Peace AirShed Zone Association

Ambient Air Monitoring Network Summary

Continuous Ambient Air Quality Monitoring Program
Monthly Report
December 2010

Operations and Reporting

FOCUS
AIR QUALITY MONITORING

PASZA
Peace AirShed Zone Association

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February 9, 2011

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Edmonton Alberta T6B 2X3

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

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

Continuous Monitoring: **Six (6) Stations including Henry Pirker (Grande Prairie), Evergreen Park, Smoky Heights, Beaverlodge, Bonanza (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 Continuous Data Summary" and "Continuous Network Equipment Summary" pages of the report.

During the month of **December** 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; with the exception of the $PM_{2.5}$ which had two (2) 1-hour exceedences of the AAAQG and one (1) 24-hour exceedences of the AAAQO:
  - **Dec. 31 22:00 275 µg/m^3 AENV Reference #243173**
  - **Dec. 31 23:00 239 µg/m^3 AENV Reference #243173**
  - **Dec. 31- 24-hour 34.6 µg/m^3 AENV Reference #243173**
- All analyzers and sensors at the Henry Pirker station had an operational uptime greater than 90% for the month of December.

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 December.

Smoky Heights Station:

- The measured ambient air quality was within the AAAQO for the Smoky Heights station; with the exception of the $PM_{2.5}$ which had one (1) 1-hour exceedences of the AAAQG:
  - **Dec. 20 20:00 100 µg/m^3 AENV Reference #242954**
- All analyzers / sensors at the Smoky Heights station had an operational uptime greater than 90% for the month of December.

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 December.

Portable – Bonanza Station:

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

Valleyview Station:

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

Passive Monitoring - 43 Stations throughout the PASZA zone:

There were four duplicate sites sampled in the month of December: Boone Creek, Hythe, Wanham and Puskwaskau. The passive sample analyses were performed by MAXXAM Analytics Inc.

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

- Monthly average concentrations for SO_2 passives ranged from 0.2 ppb to 1.0 ppb, with a mean of 0.6 ppb.
- Monthly average concentrations for NO_2 passives ranged from 1.5 ppb to 13.7 ppb, with a mean of 3.4 ppb.
- Monthly average concentrations for O_3 passives ranged from 12.6 ppb to 27.0 ppb, with a mean of 20.2 ppb.

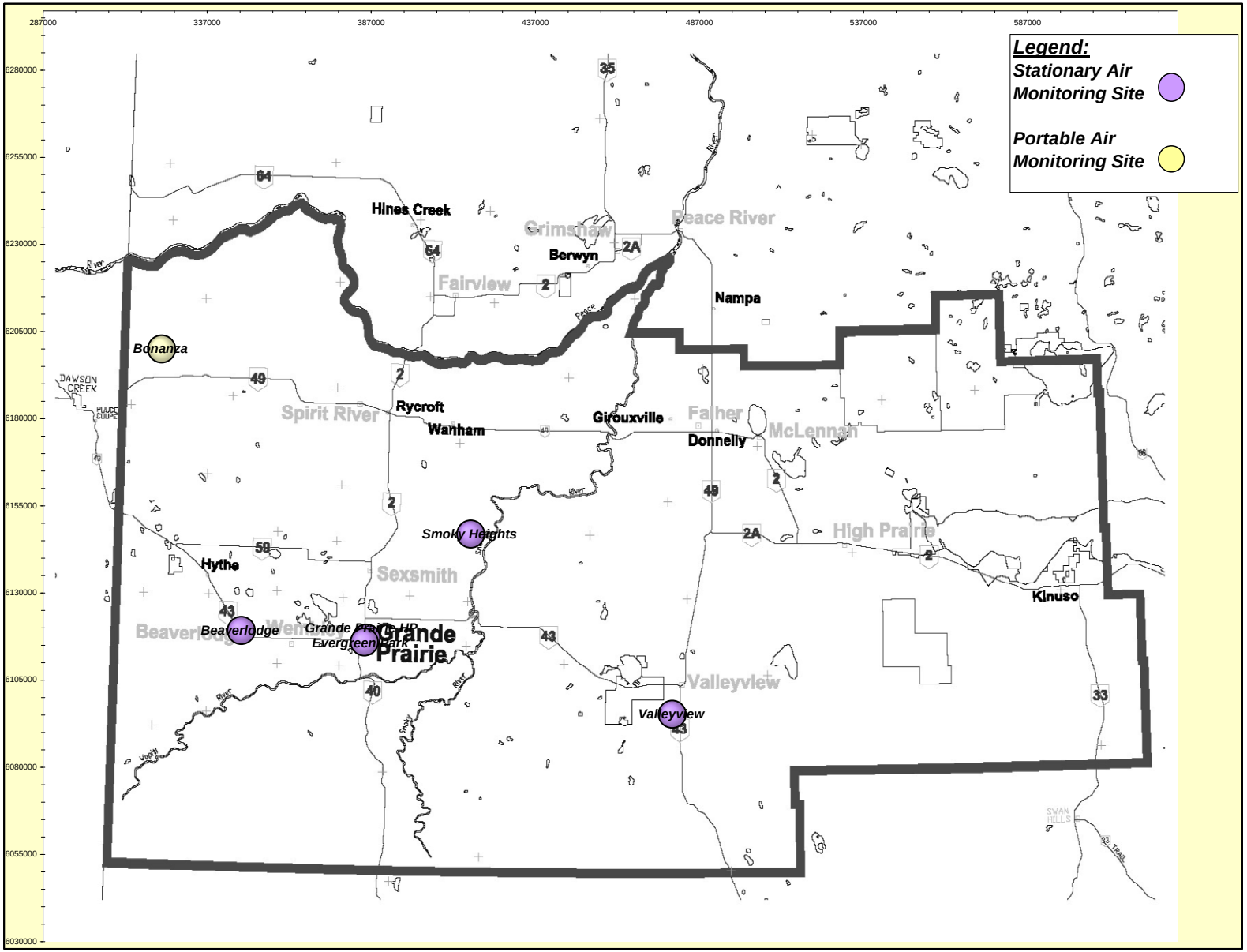
If you have any questions or concerns, please contact Shelly Pruden, PASZA Program Manager at 780.833.4343 or 780.882.4071.

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

Dec-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	48	Henry Pirker	0.8	0	0	8.7	Dec-09 08:00	1.6	Dec-08	100.0%
SO_2 (ppb)	172	48	Evergreen Park	0.5	0	0	3.2	Dec-08 10:00	1.1	Dec-23	99.5%
SO_2 (ppb)	172	48	Smoky Heights	0.8	0	0	11.6	Dec-26 20:00	2.8	Dec-26	100.0%
SO_2 (ppb)	172	48	Beaverlodge	0.7	0	0	3.3	Dec-23 02:00	1.7	Dec-23	100.0%
SO_2 (ppb)	172	48	Portable-Bonanza	1.1	0	0	8.3	Dec-02 09:00	3.7	Dec-18	100.0%
SO_2 (ppb)	172	48	Valleyview	0.7	0	0	10.9	Dec-24 13:00	3.1	Dec-24	99.6%
NO (ppb)			Henry Pirker	19.0	0	0	166.8	Dec-04 21:00	77.3	Dec-04	100.0%
NO_2 (ppb)	212	106	Henry Pirker	16.6	0	0	45.0	Dec-31 22:00	32.3	Dec-06	100.0%
NO_X (ppb)			Henry Pirker	35.6	0	0	210.2	Dec-04 21:00	104.7	Dec-04	100.0%
NO (ppb)			Beaverlodge	2.3	0	0	42.7	Dec-21 13:00	19.7	Dec-21	100.0%
NO_2 (ppb)	212	106	Beaverlodge	9.0	0	0	28.1	Dec-30 17:00	22.5	Dec-21	100.0%
NO_X (ppb)			Beaverlodge	11.3	0	0	66.2	Dec-21 21:00	42.4	Dec-21	100.0%
NO (ppb)			Portable-Bonanza	1.2	0	0	15.4	Dec-31 14:00	4.3	Dec-30	100.0%
NO_2 (ppb)	212	106	Portable-Bonanza	6.0	0	0	22.1	Dec-06 09:00	12.8	Dec-30	100.0%
NO_X (ppb)			Portable-Bonanza	7.2	0	0	33.7	Dec-13 08:00	17.3	Dec-30	100.0%
O_3 (ppb)	82		Henry Pirker	9.4	0	-	27.7	Dec-16 03:00	24.6	Dec-16	100.0%
O_3 (ppb) - 8-hr			Henry Pirker		0				26.4	Dec-16	
O_3 (ppb)	82		Beaverlodge	16.6	0	-	38.0	Dec-31 22:00	29.7	Dec-31	100.0%
O_3 (ppb) - 8-hr			Beaverlodge		0				35.2	Jan-01	
O_3 (ppb)	82		Portable-Bonanza	18.3	0	-	41.0	Dec-05 13:00	33.9	Dec-05	100.0%
O_3 (ppb) - 8-hr			Portable-Bonanza		0				39.4	Dec-05	
CO (ppm)	13		Henry Pirker	0.29	0	-	1.8	Dec-01 11:00	0.6	Dec-13	100.0%
CO (ppm) - 8-hr	5		Henry Pirker		0				0.9	Dec-05	
THC (ppm)			Henry Pirker	2.53	-	-	5.2	Dec-22 07:00	3.4	Dec-30	98.9%
TRS (ppb)			Henry Pirker	0.4	-	-	2.5	Dec-07 00:00	0.7	Dec-04	100.0%
TRS (ppb)			Evergreen Park	0.8	-	-	3.3	Dec-07 01:00	1.3	Dec-21	99.5%
TRS (ppb)			Smoky Heights	0.4	-	-	1.4	Dec-31 16:00	0.7	Dec-27	100.0%
TRS (ppb)			Portable-Bonanza	0.6	-	-	1.4	Dec-18 21:00	0.9	Dec-18	100.0%
H_2S (ppb)	10	3	Valleyview	0.1	0	0	2.8	Dec-16 21:00	0.3	Dec-21	99.6%

PASZA Monthly Continuous Data Summary – continued

Dec-2010	Peace Airshed Zone Assocation						Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
PM2.5 (µg/m3)	80	30	Henry Pirker	14.7	**2**	**1**	275.5	Dec-31 23:00	34.6	Dec-31	97.6%
PM2.5 (µg/m3)	80	30	Evergreen Park	9.2	0	0	48.7	Dec-04 14:00	15.9	Dec-21	91.9%
PM2.5 (µg/m3)	80	30	Smoky Heights	7.4	**1**	0	99.9	Dec-20 20:00	17.6	Dec-20	99.1%
PM2.5 (µg/m3)	80	30	Beaverlodge	11.8	0	0	35.3	Dec-02 12:00	22.2	Dec-24	99.9%
RH (%)			Henry Pirker	70.9	-	-	84.5	Dec-14 15:00	81.7	Dec-02	100.0%
RH (%)			Evergreen Park	79.2	-	-	92.2	Dec-02 01:00	90.6	Dec-02	99.5%
RH (%)			Beaverlodge	77.8	-	-	92.4	Dec-02 00:00	89.5	Dec-02	100.0%
RH (%)			Valleyview	79.1	-	-	93.0	Dec-14 16:00	88.4	Dec-02	99.6%
SR (W/m^2)			Henry Pirker	15.0	-	-	210.4	Dec-05 13:00	36.6	Dec-05	100.0%
Temp (°C)			Henry Pirker	-16.8	-	-	1.7	Dec-01 14:00	-5.0	Dec-01	100.0%
Temp (°C)			Evergreen Park	-16.4	-	-	1.3	Dec-01 14:00	-5.0	Dec-01	99.5%
Temp (°C)			Smoky Heights	-16.6	-	-	-1.5	Dec-01 13:00	-5.7	Dec-01	99.9%
Temp (°C)			Beaverlodge	-15.0	-	-	2.3	Dec-13 14:00	-5.1	Dec-01	100.0%
Temp (°C)			Portable-Bonanza	-17.1	-	-	3.0	Dec-05 15:00	-6.3	Dec-04	100.0%
Temp (°C)			Valleyview	-15.3	-	-	0.6	Dec-01 15:00	-4.8	Dec-01	99.6%
WSPD s (km/hr)			Henry Pirker	5.9	-	-	24.0	Dec-15 12:00	19.3	Dec-15	100.0%
WSPD s (km/hr)			Evergreen Park	3.3	-	-	14.0	Dec-15 01:00	12.6	Dec-15	99.5%
WSPD s (km/hr)			Smoky Heights	8.2	-	-	23.0	Dec-18 15:00	15.8	Dec-15	99.9%
WSPD s (km/hr)			Beaverlodge	6.5	-	-	24.0	Dec-15 12:00	18.1	Dec-15	100.0%
WSPD s (km/hr)			Portable-Bonanza	8.6	-	-	28.0	Dec-15 13:00	23.2	Dec-15	97.2%
WSPD s (km/hr)			Valleyview	3.5	-	-	14.0	Dec-15 02:00	10.9	Dec-15	99.6%
WSPD v (km/hr)			Henry Pirker	2.5	-	-	24.0	Dec-15 12:00	19.0	Dec-15	100.0%
WSPD v (km/hr)			Evergreen Park	1.3	-	-	14.0	Dec-15 19:00	12.0	Dec-15	99.5%
WSPD v (km/hr)			Smoky Heights	2.8	-	-	23.0	Dec-18 15:00	15.2	Dec-15	99.9%
WSPD v (km/hr)			Beaverlodge	3.2	-	-	24.0	Dec-15 12:00	17.8	Dec-15	100.0%
WSPD v (km/hr)			Portable-Bonanza	2.9	-	-	28.0	Dec-15 13:00	22.9	Dec-15	97.2%
WSPD v (km/hr)			Valleyview	1.0	-	-	14.0	Dec-15 02:00	10.2	Dec-15	99.6%
WDIR			Henry Pirker	NW	-	-	-	-	-	-	100.0%
WDIR			Evergreen Park	NW	-	-	-	-	-	-	99.5%
WDIR			Smoky Heights	N	-	-	-	-	-	-	99.9%
WDIR			Beaverlodge	NNW	-	-	-	-	-	-	100.0%
WDIR			Portable-Bonanza	W	-	-	-	-	-	-	97.2%
WDIR			Valleyview	NNW	-	-	-	-	-	-	99.6%

Continuous Network Equipment Summary

PASZA – Henry Pirker Station

General Station Issues

Routine monthly calibrations were performed on December 6th (CO & THC) and December 7th (SO_2, TRS, NO_X & O_3).

Parameter	Make	Model	Notes
SO_2	TEI	43C	Span less than target range on December 18th – reason unknown. No other operational issues observed.
NOx/NO/NO_2	TEI	42C	No operational issues observed.
O_3	TEI	49C	No operational issues observed.
CO	TEI	48C	Spans outside target Dec 5th & 6th - possibly due to temperature.
THC	TEI	51-CLT	Seven (7) hours were flagged invalid due to span cylinder running out – replaced on December 4th – one (1) hour flagged for maintenance.
TRS	TEI	45C/43C	Spans were outside target range December 10th – 12th, 16th – 18th, 21st, 22nd, 29th and 30th. Span fluctuations correlate with external temperature.
$PM_{2.5}$	R&P	1400AB	Three (3) hours were flagged for maintenance on December 20th (flow check etc). A total of fifteen (15) hours were flagged invalid – computer and software issue – configuration reloaded on December 22nd. Two (2) 1-hour exceedences of the AAAQG and one (1) 24-hour exceedence of the AAAQO during the month of December.
RH	Met One	083D	No operational issues observed.
ET	Met One	083D	No operational issues observed.
SR	Met One	096-1	No operational issues observed.
WS / WD	Met One	010C/020C	No operational issues observed.

PASZA – Evergreen Park Station

General Station Issues

Routine monthly calibrations were performed on December 8th (SO_2 & TRS) and December 20th ($PM_{2.5}$).

Parameter	Make	Model	Notes
SO_2	TEI	43i	Four (4) hours were flagged maintenance, downloading data. No other operational issues observed.
TRS	TEI	43C	Four (4) hours were flagged maintenance, downloading data. No other operational issues observed.
$PM_{2.5}$	R&P	1400AB	One (1) hour was flagged for baseline drift. Fifty-six (56) hours were flagged invalid due to loading issues. Three (3) hours were flagged for maintenance (downloading data, TEOM reset & TEOM filter change).
ET	Met One/Gill	083D	Four (4) hours were flagged maintenance, downloading data. No other operational issues observed.
RH	Met One/Gill		Four (4) hours were flagged maintenance, downloading data. No other operational issues observed.
WS / WD	Met One/ Gill		Four (4) hours were flagged maintenance, downloading data. No other operational issues observed.

PASZA – Smoky Heights Station

General Station Issues

Routine monthly calibrations were performed on December 9th (TRS & SO_2). On December 15th one (1) hour was flagged invalid due to a DACS / communication error.

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	Six (6) hours were flagged due to baseline drift. One (1) 1-hour exceedence of the AAAQG during the month of December.
ET	Met One	083D	No operational issues observed.
WS / WD	Met One	010C/020C	No operational issues observed.

PASZA – Beaverlodge Station

General Station Issues

Routine monthly calibrations were performed on December 1st (SO_2, O_3 & NO_X) and December 21st ($PM_{2.5}$).

Parameter	Make	Model	Notes
SO_2	TEI	43CTL	No operational issues observed.
NOx/NO/NO_2	TEI	42C	No operational issues observed.
O_3	TEI	49C	No operational issues observed.
$PM_{2.5}$	R&P	1400AB	One (1) hour was flagged invalid – analyzer reset itself.
ET	n/a	n/a	No operational issues observed.
RH	n/a	n/a	No operational issues observed.
WS / WD	Blue Sky	857	No operational issues observed.

PASZA – Bonanza (Portable) Station

General Station Issues

Routine monthly calibrations were performed on December 13th (SO_2, TRS, NO_X & O_3).

Parameter	Make	Model	Notes
SO_2	TEI	43C	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
NOx/NO/NO_2	TEI	42I	Spans were outside the target on December 16th, 30th & 31st – probably due to temperature fluctuations.
O_3	TEI	49C	No operational issues observed.
ET	Met One		No operational issues observed.
WS / WD	Met One	010C/020C	Twenty-one (21) hours were flagged invalid due to flatlining caused by freezing conditions.

PASZA – Valleyview Station

General Station Issues

Routine monthly calibrations were performed on December 15th (SO_2 & H_2S). A power failure on December 15th resulted in three (3) hours of invalid data for all parameters.

Parameter	Make	Model	Notes
SO_2	TEI	43i	No operational issues observed, except for above noted power failure.
H_2S	TEI	43A	No operational issues observed, except for above noted power failure.
ET	Gill	Met Pak 3	No operational issues observed, except for above noted power failure.
RH	Gill	Met Pak 3	No operational issues observed, except for above noted power failure.
WS	Gill	Met Pak 3	No operational issues observed, except for above noted power failure.
WD	Gill	Met Pak 3	No operational issues observed, except for above noted power failure.

PASZA
Henry Pirker Station
Monthly Summary Tables, Graphs and Roses

PASZA
Peace Air Shed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8.7 ppb on Dec 9 08:00 Maximum Daily Average: 1.6 ppb on Dec 8

Minimum Value: 0 ppb on Dec 2 06:00 Minimum Daily Average: 0.2 ppb on Dec 10
Maximum Diurnal Average: 1.0 ppb at hour 15 Minimum Diurnal Average: 0.6 ppb at hour 4
Monthly Average: 0.81 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.2$ $Q_1 = 0.4$ Median = 0.7 $Q_3 = 1.0$ $P_{90} = 1.5$ $P_{99} = 2.7$

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
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-Dec	1	A	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	2	1	0	1	0	0	0	0.7	1.5
2-Dec	A	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	1	1	1	1	A	0.4	1.0
3-Dec	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	A	0	0.8	2.0
4-Dec	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.1
5-Dec	1	1	0	0	0	A	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0.3	0.7
6-Dec	0	0	0	0	A	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0.5	0.9
7-Dec	0	0	0	0	0	A	0	0	0	0	C	C	C	C	0	1	0	1	1	1	2	1	1	1	0.5	1.7
8-Dec	1	1	0	1	5	A	1	1	1	7	3	3	1	1	1	2	2	1	1	1	1	0	0	0	1.6	7.0
9-Dec	0	1	1	0	A	2	2	9	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1.1	8.7
10-Dec	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
11-Dec	0	0	A	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
12-Dec	0	A	0	0	1	1	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1.0	2.1
13-Dec	A	1	0	1	1	1	1	1	1	2	1	1	2	1	1	2	1	1	1	1	1	1	1	A	1.1	1.6
14-Dec	1	1	1	1	0	0	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1	5	1	1	0.9	5.0
15-Dec	1	2	2	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	0	0	0	1.1	2.3
16-Dec	0	0	0	0	A	0	0	0	1	1	1	1	1	1	1	1	0	1	0	1	2	2	1	1	0.8	2.4
17-Dec	1	1	1	A	1	1	3	2	1	0	0	0	0	0	1	1	2	1	1	2	2	2	2	1	1.2	2.9
18-Dec	1	0	A	1	1	1	1	1	0	0	0	1	1	1	1	0	1	1	1	1	1	1	1	1	0.6	0.9
19-Dec	1	A	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0.7	1.4
20-Dec	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0.7	1.0
21-Dec	0	0	1	1	0	A	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0	1	1	1	0.6	1.2
22-Dec	1	1	1	1	A	0	0	1	1	1	1	1	2	2	2	2	2	2	2	1	2	2	2	2	1.4	2.3
23-Dec	2	2	2	A	2	2	2	2	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1.3	2.0
24-Dec	1	1	A	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
25-Dec	0	A	0	0	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	2	0.8	1.8
26-Dec	A	2	1	1	1	1	1	0	0	0	0	0	0	1	2	1	1	1	1	1	1	1	0	A	0.9	1.6
27-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	A	0	0.8	1.4
28-Dec	0	0	0	0	0	0	1	0	0	0	1	2	2	2	1	1	1	1	1	1	1	A	1	1	0.7	1.7
29-Dec	1	1	1	1	1	1	1	1	2	1	1	1	1	1	2	2	1	1	1	1	A	1	1	0	1.1	1.9
30-Dec	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	A	1	0	0	0	0.3	0.7
31-Dec	0	0	0	0	0	1	1	1	1	0	1	1	1	2	1	1	1	1	A	1	1	1	2	1	0.8	1.9
	0.6	0.7	0.7	0.6	0.8	0.7	0.7	0.9	0.7	0.9	0.9	0.9	0.9	1.0	1.0	0.9	0.9	0.8	0.8	0.8	0.8	0.9	0.8	0.7	Diurnal Average	
	1.6	2.0	1.9	1.5	5.3	2.2	2.9	8.7	1.6	7.0	2.7	3.0	1.8	2.1	2.1	1.9	1.9	2.1	2.3	2.2	2.4	5.0	2.2	2.3	Diurnal Maximum	

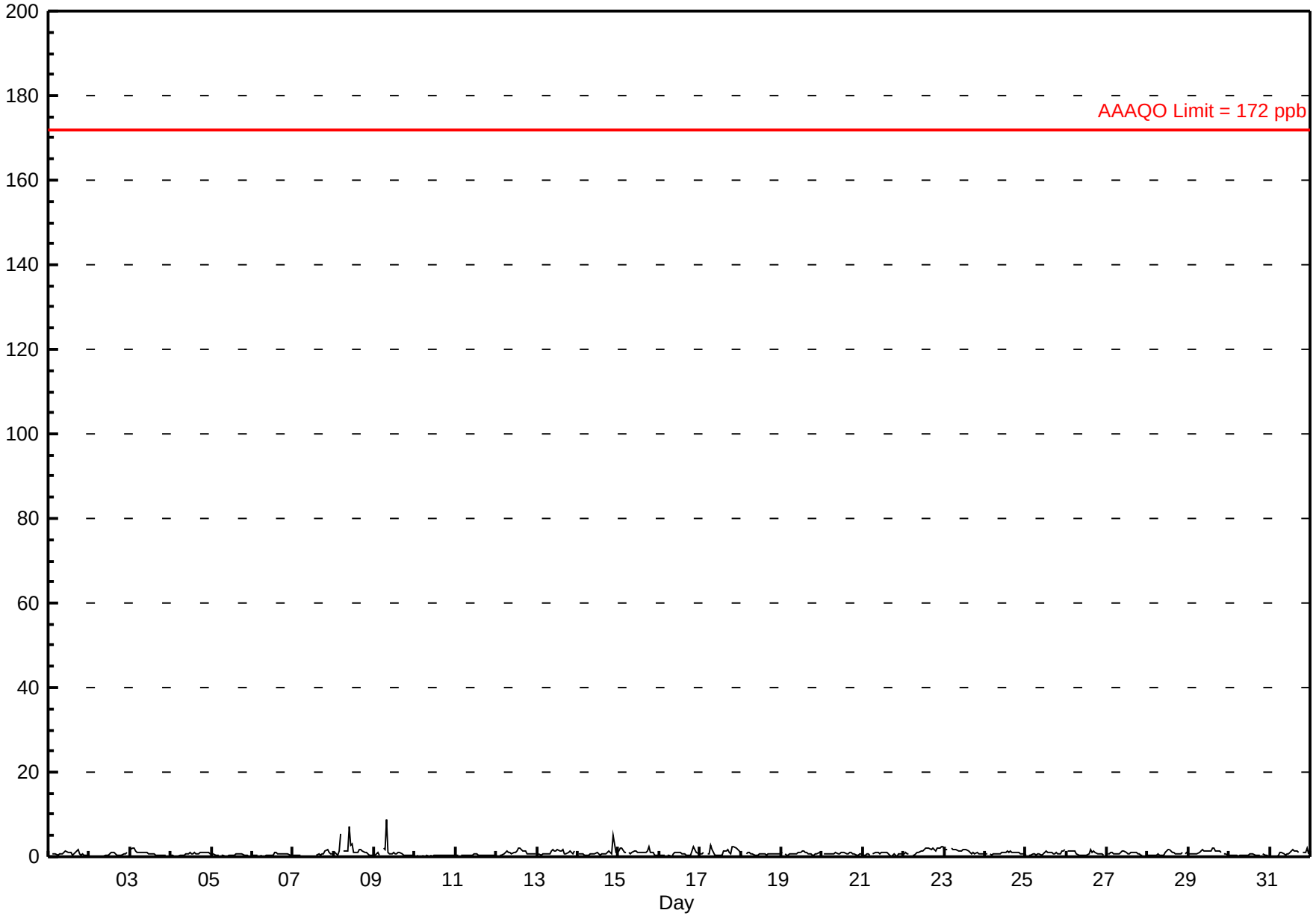
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

PASZA
Peace Air Shed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - December 2010



PASZA
Peace Air Shed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - December 2010

Maximum Value: 23.6 ppb on Dec 31 23:00

Maximum Daily Average: 2.8 ppb on Dec 8

Minimum Value: 0 ppb on Dec 10 07:00

Minimum Daily Average: 0.5 ppb on Dec 10

Maximum Diurnal Average: 1.9 ppb at hour 23

Minimum Diurnal Average: 1.0 ppb at hour 1

Monthly Average: 1.34 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.5$ $Q_1 = 0.8$ Median = 1.1 $Q_3 = 1.5$ $P_{90} = 2.1$ $P_{99} = 5.3$

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
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-Dec	1	A	1	1	1	1	1	1	2	2	2	2	1	1	1	1	2	2	2	1	1	1	0	0	1.2	2.4
2-Dec	A	0	0	0	0	0	0	0	0	0	0	1	1	1	2	1	1	1	1	1	1	1	1	A	0.8	2.4
3-Dec	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	0	A	0	1.2	2.8
4-Dec	0	0	0	0	0	1	1	1	1	1	1	3	1	1	1	1	1	1	2	1	2	1	1	1	1.1	2.8
5-Dec	1	1	1	1	1	A	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0.7	1.2
6-Dec	0	1	1	1	A	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.5
7-Dec	0	1	0	0	1	A	0	0	0	0	C	C	C	C	1	1	1	1	1	2	2	2	1	1	0.9	2.2
8-Dec	1	2	1	3	9	A	2	2	2	13	5	5	1	1	2	4	3	2	1	1	1	1	1	1	2.8	12.8
9-Dec	1	1	2	1	A	3	5	14	2	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1.9	13.9
10-Dec	0	0	0	A	1	1	0	1	0	0	0	0	1	1	1	1	1	1	1	0	0	0	1	0	0.5	0.8
11-Dec	1	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8
12-Dec	0	A	1	1	1	2	2	2	1	1	1	1	2	3	2	2	2	2	1	1	1	1	1	1	1.4	2.7
13-Dec	A	1	1	1	1	1	1	1	2	2	2	2	2	2	2	3	1	1	1	2	2	1	2	A	1.5	2.5
14-Dec	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	2	2	2	15	2	2	1.9	15.1
15-Dec	2	3	3	2	1	A	1	1	1	2	2	1	1	2	2	1	2	2	3	2	1	1	1	1	1.6	3.1
16-Dec	1	1	1	1	A	0	0	0	1	2	1	1	2	1	1	1	1	1	1	3	3	3	2	1	1.2	3.0
17-Dec	1	1	2	A	1	1	5	2	2	1	1	1	1	1	2	2	3	2	2	3	4	3	2	2	1.9	5.2
18-Dec	2	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.5
19-Dec	2	A	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1.2	2.3
20-Dec	A	1	1	1	1	1	1	1	1	1	1	2	1	1	1	2	1	1	1	1	1	1	1	1	1.2	1.7
21-Dec	1	1	1	1	1	A	1	1	1	1	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1.1	1.8
22-Dec	1	1	1	1	A	1	1	1	1	1	2	2	2	3	3	3	3	3	3	2	3	3	3	3	1.9	3.3
23-Dec	2	2	2	A	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	2	2	1	1	1	1.9	2.5
24-Dec	1	1	A	1	1	1	1	1	1	1	1	1	2	2	2	2	1	1	2	2	2	1	1	1	1.3	1.7
25-Dec	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1.2	2.4
26-Dec	A	2	2	2	2	1	1	1	1	1	1	1	1	1	3	1	2	1	1	1	1	1	1	A	1.3	3.2
27-Dec	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	A	1	1.2	1.9
28-Dec	1	1	0	1	1	1	1	1	1	1	2	2	2	2	2	1	1	1	1	1	1	A	1	1	1.1	2.1
29-Dec	1	1	1	1	1	1	1	2	2	2	2	2	2	2	3	3	2	2	2	2	A	1	1	1	1.6	3.3
30-Dec	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.7	1.2
31-Dec	1	1	1	0	1	1	1	1	1	1	1	1	2	2	2	2	2	2	A	1	2	2	24	3	2.3	23.6
	1.0	1.0	1.1	1.0	1.3	1.1	1.3	1.5	1.2	1.5	1.3	1.5	1.3	1.4	1.6	1.5	1.3	1.3	1.3	1.3	1.3	1.6	1.9	1.2	Diurnal Average	
	2.8	2.8	2.8	2.5	8.8	3.4	5.5	13.9	2.1	12.8	5.3	5.4	2.2	2.7	3.3	3.9	3.2	2.5	3.1	3.0	3.5	15.1	23.6	3.3	Diurnal Maximum	

C - Calibration

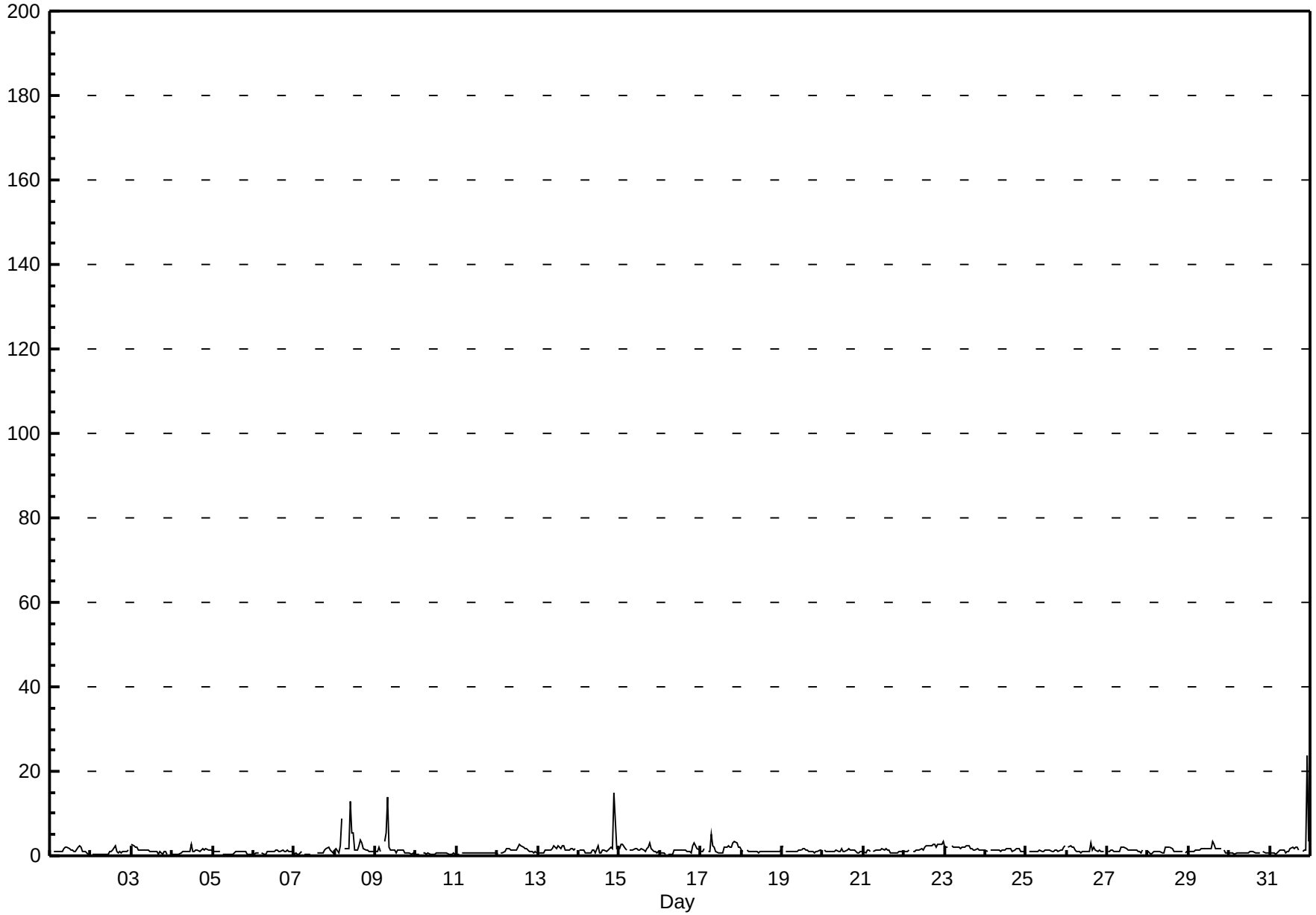
A - Automated Daily Zero Span

PASZA
Peace Air Shed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - December 2010

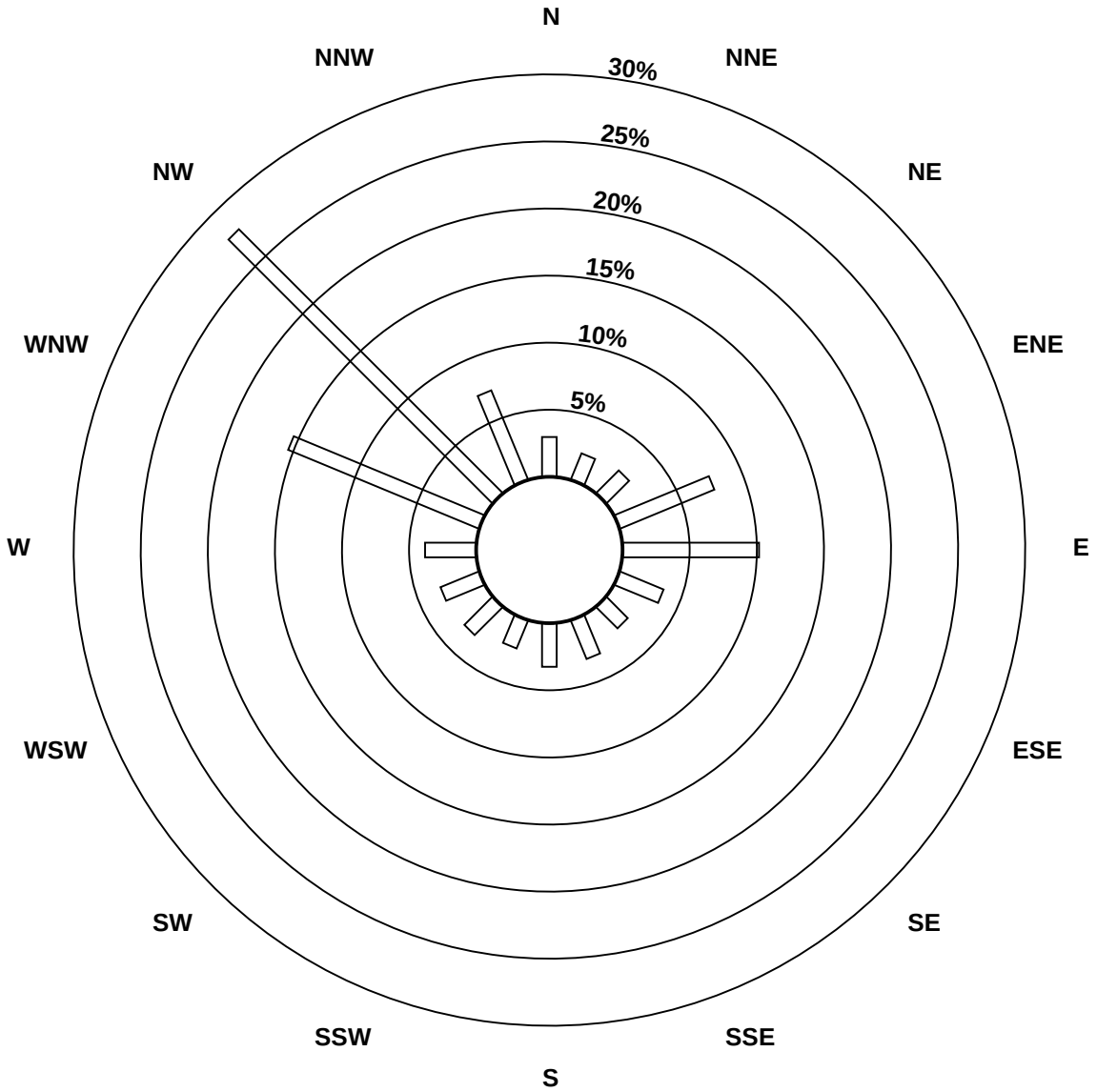


PASZA
Peace Air Shed Zone Association

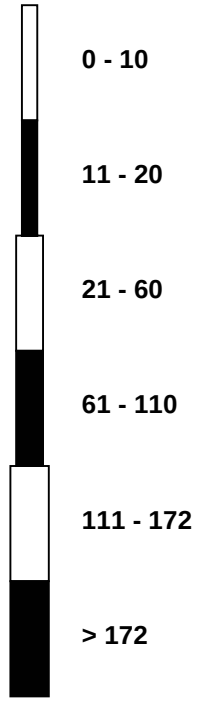
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - December 2010



Pollutant Classes (ppb)



PASZA
Peace Air Shed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 2.5 ppb on Dec 7 00:00 Maximum Daily Average: 0.7 ppb on Dec 4

Minimum Value: 0 ppb on Dec 11 17:00 Minimum Daily Average: 0.2 ppb on Dec 10
Maximum Diurnal Average: 0.5 ppb at hour 23 Minimum Diurnal Average: 0.4 ppb at hour 6
Monthly Average: 0.44 ppb Percentiles: P_1 = 0.2 P_{10} = 0.2 Q_1 = 0.3 Median = 0.4 Q_3 = 0.5 P_{90} = 0.7 P_{99} = 1.2

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)																								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-Dec	1	A	1	0	1	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.6	1.2
2-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	A	0.4	0.5
3-Dec	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	A	1	0.5	0.7
4-Dec	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2
5-Dec	1	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.4	0.8
6-Dec	0	0	0	0	A	0	0	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	2	2	0.7	2.5
7-Dec	2	1	1	1	1	A	1	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0.6	1.9
8-Dec	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	0.5
9-Dec	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
10-Dec	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
11-Dec	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
12-Dec	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0.3	0.5
13-Dec	A	1	0	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	0.7	1.1
14-Dec	1	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0.4	0.7
15-Dec	0	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
16-Dec	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
17-Dec	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
18-Dec	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.3
19-Dec	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
20-Dec	A	0	0	0	0	0	0	0	1	1	1	1	0	0	0	1	1	1	1	1	1	0	0	0	0.5	0.9
21-Dec	1	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0.4	0.6
22-Dec	1	1	0	0	A	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.7
23-Dec	0	0	0	A	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8
24-Dec	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.4	0.6
25-Dec	0	A	1	1	1	1	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1	0	1	1	0.5	0.7
26-Dec	A	1	1	1	1	0	0	0	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1	A	0.5	0.6
27-Dec	1	1	1	1	1	0	0	1	1	0	1	1	0	0	0	1	1	1	1	1	0	1	A	1	0.5	0.7
28-Dec	1	1	1	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	1	1	0.5	0.6
29-Dec	0	0	0	0	0	0	0	0	1	1	1	1	0	1	0	0	0	1	1	1	A	1	1	0	0.5	0.7
30-Dec	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	A	1	1	0	0	0.4	0.6
31-Dec	0	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1	1	1	A	1	1	1	2	1	0.7	1.9
	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	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	Diurnal Average	
	1.9	1.3	1.0	0.6	0.9	0.7	0.6	0.7	0.8	1.1	1.2	0.9	0.9	0.9	0.9	1.0	1.1	1.0	1.1	1.1	1.2	1.0	1.9	2.5	Diurnal Maximum	

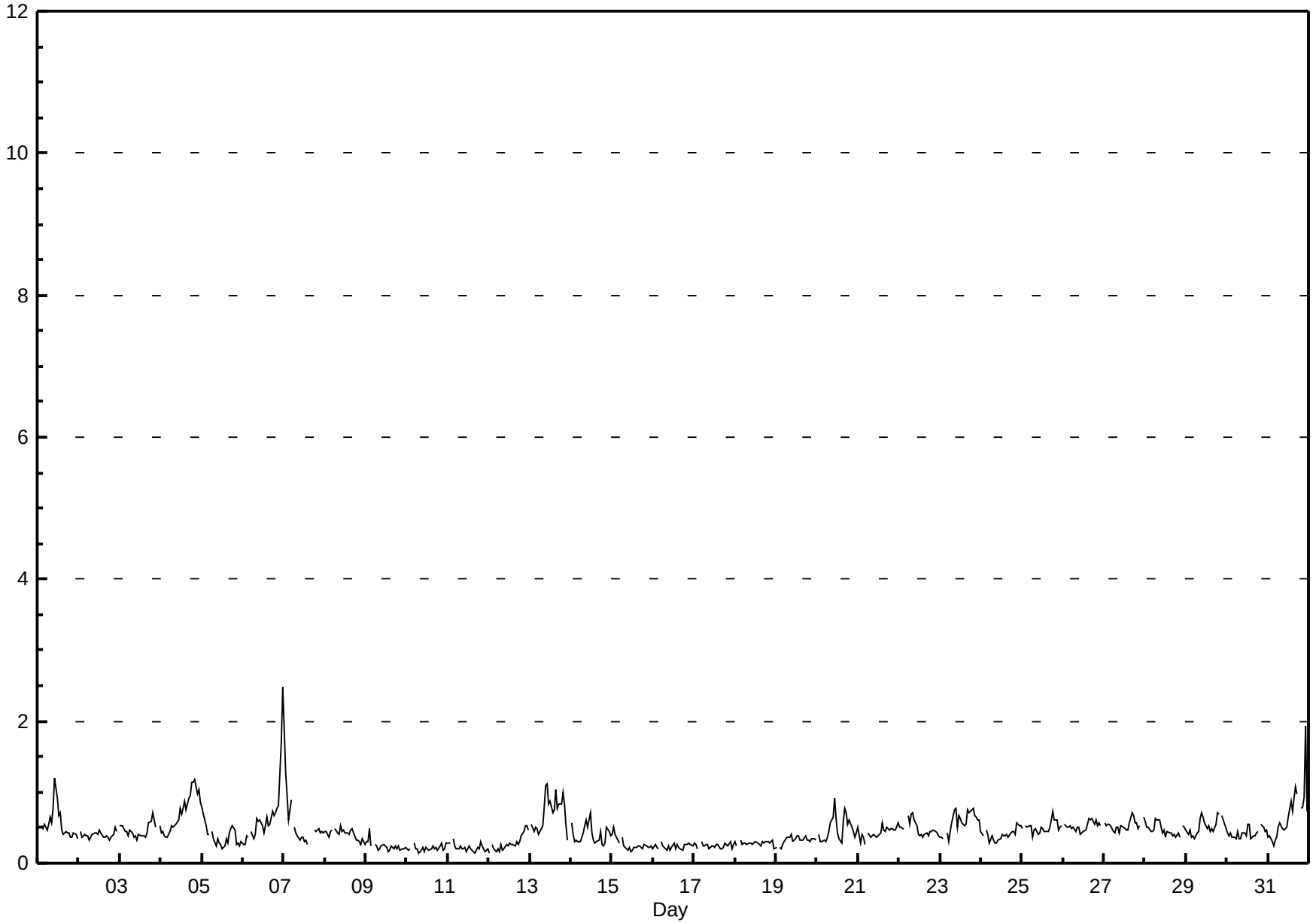
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

PASZA
Peace Air Shed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - December 2010



PASZA
Peace Air Shed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - December 2010

Maximum Value: 12.1 ppb on Dec 31 23:00

Maximum Daily Average: 1.5 ppb on Dec 31

Minimum Value: 0 ppb on Dec 12 01:00

Minimum Daily Average: 0.6 ppb on Dec 10

Maximum Diurnal Average: 1.2 ppb at hour 23

Minimum Diurnal Average: 0.7 ppb at hour 6

Monthly Average: 0.85 ppb

Percentiles: $P_1 = 0.5$ $P_{10} = 0.6$ $Q_1 = 0.7$ Median = 0.8 $Q_3 = 0.9$ $P_{90} = 1.1$ $P_{99} = 1.7$

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)																								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-Dec	1	A	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.7
2-Dec	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	1.1
3-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.8	1.1
4-Dec	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	2	2	2	1	1	1	1.2	2.2
5-Dec	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
6-Dec	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	3	1.2	3.1
7-Dec	3	2	2	1	1	A	1	1	1	1	1	1	1	1	1	C	C	C	1	1	1	1	1	1	1.0	2.6
8-Dec	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1
9-Dec	1	1	1	1	A	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0	1	0.6	0.9
10-Dec	1	1	1	A	1	1	1	1	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0.6	0.7
11-Dec	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	1	1	0.6	0.9
12-Dec	0	A	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.0
13-Dec	A	1	1	1	1	1	1	1	1	2	2	1	1	1	1	2	1	1	1	2	1	1	1	A	1.2	1.6
14-Dec	1	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	1.5
15-Dec	1	1	1	1	1	A	1	1	1	1	1	0	1	1	1	0	1	1	1	1	0	1	1	1	0.6	1.2
16-Dec	1	1	1	1	A	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0	0.6	0.7
17-Dec	1	1	1	A	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1	1	1	1	1	0.6	0.8
18-Dec	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8
19-Dec	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
20-Dec	A	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.6
21-Dec	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	1.3
22-Dec	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.1
23-Dec	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
24-Dec	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
25-Dec	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
26-Dec	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.9	1.0
27-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.9	1.2
28-Dec	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
29-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.9	1.2
30-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.8	1.2
31-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	A	1	1	2	12	1	1.5	12.1
	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	1.2	0.9	Diurnal Average	
	2.6	1.7	1.6	1.1	1.5	1.1	1.1	1.2	1.4	1.5	1.7	2.2	1.2	1.4	1.3	1.5	1.6	1.6	1.7	1.6	1.6	1.8	12.1	3.1	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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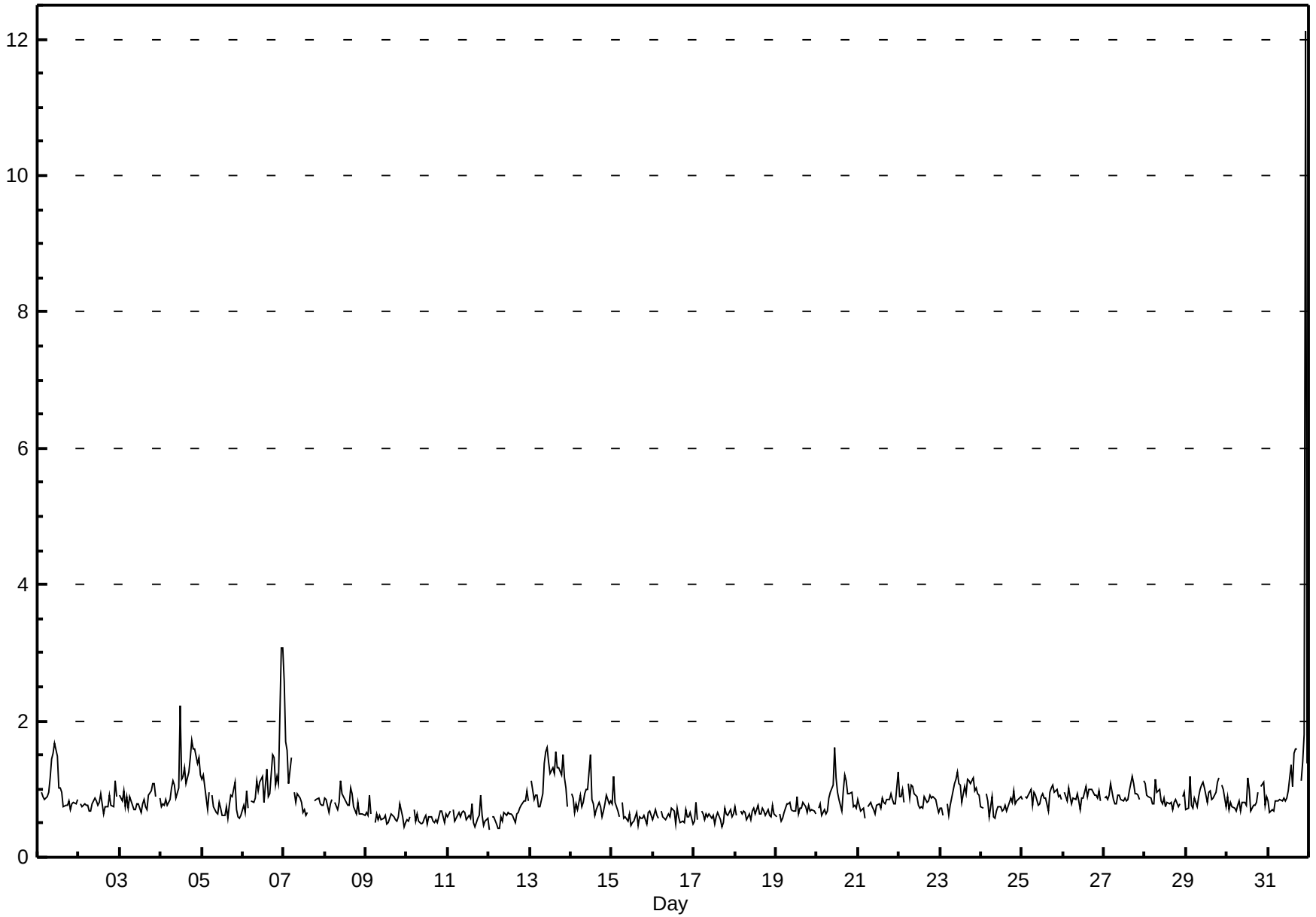
Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - December 2010

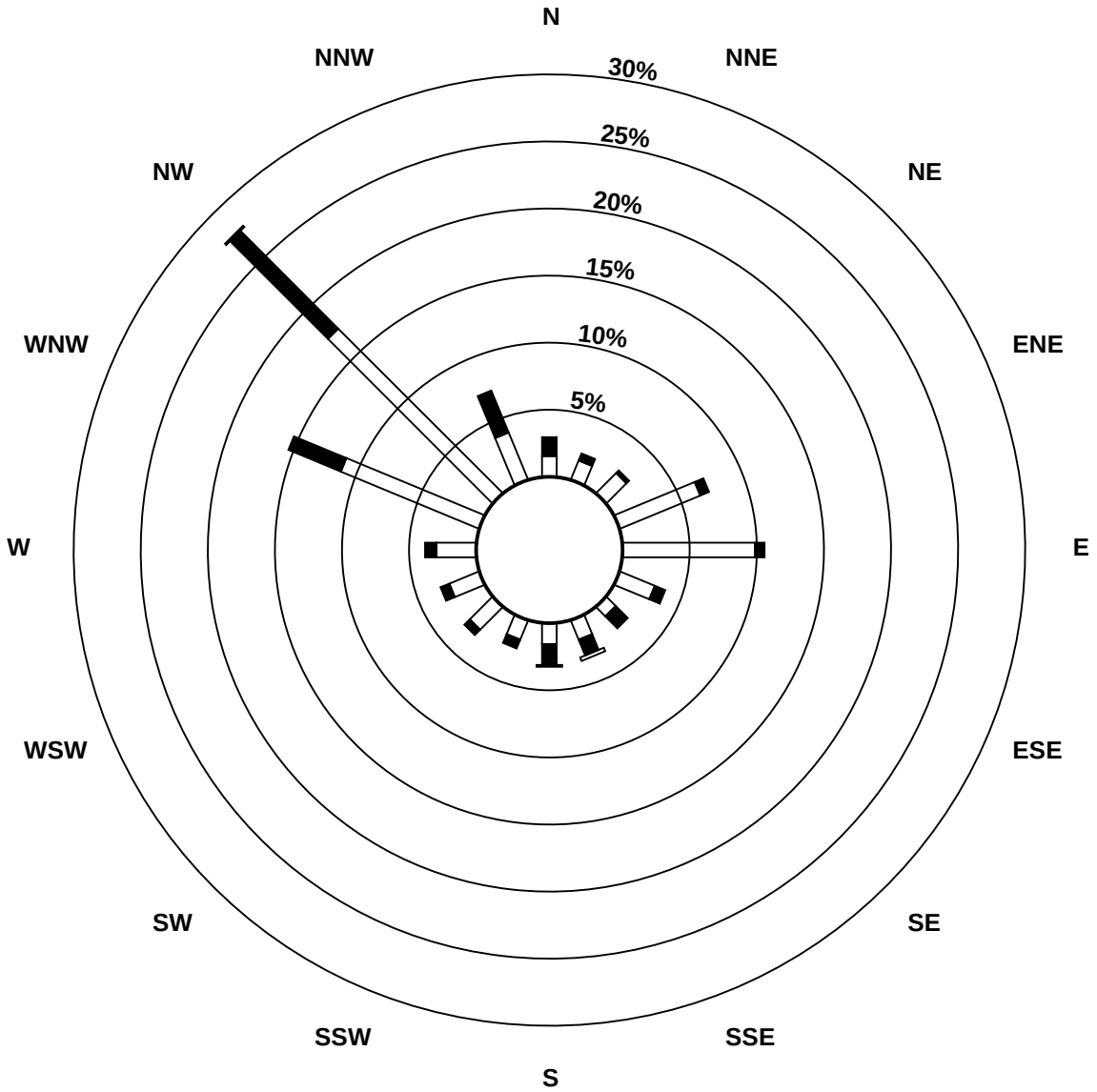


PASZA
Peace Air Shed Zone Association

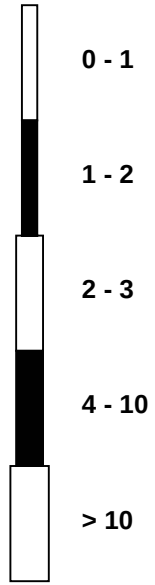
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - December 2010



Pollutant Classes (ppb)



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Peace Air Shed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 45.0 ppb on Dec 31 22:00 Maximum Daily Average: 32.3 ppb on Dec 6

Minimum Value: 1 ppb on Dec 16 03:00 Minimum Daily Average: 3.3 ppb on Dec 15
Maximum Diurnal Average: 20.5 ppb at hour 18 Minimum Diurnal Average: 13.8 ppb at hour 5
Monthly Average: 16.56 ppb Percentiles: P_1 = 2.6 P_{10} = 4.6 Q_1 = 8.2 Median = 15.3 Q_3 = 24.0 P_{90} = 29.9 P_{99} = 41.0

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	25	A	23	22	24	25	24	27	30	35	41	34	32	31	25	21	18	17	13	14	12	12	9	8	22.7	41.1
2-Dec	A	6	5	5	5	5	5	7	10	10	6	7	8	9	7	8	10	14	15	14	16	12	9	A	8.8	16.5
3-Dec	10	9	9	7	5	9	13	17	10	9	6	5	8	8	9	13	20	26	26	26	24	20	A	18	13.3	26.5
4-Dec	19	20	17	15	16	20	20	24	20	22	24	28	28	25	30	31	34	34	38	41	43	39	35	31	27.3	43.2
5-Dec	34	32	30	29	29	A	18	15	19	18	18	13	13	11	15	26	38	38	38	32	29	30	26	24	25.0	38.3
6-Dec	27	29	29	30	A	28	25	27	33	34	32	28	29	33	37	34	38	40	37	38	40	37	29	29	32.3	39.7
7-Dec	28	30	28	20	26	A	18	17	13	10	C	C	C	C	C	9	11	11	9	9	8	8	7	9	15.1	29.8
8-Dec	8	7	8	7	6	A	12	13	11	7	5	7	6	5	4	5	5	4	5	4	3	3	4	4	6.1	12.6
9-Dec	5	3	3	3	A	4	7	8	9	8	7	10	5	5	6	6	7	8	8	7	5	4	4	4	5.9	9.6
10-Dec	4	3	3	A	5	5	5	8	10	8	6	6	6	6	7	7	9	8	8	7	8	8	7	6	6.5	10.4
11-Dec	6	5	A	7	9	6	8	10	11	9	8	7	6	6	7	11	13	19	25	27	24	23	20	19	12.5	27.3
12-Dec	18	A	16	14	11	14	12	17	13	12	13	12	13	11	11	12	17	16	19	23	22	22	23	23	15.8	23.1
13-Dec	A	20	17	19	21	20	20	22	30	36	35	30	33	29	34	43	29	31	31	36	33	31	26	A	28.5	43.2
14-Dec	27	31	28	33	29	28	32	35	37	37	31	38	24	16	23	25	27	35	20	13	13	8	6	4	25.0	37.9
15-Dec	4	3	4	3	3	A	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	2	2	3	3.3	4.5
16-Dec	2	3	1	3	A	3	5	5	5	5	4	4	3	4	4	5	6	6	6	6	5	8	8	11	4.9	10.6
17-Dec	9	8	8	A	7	7	10	11	11	9	9	9	11	13	10	12	12	12	13	14	15	14	11	11	10.8	15.5
18-Dec	9	8	A	7	7	8	21	21	20	18	14	16	16	16	15	15	21	22	21	22	24	24	23	13	16.5	23.8
19-Dec	5	A	5	4	12	19	18	24	18	15	11	10	9	7	8	6	6	7	5	5	5	7	12	10	9.8	23.8
20-Dec	A	11	11	12	13	14	16	24	31	26	22	23	12	13	9	18	26	28	27	26	25	24	24	26	20.1	30.6
21-Dec	26	23	27	25	22	A	22	23	23	23	19	19	17	20	29	27	26	27	26	26	26	25	24	24	23.8	28.7
22-Dec	23	23	22	23	A	24	24	30	30	27	24	17	18	18	20	22	26	25	27	24	27	27	26	23	23.9	29.9
23-Dec	12	10	9	A	7	9	23	27	27	31	19	16	18	14	11	18	27	26	27	28	26	24	22	21	19.7	30.7
24-Dec	18	12	A	10	10	11	11	11	11	10	12	12	11	12	12	15	19	22	24	23	22	17	17	18	14.8	24.0
25-Dec	18	A	17	18	19	19	18	18	19	15	14	18	17	14	13	15	19	22	26	21	20	13	12	12	17.2	25.8
26-Dec	A	15	17	18	18	17	12	9	12	13	12	9	9	6	5	5	5	5	5	4	4	3	3	A	9.3	17.9
27-Dec	3	3	3	3	3	4	4	5	5	8	9	10	9	11	13	19	27	25	20	19	17	16	A	14	10.8	26.7
28-Dec	15	14	14	14	14	16	24	19	20	21	13	8	5	5	7	9	7	11	8	7	6	A	12	13	12.2	24.3
29-Dec	12	13	11	10	13	15	16	19	29	30	30	20	10	9	9	14	21	27	31	30	A	24	23	21	19.0	30.7
30-Dec	18	18	19	19	19	17	18	19	21	21	17	16	25	27	18	18	23	24	24	A	23	24	21	20	20.4	26.8
31-Dec	19	19	19	19	20	25	32	34	31	23	21	20	25	38	35	40	43	40	A	38	41	45	40	38	30.7	45.0
	15.0	14.0	14.4	14.2	13.8	14.3	16.0	17.7	18.4	17.8	16.2	15.1	14.4	14.2	14.5	16.4	19.1	20.5	19.5	19.5	19.0	18.5	16.8	16.4	Diurnal Average	
	33.7	32.4	29.8	33.2	29.2	28.0	32.1	35.4	37.1	36.6	41.1	37.9	32.8	38.2	37.1	43.2	43.2	39.9	37.6	41.0	43.2	45.0	40.2	37.9	Diurnal Maximum	

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

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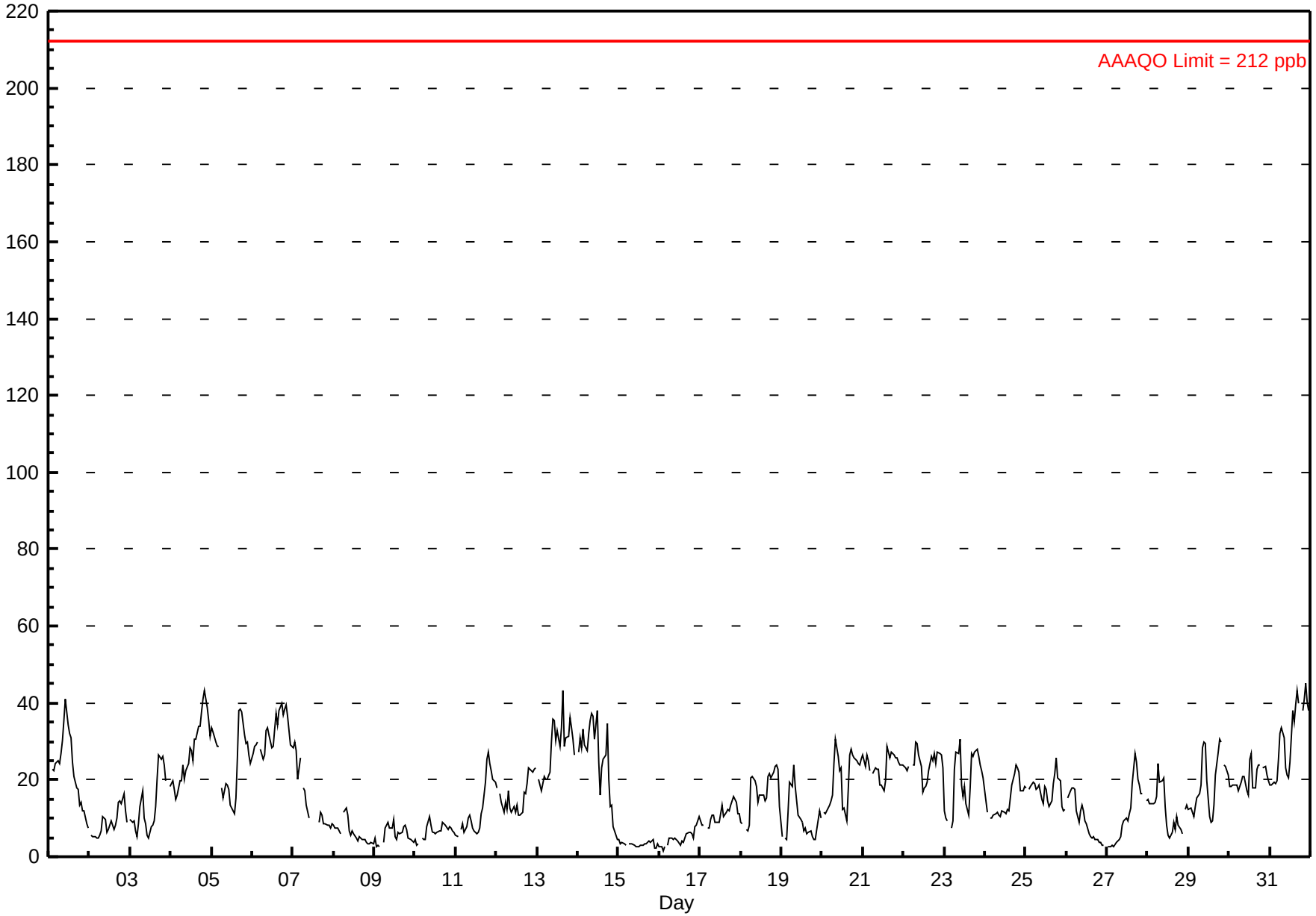
Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - December 2010



PASZA
Peace Air Shed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - December 2010

Maximum Value: 133.3 ppb on Dec 31 23:00

Maximum Daily Average: 38.9 ppb on Dec 31

Minimum Value: 3 ppb on Dec 16 03:00

Minimum Daily Average: 5.5 ppb on Dec 15

Maximum Diurnal Average: 24.7 ppb at hour 9

Minimum Diurnal Average: 16.5 ppb at hour 2

Monthly Average: 20.56 ppb

Percentiles: P_1 = 3.4 P_{10} = 6.9 Q_1 = 11.5 Median = 19.1 Q_3 = 27.4 P_{90} = 35.5 P_{99} = 50.5

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	28	A	24	23	26	27	37	30	52	51	46	44	38	35	34	28	21	21	17	18	14	14	15	12	28.5	52.1
2-Dec	A	7	9	8	6	7	10	13	18	15	12	11	12	12	12	11	14	17	19	20	22	16	12	A	12.8	21.9
3-Dec	13	10	11	8	6	19	20	24	12	12	11	7	10	11	12	18	26	27	28	29	28	22	A	20	16.9	29.3
4-Dec	21	23	20	17	18	21	23	27	22	27	28	33	34	34	36	35	37	36	45	52	51	45	40	37	31.9	52.4
5-Dec	37	37	33	32	34	A	26	17	25	22	21	18	18	14	22	35	42	44	44	38	32	33	32	29	29.8	44.1
6-Dec	30	31	34	35	A	32	29	34	41	38	37	39	33	40	39	37	42	49	43	41	44	42	32	29	37.0	48.9
7-Dec	30	31	31	25	28	A	24	23	19	13	C	C	C	C	C	13	18	18	13	13	10	10	9	11	18.8	30.9
8-Dec	11	10	11	11	8	A	14	15	14	10	7	9	8	6	5	7	7	5	7	6	5	5	5	10	8.6	15.2
9-Dec	12	4	4	4	A	6	13	13	13	27	13	14	9	7	11	9	10	10	12	11	8	7	7	6	9.9	27.5
10-Dec	9	5	8	A	6	8	7	12	15	13	9	9	9	9	10	10	13	13	11	10	11	11	9	8	9.7	14.6
11-Dec	8	7	A	11	11	9	13	16	14	12	10	10	8	10	10	14	18	24	29	30	26	24	23	21	15.6	30.0
12-Dec	20	A	20	18	13	18	17	19	16	13	15	15	15	12	13	15	19	19	23	24	24	32	25	26	18.8	31.5
13-Dec	A	24	18	20	22	21	22	25	37	42	45	42	39	34	57	56	34	37	34	41	41	35	30	A	34.4	56.5
14-Dec	31	34	41	46	39	31	49	43	71	42	38	63	33	32	37	35	38	40	32	17	19	10	7	5	34.7	70.6
15-Dec	5	4	4	4	3	A	4	5	16	6	3	4	4	4	5	5	5	6	7	6	7	4	3	11	5.5	16.3
16-Dec	5	4	3	4	A	6	24	8	6	9	8	8	5	6	6	8	8	9	9	8	6	12	13	14	8.2	24.3
17-Dec	13	11	10	A	10	10	14	14	14	13	12	12	13	16	17	17	14	16	16	19	21	19	16	14	14.4	21.5
18-Dec	11	10	A	8	8	24	24	23	22	20	16	18	21	18	19	18	24	24	22	24	25	25	25	24	19.8	25.5
19-Dec	8	A	7	5	21	23	21	25	21	17	14	11	11	11	11	9	8	9	7	6	8	13	17	15	12.9	25.5
20-Dec	A	19	18	15	17	19	20	29	49	29	26	35	29	29	12	26	29	31	29	28	26	26	27	31	26.0	49.0
21-Dec	33	26	30	27	26	A	23	26	24	25	22	21	21	26	32	31	29	31	28	27	29	25	25	27	26.7	33.0
22-Dec	25	24	24	25	A	25	31	35	32	29	27	21	20	20	21	26	27	26	29	26	28	28	28	25	26.3	34.9
23-Dec	14	12	10	A	8	17	25	30	30	35	32	21	23	18	16	27	29	32	31	31	28	26	27	23	23.6	34.8
24-Dec	21	17	A	12	12	13	14	15	13	12	15	14	14	14	15	17	20	23	26	24	24	19	18	19	16.9	25.6
25-Dec	20	A	19	20	20	21	19	20	21	17	16	21	23	20	14	17	21	26	28	23	21	18	14	14	19.6	27.9
26-Dec	A	19	20	21	21	20	20	11	16	17	18	14	11	15	6	5	6	7	6	5	4	4	4	A	12.2	21.5
27-Dec	3	3	3	3	3	4	5	6	7	12	12	14	12	14	18	21	32	29	24	20	19	20	A	17	13.2	32.1
28-Dec	16	15	15	16	17	24	27	23	23	23	17	29	7	7	11	13	11	13	12	9	8	A	16	17	16.2	28.6
29-Dec	18	17	13	12	16	20	21	21	38	33	38	29	14	11	12	18	26	30	34	34	A	27	26	32	23.5	38.2
30-Dec	19	20	20	20	21	21	23	22	25	24	21	18	34	41	25	22	25	27	26	A	28	27	24	22	24.2	40.7
31-Dec	21	21	20	19	22	31	34	36	36	27	23	24	28	43	39	46	48	44	A	44	47	61	133	48	38.9	133.3
	17.9	16.5	17.2	16.9	16.5	18.4	21.1	21.3	24.7	22.1	20.4	20.9	18.6	18.9	19.3	20.9	22.6	23.9	23.0	22.8	22.1	22.0	22.8	20.3	Diurnal Average	
	36.8	36.7	40.9	45.8	39.1	32.5	49.1	43.2	70.6	51.3	46.2	62.7	39.4	42.7	56.5	55.8	48.4	48.9	44.5	52.4	50.7	61.2	133.3	48.5	Diurnal Maximum	

C - Calibration

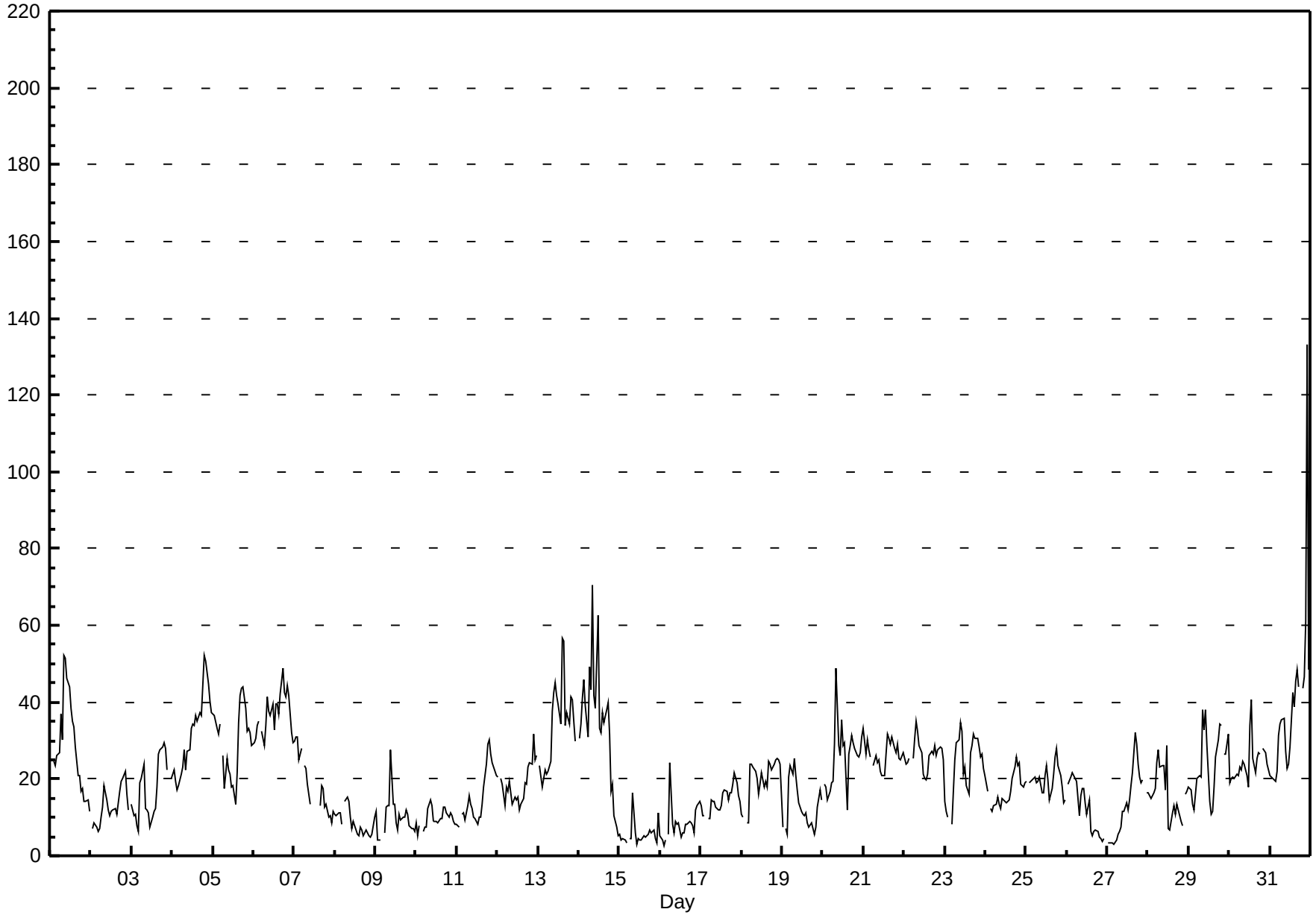
A - Automated Daily Zero Span

PASZA
Peace Air Shed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - December 2010



PASZA
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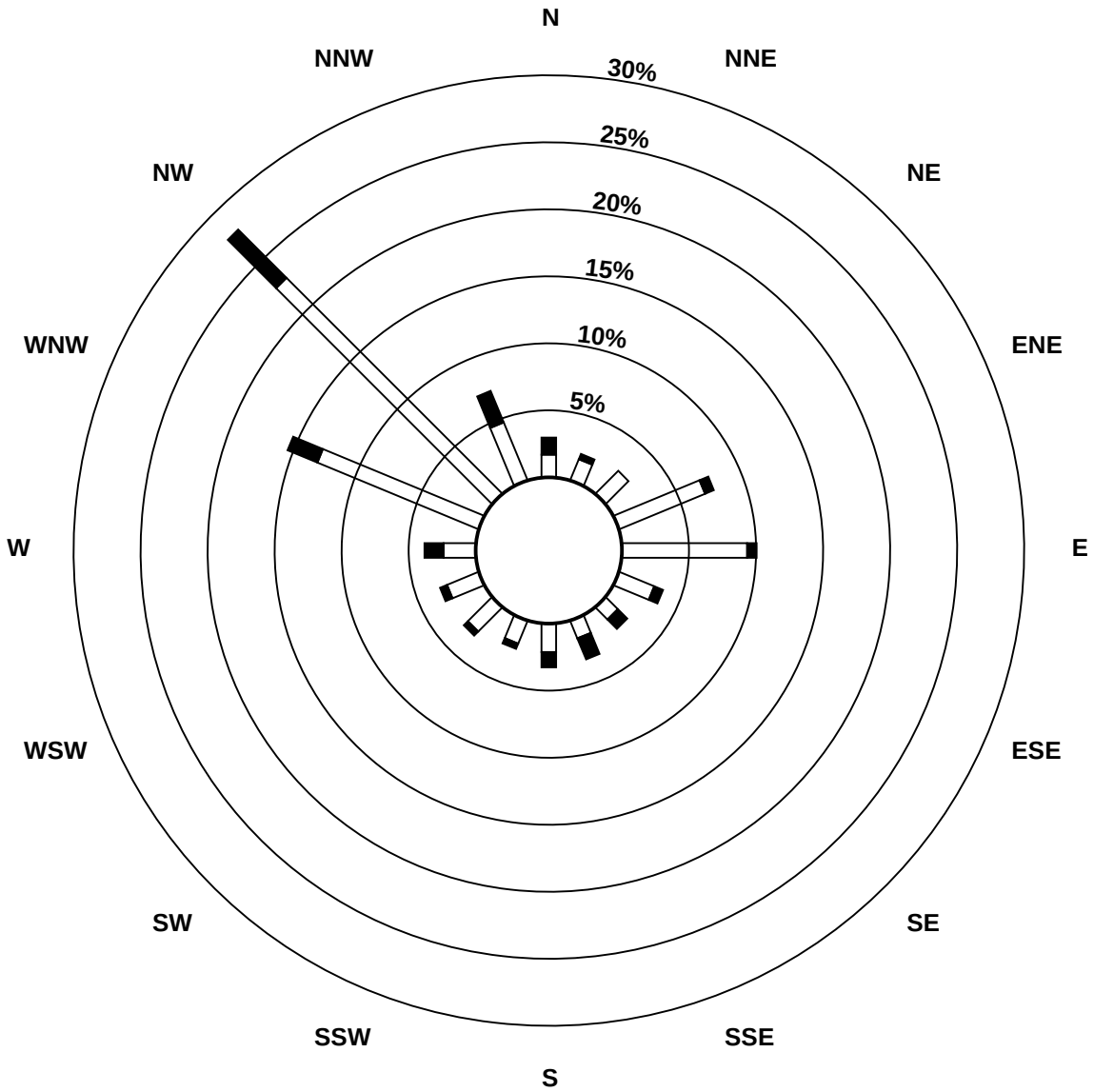
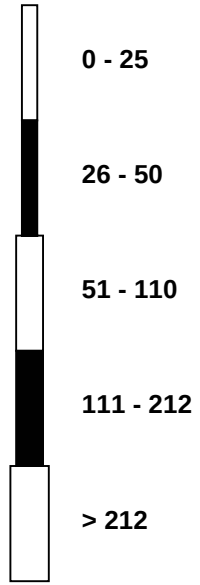
Pollutant Rose

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - December 2010



Pollutant Classes (ppb)



PASZA
Peace Air Shed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Henry Pirker - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 166.8 ppb on Dec 4 21:00
Maximum Daily Average: 77.3 ppb on Dec 4

Minimum Value: 0 ppb on Dec 3 04:00
Maximum Diurnal Average: 30.8 ppb at hour 20
Monthly Average: 18.98 ppb
Minimum Daily Average: 0.6 ppb on Dec 16
Minimum Diurnal Average: 4.9 ppb at hour 5
Percentiles: P_1 = 0.1 P_{10} = 0.6 Q_1 = 1.4 Median = 5.7 Q_3 = 24.7 P_{90} = 58.8 P_{99} = 138.3

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	25	A	12	14	17	17	25	51	57	96	150	99	85	80	22	10	4	4	3	3	2	1	0	1	33.8	150.3
2-Dec	A	1	0	0	0	1	1	1	2	3	2	3	4	6	3	3	3	3	2	2	5	2	0	A	2.1	6.2
3-Dec	0	0	0	0	0	0	1	4	1	2	2	2	6	6	6	6	9	24	25	66	69	37	A	19	12.4	68.5
4-Dec	16	23	16	5	8	24	36	66	63	75	77	95	78	74	83	54	107	105	138	149	167	151	140	104	77.3	166.8
5-Dec	95	86	48	23	17	A	2	1	1	2	6	6	7	5	7	10	39	52	64	53	23	25	14	6	25.7	95.1
6-Dec	16	19	30	40	A	42	39	48	103	89	78	59	50	49	73	44	55	80	82	99	101	87	42	30	58.8	103.0
7-Dec	14	8	6	1	4	A	3	5	3	2	C	C	C	C	C	4	9	4	3	3	2	1	1	1	4.1	14.1
8-Dec	1	1	1	0	0	A	1	2	2	1	2	3	3	2	2	2	1	1	1	1	1	1	1	1	1.3	2.8
9-Dec	3	0	0	0	A	1	1	1	3	3	3	6	3	2	3	3	3	2	2	2	1	1	1	1	1.9	5.9
10-Dec	1	1	1	A	1	1	1	2	3	2	3	4	3	3	3	3	2	2	2	2	1	2	2	1	2.1	3.7
11-Dec	1	1	A	1	1	1	1	1	2	2	3	4	4	4	3	4	3	4	13	27	20	15	8	6	5.6	27.1
12-Dec	3	A	2	2	1	2	2	2	2	2	6	7	9	7	6	4	4	3	3	20	32	36	42	45	10.5	44.7
13-Dec	A	28	9	16	27	23	30	47	105	146	144	118	117	87	90	85	23	65	106	130	76	18	3	A	67.9	145.9
14-Dec	28	23	11	13	11	8	27	33	54	59	34	71	22	7	10	9	9	24	3	1	0	1	0	0	19.1	71.3
15-Dec	0	0	0	0	0	A	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	0	0	1	0.8	1.5
16-Dec	0	0	0	0	A	0	1	1	1	1	1	1	1	2	1	1	1	0	0	0	0	0	0	1	0.6	1.7
17-Dec	1	1	1	A	1	1	1	2	1	2	3	3	5	7	5	4	2	1	1	1	2	1	1	1	2.1	7.2
18-Dec	0	0	A	0	0	0	5	6	6	7	8	16	19	19	12	9	12	9	7	8	16	15	10	4	8.3	18.9
19-Dec	1	A	1	1	1	3	3	11	5	5	5	6	6	4	4	2	1	1	1	0	0	1	2	2	2.8	10.6
20-Dec	A	1	1	1	1	1	1	18	48	41	39	60	18	21	8	18	49	62	42	40	35	28	19	26	25.2	62.0
21-Dec	46	12	28	24	16	A	10	14	13	20	20	26	29	34	58	44	39	53	48	45	42	30	27	29	30.7	57.8
22-Dec	20	21	17	23	A	26	35	68	70	47	35	16	14	14	12	13	21	10	31	19	26	23	19	7	25.6	70.4
23-Dec	1	0	0	A	0	1	12	37	61	75	32	21	31	15	9	17	42	33	48	59	52	36	29	21	27.5	74.6
24-Dec	9	2	A	2	1	1	2	3	3	2	5	7	8	11	8	10	6	8	25	18	16	2	2	7	6.8	24.7
25-Dec	5	A	3	5	5	8	7	6	9	5	11	24	23	14	10	9	12	16	39	16	12	2	2	1	10.5	39.1
26-Dec	A	1	2	3	3	4	2	1	1	3	4	4	3	4	2	2	1	1	1	0	0	0	0	A	1.9	4.0
27-Dec	0	0	0	0	0	0	1	1	1	1	4	8	12	16	15	24	63	55	31	27	17	17	A	7	13.0	62.9
28-Dec	8	6	5	4	3	7	34	22	14	8	5	4	3	3	5	4	1	2	1	1	1	A	2	1	6.3	33.9
29-Dec	1	1	1	1	1	3	3	2	34	49	52	31	11	8	6	7	9	19	51	54	A	30	32	21	18.5	54.0
30-Dec	9	7	9	5	8	11	14	18	20	39	30	34	66	71	30	25	36	46	41	A	36	38	43	35	29.2	71.1
31-Dec	22	13	5	3	4	23	60	63	47	15	28	29	39	88	60	86	119	109	A	77	81	86	82	33	50.8	118.9
	12.1	9.5	7.5	6.6	4.9	8.1	11.7	17.3	23.7	25.9	26.4	25.6	22.7	22.2	18.5	16.6	22.1	25.8	27.1	30.8	27.8	22.9	18.1	14.8	Diurnal Average	
	95.1	85.6	48.0	40.3	27.5	41.7	59.5	67.9	105.2	145.9	150.3	118.1	117.5	88.1	90.0	85.7	118.9	108.8	138.1	149.0	166.8	150.6	140.4	103.9	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

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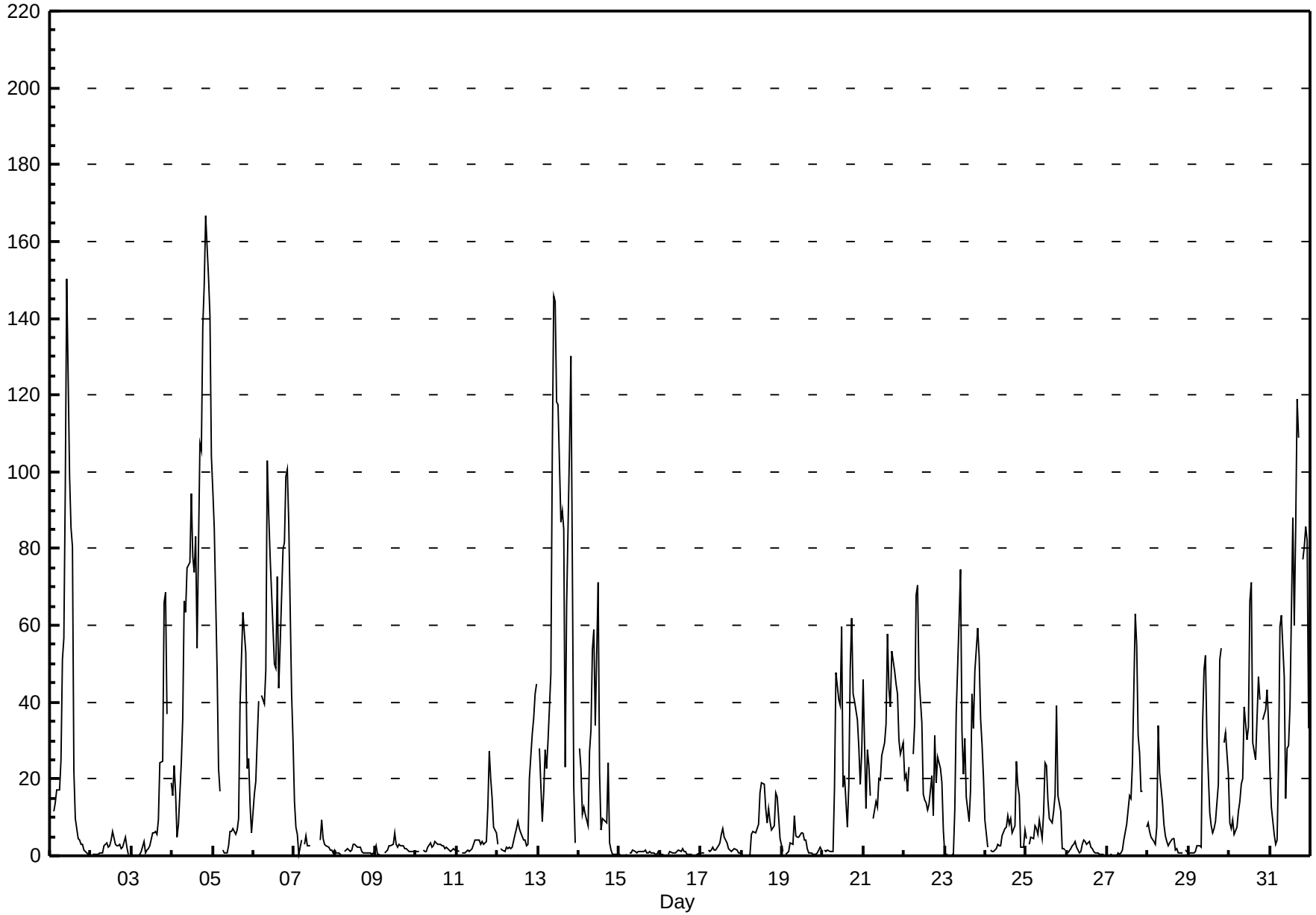
Hourly Averages

Nitrogen Oxide (NO) - ppb

Henry Pirker - December 2010



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Peace Air Shed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Henry Pirker - December 2010

Maximum Value: 500.7 ppb on Dec 31 23:00

Maximum Daily Average: 105.4 ppb on Dec 4

Minimum Value: 0 ppb on Dec 3 04:00

Minimum Daily Average: 2.5 ppb on Dec 16

Maximum Diurnal Average: 45.6 ppb at hour 20

Minimum Diurnal Average: 10.5 ppb at hour 5

Monthly Average: 31.91 ppb

Percentiles: P_1 = 0.5 P_{10} = 1.7 Q_1 = 4.0 Median = 11.0 Q_3 = 42.5 P_{90} = 93.1 P_{99} = 190.5

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	52	A	16	20	20	21	69	86	212	171	177	168	116	103	71	29	8	8	9	11	4	5	2	3	60.0	212.2
2-Dec	A	2	3	1	2	6	4	7	19	10	8	9	9	11	9	6	7	7	4	8	12	6	1	A	7.0	18.5
3-Dec	3	1	1	0	0	3	4	11	2	7	4	6	9	9	10	9	23	30	41	104	98	52	A	36	20.0	104.3
4-Dec	27	50	24	14	16	32	77	98	76	97	90	116	106	117	120	107	137	135	198	192	214	189	173	126	105.4	214.2
5-Dec	126	110	97	45	37	A	7	1	2	7	8	9	11	7	12	19	62	87	108	100	40	40	37	13	42.8	126.2
6-Dec	24	31	41	55	A	56	47	75	145	128	105	119	70	74	90	65	87	162	126	112	129	123	70	40	85.8	161.8
7-Dec	28	11	13	3	11	A	9	21	9	4	C	C	C	C	C	10	42	31	10	9	9	4	5	2	12.8	42.4
8-Dec	6	4	2	1	0	A	2	4	7	3	3	6	5	3	4	5	3	2	3	3	1	2	1	17	3.9	17.0
9-Dec	12	2	1	1	A	2	2	2	30	64	10	24	9	4	7	6	10	6	8	4	2	4	3	5	9.5	64.4
10-Dec	2	6	3	A	5	2	3	8	9	5	7	9	7	5	5	6	7	4	7	7	3	7	6	5	5.6	9.1
11-Dec	5	7	A	2	2	2	5	4	4	4	5	7	6	7	6	6	9	8	30	62	33	25	15	11	11.6	62.0
12-Dec	9	A	4	4	3	7	4	6	4	8	10	12	12	9	8	6	10	6	12	34	63	77	55	61	18.4	77.2
13-Dec	A	59	13	26	34	37	42	86	163	194	195	166	153	124	151	149	49	127	139	169	133	34	6	A	102.1	195.1
14-Dec	41	45	54	50	47	19	72	57	159	97	59	183	41	39	36	28	34	48	12	6	1	1	1	3	47.2	182.6
15-Dec	1	1	0	1	1	A	3	1	11	8	2	3	2	2	3	4	2	2	3	2	3	1	1	10	2.8	10.6
16-Dec	2	1	1	1	A	1	19	3	1	2	5	5	2	3	3	3	1	1	1	0	0	1	1	2	2.5	19.0
17-Dec	3	4	3	A	5	3	3	8	5	3	6	5	8	14	10	7	4	3	3	4	6	4	2	3	5.1	14.0
18-Dec	1	1	A	1	0	9	10	12	10	11	10	25	33	23	21	12	23	16	10	13	23	24	21	17	14.1	32.8
19-Dec	4	A	1	3	4	7	6	16	18	7	6	7	8	28	9	4	2	1	1	1	2	2	4	3	6.3	27.7
20-Dec	A	5	4	2	2	4	3	38	90	52	56	131	77	81	12	53	76	97	61	50	45	39	36	43	45.9	131.1
21-Dec	85	26	44	38	40	A	15	21	20	27	30	32	40	52	72	56	49	70	58	55	56	38	32	43	43.5	85.4
22-Dec	28	29	25	33	A	32	81	113	90	59	50	29	18	17	16	23	30	17	41	31	29	31	27	9	37.3	113.1
23-Dec	1	1	1	A	1	2	24	62	83	112	97	36	46	27	17	46	75	83	68	81	69	52	41	42	46.3	111.8
24-Dec	18	4	A	3	2	3	3	17	9	10	11	11	11	13	12	11	10	18	32	21	25	5	6	9	11.5	32.1
25-Dec	9	A	7	10	9	11	13	14	15	7	19	37	44	27	12	13	28	40	47	25	16	4	5	4	18.0	47.3
26-Dec	A	2	5	11	6	9	6	2	4	13	8	12	6	18	4	3	2	3	1	1	1	1	1	A	5.4	18.5
27-Dec	1	1	1	1	1	1	3	1	2	6	9	13	18	21	27	37	90	93	41	50	33	47	A	17	22.1	93.2
28-Dec	18	16	9	13	12	36	50	37	21	12	18	15	4	6	10	7	4	4	2	3	2	A	4	4	13.3	49.9
29-Dec	3	3	2	1	2	7	8	4	81	94	70	60	18	12	11	11	15	31	80	94	A	47	38	48	32.3	94.5
30-Dec	16	11	16	10	15	52	46	44	39	64	45	42	100	127	71	39	54	68	50	A	59	57	56	53	49.2	126.7
31-Dec	27	21	10	4	7	52	67	80	71	22	41	42	53	113	78	147	168	153	A	116	111	191	501	97	94.4	500.7
	20.4	16.8	14.2	12.6	10.5	16.0	22.8	30.3	45.4	42.2	38.8	44.6	34.7	36.4	30.5	29.9	36.2	43.9	40.2	45.6	40.8	37.1	39.7	25.8	Diurnal Average	
	126.2	110.3	97.4	55.5	46.7	55.9	81.1	113.1	212.2	194.1	195.1	182.6	152.9	126.7	150.8	148.7	168.4	161.8	198.1	191.8	214.2	190.7	500.7	125.9	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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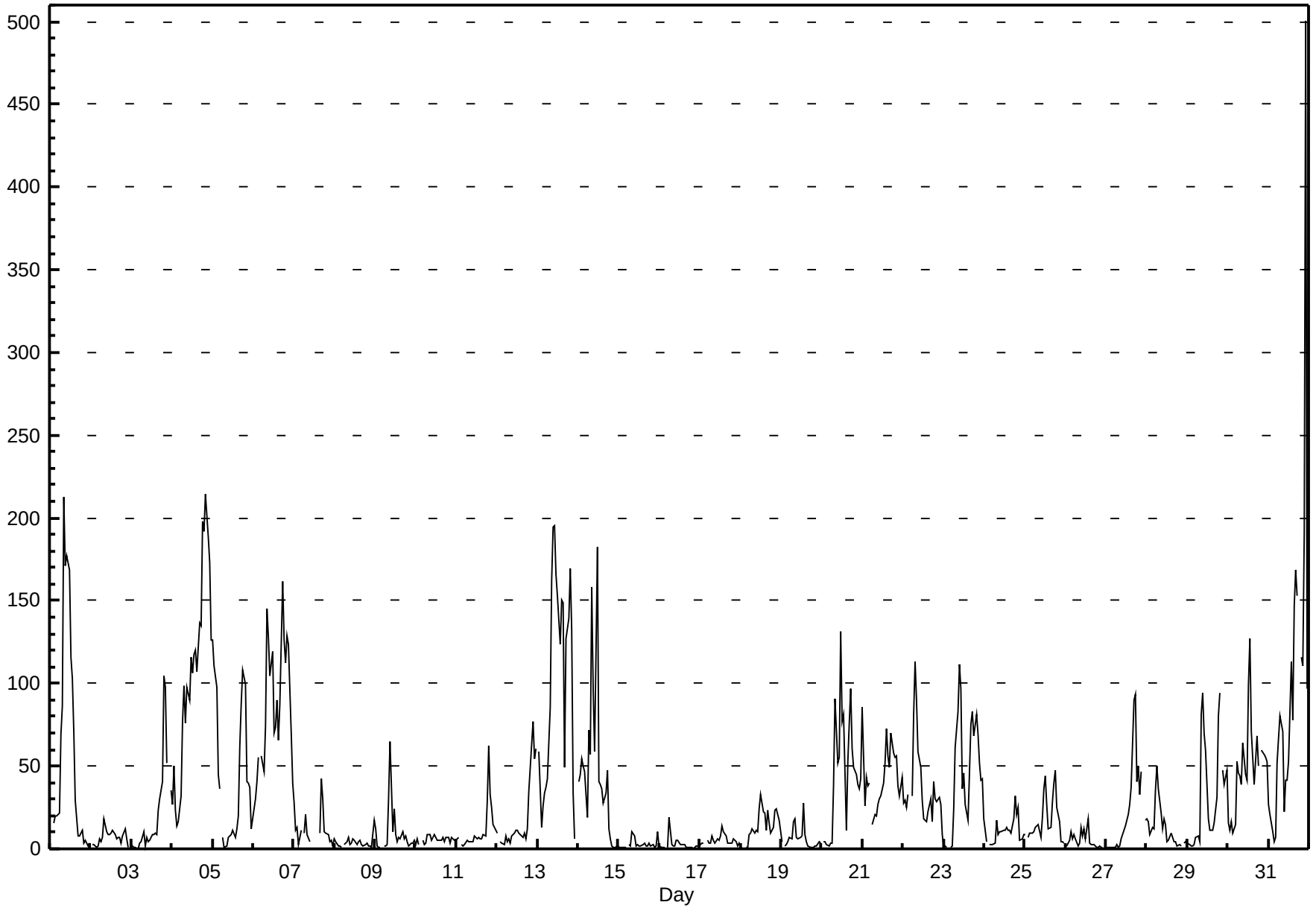
Hourly Maximums

Nitrogen Oxide (NO) - ppb

Henry Pirker - December 2010



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Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 210.2 ppb on Dec 4 21:00
Maximum Daily Average: 104.7 ppb on Dec 4

Minimum Value: 2 ppb on Dec 16 03:00
Minimum Daily Average: 4.0 ppb on Dec 15
Maximum Diurnal Average: 50.4 ppb at hour 20
Minimum Diurnal Average: 18.7 ppb at hour 5
Monthly Average: 35.57 ppb
Percentiles: P_1 = 2.9 P_{10} = 5.5 Q_1 = 9.7 Median = 20.8 Q_3 = 48.9 P_{90} = 87.4 P_{99} = 174.0

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	50	A	34	36	42	42	50	78	87	131	192	133	117	112	47	31	23	21	17	17	14	13	9	8	56.7	191.5
2-Dec	A	6	6	6	5	6	6	7	13	13	9	10	12	15	10	11	13	17	17	16	21	14	10	A	11.0	21.3
3-Dec	10	9	9	7	5	9	14	21	11	10	8	7	14	14	16	19	30	51	50	92	92	57	A	37	25.8	92.3
4-Dec	35	43	34	20	24	44	56	90	84	97	101	123	106	99	114	85	142	140	176	190	210	190	176	135	104.7	210.2
5-Dec	129	118	78	52	46	A	20	16	20	21	24	20	20	17	22	36	77	90	101	85	52	55	40	30	50.8	129.0
6-Dec	43	48	59	70	A	70	65	75	136	123	110	88	79	82	110	78	93	120	119	137	141	123	72	59	91.2	140.6
7-Dec	43	38	33	21	30	A	21	22	16	13	C	C	C	C	C	13	21	15	12	11	10	10	9	9	19.2	42.6
8-Dec	10	8	8	7	6	A	13	14	12	8	7	9	9	7	6	7	6	5	5	4	4	4	4	5	7.3	14.4
9-Dec	7	3	3	3	A	4	8	10	12	10	10	16	8	7	9	9	9	10	10	8	6	5	5	5	7.7	15.6
10-Dec	6	4	4	A	6	6	5	10	14	10	9	10	9	9	10	9	11	10	10	9	9	9	8	8	8.5	13.6
11-Dec	7	6	A	8	9	7	9	11	12	11	10	11	10	10	10	15	16	23	38	54	44	38	28	25	18.0	54.5
12-Dec	21	A	18	16	13	17	14	19	14	14	19	19	22	18	17	16	21	19	22	43	54	58	65	68	26.3	67.6
13-Dec	A	48	26	35	48	43	50	69	135	182	180	148	150	116	124	128	52	96	137	166	110	48	30	A	96.4	181.5
14-Dec	55	54	39	46	40	35	59	68	91	96	65	109	46	23	33	35	35	59	24	14	14	9	6	5	44.2	109.4
15-Dec	5	4	4	3	3	A	4	4	5	4	3	4	4	4	4	5	4	5	5	5	5	3	3	5	4.0	5.1
16-Dec	3	3	2	3	A	3	6	5	5	6	5	5	4	6	5	6	6	7	7	6	5	8	9	11	5.4	11.3
17-Dec	10	9	9	A	9	8	11	13	12	10	12	12	17	21	15	15	14	14	15	16	17	16	12	12	13.0	20.7
18-Dec	9	9	A	7	7	9	26	27	26	25	23	32	35	35	27	24	34	31	27	30	40	39	33	18	24.9	40.1
19-Dec	6	A	5	5	13	23	21	35	24	19	15	16	15	11	12	8	7	7	6	5	5	8	14	12	12.7	34.6
20-Dec	A	13	12	14	15	16	17	42	78	67	62	83	31	34	17	36	76	90	69	66	60	53	43	52	45.4	90.2
21-Dec	72	36	54	49	38	A	31	37	36	43	38	45	47	54	87	71	65	81	75	71	68	55	51	53	54.6	86.6
22-Dec	43	45	39	47	A	50	59	98	100	73	58	33	32	32	31	36	47	36	58	43	53	50	45	30	49.5	100.0
23-Dec	12	11	9	A	7	10	35	65	88	105	51	37	49	29	19	35	69	59	75	87	78	60	52	41	47.1	105.3
24-Dec	27	13	A	11	11	12	13	14	13	13	17	19	19	23	20	25	25	29	49	41	38	20	19	25	21.6	48.7
25-Dec	22	A	20	23	24	27	25	24	28	19	25	42	41	29	23	23	31	37	65	36	32	15	14	14	27.7	64.9
26-Dec	A	16	19	20	21	21	14	10	13	16	16	13	12	10	8	7	6	5	5	4	4	4	3	A	11.2	21.1
27-Dec	3	3	3	3	3	4	5	5	6	10	13	18	21	27	28	43	90	80	51	45	33	33	A	22	23.9	89.7
28-Dec	23	20	19	18	17	23	58	41	34	29	18	12	8	8	11	13	9	12	9	8	7	A	14	15	18.6	58.3
29-Dec	13	13	12	11	14	18	19	21	63	79	82	51	22	17	15	20	30	46	82	84	A	54	56	43	37.6	83.9
30-Dec	27	25	28	24	26	28	32	38	41	60	48	50	92	98	48	43	59	71	65	A	59	62	65	55	49.7	98.0
31-Dec	41	31	25	22	24	48	92	97	77	38	49	49	63	126	95	125	162	149	A	115	122	131	119	71	81.4	162.1
	27.1	23.5	21.9	20.9	18.7	22.4	27.7	35.1	42.1	43.7	42.6	40.8	37.1	36.4	33.0	33.1	41.3	46.3	46.7	50.4	46.9	41.4	34.9	31.1	Diurnal Average	
	129.0	118.1	78.0	70.4	48.5	69.8	91.7	97.9	136.1	181.5	191.5	148.5	150.3	126.3	123.6	128.3	162.1	148.8	175.8	190.2	210.2	189.7	176.0	135.3	Diurnal Maximum	

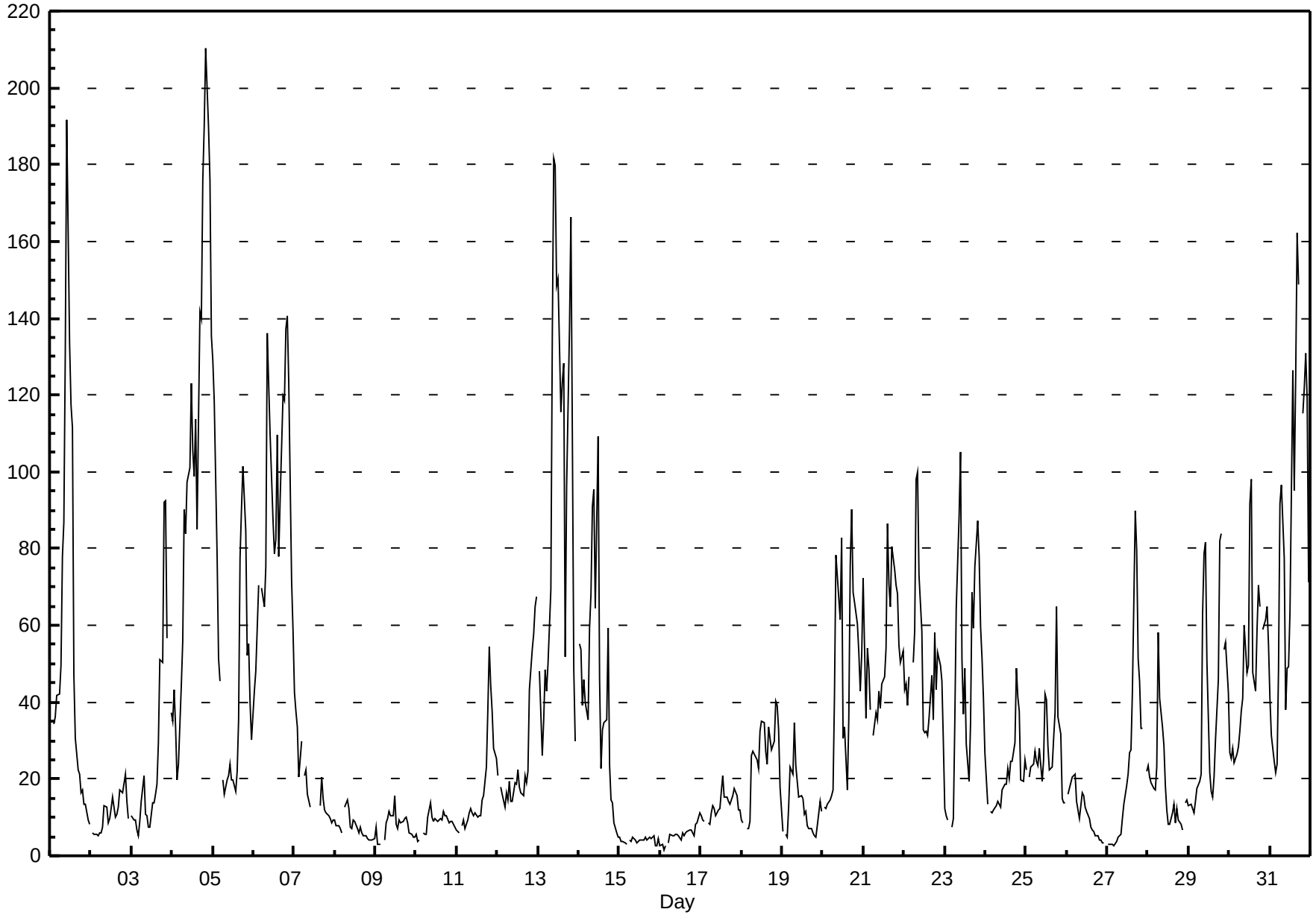
C - Calibration A - Automated Daily Zero Span

PASZA
Peace Air Shed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - December 2010



PASZA
Peace Air Shed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - December 2010

Maximum Value: 500.5 ppb on Dec 31 23:00

Maximum Daily Average: 136.7 ppb on Dec 4

Minimum Value: 3 ppb on Dec 16 03:00

Minimum Daily Average: 8.0 ppb on Dec 15

Maximum Diurnal Average: 69.1 ppb at hour 9

Minimum Diurnal Average: 26.7 ppb at hour 5

Monthly Average: 51.62 ppb

Percentiles: P_1 = 4.0 P_{10} = 9.1 Q_1 = 15.7 Median = 29.5 Q_3 = 70.0 P_{90} = 125.7 P_{99} = 241.1

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	81	A	40	43	44	46	106	115	264	224	222	212	152	138	99	55	29	28	23	28	17	19	16	13	87.5	264.0
2-Dec	A	9	10	9	7	13	15	19	37	22	20	20	20	21	20	17	21	22	23	28	34	22	13	A	19.3	37.3
3-Dec	14	11	11	8	7	22	24	35	14	18	15	13	19	21	21	27	48	58	69	133	125	73	A	56	36.5	132.7
4-Dec	48	71	43	31	34	53	98	126	98	125	115	149	140	151	155	143	174	171	242	242	265	229	212	162	136.7	265.0
5-Dec	160	146	125	75	71	A	33	19	28	26	29	27	29	21	32	54	104	127	148	138	69	71	69	40	71.3	160.0
6-Dec	52	61	75	91	A	86	74	104	180	164	141	158	102	113	128	102	130	210	168	150	172	165	101	68	121.6	209.9
7-Dec	55	42	44	27	39	A	33	43	27	18	C	C	C	C	C	22	59	47	23	22	18	14	13	13	31.1	59.2
8-Dec	16	14	12	12	9	A	16	19	20	13	11	15	13	9	10	12	9	7	10	8	6	6	6	27	12.1	26.9
9-Dec	21	5	4	4	A	8	14	16	41	92	24	37	17	10	18	14	20	15	19	14	9	10	10	11	18.9	91.8
10-Dec	10	11	11	A	11	10	10	21	22	17	15	17	14	13	14	15	18	17	16	16	14	17	14	12	14.5	22.4
11-Dec	13	14	A	12	13	11	16	20	17	16	14	17	14	17	15	19	24	31	59	92	59	49	37	32	26.5	92.1
12-Dec	29	A	23	22	15	23	19	25	19	20	25	26	27	21	20	21	28	24	35	58	86	106	79	87	36.5	106.0
13-Dec	A	83	30	46	56	57	64	110	200	236	240	208	192	157	207	203	83	165	173	207	169	68	36	A	135.9	240.2
14-Dec	72	75	92	97	85	47	111	95	230	138	98	245	74	71	73	63	72	86	44	19	20	12	7	8	80.5	244.9
15-Dec	6	4	5	4	4	A	7	6	26	10	5	7	6	6	8	9	6	7	10	8	9	5	5	21	8.0	26.1
16-Dec	6	5	3	4	A	6	34	9	7	11	13	14	7	9	9	11	9	10	10	8	7	13	15	15	10.1	34.3
17-Dec	15	14	13	A	15	12	18	20	18	15	17	16	21	30	28	24	18	19	18	23	24	23	16	15	18.7	30.2
18-Dec	12	11	A	9	9	33	34	36	31	30	25	43	55	40	41	29	48	40	32	36	47	49	46	41	33.7	54.6
19-Dec	12	A	8	8	25	30	26	42	31	24	20	19	19	36	20	13	9	10	8	7	9	14	21	18	18.6	41.7
20-Dec	A	23	22	16	19	22	22	67	139	79	81	167	105	109	22	80	105	127	90	77	70	64	61	73	71.3	166.7
21-Dec	117	53	74	65	65	A	38	47	44	52	50	54	61	77	104	87	79	99	86	82	82	63	57	70	69.7	117.5
22-Dec	53	52	48	58	A	57	111	148	122	87	76	50	38	37	36	49	57	43	69	57	56	59	55	33	63.2	147.7
23-Dec	15	13	11	A	9	19	49	90	109	146	129	57	69	45	33	73	104	114	99	111	97	77	68	65	69.7	146.4
24-Dec	39	19	A	14	13	16	16	32	22	23	25	25	25	26	26	27	29	41	58	45	49	23	24	27	28.0	57.7
25-Dec	29	A	25	29	29	31	32	34	35	21	36	58	67	46	27	28	49	66	75	46	37	22	18	17	37.1	74.8
26-Dec	A	20	25	32	27	29	26	12	18	28	25	20	16	28	10	8	9	8	8	5	5	4	5	A	16.8	32.2
27-Dec	4	3	4	4	3	4	7	7	9	17	20	27	30	36	44	58	122	122	65	69	51	66	A	34	35.1	122.5
28-Dec	34	32	24	30	29	60	78	56	45	35	33	43	10	12	21	20	13	18	14	11	10	A	19	20	28.9	77.7
29-Dec	20	20	15	14	18	25	29	24	117	126	106	87	32	22	23	29	41	61	113	128	A	74	63	79	55.0	128.1
30-Dec	34	30	36	30	36	72	68	66	63	86	65	58	134	166	90	60	78	95	75	A	87	83	78	75	72.4	165.9
31-Dec	47	39	29	23	29	83	101	115	106	49	64	65	79	155	115	192	215	193	A	154	154	252	501	144	126.3	500.5
	37.5	32.6	30.8	29.2	26.7	33.7	42.8	50.8	69.1	63.5	58.6	65.1	52.9	54.7	48.9	50.4	58.3	67.1	62.7	67.4	61.9	58.4	57.4	45.5	Diurnal Average	
	160.0	146.4	125.4	96.5	85.5	86.1	111.3	147.7	264.0	235.8	240.2	244.9	192.5	165.9	207.3	203.1	214.5	209.9	241.6	242.4	265.0	252.2	500.5	162.3	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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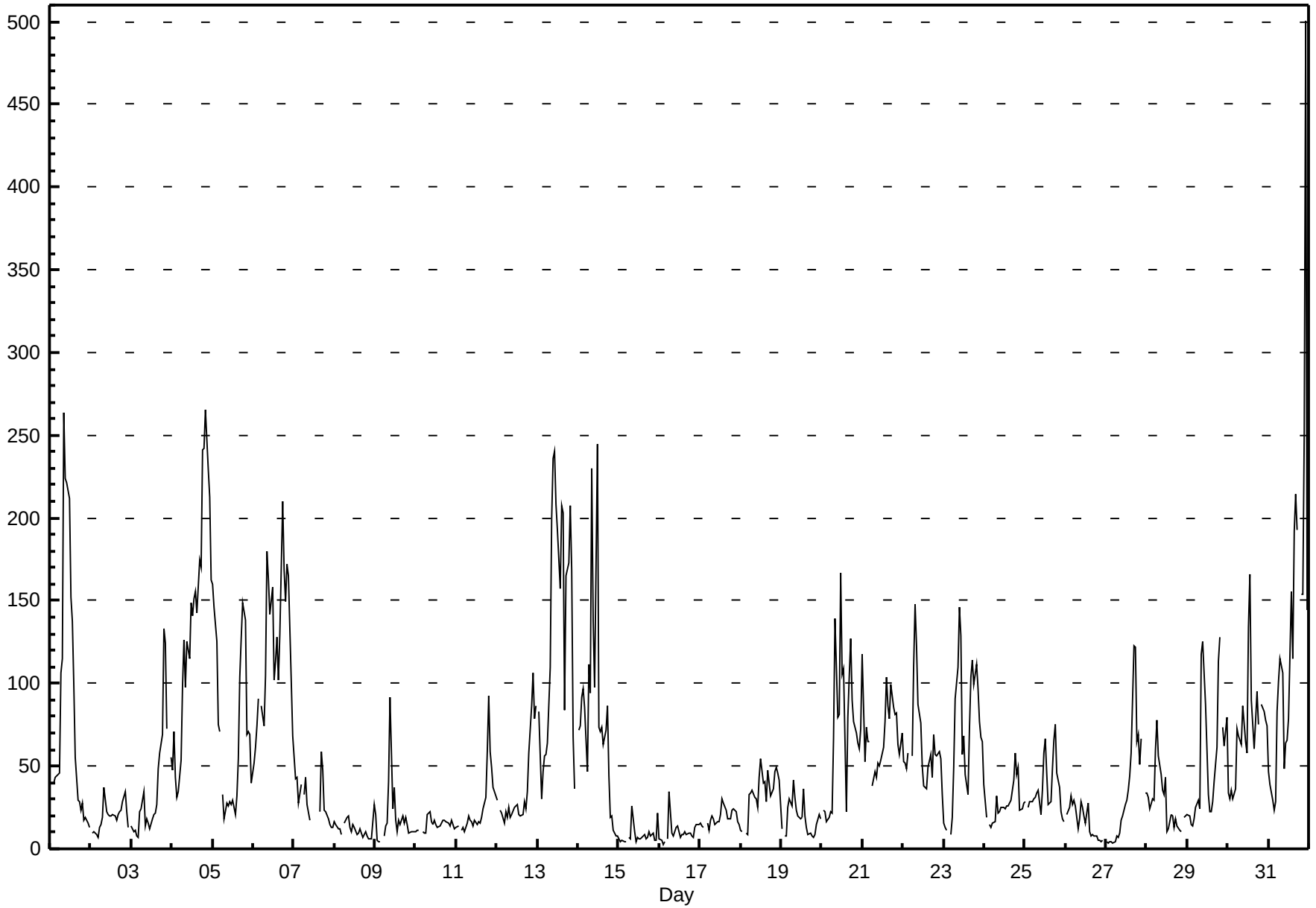
Peace Air Shed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - December 2010



PASZA
Peace Air Shed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Henry Pirker - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 27.7 ppb on Dec 16 03:00
Maximum Daily Average: 24.6 ppb on Dec 16

Minimum Value: 1 ppb on Dec 1 03:00
Maximum Diurnal Average: 13.3 ppb at hour 14
Monthly Average: 9.40 ppb
Minimum Daily Average: 2.7 ppb on Dec 13
Minimum Diurnal Average: 7.3 ppb at hour 18
Percentiles: P_1 = 0.7 P_{10} = 1.4 Q_1 = 2.1 Median = 8.0 Q_3 = 15.2 P_{90} = 20.8 P_{99} = 26.3

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Dec	1	A	1	1	1	1	1	1	1	2	3	4	5	4	12	12	12	10	10	8	11	11	14	15	6.0	15.3
2-Dec	A	18	19	19	19	19	18	17	14	14	17	16	15	15	16	14	12	8	8	8	5	8	12	A	14.2	19.3
3-Dec	11	13	13	15	17	14	10	7	12	14	17	18	16	16	15	12	6	3	2	2	2	2	A	3	10.4	17.8
4-Dec	2	2	2	3	2	2	2	2	2	3	4	5	6	5	5	4	2	2	2	2	2	2	2	2	2.9	6.0
5-Dec	5	3	1	1	2	A	16	20	16	15	19	23	25	26	22	13	3	2	4	1	2	2	3	4	9.8	25.6
6-Dec	2	2	2	2	A	2	2	2	3	2	4	7	8	7	5	4	2	2	2	2	2	2	2	2	3.0	7.8
7-Dec	2	2	3	9	4	A	7	8	10	13	13	15	16	C	C	C	C	10	12	11	12	12	13	13	9.7	16.1
8-Dec	11	12	12	13	13	A	8	6	7	11	13	12	13	15	13	14	15	16	15	16	17	17	17	18	13.3	17.5
9-Dec	17	19	19	19	A	20	17	16	16	17	17	16	19	20	19	20	19	18	19	21	23	23	24	24	19.2	23.7
10-Dec	23	24	24	A	23	23	24	21	19	21	23	24	24	24	24	24	21	22	22	22	21	21	22	22	22.5	24.4
11-Dec	22	22	A	20	18	20	18	16	15	16	18	19	20	20	19	16	14	8	3	2	2	2	3	3	13.7	22.3
12-Dec	6	A	7	8	10	8	9	5	9	10	9	10	9	12	13	12	7	7	4	2	2	2	2	2	7.4	13.5
13-Dec	A	2	2	2	2	2	2	2	2	3	3	3	5	5	4	3	2	2	1	2	1	4	8	A	2.7	7.8
14-Dec	1	2	6	3	3	2	1	2	1	1	6	5	8	16	11	7	6	2	10	15	14	17	16	15	7.1	16.9
15-Dec	14	15	14	14	15	A	17	17	18	19	20	21	22	22	22	22	22	22	22	23	23	25	26	25	20.1	26.0
16-Dec	26	26	28	27	A	26	25	25	25	25	25	25	26	26	26	25	24	24	24	24	24	22	21	18	24.6	27.7
17-Dec	19	21	20	A	21	21	19	17	17	19	18	19	17	15	17	16	15	15	13	12	11	11	14	14	16.4	20.8
18-Dec	15	15	A	16	16	14	4	3	3	4	7	7	8	8	9	7	2	2	2	1	1	1	1	16	7.1	16.3
19-Dec	27	A	25	25	15	5	5	1	4	6	11	13	15	18	16	17	16	15	17	18	19	17	13	15	14.4	27.3
20-Dec	A	14	14	12	11	10	8	3	2	2	6	6	13	12	14	8	2	1	1	1	1	1	1	2	6.4	14.3
21-Dec	1	2	2	1	1	A	2	2	2	3	6	8	9	9	7	5	2	2	2	2	2	2	3	2	3.4	9.2
22-Dec	2	2	2	2	A	2	2	3	3	2	3	7	8	8	7	5	2	1	1	1	1	1	1	1	3.0	8.3
23-Dec	9	11	12	A	14	12	1	1	1	2	5	8	8	11	12	6	2	1	1	1	1	1	1	1	5.4	14.0
24-Dec	3	8	A	12	12	11	10	10	10	9	8	9	10	9	9	6	3	1	1	1	1	1	1	1	6.4	12.1
25-Dec	1	A	1	1	1	1	1	1	1	2	5	5	6	8	8	7	2	1	1	1	1	7	8	9	3.3	8.6
26-Dec	A	6	3	2	2	2	8	11	6	6	9	11	12	14	14	11	11	11	11	12	12	13	13	A	9.0	14.4
27-Dec	14	14	14	14	14	13	12	12	12	10	9	9	10	10	9	5	2	1	1	1	1	1	A	1	8.1	13.9
28-Dec	1	1	1	3	2	1	1	1	2	4	13	19	18	16	15	14	15	12	13	15	16	A	10	9	8.7	18.6
29-Dec	10	10	11	12	10	8	6	5	2	2	4	9	15	17	16	12	5	2	2	2	A	2	2	2	7.2	16.6
30-Dec	2	2	2	2	3	2	2	2	2	3	5	8	8	8	9	7	3	2	2	A	2	2	2	2	3.4	9.3
31-Dec	2	2	2	2	2	2	2	2	2	3	5	7	7	6	7	4	2	2	A	2	2	2	3	2	3.0	6.9
	9.3	10.0	9.3	9.2	9.4	9.3	8.4	7.6	7.6	8.5	10.5	11.8	12.9	13.3	13.2	11.0	8.4	7.3	7.7	7.7	7.8	7.8	8.9	8.6	Diurnal Average	
	27.3	26.5	27.7	26.5	23.2	26.4	25.3	24.5	24.7	24.5	25.1	25.4	26.4	25.6	25.9	25.0	24.1	23.6	23.6	23.5	24.3	25.0	26.0	25.1	Diurnal Maximum	

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

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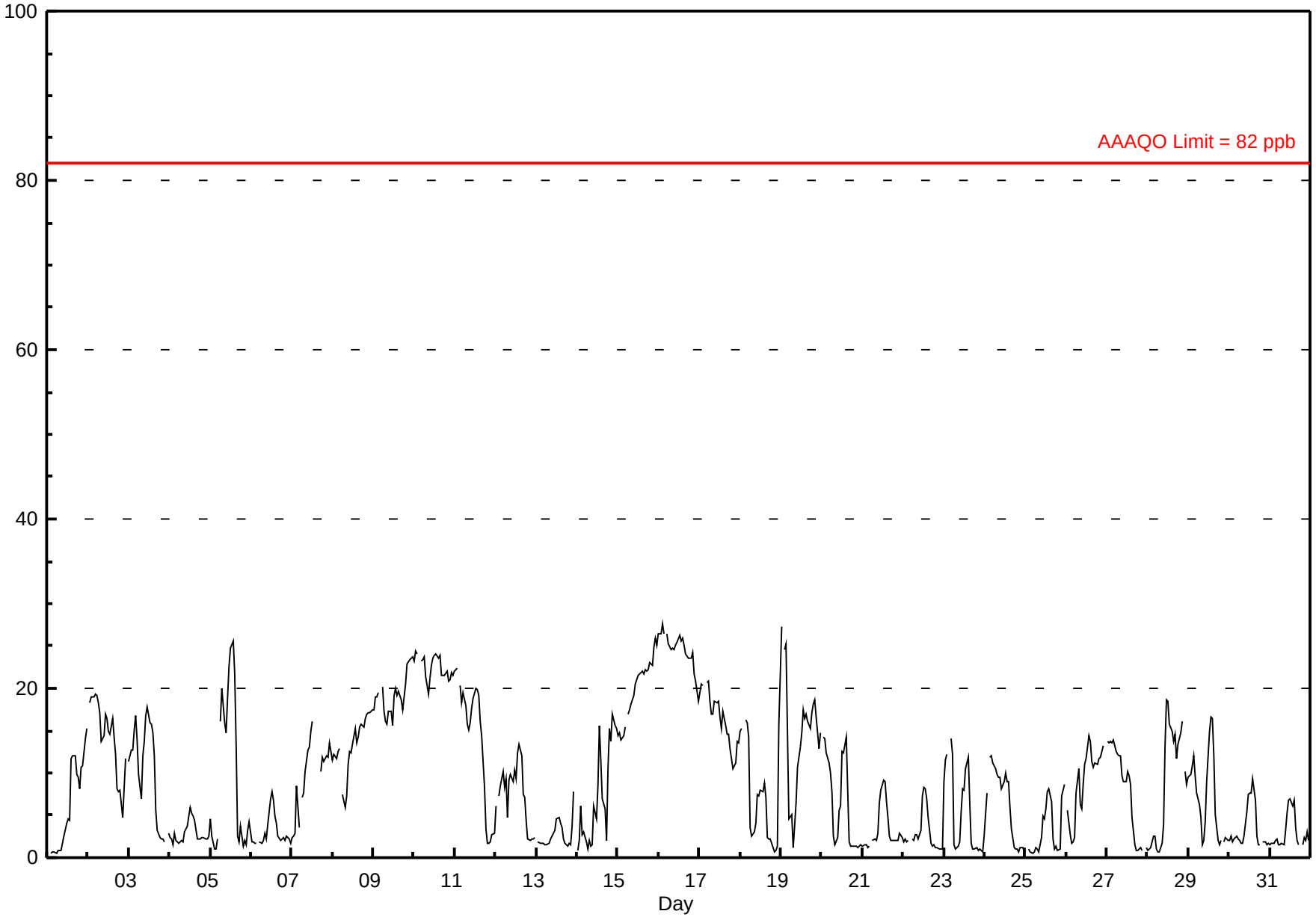
Peace Air Shed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Henry Pirker - December 2010



PASZA
Peace Air Shed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

Henry Pirker - December 2010

Maximum Value: 29.5 ppb on Dec 5 14:00

Maximum Daily Average: 26.2 ppb on Dec 16

Minimum Value: 1 ppb on Dec 1 04:00

Minimum Daily Average: 3.9 ppb on Dec 13

Maximum Diurnal Average: 15.5 ppb at hour 15

Minimum Diurnal Average: 9.2 ppb at hour 18

Monthly Average: 11.37 ppb

Percentiles: P_1 = 1.0 P_{10} = 2.2 Q_1 = 3.5 Median = 10.7 Q_3 = 17.6 P_{90} = 22.9 P_{99} = 27.3

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
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-Dec	2	A	1	1	1	1	2	2	2	3	3	5	5	6	19	18	14	13	12	10	13	13	16	18	7.9	18.7
2-Dec	A	20	20	21	21	21	20	19	18	17	19	18	17	17	19	16	15	12	11	11	11	10	13	A	16.7	20.9
3-Dec	13	14	16	16	18	17	15	15	14	16	19	19	18	18	19	16	10	5	3	3	3	3	A	5	12.7	19.5
4-Dec	4	4	2	5	3	2	5	2	2	3	5	8	8	6	6	6	3	3	3	3	4	3	3	5	4.2	7.8
5-Dec	9	5	2	1	6	A	23	25	18	18	24	25	29	30	25	17	6	3	20	2	5	2	6	8	13.4	29.5
6-Dec	3	2	2	2	A	2	2	4	5	3	5	11	10	9	6	6	4	3	3	5	3	3	3	3	4.3	10.8
7-Dec	5	5	6	12	6	A	10	10	13	15	16	17	18	C	C	C	C	13	14	14	13	14	15	14	12.0	17.5
8-Dec	13	15	14	15	14	A	10	9	9	13	14	14	15	16	14	15	17	17	17	17	18	18	19	19	14.8	19.3
9-Dec	20	20	20	20	A	21	21	19	19	19	19	19	21	21	21	22	21	21	21	24	25	25	25	25	21.3	25.3
10-Dec	25	25	25	A	24	25	25	24	22	23	24	25	26	26	25	26	24	24	23	24	23	23	23	23	24.3	26.2
11-Dec	23	23	A	23	21	21	20	18	17	18	19	21	21	21	21	20	18	12	7	3	3	3	5	5	15.9	23.2
12-Dec	9	A	10	11	11	11	12	11	11	11	11	12	12	15	15	14	10	10	6	2	3	3	3	3	9.3	15.3
13-Dec	A	2	2	2	2	2	2	2	4	4	3	4	5	5	5	5	3	4	3	3	3	9	12	A	3.9	12.0
14-Dec	2	9	19	9	11	4	3	4	5	3	18	7	10	21	19	10	12	8	17	19	20	20	17	16	11.7	20.9
15-Dec	15	15	14	15	16	A	18	19	19	20	21	22	22	23	23	23	23	23	24	24	25	27	27	27	21.2	27.5
16-Dec	28	28	28	28	A	27	27	26	26	27	27	27	27	27	27	27	26	25	25	25	26	25	23	20	26.2	28.1
17-Dec	22	23	23	A	23	22	21	20	19	21	21	21	18	17	20	19	17	17	16	14	14	14	16	16	18.9	22.8
18-Dec	17	17	A	17	17	16	5	5	5	7	9	9	10	9	12	11	6	5	5	3	1	2	3	28	9.5	28.3
19-Dec	29	A	26	27	27	7	8	3	5	9	12	15	16	19	19	18	17	17	19	19	19	19	17	19	16.7	28.8
20-Dec	A	17	18	15	14	12	12	7	2	4	9	11	16	15	16	14	3	1	2	2	2	1	2	3	8.6	17.9
21-Dec	2	5	5	2	2	A	3	3	3	4	8	10	10	10	9	6	3	3	3	3	3	3	4	6	4.7	10.3
22-Dec	4	3	2	2	A	3	3	5	4	3	4	10	10	9	8	9	3	1	2	2	1	1	2	6	4.2	10.1
23-Dec	10	12	13	A	14	14	5	1	4	3	10	11	14	14	14	10	3	2	2	3	2	3	3	2	7.5	14.3
24-Dec	7	8	A	13	14	12	13	11	11	11	9	10	11	10	11	8	5	2	2	2	1	2	2	2	7.8	14.0
25-Dec	1	A	2	1	1	1	2	2	1	4	6	6	7	9	9	8	5	3	2	3	3	9	9	10	4.5	9.7
26-Dec	A	7	4	3	6	9	11	12	11	8	12	13	14	16	16	12	12	12	12	12	13	13	14	A	11.1	16.3
27-Dec	14	14	14	14	14	13	13	13	13	14	10	11	11	11	10	6	3	2	2	4	3	1	A	2	9.3	14.4
28-Dec	1	1	2	6	5	3	1	2	5	9	16	21	20	17	16	17	17	14	16	16	18	A	14	11	10.8	20.9
29-Dec	11	12	13	14	12	15	10	8	5	3	5	13	18	18	20	17	10	5	2	4	A	3	4	4	9.9	19.8
30-Dec	3	4	3	3	6	3	4	2	2	4	7	9	9	10	12	11	4	2	2	A	2	3	2	3	4.8	11.6
31-Dec	2	2	3	3	3	3	2	2	2	6	6	8	9	7	8	5	3	2	A	3	4	3	9	8	4.5	9.0
	11.0	11.7	11.1	10.7	11.5	11.0	10.6	9.9	9.6	10.4	12.6	13.9	14.7	15.1	15.5	13.7	10.6	9.2	9.9	9.2	9.4	9.4	10.7	11.0	Diurnal Average	
	28.8	28.1	28.1	27.6	26.7	27.3	27.1	26.1	26.1	26.5	26.6	27.1	28.9	29.5	27.1	27.1	25.6	25.1	25.0	24.8	25.6	26.7	26.7	28.3	Diurnal Maximum	

C - Calibration

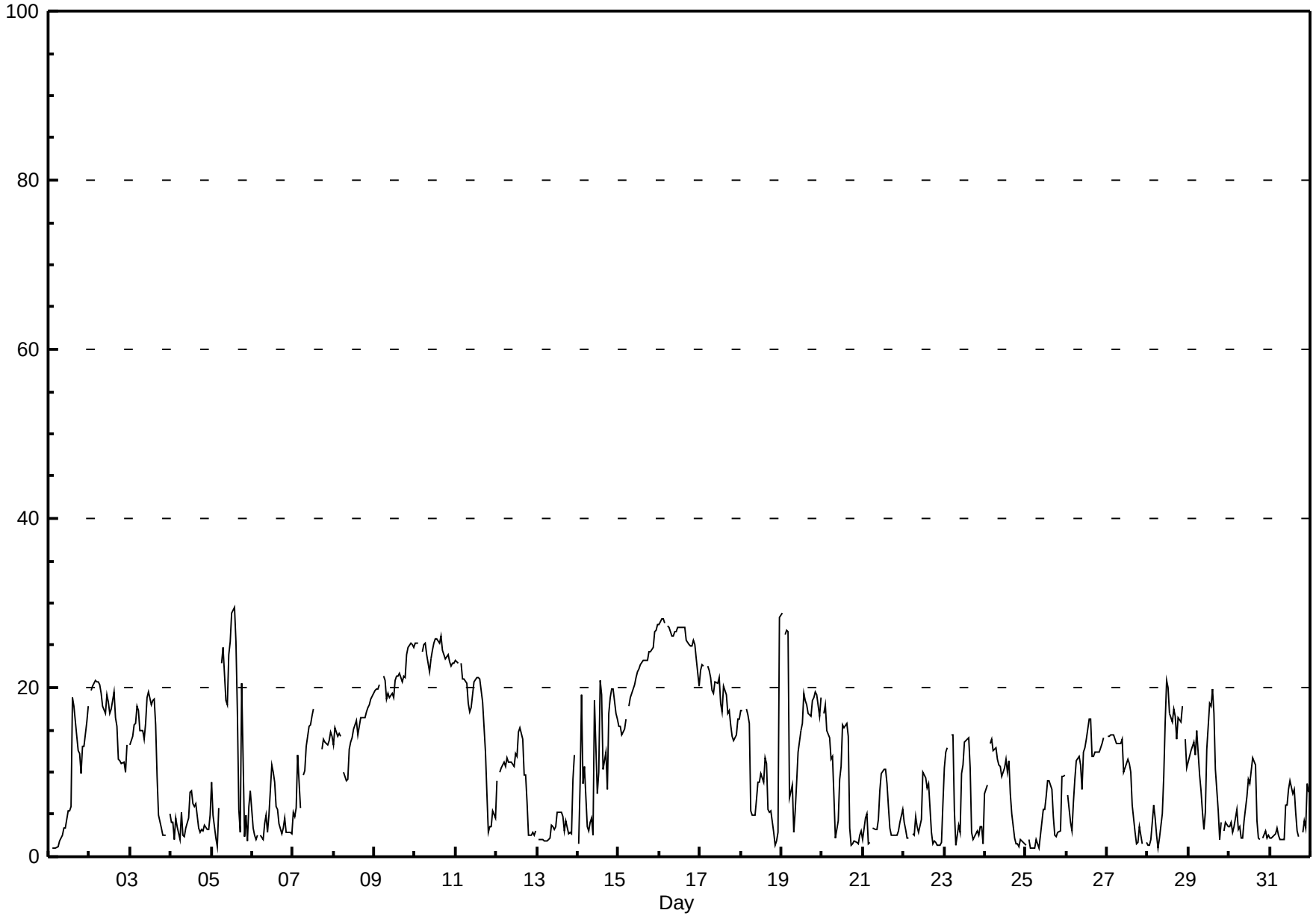
A - Automated Daily Zero Span

PASZA
Peace Air Shed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

Henry Pirker - December 2010

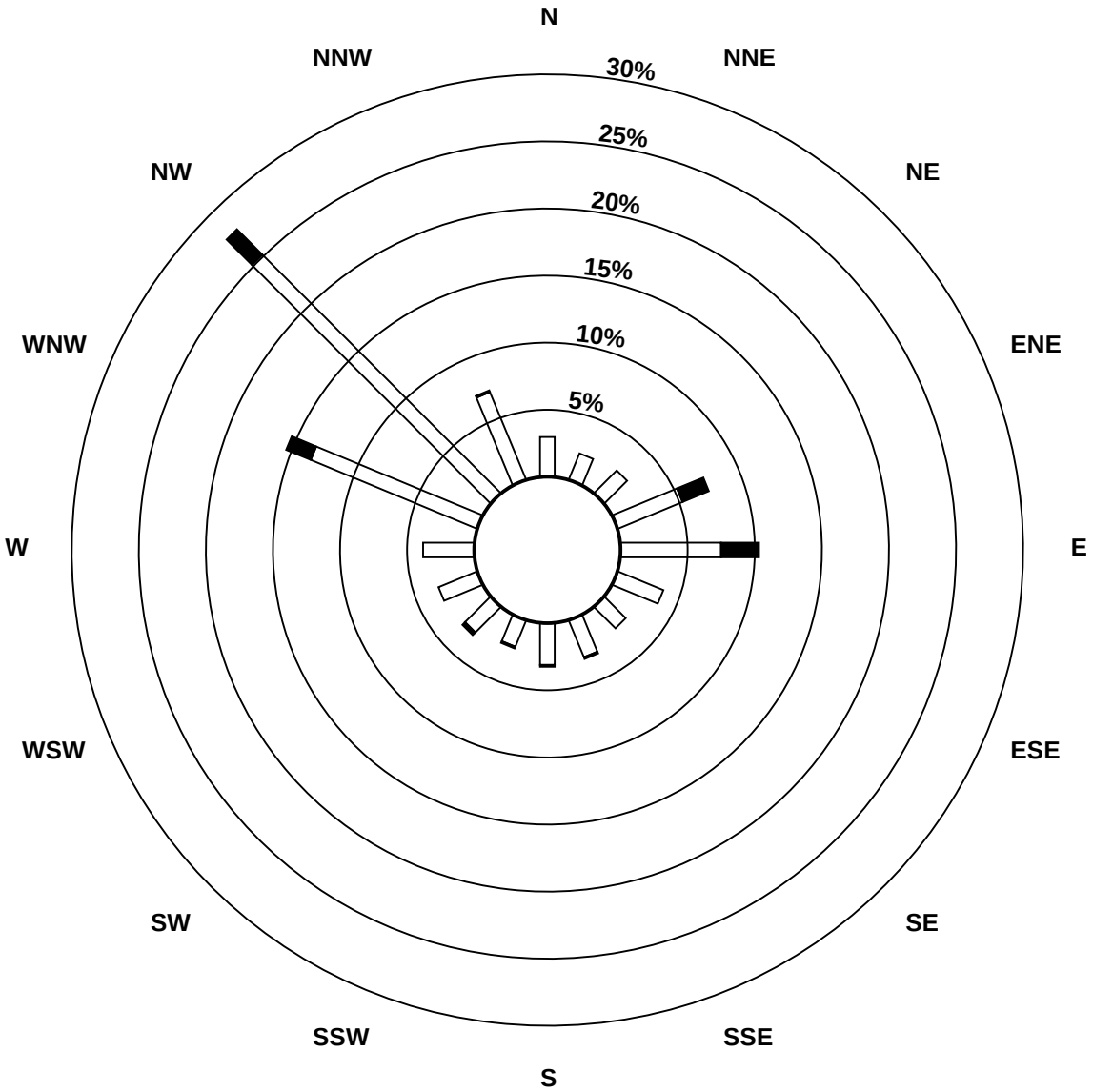


PASZA
Peace Air Shed Zone Association

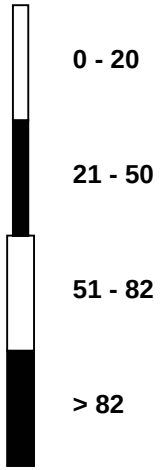
Pollutant Rose

Ozone (O_3) - ppb

Henry Pirker - December 2010



Pollutant Classes (ppb)



PASZA
Peace Air Shed Zone Association

Eight Hour Running Averages

Ozone (O_3) - ppb

Henry Pirker - December 2010

Maximum Value: 26.4 ppb on Dec 16 06:00

Minimum Value: 0.7 ppb on Dec 1 08:00

Percentiles: P_1 = 0.8 P_{10} = 2.0 Q_1 = 3.2 Median = 7.7 Q_3 = 14.3 P_{90} = 20.2 P_{99} = 25.6

Hours in Service:	744
Hours of Data:	737
Hours of Missing Data:	7
Hours of Calibration:	7
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-Dec	1	1	1	1	1	1	1	1	1	1	1	1	2	2	4	5	7	8	9	9	10	11	11	11	11.3
2-Dec	11	12	14	15	17	18	18	19	18	17	17	17	16	16	16	15	15	14	13	12	11	10	9	9	18.6
3-Dec	9	9	10	11	13	13	13	12	12	13	13	13	13	14	14	15	14	13	11	9	7	6	4	3	14.9
4-Dec	2	2	2	2	2	2	2	2	2	2	2	3	3	4	4	4	4	4	4	4	3	3	3	2	4.3
5-Dec	3	3	2	2	2	2	4	7	8	10	13	16	19	20	21	20	18	16	15	12	9	6	4	3	20.5
6-Dec	3	3	2	2	2	2	2	2	2	2	2	3	4	4	5	5	5	5	5	4	3	3	2	2	4.9
7-Dec	2	2	2	3	3	3	4	5	6	7	9	10	12	12	12	N	N	N	N	N	N	N	12	12	12.4
8-Dec	12	12	12	12	12	12	12	11	10	10	10	10	10	11	11	12	13	14	14	15	15	16	16	16	16.5
9-Dec	17	17	18	18	18	19	19	18	18	18	18	17	17	17	18	18	18	18	19	19	20	20	21	21	21.2
10-Dec	22	23	23	24	24	24	24	23	23	22	22	22	22	22	22	23	23	23	23	23	22	22	22	21	23.7
11-Dec	22	22	22	21	21	21	20	19	18	18	18	17	18	18	18	18	18	17	15	13	11	8	6	5	21.6
12-Dec	4	3	3	4	6	7	7	8	8	8	9	9	9	9	10	11	10	10	10	9	8	6	5	4	10.7
13-Dec	3	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	2	3	3	3.5
14-Dec	3	3	3	4	4	3	3	2	3	2	2	3	3	5	6	7	8	8	8	9	10	10	11	12	11.9
15-Dec	13	15	15	15	15	15	15	15	16	17	17	18	19	20	20	21	21	22	22	22	22	23	23	24	23.5
16-Dec	24	25	25	26	26	26	26	26	26	26	25	25	25	25	25	25	25	25	25	25	24	24	23	22	26.4
17-Dec	22	22	21	21	20	20	20	20	19	19	19	19	18	17	17	17	17	16	16	15	14	14	13	13	21.9
18-Dec	13	13	13	14	14	15	13	12	10	9	8	7	6	5	6	7	7	6	6	5	4	3	2	3	14.9
19-Dec	6	7	10	14	16	16	17	15	11	11	9	7	7	9	10	12	14	15	16	17	17	17	16	16	17.0
20-Dec	16	16	16	15	14	13	12	10	9	8	7	6	6	6	7	8	8	8	7	7	5	4	2	1	16.2
21-Dec	1	1	1	1	1	1	2	2	2	2	3	4	5	5	6	6	6	6	6	5	4	3	3	2	6.2
22-Dec	2	2	2	2	2	2	2	2	2	2	2	3	4	5	5	5	5	5	5	4	3	2	2	1	5.5
23-Dec	2	3	5	5	7	9	9	9	8	6	5	6	5	5	6	7	7	7	6	5	4	3	2	1	8.8
24-Dec	1	2	2	4	5	7	8	9	10	11	10	10	10	9	9	9	8	7	6	5	4	3	2	1	10.6
25-Dec	1	1	1	1	1	1	1	1	1	1	2	2	3	4	4	5	5	5	5	4	4	4	4	4	5.3
26-Dec	4	5	5	5	5	4	4	5	5	5	6	7	8	9	10	10	11	12	12	12	12	12	12	12	12.0
27-Dec	12	13	13	13	13	13	13	13	13	12	12	11	11	10	10	9	8	7	6	5	4	2	2	1	13.5
28-Dec	1	1	1	1	1	1	1	1	1	2	3	5	7	9	11	13	14	15	15	15	14	14	14	13	15.1
29-Dec	12	12	11	11	10	10	9	9	8	7	6	6	6	7	9	10	10	10	10	9	8	6	4	2	12.1
30-Dec	2	2	2	2	2	2	2	2	2	2	3	3	4	5	5	6	6	6	6	5	4	4	3	2	6.2
31-Dec	2	2	2	2	2	2	2	2	2	2	2	3	4	4	5	5	5	5	5	4	3	3	2	2	5.1
	24.1	24.6	25.3	25.7	26.2	26.4	26.3	26.2	25.9	25.7	25.3	25.1	25.3	25.2	25.3	25.3	25.3	25.1	24.9	24.7	24.4	24.0	23.3	23.5	
	Diurnal Maximums																								

N - Not Valid

PASZA
Peace Air Shed Zone Association

Hourly Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.75 ppm on Dec 1 11:00 Maximum Daily Average: 0.60 ppm on Dec 13

Minimum Value: 0.1 ppm on Dec 9 06:00 Minimum Daily Average: 0.12 ppm on Dec 15
Maximum Diurnal Average: 0.36 ppm at hour 18 Minimum Diurnal Average: 0.21 ppm at hour 5
Monthly Average: 0.294 ppm Percentiles: P_1 = 0.10 P_{10} = 0.14 Q_1 = 0.18 Median = 0.25 Q_3 = 0.33 P_{90} = 0.51 P_{99} = 1.01

Hours in Service:	744
Hours of Data:	704
Hours of Missing Data:	40
Hours of Calibration:	40
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	0.4	A	0.3	0.3	0.3	0.3	0.4	0.7	0.6	0.9	1.8	1.0	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.48	1.75
2-Dec	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.22	0.35
3-Dec	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.6	0.5	0.5	0.4	0.3	A	0.2	0.24	0.58
4-Dec	0.2	0.3	0.2	0.2	0.2	0.3	0.4	0.4	0.3	0.5	0.6	0.6	0.5	0.5	0.6	0.6	0.7	0.7	1.0	1.0	1.0	0.9	1.0	0.8	0.57	1.02
5-Dec	0.9	0.9	0.6	0.4	0.3	A	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.5	0.7	0.4	0.3	0.3	0.2	0.2	0.37	0.91
6-Dec	0.3	0.3	0.3	0.3	A	0.3	0.3	0.4	0.6	0.5	C	C	C	0.6	0.6	0.5	0.6	0.7	0.6	0.6	0.7	0.7	0.5	0.5	0.49	0.74
7-Dec	0.4	0.4	0.4	0.3	0.4	A	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.30	0.40
8-Dec	0.3	0.3	0.3	0.3	0.3	A	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.21	0.31
9-Dec	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.14	0.18
10-Dec	0.1	0.1	0.1	A	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.18	0.25
11-Dec	0.2	0.2	A	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	0.4	0.4	0.3	0.3	0.3	0.2	0.25	0.42
12-Dec	0.2	A	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.29	0.45
13-Dec	A	0.3	0.2	0.3	0.4	0.4	0.4	0.5	0.9	1.1	1.0	0.7	0.7	0.6	0.7	0.8	0.6	0.7	0.7	0.8	0.8	0.4	0.3	A	0.60	1.11
14-Dec	0.3	0.4	0.3	0.3	0.2	0.2	0.3	0.5	0.5	0.5	C	C	C	C	C	0.3	0.3	0.5	0.3	0.2	0.2	0.2	0.2	0.1	0.30	0.52
15-Dec	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12	0.14
16-Dec	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.13	0.17
17-Dec	0.1	0.1	0.1	A	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.18	0.23
18-Dec	0.2	0.2	A	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.24	0.32
19-Dec	0.2	A	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19	0.26
20-Dec	A	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.6	0.7	0.9	0.4	0.3	0.3	0.2	0.3	0.4	0.4	0.3	0.4	0.3	0.3	0.2	0.3	0.33	0.89
21-Dec	0.3	0.2	0.3	0.2	0.2	A	0.2	0.3	0.2	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	0.31	0.43
22-Dec	0.3	0.3	0.3	0.3	A	0.3	0.4	0.5	0.6	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.4	0.3	0.3	0.34	0.63
23-Dec	0.2	0.2	0.2	A	0.2	0.2	0.3	0.4	0.7	0.7	0.3	0.3	0.3	0.3	0.2	0.3	0.5	0.5	0.4	0.5	0.4	0.3	0.3	0.3	0.35	0.74
24-Dec	0.2	0.2	A	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.4	0.4	0.3	0.3	0.4	0.29	0.47
25-Dec	0.3	A	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.4	0.3	0.3	0.3	0.4	0.7	0.5	0.4	0.3	0.2	0.2	0.34	0.69
26-Dec	A	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	A	0.21	0.28
27-Dec	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.5	0.4	0.3	0.3	0.3	0.3	A	0.2	0.23	0.45
28-Dec	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.19	0.32
29-Dec	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.6	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.4	0.5	0.4	A	0.4	0.3	0.2	0.27	0.57
30-Dec	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.3	0.3	0.3	0.3	0.3	A	0.3	0.4	0.3	0.3	0.29	0.47
31-Dec	0.3	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.8	0.6	0.8	1.0	0.9	A	0.7	0.9	1.0	0.7	0.6	0.51	1.01
	0.24	0.23	0.22	0.21	0.21	0.21	0.25	0.29	0.34	0.35	0.35	0.30	0.29	0.30	0.28	0.30	0.33	0.36	0.36	0.36	0.34	0.32	0.29	0.28	Diurnal Average	
	0.91	0.89	0.55	0.38	0.36	0.37	0.43	0.68	0.90	1.11	1.75	1.02	0.74	0.76	0.65	0.82	0.95	0.89	0.99	1.02	1.01	1.01	0.97	0.78	Diurnal Maximum	

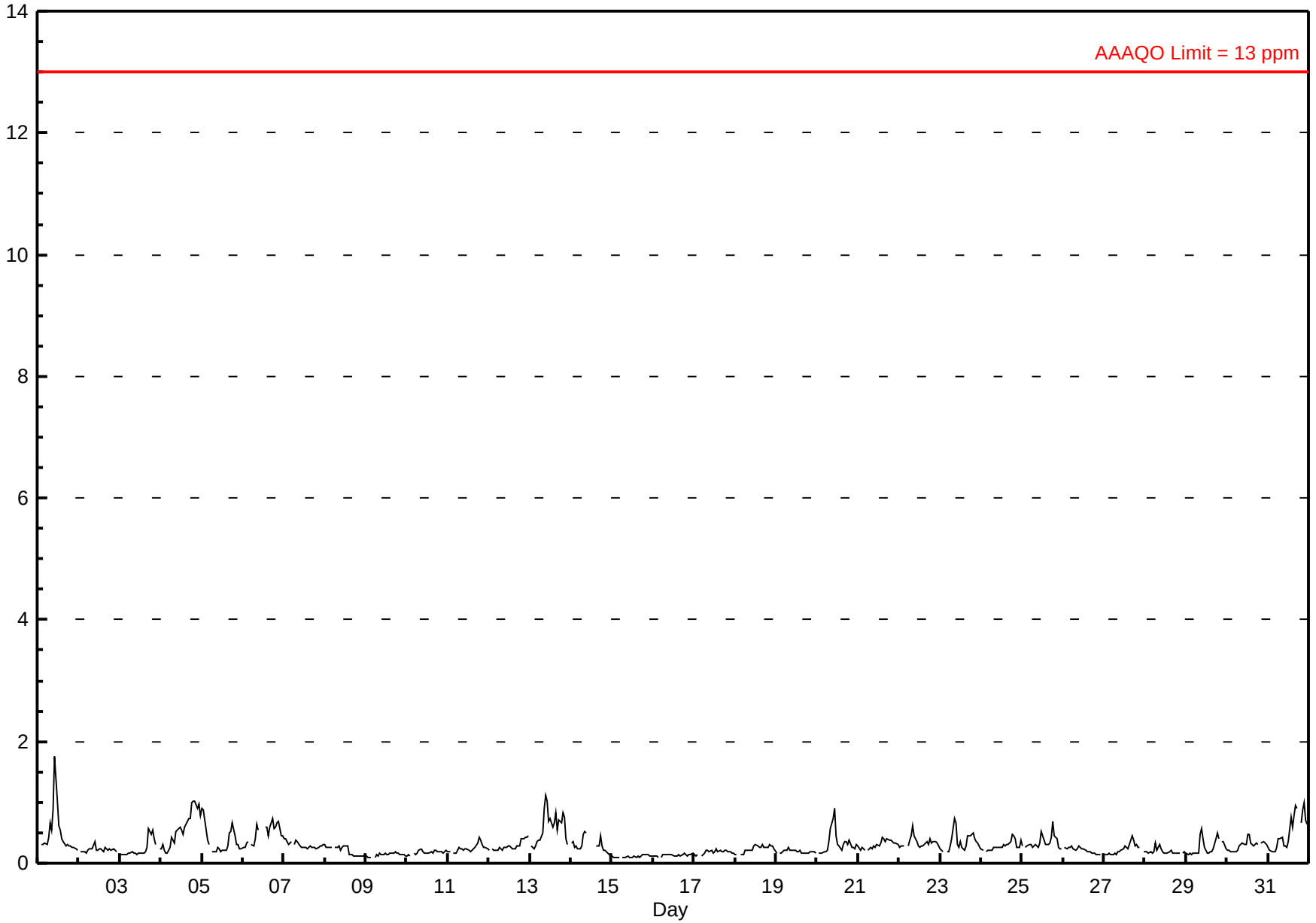
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm 24-hr na

PASZA
Peace Air Shed Zone Association

Hourly Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - December 2010



PASZA
Peace Air Shed Zone Association

Hourly Maximums

Carbon Monoxide (CO) - ppm

Henry Pirker - December 2010

Maximum Value: 8.79 ppm on Dec 20 11:00

Maximum Daily Average: 0.94 ppm on Dec 13

Minimum Value: 0.1 ppm on Dec 9 04:00

Minimum Daily Average: 0.16 ppm on Dec 15

Maximum Diurnal Average: 0.83 ppm at hour 11

Minimum Diurnal Average: 0.27 ppm at hour 4

Monthly Average: 0.458 ppm

Percentiles: P_1 = 0.13 P_{10} = 0.18 Q_1 = 0.24 Median = 0.35 Q_3 = 0.50 P_{90} = 0.83 P_{99} = 2.08

Hours in Service:	744
Hours of Data:	704
Hours of Missing Data:	40
Hours of Calibration:	40
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	0.5	A	0.4	0.4	0.4	0.3	1.4	3.3	1.2	1.7	2.9	1.7	0.7	0.7	0.6	0.6	0.4	0.4	0.4	0.3	0.3	0.7	0.3	0.3	0.87	3.27
2-Dec	A	0.2	0.3	0.2	0.2	0.8	0.5	1.0	0.4	0.7	0.4	0.4	0.3	0.3	0.3	0.8	0.4	0.3	0.3	0.3	0.3	0.3	0.2	A	0.40	0.95
3-Dec	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.6	0.7	0.7	0.7	0.5	0.5	A	0.3	0.30	0.74
4-Dec	0.4	0.5	0.3	0.3	0.3	0.3	1.9	0.5	0.7	0.9	0.9	1.3	0.7	0.7	0.7	0.8	1.0	1.0	1.8	1.5	1.3	1.2	1.5	1.0	0.89	1.90
5-Dec	1.2	1.1	0.8	0.5	0.5	A	0.3	0.2	0.3	0.6	0.3	0.2	0.4	0.3	0.3	0.4	0.7	0.8	1.5	0.8	0.5	0.4	0.3	0.3	0.55	1.50
6-Dec	0.3	0.3	0.4	0.5	A	0.4	0.4	1.2	1.3	0.7	C	C	C	0.7	0.8	0.6	0.9	1.0	1.0	0.7	0.9	0.8	0.6	0.5	0.69	1.29
7-Dec	0.5	0.4	0.4	0.4	0.4	A	0.4	0.5	0.4	0.4	0.5	0.3	0.4	0.4	0.3	0.5	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.39	0.55
8-Dec	0.4	0.3	0.3	0.3	0.3	A	0.3	0.3	0.5	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26	0.52
9-Dec	0.2	0.1	0.1	0.1	A	0.1	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.3	0.2	0.5	0.3	0.2	0.2	0.2	0.24	0.50
10-Dec	0.2	0.2	0.2	A	1.3	0.3	0.5	0.4	0.7	1.1	0.5	0.3	0.3	0.3	0.5	0.3	0.4	0.5	0.2	0.3	0.3	0.2	0.4	0.7	0.43	1.27
11-Dec	0.2	0.3	A	0.2	0.3	0.2	0.8	0.3	0.3	0.3	0.5	1.1	0.4	0.3	0.4	0.4	0.3	0.5	0.6	0.5	0.4	0.3	0.4	0.3	0.40	1.09
12-Dec	0.3	A	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.7	0.3	0.5	0.4	0.4	0.5	0.4	0.5	0.6	0.3	0.5	0.7	0.8	0.6	0.6	0.42	0.77
13-Dec	A	0.4	0.3	0.4	0.5	0.4	0.4	1.4	1.6	2.1	2.3	1.0	0.9	0.8	1.2	1.2	0.8	1.1	0.8	1.0	1.1	0.5	0.3	A	0.94	2.30
14-Dec	0.4	0.5	0.3	0.4	0.3	0.4	0.5	0.7	1.0	1.2	C	C	C	C	C	0.5	0.5	0.7	0.4	0.3	0.2	0.2	0.2	0.2	0.47	1.19
15-Dec	0.2	0.2	0.2	0.1	0.1	A	0.2	0.2	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.16	0.25
16-Dec	0.1	0.1	0.1	0.1	A	0.1	0.4	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.17	0.38
17-Dec	0.2	0.2	0.2	A	0.2	0.3	0.6	0.5	1.0	1.0	0.4	0.3	0.3	1.0	0.3	0.4	0.4	0.3	0.3	0.3	0.4	0.2	0.2	0.3	0.39	1.05
18-Dec	0.2	0.2	A	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.5	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.4	0.5	0.4	0.3	0.29	0.50
19-Dec	0.2	A	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23	0.30
20-Dec	A	0.2	0.2	0.2	0.2	0.3	0.2	0.5	1.1	2.8	8.8	0.6	0.5	0.4	0.3	0.8	0.5	0.4	0.4	0.7	0.3	0.3	0.3	0.4	0.89	8.79
21-Dec	0.4	0.4	0.4	0.4	0.3	A	0.3	0.4	0.3	0.5	0.3	0.4	0.4	0.9	0.5	0.5	0.5	0.5	0.4	0.5	0.4	0.4	0.5	0.4	0.43	0.92
22-Dec	0.3	0.4	0.3	0.4	A	0.3	1.0	0.6	0.8	0.5	0.5	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.43	1.00
23-Dec	0.2	0.2	0.2	A	0.2	0.2	0.4	0.8	2.1	1.0	0.5	0.4	0.5	0.4	0.3	0.5	0.7	0.8	0.9	0.6	0.5	0.4	0.5	0.5	0.56	2.13
24-Dec	0.3	0.3	A	0.3	0.5	0.3	0.3	0.4	0.3	0.4	0.5	0.4	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.3	0.5	0.4	0.38	0.50
25-Dec	0.3	A	0.3	0.4	0.3	0.4	0.3	0.4	0.4	0.3	0.5	0.7	0.8	0.5	0.4	0.4	0.4	0.7	1.0	0.8	0.5	0.4	0.3	0.3	0.45	1.00
26-Dec	A	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.7	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	0.28	0.73
27-Dec	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.4	0.4	0.6	0.6	0.4	0.7	0.4	0.5	A	0.2	0.31	0.71
28-Dec	0.3	0.3	0.3	0.2	0.2	0.4	0.8	0.4	0.5	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.29	0.80
29-Dec	0.2	0.2	0.4	0.2	0.5	0.3	0.2	0.2	1.4	1.4	0.8	0.5	0.2	0.2	0.2	0.3	0.4	0.5	0.6	0.6	A	0.6	0.5	0.3	0.46	1.40
30-Dec	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.6	0.5	0.5	0.4	0.4	0.6	0.8	0.7	0.4	0.4	0.4	0.4	A	0.5	0.6	0.4	0.4	0.42	0.77
31-Dec	0.3	0.3	0.2	0.2	0.4	0.4	0.5	0.5	0.7	0.6	0.5	0.3	0.6	1.0	0.7	1.2	1.4	1.7	A	1.2	1.3	1.8	2.2	1.4	0.83	2.22
	0.30	0.29	0.27	0.27	0.33	0.31	0.47	0.55	0.63	0.72	0.83	0.48	0.39	0.44	0.40	0.45	0.47	0.53	0.51	0.51	0.45	0.46	0.43	0.39	Diurnal Average	
	1.19	1.14	0.79	0.54	1.27	0.78	1.90	3.27	2.13	2.79	8.79	1.69	0.90	0.97	1.20	1.24	1.40	1.69	1.77	1.48	1.27	1.80	2.22	1.40	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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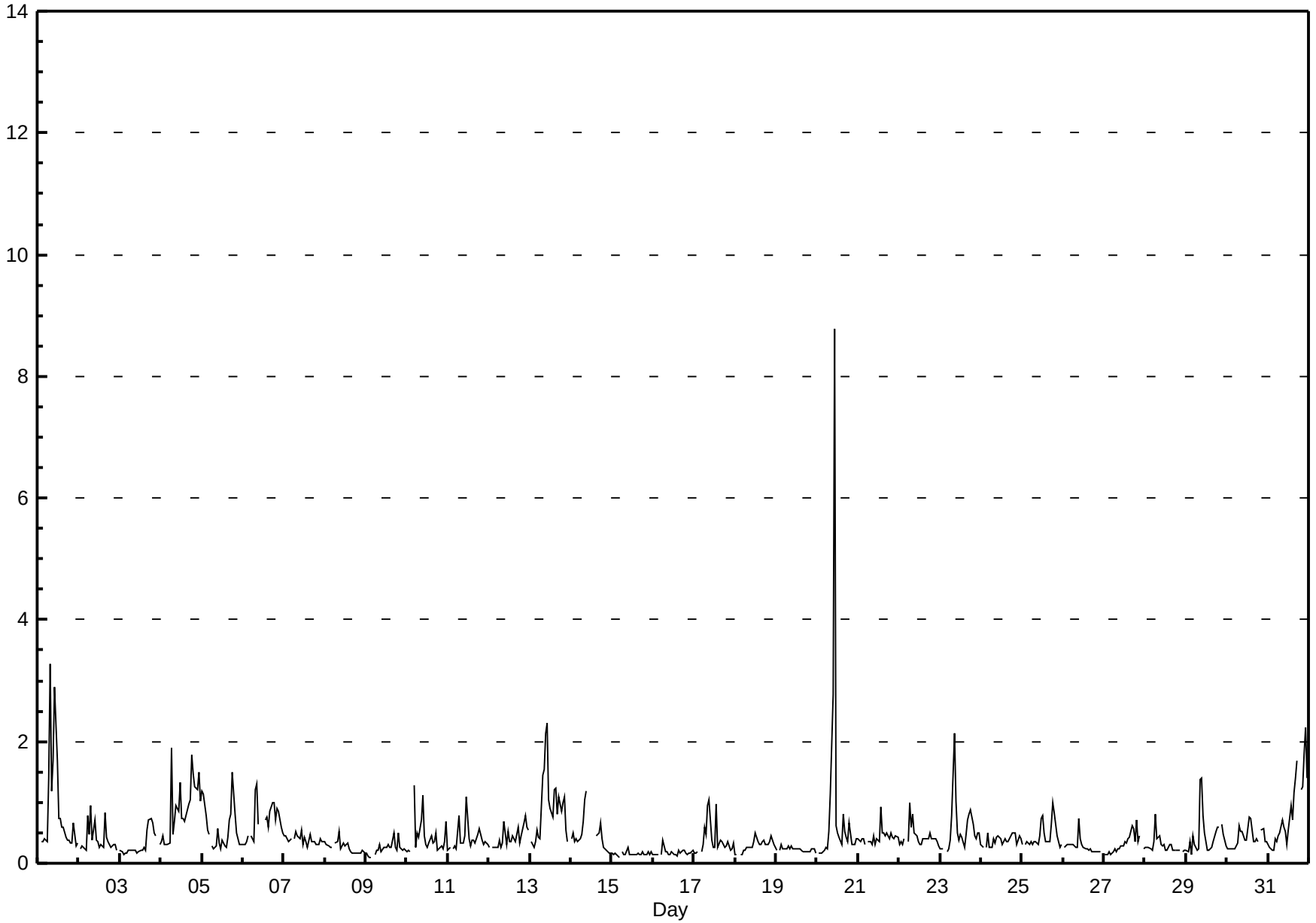
Hourly Maximums

Carbon Monoxide (CO) - ppm

Henry Pirker - December 2010



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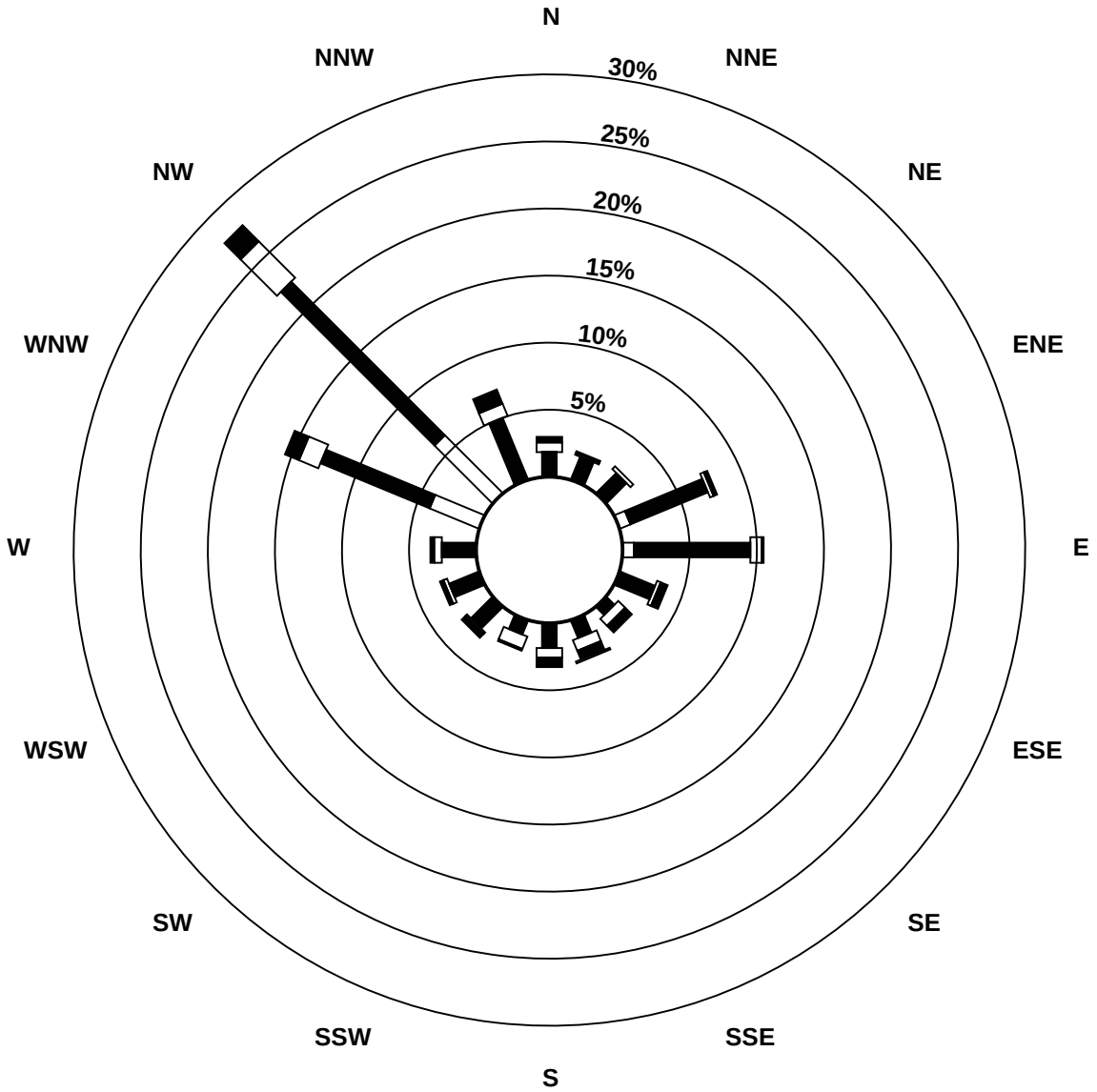
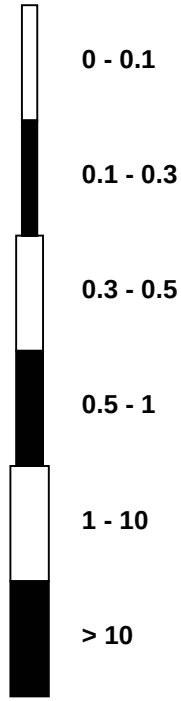
Pollutant Rose

Carbon Monoxide (CO) - ppm

Henry Pirker - December 2010



Pollutant Classes (ppm)



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Eight Hour Running Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - December 2010

Number of Exceedences (AAAQO): 8-hr: 0
Maximum Value: 0.93 ppm on Dec 5 02:00

Minimum Value: 0.10 ppm on Dec 15 09:00

Percentiles: P_1 = 0.11 P_{10} = 0.14 Q_1 = 0.19 Median = 0.26 Q_3 = 0.34 P_{90} = 0.44 P_{99} = 0.81

Hours in Service:	744
Hours of Data:	729
Hours of Missing Data:	15
Hours of Calibration:	15
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-Dec	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.5	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.7	0.5	0.4	0.3	0.3	0.3	0.3	0.81
2-Dec	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26
3-Dec	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.40
4-Dec	0.4	0.4	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.9	0.9	0.89
5-Dec	0.9	0.9	0.9	0.8	0.7	0.7	0.6	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.93
6-Dec	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	N	N	N	N	N	N	N	0.6	0.6	0.6	0.6	0.6	0.6	0.61
7-Dec	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.57
8-Dec	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	0.1	0.1	0.1	0.28
9-Dec	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.17
10-Dec	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20
11-Dec	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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	0.31
12-Dec	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.37
13-Dec	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.5	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.81
14-Dec	0.6	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	N	N	N	N	N	N	N	N	0.3	0.3	0.3	0.2	0.57
15-Dec	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.22
16-Dec	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.14
17-Dec	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21
18-Dec	0.2	0.2	0.2	0.2	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	0.28
19-Dec	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26
20-Dec	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.47
21-Dec	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.38
22-Dec	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.41
23-Dec	0.3	0.3	0.3	0.3	0.3	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	0.4	0.4	0.4	0.4	0.4	0.41
24-Dec	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.37
25-Dec	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	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.43
26-Dec	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.39
27-Dec	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.32
28-Dec	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.27
29-Dec	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.36
30-Dec	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.36
31-Dec	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.84
	0.92	0.93	0.88	0.80	0.71	0.68	0.57	0.49	0.42	0.52	0.66	0.74	0.78	0.81	0.80	0.81	0.77	0.72	0.68	0.71	0.79	0.83	0.87	0.89	
	Diurnal Maximums																								

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

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Hourly Averages

Total Hydrocarbons (THC) - ppm

Henry Pirker - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 5.20 ppm on Dec 22 07:00 Maximum Daily Average: 3.41 ppm on Dec 30

Minimum Value: 1.9 ppm on Dec 4 04:00 Minimum Daily Average: 2.08 ppm on Dec 16
Maximum Diurnal Average: 2.60 ppm at hour 24 Minimum Diurnal Average: 2.46 ppm at hour 15
Monthly Average: 2.534 ppm Percentiles: P_1 = 2.06 P_{10} = 2.10 Q_1 = 2.17 Median = 2.39 Q_3 = 2.80 P_{90} = 3.20 P_{99} = 3.82

Hours in Service:	744
Hours of Data:	701
Hours of Missing Data:	43
Hours of Calibration:	35
Percent Operational Time:	98.9

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	2.8	A	2.6	2.7	2.7	2.6	2.7	2.7	2.7	2.7	3.0	3.0	2.9	2.8	2.4	2.3	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.54	3.05
2-Dec	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.2	2.1	2.1	2.1	2.2	2.2	2.2	A	2.14	2.23
3-Dec	2.4	2.4	2.4	2.4	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.7	2.8	2.8	2.8	2.9	2.8	A	2.5	2.60	2.87
4-Dec	2.3	2.1	1.9	1.9	N	N	N	N	N	N	N	M	3.0	3.1	3.0	3.0	3.0	2.9	3.1	3.2	3.2	3.3	3.4	3.3	--	3.38
5-Dec	3.3	3.2	2.9	2.7	2.6	A	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.4	2.4	2.5	2.5	2.7	2.6	2.6	2.6	2.8	3.0	2.55	3.28
6-Dec	3.0	2.9	3.0	3.1	A	3.0	3.0	3.4	3.6	C	C	C	3.0	3.1	3.3	3.2	3.1	3.1	3.0	3.1	3.3	3.4	3.7	3.4	3.19	3.72
7-Dec	2.9	2.7	2.7	2.7	2.8	A	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.34	2.93
8-Dec	2.3	2.3	2.3	2.2	2.3	A	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.17	2.30
9-Dec	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.09	2.13
10-Dec	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.11	2.15
11-Dec	2.2	2.2	A	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.1	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.3	2.18	2.30
12-Dec	2.2	A	2.2	2.2	2.2	2.2	2.3	2.6	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.4	2.4	2.5	2.5	2.5	2.6	2.6	2.40	2.65
13-Dec	A	2.6	2.8	2.8	2.8	2.7	2.6	2.7	2.9	3.0	3.0	2.9	2.9	2.9	2.9	2.9	2.7	2.8	3.1	3.1	2.7	2.3	2.2	A	2.78	3.06
14-Dec	2.7	2.4	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.3	2.2	2.7	2.3	2.2	2.2	2.3	2.3	2.4	2.3	2.2	2.2	2.2	2.2	2.1	2.28	2.69
15-Dec	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.08	2.13
16-Dec	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.08	2.11
17-Dec	2.1	2.1	2.2	A	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.16	2.22
18-Dec	2.2	2.2	A	2.2	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.4	2.4	2.4	2.4	2.4	2.5	2.4	2.4	2.3	2.35	2.50
19-Dec	2.1	A	2.1	2.1	2.2	2.4	2.3	2.4	2.4	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.1	2.22	2.40
20-Dec	A	2.1	2.1	2.2	2.2	2.2	2.2	2.4	2.4	2.4	2.5	2.4	2.3	2.3	2.3	2.5	2.6	2.7	2.7	2.8	2.8	2.8	2.6	2.8	2.45	2.82
21-Dec	2.9	2.8	3.0	3.0	3.0	A	3.0	2.9	3.0	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.2	3.3	3.2	3.2	3.2	3.1	3.2	3.3	3.12	3.28
22-Dec	3.2	3.2	3.3	3.6	A	4.5	5.2	4.3	3.7	3.2	3.2	3.8	2.7	2.8	2.7	2.8	2.9	2.8	3.0	2.9	2.8	2.8	2.8	2.8	3.25	5.20
23-Dec	2.6	2.6	2.6	A	2.5	2.5	2.6	2.6	2.8	2.7	2.8	2.6	2.5	2.5	2.5	2.6	2.7	2.7	2.7	2.8	3.0	3.1	3.6	3.3	2.74	3.61
24-Dec	2.7	2.5	A	2.4	2.4	2.4	2.4	2.5	2.5	2.4	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.7	2.7	2.7	2.6	2.6	2.7	2.54	2.75
25-Dec	2.6	A	2.7	3.0	2.8	2.8	2.8	2.9	2.9	3.1	2.9	2.9	2.8	2.8	2.8	2.8	3.1	3.0	3.1	2.9	2.8	2.6	2.5	2.5	2.83	3.10
26-Dec	A	2.5	2.5	2.6	2.6	2.8	2.5	2.3	2.5	2.5	2.4	2.4	2.3	2.4	2.3	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	A	2.41	2.76
27-Dec	2.2	2.2	2.2	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.5	2.4	2.4	2.4	2.5	2.5	2.7	2.8	3.0	3.1	A	3.1	2.47	3.08
28-Dec	3.0	3.0	3.1	3.1	3.0	3.2	3.2	3.4	3.5	3.2	2.5	2.3	2.2	2.2	2.3	2.3	2.2	2.3	2.3	2.2	2.2	A	2.2	2.3	2.67	3.49
29-Dec	2.3	2.3	2.3	2.3	2.3	2.4	2.5	2.4	2.6	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.4	2.4	2.4	A	3.6	2.8	2.8	2.47	3.57
30-Dec	3.4	3.2	3.2	3.3	3.3	3.6	3.5	3.5	3.6	3.6	3.7	3.5	3.5	3.4	3.2	3.2	3.2	3.3	3.2	A	3.2	3.3	3.4	3.8	3.41	3.82
31-Dec	3.8	3.8	3.7	3.8	3.7	3.7	3.7	3.6	3.4	3.2	3.1	3.1	3.0	3.2	3.0	3.1	3.2	3.2	A	3.0	3.0	3.0	2.7	2.7	3.29	3.84
	2.58	2.52	2.52	2.55	2.52	2.60	2.59	2.59	2.59	2.54	2.51	2.52	2.49	2.49	2.46	2.47	2.50	2.52	2.53	2.51	2.55	2.58	2.53	2.60	Diurnal Average	
	3.82	3.82	3.74	3.84	3.71	4.52	5.20	4.26	3.71	3.63	3.72	3.80	3.52	3.44	3.30	3.22	3.24	3.28	3.25	3.24	3.29	3.57	3.72	3.82	Diurnal Maximum	

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

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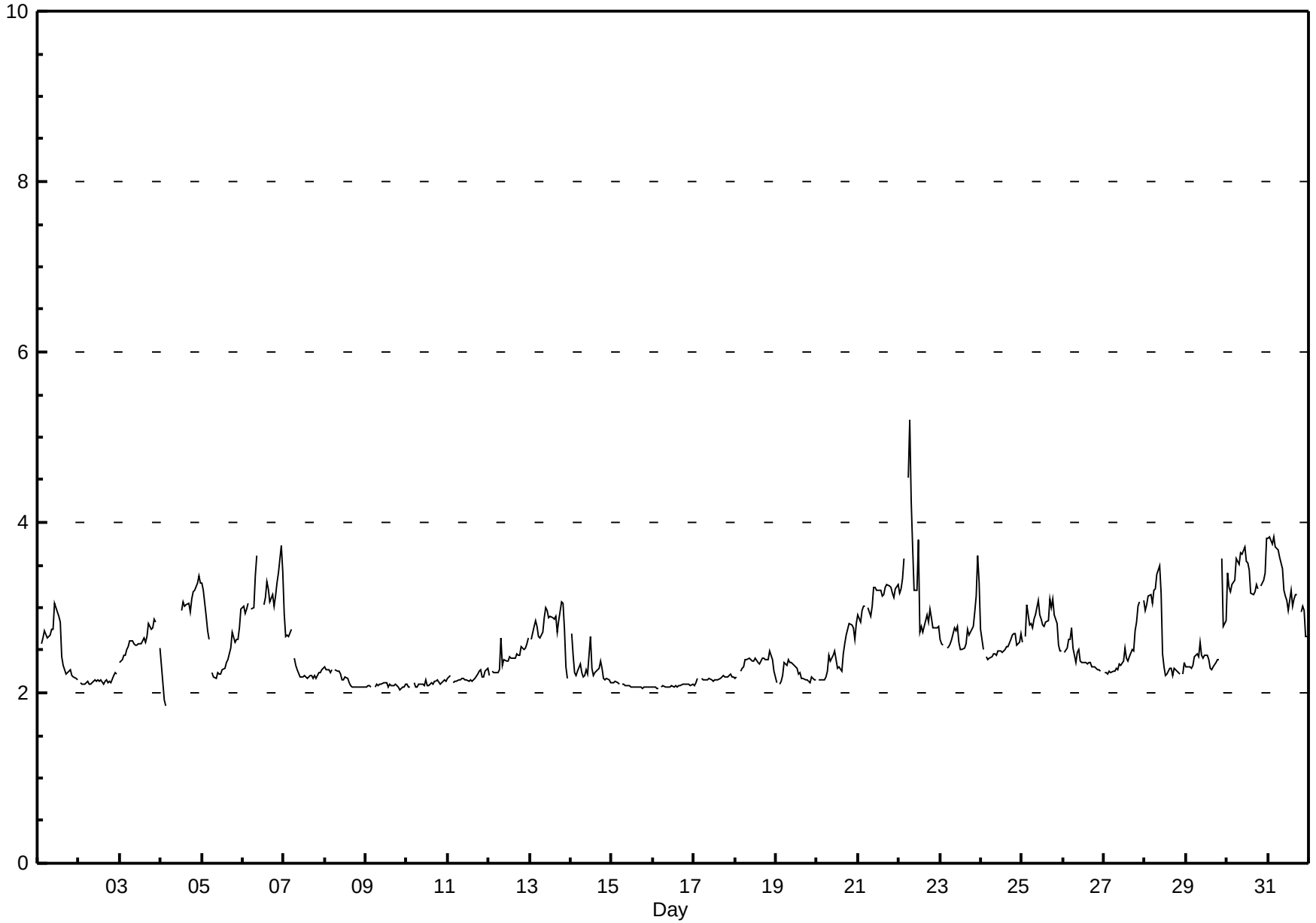
Hourly Averages

Total Hydrocarbons (THC) - ppm

Henry Pirker - December 2010



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Hourly Maximums

Total Hydrocarbons (THC) - ppm

Henry Pirker - December 2010

Maximum Value: 5.65 ppm on Dec 22 07:00

Maximum Daily Average: 3.57 ppm on Dec 30

Minimum Value: 1.9 ppm on Dec 4 04:00

Minimum Daily Average: 2.11 ppm on Dec 15

Maximum Diurnal Average: 2.79 ppm at hour 6

Minimum Diurnal Average: 2.64 ppm at hour 13

Monthly Average: 2.708 ppm

Percentiles: P_1 = 2.09 P_{10} = 2.16 Q_1 = 2.35 Median = 2.57 Q_3 = 3.01 P_{90} = 3.35 P_{99} = 4.19

Hours in Service:	744
Hours of Data:	701
Hours of Missing Data:	43
Hours of Calibration:	35
Percent Operational Time:	98.9

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	2.9	A	2.6	2.7	2.8	2.8	2.9	3.1	3.0	3.1	3.2	3.2	3.0	2.9	2.7	2.9	2.6	2.8	2.6	2.6	2.2	2.3	2.2	2.5	2.77	3.24
2-Dec	A	2.9	2.5	2.2	2.4	2.4	2.4	2.2	2.5	2.5	2.7	2.9	2.4	2.5	2.2	2.5	2.7	2.2	2.5	2.2	2.3	2.3	2.3	A	2.44	2.91
3-Dec	2.4	2.4	2.5	2.5	2.6	2.6	2.6	2.8	2.6	2.6	2.6	2.6	2.6	2.7	2.7	2.6	2.8	3.0	2.8	2.8	3.0	2.9	A	2.7	2.67	2.96
4-Dec	2.4	2.2	2.0	1.9	N	N	N	N	N	N	N	M	3.1	3.2	3.3	3.3	3.3	3.1	3.3	3.4	3.5	3.6	3.7	3.5	--	3.74
5-Dec	3.5	3.5	3.3	3.1	3.0	A	2.5	2.2	2.2	2.4	2.3	2.3	2.3	2.3	2.5	2.5	2.5	2.6	3.0	2.8	2.7	2.7	2.9	3.1	2.70	3.49
6-Dec	3.1	3.0	3.1	3.1	A	3.1	3.1	3.6	3.8	C	C	C	3.2	3.2	3.4	3.4	3.2	3.5	3.3	3.3	3.4	3.9	4.0	3.9	3.38	3.99
7-Dec	3.4	2.7	2.8	2.9	3.0	A	2.5	2.4	2.6	2.3	2.4	2.5	2.7	2.8	2.6	2.7	2.6	2.4	2.5	2.7	2.5	2.4	2.8	2.5	2.64	3.36
8-Dec	2.8	2.3	2.3	2.3	2.4	A	2.3	2.3	2.3	2.3	2.2	2.4	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.23	2.82
9-Dec	2.1	2.1	2.1	2.1	A	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.5	2.3	2.5	2.5	2.5	2.5	2.6	2.4	2.4	2.5	2.4	2.6	2.31	2.62
10-Dec	2.7	2.3	2.5	A	2.6	2.5	2.3	2.5	2.6	2.4	2.5	2.5	2.6	2.4	2.4	2.5	2.5	2.4	2.5	2.4	2.5	2.5	2.5	2.4	2.48	2.69
11-Dec	2.7	2.7	A	2.2	2.3	2.4	2.3	2.2	2.2	2.2	2.2	2.4	2.3	2.5	2.3	2.4	2.6	2.3	2.3	2.4	2.3	2.2	2.3	2.3	2.35	2.66
12-Dec	2.3	A	2.3	2.3	2.4	2.3	2.4	3.1	2.5	2.9	2.4	2.7	2.5	2.4	2.5	2.4	3.1	2.5	2.5	2.7	2.6	2.6	2.7	2.8	2.56	3.13
13-Dec	A	2.7	2.8	2.9	3.0	2.8	2.7	2.9	3.1	3.4	3.3	3.1	3.0	2.9	3.1	3.1	2.9	3.0	3.2	3.2	3.1	2.5	2.2	A	2.95	3.35
14-Dec	2.8	2.7	2.8	2.3	2.4	2.4	2.3	2.4	2.3	2.5	2.4	4.2	2.4	2.4	2.7	2.4	2.4	2.6	2.4	2.5	2.3	2.2	2.2	2.1	2.51	4.23
15-Dec	2.2	2.2	2.2	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.11	2.15
16-Dec	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.12	2.23
17-Dec	2.2	2.6	3.1	A	2.5	3.3	2.4	2.5	2.4	2.6	2.5	2.4	2.4	2.6	2.5	2.3	2.3	2.4	2.3	2.4	2.3	2.3	2.4	2.3	2.48	3.34
18-Dec	2.2	2.2	A	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.4	2.4	2.5	2.5	2.5	2.4	2.4	2.6	2.5	2.4	2.5	2.42	2.57
19-Dec	2.4	A	2.4	2.4	2.3	2.4	2.4	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.31	2.48
20-Dec	A	2.2	2.2	2.2	2.2	2.3	2.6	2.6	2.5	2.8	3.2	2.5	2.6	2.8	2.6	2.6	2.7	2.7	2.8	2.9	2.9	2.9	2.7	3.0	2.62	3.16
21-Dec	3.0	2.9	3.2	3.1	3.1	A	3.1	3.0	3.1	3.4	3.3	3.3	3.3	3.4	3.2	3.2	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.4	3.21	3.43
22-Dec	3.2	3.3	3.5	3.8	A	5.0	5.6	5.4	3.9	3.4	3.3	4.7	2.8	2.9	2.8	2.8	3.0	2.9	3.0	3.0	2.8	2.8	2.9	2.8	3.47	5.65
23-Dec	2.7	2.6	2.6	A	2.5	2.6	2.6	2.7	3.5	2.9	3.1	2.9	2.6	2.6	2.6	2.8	3.4	3.1	2.8	2.9	3.0	3.7	3.9	3.6	2.94	3.87
24-Dec	3.1	2.6	A	2.7	2.5	2.5	2.7	2.5	2.7	2.5	2.9	2.6	2.5	2.7	2.6	2.6	2.6	2.8	2.8	2.7	2.8	2.6	3.2	2.8	2.70	3.16
25-Dec	2.6	A	3.1	3.4	3.0	3.0	2.8	3.1	3.2	3.2	3.0	3.1	2.9	2.8	3.3	3.3	3.3	3.2	3.2	3.1	2.9	2.9	2.6	2.7	3.04	3.38
26-Dec	A	2.6	2.6	2.8	2.7	2.9	2.9	2.4	2.6	2.8	2.7	2.5	2.4	2.5	2.5	2.4	2.4	2.4	2.4	2.3	2.3	2.4	2.3	A	2.54	2.93
27-Dec	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.5	2.4	2.5	2.7	2.6	2.4	2.5	2.6	2.6	2.9	3.0	3.2	3.3	A	3.2	2.57	3.26
28-Dec	3.0	3.1	3.2	3.3	3.2	3.3	3.4	3.9	3.7	3.4	3.0	2.4	2.3	2.3	2.6	2.5	2.3	2.7	2.3	2.3	2.3	A	2.3	2.4	2.83	3.89
29-Dec	2.3	2.3	2.4	2.4	2.4	2.6	2.5	2.5	2.8	2.7	2.5	2.6	2.5	2.5	2.4	2.3	2.3	2.4	2.5	2.5	A	4.1	3.1	3.0	2.59	4.09
30-Dec	3.9	3.4	3.3	3.3	3.4	3.8	3.8	3.7	3.7	3.8	3.9	3.6	3.7	3.6	3.6	3.2	3.2	3.3	3.3	A	3.4	3.5	3.6	4.3	3.57	4.30
31-Dec	4.3	4.2	4.0	4.0	3.9	4.1	3.7	3.8	3.7	3.4	3.2	3.2	3.3	3.4	3.1	3.3	3.5	3.3	A	3.2	3.2	3.4	3.5	3.1	3.55	4.33
	2.77	2.67	2.70	2.67	2.67	2.79	2.73	2.78	2.76	2.73	2.71	2.77	2.64	2.66	2.65	2.65	2.70	2.69	2.68	2.66	2.67	2.75	2.72	2.79	Diurnal Average	
	4.33	4.19	3.99	3.95	3.89	4.96	5.65	5.37	3.87	3.79	3.86	4.68	3.66	3.60	3.56	3.42	3.51	3.51	3.35	3.36	3.54	4.09	3.99	4.30	Diurnal Maximum	

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

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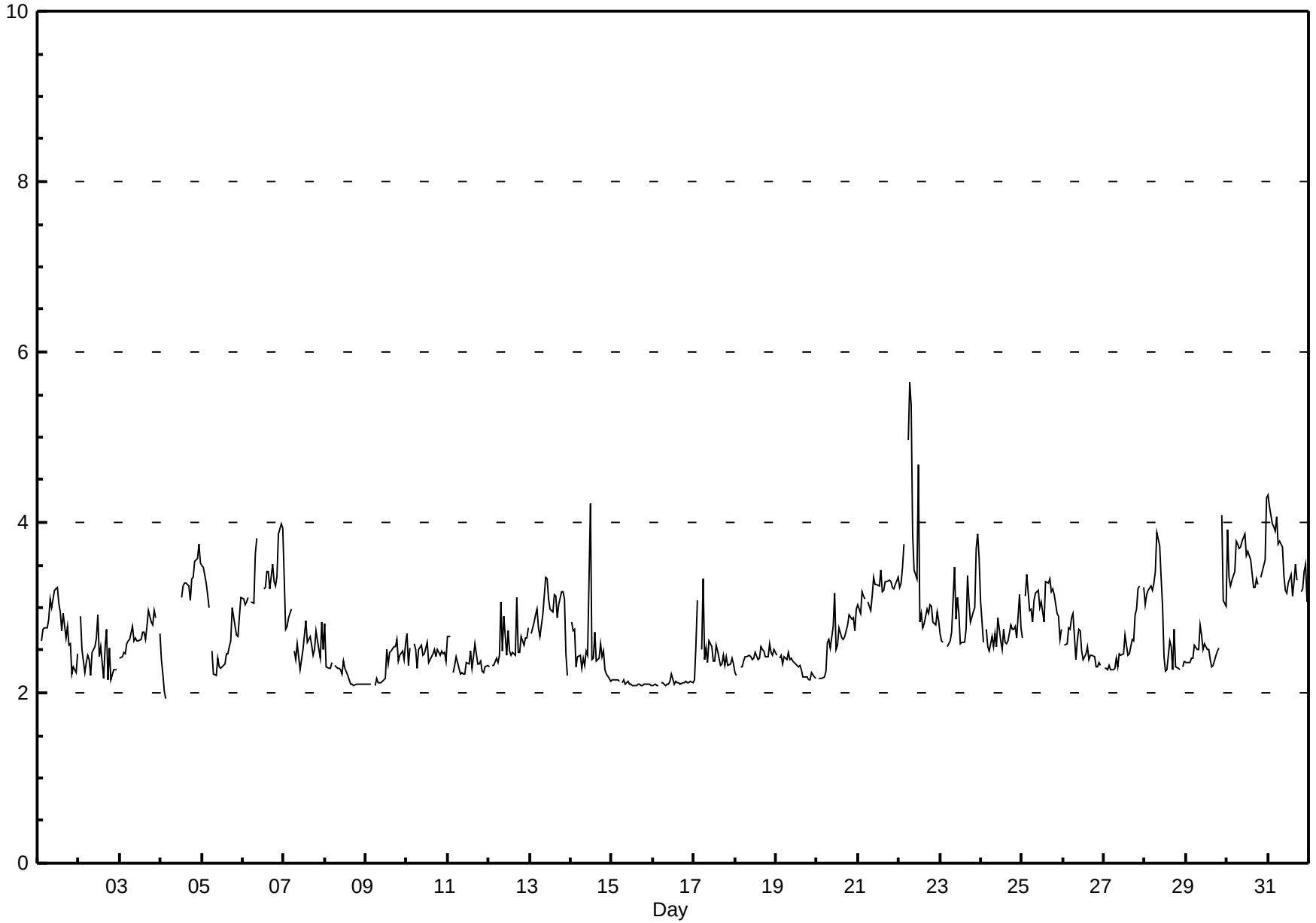
Hourly Maximums

Total Hydrocarbons (THC) - ppm

Henry Pirker - December 2010



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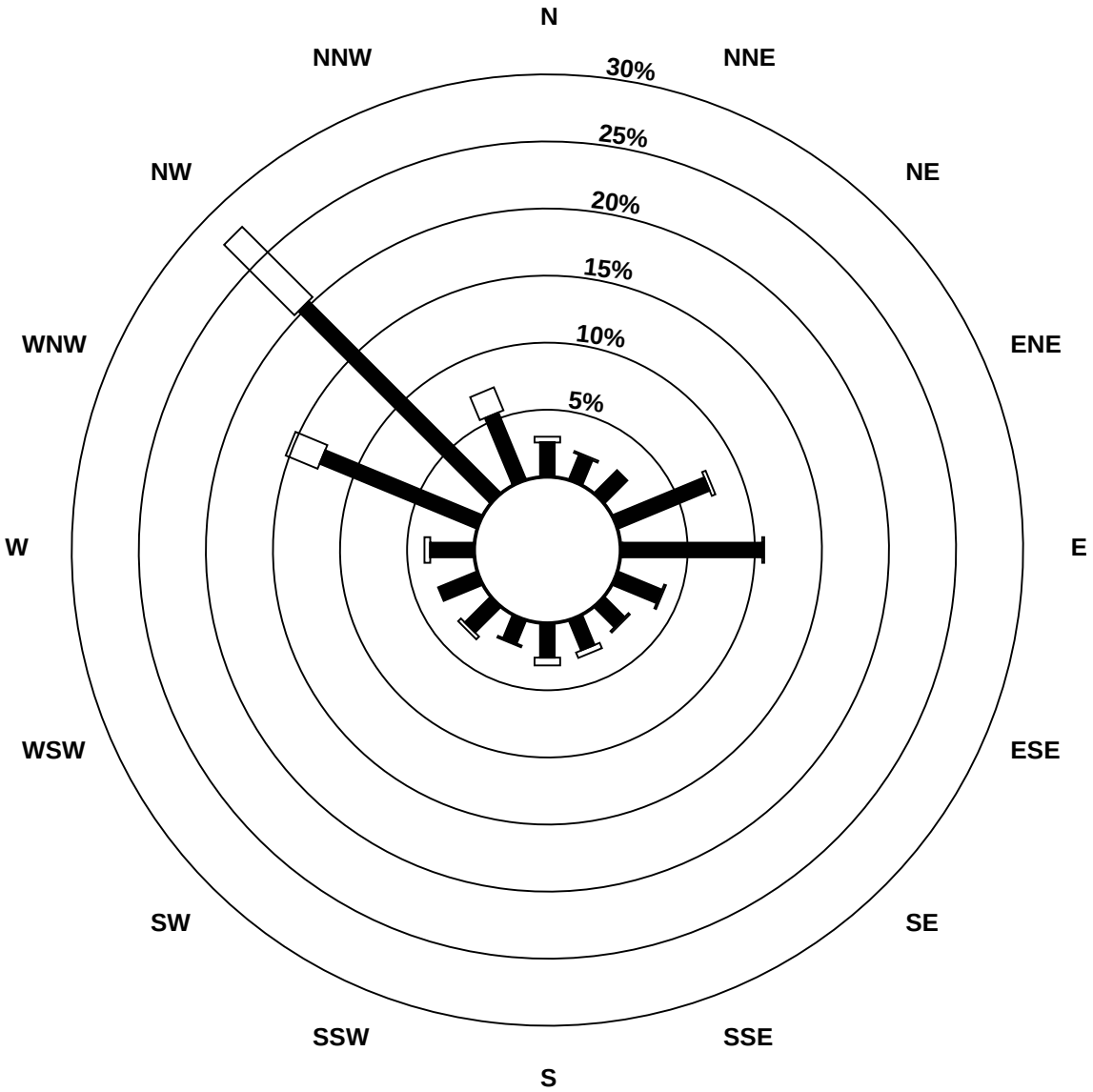
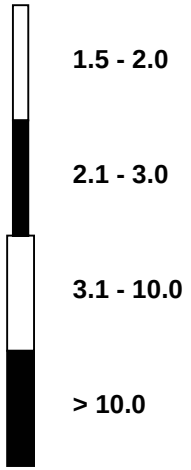
Pollutant Rose

Total Hydrocarbons (THC) - ppm

Henry Pirker - December 2010



Pollutant Classes (ppm)



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Hourly Averages

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

Henry Pirker - December 2010

Number of Exceedences: 1-hr: 2 24-hr: 1
Maximum Value: 275.5 $\mu g/m^3$ on Dec 31 23:00
Maximum Daily Average: 34.6 $\mu g/m^3$ on Dec 31

Minimum Value: 0 $\mu g/m^3$ on Dec 16 09:00
Maximum Diurnal Average: 22.4 $\mu g/m^3$ at hour 23
Monthly Average: 14.65 $\mu g/m^3$

Minimum Daily Average: 2.0 $\mu g/m^3$ on Dec 16
Minimum Diurnal Average: 11.3 $\mu g/m^3$ at hour 6
Percentiles: $P_1 = 0.5$ $P_{10} = 2.9$ $Q_1 = 6.3$ Median = 12.0 $Q_3 = 20.4$ $P_{90} = 28.1$ $P_{99} = 40.6$

Hours in Service:	744
Hours of Data:	726
Hours of Missing Data:	18
Hours of Calibration:	0
Percent Operational Time:	97.6

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	22	24	24	21	17	17	18	21	18	16	20	24	18	20	19	9	12	15	17	19	22	19	18	17	18.6	24.0
2-Dec	16	15	14	12	12	11	10	12	13	14	14	14	18	20	14	12	14	11	11	11	13	18	15	13	13.6	20.1
3-Dec	10	9	9	10	10	9	10	10	9	8	7	7	6	5	8	10	10	23	31	19	23	18	13	15	12.0	31.4
4-Dec	11	13	14	10	9	8	11	11	12	14	19	19	23	22	22	32	42	27	28	40	50	41	30	31	22.4	50.4
5-Dec	34	46	25	13	8	5	2	2	3	4	4	2	2	4	4	3	9	10	15	34	19	13	13	10	11.8	46.3
6-Dec	11	12	12	9	10	11	11	12	18	20	17	19	22	22	25	26	23	24	22	24	24	29	29	34	19.4	34.0
7-Dec	35	36	37	32	29	32	29	27	36	33	26	26	27	29	16	15	13	20	20	15	16	23	25	28	26.0	36.9
8-Dec	35	31	30	27	25	24	25	27	24	21	18	21	26	30	20	5	7	6	5	4	4	5	6	5	18.0	35.3
9-Dec	4	3	3	1	3	1	2	3	1	6	1	2	2	0	1	3	4	4	4	6	4	3	4	3	2.8	6.2
10-Dec	6	4	2	2	2	1	1	1	3	3	2	3	3	1	1	3	3	5	6	5	4	3	4	6	3.0	6.0
11-Dec	6	2	2	3	3	3	5	5	5	5	8	11	7	6	9	11	13	17	21	20	16	15	17	13	9.4	21.0
12-Dec	13	15	21	18	13	14	16	16	13	13	16	14	14	13	18	21	24	26	19	20	27	15	16	24	17.5	26.6
13-Dec	24	18	17	16	19	22	23	23	23	25	29	32	32	35	32	44	38	33	34	36	28	21	11	7	26.0	44.1
14-Dec	11	18	10	5	5	6	8	9	9	8	10	13	17	13	6	6	11	14	11	10	10	10	9	6	9.9	18.2
15-Dec	7	6	6	7	4	4	1	3	1	3	3	2	3	2	1	1	2	1	3	4	5	3	2	3	3.2	7.4
16-Dec	2	2	2	2	2	1	2	1	0	1	2	1	1	1	2	3	2	3	3	4	2	3	4	4	2.0	3.9
17-Dec	5	5	3	4	5	4	3	5	5	6	8	6	6	7	5	6	8	7	5	7	8	7	7	7	5.8	8.2
18-Dec	6	7	7	5	4	6	6	8	8	10	10	9	12	12	12	10	9	10	10	11	11	8	8	8	8.5	11.7
19-Dec	6	7	6	5	4	7	8	11	10	8	7	9	10	10	9	9	7	8	7	6	6	11	11	8	7.8	11.1
20-Dec	8	8	10	10	8	6	8	12	15	17	36	M	M	M	5	10	14	14	13	N	N	11	12	11	11.9	35.6
21-Dec	21	25	11	12	10	10	14	14	18	18	20	20	19	21	22	26	21	19	22	23	24	25	N	N	18.9	26.4
22-Dec	N	N	N	N	N	N	N	N	N	N	11	21	18	20	22	12	29	12	25	25	10	28	12	28	--	29.4
23-Dec	10	16	19	11	29	5	22	27	10	31	N	11	5	22	28	24	24	5	15	31	12	15	17	5	17.2	31.4
24-Dec	21	11	27	15	17	22	20	25	16	23	18	22	23	30	19	19	23	16	26	26	26	26	23	26	21.6	29.9
25-Dec	28	20	19	22	29	32	18	18	23	18	21	29	37	40	33	18	20	23	28	36	30	29	26	20	25.8	40.3
26-Dec	20	18	29	32	32	27	27	27	31	34	35	31	28	25	29	24	12	19	11	5	0	11	7	0	21.3	35.3
27-Dec	6	7	7	9	0	10	9	4	14	6	15	12	9	7	14	29	28	30	24	13	10	16	14	9	12.6	29.9
28-Dec	15	10	12	11	11	16	15	10	13	12	10	7	6	6	7	9	5	8	4	10	0	8	4	7	9.0	15.9
29-Dec	7	0	9	4	7	8	5	5	5	9	14	14	11	1	14	3	15	3	14	20	9	20	19	24	9.9	23.7
30-Dec	19	13	14	13	10	9	12	12	10	13	13	13	23	32	26	22	14	18	16	19	20	18	18	14	16.3	32.4
31-Dec	13	13	11	4	9	7	12	17	14	11	11	13	16	18	12	9	12	24	25	19	23	20	275	239	34.6	275.5
	14.4	13.8	13.7	11.5	11.4	11.3	11.8	12.5	12.6	13.6	14.1	14.2	14.8	15.8	14.7	14.0	15.2	14.6	15.9	17.3	15.2	15.9	22.4	20.9	Diurnal Average	
	35.4	46.3	36.9	32.2	31.6	32.4	29.0	27.5	35.6	33.8	35.6	32.4	36.8	40.3	33.1	44.1	42.0	32.8	34.2	39.6	50.4	41.2	275.5	239.2	Diurnal Maximum	

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

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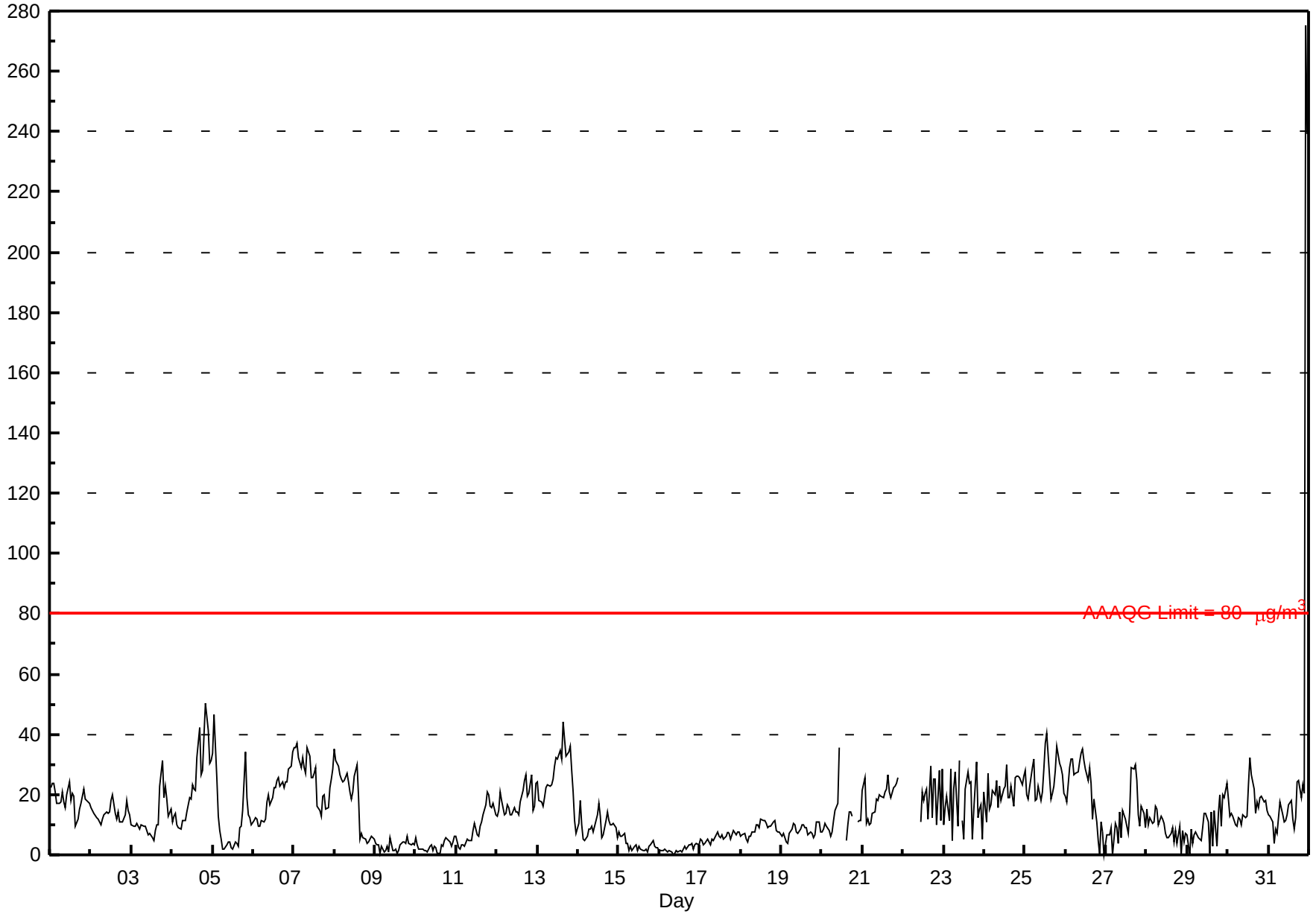
Hourly Averages

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

Henry Pirker - December 2010



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Hourly Maximums

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

Henry Pirker - December 2010

Maximum Value: 448.1 $\mu g/m^3$ on Dec 31 23:00

Maximum Daily Average: 53.3 $\mu g/m^3$ on Dec 31

Minimum Value: 1 $\mu g/m^3$ on Dec 16 09:00

Minimum Daily Average: 2.8 $\mu g/m^3$ on Dec 16

Maximum Diurnal Average: 30.4 $\mu g/m^3$ at hour 23

Minimum Diurnal Average: 13.4 $\mu g/m^3$ at hour 6

Monthly Average: 17.88 $\mu g/m^3$

Percentiles: $P_1 = 1.6$ $P_{10} = 4.0$ $Q_1 = 8.0$ Median = 14.7 $Q_3 = 24.0$ $P_{90} = 33.0$ $P_{99} = 48.0$

Hours in Service:	744
Hours of Data:	726
Hours of Missing Data:	18
Hours of Calibration:	0
Percent Operational Time:	97.6

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	25	25	24	23	19	18	20	22	19	16	24	26	21	21	21	15	14	17	17	21	22	21	18	18	20.4	26.2
2-Dec	16	16	15	13	13	12	11	13	14	15	15	16	21	22	17	13	15	13	11	12	16	19	18	14	14.9	21.5
3-Dec	12	10	10	11	10	9	10	10	11	11	8	8	7	6	10	11	11	37	37	21	24	23	15	16	14.1	37.5
4-Dec	14	16	16	12	10	10	12	13	12	18	21	23	24	23	23	43	46	34	33	48	54	47	35	33	25.7	53.9
5-Dec	42	51	37	18	9	8	2	3	4	5	6	4	3	5	5	6	10	12	29	38	22	18	13	12	15.2	51.5
6-Dec	12	13	12	11	11	12	12	13	22	21	18	20	24	24	25	26	25	25	24	26	26	31	31	36	20.8	35.7
7-Dec	36	37	38	35	31	33	33	31	38	36	30	26	30	31	23	17	15	22	22	18	19	25	26	33	28.6	38.3
8-Dec	36	35	31	29	27	25	26	29	27	23	20	25	27	31	30	8	8	6	6	5	6	6	7	7	20.0	36.0
9-Dec	4	4	4	2	3	3	4	4	4	7	4	2	3	1	3	4	5	5	5	7	5	4	4	4	3.9	6.9
10-Dec	6	6	2	2	3	2	2	2	4	4	2	4	3	2	3	4	4	6	6	5	5	4	6	6	3.8	6.5
11-Dec	7	4	3	5	4	4	7	6	6	6	10	11	9	8	11	13	14	19	23	23	17	17	18	15	10.9	23.2
12-Dec	14	19	22	21	15	15	17	16	16	15	17	16	15	15	24	24	27	29	23	28	31	19	22	25	20.2	30.7
13-Dec	25	22	18	18	21	23	24	24	25	26	32	34	34	36	34	51	51	35	35	37	37	22	18	8	28.7	50.6
14-Dec	17	21	14	6	5	8	9	9	10	10	11	16	19	20	7	9	12	16	16	11	11	11	11	7	12.0	20.7
15-Dec	8	8	7	8	6	5	3	5	2	5	5	4	4	2	2	2	2	1	4	4	5	5	3	3	4.2	8.0
16-Dec	2	3	3	3	3	1	2	1	1	1	2	1	2	2	3	4	4	4	5	5	3	5	5	4	2.8	4.8
17-Dec	6	5	4	4	6	6	4	6	5	7	8	8	6	7	6	6	8	8	6	8	9	7	9	9	6.7	9.0
18-Dec	7	8	8	6	5	6	7	8	9	11	11	11	12	12	12	11	10	10	10	12	12	9	8	9	9.5	12.3
19-Dec	7	8	6	6	7	7	10	11	11	9	8	9	11	11	10	9	8	8	7	7	8	13	13	9	8.8	12.7
20-Dec	8	10	11	11	9	7	10	12	18	18	49	M	M	M	8	13	15	15	13	N	N	12	12	14	13.9	49.2
21-Dec	33	32	12	13	11	11	15	15	20	19	21	20	20	22	23	28	28	20	23	23	27	27	N	N	21.0	32.8
22-Dec	N	N	N	N	N	N	N	N	N	N	13	27	26	29	29	21	35	24	37	37	20	33	20	33	--	37.1
23-Dec	28	36	36	28	33	19	37	37	16	41	N	15	12	28	29	26	26	17	39	40	19	24	24	11	26.9	40.6
24-Dec	27	19	32	27	29	29	32	32	19	25	22	23	26	33	26	24	25	18	32	32	28	29	25	31	26.8	32.6
25-Dec	32	21	21	26	36	38	21	20	25	22	22	34	40	42	40	25	22	24	34	37	34	32	28	24	29.2	42.0
26-Dec	21	21	34	34	34	28	28	29	34	35	36	33	31	27	30	31	15	20	16	7	5	14	9	6	24.1	36.4
27-Dec	13	13	14	15	4	14	13	11	17	9	18	13	12	11	19	35	35	35	34	17	12	17	16	13	17.2	35.2
28-Dec	17	14	15	15	16	17	16	14	15	15	12	10	7	7	11	12	7	10	6	11	8	11	9	11	11.9	16.9
29-Dec	11	7	9	9	11	11	9	8	13	13	23	23	15	9	19	12	19	12	24	24	14	24	22	25	15.3	24.7
30-Dec	24	15	15	15	12	11	14	14	12	16	14	15	33	33	34	27	23	23	22	20	22	20	20	17	19.7	33.8
31-Dec	16	14	13	8	11	8	17	19	15	13	14	15	20	20	17	13	16	30	30	24	26	24	448	448	53.3	448.1
	17.6	17.0	16.2	14.4	13.8	13.4	14.3	14.7	14.7	15.7	16.6	16.4	17.3	18.0	17.9	17.4	17.9	17.9	20.4	20.3	18.3	18.5	30.4	30.0	Diurnal Average	
	42.3	51.5	37.8	35.3	36.5	38.3	37.5	37.5	38.3	40.6	49.2	33.6	39.8	42.0	40.1	50.6	50.6	36.5	38.6	47.6	53.9	47.4	448.1	448.1	Diurnal Maximum	

M - Maintenance N - Not Valid

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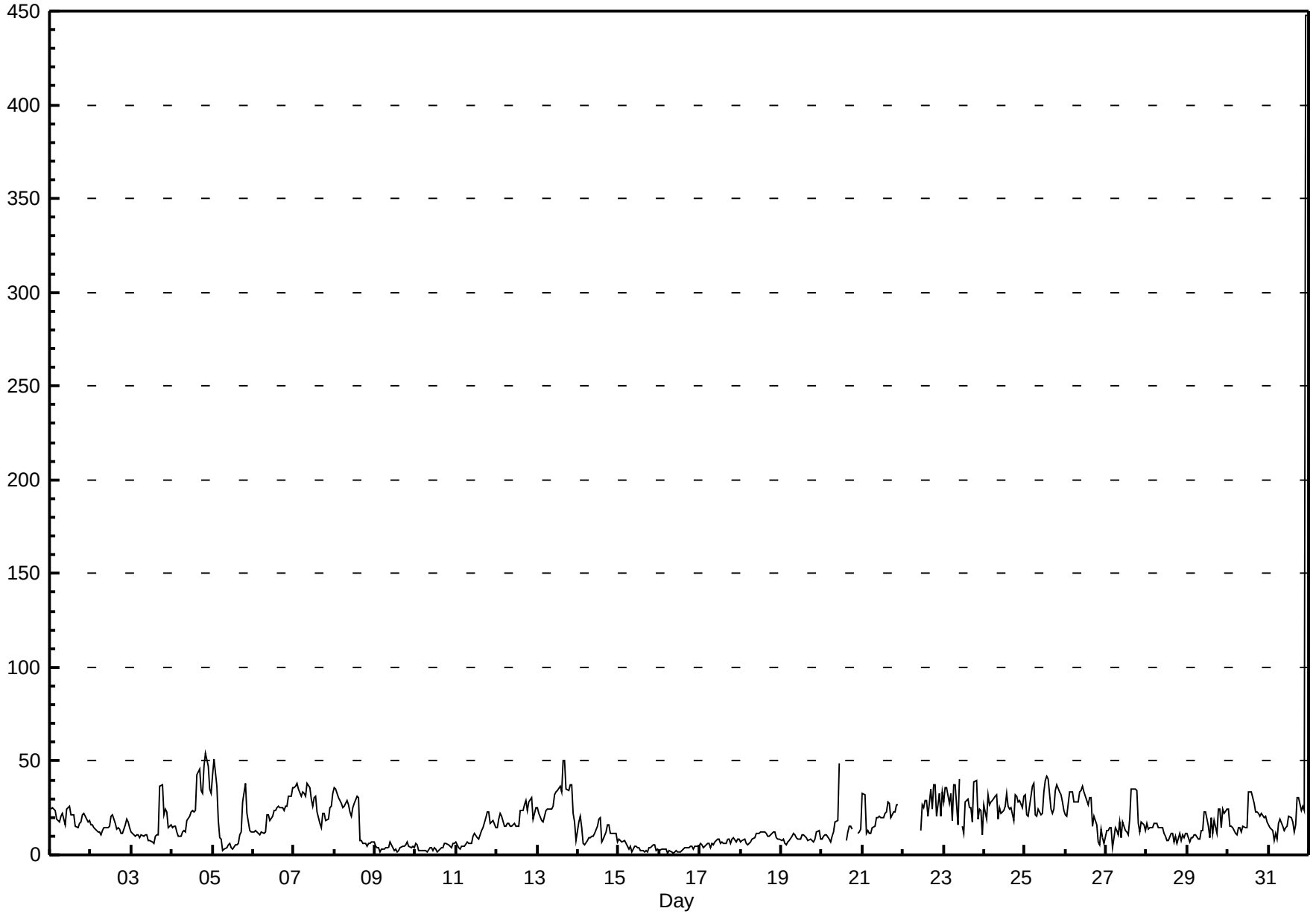
Hourly Maximums

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

Henry Pirker - December 2010



PASZA
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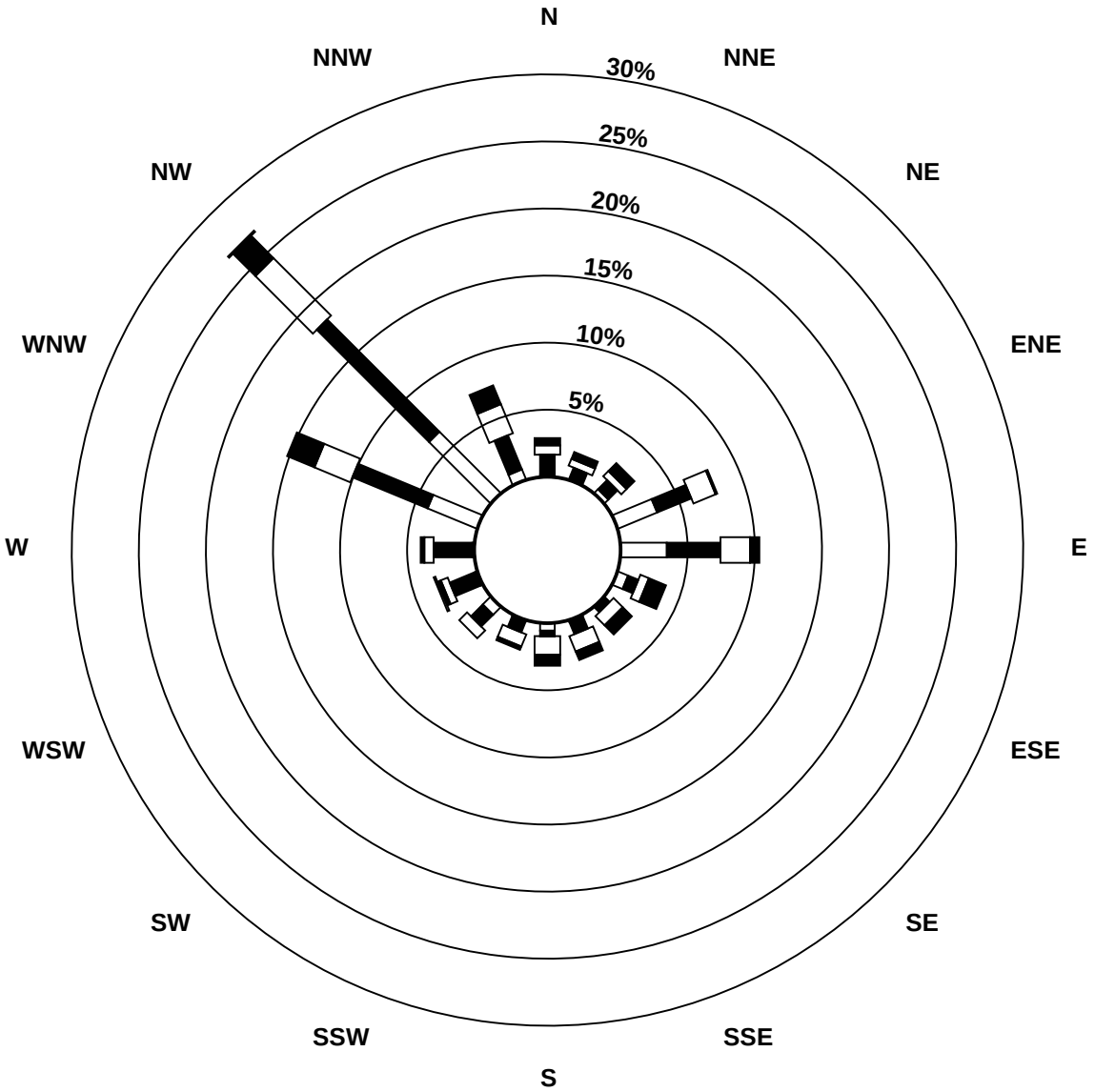
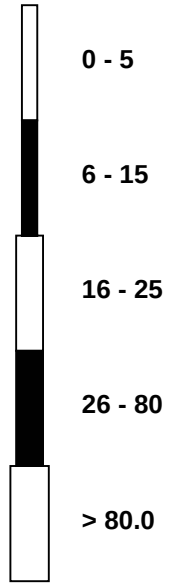
Pollutant Rose

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

Henry Pirker - December 2010



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



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Peace Air Shed Zone Association

Hourly Averages

External Temperature (ET) - °C

Henry Pirker - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.7 °C on Dec 1 14:00 Maximum Daily Average: -5.0 °C on Dec 1

Minimum Value: -34 °C on Dec 30 10:00 Minimum Daily Average: -29.8 °C on Dec 30
Maximum Diurnal Average: -13.6 °C at hour 14 Minimum Diurnal Average: -18.1 °C at hour 24
Monthly Average: -16.78 °C Percentiles: P_1 = -32.4 P_{10} = -24.2 Q_1 = -20.2 Median = -16.8 Q_3 = -12.8 P_{90} = -9.3 P_{99} = -4.3

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-Dec	-5	-5	-5	-4	-4	-4	-5	-6	-6	-5	-5	-1	0	2	0	-2	-5	-8	-10	-10	-9	-9	-8	-8	-5.0	1.7
2-Dec	-8	-8	-9	-9	-9	-9	-9	-10	-10	-10	-10	-9	-9	-9	-9	-10	-10	-11	-10	-11	-11	-12	-12	-13	-9.8	-8.0
3-Dec	-13	-13	-14	-14	-14	-13	-13	-13	-13	-13	-12	-12	-11	-11	-10	-11	-13	-14	-14	-17	-21	-22	-22	-22	-14.3	-10.5
4-Dec	-21	-20	-21	-21	-22	-20	-21	-21	-22	-21	-17	-15	-11	-10	-8	-8	-11	-11	-12	-13	-14	-15	-15	-16	-16.0	-7.8
5-Dec	-15	-14	-14	-13	-13	-11	-10	-9	-11	-11	-8	-8	-5	-5	-4	-4	-9	-13	-14	-18	-20	-20	-20	-20	-12.0	-3.9
6-Dec	-20	-19	-19	-19	-18	-19	-21	-20	-19	-17	-13	-11	-9	-10	-11	-11	-11	-12	-12	-13	-14	-13	-13	-13	-14.9	-9.0
7-Dec	-12	-12	-12	-12	-12	-12	-13	-13	-13	-13	-12	-12	-12	-11	-11	-12	-12	-12	-12	-12	-12	-12	-13	-13	-12.3	-10.9
8-Dec	-13	-12	-12	-12	-12	-11	-12	-11	-11	-11	-11	-11	-11	-10	-11	-12	-13	-14	-15	-15	-15	-15	-16	-16	-12.6	-10.3
9-Dec	-16	-16	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-16	-16	-16	-16	-17	-17	-18	-18	-18	-18	-18	-18	-17.0	-15.8
10-Dec	-19	-19	-19	-19	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-19.9	-18.8
11-Dec	-20	-20	-19	-20	-20	-19	-19	-19	-19	-19	-18	-16	-15	-16	-17	-17	-17	-18	-18	-19	-21	-22	-22	-22	-18.8	-14.9
12-Dec	-19	-18	-18	-18	-17	-17	-16	-17	-16	-15	-14	-14	-14	-13	-13	-14	-14	-14	-15	-16	-17	-18	-18	-19	-15.9	-13.1
13-Dec	-20	-20	-21	-20	-19	-17	-17	-17	-17	-16	-14	-14	-8	-7	-6	-6	-9	-12	-14	-14	-10	-7	-5	-5	-13.0	-4.7
14-Dec	-11	-9	-6	-8	-11	-13	-14	-11	-11	-13	-9	-8	-8	-7	-5	-6	-6	-5	-5	-7	-7	-8	-10	-12	-8.8	-5.1
15-Dec	-14	-16	-16	-17	-17	-18	-18	-18	-19	-19	-19	-19	-19	-19	-20	-20	-20	-20	-20	-20	-20	-20	-21	-21	-18.7	-14.0
16-Dec	-21	-21	-22	-22	-22	-22	-22	-22	-22	-22	-22	-21	-21	-21	-21	-21	-21	-21	-21	-21	-21	-21	-21	-21	-21.4	-20.8
17-Dec	-21	-21	-21	-21	-21	-21	-21	-21	-21	-21	-20	-20	-19	-18	-19	-20	-20	-20	-20	-20	-19	-19	-19	-19	-20.0	-18.4
18-Dec	-19	-19	-19	-19	-19	-19	-19	-19	-20	-20	-19	-19	-18	-17	-17	-18	-17	-17	-17	-17	-17	-16	-16	-15	-18.0	-15.1
19-Dec	-14	-15	-15	-15	-15	-16	-16	-16	-16	-16	-16	-16	-15	-15	-15	-16	-16	-16	-16	-17	-17	-16	-16	-16	-15.7	-14.3
20-Dec	-16	-16	-16	-16	-16	-16	-16	-17	-18	-19	-17	-14	-14	-14	-15	-19	-23	-25	-25	-25	-26	-27	-27	-26	-19.3	-13.6
21-Dec	-27	-27	-27	-27	-29	-29	-28	-27	-27	-27	-26	-24	-22	-20	-21	-23	-25	-26	-26	-27	-27	-26	-26	-26	-25.8	-20.5
22-Dec	-26	-27	-27	-26	-26	-25	-26	-25	-24	-23	-22	-21	-19	-19	-19	-18	-18	-18	-18	-18	-17	-17	-17	-17	-21.4	-16.5
23-Dec	-17	-17	-16	-16	-16	-17	-18	-19	-20	-21	-20	-18	-17	-17	-17	-19	-20	-20	-21	-21	-21	-21	-22	-23	-18.9	-15.8
24-Dec	-20	-19	-19	-20	-19	-19	-19	-19	-19	-19	-18	-17	-17	-16	-16	-16	-16	-16	-15	-15	-15	-15	-15	-14	-17.3	-14.4
25-Dec	-14	-14	-15	-15	-14	-14	-13	-13	-13	-14	-13	-11	-9	-9	-9	-9	-10	-11	-11	-10	-10	-9	-9	-9	-11.6	-8.5
26-Dec	-9	-10	-11	-10	-10	-10	-10	-10	-10	-10	-9	-9	-10	-9	-9	-11	-13	-13	-14	-14	-15	-15	-15	-15	-11.3	-9.0
27-Dec	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15	-14	-14	-10	-9	-11	-13	-15	-18	-20	-21	-22	-23	-23	-24	-16.2	-9.0
28-Dec	-23	-23	-22	-21	-20	-20	-18	-20	-19	-19	-17	-16	-16	-17	-20	-19	-19	-19	-19	-19	-20	-21	-22	-23	-19.7	-16.1
29-Dec	-24	-24	-25	-26	-28	-28	-27	-25	-25	-25	-24	-22	-20	-20	-20	-21	-21	-22	-23	-25	-27	-27	-28	-30	-24.4	-19.7
30-Dec	-30	-30	-31	-31	-31	-33	-33	-33	-32	-34	-30	-26	-24	-24	-23	-25	-28	-30	-30	-31	-31	-31	-32	-33	-29.8	-23.3
31-Dec	-32	-32	-30	-30	-28	-25	-23	-22	-22	-22	-21	-19	-17	-13	-10	-13	-15	-17	-18	-17	-16	-14	-15	-15	-20.2	-9.8
	-17.9	-17.8	-17.8	-17.9	-17.8	-17.8	-17.7	-17.6	-17.7	-17.6	-16.4	-15.2	-14.0	-13.6	-13.6	-14.4	-15.6	-16.4	-16.9	-17.4	-17.7	-17.7	-17.9	-18.1	Diurnal Average	
	-4.9	-4.8	-4.6	-4.4	-4.3	-4.1	-5.0	-5.6	-5.6	-5.3	-4.6	-1.0	-0.3	1.7	0.3	-1.8	-4.8	-5.5	-5.1	-6.5	-7.2	-6.6	-4.7	-5.4	Diurnal Maximum	

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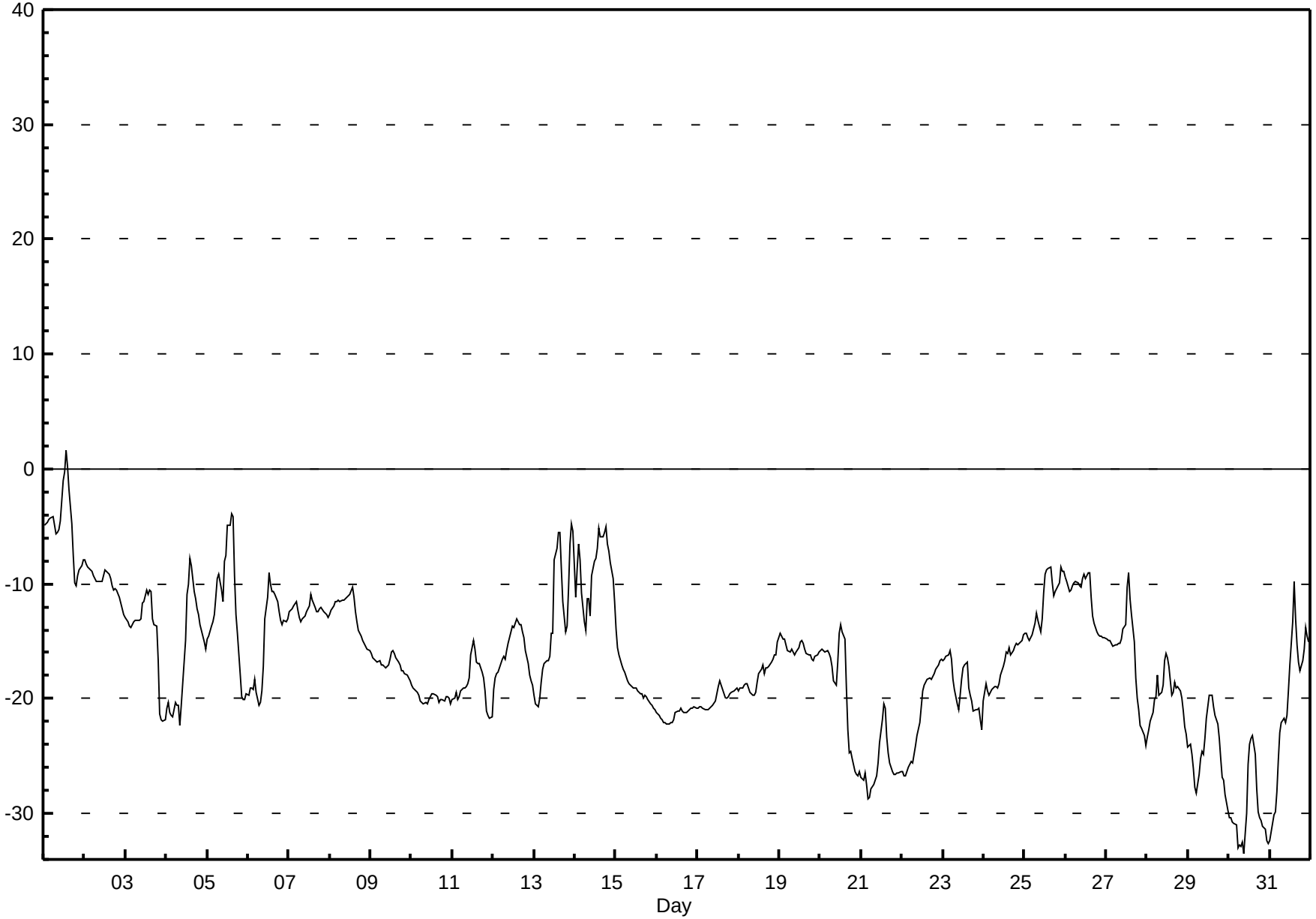
Hourly Averages

External Temperature (ET) - ^{o}C

Henry Pirker - December 2010



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Hourly Averages

Relative Humidity (RH) - %

Henry Pirker - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 84.5 % on Dec 14 15:00 Maximum Daily Average: 81.7 % on Dec 2

Minimum Value: 45 % on Dec 5 15:00 Minimum Daily Average: 60.9 % on Dec 30
Maximum Diurnal Average: 72.8 % at hour 20 Minimum Diurnal Average: 64.8 % at hour 14
Monthly Average: 70.85 % Percentiles: P_1 = 51.9 P_{10} = 64.4 Q_1 = 67.6 Median = 70.6 Q_3 = 74.6 P_{90} = 78.3 P_{99} = 83.3

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

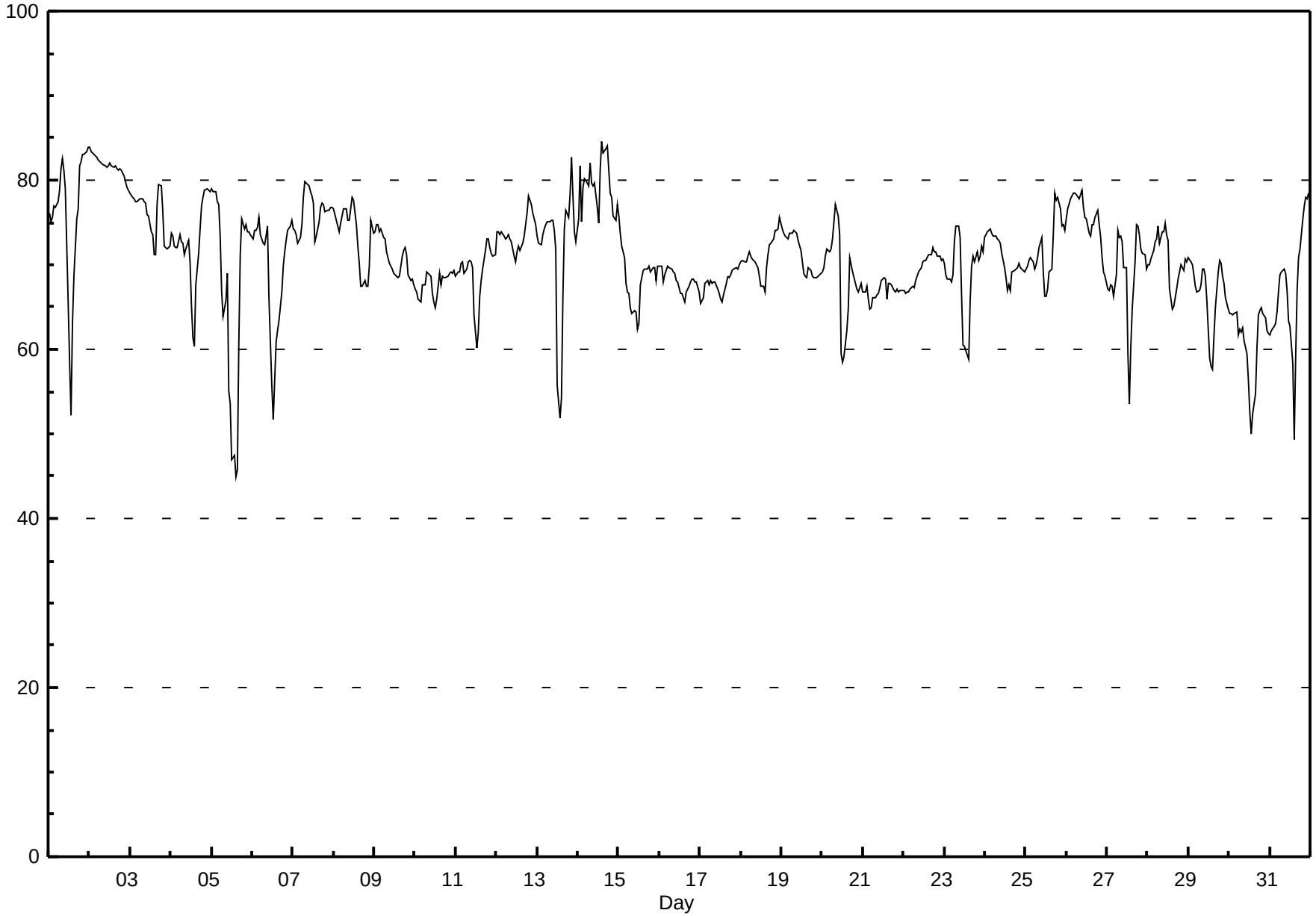
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Dec	76	75	76	77	77	77	79	81	83	81	79	66	58	52	63	69	75	77	82	82	83	83	83	84	75.8	83.9
2-Dec	84	83	83	83	83	82	82	82	82	82	82	82	82	82	82	82	81	81	81	81	81	80	79	79	81.7	83.9
3-Dec	78	78	78	77	77	78	78	78	78	77	76	76	74	74	71	71	77	79	79	76	72	72	72	72	75.8	79.5
4-Dec	74	73	72	72	72	74	73	73	71	72	73	70	65	61	60	68	71	74	77	78	79	79	79	79	72.4	78.9
5-Dec	79	79	79	77	77	73	67	64	66	69	55	54	47	47	45	46	61	71	75	74	75	74	74	74	66.7	79.0
6-Dec	73	74	74	74	76	74	73	72	73	75	66	56	52	56	61	62	63	67	70	71	73	74	75	75	69.1	75.7
7-Dec	74	74	74	73	73	75	78	80	80	79	79	78	77	73	73	75	77	77	77	76	76	77	77	77	76.2	79.9
8-Dec	77	76	75	74	75	76	77	77	75	75	77	78	78	75	72	70	67	67	68	67	67	70	75	74	73.4	78.0
9-Dec	74	75	75	74	74	73	73	72	71	70	69	69	69	69	68	69	71	72	72	71	69	68	68	68	70.9	74.7
10-Dec	67	67	66	66	68	68	68	69	69	69	67	66	65	66	69	68	69	68	69	69	69	69	69	69	67.7	69.3
11-Dec	69	69	69	70	70	69	70	70	70	70	70	64	60	62	66	68	69	72	73	73	72	71	71	71	69.2	73.1
12-Dec	74	74	74	74	73	73	73	74	73	73	71	70	72	72	72	73	73	75	76	78	77	76	75	75	73.7	78.1
13-Dec	73	73	72	74	74	75	75	75	75	75	74	72	56	52	54	66	74	76	76	78	83	78	74	73	72.0	82.8
14-Dec	75	82	75	79	80	80	79	82	80	79	80	77	75	81	85	83	84	84	81	78	78	76	75	77	79.4	84.5
15-Dec	76	74	72	71	68	67	67	65	64	65	64	62	63	68	69	70	69	70	70	69	70	70	68	70	68.3	75.8
16-Dec	70	70	68	69	69	70	70	69	69	69	68	68	67	67	66	66	67	67	68	68	68	68	68	67	68.1	69.9
17-Dec	65	66	66	68	68	68	68	68	68	68	67	67	66	66	67	68	69	68	69	69	70	70	70	70	67.8	70.0
18-Dec	70	70	70	70	71	72	71	71	70	70	70	69	67	67	67	70	71	72	73	73	74	74	74	76	70.9	75.5
19-Dec	74	74	73	73	73	74	74	74	74	74	73	72	70	69	69	69	70	69	69	69	68	68	69	69	71.2	74.3
20-Dec	69	70	71	72	71	72	73	75	77	76	73	59	59	59	62	65	71	70	69	68	67	67	67	68	68.8	77.1
21-Dec	67	67	67	66	65	65	66	66	66	67	67	68	68	68	66	68	68	68	67	67	67	67	67	67	66.9	68.4
22-Dec	67	67	67	67	67	68	67	68	69	69	70	70	71	70	71	71	71	72	72	72	71	71	71	71	69.5	72.0
23-Dec	70	69	68	68	68	69	73	75	75	73	66	61	60	60	59	66	70	71	70	72	71	71	72	72	68.6	74.7
24-Dec	73	74	74	74	74	73	73	73	73	73	71	70	68	67	68	67	69	69	70	70	70	70	69	69	70.9	74.2
25-Dec	70	70	71	71	70	69	70	71	72	73	69	66	66	67	69	70	74	79	78	78	77	75	75	74	71.7	78.5
26-Dec	75	77	78	78	79	79	78	78	78	79	77	76	75	74	73	75	75	76	76	75	73	71	69	69	75.5	78.8
27-Dec	67	67	68	67	66	69	74	73	73	73	70	70	59	54	60	65	70	75	75	74	72	71	71	70	68.8	74.7
28-Dec	70	70	71	72	73	73	75	72	74	74	75	74	73	67	65	65	66	67	68	70	70	69	71	70	70.5	74.9
29-Dec	71	70	70	69	67	67	67	68	69	69	69	66	59	58	58	61	65	69	71	70	69	68	66	65	66.7	70.9
30-Dec	64	64	64	64	64	62	62	62	63	61	60	56	53	50	52	55	60	64	65	65	64	64	62	62	60.9	64.9
31-Dec	62	62	63	63	64	67	69	69	70	69	67	63	63	58	49	59	67	71	72	75	77	78	78	79	67.2	78.5
	71.9	72.0	71.7	71.8	71.9	71.8	72.3	72.4	72.6	72.5	70.7	68.1	65.7	64.8	65.5	67.6	70.5	72.2	72.8	72.8	72.6	72.2	72.0	71.9	Diurnal Average	
	83.9	83.5	83.1	82.9	82.7	82.4	82.2	82.0	82.5	81.8	81.5	81.6	82.0	81.6	84.5	83.3	83.8	84.1	81.8	82.3	83.1	83.0	83.4	83.9	Diurnal Maximum	

PASZA
Peace Air Shed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Henry Pirker - December 2010



PASZA
Peace Air Shed Zone Association

Hourly Averages

Solar Radiation (SR) - W/m^2

Henry Pirker - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 210.4 W/m^2 on Dec 5 13:00 Maximum Daily Average: 36.6 W/m^2 on Dec 5

Minimum Value: 0 W/m^2 on Dec 1 01:00 Minimum Daily Average: 6.9 W/m^2 on Dec 14
Maximum Diurnal Average: 82.6 W/m^2 at hour 13 Minimum Diurnal Average: 0.0 W/m^2 at hour 1
Monthly Average: 15.01 W/m^2 Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 12.9 P_{90} = 59.6 P_{99} = 140.8

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-Dec	0	0	0	0	0	0	0	0	0	18	53	149	174	167	100	47	5	0	0	0	0	0	0	0	29.7	173.6
2-Dec	0	0	0	0	0	0	0	0	0	18	34	67	66	88	71	15	1	0	0	0	0	0	0	0	15.0	88.3
3-Dec	0	0	0	0	0	0	0	0	0	7	59	52	55	54	73	43	2	0	0	0	0	0	0	0	14.4	72.6
4-Dec	0	0	0	0	0	0	0	0	0	23	40	76	107	83	92	35	8	0	0	0	0	0	0	0	19.4	106.5
5-Dec	0	0	0	0	0	0	0	0	0	26	82	123	210	208	156	68	4	0	0	0	0	0	0	0	36.6	210.4
6-Dec	0	0	0	0	0	0	0	0	0	8	74	133	143	76	69	33	2	0	0	0	0	0	0	0	22.5	142.7
7-Dec	0	0	0	0	0	0	0	0	0	8	48	53	86	110	62	29	1	0	0	0	0	0	0	0	16.5	109.6
8-Dec	0	0	0	0	0	0	0	0	0	2	15	34	57	99	53	17	1	0	0	0	0	0	0	0	11.5	98.7
9-Dec	0	0	0	0	0	0	0	0	0	8	28	63	61	73	50	28	1	0	0	0	0	0	0	0	13.0	72.5
10-Dec	0	0	0	0	0	0	0	0	0	7	40	67	90	60	53	43	1	0	0	0	0	0	0	0	15.1	90.2
11-Dec	0	0	0	0	0	0	0	0	0	7	37	113	137	110	49	19	2	0	0	0	0	0	0	0	19.7	136.5
12-Dec	0	0	0	0	0	0	0	0	0	4	31	46	45	62	60	18	2	0	0	0	0	0	0	0	11.2	62.5
13-Dec	0	0	0	0	0	0	0	0	0	10	44	50	145	110	93	54	2	0	0	0	0	0	0	0	21.2	144.7
14-Dec	0	0	0	0	0	0	0	0	0	3	29	48	55	15	11	5	1	0	0	0	0	0	0	0	6.9	54.7
15-Dec	0	0	0	0	0	0	0	0	0	3	24	44	49	45	25	19	1	0	0	0	0	0	0	0	8.7	48.8
16-Dec	0	0	0	0	0	0	0	0	0	5	32	67	83	61	58	25	1	0	0	0	0	0	0	0	13.8	83.3
17-Dec	0	0	0	0	0	0	0	0	0	6	36	56	66	71	49	20	1	0	0	0	0	0	0	0	12.7	71.4
18-Dec	0	0	0	0	0	0	0	0	0	3	20	40	52	51	36	14	0	0	0	0	0	0	0	0	9.0	52.4
19-Dec	0	0	0	0	0	0	0	0	0	1	16	37	49	47	34	11	1	0	0	0	0	0	0	0	8.1	48.7
20-Dec	0	0	0	0	0	0	0	0	0	5	36	65	79	83	62	27	2	0	0	0	0	0	0	0	15.0	82.7
21-Dec	0	0	0	0	0	0	0	0	0	4	28	58	66	76	51	10	1	0	0	0	0	0	0	0	12.3	76.2
22-Dec	0	0	0	0	0	0	0	0	0	3	17	41	42	40	23	16	5	0	0	0	0	0	0	0	7.8	42.0
23-Dec	0	0	0	0	0	0	0	0	0	6	35	63	80	83	67	28	4	0	0	0	0	0	0	0	15.3	83.1
24-Dec	0	0	0	0	0	0	0	0	0	2	23	42	65	70	51	26	1	0	0	0	0	0	0	0	11.7	69.5
25-Dec	0	0	0	0	0	0	0	0	0	3	24	53	68	71	56	35	4	0	0	0	0	0	0	0	13.0	70.8
26-Dec	0	0	0	0	0	0	0	0	0	2	18	34	37	90	81	54	4	0	0	0	0	0	0	0	13.3	90.2
27-Dec	0	0	0	0	0	0	0	0	0	3	24	51	144	141	82	41	7	0	0	0	0	0	0	0	20.5	143.9
28-Dec	0	0	0	0	0	0	0	0	0	4	35	82	55	66	27	18	1	0	0	0	0	0	0	0	12.0	82.3
29-Dec	0	0	0	0	0	0	0	0	0	4	19	55	70	67	51	24	4	0	0	0	0	0	0	0	12.2	70.3
30-Dec	0	0	0	0	0	0	0	0	0	3	33	58	77	80	69	37	5	0	0	0	0	0	0	0	15.1	80.0
31-Dec	0	0	0	0	0	0	0	0	0	3	27	41	49	71	69	26	5	0	0	0	0	0	0	0	12.1	70.8
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	34.2	63.3	82.6	81.5	60.7	28.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Diurnal Average	
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.8	81.6	148.9	210.4	208.4	156.1	67.8	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Diurnal Maximum	

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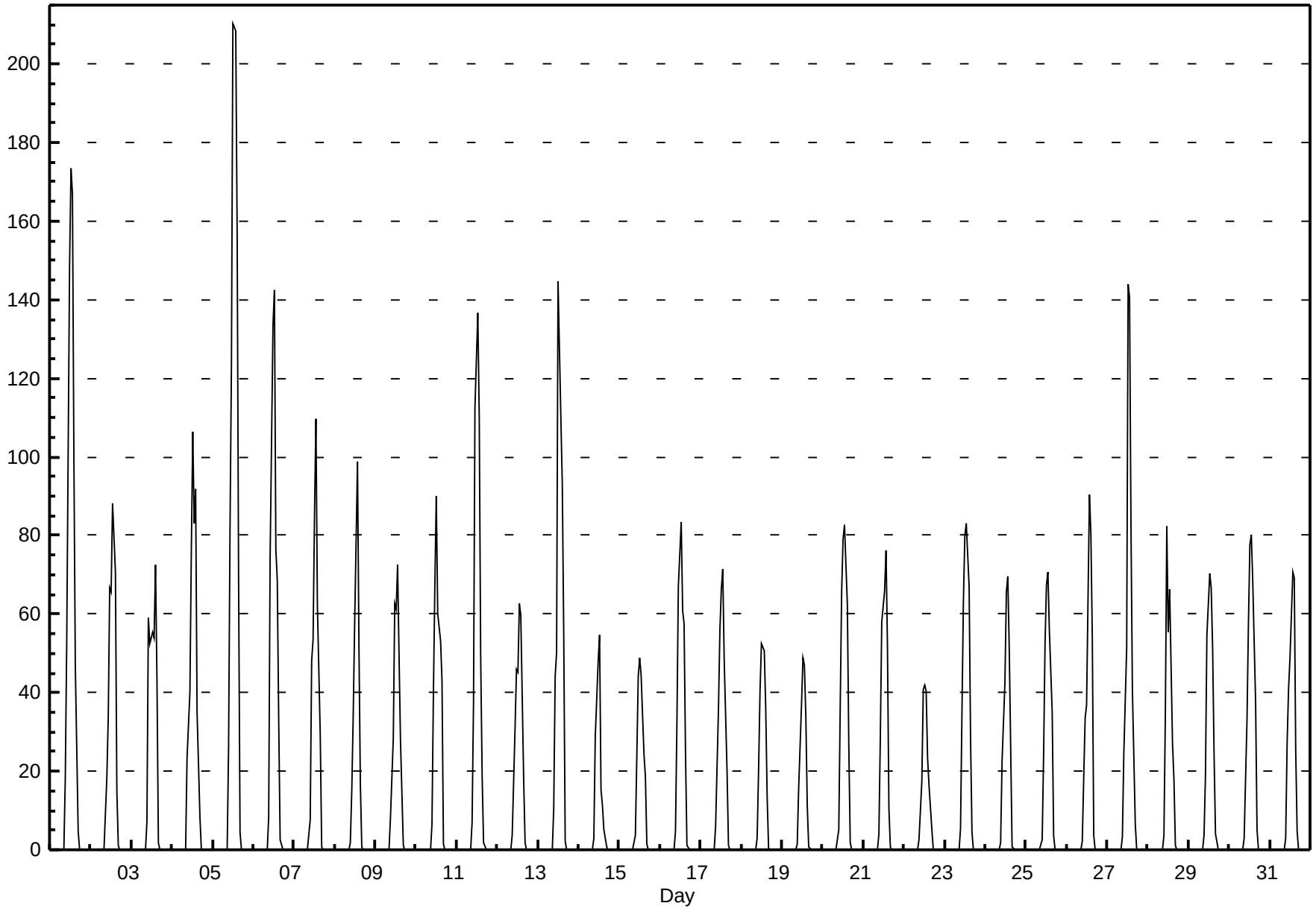
Hourly Averages

Solar Radiation (SR) - W/m^2

Henry Pirker - December 2010



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - December 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	3	3	1	3	1	3	3	4	2	1	3	4	4	3	6	7	8	7	7	4	5	2	3	3	1.7	8.2
Dir	231	259	63	194	246	212	193	167	252	171	149	179	332	299	94	81	85	82	89	83	94	44	57	84	106.7	85.0
2 Spd	4	4	4	3	3	3	2	3	3	3	4	3	1	4	4	3	3	2	2	1	3	6	6	5	2.1	5.9
Dir	94	83	100	98	53	71	93	115	69	73	77	72	78	24	7	84	73	64	60	55	332	325	319	305	51.7	319.3
3 Spd	6	7	6	5	5	3	3	4	5	6	6	4	3	4	5	4	3	5	5	1	4	4	4	4	2.4	6.9
Dir	318	313	307	299	296	266	280	266	298	298	304	301	227	176	185	186	163	110	119	296	316	312	304	316	287.0	312.7
4 Spd	1	2	3	4	0	3	1	2	3	1	2	3	2	3	2	4	3	0	3	2	2	3	2	2	1.3	4.3
Dir	287	310	333	313	302	148	165	191	308	212	183	287	277	308	233	200	337	301	321	283	299	335	319	333	293.7	313.1
5 Spd	1	4	5	1	4	5	8	7	5	6	5	5	5	5	3	1	2	4	4	6	5	4	5	4	2.4	8.3
Dir	61	180	224	208	302	256	219	233	228	180	224	179	220	213	227	260	277	306	357	334	329	324	335	328	251.0	218.5
6 Spd	1	3	0	1	2	3	2	4	3	2	3	4	2	2	5	4	2	2	4	3	2	5	3	4	0.6	4.8
Dir	305	159	151	18	120	305	358	307	321	313	316	262	348	144	163	194	74	267	332	318	157	170	190	168	242.6	170.3
7 Spd	4	3	4	5	4	8	7	6	7	7	6	6	7	6	6	6	6	5	7	6	7	4	5	3	4.7	7.5
Dir	155	179	172	180	165	136	135	126	111	105	109	98	81	79	83	72	74	66	71	81	79	77	76	55	101.6	135.9
8 Spd	5	6	4	4	4	2	4	5	6	8	9	8	10	12	15	16	19	17	15	16	15	14	13	13	9.5	18.9
Dir	36	352	2	339	300	41	203	329	314	309	316	324	310	308	311	312	317	315	308	316	314	312	311	310	315.9	316.9
9 Spd	13	14	11	10	10	10	8	8	8	7	8	6	5	5	5	6	5	5	6	7	7	6	6	7	3.9	13.7
Dir	308	301	308	301	310	319	313	321	320	317	325	327	71	48	61	73	66	72	80	87	91	81	80	81	350.9	300.9
10 Spd	8	9	8	8	7	7	9	8	8	8	9	8	9	8	8	8	7	9	8	7	6	5	6	7	7.7	8.9
Dir	78	86	81	85	74	86	83	84	83	80	86	72	79	79	72	75	77	82	71	80	86	68	69	79	79.3	83.3
11 Spd	7	7	7	6	4	5	5	5	6	6	7	7	6	6	6	6	5	3	4	3	3	3	4	4	4.1	7.3
Dir	76	72	77	86	80	90	92	111	118	116	102	93	85	91	92	94	102	71	42	9	348	318	318	345	81.5	101.8
12 Spd	3	2	3	3	3	4	4	1	4	3	2	4	4	7	6	5	4	4	3	3	3	3	1	2	1.7	7.0
Dir	27	40	335	17	56	32	74	153	37	81	109	103	128	119	113	141	94	127	178	205	295	306	128	191	94.7	119.1
13 Spd	2	4	2	3	0	2	1	1	3	1	1	3	2	4	1	6	6	1	2	3	6	9	7	5	1.2	8.6
Dir	329	311	319	173	283	171	204	167	162	21	298	308	313	311	150	124	119	294	342	117	140	138	132	144	142.9	137.6
14 Spd	3	4	4	2	1	3	3	4	2	5	3	3	5	13	1	3	4	5	7	4	7	17	18	19	3.5	18.9
Dir	10	101	92	106	183	19	76	88	59	335	82	238	277	273	224	273	284	271	319	26	304	309	316	317	315.6	317.0
15 Spd	19	18	18	21	21	20	21	21	22	23	22	24	23	19	18	19	20	19	18	16	13	15	16	15	19.0	23.6
Dir	315	297	300	303	309	310	311	301	303	301	302	303	309	315	319	317	302	307	323	320	323	317	322	315	309.4	303.1
16 Spd	12	12	13	11	13	11	11	11	11	12	11	9	11	9	8	9	7	7	5	4	2	3	1	5	8.1	13.1
Dir	324	328	315	309	309	304	310	309	302	295	299	297	297	297	297	298	301	302	308	301	300	321	149	122	306.1	308.6
17 Spd	5	4	5	6	5	5	5	4	3	4	5	3	2	3	4	4	4	4	3	2	3	3	2	3	3.5	5.6
Dir	111	73	71	73	70	61	45	68	76	66	92	76	92	14	49	80	87	81	63	60	32	43	77	0	67.0	73.5
18 Spd	6	5	6	5	5	4	5	5	5	5	6	3	4	3	3	7	3	5	3	2	3	3	2	4	3.1	7.1
Dir	314	317	323	324	304	295	247	237	236	235	238	234	226	247	275	245	262	229	259	285	202	243	207	91	260.5	245.2
19 Spd	6	5	4	4	2	4	4	3	5	7	9	11	11	11	13	13	12	13	14	13	13	11	9	10	6.7	14.1
Dir	72	52	88	80	322	255	260	254	247	243	253	252	263	291	285	296	297	294	299	303	295	283	276	278	284.2	299.3
20 Spd	9	8	7	6	5	4	4	5	4	4	4	2	4	6	6	5	4	5	5	4	4	4	5	4	1.3	8.5
Dir	276	271	250	246	232	196	164	147	134	128	122	84	106	98	83	305	338	319	309	322	316	312	294	313	270.0	276.4
21 Spd	4	3	1	4	4	5	4	4	4	3	3	3	3	3	4	3	3	3	3	3	3	3	3	3	3.2	4.8
Dir	353	313	335	319	311	311	316	327	312	331	319	317	296	303	310	325	303	314	318	326	334	305	319	311	317.7	310.8
22 Spd	3	3	2	2	3	2	2	3	1	3	3	3	2	2	2	1	1	2	3	1	1	3	2	3	2.0	3.4
Dir	305	322	321	291	320	328	288	297	315	321	304	298	302	318	302	306	296	319	157	215	264	294	280	270	300.1	297.8

PASZA
Peace Air Shed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - December 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
23 Spd	7	8	9	10	10	8	5	3	3	4	4	7	5	4	3	4	3	2	3	3	3	4	3	3	4.6	9.8
Dir	302	298	292	286	293	291	285	256	283	309	310	291	296	319	327	297	360	69	333	324	313	318	318	338	301.8	285.6
24 Spd	3	5	5	4	3	3	4	6	6	5	3	3	4	4	4	2	5	2	3	3	4	4	2	2	1.5	6.2
Dir	26	93	102	85	70	60	90	90	92	88	97	117	136	115	117	295	294	207	254	318	285	303	183	294	88.3	90.0
25 Spd	3	4	4	5	3	3	5	1	6	6	4	3	1	5	6	4	3	3	3	5	3	4	6	4	1.0	6.1
Dir	308	303	318	311	283	262	251	253	173	170	153	97	129	317	295	303	308	138	87	26	45	50	26	35	324.0	170.1
26 Spd	2	1	2	2	1	3	4	4	3	2	3	4	5	7	8	17	17	17	12	15	15	15	15	14	6.8	17.4
Dir	77	89	331	347	104	164	14	353	299	25	35	34	357	341	319	307	316	317	310	299	304	312	309	300	317.9	317.2
27 Spd	15	13	14	13	14	9	9	8	5	2	1	4	2	4	4	2	2	4	4	4	3	4	4	3	5.8	15.4
Dir	303	300	306	303	299	302	310	317	319	345	301	185	219	304	322	347	321	307	327	304	316	314	327	302	306.2	303.0
28 Spd	3	3	3	4	2	1	3	4	5	4	8	7	8	10	10	10	7	6	7	9	9	8	6	4	5.6	10.0
Dir	327	321	317	326	296	215	340	315	356	313	350	312	319	312	299	292	305	350	319	313	307	304	326	333	317.0	311.6
29 Spd	4	4	5	6	4	4	4	3	2	3	4	5	6	5	5	3	2	4	3	4	4	3	3	4	3.8	6.1
Dir	323	329	325	333	327	319	312	283	308	285	315	311	300	293	320	293	330	1	1	312	317	333	327	314	317.4	332.5
30 Spd	4	4	3	4	5	4	3	4	2	5	3	2	3	5	3	5	4	4	4	3	4	4	4	4	3.8	5.1
Dir	324	320	318	313	335	313	316	313	357	328	306	295	309	303	325	299	318	303	304	328	310	321	321	316	316.2	335.0
31 Spd	4	4	4	3	3	2	2	4	5	4	3	4	1	1	2	3	3	4	4	3	2	3	3	1	2.8	4.9
Dir	316	323	292	302	300	275	270	311	329	311	318	298	351	234	270	357	324	332	340	318	333	8	321	237	315.6	328.7
Spd	3.2	2.9	2.8	2.7	3.0	2.0	1.6	1.6	1.7	1.8	1.7	1.9	2.0	2.8	2.1	2.5	2.9	2.7	3.0	3.2	3.1	3.7	3.3	3.0	Diurnal Average	
Dir	331.5	322.2	321.7	314.8	314.7	308.1	304.6	305.2	314.9	311.9	316.6	303.4	310.5	316.1	326.4	314.1	329.7	330.1	335.3	330.0	323.5	320.2	323.6	321.9		
Spd	19.3	17.7	17.7	21.2	21.4	20.4	21.4	21.1	21.9	22.5	21.5	23.6	22.7	18.8	18.2	18.8	20.5	18.5	17.6	16.4	15.3	17.3	17.9	18.9	Diurnal Maximum	
Dir	315.0	296.8	300.4	302.5	309.1	310.4	310.8	300.9	302.8	300.6	301.6	303.1	309.2	314.8	319.2	317.1	301.8	306.7	322.6	316.2	314.2	308.7	315.9	317.0		

Maximum Speed Value: 24 km/h on Dec 15 12:00
Minimum Speed Value: 0 km/h on Dec 4 05:00
Maximum Daily Speed Average: 19.0 km/h on Dec 15
Minimum Daily Speed Average: 0.6 km/h on Dec 4
Maximum Diurnal Speed Average: 3.7 km/h at hour 22
Minimum Diurnal Speed Average: 1.6 km/h at hour 8

Monthly Average Velocity: 2.52 km/h 320.24 deg
Speed Percentiles: P_1 = 0.6 P_{10} = 2.0 Q_1 = 3.1 Median = 4.1 Q_3 = 6.2 P_{90} = 11.1 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	35	5	0	0	0	0	40
NorthEast	37	6	0	0	0	0	43
East	60	74	0	0	0	0	134
SouthEast	31	12	0	0	0	0	43
South	36	5	0	0	0	0	41
SouthWest	29	13	0	0	0	0	42
West	45	15	4	0	0	0	64
NorthWest	200	66	59	12	0	0	337
Total	473	196	63	12	0	0	744

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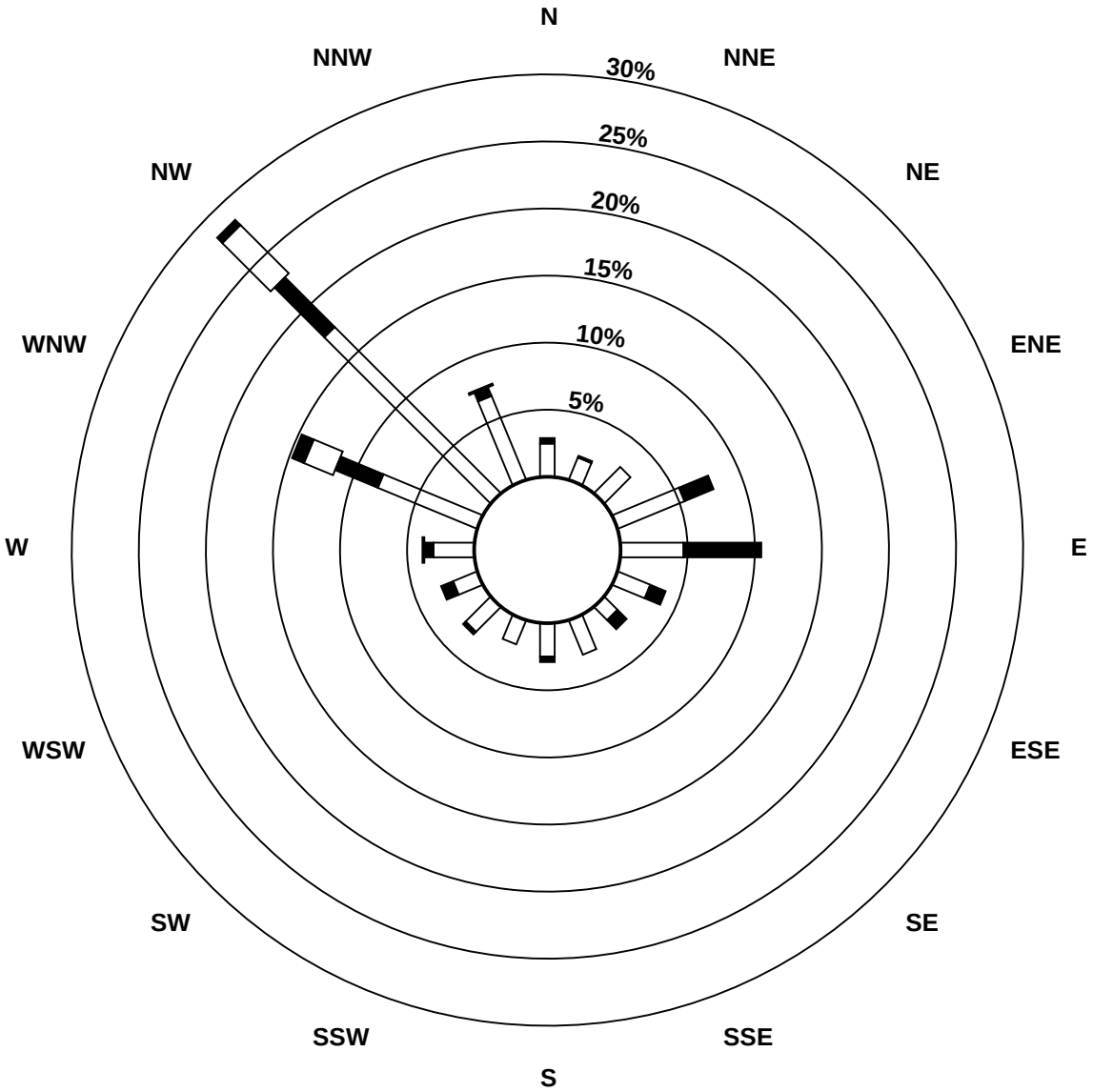
Peace Air Shed Zone Association

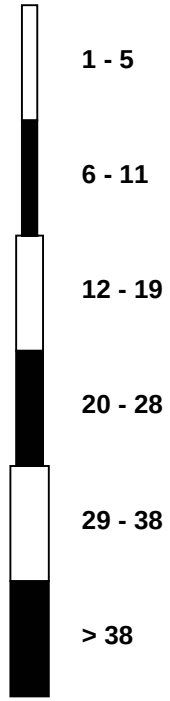
Wind Rose

Wind Speed (WS) (km/h)

Henry Pirker - December 2010



Wind Speed Classes (km/h)



PASZA
Peace Air Shed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Henry Pirker - December 2010

Maximum Speed: 24 km/h on Dec 15 12:00

Maximum Daily Speed Average: 19.3 km/h on Dec 15

Minimum Speed: 2 km/h on Dec 4 07:00

Minimum Daily Speed Average: 2.8 km/h on Dec 22

Maximum Diurnal Speed Average: 6.6 km/h at hour 16

Minimum Diurnal Speed Average: 5.5 km/h at hour 8

Monthly Average Speed: 5.90 km/h

Percentiles: P_1 = 2.2 P_{10} = 3.0 Q_1 = 3.6 Median = 4.5 Q_3 = 6.4 P_{90} = 11.1 P_{99} = 21.4

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

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	4	4	3	4	3	4	3	4	5	3	3	4	5	3	6	7	8	7	8	5	5	3	3	4	4.5	8.3
2-Dec	4	4	5	3	3	3	3	4	4	3	4	3	3	4	5	3	3	3	2	2	4	6	6	5	3.7	5.9
3-Dec	6	7	6	5	5	4	3	4	5	6	6	4	5	4	5	4	3	5	5	3	4	4	4	4	4.7	6.9
4-Dec	3	3	3	5	2	3	2	2	3	3	3	4	2	3	3	4	4	2	3	3	3	3	3	3	3.0	4.6
5-Dec	2	4	6	3	4	6	9	7	6	6	6	5	5	5	3	2	3	4	4	6	6	4	5	4	4.8	8.6
6-Dec	2	4	2	3	3	4	3	4	4	3	4	5	4	3	5	4	3	3	5	4	4	5	3	4	3.6	5.1
7-Dec	4	3	4	5	4	8	8	6	7	7	6	7	8	6	6	6	7	6	7	6	8	5	6	3	5.9	7.7
8-Dec	5	7	5	5	4	4	4	5	6	8	9	8	10	13	15	16	19	17	15	16	15	14	13	13	10.4	19.0
9-Dec	13	14	11	10	10	10	8	8	8	7	8	7	5	6	5	6	5	5	6	7	8	7	7	7	7.8	13.8
10-Dec	8	9	9	8	8	8	9	8	8	8	9	8	9	8	8	9	7	9	8	7	6	5	6	7	7.9	9.1
11-Dec	7	7	7	6	4	5	6	5	6	6	7	7	6	6	6	6	6	4	4	4	4	3	4	4	5.4	7.5
12-Dec	3	3	4	4	4	4	4	3	4	4	3	4	5	7	6	5	4	5	4	4	4	4	3	3	4.1	7.2
13-Dec	4	5	4	5	5	3	3	3	4	4	2	4	3	4	3	6	6	4	3	5	6	9	7	6	4.5	8.7
14-Dec	4	5	6	4	3	5	3	5	4	5	5	5	6	14	6	7	6	5	7	5	8	17	18	19	7.3	19.0
15-Dec	19	18	18	21	21	21	22	21	22	23	22	24	23	19	18	19	21	19	18	16	13	16	17	15	19.3	23.7
16-Dec	13	12	13	11	13	11	11	12	11	12	12	9	11	9	8	9	8	7	5	4	2	3	3	5	8.9	13.1
17-Dec	5	4	5	6	5	5	6	4	4	4	5	4	3	4	4	4	5	4	3	3	4	3	3	4	4.2	5.8
18-Dec	6	5	6	5	5	4	5	5	5	6	6	4	5	4	4	7	4	5	4	3	3	3	3	5	4.6	7.2
19-Dec	6	5	4	4	4	4	4	3	6	7	9	11	11	12	13	13	12	13	14	13	13	11	9	10	8.8	14.1
20-Dec	9	8	7	6	5	5	4	5	4	4	4	3	5	6	6	7	4	5	5	4	4	4	5	4	5.2	8.6
21-Dec	5	4	4	5	5	5	4	4	4	3	3	3	3	3	4	3	3	3	3	3	3	4	3	3	3.7	5.0
22-Dec	3	3	3	3	3	3	3	3	2	3	3	4	2	3	3	2	3	3	3	2	2	3	3	4	2.8	3.6
23-Dec	7	8	9	10	10	8	5	4	3	5	5	7	5	4	4	5	4	5	4	4	3	5	3	4	5.5	9.9
24-Dec	4	5	5	4	3	4	4	6	6	5	4	4	5	4	5	3	6	3	4	4	5	4	3	3	4.4	6.4
25-Dec	4	4	5	6	4	4	5	4	6	6	4	4	4	6	6	4	4	4	5	5	4	5	6	4	4.7	6.2
26-Dec	3	3	3	3	3	3	5	4	4	3	4	4	5	7	9	17	17	17	12	15	15	15	15	15	8.4	17.5
27-Dec	15	13	15	13	14	9	9	8	6	3	2	4	4	4	5	3	3	5	4	4	4	5	5	4	6.7	15.5
28-Dec	3	4	4	5	3	3	4	4	5	5	8	7	8	10	10	10	7	7	8	9	9	8	6	4	6.3	10.2
29-Dec	4	4	5	6	5	5	4	3	3	4	4	5	6	5	5	3	3	4	3	4	5	3	3	4	4.2	6.2
30-Dec	4	4	3	4	5	4	4	4	3	5	4	2	4	5	4	5	5	4	4	4	4	4	5	4	4.0	5.3
31-Dec	4	4	4	3	3	3	2	4	5	4	3	4	3	2	2	3	4	4	4	4	3	4	3	2	3.5	5.0
	6.0	6.0	6.0	5.9	5.6	5.5	5.5	5.5	5.5	5.7	5.7	5.8	5.9	6.3	6.2	6.6	6.3	6.2	5.9	5.7	5.7	6.1	6.0	5.8	Diurnal Average	
	19.4	17.9	17.9	21.4	21.5	20.5	21.6	21.2	22.0	22.6	21.6	23.7	22.7	18.8	18.2	18.8	20.6	18.6	17.7	16.5	15.4	17.3	18.0	19.0	Diurnal Maximum	

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

PASZA
Peace Air Shed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Henry Pirker - December 2010

Maximum Value: 96.0 deg on Dec 14 15:00

Minimum Value: 3.1 deg on Dec 19 18:00

Percentiles: P_1 = 4.7 P_{10} = 6.6 Q_1 = 12.2 Median = 20.4 Q_3 = 38.5 P_{90} = 58.3 P_{99} = 88.6

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-Dec	58	50	76	42	79	45	25	15	67	87	33	28	34	41	10	17	10	14	11	25	19	40	36	34	86.6
2-Dec	22	31	25	35	19	18	55	26	40	16	19	20	77	22	33	45	19	30	31	59	30	6	10	12	77.2
3-Dec	11	7	12	7	7	35	24	32	17	15	12	12	52	21	14	18	32	10	9	76	16	13	19	10	76.4
4-Dec	83	64	25	27	94	24	45	53	17	80	69	50	49	26	55	29	27	86	25	40	47	23	51	56	94.4
5-Dec	69	42	31	84	44	29	17	17	25	26	28	18	28	18	50	83	41	20	25	23	22	20	16	32	83.6
6-Dec	65	39	80	84	51	49	72	33	33	45	38	37	77	58	26	27	62	58	36	30	75	14	23	13	84.1
7-Dec	29	30	21	13	16	12	14	17	20	14	20	20	13	15	18	16	17	20	14	14	17	28	32	34	34.1
8-Dec	28	21	30	39	19	81	25	38	19	10	8	14	8	8	5	5	5	6	6	6	5	6	6	5	81.4
9-Dec	5	5	5	6	9	6	6	6	7	7	8	23	23	25	24	19	22	22	16	15	14	13	17	14	25.5
10-Dec	13	9	13	11	13	12	10	12	11	11	11	12	13	15	12	13	13	10	11	14	16	16	14	11	16.3
11-Dec	12	14	14	11	21	15	13	17	13	14	14	13	19	19	14	12	22	28	28	25	29	24	13	24	28.5
12-Dec	24	57	39	46	26	19	21	77	26	30	60	31	25	11	21	21	34	29	48	41	44	40	86	58	85.6
13-Dec	62	41	72	48	96	61	75	81	72	84	87	40	57	17	75	20	38	90	74	54	11	9	9	49	95.7
14-Dec	56	17	59	64	79	57	50	24	65	30	58	80	44	24	96	68	54	31	23	45	36	5	7	6	96.0
15-Dec	6	9	7	7	5	6	7	6	6	5	6	5	5	5	5	5	6	6	6	8	8	5	6	9	9.2
16-Dec	9	9	6	7	5	6	6	7	6	5	8	7	5	6	5	7	8	11	12	17	30	15	83	19	82.6
17-Dec	19	19	20	15	17	22	18	22	27	23	18	28	54	28	32	20	21	23	29	44	43	40	62	48	61.8
18-Dec	11	11	12	11	12	16	14	13	15	12	14	25	16	36	38	14	36	15	35	68	36	18	40	41	67.8
19-Dec	16	26	17	22	67	19	9	31	11	8	8	6	8	9	5	5	4	3	4	4	6	9	7	5	67.1
20-Dec	8	12	12	9	12	26	8	12	12	12	15	57	41	29	14	62	22	16	15	18	14	11	15	19	61.8
21-Dec	15	41	71	42	17	17	39	14	25	18	29	24	21	14	12	19	22	14	17	19	38	18	15	21	71.5
22-Dec	18	15	36	61	22	51	59	25	76	20	27	16	32	37	29	59	69	41	23	70	69	15	40	31	75.9
23-Dec	8	7	7	7	4	5	11	28	29	15	16	8	12	21	37	44	40	95	45	52	38	30	31	31	94.7
24-Dec	40	14	22	18	46	46	19	16	20	24	48	49	53	43	62	69	22	74	54	52	40	37	59	50	73.7
25-Dec	48	49	33	28	47	35	19	89	16	11	23	33	82	27	16	17	34	82	63	21	48	48	22	41	88.8
26-Dec	66	89	46	71	81	36	24	24	39	66	43	26	24	17	19	6	5	7	8	6	6	6	5	5	88.7
27-Dec	5	5	5	6	5	9	12	10	11	49	67	19	53	17	13	44	37	17	28	29	31	39	39	54	66.7
28-Dec	49	18	29	39	49	72	40	21	29	44	16	21	8	11	7	8	13	18	10	9	7	6	5	14	72.4
29-Dec	21	13	10	7	21	23	21	12	39	27	11	11	11	7	17	23	23	21	24	16	15	17	15	13	38.9
30-Dec	14	11	10	10	14	12	36	11	31	16	21	21	43	17	51	15	11	13	15	15	16	7	13	9	50.9
31-Dec	13	17	12	13	17	50	44	21	15	15	22	22	74	55	41	22	20	12	13	35	31	49	37	70	73.7
	82.5	88.7	80.0	84.1	95.7	81.4	74.7	88.8	75.9	86.6	86.6	79.9	81.7	58.0	96.0	83.2	69.5	94.7	74.2	76.4	74.6	49.1	85.6	70.1	

PASZA
Evergreen Park Station
Monthly Summary Tables, Graphs and Roses

PASZA
Peace Air Shed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.2 ppb on Dec 8 10:00 Maximum Daily Average: 1.1 ppb on Dec 23

Minimum Value: 0 ppb on Dec 3 18:00 Minimum Daily Average: 0.1 ppb on Dec 10
Maximum Diurnal Average: 0.6 ppb at hour 15 Minimum Diurnal Average: 0.4 ppb at hour 24
Monthly Average: 0.46 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.2$ Median = 0.4 $Q_3 = 0.6$ $P_{90} = 0.8$ $P_{99} = 1.8$

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	34
Percent Operational Time:	99.5

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	0	A	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0.3	0.6
2-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.4
3-Dec	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.4	1.0
4-Dec	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0.3	0.6
5-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.4
6-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.3
7-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.2
8-Dec	0	0	0	0	0	0	0	0	1	3	M	C	C	C	1	2	2	1	1	1	1	1	0	0	0.8	3.2
9-Dec	0	0	0	0	0	A	1	1	1	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0.4	1.4
10-Dec	0	0	0	0	A	0	0	0	0	0	0	0	0	0	M	0	0	0	0	0	0	0	0	0	0.1	0.1
11-Dec	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
12-Dec	0	0	0	0	0	A	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.3	0.7
13-Dec	0	0	0	0	A	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0.5	1.3
14-Dec	0	0	0	A	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	2	1	1	0.5	1.7
15-Dec	1	1	A	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	2	1	1	1	1	1	0.8	1.8
16-Dec	0	A	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0.5	1.0
17-Dec	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	A	0.6	1.2
18-Dec	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.5	0.9
19-Dec	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.6	1.1
20-Dec	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	0.5	1.0
21-Dec	1	0	0	1	0	A	1	0	0	1	0	1	1	1	0	0	0	0	1	1	1	1	1	1	0.6	0.7
22-Dec	1	1	1	1	A	1	1	0	0	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	0.6	0.8
23-Dec	1	1	1	A	2	2	2	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	0	1.1	2.0
24-Dec	1	1	A	1	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0.5	0.6
25-Dec	0	A	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	1	0	0	0.5	1.0
26-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	A	0.5	1.0
27-Dec	1	1	1	1	1	1	0	1	1	1	0	1	1	1	1	1	0	0	0	0	0	0	A	0	0.6	1.1
28-Dec	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	A	1	1	0.5	1.1
29-Dec	1	1	1	1	1	0	0	1	0	0	1	1	1	2	2	1	1	0	0	0	A	0	0	0	0.7	1.8
30-Dec	0	0	0	0	0	0	0	1	1	M	1	1	1	0	0	1	1	1	1	1	1	1	0	0	0.5	0.9
31-Dec	1	1	0	0	0	A	0	0	0	0	M	1	0	1	1	1	1	1	1	1	0	0	0	0	0.5	1.0
	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	Diurnal Average	
	0.9	0.8	1.0	0.8	1.8	1.8	1.6	1.4	1.1	3.2	1.0	2.0	1.8	1.7	1.8	2.1	2.5	1.3	1.8	1.3	0.9	1.7	0.9	0.7	Diurnal Maximum	

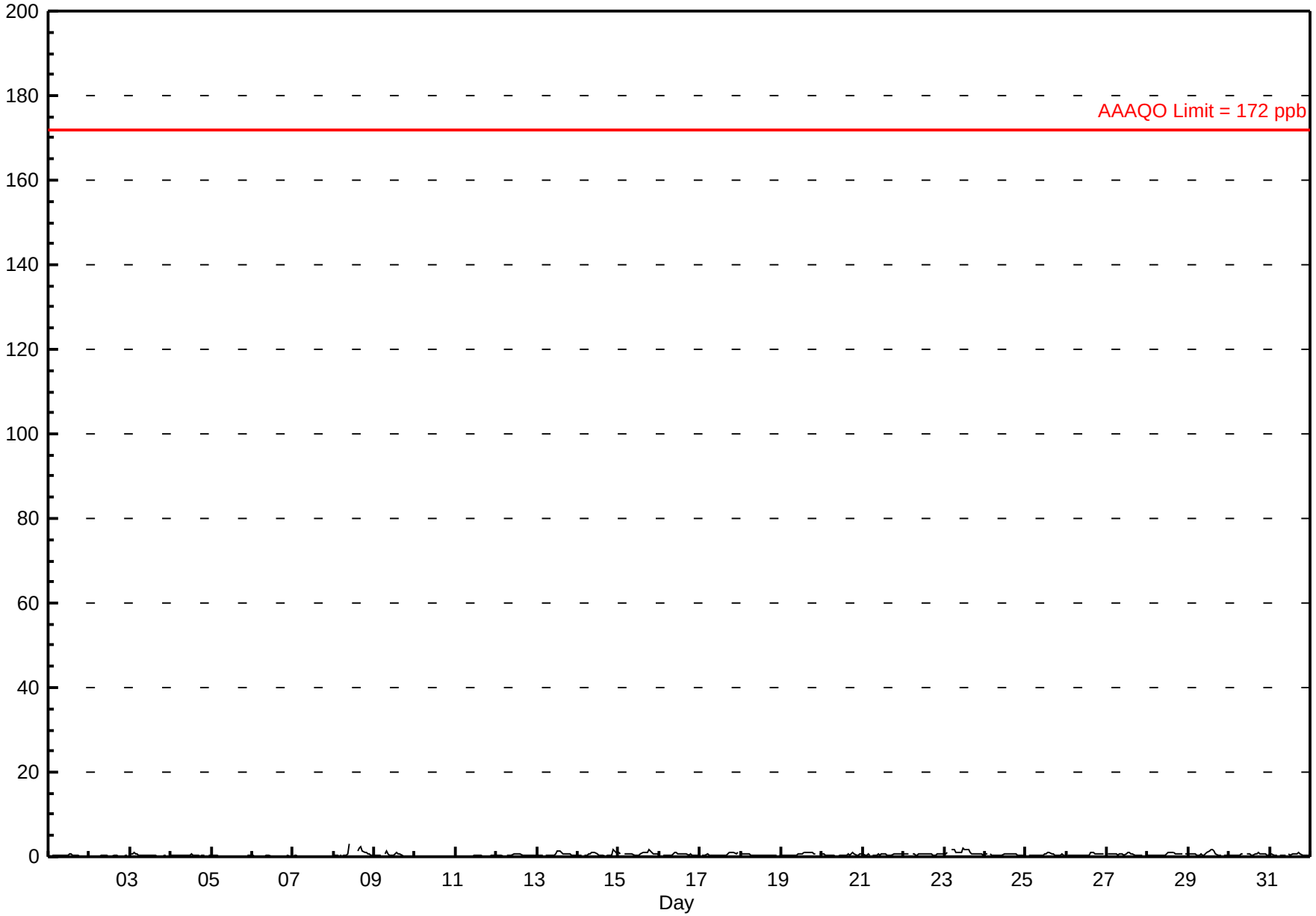
C - Calibration M - Maintenance A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

PASZA
Peace Air Shed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - December 2010



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - December 2010

Maximum Value: 5.4 ppb on Dec 8 10:00

Maximum Daily Average: 1.5 ppb on Dec 23

Minimum Value: 0 ppb on Dec 3 19:00

Minimum Daily Average: 0.4 ppb on Dec 7

Maximum Diurnal Average: 1.1 ppb at hour 15

Minimum Diurnal Average: 0.7 ppb at hour 24

Monthly Average: 0.83 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.4$ $Q_1 = 0.6$ Median = 0.7 $Q_3 = 1.0$ $P_{90} = 1.3$ $P_{99} = 2.4$

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	34
Percent Operational Time:	99.5

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.7	1.0
2-Dec	A	0	0	0	0	0	0	1	1	1	0	0	0	1	1	0	0	0	0	0	0	1	1	A	0.5	0.7
3-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	A	1	0.7	1.3
4-Dec	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	1	A	1	1	0.7	1.1
5-Dec	1	1	1	1	0	0	0	0	1	0	1	0	0	0	1	1	0	0	0	0	A	1	1	0	0.5	0.9
6-Dec	1	0	0	0	0	0	0	0	1	1	1	1	0	1	0	0	0	0	0	A	1	1	0	0	0.5	0.8
7-Dec	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.4	0.5
8-Dec	0	1	1	0	1	0	1	1	2	5	M	C	C	C	2	3	3	2	1	1	1	1	1	1	1.4	5.4
9-Dec	1	1	1	1	1	A	1	2	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.8	1.8
10-Dec	0	0	0	0	A	0	0	0	0	0	0	0	0	0	M	1	0	0	0	0	0	0	0	1	0.4	0.5
11-Dec	0	0	0	0	0	A	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	1	1	1	0.5	0.7
12-Dec	1	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0.7	1.1
13-Dec	1	1	0	1	A	1	1	1	1	1	1	1	2	2	2	1	1	2	1	1	1	1	0	0	0.9	1.8
14-Dec	0	0	1	A	0	1	1	1	2	1	1	1	1	0	1	0	0	0	1	1	1	5	1	1	1.0	5.1
15-Dec	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1.1	2.4
16-Dec	1	A	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	0.9	2.4
17-Dec	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	A	0.9	1.7
18-Dec	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	1.5
19-Dec	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	1.5
20-Dec	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.4
21-Dec	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3
22-Dec	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.4
23-Dec	1	1	1	A	2	2	2	2	1	2	1	2	2	2	2	2	1	1	1	1	1	1	1	1	1.5	2.5
24-Dec	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
25-Dec	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
26-Dec	A	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	A	1.0	2.4
27-Dec	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	1.4
28-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	A	1	1	0.9	1.6
29-Dec	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1	A	1	1	1	1.1	2.3
30-Dec	1	1	1	1	1	1	1	1	1	M	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3
31-Dec	1	1	1	1	1	A	1	1	1	1	M	1	1	1	1	1	2	2	1	1	1	1	1	1	0.9	2.2
	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.8	0.8	0.9	0.8	0.9	0.9	1.0	1.1	1.0	0.9	0.9	0.9	0.8	0.7	0.9	0.8	0.7	Diurnal Average	
	1.5	1.2	1.3	1.2	2.2	2.2	2.1	1.8	1.7	5.4	1.5	2.5	2.3	2.4	2.4	3.3	3.1	2.2	2.4	2.1	1.4	5.1	1.4	1.0	Diurnal Maximum	

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

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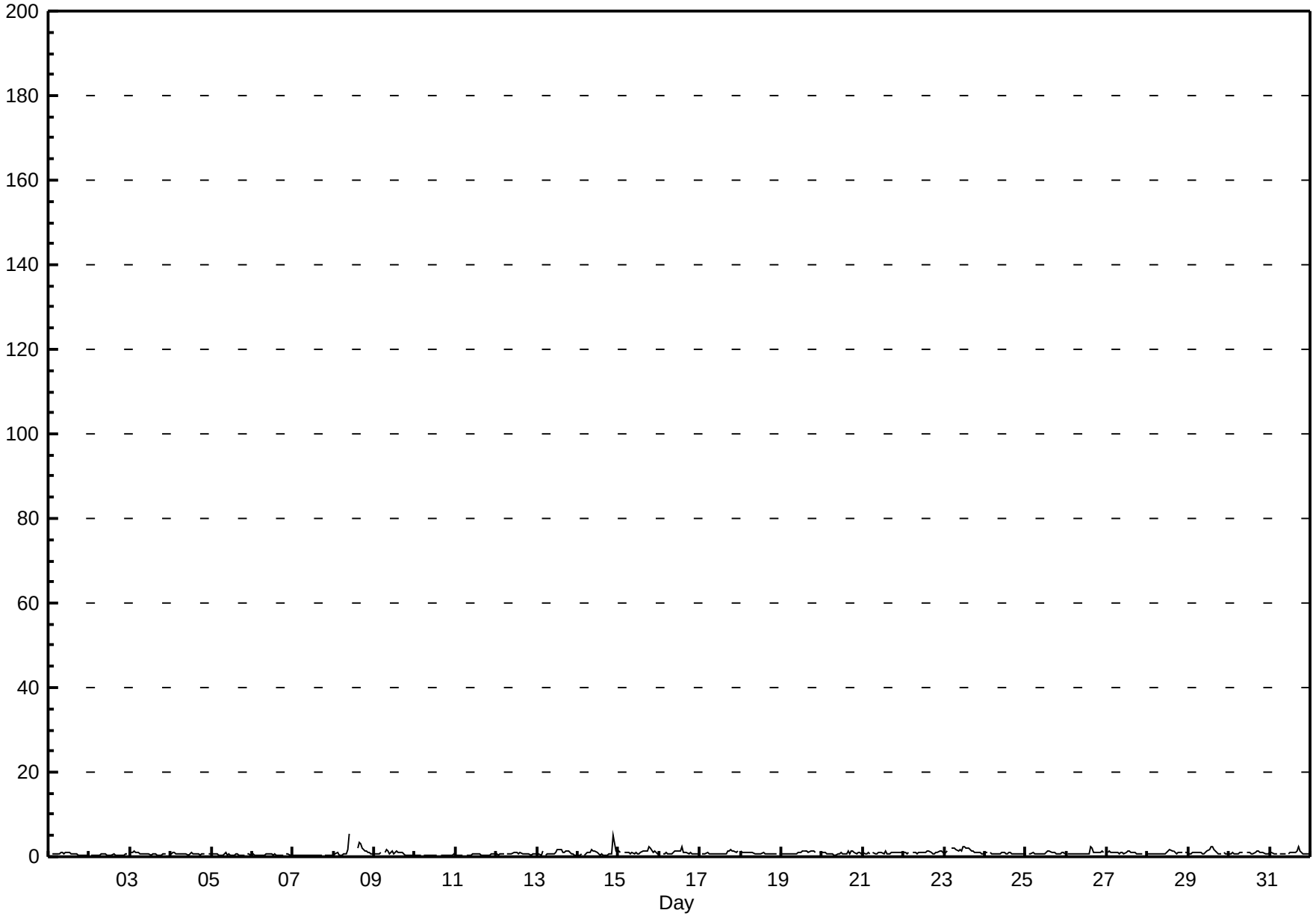
Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - December 2010



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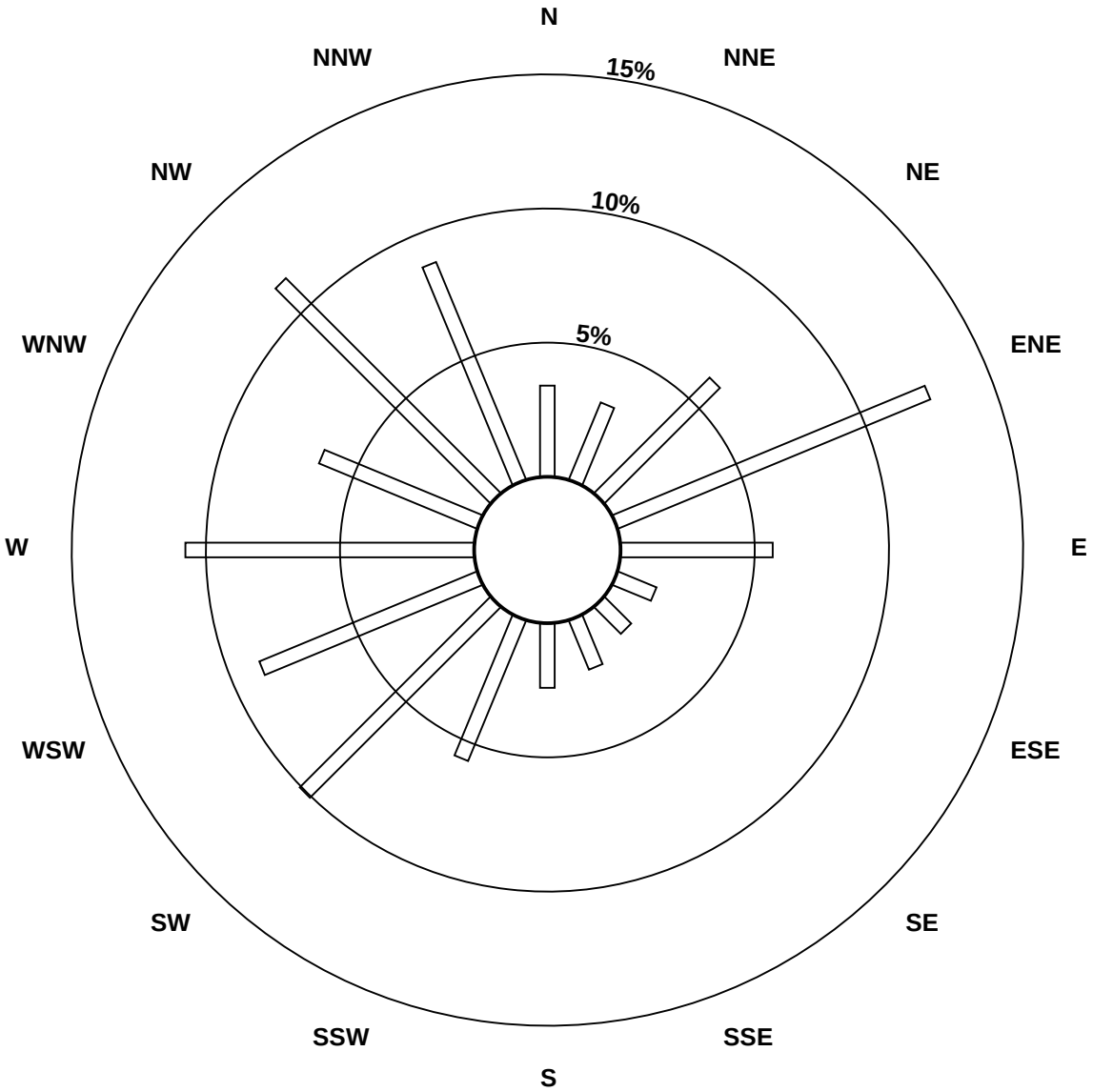
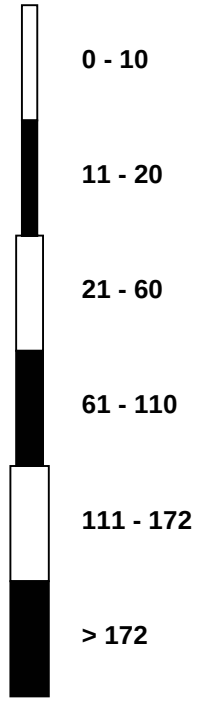
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - December 2010



Pollutant Classes (ppb)



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Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.3 ppb on Dec 7 01:00 Maximum Daily Average: 1.3 ppb on Dec 21

Minimum Value: 0 ppb on Dec 2 21:00 Minimum Daily Average: 0.5 ppb on Dec 10
Maximum Diurnal Average: 0.9 ppb at hour 2 Minimum Diurnal Average: 0.7 ppb at hour 14
Monthly Average: 0.82 ppb Percentiles: P_1 = 0.5 P_{10} = 0.5 Q_1 = 0.6 Median = 0.7 Q_3 = 0.9 P_{90} = 1.2 P_{99} = 2.6

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	34
Percent Operational Time:	99.5

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	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	1.4
2-Dec	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	1	1	A	0.6	0.9
3-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0	0	1	1	1	A	1	0.6	0.9
4-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	A	1	1	0.7	0.9
5-Dec	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	1.0
6-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	2	3	3	1.0	2.9
7-Dec	3	3	3	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1.2	3.3
8-Dec	1	1	1	1	1	1	1	1	1	1	M	1	1	C	C	C	1	1	1	1	1	1	1	1	0.7	1.1
9-Dec	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
10-Dec	0	1	1	1	A	1	1	1	1	1	1	1	1	1	M	1	1	1	1	1	1	1	1	1	0.5	0.6
11-Dec	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	0.8
12-Dec	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
13-Dec	1	1	1	1	A	1	1	1	1	1	1	1	2	1	1	1	2	3	3	3	1	1	1	1	1.2	2.6
14-Dec	1	1	1	A	1	1	1	1	2	2	2	1	1	1	1	1	1	1	0	0	1	1	1	1	0.9	1.6
15-Dec	1	1	A	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	0	1	1	1	0	0.6	0.7
16-Dec	0	A	0	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.7
17-Dec	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
18-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.7	0.7
19-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.7	0.7
20-Dec	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	0.9	1.7
21-Dec	1	2	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.3	1.5
22-Dec	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.3
23-Dec	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.2
24-Dec	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.4
25-Dec	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
26-Dec	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
27-Dec	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	1.3
28-Dec	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	1.5
29-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.9	1.1
30-Dec	1	1	1	1	1	1	1	1	1	M	1	2	1	1	1	1	1	2	1	1	1	1	1	1	1.1	1.5
31-Dec	1	1	1	1	1	A	1	1	1	1	M	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.3
	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	Diurnal Average	
	3.3	3.1	3.0	2.7	2.2	2.1	1.4	1.5	1.5	1.6	1.6	1.5	1.6	1.3	1.5	1.5	1.6	2.6	2.6	2.5	1.5	2.4	2.9	2.9	Diurnal Maximum	

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

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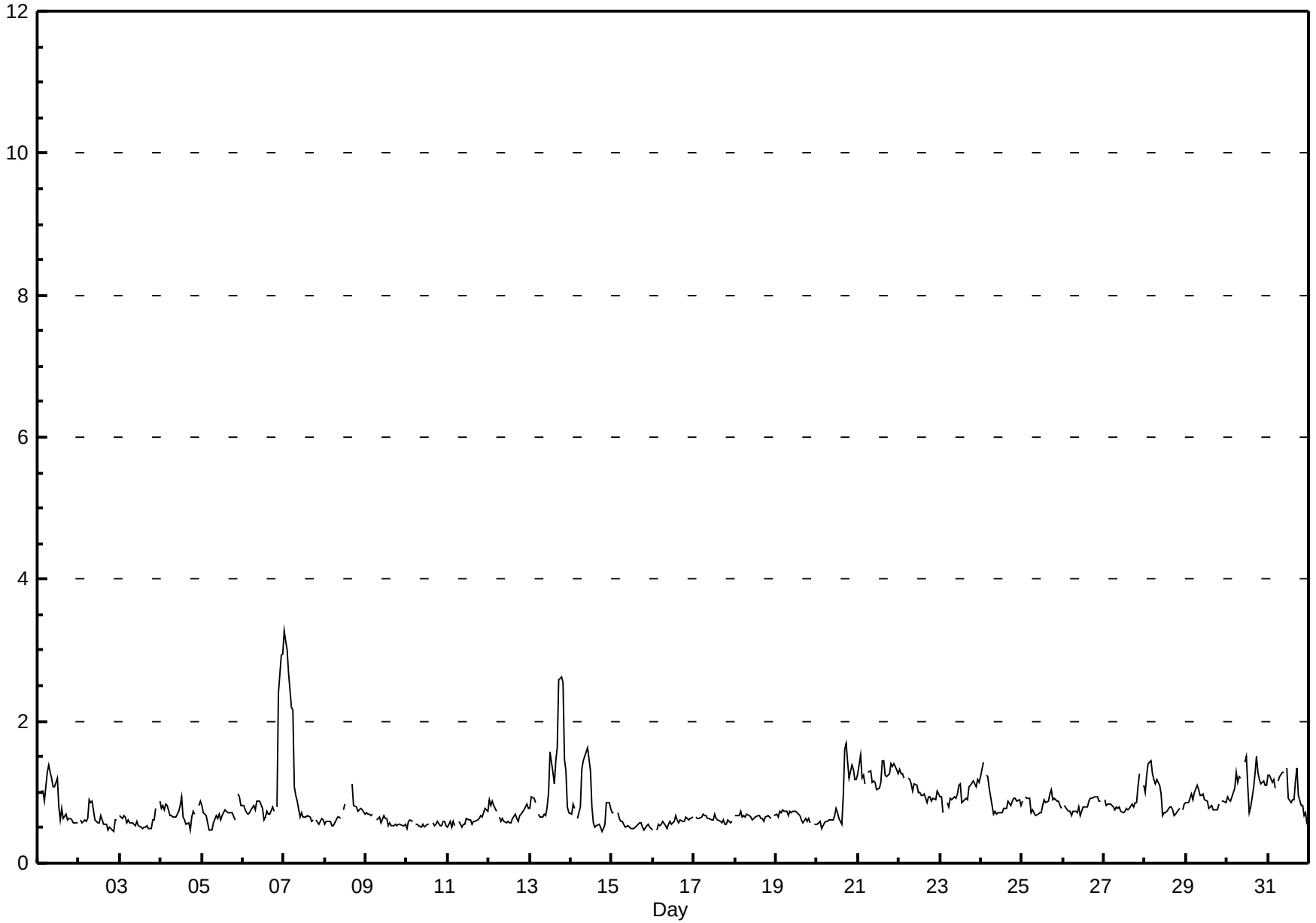
Peace Air Shed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - December 2010



PASZA
Peace Air Shed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - December 2010

Maximum Value: 4.4 ppb on Dec 6 22:00

Maximum Daily Average: 1.7 ppb on Dec 13

Minimum Value: 1 ppb on Dec 2 21:00

Minimum Daily Average: 0.9 ppb on Dec 10

Maximum Diurnal Average: 1.3 ppb at hour 2

Minimum Diurnal Average: 1.1 ppb at hour 16

Monthly Average: 1.21 ppb

Percentiles: $P_1 = 0.8$ $P_{10} = 0.9$ $Q_1 = 1.0$ Median = 1.1 $Q_3 = 1.3$ $P_{90} = 1.6$ $P_{99} = 3.4$

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	34
Percent Operational Time:	99.5

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	2	A	1	1	1	2	2	2	2	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1.3	2.0
2-Dec	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1.0	1.3
3-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.9	1.3
4-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1.1	1.5
5-Dec	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.1	1.6
6-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	4	4	4	1.5	4.4
7-Dec	4	4	3	3	3	3	2	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1.6	3.9
8-Dec	1	1	1	1	1	1	1	1	1	1	M	1	1	C	C	C	2	1	1	1	1	1	1	1	1.1	1.6
9-Dec	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.3
10-Dec	1	1	1	1	A	1	1	1	1	1	1	1	1	1	M	1	1	1	1	1	1	1	1	1	0.9	1.0
11-Dec	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
12-Dec	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.3
13-Dec	1	1	1	2	A	1	1	1	1	1	1	2	2	2	1	2	2	3	3	4	2	2	1	1	1.7	3.7
14-Dec	1	1	1	A	1	1	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1.3	2.4
15-Dec	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.1
16-Dec	1	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	2.1
17-Dec	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	1.1
18-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1.0	1.3
19-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1.0	1.3
20-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	2	2	2	2	2	2	2	1.3	2.6
21-Dec	2	2	2	2	2	A	2	2	2	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	1.7	2.4
22-Dec	2	2	2	2	A	1	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.4	1.7
23-Dec	1	1	1	A	1	1	1	1	1	1	1	2	2	1	1	1	1	2	1	2	2	1	2	1	1.4	1.6
24-Dec	2	2	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	1.9
25-Dec	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1.2	1.5
26-Dec	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1.1	1.4
27-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	A	2	1.2	1.7
28-Dec	1	2	2	2	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1.3	1.9
29-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.2	1.4
30-Dec	1	1	1	1	2	2	2	2	2	M	2	2	2	1	1	2	2	2	2	1	2	2	1	1	1.6	2.1
31-Dec	2	2	1	2	1	A	1	2	2	2	M	2	2	1	1	1	2	2	1	1	1	1	1	1	1.5	2.4
	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.2	1.2	1.2	1.1	1.1	1.1	1.2	1.3	1.2	1.2	1.2	1.3	1.3	1.3	Diurnal Average	
	3.9	3.5	3.5	3.3	2.6	2.7	1.8	1.9	1.9	2.4	2.1	2.1	2.2	2.1	1.9	2.0	2.6	3.4	3.4	3.7	2.1	4.4	4.4	3.8	Diurnal Maximum	

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

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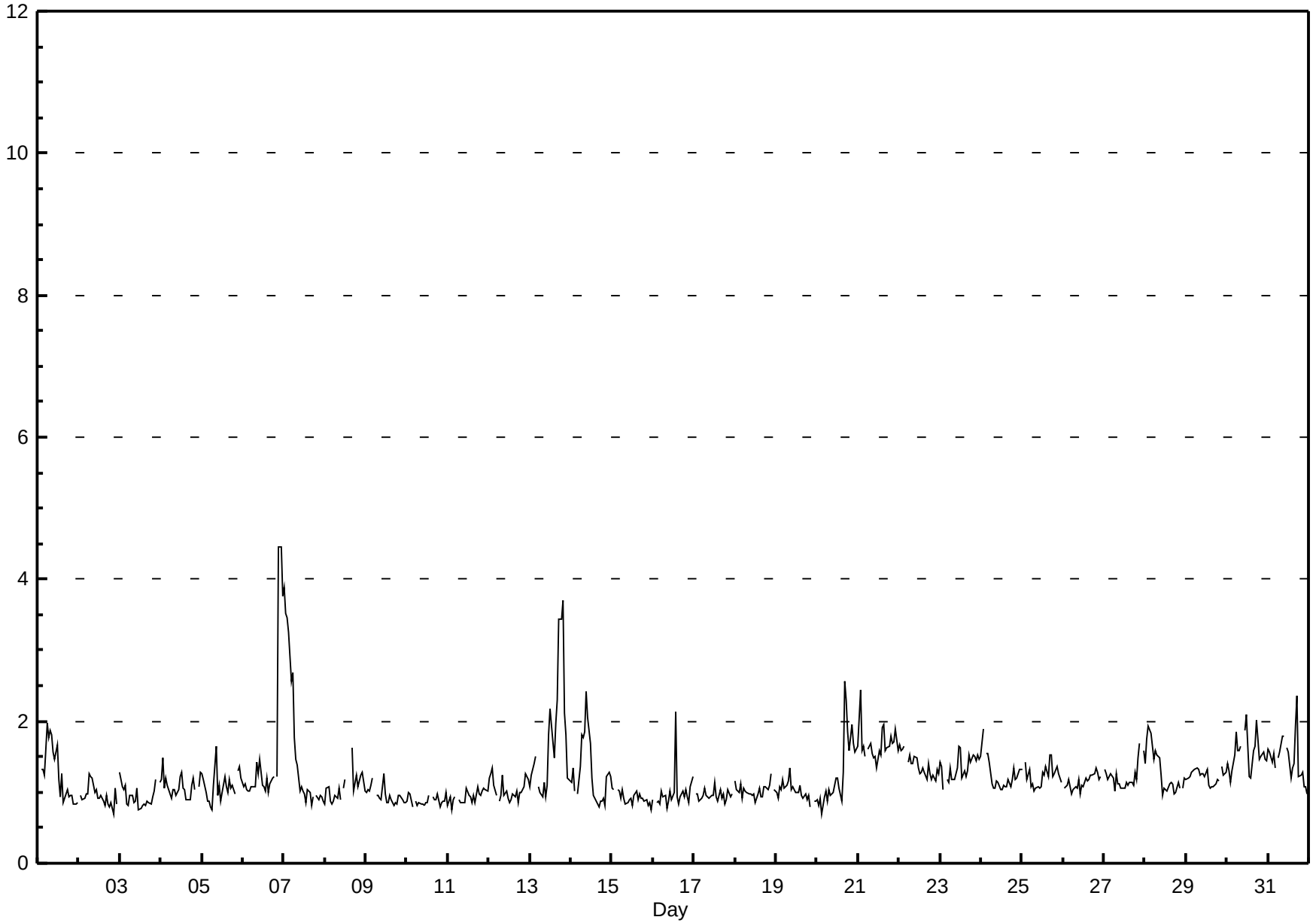
Peace Air Shed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - December 2010



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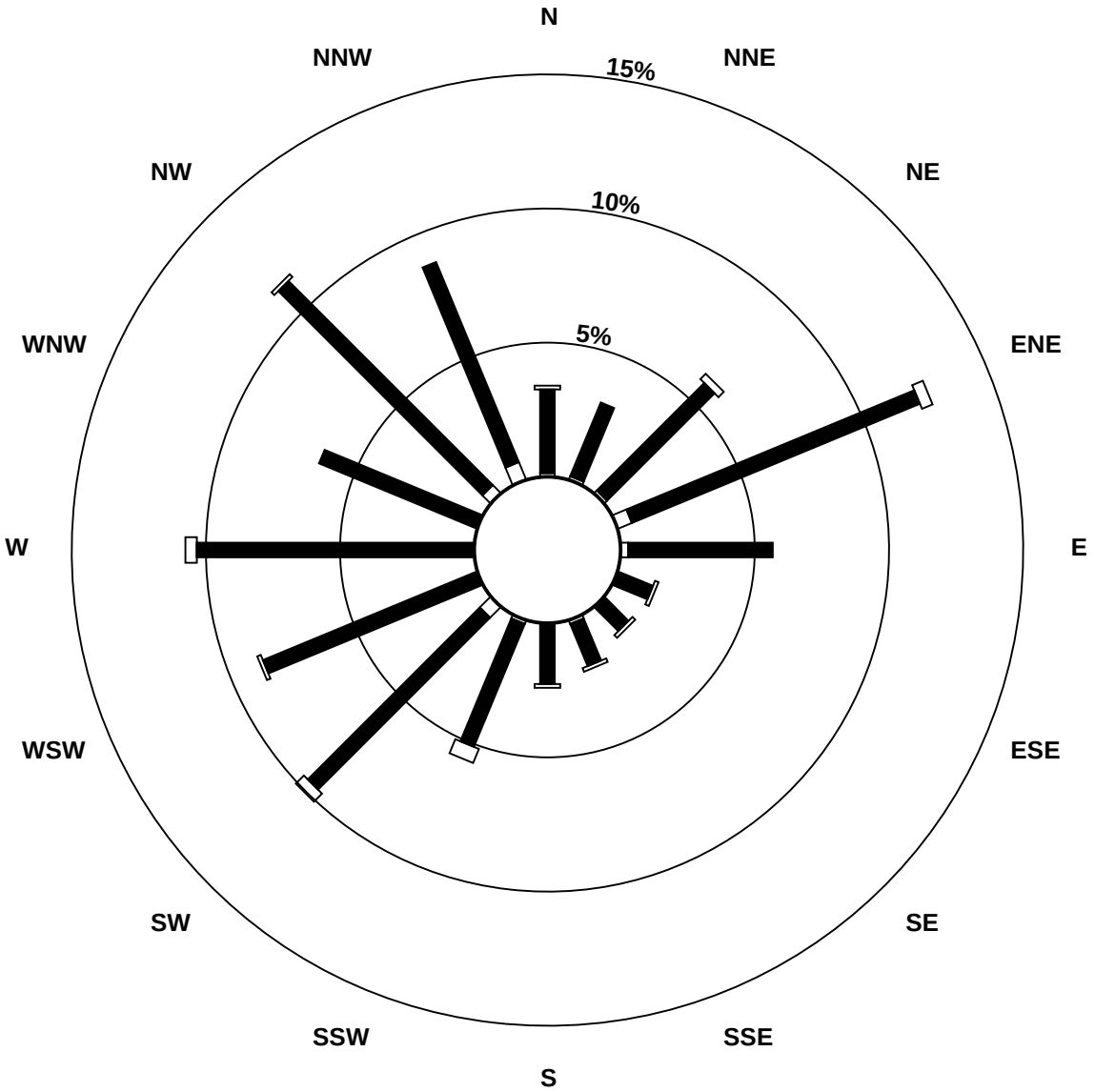
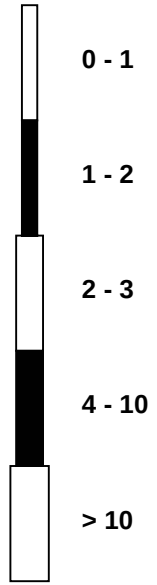
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - December 2010



Pollutant Classes (ppb)



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Hourly Averages

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

Evergreen Park - December 2010

Number of Exceedences: 1-hr: 0 24-hr: 0
Maximum Value: 48.7 $\mu g/m^3$ on Dec 4 14:00
Maximum Daily Average: 15.9 $\mu g/m^3$ on Dec 21

Minimum Value: 0 $\mu g/m^3$ on Dec 9 09:00
Minimum Daily Average: 2.9 $\mu g/m^3$ on Dec 16
Maximum Diurnal Average: 12.2 $\mu g/m^3$ at hour 14
Minimum Diurnal Average: 7.4 $\mu g/m^3$ at hour 6
Monthly Average: 9.18 $\mu g/m^3$
Percentiles: $P_1 = 0.8$ $P_{10} = 3.1$ $Q_1 = 4.8$ Median = 8.1 $Q_3 = 12.1$ $P_{90} = 16.8$ $P_{99} = 25.3$

Hours in Service:	744
Hours of Data:	683
Hours of Missing Data:	61
Hours of Calibration:	1
Percent Operational Time:	91.9

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-Dec	14	38	12	12	11	10	10	9	10	10	12	12	8	3	9	7	8	9	11	10	8	7	7	8	10.7	38.1
2-Dec	8	7	6	7	7	6	19	14	13	8	7	7	9	23	13	9	8	8	7	6	5	8	8	5	9.1	22.8
3-Dec	4	5	4	5	7	5	4	3	3	3	5	3	3	3	2	4	5	4	5	8	9	12	13	13	5.6	12.8
4-Dec	9	9	10	9	7	7	11	9	9	5	18	15	12	49	38	15	16	21	16	17	17	18	18	17	15.4	48.7
5-Dec	17	14	18	12	8	8	5	4	4	5	11	15	6	15	13	13	20	11	11	11	11	13	11	10	11.1	20.3
6-Dec	14	14	N	N	N	N	N	N	N	14	14	10	9	8	11	11	11	12	10	11	13	15	16	18	--	17.7
7-Dec	19	17	17	23	26	22	14	15	17	17	17	18	16	17	15	13	9	9	8	6	8	13	15	15	15.2	25.7
8-Dec	17	19	20	19	18	20	22	17	15	14	M	21	22	31	18	6	8	6	2	8	11	15	10	7	15.0	30.6
9-Dec	9	6	5	3	2	4	0	0	0	1	1	0	3	N	N	N	N	N	N	N	N	N	N	N	--	8.7
10-Dec	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	M	BD	3	2	0	0	1	1	2	--	2.6
11-Dec	3	3	2	2	1	2	1	1	4	4	4	5	7	5	8	7	7	7	8	9	11	18	12	10	5.9	17.6
12-Dec	11	8	10	8	8	7	6	7	9	8	10	8	10	22	28	20	12	10	11	11	10	11	10	9	10.9	28.5
13-Dec	8	9	12	13	12	10	10	9	11	9	13	15	23	21	23	25	21	25	21	18	23	13	4	4	14.7	25.4
14-Dec	2	5	3	3	2	5	6	10	10	9	10	12	15	13	3	2	5	4	4	6	8	8	10	12	6.9	14.6
15-Dec	15	13	12	10	5	6	4	2	3	4	3	2	2	10	13	10	4	2	7	4	5	3	5	4	6.2	15.1
16-Dec	4	3	3	3	2	2	2	2	2	2	3	3	3	3	3	4	3	3	2	3	3	2	3	6	2.9	6.1
17-Dec	2	2	2	2	2	2	2	3	3	3	4	3	10	3	3	3	4	4	4	5	4	3	4	5	3.5	10.1
18-Dec	5	4	3	4	4	4	4	5	6	6	6	8	7	7	7	7	8	7	7	5	6	7	5	5	5.6	8.0
19-Dec	5	6	8	6	5	6	7	5	6	5	5	4	5	5	6	7	5	6	5	4	8	9	8	6	5.9	9.3
20-Dec	6	5	6	5	5	5	5	7	7	8	8	13	9	7	6	C	20	21	20	17	15	15	15	12	10.2	20.9
21-Dec	12	12	12	11	10	10	11	15	13	15	16	18	20	19	22	25	21	17	18	19	16	17	17	16	15.9	25.3
22-Dec	15	14	13	12	12	10	10	12	10	12	17	18	15	12	13	13	11	10	11	11	11	11	11	11	12.3	18.1
23-Dec	10	10	8	8	9	10	11	11	12	12	10	6	7	4	5	9	6	7	8	9	9	9	9	8	8.6	12.3
24-Dec	8	10	10	8	7	5	11	12	12	12	12	11	9	11	11	12	14	12	13	11	13	12	13	12	10.9	13.6
25-Dec	12	12	12	15	13	13	12	13	12	11	10	12	10	13	18	15	12	11	9	13	11	10	5	6	11.7	17.7
26-Dec	5	4	5	5	7	5	6	9	8	9	7	9	11	9	10	11	8	6	3	4	5	6	4	0	6.3	10.5
27-Dec	4	3	3	4	3	3	4	6	6	6	6	6	17	22	15	13	10	9	10	9	10	11	9	9	8.2	21.9
28-Dec	6	7	6	7	7	7	6	6	7	8	5	4	4	4	2	4	6	4	4	7	6	4	4	4	5.4	7.7
29-Dec	4	4	4	4	N	N	N	N	N	N	11	8	7	4	6	8	6	N	N	N	N	N	N	N	--	10.5
30-Dec	N	N	N	N	N	N	N	N	N	N	23	24	20	5	2	13	19	19	15	11	11	11	11	10	--	23.8
31-Dec	13	14	11	8	7	7	8	8	8	8	M	3	6	7	6	6	10	13	7	4	2	2	3	1	7.0	13.8
	9.0	9.6	8.4	8.2	7.7	7.4	7.8	7.9	8.1	8.2	9.5	9.7	10.1	12.2	11.4	10.5	10.2	9.7	9.0	8.8	9.2	9.8	9.0	8.4	Diurnal Average	
	19.3	38.1	19.6	23.1	25.7	21.9	21.9	16.6	16.8	17.3	22.7	23.8	23.3	48.7	38.3	25.4	21.1	24.8	21.1	18.7	23.1	18.0	18.1	17.7	Diurnal Maximum	

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

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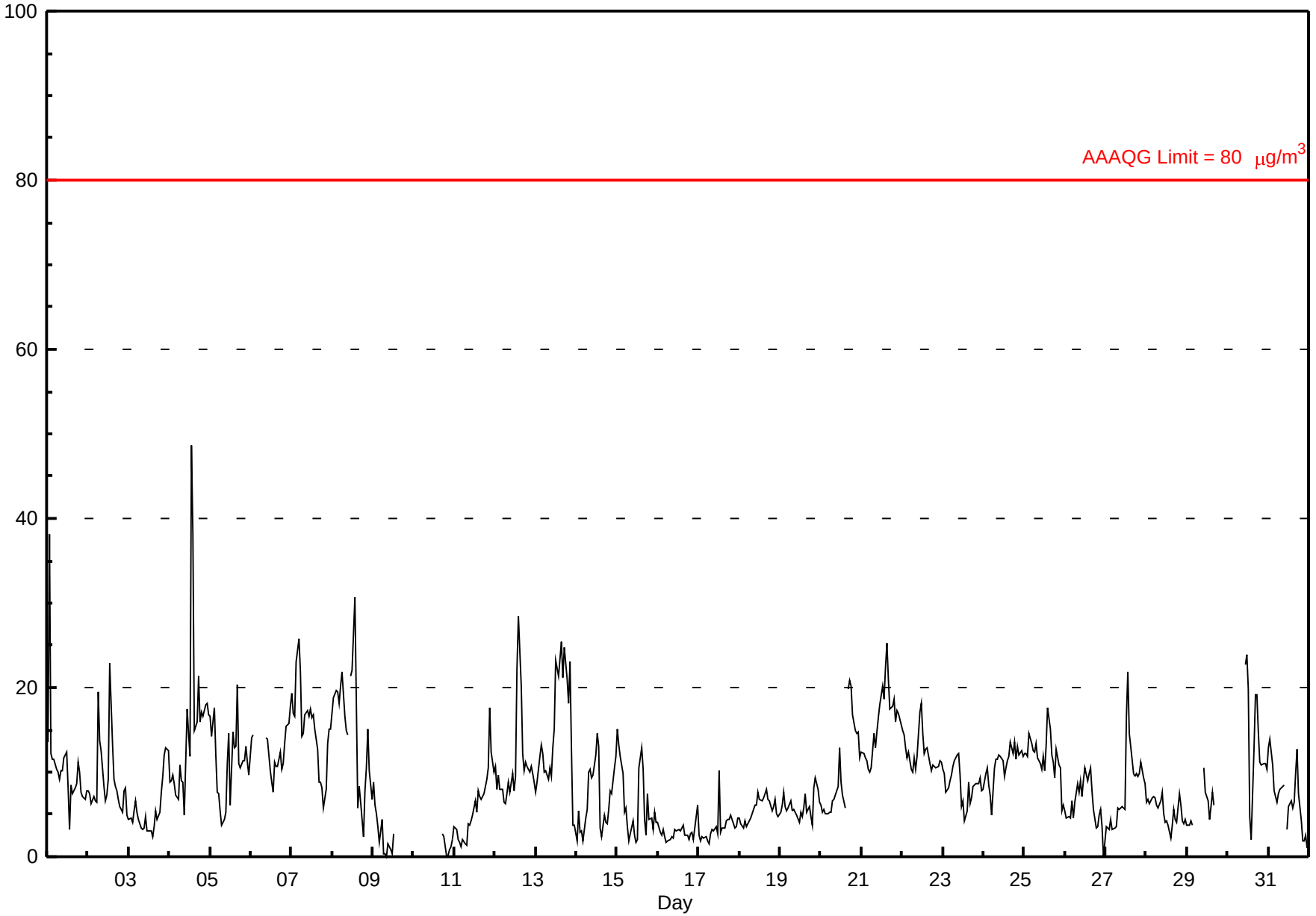
Hourly Averages

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

Evergreen Park - December 2010



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Hourly Maximums

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

Evergreen Park - December 2010

Maximum Value: 147.5 $\mu g/m^3$ on Dec 1 02:00

Maximum Daily Average: 22.8 $\mu g/m^3$ on Dec 4

Minimum Value: 0 $\mu g/m^3$ on Dec 10 17:00

Minimum Daily Average: 4.9 $\mu g/m^3$ on Dec 16

Maximum Diurnal Average: 18.5 $\mu g/m^3$ at hour 14

Minimum Diurnal Average: 10.0 $\mu g/m^3$ at hour 5

Monthly Average: 13.20 $\mu g/m^3$

Percentiles: $P_1 = 3.0$ $P_{10} = 5.2$ $Q_1 = 7.7$ Median = 11.9 $Q_3 = 16.5$ $P_{90} = 22.4$ $P_{99} = 35.5$

Hours in Service:	744
Hours of Data:	684
Hours of Missing Data:	60
Hours of Calibration:	1
Percent Operational Time:	92.1

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	16	147	15	13	13	13	12	11	13	13	15	26	25	6	11	11	9	10	13	12	9	9	8	9	18.2	147.5
2-Dec	10	9	8	8	8	9	28	18	16	10	8	8	19	29	19	11	9	10	9	8	6	11	11	6	12.1	29.0
3-Dec	6	6	5	8	8	7	5	5	4	5	7	6	9	4	4	7	7	6	7	9	11	18	15	14	7.7	18.1
4-Dec	11	11	11	10	9	10	15	18	18	12	36	28	23	89	49	22	22	25	17	25	20	25	21	20	22.8	89.0
5-Dec	19	16	27	14	10	10	9	8	12	10	21	30	15	22	18	21	23	13	12	13	19	19	20	16	16.6	30.3
6-Dec	22	23	N	N	N	N	N	N	N	22	20	15	12	11	14	13	14	15	12	12	18	18	19	23	--	23.2
7-Dec	24	19	19	26	30	29	17	18	20	20	20	19	18	19	17	15	12	11	10	7	11	16	19	17	18.1	30.0
8-Dec	18	21	23	21	21	29	26	20	17	16	M	32	28	38	28	9	11	12	10	30	24	36	20	11	21.9	38.4
9-Dec	13	15	14	7	4	14	7	8	3	9	8	9	10	N	N	N	N	N	N	N	N	N	N	N	--	15.2
10-Dec	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	M	0	7	6	2	2	3	3	4	--	6.6
11-Dec	5	5	4	4	3	4	4	4	14	7	7	7	9	7	11	10	9	10	11	12	12	28	15	12	8.9	28.0
12-Dec	13	11	13	9	10	9	8	10	14	10	15	15	16	34	33	35	15	12	14	14	12	14	12	12	15.0	34.8
13-Dec	10	10	16	20	14	12	12	13	14	13	16	25	31	25	29	31	23	30	23	22	32	30	7	6	19.4	32.2
14-Dec	5	10	6	5	3	13	8	14	14	15	18	20	23	34	9	5	7	5	6	7	9	9	19	19	11.7	34.3
15-Dec	21	17	16	14	8	13	8	3	4	8	6	4	4	27	18	20	13	5	12	11	9	6	10	8	11.1	27.4
16-Dec	7	5	5	5	5	4	3	4	4	4	5	4	6	6	6	6	4	4	3	5	5	3	7	8	4.9	8.0
17-Dec	5	4	4	3	4	3	3	4	5	5	5	5	21	4	6	4	6	6	6	9	6	4	5	7	5.6	21.4
18-Dec	6	7	6	9	5	5	6	7	8	8	9	10	9	8	9	9	9	9	10	8	8	11	6	7	7.9	10.9
19-Dec	7	18	17	7	7	7	10	7	8	7	6	5	8	6	9	14	7	12	7	6	38	29	11	10	11.0	37.9
20-Dec	7	7	8	8	6	6	6	8	8	15	14	17	12	10	7	C	22	25	23	25	17	18	19	16	13.2	24.7
21-Dec	15	16	15	15	14	14	15	18	17	18	21	21	24	25	27	30	25	20	23	22	21	20	20	19	19.7	29.5
22-Dec	18	17	17	14	16	16	14	16	14	14	27	25	18	15	16	17	14	13	13	13	13	14	14	15	16.0	27.3
23-Dec	12	13	11	11	12	12	14	14	15	14	13	11	10	7	12	17	10	16	14	14	12	13	13	11	12.6	17.2
24-Dec	12	15	13	13	11	9	18	17	14	14	15	16	12	15	16	15	17	15	17	15	17	19	15	16	14.8	19.0
25-Dec	16	15	16	18	17	17	16	15	14	13	15	15	13	15	20	20	14	15	14	17	14	15	9	10	15.1	20.2
26-Dec	8	8	8	6	8	8	11	12	10	12	9	12	12	18	17	15	11	10	5	6	12	10	6	8	10.0	17.9
27-Dec	6	5	5	7	5	6	6	8	8	8	8	8	22	28	21	17	12	11	14	12	12	14	12	13	11.2	27.8
28-Dec	9	9	8	10	9	10	8	9	9	10	9	7	7	8	7	7	8	7	9	13	15	7	7	10	8.7	14.8
29-Dec	6	6	10	9	N	N	N	N	N	N	17	14	15	7	13	11	9	N	N	N	N	N	N	N	--	17.0
30-Dec	N	N	N	N	N	N	N	N	N	N	27	29	28	9	8	19	24	22	19	15	14	14	14	14	--	28.8
31-Dec	17	17	14	12	11	10	11	12	12	12	M	9	9	8	11	9	17	18	14	6	5	5	5	4	10.7	17.5
	11.8	16.6	11.9	10.9	10.0	11.1	11.1	11.0	11.5	11.6	14.1	15.1	15.6	18.5	15.9	15.0	12.8	12.8	12.2	12.8	13.9	15.2	12.5	11.9	Diurnal Average	
	24.2	147.5	27.4	25.9	30.0	29.1	28.2	19.6	20.4	22.0	35.8	31.9	31.0	89.0	48.9	34.8	24.8	29.6	23.3	29.9	37.9	36.5	21.3	22.6	Diurnal Maximum	

C - Calibration M - Maintenance N - Not Valid

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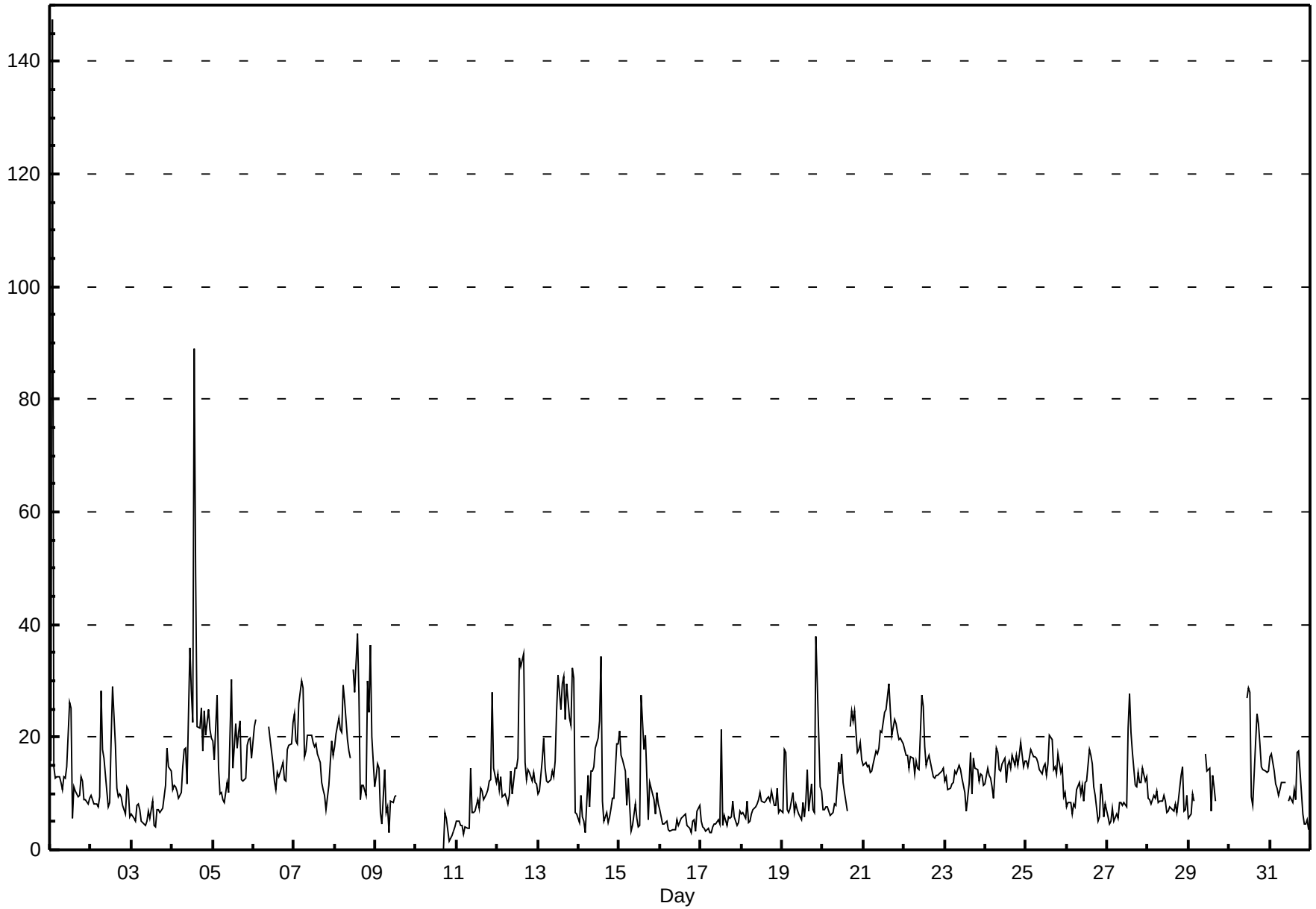
Hourly Maximums

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

Evergreen Park - December 2010



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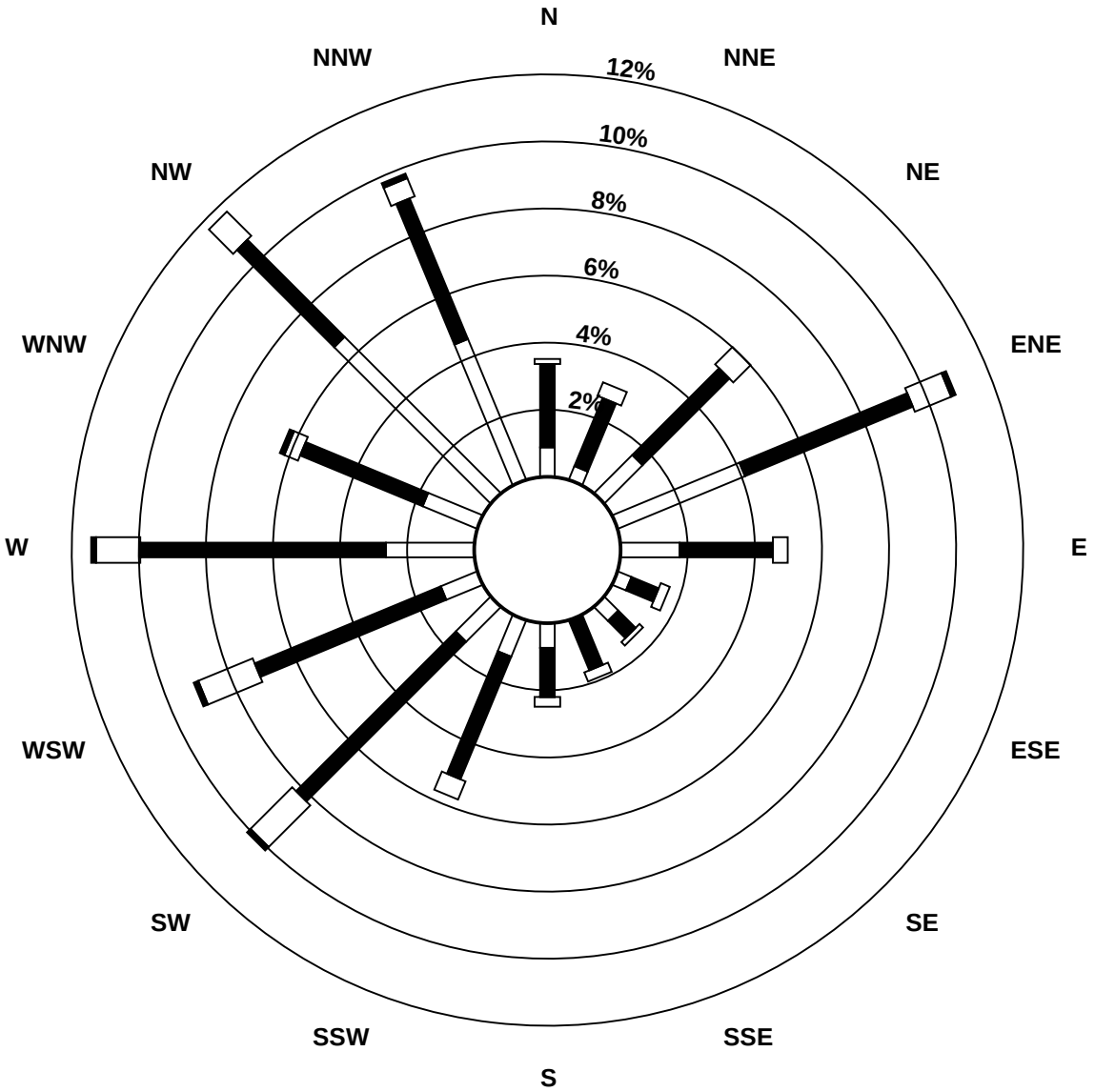
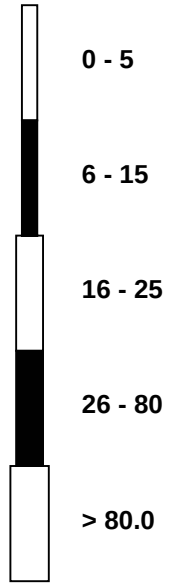
Pollutant Rose

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

Evergreen Park - December 2010



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



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Hourly Averages

External Temperature (ET) - °C

Evergreen Park - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.3 °C on Dec 1 14:00 Maximum Daily Average: -5.0 °C on Dec 1

Minimum Value: -31 °C on Dec 30 09:00 Minimum Daily Average: -27.8 °C on Dec 30
Maximum Diurnal Average: -13.4 °C at hour 15 Minimum Diurnal Average: -17.6 °C at hour 9
Monthly Average: -16.36 °C Percentiles: P_1 = -29.9 P_{10} = -22.6 Q_1 = -19.9 Median = -16.7 Q_3 = -12.5 P_{90} = -9.1 P_{99} = -3.6

Hours in Service:	744
Hours of Data:	740
Hours of Missing Data:	4
Hours of Calibration:	0
Percent Operational Time:	99.5

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	-5	-5	-4	-4	-4	-4	-4	-5	-6	-7	-7	-4	0	1	1	-2	-4	-7	-9	-9	-9	-8	-8	-7	-5.0	1.3
2-Dec	-7	-8	-8	-8	-8	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-10	-10	-10	-10	-10	-10	-11	-12	-9.2	-7.5
3-Dec	-12	-12	-13	-13	-13	-13	-13	-13	-13	-13	-12	-12	-12	-11	-10	-11	-13	-15	-16	-17	-18	-19	-19	-20	-13.9	-10.4
4-Dec	-20	-21	-21	-21	-21	-21	-21	-21	-21	-22	-19	-15	-11	-9	-7	-7	-8	-10	-11	-12	-13	-14	-15	-16	-15.7	-6.7
5-Dec	-16	-16	-15	-14	-12	-12	-11	-10	-13	-14	-12	-10	-8	-6	-4	-6	-8	-12	-14	-16	-17	-18	-19	-19	-12.6	-4.0
6-Dec	-19	-20	-21	-21	-21	-21	-21	-21	-21	-19	-16	-14	-11	-11	-11	-11	-11	-12	-12	-13	-14	-14	-14	-14	-16.0	-10.6
7-Dec	-13	-14	-13	-13	-12	-12	-13	-13	-13	-13	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-13	-13	-12.5	-11.6
8-Dec	-12	-12	-12	-11	-11	-11	-11	-11	-11	-11	M	-11	-11	-10	-11	-12	-13	-13	-14	-14	-15	-15	-15	-15	-12.3	-10.4
9-Dec	-15	-16	-16	-16	-16	-16	-16	-16	-16	-17	-17	-16	-16	-16	-16	-16	-16	-17	-17	-17	-17	-18	-18	-18	-16.5	-15.5
10-Dec	-18	-18	-19	-19	-19	-20	-20	-20	-20	-20	-20	-20	-20	-20	M	-19	-20	-20	-20	-20	-20	-20	-20	-20	-19.6	-18.3
11-Dec	-20	-19	-19	-20	-20	-19	-19	-19	-19	-19	-18	-18	-17	-16	-17	-17	-17	-18	-18	-19	-19	-20	-20	-20	-18.6	-16.4
12-Dec	-19	-19	-19	-18	-18	-17	-17	-17	-16	-16	-15	-14	-14	-14	-13	-13	-13	-14	-15	-16	-17	-18	-18	-19	-16.2	-13.0
13-Dec	-19	-20	-19	-19	-19	-19	-18	-17	-17	-17	-16	-14	-10	-6	-6	-7	-8	-10	-11	-10	-5	-3	-3	-3	-12.3	-2.9
14-Dec	-5	-7	-8	-9	-11	-12	-13	-13	-13	-13	-12	-10	-9	-7	-6	-6	-6	-6	-6	-6	-6	-7	-9	-11	-8.8	-4.8
15-Dec	-13	-15	-15	-16	-17	-17	-17	-18	-18	-18	-19	-18	-18	-19	-19	-19	-19	-19	-19	-19	-20	-20	-20	-20	-18.0	-12.9
16-Dec	-20	-21	-21	-21	-21	-21	-22	-22	-21	-21	-21	-21	-21	-21	-21	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20.8	-20.1
17-Dec	-20	-20	-20	-20	-21	-21	-21	-20	-21	-20	-20	-20	-19	-19	-19	-19	-20	-20	-20	-19	-19	-19	-19	-19	-19.8	-18.7
18-Dec	-19	-19	-19	-18	-19	-19	-19	-19	-19	-19	-19	-19	-18	-18	-18	-18	-17	-17	-17	-17	-17	-17	-17	-16	-18.1	-16.3
19-Dec	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-15	-15	-15	-15	-15	-15	-15	-16	-16	-16	-16	-15	-15.7	-14.9
20-Dec	-15	-15	-15	-16	-15	-16	-16	-18	-20	-22	-21	-19	-17	-16	-16	-18	-20	-21	-21	-22	-22	-22	-23	-25	-18.7	-15.4
21-Dec	-25	-26	-27	-27	-27	-27	-27	-26	-27	-27	-26	-24	-23	-22	-22	-22	-22	-23	-24	-25	-25	-25	-25	-25	-24.9	-21.5
22-Dec	-26	-27	-27	-27	-26	-26	-26	-25	-25	-24	-22	-21	-20	-20	-19	-19	-18	-18	-18	-18	-18	-17	-17	-17	-21.6	-16.8
23-Dec	-17	-17	-16	-16	-15	-16	-17	-18	-19	-20	-19	-18	-18	-17	-16	-17	-18	-20	-20	-20	-20	-20	-21	-21	-18.2	-15.5
24-Dec	-21	-20	-21	-21	-21	-20	-20	-20	-19	-19	-18	-18	-17	-17	-16	-16	-16	-16	-15	-15	-15	-15	-14	-14	-17.6	-14.2
25-Dec	-14	-14	-14	-14	-14	-14	-14	-13	-14	-14	-13	-12	-10	-9	-8	-8	-9	-10	-11	-11	-10	-9	-9	-9	-11.5	-7.9
26-Dec	-9	-9	-9	-9	-9	-10	-10	-9	-9	-10	-9	-9	-9	-9	-9	-10	-12	-12	-13	-14	-14	-14	-14	-14	-10.7	-8.7
27-Dec	-14	-14	-14	-14	-15	-14	-14	-14	-14	-14	-14	-13	-12	-11	-11	-12	-14	-15	-17	-18	-19	-20	-21	-21	-15.0	-10.6
28-Dec	-21	-20	-20	-20	-19	-18	-17	-17	-17	-17	-17	-16	-16	-16	-18	-18	-18	-18	-18	-18	-18	-19	-20	-20	-18.1	-15.8
29-Dec	-21	-22	-22	-23	-24	-25	-25	-24	-24	-25	-23	-21	-21	-20	-20	-20	-20	-21	-22	-23	-25	-25	-26	-26	-22.7	-19.5
30-Dec	-27	-28	-28	-29	-30	-30	-30	-31	-31	M	-30	-27	-25	-23	-22	-23	-24	-26	-27	-29	-29	-30	-30	-30	-27.8	-21.6
31-Dec	-30	-30	-29	-28	-27	-26	-24	-23	-22	-22	M	-19	-17	-13	-12	-12	-13	-14	-11	-12	-13	-15	-13	-15	-19.2	-10.7
	-17.2	-17.3	-17.4	-17.5	-17.5	-17.4	-17.4	-17.4	-17.6	-17.2	-16.9	-15.8	-14.7	-13.9	-13.4	-13.9	-14.6	-15.5	-16.0	-16.4	-16.5	-16.7	-17.0	-17.3	Diurnal Average	
	-4.8	-4.7	-4.4	-4.4	-4.0	-3.9	-4.3	-4.7	-6.3	-7.0	-6.9	-3.8	0.2	1.3	0.6	-2.0	-4.1	-6.0	-5.9	-5.8	-5.3	-2.9	-3.1	-3.3	Diurnal Maximum	

M - Maintenance

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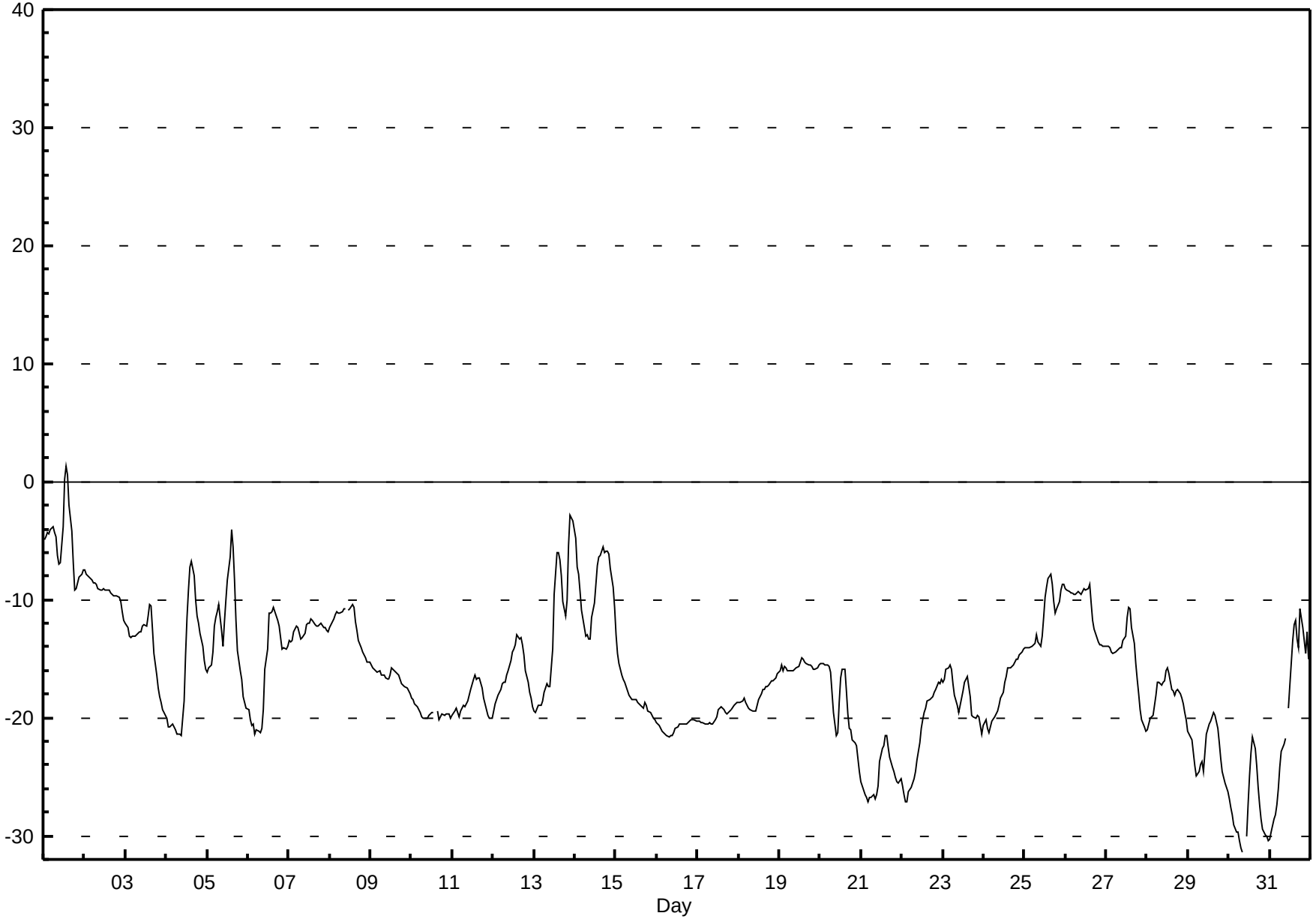
Hourly Averages

External Temperature (ET) - ^{o}C

Evergreen Park - December 2010



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Peace Air Shed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Evergreen Park - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 92.2 % on Dec 2 01:00 Maximum Daily Average: 90.6 % on Dec 2

Minimum Value: 54 % on Dec 5 15:00 Minimum Daily Average: 71.9 % on Dec 15
Maximum Diurnal Average: 81.2 % at hour 20 Minimum Diurnal Average: 74.6 % at hour 15
Monthly Average: 79.19 % Percentiles: P_1 = 65.2 P_{10} = 73.3 Q_1 = 75.8 Median = 78.5 Q_3 = 82.5 P_{90} = 86.8 P_{99} = 91.8

Hours in Service:	744
Hours of Data:	740
Hours of Missing Data:	4
Hours of Calibration:	0
Percent Operational Time:	99.5

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-Dec	82	81	81	82	80	79	82	84	88	90	90	82	67	63	65	76	82	85	90	92	92	92	92	92	82.9	92.1
2-Dec	92	92	92	92	91	91	91	91	91	91	91	91	91	91	91	90	90	90	90	90	90	90	89	88	90.6	92.2
3-Dec	87	87	86	86	86	86	86	86	86	86	85	85	85	83	78	77	83	85	84	83	82	81	80	80	83.7	87.3
4-Dec	80	79	78	79	79	79	79	78	78	78	78	78	76	76	74	77	81	86	87	87	86	86	84	83	80.2	87.0
5-Dec	83	84	83	84	85	84	83	78	83	84	80	73	67	62	54	65	75	85	86	84	84	82	82	81	78.7	85.8
6-Dec	80	79	78	78	78	78	77	77	77	78	77	75	69	70	73	73	77	81	83	84	84	86	86	85	78.5	86.4
7-Dec	85	85	85	84	85	86	86	87	88	89	88	87	86	84	83	85	86	87	87	87	87	87	87	87	86.0	88.7
8-Dec	86	85	84	83	83	85	86	85	84	82	M	87	87	84	81	78	76	75	74	74	76	76	82	81	81.5	87.0
9-Dec	79	82	81	80	81	80	79	78	76	74	74	75	74	76	76	76	78	80	80	80	79	78	76	76	77.8	81.7
10-Dec	77	76	75	75	75	75	75	76	77	77	75	74	73	74	M	75	76	76	76	77	77	77	77	77	75.8	77.5
11-Dec	77	77	77	78	78	78	78	78	79	79	78	77	74	74	75	77	78	80	81	81	81	80	79	79	77.9	81.1
12-Dec	79	79	80	80	81	81	81	81	82	81	81	80	81	81	79	81	82	83	85	85	84	83	82	80	81.3	84.5
13-Dec	80	80	81	81	80	80	80	80	80	80	80	80	75	71	72	77	83	86	87	89	87	77	78	77	80.0	88.8
14-Dec	82	88	87	89	89	88	88	88	87	87	87	88	87	89	92	92	92	92	92	91	91	82	81	85	88.0	91.9
15-Dec	83	79	76	74	71	71	70	69	69	68	69	66	65	67	72	75	74	67	75	74	71	74	71	75	71.9	82.7
16-Dec	75	75	75	76	77	77	77	77	77	76	75	75	72	73	69	70	71	71	70	70	72	74	75	75	73.8	77.3
17-Dec	76	75	76	76	76	75	74	75	75	76	75	74	73	73	74	75	76	76	76	77	77	76	76	77	75.3	77.0
18-Dec	77	77	77	77	77	78	77	77	77	77	77	76	76	75	76	77	78	79	80	80	81	81	81	81	77.9	81.3
19-Dec	82	82	82	82	82	82	82	82	82	82	81	81	80	78	77	76	77	78	77	76	76	76	77	76	79.5	82.4
20-Dec	77	79	80	80	80	81	81	81	82	79	77	77	75	74	74	73	77	80	80	80	79	79	78	77	78.3	81.5
21-Dec	77	76	76	76	75	76	76	77	76	76	76	76	77	78	78	78	78	77	77	77	77	76	76	76	76.5	78.2
22-Dec	76	75	75	75	75	76	76	76	76	77	78	78	78	78	78	79	79	79	79	79	79	79	79	80	77.5	79.9
23-Dec	80	80	77	78	76	76	78	80	81	80	78	75	73	72	70	73	76	78	79	79	79	79	80	79	77.4	81.1
24-Dec	79	79	80	79	79	79	80	80	80	80	80	79	78	77	77	77	78	78	78	79	80	80	80	81	79.0	80.6
25-Dec	81	81	80	78	78	78	77	78	80	80	80	79	77	75	76	77	81	85	87	88	87	85	85	85	80.7	87.7
26-Dec	86	86	86	87	87	87	88	87	87	87	87	85	85	84	81	83	82	83	85	84	80	77	74	73	83.8	88.1
27-Dec	72	72	73	79	75	73	76	82	83	83	82	79	73	70	71	75	77	82	84	84	82	81	80	80	77.7	83.6
28-Dec	79	78	78	79	80	81	82	82	82	83	83	82	82	76	72	72	72	74	73	74	74	74	73	75	77.6	83.2
29-Dec	77	78	77	77	78	77	77	77	77	76	76	75	72	70	68	70	72	76	78	79	78	77	77	77	75.7	78.7
30-Dec	77	76	75	75	74	75	74	73	73	M	73	73	72	67	63	66	70	75	76	75	75	74	74	73	73.1	76.6
31-Dec	73	73	73	73	74	74	75	76	76	76	M	73	71	65	66	66	72	78	79	82	86	85	86	85	75.6	85.7
	79.8	79.9	79.5	79.6	79.5	79.5	79.8	79.9	80.2	80.4	79.7	78.5	76.5	75.2	74.6	76.1	78.4	80.3	81.1	81.2	80.9	80.1	79.9	79.9	Diurnal Average	
	92.2	92.0	91.8	91.6	91.4	91.3	91.2	91.0	91.0	90.8	90.8	90.8	90.8	90.8	91.9	91.7	91.7	91.8	91.8	91.6	91.7	91.8	92.0	92.1	Diurnal Maximum	

M - Maintenance

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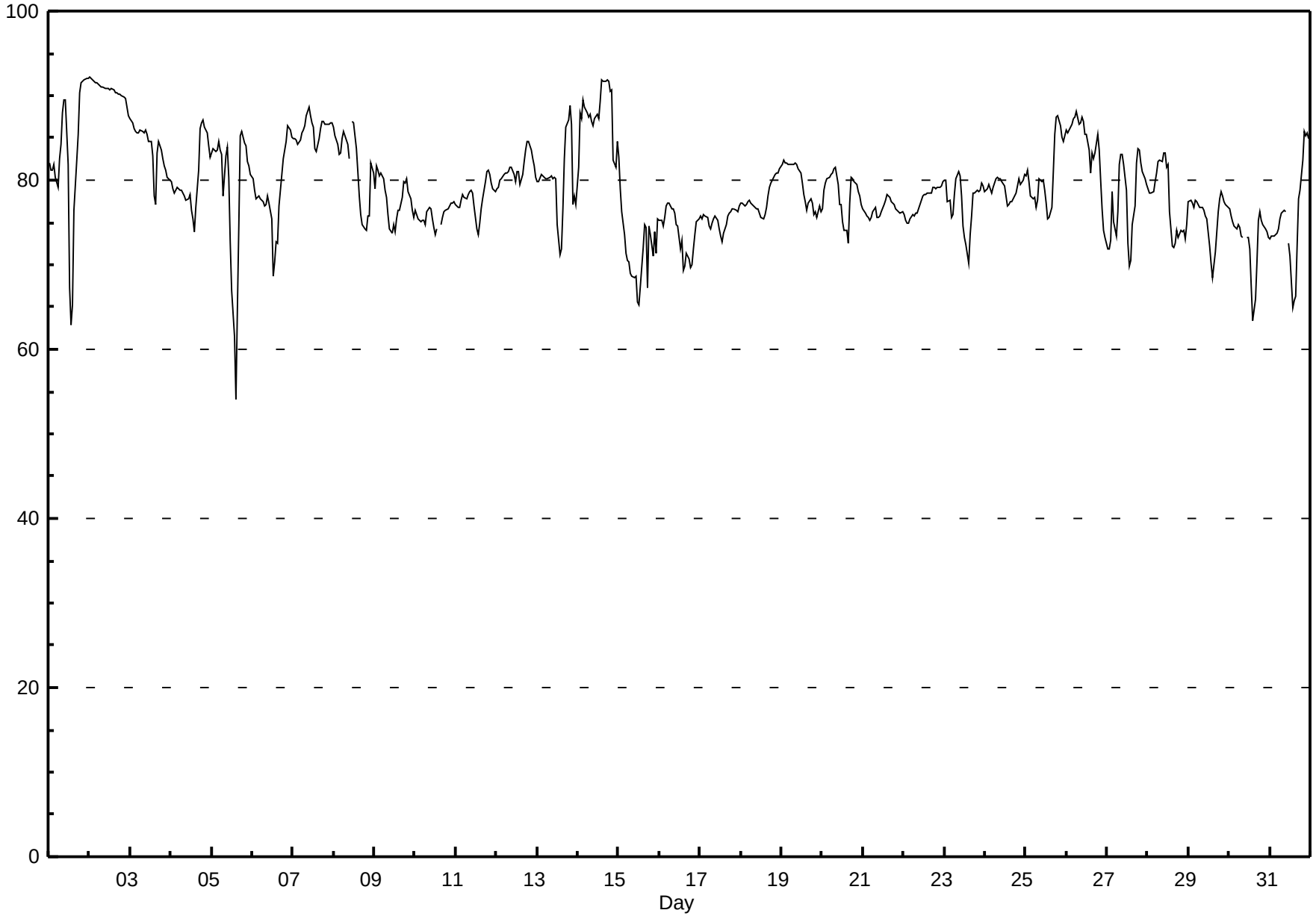
Peace Air Shed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Evergreen Park - December 2010



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Peace Air Shed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Evergreen Park - December 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	3	2	1	4	3	2	1	2	1	0	1	0	1	1	2	5	7	6	6	5	5	3	3	2	1.1	6.6
Dir	239	296	206	222	225	237	278	207	165	173	188	222	239	9	47	70	77	75	77	73	88	75	71	95	91.6	76.9
2 Spd	2	3	3	1	2	2	2	1	2	3	3	3	3	3	3	2	2	1	1	1	1	3	4	3	1.9	3.5
Dir	78	56	67	88	49	70	80	89	27	55	60	49	44	44	56	96	74	64	52	80	81	2	359	327	49.3	359.0
3 Spd	3	4	3	3	3	2	2	2	2	2	2	3	3	2	3	2	1	1	1	0	0	0	1	1	1.5	3.8
Dir	317	313	311	274	275	241	244	257	263	242	258	235	216	228	222	222	127	70	46	237	283	273	231	249	258.6	313.0
4 Spd	1	0	0	1	2	2	1	0	0	0	0	1	1	2	2	2	0	0	0	1	1	1	2	1	0.8	2.0
Dir	199	246	300	246	218	221	224	260	139	45	14	14	296	232	239	224	254	63	283	255	225	235	236	244	236.0	224.4
5 Spd	1	1	1	3	4	1	4	4	3	1	3	3	5	3	0	1	0	2	1	1	2	0	0	1	1.6	5.0
Dir	227	221	239	216	219	163	211	222	213	179	207	212	214	215	263	87	252	222	49	273	241	270	336	203	215.9	213.9
6 Spd	2	1	0	1	0	1	1	1	1	1	0	4	1	1	2	2	2	2	0	1	2	2	0	0	0.7	4.4
Dir	218	214	301	150	46	222	209	217	229	200	151	259	32	94	218	218	71	213	174	206	207	209	34	57	215.5	259.0
7 Spd	1	0	1	1	1	1	2	1	3	3	2	3	5	5	5	5	5	3	3	3	3	2	1	1	2.3	5.4
Dir	154	195	171	74	74	131	146	119	88	94	102	68	66	61	61	66	75	72	69	72	82	72	92	21	77.0	60.9
8 Spd	1	2	2	1	1	1	3	4	4	5	M	6	6	8	10	10	12	10	11	11	9	10	9	8	5.8	12.3
Dir	320	25	342	32	243	156	243	270	319	314	M	345	334	327	338	332	335	329	333	327	329	329	323	315	327.2	335.1
9 Spd	8	7	7	6	5	5	4	3	3	4	5	3	2	3	4	3	3	3	4	4	4	4	4	4	2.5	7.6
Dir	317	310	317	308	316	325	313	325	309	308	324	324	353	54	46	60	63	65	71	72	82	61	75	72	355.9	317.1
10 Spd	5	4	5	4	4	4	5	5	4	5	6	5	6	6	M	5	4	4	4	4	3	3	4	3	4.4	6.0
Dir	72	85	75	84	76	81	80	82	77	76	82	70	69	71	M	71	69	81	68	73	86	74	69	76	75.6	68.5
11 Spd	4	3	2	2	1	1	1	1	2	2	3	3	4	3	3	3	1	1	1	1	0	0	1	0	1.7	3.6
Dir	71	65	77	91	63	79	91	109	93	95	85	66	78	66	56	78	58	60	18	14	309	318	225	50	70.8	70.5
12 Spd	1	0	1	0	1	1	1	1	3	3	1	2	1	2	2	2	1	1	1	2	0	1	1	1	0.8	2.9
Dir	243	9	290	217	213	219	213	280	272	235	251	82	167	207	267	219	88	157	237	202	350	216	193	229	224.6	272.0
13 Spd	0	1	2	3	1	1	1	1	4	1	1	1	1	2	3	2	1	0	2	1	3	3	2	2	0.7	4.3
Dir	27	236	234	218	237	88	207	228	220	71	353	258	265	3	69	73	112	43	228	225	186	173	144	187	196.6	220.3
14 Spd	0	3	1	1	0	0	1	1	1	1	2	3	4	8	4	2	2	5	0	2	3	11	11	12	2.1	12.2
Dir	53	45	47	68	342	5	304	308	258	351	213	232	276	282	225	304	253	217	357	20	319	338	333	337	311.2	337.0
15 Spd	14	13	12	14	12	13	11	11	13	13	11	12	12	14	13	13	9	10	14	13	13	11	13	9	12.0	13.8
Dir	333	325	320	322	323	337	326	316	325	326	320	318	322	338	345	339	317	331	345	345	345	330	344	334	330.7	345.4
16 Spd	11	10	6	6	5	7	7	8	5	5	7	5	7	4	6	5	3	3	2	2	1	1	1	1	4.5	11.1
Dir	346	345	332	318	319	333	339	337	318	306	311	290	319	317	288	298	327	335	310	311	239	141	126	108	323.5	345.6
17 Spd	1	2	3	3	3	3	3	2	2	2	2	2	1	2	2	2	2	1	1	1	1	1	0	1	1.6	3.2
Dir	55	71	64	75	72	50	46	51	74	74	71	65	38	20	46	84	76	67	97	87	35	64	123	225	63.9	45.6
18 Spd	3	3	3	3	4	5	5	5	5	5	5	4	3	3	4	5	3	6	3	3	4	5	4	3	3.8	5.5
Dir	297	301	306	303	277	275	282	269	275	264	263	273	275	279	268	273	276	254	302	271	251	270	267	263	274.3	254.0
19 Spd	3	3	4	2	3	4	4	5	5	6	7	8	8	8	9	9	6	4	5	6	6	8	6	6	5.5	9.4
Dir	281	237	266	275	280	281	285	268	264	261	270	262	279	287	275	286	291	281	295	315	302	289	283	280	279.9	275.2
20 Spd	6	5	5	4	2	2	1	1	1	1	1	1	1	3	4	3	1	1	2	1	1	1	2	1	1.2	6.3
Dir	277	261	238	229	211	193	172	149	134	68	52	352	40	3	349	291	315	260	261	259	318	319	222	254	269.6	276.9
21 Spd	0	2	1	1	1	1	1	1	1	1	1	0	0	2	1	1	1	0	1	1	1	1	1	1	0.5	2.0
Dir	351	206	9	217	241	311	300	280	222	245	196	204	218	236	248	35	39	318	275	294	222	221	226	313	252.2	236.4
22 Spd	1	1	0	1	0	0	1	2	0	0	2	3	2	2	3	1	2	1	2	1	1	0	3	1	1.1	2.9
Dir	222	204	113	218	246	207	215	229	179	330	269	271	264	237	246	188	199	152	204	137	216	278	230	164	227.9	229.7

PASZA
Peace Air Shed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Evergreen Park - December 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
23 Spd	2	2	2	4	5	5	3	1	3	3	2	4	3	3	2	1	2	1	1	1	0	0	1	0	1.5	5.0
Dir	185	244	255	266	283	284	264	252	276	276	308	287	271	349	320	339	48	73	44	56	68	240	213	21	283.3	283.1
24 Spd	0	1	0	0	0	0	2	2	2	1	2	1	1	1	1	2	2	1	1	1	2	1	1	1	0.1	2.4
Dir	30	204	214	300	252	83	80	77	91	80	118	63	221	247	134	318	303	116	241	106	254	270	164	45	124.8	77.1
25 Spd	0	1	1	3	3	3	4	1	4	1	1	2	1	2	3	1	1	1	1	2	2	3	1	0	0.5	4.1
Dir	93	279	299	302	259	259	255	251	209	183	64	81	23	315	311	284	264	164	49	42	58	68	57	154	289.3	254.5
26 Spd	1	0	1	0	1	0	2	2	1	1	1	3	3	3	5	10	9	9	6	7	8	9	9	7	3.6	10.3
Dir	178	31	109	198	217	31	6	41	337	173	24	38	37	45	341	337	331	344	329	320	327	338	334	325	340.8	336.9
27 Spd	6	7	6	7	6	3	3	2	1	1	0	2	2	2	1	2	1	1	1	1	0	1	1	1	1.9	7.3
Dir	310	319	324	340	325	320	344	313	2	62	264	219	239	245	0	24	30	1	305	239	321	265	266	273	319.9	340.1
28 Spd	1	1	0	1	1	2	0	1	2	2	3	3	4	8	7	5	4	4	5	7	7	4	6	4	2.7	8.2
Dir	243	304	290	335	224	230	280	253	26	38	75	243	347	350	338	310	295	270	316	325	335	348	346	346	329.4	350.4
29 Spd	2	1	3	3	2	1	1	2	0	1	1	2	3	4	4	1	0	2	1	1	1	0	1	0	1.0	3.8
Dir	329	293	329	320	315	291	324	233	207	220	259	333	340	329	349	321	77	63	70	207	230	33	249	337	319.7	348.9
30 Spd	1	1	0	0	1	1	1	1	0	M	2	1	1	1	1	3	2	1	1	1	1	0	1	0	0.8	2.5
Dir	238	228	264	275	314	292	241	310	179	M	252	235	299	317	299	326	319	278	231	231	243	296	223	194	276.1	326.3
31 Spd	0	0	0	0	1	1	0	0	1	2	M	1	2	0	1	1	2	3	3	1	1	1	0	2	0.5	3.1
Dir	2	289	300	318	170	79	314	287	312	246	M	267	265	51	359	346	243	266	290	194	172	62	202	205	268.2	290.5
Spd	1.5	1.5	1.4	1.3	1.3	1.1	1.1	1.1	1.0	0.9	0.8	1.3	1.5	1.9	2.0	1.8	1.5	1.0	1.5	1.4	1.2	1.6	1.5	1.3	Diurnal Average	
Dir	319.0	321.7	318.7	299.4	294.8	309.4	299.3	290.1	296.4	315.9	312.3	302.5	319.3	330.6	330.1	335.3	344.1	335.1	342.9	345.2	328.7	335.4	328.9	324.4		
Spd	13.8	13.3	12.1	13.8	11.6	12.8	11.3	11.1	13.0	13.0	10.7	12.1	12.5	13.8	13.0	13.3	12.3	10.3	13.8	13.3	13.1	10.9	12.7	12.2	Diurnal Maximum	
Dir	332.8	325.1	319.6	322.0	323.0	337.5	325.7	316.3	324.8	326.4	320.2	317.7	322.2	338.3	344.7	339.1	335.1	330.7	345.4	344.7	344.7	337.5	344.0	337.0		

Maximum Speed Value: 14 km/h on Dec 15 19:00
Maximum Daily Speed Average: 12.0 km/h on Dec 15
Maximum Diurnal Speed Average: 2.0 km/h at hour 15

Minimum Speed Value: 0 km/h on Dec 31 07:00
Minimum Daily Speed Average: 0.1 km/h on Dec 21
Minimum Diurnal Speed Average: 0.8 km/h at hour 11

Monthly Average Velocity: 1.30 km/h 321.83 deg

Speed Percentiles: P_1 = 0.1 P_{10} = 0.5 Q_1 = 0.9 Median = 1.8 Q_3 = 3.6 P_{90} = 6.4 P_{99} = 13.2

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

Hours in Service:	744
Hours of Data:	740
Hours of Missing Data:	4
Percent Operational Time:	99.5

M - Maintenance

Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	42	11	8	0	0	0	61
NorthEast	87	2	0	0	0	0	89
East	99	11	0	0	0	0	110
SouthEast	23	0	0	0	0	0	23
South	36	0	0	0	0	0	36
SouthWest	148	0	0	0	0	0	148
West	107	20	0	0	0	0	127
NorthWest	86	45	15	0	0	0	146
Total	628	89	23	0	0	0	740

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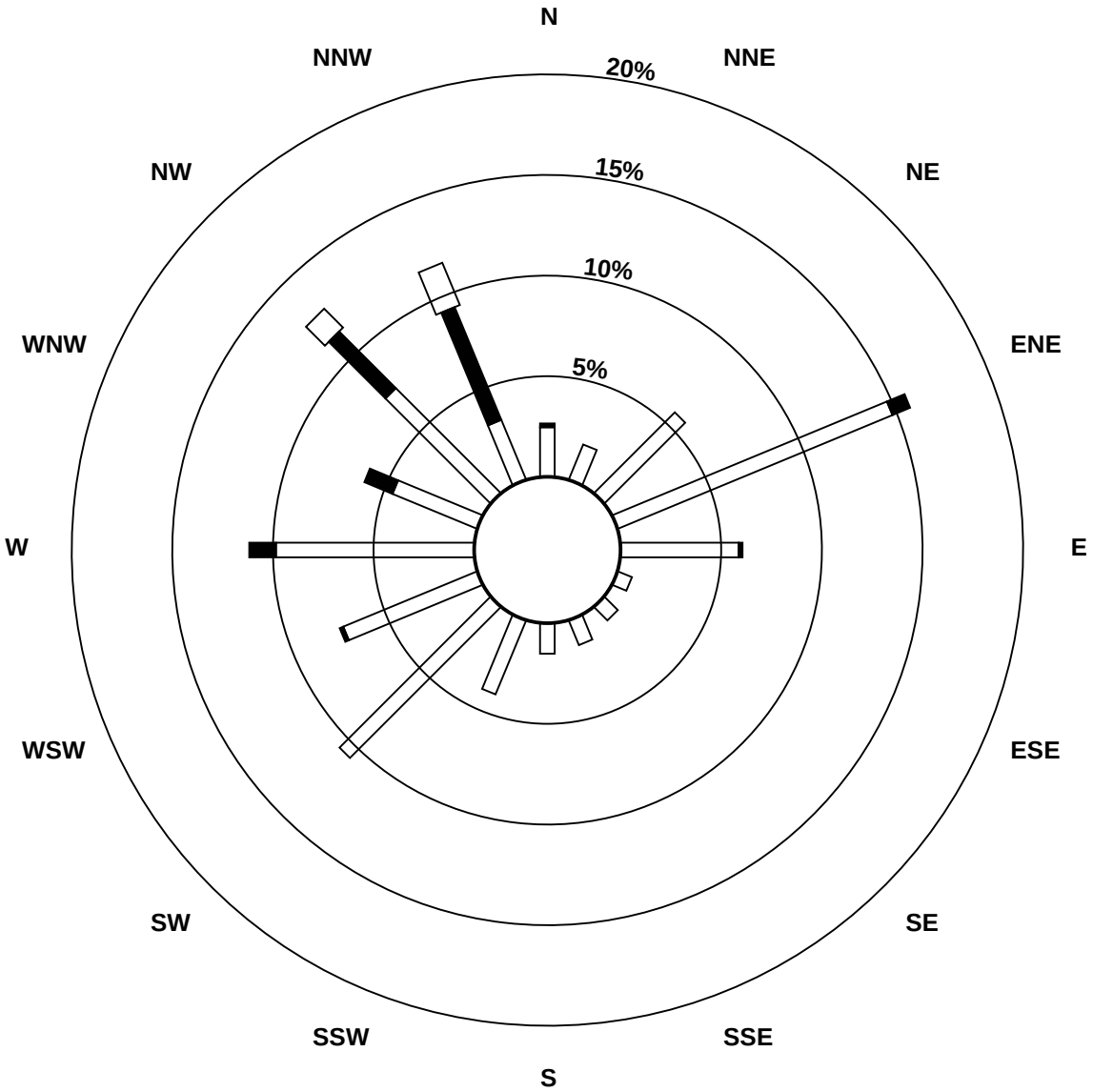
Peace Air Shed Zone Association

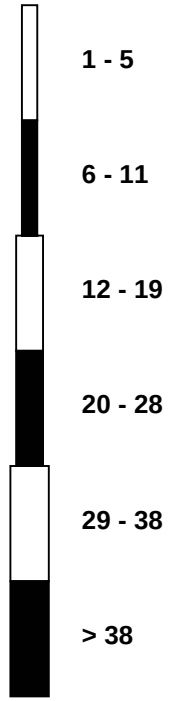
Wind Rose

Wind Speed (WS) (km/h)

Evergreen Park - December 2010



Wind Speed Classes (km/h)



PASZA
Peace Air Shed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Evergreen Park - December 2010

Maximum Speed: 14 km/h on Dec 15 01:00

Maximum Daily Speed Average: 12.6 km/h on Dec 15

Minimum Speed: 1 km/h on Dec 30 22:00

Minimum Daily Speed Average: 1.3 km/h on Dec 30

Maximum Diurnal Speed Average: 4.1 km/h at hour 15

Minimum Diurnal Speed Average: 2.8 km/h at hour 8

Monthly Average Speed: 3.26 km/h

Percentiles: P_1 = 0.8 P_{10} = 1.1 Q_1 = 1.5 Median = 2.3 Q_3 = 3.9 P_{90} = 6.6 P_{99} = 13.4

Hours in Service: 744

Hours of Data: 740

Hours of Missing Data: 4

Percent Operational Time: 99.5

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	4	3	2	4	3	2	2	3	3	2	2	2	2	2	3	5	7	6	7	5	5	3	3	2	3.4	6.8
2-Dec	2	3	3	2	2	2	2	1	2	3	3	3	3	3	3	2	2	1	1	1	1	3	4	4	2.4	3.8
3-Dec	3	4	3	3	3	2	2	2	3	2	2	3	3	2	3	2	1	1	1	1	1	1	1	2	2.2	4.1
4-Dec	1	1	1	2	3	2	2	1	1	1	1	1	1	2	2	2	1	1	1	2	2	1	2	2	1.5	2.5
5-Dec	2	2	2	4	4	3	4	5	3	1	3	3	5	3	1	2	1	2	1	2	2	1	1	2	2.4	5.0
6-Dec	2	1	1	1	1	1	1	1	2	1	1	5	2	2	3	2	2	2	1	1	2	2	2	2	1.8	4.5
7-Dec	2	1	2	1	2	2	2	2	3	3	2	3	5	5	5	5	5	4	3	4	4	2	3	1	2.9	5.5
8-Dec	1	3	2	1	2	3	4	4	4	5	M	7	6	8	10	11	13	11	11	11	10	10	9	8	6.6	12.5
9-Dec	8	7	7	6	5	5	4	3	3	4	5	3	2	4	4	3	3	3	4	4	4	5	4	4	4.4	7.8
10-Dec	5	4	5	4	4	4	5	5	5	6	6	5	6	6	M	5	4	4	4	4	3	4	4	4	4.6	6.2
11-Dec	4	4	3	2	1	2	2	1	2	2	3	3	4	4	4	3	1	1	1	1	1	1	1	1	2.1	3.9
12-Dec	1	1	1	1	1	1	1	1	3	3	2	2	3	3	2	3	2	2	2	2	2	2	2	2	1.9	3.2
13-Dec	2	2	3	4	3	2	2	2	4	2	2	2	2	2	3	3	1	1	2	3	4	3	2	2	2.4	4.4
14-Dec	2	3	3	2	1	1	1	2	1	2	3	4	6	9	5	4	4	5	2	3	3	11	11	13	4.2	12.6
15-Dec	14	14	13	14	12	13	12	12	13	13	11	13	13	14	13	13	10	11	14	13	13	11	13	9	12.6	14.2
16-Dec	11	10	7	7	6	8	8	8	5	6	7	6	7	5	6	5	3	4	3	2	1	1	2	1	5.3	11.4
17-Dec	1	2	3	3	3	3	3	2	2	2	2	3	2	2	2	3	2	1	1	1	1	1	1	1	1.9	3.2
18-Dec	3	3	3	3	4	5	6	5	5	5	5	4	4	4	4	6	3	6	4	3	4	5	4	3	4.1	5.6
19-Dec	3	3	4	2	3	4	4	5	5	6	7	8	8	8	10	9	6	5	5	6	6	8	7	6	5.8	9.5
20-Dec	7	5	5	5	2	2	1	1	1	1	1	1	2	3	4	4	2	1	2	1	1	1	2	1	2.4	6.7
21-Dec	1	2	2	2	1	2	2	2	2	1	1	1	2	2	1	1	1	1	2	1	2	1	1	1	1.4	2.2
22-Dec	2	1	1	2	2	2	2	2	1	1	2	3	3	2	3	2	2	2	2	1	2	1	3	2	1.8	3.1
23-Dec	2	2	3	4	5	5	3	1	3	3	2	4	3	3	3	2	2	3	2	2	1	1	1	1	2.6	5.1
24-Dec	1	1	1	1	1	1	2	3	2	2	2	3	2	2	3	3	3	2	2	2	2	1	2	1	1.9	3.2
25-Dec	2	2	3	4	3	3	4	3	4	1	2	2	2	3	3	2	2	3	2	3	2	3	2	1	2.6	4.3
26-Dec	2	1	1	1	1	1	2	3	2	2	1	3	3	3	5	11	10	10	7	7	9	9	9	7	4.6	10.6
27-Dec	6	7	6	7	6	3	3	2	2	2	1	3	2	2	2	2	1	1	2	2	1	2	2	1	2.9	7.5
28-Dec	2	1	1	2	2	2	3	2	2	3	3	4	5	8	7	6	4	4	6	7	8	4	6	4	3.9	8.4
29-Dec	3	2	3	3	2	2	1	2	1	1	1	2	3	4	4	1	1	2	1	1	1	1	1	1	1.8	4.0
30-Dec	1	1	1	1	1	1	2	1	1	M	2	1	2	2	2	3	2	1	1	1	1	1	1	1	1.3	2.6
31-Dec	1	1	1	1	1	1	1	1	2	2	M	2	3	1	2	1	2	3	3	1	1	1	1	2	1.5	3.2
	3.2	3.1	3.1	3.1	2.9	2.9	3.0	2.8	2.9	2.9	3.0	3.5	3.7	4.0	4.1	4.0	3.4	3.3	3.3	3.2	3.2	3.3	3.5	3.0	Diurnal Average	
	14.2	13.5	12.5	14.2	12.0	13.1	11.6	11.6	13.4	13.4	11.2	12.6	13.1	14.1	13.2	13.5	12.5	11.0	14.0	13.4	13.3	11.2	12.9	12.6	Diurnal Maximum	

M - Maintenance

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

PASZA
Peace Air Shed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Evergreen Park - December 2010

Maximum Value: 98.3 deg on Dec 12 21:00

Minimum Value: 5.7 deg on Dec 20 04:00

Percentiles: P_1 = 8.8 P_{10} = 13.8 Q_1 = 18.9 Median = 36.6 Q_3 = 66.2 P_{90} = 82.2 P_{99} = 95.9

Hours in Service:	744
Hours of Data:	740
Hours of Missing Data:	4
Hours of Calibration:	0
Percent Operational Time:	99.5

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-Dec	49	60	63	42	37	36	60	39	81	86	55	90	82	51	21	12	12	17	17	18	19	25	26	36	89.6
2-Dec	35	21	28	52	30	36	40	50	45	18	17	27	26	37	27	30	22	22	27	36	41	32	27	18	52.1
3-Dec	21	22	22	18	25	33	21	24	55	39	42	16	9	22	29	20	58	84	54	91	88	73	44	58	91.2
4-Dec	57	72	96	71	65	59	48	75	86	75	80	83	73	26	32	22	84	97	83	68	30	50	50	33	97.0
5-Dec	52	79	87	34	18	63	51	45	53	79	25	13	8	12	73	69	96	52	44	74	24	82	68	78	96.2
6-Dec	25	74	91	69	90	75	72	81	84	57	83	21	61	67	59	42	64	65	85	88	45	40	95	85	94.8
7-Dec	75	96	66	38	52	36	36	44	36	31	49	29	16	18	13	17	16	22	25	18	20	19	74	60	95.7
8-Dec	63	37	51	73	78	72	30	22	21	20	M	15	17	18	18	14	13	15	14	13	14	11	13	14	78.1
9-Dec	14	16	14	15	15	17	17	18	13	12	14	24	35	23	20	21	18	16	18	23	22	17	16	23	35.3
10-Dec	18	17	12	19	19	19	17	18	16	17	21	21	17	20	M	20	13	16	17	23	23	23	14	15	23.5
11-Dec	22	16	32	34	39	34	63	70	26	30	23	19	24	26	15	24	29	45	24	18	70	59	79	80	80.3
12-Dec	79	96	60	66	52	66	39	49	30	19	70	49	71	44	56	42	63	68	81	44	98	93	73	92	98.3
13-Dec	94	74	53	57	81	77	83	68	17	81	69	82	71	66	18	27	70	89	45	88	12	27	35	70	94.3
14-Dec	87	28	76	56	80	85	70	55	58	58	87	84	62	23	77	69	55	14	80	61	55	13	14	15	87.0
15-Dec	14	12	16	14	13	13	13	16	14	14	16	17	18	13	9	11	15	20	8	9	8	14	10	17	19.7
16-Dec	11	13	16	15	17	17	14	13	17	17	18	21	17	31	19	19	19	29	21	26	58	19	20	26	58.3
17-Dec	29	20	16	22	16	13	12	28	22	35	31	34	63	33	35	25	25	33	47	50	46	51	61	48	63.1
18-Dec	23	19	18	19	11	9	11	9	12	17	13	16	21	20	38	21	25	8	34	19	21	12	13	21	38.1
19-Dec	40	38	12	40	24	11	17	13	10	11	10	11	11	11	9	11	14	11	16	18	19	11	11	11	40.2
20-Dec	18	10	13	6	42	39	46	48	38	53	33	62	64	21	13	31	41	41	23	26	35	37	20	66	65.9
21-Dec	79	76	78	59	80	63	59	69	58	77	72	97	93	16	47	78	41	75	60	66	88	43	73	61	97.4
22-Dec	55	74	71	87	83	91	62	55	83	80	39	30	26	25	18	63	31	50	41	63	69	92	30	56	92.3
23-Dec	33	41	28	28	15	13	21	50	10	14	31	23	17	25	45	73	33	87	73	67	93	88	77	79	92.8
24-Dec	93	86	86	87	85	93	48	37	35	42	42	78	73	82	84	50	46	71	68	74	56	88	61	80	93.3
25-Dec	90	89	61	48	49	20	16	86	32	50	67	29	80	46	40	65	75	64	61	51	40	45	70	82	90.0
26-Dec	90	89	73	86	62	84	21	40	72	85	72	27	22	28	17	14	17	14	20	21	15	14	13	20	90.1
27-Dec	19	14	15	14	20	19	28	26	47	27	92	37	39	21	76	41	48	61	75	81	68	66	70	57	91.9
28-Dec	83	59	88	65	66	76	75	74	39	38	33	49	22	12	18	19	20	19	25	14	14	19	13	15	88.3
29-Dec	30	31	15	22	25	56	49	19	88	57	47	33	29	24	24	61	69	8	73	57	63	83	84	70	88.3
30-Dec	41	22	74	76	67	45	66	59	84	M	32	27	41	58	39	11	12	30	13	67	64	58	33	82	83.6
31-Dec	66	77	63	87	67	49	97	86	67	45	M	68	83	96	55	60	25	18	29	45	47	32	77	44	97.2
	94.3	95.9	95.9	87.2	89.9	92.9	97.2	86.5	88.3	85.8	91.9	97.4	93.2	95.9	84.0	77.6	96.2	97.0	85.2	91.2	98.3	93.1	94.8	92.1	

M - Maintenance

PASZA
Smoky Heights Station
Monthly Summary Tables, Graphs and Roses

PASZA
Peace Air Shed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 11.6 ppb on Dec 26 20:00
Maximum Daily Average: 2.8 ppb on Dec 26

Minimum Value: 0 ppb on Dec 9 09:00
Minimum Daily Average: 0.2 ppb on Dec 9
Maximum Diurnal Average: 1.3 ppb at hour 20
Minimum Diurnal Average: 0.5 ppb at hour 7
Monthly Average: 0.80 ppb
Percentiles: $P_1 = 0.1$ $P_{10} = 0.2$ $Q_1 = 0.3$ Median = 0.5 $Q_3 = 0.9$ $P_{90} = 1.5$ $P_{99} = 5.3$

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-Dec	3	3	2	1	1	1	1	0	0	0	1	3	1	2	A	1	0	0	0	0	0	0	0	0	0.9	3.3
2-Dec	0	0	0	0	0	0	0	0	0	1	0	0	1	A	1	0	0	0	0	0	1	1	1	1	0.4	1.0
3-Dec	1	2	4	4	4	2	1	0	1	1	1	0	A	1	1	1	0	0	0	0	0	0	0	0	1.1	3.8
4-Dec	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	1	0	1	1	1	1	0	0	0	0.4	0.8
5-Dec	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	1	0	0	1	0	0	0	0	0	0.4	0.8
6-Dec	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	2	5	0.5	4.9
7-Dec	1	0	0	0	0	0	0	1	A	1	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0.5	1.4
8-Dec	0	0	1	4	1	2	1	A	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0.7	4.0
9-Dec	0	0	0	0	1	0	A	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0.2	0.9
10-Dec	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	0.6
11-Dec	0	0	0	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7
12-Dec	0	0	1	A	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2
13-Dec	1	1	A	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.6	1.1
14-Dec	0	A	0	0	0	0	0	0	0	0	1	1	1	0	1	1	0	1	1	0	1	2	0	0	0.5	1.8
15-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
16-Dec	0	0	0	0	0	A	0	0	0	0	0	0	1	3	2	1	1	0	0	0	1	1	1	0	0.7	2.5
17-Dec	0	0	0	0	A	0	1	1	1	1	1	1	0	0	0	1	1	2	2	1	1	1	1	1	0.7	1.8
18-Dec	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	1	1	1	0.6	0.8
19-Dec	1	0	A	0	0	0	0	0	1	1	2	2	1	1	1	1	2	2	2	3	1	1	2	4	1.4	4.5
20-Dec	2	A	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	1	0	0	0	0.7	2.0
21-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.3	0.7
22-Dec	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	4	2	7	1	1	1	1	1.5	6.8
23-Dec	1	2	2	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.7
24-Dec	1	1	1	A	0	0	1	1	2	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	0.9	1.7
25-Dec	1	1	A	0	1	1	1	2	2	2	2	3	3	2	3	2	1	1	1	1	1	1	1	1	1.3	2.9
26-Dec	1	A	1	0	0	0	0	1	0	0	0	2	6	1	3	2	2	5	4	12	9	2	8	4	2.8	11.6
27-Dec	A	2	1	1	1	1	1	2	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	A	1.1	1.6
28-Dec	1	1	1	0	0	1	0	0	2	1	1	1	0	5	7	4	5	3	3	2	2	2	A	1	1.8	7.1
29-Dec	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	1	1	A	2	2	0.8	2.3
30-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0	0	0	0.7	1.4
31-Dec	1	1	1	1	1	1	1	1	0	0	1	1	0	1	1	1	0	0	1	A	0	0	0	1	0.5	0.6
	0.7	0.6	0.7	0.8	0.7	0.7	0.5	0.6	0.6	0.6	0.6	0.9	0.9	1.0	1.0	0.9	0.8	0.9	0.9	1.3	0.9	0.7	0.9	1.0	Diurnal Average	
	3.0	2.7	3.8	4.0	3.8	2.5	1.2	1.6	2.0	1.6	1.7	3.3	5.8	5.1	7.1	3.6	5.5	5.2	3.5	11.6	8.8	2.1	8.1	4.9	Diurnal Maximum	

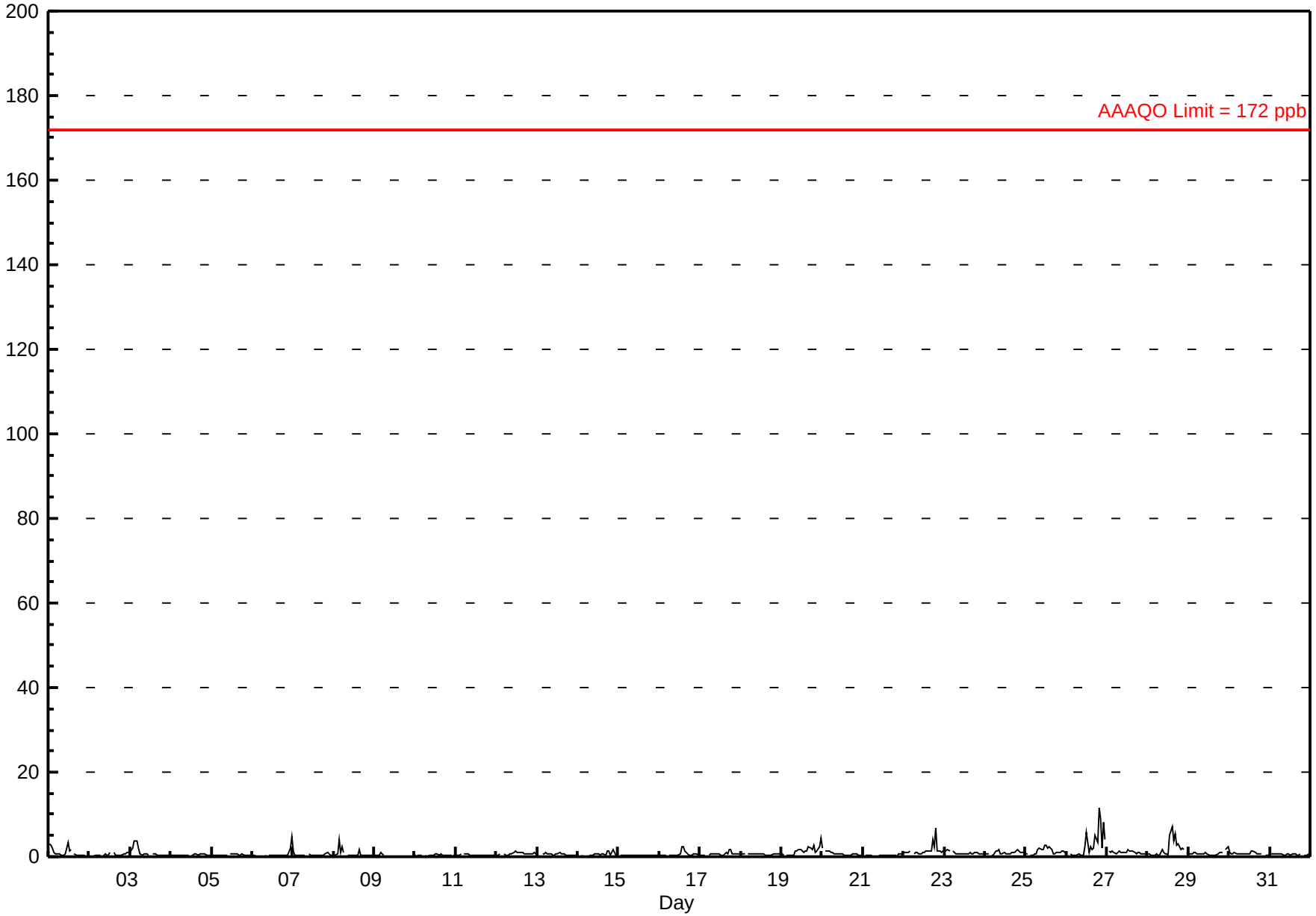
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

PASZA
Peace Air Shed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - December 2010



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - December 2010

Maximum Value: 21.8 ppb on Dec 26 21:00

Maximum Daily Average: 6.7 ppb on Dec 26

Minimum Value: 0 ppb on Dec 9 11:00

Minimum Daily Average: 0.6 ppb on Dec 9

Maximum Diurnal Average: 2.6 ppb at hour 12

Minimum Diurnal Average: 1.0 ppb at hour 7

Monthly Average: 1.58 ppb

Percentiles: $P_1 = 0.4$ $P_{10} = 0.5$ $Q_1 = 0.7$ Median = 0.9 $Q_3 = 1.4$ $P_{90} = 2.6$ $P_{99} = 15.4$

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-Dec	4	3	3	2	1	1	1	1	1	1	1	20	3	4	A	1	1	1	1	0	1	1	0	0	2.2	19.7
2-Dec	0	0	0	1	0	1	0	0	1	2	1	1	3	A	2	1	1	1	1	1	1	1	1	2	1.0	2.7
3-Dec	2	3	5	7	6	5	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1.9	6.8
4-Dec	1	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
5-Dec	1	0	0	1	1	1	0	1	0	1	A	1	1	1	1	1	1	1	1	1	1	1	0	0	0.7	1.4
6-Dec	0	1	0	0	0	1	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	10	10	1.4	10.3
7-Dec	5	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1.0	5.0
8-Dec	1	1	3	8	4	6	5	A	1	1	1	1	1	1	1	6	1	1	1	1	1	1	1	1	1.9	8.2
9-Dec	1	1	1	1	2	1	A	0	0	0	0	C	C	C	0	1	1	1	1	1	1	1	1	1	0.6	1.7
10-Dec	0	1	1	1	1	A	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.1
11-Dec	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1
12-Dec	1	1	1	A	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	2	2	1	1.1	1.8
13-Dec	1	1	A	1	2	3	1	1	1	1	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1.1	2.5
14-Dec	1	A	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	3	3	1	3	5	1	2	1.3	4.8
15-Dec	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0.6	1.0
16-Dec	1	1	1	1	1	A	1	1	1	1	1	1	2	6	6	2	1	1	1	1	1	1	1	1	1.3	6.4
17-Dec	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	2	1	6	6	1	1	1	1	1	1.4	6.2
18-Dec	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.0	1.9
19-Dec	1	1	A	1	1	1	1	2	4	2	5	5	2	2	2	2	3	3	2	5	2	2	3	6	2.4	5.9
20-Dec	3	A	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	2.9
21-Dec	A	1	1	0	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	0.6	1.1
22-Dec	1	1	2	1	2	A	1	1	1	1	1	1	2	2	2	2	2	19	19	17	2	3	2	2	3.7	19.3
23-Dec	2	2	2	2	A	2	1	1	1	1	1	1	1	1	1	2	1	1	2	1	1	1	1	1	1.3	2.1
24-Dec	1	1	1	A	1	1	2	2	2	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1.4	2.2
25-Dec	1	1	A	1	1	1	1	2	3	2	2	9	8	2	5	3	1	1	1	1	1	2	2	1	2.3	8.7
26-Dec	1	A	1	1	1	1	1	2	1	1	1	17	16	3	5	5	8	11	14	15	22	4	13	12	6.7	21.8
27-Dec	A	2	2	3	2	1	1	2	2	1	1	2	2	2	2	2	1	1	1	1	1	1	1	A	1.6	2.7
28-Dec	1	1	1	1	1	1	1	1	4	2	1	1	1	9	10	10	13	6	4	3	3	2	A	1	3.4	13.0
29-Dec	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	4	4	1.4	4.4
30-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	A	1	1	1	1.2	2.0
31-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.9	1.0
	1.2	1.1	1.2	1.4	1.3	1.3	1.0	1.1	1.1	1.0	1.1	2.6	2.0	1.7	1.8	1.7	1.6	2.2	2.3	2.2	1.8	1.3	1.8	1.9	Diurnal Average	
	5.0	3.3	5.3	8.2	6.5	6.2	4.7	2.4	4.2	2.1	4.8	19.7	15.9	8.9	9.6	9.8	13.0	18.5	19.3	17.2	21.8	4.8	12.9	11.9	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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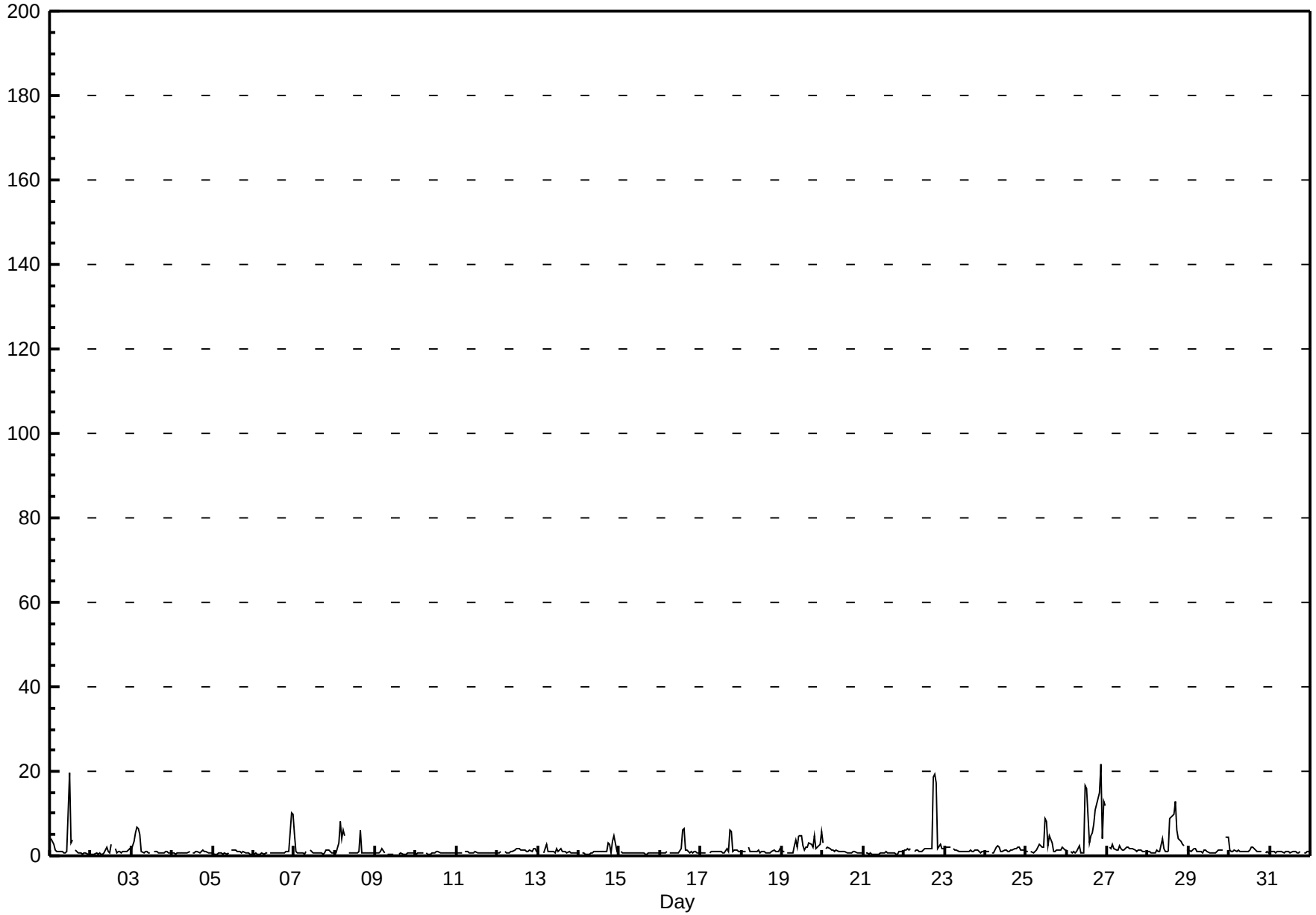
Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - December 2010



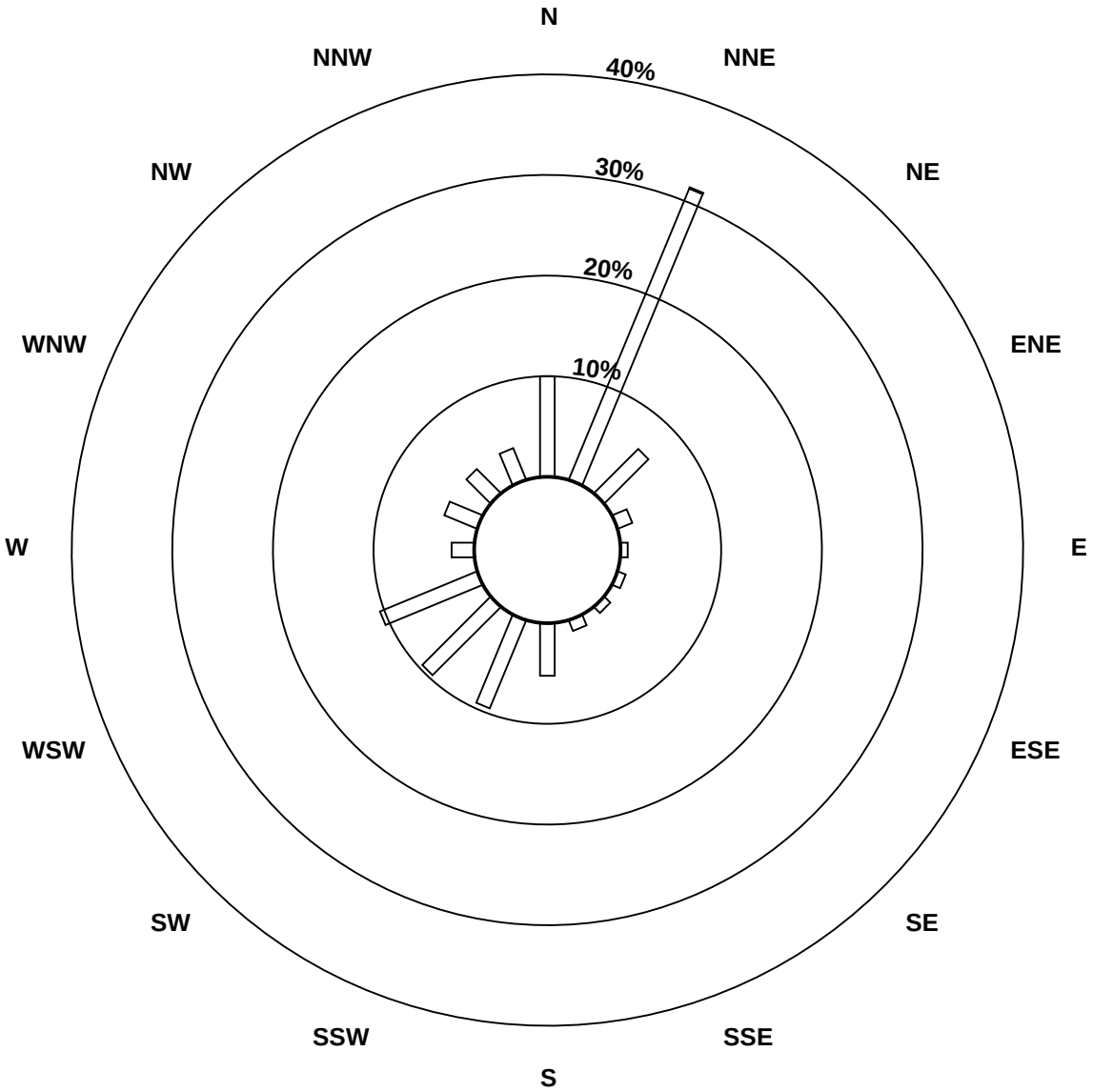
FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

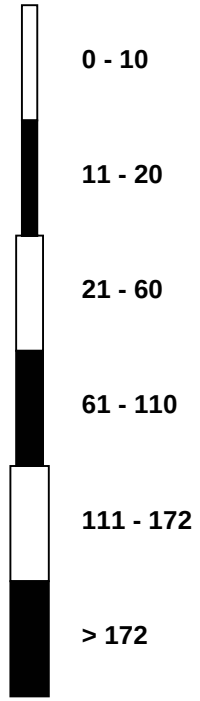
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - December 2010



Pollutant Classes (ppb)



PASZA
Peace Air Shed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.4 ppb on Dec 31 16:00 Maximum Daily Average: 0.7 ppb on Dec 27

Minimum Value: 0 ppb on Dec 12 09:00 Minimum Daily Average: 0.2 ppb on Dec 10
Maximum Diurnal Average: 0.5 ppb at hour 17 Minimum Diurnal Average: 0.4 ppb at hour 7
Monthly Average: 0.43 ppb Percentiles: $P_1 = 0.2$ $P_{10} = 0.2$ $Q_1 = 0.3$ Median = 0.4 $Q_3 = 0.6$ $P_{90} = 0.6$ $P_{99} = 0.9$

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) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	0	0	0	0	0	0	0.6	0.9
2-Dec	0	0	0	0	0	0	0	0	0	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.4	0.8
3-Dec	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
4-Dec	0	0	0	0	0	0	0	0	1	0	1	A	0	1	0	0	1	1	1	0	1	1	1	1	0.5	0.7
5-Dec	1	1	1	1	0	1	0	1	0	0	A	0	0	0	0	0	0	1	1	0	0	0	0	0	0.5	0.6
6-Dec	1	0	0	1	1	1	1	1	1	A	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0.5	0.7
7-Dec	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
8-Dec	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
9-Dec	0	0	0	0	0	0	A	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0.3	0.4
10-Dec	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
11-Dec	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
12-Dec	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
13-Dec	0	1	A	1	0	1	0	1	1	1	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0.5	0.7
14-Dec	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.4	0.6
15-Dec	A	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
16-Dec	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
17-Dec	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
18-Dec	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
19-Dec	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.4	0.6
20-Dec	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0.5	0.7
21-Dec	A	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.7
22-Dec	1	1	0	1	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.7
23-Dec	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0.6	0.6
24-Dec	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.4	0.6
25-Dec	0	1	A	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.7
26-Dec	1	A	1	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8
27-Dec	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	0.8
28-Dec	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	0	0	0	0	A	1	0.5	0.9
29-Dec	0	0	0	0	1	0	1	0	0	0	1	1	1	0	0	1	1	1	1	1	1	A	1	1	0.5	0.7
30-Dec	1	1	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.5	0.6
31-Dec	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	A	1	1	1	1	0.6	1.4
	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	Diurnal Average	
	0.7	0.8	0.7	0.8	0.8	0.8	0.7	0.9	0.8	0.8	0.7	0.7	0.7	0.9	0.9	1.4	1.2	1.0	0.7	0.8	1.0	1.0	0.7	0.7	Diurnal Maximum	

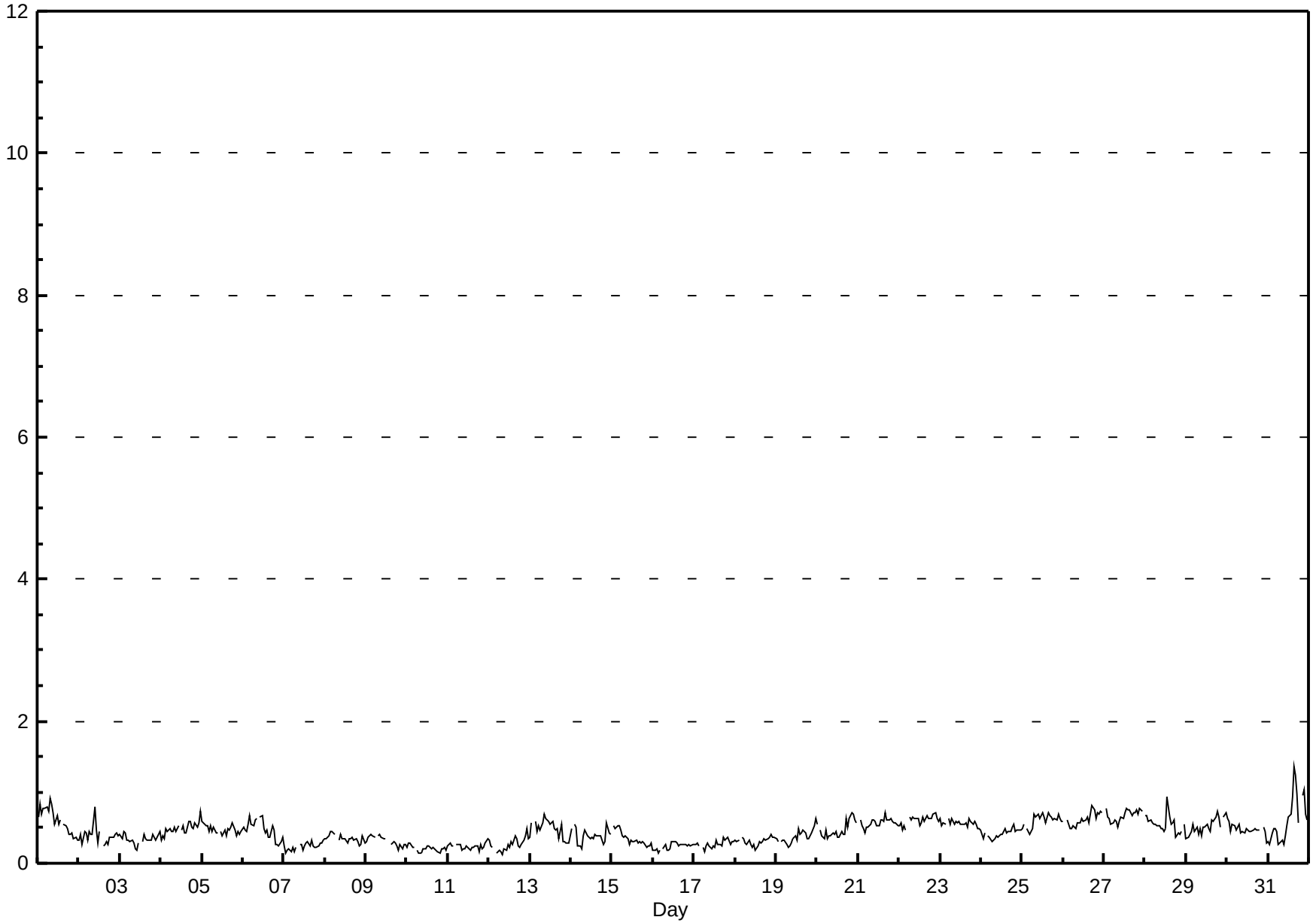
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

PASZA
Peace Air Shed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - December 2010



PASZA
Peace Air Shed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - December 2010

Maximum Value: 2.2 ppb on Dec 2 10:00

Maximum Daily Average: 1.1 ppb on Dec 27

Minimum Value: 0 ppb on Dec 12 07:00

Minimum Daily Average: 0.6 ppb on Dec 16

Maximum Diurnal Average: 0.9 ppb at hour 17

Minimum Diurnal Average: 0.8 ppb at hour 11

Monthly Average: 0.88 ppb

Percentiles: $P_1 = 0.5$ $P_{10} = 0.6$ $Q_1 = 0.7$ Median = 0.9 $Q_3 = 1.0$ $P_{90} = 1.1$ $P_{99} = 1.5$

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)																								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-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1.1	1.5
2-Dec	1	1	1	1	1	1	1	1	1	2	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.9	2.2
3-Dec	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
4-Dec	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
5-Dec	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
6-Dec	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
7-Dec	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
8-Dec	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
9-Dec	1	1	1	1	1	1	A	1	1	1	1	1	C	C	C	1	1	1	1	1	1	1	1	1	0.8	1.1
10-Dec	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	0.8
11-Dec	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
12-Dec	1	1	1	A	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
13-Dec	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
14-Dec	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.5
15-Dec	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	1.1
16-Dec	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
17-Dec	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
18-Dec	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
19-Dec	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1
20-Dec	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
21-Dec	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.3
22-Dec	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.2
23-Dec	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.1
24-Dec	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
25-Dec	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.5
26-Dec	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.2
27-Dec	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1.1	1.3
28-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	A	1	1.0	1.7
29-Dec	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	1.2
30-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.9	1.1
31-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1	A	1	2	1	1	1.1	2.0
	0.9	0.8	0.9	0.9	0.8	0.9	0.8	0.9	0.9	0.9	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.9	0.9	0.9	0.9	Diurnal Average	
	1.3	1.3	1.5	1.2	1.2	1.3	1.2	1.3	1.3	2.2	1.1	1.5	1.3	1.7	1.6	2.0	1.8	1.6	1.2	1.2	1.4	1.5	1.2	1.2	Diurnal Maximum	

C - Calibration

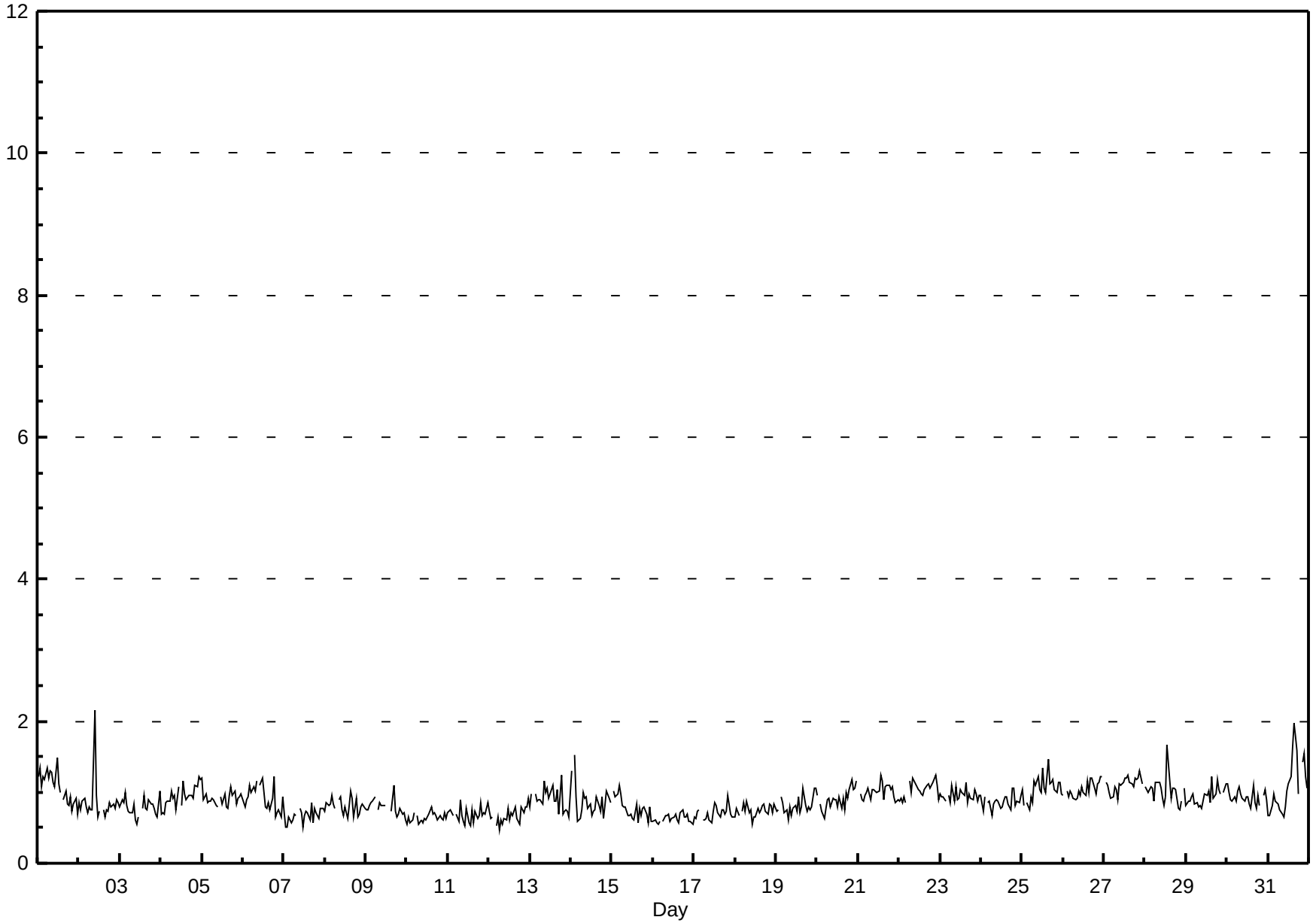
A - Automated Daily Zero Span

PASZA
Peace Air Shed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - December 2010

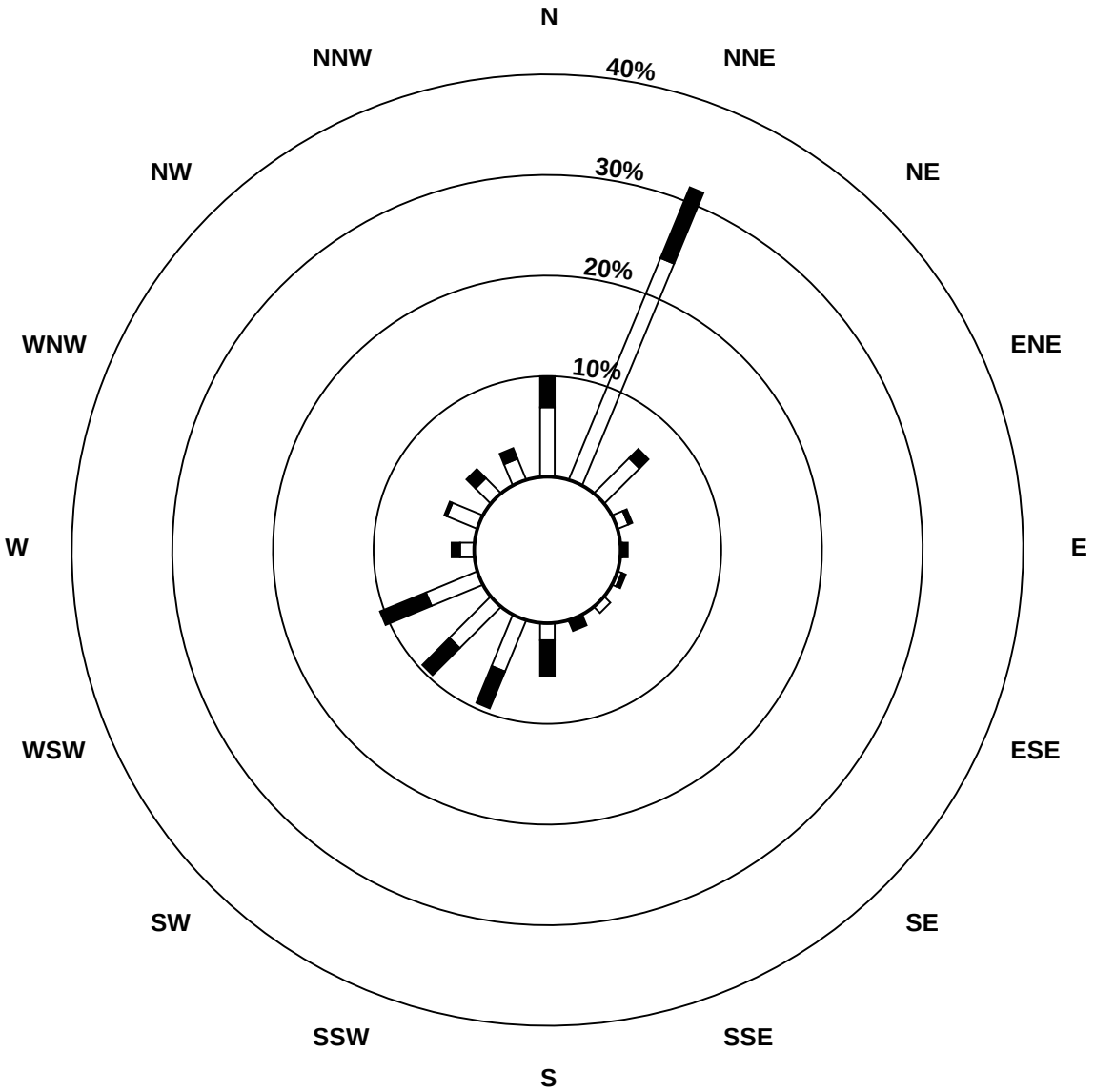


PASZA
Peace Air Shed Zone Association

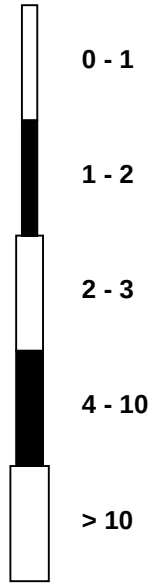
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - December 2010



Pollutant Classes (ppb)



PASZA
Peace Air Shed Zone Association

Hourly Averages

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

Smoky Heights - December 2010

Number of Exceedences: 1-hr: 1 24-hr: 0
Maximum Value: 99.9 $\mu g/m^3$ on Dec 20 20:00
Maximum Daily Average: 17.6 $\mu g/m^3$ on Dec 20

Minimum Value: 0 $\mu g/m^3$ on Dec 9 07:00
Maximum Diurnal Average: 12.8 $\mu g/m^3$ at hour 20
Monthly Average: 7.42 $\mu g/m^3$
Minimum Daily Average: 1.4 $\mu g/m^3$ on Dec 10
Minimum Diurnal Average: 4.9 $\mu g/m^3$ at hour 7
Percentiles: P_1 = 0.0 P_{10} = 1.3 Q_1 = 2.9 Median = 6.2 Q_3 = 9.0 P_{90} = 13.3 P_{99} = 39.4

Hours in Service:	744
Hours of Data:	736
Hours of Missing Data:	8
Hours of Calibration:	1
Percent Operational Time:	99.1

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	6	7	7	8	14	18	18	17	18	15	12	8	7	10	7	8	13	14	19	16	7	5	4	4	11.0	18.8
2-Dec	3	6	7	6	6	6	4	12	9	8	6	8	7	5	7	6	6	8	10	28	3	5	4	5	7.3	27.8
3-Dec	5	4	4	3	2	2	1	3	0	1	1	1	3	4	8	8	8	5	8	8	7	7	6	7	4.5	8.5
4-Dec	8	7	9	6	6	5	6	6	6	7	8	9	9	8	11	10	13	15	11	13	12	11	12	9	9.1	14.7
5-Dec	7	4	4	4	3	5	3	3	2	2	3	3	4	3	5	5	6	9	8	8	4	7	3	2	4.4	9.1
6-Dec	3	9	12	12	9	7	9	13	8	5	8	11	6	7	10	11	9	12	12	15	15	18	13	9	10.0	17.5
7-Dec	15	10	11	12	11	9	7	11	21	15	10	11	10	10	11	7	7	6	17	15	16	25	21	16	12.7	24.7
8-Dec	15	9	5	3	5	4	6	8	10	12	16	12	12	15	11	6	4	2	0	0	2	2	2	1	6.8	16.0
9-Dec	1	1	1	3	0	1	0	1	10	0	5	0	0	0	0	0	1	1	1	2	2	2	2	1	1.5	9.8
10-Dec	1	0	0	0	0	0	0	1	1	1	1	1	4	2	2	3	5	1	1	1	2	4	2	2	1.4	4.5
11-Dec	6	12	5	3	5	6	5	4	4	5	7	8	11	12	12	9	8	8	7	6	6	15	30	24	9.1	30.3
12-Dec	5	3	3	2	2	1	0	2	3	21	17	10	5	6	7	16	10	8	4	5	0	2	4	7	5.9	20.6
13-Dec	9	11	11	11	13	12	11	12	10	9	11	11	12	22	7	12	20	0	31	BD	0	0	BD	BD	11.2	31.0
14-Dec	10	BD	12	26	0	BD	1	74	51	1	0	0	2	6	6	7	10	7	10	6	8	7	10	7	11.8	74.3
15-Dec	D	5	5	5	4	5	3	3	3	2	2	2	1	2	2	1	2	1	1	2	1	2	1	2	2.4	5.4
16-Dec	2	1	1	1	1	1	1	1	2	2	2	4	5	2	1	1	1	2	2	2	1	2	2	1	1.7	5.3
17-Dec	1	8	2	0	1	3	2	7	2	2	2	6	6	5	4	3	6	15	29	24	7	8	1	1	6.1	28.7
18-Dec	25	12	2	2	2	2	3	4	5	5	7	7	5	4	3	4	4	4	3	2	2	2	3	4	4.8	25.1
19-Dec	2	3	6	6	13	0	0	0	1	1	1	1	1	2	2	3	4	4	3	1	1	1	2	3	2.6	12.8
20-Dec	3	3	3	4	4	5	6	7	6	6	10	7	6	6	8	8	66	63	6	100	45	33	BD	0	17.6	99.9
21-Dec	2	5	2	2	4	2	4	4	6	12	21	29	11	C	24	19	20	13	35	60	10	9	8	8	13.3	59.6
22-Dec	9	7	9	11	7	6	5	7	15	13	18	7	6	7	7	15	13	8	13	18	33	9	7	7	10.7	32.6
23-Dec	8	8	8	8	8	9	9	9	9	9	8	11	9	9	7	7	10	5	9	8	8	5	4	32	9.0	32.5
24-Dec	16	13	16	16	15	13	12	11	9	13	10	6	7	9	6	10	9	6	7	6	8	8	8	8	10.1	16.4
25-Dec	8	13	6	8	7	9	10	7	7	8	9	10	7	9	6	9	9	10	8	7	7	6	9	10	8.3	13.3
26-Dec	10	9	14	15	8	8	6	11	19	17	29	12	5	7	5	5	10	6	5	6	4	8	9	6	9.7	29.2
27-Dec	2	1	3	2	2	3	2	4	2	3	3	2	7	3	17	3	3	4	5	5	4	7	5	8	4.2	16.7
28-Dec	6	6	6	6	6	4	2	6	6	7	9	9	7	5	4	5	3	3	4	2	4	9	2	2	5.1	9.5
29-Dec	4	3	4	6	5	5	6	5	4	5	6	4	5	7	5	4	4	6	5	7	6	6	5	5	5.0	7.5
30-Dec	7	5	6	6	6	7	6	8	9	11	12	10	9	9	8	7	9	10	10	10	8	9	6	6	8.0	12.1
31-Dec	6	8	9	8	10	8	3	4	5	8	8	9	7	8	8	9	8	7	2	2	3	7	4	1	6.2	9.8
	6.9	6.4	6.2	6.7	5.8	5.4	4.9	8.5	8.5	7.2	8.4	7.4	6.2	6.7	7.1	7.1	9.7	8.5	9.2	12.8	7.6	7.8	6.5	6.6	Diurnal Average	
	25.1	13.3	16.3	25.5	14.5	17.8	17.7	74.3	50.9	20.6	29.2	29.1	11.8	21.8	23.6	18.5	66.2	62.8	34.8	99.9	44.7	32.9	30.3	32.5	Diurnal Maximum	

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

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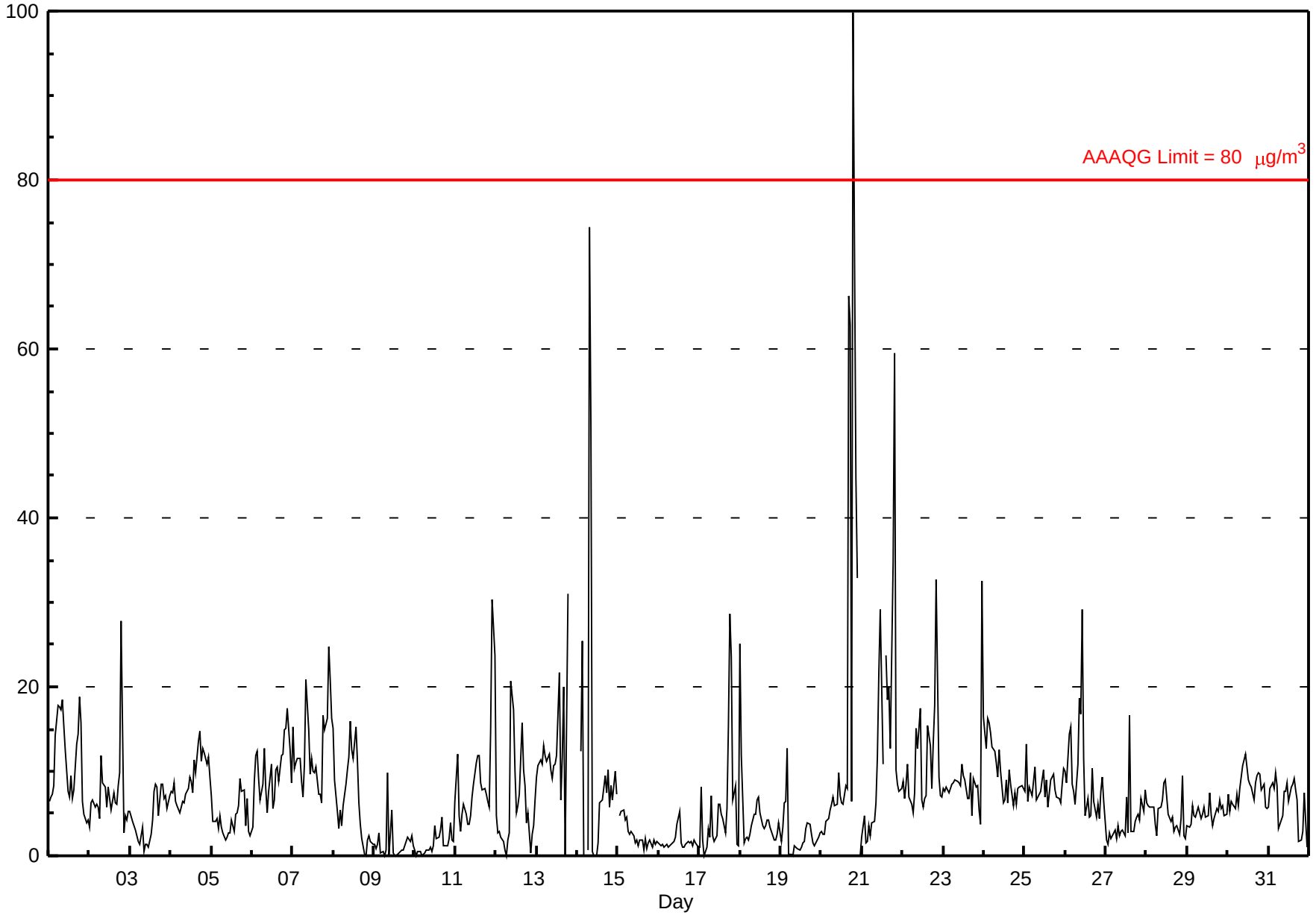
Hourly Averages

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

Smoky Heights - December 2010



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Peace Air Shed Zone Association

Hourly Maximums

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

Smoky Heights - December 2010

Maximum Value: 319.4 $\mu g/m^3$ on Dec 20 20:00

Maximum Daily Average: 55.2 $\mu g/m^3$ on Dec 20

Minimum Value: 0 $\mu g/m^3$ on Dec 13 20:00

Minimum Daily Average: 3.6 $\mu g/m^3$ on Dec 10

Maximum Diurnal Average: 30.4 $\mu g/m^3$ at hour 20

Minimum Diurnal Average: 8.5 $\mu g/m^3$ at hour 6

Monthly Average: 14.44 $\mu g/m^3$

Percentiles: P_1 = 1.0 P_{10} = 3.4 Q_1 = 6.0 Median = 10.2 Q_3 = 14.8 P_{90} = 23.2 P_{99} = 137.0

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)																								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-Dec	9	9	9	13	21	20	20	19	22	22	22	13	10	16	14	16	19	18	30	31	9	7	5	7	15.8	31.0
2-Dec	7	11	13	8	7	7	6	21	16	12	11	11	13	8	11	12	11	13	32	44	5	7	6	9	12.6	44.0
3-Dec	9	9	6	6	5	4	6	8	2	4	4	3	5	6	10	11	11	10	11	11	10	12	9	10	7.5	12.1
4-Dec	14	13	12	10	9	7	9	9	8	10	11	12	13	10	14	13	18	18	15	16	16	14	14	12	12.3	18.0
5-Dec	10	9	7	9	8	8	6	5	3	5	6	4	7	7	8	9	8	11	12	12	11	16	8	5	8.1	15.7
6-Dec	8	14	14	16	13	12	12	15	13	8	10	22	16	11	17	18	14	20	18	18	18	24	17	12	14.9	24.1
7-Dec	45	14	16	14	13	11	11	23	30	27	12	15	15	14	14	11	12	11	27	18	18	29	29	19	18.6	45.2
8-Dec	20	13	10	8	11	7	13	13	12	17	39	15	14	17	17	11	6	4	3	2	4	5	4	4	11.2	39.2
9-Dec	4	3	4	6	2	3	2	3	40	1	35	18	1	1	4	3	2	3	3	4	4	4	4	3	6.6	40.5
10-Dec	2	2	1	2	2	2	2	3	2	3	2	3	7	7	6	5	7	3	3	4	4	7	5	4	3.6	6.8
11-Dec	17	23	19	7	8	10	7	6	6	8	10	11	14	16	14	13	11	14	17	15	16	53	59	46	17.5	58.8
12-Dec	13	5	5	4	4	3	1	5	7	33	27	17	9	14	22	24	23	23	9	10	4	6	8	11	11.9	32.7
13-Dec	14	15	16	14	16	15	14	15	15	13	17	13	19	63	12	27	46	3	78	0	1	1	0	0	17.7	77.9
14-Dec	30	0	54	38	20	2	9	171	94	10	1	3	6	15	11	10	14	11	21	8	14	10	20	12	24.4	171.0
15-Dec	D	6	7	7	7	7	7	4	6	3	3	4	3	4	4	3	4	3	4	3	4	4	3	4	4.6	7.2
16-Dec	3	3	3	3	3	3	3	4	3	4	6	7	9	7	3	3	4	4	4	4	4	6	7	3	4.3	8.9
17-Dec	3	32	6	2	3	6	4	21	6	4	4	18	14	9	9	6	11	36	47	51	15	22	5	4	14.1	51.0
18-Dec	44	21	6	6	5	4	5	5	7	7	8	14	10	6	6	6	6	5	6	5	3	4	5	7	8.4	44.0
19-Dec	4	6	17	17	56	12	2	2	3	3	3	2	3	3	3	7	6	9	4	3	3	3	4	5	7.5	55.8
20-Dec	5	4	4	7	7	8	8	9	10	10	14	10	8	11	16	33	188	195	35	319	260	153	0	9	55.2	319.4
21-Dec	10	7	3	5	7	6	8	9	12	26	47	50	17	C	32	29	43	18	123	224	31	16	13	11	32.5	224.4
22-Dec	18	9	20	29	11	10	8	24	24	24	25	23	12	9	10	37	19	12	30	31	73	21	18	11	21.2	73.4
23-Dec	11	9	10	10	10	11	12	12	12	12	11	16	13	11	10	11	16	15	32	32	20	12	8	68	16.0	67.5
24-Dec	38	16	22	19	17	18	18	15	15	20	18	9	10	17	11	17	15	8	14	9	11	12	13	12	15.5	37.8
25-Dec	11	21	9	15	10	13	15	11	9	11	15	13	12	11	10	13	12	13	12	13	14	13	15	14	12.7	20.9
26-Dec	16	11	23	19	13	11	10	26	46	33	76	50	16	16	7	7	23	21	18	10	9	35	29	22	22.9	76.0
27-Dec	5	5	5	4	6	5	4	6	5	5	5	5	23	8	45	6	6	11	11	10	8	10	11	12	9.1	44.7
28-Dec	14	11	9	12	12	8	15	8	9	12	12	13	9	10	7	9	6	7	6	6	20	40	8	8	11.3	40.1
29-Dec	7	8	7	9	8	7	9	7	7	7	9	8	8	14	12	6	8	8	8	10	8	8	7	9	8.2	13.7
30-Dec	10	8	10	9	9	12	9	11	12	14	16	16	12	14	12	10	11	14	14	14	11	12	9	9	11.6	16.4
31-Dec	9	12	13	10	13	11	7	7	7	10	11	12	11	12	17	13	12	9	5	5	6	17	9	4	10.1	17.4
	13.7	10.6	11.6	11.0	10.8	8.5	8.5	16.0	15.0	12.2	15.8	13.8	10.9	12.2	12.5	12.9	19.0	17.7	21.0	30.4	20.5	18.8	11.4	11.8	Diurnal Average	
	45.2	32.1	54.3	38.2	55.8	19.9	19.9	171.0	94.3	33.2	76.0	50.4	22.7	62.8	44.7	37.5	187.8	195.0	123.2	319.4	260.3	153.3	58.8	67.5	Diurnal Maximum	

C - Calibration D - DAS Failure

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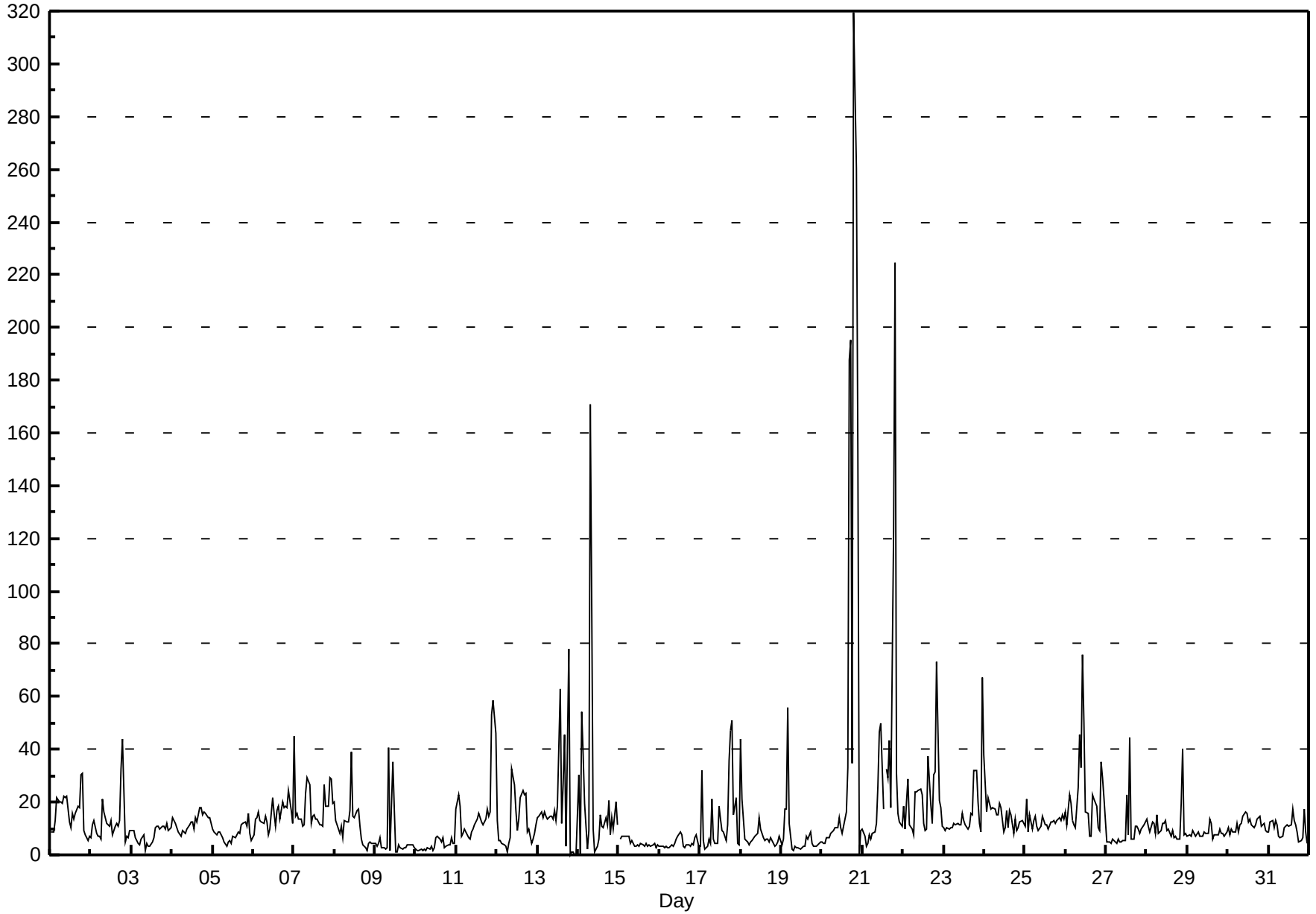
Hourly Maximums

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

Smoky Heights - December 2010



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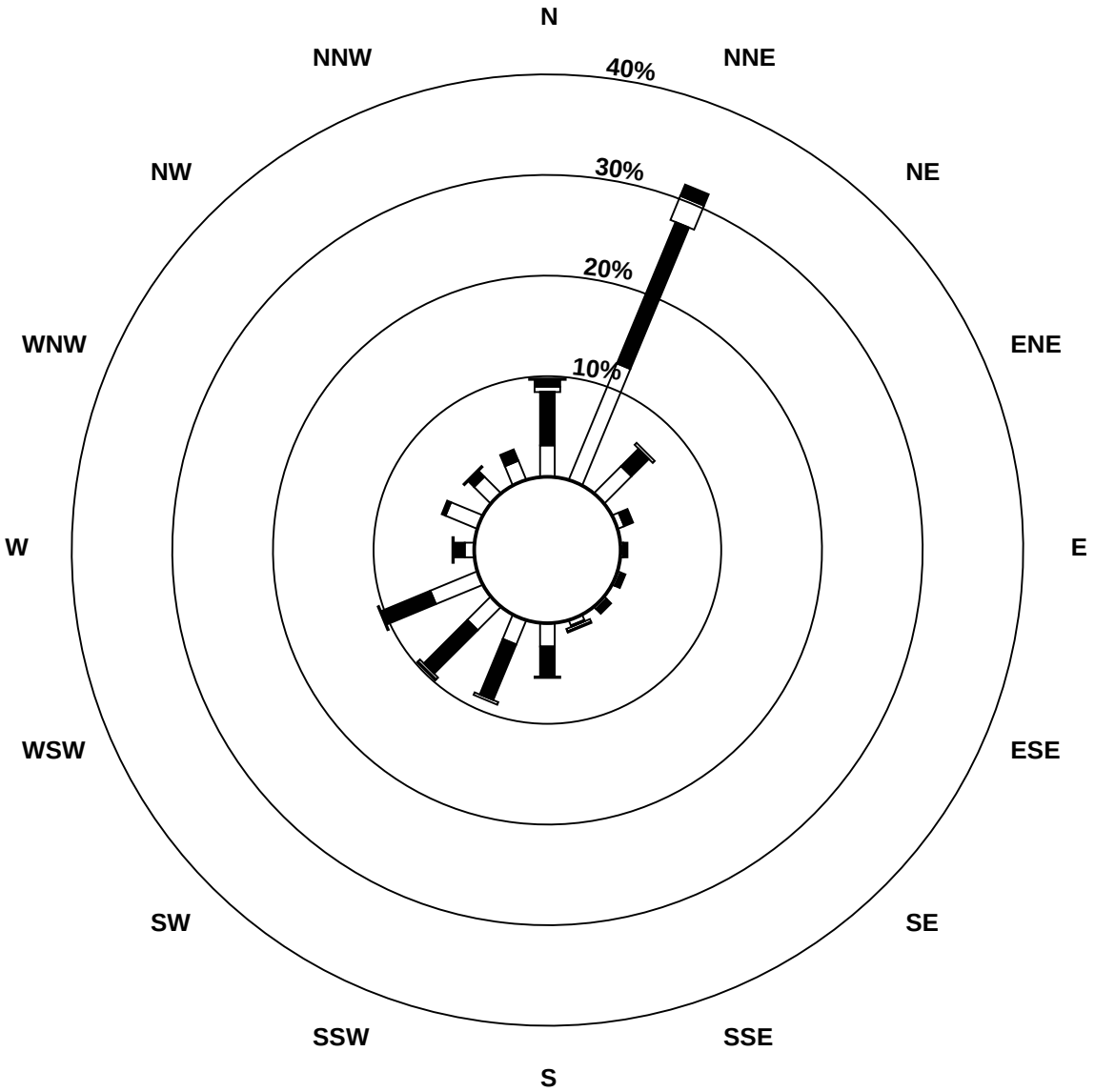
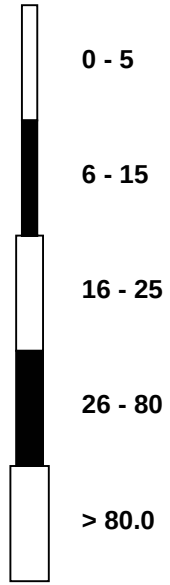
Pollutant Rose

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

Smoky Heights - December 2010



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



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Peace Air Shed Zone Association

Hourly Averages

External Temperature (ET) - °C

Smoky Heights - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: -1.5 °C on Dec 1 13:00 Maximum Daily Average: -5.7 °C on Dec 1

Minimum Value: -30 °C on Dec 30 07:00 Minimum Daily Average: -28.0 °C on Dec 30
Maximum Diurnal Average: -14.6 °C at hour 15 Minimum Diurnal Average: -17.4 °C at hour 10
Monthly Average: -16.55 °C Percentiles: P_1 = -28.9 P_{10} = -22.6 Q_1 = -19.9 Median = -17.0 Q_3 = -12.8 P_{90} = -9.9 P_{99} = -3.2

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 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-Dec	-3	-3	-3	-3	-4	-5	-5	-6	-8	-7	-6	-4	-1	-2	-5	-7	-9	-9	-9	-8	-8	-8	-8	-8	-5.7	-1.5
2-Dec	-9	-9	-9	-9	-9	-9	-10	-10	-10	-10	-10	-10	-10	-10	-11	-11	-11	-11	-11	-11	-12	-12	-12	-12	-10.3	-8.6
3-Dec	-12	-13	-13	-13	-13	-14	-14	-14	-15	-14	-14	-13	-13	-12	-12	-13	-15	-18	-18	-18	-17	-16	-19	-19	-14.7	-12.3
4-Dec	-18	-18	-19	-19	-20	-19	-20	-21	-20	-20	-18	-16	-14	-13	-12	-12	-12	-11	-10	-12	-13	-14	-13	-13	-15.8	-9.9
5-Dec	-12	-12	-12	-12	-11	-12	-12	-11	-12	-12	-11	-10	-9	-10	-8	-9	-12	-15	-16	-15	-15	-17	-19	-20	-12.8	-8.3
6-Dec	-20	-20	-19	-20	-19	-19	-21	-21	-21	-20	-19	-15	-15	-14	-15	-15	-15	-16	-15	-14	-14	-15	-14	-12	-16.9	-12.4
7-Dec	-12	-12	-12	-12	-12	-13	-13	-13	-14	-13	-13	-12	-12	-12	-12	-13	-13	-13	-13	-13	-13	-13	-13	-13	-12.6	-11.9
8-Dec	-13	-13	-13	-12	-12	-12	-12	-12	-12	-12	-11	-11	-11	-10	-10	-11	-12	-12	-13	-13	-14	-14	-14	-15	-12.3	-10.3
9-Dec	-15	-15	-15	-16	-16	-16	-16	-16	-16	-17	-16	-16	-17	-17	-17	-17	-17	-18	-18	-18	-18	-19	-19	-19	-16.9	-14.8
10-Dec	-19	-20	-20	-20	-21	-21	-21	-21	-21	-21	-21	-20	-21	-21	-20	-20	-21	-21	-21	-21	-21	-20	-20	-20	-20.5	-19.2
11-Dec	-20	-20	-20	-20	-20	-20	-20	-19	-19	-19	-19	-18	-17	-17	-17	-17	-18	-18	-19	-18	-19	-19	-19	-19	-18.8	-16.7
12-Dec	-19	-19	-19	-19	-19	-19	-18	-18	-17	-17	-16	-16	-15	-15	-14	-14	-14	-14	-14	-14	-15	-17	-17	-18	-16.4	-13.6
13-Dec	-18	-18	-18	-19	-19	-17	-17	-16	-16	-16	-16	-14	-12	-9	-8	-8	-7	-6	-7	-6	-5	-3	-4	-3	-11.8	-3.1
14-Dec	-4	-3	-4	-5	-7	-9	-8	-8	-7	-6	-6	-8	-9	-8	-8	-8	-8	-8	-9	-9	-8	-9	-11	-11	-7.5	-3.1
15-Dec	D	-13	-13	-14	-15	-16	-17	-17	-17	-18	-18	-18	-18	-19	-19	-20	-20	-20	-21	-21	-21	-21	-21	-21	-18.1	-12.6
16-Dec	-21	-21	-21	-22	-22	-22	-22	-22	-22	-23	-24	-23	-22	-21	-21	-21	-21	-21	-21	-21	-21	-21	-21	-21	-21.7	-21.2
17-Dec	-21	-21	-21	-21	-21	-21	-21	-21	-21	-21	-21	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-19	-19	-20.5	-19.1
18-Dec	-19	-19	-19	-19	-18	-18	-17	-17	-17	-17	-16	-16	-15	-15	-14	-14	-14	-14	-14	-14	-14	-14	-14	-15	-16.0	-13.9
19-Dec	-15	-15	-15	-15	-15	-15	-16	-16	-15	-15	-15	-15	-15	-14	-15	-15	-15	-16	-16	-16	-16	-16	-16	-16	-15.3	-14.4
20-Dec	-16	-17	-17	-18	-18	-18	-18	-18	-18	-21	-19	-16	-14	-14	-14	-15	-18	-19	-20	-18	-19	-20	-21	-24	-17.9	-13.7
21-Dec	-26	-25	-25	-26	-26	-26	-27	-28	-28	-28	-24	-23	-21	-21	-21	-22	-24	-25	-24	-23	-24	-22	-23	-23	-24.3	-20.5
22-Dec	-23	-24	-23	-23	-23	-23	-22	-22	-22	-22	-22	-21	-20	-20	-20	-20	-20	-19	-20	-19	-19	-18	-18	-19	-20.9	-18.0
23-Dec	-18	-18	-18	-18	-19	-19	-18	-19	-19	-19	-19	-18	-17	-16	-17	-17	-18	-18	-18	-18	-18	-18	-19	-20	-18.2	-16.4
24-Dec	-19	-19	-19	-19	-19	-19	-19	-20	-20	-19	-19	-18	-17	-17	-17	-16	-16	-16	-16	-16	-16	-16	-15	-15	-17.6	-15.1
25-Dec	-15	-14	-15	-15	-15	-15	-14	-14	-14	-15	-14	-12	-10	-7	-5	-7	-10	-11	-12	-10	-10	-10	-10	-10	-11.8	-5.5
26-Dec	-10	-10	-10	-10	-10	-10	-10	-10	-11	-11	-11	-11	-11	-11	-10	-10	-11	-12	-12	-13	-13	-13	-14	-15	-11.2	-9.8
27-Dec	-15	-15	-16	-17	-16	-17	-18	-17	-17	-17	-16	-16	-15	-14	-13	-14	-18	-20	-18	-18	-19	-20	-20	-20	-17.0	-12.7
28-Dec	-18	-18	-17	-16	-14	-12	-16	-19	-19	-20	-20	-19	-18	-19	-19	-18	-19	-20	-19	-20	-21	-22	-25	-26	-18.8	-11.9
29-Dec	-26	-27	-25	-25	-23	-23	-23	-22	-23	-22	-21	-22	-21	-20	-20	-21	-24	-24	-26	-26	-26	-26	-26	-29	-23.9	-19.9
30-Dec	-28	-29	-28	-28	-30	-30	-30	-30	-29	-30	-28	-27	-26	-24	-24	-24	-26	-29	-30	-28	-28	-28	-30	-29	-28.0	-23.9
31-Dec	-29	-27	-24	-25	-24	-22	-18	-18	-19	-18	-17	-16	-18	-16	-16	-16	-18	-18	-15	-17	-18	-17	-15	-14	-18.9	-13.7
	-17.2	-17.0	-17.0	-17.1	-17.1	-17.1	-17.2	-17.3	-17.3	-17.4	-16.8	-15.9	-15.3	-14.8	-14.6	-15.0	-16.0	-16.5	-16.5	-16.4	-16.7	-16.8	-17.0	-17.3	Diurnal Average	
	-2.9	-3.0	-3.1	-3.2	-3.6	-4.5	-4.8	-6.5	-7.2	-6.3	-6.2	-3.7	-1.5	-2.3	-4.6	-6.7	-6.8	-6.2	-6.8	-5.9	-5.5	-3.2	-3.6	-3.1	Diurnal Maximum	

D - DAS Failure

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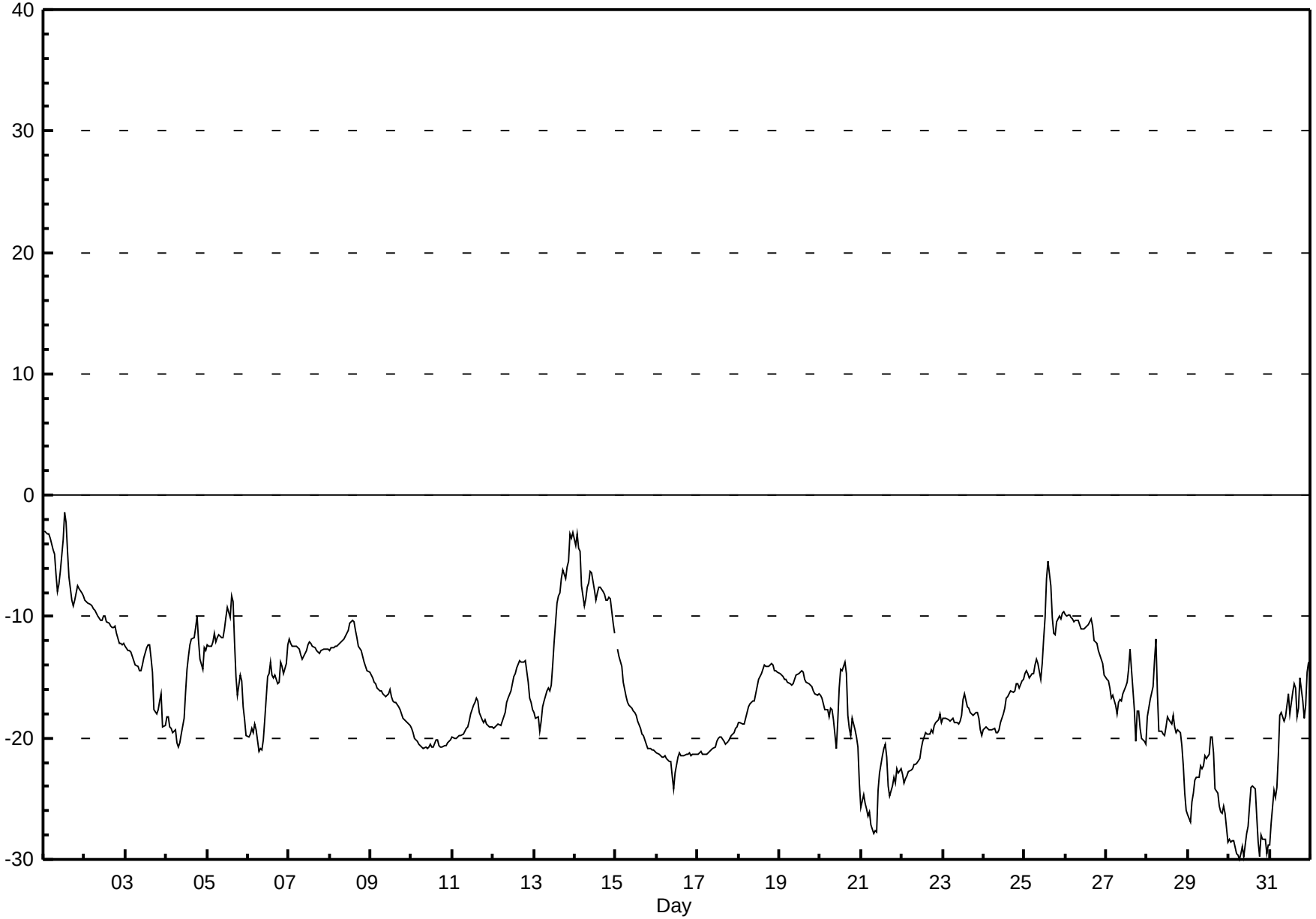
Peace Air Shed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Smoky Heights - December 2010



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Peace Air Shed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Smoky Heights - December 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	8	8	7	9	8	7	5	8	8	5	4	4	8	10	13	14	15	12	11	11	11	12	10	7	2.7	15.3
Dir	230	244	227	196	191	195	153	179	199	253	250	33	24	17	14	15	17	12	16	29	42	48	46	36	22.1	17.0
2 Spd	7	6	5	4	4	3	2	3	3	3	3	3	3	4	4	4	3	3	3	3	4	5	5	4	3.6	6.7
Dir	36	19	24	16	10	12	16	4	331	350	357	348	3	349	11	14	353	5	351	356	341	337	349	349	2.5	36.1
3 Spd	4	4	4	4	3	3	3	3	2	1	1	2	4	5	5	6	4	4	6	6	6	6	7	7	1.8	7.3
Dir	356	354	5	13	3	25	20	38	33	60	239	202	180	196	216	202	213	242	226	239	249	237	228	223	241.3	228.1
4 Spd	7	7	5	4	4	3	5	6	6	5	5	6	5	6	6	7	5	8	14	7	5	8	11	14	6.1	14.3
Dir	209	196	215	216	230	232	201	199	194	206	194	190	191	193	193	204	247	245	247	214	178	186	232	241	214.3	246.8
5 Spd	13	13	11	10	15	11	11	9	11	13	13	10	9	11	8	7	7	7	12	11	4	1	8	8	8.8	14.5
Dir	233	209	184	190	192	174	185	184	192	187	191	197	189	195	209	253	221	221	240	247	208	244	246	205	204.9	192.2
6 Spd	8	7	5	3	4	7	4	6	7	4	4	2	7	2	0	6	4	3	7	7	5	3	4	5	1.4	7.9
Dir	246	199	184	169	258	239	209	230	243	226	193	224	136	172	140	249	222	22	61	32	51	36	11	11	217.1	246.1
7 Spd	6	6	5	3	3	6	6	3	5	6	8	8	9	11	12	10	11	13	14	15	15	15	16	14	9.0	15.6
Dir	8	36	31	47	64	57	54	17	31	38	49	23	32	32	36	34	32	27	19	27	28	29	28	27	31.2	27.5
8 Spd	13	12	10	10	9	8	5	9	7	6	4	6	3	2	7	8	8	11	10	13	9	6	5	8	7.3	13.4
Dir	20	14	2	355	0	351	343	296	332	316	313	287	319	281	351	360	325	324	329	334	326	331	310	315	337.9	19.7
9 Spd	9	9	10	9	9	8	7	6	6	5	5	7	9	9	8	8	8	8	9	8	9	9	9	8	6.7	9.5
Dir	316	310	328	351	6	10	38	24	5	348	2	48	57	53	52	49	53	52	59	56	51	52	44	45	28.2	327.6
10 Spd	8	9	9	10	9	8	9	9	8	9	10	10	10	9	11	10	11	12	12	12	12	12	12	13	10.2	12.8
Dir	37	43	31	38	31	36	32	34	38	31	32	25	18	20	26	28	19	30	28	26	30	28	28	28	29.5	28.4
11 Spd	11	12	12	10	11	12	9	9	9	9	11	12	10	11	10	9	8	8	8	9	10	9	11	10	9.8	11.9
Dir	22	18	22	23	19	24	19	25	31	30	30	30	27	30	26	32	24	10	7	8	13	12	10	13	21.2	30.0
12 Spd	10	10	12	14	13	16	16	14	15	13	13	13	10	10	10	9	9	8	6	2	5	11	11	11	8.0	15.9
Dir	11	12	14	17	17	18	19	17	15	15	12	15	12	15	16	15	17	15	2	13	230	228	214	221	10.0	18.4
13 Spd	11	6	5	2	6	12	9	9	10	11	6	7	7	8	9	7	11	13	13	13	8	18	15	15	9.1	17.5
Dir	253	234	243	210	244	189	200	209	201	203	222	218	213	229	194	230	216	211	223	200	204	182	190	206	209.8	182.2
14 Spd	14	15	11	9	4	5	9	9	9	12	15	19	19	4	2	4	9	11	9	10	10	16	12	10	6.3	18.9
Dir	212	186	216	260	312	344	24	12	13	11	17	20	24	347	340	51	19	18	8	31	10	347	20	355	5.8	20.4
15 Spd	D	11	15	13	18	10	12	14	13	15	13	12	14	15	21	23	17	16	21	21	19	16	16	14	15.2	22.7
Dir	D	329	318	318	314	290	273	280	277	275	286	290	291	307	300	290	299	302	302	309	300	292	291	301	297.6	289.9
16 Spd	11	10	10	11	12	11	9	6	7	6	7	8	7	8	8	8	5	4	4	3	6	5	5	6	4.9	12.2
Dir	300	298	298	295	288	290	288	288	292	237	232	244	257	231	246	238	239	203	155	106	32	24	38	30	278.7	287.9
17 Spd	7	7	8	11	11	12	12	12	12	13	13	12	11	10	10	9	9	8	8	10	11	12	12	12	10.3	13.4
Dir	26	22	26	28	26	21	26	23	26	30	27	23	13	12	12	4	7	9	9	18	19	20	18	18	19.9	29.7
18 Spd	12	10	9	10	13	15	15	16	13	13	14	15	16	21	23	20	18	16	15	15	13	15	17	15	15.0	23.2
Dir	20	20	20	19	14	21	25	29	24	17	21	23	31	29	29	29	30	33	31	26	14	20	29	29	25.1	29.3
19 Spd	15	13	13	10	9	8	6	3	9	8	11	13	13	14	12	10	6	6	6	10	11	12	11	9	5.7	15.0
Dir	23	19	18	6	6	348	342	245	247	244	247	244	240	241	243	252	257	247	254	247	239	245	241	237	269.9	22.6
20 Spd	9	9	8	7	6	4	5	3	4	5	4	1	2	10	8	8	5	7	7	6	7	6	7	3	1.5	9.5
Dir	224	222	216	215	235	218	215	258	265	233	203	39	360	23	20	23	10	17	8	11	20	23	26	21	324.5	23.0
21 Spd	2	4	2	2	1	2	2	2	2	1	1	2	0	0	2	3	3	3	5	5	4	8	8	8	2.0	8.2
Dir	220	29	15	353	176	309	311	62	312	97	11	148	206	170	251	151	35	352	1	21	8	24	25	24	15.7	24.3
22 Spd	8	6	9	11	10	9	10	11	10	11	12	12	11	8	10	9	7	6	6	3	4	4	2	3	7.6	12.1
Dir	26	31	23	21	22	14	21	23	20	19	17	23	25	18	22	22	8	355	21	356	13	355	324	190	18.4	16.7

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Peace Air Shed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Smoky Heights - December 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
23 Spd	4	3	4	4	4	2	4	4	3	4	3	3	1	3	5	2	6	6	5	7	8	8	8	7	0.8	8.0
Dir	178	178	173	212	181	253	184	191	201	190	123	173	172	120	101	31	237	38	326	34	33	26	27	14	89.8	33.1
24 Spd	9	9	8	8	7	7	7	7	8	10	9	8	7	7	7	5	4	5	3	1	1	3	4	2	5.4	9.7
Dir	20	36	33	31	27	23	32	26	28	24	24	29	34	29	41	14	42	60	16	24	145	178	124	115	33.1	23.7
25 Spd	2	1	1	3	4	2	8	8	5	5	11	15	16	11	8	9	7	5	6	12	15	15	16	13	2.6	16.3
Dir	88	72	124	188	77	20	26	51	69	282	257	254	265	263	234	168	113	52	16	13	28	19	28	31	0.6	265.0
26 Spd	14	13	12	11	11	9	11	11	10	9	9	9	10	8	8	8	8	8	9	6	8	8	7	6	9.0	13.5
Dir	27	21	18	11	12	358	1	360	3	7	19	347	345	359	344	358	4	343	18	17	52	24	4	4	7.7	27.5
27 Spd	6	5	2	0	4	4	8	4	6	5	3	3	4	3	2	3	4	9	16	16	13	11	6	8	3.2	16.2
Dir	339	326	253	213	177	212	265	311	43	90	96	49	25	27	25	163	202	225	231	228	242	253	241	230	243.5	230.6
28 Spd	10	6	7	9	8	9	4	12	18	13	9	6	4	7	6	5	2	3	1	2	2	2	3	2	2.4	18.2
Dir	197	250	248	258	259	251	34	28	26	26	19	17	16	21	11	348	10	172	137	112	217	321	302	338	348.8	26.1
29 Spd	2	1	3	5	3	2	3	2	4	4	2	3	3	2	3	1	3	4	4	4	4	6	7	5	2.6	6.6
Dir	285	267	246	273	286	242	275	245	213	205	232	161	153	177	129	188	188	241	247	213	217	237	262	232	230.7	262.5
30 Spd	6	5	7	5	4	5	4	3	3	4	2	5	5	6	6	5	7	7	7	7	5	6	7	6	5.1	7.0
Dir	246	214	222	244	236	225	216	239	264	261	198	207	223	229	229	220	228	214	227	252	244	218	216	222	228.5	222.0
31 Spd	6	6	8	7	8	8	10	7	6	6	6	5	6	5	5	4	5	6	7	3	6	6	8	7	5.9	9.5
Dir	256	231	202	198	199	232	222	217	196	193	202	208	197	240	210	172	204	224	244	182	183	199	214	222	211.7	221.6
Spd	2.6	2.3	2.4	2.8	2.8	2.6	2.5	2.7	2.7	2.3	2.4	2.6	2.7	2.8	3.1	2.8	2.8	3.0	3.5	3.3	3.3	3.1	2.9	2.6	Diurnal Average	
Dir	330.4	342.5	340.1	342.6	342.4	341.1	359.2	357.3	356.3	348.1	353.8	351.0	357.6	353.2	357.8	353.2	352.8	348.7	334.3	352.4	0.3	353.1	350.6	341.2		
Spd	15.0	14.8	14.9	14.2	18.0	15.9	15.6	16.4	18.2	14.8	14.9	18.9	18.5	21.0	23.2	22.7	18.4	16.1	20.9	20.7	19.4	17.5	17.0	14.9	Diurnal Maximum	
Dir	22.6	185.7	318.4	17.0	313.6	18.4	18.7	28.6	26.1	275.3	16.9	20.4	24.0	29.2	29.3	289.9	30.4	33.2	301.9	308.6	299.6	182.2	29.0	28.8		

Maximum Speed Value: 23 km/h on Dec 18 15:00
Minimum Speed Value: 0 km/h on Dec 27 04:00
Maximum Daily Speed Average: 15.2 km/h on Dec 15
Minimum Daily Speed Average: 0.8 km/h on Dec 21
Maximum Diurnal Speed Average: 3.5 km/h at hour 19
Minimum Diurnal Speed Average: 2.3 km/h at hour 10

Monthly Average Velocity: 2.75 km/h 349.31 deg
Speed Percentiles: P_1 = 0.7 P_{10} = 2.9 Q_1 = 4.7 Median = 7.6 Q_3 = 10.6 P_{90} = 13.4 P_{99} = 19.0
All monthly, daily, and diurnal averages have been calculated using vector methods

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

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	49	105	48	0	0	0	202
NorthEast	24	103	47	3	0	0	177
East	10	0	0	0	0	0	10
SouthEast	13	3	0	0	0	0	16
South	34	40	8	0	0	0	82
SouthWest	47	85	23	0	0	0	155
West	16	24	16	1	0	0	57
NorthWest	13	17	10	4	0	0	44
Total	206	377	152	8	0	0	743

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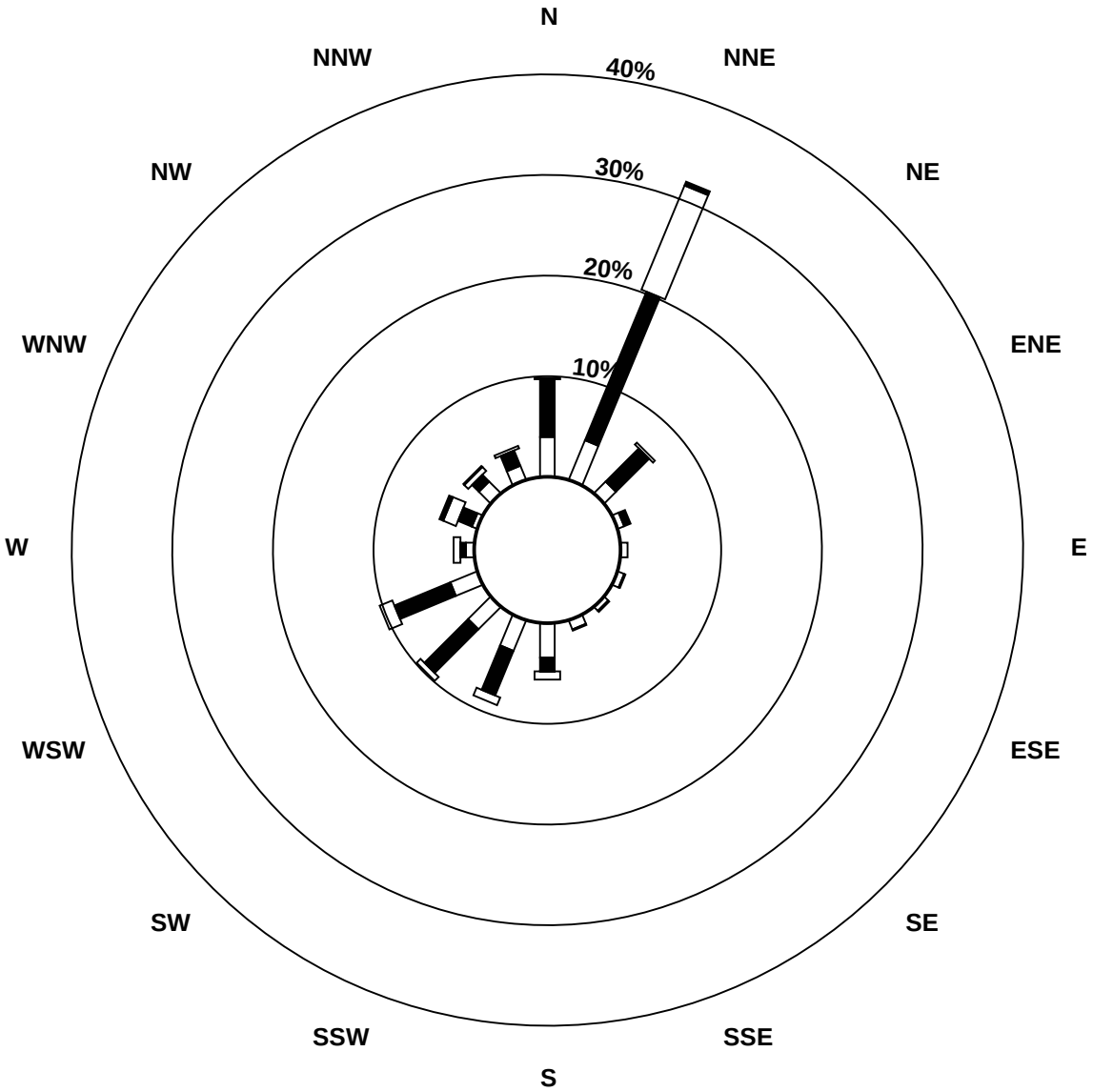
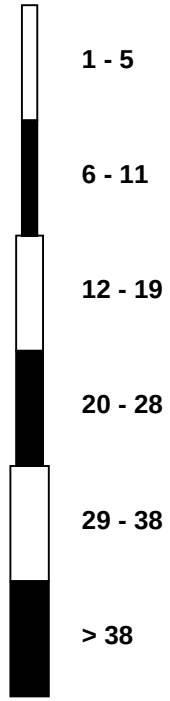
Wind Rose

Wind Speed (WS) (km/h)

Smoky Heights - December 2010



Wind Speed Classes (km/h)



PASZA
Peace Air Shed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Smoky Heights - December 2010

Maximum Speed: 23 km/h on Dec 18 15:00

Maximum Daily Speed Average: 15.8 km/h on Dec 15

Minimum Speed: 1 km/h on Dec 21 11:00

Minimum Daily Speed Average: 3.6 km/h on Dec 29

Maximum Diurnal Speed Average: 9.2 km/h at hour 23

Minimum Diurnal Speed Average: 7.6 km/h at hour 6

Monthly Average Speed: 8.15 km/h

Percentiles: P_1 = 1.9 P_{10} = 3.3 Q_1 = 5.1 Median = 7.8 Q_3 = 10.7 P_{90} = 13.4 P_{99} = 19.0

Hours in Service: 744
Hours of Data: 743
Hours of Missing Data: 1

Percent Operational Time: 99.9

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	8	9	9	9	9	10	7	8	9	6	6	6	8	10	13	14	15	12	11	11	11	12	10	7	9.6	15.4
2-Dec	7	6	5	5	4	3	3	3	3	3	3	3	4	4	4	4	3	3	3	3	5	5	5	4	3.9	6.8
3-Dec	4	4	4	4	3	3	3	3	2	1	2	3	4	5	5	6	4	4	6	6	6	6	7	7	4.3	7.3
4-Dec	7	7	5	4	4	3	5	6	6	5	5	6	5	6	6	7	5	8	14	7	5	8	12	14	6.7	14.3
5-Dec	13	13	12	10	15	11	11	9	11	13	13	10	9	11	9	8	7	7	12	11	5	3	9	8	9.9	14.6
6-Dec	8	7	5	4	4	7	4	6	7	4	5	4	7	3	3	6	4	4	8	7	5	4	5	5	5.2	8.0
7-Dec	6	6	5	3	4	6	6	4	6	6	8	8	9	11	12	10	12	13	14	15	15	15	16	14	9.2	15.6
8-Dec	13	12	10	11	9	8	7	9	7	7	5	6	4	3	8	9	9	11	11	13	9	6	5	8	8.3	13.5
9-Dec	9	9	10	9	9	8	7	6	6	5	5	7	9	9	8	9	8	8	9	8	9	9	9	8	8.1	9.9
10-Dec	8	9	9	10	9	8	9	9	8	9	11	10	10	9	11	10	12	12	12	12	12	12	12	13	10.3	12.8
11-Dec	11	12	12	10	11	12	9	9	9	9	11	12	10	11	10	9	8	8	8	9	10	9	11	11	9.9	11.9
12-Dec	11	10	12	14	13	16	16	14	15	13	13	13	10	10	11	10	9	8	6	3	5	11	11	11	11.0	16.0
13-Dec	12	6	6	5	7	12	10	10	10	11	6	8	8	8	9	8	11	14	13	13	9	18	15	15	10.1	17.6
14-Dec	14	15	11	9	5	5	9	9	9	12	15	19	19	11	6	5	9	11	10	10	11	17	12	11	10.9	19.0
15-Dec	D	12	15	13	18	10	12	15	13	15	13	12	15	15	21	23	17	16	21	21	20	16	16	14	15.8	22.8
16-Dec	11	10	10	11	12	11	9	6	7	6	7	8	7	8	8	8	5	4	4	4	6	5	5	6	7.6	12.2
17-Dec	7	7	8	11	11	12	12	12	12	13	13	12	11	10	10	9	9	8	8	10	11	12	12	12	10.5	13.4
18-Dec	12	11	9	10	13	15	15	16	14	13	14	15	16	21	23	20	18	16	15	15	13	15	17	15	15.2	23.2
19-Dec	15	13	13	11	9	8	6	4	9	8	11	13	13	14	12	10	6	6	6	10	11	12	11	9	10.0	15.0
20-Dec	9	9	8	7	6	4	5	3	4	5	4	2	3	10	8	8	5	7	7	6	7	6	7	3	6.0	9.6
21-Dec	3	4	3	3	2	2	3	3	3	2	1	2	2	2	4	3	4	3	5	5	4	8	8	8	3.6	8.3
22-Dec	8	6	9	11	10	9	10	11	10	11	12	12	11	8	10	9	7	6	6	4	5	4	4	4	8.2	12.2
23-Dec	4	4	4	4	4	3	5	4	3	4	3	4	3	3	5	3	7	8	6	7	8	8	8	8	5.0	8.2
24-Dec	9	9	8	8	7	7	7	7	8	10	9	8	7	7	7	5	4	5	5	3	3	4	4	3	6.4	9.8
25-Dec	3	2	3	4	4	3	8	9	5	6	12	16	17	12	9	9	7	5	7	12	15	15	16	14	8.9	16.7
26-Dec	14	13	12	11	11	10	11	11	11	9	9	10	11	8	8	8	8	8	9	7	8	8	7	6	9.5	13.7
27-Dec	6	5	4	4	4	4	8	6	7	5	3	3	4	3	2	3	5	10	16	16	13	11	6	8	6.6	16.3
28-Dec	11	7	7	9	8	9	7	12	18	13	9	6	5	7	6	5	4	4	2	3	3	2	3	2	6.7	18.3
29-Dec	2	2	3	6	3	3	3	2	4	4	2	3	3	3	3	2	3	4	4	4	5	6	7	5	3.6	6.6
30-Dec	6	5	7	6	4	5	4	4	3	4	3	5	5	6	6	5	7	7	7	7	5	6	7	6	5.4	7.0
31-Dec	6	6	8	7	8	8	10	7	6	6	6	5	6	6	5	5	5	6	8	3	6	6	8	7	6.4	9.6
	8.5	8.1	8.0	7.8	7.7	7.6	7.7	7.7	7.9	7.7	7.8	8.1	8.1	8.2	8.5	8.0	7.7	7.9	8.8	8.5	8.4	9.1	9.2	8.6	Diurnal Average	
	15.0	14.9	15.0	14.2	18.3	16.0	15.6	16.4	18.3	15.0	15.0	19.0	18.6	21.0	23.2	22.8	18.4	16.1	21.1	20.8	19.5	17.6	17.0	14.9	Diurnal Maximum	

D - DAS Failure

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

PASZA
Peace Air Shed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Smoky Heights - December 2010

Maximum Value: 98.1 deg on Dec 28 19:00

Minimum Value: 2.2 deg on Dec 18 15:00

Percentiles: P_1 = 2.9 P_{10} = 4.4 Q_1 = 6.2 Median = 9.9 Q_3 = 18.0 P_{90} = 39.0 P_{99} = 82.5

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
	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-Dec	17	30	32	15	22	62	43	7	11	47	50	67	11	5	7	5	5	5	6	9	8	6	8	8	66.7
2-Dec	10	11	11	8	13	12	35	19	22	25	21	25	20	22	10	14	19	18	13	15	7	8	11	13	34.9
3-Dec	13	13	12	11	14	18	13	19	36	66	82	19	12	8	8	5	17	15	3	10	6	7	3	7	81.6
4-Dec	5	5	31	12	14	15	8	9	6	13	9	6	5	3	4	10	10	9	5	21	28	11	20	3	30.8
5-Dec	9	12	29	7	8	6	9	5	5	5	3	10	6	6	10	12	11	7	10	9	40	97	24	13	96.5
6-Dec	11	9	10	55	39	19	12	8	9	21	52	58	10	59	84	12	61	43	19	8	15	38	44	28	83.7
7-Dec	14	10	15	15	16	8	15	39	23	8	9	10	8	6	7	5	4	8	4	4	4	4	5	5	39.2
8-Dec	4	9	10	15	13	16	44	10	13	20	38	10	20	49	33	13	11	7	10	8	14	23	21	17	48.5
9-Dec	12	11	16	12	11	14	7	8	12	10	15	13	9	8	8	8	7	9	9	8	8	11	7	7	15.9
10-Dec	7	6	6	9	5	6	5	5	7	5	6	7	4	4	6	6	5	4	3	4	4	4	4	3	9.5
11-Dec	6	5	6	8	6	7	8	8	7	7	5	5	7	7	8	6	6	8	7	6	7	5	4	3	8.3
12-Dec	4	5	5	3	3	3	3	5	4	4	4	4	6	5	6	12	7	8	10	80	40	7	17	13	80.0
13-Dec	18	19	39	75	29	18	19	22	11	13	16	17	30	19	7	29	14	14	13	9	25	4	5	9	74.9
14-Dec	13	6	18	11	36	13	7	7	4	5	9	7	5	64	69	60	8	14	20	9	15	10	13	15	68.7
15-Dec	D	15	8	9	10	28	11	8	11	11	8	8	11	10	6	5	9	8	7	5	6	5	5	9	28.5
16-Dec	10	11	10	10	6	7	8	9	10	17	12	5	4	5	7	4	8	14	19	28	8	8	8	6	27.9
17-Dec	5	7	6	4	6	4	5	5	4	4	5	7	6	5	6	9	8	7	8	7	5	5	4	4	8.8
18-Dec	4	4	5	5	7	5	6	4	6	4	5	5	4	3	2	3	2	4	3	5	4	5	3	4	6.6
19-Dec	4	4	5	9	9	9	10	55	10	8	4	4	4	3	3	9	7	11	11	7	5	4	6	10	54.9
20-Dec	6	5	8	11	4	19	10	14	10	16	17	60	35	3	5	6	9	4	4	7	4	6	4	29	60.4
21-Dec	59	9	75	41	79	43	39	49	39	49	34	55	88	91	79	29	48	14	17	6	18	6	3	4	91.2
22-Dec	6	4	5	4	4	11	4	5	5	6	4	5	6	9	8	8	14	17	16	24	14	13	48	11	48.2
23-Dec	9	13	14	16	20	29	28	21	30	19	33	61	74	31	26	59	67	52	40	20	15	10	7	11	74.3
24-Dec	4	6	7	9	7	7	7	7	7	6	6	6	10	16	10	23	30	15	50	66	68	42	35	64	67.5
25-Dec	64	85	74	51	44	53	25	25	15	73	24	7	13	25	30	22	24	32	21	16	6	5	6	6	85.0
26-Dec	8	6	7	8	11	10	10	9	10	13	11	16	14	16	14	19	17	13	18	20	11	12	17	16	19.7
27-Dec	12	20	65	87	17	26	10	57	29	15	36	38	14	10	38	18	22	13	6	4	9	9	11	14	86.6
28-Dec	9	32	15	15	18	33	84	6	5	9	7	9	18	9	10	17	62	34	98	38	80	42	21	39	98.1
29-Dec	37	84	50	12	8	29	15	39	21	11	51	41	23	49	20	69	16	15	14	14	19	8	4	9	83.7
30-Dec	11	13	4	13	18	9	19	16	14	17	41	11	13	6	13	6	6	11	7	6	10	11	7	11	41.5
31-Dec	5	18	6	5	6	6	5	6	5	7	4	14	9	20	25	10	12	21	12	32	12	9	12	13	31.9
	63.9	85.0	74.9	86.6	78.8	62.1	83.5	56.6	39.3	73.1	81.6	66.7	88.1	91.2	83.7	68.6	67.3	51.7	98.1	80.0	80.0	96.5	48.2	64.1	

D - DAS Failure

PASZA
Beaverlodge Station
Monthly Summary Tables, Graphs and Roses

PASZA
Peace Air Shed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.3 ppb on Dec 23 02:00 Maximum Daily Average: 1.7 ppb on Dec 23

Minimum Value: 0 ppb on Dec 4 20:00 Minimum Daily Average: 0.2 ppb on Dec 4
Maximum Diurnal Average: 0.8 ppb at hour 3 Minimum Diurnal Average: 0.6 ppb at hour 22
Monthly Average: 0.72 ppb Percentiles: $P_1 = 0.1$ $P_{10} = 0.2$ $Q_1 = 0.4$ Median = 0.6 $Q_3 = 0.9$ $P_{90} = 1.3$ $P_{99} = 2.5$

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)																								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-Dec	1	0	1	1	A	0	0	0	0	0	0	1	1	0	1	1	1	1	0	0	0	0	1	0	0.5	1.0
2-Dec	0	0	0	0	A	0	0	0	C	C	C	0	0	0	0	0	1	1	0	0	0	0	0	0	0.3	0.6
3-Dec	1	1	0	0	A	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0.4	0.8
4-Dec	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
5-Dec	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
6-Dec	0	0	0	0	A	0	0	0	0	0	0	1	1	1	1	1	1	1	2	2	2	1	1	1	0.7	1.7
7-Dec	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3
8-Dec	1	2	1	1	A	1	1	1	1	0	1	1	1	1	0	0	0	0	1	0	0	0	1	1	0.8	2.0
9-Dec	1	1	1	1	A	1	1	1	1	1	1	0	1	0	1	1	0	1	1	1	1	0	1	2	0.7	1.7
10-Dec	1	1	0	0	A	0	0	1	1	0	0	1	1	1	0	0	0	1	1	1	1	1	0	0	0.6	1.2
11-Dec	0	1	1	1	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.5	1.1
12-Dec	1	0	1	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.5
13-Dec	1	1	0	1	A	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0.4	0.8
14-Dec	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.3	0.6
15-Dec	0	0	0	0	A	0	0	0	1	1	1	1	1	1	0	0	1	1	1	1	1	1	0	1	0.6	1.5
16-Dec	0	0	0	0	A	0	1	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0.5	0.8
17-Dec	0	0	1	1	A	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	2	1	1	1.0	2.1
18-Dec	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1.0	1.9
19-Dec	1	1	1	1	A	1	2	2	2	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	2.5
20-Dec	1	1	1	1	A	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9
21-Dec	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
22-Dec	1	1	1	1	A	1	1	1	1	2	1	2	1	1	1	1	1	1	1	2	2	1	2	2	1.3	2.0
23-Dec	3	3	3	3	A	2	2	2	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	2	1.7	3.3
24-Dec	2	2	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.9
25-Dec	1	1	1	1	A	2	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0.8	1.7
26-Dec	1	2	2	2	A	2	2	2	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1.1	2.4
27-Dec	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0	0.9	1.3
28-Dec	0	0	0	0	A	0	0	0	0	1	2	2	1	1	1	1	1	1	0	0	1	1	1	1	0.7	2.0
29-Dec	1	2	3	3	A	2	2	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1.3	3.0
30-Dec	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.4	1.2
31-Dec	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
	0.8	0.8	0.8	0.8	--	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.6	0.6	0.7	0.7	Diurnal Average	
	3.2	3.3	2.8	3.0	--	2.1	2.4	2.2	1.8	2.4	2.5	1.6	1.3	1.4	1.4	2.1	1.8	1.9	3.0	2.0	1.7	1.6	2.0	1.9	Diurnal Maximum	

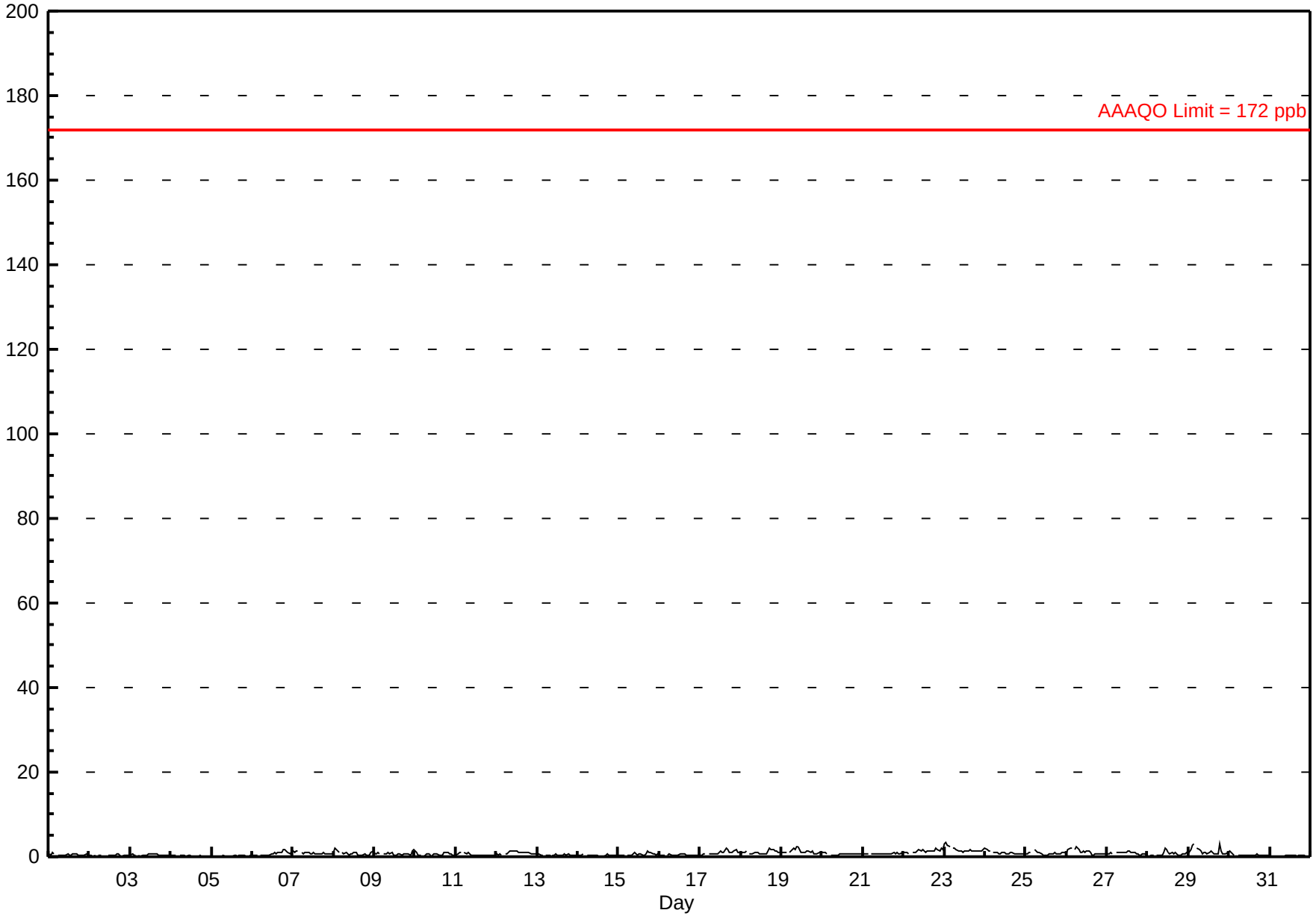
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

PASZA
Peace Air Shed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - December 2010



PASZA
Peace Air Shed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - December 2010

Maximum Value: 4.4 ppb on Dec 29 04:00

Maximum Daily Average: 2.0 ppb on Dec 23

Minimum Value: 0 ppb on Dec 4 21:00

Minimum Daily Average: 0.3 ppb on Dec 5

Maximum Diurnal Average: 1.1 ppb at hour 3

Minimum Diurnal Average: 0.9 ppb at hour 22

Monthly Average: 0.98 ppb

Percentiles: P_1 = 0.2 P_{10} = 0.4 Q_1 = 0.5 Median = 0.8 Q_3 = 1.3 P_{90} = 1.7 P_{99} = 3.2

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)																								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-Dec	1	1	1	1	A	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.3
2-Dec	1	1	0	0	A	0	0	1	C	C	C	0	0	1	1	1	1	1	0	0	0	0	0	1	0.5	0.8
3-Dec	1	1	1	0	A	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0.6	0.9
4-Dec	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
5-Dec	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	0.6
6-Dec	1	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	1	1	2	2	2	2	1	2	1.0	2.4
7-Dec	2	1	2	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.6
8-Dec	1	3	2	1	A	2	1	1	1	1	1	1	1	2	1	1	0	0	1	1	1	1	1	1	1.1	2.6
9-Dec	1	1	1	1	A	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	2	3	1.1	2.5
10-Dec	2	1	1	1	A	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.8
11-Dec	1	2	2	1	A	2	1	1	1	0	1	1	1	1	0	1	0	0	1	1	1	1	1	1	0.9	2.3
12-Dec	1	1	1	1	A	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.7
13-Dec	1	1	1	1	A	1	1	0	1	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0.6	0.9
14-Dec	0	0	1	1	A	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	0	1	1	0	0.6	1.0
15-Dec	0	0	1	1	A	1	0	0	1	2	1	1	1	1	1	1	1	2	1	1	1	1	1	1	0.9	2.3
16-Dec	1	1	1	0	A	1	1	1	0	1	1	1	2	1	1	1	1	1	1	1	0	1	1	1	0.7	1.6
17-Dec	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	3	3	1	2	1	2	2	2	1	1.3	2.8
18-Dec	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	2	3	2	2	2	2	1	1	1.3	2.6
19-Dec	1	1	1	1	A	1	2	3	2	3	3	1	1	2	1	2	2	1	2	1	1	1	1	1	1.5	3.3
20-Dec	1	1	1	1	A	1	1	1	1	1	2	3	1	1	1	1	1	1	1	1	1	1	1	1	0.9	3.0
21-Dec	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	0.9	1.5
22-Dec	2	1	1	1	A	1	2	2	2	2	2	2	2	1	1	1	2	2	2	2	2	2	2	2	1.7	2.5
23-Dec	4	4	3	3	A	2	2	2	2	1	1	1	1	2	2	2	1	1	2	2	2	2	2	2	2.0	3.7
24-Dec	2	2	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	2.3
25-Dec	1	1	1	1	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	2.0
26-Dec	1	2	2	2	A	2	4	4	3	1	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1.6	4.4
27-Dec	1	1	2	1	A	1	2	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1.1	1.8
28-Dec	0	0	0	0	A	0	1	0	0	2	3	2	1	1	1	1	1	1	1	1	1	1	1	1	0.9	2.9
29-Dec	1	3	3	4	A	2	2	2	1	1	1	1	1	2	1	1	1	1	4	3	1	1	1	1	1.8	4.4
30-Dec	1	1	1	1	A	0	0	0	1	0	0	0	0	0	0	1	2	1	1	1	0	0	0	0	0.6	1.6
31-Dec	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
	1.0	1.1	1.1	1.0	--	0.9	1.0	1.0	1.0	1.0	1.1	1.0	0.9	0.9	0.9	0.9	1.0	1.0	1.1	1.0	0.9	0.9	0.9	1.0	Diurnal Average	
	3.7	3.7	3.1	4.4	--	2.3	3.5	4.4	3.0	2.9	3.3	3.0	1.7	1.8	2.1	2.8	2.7	2.6	3.9	2.8	2.2	2.1	2.5	2.5	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

PASZA
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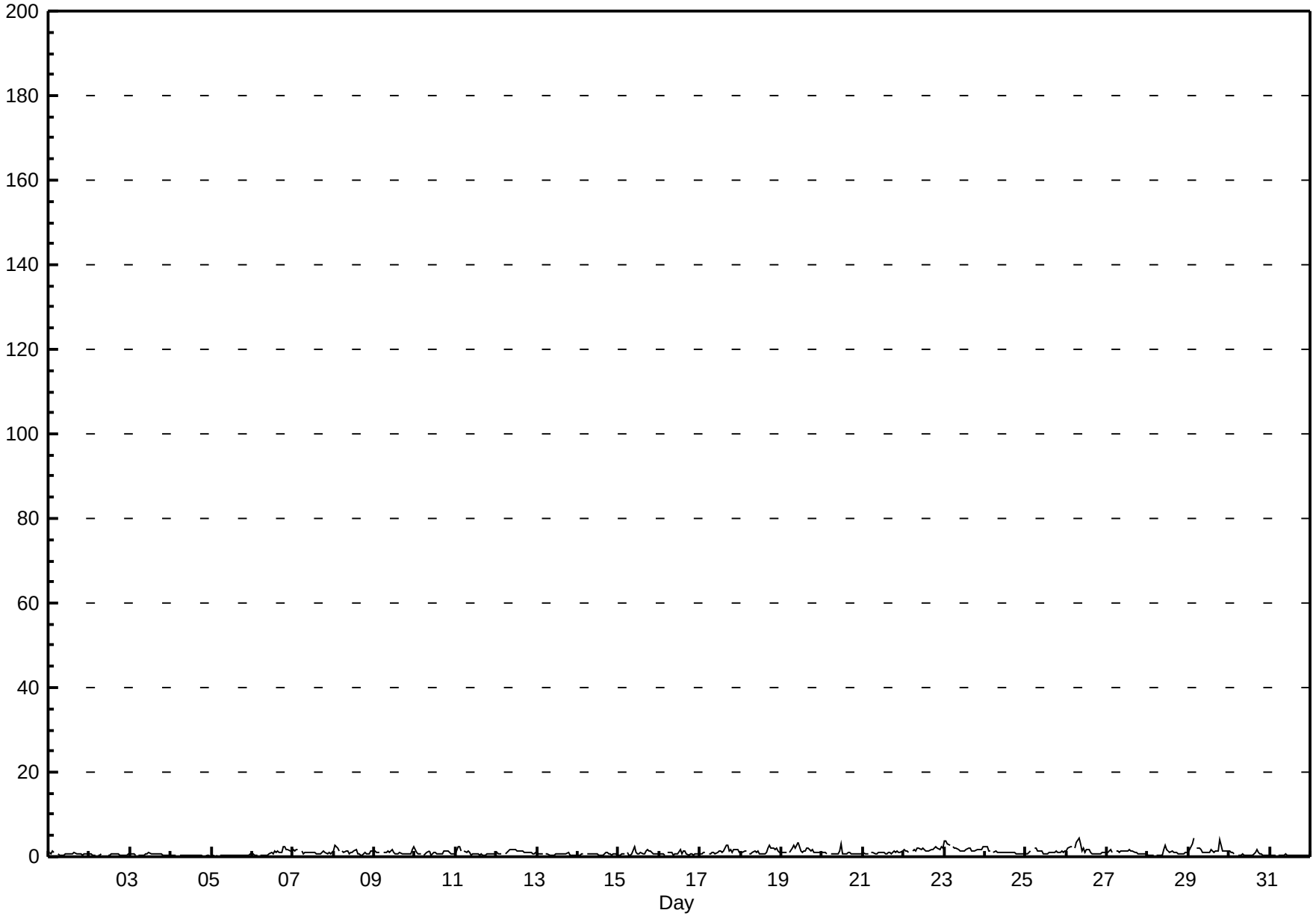
Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - December 2010



PASZA
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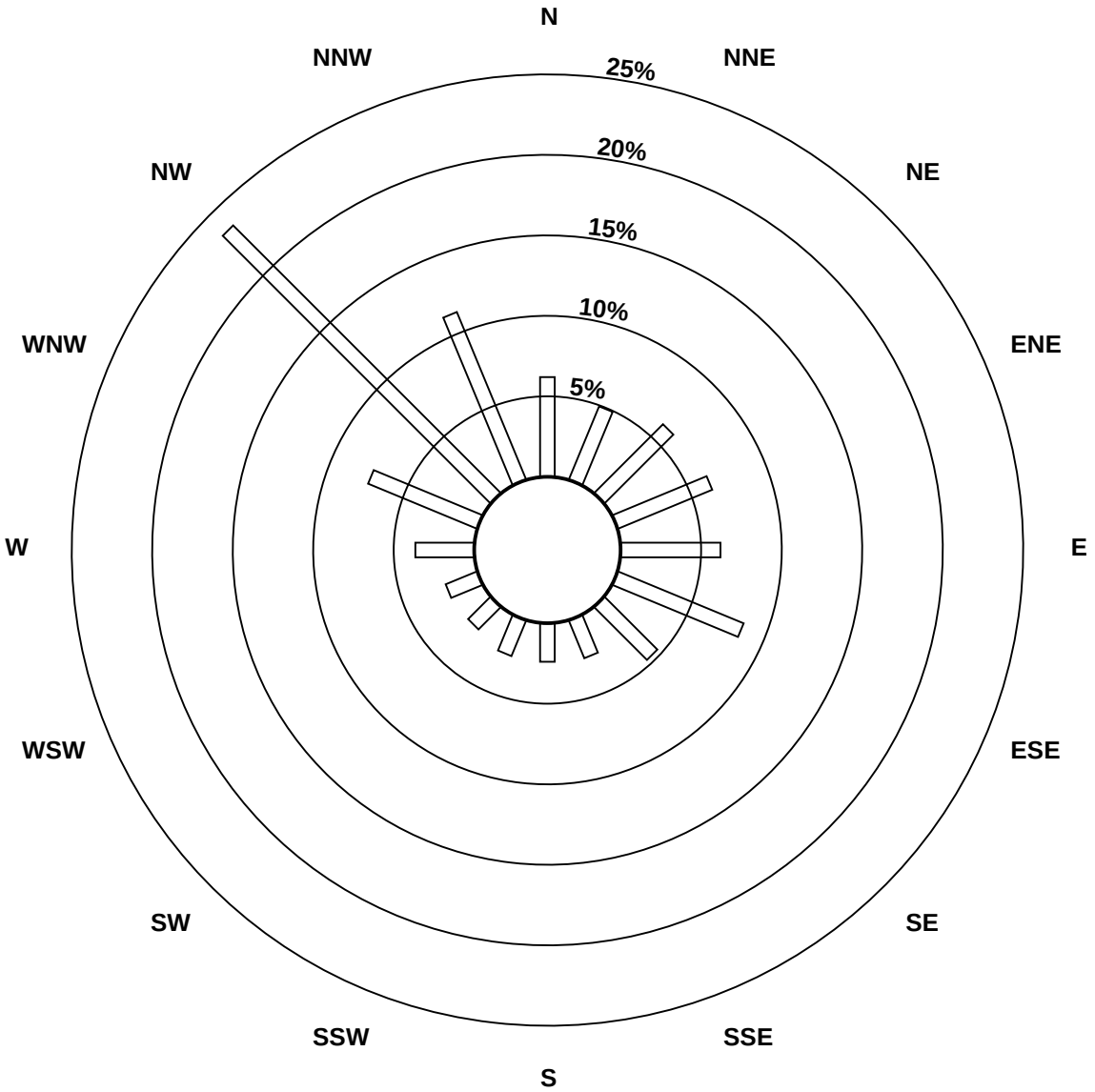
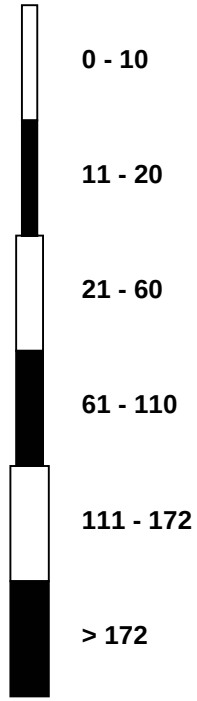
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - December 2010



Pollutant Classes (ppb)



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Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 28.1 ppb on Dec 30 17:00
Maximum Daily Average: 22.5 ppb on Dec 21

Minimum Value: 1 ppb on Dec 10 15:00
Minimum Daily Average: 2.2 ppb on Dec 10
Maximum Diurnal Average: 11.0 ppb at hour 9
Minimum Diurnal Average: 5.5 ppb at hour 14
Monthly Average: 8.96 ppb
Percentiles: P_1 = 1.5 P_{10} = 3.0 Q_1 = 4.3 Median = 7.4 Q_3 = 11.9 P_{90} = 17.5 P_{99} = 25.9

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
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-Dec	20	22	23	21	A	17	17	12	10	8	7	3	4	4	3	8	25	17	12	17	17	16	17	16	13.9	24.5
2-Dec	13	15	15	12	A	13	12	12	C	C	C	C	C	5	5	6	9	10	7	6	6	6	6	7	9.1	15.0
3-Dec	7	4	3	3	A	5	4	7	7	6	4	5	3	3	3	6	5	4	4	9	10	12	12	10	5.9	12.1
4-Dec	11	11	11	10	A	6	7	5	7	10	6	6	5	5	6	9	9	9	8	7	6	4	5	3	7.2	10.8
5-Dec	3	3	2	3	A	3	4	8	8	7	6	7	7	6	6	7	12	9	8	7	9	8	9	13	6.6	13.2
6-Dec	14	13	15	10	A	11	9	18	19	19	16	8	7	9	11	7	10	8	8	7	8	7	7	6	10.7	19.5
7-Dec	5	4	6	6	A	7	17	9	11	9	8	9	8	8	7	10	12	10	6	3	4	5	3	5	7.4	16.7
8-Dec	5	4	3	4	A	5	7	7	6	6	5	5	3	3	3	3	4	4	4	4	4	4	3	3	4.2	7.0
9-Dec	3	2	2	4	A	3	5	4	4	5	5	2	2	2	2	2	3	3	3	3	4	4	4	4	3.3	5.3
10-Dec	4	4	2	2	A	2	1	1	2	1	2	1	2	1	1	1	2	2	2	2	3	4	5	4	2.2	5.1
11-Dec	4	5	2	3	A	5	8	6	6	8	8	8	7	7	9	7	10	8	12	11	12	12	10	10	7.7	12.0
12-Dec	19	17	15	15	A	17	19	12	10	7	6	7	6	5	6	8	10	14	18	14	16	13	12	11	12.1	19.3
13-Dec	14	17	17	17	A	17	14	12	11	5	6	9	6	4	10	15	9	19	21	13	9	7	4	5	11.4	21.2
14-Dec	5	3	3	5	A	9	9	11	14	17	12	12	10	9	10	14	9	10	7	8	6	5	3	3	8.5	17.1
15-Dec	3	3	3	3	A	3	3	3	3	3	3	2	2	2	2	3	3	4	3	3	3	3	3	3	2.9	3.7
16-Dec	3	3	2	1	A	2	3	4	5	4	3	3	3	3	3	3	4	5	3	3	3	2	2	2	3.1	5.4
17-Dec	2	2	2	3	A	9	6	9	23	21	19	4	4	5	9	6	8	11	12	9	11	11	8	8	8.8	23.2
18-Dec	7	8	8	9	A	16	15	14	12	10	7	7	7	6	8	8	11	12	14	12	16	15	12	11	10.7	16.0
19-Dec	9	8	8	8	A	9	9	9	11	9	7	5	4	3	4	6	7	7	5	5	5	5	5	5	6.7	10.7
20-Dec	6	4	3	4	A	6	6	8	18	9	8	3	10	9	9	16	20	22	25	24	24	24	25	23	13.3	24.8
21-Dec	26	26	25	24	A	24	24	24	22	20	16	17	19	14	14	17	23	25	26	27	28	26	25	24	22.5	27.9
22-Dec	27	26	26	25	A	27	24	25	24	22	18	15	13	13	14	15	19	22	21	15	12	8	8	9	18.7	27.0
23-Dec	9	9	10	13	A	17	13	14	12	8	5	12	4	4	8	7	7	10	12	7	16	17	14	15	10.5	17.0
24-Dec	13	10	10	10	A	12	17	16	14	12	7	6	5	5	7	7	9	10	10	10	12	13	14	13	10.6	17.1
25-Dec	12	12	13	15	A	19	17	13	14	14	10	9	8	8	13	14	18	23	20	21	18	19	18	17	15.0	23.2
26-Dec	19	15	13	12	A	14	9	7	11	4	4	4	4	4	3	3	3	4	5	5	4	4	4	3	6.8	18.5
27-Dec	3	3	3	3	A	6	4	3	5	9	7	5	6	5	5	6	12	11	7	7	6	5	4	4	5.7	11.6
28-Dec	3	3	4	4	A	10	8	8	12	8	5	3	3	3	4	5	7	7	4	4	4	7	5	5	5.5	11.7
29-Dec	8	7	6	4	A	14	12	7	6	7	6	4	4	4	5	5	9	9	12	12	7	10	14	12	8.0	14.1
30-Dec	8	6	8	8	A	8	7	11	14	13	8	8	5	4	4	18	28	27	24	22	13	10	11	10	12.0	28.1
31-Dec	8	10	8	5	A	8	10	10	11	11	11	7	7	6	5	6	5	4	10	5	3	2	2	2	6.8	11.4
	9.4	9.0	8.7	8.6	--	10.4	10.3	10.0	11.0	9.8	7.9	6.5	5.9	5.5	6.5	8.1	10.4	11.0	10.8	9.7	9.5	9.2	8.9	8.6	Diurnal Average	
	27.0	25.6	25.6	25.0	--	26.9	24.4	25.2	24.2	22.3	19.3	17.5	19.1	13.9	13.7	17.9	28.1	27.0	25.5	26.7	27.9	25.9	25.1	24.5	Diurnal Maximum	

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

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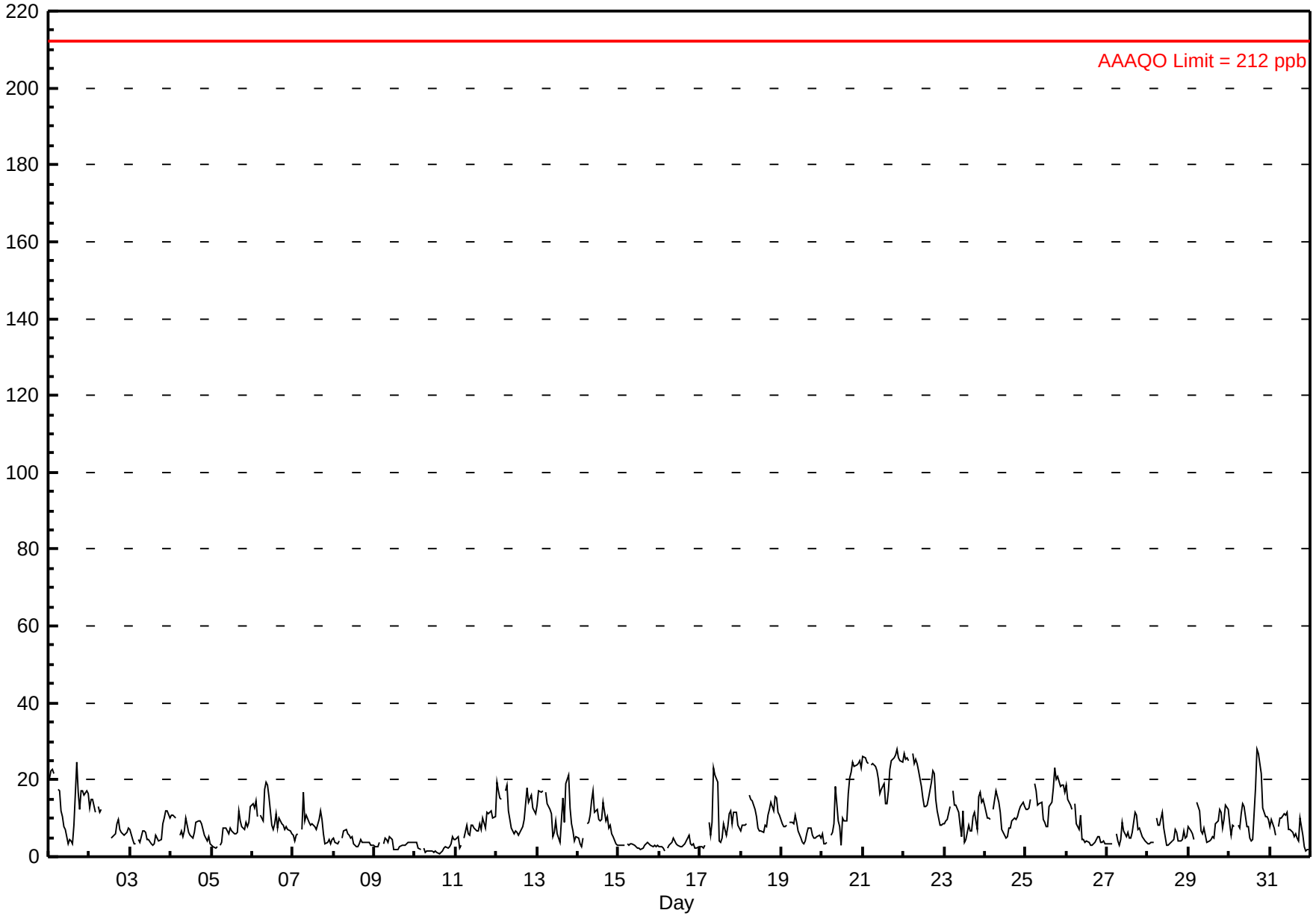
Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - December 2010



PASZA
Peace Air Shed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - December 2010

Maximum Value: 39.7 ppb on Dec 22 02:00

Maximum Daily Average: 27.4 ppb on Dec 21

Minimum Value: 1 ppb on Dec 10 15:00

Minimum Daily Average: 3.3 ppb on Dec 10

Maximum Diurnal Average: 16.7 ppb at hour 9

Minimum Diurnal Average: 7.9 ppb at hour 13

Monthly Average: 12.26 ppb

Percentiles: P_1 = 2.3 P_{10} = 3.8 Q_1 = 5.8 Median = 10.0 Q_3 = 17.5 P_{90} = 24.7 P_{99} = 34.0

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
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-Dec	25	25	24	23	A	21	20	16	19	9	11	5	6	9	4	13	39	29	15	20	20	18	20	18	17.8	38.8
2-Dec	17	19	17	15	A	17	17	19	C	C	C	C	C	6	7	8	10	11	8	8	6	7	7	10	11.7	18.6
3-Dec	11	6	4	5	A	6	5	9	10	11	7	6	5	4	5	8	5	5	6	12	16	18	15	11	8.2	17.9
4-Dec	12	11	12	12	A	7	9	6	8	11	10	7	7	6	8	14	13	11	11	10	8	7	7	5	9.3	14.1
5-Dec	7	5	3	3	A	5	7	9	10	9	7	13	9	8	7	11	17	11	10	14	14	16	29	16	10.3	28.8
6-Dec	18	29	22	21	A	22	32	25	29	25	29	16	10	20	21	10	13	11	11	8	9	9	11	7	17.7	31.8
7-Dec	6	5	8	7	A	14	21	12	13	12	12	10	10	10	10	12	15	17	8	5	5	6	5	8	10.0	21.1
8-Dec	7	4	4	4	A	7	9	9	7	7	6	6	6	3	4	4	6	5	5	5	6	4	4	4	5.6	9.4
9-Dec	3	3	3	8	A	7	7	7	9	10	6	3	3	2	2	4	4	3	4	4	4	4	4	5	4.8	9.8
10-Dec	4	5	3	3	A	3	2	3	4	2	2	2	3	2	1	3	3	3	4	3	4	5	7	6	3.3	6.7
11-Dec	8	7	4	4	A	6	19	10	8	10	11	11	8	8	10	16	16	9	24	19	20	19	11	13	11.8	23.8
12-Dec	32	24	26	23	A	22	21	19	11	8	7	7	9	7	7	10	13	17	21	17	18	14	15	13	15.6	32.3
13-Dec	15	20	19	20	A	23	20	18	16	8	13	12	8	10	23	27	19	25	27	18	18	11	8	10	16.8	27.4
14-Dec	7	5	3	10	A	14	17	17	30	36	27	18	17	17	16	18	12	13	8	11	7	6	4	4	13.8	35.7
15-Dec	3	3	4	3	A	5	3	5	5	3	4	3	3	2	3	4	4	5	4	4	3	4	4	3	3.8	5.3
16-Dec	6	5	5	2	A	3	5	5	6	8	5	5	4	4	5	5	5	8	5	5	5	3	3	3	4.6	8.4
17-Dec	3	3	3	3	A	13	10	11	34	28	26	11	4	11	13	11	13	14	15	12	15	12	9	8	12.3	34.1
18-Dec	7	10	9	9	A	19	17	17	15	13	8	8	8	7	10	9	13	18	18	13	18	21	15	14	13.0	21.0
19-Dec	12	9	8	10	A	13	10	9	13	11	9	7	5	4	6	8	9	10	7	6	6	7	8	8	8.4	13.5
20-Dec	10	5	6	5	A	8	8	20	22	13	11	4	20	11	21	24	28	25	26	25	24	27	26	25	17.1	28.1
21-Dec	32	30	28	25	A	27	30	25	26	30	26	27	22	18	15	27	30	27	31	32	39	28	27	27	27.4	38.8
22-Dec	33	40	32	29	A	35	28	30	27	25	21	18	14	14	14	17	22	26	26	17	14	9	9	10	22.3	39.7
23-Dec	9	9	11	17	A	23	20	20	18	10	10	19	7	6	16	12	10	16	15	8	23	22	15	16	14.6	23.4
24-Dec	19	11	12	12	A	14	20	19	23	15	9	6	5	5	10	8	11	12	11	11	14	15	19	19	13.0	22.5
25-Dec	15	16	14	18	A	21	19	20	21	19	11	10	8	12	18	17	22	26	24	26	20	21	21	22	18.3	25.6
26-Dec	21	19	19	17	A	18	19	18	22	5	5	4	5	5	3	4	4	5	8	7	4	4	5	4	9.8	21.6
27-Dec	4	4	4	4	A	10	8	4	14	15	8	12	8	8	7	9	17	18	8	8	7	6	5	5	8.3	17.8
28-Dec	4	4	5	5	A	17	13	19	21	9	8	4	3	4	6	6	10	9	5	5	5	8	5	7	7.9	20.9
29-Dec	11	12	13	6	A	17	17	9	7	11	8	5	5	6	6	6	15	15	26	25	9	13	26	23	12.7	26.4
30-Dec	9	7	18	8	A	10	10	14	28	21	15	10	7	6	7	34	37	36	31	31	27	12	13	10	17.5	36.6
31-Dec	10	19	18	7	A	19	24	16	26	23	24	9	9	10	7	8	10	14	15	7	4	2	3	4	12.6	25.8
	12.3	12.0	11.7	10.9	--	14.4	15.0	14.2	16.7	14.0	11.9	9.3	7.9	8.0	9.4	11.8	14.3	14.6	14.1	12.8	12.6	11.6	11.6	10.9	Diurnal Average	
	33.5	39.7	32.5	29.0	--	34.6	31.8	29.6	34.1	35.7	29.1	26.6	21.7	20.1	23.2	33.8	38.8	35.8	30.8	32.3	38.8	28.3	28.8	27.0	Diurnal Maximum	

C - Calibration

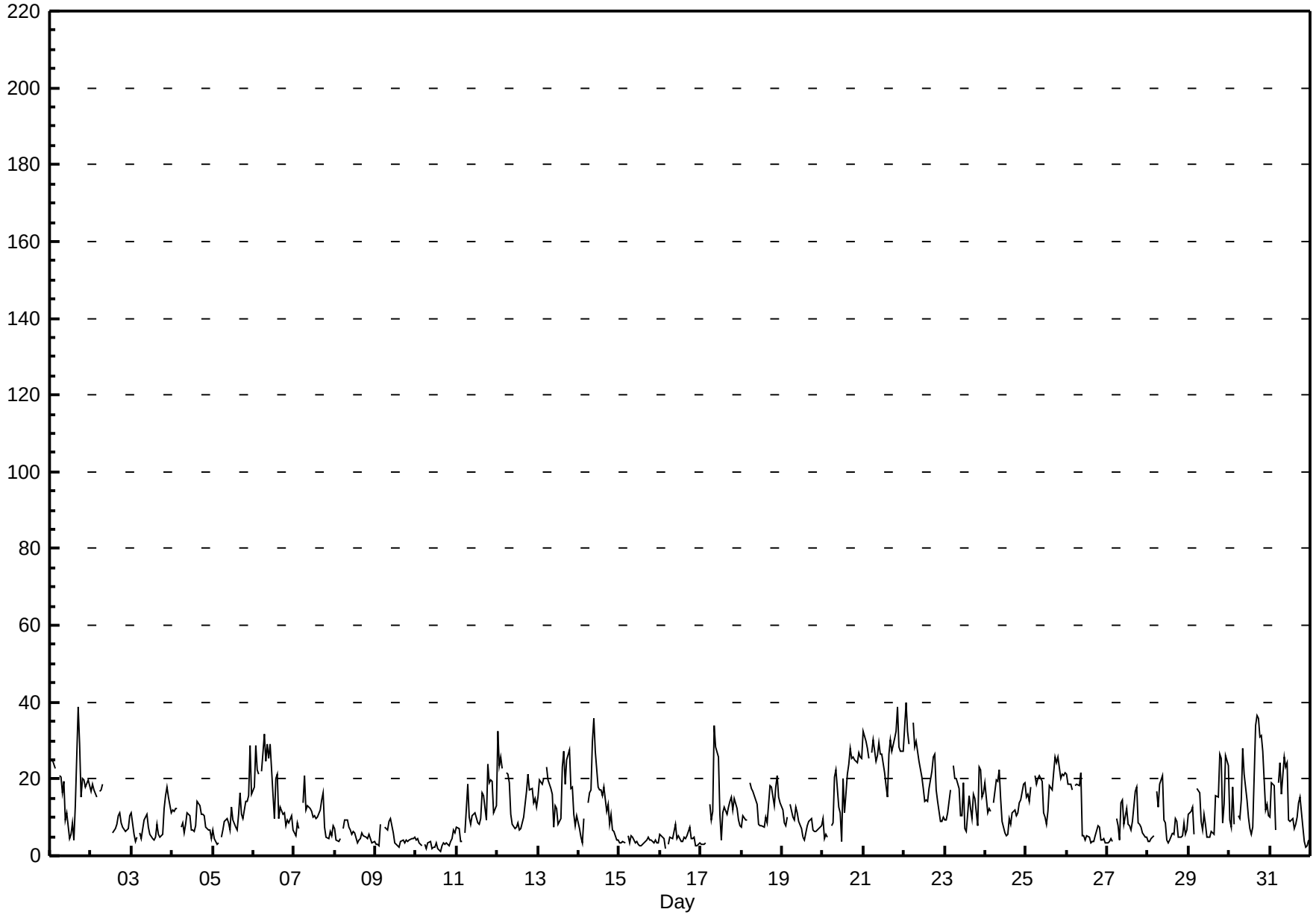
A - Automated Daily Zero Span

PASZA
Peace Air Shed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - December 2010

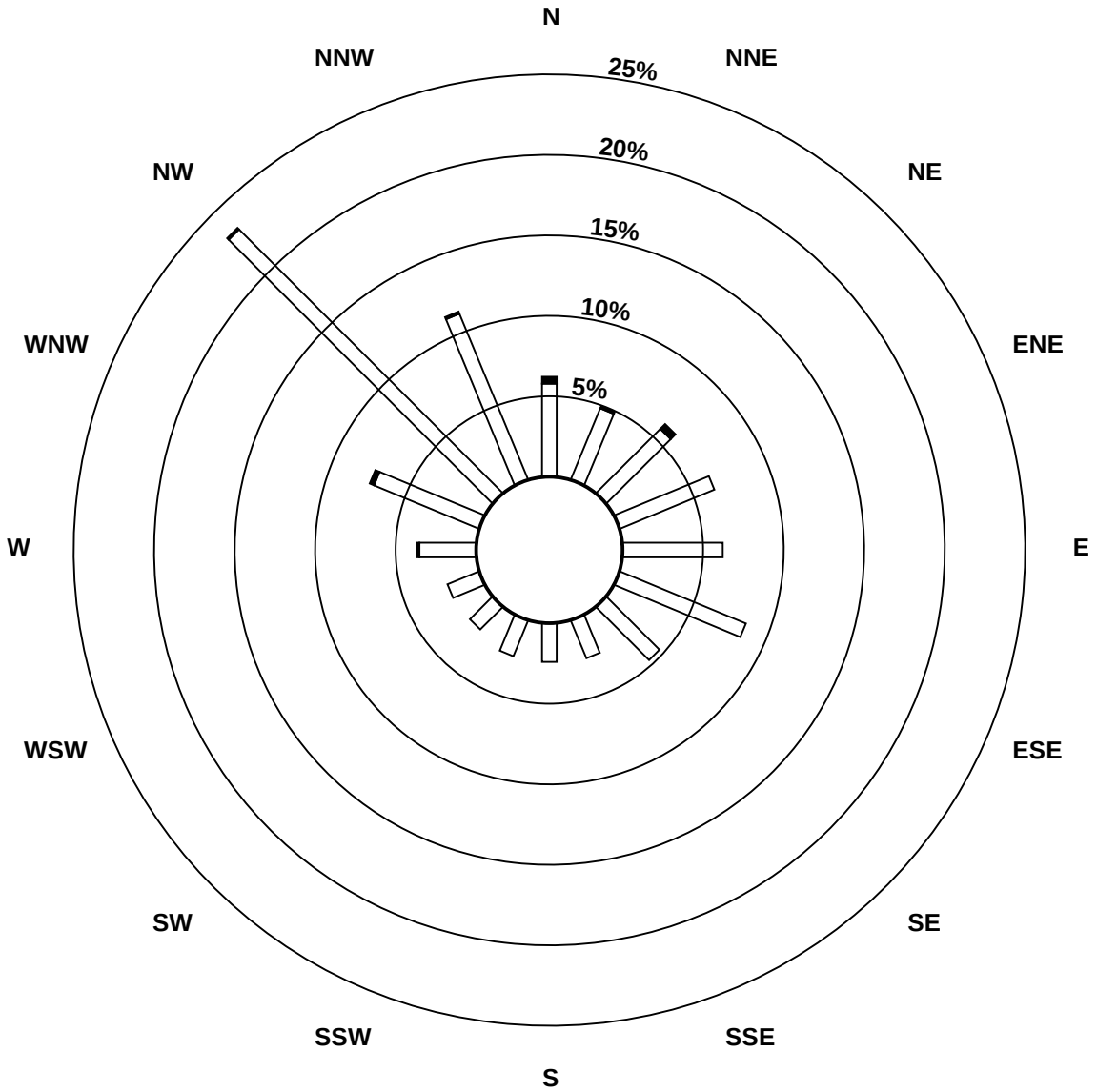


PASZA
Peace Air Shed Zone Association

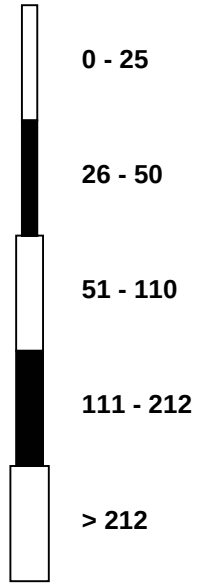
Pollutant Rose

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - December 2010



Pollutant Classes (ppb)



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Beaverlodge - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 42.7 ppb on Dec 21 13:00
Maximum Daily Average: 19.7 ppb on Dec 21

Minimum Value: 0 ppb on Dec 3 18:00
Maximum Diurnal Average: 5.2 ppb at hour 13
Monthly Average: 2.31 ppb
Minimum Daily Average: 0.1 ppb on Dec 10
Minimum Diurnal Average: 0.4 ppb at hour 24
Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.3 Q_3 = 2.2 P_{90} = 5.6 P_{99} = 28.4

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
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-Dec	10	10	1	3	A	0	2	0	0	1	2	1	2	2	1	1	6	1	0	1	1	1	1	1	2.1	10.1
2-Dec	0	1	1	0	A	1	1	1	C	C	C	C	C	2	3	2	1	0	0	0	0	0	0	0	0.8	2.9
3-Dec	0	0	0	0	A	0	0	0	0	1	2	3	2	2	2	2	0	0	0	0	0	0	0	0	0.7	3.2
4-Dec	0	0	0	0	A	0	0	0	0	1	2	3	4	3	3	2	1	0	0	0	0	0	0	0	0.9	3.8
5-Dec	0	0	0	0	A	0	0	0	0	1	1	4	4	3	3	1	1	0	0	0	0	0	0	0	0.8	3.6
6-Dec	0	0	0	0	A	0	3	2	4	5	12	6	3	3	5	1	0	0	0	0	0	0	0	0	2.0	11.9
7-Dec	0	0	0	0	A	0	1	0	0	1	3	5	6	6	3	3	1	0	0	0	0	0	0	0	1.3	6.2
8-Dec	0	0	0	0	A	0	0	0	0	0	1	2	3	2	1	1	0	0	0	0	0	0	0	0	0.5	2.5
9-Dec	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.3	1.3
10-Dec	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
11-Dec	0	0	0	0	A	0	0	0	0	1	4	6	6	5	5	2	1	0	1	0	1	0	0	0	1.4	6.5
12-Dec	11	5	3	4	A	2	2	1	0	1	2	3	4	4	4	3	1	1	2	1	0	0	0	0	2.3	11.0
13-Dec	0	2	1	1	A	0	0	0	0	0	1	3	3	1	6	6	0	0	0	0	0	0	0	0	1.2	5.9
14-Dec	0	0	0	0	A	0	0	0	0	3	4	6	4	2	2	2	0	0	0	0	0	0	0	0	1.1	5.7
15-Dec	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.3	0.9
16-Dec	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.3	1.2
17-Dec	0	0	0	0	A	1	0	0	9	4	12	1	2	2	4	1	0	0	0	0	0	0	0	0	1.6	11.7
18-Dec	0	0	0	0	A	0	0	0	0	1	2	4	5	4	5	2	1	0	0	0	1	1	0	0	1.2	4.7
19-Dec	0	0	0	0	A	0	0	0	0	1	2	2	2	2	2	2	1	0	0	0	0	0	0	0	0.6	1.9
20-Dec	0	0	0	0	A	0	0	0	2	1	4	2	17	13	10	14	10	2	5	3	2	4	4	1	4.1	16.6
21-Dec	18	15	18	8	A	8	11	5	6	15	18	35	43	28	20	16	23	29	27	29	38	25	13	7	19.7	42.7
22-Dec	23	15	14	12	A	29	22	25	21	13	15	14	12	11	12	11	8	10	10	0	0	0	0	0	12.1	28.6
23-Dec	0	0	0	0	A	2	0	0	0	1	2	15	3	3	9	3	1	0	0	0	3	2	0	0	2.1	15.3
24-Dec	0	0	0	0	A	0	3	2	2	2	2	3	3	3	4	2	1	0	0	0	0	0	0	0	1.2	3.7
25-Dec	0	0	1	1	A	4	1	1	1	2	7	6	3	3	9	6	4	5	1	2	0	2	1	1	2.7	9.4
26-Dec	0	0	0	0	A	0	1	1	2	0	1	1	2	2	2	1	0	0	0	0	0	0	0	0	0.6	2.4
27-Dec	0	0	0	0	A	0	0	0	0	1	3	4	8	5	4	4	4	1	0	0	0	0	0	0	1.6	7.9
28-Dec	0	0	0	0	A	0	0	0	0	1	1	2	2	2	3	2	1	0	0	0	0	0	0	0	0.7	2.9
29-Dec	0	0	0	0	A	0	1	0	0	1	2	2	3	4	3	1	1	0	1	1	0	0	0	0	0.9	3.6
30-Dec	0	0	0	0	A	0	0	0	2	3	5	8	5	4	3	21	35	21	8	5	0	0	0	0	5.3	34.7
31-Dec	0	0	0	0	A	0	1	0	0	1	3	2	3	3	1	1	0	0	0	0	0	0	0	0	0.7	3.4
	2.1	1.6	1.3	1.0	--	1.6	1.6	1.4	1.7	2.1	3.9	4.9	5.2	4.2	4.2	3.7	3.3	2.4	1.9	1.4	1.6	1.2	0.7	0.4	Diurnal Average	
	22.9	15.1	18.1	11.7	--	28.6	22.5	25.5	21.0	15.3	18.3	35.0	42.7	28.1	20.1	21.2	34.7	29.3	26.7	28.9	38.1	24.8	13.4	7.3	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

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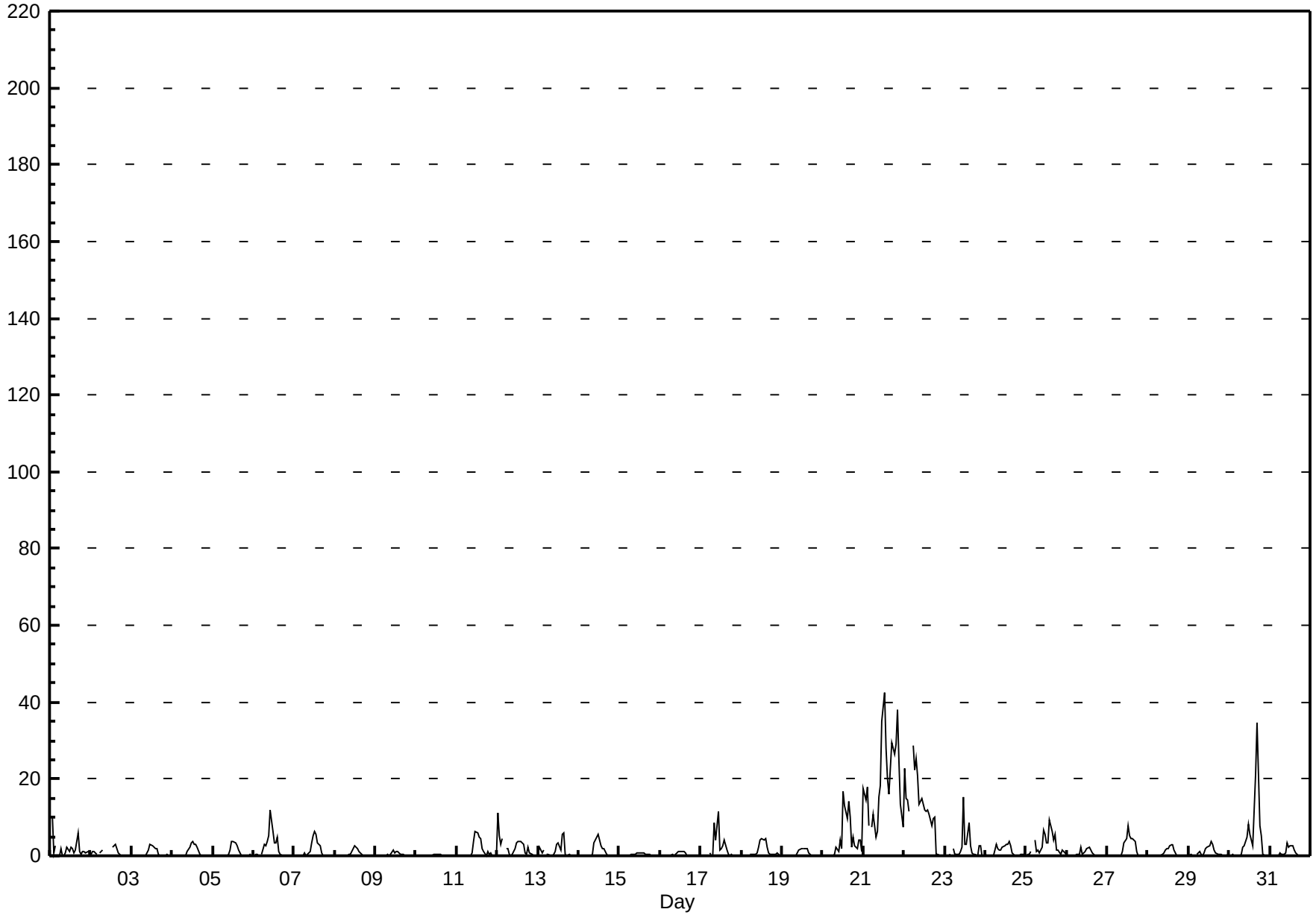
Hourly Averages

Nitrogen Oxide (NO) - ppb

Beaverlodge - December 2010



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Hourly Maximums

Nitrogen Oxide (NO) - ppb

Beaverlodge - December 2010

Maximum Value: 98.9 ppb on Dec 21 21:00

Maximum Daily Average: 42.5 ppb on Dec 21

Minimum Value: 0 ppb on Dec 17 03:00

Minimum Daily Average: 0.3 ppb on Dec 10

Maximum Diurnal Average: 9.3 ppb at hour 12

Minimum Diurnal Average: 2.0 ppb at hour 23

Monthly Average: 5.58 ppb

Percentiles: P_1 = 0.1 P_{10} = 0.1 Q_1 = 0.3 Median = 1.3 Q_3 = 4.5 P_{90} = 14.9 P_{99} = 67.7

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
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-Dec	26	17	2	24	A	1	8	1	1	2	4	2	3	4	1	3	18	4	2	4	2	2	3	2	5.9	25.9
2-Dec	1	4	3	1	A	2	3	5	C	C	C	C	C	3	4	2	2	0	0	1	0	0	0	0	1.8	4.6
3-Dec	0	0	0	0	A	0	0	1	1	1	4	5	4	4	3	4	1	0	0	0	1	3	1	1	1.5	4.5
4-Dec	0	0	0	0	A	0	0	0	2	3	3	4	6	4	4	3	2	0	0	0	0	0	0	0	1.4	5.6
5-Dec	0	0	0	0	A	0	0	0	0	1	2	8	5	4	3	4	2	0	0	1	0	2	6	0	1.7	8.0
6-Dec	1	5	2	0	A	5	32	13	27	14	35	20	5	14	16	2	1	0	0	0	0	0	0	0	8.6	35.5
7-Dec	0	0	0	0	A	0	2	0	1	3	7	7	8	8	5	4	2	1	0	0	0	0	0	0	2.2	8.1
8-Dec	0	0	0	0	A	0	0	0	0	1	2	4	4	3	2	1	1	0	0	0	0	0	0	0	0.9	4.0
9-Dec	0	0	0	0	A	0	1	6	0	1	2	2	2	1	1	1	1	0	0	0	0	0	0	0	0.9	6.2
10-Dec	0	0	0	0	A	0	0	1	0	0	0	1	1	1	0	1	1	0	0	0	0	0	0	0	0.3	1.2
11-Dec	0	0	0	0	A	0	1	0	0	2	7	9	8	7	6	5	5	0	6	2	8	1	0	1	3.0	9.1
12-Dec	54	13	16	15	A	4	6	3	0	1	4	4	5	5	4	4	2	1	7	3	1	0	0	0	6.7	53.9
13-Dec	0	11	3	7	A	2	3	2	0	0	4	4	5	7	28	23	3	0	1	0	0	0	0	0	4.5	27.6
14-Dec	0	0	0	0	A	0	1	0	2	23	22	10	11	5	5	4	1	0	0	0	0	0	0	0	3.7	23.0
15-Dec	0	0	0	0	A	0	0	1	1	1	1	1	1	1	2	1	0	1	1	1	0	1	0	0	0.6	1.6
16-Dec	0	0	0	0	A	0	1	9	0	0	1	2	2	2	2	1	1	0	0	0	0	0	0	0	1.0	9.5
17-Dec	0	0	0	0	A	2	0	1	23	8	21	5	2	7	7	5	1	0	1	0	0	0	0	0	3.7	23.3
18-Dec	0	0	0	0	A	0	1	1	1	2	3	6	6	5	7	4	2	1	2	1	2	3	1	1	2.1	6.7
19-Dec	0	0	0	0	A	0	0	0	0	1	2	3	2	2	2	2	1	0	0	0	0	0	0	0	0.9	2.7
20-Dec	0	0	0	0	A	0	1	3	8	3	7	3	46	17	29	24	32	11	8	6	5	21	12	4	10.5	45.8
21-Dec	49	40	26	17	A	25	43	12	15	74	45	76	54	42	23	37	57	37	48	52	99	38	25	45	42.5	98.9
22-Dec	57	55	51	28	A	62	69	69	44	27	18	17	14	13	13	15	11	15	23	1	1	0	1	0	26.4	69.3
23-Dec	0	0	0	2	A	8	1	3	2	3	6	36	7	5	24	8	2	2	3	0	13	7	2	0	5.9	36.0
24-Dec	3	0	0	0	A	0	6	4	14	3	3	3	3	3	5	4	1	1	0	0	1	1	1	2	2.6	14.2
25-Dec	0	2	2	3	A	6	2	9	3	5	8	7	4	6	28	11	9	10	7	6	1	4	3	2	6.0	28.0
26-Dec	1	1	1	0	A	1	5	5	20	1	2	1	3	4	2	2	1	0	0	1	0	0	0	0	2.2	19.9
27-Dec	0	0	0	0	A	0	0	1	1	3	6	19	10	9	7	9	9	6	0	0	0	0	0	0	3.5	18.6
28-Dec	0	0	0	0	A	0	0	0	1	2	2	3	3	3	4	2	1	0	0	0	0	1	0	0	1.1	4.3
29-Dec	1	1	1	0	A	3	2	1	0	1	3	3	3	18	4	2	2	1	12	8	0	1	1	4	3.1	17.6
30-Dec	0	0	2	0	A	1	0	1	21	8	10	11	8	6	4	59	68	69	31	27	6	0	2	0	14.5	69.3
31-Dec	0	0	0	0	A	1	12	3	3	2	12	3	5	5	2	1	1	0	0	0	0	0	0	0	2.2	12.0
	6.4	4.9	3.6	3.2	--	4.0	6.5	5.0	6.4	6.5	8.2	9.3	8.0	7.0	8.0	8.0	7.8	5.4	5.0	3.8	4.7	2.8	2.0	2.1	Diurnal Average	
	57.1	54.7	51.0	28.4	--	62.1	68.7	69.3	43.9	73.7	45.3	76.0	53.5	41.7	29.4	58.9	68.1	69.3	48.2	52.3	98.9	38.3	25.0	44.7	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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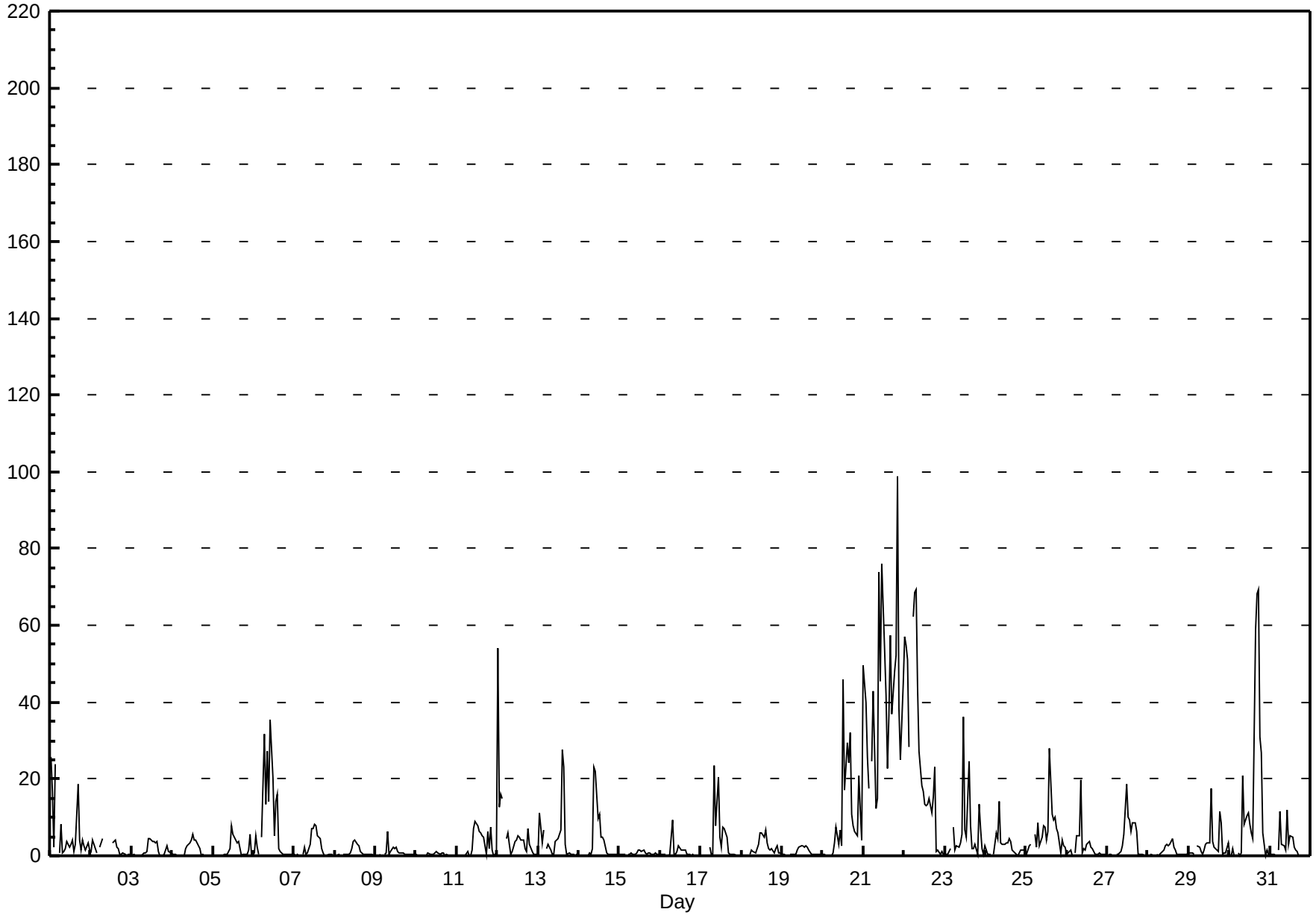
Hourly Maximums

Nitrogen Oxide (NO) - ppb

Beaverlodge - December 2010



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Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 66.2 ppb on Dec 21 21:00
Maximum Daily Average: 42.4 ppb on Dec 21

Minimum Value: 1 ppb on Dec 10 15:00
Minimum Daily Average: 2.3 ppb on Dec 10
Maximum Diurnal Average: 13.7 ppb at hour 17
Minimum Diurnal Average: 9.1 ppb at hour 24
Monthly Average: 11.32 ppb
Percentiles: P_1 = 1.6 P_{10} = 3.2 Q_1 = 5.0 Median = 8.6 Q_3 = 13.0 P_{90} = 22.8 P_{99} = 51.6

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
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-Dec	30	32	23	24	A	17	19	12	10	8	9	5	7	6	4	10	30	18	12	18	18	17	18	17	15.8	31.8
2-Dec	13	16	16	12	A	13	12	13	C	C	C	C	C	7	8	8	10	10	7	7	6	6	6	7	9.8	15.9
3-Dec	7	5	3	4	A	5	4	7	7	7	6	8	6	5	5	8	5	4	4	9	10	12	12	10	6.7	12.4
4-Dec	11	11	11	10	A	6	7	5	7	12	9	9	9	8	9	11	10	10	9	7	6	4	5	3	8.2	11.6
5-Dec	3	3	2	3	A	3	4	8	8	7	7	11	10	10	9	8	13	9	8	7	9	8	9	13	7.5	13.4
6-Dec	14	13	15	11	A	11	12	20	23	24	28	14	10	12	16	9	10	9	8	7	8	7	7	6	12.8	27.7
7-Dec	6	4	6	6	A	7	18	9	11	10	12	14	15	13	10	13	13	10	6	3	4	5	3	5	8.8	17.6
8-Dec	5	4	4	4	A	5	7	7	6	6	6	7	6	5	4	4	5	4	4	4	4	4	3	3	4.8	7.3
9-Dec	3	3	3	4	A	3	5	5	4	6	6	3	3	3	2	3	3	3	3	3	4	4	4	4	3.6	5.9
10-Dec	4	4	2	2	A	2	1	2	2	1	2	2	2	1	1	1	2	2	3	2	3	4	5	4	2.3	5.1
11-Dec	4	5	2	3	A	5	8	6	6	9	12	14	13	12	13	9	11	8	13	11	12	12	10	11	9.1	14.2
12-Dec	31	22	18	20	A	19	21	13	10	8	8	10	10	9	10	11	11	15	20	15	16	13	12	12	14.5	30.5
13-Dec	14	20	18	19	A	18	14	13	11	6	8	13	9	5	15	21	9	19	22	13	9	7	4	5	12.6	21.6
14-Dec	5	3	3	5	A	9	9	11	15	21	16	18	14	12	12	16	10	11	8	8	6	5	3	3	9.6	20.7
15-Dec	3	3	3	3	A	4	3	4	4	3	3	3	3	3	3	4	4	4	3	3	3	3	3	3	3.2	4.0
16-Dec	3	3	2	2	A	2	3	4	5	4	4	4	4	4	4	4	4	6	3	3	3	2	2	2	3.4	5.5
17-Dec	2	2	2	3	A	10	6	9	32	26	31	5	6	7	13	7	8	11	12	9	12	11	8	8	10.5	31.9
18-Dec	7	8	8	9	A	16	16	15	13	11	10	11	11	11	13	10	12	13	15	12	16	16	12	11	12.0	16.3
19-Dec	9	8	8	9	A	9	9	9	11	10	8	7	6	5	6	8	8	8	6	5	5	5	6	5	7.3	11.0
20-Dec	6	4	3	4	A	6	6	9	21	11	12	5	27	23	19	31	31	24	30	27	26	28	29	24	17.6	30.8
21-Dec	44	40	43	32	A	32	35	28	29	36	35	53	62	42	34	33	46	55	52	56	66	51	39	32	42.4	66.2
22-Dec	50	41	40	37	A	56	47	51	45	36	33	29	25	25	26	26	27	32	32	16	12	8	9	9	30.9	55.6
23-Dec	9	9	10	13	A	19	14	14	12	10	7	27	7	7	17	10	8	11	12	7	18	19	14	15	12.7	27.4
24-Dec	14	10	10	10	A	12	20	17	16	13	9	9	8	8	11	10	10	10	10	11	12	13	14	14	11.9	20.3
25-Dec	12	13	13	16	A	23	18	15	14	16	16	14	11	11	23	21	22	29	22	23	19	21	20	18	17.9	28.8
26-Dec	19	15	14	12	A	14	9	8	13	5	5	5	6	6	5	4	4	4	5	5	4	4	4	3	7.5	19.1
27-Dec	3	3	4	3	A	6	4	3	5	10	10	10	14	10	10	11	15	12	7	7	7	5	4	4	7.3	15.4
28-Dec	3	3	4	4	A	10	8	9	12	8	6	5	5	6	7	6	8	7	4	4	5	7	5	6	6.2	12.0
29-Dec	8	7	6	4	A	15	13	7	6	8	7	6	7	8	8	6	10	9	13	12	8	10	14	13	8.9	14.6
30-Dec	9	6	9	8	A	9	7	11	16	16	13	16	11	8	7	39	63	48	32	27	13	11	11	10	17.3	62.9
31-Dec	8	10	8	6	A	8	11	10	12	12	15	9	10	9	7	7	5	4	10	6	3	2	2	2	7.6	14.9
	11.5	10.6	10.1	9.6	--	12.0	12.0	11.4	12.8	12.0	11.8	11.5	11.2	9.7	10.7	11.9	13.7	13.5	12.8	11.2	11.1	10.5	9.7	9.1	Diurnal Average	
	50.1	40.8	42.9	36.9	--	55.6	47.0	50.8	45.2	35.9	34.9	52.7	61.9	42.1	33.9	39.2	62.9	54.5	52.3	55.7	66.2	50.7	38.7	32.0	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

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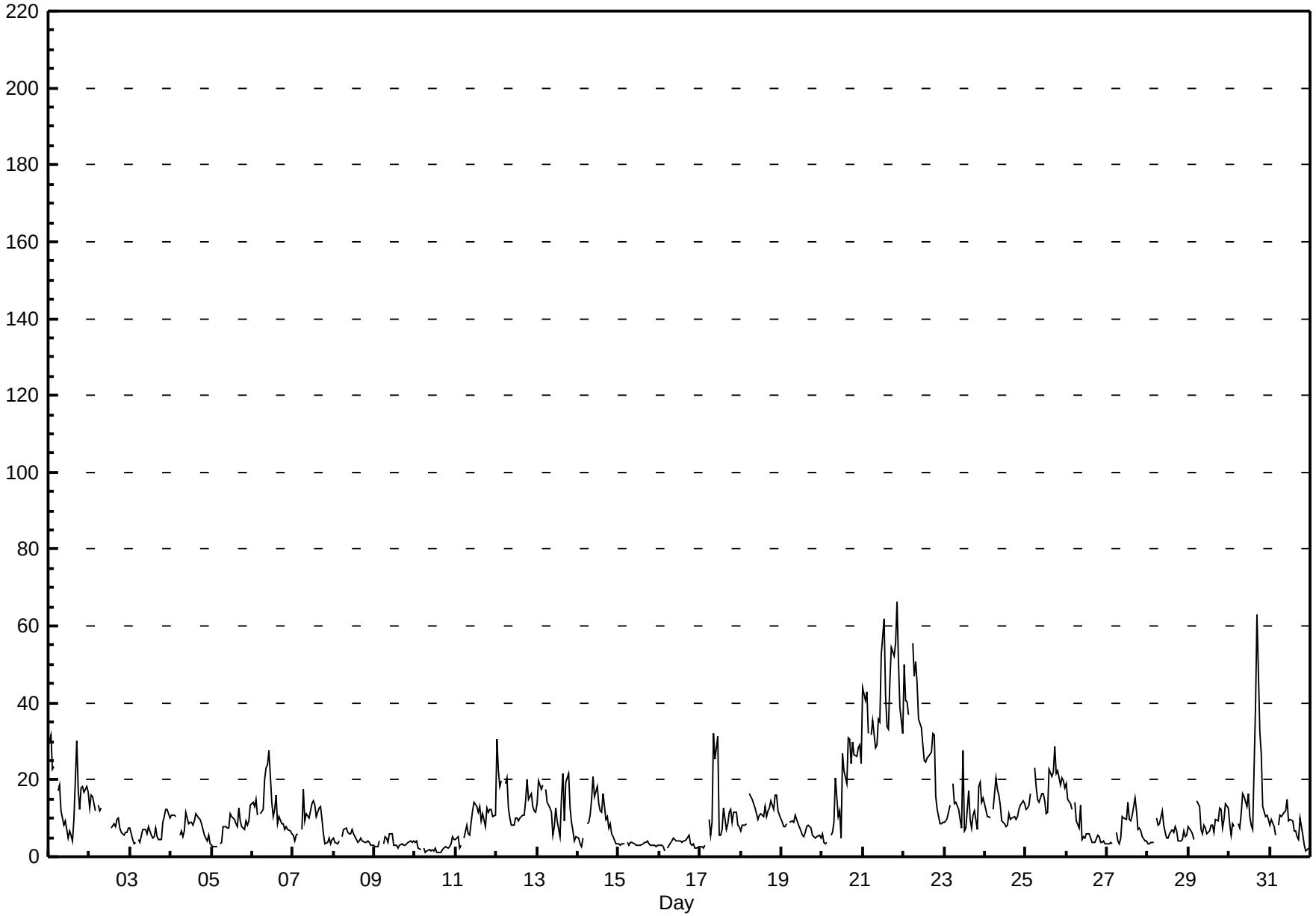
Peace Air Shed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - December 2010



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Peace Air Shed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - December 2010

Maximum Value: 134.4 ppb on Dec 21 21:00

Maximum Daily Average: 69.2 ppb on Dec 21

Minimum Value: 1 ppb on Dec 10 15:00

Minimum Daily Average: 3.6 ppb on Dec 10

Maximum Diurnal Average: 22.9 ppb at hour 9

Minimum Diurnal Average: 12.9 ppb at hour 24

Monthly Average: 17.61 ppb

Percentiles: P_1 = 2.6 P_{10} = 4.4 Q_1 = 6.9 Median = 11.9 Q_3 = 20.1 P_{90} = 36.4 P_{99} = 96.9

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
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-Dec	49	38	26	44	A	21	28	16	20	11	15	7	8	13	5	16	56	31	16	22	21	19	23	19	22.7	55.7
2-Dec	18	22	20	16	A	18	20	22	C	C	C	C	C	9	11	11	12	12	9	8	6	7	7	11	13.2	22.2
3-Dec	12	6	4	5	A	6	5	10	11	12	12	10	8	8	8	12	7	5	6	13	17	21	16	12	9.7	20.7
4-Dec	12	12	12	13	A	7	9	6	10	14	13	11	12	11	12	18	14	11	11	11	8	7	7	5	10.6	17.7
5-Dec	7	5	3	3	A	5	7	9	10	10	8	21	15	12	10	12	19	11	10	15	14	18	35	16	11.9	34.8
6-Dec	18	34	24	22	A	26	61	37	54	39	63	35	15	35	37	11	14	11	11	8	9	9	11	7	25.7	63.4
7-Dec	6	5	9	7	A	14	23	12	14	13	19	17	19	17	16	16	16	17	8	5	5	7	5	8	12.0	22.9
8-Dec	7	4	4	5	A	7	10	9	8	7	7	10	10	6	7	6	7	6	5	5	6	5	4	4	6.4	10.3
9-Dec	3	3	3	9	A	8	7	9	9	10	8	5	5	4	3	4	5	4	4	4	4	5	5	5	5.5	10.3
10-Dec	4	5	3	3	A	3	2	4	4	2	3	3	5	3	1	3	4	3	4	3	4	5	7	6	3.6	6.8
11-Dec	8	7	4	4	A	6	20	10	8	11	18	20	17	14	15	22	21	10	30	20	27	21	11	14	14.7	29.8
12-Dec	86	36	41	37	A	26	27	22	11	9	11	11	14	12	11	14	15	18	29	20	19	14	15	13	22.4	86.5
13-Dec	16	31	22	25	A	24	23	18	16	8	17	16	13	17	49	49	22	25	28	18	18	11	8	11	21.0	49.2
14-Dec	7	5	4	10	A	14	17	18	32	58	49	27	28	22	21	22	12	14	9	11	7	7	4	4	17.5	57.5
15-Dec	4	4	4	4	A	5	4	6	5	4	5	4	4	4	5	5	5	5	5	4	4	5	4	4	4.3	5.7
16-Dec	6	5	5	2	A	3	5	11	7	9	6	8	5	5	7	6	5	8	5	5	5	3	3	3	5.5	11.5
17-Dec	3	3	3	3	A	16	10	11	56	36	45	16	6	18	20	16	13	15	16	12	15	13	9	8	15.8	56.2
18-Dec	8	11	9	10	A	20	19	18	15	14	11	14	14	12	17	12	14	20	19	14	19	24	16	14	14.9	23.7
19-Dec	12	9	8	10	A	14	10	10	13	12	11	10	7	6	8	10	10	10	7	6	7	7	8	8	9.3	13.7
20-Dec	10	5	6	5	A	8	9	24	30	13	18	6	65	28	50	48	59	36	33	31	30	47	37	29	27.3	65.3
21-Dec	81	68	53	43	A	51	72	37	40	104	72	103	75	60	38	63	86	63	77	81	134	66	52	72	69.2	134.4
22-Dec	90	93	83	57	A	97	97	97	71	49	38	35	28	27	27	32	31	41	46	18	15	9	10	11	47.9	97.3
23-Dec	10	10	12	19	A	30	22	22	19	14	14	54	14	11	40	20	11	18	15	8	36	29	16	17	20.1	54.2
24-Dec	22	12	13	12	A	14	26	24	35	18	12	9	8	9	14	12	12	13	11	11	15	16	20	21	15.5	35.5
25-Dec	16	18	16	21	A	25	21	28	24	21	18	18	12	18	45	28	30	33	31	32	21	25	23	24	23.8	45.2
26-Dec	22	19	20	17	A	19	24	24	42	6	6	6	7	8	6	5	5	5	8	8	4	4	5	4	12.0	41.6
27-Dec	4	4	5	4	A	10	8	4	15	16	14	30	18	17	13	18	23	24	9	8	8	6	5	5	11.6	30.2
28-Dec	4	4	5	6	A	17	13	19	22	11	11	7	6	7	10	8	11	9	5	5	5	9	6	7	9.0	22.2
29-Dec	11	12	13	6	A	20	19	10	7	12	10	8	8	24	10	7	17	16	34	33	9	14	27	24	15.2	33.8
30-Dec	9	8	20	8	A	11	10	15	49	29	24	21	15	11	12	91	105	105	62	58	33	12	15	11	31.9	105.4
31-Dec	10	19	19	7	A	20	35	19	29	25	36	12	14	15	9	10	11	14	15	8	4	2	3	4	14.8	36.5
	18.5	16.6	15.1	14.0	--	18.2	21.4	18.8	22.9	19.9	19.8	18.4	15.9	14.9	17.4	19.5	21.6	19.8	18.6	16.2	17.1	14.3	13.4	12.9	Diurnal Average	
	89.9	93.2	82.6	57.3	--	96.7	97.0	97.3	71.4	103.6	71.9	102.9	75.2	59.8	50.1	91.1	104.8	105.4	77.2	81.1	134.4	66.3	51.6	71.8	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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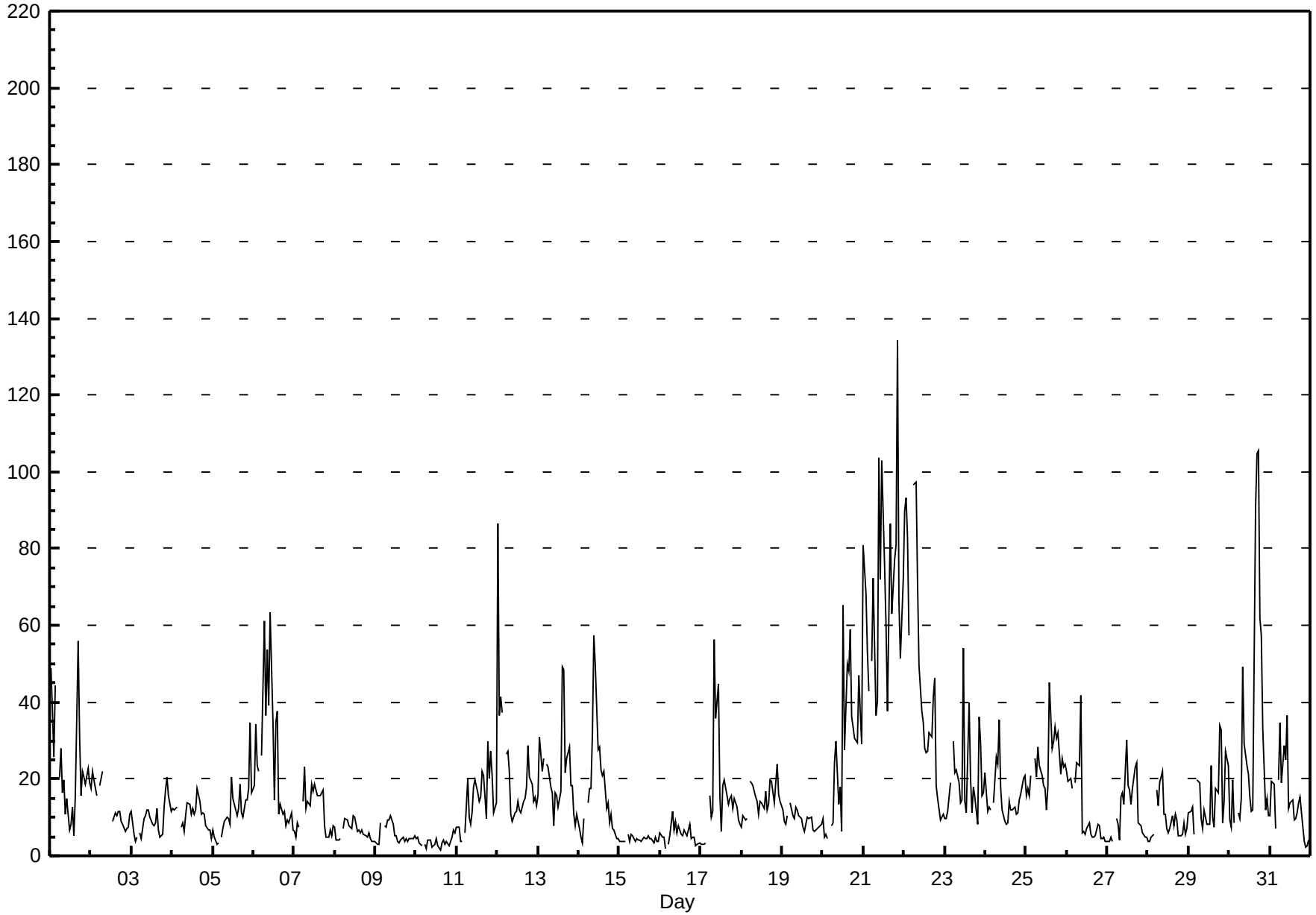
Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - December 2010



PASZA
Peace Air Shed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Beaverlodge - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 38.0 ppb on Dec 31 22:00
Maximum Daily Average: 29.7 ppb on Dec 31

Minimum Value: 1 ppb on Dec 22 18:00
Minimum Daily Average: 3.5 ppb on Dec 21
Maximum Diurnal Average: 21.0 ppb at hour 14
Minimum Diurnal Average: 14.5 ppb at hour 9
Monthly Average: 16.60 ppb
Percentiles: P_1 = 0.9 P_{10} = 5.0 Q_1 = 10.6 Median = 16.4 Q_3 = 22.3 P_{90} = 27.8 P_{99} = 35.3

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)																								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-Dec	4	1	2	2	A	8	4	15	19	23	25	32	31	32	35	30	12	7	9	5	4	4	3	3	13.5	34.7
2-Dec	6	4	3	7	A	8	8	7	8	9	10	C	C	C	13	13	12	12	14	16	17	16	16	15	10.6	16.6
3-Dec	15	18	20	19	A	19	19	16	16	17	18	18	20	20	20	18	17	18	17	11	9	7	6	8	15.9	20.0
4-Dec	9	10	13	17	A	24	20	22	21	19	23	24	25	26	25	19	20	20	22	27	28	31	31	33	22.2	33.4
5-Dec	34	35	34	34	A	35	33	28	28	27	28	28	31	30	29	29	23	27	29	29	26	26	25	19	29.0	35.3
6-Dec	17	19	15	20	A	20	22	12	9	11	16	25	26	26	24	28	25	25	23	23	19	18	16	16	19.8	28.3
7-Dec	16	17	16	16	A	15	7	14	12	13	14	14	14	16	16	14	12	14	17	20	18	16	18	16	14.9	20.2
8-Dec	15	16	16	16	A	14	11	12	12	13	14	14	14	15	17	18	17	17	17	18	18	18	19	20	15.6	19.5
9-Dec	20	21	21	20	A	22	21	21	22	21	21	23	23	23	23	23	22	22	22	21	21	21	21	21	21.6	23.4
10-Dec	21	21	25	25	A	25	26	26	27	27	27	27	27	28	28	28	28	28	27	27	26	25	23	24	25.9	28.0
11-Dec	23	22	25	24	A	22	19	20	20	17	18	18	19	20	19	19	16	18	13	13	12	11	13	13	18.0	25.1
12-Dec	5	6	8	7	A	5	3	9	10	12	13	13	14	15	15	13	11	7	4	6	5	7	7	7	8.9	15.4
13-Dec	5	2	3	2	A	12	17	22	24	31	31	28	32	35	29	22	30	16	15	26	30	31	34	33	22.3	35.0
14-Dec	33	35	37	34	A	28	26	23	19	16	21	19	22	23	26	20	23	20	22	19	20	18	18	17	23.5	36.7
15-Dec	16	15	15	16	A	17	18	18	19	20	21	22	22	23	22	22	22	22	23	23	24	24	25	25	20.7	25.4
16-Dec	26	26	27	29	A	29	28	26	26	26	27	28	28	29	28	28	27	26	28	28	27	28	28	28	27.3	28.5
17-Dec	28	27	28	26	A	21	23	20	8	9	11	23	24	23	20	22	20	16	15	18	15	15	18	18	19.5	27.8
18-Dec	18	17	17	16	A	7	8	8	10	12	16	16	17	17	15	16	13	11	9	11	7	8	10	11	12.6	18.4
19-Dec	12	13	13	13	A	13	15	15	13	15	18	19	20	20	19	17	16	16	19	20	20	19	20	21	16.8	20.5
20-Dec	20	22	22	20	A	18	17	15	5	12	14	19	14	14	15	9	6	4	1	1	1	1	1	2	11.1	22.1
21-Dec	2	1	1	1	A	2	1	1	2	4	8	9	8	10	10	8	2	1	1	1	1	1	1	1	3.5	10.2
22-Dec	2	2	1	1	A	2	1	1	1	2	4	7	8	8	9	7	3	1	1	7	10	14	14	14	5.3	14.3
23-Dec	14	13	13	9	A	7	9	8	9	12	15	10	17	17	14	15	15	11	10	14	6	5	7	6	11.2	17.2
24-Dec	7	10	9	9	A	7	3	4	4	7	12	14	16	15	14	14	11	10	11	10	8	6	6	6	9.2	15.6
25-Dec	7	6	5	3	A	1	3	13	14	8	8	14	21	23	15	11	6	2	5	3	4	4	5	6	8.0	22.6
26-Dec	3	5	7	7	A	6	10	12	8	15	15	15	13	12	13	13	12	12	10	11	12	12	12	13	10.8	15.4
27-Dec	13	13	13	14	A	11	13	13	12	8	10	12	12	13	13	11	6	6	9	11	17	23	31	32	13.8	32.2
28-Dec	33	33	32	32	A	22	23	25	20	18	20	18	18	19	18	17	15	16	18	19	19	16	19	20	21.2	33.0
29-Dec	18	18	19	20	A	12	14	18	19	18	20	22	22	22	21	21	18	17	15	16	18	16	13	14	17.9	22.0
30-Dec	17	19	16	15	A	13	14	11	8	10	15	16	20	23	25	13	4	3	5	7	15	16	15	17	13.8	25.3
31-Dec	21	19	24	28	A	26	24	23	23	24	23	30	32	35	35	35	35	35	29	33	36	38	38	37	29.7	38.0
	15.4	15.7	16.2	16.2	--	15.2	14.8	15.4	14.5	15.3	17.3	19.4	20.3	21.0	20.2	18.5	16.1	14.8	14.9	15.9	15.9	16.1	16.5	16.5	Diurnal Average	
	33.7	34.9	36.7	34.1	--	35.3	32.8	27.9	27.7	31.2	31.0	31.6	32.2	35.0	35.5	34.7	35.1	35.3	29.2	33.3	36.1	38.0	37.7	37.2	Diurnal Maximum	

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

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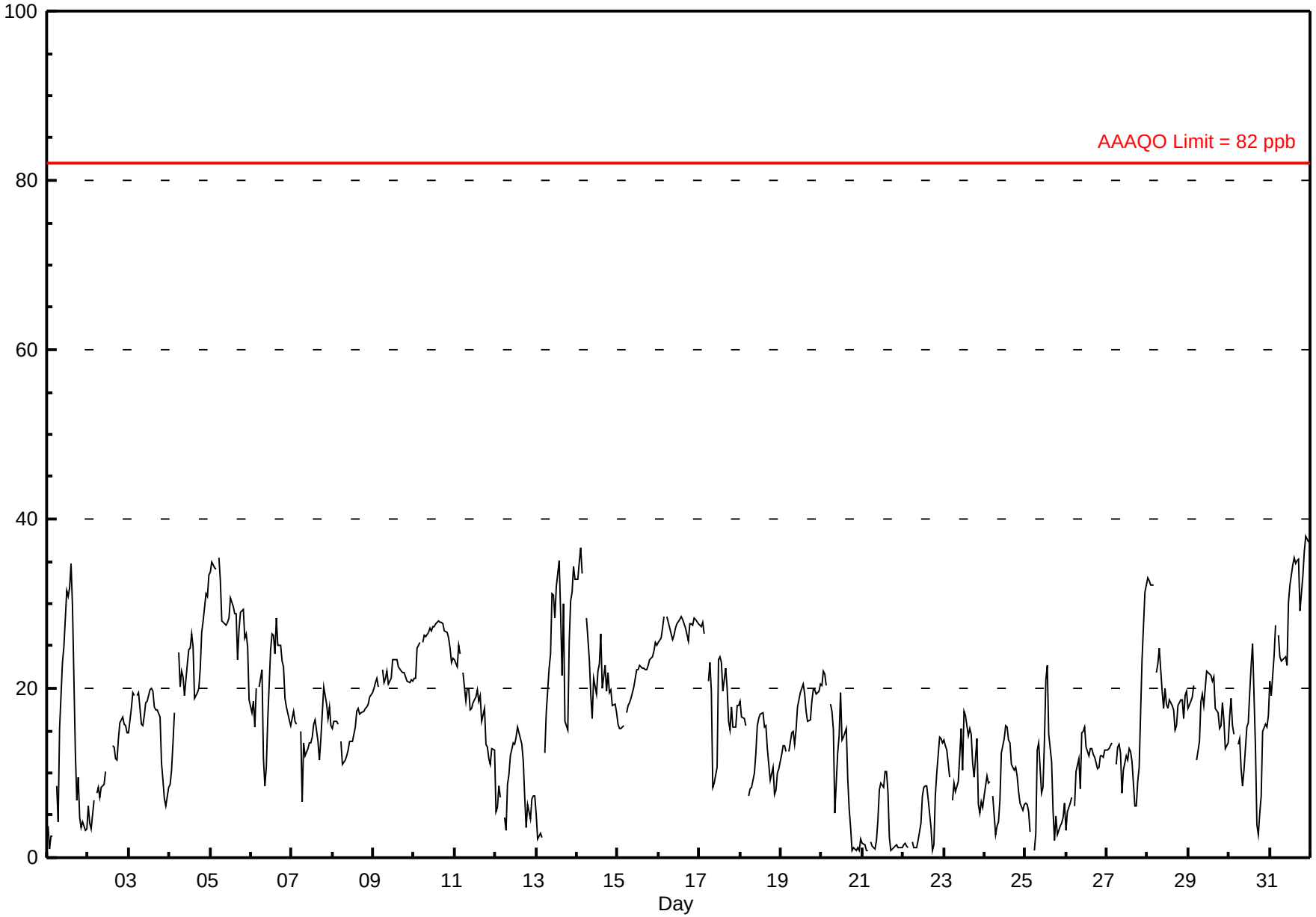
Hourly Averages

Ozone (O_3) - ppb

Beaverlodge - December 2010



PASZA
Peace Air Shed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

Beaverlodge - December 2010

Maximum Value: 38.7 ppb on Dec 31 22:00

Maximum Daily Average: 32.8 ppb on Dec 31

Minimum Value: 1 ppb on Dec 20 23:00

Minimum Daily Average: 5.1 ppb on Dec 21

Maximum Diurnal Average: 22.6 ppb at hour 14

Minimum Diurnal Average: 17.3 ppb at hour 18

Monthly Average: 18.98 ppb

Percentiles: P_1 = 1.7 P_{10} = 8.1 Q_1 = 13.5 Median = 18.6 Q_3 = 24.7 P_{90} = 29.9 P_{99} = 37.7

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)																								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-Dec	15	2	4	4	A	14	12	21	24	29	31	33	32	34	37	38	27	15	15	8	5	6	6	6	18.1	38.2
2-Dec	9	8	7	12	A	12	13	10	10	11	12	C	C	C	14	14	13	14	16	18	18	17	17	17	13.0	17.7
3-Dec	17	20	20	20	A	20	20	18	18	19	20	20	21	21	21	21	18	18	18	15	11	9	9	9	17.4	21.0
4-Dec	10	13	15	20	A	25	23	23	23	21	25	26	27	29	28	22	23	22	26	33	32	33	33	36	24.7	36.2
5-Dec	37	38	36	36	A	37	37	31	30	30	29	30	33	32	30	31	27	29	33	34	29	31	29	24	31.8	38.2
6-Dec	22	22	22	26	A	26	29	21	19	17	23	32	29	31	28	30	27	27	25	24	22	21	20	17	24.3	31.9
7-Dec	17	18	18	17	A	16	11	15	14	15	15	15	16	18	18	17	14	19	20	22	20	18	19	17	16.9	21.6
8-Dec	18	17	17	16	A	15	14	13	13	14	14	15	15	16	18	19	18	18	18	18	19	19	20	20	16.6	20.2
9-Dec	21	21	22	23	A	24	22	24	24	22	23	24	24	24	24	23	23	22	22	22	21	21	22	22	22.6	24.2
10-Dec	23	23	26	26	A	26	27	27	27	27	27	28	28	28	28	28	29	29	27	27	27	26	24	25	26.7	28.7
11-Dec	25	24	26	25	A	24	22	22	22	19	19	21	20	21	20	21	19	19	18	16	16	14	14	14	20.0	26.0
12-Dec	12	15	15	16	A	11	7	11	12	13	14	14	15	16	16	15	13	10	6	8	7	8	8	8	11.7	15.9
13-Dec	7	4	4	4	A	17	21	26	28	34	35	31	35	37	37	33	35	22	24	29	35	36	36	36	26.3	36.8
14-Dec	34	36	38	37	A	31	30	28	26	28	31	25	26	27	35	25	28	23	23	21	21	19	19	19	27.3	37.7
15-Dec	17	16	16	16	A	18	20	20	21	21	22	23	23	23	23	23	23	23	24	24	24	26	27	26	21.6	26.7
16-Dec	26	27	29	29	A	29	29	28	27	28	28	29	29	29	29	28	28	27	28	29	28	29	29	28	28.3	29.3
17-Dec	28	28	29	27	A	25	24	23	21	14	17	24	25	25	22	24	24	18	18	19	19	17	19	19	22.1	28.6
18-Dec	19	19	18	16	A	9	9	11	12	15	17	17	18	18	17	16	16	13	12	12	11	13	13	13	14.4	19.2
19-Dec	14	14	14	14	A	14	16	16	15	17	19	21	21	21	21	19	17	17	20	21	21	20	21	22	17.9	21.7
20-Dec	23	23	23	21	A	20	19	19	10	15	18	21	21	16	18	13	10	6	3	3	2	2	1	5	13.3	23.1
21-Dec	4	3	2	3	A	4	3	2	4	9	11	12	11	12	12	9	4	1	2	2	3	2	2	2	5.1	12.2
22-Dec	2	2	2	2	A	4	2	1	1	3	6	9	9	10	9	9	6	3	5	8	13	15	15	15	6.6	15.2
23-Dec	15	14	14	12	A	12	11	11	13	14	17	17	18	18	18	18	16	15	14	15	14	10	8	7	13.8	18.4
24-Dec	10	11	10	10	A	8	8	10	13	11	14	15	16	16	16	15	13	12	12	10	9	8	7	9	11.3	16.2
25-Dec	9	9	7	5	A	2	8	27	29	15	10	18	23	25	25	16	8	7	12	7	6	8	10	14	13.0	29.2
26-Dec	9	9	9	9	A	9	14	15	15	15	16	16	16	13	14	13	13	13	13	12	13	13	13	13	12.7	16.1
27-Dec	13	14	16	15	A	13	15	14	14	10	12	13	13	14	14	13	10	8	10	14	25	27	33	33	15.7	33.3
28-Dec	34	34	33	34	A	29	30	29	30	20	22	20	19	19	19	19	17	18	19	20	20	19	20	21	23.6	33.7
29-Dec	20	20	21	21	A	17	17	20	20	20	22	23	23	23	22	22	21	20	20	19	20	19	17	17	20.1	22.7
30-Dec	18	20	19	16	A	15	15	14	12	17	19	18	22	25	26	27	10	14	14	14	18	17	16	21	17.7	27.2
31-Dec	22	24	29	29	A	29	33	27	30	30	28	32	35	37	38	36	37	37	34	35	38	39	39	38	32.8	38.7
	17.7	17.7	18.0	18.1	--	17.8	18.0	18.5	18.5	18.4	19.8	21.3	22.0	22.6	22.4	21.2	18.9	17.3	17.7	18.0	18.2	18.0	18.1	18.4	Diurnal Average	
	37.3	38.2	37.7	36.7	--	36.8	36.8	31.2	30.1	33.8	34.8	32.7	34.8	37.2	37.7	38.2	36.7	37.2	34.3	35.0	37.7	38.7	38.7	38.2	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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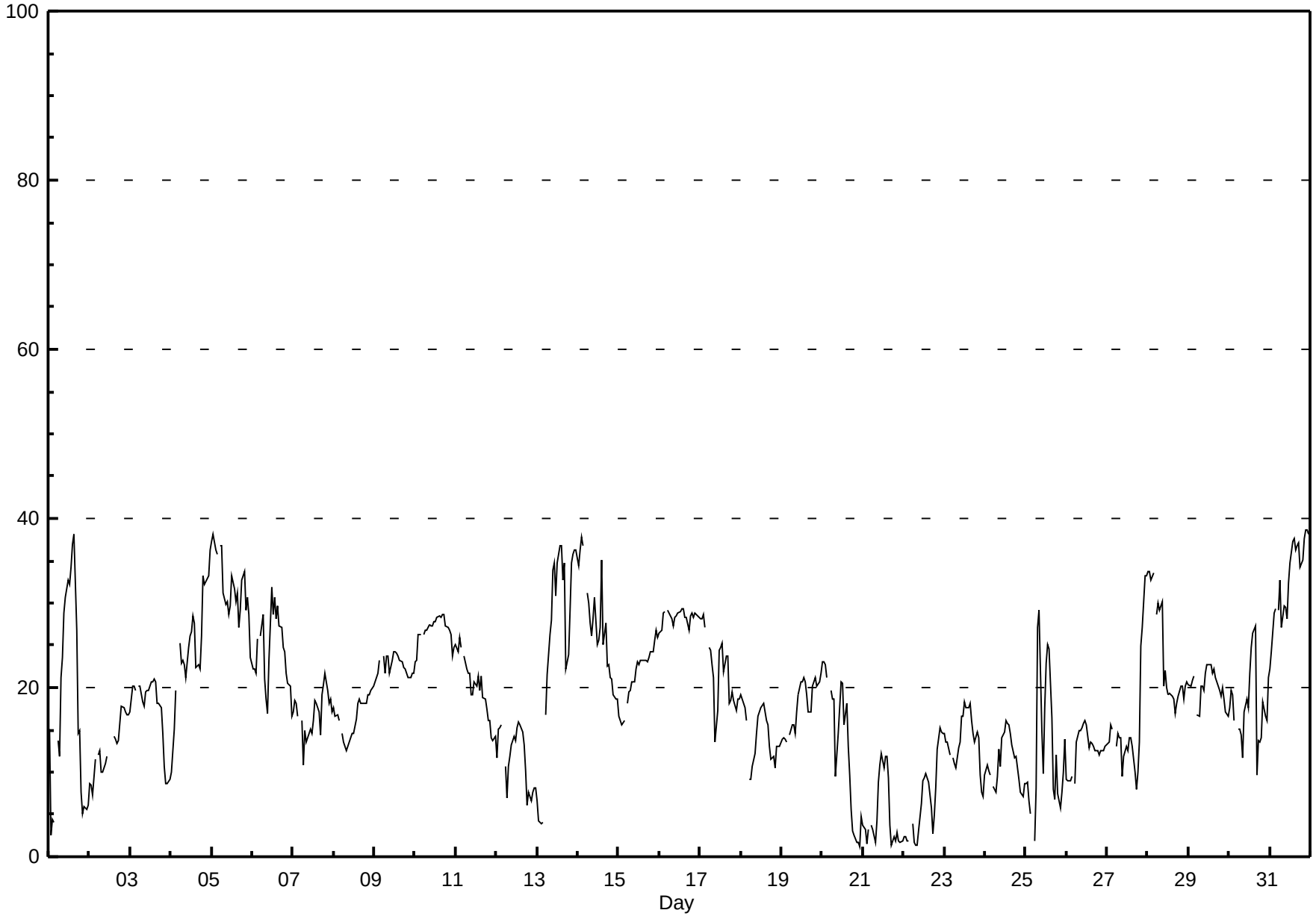
Hourly Maximums

Ozone (O_3) - ppb

Beaverlodge - December 2010



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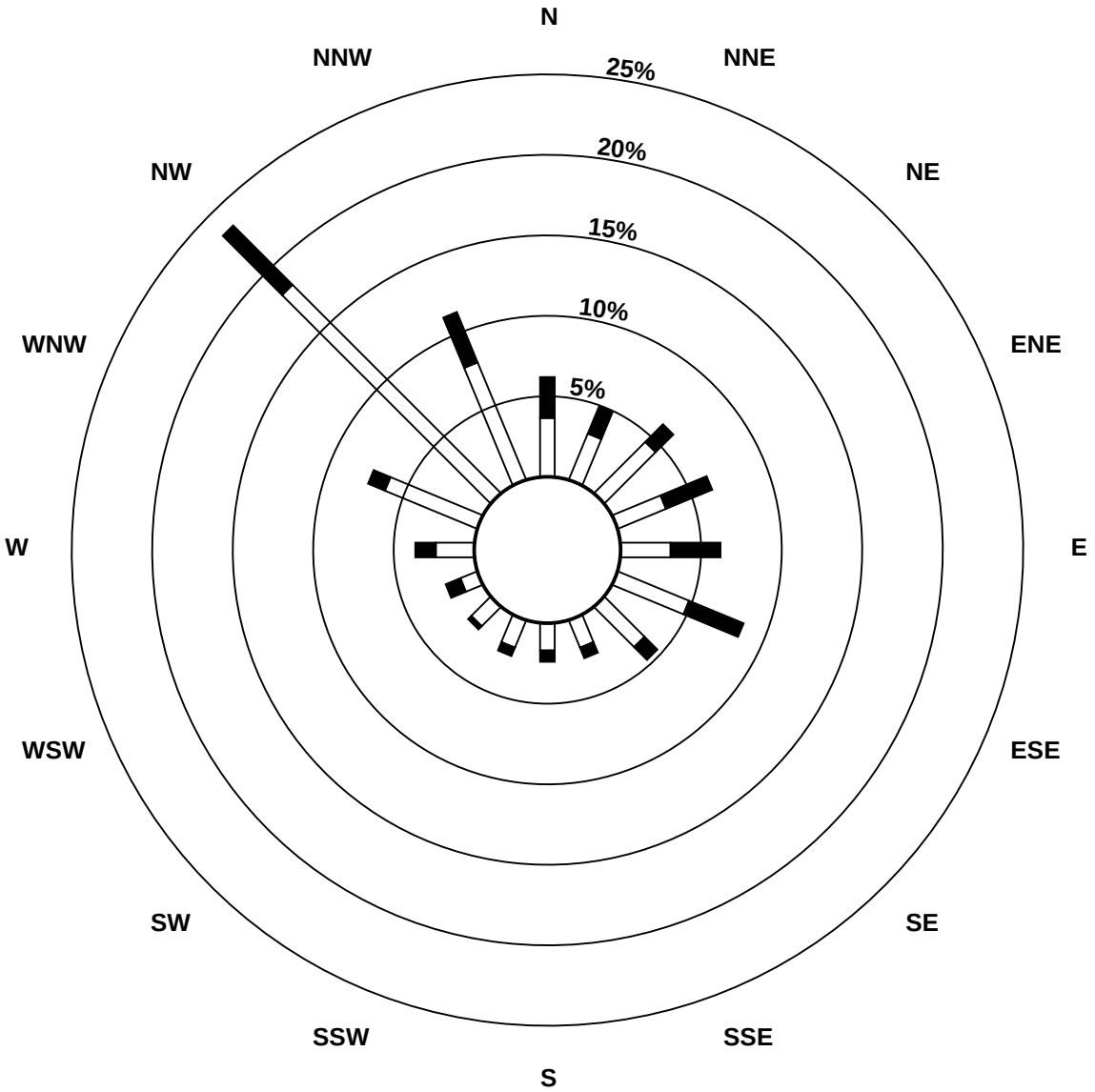
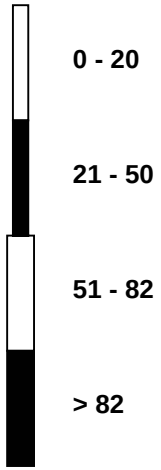
Pollutant Rose

Ozone (O_3) - ppb

Beaverlodge - December 2010



Pollutant Classes (ppb)



PASZA
Peace Air Shed Zone Association

Eight Hour Running Averages

Ozone (O_3) - ppb

Beaverlodge - December 2010

Maximum Value: 35.2 ppb on Jan 1 00:00

Minimum Value: 1.2 ppb on Dec 22 01:00

Percentiles: P_1 = 1.3 P_{10} = 5.9 Q_1 = 11.3 Median = 16.6 Q_3 = 21.9 P_{90} = 27.2 P_{99} = 33.8

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
	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-Dec	5	5	5	5	5	5	4	5	8	11	14	18	20	23	26	28	27	25	23	20	17	13	9	6	28.2
2-Dec	5	5	4	4	4	5	6	6	6	7	8	8	8	N	N	N	N	N	N	13	14	14	14	14	14.5
3-Dec	15	16	16	17	17	17	18	18	18	18	18	18	18	18	18	18	19	19	18	18	16	15	13	12	18.6
4-Dec	11	10	9	10	10	13	15	17	18	20	21	22	22	23	23	23	23	23	23	23	23	24	25	27	26.5
5-Dec	28	30	32	33	33	34	34	33	32	31	30	30	30	29	29	29	28	28	28	28	28	27	27	26	34.0
6-Dec	25	24	22	21	20	19	19	18	17	16	16	16	18	18	19	21	23	25	25	25	24	23	22	21	25.4
7-Dec	19	18	18	17	16	16	15	14	14	13	13	12	13	13	14	14	14	14	15	15	16	16	16	16	19.5
8-Dec	17	17	17	16	16	16	15	14	14	13	13	13	13	13	14	15	15	16	16	17	17	17	18	18	17.9
9-Dec	18	19	19	20	20	20	21	21	21	21	21	22	22	22	22	22	22	23	23	22	22	22	22	21	22.7
10-Dec	21	21	21	22	22	23	24	24	25	26	26	26	27	27	27	27	27	28	28	27	27	27	26	26	27.5
11-Dec	25	25	24	24	24	23	23	22	22	21	20	19	19	19	19	19	18	18	18	17	16	15	14	14	25.2
12-Dec	12	11	10	9	9	8	7	6	7	8	8	9	10	11	13	13	13	13	12	11	10	8	8	7	13.5
13-Dec	6	5	5	5	5	6	7	9	12	16	20	24	25	28	29	29	30	28	26	26	25	25	26	27	29.8
14-Dec	27	30	32	33	34	33	32	31	29	26	24	22	22	21	21	21	21	22	22	22	22	22	21	20	20	33.8
15-Dec	19	18	17	17	16	16	16	16	17	18	18	19	20	20	21	21	22	22	22	23	23	23	23	24	23.6
16-Dec	24	25	25	26	26	27	27	27	27	27	27	27	27	27	27	27	28	27	28	28	27	27	27	27	27.6
17-Dec	27	28	28	28	28	27	26	25	22	19	17	16	17	18	17	18	19	20	20	20	19	18	18	17	27.7
18-Dec	17	17	17	17	17	16	14	13	12	11	11	11	12	13	14	15	15	15	14	14	12	11	11	10	17.0
19-Dec	10	10	11	11	11	12	13	13	14	14	14	15	16	17	18	18	18	18	18	18	18	18	18	19	18.7
20-Dec	19	20	20	20	21	20	20	19	17	16	15	15	14	14	14	13	13	12	10	8	6	5	3	2	20.6
21-Dec	2	1	1	1	1	1	1	1	1	2	3	4	4	6	7	7	8	7	6	5	4	3	2	1	7.5
22-Dec	1	1	1	1	1	1	1	1	1	1	2	3	3	4	5	6	6	6	6	6	6	7	7	8	8.1
23-Dec	9	11	12	13	13	12	11	10	10	10	10	10	11	12	13	14	14	14	14	14	13	11	10	9	14.5
24-Dec	8	8	8	7	8	8	7	7	7	6	7	7	8	9	11	12	13	13	13	13	12	10	9	8	13.3
25-Dec	8	7	7	6	6	5	4	5	6	7	7	9	10	13	14	14	13	12	12	11	8	6	5	4	14.3
26-Dec	4	4	5	5	5	6	6	7	8	9	10	12	12	13	13	13	14	13	13	12	12	12	12	12	13.5
27-Dec	12	12	12	13	13	13	13	13	13	12	12	11	11	12	12	11	11	10	10	10	11	12	14	17	17.0
28-Dec	20	24	27	29	31	31	30	29	27	24	23	21	20	20	19	18	18	18	17	17	17	17	17	18	31.0
29-Dec	18	18	18	19	19	18	17	17	17	17	17	18	18	19	20	21	20	20	20	19	18	18	17	16	20.6
30-Dec	16	16	16	16	15	15	15	15	14	12	12	13	13	15	16	16	16	15	14	12	12	11	10	10	16.4
31-Dec	12	14	17	19	20	21	23	23	24	25	24	25	26	27	28	30	31	33	33	34	34	35	35	35	35.2
	28.3	30.1	32.4	33.4	33.8	33.8	34.0	33.3	32.4	31.3	30.4	29.6	29.8	29.0	29.1	29.6	31.1	32.5	33.3	33.7	34.2	34.6	34.9	35.2	
	Diurnal Maximums																								

N - Not Valid

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Hourly Averages

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

Beaverlodge - December 2010

Number of Exceedences: 1-hr: 0 24-hr: 0
Maximum Value: 35.3 $\mu g/m^3$ on Dec 2 12:00
Maximum Daily Average: 22.2 $\mu g/m^3$ on Dec 24

Minimum Value: 2 $\mu g/m^3$ on Dec 9 18:00
Maximum Diurnal Average: 13.2 $\mu g/m^3$ at hour 2
Monthly Average: 11.79 $\mu g/m^3$
Minimum Daily Average: 3.9 $\mu g/m^3$ on Dec 9
Minimum Diurnal Average: 10.7 $\mu g/m^3$ at hour 14
Percentiles: P_1 = 2.8 P_{10} = 4.4 Q_1 = 6.1 Median = 9.7 Q_3 = 17.4 P_{90} = 22.5 P_{99} = 30.3

Hours in Service:	744
Hours of Data:	741
Hours of Missing Data:	3
Hours of Calibration:	2
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	18	23	20	18	20	16	14	13	9	8	8	6	5	5	5	4	9	11	11	13	13	16	17	20	12.7	22.6
2-Dec	20	26	30	30	25	22	24	24	28	31	34	35	28	28	26	16	14	13	10	9	9	11	10	12	21.5	35.3
3-Dec	12	10	8	7	7	7	6	9	6	8	8	8	7	8	9	8	9	8	7	8	10	11	11	11	8.4	11.7
4-Dec	11	9	8	7	5	6	9	11	11	9	7	7	5	6	5	6	9	11	9	9	7	7	7	6	7.7	11.3
5-Dec	5	4	4	5	4	5	4	4	4	6	6	5	5	5	5	3	5	4	4	6	7	6	6	7	4.9	6.8
6-Dec	9	7	10	8	7	10	6	6	13	9	9	8	5	7	10	11	11	9	11	11	15	14	8	11	9.4	15.3
7-Dec	10	10	9	9	10	10	16	21	22	21	23	27	29	29	30	27	27	26	21	18	21	19	18	18	19.6	29.9
8-Dec	16	19	19	23	28	29	31	25	19	19	23	28	24	9	8	7	7	6	5	5	5	6	7	6	15.6	30.9
9-Dec	5	6	4	4	4	5	4	5	3	4	4	4	5	4	4	4	3	2	3	4	4	3	3	4	3.9	6.0
10-Dec	4	5	5	6	7	6	4	4	3	4	4	5	7	6	6	5	6	6	8	12	10	8	10	14	6.4	14.3
11-Dec	13	13	13	7	5	7	7	7	7	8	7	8	10	10	13	14	14	14	15	18	15	16	17	19	11.5	19.1
12-Dec	19	18	17	18	20	18	17	21	21	23	21	20	21	21	20	23	24	23	23	19	20	24	24	24	20.8	24.5
13-Dec	22	24	23	24	24	20	13	9	8	6	7	6	7	5	4	6	13	9	9	11	10	7	7	7	11.8	24.3
14-Dec	9	8	5	5	6	5	5	7	9	7	11	7	12	8	7	8	9	11	15	15	14	13	12	10	9.1	15.2
15-Dec	10	7	8	10	9	6	5	4	4	4	6	5	4	2	5	5	4	6	5	4	5	4	5	5	5.6	9.7
16-Dec	6	6	4	4	5	4	4	4	4	3	5	5	4	4	6	4	4	5	4	5	4	5	5	4	4.5	5.7
17-Dec	5	5	5	5	6	5	6	7	8	11	11	11	6	7	9	9	7	8	7	8	9	10	9	11	7.6	11.2
18-Dec	10	9	11	13	15	13	11	9	10	10	9	9	10	11	10	9	11	13	11	13	12	13	12	13	11.2	15.4
19-Dec	13	12	12	11	12	11	12	10	11	10	9	10	10	10	8	9	10	10	8	10	11	11	10	10	10.4	13.0
20-Dec	12	13	14	11	9	9	9	10	9	9	8	8	10	9	9	13	14	15	15	14	15	15	17	18	11.9	17.6
21-Dec	20	20	20	19	15	15	18	17	17	C	C	11	17	19	16	17	18	19	N	21	20	22	19	22	18.0	22.0
22-Dec	22	24	21	22	17	18	21	23	19	20	24	23	19	22	22	23	21	21	21	22	18	18	15	16	20.5	23.8
23-Dec	18	19	22	20	22	22	22	21	21	16	13	13	17	13	15	20	14	17	14	18	18	22	21	23	18.3	22.5
24-Dec	33	34	22	19	16	19	18	23	23	15	18	20	19	17	22	23	20	25	24	23	23	24	23	28	22.2	34.4
25-Dec	27	22	25	33	26	24	23	17	14	16	21	21	16	11	13	20	21	24	25	24	24	25	27	24	21.7	33.3
26-Dec	22	23	22	20	22	20	20	22	21	21	19	16	22	18	14	12	9	10	11	9	11	10	9	10	16.3	22.8
27-Dec	9	8	8	10	8	8	11	10	10	9	9	12	13	15	14	15	12	10	10	10	10	6	6	4	9.9	15.5
28-Dec	4	3	3	2	3	3	7	5	7	8	5	6	7	6	6	6	7	8	6	7	5	6	6	6	5.5	8.5
29-Dec	6	6	7	6	6	6	6	7	7	7	5	5	6	7	7	5	6	8	7	8	6	5	8	8	6.4	8.3
30-Dec	14	14	10	7	4	3	5	4	3	4	2	4	6	6	7	11	15	17	12	12	12	12	10	8	8.3	16.8
31-Dec	6	6	6	5	4	4	4	4	4	3	5	5	5	5	4	3	5	4	6	6	5	5	5	6	4.8	6.4
	13.1	13.2	12.7	12.6	12.0	11.5	11.7	11.7	11.3	11.0	11.5	11.6	11.7	10.7	10.9	11.2	11.5	12.0	11.2	12.0	11.9	12.0	11.7	12.3	Diurnal Average	
	32.9	34.4	29.6	33.3	28.3	28.6	30.9	24.8	28.2	30.6	33.5	35.3	29.0	28.7	29.9	26.7	26.7	26.5	24.7	24.2	24.4	24.5	26.8	27.8	Diurnal Maximum	

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

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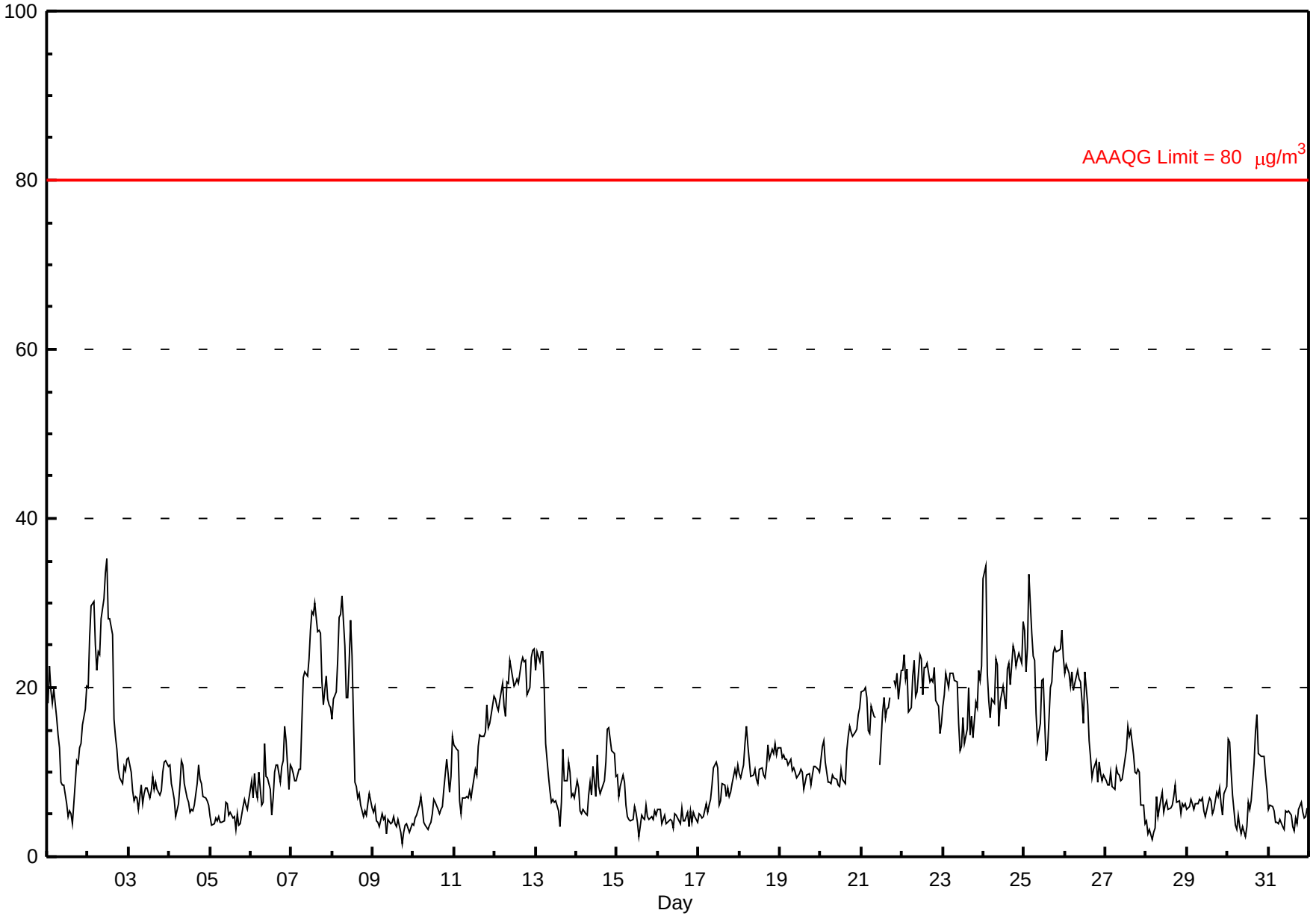
Hourly Averages

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

Beaverlodge - December 2010



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Hourly Maximums

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

Beaverlodge - December 2010

Maximum Value: 36.9 $\mu g/m^3$ on Dec 2 12:00

Maximum Daily Average: 25.1 $\mu g/m^3$ on Dec 24

Minimum Value: 3 $\mu g/m^3$ on Dec 9 18:00

Minimum Daily Average: 4.6 $\mu g/m^3$ on Dec 9

Maximum Diurnal Average: 14.6 $\mu g/m^3$ at hour 2

Minimum Diurnal Average: 12.4 $\mu g/m^3$ at hour 14

Monthly Average: 13.18 $\mu g/m^3$

Percentiles: $P_1 = 3.5$ $P_{10} = 5.2$ $Q_1 = 7.1$ Median = 10.7 $Q_3 = 19.3$ $P_{90} = 24.4$ $P_{99} = 32.0$

Hours in Service:	744
Hours of Data:	741
Hours of Missing Data:	3
Hours of Calibration:	2
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	22	23	20	20	21	21	17	17	10	9	9	7	5	6	6	6	11	12	12	13	14	17	18	21	14.1	23.3
2-Dec	21	30	31	32	28	25	25	25	30	32	36	37	33	31	30	21	15	13	12	10	10	11	12	12	23.4	36.9
3-Dec	12	12	9	7	8	8	7	9	8	9	9	9	8	9	10	9	9	9	8	9	11	12	12	12	9.3	12.3
4-Dec	12	10	10	8	8	7	10	13	12	10	8	7	7	6	6	7	11	13	10	10	8	7	7	7	8.9	13.0
5-Dec	6	4	5	5	5	5	5	5	5	8	8	6	7	6	6	4	6	5	5	7	7	8	7	8	6.0	8.5
6-Dec	10	9	11	11	8	11	10	9	15	14	10	10	7	8	11	12	12	11	11	12	18	18	11	12	11.3	17.9
7-Dec	11	10	10	10	11	11	23	23	23	22	25	30	30	30	32	27	29	29	23	20	22	20	19	18	21.2	32.2
8-Dec	17	21	21	26	29	31	32	28	21	21	25	30	30	14	9	7	8	7	5	6	6	7	8	7	17.4	31.9
9-Dec	6	7	5	5	5	5	5	5	3	5	4	5	5	4	4	5	4	3	4	4	5	3	4	4	4.6	6.9
10-Dec	5	5	5	7	7	7	5	4	4	5	5	6	8	8	6	6	6	6	9	13	13	8	11	16	7.2	15.6
11-Dec	15	14	13	10	6	8	8	8	8	9	9	10	11	12	14	15	16	16	18	19	16	16	18	20	12.9	19.9
12-Dec	19	18	18	20	21	19	19	22	22	24	23	21	21	22	25	26	27	27	24	21	22	27	27	26	22.6	27.2
13-Dec	25	26	25	26	26	24	15	12	8	8	7	7	7	7	4	13	14	10	10	12	11	9	8	8	13.4	26.1
14-Dec	10	9	7	6	6	6	6	9	10	12	14	9	16	13	9	9	10	14	16	16	14	14	13	10	10.7	15.8
15-Dec	11	8	10	11	10	8	6	6	5	5	7	7	5	3	6	5	5	7	6	5	5	5	7	6	6.6	11.3
16-Dec	6	6	5	5	5	4	5	5	5	4	7	7	5	5	6	6	5	6	5	6	5	6	6	5	5.4	6.6
17-Dec	5	5	5	6	7	6	7	8	10	11	12	12	8	9	9	9	8	9	8	8	9	11	11	12	8.5	12.0
18-Dec	11	11	12	16	16	15	12	10	11	11	10	10	11	11	10	10	13	14	12	13	13	15	14	14	12.2	16.0
19-Dec	14	12	13	13	12	11	12	11	11	11	10	10	11	11	9	9	10	10	10	11	11	11	11	11	11.0	13.5
20-Dec	12	14	14	13	10	10	10	11	10	9	9	10	12	11	10	16	16	17	17	15	15	16	17	19	13.0	18.7
21-Dec	21	21	21	20	19	16	20	18	17	C	C	17	18	20	18	18	19	20	N	22	23	24	20	23	19.8	23.6
22-Dec	24	25	22	24	20	19	23	24	21	22	26	26	22	24	25	25	22	22	23	23	21	19	18	17	22.3	25.7
23-Dec	19	21	23	22	22	22	23	22	22	19	14	19	20	14	20	23	17	19	19	20	20	24	24	27	20.6	26.8
24-Dec	35	36	29	21	20	20	22	26	24	22	21	22	21	21	27	27	25	27	26	25	25	26	25	29	25.1	36.4
25-Dec	29	25	31	34	32	24	24	21	15	18	22	22	19	13	18	22	22	26	26	25	25	28	29	25	24.0	34.1
26-Dec	23	24	23	22	24	20	21	23	22	21	20	20	23	21	16	13	10	11	12	10	12	11	10	10	17.6	24.1
27-Dec	10	9	10	11	9	10	11	10	10	10	10	12	14	17	16	15	15	11	10	11	11	8	7	5	10.9	16.5
28-Dec	5	4	4	3	3	7	8	6	9	9	7	8	8	6	6	7	8	10	7	7	6	7	7	7	6.5	9.7
29-Dec	6	6	8	7	6	7	7	7	7	7	6	6	7	8	8	6	6	9	8	9	8	7	8	10	7.3	9.8
30-Dec	17	17	11	10	5	5	6	5	3	4	3	5	7	7	10	12	17	19	15	13	13	12	12	8	9.8	18.6
31-Dec	7	8	7	6	5	5	5	5	5	4	6	7	6	6	4	4	5	4	7	7	6	5	5	6	5.7	7.8
	14.4	14.6	14.1	14.0	13.4	12.8	13.1	13.1	12.4	12.5	12.8	13.3	13.2	12.4	12.6	12.8	12.9	13.4	12.6	13.0	13.1	13.3	13.0	13.4	Diurnal Average	
	35.1	36.4	31.4	34.1	32.5	31.1	31.9	27.9	30.2	31.8	35.5	36.9	33.1	31.2	32.2	27.4	28.7	28.9	26.3	25.3	25.1	28.4	29.3	28.9	Diurnal Maximum	

C - Calibration N - Not Valid

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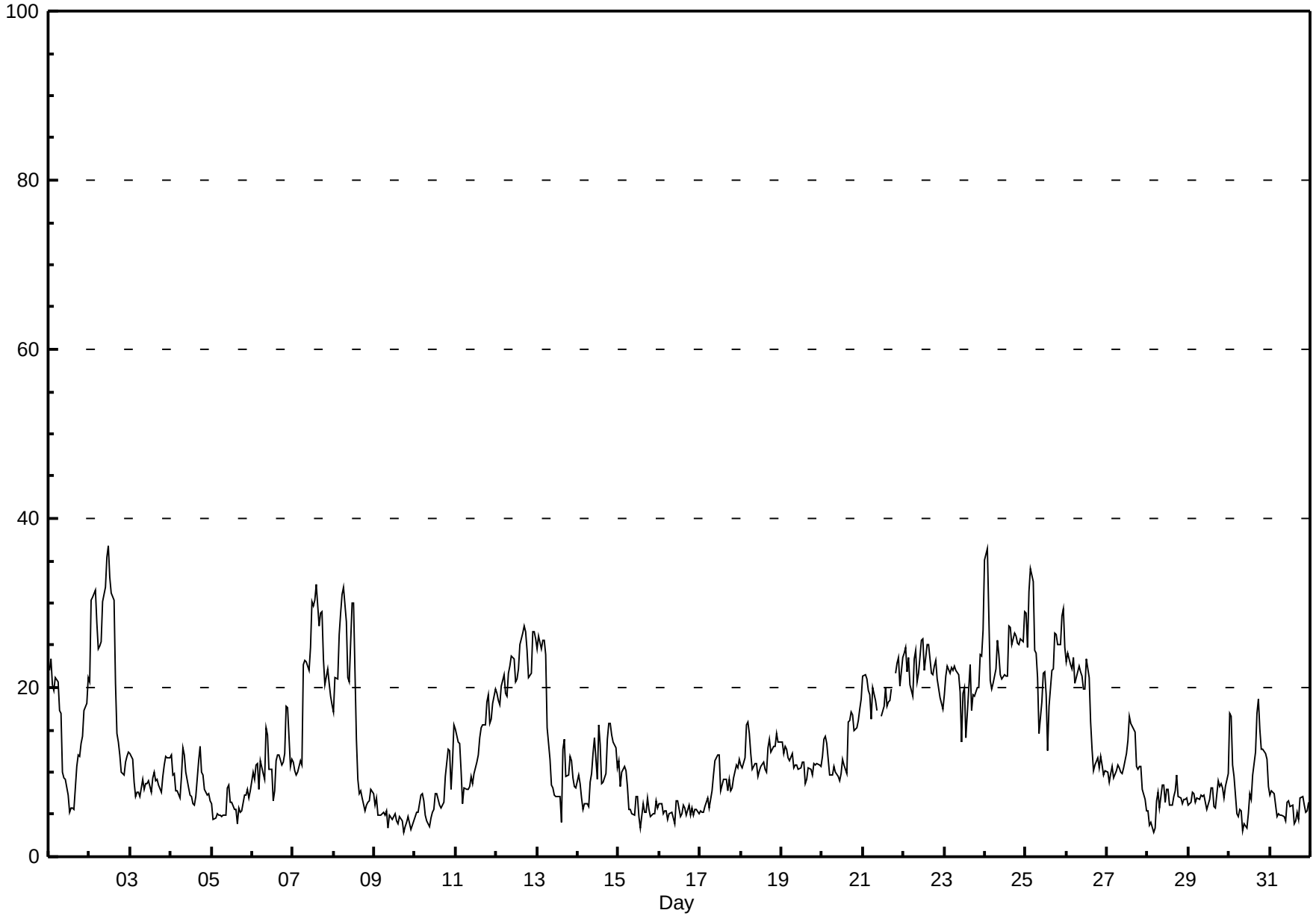
Hourly Maximums

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

Beaverlodge - December 2010



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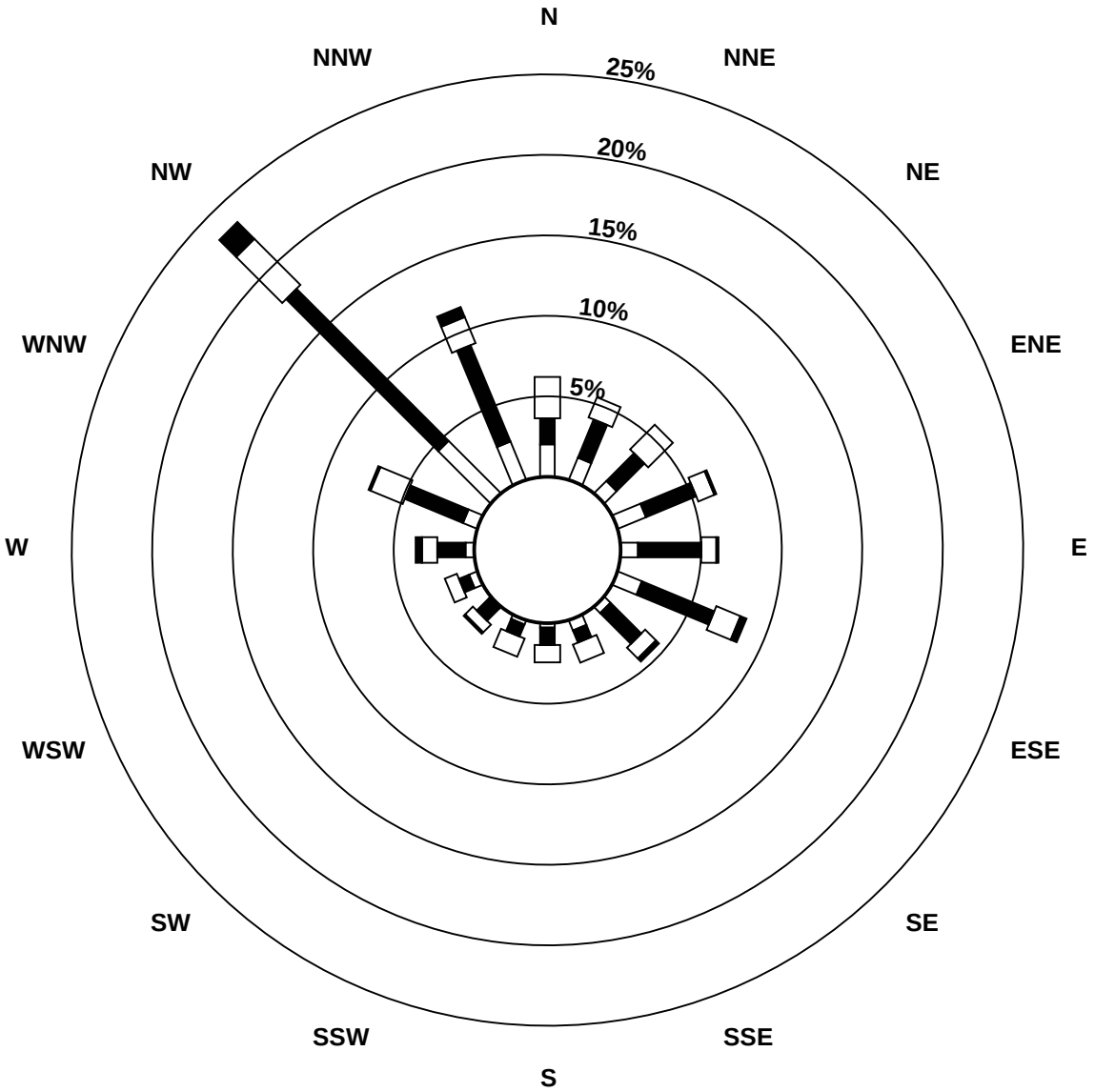
Pollutant Rose

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

Beaverlodge - December 2010



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

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

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Hourly Averages

External Temperature (ET) - °C

Beaverlodge - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 2.3 °C on Dec 13 14:00 Maximum Daily Average: -5.1 °C on Dec 1

Minimum Value: -26 °C on Dec 21 03:00 Minimum Daily Average: -23.0 °C on Dec 21
Maximum Diurnal Average: -12.7 °C at hour 14 Minimum Diurnal Average: -15.7 °C at hour 3
Monthly Average: -14.98 °C Percentiles: P_1 = -24.9 P_{10} = -21.6 Q_1 = -19.3 Median = -16.1 Q_3 = -11.0 P_{90} = -6.6 P_{99} = 0.2

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

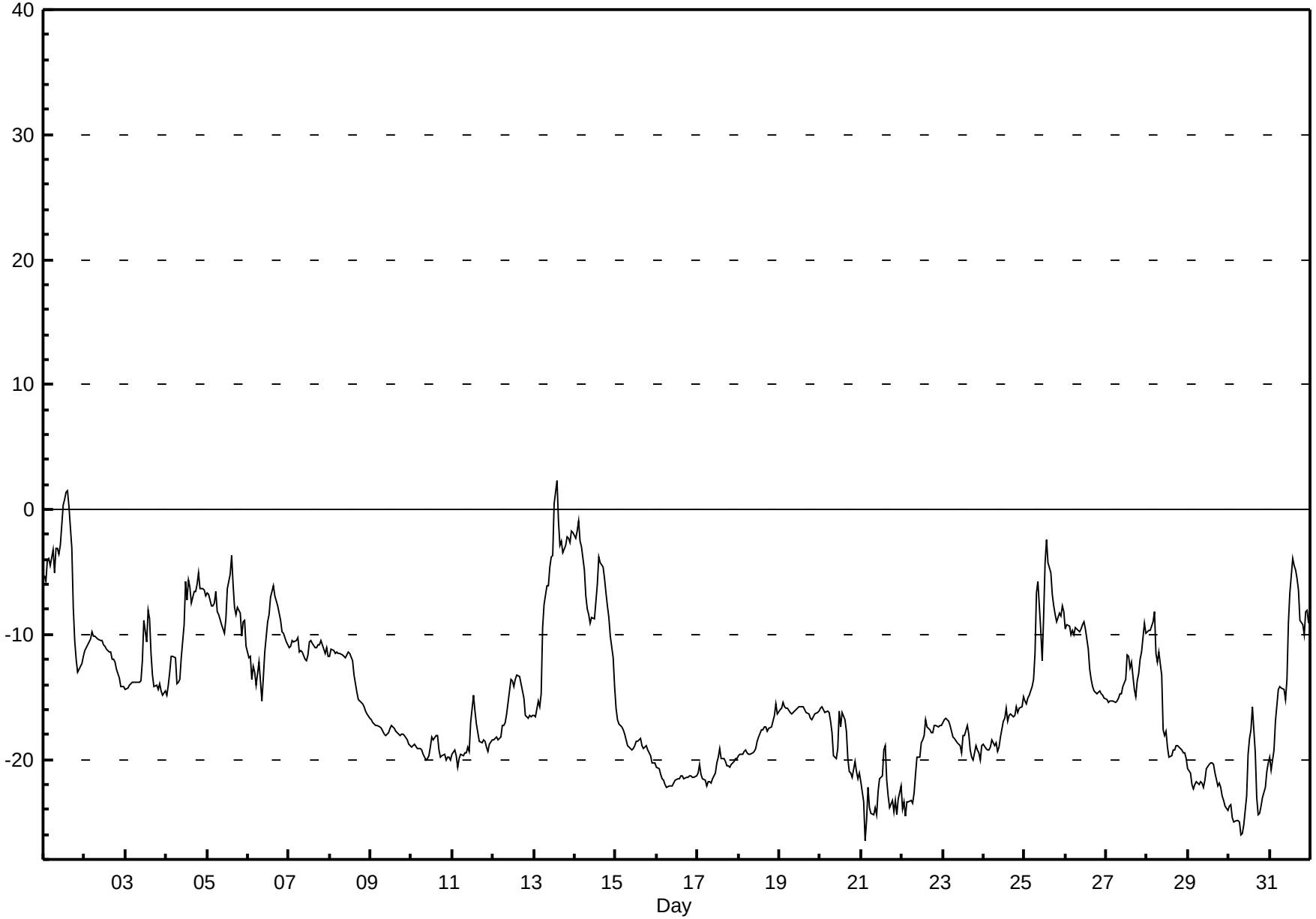
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Dec	-5	-6	-4	-4	-4	-3	-5	-3	-3	-4	-3	0	1	1	1	0	-3	-8	-10	-12	-13	-13	-12	-12	-5.1	1.5
2-Dec	-11	-11	-11	-10	-10	-10	-10	-10	-10	-10	-10	-11	-11	-11	-11	-11	-12	-12	-12	-13	-13	-14	-14	-14	-11.5	-9.8
3-Dec	-14	-14	-14	-14	-14	-14	-14	-14	-14	-14	-12	-9	-11	-8	-9	-12	-13	-14	-14	-14	-14	-15	-15	-14	-13.1	-8.1
4-Dec	-15	-14	-13	-12	-12	-12	-14	-14	-14	-12	-9	-6	-7	-6	-6	-8	-7	-7	-6	-5	-6	-6	-6	-7	-9.3	-5.0
5-Dec	-7	-7	-8	-8	-7	-7	-8	-8	-9	-10	-10	-9	-6	-5	-4	-6	-8	-8	-8	-8	-10	-9	-9	-11	-7.9	-3.7
6-Dec	-12	-12	-14	-13	-13	-14	-12	-14	-15	-13	-11	-9	-8	-7	-7	-6	-7	-8	-8	-9	-10	-10	-11	-11	-10.5	-6.1
7-Dec	-11	-11	-10	-11	-10	-10	-11	-11	-11	-12	-12	-12	-11	-10	-11	-11	-11	-11	-11	-11	-11	-11	-11	-12	-11.1	-10.2
8-Dec	-12	-11	-11	-11	-11	-12	-11	-12	-12	-12	-12	-11	-11	-12	-13	-14	-15	-15	-15	-16	-16	-16	-16	-17	-13.1	-11.2
9-Dec	-17	-17	-17	-17	-17	-17	-18	-18	-18	-18	-18	-18	-17	-17	-17	-18	-18	-18	-18	-18	-18	-18	-19	-19	-17.7	-16.8
10-Dec	-19	-19	-19	-19	-19	-19	-19	-20	-20	-20	-20	-19	-18	-18	-18	-18	-19	-20	-20	-20	-20	-20	-20	-20	-19.3	-18.1
11-Dec	-20	-19	-20	-21	-20	-20	-20	-19	-19	-19	-19	-17	-15	-16	-17	-18	-19	-19	-18	-19	-19	-19	-19	-18	-18.7	-14.9
12-Dec	-18	-18	-18	-18	-18	-17	-17	-17	-16	-15	-14	-14	-14	-14	-13	-13	-14	-15	-15	-16	-17	-17	-17	-17	-16.0	-13.2
13-Dec	-16	-17	-15	-16	-15	-9	-8	-6	-6	-5	-4	-4	0	2	-1	-3	-3	-3	-3	-2	-2	-3	-2	-2	-5.9	2.3
14-Dec	-2	-2	-1	-2	-3	-5	-7	-8	-8	-9	-9	-9	-7	-6	-4	-4	-5	-6	-7	-8	-9	-10	-12	-14	-6.5	-0.9
15-Dec	-16	-17	-17	-17	-18	-18	-18	-19	-19	-19	-19	-19	-19	-18	-18	-19	-19	-19	-19	-19	-20	-20	-20	-20	-18.6	-15.9
16-Dec	-21	-21	-21	-22	-22	-22	-22	-22	-22	-22	-22	-22	-22	-22	-21	-21	-22	-21	-21	-21	-21	-21	-21	-21	-21.5	-20.6
17-Dec	-21	-20	-21	-21	-22	-22	-22	-22	-22	-22	-21	-20	-20	-19	-20	-20	-20	-20	-21	-21	-20	-20	-20	-20	-20.7	-19.1
18-Dec	-20	-20	-20	-19	-19	-19	-20	-20	-19	-19	-19	-19	-18	-18	-18	-17	-17	-18	-18	-17	-17	-16	-16	-16	-18.3	-15.5
19-Dec	-16	-16	-15	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-17	-17	-17	-16	-16	-16	-16.1	-15.5
20-Dec	-16	-16	-16	-16	-16	-16	-17	-18	-20	-20	-19	-16	-17	-16	-17	-18	-20	-21	-21	-21	-20	-21	-21	-21	-18.4	-15.8
21-Dec	-22	-23	-26	-25	-22	-24	-24	-24	-24	-24	-23	-22	-21	-19	-19	-22	-23	-24	-23	-24	-23	-24	-23	-22	-23.0	-18.9
22-Dec	-24	-23	-25	-23	-23	-23	-24	-23	-21	-20	-20	-19	-18	-18	-17	-17	-18	-18	-18	-17	-17	-17	-17	-17	-19.9	-16.9
23-Dec	-17	-17	-17	-17	-17	-18	-18	-18	-19	-19	-19	-19	-18	-18	-17	-18	-19	-20	-20	-19	-19	-20	-20	-19	-18.4	-16.7
24-Dec	-19	-19	-19	-19	-19	-18	-19	-19	-19	-19	-18	-17	-17	-16	-17	-17	-16	-17	-16	-16	-16	-16	-16	-15	-17.5	-15.0
25-Dec	-15	-16	-15	-15	-14	-14	-11	-7	-6	-10	-12	-9	-4	-2	-4	-5	-7	-8	-8	-9	-8	-9	-8	-8	-9.3	-2.4
26-Dec	-10	-9	-9	-10	-10	-10	-10	-10	-10	-10	-9	-9	-10	-11	-13	-14	-14	-14	-15	-15	-15	-15	-15	-15	-11.6	-8.9
27-Dec	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15	-14	-14	-12	-12	-13	-12	-14	-15	-14	-13	-12	-11	-9	-10	-13.6	-9.1
28-Dec	-10	-10	-10	-9	-8	-12	-12	-11	-13	-18	-18	-18	-19	-20	-20	-19	-19	-19	-19	-19	-19	-19	-19	-20	-15.8	-8.1
29-Dec	-21	-21	-22	-22	-22	-22	-22	-22	-22	-22	-22	-21	-20	-20	-20	-20	-21	-22	-22	-22	-23	-23	-24	-24	-21.8	-20.3
30-Dec	-24	-24	-25	-25	-25	-25	-25	-26	-26	-25	-23	-20	-18	-18	-16	-19	-23	-24	-24	-24	-23	-22	-21	-20	-22.7	-15.7
31-Dec	-20	-21	-19	-17	-16	-14	-14	-14	-14	-15	-14	-9	-7	-4	-4	-5	-6	-6	-9	-9	-10	-8	-8	-9	-11.4	-3.9
	-15.6	-15.7	-15.7	-15.7	-15.4	-15.4	-15.6	-15.5	-15.6	-15.7	-15.2	-13.9	-13.3	-12.7	-12.9	-13.6	-14.4	-15.0	-15.2	-15.3	-15.5	-15.5	-15.4	-15.6	Diurnal Average	
	-2.3	-1.8	-0.9	-2.5	-3.0	-3.2	-5.1	-3.1	-3.1	-3.5	-2.9	0.3	0.8	2.3	1.5	0.3	-2.5	-3.4	-2.8	-2.2	-2.3	-2.6	-1.8	-1.8	Diurnal Maximum	

PASZA
Peace Air Shed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Beaverlodge - December 2010



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Peace Air Shed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Beaverlodge - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 92.4 % on Dec 2 00:00 Maximum Daily Average: 89.5 % on Dec 2

Minimum Value: 41 % on Dec 5 15:00 Minimum Daily Average: 59.0 % on Dec 5
Maximum Diurnal Average: 80.9 % at hour 9 Minimum Diurnal Average: 69.8 % at hour 14
Monthly Average: 77.79 % Percentiles: P_1 = 55.6 P_{10} = 67.6 Q_1 = 74.2 Median = 78.7 Q_3 = 82.7 P_{90} = 87.4 P_{99} = 90.9

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

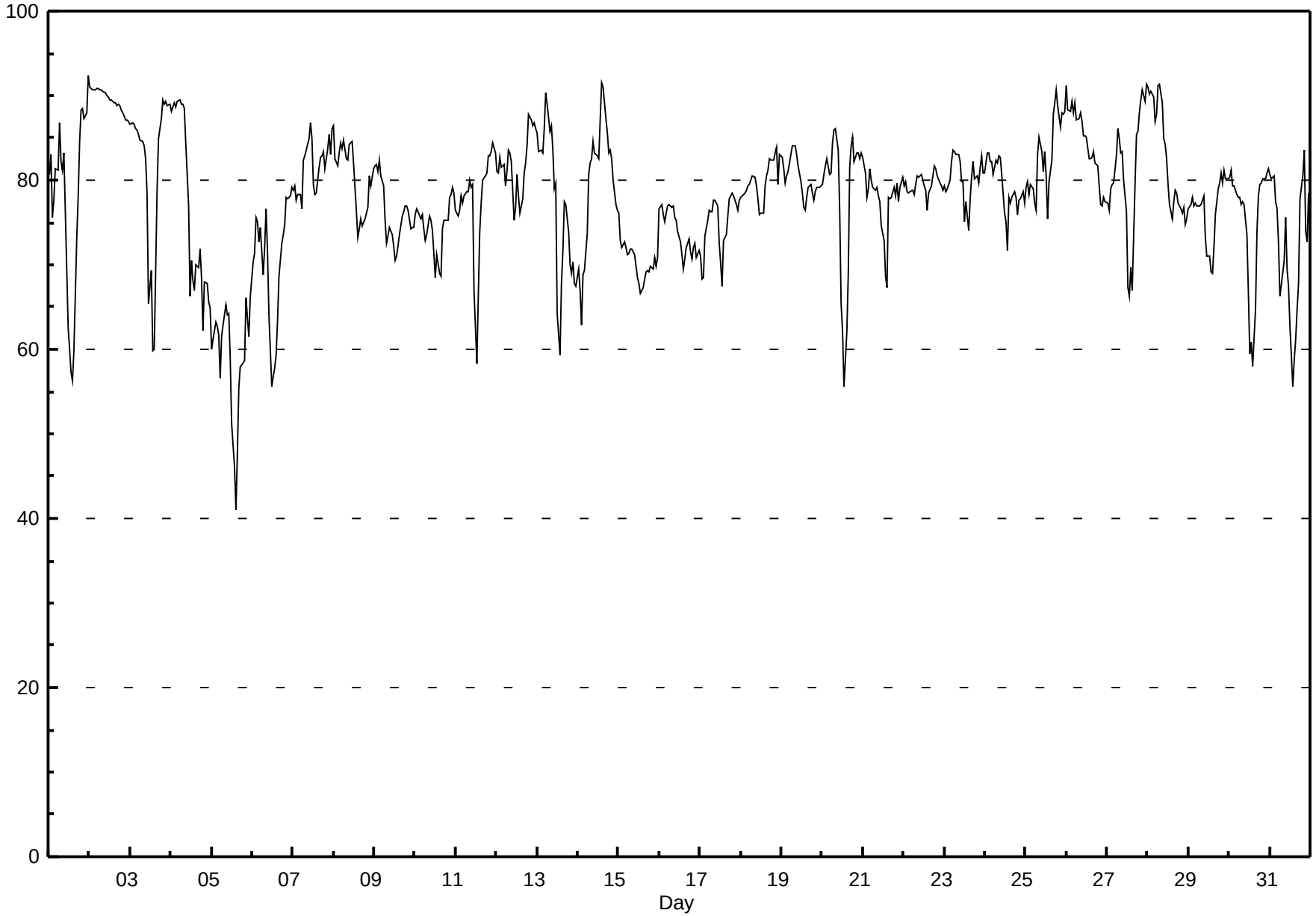
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Dec	81	83	76	78	81	81	87	82	81	83	76	63	60	57	56	60	73	78	85	88	88	87	88	92	77.7	92.4
2-Dec	91	91	91	91	91	91	91	91	90	90	90	90	90	89	89	89	89	89	89	88	88	87	87	87	89.5	91.0
3-Dec	87	87	87	86	86	85	85	85	84	83	78	65	69	60	60	69	79	85	87	89	89	89	89	89	81.3	89.5
4-Dec	88	89	89	89	89	89	89	89	89	84	77	66	70	68	67	70	70	72	68	62	68	68	66	65	76.7	89.5
5-Dec	60	61	63	63	62	57	62	63	65	64	64	59	51	46	41	48	55	58	58	59	66	64	61	66	59.0	66.2
6-Dec	70	71	76	75	73	74	69	72	77	72	64	56	57	58	59	63	69	73	73	75	78	78	78	79	70.3	79.2
7-Dec	79	79	78	78	78	77	82	83	84	85	87	85	80	78	79	82	83	83	83	81	84	85	83	86	81.7	86.7
8-Dec	86	83	82	83	84	84	85	82	82	84	84	85	82	76	73	74	75	75	75	76	77	81	79	81	80.4	86.4
9-Dec	82	82	81	82	81	79	75	73	73	74	74	72	71	71	72	74	76	76	77	77	76	74	74	74	75.9	82.3
10-Dec	76	77	76	75	76	74	73	73	76	75	74	71	68	71	69	69	74	75	75	75	78	78	79	79	74.5	79.2
11-Dec	76	76	76	78	77	78	79	79	80	79	79	67	58	66	74	77	80	81	81	83	83	83	84	83	77.5	84.4
12-Dec	81	81	83	82	82	79	81	83	83	82	75	77	81	78	76	78	81	82	84	88	87	87	87	86	81.8	87.7
13-Dec	86	83	84	83	86	90	89	86	86	84	79	80	64	59	68	72	77	77	74	70	69	70	68	68	77.2	90.3
14-Dec	70	67	63	69	69	74	81	82	83	85	83	83	82	87	92	91	87	86	83	84	82	80	77	76	79.8	91.6
15-Dec	76	73	72	73	72	71	71	72	72	71	70	68	68	67	67	68	69	69	69	70	70	71	70	71	70.4	76.1
16-Dec	77	77	76	75	76	77	77	77	77	76	75	74	73	71	70	71	72	73	71	71	72	72	71	72	73.8	77.2
17-Dec	71	68	69	73	75	76	76	76	78	78	77	73	70	67	73	74	76	78	78	79	78	77	76	78	74.7	78.5
18-Dec	78	78	78	79	79	80	80	80	80	79	78	76	76	76	79	80	81	83	82	82	83	84	79	83	79.8	83.8
19-Dec	83	81	80	81	81	82	84	84	84	83	82	80	79	77	77	78	79	80	79	78	79	79	79	79	80.2	84.2
20-Dec	79	81	82	82	81	81	84	86	86	84	77	65	62	56	62	69	81	84	85	82	83	83	83	83	78.4	86.1
21-Dec	83	81	78	79	81	80	79	79	79	78	77	75	73	69	67	78	78	78	79	78	80	77	79	80	77.7	82.7
22-Dec	79	80	79	79	79	79	78	80	81	80	81	80	79	79	77	78	79	81	82	81	81	80	79	79	79.5	81.7
23-Dec	79	79	79	80	82	84	83	83	83	82	80	80	75	77	74	78	80	82	80	81	80	82	83	81	80.3	83.6
24-Dec	81	83	83	82	82	81	82	82	83	83	81	76	75	72	78	77	78	79	78	76	78	78	79	77	79.3	83.3
25-Dec	79	80	78	80	79	77	76	83	85	83	81	83	81	75	80	82	88	89	91	89	86	88	88	88	82.9	90.6
26-Dec	91	88	88	89	88	89	87	87	88	87	85	85	85	83	83	83	83	82	82	79	77	77	78	77	84.3	91.2
27-Dec	77	76	79	79	80	83	86	85	83	83	80	76	67	66	70	67	80	85	86	88	89	91	89	91	80.8	91.3
28-Dec	91	90	91	90	87	88	91	91	89	85	84	83	79	77	75	77	79	78	77	77	76	77	75	75	82.7	91.4
29-Dec	77	77	78	77	77	77	77	77	78	78	73	71	71	69	69	72	76	79	80	81	80	81	80	80	76.5	81.3
30-Dec	80	81	79	79	78	78	78	77	78	77	74	67	60	61	58	65	74	78	80	80	80	80	81	81	75.1	81.3
31-Dec	81	80	81	77	77	73	66	68	70	76	70	67	63	56	59	61	65	68	78	81	84	74	73	78	71.8	83.6
	79.8	79.5	79.1	79.6	79.7	79.6	80.2	80.3	80.9	80.2	77.7	74.1	71.6	69.8	70.7	73.3	77.0	78.5	79.0	78.9	79.6	79.4	78.8	79.6	Diurnal Average	
	91.2	90.9	90.6	90.6	90.8	90.8	91.2	91.4	90.5	90.3	90.0	89.8	89.6	89.5	91.6	91.1	88.9	89.2	90.6	89.5	89.4	90.7	89.3	92.4	Diurnal Maximum	

PASZA
Peace Air Shed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Beaverlodge - December 2010



PASZA
Peace Air Shed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Beaverlodge - December 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	3	4	3	2	3	1	4	1	0	1	6	4	2	4	4	5	5	14	12	8	9	5	6	4	2.4	13.8
Dir	205	58	61	207	67	274	127	286	77	61	51	69	58	62	57	95	294	318	329	330	333	311	317	337	355	318
2 Spd	3	5	7	3	1	4	4	6	5	6	8	10	12	12	10	8	11	11	10	12	14	13	10	12	8.0	13.8
Dir	356	327	311	348	350	294	312	312	316	318	316	316	315	323	316	324	313	313	322	316	320	321	327	333	319	320
3 Spd	10	9	9	12	11	10	10	8	5	6	2	1	4	2	4	5	6	8	6	5	3	2	1	2	2.2	11.9
Dir	328	327	309	305	312	310	320	324	323	310	51	150	187	134	109	99	96	92	95	111	116	122	115	95	341	305
4 Spd	3	5	6	4	1	3	5	6	5	4	2	2	3	3	4	2	2	3	3	5	2	3	4	4	1.7	6.0
Dir	88	57	51	52	68	75	54	53	57	80	94	155	104	73	77	115	212	182	208	226	106	188	209	236	94	53
5 Spd	7	1	3	2	1	5	2	3	1	3	1	5	5	4	2	3	4	3	3	1	4	6	4	4	0.6	7.5
Dir	241	280	212	215	273	255	163	190	149	138	113	52	51	70	85	46	21	61	69	275	333	343	326	300	1	241
6 Spd	6	4	1	4	3	7	3	9	4	4	9	10	7	7	12	9	8	9	10	8	6	7	7	5	6.0	12.4
Dir	304	27	11	18	332	14	337	311	335	42	305	334	353	354	311	330	323	333	344	355	8	347	358	359	340	311
7 Spd	4	3	2	4	4	2	4	8	10	11	8	7	6	9	3	5	4	4	2	7	8	6	2	3	2.9	11.2
Dir	359	23	341	333	20	118	112	105	110	112	131	124	117	118	125	269	233	272	185	108	144	140	208	247	120	112
8 Spd	4	6	5	5	4	5	6	9	9	10	10	7	16	16	18	13	13	17	14	14	13	11	12	12	10.1	17.6
Dir	320	6	3	6	330	349	301	314	317	310	310	311	312	317	315	323	337	330	331	327	329	325	321	315	324	315
9 Spd	11	10	9	8	8	6	6	7	10	8	7	6	8	8	9	8	8	8	8	8	8	8	7	7	7.4	11.3
Dir	313	315	319	310	331	335	328	333	314	320	340	344	2	352	18	8	9	4	9	2	1	346	352	7	343	313
10 Spd	6	5	5	9	7	8	6	8	10	10	12	8	5	9	10	10	12	12	9	8	8	7	6	4	7.5	12.0
Dir	2	26	105	90	81	85	96	105	108	107	96	97	91	103	103	95	94	93	91	93	121	124	115	101	96	93
11 Spd	1	1	7	3	4	6	4	6	8	8	7	5	4	6	6	8	6	3	0	1	0	0	1	1	3.6	8.2
Dir	4	246	117	129	121	130	137	114	119	119	129	130	131	139	144	127	111	91	159	15	49	169	296	316	123	119
12 Spd	3	1	5	2	2	1	4	6	5	5	1	2	4	4	3	4	4	2	5	4	3	2	2	4	0.3	6.3
Dir	280	324	317	273	360	44	302	329	328	27	35	209	214	207	219	179	160	167	168	170	79	119	84	116	237	329
13 Spd	3	2	4	2	3	1	4	4	3	5	3	3	3	1	5	6	7	5	6	9	8	8	9	7	4.2	9.1
Dir	119	39	46	89	111	75	68	134	98	76	123	100	79	64	94	104	97	131	112	124	103	108	101	124	102	124
14 Spd	7	5	5	2	2	2	2	0	2	4	9	6	9	5	6	1	12	11	16	15	16	21	20	17	5.9	20.7
Dir	106	91	89	103	176	208	254	185	283	310	271	275	280	18	280	258	343	333	331	333	320	328	320	321	322	328
15 Spd	18	20	19	17	19	15	14	18	20	22	22	24	22	20	17	15	16	19	16	17	16	16	16	15	17.8	23.6
Dir	317	311	311	312	311	319	327	311	311	309	311	306	311	314	315	330	323	301	316	316	322	316	308	311	313	306
16 Spd	12	10	10	11	11	12	10	10	8	11	9	8	11	11	8	9	7	5	6	4	5	4	4	4	7.7	12.3
Dir	312	328	320	315	312	309	327	319	315	311	312	318	308	312	316	317	327	340	354	0	32	39	28	36	324	309
17 Spd	3	3	6	6	4	5	2	2	6	5	4	5	5	2	4	4	1	3	3	3	3	2	3	4	2.2	5.9
Dir	43	57	37	29	22	18	25	292	288	313	316	14	15	331	303	330	221	211	226	272	291	303	328	335	340	288
18 Spd	3	4	5	4	4	7	7	8	6	6	7	4	6	6	9	10	9	8	7	10	7	3	1	3	5.6	10.1
Dir	322	318	321	325	320	302	300	288	288	298	311	307	304	317	288	312	310	277	311	324	320	281	192	223	305	324
19 Spd	2	1	2	2	1	2	10	10	10	10	9	11	12	14	10	10	9	9	14	13	9	9	8	8	7.3	13.6
Dir	224	165	75	165	147	316	316	313	304	300	304	299	301	310	308	311	314	309	310	299	281	285	291	292	302	310
20 Spd	7	7	5	4	2	2	4	4	3	5	3	3	4	3	3	2	5	3	3	0	1	1	4	4	0.3	7.1
Dir	281	261	240	236	230	109	68	114	99	132	77	78	283	35	18	0	10	65	213	301	267	330	44	39	7	281
21 Spd	1	2	3	3	3	1	0	3	1	0	2	2	2	1	1	4	2	2	3	4	4	2	1	2	1.5	4.3
Dir	356	272	9	34	26	30	246	36	40	339	48	342	85	91	56	6	244	56	296	52	323	355	20	15	12	323
22 Spd	1	2	3	1	2	3	1	4	2	1	6	3	4	2	1	3	1	1	8	10	10	11	11	12	3.1	12.4
Dir	359	344	25	88	27	288	281	17	328	341	274	243	179	160	152	219	315	235	292	317	317	319	321	308	309	308

PASZA
Peace Air Shed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Beaverlodge - December 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
23 Spd	13	11	9	6	5	6	3	3	4	6	7	4	5	7	3	4	7	1	6	3	1	1	2	1	3.4	13.4
Dir	307	313	303	286	296	287	318	334	336	353	24	334	34	19	28	321	34	33	49	45	187	298	142	165	338	307
24 Spd	3	4	4	4	3	1	3	1	3	2	3	1	1	1	4	3	2	4	3	1	2	1	2	2	0.6	4.3
Dir	57	116	124	107	148	130	295	9	269	230	237	215	242	163	302	320	264	202	188	192	211	66	311	99	200	124
25 Spd	4	5	7	3	4	6	15	9	6	7	5	6	3	2	1	1	2	1	2	3	3	6	7	5	2.6	15.2
Dir	260	312	333	318	329	338	335	1	12	168	78	56	68	65	54	3	44	100	341	110	140	296	316	343	350	335
26 Spd	4	1	0	1	2	2	5	4	5	6	7	10	12	15	18	16	19	10	11	15	14	13	11	12	8.0	18.6
Dir	209	297	170	119	287	18	13	7	325	2	5	11	321	318	314	324	316	344	332	320	321	321	319	324	328	316
27 Spd	11	11	10	11	6	6	7	5	4	3	3	1	1	1	3	5	5	6	3	5	4	7	4	5	2.3	11.2
Dir	314	309	320	316	342	357	14	5	319	287	37	246	179	112	115	99	139	128	130	58	59	53	75	127	3	314
28 Spd	4	2	3	11	7	3	2	1	11	21	19	12	11	9	8	8	8	7	9	13	11	7	10	10	7.1	21.1
Dir	126	110	67	22	26	157	83	270	329	335	334	329	324	323	307	303	299	307	319	313	314	312	323	336	329	335
29 Spd	13	13	14	10	4	7	6	5	7	9	7	11	7	6	5	4	5	4	5	6	2	1	0	2	6.0	13.7
Dir	333	335	326	331	347	334	343	340	326	314	329	317	323	326	326	342	308	27	300	312	35	25	176	55	330	326
30 Spd	3	5	3	4	2	3	3	5	1	5	4	4	2	2	0	1	1	2	2	1	3	3	4	5	2.2	5.2
Dir	69	64	107	136	59	58	108	135	286	48	109	158	85	68	48	320	49	49	60	91	71	75	90	87	87	135
31 Spd	2	2	4	3	2	3	3	2	3	2	1	6	7	6	11	9	8	7	1	2	2	7	7	2	1.9	10.7
Dir	116	122	104	126	123	120	158	75	28	354	342	296	293	298	292	292	299	310	188	115	188	247	262	265	285	292
Spd	3.4	3.4	3.0	2.5	2.5	2.4	2.8	2.8	3.1	3.0	3.1	3.1	3.6	3.4	3.6	3.3	3.6	3.1	3.7	3.9	3.5	3.6	3.7	3.3	Diurnal Average	
Dir	319	337	342	338	342	336	342	341	330	337	338	331	322	338	324	335	335	332	331	334	335	328	327	331		
Spd	18.2	19.8	18.7	17.2	19.3	15.0	15.2	17.9	19.6	21.6	21.7	23.6	22.2	19.9	18.0	16.3	18.6	19.3	16.0	17.3	16.5	20.7	19.8	16.7	Diurnal Maximum	
Dir	317	311	311	312	311	319	335	311	311	309	311	306	311	314	314	324	316	301	331	316	320	328	320	321		

Maximum Speed Value: 24 km/h on Dec 15 12:00
Minimum Speed Value: 0 km/h on Dec 20 20:00
Maximum Daily Speed Average: 17.8 km/h on Dec 15
Minimum Daily Speed Average: 0.3 km/h on Dec 21
Maximum Diurnal Speed Average: 3.9 km/h at hour 20
Minimum Diurnal Speed Average: 2.4 km/h at hour 6

Monthly Average Velocity: 3.21 km/h 333.1 deg
Speed Percentiles: P_1 = 0.4 P_{10} = 1.4 Q_1 = 2.7 Median = 4.8 Q_3 = 8.3 P_{90} = 11.8 P_{99} = 19.2
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	45	46	1	0	0	0	92
NorthEast	70	16	0	0	0	0	86
East	64	34	4	0	0	0	102
SouthEast	47	23	0	0	0	0	70
South	33	1	0	0	0	0	34
SouthWest	38	3	0	0	0	0	41
West	29	23	0	0	0	0	52
NorthWest	57	122	76	12	0	0	267
Total	383	268	81	12	0	0	744

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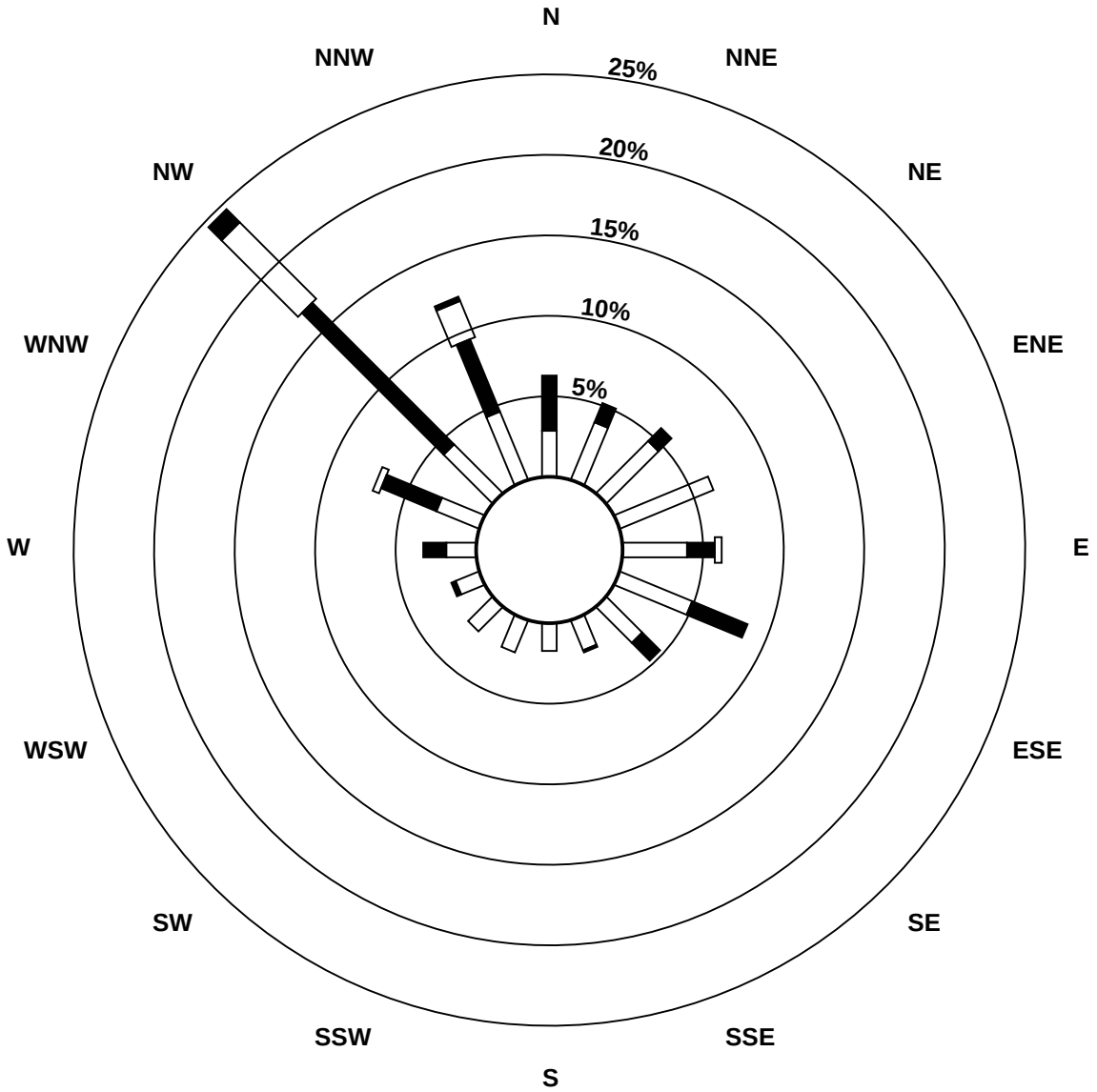
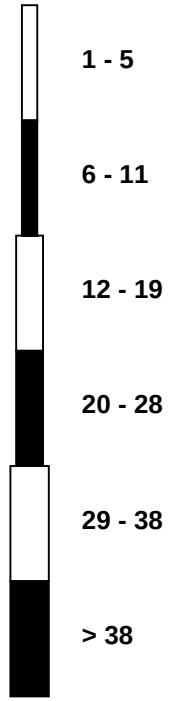
Wind Rose

Wind Speed (WS) (km/h)

Beaverlodge - December 2010



Wind Speed Classes (km/h)



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Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Beaverlodge - December 2010

Maximum Speed: 24 km/h on Dec 15 12:00

Maximum Daily Speed Average: 18.1 km/h on Dec 15

Minimum Speed: 1 km/h on Dec 29 23:00

Minimum Daily Speed Average: 3.1 km/h on Dec 24

Maximum Diurnal Speed Average: 7.3 km/h at hour 20

Minimum Diurnal Speed Average: 5.0 km/h at hour 5

Monthly Average Speed: 6.50 km/h

Percentiles: P_1 = 1.1 P_{10} = 2.4 Q_1 = 3.5 Median = 5.4 Q_3 = 8.5 P_{90} = 12.0 P_{99} = 19.3

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

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	4	5	4	3	3	4	6	3	4	2	6	4	2	4	4	6	7	14	12	9	9	6	6	5	5.4	13.9
2-Dec	5	6	7	3	2	4	4	6	5	6	8	11	12	12	11	8	11	11	10	12	14	13	10	12	8.4	13.8
3-Dec	10	9	9	12	11	10	10	8	5	6	2	2	4	3	4	5	6	8	6	5	4	2	2	3	6.1	12.0
4-Dec	4	5	6	4	2	3	5	6	5	4	3	2	4	3	4	2	2	3	4	6	3	4	5	4	3.9	6.3
5-Dec	9	4	4	6	3	5	4	3	3	4	3	5	5	4	2	4	7	4	3	2	5	6	5	5	4.5	9.2
6-Dec	6	6	3	4	6	9	6	9	5	4	10	10	8	8	13	9	8	9	10	8	7	7	7	5	7.4	12.6
7-Dec	4	3	3	4	5	2	5	8	10	11	9	8	6	9	4	5	4	5	4	7	8	6	4	3	5.7	11.3
8-Dec	6	6	6	5	5	7	7	9	9	11	10	8	16	16	18	13	13	17	14	14	13	11	12	12	10.7	17.7
9-Dec	11	10	9	8	8	6	6	7	10	8	7	7	8	8	9	8	8	8	9	8	8	8	7	7	8.1	11.3
10-Dec	6	5	6	9	7	8	6	8	10	10	12	8	5	9	10	10	12	12	9	8	8	7	6	4	8.2	12.1
11-Dec	2	2	7	4	4	6	4	6	8	8	7	5	4	6	6	8	7	4	2	1	2	1	1	2	4.4	8.3
12-Dec	4	2	6	3	3	2	4	7	6	5	2	2	4	4	3	4	4	3	5	4	4	3	3	5	3.8	6.6
13-Dec	3	4	5	4	4	2	5	5	4	5	3	3	3	3	6	7	7	5	6	9	8	8	9	8	5.2	9.2
14-Dec	7	6	6	4	3	3	4	3	5	5	12	8	11	8	10	5	12	11	16	15	17	21	20	17	9.5	20.7
15-Dec	18	20	19	17	19	15	15	18	20	22	22	24	22	20	17	15	16	19	16	17	16	16	16	15	18.1	23.7
16-Dec	12	10	10	11	11	12	10	10	8	11	9	8	12	11	8	9	7	5	6	4	5	4	4	4	8.5	12.4
17-Dec	3	3	6	6	4	5	2	2	6	5	4	5	5	2	4	4	4	3	3	3	3	2	3	4	3.9	6.1
18-Dec	4	4	5	4	4	7	7	8	6	6	7	5	7	6	9	10	9	8	7	10	8	4	1	3	6.1	10.2
19-Dec	3	2	2	2	1	2	10	10	10	10	9	11	12	14	10	10	9	9	14	13	9	9	8	8	8.1	13.7
20-Dec	8	7	5	4	3	2	4	5	4	6	4	4	6	3	5	3	6	3	3	1	2	3	4	4	4.0	7.5
21-Dec	3	4	4	3	5	2	2	3	3	3	4	6	4	2	2	5	4	4	4	5	6	3	2	3	3.6	6.1
22-Dec	4	5	4	2	3	5	4	5	5	3	6	4	5	3	2	3	2	3	9	10	10	11	11	13	5.4	12.5
23-Dec	13	11	9	6	5	6	3	3	4	6	7	6	5	7	4	7	7	5	6	4	3	3	3	1	5.6	13.4
24-Dec	3	5	4	4	3	2	3	3	4	3	3	2	3	2	4	3	2	4	4	2	2	2	3	3	3.1	4.6
25-Dec	5	6	7	5	5	6	16	9	7	7	6	6	3	2	2	2	3	3	5	4	3	6	7	7	5.6	16.1
26-Dec	4	3	3	1	2	3	6	5	6	6	7	10	13	15	18	16	19	10	11	15	14	13	11	12	9.3	18.7
27-Dec	11	11	10	11	6	7	8	5	4	4	3	2	1	1	3	5	5	6	4	5	5	7	5	5	5.5	11.3
28-Dec	4	3	3	11	8	5	4	3	12	21	19	12	11	10	8	8	8	7	9	13	12	7	10	11	9.0	21.2
29-Dec	13	13	14	10	4	7	6	6	7	9	7	11	7	6	5	4	5	4	5	6	2	2	1	2	6.5	13.8
30-Dec	4	5	3	4	2	3	4	6	3	6	5	5	2	2	1	2	2	2	2	1	3	3	4	5	3.3	5.6
31-Dec	2	3	4	3	2	3	3	3	4	3	4	6	7	7	11	9	8	7	2	2	2	8	7	3	4.7	10.8
	6.3	6.0	6.2	5.7	5.0	5.2	5.9	6.2	6.5	7.1	7.1	6.7	7.0	6.8	7.1	6.8	7.2	7.0	7.1	7.3	6.9	6.6	6.3	6.2	Diurnal Average	
	18.3	19.9	18.7	17.3	19.3	15.2	16.1	18.1	19.8	21.7	21.9	23.7	22.3	20.0	18.0	16.4	18.7	19.4	16.0	17.5	16.6	20.7	19.9	16.8	Diurnal Maximum	

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

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Peace Air Shed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Beaverlodge - December 2010

Maximum Value: 96.5 deg on Dec 13 06:00

Minimum Value: 3.0 deg on Dec 10 08:00

Percentiles: P_1 = 4.0 P_{10} = 6.3 Q_1 = 8.9 Median = 19.1 Q_3 = 45.5 P_{90} = 70.3 P_{99} = 87.5

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-Dec	51	31	29	65	42	87	42	80	87	78	10	14	43	14	20	10	52	10	17	33	13	38	13	47	87.2
2-Dec	57	38	39	43	79	9	19	25	10	8	7	7	8	5	12	17	5	7	5	5	4	5	8	9	79.4
3-Dec	9	8	11	7	7	10	12	12	16	9	43	38	15	40	29	12	8	9	6	8	27	28	50	21	50.4
4-Dec	18	14	10	33	69	18	24	11	18	20	50	38	13	19	28	40	61	27	53	58	53	33	46	21	69.5
5-Dec	70	74	63	85	85	62	57	22	70	55	86	15	34	21	32	56	69	16	24	68	38	26	54	39	85.7
6-Dec	25	61	82	49	64	35	63	36	44	43	36	20	35	35	12	16	6	10	8	9	10	17	15	17	82.1
7-Dec	18	25	50	16	24	66	25	13	13	6	19	10	8	6	57	15	23	47	49	32	12	13	79	7	78.7
8-Dec	42	25	24	22	16	37	22	9	11	8	6	11	5	8	6	10	8	7	6	8	9	8	7	7	42.1
9-Dec	5	6	6	8	10	10	9	7	11	8	13	12	15	11	5	11	10	7	10	9	10	6	12	11	15.1
10-Dec	17	22	21	9	7	8	9	3	15	9	5	8	24	13	6	9	8	4	5	11	7	7	9	48	48.1
11-Dec	76	84	12	30	27	49	18	11	8	9	6	17	15	11	9	8	14	30	76	62	73	88	64	65	88.0
12-Dec	49	43	33	77	46	77	57	17	21	10	67	34	12	32	37	37	29	38	14	27	27	46	38	28	77.0
13-Dec	38	78	31	70	33	96	30	21	28	22	34	30	34	95	27	30	25	30	22	10	13	16	12	22	96.5
14-Dec	8	24	28	73	48	43	81	95	80	32	70	65	48	68	54	81	9	6	5	6	6	5	6	7	95.5
15-Dec	7	4	6	6	5	9	9	8	7	4	7	5	6	5	8	8	9	6	9	7	6	6	9	7	9.0
16-Dec	9	11	11	7	6	8	10	8	7	7	7	9	9	12	9	9	8	19	12	17	10	8	22	17	22.0
17-Dec	12	19	7	6	10	5	12	23	13	4	14	12	8	45	12	28	88	17	12	21	9	20	9	14	87.7
18-Dec	9	10	9	9	12	6	8	16	14	9	12	20	10	12	9	11	13	8	17	5	10	56	72	63	72.3
19-Dec	57	64	39	30	75	57	3	4	4	6	7	7	5	7	6	6	6	8	7	8	5	5	5	5	74.9
20-Dec	19	8	8	7	18	34	8	24	31	34	33	42	73	55	47	52	45	42	52	83	60	66	16	57	83.5
21-Dec	73	57	43	30	64	74	92	32	85	78	78	73	73	61	75	46	75	76	51	23	45	54	77	62	91.7
22-Dec	73	76	69	77	73	61	83	45	61	79	14	41	18	37	69	49	76	67	27	8	7	9	7	9	82.6
23-Dec	6	8	8	9	9	14	25	22	16	18	6	48	8	19	58	52	21	94	9	35	78	96	48	88	95.6
24-Dec	41	30	17	17	33	53	32	87	50	37	50	71	70	82	30	22	50	25	22	83	68	80	56	51	87.4
25-Dec	48	25	22	61	52	32	32	29	40	34	39	10	37	43	89	60	56	69	64	49	35	30	15	48	89.2
26-Dec	47	85	79	79	74	48	34	39	29	11	13	6	27	9	5	7	5	16	8	8	7	6	10	6	84.9
27-Dec	8	5	5	5	15	11	14	23	22	47	15	68	54	69	23	18	20	22	47	18	40	17	46	22	69.5
28-Dec	18	36	18	7	39	43	75	80	35	6	4	12	10	9	7	7	8	11	7	6	7	13	10	10	79.6
29-Dec	5	5	7	6	22	6	9	10	5	5	17	4	11	9	10	21	56	23	13	25	33	61	82	16	81.8
30-Dec	16	10	29	23	70	22	14	22	75	24	32	17	34	39	83	68	65	55	56	68	11	19	13	13	83.0
31-Dec	39	30	22	18	20	19	36	53	76	60	90	27	11	9	4	4	14	8	68	23	30	6	6	71	89.5
	76.0	84.9	82.1	85.4	85.0	96.5	91.7	95.5	87.2	78.6	89.5	72.6	72.5	94.7	89.2	81.0	87.7	94.0	75.7	83.5	78.0	95.6	81.8	87.5	

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

PASZA
Peace Air Shed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Portable-Bonanza - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8.3 ppb on Dec 2 09:00 Maximum Daily Average: 3.7 ppb on Dec 18

Minimum Value: 0 ppb on Dec 1 07:00 Minimum Daily Average: 0.3 ppb on Dec 16
Maximum Diurnal Average: 1.5 ppb at hour 11 Minimum Diurnal Average: 0.8 ppb at hour 23
Monthly Average: 1.13 ppb Percentiles: $P_1 = 0.2$ $P_{10} = 0.3$ $Q_1 = 0.4$ Median = 0.8 $Q_3 = 1.3$ $P_{90} = 2.5$ $P_{99} = 6.0$

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
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-Dec	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	2	1	0.4	1.6
2-Dec	1	1	A	1	1	1	1	3	8	6	6	6	4	3	3	5	7	2	1	1	1	1	2	2	2.9	8.3
3-Dec	2	A	3	3	2	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.3	3.4
4-Dec	A	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0.4	0.6
5-Dec	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
6-Dec	0	0	0	0	0	1	0	0	1	0	1	1	1	1	1	1	1	0	0	0	0	A	0	0	0.5	1.4
7-Dec	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	A	1	1	0	0.7	1.4
8-Dec	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	0.5
9-Dec	0	0	0	0	0	1	0	1	0	1	0	3	0	0	0	0	0	0	A	0	0	2	1	2	0.7	2.6
10-Dec	2	2	2	2	2	2	2	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.9	2.2
11-Dec	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	A	1	1	0	0	0	1	1	0.6	1.1
12-Dec	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1	A	1	1	1	1	0	0	0	0	0.6	1.1
13-Dec	0	0	0	0	0	0	0	1	0	0	C	C	C	C	1	1	1	1	1	0	1	1	1	0	0.5	1.1
14-Dec	0	0	1	A	0	0	0	0	1	0	1	1	1	1	2	4	3	1	1	0	1	1	0	0	0.9	3.7
15-Dec	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	1	0	0	0	0.4	1.2
16-Dec	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
17-Dec	A	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	A	0.4	0.7
18-Dec	0	0	0	0	0	1	3	3	3	4	6	5	5	6	5	6	6	5	4	5	6	6	A	5	3.7	6.1
19-Dec	5	6	4	4	4	3	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	A	2	1	2.0	5.6
20-Dec	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	2	2	A	2	1	1	1.0	2.5
21-Dec	1	1	1	1	1	1	1	1	1	2	2	2	3	2	1	1	1	1	1	A	1	1	1	1	1.3	2.5
22-Dec	1	1	2	2	1	1	1	1	1	1	2	2	2	1	1	1	1	1	A	1	1	1	1	3	1.3	3.1
23-Dec	3	1	1	1	1	1	1	1	1	2	2	4	3	3	2	2	2	A	3	2	2	2	2	2	1.9	3.8
24-Dec	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1.1	2.1
25-Dec	1	1	1	1	1	3	3	2	2	2	2	2	2	2	2	A	2	1	1	1	1	1	1	1	1.5	2.9
26-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	2	1	1	0	1	0	0	1	0.8	1.9
27-Dec	1	1	3	4	3	2	5	7	6	6	7	5	3	A	2	2	2	2	1	1	1	1	1	1	3.0	7.5
28-Dec	1	1	0	0	1	1	3	3	2	3	2	2	A	2	1	1	1	1	1	2	2	2	1	2	1.4	3.2
29-Dec	3	3	3	3	3	3	2	1	1	1	1	A	1	2	2	1	1	1	1	1	1	1	1	1	1.7	3.2
30-Dec	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
31-Dec	1	1	1	1	1	1	1	1	0	A	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0.7	1.2
	1.1	1.0	1.0	1.1	1.1	1.1	1.2	1.3	1.3	1.3	1.5	1.5	1.2	1.2	1.1	1.2	1.3	0.9	0.9	0.9	0.9	1.0	0.8	1.0	Diurnal Average	
	5.0	5.6	4.5	4.1	3.8	3.2	5.4	7.4	8.3	6.4	7.5	6.2	5.2	5.6	5.3	5.7	6.6	4.6	4.4	5.1	6.1	5.8	2.2	5.0	Diurnal Maximum	

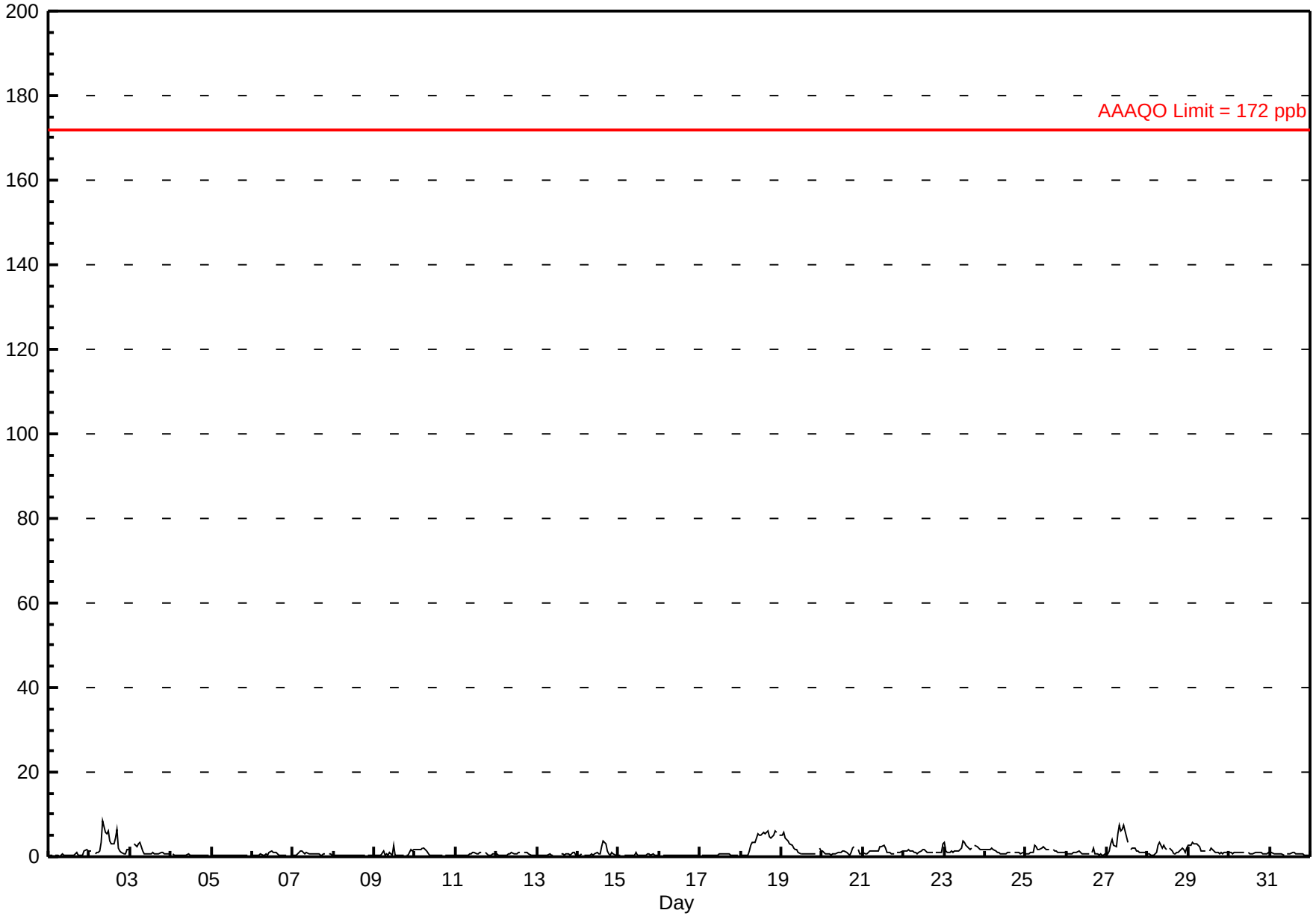
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

PASZA
Peace Air Shed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Portable-Bonanza - December 2010



PASZA
Peace Air Shed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Portable-Bonanza - December 2010

Maximum Value: 12.2 ppb on Dec 9 12:00

Maximum Daily Average: 4.3 ppb on Dec 18

Minimum Value: 0 ppb on Dec 1 05:00

Minimum Daily Average: 0.5 ppb on Dec 5

Maximum Diurnal Average: 2.3 ppb at hour 12

Minimum Diurnal Average: 1.2 ppb at hour 23

Monthly Average: 1.61 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.5$ $Q_1 = 0.8$ Median = 1.1 $Q_3 = 1.8$ $P_{90} = 3.4$ $P_{99} = 7.6$

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
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-Dec	1	1	1	A	0	0	0	0	1	1	0	0	0	1	0	0	4	1	1	1	1	1	2	2	0.9	4.3
2-Dec	1	1	A	1	2	1	2	8	9	8	6	8	4	3	4	6	7	6	2	2	1	1	2	2	3.9	9.3
3-Dec	2	A	4	4	3	4	5	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.9	4.7
4-Dec	A	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	A	0.7	0.9
5-Dec	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	1	1	1	0	1	A	0	0.5	0.9
6-Dec	1	1	1	1	1	1	1	1	1	1	3	2	1	2	2	1	1	1	1	1	1	A	1	1	1.1	2.8
7-Dec	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.0	1.7
8-Dec	0	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	0	0	1	A	0	0	0	1	0.6	1.3
9-Dec	1	0	1	1	1	3	1	2	1	4	1	12	1	1	0	0	0	1	A	1	1	2	2	2	1.7	12.2
10-Dec	2	2	2	2	2	2	2	2	1	1	1	0	1	1	1	1	0	A	0	1	1	1	0	1	1.2	2.3
11-Dec	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.9	1.4
12-Dec	1	1	0	1	1	1	1	1	1	1	1	1	1	2	1	A	1	1	1	1	1	1	1	1	1.1	1.9
13-Dec	1	0	0	1	1	1	1	1	1	0	C	C	C	C	1	1	1	1	1	1	1	1	1	1	0.9	1.4
14-Dec	1	1	1	A	1	1	1	1	1	1	1	1	1	1	4	4	5	2	1	1	1	1	1	1	1.4	4.5
15-Dec	1	0	A	0	0	0	0	0	0	1	4	1	1	1	1	1	1	1	1	1	3	1	0	1	0.9	4.3
16-Dec	1	A	1	1	1	1	0	0	0	0	0	0	0	1	0	1	0	1	0	1	0	0	1	1	0.6	1.3
17-Dec	A	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.7	1.1
18-Dec	1	1	1	1	1	3	4	4	4	6	6	6	6	6	6	6	7	5	5	6	6	6	A	5	4.3	6.7
19-Dec	6	7	5	4	4	4	3	3	2	2	1	1	1	1	1	1	1	1	1	1	1	A	3	2	2.5	7.3
20-Dec	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	2	3	4	A	2	1	1	1.4	3.5
21-Dec	2	1	1	1	2	2	2	2	2	2	3	3	4	3	2	1	1	1	1	A	1	1	2	2	1.9	4.3
22-Dec	2	2	2	2	2	2	2	1	1	1	2	2	2	2	2	1	1	1	A	1	1	1	1	5	1.8	5.4
23-Dec	5	2	1	1	2	1	1	1	2	2	3	4	4	3	2	3	2	A	3	3	2	2	2	2	2.4	4.9
24-Dec	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	2	A	1	1	1	1	1	1	1	1.5	2.5
25-Dec	1	1	1	1	2	5	4	2	2	3	3	3	2	2	2	A	2	2	1	1	1	2	1	2	2.0	4.8
26-Dec	1	1	1	1	1	1	2	2	2	1	1	1	1	1	A	2	3	1	1	1	1	1	1	1	1.3	2.9
27-Dec	1	2	5	6	4	4	9	9	7	8	8	7	4	A	2	3	2	2	1	1	1	1	1	1	4.0	9.4
28-Dec	1	1	1	1	1	2	4	4	2	3	2	2	A	2	2	1	1	1	1	2	3	2	1	2	2.0	4.4
29-Dec	3	3	4	4	4	4	3	2	2	1	1	A	2	2	2	2	1	1	1	1	1	1	1	1	2.2	3.9
30-Dec	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	2	2	1	1	1	1	1	1.3	2.2
31-Dec	1	1	1	1	1	1	1	1	1	A	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1.0	1.8
	1.5	1.3	1.4	1.5	1.5	1.7	1.9	1.9	1.8	1.9	2.1	2.3	1.6	1.6	1.6	1.6	1.8	1.4	1.3	1.4	1.3	1.3	1.2	1.5	Diurnal Average	
	5.8	7.3	5.0	6.4	4.3	4.8	9.4	9.4	9.3	7.9	8.4	12.2	5.7	6.3	5.8	6.4	7.3	5.8	4.8	5.8	6.3	6.3	3.3	5.4	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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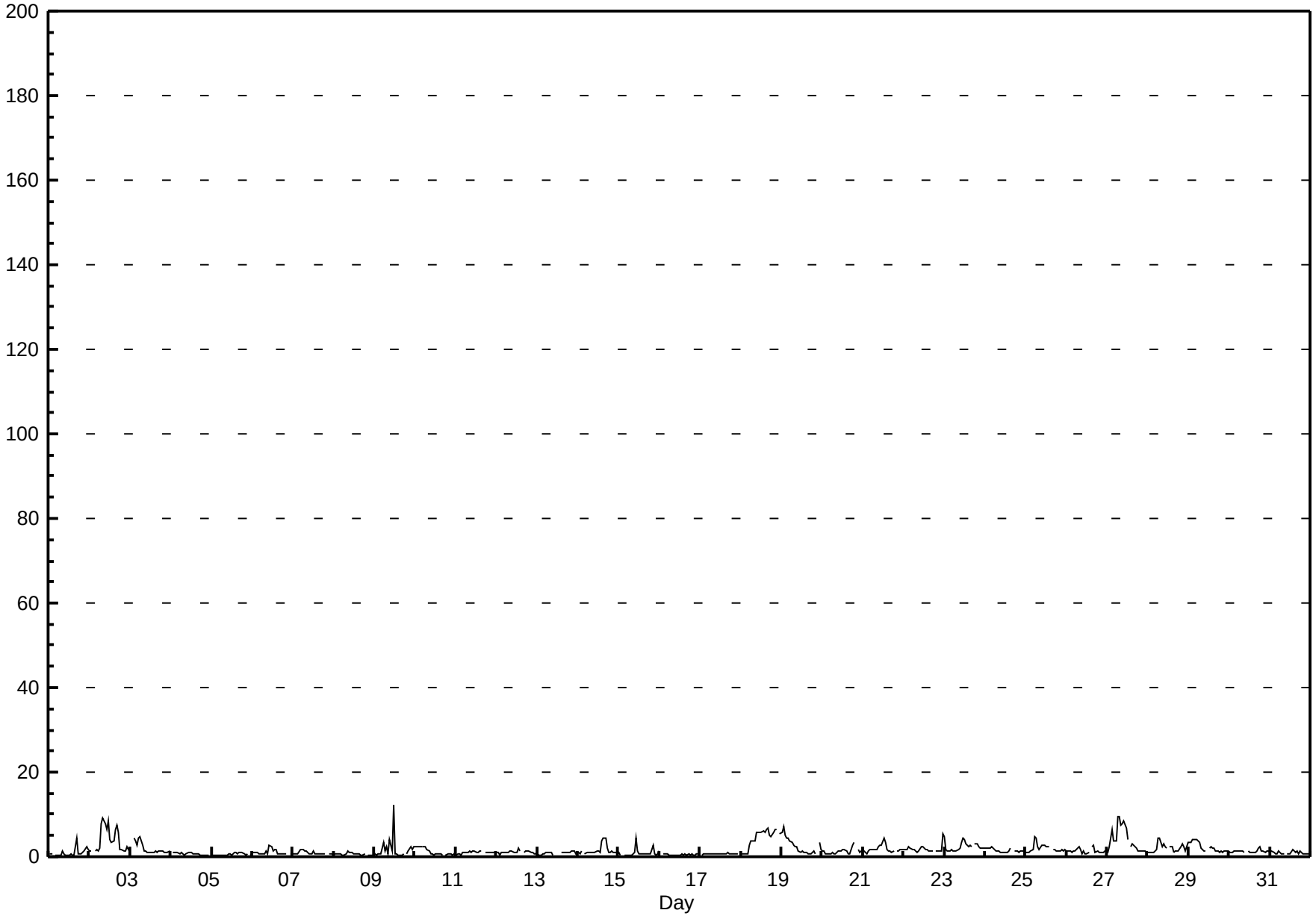
Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Portable-Bonanza - December 2010



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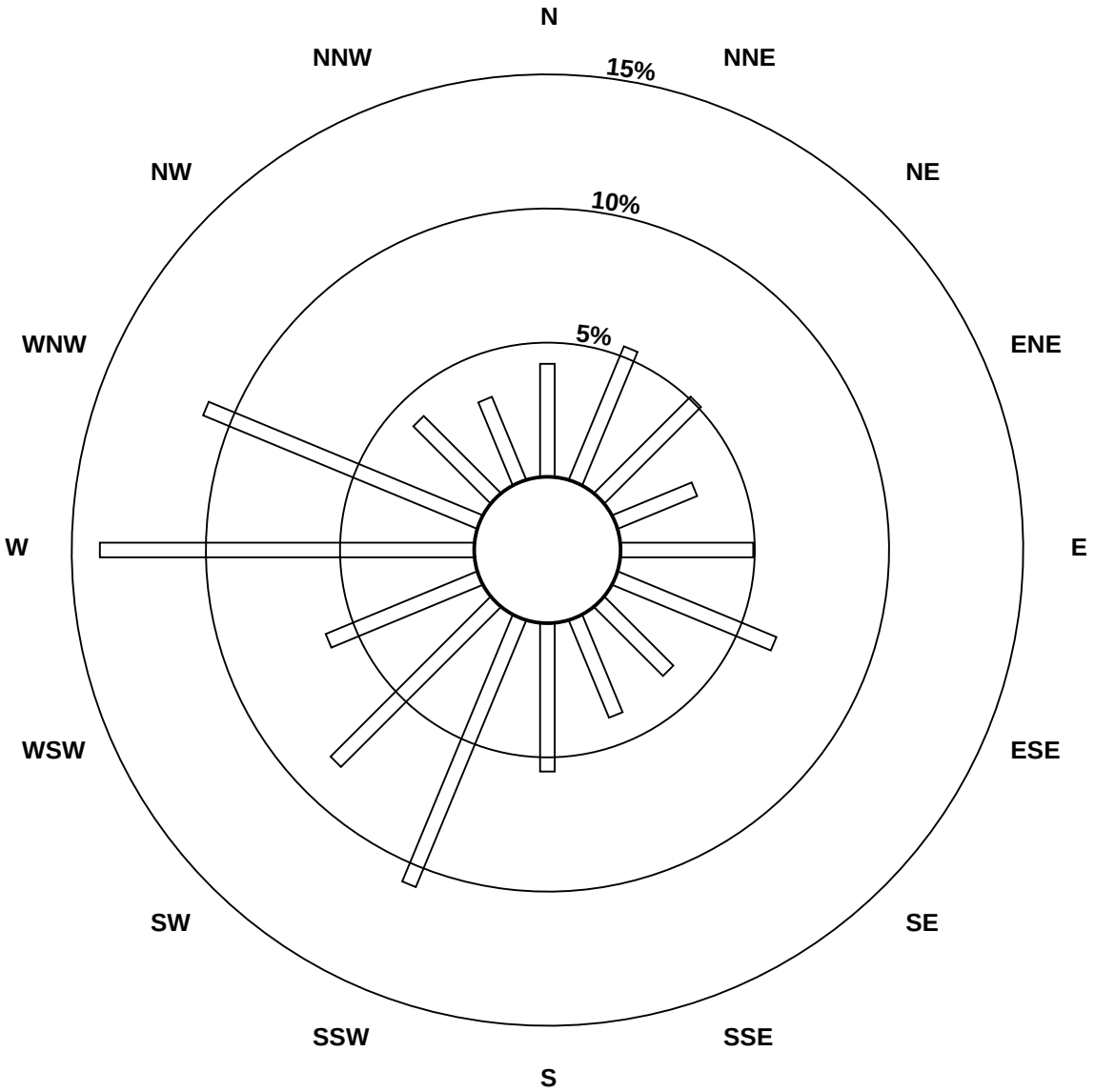
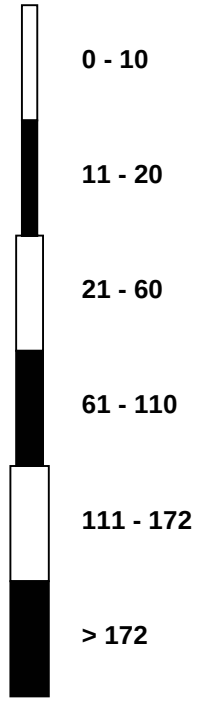
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Portable-Bonanza - December 2010



Pollutant Classes (ppb)



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Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Portable-Bonanza - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.4 ppb on Dec 18 21:00 Maximum Daily Average: 0.9 ppb on Dec 18

Minimum Value: 0 ppb on Dec 21 03:00 Minimum Daily Average: 0.4 ppb on Dec 11
Maximum Diurnal Average: 0.6 ppb at hour 9 Minimum Diurnal Average: 0.6 ppb at hour 18
Monthly Average: 0.61 ppb Percentiles: P_1 = 0.4 P_{10} = 0.4 Q_1 = 0.5 Median = 0.6 Q_3 = 0.7 P_{90} = 0.8 P_{99} = 1.2

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
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-Dec	0	1	0	A	0	0	0	1	1	1	1	1	0	0	0	1	1	1	1	0	0	1	1	1	0.6	0.8
2-Dec	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	0.7	1.2
3-Dec	1	A	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0.6	0.7
4-Dec	A	1	0	0	0	1	1	1	1	0	0	1	1	1	1	0	0	0	1	0	0	0	0	A	0.5	0.5
5-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	A	1	0.4	0.6
6-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	A	1	1	0.6	0.8
7-Dec	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	0.7
8-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	A	1	0	0	0	0.5	0.6
9-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	1	0.5	0.7
10-Dec	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.5	0.9
11-Dec	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	0.5
12-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	1	1	1	1	0.5	0.9
13-Dec	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	C	C	C	C	1	1	1	1	1	0.6	0.7
14-Dec	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	1.2
15-Dec	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
16-Dec	0	A	0	0	0	0	0	0	1	1	1	1	0	0	0	0	1	0	0	0	1	1	0	1	0.5	0.6
17-Dec	A	1	1	1	1	1	1	1	0	0	0	1	1	1	0	1	0	0	0	1	0	0	0	A	0.5	0.6
18-Dec	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.9	1.4
19-Dec	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	A	1	1	0.7	1.2
20-Dec	1	1	1	0	1	1	0	0	1	1	1	0	0	0	1	1	1	1	1	1	A	1	1	1	0.5	0.6
21-Dec	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	A	1	1	1	1	0.6	0.9
22-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.6	0.8
23-Dec	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
24-Dec	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
25-Dec	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
26-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.7	0.8
27-Dec	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	1.1
28-Dec	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
29-Dec	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8
30-Dec	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	1.1
31-Dec	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8
	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	
	1.2	1.1	1.1	1.0	1.0	1.0	0.9	0.9	1.2	0.9	1.2	1.1	1.3	1.3	1.1	1.0	0.9	0.8	1.0	1.2	1.4	1.4	0.8	1.3	Diurnal Maximum	

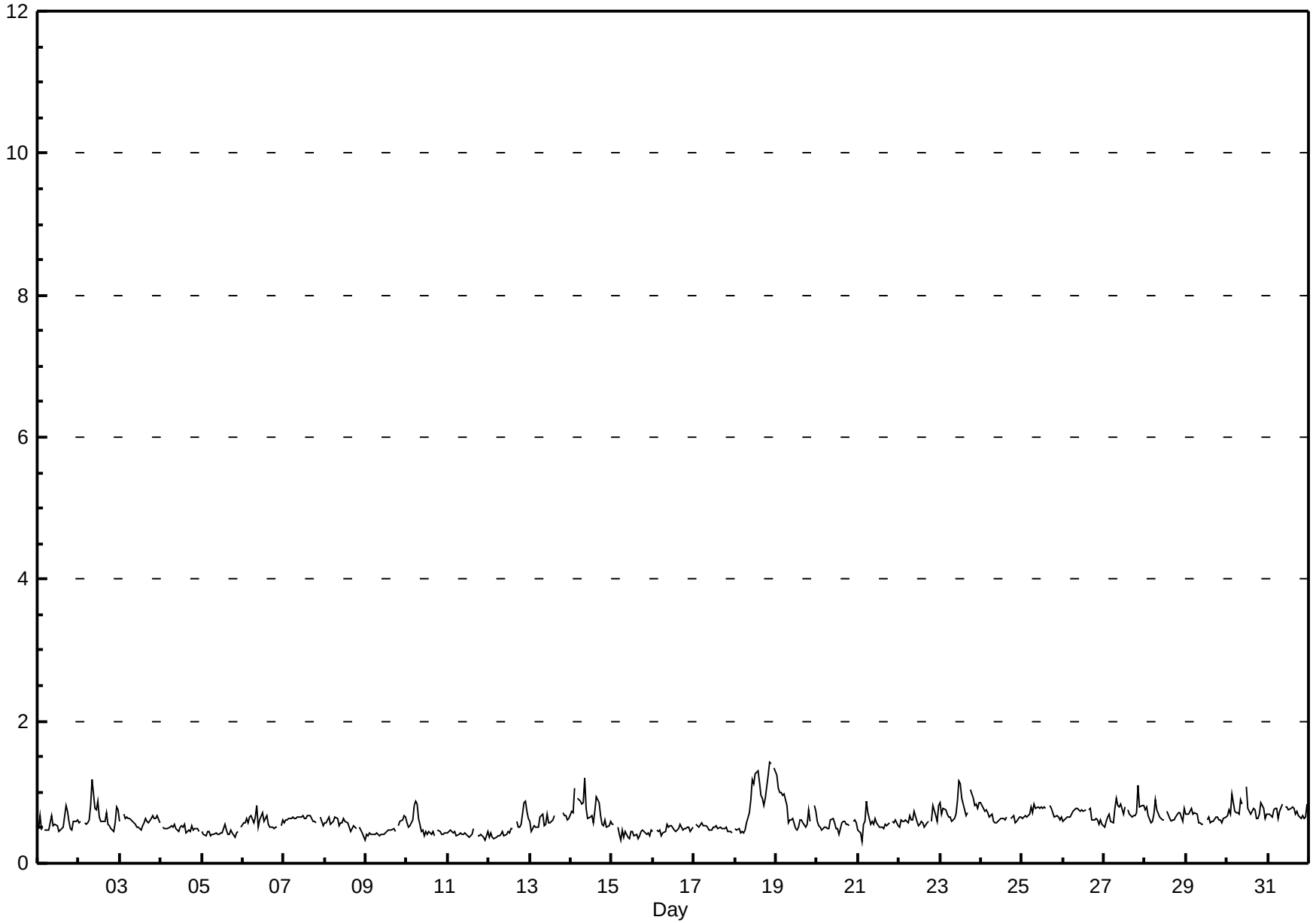
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

PASZA
Peace Air Shed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Portable-Bonanza - December 2010



PASZA
Peace Air Shed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Portable-Bonanza - December 2010

Maximum Value: 2.2 ppb on Dec 19 06:00

Maximum Daily Average: 1.2 ppb on Dec 18

Minimum Value: 1 ppb on Dec 5 06:00

Minimum Daily Average: 0.8 ppb on Dec 5

Maximum Diurnal Average: 1.1 ppb at hour 24

Minimum Diurnal Average: 0.9 ppb at hour 4

Monthly Average: 0.98 ppb

Percentiles: $P_1 = 0.6$ $P_{10} = 0.7$ $Q_1 = 0.8$ Median = 0.9 $Q_3 = 1.1$ $P_{90} = 1.3$ $P_{99} = 1.7$

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
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-Dec	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.4
2-Dec	1	1	A	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.5
3-Dec	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
4-Dec	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	1.1
5-Dec	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
6-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1.0	1.4
7-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.0	1.1
8-Dec	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
9-Dec	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	1.4
10-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.9	1.3
11-Dec	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	1.3
12-Dec	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	1.3
13-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	C	C	C	C	1	1	1	1	1	1.0	1.2
14-Dec	1	1	2	A	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	1.8
15-Dec	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
16-Dec	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
17-Dec	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.9	1.4
18-Dec	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1	1	1	2	2	2	A	2	1.2	1.8
19-Dec	2	2	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1.1	2.2
20-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.9	1.2
21-Dec	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
22-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	2	1	1	1	1.0	1.7
23-Dec	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	A	1	1	1	1	1	1	1.1	1.6
24-Dec	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1.0	1.5
25-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	2	1	1.1	1.7
26-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1.0	1.5
27-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	2	1	1	1	1.1	2.0
28-Dec	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1.1	1.4
29-Dec	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.3
30-Dec	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.6
31-Dec	1	1	1	1	1	1	1	1	1	A	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1.1	1.5
	1.0	1.0	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	0.9	1.0	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	1.0	1.0	1.1	1.1	Diurnal Average	
	1.6	1.5	1.6	1.4	1.3	2.2	1.3	1.4	1.8	1.5	1.5	1.6	1.7	1.7	1.8	1.4	1.4	1.4	1.4	1.6	2.0	1.7	1.7	1.7	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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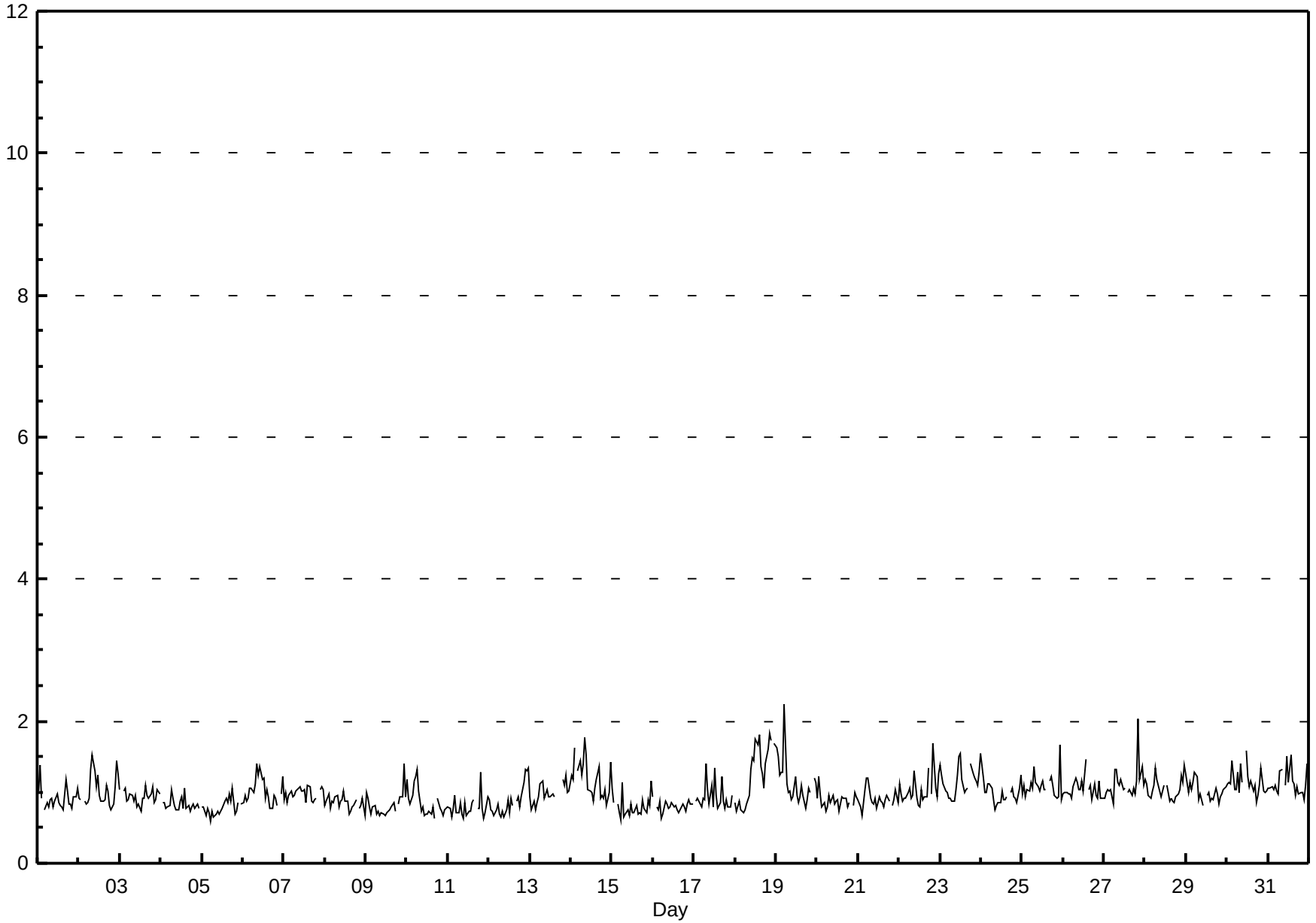
Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Portable-Bonanza - December 2010



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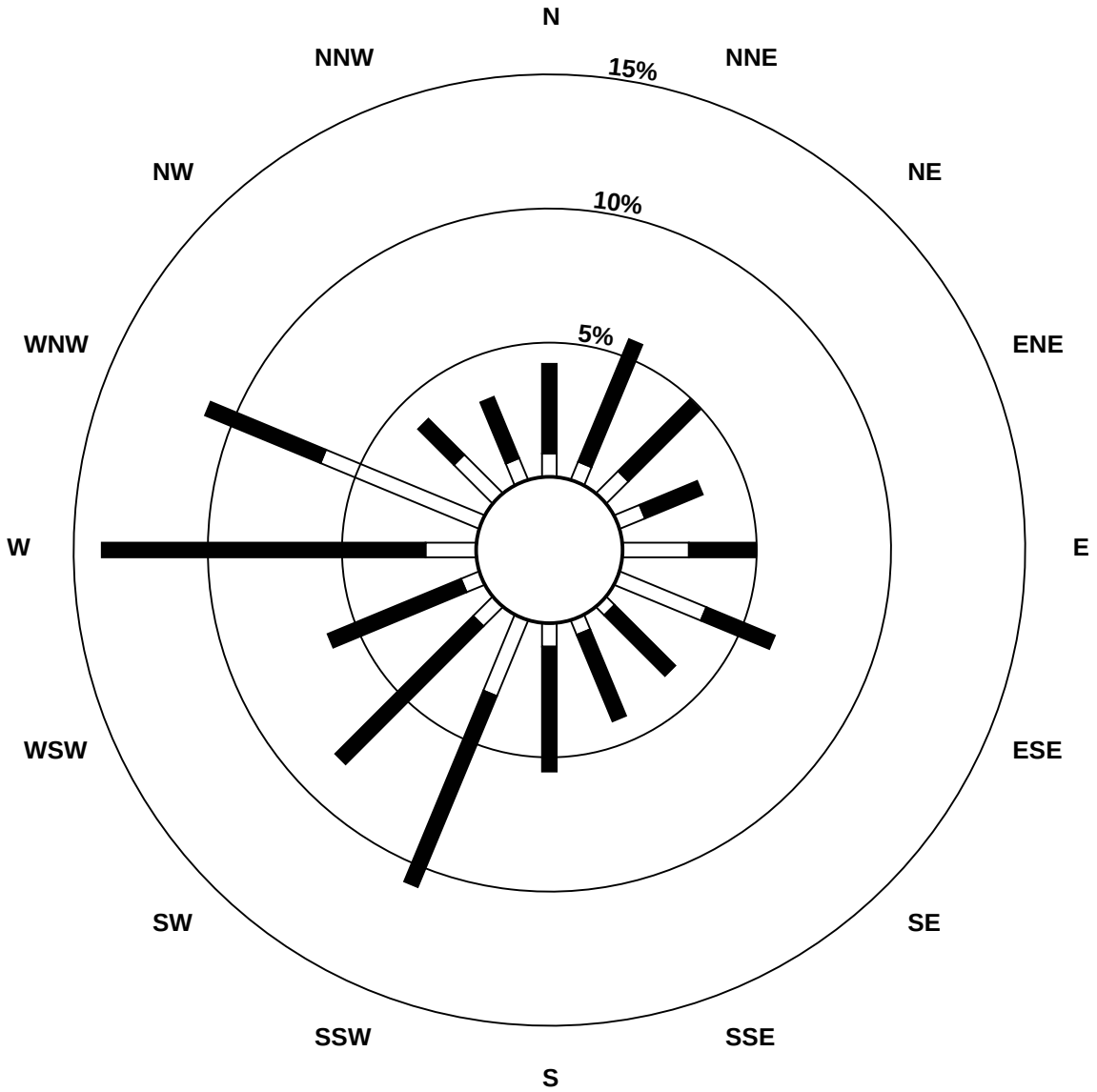
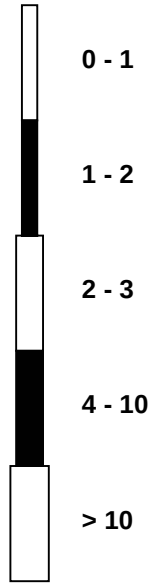
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Portable-Bonanza - December 2010



Pollutant Classes (ppb)



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Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Portable-Bonanza - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 22.1 ppb on Dec 6 09:00 Maximum Daily Average: 12.8 ppb on Dec 30

Minimum Value: 0 ppb on Dec 15 15:00 Minimum Daily Average: 1.1 ppb on Dec 15
Maximum Diurnal Average: 7.6 ppb at hour 8 Minimum Diurnal Average: 4.0 ppb at hour 13
Monthly Average: 5.95 ppb Percentiles: P_1 = 0.7 P_{10} = 1.6 Q_1 = 2.7 Median = 4.8 Q_3 = 8.7 P_{90} = 12.0 P_{99} = 17.4

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	38
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-Dec	5	4	2	A	8	8	8	5	4	2	3	2	1	1	2	2	2	3	2	1	3	5	5	5	3.6	8.0
2-Dec	5	5	A	10	8	7	5	6	6	5	4	4	4	4	3	4	6	4	4	3	3	3	4	4	4.8	10.0
3-Dec	4	A	4	4	3	2	4	3	2	2	2	3	2	3	3	10	7	10	8	9	9	9	7	3	4.9	10.0
4-Dec	A	2	2	3	2	2	3	15	6	6	4	2	2	2	3	3	3	4	3	3	3	1	1	A	3.4	15.2
5-Dec	2	1	1	1	1	1	2	2	3	3	3	2	2	4	5	5	11	9	14	9	11	11	A	12	5.0	13.8
6-Dec	13	14	17	18	17	16	20	18	22	19	9	8	8	8	5	3	2	2	3	3	2	A	2	1	9.9	22.1
7-Dec	1	2	2	2	3	3	11	6	10	6	5	4	4	4	9	14	4	3	4	3	A	5	4	3	4.8	13.8
8-Dec	3	4	4	5	4	3	4	3	2	2	2	1	1	1	1	1	2	2	2	A	2	1	1	1	2.3	4.8
9-Dec	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	3	A	3	3	4	4	5	1.7	4.7
10-Dec	4	4	4	3	4	5	6	5	3	3	3	2	2	3	5	6	3	A	3	2	2	3	3	2	3.5	6.2
11-Dec	3	3	3	2	3	3	3	3	3	4	3	4	3	3	4	5	A	5	6	5	5	6	5	6	3.9	5.9
12-Dec	5	6	5	6	5	5	6	8	11	7	4	4	4	7	7	A	8	9	10	9	6	6	6	6	6.6	11.4
13-Dec	8	8	10	11	10	12	14	19	14	12	C	C	C	C	C	C	15	15	15	13	9	7	7	9	11.6	18.6
14-Dec	10	12	12	A	12	11	13	13	16	12	10	10	9	10	10	11	11	6	3	2	2	2	2	2	8.8	16.1
15-Dec	2	2	A	2	2	2	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1.1	2.0
16-Dec	1	A	1	1	1	2	1	2	2	2	2	1	1	2	1	1	2	2	2	3	2	5	2	1	1.7	5.4
17-Dec	A	2	4	3	3	3	6	10	7	4	5	4	4	3	3	4	4	5	3	5	4	4	5	A	4.3	9.6
18-Dec	4	4	2	2	3	4	5	5	7	8	6	5	5	5	6	7	8	8	8	10	9	10	A	9	6.1	10.2
19-Dec	11	10	9	9	8	7	7	6	4	4	2	2	1	2	2	2	2	2	2	2	3	A	4	4	4.5	10.9
20-Dec	5	4	3	3	4	11	10	12	8	9	7	5	7	6	7	11	14	10	10	9	A	10	8	9	8.0	14.5
21-Dec	9	9	10	11	12	13	12	10	8	9	9	7	7	6	6	8	12	14	14	A	14	13	12	12	10.2	13.9
22-Dec	14	15	16	15	12	10	10	14	11	9	12	10	7	7	8	7	9	10	A	9	9	8	8	10	10.4	16.4
23-Dec	10	5	4	4	3	3	3	3	3	4	10	5	5	4	4	3	5	A	10	9	7	6	6	8	5.3	9.9
24-Dec	7	7	6	6	6	6	6	5	6	5	5	4	4	4	4	5	A	7	7	9	8	9	9	7	6.2	9.0
25-Dec	8	8	8	7	9	13	13	13	13	14	11	9	7	8	9	A	12	11	10	9	9	9	9	9	10.0	13.8
26-Dec	6	6	6	6	8	10	10	8	3	3	3	2	2	2	A	2	3	3	2	2	2	2	3	2	4.1	9.7
27-Dec	2	3	3	4	4	6	5	4	5	5	5	3	2	A	4	6	6	9	6	7	9	8	10	9	5.3	9.6
28-Dec	7	7	6	6	8	7	6	5	3	4	2	2	A	2	2	1	3	4	3	3	3	4	3	3	4.0	8.0
29-Dec	4	4	4	4	5	5	5	4	5	4	4	A	4	4	5	5	6	8	12	9	7	9	9	11	6.0	12.3
30-Dec	11	15	12	12	12	11	13	11	14	13	A	9	8	9	10	13	17	15	13	16	19	16	14	14	12.8	19.1
31-Dec	15	13	14	16	15	16	15	15	13	A	10	8	10	10	12	9	11	7	4	5	6	6	6	8	10.7	16.2
	6.2	6.2	6.0	6.1	6.4	6.8	7.3	7.6	7.0	6.0	5.1	4.2	4.0	4.3	4.8	5.4	6.6	6.4	6.2	5.9	6.0	6.3	5.6	6.2	Diurnal Average	
	15.4	15.3	16.9	17.6	16.6	16.1	19.9	18.6	22.1	19.2	12.1	10.0	9.5	10.0	11.7	13.8	17.2	15.0	15.1	16.1	19.1	15.5	14.4	14.3	Diurnal Maximum	

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

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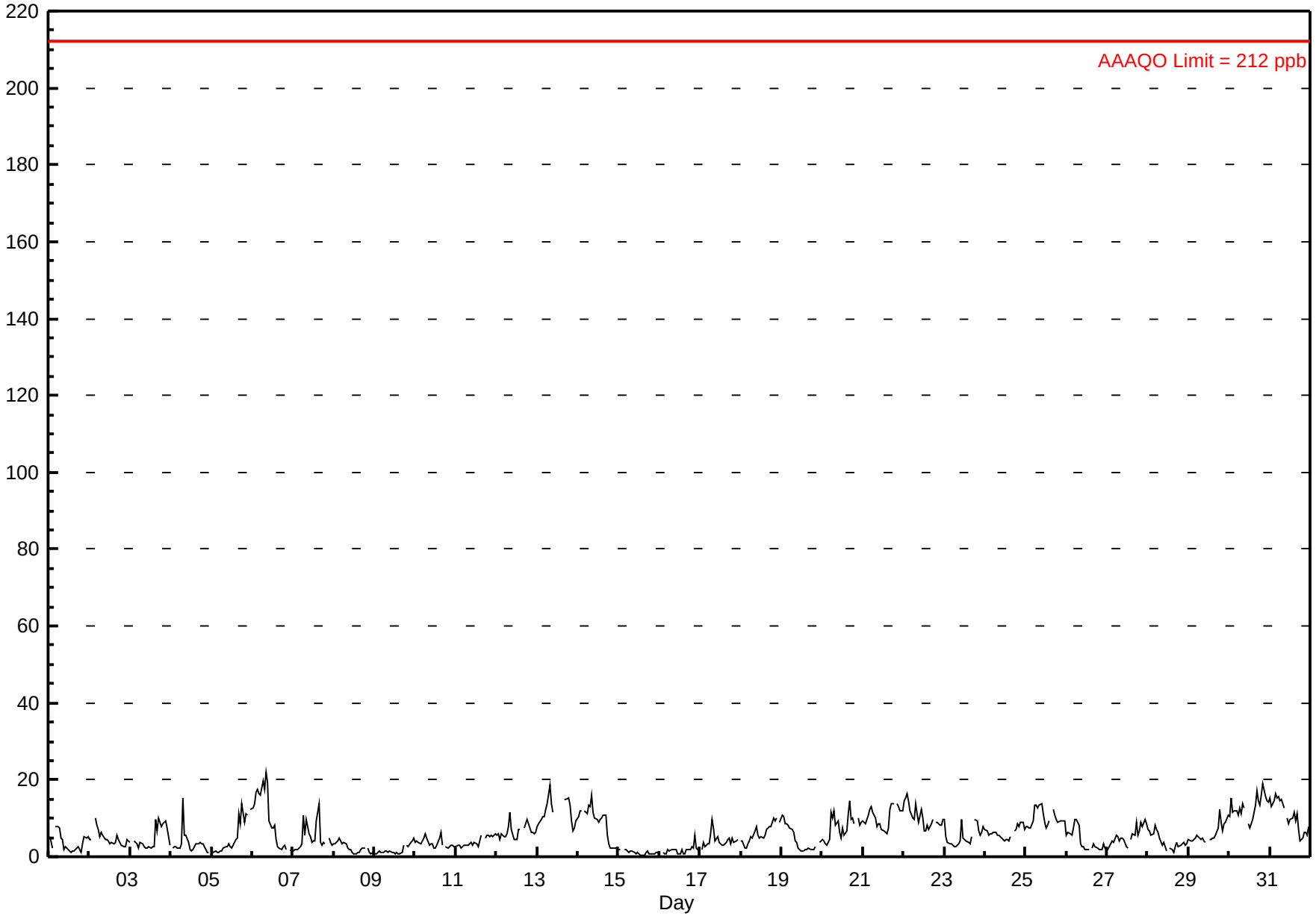
Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Portable-Bonanza - December 2010



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Peace Air Shed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Portable-Bonanza - December 2010

Maximum Value: 80.5 ppb on Dec 23 11:00

Maximum Daily Average: 18.4 ppb on Dec 31

Minimum Value: 1 ppb on Dec 15 15:00

Minimum Daily Average: 1.9 ppb on Dec 15

Maximum Diurnal Average: 13.3 ppb at hour 7

Minimum Diurnal Average: 6.6 ppb at hour 13

Monthly Average: 9.65 ppb

Percentiles: P_1 = 1.1 P_{10} = 2.4 Q_1 = 4.2 Median = 7.8 Q_3 = 13.5 P_{90} = 18.2 P_{99} = 34.0

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	38
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-Dec	7	5	3	A	11	11	13	14	6	2	7	5	2	2	2	2	5	4	3	2	7	6	6	7	5.8	13.6
2-Dec	5	5	A	12	10	9	12	7	7	6	6	5	5	4	4	5	7	6	5	10	3	4	5	5	6.4	12.1
3-Dec	4	A	4	4	13	7	12	10	4	3	5	5	3	7	5	46	9	21	13	10	10	13	13	5	9.9	46.4
4-Dec	A	3	3	3	3	3	12	31	16	10	7	4	3	9	4	6	4	9	6	10	13	2	2	A	7.5	30.6
5-Dec	2	2	4	2	2	8	5	6	6	5	9	5	3	21	9	13	29	26	36	17	14	14	A	14	11.0	36.3
6-Dec	15	20	19	26	20	20	29	25	55	28	12	13	12	14	10	4	4	2	7	5	3	A	2	1	15.1	55.5
7-Dec	2	2	2	2	3	8	20	17	21	17	10	5	7	8	29	35	8	4	5	5	A	7	5	3	9.9	35.0
8-Dec	4	4	5	8	6	4	7	5	5	4	3	2	1	1	1	2	3	4	4	A	3	1	1	3	3.6	7.8
9-Dec	1	1	2	2	3	2	3	2	2	2	3	2	1	3	1	1	2	16	A	6	3	5	10	14	3.8	15.7
10-Dec	6	6	5	4	5	7	17	11	6	10	7	4	6	13	16	28	7	A	4	4	4	4	3	3	7.8	28.2
11-Dec	3	3	4	3	3	5	5	6	5	6	5	14	7	5	18	17	A	6	9	8	7	9	7	9	7.1	18.3
12-Dec	8	10	6	8	7	7	14	11	15	13	5	6	12	32	12	A	12	15	12	18	7	9	8	9	11.1	32.3
13-Dec	10	11	11	12	12	21	25	28	21	15	C	C	C	C	C	C	17	18	19	15	15	12	10	13	15.8	28.0
14-Dec	13	17	18	A	21	15	21	26	22	20	15	12	12	18	12	13	14	7	5	4	3	4	3	2	13.0	26.2
15-Dec	2	2	A	3	3	2	2	2	3	2	1	1	1	1	1	1	2	3	2	2	1	2	2	2	1.9	3.2
16-Dec	2	A	2	1	2	3	3	4	3	3	3	2	2	14	1	1	6	3	4	6	4	24	6	3	4.4	24.1
17-Dec	A	3	6	4	6	5	13	34	18	6	14	7	6	5	3	8	10	10	4	12	5	6	6	A	8.7	34.3
18-Dec	8	9	3	3	6	7	8	5	8	9	7	5	6	6	7	8	8	9	9	15	14	11	A	10	7.8	14.8
19-Dec	15	13	11	9	10	10	13	8	6	6	4	2	2	6	4	2	3	4	2	6	4	A	4	5	6.4	15.5
20-Dec	5	5	4	5	18	19	23	20	14	13	11	8	18	9	11	21	29	16	14	10	A	13	10	11	13.3	28.6
21-Dec	11	11	14	16	13	25	19	14	10	17	10	9	13	15	10	14	23	17	18	A	17	16	15	14	14.8	25.2
22-Dec	19	17	18	18	15	12	11	21	17	10	16	13	8	8	14	9	10	15	A	10	11	9	9	14	13.2	21.4
23-Dec	11	9	7	4	4	3	3	3	6	16	81	7	6	11	16	4	8	A	18	16	10	8	8	11	11.7	80.5
24-Dec	8	8	6	7	7	7	15	8	14	8	9	8	8	7	6	8	A	8	12	14	11	14	13	9	9.4	15.0
25-Dec	9	9	9	8	14	16	16	14	17	16	14	13	9	9	15	A	14	13	11	10	11	11	12	14	12.3	16.7
26-Dec	7	7	7	8	14	14	14	13	5	4	4	3	3	2	A	3	4	3	3	3	3	2	6	3	5.8	13.9
27-Dec	2	3	5	5	5	10	17	6	9	7	6	4	4	A	11	12	11	23	9	11	18	14	17	14	9.7	23.4
28-Dec	11	14	14	8	12	8	12	8	8	5	4	2	A	4	3	2	8	14	10	4	5	6	4	4	7.4	14.4
29-Dec	6	6	5	5	6	7	7	6	6	7	5	A	7	9	13	11	7	12	21	17	12	19	13	18	9.8	21.3
30-Dec	15	21	14	14	15	13	18	23	23	17	A	13	10	11	14	19	24	18	18	25	32	19	16	16	17.7	31.7
31-Dec	17	15	17	18	17	19	22	20	18	A	17	14	13	53	21	27	28	18	5	8	11	11	12	21	18.4	52.8
	7.9	8.4	7.9	7.7	9.2	10.0	13.3	13.1	12.1	9.6	10.3	6.6	6.6	10.6	9.4	11.5	10.9	11.3	9.8	9.8	8.9	9.5	7.9	8.9	Diurnal Average	
	18.6	21.2	19.4	26.4	21.1	25.2	29.3	34.3	55.5	28.3	80.5	14.4	18.2	52.8	29.3	46.4	28.6	25.6	36.3	25.2	31.7	24.1	16.8	21.3	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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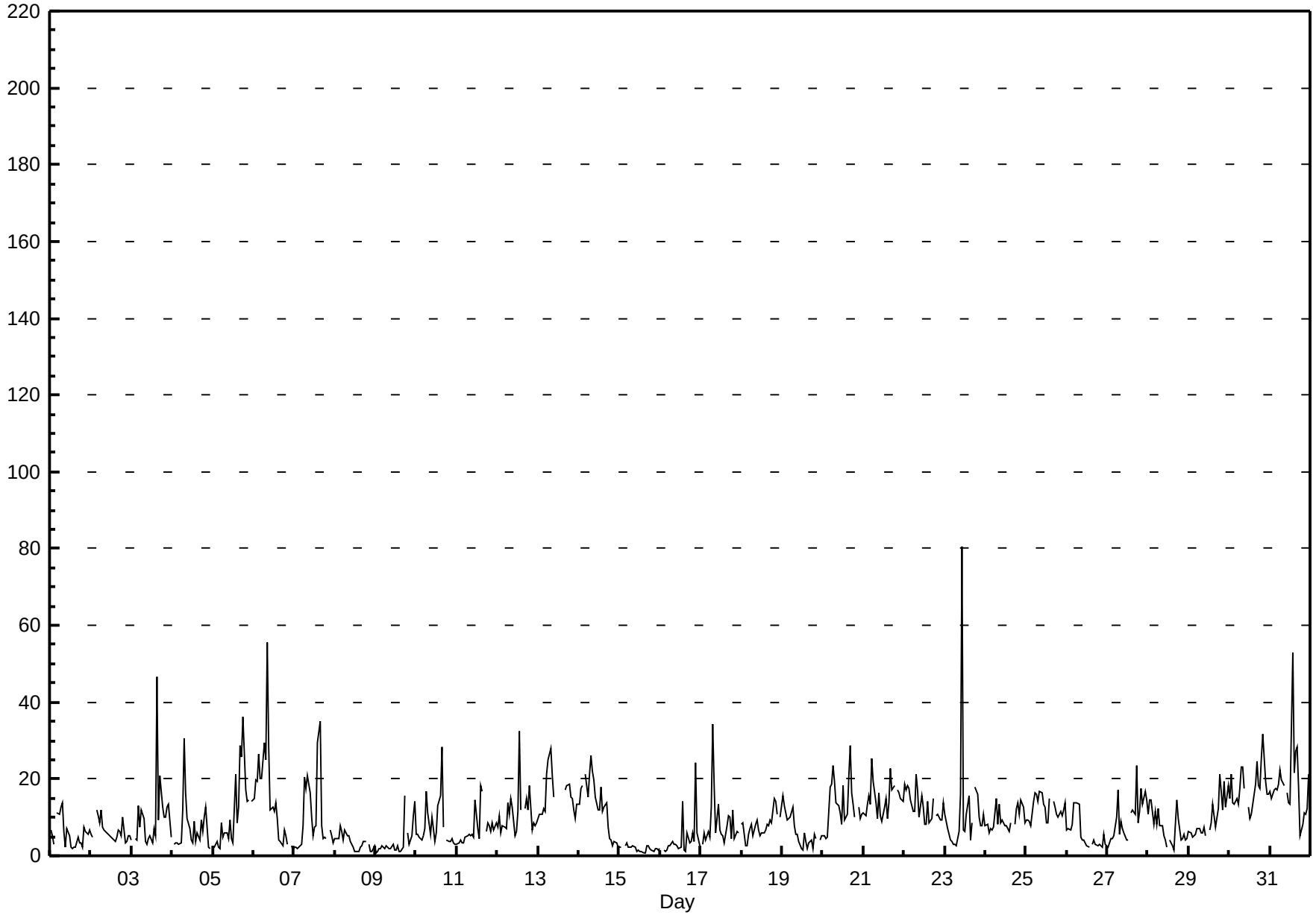
Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Portable-Bonanza - December 2010



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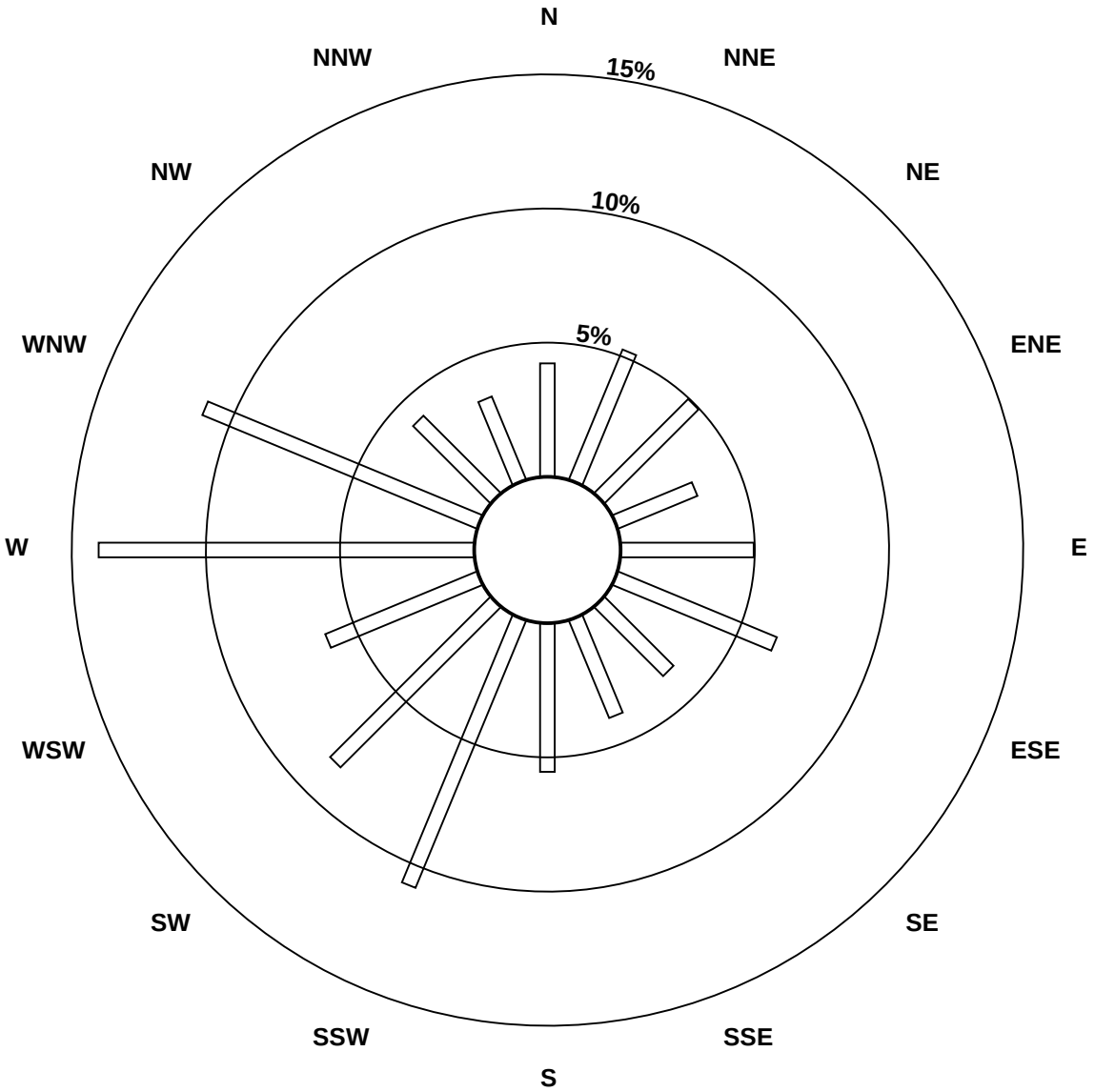
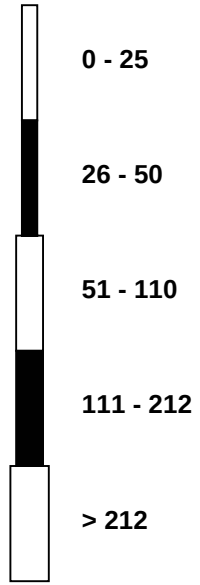
Pollutant Rose

Nitrogen Dioxide (NO_2) - ppb

Portable-Bonanza - December 2010



Pollutant Classes (ppb)



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Hourly Averages

Nitrogen Oxide (NO) - ppb

Portable-Bonanza - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 15.4 ppb on Dec 31 14:00 Maximum Daily Average: 4.3 ppb on Dec 30

Minimum Value: 0 ppb on Dec 8 23:00 Minimum Daily Average: 0.1 ppb on Dec 15
Maximum Diurnal Average: 3.4 ppb at hour 14 Minimum Diurnal Average: 0.3 ppb at hour 3
Monthly Average: 1.24 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.1$ Median = 0.5 $Q_3 = 1.3$ $P_{90} = 3.5$ $P_{99} = 11.1$

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	38
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-Dec	1	0	0	A	0	1	1	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.4	1.5
2-Dec	0	0	A	0	0	0	0	0	0	0	1	2	1	1	1	1	0	0	0	1	0	0	0	0	0.4	1.6
3-Dec	0	A	0	0	1	0	1	1	0	0	1	2	1	2	1	8	1	2	1	0	0	1	1	0	1.1	8.0
4-Dec	A	0	0	0	0	0	0	4	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	A	0.6	3.9
5-Dec	0	0	0	0	0	0	0	0	0	0	1	1	1	2	1	1	2	1	2	0	0	0	A	0	0.5	1.7
6-Dec	0	0	0	0	1	1	2	2	11	11	3	4	4	5	2	1	0	0	0	0	0	A	0	0	2.1	11.1
7-Dec	0	0	0	0	0	0	7	1	5	1	2	2	3	2	11	14	1	1	0	1	A	1	0	0	2.3	14.4
8-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.4
9-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	1	0	0	1	2	0.3	2.1
10-Dec	0	0	0	0	0	0	1	1	1	1	2	1	1	4	4	5	1	A	0	0	0	0	0	0	1.1	4.7
11-Dec	0	0	0	0	0	0	0	0	0	1	1	2	2	1	2	4	A	0	1	0	0	1	0	1	0.8	3.7
12-Dec	1	1	1	1	0	0	1	0	0	1	1	2	2	13	4	A	1	1	0	1	0	0	0	0	1.4	12.9
13-Dec	0	0	0	0	0	2	5	15	4	4	C	C	C	C	C	C	5	4	1	1	1	1	0	0	2.6	15.3
14-Dec	1	2	2	A	2	1	4	4	13	4	5	7	8	6	4	1	1	0	0	0	0	0	0	0	2.8	12.8
15-Dec	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
16-Dec	0	A	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	3	0	0	0.3	2.5
17-Dec	A	0	0	0	1	0	2	4	2	1	1	1	1	1	1	1	0	0	0	0	0	0	0	A	0.8	3.9
18-Dec	0	0	0	0	0	0	0	0	0	1	2	2	4	3	3	2	0	0	0	0	1	0	A	0	0.8	3.6
19-Dec	0	0	1	0	0	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	A	0	0	0.3	0.9
20-Dec	1	1	0	0	1	4	3	1	2	2	2	3	6	4	4	6	4	2	1	0	A	0	0	1	2.0	6.2
21-Dec	0	0	1	1	0	0	1	1	0	2	3	4	6	5	3	3	5	2	1	A	1	1	0	0	1.9	6.0
22-Dec	1	1	1	1	1	0	0	2	1	1	5	4	2	2	3	1	1	1	A	0	0	0	0	0	1.3	4.6
23-Dec	0	0	0	0	0	0	0	0	0	2	8	3	3	3	2	1	1	A	1	1	0	1	1	0	1.2	7.8
24-Dec	0	0	0	0	0	0	1	0	1	2	2	1	2	2	1	1	A	1	1	1	0	1	0	0	0.8	2.4
25-Dec	0	0	0	0	0	1	0	0	1	3	6	6	6	6	6	A	1	0	0	0	0	0	0	1	1.7	6.4
26-Dec	0	0	0	0	1	1	1	0	0	0	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0.3	1.2
27-Dec	0	0	0	0	0	0	0	0	0	0	1	1	1	A	3	3	1	3	0	1	1	1	1	2	0.9	3.4
28-Dec	1	0	0	0	0	0	1	0	0	0	1	1	A	1	1	0	1	1	1	1	0	1	1	0	0.6	1.3
29-Dec	1	0	0	0	0	0	1	0	1	1	2	A	3	4	3	3	1	0	3	2	1	2	1	3	1.4	4.0
30-Dec	0	4	0	1	1	1	2	1	5	3	A	11	10	10	10	10	9	1	1	5	10	2	1	1	4.3	10.9
31-Dec	1	1	1	2	4	6	2	2	3	A	6	8	9	15	5	4	2	0	0	0	0	1	2	2	3.4	15.4
	0.4	0.5	0.3	0.4	0.5	0.7	1.2	1.4	1.7	1.5	2.1	2.5	2.8	3.4	2.6	2.5	1.3	0.8	0.5	0.6	0.6	0.6	0.4	0.5	Diurnal Average	
	1.4	4.0	2.1	2.3	3.5	5.8	6.7	15.3	12.8	11.1	7.8	10.9	9.6	15.4	10.7	14.4	9.1	4.4	3.1	4.6	9.9	2.5	2.1	2.5	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

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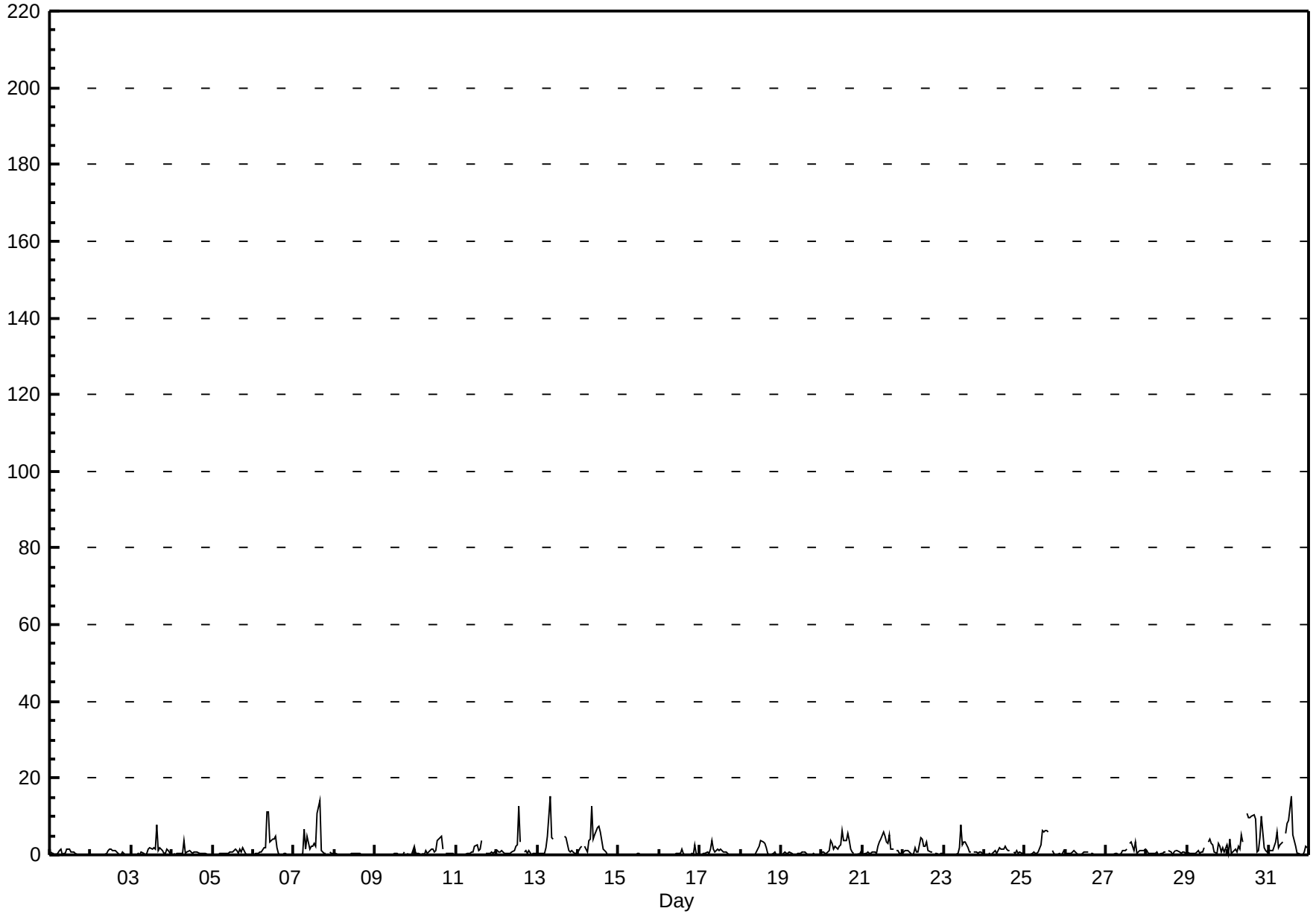
Hourly Averages

Nitrogen Oxide (NO) - ppb

Portable-Bonanza - December 2010



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Peace Air Shed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Portable-Bonanza - December 2010

Maximum Value: 134.4 ppb on Dec 12 14:00

Maximum Daily Average: 18.9 ppb on Dec 31

Minimum Value: 0 ppb on Dec 1 20:00

Minimum Daily Average: 0.2 ppb on Dec 15

Maximum Diurnal Average: 18.6 ppb at hour 14

Minimum Diurnal Average: 1.7 ppb at hour 1

Monthly Average: 6.68 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.2 Q_1 = 0.6 Median = 2.7 Q_3 = 8.1 P_{90} = 17.6 P_{99} = 51.6

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	38
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-Dec	2	1	1	A	1	6	6	2	1	0	5	10	1	1	1	1	0	0	0	0	0	0	0	0	1.8	10.5
2-Dec	1	1	A	2	0	0	3	0	0	1	2	2	5	2	1	1	0	0	0	13	0	2	0	1	1.6	13.0
3-Dec	0	A	0	0	12	4	13	15	1	5	10	6	4	9	10	82	5	24	10	2	1	23	10	1	10.8	82.1
4-Dec	A	1	1	1	1	1	4	34	2	5	10	2	1	8	2	7	1	3	9	2	4	1	1	A	4.7	33.9
5-Dec	1	1	1	1	1	3	3	4	4	2	5	2	2	20	3	1	17	22	15	3	1	1	A	1	4.9	21.8
6-Dec	1	2	2	8	5	5	10	13	100	54	5	16	9	16	9	3	1	0	4	4	0	A	0	0	11.6	99.7
7-Dec	0	0	0	0	0	5	28	11	28	14	9	4	8	6	52	53	7	4	2	2	A	4	2	1	10.4	52.5
8-Dec	2	2	1	2	0	0	2	2	0	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0.6	2.0
9-Dec	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	14	A	3	0	0	14	22	2.5	22.0
10-Dec	2	1	1	0	2	1	10	2	7	12	6	5	6	37	21	23	10	A	6	4	2	2	2	1	7.2	37.0
11-Dec	0	0	2	1	1	3	8	4	5	10	3	11	7	5	11	23	A	2	10	4	1	5	1	3	5.1	22.6
12-Dec	3	3	2	3	2	2	4	3	3	4	2	18	11	134	9	A	4	9	1	28	1	1	4	3	11.0	134.4
13-Dec	3	1	2	2	3	14	21	43	18	15	C	C	C	C	C	C	14	26	5	6	14	8	3	5	11.4	43.5
14-Dec	7	14	20	A	14	7	27	42	40	32	21	13	18	22	5	3	6	0	0	0	0	0	0	0	12.6	41.6
15-Dec	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
16-Dec	0	A	0	0	0	0	0	0	0	0	1	1	1	26	0	0	2	0	1	4	0	26	4	1	3.0	26.4
17-Dec	A	0	1	1	3	2	5	32	8	2	6	4	3	3	1	3	3	1	0	2	0	1	0	A	3.6	31.8
18-Dec	0	0	0	0	0	0	0	0	0	1	2	3	4	4	3	3	1	0	0	2	9	0	A	0	1.5	9.2
19-Dec	0	2	15	2	2	25	4	1	2	0	1	1	1	4	2	0	1	1	0	14	1	A	0	1	3.4	25.0
20-Dec	2	2	1	2	10	10	20	11	17	7	11	6	26	10	8	20	35	13	6	4	A	5	1	7	10.1	35.4
21-Dec	0	1	4	5	2	8	7	4	3	14	6	8	16	20	9	12	49	11	9	A	3	8	2	4	8.9	49.4
22-Dec	5	3	5	5	3	1	3	8	9	4	9	7	3	3	10	2	6	10	A	2	9	4	12	3	5.5	11.9
23-Dec	0	0	0	0	0	0	0	0	7	25	85	5	10	37	18	2	5	A	4	3	2	3	2	1	9.1	85.0
24-Dec	0	1	0	5	0	2	6	4	10	13	6	7	8	5	3	7	A	2	6	6	2	11	3	1	4.7	12.7
25-Dec	1	1	0	0	5	5	2	1	4	12	13	13	8	7	21	A	2	2	0	1	2	0	3	10	4.9	21.1
26-Dec	1	1	0	1	9	10	4	0	0	0	1	1	3	1	A	1	1	0	0	0	0	0	0	0	1.6	10.0
27-Dec	0	0	0	0	0	2	8	0	0	4	3	4	5	A	13	13	7	43	6	5	27	29	21	9	8.6	42.6
28-Dec	6	11	11	2	3	3	9	5	11	2	2	1	A	4	2	0	9	13	24	1	1	3	6	2	5.7	23.7
29-Dec	4	2	2	1	1	1	9	3	6	7	5	A	11	9	7	19	3	3	21	10	6	16	5	25	7.8	25.1
30-Dec	2	12	2	3	7	3	10	15	35	8	A	21	15	14	26	19	31	3	13	26	43	9	3	4	14.1	43.2
31-Dec	5	3	5	5	19	49	19	9	17	A	13	16	16	128	18	38	19	3	1	1	1	5	21	22	18.9	128.5
	1.7	2.3	2.7	1.8	3.5	5.6	7.9	8.6	10.9	8.5	8.4	6.5	7.0	18.6	9.2	12.0	8.3	7.2	5.3	5.2	4.6	5.8	4.2	4.4	Diurnal Average	
	7.0	13.9	20.0	8.1	18.7	48.5	27.8	43.5	99.7	54.1	85.0	21.1	25.8	134.4	51.5	82.1	49.4	42.6	23.7	28.0	43.2	28.7	20.7	25.1	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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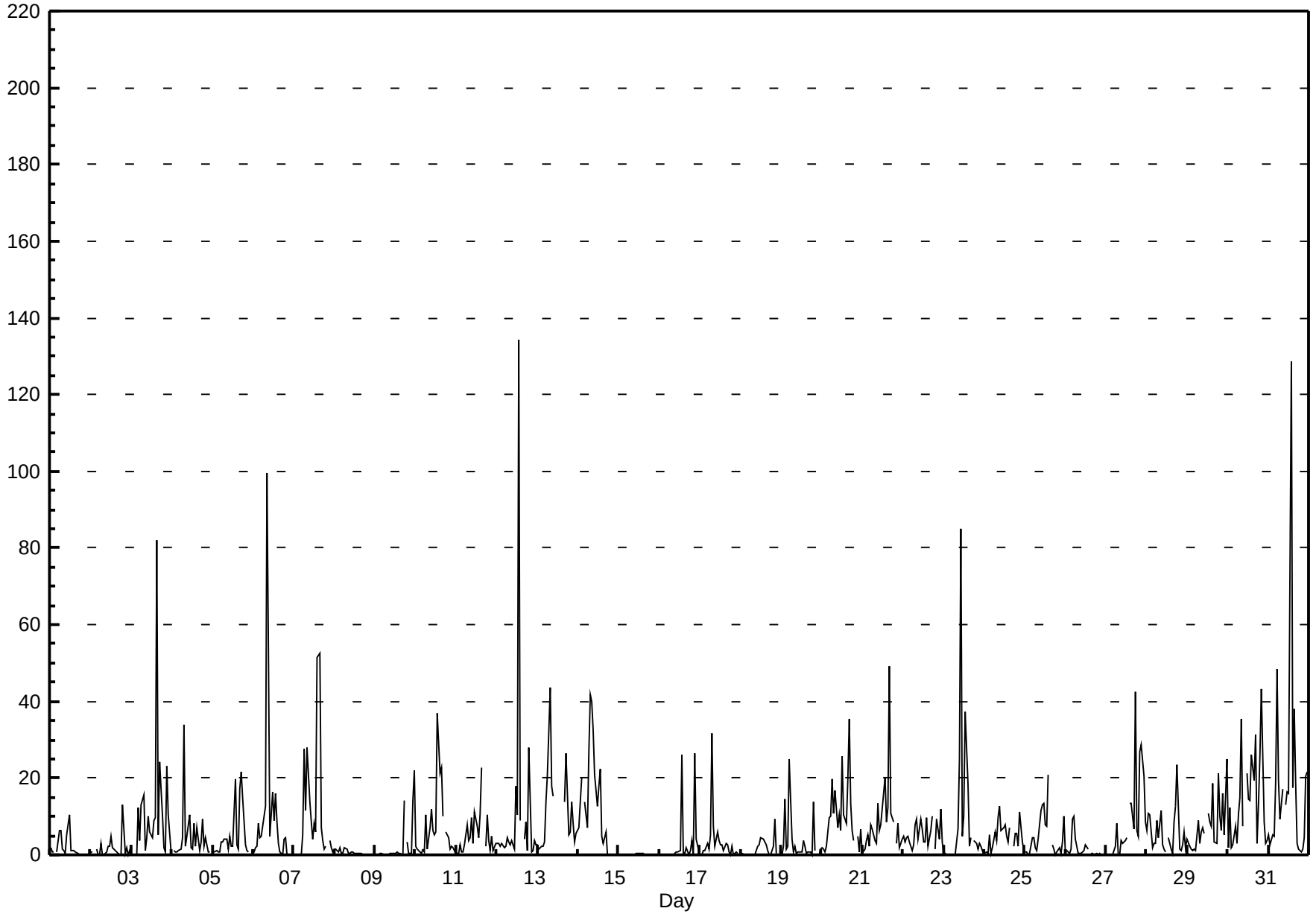
Hourly Maximums

Nitrogen Oxide (NO) - ppb

Portable-Bonanza - December 2010



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Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Portable-Bonanza - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 33.7 ppb on Dec 13 08:00
Maximum Daily Average: 17.3 ppb on Dec 30

Minimum Value: 1 ppb on Dec 15 16:00
Minimum Daily Average: 1.1 ppb on Dec 15
Maximum Diurnal Average: 8.9 ppb at hour 8
Minimum Diurnal Average: 6.0 ppb at hour 23
Monthly Average: 7.18 ppb
Percentiles: $P_1 = 0.7$ $P_{10} = 1.8$ $Q_1 = 3.0$ Median = 5.7 $Q_3 = 9.9$ $P_{90} = 15.4$ $P_{99} = 25.6$

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	38
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-Dec	5	4	2	A	8	9	9	5	5	2	4	3	2	2	2	2	2	3	2	1	3	5	5	5	3.9	9.1
2-Dec	5	5	A	10	8	7	5	7	6	5	6	6	5	5	4	4	6	4	4	4	3	3	4	4	5.1	10.1
3-Dec	4	A	4	4	4	2	4	4	3	3	4	4	4	4	4	18	8	12	9	9	9	11	8	3	5.9	17.5
4-Dec	A	2	3	3	3	2	4	19	6	7	5	3	2	2	3	4	3	4	4	4	3	1	1	A	3.9	19.0
5-Dec	2	1	1	1	2	2	2	2	3	3	4	3	3	5	5	5	13	9	15	9	11	11	A	12	5.5	15.5
6-Dec	13	14	17	18	17	17	22	19	33	30	13	12	12	13	6	3	2	2	3	3	2	A	2	1	12.0	33.1
7-Dec	1	2	2	2	2	3	17	7	14	7	8	6	7	6	20	28	5	4	4	4	A	6	4	3	7.1	28.0
8-Dec	4	4	4	5	4	3	4	3	2	2	2	1	1	1	1	2	2	2	2	A	2	1	1	1	2.4	4.9
9-Dec	1	1	1	1	1	1	2	1	1	2	1	1	1	2	1	1	1	4	A	3	3	4	5	7	2.0	6.7
10-Dec	4	5	4	3	4	5	7	5	4	5	5	3	3	6	9	11	4	A	3	3	3	3	3	2	4.6	10.9
11-Dec	3	3	3	2	3	3	3	3	4	4	4	6	6	4	5	9	A	5	6	6	6	7	5	7	4.6	9.0
12-Dec	6	7	5	7	6	6	7	8	12	8	5	7	7	20	10	A	8	10	10	10	6	7	6	7	8.0	19.9
13-Dec	8	9	10	11	11	14	19	34	18	16	C	C	C	C	C	C	20	19	17	14	10	7	8	10	14.2	33.7
14-Dec	11	14	14	A	14	12	17	17	29	16	15	17	17	16	14	12	12	6	3	2	2	2	2	2	11.6	29.0
15-Dec	2	2	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	2.0
16-Dec	1	A	1	1	1	2	1	2	2	2	2	1	1	3	1	1	2	2	2	3	2	8	3	1	1.9	7.9
17-Dec	A	2	4	3	4	4	8	13	9	5	7	5	5	4	4	5	5	5	3	5	4	4	5	A	5.0	13.4
18-Dec	4	4	2	2	3	4	5	5	7	9	7	7	9	8	9	9	8	8	8	10	10	10	A	9	6.8	10.3
19-Dec	11	11	9	9	9	8	7	6	4	4	3	2	2	2	2	2	2	2	2	2	3	A	4	4	4.8	11.0
20-Dec	5	5	4	3	5	15	13	13	11	11	9	8	14	9	11	17	18	11	11	9	A	10	9	10	10.0	18.1
21-Dec	9	9	10	12	13	13	12	11	8	11	12	11	13	11	9	11	18	16	15	A	15	14	12	13	12.1	17.8
22-Dec	15	16	18	16	13	10	10	16	12	10	17	14	9	9	11	8	9	10	A	9	9	8	9	10	11.7	17.8
23-Dec	10	5	4	3	3	3	3	3	4	6	18	7	8	7	6	4	6	A	10	10	7	6	7	8	6.4	17.6
24-Dec	7	7	6	6	6	7	7	6	7	7	6	5	7	6	6	7	A	8	8	10	9	10	10	7	7.1	9.6
25-Dec	8	8	8	8	10	14	14	13	14	17	18	15	14	14	15	A	13	11	10	9	10	9	9	10	11.8	17.5
26-Dec	6	6	6	6	8	11	10	8	3	3	3	3	2	2	A	3	3	3	2	2	2	2	3	2	4.4	11.0
27-Dec	2	3	3	4	4	6	5	4	5	5	6	4	4	A	7	9	7	12	6	8	10	9	11	10	6.3	12.0
28-Dec	8	7	6	7	8	7	7	5	3	4	3	2	A	4	2	1	3	5	4	4	4	5	4	4	4.6	8.4
29-Dec	5	4	4	5	5	6	6	5	6	5	5	A	8	8	8	8	6	8	15	11	8	10	10	13	7.4	15.4
30-Dec	11	19	12	13	13	12	15	13	19	16	A	20	17	18	20	24	26	16	14	21	29	18	15	15	17.3	29.0
31-Dec	17	14	16	19	19	21	17	17	16	A	16	17	18	25	17	13	14	8	4	5	6	7	8	10	14.1	25.4
	6.5	6.6	6.3	6.4	6.9	7.5	8.5	8.9	8.7	7.4	7.1	6.7	6.9	7.6	7.4	7.9	7.9	7.2	6.8	6.5	6.6	6.9	6.0	6.7	Diurnal Average	
	17.0	19.4	17.8	18.7	18.9	21.5	21.8	33.7	33.1	30.2	17.6	19.6	18.4	25.4	20.1	28.0	26.5	19.4	16.6	20.9	29.0	17.7	15.4	15.3	Diurnal Maximum	

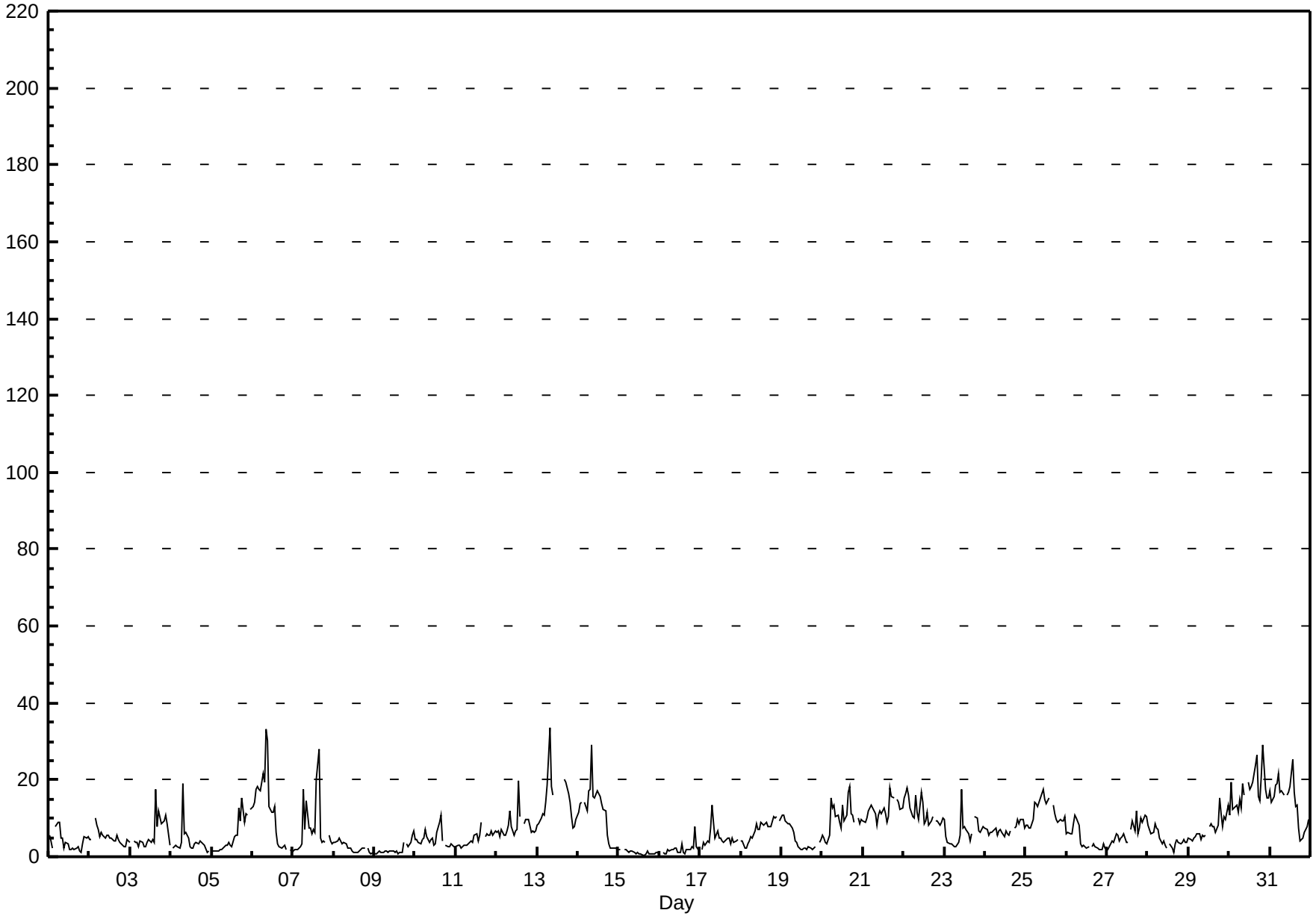
C - Calibration
A - Automated Daily Zero Span

PASZA
Peace Air Shed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Portable-Bonanza - December 2010



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Peace Air Shed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Portable-Bonanza - December 2010

Maximum Value: 163.0 ppb on Dec 31 14:00

Maximum Daily Average: 35.8 ppb on Dec 31

Minimum Value: 1 ppb on Dec 15 15:00

Minimum Daily Average: 1.8 ppb on Dec 15

Maximum Diurnal Average: 26.6 ppb at hour 14

Minimum Diurnal Average: 9.2 ppb at hour 4

Monthly Average: 15.66 ppb

Percentiles: P_1 = 1.2 P_{10} = 2.6 Q_1 = 5.2 Median = 10.8 Q_3 = 20.2 P_{90} = 33.6 P_{99} = 80.4

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	38
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-Dec	7	5	4	A	11	17	18	15	7	2	12	15	3	3	3	3	5	3	3	2	7	6	6	6	7.3	18.5
2-Dec	6	6	A	14	10	9	15	7	7	7	7	7	9	6	5	5	7	6	5	23	4	5	5	7	7.9	22.9
3-Dec	4	A	4	4	26	11	18	25	4	7	13	11	8	16	12	128	14	44	23	12	10	32	24	6	19.8	127.7
4-Dec	A	3	3	4	4	5	16	63	18	13	17	6	4	17	5	13	5	13	13	12	17	3	2	A	11.7	63.3
5-Dec	3	3	5	2	2	12	7	10	7	6	14	7	5	41	11	14	46	47	48	20	15	15	A	15	15.4	47.8
6-Dec	15	21	22	35	24	24	39	38	151	81	16	20	20	30	18	7	4	3	11	9	3	A	2	1	25.9	150.9
7-Dec	2	2	2	2	3	13	42	27	41	30	19	9	16	14	78	83	15	8	6	6	A	11	7	4	19.1	82.9
8-Dec	6	6	5	10	6	4	9	7	6	4	4	3	1	1	2	3	3	4	4	A	3	1	1	3	4.1	9.6
9-Dec	1	1	2	2	3	2	3	2	2	2	3	2	2	3	1	1	2	22	A	9	3	5	24	33	5.7	32.7
10-Dec	7	7	6	4	6	8	27	12	12	22	12	8	12	45	35	46	16	A	10	8	5	6	5	4	14.1	45.7
11-Dec	3	3	6	3	4	7	13	9	10	15	7	25	14	9	23	36	A	7	19	11	7	13	7	11	11.5	35.7
12-Dec	10	13	8	10	9	9	18	14	16	17	6	23	21	132	21	A	16	21	12	45	7	10	12	11	20.1	132.2
13-Dec	11	12	13	14	15	35	44	68	37	31	C	C	C	C	C	C	30	40	24	21	22	15	13	19	25.7	67.9
14-Dec	21	30	38	A	34	23	47	67	62	51	36	25	26	39	16	16	20	7	5	4	3	4	3	2	25.2	67.4
15-Dec	2	2	A	3	3	2	2	2	2	2	1	2	2	1	1	1	2	3	2	1	1	2	2	2	1.8	3.3
16-Dec	2	A	1	1	2	3	3	4	3	3	3	2	3	38	2	1	8	3	4	10	4	50	8	3	7.0	50.4
17-Dec	A	3	7	5	9	6	18	66	23	8	20	10	8	8	4	11	13	11	4	14	4	7	6	A	12.1	66.0
18-Dec	8	9	3	2	6	7	8	5	8	10	8	8	10	10	10	10	9	9	9	15	23	11	A	10	9.1	23.2
19-Dec	16	13	24	11	12	32	15	8	7	6	4	2	2	10	6	2	4	5	2	20	6	A	4	6	9.4	32.2
20-Dec	7	7	5	6	27	28	43	24	28	17	19	15	44	20	19	40	58	29	19	12	A	17	10	15	22.2	58.4
21-Dec	11	12	17	21	15	33	26	15	11	30	16	17	29	35	19	26	72	28	27	A	20	23	16	17	23.3	71.8
22-Dec	23	20	23	21	17	12	14	30	27	13	25	20	11	11	24	10	14	25	A	12	20	12	17	17	18.2	29.5
23-Dec	11	9	7	4	4	3	3	3	13	41	161	12	14	41	34	6	10	A	20	17	11	11	10	12	19.9	161.4
24-Dec	8	9	6	12	7	9	21	12	23	21	16	15	15	12	9	16	A	11	18	20	12	26	13	10	13.9	25.8
25-Dec	10	10	9	8	17	19	17	15	21	28	27	26	17	16	36	A	17	14	11	11	13	11	15	24	16.9	35.7
26-Dec	7	8	7	9	22	24	18	14	5	4	5	4	5	3	A	3	4	3	3	3	3	2	6	3	7.2	23.6
27-Dec	2	3	5	5	5	10	25	6	9	11	8	8	9	A	25	24	16	66	15	15	39	42	37	23	17.7	66.1
28-Dec	17	25	25	10	12	10	18	12	19	5	6	3	A	9	4	2	15	26	32	6	6	8	6	6	12.3	32.4
29-Dec	10	8	6	6	7	8	10	8	8	10	11	A	17	14	21	22	9	14	38	25	19	35	18	43	16.0	43.2
30-Dec	17	34	16	16	22	14	28	38	57	25	A	33	24	24	34	37	55	21	28	49	75	28	19	20	30.9	74.7
31-Dec	22	17	23	22	35	66	42	27	32	A	30	30	29	163	39	65	47	19	6	9	11	15	33	40	35.8	163.0
	9.3	10.4	10.4	9.2	12.2	15.0	20.2	21.1	21.8	17.4	18.1	12.6	13.1	26.6	17.8	22.5	18.5	17.7	14.5	14.5	12.9	14.8	11.5	12.8	Diurnal Average	
	23.3	33.7	38.3	34.5	34.7	66.5	47.4	67.9	150.9	81.3	161.4	33.0	43.5	163.0	78.5	127.7	71.8	66.1	47.8	48.8	74.7	50.4	37.4	43.2	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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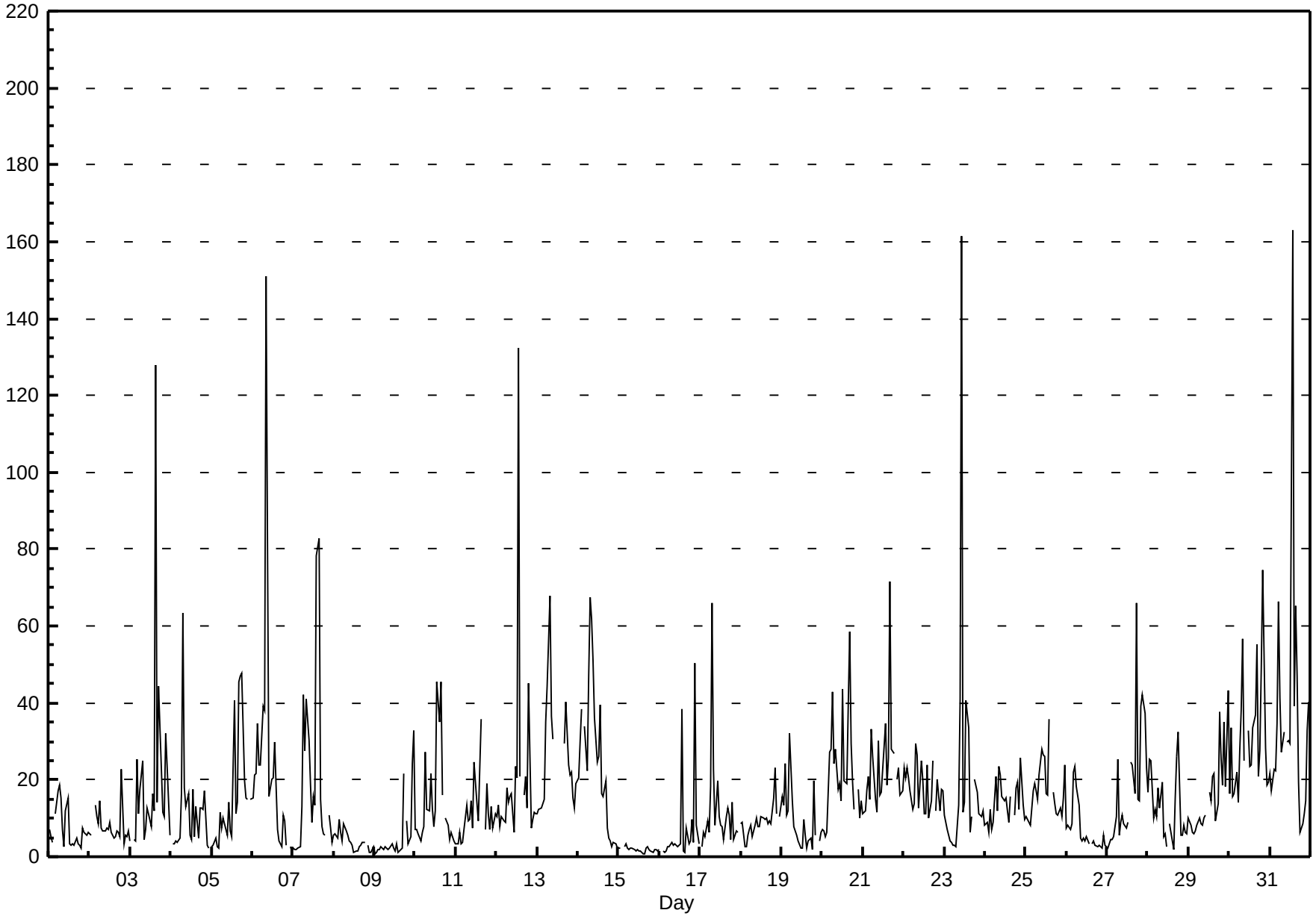
Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Portable-Bonanza - December 2010



PASZA
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Hourly Averages

Ozone (O_3) - ppb

Portable-Bonanza - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 41.0 ppb on Dec 5 13:00 Maximum Daily Average: 33.9 ppb on Dec 5

Minimum Value: 2 ppb on Dec 31 04:00 Minimum Daily Average: 7.5 ppb on Dec 30
Maximum Diurnal Average: 21.4 ppb at hour 14 Minimum Diurnal Average: 15.7 ppb at hour 8
Monthly Average: 18.27 ppb Percentiles: P_1 = 2.6 P_{10} = 8.6 Q_1 = 12.7 Median = 17.8 Q_3 = 23.0 P_{90} = 28.3 P_{99} = 39.3

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Dec	21	25	30	A	17	11	11	13	13	16	16	17	20	22	21	21	20	19	20	21	19	17	17	17	18.3	29.5
2-Dec	18	18	A	13	14	15	17	16	19	20	20	20	21	21	22	22	20	21	22	21	21	22	20	22	19.4	22.4
3-Dec	23	A	22	23	23	24	22	23	23	24	24	24	25	25	24	17	17	14	15	13	11	10	15	27	20.3	27.4
4-Dec	A	32	28	29	31	31	30	18	25	26	30	34	35	36	35	33	34	34	34	35	37	39	39	A	32.0	38.8
5-Dec	38	39	39	40	40	40	39	38	37	37	39	40	41	38	38	35	28	29	21	24	18	21	A	18	33.9	41.0
6-Dec	14	9	8	10	9	12	7	7	7	8	20	22	25	21	21	21	21	21	21	21	23	A	23	23	16.3	24.8
7-Dec	23	22	21	21	20	19	10	14	10	13	15	16	16	17	17	17	20	21	20	20	A	16	18	18	17.6	22.7
8-Dec	18	17	17	16	17	17	17	17	16	18	20	21	22	22	22	22	22	22	22	A	23	24	25	26	20.0	26.0
9-Dec	28	28	27	27	27	27	26	27	27	27	27	27	27	27	28	27	27	25	A	25	26	24	23	23	26.5	27.9
10-Dec	24	23	24	24	23	23	21	22	28	29	28	30	30	30	28	28	30	A	31	30	30	29	29	29	27.1	30.5
11-Dec	29	28	28	28	28	27	27	26	25	25	25	25	26	26	26	25	A	25	23	23	22	22	22	20	25.2	28.8
12-Dec	20	19	19	18	18	18	17	15	11	15	18	19	19	17	17	A	16	14	14	14	15	14	14	14	16.3	19.6
13-Dec	12	11	10	8	8	6	6	4	4	6	7	10	13	C	C	C	C	5	3	6	19	29	24	9	10.0	28.9
14-Dec	7	7	7	A	6	6	4	4	3	7	10	11	12	14	15	14	14	17	16	17	17	16	16	16	11.1	17.0
15-Dec	16	17	A	18	19	20	21	22	22	23	24	24	24	25	26	27	27	27	28	28	29	29	28	29	24.0	28.7
16-Dec	29	A	29	29	29	28	28	28	28	28	28	29	29	31	30	30	29	28	28	28	28	25	28	29	28.4	31.1
17-Dec	A	28	26	27	26	26	23	20	21	23	22	24	24	25	25	24	23	22	23	21	22	22	21	A	23.5	27.8
18-Dec	21	21	24	24	22	21	19	19	16	14	16	17	16	17	16	15	14	14	14	11	11	10	A	11	16.6	23.5
19-Dec	9	9	10	10	11	12	13	14	19	19	18	19	20	20	20	20	20	21	21	21	21	A	21	20	16.9	21.5
20-Dec	20	20	22	22	21	15	18	16	19	19	21	22	21	21	20	14	12	17	18	16	A	13	13	12	17.9	22.4
21-Dec	12	12	11	9	8	7	9	11	13	12	14	15	16	17	17	15	11	9	8	A	8	9	9	9	11.4	17.1
22-Dec	6	5	4	6	8	11	10	7	9	11	10	12	16	16	15	16	14	12	A	13	13	14	14	12	11.1	16.4
23-Dec	11	15	17	17	17	17	18	18	17	17	14	16	16	17	18	18	16	A	12	11	14	14	13	11	15.4	18.0
24-Dec	12	12	14	13	13	13	13	14	15	16	17	17	16	16	16	15	A	14	12	11	10	9	10	10	13.4	16.8
25-Dec	10	11	11	10	9	5	5	5	4	4	7	9	11	11	11	A	8	9	10	10	10	10	9	10	8.7	11.4
26-Dec	16	15	15	15	12	9	8	8	11	12	12	13	14	14	A	14	13	13	14	14	15	15	13	15	13.1	16.5
27-Dec	16	16	16	15	15	14	16	18	17	18	18	20	20	A	18	16	16	13	14	13	11	11	10	10	15.2	20.3
28-Dec	12	11	12	11	9	10	12	15	17	17	19	21	A	21	22	23	21	21	22	21	21	20	21	20	17.4	23.0
29-Dec	19	19	19	19	19	18	18	19	18	19	20	A	20	20	20	19	18	15	10	14	14	13	13	10	17.0	19.8
30-Dec	10	6	9	7	8	9	7	9	6	6	A	12	13	14	13	10	5	4	6	4	2	3	5	4	7.5	13.8
31-Dec	2	5	3	2	3	2	4	2	3	A	10	10	13	21	20	22	22	27	32	30	26	26	27	21	14.6	31.9
	17.0	17.3	17.9	17.6	17.1	16.5	16.1	15.7	16.2	17.6	19.1	20.0	20.7	21.4	21.4	20.8	19.2	18.4	18.3	18.6	18.4	18.1	18.7	17.1	Diurnal Average	
	38.4	39.4	39.1	39.7	40.2	39.6	39.3	38.4	36.8	37.2	38.8	40.3	41.0	38.1	38.4	35.2	34.1	34.0	34.0	34.6	37.1	38.7	38.8	29.3	Diurnal Maximum	

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

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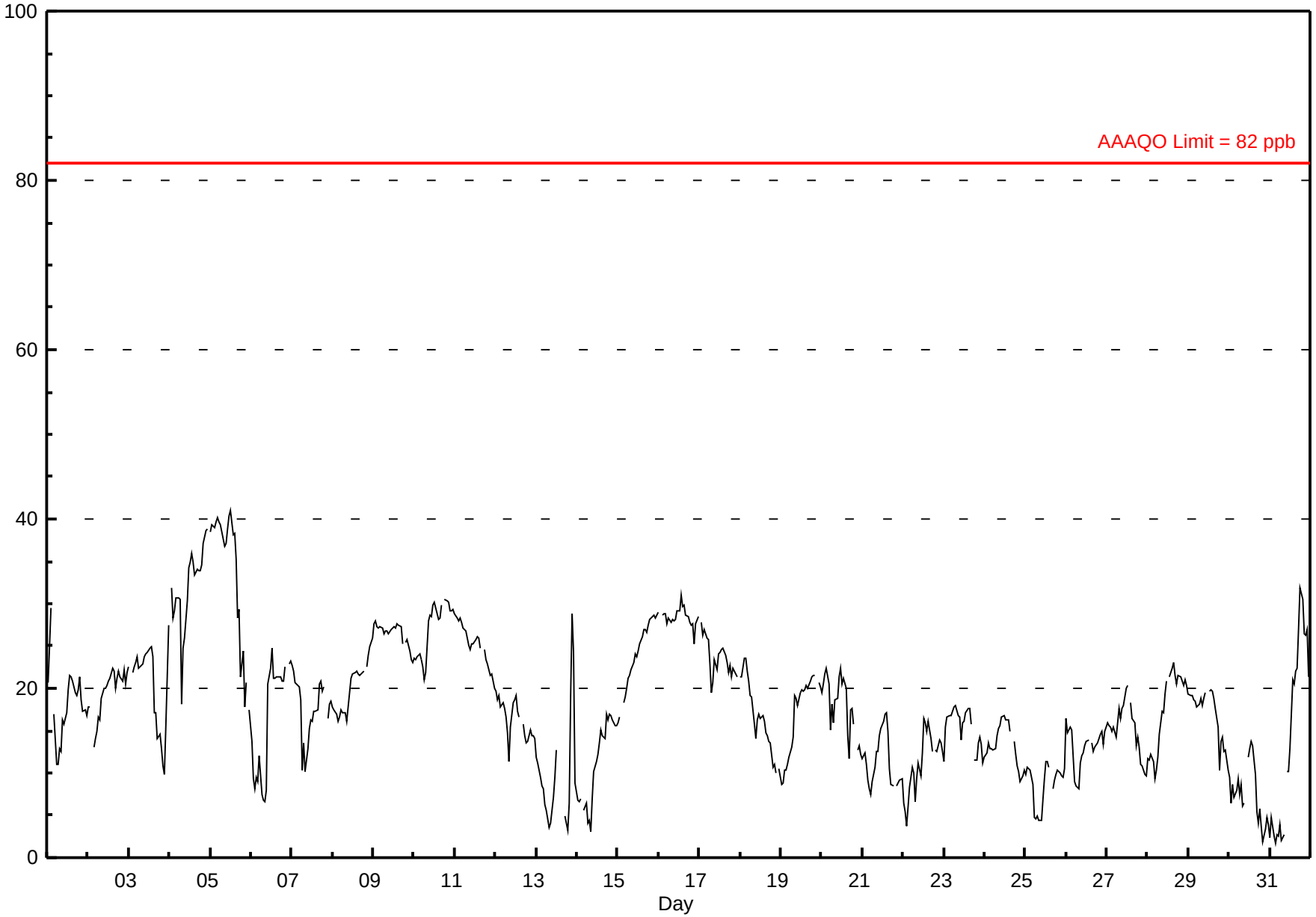
Hourly Averages

Ozone (O_3) - ppb

Portable-Bonanza - December 2010



FOCUS AIR QUALITY MONITORING

PASZA
Peace Air Shed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

Portable-Bonanza - December 2010

Maximum Value: 180.4 ppb on Dec 16 14:00

Maximum Daily Average: 36.7 ppb on Dec 5

Minimum Value: 2 ppb on Dec 31 04:00

Minimum Daily Average: 10.3 ppb on Dec 25

Maximum Diurnal Average: 27.9 ppb at hour 14

Minimum Diurnal Average: 17.9 ppb at hour 8

Monthly Average: 20.23 ppb

Percentiles: P_1 = 4.9 P_{10} = 11.1 Q_1 = 14.6 Median = 19.6 Q_3 = 24.6 P_{90} = 29.5 P_{99} = 40.6

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
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-Dec	26	28	31	A	20	13	14	16	16	17	17	18	22	22	22	22	21	21	21	22	22	19	19	19	20.3	30.9
2-Dec	20	19	A	15	16	18	18	18	20	21	21	22	22	23	23	23	21	23	24	23	22	24	22	23	20.7	23.6
3-Dec	24	A	23	23	24	25	24	24	24	25	25	25	25	26	26	22	19	18	16	15	14	13	21	30	22.1	29.9
4-Dec	A	33	33	31	32	32	32	28	29	32	33	36	36	37	36	36	36	36	36	37	40	39	40	A	34.4	39.6
5-Dec	40	41	40	41	41	41	40	40	39	40	40	42	42	41	42	40	36	35	27	28	23	24	A	22	36.7	42.4
6-Dec	16	14	10	16	12	17	14	11	13	20	23	26	26	24	22	22	22	22	22	22	23	A	24	24	19.3	26.1
7-Dec	23	22	22	21	21	20	17	17	15	15	18	18	17	19	20	21	22	22	21	21	A	18	19	19	19.4	23.1
8-Dec	18	18	17	17	18	18	18	18	17	19	20	22	22	22	23	22	23	23	24	A	24	25	26	28	20.9	27.5
9-Dec	28	28	28	28	28	28	27	28	28	27	28	28	28	28	28	28	28	28	A	26	27	26	25	25	27.4	28.5
10-Dec	24	24	25	25	24	25	23	24	30	30	30	31	31	31	31	31	31	A	31	31	31	31	30	30	28.3	31.1
11-Dec	29	29	29	29	29	28	28	27	26	25	26	26	27	27	27	26	A	26	24	25	23	23	22	22	26.1	29.2
12-Dec	21	21	20	19	20	19	18	16	15	18	19	20	20	20	19	A	17	16	16	16	16	16	15	15	17.9	21.0
13-Dec	13	12	11	10	9	8	8	6	7	8	11	12	14	C	C	C	C	24	19	22	30	31	30	16	14.9	31.0
14-Dec	8	9	9	A	8	9	6	7	6	9	13	13	14	16	16	15	17	18	18	18	17	17	17	16	12.7	18.1
15-Dec	17	18	A	19	20	21	22	23	23	24	25	25	25	26	27	28	28	28	28	29	29	29	30	29	24.8	29.6
16-Dec	30	A	29	29	29	29	29	29	29	29	30	30	30	180	30	30	30	29	29	29	29	29	29	29	35.9	180.4
17-Dec	A	29	28	28	27	27	26	25	25	24	25	25	25	25	26	26	25	23	24	23	24	23	23	A	25.1	28.5
18-Dec	23	24	24	24	23	23	21	20	18	16	17	18	18	18	17	16	15	15	14	14	13	12	A	11	17.8	24.1
19-Dec	11	11	11	11	12	13	14	17	21	21	19	20	20	20	21	21	21	22	22	22	22	A	21	21	17.9	22.5
20-Dec	21	21	23	23	23	23	24	20	21	21	23	24	22	23	22	18	16	21	20	18	A	15	15	13	20.3	24.0
21-Dec	13	14	12	13	10	9	12	13	14	14	16	17	19	19	18	17	15	12	11	A	11	13	14	12	13.7	19.1
22-Dec	9	10	5	11	11	12	12	9	11	12	13	16	18	17	16	17	15	14	A	14	14	15	14	15	13.0	17.5
23-Dec	14	18	18	18	17	18	18	19	18	18	17	18	18	18	20	19	17	A	16	15	15	15	15	14	16.9	19.6
24-Dec	13	14	14	14	14	14	14	15	17	17	18	18	17	17	17	16	A	15	13	12	12	11	11	12	14.3	17.6
25-Dec	11	11	13	13	11	7	6	6	5	6	9	11	13	13	12	A	10	11	11	11	11	11	10	16	10.3	16.2
26-Dec	17	17	17	16	15	11	11	12	13	13	14	14	14	14	A	14	13	14	14	15	15	15	16	16	14.2	17.0
27-Dec	17	17	17	15	17	17	18	19	19	19	19	21	21	A	21	19	19	16	16	15	13	13	14	12	17.0	21.1
28-Dec	14	13	14	13	11	12	14	16	19	19	21	22	A	22	24	24	23	22	23	22	22	22	22	21	18.7	23.6
29-Dec	20	20	20	19	19	19	19	20	19	20	20	A	21	20	20	20	19	17	14	18	17	15	16	15	18.4	20.6
30-Dec	13	12	13	9	11	12	11	11	11	10	A	14	15	16	16	13	9	5	7	6	3	8	7	6	10.3	15.7
31-Dec	4	6	5	2	5	4	5	3	4	A	13	11	20	26	24	24	27	33	33	33	30	29	29	27	17.2	33.0
	18.4	19.0	19.2	19.0	18.5	18.3	18.1	17.9	18.4	19.6	20.7	21.3	22.0	27.9	22.9	22.4	21.1	20.9	20.4	20.7	20.3	19.8	20.4	19.2	Diurnal Average	
	39.6	40.6	40.2	40.8	41.1	40.6	40.1	40.1	38.6	40.1	40.4	42.1	42.4	180.4	42.1	40.4	36.1	35.5	36.1	37.1	39.6	39.4	39.6	29.9	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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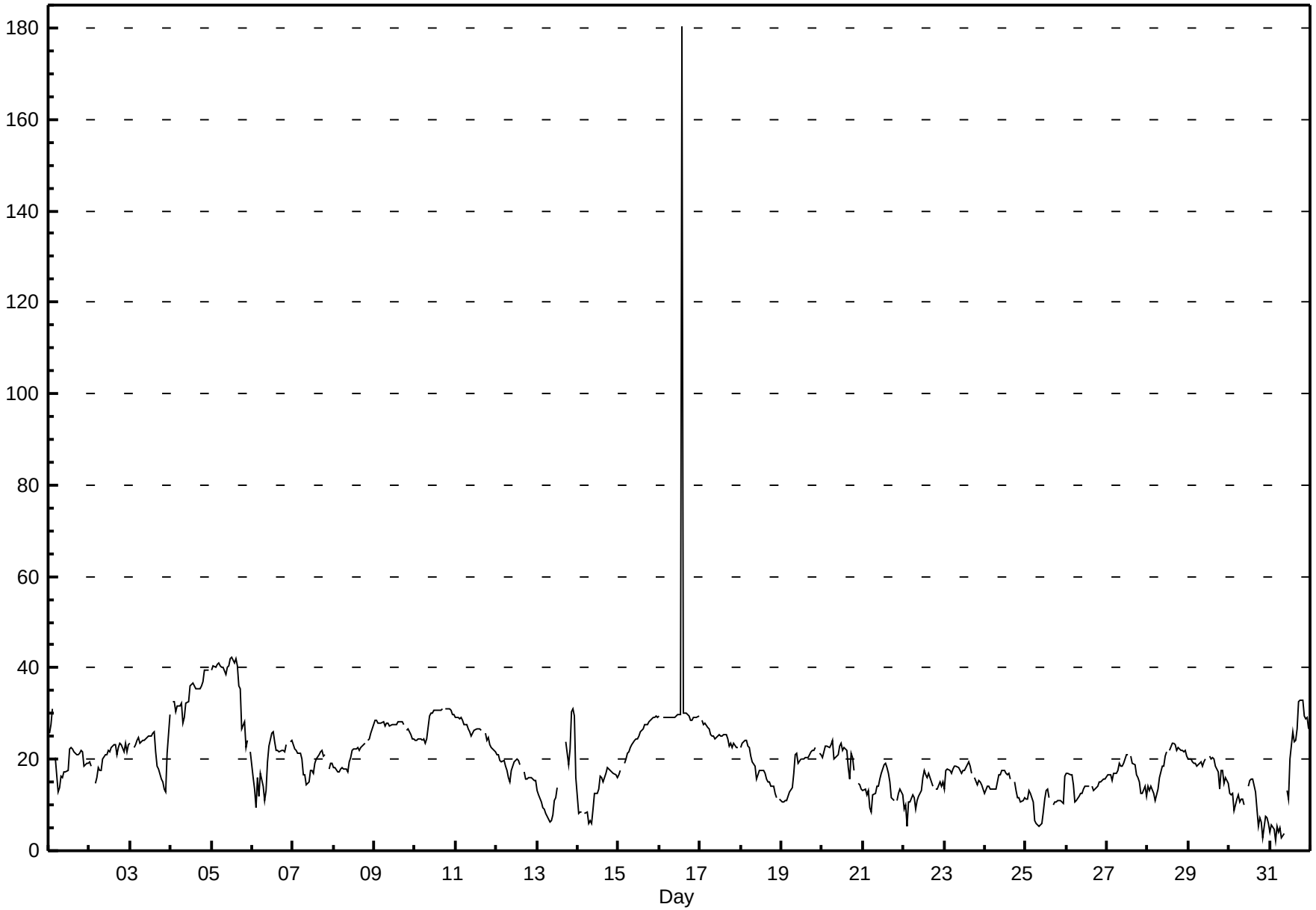
Hourly Maximums

Ozone (O_3) - ppb

Portable-Bonanza - December 2010



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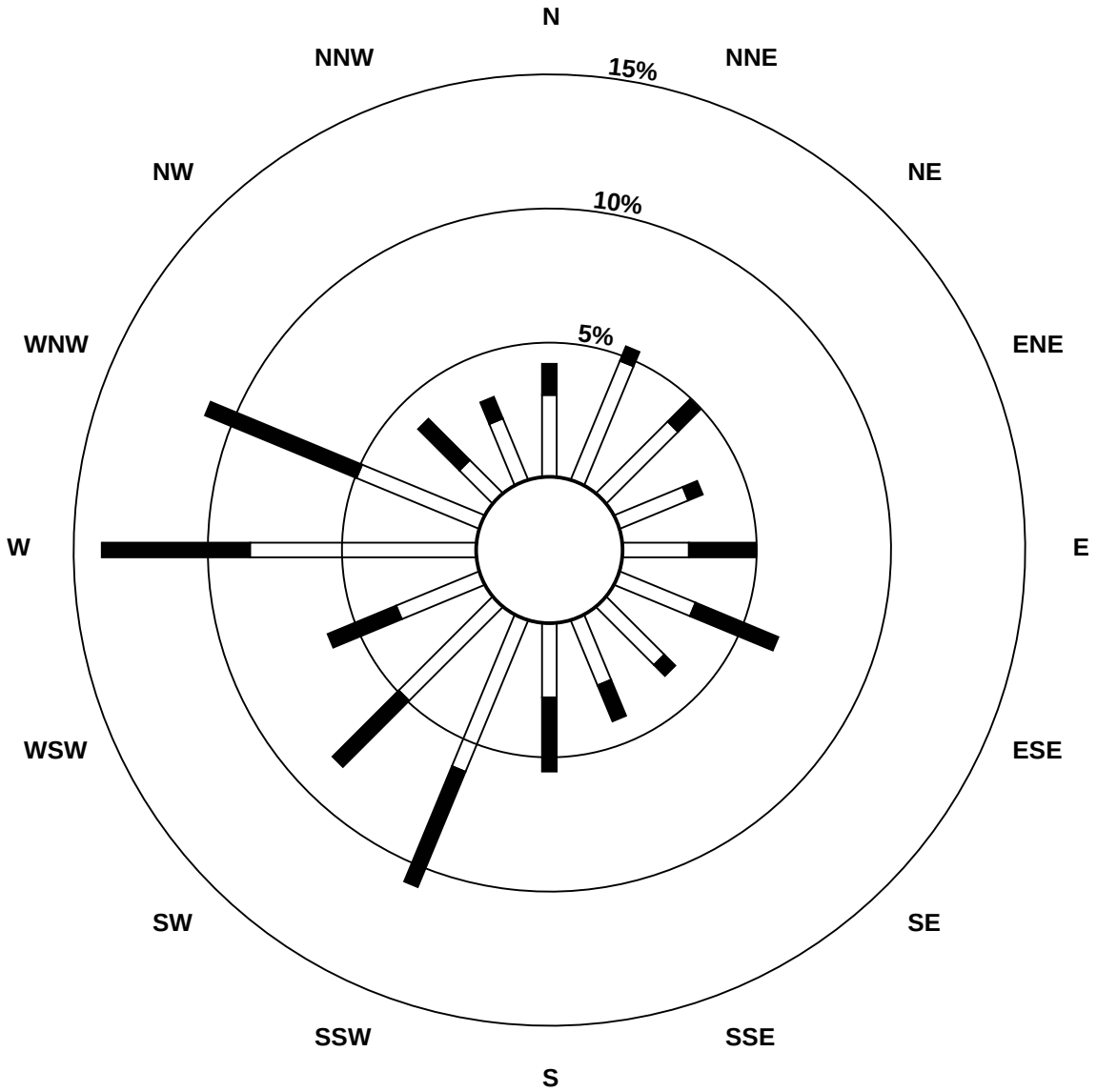
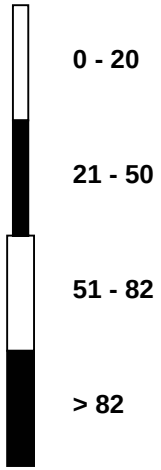
Pollutant Rose

Ozone (O_3) - ppb

Portable-Bonanza - December 2010



Pollutant Classes (ppb)



PASZA
Peace Air Shed Zone Association

Eight Hour Running Averages

Ozone (O_3) - ppb

Portable-Bonanza - December 2010

Maximum Value: 39.4 ppb on Dec 5 07:00

Minimum Value: 2.6 ppb on Dec 31 10:00

Percentiles: P_1 = 3.4 P_{10} = 9.5 Q_1 = 13.1 Median = 17.5 Q_3 = 22.7 P_{90} = 28.1 P_{99} = 38.7

Hours in Service:	744
Hours of Data:	737
Hours of Missing Data:	7
Hours of Calibration:	7
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-Dec	15	16	19	20	21	21	20	18	17	16	14	14	15	16	17	18	19	19	20	20	20	20	19	19	21.2
2-Dec	19	18	18	17	16	16	16	16	16	16	17	18	19	19	20	21	21	21	21	21	21	22	21	21	21.5
3-Dec	22	22	22	22	22	22	23	23	23	23	23	23	24	24	24	23	22	21	20	19	17	15	14	15	23.9
4-Dec	15	18	20	22	25	28	30	28	28	27	28	28	29	29	30	32	33	34	34	34	35	35	36	36	35.9
5-Dec	37	37	38	39	39	39	39	39	39	39	39	39	39	39	39	38	37	36	34	32	29	27	25	23	39.4
6-Dec	21	18	16	14	13	11	11	9	9	8	10	12	14	15	16	18	20	22	22	22	21	21	22	22	21.9
7-Dec	22	22	22	22	22	21	20	19	17	16	15	15	14	14	15	15	17	18	18	19	19	19	19	19	22.2
8-Dec	19	18	18	17	17	17	17	17	17	17	17	18	19	19	20	20	21	21	22	22	22	22	23	23	23.2
9-Dec	24	25	26	26	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	26	26	25	27.2
10-Dec	24	24	24	24	24	23	23	23	24	24	25	25	26	27	28	29	29	29	29	30	30	30	30	30	29.8
11-Dec	30	29	29	29	29	28	28	28	27	27	26	26	26	26	25	25	25	25	25	25	24	24	23	22	29.6
12-Dec	22	21	21	20	20	19	18	18	17	16	16	16	16	16	16	17	17	17	16	16	15	15	15	14	22.0
13-Dec	14	14	13	12	12	10	9	8	7	6	6	6	7	7	7	N	N	N	N	N	N	N	14	14	14.5
14-Dec	13	13	13	14	13	9	6	6	5	5	6	6	7	8	10	11	12	13	14	15	16	16	16	16	16.1
15-Dec	16	16	16	16	17	17	18	19	20	21	21	22	23	23	24	24	25	25	26	26	27	27	28	28	27.9
16-Dec	28	28	29	29	29	29	29	28	28	28	28	28	28	29	29	29	29	29	29	29	29	28	28	28	29.3
17-Dec	28	27	27	27	27	27	26	25	24	24	23	23	23	23	23	23	24	24	24	23	23	23	22	22	27.6
18-Dec	22	22	22	22	22	22	22	21	21	20	19	18	17	17	16	16	16	16	15	15	14	13	13	12	22.2
19-Dec	11	10	10	10	10	10	11	11	12	14	15	16	17	18	19	19	19	20	20	20	21	21	21	21	20.9
20-Dec	21	21	21	21	21	20	20	19	19	19	19	19	19	20	20	20	19	19	18	17	17	16	15	14	20.9
21-Dec	14	14	13	12	11	11	10	10	10	10	10	11	12	13	14	15	15	14	13	13	12	11	10	9	15.0
22-Dec	8	8	7	7	7	7	7	7	7	8	9	10	11	11	12	13	14	14	15	15	14	14	14	13	14.7
23-Dec	13	13	14	14	15	15	16	16	17	17	17	17	17	17	17	16	16	16	16	15	15	15	14	13	17.1
24-Dec	12	12	13	13	13	13	13	13	13	14	14	15	15	16	16	16	16	16	15	14	14	12	12	11	16.1
25-Dec	11	10	10	10	10	9	9	8	7	7	6	6	6	7	8	8	9	10	10	10	10	10	9	10	10.7
26-Dec	11	11	12	13	13	13	13	12	12	11	11	11	11	12	12	13	13	13	13	13	14	14	14	14	13.9
27-Dec	14	15	15	15	15	15	15	16	16	16	16	17	18	18	18	18	18	17	17	16	15	14	13	12	18.3
28-Dec	12	12	11	11	11	11	11	12	12	13	14	15	16	17	19	20	21	21	22	22	22	21	21	21	21.6
29-Dec	21	21	20	20	20	19	19	19	19	18	19	19	19	19	19	19	19	19	17	17	16	15	14	13	20.7
30-Dec	12	11	11	10	9	9	8	8	8	8	8	8	9	10	10	11	10	10	10	9	7	6	5	4	12.4
31-Dec	4	4	3	3	3	3	3	3	3	3	4	5	6	9	11	14	17	18	21	24	25	26	27	27	26.7
	36.5	37.3	38.0	38.7	39.2	39.3	39.4	39.3	39.0	38.8	38.7	38.8	38.9	38.7	38.6	38.2	37.2	36.2	34.4	34.5	34.7	35.1	35.6	35.9	
	Diurnal Maximums																								

N - Not Valid

PASZA
Peace Air Shed Zone Association

Hourly Averages

External Temperature (ET) - °C

Portable-Bonanza - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.0 °C on Dec 5 15:00 Maximum Daily Average: -6.3 °C on Dec 4

Minimum Value: -32 °C on Dec 30 10:00 Minimum Daily Average: -28.0 °C on Dec 30
Maximum Diurnal Average: -14.5 °C at hour 15 Minimum Diurnal Average: -18.4 °C at hour 9
Monthly Average: -17.13 °C Percentiles: P_1 = -30.2 P_{10} = -22.9 Q_1 = -20.5 Median = -17.8 Q_3 = -14.1 P_{90} = -10.1 P_{99} = -2.2

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)																								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-Dec	-3	-2	0	-5	-6	-10	-12	-14	-14	-13	-12	-11	-11	-11	-11	-12	-12	-13	-13	-14	-14	-14	-14	-14	-10.7	-0.2
2-Dec	-14	-14	-14	-14	-14	-14	-14	-14	-14	-15	-15	-15	-14	-14	-14	-14	-14	-13	-13	-16	-16	-17	-16	-15	-14.5	-13.4
3-Dec	-15	-15	-15	-15	-15	-15	-14	-14	-14	-14	-13	-13	-10	-10	-7	-9	-15	-15	-13	-15	-17	-18	-14	-7	-13.5	-7.1
4-Dec	-5	-5	-10	-9	-9	-9	-9	-11	-13	-12	-8	-4	-3	-2	-2	-3	-3	-4	-5	-5	-4	-5	-5	-5	-6.3	-2.3
5-Dec	-5	-4	-4	-4	-4	-5	-6	-7	-10	-8	-5	-2	-1	1	3	-2	-6	-9	-13	-14	-16	-15	-15	-16	-6.9	3.0
6-Dec	-17	-18	-17	-16	-17	-16	-17	-18	-17	-17	-14	-11	-10	-11	-10	-11	-11	-12	-12	-12	-12	-12	-12	-12	-13.7	-9.5
7-Dec	-12	-12	-13	-12	-12	-13	-16	-17	-17	-15	-13	-12	-10	-10	-10	-11	-11	-11	-11	-11	-11	-11	-11	-11	-12.3	-9.5
8-Dec	-11	-12	-12	-12	-12	-12	-12	-12	-13	-14	-14	-15	-15	-15	-15	-15	-15	-16	-16	-16	-16	-16	-16	-17	-14.0	-11.5
9-Dec	-17	-17	-18	-18	-18	-18	-18	-18	-19	-19	-19	-19	-19	-19	-19	-19	-19	-20	-21	-21	-20	-21	-21	-21	-19.0	-17.0
10-Dec	-21	-20	-20	-20	-20	-20	-20	-20	-20	-20	-19	-19	-19	-19	-18	-19	-20	-20	-20	-20	-20	-20	-20	-20	-19.9	-18.4
11-Dec	-20	-20	-20	-19	-19	-19	-19	-19	-19	-19	-18	-18	-18	-17	-17	-17	-18	-19	-20	-20	-20	-19	-19	-20	-18.9	-16.9
12-Dec	-21	-21	-22	-22	-20	-20	-20	-19	-18	-17	-16	-15	-15	-14	-14	-14	-15	-15	-15	-15	-17	-19	-19	-18	-17.6	-13.8
13-Dec	-19	-19	-20	-20	-19	-19	-18	-19	-20	-21	-21	-19	-16	-11	-9	-11	-16	-14	-15	-15	-10	-3	-5	-13	-15.5	-2.9
14-Dec	-13	-13	-13	-14	-16	-16	-17	-17	-17	-16	-16	-15	-15	-13	-12	-11	-11	-11	-12	-14	-16	-17	-18	-18	-14.6	-11.0
15-Dec	-18	-18	-19	-19	-19	-19	-20	-20	-20	-20	-21	-21	-21	-21	-21	-21	-21	-21	-21	-21	-22	-22	-22	-22	-20.4	-18.3
16-Dec	-22	-22	-22	-22	-22	-22	-22	-22	-22	-22	-22	-23	-23	-23	-22	-22	-22	-23	-23	-23	-23	-23	-23	-22	-22.4	-21.9
17-Dec	-22	-22	-22	-21	-21	-21	-23	-25	-22	-21	-21	-20	-20	-20	-20	-20	-20	-20	-21	-20	-21	-20	-20	-20	-21.0	-19.5
18-Dec	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-19	-19	-19	-19	-19	-19	-19	-18	-18	-18	-18	-18	-18	-19.1	-17.6
19-Dec	-18	-18	-17	-17	-17	-17	-16	-16	-16	-16	-17	-17	-17	-18	-18	-18	-18	-18	-17	-17	-17	-17	-17	-16	-17.0	-15.8
20-Dec	-16	-16	-16	-17	-18	-21	-20	-19	-18	-17	-15	-14	-11	-11	-13	-17	-22	-22	-20	-19	-20	-21	-25	-26	-18.1	-11.0
21-Dec	-25	-26	-27	-25	-22	-22	-20	-18	-18	-18	-16	-16	-15	-15	-19	-18	-22	-24	-24	-25	-25	-25	-26	-25	-21.5	-14.6
22-Dec	-26	-27	-26	-25	-23	-23	-24	-23	-23	-22	-20	-19	-18	-19	-19	-18	-18	-19	-19	-19	-19	-18	-18	-17	-20.9	-17.4
23-Dec	-17	-17	-17	-18	-18	-18	-18	-19	-21	-21	-21	-19	-18	-17	-17	-17	-18	-18	-18	-18	-18	-18	-19	-18	-18.3	-16.6
24-Dec	-17	-18	-18	-18	-18	-17	-17	-17	-17	-17	-17	-17	-16	-16	-15	-16	-16	-16	-16	-16	-18	-18	-17	-18	-16.9	-15.4
25-Dec	-18	-17	-17	-17	-16	-15	-14	-12	-12	-11	-10	-9	-7	-8	-8	-7	-8	-8	-9	-8	-8	-8	-8	-8	-11.0	-7.2
26-Dec	-8	-7	-7	-7	-8	-8	-8	-9	-12	-13	-14	-15	-15	-16	-16	-17	-17	-17	-17	-17	-17	-18	-20	-19	-13.4	-7.3
27-Dec	-19	-19	-19	-19	-21	-22	-23	-21	-21	-21	-20	-19	-17	-16	-15	-18	-19	-21	-23	-24	-23	-24	-24	-25	-20.5	-15.2
28-Dec	-25	-26	-27	-26	-25	-23	-23	-23	-25	-23	-21	-20	-20	-20	-20	-21	-22	-23	-23	-22	-22	-22	-22	-23	-22.9	-19.8
29-Dec	-23	-23	-24	-23	-23	-23	-23	-22	-23	-22	-22	-21	-21	-20	-21	-21	-22	-23	-26	-25	-28	-29	-29	-30	-23.6	-19.8
30-Dec	-31	-30	-31	-30	-31	-31	-30	-31	-31	-32	-29	-26	-20	-19	-20	-20	-28	-30	-29	-29	-29	-29	-29	-29	-28.0	-19.0
31-Dec	-29	-28	-28	-26	-23	-23	-23	-24	-26	-25	-20	-19	-17	-11	-12	-15	-12	-11	-9	-11	-14	-13	-12	-16	-18.6	-9.1
	-17.6	-17.6	-17.9	-17.8	-17.7	-17.8	-17.9	-18.1	-18.4	-18.1	-17.0	-16.2	-15.2	-14.6	-14.5	-15.3	-16.5	-16.9	-17.2	-17.5	-17.8	-17.8	-17.8	-18.1	Diurnal Average	
	-3.2	-1.5	-0.2	-3.5	-3.6	-5.1	-5.8	-7.1	-10.1	-8.3	-4.6	-1.9	-0.7	1.0	3.0	-1.6	-2.8	-3.6	-4.9	-5.2	-4.1	-2.9	-4.6	-5.2	Diurnal Maximum	

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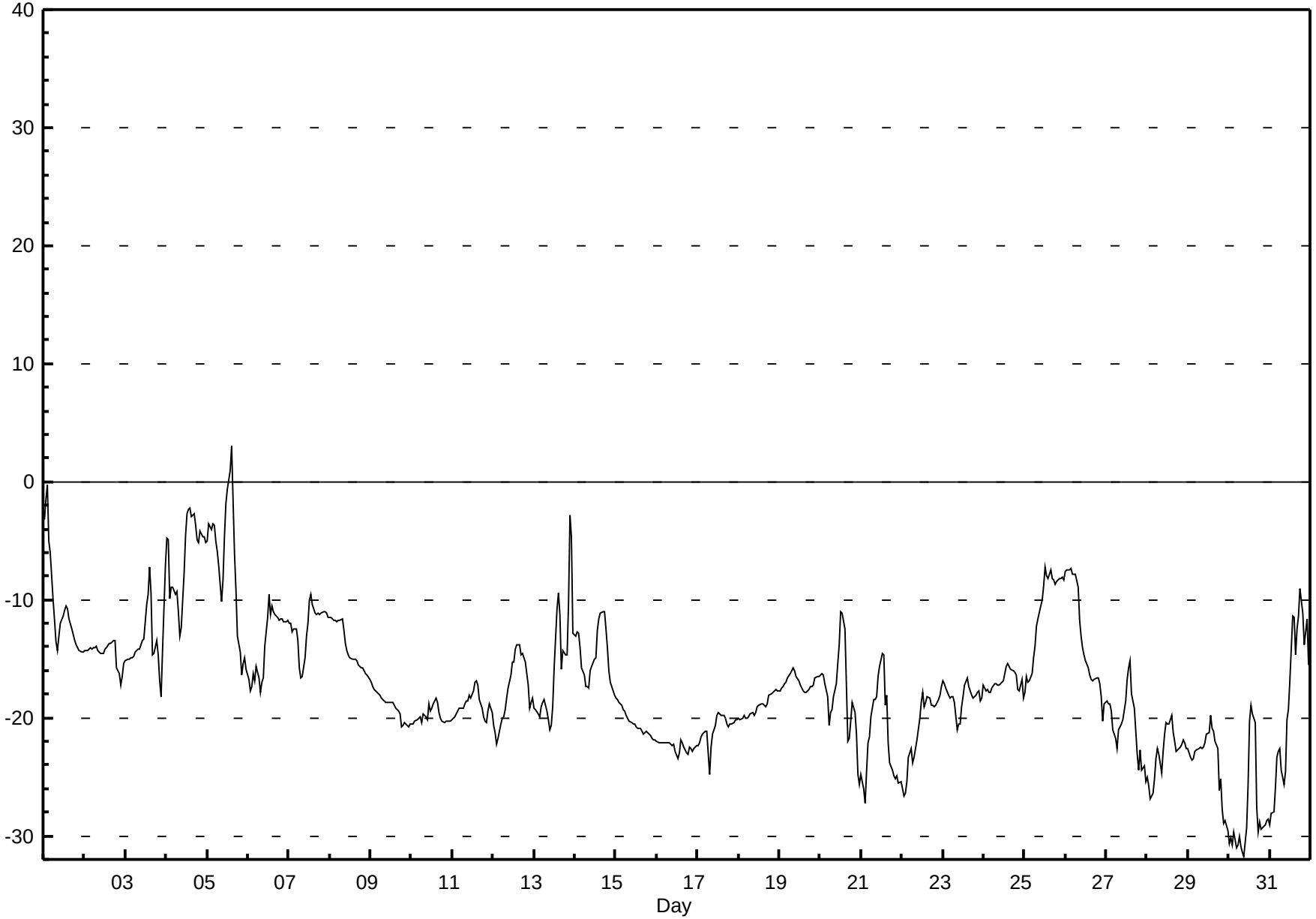
Hourly Averages

External Temperature (ET) - ^{o}C

Portable-Bonanza - December 2010



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Peace Air Shed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Portable-Bonanza - December 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	8	12	9	5	5	8	7	7	4	4	6	7	7	7	7	8	8	6	6	8	8	4	5	4	4.0	12.4
Dir	199	176	195	317	303	35	9	326	261	264	226	240	288	280	302	319	313	320	302	285	294	269	259	283	282	176
2 Spd	3	3	3	1	4	3	4	5	5	6	6	7	8	10	9	8	7	8	8	8	9	9	9	8	6.0	10.5
Dir	257	218	271	343	283	272	264	259	259	280	260	247	256	262	266	271	265	279	267	274	243	232	226	240	258	262
3 Spd	9	10	12	12	11	9	7	8	7	7	7	6	4	5	4	5	8	10	10	5	3	6	8	21	5.6	21.0
Dir	252	248	263	262	248	242	222	228	224	215	214	202	194	165	143	103	107	126	138	152	171	174	204	196	206	196
4 Spd	21	19	12	15	15	12	10	6	5	7	7	11	10	11	10	9	10	9	12	9	11	18	21	17	11.4	20.7
Dir	199	201	229	213	214	215	216	203	162	170	161	170	184	189	183	206	194	209	221	210	192	215	214	207	203	214
5 Spd	19	21	15	20	19	18	14	7	3	11	6	6	6	4	4	3	5	7	2	1	3	4	3	3	7.5	20.9
Dir	212	210	210	211	206	207	199	201	204	176	178	192	186	182	151	136	149	114	182	228	148	91	125	217	195	210
6 Spd	4	3	5	2	4	6	4	5	5	4	11	9	6	7	11	13	12	11	8	10	10	10	6	10	5.6	12.6
Dir	139	223	140	168	203	178	130	226	169	207	188	182	213	245	256	259	267	262	249	250	266	267	270	260	234	259
7 Spd	9	8	7	7	4	1	4	4	5	1	1	6	7	7	7	8	9	7	8	8	8	6	8	12	2.8	12.0
Dir	267	258	241	258	286	227	168	114	117	80	325	28	40	26	89	81	47	64	98	72	72	80	50	38	60	38
8 Spd	9	8	7	5	5	7	6	7	17	16	16	13	15	18	18	19	19	19	18	18	19	20	19	21	12.6	20.7
Dir	38	30	25	350	298	313	263	262	301	292	286	272	274	279	280	280	287	288	293	289	294	298	298	297	293	297
9 Spd	19	19	19	17	15	14	14	14	13	12	11	11	9	8	8	8	7	6	7	7	8	8	6	6	9.7	19.3
Dir	300	303	306	309	310	308	304	311	308	307	302	310	297	292	279	277	287	253	238	222	237	223	214	209	292	300
10 Spd	6	5	3	3	3	1	3	4	10	9	4	12	13	12	9	11	12	16	16	14	12	11	11	13	7.7	16.1
Dir	213	202	189	165	197	219	10	36	111	97	88	110	109	102	81	86	96	108	111	105	98	92	95	105	105	108
11 Spd	13	14	13	11	9	13	13	12	13	12	13	12	14	12	12	13	16	17	14	13	8	5	5	4	11.5	17.4
Dir	102	113	120	111	97	112	111	112	118	110	101	100	94	97	96	107	113	116	102	112	106	61	85	56	106	116
12 Spd	7	4	6	8	6	3	2	3	2	5	5	4	3	5	5	5	3	5	9	4	3	2	5	6	2.0	8.6
Dir	71	31	53	42	51	98	69	215	285	22	47	74	272	78	14	27	52	119	125	181	257	178	196	188	75	125
13 Spd	5	5	6	4	3	2	4	3	1	1	1	6	1	3	4	6	4	6	3	4	7	12	9	2	2.1	12.2
Dir	183	183	193	160	235	196	156	149	78	238	169	32	73	32	23	53	311	116	224	178	153	143	147	333	148	143
14 Spd	5	5	3	5	3	5	4	4	3	5	1	1	3	6	3	1	5	13	16	16	17	16	18	19	5.3	19.1
Dir	10	5	25	211	214	111	233	211	182	192	124	230	204	217	304	270	236	297	289	274	274	287	282	270	272	270
15 Spd	19	22	23	22	25	27	25	23	25	21	24	22	28	27	27	26	24	23	22	24	22	20	19	18	22.9	27.6
Dir	273	280	279	282	287	293	292	291	289	292	292	290	296	297	300	302	294	294	298	301	304	296	300	302	293	296
16 Spd	20	20	19	18	20	18	16	16	14	13	13	12	11	12	14	13	11	9	7	8	6	4	4	3	11.8	20.3
Dir	303	304	306	305	301	293	293	289	287	285	285	276	261	260	284	275	261	264	244	264	281	262	222	221	285	301
17 Spd	3	3	3	4	6	6	5	3	3	5	4	4	5	6	7	7	6	5	5	5	5	6	5	5	4.0	7.2
Dir	170	149	75	44	44	37	48	84	56	38	20	16	2	356	1	14	18	348	338	353	349	6	1	350	18	14
18 Spd	4	6	5	6	6	6	5	4	5	6	6	6	6	7	6	4	4	3	3	6	7	6	4	4	4.8	7.4
Dir	344	341	332	335	307	305	287	328	340	322	331	339	337	333	327	304	273	265	333	5	5	2	325	296	328	333
19 Spd	4	5	4	4	5	6	8	9	9	12	11	11	12	14	15	13	12	11	10	8	7	10	9	8	8.3	14.8
Dir	232	213	214	194	211	222	222	225	259	283	279	275	267	261	262	266	260	270	272	258	239	231	230	226	252	262
20 Spd	9	9	9	9	8	6	8	9	10	8	12	9	7	8	8	3	3	6	15	14	13	5	3	2	5.2	14.6
Dir	209	204	200	197	183	142	123	128	133	124	137	123	55	42	31	345	63	102	126	121	120	125	275	14	132	126
21 Spd	4	3	2	3	2	3	3	3	5	4	3	5	9	10	7	4	5	3	4	3	1	3	1	2	2.2	9.5
Dir	130	244	300	149	292	272	16	33	30	46	90	26	9	16	27	359	15	20	349	290	39	245	12	254	12	16
22 Spd	2	1	1	1	2	3	3	1	5	2	2	3	3	8	5	5	5	4	6	4	6	6	8	8	3.0	8.4
Dir	226	22	207	121	245	342	246	120	219	265	329	4	343	243	248	266	226	222	204	205	237	224	226	220	236	226

PASZA
Peace Air Shed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Portable-Bonanza - December 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
23 Spd	10	10	11	14	11	9	11	9	9	7	3	8	6	5	3	6	2	3	1	2	1	4	3	2	4.2	13.9
Dir	277	301	277	268	268	272	280	271	250	255	171	197	186	188	203	214	165	180	173	55	22	38	60	101	257	268
24 Spd	10	8	11	12	10	8	8	9	7	7	8	9	7	5	7	5	5	5	3	4	4	8	5	3	6.2	12.2
Dir	101	108	105	107	106	64	72	94	88	96	103	111	94	77	23	89	55	47	95	53	50	130	114	350	90	107
25 Spd	3	3	4	3	6	5	7	4	1	4	7	4	3	7	7	3	2	6	6	4	4	6	9	11	2.7	10.5
Dir	291	317	297	258	204	168	160	237	54	354	1	26	1	15	21	36	315	9	332	346	29	339	2	37	357	37
26 Spd	9	8	8	6	7	8	7	16	20	17	14	12	14	17	18	19	16	16	15	14	15	13	10	15	9.8	20.0
Dir	60	45	49	28	11	7	357	318	297	290	289	280	264	260	260	264	269	272	275	281	263	279	274	267	287	297
27 Spd	14	14	14	11	11	9	10	11	7	7	5	5	4	4	4	6	5	2	2	4	5	2	3	4	4.2	14.1
Dir	273	263	261	273	292	273	251	290	295	247	220	210	233	331	14	43	22	14	53	188	209	133	142	34	272	273
28 Spd	6	4	5	4	3	5	9	12	11	14	13	13	13	11	10	11	11	11	7	8	11	9	9	9	7.1	13.8
Dir	20	150	312	99	142	193	223	247	238	230	245	280	277	261	286	279	259	255	235	213	216	216	208	197	243	230
29 Spd	10	9	9	10	9	9	9	10	9	11	8	9	9	10	9	8	8	6	6	6	4	6	2	1	7.3	10.8
Dir	209	198	196	197	209	212	206	215	209	211	211	212	212	208	209	205	194	189	149	149	159	152	123	134	199	211
30 Spd	1	2	2	3	6	1	N	N	N	N	N	N	N	N	N	N	N	N	4	1	2	0	2	N	--	6.0
Dir	133	61	239	213	76	44	N	N	N	N	N	N	N	N	N	N	N	N	71	131	181	78	1	N	--	76
31 Spd	N	N	N	N	N	N	N	N	2	3	3	1	4	2	1	4	4	8	11	3	3	6	9	4	--	11.1
Dir	N	N	N	N	N	N	N	N	16	84	205	283	77	150	95	94	173	183	186	166	223	179	190	226	--	186
Spd	3.1	3.4	3.4	3.1	3.5	2.7	2.9	3.5	3.0	3.0	2.7	2.2	2.8	3.3	3.5	3.1	2.7	2.2	2.3	2.4	2.8	2.7	2.9	3.4	Diurnal Average	
Dir	245	245	256	252	260	263	250	262	266	262	255	254	271	275	293	287	273	258	242	250	252	245	245	254		
Spd	20.5	21.6	23.3	21.5	24.5	26.8	24.7	22.9	24.6	20.6	24.2	21.9	27.6	26.9	26.9	26.3	23.7	22.7	22.2	23.8	22.0	20.5	20.7	21.0	Diurnal Maximum	
Dir	199	280	279	282	287	293	292	291	289	292	292	290	296	297	300	302	294	294	298	301	304	298	214	196		

Maximum Speed Value: 28 km/h on Dec 15 13:00
Minimum Speed Value: 0 km/h on Dec 30 22:00
Maximum Daily Speed Average: 22.9 km/h on Dec 15
Minimum Daily Speed Average: 2.0 km/h on Dec 21
Maximum Diurnal Speed Average: 3.5 km/h at hour 15
Minimum Diurnal Speed Average: 2.2 km/h at hour 18

Monthly Average Velocity: 2.86 km/h 259.4 deg
Speed Percentiles: P_1 = 0.9 P_{10} = 2.7 Q_1 = 4.1 Median = 6.8 Q_3 = 10.7 P_{90} = 16.1 P_{99} = 24.6
All monthly, daily, and diurnal averages have been calculated using vector methods

Hours in Service:	744
Hours of Data:	723
Hours of Missing Data:	21
Percent Operational Time:	97.2

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	33	30	0	0	0	0	63
NorthEast	31	33	1	0	0	0	65
East	25	29	25	0	0	0	79
SouthEast	28	21	10	0	0	0	59
South	31	42	6	2	0	0	81
SouthWest	43	73	13	5	0	0	134
West	28	60	60	13	0	0	161
NorthWest	18	22	18	23	0	0	81
Total	237	310	133	43	0	0	723

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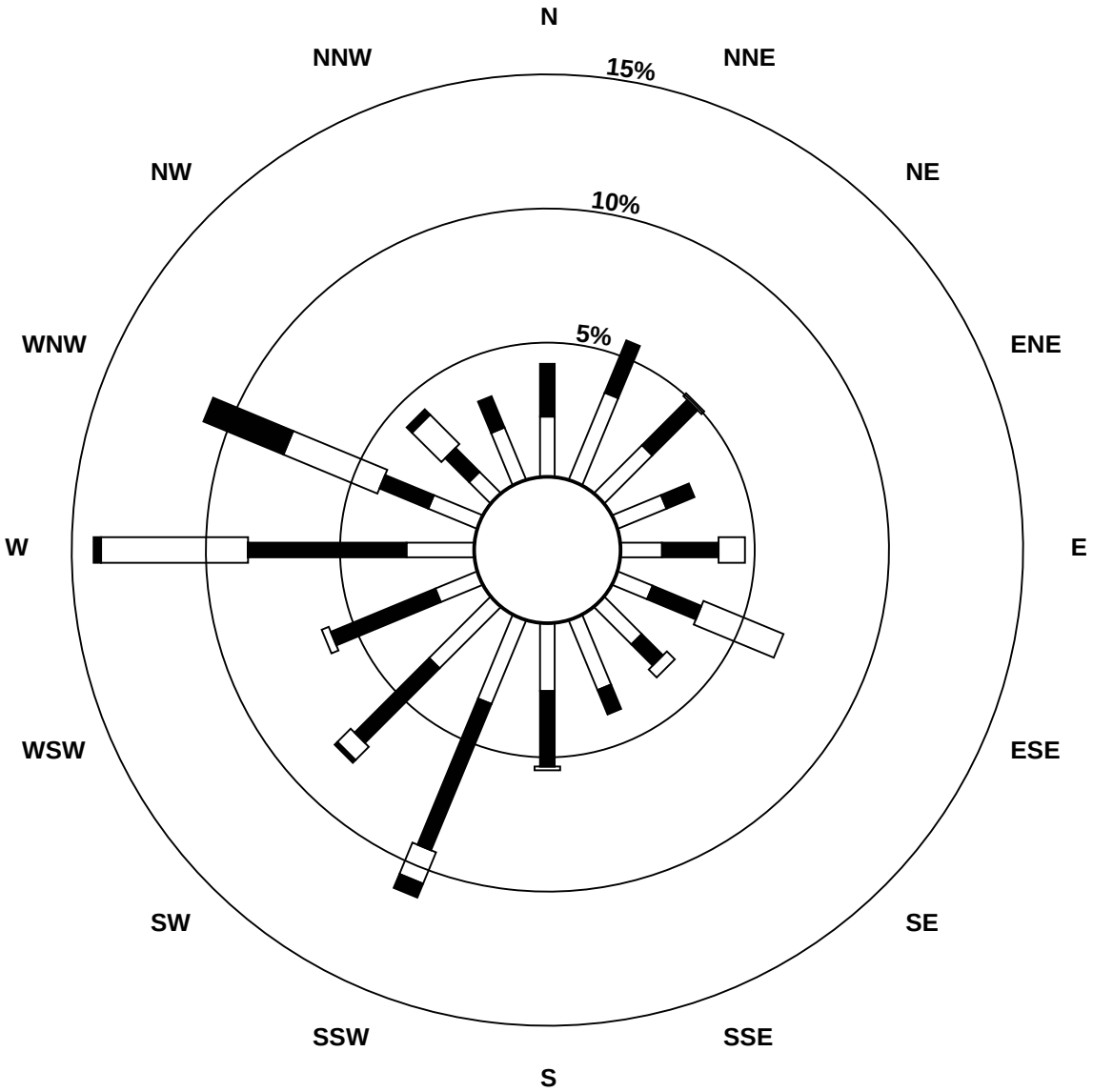
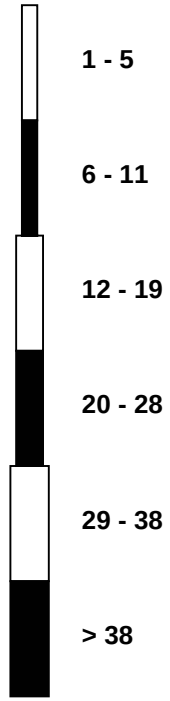
Wind Rose

Wind Speed (WS) (km/h)

Portable-Bonanza - December 2010



Wind Speed Classes (km/h)



PASZA
Peace Air Shed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Portable-Bonanza - December 2010

Maximum Speed: 28 km/h on Dec 15 13:00

Maximum Daily Speed Average: 23.2 km/h on Dec 15

Minimum Speed: 2 km/h on Dec 30 22:00

Minimum Daily Speed Average: 4.6 km/h on Dec 22

Maximum Diurnal Speed Average: 9.3 km/h at hour 14

Minimum Diurnal Speed Average: 8.1 km/h at hour 6

Monthly Average Speed: 8.61 km/h

Percentiles: P_1 = 2.3 P_{10} = 3.7 Q_1 = 4.8 Median = 7.2 Q_3 = 11.0 P_{90} = 16.0 P_{99} = 24.7

Hours in Service:	744
Hours of Data:	723
Hours of Missing Data:	21
Percent Operational Time:	97.2

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-Dec	8	12	10	6	8	8	7	7	4	4	6	7	7	8	7	8	8	6	6	8	8	4	5	4	6.9	12.4
2-Dec	3	3	4	3	4	3	4	6	5	6	6	7	8	11	9	8	7	9	8	8	9	9	9	8	6.5	10.6
3-Dec	9	10	12	12	11	9	7	8	7	7	7	6	4	5	5	6	8	10	10	6	6	6	8	21	8.4	21.0
4-Dec	21	19	13	15	15	12	10	7	5	8	8	11	10	11	10	9	10	9	12	11	12	18	21	17	12.2	20.7
5-Dec	19	21	15	21	19	18	14	8	4	11	8	7	7	5	4	4	5	7	4	3	4	5	4	3	9.1	21.0
6-Dec	5	4	6	4	6	6	4	6	6	4	11	9	6	7	11	13	13	11	9	10	10	10	6	10	7.7	12.6
7-Dec	9	8	7	7	4	3	4	4	5	2	2	6	7	7	8	8	9	7	8	8	8	7	9	12	6.7	12.0
8-Dec	9	8	7	5	5	8	7	8	17	17	16	13	15	18	18	19	19	19	18	18	19	21	20	21	14.3	20.8
9-Dec	19	19	19	17	15	14	14	14	13	12	11	11	9	8	8	8	7	6	7	7	8	8	6	6	11.1	19.3
10-Dec	6	5	3	3	3	2	3	4	10	9	5	12	13	12	9	11	13	16	16	14	12	11	12	13	9.1	16.1
11-Dec	13	14	13	11	9	14	13	12	13	13	14	12	14	12	12	13	16	17	15	13	8	5	5	4	11.9	17.5
12-Dec	8	4	6	8	6	3	3	3	2	5	5	4	3	7	5	5	4	6	9	6	5	3	5	7	5.2	8.7
13-Dec	5	5	6	4	4	3	4	3	4	3	3	6	6	3	5	6	6	7	6	7	8	12	12	6	5.6	12.4
14-Dec	6	6	4	6	4	5	4	5	3	5	4	3	4	8	5	4	6	13	17	16	17	17	18	19	8.2	19.2
15-Dec	19	22	23	22	25	27	25	23	25	21	24	22	28	27	27	26	24	23	22	24	22	20	19	18	23.2	27.7
16-Dec	20	20	19	18	20	18	16	16	14	13	13	12	11	12	14	13	11	9	7	8	6	4	4	3	12.6	20.5
17-Dec	3	3	3	5	6	6	6	3	4	5	4	4	6	6	7	7	6	5	5	5	5	6	5	5	5.1	7.2
18-Dec	4	6	5	6	6	6	5	5	6	6	6	6	6	7	6	5	4	3	4	6	7	6	4	4	5.3	7.4
19-Dec	5	5	4	4	5	6	8	9	10	12	11	11	12	14	15	13	12	11	10	8	7	10	9	8	9.1	14.8
20-Dec	9	9	9	9	8	6	8	9	10	8	12	9	7	8	8	4	3	7	15	14	13	6	3	3	8.2	14.6
21-Dec	6	4	4	6	4	4	5	4	5	6	5	5	9	10	7	4	5	4	4	4	4	4	4	3	4.9	9.7
22-Dec	2	2	2	5	3	4	4	3	5	3	2	3	4	8	6	6	5	5	6	4	6	7	9	8	4.6	8.7
23-Dec	10	11	11	14	11	9	11	9	9	7	5	9	6	5	3	6	3	5	3	4	2	4	4	3	6.9	14.0
24-Dec	10	8	11	12	10	8	8	9	7	7	8	9	8	6	7	6	5	5	4	5	4	8	8	5	7.4	12.4
25-Dec	4	7	4	3	7	6	8	6	4	5	7	5	4	8	8	4	3	6	6	5	5	6	9	11	5.8	11.0
26-Dec	9	9	8	6	7	8	7	16	20	17	14	12	14	17	18	19	16	16	15	14	15	13	10	15	13.1	20.1
27-Dec	14	14	14	11	11	10	11	11	7	7	5	5	4	4	4	6	5	3	4	6	6	3	7	6	7.4	14.2
28-Dec	6	5	7	5	4	5	9	12	11	14	14	14	13	11	11	12	11	11	7	8	11	9	9	9	9.5	13.8
29-Dec	10	9	9	10	10	9	9	10	9	11	8	9	9	10	9	8	8	7	6	6	5	7	6	3	8.1	10.8
30-Dec	6	4	4	4	7	4	N	N	N	N	N	N	N	N	N	N	N	N	4	2	2	2	2	N	--	6.8
31-Dec	N	N	N	N	N	N	N	N	3	4	4	3	5	4	2	4	4	8	11	4	6	7	9	4	--	11.2
	9.2	9.2	8.7	8.7	8.6	8.1	8.2	8.3	8.3	8.3	8.2	8.4	8.6	9.3	8.9	8.9	8.6	9.0	9.0	8.5	8.3	8.3	8.4	8.6	Diurnal Average	
	20.6	21.7	23.4	21.6	24.6	26.9	24.8	23.0	24.7	20.7	24.3	22.0	27.7	26.9	27.0	26.4	23.9	22.8	22.3	23.8	22.0	20.6	20.7	21.0	Diurnal Maximum	

N - Not Valid

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

PASZA
Peace Air Shed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Portable-Bonanza - December 2010

Maximum Value: 93.8 deg on Dec 13 13:00

Minimum Value: 1.6 deg on Dec 5 05:00

Percentiles: P_1 = 2.8 P_{10} = 5.0 Q_1 = 6.8 Median = 12.0 Q_3 = 27.1 P_{90} = 56.0 P_{99} = 88.9

Hours in Service:	744
Hours of Data:	723
Hours of Missing Data:	21
Hours of Calibration:	0
Percent Operational Time:	97.2

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-Dec	21	5	22	39	58	11	16	20	23	13	9	11	25	21	8	13	13	12	10	8	7	16	21	13	58.0
2-Dec	22	13	24	67	9	10	12	14	7	13	17	12	9	7	7	9	7	8	11	11	7	5	3	12	67.5
3-Dec	7	7	7	5	5	9	12	4	5	8	6	6	15	18	63	27	9	7	3	22	64	19	8	4	64.0
4-Dec	3	3	17	4	4	6	7	25	29	17	28	6	20	5	8	12	7	18	10	31	15	17	5	8	31.5
5-Dec	6	6	11	4	2	3	6	44	75	7	53	20	34	70	33	53	10	14	62	70	34	46	56	39	74.7
6-Dec	59	53	32	60	44	23	58	29	22	19	7	8	18	10	4	5	7	6	11	6	8	6	14	7	60.3
7-Dec	11	9	9	16	27	77	26	11	29	94	79	18	9	8	19	12	10	16	19	13	15	18	16	4	93.7
8-Dec	8	6	7	27	22	15	34	12	10	7	6	8	7	6	5	5	7	5	5	6	6	4	5	5	34.4
9-Dec	4	5	4	5	5	3	4	5	4	6	7	7	11	11	14	12	14	8	7	8	6	6	6	7	13.7
10-Dec	5	7	21	16	14	43	37	19	10	21	27	8	6	7	13	16	9	4	5	6	9	9	9	8	42.8
11-Dec	8	7	6	14	15	6	9	7	4	8	10	7	8	9	9	7	4	3	11	6	16	18	20	24	23.5
12-Dec	31	27	11	5	16	28	87	20	26	33	14	40	51	49	22	16	35	50	8	52	57	44	14	11	87.1
13-Dec	14	16	19	39	46	46	23	32	91	65	90	31	94	32	54	26	71	43	61	55	47	4	73	82	93.8
14-Dec	22	41	36	30	46	43	32	33	47	17	76	83	27	54	61	68	37	10	7	9	6	11	8	6	83.3
15-Dec	5	6	6	5	5	5	6	5	5	6	6	6	5	4	5	4	8	5	4	4	4	7	9	7	8.6
16-Dec	7	4	5	3	8	5	6	6	6	6	7	6	6	6	9	7	5	4	4	15	12	14	10	13	15.2
17-Dec	20	19	46	13	9	7	11	63	36	7	10	15	9	10	7	7	9	13	16	19	17	8	15	11	63.4
18-Dec	15	13	10	9	10	10	10	21	10	9	10	6	7	6	10	25	9	17	23	10	7	9	14	15	25.4
19-Dec	17	8	10	7	10	4	5	6	17	6	7	7	8	6	5	5	4	5	6	11	6	5	4	8	17.4
20-Dec	4	6	3	5	10	13	4	5	5	11	3	11	20	9	20	38	52	26	4	5	5	55	28	49	55.2
21-Dec	50	23	72	54	63	50	71	68	14	46	49	35	8	9	14	25	15	56	23	31	87	42	92	53	92.4
22-Dec	64	76	65	79	64	55	30	79	17	35	43	45	49	12	15	35	11	15	10	22	8	12	17	10	78.9
23-Dec	13	13	12	7	6	8	9	8	7	12	55	10	7	12	53	17	79	71	86	83	69	32	81	73	86.4
24-Dec	11	14	10	12	9	19	22	12	17	18	18	12	27	33	19	30	29	19	53	29	35	18	59	64	64.4
25-Dec	43	69	19	25	34	39	23	59	87	49	12	33	41	32	18	54	32	13	11	22	35	10	13	17	86.6
26-Dec	8	14	16	12	10	8	18	11	7	7	9	8	9	6	4	6	6	9	7	9	6	7	17	5	17.9
27-Dec	7	7	9	13	10	19	23	9	16	9	10	16	34	31	17	12	18	58	59	70	20	72	76	47	75.6
28-Dec	26	44	70	29	51	8	20	6	5	2	17	6	7	8	24	24	5	5	13	8	4	4	11	6	70.0
29-Dec	3	8	3	4	6	3	5	5	4	2	4	4	5	4	2	6	6	12	11	12	42	23	85	93	92.5
30-Dec	86	86	67	50	28	86	N	N	N	N	N	N	N	N	N	N	N	N	8	72	41	92	26	N	91.8
31-Dec	N	N	N	N	N	N	N	N	40	44	25	76	22	62	76	10	33	9	8	61	63	14	11	36	76.1
	85.9	85.9	71.9	78.9	63.8	85.7	87.1	78.7	91.4	93.7	90.0	83.3	93.8	69.8	76.1	67.6	78.6	71.3	86.4	83.3	87.1	91.8	92.4	92.5	

N - Not Valid

PASZA
Valleyview Station
Monthly Summary Tables, Graphs and Roses

PASZA
Peace Air Shed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Valleyview - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 10.9 ppb on Dec 24 13:00
Maximum Daily Average: 3.1 ppb on Dec 24

Minimum Value: 0 ppb on Dec 1 19:00
Minimum Daily Average: 0.0 ppb on Dec 3
Maximum Diurnal Average: 1.3 ppb at hour 13
Minimum Diurnal Average: 0.3 ppb at hour 2
Monthly Average: 0.65 ppb
Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.1$ Median = 0.3 $Q_3 = 0.6$ $P_{90} = 1.5$ $P_{99} = 6.3$

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	34
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-Dec	A	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
2-Dec	A	0	0	0	0	0	0	0	0	0	1	7	4	3	2	0	0	0	0	0	0	0	0	0	0.8	7.0
3-Dec	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
4-Dec	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
5-Dec	A	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0.3	0.9
6-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
7-Dec	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
8-Dec	A	0	0	0	0	0	1	0	0	3	4	3	0	1	0	0	0	0	0	0	0	0	0	0	0.7	4.4
9-Dec	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
10-Dec	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
11-Dec	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-Dec	A	0	0	0	0	0	3	7	6	4	5	2	2	2	2	2	2	2	2	1	1	2	1	1	2.1	6.6
13-Dec	A	1	1	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0.6	1.0
14-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0.2	0.5
15-Dec	A	0	0	0	0	0	1	1	P	P	P	1	1	1	C	C	C	2	0	1	1	0	0	1	--	1.5
16-Dec	A	1	1	1	1	1	0	0	0	1	1	1	3	3	1	1	0	0	0	1	1	0	0	0	0.8	3.4
17-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	1	1	0.3	0.6
18-Dec	A	0	0	0	1	1	1	1	1	1	1	1	1	1	4	2	1	1	0	0	0	0	0	0	0.7	3.6
19-Dec	A	0	0	0	0	1	0	0	1	1	1	6	6	5	8	2	1	3	3	8	8	1	1	1	2.5	8.1
20-Dec	A	0	1	0	0	0	0	0	0	0	1	1	1	2	2	3	2	1	0	0	0	0	0	0	0.8	2.6
21-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0.4	1.2
22-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0.3	0.9
23-Dec	A	0	0	1	1	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0.5	1.3
24-Dec	A	0	0	0	0	0	0	0	0	1	6	8	11	4	3	2	2	3	6	6	5	4	4	4	3.1	10.9
25-Dec	A	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	1	1	1	1	1	1	0	0	2.2	3.3
26-Dec	A	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	0.4	0.6
27-Dec	A	1	1	1	1	1	1	1	1	1	1	1	1	1	2	4	2	1	1	1	0	0	0	0	1.0	3.6
28-Dec	A	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	1	0	0	0.3	0.7
29-Dec	A	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0.2	0.8
30-Dec	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	0.7
31-Dec	A	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.3	1.4
	--	0.3	0.3	0.3	0.3	0.4	0.5	0.6	0.5	0.6	1.0	1.3	1.3	1.1	1.2	0.9	0.6	0.6	0.6	0.7	0.7	0.4	0.4	0.4	Diurnal Average	
	--	2.9	3.3	3.2	2.7	3.0	3.0	6.6	5.9	4.3	5.9	8.0	10.9	5.1	8.1	3.6	2.1	3.3	5.9	7.6	7.7	3.9	3.8	4.2	Diurnal Maximum	

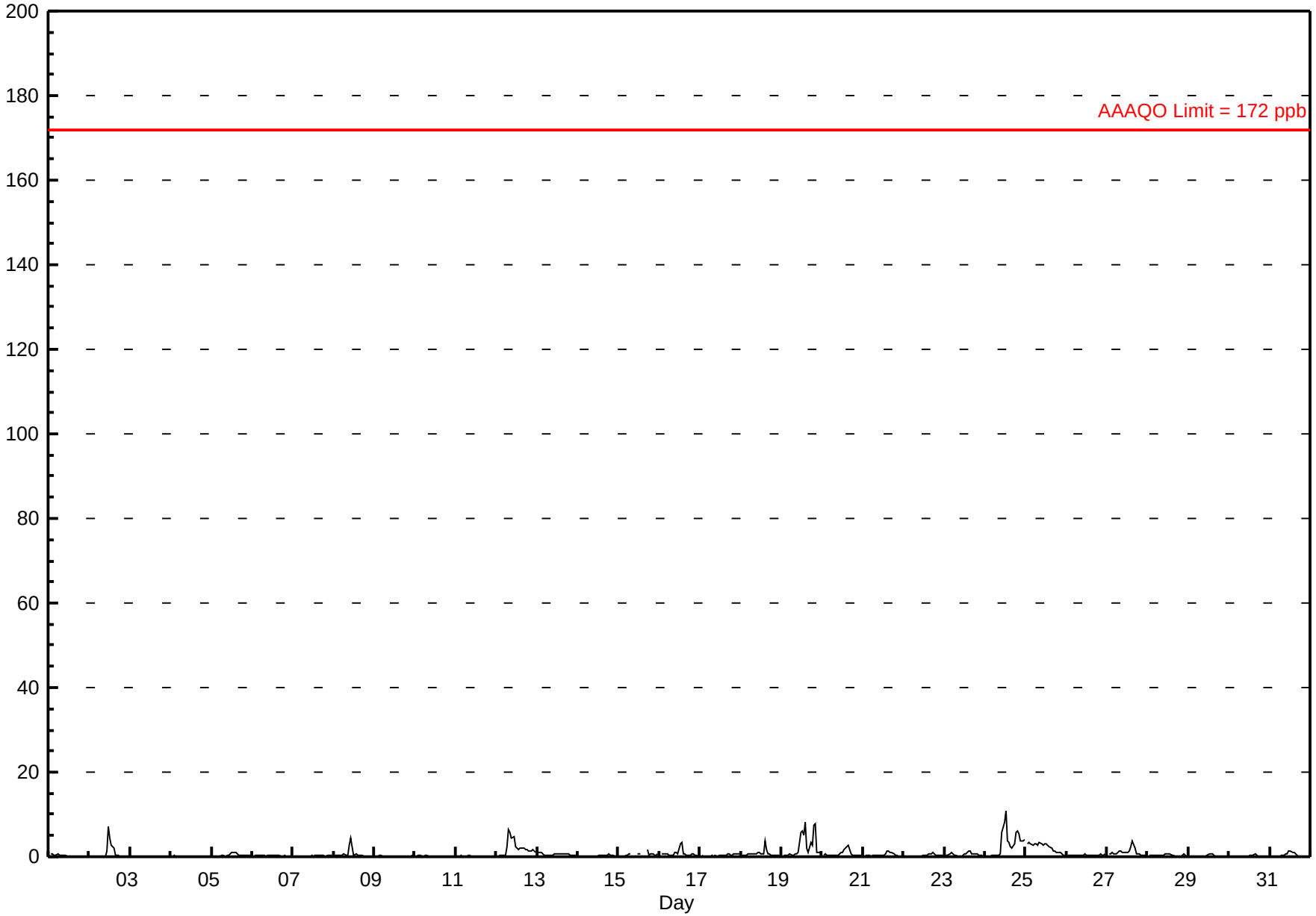
C - Calibration P - Power Failure A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

PASZA
Peace Air Shed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Valleyview - December 2010



PASZA
Peace Air Shed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Valleyview - December 2010

Maximum Value: 23.9 ppb on Dec 19 20:00

Maximum Daily Average: 6.5 ppb on Dec 19

Minimum Value: 0 ppb on Dec 12 00:00

Minimum Daily Average: 0.5 ppb on Dec 4

Maximum Diurnal Average: 2.9 ppb at hour 13

Minimum Diurnal Average: 0.8 ppb at hour 2

Monthly Average: 1.44 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.4$ $Q_1 = 0.6$ Median = 0.8 $Q_3 = 1.1$ $P_{90} = 2.5$ $P_{99} = 16.1$

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	34
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-Dec	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	1	0	0.7	1.1
2-Dec	A	0	1	1	1	1	0	1	0	1	7	13	9	4	4	1	1	1	1	1	1	1	1	1	2.0	12.7
3-Dec	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	0	0.5	0.6
4-Dec	A	0	1	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0.5	0.8
5-Dec	A	1	0	0	0	0	0	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	0.8	1.6
6-Dec	A	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	0.7	1.0
7-Dec	A	1	0	1	1	0	1	1	0	1	1	1	0	1	1	1	1	0	1	0	1	1	0	1	0.6	0.9
8-Dec	A	1	1	1	1	1	2	2	0	12	13	13	1	2	1	1	1	1	1	1	1	1	1	1	2.5	13.5
9-Dec	A	1	0	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	1	1	1	0.5	1.0
10-Dec	A	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	1	1	1	0	1	0	1	1	0.6	0.8
11-Dec	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0	1	0	0	0.6	1.2
12-Dec	A	1	1	1	1	1	7	7	7	6	7	3	3	2	3	2	2	2	2	2	2	2	2	1	2.9	7.3
13-Dec	A	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1.1	1.9
14-Dec	A	1	0	0	1	0	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0.7	0.9
15-Dec	A	0	0	0	1	1	2	1	P	P	P	1	1	1	C	C	C	3	1	1	1	1	1	1	--	2.6
16-Dec	A	1	1	1	1	2	1	1	1	4	10	9	18	17	1	1	1	1	1	1	1	1	1	1	3.3	17.6
17-Dec	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
18-Dec	A	1	1	1	1	1	1	1	1	1	2	2	1	2	5	3	1	1	1	1	1	1	1	1	1.4	5.5
19-Dec	A	1	1	1	1	1	1	1	1	1	2	13	18	18	18	7	3	7	7	24	20	2	1	1	6.5	23.9
20-Dec	A	1	1	1	1	1	1	1	1	1	1	1	2	3	5	3	2	2	1	1	1	1	1	1	1.4	4.8
21-Dec	A	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1	1	1	0.9	1.9
22-Dec	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	0.8	1.5
23-Dec	A	0	1	1	1	1	1	1	0	0	0	1	1	1	2	2	1	1	1	1	1	1	1	0	1.0	2.0
24-Dec	A	1	0	0	1	0	1	1	1	2	8	12	14	5	4	3	3	5	7	7	7	5	5	5	4.1	14.3
25-Dec	A	4	4	4	3	4	4	4	5	4	4	4	4	3	3	3	2	2	2	1	1	1	1	1	2.9	4.7
26-Dec	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	1.3
27-Dec	A	1	1	2	1	1	1	2	2	2	2	1	1	3	6	5	3	1	1	1	1	1	1	1	1.9	5.9
28-Dec	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
29-Dec	A	0	0	0	0	0	0	0	0	1	1	1	1	2	1	1	0	1	1	0	0	0	0	0	0.6	1.9
30-Dec	A	0	0	1	0	0	1	0	1	0	0	1	1	1	1	1	1	1	1	1	1	0	1	0	0.6	1.2
31-Dec	A	1	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1	0	0	0	1	0	0	0.8	2.2
	--	0.8	0.8	0.9	0.8	0.9	1.1	1.1	1.1	1.5	2.3	2.9	2.9	2.5	2.3	1.6	1.2	1.3	1.2	1.7	1.6	0.9	0.9	0.8	Diurnal Average	
	--	3.6	4.1	3.6	3.3	4.1	6.8	7.3	6.8	12.2	12.7	13.5	17.7	17.7	17.9	6.7	2.9	7.5	7.0	23.9	20.4	4.6	4.6	4.6	Diurnal Maximum	

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

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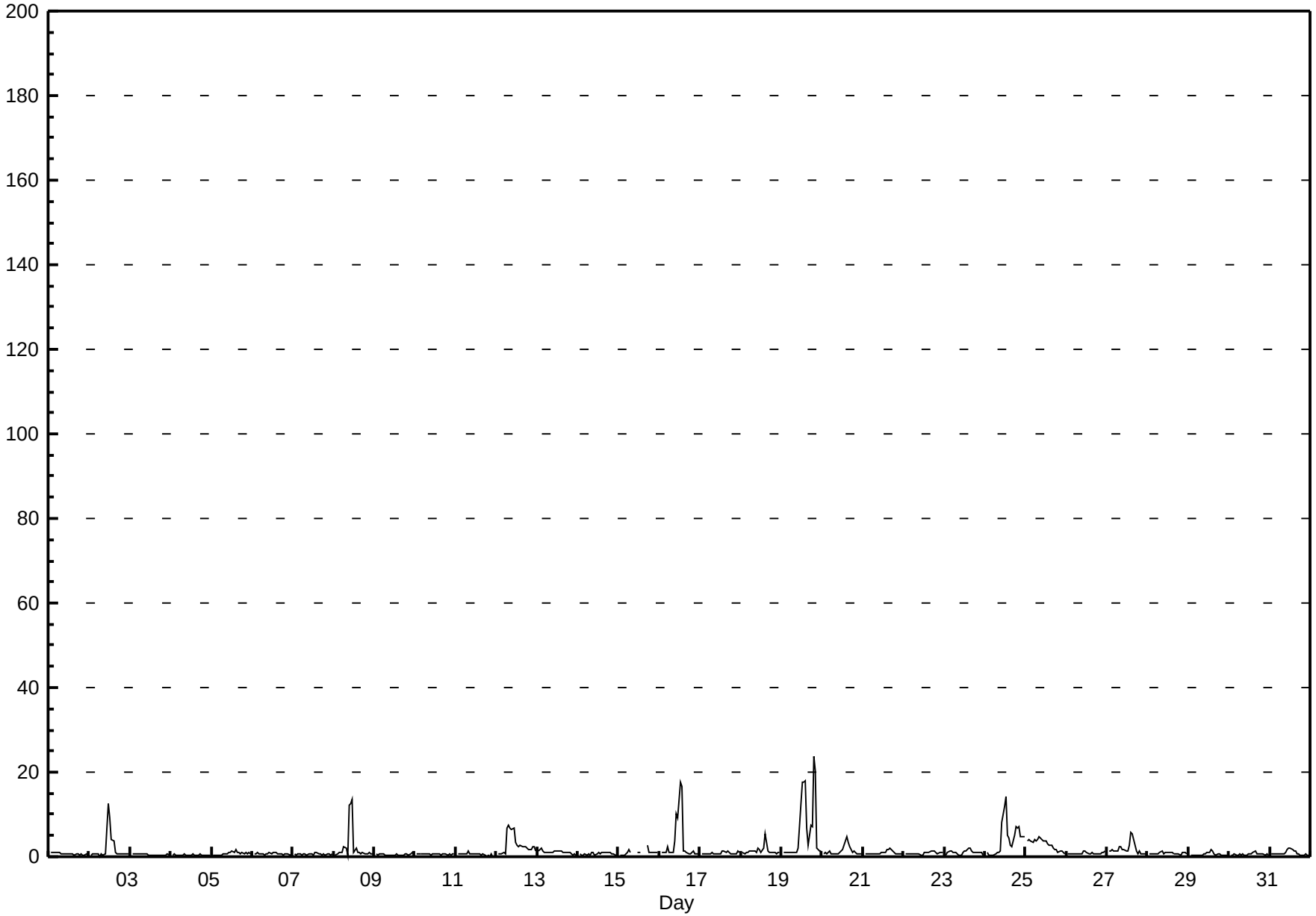
Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Valleyview - December 2010



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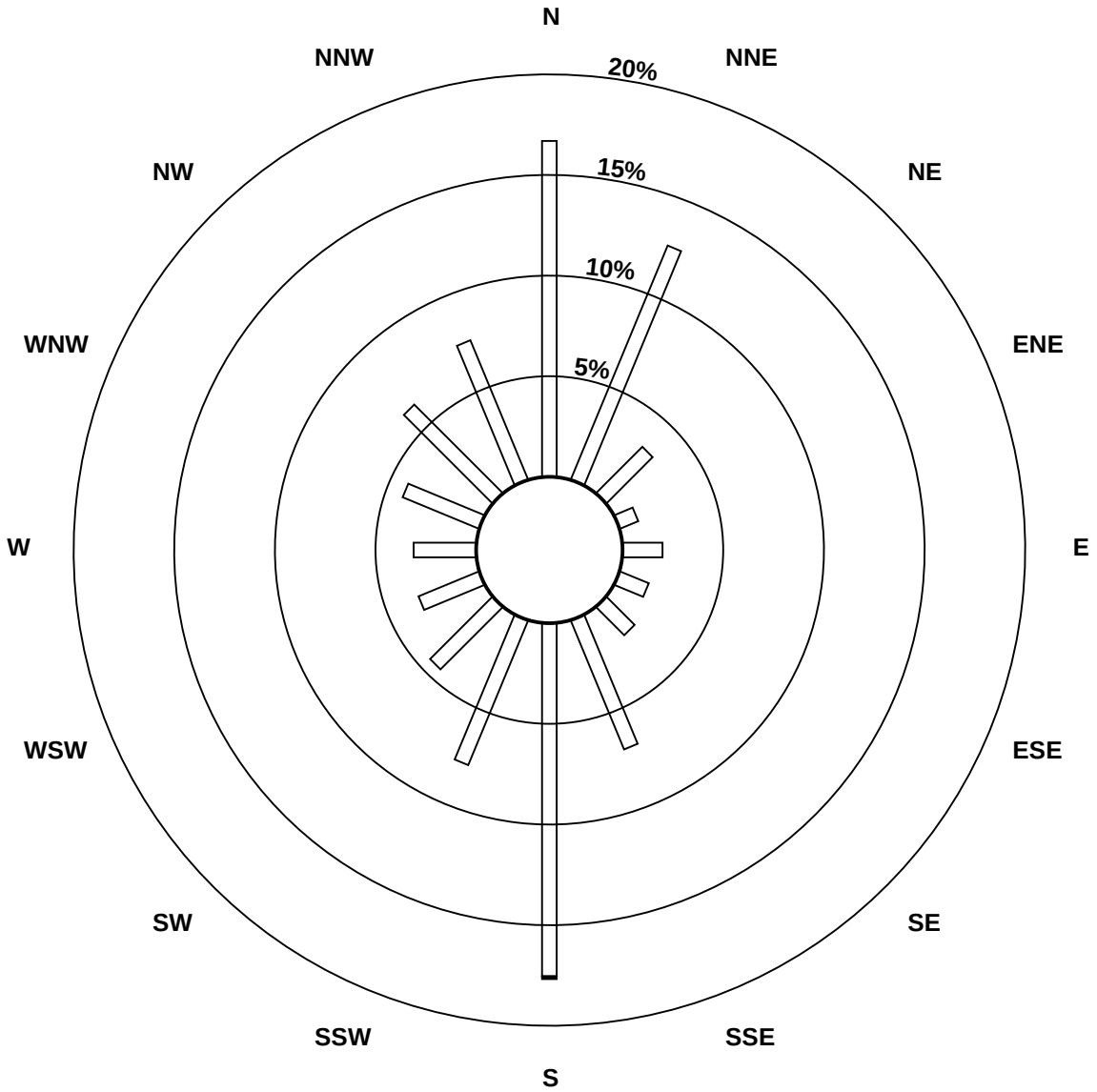
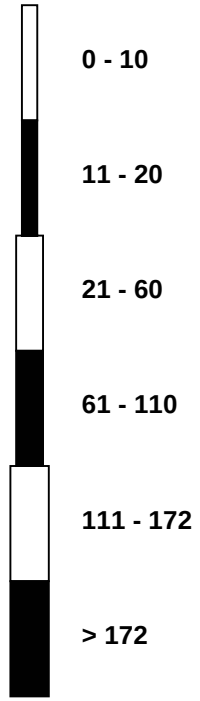
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Valleyview - December 2010



Pollutant Classes (ppb)



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Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Valleyview - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 2.8 ppb on Dec 16 21:00 Maximum Daily Average: 0.3 ppb on Dec 21

Minimum Value: 0 ppb on Dec 1 04:00 Minimum Daily Average: 0.0 ppb on Dec 18
Maximum Diurnal Average: 0.3 ppb at hour 21 Minimum Diurnal Average: 0.1 ppb at hour 12
Monthly Average: 0.14 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.0$ Median = 0.1 $Q_3 = 0.2$ $P_{90} = 0.3$ $P_{99} = 0.6$

Hours in Service:	744
Hours of Data:	705
Hours of Missing Data:	39
Hours of Calibration:	36
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-Dec	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
2-Dec	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
3-Dec	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
4-Dec	A	1	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
5-Dec	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
6-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	0	0.3	0.6
7-Dec	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
8-Dec	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
9-Dec	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
10-Dec	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
11-Dec	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
12-Dec	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
13-Dec	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-Dec	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
15-Dec	A	0	0	0	0	0	0	0	P	P	P	C	C	C	C	C	0	0	0	0	0	0	0	0	--	0.2
16-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0.2	2.8
17-Dec	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
18-Dec	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
19-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
20-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	0.3	0.7
21-Dec	A	0	0	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
22-Dec	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-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
24-Dec	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-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0.2	1.0
26-Dec	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
27-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.1	0.5
28-Dec	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
29-Dec	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
30-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0.3	0.6
31-Dec	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
	--	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.1	Diurnal Average	
	--	0.6	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.2	0.3	0.6	0.6	0.7	1.0	2.8	0.6	0.5	0.5	Diurnal Maximum	

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

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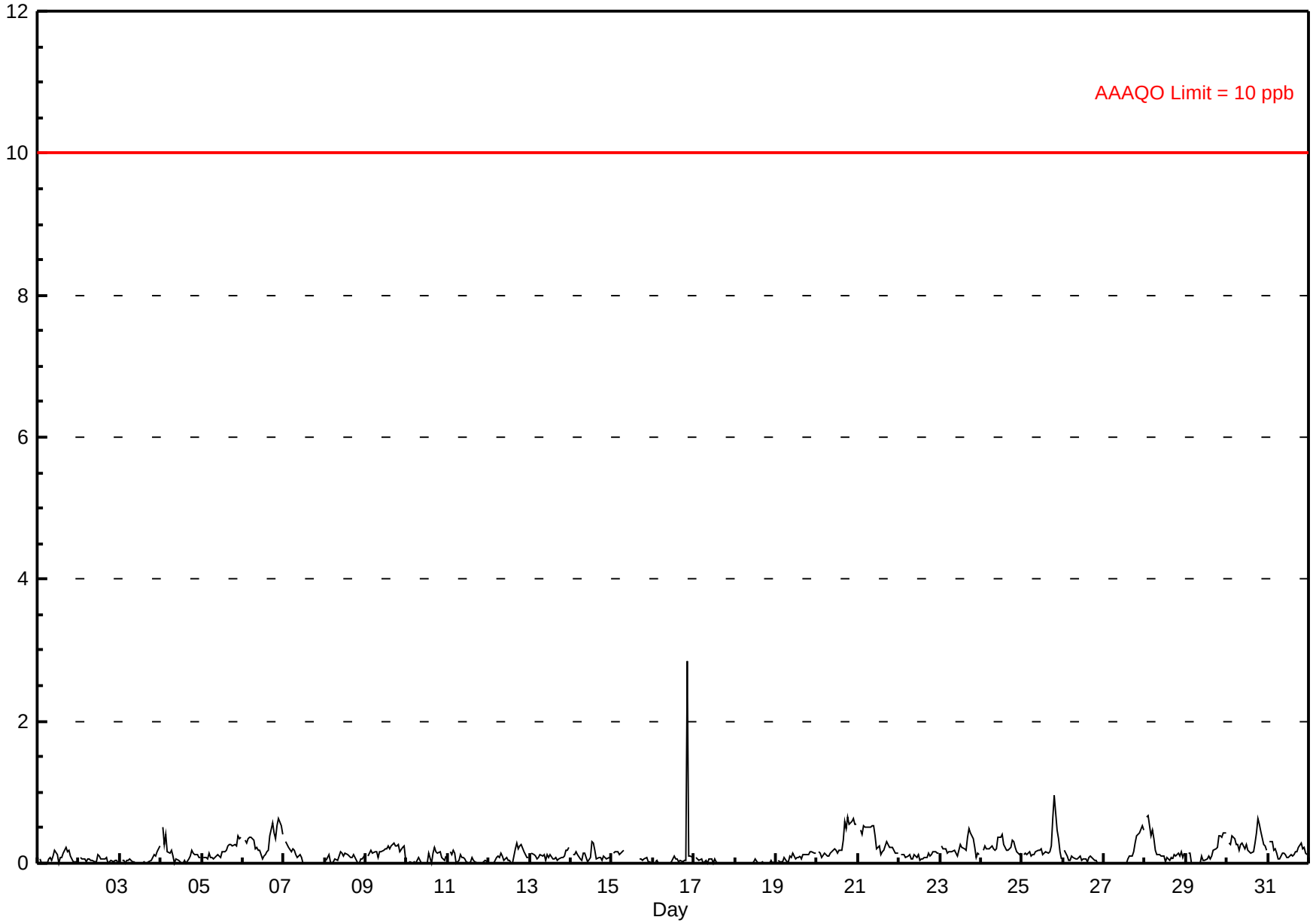
Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Valleyview - December 2010



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Peace Air Shed Zone Association

Hourly Maximums

Hydrogen Sulphide (H_2S) - ppb

Valleyview - December 2010

Maximum Value: 33.6 ppb on Dec 16 21:00

Maximum Daily Average: 1.8 ppb on Dec 16

Minimum Value: 0 ppb on Dec 7 20:00

Minimum Daily Average: 0.3 ppb on Dec 17

Maximum Diurnal Average: 1.6 ppb at hour 21

Minimum Diurnal Average: 0.4 ppb at hour 15

Monthly Average: 0.51 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.3$ $Q_1 = 0.3$ Median = 0.4 $Q_3 = 0.5$ $P_{90} = 0.7$ $P_{99} = 1.2$

Hours in Service:	744
Hours of Data:	705
Hours of Missing Data:	39
Hours of Calibration:	36
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-Dec	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0.4	0.6
2-Dec	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
3-Dec	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.4	1.0
4-Dec	A	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.1
5-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1	0	1	1	1	0.5	0.7
6-Dec	A	1	1	1	1	1	1	1	0	1	1	0	0	0	0	0	1	1	1	1	1	1	1	1	0.6	1.3
7-Dec	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
8-Dec	A	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0.4	0.6
9-Dec	A	0	0	0	0	0	0	1	1	0	0	0	1	1	0	0	1	1	1	0	1	1	1	0	0.5	0.7
10-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0.4	0.7
11-Dec	A	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7
12-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0.4	0.6
13-Dec	A	1	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	1	1	0	0.4	0.8
14-Dec	A	1	1	0	0	0	0	0	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0.5	0.8
15-Dec	A	0	1	0	0	0	1	0	P	P	P	C	C	C	C	C	0	0	0	0	0	0	0	0	--	0.6
16-Dec	A	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	34	0	0	0	1.8	33.6
17-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
18-Dec	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	1.0
19-Dec	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0.4	0.5
20-Dec	A	0	0	0	0	0	0	0	0	0	1	1	0	0	1	3	3	1	1	1	1	1	1	1	0.8	3.0
21-Dec	A	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	0	1	0	0	0	0.7	1.3
22-Dec	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0.4	0.6
23-Dec	A	1	0	0	1	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0.6	1.0
24-Dec	A	1	1	1	0	1	1	0	1	1	1	1	1	1	1	0	1	0	1	1	0	1	0	1	0.6	0.8
25-Dec	A	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0	1	1	1	2	2	1	1	0	0.6	1.7
26-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.4	0.5
27-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0.5	1.0
28-Dec	A	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.5
29-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0.5	1.0
30-Dec	A	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	0.6	1.1
31-Dec	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0.5	0.8
	--	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.5	0.5	0.5	1.6	0.5	0.5	0.5	Diurnal Average	
	--	1.2	1.5	0.9	1.1	0.8	1.0	0.8	0.9	1.0	0.8	0.8	0.8	0.9	0.7	2.6	3.0	0.9	1.2	1.6	33.6	1.3	1.0	1.0	Diurnal Maximum	

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

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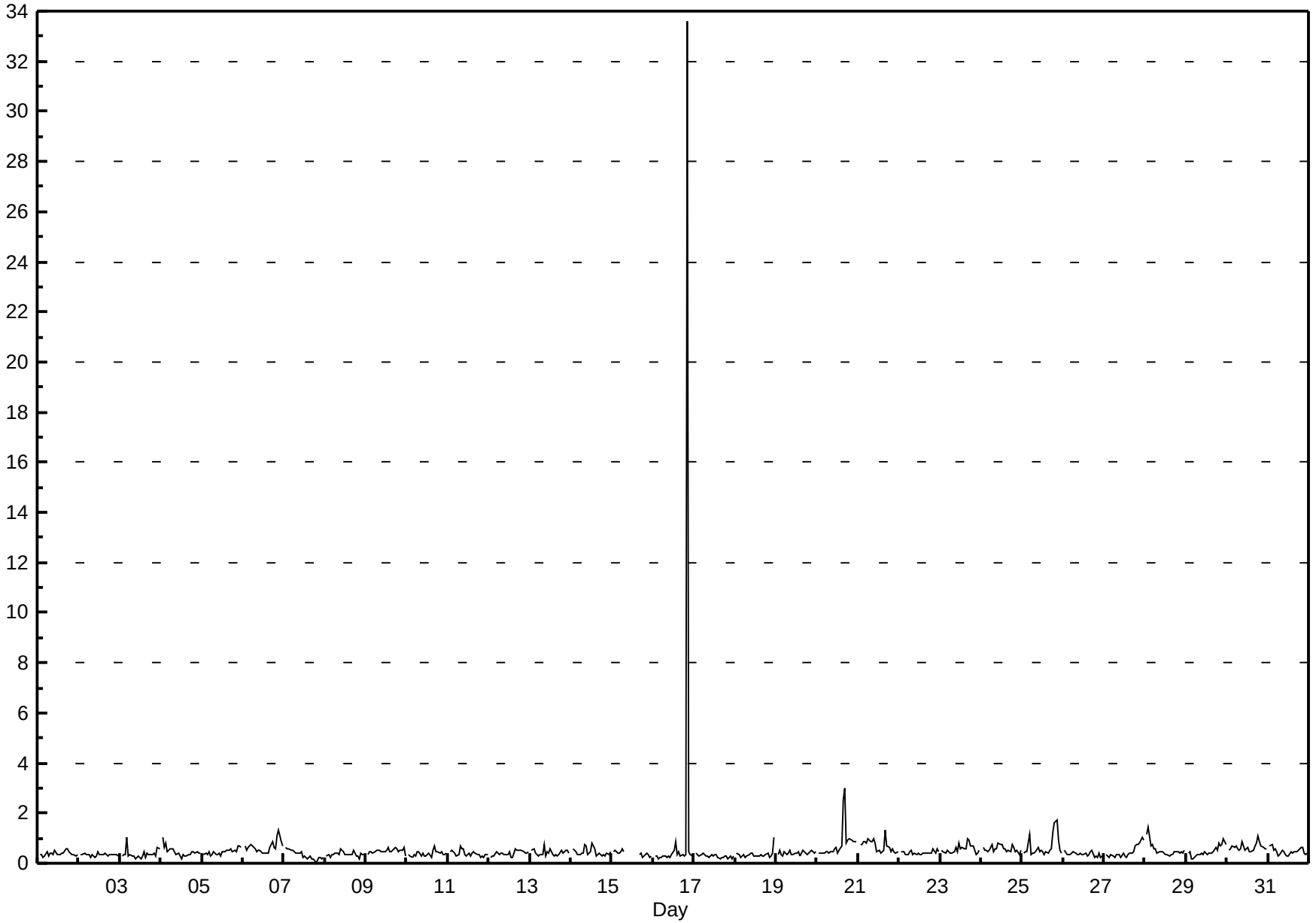
Hourly Maximums

Hydrogen Sulphide (H_2S) - ppb

Valleyview - December 2010



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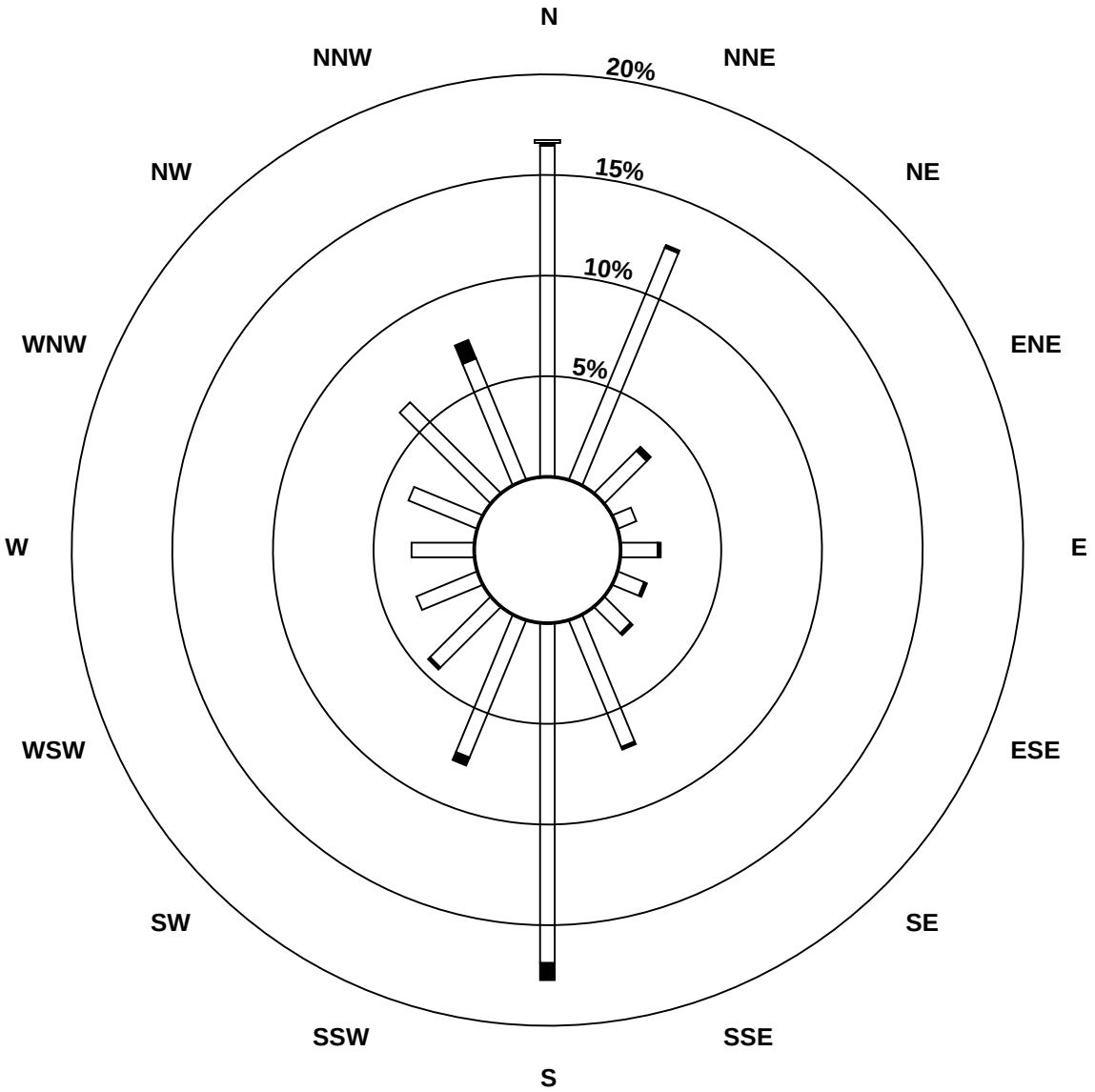
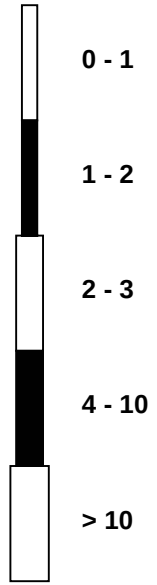
Pollutant Rose

Hydrogen Sulphide (H_2S) - ppb

Valleyview - December 2010



Pollutant Classes (ppb)



PASZA
Peace Air Shed Zone Association

Hourly Averages

External Temperature (ET) - °C

Valleyview - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 0.6 °C on Dec 1 15:00 Maximum Daily Average: -4.8 °C on Dec 1

Minimum Value: -29 °C on Dec 30 09:00 Minimum Daily Average: -23.5 °C on Dec 30
Maximum Diurnal Average: -12.3 °C at hour 16 Minimum Diurnal Average: -16.7 °C at hour 8
Monthly Average: -15.27 °C Percentiles: P_1 = -27.2 P_{10} = -22.0 Q_1 = -19.0 Median = -15.1 Q_3 = -11.5 P_{90} = -9.3 P_{99} = -1.6

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	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-Dec	-5	-5	-5	-5	-5	-6	-6	-5	-4	-4	-4	-3	-2	-1	1	0	-2	-6	-8	-8	-8	-8	-8	-8	-4.8	0.6
2-Dec	-8	-9	-9	-10	-10	-11	-11	-12	-12	-12	-11	-11	-11	-11	-11	-10	-10	-9	-10	-10	-10	-10	-11	-11	-10.5	-8.5
3-Dec	-11	-12	-13	-13	-13	-12	-13	-13	-14	-14	-13	-13	-12	-11	-11	-11	-11	-12	-15	-16	-17	-18	-19	-19	-13.6	-10.7
4-Dec	-19	-19	-18	-18	-18	-19	-18	-18	-18	-16	-13	-11	-9	-7	-6	-6	-7	-8	-10	-10	-11	-11	-11	-12	-13.0	-6.0
5-Dec	-13	-14	-14	-15	-15	-14	-14	-14	-15	-15	-13	-12	-10	-10	-10	-9	-11	-13	-15	-18	-19	-19	-21	-21	-14.3	-9.3
6-Dec	-22	-22	-23	-24	-24	-24	-25	-25	-24	-24	-21	-18	-15	-14	-14	-14	-15	-15	-16	-16	-16	-15	-15	-15	-19.0	-14.2
7-Dec	-14	-14	-14	-14	-14	-14	-13	-13	-13	-13	-14	-13	-13	-12	-12	-12	-12	-12	-12	-12	-11	-12	-12	-12	-12.8	-11.3
8-Dec	-13	-12	-12	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-12	-12	-13	-13	-13	-13	-11.6	-10.7
9-Dec	-14	-14	-14	-14	-15	-15	-16	-16	-16	-16	-17	-16	-17	-17	-17	-17	-18	-18	-19	-19	-19	-19	-19	-19	-16.7	-13.5
10-Dec	-19	-19	-19	-20	-20	-20	-20	-20	-20	-20	-20	-19	-19	-19	-18	-18	-18	-18	-19	-18	-18	-18	-18	-18	-19.0	-18.2
11-Dec	-18	-18	-18	-18	-18	-17	-17	-17	-17	-17	-17	-16	-15	-15	-14	-14	-14	-15	-16	-17	-18	-17	-16	-16	-16.4	-13.9
12-Dec	-15	-15	-14	-14	-13	-13	-13	-13	-13	-13	-13	-13	-12	-12	-11	-11	-12	-12	-12	-12	-13	-13	-13	-13	-12.8	-11.5
13-Dec	-13	-14	-14	-14	-15	-15	-15	-15	-14	-13	-10	-7	-4	-2	-1	0	-1	-1	-2	-3	-3	-4	-5	-6	-8.0	-0.2
14-Dec	-7	-7	-9	-10	-9	-10	-11	-13	-14	-14	-13	-12	-11	-10	-7	-3	-3	-3	-2	-3	-8	-10	-11	-12	-8.8	-1.8
15-Dec	-11	-12	-12	-12	-13	-14	-15	-16	P	P	P	-17	-18	-18	-18	-18	-19	-19	-19	-19	-20	-20	-21	-21	-16.6	-10.7
16-Dec	-20	-20	-20	-21	-21	-21	-21	-20	-20	-20	-21	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20.2	-19.6
17-Dec	-20	-20	-20	-20	-19	-19	-19	-19	-19	-19	-18	-18	-18	-17	-16	-16	-15	-16	-15	-15	-15	-15	-15	-15	-17.5	-14.8
18-Dec	-16	-17	-16	-15	-15	-14	-14	-14	-14	-14	-12	-11	-12	-10	-9	-9	-11	-11	-12	-13	-14	-14	-14	-14	-13.1	-8.5
19-Dec	-15	-15	-15	-15	-15	-15	-15	-15	-16	-16	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15.0	-14.5
20-Dec	-15	-15	-15	-15	-16	-15	-16	-16	-18	-18	-18	-17	-18	-17	-16	-16	-17	-19	-21	-20	-21	-23	-23	-24	-17.9	-15.2
21-Dec	-25	-25	-25	-26	-26	-26	-26	-27	-27	-27	-26	-23	-20	-18	-17	-17	-18	-19	-20	-20	-20	-21	-21	-23	-22.6	-16.8
22-Dec	-23	-23	-24	-24	-24	-25	-25	-25	-25	-25	-24	-23	-21	-19	-18	-18	-17	-17	-17	-17	-18	-19	-19	-19	-21.3	-17.0
23-Dec	-19	-18	-18	-17	-17	-17	-18	-19	-20	-21	-20	-18	-17	-16	-15	-16	-18	-19	-19	-20	-20	-21	-21	-21	-18.5	-15.4
24-Dec	-22	-22	-22	-22	-22	-21	-20	-20	-19	-17	-12	-11	-11	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-9	-14.6	-9.3
25-Dec	-9	-9	-9	-9	-10	-10	-10	-10	-9	-9	-9	-8	-6	-5	-5	-5	-7	-8	-9	-10	-10	-11	-11	-12	-8.7	-4.9
26-Dec	-11	-11	-11	-10	-10	-10	-11	-10	-10	-11	-11	-10	-10	-9	-10	-10	-11	-11	-11	-11	-10	-11	-11	-12	-10.6	-9.4
27-Dec	-12	-12	-13	-13	-13	-13	-14	-14	-13	-13	-13	-13	-13	-12	-12	-12	-13	-15	-16	-17	-17	-18	-18	-19	-14.1	-12.0
28-Dec	-20	-21	-19	-18	-18	-18	-16	-14	-13	-14	-16	-17	-17	-18	-18	-18	-18	-18	-18	-18	-19	-20	-21	-22	-17.9	-12.9
29-Dec	-24	-25	-25	-25	-24	-25	-25	-25	-24	-23	-22	-21	-21	-20	-20	-20	-21	-22	-23	-24	-25	-26	-26	-26	-23.4	-19.7
30-Dec	-27	-27	-27	-28	-27	-27	-27	-28	-29	-28	-27	-23	-22	-19	-16	-15	-17	-19	-21	-23	-22	-21	-22	-23	-23.5	-14.9
31-Dec	-23	-24	-24	-23	-23	-22	-21	-19	-18	-16	-15	-14	-13	-12	-10	-9	-11	-13	-15	-16	-16	-16	-16	-15	-17.0	-8.9
	-16.2	-16.5	-16.4	-16.5	-16.5	-16.6	-16.6	-16.7	-16.6	-16.4	-15.6	-14.6	-14.0	-13.1	-12.5	-12.3	-12.9	-13.7	-14.4	-14.9	-15.3	-15.7	-16.0	-16.3	Diurnal Average	
	-4.6	-4.8	-5.0	-5.1	-5.4	-5.8	-5.6	-5.1	-4.1	-3.5	-3.7	-3.4	-1.9	-0.8	0.6	0.1	-0.7	-1.3	-1.8	-2.7	-2.8	-3.9	-5.5	-6.5	Diurnal Maximum	

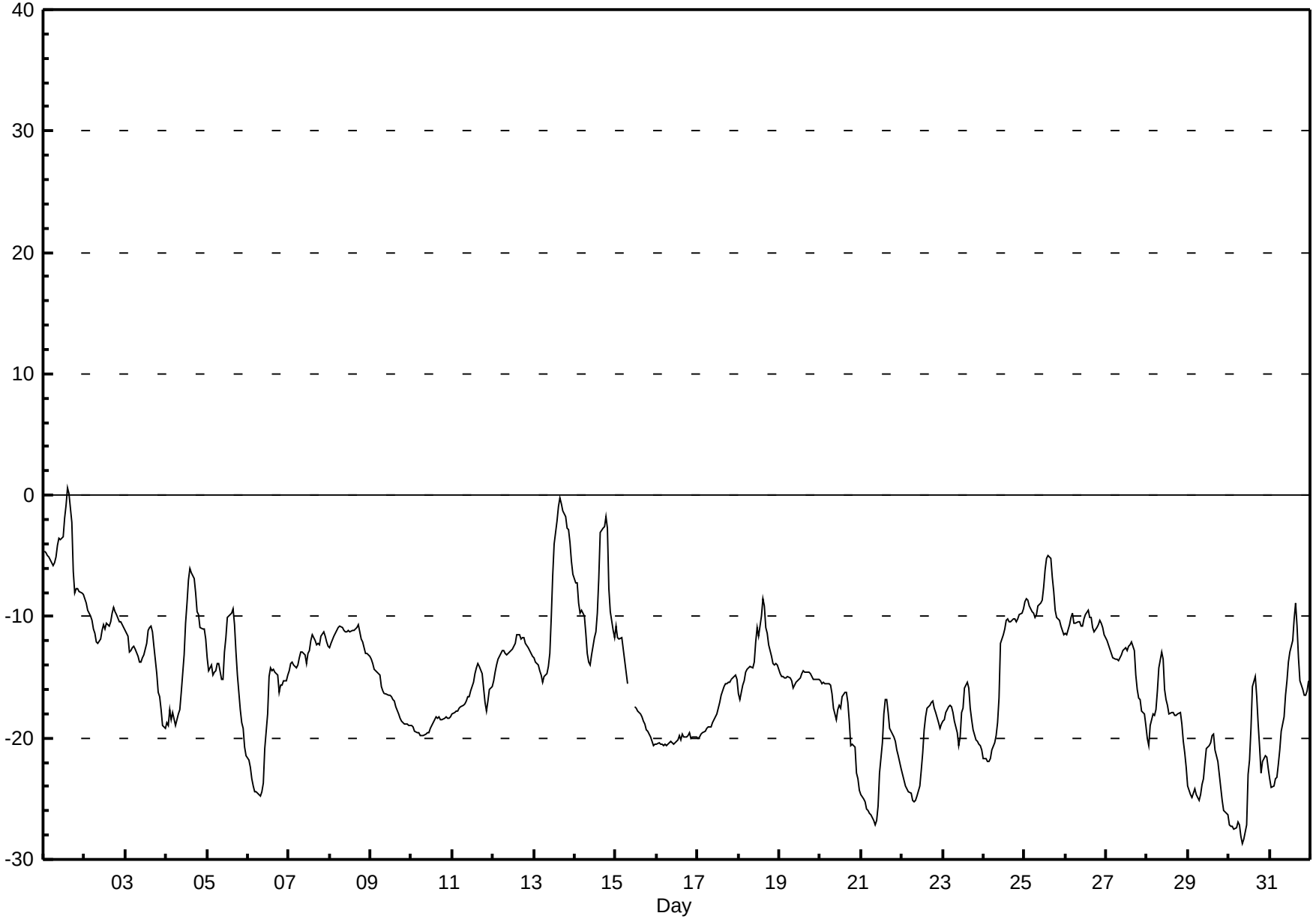
P - Power Failure

PASZA
Peace Air Shed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Valleyview - December 2010



PASZA
Peace Air Shed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Valleyview - December 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 93.0 % on Dec 14 16:00 Maximum Daily Average: 88.4 % on Dec 2

Minimum Value: 65 % on Dec 25 14:00 Minimum Daily Average: 73.3 % on Dec 16
Maximum Diurnal Average: 80.9 % at hour 19 Minimum Diurnal Average: 76.3 % at hour 15
Monthly Average: 79.13 % Percentiles: P_1 = 68.5 P_{10} = 72.5 Q_1 = 74.9 Median = 78.5 Q_3 = 83.2 P_{90} = 86.6 P_{99} = 90.6

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	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-Dec	85	83	80	80	81	81	82	86	89	90	89	86	81	75	70	74	82	90	92	92	91	91	91	90	84.6	91.6
2-Dec	90	90	90	89	89	88	88	87	87	87	88	88	88	88	88	89	89	89	89	89	89	88	88	88	88.4	90.3
3-Dec	88	87	86	86	86	86	86	85	85	85	85	85	86	87	87	87	87	85	83	82	81	80	79	78	84.6	87.5
4-Dec	79	79	80	80	80	79	79	80	80	82	85	87	89	90	90	90	90	90	89	89	87	88	87	86	84.8	90.4
5-Dec	85	84	84	84	84	84	84	84	83	82	83	83	84	84	85	85	86	85	83	80	79	78	77	77	82.8	85.7
6-Dec	76	76	75	75	74	74	74	74	74	74	75	77	78	79	81	81	81	82	82	82	81	82	82	82	77.9	82.0
7-Dec	83	83	83	83	83	83	84	84	84	84	83	82	83	83	84	85	85	85	85	86	86	86	86	85	84.0	85.9
8-Dec	85	86	86	86	86	86	86	84	83	82	80	82	85	85	83	82	85	83	83	83	83	84	83	82	83.8	86.4
9-Dec	81	81	81	82	81	81	80	79	78	78	75	74	73	72	73	75	73	71	73	73	75	76	77	76	76.6	82.5
10-Dec	76	76	77	76	76	76	76	76	76	76	75	74	74	74	75	77	77	77	77	77	77	77	77	77	76.0	77.0
11-Dec	77	77	77	77	77	77	77	77	78	77	77	78	77	77	77	78	78	81	83	83	83	81	80	81	78.5	82.8
12-Dec	79	78	78	78	77	77	77	76	77	76	77	80	80	82	74	71	73	74	76	78	79	80	80	81	77.3	81.7
13-Dec	82	83	83	83	83	82	82	81	82	83	82	81	80	78	73	72	76	79	80	83	82	83	89	90	81.3	89.7
14-Dec	90	91	92	90	89	89	88	86	85	84	84	86	86	88	90	93	91	90	89	88	88	85	84	85	87.9	93.0
15-Dec	86	83	84	85	82	78	75	75	P	P	P	73	75	76	75	73	74	75	75	75	72	73	73	74	76.7	86.0
16-Dec	75	76	74	74	74	75	75	75	75	75	74	73	70	72	69	69	70	72	73	72	73	74	75	74	73.3	75.9
17-Dec	74	72	73	74	74	74	74	75	75	75	75	76	76	77	78	79	80	80	80	80	81	82	82	82	77.0	82.4
18-Dec	83	81	81	82	83	83	83	83	83	83	80	79	78	74	67	70	77	78	81	82	82	82	83	83	80.1	83.3
19-Dec	82	82	81	80	80	79	79	79	78	80	78	76	75	75	75	76	77	77	77	76	74	75	75	76	77.5	82.4
20-Dec	77	78	79	79	80	81	80	79	79	77	71	68	70	68	69	71	75	79	78	80	78	76	76	73	75.9	80.6
21-Dec	73	73	73	73	72	73	72	72	72	71	70	71	72	72	71	74	77	80	79	80	80	79	78	78	74.4	79.9
22-Dec	77	75	76	76	76	75	74	74	74	73	73	73	75	74	75	76	78	78	77	78	77	75	73	73	75.2	78.0
23-Dec	74	74	74	74	75	76	77	79	78	77	73	70	70	69	69	72	77	78	80	81	80	79	79	79	75.6	80.9
24-Dec	77	77	77	76	76	77	77	77	78	79	76	73	72	71	72	72	72	72	73	73	72	71	72	72	74.4	79.0
25-Dec	72	72	72	74	76	76	77	78	78	78	78	74	67	65	66	67	75	79	85	87	86	86	86	87	76.7	86.8
26-Dec	86	85	85	85	86	87	86	86	87	88	86	85	83	82	83	83	85	84	84	83	78	80	82	78	84.1	87.5
27-Dec	79	80	79	75	76	76	78	77	74	74	76	76	73	72	71	71	74	81	84	84	84	82	83	81	77.5	84.1
28-Dec	79	78	80	79	78	79	81	83	84	85	83	84	83	81	81	81	80	80	80	80	79	78	77	76	80.3	84.7
29-Dec	75	75	74	74	74	74	74	74	74	75	75	75	75	75	74	74	75	75	75	74	73	73	73	72	74.2	75.0
30-Dec	72	72	72	71	72	72	73	72	72	72	70	69	71	70	69	71	75	79	79	77	79	78	78	77	73.4	79.3
31-Dec	77	77	76	76	76	76	76	77	78	79	79	77	76	74	70	68	77	84	84	84	83	83	82	82	77.9	84.3
	79.8	79.5	79.4	79.3	79.2	79.1	79.1	79.2	79.3	79.4	78.5	77.9	77.5	77.0	76.3	77.0	79.1	80.4	80.9	80.9	80.3	80.2	80.1	79.9	Diurnal Average	
	90.4	90.8	91.5	89.5	89.4	89.0	87.7	87.0	88.8	89.9	88.6	87.9	88.6	89.7	90.1	93.0	90.6	90.0	91.6	91.5	91.3	91.0	90.8	90.5	Diurnal Maximum	

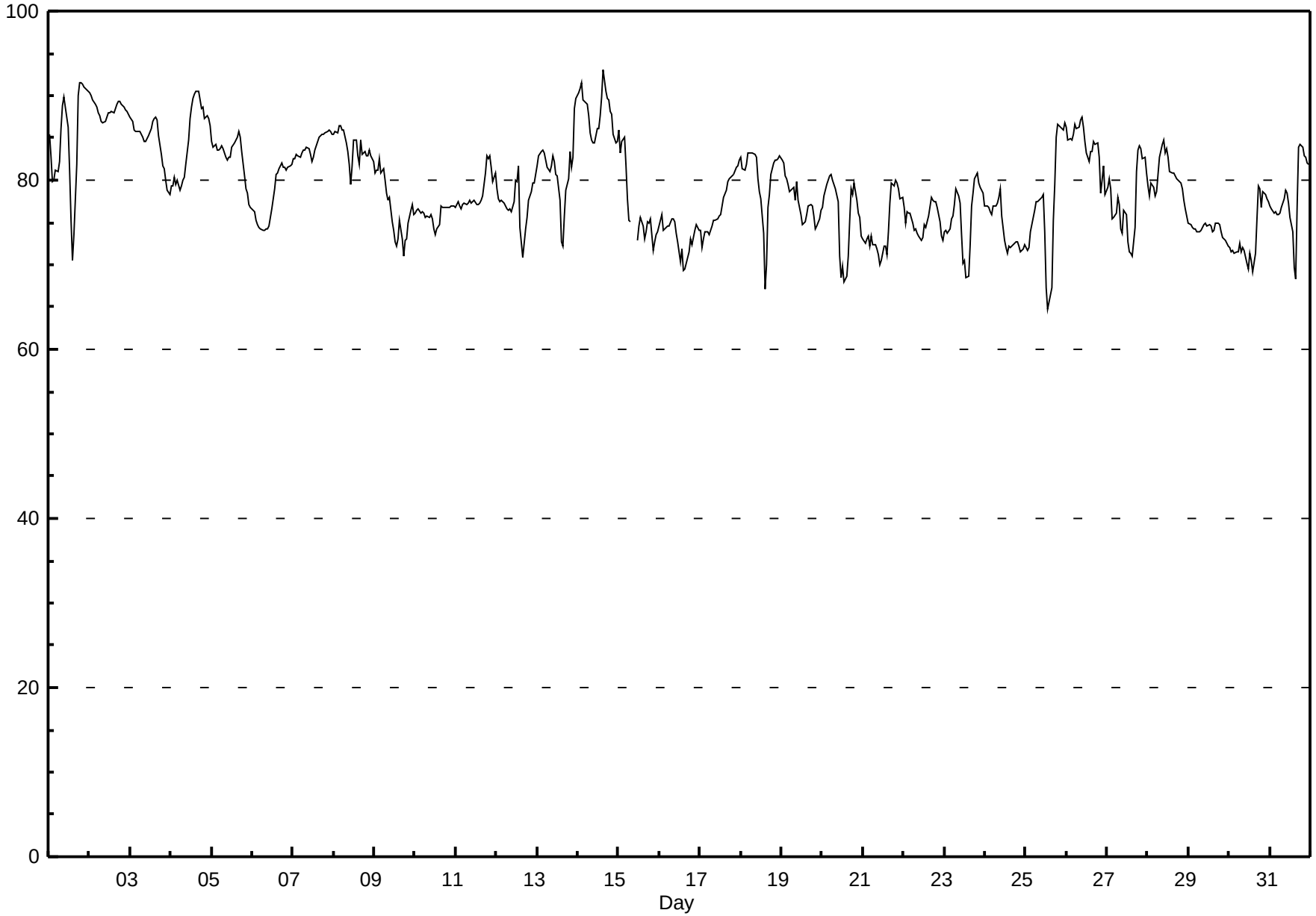
P - Power Failure

PASZA
Peace Air Shed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Valleyview - December 2010



PASZA
Peace Air Shed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Valleyview - December 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	2	3	4	2	3	3	3	2	3	1	1	2	2	1	2	1	1	8	6	5	3	2	2	1	0.3	7.8
Dir	175	180	178	191	236	194	172	156	162	278	208	189	193	203	186	189	328	359	15	18	39	33	54	39	137	359
2 Spd	2	1	1	1	1	2	3	2	3	2	3	2	2	1	2	3	1	1	4	2	3	2	2	2	0.4	3.5
Dir	43	88	161	54	144	169	168	162	164	171	166	169	355	203	320	352	329	357	357	22	8	357	13	5	42	357
3 Spd	2	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0	0	1	0.4	2.9
Dir	6	8	19	21	23	14	55	82	99	89	66	103	168	172	164	168	162	223	187	183	187	219	208	192	84	19
4 Spd	1	2	1	2	1	1	1	1	1	2	2	3	2	2	2	2	1	1	1	1	1	3	2	1	1.5	2.7
Dir	206	188	192	187	214	197	195	194	195	187	182	177	179	178	179	182	193	273	197	195	206	191	188	195	189	177
5 Spd	1	1	1	2	2	3	3	1	2	2	1	2	1	2	3	2	1	0	0	1	1	0	1	1	0.9	2.9
Dir	204	197	200	192	188	187	184	196	190	188	177	178	205	281	341	280	103	245	195	157	204	234	177	159	199	341
6 Spd	1	1	0	1	1	0	1	1	1	0	1	1	1	2	1	0	1	1	3	0	1	0	1	0	0.1	2.7
Dir	232	173	125	297	162	302	170	185	198	62	172	152	20	345	339	34	118	330	343	58	193	329	116	173	353	343
7 Spd	1	0	1	1	1	1	1	1	1	1	3	1	3	5	5	6	4	5	4	3	3	4	4	4	2.2	6.2
Dir	338	147	215	102	330	99	232	127	157	29	356	345	353	0	3	357	2	13	357	23	25	358	13	4	5	357
8 Spd	4	5	4	7	4	3	0	4	5	6	6	6	5	6	5	5	4	5	8	6	7	8	6	7	4.2	7.7
Dir	358	359	356	6	359	7	253	287	296	292	274	280	295	305	300	300	301	321	15	20	20	360	352	324	331	360
9 Spd	7	6	7	5	5	6	9	5	4	4	7	6	7	8	7	9	9	7	6	7	7	6	7	8	6.2	9.2
Dir	323	305	314	318	331	342	15	22	21	27	13	14	15	10	14	13	15	21	6	7	9	6	3	6	2	13
10 Spd	10	8	9	7	5	8	5	5	4	5	6	5	7	6	6	6	6	7	7	6	5	6	5	6	6.2	9.7
Dir	359	356	0	12	3	6	9	5	24	22	8	13	3	5	6	8	13	11	14	14	12	12	5	7	8	359
11 Spd	5	5	7	7	5	5	5	4	3	2	4	4	5	5	5	3	2	2	1	0	2	2	1	1	3.3	7.2
Dir	16	4	11	17	7	351	2	352	25	10	9	18	354	352	347	5	16	26	348	44	347	156	144	170	6	11
12 Spd	3	6	5	5	6	8	8	6	5	7	8	8	10	9	9	9	8	8	5	4	4	4	4	4	6.4	9.5
Dir	175	171	172	175	174	172	163	167	171	162	163	170	168	162	168	171	166	168	174	178	181	182	178	183	170	168
13 Spd	4	3	2	1	1	2	0	0	1	1	1	3	3	4	3	4	4	5	4	4	4	1	1	1	2.2	5.0
Dir	190	204	221	216	201	16	326	237	201	188	206	196	195	198	189	174	188	183	192	176	177	210	263	216	193	183
14 Spd	1	1	2	1	0	1	1	0	1	1	1	1	1	1	1	6	2	1	3	6	10	6	11	5	1.8	11.2
Dir	295	144	341	212	253	292	185	141	105	155	166	41	345	250	189	7	316	173	280	339	22	17	16	6	2	16
15 Spd	10	14	10	8	12	12	13	10	P	P	P	11	9	11	12	12	12	8	12	8	10	10	10	8	10.2	13.9
Dir	341	332	339	334	318	308	293	309	P	P	P	301	300	294	286	294	322	318	331	315	305	309	305	309	312	332
16 Spd	7	4	5	4	4	3	2	1	0	1	3	3	4	4	3	0	1	0	0	0	2	2	2	4	1.9	6.6
Dir	303	297	312	299	302	295	320	332	136	243	239	247	281	293	328	146	114	137	108	37	4	39	26	14	306	303
17 Spd	4	5	4	5	4	4	3	4	4	2	2	5	4	5	4	3	2	4	2	3	2	4	3	2	3.5	5.2
Dir	10	16	20	11	21	14	20	21	13	27	25	18	10	353	351	355	17	355	325	346	338	347	354	349	7	353
18 Spd	4	2	1	4	6	5	6	6	6	6	4	1	1	4	7	5	6	3	6	6	7	7	7	9	3.8	9.4
Dir	358	325	360	13	2	14	3	11	13	27	47	181	187	127	125	87	65	72	17	13	7	12	5	9	25	9
19 Spd	10	10	7	8	10	8	6	6	8	2	4	6	7	6	6	6	5	4	4	6	7	4	2	1	3.8	10.2
Dir	11	12	11	350	347	347	341	356	349	324	273	261	261	251	260	250	248	262	256	259	260	248	235	210	309	11
20 Spd	1	2	2	2	3	3	2	3	2	2	2	2	4	3	3	4	2	1	1	1	0	1	0	0	0.5	4.0
Dir	189	189	184	170	163	168	180	178	179	190	185	267	335	311	346	349	334	148	194	174	89	335	211	161	215	349
21 Spd	0	1	1	1	1	2	0	1	1	0	2	2	3	3	2	1	1	2	1	2	2	3	1	2	1.3	3.1
Dir	35	24	344	49	359	352	33	38	347	138	356	341	343	338	353	28	37	357	355	358	24	25	11	353	2	343
22 Spd	1	1	2	2	2	1	2	4	2	3	2	3	3	2	3	4	6	3	3	2	2	3	4	1	2.2	5.6
Dir	36	5	355	354	355	3	5	356	0	3	48	358	352	14	19	353	349	7	27	2	301	318	290	262	354	349

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Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Valleyview - December 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
23 Spd	0	1	1	4	3	1	1	1	0	1	1	2	3	0	2	2	5	2	2	3	3	3	2	1	0.7	4.9
Dir	190	156	150	258	251	183	156	176	209	163	153	239	259	298	66	24	319	38	314	13	353	1	318	31	321	319
24 Spd	1	0	1	1	0	2	2	2	2	0	9	11	11	11	9	11	10	12	13	10	12	12	10	7	5.9	12.7
Dir	39	95	181	236	100	40	38	27	354	181	171	173	170	172	177	175	179	175	179	177	177	176	176	179	174	179
25 Spd	7	7	5	3	2	2	3	2	2	1	2	2	2	1	0	2	3	1	3	1	2	1	2	1	1.1	7.0
Dir	180	183	184	198	185	227	251	221	270	101	255	218	179	173	270	336	331	40	344	340	338	59	337	342	217	180
26 Spd	1	1	1	1	1	0	0	1	2	1	3	2	3	3	4	3	5	4	3	4	3	3	3	6	2.1	5.9
Dir	290	164	286	331	300	45	169	117	310	42	341	330	321	351	17	15	11	353	313	302	310	347	321	304	335	304
27 Spd	6	8	6	5	3	3	4	2	1	1	1	1	2	3	3	3	0	1	1	2	1	1	1	0	1.9	7.7
Dir	315	326	310	296	306	301	308	325	323	84	132	313	308	3	351	2	322	211	193	210	218	201	187	298	312	326
28 Spd	1	1	1	0	1	1	2	2	3	5	9	8	8	8	6	4	3	2	1	0	3	3	0	1	1.8	8.7
Dir	198	187	217	4	108	164	188	165	178	6	18	22	13	14	22	29	37	84	98	160	277	342	351	180	21	18
29 Spd	1	1	1	1	2	0	1	2	1	1	1	1	1	1	1	0	0	0	0	1	1	0	0	0	0.6	1.6
Dir	169	153	136	177	174	114	175	174	182	155	159	51	149	227	251	178	224	169	0	184	171	1	216	173	174	174
30 Spd	1	0	0	0	1	1	0	1	0	0	1	0	1	0	4	4	1	0	1	1	1	1	1	1	0.7	4.1
Dir	165	182	209	317	190	162	259	172	238	254	175	359	335	90	181	177	226	207	191	172	211	207	222	222	195	177
31 Spd	1	1	1	1	1	1	2	2	2	2	3	3	4	4	3	2	1	1	1	1	1	2	2	2	1.6	3.9
Dir	221	238	215	250	227	214	214	219	221	201	188	195	195	189	162	161	337	235	185	209	214	198	194	176	198	189
Spd	1.5	1.2	1.3	1.4	1.3	1.2	0.8	0.7	0.5	0.4	0.1	0.6	1.1	1.0	0.9	1.0	1.2	0.8	1.2	0.9	1.3	1.3	1.2	1.2	Diurnal Average	
Dir	341	335	337	335	327	334	326	348	352	33	7	280	308	313	331	345	347	358	344	343	342	349	344	340		
Spd	10.2	13.9	9.7	8.4	12.2	12.3	13.0	10.4	8.0	7.4	9.0	11.2	10.7	11.1	12.3	12.5	11.7	11.9	12.7	10.4	12.5	12.0	11.2	9.4	Diurnal Maximum	
Dir	11	332	339	350	318	308	293	309	349	162	171	301	170	172	286	294	322	175	179	177	177	176	16	9		

Maximum Speed Value: 14 ppb on Dec 15 02:00
Minimum Speed Value: 0 ppb on Dec 14 08:00
Maximum Daily Speed Average: 10.2 ppb on Dec 15
Minimum Daily Speed Average: 0.1 ppb on Dec 29
Maximum Diurnal Speed Average: 1.5 ppb at hour 1
Minimum Diurnal Speed Average: 0.1 ppb at hour 11

Monthly Average Velocity: 0.98 ppb 337.1 deg
Speed Percentiles: P_1 = 0.1 P_{10} = 0.5 Q_1 = 1.1 Median = 2.3 Q_3 = 4.7 P_{90} = 7.4 P_{99} = 12.2
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

P - Power Failure

Frequency Distribution

Direction	Speed Range (ppb) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	132	92	1	0	0	0	225
NorthEast	54	2	0	0	0	0	56
East	21	0	0	0	0	0	21
SouthEast	33	1	0	0	0	0	34
South	168	29	5	0	0	0	202
SouthWest	64	0	0	0	0	0	64
West	34	10	1	0	0	0	45
NorthWest	60	26	8	0	0	0	94
Total	566	160	15	0	0	0	741

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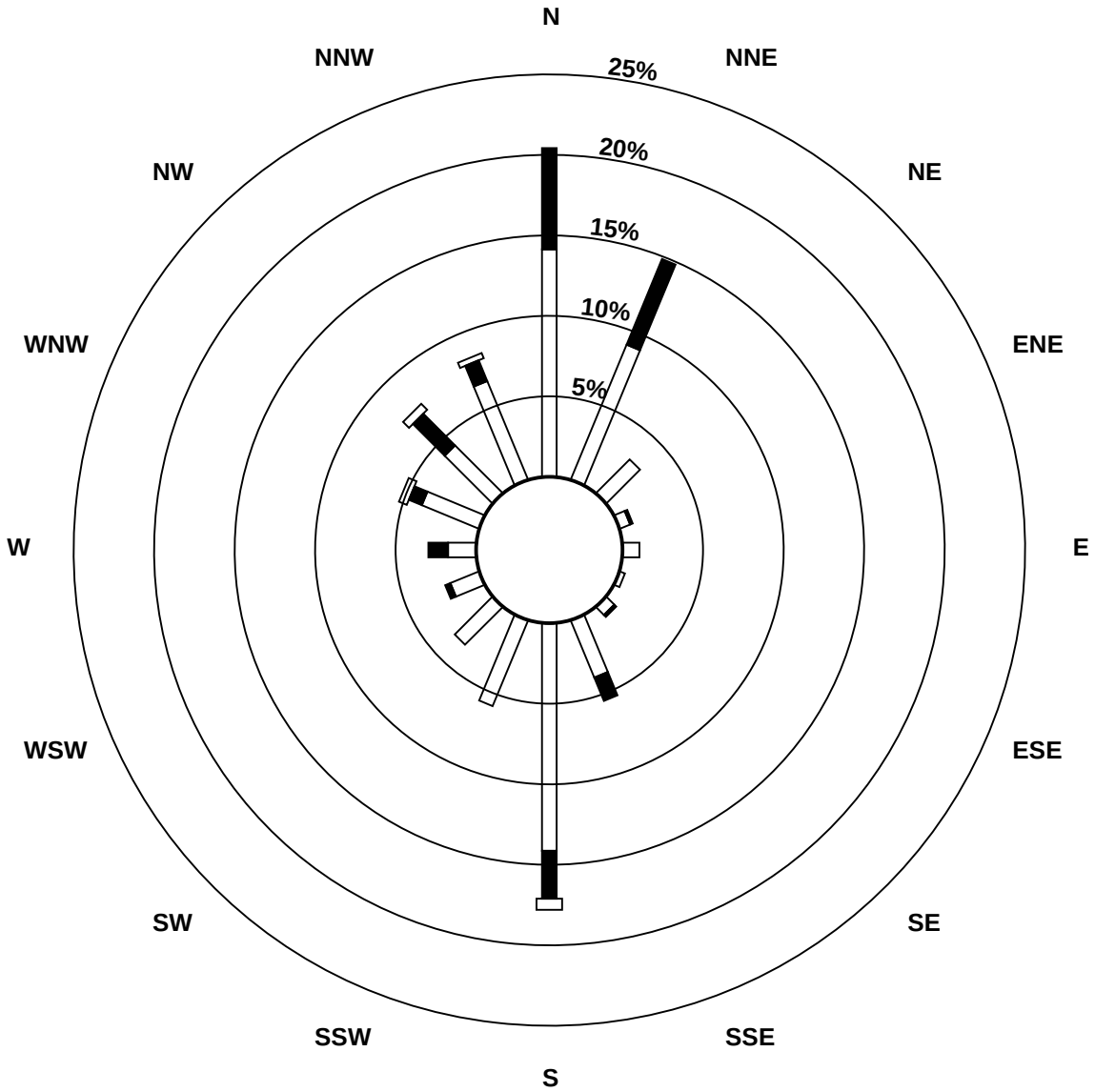
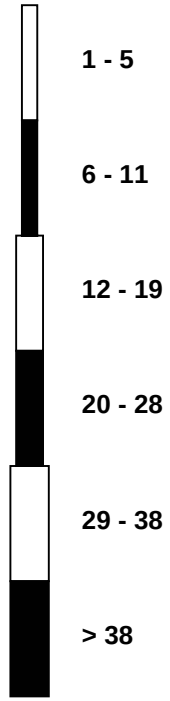
Wind Rose

Wind Speed (WS) (km/h)

Valleyview - December 2010



Wind Speed Classes (km/h)



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Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Valleyview - December 2010

Maximum Speed: 14 km/h on Dec 15 02:00

Maximum Daily Speed Average: 10.9 km/h on Dec 15

Minimum Speed: 0 km/h on Dec 30 02:00

Minimum Daily Speed Average: 1.0 km/h on Dec 29

Maximum Diurnal Speed Average: 4.3 km/h at hour 15

Minimum Diurnal Speed Average: 2.5 km/h at hour 10

Monthly Average Speed: 3.48 km/h

Percentiles: P_1 = 0.5 P_{10} = 0.9 Q_1 = 1.4 Median = 2.5 Q_3 = 4.9 P_{90} = 7.4 P_{99} = 12.5

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	2	3	4	3	3	3	3	2	3	2	1	2	2	2	2	1	1	8	7	5	4	2	2	2	2.8	8.0
2-Dec	2	2	1	2	2	2	3	2	3	2	3	3	2	2	2	3	2	2	4	2	3	2	2	3	2.3	3.8
3-Dec	2	2	3	2	1	1	2	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1.3	3.1
4-Dec	1	2	1	2	1	1	1	1	1	2	2	3	2	2	2	2	1	1	1	1	1	3	2	1	1.6	2.7
5-Dec	1	1	1	2	2	3	3	1	2	2	1	2	2	2	3	2	1	1	1	1	1	1	1	1	1.5	2.9
6-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	2	3	1	1	1	1	1	1.2	2.9
7-Dec	1	1	1	1	1	1	1	1	1	1	3	2	4	5	5	6	5	5	4	3	4	4	4	4	2.7	6.2
8-Dec	4	5	4	7	4	3	2	4	5	6	6	6	5	6	6	5	4	6	8	6	7	8	6	7	5.4	7.8
9-Dec	7	6	7	5	5	7	9	6	4	4	7	6	8	8	7	9	9	7	6	7	7	6	7	8	6.8	9.3
10-Dec	10	8	9	7	6	8	5	5	4	5	6	5	7	6	6	6	6	7	7	6	5	6	5	6	6.3	9.8
11-Dec	5	5	7	7	5	6	5	5	3	2	5	5	6	6	6	4	3	2	2	1	2	2	1	2	3.9	7.3
12-Dec	3	6	5	5	6	8	8	7	5	8	9	8	10	9	9	9	8	8	5	4	4	4	4	4	6.5	9.6
13-Dec	4	3	2	2	1	2	1	1	2	1	2	3	3	4	3	4	4	5	4	4	4	2	1	1	2.7	5.0
14-Dec	2	1	2	2	1	2	2	1	1	1	1	2	2	2	3	7	4	2	3	6	10	7	11	5	3.4	11.3
15-Dec	10	14	10	9	13	12	13	12	P	P	P	11	9	11	13	13	12	9	12	9	11	10	10	8	10.9	13.9
16-Dec	7	4	5	4	4	3	2	1	1	1	4	4	5	4	3	1	1	1	1	1	2	2	3	4	2.7	6.7
17-Dec	5	5	4	5	4	4	3	4	4	2	2	5	5	5	4	3	3	4	2	3	2	4	3	2	3.7	5.2
18-Dec	4	2	1	4	6	5	6	6	6	6	4	2	2	4	7	5	6	4	6	6	7	7	7	9	5.1	9.5
19-Dec	10	10	8	8	10	8	6	6	8	2	4	6	7	6	6	6	5	4	4	6	7	4	2	1	6.1	10.3
20-Dec	1	2	2	2	3	3	2	3	2	2	2	2	4	3	3	4	3	1	1	1	1	1	1	1	2.0	4.0
21-Dec	0	1	1	1	1	2	1	1	2	1	2	2	3	3	2	1	2	2	1	2	2	3	1	2	1.6	3.2
22-Dec	1	1	2	2	2	1	3	4	2	3	2	3	4	2	3	4	6	3	3	2	3	3	4	1	2.7	5.7
23-Dec	1	1	1	4	4	1	1	1	1	1	1	2	3	1	3	3	5	3	3	3	4	4	3	2	2.3	5.2
24-Dec	1	2	1	1	1	2	2	3	3	2	9	11	11	11	9	11	10	12	13	10	13	12	10	7	7.0	12.8
25-Dec	7	7	6	3	2	3	3	2	3	5	3	3	3	2	2	2	3	2	3	2	3	2	2	2	3.1	7.1
26-Dec	2	1	2	3	2	2	1	2	2	2	3	3	3	4	5	4	5	4	3	4	4	3	3	6	3.0	6.0
27-Dec	6	8	6	5	3	3	4	3	1	1	1	1	2	3	3	3	1	1	1	2	1	1	1	1	2.7	7.8
28-Dec	1	1	2	1	1	2	2	3	4	6	9	8	8	8	6	5	4	2	1	1	3	4	1	1	3.4	8.8
29-Dec	1	1	1	1	2	1	1	2	1	1	1	1	1	2	1	0	1	0	1	1	1	1	1	0	1.0	1.7
30-Dec	1	0	1	1	1	1	2	1	2	1	1	1	1	1	4	4	1	1	1	1	1	1	1	1	1.2	4.1
31-Dec	1	1	1	2	1	1	2	2	3	2	3	3	4	4	3	2	1	1	2	1	1	2	2	3	1.9	4.0
	3.3	3.5	3.3	3.2	3.2	3.2	3.2	3.0	2.7	2.5	3.3	3.8	4.1	4.3	4.3	4.3	3.8	3.5	3.6	3.3	3.8	3.6	3.4	3.2	Diurnal Average	
	10.3	13.9	9.8	8.5	12.6	12.4	13.3	11.5	8.1	7.5	9.1	11.4	10.9	11.2	12.5	12.7	11.9	12.0	12.8	10.5	12.5	12.1	11.3	9.5	Diurnal Maximum	

P - Power Failure

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

PASZA
Peace Air Shed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Valleyview - December 2010

Maximum Value: 99.4 deg on Dec 6 16:00

Minimum Value: 4.0 deg on Dec 19 05:00

Percentiles: P_1 = 5.6 P_{10} = 8.6 Q_1 = 11.6 Median = 21.1 Q_3 = 47.0 P_{90} = 71.5 P_{99} = 92.6

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

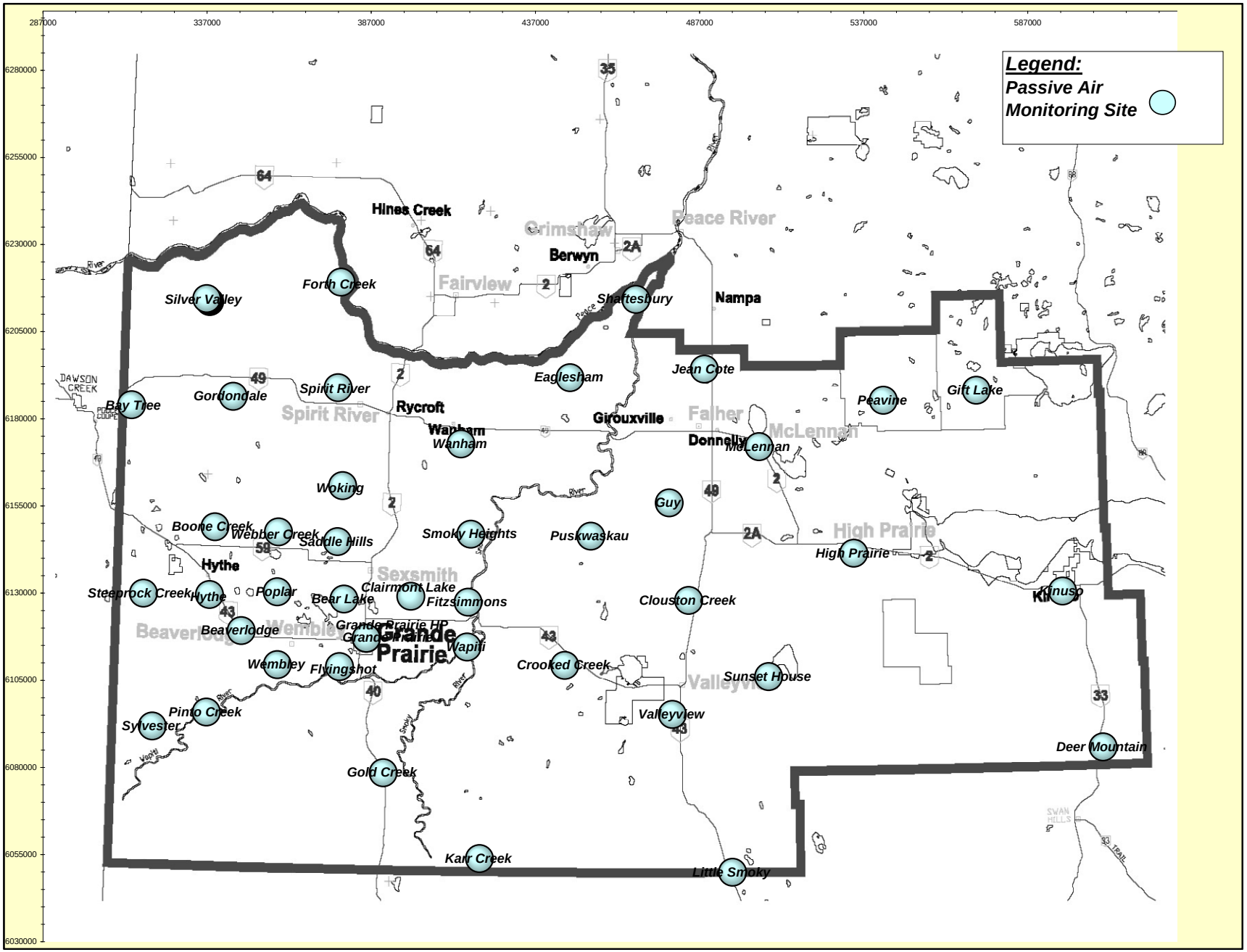
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Dec	20	15	10	19	36	23	20	15	17	85	68	9	17	35	15	24	62	16	16	16	31	25	48	47	85.2
2-Dec	37	44	26	51	49	24	18	12	14	13	26	78	36	41	41	43	64	70	29	25	16	22	17	29	78.0
3-Dec	50	15	25	49	26	54	47	34	39	47	36	55	22	24	20	18	37	82	55	31	26	90	89	67	89.5
4-Dec	37	10	10	12	54	44	16	5	15	6	11	5	6	9	9	6	57	44	31	12	63	7	5	20	63.4
5-Dec	22	13	15	7	7	4	9	38	18	32	18	6	54	23	14	50	40	66	57	27	47	81	52	36	80.7
6-Dec	54	28	77	70	70	90	62	48	56	75	64	43	75	15	36	99	56	65	19	85	50	86	38	79	99.4
7-Dec	73	64	46	55	53	47	56	40	44	92	20	50	15	10	15	8	22	12	23	17	16	12	12	13	92.4
8-Dec	9	12	15	9	25	23	95	18	16	18	15	15	16	19	15	16	16	14	9	12	11	7	19	9	95.5
9-Dec	11	12	9	13	10	17	8	12	11	15	12	11	12	10	13	8	9	12	10	8	8	12	8	9	17.4
10-Dec	8	9	9	11	13	8	9	11	12	13	12	15	14	12	13	11	12	10	10	11	12	12	10	14	14.5
11-Dec	20	15	9	11	19	14	16	12	22	40	17	15	16	19	11	27	10	49	69	91	38	53	42	43	91.3
12-Dec	10	12	11	9	9	8	9	10	11	11	10	10	9	11	10	10	9	9	11	10	9	9	12	8	12.2
13-Dec	14	11	18	33	74	80	97	93	37	22	65	9	17	6	17	6	7	7	13	10	10	45	39	23	97.3
14-Dec	60	34	39	49	70	63	86	96	65	61	56	84	80	91	74	30	70	56	35	39	11	13	8	25	95.8
15-Dec	19	6	9	11	14	8	12	29	P	P	P	10	11	10	9	12	9	9	6	17	12	9	10	12	28.9
16-Dec	10	12	13	12	14	17	17	55	78	47	29	31	29	18	17	72	31	53	55	82	16	16	18	9	82.0
17-Dec	11	10	11	8	9	9	11	12	12	19	16	11	11	9	13	35	33	12	23	9	20	8	15	17	35.5
18-Dec	21	58	48	19	7	9	10	9	8	9	21	24	36	43	13	27	16	29	6	10	8	7	6	8	58.4
19-Dec	8	7	8	5	4	7	7	19	7	31	22	14	14	14	14	9	9	13	12	10	10	11	24	19	31.4
20-Dec	8	7	11	8	12	9	6	8	7	12	13	31	23	17	12	11	35	72	50	20	63	56	85	86	85.6
21-Dec	74	41	40	85	79	25	89	58	51	93	28	18	15	27	24	38	21	40	51	23	38	26	63	31	92.8
22-Dec	60	35	11	20	40	23	31	23	66	24	50	48	19	27	22	28	13	33	14	42	50	26	18	52	65.9
23-Dec	49	28	21	49	41	22	28	39	43	26	13	43	26	91	29	44	20	51	47	38	48	31	44	75	91.2
24-Dec	56	82	41	62	89	60	42	31	18	93	9	7	9	8	8	8	9	7	6	9	7	6	8	9	92.6
25-Dec	10	10	16	19	25	29	22	28	64	90	80	42	34	78	87	52	33	83	37	66	40	59	51	63	89.5
26-Dec	62	83	59	94	65	96	84	65	71	54	24	61	21	33	32	24	13	14	73	18	21	24	15	15	95.6
27-Dec	12	9	16	16	11	14	18	37	42	46	83	49	20	21	15	16	81	45	46	19	44	29	32	73	83.0
28-Dec	44	47	28	91	65	63	28	38	16	73	9	15	11	9	11	18	15	30	39	87	31	14	81	36	91.0
29-Dec	27	63	70	17	9	82	57	8	7	23	20	29	46	42	90	70	26	65	80	14	46	81	36	67	90.0
30-Dec	39	83	67	83	65	77	68	75	80	89	52	88	36	84	16	6	22	74	65	49	21	20	10	10	88.6
31-Dec	23	35	27	35	26	27	17	33	56	17	14	13	15	10	11	28	67	64	17	18	20	20	11	25	67.0
	73.9	83.0	76.8	94.1	88.6	95.6	97.3	95.8	80.4	92.8	83.0	87.8	79.6	91.2	90.0	99.4	80.8	82.7	79.7	91.3	63.4	89.5	89.1	85.6	

P - Power Failure

PASZA

Monthly Passive Data Summary

Location of PASZA Passive Monitoring Stations



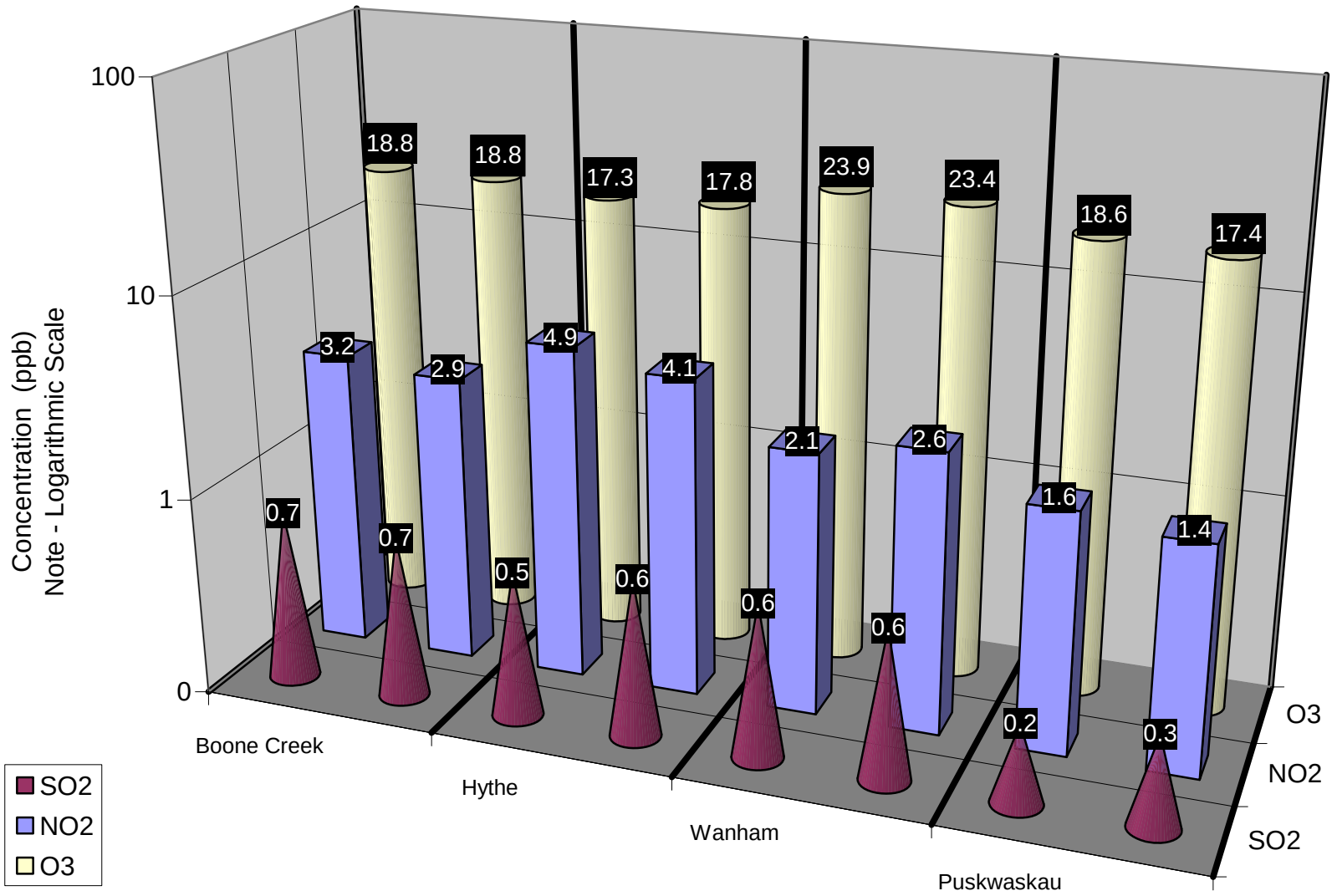
PASZA Passive Results for December 2010

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	Site Legal
Duplicates					
5a	Boone Creek	**0.7**	**18.8**	**3.2**	
5b	Boone Creek	**0.7**	**18.8**	**2.9**	
12a	Hythe	**0.5**	**17.3**	**4.9**	
12b	Hythe	**0.6**	**17.8**	**4.1**	
19a	Wanham	**0.6**	**23.9**	**2.1**	
19b	Wanham	**0.6**	**23.4**	**2.6**	
34a	Puskwaskau	**0.2**	**18.6**	**1.6**	
34b	Puskwaskau	**0.3**	**17.4**	**1.4**	
1	Silver Valley	**0.7**	**19.2**	**2.1**	08-27-081-11 W6M
2	Bay Tree	**0.8**	**20.3**	**2.3**	13-16-078-13 W6M
3	Fourth Creek	**0.5**	**23.0**	**1.7**	04-13-082-07 W6M
4	Gordondale	**0.9**	**25.3**	**2.2**	04-34-078-10 W6M
5	Boone Creek	**0.7**	**18.8**	**3.0**	16-36-074-11 W6M
7	Steeprock Creek	**0.6**	**24.4**	**2.5**	09-35-072-13 W6M
9	Spirit River	**0.5**	**25.3**	**2.1**	08-12-079-07 W6M
10	Woking	**0.8**	**23.5**	**1.5**	01-13-076-07 W6M
11	Webber Creek	**1.0**	**19.2**	**3.0**	09-36-074-09 W6M
12	Hythe	**0.6**	**17.5**	**4.5**	14-36-072-11 W6M
14	Sylvester	**0.2**	**16.4**	**2.7**	08-06-069-12 W6M
16	Beaverlodge	**0.7**	**22.2**	**5.2**	15-36-071-10 W6M
17	Poplar	**0.7**	**19.4**	**4.1**	13-06-073-08 W6M
18	Saddle Hills	**0.6**	**23.5**	**3.0**	04-25-074-07 W6M
19	Wanham	**0.6**	**23.6**	**2.3**	16-22-077-03 W6M
20	Shaftesbury	**0.5**	**20.4**	**1.9**	04-03-082-23 W5M
21	Eaglesham	**0.5**	**21.3**	**1.6**	16-21-079-25 W5M
23	Bear Lake	**0.9**	**20.3**	**3.7**	15-31-072-06 W6M

PASZA Passive Results for December 2010 (Continued)

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	Site Legal
24	Wembley	**0.5**	**18.4**	**4.7**	12-31-070-08 W6M
25	Pinto Creek	**0.3**	**18.9**	**3.6**	04-24-069-11 W6M
26	Flyingshot	**0.6**	**16.0**	**5.2**	15-36-070-07 W6M
27	Grande Prairie I	**0.6**	**12.6**	**13.7**	08-15-071-06 W6M
28	Clairmont Lake	**0.8**	**23.4**	**3.2**	09-06-073-04 W6M
29	Smoky Heights	**0.7**	**19.4**	**3.2**	04-06-075-02 W6M
30	Fitzsimmons	**0.5**	**18.1**	**3.1**	15-36-072-03 W6M
32	Gold Creek	**0.6**	**14.1**	**4.6**	06-33-067-05 W6M
33	Wapiti	**0.4**	**18.9**	**4.0**	02-25-071-03 W6M
34	Puskwaskau	**0.3**	**18.0**	**1.5**	15-35-074-25 W5M
35	Jean Cote	**0.5**	**24.2**	**2.4**	12-35-079-21 W5M
36	Guy	**0.4**	**23.7**	**1.6**	03-04-076-22 W5M
37	Crooked Creek	**0.4**	**19.1**	**3.4**	16-01-071-26 W5M
38	Karr Creek	**0.5**	**13.8**	**2.5**	10-16-065-02 W6M
39	Clouston Creek	**0.5**	**21.3**	**2.5**	12-01-073-22 W5M
40	McLennan	**0.6**	**23.8**	**2.0**	03-29-077-19 W5M
41	Valleyview	**0.7**	**22.4**	**3.5**	09-30-069-22 W5M
42	Sunset House	**0.6**	**27.0**	**2.1**	05-32-070-19 W5M
43	High Prairie	**0.5**	**21.6**	**3.3**	16-13-074-17 W5M
44	Peavine	**0.3**	**19.7**	**1.6**	03-05-079-15 W5M
45	Gift Lake	**0.3**	**18.2**	**1.7**	10-07-079-12 W5M
46	Little Smoky	**0.8**	**16.6**	**5.2**	12-01-065-21 W5M
47	Kinuso	**0.3**	**18.9**	**2.3**	12-10-073-10 W5M
48	Deer Mountain	**1.0**	**23.0**	**3.2**	15-22-068-09 W5M
49	Grande Prairie HP	**0.7**	**13.6**	**12.1**	17-26-071-06 W6M

*BDL = Below Detection Level



Duplicate Summary Chart

Passive Summary for December 2010

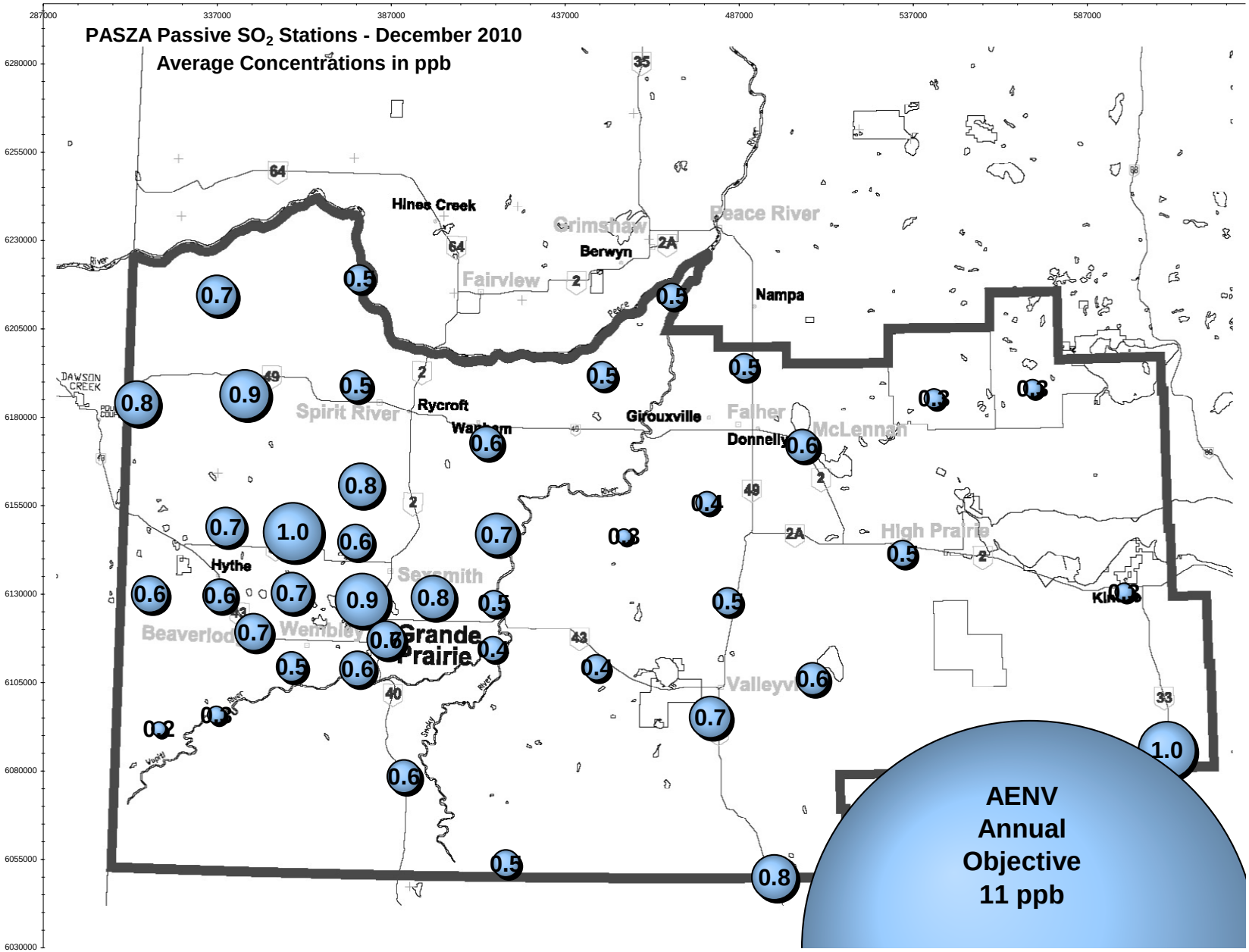
Stats	Sulphur Dioxide SO_2	Ozone O_3	Nitrogen Dioxide NO_2
	ppb	ppb	ppb
	Passive Summary for December 2010 (PASZA Zone)		
Mean	**0.6**	**20.2**	**3.4**
Standard Deviation	**0.2**	**3.4**	**2.4**
Minimum	**0.2**	**12.6**	**1.5**
Minimum At	**Sylvester (#14)**	**Grande Prairie I (#27)**	**Woking (#10)**
Maximum	**1.0**	**27.0**	**13.7**
Maximum At	**Webber Creek (#11)**	**Sunset House (#42)**	**Grande Prairie I (#27)**

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

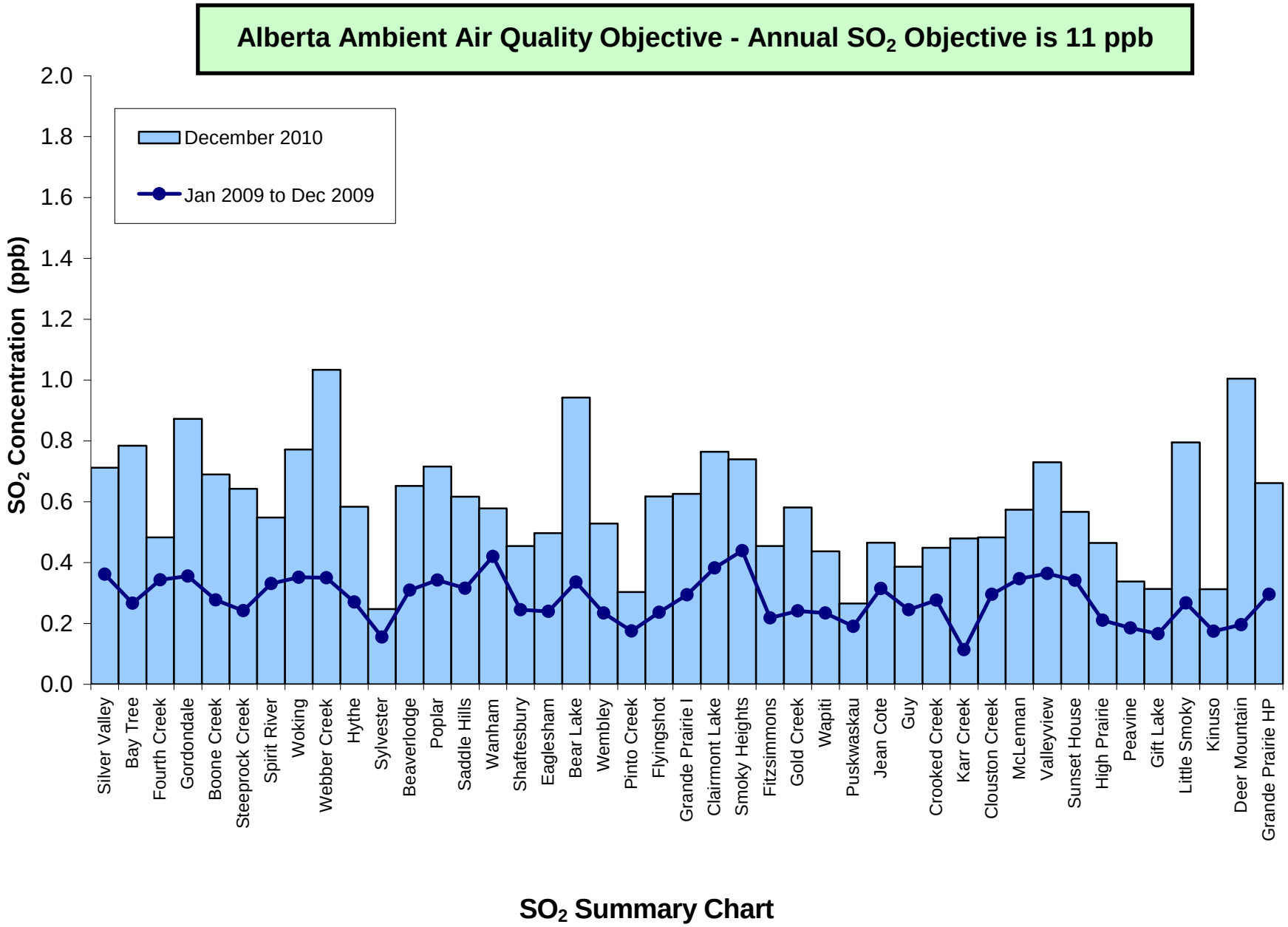
	SO_2	O_3	NO_2
PASZA Beaverlodge station	**0.7**	**16.6**	**9.0**
PASZA Beaverlodge passive	**0.7**	**22.2**	**5.2**

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

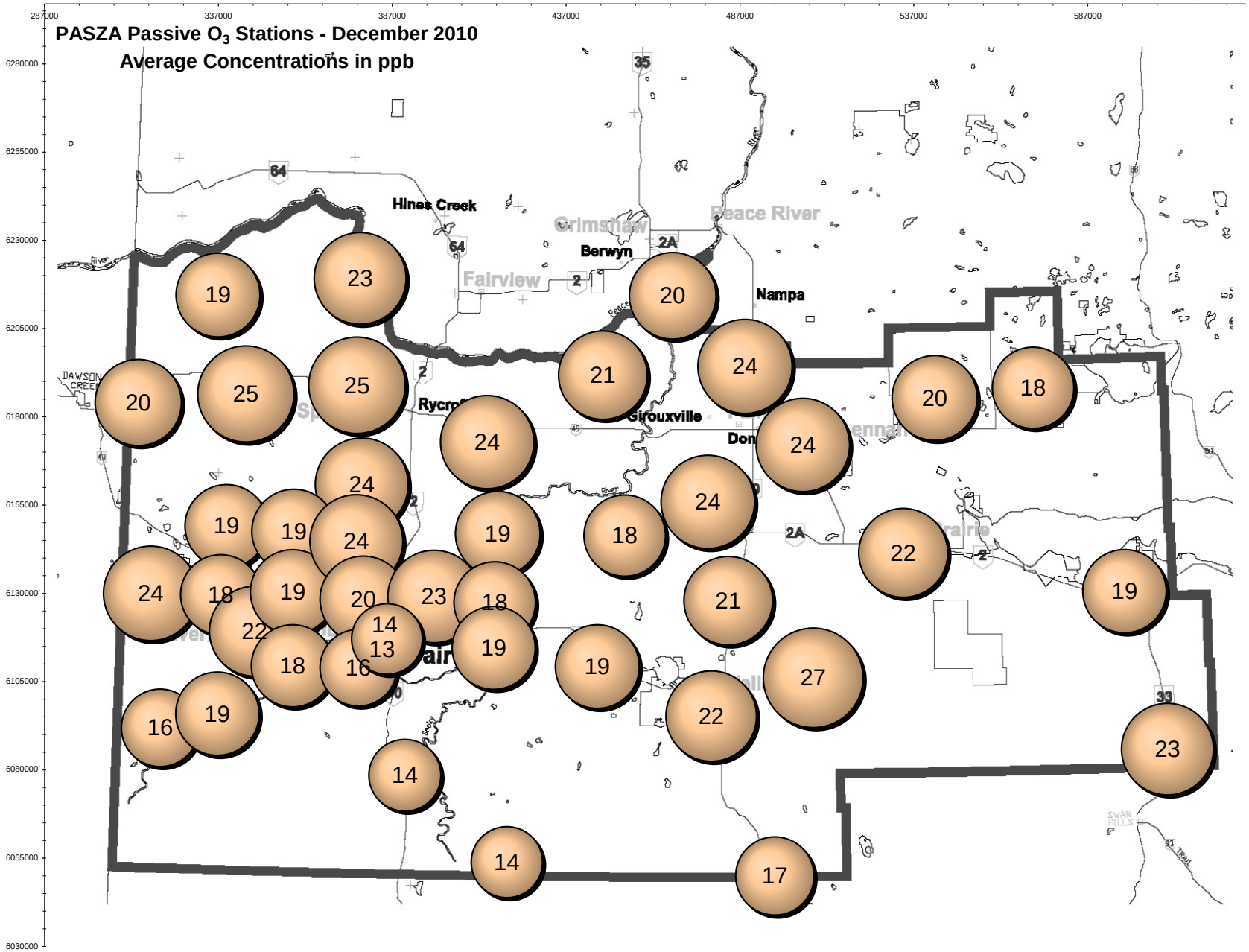
	SO_2	O_3	NO_2
PASZA Henry Pirker station	**0.8**	**9.4**	**16.6**
PASZA Grande Prairie passive	**0.7**	**13.6**	**12.1**



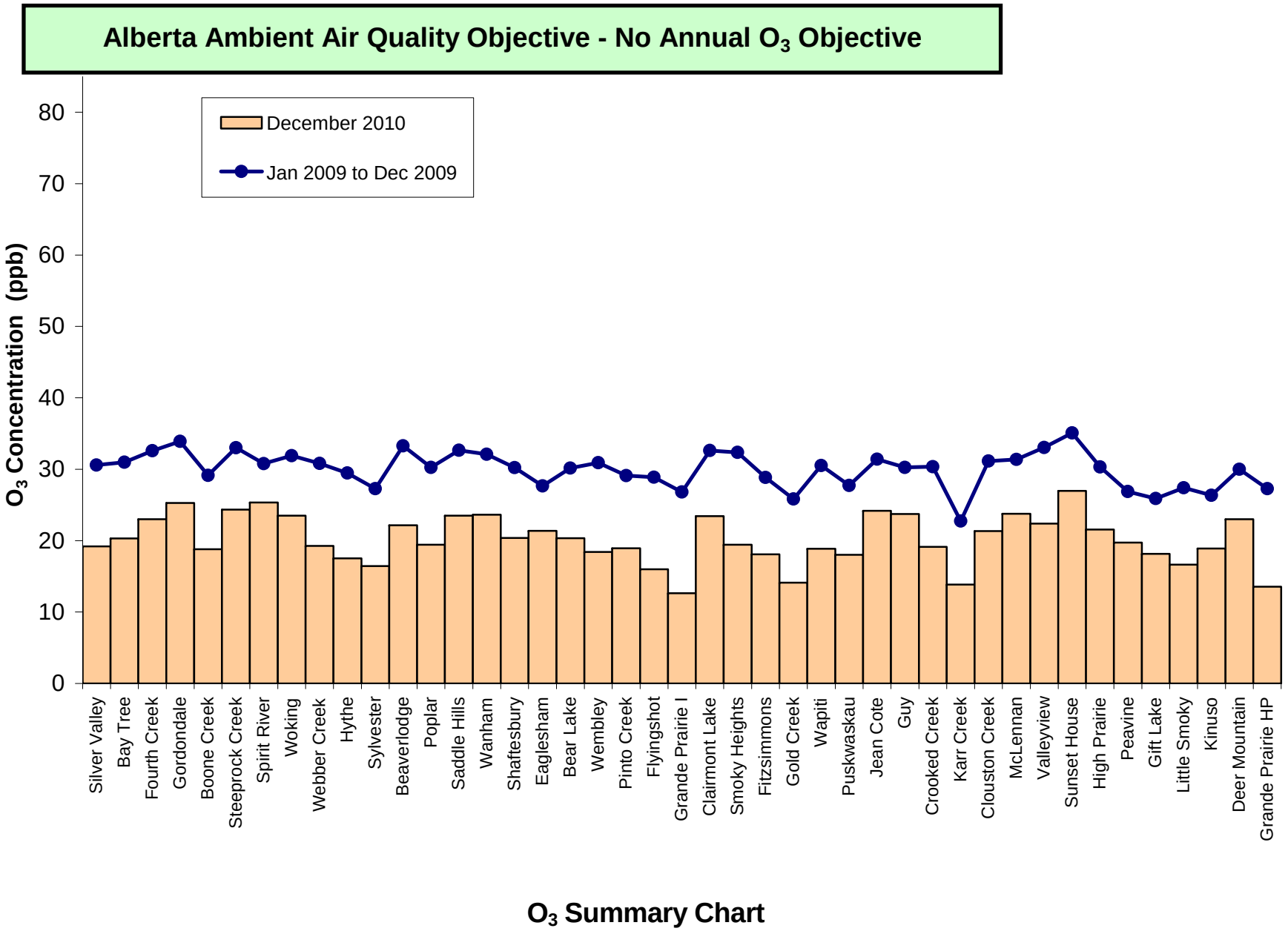
SO_2 Bubble Chart



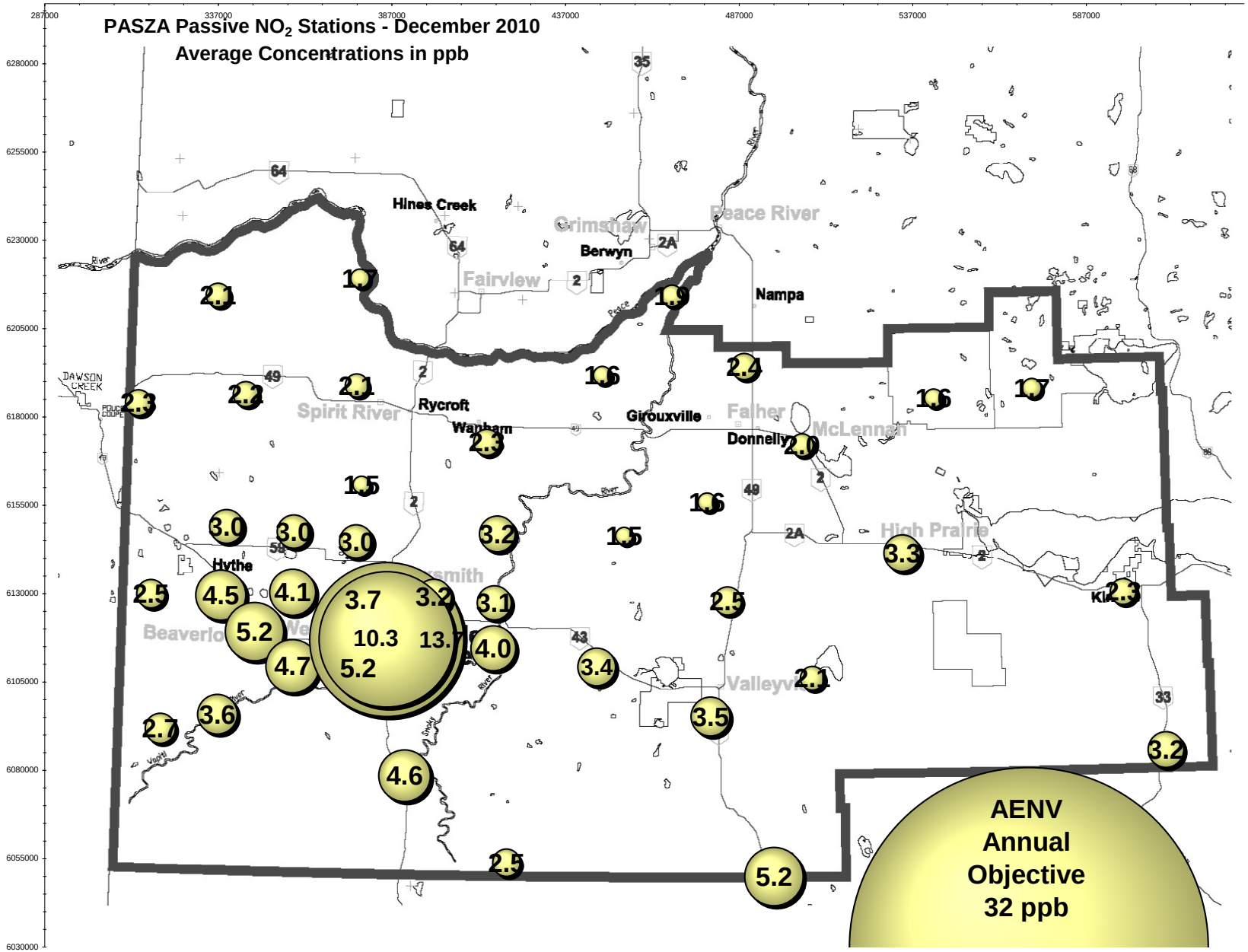
SO_2 Summary Chart



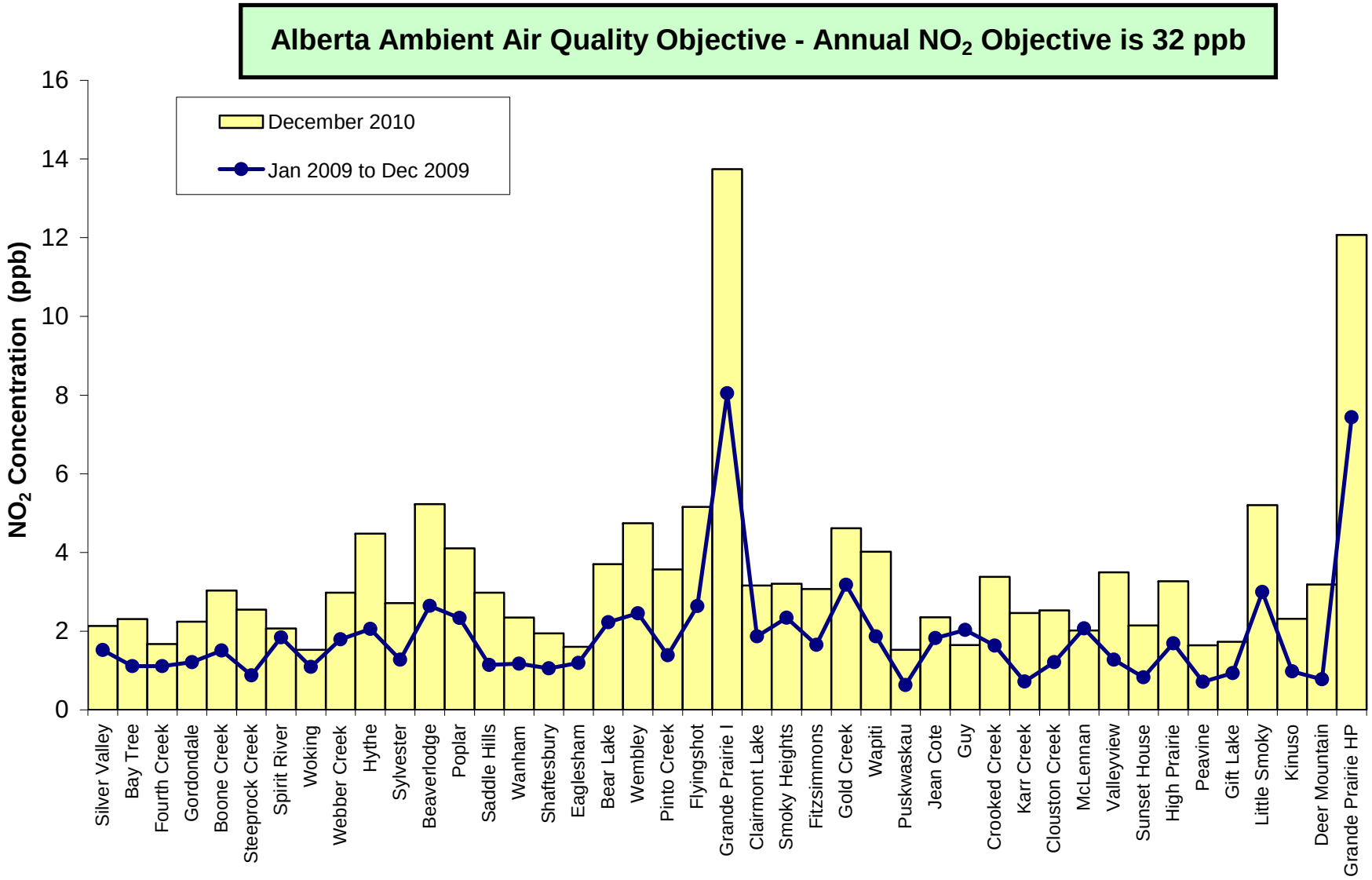
O_3 Bubble Chart



O_3 Summary Chart



NO_2 Bubble Chart



NO_2 Summary Chart

PASZA

ALBERTA ENVIRONMENT
INCIDENCE REPORTS

December 2010

Air Monitoring Directive Exceedence Report

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

Reference Number:	243173	**Reported To (AENV Contact):**	Karla
Date & Time Incident Reported to AENV:	01-01-2011 18:30 PM	**Reported By:**	Courtney Thompson
Reported on Behalf of:	PASZA	**Approval Number (if applicable):**	
Location(s) of Incident:	Site #1 – Henry Pirker Air Monitoring Site – Muskoseepi park		
Start Date & Time of Incident:	22:00 PM 12-31-2010	**End Date & Time of Incident:**	00:00:00 PM 01-01-2011

Details of Exceedence:

A yearly fireworks display done near the Henry Pirker monitoring station exceeded the AENV hourly average $PM_{2.5}$ hourly guideline (80 µg/m^3) as detailed below:

22:00-23:00 MST $PM_{2.5}$= 275.5 µg/m^3 WD=321.0 Deg WS = 2.9 km/hr ET = -14.5 deg C
23:00-00:00 MST $PM_{2.5}$= 239.2 µg/m^3 WD= 236.6Deg WS = 1.1 km/hr ET = -15.1 deg C

Immediate Actions Taken:

Confirmed validity of data and reported to AENV Environmental Service Response Centre on 2011-01-01 at 18:30 MST.

Follow-up Details:

Analyzer returned to normal operation/values following event. No further details at this time.

Actions Taken to Prevent Reoccurrence (if any):

Not Applicable

Additional Actions Required (if any):

Not applicable

Report Completed By:	Courtney Thompson	Date Report Submitted:	01-01-2011
7-Day Letter Due Date:	01-06-2010		

Air Monitoring Directive Exceedence Report

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

Reference Number:	243173	**Reported To (AENV Contact):**	Karla
Date & Time Incident Reported to AENV:	01-01-2011 18:30 PM	**Reported By:**	Courtney Thompson
Reported on Behalf of:	PASZA	**Approval Number (if applicable):**	
Location(s) of Incident:	Site #1 – Henry Pirker Air Monitoring Site- Muskoseepi park		
Start Date & Time of Incident:	22:00 PM 12-31-2010	**End Date & Time of Incident:**	00:00:00 PM 01-01-2011

Details of Exceedence:

A yearly fireworks display done near the Henry Pirker monitoring station exceeded the AENV 24 hour average $PM_{2.5}$ guideline (30 µg/m^3) as detailed below:

00:00-00:00 MST $PM_{2.5}$= 34.6 µg/m^3 WD= 294.5Deg WS = 3.1 km/hr ET = -20.2 deg C

Immediate Actions Taken:

Confirmed validity of data and reported to AENV Environmental Service Response Centre on 2011-01-01 at 18:30 MST.

Follow-up Details:

Analyzer returned to normal operation/values following event. No further details at this time.

Actions Taken to Prevent Reoccurrence (if any):

Not Applicable

Additional Actions Required (if any):

Not applicable

Report Completed By:	Courtney Thompson	Date Report Submitted:	01-01-2011
7-Day Letter Due Date:	01-06-2010		

Air Monitoring Directive Exceedence Report

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

Reference Number:	242954	**Reported To (AENV Contact):**	Nancy
Date & Time Incident Reported to AENV:	12-20-2010 @ 20:35 PM	**Reported By:**	Courtney Thompson
Reported on Behalf of:	PASZA	**Approval Number (if applicable):**	
Location(s) of Incident:	Smokey Heights located approximately 6 km east of Teepee Creek		
Start Date & Time of Incident:	19:00 PM 12-20-2010	**End Date & Time of Incident:**	20:00 PM 12-20-2010

Details of Exceedence:

The $PM_{2.5}$ analyzer (TEOM) within the Smoky Heights station, currently located ENE of Grande Prairie at LSD 13-8-074-02 W6, exceeded the AENV hourly average $PM_{2.5}$ hourly guideline (80 µg/m^3) as detailed below:

19:00-20:00 MST $PM_{2.5}$= 99.9 µg/m^3 WD=10.6 Deg WS = 5.8 km/hr ET = -18.4 deg C

Immediate Actions Taken:

Hourly exceedence phoned in to Ministry.

Follow-up Details:

Not Applicable

Actions Taken to Prevent Reoccurrence (if any):

Not Applicable

Additional Actions Required (if any):

Not applicable

Report Completed By:	Courtney Thompson	Date Report Submitted:	12-20-2010
7-Day Letter Due Date:	12-27-2010		

December 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

Parameter **SO2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	December 7, 2010	Previous Calibration	November 3, 2010
Station Number	1	Station Location	Henry Pirker

Reason: [Routine] [Install] [Removal] [Other:]

Start Time (MST)	10:30	End Time (MST)	13:25
Barometric Pressure	0.936 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Conc	51.5 ppb	Cal Gas Cert Date	4/6/2012
		Cal Gas Cylinder #	SGAL3245
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	10
	Before		After
Calculated slope	1.002798	Calculated slope	1.001355
Calculated intercept	0.289448	Calculated intercept	-1.259697

Analyzer make	TEI 43C	Analyzer serial #	610816292

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	8.6		8.6	
Coefficient	.809		.809	
Pressure	652.0	mm Hg	644.8	mm Hg
Flow	0.482	lpm	0.479	lpm
Lamp Voltage	43807	Hz	44498	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
4991	0.00	0.0	-0.3	N/A
4991	39.83	407.7	407.7	1.0002
4991	19.89	204.4	206.1	0.9919
4991	9.93	102.3	105.0	0.9738
4991	0.00	0.0	-0.3	As Found Zero
4991	39.83	407.7	407.7	As Found Span
			Average Correction Factor	0.9886

Calculated value of As Found Response: 409.4 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	231.4	ppb

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PASZA**

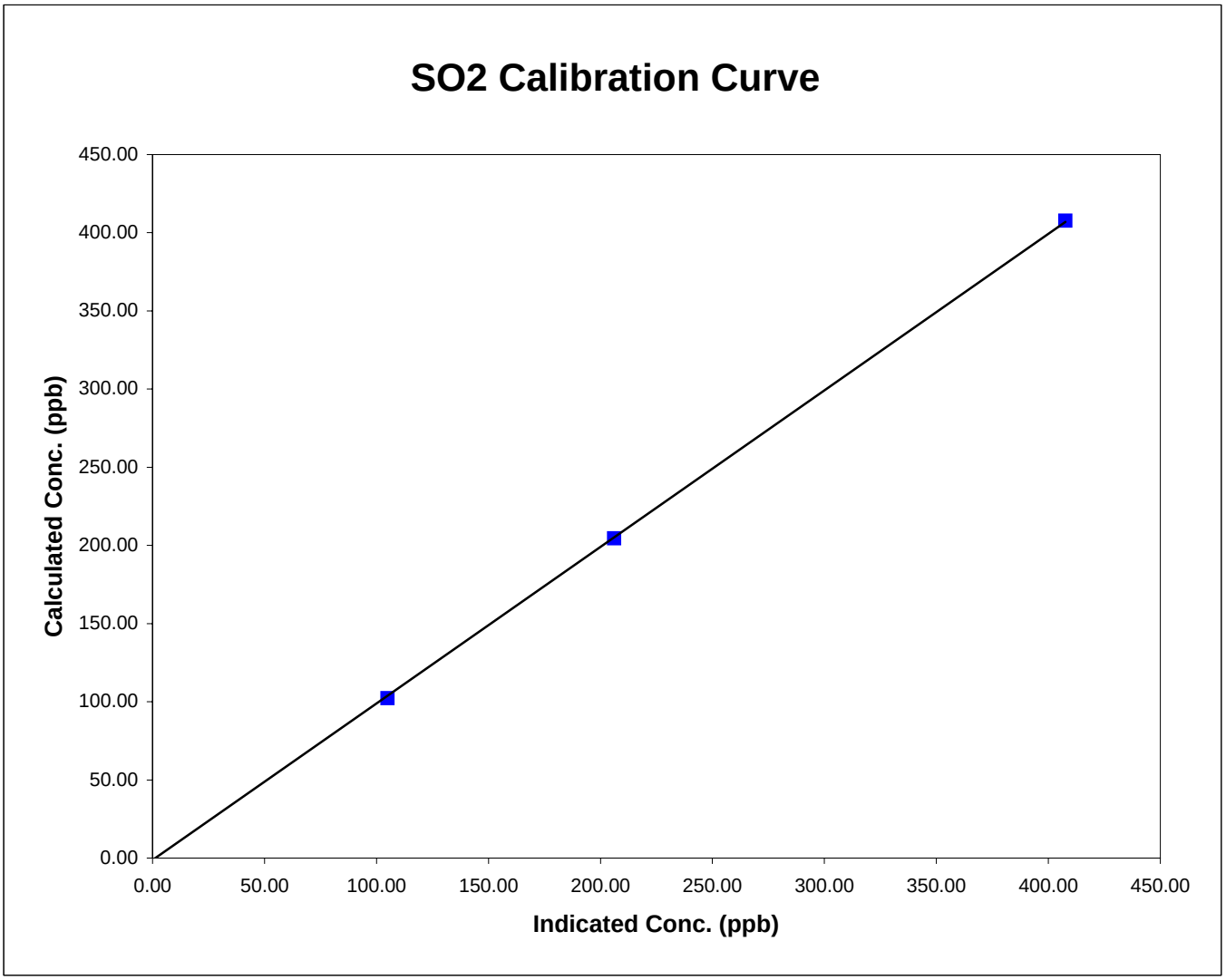
FOCUS AIR QUALITY MONITORING

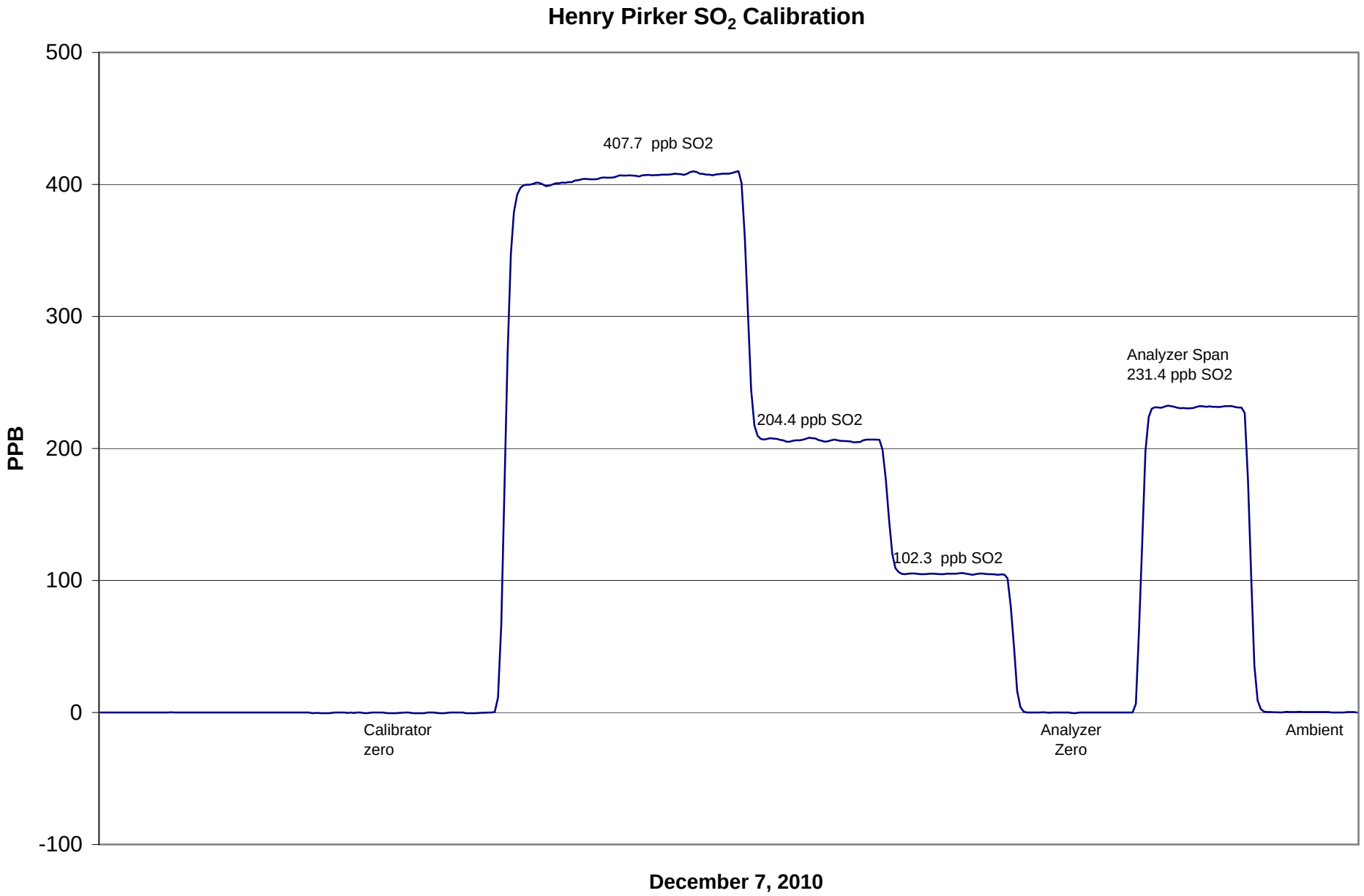
Station Information

Calibration Date	December 7, 2010	Previous Calibration	November 3, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:30	End Time (MST)	13:25
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		
407.7	407.7	1.0002	Correlation Coefficient	0.999932
204.4	206.1	0.9919		
102.3	105.0	0.9738	Slope	1.001355
			Intercept	-1.259697




Henry Pirker SO2 Calibration
500
400
300
200
100
0
-100
PPB
407.7 ppb SO2
204.4 ppb SO2
102.3 ppb SO2
Analyzer Span
231.4 ppb SO2
Calibrator
zero
Analyzer
Zero
Ambient
December 7, 2010

Calibration Report

Parameter **TRS**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	December 7, 2010	Previous Calibration	November 2, 2010
Station Number	1	Station Location	Henry Pirker
Reason:	Routine / Install / Removal / Other:		
Start Time (MST)	14:50	End Time (MST)	17:50
Barometric Pressure	0.936 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Conc	5.15 ppb	Cal Gas Expiry Date	7/31/2008
		Cal Gas Cylinder #	ALM013295
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	1.008176	Calculated slope	1.008692
Calculated intercept	0.015566	Calculated intercept	-0.609988
Analyzer make	TEI 45C	Analyzer serial #	630718528

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Coefficient	1.084		1.037	
Background	10.3		9.9	
Pressure	669.1	mm Hg	661.8	mm Hg
Flow	0.463	ccm	0.46	ccm
Lamp Voltage	828	V	828	V

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
4991	0.00	0.00	0.37	N/A
4991	79.78	81.03	80.95	1.0009
4991	39.87	40.81	40.94	0.9970
4991	9.93	10.23	11.08	0.9226
4991	0.00	0.00	0.37	As Found Zero
4991	79.78	81.03	82.72	As Found Span
			Average Correction Factor	0.9735

Calculated value of As Found Response: 83.0 ppb Percent Change of As Found: -2.5%

	before calibration		after calibration	
Auto zero	-0.29	ppb	0.20	ppb
Auto span	26.30	ppb	27.39	ppb

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **TRS**

Air Monitoring Network **PASZA**

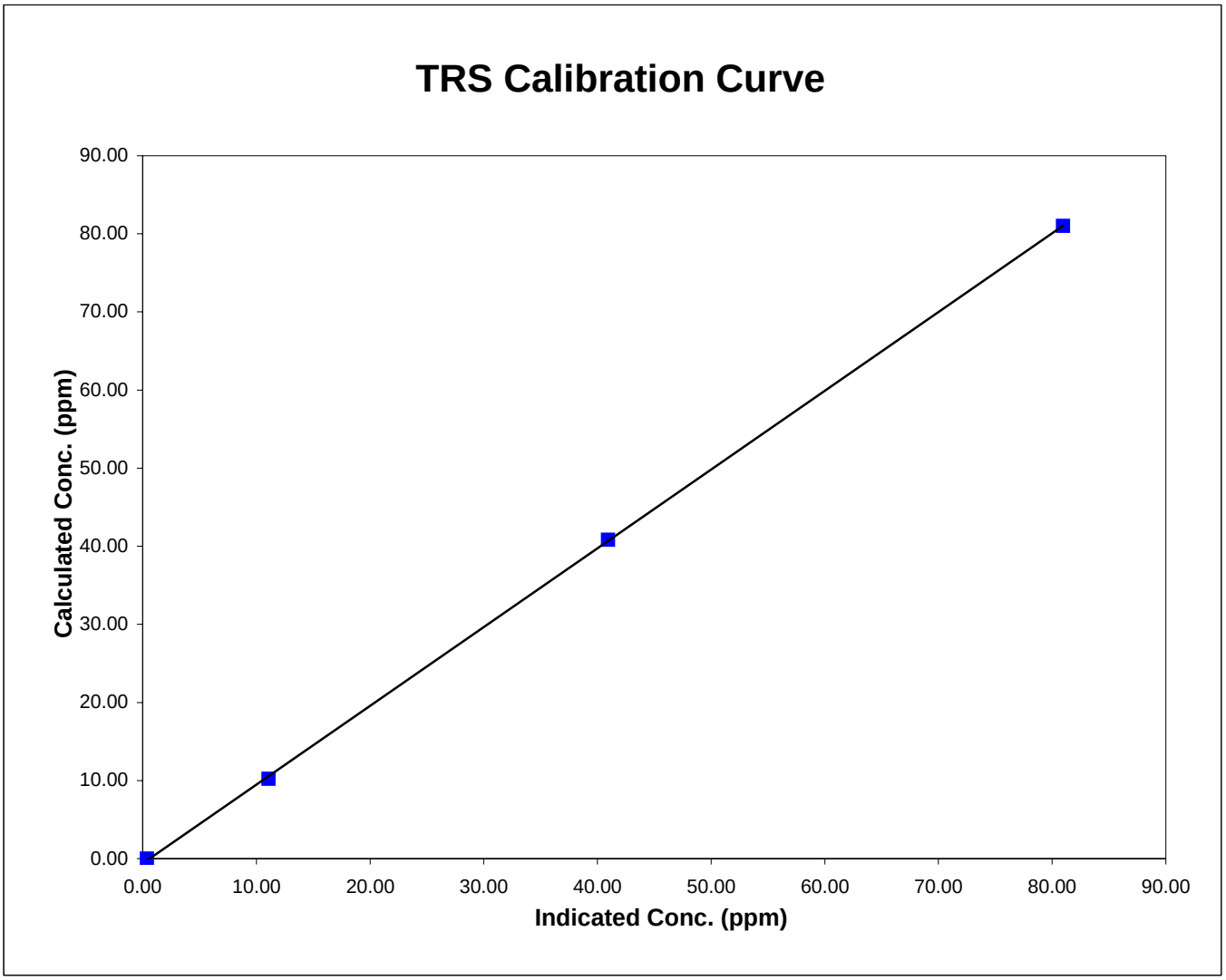
FOCUS AIR QUALITY MONITORING

Station Information

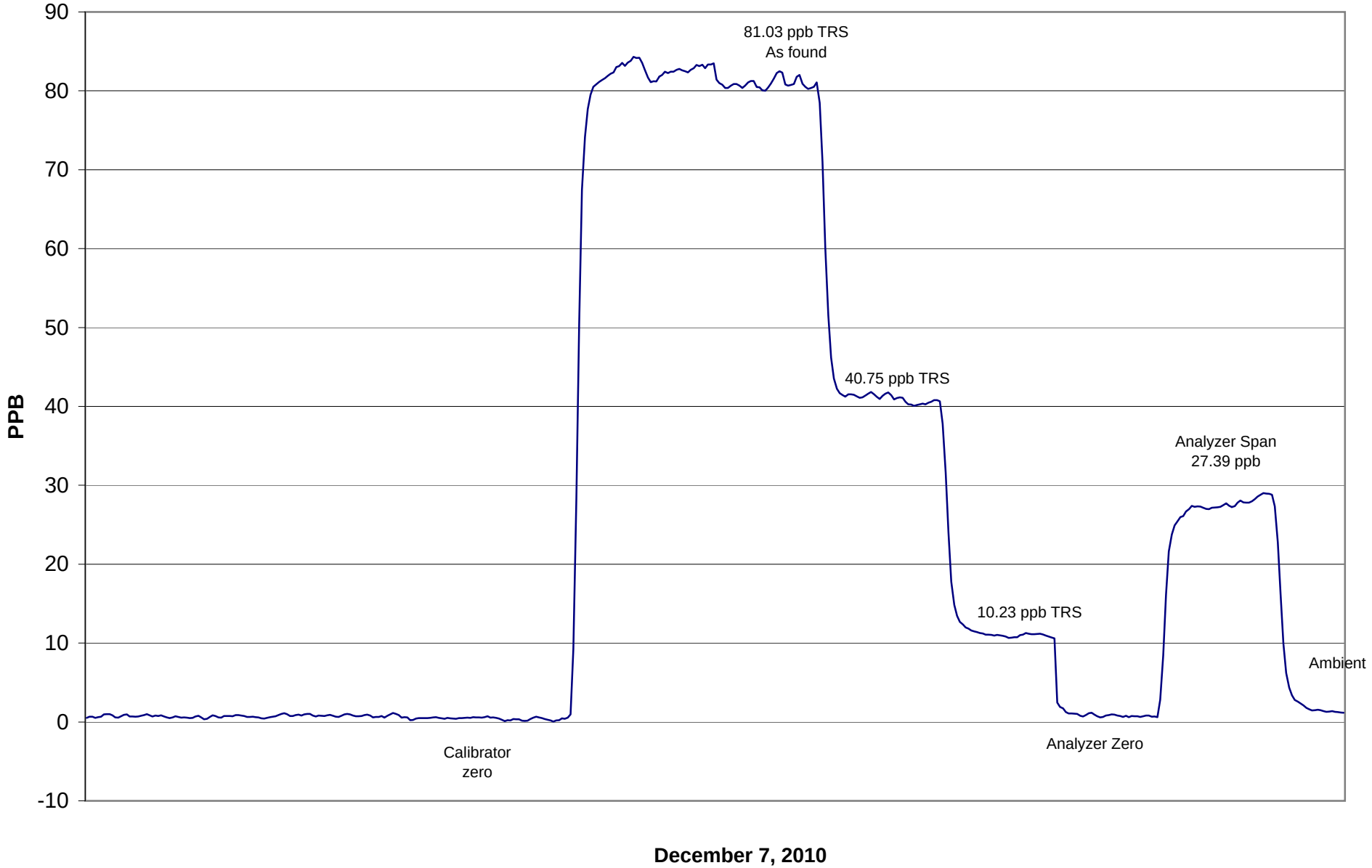
Calibration Date	December 7, 2010	Previous Calibration	November 2, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	14:50	End Time (MST)	17:50
Analyzer make/model	TEI 45C	Analyzer serial #	630718528

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.373	N/A		
81.026	80.953	1.0009	Correlation Coefficient	0.999952
40.814	40.937	0.9970		
10.226	11.084	0.9226	Slope	1.008692
			Intercept	-0.609988



Henry Pirker TRS Calibration



December 7, 2010

Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	December 7, 2010	Previous Calibration	November 3, 2010
Station Number	1	Station Location	Henry Pirker

Reason: Routine | Installation | Removal | Other:

Start Time (MST)	10:30		End Time (MST)	14:53	
Barometric Pressure	0.936	Atm	Station Temperature	20.0	Deg C
Calibrator	Environics		Serial Number	3474	
NO Cal Gas Conc	50.8	ppm	Cal Gas Expiry Date	April 6, 2012	
NOx Cal Gas Conc	50.8	ppm	Cal Gas Serial #	SGAL3245	

DACS Information

DACS make: Focus AP1000 DACS serial No.:

Parameter		NO2	NOx	NO
Before	Data Slope	0.999030	1.004003	1.004037
	Data Offset	-0.191758	-1.307079	-1.405313
After	Data Slope	1.000646	1.005581	1.005450
	Data Offset	0.131676	-2.074837	-2.083230
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	10.3	mV	9.7	mV
NOx bkgnd	10.8	mV	10.1	mV
NO coefficient	0.768		0.722	
NOx coefficient	1.000		0.998	
NO2 conv temp	318.0	Deg C	318.0	Deg C
PMT Temp	-2.5	Deg C	-2.5	Deg C
PMT Volt	-786.0	mV	-786.0	mV
R Cell Press	178.0	in Hg	176.2	in Hg

Calibration Report

Parameter **NOx-NO-NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: December 7, 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	4991	0.00	0.0	0.0	0.0	0.1	0.0	0.0	N/A	N/A
1	4991	39.83	402.2	402.2	0.0	401.0	401.0	0.0	1.0030	1.0031
2	4991	19.89	201.6	201.6	0.0	203.6	203.8	-0.2	0.9906	0.9894
3	4991	9.93	100.9	100.9	0.0	104.4	104.4	0.0	0.9660	0.9661
AFZ	4991	0.00	0.0	0.0	0.0	-2.0	-1.5	-0.6	0.0000	0.0000
AFS	4991	39.83	402.2	402.2	0.0	426.0	424.6	1.3	0.9442	0.9471
							Average Correction Factor		0.9865	0.9862

As Found Concentrations: NO_X= 426.7 NO= 424.8 As Found Percent Change NO_X= 6.1% NO= 5.6%

GPT Calibration Data

Dilution Flow 4989 ccm Source Gas Flow 39.85 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	-1.5	-1.5	0.0	0.1	0.0	0.0	N/A	N/A	N/A	N/A
NO point	401.1	401.1	0.0	400.6	401.1	-0.5	1.0011	1.0000	N/A	N/A
300	401.1	176.5	224.6	400.7	176.5	224.4	1.0010	1.0000	1.0009	99.9%
200	401.1	250.9	150.2	400.6	250.9	150.0	1.0011	1.0000	1.0012	99.9%
100	401.1	321.5	79.6	400.3	321.5	79.1	1.0019	1.0000	1.0060	99.4%
					Average Correction Factor		1.0013	1.0000	1.0027	99.7%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.1	0.0	0.0	ppb	0.1	13.7	0.0	ppb
Auto span	168.4	169.5	1.2	ppb	163.5	162.6	1.0	ppb

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

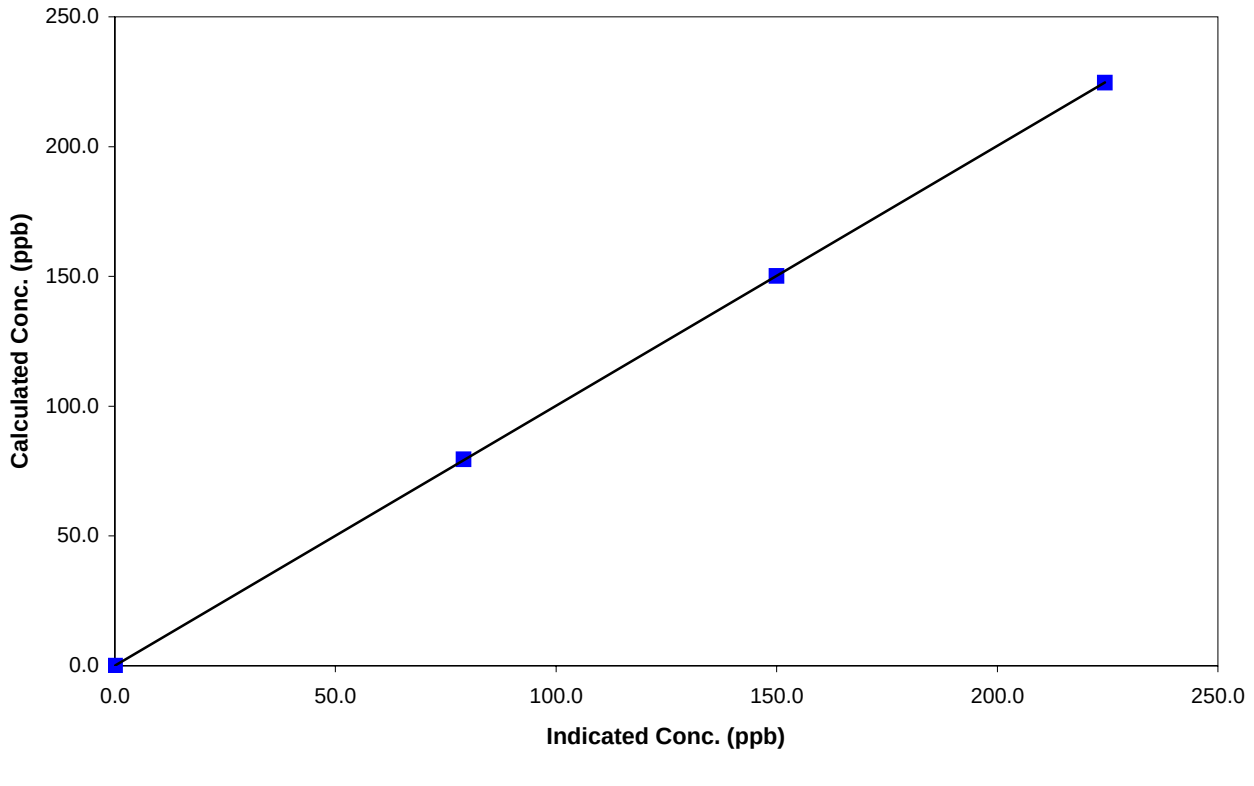
Station Information

Calibration Date	December 7, 2010	Previous Calibration	November 3, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:30	End Time (MST)	14:53
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	0.0	N/A		
224.6	224.4	1.0009	Correlation Coefficient	0.999996
150.2	150.0	1.0012		
79.6	79.1	1.0060	Slope	1.000646
			Intercept	0.131676

NO_2 Calibration Curve



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

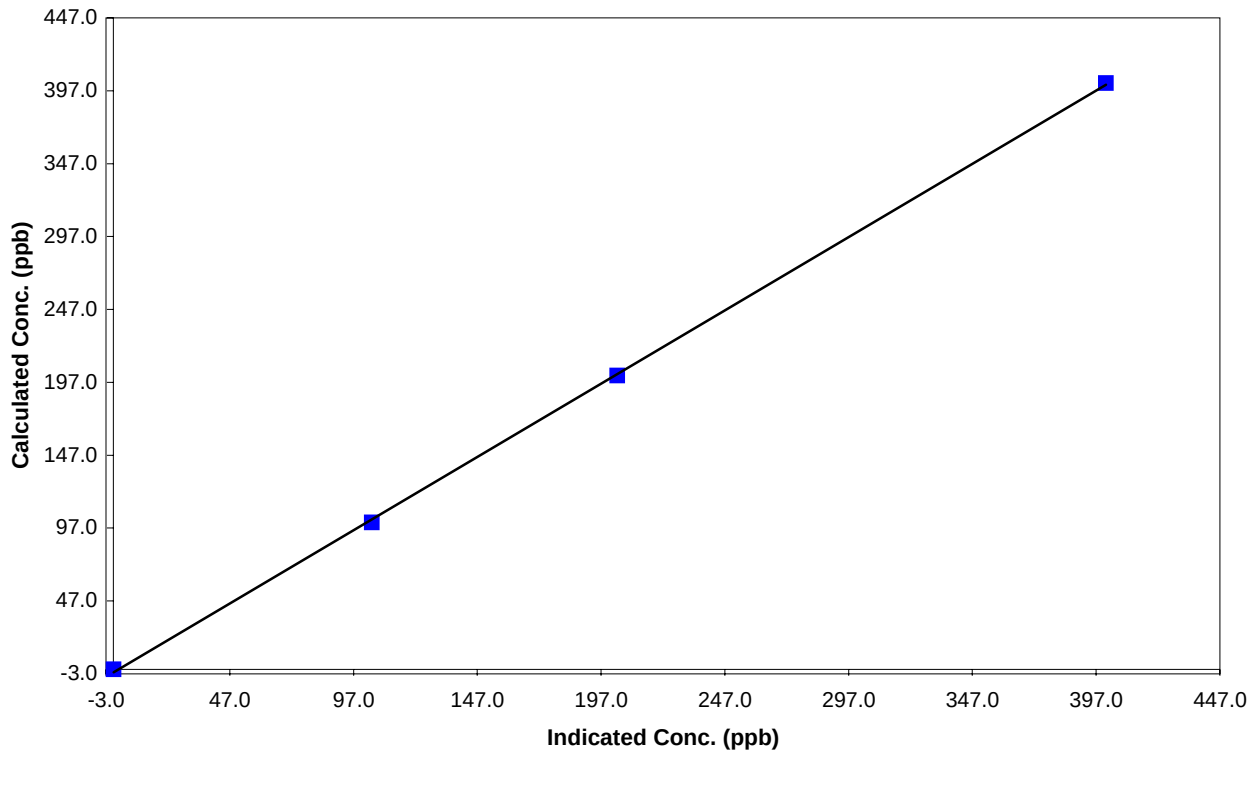
Station Information

Calibration Date	December 7, 2010	Previous Calibration	November 3, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:30	End Time (MST)	14:53
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		
402.2	401.0	1.0030	Correlation Coefficient	0.999884
201.6	203.6	0.9906		
100.9	104.4	0.9660	Slope	1.005581
			Intercept	-2.074837

NOx Calibration Curve



Calibration Summary

Parameter **NO**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

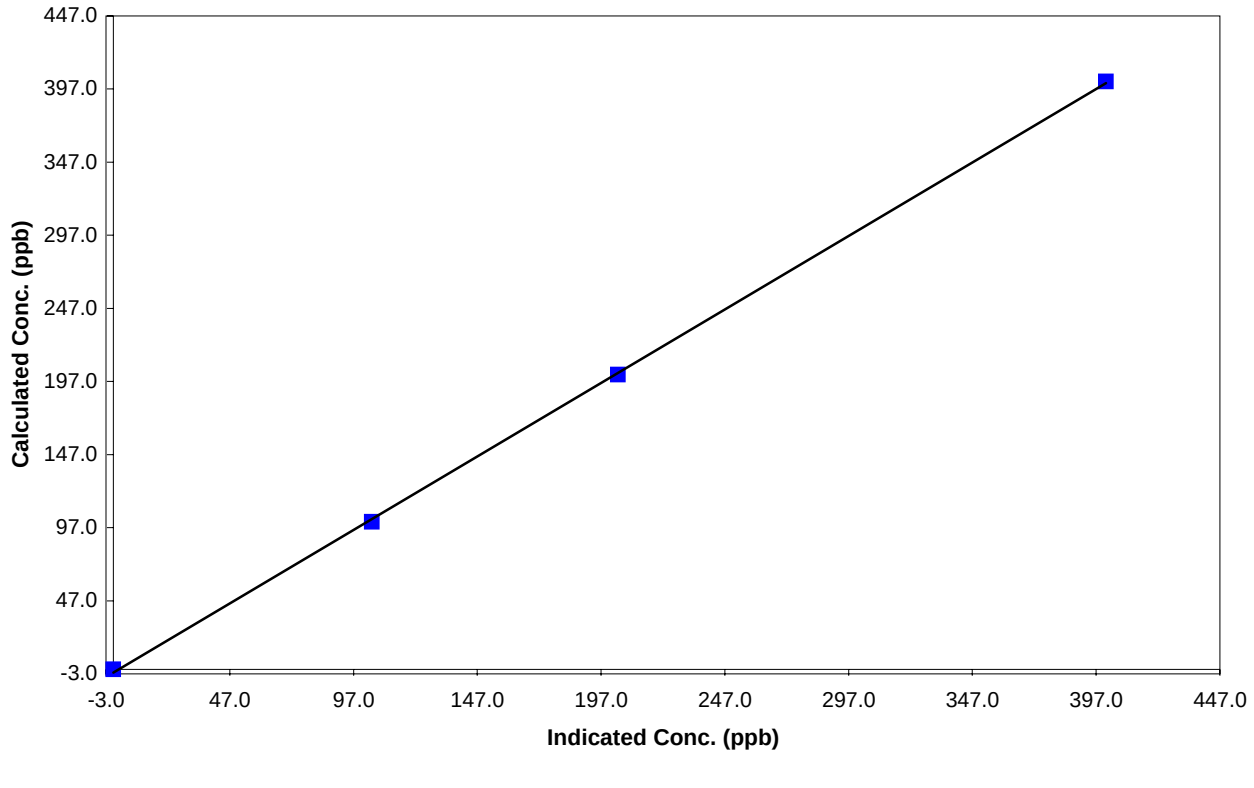
Station Information

Calibration Date	December 7, 2010	Previous Calibration	November 3, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:30	End Time (MST)	14:53
Analyzer make	TEI 42C	Analyzer serial #	508011073

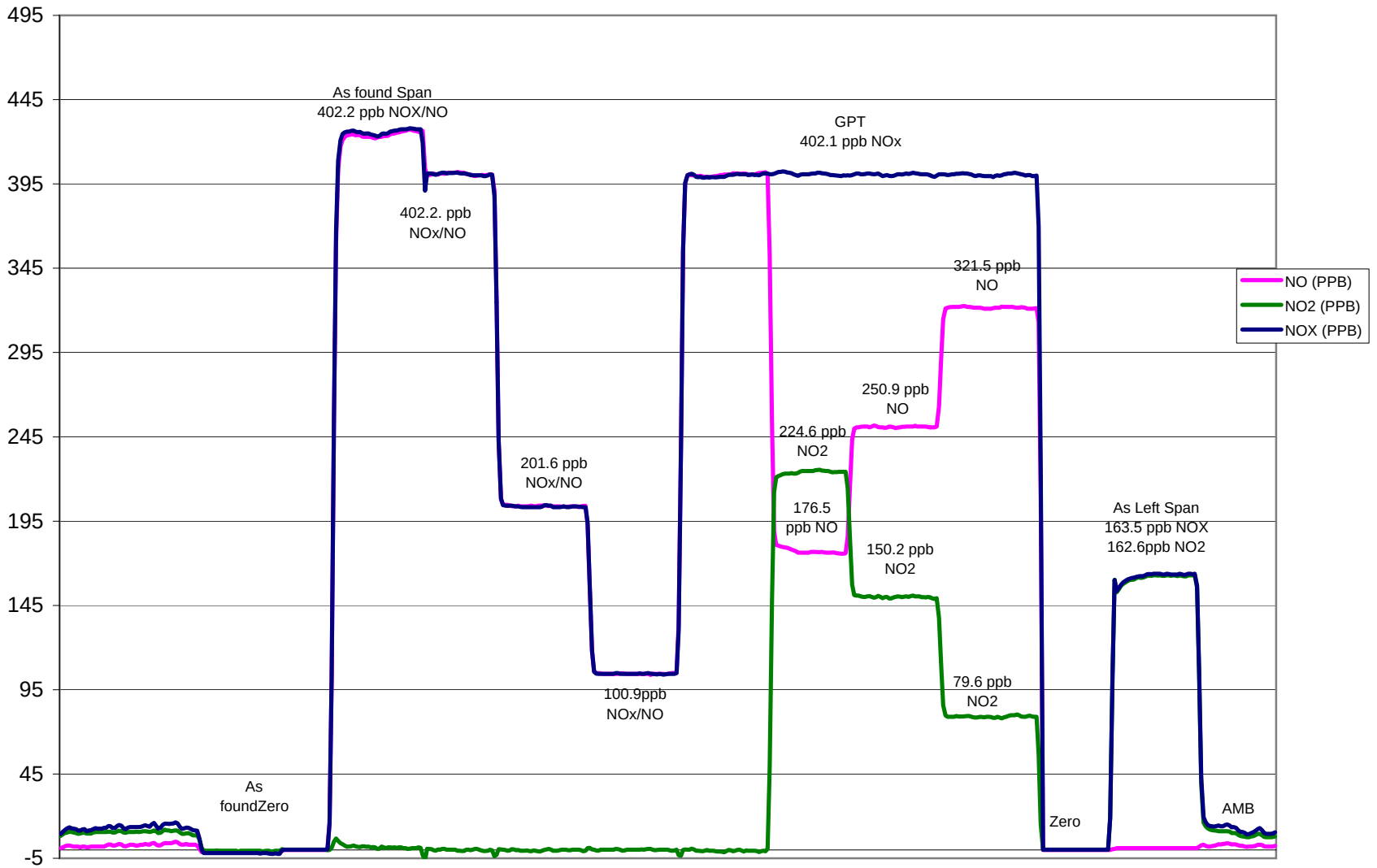
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
402.2	401.0	1.0031	Correlation Coefficient	0.999873
201.6	203.8	0.9894		
100.9	104.4	0.9661	Slope	1.005450
			Intercept	-2.083230

NO Calibration Curve



Henry Pirker NO_X Calibration



December 7, 2010

Calibration Report

Parameter **O3**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	December 7, 2010	Previous Calibration	November 3, 2010
Station Number	1	Station Location	Henry Pirker
Reason:	Routine / Install / Removal / Other:		
Start Time (MST)	13:35	End Time (MST)	16:13
Barometric Pressure	0.936 atm	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	Focus AP1000	DACS serial No.	45269
DACS voltage range	0 - 1 volt	DACS channel #	5
	Before		After
Calculated slope	0.986343	Calculated slope	0.995772
Calculated intercept	0.064096	Calculated intercept	-0.255877
Analyzer make	TECO 49C	Analyzer serial #	607415761

	before		after	
Concentration range	500	ppb	500	ppb
offset	-0.6	ppb	-0.6	ppb
slope	1.030		0.985	
O3 Lamp temp	71	Deg C	71	Deg C
Intensities	84639/74018	mV	85406/74261	mV
Pressure	696.8	inches Hg	686.2	inches Hg
Flow A	0.726	ccm	0.719	ccm
Flow B	0.728	ccm	0.735	ccm

Calibration Data

Referenced concentration (ppb)	Dilution air flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
0	4991	0.0	-0.2	N/A
300	4991	224.6	225.5	0.9959
200	4991	150.2	151.2	0.9934
100	4991	79.6	80.8	0.9850
0	4991	0.0	-0.2	As found zero
300	4991	224.6	235.6	As found span
			Average Correction Factor	0.9914

Calculated value of As Found Response: 232.6 ppm Percent Change of As Found: 3.6%

	before calibration		after calibration	
Auto zero	0.3	ppb	0.3	ppb
Auto span	153.0	ppb	153.1	ppb

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **O3**

Air Monitoring Network **PASZA**

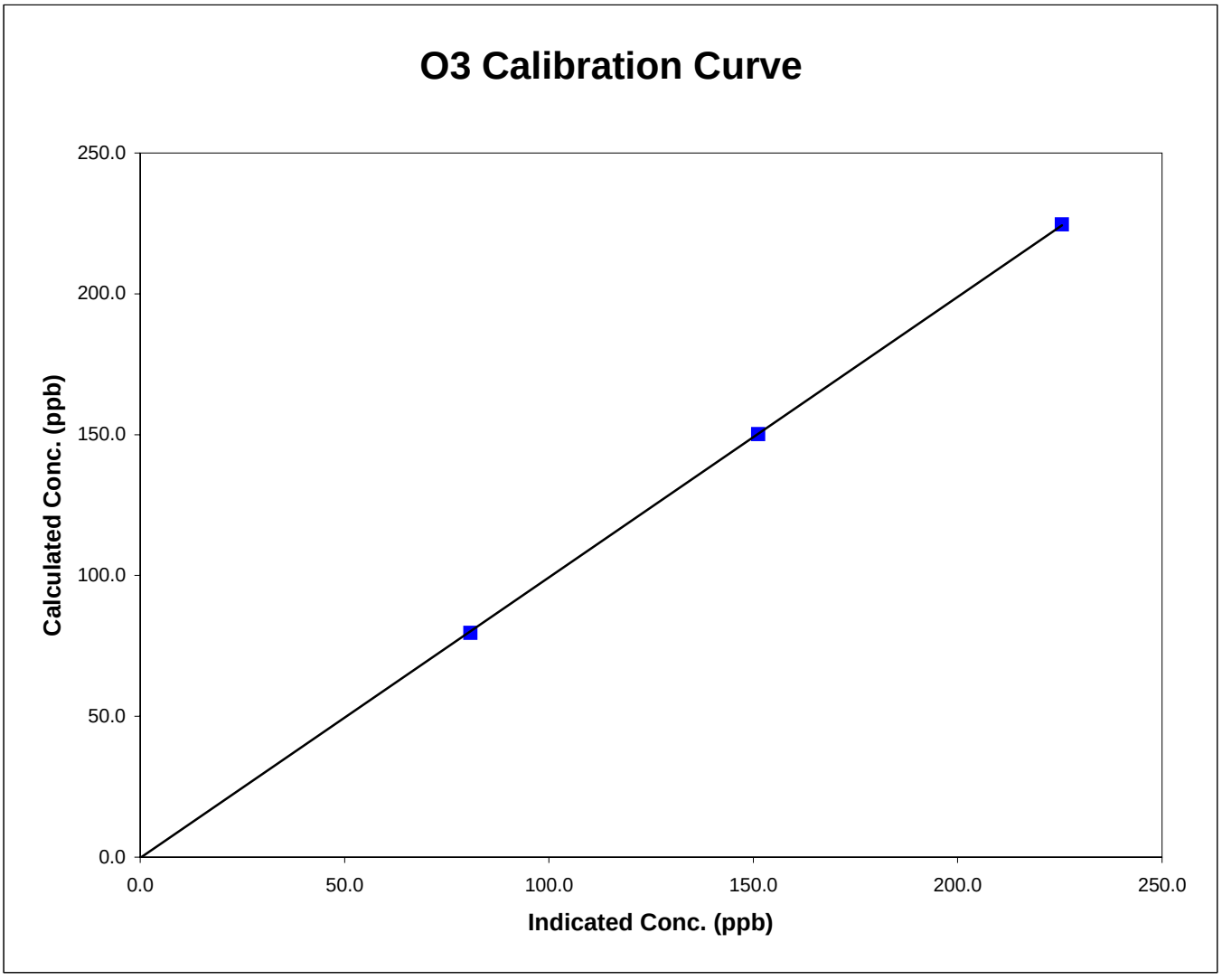
FOCUS AIR QUALITY MONITORING

Station Information

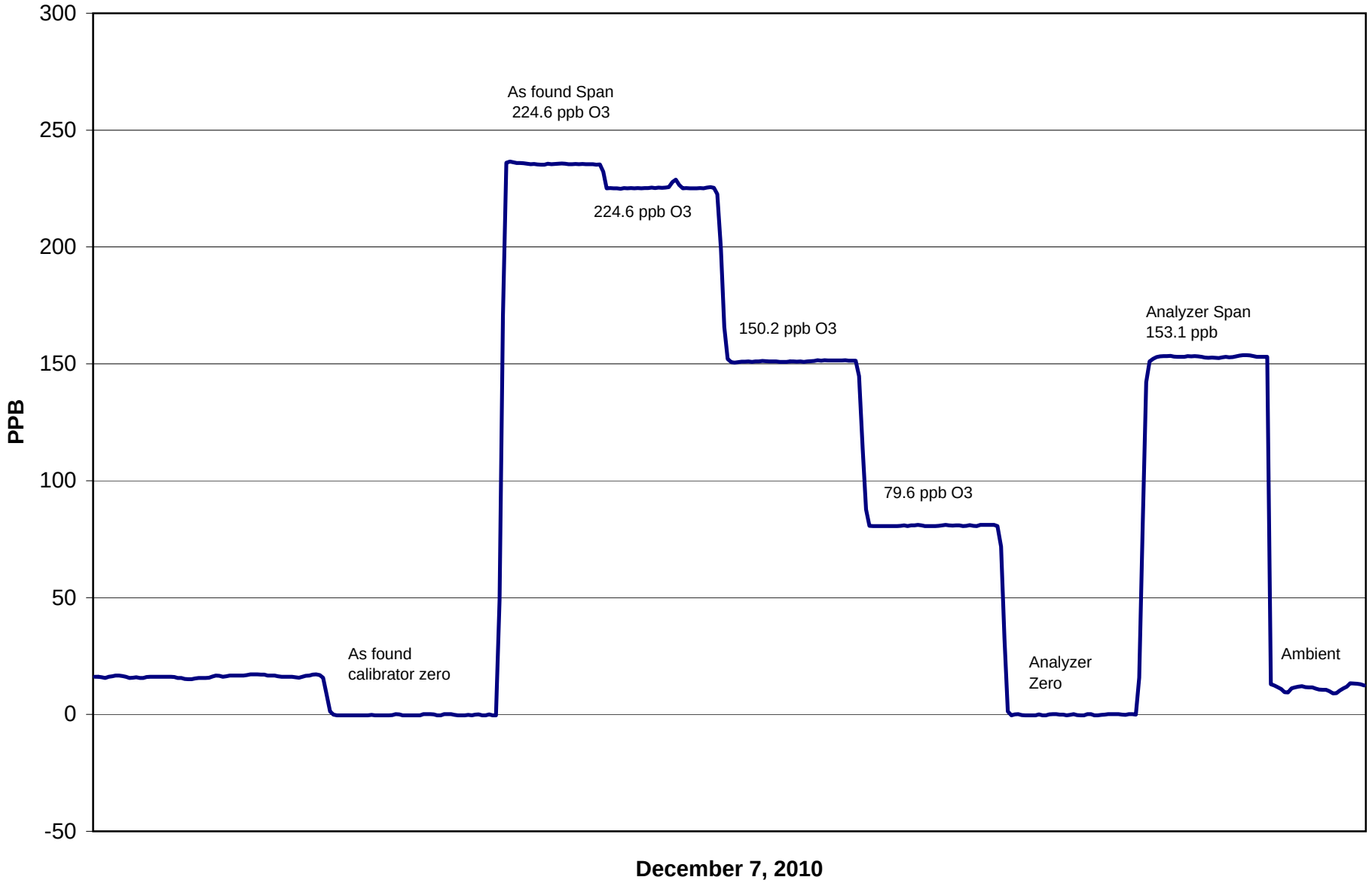
Calibration Date	December 7, 2010	Previous Calibration	November 3, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	13:35	End Time (MST)	16:13
Analyzer make/model	TECO 49C	Analyzer serial #	607415761

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.2	NA		
224.6	225.5	0.9959	Correlation Coefficient	0.999976
150.2	151.2	0.9934		
79.6	80.8	0.9850	Slope	0.995772
			Intercept	-0.255877



Henry Pirker O_3 Calibration



Calibration Report

Parameter **CO**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	December 14, 2010	Previous Calibration	December 6, 2010
Station Number	1	Station Location	Henry Pirker
Reason:	Routine ☐ Install	☐ Removal	☐ Other:
Start Time (MST)	10:10	End Time (MST)	14:26
Barometric Pressure	0.936 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Conc	3000 ppm	Cal Gas Expiry Date	AUG 28/05
		Cal Gas Cylinder #	AAL20565
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	0.979519	Calculated slope	1.004117
Calculated intercept	-1.005489	Calculated intercept	-0.069753
Analyzer make	TEI Model 48C	Analyzer serial #	508011062

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO span setting	1.062		1.077	
CO zero setting	10.068		-0.007	
Sample pressure	682.3	mm Hg	665.6	mm Hg
Sample Flow	1.151	LPM	1.114	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	0.03	N/A
4991	39.84	23.76	23.70	1.0022
4991	19.90	11.91	11.97	0.9957
4991	9.95	5.97	6.05	0.9867
4991	0.00	0.00	1.10	As Found Zero
4991	39.84	23.76	25.53	As Found Span
			Average Correction Factor	0.9949

Calculated value of As Found Response: 22.929 ppm Percent Change of As Found: 3.5%

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	18.77	ppm	19.12	ppm

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **CO**

Air Monitoring Network **PASZA**

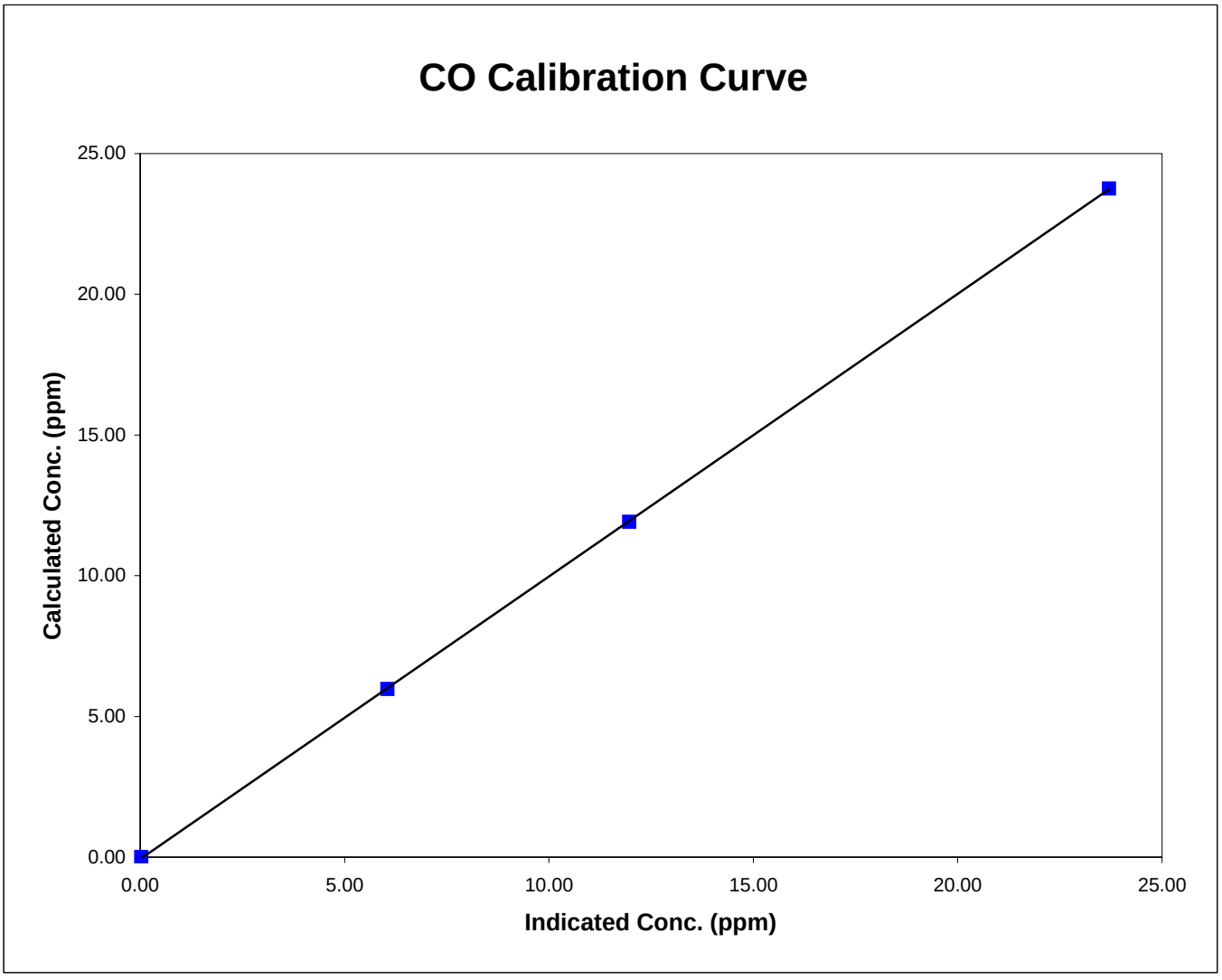
FOCUS AIR QUALITY MONITORING

Station Information

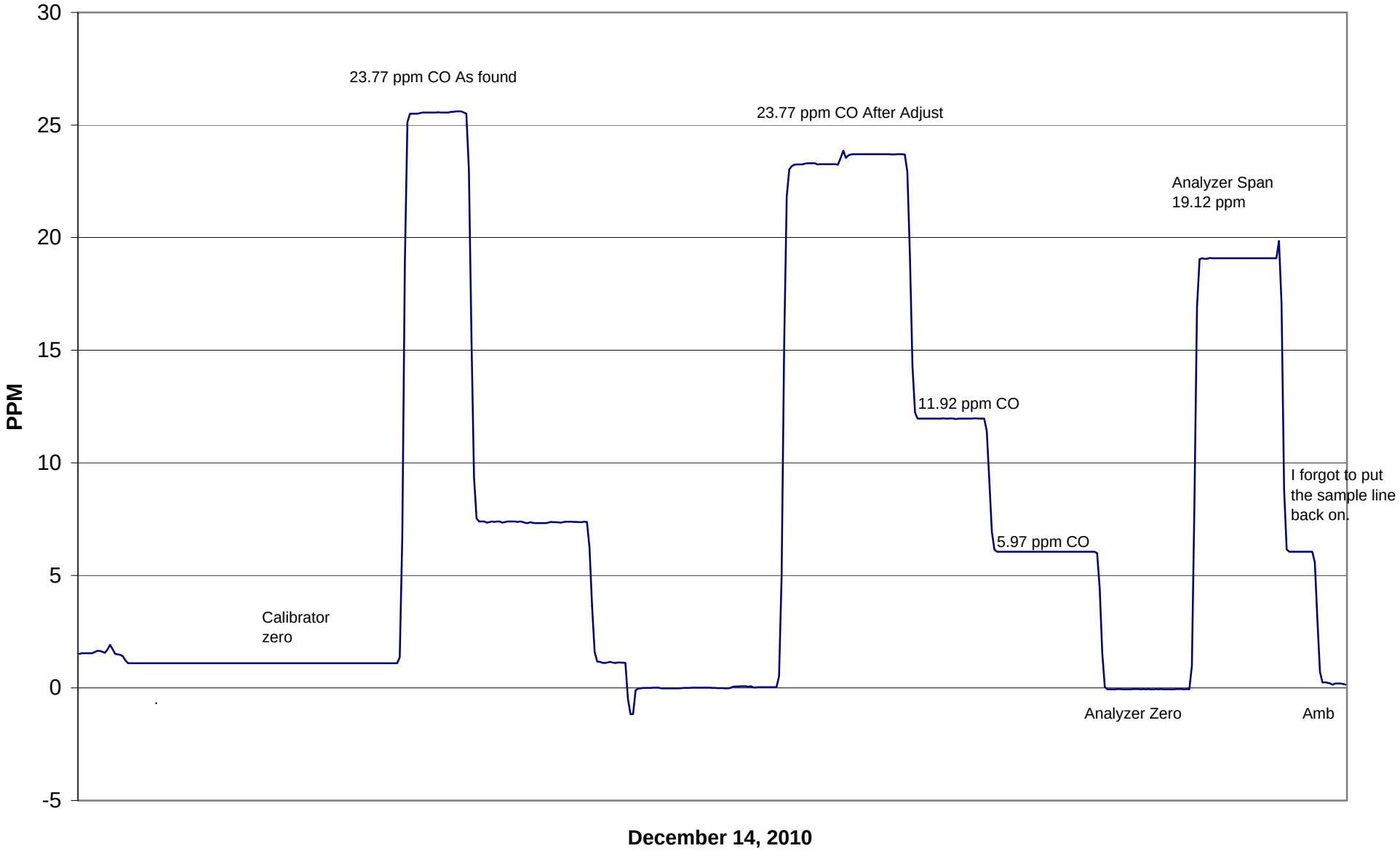
Calibration Date	December 14, 2010	Previous Calibration	December 6, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:10	End Time (MST)	14:26
Analyzer make/model	TEI Model 48C	Analyzer serial #	508011062

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.028	N/A		
23.757	23.705	1.0022	Correlation Coefficient	0.999985
11.914	11.966	0.9957		
5.969	6.049	0.9867	Slope	1.004117
			Intercept	-0.069753



Henry Pirker CO Calibration



Calibration Report

Parameter **THC**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	December 6, 2010	Previous Calibration	November 2, 2010
Station Number	1	Station Location	Henry Pirker
Reason:	Routine / Install / Removal / Other:		
Start Time (MST)	9:30	End Time (MST)	11:27
Barometric Pressure	0.936 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	1.000943	Calculated slope	0.998412
Calculated intercept	0.132560	Calculated intercept	0.100789
Analyzer make	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

	before		after	
Concentration range	0 - 25	ppm	0 - 25	ppm
THC sample pressure	6.50	psi	6.50	psi
THC span counts	9617	capture	9616	capture
THC zero counts	448	capture	446	capture

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.00	-0.11	N/A
4991	69.73	20.99	20.94	1.0023
4991	29.90	9.07	8.92	1.0171
4991	9.92	3.02	2.98	1.0138
4991	0.00	0.00	-0.11	As Found Zero
4991	69.73	20.99	20.94	As Found Span
			Average Correction Factor	1.0111

Calculated value of As Found Response: 21.203 ppm Percent Change of As Found: -1.0%

	before calibration		after calibration	
Auto zero	0.10	ppm	-0.02	ppm
Auto span	20.65	ppm	20.50	ppm

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **THC**

Air Monitoring Network **PASZA**

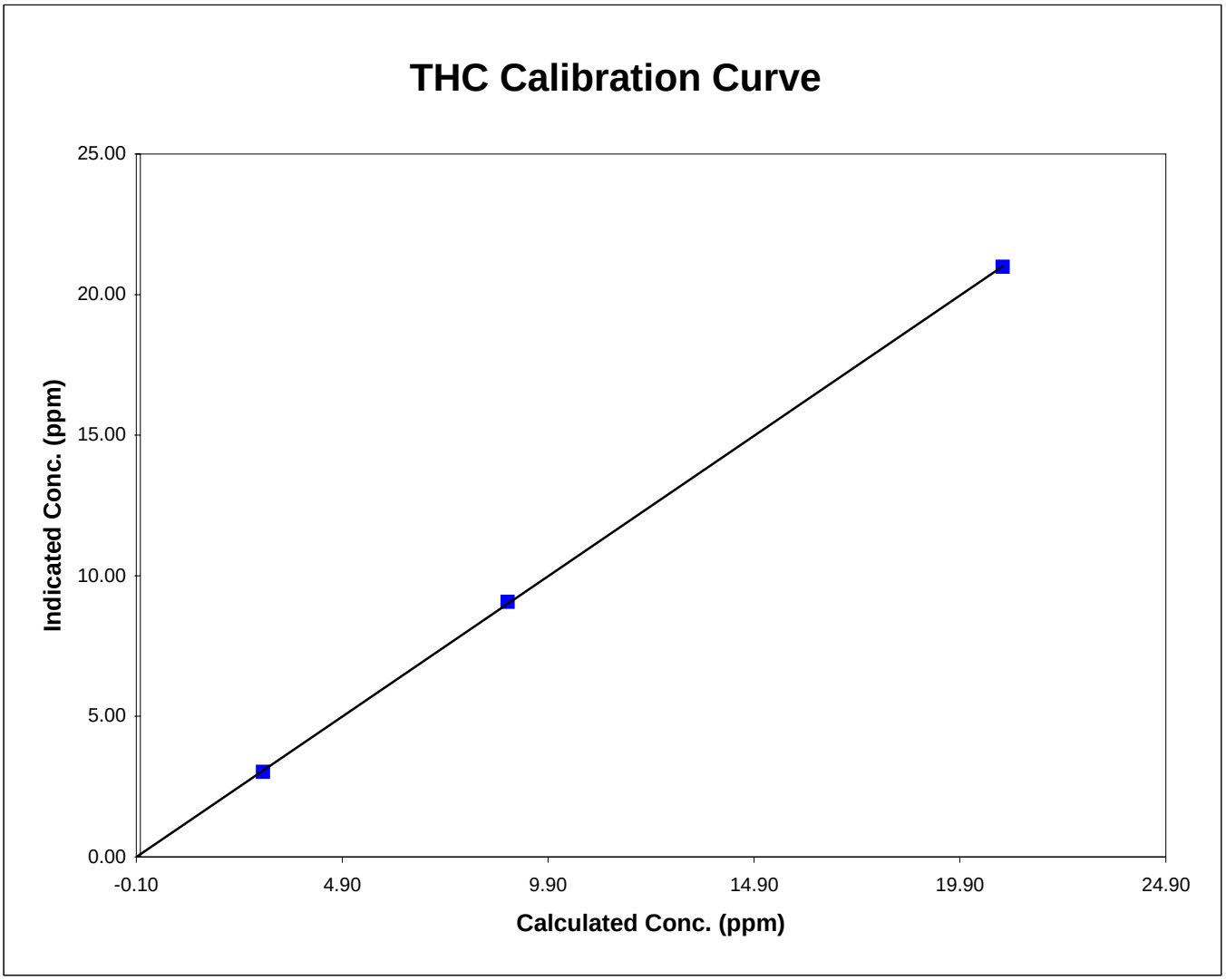
FOCUS AIR QUALITY MONITORING

Station Information

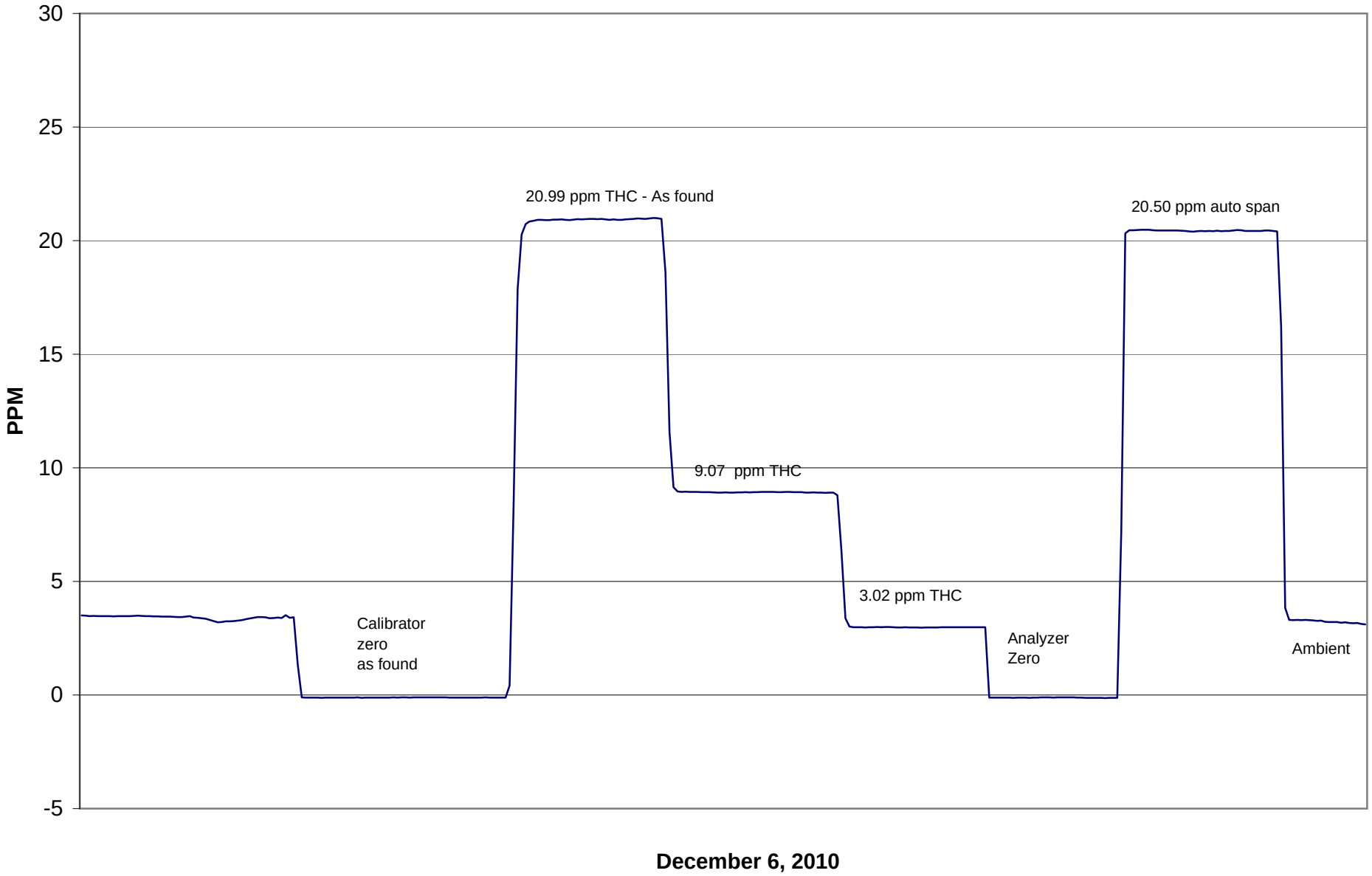
Calibration Date	December 6, 2010	Previous Calibration	November 2, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:30	End Time (MST)	11:27
Analyzer make/model	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	-0.110	N/A		
20.988	20.941	1.0023	Correlation Coefficient	0.999969
9.071	8.918	1.0171		
3.022	2.980	1.0138	Slope	0.998412
			Intercept	0.100789



Henry Pirker THC Calibration



Calibration Report

Parameter **SO_2**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	December 8, 2010	Previous Calibration	November 11, 2010
Station Number	2	Station Location	Evergreen Park
Reason:	Routine / Install / Removal / Other:		
Start Time (MST)	10:55	End Time (MST)	14:07
Barometric Pressure	0.934 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	51.5 ppm	Cal Gas Expiry Date	4/6/2012
Correction factor	0.031749	Cal Gas Cylinder #	SGAL3245
DACS make	Focus AP1000	DACS serial No.	52620
DACS voltage range	0 - 10 volt	DACS channel #	6
	Before		After
Calculated slope	1.018286	Calculated slope	1.010252
Calculated intercept	-0.812808	Calculated intercept	-2.000111
Analyzer make	Teco 43i	Analyzer serial #	701120008

	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
Background	10.9		11	
coefficient	1.051		1.051	
Lamp Voltage	833	volts	832	volts
Chamber Temp	45	Deg C	45.4	Deg C
Perm Gas Temp	45.00	Deg C	45	Deg C
Pressure	665.9	mm Hg	659.5	mm Hg
Sample Flow	0.451	ccm	0.448	ccm
Lamp Intensity	89	%	90	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4990	0.0	0.00	0.5	N/A
4991	39.85	407.94	405.1	1.0071
4991	19.91	204.63	205.1	0.9978
4991	9.96	102.57	105.2	0.9752
	0.0			
4991	0.0	0.00	0.5	As Found Zero
4991	39.85	407.94	405.1	As Found Span
			Average Correction Factor	0.9933

Calculated value of As Found Response: 411.184 ppm Percent Change of As Found: -0.8%

	before calibration		after calibration	
Auto zero	0.7	ppm	0.3	ppm
Auto span	286.9	ppm	288.4	ppm

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PASZA**

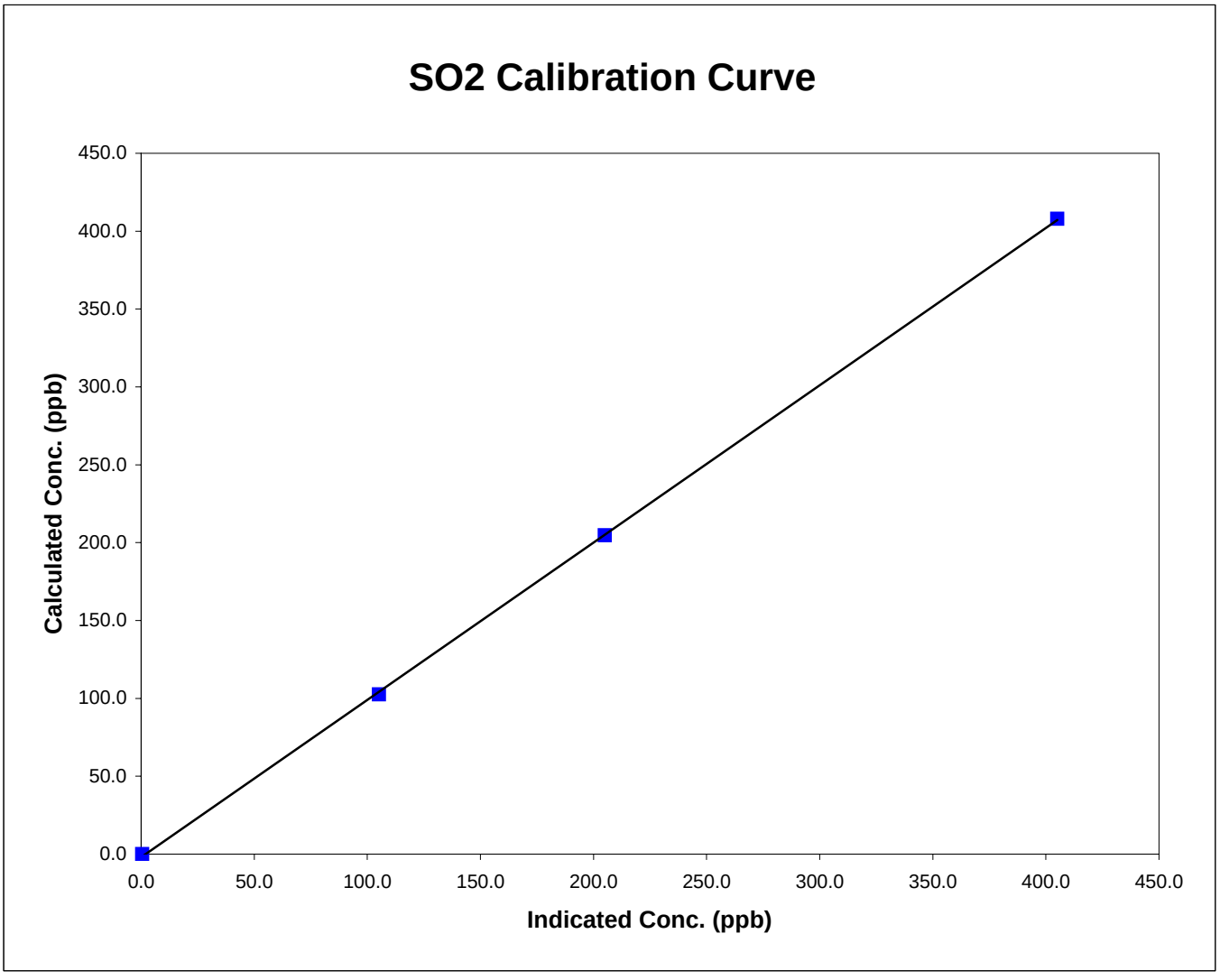
FOCUS AIR QUALITY MONITORING

Station Information

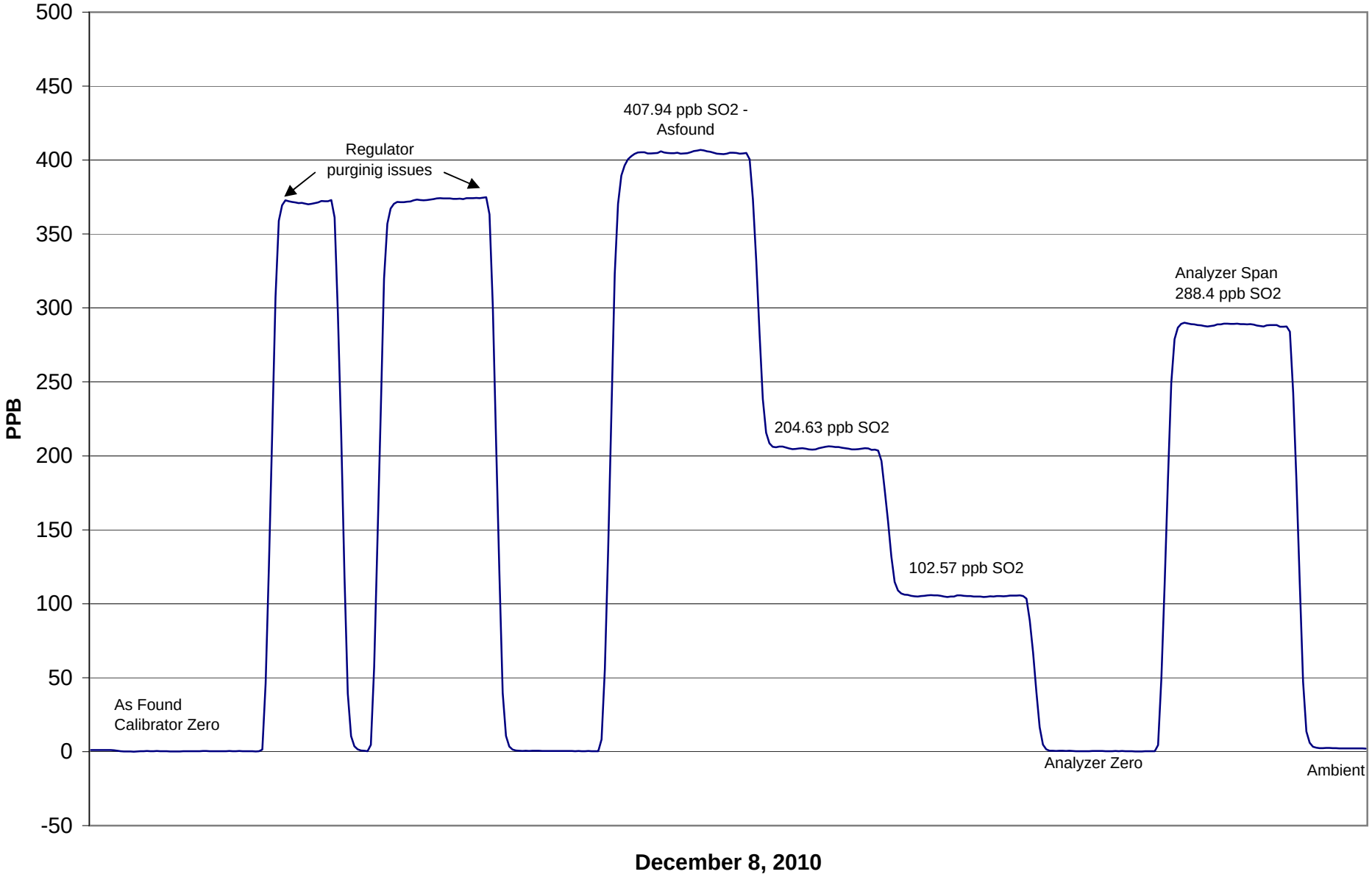
Calibration Date	December 8, 2010	Previous Calibration	November 11, 2010
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	10:55	End Time (MST)	14:07
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A		
407.9	405.1	1.0071	Correlation Coefficient	0.999934
204.6	205.1	0.9978		
102.6	105.2	0.9752	Slope	1.010252
			Intercept	-2.000111



Evergreen Park SO_2 Calibration



Calibration Report

Parameter **TRS**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	December 8, 2010	Previous Calibration	November 11, 2010
Station Number	2	Station Location	Evergreen Park

Reason: Routine | Install | Removal | Other:

Start Time (MST)	13:00	End Time (MST)	15:16
Barometric Pressure	0.934 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Conc	5.15 ppm	Cal Gas Expiry Date	4/2/2009
Correction factor	0.031749	Cal Gas Cylinder #	ALM 013295
DACS make	Focus AP1000	DACS serial No.	52620
DACS voltage range	0 - 10 volt	DACS channel #	5
	Before		After
Calculated slope	1.014594	Calculated slope	1.000328
Calculated intercept	0.276488	Calculated intercept	-0.535708

Analyzer make: TEI Model 43C | Analyzer serial #: 436610005

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	16	ppb	16	ppb
coefficient	0.859		0.859	
Lamp Voltage	813	volts	808	volts
Chamber Temp	44.2	Deg C	44.1	Deg C
Perm Gas Temp	45.01	Deg C	45.02	Deg C
Pressure	642.2	mm Hg	645.8	mm Hg
Sample Flow	0.478	ccm	0.479	ccm
Lamp Intensity	45,563	mv	45,619	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	0.3	N/A
4991	79.79	81.04	81.5	0.9949
4991	39.87	40.81	41.5	0.9841
4991	9.95	10.25	10.9	0.9364
4990	0.00	0.00	0.3	As Found Zero
4991	79.79	81.04	81.5	As Found Span
			Average Correction Factor	0.9718

Calculated value of As Found Response: 82.59 ppm Percent Change of As Found: -1.9%

	before calibration		after calibration	
Auto zero	-0.5	ppm	-0.2	ppm
Auto span	62.0	ppm	66.3	ppm

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **TRS**

Air Monitoring Network **PASZA**

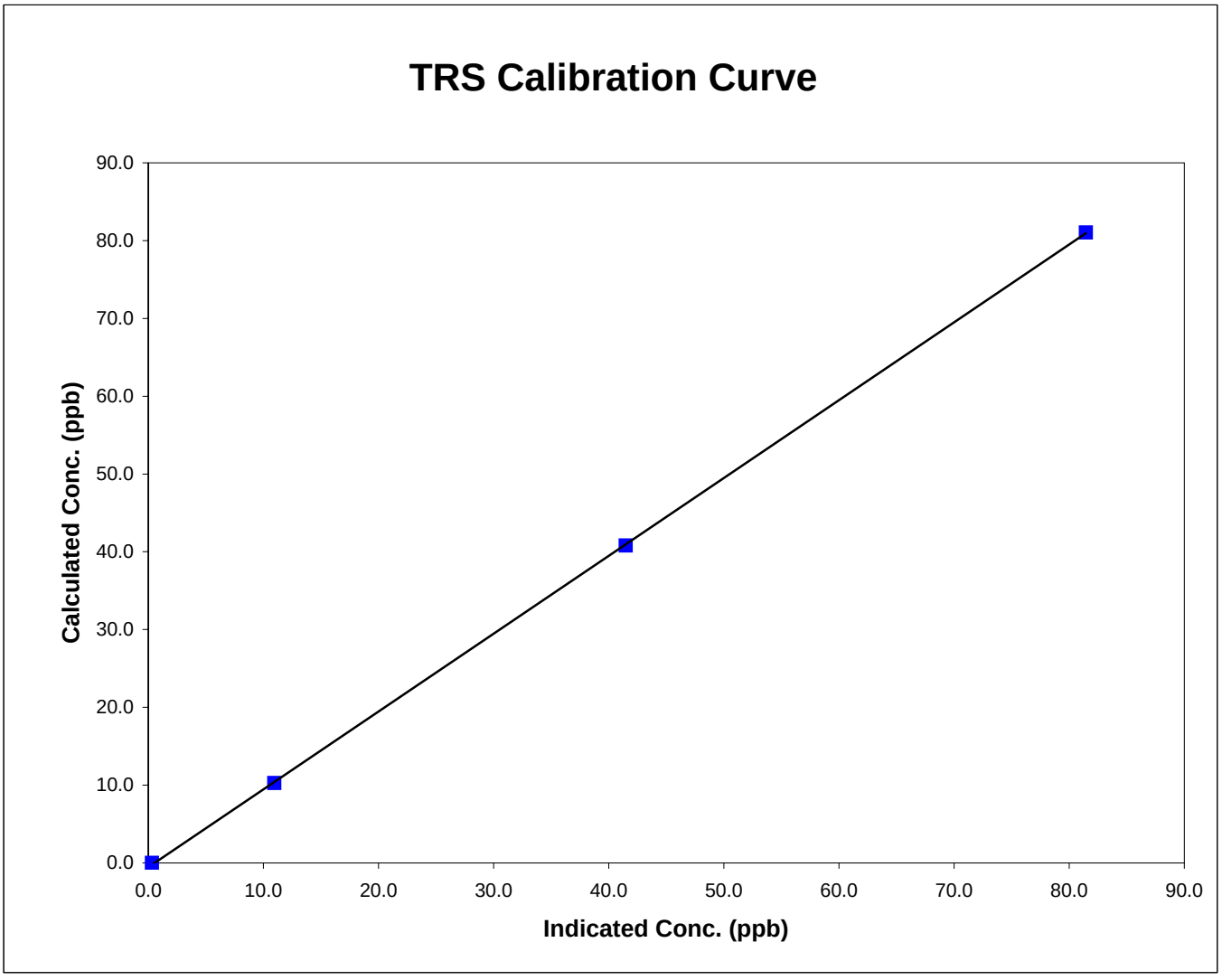
FOCUS AIR QUALITY MONITORING

Station Information

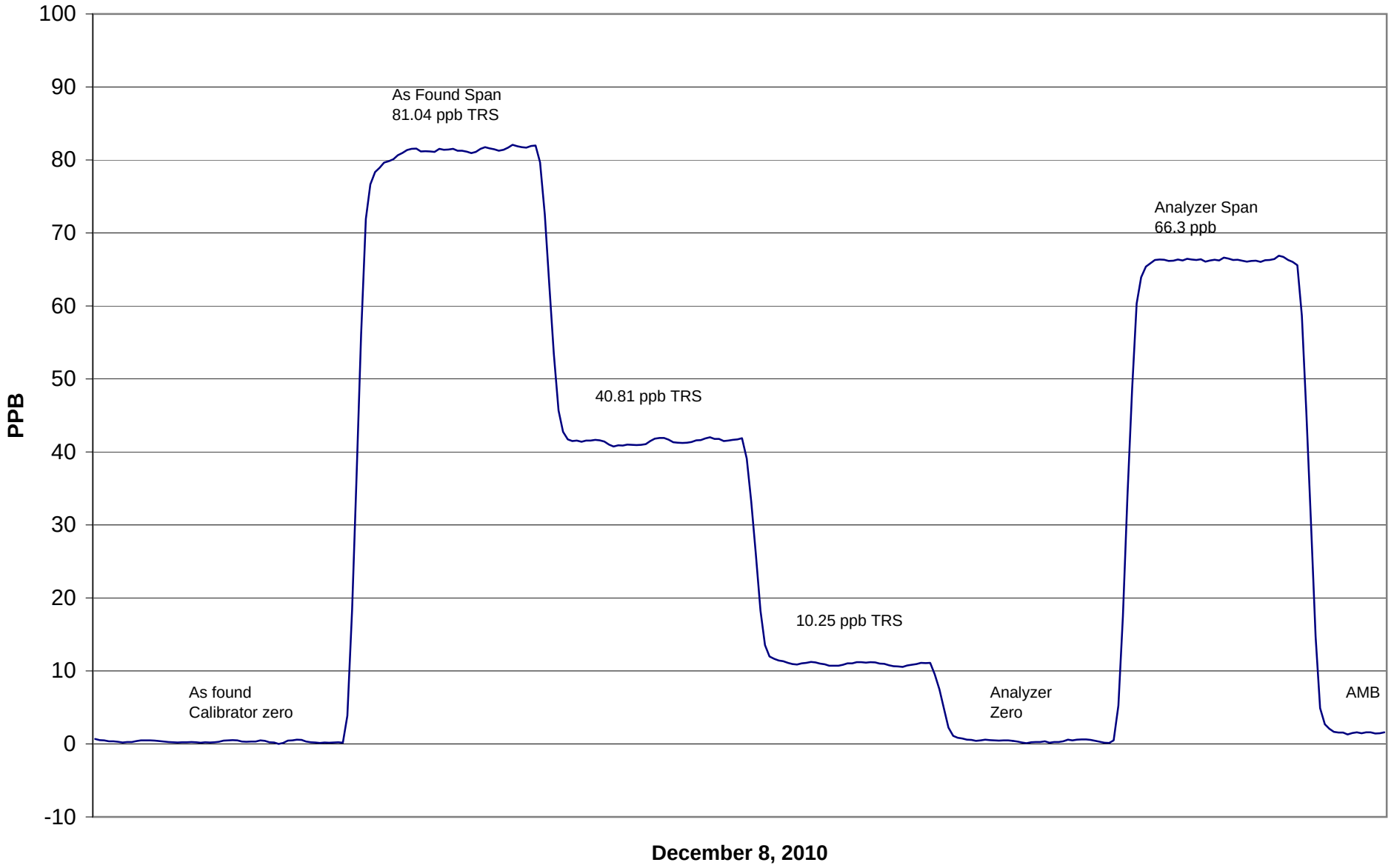
Calibration Date	December 8, 2010	Previous Calibration	November 11, 2010
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	13:00	End Time (MST)	15:16
Analyzer make/model	TEI Model 43C	Analyzer serial #	436610005

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A		
81.0	81.5	0.9949	Correlation Coefficient	0.999976
40.8	41.5	0.9841		
10.2	10.9	0.9364	Slope	1.000328
			Intercept	-0.535708



Evergreen Park TRS Calibration



AB TEOM PM2.5 Calibration

FOCUS AIR QUALITY MONITORING

STATION: **Evergreen Park**
LOCATION: PASZA - Grande Prairie

OPERATOR: Courtney Thompson
DATE: 20/12/2010

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	0.985
FAdj. Aux. Setting	0.975
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	11-Nov-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	0.040	0.030
PUMP OFF	-0.060	-0.260
NET	0.100	0.290
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)	-17.5	0.915		13.79	3.020
As Found Data	MEASURED (AF)	-16.8	0.917		13.79	3.020
Adjusted Data	MEASURED (M)	-16.8	0.917	10118	13.79	3.020
	DIFFERENCE (M-I)	0.7	0.002	-0.1%	0.88	0.67
	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.

As well as filter change.

TEOM back online as 14:30

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

Calibration Report

Parameter **SO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	December 9, 2010	Previous Calibration	November 16, 2010
Station Number	3	Station Location	Smoky Heights

Reason: [Routine] [Install] [Removal] [Other:]

Start Time (MST)	11:30	End Time (MST)	13:56
Barometric Pressure	0.936 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	51.5 ppm	Cal Gas Cert Date	7/23/2010
Correction factor	0.031817	Cal Gas Cylinder #	SGAL 3245
DACS make	Focus AP1000	DACS serial No.	45272
DACS voltage range	0 - 10 volt	DACS channel #	6
	Before		After
Calculated slope	0.992854	Calculated slope	1.006764
Calculated intercept	-2.892386	Calculated intercept	-2.489598

Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	8.7		8.8	
coefficient	0.692		0.692	
Lamp Voltage	927	volts	924	volts
Chamber Temp	45	Deg C	45.5	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	669.6	mm Hg	669.6	mm Hg
Sample Flow	0.442	ccm	0.442	ccm
Lamp Intensity	89	%	87	%

Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4989	0.0	0.00	0.5	N/A
4989	39.84	408.00	406.6	1.0034
4989	19.91	204.71	207.1	0.9883
4989	9.95	102.51	106.0	0.9668
4989	0.0	0.00	0.5	As Found Zero
4989	39.84	408.00	406.6	As Found Span
			Average Correction Factor	0.9862

Calculated value of As Found Response: 400.276 ppm Percent Change of As Found: 1.9%

	before calibration		after calibration	
Auto zero	0.4	ppb	0.4	ppb
Auto span	311.6	ppb	303.4	ppb

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PASZA**

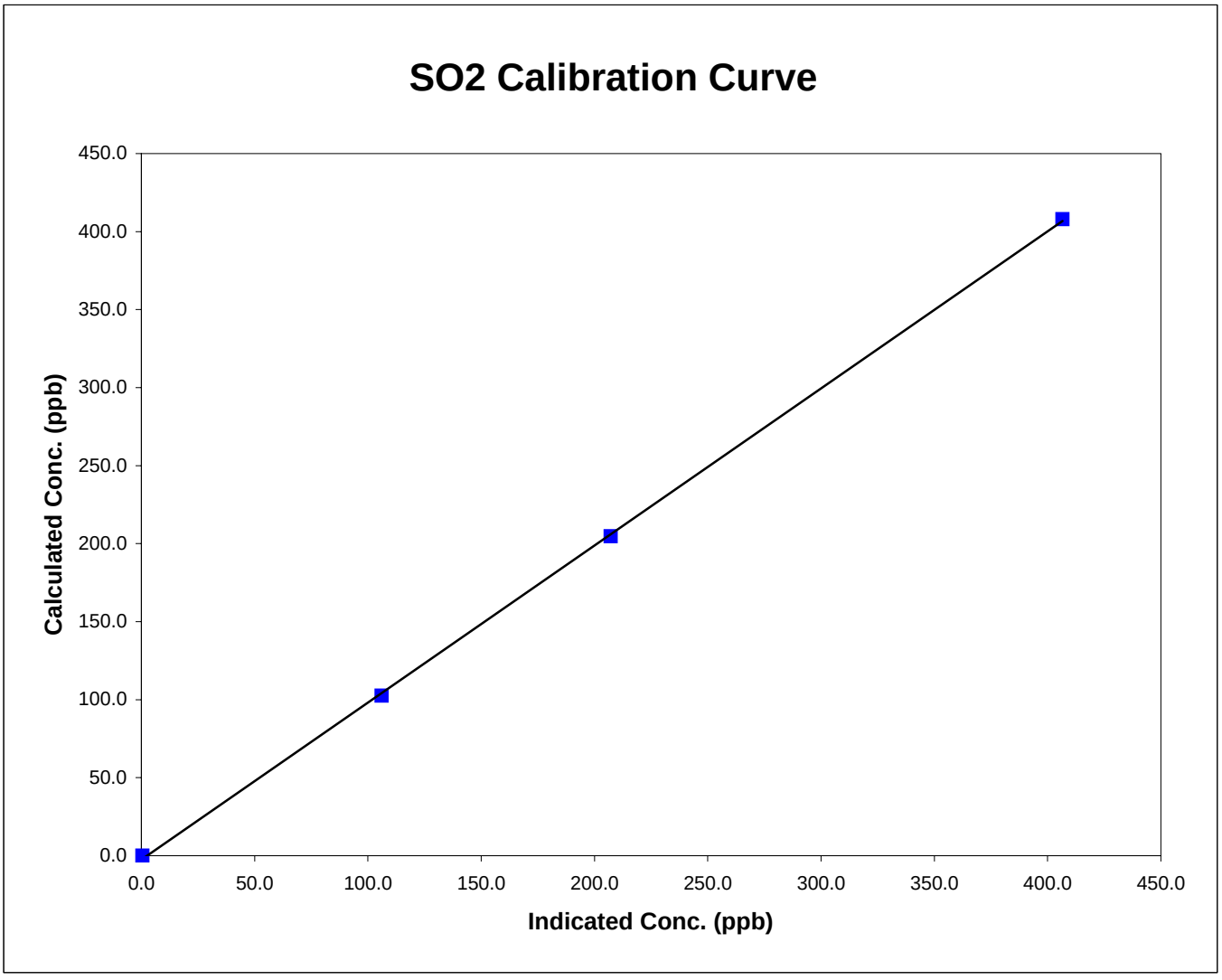
FOCUS AIR QUALITY MONITORING

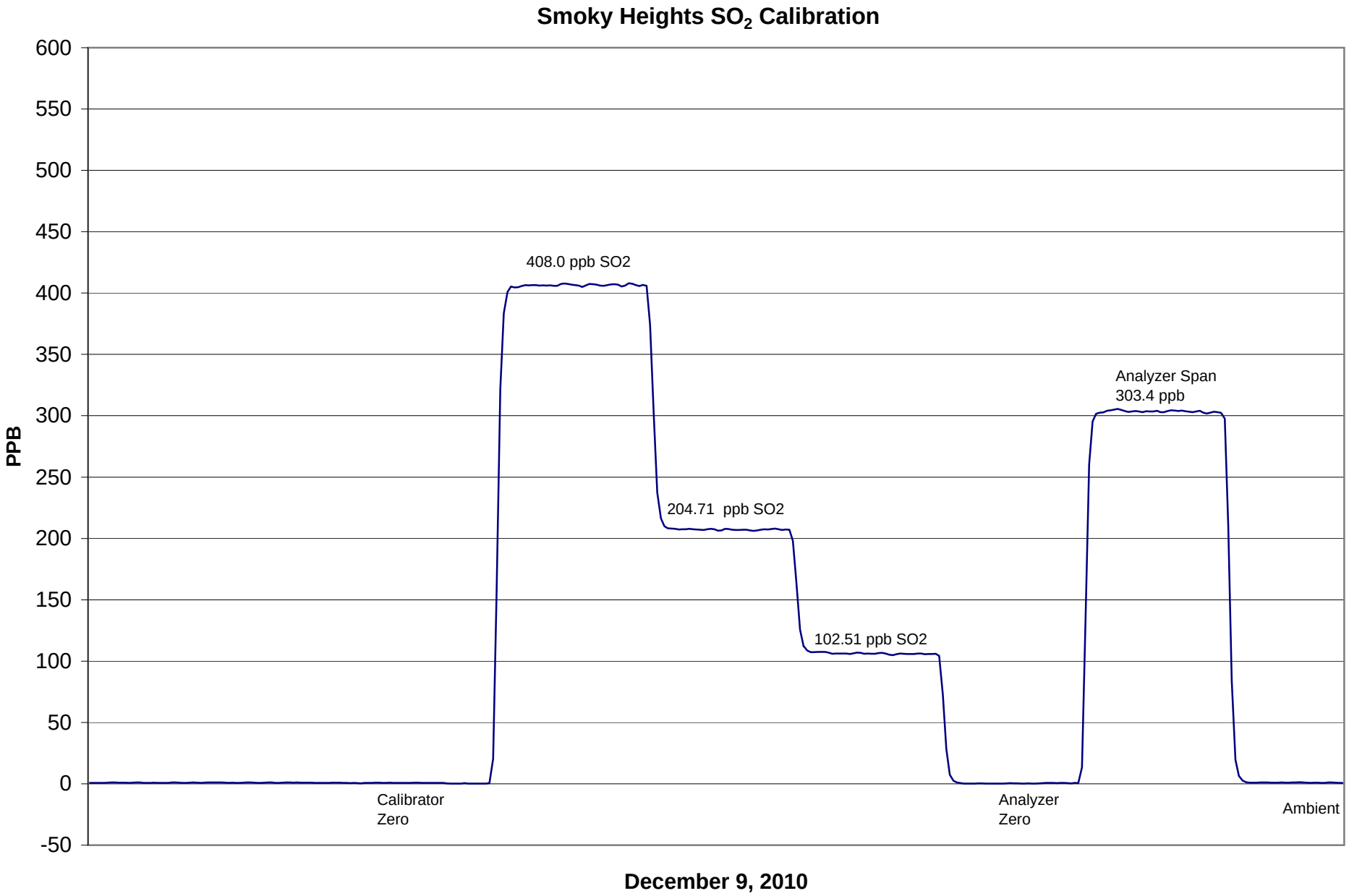
Station Information

Calibration Date	December 9, 2010	Previous Calibration	November 16, 2010
Station Number	3	Station Location	Smoky Heights
Start Time (MST)	11:30	End Time (MST)	13:56
Analyzer make/model	Teco 43i	Analyzer serial #	701120009

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A		
408.0	406.6	1.0034	Correlation Coefficient	0.999890
204.7	207.1	0.9883		
102.5	106.0	0.9668	Slope	1.006764
			Intercept	-2.489598




Smoky Heights SO2 Calibration
600
550
500
450
400
350
300
250
200
150
100
50
0
-50
PPB
408.0 ppb SO2
204.71 ppb SO2
102.51 ppb SO2
Analyzer Span
303.4 ppb
Calibrator
Zero
Analyzer
Zero
Ambient
December 9, 2010

Calibration Report

Parameter **TRS**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	December 9, 2010	Previous Calibration	November 16, 2010
Station Number	3	Station Location	Smoky Heights

Reason: Routine | Install | Removal | Other:

Start Time (MST)	12:40	End Time (MST)	14:59
Barometric Pressure	0.936 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Conc	5.15 ppm	Cal Gas Expiry Date	4/2/2009
Correction factor	0.031817	Cal Gas Cylinder #	ALM013295
DACS make	Focus AP1000	DACS serial No.	52620
DACS voltage range	0 - 10 volt	DACS channel #	5
	Before		After
Calculated slope	1.017578	Calculated slope	1.023183
Calculated intercept	-0.739513	Calculated intercept	-0.291595

Analyzer make: TEI Model 43C — Analyzer serial #: 0436610005

	before		after	
Concentration range	100	ppb	100	ppb
Background	15.2	ppb	15.6	ppb
coefficient	1.068		1.068	
Lamp Voltage	771	volts	770	volts
Chamber Temp	43.9	Deg C	43.8	Deg C
Perm Gas Temp	45	Deg C	44.99	Deg C
Pressure	494.2	mm Hg	486.7	mm Hg
Sample Flow	0.718	ccm	0.709	ccm
Lamp Intensity	32,168	mv	32,732	mv

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4989	0.0	0.00	0.2	N/A
4990	79.77	81.03	79.4	1.0210
4990	39.85	40.80	40.4	1.0094
4990	9.94	10.24	10.2	1.0045
4990	0.0	0.00	0.2	As Found Zero
4990	79.77	81.03	79.4	As Found Span
			Average Correction Factor	1.0116

Calculated value of As Found Response: 79.77 ppm Percent Change of As Found: 1.6%

	before calibration		after calibration	
Auto zero	0.0	ppm	-0.2	ppm
Auto span	41.9	ppm	41.4	ppm

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **TRS**

Air Monitoring Network **PASZA**

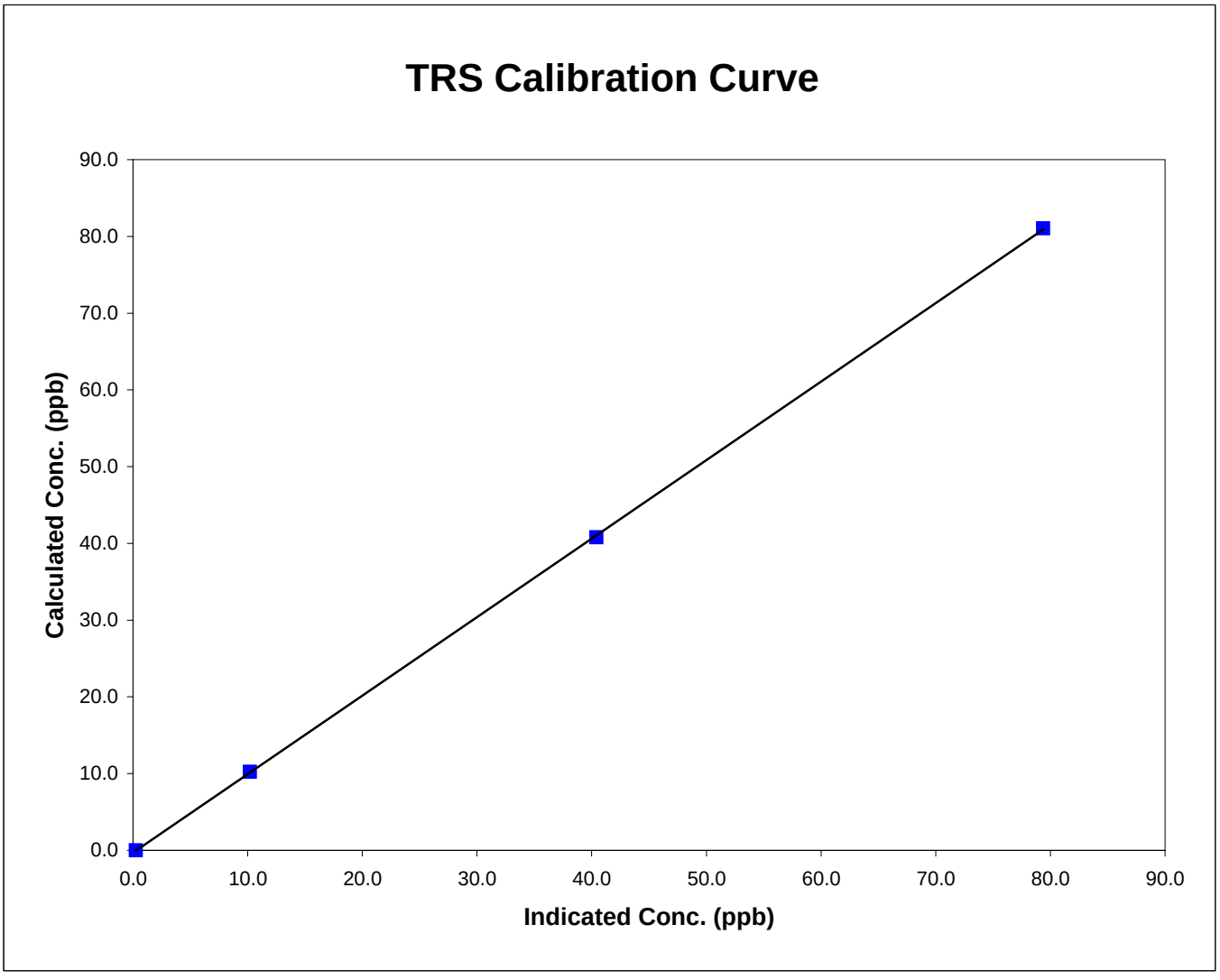
FOCUS AIR QUALITY MONITORING

Station Information

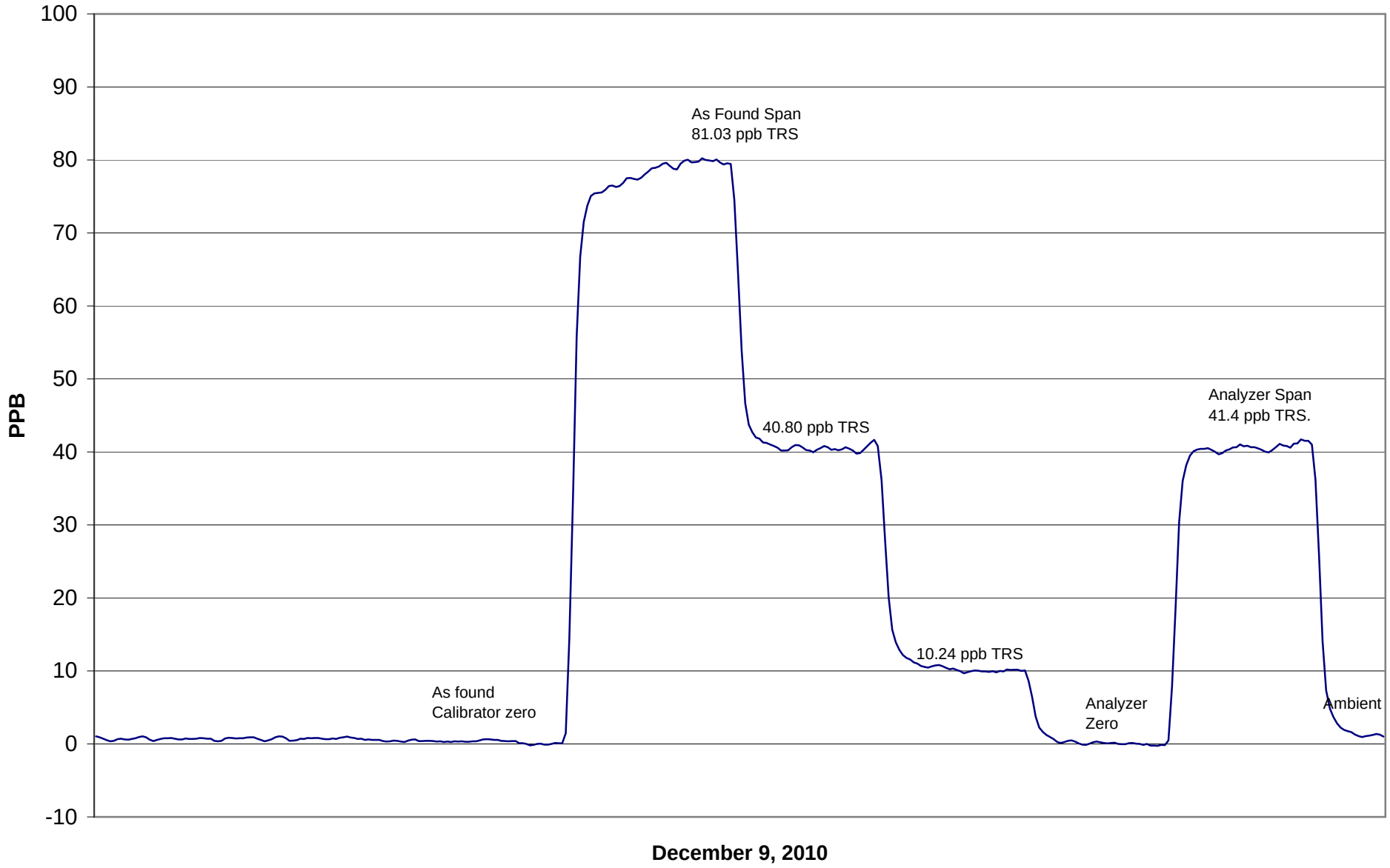
Calibration Date	December 9, 2010	Previous Calibration	November 16, 2010
Station Number	3	Station Location	Smoky Heights
Start Time (MST)	12:40	End Time (MST)	14:59
Analyzer make/model	TEI Model 43C	Analyzer serial #	0436610005

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
81.0	79.4	1.0210	Correlation Coefficient	0.999975
40.8	40.4	1.0094		
10.2	10.2	1.0045	Slope	1.023183
			Intercept	-0.291595



Smoky Heights TRS Calibration



Calibration Report

Parameter **SO2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	December 2, 2010	Previous Calibration	November 9, 2010
Station Number	4	Station Location	Beaverlodge

Reason: Routine | Install | Removal | Other:

Start Time (MST)	8:00	End Time (MST)	10:59
Barometric Pressure	0.912 atm	Station Temperature	23.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	10.06 ppm	Cal Gas Expiry Date	7/27/2009
Gas Cert Reference	CC 114395		
DACS make	Focus AP1000	DACS serial No.	45269
DACS voltage range	0 - 10 volt	DACS channel #	5
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.993590	Calculated slope	0.988618
Calculated intercept	-0.033691	Calculated intercept	-0.531141

Analyzer make	TEI Model 43i-TLE	Analyzer serial # 713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.55		2.48	
Coefficient	0.924		0.893	
PMT	-812.9	V	-812.9	V
UV Lamp Voltage	1076	V	1076	V
Chamber Temp	44.8	Deg C	45.1	Deg C
Pressure	663.4	mm Hg	658.9	mm Hg
Sample Flow	0.52	LPM	0.518	LPM
Lamp Intesity	84%	%	85%	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.0	0.2	N/A
4988	39.82	79.7	81.0	0.9835
4988	19.90	40.0	41.0	0.9743
4988	9.93	20.0	21.1	0.9468
4988	0.00	0.0	0.2	As found zero
4988	39.82	79.7	84.0	As found span
			Average Correction Factor	0.9682

Calculated value of As Found Response: 83.175 ppm Percent Change of As Found: -4.4%

	before calibration		after calibration	
Auto zero	-0.3	ppb	-0.3	ppb
Auto span	59.7	ppb	56.8	ppb

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PASZA**

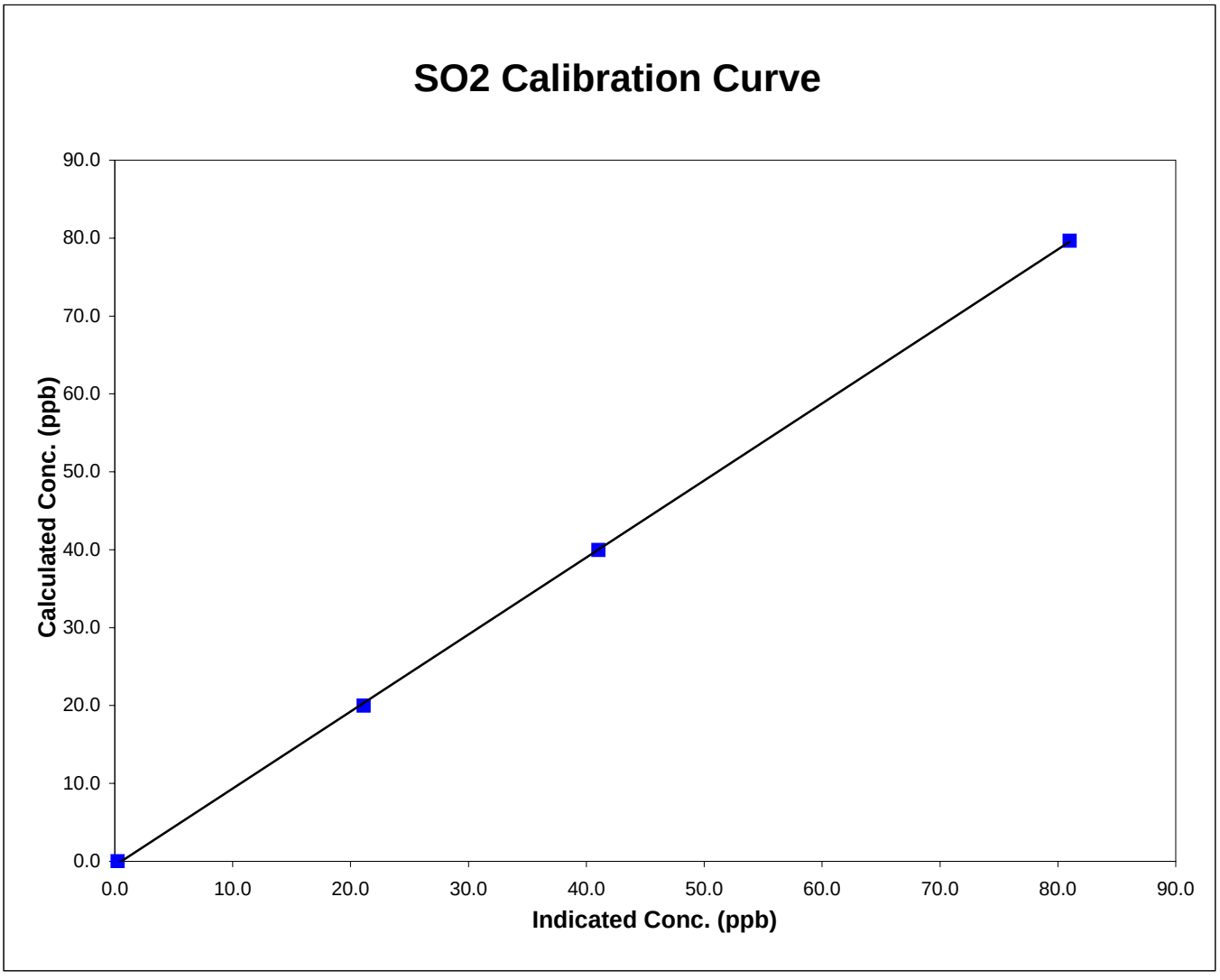
FOCUS AIR QUALITY MONITORING

Station Information

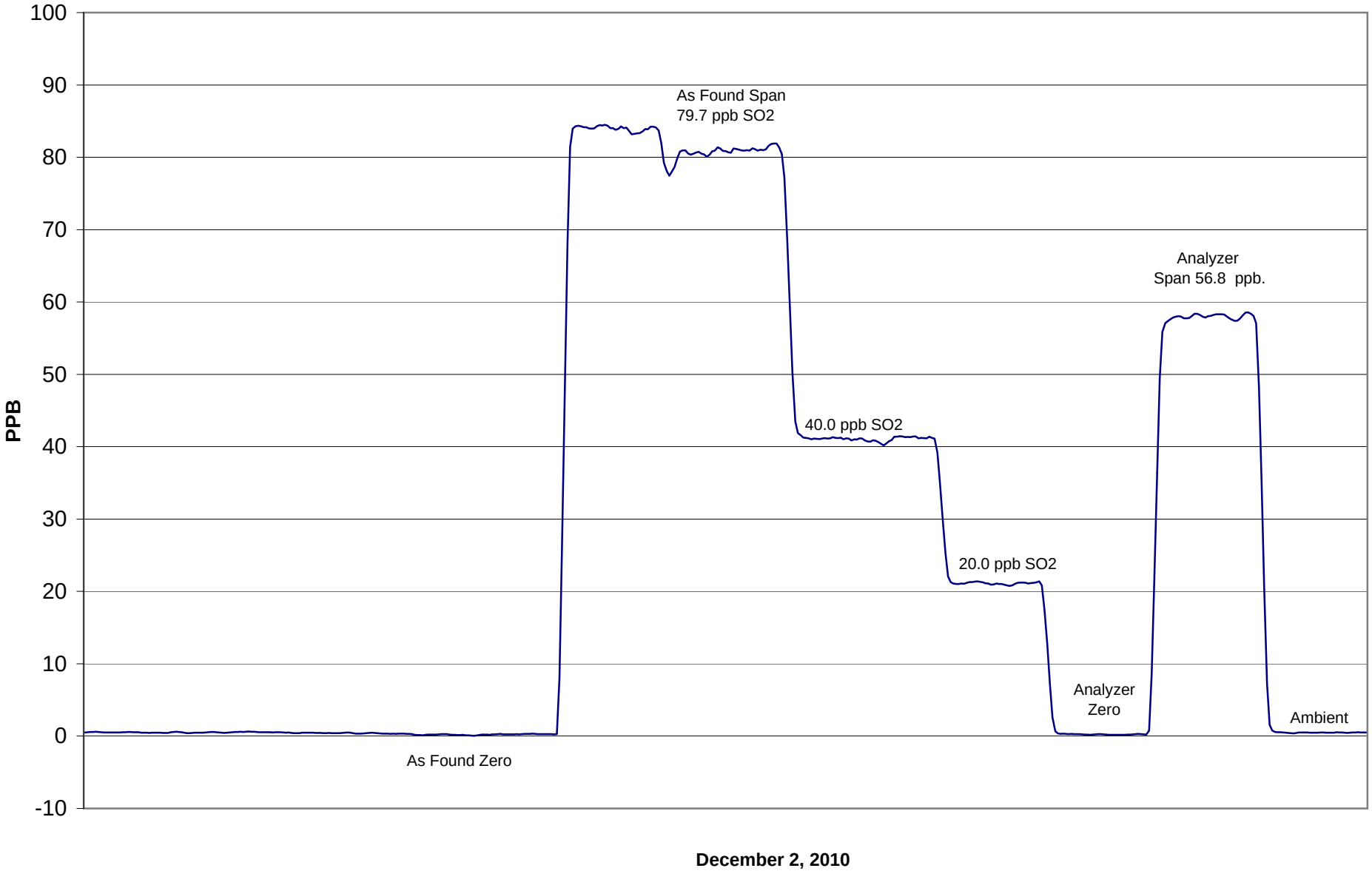
Calibration Date	December 2, 2010	Previous Calibration	November 9, 2010
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:00	End Time (MST)	10:59
Analyzer make/model	TEI Model 43i-TLE	Analyzer serial #	713021137

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
79.7	81.0	0.9835	Correlation Coefficient	0.999935
40.0	41.0	0.9743		
20.0	21.1	0.9468	Slope	0.988618
			Intercept	-0.531141



Beaverlodge SO_2 Calibration



Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	December 2, 2010	Previous Calibration	November 10, 2010
Station Number	4	Station Location	BeaverLodge

Reason: **Routine** Installation Removal Other:

Start Time (MST)	8:00		End Time (MST)	12:24	
Barometric Pressure	0.912	Atm	Station Temperature	23.0	Deg C
Calibrator	Environics		Serial Number	2844	
NO Cal Gas Conc	50.1	ppm	Cal Gas Expiry Date		
NOx Cal Gas Conc	50.2	ppm	Cal Gas Serial #	CC-114395	

DACS Information

DACS make AP1000 DACS serial No.

Parameter		NO2	NOx	NO
Before	Data Slope	0.997293	0.977523	0.974955
	Data Offset	-0.302458	-1.856197	-0.829412
After	Data Slope	0.994007	1.004474	1.004435
	Data Offset	-0.440536	-2.611018	-2.288320
Channel #		8	6	7
Voltage Range		0 - 10 VDC	0 - 10 VDC	0 - 10 VDC

Analyzer Information

Analyzer make/model TEI 42i Analyzer serial # 906535068

Test Point	before		after	
Concentration range	0-500	ppb	0-500	ppb
NO offset	2.6	mV	2.5	mV
NOx bkgnd	2.9	mV	2.8	mV
NO coefficient	1.551		1.484	
NOx coefficient	0.992		1.002	
NO2 conv temp	326.3	Deg C	322.1	Deg C
PMT Temp	-2.7	Deg C	-2.7	Deg C
PMT Volt	-676.4	mV	-676.4	mV
R Cell Press	183.1	in Hg	181.6	in Hg
Sample Flow	0.692	ccm	0.680	ccm

Calibration Report

Parameter **NOX-NO-NO2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: December 2, 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	0.1	-0.2	0.1	N/A	N/A
1	4988	39.82	397.6	396.8	0.8	397.0	396.0	0.7	1.0015	1.0020
2	4988	19.90	199.5	199.1	0.4	202.8	201.8	0.3	0.9838	0.9868
3	4988	9.93	99.7	99.5	0.2	104.2	103.9	0.1	0.9570	0.9583
AFZ	4988	0.00	0.0	0.0	0.0	0.1	-0.2	0.1	0.0000	0.0000
AFS	4988	39.84	397.8	397.0	0.8	410.5	413.3	-3.2	0.9690	0.9606
							Average Correction Factor		0.9807	0.9823

As Found Concentrations: NO_X= 408.6 NO= 412.6 As Found Percent Change NO_X= 2.7% NO= 3.9%

GPT Calibration Data

Dilution Flow 4989 ccm Source Gas Flow 39.84 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	-0.2	-0.2	0.0	0.1	-0.2	0.1	N/A	N/A	N/A	N/A
NO point	395.7	395.7	0.0	396.5	395.7	0.5	0.9979	1.0000	N/A	N/A
300	395.7	184.2	211.5	397.5	184.2	212.9	0.9955	1.0000	0.9932	100.7%
200	395.7	256.3	139.3	397.3	256.3	140.8	0.9959	1.0000	0.9896	101.0%
100	395.7	324.9	70.8	397.1	324.9	72.1	0.9964	1.0000	0.9815	101.9%
					Average Correction Factor		0.9959	1.0000	0.9881	101.2%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.2	-0.3	-0.2	ppb	0.0	-0.1	-0.1	ppb
Auto span	238.0	235.5	1.6	ppb	224.9	222.7	1.4	ppb

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

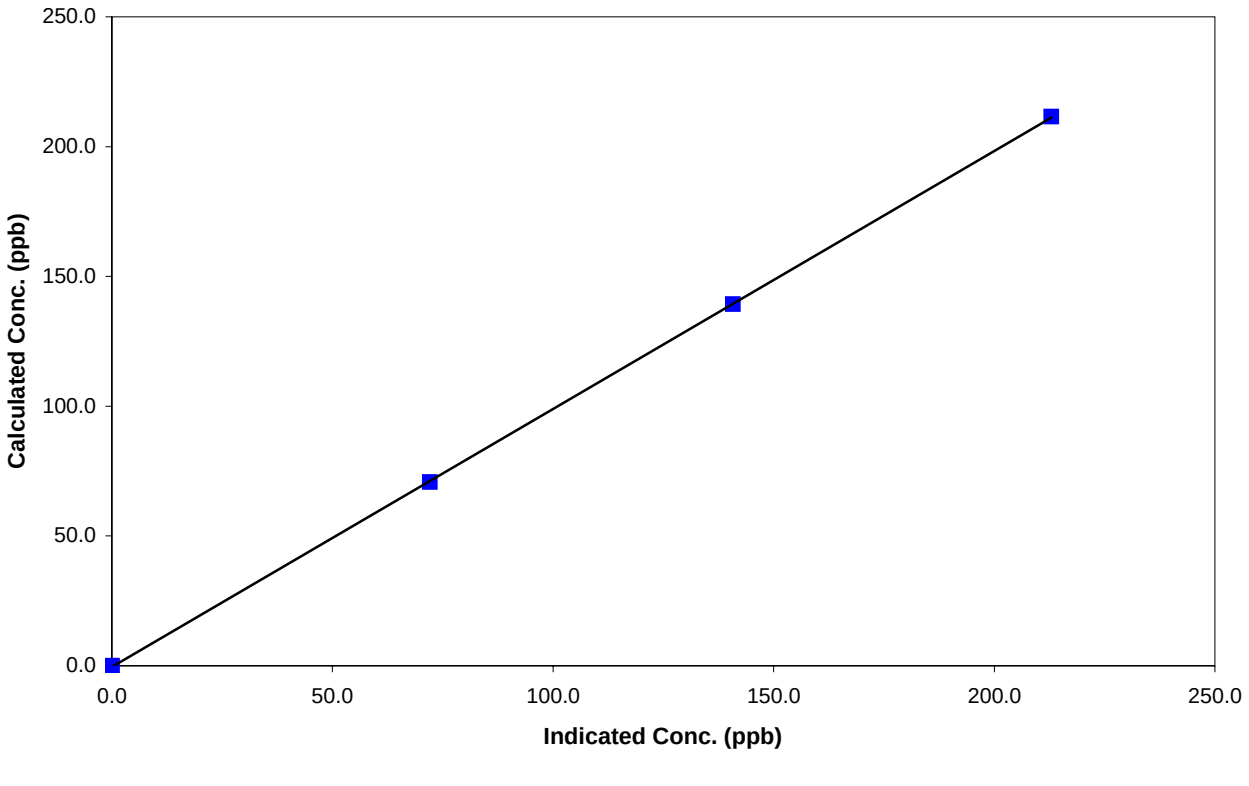
Station Information

Calibration Date	December 2, 2010	Previous Calibration	November 10, 2010
Station Number	4	Station Location	BeaverLodge
Start Time (MST)	8:00	End Time (MST)	12:24
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		
211.5	212.9	0.9932	Correlation Coefficient	0.999982
139.3	140.8	0.9896		
70.8	72.1	0.9815	Slope	0.994007
			Intercept	-0.440536

NO_2 Calibration Curve



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

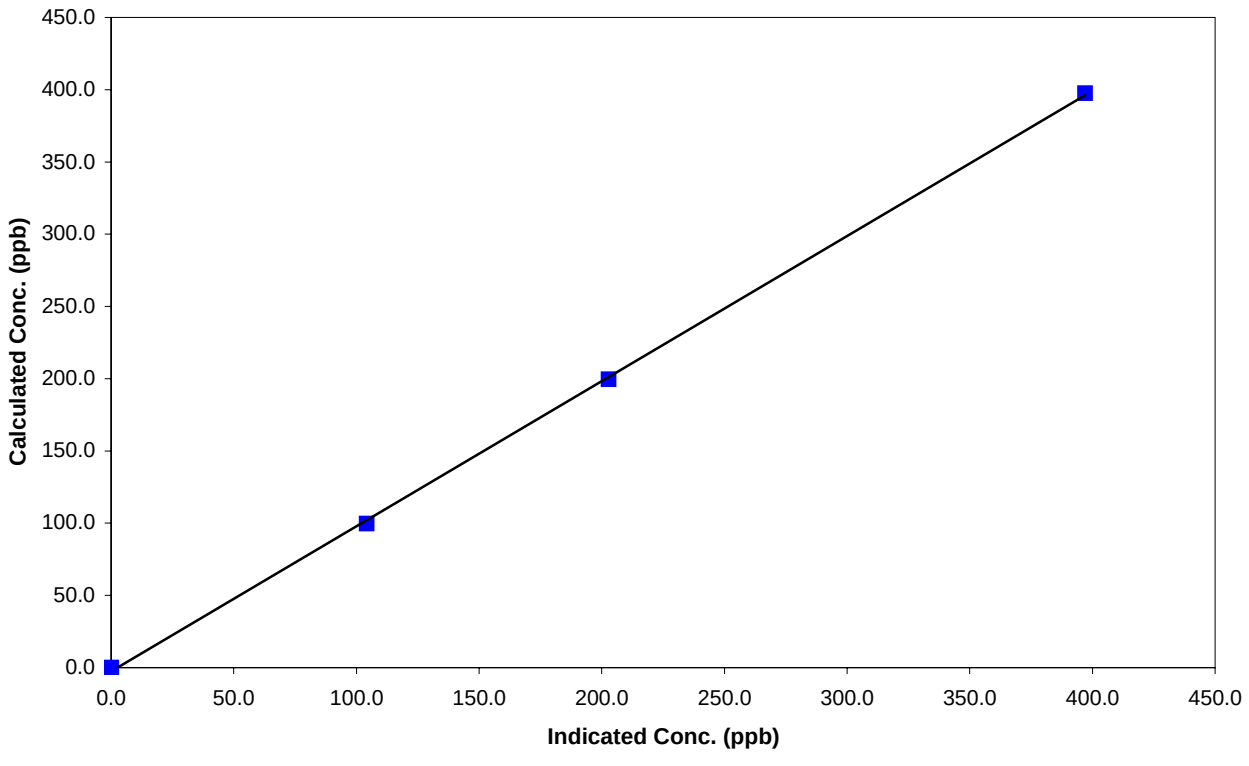
Station Information

Calibration Date	December 2, 2010	Previous Calibration	November 10, 2010
Station Number	4	Station Location	BeaverLodge
Start Time (MST)	8:00	End Time (MST)	12:24
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A		
397.6	397.0	1.0015	Correlation Coefficient	0.999811
199.5	202.8	0.9838		
99.7	104.2	0.9570	Slope	1.004474
			Intercept	-2.611018

NOx Calibration Curve



Calibration Summary

Parameter **NO**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

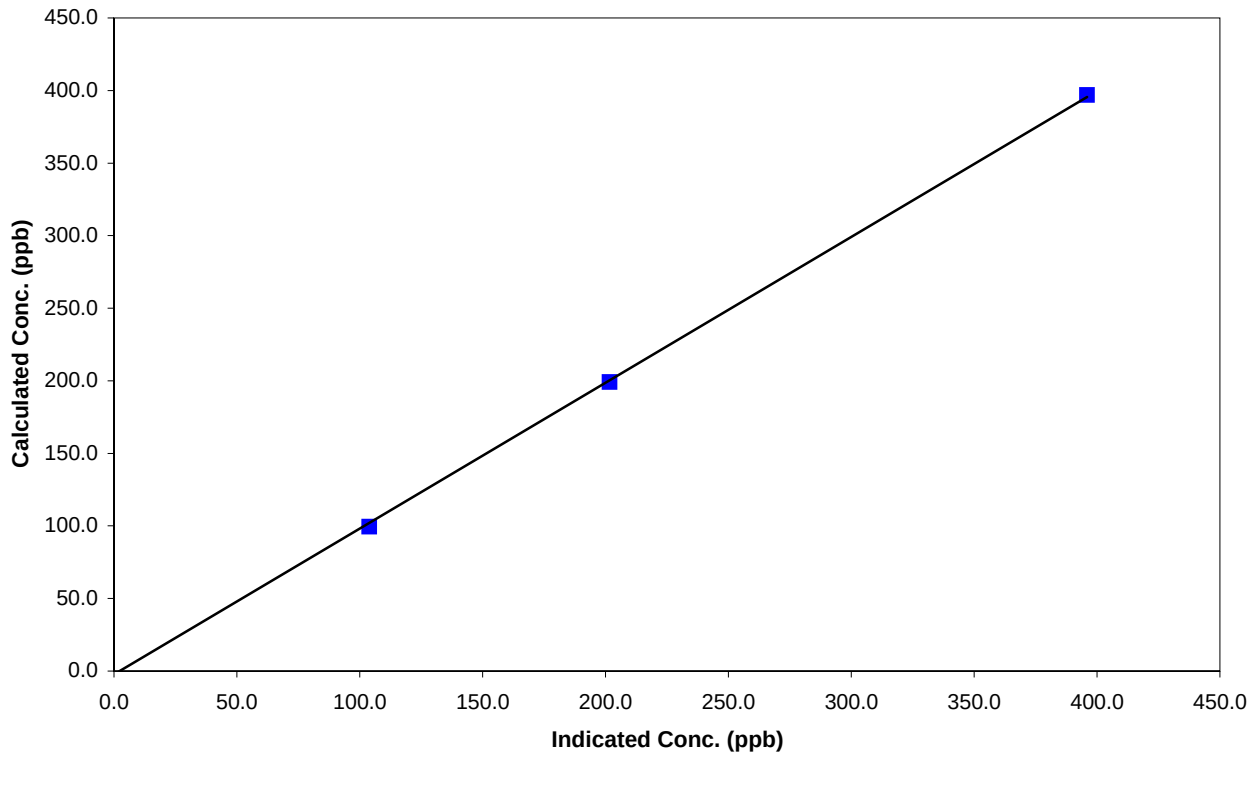
Station Information

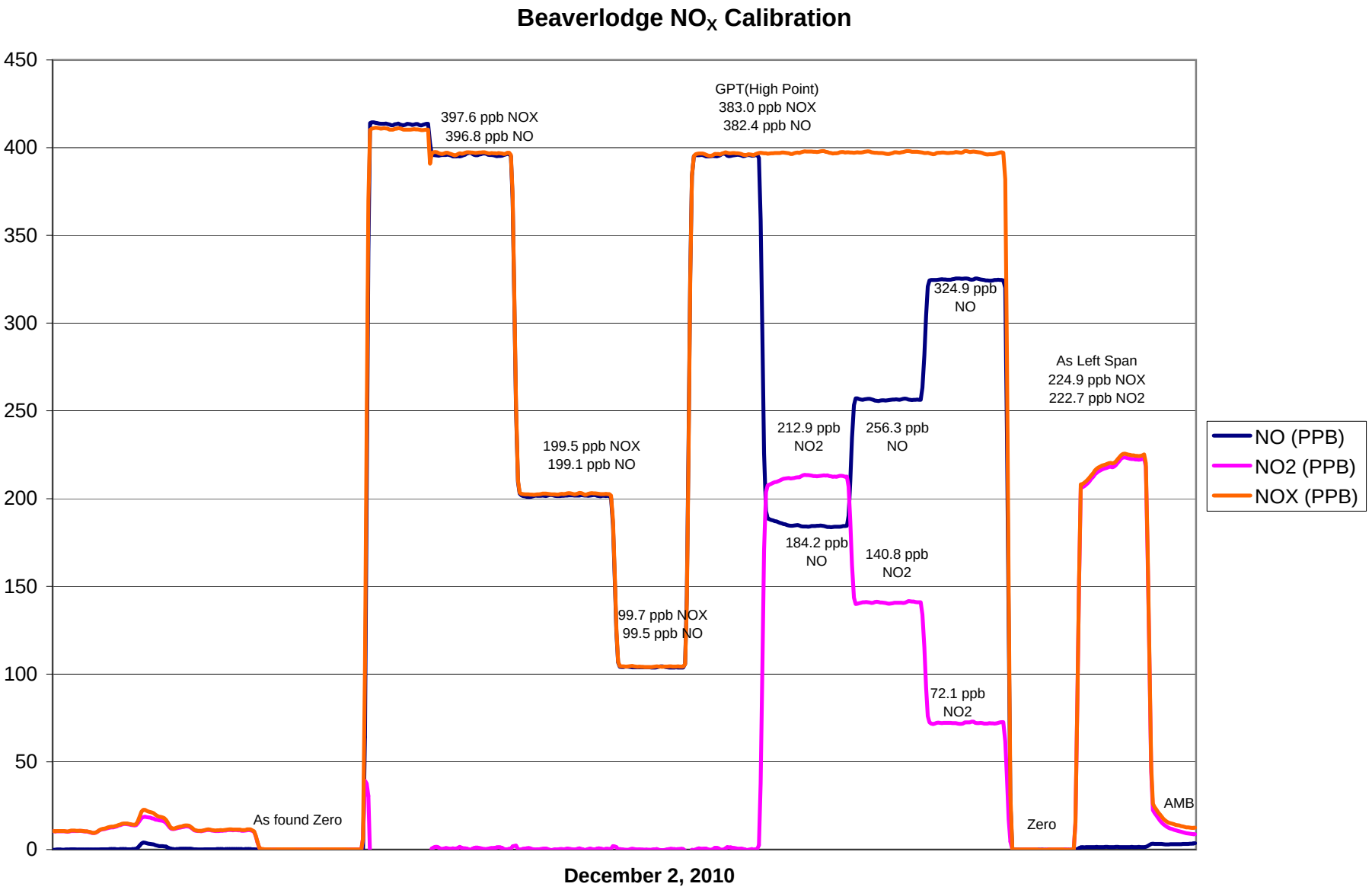
Calibration Date	December 2, 2010	Previous Calibration	November 10, 2010
Station Number	4	Station Location	BeaverLodge
Start Time (MST)	8:00	End Time (MST)	12:24
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.2	N/A		
396.8	396.0	1.0020	Correlation Coefficient	0.999817
199.1	201.8	0.9868		
99.5	103.9	0.9583	Slope	1.004435
			Intercept	-2.288320

NO Calibration Curve




Beaverlodge NOX Calibration
450
400
350
300
250
200
150
100
50
0
397.6 ppb NOX
396.8 ppb NO
GPT(High Point)
383.0 ppb NOX
382.4 ppb NO
199.5 ppb NOX
199.1 ppb NO
99.7 ppb NOX
99.5 ppb NO
212.9 ppb
NO2
184.2 ppb
NO
256.3 ppb
NO
324.9 ppb
NO
140.8 ppb
NO2
72.1 ppb
NO2
As Left Span
224.9 ppb NOX
222.7 ppb NO2
As found Zero
Zero
AMB
NO (PPB)
NO2 (PPB)
NOX (PPB)
December 2, 2010

Calibration Report

Parameter **O3**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	December 2, 2010	Previous Calibration	November 9, 2010
Station Number	4	Station Location	Beaverlodge

Reason: Routine | Install | Removal | Other:

Start Time (MST)	11:08	End Time (MST)	13:38
Barometric Pressure	0.912 atm	Station Temperature	23.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA

DACS make	Focus AP1000	DACS serial No.	45269
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	1.005885	Calculated slope	1.007160
Calculated intercept	2.171812	Calculated intercept	-0.361026

Analyzer make	Teco 49C	Analyzer serial #	49C-76443-383

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-1.40	ppb	-1.40	ppb
slope	1.008		1.008	
Lamp temp	56.5	mV	56.5	mV
Lamp Intensity A/B	65997/68224	mV	66234/66893	mV
Pressure	680.1	mm Hg	662.8	mm Hg
Flow A	0.708	ccm	0.691	ccm
Flow B	0.655	ccm	0.641	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	0.5	N/A
4990	0.00	211.5	210.6	1.0044
4990	0.00	139.3	138.3	1.0071
4990	0.00	70.8	70.7	1.0015
4990	0.00	0.0	0.5	As found zero
4990	0.00	211.5	210.6	As found span
			Average Correction Factor	1.0043

Calculated value of As Found Response: 213.5 ppm Percent Change of As Found: 1.0%

	before calibration		after calibration	
Auto zero	0.1	ppb	-0.1	ppb
Auto span	114.3	ppb	124.6	ppb

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **O3**

Air Monitoring Network **PASZA**

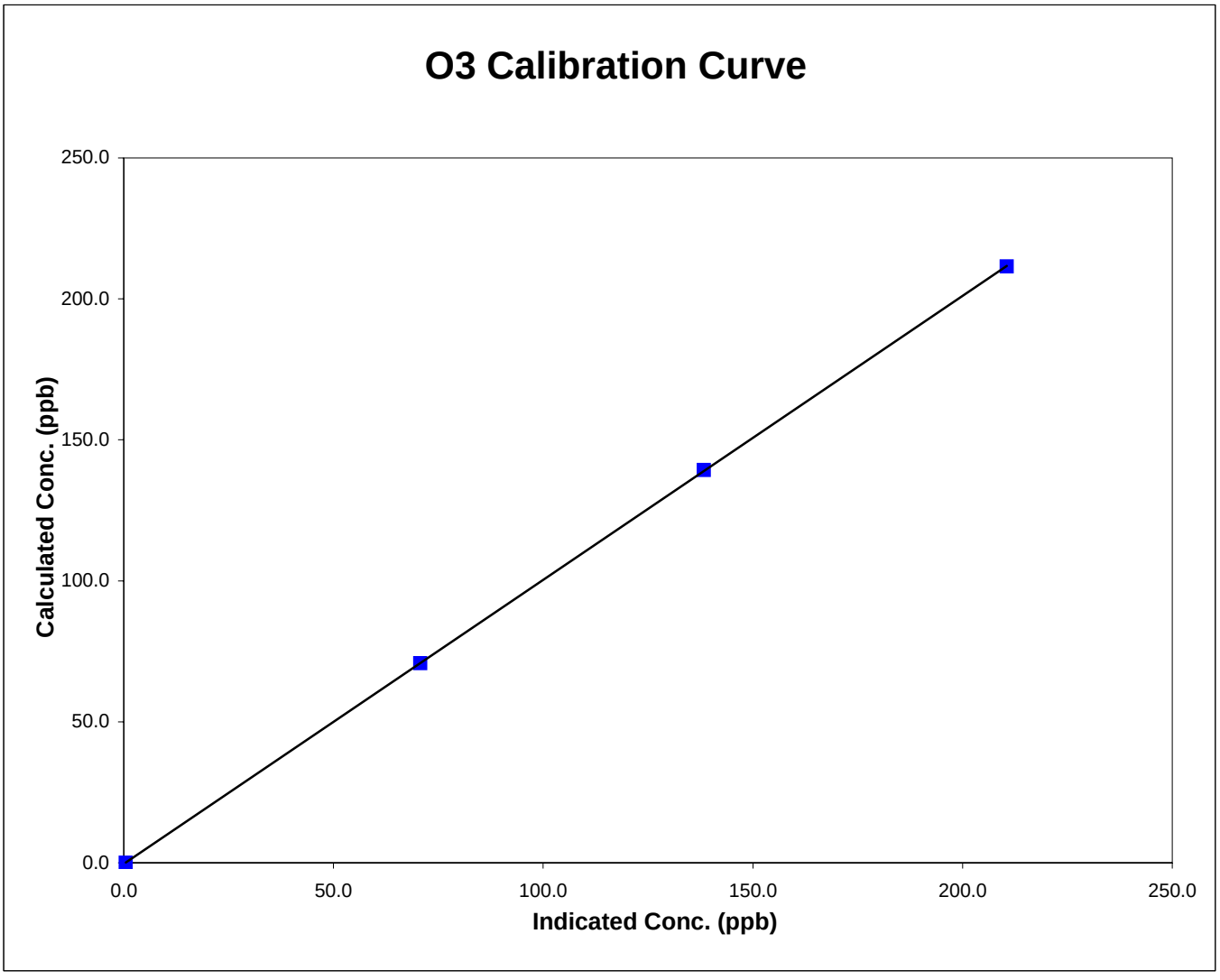
FOCUS AIR QUALITY MONITORING

Station Information

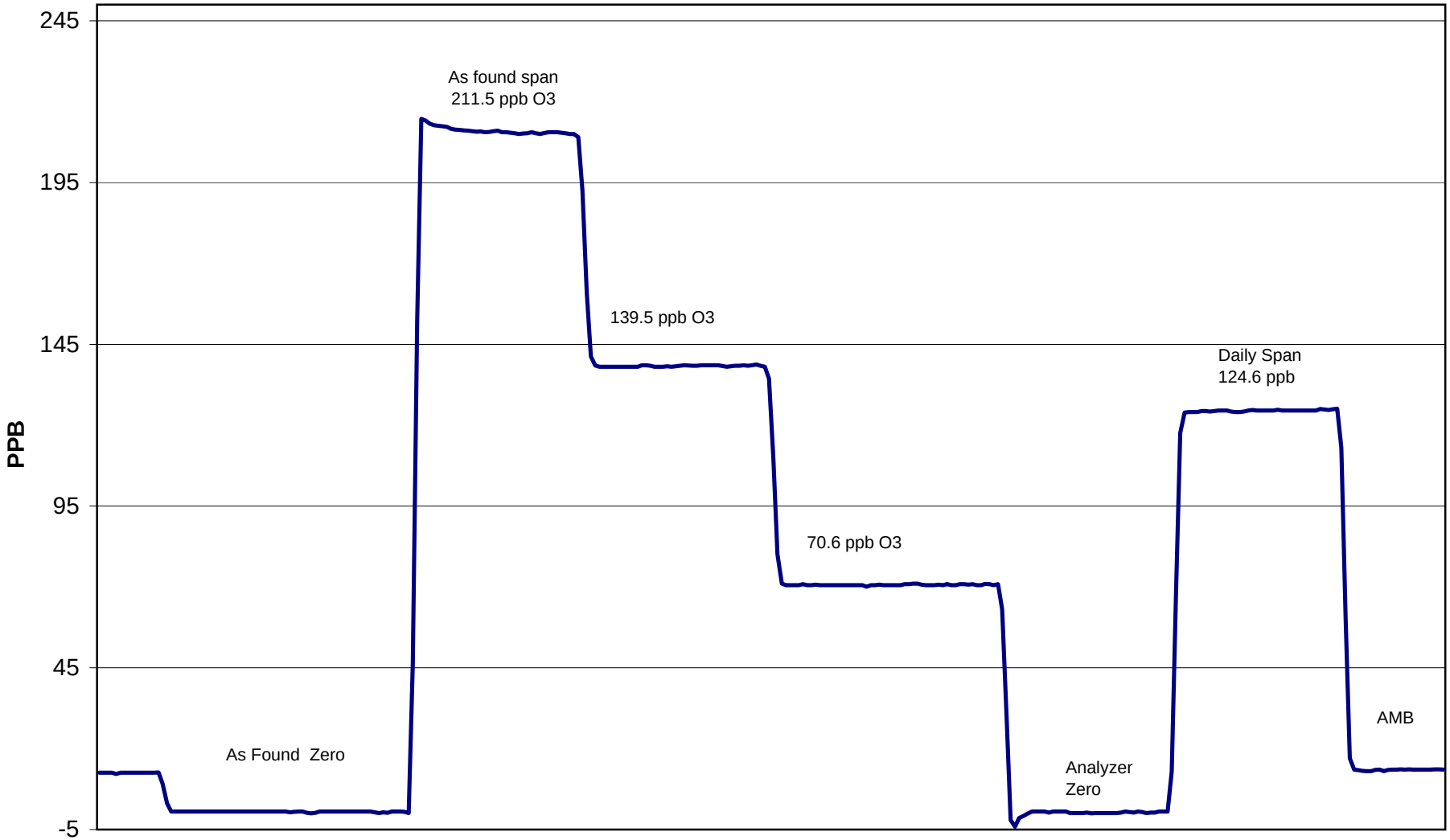
Calibration Date	December 2, 2010	Previous Calibration	November 9, 2010
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	11:08	End Time (MST)	13:38
Analyzer make/model	Teco 49C	Analyzer serial #	49C-76443-383

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	NA		
211.5	210.6	1.0044	Correlation Coefficient	0.999993
139.3	138.3	1.0071		
70.8	70.7	1.0015	Slope	1.007160
			Intercept	-0.361026



Beaverlodge O_3 Calibration



December 2, 2010

FDMS TEOM PM2.5 AUDIT

FOCUS AIR QUALITY MONITORING

STATION: **BeaverLodge**
LOCATION: PASZA - Grande Prairie

OPERATOR: Grover Christiansen
DATE: 21-Dec-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	11-Jun-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	-0.120	0.170
PUMP OFF	0.000	0.060
NET	-0.120	0.110
LIMITS	*<0.15*	*<0.60*

		Ambient Temp. (^{U}C)	Ambient Pres. (atm)	Ko *	Bypass flow (lpm)	Sample flow (lpm)
	SET POINT (S)	na	na	14287	13.67	3.000
	INDICATED (I)	-24.6	0.907		13.60	2.995
As Found Data	MEASURED (AF)	-23.9	0.909		13.60	2.995
Adjusted Data	MEASURED (M)	-23.9	0.909	14119	13.60	2.995
	DIFFERENCE (M-I)	0.7	0.002	-1.2%	-0.51	-0.17
	LIMITS	*± 2 ^{0} C*	*± 0.005 atm*	*± 2.5 %*	*± 1.0 L/min*	*± 0.2 L/min*

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

COMMENTS: PASS

PASS

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

Calibration Report

Parameter **SO2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	December 13, 2010	Previous Calibration	November 4, 2010
Station Number	9	Station Location	Rover - Bonanza
Reason:	Routine / Install / Removal / Other:		
Start Time (MST)	10:40	End Time (MST)	13:14
Barometric Pressure	31.70 inches Hg	Station Temperature	15.7 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	51.5 ppm	Cal Gas Expiry Date	4/6/2012
Gas Cert Reference	SGAL3245		
DACS make	Focus AP1000	DACS serial No.	52662
DACS voltage range	0 - 10 volt	DACS channel #	9
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.997661	Calculated slope	1.000219
Calculated intercept	0.742461	Calculated intercept	-1.457284
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	9.7		9.5	
Coefficient	1.013		0.985	
UV Lamp Voltage	798	V	797	V
Chamber Temp	44.4	C	44.4	C
Perm Gas Temp	45	C	45	C
Pressure	667.6	mm Hg	663.4	mm Hg
Sample Flow	0.484	LPM	0.483	LPM
Lamp Intesity	47764	Hz	47316	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4991	0.00	0.0	-0.5	N/A
4991	39.84	407.8	408.3	0.9988
4991	19.90	204.5	206.6	0.9902
4991	9.93	102.3	105.9	0.9658
4991	0.00	0.0	-0.5	As found zero
4991	39.84	407.8	417.9	As found span
			Average Correction Factor	0.9849

Calculated value of As Found Response: 418.175 ppm Percent Change of As Found: -2.5%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	256.9	ppm	264.0	ppm

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PASZA**

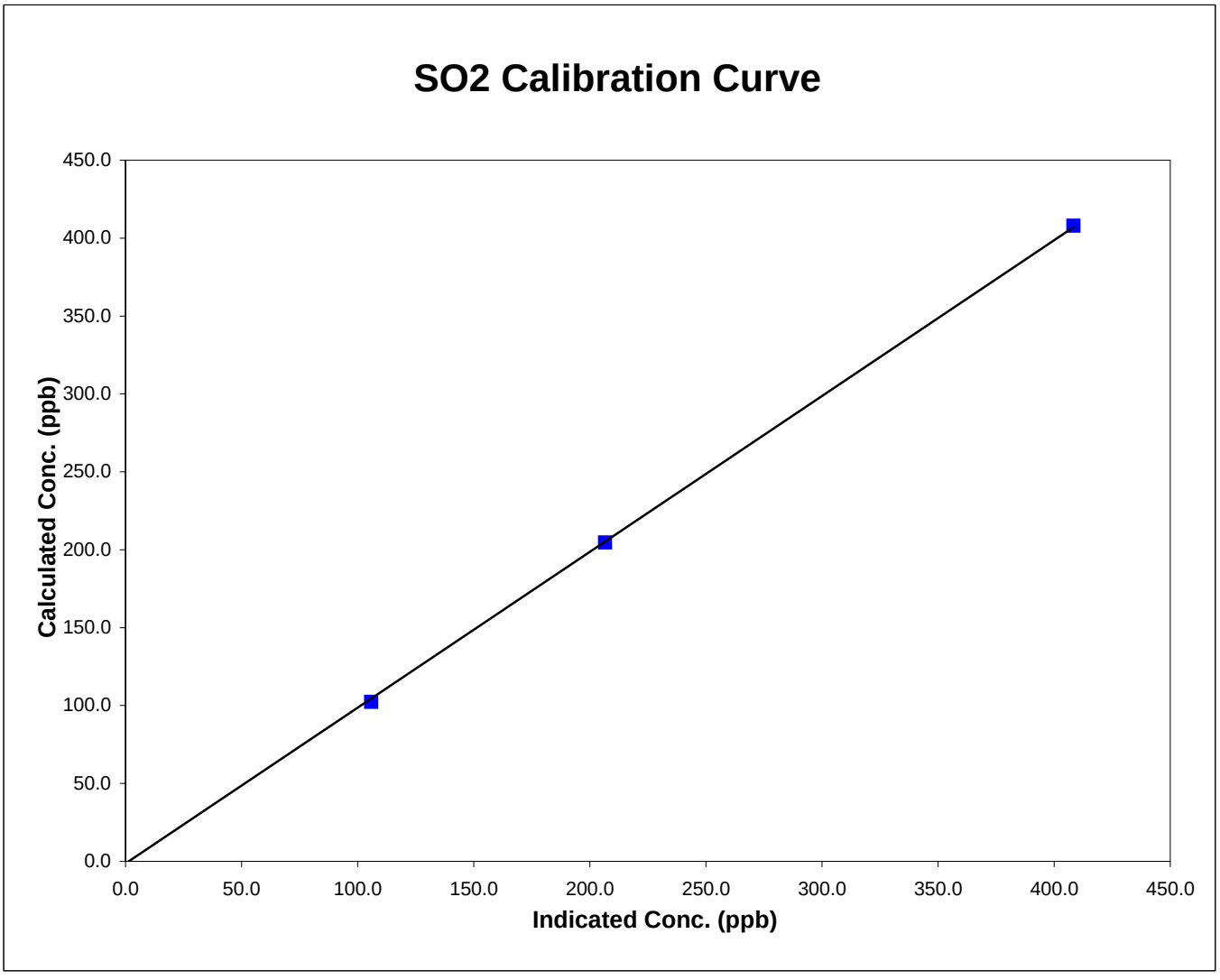
FOCUS AIR QUALITY MONITORING

Station Information

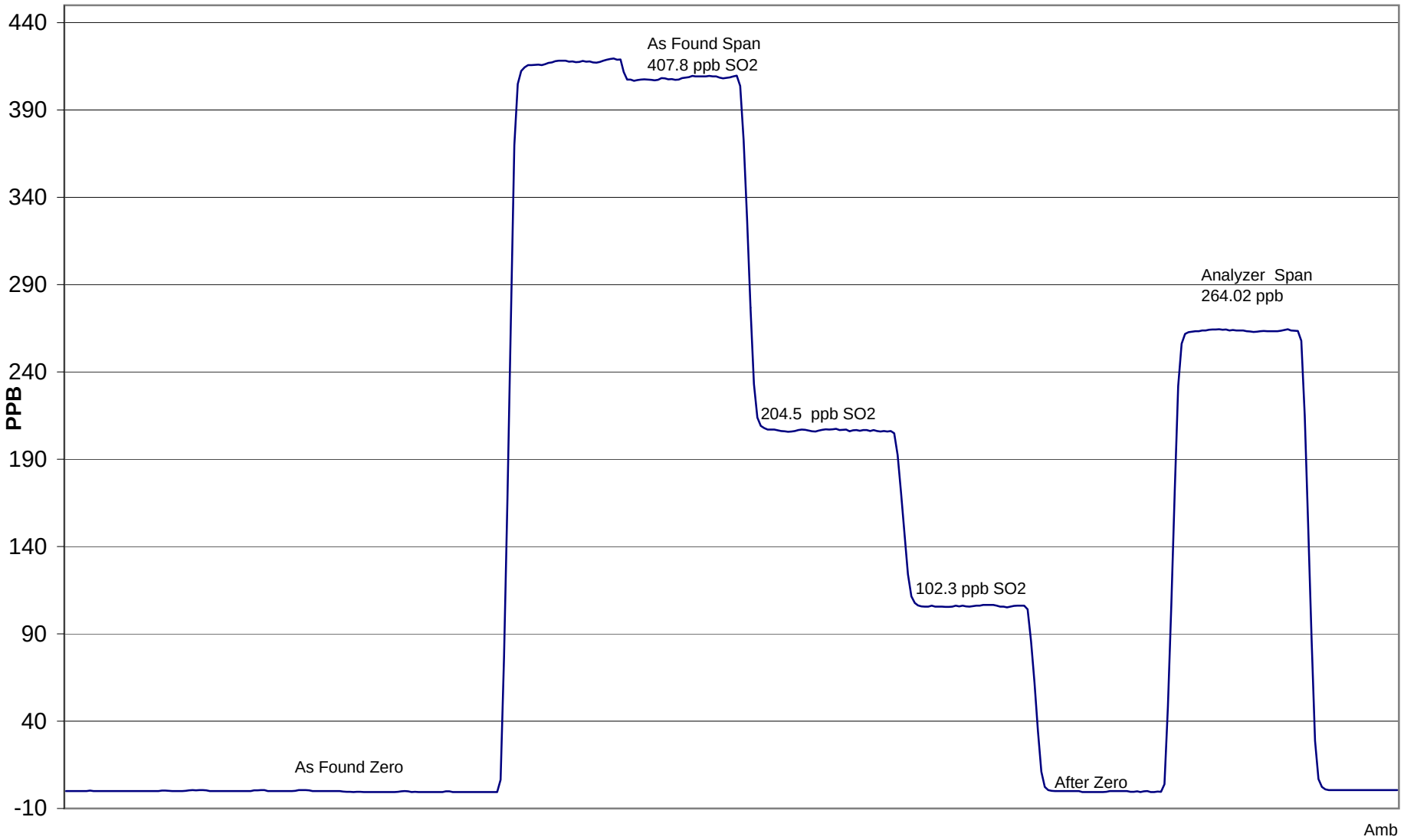
Calibration Date	December 13, 2010	Previous Calibration	November 4, 2010
Station Number	9	Station Location	Rover - Bonanza
Start Time (MST)	10:40	End Time (MST)	13:14
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.5	N/A		
407.8	408.3	0.9988	Correlation Coefficient	0.999894
204.5	206.6	0.9902		
102.3	105.9	0.9658	Slope	1.000219
			Intercept	-1.457284



Bonanza SO_2 Calibration



December 13, 2010

Calibration Report

Parameter **TRS**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	December 13, 2010	Previous Calibration	November 4, 2010
Station Number	9	Station Location	Rover-Bonanza
Reason:	Routine / Install / Removal / Other:		
Start Time (MST)	15:36	End Time (MST)	18:16
Barometric Pressure	27.5 inches Hg	Station Temperature	15.7 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	0.978199	Calculated slope	0.973777
Calculated intercept	0.664763	Calculated intercept	0.288375
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	11.4	ppb	11.4	ppb
Coefficient	1.460		1.460	
Lamp Voltage	791	V	792	V
Chamber Temp	44.0	C	43.9	C
Perm gas Temp	45.00	C	45.0	C
Pressure	647.9	mmHg	648.7	mmHg
Sample Flow	.430	ccm	.433	ccm
Lamp Intensity	39580.0	Hz	39034.0	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4989	0.0	0.0	-0.4	N/A
4991	79.74	81.0	82.8	0.9779
4991	39.80	40.7	41.6	0.9788
4991	9.93	10.2	10.3	0.9911
4991	0.00	0.0	-0.4	As found zero
4991	79.74	81.0	82.8	As found span
			Average Correction Factor	0.9826

Calculated value of As Found Response: 82.10 ppm Percent Change of As Found: -1.4%

	before calibration		after calibration	
Auto zero	-0.6	ppm	0.2	ppm
Auto span	67.0	ppm	65.9	ppm

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **TRS**

Air Monitoring Network **PASZA**

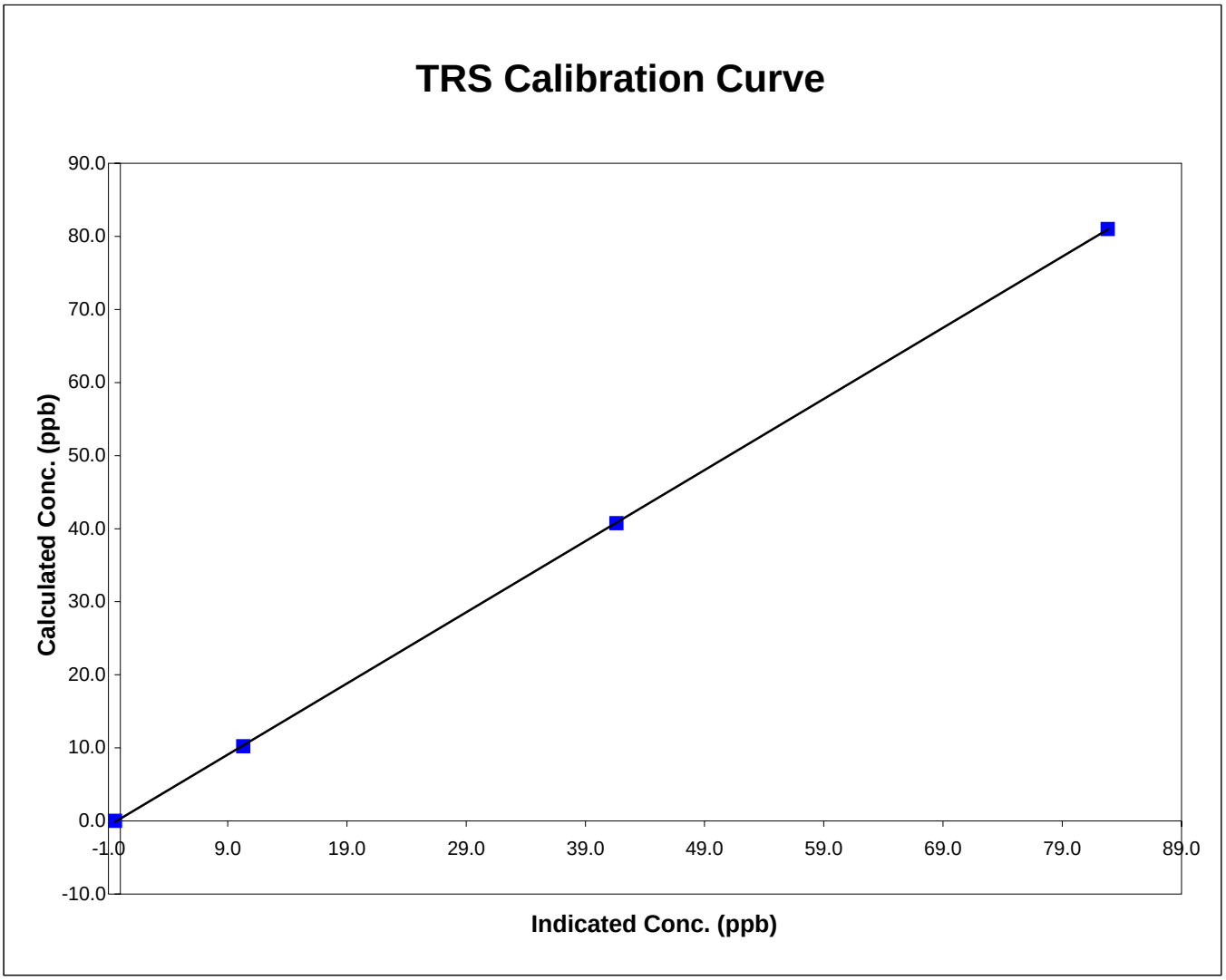
FOCUS AIR QUALITY MONITORING

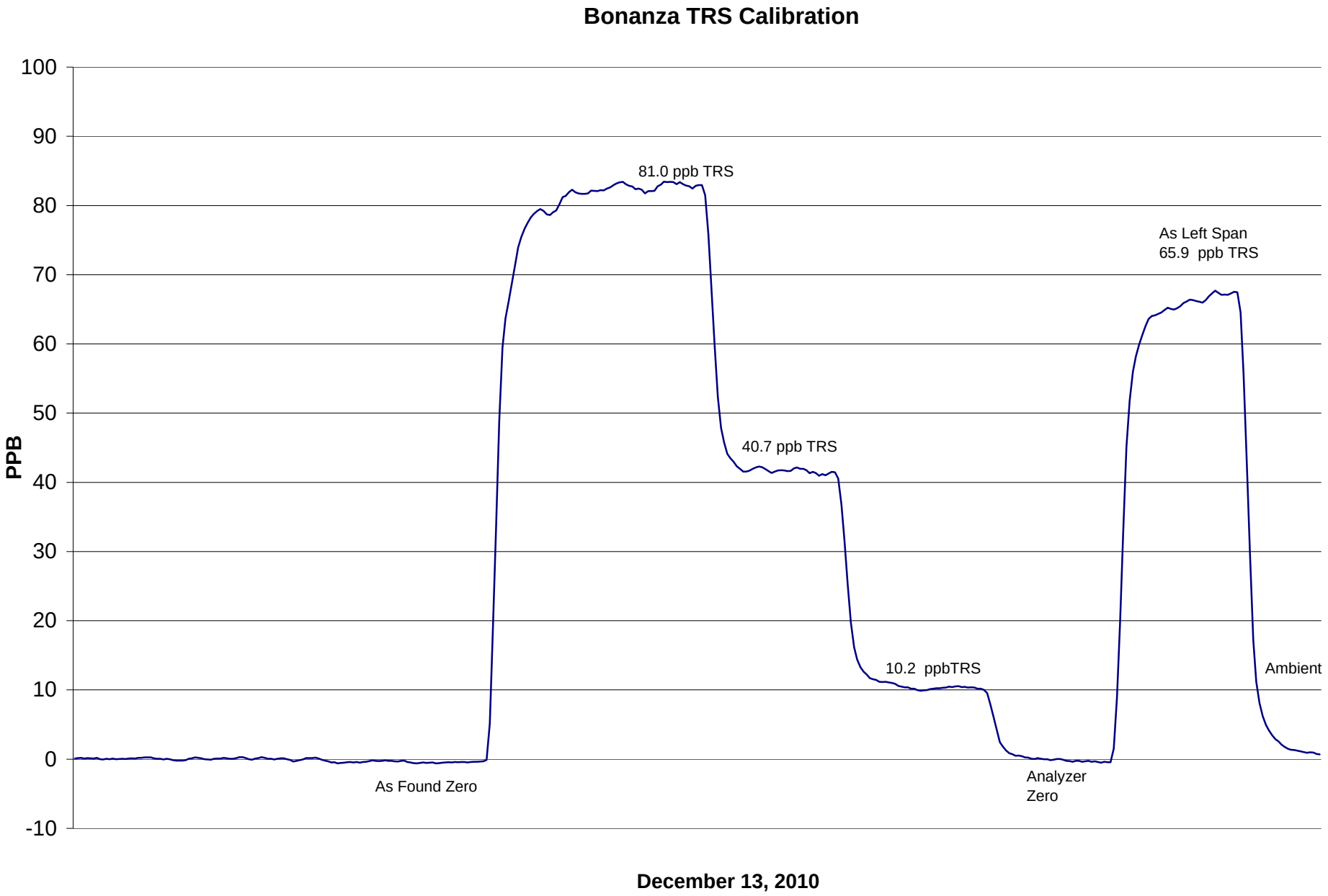
Station Information

Calibration Date	December 13, 2010	Previous Calibration	November 4, 2010
Station Number	9	Station Location	Rover-Bonanza
Start Time (MST)	15:36	End Time (MST)	18:16
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		
81.0	82.8	0.9779	Correlation Coefficient	0.999990
40.7	41.6	0.9788		
10.2	10.3	0.9911	Slope	0.973777
			Intercept	0.288375




Bonanza TRS Calibration
100
90
80
70
60
50
40
30
20
10
0
-10
PPB
81.0 ppb TRS
40.7 ppb TRS
10.2 ppbTRS
As Left Span
65.9 ppb TRS
Ambient
As Found Zero
Analyzer
Zero
December 13, 2010

Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	December 13, 2010	Previous Calibration	November 30, 2010
Station Number	9	Station Location	Rover - Bonanza

Reason: **Routine** Installation Removal Other:

Start Time (MST)	10:00		End Time (MST)	15:50	
Barometric Pressure	0.927	Atm	Station Temperature	20.0	Deg C
Calibrator	Environics 6100		Serial Number	3474	
NO Cal Gas Conc	50.8	ppm	Cal Gas Expiry Date	April 6, 2012	
NOx Cal Gas Conc	50.8	ppm	Cal Gas Serial #	SGAL 3245	

DACS Information

DACS make: Focus AP1000 DACS serial No.: 52662

Parameter		NO2	NOx	NO
Before	Data Slope	1.000502	0.989709	1.003313
	Data Offset	-0.002695	-0.727420	-0.578316
After	Data Slope	0.996934	0.990850	0.998357
	Data Offset	1.733843	0.709432	-0.546948
Channel #		8	6	7
Voltage Range		0 - 10 VDC	0 - 10 VDC	0 - 10 VDC

Analyzer Information

Analyzer make/model: TEI 42i Analyzer serial #: 0701120011

Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	4.4	mV	4.4	mV
NOx bkgnd	5.4	mV	4.6	mV
NO coefficient	1.112		1.112	
NOx coefficient	0.999		1.007	
NO2 conv temp	325.8	Deg C	325.5	Deg C
PMT Temp	-3.0	Deg C	-3.1	Deg C
PMT Volt	-786.6	mV	-787.0	mV
R Cell Press	163.0	in Hg	158.1	in Hg

Calibration Report

Parameter **$NOx\text{-}NO\text{-}NO_2$**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: December 13, 2010 Station Location: Rover - Bonanza

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	5000	0.00	0.0	0.0	0.0	-0.7	0.5	-1.6	N/A	N/A
1	5000	40.00	403.2	403.2	0.0	406.2	404.4	-1.3	0.9926	0.9970
2	5000	20.00	202.4	202.4	0.0	206.0	206.0	-1.8	0.9824	0.9826
3	5000	10.00	101.4	101.4	0.0	105.6	106.3	-1.5	0.9601	0.9535
AFZ	5000	0.00	0.0	0.0	0.0	-0.7	0.5	-1.6	0.0000	0.0000
AFS	5000	40.00	403.2	403.2	0.0	412.3	410.7	-1.5	0.9779	0.9818
							Average Correction Factor		0.9783	0.9777

As Found Concentrations: NO_X= 412.3 NO= 409.5 As Found Percent Change NO_X= 2.3% NO= 1.6%

GPT Calibration Data

Dilution Flow 4988 ccm Source Gas Flow 39.84 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	0.5	0.5	0.0	-0.7	0.5	-1.6	N/A	N/A	N/A	N/A
NO point	404.8	404.8	0.0	406.3	404.8	-1.6	0.9965	1.0000	N/A	N/A
300	404.8	164.3	240.6	405.9	164.3	239.6	0.9974	1.0000	1.0041	99.6%
200	404.8	243.4	161.4	406.1	243.4	160.2	0.9969	1.0000	1.0074	99.3%
100	404.8	321.4	83.4	405.7	321.4	81.8	0.9980	1.0000	1.0204	98.0%
					Average Correction Factor		0.9974	1.0000	1.0106	99.0%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.4	-0.9	0.7	ppb	-0.3	-1.4	0.6	ppb
Auto span	275.6	274.9	2.9	ppb	206.4	203.1	2.1	ppb

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

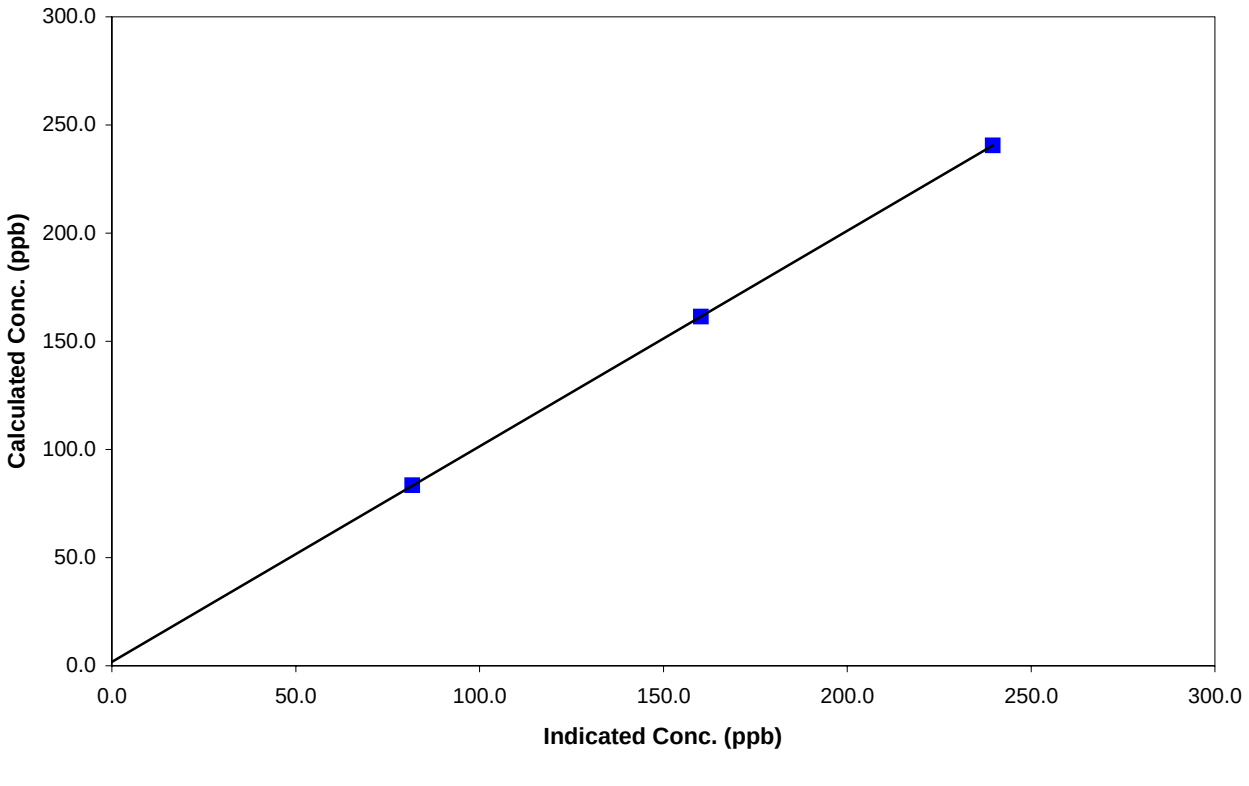
Station Information

Calibration Date	December 13, 2010	Previous Calibration	November 30, 2010
Station Number	9	Station Location	Rover - Bonanza
Start Time (MST)	10:00	End Time (MST)	13:12
Analyzer make	TEI 42i	Analyzer serial #	0701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-1.6	N/A		
240.6	239.6	1.0041	Correlation Coefficient	0.999998
161.4	160.2	1.0074		
83.4	81.8	1.0204	Slope	0.996934
			Intercept	1.733843

NO_2 Calibration Curve



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

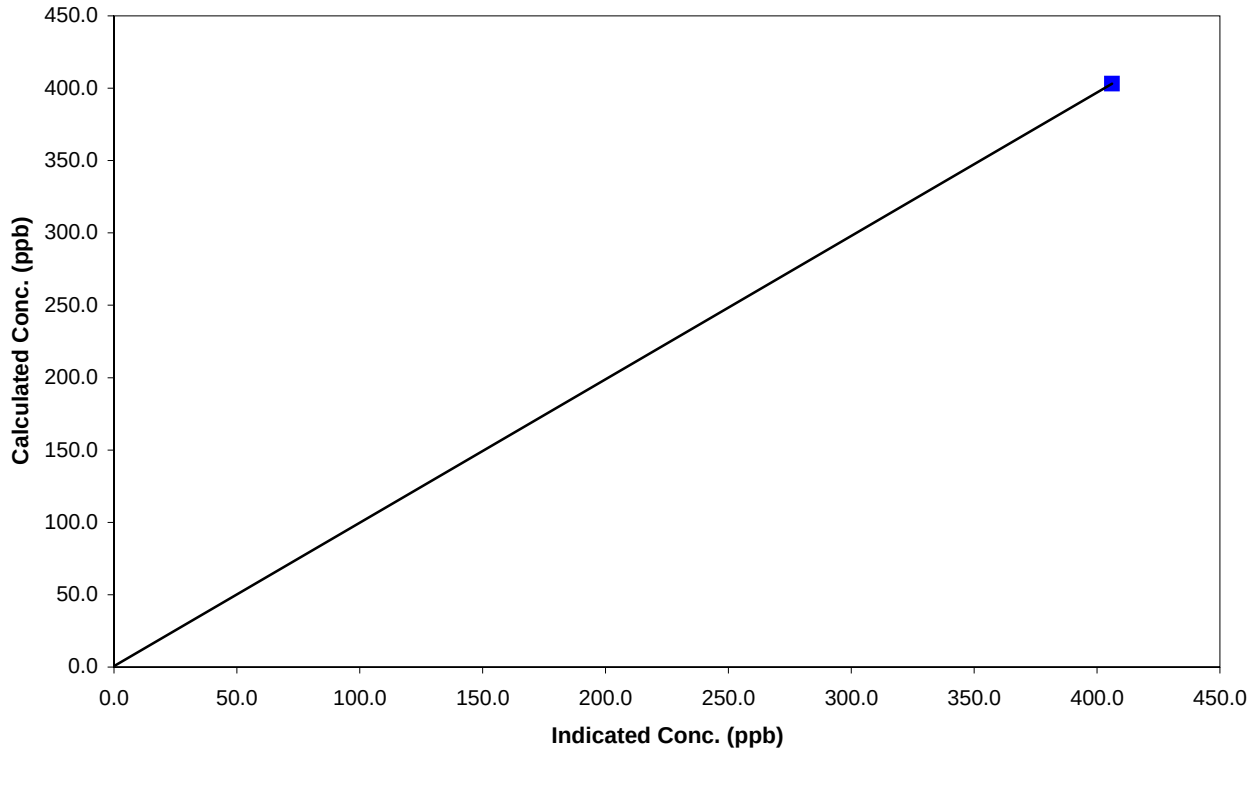
Station Information

Calibration Date	December 13, 2010	Previous Calibration	November 30, 2010
Station Number	9	Station Location	Rover - Bonanza
Start Time (MST)	10:00	End Time (MST)	13:12
Analyzer make	TEI 42i	Analyzer serial #	0701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.7	N/A		
403.2	406.2	0.9926	Correlation Coefficient	1.000000
			Slope	0.990850
			Intercept	0.709432

NOx Calibration Curve



Calibration Summary

Parameter **NO**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

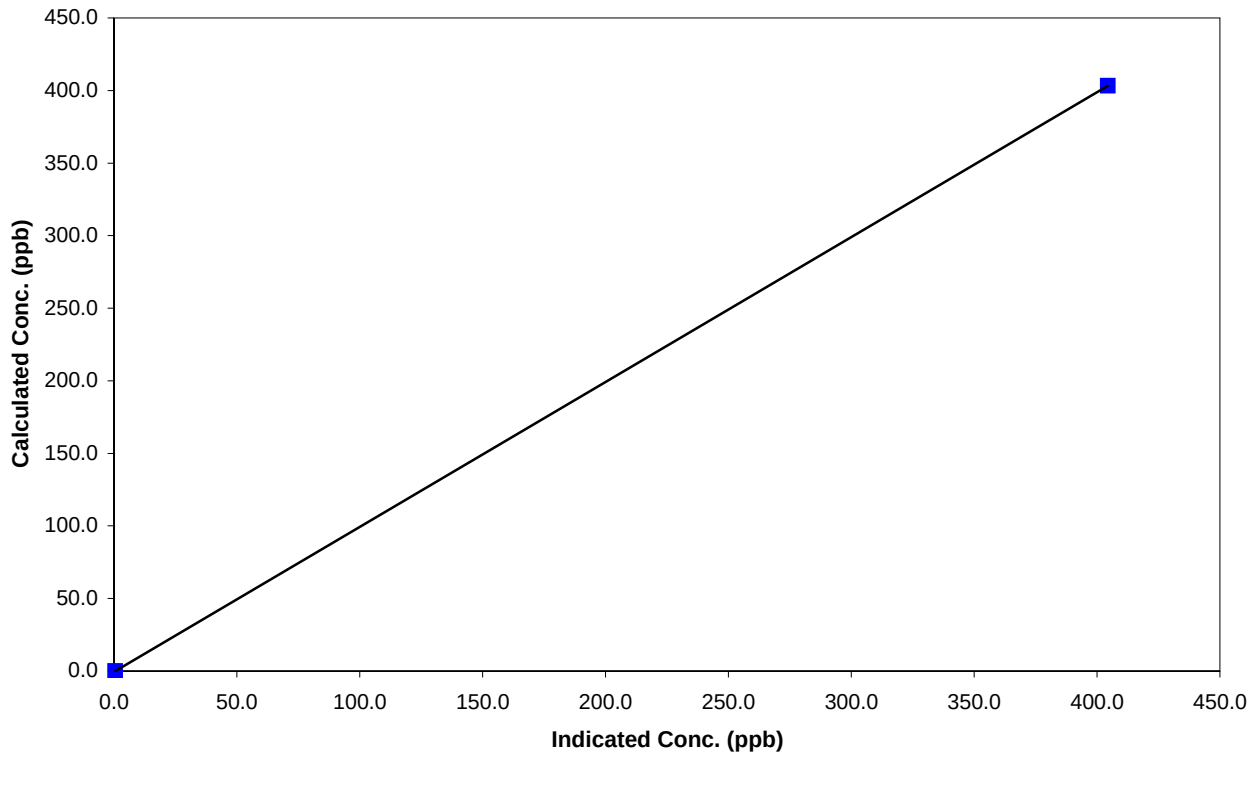
Station Information

Calibration Date	December 13, 2010	Previous Calibration	November 30, 2010
Station Number	9	Station Location	Rover - Bonanza
Start Time (MST)	10:00	End Time (MST)	13:12
Analyzer make	TEI 42i	Analyzer serial #	0701120011

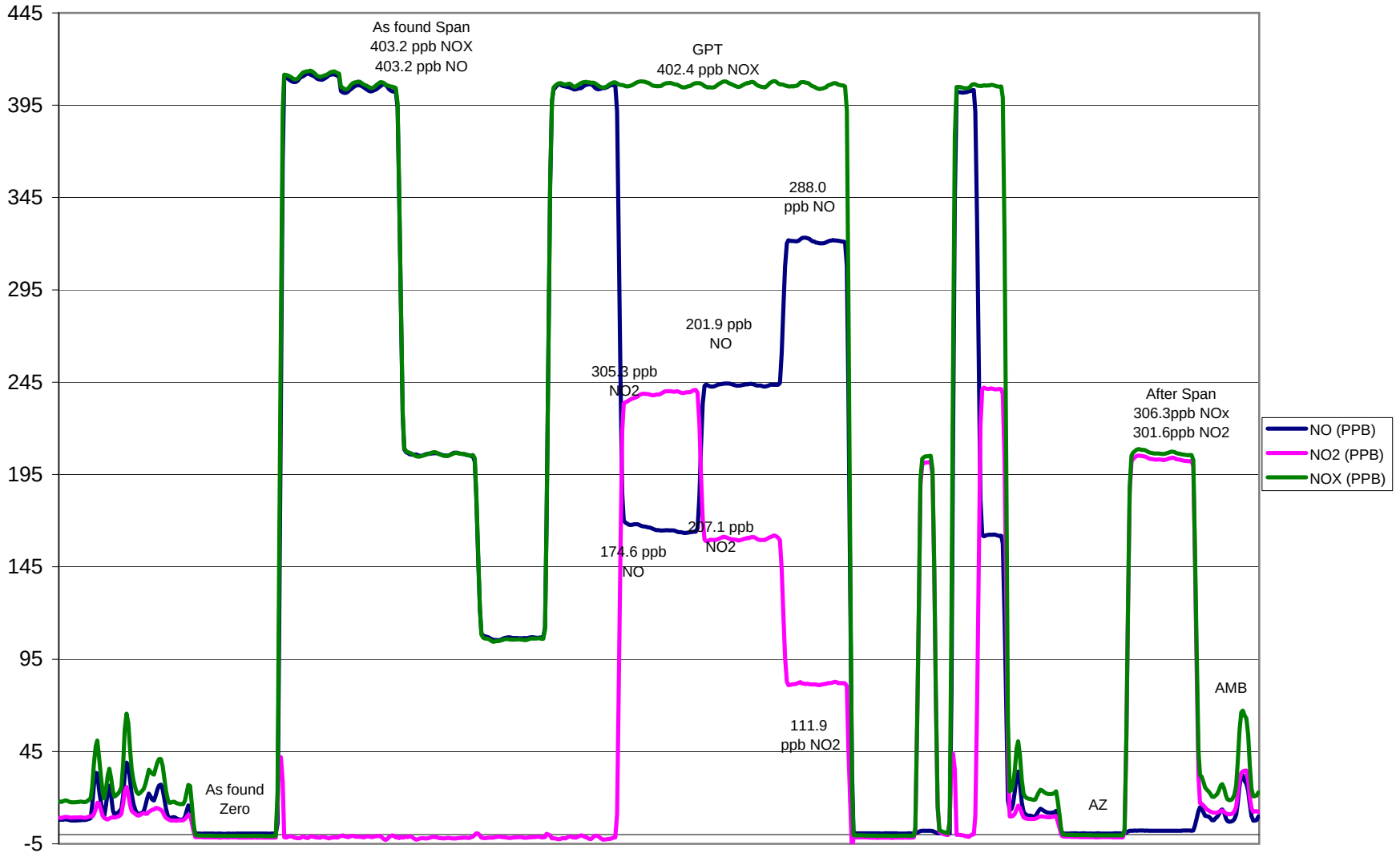
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A		
403.2	404.4	0.9970	Correlation Coefficient	1.000000
			Slope	0.998357
			Intercept	-0.546948

NO Calibration Curve



Bonanza NO_X Calibration



December 13, 2010

Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **O3**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	November 30, 2010	Previous Calibration	November 30, 2010
Station Number	12:00	Station Location	Rover - Bonanza

Reason: Routine | Install | Removal | remove | Other:

Start Time (MST)	13:30	End Time (MST)	16:56
Barometric Pressure	0.927 atm	Station Temperature	15.7 Deg C
Calibrator	Environics 6100	Serial Number	3474
DACS make	Focus AP1000	DACS serial No.	52662
DACS voltage range	0-5	DACS channel #	7
	Before		After
Calculated slope	1.061168	Calculated slope	0.997063
Calculated intercept	0.554423	Calculated intercept	0.539824
Analyzer make	TEI Model 49C	Analyzer serial #	49C-71577-369

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	0.5	ppb	0.4	ppb
Span	1.113		0.991	
Cell A intensity	87888	Hz	85814	Hz
Cell B intensity	90910	Hz	87731	Hz
Pressure	686.50	in Hg	680.41	in Hg
CellA Flow	0.778	ccm	0.773	ccm
Cell B Flow	0.690	cmm	0.683	cmm

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4990	0.00	0.0	0.0	N/A
4990	0.30	240.6	241.4	0.9966
4990	0.20	161.4	160.6	1.0048
4990	0.10	83.4	82.6	1.0100
4990	0.00	0.0	0.0	As found zero
4990	0.30	240.6	271.9	As found span
			Average Correction Factor	1.0038

Calculated value of As Found Response: 226.2 ppm Percent Change of As Found: -6.0%

	before calibration		after calibration	
Auto zero	0.6	ppb	0.5	ppb
Auto span	141.4	ppb	136.0	ppb

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **O3**

Air Monitoring Network **PASZA**

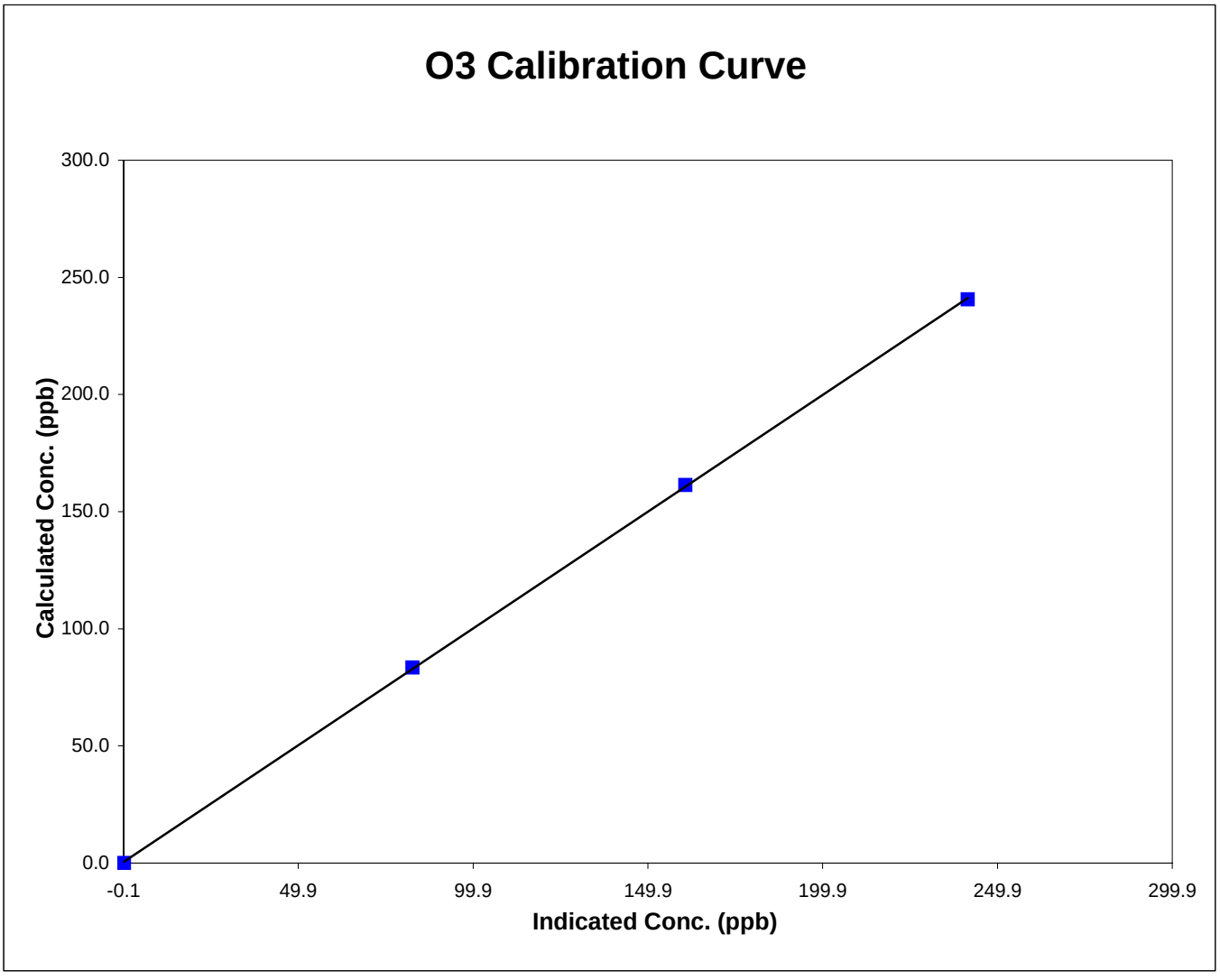
FOCUS AIR QUALITY MONITORING

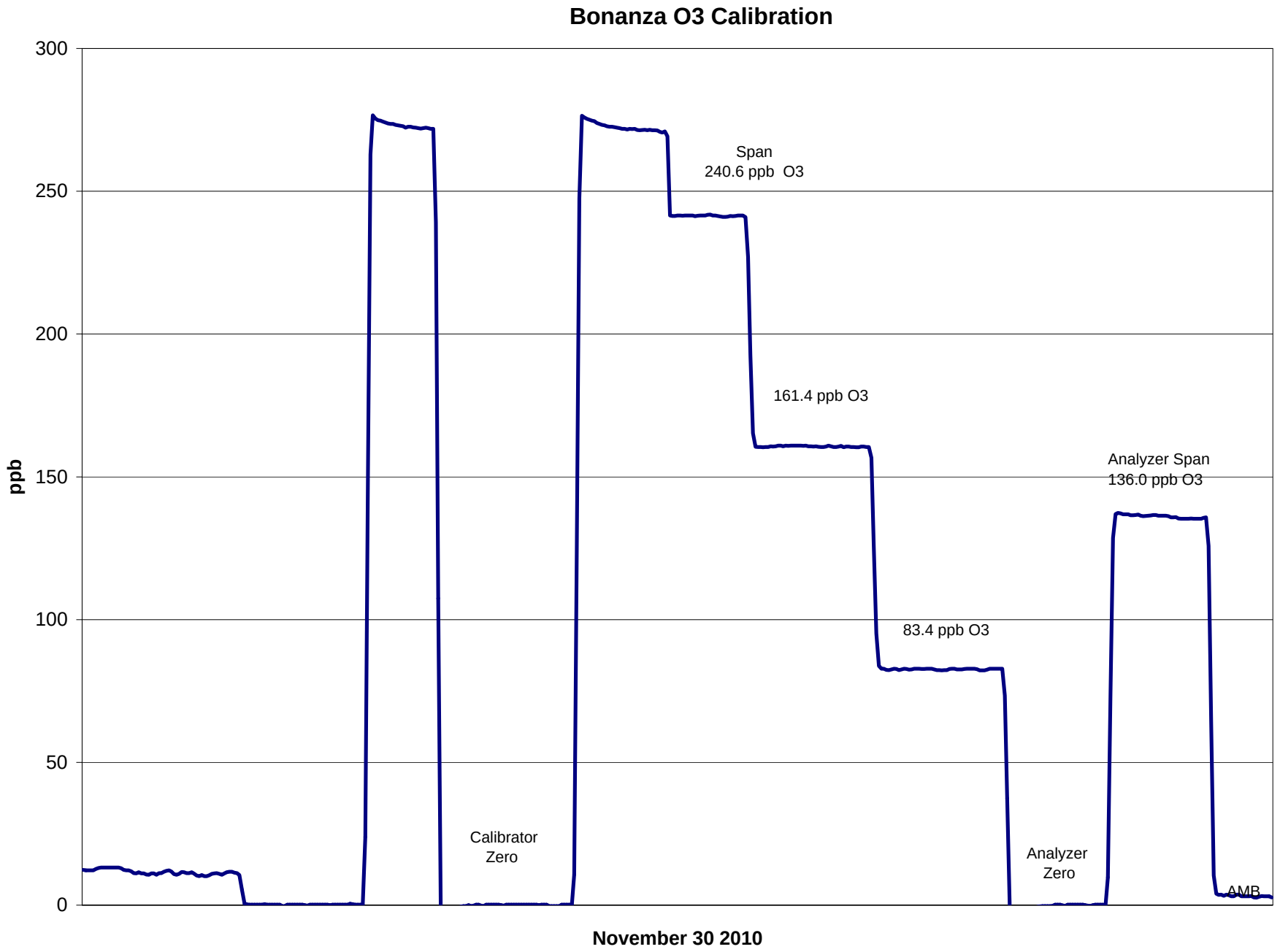
Station Information

Calibration Date	November 30, 2010	Previous Calibration	November 30, 2010
Station Number	0.5	Station Location	Rover - Bonanza
Start Time (MST)	13:30	End Time (MST)	16:56
Analyzer make/model	TEI Model 49C	Analyzer serial #	49C-71577-369

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	NA		
240.6	241.4	0.9966	Correlation Coefficient	0.999952
161.4	160.6	1.0048		
83.4	82.6	1.0100	Slope	0.997063
			Intercept	0.539824




Bonanza O3 Calibration
300
250
200
150
100
50
0
ppb
Span
240.6 ppb O3
161.4 ppb O3
83.4 ppb O3
Analyzer Span
136.0 ppb O3
Calibrator
Zero
Analyzer
Zero
AMB
November 30 2010

Calibration Report

Parameter **SO2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	December 15, 2010	Previous Calibration	November 18, 2010
Station Number	6	Station Location	Valleyview
Reason:	Routine	Install	Removal	Other:
Start Time (MST)	12:00	End Time (MST)	16:44
Barometric Pressure	702.00 mm	Station Temperature	14.7 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	51.5 ppm	Cal Gas Cert Date	7/23/2010
Gas Cert Reference	SGAL3245		
DACS make	Focus AP1000	DACS serial No.	45274
DACS voltage range	0 - 10 volt	DACS channel #	4
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.020288	Calculated slope	1.019638
Calculated intercept	-0.426231	Calculated intercept	-2.471531
Analyzer make	TEI 45C	Analyzer serial #	45C-57531-313

	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
Background	24.7		26.5	
Coefficient	0.851		0.851	
UV Lamp Voltage	948	LPM	947	LPM
Chamber Temp	43.7	V	44.3	V
Perm Gas Temp	36.2	C	35.1	C
Pressure	620.3	in Hg	618.6	in Hg
Sample Flow	0.473	LPM	0.472	LPM
Lamp Intensity	48256	Hz	47992	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4991	0.00	0.0	-0.1	N/A
4989	39.85	408.1	401.2	1.0173
4989	19.89	204.5	204.8	0.9985
4989	9.94	102.4	105.0	0.9753
4989	0.00	0.0	-0.1	As found zero
4989	39.85	408.1	401.2	As found span
			Average Correction Factor	0.9970

Calculated value of As Found Response: 408.936 ppm Percent Change of As Found: -0.2%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.0	ppm
Auto span	155.5	ppm	154.2	ppm

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PASZA**

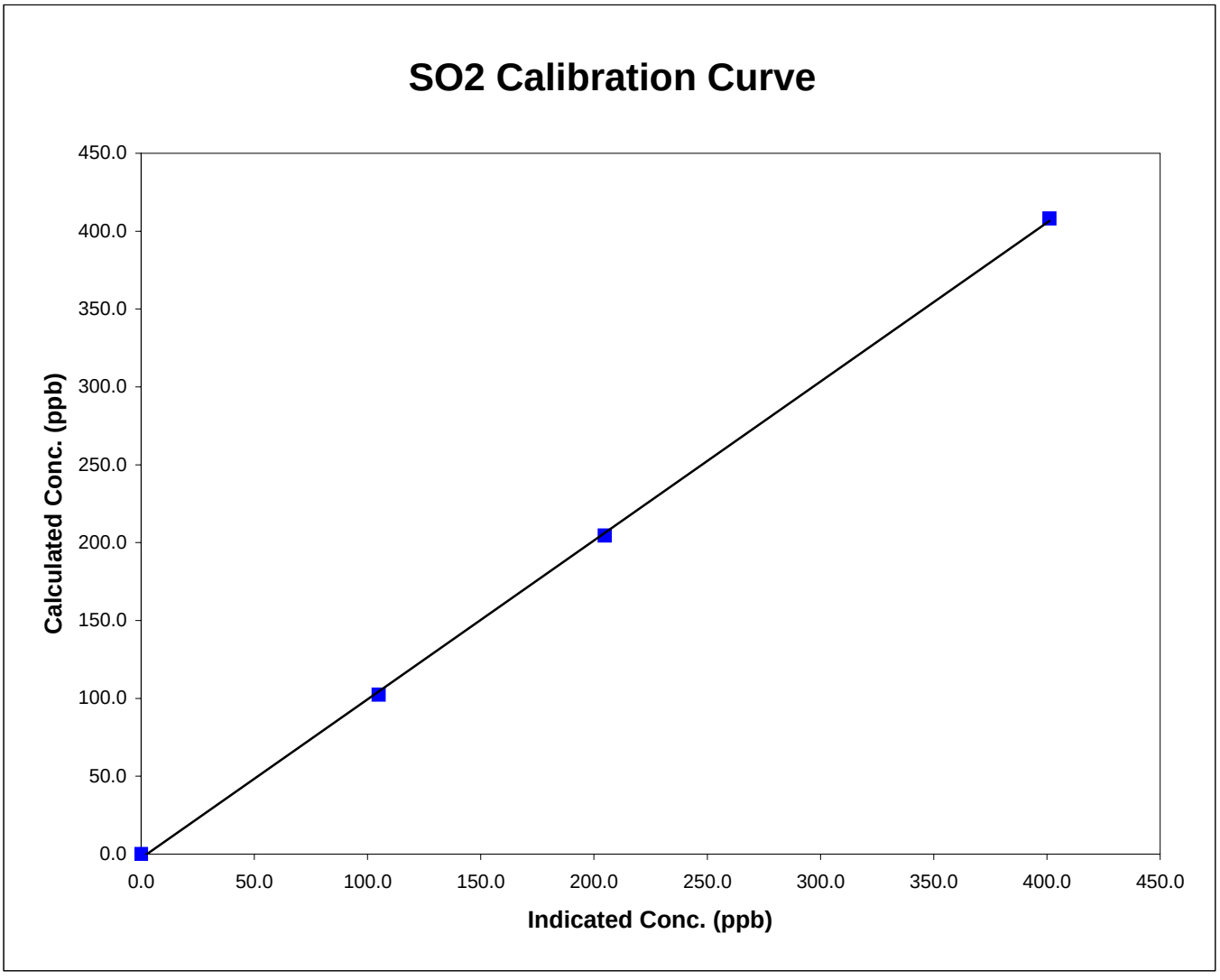
FOCUS AIR QUALITY MONITORING

Station Information

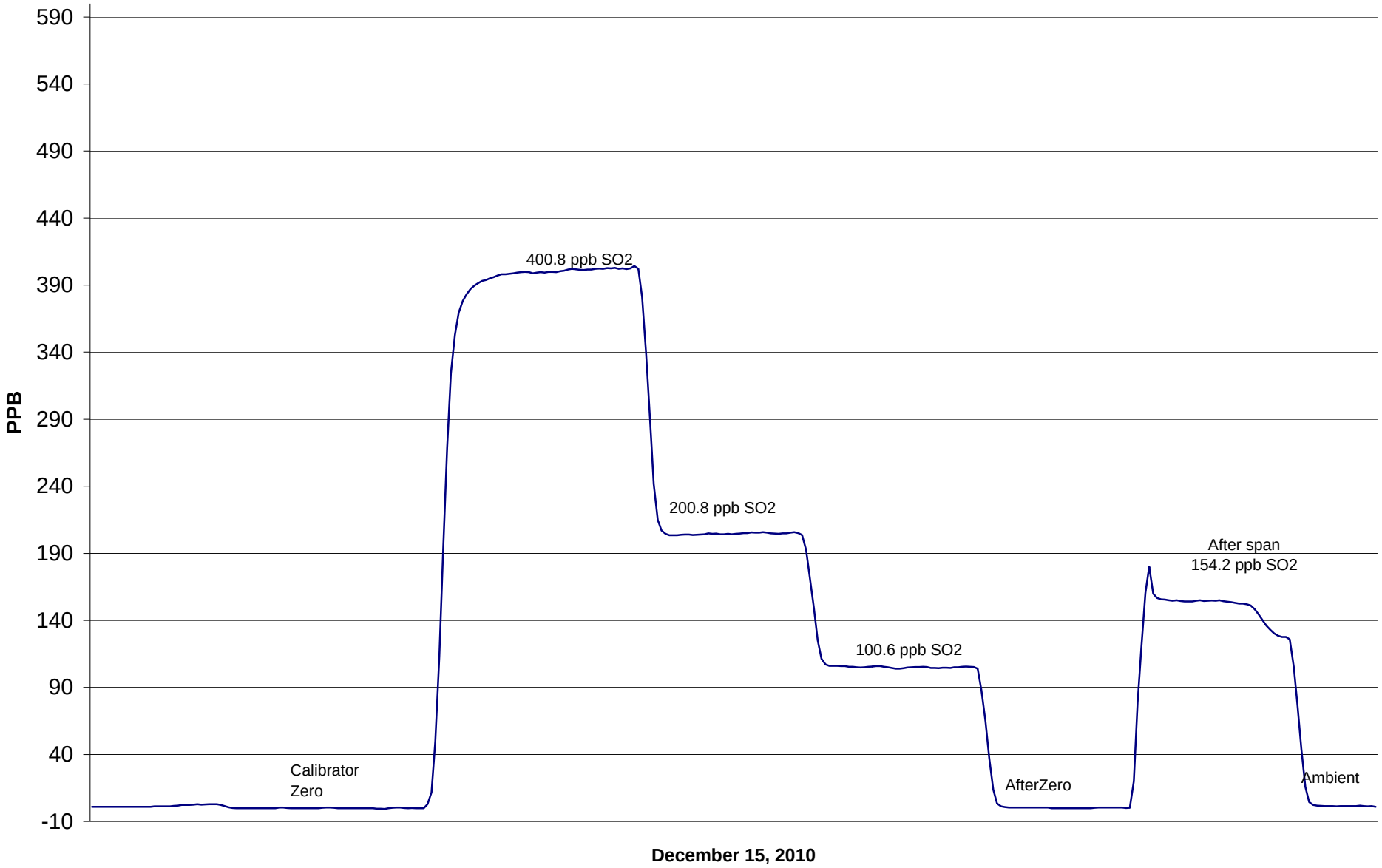
Calibration Date	December 15, 2010	Previous Calibration	November 18, 2010
Station Number	6	Station Location	Valleyview
Start Time (MST)	12:00	End Time (MST)	14:42
Analyzer make/model	TEI 45C	Analyzer serial #	45C-57531-313

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A		
408.1	401.2	1.0173	Correlation Coefficient	0.999814
204.5	204.8	0.9985		
102.4	105.0	0.9753	Slope	1.019638
			Intercept	-2.471531



Valleyview SO_2 Calibration



Calibration Report

Parameter **H2S**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	December 15, 2010	Previous Calibration	November 18, 2010
Station Number	5	Station Location	Valleyview

Reason: **Routine** | Install | Removal | Other:

Start Time (MST)	12:00	End Time (MST)	15:32
Barometric Pressure	702.00 mm	Station Temperature	21.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	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	0.998393	Calculated slope	0.993215
Calculated intercept	0.285576	Calculated intercept	0.358248

Analyzer make	TEI Model 43i - APSCB	Analyzer serial # 701120010

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	5.6	ppb	5.9	ppb
Coefficient	1.099		1.155	
Lamp Voltage	787	V	786	V
Chamber Temp	45.1	c	45.2	c
Perm Oven Temp	45.00	c	45.0	c
Pressure	629.50	mm Hg	629.50	mm Hg
Sample Flow	.426	ccm	.426	ccm
Lamp Intensity	91.0	%	91.0	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.0	-0.1	N/A
4989	79.75	81.0	81.4	0.9953
4989	39.83	40.8	40.3	1.0109
4989	9.93	10.2	9.8	1.0386
4989	0.00	0.0	-0.1	As found zero
4989	79.75	81.0	76.2	As found span
			Average Correction Factor	1.0149

Calculated value of As Found Response: 76.46 ppm Percent Change of As Found: 5.6%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.5	ppm
Auto span	70.6	ppm	62.6	ppm

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **H2S**

Air Monitoring Network **PASZA**

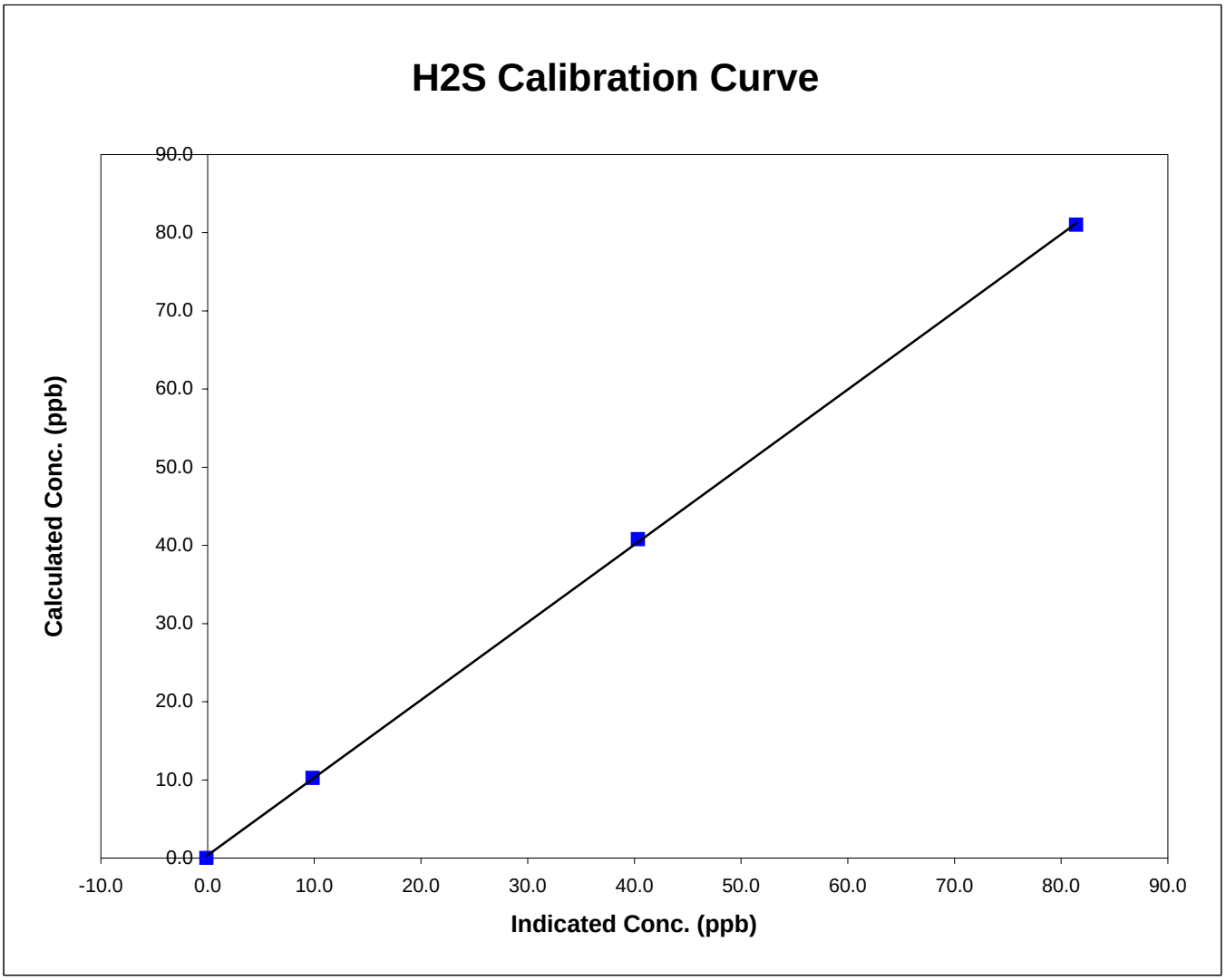
FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	December 15, 2010	Previous Calibration	November 18, 2010
Station Number	5	Station Location	Valleyview
Start Time (MST)	12:00	End Time (MST)	15:32
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	-0.1	N/A		
81.0	81.4	0.9953	Correlation Coefficient	0.999941
40.8	40.3	1.0109		
10.2	9.8	1.0386	Slope	0.993215
			Intercept	0.358248



Valleyview H_2S Calibration