make	Focus AP1000	DACS serial No.	52620
DACS voltage range	0 - 10 volt	DACS channel #	6
	Before		After
Calculated slope	0.995063	Calculated slope	0.999421
Calculated intercept	-2.191508	Calculated intercept	-2.040790

Analyzer make	Teco 43i	Analyzer serial #	701120008

	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
Background	10.5		10.8	
coefficient	1.045		1.041	
Lamp Voltage	833	volts	833	volts
Chamber Temp	45	Deg C	45.3	Deg C
Perm Gas Temp	44.23	Deg C	45	Deg C
Pressure	671.3	mm Hg	669.8	mm Hg
Sample Flow	451	ccm	0.451	ccm
Lamp Intensity	91	%	90	%

Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4990	0.0	0.00	0.0	N/A
4991	39.85	400.81	402.1	0.9968
4990	19.91	201.09	204.1	0.9853
4991	9.96	100.78	105.0	0.9595
	0.0			
4990	0.0	0.00	1.0	As Found Zero
4990	39.85	400.89	402.0	As Found Span
			Average Correction Factor	0.9805

Calculated value of As Found Response: 396.844 ppm Percent Change of As Found: 1.0%

	before calibration		after calibration	
Auto zero	0.7	ppm	0.7	ppm
Auto span	266.0	ppm	286.9	ppm

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **SO2**

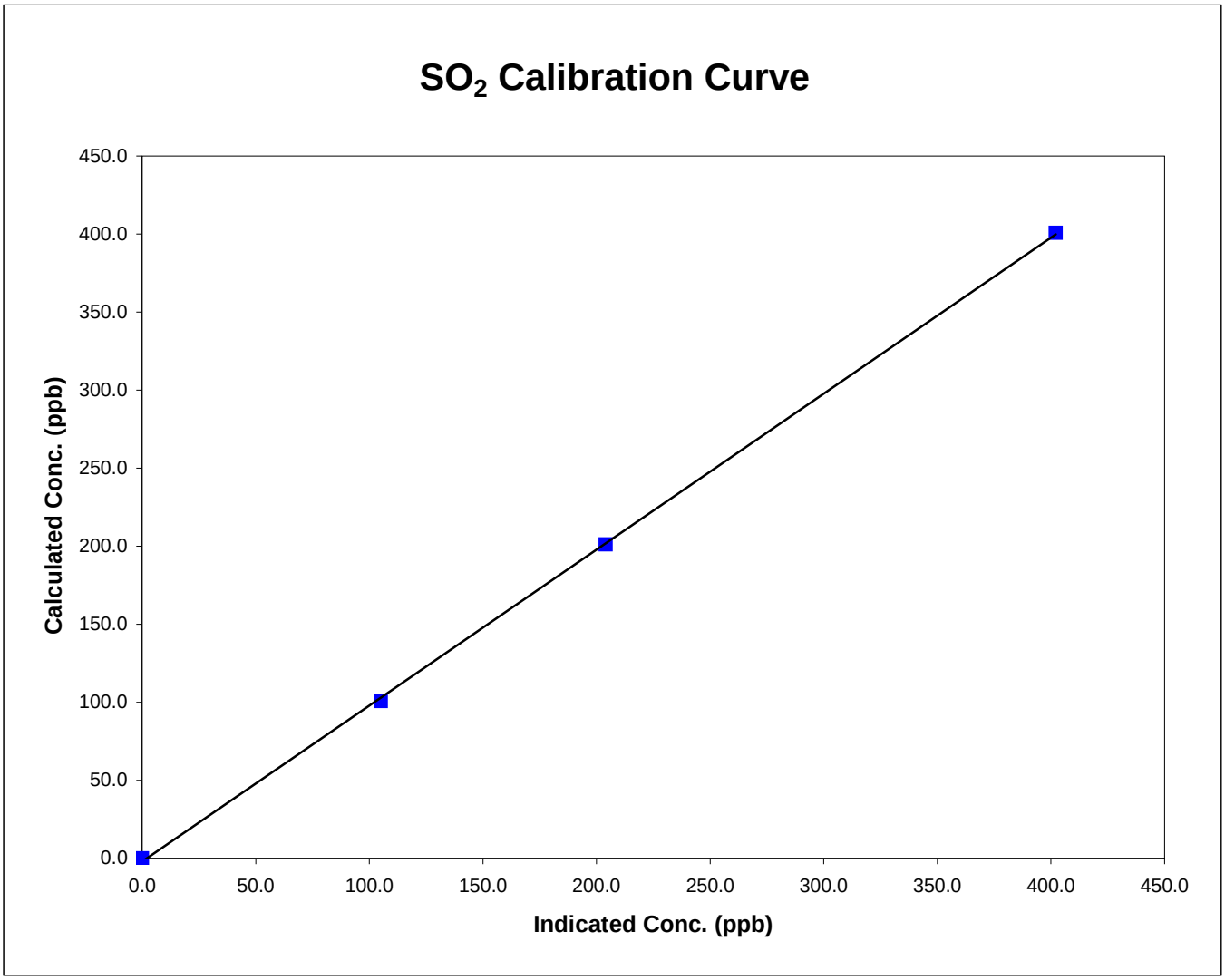
Air Monitoring Network **PASZA**

Station Information

Calibration Date	March 15, 2010	Previous Calibration	February 17, 2010
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	8:30	End Time (MST)	10:09
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	0.0	N/A		
400.8	402.1	0.9968	Correlation Coefficient	0.999882
201.1	204.1	0.9853		
100.8	105.0	0.9595	Slope	0.999421
			Intercept	-2.040790



Evergreen Park SO_2 Calibration

March 15, 2010

Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **TRS**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	March 15, 2010	Previous Calibration	February 17, 2010
Station Number	2	Station Location	Evergreen Park
Reason: Routine	Install	Removal	Other:

Start Time (MST)	9:20	End Time (MST)	12:00
Barometric Pressure	0.941 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Conc	5.15 ppm	Cal Gas Expiry Date	4/2/2009
Correction factor	0.031987	Cal Gas Cylinder #	ALM 013295
DACS make	Focus AP1000	DACS serial No.	52620
DACS voltage range	0 - 10 volt	DACS channel #	5
	Before		After
Calculated slope	0.996296	Calculated slope	1.003187
Calculated intercept	-0.056965	Calculated intercept	-0.187666

Analyzer make	TEI Model 43C	Analyzer serial #	436610005

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	15.4	ppb	15.3	ppb
coefficient	0.859		0.859	
Lamp Voltage	818	volts	818	volts
Chamber Temp	44.2	Deg C	44.3	Deg C
Perm Gas Temp	45	Deg C	45.3	Deg C
Pressure	646.7	mm Hg	646.7	mm Hg
Sample Flow	0.481	ccm	0.481	ccm
Lamp Intensity	45,676	mv	45,443	mv

Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4990	0.00	0.00	0.2	N/A
4991	79.78	81.03	81.0	1.0005
4991	39.87	40.81	40.8	1.0004
4990	9.95	10.25	10.5	0.9774
4990	0.00	0.00	0.1	As Found Zero
4990	79.91	81.17	81.0	As Found Span
			Average Correction Factor	0.9928

Calculated value of As Found Response: 80.56 ppm Percent Change of As Found: 0.8%

	before calibration		after calibration	
Auto zero	-0.5	ppm	0.0	ppm
Auto span	62.0	ppm	58.7	ppm

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **TRS**

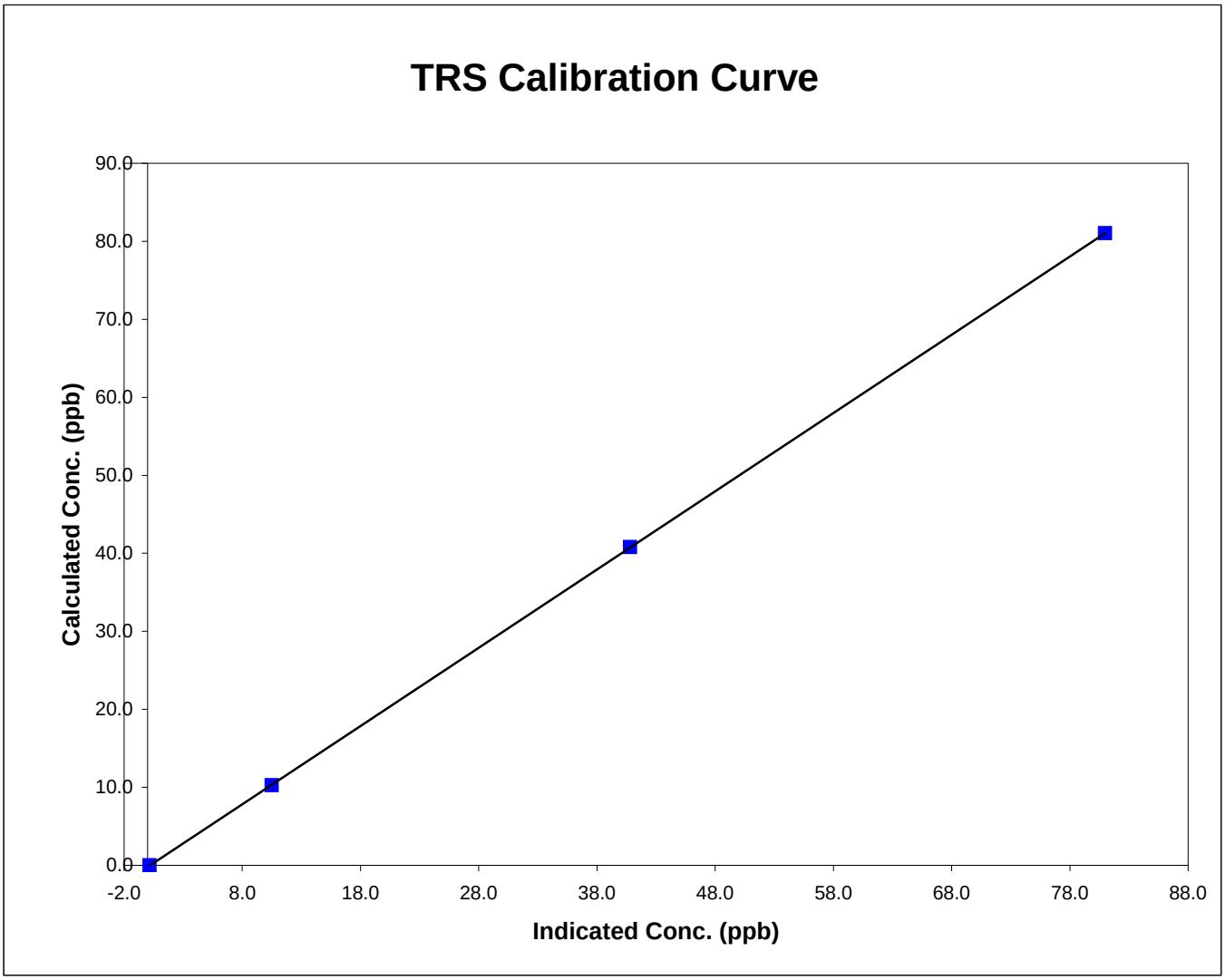
Air Monitoring Network **PASZA**

Station Information

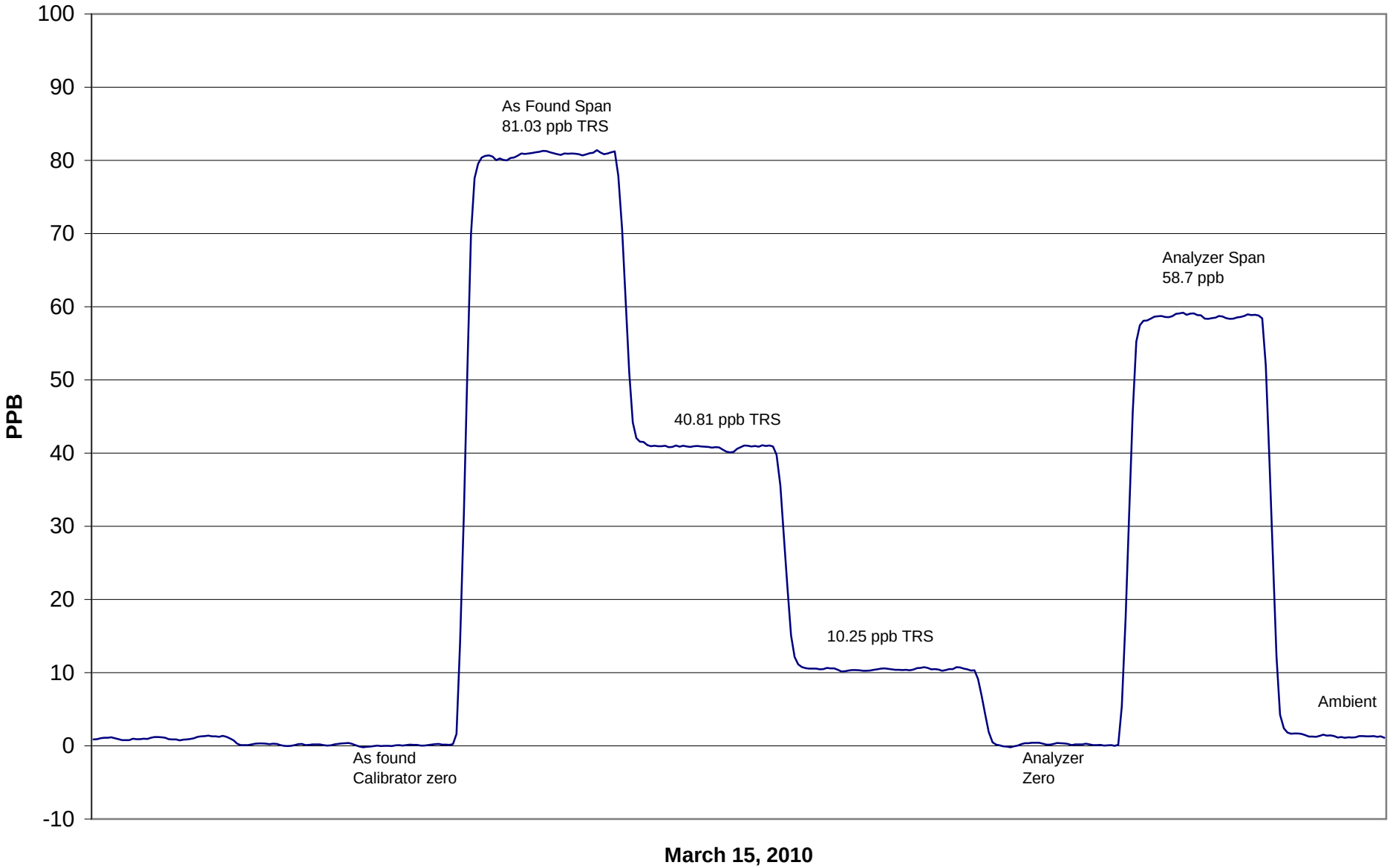
Calibration Date	March 15, 2010	Previous Calibration	February 17, 2010
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	9:20	End Time (MST)	12:00
Analyzer make/model	TEI Model 43C	Analyzer serial #	436610005

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
81.0	81.0	1.0005	Correlation Coefficient	0.999996
40.8	40.8	1.0004		
10.2	10.5	0.9774	Slope	1.003187
			Intercept	-0.187666



Evergreen Park TRS Calibration



AB TEOM PM2.5 Calibration

FOCUS
AIR QUALITY MONITORING

STATION: **Evergreen Park**

LOCATION: PASZA - Grande Prairie

OPERATOR: Grover Christiansen

DATE: 15-Mar-10

MONITOR INFO / PARAMETER VALUES:

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

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

RECENT CALIBRATION AND AUDIT HISTORY

Previous Audit	17-Feb-10
Previous Calibration	NA

PUMP CAPACITY CHECK *	PASS

* capacity test or pump on timed test utilized to verify pump integrity

"FAIL" indicates that pump requires service.

LEAK CHECK	Indicated Flow (lpm)	
	Main	Auxiliary
PUMP ON	0.010	0.010
PUMP OFF	0.000	0.000
NET	0.010	0.010
LIMITS	*<0.15*	*<0.60*

		Ambient Temp. (^{0} C)	Ambient Pres. (atm)	Ko *	Bypass flow (lpm)	Sample flow (lpm)
	SET POINT (S)	na	na	10124	13.67	3.000
	INDICATED (I)	4.9	0.930		13.67	3.000
As Found Data	MEASURED (AF)	4.2	0.930		13.70	3.005
Adjusted Data	MEASURED (M)	4.2	0.930	10202	13.70	3.005
	DIFFERENCE (M-I)	-0.7	0.000	0.8%	0.22	0.17
	LIMITS	*± 2 ^{0} C*	*± 0.005 atm*	*± 2.5 %*	*± 1.0 L/min*	*± 0.2 L/min*

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

COMMENTS: PASS

Sample Head Inspection/Cleaning:

PM10:Cleaned

PM2.5:Cleaned

Large In Line Filter Inspection & Or Cleaning:

Main:Good

Aux: Replaced.

Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **SO_2**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	March 19, 2010	Previous Calibration	February 15, 2010
Station Number	3	Station Location	Smoky Heights
Reason: Routine	Install	Removal	Other:

Start Time (MST)	7:48	End Time (MST)	11:47
Barometric Pressure	0.931 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentratior	50.6 ppm	Cal Gas Cert Date	6/8/2008
Correction factor	0.031647	Cal Gas Cylinder #	AAL 15377
DACS make	Focus AP1000	DACS serial No.	45272
DACS voltage range	0 - 10 volt	DACS channel #	6
	Before		After
Calculated slope	1.000792	Calculated slope	1.005218
Calculated intercept	-1.580174	Calculated intercept	-2.744497

Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	8.5		8.3	
coefficient	0.706		0.701	
Lamp Voltage	925	volts	924	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	647.2	mm Hg	646.4	mm Hg
Sample Flow	430	ccm	447	ccm
Lamp Intensity	89	%	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)
4990	0.0	0.00	0.8	N/A
4989	39.91	401.57	401.0	1.0014
4990	19.89	200.89	204.1	0.9841
4990	9.95	100.70	104.5	0.9638
4990	0.0	0.00	0.8	As Found Zero
4990	39.85	400.89	401.0	As Found Span
			Average Correction Factor	0.9831

Calculated value of As Found Response: 398.951 ppm Percent Change of As Found: 0.5%

	before calibration		after calibration	
Auto zero	0.4	ppb	0.6	ppb
Auto span	304.1	ppb	305.1	ppb

Notes:

Calibration Performed By: Brad Moyles

Calibration Summary

Parameter **SO2**

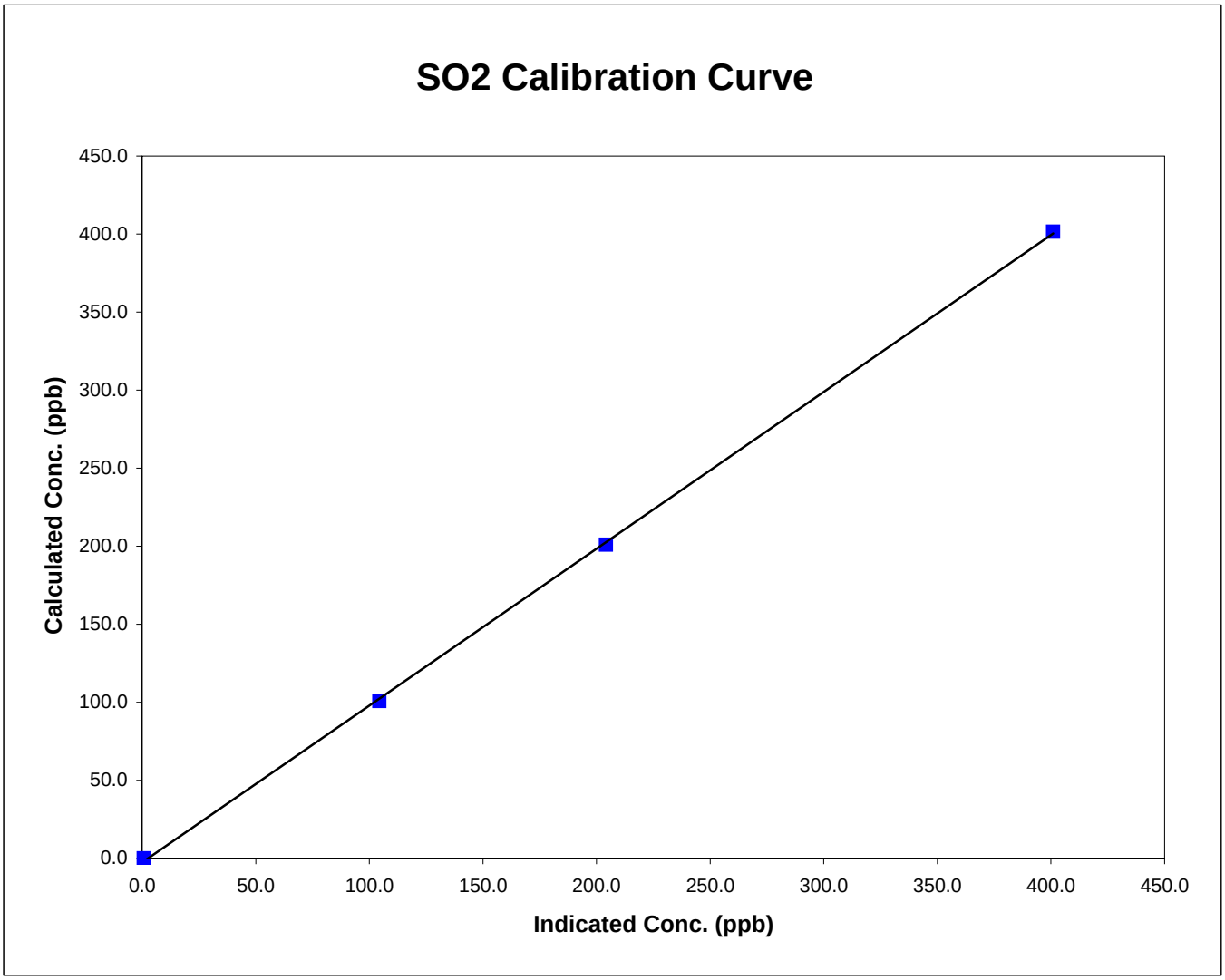
Air Monitoring Network **PASZA**

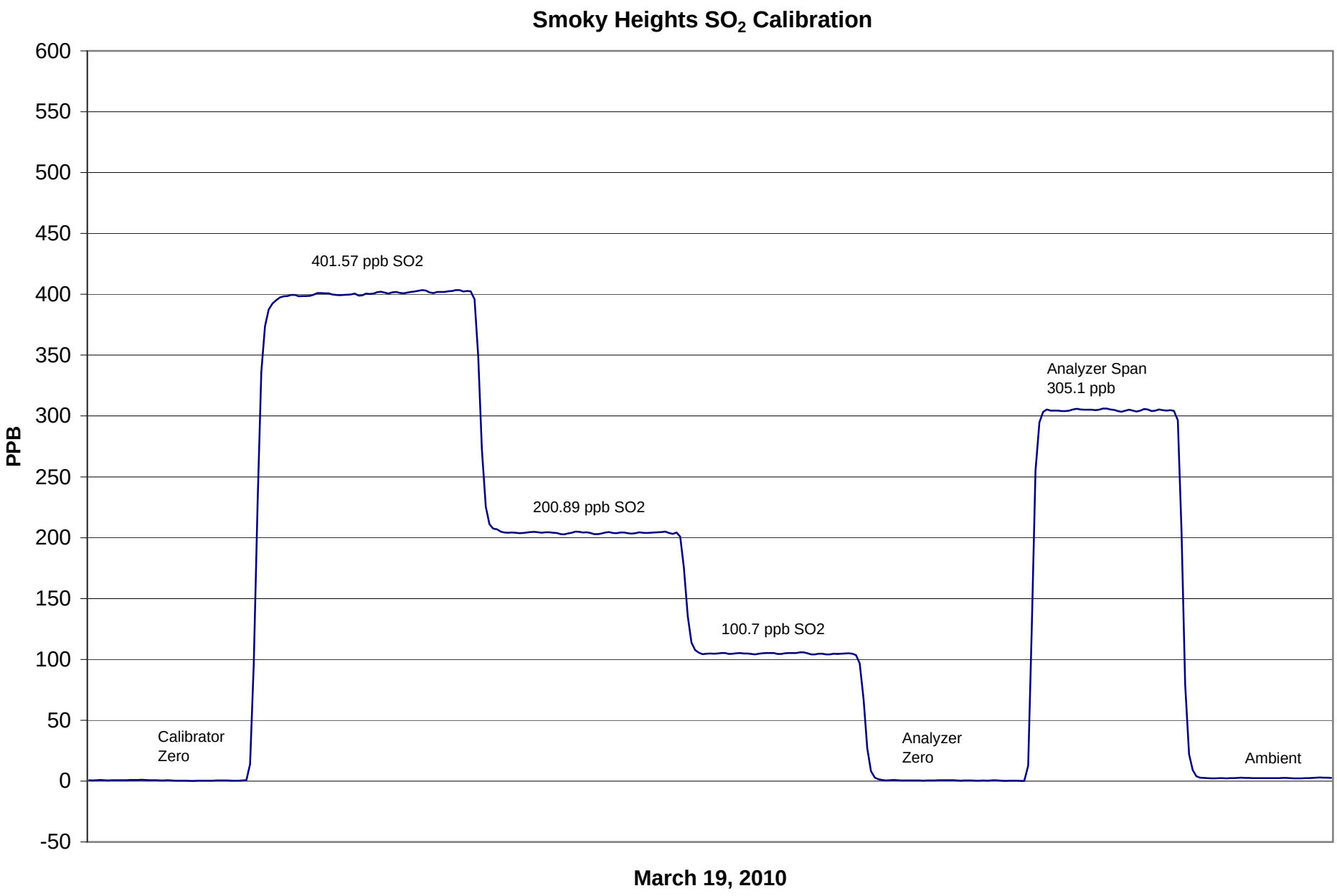
Station Information

Calibration Date	March 19, 2010	Previous Calibration	February 15, 2010
Station Number	3	Station Location	Smoky Heights
Start Time (MST)	7:48	End Time (MST)	11:47
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	0.8	N/A		
401.6	401.0	1.0014	Correlation Coefficient	0.999885
200.9	204.1	0.9841		
100.7	104.5	0.9638	Slope	1.005218
			Intercept	-2.744497




Smoky Heights SO_2 Calibration
600
550
500
450
400
350
300
250
200
150
100
50
0
-50
PPB
401.57 ppb SO2
200.89 ppb SO2
100.7 ppb SO2
Analyzer Span
305.1 ppb
Calibrator
Zero
Analyzer
Zero
Ambient
March 19, 2010

Calibration Report

Parameter **TRS**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	March 19, 2010	Previous Calibration	February 15, 2010
Station Number	3	Station Location	Smoky Heights
Reason: Routine	Install	Removal	Other:

Start Time (MST)	9:29	End Time (MST)	12:07
Barometric Pressure	0.927 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Conc	5.15 ppm	Cal Gas Expiry Date	4/2/2009
Correction factor	0.031511	Cal Gas Cylinder #	ALM013295
DACS make	Focus AP1000	DACS serial No.	52620
DACS voltage range	0 - 10 volt	DACS channel #	5
	Before		After
Calculated slope	0.997404	Calculated slope	1.000112
Calculated intercept	-0.088449	Calculated intercept	-0.358984

Analyzer make	TEI Model 43C	Analyzer serial #	0436610005

	before		after	
Concentration range	100	ppb	100	ppb
Background	15	ppb	13.5	ppb
coefficient	1.043		0.999	
Lamp Voltage	764	volts	768	volts
Chamber Temp	43.9	Deg C	43.9	Deg C
Perm Gas Temp	44.9	Deg C	44.9	Deg C
Pressure	458.9	mm Hg	483	mm Hg
Sample Flow	698	ccm	735	ccm
Lamp Intensity	32,291	mv	32,286	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)
4992	0.0	0.00	0.2	N/A
4992	79.77	81.00	81.3	0.9958
4992	39.84	40.78	41.1	0.9918
4992	9.93	10.22	10.7	0.9516
4992	0.0	0.00	0.2	As Found Zero
4992	79.77	81.00	81.3	As Found Span
			Average Correction Factor	0.9797

Calculated value of As Found Response: 80.81 ppm Percent Change of As Found: 0.2%

	before calibration		after calibration	
Auto zero	0.0	ppm	-0.2	ppm
Auto span	40.8	ppm	39.7	ppm

Notes:

Calibration Performed By: Brad Moyles

Calibration Summary

Parameter **TRS**

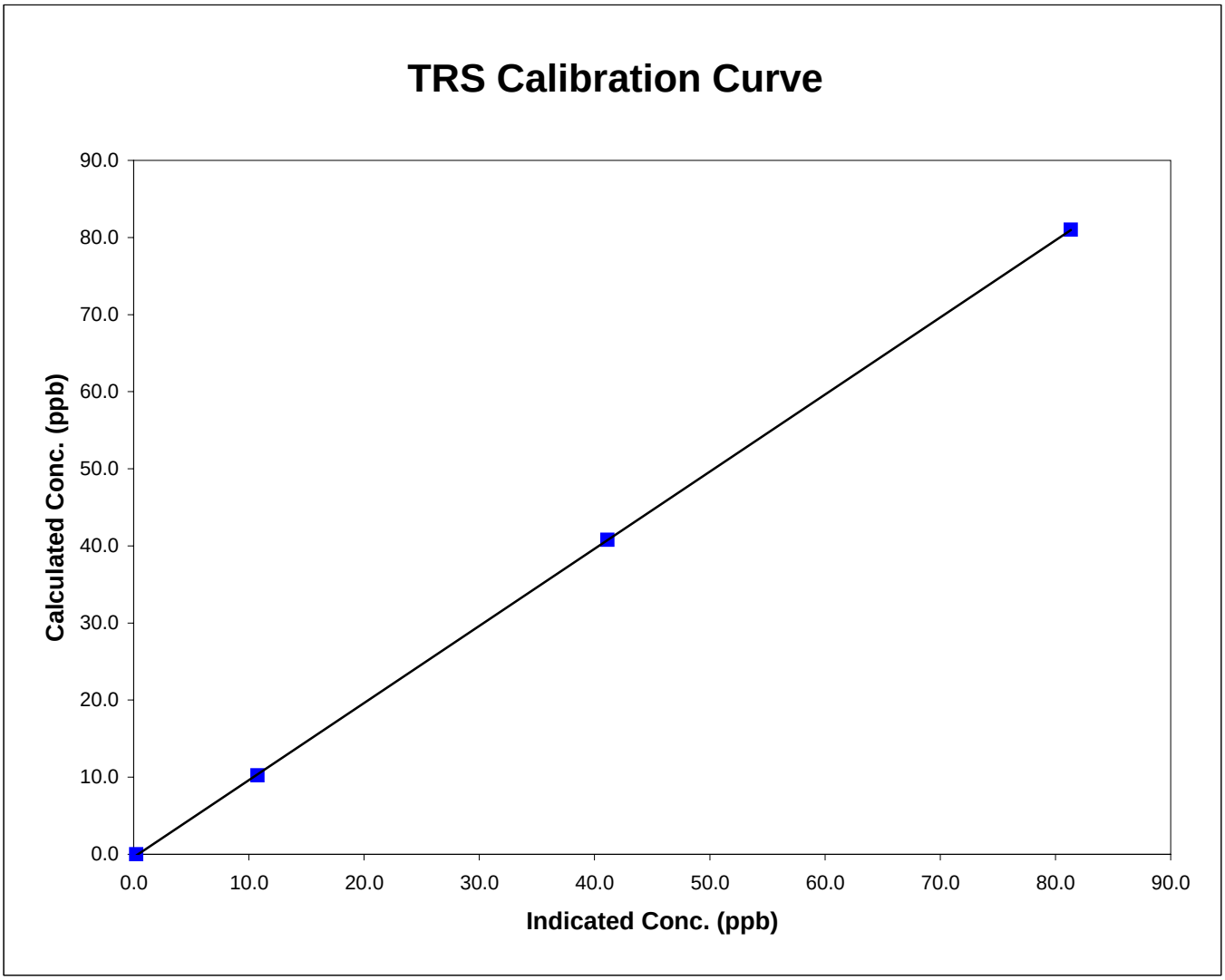
Air Monitoring Network **PASZA**

Station Information

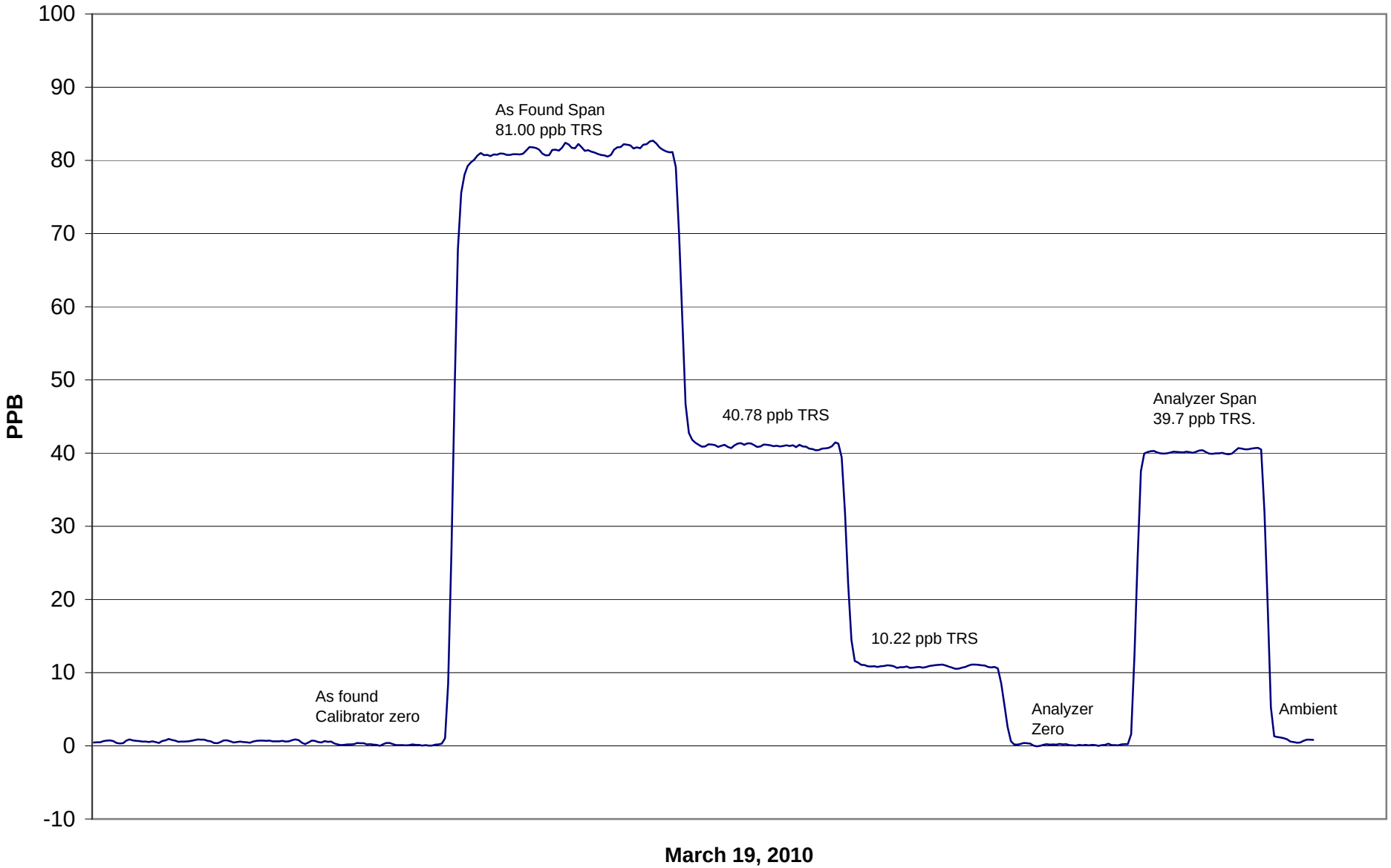
Calibration Date	March 19, 2010	Previous Calibration	February 15, 2010
Station Number	3	Station Location	Smoky Heights
Start Time (MST)	9:29	End Time (MST)	12:07
Analyzer make/model	TEI Model 43C	Analyzer serial #	0436610005

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
81.0	81.3	0.9958	Correlation Coefficient	0.999989
40.8	41.1	0.9918		
10.2	10.7	0.9516	Slope	1.000112
			Intercept	-0.358984



Smoky Heights TRS Calibration



AB TEOM PM2.5 Calibration

FOCUS
AIR QUALITY MONITORING

STATION: **Smoky Heights**

LOCATION: PASZA - Grande Prairie

OPERATOR: Brad Moyles

DATE: 19-Mar-10

MONITOR INFO / PARAMETER VALUES:

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

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

RECENT CALIBRATION AND AUDIT HISTORY

Previous Audit	Feb15,2010
Previous Calibration	NA

PUMP CAPACITY CHECK *	PASS

* capacity test or pump on timed test utilized to verify pump integrity

"FAIL" indicates that pump requires service.

LEAK CHECK	Indicated Flow (lpm)	
	Main	Auxiliary
PUMP ON	0.006	0.010
PUMP OFF	0.001	0.007
NET	0.005	0.003
LIMITS	*<0.15*	*<0.65*

		Ambient Temp. (^{0} C)	Ambient Pres. (atm)	Ko *	Bypass flow (lpm)	Sample flow (lpm)
	SET POINT (S)	na	na	12122	13.67	3.000
	INDICATED (I)	-5.6	0.935		13.67	3.000
As Found Data	MEASURED (AF)	-5.8	0.933		13.63	2.998
Adjusted Data	MEASURED (M)	-5.8	0.933	12184	13.63	2.998
	DIFFERENCE (M-I)	-0.2	-0.002	0.5%	-0.29	-0.07
	LIMITS	*± 2 ^{0} C*	*± 0.005 atm*	*± 2.5 %*	*± 1.0 L/min*	*± 0.2 L/min*

Ko Audit Filter data *Weight:* 0.11043 *Serial #:* *CVK 2564*

COMMENTS: PASS

Sample Head Inspection/Cleaning:

PM10:Cleaned

PM2.5:Cleaned

Large In Line Filter Inspection & Or Replacement:

Main: Good

Aux: Good

Calibration Report

Parameter **SO2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	March 11, 2010	Previous Calibration	February 11, 2010
Station Number	4	Station Location	Beaverlodge
Reason: Routine	Install	Removal	Other:
Start Time (MST)	8:05	End Time (MST)	10:50
Barometric Pressure	0.895 atm	Station Temperature	23.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentratior	10.06 ppm	Cal Gas Expiry Date	7/27/2009
Gas Cert Reference	CC 114395		
DACS make	Focus AP1000	DACS serial No.	45269
DACS voltage range	0 - 10 volt	DACS channel #	5
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.005067	Calculated slope	1.006617
Calculated intercept	-0.315286	Calculated intercept	-0.381235
Analyzer make	TEI Model 43i-TLE	Analyzer serial #	713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.59		2.55	
Coefficient	0.902		0.886	
PMT	-812.5	V	-812.9	V
UV Lamp Voltage	1073	V	1071	V
Chamber Temp	44.9	Deg C	45.1	Deg C
Pressure	652.5	mm Hg	652.1	mm Hg
Sample Flow	0.486	LPM	0.485	LPM
Lamp Intesity	84%	%	84%	%

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	0.0	N/A
4988	39.82	79.7	79.3	1.0049
4988	19.87	39.9	40.3	0.9899
4988	9.91	19.9	20.6	0.9698
4988	0.00	0.0	0.1	As found zero
4988	39.82	79.7	80.7	As found span
			Average Correction Factor	0.9882

Calculated value of As Found Response: 80.715 ppm Percent Change of As Found: -1.3%

	before calibration		after calibration	
Auto zero	-0.3	ppb	-0.3	ppb
Auto span	57.8	ppb	58.5	ppb

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **SO2**

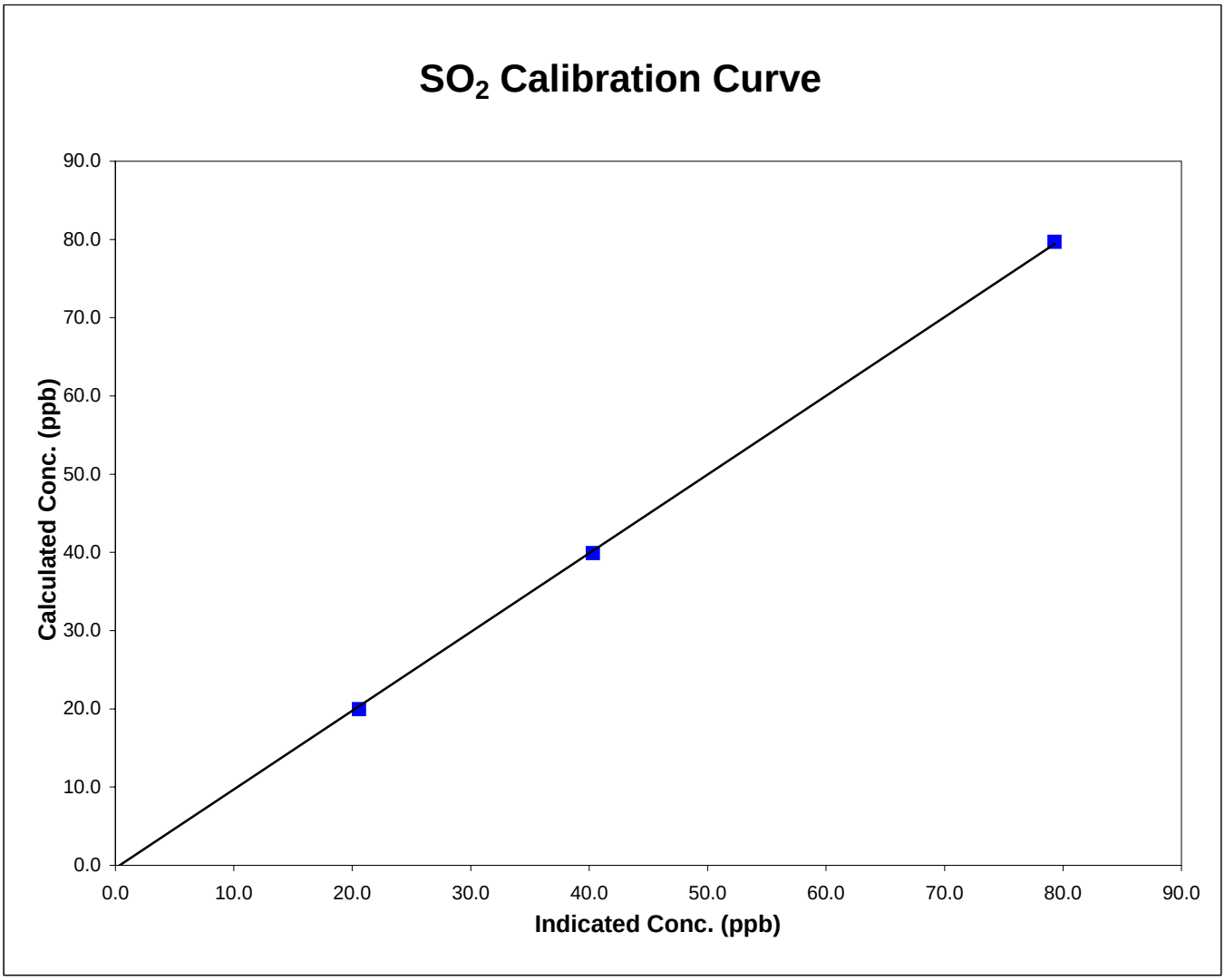
Air Monitoring Network **PASZA**

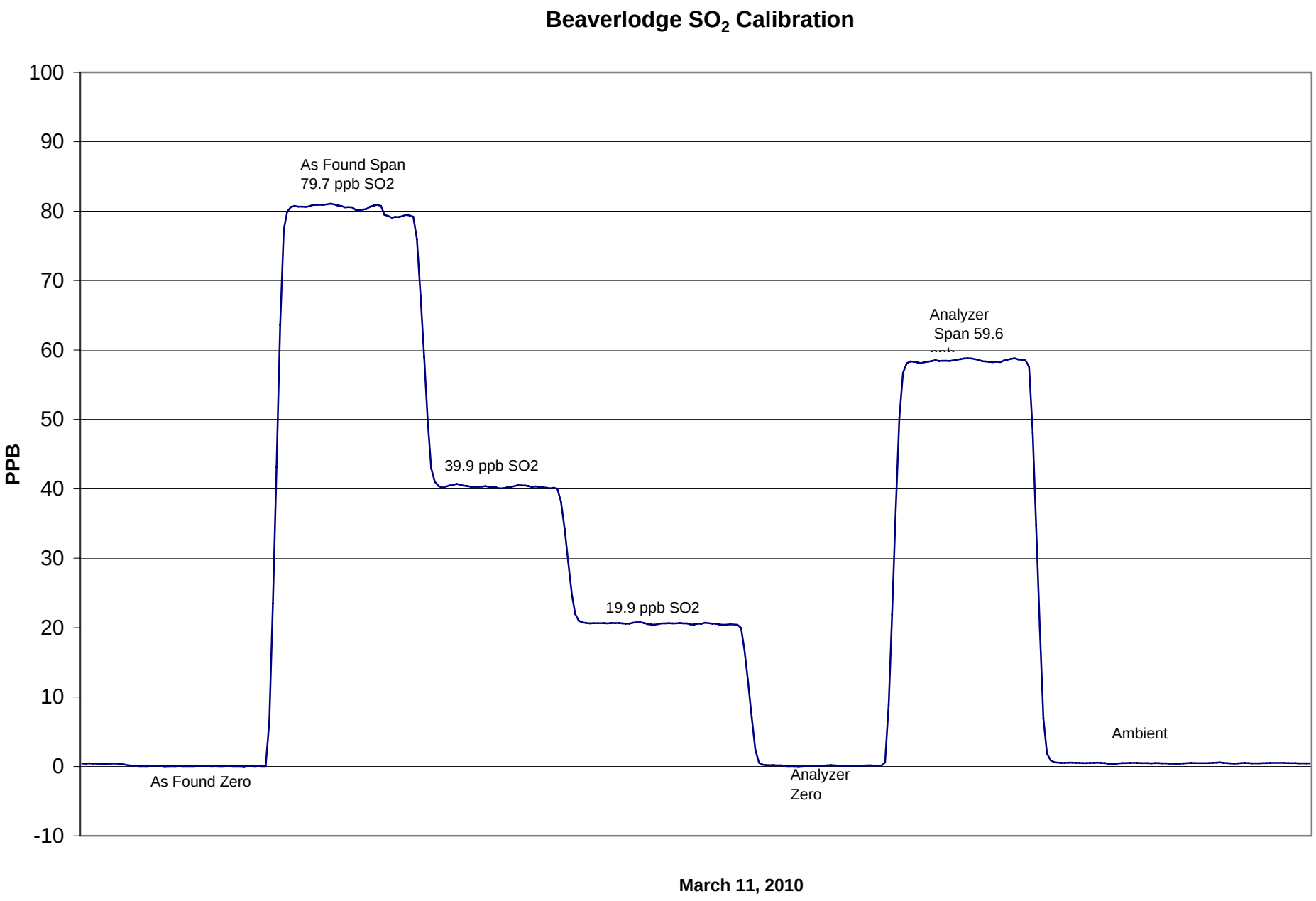
Station Information

Calibration Date	March 11, 2010	Previous Calibration	February 11, 2010
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:05	End Time (MST)	10:50
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	0.0	N/A		
79.7	79.3	1.0049	Correlation Coefficient	0.999866
39.9	40.3	0.9899		
19.9	20.6	0.9698	Slope	1.006617
			Intercept	-0.381235




Beaverlodge SO_2 Calibration
100
90
80
70
60
50
40
30
20
10
0
-10
PPB
As Found Span
79.7 ppb SO2
39.9 ppb SO2
19.9 ppb SO2
Analyzer
Span 59.6
Ambient
As Found Zero
Analyzer
Zero
March 11, 2010

Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	March 11, 2010	Previous Calibration	February 11, 2010
Station Number	4	Station Location	BeaverLodge

Reason: **Routine** Installation Removal Other:

Start Time (MST)	8:05		End Time (MST)	11:51	
Barometric Pressure	0.895	Atm	Station Temperature	20.0	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	0.995207	1.002993	1.003549
	Data Offset	0.411071	-1.911114	-0.993884
After	Data Slope	0.992986	1.002768	1.002528
	Data Offset	0.233535	-2.018454	-1.115244
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 - 1000	ppb	0 - 1000	ppb
NO offset	2.5	mV	2.3	mV
NOx bkgnd	3.0	mV	2.9	mV
NO coefficient	1.481		1.427	
NOx coefficient	0.994		0.993	
NO2 conv temp	326.1	Deg C	322.4	Deg C
PMT Temp	-3.0	Deg C	-3.0	Deg C
PMT Volt	-676.0	mV	-676.0	mV
R Cell Press	181.9	in Hg	178.0	in Hg
Sample Flow	0.724	ccm	0.748	ccm

Notes:

Calibration Report

Parameter **NOX-NO-NO2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: March 11, 2010 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	0.2	-0.1	0.0	N/A	N/A
1	4988	39.82	397.6	396.8	0.8	397.5	396.2	-0.1	1.0003	1.0016
2	4988	19.87	199.2	198.8	0.4	201.7	200.4	0.9	0.9873	0.9920
3	4988	9.91	99.5	99.3	0.2	103.1	101.1	1.5	0.9658	0.9825
AFZ	4988	0.00	0.0	0.0	0.0	0.2	-0.1	0.0	0.0000	0.0000
AFS	4988	39.84	397.8	397.0	0.8	394.6	392.5	0.7	1.0080	1.0113
							Average Correction Factor		0.9845	0.9920

As Found Concentrations: NO_X= 392.6 NO= 391.6 As Found Percent Change NO_X= -1.3% NO= -1.4%

GPT Calibration Data

Dilution Flow 4989 ccm Source Gas Flow 39.84 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	-0.1	-0.1	0.0	0.2	-0.1	0.0	N/A	N/A	N/A	N/A
NO point	395.9	395.9	0.0	397.0	395.9	-0.4	0.9974	1.0000	N/A	N/A
300	395.9	165.0	230.9	397.9	165.0	232.4	0.9950	1.0000	0.9934	100.7%
200	395.9	241.5	154.4	397.4	241.5	155.2	0.9961	1.0000	0.9947	100.5%
100	395.9	317.0	78.9	397.0	317.0	78.9	0.9974	1.0000	1.0000	100.0%
					Average Correction Factor		0.9962	1.0000	0.9961	100.4%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.2	-0.3	-0.2	ppb	-0.1	-0.2	-0.1	ppb
Auto span	175.3	173.3	2.1	ppb	219.3	217.6	1.6	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

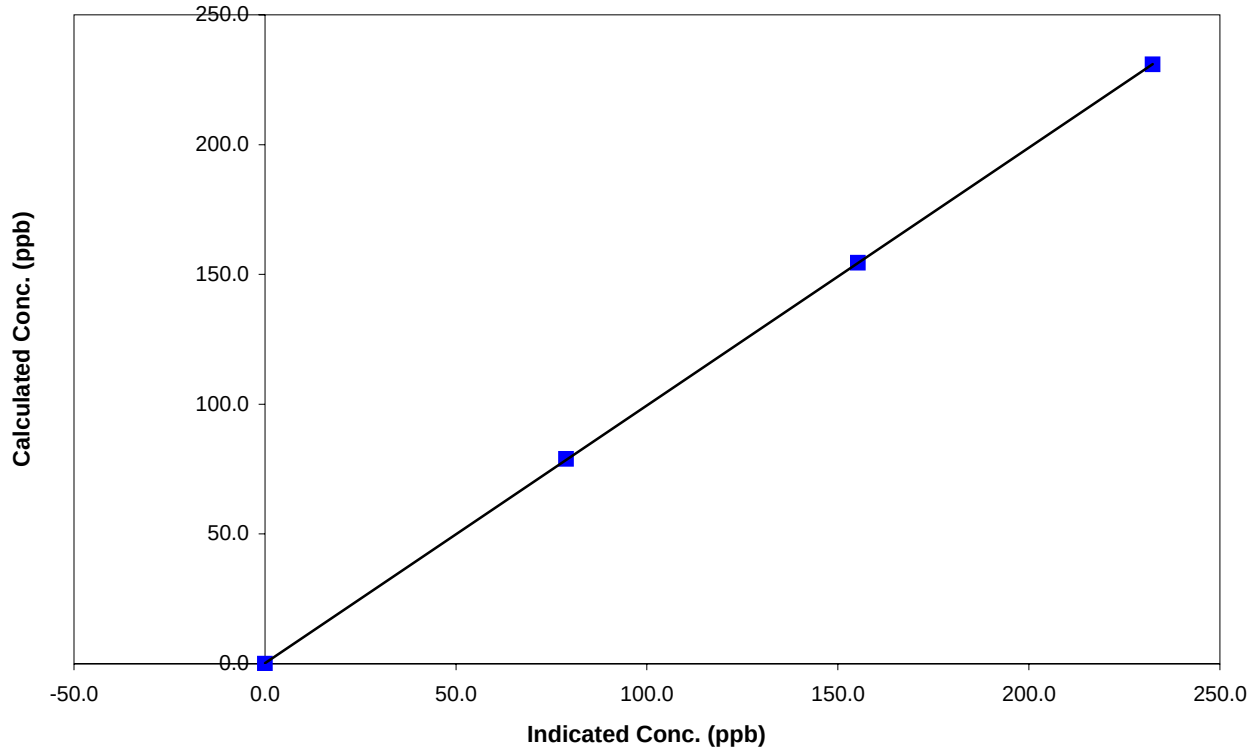
Station Information

Calibration Date	March 11, 2010	Previous Calibration	February 11, 2010
Station Number	4	Station Location	BeaverLodge
Start Time (MST)	8:05	End Time (MST)	11:51
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
230.9	232.4	0.9934	Correlation Coefficient	0.999994
154.4	155.2	0.9947		
78.9	78.9	1.0000	Slope	0.992986
			Intercept	0.233535

NO_2 Calibration Curve



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

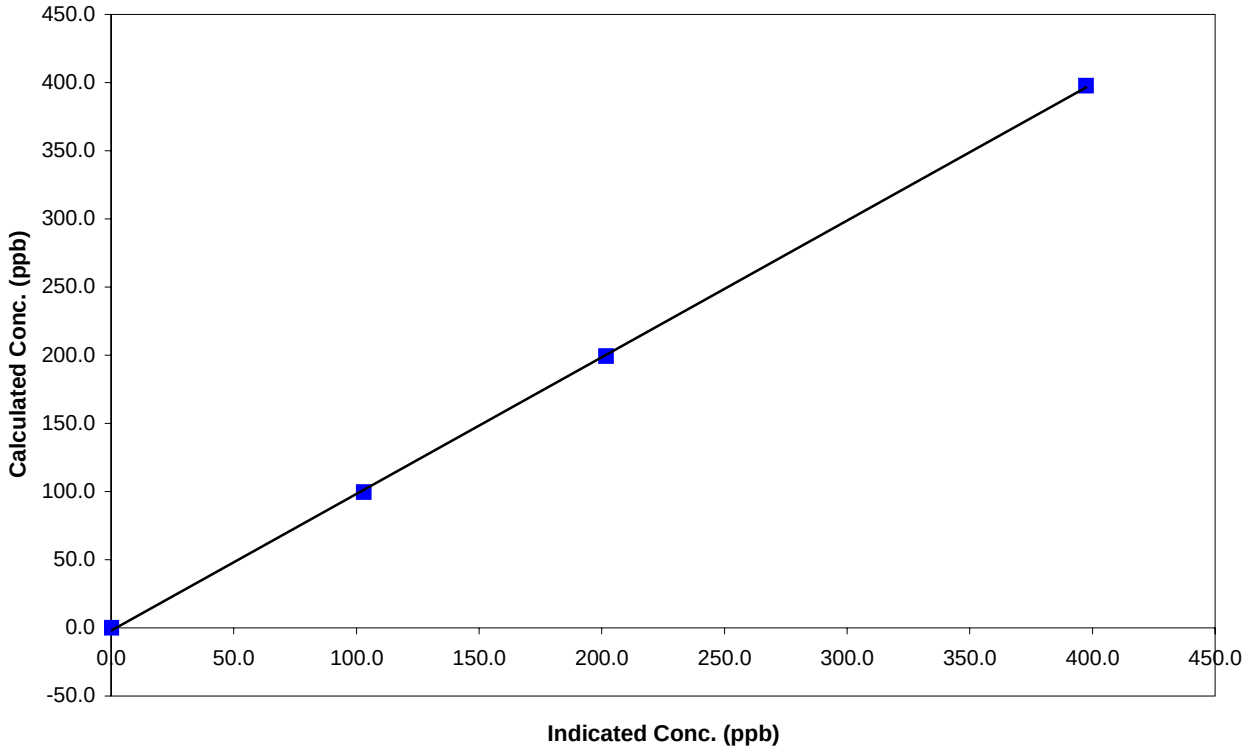
Station Information

Calibration Date	March 11, 2010	Previous Calibration	February 11, 2010
Station Number	4	Station Location	BeaverLodge
Start Time (MST)	8:05	End Time (MST)	11:51
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		
397.6	397.5	1.0003	Correlation Coefficient	0.999897
199.2	201.7	0.9873		
99.5	103.1	0.9658	Slope	1.002768
			Intercept	-2.018454

NOx Calibration Curve



Calibration Summary

Parameter **NO**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

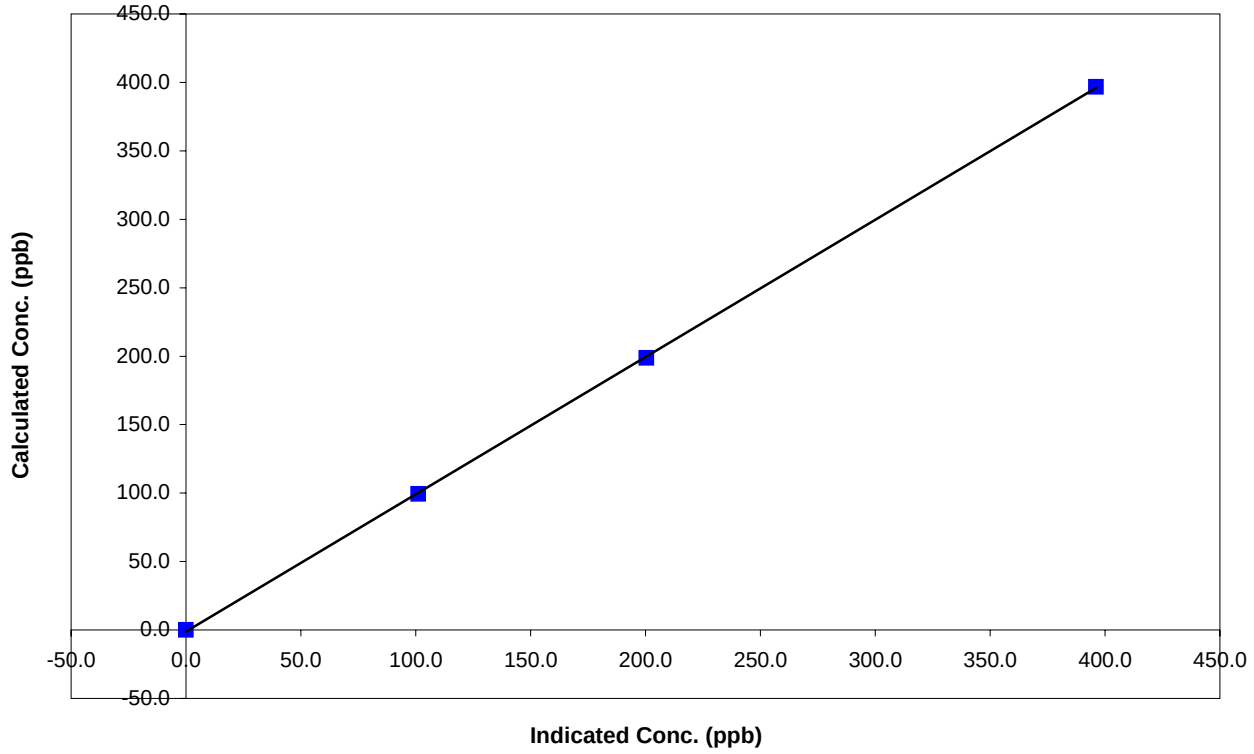
Station Information

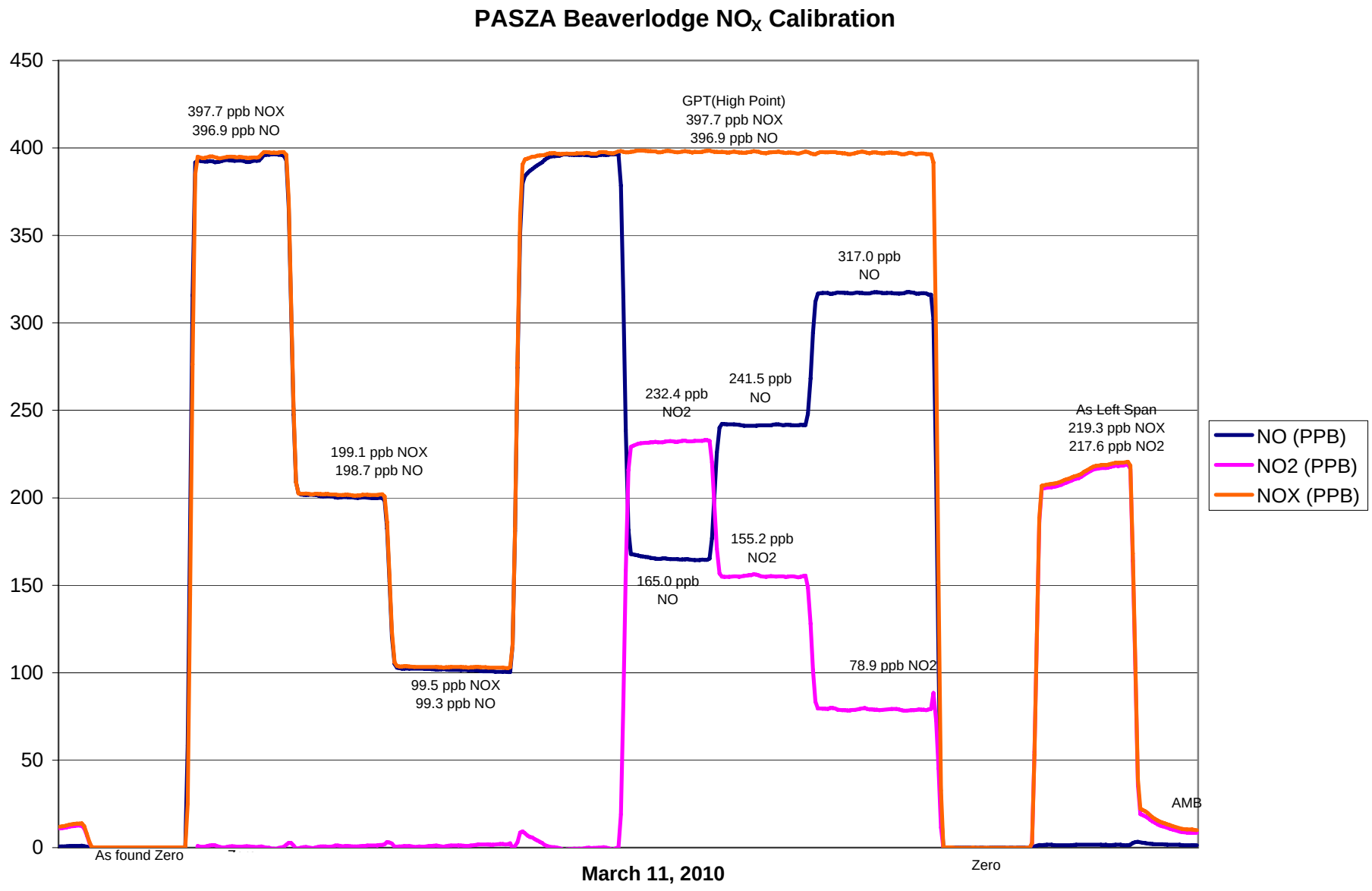
Calibration Date	March 11, 2010	Previous Calibration	February 11, 2010
Station Number	4	Station Location	BeaverLodge
Start Time (MST)	8:05	End Time (MST)	11:51
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A		
396.8	396.2	1.0016	Correlation Coefficient	0.999957
198.8	200.4	0.9920		
99.3	101.1	0.9825	Slope	1.002528
			Intercept	-1.115244

NO Calibration Curve




PASZA Beaverlodge NOX Calibration
450
400
350
300
250
200
150
100
50
0
397.7 ppb NOX
396.9 ppb NO
199.1 ppb NOX
198.7 ppb NO
99.5 ppb NOX
99.3 ppb NO
GPT(High Point)
397.7 ppb NOX
396.9 ppb NO
232.4 ppb
NO2
165.0 ppb
NO
241.5 ppb
NO
317.0 ppb
NO
155.2 ppb
NO2
78.9 ppb NO2
As Left Span
219.3 ppb NOX
217.6 ppb NO2
AMB
As found Zero
Zero
March 11, 2010
NO (PPB)
NO2 (PPB)
NOX (PPB)

Calibration Report

Parameter **O3**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	March 11, 2010	Previous Calibration	February 11, 2010
Station Number	4	Station Location	Beaverlodge
Reason: Routine	Install	Removal	Other:
Start Time (MST)	10:55	End Time (MST)	13:00
Barometric Pressure	0.895 atm	Station Temperature	21.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	Focus AP1000	DACS serial No.	45269
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	0.987251	Calculated slope	0.988693
Calculated intercept	1.399816	Calculated intercept	1.054957
Analyzer make	Teco 49C	Analyzer serial #	49C-76443-383

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-1.00	ppb	-1.00	ppb
slope	1.041		1.041	
Lamp temp	56.5	mV	56.2	mV
Lamp Intensity A/B	71175 / 71026	mV	71405 / 71350	mV
Pressure	649.5	mm Hg	670.6	mm Hg
Flow A	678	ccm	703	ccm
Flow B	630	ccm	650	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	-0.4	N/A
4990	0.00	230.9	233.2	0.9902
4990	0.00	154.4	154.3	1.0006
4990	0.00	78.9	78.2	1.0095
4990	0.00	0.0	0.3	As found zero
4990	0.00	230.9	236.2	As found span
			Average Correction Factor	1.0001

Calculated value of As Found Response: 234.3 ppm Percent Change of As Found: 1.5%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.9	ppb
Auto span	114.3	ppb	124.3	ppb

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **O3**

Air Monitoring Network **PASZA**

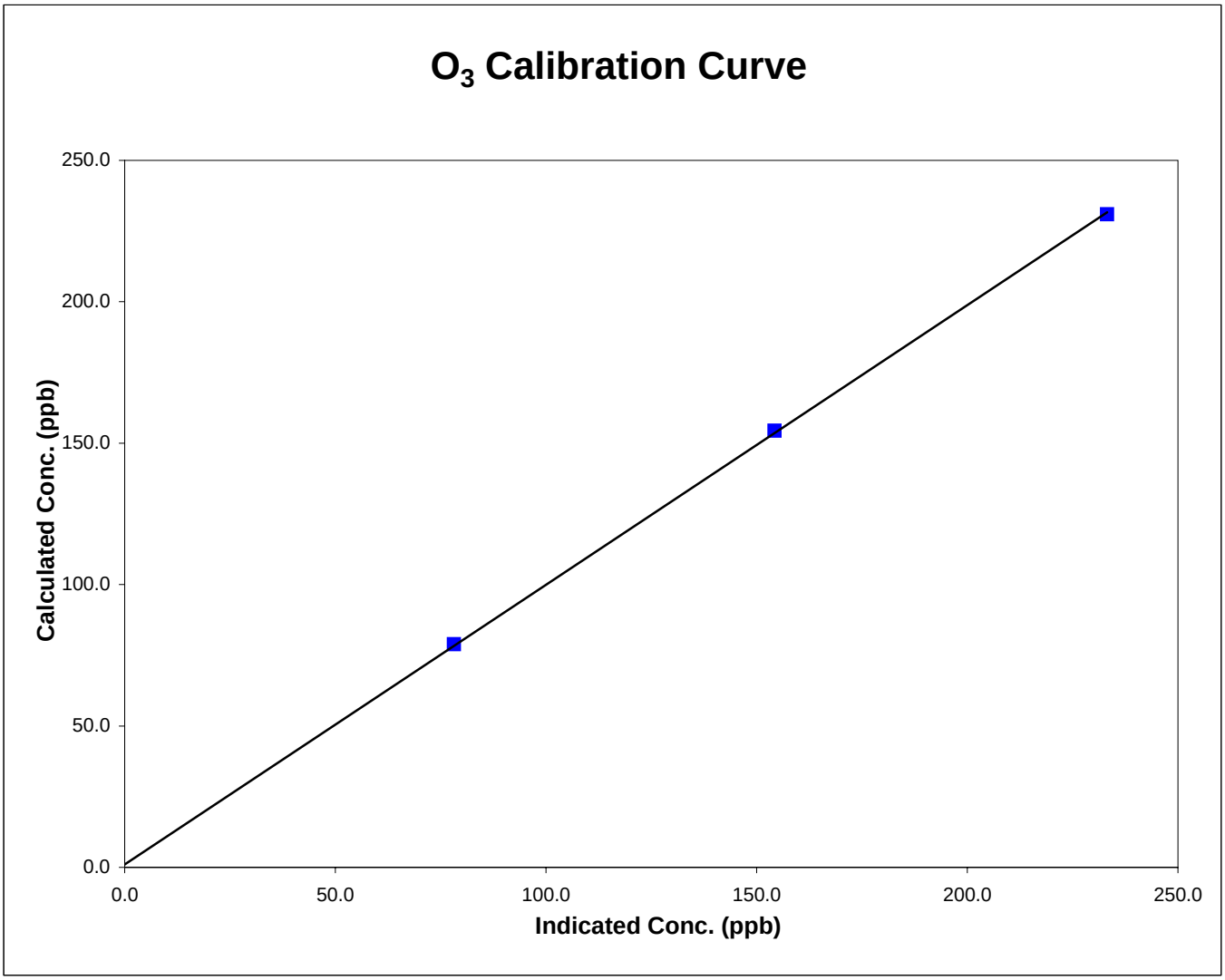
FOCUS AIR QUALITY MONITORING

Station Information

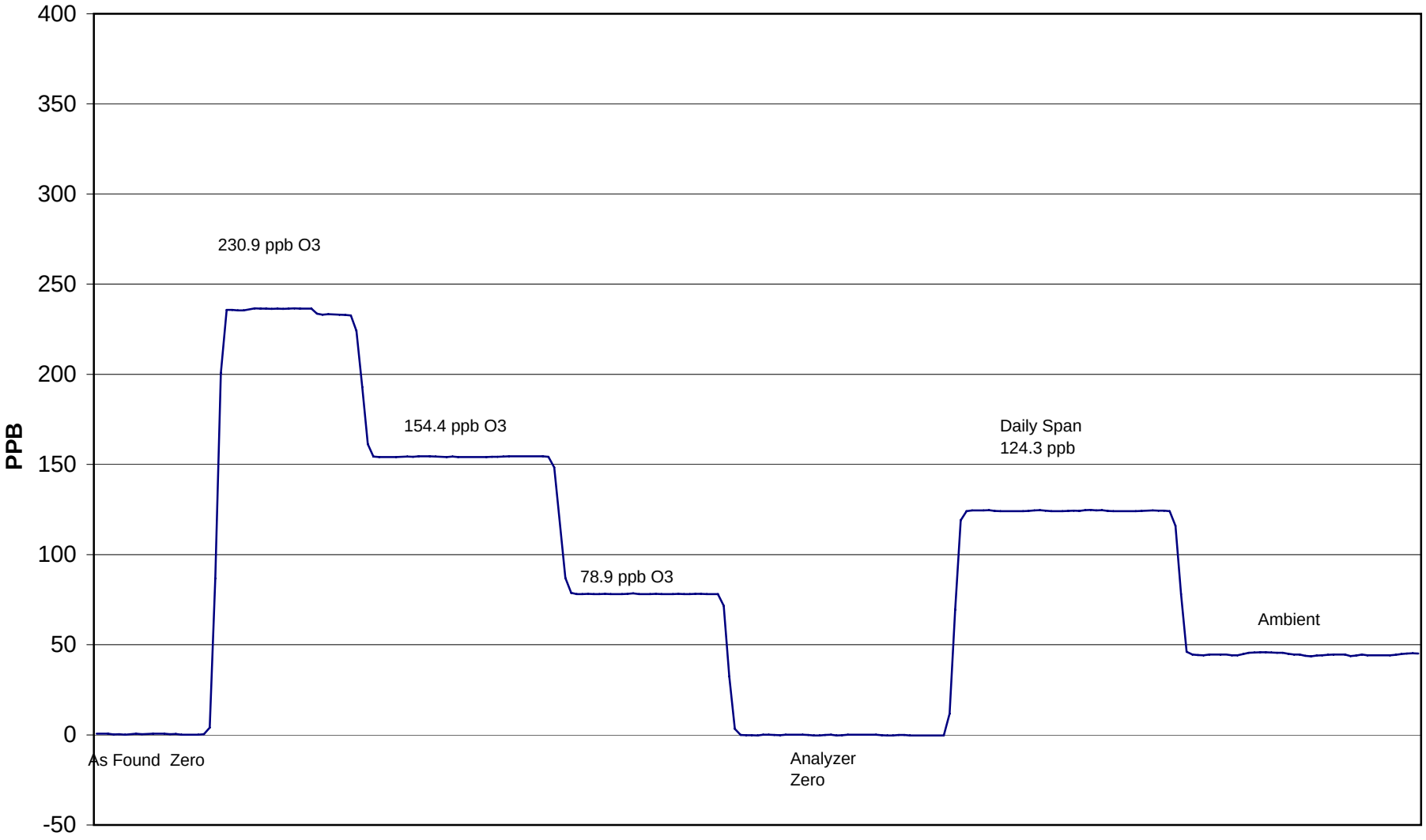
Calibration Date	March 11, 2010	Previous Calibration	February 11, 2010
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	10:55	End Time (MST)	13:00
Analyzer make/model	Teco 49C	Analyzer serial #	49C-76443-383

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.4	NA		
230.9	233.2	0.9902	Correlation Coefficient	0.999936
154.4	154.3	1.0006		
78.9	78.2	1.0095	Slope	0.988693
			Intercept	1.054957



Beaverlodge - O_3 Calibration



March 11, 2010

FDMS TEOM PM2.5 AUDIT

FOCUS AIR QUALITY MONITORING

STATION: **BeaverLodge**

LOCATION: PASZA - Grande Prairie

OPERATOR: Grover Christiansen

DATE: 11-Mar-10

MONITOR INFO / PARAMETER VALUES:

Make/Model	TEOM AB
Configuration	PM2.5
Serial Number	AMU1649
Site Number	4
Inlet Type	PM 10 / SCC
FAdj. Main Setting	1.000
FAdj. Aux. Setting	1.000
T-Case Indicated / Set Point	30/30
T-Air Indicated / Set Point	30/30
T-Cap Indicated / Set Point	30/30
Splitter Assembly Alignment (cm)	15.5

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

RECENT CALIBRATION AND AUDIT HISTORY

Previous Audit	Feb-11-10
Previous Calibration	

PUMP CAPACITY CHECK *	PASS

* capacity test or pump on timed test utilized to verify pump integrity

"FAIL" indicates that pump requires service.

LEAK CHECK	Indicated Flow (lpm)	
	Main	Auxiliary
PUMP ON	-0.070	0.220
PUMP OFF	0.000	0.060
NET	-0.070	0.160
LIMITS	*<0.15*	*<0.65*

		Ambient Temp. (^{0}C)	Ambient Pres. (atm)	Ko *	Bypass flow (lpm)	Sample flow (lpm)
	SET POINT (S)	na	na	14287	13.67	3.000
	INDICATED (I)	3.9	0.895		13.67	3.000
As Found Data	MEASURED (AF)	3.8	0.895		13.70	3.003
Adjusted Data	MEASURED (M)	3.8	0.895	14119	13.70	3.003
	DIFFERENCE (M-I)	-0.1	0.000	-1.2%	0.22	0.10
	LIMITS	*± 2 ^{0} C*	*± 0.005 atm*	*± 2.5 %*	*± 1.0 L/min*	*± 0.2 L/min*

Ko Audit Filter data *Weight:* 0.11477 *Serial #:* *CVK 3532*

COMMENTS:

PASS

Sample Head Inspection Or Cleaning:

PM10: Cleaned.

PM2.5: Cleaned

TEOM / FDMS IN LINE FILTER INSPECTION OR REPLACEMENT:

TEOM IN LINE: FDMS Water knock out:Good

Main: Good

AUX: Good FDMS 47 mm Filter Cassette: Replaced

Calibration Report

Parameter **SO2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	March 17, 2010	Previous Calibration	February 22, 2010
Station Number	9	Station Location	Rover - Kinuso
Reason: Routine	Install	Removal	Other:
Start Time (MST)	8:19	End Time (MST)	11:00
Barometric Pressure	27.66 inches Hg	Station Temperature	22.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentratior	50.6 ppm	Cal Gas Expiry Date	7/27/2009
Gas Cert Reference	LL 16161		
DACS make	Focus AP1000	DACS serial No.	52662
DACS voltage range	0 - 10 volt	DACS channel #	9
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.004170	Calculated slope	0.997858
Calculated intercept	-1.955323	Calculated intercept	-1.375687
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	8.8		8.6	
Coefficient	0.869		0.874	
UV Lamp Voltage	806	V	804	V
Chamber Temp	44.6	C	44.6	C
Perm Gas Temp	45	C	45	C
Pressure	685.3	mm Hg	682.2	mm Hg
Sample Flow	0.494	LPM	0.493	LPM
Lamp Intesity	47648	Hz	47410	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	0.00	0.0	0.4	N/A
4988	39.83	400.8	402.5	0.9960
4988	19.88	200.9	203.6	0.9868
4988	9.98	101.0	103.3	0.9779
4988	0.00	0.0	0.4	As found zero
4988	39.89	401.4	402.1	As found span
			Average Correction Factor	0.9869

Calculated value of As Found Response: 401.359 ppm Percent Change of As Found: 0.0%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	256.9	ppm	260.2	ppm

Notes:

Calibration Performed By: Brad Moyles

Calibration Summary

Parameter **SO2**

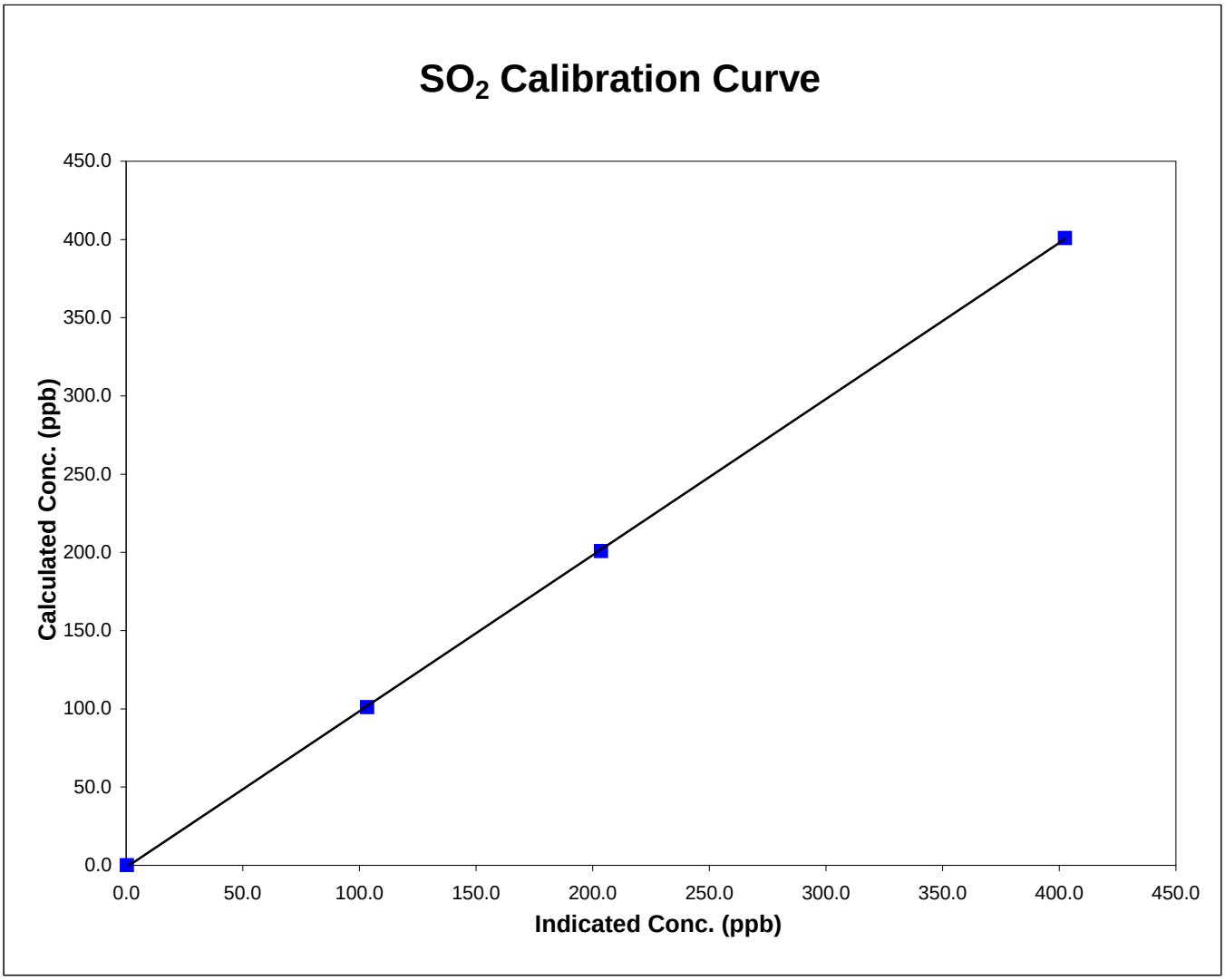
Air Monitoring Network **PASZA**

Station Information

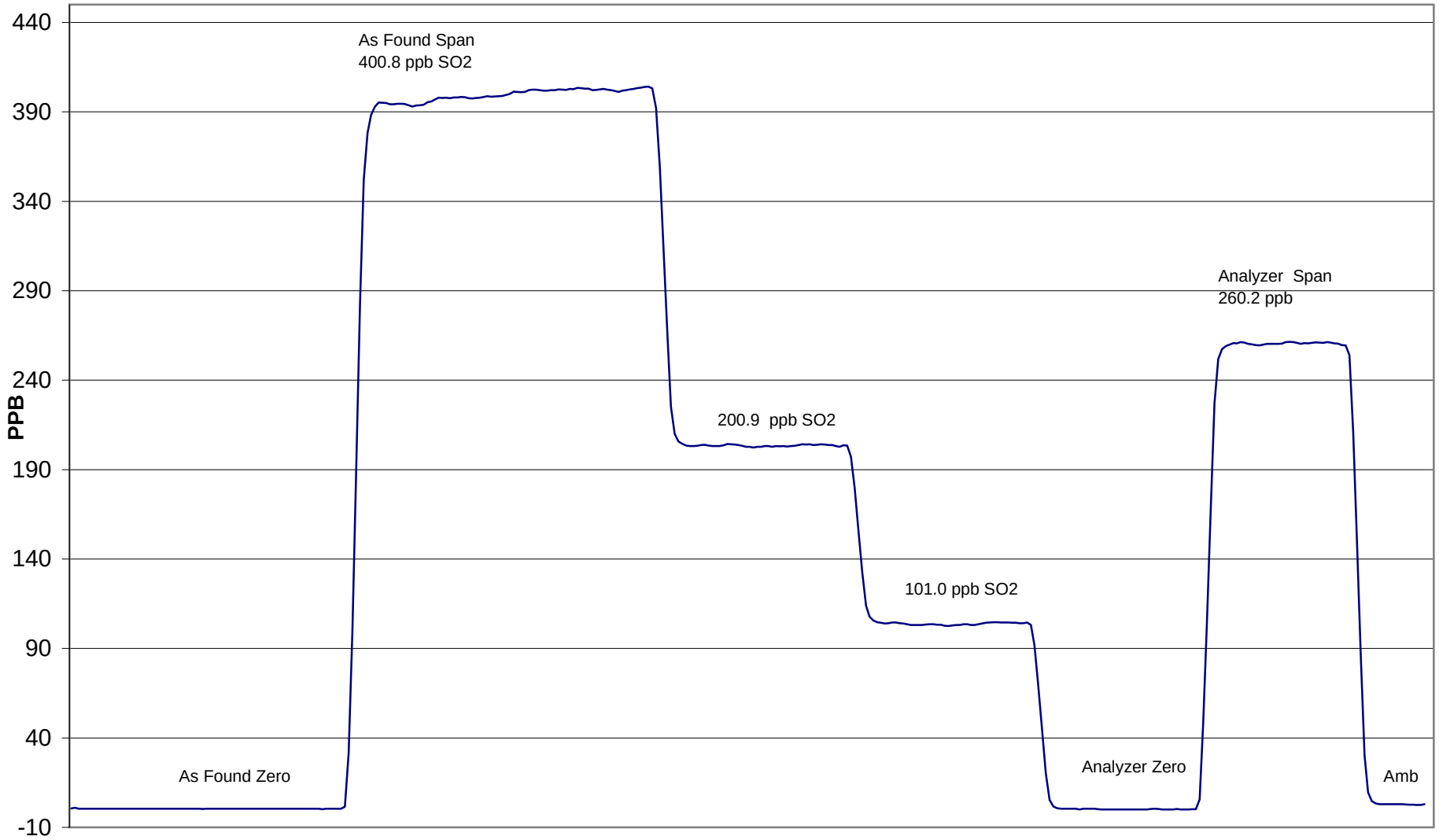
Calibration Date	March 17, 2010	Previous Calibration	February 22, 2010
Station Number	9	Station Location	Rover - Kinuso
Start Time (MST)	8:19	End Time (MST)	11:00
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A		
400.8	402.5	0.9960	Correlation Coefficient	0.999971
200.9	203.6	0.9868		
101.0	103.3	0.9779	Slope	0.997858
			Intercept	-1.375687



Kinuso SO_2 Calibration



March 17, 2010

Calibration Report

Parameter **TRS**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	March 16, 2010	Previous Calibration	February 22, 2010
Station Number	9	Station Location	Rover-Kinuso
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	14:01	End Time (MST)	16:40
Barometric Pressure	27.5 inches Hg	Station Temperature	21.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	5.15 ppm	Cal Gas Expiry Date	11/15/2005
Gas Cert Reference	ALM013295		
DACS make	Focus AP1000	DACS serial No.	52662
DACS voltage range	0 - 5 volt	DACS channel #	8
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.003275	Calculated slope	1.004459
Calculated intercept	0.059218	Calculated intercept	0.182172
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	10.4	ppb	10.2	ppb
Coefficient	1.402		1.384	
Lamp Voltage	795	V	793	V
Chamber Temp	44.0	C	44.0	C
Perm gas Temp	45	C	45	C
Pressure	675	mmHg	672	mmHg
Sample Flow	435	ccm	0.434	ccm
Lamp Intensity	38687.0	Hz	38948.0	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	0.2	N/A
4988	79.75	81.0	80.7	1.0042
4988	39.80	40.8	40.0	1.0180
4988	9.93	10.2	9.8	1.0407
4988	0.00	0.0	0.2	As found zero
4988	79.88	81.2	80.7	As found span
			Average Correction Factor	1.0210

Calculated value of As Found Response: 80.87 ppm Percent Change of As Found: 0.4%

	before calibration		after calibration	
Auto zero	-0.6	ppm	-0.2	ppm
Auto span	64.8	ppm	65.7	ppm

Notes:

Calibration Performed By: Brad Moyles

Calibration Summary

Parameter **TRS**

Air Monitoring Network **PASZA**

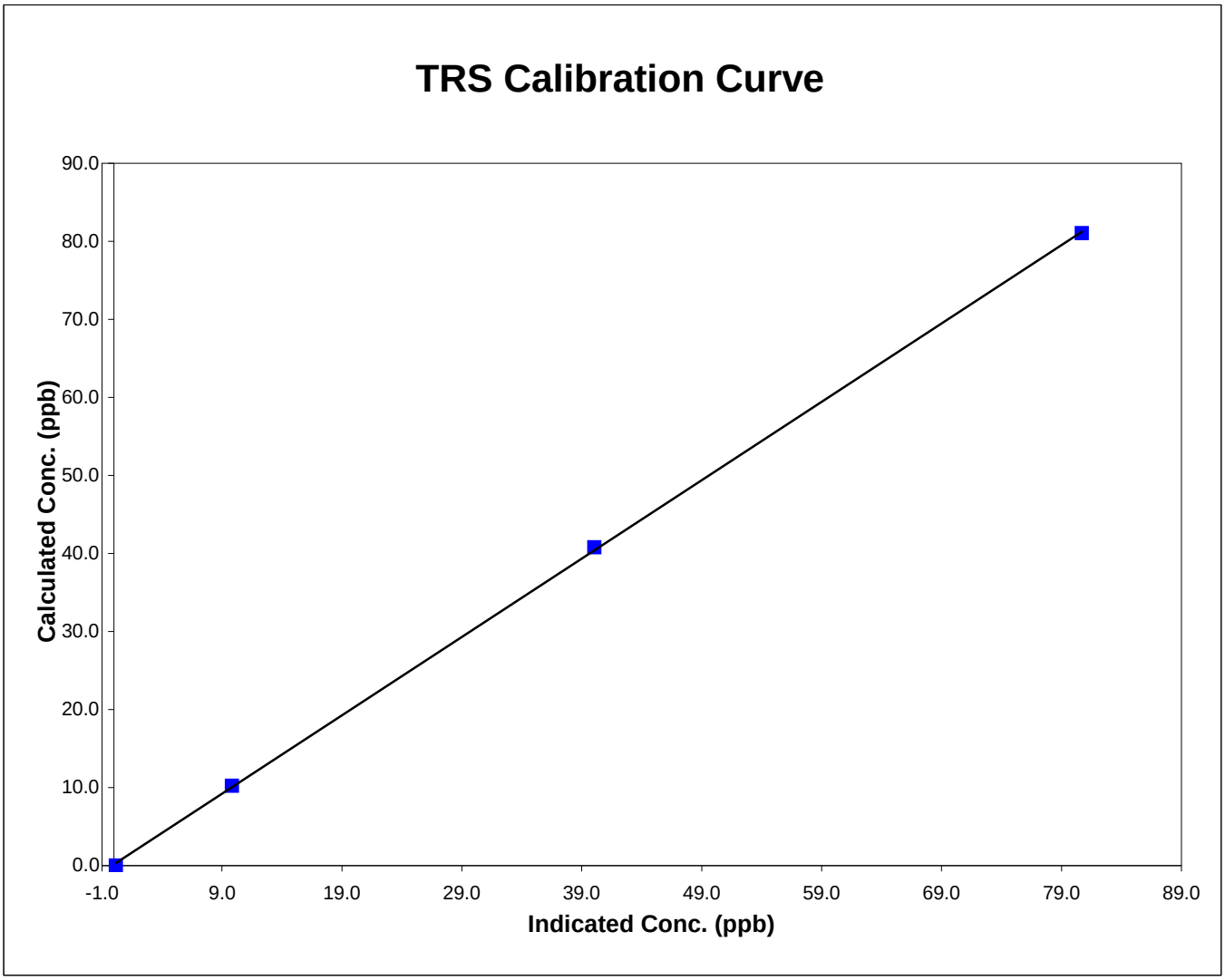
FOCUS AIR QUALITY MONITORING

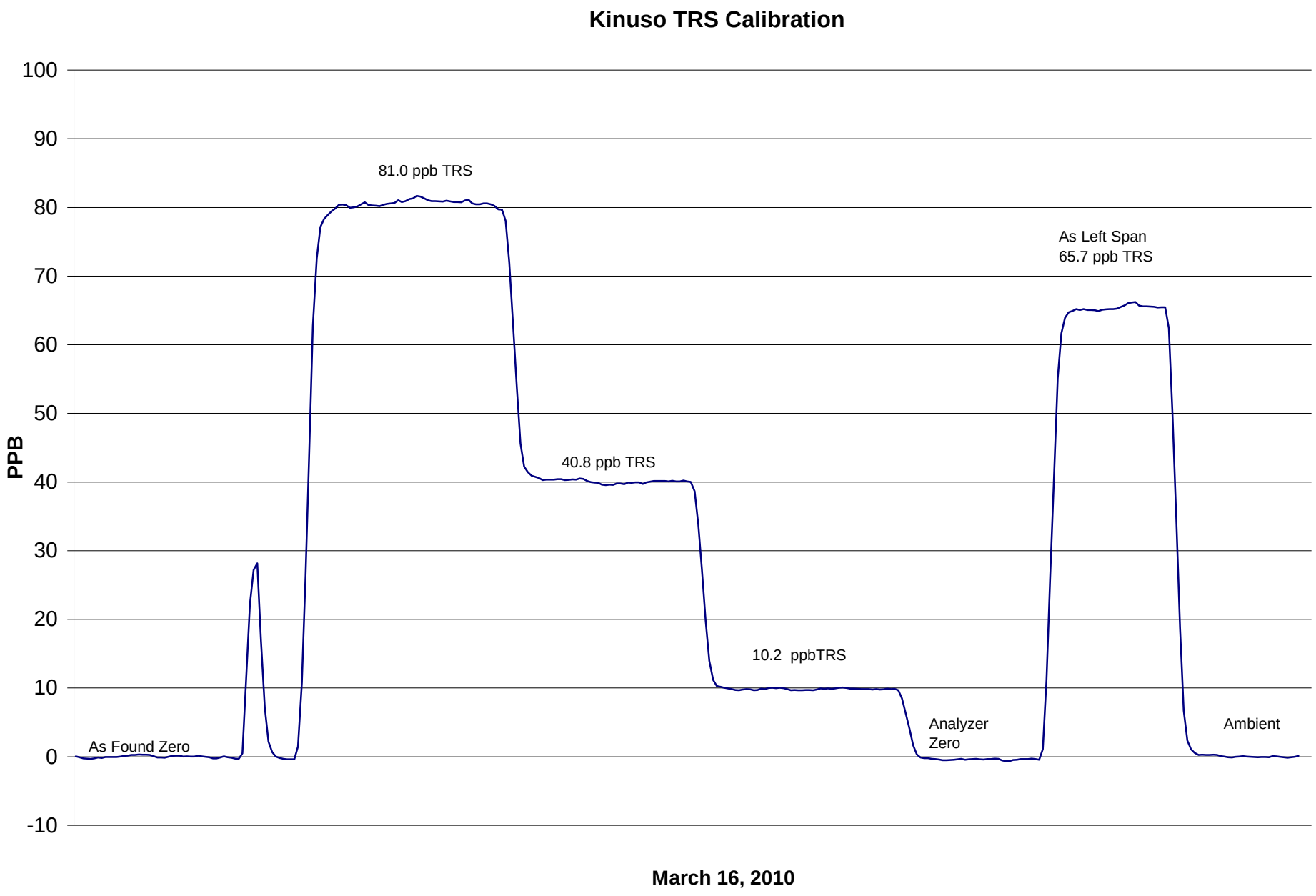
Station Information

Calibration Date	March 16, 2010	Previous Calibration	February 22, 2010
Station Number	9	Station Location	Rover-Kinuso
Start Time (MST)	14:01	End Time (MST)	16:40
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
81.0	80.7	1.0042	Correlation Coefficient	0.999921
40.8	40.0	1.0180		
10.2	9.8	1.0407	Slope	1.004459
			Intercept	0.182172




Kinuso TRS Calibration
100
90
80
70
60
50
40
30
20
10
0
-10
PPB
81.0 ppb TRS
40.8 ppb TRS
10.2 ppbTRS
As Found Zero
Analyzer
Zero
As Left Span
65.7 ppb TRS
Ambient
March 16, 2010

Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	March 17, 2010	Previous Calibration	February 22, 2010
Station Number	9	Station Location	Rover Kinuso

Reason: Routine | Installation | Removal | Other:

Start Time (MST)	7:05	End Time (MST)	12:46
Barometric Pressure	0.916 Atm	Station Temperature	25.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
NO Cal Gas Conc	49.6 ppm	Cal Gas Expiry Date	July 2, 2007
NOx Cal Gas Conc	49.6 ppm	Cal Gas Serial #	CC114395

DACS Information

DACS make	Focus AP1000	DACS serial No.	52662

Parameter		NO2	NOx	NO
Before	Data Slope	0.995302	1.002122	1.008232
	Data Offset	1.252389	-2.445870	-2.818105
After	Data Slope	0.994530	0.996047	1.001808
	Data Offset	1.190516	-2.472890	-2.860770
Channel #		8	6	7
Voltage Range		0 - 10 VDC	0 - 10 VDC	0 - 10 VDC

Analyzer Information

Analyzer make/model	TEI 42i	Analyzer serial #	701120011

Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	5.5	mV	4.1	mV
NOx bkgnd	5.7	mV	4.2	mV
NO coefficient	1.124		0.749	
NOx coefficient	1.000		0.998	
NO2 conv temp	323.9	Deg C	324.2	Deg C
PMT Temp	-3.1	Deg C	-3.1	Deg C
PMT Volt	-829.5	mV	-829.5	mV
R Cell Press	192.3	in Hg	147.0	in Hg

Calibration Report

Parameter **NOx-NO-NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: March 17, 2010 Station Location: Rover Kinuso

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	4990	0.00	0.0	0.0	0.0	0.4	0.7	-1.4	N/A	N/A
1	4988	39.85	393.1	393.1	0.0	395.9	394.0	-1.0	0.9930	0.9978
2	4988	19.87	196.8	196.8	0.0	201.7	200.8	-0.8	0.9757	0.9801
3	4988	9.98	99.0	99.0	0.0	103.6	103.7	-0.8	0.9557	0.9555
AFZ	4988	0.00	0.0	0.0	0.0	0.4	0.7	-0.7	0.0000	0.0000
AFS	4988	39.85	393.1	393.1	0.0	391.5	388.5	0.2	1.0043	1.0120
							Average Correction Factor		0.9748	0.9778

As Found Concentrations: NO_X= 388.6 NO= 385.0 As Found Percent Change NO_X= -1.2% NO= -2.1%

GPT Calibration Data

Dilution Flow 4988 ccm Source Gas Flow 39.84 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	0.7	0.7	0.0	0.4	0.7	-1.4	N/A	N/A	N/A	N/A
NO point	392.5	392.5	0.0	394.4	392.5	-0.9	0.9950	1.0000	N/A	N/A
300	392.5	158.4	234.1	394.5	158.4	234.1	0.9948	1.0000	1.0001	100.0%
200	392.5	231.8	160.7	394.6	231.8	160.3	0.9945	1.0000	1.0022	99.8%
100	392.5	303.5	89.0	394.6	303.5	88.7	0.9946	1.0000	1.0037	99.6%
					Average Correction Factor		0.9946	1.0000	1.0020	99.8%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.4	-0.9	0.7	ppb	0.4	-0.7	0.7	ppb
Auto span	312.6	308.0	2.9	ppb	317.0	312.3	2.8	ppb

Calibration Performed By: Brad Moyles

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

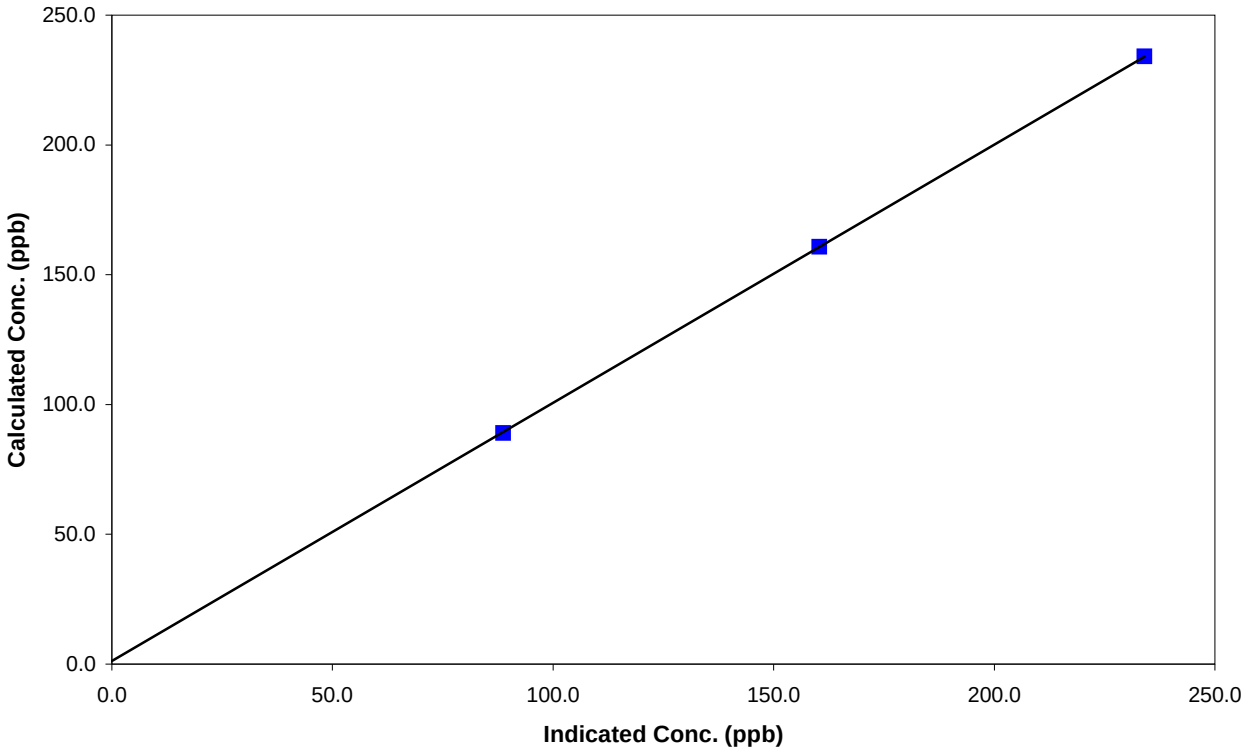
Station Information

Calibration Date	March 17, 2010	Previous Calibration	February 22, 2010
Station Number	9	Station Location	Rover Kinuso
Start Time (MST)	7:05	End Time (MST)	13:39
Analyzer make	TEI 42i	Analyzer serial #	701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-1.4	N/A		
234.1	234.1	1.0001	Correlation Coefficient	0.999993
160.7	160.3	1.0022		
89.0	88.7	1.0037	Slope	0.994530
			Intercept	1.190516

NO_2 Calibration Curve



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

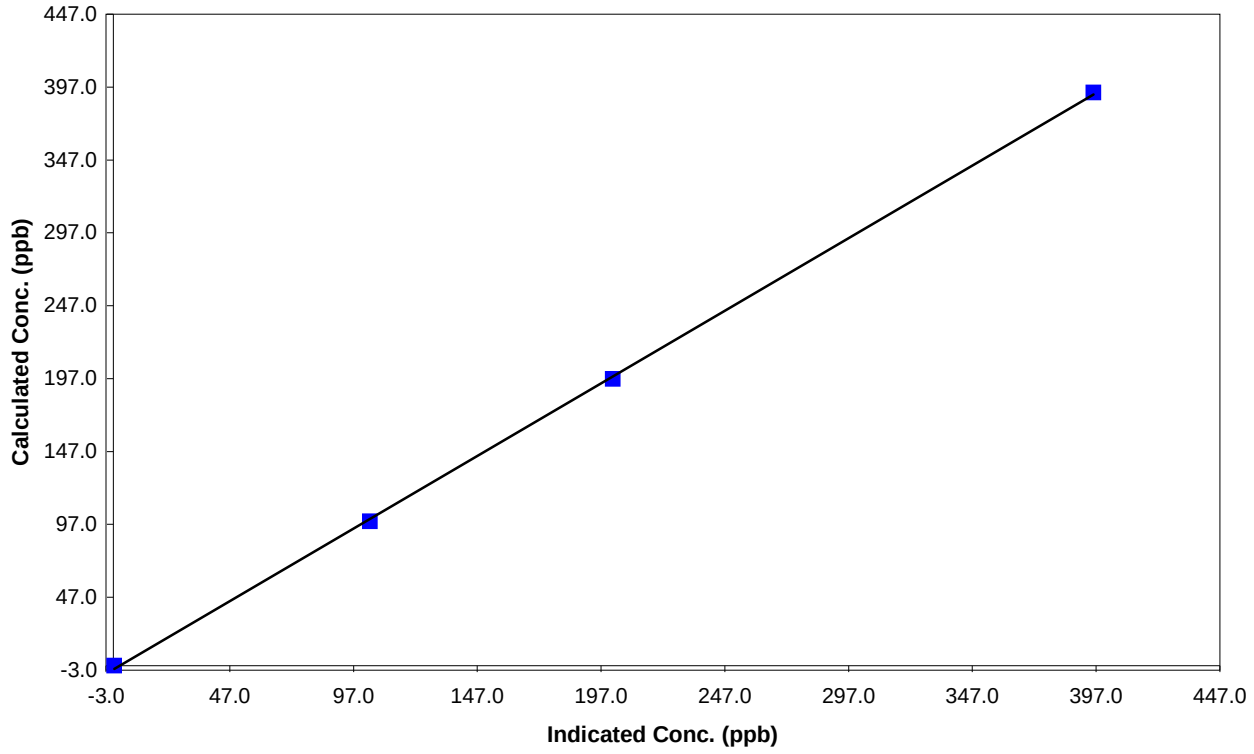
Station Information

Calibration Date	March 17, 2010	Previous Calibration	February 22, 2010
Station Number	9	Station Location	Rover Kinuso
Start Time (MST)	7:05	End Time (MST)	13:39
Analyzer make	TEI 42i	Analyzer serial #	701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A		
393.1	395.9	0.9930	Correlation Coefficient	0.999864
196.8	201.7	0.9757		
99.0	103.6	0.9557	Slope	0.996047
			Intercept	-2.472890

NOx Calibration Curve



Calibration Summary

Parameter **NO**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

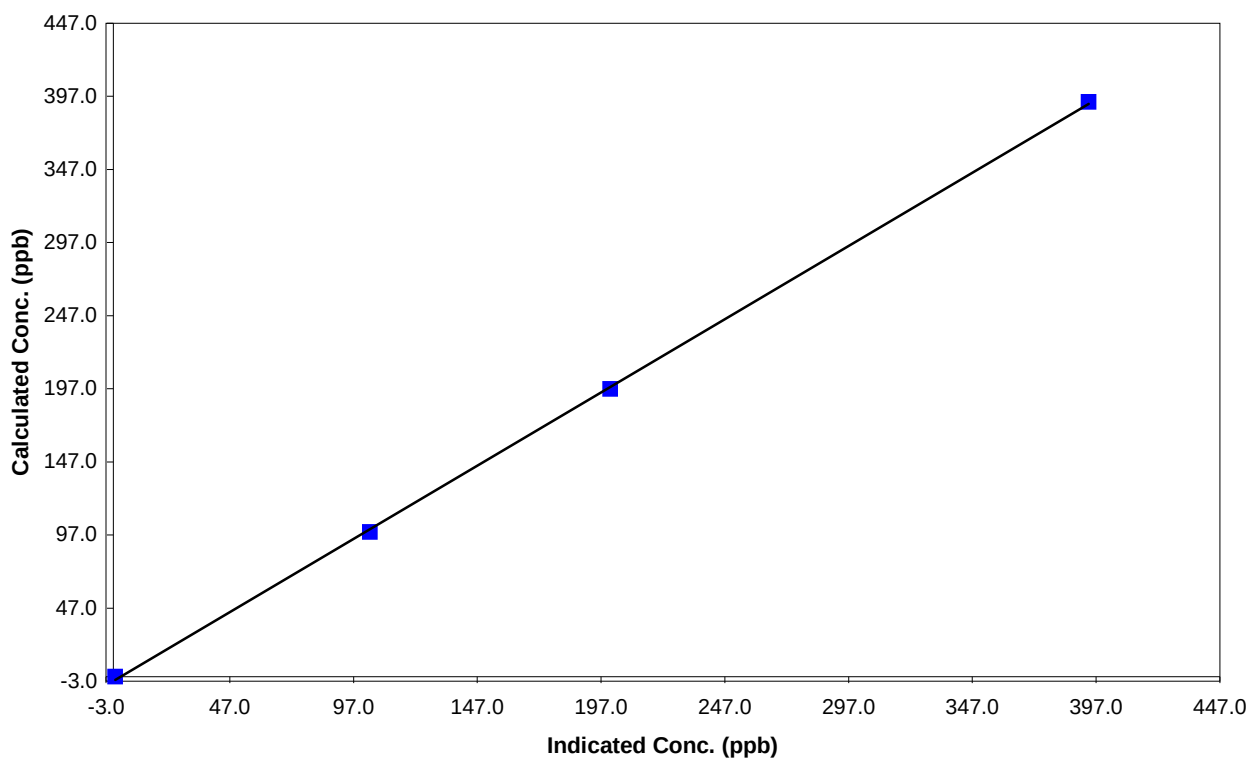
Station Information

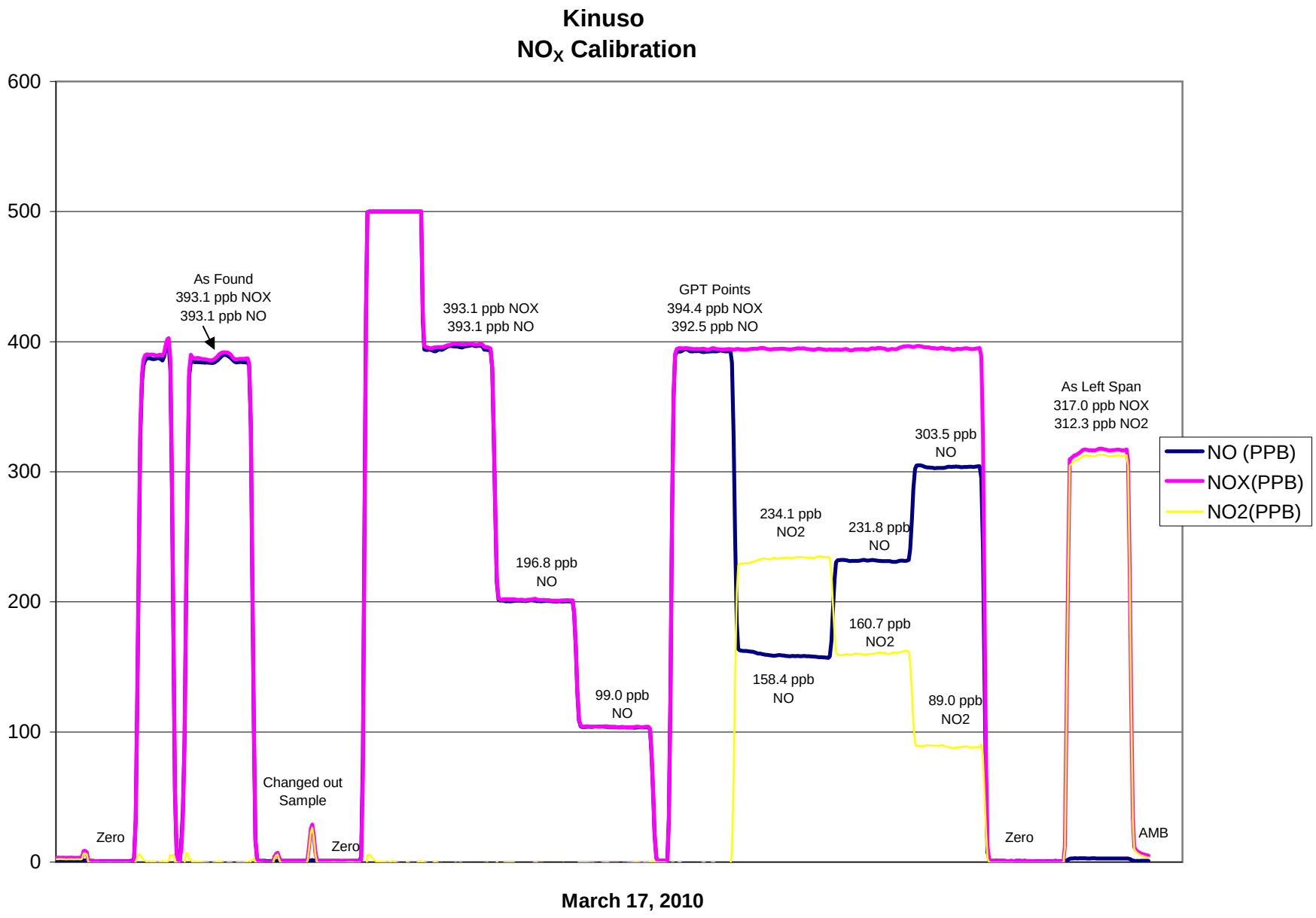
Calibration Date	March 17, 2010	Previous Calibration	February 22, 2010
Station Number	9	Station Location	Rover Kinuso
Start Time (MST)	7:05	End Time (MST)	13:39
Analyzer make	TEI 42i	Analyzer serial #	701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.7	N/A		
393.1	394.0	0.9978	Correlation Coefficient	0.999854
196.8	200.8	0.9801		
99.0	103.7	0.9555	Slope	1.001808
			Intercept	-2.860770

NO Calibration Curve




Kinuso
NOX Calibration
600
500
400
300
200
100
0
As Found
393.1 ppb NOX
393.1 ppb NO
393.1 ppb NOX
393.1 ppb NO
GPT Points
394.4 ppb NOX
392.5 ppb NO
As Left Span
317.0 ppb NOX
312.3 ppb NO2
303.5 ppb
NO
234.1 ppb
NO2
231.8 ppb
NO
196.8 ppb
NO
160.7 ppb
NO2
158.4 ppb
NO
99.0 ppb
NO
89.0 ppb
NO2
Changed out
Sample
Zero
Zero
Zero
AMB
NO (PPB)
NOX(PPB)
NO2(PPB)
March 17, 2010

Calibration Report

FOCUS
AIR QUALITY MONITORING

Parameter **O3**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	March 17, 2010	Previous Calibration	February 22, 2010
Station Number	9	Station Location	Rover - Kinuso
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	12:00	End Time (MST)	14:53
Barometric Pressure	0.935 atm	Station Temperature	21.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
DACS make	Focus AP1000	DACS serial No.	52662
DACS voltage range	0-5	DACS channel #	7
	Before		After
Calculated slope	1.066602	Calculated slope	1.002036
Calculated intercept	2.471033	Calculated intercept	0.251492
Analyzer make	TEI Model 49C	Analyzer serial #	609-716240

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	-13.8	ppb	-13.8	ppb
Span	1.517		1.517	
Cell A	90644	Hz	90644	Hz
Cell B	98378	Hz	98378	Hz
Pressure	709	in Hg	709	in Hg
CellA Flow	724	ccm	724	ccm
Cell B Flow	692	cmm	692	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	1.0	N/A
4990	0.30	234.1	233.9	1.0009
4990	0.20	160.7	160.5	1.0012
4990	0.10	89.0	86.5	1.0294
4990	0.00	0.0	1.0	As found zero
4990	0.30	234.1	238.1	As found span
			Average Correction Factor	1.0105

Calculated value of As Found Response: 238.1 ppm Percent Change of As Found: 1.7%

	before calibration		after calibration	
Auto zero	2.1	ppb	1.6	ppb
Auto span	326.9	ppb	308.0	ppb

Notes:

Calibration Performed By: Brad Moyles

Calibration Summary

Parameter **O3**

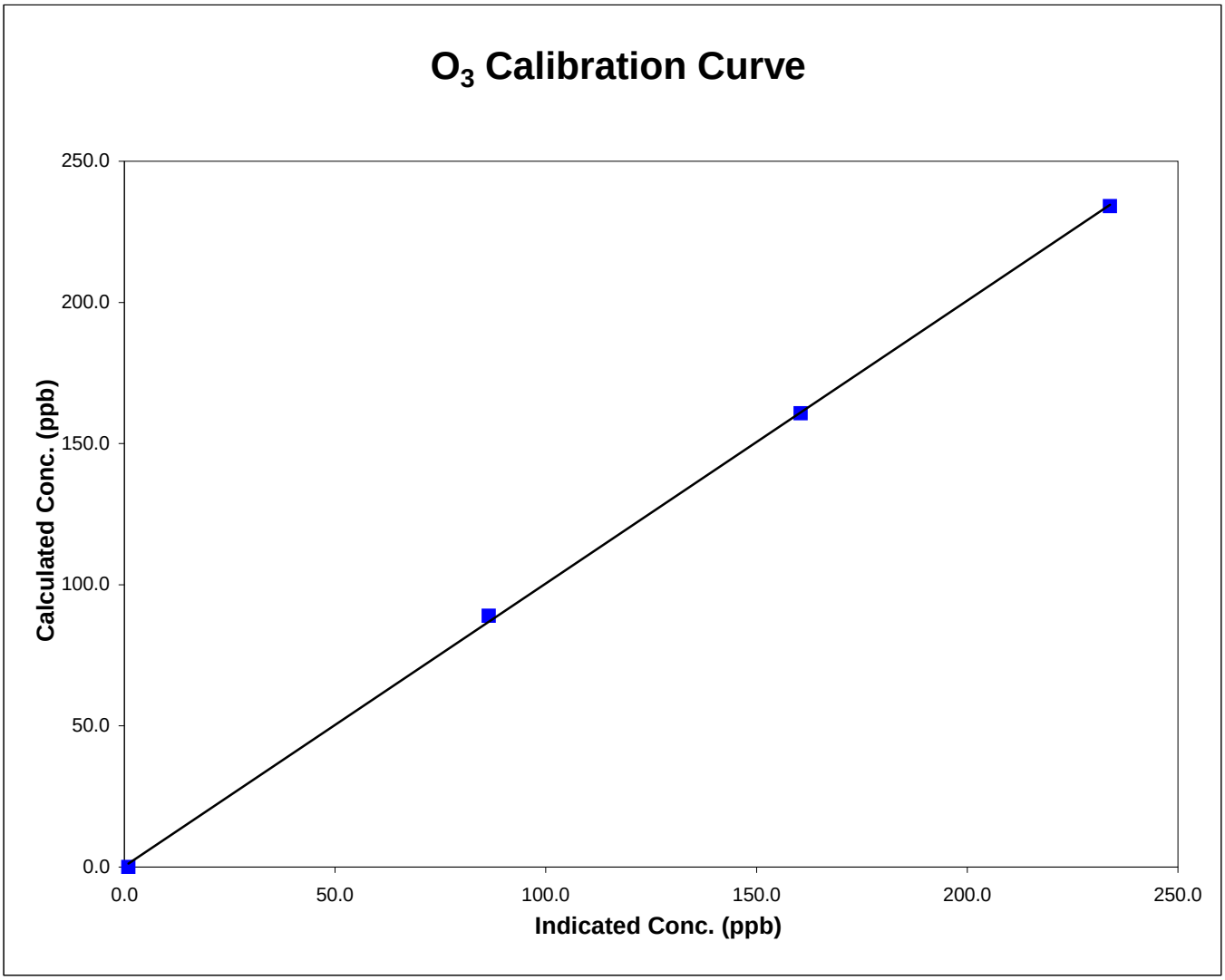
Air Monitoring Network **PASZA**

Station Information

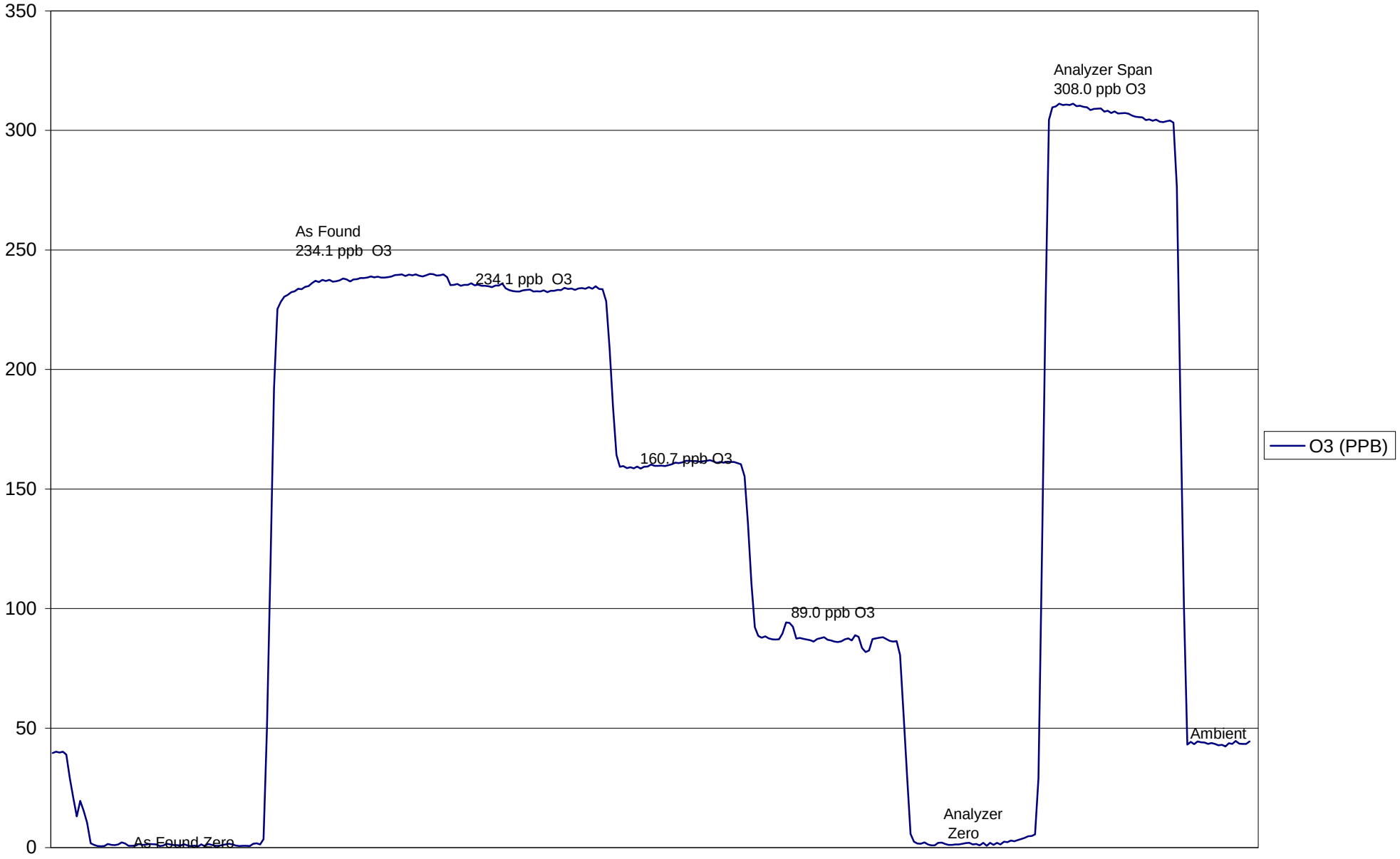
Calibration Date	March 17, 2010	Previous Calibration	February 22, 2010
Station Number	9	Station Location	Rover - Kinuso
Start Time (MST)	12:00	End Time (MST)	14:53
Analyzer make/model	TEI Model 49C	Analyzer serial #	609-716240

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	1.0	NA		
234.1	233.9	1.0009	Correlation Coefficient	0.999787
160.7	160.5	1.0012		
89.0	86.5	1.0294	Slope	1.002036
			Intercept	0.251492



Kinuso O_3 Calibration



March 17, 2010

Calibration Report

Parameter **SO2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	March 18, 2010	Previous Calibration	February 18, 2010
Station Number	6	Station Location	Valleyview
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	7:54	End Time (MST)	10:56
Barometric Pressure	29.90 inches Hg	Station Temperature	25.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentratior	50.6 ppm	Cal Gas Cert Date	12/3/2009
Gas Cert Reference	AAL 56996		
DACS make	Focus AP1000	DACS serial No.	45274
DACS voltage range	0 - 10 volt	DACS channel #	4
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.004645	Calculated slope	1.000248
Calculated intercept	-2.244554	Calculated intercept	-2.571311
Analyzer make	TEI 45C	Analyzer serial #	45C-57531-313

	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
Background	24.4		24.4	
Coefficient	0.886		0.902	
UV Lamp Voltage	917	LPM	917	LPM
Chamber Temp	44.2	V	44.2	V
Perm Gas Temp	35.1	C	35.1	C
Pressure	626.3	in Hg	623.4	in Hg
Sample Flow	0.472	LPM	0.475	LPM
Lamp Intesity	48434	Hz	48786	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)
4993	0.00	0.0	0.3	N/A
4993	39.85	400.6	401.7	0.9974
4993	19.89	200.8	205.2	0.9786
4993	9.94	100.5	104.9	0.9582
4993	0.00	0.0	0.3	As found zero
4993	39.88	400.9	389.5	As found span
			Average Correction Factor	0.9781

Calculated value of As Found Response: 388.785 ppm Percent Change of As Found: 3.0%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.0	ppm
Auto span	150.3	ppm	154.3	ppm

Notes: A span adjustment was performed.

Calibration Performed By: Brad Moyles

Calibration Summary

Parameter **SO2**

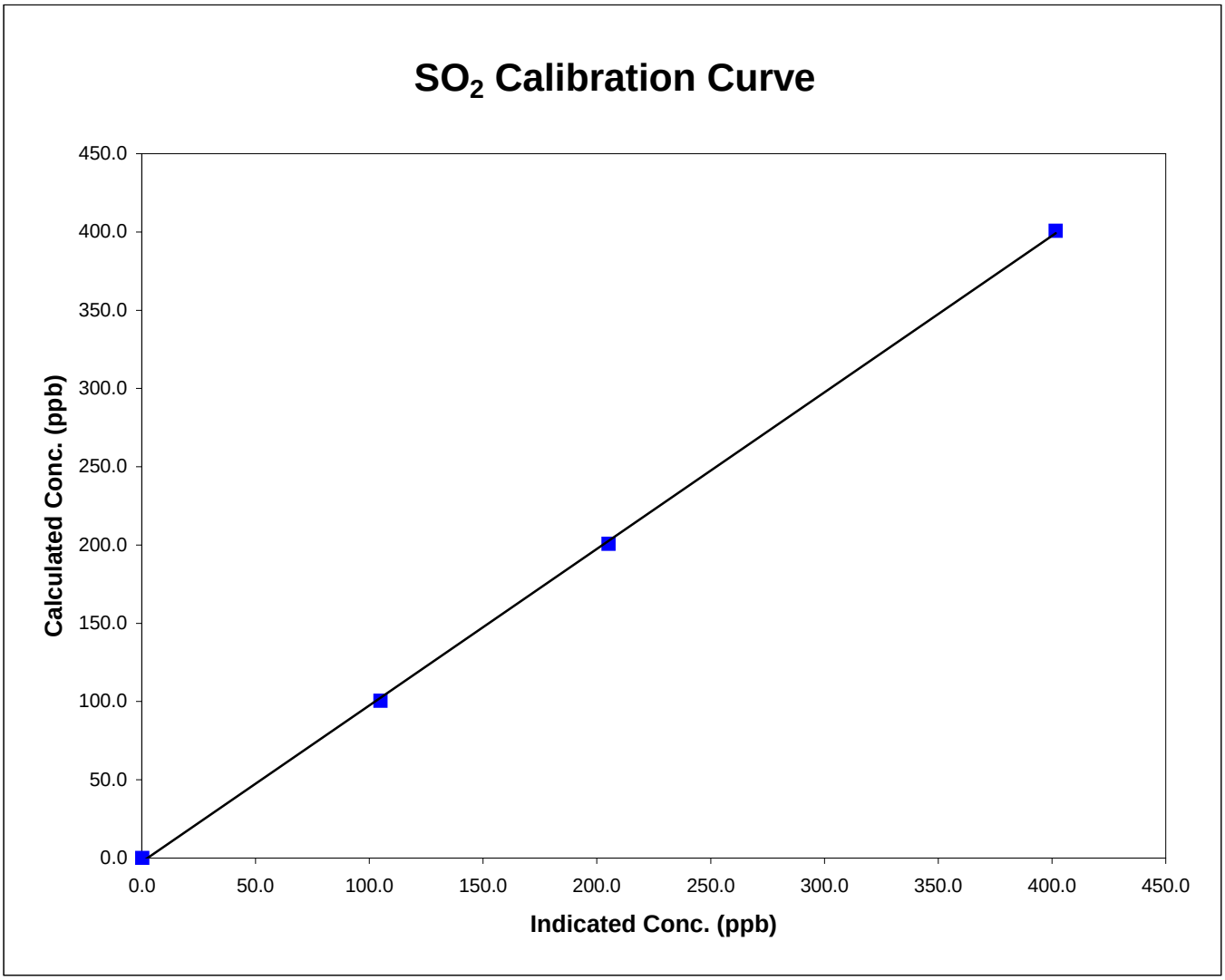
Air Monitoring Network **PASZA**

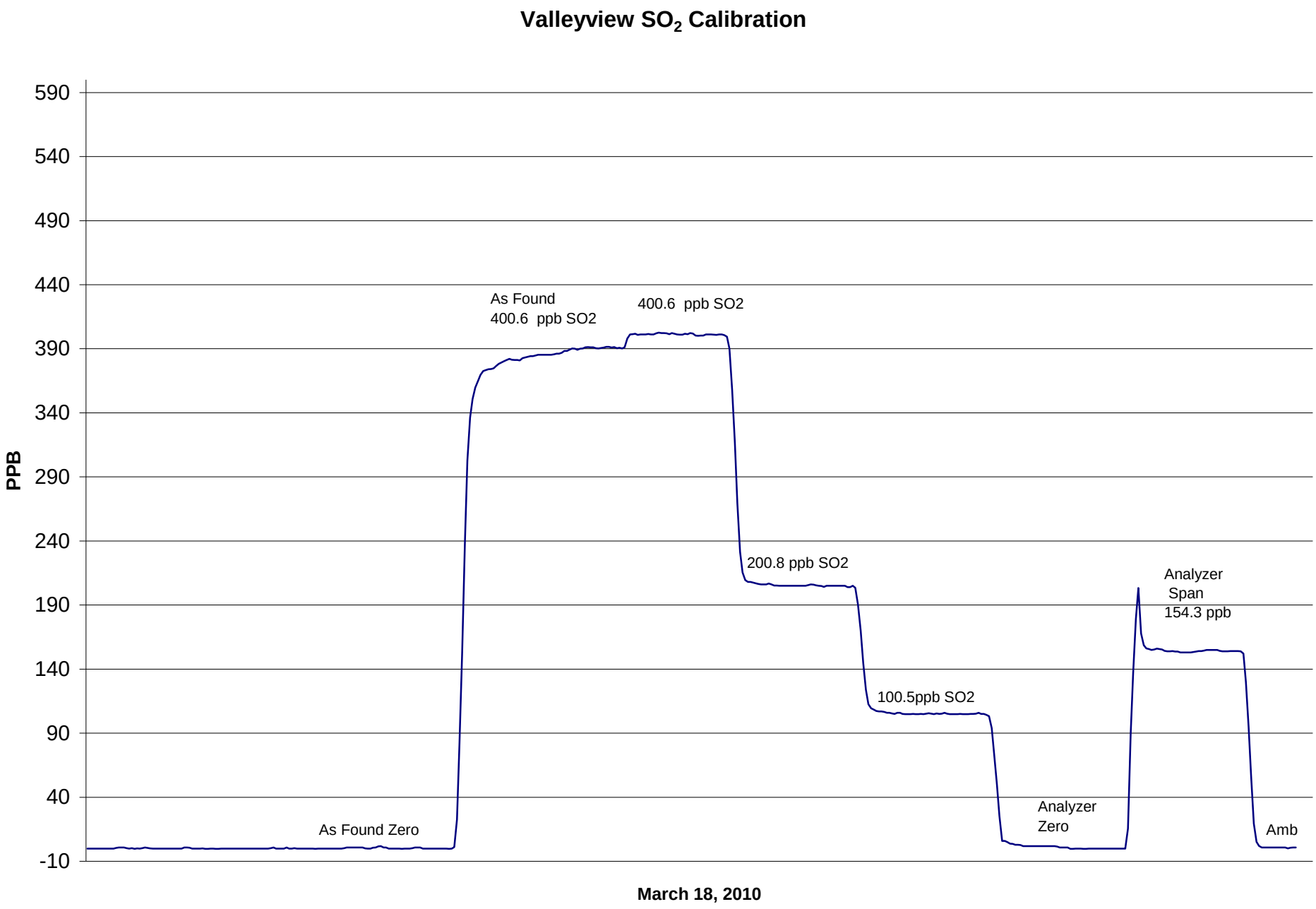
Station Information

Calibration Date	March 18, 2010	Previous Calibration	February 18, 2010
Station Number	6	Station Location	Valleyview
Start Time (MST)	7:54	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	0.3	N/A		
400.6	401.7	0.9974	Correlation Coefficient	0.999839
200.8	205.2	0.9786		
100.5	104.9	0.9582	Slope	1.000248
			Intercept	-2.571311




Valleyview SO_2 Calibration
590
540
490
440
390
340
290
240
190
140
90
40
-10
PPB
As Found
400.6 ppb SO2
400.6 ppb SO2
200.8 ppb SO2
100.5ppb SO2
Analyzer
Span
154.3 ppb
Analyzer
Zero
Amb
As Found Zero
March 18, 2010

Calibration Report

Parameter **H2S**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	March 18, 2010	Previous Calibration	February 18, 2010
Station Number	5	Station Location	Valleyview
Reason: Routine	Install	Removal	Other:
Start Time (MST)	9:59	End Time (MST)	12:32
Barometric Pressure	0.00 inches Hg	Station Temperature	23.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentratior	5.15 ppm	Cal Gas Expiry Date	4/4/2009
Gas Cert Reference	ALM013295		
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 10 volt	DACS channel #	9
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.006449	Calculated slope	0.990881
Calculated intercept	-0.428970	Calculated intercept	-0.061377
Analyzer make	TEI Model 43i - APSCB	Analyzer serial #	701120010

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	5.1	ppb	4.9	ppb
Coefficient	1.097		1.085	
Lamp Voltage	792	V	791	V
Chamber Temp	45	c	44	c
Perm Oven Temp	45	c	45	c
Pressure	642	mm Hg	649	mm Hg
Sample Flow	428	ccm	433	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	79.72	81.0	82.0	0.9884
4988	39.83	40.8	40.9	0.9968
4988	9.93	10.2	10.5	0.9781
4989	0.00	0.0	0.2	As found zero
4989	79.81	81.1	82.0	As found span
			Average Correction Factor	0.9878

Calculated value of As Found Response: 81.91 ppm Percent Change of As Found: -1.0%

	before calibration		after calibration	
Auto zero	-0.1	ppm	0.2	ppm
Auto span	59.5	ppm	58.0	ppm

Notes:

Calibration Performed By: Brad Moyles

Calibration Summary

Parameter **H2S**

Air Monitoring Network **PASZA**

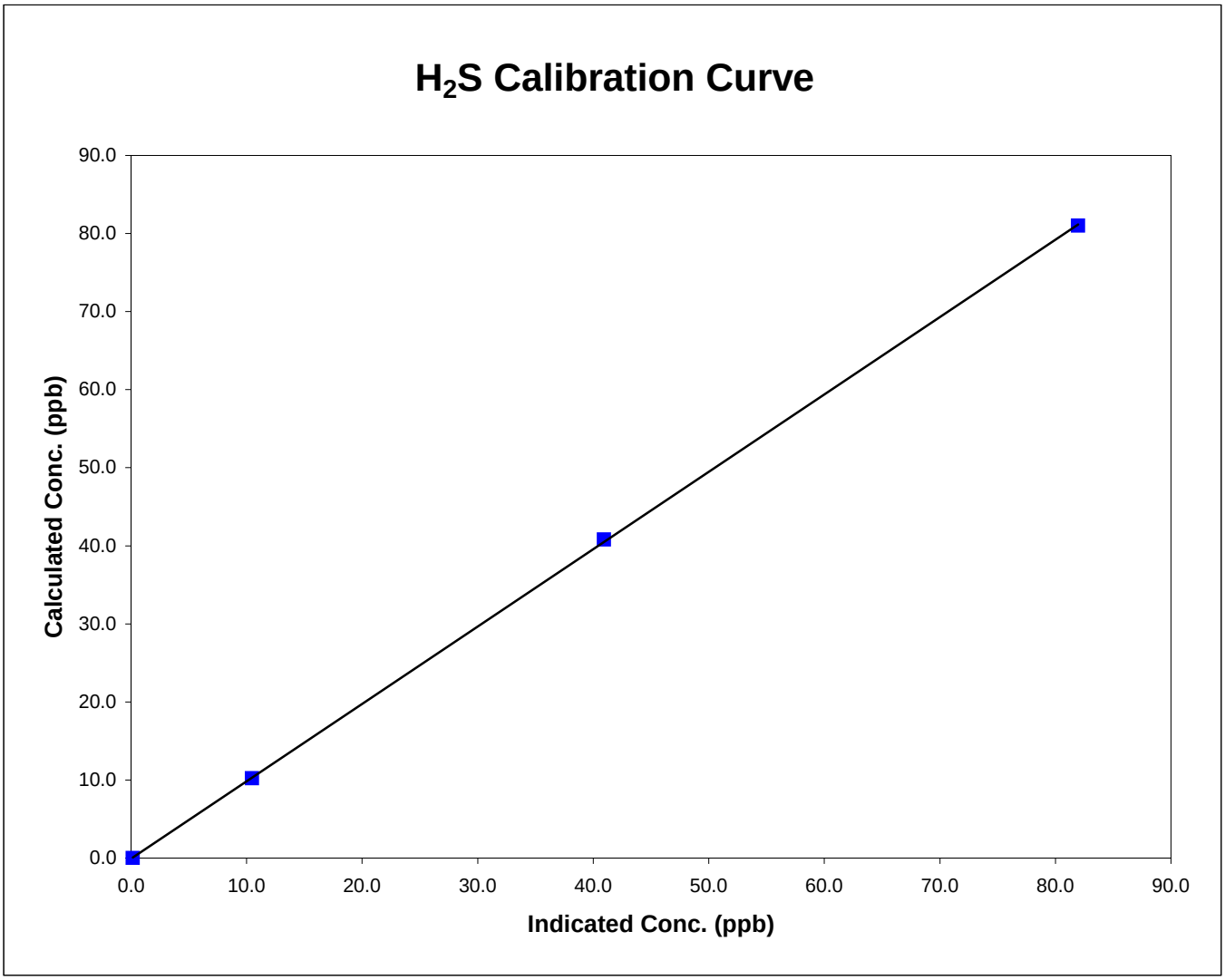
FOCUS AIR QUALITY MONITORING

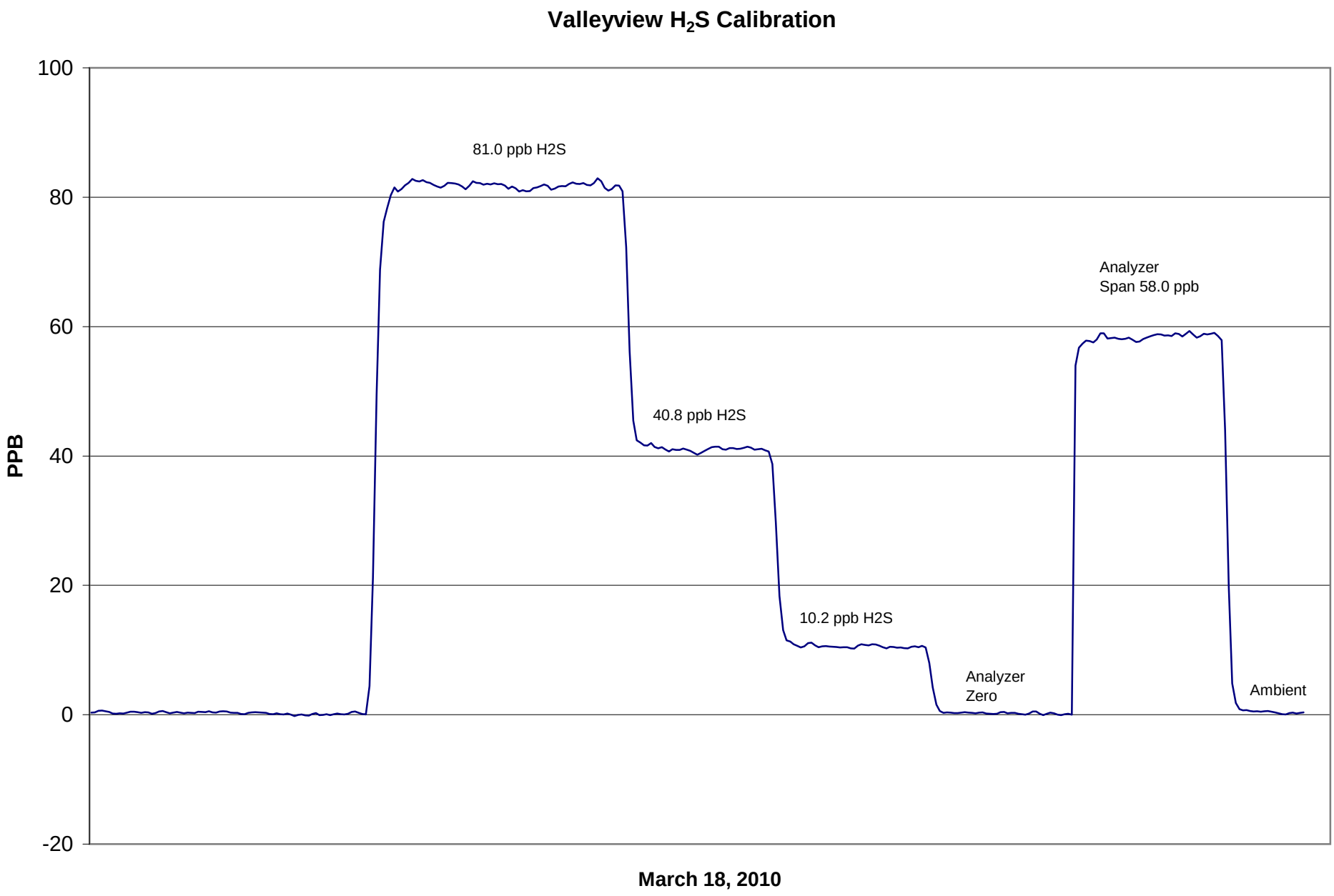
Station Information

Calibration Date	March 18, 2010	Previous Calibration	February 18, 2010
Station Number	5	Station Location	Valleyview
Start Time (MST)	9:59	End Time (MST)	12:32
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		
81.0	82.0	0.9884	Correlation Coefficient	0.999968
40.8	40.9	0.9968		
10.2	10.5	0.9781	Slope	0.990881
			Intercept	-0.061377




Valleyview H2S Calibration
100
80
60
40
20
0
-20
PPB
81.0 ppb H2S
40.8 ppb H2S
10.2 ppb H2S
Analyzer
Zero
Analyzer
Span 58.0 ppb
Ambient
March 18, 2010