Peace AirShed Zone Association

Ambient Air Monitoring Network Summary

Continuous Ambient Air Quality Monitoring Program
Monthly Report
July 2010

Operations and Reporting

FOCUS
AIR QUALITY MONITORING

PASZA
Peace AirShed Zone Association

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September 7, 2010

Alberta Environment
11th Floor, Oxbridge Place
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Edmonton Alberta T6B 2X3

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

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

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

During the month of July the following events were noted:

Henry Pirker Station:
- The measured ambient air quality was within the Alberta Ambient Air Quality Objectives (AAAQO) for the Henry Pirker station.
- All analyzers and sensors at the Henry Pirker station had an operational uptime greater than 90% for the month of July.

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 July.

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

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 July.

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 July.

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 July.
- A new station shelter was installed the week of July 6th, removal calibrations were performed on July 6th, new station shelter was installed (old one removed) and installation calibrations were completed on July 8th.

Passive Monitoring - 43 Stations throughout the PASZA zone:

There were four duplicate sites sampled in the month of July: Steeprock Creek, Saddle Hills, Wapiti and Gift Lake. The passive sample analyses were performed by MAXXAM Analytics Inc.

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

- Monthly average concentrations for SO_2 passives ranged from 0.1 ppb to 1.0 ppb, with a mean of 0.2 ppb.
- Monthly average concentrations for NO_2 passives ranged from 0.2 ppb to 1.5 ppb, with a mean of 0.6 ppb.
- Monthly average concentrations for O_3 passives ranged from 16.2 ppb to 28.9 ppb, with a mean of 21.9 ppb.

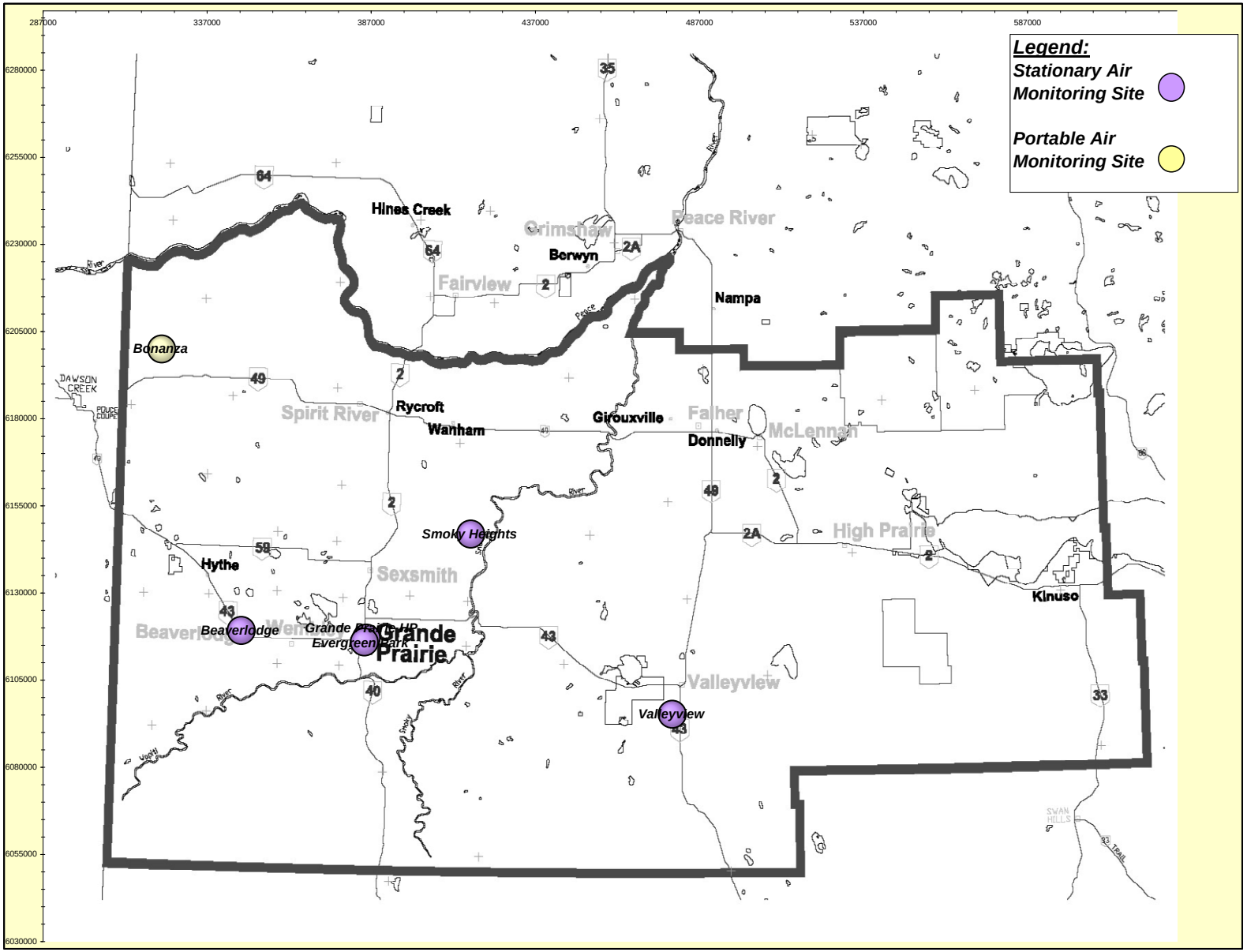
If you have any questions or concerns, please contact Shelly Pruden, PASZA Program Manager at 780.833.4343 or 780.882.4071.

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

Jul-2010	Peace Airshed Zone Assocation						Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
Pollutant (units)	Objectives 1-hr	Objectives 24-hr	Station	Monthly Average	Exceedence 1-hr	Exceedence 24-hr	Conc	Day	Conc	Day	Operational Time (%)
SO_2 (ppb)	172	57	Henry Pirker	0.2	0	0	4.0	Jul-14 04:00	0.8	Jul-28	100.0%
SO_2 (ppb)	172	57	Evergreen Park	0.3	0	0	7.9	Jul-15 10:00	1.4	Jul-14	99.7%
SO_2 (ppb)	172	57	Smoky Heights	0.3	0	0	5.8	Jul-14 04:00	0.7	Jul-28	99.9%
SO_2 (ppb)	172	57	Beaverlodge	0.3	0	0	4.4	Jul-10 11:00	0.8	Jul-10	100.0%
SO_2 (ppb)	172	57	Portable-Bonanza	0.3	0	0	1.8	Jul-09 21:00	0.7	Jul-28	100.0%
SO_2 (ppb)	172	57	Valleyview	0.7	0	0	8.4	Jul-16 21:00	2.9	Jul-14	100.0%
NO (ppb)			Henry Pirker	0.8	0	0	25.1	Jul-21 08:00	2.9	Jul-27	100.0%
NO_2 (ppb)	212	106	Henry Pirker	4.0	0	0	20.7	Jul-08 23:00	8.6	Jul-28	100.0%
NO_X (ppb)			Henry Pirker	4.9	0	0	44.0	Jul-21 08:00	10.6	Jul-28	100.0%
NO (ppb)			Beaverlodge	0.3	0	0	7.6	Jul-27 08:00	0.8	Jul-27	100.0%
NO_2 (ppb)	212	106	Beaverlodge	1.7	0	0	9.5	Jul-21 06:00	3.2	Jul-28	100.0%
NO_X (ppb)			Beaverlodge	2.0	0	0	13.6	Jul-07 08:00	3.8	Jul-28	100.0%
NO (ppb)			Portable-Bonanza	0.5	0	0	37.4	Jul-06 09:00	1.9	Jul-06	100.0%
NO_2 (ppb)	212	106	Portable-Bonanza	1.7	0	0	17.2	Jul-06 09:00	3.5	Jul-30	100.0%
NO_X (ppb)			Portable-Bonanza	2.3	0	0	54.9	Jul-06 09:00	4.4	Jul-30	100.0%
O_3 (ppb)	82		Henry Pirker	25.2	0	-	61.1	Jul-28 15:00	38.0	Jul-31	100.0%
O_3 (ppb) - 8-hr			Henry Pirker		0				53.9	Jul-31	
O_3 (ppb)	82		Beaverlodge	24.3	0	-	51.7	Jul-31 17:00	37.2	Jul-31	100.0%
O_3 (ppb) - 8-hr			Beaverlodge		0				49.6	Jul-31	
O_3 (ppb)	82		Portable-Bonanza	23.7	0	-	55.2	Jul-31 17:00	33.9	Jul-31	99.9%
O_3 (ppb) - 8-hr			Portable-Bonanza		0				52.7	Jul-31	
CO (ppm)	13		Henry Pirker	0.14	0	-	0.4	Jul-08 00:00	0.2	Jul-08	100.0%
CO (ppm) - 8-hr	5		Henry Pirker		0				0.3	Jul-08	
THC (ppm)			Henry Pirker	1.96	-	-	3.1	Jul-31 06:00	2.1	Jul-31	100.0%
TRS (ppb)			Henry Pirker	0.2	-	-	1.2	Jul-08 00:00	0.4	Jul-09	100.0%
TRS (ppb)			Evergreen Park	0.5	-	-	1.1	Jul-17 04:00	0.7	Jul-28	99.7%
TRS (ppb)			Smoky Heights	0.4	-	-	1.3	Jul-09 07:00	0.5	Jul-09	99.9%
TRS (ppb)			Portable-Bonanza	0.5	-	-	1.1	Jul-08 08:00	0.6	Jul-07	100.0%
H_2S (ppb)	10	3	Valleyview	0.1	0	0	0.8	Jul-04 17:00	0.2	Jul-14	100.0%

PASZA Monthly Continuous Data Summary – continued

Jul-2010	Peace Airshed Zone Assocation						Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
PM2.5 (µg/m3)	80	30	Henry Pirker	6.2	0	0	23.7	Jul-28 13:00	14.0	Jul-29	99.9%
PM2.5 (µg/m3)	80	30	Evergreen Park	5.2	0	0	28.7	Jul-21 17:00	11.2	Jul-29	99.1%
PM2.5 (µg/m3)	80	30	Smoky Heights	3.9	0	0	79.9	Jul-25 22:00	9.4	Jul-28	99.5%
PM2.5 (µg/m3)	80	30	Beaverlodge	7.4	0	0	23.2	Jul-29 19:00	17.0	Jul-29	99.5%
RH (%)			Henry Pirker	54.3	-	-	91.2	Jul-29 06:00	76.7	Jul-13	100.0%
RH (%)			Evergreen Park	55.0	-	-	97.1	Jul-29 06:00	80.1	Jul-13	95.7%
RH (%)			Beaverlodge	53.3	-	-	95.7	Jul-27 06:00	76.9	Jul-13	100.0%
RH (%)			Valleyview	60.7	-	-	97.4	Jul-20 05:00	85.6	Jul-13	100.0%
SR (W/m^2)			Henry Pirker	218.9	-	-	809.2	Jul-14 13:00	280.4	Jul-01	100.0%
Temp (°C)			Henry Pirker	17.9	-	-	30.9	Jul-08 17:00	23.3	Jul-08	100.0%
Temp (°C)			Evergreen Park	17.6	-	-	30.4	Jul-08 20:00	22.4	Jul-08	95.7%
Temp (°C)			Smoky Heights	17.5	-	-	29.8	Jul-28 16:00	22.4	Jul-08	99.5%
Temp (°C)			Beaverlodge	17.3	-	-	31.1	Jul-08 18:00	23.1	Jul-08	100.0%
Temp (°C)			Portable-Bonanza	18.1	-	-	31.1	Jul-08 20:00	22.8	Jul-08	100.0%
Temp (°C)			Valleyview	16.5	-	-	28.6	Jul-28 18:00	19.9	Jul-09	100.0%
WSPD s (km/hr)			Henry Pirker	12.2	-	-	33.0	Jul-12 08:00	21.2	Jul-24	100.0%
WSPD s (km/hr)			Evergreen Park	8.3	-	-	24.0	Jul-03 17:00	15.2	Jul-01	100.0%
WSPD s (km/hr)			Smoky Heights	15.4	-	-	45.0	Jul-24 12:00	26.9	Jul-01	99.5%
WSPD s (km/hr)			Beaverlodge	13.8	-	-	45.0	Jul-24 13:00	29.3	Jul-24	100.0%
WSPD s (km/hr)			Portable-Bonanza	14.4	-	-	47.0	Jul-24 12:00	31.4	Jul-01	100.0%
WSPD s (km/hr)			Valleyview	6.9	-	-	22.0	Jul-13 08:00	14.3	Jul-13	100.0%
WSPD v (km/hr)			Henry Pirker	8.7	-	-	33.0	Jul-12 08:00	20.2	Jul-24	100.0%
WSPD v (km/hr)			Evergreen Park	6.2	-	-	24.0	Jul-03 17:00	14.4	Jul-01	100.0%
WSPD v (km/hr)			Smoky Heights	10.7	-	-	45.0	Jul-24 12:00	26.3	Jul-01	99.5%
WSPD v (km/hr)			Beaverlodge	9.2	-	-	45.0	Jul-24 13:00	28.7	Jul-24	100.0%
WSPD v (km/hr)			Portable-Bonanza	9.5	-	-	46.0	Jul-24 13:00	30.3	Jul-01	100.0%
WSPD v (km/hr)			Valleyview	4.0	-	-	22.0	Jul-13 08:00	13.4	Jul-13	100.0%
WDIR			Henry Pirker	W	-	-	-	-	-	-	100.0%
WDIR			Evergreen Park	W	-	-	-	-	-	-	100.0%
WDIR			Smoky Heights	W	-	-	-	-	-	-	99.5%
WDIR			Beaverlodge	W	-	-	-	-	-	-	100.0%
WDIR			Portable-Bonanza	WSW	-	-	-	-	-	-	100.0%
WDIR			Valleyview	WNW	-	-	-	-	-	-	100.0%

Continuous Network Equipment Summary

PASZA – Henry Pirker Station

General Station Issues

Routine monthly calibrations were performed on July 13th (SO_2, NO_X & O_3) and July 14th (TRS, CO & THC).

Parameter	Make	Model	Notes
SO_2	TEI	43C	No operational issues observed.
NOx/NO/NO_2	TEI	42C	No operational issues observed.
O_3	TEI	49C	No operational issues observed.
CO	TEI	48C	No operational issues observed.
THC	TEI	51-CLT	No operational issues observed.
TRS	TEI	45C/43C	No operational issues observed.
$PM_{2.5}$	R&P	1400AB	One (1) hour was flagged for maintenance (due to tech activity around station).
RH	Met One	083D	No operational issues observed.
ET	Met One	083D	No operational issues observed.
SR	Met One	096-1	No operational issues observed.
WS	Met One	010C	No operational issues observed. On July 9th a wind instrument calibration was performed.
WD	Met One	020C	No operational issues observed. On July 9th a wind instrument calibration was performed.

PASZA – Evergreen Park Station

General Station Issues

Routine monthly calibrations were performed on July 1st (SO_2, TRS & $PM_{2.5}$). A DACS/ Communication error occurred on July 30th to August 3rd which affected two channels (relative humidity & external temperature). On July 12th a break in occurred at the station – it appears nothing was tampered with (station was only used for shelter), however a police report was filed.

Parameter	Make	Model	Notes
SO_2	TEI	43i	Span on July 29th was outside the target range – reason unknown. No other operational issues observed.
TRS	TEI	43C	Spans were outside the target July 7th -10th, 12th, 16th – 18th, 20th and 22nd -27th, perm tube to be replaced (on order). Two (2) hours were flagged for maintenance on July 12th – to repair perm tube housing.
$PM_{2.5}$	R&P	1400AB	One (1) hour was flagged for maintenance on July 1st (filter change). A total of six (6) hours were flagged for baseline drift.
ET	Met One/Gill	083D	Thirty-two (32) hours were flagged for above noted DACS error.
RH	Met One/Gill		Thirty-two (32) hours were flagged for above noted DACS error.
WS	Met One/ Gill	010C	No operational issues observed.
WD	Met One/ Gill	020C	No operational issues observed.

PASZA – Smoky Heights Station

General Station Issues

Routine monthly calibrations were performed on July 16th (TRS & SO_2).

Parameter	Make	Model	Notes
SO_2	TEI	43C	One (1) hour was flagged invalid – due to tech activity at the station on July 27th. No other operational issues observed.
TRS	TEI	43C	One (1) hour was flagged invalid – due to tech activity at the station on July 27th. No other operational issues observed.
$PM_{2.5}$	R&P	1400AB	A total of three (3) hours were flagged for baseline drift. One (1) hour was flagged invalid – due to tech activity at the station on July 27th.
ET	Met One	083D	One (1) hour was flagged invalid – due to tech activity at the station on July 27th. Three (3) hours were flagged for maintenance on the met system (temperature, wind speed & wind direction) due to animal activity chewing through the cables. Wiring was redone to fix the issue.
WS	Met One	010C	One (1) hour was flagged invalid – due to tech activity at the station on July 27th. Three (3) hours were flagged for maintenance on the met system (temperature, wind speed & wind direction) due to animal activity chewing through the cables. Wiring was redone to fix the issue.
WD	Met One	020C	One (1) hour was flagged invalid – due to tech activity at the station on July 27th. Three (3) hours were flagged for maintenance on the met system (temperature, wind speed & wind direction) due to animal activity chewing through the cables. Wiring was redone to fix the issue.

PASZA – Beaverlodge Station

General Station Issues

Routine monthly calibrations were performed on July 5th (SO_2, O_3 & NO_X & $PM_{2.5}$).

Parameter	Make	Model	Notes
SO_2	TEI	43CTL	Spans wer outside the target on July 13th & 14th - a second calibration was performed on July 15th to ensure analyzer integrity.
NOx/NO/NO_2	TEI	42C	No operational issues observed.
O_3	TEI	49C	No operational issues observed.
$PM_{2.5}$	R&P	1400AB	A total of four (4) hours were flagged due to power bumps.
ET	n/a	n/a	No operational issues observed.
RH	n/a	n/a	No operational issues observed.
WS	Blue Sky	857	No operational issues observed.
WD	Blue Sky	857	No operational issues observed.

PASZA – Bonanza (Portable) Station

General Station Issues

Routine monthly calibrations were performed on July 20th (SO_2, TRS & NO_X) and July 21st (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	No operational issues observed.
O_3	TEI	49C	A power bump resulted in one (1) hour of invalid data. No other operational issues observed.
ET	Met One		No operational issues observed.
WS	Met One		No operational issues observed.
WD	Met One		No operational issues observed.

PASZA – Valleyview Station

General Station Issues

Routine monthly calibrations were performed in the first week of July (SO_2 & H_2S) due to the new shelter replacement. Removal calibrations were performed on July 6th, a new shelter was installed and installation calibrations occurred on July 8th. Due to the shelter changeout the Valleyview station was not in service from July 6th 17:00 to July 8th 13:00.

Parameter	Make	Model	Notes
SO_2	TEI	43i	No operational issues observed other than above noted shelter replacement event – twenty-nine (29) hours were flagged not in service.
H_2S	TEI	43A	No operational issues observed other than above noted shelter replacement event – twenty-nine (29) hours were flagged not in service.
ET	Gill	Met Pak 3	No operational issues observed other than above noted shelter replacement event – forty (40) hours were flagged not in service.
RH	Gill	Met Pak 3	No operational issues observed other than above noted shelter replacement event – forty-one (41) hours were flagged not in service.
WS	Gill	Met Pak 3	No operational issues observed other than above noted shelter replacement event – forty (40) hours were flagged not in service.
WD	Gill	Met Pak 3	No operational issues observed other than above noted shelter replacement event – forty (40) hours were flagged not in service.

PASZA
Henry Pirker Station
Monthly Summary Tables, Graphs and Roses

PASZA
Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 4.0 ppb on Jul 14 04:00 Maximum Daily Average: 0.8 ppb on Jul 28

Minimum Value: 0 ppb on Jul 1 01:00 Minimum Daily Average: 0.0 ppb on Jul 29
Maximum Diurnal Average: 0.4 ppb at hour 9 Minimum Diurnal Average: 0.0 ppb at hour 19
Monthly Average: 0.16 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.0$ Median = 0.0 $Q_3 = 0.1$ $P_{90} = 0.5$ $P_{99} = 1.9$

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
2-Jul	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
3-Jul	0	A	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.0
4-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.0	0.1
5-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.2
6-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
7-Jul	0	0	0	0	0	A	0	0	1	1	1	0	1	3	0	0	0	0	0	0	0	0	0	0	0.4	3.1
8-Jul	0	1	1	0	A	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9
9-Jul	0	0	0	A	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0.2	0.6
10-Jul	0	0	0	0	0	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.4
11-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	1.5
12-Jul	1	1	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.9
13-Jul	0	0	A	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
14-Jul	0	0	2	4	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	4.0
15-Jul	0	0	0	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.0
16-Jul	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
17-Jul	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
18-Jul	0	0	A	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
19-Jul	0	A	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.4
20-Jul	A	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.9
21-Jul	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	2.2
22-Jul	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	1	2	0.3	2.2
23-Jul	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	0.5
24-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.0	0.1
25-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.0	0.1
26-Jul	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.9
27-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.2
28-Jul	0	0	1	2	1	1	1	2	2	2	2	1	1	0	0	A	0	0	0	0	0	0	0	0	0.8	2.1
29-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.0	0.0
30-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.0	0.2
31-Jul	0	0	0	0	0	0	0	0	0	1	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
	0.1	0.1	0.2	0.3	0.2	0.2	0.3	0.3	0.4	0.3	0.2	0.2	0.1	0.2	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.2	Diurnal Average	
	0.9	0.7	2.1	4.0	1.5	1.2	1.4	1.7	2.2	2.0	1.8	1.3	0.6	3.1	0.6	0.3	0.3	0.3	0.2	0.3	0.2	0.2	1.0	2.2	Diurnal Maximum	

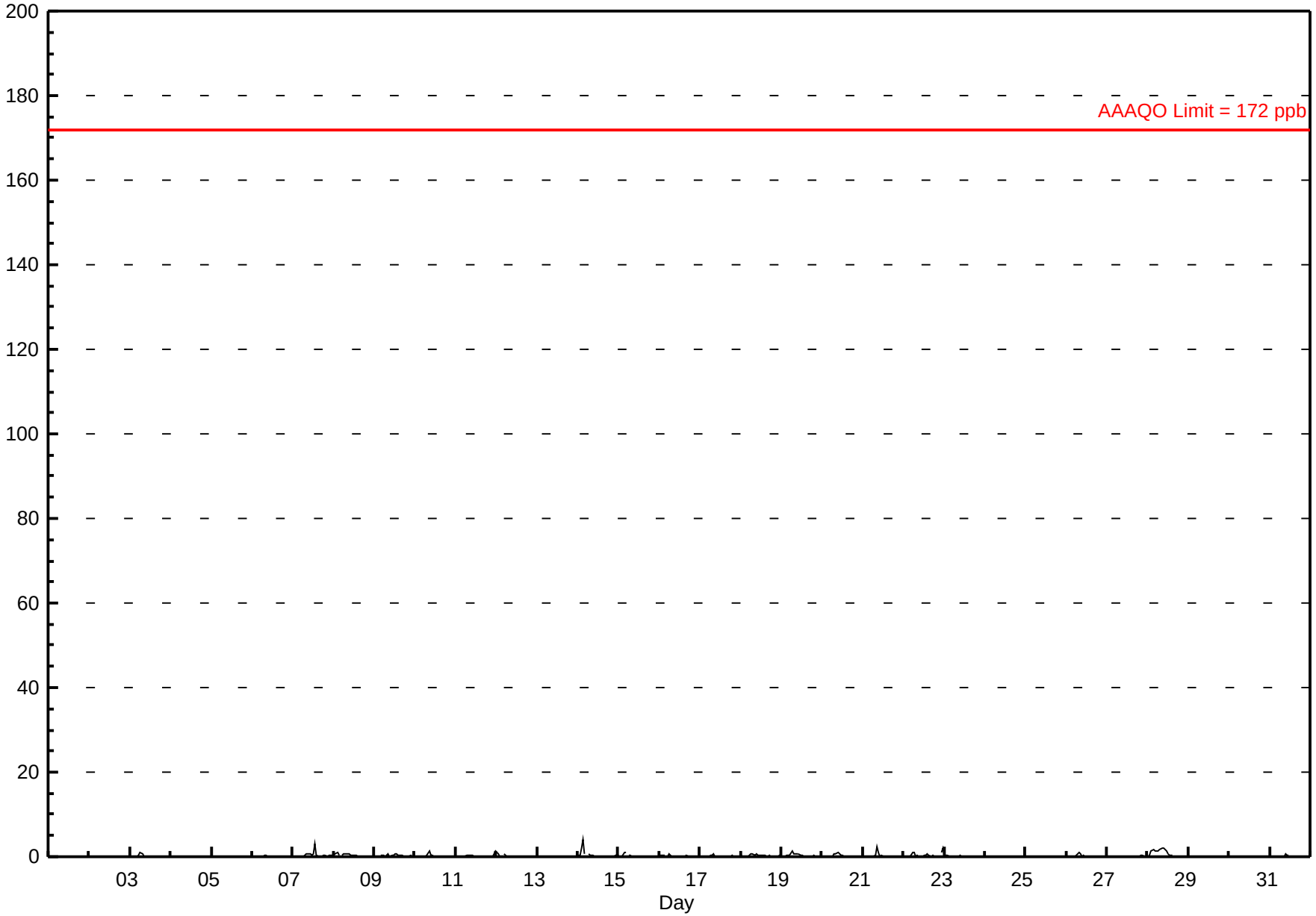
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 57 ppb

PASZA
Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - July 2010



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Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - July 2010

Maximum Value: 7.4 ppb on Jul 14 04:00

Maximum Daily Average: 1.4 ppb on Jul 14

Minimum Value: 0 ppb on Jul 14 13:00

Minimum Daily Average: 0.1 ppb on Jul 1

Maximum Diurnal Average: 0.9 ppb at hour 9

Minimum Diurnal Average: 0.3 ppb at hour 20

Monthly Average: 0.53 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.2$ Median = 0.4 $Q_3 = 0.6$ $P_{90} = 1.0$ $P_{99} = 3.1$

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

Day	Hourly Period Ending At (MST)																								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-Jul	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
2-Jul	0	0	A	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
3-Jul	0	A	0	0	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.6
4-Jul	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	A	0.2	0.6
5-Jul	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	0	0.3	0.6
6-Jul	0	0	0	0	0	0	0	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.3	0.8
7-Jul	0	0	0	0	1	A	1	1	1	1	1	1	5	6	1	1	0	0	1	0	0	0	1	1	1.0	5.7
8-Jul	0	1	1	1	A	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.8
9-Jul	0	0	0	A	0	1	0	1	1	0	0	1	1	1	1	0	0	0	0	0	0	1	1	0	0.6	1.3
10-Jul	1	1	1	1	1	A	1	1	2	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.6	2.5
11-Jul	0	0	0	0	A	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	3	0.6	3.0
12-Jul	2	1	1	A	2	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	0.5	2.1
13-Jul	1	0	A	0	1	1	0	1	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
14-Jul	0	1	7	7	1	A	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	3	3	1.4	7.4
15-Jul	0	0	0	3	3	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.5	2.9
16-Jul	1	1	1	1	A	0	3	1	0	1	1	0	1	1	1	1	1	1	0	0	1	1	1	0	0.6	3.0
17-Jul	1	1	1	A	1	1	1	1	2	1	1	1	0	0	0	1	0	0	1	1	1	1	1	1	0.5	2.0
18-Jul	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	1	0.6	1.1
19-Jul	0	A	1	3	3	1	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1.0	3.6
20-Jul	A	1	1	0	0	1	1	1	1	2	2	1	1	1	0	1	0	0	0	1	1	0	0	A	0.6	1.6
21-Jul	0	0	0	0	0	0	0	2	4	2	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0.5	3.6
22-Jul	0	0	0	0	0	3	2	1	1	1	1	1	1	1	1	1	0	1	0	0	0	A	3	5	1.0	4.7
23-Jul	1	1	1	0	0	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0.4	1.2
24-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	0	0.2	0.7
25-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	0	0.1	0.6
26-Jul	0	0	0	0	0	1	1	5	1	1	1	1	0	0	0	0	1	A	1	0	0	0	0	0	0.6	5.1
27-Jul	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	A	0	0	0	1	1	0	0	0.3	0.6
28-Jul	0	1	2	2	2	2	2	2	3	3	2	2	1	1	1	A	1	0	1	1	0	0	0	0	1.1	2.6
29-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.4
30-Jul	0	0	0	0	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0.3	0.7
31-Jul	0	0	0	0	0	0	0	0	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0.4	0.9
	0.4	0.4	0.6	0.8	0.7	0.5	0.8	0.9	0.9	0.7	0.6	0.5	0.5	0.5	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.6	0.6	Diurnal Average	
	1.5	1.3	7.4	7.4	3.2	2.6	3.6	5.1	3.6	2.5	2.1	2.0	4.6	5.7	1.2	1.2	1.0	1.2	0.7	0.9	0.6	0.9	3.4	4.7	Diurnal Maximum	

C - Calibration

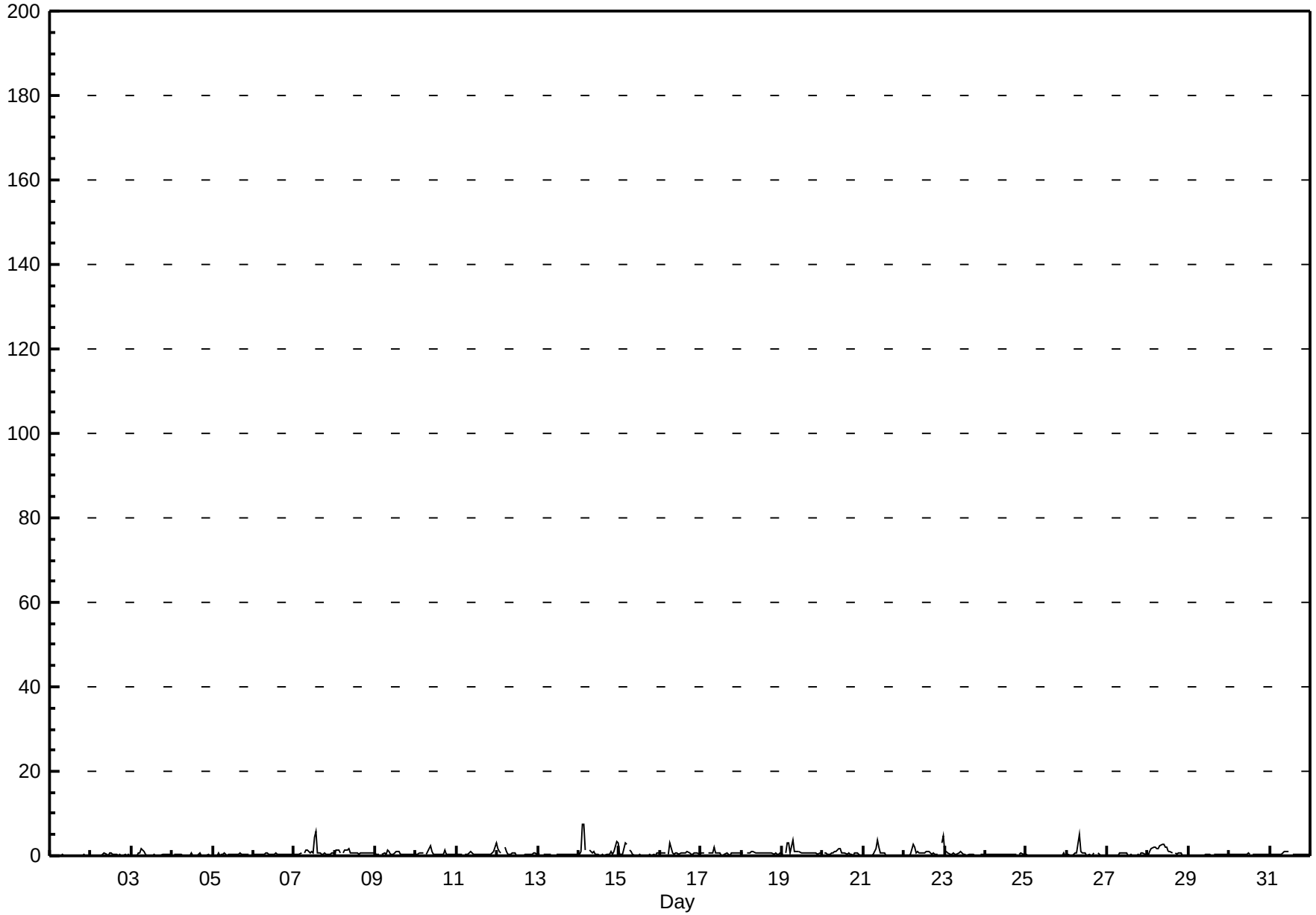
A - Automated Daily Zero Span

PASZA
Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

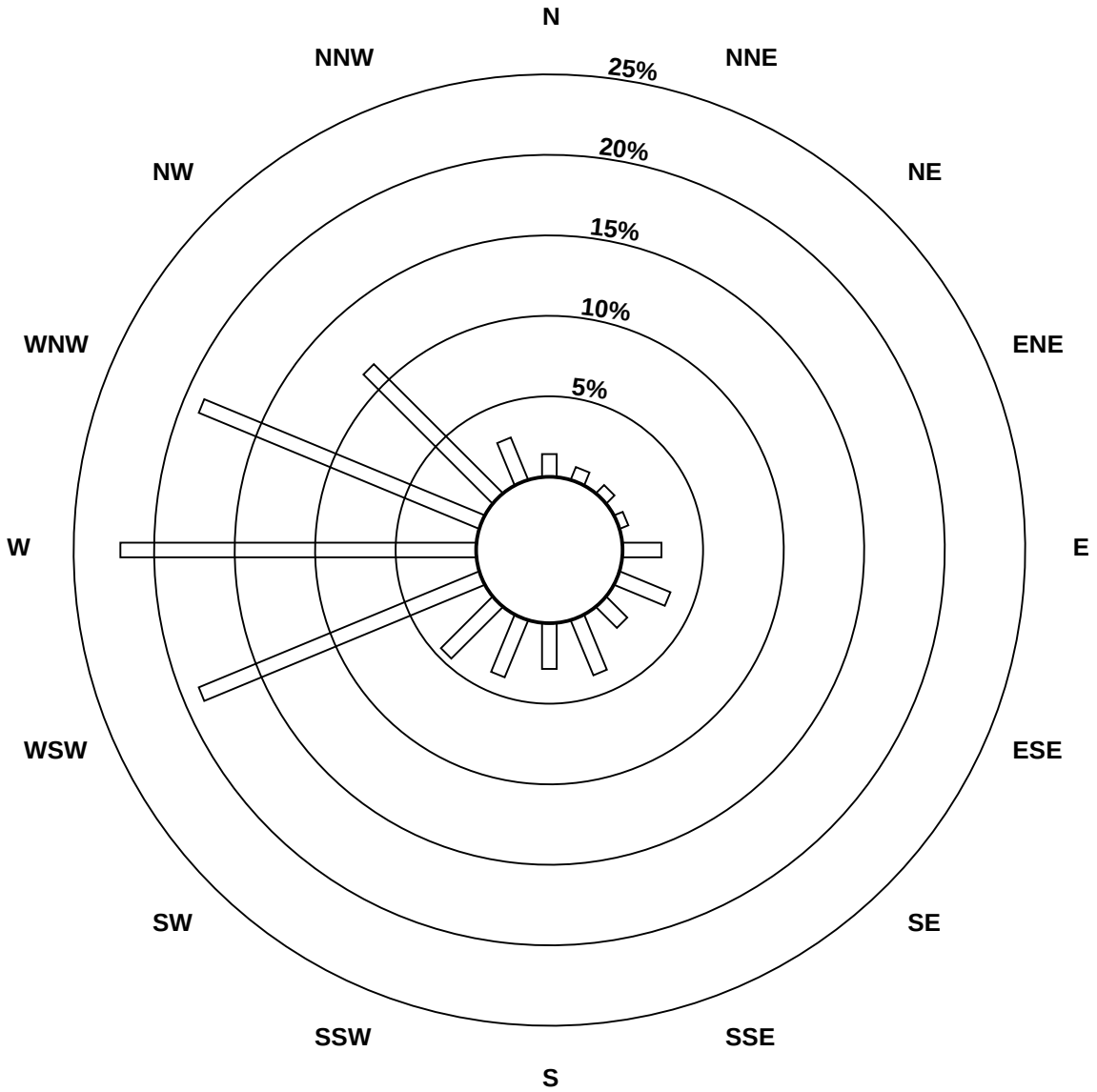
Henry Pirker - July 2010



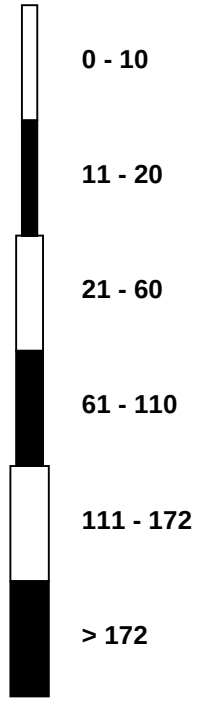
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - July 2010



Pollutant Classes (ppb)



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Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.2 ppb on Jul 8 00:00 Maximum Daily Average: 0.4 ppb on Jul 9

Minimum Value: 0 ppb on Jul 1 15:00 Minimum Daily Average: 0.0 ppb on Jul 2
Maximum Diurnal Average: 0.2 ppb at hour 6 Minimum Diurnal Average: 0.1 ppb at hour 17
Monthly Average: 0.16 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.1 Q_3 = 0.2 P_{90} = 0.3 P_{99} = 0.7

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

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

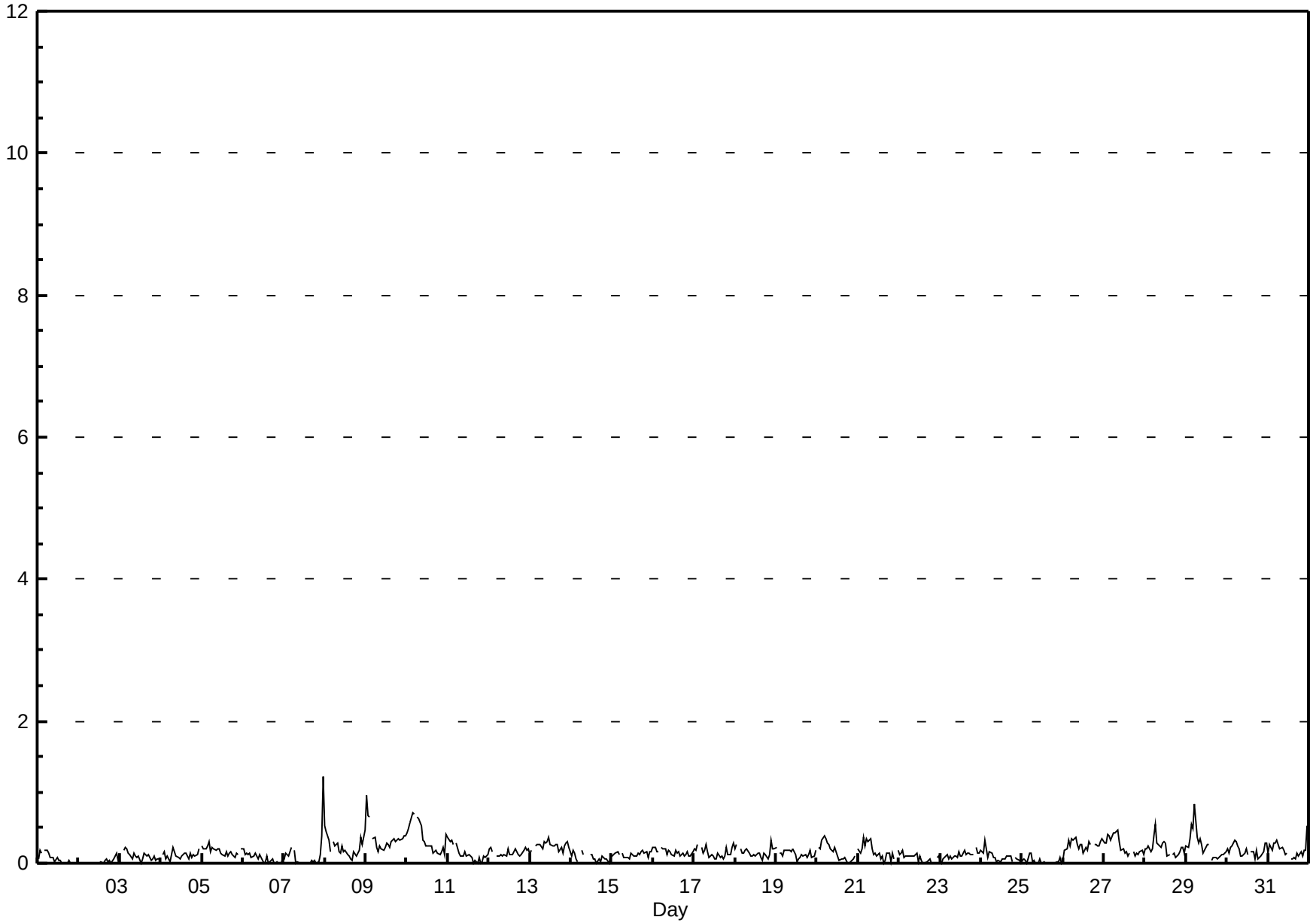
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

PASZA
Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - July 2010



PASZA
Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - July 2010

Maximum Value: 2.9 ppb on Jul 8 00:00

Maximum Daily Average: 1.0 ppb on Jul 10

Minimum Value: 0 ppb on Jul 2 11:00

Minimum Daily Average: 0.7 ppb on Jul 2

Maximum Diurnal Average: 0.9 ppb at hour 24

Minimum Diurnal Average: 0.7 ppb at hour 17

Monthly Average: 0.83 ppb

Percentiles: $P_1 = 0.5$ $P_{10} = 0.6$ $Q_1 = 0.7$ Median = 0.8 $Q_3 = 0.9$ $P_{90} = 1.0$ $P_{99} = 1.4$

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-Jul	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	1	1	1	0.7	1.1
2-Jul	1	1	A	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
3-Jul	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	1.3
4-Jul	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-Jul	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
6-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0.7	1.1
7-Jul	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	0.9	2.9
8-Jul	2	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	0.9	1.7
9-Jul	2	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.8
10-Jul	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.4
11-Jul	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1
12-Jul	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.0
13-Jul	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
14-Jul	1	1	1	1	1	A	1	1	C	C	C	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
15-Jul	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
16-Jul	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1
17-Jul	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
18-Jul	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
19-Jul	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
20-Jul	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	A	0.8	1.1
21-Jul	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
22-Jul	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.7	1.0
23-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.0
24-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.8	1.1
25-Jul	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	A	1	1	1	1	1	0.7	0.9
26-Jul	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	1.2
27-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.9	1.2
28-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.9	1.4
29-Jul	1	1	1	1	1	2	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.9	1.8
30-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.9	1.1
31-Jul	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	2	0.9	1.8
	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.9	0.9	Diurnal Average	
	1.8	1.2	1.3	1.4	1.4	1.8	1.4	1.3	1.2	1.3	1.2	1.4	1.1	1.0	1.0	1.0	0.9	1.1	1.2	1.3	1.1	1.2	1.8	2.9	Diurnal Maximum	

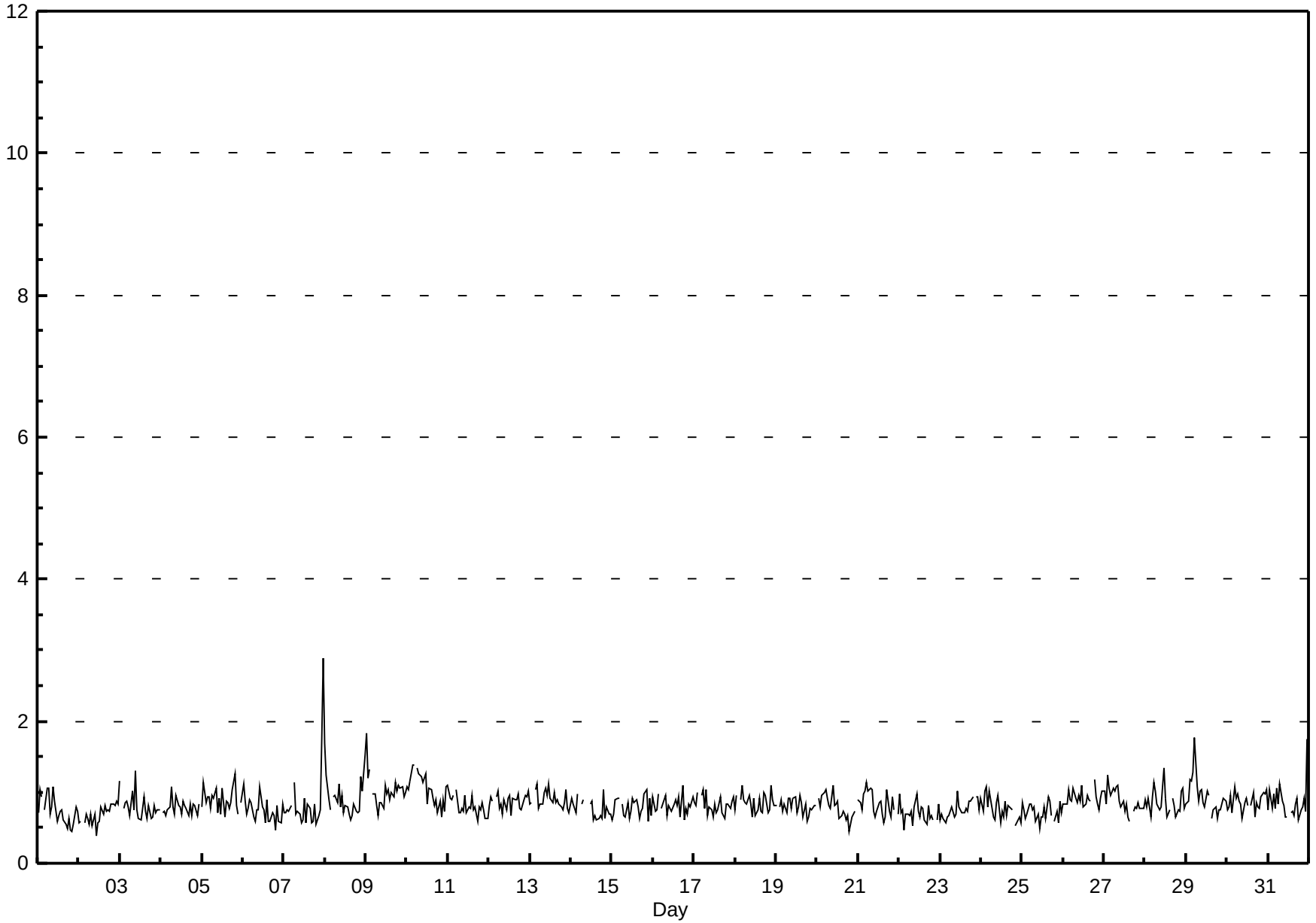
C - Calibration

A - Automated Daily Zero Span

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

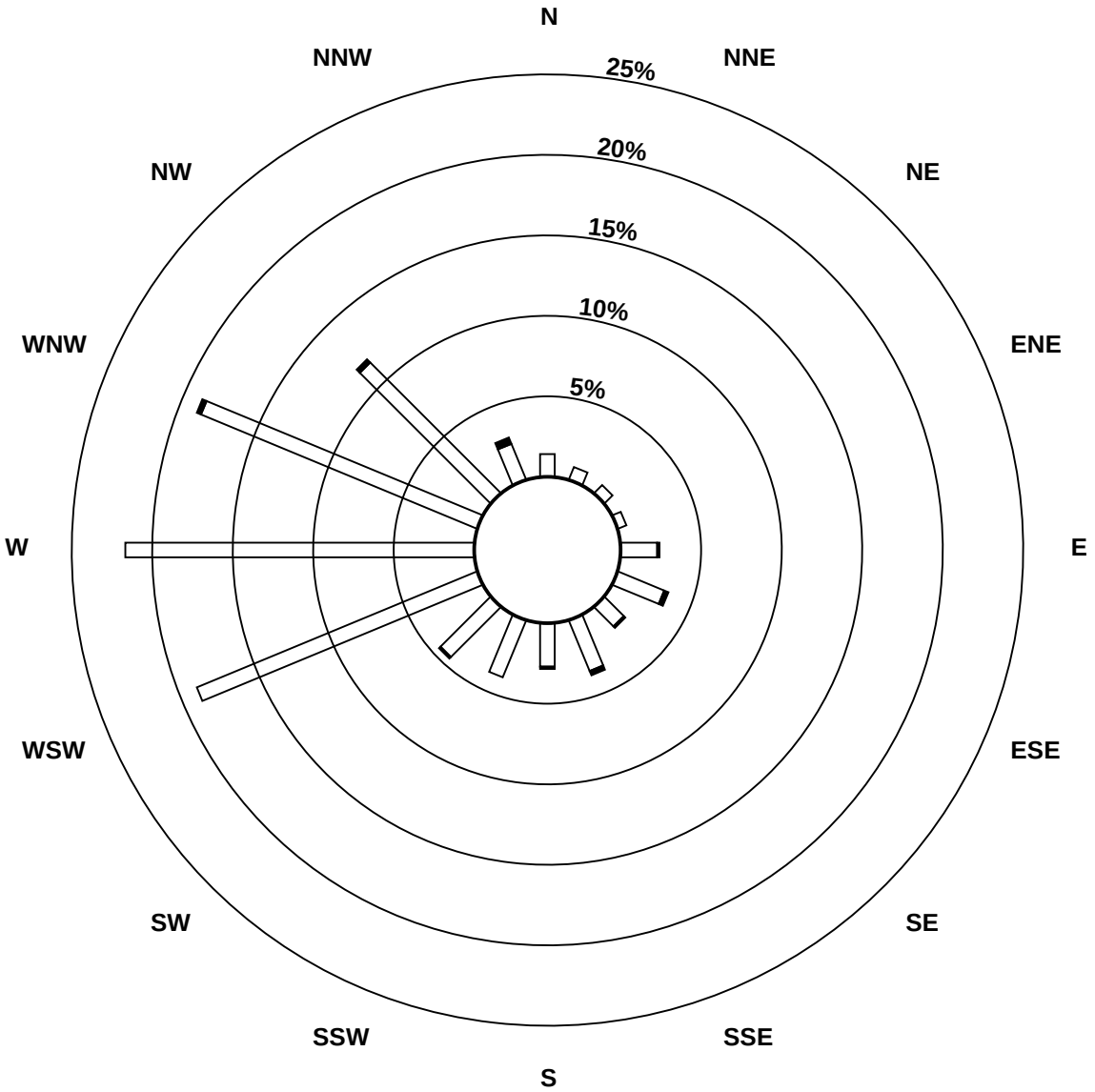
Henry Pirker - July 2010



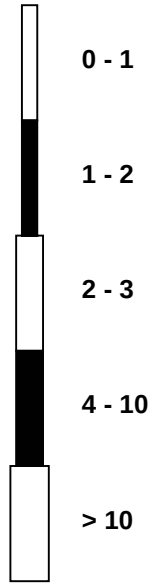
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - July 2010



Pollutant Classes (ppb)



PASZA
Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 20.7 ppb on Jul 8 23:00 Maximum Daily Average: 8.6 ppb on Jul 28

Minimum Value: 1 ppb on Jul 13 01:00 Minimum Daily Average: 1.1 ppb on Jul 4
Maximum Diurnal Average: 7.9 ppb at hour 6 Minimum Diurnal Average: 1.7 ppb at hour 15
Monthly Average: 3.95 ppb Percentiles: $P_1 = 0.8$ $P_{10} = 1.1$ $Q_1 = 1.5$ Median = 2.7 $Q_3 = 5.2$ $P_{90} = 8.6$ $P_{99} = 14.6$

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) 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-Jul	2	2	1	A	3	5	4	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2	4	4	2.0	4.9
2-Jul	3	2	A	4	4	5	5	3	1	1	1	1	1	2	2	2	2	1	1	1	2	2	2	2	2.2	4.9
3-Jul	1	A	4	3	3	4	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1.7	3.9
4-Jul	A	3	1	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1.1	2.6
5-Jul	3	2	1	1	2	2	2	2	1	1	2	1	1	1	1	2	2	2	2	3	4	3	A	3	1.9	4.5
6-Jul	2	2	2	2	3	6	8	6	3	1	1	1	1	1	1	1	1	1	1	2	2	3	7	8	9	3.1	8.6
7-Jul	7	7	9	9	11	A	14	6	3	2	1	1	1	1	1	1	1	1	1	1	2	3	8	11	17	5.2	17.2
8-Jul	10	7	6	6	A	13	7	7	6	7	3	2	2	2	1	1	1	1	1	2	3	14	21	15	6.0	20.7
9-Jul	11	8	12	A	11	15	10	6	C	C	C	3	2	3	3	3	3	3	4	4	5	4	2	2	5.7	15.0
10-Jul	3	3	4	3	4	A	6	6	5	2	2	2	3	2	2	2	2	2	1	2	3	5	6	8	3.5	7.8
11-Jul	6	6	7	7	A	7	7	5	4	4	3	2	2	1	2	1	1	1	1	2	3	7	12	5	4.2	12.1
12-Jul	4	3	1	A	4	3	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.7	4.3
13-Jul	1	1	A	2	1	2	2	2	C	C	C	C	C	3	3	3	2	2	2	2	3	6	6	4	2.5	6.4
14-Jul	4	4	3	4	7	A	11	6	3	3	2	2	2	2	2	2	2	2	2	2	3	3	4	4	3.5	10.8
15-Jul	6	5	5	5	7	A	11	6	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3.3	11.1
16-Jul	2	2	3	4	A	8	6	4	3	1	1	1	1	1	1	3	2	1	1	1	3	5	3	3	2.6	7.8
17-Jul	6	7	7	A	9	8	6	5	3	2	1	1	1	1	1	1	1	1	1	1	3	7	11	12	4.2	12.1
18-Jul	14	5	A	5	5	6	4	3	2	1	1	1	1	1	2	1	1	3	4	5	5	8	4	5	3.8	14.0
19-Jul	4	A	7	6	6	7	6	5	5	4	4	2	2	1	2	2	2	2	4	4	5	5	5	5	4.2	7.4
20-Jul	A	8	7	7	11	13	8	6	6	5	4	3	2	2	2	2	2	2	3	3	4	5	5	A	4.9	13.4
21-Jul	7	7	10	14	11	12	14	19	8	4	3	4	3	2	2	2	2	2	2	3	4	4	A	6	6.3	19.0
22-Jul	5	6	9	4	5	9	12	11	8	7	3	2	2	2	2	3	3	2	2	2	4	A	4	4	4.8	12.3
23-Jul	3	4	3	3	3	6	6	4	4	2	2	2	2	2	2	2	2	2	2	2	A	9	10	6	3.4	9.5
24-Jul	7	4	5	4	4	3	5	4	1	1	2	1	1	2	1	2	2	1	1	A	3	3	2	1	2.6	6.8
25-Jul	1	2	1	1	2	4	2	2	2	1	1	1	1	1	1	1	1	1	A	3	4	4	3	4	1.9	4.4
26-Jul	3	5	5	4	7	11	13	7	2	1	1	1	1	1	1	1	1	A	3	2	4	6	4	9	4.1	12.5
27-Jul	7	7	10	7	10	10	9	12	13	8	3	2	1	1	1	1	A	3	3	3	9	8	5	3	5.8	12.9
28-Jul	3	3	5	7	10	17	20	16	14	14	14	11	8	6	5	A	5	4	4	5	6	8	6	5	8.6	20.1
29-Jul	4	7	9	8	10	13	14	11	10	6	4	5	4	3	A	5	4	5	4	5	4	6	5	7	6.6	13.6
30-Jul	4	4	6	9	10	11	13	9	5	5	4	3	3	A	5	3	4	5	3	4	7	9	9	7	6.1	13.1
31-Jul	4	4	4	4	6	12	12	8	4	2	2	1	A	3	2	2	2	2	2	2	6	10	10	8	4.8	12.1
	4.8	4.5	5.3	5.0	6.1	7.9	7.9	6.0	4.3	3.3	2.5	2.1	1.8	1.7	1.7	1.8	1.9	1.9	2.0	2.4	3.6	5.4	5.7	5.6	Diurnal Average	
	14.0	8.3	11.7	13.7	11.4	17.2	20.1	19.0	13.9	14.4	14.3	11.0	7.9	5.6	5.0	4.8	4.8	4.9	4.5	5.2	8.6	13.7	20.7	17.2	Diurnal Maximum	

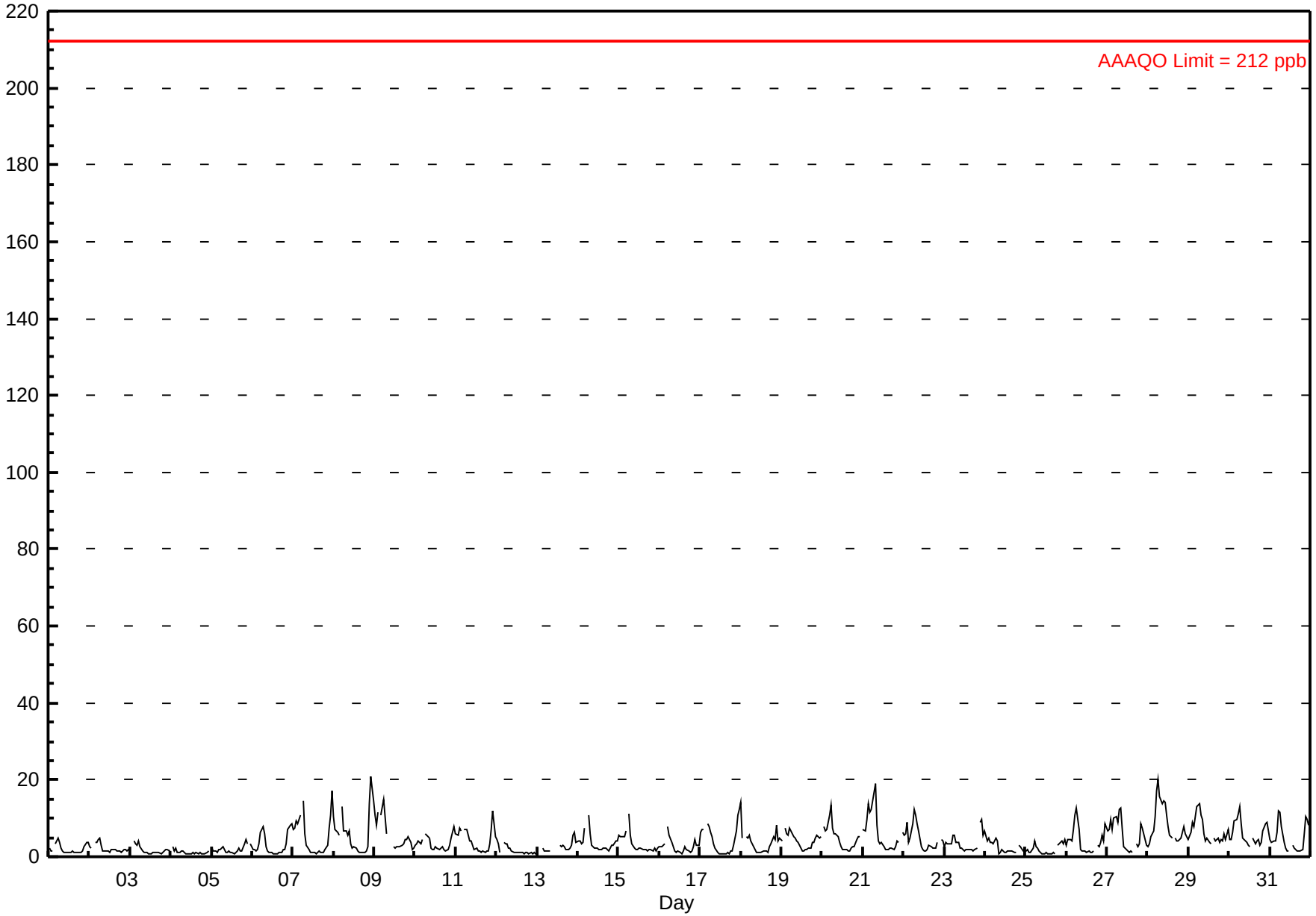
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 212 ppb 24-hr 106 ppb

PASZA
Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - July 2010



PASZA
Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - July 2010

Maximum Value: 34.8 ppb on Jul 23 09:00

Maximum Daily Average: 12.7 ppb on Jul 28

Minimum Value: 1 ppb on Jul 13 01:00

Minimum Daily Average: 1.8 ppb on Jul 4

Maximum Diurnal Average: 10.8 ppb at hour 6

Minimum Diurnal Average: 3.1 ppb at hour 15

Monthly Average: 6.24 ppb

Percentiles: P_1 = 1.5 P_{10} = 2.0 Q_1 = 2.9 Median = 4.5 Q_3 = 8.3 P_{90} = 13.1 P_{99} = 22.6

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-Jul	3	3	2	A	4	6	5	4	2	2	2	2	2	2	2	2	2	2	2	2	2	3	5	5	2.9	6.0
2-Jul	3	3	A	5	4	7	6	5	2	3	3	4	2	3	3	3	3	2	2	2	3	3	2	3	3.4	7.5
3-Jul	2	A	5	4	4	5	4	2	2	2	2	2	2	2	2	2	2	2	1	2	3	3	3	2	2.5	4.8
4-Jul	A	4	2	3	2	2	2	2	2	2	1	2	2	2	1	2	1	2	2	2	1	2	2	A	1.8	4.4
5-Jul	4	3	2	2	3	3	4	3	2	2	12	2	2	1	2	3	4	2	3	5	6	5	A	5	3.6	11.7
6-Jul	3	2	2	3	8	10	11	10	5	2	3	3	2	2	1	1	2	2	3	3	5	11	11	10	5.0	11.0
7-Jul	9	11	13	11	15	A	16	12	4	8	2	1	8	11	1	3	2	2	1	4	8	10	15	24	8.4	24.0
8-Jul	15	8	7	7	A	18	9	10	8	13	6	5	3	3	3	2	2	3	3	5	4	25	24	19	8.9	25.0
9-Jul	14	9	14	A	15	18	16	9	C	C	C	4	3	6	4	5	7	5	10	9	11	10	3	4	8.9	17.9
10-Jul	4	5	5	4	7	A	8	8	7	3	2	3	3	3	3	4	4	3	2	4	5	7	8	10	5.0	10.5
11-Jul	8	9	9	11	A	8	8	7	5	5	3	2	3	2	4	2	2	2	2	2	5	10	21	14	6.6	21.3
12-Jul	5	4	3	A	7	4	6	4	5	4	4	2	2	3	2	2	1	2	2	1	2	1	1	1	3.1	6.6
13-Jul	1	1	A	4	2	2	2	2	C	C	C	C	C	4	3	3	3	3	2	3	5	9	8	5	3.5	9.2
14-Jul	5	5	4	7	13	A	13	13	4	3	3	4	3	4	4	4	4	3	3	3	4	4	5	6	5.3	13.3
15-Jul	8	7	7	8	8	A	14	12	7	4	3	3	3	3	3	4	3	2	3	3	3	3	3	3	5.2	14.4
16-Jul	3	3	4	4	A	11	9	5	3	3	3	14	2	1	3	5	4	2	2	3	3	7	4	5	4.7	13.9
17-Jul	9	10	8	A	11	10	9	8	4	3	2	2	2	1	1	1	3	1	2	3	6	10	18	16	6.3	17.9
18-Jul	20	7	A	7	8	12	5	6	3	2	1	2	2	2	3	2	2	4	5	10	10	10	6	6	6.0	20.3
19-Jul	5	A	9	8	10	10	8	7	6	5	27	4	3	3	4	5	4	7	6	5	6	7	7	6	7.1	27.3
20-Jul	A	13	14	9	15	17	11	7	8	6	6	3	2	3	3	3	6	3	6	4	7	7	13	A	7.7	16.6
21-Jul	11	10	13	16	13	14	20	23	17	6	5	7	4	2	3	3	4	4	3	4	9	8	A	10	9.2	23.4
22-Jul	7	8	11	5	8	14	17	14	14	11	7	2	2	2	4	4	4	4	4	4	5	A	7	6	7.2	16.9
23-Jul	4	5	4	4	4	9	9	5	35	3	12	5	7	5	3	3	4	3	3	4	A	12	13	8	7.2	34.8
24-Jul	10	7	6	6	5	5	6	8	1	3	3	2	2	3	3	4	3	2	2	A	4	5	3	2	4.3	10.4
25-Jul	2	3	3	2	4	5	4	3	3	2	1	2	2	2	1	2	2	1	A	5	6	6	5	10	3.5	9.9
26-Jul	5	7	5	6	9	14	14	11	3	3	6	2	2	3	2	2	2	A	5	3	6	11	5	12	6.1	14.4
27-Jul	11	9	11	11	12	12	10	17	15	11	4	3	2	2	3	2	A	5	4	5	22	17	8	3	8.8	22.4
28-Jul	3	4	6	9	15	23	23	23	19	18	20	14	16	7	6	A	7	10	7	7	17	14	15	9	12.7	22.9
29-Jul	6	9	11	9	16	16	18	21	16	12	7	7	7	8	A	7	6	10	7	6	7	12	7	10	10.3	20.9
30-Jul	11	7	19	16	11	15	19	10	8	6	7	7	7	A	8	5	6	8	4	6	11	11	14	9	9.9	18.7
31-Jul	8	6	5	6	11	21	19	9	6	3	2	2	A	6	4	4	3	7	6	4	11	12	11	11	7.8	21.4
	7.0	6.4	7.4	6.9	8.7	10.8	10.7	9.2	7.6	5.3	5.6	4.0	3.6	3.5	3.1	3.3	3.4	3.7	3.7	4.3	6.8	8.6	8.6	8.1	Diurnal Average	
	20.3	13.4	18.5	16.0	16.4	22.9	22.7	23.4	34.8	17.9	27.3	14.3	15.7	11.2	8.3	7.2	6.9	9.9	9.9	10.4	22.4	25.0	24.0	24.0	Diurnal Maximum	

C - Calibration

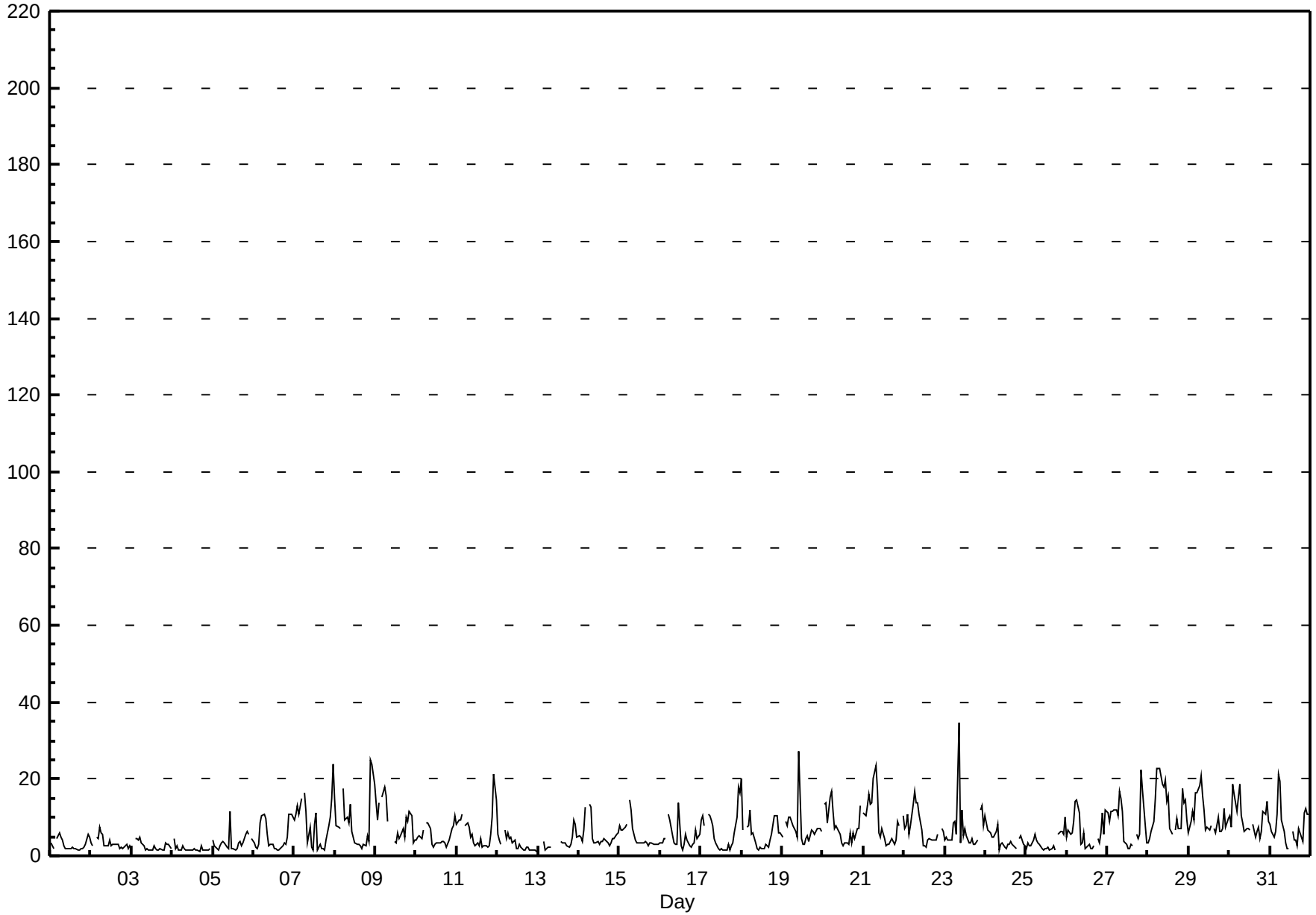
A - Automated Daily Zero Span

PASZA
Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

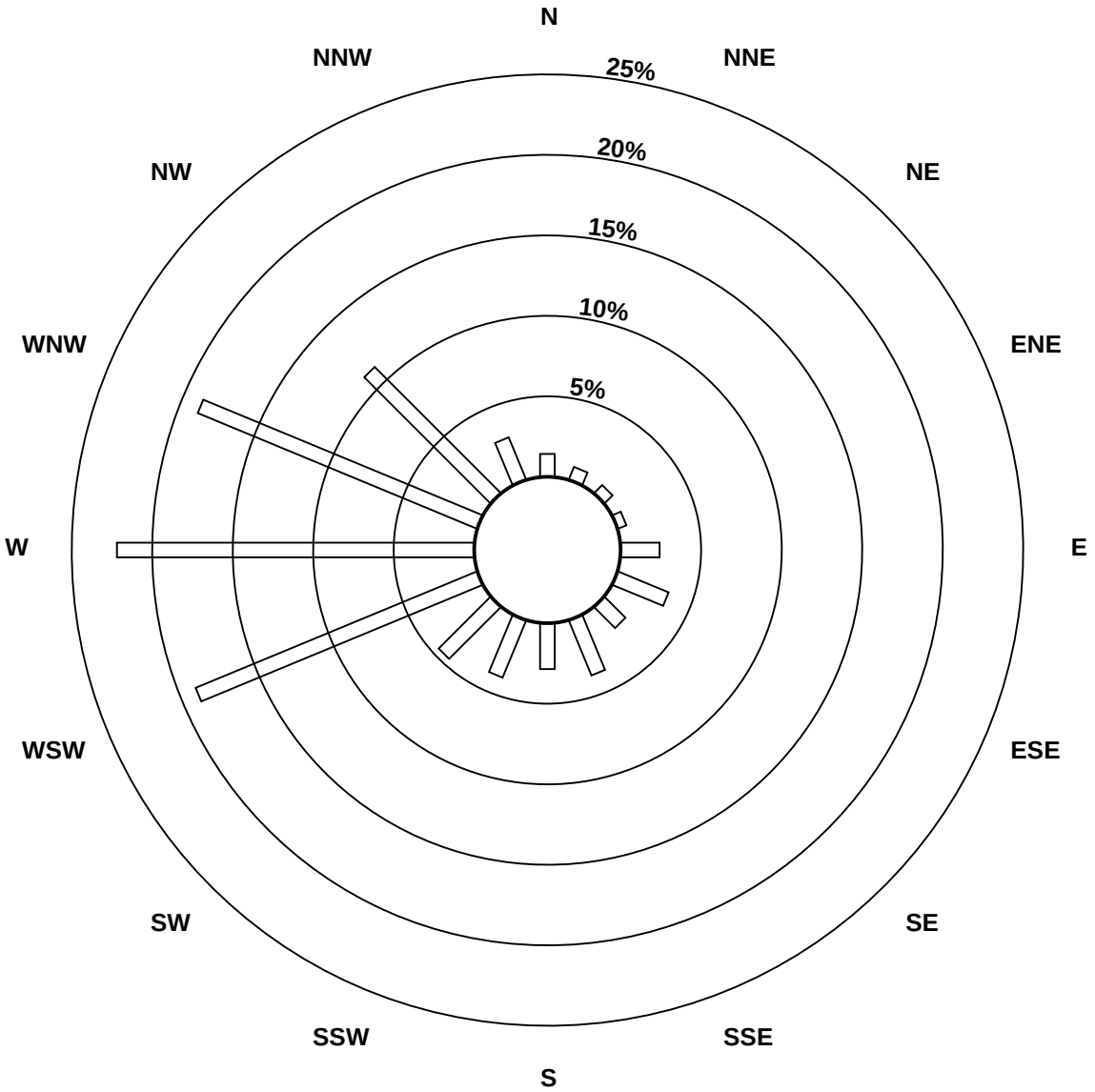
Henry Pirker - July 2010



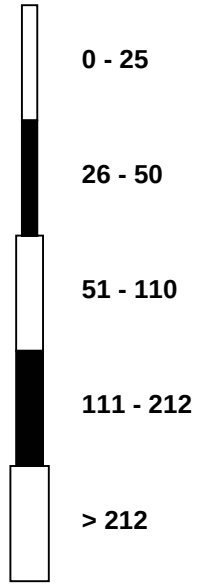
Pollutant Rose

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - July 2010



Pollutant Classes (ppb)



PASZA
Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Henry Pirker - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 25.1 ppb on Jul 21 08:00 Maximum Daily Average: 2.9 ppb on Jul 27

Minimum Value: 0 ppb on Jul 1 02:00 Minimum Daily Average: 0.2 ppb on Jul 18
Maximum Diurnal Average: 3.6 ppb at hour 7 Minimum Diurnal Average: 0.0 ppb at hour 24
Monthly Average: 0.77 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.3 Q_3 = 0.7 P_{90} = 1.6 P_{99} = 7.8

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-Jul	0	0	0	A	0	1	1	1	1	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0.4	1.3
2-Jul	0	0	A	0	0	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0.6	1.6
3-Jul	0	A	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.3	0.7
4-Jul	A	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	A	0.3	0.6
5-Jul	0	0	0	0	0	1	1	1	1	1	3	1	1	0	0	1	1	1	0	1	0	0	A	0	0.6	3.1
6-Jul	0	0	0	0	0	1	4	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	4.1
7-Jul	0	0	0	0	1	A	11	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	11.0
8-Jul	0	0	0	0	A	4	2	3	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	4.2
9-Jul	0	0	0	A	1	5	4	2	C	C	C	0	0	0	0	1	1	0	0	0	0	0	0	0	0.8	5.4
10-Jul	0	0	0	0	0	A	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.3
11-Jul	0	0	0	0	A	1	2	2	2	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0.6	2.2
12-Jul	0	0	0	A	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.2
13-Jul	0	0	A	0	0	0	0	1	C	C	C	C	C	1	1	1	1	1	0	1	0	0	0	0	0.4	0.7
14-Jul	0	1	0	0	3	A	6	4	2	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1.1	6.2
15-Jul	0	0	0	0	0	A	6	3	2	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.8	5.8
16-Jul	0	0	0	0	A	1	2	2	1	1	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0.5	2.3
17-Jul	0	0	0	A	0	2	3	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	3.1
18-Jul	0	0	A	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1
19-Jul	0	A	0	0	0	1	2	3	3	2	3	1	0	0	0	1	1	1	0	0	0	0	0	0	0.8	2.9
20-Jul	A	0	0	0	1	5	4	4	5	3	1	0	0	0	0	0	0	0	0	0	0	0	0	A	1.1	5.2
21-Jul	0	0	0	1	1	7	14	25	3	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	2.4	25.1
22-Jul	0	0	0	0	0	0	1	1	2	1	0	0	0	0	0	1	1	0	0	0	0	A	0	0	0.4	1.6
23-Jul	0	0	0	0	0	1	3	2	2	1	1	1	1	1	1	1	1	1	1	0	A	0	0	0	0.8	2.6
24-Jul	0	0	0	0	0	0	1	1	0	0	1	0	0	1	1	1	1	0	0	A	0	0	0	0	0.3	1.4
25-Jul	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	1.1
26-Jul	0	0	0	0	0	5	9	5	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1.0	8.9
27-Jul	0	0	0	0	3	8	7	20	20	5	1	0	0	0	0	0	A	0	0	0	1	0	0	0	2.9	20.3
28-Jul	0	0	0	0	0	5	13	6	4	6	7	4	1	0	0	A	0	0	0	0	0	0	0	0	2.1	12.9
29-Jul	0	0	0	0	1	5	5	3	4	2	1	1	1	0	A	0	0	0	0	0	0	0	0	0	1.0	5.3
30-Jul	0	0	0	0	0	1	1	2	2	1	1	1	1	A	0	0	0	1	0	0	0	0	0	0	0.5	2.3
31-Jul	0	0	0	0	0	1	3	2	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	2.6
	0.0	0.0	0.1	0.1	0.5	2.2	3.6	3.5	2.3	1.3	0.9	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.1	0.1	0.1	0.0	Diurnal Average	
	0.4	0.5	0.3	0.8	3.4	8.1	14.4	25.1	19.6	6.1	6.6	3.8	1.4	0.9	1.0	1.0	1.0	0.8	0.7	0.8	0.6	0.4	0.4	0.4	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

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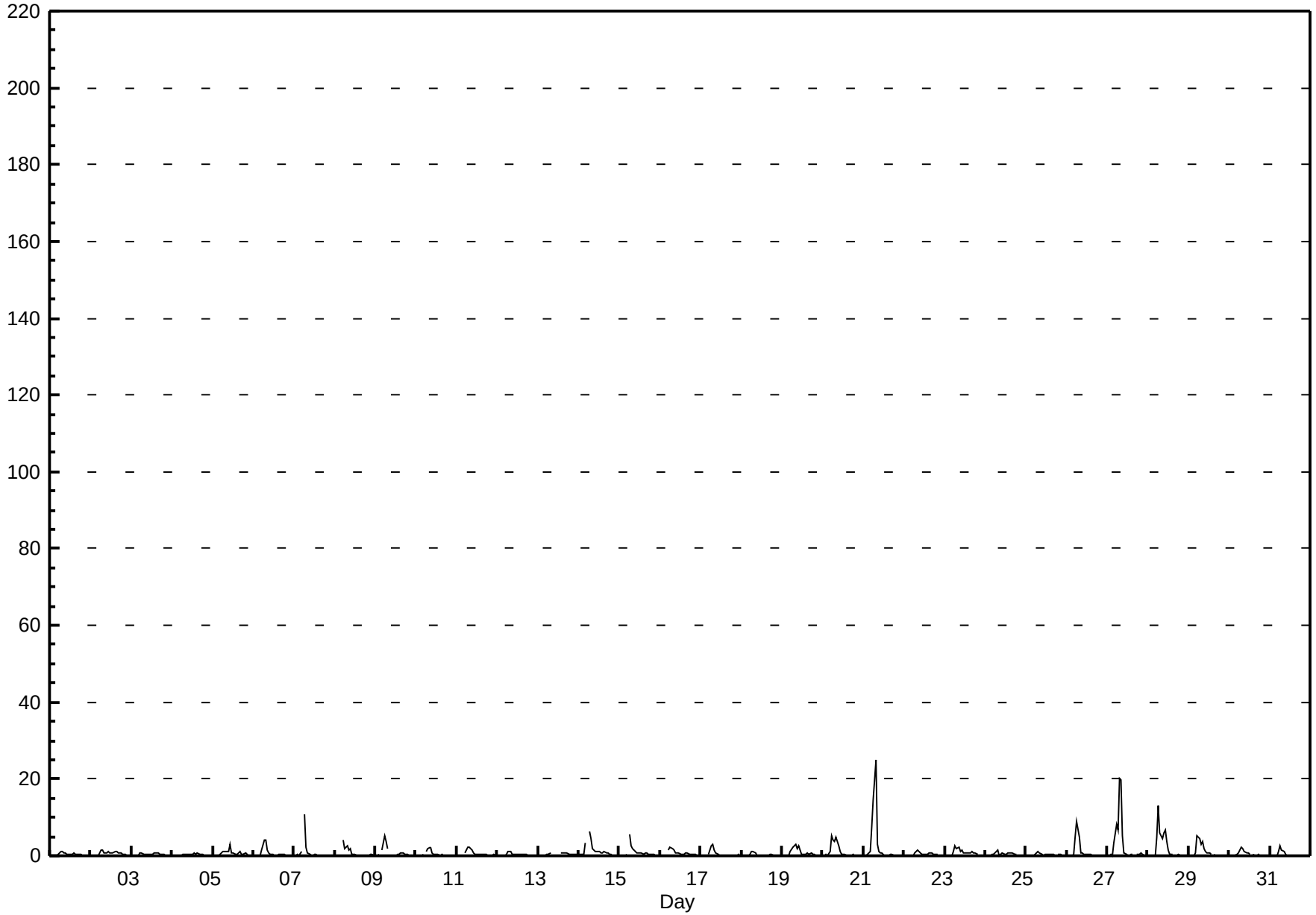
Hourly Averages

Nitrogen Oxide (NO) - ppb

Henry Pirker - July 2010



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Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Henry Pirker - July 2010

Maximum Value: 43.2 ppb on Jul 21 08:00

Maximum Daily Average: 6.2 ppb on Jul 27

Minimum Value: 0 ppb on Jul 22 00:00

Minimum Daily Average: 0.7 ppb on Jul 4

Maximum Diurnal Average: 7.6 ppb at hour 8

Minimum Diurnal Average: 0.4 ppb at hour 24

Monthly Average: 2.42 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.5 Median = 1.0 Q_3 = 2.0 P_{90} = 5.5 P_{99} = 29.0

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-Jul	1	0	0	A	0	2	2	3	1	1	1	1	1	2	1	1	1	1	1	1	1	0	0	0	0.9	2.8
2-Jul	0	0	A	0	1	1	2	3	2	2	10	4	2	2	2	2	2	1	1	1	1	1	0	1	1.7	9.8
3-Jul	0	A	0	0	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	0	0	0.8	1.6
4-Jul	A	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.7	1.1
5-Jul	1	1	0	0	1	5	3	2	12	2	20	1	1	1	1	2	2	2	1	1	1	1	A	1	2.7	19.5
6-Jul	1	0	0	0	1	4	8	7	4	2	2	2	1	1	2	1	1	1	1	1	1	0	0	1	1.6	7.7
7-Jul	1	1	2	1	10	A	15	6	1	5	1	1	8	14	0	2	1	1	0	1	0	0	0	1	3.0	15.0
8-Jul	1	0	0	1	A	40	3	10	3	5	2	1	1	1	1	1	1	2	1	1	0	1	2	0	3.3	39.9
9-Jul	1	2	1	A	22	12	10	4	C	C	C	1	1	4	3	5	5	1	1	1	4	1	1	2	4.0	21.8
10-Jul	1	1	1	1	2	A	2	3	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1.0	4.4
11-Jul	0	1	1	2	A	1	5	3	3	2	2	1	2	1	2	1	1	1	1	1	1	1	5	0	1.5	5.1
12-Jul	0	0	0	A	0	1	3	3	3	2	9	1	1	2	1	1	1	1	1	1	1	0	0	0	1.4	8.9
13-Jul	0	0	A	0	0	1	1	2	C	C	C	C	C	1	1	1	1	1	1	1	1	1	1	1	0.8	1.7
14-Jul	1	1	0	2	12	A	15	15	3	2	2	2	2	1	2	2	1	1	1	1	0	0	0	0	3.0	15.2
15-Jul	0	0	0	0	1	A	9	9	22	2	1	2	2	1	1	2	1	1	1	1	1	0	0	0	2.6	21.9
16-Jul	0	0	0	0	A	3	4	3	2	2	2	13	2	1	1	3	1	1	1	1	0	1	1	1	1.8	12.6
17-Jul	1	1	0	A	1	3	5	6	2	1	1	0	1	0	1	2	1	1	1	2	1	1	4	2	1.7	5.9
18-Jul	1	0	A	0	0	1	1	3	1	1	0	0	0	1	1	0	1	1	1	0	0	0	0	0	0.7	3.0
19-Jul	0	A	0	0	1	2	4	4	4	3	28	1	1	7	2	6	1	9	2	1	1	0	0	0	3.4	27.8
20-Jul	A	1	4	0	7	9	6	5	8	4	2	1	1	1	1	0	4	1	2	1	0	0	1	A	2.9	9.1
21-Jul	2	4	1	2	2	16	32	43	10	2	1	1	1	1	0	1	1	1	1	0	1	0	A	0	5.4	43.2
22-Jul	0	0	2	0	0	1	1	1	4	2	1	1	1	1	1	1	1	1	1	1	1	A	0	0	1.1	4.5
23-Jul	0	1	0	0	0	3	4	3	43	2	29	6	13	13	2	2	3	2	1	1	A	0	1	0	5.6	43.1
24-Jul	1	0	0	0	1	1	2	4	1	1	1	1	1	2	2	2	1	1	1	A	0	0	0	0	1.0	4.0
25-Jul	0	0	0	0	0	1	1	2	2	1	1	1	1	1	1	1	1	1	A	1	1	1	0	1	0.8	2.0
26-Jul	1	0	0	0	1	12	15	11	1	7	6	1	1	1	1	1	1	A	1	1	0	0	0	1	2.8	15.4
27-Jul	1	0	1	1	10	25	11	35	29	11	1	1	1	1	1	1	A	2	1	1	3	1	0	1	6.2	35.2
28-Jul	1	2	1	1	3	17	25	14	13	8	13	8	9	1	1	A	0	0	3	2	1	0	1	0	5.5	24.8
29-Jul	0	0	0	0	5	13	10	19	8	4	2	2	6	3	A	1	1	0	0	0	0	0	0	0	3.4	19.0
30-Jul	0	0	1	1	1	1	4	4	3	2	2	5	9	A	2	1	1	1	1	0	0	1	3	0	2.0	9.0
31-Jul	0	0	0	0	1	6	5	3	2	1	0	0	A	3	7	2	0	3	3	0	0	0	0	0	1.7	6.8
	0.5	0.5	0.6	0.5	3.0	6.8	6.9	7.6	6.8	2.8	4.9	2.1	2.4	2.4	1.5	1.6	1.3	1.4	1.1	0.8	0.8	0.5	0.8	0.4	Diurnal Average	
	1.8	4.0	4.0	2.5	21.8	39.9	31.7	43.2	43.1	11.4	29.1	12.6	12.9	14.3	6.8	6.1	4.5	9.1	3.4	2.0	3.8	1.5	4.9	2.0	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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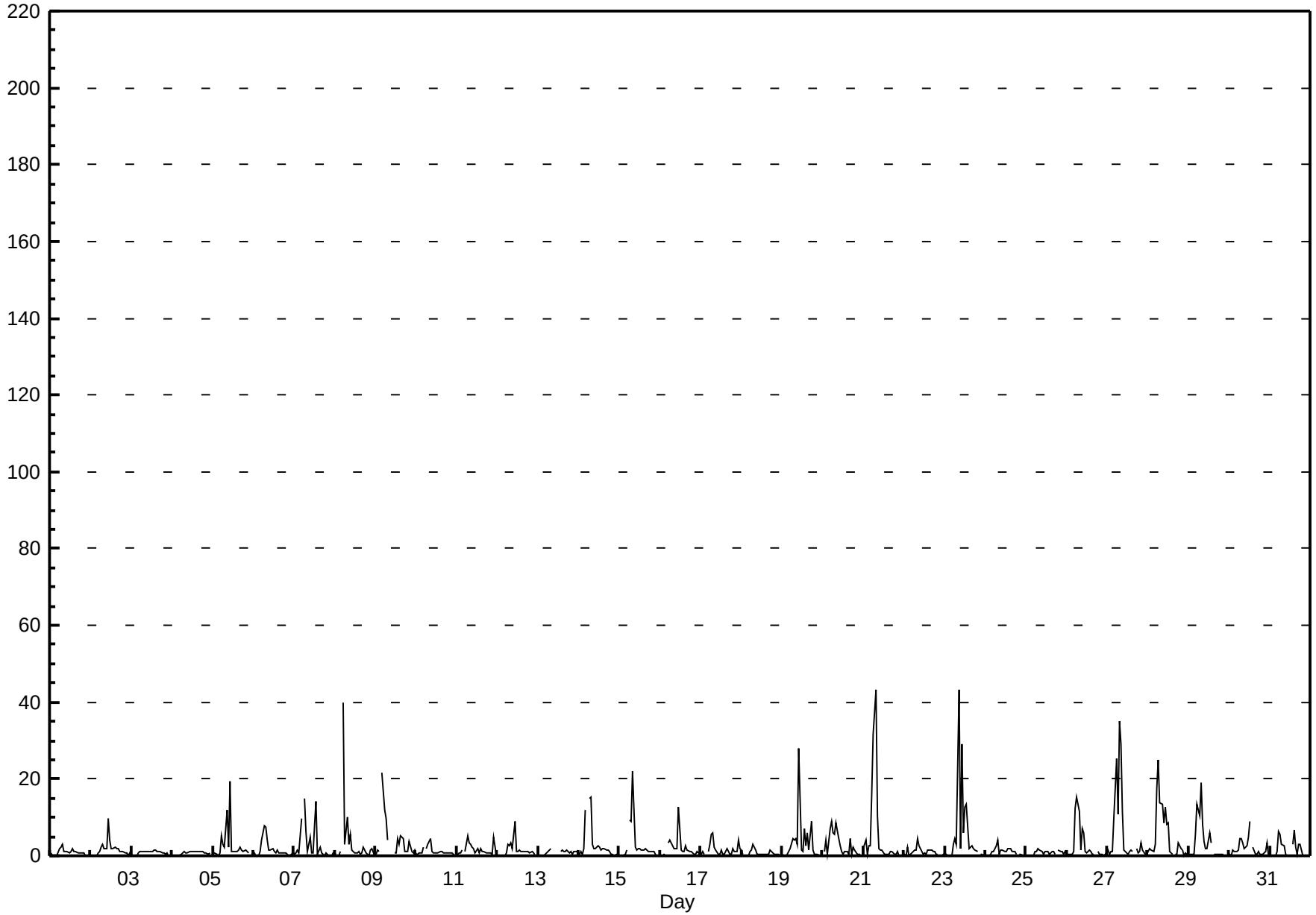
Hourly Maximums

Nitrogen Oxide (NO) - ppb

Henry Pirker - July 2010



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Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 44.0 ppb on Jul 21 08:00 Maximum Daily Average: 10.6 ppb on Jul 28

Minimum Value: 1 ppb on Jul 13 01:00 Minimum Daily Average: 1.6 ppb on Jul 4
Maximum Diurnal Average: 11.7 ppb at hour 7 Minimum Diurnal Average: 2.2 ppb at hour 15
Monthly Average: 4.89 ppb Percentiles: $P_1 = 0.9$ $P_{10} = 1.4$ $Q_1 = 1.9$ Median = 3.4 $Q_3 = 6.0$ $P_{90} = 9.9$ $P_{99} = 21.9$

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-Jul	3	2	2	A	4	6	6	4	2	2	2	2	2	2	2	2	2	1	1	2	2	3	4	4	2.6	6.4
2-Jul	3	2	A	4	4	6	7	5	2	2	3	2	2	3	3	3	3	2	2	2	2	2	2	2	3.1	7.0
3-Jul	2	A	4	4	4	5	4	2	2	2	2	1	1	2	2	2	2	2	1	1	2	2	2	2	2.3	5.0
4-Jul	A	3	2	2	1	1	2	2	1	1	1	1	1	2	1	2	1	1	1	1	1	1	2	A	1.6	2.9
5-Jul	3	2	2	1	2	3	3	4	3	2	5	2	2	1	2	2	4	2	2	4	5	4	A	4	2.8	5.5
6-Jul	2	2	2	2	4	9	13	11	5	2	2	2	1	1	1	1	2	2	2	2	4	8	9	10	4.1	13.0
7-Jul	8	9	11	10	13	A	27	9	4	3	2	1	2	1	1	2	1	1	1	2	3	9	12	20	6.6	27.3
8-Jul	12	8	7	6	A	19	9	10	8	9	4	3	3	3	2	1	1	1	1	2	3	16	24	17	7.4	23.8
9-Jul	12	10	13	A	14	22	16	9	C	C	C	3	3	3	4	4	4	4	6	5	6	5	2	3	7.4	22.3
10-Jul	4	4	5	4	5	A	8	8	8	3	2	3	3	3	2	3	3	2	2	3	4	6	7	9	4.4	8.9
11-Jul	7	6	9	8	A	8	10	8	7	6	4	2	3	2	2	2	2	2	2	2	4	8	14	6	5.4	14.0
12-Jul	5	4	1	A	4	4	5	4	4	2	2	1	2	2	2	1	1	2	1	1	1	1	1	1	2.3	4.9
13-Jul	1	1	A	3	2	2	2	2	C	C	C	C	C	4	3	4	3	3	2	3	3	6	7	4	3.0	6.7
14-Jul	4	5	3	4	10	A	17	10	5	4	3	3	3	2	3	3	3	3	2	3	3	3	4	4	4.6	16.9
15-Jul	6	5	5	5	7	A	17	8	5	3	3	3	3	3	2	3	3	2	2	2	2	2	2	2	4.2	16.9
16-Jul	2	2	3	4	A	9	8	5	4	2	2	2	2	1	2	4	3	2	1	2	3	5	3	3	3.2	9.1
17-Jul	6	7	7	A	9	9	9	8	5	3	2	1	1	1	1	1	1	1	1	2	3	7	11	12	4.7	12.2
18-Jul	14	5	A	5	5	6	5	4	3	1	1	1	1	1	2	1	1	3	4	5	5	8	4	5	4.0	14.4
19-Jul	4	A	7	6	6	8	8	8	8	6	7	3	2	2	2	3	3	3	4	4	5	6	5	5	4.9	8.4
20-Jul	A	8	7	7	12	19	12	10	11	8	5	3	2	2	2	2	2	2	3	3	4	5	5	A	6.1	18.6
21-Jul	7	7	10	14	12	20	29	44	11	5	4	4	3	2	2	2	3	2	2	3	4	4	A	6	8.7	44.0
22-Jul	5	6	9	4	5	9	13	12	10	8	3	2	2	2	2	4	3	3	3	2	4	A	4	4	5.1	12.9
23-Jul	3	4	3	3	3	7	8	6	6	3	4	2	2	3	3	3	3	2	2	3	A	9	10	6	4.2	9.6
24-Jul	7	4	5	4	4	4	6	5	1	1	2	2	2	2	2	2	2	2	1	A	3	3	2	1	2.9	6.9
25-Jul	1	2	1	1	2	4	3	3	2	1	1	1	1	1	1	1	1	1	A	3	4	4	4	5	2.2	4.7
26-Jul	3	5	5	4	7	16	21	12	3	2	2	2	2	2	1	1	2	A	3	3	4	6	4	9	5.1	21.5
27-Jul	7	7	10	7	13	18	16	33	32	13	3	2	2	1	2	1	A	4	3	3	9	8	5	3	8.8	32.5
28-Jul	3	3	5	7	11	22	33	22	18	21	21	15	9	6	5	A	5	4	4	5	6	8	6	5	10.6	32.9
29-Jul	4	7	9	8	11	18	18	14	13	8	5	6	4	4	A	5	4	5	4	5	4	6	5	7	7.6	18.4
30-Jul	4	4	6	9	10	12	14	11	7	6	4	3	3	A	5	4	4	5	3	4	7	9	9	7	6.6	14.4
31-Jul	4	4	4	4	6	13	14	9	5	2	2	2	A	3	2	2	2	2	2	2	6	10	10	8	5.1	14.1
	5.1	4.7	5.6	5.2	6.9	10.4	11.7	9.8	6.7	4.6	3.5	2.7	2.4	2.2	2.2	2.3	2.4	2.4	2.4	2.8	4.0	5.8	6.1	6.0	Diurnal Average	
	14.4	9.6	13.5	14.5	13.6	22.3	32.9	44.0	32.4	20.5	20.9	14.8	9.2	6.1	5.3	5.1	4.9	5.2	5.5	5.3	9.2	15.9	23.8	19.5	Diurnal Maximum	

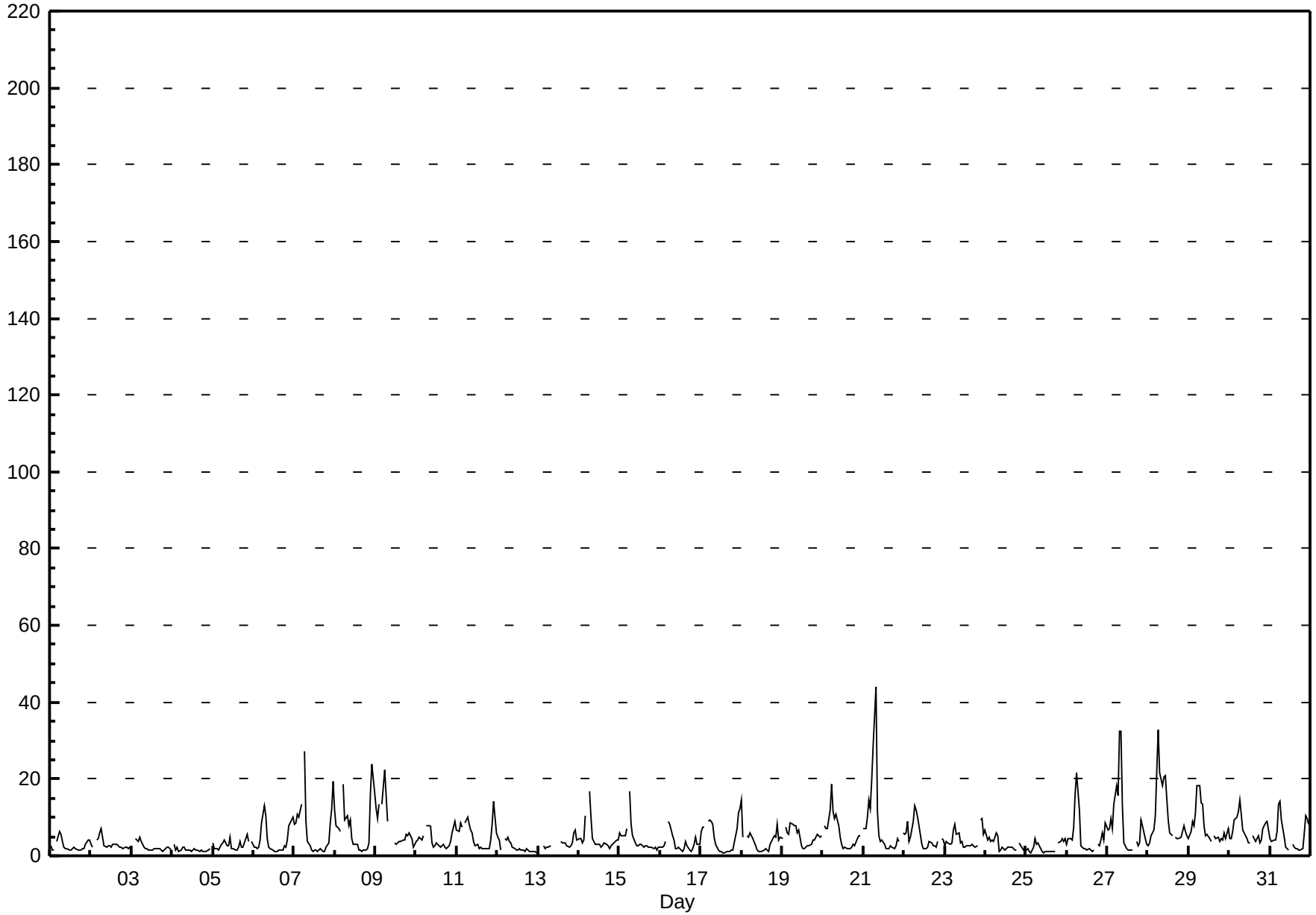
C - Calibration A - Automated Daily Zero Span

PASZA
Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - July 2010



PASZA
Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - July 2010

Maximum Value: 77.7 ppb on Jul 23 09:00

Maximum Daily Average: 17.7 ppb on Jul 28

Minimum Value: 1 ppb on Jul 13 01:00

Minimum Daily Average: 2.7 ppb on Jul 4

Maximum Diurnal Average: 17.8 ppb at hour 6

Minimum Diurnal Average: 4.6 ppb at hour 15

Monthly Average: 8.69 ppb

Percentiles: $P_1 = 1.6$ $P_{10} = 2.8$ $Q_1 = 3.8$ Median = 5.7 $Q_3 = 10.7$ $P_{90} = 17.5$ $P_{99} = 45.1$

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-Jul	4	3	2	A	5	8	7	7	4	3	3	3	3	4	3	3	3	2	3	3	3	4	7	6	4.0	8.2
2-Jul	4	3	A	6	5	10	8	9	4	5	9	9	4	5	6	5	5	3	4	3	4	4	3	3	5.3	10.1
3-Jul	2	A	5	5	5	6	5	4	3	3	3	3	3	4	3	3	3	3	2	3	4	3	3	2	3.5	6.2
4-Jul	A	5	2	3	2	2	3	3	2	2	3	3	3	3	3	3	2	3	3	2	2	2	3	A	2.7	4.9
5-Jul	5	3	2	2	3	7	7	6	13	4	30	4	3	3	3	6	6	4	5	7	8	7	A	6	6.3	30.4
6-Jul	4	3	2	3	11	15	20	18	10	4	5	5	3	3	2	3	3	3	5	4	6	13	12	12	7.0	19.7
7-Jul	11	13	16	13	26	A	33	19	5	13	3	2	18	27	2	5	3	3	2	5	9	11	17	28	12.4	33.2
8-Jul	18	9	8	9	A	60	13	19	12	21	9	7	4	4	5	3	2	5	3	7	4	29	29	21	13.1	59.8
9-Jul	16	12	16	A	36	31	27	14	C	C	C	5	4	10	8	11	12	6	13	11	16	13	4	6	13.5	36.3
10-Jul	5	6	7	5	10	A	11	12	12	5	3	4	4	4	4	5	4	4	3	5	7	8	9	12	6.5	12.4
11-Jul	10	11	11	13	A	10	14	12	8	8	5	3	6	4	7	4	4	3	3	3	6	11	29	16	8.7	28.8
12-Jul	6	4	3	A	7	6	10	8	8	5	13	3	3	5	4	3	3	4	4	2	3	2	2	1	4.7	12.6
13-Jul	1	1	A	4	2	3	3	4	C	C	C	C	C	5	4	4	4	3	3	4	5	10	9	5	4.3	9.8
14-Jul	5	6	4	8	24	A	28	28	7	6	6	6	5	5	5	6	5	5	3	4	5	4	6	6	8.1	27.6
15-Jul	8	6	7	8	9	A	24	21	28	6	5	5	5	5	4	6	5	4	4	4	4	3	3	3	7.8	28.1
16-Jul	3	3	5	4	A	14	13	8	5	5	5	26	4	2	4	8	5	3	3	3	4	7	5	5	6.4	25.6
17-Jul	9	11	8	A	11	13	14	13	6	5	3	2	3	1	2	4	4	2	3	5	6	11	19	16	7.6	19.2
18-Jul	21	7	A	7	8	12	7	9	4	2	2	2	2	2	3	3	2	5	6	10	11	11	6	6	6.6	21.5
19-Jul	5	A	9	7	11	11	12	11	11	7	51	6	4	8	7	11	4	15	7	6	6	7	7	6	10.0	51.2
20-Jul	A	14	18	9	22	25	17	12	16	11	8	4	3	4	5	3	10	4	7	6	7	7	14	A	10.4	25.4
21-Jul	13	14	14	18	15	29	51	66	28	8	6	8	5	3	3	3	4	5	3	4	9	8	A	10	14.4	65.9
22-Jul	7	8	12	5	8	14	18	15	18	13	8	3	3	2	5	5	5	5	5	5	5	A	7	7	8.1	18.3
23-Jul	4	5	4	4	4	11	13	8	78	5	41	11	18	15	5	6	7	5	5	5	A	12	13	8	12.5	77.7
24-Jul	10	7	6	6	6	6	9	12	2	4	4	3	3	4	5	6	4	3	3	A	4	6	3	2	5.2	12.2
25-Jul	2	3	2	2	4	6	5	5	4	3	2	3	3	3	2	3	4	2	A	7	7	7	6	10	4.2	10.4
26-Jul	5	7	5	6	10	27	30	23	4	10	12	3	3	4	3	2	3	A	5	4	6	12	6	12	8.8	29.6
27-Jul	12	9	12	12	21	37	21	51	44	23	5	3	2	3	4	3	A	7	5	6	25	18	8	4	14.6	51.2
28-Jul	4	6	8	10	15	40	47	37	32	25	30	22	24	8	6	A	7	10	11	7	19	14	15	9	17.7	47.3
29-Jul	6	9	11	9	22	30	27	40	24	15	8	10	9	12	A	8	6	10	7	6	7	13	7	9	13.3	39.7
30-Jul	11	7	20	17	12	17	22	14	12	8	9	12	15	A	10	5	7	8	5	6	12	11	16	9	11.6	22.2
31-Jul	8	6	5	6	12	28	24	12	8	4	2	2	A	9	9	7	3	10	9	4	11	12	11	11	9.4	27.8
	7.6	7.0	8.1	7.6	11.7	17.8	17.6	16.8	14.3	8.1	10.2	6.1	5.9	5.8	4.6	4.9	4.8	5.1	4.8	5.1	7.6	9.3	9.6	8.8	Diurnal Average	
	21.5	14.2	20.0	18.2	36.3	59.8	51.5	65.9	77.7	25.3	51.2	25.6	23.8	27.0	10.3	11.2	12.0	15.5	12.6	10.7	25.2	28.7	28.8	27.8	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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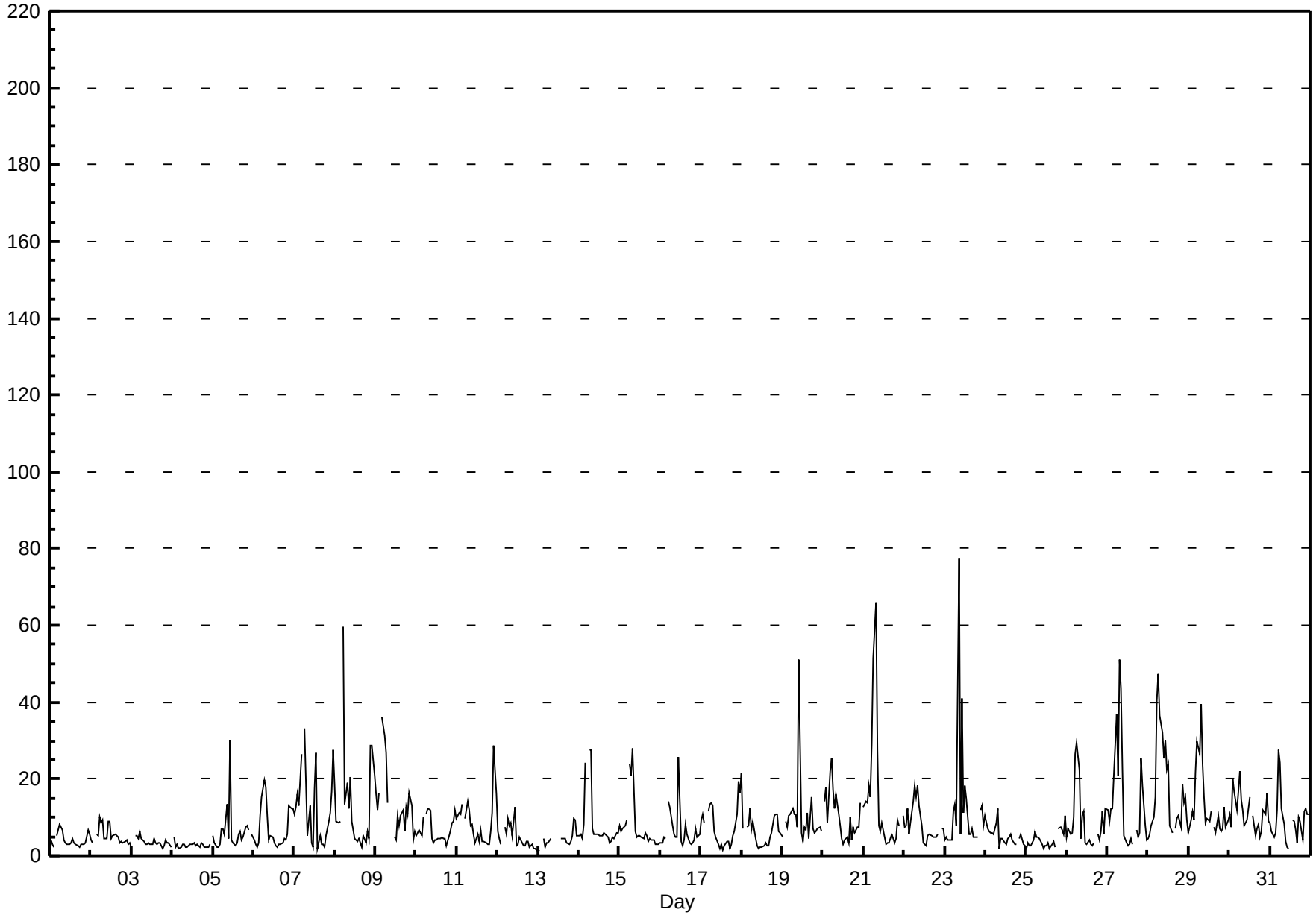
Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - July 2010



PASZA
Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Henry Pirker - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 61.1 ppb on Jul 28 15:00 Maximum Daily Average: 38.0 ppb on Jul 31

Minimum Value: 2 ppb on Jul 27 05:00 Minimum Daily Average: 16.0 ppb on Jul 13
Maximum Diurnal Average: 34.0 ppb at hour 14 Minimum Diurnal Average: 13.0 ppb at hour 6
Monthly Average: 25.19 ppb Percentiles: P_1 = 4.3 P_{10} = 12.9 Q_1 = 18.2 Median = 24.5 Q_3 = 31.5 P_{90} = 38.4 P_{99} = 53.9

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

Day	Hourly Period Ending At (MST)																								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-Jul	23	24	25	A	23	20	21	23	26	27	29	32	33	32	31	31	32	32	32	32	29	26	24	23	27.4	33.1
2-Jul	23	25	A	22	21	19	19	21	22	21	22	23	23	23	22	22	22	22	21	21	20	19	19	19	21.4	24.6
3-Jul	19	A	16	14	14	13	16	19	21	23	25	25	26	26	25	25	25	26	26	26	26	24	24	26	22.3	26.4
4-Jul	A	26	26	24	25	24	20	18	18	19	19	19	20	21	20	20	20	19	19	18	17	16	15	A	20.1	26.2
5-Jul	12	18	18	16	12	12	12	12	15	18	22	25	27	27	29	27	24	23	23	21	21	21	A	20	19.8	28.5
6-Jul	20	20	20	20	18	16	13	16	21	25	27	27	27	28	29	30	30	33	34	35	33	24	17	12	24.0	35.1
7-Jul	13	12	8	10	6	A	6	20	29	34	35	34	34	35	36	38	39	40	40	38	35	29	24	12	26.4	40.4
8-Jul	17	18	22	22	A	10	19	23	33	37	42	42	45	44	40	39	39	40	39	39	39	23	11	15	30.3	44.6
9-Jul	15	15	8	A	9	6	16	24	31	33	35	35	37	40	37	36	36	36	31	31	30	29	31	30	27.5	40.0
10-Jul	26	22	20	19	16	A	16	16	24	31	32	34	38	41	43	47	49	43	42	39	31	26	23	19	30.3	49.0
11-Jul	20	18	14	13	A	12	10	13	16	19	24	29	26	26	25	27	29	32	34	35	30	24	16	25	22.4	34.9
12-Jul	24	25	36	A	31	29	26	26	26	27	28	28	30	28	26	22	21	21	21	23	20	20	20	19	25.0	35.6
13-Jul	20	19	A	15	15	14	13	13	12	12	14	15	C	C	17	18	19	20	22	21	20	16	11	10	16.0	21.7
14-Jul	8	8	8	8	5	A	7	14	18	21	22	22	24	26	26	27	30	28	26	27	27	27	25	25	20.0	29.5
15-Jul	20	20	17	17	15	A	12	19	26	29	31	33	33	34	35	33	32	31	30	29	28	26	26	25	26.1	34.6
16-Jul	23	21	20	18	A	15	16	19	22	23	23	24	25	25	25	23	23	23	23	21	18	16	17	17	20.9	25.2
17-Jul	12	9	7	A	7	9	13	16	22	26	28	27	29	29	29	30	31	31	31	30	29	24	18	15	21.8	31.3
18-Jul	9	20	A	18	19	19	18	22	27	33	36	37	37	37	37	35	35	34	31	27	26	24	26	22	27.4	37.3
19-Jul	21	A	16	18	18	14	16	17	20	22	29	32	34	33	33	36	36	36	33	29	27	27	24	22	25.8	36.3
20-Jul	A	14	14	10	6	5	11	14	15	24	32	37	37	37	40	42	43	44	46	46	41	32	29	A	28.1	45.8
21-Jul	23	20	10	3	5	3	6	9	26	31	35	43	49	46	45	41	35	38	39	36	32	33	A	27	27.5	49.3
22-Jul	23	20	15	29	24	19	14	18	23	25	33	35	35	35	33	30	30	30	29	28	25	A	19	16	25.5	35.1
23-Jul	17	15	15	15	15	12	13	15	19	23	27	29	32	31	26	25	23	24	25	24	A	16	13	16	20.4	31.8
24-Jul	14	16	14	14	14	17	22	29	36	36	36	34	32	31	32	32	32	32	33	A	31	28	30	30	27.2	36.3
25-Jul	28	27	26	25	23	19	20	19	21	23	24	26	26	27	27	27	27	26	A	22	18	16	16	16	23.0	28.5
26-Jul	17	13	12	11	7	3	4	10	20	25	27	30	31	29	31	31	31	A	29	29	25	21	21	14	20.5	31.3
27-Jul	13	11	6	8	2	3	5	6	8	20	30	34	36	36	35	36	A	38	38	40	32	29	27	23	22.4	39.8
28-Jul	23	24	25	23	18	8	6	13	18	20	24	35	51	59	61	A	57	51	48	44	47	39	30	32	32.9	61.1
29-Jul	27	22	16	14	7	3	8	13	18	23	35	38	45	48	A	51	51	47	54	44	42	37	38	29	30.9	53.9
30-Jul	30	25	21	14	8	14	15	17	24	32	36	38	39	A	43	44	42	39	42	38	30	24	20	22	28.6	44.1
31-Jul	30	30	28	24	21	14	14	16	25	38	45	48	A	52	54	54	54	54	55	55	51	41	36	35	38.0	55.3
	19.7	19.3	17.2	16.5	14.4	13.0	13.8	17.2	22.0	25.8	29.2	31.4	33.1	34.0	33.1	32.6	33.3	33.2	33.2	31.6	29.3	25.3	22.4	21.2	Diurnal Average	
	29.7	30.5	35.6	28.5	30.6	28.6	26.2	29.0	36.3	38.2	45.3	48.3	50.6	59.0	61.1	54.3	57.4	54.0	54.5	55.3	50.6	40.9	38.2	35.0	Diurnal Maximum	

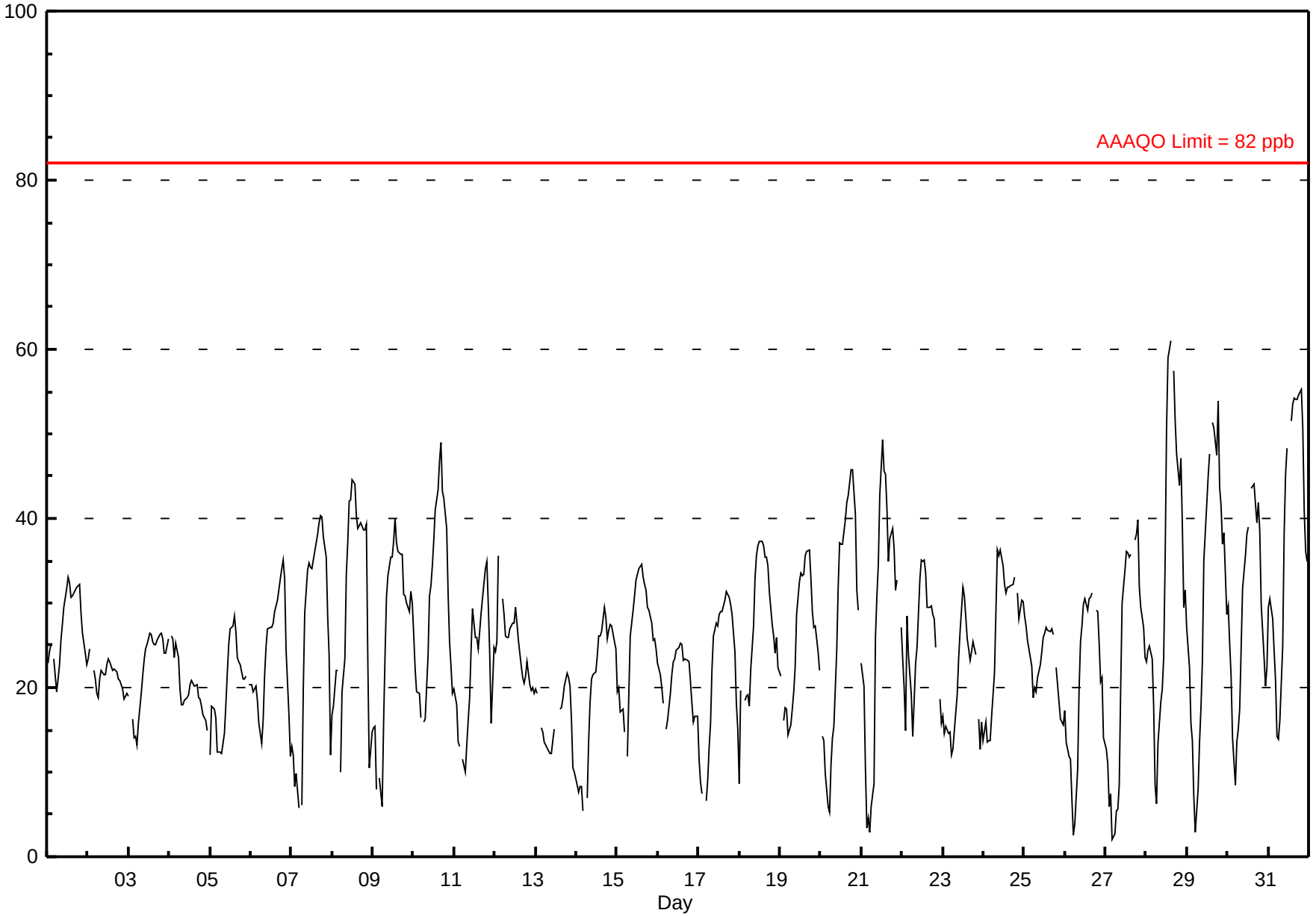
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na

PASZA
Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Henry Pirker - July 2010



PASZA
Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

Henry Pirker - July 2010

Maximum Value: 66.9 ppb on Jul 29 18:00

Maximum Daily Average: 41.4 ppb on Jul 31

Minimum Value: 4 ppb on Jul 21 06:00

Minimum Daily Average: 17.4 ppb on Jul 13

Maximum Diurnal Average: 36.0 ppb at hour 18

Minimum Diurnal Average: 16.1 ppb at hour 6

Monthly Average: 27.82 ppb

Percentiles: P_1 = 6.4 P_{10} = 15.5 Q_1 = 20.5 Median = 26.8 Q_3 = 34.3 P_{90} = 41.2 P_{99} = 58.0

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-Jul	24	25	26	A	25	21	23	25	27	29	31	35	34	35	32	32	32	33	34	34	32	28	26	24	29.0	35.1
2-Jul	25	25	A	24	22	21	20	23	23	23	23	24	24	25	23	23	23	22	22	22	21	19	21	20	22.6	25.5
3-Jul	20	A	18	16	15	15	18	21	23	24	25	26	28	27	27	26	26	27	27	27	27	25	26	26	23.5	27.8
4-Jul	A	28	27	25	26	25	22	19	18	19	20	20	21	23	21	22	22	20	19	19	18	18	18	A	21.4	27.7
5-Jul	15	20	18	18	14	13	13	13	16	20	25	27	28	28	29	29	27	25	24	23	23	23	A	22	21.5	29.4
6-Jul	21	21	21	22	20	20	18	20	24	26	28	28	29	29	30	31	33	36	37	37	36	32	21	15	26.4	37.1
7-Jul	17	18	12	12	9	A	11	26	32	37	36	35	35	37	38	40	41	42	41	41	40	32	28	19	29.6	41.7
8-Jul	20	20	24	24	A	17	23	29	38	43	44	45	47	47	44	40	41	41	40	40	42	37	20	19	34.1	47.1
9-Jul	17	17	12	A	15	10	23	30	32	35	37	37	43	41	40	38	38	39	36	41	35	34	35	31	31.3	42.9
10-Jul	30	26	23	22	18	A	20	20	31	33	33	37	40	45	45	50	52	48	45	44	35	27	24	21	33.6	51.8
11-Jul	21	20	15	14	A	13	11	16	18	22	29	31	29	27	27	29	31	34	36	37	34	28	21	28	25.0	36.9
12-Jul	26	31	38	A	32	31	28	28	27	29	29	30	30	30	27	25	22	22	23	24	21	22	21	20	26.9	38.4
13-Jul	20	20	A	16	15	15	14	13	13	13	15	16	C	C	18	19	20	23	23	23	22	20	15	11	17.4	23.2
14-Jul	10	9	10	9	9	A	11	17	20	22	23	24	26	28	27	28	32	30	30	28	29	29	28	26	22.0	32.0
15-Jul	24	22	19	21	17	A	14	23	30	31	33	35	35	36	37	35	34	33	31	31	29	27	27	26	28.1	37.0
16-Jul	24	22	21	19	A	18	19	21	23	24	25	26	26	26	26	26	25	24	24	22	20	18	19	19	22.5	26.4
17-Jul	15	12	9	A	9	10	15	19	25	27	29	29	30	30	30	31	32	32	33	32	31	28	23	21	24.1	33.5
18-Jul	15	22	A	19	21	21	19	27	31	36	37	38	38	38	38	37	37	40	34	33	30	30	30	24	30.2	39.9
19-Jul	25	A	23	20	20	16	17	19	23	28	32	35	36	35	35	38	38	38	38	31	31	29	28	24	28.6	38.2
20-Jul	A	20	19	11	9	9	13	18	19	30	36	40	39	39	42	43	45	46	49	48	48	34	31	A	31.3	48.9
21-Jul	27	23	21	7	7	4	10	18	30	33	37	52	53	48	47	45	36	40	40	40	35	34	A	29	31.2	53.0
22-Jul	27	23	26	31	28	23	20	24	28	30	36	37	37	37	37	32	31	32	31	31	28	A	20	17	28.9	37.4
23-Jul	17	16	17	15	16	14	14	17	22	26	29	32	33	33	27	26	25	26	27	25	A	20	16	17	22.3	33.4
24-Jul	16	18	15	15	15	20	25	35	37	37	38	37	34	33	33	34	33	33	34	A	33	30	32	32	29.2	37.9
25-Jul	30	28	27	25	25	22	21	20	23	24	26	27	28	28	28	28	28	27	A	24	21	19	17	17	24.5	29.9
26-Jul	19	16	13	13	8	5	6	17	23	27	29	32	32	32	32	32	32	A	30	30	28	25	23	21	22.9	32.4
27-Jul	16	15	8	10	6	5	9	8	14	27	33	36	37	37	36	37	A	39	40	42	40	32	29	25	25.4	41.9
28-Jul	24	25	26	25	20	17	11	21	21	21	30	41	57	63	66	A	61	60	50	50	54	51	34	35	37.5	65.9
29-Jul	31	28	20	17	11	7	14	22	25	31	39	41	47	50	A	54	54	67	59	47	44	41	43	34	36.1	66.9
30-Jul	33	27	25	20	13	22	18	20	31	34	39	41	42	A	49	48	45	44	44	43	37	26	26	28	32.9	49.0
31-Jul	33	35	31	27	24	21	21	19	35	45	47	51	A	53	55	56	55	55	56	58	56	44	39	36	41.4	58.2
	22.2	21.9	20.1	18.5	16.8	16.1	16.9	21.0	25.3	28.6	31.5	33.7	35.2	35.9	35.0	34.5	35.1	36.0	35.3	34.2	32.7	28.8	25.5	23.8	Diurnal Average	
	33.0	35.1	38.4	30.8	32.0	31.4	27.9	34.8	37.7	44.8	46.8	52.3	56.6	63.3	65.9	56.2	60.9	66.9	58.5	58.2	56.3	50.5	42.9	36.3	Diurnal Maximum	

C - Calibration

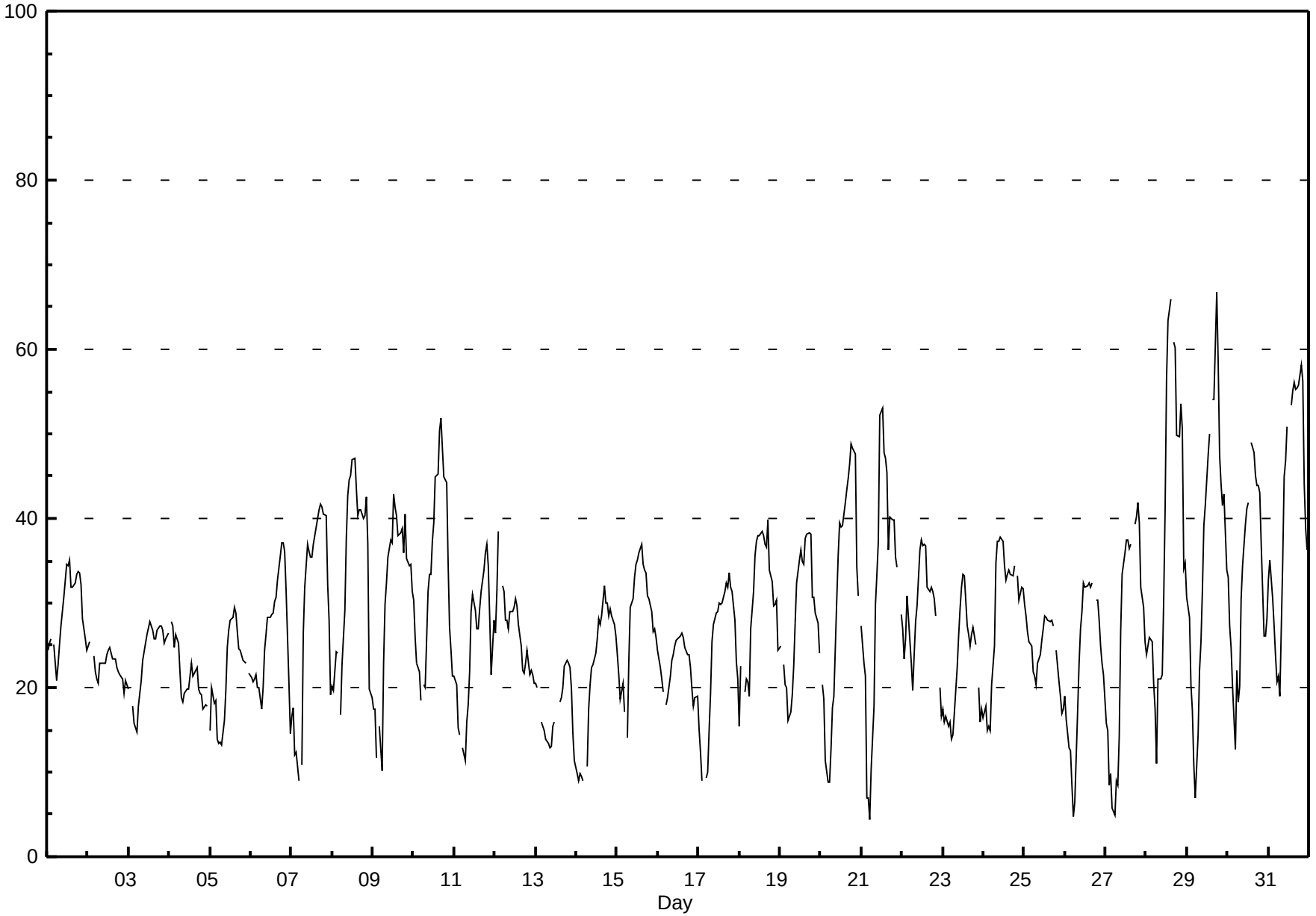
A - Automated Daily Zero Span

PASZA
Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

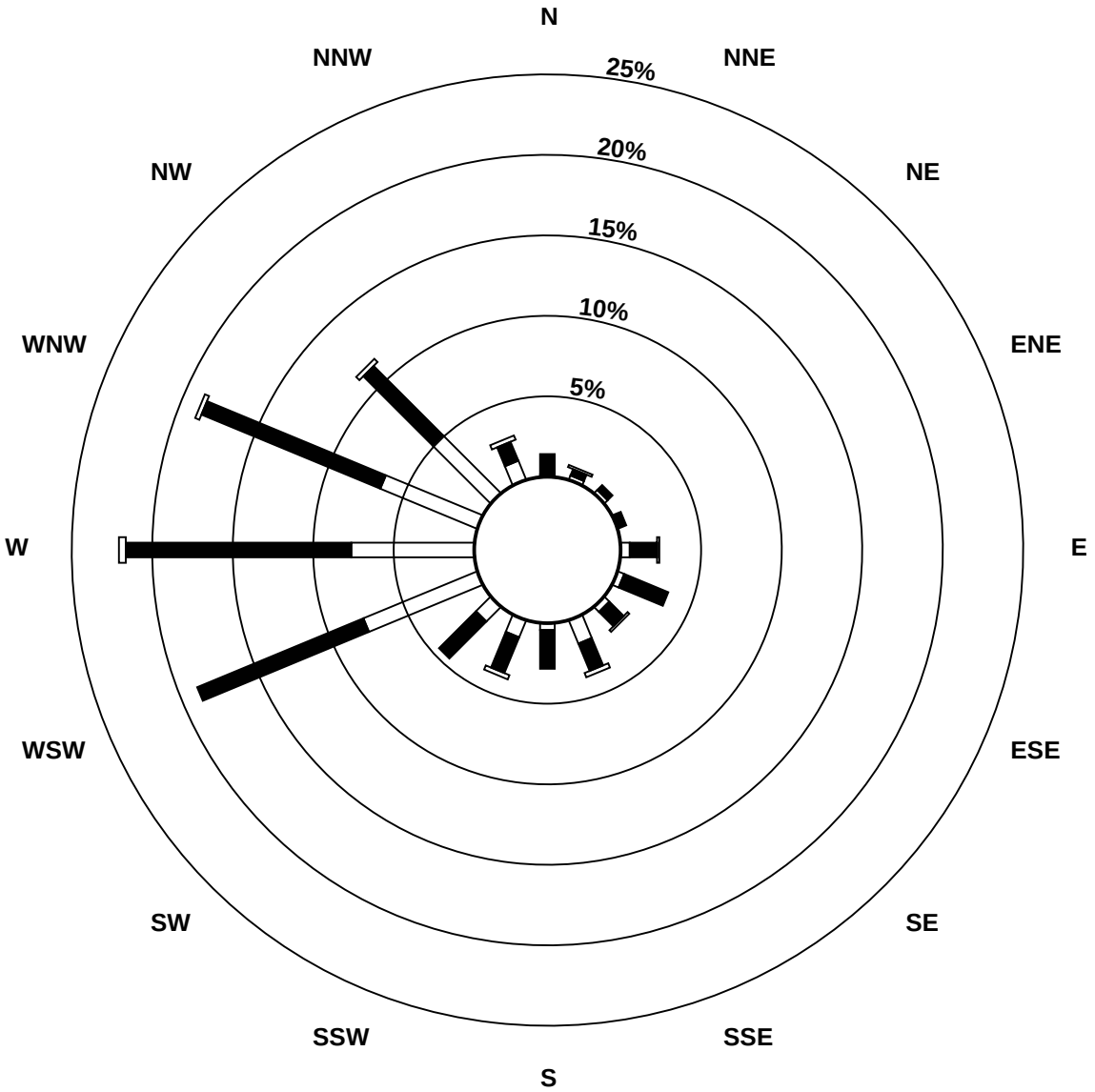
Henry Pirker - July 2010



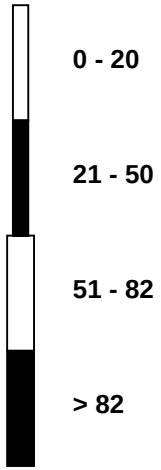
Pollutant Rose

Ozone (O_3) - ppb

Henry Pirker - July 2010



Pollutant Classes (ppb)



PASZA
Peace Airshed Zone Association

Eight Hour Running Averages

Ozone (O_3) - ppb

Henry Pirker - July 2010

Maximum Value: 53.9 ppb on Jul 31 20:00

Minimum Value: 6.1 ppb on Jul 27 09:00

Percentiles: P_1 = 9.4 P_{10} = 14.6 Q_1 = 19.1 Median = 24.1 Q_3 = 29.8 P_{90} = 36.6 P_{99} = 51.3

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

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Jul	26	26	25	24	24	23	22	23	23	24	24	25	26	28	29	30	31	31	32	32	31	31	30	29	31.8
2-Jul	28	27	26	25	23	22	22	21	21	21	21	21	21	22	22	22	22	22	22	22	22	21	21	20	27.7
3-Jul	20	20	19	18	17	16	16	16	16	17	18	20	21	23	24	25	25	25	26	26	26	25	25	25	25.8
4-Jul	25	26	25	25	25	25	24	23	23	22	21	20	20	19	19	20	20	20	20	20	19	19	18	18	25.5
5-Jul	16	16	16	16	15	15	14	14	14	14	15	16	18	20	22	24	25	25	26	25	24	24	23	22	25.5
6-Jul	21	21	20	20	20	19	18	18	18	19	20	20	22	23	25	27	28	29	30	31	31	31	30	27	31.4
7-Jul	25	23	19	16	13	11	10	11	13	16	20	23	27	28	32	34	36	37	37	38	38	37	35	32	37.8
8-Jul	29	27	24	22	20	18	17	19	21	24	27	30	32	36	38	40	41	41	41	40	40	37	33	30	41.3
9-Jul	27	24	21	18	14	11	12	13	16	18	22	24	27	31	34	36	36	37	36	35	35	33	32	32	36.6
10-Jul	31	29	27	26	24	24	21	19	19	20	22	24	27	29	32	36	39	41	42	43	42	40	37	34	42.8
11-Jul	30	27	24	20	19	17	15	14	14	14	15	18	19	20	22	24	26	27	28	29	30	29	28	28	30.3
12-Jul	28	27	27	26	26	26	28	28	28	29	27	27	27	27	27	27	26	25	24	24	23	22	21	21	28.5
13-Jul	21	20	20	19	18	17	16	15	14	13	13	13	13	13	14	15	16	17	18	19	20	19	18	17	20.5
14-Jul	16	14	13	11	9	8	8	8	10	12	14	16	18	19	22	23	25	25	26	27	27	27	27	27	27.2
15-Jul	26	25	24	22	21	20	18	17	18	19	21	24	26	27	30	32	33	33	33	32	31	30	29	28	32.8
16-Jul	27	26	25	23	23	21	20	19	19	19	20	20	21	22	23	24	24	24	24	24	23	22	21	20	27.1
17-Jul	18	16	14	14	12	11	10	10	12	14	17	18	21	24	26	28	29	29	30	30	30	29	28	26	30.0
18-Jul	23	22	21	19	18	17	17	18	20	22	24	26	29	31	33	35	36	36	36	34	33	31	30	28	36.2
19-Jul	27	26	23	22	21	19	18	17	17	18	19	21	23	25	28	30	32	34	34	34	33	32	31	29	34.2
20-Jul	28	25	23	20	17	14	12	11	11	12	15	18	22	26	30	33	36	39	41	42	42	42	40	40	42.2
21-Jul	37	34	29	23	17	13	10	10	10	12	15	20	25	30	35	39	41	41	42	41	39	37	36	34	41.9
22-Jul	33	30	27	25	24	22	21	20	20	21	23	24	25	27	30	31	32	33	32	31	30	29	27	25	32.5
23-Jul	23	21	19	17	16	15	15	14	15	16	17	19	21	24	25	26	27	27	27	26	25	23	21	20	27.0
24-Jul	19	18	16	15	14	15	16	17	20	23	25	28	30	32	33	34	33	33	32	32	32	32	31	31	33.7
25-Jul	31	30	29	28	27	26	25	23	22	22	22	22	22	23	24	25	26	26	27	26	25	23	22	20	30.5
26-Jul	19	17	16	15	14	12	10	10	10	12	13	16	19	22	25	28	29	30	30	30	29	28	27	24	30.2
27-Jul	22	20	17	15	12	10	8	7	6	7	10	14	18	22	26	29	32	35	36	37	36	35	34	32	37.0
28-Jul	31	30	28	26	24	22	19	18	17	17	16	18	22	28	35	38	44	48	52	53	53	50	45	43	53.0
29-Jul	40	36	32	28	23	19	16	14	13	13	15	18	23	29	31	37	42	45	48	49	48	47	45	43	48.5
30-Jul	40	37	33	29	25	22	20	18	17	18	20	23	27	29	33	37	39	40	41	41	40	38	35	32	41.1
31-Jul	31	30	28	26	25	24	23	22	22	23	25	28	29	34	40	45	49	52	53	54	53	52	50	48	53.9
	40.0	37.3	33.2	29.5	27.2	26.4	27.9	28.1	28.3	28.5	27.4	29.6	31.5	35.8	39.7	45.1	49.3	51.6	52.9	53.9	53.5	52.2	50.0	47.6	
	Diurnal Maximums																								

PASZA
Peace Airshed Zone Association

Hourly Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 0.43 ppm on Jul 8 00:00 Maximum Daily Average: 0.20 ppm on Jul 8

Minimum Value: 0.1 ppm on Jul 24 17:00 Minimum Daily Average: 0.07 ppm on Jul 25
Maximum Diurnal Average: 0.17 ppm at hour 23 Minimum Diurnal Average: 0.12 ppm at hour 18
Monthly Average: 0.142 ppm Percentiles: $P_1 = 0.05$ $P_{10} = 0.10$ $Q_1 = 0.11$ Median = 0.14 $Q_3 = 0.16$ $P_{90} = 0.20$ $P_{99} = 0.28$

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

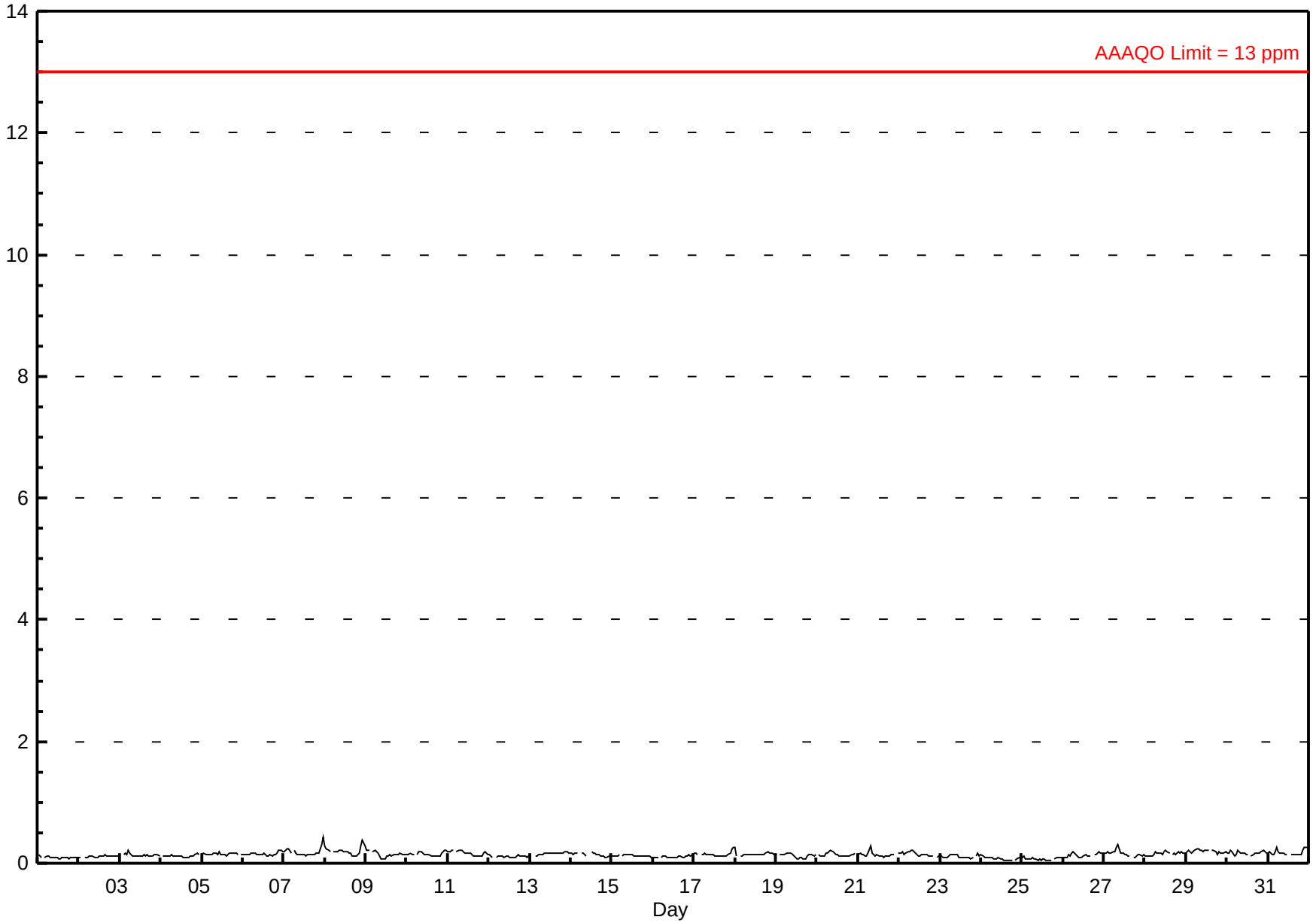
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Jul	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.10	0.14
2-Jul	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.11	0.14
3-Jul	0.1	A	0.1	0.2	0.1	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	0.13	0.21
4-Jul	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	0.1	0.1	0.2	0.2	A	0.12	0.16
5-Jul	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	A	0.1	0.15	0.18
6-Jul	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.15	0.21
7-Jul	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.19	0.43
8-Jul	0.3	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.3	0.20	0.38
9-Jul	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.15	0.22
10-Jul	0.1	0.1	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.16	0.21
11-Jul	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.17	0.22
12-Jul	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	0.1	0.1	0.11	0.13
13-Jul	0.1	0.1	A	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	0.16	0.20
14-Jul	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.1	0.1	C	C	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.14	0.18
15-Jul	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	0.13	0.15
16-Jul	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	0.1	0.11	0.14
17-Jul	0.2	0.2	0.1	A	0.1	0.1	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	0.3	0.15	0.25
18-Jul	0.3	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	0.2	0.2	0.2	0.2	0.2	0.1	0.15	0.25
19-Jul	0.1	A	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12	0.17
20-Jul	A	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	A	0.14	0.20
21-Jul	0.1	0.2	0.1	0.1	0.1	0.1	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	A	0.2	0.14	0.28
22-Jul	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.15	0.22
23-Jul	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	A	0.1	0.2	0.1	0.12	0.17
24-Jul	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	A	0.1	0.1	0.1	0.1	0.08	0.14
25-Jul	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	A	0.1	0.1	0.1	0.1	0.1	0.07	0.12
26-Jul	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.2	0.2	0.2	0.2	0.2	0.2	0.13	0.19
27-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.16	0.31
28-Jul	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	A	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.16	0.21
29-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.19	0.24
30-Jul	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	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	0.17	0.21
31-Jul	0.2	0.2	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.18	0.27
	0.15	0.15	0.15	0.14	0.13	0.15	0.16	0.16	0.15	0.14	0.14	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.13	0.14	0.16	0.17	0.16	Diurnal Average	
	0.28	0.23	0.23	0.24	0.20	0.27	0.24	0.28	0.31	0.23	0.21	0.21	0.21	0.20	0.17	0.20	0.20	0.20	0.17	0.20	0.20	0.28	0.38	0.43	Diurnal Maximum	

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

Hourly Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - July 2010



PASZA
Peace Airshed Zone Association

Hourly Maximums

Carbon Monoxide (CO) - ppm

Henry Pirker - July 2010

Maximum Value: 1.06 ppm on Jul 28 12:00

Maximum Daily Average: 0.29 ppm on Jul 28

Minimum Value: 0.1 ppm on Jul 24 19:00

Minimum Daily Average: 0.11 ppm on Jul 24

Maximum Diurnal Average: 0.22 ppm at hour 6

Minimum Diurnal Average: 0.15 ppm at hour 14

Monthly Average: 0.189 ppm

Percentiles: P_1 = 0.10 P_{10} = 0.12 Q_1 = 0.15 Median = 0.17 Q_3 = 0.21 P_{90} = 0.26 P_{99} = 0.58

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-Jul	0.2	0.2	0.2	A	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	0.25
2-Jul	0.1	0.1	A	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.14	0.17
3-Jul	0.2	A	0.2	0.3	0.2	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.18	0.37
4-Jul	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	A	0.16	0.22
5-Jul	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.9	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	0.23	0.94
6-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.19	0.26
7-Jul	0.2	0.3	0.3	0.4	0.2	A	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.6	0.24	0.56
8-Jul	0.4	0.3	0.3	0.2	A	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.5	0.4	0.26	0.45
9-Jul	0.3	0.4	0.3	A	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.8	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.24	0.77
10-Jul	0.1	0.2	0.3	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.18	0.26
11-Jul	0.2	0.3	0.3	0.3	A	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.3	0.2	0.20	0.28
12-Jul	0.2	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	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.14	0.18
13-Jul	0.1	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.19	0.26
14-Jul	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	C	C	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.18	0.21
15-Jul	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.15	0.20
16-Jul	0.1	0.1	0.1	0.1	A	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.13	0.20
17-Jul	0.2	0.2	0.2	A	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.19	0.34
18-Jul	0.4	0.2	A	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.18	0.44
19-Jul	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.19	0.44
20-Jul	A	0.2	0.2	0.1	0.2	0.6	0.2	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.3	0.2	A	0.20	0.65
21-Jul	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	A	0.2	0.18	0.37
22-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	A	0.2	0.2	0.19	0.26
23-Jul	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.2	0.3	0.2	0.14	0.25
24-Jul	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	A	0.1	0.1	0.2	0.2	0.11	0.21
25-Jul	0.3	0.4	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	A	0.1	0.1	0.2	0.2	0.2	0.13	0.40
26-Jul	0.1	0.2	0.1	0.2	0.2	0.4	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.3	0.2	0.2	0.18	0.35
27-Jul	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	1.0	0.4	0.2	0.2	0.2	0.2	0.2	0.2	A	0.1	0.2	0.1	0.2	0.2	0.1	0.3	0.24	0.99
28-Jul	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.1	0.9	0.2	0.2	A	0.2	0.2	0.2	0.9	0.3	0.2	0.2	0.2	0.29	1.06
29-Jul	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.3	0.2	0.2	0.3	0.3	0.2	A	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.25	0.38
30-Jul	0.2	0.2	0.4	0.4	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.22	0.41
31-Jul	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.22	0.32
	0.20	0.21	0.19	0.18	0.17	0.22	0.20	0.21	0.21	0.18	0.20	0.19	0.18	0.15	0.18	0.16	0.16	0.16	0.16	0.19	0.19	0.21	0.21	0.21	Diurnal Average	
	0.44	0.40	0.41	0.40	0.35	0.65	0.31	0.38	0.99	0.44	0.94	1.06	0.91	0.22	0.77	0.28	0.25	0.26	0.23	0.88	0.31	0.45	0.45	0.56	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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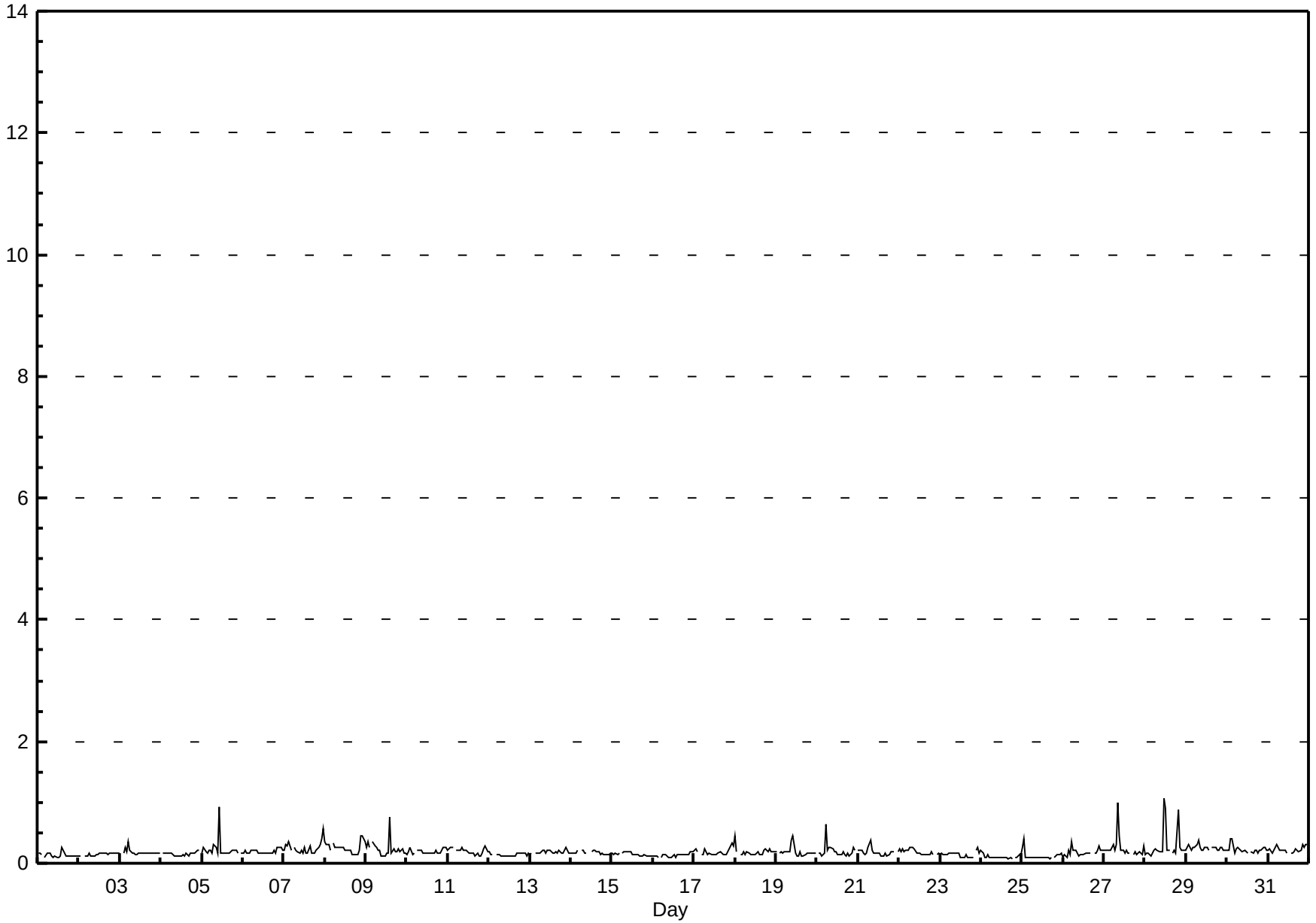
Hourly Maximums

Carbon Monoxide (CO) - ppm

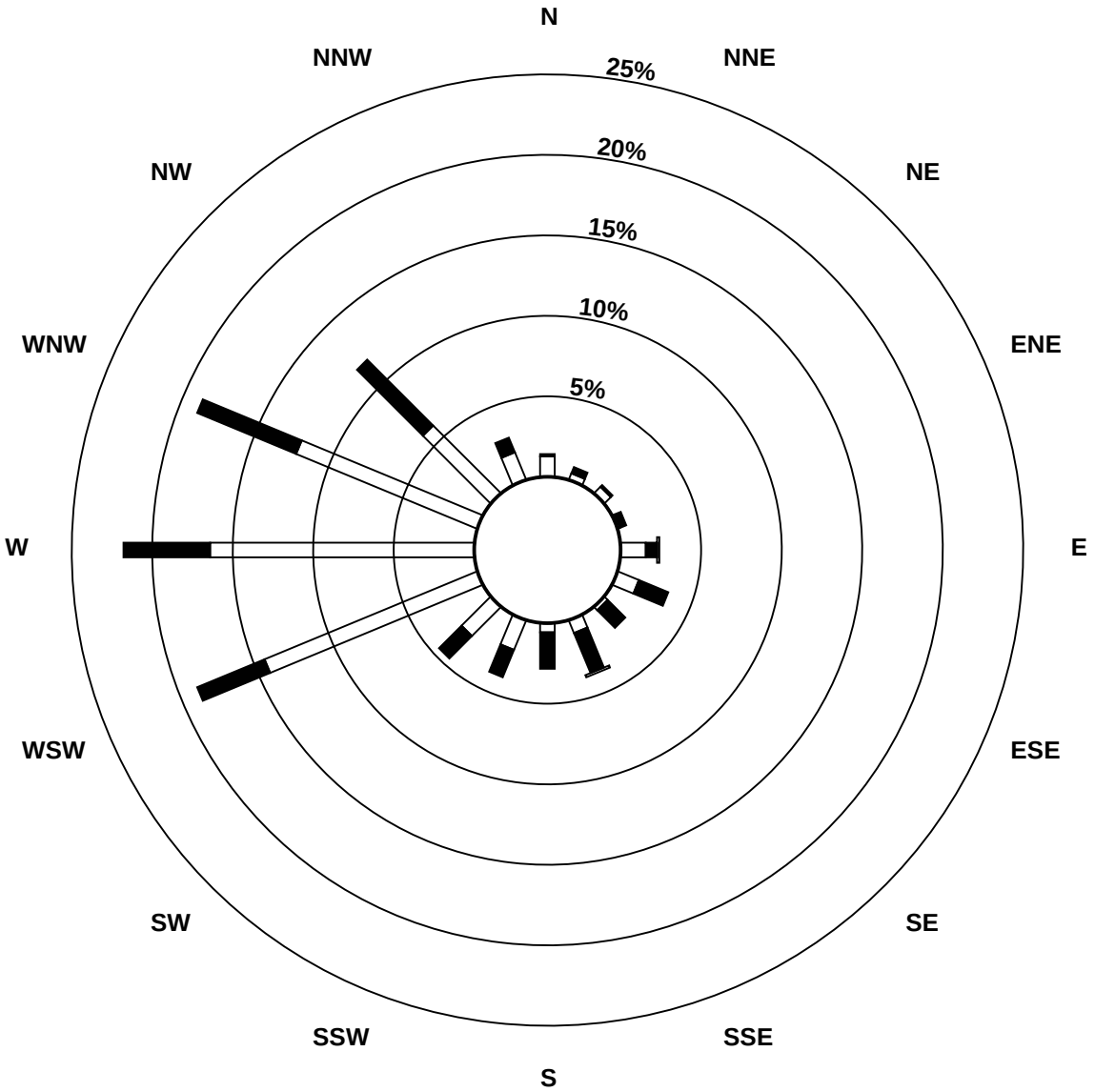
Henry Pirker - July 2010



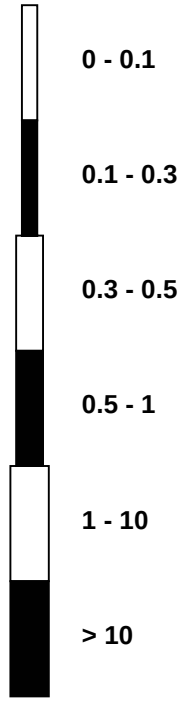
Pollutant Rose

Carbon Monoxide (CO) - ppm

Henry Pirker - July 2010



Pollutant Classes (ppm)



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Eight Hour Running Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - July 2010

Number of Exceedences (AAAQO): 8-hr: 0
Maximum Value: 0.27 ppm on Jul 8 05:00

Minimum Value: 0.05 ppm on Jul 24 21:00

Percentiles: P_1 = 0.06 P_{10} = 0.10 Q_1 = 0.12 Median = 0.14 Q_3 = 0.16 P_{90} = 0.18 P_{99} = 0.24

Hours in Service:	744
Hours of Data:	742
Hours of Missing Data:	2
Hours of Calibration:	2
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-Jul	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	0.13
2-Jul	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	0.13
3-Jul	0.1	0.1	0.1	0.1	0.1	0.1	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	0.15
4-Jul	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	0.13
5-Jul	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.16
6-Jul	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.17
7-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.22
8-Jul	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.27
9-Jul	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.26
10-Jul	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.17
11-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.21
12-Jul	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
13-Jul	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	0.2	0.2	0.2	0.2	0.17
14-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	N	N	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.17
15-Jul	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
16-Jul	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	0.12
17-Jul	0.1	0.1	0.1	0.1	0.1	0.1	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	0.2	0.16
18-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.18
19-Jul	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	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	0.16
20-Jul	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.17
21-Jul	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.16
22-Jul	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.19
23-Jul	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	0.13
24-Jul	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	0.12
25-Jul	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	0.08
26-Jul	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	0.2	0.16
27-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.21
28-Jul	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	0.2	0.2	0.2	0.2	0.18
29-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21
30-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.18
31-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.20
	0.24	0.25	0.25	0.26	0.27	0.26	0.25	0.21	0.20	0.21	0.21	0.21	0.21	0.21	0.21	0.20	0.20	0.20	0.19	0.19	0.19	0.18	0.18	0.22	
	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 - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.05 ppm on Jul 31 06:00 Maximum Daily Average: 2.09 ppm on Jul 31

Minimum Value: 1.8 ppm on Jul 14 11:00 Minimum Daily Average: 1.90 ppm on Jul 13
Maximum Diurnal Average: 2.09 ppm at hour 6 Minimum Diurnal Average: 1.90 ppm at hour 19
Monthly Average: 1.958 ppm Percentiles: P_1 = 1.84 P_{10} = 1.88 Q_1 = 1.90 Median = 1.92 Q_3 = 1.97 P_{90} = 2.09 P_{99} = 2.39

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-Jul	2.0	1.9	2.0	A	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.96	2.03
2-Jul	2.0	2.0	A	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.93	2.01
3-Jul	1.9	A	1.9	2.1	2.0	2.3	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.95	2.26
4-Jul	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.90	1.94
5-Jul	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	A	1.9	1.92	1.96
6-Jul	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.1	1.95	2.09
7-Jul	2.1	2.1	2.4	2.5	2.2	A	2.2	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.4	2.7	2.08	2.71
8-Jul	2.4	2.2	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.3	2.2	2.01	2.40
9-Jul	2.2	2.1	2.2	A	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.97	2.21
10-Jul	1.9	1.9	2.0	1.9	1.9	A	1.9	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.92	2.09
11-Jul	2.0	2.0	2.0	2.2	A	2.2	2.1	2.1	2.1	2.0	2.1	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.97	2.21
12-Jul	2.0	2.0	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.91	2.02
13-Jul	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.90	2.00
14-Jul	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.8	C	C	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.90	1.95
15-Jul	2.0	1.9	2.0	2.0	2.0	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.91	2.01
16-Jul	2.0	1.9	2.0	2.0	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.92	2.03
17-Jul	1.9	2.0	2.2	A	2.1	2.2	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.97	2.24
18-Jul	2.1	2.0	A	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.93	2.10
19-Jul	1.9	A	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.95	2.15
20-Jul	A	2.0	2.0	2.1	2.2	2.1	2.0	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	1.98	2.17
21-Jul	2.0	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.01	2.26
22-Jul	1.9	2.0	2.2	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.91	2.22
23-Jul	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	A	1.9	2.1	2.0	1.91	2.09
24-Jul	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	2.1	2.0	1.92	2.07
25-Jul	2.1	2.1	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.0	1.9	2.0	2.0	1.95	2.11
26-Jul	2.0	2.0	2.0	2.6	2.1	2.2	2.2	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	2.0	1.99	2.59
27-Jul	2.1	2.1	2.2	2.1	2.2	2.3	2.2	2.2	2.2	2.1	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.0	2.0	1.9	1.9	2.04	2.26
28-Jul	1.9	1.9	2.0	2.0	2.0	2.1	2.4	2.2	2.0	2.1	2.1	2.1	2.0	2.0	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.01	2.39
29-Jul	1.9	2.0	2.0	2.0	2.2	2.2	2.1	2.2	2.0	2.0	2.0	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.98	2.22
30-Jul	1.9	2.0	2.0	2.0	2.1	2.2	2.0	2.0	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.94	2.16
31-Jul	2.0	2.4	1.9	2.1	2.5	3.0	2.4	2.1	2.0	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.5	2.09	3.05
	2.00	2.01	2.02	2.04	2.04	2.09	2.03	2.01	1.96	1.94	1.92	1.91	1.91	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.91	1.95	1.98	2.00	Diurnal Average	
	2.40	2.37	2.36	2.59	2.50	3.05	2.42	2.26	2.22	2.07	2.09	2.11	2.01	1.99	1.97	1.95	1.94	1.95	1.96	1.95	1.97	2.12	2.37	2.71	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

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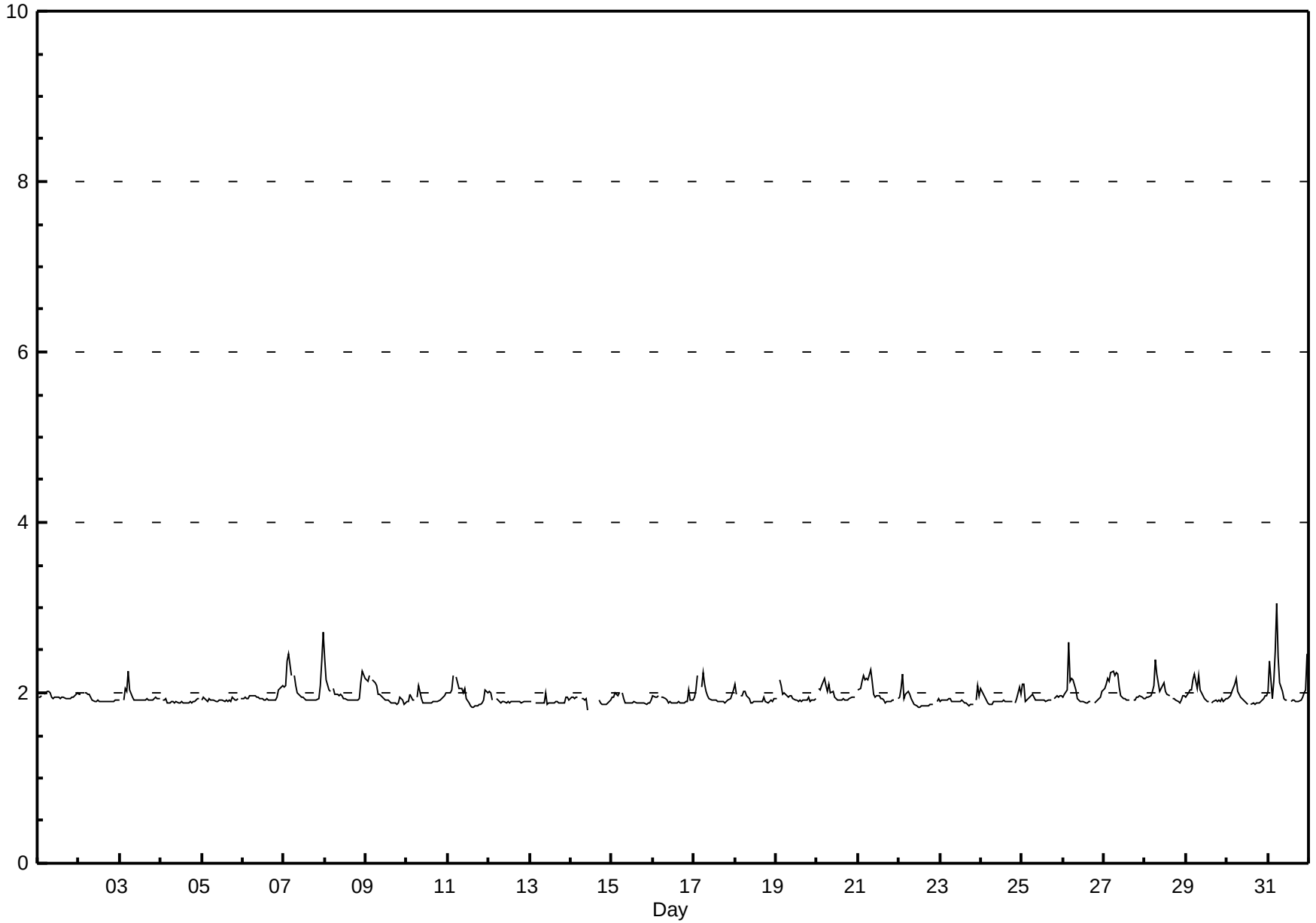
Hourly Averages

Total Hydrocarbons (THC) - ppm

Henry Pirker - July 2010



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Hourly Maximums

Total Hydrocarbons (THC) - ppm

Henry Pirker - July 2010

Maximum Value: 3.59 ppm on Aug 1 00:00

Maximum Daily Average: 2.27 ppm on Jul 31

Minimum Value: 1.8 ppm on Jul 22 12:00

Minimum Daily Average: 1.93 ppm on Jul 4

Maximum Diurnal Average: 2.20 ppm at hour 6

Minimum Diurnal Average: 1.92 ppm at hour 17

Monthly Average: 2.023 ppm

Percentiles: P_1 = 1.87 P_{10} = 1.90 Q_1 = 1.92 Median = 1.96 Q_3 = 2.04 P_{90} = 2.21 P_{99} = 3.05

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-Jul	2.0	2.0	2.0	A	2.1	2.1	2.1	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.99	2.08
2-Jul	2.0	2.0	A	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	2.1	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.96	2.06
3-Jul	1.9	A	1.9	2.3	2.3	2.6	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	2.0	2.0	2.0	1.9	2.01	2.59
4-Jul	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	2.1	2.0	A	1.93	2.05
5-Jul	2.0	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	A	2.0	1.97	2.18
6-Jul	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.1	2.1	2.2	1.98	2.15
7-Jul	2.1	2.1	3.1	3.0	2.2	A	2.3	2.2	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.2	3.0	3.4	2.23	3.42
8-Jul	3.1	2.3	2.1	2.1	A	2.1	2.0	2.4	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.2	2.4	2.3	2.11	3.08
9-Jul	2.2	2.2	2.3	A	2.2	2.2	2.2	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	2.0	2.1	2.0	1.9	2.0	2.03	2.32
10-Jul	2.0	1.9	2.2	1.9	1.9	A	2.1	2.3	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.96	2.26
11-Jul	2.0	2.0	2.1	2.7	A	2.3	2.1	2.2	2.1	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.1	2.04	2.72
12-Jul	2.1	2.0	2.0	A	2.0	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.93	2.10
13-Jul	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	2.2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2	2.1	1.9	1.94	2.24
14-Jul	2.1	2.0	1.9	2.0	2.0	A	1.9	2.0	2.0	2.2	1.9	C	C	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.95	2.17
15-Jul	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.94	2.05
16-Jul	2.1	2.0	2.0	2.0	A	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.3	2.0	2.0	1.96	2.25
17-Jul	2.0	2.1	2.6	A	2.1	2.4	2.3	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.03	2.55
18-Jul	2.1	2.0	A	2.0	2.0	2.2	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2	2.2	1.9	2.0	2.0	1.9	2.0	2.00	2.23
19-Jul	2.0	A	2.3	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	2.0	1.9	2.0	2.0	2.0	2.5	1.9	1.9	1.9	2.0	2.02	2.46
20-Jul	A	2.2	2.1	2.2	2.3	2.2	2.0	2.4	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	A	2.04	2.43
21-Jul	2.3	2.1	2.2	2.3	2.2	2.2	2.2	2.4	2.4	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	2.0	2.0	A	1.9	2.07	2.41
22-Jul	2.1	2.2	2.3	2.0	2.2	2.2	2.0	2.0	2.0	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.0	1.98	2.35
23-Jul	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.0	2.2	2.1	1.94	2.18
24-Jul	2.2	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	2.0	2.3	2.2	1.98	2.34
25-Jul	2.7	3.3	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.0	2.1	2.0	2.0	2.0	2.05	3.28
26-Jul	2.0	2.0	2.3	3.0	2.3	2.3	2.3	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	2.0	2.0	2.1	2.06	3.03
27-Jul	2.1	2.2	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.2	2.0	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	2.0	2.0	2.0	1.9	2.09	2.38
28-Jul	2.0	2.3	2.5	2.1	2.1	2.2	2.6	2.8	2.1	2.1	2.1	2.2	2.1	2.0	2.0	A	2.0	2.0	1.9	1.9	2.4	2.1	2.0	2.1	2.15	2.78
29-Jul	2.0	2.1	2.1	2.1	2.3	2.4	2.1	2.4	2.4	2.2	2.0	2.0	1.9	1.9	A	1.9	1.9	2.0	2.0	1.9	1.9	2.2	1.9	2.0	2.08	2.40
30-Jul	2.0	2.0	2.1	2.1	2.2	2.7	2.1	2.0	2.0	2.0	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.0	2.01	2.70
31-Jul	2.3	2.7	2.0	2.6	3.3	3.3	2.6	2.2	2.1	2.0	1.9	1.9	A	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	2.0	2.1	3.6	2.27	3.59
	2.11	2.12	2.15	2.17	2.13	2.20	2.09	2.10	2.02	1.99	1.96	1.95	1.93	1.93	1.93	1.92	1.92	1.94	1.93	1.95	1.97	2.02	2.06	2.12	Diurnal Average	
	3.08	3.28	3.12	3.04	3.26	3.34	2.62	2.78	2.40	2.24	2.18	2.18	2.06	2.01	2.02	2.02	2.01	2.21	2.17	2.46	2.41	2.25	3.04	3.59	Diurnal Maximum	

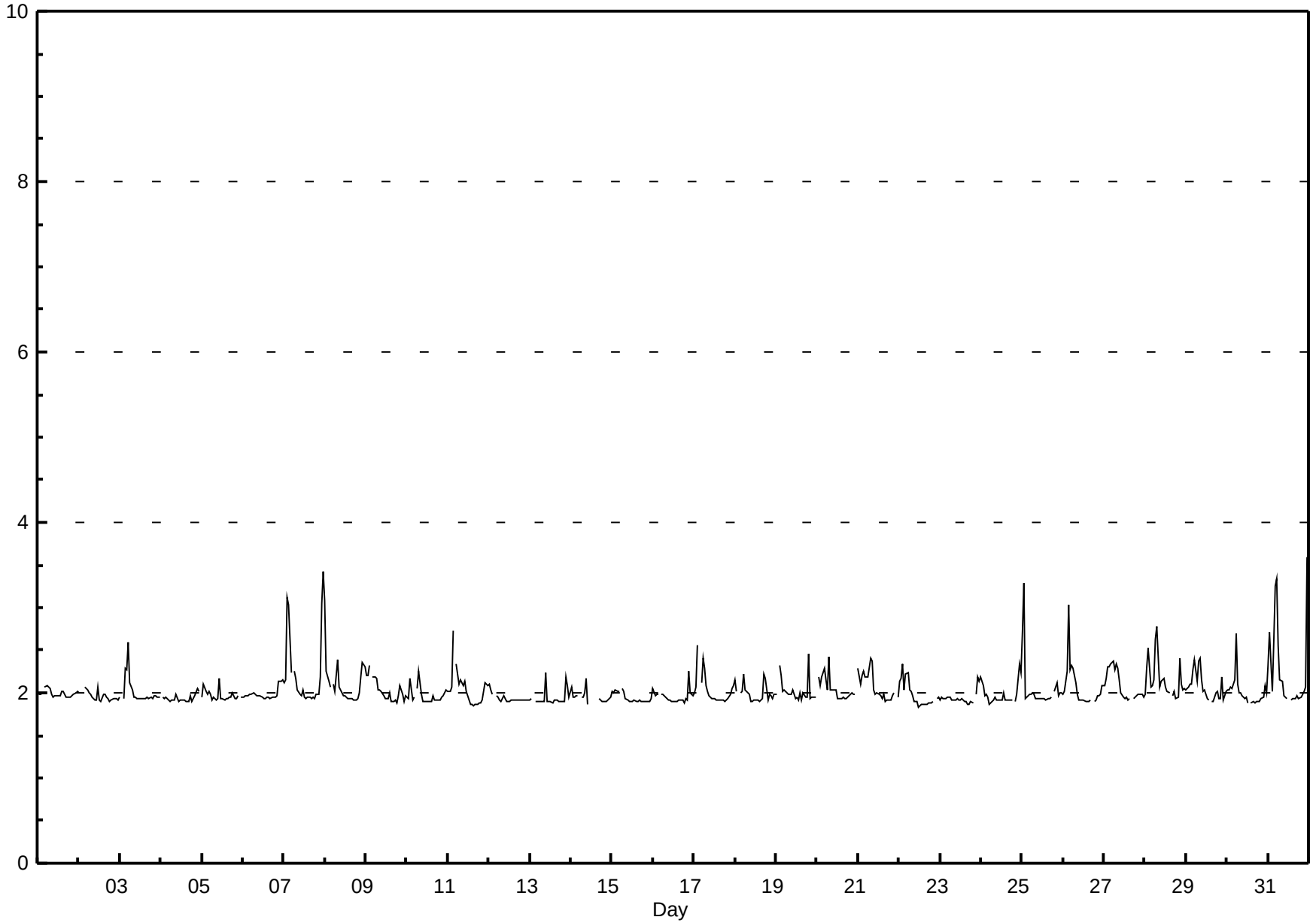
C - Calibration

A - Automated Daily Zero Span

Hourly Maximums

Total Hydrocarbons (THC) - ppm

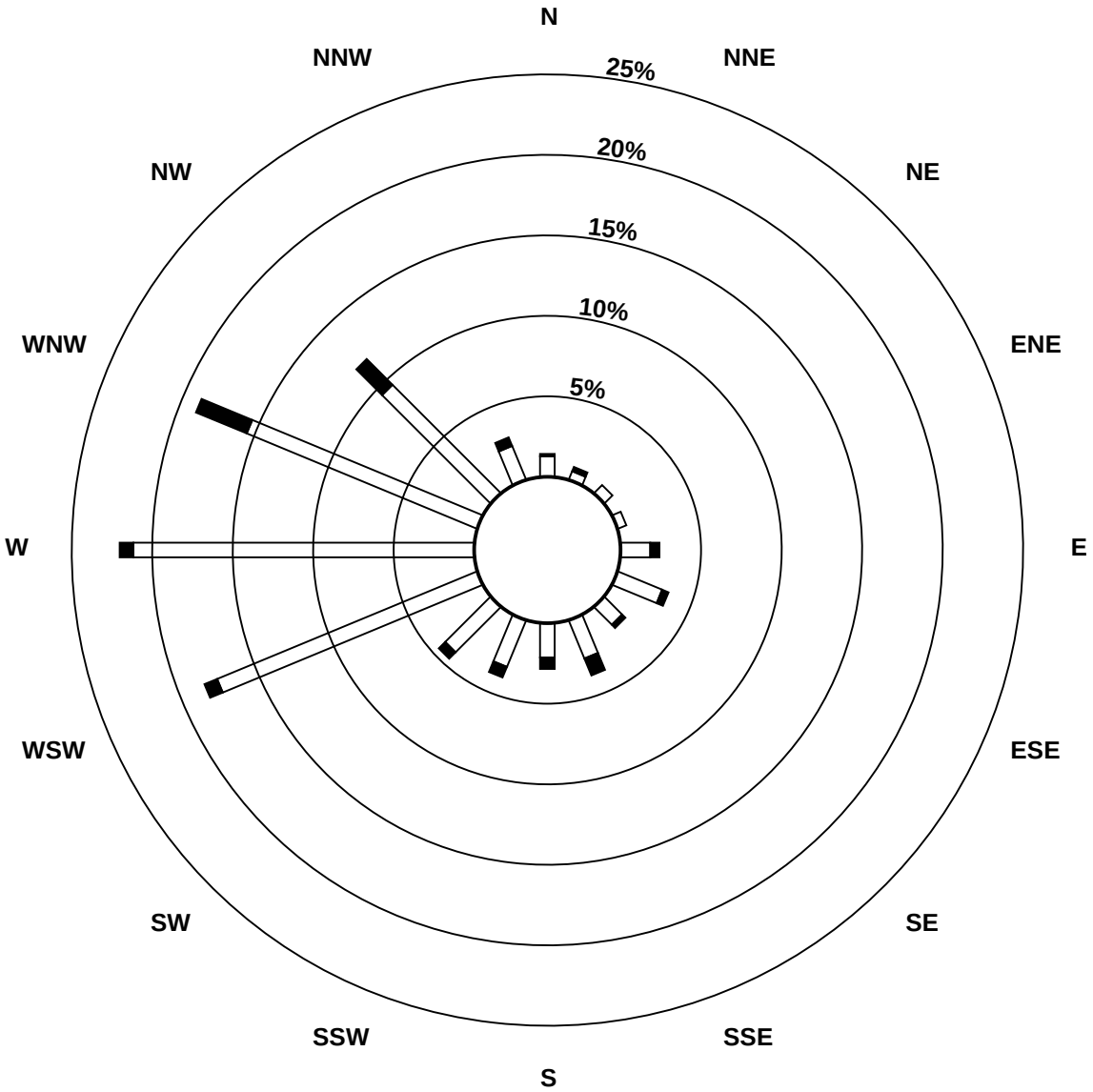
Henry Pirker - July 2010



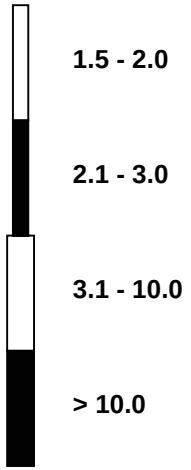
Pollutant Rose

Total Hydrocarbons (THC) - ppm

Henry Pirker - July 2010



Pollutant Classes (ppm)



PASZA
Peace Airshed Zone Association

Hourly Averages

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

Henry Pirker - July 2010

Number of Exceedences: 1-hr: 0 24-hr: 0
Maximum Value: 23.7 $\mu g/m^3$ on Jul 28 13:00
Maximum Daily Average: 14.0 $\mu g/m^3$ on Jul 29

Minimum Value: 0 $\mu g/m^3$ on Jul 1 07:00
Maximum Diurnal Average: 7.4 $\mu g/m^3$ at hour 24
Monthly Average: 6.16 $\mu g/m^3$
Minimum Daily Average: 1.9 $\mu g/m^3$ on Jul 2
Minimum Diurnal Average: 5.3 $\mu g/m^3$ at hour 19
Percentiles: $P_1 = 0.0$ $P_{10} = 1.5$ $Q_1 = 2.9$ Median = 5.2 $Q_3 = 8.5$ $P_{90} = 12.2$ $P_{99} = 20.1$

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-Jul	13	2	1	1	3	1	0	4	1	0	1	1	0	2	4	2	6	5	3	4	1	2	2	2	2.5	12.7
2-Jul	1	2	2	2	1	2	3	3	0	0	2	2	2	3	0	1	1	2	3	4	3	3	2	2	1.9	4.4
3-Jul	4	1	3	3	2	3	3	2	1	3	3	1	1	1	2	3	4	3	3	4	4	2	3	1	2.5	4.1
4-Jul	2	2	3	4	2	2	2	1	2	20	4	3	4	4	2	3	1	0	1	0	1	2	1	2	2.8	20.1
5-Jul	1	2	1	0	1	1	0	1	2	2	4	5	3	2	0	2	2	3	3	3	4	4	3	4	2.2	5.5
6-Jul	4	4	2	3	4	4	3	7	6	3	M	3	4	5	7	5	4	7	4	4	3	6	7	10	4.7	9.6
7-Jul	9	9	11	8	6	10	12	13	6	6	5	7	5	4	4	5	7	7	5	6	6	10	12	16	7.8	16.5
8-Jul	18	14	12	7	6	8	9	10	8	11	17	14	9	9	8	9	9	10	8	6	7	10	12	20	10.5	20.1
9-Jul	23	17	17	18	15	17	18	17	12	9	11	15	13	13	8	9	14	11	13	15	5	12	6	11	13.4	23.4
10-Jul	6	4	5	5	4	5	5	7	7	8	6	7	5	7	13	9	2	2	4	4	9	10	6	9	6.3	13.2
11-Jul	10	9	11	13	11	11	11	14	9	12	15	11	11	7	5	9	2	1	8	10	8	3	3	8	8.8	15.4
12-Jul	10	6	8	0	7	2	5	6	5	1	3	2	2	2	6	2	2	4	2	3	0	0	2	1	3.3	9.7
13-Jul	1	1	1	0	1	0	3	3	4	5	3	4	4	5	4	4	6	6	7	6	5	7	7	6	3.9	7.5
14-Jul	4	6	4	5	2	8	5	6	6	5	7	5	3	4	4	7	2	0	0	5	6	5	5	5	4.6	8.2
15-Jul	6	5	7	5	6	6	7	7	7	5	7	4	2	5	2	7	4	4	4	2	4	2	2	2	4.6	6.9
16-Jul	1	3	3	2	2	3	2	3	4	3	2	1	3	2	3	4	4	4	3	5	4	4	5	3	3.1	4.8
17-Jul	3	5	5	4	4	4	4	6	4	4	3	4	3	1	2	4	7	3	2	4	4	5	10	13	4.5	13.1
18-Jul	14	10	5	5	5	4	5	4	3	7	5	7	5	6	5	6	6	7	7	5	6	6	7	5	6.0	13.7
19-Jul	6	6	4	5	7	5	8	6	7	7	8	8	4	5	6	5	2	5	5	5	6	5	2	4	5.5	8.0
20-Jul	5	6	8	7	5	6	4	5	5	6	6	7	6	6	5	6	7	6	5	8	7	8	7	9	6.2	8.8
21-Jul	10	9	9	9	10	6	7	13	15	12	10	9	8	9	9	8	8	6	4	5	8	9	7	11	8.8	15.1
22-Jul	9	8	11	10	6	7	8	8	6	4	4	5	5	3	4	3	5	2	5	2	5	2	4	3	5.5	11.2
23-Jul	1	2	3	3	4	3	2	2	4	6	3	4	1	4	0	6	11	0	1	9	8	3	1	9	3.8	10.6
24-Jul	4	5	5	2	4	2	2	3	4	7	6	6	3	4	7	0	7	6	0	2	5	2	3	3	3.8	7.3
25-Jul	2	2	2	3	2	2	3	4	3	2	2	1	3	1	8	1	0	2	9	4	0	7	8	8	3.3	9.1
26-Jul	6	5	4	3	4	6	10	10	7	2	3	4	0	3	5	2	6	5	1	9	6	7	8	7	5.0	10.0
27-Jul	6	8	8	8	5	6	7	5	9	9	11	7	9	0	6	6	0	6	11	13	10	4	12	10	7.5	13.3
28-Jul	12	10	10	10	13	13	14	18	18	13	18	21	24	19	18	22	16	16	10	5	0	1	4	8	13.0	23.7
29-Jul	9	9	9	8	11	11	10	10	13	12	20	16	17	18	19	17	18	20	12	16	18	15	13	13	14.0	20.5
30-Jul	13	13	13	13	12	14	15	17	18	16	14	11	10	10	8	8	10	12	12	10	10	11	10	10	12.1	18.1
31-Jul	9	8	8	5	7	8	9	9	8	10	11	9	8	5	8	9	8	10	9	11	9	13	14	15	9.2	14.8
	7.2	6.2	6.3	5.5	5.6	5.8	6.3	7.2	6.7	6.8	7.1	6.6	5.8	5.5	5.9	5.9	5.8	5.5	5.3	6.1	5.6	5.8	6.1	7.4	Diurnal Average	
	23.4	17.0	17.1	18.1	15.4	17.3	17.7	17.5	18.1	20.1	20.5	21.2	23.7	18.8	19.0	21.5	18.0	19.6	13.4	16.0	18.3	15.4	14.3	20.1	Diurnal Maximum	

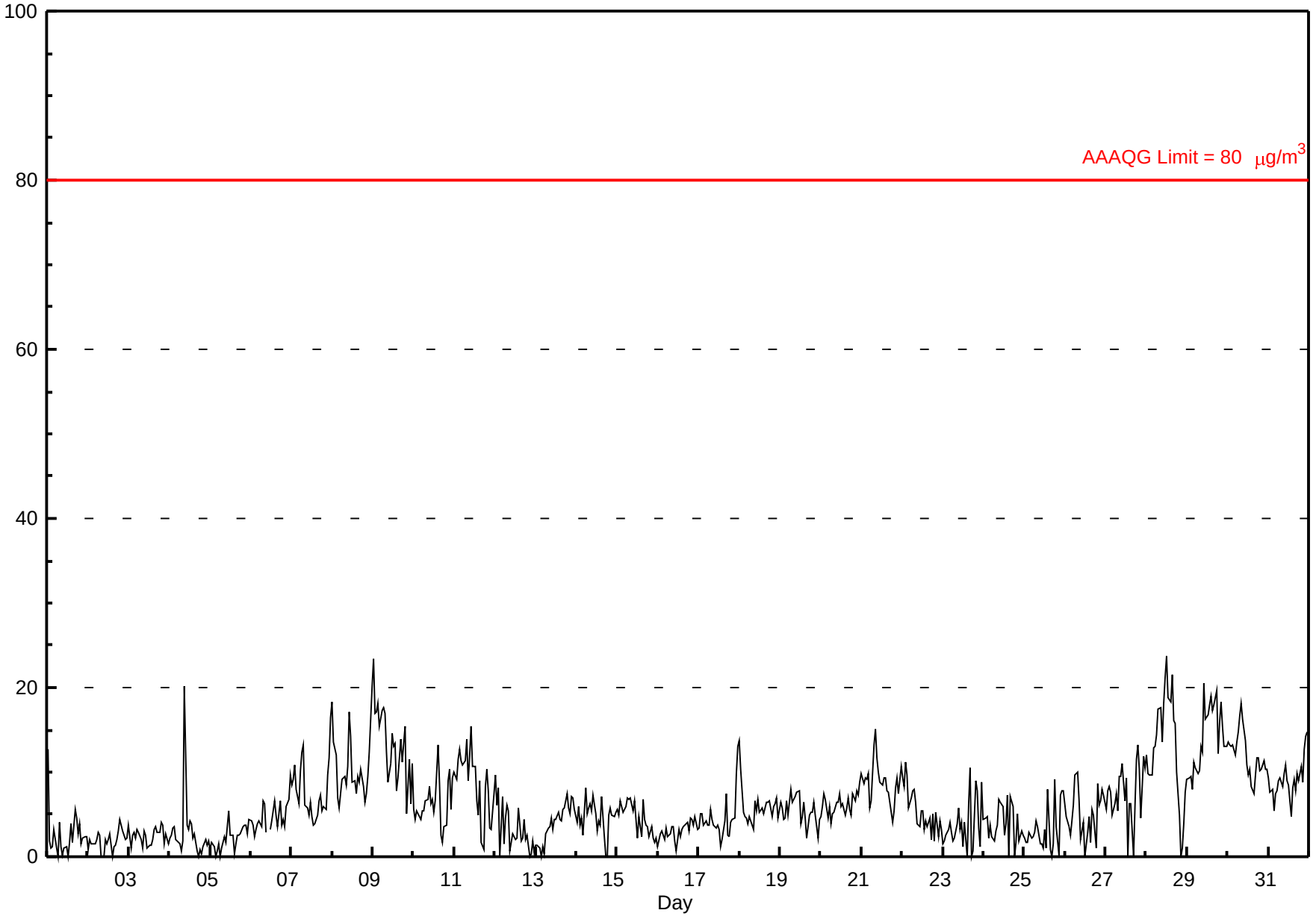
M - Maintenance
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

PASZA
Pasco Airlifted Zoso Association

Hourly Averages

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

Henry Pirker - July 2010



PASZA
Peace Airshed Zone Association

Hourly Maximums

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

Henry Pirker - July 2010

Maximum Value: 28.9 $\mu g/m^3$ on Jul 1 01:00

Maximum Daily Average: 16.7 $\mu g/m^3$ on Jul 29

Minimum Value: 0 $\mu g/m^3$ on Jul 14 18:00

Minimum Daily Average: 3.5 $\mu g/m^3$ on Jul 2

Maximum Diurnal Average: 9.5 $\mu g/m^3$ at hour 24

Minimum Diurnal Average: 6.9 $\mu g/m^3$ at hour 4

Monthly Average: 8.16 $\mu g/m^3$

Percentiles: $P_1 = 0.7$ $P_{10} = 3.2$ $Q_1 = 4.8$ Median = 7.0 $Q_3 = 10.5$ $P_{90} = 14.2$ $P_{99} = 22.9$

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-Jul	29	4	2	3	5	3	1	6	4	2	3	4	4	4	6	5	8	7	5	6	6	5	5	3	5.4	28.9
2-Jul	2	3	3	2	2	3	4	3	0	1	4	4	5	5	2	3	4	4	5	6	5	4	3	5	3.5	5.9
3-Jul	5	2	4	4	3	4	4	3	3	6	6	4	4	3	5	6	6	5	4	6	6	3	3	2	4.2	6.4
4-Jul	4	3	5	5	4	3	2	1	14	23	12	4	6	6	6	5	2	1	3	2	3	3	3	3	5.2	23.2
5-Jul	3	3	3	1	2	3	2	2	4	4	7	7	5	5	3	5	5	5	4	5	5	5	6	7	4.1	7.1
6-Jul	6	6	5	6	6	6	6	9	9	4	M	4	7	7	10	10	7	8	6	6	5	9	9	11	6.9	11.1
7-Jul	10	10	12	12	7	14	14	16	10	7	7	8	7	5	6	6	8	10	9	7	7	12	14	20	9.9	20.0
8-Jul	20	16	14	10	8	9	10	10	10	14	20	20	12	10	10	12	10	11	11	8	9	12	15	27	12.8	26.9
9-Jul	29	19	18	19	18	18	19	19	17	11	12	17	18	15	12	13	15	13	18	19	8	14	10	14	16.0	28.6
10-Jul	10	6	6	6	6	6	6	7	7	10	10	10	10	12	14	11	5	2	4	6	11	12	8	11	8.2	14.2
11-Jul	11	12	12	13	12	12	13	14	13	13	17	16	12	11	10	12	5	4	10	11	11	5	4	12	11.0	16.8
12-Jul	12	11	12	4	9	5	6	8	6	4	4	5	3	6	8	6	6	6	3	4	3	4	4	2	5.9	12.2
13-Jul	2	2	2	1	2	1	4	5	5	6	4	5	6	6	6	6	6	7	8	7	7	8	8	8	5.2	8.4
14-Jul	5	7	5	5	4	10	9	7	7	8	9	7	7	7	4	9	8	0	0	8	8	6	5	7	6.3	9.8
15-Jul	7	7	8	7	7	7	7	8	9	8	9	6	4	7	7	8	5	4	4	4	4	4	3	3	6.1	9.1
16-Jul	2	4	4	4	3	4	4	4	4	5	3	3	4	4	5	4	4	5	4	6	5	5	6	6	4.3	5.7
17-Jul	5	6	6	5	5	5	5	7	6	6	4	5	5	3	4	7	8	6	4	5	6	8	13	15	6.2	14.6
18-Jul	16	15	6	5	5	4	5	5	5	8	7	9	6	7	6	7	7	7	9	6	8	7	8	5	7.2	15.6
19-Jul	7	6	6	5	8	7	10	9	9	9	9	9	5	7	8	8	4	6	6	8	9	6	4	6	7.2	10.2
20-Jul	6	7	9	8	7	6	5	6	7	7	8	9	9	8	6	6	8	7	9	9	8	9	9	11	7.6	11.3
21-Jul	12	10	10	10	11	9	9	17	17	14	12	10	10	10	10	9	9	8	4	8	9	11	9	12	10.4	17.0
22-Jul	11	11	12	11	8	9	9	9	8	5	5	8	8	6	5	5	6	5	7	6	7	6	6	5	7.3	11.9
23-Jul	2	3	4	4	5	5	5	5	6	6	8	9	7	7	0	14	14	6	7	10	9	7	7	11	6.7	13.9
24-Jul	8	8	7	4	4	4	4	4	5	9	8	9	9	12	12	2	10	9	0	8	9	4	5	5	6.6	12.4
25-Jul	3	2	3	4	3	4	4	5	5	4	3	5	6	6	9	7	0	9	11	6	3	9	10	10	5.3	10.7
26-Jul	7	6	4	4	5	8	11	11	12	3	4	5	4	4	6	8	9	7	4	11	9	8	9	8	7.0	11.7
27-Jul	6	9	10	10	7	7	8	7	13	13	13	10	12	4	11	11	2	9	13	14	13	7	15	15	10.0	15.1
28-Jul	13	10	10	11	15	15	16	19	19	17	21	22	26	25	21	24	18	17	16	10	0	4	6	8	15.2	26.5
29-Jul	10	13	13	11	12	12	10	12	14	22	24	18	18	21	21	19	20	21	19	21	21	17	16	15	16.7	24.3
30-Jul	14	13	14	14	14	15	17	17	19	18	16	13	11	14	11	10	12	13	13	12	12	13	12	12	13.7	19.0
31-Jul	12	10	9	8	9	9	10	11	10	11	12	12	10	6	11	11	11	12	11	12	11	14	15	16	10.9	16.0
	9.4	7.9	7.7	6.9	7.0	7.3	7.7	8.5	8.9	8.9	9.4	8.9	8.3	8.1	8.2	8.6	7.9	7.6	7.5	8.3	7.6	7.7	8.0	9.5	Diurnal Average	
	28.9	19.0	18.5	19.4	18.0	18.3	19.1	19.1	19.0	23.2	24.3	21.5	26.5	24.9	21.0	23.6	20.4	21.3	19.4	20.8	20.8	16.8	15.5	26.9	Diurnal Maximum	

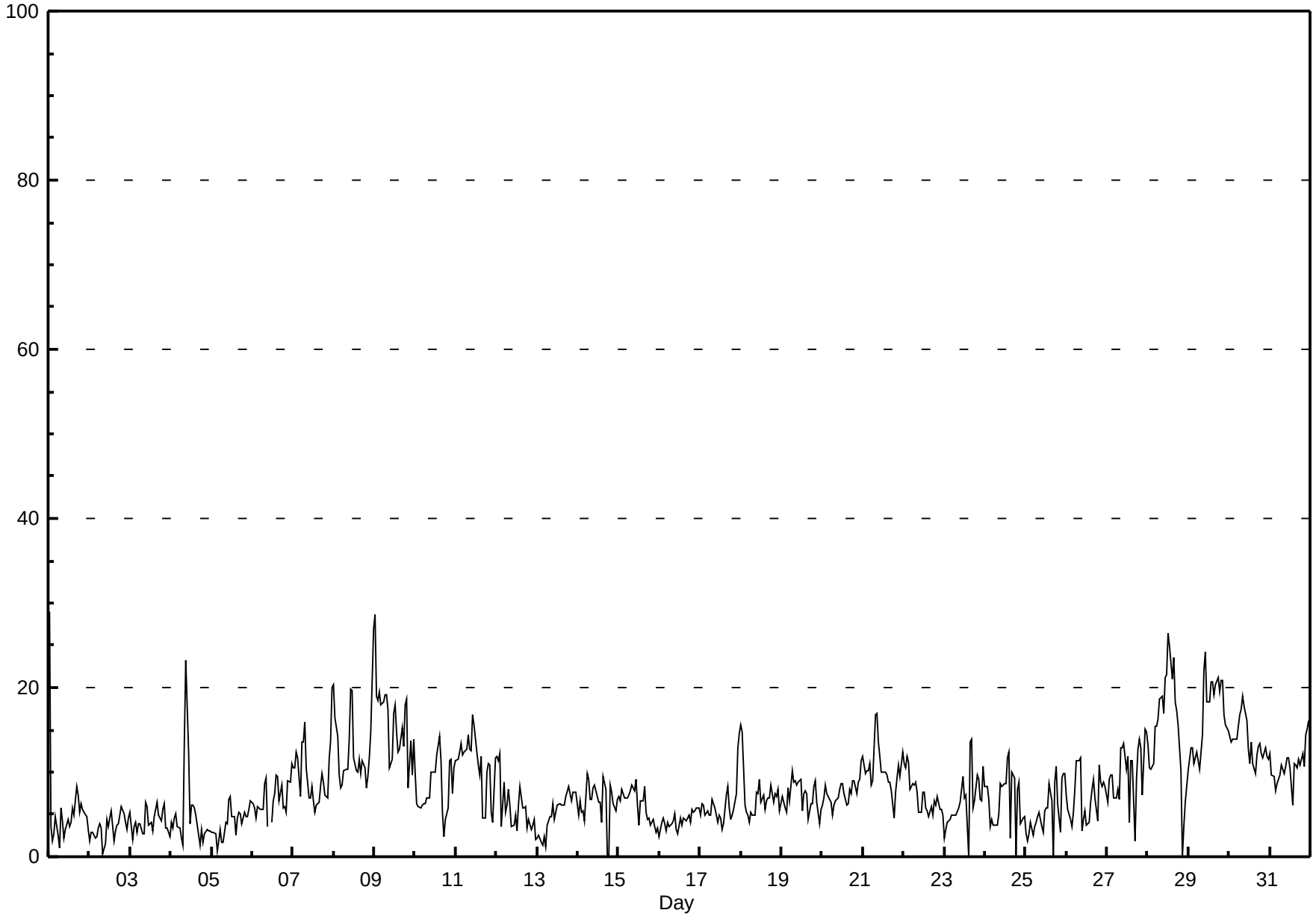
M - Maintenance

PASZA
Peace Airshed Zone Association

Hourly Maximums

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

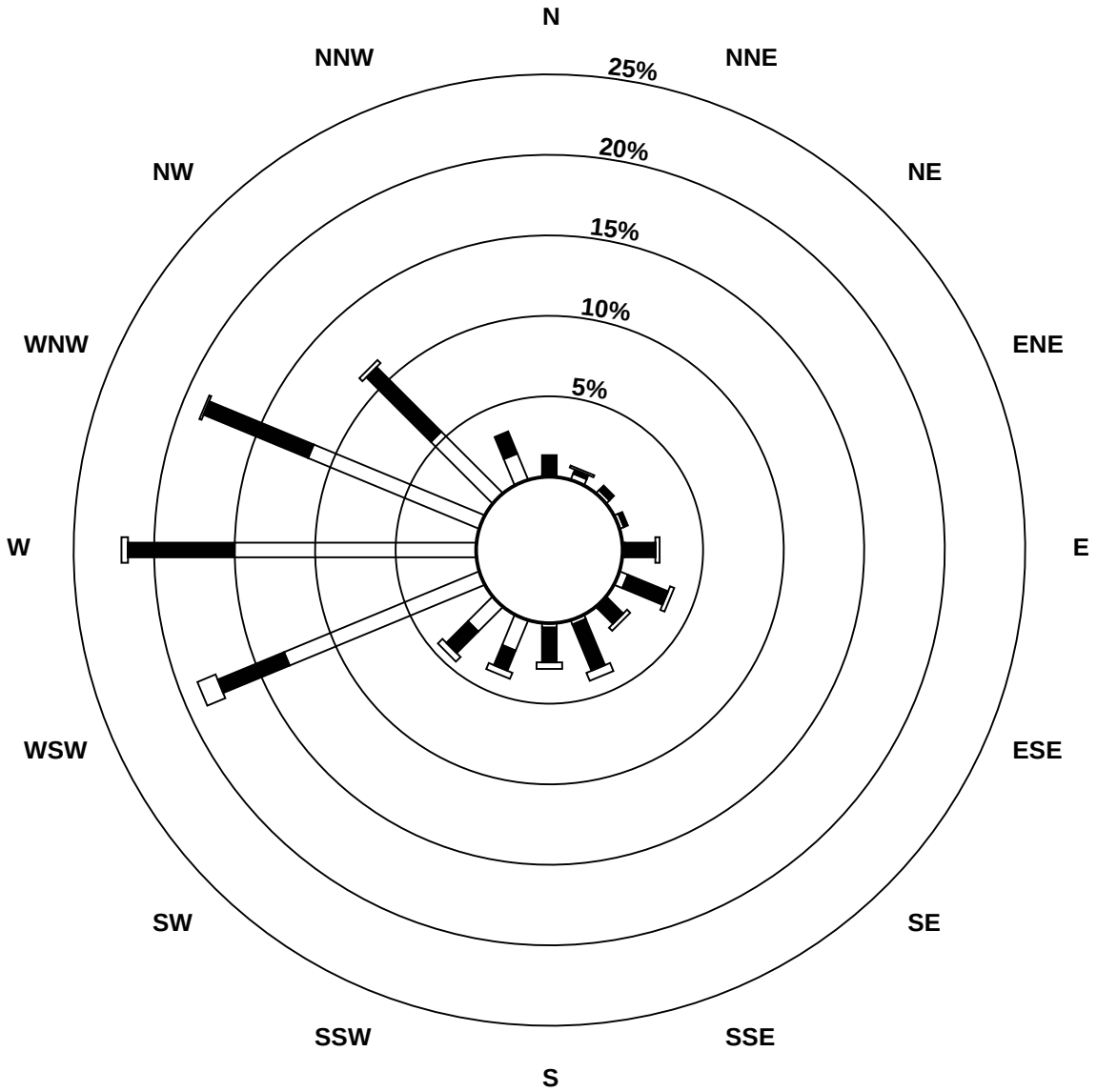
Henry Pirker - July 2010



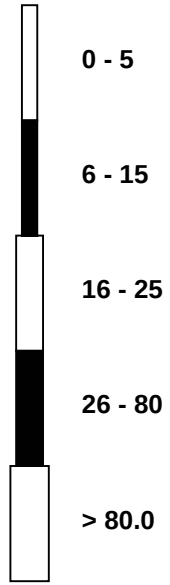
Pollutant Rose

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

Henry Pirker - July 2010



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



PASZA
Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Henry Pirker - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 30.9 ^{o}C on Jul 8 17:00 Maximum Daily Average: 23.3 ^{o}C on Jul 8

Minimum Value: 7 ^{o}C on Jul 1 06:00 Minimum Daily Average: 13.3 ^{o}C on Jul 1
Maximum Diurnal Average: 23.4 ^{o}C at hour 16 Minimum Diurnal Average: 11.5 ^{o}C at hour 5
Monthly Average: 17.89 ^{o}C Percentiles: P_1 = 8.6 P_{10} = 11.1 Q_1 = 13.8 Median = 17.5 Q_3 = 21.6 P_{90} = 25.4 P_{99} = 29.4

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

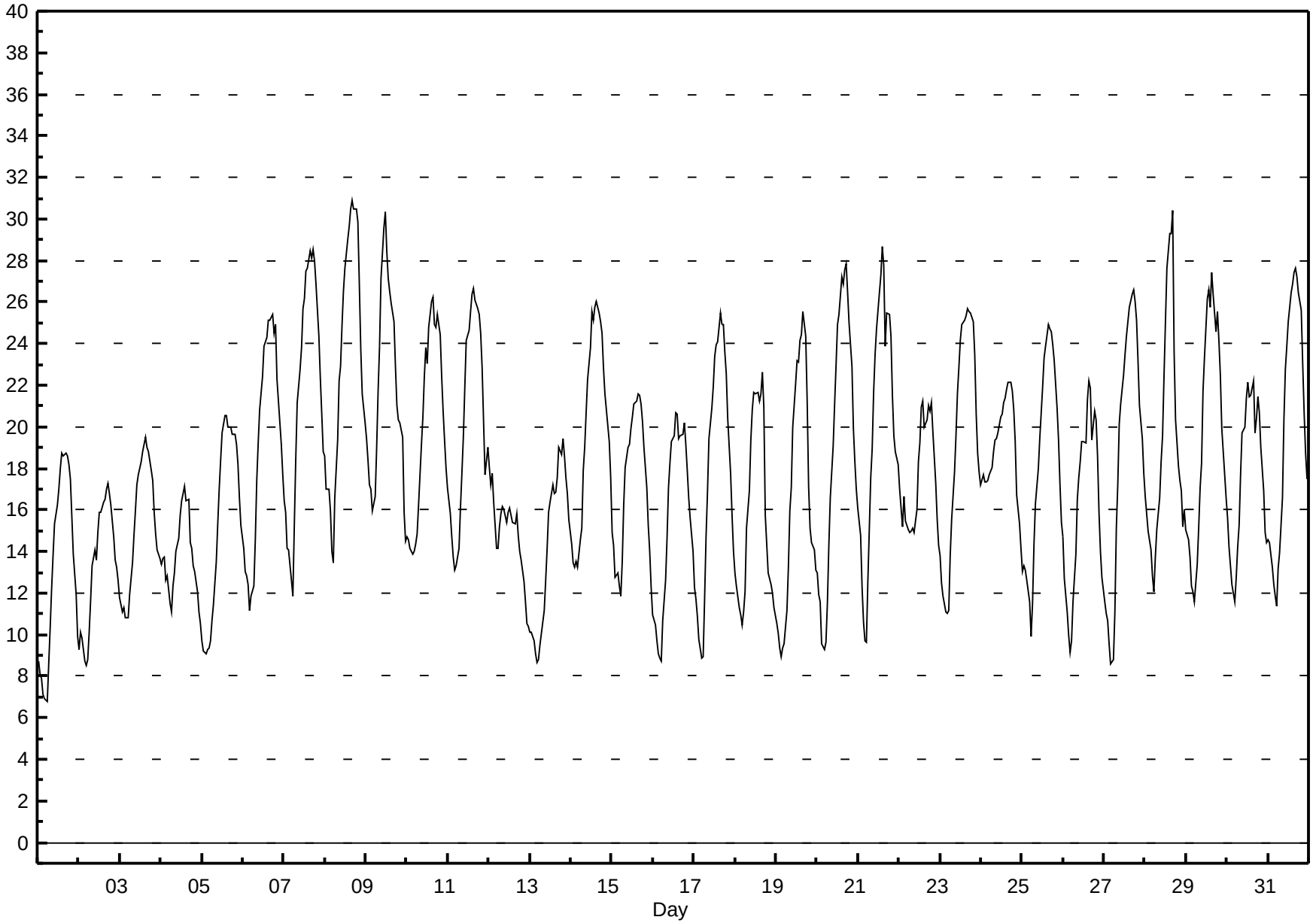
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Jul	9	8	8	7	7	7	9	10	12	14	15	16	17	18	19	19	19	19	18	17	16	14	12	10	13.3	18.8
2-Jul	9	10	10	9	9	9	10	12	13	14	14	15	16	16	16	17	17	17	17	16	15	14	13	13	13.3	17.3
3-Jul	12	11	11	11	11	11	12	13	15	16	17	18	18	19	19	19	19	19	18	17	16	15	14	14	15.2	19.5
4-Jul	13	14	14	13	13	12	11	12	13	14	15	16	16	17	17	16	17	14	14	13	13	12	11	11	13.8	17.2
5-Jul	10	9	9	9	9	10	11	11	14	15	17	18	20	21	21	20	20	20	20	20	19	18	17	15	15.5	20.6
6-Jul	14	13	13	12	11	12	12	15	17	19	21	22	24	24	24	25	25	25	24	25	22	21	19	18	19.2	25.4
7-Jul	16	16	14	14	13	12	15	18	21	23	24	26	26	28	28	28	28	29	28	27	24	22	21	19	21.6	28.5
8-Jul	19	17	17	16	14	13	17	19	22	23	25	27	28	29	30	31	31	30	30	30	27	24	22	20	23.3	30.9
9-Jul	19	18	17	17	16	17	19	22	24	27	30	30	28	27	27	26	25	23	21	20	20	20	16	14	21.8	30.3
10-Jul	15	15	14	14	14	14	15	16	19	20	22	24	23	25	26	26	25	25	25	24	22	21	19	18	20.1	26.3
11-Jul	17	16	15	14	13	13	14	16	18	20	22	24	25	26	26	27	26	26	25	24	23	20	18	19	20.2	26.7
12-Jul	18	17	18	16	14	14	15	16	16	16	15	16	16	16	15	15	16	15	14	14	13	12	11	10	14.9	18.1
13-Jul	10	10	10	9	9	9	9	11	11	13	14	16	16	17	17	17	18	19	19	19	19	18	17	16	14.2	19.5
14-Jul	14	13	13	13	13	15	15	18	19	21	22	24	26	25	26	26	25	25	25	23	22	21	19	18	20.0	26.1
15-Jul	15	14	13	13	12	12	14	16	18	19	19	20	20	21	21	22	22	21	20	19	17	15	14	12	17.1	21.6
16-Jul	11	10	10	9	9	9	11	13	15	17	18	19	20	21	21	19	20	20	20	19	18	17	16	14	15.6	20.7
17-Jul	12	12	11	10	9	9	12	15	17	19	21	22	23	24	24	26	25	25	24	23	20	18	16	14	17.9	25.5
18-Jul	13	12	11	11	10	11	12	15	17	19	21	22	22	22	21	22	23	21	16	13	13	12	12	11	15.9	22.6
19-Jul	11	10	9	9	9	10	11	13	16	17	20	22	23	23	24	24	26	24	21	17	15	14	14	13	16.5	25.5
20-Jul	13	12	12	10	9	10	11	14	17	19	21	23	25	25	27	27	28	28	26	25	23	20	18	17	19.2	27.8
21-Jul	16	15	12	11	10	10	13	18	19	22	23	25	26	27	29	28	24	25	25	24	22	20	19	18	20.0	28.6
22-Jul	17	16	15	17	15	15	15	15	15	15	16	18	19	21	21	20	20	21	21	21	20	17	16	14	17.6	21.2
23-Jul	14	12	12	11	11	11	14	16	18	20	22	23	24	25	25	25	26	26	25	25	23	21	19	18	19.4	25.7
24-Jul	17	18	17	17	17	18	18	19	19	19	20	20	21	21	21	22	22	22	22	21	19	17	15	14	19.1	22.2
25-Jul	13	13	13	13	12	10	11	14	16	18	19	21	22	23	24	25	25	25	24	23	21	19	17	15	18.2	24.9
26-Jul	15	13	11	10	9	10	12	14	16	18	18	19	19	19	21	22	22	19	21	20	19	16	14	13	16.2	22.2
27-Jul	12	11	11	10	9	9	11	15	17	20	21	22	23	24	25	26	26	27	26	25	23	21	19	18	18.8	26.6
28-Jul	17	16	15	14	13	12	14	15	17	18	20	22	25	28	29	29	30	24	20	18	17	17	15	16	19.2	30.4
29-Jul	15	15	14	12	12	12	13	15	17	18	22	23	26	27	26	27	26	25	26	24	23	20	19	17	19.7	27.4
30-Jul	16	14	13	12	12	13	14	15	18	20	20	21	22	21	22	22	20	20	21	21	19	17	15	14	17.6	22.2
31-Jul	15	14	13	12	12	11	13	14	17	20	23	24	25	26	27	27	28	27	26	26	23	21	19	17	20.1	27.6
	14.1	13.4	12.7	12.1	11.5	11.5	13.0	15.0	16.9	18.5	19.9	21.3	22.1	22.8	23.2	23.4	23.3	22.7	22.1	21.1	19.5	17.8	16.3	15.2	Diurnal Average	
	19.4	18.4	17.7	17.4	17.4	17.7	19.0	21.7	23.9	27.2	29.6	30.3	28.4	29.0	29.7	30.5	30.9	30.5	30.5	29.9	26.9	23.8	21.6	20.2	Diurnal Maximum	

PASZA
Peace Airlifted Zoos Association

Hourly Averages

External Temperature (ET) - ^{o}C

Henry Pirker - July 2010



PASZA
Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Henry Pirker - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 91.2 % on Jul 29 06:00 Maximum Daily Average: 76.7 % on Jul 13

Minimum Value: 22 % on Jul 1 17:00 Minimum Daily Average: 38.3 % on Jul 24
Maximum Diurnal Average: 74.4 % at hour 5 Minimum Diurnal Average: 37.3 % at hour 17
Monthly Average: 54.34 % Percentiles: P_1 = 24.1 P_{10} = 32.0 Q_1 = 39.8 Median = 52.1 Q_3 = 68.0 P_{90} = 80.8 P_{99} = 88.9

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

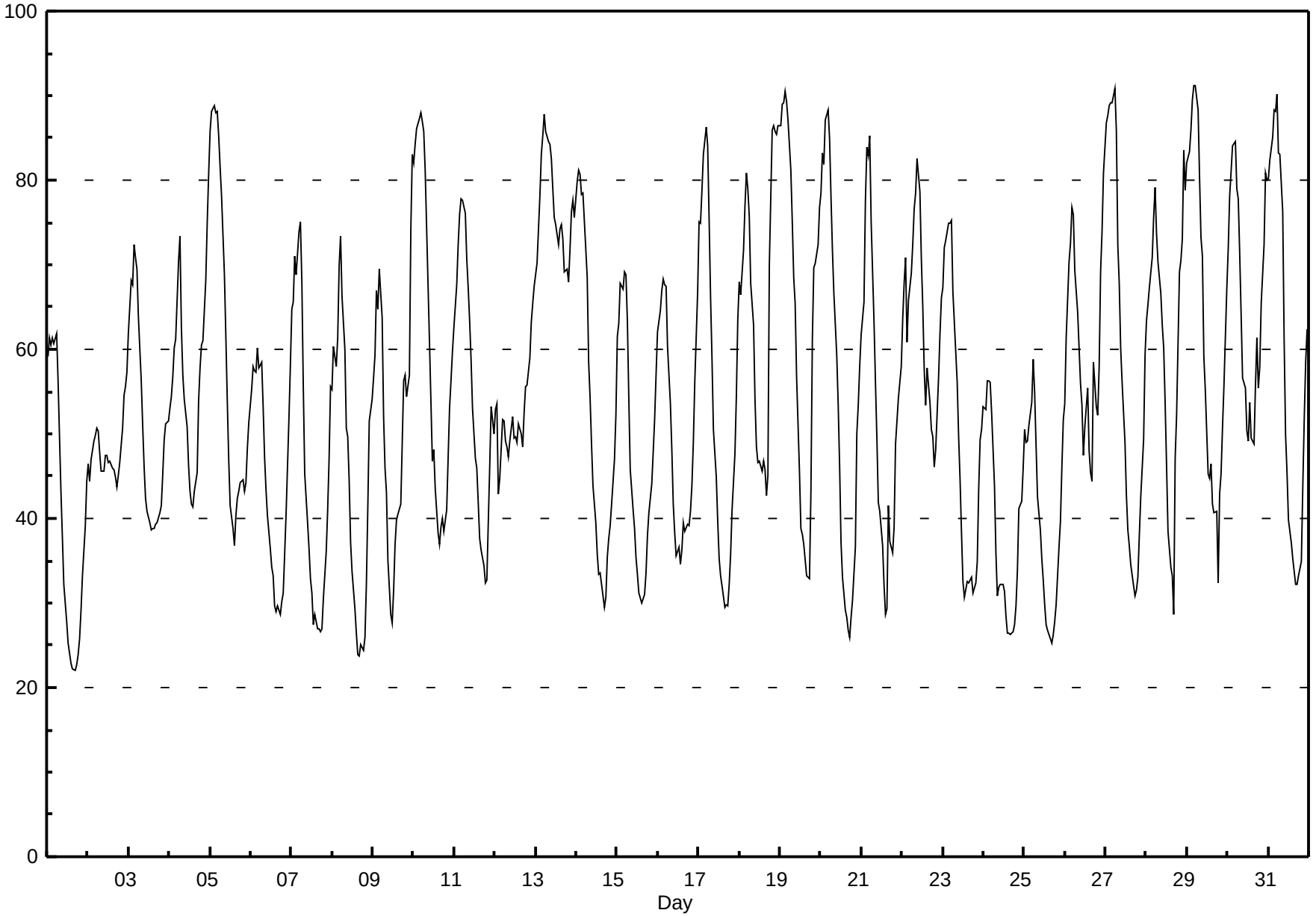
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Jul	59	61	61	61	61	62	56	50	43	38	32	28	25	24	23	22	22	23	24	26	29	33	39	44	39.5	61.9
2-Jul	46	44	47	49	50	51	50	48	46	46	47	47	47	47	46	46	45	44	45	47	51	55	56	57	48.1	57.3
3-Jul	62	68	68	72	71	70	64	56	51	46	42	41	39	39	39	39	39	39	41	42	45	49	51	52	51.0	72.4
4-Jul	53	54	57	60	61	70	73	63	57	54	51	46	43	42	41	43	45	54	58	61	61	68	75	81	57.2	80.6
5-Jul	86	88	89	88	88	85	81	78	69	62	54	47	42	39	37	40	42	43	44	45	43	44	48	51	59.7	88.9
6-Jul	55	58	58	57	60	58	59	53	47	43	40	36	34	33	30	29	30	29	30	31	36	40	52	58	44.1	60.1
7-Jul	65	66	71	69	74	75	68	56	45	39	37	33	31	28	29	27	27	27	27	30	36	41	47	56	45.9	75.0
8-Jul	55	60	58	61	70	73	66	60	51	50	44	37	34	29	26	24	24	25	24	26	32	41	52	54	44.9	73.4
9-Jul	57	59	67	65	69	64	52	46	43	35	29	28	32	37	40	40	42	49	56	57	54	57	74	83	51.5	83.1
10-Jul	82	84	86	87	88	87	86	81	68	61	54	47	48	44	38	37	39	40	38	41	47	53	56	60	60.5	88.0
11-Jul	63	68	72	76	78	78	76	71	67	63	59	53	47	46	42	38	36	34	32	33	40	46	53	50	55.0	77.8
12-Jul	53	54	43	45	52	51	49	48	47	49	52	49	50	49	51	50	49	53	56	56	59	63	65	67	52.5	67.4
13-Jul	69	70	78	83	85	88	86	85	84	83	79	76	75	72	74	75	73	69	69	68	72	76	78	76	76.7	87.8
14-Jul	80	81	81	78	78	72	68	58	54	49	44	39	36	33	34	32	29	31	35	38	39	42	47	52	51.3	81.2
15-Jul	61	63	68	67	69	69	63	54	46	41	39	35	33	31	30	31	31	34	38	41	44	48	52	57	47.7	69.1
16-Jul	62	65	67	68	68	67	60	54	48	42	38	36	37	35	36	39	39	39	39	41	44	49	56	67	49.8	68.3
17-Jul	75	75	79	83	86	84	75	66	59	50	45	40	35	33	32	29	30	30	32	36	41	48	54	63	53.4	86.2
18-Jul	68	66	72	77	81	79	76	68	63	54	48	47	47	46	47	46	43	45	70	86	86	86	86	86	65.5	86.5
19-Jul	86	89	89	90	89	87	81	75	68	65	57	46	39	38	37	35	33	33	43	61	70	70	72	77	63.9	90.5
20-Jul	79	83	82	87	88	85	78	72	67	59	54	46	37	33	29	28	27	26	28	30	37	50	53	58	54.8	88.4
21-Jul	62	66	78	84	83	85	75	63	56	50	42	41	37	32	29	29	41	37	36	39	49	52	54	58	53.2	85.3
22-Jul	64	68	71	61	66	69	72	77	78	82	79	71	65	58	53	58	54	51	50	46	48	57	62	66	63.5	82.5
23-Jul	67	72	73	75	75	75	67	63	56	50	45	38	33	31	33	32	33	33	31	32	35	44	49	51	49.7	75.2
24-Jul	53	53	56	56	56	52	44	36	31	32	32	32	31	28	26	26	26	27	27	30	34	41	42	46	38.3	56.4
25-Jul	51	49	49	51	54	59	55	49	42	39	35	33	30	27	27	26	25	26	28	30	37	40	46	52	39.9	58.8
26-Jul	54	61	70	73	77	76	69	64	60	56	53	47	51	55	48	45	44	58	53	52	58	69	74	81	60.5	80.9
27-Jul	87	88	89	89	89	91	86	72	68	60	56	49	43	39	37	35	32	31	32	33	38	43	49	59	58.0	90.9
28-Jul	63	65	67	71	76	79	74	70	67	63	60	54	46	39	34	33	29	47	52	69	70	73	84	79	61.0	83.6
29-Jul	82	83	86	90	91	91	88	80	73	71	59	55	45	45	46	42	41	41	32	43	45	51	56	67	62.7	91.2
30-Jul	72	78	81	84	85	79	78	71	64	57	55	50	49	54	50	49	56	61	55	58	65	72	81	80	66.0	84.6
31-Jul	80	82	85	88	88	90	83	83	76	61	50	45	40	37	35	34	32	32	33	35	44	52	59	62	58.7	90.1
	66.1	68.5	70.8	72.5	74.4	74.2	69.7	63.6	57.9	53.2	48.8	44.3	41.3	39.4	38.0	37.4	37.3	39.0	40.7	43.9	48.1	53.3	58.8	62.9	Diurnal Average	
	86.7	88.9	89.1	90.5	91.1	91.2	88.3	84.6	84.3	82.6	78.9	75.7	74.8	72.4	74.2	74.7	73.0	69.2	70.0	85.9	86.5	85.7	85.5	86.4	Diurnal Maximum	

PASZA
Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Henry Pirker - July 2010



PASZA
Peace Airshed Zone Association

Hourly Averages

Solar Radiation (SR) - W/m^2

Henry Pirker - July 2010

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

Maximum Value: 809.2 W/m^2 on Jul 14 13:00

Maximum Daily Average: 280.4 W/m^2 on Jul 1

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

Minimum Daily Average: 98.7 W/m^2 on Jul 13

Maximum Diurnal Average: 615.8 W/m^2 at hour 13

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

Monthly Average: 218.87 W/m^2

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 114.3 Q_3 = 391.2 P_{90} = 637.5 P_{99} = 762.1

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

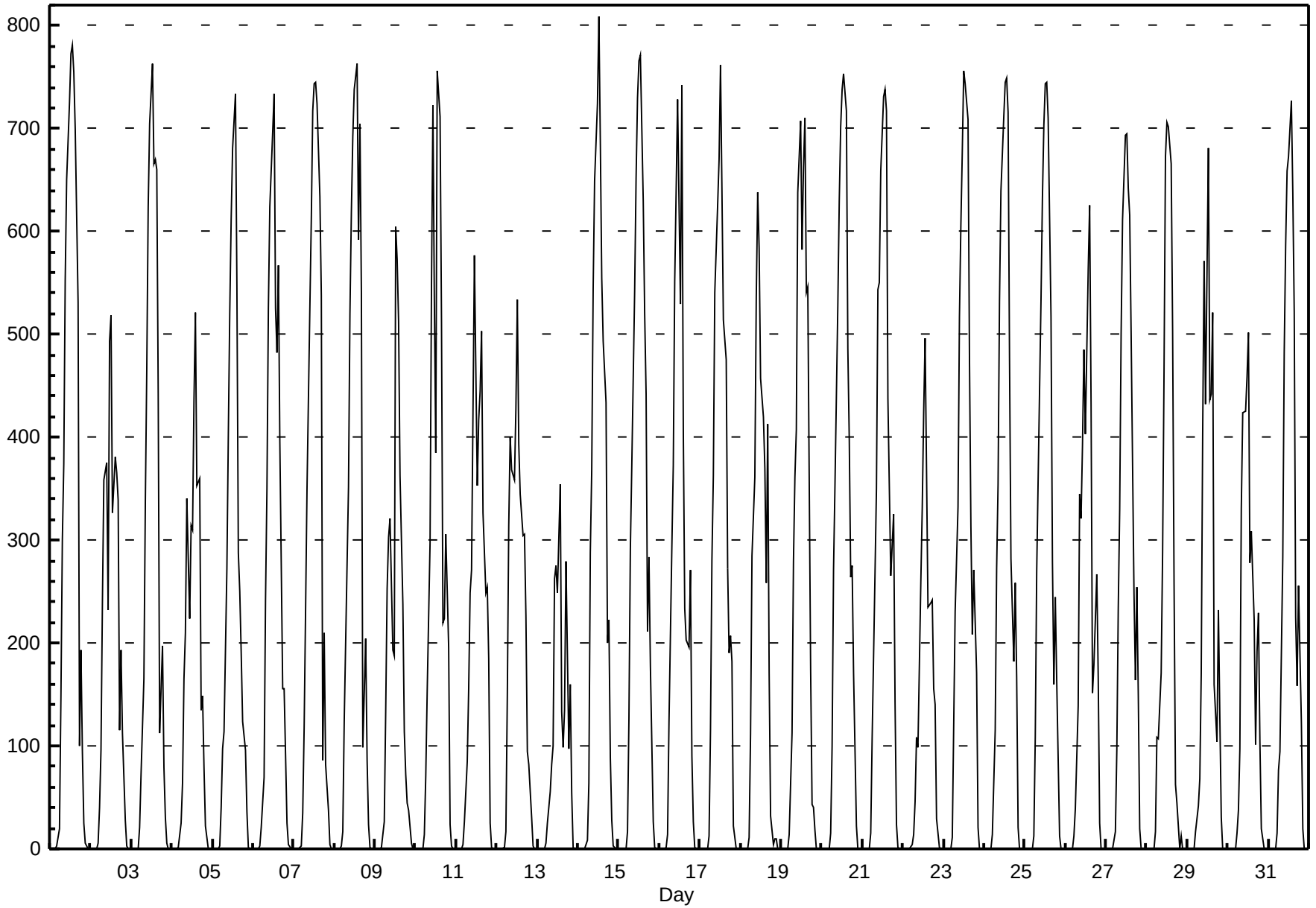
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Jul	0	0	0	0	3	19	147	301	374	553	650	725	773	781	755	700	531	100	193	94	25	6	0	0	280.4	780.6
2-Jul	0	0	0	0	5	40	96	239	358	375	232	494	519	327	381	366	340	115	193	113	27	2	0	0	175.9	518.8
3-Jul	0	0	0	0	1	20	72	165	336	466	624	705	763	665	670	660	442	112	197	79	30	5	0	0	250.5	762.5
4-Jul	0	0	0	0	1	25	64	165	210	341	223	314	310	436	521	353	360	135	148	79	22	0	0	0	154.5	520.6
5-Jul	0	0	0	0	2	41	97	115	273	401	521	613	681	733	547	288	251	190	123	96	36	1	0	0	208.7	733.2
6-Jul	0	0	0	0	3	20	70	242	350	525	624	697	734	526	482	567	397	155	156	92	26	5	0	0	236.2	733.6
7-Jul	0	0	0	0	3	35	119	232	350	526	612	717	743	744	724	634	538	86	210	82	37	4	0	0	266.6	744.3
8-Jul	0	0	0	0	3	17	124	276	351	520	618	692	738	763	592	705	541	98	204	86	24	2	0	0	264.8	762.9
9-Jul	0	0	0	0	1	27	134	253	303	321	193	188	605	573	513	363	238	113	72	45	38	5	0	0	166.0	604.6
10-Jul	0	0	0	0	1	14	71	152	297	547	722	533	385	756	712	512	219	224	306	196	24	2	0	0	236.4	755.7
11-Jul	0	0	0	0	4	26	85	155	248	271	424	577	354	417	445	504	327	249	255	185	26	2	0	0	189.7	577.4
12-Jul	0	0	0	0	1	16	148	314	400	368	359	429	534	394	344	304	305	227	94	82	31	3	0	0	181.5	534.3
13-Jul	0	0	0	0	0	5	25	56	82	99	262	275	248	354	134	99	135	279	97	160	54	2	0	0	98.7	354.4
14-Jul	0	0	0	0	0	9	63	288	369	545	649	724	809	688	554	494	433	200	223	90	27	2	0	0	257.0	809.2
15-Jul	0	0	0	0	1	17	126	291	372	542	651	730	766	772	630	520	442	211	283	179	27	1	0	0	273.4	772.0
16-Jul	0	0	0	0	2	13	124	293	373	552	639	728	530	742	407	233	204	196	271	91	26	1	0	0	226.0	742.1
17-Jul	0	0	0	0	0	12	115	281	363	540	625	671	761	641	515	476	272	190	207	181	22	0	0	0	244.7	761.1
18-Jul	0	0	0	0	0	11	112	285	361	536	638	583	457	420	370	258	413	171	31	4	10	10	0	0	194.6	638.5
19-Jul	0	0	0	0	0	14	112	280	361	408	638	707	582	663	710	541	546	174	43	40	18	0	0	0	243.2	709.9
20-Jul	0	0	0	0	0	15	100	270	352	528	630	701	738	754	717	487	398	264	276	171	23	0	0	0	267.7	753.8
21-Jul	0	0	0	0	0	15	108	268	350	544	551	659	731	739	718	438	352	265	325	142	24	1	0	0	259.6	738.6
22-Jul	0	0	0	0	0	5	13	45	109	99	259	331	424	496	369	235	239	242	156	140	29	1	0	0	133.0	496.0
23-Jul	0	0	0	0	0	11	121	231	333	517	607	678	756	743	710	479	314	209	271	171	21	0	0	0	257.2	756.5
24-Jul	0	0	0	0	0	14	116	272	354	532	639	711	745	749	715	477	282	181	258	166	21	0	0	0	259.8	749.2
25-Jul	0	0	0	0	0	12	108	269	359	532	633	704	743	745	711	517	280	160	245	163	13	0	0	0	258.1	745.0
26-Jul	0	0	0	0	0	12	39	139	345	321	392	485	403	563	625	432	151	180	267	167	26	0	0	0	189.5	625.0
27-Jul	0	0	0	0	0	16	96	234	330	500	611	693	695	643	616	500	249	164	255	151	20	0	0	0	240.5	695.4
28-Jul	0	0	0	0	0	17	108	107	171	287	465	673	706	702	666	504	258	63	45	0	12	0	0	0	199.3	705.6
29-Jul	0	0	0	0	0	17	42	68	171	403	572	433	680	436	442	521	159	105	232	127	30	0	0	0	184.9	680.5
30-Jul	0	0	0	0	0	16	37	97	331	424	426	459	502	278	308	222	102	192	230	105	19	0	0	0	156.1	501.8
31-Jul	0	0	0	0	0	15	76	95	284	482	587	659	673	727	637	521	225	158	255	122	19	0	0	0	230.6	727.1
	0.0	0.0	0.0	0.0	1.0	17.7	92.5	209.0	310.4	438.9	525.0	589.9	615.8	611.9	556.1	448.6	320.7	174.5	197.4	116.1	25.4	1.8	0.0	0.0	Diurnal Average	
	0.0	0.0	0.0	0.0	5.1	40.9	148.0	313.8	400.3	552.6	722.1	730.3	809.2	780.6	754.5	704.8	546.2	279.4	325.4	195.6	53.8	10.3	0.0	0.0	Diurnal Maximum	

PASZA
Peace Airshed Zone Association

Hourly Averages

Solar Radiation (SR) - W/m^2

Henry Pirker - July 2010



PASZA
Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - July 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	13	11	11	10	13	12	13	15	21	23	20	24	24	22	24	27	26	27	25	21	18	14	12	8	17.5	27.3
Dir	221	227	218	204	203	193	197	206	222	231	231	243	241	232	229	237	241	242	241	240	252	246	243	225	231.0	236.7
2 Spd	8	10	12	11	11	11	13	18	23	24	24	24	23	20	22	21	21	23	22	24	23	16	16	13	17.1	24.2
Dir	211	209	217	203	199	209	227	242	258	264	272	273	258	252	250	244	241	245	241	244	247	240	247	256	245.1	272.7
3 Spd	13	9	11	6	7	9	11	16	22	25	27	28	27	27	28	28	30	29	30	28	23	12	12	13	19.4	30.1
Dir	255	268	252	271	282	275	273	273	257	253	259	253	260	251	247	250	249	251	251	247	249	235	238	235	253.3	250.9
4 Spd	15	17	13	9	20	20	16	22	26	26	24	24	24	27	31	27	27	24	21	22	19	16	12	10	20.0	31.3
Dir	239	255	266	251	253	249	239	246	249	250	263	278	273	256	253	257	269	267	278	279	279	278	280	280	261.6	253.3
5 Spd	12	14	14	14	11	10	13	12	19	19	20	21	21	24	23	16	19	20	15	11	11	16	19	14	15.5	24.3
Dir	288	279	280	260	278	287	296	297	293	296	296	294	294	293	292	291	270	276	278	268	264	247	248	240	280.7	293.1
6 Spd	13	8	11	13	11	12	11	14	16	18	15	13	13	13	16	15	13	15	12	7	4	4	5	4	10.8	17.7
Dir	237	273	275	266	281	257	262	259	274	275	279	281	288	293	292	290	293	304	308	281	240	208	232	286	276.9	275.4
7 Spd	5	4	6	4	4	5	5	7	10	13	12	8	8	6	8	9	9	7	6	4	2	5	4	4	5.4	13.0
Dir	312	282	285	270	267	293	286	295	299	288	278	279	275	301	270	275	285	305	313	295	175	177	165	159	281.0	288.2
8 Spd	4	6	4	3	1	5	7	8	4	10	8	6	4	4	4	5	7	7	5	3	5	3	3	5	1.1	9.8
Dir	101	147	67	113	239	323	335	334	160	186	207	187	140	162	287	309	292	272	300	282	164	118	90	141	212.4	185.7
9 Spd	5	4	2	7	5	5	7	11	12	C	C	C	16	17	14	13	13	7	4	8	3	6	13	9	4.9	16.6
Dir	120	89	235	262	283	250	244	253	292	C	C	C	317	344	4	2	10	354	338	290	180	7	2	78	332.3	344.3
10 Spd	3	5	7	5	4	5	5	4	2	4	2	4	1	3	3	3	4	5	5	9	9	8	7	6	0.8	8.9
Dir	243	273	347	317	349	339	301	330	128	153	144	277	277	307	5	113	195	150	114	119	122	131	137	141	131.8	121.6
11 Spd	7	6	5	5	6	5	5	5	6	7	10	12	14	8	16	24	21	21	21	20	11	6	4	7	7.2	23.6
Dir	135	151	161	160	166	163	146	169	161	169	175	175	205	215	265	262	256	269	275	266	280	272	203	244	231.0	262.2
12 Spd	8	9	13	13	13	16	26	33	30	23	21	20	23	23	24	21	23	22	19	23	20	21	20	20	19.2	33.0
Dir	256	255	273	264	253	253	271	280	282	298	311	310	314	298	298	299	296	284	300	307	306	306	302	312	292.0	280.3
13 Spd	21	21	20	19	18	17	22	20	22	19	21	21	20	22	20	19	18	20	19	14	9	7	9	11	17.5	22.4
Dir	300	299	299	298	302	304	316	314	315	312	317	315	308	311	304	305	303	294	302	306	296	291	266	266	304.3	315.7
14 Spd	7	7	7	7	6	10	9	12	16	20	21	18	13	14	15	19	21	21	26	25	18	17	10	7	14.3	26.0
Dir	255	265	274	266	291	263	278	272	264	262	260	260	254	252	257	253	259	261	268	260	262	260	249	239	261.1	268.3
15 Spd	5	6	6	6	10	11	9	14	22	25	29	27	30	28	26	24	23	25	24	26	26	19	19	11	18.4	29.7
Dir	254	238	217	247	253	254	242	259	270	278	273	272	271	268	271	274	267	278	279	281	274	269	265	255	268.9	271.2
16 Spd	11	11	11	12	11	12	11	16	21	19	19	20	17	18	15	14	17	15	16	18	16	10	7	4	13.1	20.6
Dir	252	249	247	242	243	256	282	261	262	285	288	289	294	299	310	279	286	300	302	283	262	244	322	318	277.8	262.1
17 Spd	4	4	5	6	5	5	5	7	6	7	8	11	9	8	6	4	6	6	9	14	9	4	3	2	5.0	14.1
Dir	282	303	340	334	320	309	290	249	263	284	291	295	300	326	326	273	312	296	331	352	21	62	111	164	313.0	352.4
18 Spd	5	10	9	6	6	6	8	9	10	7	2	7	8	9	11	11	11	9	5	5	7	4	5	7	4.7	10.9
Dir	324	338	333	321	301	243	253	281	288	307	310	299	302	276	259	300	304	50	116	174	157	181	280	327	294.2	299.9
19 Spd	6	4	3	4	7	8	10	10	9	8	9	8	7	12	11	8	6	7	2	13	8	5	4	3	5.5	13.4
Dir	300	292	299	224	238	257	258	260	268	246	245	284	283	298	322	15	41	16	328	251	265	245	261	285	277.8	251.4
20 Spd	3	3	4	3	1	4	8	8	5	5	6	6	4	5	3	2	3	0	4	9	9	10	10	6	2.2	10.1
Dir	258	206	270	291	277	229	259	258	242	218	225	205	235	180	280	321	254	138	42	123	112	109	121	164	201.0	120.8
21 Spd	3	4	4	2	4	3	2	1	7	8	6	9	8	9	6	7	18	6	9	11	11	7	4	7	2.5	18.2
Dir	119	85	303	314	341	292	293	207	213	239	197	151	169	149	161	271	325	94	124	146	176	162	105	115	169.4	325.1
22 Spd	6	3	3	7	7	5	3	7	12	9	6	6	7	9	9	14	11	10	10	12	14	14	15	13	7.6	15.4
Dir	107	216	284	253	285	233	219	257	272	275	308	319	305	314	290	240	242	235	254	289	266	259	257	258	265.3	257.1

PASZA
Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - July 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	12	8	9	8	8	9	10	10	13	15	12	15	14	16	22	23	26	24	22	18	14	6	7	7	12.9	25.6
Dir	257	243	253	273	265	274	265	258	259	260	246	231	235	242	266	265	272	278	276	267	261	237	196	179	258.1	272.0
24 Spd	5	8	7	11	14	16	17	21	23	24	29	26	31	31	32	30	28	29	28	26	20	13	16	12	20.2	31.9
Dir	210	262	256	250	262	271	271	278	294	289	279	281	277	262	268	265	261	261	260	273	269	285	296	298	272.0	268.5
25 Spd	14	14	13	11	9	5	12	15	23	19	18	16	14	13	14	14	16	16	14	15	10	11	12	11	13.2	22.6
Dir	293	284	288	281	263	247	254	263	274	285	293	282	267	274	274	293	288	286	297	301	280	270	250	255	278.7	273.5
26 Spd	9	5	4	4	4	3	5	9	20	18	18	17	22	21	16	13	14	12	19	14	10	7	7	4	11.1	21.5
Dir	289	319	302	312	335	287	247	298	318	318	311	332	305	289	301	306	298	325	299	309	317	318	320	317	308.1	305.4
27 Spd	5	2	2	2	3	3	2	3	1	4	7	8	9	8	10	10	7	7	8	9	9	8	12	11	4.4	11.5
Dir	308	33	280	309	301	296	305	318	4	97	121	122	138	113	106	111	105	91	102	91	95	87	98	97	100.1	97.7
28 Spd	9	8	6	4	4	2	2	3	2	3	5	5	4	4	0	3	3	20	25	8	8	5	8	11	0.9	24.6
Dir	87	87	83	79	56	307	299	27	287	203	191	145	204	273	85	153	259	321	350	281	65	245	213	208	325.9	350.3
29 Spd	4	3	2	1	2	3	7	7	3	10	8	6	5	5	8	8	8	13	10	11	13	8	6	4	3.4	13.1
Dir	311	91	347	167	169	311	257	322	40	179	204	244	254	226	171	164	153	171	192	224	310	282	286	223	222.7	170.6
30 Spd	5	2	1	3	5	5	7	12	12	11	14	12	11	15	9	13	10	11	12	10	9	4	3	6	7.1	14.8
Dir	219	214	121	312	305	252	255	258	246	246	246	258	267	302	330	315	304	245	238	238	251	268	323	306	267.5	302.3
31 Spd	6	6	6	4	4	3	4	5	7	6	5	6	4	5	1	4	4	3	5	2	6	6	5	4	2.9	7.0
Dir	298	300	314	291	309	284	310	302	294	308	308	309	329	329	19	310	273	302	341	303	142	165	169	175	296.4	294.1
Spd	4.9	4.7	5.3	5.4	5.8	6.6	7.8	9.8	11.8	11.6	11.6	11.1	11.6	11.3	11.5	11.4	12.1	11.2	10.7	10.4	7.7	5.9	5.3	4.4	Diurnal Average	
Dir	260.2	264.7	273.8	264.6	266.9	261.8	266.2	270.1	271.2	269.0	270.1	273.1	274.0	274.3	275.3	272.7	274.2	274.4	278.4	269.8	263.5	256.2	258.3	248.9		
Spd	20.6	21.4	19.5	18.8	20.1	20.4	25.7	33.0	29.8	25.8	29.0	27.9	31.5	30.9	31.9	30.4	29.9	29.2	30.1	28.5	26.5	20.5	20.1	20.3	Diurnal Maximum	
Dir	299.7	299.2	298.9	298.2	252.6	248.7	270.7	280.3	282.4	250.0	278.6	253.1	276.7	262.3	268.5	264.6	248.7	250.6	250.9	247.1	274.2	305.8	302.3	312.1		

Maximum Speed Value: 33 km/h on Jul 12 08:00
Minimum Speed Value: 0 km/h on Jul 28 15:00
Maximum Daily Speed Average: 20.2 km/h on Jul 24
Minimum Daily Speed Average: 0.8 km/h on Jul 31
Maximum Diurnal Speed Average: 12.1 km/h at hour 17
Minimum Diurnal Speed Average: 4.4 km/h at hour 24

Monthly Average Velocity: 8.69 km/h 269.75 deg
Speed Percentiles: P_1 = 1.4 P_{10} = 3.6 Q_1 = 5.5 Median = 9.7 Q_3 = 16.2 P_{90} = 23.0 P_{99} = 29.8
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:	100.0

C - Calibration

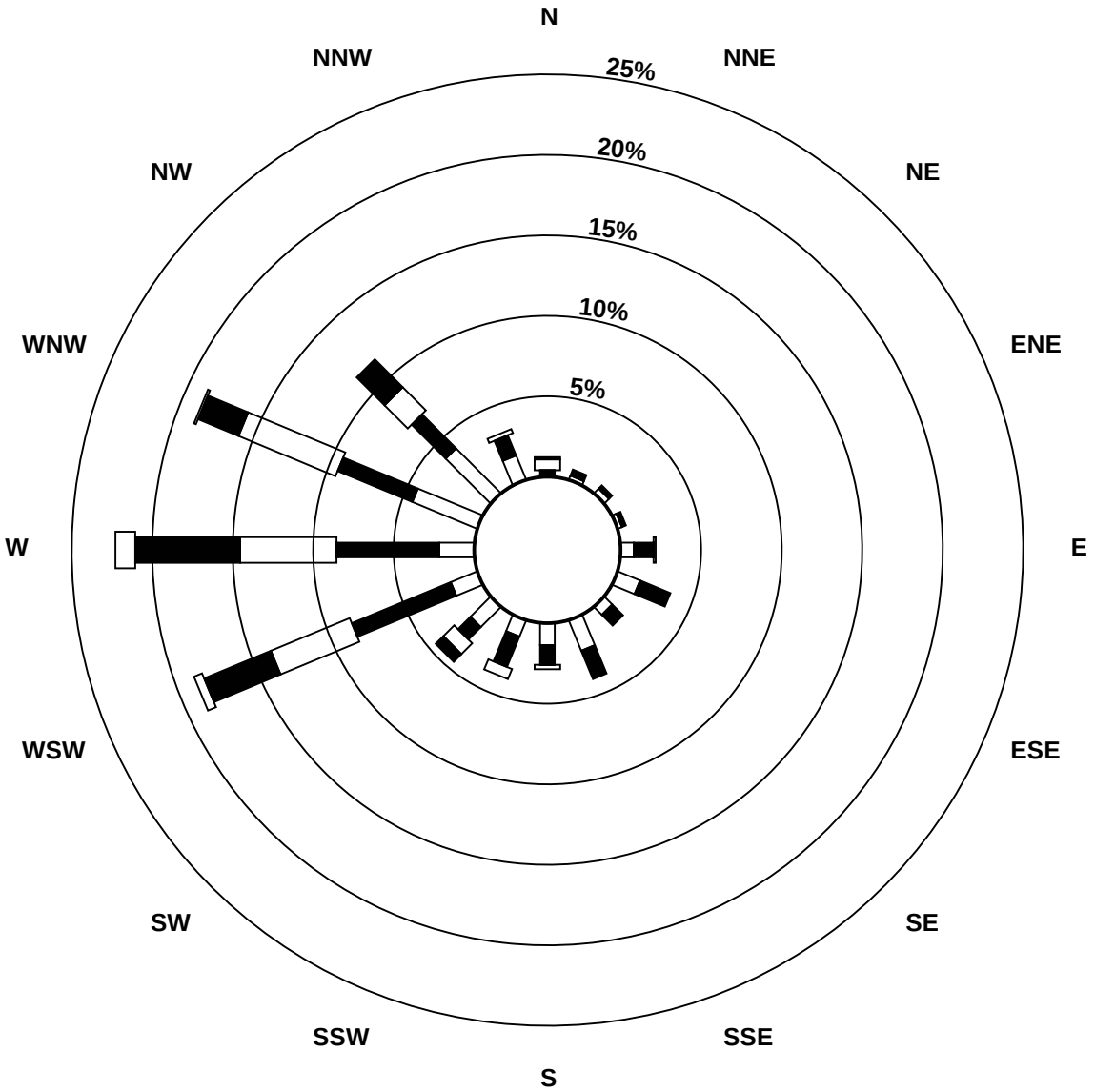
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	8	9	6	1	0	0	24
NorthEast	7	3	0	0	0	0	10
East	10	16	2	0	0	0	28
SouthEast	15	25	0	0	0	0	40
South	15	26	5	0	0	0	46
SouthWest	23	42	31	20	1	0	117
West	33	98	84	72	17	0	304
NorthWest	46	49	39	38	0	0	172
Total	157	268	167	131	18	0	741

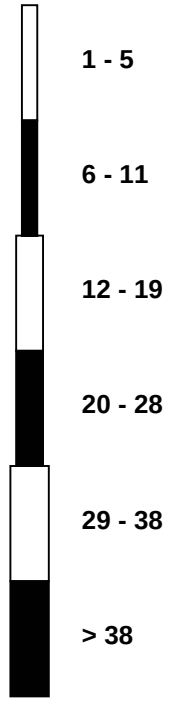
Wind Rose

Wind Speed (WS) (km/h)

Henry Pirker - July 2010



Wind Speed Classes (km/h)



PASZA
Peace Airshed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Henry Pirker - July 2010

Maximum Speed: 33 km/h on Jul 12 08:00

Maximum Daily Speed Average: 21.2 km/h on Jul 24

Minimum Speed: 3 km/h on Jul 27 07:00

Minimum Daily Speed Average: 5.8 km/h on Jul 31

Maximum Diurnal Speed Average: 15.8 km/h at hour 15

Minimum Diurnal Speed Average: 7.5 km/h at hour 4

Monthly Average Speed: 12.22 km/h

Percentiles: P_1 = 3.0 P_{10} = 4.7 Q_1 = 6.6 Median = 10.3 Q_3 = 16.4 P_{90} = 23.3 P_{99} = 29.8

Hours in Service:	744
Hours of Data:	741
Hours of Missing Data:	3
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-Jul	13	11	12	10	13	12	13	15	21	24	21	25	25	23	25	28	27	27	26	22	18	14	12	8	18.5	27.9
2-Jul	8	10	12	11	11	11	13	18	23	24	24	24	23	20	23	22	21	23	22	24	23	16	16	14	18.3	24.4
3-Jul	14	10	11	6	7	9	11	16	22	26	27	28	28	27	28	28	30	30	30	29	23	13	12	14	20.0	30.4
4-Jul	15	17	13	9	20	21	16	23	27	26	24	24	24	27	32	28	28	24	22	22	19	16	12	10	20.8	31.7
5-Jul	12	14	14	14	11	10	13	12	19	19	20	21	22	25	24	17	19	20	16	11	11	16	19	15	16.4	24.6
6-Jul	13	10	11	14	11	12	11	14	16	18	16	13	14	14	16	16	14	15	12	7	5	4	5	6	11.9	17.9
7-Jul	6	5	6	4	4	5	5	7	10	13	12	9	9	9	10	9	11	8	6	4	4	5	4	5	7.1	13.3
8-Jul	5	6	5	4	3	5	7	8	6	10	9	7	7	7	7	7	8	7	6	4	5	4	3	5	6.1	10.3
9-Jul	5	4	4	8	5	5	7	11	12	C	C	C	17	17	15	14	13	10	7	9	5	10	15	10	9.7	17.3
10-Jul	5	7	7	5	4	5	5	5	4	5	5	5	5	6	7	5	5	6	6	9	9	8	7	6	5.9	9.2
11-Jul	7	6	5	6	6	5	5	5	6	7	11	13	14	10	17	24	21	22	22	20	11	6	5	7	10.9	24.1
12-Jul	8	9	13	13	13	16	26	33	30	24	21	21	23	23	24	22	24	22	20	23	20	21	20	21	20.4	33.1
13-Jul	21	21	20	19	18	17	23	20	22	19	21	21	20	22	20	19	18	20	19	14	9	7	9	11	17.9	22.5
14-Jul	7	7	7	7	6	10	9	12	17	20	22	19	15	15	16	20	22	21	26	25	19	17	10	8	14.8	26.4
15-Jul	6	6	6	7	10	11	9	14	22	25	29	28	30	29	27	24	24	25	24	26	27	19	19	11	19.1	30.1
16-Jul	11	11	11	12	12	12	12	16	21	19	20	20	18	18	16	15	17	15	17	18	17	10	10	4	14.7	20.8
17-Jul	4	4	6	6	5	5	6	7	7	8	9	11	10	9	8	7	7	7	10	14	10	5	4	3	7.2	14.4
18-Jul	5	10	9	6	6	6	8	9	10	8	6	8	9	10	12	11	12	9	9	6	7	5	6	7	8.2	12.3
19-Jul	6	4	4	5	7	9	10	10	9	8	9	9	9	13	14	9	8	8	11	14	8	6	5	4	8.3	14.3
20-Jul	4	4	5	4	3	4	8	8	6	6	6	6	7	7	6	7	5	4	6	9	9	10	10	8	6.4	10.2
21-Jul	4	4	4	4	5	3	3	3	7	8	7	9	9	10	8	12	19	9	10	11	12	7	5	7	7.5	18.6
22-Jul	6	5	4	7	8	6	5	8	12	9	7	7	7	9	10	14	11	11	11	13	14	15	15	13	9.5	15.5
23-Jul	12	8	9	8	8	9	10	10	14	16	13	15	15	18	23	23	26	24	22	18	14	6	7	7	14.0	26.0
24-Jul	6	9	7	11	14	16	17	21	23	25	29	27	32	32	32	31	29	29	29	26	20	14	17	12	21.2	32.4
25-Jul	14	14	14	11	9	6	12	15	23	19	18	16	15	14	15	14	16	16	15	15	10	11	13	12	14.0	22.8
26-Jul	11	6	5	4	4	4	6	9	20	19	18	18	22	21	17	14	15	13	19	15	10	7	7	4	12.0	21.8
27-Jul	5	3	3	3	3	4	3	3	4	5	8	10	10	10	11	10	9	8	8	10	9	8	12	11	7.0	11.6
28-Jul	9	8	6	5	4	3	4	5	5	5	6	6	5	5	5	8	5	21	25	13	9	9	9	11	7.9	24.9
29-Jul	7	4	5	3	4	4	8	7	8	10	8	7	7	7	8	9	8	13	11	12	14	10	7	5	7.9	14.3
30-Jul	5	5	3	4	5	7	9	12	12	11	14	13	11	16	10	14	11	11	13	10	9	5	4	7	9.2	16.2
31-Jul	6	7	6	5	4	3	5	5	7	7	6	7	7	7	6	7	6	5	7	4	7	6	5	4	5.8	7.5
	8.4	8.1	8.0	7.5	7.9	8.3	9.6	11.7	14.4	14.8	14.9	14.9	15.1	15.5	15.8	15.8	15.7	15.7	15.6	14.7	12.5	10.0	9.8	8.7	Diurnal Average	
	20.7	21.5	19.6	18.8	20.2	20.5	25.8	33.1	30.0	26.0	29.5	28.4	32.2	31.7	32.4	31.1	30.2	29.7	30.4	28.6	26.7	20.7	20.2	20.5	Diurnal Maximum	

C - Calibration

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

PASZA
Peace Airshed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Henry Pirker - July 2010

Maximum Value: 101.6 deg on Jul 20 18:00

Minimum Value: 3.9 deg on Jul 13 04:00

Percentiles: P_1 = 4.8 P_{10} = 6.9 Q_1 = 9.4 Median = 14.2 Q_3 = 29.8 P_{90} = 52.3 P_{99} = 82.0

Hours in Service:	744
Hours of Data:	741
Hours of Missing Data:	3
Hours of Calibration:	3
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-Jul	8	9	8	10	8	9	9	13	13	14	13	12	12	19	13	12	12	9	9	8	8	5	6	9	18.7
2-Jul	10	7	6	10	9	8	11	8	11	11	8	9	13	11	11	13	12	11	7	7	6	7	7	16	15.9
3-Jul	11	17	6	11	5	7	7	12	8	9	10	11	11	11	10	11	9	10	8	7	8	8	9	8	17.0
4-Jul	8	8	12	10	8	7	7	7	6	8	10	9	10	9	9	9	17	13	14	11	5	4	7	6	17.3
5-Jul	6	6	6	12	10	7	9	8	6	8	9	11	10	9	11	12	9	7	5	7	8	6	5	9	12.1
6-Jul	7	36	14	10	9	7	9	7	11	9	14	20	20	16	11	18	18	12	11	9	41	11	14	44	44.2
7-Jul	31	28	10	26	25	14	11	13	13	11	14	33	33	55	33	31	30	34	31	22	69	8	9	39	68.8
8-Jul	37	15	36	37	75	30	14	17	72	18	29	40	73	63	60	61	33	30	34	26	15	36	26	20	75.2
9-Jul	14	41	65	39	26	17	16	18	11	C	C	C	17	17	18	22	17	52	63	46	63	62	31	31	65.1
10-Jul	62	43	17	18	30	27	12	29	73	46	85	40	78	71	72	82	46	36	39	21	11	7	10	9	84.7
11-Jul	8	10	14	11	11	10	10	20	21	14	15	15	16	40	20	12	10	11	14	7	8	21	24	12	39.8
12-Jul	15	11	13	13	7	18	7	6	6	14	12	10	9	12	11	8	6	11	10	8	7	6	6	8	17.6
13-Jul	5	5	5	4	5	5	5	5	6	7	7	7	9	7	6	6	7	7	6	8	5	18	11	8	18.2
14-Jul	12	16	16	12	10	8	11	10	12	10	11	13	24	23	18	15	14	12	10	6	6	5	10	15	23.9
15-Jul	31	16	10	24	15	10	17	9	11	10	10	11	10	13	11	12	12	10	8	7	7	6	9	9	31.4
16-Jul	10	7	9	7	7	10	26	9	9	14	14	15	16	16	18	24	17	9	14	12	9	7	47	32	47.4
17-Jul	13	29	10	14	17	14	29	17	23	31	24	21	36	36	37	61	39	31	19	12	13	45	61	62	62.2
18-Jul	53	10	8	13	13	16	17	15	20	34	80	36	33	24	29	17	24	19	59	53	33	41	30	9	80.4
19-Jul	11	29	50	35	15	13	9	8	16	21	21	21	31	20	43	36	47	34	88	16	21	18	34	36	88.4
20-Jul	46	34	49	36	68	14	12	15	23	34	29	32	51	40	71	81	72	102	54	15	17	9	7	39	101.6
21-Jul	43	19	53	70	33	29	59	83	18	19	38	19	31	29	45	64	12	54	22	14	22	14	37	13	83.1
22-Jul	23	62	68	12	23	38	51	19	12	17	22	36	25	19	29	13	15	23	26	15	9	7	6	5	67.9
23-Jul	8	9	11	10	9	10	12	14	14	15	21	17	20	24	15	11	10	8	9	8	8	14	12	13	24.2
24-Jul	31	29	18	9	8	6	6	8	8	12	10	11	12	13	10	12	12	10	8	9	7	11	5	6	31.4
25-Jul	5	4	5	6	29	48	10	9	8	13	11	13	18	23	23	20	15	17	13	11	10	13	8	7	48.4
26-Jul	40	27	44	20	16	43	20	23	10	10	10	16	10	9	16	14	18	19	8	10	8	14	7	32	44.0
27-Jul	24	52	74	51	31	38	62	32	82	42	35	30	32	52	27	29	39	34	25	11	7	6	5	6	81.6
28-Jul	9	10	10	25	23	53	63	71	82	50	31	55	47	43	96	77	65	37	8	61	35	65	32	19	95.9
29-Jul	56	45	84	81	61	57	25	29	76	14	23	27	45	55	28	30	19	13	25	19	26	34	35	42	84.2
30-Jul	29	76	65	65	20	42	53	7	10	14	14	21	21	23	17	13	28	13	12	13	10	47	41	27	75.7
31-Jul	12	30	14	24	14	24	24	17	16	34	39	42	60	58	96	71	57	68	50	69	18	6	4	6	95.9
	62.2	75.7	84.2	80.6	75.2	57.3	62.8	83.1	82.0	50.4	84.7	55.0	78.1	71.1	95.9	81.9	71.8	101.6	88.4	69.2	68.8	65.2	61.3	62.2	

C - Calibration

PASZA
Evergreen Park Station
Monthly Summary Tables, Graphs and Roses

PASZA
Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7.9 ppb on Jul 15 10:00 Maximum Daily Average: 1.4 ppb on Jul 14

Minimum Value: 0 ppb on Jul 1 04:00 Minimum Daily Average: 0.0 ppb on Jul 2
Maximum Diurnal Average: 0.9 ppb at hour 9 Minimum Diurnal Average: 0.0 ppb at hour 5
Monthly Average: 0.28 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.0$ Median = 0.1 $Q_3 = 0.2$ $P_{90} = 0.5$ $P_{99} = 4.6$

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	33
Percent Operational Time:	99.7

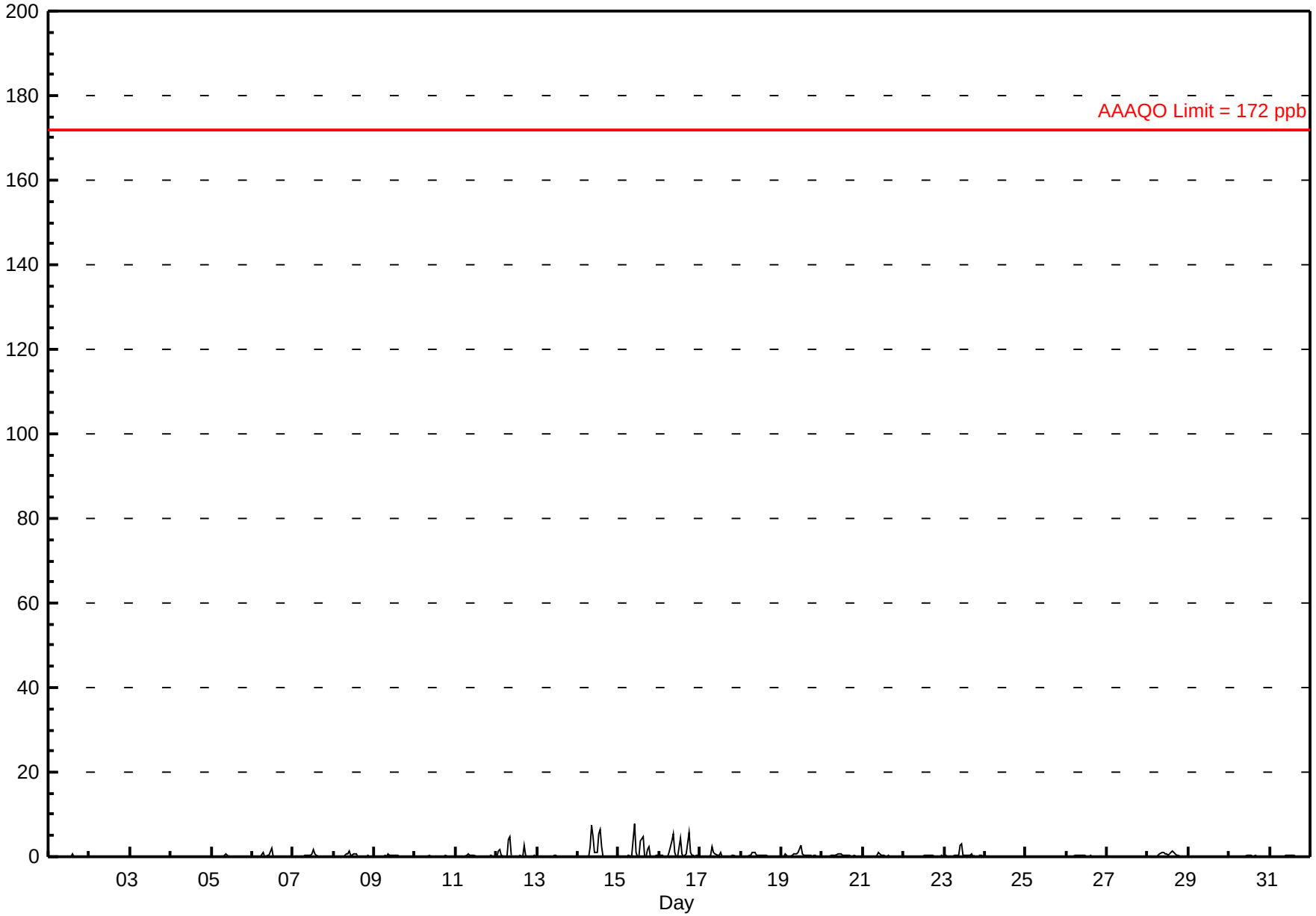
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Jul	0	0	0	0	0	0	0	0	0	0	C	C	C	0	1	0	0	0	0	0	0	0	0	0	0.1	0.7
2-Jul	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
3-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
4-Jul	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
5-Jul	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7
6-Jul	0	A	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.9
7-Jul	A	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	A	0.3	1.8
8-Jul	0	0	0	0	0	0	0	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	A	0	0.3	1.3
9-Jul	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.7
10-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.0	0.3
11-Jul	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.5
12-Jul	0	1	2	0	0	0	0	4	5	0	M	M	0	0	0	0	3	0	0	0	0	0	0	0	0.8	4.7
13-Jul	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
14-Jul	0	0	0	0	0	A	0	2	7	5	1	1	5	7	3	0	0	0	0	0	0	0	0	0	1.4	7.4
15-Jul	0	0	0	0	A	0	0	0	0	8	1	0	0	4	5	0	0	2	3	0	0	0	0	0	1.0	7.9
16-Jul	0	0	0	A	0	0	1	4	5	1	0	0	4	1	0	0	1	6	1	0	0	0	0	0	1.1	5.7
17-Jul	0	0	A	0	0	0	0	2	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.3	2.4
18-Jul	0	A	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.2
19-Jul	A	0	1	0	0	0	0	1	1	1	1	3	1	0	0	0	0	0	0	0	0	0	0	A	0.4	2.6
20-Jul	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0.3	0.6
21-Jul	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	1.0
22-Jul	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	0.5
23-Jul	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	1	0	0	A	0	0	0	0	0.5	3.2
24-Jul	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
25-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.1
26-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.5
27-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.1
28-Jul	0	0	0	0	0	0	0	1	1	1	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0.4	1.2
29-Jul	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
30-Jul	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	0.4
31-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.6	0.9	0.8	0.5	0.4	0.6	0.5	0.4	0.1	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	Diurnal Average	
	0.2	1.2	1.6	0.4	0.2	0.3	1.0	4.0	7.4	7.9	3.2	2.6	5.3	6.6	4.7	0.9	2.8	5.7	2.5	0.3	0.3	0.2	0.2	0.3	Diurnal Maximum	

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

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - July 2010



PASZA
Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - July 2010

Maximum Value: 26.3 ppb on Jul 16 13:00

Maximum Daily Average: 6.3 ppb on Jul 14

Minimum Value: 0 ppb on Jul 10 00:00

Minimum Daily Average: 0.3 ppb on Jul 2

Maximum Diurnal Average: 3.2 ppb at hour 9

Minimum Diurnal Average: 0.4 ppb at hour 6

Monthly Average: 1.31 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.3$ $Q_1 = 0.3$ Median = 0.4 $Q_3 = 0.6$ $P_{90} = 1.2$ $P_{99} = 20.5$

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	33
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	0	0	0	0	0	0	0	1	1	1	C	C	C	0	6	1	0	0	0	0	1	0	0	0	0.7	6.0
2-Jul	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
3-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0.3	1.6
4-Jul	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
5-Jul	0	0	A	0	0	0	0	1	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	3.5
6-Jul	0	A	0	0	0	0	6	0	0	1	4	19	0	0	0	1	0	0	0	0	0	0	0	0	1.6	18.7
7-Jul	A	0	0	0	0	0	0	0	1	1	1	5	10	2	1	0	0	0	0	0	0	0	0	A	1.2	10.1
8-Jul	0	0	0	0	0	0	0	1	1	4	1	1	10	5	0	0	0	0	0	0	1	0	A	1	1.3	10.0
9-Jul	0	0	0	0	0	0	1	1	2	1	1	0	1	1	1	1	0	0	0	0	0	A	0	0	0.5	1.8
10-Jul	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0.4	0.7
11-Jul	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	A	1	1	0	0	0.5	0.8
12-Jul	0	3	3	1	0	0	1	16	25	1	M	M	1	1	1	1	19	1	1	1	1	1	1	1	3.5	24.6
13-Jul	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	0.6	1.0
14-Jul	0	0	0	0	0	A	0	8	21	20	16	18	17	23	18	0	0	0	0	0	0	0	0	1	6.3	22.7
15-Jul	0	0	0	0	A	1	0	0	7	26	10	0	0	17	24	0	0	9	17	1	1	1	1	1	5.1	25.8
16-Jul	1	1	1	A	0	1	9	11	17	8	1	0	26	3	0	1	1	22	10	1	1	0	1	1	5.0	26.3
17-Jul	0	1	A	1	0	0	3	11	5	1	1	1	11	0	0	0	0	0	0	0	1	0	0	0	1.7	11.3
18-Jul	0	A	0	0	0	1	1	1	2	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0.6	1.9
19-Jul	A	0	1	1	0	0	1	4	1	1	3	10	2	1	1	0	1	0	0	1	1	0	0	A	1.4	10.0
20-Jul	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	1	0	0	1	0	0	A	0	0.6	1.0
21-Jul	0	0	0	0	0	0	1	0	1	1	1	1	0	0	0	5	0	0	0	0	0	A	0	0	0.7	5.0
22-Jul	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	4	1	0	1	A	1	0	1	0.6	4.0
23-Jul	1	1	0	0	0	0	1	0	1	15	15	1	1	1	1	7	5	1	1	A	0	0	0	0	2.3	15.2
24-Jul	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.4	1.3
25-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	A	0	0	1	0	0	0	0.4	0.7
26-Jul	0	0	0	0	0	0	0	1	1	1	1	1	0	1	0	0	A	0	0	0	0	0	1	0	0.5	1.3
27-Jul	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.4	0.8
28-Jul	0	0	0	0	0	0	1	1	5	2	1	1	1	3	8	1	1	1	1	1	1	1	1	1	1.4	7.9
29-Jul	1	0	1	1	1	A	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.9
30-Jul	0	0	0	0	0	A	0	0	0	0	5	1	1	1	0	0	0	0	1	0	0	0	0	0	0.6	5.4
31-Jul	0	0	0	0	A	1	1	0	0	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0.5	0.7
	0.4	0.5	0.5	0.4	0.4	0.4	1.0	2.1	3.2	2.9	2.4	2.3	2.9	2.1	2.2	0.8	1.3	1.4	1.3	0.4	0.5	0.4	0.4	0.4	Diurnal Average	
	1.3	2.8	2.6	1.0	1.0	0.7	9.2	15.9	24.6	25.8	15.9	18.7	26.3	22.7	24.3	7.0	18.9	21.7	16.8	0.8	1.6	0.9	1.1	1.1	Diurnal Maximum	

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

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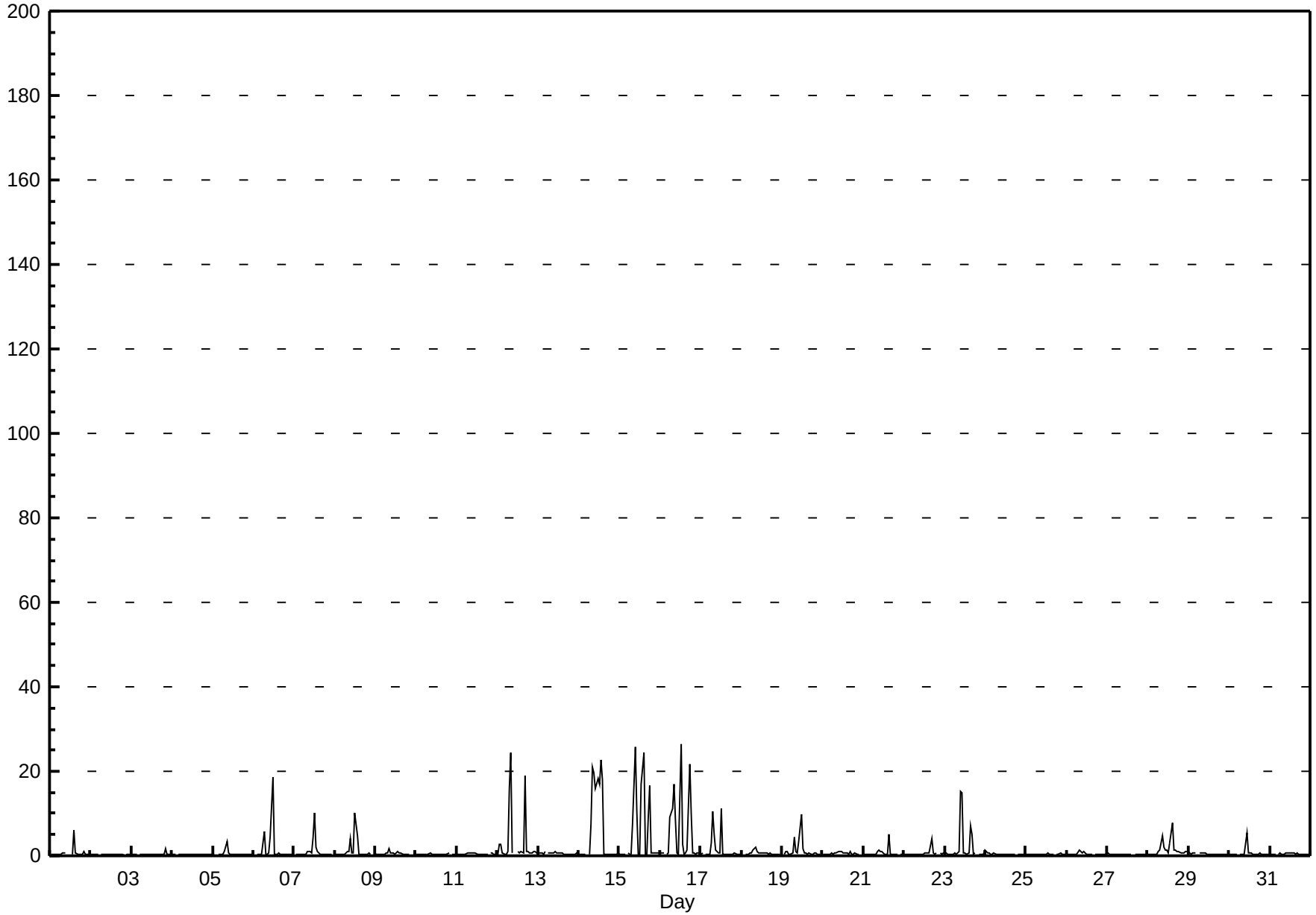
Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

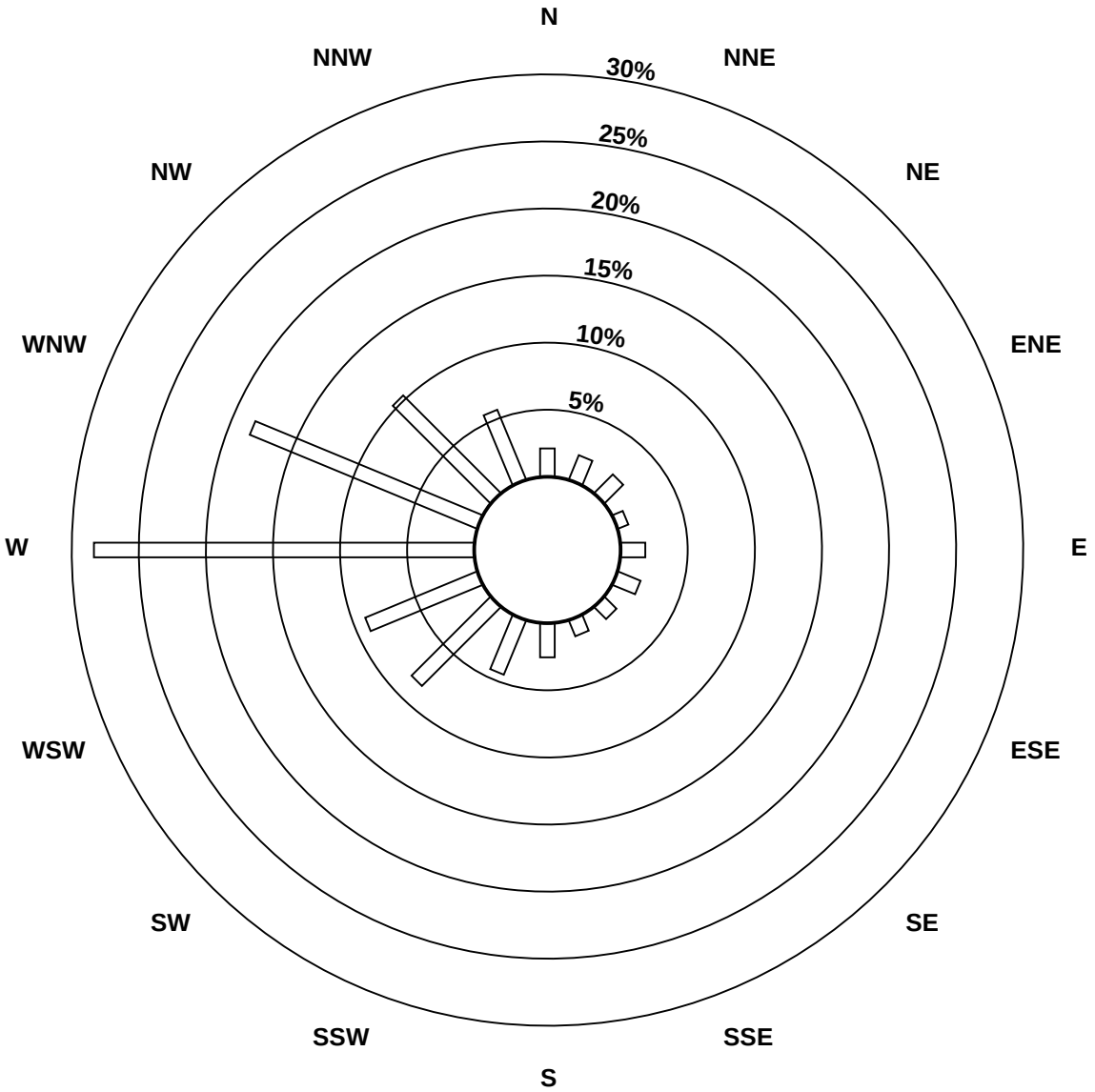
Evergreen Park - July 2010



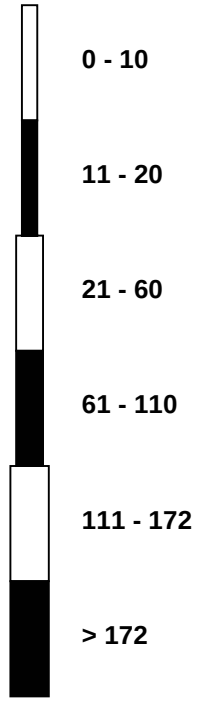
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - July 2010



Pollutant Classes (ppb)



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Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.1 ppb on Jul 17 04:00 Maximum Daily Average: 0.7 ppb on Jul 28

Minimum Value: 0 ppb on Jul 19 23:00 Minimum Daily Average: 0.3 ppb on Jul 2
Maximum Diurnal Average: 0.5 ppb at hour 4 Minimum Diurnal Average: 0.4 ppb at hour 19
Monthly Average: 0.48 ppb Percentiles: P_1 = 0.3 P_{10} = 0.3 Q_1 = 0.4 Median = 0.5 Q_3 = 0.5 P_{90} = 0.6 P_{99} = 0.9

Hours in Service:	744
Hours of Data:	704
Hours of Missing Data:	40
Hours of Calibration:	38
Percent Operational Time:	99.7

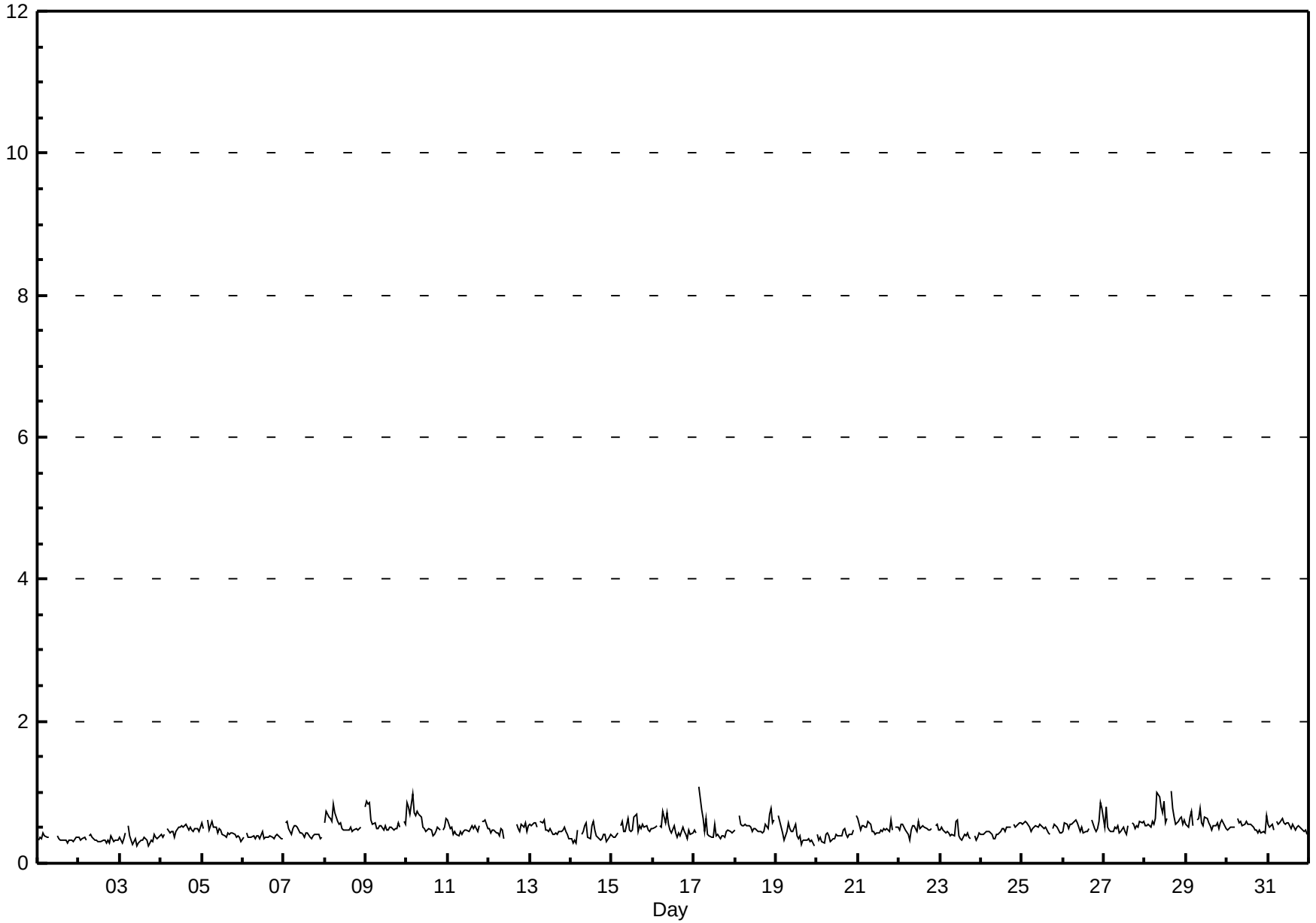
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Jul	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
2-Jul	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
3-Jul	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0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

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

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - July 2010



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Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - July 2010

Maximum Value: 2.5 ppb on Jul 29 09:00

Maximum Daily Average: 1.1 ppb on Jul 28

Minimum Value: 1 ppb on Jul 19 23:00

Minimum Daily Average: 0.7 ppb on Jul 1

Maximum Diurnal Average: 1.0 ppb at hour 8

Minimum Diurnal Average: 0.8 ppb at hour 18

Monthly Average: 0.86 ppb

Percentiles: P_1 = 0.6 P_{10} = 0.7 Q_1 = 0.7 Median = 0.8 Q_3 = 0.9 P_{90} = 1.1 P_{99} = 1.8

Hours in Service:	744
Hours of Data:	704
Hours of Missing Data:	40
Hours of Calibration:	38
Percent Operational Time:	99.7

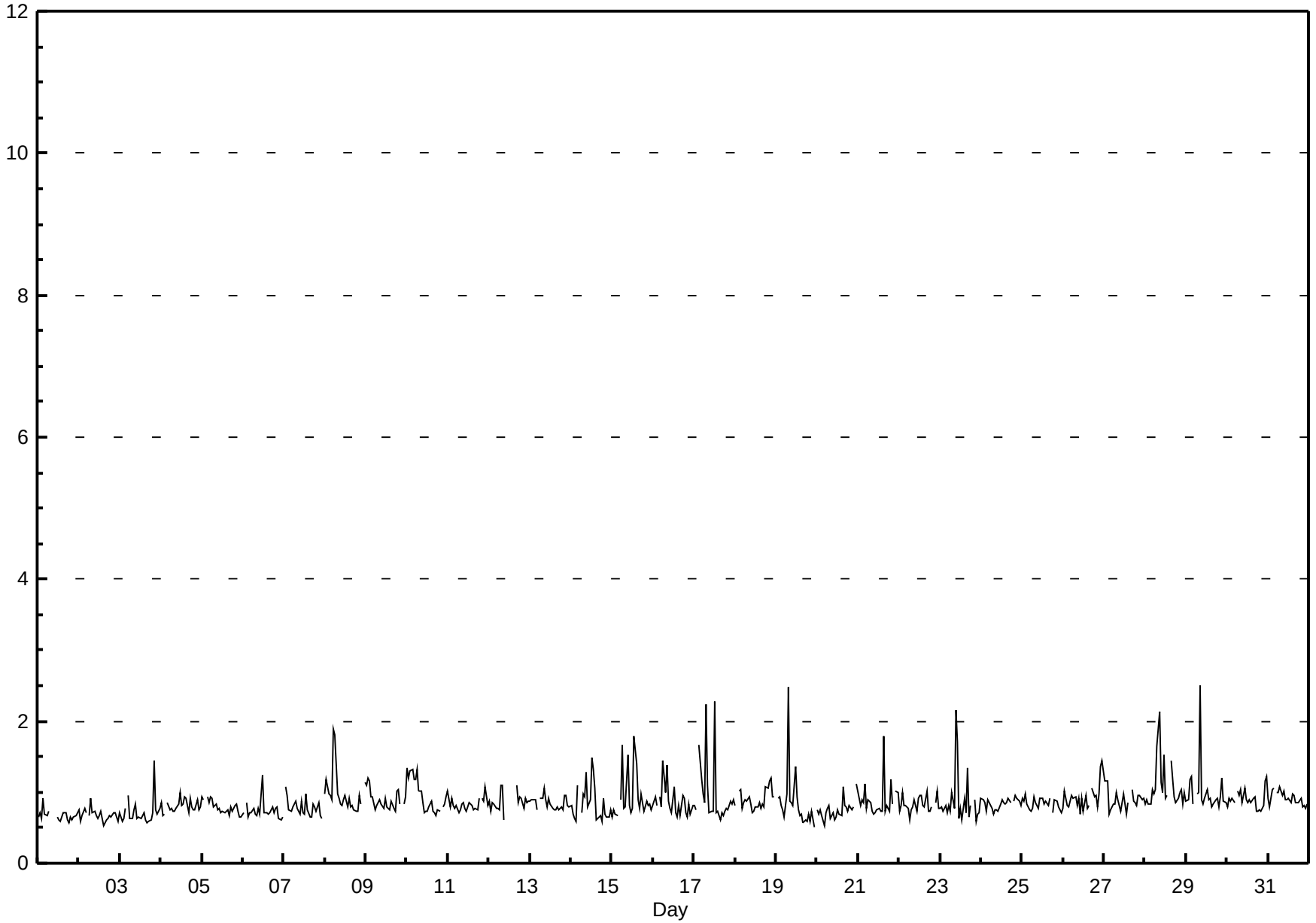
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	1	1	1	1	1	1	1	C	C	C	C	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
2-Jul	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
3-Jul	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.5
4-Jul	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
5-Jul	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	0.9
6-Jul	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.3
7-Jul	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
8-Jul	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1.0	1.9
9-Jul	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
10-Jul	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	1.3
11-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.8	1.1
12-Jul	1	1	1	1	1	1	1	1	1	1	M	M	1	C	C	A	1	1	1	1	1	1	1	1	0.9	1.1
13-Jul	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
14-Jul	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	1.5
15-Jul	1	1	1	1	A	1	2	1	1	2	1	1	1	2	1	1	1	1	1	1	1	1	1	1	0.9	1.8
16-Jul	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
17-Jul	1	1	A	2	1	1	1	2	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1.0	2.3
18-Jul	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
19-Jul	A	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.9	2.5
20-Jul	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
21-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	A	1	1	0.9	1.8
22-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.0
23-Jul	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	A	1	1	1	1	0.9	2.1
24-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.8	1.0
25-Jul	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	1.0
26-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.9	1.4
27-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.9	1.2
28-Jul	1	1	1	1	1	1	1	2	2	1	1	2	1	1	C	1	1	1	1	1	1	1	1	1	1.1	2.1
29-Jul	1	1	1	1	1	A	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.5
30-Jul	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
31-Jul	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
	0.9	0.9	0.9	0.9	0.8	0.9	0.9	1.0	1.0	0.9	0.8	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.9	Diurnal Average	
	1.3	1.2	1.3	1.7	1.2	1.9	1.8	2.5	2.5	2.1	1.7	1.5	2.3	1.8	1.4	1.8	1.3	1.1	1.1	1.2	1.5	1.2	1.4	1.4	Diurnal Maximum	

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

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

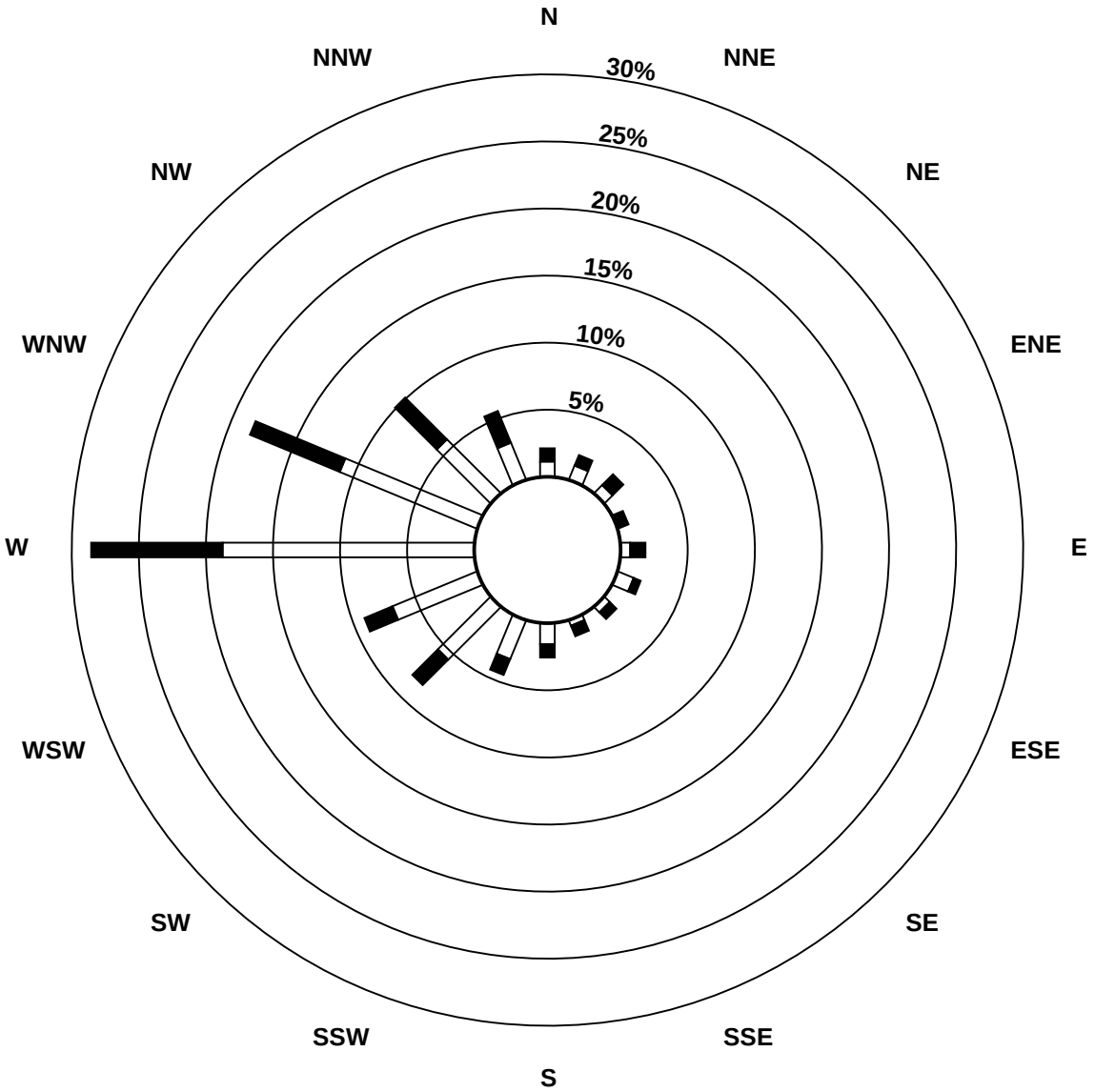
Evergreen Park - July 2010



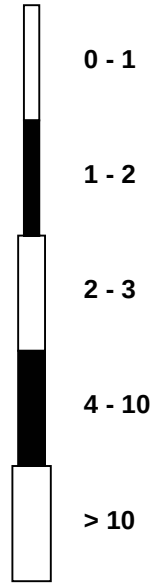
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - July 2010



Pollutant Classes (ppb)



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Hourly Averages

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

Evergreen Park - July 2010

Number of Exceedences: 1-hr: 0 24-hr: 0
Maximum Value: 28.7 $\mu g/m^3$ on Jul 21 17:00
Maximum Daily Average: 11.2 $\mu g/m^3$ on Jul 29

Minimum Value: 0 $\mu g/m^3$ on Jul 1 02:00
Maximum Diurnal Average: 8.5 $\mu g/m^3$ at hour 9
Monthly Average: 5.21 $\mu g/m^3$
Minimum Daily Average: 1.4 $\mu g/m^3$ on Jul 5
Minimum Diurnal Average: 3.2 $\mu g/m^3$ at hour 4
Percentiles: P_1 = 0.0 P_{10} = 0.3 Q_1 = 1.8 Median = 3.8 Q_3 = 7.1 P_{90} = 12.2 P_{99} = 20.7

Hours in Service:	744
Hours of Data:	737
Hours of Missing Data:	7
Hours of Calibration:	0
Percent Operational Time:	99.1

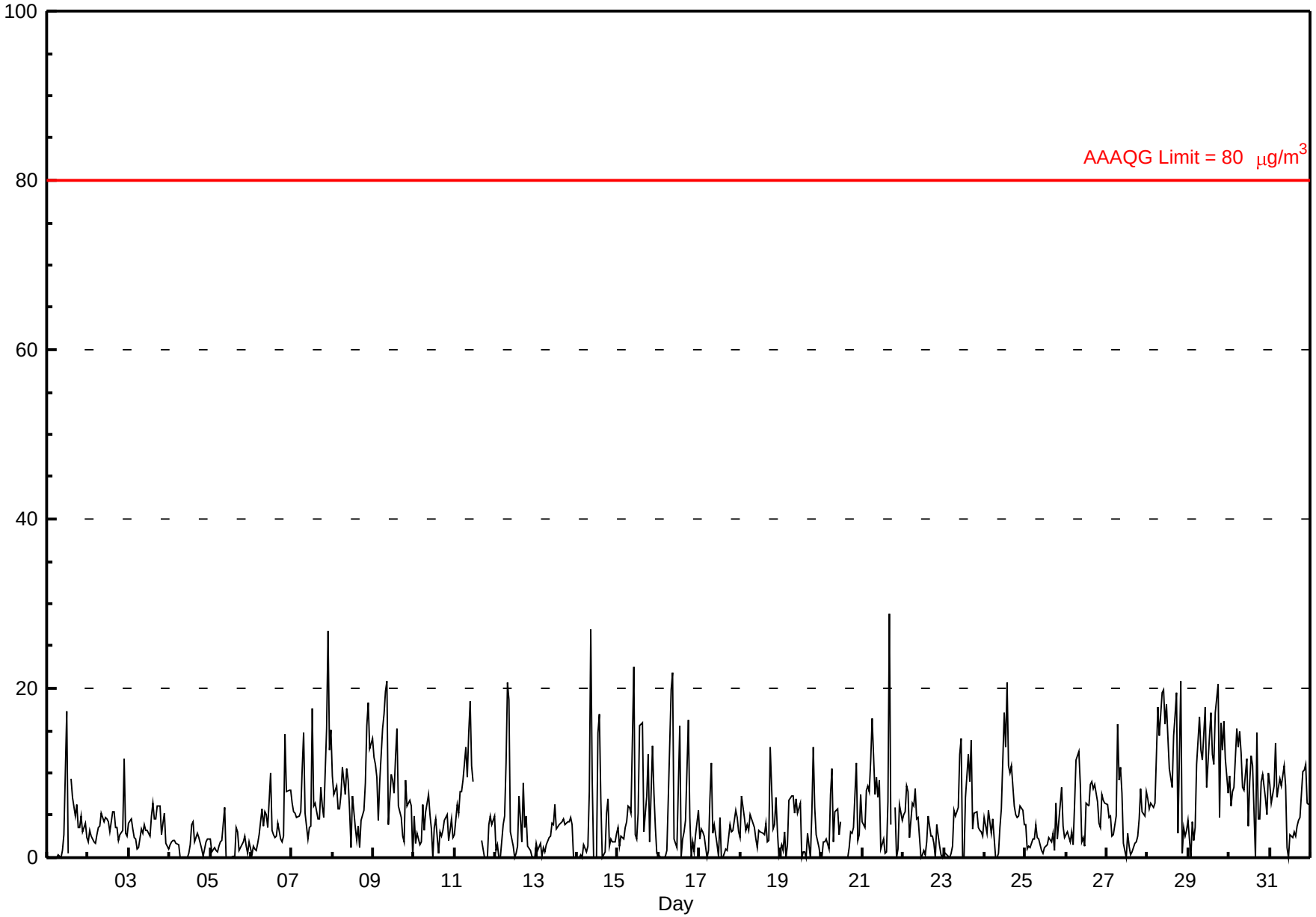
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	0	0	0	0	0	0	0	0	0	1	3	17	0	M	9	7	5	6	4	4	5	3	4	2	3.1	17.4
2-Jul	2	3	3	2	2	3	4	4	5	4	5	5	4	3	5	5	3	4	2	3	3	12	3	3	3.8	11.7
3-Jul	4	5	3	2	2	1	1	3	3	4	3	3	3	5	6	5	5	6	6	3	4	5	2	1	3.6	6.4
4-Jul	2	2	2	2	2	2	0	0	0	0	0	1	2	4	4	2	3	2	2	1	0	2	2	2	1.6	4.3
5-Jul	2	1	1	1	1	1	2	2	6	0	0	0	0	0	0	4	3	1	1	2	2	1	0	2	1.4	5.9
6-Jul	0	1	1	1	2	3	6	4	5	5	4	10	3	3	2	3	4	2	2	2	15	8	8	8	4.2	14.5
7-Jul	7	5	5	5	5	5	11	15	5	2	3	4	18	6	6	5	4	8	6	5	15	27	13	15	8.4	26.7
8-Jul	10	7	8	6	6	7	11	8	11	9	6	1	7	4	2	4	1	4	6	9	16	18	13	14	7.8	18.3
9-Jul	12	11	10	4	9	15	17	20	21	4	10	9	8	12	15	6	5	3	2	9	6	7	6	0	9.2	20.8
10-Jul	5	2	3	1	2	6	3	5	7	5	3	0	4	5	0	3	3	3	4	5	2	3	5	2	3.5	7.5
11-Jul	3	6	5	8	8	9	13	10	15	19	11	9	BD	0	BD	BD	2	0	0	0	4	5	4	5	6.4	18.5
12-Jul	1	1	0	0	4	5	11	21	19	3	1	0	1	1	7	2	9	3	5	1	1	0	0	0	4.0	20.7
13-Jul	2	1	2	0	1	1	2	2	3	4	4	6	3	4	4	4	5	4	4	4	5	4	0	0	2.9	6.2
14-Jul	0	0	0	0	1	1	1	8	27	9	0	0	15	17	7	0	1	5	7	1	2	2	2	3	4.6	26.9
15-Jul	4	1	3	2	4	4	6	6	5	23	3	2	5	16	16	3	5	7	12	2	13	8	4	1	6.4	22.6
16-Jul	0	0	0	0	0	1	7	20	22	2	2	1	16	0	2	3	4	16	5	0	2	1	3	6	4.7	21.9
17-Jul	2	3	3	3	0	1	7	11	3	4	1	0	5	0	0	1	1	2	4	3	3	6	5	3	3.0	11.3
18-Jul	2	7	5	3	4	3	5	5	4	2	1	3	3	3	3	4	2	2	13	3	4	7	3	0	3.8	13.0
19-Jul	2	1	3	0	2	7	7	7	5	7	5	7	0	1	1	0	3	0	5	13	6	3	1	0	3.5	13.0
20-Jul	0	2	2	2	1	7	11	2	5	6	3	4	BD	3	BD	0	1	3	3	4	11	2	3	7	3.7	11.2
21-Jul	4	4	8	8	8	12	16	7	10	7	9	1	2	0	1	7	29	4	BD	6	0	1	6	4	6.7	28.7
22-Jul	5	5	8	8	2	6	6	8	5	5	0	0	1	0	2	5	3	3	2	0	4	1	0	0	3.3	8.4
23-Jul	1	1	0	0	1	1	6	5	6	12	14	0	0	7	12	9	14	3	5	5	3	3	3	3	4.8	14.1
24-Jul	5	3	6	4	3	5	0	0	0	3	6	17	13	21	11	10	11	6	5	5	5	6	6	4	6.4	20.7
25-Jul	4	1	1	1	2	2	4	2	2	1	1	1	1	1	2	2	3	1	6	2	6	8	4	2	2.6	8.2
26-Jul	3	3	2	3	1	6	11	13	9	2	2	1	7	6	9	9	8	9	7	4	4	7	7	6	5.8	12.6
27-Jul	6	5	5	2	3	5	16	9	11	8	2	0	3	1	0	1	2	2	2	5	8	5	5	8	4.7	15.8
28-Jul	7	6	6	6	6	12	18	14	19	20	16	18	14	11	8	14	17	19	3	21	0	4	3	3	11.1	20.9
29-Jul	4	0	4	2	3	11	17	13	11	15	18	8	14	17	12	11	17	20	5	16	13	16	12	8	11.2	20.5
30-Jul	10	6	8	8	15	13	15	12	8	8	12	4	9	12	11	0	15	5	5	9	10	7	5	10	9.0	15.2
31-Jul	9	7	9	14	7	8	9	9	11	9	1	0	3	2	3	2	4	4	5	10	10	11	7	6	6.6	13.5
	3.7	3.2	3.8	3.2	3.4	5.3	7.8	7.9	8.5	6.5	4.8	4.3	5.6	5.5	5.6	4.3	6.1	5.1	4.6	5.1	5.9	6.2	4.4	4.2	Diurnal Average	
	11.9	11.0	9.6	13.5	15.2	15.3	17.8	20.7	26.9	22.6	17.8	18.1	17.7	20.7	16.0	14.4	28.7	20.5	13.0	20.9	15.6	26.7	12.9	15.2	Diurnal Maximum	

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

Hourly Averages

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

Evergreen Park - July 2010



PASZA
Peace Airshed Zone Association

Hourly Maximums

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

Evergreen Park - July 2010

Maximum Value: 76.2 $\mu g/m^3$ on Jul 1 12:00

Maximum Daily Average: 27.2 $\mu g/m^3$ on Jul 29

Minimum Value: 0 $\mu g/m^3$ on Jul 1 04:00

Minimum Daily Average: 4.6 $\mu g/m^3$ on Jul 5

Maximum Diurnal Average: 19.0 $\mu g/m^3$ at hour 9

Minimum Diurnal Average: 6.5 $\mu g/m^3$ at hour 4

Monthly Average: 12.08 $\mu g/m^3$

Percentiles: $P_1 = 0.5$ $P_{10} = 3.1$ $Q_1 = 5.4$ Median = 9.0 $Q_3 = 15.5$ $P_{90} = 24.4$ $P_{99} = 54.7$

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-Jul	2	1	0	0	1	1	3	2	3	5	12	76	0	M	22	19	9	9	7	6	8	6	10	4	8.9	76.2
2-Jul	5	6	4	4	4	4	6	9	9	8	7	8	7	8	9	8	6	10	5	5	6	34	5	4	7.4	34.4
3-Jul	17	12	5	5	4	4	4	8	5	8	9	9	5	8	10	7	8	9	11	5	9	10	4	3	7.3	16.6
4-Jul	4	3	4	3	4	3	1	2	2	2	2	6	6	11	16	4	10	7	6	3	3	4	4	4	4.8	16.2
5-Jul	4	2	3	2	2	3	3	5	16	3	5	3	7	4	5	10	9	3	5	4	5	3	2	4	4.6	15.6
6-Jul	2	3	2	2	4	4	15	6	8	9	7	44	6	6	6	7	9	6	5	6	25	16	17	19	9.8	43.6
7-Jul	11	8	9	9	7	8	15	20	17	5	10	10	52	23	16	14	8	43	25	11	23	33	18	26	17.5	52.0
8-Jul	17	15	15	7	10	11	15	13	18	17	13	12	14	13	7	9	11	14	15	24	30	35	19	17	15.5	34.8
9-Jul	16	13	13	8	14	20	24	27	55	14	19	14	21	23	26	12	21	11	16	16	16	17	22	4	18.5	55.3
10-Jul	10	5	8	4	4	9	7	12	19	13	12	14	12	13	9	9	11	11	10	13	4	6	12	5	9.7	19.1
11-Jul	4	9	8	13	9	12	20	13	21	26	23	18	5	6	13	7	13	6	6	4	8	11	10	11	11.5	26.2
12-Jul	6	5	2	5	9	14	20	34	65	10	9	2	6	6	16	6	18	13	9	5	6	3	2	3	11.4	64.5
13-Jul	8	3	3	2	3	3	3	4	4	6	7	10	7	6	9	7	8	7	7	7	10	9	1	3	5.7	10.0
14-Jul	0	0	2	2	3	4	6	26	58	37	32	6	40	40	26	3	7	14	11	4	5	4	5	6	14.2	58.4
15-Jul	7	3	6	5	5	7	10	12	12	56	14	6	9	25	41	10	9	19	34	19	24	14	11	3	15.0	55.9
16-Jul	1	1	2	2	3	5	19	37	42	30	7	6	48	6	6	27	9	37	34	3	4	3	8	8	14.5	47.9
17-Jul	5	7	5	8	1	10	16	29	16	9	6	5	18	6	9	6	5	13	16	9	7	11	9	6	9.7	28.6
18-Jul	4	14	7	5	14	11	8	6	6	9	11	8	10	8	6	9	5	22	23	18	8	9	5	3	9.6	23.3
19-Jul	4	2	5	2	5	14	26	19	19	13	14	17	11	15	10	11	12	8	15	28	22	8	4	1	11.9	28.0
20-Jul	1	4	4	11	6	13	34	9	13	11	11	11	7	14	9	16	8	9	13	10	22	16	4	19	11.4	34.3
21-Jul	6	6	16	15	10	19	32	12	16	17	18	20	10	19	12	33	75	41	13	20	17	13	23	17	20.1	75.1
22-Jul	11	12	13	12	9	18	16	19	10	10	10	7	13	10	10	11	16	10	11	4	7	5	2	1	10.3	18.7
23-Jul	2	2	2	2	2	5	8	10	10	27	35	6	8	12	20	17	26	10	12	13	9	12	11	9	11.2	35.3
24-Jul	13	12	19	14	10	10	4	8	4	8	8	32	22	33	16	15	17	10	8	7	7	8	10	7	12.7	33.0
25-Jul	7	3	2	3	4	4	7	5	8	4	4	7	5	5	6	9	8	5	12	8	12	11	7	6	6.3	12.3
26-Jul	9	6	4	5	5	10	18	20	13	7	7	5	22	23	28	20	14	34	11	8	8	10	10	12	12.8	33.7
27-Jul	16	12	10	6	5	8	22	17	19	13	11	9	12	9	7	6	10	8	9	9	15	16	11	9	11.2	22.0
28-Jul	9	9	9	10	10	20	34	25	41	33	21	24	20	11	8	52	29	44	22	35	8	13	6	11	21.1	52.4
29-Jul	17	7	19	6	13	21	28	19	30	27	28	25	28	35	30	24	29	70	22	32	32	37	36	35	27.2	70.4
30-Jul	21	10	13	14	19	20	24	23	20	17	23	19	19	33	41	0	15	5	5	9	10	7	5	10	15.8	40.7
31-Jul	9	7	9	14	7	8	9	9	11	9	1	0	3	2	3	2	4	4	5	10	10	11	7	6	6.6	13.5
	8.0	6.6	7.2	6.5	6.6	9.8	14.8	14.7	19.0	14.9	12.8	14.2	14.7	14.4	14.5	12.6	14.2	16.5	13.0	11.5	12.2	12.8	9.6	8.9	Diurnal Average	
	20.8	15.1	19.0	15.4	18.6	20.9	34.3	36.7	64.5	55.9	35.3	76.2	52.0	40.3	40.7	52.4	75.1	70.4	34.2	35.2	32.3	37.1	35.8	35.3	Diurnal Maximum	

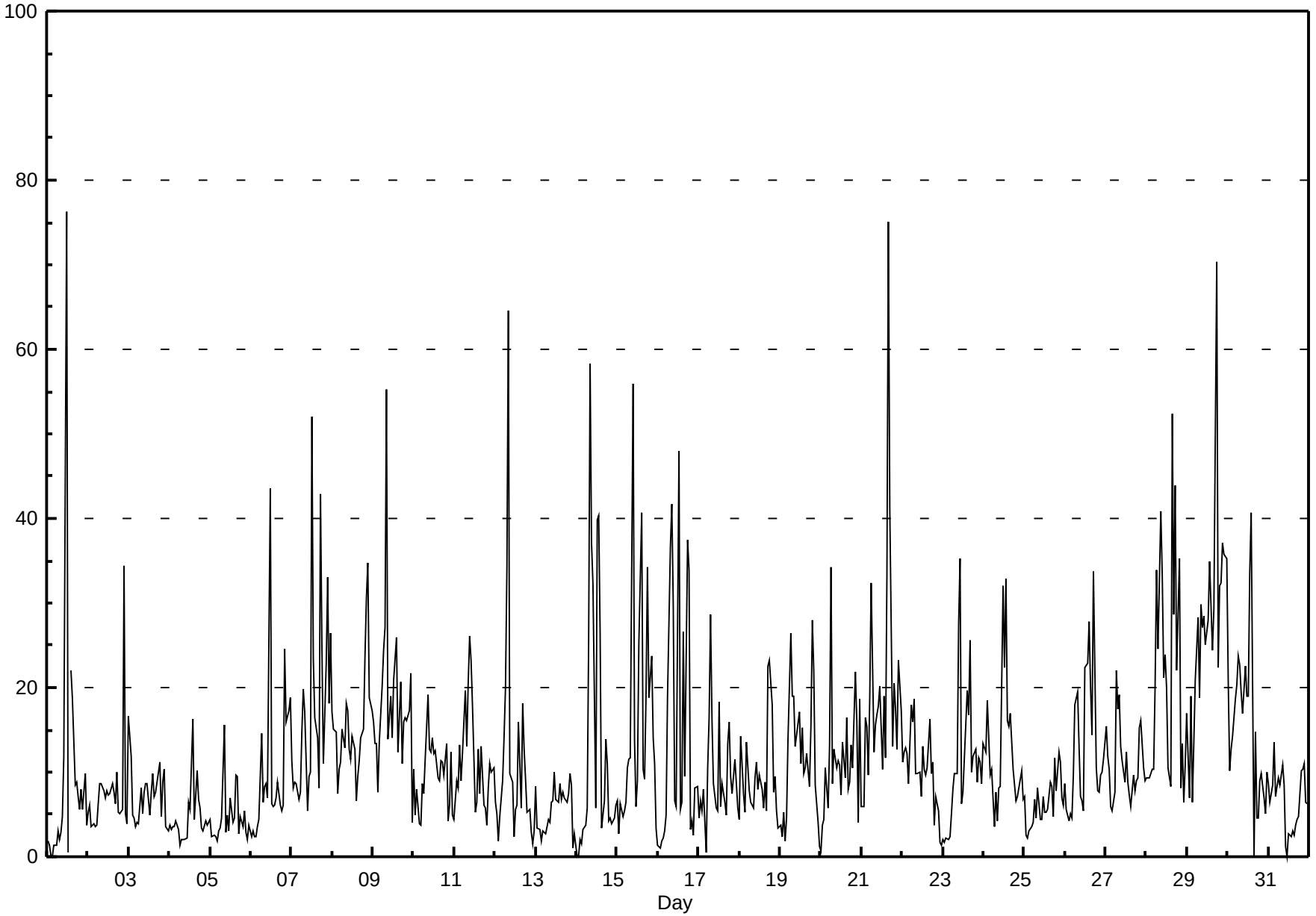
M - Maintenance

PASZA
Peace Airshed Zone Association

Hourly Maximums

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

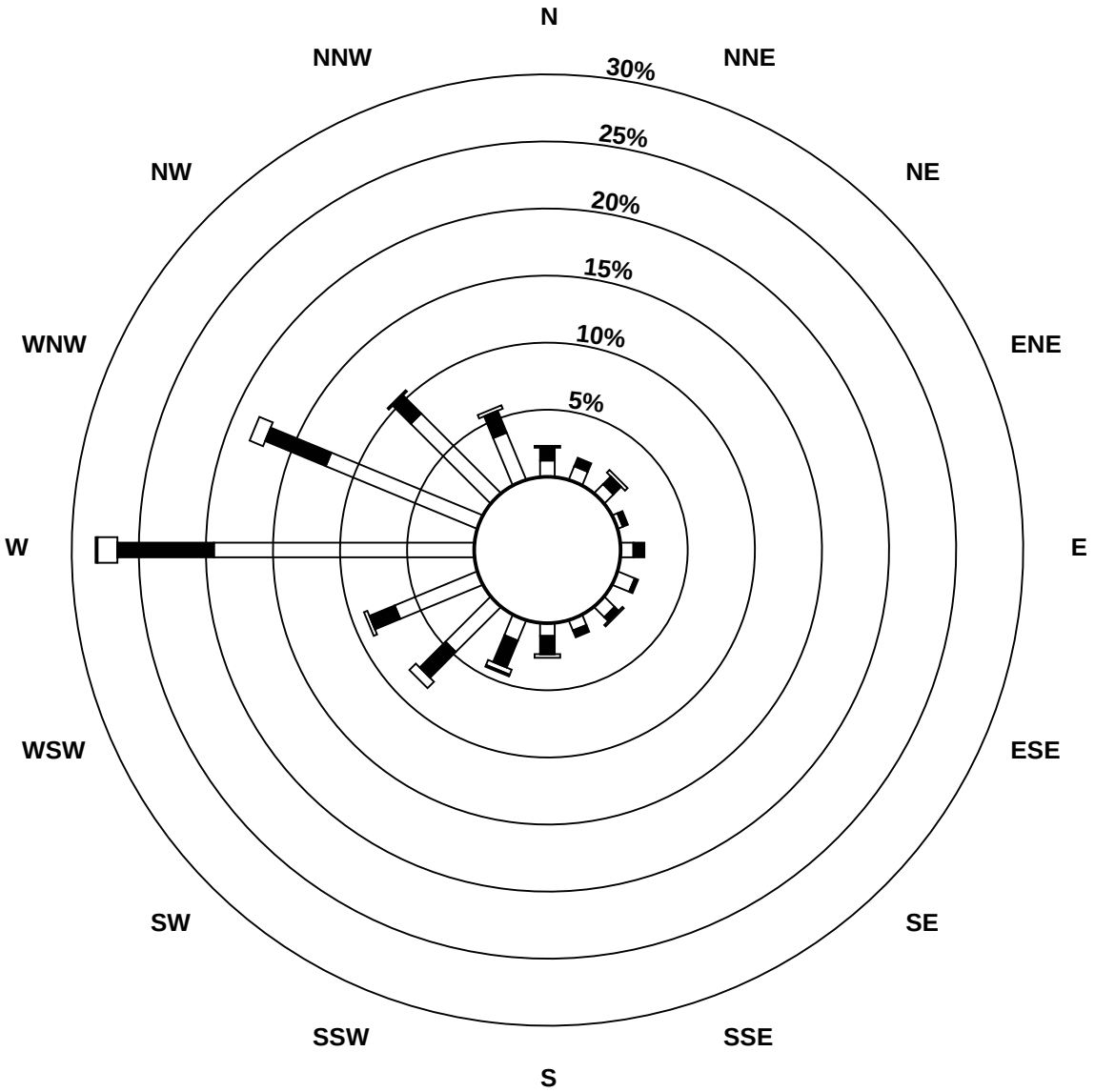
Evergreen Park - July 2010



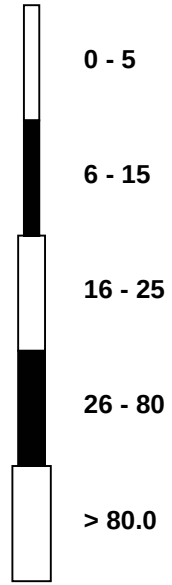
Pollutant Rose

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

Evergreen Park - July 2010



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



PASZA
Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Evergreen Park - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 30.4 ^{o}C on Jul 8 20:00 Maximum Daily Average: 22.4 ^{o}C on Jul 8

Minimum Value: 6 ^{o}C on Jul 1 06:00 Minimum Daily Average: 13.4 ^{o}C on Jul 2
Maximum Diurnal Average: 22.6 ^{o}C at hour 17 Minimum Diurnal Average: 11.9 ^{o}C at hour 5
Monthly Average: 17.60 ^{o}C Percentiles: P_1 = 7.7 P_{10} = 11.6 Q_1 = 14.2 Median = 17.3 Q_3 = 20.9 P_{90} = 24.5 P_{99} = 27.6

Hours in Service:	744
Hours of Data:	712
Hours of Missing Data:	32
Hours of Calibration:	0
Percent Operational Time:	95.7

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	9	9	8	8	7	6	8	10	13	14	15	16	17	18	18	19	19	19	19	18	17	15	14	13	13.6	19.0
2-Jul	11	9	8	7	7	8	9	11	14	14	15	15	16	16	17	17	17	18	17	17	16	15	14	14	13.4	17.5
3-Jul	14	12	12	12	12	12	13	14	15	16	18	18	19	19	19	19	19	19	19	18	17	16	16	15	16.1	19.3
4-Jul	15	15	14	14	14	13	13	13	14	15	15	16	17	17	16	17	17	15	15	14	14	13	13	12	14.7	17.2
5-Jul	11	10	10	10	10	10	11	12	14	16	17	18	19	20	20	20	20	20	20	20	20	19	18	17	16.0	20.5
6-Jul	16	15	15	15	14	14	14	15	17	19	20	21	22	23	24	24	24	25	25	25	24	21	19	19	19.6	24.9
7-Jul	18	17	15	15	14	14	15	17	20	22	23	23	24	25	26	26	27	27	28	27	26	22	18	17	21.1	27.5
8-Jul	17	18	17	15	13	14	17	20	21	22	23	25	26	27	28	29	29	29	30	30	28	23	20	19	22.4	30.4
9-Jul	18	18	16	18	18	16	18	21	23	24	25	26	27	26	26	25	24	24	23	22	21	20	17	15	21.2	26.7
10-Jul	15	15	15	15	14	15	15	16	18	19	20	22	21	22	23	25	25	25	25	24	23	21	19	18	19.6	24.8
11-Jul	18	16	15	14	13	13	14	16	17	20	22	23	24	25	26	26	26	26	25	25	24	20	17	17	20.1	26.3
12-Jul	18	18	18	17	15	15	15	16	16	16	15	15	15	15	15	15	16	15	15	14	14	13	12	12	15.2	18.4
13-Jul	11	11	10	10	10	10	10	11	11	12	14	15	15	16	17	17	17	18	18	19	19	18	17	16	14.3	19.1
14-Jul	15	15	14	13	13	15	16	18	19	20	22	23	24	24	25	25	26	26	25	23	22	21	20	18	20.0	25.6
15-Jul	16	15	14	13	12	13	14	16	18	19	19	20	20	21	21	21	21	21	20	19	17	16	15	13	17.2	21.4
16-Jul	12	11	10	8	9	9	10	12	14	16	17	18	19	19	19	19	19	19	19	19	18	17	16	15	15.3	19.3
17-Jul	14	12	12	11	11	10	12	14	15	17	18	20	21	22	22	23	24	24	24	23	20	18	15	13	17.2	23.7
18-Jul	11	13	13	13	11	12	12	14	15	17	19	20	20	20	21	21	21	20	16	13	12	12	12	12	15.4	20.9
19-Jul	12	11	10	9	8	9	11	13	14	16	18	20	21	21	22	22	23	23	21	17	16	15	14	12	15.8	23.4
20-Jul	11	11	11	10	9	10	11	13	15	17	20	21	23	23	24	25	25	26	26	25	24	20	18	17	18.1	25.7
21-Jul	15	13	12	11	10	10	12	15	18	20	22	24	25	26	27	27	22	23	24	24	21	20	18	17	18.9	27.1
22-Jul	16	16	15	15	15	15	15	15	15	15	16	17	19	19	20	19	20	20	20	21	20	18	17	16	17.3	21.3
23-Jul	15	14	13	13	13	13	14	16	17	19	20	21	23	24	24	25	26	26	26	25	24	22	19	18	19.6	25.7
24-Jul	18	18	17	17	17	18	18	18	19	19	19	20	21	21	21	22	22	22	22	21	20	18	16	16	19.1	22.0
25-Jul	14	14	14	13	12	11	12	13	16	17	18	19	20	21	22	23	24	24	24	23	22	20	18	17	18.0	23.9
26-Jul	16	15	13	12	11	11	12	13	16	17	17	18	18	18	20	21	21	20	20	20	20	18	16	15	16.6	21.2
27-Jul	13	12	10	10	9	9	11	13	16	18	20	21	22	23	24	25	25	26	26	25	23	20	18	17	18.1	25.6
28-Jul	16	14	13	12	11	11	13	15	15	17	18	20	23	25	27	28	29	25	21	18	16	16	16	15	18.0	28.9
29-Jul	15	14	13	12	11	12	13	14	16	18	20	22	24	25	25	26	26	24	25	24	23	21	19	17	19.1	26.2
30-Jul	16	14	13	12	12	13	14	15	17	18	19	20	21	20	20	21	D	D	D	D	D	D	D	D	--	21.5
31-Jul	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
	14.5	13.8	13.1	12.4	11.9	11.9	13.1	14.6	16.3	17.6	18.8	20.0	20.9	21.4	21.9	22.4	22.6	22.3	21.9	21.2	20.0	18.2	16.6	15.6	Diurnal Average	
	18.4	18.4	17.7	17.7	17.5	17.6	17.7	21.0	23.1	24.1	24.7	25.8	26.7	27.3	27.5	28.7	29.0	29.3	29.8	30.4	27.7	22.6	20.1	18.9	Diurnal Maximum	

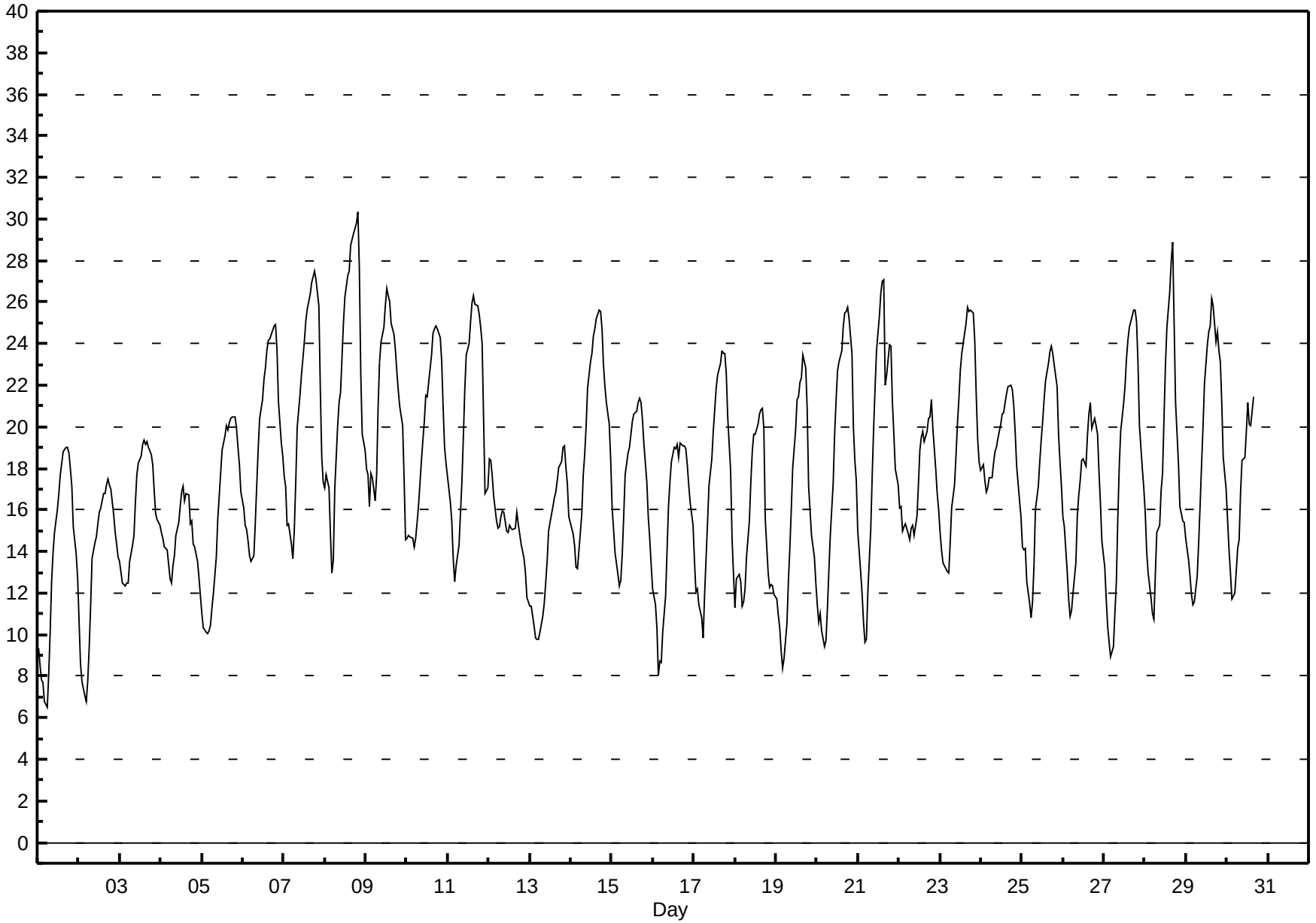
D - DAS Failure

PASZA
Pretoria Airshed Zones Association

Hourly Averages

External Temperature (ET) - ^{o}C

Evergreen Park - July 2010



PASZA
Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Evergreen Park - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 97.1 % on Jul 29 06:00 Maximum Daily Average: 80.1 % on Jul 13

Minimum Value: 22 % on Jul 1 18:00 Minimum Daily Average: 36.7 % on Jul 24
Maximum Diurnal Average: 76.0 % at hour 6 Minimum Diurnal Average: 36.9 % at hour 17
Monthly Average: 54.99 % Percentiles: P_1 = 23.2 P_{10} = 30.5 Q_1 = 39.7 Median = 51.8 Q_3 = 68.7 P_{90} = 85.5 P_{99} = 95.2

Hours in Service:	744
Hours of Data:	712
Hours of Missing Data:	32
Hours of Calibration:	0
Percent Operational Time:	95.7

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-Jul	57	59	60	59	64	67	60	52	40	34	31	28	25	22	23	23	23	22	23	23	26	31	33	35	38.2	67.0
2-Jul	42	53	58	62	63	60	56	49	44	43	44	44	44	44	43	43	43	42	43	44	48	51	53	56	48.8	62.9
3-Jul	57	66	68	69	67	66	57	54	50	43	39	37	36	35	36	37	37	37	37	38	42	46	45	46	47.8	68.5
4-Jul	48	50	54	56	59	68	68	59	57	52	48	45	41	40	44	43	45	51	53	57	58	63	70	78	54.5	77.7
5-Jul	88	91	94	94	93	91	88	84	76	63	56	48	43	39	37	40	43	41	40	40	41	42	43	46	60.9	94.4
6-Jul	48	50	50	50	52	55	54	50	47	43	39	37	35	33	30	29	29	29	28	28	35	47	53	56	41.9	56.0
7-Jul	61	63	71	69	72	74	69	60	48	39	37	33	31	30	29	28	27	26	26	27	37	52	63	65	47.3	73.5
8-Jul	64	60	62	71	80	80	68	60	56	53	46	38	34	30	27	26	23	24	24	24	35	50	60	60	48.1	79.7
9-Jul	64	65	74	61	61	67	63	46	42	37	34	33	31	35	38	43	44	44	43	49	54	57	69	87	51.7	87.4
10-Jul	87	87	88	89	92	93	90	86	74	64	61	51	49	47	41	38	38	37	38	40	45	52	59	59	62.8	93.4
11-Jul	62	68	71	80	84	81	79	73	70	65	60	54	49	46	40	35	31	31	31	31	34	47	61	59	56.0	83.7
12-Jul	51	48	44	42	45	46	46	45	44	44	51	50	49	47	49	48	45	48	50	55	57	61	64	66	49.8	65.6
13-Jul	68	70	80	86	89	91	91	90	90	88	85	82	80	78	77	77	76	74	73	71	71	78	77	81	80.1	91.3
14-Jul	79	77	78	83	83	72	66	58	53	49	43	37	35	32	32	30	27	28	33	35	37	39	42	48	49.8	83.4
15-Jul	58	60	64	68	71	69	62	55	46	40	37	33	31	30	28	27	28	30	35	38	42	43	47	52	45.6	71.1
16-Jul	58	61	65	76	70	69	63	56	48	41	37	34	33	35	36	40	37	38	41	39	42	45	49	59	48.8	76.2
17-Jul	68	75	77	81	84	86	78	71	63	55	49	42	39	35	32	31	30	30	32	35	41	49	63	70	54.8	85.8
18-Jul	76	69	68	73	80	81	79	75	69	60	52	49	50	48	46	46	46	45	71	89	92	93	93	91	68.4	93.3
19-Jul	90	92	93	94	96	96	92	83	75	69	62	52	44	40	38	38	35	36	42	68	74	80	87	91	69.5	96.3
20-Jul	94	95	92	92	93	92	87	80	74	67	57	51	40	38	35	29	28	28	27	29	37	48	54	58	59.4	94.7
21-Jul	69	77	83	87	90	90	84	75	64	56	51	43	36	31	28	28	55	60	47	47	51	52	61	64	59.5	90.4
22-Jul	71	71	77	74	70	73	78	80	82	89	84	74	63	60	57	59	54	50	52	41	46	52	56	59	65.6	89.3
23-Jul	63	65	67	67	68	69	65	60	56	51	45	38	32	29	30	31	31	31	31	32	35	40	46	49	47.1	68.9
24-Jul	51	50	55	60	58	56	50	39	30	30	30	28	28	25	24	23	23	24	24	28	31	35	40	40	36.7	59.7
25-Jul	44	44	44	49	52	55	55	50	41	38	34	32	30	28	27	26	25	25	27	28	31	38	41	45	37.9	55.5
26-Jul	49	51	60	64	68	68	66	64	62	58	54	49	50	57	50	47	45	52	52	52	52	61	68	75	57.3	75.5
27-Jul	81	87	90	93	93	93	89	85	75	67	60	49	45	40	36	34	32	31	32	33	40	49	56	63	60.6	93.2
28-Jul	68	77	81	85	87	87	80	76	76	70	68	59	51	43	36	32	31	40	48	71	85	86	89	87	67.3	88.7
29-Jul	90	93	95	96	97	97	97	90	83	74	66	58	48	47	46	41	41	47	40	42	45	47	61	68	67.1	97.1
30-Jul	77	83	89	93	91	87	84	84	68	61	61	55	52	59	62	52	D	D	D	D	D	D	D	D	--	92.9
31-Jul	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--
	66.1	68.5	71.7	74.1	75.7	76.0	72.1	66.3	60.1	54.7	50.6	45.4	41.7	40.2	38.7	37.5	36.9	38.1	39.4	42.6	47.1	53.0	58.7	62.5	Diurnal Average	
	94.0	94.7	95.5	96.2	96.8	97.1	96.6	89.9	89.8	89.3	84.8	81.6	80.4	78.4	77.4	76.8	75.6	73.8	73.4	89.4	91.9	93.3	92.6	91.0	Diurnal Maximum	

D - DAS Failure

PASZA
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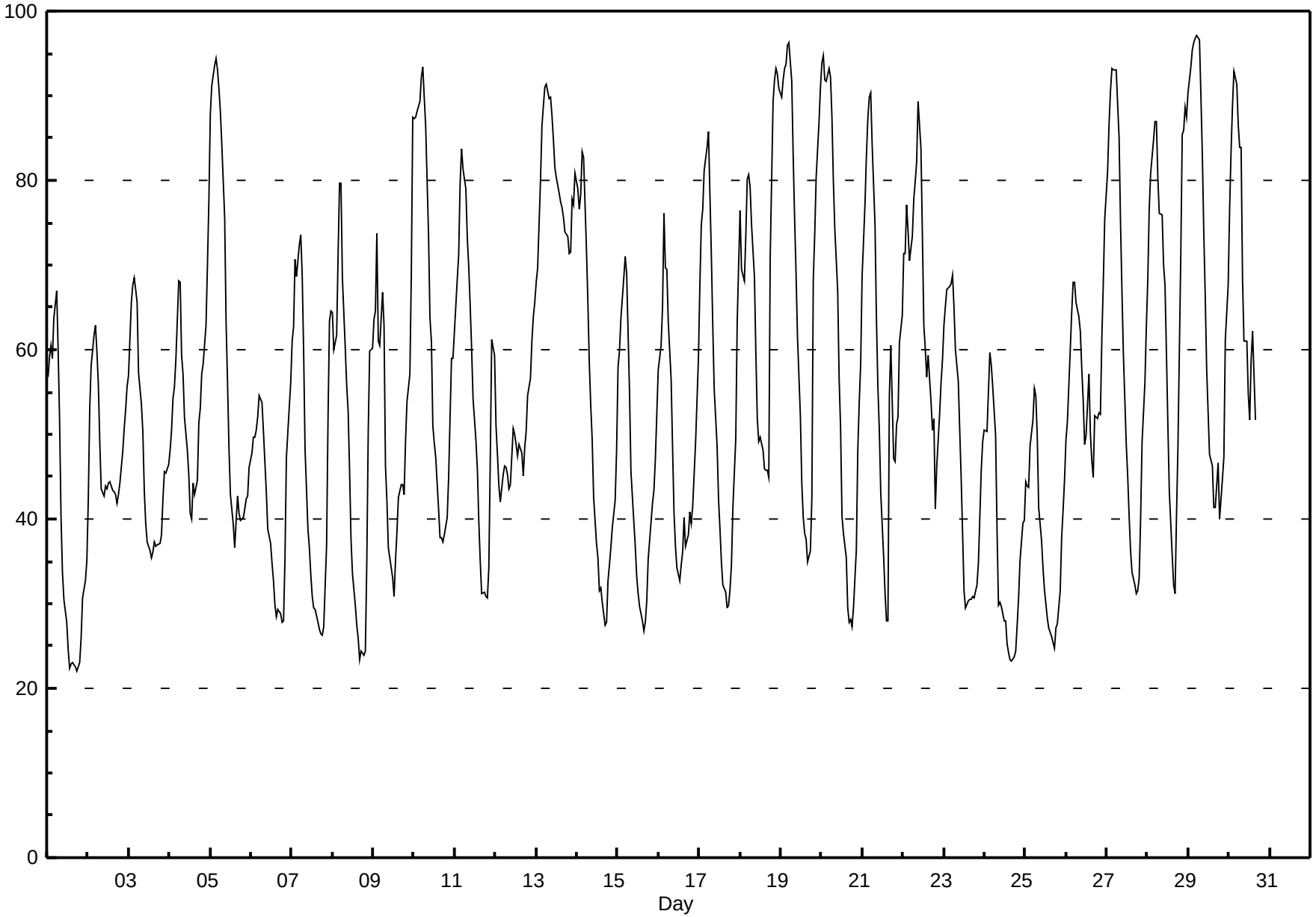
Hourly Averages

Relative Humidity (RH) - %

Evergreen Park - July 2010



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Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Evergreen Park - July 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	11	13	12	13	7	6	10	13	17	19	18	19	20	23	22	20	19	20	20	20	12	7	9	8	14.4	22.7
Dir	244	237	235	233	220	213	222	230	247	257	253	249	246	250	257	266	270	278	274	262	262	262	265	250	252.7	249.9
2 Spd	7	5	7	7	7	5	6	12	18	17	15	16	18	16	17	17	18	18	17	15	17	15	11	9	12.1	17.9
Dir	227	216	216	212	209	208	219	257	269	271	274	269	272	273	273	279	263	268	267	269	264	262	258	259	261.4	267.9
3 Spd	13	8	3	4	3	4	9	12	16	20	19	20	20	20	23	22	24	24	21	18	12	9	11	13	14.0	23.8
Dir	265	272	304	307	304	311	299	286	273	274	281	282	289	281	271	269	267	270	275	279	262	249	247	252	274.3	267.4
4 Spd	13	13	4	7	16	15	15	18	18	20	18	17	19	21	20	19	19	13	13	11	13	10	7	5	14.0	21.4
Dir	252	258	273	267	274	271	265	266	263	268	276	273	273	274	272	276	276	297	302	304	291	299	297	305	275.7	274.5
5 Spd	6	8	9	12	8	8	7	7	10	11	13	13	15	15	16	10	13	11	9	7	7	10	13	15	9.7	15.8
Dir	308	298	295	277	292	299	300	293	293	322	332	326	323	320	327	305	283	303	301	288	265	263	264	261	299.1	327.4
6 Spd	15	13	10	7	7	6	8	10	12	12	10	10	10	8	9	9	8	9	10	5	2	1	2	1	7.4	15.3
Dir	263	263	270	289	293	299	285	291	285	283	301	308	287	305	303	308	319	326	350	334	245	214	211	297	293.2	263.3
7 Spd	2	1	2	4	4	4	3	5	6	9	7	7	5	6	6	6	5	5	3	3	1	1	1	1	3.6	8.6
Dir	352	295	246	262	274	287	280	279	316	330	303	281	289	291	294	306	266	270	288	311	228	210	210	219	289.6	330.4
8 Spd	2	4	1	1	0	1	2	1	2	8	6	4	3	2	4	2	6	4	2	1	1	0	0	3	0.9	8.0
Dir	102	207	93	212	2	7	33	75	242	221	231	216	254	255	318	359	352	11	314	8	205	52	131	209	259.0	220.9
9 Spd	0	0	0	4	2	2	3	7	6	11	10	10	13	11	9	8	7	6	4	2	1	1	8	5	3.9	13.5
Dir	186	145	41	259	314	235	236	270	312	330	330	343	345	347	12	38	39	27	347	301	169	357	23	91	347.4	344.9
10 Spd	1	3	2	2	1	1	2	1	1	0	1	1	4	2	2	1	4	3	4	4	3	2	1	2	0.3	4.4
Dir	250	272	307	329	77	311	310	252	51	166	114	107	342	18	8	307	90	113	154	129	132	137	165	178	100.3	128.6
11 Spd	4	3	2	0	1	2	2	3	3	3	6	8	9	8	12	18	19	16	14	11	6	0	2	1	5.3	19.5
Dir	189	192	191	109	215	188	184	216	177	186	208	201	206	209	262	273	268	264	280	282	286	314	213	250	246.7	268.2
12 Spd	5	6	8	11	9	9	20	20	18	16	16	16	18	17	18	13	16	15	15	14	15	13	13	14	12.8	20.4
Dir	256	262	262	277	268	277	288	288	290	297	333	340	334	321	289	312	298	284	296	326	326	327	331	328	304.2	288.2
13 Spd	12	12	11	10	10	12	12	12	12	12	13	12	12	11	12	11	10	11	10	6	5	4	6	5	9.7	13.0
Dir	310	299	300	304	309	313	315	320	320	319	330	330	323	318	315	321	311	296	289	313	312	261	275	259	310.5	329.8
14 Spd	7	6	3	1	1	6	7	8	14	17	17	15	11	14	13	15	16	16	19	19	11	10	7	7	10.7	18.9
Dir	265	262	287	353	317	262	273	287	267	262	270	271	277	264	263	269	272	268	274	269	265	258	247	234	267.7	274.0
15 Spd	6	5	3	3	5	6	9	10	15	16	18	18	19	20	21	18	18	15	15	15	15	13	14	9	12.3	20.7
Dir	218	220	218	246	260	270	259	270	274	279	285	284	274	282	282	271	274	284	285	278	287	276	277	264	275.1	282.2
16 Spd	9	9	6	5	5	4	7	12	14	13	15	12	15	11	10	11	10	12	6	13	12	8	5	1	8.6	14.6
Dir	259	248	234	212	247	240	281	262	264	275	285	296	295	311	326	275	292	279	280	270	267	254	286	360	275.5	284.7
17 Spd	1	1	2	3	2	1	4	6	7	6	6	8	5	4	4	6	7	4	4	6	5	1	1	0	2.9	7.7
Dir	255	281	326	324	302	234	264	270	258	277	299	289	310	332	296	333	262	299	344	12	42	181	46	30	302.4	288.8
18 Spd	0	5	4	3	3	4	7	8	7	6	4	4	6	8	10	10	8	7	4	5	3	1	3	4	3.8	10.3
Dir	16	344	343	353	235	257	278	283	283	279	322	301	304	274	267	284	310	37	171	243	168	286	309	316	290.3	283.9
19 Spd	4	3	4	3	2	4	5	6	9	6	7	7	6	10	7	6	5	4	6	10	3	1	0	1	3.8	10.1
Dir	307	323	283	217	229	234	274	283	277	289	272	282	280	271	303	24	26	46	260	264	259	241	235	53	283.5	264.2
20 Spd	0	3	3	2	1	3	5	6	5	3	3	4	4	2	2	3	1	4	3	3	2	4	3	2	1.9	6.2
Dir	192	223	226	233	225	242	263	264	267	256	258	275	218	280	19	306	288	255	319	180	158	108	137	221	245.6	264.1
21 Spd	2	0	1	1	0	0	3	2	2	4	1	4	5	4	4	3	6	4	4	3	5	4	2	2	1.6	5.8
Dir	67	52	270	217	144	321	205	219	198	213	146	171	178	175	198	241	3	111	122	159	216	185	99	75	176.4	2.9
22 Spd	2	3	0	1	3	1	1	4	6	5	4	6	6	7	9	11	9	10	6	13	10	11	10	10	5.4	12.7
Dir	86	267	316	246	224	193	165	277	288	291	347	314	298	334	278	256	255	253	245	269	267	268	268	262	272.1	268.7

PASZA
Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Evergreen Park - July 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	9	9	7	7	7	6	7	11	10	12	12	12	13	14	16	14	13	15	11	10	5	5	6	5	9.4	16.4
Dir	259	259	256	251	258	252	263	260	268	263	266	262	249	269	281	271	270	292	289	266	256	222	210	208	263.7	281.3
24 Spd	5	6	3	1	4	6	8	13	17	13	19	22	21	23	23	21	22	21	20	14	11	9	6	5	12.8	22.6
Dir	220	268	239	253	284	276	283	284	289	304	289	278	283	287	281	285	284	290	281	290	285	270	269	274	282.9	286.8
25 Spd	4	6	8	6	7	7	8	11	15	14	13	12	11	11	11	8	11	10	9	10	5	5	8	8	8.7	14.7
Dir	267	286	299	265	260	235	263	272	279	289	283	294	287	277	287	298	281	293	292	322	299	257	263	261	281.5	279.5
26 Spd	5	5	3	3	4	3	7	5	16	16	13	14	15	13	10	8	11	9	11	7	6	4	3	2	7.4	16.3
Dir	286	304	281	288	282	276	268	303	341	340	334	344	337	315	322	341	307	348	317	308	321	318	309	259	321.8	340.6
27 Spd	3	0	2	1	1	1	2	3	1	3	3	5	6	5	5	4	5	5	5	4	3	3	4	3	2.2	5.6
Dir	283	166	224	220	241	214	209	268	41	79	104	135	137	141	144	156	112	105	107	104	82	85	80	83	122.1	137.4
28 Spd	3	2	1	1	0	2	1	1	3	3	4	3	2	4	4	1	0	13	11	7	3	6	7	4	1.4	13.5
Dir	80	67	66	25	333	229	40	22	271	230	226	145	259	327	339	241	332	341	4	283	85	246	231	238	304.1	341.1
29 Spd	1	2	1	0	2	1	2	2	4	6	6	4	5	3	4	5	5	4	9	7	8	10	4	2	2.8	9.7
Dir	25	98	2	270	214	217	271	35	180	220	223	262	266	270	192	171	180	216	227	249	312	277	278	208	238.8	276.8
30 Spd	0	1	1	1	4	4	4	5	10	9	11	11	8	7	2	5	10	10	10	7	4	2	2	3	4.9	11.2
Dir	221	220	9	207	218	260	275	249	261	275	251	270	287	307	50	309	269	259	264	260	262	246	348	288	269.1	250.8
31 Spd	3	4	3	1	3	3	3	5	4	4	4	5	4	3	6	3	2	2	2	2	1	2	1	2	2.6	5.6
Dir	268	281	287	253	274	261	267	282	287	291	272	329	273	310	273	282	283	266	342	215	174	202	201	228	276.9	273.2
Spd	3.8	4.2	3.3	3.3	3.5	3.8	5.3	7.0	8.5	8.6	8.3	8.0	8.5	8.6	8.9	8.3	8.6	7.9	7.6	7.2	4.9	4.3	3.9	3.5	Diurnal Average	
Dir	262.4	264.2	269.4	264.7	265.1	266.6	272.4	275.1	278.4	282.1	286.2	287.0	286.6	287.7	285.8	285.1	282.4	288.5	285.9	280.6	277.2	265.9	270.5	261.6		
Spd	15.3	13.3	11.9	13.2	16.1	14.6	20.4	19.9	18.0	19.7	18.8	21.9	21.0	22.7	22.6	21.5	23.8	23.6	21.0	20.4	17.1	14.6	13.8	14.7	Diurnal Maximum	
Dir	263.3	263.5	235.1	233.2	273.8	270.5	288.2	288.0	289.5	268.3	289.4	278.0	283.3	249.9	271.5	268.8	267.4	269.9	275.1	262.3	264.4	262.1	276.7	260.6		

Maximum Speed Value: 24 km/h on Jul 3 17:00
Minimum Speed Value: 0 km/h on Jul 29 04:00
Maximum Daily Speed Average: 14.4 km/h on Jul 1
Minimum Daily Speed Average: 0.3 km/h on Jul 10
Maximum Diurnal Speed Average: 8.9 km/h at hour 15
Minimum Diurnal Speed Average: 3.3 km/h at hour 3

Monthly Average Velocity: 6.17 km/h 279.32 deg
Speed Percentiles: P_1 = 0.2 P_{10} = 1.3 Q_1 = 3.2 Median = 6.3 Q_3 = 11.3 P_{90} = 16.4 P_{99} = 22.1
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

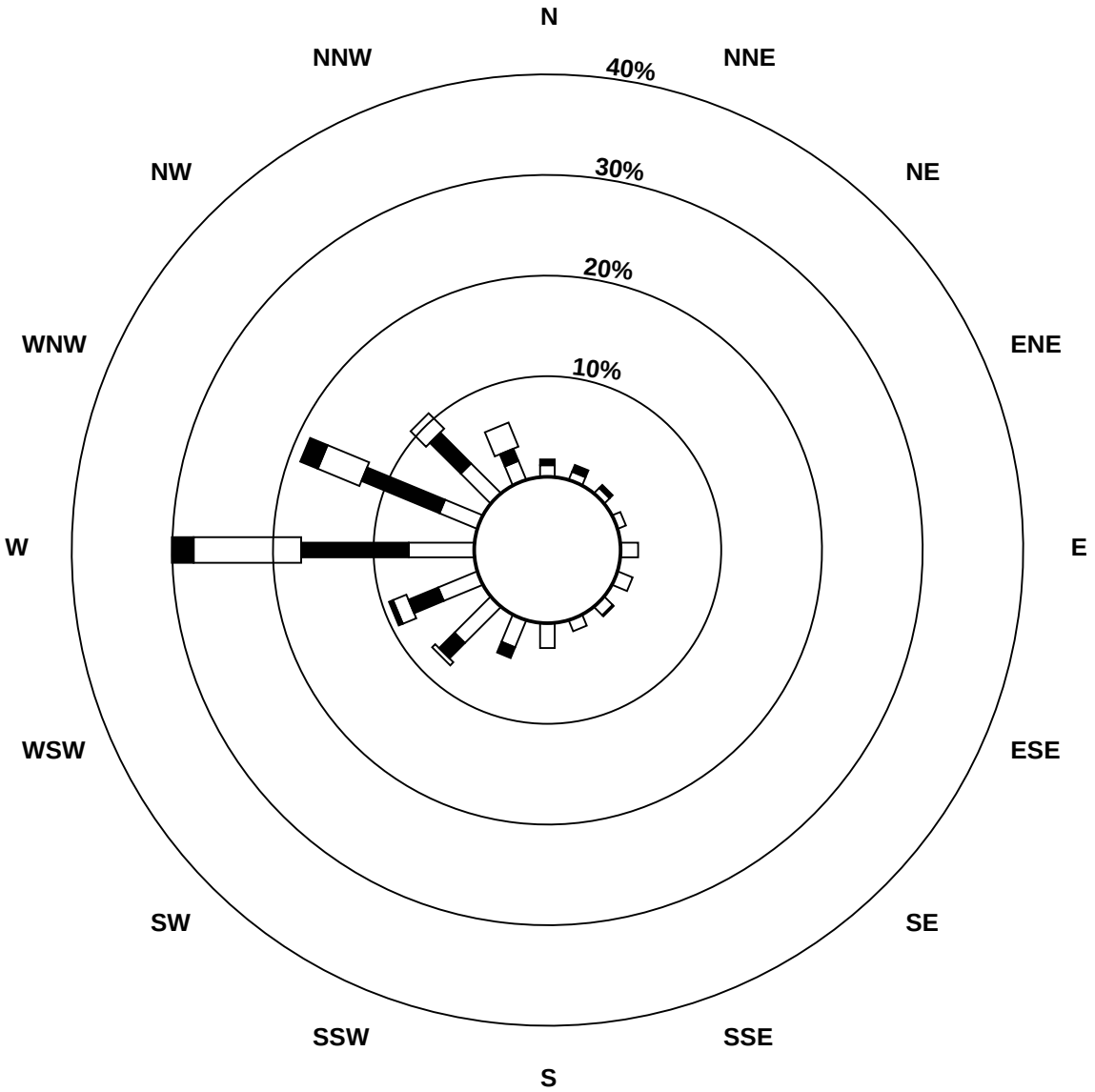
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	25	10	7	0	0	0	42
NorthEast	19	7	0	0	0	0	26
East	23	3	0	0	0	0	26
SouthEast	15	3	0	0	0	0	18
South	35	1	0	0	0	0	36
SouthWest	70	30	7	1	0	0	108
West	73	125	110	33	0	0	341
NorthWest	48	60	39	0	0	0	147
Total	308	239	163	34	0	0	744

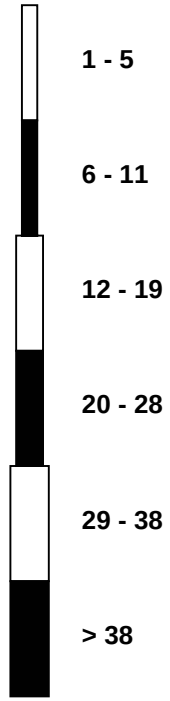
Wind Rose

Wind Speed (WS) (km/h)

Evergreen Park - July 2010



Wind Speed Classes (km/h)



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Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Evergreen Park - July 2010

Maximum Speed: 24 km/h on Jul 3 17:00

Maximum Daily Speed Average: 15.2 km/h on Jul 1

Minimum Speed: 1 km/h on Jul 19 23:00

Minimum Daily Speed Average: 3.2 km/h on Jul 10

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

Minimum Diurnal Speed Average: 4.4 km/h at hour 4

Monthly Average Speed: 8.29 km/h

Percentiles: P_1 = 1.2 P_{10} = 2.1 Q_1 = 3.8 Median = 6.9 Q_3 = 11.9 P_{90} = 16.9 P_{99} = 22.5

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-Jul	11	13	12	13	7	6	10	13	17	19	19	19	21	23	22	21	19	20	20	21	12	7	9	9	15.2	23.5
2-Jul	7	5	7	7	7	5	7	12	18	18	16	16	18	16	18	17	18	18	18	15	17	15	11	9	13.1	18.5
3-Jul	13	9	3	4	3	5	9	12	16	20	19	20	21	20	23	22	24	24	21	18	12	9	11	13	14.7	24.1
4-Jul	13	13	5	7	16	15	16	18	18	20	19	18	19	22	21	19	20	14	14	11	13	10	8	5	14.7	21.8
5-Jul	6	9	9	12	9	8	7	7	10	12	14	14	15	16	17	11	13	11	9	7	7	10	13	15	10.8	17.0
6-Jul	15	13	11	8	8	7	8	10	13	13	10	11	11	10	10	10	8	10	10	5	2	1	2	2	8.7	15.4
7-Jul	2	2	3	4	4	4	3	5	7	9	9	8	7	7	7	7	6	6	4	3	1	2	1	2	4.8	9.3
8-Jul	3	4	3	2	1	2	2	2	3	8	7	5	5	5	5	4	7	4	3	1	1	1	2	3	3.5	8.4
9-Jul	1	2	1	5	3	2	3	7	6	11	11	11	14	12	10	9	7	7	5	4	2	5	9	6	6.5	14.1
10-Jul	3	4	3	2	2	2	2	2	2	3	4	4	5	3	5	4	5	4	4	5	3	2	1	2	3.2	5.3
11-Jul	4	3	2	1	2	2	2	4	3	4	7	8	9	9	13	18	20	17	14	12	6	1	2	2	6.9	19.9
12-Jul	5	7	9	11	9	9	21	20	18	17	16	16	19	18	18	14	16	15	15	15	15	13	14	14	14.4	20.7
13-Jul	13	12	11	10	10	13	12	12	12	12	13	12	12	12	13	11	11	11	10	7	5	4	6	5	10.4	13.4
14-Jul	7	7	3	1	2	6	7	9	15	17	18	16	11	14	14	16	16	16	19	19	11	10	7	7	11.2	19.2
15-Jul	6	5	3	3	5	6	9	10	15	17	18	19	20	21	22	19	18	16	16	15	15	14	14	9	13.0	21.5
16-Jul	9	9	6	5	5	5	7	12	14	14	15	13	16	12	11	12	10	13	7	14	12	8	7	2	9.9	15.8
17-Jul	2	1	2	3	2	1	4	6	7	7	7	9	7	8	6	7	8	4	5	6	5	2	2	1	4.7	9.1
18-Jul	1	5	4	3	4	4	7	8	8	7	5	5	7	8	11	11	9	8	7	8	4	2	3	4	6.0	11.3
19-Jul	5	3	4	3	2	4	5	7	9	7	8	8	7	10	8	7	6	5	9	10	4	2	1	1	5.7	10.4
20-Jul	1	3	3	2	2	3	5	6	6	4	4	5	5	4	4	5	3	5	4	4	3	5	3	3	3.8	6.3
21-Jul	2	1	2	2	1	1	3	2	3	4	3	5	6	5	6	8	9	5	4	4	6	5	3	3	3.9	8.8
22-Jul	2	4	2	1	3	2	2	5	6	6	4	7	8	7	10	11	9	10	7	13	10	11	10	10	6.8	12.9
23-Jul	9	9	7	7	7	6	7	11	10	12	12	12	14	14	17	15	14	16	12	10	5	5	6	5	10.2	17.3
24-Jul	5	6	3	2	4	6	9	13	17	14	19	22	22	23	23	22	23	21	20	14	11	9	7	6	13.4	23.3
25-Jul	4	6	8	6	7	7	8	11	15	14	14	12	12	12	12	9	12	11	10	11	5	5	8	8	9.5	15.1
26-Jul	6	5	4	3	4	3	7	6	17	16	14	14	16	13	11	8	12	10	12	7	6	4	3	2	8.5	16.7
27-Jul	3	2	2	2	1	1	2	3	2	4	5	6	7	6	7	7	6	6	6	4	3	3	4	4	4.0	6.9
28-Jul	3	2	2	1	1	2	2	3	5	3	4	4	4	5	5	4	4	14	13	11	4	7	7	6	4.8	14.5
29-Jul	3	3	3	2	3	2	3	3	5	6	6	5	6	5	4	6	5	5	9	8	9	11	5	3	5.0	10.6
30-Jul	2	2	2	2	4	5	5	5	10	9	11	12	9	8	3	5	10	10	10	7	4	3	2	3	6.0	11.7
31-Jul	3	4	4	2	3	3	3	5	4	5	5	6	5	5	7	5	5	4	3	3	1	2	1	2	3.7	6.7
	5.5	5.6	4.6	4.4	4.5	4.7	6.3	8.1	10.1	10.7	10.9	11.1	11.6	11.4	11.7	11.1	11.4	11.0	10.3	9.4	7.1	6.0	5.9	5.3	Diurnal Average	
	15.4	13.3	11.9	13.2	16.3	14.8	20.7	20.2	18.4	20.2	19.5	22.4	21.7	23.5	23.3	22.2	24.1	24.1	21.3	20.7	17.3	14.7	14.0	14.8	Diurnal Maximum	

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

PASZA
Peace Airshed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Evergreen Park - July 2010

Maximum Value: 101.0 deg on Jul 10 10:00

Minimum Value: 3.4 deg on Jul 1 04:00

Percentiles: P_1 = 5.6 P_{10} = 9.5 Q_1 = 13.0 Median = 19.7 Q_3 = 40.5 P_{90} = 66.9 P_{99} = 92.1

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

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Jul	8	6	5	3	13	9	7	10	13	11	16	15	13	15	13	10	11	11	10	9	8	8	8	13	15.6
2-Jul	6	6	4	5	5	6	9	15	13	12	12	14	17	13	16	16	12	14	12	13	8	7	9	8	17.5
3-Jul	7	24	16	16	18	12	15	15	8	10	12	15	16	14	12	11	9	11	11	11	11	9	10	8	24.1
4-Jul	8	7	24	14	9	9	9	9	9	13	13	12	13	12	9	12	11	22	24	15	11	13	15	15	24.0
5-Jul	11	13	13	10	16	11	15	14	13	21	17	20	20	18	21	25	15	15	14	14	12	6	7	6	24.7
6-Jul	6	6	11	17	17	20	13	13	14	12	22	29	30	32	27	25	19	29	16	25	42	71	27	66	71.0
7-Jul	43	90	52	10	16	17	34	16	35	22	41	30	58	40	39	42	45	44	60	26	60	80	80	83	89.7
8-Jul	71	16	89	93	85	51	25	76	49	16	28	62	67	80	51	79	42	42	72	65	61	92	88	19	92.6
9-Jul	88	85	80	47	41	35	37	19	27	19	23	29	20	22	26	21	20	39	45	66	73	84	26	46	87.7
10-Jul	81	46	39	46	61	57	26	65	89	101	86	82	28	69	66	72	55	62	38	20	15	10	25	15	101.0
11-Jul	12	21	16	80	21	18	22	28	32	24	20	16	18	23	24	18	12	12	16	15	20	95	28	61	94.8
12-Jul	13	16	13	12	10	21	9	10	14	19	17	15	19	20	18	20	17	17	15	15	13	13	15	14	20.7
13-Jul	16	12	12	11	13	11	12	12	13	15	14	13	16	15	12	16	16	16	12	18	17	19	12	11	18.5
14-Jul	7	7	26	31	58	8	12	18	12	10	12	14	16	13	16	13	16	10	10	7	9	6	12	7	58.0
15-Jul	7	7	8	24	23	19	10	11	11	15	13	15	15	15	15	14	13	18	16	18	12	10	9	7	23.6
16-Jul	7	9	31	9	10	23	18	9	11	17	17	22	23	24	25	19	18	16	27	12	10	9	38	80	80.2
17-Jul	51	59	25	33	46	88	23	20	24	29	34	35	57	68	60	44	35	35	34	22	10	81	88	94	93.7
18-Jul	90	15	16	33	22	12	14	15	17	27	61	55	31	26	25	25	25	31	80	52	49	88	14	15	89.7
19-Jul	13	22	33	17	37	18	16	19	17	24	26	28	32	19	38	36	55	35	67	20	67	92	79	72	92.5
20-Jul	95	27	37	48	57	18	13	14	19	47	59	46	54	82	75	65	93	49	61	18	36	12	18	68	94.6
21-Jul	20	77	49	80	73	97	16	38	36	30	81	41	41	46	55	56	58	21	26	30	35	54	47	59	97.3
22-Jul	58	32	78	20	23	86	63	41	15	39	22	38	46	28	27	10	15	16	19	10	8	7	6	6	85.7
23-Jul	8	6	7	10	8	9	10	12	15	17	18	22	20	16	19	21	18	13	16	11	13	14	13	13	21.6
24-Jul	15	25	25	59	22	17	14	12	12	20	16	13	14	12	15	15	11	11	11	12	11	8	16	17	59.4
25-Jul	23	14	15	10	8	10	12	11	13	15	19	22	20	24	29	30	27	28	24	20	20	10	6	6	30.1
26-Jul	38	17	51	18	17	29	11	21	13	14	18	13	19	18	29	28	25	16	19	17	17	25	22	43	51.4
27-Jul	30	84	41	49	61	69	58	52	59	46	52	48	39	42	54	67	34	37	28	23	11	8	8	12	83.5
28-Jul	11	16	30	55	87	67	89	75	62	53	31	54	64	47	50	79	94	29	37	56	53	43	8	47	94.3
29-Jul	81	42	73	91	56	76	69	52	38	17	16	48	38	65	30	37	21	47	14	23	27	26	30	58	91.4
30-Jul	93	71	77	90	28	41	42	21	10	18	13	21	29	31	41	33	16	9	10	11	15	38	36	27	92.8
31-Jul	29	34	26	52	19	14	20	20	29	33	38	47	48	68	34	71	70	79	58	47	25	26	31	38	78.9
	94.6	89.7	88.6	92.6	87.5	97.3	89.4	76.2	88.7	101.0	86.2	82.2	67.3	82.4	74.9	79.4	94.3	78.9	80.5	66.4	72.9	94.8	88.0	93.7	

PASZA
Smoky Heights Station
Monthly Summary Tables, Graphs and Roses

PASZA
Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 5.8 ppb on Jul 15 07:00 Maximum Daily Average: 0.7 ppb on Jul 28

Minimum Value: 0 ppb on Jul 21 21:00 Minimum Daily Average: 0.1 ppb on Jul 13
Maximum Diurnal Average: 0.9 ppb at hour 7 Minimum Diurnal Average: 0.1 ppb at hour 17
Monthly Average: 0.32 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.1$ Median = 0.1 $Q_3 = 0.3$ $P_{90} = 0.8$ $P_{99} = 3.0$

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

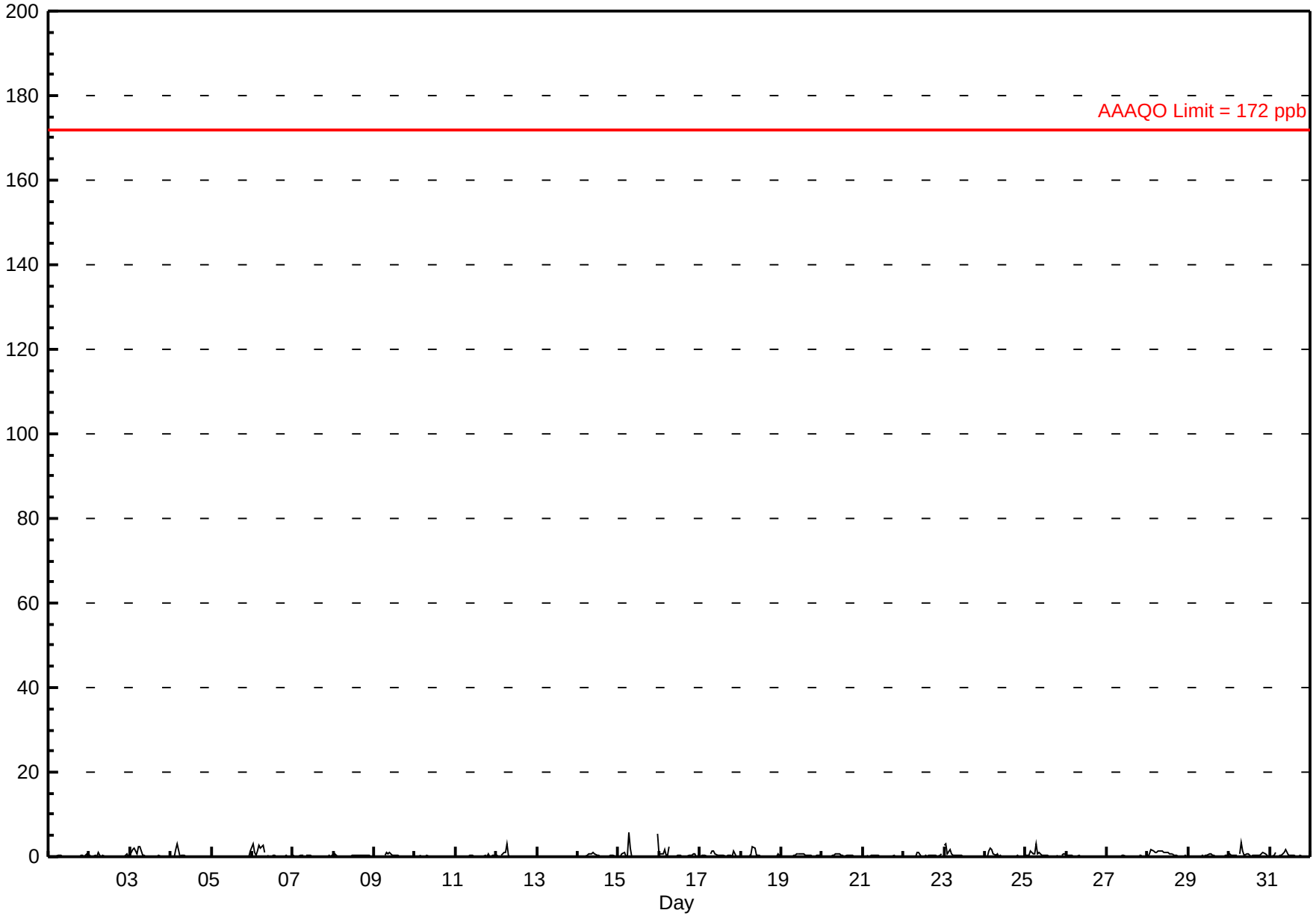
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0.1	0.6
2-Jul	0	0	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0.2	1.0
3-Jul	0	2	2	1	1	2	2	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.5	2.4
4-Jul	0	0	0	2	3	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.9
5-Jul	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	1.5
6-Jul	3	1	0	1	3	2	3	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	3.0
7-Jul	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
8-Jul	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
9-Jul	0	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.2
10-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
11-Jul	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.1	0.6
12-Jul	0	0	A	0	1	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	3.1
13-Jul	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
14-Jul	A	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0.3	0.9
15-Jul	0	0	1	1	0	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	5	0.7	5.8
16-Jul	1	1	1	2	0	0	2	C	C	C	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0.5	2.5
17-Jul	0	0	0	0	0	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.4	1.3
18-Jul	0	0	0	0	A	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.3	2.3
19-Jul	0	0	0	A	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.3	0.7
20-Jul	0	0	A	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
21-Jul	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
22-Jul	A	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0.2	0.9
23-Jul	3	3	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.5	3.1
24-Jul	0	0	1	2	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.4	2.1
25-Jul	1	0	0	1	1	1	3	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	0.5	3.0
26-Jul	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
27-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	N	0	A	0	0	0	0	0	0.1	0.3
28-Jul	0	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.7	1.7
29-Jul	0	0	0	0	0	A	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0.2	0.7
30-Jul	1	0	0	0	0	A	1	4	1	0	1	1	0	0	0	0	0	0	0	1	1	1	0	0	0.6	3.5
31-Jul	0	0	0	1	A	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.8
	0.4	0.4	0.4	0.6	0.5	0.4	0.9	0.7	0.5	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.4	Diurnal Average	
	3.0	3.1	2.1	2.1	2.9	2.3	5.8	3.5	2.1	1.8	1.1	1.1	0.9	0.8	0.7	0.5	0.4	0.4	0.5	0.7	1.3	0.6	0.8	5.4	Diurnal Maximum	

C - Calibration N - Not Valid A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 57 ppb

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - July 2010



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Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - July 2010

Maximum Value: 22.3 ppb on Jul 12 07:00

Maximum Daily Average: 1.7 ppb on Jul 23

Minimum Value: 0 ppb on Jul 22 00:00

Minimum Daily Average: 0.4 ppb on Jul 13

Maximum Diurnal Average: 2.4 ppb at hour 7

Minimum Diurnal Average: 0.5 ppb at hour 16

Monthly Average: 0.92 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.3$ $Q_1 = 0.4$ Median = 0.5 $Q_3 = 0.8$ $P_{90} = 1.8$ $P_{99} = 6.4$

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

Day	Hourly Period Ending At (MST)																								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-Jul	0	0	0	0	0	1	1	1	0	0	0	0	0	A	0	0	0	0	1	1	2	1	2	0	0.6	2.1
2-Jul	1	0	0	1	0	2	1	1	1	0	0	0	A	1	0	0	0	0	0	0	0	1	1	0	0.6	1.6
3-Jul	1	3	4	3	1	6	6	1	0	0	0	A	0	0	0	0	1	1	1	1	0	0	0	0	1.3	6.2
4-Jul	0	0	0	7	6	0	0	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.9	6.5
5-Jul	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	5	0.6	5.4
6-Jul	7	2	1	2	4	4	5	2	A	2	0	0	1	1	0	1	0	0	0	0	1	0	0	0	1.5	7.4
7-Jul	1	0	0	0	1	1	1	A	1	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1	0.5	1.0
8-Jul	1	2	0	0	0	0	A	0	0	0	0	1	1	0	1	1	1	1	1	1	1	0	0	0	0.6	2.1
9-Jul	0	1	0	0	0	A	1	3	1	3	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0.7	3.2
10-Jul	0	0	0	1	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.5
11-Jul	0	0	0	A	0	0	0	0	1	1	1	0	0	0	0	1	0	2	0	1	0	0	1	1	0.5	1.6
12-Jul	1	0	A	1	2	2	22	1	1	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1.5	22.3
13-Jul	0	A	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.4	0.6
14-Jul	A	0	0	0	1	2	2	2	2	2	2	1	1	0	0	0	1	0	0	2	2	2	0	A	1.1	2.3
15-Jul	0	0	2	4	0	3	10	4	1	1	1	0	0	1	1	0	0	0	0	0	0	1	A	8	1.7	9.6
16-Jul	2	1	2	5	1	4	4	C	C	C	0	0	0	0	0	0	1	0	1	1	1	2	0	1	1.3	5.4
17-Jul	0	1	1	1	0	A	2	4	3	2	1	1	1	1	1	0	1	1	1	0	6	0	0	1	1.2	5.9
18-Jul	1	0	0	0	A	1	1	4	3	2	1	1	0	0	0	0	1	0	0	0	0	0	2	1	0.8	3.7
19-Jul	0	0	0	A	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	0.7	1.1
20-Jul	0	0	A	0	0	0	1	1	1	1	1	1	1	0	1	0	1	1	1	0	0	0	0	0	0.6	1.3
21-Jul	0	A	1	0	0	1	1	1	1	1	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0.5	0.7
22-Jul	A	0	0	0	0	0	0	0	4	4	1	1	1	1	0	1	1	1	1	1	0	1	1	A	0.9	4.5
23-Jul	5	15	3	5	2	1	1	1	0	1	1	0	0	0	0	0	1	0	0	1	0	0	A	0	1.7	15.1
24-Jul	0	1	3	7	6	2	1	2	0	1	0	0	0	0	0	0	0	0	1	1	0	A	1	1	1.3	6.8
25-Jul	1	1	1	2	1	3	6	2	2	1	1	1	1	1	1	0	0	1	0	0	A	1	4	1	1.4	5.5
26-Jul	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	A	0	0	0	0	0.5	0.9
27-Jul	0	1	0	0	0	0	1	0	0	1	1	0	0	0	0	1	N	1	A	1	1	0	0	0	0.4	0.8
28-Jul	1	1	3	2	1	1	2	2	2	2	2	1	1	1	1	1	1	1	1	0	0	0	1	0	1.2	2.5
29-Jul	0	0	0	0	0	A	0	0	1	0	1	1	1	1	1	0	0	0	0	0	1	1	1	1	0.6	1.3
30-Jul	1	1	1	1	1	A	2	8	6	1	1	1	1	1	1	1	0	2	1	2	4	2	1	0	1.6	8.2
31-Jul	0	1	1	3	A	0	1	1	4	3	2	1	1	1	1	1	0	0	1	0	0	0	0	1	1.0	3.5
	1.0	1.2	0.9	1.7	1.2	1.3	2.4	1.6	1.3	1.0	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.6	0.5	0.6	0.8	0.6	0.8	1.0	Diurnal Average	
	7.4	15.1	3.5	6.8	6.1	5.7	22.3	8.2	5.8	4.0	2.3	1.5	1.3	1.2	1.0	0.9	0.8	1.6	1.5	1.9	5.9	2.4	4.1	8.3	Diurnal Maximum	

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

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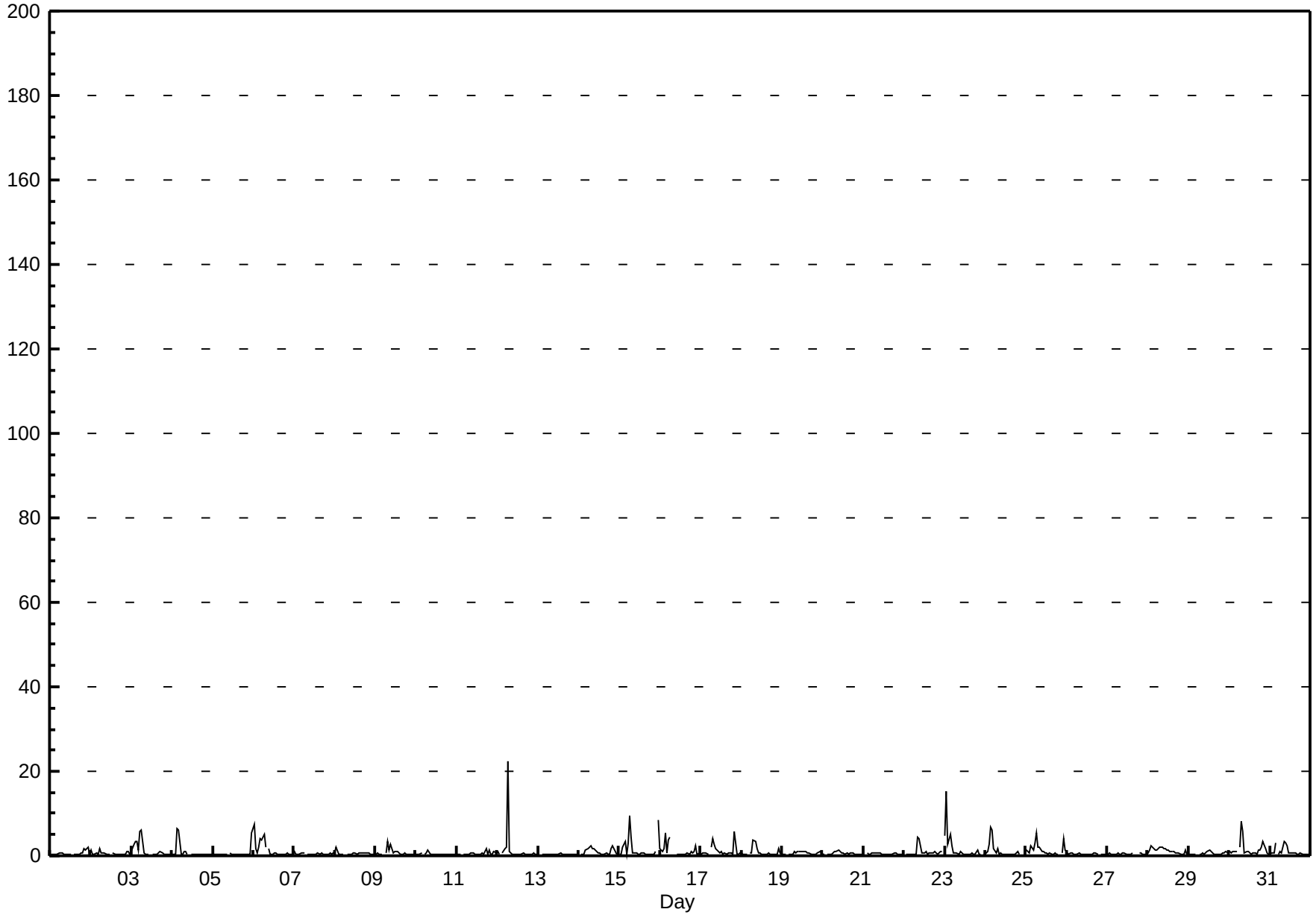
Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

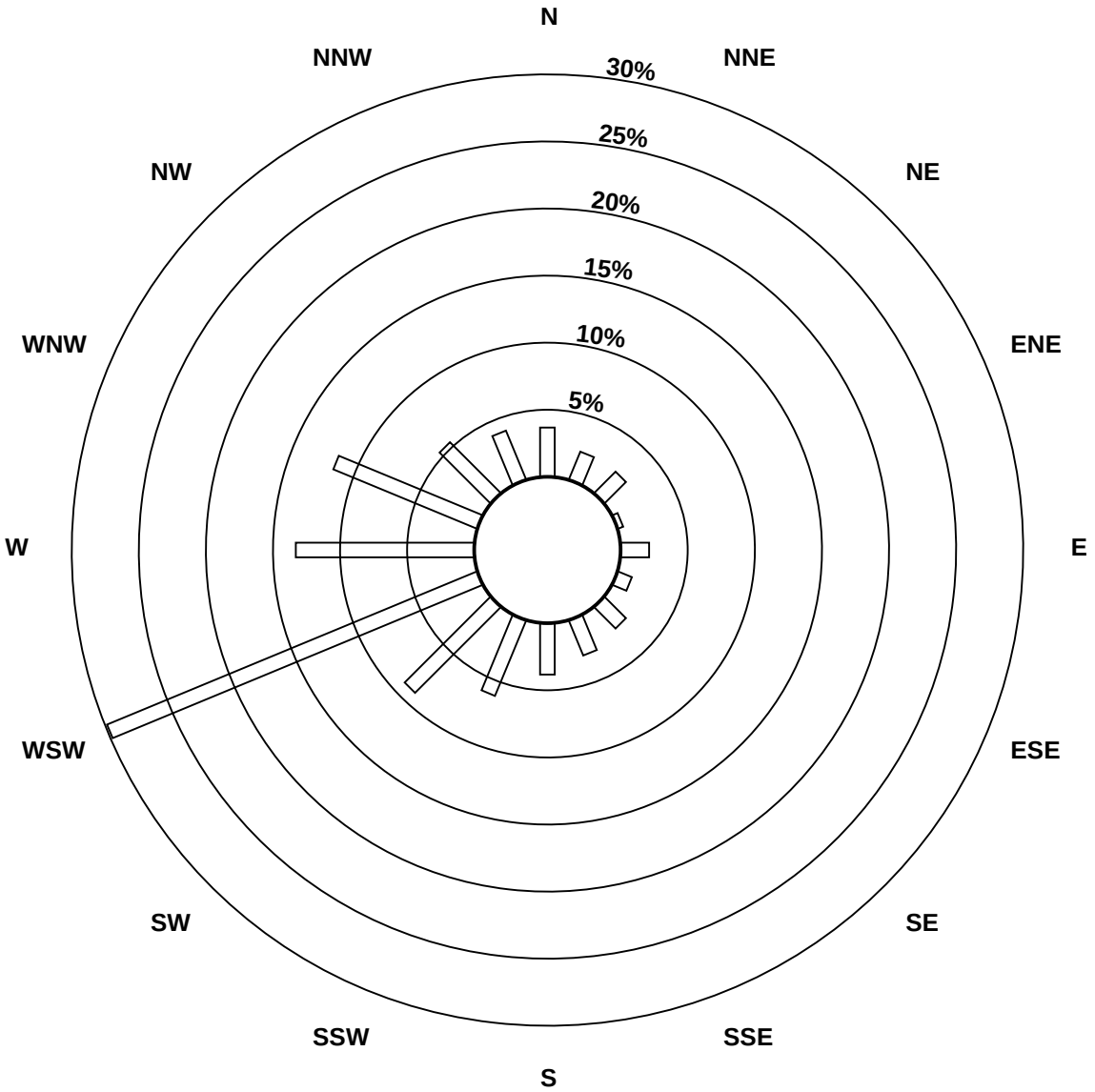
Smoky Heights - July 2010



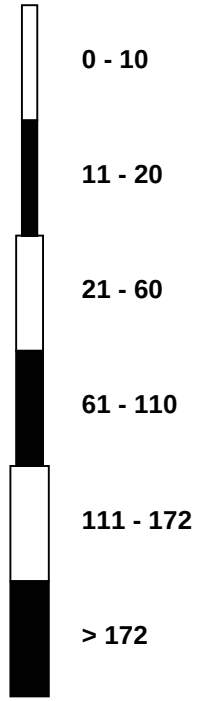
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - July 2010



Pollutant Classes (ppb)



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Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.3 ppb on Jul 9 07:00 Maximum Daily Average: 0.5 ppb on Jul 9

Minimum Value: 0 ppb on Jul 20 12:00 Minimum Daily Average: 0.3 ppb on Jul 7
Maximum Diurnal Average: 0.5 ppb at hour 7 Minimum Diurnal Average: 0.3 ppb at hour 17
Monthly Average: 0.35 ppb Percentiles: $P_1 = 0.2$ $P_{10} = 0.2$ $Q_1 = 0.3$ Median = 0.3 $Q_3 = 0.4$ $P_{90} = 0.5$ $P_{99} = 0.6$

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

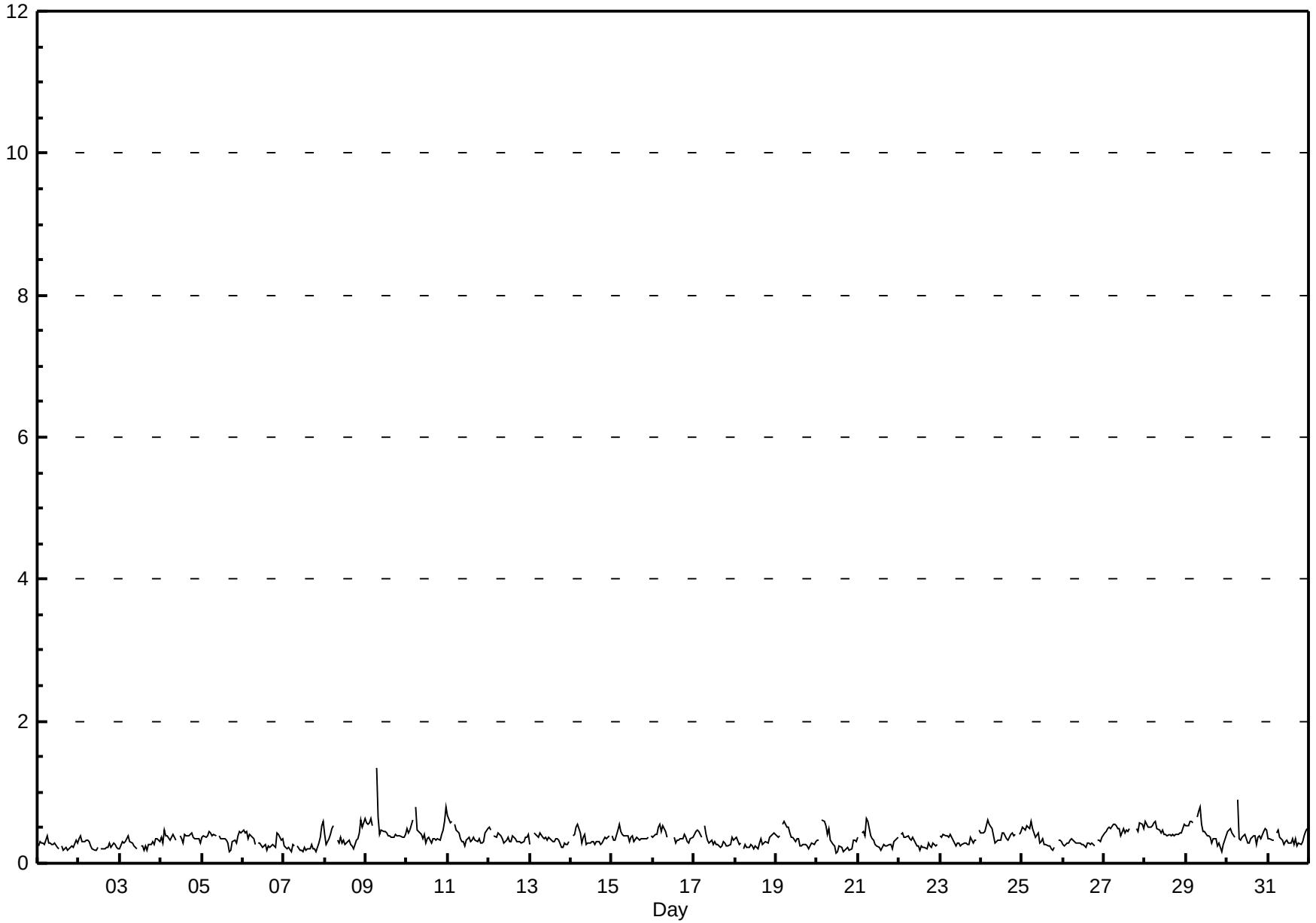
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.3	0.4
2-Jul	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
3-Jul	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0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

C - Calibration N - Not Valid A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - July 2010



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Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - July 2010

Maximum Value: 1.9 ppb on Jul 9 07:00

Maximum Daily Average: 0.9 ppb on Jul 9

Minimum Value: 0 ppb on Jul 2 15:00

Minimum Daily Average: 0.6 ppb on Jul 7

Maximum Diurnal Average: 0.9 ppb at hour 7

Minimum Diurnal Average: 0.7 ppb at hour 17

Monthly Average: 0.75 ppb

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

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.7	0.8
2-Jul	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	1	1	1	1	1	1	1	1	1	0.7	0.9
3-Jul	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
4-Jul	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
5-Jul	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0.8	0.9
6-Jul	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
7-Jul	1	1	0	1	1	1	1	A	1	0	0	1	1	1	1	1	1	1	1	0	1	1	1	1	0.6	1.2
8-Jul	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
9-Jul	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.9
10-Jul	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.4
11-Jul	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.3
12-Jul	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	0.9
13-Jul	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8
14-Jul	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
15-Jul	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
16-Jul	1	1	1	1	1	1	1	1	1	C	C	C	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
17-Jul	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1
18-Jul	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
19-Jul	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0.7	0.9
20-Jul	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0.7	1.3
21-Jul	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
22-Jul	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.7	0.9
23-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.7	1.0
24-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.8	1.0
25-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	0.9
26-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.7	0.9
27-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	N	1	A	1	1	1	1	1	0.9	1.0
28-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
29-Jul	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
30-Jul	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.4
31-Jul	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
	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	Diurnal Average	
	1.3	1.0	1.0	1.3	1.1	1.4	1.9	1.2	1.3	0.9	1.0	0.9	0.8	0.9	0.9	0.9	0.8	1.0	0.9	0.9	1.0	1.3	1.0	1.2	Diurnal Maximum	

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

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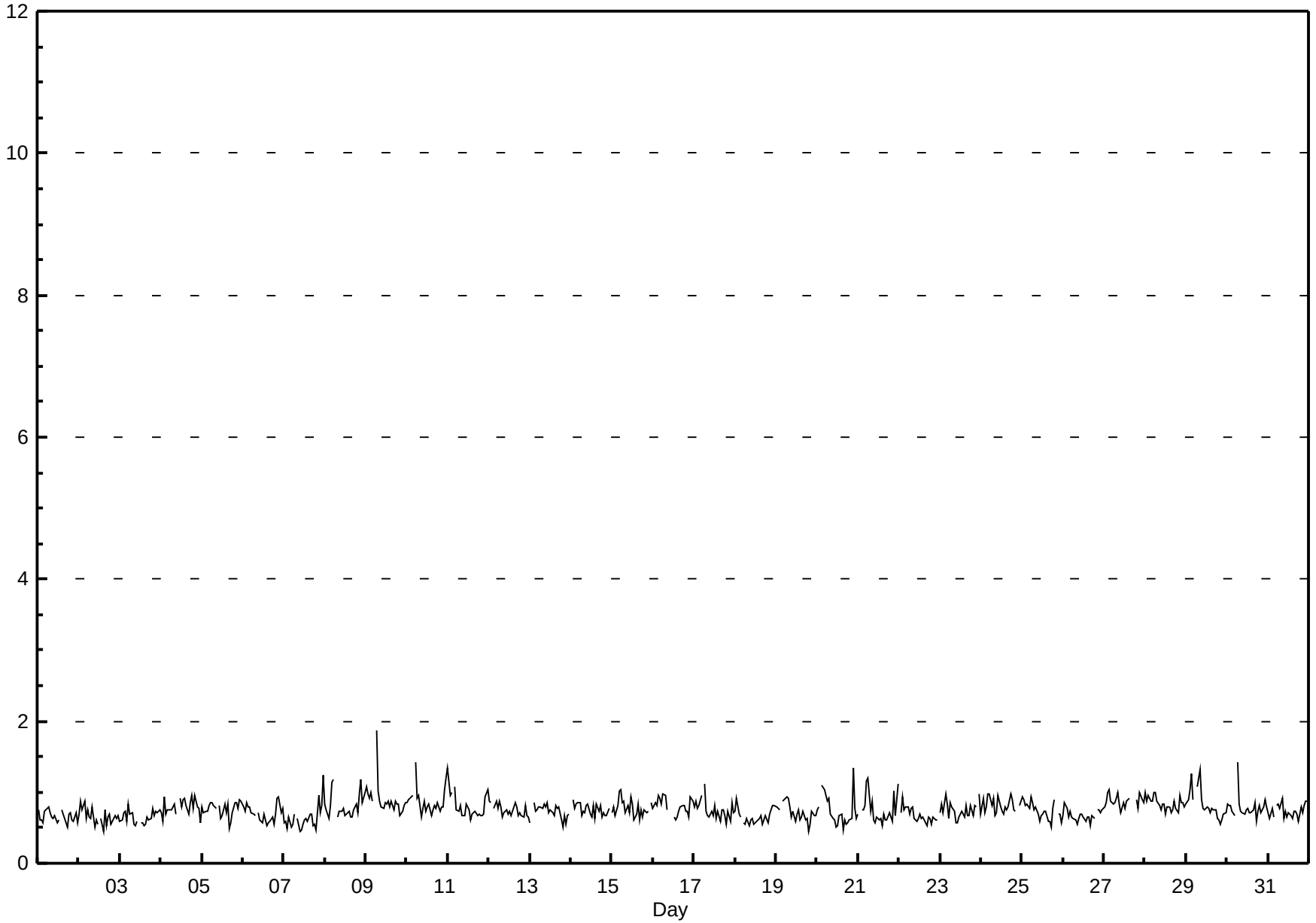
Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

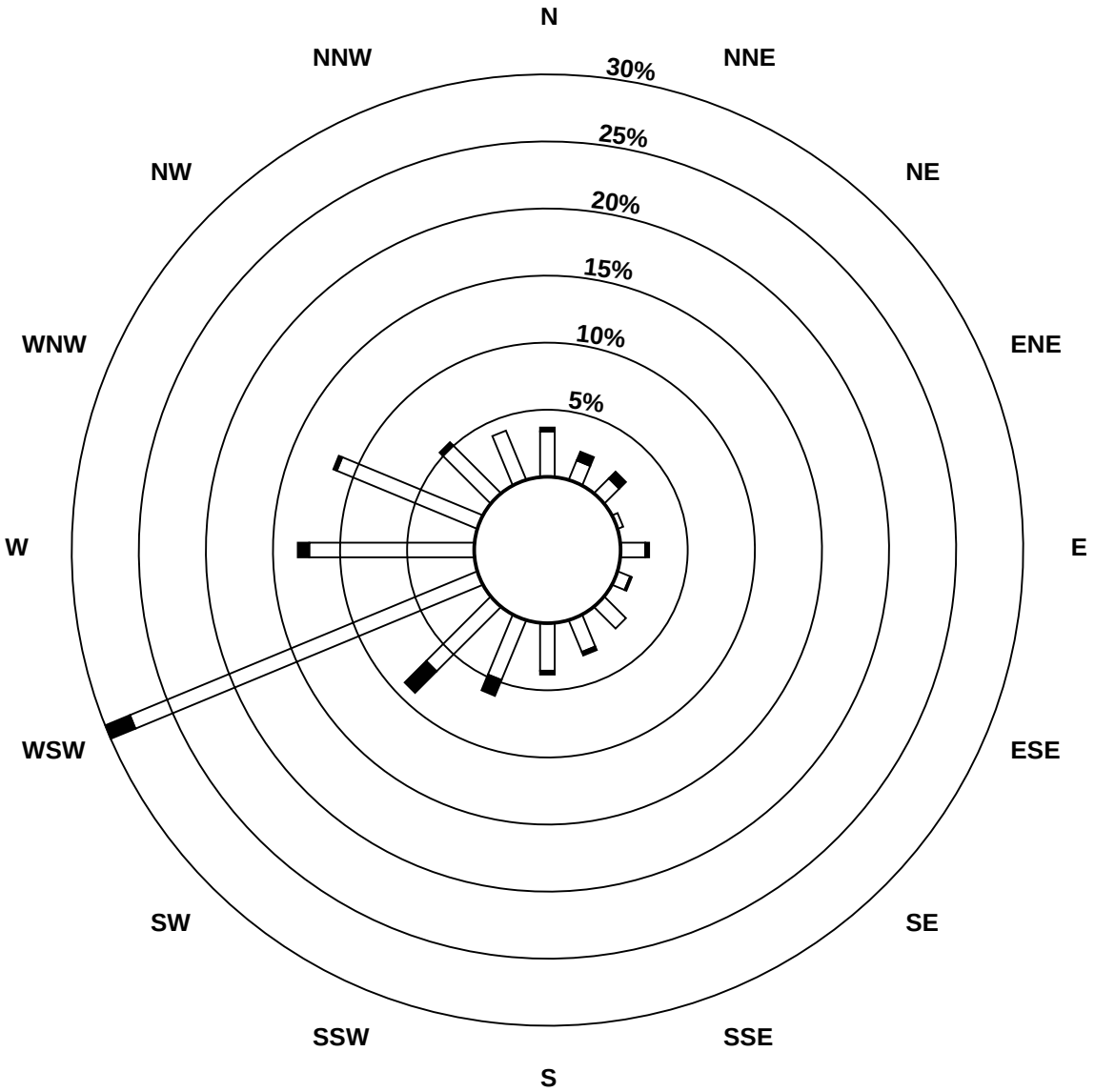
Smoky Heights - July 2010



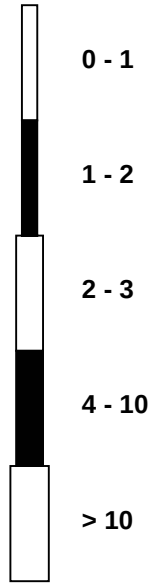
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - July 2010



Pollutant Classes (ppb)



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Hourly Averages

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

Smoky Heights - July 2010

Number of Exceedences: 1-hr: 0 24-hr: 0
Maximum Value: 79.9 $\mu g/m^3$ on Jul 25 22:00
Maximum Daily Average: 9.4 $\mu g/m^3$ on Jul 28

Minimum Value: 0 $\mu g/m^3$ on Jul 1 04:00
Maximum Diurnal Average: 7.7 $\mu g/m^3$ at hour 22
Monthly Average: 3.90 $\mu g/m^3$
Minimum Daily Average: 1.3 $\mu g/m^3$ on Jul 4
Minimum Diurnal Average: 2.3 $\mu g/m^3$ at hour 3
Percentiles: $P_1 = 0.0$ $P_{10} = 0.2$ $Q_1 = 1.1$ Median = 2.4 $Q_3 = 4.9$ $P_{90} = 9.0$ $P_{99} = 20.8$

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 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-Jul	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	2	2	3	5	21	2	1.7	21.3
2-Jul	2	2	1	1	2	2	2	2	2	3	6	3	0	1	2	1	1	1	1	2	2	4	4	5	2.2	6.3
3-Jul	2	3	3	4	3	2	2	0	0	0	1	1	1	1	2	2	2	3	2	2	2	2	1	1	1.8	4.2
4-Jul	2	1	2	2	1	1	1	0	0	0	0	0	0	1	0	3	1	4	0	2	4	2	1	0	1.3	4.4
5-Jul	1	1	0	1	0	0	1	2	1	1	1	0	1	0	0	2	0	2	2	2	5	4	6	2	1.4	5.6
6-Jul	0	1	0	1	2	2	3	3	4	0	2	2	3	6	5	3	4	4	6	3	16	13	7	2	3.9	16.1
7-Jul	3	0	1	2	3	3	4	4	3	2	2	2	1	2	2	2	3	4	5	6	34	17	17	10	5.5	33.5
8-Jul	10	10	6	5	5	5	5	2	1	1	0	0	1	2	5	4	1	2	4	4	10	6	10	17	4.9	16.9
9-Jul	8	7	5	15	9	8	13	17	13	10	7	7	7	4	4	5	5	4	1	4	0	17	5	2	7.3	17.1
10-Jul	1	3	2	6	3	3	3	3	2	2	0	2	0	1	1	0	1	1	0	2	3	6	2	2	2.0	6.3
11-Jul	0	0	1	0	1	3	3	3	4	4	5	3	0	2	3	0	BD	0	0	0	0	1	10	4	2.1	10.3
12-Jul	2	2	2	0	0	2	1	3	4	3	0	0	0	1	4	2	3	0	1	1	3	1	1	0	1.5	4.1
13-Jul	0	1	1	0	1	1	2	3	3	4	4	5	4	5	5	3	3	3	3	3	2	3	2	2	2.7	4.9
14-Jul	1	3	0	2	1	5	2	0	0	1	0	0	0	0	0	2	1	1	4	5	1	3	4	3	1.5	5.3
15-Jul	2	2	1	2	2	1	2	1	0	0	2	1	1	3	1	0	2	2	2	7	1	2	0	0	1.6	7.0
16-Jul	1	0	0	0	0	0	1	1	0	4	5	2	7	13	5	3	3	8	6	6	5	5	1	1	3.2	13.2
17-Jul	1	1	1	1	2	2	2	1	1	2	2	4	1	2	3	2	1	5	3	6	4	5	6	2	2.5	6.1
18-Jul	2	2	6	1	1	2	2	3	2	0	2	2	1	0	9	2	0	1	5	6	3	2	2	0	2.3	8.9
19-Jul	1	1	0	1	2	3	5	5	5	1	4	1	6	3	3	0	3	3	3	5	6	3	4	3	2.9	5.8
20-Jul	4	2	1	1	2	7	8	5	5	5	6	0	3	7	BD	0	2	6	4	2	3	2	3	2	3.5	8.3
21-Jul	3	1	1	1	0	5	5	5	7	8	6	2	3	2	3	2	3	9	3	7	3	3	3	4	3.7	9.1
22-Jul	3	3	4	3	4	7	5	5	10	3	0	1	0	0	1	0	3	6	1	1	1	3	2	0	2.6	10.0
23-Jul	1	0	0	0	0	1	2	3	1	1	0	0	0	2	3	7	2	5	7	1	2	2	0	21	2.6	21.0
24-Jul	26	7	4	3	3	5	BD	0	0	2	3	7	2	1	0	1	1	2	0	1	2	4	60	15	6.5	59.8
25-Jul	4	2	2	2	6	2	1	1	1	2	3	5	3	1	3	1	8	3	7	10	11	80	12	8	7.4	79.9
26-Jul	5	2	2	4	4	5	6	6	3	1	2	3	5	2	2	4	3	5	11	12	15	10	6	5	5.1	15.3
27-Jul	3	2	1	3	3	6	11	2	6	5	2	0	0	3	1	1	N	3	3	4	5	13	9	9	4.2	13.4
28-Jul	8	8	8	9	9	11	12	10	9	10	13	14	11	10	7	7	6	16	29	0	8	0	6	3	9.4	29.3
29-Jul	4	3	1	0	5	4	10	9	7	10	12	11	12	10	1	11	14	14	19	18	12	12	8	10	9.0	19.2
30-Jul	15	9	9	11	15	9	10	10	15	9	5	7	8	19	7	16	0	5	16	6	8	7	3	2	9.3	19.2
31-Jul	8	7	5	4	0	5	5	6	4	4	4	3	0	5	1	6	2	3	5	7	7	7	18	6	5.1	17.6
	4.0	2.9	2.3	2.8	2.9	3.7	4.4	3.7	3.6	3.2	3.2	2.8	2.7	3.5	2.7	2.9	2.7	4.1	5.0	4.5	5.8	7.7	7.6	4.7	Diurnal Average	
	26.4	9.9	8.9	14.7	14.7	10.6	12.9	16.7	14.7	10.4	13.0	13.6	12.2	19.2	8.9	16.1	14.0	15.7	29.3	17.8	33.5	79.9	59.8	21.0	Diurnal Maximum	

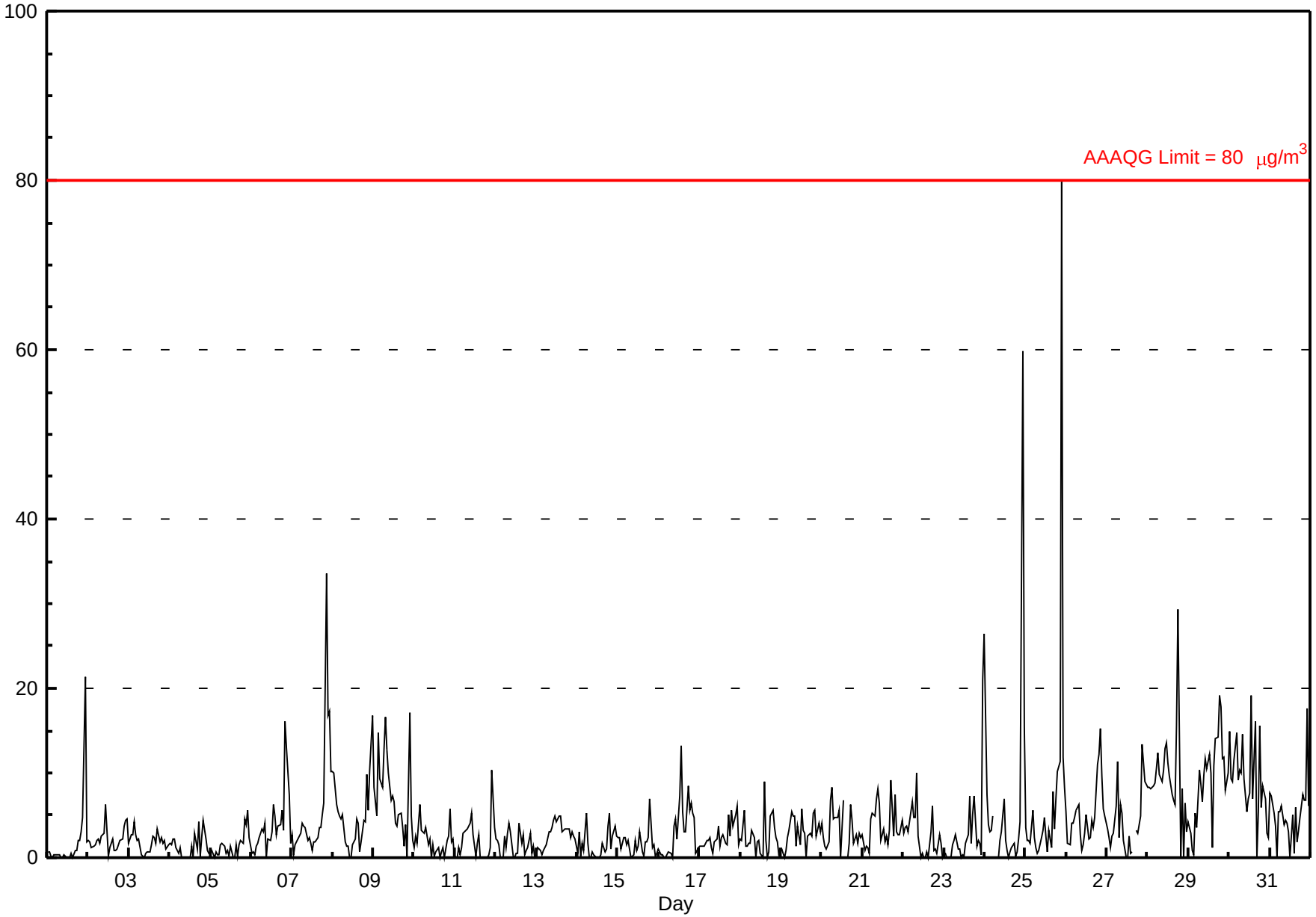
N - Not Valid BD - Baseline Drift
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

PASZA
Peace Airshed Zone Association

Hourly Averages

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

Smoky Heights - July 2010



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Hourly Maximums

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

Smoky Heights - July 2010

Maximum Value: 201.1 $\mu g/m^3$ on Jul 25 22:00

Maximum Daily Average: 21.3 $\mu g/m^3$ on Jul 30

Minimum Value: 0 $\mu g/m^3$ on Jul 1 09:00

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

Maximum Diurnal Average: 20.6 $\mu g/m^3$ at hour 22

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

Monthly Average: 10.63 $\mu g/m^3$

Percentiles: P_1 = 1.1 P_{10} = 2.5 Q_1 = 4.2 Median = 7.0 Q_3 = 12.0 P_{90} = 20.9 P_{99} = 48.0

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-Jul	2	2	1	1	1	2	2	4	0	1	7	1	1	1	6	2	7	3	6	5	11	15	88	6	7.3	87.9
2-Jul	3	5	4	2	3	4	5	4	12	5	14	11	2	4	9	3	3	2	4	4	4	9	9	7	5.6	14.2
3-Jul	3	4	4	6	5	4	3	3	3	2	2	3	2	5	4	4	3	6	4	4	5	3	2	3	3.6	6.2
4-Jul	3	3	4	5	3	3	4	1	0	0	1	1	2	9	6	12	7	15	4	4	9	4	2	2	4.3	15.1
5-Jul	2	2	1	2	2	1	3	4	4	3	3	3	4	2	2	3	2	5	5	4	7	9	16	6	4.0	16.1
6-Jul	2	3	2	2	3	4	6	5	7	4	5	8	6	19	12	8	8	8	15	6	63	30	21	4	10.4	63.4
7-Jul	5	1	3	3	4	5	8	8	5	5	5	4	4	7	4	8	7	11	11	9	53	43	33	17	11.0	53.3
8-Jul	15	17	11	16	16	15	14	8	5	7	3	3	8	5	8	7	4	4	10	11	25	25	20	34	12.1	33.8
9-Jul	10	9	7	53	16	10	26	32	40	23	14	19	18	9	10	12	10	9	8	16	2	48	28	8	18.2	53.3
10-Jul	7	8	5	12	6	8	9	9	10	8	11	11	6	8	12	8	5	12	4	13	14	21	8	9	9.3	21.1
11-Jul	3	3	3	2	6	5	6	7	7	8	8	10	5	8	10	8	7	8	9	3	6	17	26	9	7.6	26.0
12-Jul	5	4	6	2	2	8	4	8	9	9	3	3	6	5	8	5	4	4	5	6	7	3	3	1	5.0	9.0
13-Jul	1	4	2	2	2	3	4	5	5	6	7	9	8	9	13	7	7	7	6	5	5	5	4	4	5.4	12.9
14-Jul	3	6	4	3	4	8	8	3	5	4	4	6	4	4	6	5	4	4	11	9	4	6	7	4	5.4	11.4
15-Jul	4	5	4	5	5	3	5	5	2	3	5	4	9	8	5	6	6	6	11	17	4	3	2	2	5.3	17.3
16-Jul	4	2	2	1	2	2	3	3	2	11	19	11	20	63	14	8	6	33	20	17	23	20	2	5	12.2	62.5
17-Jul	3	3	3	3	9	5	5	5	5	6	6	15	8	9	8	3	8	21	5	14	9	8	14	6	7.4	20.9
18-Jul	5	6	11	3	3	3	3	6	5	4	5	7	5	4	30	13	6	6	13	10	10	5	5	4	7.2	29.7
19-Jul	4	2	3	5	6	12	16	7	11	13	10	8	21	17	12	7	9	10	8	9	11	6	9	5	9.2	20.6
20-Jul	15	4	5	4	6	19	22	10	11	9	10	5	44	41	7	8	12	30	14	7	7	16	17	7	13.7	44.5
21-Jul	7	3	4	3	2	7	10	7	11	13	15	12	9	20	17	9	8	17	13	22	7	5	5	10	9.9	21.7
22-Jul	4	6	7	5	7	9	8	9	20	9	4	4	5	4	9	3	22	15	6	5	5	6	3	2	7.5	22.2
23-Jul	2	3	1	1	2	6	6	6	4	5	5	5	14	12	10	16	5	19	16	5	5	6	5	80	9.9	80.0
24-Jul	100	28	6	6	17	20	2	5	4	6	10	23	11	3	7	5	3	7	3	3	4	7	112	93	20.1	112.2
25-Jul	5	3	4	3	22	5	3	3	2	9	14	29	11	6	8	4	34	12	27	31	42	201	16	17	21.2	201.1
26-Jul	8	3	3	21	17	8	19	9	5	8	5	13	14	17	13	27	23	9	30	20	52	18	10	13	15.2	52.5
27-Jul	10	10	5	10	16	16	29	7	9	8	5	5	6	11	5	6	N	6	5	7	8	23	11	10	9.9	28.8
28-Jul	10	10	9	10	15	15	17	13	12	15	17	20	15	17	19	16	11	63	59	8	38	19	20	17	19.4	63.3
29-Jul	11	8	7	6	15	9	16	16	13	24	21	24	29	19	22	22	24	22	31	23	46	26	11	13	19.0	46.4
30-Jul	27	14	13	15	36	13	14	17	26	18	12	11	12	54	50	39	21	35	34	11	13	11	7	8	21.3	54.0
31-Jul	12	11	7	6	5	12	10	9	11	12	11	8	12	15	7	13	9	9	14	12	25	22	29	10	12.1	28.7
	9.4	6.2	4.9	7.1	8.3	7.8	9.3	7.7	8.5	8.3	8.5	9.5	10.3	13.4	11.3	9.6	9.5	13.5	13.3	10.3	16.9	20.6	17.6	13.4	Diurnal Average	
	99.9	27.8	13.2	53.3	35.6	20.1	28.8	32.1	40.1	24.0	21.0	29.3	44.5	62.5	50.4	38.5	33.6	63.3	59.1	30.6	63.4	201.1	112.2	93.1	Diurnal Maximum	

N - Not Valid

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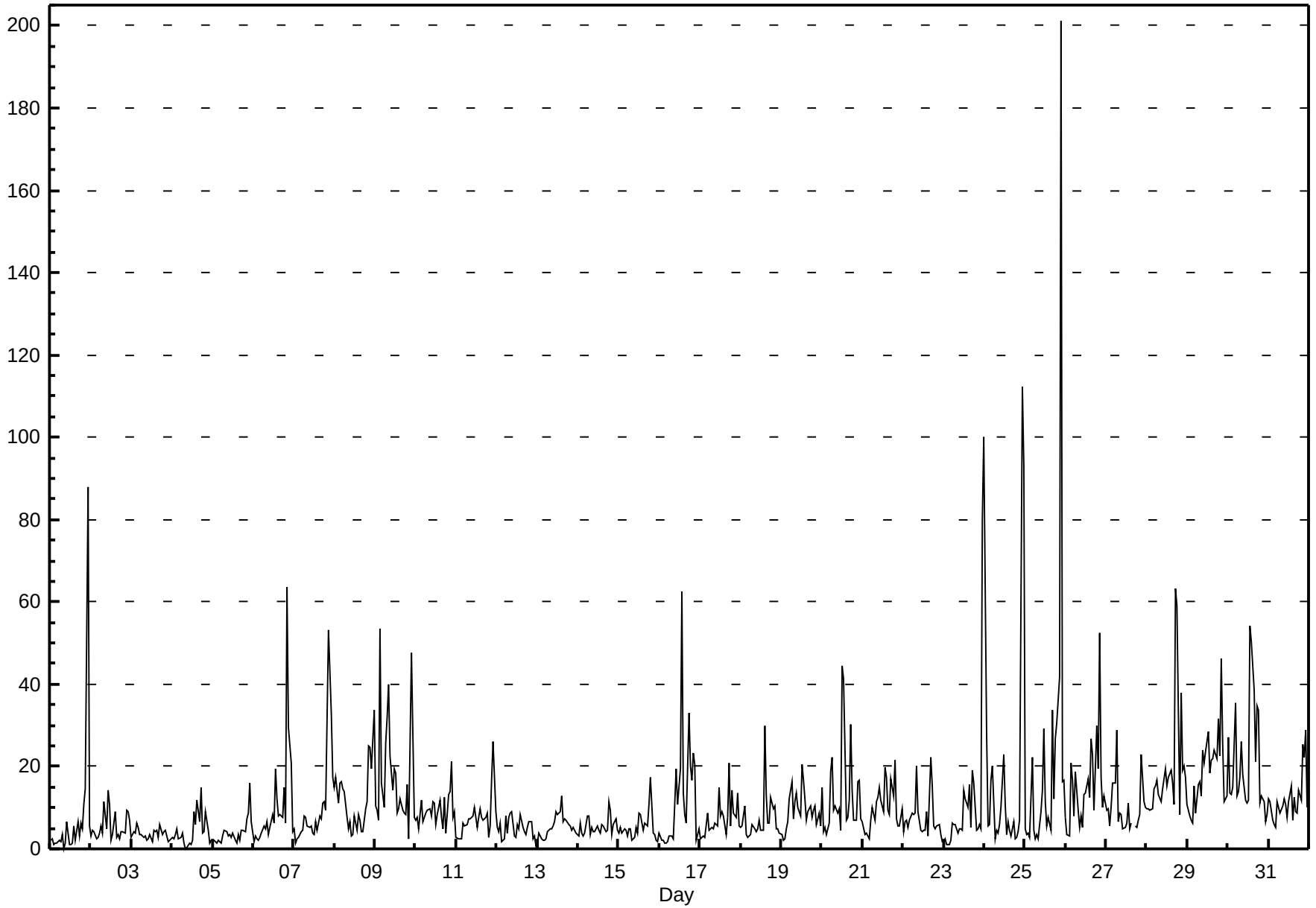
Hourly Maximums

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

Smoky Heights - July 2010

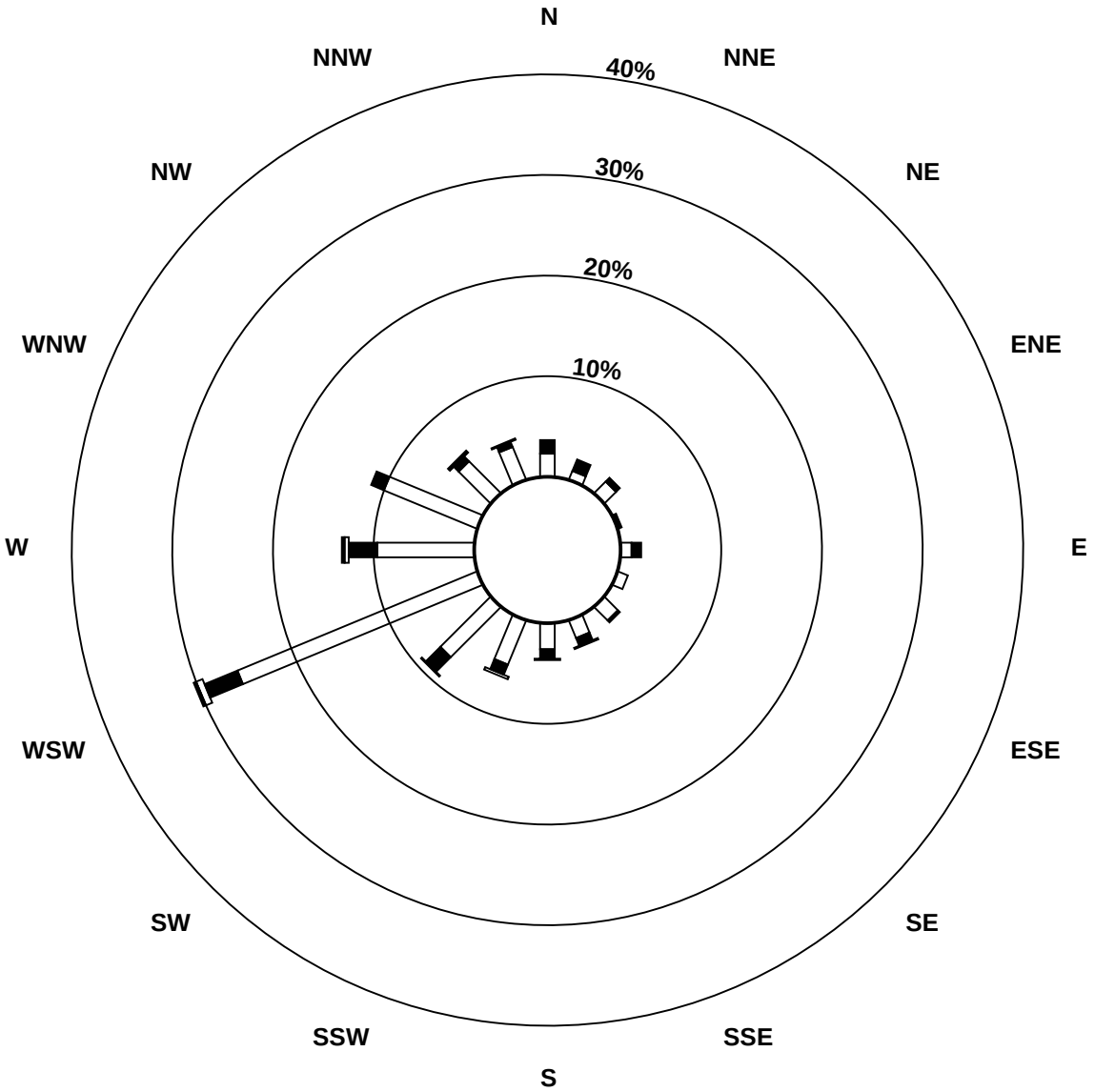


PASZA
Peace Airshed Zone Association

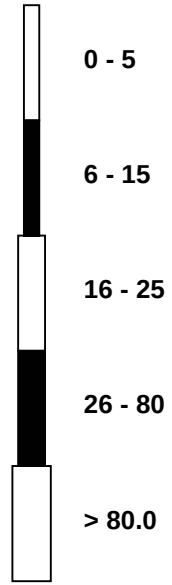
Pollutant Rose

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

Smoky Heights - July 2010



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



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Hourly Averages

External Temperature (ET) - °C

Smoky Heights - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 29.8 °C on Jul 28 16:00 Maximum Daily Average: 22.4 °C on Jul 8

Minimum Value: 2 °C on Jul 2 05:00 Minimum Daily Average: 12.7 °C on Jul 2
Maximum Diurnal Average: 23.3 °C at hour 17 Minimum Diurnal Average: 10.6 °C at hour 5
Monthly Average: 17.46 °C Percentiles: P_1 = 6.2 P_{10} = 10.8 Q_1 = 13.5 Median = 17.2 Q_3 = 21.3 P_{90} = 24.8 P_{99} = 29.0

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-Jul	8	8	7	7	6	6	8	10	13	14	15	17	18	19	19	19	20	19	19	18	16	13	10	9	13.3	19.6
2-Jul	7	6	4	3	2	6	9	12	13	14	14	14	16	17	17	18	19	19	18	17	16	15	14	13	12.7	18.9
3-Jul	13	12	12	11	11	11	12	13	14	15	18	19	20	21	20	20	20	20	19	18	17	15	15	14	15.9	20.7
4-Jul	13	13	12	12	13	14	13	13	14	15	16	17	17	17	18	18	17	16	16	15	13	12	11	10	14.4	17.9
5-Jul	10	10	10	10	11	12	13	14	15	17	17	18	19	20	21	21	22	21	21	20	20	17	16	16	16.2	21.6
6-Jul	15	14	14	13	13	12	13	15	18	21	22	23	23	24	24	24	24	24	24	24	21	18	16	17	19.0	24.3
7-Jul	19	19	18	17	17	17	17	20	21	23	24	25	26	26	26	27	27	27	27	26	25	21	16	15	21.8	27.2
8-Jul	14	17	16	14	13	14	18	20	22	24	25	27	28	29	29	29	30	30	30	29	27	21	18	16	22.4	29.8
9-Jul	17	16	15	15	14	13	16	21	24	23	25	25	26	26	26	26	25	24	24	22	20	18	15	15	20.4	25.7
10-Jul	14	14	14	14	14	14	15	17	18	19	21	21	22	23	22	24	25	24	25	24	23	18	16	15	19.0	24.9
11-Jul	14	12	12	12	10	12	13	14	16	18	20	24	25	25	25	26	27	25	25	24	23	20	16	13	18.9	26.8
12-Jul	14	15	15	15	14	13	14	16	17	16	16	16	16	16	15	15	15	15	15	14	14	13	12	11	14.6	16.7
13-Jul	11	10	10	10	10	11	11	12	13	14	15	16	17	19	20	20	21	21	20	19	19	18	16	16	15.3	20.9
14-Jul	14	13	12	12	11	12	14	16	18	21	22	24	25	25	26	26	26	26	26	24	22	20	19	17	19.6	26.1
15-Jul	16	14	12	11	10	11	14	17	19	20	20	20	21	21	22	22	22	21	21	19	18	15	14	12	17.1	21.8
16-Jul	11	9	8	8	6	7	10	12	15	15	17	18	19	19	19	20	20	19	20	19	18	15	15	13	14.7	19.9
17-Jul	12	11	9	10	12	10	12	14	17	18	19	21	22	22	23	24	24	24	24	21	19	17	14	12	17.1	24.2
18-Jul	12	11	14	14	14	13	15	17	17	18	19	20	22	22	19	19	20	20	18	14	13	13	12	11	16.2	21.8
19-Jul	11	11	9	7	7	8	10	12	15	18	19	21	20	21	21	22	22	22	22	21	19	16	15	13	16.0	22.3
20-Jul	10	10	9	8	7	7	11	13	16	18	21	23	23	19	24	25	25	23	24	22	20	16	14	13	16.7	25.4
21-Jul	13	13	10	10	9	9	12	14	16	20	23	25	26	27	27	28	27	25	25	24	21	19	16	16	18.9	27.5
22-Jul	15	15	13	13	13	14	15	16	16	17	18	18	20	21	21	22	23	22	21	21	20	20	18	16	17.8	23.1
23-Jul	14	13	12	12	10	10	12	15	17	19	21	22	24	24	25	26	26	26	25	25	23	21	19	16	18.9	25.8
24-Jul	14	15	16	16	13	13	17	19	20	20	20	20	21	22	22	22	22	22	22	21	19	16	13	11	18.2	22.2
25-Jul	9	9	8	7	7	7	11	14	16	17	19	20	21	22	23	23	24	24	24	23	21	16	15	16	16.5	24.0
26-Jul	16	15	14	12	11	13	14	15	16	17	17	18	19	19	21	22	22	22	22	20	20	17	15	13	17.2	22.5
27-Jul	12	10	9	9	8	7	10	12	15	18	20	23	24	24	25	25	N	M	M	25	23	20	19	17	16.9	25.5
28-Jul	16	14	14	13	12	12	14	16	18	20	M	24	26	27	28	30	30	28	21	19	18	18	16	14	19.4	29.8
29-Jul	13	13	12	10	10	10	11	14	16	16	20	23	24	27	27	27	27	27	25	25	22	21	19	16	19.0	27.4
30-Jul	16	13	13	12	12	12	14	17	16	17	20	22	21	19	20	20	21	23	21	21	20	17	16	17	17.6	22.6
31-Jul	16	15	16	14	12	11	13	16	19	20	22	23	25	26	25	24	26	26	26	25	23	18	17	14	19.7	26.4
	13.2	12.6	12.0	11.4	10.6	11.1	13.0	15.1	16.7	18.1	19.5	20.9	21.7	22.1	22.6	23.0	23.3	22.8	22.3	21.3	19.7	17.2	15.4	14.1	Diurnal Average	
	18.8	18.8	17.8	17.1	16.8	17.1	17.8	21.3	24.1	23.6	25.4	27.3	28.1	28.8	29.1	29.8	29.8	29.8	29.6	29.1	26.8	21.4	18.8	17.4	Diurnal Maximum	

M - Maintenance N - Not Valid

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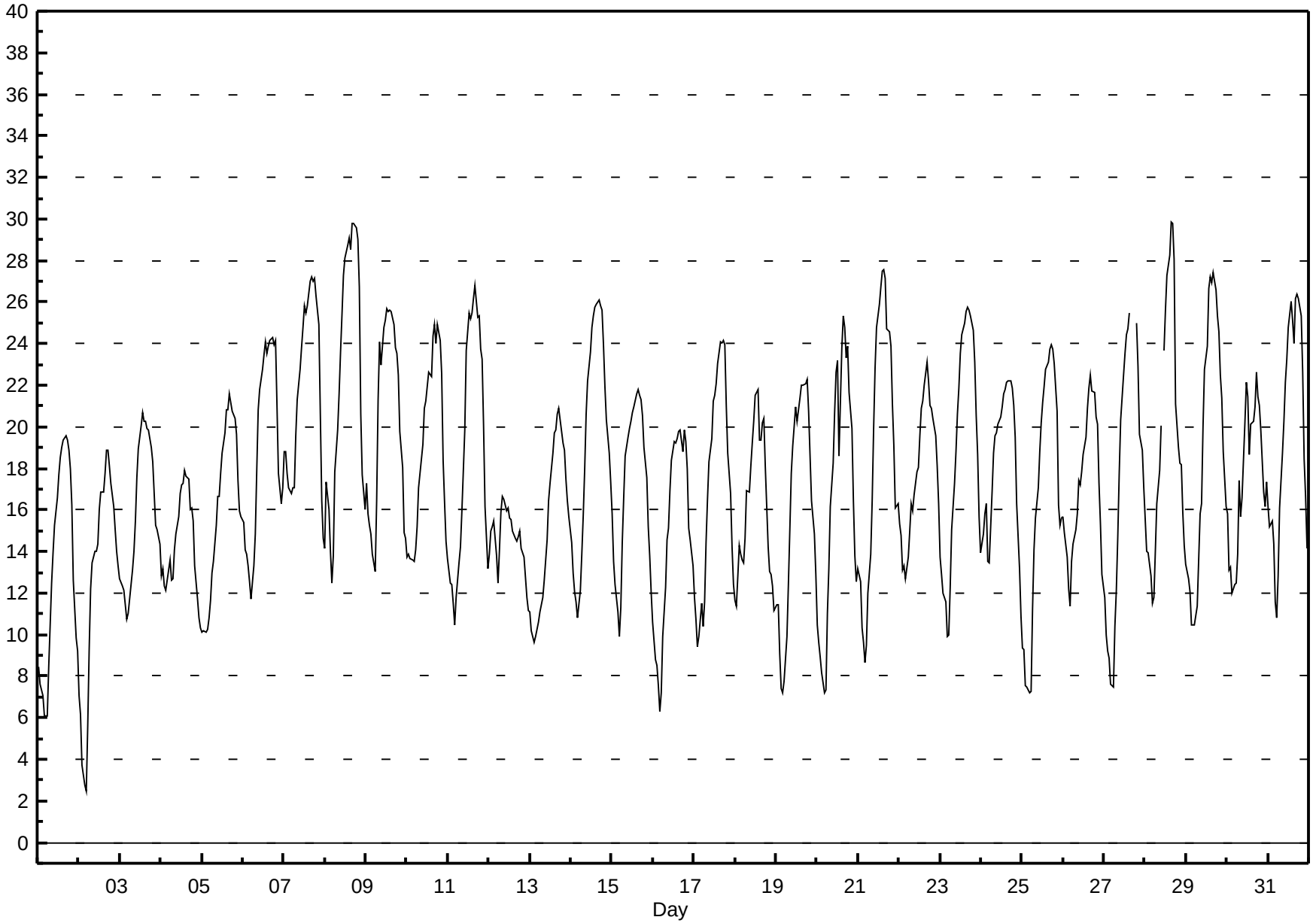
Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Smoky Heights - July 2010



PASZA
Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Smoky Heights - July 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	18	19	25	24	17	18	19	25	31	37	37	36	35	33	34	33	35	34	31	32	25	13	11	13	25.7	37.0
Dir	228	222	225	224	206	198	195	208	225	233	234	240	239	239	240	232	231	242	248	257	251	241	251	246	232.9	232.5
2 Spd	11	9	9	9	8	6	9	20	28	29	28	30	27	27	27	29	29	30	32	28	26	24	19	20	21.0	31.8
Dir	246	242	209	214	207	216	219	245	251	259	263	265	256	255	247	247	239	238	236	238	242	241	237	243	244.6	236.2
3 Spd	18	20	19	17	14	14	17	15	27	30	28	32	32	30	31	31	31	33	36	36	31	24	26	21	25.3	36.3
Dir	240	246	242	246	236	247	252	255	264	261	269	256	256	250	263	258	257	252	250	246	240	239	241	237	251.2	250.0
4 Spd	15	16	17	17	17	24	31	26	29	31	30	30	28	24	25	27	28	28	27	22	18	15	17	18	22.2	31.1
Dir	227	244	248	265	253	248	246	246	255	260	256	267	280	282	275	290	276	273	286	302	290	278	275	269	266.9	259.5
5 Spd	15	14	19	16	16	21	24	22	20	22	23	25	23	26	28	25	28	25	20	16	10	8	9	15	18.8	28.2
Dir	260	263	266	273	281	303	308	296	298	310	302	299	301	304	299	298	282	282	290	285	281	273	255	248	289.4	299.4
6 Spd	17	18	22	22	20	19	13	10	9	9	8	9	11	19	18	17	17	14	9	8	5	9	13	12	12.3	22.2
Dir	251	253	247	253	258	259	252	238	240	319	309	287	254	251	269	301	313	306	312	308	280	261	277	303	270.7	252.8
7 Spd	10	14	13	12	11	12	6	11	9	9	9	9	8	11	11	10	13	12	10	6	3	4	6	5	8.4	14.0
Dir	333	335	323	332	332	324	301	329	337	331	309	301	293	288	299	295	272	266	294	270	254	308	263	258	306.5	334.9
8 Spd	6	10	11	4	5	4	5	6	11	9	6	3	4	6	5	8	6	5	1	5	2	1	4	2	2.2	11.3
Dir	221	359	17	31	359	311	329	206	221	251	255	224	247	243	238	223	255	314	302	103	88	323	18	235	272.6	220.6
9 Spd	3	5	6	8	5	8	9	11	10	12	8	9	10	15	12	14	12	13	9	15	12	11	8	15	5.0	14.9
Dir	222	259	242	236	236	197	232	262	281	359	16	354	341	324	344	352	4	41	46	53	48	337	30	261	336.2	323.5
10 Spd	7	5	5	4	0	2	1	6	3	5	6	2	3	3	2	4	7	5	4	6	7	7	4	4	1.1	7.1
Dir	48	274	272	358	306	239	4	50	86	130	135	249	283	337	298	163	87	84	88	135	158	183	210	210	134.3	158.4
11 Spd	3	6	5	6	6	8	11	10	11	13	15	15	24	25	18	20	31	31	28	29	22	11	7	10	13.3	31.1
Dir	217	207	238	224	194	192	190	188	183	175	180	181	199	202	210	240	250	251	241	250	244	246	264	273	223.2	250.1
12 Spd	10	12	12	13	15	13	15	24	26	22	23	23	22	26	26	25	21	21	25	25	22	24	26	24	19.2	26.3
Dir	263	265	214	220	228	243	242	263	276	294	299	296	287	291	287	269	294	278	287	284	293	300	298	287	279.2	291.5
13 Spd	27	25	21	19	20	25	27	29	23	27	20	18	16	21	26	27	27	31	26	21	15	14	13	13	21.6	30.7
Dir	288	291	286	282	292	305	309	313	319	313	317	317	321	308	304	291	290	292	297	292	282	277	286	284	298.9	292.3
14 Spd	10	9	7	4	8	4	8	15	18	24	21	18	21	23	24	23	24	28	27	30	26	19	18	16	17.6	29.7
Dir	276	253	254	216	238	251	224	224	241	250	246	258	251	239	234	236	247	244	243	244	248	246	241	241	244.0	243.9
15 Spd	14	14	13	14	15	15	18	21	34	37	41	38	40	36	34	33	32	34	31	29	33	21	20	17	26.3	40.6
Dir	243	249	247	253	261	240	251	257	257	255	255	251	258	254	247	247	249	255	260	265	261	255	248	255	253.9	254.7
16 Spd	15	13	14	13	11	11	15	16	27	24	20	24	21	24	21	22	22	17	22	18	13	13	12	9	16.2	27.2
Dir	267	253	261	241	233	249	259	252	253	255	259	254	259	293	289	289	286	289	271	285	295	331	306	286	270.9	253.3
17 Spd	8	9	8	7	9	9	6	9	8	10	8	9	12	11	11	8	8	7	6	17	11	5	3	4	6.7	17.1
Dir	249	229	224	214	287	273	202	248	234	252	249	272	243	267	282	295	248	251	251	314	354	24	332	304	265.6	313.6
18 Spd	5	6	19	19	16	14	11	9	6	10	7	7	7	9	14	10	13	8	7	19	9	12	14	9	6.7	19.3
Dir	329	292	334	344	348	346	347	13	11	335	321	326	329	289	279	247	294	334	194	199	172	254	272	221	305.9	199.2
19 Spd	15	13	5	6	3	6	8	10	7	9	8	6	7	9	11	12	5	11	7	6	10	10	7	6	5.1	15.3
Dir	272	275	165	159	195	247	180	221	191	204	202	205	96	133	136	186	133	95	114	144	200	241	216	204	190.7	272.3
20 Spd	8	6	9	6	5	5	7	8	5	8	8	8	3	7	6	3	5	7	8	16	10	3	4	5	3.2	16.1
Dir	235	222	206	209	236	226	215	208	186	147	158	142	115	220	150	195	294	284	41	84	115	274	271	258	191.5	83.7
21 Spd	9	8	5	7	8	7	8	9	10	9	10	10	13	12	11	11	5	14	5	8	11	9	4	7	5.9	14.1
Dir	240	261	258	263	231	234	180	174	166	181	175	170	137	159	157	154	154	312	275	124	157	173	171	158	183.4	312.5
22 Spd	5	2	6	6	4	7	6	10	13	16	16	17	10	14	13	12	15	25	19	11	10	18	18	18	11.2	25.2
Dir	159	228	257	185	186	178	212	228	256	257	258	250	237	251	277	278	263	246	250	244	243	262	259	256	248.8	246.3

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Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Smoky Heights - July 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	17	20	22	17	12	10	10	15	24	24	25	24	26	27	28	29	29	28	30	26	19	15	13	9	20.5	30.1
Dir	259	257	258	251	252	234	213	227	243	248	241	241	238	235	242	239	239	243	240	246	239	235	225	209	241.5	239.8
24 Spd	9	13	12	12	9	6	16	28	37	38	44	45	42	40	38	37	36	34	32	32	27	14	11	12	25.8	44.8
Dir	260	267	246	248	242	210	257	258	265	266	253	255	250	249	253	254	253	254	251	251	259	253	263	243	254.3	255.1
25 Spd	11	13	13	13	13	8	19	27	29	25	22	19	13	20	14	18	12	5	20	17	10	10	14	14	9.9	28.6
Dir	256	246	252	267	266	295	0	0	0	0	0	352	270	48	45	275	271	292	272	276	283	244	270	271	311.6	0.0
26 Spd	10	9	10	8	8	11	13	19	22	18	17	18	20	17	19	13	13	12	13	15	12	12	3	4	11.2	22.2
Dir	330	341	305	239	246	359	0	360	0	340	315	314	300	307	0	359	4	320	300	0	0	0	298	247	334.1	0.0
27 Spd	6	4	2	1	1	5	2	6	6	6	7	7	9	12	13	10	N	M	M	10	6	12	15	9	4.9	14.5
Dir	263	210	71	46	280	286	44	116	124	115	139	142	130	138	146	121	N	M	M	92	80	81	80	64	112.7	80.1
28 Spd	6	5	5	6	6	6	6	2	6	6	M	1	2	4	4	2	6	3	38	23	25	9	13	10	2.1	37.6
Dir	31	50	47	12	9	16	28	99	86	35	M	29	172	17	187	76	92	172	306	324	224	184	215	217	310.9	305.6
29 Spd	7	10	1	4	8	7	7	12	5	7	11	14	14	7	13	13	13	17	12	12	15	21	15	7	9.1	20.9
Dir	215	200	42	222	249	232	241	234	167	163	225	242	244	260	242	225	199	205	203	238	267	287	266	245	234.4	287.5
30 Spd	4	8	8	8	14	13	11	12	14	11	14	15	10	8	14	9	5	16	20	21	15	9	9	10	10.1	21.3
Dir	243	238	251	258	256	254	255	241	245	196	237	223	200	251	214	148	203	271	241	248	258	267	303	333	244.5	248.4
31 Spd	4	9	12	8	4	8	10	4	4	5	4	4	2	4	3	5	8	8	6	7	7	7	6	5	1.7	12.4
Dir	316	332	337	352	240	278	263	293	25	21	344	213	109	34	211	175	159	163	203	164	167	203	258	258	259.0	336.7
Spd	8.3	8.9	8.5	7.8	7.8	7.6	7.5	9.3	11.0	11.5	12.8	12.9	12.7	12.7	12.6	13.0	13.8	14.6	15.1	11.9	10.3	8.9	9.0	9.1	Diurnal Average	
Dir	259.2	260.6	260.1	255.8	256.5	260.8	258.1	258.3	262.1	267.8	261.9	261.9	257.1	262.0	261.0	258.6	261.4	262.5	262.8	262.9	254.1	261.1	262.0	256.3		
Spd	26.6	25.1	24.6	23.8	20.3	24.6	30.5	29.1	37.0	38.0	43.9	44.8	41.6	40.3	38.3	37.0	36.5	34.0	37.6	35.8	32.7	24.1	25.8	24.5	Diurnal Maximum	
Dir	287.5	290.5	225.5	223.5	291.6	304.6	246.5	313.1	265.2	266.5	253.1	255.1	249.7	249.1	252.5	253.7	253.0	241.5	305.6	245.7	260.7	239.2	240.7	286.9		

Maximum Speed Value: 45 km/h on Jul 24 12:00
Minimum Speed Value: 0 km/h on Jul 10 05:00
Maximum Daily Speed Average: 26.3 km/h on Jul 1
Minimum Daily Speed Average: 1.1 km/h on Jul 10
Maximum Diurnal Speed Average: 15.1 km/h at hour 19
Minimum Diurnal Speed Average: 7.5 km/h at hour 7

Monthly Average Velocity: 10.70 km/h 260.47 deg
Speed Percentiles: P_1 = 1.4 P_{10} = 4.9 Q_1 = 7.7 Median = 12.4 Q_3 = 20.8 P_{90} = 28.2 P_{99} = 36.6
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 N - Not Valid

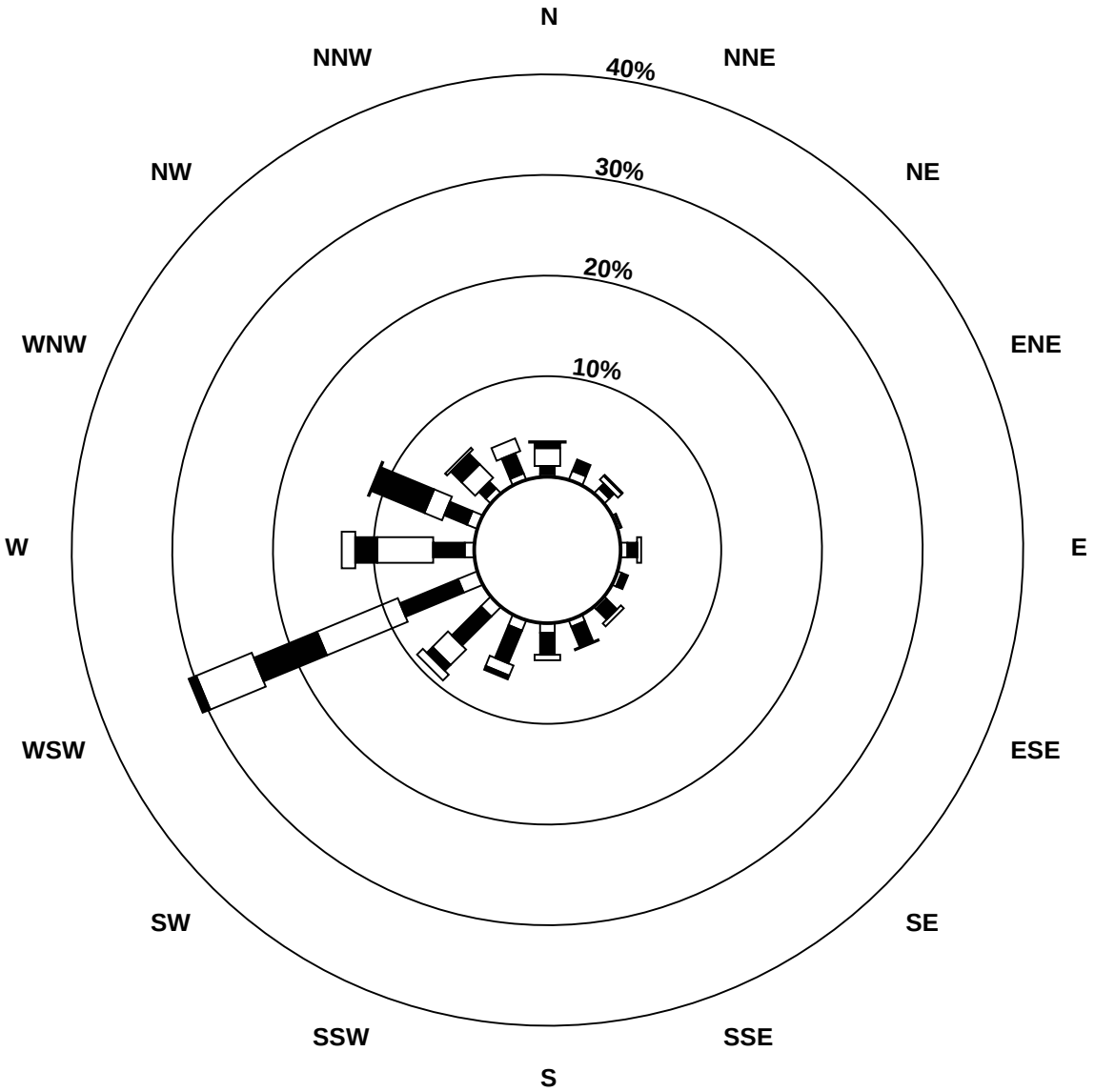
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	6	16	16	6	1	0	45
NorthEast	9	10	4	1	0	0	24
East	8	7	4	0	0	0	19
SouthEast	1	24	4	0	0	0	29
South	10	38	8	4	0	0	60
SouthWest	18	68	52	37	25	0	200
West	14	53	88	57	42	8	262
NorthWest	14	30	24	30	3	0	101
Total	80	246	200	135	71	8	740

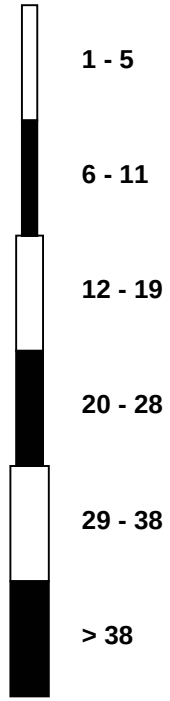
Wind Rose

Wind Speed (WS) (km/h)

Smoky Heights - July 2010



Wind Speed Classes (km/h)



PASZA
Peace Airshed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Smoky Heights - July 2010

Maximum Speed: 45 km/h on Jul 24 12:00

Maximum Daily Speed Average: 26.9 km/h on Jul 1

Minimum Speed: 2 km/h on Jul 10 06:00

Minimum Daily Speed Average: 5.5 km/h on Jul 10

Maximum Diurnal Speed Average: 19.7 km/h at hour 19

Minimum Diurnal Speed Average: 10.5 km/h at hour 5

Monthly Average Speed: 15.41 km/h

Percentiles: P_1 = 3.2 P_{10} = 5.9 Q_1 = 8.5 Median = 13.2 Q_3 = 21.2 P_{90} = 28.6 P_{99} = 37.4

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-Jul	19	20	25	24	18	18	19	25	32	37	37	37	36	34	35	33	35	34	32	32	25	13	11	13	26.9	37.3
2-Jul	12	9	9	9	8	6	10	20	29	29	29	30	27	28	27	29	30	31	32	29	26	24	20	20	21.8	32.1
3-Jul	18	20	19	17	14	14	17	15	28	31	29	32	32	31	32	32	31	33	36	36	31	24	26	21	25.8	36.5
4-Jul	15	16	17	17	17	24	31	26	29	31	31	30	29	25	26	28	29	28	28	22	18	15	17	19	23.5	31.3
5-Jul	15	14	19	16	17	21	24	22	20	22	24	25	24	26	29	25	28	26	20	16	10	8	9	15	19.8	28.9
6-Jul	17	18	22	22	20	19	13	10	10	9	9	10	13	20	19	18	18	15	9	8	5	9	13	12	14.1	22.3
7-Jul	11	14	13	12	11	12	8	12	9	10	11	11	11	13	11	12	14	12	10	7	3	4	6	5	10.1	14.3
8-Jul	6	12	11	5	5	5	5	7	11	10	8	6	7	9	10	11	10	7	6	5	3	2	4	3	7.1	12.2
9-Jul	4	5	6	8	7	9	9	11	14	13	8	10	12	16	13	15	13	13	9	15	12	14	16	15	11.1	16.1
10-Jul	10	6	7	4	2	2	3	6	5	6	7	5	5	6	4	6	8	6	5	6	7	7	5	4	5.5	9.5
11-Jul	3	7	5	6	6	8	11	10	12	14	15	16	25	26	20	20	32	31	28	30	22	11	8	10	15.5	31.5
12-Jul	10	13	13	14	15	13	15	24	26	24	24	23	23	27	26	25	22	22	26	25	22	24	26	25	21.1	26.8
13-Jul	27	25	21	20	21	25	27	29	23	27	20	19	17	22	27	27	27	31	26	22	15	14	13	13	22.3	31.1
14-Jul	11	9	8	5	8	5	8	15	18	25	21	19	22	24	24	24	24	28	28	30	26	19	18	16	18.1	29.9
15-Jul	14	14	13	14	15	15	18	21	35	38	41	38	41	37	35	34	33	34	31	29	33	21	20	18	26.7	41.1
16-Jul	15	13	15	13	12	12	15	16	27	24	21	24	22	25	22	22	23	18	22	18	14	13	12	9	17.8	27.3
17-Jul	8	9	8	7	9	9	6	10	9	11	11	11	13	12	13	10	10	9	7	18	11	5	4	6	9.3	17.5
18-Jul	6	7	19	19	16	14	11	9	7	11	9	8	9	10	16	10	14	9	12	20	12	13	14	11	12.0	19.8
19-Jul	15	13	6	6	4	6	8	10	8	10	9	8	9	9	11	13	10	11	8	6	10	10	9	6	9.1	15.4
20-Jul	8	6	9	6	6	5	7	8	6	8	9	9	12	11	7	7	6	8	9	16	10	3	4	5	7.8	16.5
21-Jul	9	8	5	7	8	8	8	9	10	9	10	12	14	14	13	14	8	16	7	10	11	9	5	7	9.7	16.1
22-Jul	6	4	7	6	4	7	7	12	13	16	16	17	11	15	14	14	17	26	19	12	12	18	18	18	13.0	25.8
23-Jul	17	20	22	17	13	10	10	15	24	25	25	25	27	28	29	30	29	28	30	26	19	15	13	9	21.1	30.3
24-Jul	9	13	12	13	9	8	16	28	37	39	45	45	42	41	39	37	37	34	33	33	27	14	11	12	26.3	45.2
25-Jul	11	13	13	13	13	13	19	27	29	25	22	22	21	20	19	19	16	16	21	18	10	10	14	15	17.5	28.6
26-Jul	11	10	10	8	8	11	13	19	22	19	17	18	21	18	19	13	13	13	15	15	12	12	7	5	13.8	22.2
27-Jul	6	4	4	3	5	5	4	6	6	6	8	8	10	13	14	12	N	M	M	10	7	13	15	9	8.1	14.8
28-Jul	7	5	6	6	6	6	6	3	6	7	M	5	6	7	7	6	8	6	39	24	26	11	13	11	9.9	38.9
29-Jul	8	11	6	5	9	8	7	13	7	9	12	15	15	9	14	13	14	17	12	12	16	21	15	10	11.6	21.0
30-Jul	6	9	9	8	14	13	13	13	14	12	15	16	11	13	15	13	15	17	20	21	15	10	10	11	12.9	21.4
31-Jul	6	10	12	9	5	8	10	6	5	6	6	6	8	6	5	5	8	9	8	7	7	7	6	5	7.1	12.5
	10.9	11.5	11.9	10.9	10.5	11.0	12.2	14.8	17.1	18.1	18.2	18.2	18.5	19.2	19.2	18.7	19.5	19.6	19.7	18.6	15.4	12.7	12.4	11.5	Diurnal Average	
	26.7	25.2	24.6	23.9	20.5	24.8	30.6	29.3	37.2	38.5	44.6	45.2	42.3	41.0	39.0	37.4	37.1	34.3	38.9	36.0	32.8	24.1	25.9	24.6	Diurnal Maximum	

M - Maintenance N - Not Valid

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

PASZA
Peace Airshed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Smoky Heights - July 2010

Maximum Value: 93.9 deg on Jul 28 12:00

Minimum Value: 0.0 deg on Jul 25 07:00

Percentiles: P_1 = 0.0 P_{10} = 5.0 Q_1 = 7.8 Median = 12.8 Q_3 = 26.9 P_{90} = 46.7 P_{99} = 82.4

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-Jul	5	5	4	4	8	3	8	8	11	7	9	12	11	11	11	14	12	8	9	6	6	11	6	7	13.6
2-Jul	8	16	8	6	5	9	15	10	7	8	10	8	11	11	11	8	11	9	8	6	6	4	4	4	16.5
3-Jul	4	4	5	4	4	6	6	6	7	6	11	10	9	12	10	10	9	8	6	6	4	4	3	5	12.3
4-Jul	4	8	7	8	3	4	4	5	7	8	8	9	11	19	16	12	16	9	8	7	15	6	4	6	18.5
5-Jul	4	8	4	8	5	7	6	8	10	10	10	9	11	11	12	12	10	8	6	5	4	14	13	7	14.2
6-Jul	4	8	3	2	3	2	9	10	20	17	32	32	36	19	14	17	16	18	16	16	17	10	13	14	35.9
7-Jul	7	5	4	6	10	5	47	14	23	28	31	47	60	36	29	36	30	18	21	26	33	17	12	33	59.7
8-Jul	30	60	12	20	18	36	45	25	10	26	52	80	73	57	84	45	66	64	88	18	34	79	34	58	88.1
9-Jul	33	17	10	9	63	24	14	14	54	20	25	27	28	19	20	18	23	16	14	13	8	40	60	14	63.5
10-Jul	69	36	38	58	77	20	78	13	69	47	44	90	60	66	79	66	38	32	43	31	7	10	31	16	90.4
11-Jul	18	23	22	14	21	7	6	5	11	10	9	22	12	13	23	16	10	7	9	5	5	8	20	6	23.4
12-Jul	11	10	30	19	5	6	9	9	10	19	15	14	17	11	11	11	10	10	8	6	7	7	7	6	30.0
13-Jul	4	5	4	5	8	6	7	7	7	6	8	11	17	11	9	9	9	9	6	9	7	4	4	3	16.7
14-Jul	21	6	15	33	9	51	11	7	10	8	12	18	18	12	13	13	11	8	8	6	5	6	3	5	51.2
15-Jul	9	4	6	5	6	7	4	4	6	8	8	10	9	11	10	11	12	8	10	6	4	4	7	11	11.6
16-Jul	7	6	5	7	6	7	7	10	6	7	14	14	23	13	16	14	13	21	10	8	26	11	8	24	25.9
17-Jul	11	9	9	14	24	25	14	17	31	25	41	43	38	26	37	42	41	34	60	14	18	20	34	44	60.0
18-Jul	33	35	10	6	7	7	11	18	26	24	45	45	44	28	33	16	18	29	79	14	45	18	5	38	78.5
19-Jul	5	6	31	13	47	23	12	14	22	26	25	58	56	32	17	30	59	16	27	13	17	14	42	21	58.5
20-Jul	13	22	15	16	12	17	14	13	29	20	28	33	81	48	32	74	38	13	59	13	17	44	18	20	81.1
21-Jul	10	27	19	10	13	28	8	10	12	16	21	32	21	38	35	41	64	33	53	42	12	6	47	16	64.0
22-Jul	48	69	46	17	24	19	23	26	12	9	13	10	31	23	29	37	29	12	7	15	32	4	3	4	68.5
23-Jul	2	3	2	3	7	12	8	15	7	11	11	11	13	17	14	13	13	11	6	7	5	6	5	20	19.9
24-Jul	13	8	10	8	16	37	5	5	6	9	10	8	10	11	10	9	10	9	8	6	5	11	8	5	36.9
25-Jul	4	6	9	3	6	52	0	0	0	0	0	40	59	18	61	25	54	76	28	10	11	7	12	19	75.9
26-Jul	12	21	12	15	17	9	0	1	0	18	11	16	17	24	0	8	20	21	30	0	0	0	68	43	68.2
27-Jul	26	53	72	92	84	42	67	20	15	27	29	46	47	39	30	41	N	M	M	13	26	23	11	12	91.8
28-Jul	14	19	22	7	7	12	13	67	30	36	M	94	86	60	64	80	49	65	16	11	18	43	15	21	93.9
29-Jul	28	11	86	32	16	39	31	14	41	42	17	17	20	53	33	17	18	13	10	13	23	7	9	53	86.4
30-Jul	40	22	21	9	6	7	51	40	14	21	13	19	28	60	8	46	72	15	8	6	7	7	23	9	71.8
31-Jul	53	37	7	25	49	12	7	54	42	41	67	54	77	52	57	18	22	27	41	9	8	19	11	9	76.8
	68.8	68.5	86.4	91.8	83.5	52.3	77.9	67.2	68.9	46.9	67.3	93.9	85.6	66.0	83.9	80.5	71.8	75.9	88.1	42.2	45.4	79.4	68.2	58.3	

M - Maintenance N - Not Valid

PASZA
Beaverlodge Station
Monthly Summary Tables, Graphs and Roses

PASZA
Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 4.4 ppb on Jul 10 11:00 Maximum Daily Average: 0.8 ppb on Jul 10

Minimum Value: 0 ppb on Jul 1 02:00 Minimum Daily Average: 0.0 ppb on Jul 12
Maximum Diurnal Average: 0.4 ppb at hour 11 Minimum Diurnal Average: 0.2 ppb at hour 22
Monthly Average: 0.27 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.2 Q_3 = 0.4 P_{90} = 0.6 P_{99} = 1.4

Hours in Service:	744
Hours of Data:	705
Hours of Missing Data:	39
Hours of Calibration:	39
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-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
2-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
3-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.3
4-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
5-Jul	0	0	0	0	A	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
6-Jul	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1
7-Jul	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
8-Jul	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	0.5
9-Jul	1	1	1	0	A	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0.4	1.0
10-Jul	0	0	0	0	A	0	0	0	1	1	4	3	2	1	1	1	1	0	0	0	0	0	0	0	0.8	4.4
11-Jul	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
12-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
13-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
14-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
15-Jul	0	0	0	0	A	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
16-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.3	1.1
17-Jul	1	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.3	0.8
18-Jul	0	1	0	1	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
19-Jul	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
20-Jul	0	0	0	0	A	0	0	1	1	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0.4	1.3
21-Jul	1	3	2	1	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.6	3.2
22-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.1	0.6
23-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
24-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
25-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
26-Jul	0	0	0	0	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
27-Jul	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
28-Jul	1	1	1	1	A	1	1	1	1	2	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.8	1.6
29-Jul	0	0	0	0	A	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0.6	1.3
30-Jul	1	1	1	1	A	0	0	1	1	1	1	1	1	1	1	0	1	1	1	1	0	0	0	1	0.5	0.6
31-Jul	0	0	0	1	A	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.9
	0.2	0.3	0.3	0.2	--	0.2	0.2	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	Diurnal Average	
	0.7	3.2	2.3	0.9	--	0.6	0.7	1.1	1.4	1.6	4.4	2.7	2.2	1.4	1.1	1.1	0.8	0.7	0.8	1.3	0.7	0.6	0.5	1.1	Diurnal Maximum	

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

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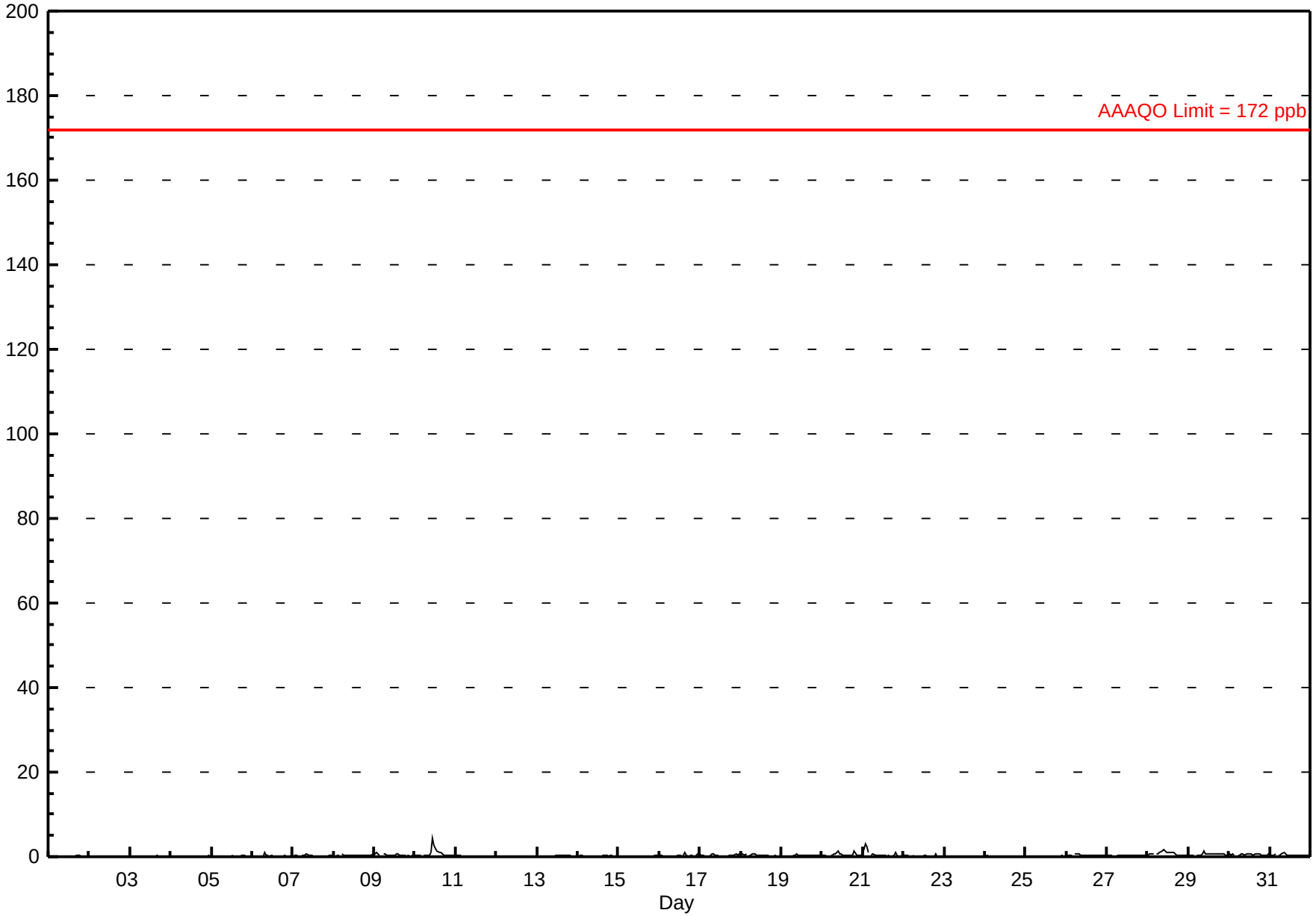
Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - July 2010



PASZA
Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - July 2010

Maximum Value: 7.5 ppb on Jul 10 11:00

Maximum Daily Average: 1.4 ppb on Jul 10

Minimum Value: 0 ppb on Jul 14 09:00

Minimum Daily Average: 0.2 ppb on Jul 24

Maximum Diurnal Average: 0.7 ppb at hour 11

Minimum Diurnal Average: 0.3 ppb at hour 22

Monthly Average: 0.45 ppb

Percentiles: $P_1 = 0.1$ $P_{10} = 0.1$ $Q_1 = 0.2$ Median = 0.3 $Q_3 = 0.5$ $P_{90} = 0.8$ $P_{99} = 2.6$

Hours in Service:	744
Hours of Data:	705
Hours of Missing Data:	39
Hours of Calibration:	39
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-Jul	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
2-Jul	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	0.2
3-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.2	0.5
4-Jul	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
5-Jul	0	0	0	0	A	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
6-Jul	0	0	0	0	A	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.6
7-Jul	0	0	0	1	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0.4	0.8
8-Jul	0	0	0	0	A	1	1	1	0	0	0	0	0	1	1	0	0	0	0	0	1	0	1	1	0.5	0.8
9-Jul	1	1	1	0	A	1	1	1	1	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.7	1.4
10-Jul	0	0	0	0	A	0	1	1	1	5	7	3	3	2	1	1	1	1	0	1	1	0	0	0	1.4	7.5
11-Jul	0	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
12-Jul	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
13-Jul	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
14-Jul	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
15-Jul	0	0	0	0	A	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	1	0	0	0.2	0.7
16-Jul	0	0	0	0	A	0	0	0	0	0	0	1	0	0	1	1	1	0	0	0	0	0	0	2	0.5	1.7
17-Jul	1	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0.5	1.1
18-Jul	1	2	1	1	A	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0.5	1.6
19-Jul	0	0	0	0	A	0	0	0	1	1	1	0	0	0	0	1	0	2	1	0	1	1	1	0	0.6	1.6
20-Jul	1	0	0	0	A	1	1	1	1	1	1	1	1	1	0	0	0	0	1	2	1	1	1	0	0.7	2.4
21-Jul	2	4	3	2	A	1	1	0	0	0	0	0	1	1	0	0	0	0	0	3	0	0	0	0	1.0	4.2
22-Jul	0	0	0	0	A	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0.3	1.3
23-Jul	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	0.2
24-Jul	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
25-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
26-Jul	0	0	0	1	A	1	1	1	1	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0.5	0.8
27-Jul	0	0	0	0	A	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0.4	0.6
28-Jul	1	1	1	1	A	1	1	1	2	2	2	1	1	1	1	1	1	0	0	0	0	0	0	0	0.9	1.8
29-Jul	0	0	0	0	A	0	0	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.7
30-Jul	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8
31-Jul	0	1	1	1	A	1	0	1	1	1	1	0	1	1	1	1	0	1	0	0	0	1	0	1	0.6	1.2
	0.4	0.5	0.4	0.4	--	0.4	0.4	0.5	0.5	0.6	0.7	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.3	0.4	0.4	Diurnal Average	
	2.3	4.2	2.7	1.8	--	0.8	1.1	1.6	1.6	4.6	7.5	3.4	3.3	1.9	1.3	1.4	1.0	1.6	1.2	3.0	1.1	0.7	0.7	1.7	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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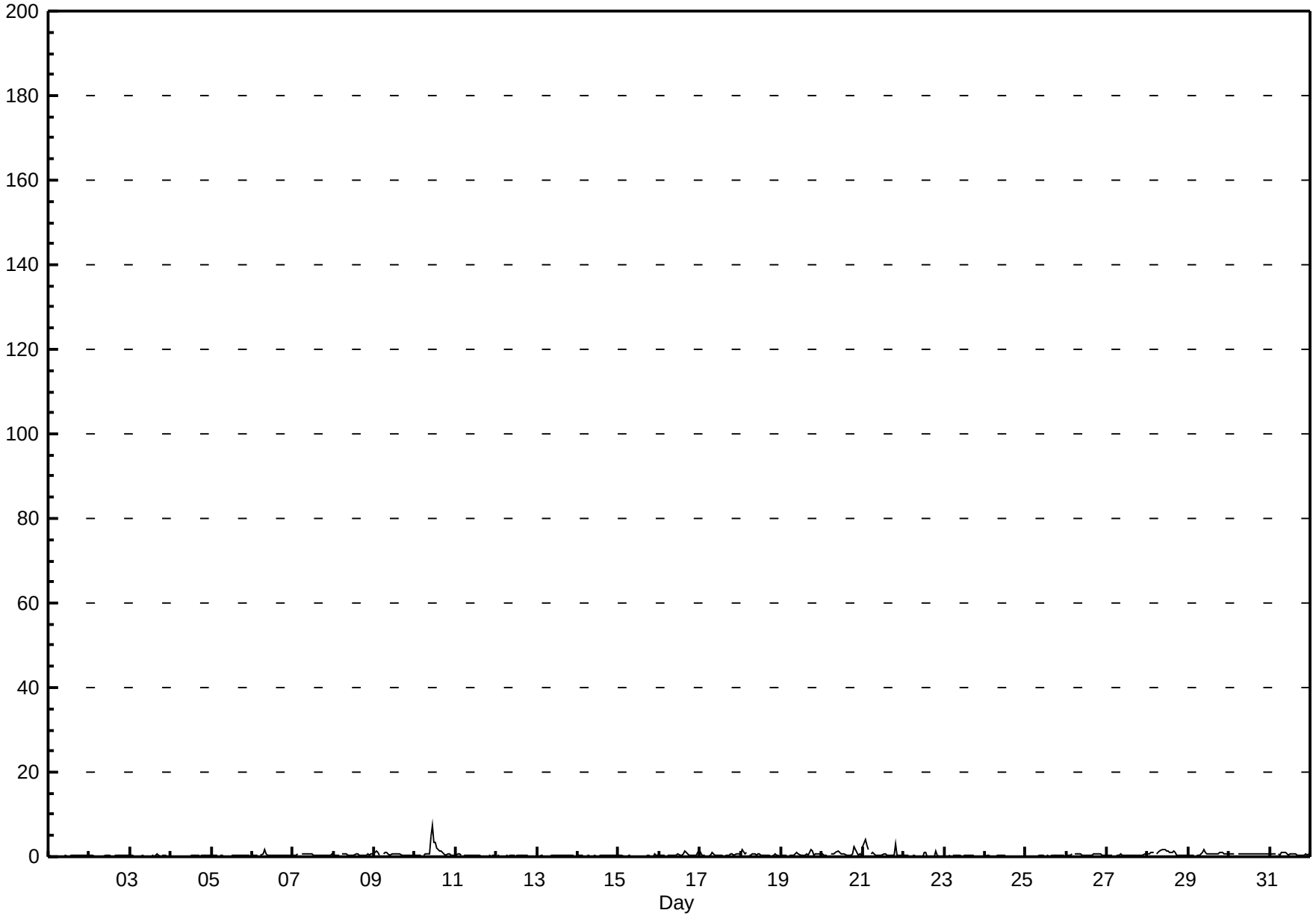
Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

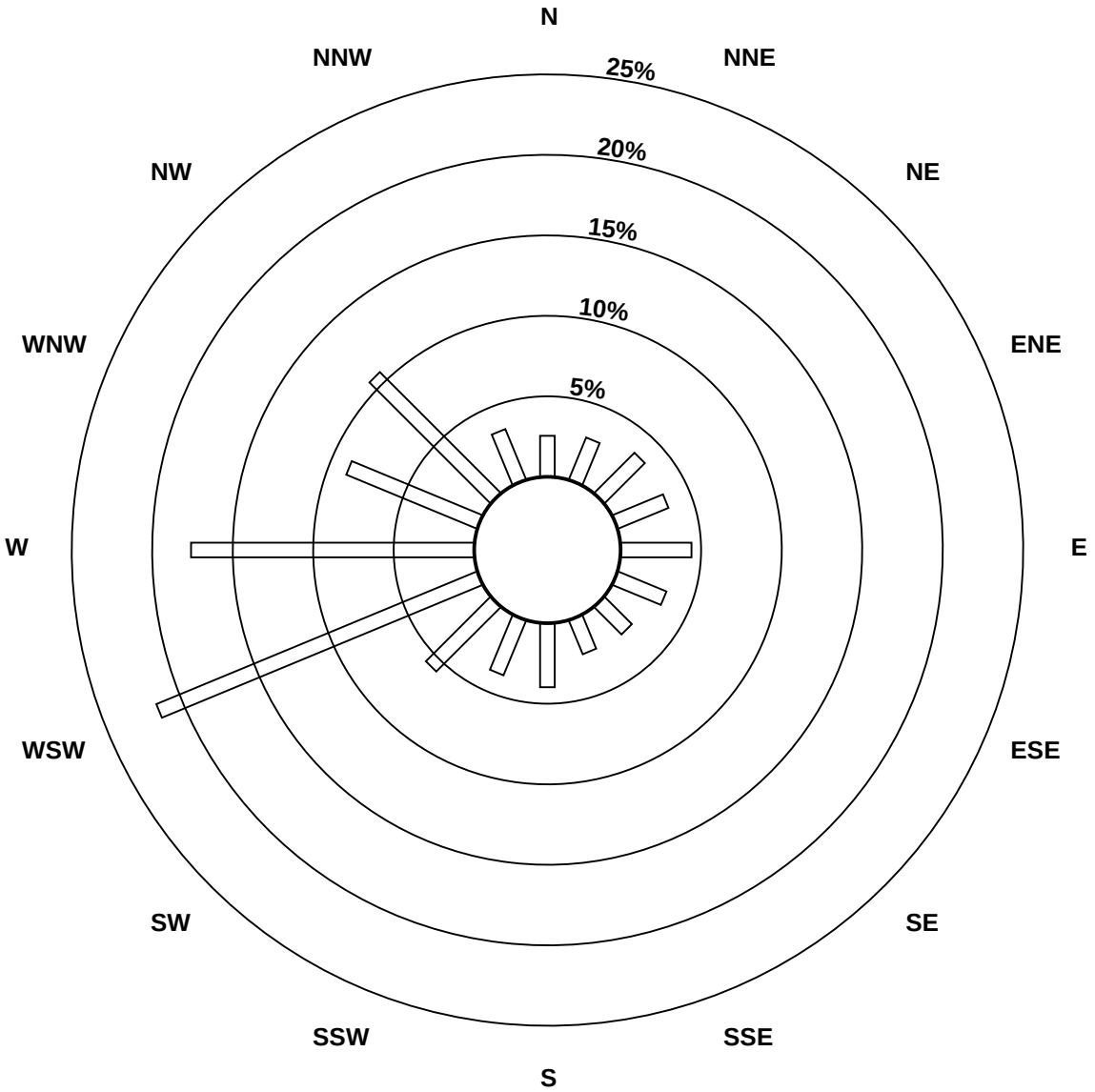
Beaverlodge - July 2010



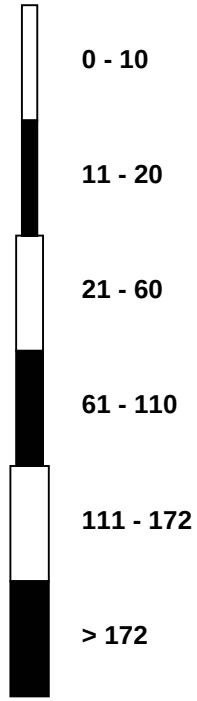
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - July 2010



Pollutant Classes (ppb)



PASZA
Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 9.5 ppb on Jul 21 06:00 Maximum Daily Average: 3.2 ppb on Jul 28

Minimum Value: 0 ppb on Jul 24 04:00 Minimum Daily Average: 0.4 ppb on Jul 4
Maximum Diurnal Average: 4.7 ppb at hour 6 Minimum Diurnal Average: 0.6 ppb at hour 15
Monthly Average: 1.66 ppb Percentiles: P_1 = 0.2 P_{10} = 0.3 Q_1 = 0.5 Median = 1.1 Q_3 = 2.4 P_{90} = 3.8 P_{99} = 7.0

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	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-Jul	1	2	1	3	A	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.8	2.9
2-Jul	1	1	2	4	A	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1.0	5.1
3-Jul	2	3	2	2	A	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0.8	2.5
4-Jul	0	0	0	0	A	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.4	2.2
5-Jul	1	1	1	1	A	3	2	1	C	C	C	C	C	2	1	1	1	1	1	1	1	2	1	1	1.2	3.3
6-Jul	1	1	2	2	A	3	2	2	1	1	1	0	0	0	0	0	0	0	1	1	3	2	3	3	1.3	3.3
7-Jul	2	2	3	6	A	7	6	8	5	2	1	1	0	1	0	0	0	0	0	1	4	8	3	3	2.7	7.9
8-Jul	3	4	4	4	A	6	6	5	4	3	2	1	1	1	1	1	1	1	1	2	4	3	2	2	2.6	5.7
9-Jul	3	5	6	5	A	5	4	3	3	2	1	1	2	2	1	1	1	1	2	2	4	1	1	2	2.4	6.0
10-Jul	2	3	3	3	A	5	5	4	2	2	1	1	1	1	1	1	1	1	1	2	5	4	3	3	2.3	4.9
11-Jul	5	4	5	4	A	6	3	3	2	1	1	1	0	0	0	0	0	0	0	0	2	4	3	2	2.1	6.3
12-Jul	0	0	0	0	A	2	1	1	2	1	0	0	0	1	1	0	1	1	1	1	1	1	1	1	0.7	2.3
13-Jul	0	0	1	1	A	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	2	1	2	1.2	2.7
14-Jul	3	4	4	5	A	6	2	1	1	1	0	0	1	0	0	0	0	0	0	1	1	1	2	1	1.6	6.2
15-Jul	2	3	2	2	A	4	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.9	4.1
16-Jul	1	0	0	0	A	3	2	1	0	0	0	0	0	0	1	1	1	1	0	0	1	1	1	1	0.8	3.0
17-Jul	5	2	3	4	A	5	4	2	1	1	0	0	0	0	0	0	0	0	0	1	1	2	4	2	1.7	5.2
18-Jul	4	3	2	2	A	4	3	2	1	1	1	0	1	1	1	1	1	1	1	1	2	3	3	2	1.7	4.5
19-Jul	2	3	3	2	A	5	4	4	3	2	1	1	1	1	1	1	1	1	1	2	3	2	3	3	2.1	4.8
20-Jul	2	2	3	4	A	8	5	3	2	2	2	1	1	1	1	1	1	1	1	3	4	3	3	4	2.5	7.8
21-Jul	2	2	2	2	A	9	7	4	4	3	2	1	1	1	1	1	1	1	1	2	2	2	2	2	2.3	9.5
22-Jul	3	3	3	3	A	5	3	3	2	2	1	1	1	1	1	1	0	1	0	0	1	2	2	1	1.8	5.1
23-Jul	1	1	3	3	A	4	4	2	1	0	0	0	0	0	0	0	0	0	0	0	1	3	4	2	1.4	4.2
24-Jul	3	3	1	0	A	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	1	2	0.7	3.1
25-Jul	2	1	1	1	A	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.7	2.6
26-Jul	1	1	2	2	A	4	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	4	1.4	3.9
27-Jul	5	3	3	4	A	5	4	4	3	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2.1	5.2
28-Jul	1	1	2	3	A	5	7	6	4	4	3	3	2	2	2	2	2	2	2	2	3	4	5	5	3.2	7.0
29-Jul	4	5	3	3	A	8	8	5	3	2	2	1	1	1	1	1	1	2	1	1	1	2	2	2	2.6	8.4
30-Jul	2	2	2	2	A	6	7	4	2	1	1	1	1	1	1	2	1	1	1	2	2	3	3	2	2.2	7.2
31-Jul	4	2	4	3	A	6	5	3	2	1	1	1	1	1	1	1	1	1	1	1	2	4	3	2	2.2	5.9
	2.2	2.2	2.3	2.5	--	4.7	3.4	2.5	1.8	1.2	0.9	0.7	0.7	0.7	0.6	0.6	0.7	0.6	0.7	1.0	1.8	2.1	2.0	2.0	Diurnal Average	
	5.0	4.8	6.0	6.1	--	9.5	7.6	7.8	4.6	4.1	3.4	2.7	2.4	2.0	1.7	1.8	2.2	1.8	2.2	2.7	4.5	7.9	5.0	5.0	Diurnal Maximum	

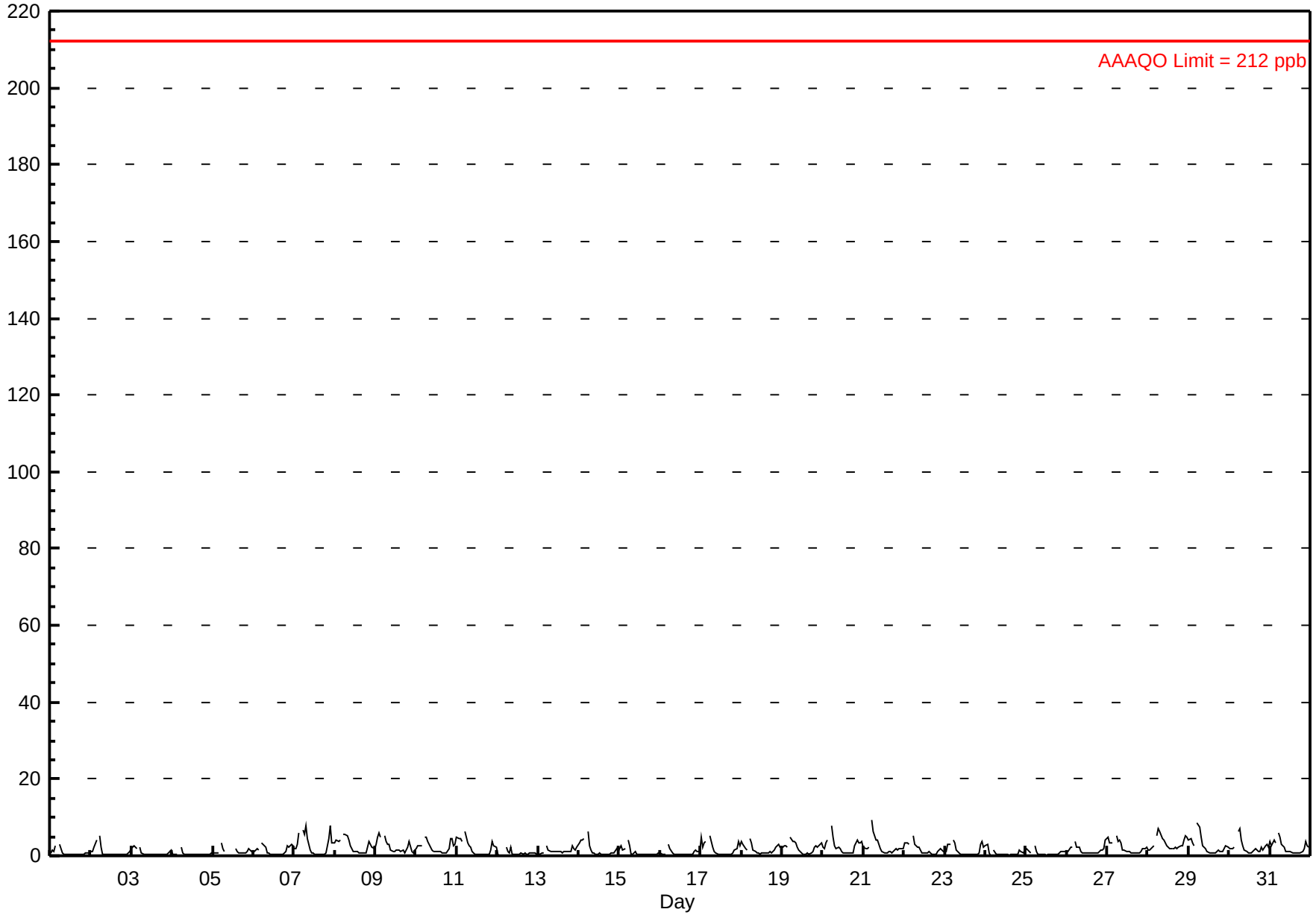
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 212 ppb 24-hr 106 ppb

PASZA
Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - July 2010



PASZA
Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - July 2010

Maximum Value: 48.1 ppb on Jul 12 09:00

Maximum Daily Average: 4.9 ppb on Jul 28

Minimum Value: 0 ppb on Jul 24 04:00

Minimum Daily Average: 0.9 ppb on Jul 4

Maximum Diurnal Average: 8.4 ppb at hour 6

Minimum Diurnal Average: 1.1 ppb at hour 16

Monthly Average: 2.94 ppb

Percentiles: P_1 = 0.4 P_{10} = 0.6 Q_1 = 1.0 Median = 1.9 Q_3 = 4.0 P_{90} = 6.1 P_{99} = 11.6

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-Jul	1	3	3	4	A	5	3	1	1	1	1	1	1	1	0	0	1	1	1	1	1	3	2	3	1.6	5.2
2-Jul	4	2	3	5	A	7	5	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	3	1.8	7.3
3-Jul	4	3	3	4	A	5	1	1	1	1	1	1	0	1	1	0	0	1	2	1	1	1	2	2	1.6	5.3
4-Jul	1	1	1	1	A	5	1	1	1	0	0	1	0	0	1	1	1	1	1	1	1	1	1	1	0.9	4.5
5-Jul	2	2	1	1	A	7	3	3	C	C	C	C	C	4	2	1	1	1	1	1	3	4	2	1	2.2	6.6
6-Jul	1	3	2	2	A	5	3	3	1	1	1	1	1	2	1	1	1	1	1	3	4	3	5	3	2.2	5.1
7-Jul	3	4	6	10	A	11	12	9	6	5	1	1	1	1	1	1	0	1	1	2	10	12	4	5	4.5	12.5
8-Jul	5	5	4	6	A	10	12	9	6	3	2	1	2	1	1	1	1	1	1	5	6	6	3	2	4.1	11.6
9-Jul	4	6	8	6	A	9	5	5	6	2	1	1	3	3	8	2	4	2	4	4	9	2	1	3	4.3	9.3
10-Jul	2	4	4	3	A	8	8	5	3	2	2	1	1	2	1	1	1	1	1	3	6	7	4	4	3.4	8.3
11-Jul	6	5	5	4	A	10	4	3	3	2	1	1	1	1	1	1	1	1	1	1	3	6	5	5	3.0	9.6
12-Jul	3	1	0	1	A	5	3	7	48	19	12	1	1	1	1	1	1	1	1	1	1	1	1	1	4.9	48.1
13-Jul	1	1	1	1	A	5	2	1	1	1	1	2	2	1	1	1	2	1	2	2	5	4	2	3	1.9	5.3
14-Jul	5	5	5	6	A	10	5	9	6	1	1	1	10	1	1	1	1	1	1	2	1	2	5	2	3.5	9.9
15-Jul	2	4	3	4	A	8	4	2	1	27	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3.0	27.1
16-Jul	2	1	1	2	A	6	4	2	1	1	1	1	1	1	2	1	1	1	1	1	2	3	2	4	1.7	6.1
17-Jul	8	3	4	4	A	10	5	3	2	1	0	0	1	1	1	1	1	1	1	2	1	3	2	6	2.7	9.6
18-Jul	5	3	3	2	A	6	5	2	1	1	1	1	1	1	1	1	1	2	1	2	3	5	4	3	2.4	6.4
19-Jul	4	6	5	4	A	8	4	4	4	4	2	1	1	1	1	1	1	2	5	4	4	4	4	5	3.4	7.6
20-Jul	5	4	5	9	A	13	9	5	2	3	2	2	1	1	1	1	1	1	2	6	7	6	5	6	4.1	12.7
21-Jul	3	5	2	4	A	24	9	6	5	5	3	2	1	1	1	2	3	1	2	3	3	3	5	3	4.2	24.4
22-Jul	5	4	4	4	A	8	4	4	4	4	1	1	1	1	1	2	1	1	1	1	3	3	3	2	2.7	7.9
23-Jul	1	2	5	5	A	7	4	3	2	1	1	1	1	1	1	0	1	1	1	1	3	6	5	3	2.4	7.3
24-Jul	5	4	3	0	A	4	1	1	1	1	0	1	1	1	1	1	1	1	1	1	4	4	2	5	1.8	4.6
25-Jul	3	3	2	1	A	5	3	1	1	0	1	0	0	1	0	0	0	0	0	1	2	3	2	3	1.4	4.9
26-Jul	1	2	4	3	A	6	3	3	2	1	1	1	1	1	1	1	1	1	1	2	2	3	3	8	2.2	8.0
27-Jul	8	6	4	4	A	8	7	5	4	2	2	2	1	2	1	1	1	1	1	2	2	5	2	3	3.2	8.0
28-Jul	1	2	2	3	A	9	11	11	8	5	4	4	3	2	2	2	4	3	4	4	4	12	7	6	4.9	11.9
29-Jul	5	11	5	3	A	12	10	7	5	3	3	2	1	1	1	1	1	3	2	2	2	3	3	3	3.9	12.3
30-Jul	2	2	2	3	A	15	15	6	3	2	1	1	1	1	1	4	2	1	1	4	2	6	4	3	3.7	15.3
31-Jul	5	6	5	6	A	9	6	4	3	2	1	1	1	1	1	1	1	1	1	3	3	7	3	2	3.2	8.9
	3.5	3.6	3.4	3.7	--	8.4	5.5	4.0	4.4	3.4	1.7	1.1	1.4	1.2	1.3	1.1	1.2	1.2	1.4	2.2	3.3	4.2	3.2	3.4	Diurnal Average	
	8.4	11.5	7.7	9.5	--	24.4	14.7	10.8	48.1	27.1	12.5	3.6	9.8	4.1	8.0	3.5	4.2	3.1	5.1	5.8	9.5	11.9	7.3	8.0	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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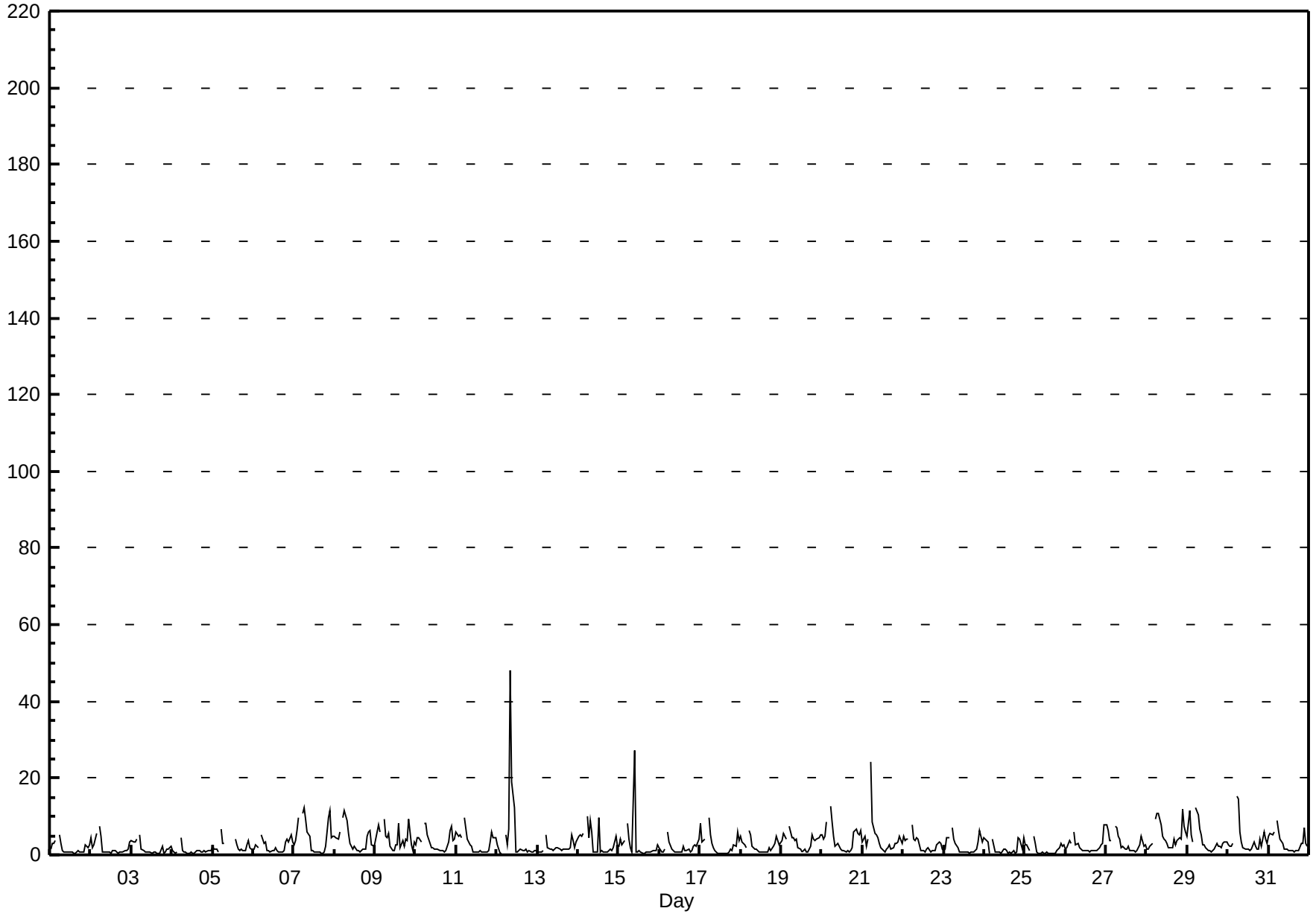
Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

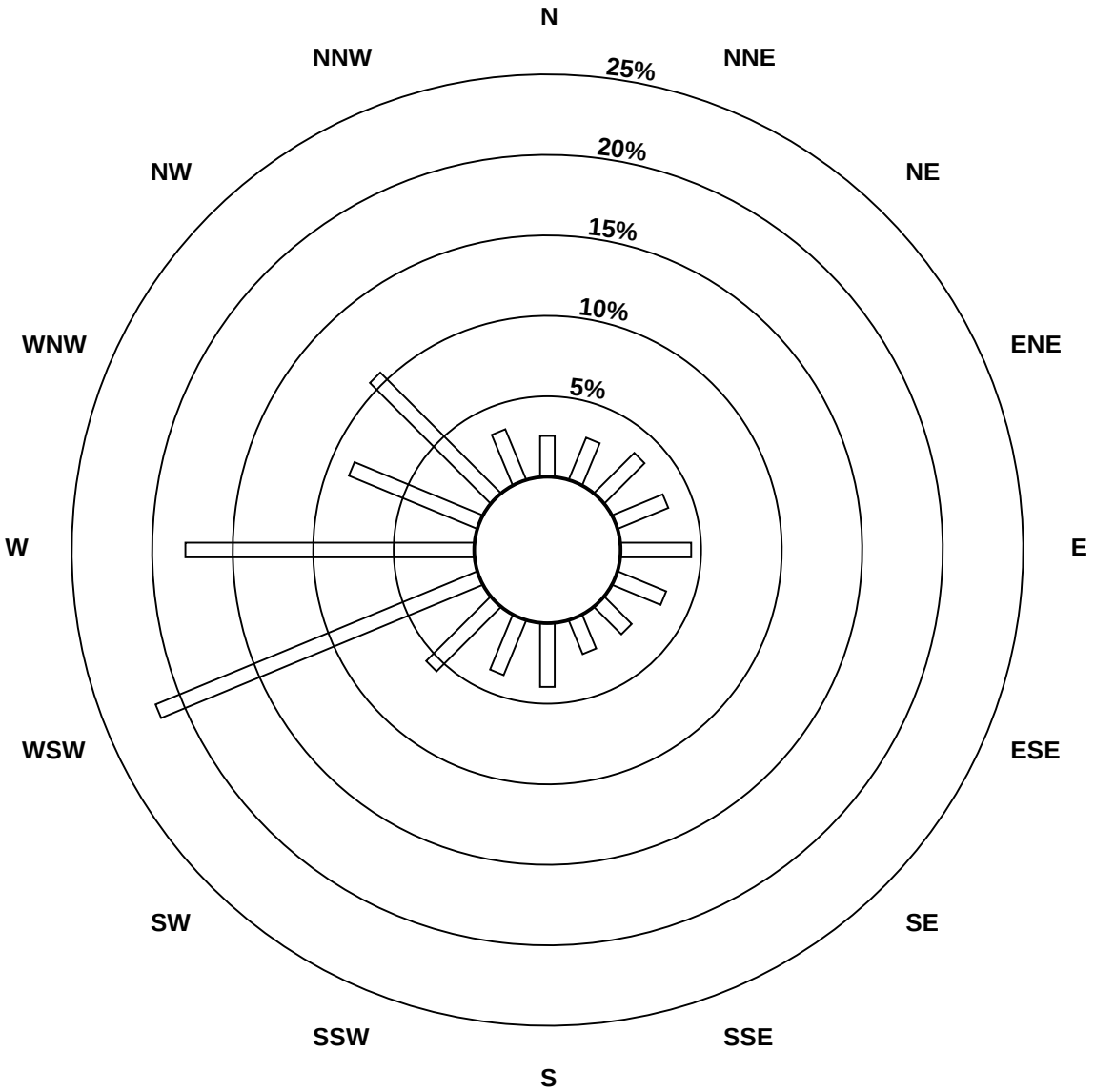
Beaverlodge - July 2010



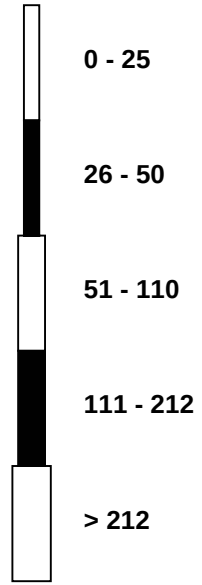
Pollutant Rose

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - July 2010



Pollutant Classes (ppb)



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Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Beaverlodge - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7.6 ppb on Jul 27 08:00 Maximum Daily Average: 0.8 ppb on Jul 27

Minimum Value: 0 ppb on Jul 2 02:00 Minimum Daily Average: 0.0 ppb on Jul 24
Maximum Diurnal Average: 1.4 ppb at hour 8 Minimum Diurnal Average: 0.0 ppb at hour 24
Monthly Average: 0.27 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.1$ Median = 0.1 $Q_3 = 0.2$ $P_{90} = 0.6$ $P_{99} = 3.0$

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	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-Jul	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
2-Jul	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7
3-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
4-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
5-Jul	0	0	0	0	A	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
6-Jul	0	0	0	0	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.3	1.3
7-Jul	0	0	0	0	A	1	3	5	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	5.3
8-Jul	0	0	0	0	A	0	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.6
9-Jul	0	0	0	0	A	0	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.3	0.9
10-Jul	0	0	0	0	A	0	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.7
11-Jul	0	0	0	0	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
12-Jul	0	0	0	0	A	0	0	3	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0.3	3.3
13-Jul	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
14-Jul	0	0	0	0	A	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.6
15-Jul	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8
16-Jul	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
17-Jul	0	0	0	0	A	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.2
18-Jul	0	0	0	0	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8
19-Jul	0	0	0	0	A	0	1	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.7
20-Jul	0	0	0	0	A	2	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	3.1
21-Jul	0	0	0	0	A	1	2	2	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	2.6
22-Jul	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
23-Jul	0	0	0	0	A	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.2
24-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
25-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
26-Jul	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
27-Jul	0	0	0	0	A	1	4	8	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8	7.6
28-Jul	0	0	0	0	A	0	3	4	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	4.2
29-Jul	0	0	0	0	A	1	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.0
30-Jul	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.4
31-Jul	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
	0.0	0.1	0.1	0.1	--	0.5	1.2	1.4	0.8	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.0	Diurnal Average	
	0.3	0.3	0.4	0.5	--	2.1	4.2	7.6	3.6	1.4	1.0	0.5	0.5	0.6	0.3	0.3	0.3	0.3	0.3	0.9	0.4	0.3	0.1	0.2	Diurnal Maximum	

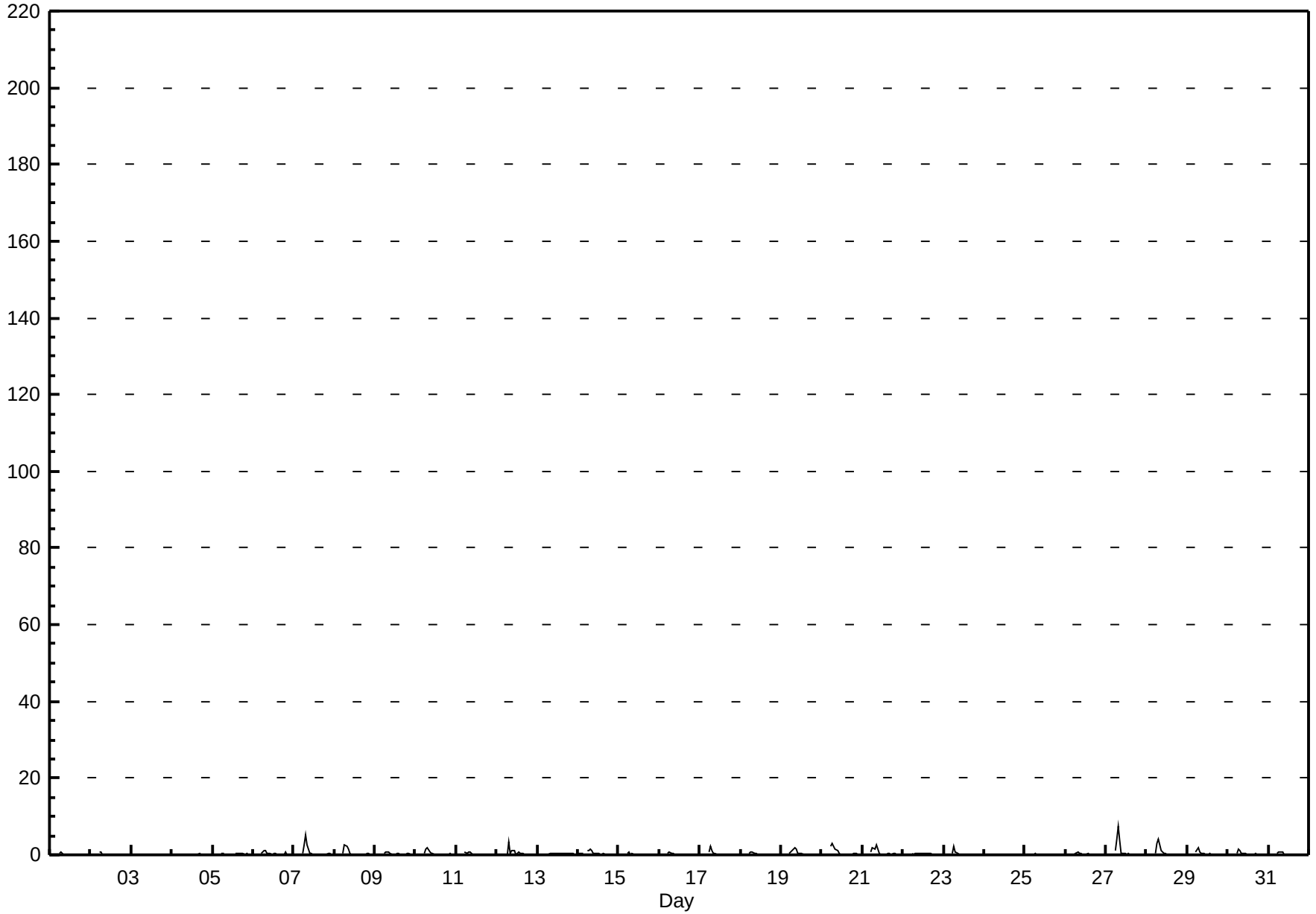
C - Calibration A - Automated Daily Zero Span

PASZA
Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Beaverlodge - July 2010



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Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Beaverlodge - July 2010

Maximum Value: 101.9 ppb on Jul 12 08:00

Maximum Daily Average: 8.8 ppb on Jul 12

Minimum Value: 0 ppb on Jul 25 04:00

Minimum Daily Average: 0.2 ppb on Jul 24

Maximum Diurnal Average: 6.1 ppb at hour 8

Minimum Diurnal Average: 0.2 ppb at hour 24

Monthly Average: 1.07 ppb

Percentiles: $P_1 = 0.1$ $P_{10} = 0.1$ $Q_1 = 0.2$ Median = 0.3 $Q_3 = 0.5$ $P_{90} = 1.5$ $P_{99} = 14.5$

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-Jul	0	0	0	0	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.0
2-Jul	0	0	0	0	A	1	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.4	1.6
3-Jul	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
4-Jul	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0.3	0.7
5-Jul	0	0	0	0	A	0	1	1	C	C	C	C	C	1	1	0	0	0	0	0	0	0	0	0	0.4	0.9
6-Jul	0	0	0	0	A	4	2	2	0	1	0	0	1	3	0	0	0	0	0	30	0	0	0	0	2.1	30.5
7-Jul	0	0	0	0	A	3	19	9	4	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1.8	19.1
8-Jul	0	0	0	0	A	1	8	5	2	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0.9	8.0
9-Jul	0	0	0	0	A	1	1	1	5	1	0	0	1	13	5	0	0	0	0	1	1	0	0	0	1.4	12.7
10-Jul	0	0	0	0	A	1	4	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	3.8
11-Jul	0	0	0	0	A	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.3
12-Jul	0	0	0	0	A	0	0	102	6	36	32	0	8	16	1	0	0	0	0	0	0	0	0	0	8.8	101.9
13-Jul	0	0	0	0	A	0	0	0	0	1	1	1	1	0	0	0	0	1	0	0	1	1	0	1	0.5	1.1
14-Jul	1	1	3	1	A	2	14	16	6	1	0	0	5	1	0	0	0	0	0	0	0	0	0	0	2.3	16.2
15-Jul	0	0	0	0	A	1	1	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	5.0
16-Jul	0	0	0	0	A	2	1	1	2	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0.5	2.1
17-Jul	0	0	0	0	A	3	4	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	3.9
18-Jul	0	0	0	0	A	1	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.0
19-Jul	0	1	0	1	A	1	2	2	3	4	1	0	0	0	1	1	0	0	1	0	0	0	1	1	0.9	3.6
20-Jul	0	0	1	0	A	6	5	4	2	1	1	0	0	0	0	0	0	0	0	1	1	0	0	1	1.1	6.2
21-Jul	0	0	0	0	A	3	2	3	4	3	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0.9	3.8
22-Jul	0	0	0	0	A	3	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.5	2.9
23-Jul	0	0	0	0	A	1	3	2	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.6	3.2
24-Jul	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
25-Jul	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.4
26-Jul	0	0	0	0	A	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.1
27-Jul	0	0	0	0	A	2	23	14	6	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2.3	22.6
28-Jul	0	0	0	0	A	1	7	8	2	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1.1	8.3
29-Jul	0	2	0	0	A	2	5	2	2	1	1	1	2	9	0	0	0	0	0	0	0	0	0	0	1.2	9.0
30-Jul	0	0	0	0	A	3	5	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	5.0
31-Jul	0	0	0	0	A	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.0
	0.2	0.3	0.3	0.3	--	1.5	3.9	6.1	2.0	2.0	1.5	0.3	0.8	1.6	0.5	0.3	0.3	0.3	0.3	1.3	0.3	0.3	0.2	0.2	Diurnal Average	
	0.8	1.8	2.6	1.2	--	6.2	22.6	101.9	6.4	35.5	32.0	0.8	7.5	15.6	4.9	0.7	0.5	0.9	0.7	30.5	1.2	0.6	0.9	0.6	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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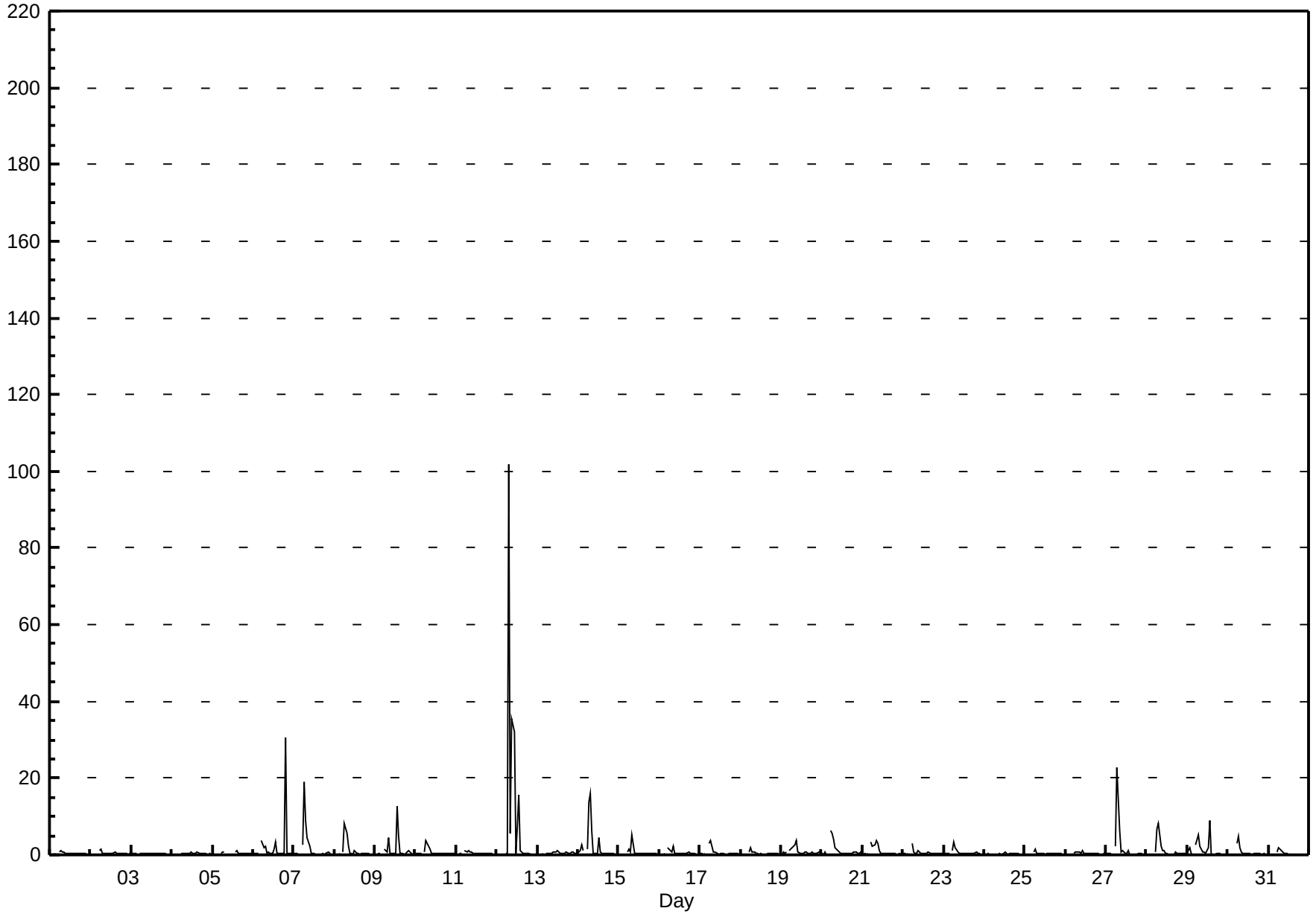
Hourly Maximums

Nitrogen Oxide (NO) - ppb

Beaverlodge - July 2010



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Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 13.6 ppb on Jul 7 08:00 Maximum Daily Average: 3.8 ppb on Jul 28

Minimum Value: 0 ppb on Jul 24 04:00 Minimum Daily Average: 0.6 ppb on Jul 4
Maximum Diurnal Average: 5.4 ppb at hour 6 Minimum Diurnal Average: 0.8 ppb at hour 15
Monthly Average: 2.02 ppb Percentiles: P_1 = 0.2 P_{10} = 0.4 Q_1 = 0.7 Median = 1.3 Q_3 = 2.8 P_{90} = 4.5 P_{99} = 9.7

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	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-Jul	1	2	1	3	A	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.9	3.4
2-Jul	1	1	2	4	A	6	3	1	0	0	0	0	0	1	1	1	0	0	0	1	1	1	1	1	1.2	5.8
3-Jul	2	3	2	2	A	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0.9	2.6
4-Jul	1	0	0	0	A	2	1	0	0	0	0	1	0	0	0	0	1	1	1	1	0	1	1	1	0.6	2.3
5-Jul	1	1	1	1	A	4	2	2	C	C	C	C	C	2	1	1	1	1	1	1	2	2	2	1	1.5	3.6
6-Jul	1	2	2	2	A	4	4	4	1	1	1	1	1	1	1	1	1	1	1	1	3	2	3	3	1.7	4.0
7-Jul	2	2	3	6	A	8	9	14	7	2	1	1	1	1	1	1	0	1	1	1	5	8	4	3	3.5	13.6
8-Jul	3	4	4	4	A	6	8	8	6	3	2	1	1	1	1	1	1	1	1	2	4	3	2	2	3.2	8.4
9-Jul	3	5	6	5	A	6	5	4	4	2	1	1	2	2	2	1	2	1	2	3	4	1	1	2	2.8	6.4
10-Jul	2	3	3	3	A	6	7	6	3	2	2	2	1	1	1	1	1	1	1	2	5	5	3	3	2.8	6.7
11-Jul	5	5	5	4	A	7	4	4	3	2	1	1	1	0	1	0	0	0	0	1	2	4	3	2	2.4	7.2
12-Jul	1	0	0	0	A	2	1	1	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	2.7
13-Jul	0	0	1	1	A	3	2	1	1	1	1	2	2	2	1	1	2	1	2	2	3	2	2	2	1.6	3.2
14-Jul	4	4	5	5	A	8	4	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2.1	7.7
15-Jul	2	3	2	2	A	5	3	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	1	1.1	4.7
16-Jul	1	0	0	0	A	4	3	1	1	0	1	1	1	0	1	1	1	1	0	0	1	2	1	1	0.9	3.5
17-Jul	5	3	3	4	A	6	6	4	2	1	0	0	0	0	0	0	0	0	1	1	2	2	4	3	2.1	6.2
18-Jul	4	3	2	2	A	5	4	2	2	1	1	1	1	1	1	1	1	1	1	2	2	3	3	2	1.9	5.0
19-Jul	3	3	3	3	A	6	5	5	5	4	2	1	1	1	1	1	1	1	1	2	3	3	3	4	2.6	5.5
20-Jul	2	2	4	4	A	10	8	5	4	3	2	1	1	1	1	1	1	1	1	3	4	4	4	4	3.1	10.3
21-Jul	2	2	2	2	A	11	9	6	7	5	3	1	1	1	1	2	2	1	2	2	2	2	2	2	3.0	10.8
22-Jul	4	3	3	3	A	6	3	3	3	3	1	1	1	1	1	1	1	1	1	1	1	2	2	1	2.1	5.7
23-Jul	1	1	3	3	A	5	6	3	1	1	1	1	0	1	1	0	1	1	0	1	1	3	4	3	1.7	5.9
24-Jul	3	3	1	0	A	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	2	1	1	2	0.8	3.3
25-Jul	2	2	1	1	A	3	2	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0.8	2.8
26-Jul	1	1	2	2	A	4	3	3	2	1	1	1	1	1	1	1	1	1	1	1	2	2	2	4	1.6	4.2
27-Jul	5	3	4	4	A	6	8	12	7	2	2	2	1	2	1	1	1	1	1	1	1	2	2	2	3.1	11.8
28-Jul	1	2	2	3	A	6	10	11	6	5	4	3	3	2	2	2	2	2	2	3	3	4	5	5	3.8	10.8
29-Jul	5	5	4	3	A	9	10	6	3	3	2	1	1	1	1	1	1	2	1	1	1	2	3	2	3.0	9.9
30-Jul	2	2	2	2	A	7	9	5	3	2	1	1	1	1	1	2	2	1	1	2	2	3	3	2	2.5	9.0
31-Jul	4	3	4	3	A	6	6	4	3	1	1	1	1	1	1	1	1	1	1	1	2	4	3	2	2.5	6.4
	2.4	2.4	2.5	2.7	--	5.4	4.8	3.9	2.7	1.7	1.2	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.9	1.3	2.0	2.3	2.2	2.2	Diurnal Average	
	5.3	5.1	6.4	6.4	--	10.8	10.5	13.6	7.5	5.1	4.1	3.0	2.6	2.5	1.9	1.9	2.4	1.9	2.4	3.2	5.1	8.5	5.3	5.3	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

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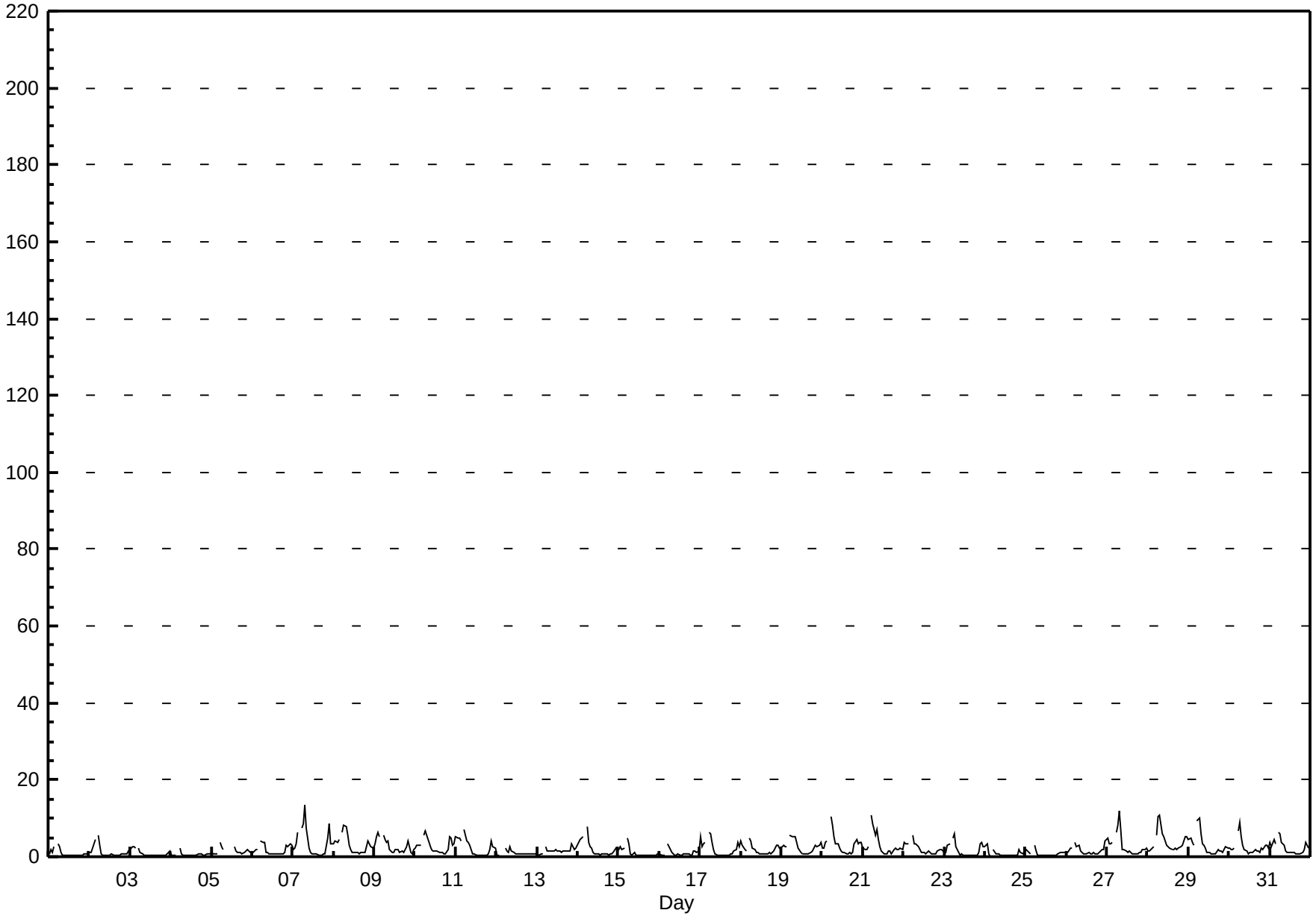
Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - July 2010



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Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - July 2010

Maximum Value: 52.7 ppb on Jul 12 09:00

Maximum Daily Average: 6.5 ppb on Jul 7

Minimum Value: 0 ppb on Jul 25 13:00

Minimum Daily Average: 1.2 ppb on Jul 4

Maximum Diurnal Average: 9.6 ppb at hour 6

Minimum Diurnal Average: 1.4 ppb at hour 16

Monthly Average: 3.68 ppb

Percentiles: $P_1 = 0.6$ $P_{10} = 0.9$ $Q_1 = 1.2$ Median = 2.3 $Q_3 = 4.6$ $P_{90} = 7.5$ $P_{99} = 18.3$

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-Jul	2	3	3	4	A	6	4	2	1	1	1	1	1	1	1	1	2	1	1	1	1	3	2	3	1.9	5.5
2-Jul	4	2	3	6	A	8	6	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	4	2.2	8.4
3-Jul	4	4	4	4	A	5	2	1	1	1	1	1	1	1	1	1	1	1	3	1	1	2	2	2	1.8	5.3
4-Jul	1	1	1	1	A	5	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1.2	4.6
5-Jul	2	2	2	1	A	7	3	3	C	C	C	C	C	5	4	2	2	2	1	2	3	4	2	2	2.7	6.9
6-Jul	2	3	2	2	A	7	5	5	2	2	1	2	2	5	2	1	1	1	1	4	4	4	5	4	2.9	7.0
7-Jul	3	4	7	10	A	14	32	18	11	7	2	1	1	1	1	1	1	1	1	3	11	12	5	5	6.5	31.7
8-Jul	5	5	4	6	A	10	19	15	8	3	3	2	4	1	1	1	1	2	2	6	7	7	3	3	5.1	18.6
9-Jul	4	7	8	7	A	10	6	6	10	3	1	2	3	9	13	2	4	3	5	4	11	3	1	4	5.5	13.3
10-Jul	3	5	5	4	A	9	12	9	5	3	3	2	2	2	1	1	1	1	2	4	7	8	4	4	4.2	12.5
11-Jul	6	5	6	5	A	10	5	4	4	3	1	1	1	1	2	1	1	1	1	1	3	6	5	5	3.5	10.3
12-Jul	3	2	1	1	A	6	3	7	53	22	15	1	2	2	2	1	2	2	1	1	1	1	1	1	5.6	52.7
13-Jul	1	1	1	2	A	5	2	2	2	2	2	3	3	2	2	2	2	2	2	2	6	5	2	4	2.5	6.3
14-Jul	6	6	7	6	A	12	6	19	10	1	1	1	10	1	2	1	1	1	2	2	1	2	5	2	4.7	19.2
15-Jul	2	4	3	4	A	9	5	2	1	28	1	1	1	1	1	1	1	1	1	1	1	2	1	3	3.4	28.4
16-Jul	2	1	1	2	A	8	5	2	2	1	1	1	1	1	2	2	1	2	1	2	3	3	3	4	2.3	8.3
17-Jul	9	4	4	4	A	10	9	5	3	2	1	1	1	1	1	1	1	1	2	1	3	3	6	4	3.3	10.3
18-Jul	5	4	3	2	A	7	7	3	2	2	1	1	1	1	1	1	1	2	1	3	3	5	4	3	2.7	6.7
19-Jul	4	7	5	4	A	8	6	7	7	8	3	2	1	2	2	1	1	3	6	5	4	5	5	6	4.4	8.2
20-Jul	6	4	5	9	A	19	13	9	4	4	3	2	1	1	1	1	1	1	2	7	7	6	6	7	5.3	19.5
21-Jul	3	5	2	4	A	29	11	9	9	8	4	2	1	1	2	2	3	2	2	3	3	3	5	3	5.2	28.5
22-Jul	5	4	4	5	A	9	5	4	5	5	2	2	2	1	2	3	1	1	1	1	3	4	4	2	3.2	9.0
23-Jul	1	2	5	5	A	9	7	5	3	1	1	1	1	1	1	1	1	1	1	2	4	7	5	4	3.0	8.6
24-Jul	5	4	4	1	A	4	1	1	1	1	1	2	2	2	1	1	1	1	1	1	5	4	2	5	2.1	4.9
25-Jul	3	3	2	1	A	5	5	1	1	1	1	1	0	1	1	1	1	1	1	1	2	3	2	3	1.7	5.2
26-Jul	2	2	4	3	A	6	3	4	3	2	2	1	1	1	1	1	2	2	1	2	2	3	3	9	2.6	8.5
27-Jul	9	7	4	4	A	8	29	19	11	3	3	2	2	3	1	1	1	1	1	2	3	5	2	3	5.4	29.4
28-Jul	2	2	2	3	A	10	18	20	10	6	5	4	3	2	2	2	4	3	4	5	5	13	8	6	6.1	19.5
29-Jul	5	14	6	4	A	14	16	9	7	4	3	2	1	1	1	1	2	3	3	3	2	3	4	3	4.8	15.8
30-Jul	3	3	3	3	A	19	18	8	4	2	2	2	2	2	2	4	3	2	2	4	2	6	4	3	4.5	18.8
31-Jul	5	6	6	6	A	10	7	5	4	2	2	2	1	1	1	1	1	1	1	3	3	8	3	3	3.6	9.5
	3.8	3.9	3.7	4.0	--	9.6	8.9	6.7	6.1	4.3	2.3	1.5	1.8	1.8	1.8	1.4	1.5	1.5	1.8	2.6	3.7	4.6	3.5	3.7	Diurnal Average	
	8.8	13.6	8.1	10.1	--	28.5	31.7	19.5	52.7	28.4	15.1	4.1	10.5	8.7	13.3	4.1	4.4	3.4	5.8	6.8	10.9	12.5	7.7	8.5	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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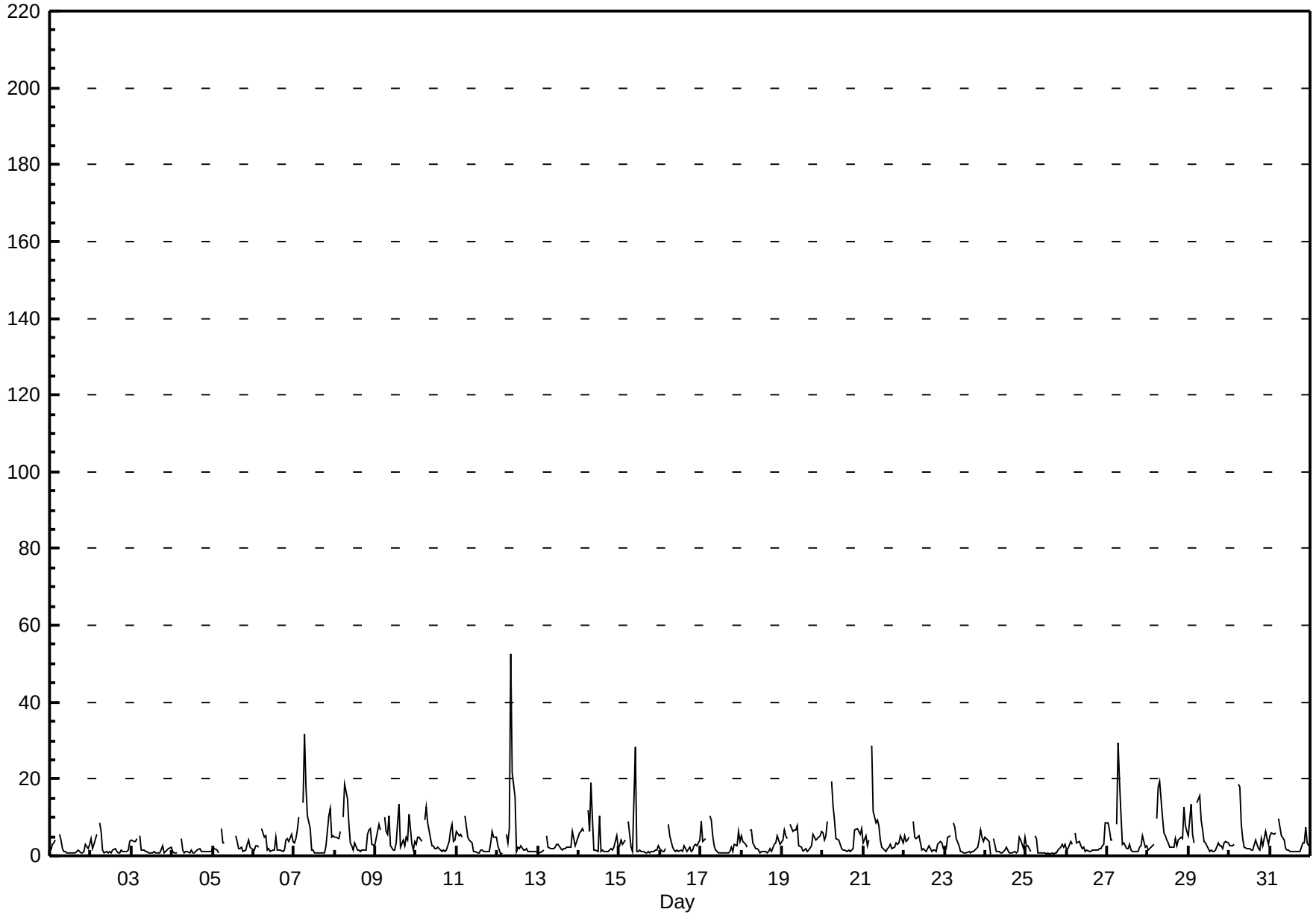
Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - July 2010



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Hourly Averages

Ozone (O_3) - ppb

Beaverlodge - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 51.7 ppb on Jul 31 15:00 Maximum Daily Average: 37.2 ppb on Jul 31

Minimum Value: 4 ppb on Jul 14 04:00 Minimum Daily Average: 14.9 ppb on Jul 13
Maximum Diurnal Average: 30.5 ppb at hour 15 Minimum Diurnal Average: 14.9 ppb at hour 6
Monthly Average: 24.30 ppb Percentiles: P_1 = 5.6 P_{10} = 14.0 Q_1 = 18.2 Median = 23.5 Q_3 = 29.4 P_{90} = 35.8 P_{99} = 50.0

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-Jul	24	21	23	21	A	19	21	23	25	27	28	28	30	31	31	31	31	31	30	29	29	29	26	25	26.5	30.9
2-Jul	22	21	19	17	A	14	18	22	21	21	21	22	22	23	21	21	21	21	21	19	18	19	18	16	19.9	22.6
3-Jul	16	14	14	12	A	19	20	22	23	24	24	24	25	25	24	24	25	25	25	25	25	25	24	22	22.0	25.1
4-Jul	26	27	26	26	A	19	17	17	17	18	19	20	20	19	19	19	18	18	17	16	16	16	14	13	18.9	26.7
5-Jul	13	15	14	14	A	11	12	12	13	18	23	25	C	C	C	21	21	22	23	24	22	19	18	19	18.0	25.1
6-Jul	19	18	15	16	A	16	15	18	21	23	24	25	26	27	27	27	29	35	36	34	25	19	16	15	22.8	35.5
7-Jul	16	15	16	15	A	16	13	11	21	30	33	34	35	36	35	33	34	34	33	33	27	21	25	26	25.7	36.3
8-Jul	23	20	20	18	A	20	16	22	29	39	40	39	39	39	38	37	36	37	37	36	32	31	33	34	31.0	40.5
9-Jul	30	25	18	15	A	15	21	25	27	32	32	32	34	34	35	35	33	35	32	29	23	27	26	23	27.7	35.3
10-Jul	20	19	17	16	A	14	12	14	23	32	36	37	37	37	37	38	38	37	37	37	31	24	24	22	27.8	38.0
11-Jul	19	18	15	14	A	11	13	13	15	17	21	21	22	23	26	30	31	32	34	33	28	25	26	28	22.4	34.0
12-Jul	37	37	35	33	A	28	26	25	25	26	26	26	26	23	20	20	19	18	20	20	18	18	18	18	24.4	37.1
13-Jul	17	17	15	15	A	13	13	13	13	13	13	13	14	15	16	17	18	19	20	20	16	11	10	9	14.9	20.4
14-Jul	6	5	4	4	A	6	11	14	16	17	19	21	22	23	23	24	26	23	25	26	26	26	24	24	18.0	25.7
15-Jul	22	19	21	18	A	18	18	26	27	28	29	29	28	29	29	28	27	27	27	25	24	24	24	22	24.7	29.0
16-Jul	21	19	18	18	A	15	16	19	20	20	21	21	22	21	21	21	21	20	19	17	15	14	16	16	18.7	21.8
17-Jul	10	12	11	10	A	10	10	16	21	22	21	23	25	26	26	26	26	26	25	29	27	26	22	23	20.6	28.6
18-Jul	19	19	21	21	A	17	16	21	23	29	32	32	33	33	31	31	29	28	34	29	23	22	27	30	26.1	33.7
19-Jul	25	20	21	19	A	13	13	12	13	19	26	29	29	30	31	32	31	30	29	25	22	24	18	16	22.9	31.7
20-Jul	20	19	15	13	A	9	10	12	17	25	28	33	34	36	37	38	39	40	39	34	30	27	28	26	26.6	40.2
21-Jul	29	31	31	28	A	16	18	18	19	24	30	34	34	35	34	29	30	34	33	32	33	32	31	29	28.8	35.1
22-Jul	21	21	21	20	A	16	19	21	23	27	28	29	28	28	27	26	29	27	26	24	21	17	15	15	23.1	28.6
23-Jul	15	14	11	10	A	10	8	15	20	23	26	28	26	23	21	21	20	21	22	22	20	17	15	16	18.4	28.3
24-Jul	15	14	15	17	A	25	30	32	30	30	30	27	26	26	28	29	29	29	29	28	26	28	28	26	26.0	31.9
25-Jul	25	23	22	21	A	17	17	19	19	20	22	22	23	22	23	23	22	22	20	18	17	16	17	17	20.4	24.7
26-Jul	17	17	15	14	A	13	13	13	18	21	26	25	23	23	28	29	27	26	28	28	26	23	20	16	21.2	28.9
27-Jul	14	14	11	9	A	5	6	5	12	24	28	32	35	40	37	35	34	35	35	34	31	30	29	25	24.3	39.6
28-Jul	24	24	24	22	A	12	9	12	23	30	37	43	46	47	49	51	45	40	41	38	36	28	22	21	31.5	51.4
29-Jul	19	20	22	24	A	12	7	12	22	25	30	36	41	44	46	48	49	41	40	40	39	39	32	31	31.3	48.8
30-Jul	32	29	30	25	A	18	14	21	26	27	28	33	36	40	41	35	38	41	40	34	31	27	28	33	30.7	41.1
31-Jul	30	29	24	22	A	15	16	21	30	38	41	44	47	50	52	51	50	51	51	46	38	35	39	39	37.2	51.7
	20.8	19.9	18.9	17.6	--	14.9	15.0	17.6	21.0	24.9	27.1	28.6	29.6	30.2	30.5	29.9	29.8	29.8	29.9	28.5	25.6	23.8	23.0	22.4	Diurnal Average	
	37.1	36.8	35.3	33.2	--	27.9	29.6	31.9	30.0	38.9	40.8	43.8	47.2	50.4	51.7	51.4	50.1	50.6	50.6	46.0	38.6	38.7	38.7	39.4	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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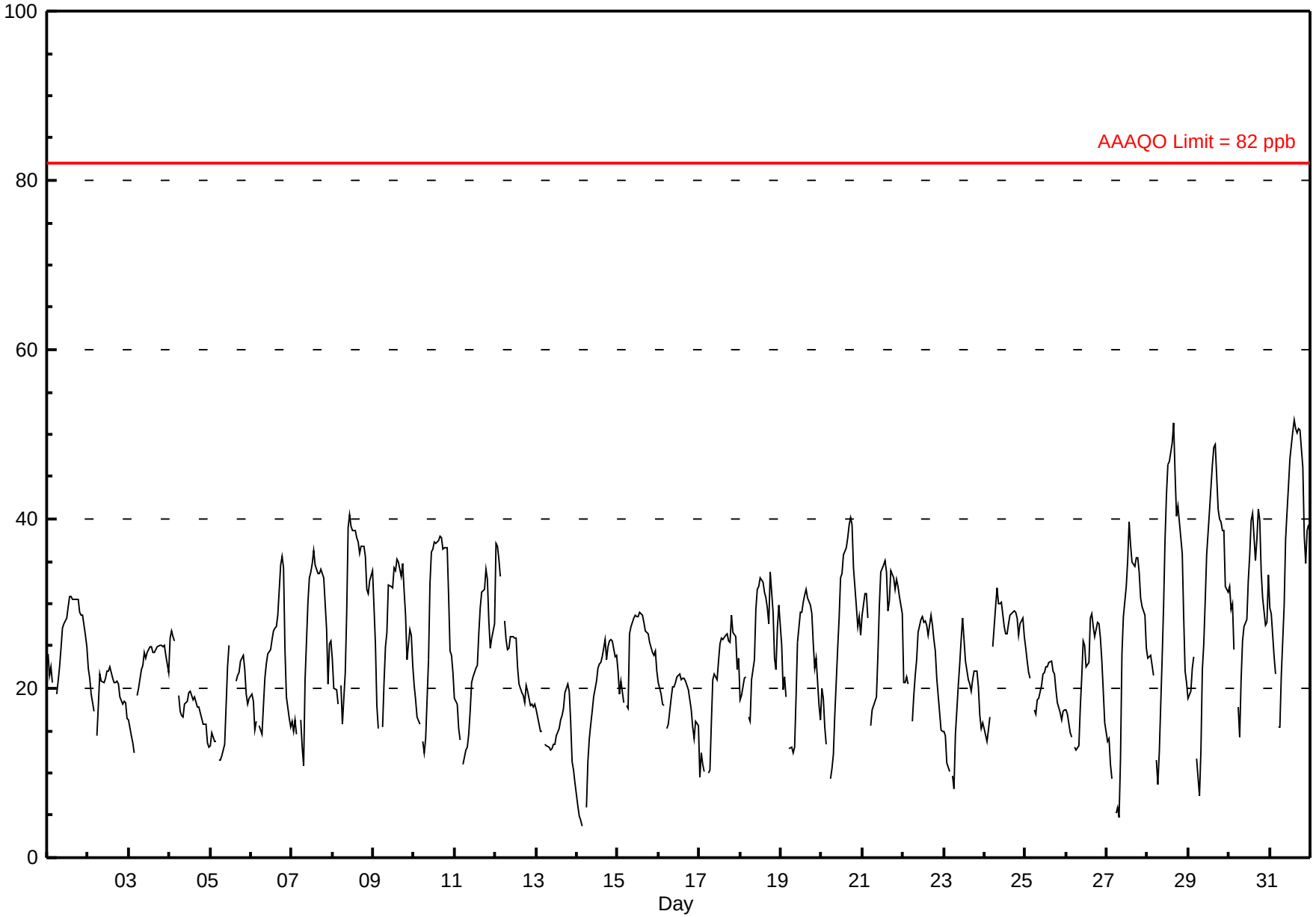
Hourly Averages

Ozone (O_3) - ppb

Beaverlodge - July 2010



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Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

Beaverlodge - July 2010

Maximum Value: 52.8 ppb on Jul 28 16:00

Maximum Daily Average: 40.3 ppb on Jul 31

Minimum Value: 5 ppb on Jul 14 04:00

Minimum Daily Average: 16.1 ppb on Jul 13

Maximum Diurnal Average: 32.2 ppb at hour 15

Minimum Diurnal Average: 18.1 ppb at hour 6

Monthly Average: 26.57 ppb

Percentiles: P_1 = 10.2 P_{10} = 16.2 Q_1 = 20.4 Median = 25.7 Q_3 = 31.8 P_{90} = 38.3 P_{99} = 52.2

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	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-Jul	25	24	25	22	A	21	22	24	27	31	28	30	31	33	32	32	32	31	32	30	30	31	28	26	28.1	32.6
2-Jul	25	22	21	20	A	17	24	23	22	22	23	23	23	24	23	22	22	22	22	20	19	19	19	19	21.5	24.6
3-Jul	19	16	16	16	A	21	21	23	24	26	24	26	26	26	25	25	25	26	26	26	26	26	26	23	23.3	26.2
4-Jul	28	27	27	27	A	22	18	18	18	19	20	21	21	20	20	21	20	19	18	18	17	17	14	14	20.1	27.6
5-Jul	15	16	14	15	A	13	12	13	16	20	25	27	C	C	C	23	24	24	25	25	25	21	19	20	19.6	26.6
6-Jul	20	21	17	18	A	19	17	21	23	24	25	26	27	29	29	29	32	37	37	36	32	20	19	17	24.9	36.9
7-Jul	17	19	23	20	A	19	19	18	26	33	35	35	37	38	36	36	34	35	35	35	34	24	27	28	28.8	37.8
8-Jul	25	22	22	21	A	24	24	28	35	41	42	40	40	40	40	39	38	39	38	40	34	35	36	37	34.0	42.3
9-Jul	32	30	23	17	A	18	24	27	31	34	33	34	36	36	38	38	36	38	35	32	28	29	27	27	30.5	38.0
10-Jul	22	21	18	18	A	15	17	23	31	36	38	38	39	38	38	39	39	38	38	39	35	28	25	23	30.4	39.4
11-Jul	21	19	18	15	A	14	14	15	15	20	22	22	24	24	29	33	33	34	36	35	32	29	28	35	24.7	36.2
12-Jul	39	38	36	34	A	29	27	26	26	27	27	27	27	25	22	20	20	19	22	21	19	19	19	19	25.6	38.8
13-Jul	19	18	16	16	A	14	14	14	13	14	14	15	15	17	17	18	19	20	22	21	19	14	11	10	16.1	21.9
14-Jul	8	6	5	5	A	8	15	15	17	19	20	22	25	25	25	25	28	26	28	27	27	27	25	25	19.8	28.2
15-Jul	24	21	22	21	A	20	24	28	29	30	30	30	30	31	30	29	28	28	28	27	25	26	25	24	26.4	31.0
16-Jul	22	20	18	19	A	17	18	21	21	21	22	23	23	22	23	22	23	21	20	18	17	15	18	17	20.0	22.8
17-Jul	13	14	12	12	A	17	13	19	23	23	23	25	26	27	27	29	28	27	27	30	28	28	28	26	22.8	29.6
18-Jul	26	21	22	23	A	19	18	25	25	32	33	33	34	34	33	32	30	30	40	33	26	24	31	31	28.4	40.0
19-Jul	29	27	26	24	A	15	14	15	15	25	29	31	31	32	32	33	32	32	34	30	26	26	26	21	26.3	34.4
20-Jul	24	23	22	15	A	16	15	15	23	28	32	34	35	37	38	39	41	41	41	39	32	31	31	30	29.7	41.4
21-Jul	33	35	33	32	A	20	22	20	21	27	33	36	36	37	36	31	33	36	36	35	35	34	34	33	31.5	36.8
22-Jul	27	23	23	22	A	22	25	24	28	29	30	30	29	29	30	29	30	29	27	26	23	20	16	16	25.6	30.2
23-Jul	16	16	13	12	A	11	11	20	22	25	28	32	29	25	23	22	20	22	23	23	22	20	17	17	20.4	31.5
24-Jul	17	15	17	18	A	28	32	34	32	32	32	29	28	28	30	31	31	32	32	29	29	30	30	28	27.8	34.1
25-Jul	26	24	23	22	A	19	19	19	20	22	23	24	24	23	25	25	23	22	21	19	18	17	19	20	21.6	25.8
26-Jul	19	18	16	15	A	14	14	15	21	24	27	26	24	27	30	30	29	28	29	29	27	24	22	19	23.0	30.4
27-Jul	17	16	14	11	A	10	10	8	19	26	31	34	38	42	40	37	35	37	37	36	33	31	31	28	27.1	41.6
28-Jul	25	25	26	24	A	15	20	20	28	34	41	46	48	50	53	53	52	42	44	40	39	34	25	23	35.0	52.8
29-Jul	22	25	29	27	A	17	13	22	26	29	33	40	46	47	49	50	50	48	42	41	40	41	39	33	35.2	50.4
30-Jul	35	34	32	31	A	27	19	26	30	29	30	40	40	41	44	40	41	43	43	36	33	30	30	36	34.4	43.8
31-Jul	33	32	30	23	A	21	20	28	36	40	43	46	50	53	53	52	51	52	52	50	44	39	40	40	40.3	52.7
	23.2	22.3	21.4	19.8	--	18.1	18.6	20.8	23.9	27.1	29.0	30.4	31.3	31.9	32.2	31.7	31.5	31.6	31.9	30.6	28.1	26.0	25.3	24.7	Diurnal Average	
	38.8	38.3	36.4	34.4	--	29.0	31.5	34.1	35.6	41.2	43.1	46.5	49.8	52.6	52.7	52.8	52.3	52.2	52.2	49.7	44.0	41.1	40.1	40.3	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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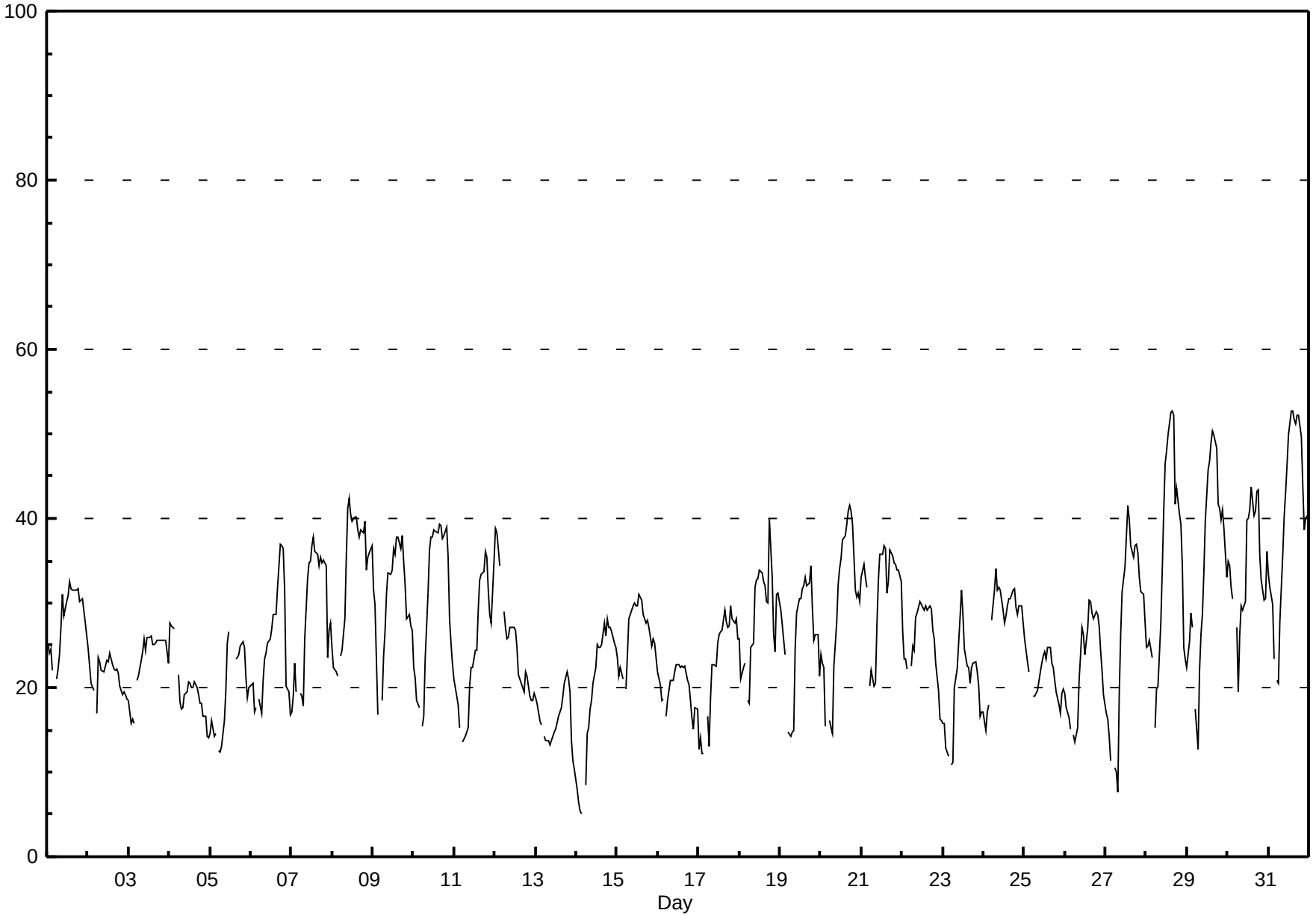
Hourly Maximums

Ozone (O_3) - ppb

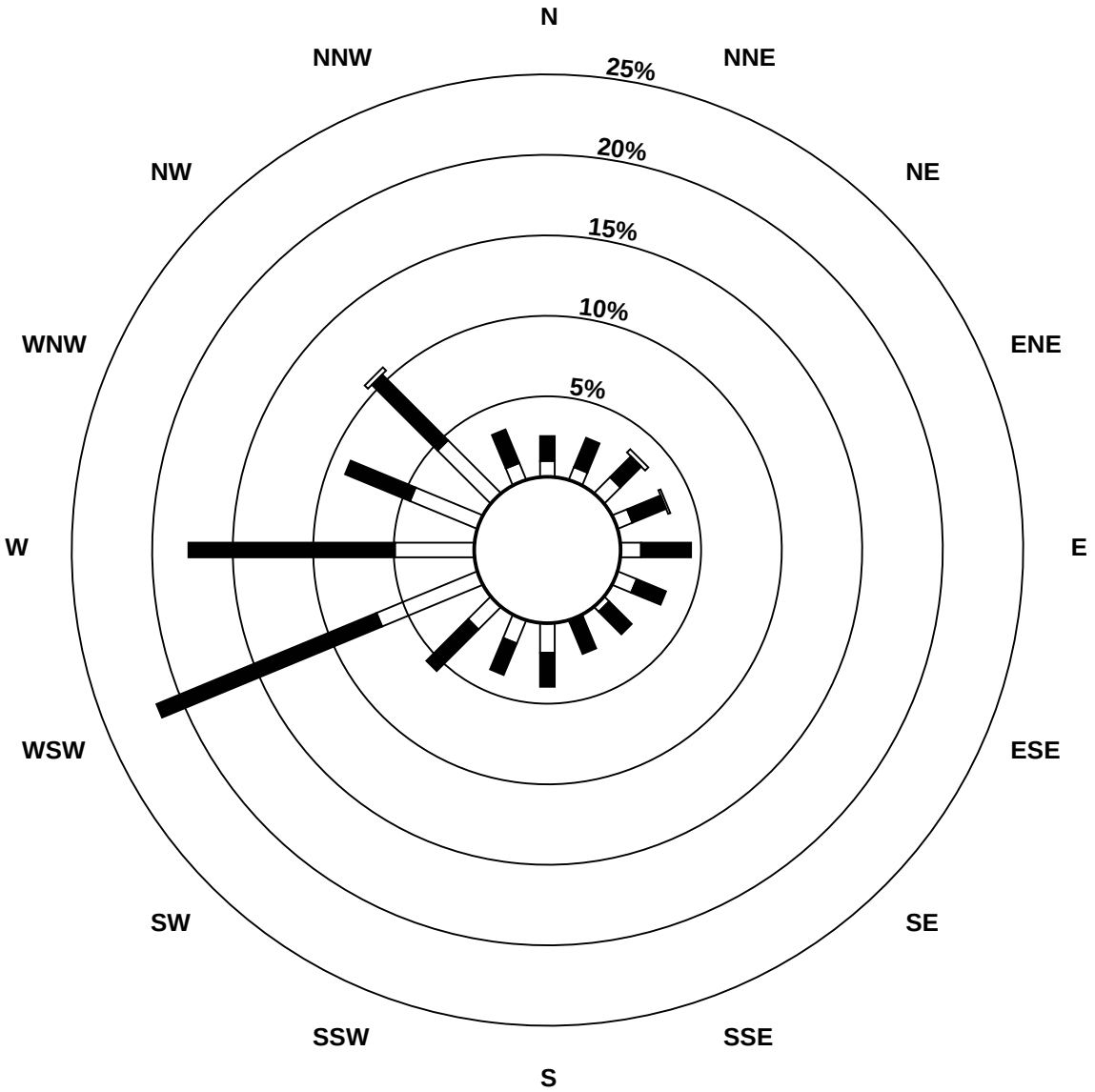
Beaverlodge - July 2010



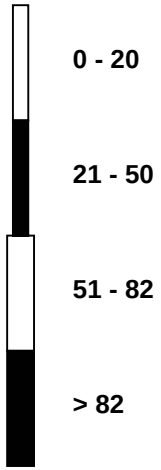
Pollutant Rose

Ozone (O_3) - ppb

Beaverlodge - July 2010



Pollutant Classes (ppb)



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Eight Hour Running Averages

Ozone (O_3) - ppb

Beaverlodge - July 2010

Maximum Value: 49.6 ppb on Jul 31 20:00

Minimum Value: 6.3 ppb on Jul 14 06:00

Percentiles: P_1 = 9.0 P_{10} = 15.7 Q_1 = 18.8 Median = 23.3 Q_3 = 28.3 P_{90} = 33.7 P_{99} = 44.6

Hours in Service:	744
Hours of Data:	738
Hours of Missing Data:	6
Hours of Calibration:	6
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	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-Jul	27	26	26	24	24	23	22	22	22	23	23	24	25	26	28	29	29	30	30	30	30	30	29	29	30.3
2-Jul	28	26	25	24	23	21	20	19	19	19	19	20	20	21	22	21	21	21	21	21	20	20	20	19	27.6
3-Jul	19	18	17	16	16	16	16	17	18	19	21	22	23	23	24	24	24	24	25	25	25	25	25	24	24.8
4-Jul	25	25	25	25	25	24	23	23	21	20	19	18	18	18	18	19	19	19	19	18	18	17	17	16	25.0
5-Jul	15	15	15	14	14	13	13	13	13	13	15	16	16	17	N	N	N	N	N	N	22	22	21	21	22.3
6-Jul	21	20	19	18	18	17	17	17	17	18	19	20	21	22	24	25	26	27	29	30	30	29	28	26	30.0
7-Jul	25	22	20	17	16	16	15	15	15	17	20	23	24	27	29	32	34	34	34	34	33	31	30	29	34.3
8-Jul	28	26	24	22	22	22	20	20	21	23	26	29	31	33	36	37	38	38	38	37	36	35	35	34	38.3
9-Jul	34	32	30	27	27	24	23	21	21	22	24	26	27	30	31	33	33	34	34	33	32	31	30	28	33.8
10-Jul	27	25	23	21	21	19	17	16	16	18	21	24	26	29	32	35	37	37	37	37	36	35	33	31	37.2
11-Jul	29	26	24	21	19	18	16	15	14	14	15	16	17	18	20	22	24	26	27	29	30	30	30	29	29.8
12-Jul	30	31	31	31	32	32	32	32	30	28	27	26	26	25	25	24	23	22	22	21	20	19	19	19	32.0
13-Jul	18	18	18	17	17	16	16	15	14	14	13	13	13	14	14	14	15	16	17	17	18	17	16	15	18.5
14-Jul	14	12	10	8	7	6	6	7	9	10	12	15	16	18	19	21	22	23	23	24	24	25	25	25	24.8
15-Jul	24	24	23	22	22	21	20	20	21	22	23	25	25	27	28	28	28	28	28	27	27	26	26	25	28.3
16-Jul	24	23	22	21	21	20	18	18	18	18	18	19	19	20	21	21	21	21	21	20	19	19	18	17	24.2
17-Jul	16	15	14	13	13	12	11	11	13	14	16	18	19	21	22	24	24	25	25	26	26	26	26	26	26.3
18-Jul	25	24	23	22	22	20	20	19	20	21	23	24	25	27	29	31	31	31	31	31	30	28	28	28	31.3
19-Jul	27	26	25	23	23	22	20	18	16	16	16	18	19	21	24	26	28	30	30	30	29	28	26	24	30.0
20-Jul	23	22	20	18	18	16	15	14	14	15	16	19	21	24	28	31	34	36	37	37	37	36	35	33	37.1
21-Jul	32	31	30	29	29	27	26	24	23	22	22	23	24	26	29	30	31	33	33	33	32	32	32	32	32.9
22-Jul	30	29	27	26	25	23	21	20	20	21	22	23	24	25	26	27	28	28	27	27	26	25	23	22	30.5
23-Jul	20	18	17	15	14	13	12	12	13	14	16	19	19	21	23	23	23	23	23	22	21	20	20	19	23.5
24-Jul	19	18	17	16	16	17	19	21	23	25	28	29	29	29	29	28	28	28	28	28	28	28	28	28	29.1
25-Jul	27	27	26	25	25	23	22	21	20	19	19	19	20	20	21	22	22	22	22	22	21	20	19	19	27.4
26-Jul	18	18	17	16	16	16	15	15	15	15	17	18	19	20	22	24	25	26	26	26	27	27	26	24	26.9
27-Jul	22	21	19	17	15	13	11	9	9	10	13	16	18	23	27	30	33	35	35	36	35	34	33	32	35.7
28-Jul	30	29	27	26	25	23	20	18	18	19	21	24	27	31	36	41	44	45	45	45	44	41	38	34	45.5
29-Jul	31	28	26	24	22	20	18	17	17	18	19	21	23	27	32	37	40	42	43	44	43	43	41	39	43.6
30-Jul	37	35	34	32	31	28	26	24	23	23	23	24	25	28	31	33	35	36	38	38	37	36	34	34	38.0
31-Jul	33	31	29	28	27	26	24	22	22	24	26	29	31	36	40	44	47	48	49	50	49	47	45	44	49.6
	36.7	35.2	34.0	32.1	31.5	32.0	32.0	31.5	29.8	28.2	27.6	29.4	31.4	35.8	40.3	44.0	46.5	48.1	49.4	49.6	48.5	46.6	44.9	43.5	
	Diurnal Maximums																								

N - Not Valid

PASZA
Peace Airshed Zone Association

Hourly Averages

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

Beaverlodge - July 2010

Number of Exceedences: 1-hr: 0 24-hr: 0
Maximum Value: 23.2 $\mu g/m^3$ on Jul 29 19:00
Maximum Daily Average: 17.0 $\mu g/m^3$ on Jul 29

Minimum Value: 1 $\mu g/m^3$ on Jul 2 12:00
Maximum Diurnal Average: 8.0 $\mu g/m^3$ at hour 23
Monthly Average: 7.43 $\mu g/m^3$
Minimum Daily Average: 2.9 $\mu g/m^3$ on Jul 4
Minimum Diurnal Average: 6.9 $\mu g/m^3$ at hour 3
Percentiles: P_1 = 1.4 P_{10} = 3.4 Q_1 = 4.7 Median = 6.5 Q_3 = 9.3 P_{90} = 13.0 P_{99} = 21.2

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-Jul	3	4	3	3	2	3	3	4	3	6	4	3	1	3	3	5	2	1	5	4	3	5	4	3	3.2	5.6
2-Jul	5	4	7	5	5	5	6	4	3	2	1	1	5	3	4	4	2	3	2	6	5	5	6	6	4.1	6.7
3-Jul	8	6	5	5	4	3	5	4	4	5	4	5	6	4	5	4	8	6	5	6	6	6	6	6	5.2	8.3
4-Jul	5	4	3	1	2	3	2	2	1	2	5	4	2	2	3	2	3	4	4	3	3	3	3	3	2.9	5.1
5-Jul	4	4	3	3	3	2	3	3	3	5	3	5	5	6	1	4	4	4	4	5	4	6	5	4	4.0	6.5
6-Jul	5	4	5	4	4	5	6	6	5	5	5	7	6	7	7	7	6	6	5	4	8	8	10	11	6.0	11.1
7-Jul	9	10	9	8	7	7	8	8	9	8	6	6	8	9	9	7	6	8	8	7	7	10	16	16	8.6	16.2
8-Jul	13	13	12	12	12	13	13	15	13	11	12	10	10	10	10	8	10	11	10	10	12	15	17	15	11.9	16.6
9-Jul	14	14	16	18	16	16	15	13	15	11	12	13	12	11	12	13	12	7	7	11	9	7	7	6	12.0	18.2
10-Jul	7	8	7	7	7	8	8	7	8	8	9	10	12	13	12	11	9	7	7	8	8	9	9	10	8.9	13.1
11-Jul	10	10	9	11	10	9	8	9	11	8	8	8	7	6	5	5	5	3	6	6	5	9	11	9	7.8	10.9
12-Jul	6	5	4	4	5	4	4	4	4	3	2	3	5	6	4	4	2	3	4	2	4	4	1	3	3.8	6.2
13-Jul	3	3	4	3	4	5	7	5	4	5	5	6	6	6	7	7	8	8	7	8	8	7	6	7	5.8	7.9
14-Jul	8	8	7	7	6	7	7	6	7	5	7	6	6	6	7	8	7	7	8	6	7	7	6	7	6.8	8.3
15-Jul	7	7	8	7	7	6	5	7	6	6	4	4	4	6	5	5	6	6	4	5	5	5	4	5	5.6	7.9
16-Jul	4	3	4	5	4	4	5	6	4	2	3	2	4	3	2	4	4	5	5	5	5	6	6	5	4.2	6.1
17-Jul	5	6	5	5	5	5	5	6	5	5	4	5	5	5	4	5	4	6	9	6	6	8	9	9	5.8	9.1
18-Jul	8	6	6	6	5	4	5	6	6	6	5	6	5	6	7	7	7	9	11	7	9	7	7	7	6.5	10.6
19-Jul	7	8	8	7	8	8	9	11	10	10	11	8	7	5	6	6	6	7	P	P	6	9	9	8	7.9	10.9
20-Jul	7	6	5	6	7	5	8	6	8	9	9	9	7	9	7	7	8	7	8	8	7	8	8	8	7.3	9.4
21-Jul	8	7	7	7	9	10	10	10	8	10	11	11	8	8	9	9	9	9	8	9	9	8	8	8	8.8	11.1
22-Jul	8	9	8	9	10	10	9	8	6	5	5	5	4	6	5	6	4	5	5	4	4	4	4	4	6.1	9.8
23-Jul	4	5	3	3	5	3	5	6	7	6	5	3	4	5	6	7	8	7	5	5	9	5	5	6	5.4	9.4
24-Jul	6	7	7	4	4	3	4	4	7	6	8	5	5	6	3	3	3	6	8	5	5	5	5	5	5.2	7.8
25-Jul	5	5	5	5	4	4	5	4	3	3	4	4	3	4	4	3	7	8	5	5	5	6	8	7	4.9	8.1
26-Jul	5	2	5	6	6	7	6	8	8	7	6	4	5	4	6	8	7	7	7	8	8	8	8	9	6.5	8.9
27-Jul	7	7	6	5	4	4	6	8	8	6	7	8	8	11	11	9	10	10	10	11	9	10	10	11	8.1	11.3
28-Jul	11	12	12	11	13	13	13	16	17	16	18	16	17	16	17	16	16	P	P	11	12	11	11	11	14.0	17.8
29-Jul	7	10	10	12	12	12	17	17	19	17	19	22	20	20	21	23	22	22	23	23	19	13	12	15	17.0	23.2
30-Jul	14	13	15	15	15	15	16	18	17	15	16	15	13	14	15	16	13	13	13	14	15	12	11	10	14.3	18.0
31-Jul	10	11	10	13	13	13	13	13	15	14	11	11	12	11	10	11	12	11	12	11	14	17	14	14	12.3	16.8
	7.2	7.2	6.9	7.0	7.1	7.0	7.6	7.9	7.9	7.4	7.3	7.3	7.2	7.5	7.3	7.5	7.4	7.2	7.4	7.5	7.7	7.9	8.0	8.0	Diurnal Average	
	14.0	14.1	15.7	18.2	15.9	15.7	17.3	18.0	18.6	16.6	18.8	21.8	20.5	20.2	21.4	22.9	21.5	22.4	23.2	22.5	18.7	16.8	16.6	15.7	Diurnal Maximum	

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

PASZA
Peace Airshed Zone Association

Hourly Averages

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

Beaverlodge - July 2010

PASZA
Peace Airshed Zone Association

Hourly Maximums

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

Beaverlodge - July 2010

Maximum Value: 23.9 $\mu g/m^3$ on Jul 29 20:00

Maximum Daily Average: 18.7 $\mu g/m^3$ on Jul 29

Minimum Value: 1 $\mu g/m^3$ on Jul 1 13:00

Minimum Daily Average: 3.7 $\mu g/m^3$ on Jul 4

Maximum Diurnal Average: 9.1 $\mu g/m^3$ at hour 8

Minimum Diurnal Average: 7.7 $\mu g/m^3$ at hour 6

Monthly Average: 8.44 $\mu g/m^3$

Percentiles: $P_1 = 2.4$ $P_{10} = 4.4$ $Q_1 = 5.6$ Median = 7.6 $Q_3 = 10.2$ $P_{90} = 14.5$ $P_{99} = 23.0$

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

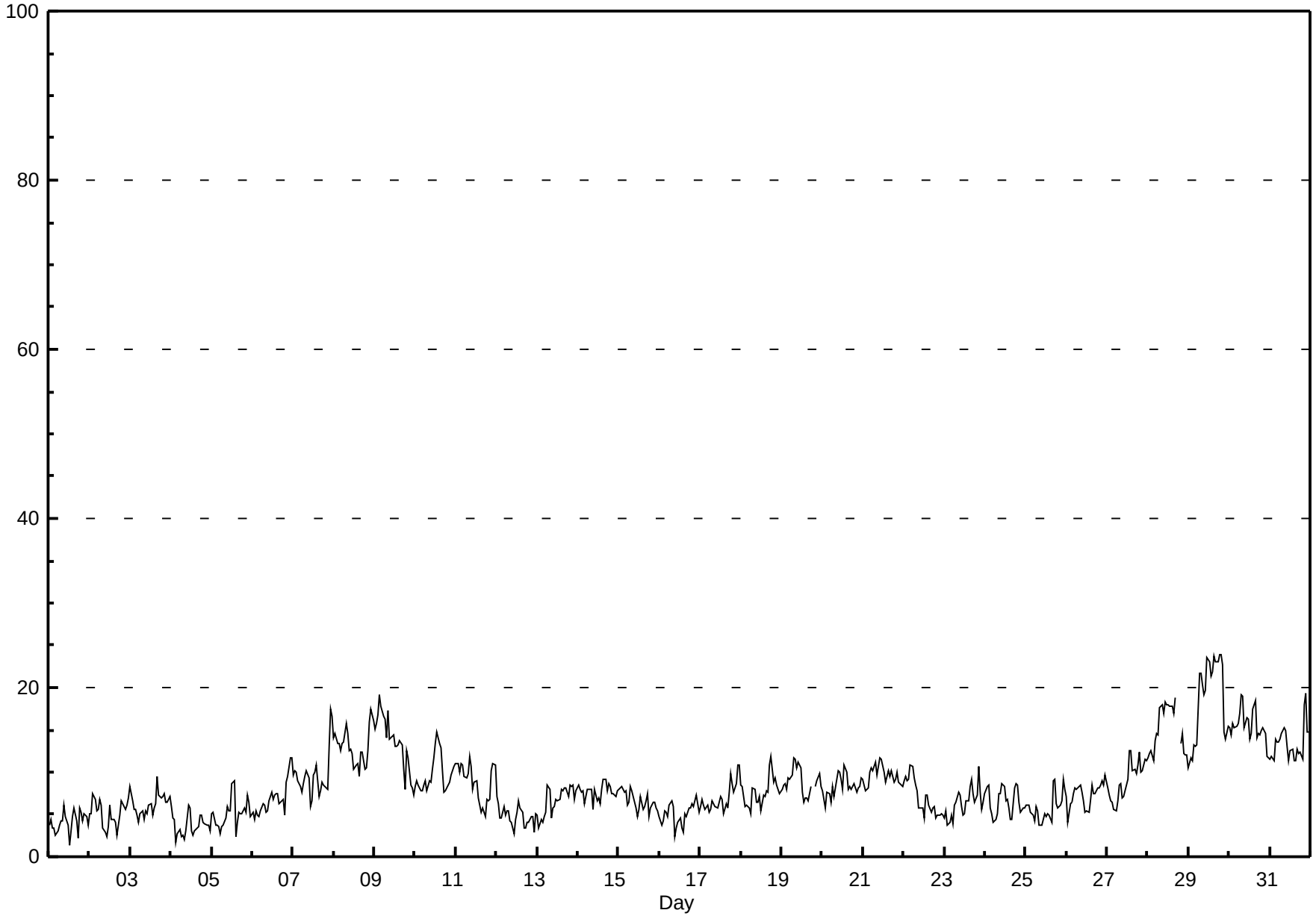
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	4	4	3	3	2	3	4	4	4	6	5	4	1	3	5	6	4	2	6	5	4	5	5	4	4.1	6.1
2-Jul	5	5	7	7	5	6	7	6	3	3	2	4	6	4	4	4	3	4	5	7	6	6	6	7	5.1	7.4
3-Jul	8	7	6	6	5	4	5	5	4	5	5	6	6	5	6	6	9	7	7	7	8	6	6	7	6.2	9.4
4-Jul	6	5	4	2	3	3	2	3	2	3	6	6	3	3	3	3	4	5	5	4	4	4	4	3	3.7	6.0
5-Jul	5	5	4	4	4	3	4	4	5	6	5	5	9	9	2	4	5	5	5	6	5	7	6	5	5.1	9.0
6-Jul	5	4	5	5	5	5	6	6	5	5	7	8	7	7	7	7	6	7	7	5	9	9	12	12	6.8	11.7
7-Jul	10	10	10	9	8	8	9	9	10	9	6	7	10	10	11	7	8	9	8	8	8	13	17	17	9.6	17.5
8-Jul	14	14	13	13	12	13	13	16	15	13	13	12	10	11	11	9	12	12	10	11	13	16	18	16	13.0	17.5
9-Jul	15	16	17	19	18	17	16	14	17	14	14	14	13	13	13	14	13	10	8	13	12	8	8	7	13.5	19.2
10-Jul	8	9	8	8	8	9	9	8	9	9	10	12	13	15	13	13	10	8	8	9	9	10	10	11	9.8	14.7
11-Jul	11	11	10	11	11	9	9	10	12	11	8	9	9	7	6	5	6	5	7	7	7	10	11	11	8.8	11.8
12-Jul	7	6	5	5	6	5	5	5	4	4	3	4	5	7	6	5	3	3	4	4	5	5	3	5	4.8	7.1
13-Jul	5	3	4	4	5	5	9	8	5	6	6	7	7	7	8	8	8	8	7	9	8	9	7	8	6.6	8.5
14-Jul	8	8	8	8	6	8	8	8	8	6	8	7	7	6	8	9	9	8	9	8	7	7	7	8	7.7	9.2
15-Jul	8	8	8	8	8	6	6	8	8	6	6	5	6	7	6	6	7	7	5	6	6	6	6	5	6.6	8.3
16-Jul	5	4	4	5	5	5	6	7	6	2	3	4	5	3	3	5	5	6	6	6	6	7	7	5	5.0	7.3
17-Jul	6	7	6	6	6	5	6	7	6	6	6	6	7	7	5	6	6	8	10	9	8	9	11	11	7.0	10.9
18-Jul	8	8	6	6	6	6	5	8	8	6	6	7	5	7	7	8	8	11	12	9	9	9	8	7	7.6	11.8
19-Jul	8	8	9	8	9	9	10	12	12	11	11	11	8	6	7	7	7	8	P	P	8	9	10	8	8.9	11.7
20-Jul	8	7	6	8	8	7	8	7	8	10	10	9	8	11	10	8	8	8	8	9	8	8	8	9	8.3	10.8
21-Jul	9	8	8	8	10	10	10	11	10	11	12	11	10	9	10	10	10	10	9	9	10	9	9	8	9.6	11.7
22-Jul	9	10	9	9	11	11	9	8	8	6	6	6	5	7	7	6	5	6	6	5	5	5	5	5	7.0	10.8
23-Jul	5	5	4	4	5	4	6	6	8	7	6	5	5	7	7	8	9	7	6	7	11	8	6	6	6.4	10.7
24-Jul	8	8	8	6	5	4	4	5	7	7	9	8	7	7	6	4	4	8	9	9	6	5	6	6	6.5	8.6
25-Jul	6	6	6	5	5	4	6	5	4	4	4	5	5	5	5	4	9	9	6	6	6	7	9	8	5.8	9.2
26-Jul	7	4	6	6	8	8	8	8	9	8	7	5	5	5	7	8	7	7	8	8	9	9	9	10	7.3	9.6
27-Jul	8	7	7	6	6	5	7	9	9	7	7	9	9	13	13	10	10	10	11	12	10	10	11	11	9.0	12.6
28-Jul	12	12	13	11	14	15	14	18	18	17	18	18	18	18	18	17	19	P	P	13	15	12	12	12	15.1	18.8
29-Jul	10	12	11	13	13	13	22	22	20	19	20	24	23	21	22	24	23	23	24	24	23	15	14	15	18.7	23.9
30-Jul	15	14	16	15	15	16	17	19	19	15	16	16	14	15	17	18	14	14	14	15	15	15	12	12	15.4	19.1
31-Jul	11	12	11	14	14	14	14	15	15	15	13	11	13	13	11	11	13	12	12	12	18	19	15	15	13.4	19.3
	8.2	8.0	7.8	7.8	7.9	7.7	8.6	9.1	8.9	8.3	8.3	8.5	8.3	8.6	8.5	8.5	8.6	8.3	8.3	8.6	8.9	8.9	8.9	8.8	Diurnal Average	
	15.3	15.7	16.8	19.2	17.8	16.7	21.7	21.8	20.4	19.1	19.7	23.6	23.1	21.3	21.9	23.7	23.1	23.1	23.8	23.9	22.7	19.3	17.5	16.6	Diurnal Maximum	

P - Power Failure

Hourly Maximums

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

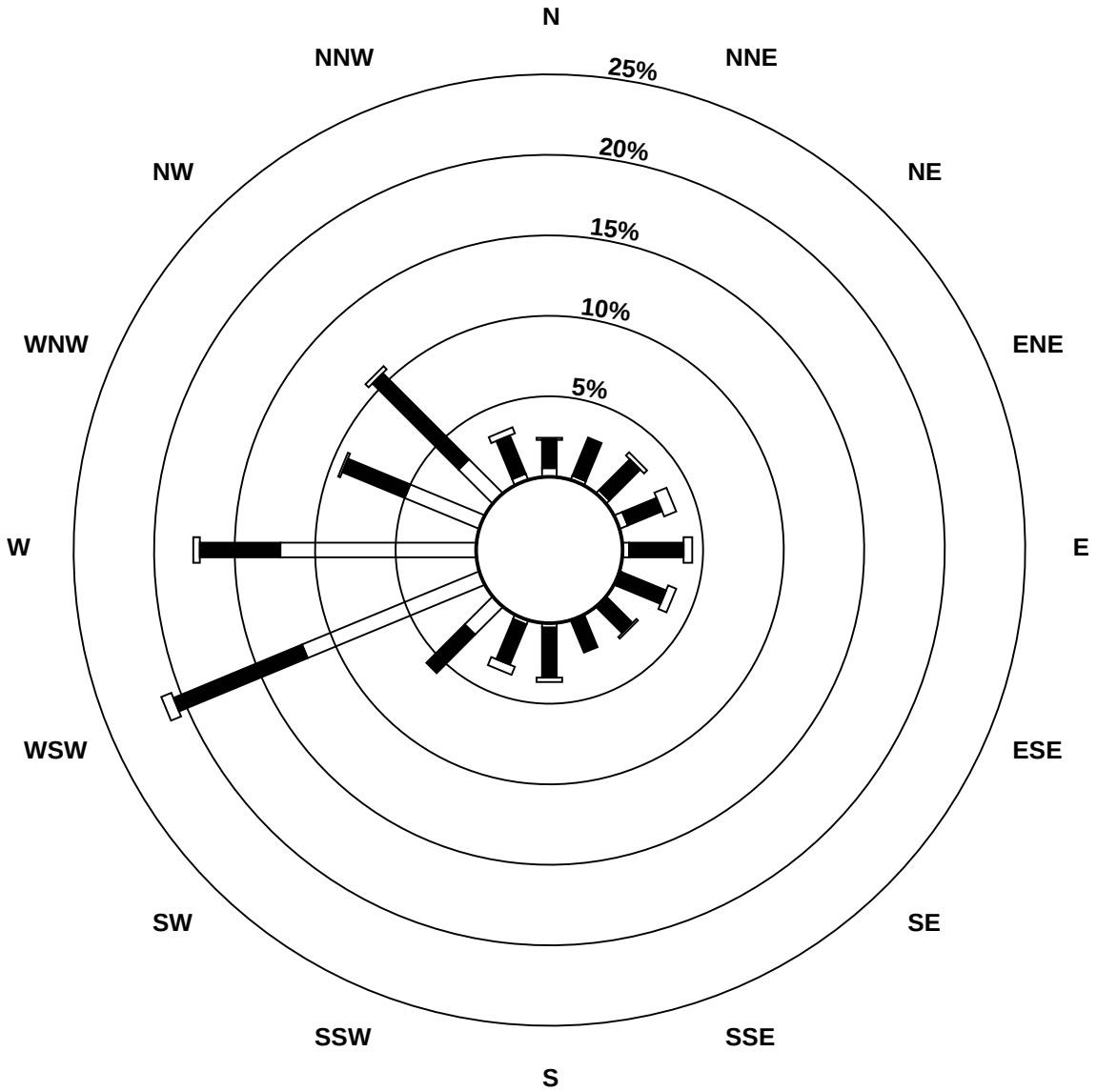
Beaverlodge - July 2010



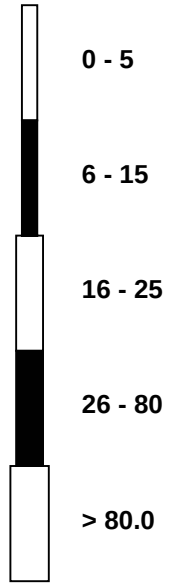
Pollutant Rose

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

Beaverlodge - July 2010



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



PASZA
Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Beaverlodge - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 31.1 ^{o}C on Jul 8 18:00 Maximum Daily Average: 23.1 ^{o}C on Jul 8

Minimum Value: 5 ^{o}C on Jul 1 05:00 Minimum Daily Average: 12.2 ^{o}C on Jul 1
Maximum Diurnal Average: 22.4 ^{o}C at hour 17 Minimum Diurnal Average: 11.2 ^{o}C at hour 5
Monthly Average: 17.31 ^{o}C Percentiles: P_1 = 5.7 P_{10} = 10.8 Q_1 = 13.5 Median = 16.8 Q_3 = 21.0 P_{90} = 24.9 P_{99} = 28.0

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

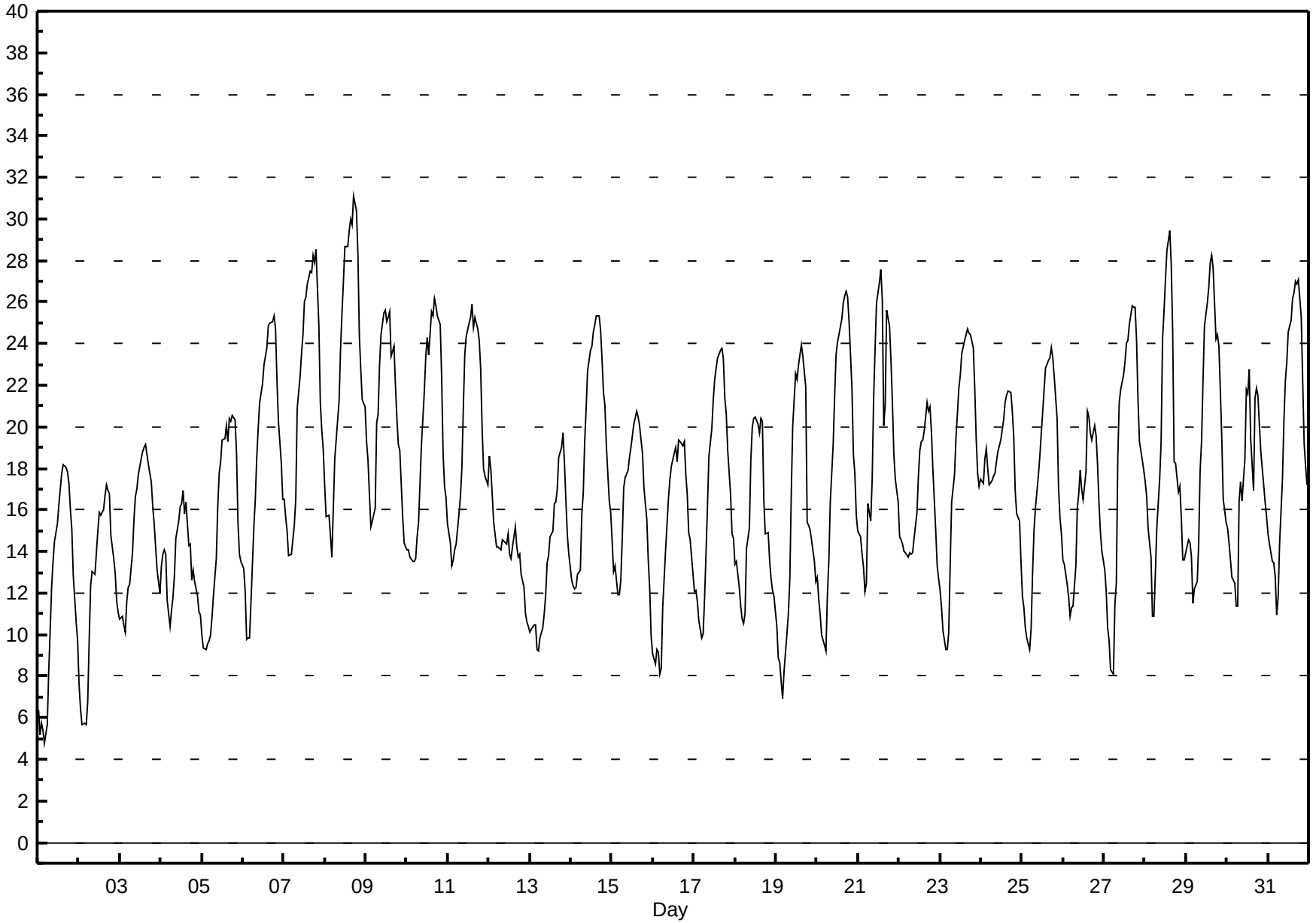
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Jul	6	5	6	5	5	6	8	10	12	13	15	15	16	17	18	18	18	18	17	16	15	13	11	10	12.2	18.2
2-Jul	8	6	6	6	6	7	10	12	13	13	14	15	16	16	16	17	17	17	17	15	14	13	12	11	12.3	17.2
3-Jul	11	11	10	10	12	12	12	14	16	17	17	18	18	19	19	19	19	18	17	16	15	14	13	12	15.0	19.2
4-Jul	13	14	14	14	12	10	11	12	13	15	15	16	16	17	16	16	14	14	13	13	13	12	11	11	13.6	16.9
5-Jul	10	9	9	10	10	10	11	12	14	16	18	18	19	19	20	19	20	20	21	20	19	15	14	14	15.3	20.5
6-Jul	13	12	10	10	10	12	15	17	19	20	21	22	23	23	24	25	25	25	25	25	22	20	18	17	18.8	25.3
7-Jul	16	16	15	14	14	15	15	17	21	22	24	24	26	26	27	27	27	28	28	29	25	21	20	19	21.5	28.5
8-Jul	17	16	16	15	14	16	18	20	21	24	25	27	29	29	29	30	30	31	30	28	24	23	21	21	23.1	31.1
9-Jul	19	18	17	15	15	16	20	21	23	24	25	26	25	25	26	23	24	22	20	19	19	16	14	14	20.3	25.6
10-Jul	14	14	14	14	14	14	15	15	19	20	22	23	24	23	26	25	26	26	25	25	22	19	17	17	19.7	26.2
11-Jul	15	14	13	14	14	14	16	17	18	21	23	24	25	25	26	25	25	25	24	23	20	18	18	17	19.8	25.9
12-Jul	19	18	17	15	14	14	14	14	15	14	14	15	14	14	14	15	14	14	14	13	12	11	11	10	14.1	18.6
13-Jul	10	10	10	10	9	9	10	10	11	12	13	14	15	15	16	16	17	19	19	20	18	16	15	14	13.7	19.7
14-Jul	13	12	12	12	13	13	16	17	19	21	23	24	24	25	25	25	25	25	23	22	21	19	16	16	19.2	25.3
15-Jul	14	13	13	12	12	13	15	17	18	18	19	19	20	20	21	20	20	19	19	17	16	14	12	10	16.2	20.7
16-Jul	9	9	9	9	8	8	11	14	15	17	18	18	19	19	18	19	19	19	19	18	17	15	15	13	14.8	19.4
17-Jul	12	12	12	11	10	10	12	14	16	19	20	21	22	23	23	24	24	23	21	21	19	17	15	15	17.3	23.8
18-Jul	13	14	12	11	11	11	11	14	15	18	20	20	20	20	20	20	20	16	15	15	14	13	12	12	15.4	20.5
19-Jul	10	9	9	8	7	8	10	11	13	17	20	23	22	23	23	24	23	22	15	15	15	15	14	13	15.3	24.0
20-Jul	13	12	11	10	9	9	12	14	16	19	21	23	24	24	25	26	26	27	26	25	22	19	18	16	18.7	26.5
21-Jul	15	15	14	13	12	12	16	15	17	21	24	26	27	28	26	20	21	26	25	23	21	19	17	16	19.6	27.6
22-Jul	15	15	14	14	14	14	14	14	14	15	16	18	19	19	19	20	21	21	21	20	18	15	13	13	16.4	21.1
23-Jul	12	11	10	9	9	10	13	16	18	20	21	22	23	23	24	24	25	24	24	24	22	19	18	17	18.3	24.7
24-Jul	17	17	18	19	18	17	17	18	18	18	19	19	20	20	21	22	22	22	21	20	17	16	15	14	18.5	21.7
25-Jul	12	11	10	10	9	10	13	15	16	18	19	20	21	22	23	23	23	24	23	22	20	17	16	15	17.2	23.8
26-Jul	14	13	12	12	11	11	11	13	16	17	18	17	17	18	21	20	20	19	20	20	18	16	15	14	16.0	20.8
27-Jul	13	12	10	10	8	8	11	13	18	21	22	22	23	24	24	25	26	26	26	24	21	19	18	18	18.5	25.8
28-Jul	17	17	15	14	11	11	13	15	17	19	24	26	27	28	29	28	25	18	18	17	17	16	14	14	18.8	29.4
29-Jul	14	15	14	14	11	12	13	14	18	19	22	25	26	27	28	28	28	24	24	24	22	19	16	15	19.7	28.2
30-Jul	15	14	14	13	12	11	11	16	17	16	18	22	22	23	19	17	21	22	21	20	19	17	16	16	17.3	22.8
31-Jul	15	14	14	13	13	11	12	14	17	20	22	23	25	25	26	26	27	27	27	25	22	19	18	17	19.8	27.1
	13.4	12.9	12.3	11.8	11.2	11.5	13.2	14.7	16.6	18.2	19.7	20.8	21.5	21.9	22.4	22.3	22.4	22.0	21.3	20.4	18.7	16.6	15.3	14.4	Diurnal Average	
	19.3	18.4	18.5	18.9	18.0	17.2	20.2	20.6	23.0	24.4	25.5	27.0	28.6	28.7	29.4	30.0	29.7	31.1	30.4	28.5	24.9	22.8	21.3	20.9	Diurnal Maximum	

PASZA
Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Beaverlodge - July 2010



PASZA
Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Beaverlodge - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 95.7 % on Jul 27 06:00 Maximum Daily Average: 76.9 % on Jul 13

Minimum Value: 21 % on Jul 8 18:00 Minimum Daily Average: 34.0 % on Jul 24
Maximum Diurnal Average: 74.7 % at hour 5 Minimum Diurnal Average: 35.2 % at hour 15
Monthly Average: 53.27 % Percentiles: P_1 = 23.0 P_{10} = 29.1 Q_1 = 36.2 Median = 51.5 Q_3 = 68.2 P_{90} = 81.7 P_{99} = 92.0

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-Jul	65	71	66	68	70	68	59	52	42	35	32	29	27	25	23	22	22	23	24	26	28	32	41	44	41.4	70.7
2-Jul	52	57	60	60	63	63	55	46	46	47	48	46	45	46	46	45	43	44	45	51	56	58	62	65	51.9	65.1
3-Jul	74	74	77	80	67	60	57	51	47	41	41	39	37	37	37	36	37	38	40	44	47	51	55	60	51.1	79.9
4-Jul	55	56	56	56	74	83	72	66	62	52	48	43	41	40	49	45	60	58	69	63	65	69	76	80	60.0	83.0
5-Jul	87	92	93	91	88	87	83	78	70	58	49	44	41	41	38	42	39	38	36	35	40	53	57	57	59.9	92.9
6-Jul	55	58	70	67	66	60	51	48	41	37	35	32	29	27	27	26	26	26	26	28	41	48	55	61	43.3	69.7
7-Jul	60	63	64	66	62	61	64	62	47	36	32	29	26	26	26	25	25	24	25	25	34	47	49	51	43.0	65.6
8-Jul	58	64	64	67	72	63	57	54	53	42	36	30	26	25	24	23	23	21	23	29	37	42	45	44	42.6	72.2
9-Jul	50	55	64	71	70	63	47	45	40	34	30	30	34	33	34	38	36	41	55	63	67	81	87	87	52.3	87.3
10-Jul	88	88	91	92	92	92	88	85	68	59	51	46	40	40	34	33	31	30	31	33	42	58	64	65	60.1	92.2
11-Jul	70	74	79	78	76	75	70	68	65	55	45	43	40	36	32	31	30	29	28	32	42	48	50	49	51.9	78.7
12-Jul	34	35	37	41	46	47	48	49	48	54	53	49	54	52	48	46	52	56	55	59	62	67	67	69	51.2	69.0
13-Jul	72	71	70	71	85	87	87	87	87	84	81	81	79	79	74	74	73	68	66	63	69	76	79	82	76.9	87.2
14-Jul	86	87	88	87	83	80	66	60	52	45	38	34	32	31	30	29	27	30	32	36	38	43	52	55	51.6	87.6
15-Jul	60	66	63	67	64	60	57	40	38	35	33	32	31	29	29	29	32	34	36	40	44	51	54	66	45.3	66.6
16-Jul	69	72	69	66	68	67	57	46	41	37	35	34	33	34	35	33	34	36	35	41	47	54	61	71	49.0	72.3
17-Jul	77	77	79	83	83	80	74	65	57	48	40	34	30	30	29	27	28	30	37	38	43	48	55	57	52.0	82.8
18-Jul	66	68	75	80	83	87	87	73	69	53	47	44	45	46	48	45	44	66	67	72	83	85	82	80	66.3	86.7
19-Jul	85	90	92	92	95	91	83	82	78	62	49	35	32	31	30	29	30	36	69	75	75	73	80	84	65.7	94.7
20-Jul	76	82	82	89	87	89	77	73	65	57	51	39	34	31	27	27	26	25	24	29	38	49	50	60	53.6	89.3
21-Jul	61	61	64	67	73	71	60	63	57	44	39	32	27	24	28	52	49	30	34	41	41	49	52	60	49.1	72.7
22-Jul	68	70	70	72	72	75	78	82	86	84	80	68	58	53	52	52	40	40	40	43	50	63	69	71	64.1	85.7
23-Jul	74	77	81	84	84	80	70	61	50	41	34	29	30	31	31	31	32	31	29	30	35	41	48	51	49.4	84.0
24-Jul	50	54	49	46	44	38	31	29	32	32	30	29	26	25	24	23	23	24	26	29	35	37	36	43	34.0	53.5
25-Jul	48	50	54	56	59	57	50	42	39	35	32	30	28	26	25	24	25	25	25	27	32	42	47	49	38.7	59.3
26-Jul	53	55	59	63	67	66	66	61	57	57	52	60	70	63	44	42	49	53	49	52	58	66	73	78	58.9	77.6
27-Jul	82	86	91	94	95	96	86	79	62	51	46	41	35	31	32	33	31	31	30	34	42	47	49	51	56.4	95.7
28-Jul	56	60	65	72	83	84	78	71	62	56	41	37	34	31	29	32	40	63	64	76	73	80	90	90	61.1	90.4
29-Jul	88	84	81	83	91	89	90	84	67	60	52	40	30	29	24	23	24	41	40	36	39	39	50	55	55.8	91.2
30-Jul	55	59	62	68	70	74	75	59	59	65	58	47	45	42	54	72	55	49	50	58	66	73	70	71	60.6	75.3
31-Jul	76	78	81	81	83	89	86	77	65	53	46	41	35	31	28	28	27	27	26	29	38	51	56	60	53.9	89.1
	66.2	68.8	70.9	72.7	74.7	73.7	68.0	62.6	56.5	50.0	44.5	40.3	37.8	36.3	35.2	36.1	35.9	37.7	39.8	43.0	48.6	55.5	60.0	63.4	Diurnal Average	
	88.0	91.8	92.9	94.0	95.3	95.7	89.6	87.2	86.7	84.4	81.2	80.8	78.7	79.2	73.8	74.4	73.3	67.8	69.2	75.8	83.2	84.6	90.3	90.4	Diurnal Maximum	

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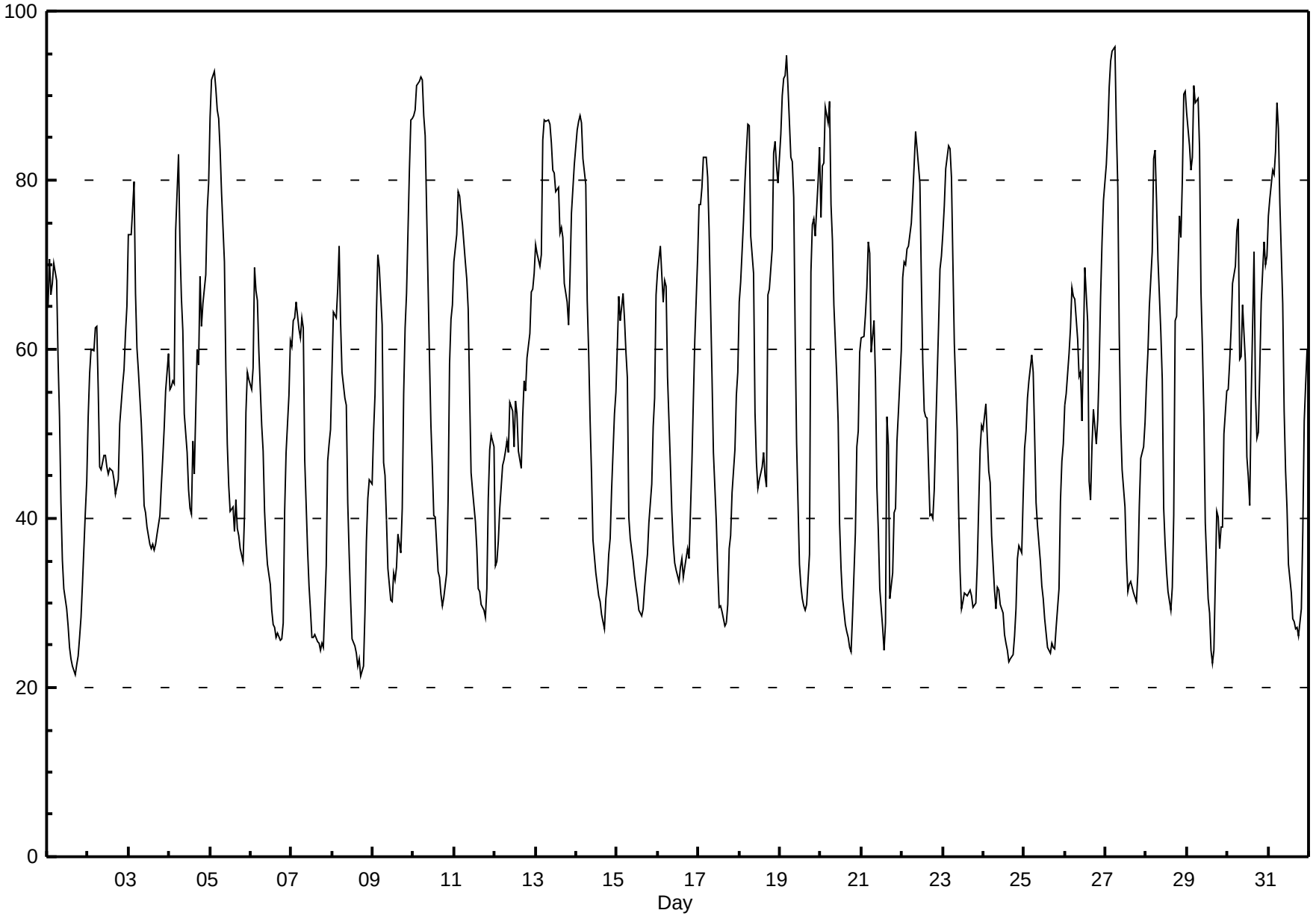
Hourly Averages

Relative Humidity (RH) - %

Beaverlodge - July 2010



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Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Beaverlodge - July 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	14	12	19	17	11	15	20	27	33	36	38	38	36	37	36	35	38	34	34	27	24	19	14	15	25.7	38.4
Dir	236	227	228	225	224	211	220	230	241	245	247	254	249	246	255	251	247	254	256	250	250	253	258	247	245	247
2 Spd	9	7	10	9	6	6	12	26	30	30	28	28	27	27	26	25	28	27	26	22	16	14	11	3	18.3	30.3
Dir	231	224	229	229	229	216	243	263	268	265	266	262	274	269	245	251	248	249	260	235	238	241	238	185	253	268
3 Spd	6	3	1	2	6	9	11	23	24	31	34	32	32	34	34	34	36	36	36	32	25	19	12	10	20.9	36.4
Dir	175	182	71	53	254	262	273	260	254	258	245	247	250	260	260	260	256	251	241	241	241	241	228	227	250	256
4 Spd	16	18	19	27	16	10	20	23	23	29	32	30	34	33	30	29	18	22	16	22	18	14	13	13	21.4	33.8
Dir	247	258	259	256	249	238	245	245	252	269	260	266	261	264	255	261	285	286	283	282	281	276	262	282	263	261
5 Spd	12	12	8	10	11	11	12	13	16	19	18	19	19	17	20	26	22	18	21	23	16	12	12	9	14.9	25.8
Dir	300	289	276	261	287	295	292	295	294	300	305	299	294	291	278	266	275	276	264	261	260	245	245	241	279	266
6 Spd	10	4	3	2	3	2	1	7	15	17	15	16	17	18	18	16	15	14	13	8	8	8	0	5	8.0	18.5
Dir	246	246	60	87	60	102	185	272	283	282	279	280	289	271	272	289	305	327	309	305	232	248	202	44	285	272
7 Spd	4	3	5	12	11	5	2	3	4	9	8	9	5	6	6	5	5	3	2	2	4	3	5	3	3.4	12.4
Dir	37	317	324	315	312	315	314	230	258	319	308	292	315	276	316	281	319	31	6	90	170	116	62	99	315	315
8 Spd	4	4	9	2	2	3	2	4	14	5	5	5	2	4	8	4	1	4	3	7	7	6	6	7	3.3	13.9
Dir	71	108	33	97	123	64	348	286	101	145	174	146	124	142	50	36	289	105	190	145	99	78	81	85	96	101
9 Spd	3	2	4	6	2	2	3	5	8	13	19	17	16	18	17	15	10	6	2	5	9	19	22	3	6.3	21.6
Dir	97	163	188	47	82	81	207	247	313	326	315	316	333	341	3	345	331	2	108	75	235	344	40	279	341	40
10 Spd	6	6	10	7	7	8	1	6	3	2	4	6	4	2	2	5	6	6	7	7	8	6	6	5	1.8	9.9
Dir	237	291	291	28	21	25	27	202	164	201	184	136	152	20	121	158	111	166	182	158	146	91	88	95	139	291
11 Spd	3	5	4	4	4	3	5	5	6	12	14	18	28	37	40	36	36	38	33	22	11	5	7	11	13.6	40.3
Dir	143	118	115	89	107	112	166	170	183	202	204	212	259	253	248	244	245	255	248	245	238	211	260	260	239	248
12 Spd	21	28	30	26	22	27	29	25	27	23	22	22	20	24	23	22	23	25	20	18	22	19	20	20	21.8	29.7
Dir	271	275	268	268	255	250	259	252	265	305	310	310	320	288	279	290	280	268	293	314	304	302	298	300	282	268
13 Spd	19	21	23	22	24	22	21	22	21	17	19	18	20	20	20	17	16	17	15	12	8	8	8	7	16.5	23.8
Dir	289	290	290	295	299	306	313	315	315	318	312	305	307	313	313	318	308	301	303	293	278	241	251	237	302	299
14 Spd	3	2	2	3	2	2	6	8	15	19	25	23	17	23	27	28	27	32	35	23	21	17	4	8	14.4	34.6
Dir	189	140	90	77	126	111	202	218	247	248	251	258	272	256	258	247	252	255	256	254	244	256	231	242	250	256
15 Spd	5	6	6	5	7	11	13	37	35	37	39	36	37	35	35	35	34	35	33	35	26	26	16	9	24.5	39.3
Dir	217	216	243	253	264	256	240	262	273	266	264	255	247	248	255	259	259	263	261	257	251	257	249	251	257	264
16 Spd	9	13	19	16	12	9	5	16	27	26	26	21	18	18	23	20	17	16	30	24	11	10	8	6	15.4	29.7
Dir	242	245	245	245	234	241	246	251	263	272	271	284	286	278	268	278	276	296	263	261	239	252	346	0	267	263
17 Spd	7	8	8	9	6	3	3	4	6	6	11	7	10	9	9	12	4	7	12	16	11	5	2	2	5.0	16.1
Dir	315	330	316	329	310	9	220	270	260	242	273	285	281	275	289	278	257	342	17	28	27	25	223	311	312	28
18 Spd	11	12	13	11	12	12	6	5	9	5	5	2	4	4	10	8	12	2	14	8	6	6	7	8	5.0	14.3
Dir	10	10	16	333	318	304	285	282	318	323	348	22	281	268	281	287	277	282	29	80	160	220	259	289	320	29
19 Spd	2	2	3	3	3	2	2	2	3	6	6	8	12	10	9	10	10	4	7	4	7	2	1	2	2.9	11.8
Dir	353	64	50	65	68	171	226	193	260	288	289	305	300	320	335	344	7	324	299	189	226	258	172	190	311	300
20 Spd	3	3	3	3	3	2	2	3	3	3	4	4	6	6	4	7	5	4	6	7	9	6	6	5	2.6	8.9
Dir	264	51	271	276	289	280	218	207	241	256	211	180	173	205	201	154	170	193	151	147	133	86	219	94	181	133
21 Spd	5	2	6	4	2	2	2	5	7	4	7	7	7	9	11	14	16	4	15	14	13	7	3	8	2.8	15.6
Dir	90	68	44	56	110	114	138	192	196	181	155	133	157	154	242	325	32	48	133	139	181	218	206	250	153	32
22 Spd	3	6	4	3	0	2	1	3	2	3	7	11	14	13	14	16	19	19	23	22	14	12	10	9	7.9	22.7
Dir	92	129	170	51	341	18	37	227	245	250	220	265	277	273	233	225	254	262	273	271	271	250	243	233	254	273

PASZA
Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Beaverlodge - July 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	12	9	4	2	2	3	2	8	18	25	26	28	28	28	27	31	32	29	31	26	17	6	4	2	15.6	31.5
Dir	247	236	173	95	75	55	83	242	247	256	249	245	243	239	254	241	242	238	251	245	242	201	185	201	243	242
24 Spd	5	8	27	30	28	32	31	25	26	33	37	43	45	43	38	39	36	36	36	31	17	19	22	7	28.7	44.8
Dir	274	280	260	256	252	257	259	272	281	272	259	265	262	258	257	260	260	256	248	247	259	271	267	291	261	262
25 Spd	11	15	10	6	9	10	12	25	26	23	19	18	19	21	22	21	21	18	19	21	18	12	10	7	16.1	25.8
Dir	274	266	272	270	275	256	255	259	265	276	260	259	255	266	273	266	268	279	294	277	267	256	256	254	267	265
26 Spd	5	9	13	11	7	7	11	10	17	18	16	13	19	15	14	16	22	18	16	15	8	4	5	6	11.5	22.3
Dir	309	319	312	308	303	324	314	312	313	312	321	343	17	352	322	313	305	306	307	303	311	341	327	350	320	305
27 Spd	8	7	5	5	5	4	2	2	1	4	11	13	13	14	13	13	10	10	10	12	9	10	9	13	5.6	14.1
Dir	325	322	323	22	279	5	335	230	95	78	127	115	121	112	111	94	98	93	79	61	45	43	80	85	82	112
28 Spd	10	11	4	2	9	5	5	6	7	6	2	4	6	6	7	3	4	20	19	20	1	7	8	4	2.6	20.3
Dir	75	79	67	184	299	35	1	256	267	287	101	108	132	69	58	78	316	2	40	118	40	271	173	161	54	2
29 Spd	5	2	6	4	2	2	0	8	6	12	9	13	14	11	9	11	11	18	14	4	10	8	3	3	3.0	17.7
Dir	80	338	352	14	112	103	106	34	338	313	206	267	281	255	242	242	210	170	199	332	345	273	65	67	262	170
30 Spd	4	4	3	7	3	2	2	2	7	9	13	13	14	10	16	12	4	10	12	10	7	2	8	10	3.7	16.0
Dir	251	286	19	28	4	215	71	124	213	229	250	261	311	320	354	8	161	206	219	238	257	296	314	2	285	354
31 Spd	7	3	5	8	7	2	3	5	10	6	5	6	5	5	5	2	2	1	4	5	4	4	5	5	2.7	10.0
Dir	310	38	233	299	309	332	311	315	303	324	297	276	313	299	51	308	287	314	37	51	88	74	71	76	328	303
Spd	4.0	4.2	5.5	5.2	5.2	4.5	6.0	9.9	11.8	13.4	13.6	13.4	13.5	14.2	14.2	14.2	13.6	12.7	12.3	9.6	8.1	6.5	4.0	2.8	Diurnal Average	
Dir	270	276	276	282	276	271	261	260	268	273	264	266	271	268	268	267	266	266	264	256	252	263	264	268		
Spd	20.9	28.0	29.7	30.3	27.7	32.4	30.9	37.5	35.3	37.1	39.3	43.3	44.8	43.1	40.3	39.2	37.8	37.5	36.2	34.9	25.9	26.0	21.7	19.7	Diurnal Maximum	
Dir	271	275	268	256	252	257	259	262	273	266	264	265	262	258	248	260	247	255	248	257	251	257	267	300		

Maximum Speed Value: 45 km/h on Jul 24 13:00
Minimum Speed Value: 0 km/h on Jul 6 23:00
Maximum Daily Speed Average: 28.7 km/h on Jul 24
Minimum Daily Speed Average: 1.8 km/h on Jul 20
Maximum Diurnal Speed Average: 14.2 km/h at hour 16
Minimum Diurnal Speed Average: 2.8 km/h at hour 24

Monthly Average Velocity: 9.22 km/h 266.7 deg
Speed Percentiles: P_1 = 0.9 P_{10} = 2.6 Q_1 = 5.0 Median = 9.9 Q_3 = 19.1 P_{90} = 28.2 P_{99} = 37.6
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

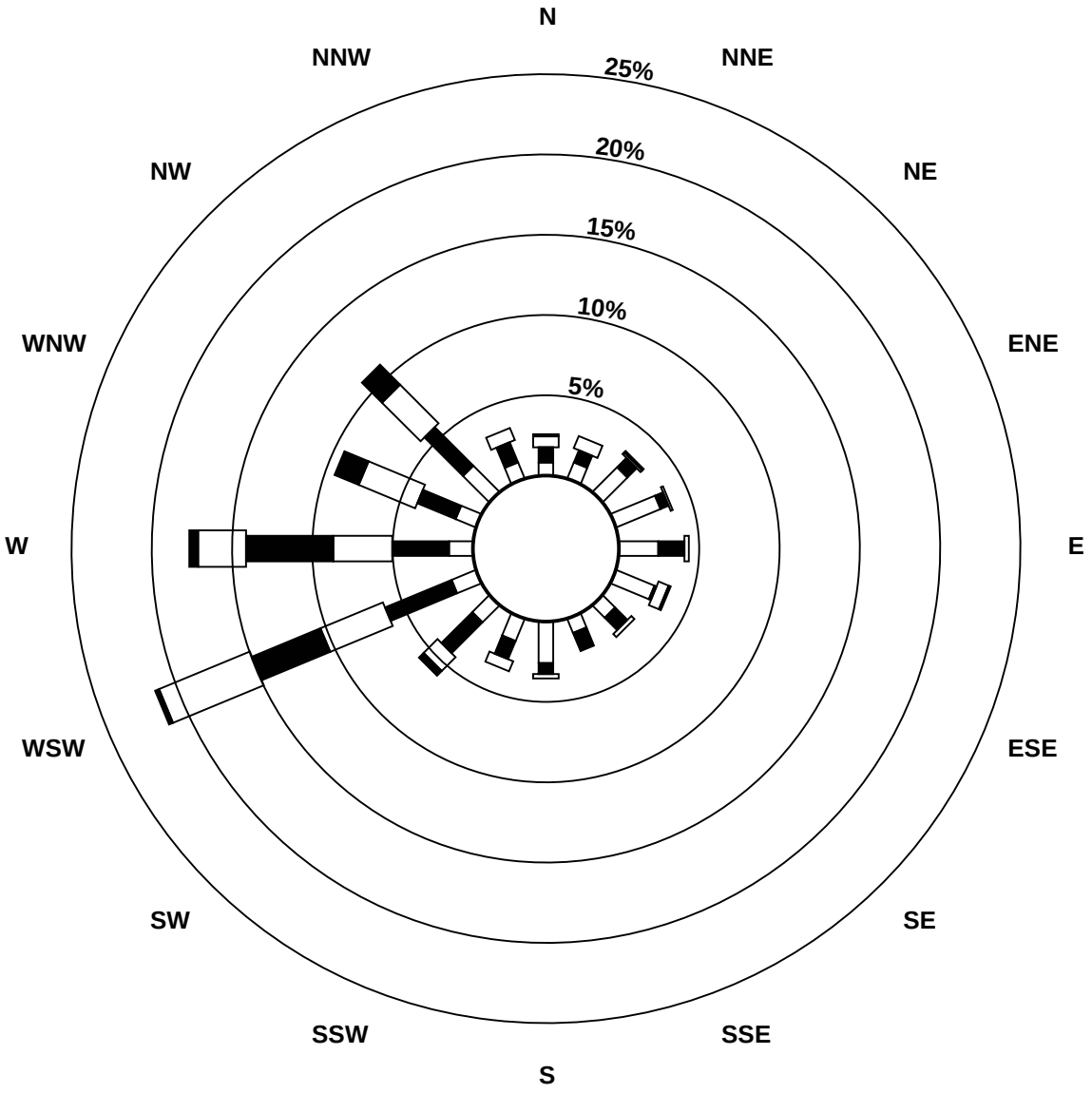
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	17	13	11	2	0	0	43
NorthEast	24	16	6	1	0	0	47
East	41	19	5	0	0	0	65
SouthEast	14	16	4	1	0	0	35
South	31	15	4	0	0	0	50
SouthWest	18	45	30	12	18	1	124
West	23	52	53	72	52	8	260
NorthWest	18	40	41	21	0	0	120
Total	186	216	154	109	70	9	744

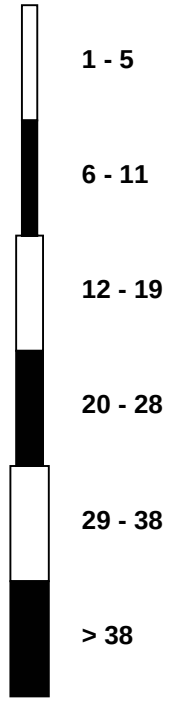
Wind Rose

Wind Speed (WS) (km/h)

Beaverlodge - July 2010



Wind Speed Classes (km/h)



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Peace Airshed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Beaverlodge - July 2010

Maximum Speed: 45 km/h on Jul 24 13:00

Maximum Daily Speed Average: 29.3 km/h on Jul 24

Minimum Speed: 1 km/h on Jul 6 07:00

Minimum Daily Speed Average: 5.4 km/h on Jul 20

Maximum Diurnal Speed Average: 19.9 km/h at hour 15

Minimum Diurnal Speed Average: 8.0 km/h at hour 24

Monthly Average Speed: 13.83 km/h

Percentiles: P_1 = 2.1 P_{10} = 3.8 Q_1 = 6.2 Median = 10.7 Q_3 = 19.4 P_{90} = 28.9 P_{99} = 38.1

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-Jul	14	12	19	17	12	15	20	27	33	37	39	38	37	37	36	36	38	35	35	28	24	19	14	15	26.5	38.7
2-Jul	9	7	11	9	6	6	13	26	30	30	29	29	27	28	27	26	29	27	27	22	16	14	11	5	19.4	30.5
3-Jul	6	3	2	2	6	10	11	23	24	31	35	33	33	35	35	34	37	36	36	32	25	19	12	10	22.0	37.0
4-Jul	16	18	19	27	16	10	20	23	23	29	32	31	34	33	31	29	19	23	17	22	18	15	13	13	22.2	34.2
5-Jul	12	12	9	10	11	11	12	13	16	19	18	19	19	18	20	26	22	18	21	23	16	12	12	9	15.8	25.9
6-Jul	10	5	3	3	4	3	1	7	15	17	15	16	18	19	19	17	16	14	13	9	8	8	2	5	10.3	19.2
7-Jul	4	4	5	12	11	6	4	4	4	10	9	10	7	8	8	8	9	7	4	3	4	5	5	3	6.5	12.4
8-Jul	5	4	9	3	3	4	4	5	15	10	6	7	5	6	10	7	7	6	4	7	8	6	6	7	6.5	15.3
9-Jul	4	3	4	6	5	3	4	6	8	13	19	18	17	18	18	15	11	8	6	5	10	27	22	10	10.7	26.7
10-Jul	6	7	10	7	7	8	3	6	4	4	6	7	5	6	6	8	8	8	8	8	8	6	6	5	6.6	10.1
11-Jul	4	6	4	4	4	4	5	5	6	12	15	19	28	38	41	37	36	38	34	22	11	5	8	11	16.4	40.8
12-Jul	21	28	30	26	23	27	29	25	29	23	22	22	20	24	24	22	24	25	22	19	22	19	20	20	23.6	29.8
13-Jul	19	21	23	22	24	22	21	22	21	18	19	18	20	20	20	17	16	17	15	12	8	8	9	7	17.4	23.9
14-Jul	3	2	2	3	2	2	7	8	16	19	25	23	18	24	27	29	28	32	35	23	21	17	4	9	15.7	34.8
15-Jul	5	6	6	6	7	11	13	38	36	37	40	37	38	36	36	35	35	35	33	35	26	26	16	9	25.1	39.7
16-Jul	9	13	19	16	12	10	7	17	27	26	26	23	19	19	23	21	18	17	30	24	11	10	9	7	17.2	29.9
17-Jul	7	8	8	9	7	4	4	5	6	7	12	12	11	11	11	13	6	8	12	16	11	6	4	5	8.5	16.2
18-Jul	12	12	13	12	12	12	7	6	9	6	8	5	6	6	10	10	13	11	15	11	7	7	7	8	9.3	14.8
19-Jul	3	3	3	3	3	2	3	2	4	7	7	10	13	13	10	11	13	13	13	5	7	3	3	3	6.5	13.2
20-Jul	4	4	4	3	3	4	3	3	3	4	4	5	7	8	7	8	7	6	7	7	9	6	7	6	5.4	9.2
21-Jul	5	2	6	4	3	2	2	5	7	5	7	8	8	10	18	15	16	6	16	14	14	8	5	9	8.1	17.7
22-Jul	4	6	4	4	3	5	3	3	2	3	7	12	14	14	16	17	19	19	23	22	14	12	10	9	10.3	23.1
23-Jul	12	9	4	2	3	4	3	9	18	26	27	29	28	29	28	31	32	29	31	26	17	7	4	2	17.1	31.8
24-Jul	6	8	28	30	28	32	31	26	26	33	37	44	45	44	39	40	37	36	36	31	17	19	22	7	29.3	45.4
25-Jul	11	15	10	6	9	10	13	25	26	23	20	19	20	22	23	22	22	19	19	21	18	12	10	8	16.8	26.0
26-Jul	7	10	13	11	7	7	11	11	17	18	17	13	19	17	14	16	23	19	16	15	8	5	6	7	12.7	22.7
27-Jul	9	8	6	5	7	6	4	4	2	5	11	14	14	15	14	14	12	11	11	12	9	10	9	13	9.3	15.3
28-Jul	11	11	5	2	9	6	7	6	7	7	4	6	7	8	9	6	15	21	22	21	12	10	8	5	9.3	21.8
29-Jul	9	7	6	5	5	4	6	9	8	12	10	15	15	13	12	12	12	18	14	12	11	8	4	4	9.6	18.2
30-Jul	4	7	4	7	4	3	3	4	7	10	13	15	14	11	18	13	6	11	13	10	7	3	9	10	8.6	17.6
31-Jul	7	3	6	8	7	4	4	5	10	7	6	8	7	8	8	6	6	6	5	6	4	4	5	5	6.0	10.2
	8.3	8.4	9.5	9.2	8.5	8.3	8.9	12.2	14.9	16.4	17.6	18.2	18.5	19.3	19.9	19.4	19.0	18.7	19.1	16.9	13.0	10.8	9.1	8.0	Diurnal Average	
	21.0	28.0	29.8	30.4	27.8	32.4	31.0	37.6	35.5	37.5	39.7	43.7	45.4	43.7	40.8	39.5	38.3	37.9	36.4	35.1	26.0	26.7	21.8	19.9	Diurnal Maximum	

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

PASZA
Peace Airshed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Beaverlodge - July 2010

Maximum Value: 94.7 deg on Jul 28 17:00

Minimum Value: 2.1 deg on Jul 16 04:00

Percentiles: P_1 = 2.9 P_{10} = 5.5 Q_1 = 8.3 Median = 15.0 Q_3 = 36.9 P_{90} = 61.9 P_{99} = 85.7

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

Day	Hourly Period Ending At (MST)																								Daily
	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-Jul	3	5	8	3	6	7	5	6	8	9	8	7	9	10	7	9	10	11	8	5	6	4	5	4	11.1
2-Jul	5	5	6	6	8	16	23	9	6	6	8	10	9	9	16	14	12	10	15	4	2	5	5	58	57.9
3-Jul	12	19	59	41	19	10	9	7	9	7	7	9	11	12	9	10	10	9	6	5	3	3	10	10	59.1
4-Jul	4	8	6	6	7	4	3	4	5	8	7	10	8	8	8	8	13	11	12	7	6	11	3	13	13.3
5-Jul	5	6	11	8	5	4	5	6	6	9	12	14	12	17	15	6	9	12	5	4	4	4	2	9	17.5
6-Jul	10	51	27	22	24	60	67	13	11	12	20	14	16	20	18	22	23	15	15	22	7	8	82	18	82.4
7-Jul	44	53	16	2	6	20	84	60	38	24	27	27	64	62	55	61	61	79	87	68	13	44	12	29	86.9
8-Jul	22	19	20	79	67	25	71	42	50	51	46	51	86	61	44	81	91	59	54	24	23	13	16	18	90.5
9-Jul	23	55	62	36	64	71	47	24	24	14	14	12	11	13	18	17	22	31	70	43	42	52	5	73	73.3
10-Jul	12	40	13	15	7	5	90	8	49	67	55	43	58	75	86	58	45	46	36	17	12	13	5	7	89.6
11-Jul	46	21	21	13	9	19	13	17	17	18	17	14	10	10	9	7	8	9	9	5	7	13	39	14	45.8
12-Jul	5	2	5	3	6	5	6	6	20	9	10	11	16	13	13	9	14	12	21	7	7	6	6	7	21.4
13-Jul	5	5	5	6	4	4	5	5	5	8	8	7	7	6	7	9	7	7	6	6	18	8	7	16	18.4
14-Jul	40	24	23	15	21	47	18	16	10	10	9	12	17	15	14	13	12	8	5	9	6	6	53	9	52.6
15-Jul	21	16	13	40	13	10	14	5	6	8	8	12	10	11	10	10	9	9	7	6	4	8	9	7	39.6
16-Jul	9	7	4	2	15	30	63	33	8	11	13	20	21	25	7	13	20	20	7	5	6	12	19	32	63.0
17-Jul	18	7	11	5	29	78	24	30	18	40	21	64	35	39	50	24	42	38	11	5	5	50	74	60	78.1
18-Jul	25	7	5	17	5	13	47	32	13	42	56	64	50	48	19	36	16	87	16	39	22	15	12	12	86.9
19-Jul	55	74	15	31	20	47	26	41	35	23	36	48	24	35	28	27	37	81	78	45	8	66	80	73	80.8
20-Jul	70	20	60	34	41	63	52	22	35	39	48	62	47	55	65	36	44	69	34	14	15	14	37	39	69.9
21-Jul	43	32	9	20	66	18	37	12	18	35	22	33	36	39	60	23	8	70	14	11	11	15	77	40	77.3
22-Jul	40	17	13	35	79	72	76	26	53	28	21	20	17	18	28	14	14	14	10	5	8	9	3	6	78.9
23-Jul	6	14	25	58	58	17	44	46	9	9	11	11	12	12	19	9	8	9	6	7	3	25	13	42	58.3
24-Jul	41	11	6	5	5	3	5	8	9	7	9	8	9	10	10	8	11	10	6	5	4	7	8	15	40.8
25-Jul	10	5	5	7	10	7	24	5	8	10	15	17	16	21	17	18	16	21	12	9	4	10	10	58	58.5
26-Jul	56	10	3	7	29	17	6	6	10	10	13	18	8	26	20	15	10	11	9	8	9	25	26	36	55.9
27-Jul	17	21	48	27	57	41	79	67	63	34	24	22	26	24	22	22	49	27	22	7	6	14	14	5	79.3
28-Jul	10	13	34	41	16	49	57	26	15	53	77	58	42	61	64	66	95	16	36	21	89	49	15	35	94.7
29-Jul	72	80	40	49	65	53	88	21	71	9	34	33	18	31	65	38	22	13	9	75	22	15	57	32	88.2
30-Jul	64	72	44	32	56	70	71	66	34	14	18	34	11	27	26	21	62	25	11	14	13	66	19	26	72.4
31-Jul	11	42	39	7	24	53	59	40	12	42	50	46	66	63	72	91	83	80	63	14	8	10	5	9	91.1
	72.3	80.1	61.8	78.9	78.9	78.1	89.6	66.5	71.2	67.1	77.0	64.4	86.4	74.7	86.5	91.1	94.7	86.9	86.9	75.0	89.3	66.5	82.4	73.3	

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

PASZA
Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Portable-Bonanza - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.8 ppb on Jul 9 21:00 Maximum Daily Average: 0.7 ppb on Jul 28

Minimum Value: 0 ppb on Jul 1 01:00 Minimum Daily Average: 0.0 ppb on Jul 1
Maximum Diurnal Average: 0.4 ppb at hour 10 Minimum Diurnal Average: 0.2 ppb at hour 19
Monthly Average: 0.29 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.1$ Median = 0.2 $Q_3 = 0.4$ $P_{90} = 0.5$ $P_{99} = 1.2$

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-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.0	0.0
2-Jul	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	0.3
3-Jul	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
4-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.4
5-Jul	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.6
6-Jul	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.7
7-Jul	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	A	0	0	0	0	0	0	0	0	0.4	1.0
8-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	1	0.3	1.0
9-Jul	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	2	0	0	0	0.4	1.8
10-Jul	0	0	0	0	0	0	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
11-Jul	0	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.1
12-Jul	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
13-Jul	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
14-Jul	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
15-Jul	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
16-Jul	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
17-Jul	0	0	0	0	0	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
18-Jul	0	0	0	0	A	0	1	1	1	1	1	1	0	1	0	0	1	0	0	0	0	0	0	0	0.4	1.0
19-Jul	0	1	1	A	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.5	1.0
20-Jul	1	1	0	A	1	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	1	0.4	0.6
21-Jul	1	1	1	A	1	1	0	1	1	1	1	1	1	1	0	0	0	0	0	0	1	1	0	1	0.6	1.0
22-Jul	1	1	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0.3	0.6
23-Jul	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
24-Jul	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
25-Jul	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.7
26-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.4
27-Jul	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.5
28-Jul	1	0	0	0	0	0	1	1	1	1	2	1	1	1	1	1	1	0	0	0	A	1	1	0	0.7	1.7
29-Jul	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	A	0	0	0	0	0.4	1.5
30-Jul	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	A	0	0	0	0	0	0.3	0.6
31-Jul	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	0.3	1.0
	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	Diurnal Average	
	0.9	1.0	1.1	0.5	1.0	0.6	0.5	0.8	1.3	1.4	1.7	1.5	1.0	0.9	0.8	0.8	0.7	0.5	0.4	0.5	1.8	0.9	1.0	1.0	Diurnal Maximum	

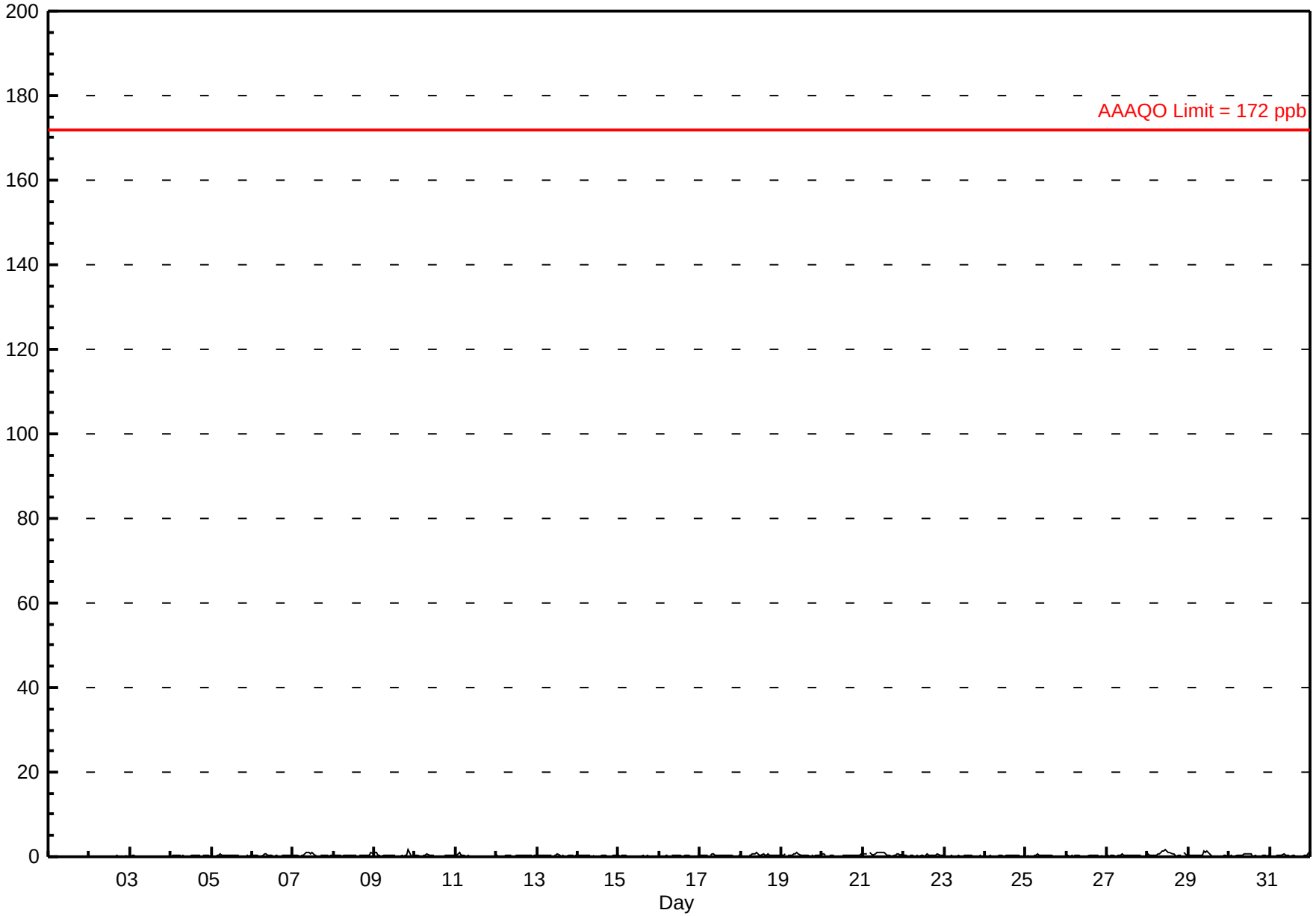
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 57 ppb

PASZA
Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Portable-Bonanza - July 2010



FOCUS
AIR QUALITY MONITORING

PASZA
Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Portable-Bonanza - July 2010

Maximum Value: 6.5 ppb on Jul 9 21:00

Maximum Daily Average: 1.1 ppb on Jul 28

Minimum Value: 0 ppb on Jul 1 18:00

Minimum Daily Average: 0.4 ppb on Jul 1

Maximum Diurnal Average: 0.8 ppb at hour 10

Minimum Diurnal Average: 0.5 ppb at hour 19

Monthly Average: 0.61 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.4$ $Q_1 = 0.4$ Median = 0.5 $Q_3 = 0.7$ $P_{90} = 1.0$ $P_{99} = 2.4$

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 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-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.4	0.4
2-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.5	0.5
3-Jul	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0.5	0.9
4-Jul	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	A	1	1	1	1	1	0.6	1.0
5-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	1	1	1	1	0.6	1.0
6-Jul	1	1	1	0	0	0	0	1	2	1	1	0	0	0	0	1	A	0	0	0	1	1	0	0	0.6	2.0
7-Jul	1	1	1	2	1	1	1	1	1	2	1	1	1	1	0	A	0	0	0	0	0	0	1	1	0.8	1.5
8-Jul	0	0	0	0	0	0	0	0	0	1	1	1	0	0	A	0	0	0	1	1	0	0	2	1	0.6	1.9
9-Jul	1	1	1	0	0	0	0	1	0	0	0	0	0	A	0	0	0	0	1	0	6	2	0	1	0.9	6.5
10-Jul	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0.5	1.0
11-Jul	0	1	1	1	1	4	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.6	4.1
12-Jul	1	1	0	0	0	0	1	1	0	0	A	0	0	1	1	1	1	1	0	1	0	0	1	0	0.7	1.0
13-Jul	0	0	0	1	1	0	0	0	0	A	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0.5	0.9
14-Jul	0	0	1	0	0	0	1	1	A	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.5	1.0
15-Jul	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0.4	0.9
16-Jul	0	0	0	0	1	0	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.9
17-Jul	0	0	1	1	1	A	1	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.6	1.0
18-Jul	0	0	0	0	A	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	0.9	2.5
19-Jul	1	1	1	A	1	1	1	1	1	1	1	0	1	0	1	0	0	0	0	0	0	1	1	1	0.8	1.5
20-Jul	1	1	0	A	1	1	1	0	C	C	C	C	0	0	0	1	0	1	1	1	1	1	1	1	0.7	1.0
21-Jul	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1.0	1.5
22-Jul	1	1	1	A	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	1	1	1	0	0	0.7	1.0
23-Jul	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.4
24-Jul	0	A	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	0.9
25-Jul	A	0	0	0	0	0	1	1	1	1	1	1	0	1	0	1	0	0	0	0	0	0	0	A	0.5	1.3
26-Jul	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	A	0	0.4	0.9
27-Jul	0	0	1	0	0	0	0	0	1	1	1	0	1	1	0	0	1	0	1	1	0	A	1	0	0.6	1.2
28-Jul	1	0	0	1	1	1	1	1	2	2	2	2	1	1	1	1	1	0	1	1	A	1	1	1	1.1	2.4
29-Jul	1	0	1	0	0	1	1	1	1	2	1	2	2	0	0	0	0	0	0	A	0	1	0	0	0.7	2.1
30-Jul	0	0	0	0	0	0	0	1	1	1	1	1	1	4	0	0	0	0	A	0	0	1	0	0	0.7	4.2
31-Jul	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0	1	1	0.5	1.4
	0.6	0.6	0.6	0.5	0.6	0.6	0.6	0.7	0.8	0.8	0.7	0.7	0.7	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.7	0.6	0.6	0.6	Diurnal Average	
	1.5	1.4	1.4	1.5	1.5	4.1	1.0	1.4	2.4	1.9	2.4	2.1	1.8	4.2	1.4	1.2	2.5	1.0	0.8	1.0	6.5	2.5	1.9	1.4	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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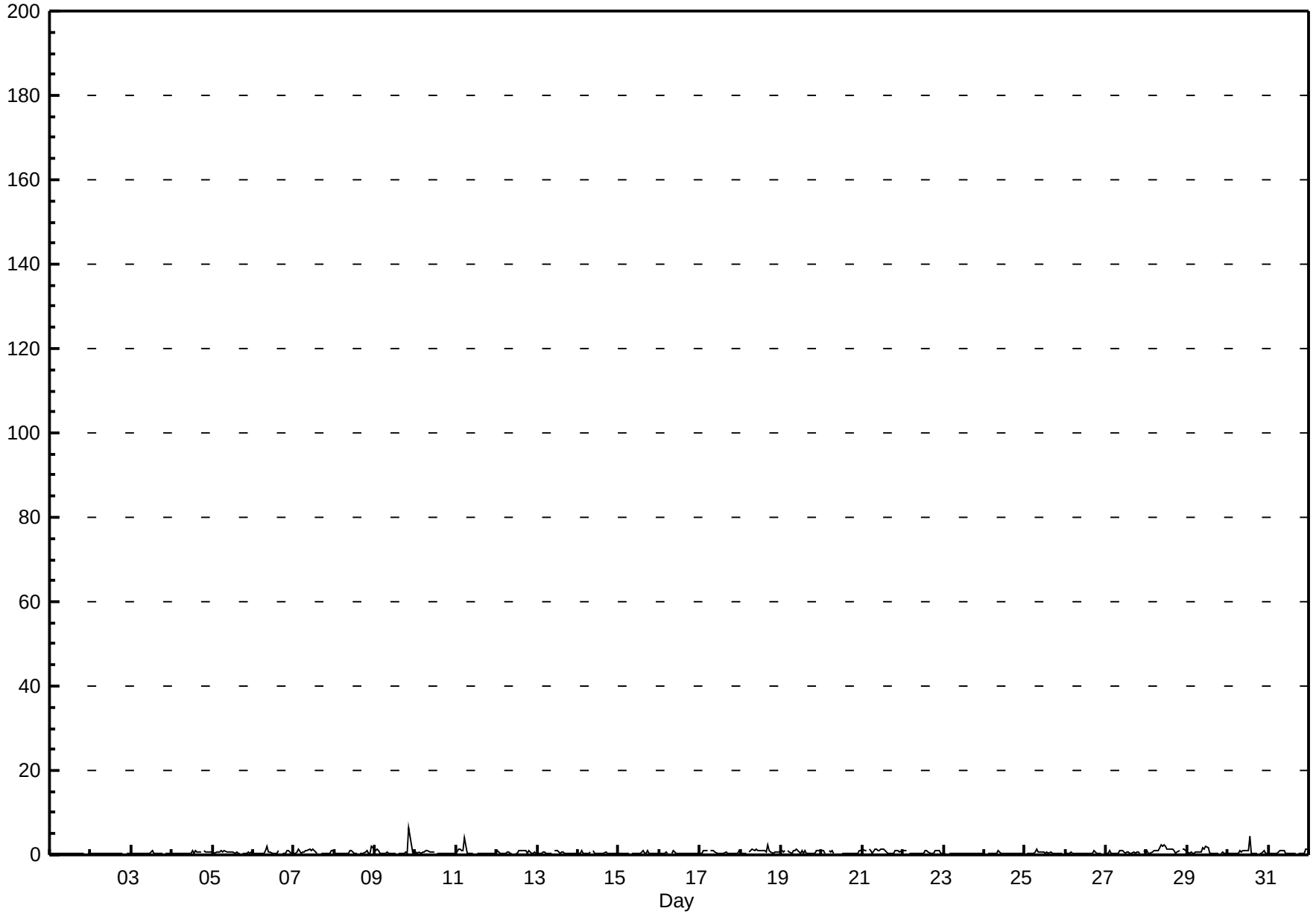
Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

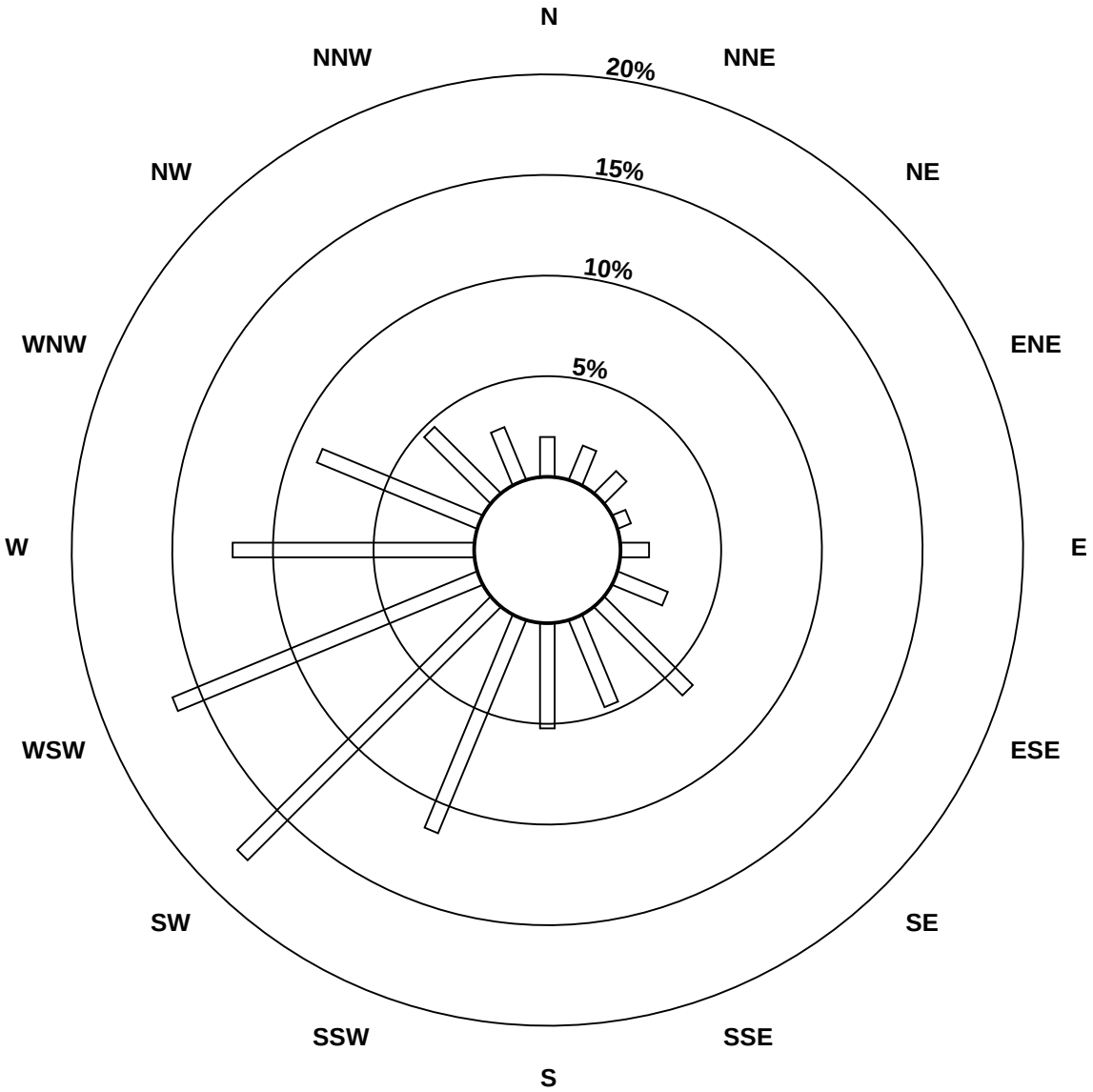
Portable-Bonanza - July 2010



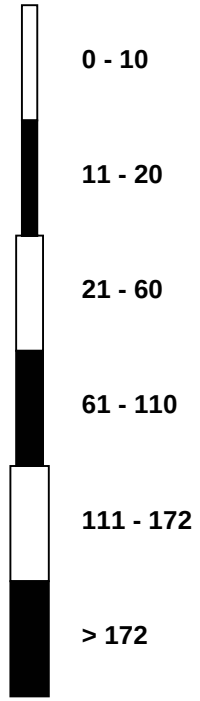
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Portable-Bonanza - July 2010



Pollutant Classes (ppb)



PASZA
Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Portable-Bonanza - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.1 ppb on Jul 8 08:00 Maximum Daily Average: 0.6 ppb on Jul 7

Minimum Value: 0 ppb on Jul 14 18:00 Minimum Daily Average: 0.3 ppb on Jul 3
Maximum Diurnal Average: 0.5 ppb at hour 5 Minimum Diurnal Average: 0.4 ppb at hour 18
Monthly Average: 0.46 ppb Percentiles: $P_1 = 0.2$ $P_{10} = 0.3$ $Q_1 = 0.4$ Median = 0.4 $Q_3 = 0.5$ $P_{90} = 0.6$ $P_{99} = 0.8$

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

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

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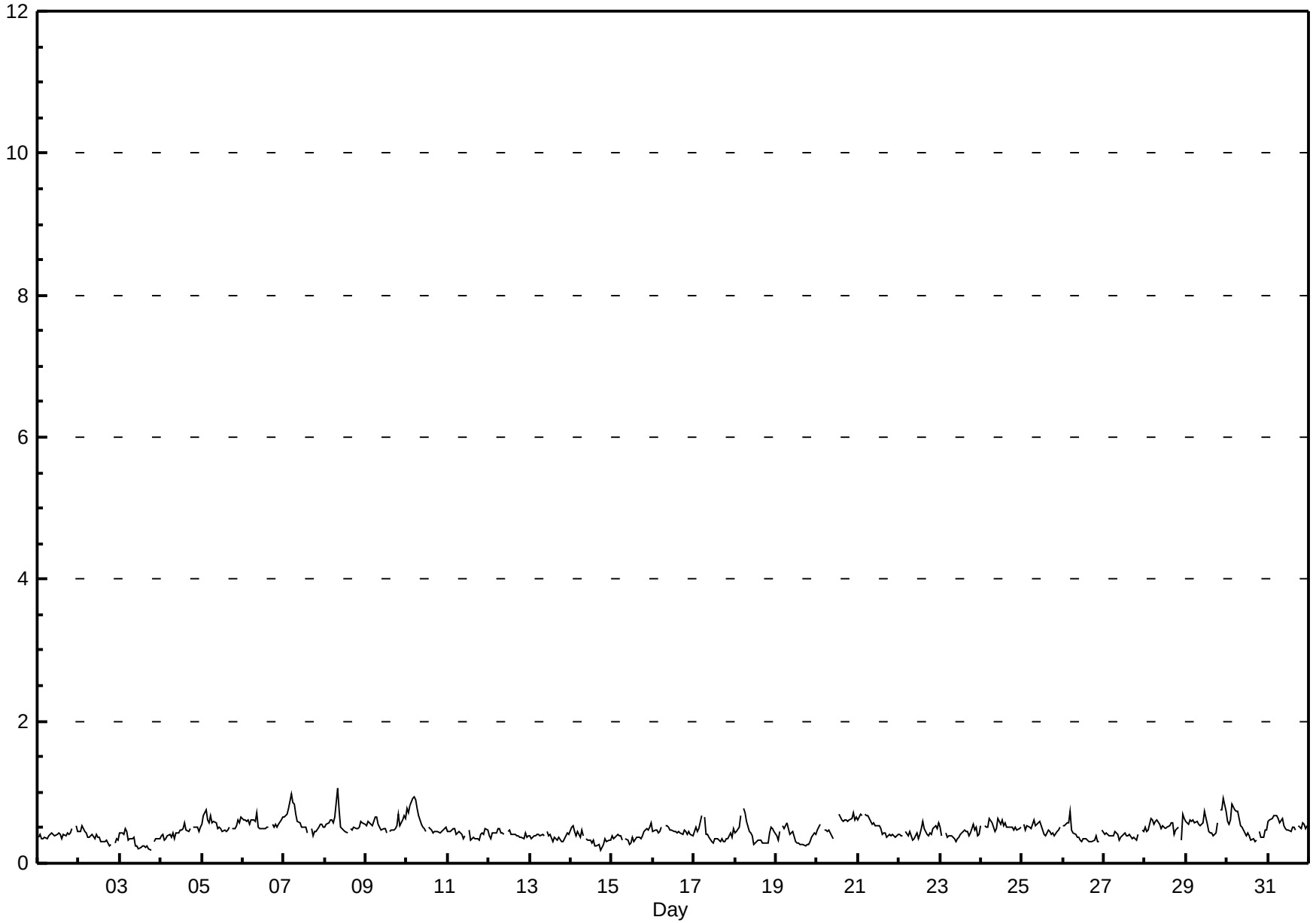
Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Portable-Bonanza - July 2010



PASZA
Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Portable-Bonanza - July 2010

Maximum Value: 3.1 ppb on Jul 30 20:00

Maximum Daily Average: 1.0 ppb on Jul 30

Minimum Value: 0 ppb on Jul 14 18:00

Minimum Daily Average: 0.6 ppb on Jul 3

Maximum Diurnal Average: 0.9 ppb at hour 20

Minimum Diurnal Average: 0.7 ppb at hour 15

Monthly Average: 0.80 ppb

Percentiles: $P_1 = 0.5$ $P_{10} = 0.6$ $Q_1 = 0.7$ Median = 0.8 $Q_3 = 0.9$ $P_{90} = 1.0$ $P_{99} = 1.2$

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

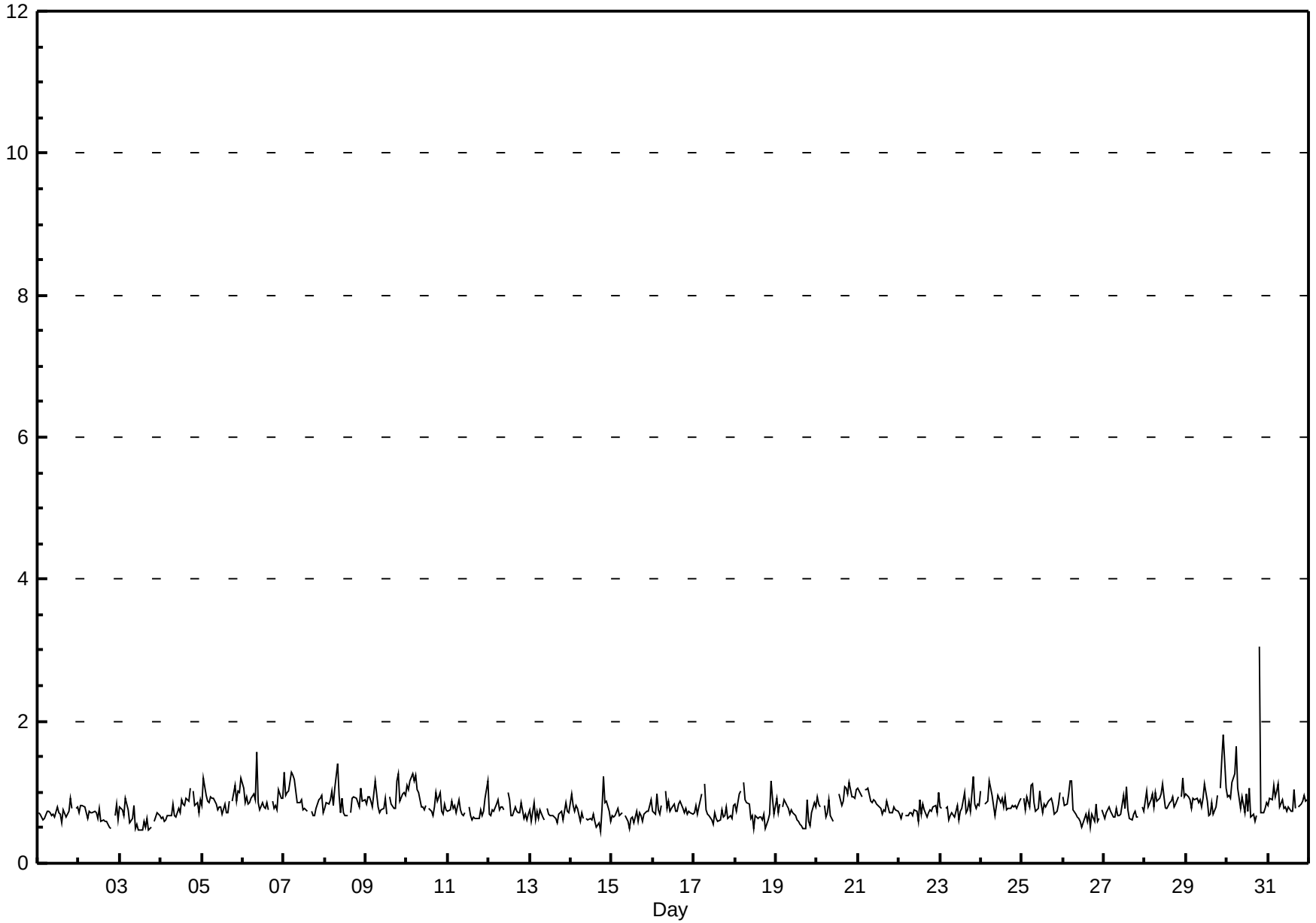
C - Calibration

A - Automated Daily Zero Span

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

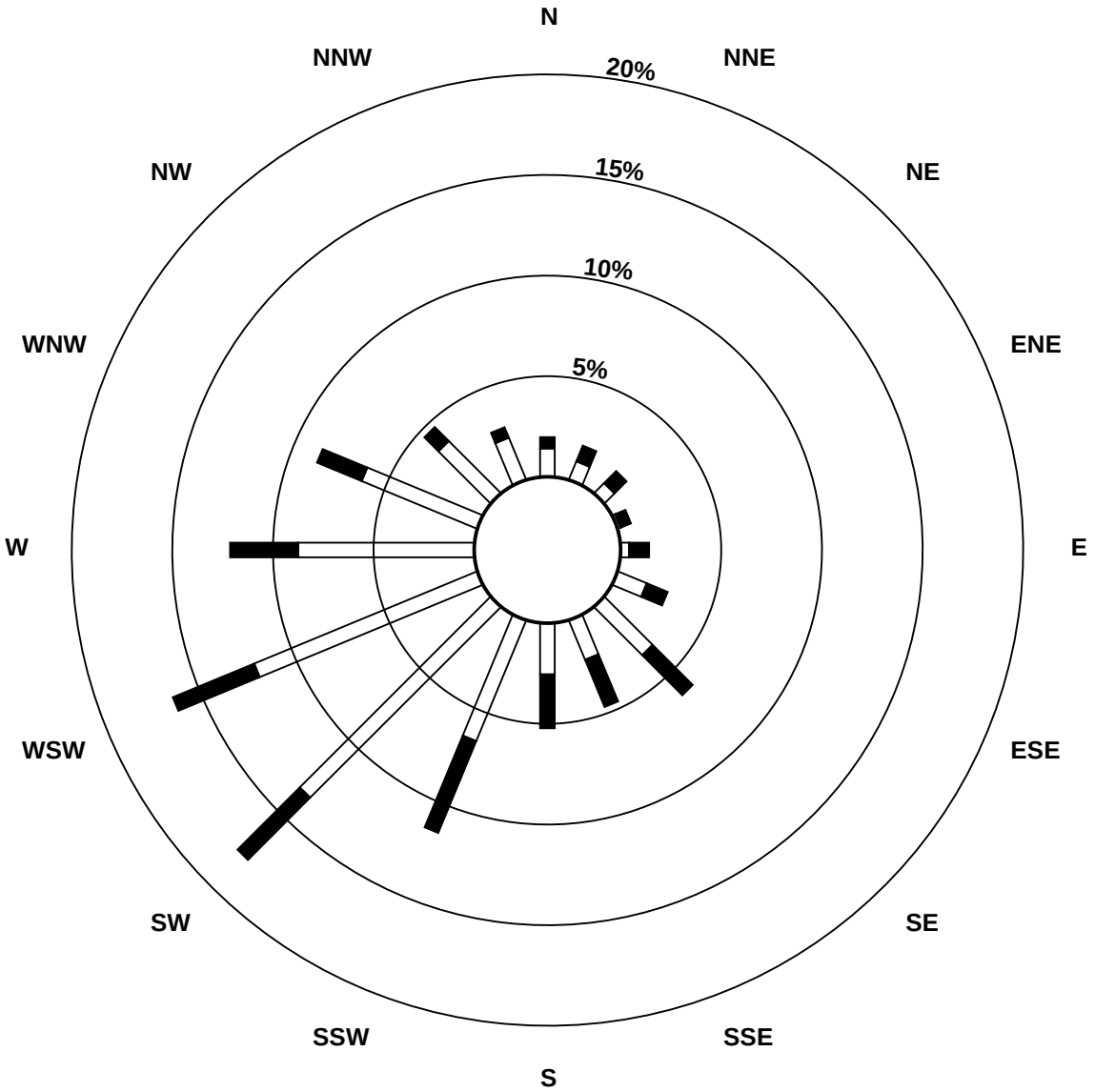
Portable-Bonanza - July 2010



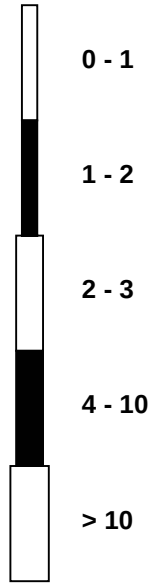
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Portable-Bonanza - July 2010



Pollutant Classes (ppb)



PASZA
Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Portable-Bonanza - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 17.2 ppb on Jul 6 09:00 Maximum Daily Average: 3.5 ppb on Jul 30

Minimum Value: 0 ppb on Jul 1 11:00 Minimum Daily Average: 0.2 ppb on Jul 1
Maximum Diurnal Average: 3.1 ppb at hour 6 Minimum Diurnal Average: 0.7 ppb at hour 13
Monthly Average: 1.68 ppb Percentiles: P_1 = 0.0 P_{10} = 0.3 Q_1 = 0.5 Median = 1.1 Q_3 = 2.4 P_{90} = 3.7 P_{99} = 7.8

Hours in Service:	744
Hours of Data:	703
Hours of Missing Data:	41
Hours of Calibration:	41
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	0.2	1.4
2-Jul	1	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	2	2	2	0.6	1.8
3-Jul	2	2	3	3	4	2	1	1	1	0	0	0	0	0	0	0	0	0	0	A	2	1	1	1	1.0	3.7
4-Jul	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	2	1	1	1	1	0.5	1.6
5-Jul	2	2	2	2	1	3	2	1	1	1	1	0	0	1	0	0	0	A	2	1	2	4	3	3	1.6	3.7
6-Jul	2	1	2	2	1	1	2	2	17	1	0	0	0	0	0	0	A	2	1	1	1	2	3	3	1.9	17.2
7-Jul	2	3	4	4	3	3	3	2	2	1	1	0	0	0	0	A	1	1	1	1	3	3	3	2	1.9	4.2
8-Jul	2	1	2	2	5	8	3	2	2	1	1	1	0	1	A	2	1	1	1	1	2	2	4	5	2.1	7.8
9-Jul	3	3	3	2	1	4	5	4	1	1	1	1	1	A	2	1	1	1	3	2	1	2	2	3	2.1	5.1
10-Jul	6	6	5	8	7	6	5	5	2	1	1	1	A	2	1	1	1	1	1	1	1	2	2	2	3.0	7.9
11-Jul	2	3	2	2	3	2	1	1	1	0	0	A	1	1	1	1	0	0	0	0	0	1	1	1	1.1	2.8
12-Jul	1	0	1	0	0	0	0	0	0	0	A	2	1	1	1	0	0	1	1	1	0	0	1	1	0.6	1.9
13-Jul	1	1	1	0	1	1	2	1	1	A	2	1	1	1	1	1	1	1	0	0	1	3	4	3	1.3	3.7
14-Jul	6	4	4	3	2	2	2	1	A	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1.4	5.7
15-Jul	1	0	0	0	0	0	1	A	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	1.9
16-Jul	0	0	1	1	1	1	A	3	2	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	0.7	2.5
17-Jul	1	1	2	2	2	A	3	2	1	1	1	0	0	0	0	0	0	0	0	1	1	3	1	2	1.1	3.2
18-Jul	1	3	4	5	A	7	5	4	3	2	1	1	1	1	1	1	3	1	1	1	2	3	3	2	2.5	6.5
19-Jul	3	2	2	A	4	3	3	2	2	2	1	1	0	1	1	1	1	1	1	1	2	2	2	2	1.6	3.6
20-Jul	2	3	2	A	4	3	2	2	C	C	C	C	1	1	1	1	1	1	1	1	3	2	6	4	2.1	5.8
21-Jul	3	3	3	A	5	5	4	4	3	C	C	C	C	C	2	2	3	1	3	5	3	3	3	5	3.3	5.4
22-Jul	5	2	3	A	5	4	3	3	3	1	2	2	1	1	2	1	1	1	2	3	2	3	4	3	2.6	5.3
23-Jul	3	1	A	3	2	1	2	1	1	1	1	1	0	0	1	1	1	1	1	0	2	4	1	1	1.2	3.7
24-Jul	1	A	2	2	2	3	1	0	0	0	0	1	0	0	0	0	1	1	1	1	1	1	1	1	0.9	2.6
25-Jul	A	4	1	1	1	1	1	1	1	0	1	1	0	1	1	0	0	0	0	0	1	2	2	A	0.9	3.8
26-Jul	5	3	3	2	3	2	1	1	1	1	1	1	0	1	1	1	0	1	1	1	1	1	A	3	1.5	4.7
27-Jul	3	3	3	4	4	3	4	2	2	1	1	1	1	1	1	1	1	1	1	1	1	A	3	3	2.1	4.2
28-Jul	2	4	3	4	6	6	4	4	5	4	2	3	2	1	1	1	2	1	1	2	A	3	3	2	2.9	6.4
29-Jul	2	1	3	3	3	4	3	3	2	2	1	1	1	2	1	1	1	1	2	A	5	6	8	9	2.9	9.4
30-Jul	7	6	6	7	9	8	7	4	3	2	2	1	1	1	1	1	1	1	A	2	2	2	2	2	3.5	9.3
31-Jul	5	6	7	4	4	5	3	2	3	2	1	1	1	1	1	1	1	A	2	2	7	5	3	4	3.1	6.9
	2.4	2.4	2.4	2.5	2.9	3.1	2.4	2.0	2.1	1.1	0.9	0.9	0.7	0.8	0.7	0.7	0.8	0.7	1.0	1.1	1.7	2.3	2.3	2.4	Diurnal Average	
	7.1	6.4	6.6	7.9	9.3	8.5	7.0	4.5	17.2	3.6	2.5	2.9	1.8	2.0	2.0	1.9	3.1	1.6	3.2	4.6	6.9	6.5	8.3	9.4	Diurnal Maximum	

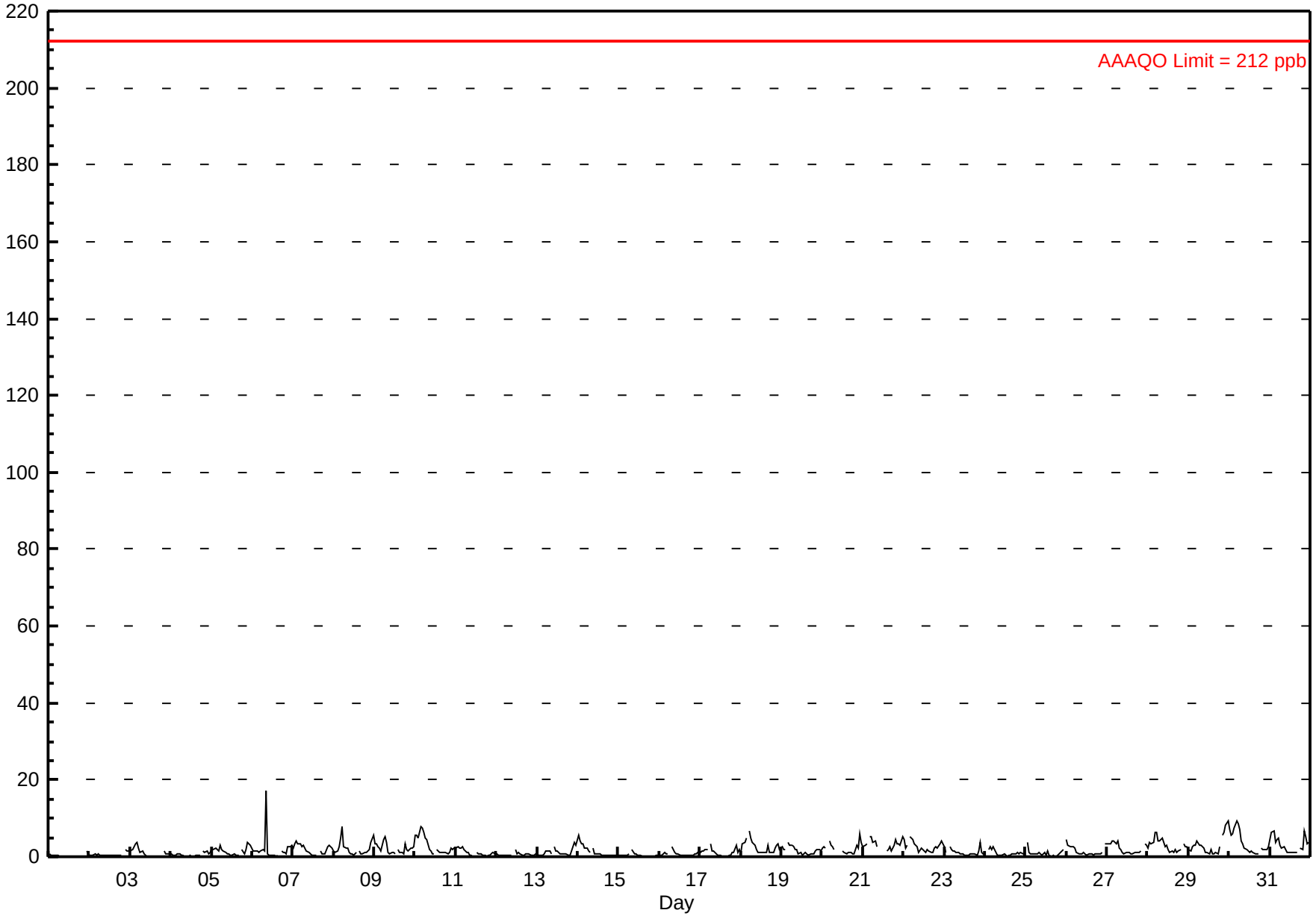
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 212 ppb 24-hr 106 ppb

PASZA
Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Portable-Bonanza - July 2010



PASZA
Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Portable-Bonanza - July 2010

Maximum Value: 171.2 ppb on Jul 6 09:00

Maximum Daily Average: 11.2 ppb on Jul 6

Minimum Value: 0 ppb on Jul 1 12:00

Minimum Daily Average: 1.0 ppb on Jul 1

Maximum Diurnal Average: 9.6 ppb at hour 9

Minimum Diurnal Average: 2.0 ppb at hour 13

Monthly Average: 4.64 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.7$ $Q_1 = 1.4$ Median = 3.1 $Q_3 = 5.5$ $P_{90} = 10.4$ $P_{99} = 28.4$

Hours in Service:	744
Hours of Data:	703
Hours of Missing Data:	41
Hours of Calibration:	41
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	1	1	0	0	0	3	0	2	1	2	0	0	1	0	0	0	0	1	4	1	2	A	3	1	1.0	4.0
2-Jul	1	1	1	3	1	3	4	3	2	2	1	1	1	2	1	1	1	1	1	1	A	4	3	3	1.8	4.4
3-Jul	2	3	3	4	5	4	2	3	1	1	1	2	0	1	1	1	1	0	4	A	6	1	1	1	2.1	6.1
4-Jul	1	1	1	1	2	4	1	2	1	2	1	5	0	1	0	1	1	1	A	3	1	3	1	3	1.7	5.5
5-Jul	3	2	5	2	2	8	3	3	1	2	1	1	1	1	1	1	1	A	5	1	11	11	4	4	3.2	11.3
6-Jul	3	10	2	4	1	3	18	5	171	2	1	5	6	2	0	1	A	3	3	2	3	5	6	3	11.2	171.2
7-Jul	5	7	7	4	8	5	6	5	3	2	1	1	1	1	1	A	3	1	1	1	30	12	12	10	5.4	30.3
8-Jul	2	3	4	6	13	13	6	3	9	3	1	1	1	6	A	3	1	2	6	3	6	4	6	14	5.0	13.6
9-Jul	4	4	4	4	4	9	10	7	3	2	4	3	1	A	3	2	2	1	36	3	3	3	3	4	5.2	35.9
10-Jul	11	9	7	11	11	12	7	7	2	3	1	1	A	3	2	2	2	4	4	2	3	8	3	8	5.4	12.2
11-Jul	3	3	3	2	8	3	3	2	1	1	0	A	2	2	2	3	4	3	1	2	1	1	2	1	2.3	7.7
12-Jul	1	1	1	1	0	4	1	1	1	1	A	4	1	2	1	1	1	1	2	2	0	1	1	1	1.2	3.8
13-Jul	1	1	1	1	1	2	2	2	1	A	5	2	3	1	1	1	1	2	1	1	3	8	7	7	2.4	7.6
14-Jul	9	6	5	5	4	6	4	2	A	6	1	2	1	3	1	2	2	2	1	3	1	2	1	1	2.9	9.3
15-Jul	1	1	1	1	1	3	5	A	4	3	2	3	3	2	1	1	2	1	1	0	0	1	0	1	1.5	4.8
16-Jul	1	3	1	2	1	4	A	4	5	4	1	1	1	1	1	1	0	1	1	1	1	1	2	3	1.7	5.0
17-Jul	2	2	2	3	5	A	10	2	2	1	7	2	2	2	0	0	1	1	2	6	4	6	4	7	3.1	10.1
18-Jul	1	15	12	7	A	8	6	5	4	3	2	1	1	2	16	4	7	3	2	2	4	7	4	3	5.1	15.6
19-Jul	6	4	2	A	6	7	4	5	2	2	2	11	1	2	3	1	2	4	1	1	3	2	7	2	3.6	10.6
20-Jul	3	3	3	A	8	7	8	4	C	C	C	C	4	4	1	2	6	4	4	1	13	7	14	13	5.7	14.2
21-Jul	3	4	5	A	10	7	5	17	6	C	C	C	C	C	2	8	7	4	13	24	11	9	5	14	8.6	24.1
22-Jul	10	3	11	A	14	11	13	9	7	5	20	6	3	1	3	2	3	4	26	24	11	10	21	4	9.6	25.8
23-Jul	3	1	A	3	2	3	7	4	4	6	4	4	3	3	5	6	14	7	6	6	18	32	5	4	6.6	32.5
24-Jul	5	A	3	32	4	10	3	2	4	3	6	9	5	1	3	11	13	8	10	7	6	15	7	4	7.4	32.2
25-Jul	A	36	5	5	4	3	4	5	12	2	3	29	4	20	9	0	0	1	0	3	10	4	13	A	7.9	36.3
26-Jul	10	5	4	3	4	4	3	2	3	2	12	6	1	2	1	1	1	1	2	2	3	4	A	4	3.5	12.4
27-Jul	4	4	4	5	6	6	7	5	5	2	1	2	2	4	3	3	3	7	3	5	8	A	5	4	4.2	7.6
28-Jul	3	6	5	6	12	13	5	7	7	7	3	4	3	2	4	3	14	3	3	5	A	11	12	3	6.1	14.0
29-Jul	2	2	5	15	7	8	5	8	4	16	2	5	2	10	4	4	8	2	10	A	8	8	16	12	7.1	15.9
30-Jul	12	8	12	11	12	12	14	7	9	3	4	2	2	5	5	1	1	1	A	3	4	4	3	4	6.1	14.3
31-Jul	10	10	9	5	10	11	4	4	3	3	1	2	1	1	8	2	3	A	4	5	18	20	5	5	6.3	20.4
	4.1	5.2	4.2	5.3	5.5	6.6	5.6	4.5	9.6	3.1	3.2	4.1	2.0	3.1	2.8	2.3	3.5	2.5	5.3	4.1	6.6	7.0	5.9	4.9	Diurnal Average	
	11.6	36.3	11.8	32.2	14.2	12.9	17.7	16.6	171.2	15.9	20.1	29.1	6.4	20.4	15.6	10.9	14.0	8.5	35.9	24.1	30.3	32.5	21.2	13.9	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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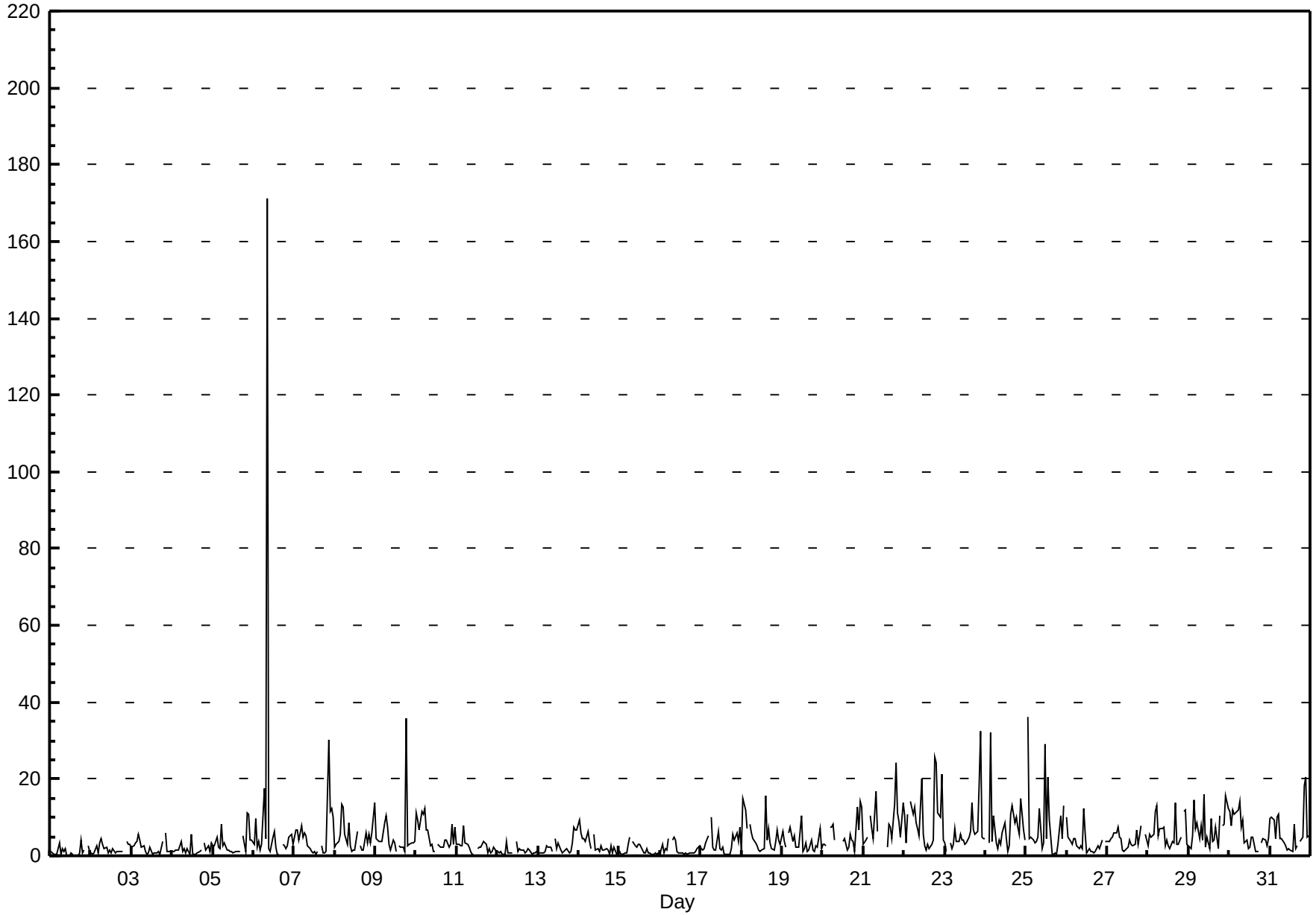
Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

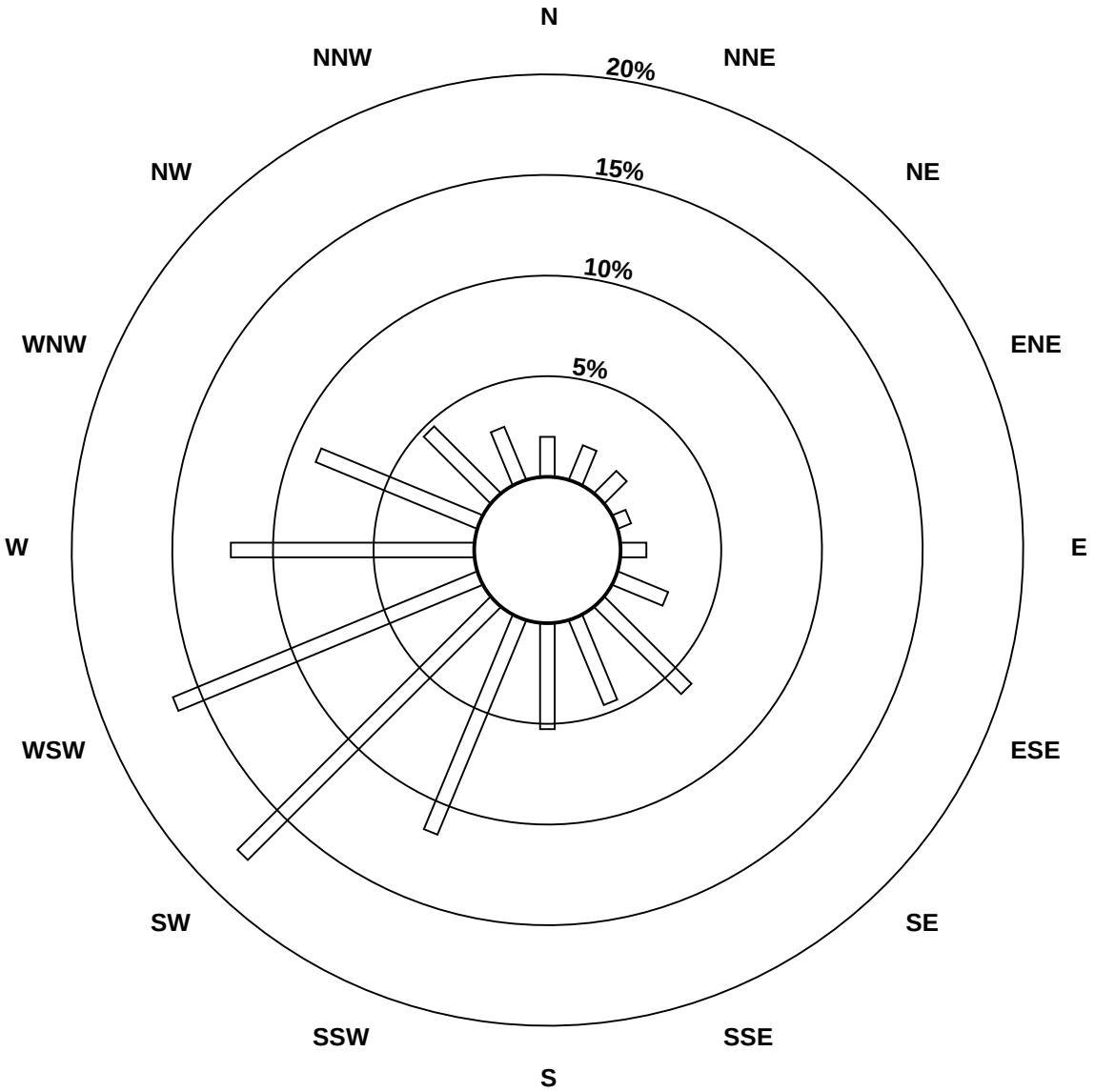
Portable-Bonanza - July 2010



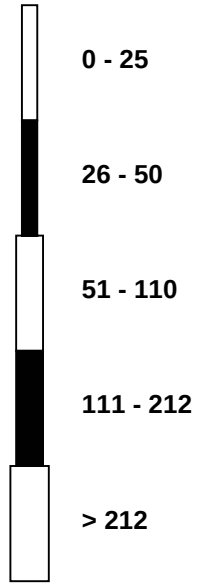
Pollutant Rose

Nitrogen Dioxide (NO_2) - ppb

Portable-Bonanza - July 2010



Pollutant Classes (ppb)



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Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Portable-Bonanza - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 37.4 ppb on Jul 6 09:00 Maximum Daily Average: 1.9 ppb on Jul 6

Minimum Value: 0 ppb on Jul 1 01:00 Minimum Daily Average: 0.1 ppb on Jul 1
Maximum Diurnal Average: 1.9 ppb at hour 9 Minimum Diurnal Average: 0.2 ppb at hour 16
Monthly Average: 0.49 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.2 Q_3 = 0.5 P_{90} = 1.0 P_{99} = 4.1

Hours in Service:	744
Hours of Data:	703
Hours of Missing Data:	41
Hours of Calibration:	41
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.3
2-Jul	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	0.3
3-Jul	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0.2	1.3
4-Jul	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.5
5-Jul	0	0	1	0	0	1	1	1	1	1	0	0	0	0	0	0	0	A	0	0	1	1	0	0	0.5	1.0
6-Jul	0	1	0	0	0	1	1	1	37	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1.9	37.4
7-Jul	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0	2	1	0	0	0.4	2.5
8-Jul	0	0	0	0	1	4	1	1	1	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0.5	3.6
9-Jul	0	0	0	0	0	1	2	1	0	0	0	0	0	A	0	0	0	0	6	0	0	0	0	0	0.6	6.4
10-Jul	0	0	0	3	2	3	3	2	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.8	3.5
11-Jul	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0.2	0.5
12-Jul	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
13-Jul	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
14-Jul	0	0	0	0	0	2	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.5
15-Jul	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7
16-Jul	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
17-Jul	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
18-Jul	0	0	0	0	A	1	2	2	1	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0.6	1.8
19-Jul	0	0	0	A	0	1	1	1	1	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0.3	1.6
20-Jul	0	0	0	A	0	1	1	1	C	C	C	C	0	0	0	0	0	0	0	0	0	0	1	0	0.3	1.2
21-Jul	0	0	0	A	0	0	1	2	1	C	C	C	C	C	0	1	1	0	1	4	0	1	0	0	0.7	4.2
22-Jul	0	0	0	A	1	1	1	0	0	0	0	1	1	0	1	0	0	0	1	3	1	2	2	1	0.7	2.8
23-Jul	0	0	A	0	0	0	0	0	0	1	1	1	0	0	1	0	2	1	1	1	2	4	1	0	0.8	4.4
24-Jul	1	A	0	1	0	1	0	0	1	1	1	1	0	0	1	1	2	3	1	2	2	1	0	0	0.9	2.8
25-Jul	A	4	1	0	1	0	0	1	1	0	1	3	0	4	0	0	0	0	0	0	1	0	1	A	0.8	4.2
26-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.5
27-Jul	0	0	0	1	2	3	5	2	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.8	5.4
28-Jul	0	0	0	0	2	2	2	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.6	2.4
29-Jul	0	0	0	0	0	1	0	1	1	1	0	0	0	1	0	0	0	0	1	A	0	0	5	2	0.7	5.1
30-Jul	1	0	0	2	1	3	6	2	3	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0.9	6.4
31-Jul	0	0	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	A	0	0	3	1	0	0	0.5	2.8
	0.2	0.3	0.2	0.4	0.4	1.0	1.1	0.8	1.9	0.4	0.3	0.4	0.2	0.4	0.2	0.2	0.3	0.3	0.5	0.4	0.5	0.5	0.4	0.2	Diurnal Average	
	1.1	4.2	0.7	3.5	2.5	3.6	6.4	2.3	37.4	1.3	1.0	3.0	1.6	4.1	1.3	0.6	1.8	2.8	6.4	4.2	2.8	4.4	5.1	1.6	Diurnal Maximum	

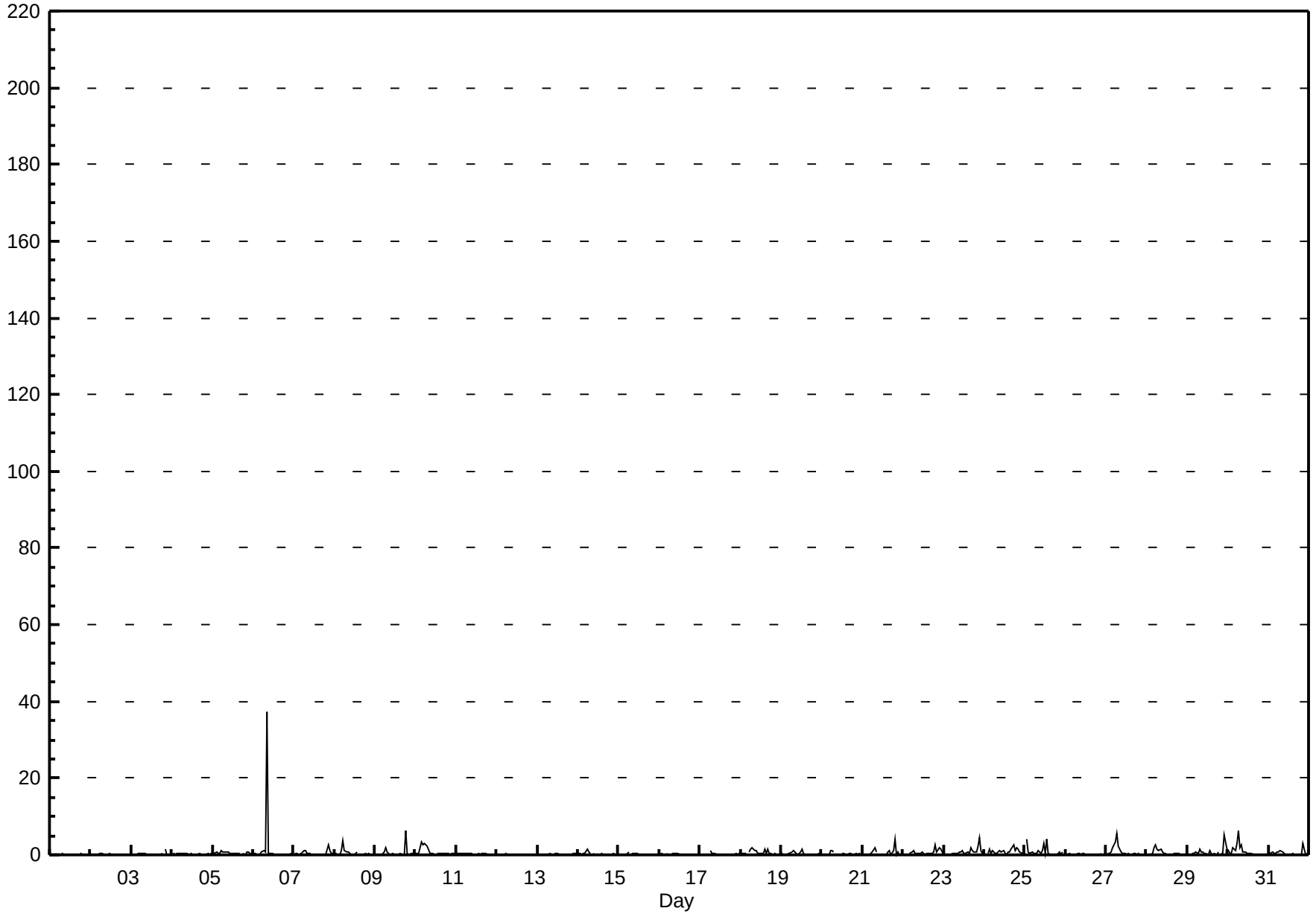
C - Calibration A - Automated Daily Zero Span

PASZA
Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Portable-Bonanza - July 2010



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Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Portable-Bonanza - July 2010

Maximum Value: 326.7 ppb on Jul 6 09:00

Maximum Daily Average: 17.6 ppb on Jul 6

Minimum Value: 0 ppb on Jul 14 23:00

Minimum Daily Average: 0.5 ppb on Jul 12

Maximum Diurnal Average: 14.7 ppb at hour 9

Minimum Diurnal Average: 1.5 ppb at hour 1

Monthly Average: 4.42 ppb

Percentiles: $P_1 = 0.1$ $P_{10} = 0.2$ $Q_1 = 0.3$ Median = 1.1 $Q_3 = 4.2$ $P_{90} = 10.3$ $P_{99} = 42.0$

Hours in Service:	744
Hours of Data:	703
Hours of Missing Data:	41
Hours of Calibration:	41
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	0	0	0	0	0	3	1	3	1	6	0	0	2	2	1	0	0	1	11	1	2	A	0	0	1.5	10.8
2-Jul	0	0	0	4	0	6	6	5	3	2	1	2	1	2	0	2	1	2	2	2	A	4	0	0	2.0	5.9
3-Jul	0	0	0	0	3	3	3	7	1	0	1	2	0	1	1	1	2	2	10	A	18	0	1	0	2.4	18.0
4-Jul	0	1	1	1	1	10	4	5	1	3	1	10	0	0	0	0	1	0	A	0	0	1	0	1	1.7	9.9
5-Jul	1	1	2	0	0	4	1	2	1	1	1	1	1	1	3	0	0	A	4	0	13	10	9	1	2.5	13.1
6-Jul	1	15	1	1	0	17	13	2	327	3	7	4	4	3	0	0	A	3	0	0	0	1	3	0	17.6	326.7
7-Jul	1	3	1	0	2	8	4	4	1	1	0	0	0	0	1	A	0	0	0	0	59	26	12	3	5.6	59.1
8-Jul	0	4	0	0	10	14	4	2	8	2	0	1	0	7	A	1	0	1	9	1	5	0	1	0	3.1	14.3
9-Jul	1	0	0	0	0	5	5	5	1	1	2	1	0	A	2	5	1	0	104	1	1	1	1	0	5.9	104.1
10-Jul	2	1	1	16	7	16	5	4	1	1	0	0	A	1	1	1	1	3	2	0	0	6	1	4	3.2	16.0
11-Jul	0	0	0	0	8	1	1	1	2	1	0	A	0	6	1	11	8	3	1	1	0	0	2	0	2.1	11.3
12-Jul	0	0	0	0	0	6	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0.5	6.3
13-Jul	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	3	1	2	0.5	3.1
14-Jul	3	1	0	1	3	12	4	3	A	2	0	5	1	2	5	2	3	2	1	7	0	10	0	3	3.0	12.5
15-Jul	1	0	0	0	0	5	10	A	4	5	7	5	3	2	1	1	1	2	1	0	0	0	0	0	2.2	10.4
16-Jul	0	10	0	0	0	7	A	4	2	5	0	1	1	0	0	0	0	1	0	0	0	0	0	0	1.5	10.1
17-Jul	0	0	0	3	2	A	12	2	1	1	2	0	1	1	0	1	0	1	0	1	1	3	0	1	1.4	12.1
18-Jul	0	4	1	1	A	2	3	3	2	1	1	1	1	2	45	4	5	1	0	0	1	1	0	0	3.4	45.3
19-Jul	3	0	0	A	4	4	5	3	2	1	1	15	9	2	1	0	1	2	0	0	0	0	10	0	2.8	15.5
20-Jul	1	0	0	A	2	16	12	3	C	C	C	C	10	12	2	0	4	4	3	0	4	3	11	2	4.7	15.8
21-Jul	0	0	0	A	0	2	2	22	3	C	C	C	C	C	1	12	6	2	9	43	1	13	2	4	6.9	43.2
22-Jul	3	0	1	A	9	20	15	3	4	4	7	9	9	0	1	0	5	2	7	18	6	35	18	25	8.8	35.2
23-Jul	0	0	A	0	0	5	4	3	2	7	8	7	5	2	5	3	35	10	3	11	9	85	11	5	9.5	84.7
24-Jul	11	A	15	17	1	12	3	3	6	11	6	7	4	2	10	5	14	25	5	9	11	11	4	5	8.6	25.4
25-Jul	A	34	7	7	7	4	3	5	13	1	6	29	9	49	4	4	0	0	0	0	18	0	15	A	9.8	49.4
26-Jul	8	1	10	0	0	0	0	1	1	0	9	2	0	0	0	0	0	0	0	0	0	9	A	1	2.0	10.1
27-Jul	0	1	4	2	12	11	14	13	8	3	0	1	1	3	2	1	2	4	1	2	2	A	1	1	3.9	14.4
28-Jul	0	0	0	0	41	26	11	3	3	3	0	0	0	0	1	1	15	1	1	2	A	5	4	0	5.2	40.5
29-Jul	0	0	0	12	2	9	4	17	7	9	3	6	1	8	10	2	4	1	7	A	1	0	41	7	6.5	41.2
30-Jul	5	2	4	5	4	17	36	6	20	2	7	0	0	1	1	0	0	0	A	0	0	0	0	0	4.9	36.0
31-Jul	0	2	2	0	4	5	4	11	1	1	0	1	0	0	6	0	1	A	0	1	25	20	0	1	3.9	25.4
	1.5	2.7	1.7	2.7	4.1	8.3	6.4	4.8	14.7	2.8	2.6	3.9	2.2	3.8	3.6	2.0	3.7	2.5	6.4	3.5	6.1	8.6	5.0	2.3	Diurnal Average	
	11.4	34.4	15.2	16.8	40.5	26.2	36.0	22.5	326.7	11.5	9.0	29.2	10.3	49.4	45.3	12.2	35.4	25.4	104.1	43.2	59.1	84.7	41.2	24.6	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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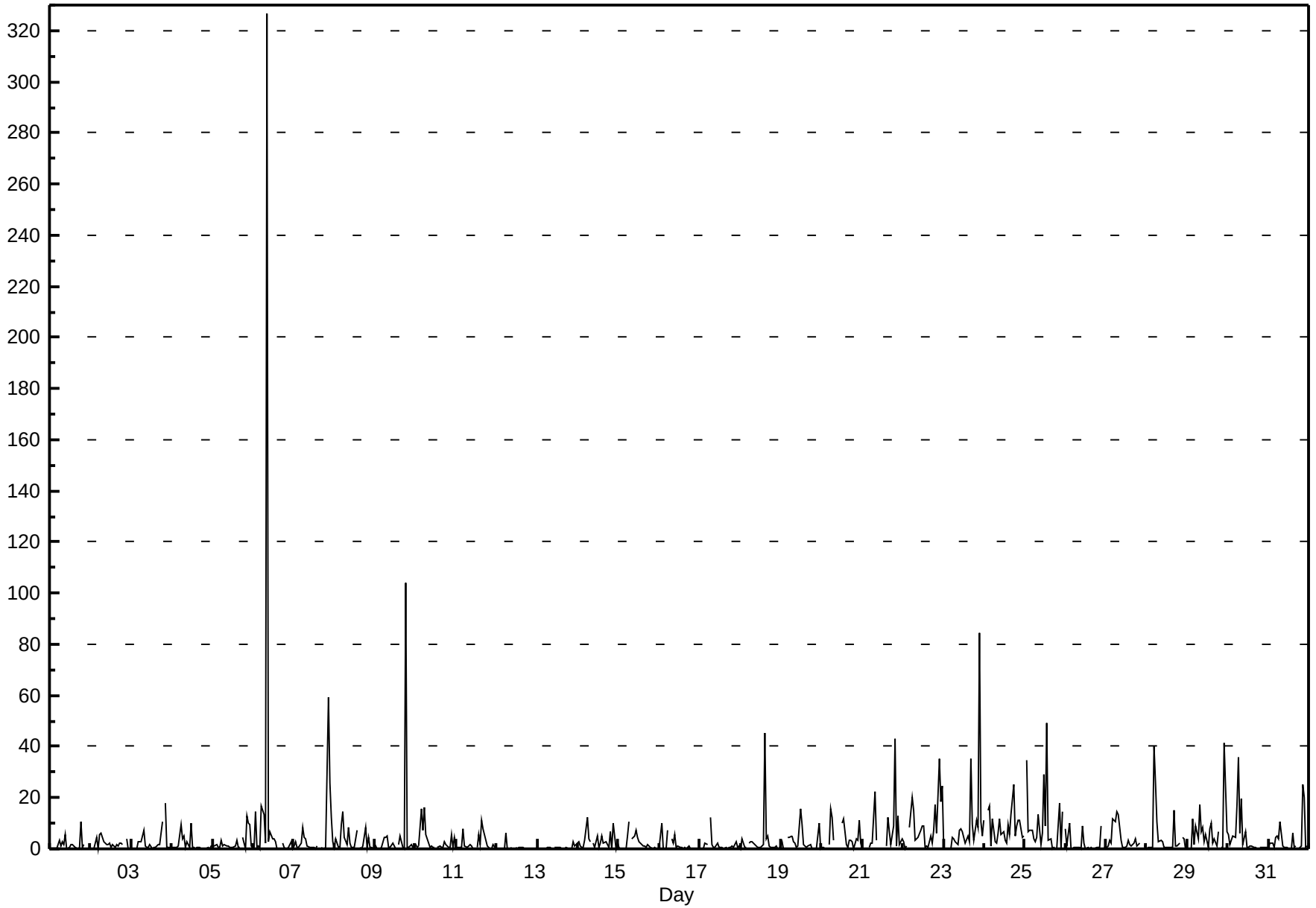
Hourly Maximums

Nitrogen Oxide (NO) - ppb

Portable-Bonanza - July 2010



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Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Portable-Bonanza - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 54.9 ppb on Jul 6 09:00 Maximum Daily Average: 4.4 ppb on Jul 30

Minimum Value: 0 ppb on Jul 1 11:00 Minimum Daily Average: 0.3 ppb on Jul 1
Maximum Diurnal Average: 4.2 ppb at hour 6 Minimum Diurnal Average: 0.9 ppb at hour 16
Monthly Average: 2.25 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.5$ $Q_1 = 0.8$ Median = 1.5 $Q_3 = 2.9$ $P_{90} = 4.7$ $P_{99} = 10.9$

Hours in Service:	744
Hours of Data:	703
Hours of Missing Data:	41
Hours of Calibration:	41
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	0.3	1.4
2-Jul	1	0	0	1	0	1	1	1	1	1	1	1	0	1	0	0	1	1	0	0	A	2	2	2	0.7	2.0
3-Jul	2	2	3	4	4	3	2	2	1	0	0	0	0	0	0	0	0	0	1	A	3	1	1	1	1.4	4.1
4-Jul	1	1	1	1	1	1	1	1	0	0	0	1	0	0	0	1	1	1	A	2	1	2	1	2	0.9	1.9
5-Jul	3	3	3	2	2	4	3	3	2	2	1	1	1	1	1	1	1	A	3	1	3	5	4	4	2.3	4.9
6-Jul	2	2	2	2	2	2	3	3	55	1	1	1	1	1	0	1	A	2	1	1	1	3	3	3	4.1	54.9
7-Jul	3	4	5	4	4	4	4	4	2	2	1	1	1	1	1	A	2	1	1	1	5	4	3	3	2.5	5.2
8-Jul	2	1	2	3	6	12	4	3	3	2	1	1	1	2	A	2	1	1	2	1	2	2	4	6	2.8	11.7
9-Jul	4	4	3	2	2	6	7	5	2	1	1	1	1	A	2	2	1	1	10	2	2	3	3	3	2.9	9.7
10-Jul	6	6	5	12	10	9	8	7	2	2	1	1	A	2	1	1	1	2	2	1	1	3	2	3	3.9	11.6
11-Jul	3	3	3	3	3	2	2	1	1	1	0	A	1	1	1	1	1	1	0	0	1	1	1	1	1.4	3.2
12-Jul	1	1	1	1	0	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	0	1	1	1	0.8	2.2
13-Jul	1	1	1	1	1	2	2	2	1	A	3	2	2	1	1	1	1	1	1	1	1	3	4	3	1.4	4.1
14-Jul	6	5	4	4	3	4	2	2	A	3	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1.8	6.1
15-Jul	1	1	1	1	1	1	2	A	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0.7	2.4
16-Jul	0	1	1	1	1	1	A	3	2	1	1	1	1	0	0	1	0	1	0	1	1	1	1	2	1.0	2.9
17-Jul	1	2	2	2	2	A	4	2	2	1	1	0	0	0	0	0	0	0	1	1	1	3	1	2	1.3	4.2
18-Jul	1	4	4	5	A	7	6	6	4	3	2	1	1	1	3	2	5	2	1	1	3	3	3	2	3.1	7.4
19-Jul	3	2	2	A	4	4	4	3	3	2	1	2	2	1	1	1	1	1	1	1	2	2	2	2	2.0	4.0
20-Jul	2	3	3	A	4	4	4	3	C	C	C	C	2	1	1	1	1	1	1	1	3	2	6	4	2.4	6.4
21-Jul	3	3	3	A	6	6	4	6	3	C	C	C	C	C	2	2	3	1	4	9	3	4	3	5	3.9	8.7
22-Jul	5	2	3	A	6	5	5	3	3	1	3	3	2	1	2	2	1	1	3	5	3	5	6	4	3.2	5.8
23-Jul	3	1	A	3	2	2	2	2	1	2	1	2	1	1	1	1	2	2	1	1	4	8	2	1	2.0	8.1
24-Jul	2	A	2	4	2	4	2	1	1	2	1	2	1	0	1	1	2	4	2	3	3	2	1	1	1.9	3.9
25-Jul	A	8	2	1	2	1	1	1	2	1	2	4	1	5	1	0	0	0	0	0	2	2	2	A	1.8	8.1
26-Jul	5	3	3	3	3	2	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	2	A	3	1.6	5.1
27-Jul	3	4	4	5	6	7	10	4	3	2	1	1	1	1	1	1	1	1	1	1	2	A	4	3	2.9	9.7
28-Jul	2	4	4	4	8	9	6	6	6	4	3	3	2	1	2	1	2	1	2	2	A	3	3	3	3.5	8.9
29-Jul	2	2	3	3	3	5	3	4	3	3	1	2	1	3	1	1	1	1	3	A	6	7	14	11	3.6	13.5
30-Jul	8	6	6	9	11	11	13	6	6	3	2	2	1	2	1	1	1	1	A	2	2	2	2	3	4.4	13.5
31-Jul	5	7	7	4	5	6	3	3	3	2	1	1	1	1	2	1	1	A	2	2	10	7	3	4	3.6	9.8
	2.7	2.8	2.7	3.0	3.4	4.2	3.6	2.9	4.1	1.6	1.3	1.4	1.0	1.2	1.0	0.9	1.2	1.0	1.5	1.6	2.3	2.9	2.9	2.7	Diurnal Average	
	8.2	8.1	7.2	11.6	10.6	11.7	13.5	6.8	54.9	4.4	2.8	4.1	2.1	5.4	2.5	2.3	4.5	3.7	9.7	8.7	9.8	8.1	13.5	11.1	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

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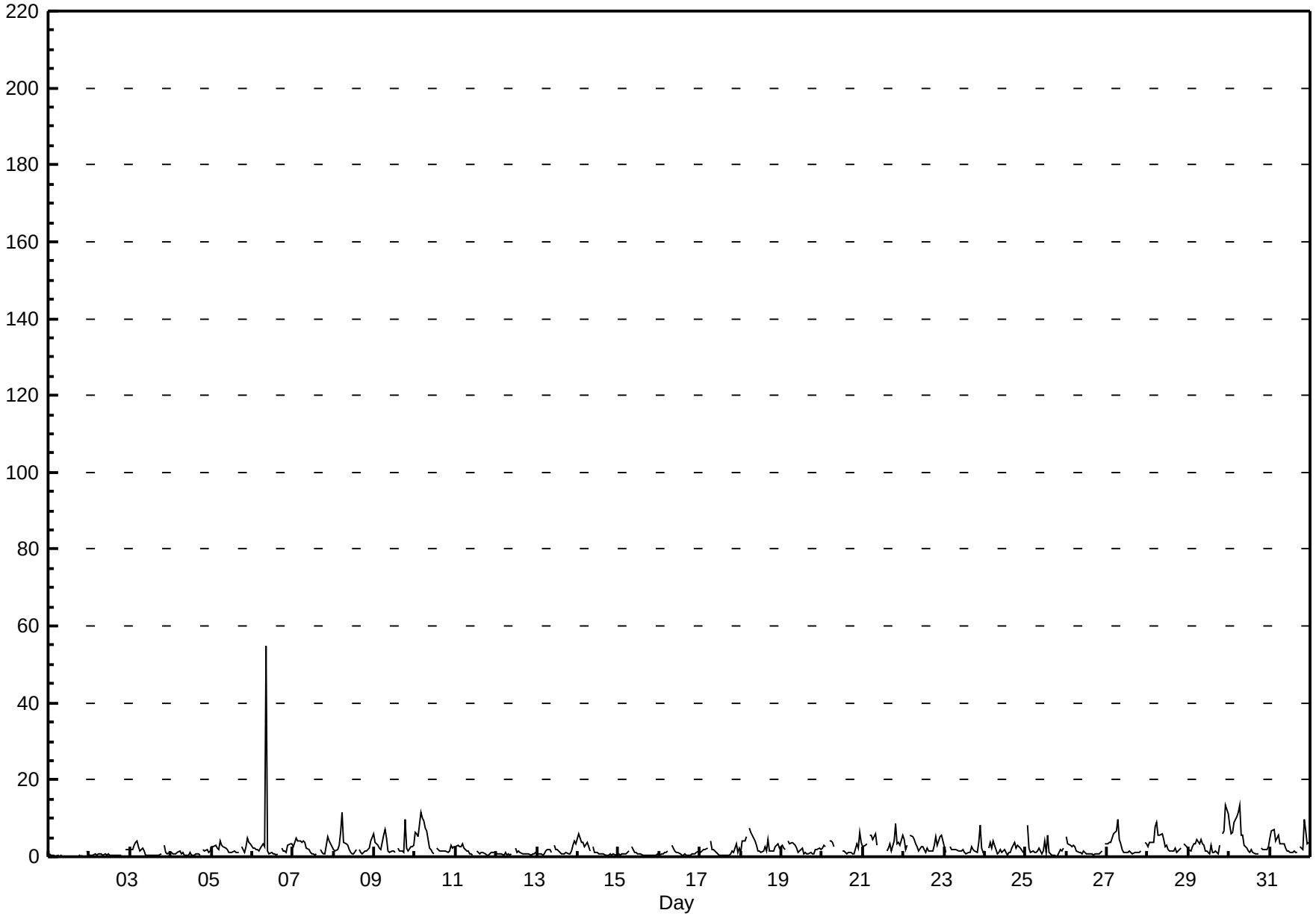
Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Portable-Bonanza - July 2010



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Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Portable-Bonanza - July 2010

Maximum Value: 457.6 ppb on Jul 6 09:00

Maximum Daily Average: 26.8 ppb on Jul 6

Minimum Value: 0 ppb on Jul 1 11:00

Minimum Daily Average: 1.7 ppb on Jul 12

Maximum Diurnal Average: 22.1 ppb at hour 9

Minimum Diurnal Average: 3.8 ppb at hour 13

Monthly Average: 8.55 ppb

Percentiles: $P_1 = 0.4$ $P_{10} = 1.1$ $Q_1 = 2.0$ Median = 4.2 $Q_3 = 9.9$ $P_{90} = 17.5$ $P_{99} = 56.8$

Hours in Service:	744
Hours of Data:	703
Hours of Missing Data:	41
Hours of Calibration:	41
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	1	1	0	1	1	5	1	3	2	8	0	0	1	2	1	0	0	1	15	1	3	A	3	1	2.2	15.0
2-Jul	1	1	1	6	1	7	10	7	5	4	2	3	2	4	1	2	2	3	3	3	A	8	3	3	3.5	10.5
3-Jul	2	3	3	4	8	7	5	9	2	1	1	4	1	1	1	2	3	1	13	A	21	2	2	1	4.3	21.1
4-Jul	2	2	2	2	3	13	5	7	1	4	1	16	1	1	1	1	2	2	A	4	2	3	1	5	3.5	15.6
5-Jul	4	3	6	3	2	12	4	5	3	3	2	2	2	2	3	2	2	A	10	2	25	21	14	5	5.9	24.6
6-Jul	4	24	3	5	2	15	32	7	458	4	3	9	11	5	1	1	A	6	3	2	3	6	9	4	26.8	457.6
7-Jul	6	9	7	5	10	12	9	10	3	2	2	1	2	1	2	A	3	1	1	1	88	36	25	10	10.8	88.0
8-Jul	3	7	4	6	22	27	10	5	17	5	1	2	2	14	A	3	2	3	15	4	10	4	7	14	8.2	27.1
9-Jul	5	4	4	4	4	14	15	12	3	2	7	4	2	A	4	6	3	2	122	3	3	5	4	4	10.3	122.1
10-Jul	13	10	8	27	18	28	11	10	3	4	1	2	A	3	3	3	3	7	6	2	3	14	4	12	8.6	28.4
11-Jul	3	3	3	3	16	5	4	3	2	1	1	A	2	7	4	15	10	5	2	3	1	2	4	1	4.3	15.9
12-Jul	2	1	2	1	1	8	1	1	1	1	A	4	1	2	2	2	1	1	2	2	1	1	1	1	1.7	7.9
13-Jul	1	1	1	1	1	3	3	3	1	A	5	2	4	2	1	2	2	2	1	1	4	11	8	9	2.9	10.8
14-Jul	10	7	5	5	7	19	8	5	A	8	2	3	2	5	6	4	4	3	1	8	1	11	1	3	5.5	18.6
15-Jul	2	1	1	1	1	7	15	A	7	8	8	8	6	4	2	2	2	2	2	1	0	1	1	1	3.6	14.8
16-Jul	1	12	1	2	1	12	A	8	8	10	2	2	1	1	1	1	1	2	1	1	1	1	2	3	3.2	11.9
17-Jul	2	2	2	6	7	A	22	4	2	2	9	2	2	3	0	1	1	1	2	7	5	8	4	8	4.5	22.4
18-Jul	1	19	12	8	A	9	9	7	5	4	2	2	2	3	61	8	10	5	2	2	5	7	4	3	8.3	61.2
19-Jul	10	4	2	A	10	11	8	8	4	3	3	21	9	4	4	1	3	6	2	1	3	3	17	2	6.1	20.6
20-Jul	4	3	3	A	9	19	20	8	C	C	C	C	13	16	3	2	8	8	6	1	16	10	22	13	9.6	21.8
21-Jul	3	4	5	A	11	9	6	39	9	C	C	C	C	C	2	20	13	6	21	66	12	22	6	18	15.1	66.0
22-Jul	11	3	12	A	23	30	27	12	10	7	27	12	9	2	4	2	8	6	30	42	18	39	39	22	17.2	41.8
23-Jul	3	1	A	4	2	6	11	7	6	12	12	11	4	5	8	9	50	17	7	11	23	118	12	7	14.9	117.6
24-Jul	13	A	15	49	4	22	5	3	7	14	12	13	8	3	7	14	21	20	13	14	12	27	11	9	13.8	49.4
25-Jul	A	53	12	12	9	7	6	6	18	3	9	58	11	55	13	2	0	1	0	3	27	4	28	A	15.4	58.3
26-Jul	18	6	13	3	5	5	3	2	3	2	21	7	1	2	1	1	1	1	3	2	3	12	A	4	5.2	21.4
27-Jul	4	5	8	6	16	16	21	15	13	3	1	2	3	8	4	4	5	10	4	7	10	A	6	4	7.6	21.1
28-Jul	3	6	5	6	50	39	16	10	10	10	3	5	3	2	4	4	29	4	4	7	A	16	16	3	11.2	50.4
29-Jul	2	2	5	25	9	18	8	23	10	25	4	8	2	17	11	6	11	2	17	A	9	9	52	19	12.8	52.1
30-Jul	17	9	16	16	16	28	49	14	21	5	11	2	3	6	6	1	1	1	A	3	5	5	3	4	10.5	49.1
31-Jul	10	12	11	5	12	14	8	12	4	3	2	2	2	1	15	2	3	A	4	6	44	41	5	6	9.8	43.9
	5.4	7.2	5.7	7.9	9.4	14.2	11.7	8.8	22.1	5.6	5.6	7.4	3.8	6.3	5.9	4.1	6.8	4.4	10.8	7.3	12.3	15.4	10.4	6.7	Diurnal Average	
	17.9	52.9	15.5	49.4	50.4	39.1	49.1	39.1	457.6	24.8	27.3	58.3	13.3	54.8	61.2	20.4	49.8	19.7	122.1	66.0	88.0	117.6	52.1	21.6	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

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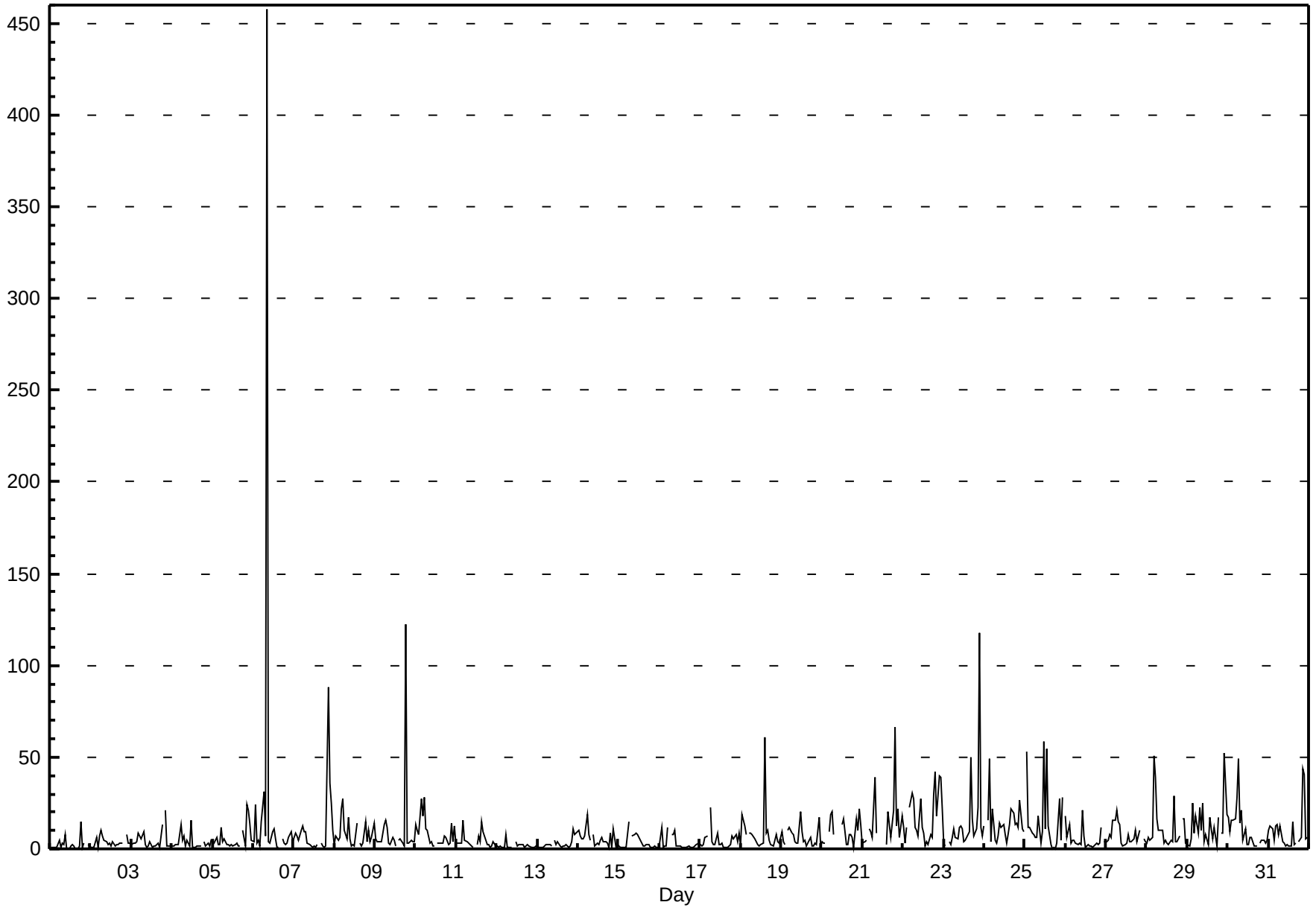
Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Portable-Bonanza - July 2010



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Hourly Averages

Ozone (O_3) - ppb

Portable-Bonanza - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 55.2 ppb on Jul 31 17:00 Maximum Daily Average: 33.9 ppb on Jul 31

Minimum Value: 1 ppb on Jul 10 04:00 Minimum Daily Average: 15.3 ppb on Jul 13
Maximum Diurnal Average: 31.8 ppb at hour 16 Minimum Diurnal Average: 14.2 ppb at hour 6
Monthly Average: 23.68 ppb Percentiles: P_1 = 4.3 P_{10} = 13.1 Q_1 = 17.3 Median = 22.7 Q_3 = 28.6 P_{90} = 35.5 P_{99} = 51.4

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

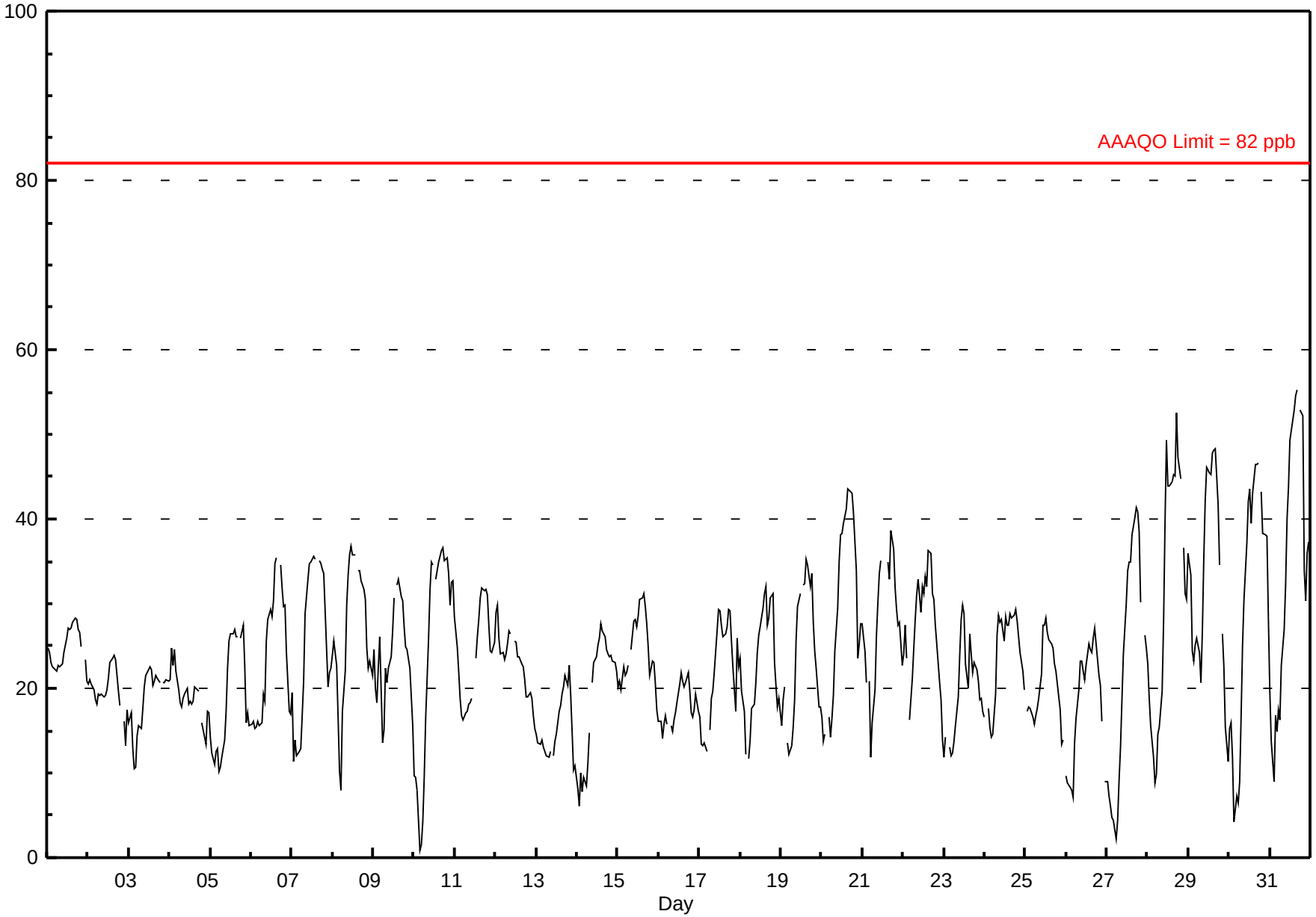
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Jul	25	24	23	23	22	22	23	23	23	23	24	26	27	27	27	28	28	28	27	27	25	A	23	21	24.7	28.4
2-Jul	21	21	21	20	19	18	19	19	19	19	19	20	21	23	24	24	23	22	20	18	A	16	13	17	19.8	23.8
3-Jul	16	17	13	10	11	14	16	15	18	20	21	22	23	22	20	21	22	21	21	A	21	21	21	21	18.5	22.6
4-Jul	21	25	23	25	22	20	18	18	19	19	20	18	19	18	18	20	20	20	A	16	15	13	17	17	19.2	24.8
5-Jul	14	12	11	13	13	10	11	12	14	17	22	26	26	27	27	26	26	A	26	28	23	16	17	16	18.8	27.5
6-Jul	16	16	15	15	16	16	16	19	19	26	28	29	28	30	35	35	A	34	32	30	30	24	17	17	23.7	35.5
7-Jul	20	11	14	12	12	13	17	21	29	33	35	35	35	36	35	A	35	35	34	34	25	20	22	22	25.4	35.6
8-Jul	24	26	23	17	10	8	17	22	30	33	36	37	36	36	A	34	34	33	32	31	25	22	23	21	26.4	36.8
9-Jul	25	20	18	22	26	14	15	22	21	22	24	27	31	A	32	33	31	30	27	25	25	22	19	16	23.8	32.9
10-Jul	10	9	8	1	1	4	9	16	26	32	35	35	A	33	35	36	36	37	35	35	34	30	32	33	24.4	36.6
11-Jul	29	25	22	19	17	16	17	17	18	18	19	A	24	26	28	31	32	32	32	31	27	24	24	25	24.0	31.9
12-Jul	29	30	26	24	24	23	24	25	27	26	A	26	25	24	24	23	23	21	19	19	20	19	17	15	23.1	29.9
13-Jul	15	13	13	14	13	13	12	12	13	A	12	14	15	17	18	19	20	22	20	23	19	15	10	11	15.3	22.6
14-Jul	8	6	10	8	9	8	11	15	A	21	23	24	25	26	28	27	26	25	24	24	24	23	23	22	19.1	27.6
15-Jul	20	21	20	23	22	22	23	A	25	28	28	27	28	31	31	31	30	28	25	22	23	23	20	17	24.6	31.3
16-Jul	16	16	14	16	17	16	A	16	15	16	17	18	21	22	21	20	21	22	20	17	17	17	19	17	17.8	21.9
17-Jul	17	13	13	14	13	A	15	19	20	22	27	29	29	27	26	27	27	29	29	26	23	17	26	22	22.2	29.4
18-Jul	24	20	17	12	A	12	14	18	18	21	24	26	27	30	31	32	27	28	31	31	23	20	18	19	22.8	32.1
19-Jul	16	19	20	A	14	12	13	16	19	26	30	31	P	32	32	35	35	32	34	28	24	22	18	18	23.8	35.3
20-Jul	17	14	15	A	17	14	16	19	24	29	35	38	38	39	41	44	43	43	43	41	34	24	25	28	29.6	43.6
21-Jul	28	24	21	A	21	12	16	20	26	30	34	35	C	C	C	35	33	39	36	32	29	28	28	23	27.4	38.7
22-Jul	24	28	23	A	16	21	25	28	31	33	29	32	31	33	32	36	36	31	30	27	25	21	19	14	27.3	36.3
23-Jul	12	14	A	13	12	12	14	16	19	24	28	30	29	23	20	26	24	22	23	22	21	19	19	17	19.9	29.9
24-Jul	17	A	18	15	14	15	19	26	29	28	28	26	28	27	27	29	28	29	29	28	26	24	22	20	24.0	29.3
25-Jul	A	17	18	18	17	16	17	18	19	22	28	27	28	27	26	25	25	23	22	21	17	13	14	A	20.7	28.2
26-Jul	10	9	8	8	7	14	16	20	23	23	22	21	23	25	24	24	26	27	23	22	20	16	A	9	18.3	27.2
27-Jul	9	7	6	5	4	2	4	9	13	19	24	30	34	35	35	38	40	41	41	38	30	A	26	25	22.5	41.4
28-Jul	23	19	16	12	9	10	15	15	20	28	40	49	44	44	44	45	45	53	47	45	A	37	31	31	31.3	52.6
29-Jul	36	33	24	23	25	26	24	21	27	35	42	46	45	45	48	48	48	42	35	A	26	23	15	11	32.6	48.3
30-Jul	15	16	12	4	7	6	9	17	25	30	37	42	44	39	43	46	46	47	A	43	38	38	38	28	29.3	46.7
31-Jul	20	14	9	17	15	17	16	23	27	32	40	44	49	52	53	55	55	A	53	52	34	30	36	37	33.9	55.2
	19.0	18.0	16.5	14.8	14.9	14.2	16.1	18.5	21.7	25.2	27.7	29.7	29.8	30.2	30.5	31.8	31.5	30.8	30.0	28.7	24.9	22.0	21.8	20.4	Diurnal Average	
	35.9	33.4	26.0	24.5	26.2	26.0	24.7	28.2	31.1	35.3	42.2	49.3	49.3	51.7	52.9	54.6	55.2	52.6	52.9	52.2	38.2	38.1	38.0	37.4	Diurnal Maximum	

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

Hourly Averages

Ozone (O_3) - ppb

Portable-Bonanza - July 2010



PASZA
Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

Portable-Bonanza - July 2010

Maximum Value: 58.2 ppb on Jul 28 17:00

Maximum Daily Average: 38.4 ppb on Jul 31

Minimum Value: 4 ppb on Jul 27 06:00

Minimum Daily Average: 17.6 ppb on Jul 13

Maximum Diurnal Average: 34.5 ppb at hour 17

Minimum Diurnal Average: 18.0 ppb at hour 6

Monthly Average: 26.77 ppb

Percentiles: P_1 = 9.9 P_{10} = 16.0 Q_1 = 20.1 Median = 25.9 Q_3 = 31.7 P_{90} = 38.7 P_{99} = 54.6

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

Day	Hourly Period Ending At (MST)																								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-Jul	27	26	25	25	24	24	24	24	24	25	26	28	29	28	29	30	30	30	29	29	28	A	26	23	26.6	30.5
2-Jul	22	23	22	22	21	20	21	21	21	21	21	21	23	24	26	28	26	25	21	20	A	18	16	22	22.0	28.2
3-Jul	19	22	15	12	15	19	19	18	19	22	23	23	25	24	22	23	23	23	22	A	23	22	22	23	20.9	24.5
4-Jul	26	27	25	27	26	21	20	19	21	21	21	21	20	21	20	22	21	22	A	18	17	15	20	20	21.4	26.7
5-Jul	16	14	12	14	15	13	13	14	16	21	25	28	28	29	29	28	28	A	28	29	27	20	20	18	21.1	29.3
6-Jul	18	18	17	17	18	17	18	22	25	28	31	31	30	36	38	38	A	37	34	33	33	30	23	21	26.6	37.8
7-Jul	23	20	18	16	15	17	19	27	32	36	37	37	37	37	37	A	37	37	36	35	35	27	25	26	29.0	37.4
8-Jul	27	29	26	21	17	17	19	27	34	35	38	39	38	39	A	36	36	35	33	34	31	27	28	28	30.1	38.7
9-Jul	27	27	21	26	28	27	21	26	27	24	26	31	32	A	34	36	35	32	31	31	28	26	22	19	27.8	35.6
10-Jul	18	18	12	4	6	10	12	25	32	34	37	37	A	35	37	38	39	39	39	37	36	33	35	35	28.2	39.0
11-Jul	32	27	25	21	18	22	19	19	20	20	21	A	25	29	32	34	36	33	34	33	31	28	28	29	26.7	36.0
12-Jul	31	35	29	27	26	25	26	27	29	29	A	28	28	25	26	24	24	23	21	21	21	21	19	17	25.3	34.7
13-Jul	16	15	15	15	15	15	14	14	14	A	14	15	17	19	20	21	22	25	22	24	23	19	17	17	17.6	24.6
14-Jul	15	12	12	11	11	10	13	18	A	23	25	25	27	29	31	29	30	27	26	26	25	24	24	24	21.6	30.8
15-Jul	23	23	22	25	24	24	25	A	26	31	30	29	31	33	33	33	31	30	28	24	26	25	23	20	26.9	33.4
16-Jul	17	18	16	18	19	18	A	17	16	18	19	20	22	23	22	22	22	24	22	19	19	19	22	20	19.7	23.7
17-Jul	19	16	15	16	17	A	19	21	21	25	29	31	31	30	29	28	35	33	31	31	26	26	36	32	25.9	36.0
18-Jul	25	25	22	16	A	15	19	19	20	25	26	28	31	31	33	35	30	30	33	33	30	24	22	21	25.9	34.6
19-Jul	20	22	22	A	16	14	15	18	22	30	31	33	P	34	35	37	37	34	36	33	26	26	23	20	26.6	37.0
20-Jul	18	19	16	A	19	16	19	23	27	33	39	40	40	41	44	46	45	46	45	43	40	32	31	30	32.8	46.2
21-Jul	30	27	25	A	24	15	18	23	29	33	36	37	C	C	C	38	38	41	40	36	32	30	30	29	30.6	40.5
22-Jul	29	30	30	A	23	30	31	34	35	34	33	35	35	37	35	39	39	34	33	32	28	26	23	18	31.4	39.3
23-Jul	14	15	A	14	14	14	16	18	21	27	30	33	32	27	22	29	28	24	24	25	23	21	21	20	22.3	32.7
24-Jul	19	A	21	19	18	19	26	30	30	31	31	29	31	29	30	30	30	32	32	30	29	28	25	22	26.9	31.8
25-Jul	A	20	20	19	19	17	19	19	21	25	31	31	30	29	27	27	26	25	23	22	22	18	18	A	23.1	30.7
26-Jul	13	13	11	10	13	17	19	23	25	25	25	23	27	27	26	26	28	29	28	23	23	19	A	13	21.2	29.1
27-Jul	11	11	10	9	8	4	7	13	16	23	27	33	37	37	37	41	42	44	44	42	37	A	28	26	25.6	44.5
28-Jul	25	22	20	16	13	15	20	17	26	34	47	54	47	46	47	48	58	56	52	47	A	39	37	37	35.7	58.2
29-Jul	39	36	35	32	30	30	31	25	31	40	45	49	49	48	51	50	51	49	40	A	32	30	24	26	37.9	50.6
30-Jul	24	21	20	14	17	13	13	22	29	35	43	45	46	45	47	49	48	48	A	46	41	42	42	34	34.1	49.0
31-Jul	24	22	15	21	20	21	20	26	29	37	44	47	52	54	55	57	57	A	56	55	53	39	39	39	38.4	57.0
	22.3	21.8	19.8	18.1	18.2	18.0	19.2	21.7	24.6	28.2	30.4	32.0	32.1	32.7	32.9	34.1	34.5	33.3	32.5	31.5	29.2	26.0	25.6	24.3	Diurnal Average	
	38.9	35.6	34.5	32.3	30.1	30.5	31.0	33.8	34.9	39.7	46.7	53.8	51.8	53.8	55.0	56.5	58.2	56.1	56.2	54.7	53.3	42.1	42.1	39.1	Diurnal Maximum	

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

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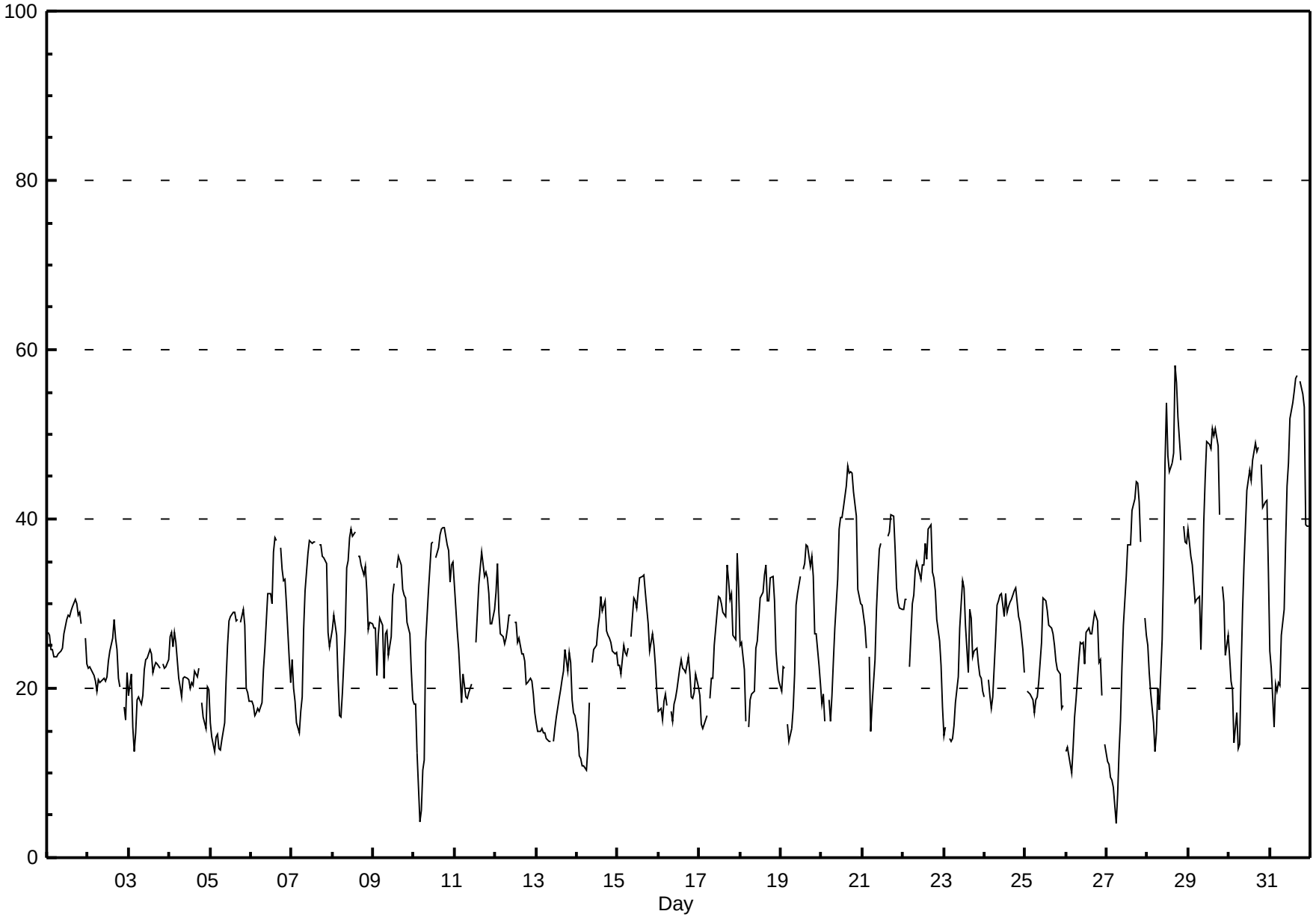
Hourly Maximums

Ozone (O_3) - ppb

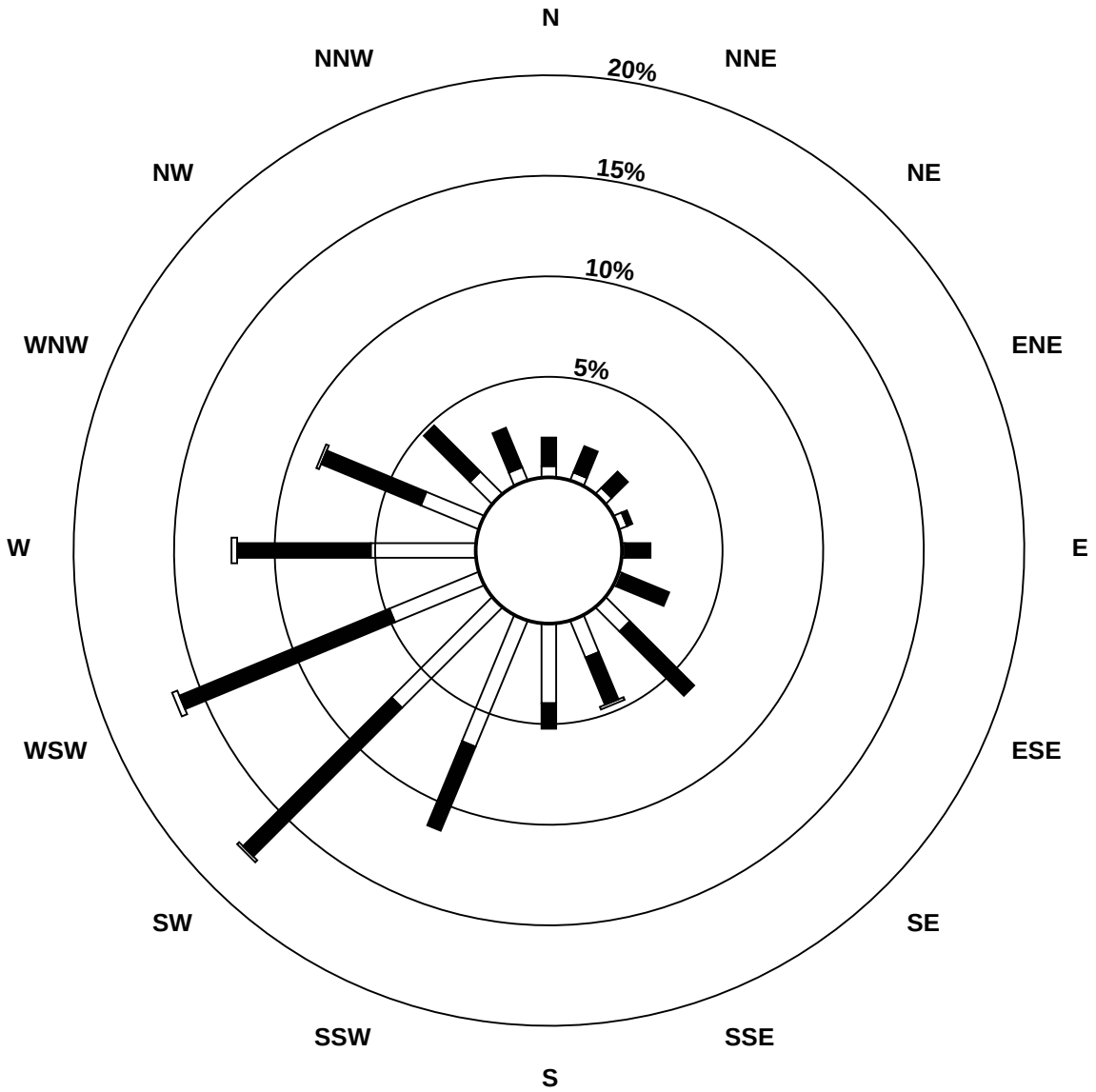
Portable-Bonanza - July 2010



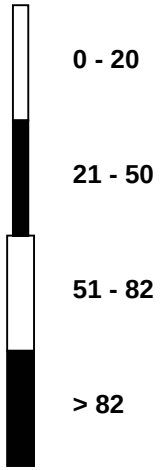
Pollutant Rose

Ozone (O_3) - ppb

Portable-Bonanza - July 2010



Pollutant Classes (ppb)



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Eight Hour Running Averages

Ozone (O_3) - ppb

Portable-Bonanza - July 2010

Maximum Value: 52.7 ppb on Jul 31 20:00

Minimum Value: 5.9 ppb on Jul 27 07:00

Percentiles: P_1 = 8.1 P_{10} = 14.7 Q_1 = 18.2 Median = 22.6 Q_3 = 27.6 P_{90} = 34.3 P_{99} = 45.6

Hours in Service:	744
Hours of Data:	738
Hours of Missing Data:	6
Hours of Calibration:	6
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	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-Jul	25	25	24	24	24	23	23	23	23	23	23	23	24	24	25	26	26	27	27	27	27	27	27	26	27.4
2-Jul	25	23	23	22	21	20	20	20	19	19	19	19	19	20	21	21	22	22	22	22	22	21	19	18	24.5
3-Jul	17	17	16	15	14	14	14	14	14	15	16	17	19	20	20	21	21	21	21	21	21	21	21	21	21.5
4-Jul	21	21	22	22	22	22	22	21	21	20	20	19	19	19	19	19	19	19	19	19	18	18	17	17	22.2
5-Jul	16	15	15	14	14	13	13	12	12	13	14	16	17	19	21	23	25	26	26	26	26	24	23	22	26.5
6-Jul	20	20	18	17	16	16	16	16	17	18	19	21	23	24	27	29	30	32	32	32	32	31	29	26	32.3
7-Jul	25	23	20	18	16	15	14	15	16	19	21	24	27	30	32	34	35	35	35	35	33	31	29	28	35.1
8-Jul	27	26	24	22	20	19	18	18	19	20	22	24	27	31	33	34	35	35	34	33	32	30	29	28	35.0
9-Jul	26	25	23	22	22	21	20	20	20	20	21	21	22	23	26	27	28	30	30	30	29	28	27	24	30.2
10-Jul	22	19	17	14	11	9	7	7	9	12	16	20	22	27	30	33	34	35	35	35	35	35	34	34	35.2
11-Jul	33	32	30	28	26	24	22	20	19	18	18	18	18	20	21	23	25	27	29	29	30	30	29	28	33.0
12-Jul	28	28	27	26	26	26	26	26	25	25	25	25	25	25	25	25	24	24	23	22	21	21	20	19	28.1
13-Jul	18	17	16	16	15	14	14	13	13	13	13	13	13	13	14	15	16	17	18	19	20	20	19	18	19.8
14-Jul	16	14	13	11	10	9	9	10	10	12	14	16	18	21	23	25	25	25	25	25	25	25	24	24	25.5
15-Jul	23	23	22	22	22	21	21	21	22	23	24	25	26	27	28	29	29	29	29	28	27	26	25	23	29.2
16-Jul	22	20	19	18	17	17	16	16	16	16	16	16	17	18	18	19	19	20	21	20	20	19	19	19	21.8
17-Jul	18	17	16	16	15	15	15	15	15	16	18	21	23	24	25	26	27	28	28	28	27	25	25	25	28.1
18-Jul	24	23	22	20	20	19	17	17	16	16	17	19	20	22	24	26	27	28	29	30	29	28	26	25	29.7
19-Jul	23	22	21	19	18	17	16	16	16	17	18	20	21	24	26	29	32	33	33	33	32	30	29	26	33.1
20-Jul	24	22	19	18	17	16	16	16	17	19	22	24	27	30	33	36	39	40	41	42	41	39	37	35	41.6
21-Jul	33	31	28	26	24	23	21	20	20	21	23	24	25	27	N	N	N	N	N	N	34	33	32	31	34.0
22-Jul	30	28	27	26	24	23	23	24	25	25	26	27	29	30	31	32	33	33	33	32	31	30	28	25	32.9
23-Jul	22	20	19	17	15	14	13	13	14	16	17	19	21	23	24	25	25	25	25	24	23	22	22	21	25.5
24-Jul	20	20	19	18	17	16	16	18	19	20	22	23	25	26	27	28	28	28	28	28	28	28	27	26	28.3
25-Jul	25	24	22	21	19	18	17	17	17	18	19	20	22	23	24	25	26	26	25	25	23	21	20	19	26.0
26-Jul	17	15	13	11	10	10	10	11	13	15	17	18	20	22	23	23	24	24	24	24	24	23	23	20	24.4
27-Jul	18	15	13	10	8	6	6	6	6	8	10	13	17	21	25	28	32	35	37	38	37	38	36	35	37.9
28-Jul	32	29	25	21	18	17	16	15	14	15	18	23	27	32	35	39	42	45	46	46	46	45	43	41	46.5
29-Jul	40	37	34	31	30	29	28	27	25	26	28	31	33	36	39	42	45	46	45	44	42	38	34	29	45.6
30-Jul	24	20	17	15	13	11	10	11	12	14	17	22	26	30	35	38	41	43	44	44	43	43	42	40	44.1
31-Jul	36	31	29	25	22	20	17	16	17	20	23	27	31	35	40	44	47	50	51	53	50	47	45	43	52.7
	39.8	37.1	33.9	30.8	30.1	28.7	27.9	26.6	25.5	25.7	27.9	30.8	33.3	35.7	39.9	43.9	47.5	49.6	51.5	52.7	50.5	47.4	45.0	42.5	
	Diurnal Maximums																								

N - Not Valid

PASZA
Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - °C

Portable-Bonanza - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 31.1 °C on Jul 8 20:00 Maximum Daily Average: 22.8 °C on Jul 8

Minimum Value: 6 °C on Jul 27 06:00 Minimum Daily Average: 13.1 °C on Jul 12
Maximum Diurnal Average: 23.5 °C at hour 16 Minimum Diurnal Average: 12.2 °C at hour 6
Monthly Average: 18.07 °C Percentiles: P_1 = 8.6 P_{10} = 11.6 Q_1 = 13.7 Median = 17.6 Q_3 = 21.9 P_{90} = 25.9 P_{99} = 29.3

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-Jul	9	8	8	8	8	8	9	11	12	14	16	17	17	18	17	18	18	18	17	16	16	14	14	12	13.4	18.1
2-Jul	11	11	11	10	10	10	11	12	12	13	14	15	17	17	19	19	20	20	19	18	17	16	15	14	14.6	19.8
3-Jul	13	13	13	12	12	12	13	13	15	17	18	19	20	19	19	21	20	20	20	19	19	17	16	16	16.5	20.6
4-Jul	15	15	14	13	13	13	13	14	16	16	16	16	16	17	16	16	15	14	13	12	12	12	11	10	14.1	17.3
5-Jul	10	10	10	11	11	11	12	13	15	17	19	19	21	22	21	22	22	23	23	22	21	18	17	15	16.9	22.8
6-Jul	14	14	13	12	12	12	13	16	18	20	21	23	23	24	25	25	25	26	25	26	26	22	17	16	19.6	26.1
7-Jul	16	14	14	13	13	14	16	17	20	22	24	25	26	27	27	28	28	28	27	28	25	21	19	19	21.2	28.0
8-Jul	20	18	16	13	12	12	15	17	20	23	25	27	28	29	30	30	30	31	31	31	26	22	21	20	22.8	31.1
9-Jul	20	19	18	19	19	16	17	20	22	23	24	25	25	25	26	26	26	25	24	21	19	16	16	15	21.2	26.5
10-Jul	15	15	14	13	13	14	15	17	20	22	23	26	26	27	26	28	29	27	27	26	24	21	19	18	21.1	28.7
11-Jul	18	18	18	17	17	18	19	20	22	24	25	26	27	26	27	27	27	26	24	24	23	20	19	18	22.0	27.2
12-Jul	17	17	15	14	13	14	12	11	11	12	13	14	14	12	13	15	14	14	13	12	11	11	11	11	13.1	17.3
13-Jul	11	11	11	11	11	11	11	12	12	13	14	16	16	17	18	19	20	20	20	21	18	17	14	13	15.0	20.9
14-Jul	14	14	14	14	14	14	16	18	20	22	24	25	25	26	27	27	26	26	25	23	22	21	19	18	20.6	26.8
15-Jul	17	16	14	14	13	13	15	17	18	19	19	20	21	21	20	21	21	21	19	18	15	13	12	10	17.0	21.4
16-Jul	10	10	9	10	11	11	11	12	13	14	15	16	18	19	19	19	20	20	19	16	15	14	14	13	14.5	19.8
17-Jul	13	13	12	10	10	9	11	14	16	18	20	21	22	23	24	24	23	24	22	21	18	16	16	14	17.3	24.2
18-Jul	13	13	12	12	12	12	12	13	14	16	18	19	19	20	21	21	19	19	21	20	18	16	14	14	16.2	21.3
19-Jul	13	12	13	12	12	12	13	14	16	18	21	22	23	24	25	25	26	25	24	22	21	19	17	15	18.5	25.9
20-Jul	14	12	12	11	11	10	12	14	17	19	22	24	25	27	26	28	27	28	27	27	26	19	18	18	19.7	28.2
21-Jul	17	16	14	16	14	12	13	16	18	21	25	27	28	28	26	23	22	25	26	24	22	21	20	17	20.4	28.1
22-Jul	16	16	16	15	15	14	15	16	16	16	15	15	15	16	18	21	21	21	21	20	19	18	17	15	16.9	20.8
23-Jul	14	14	14	13	13	14	15	17	18	20	21	22	23	24	25	26	26	26	26	25	24	21	22	22	20.2	25.9
24-Jul	20	19	17	15	13	13	15	17	17	18	18	19	19	20	21	21	22	21	21	20	18	17	15	14	17.9	21.6
25-Jul	13	12	11	11	10	10	12	14	16	18	19	21	21	22	23	23	24	24	23	22	20	18	16	15	17.5	23.8
26-Jul	14	13	13	13	12	14	14	15	16	15	16	16	18	19	19	19	20	20	20	20	18	15	14	12	16.0	20.4
27-Jul	11	10	9	9	8	6	9	11	14	17	20	23	24	25	27	28	27	27	27	26	23	19	19	18	18.2	27.7
28-Jul	17	16	14	11	10	11	13	15	18	20	24	26	29	29	31	29	26	27	25	23	22	20	18	17	20.4	31.1
29-Jul	17	17	14	13	14	14	14	15	18	22	24	26	27	28	29	29	29	24	19	19	18	16	14	13	19.8	29.0
30-Jul	13	12	11	9	10	9	10	13	16	18	20	22	23	22	22	23	24	25	24	23	21	19	17	16	17.7	25.0
31-Jul	14	12	11	12	12	12	12	15	16	18	21	23	25	25	27	27	27	28	27	26	23	18	18	19	19.5	27.6
	14.5	13.9	13.1	12.5	12.2	12.2	13.3	14.8	16.6	18.2	19.7	21.1	22.1	22.6	23.1	23.5	23.4	23.3	22.6	21.7	20.0	17.6	16.4	15.4	Diurnal Average	
	20.4	19.1	18.4	19.2	19.1	17.8	19.4	20.4	22.3	23.7	25.3	27.4	29.1	29.0	31.1	30.0	30.3	30.7	30.7	31.1	26.1	22.1	21.6	21.7	Diurnal Maximum	

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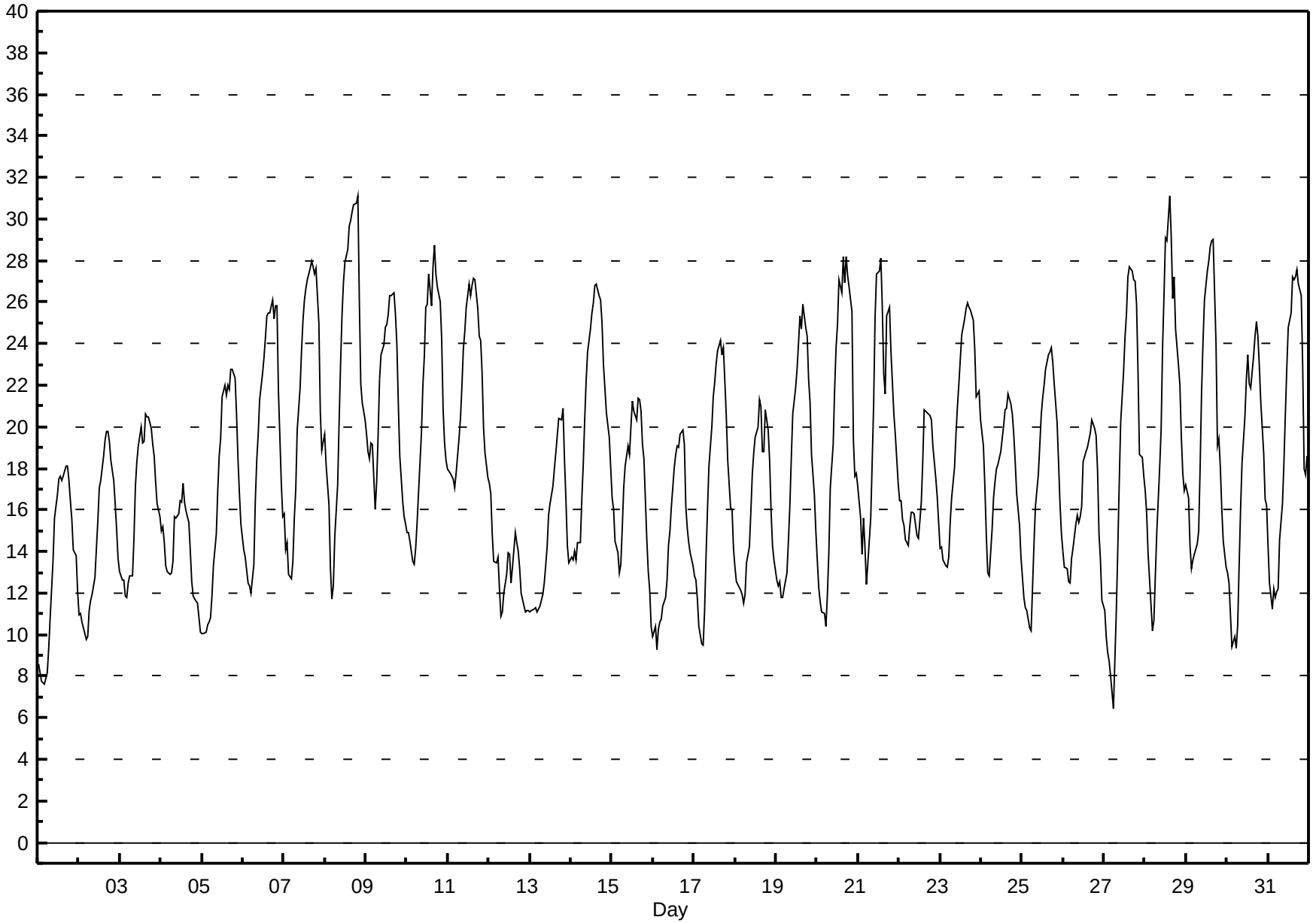
Hourly Averages

External Temperature (ET) - ^{o}C

Portable-Bonanza - July 2010



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Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Portable-Bonanza - July 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	23	25	23	23	23	26	29	33	32	30	39	40	41	40	40	41	38	38	37	35	31	24	21	17	30.3	41.4
Dir	202	200	204	207	206	203	205	219	219	216	230	234	236	229	219	224	231	239	238	241	233	226	223	224	223	236
2 Spd	17	18	18	18	16	16	22	25	25	25	25	27	29	27	28	27	27	29	29	27	25	18	11	10	22.1	28.8
Dir	222	215	216	216	218	224	247	241	241	242	238	235	232	236	237	244	238	236	232	232	229	227	244	263	234	236
3 Spd	8	7	7	5	3	13	14	13	15	21	21	22	25	23	27	29	34	32	30	29	26	20	19	13	18.6	34.3
Dir	242	256	218	232	239	258	239	232	233	257	254	242	246	251	240	242	234	235	232	227	221	211	211	236	236	234
4 Spd	15	22	21	21	24	23	23	22	28	28	26	28	19	23	24	27	23	22	19	17	14	11	16	12	19.1	28.0
Dir	233	232	232	231	234	231	232	240	256	261	266	255	275	270	287	310	312	299	290	276	269	261	276	259	262	256
5 Spd	13	12	10	11	12	7	9	12	17	21	22	26	26	23	22	22	19	20	21	20	13	7	9	9	14.7	25.9
Dir	227	221	249	279	281	265	271	273	278	277	292	297	277	272	285	278	275	269	262	278	264	229	181	210	270	297
6 Spd	10	7	10	9	11	8	8	12	9	8	9	13	14	16	15	17	12	13	11	8	3	4	7	8	6.5	17.3
Dir	219	213	192	192	201	196	214	263	266	266	254	247	257	258	305	307	283	284	295	338	301	72	61	49	260	307
7 Spd	4	4	8	6	6	3	3	6	6	11	9	9	11	12	12	12	11	11	10	7	2	7	9	8	4.6	11.9
Dir	74	232	207	185	204	214	191	229	254	265	297	295	290	285	281	287	272	268	280	281	102	129	134	91	260	287
8 Spd	10	12	5	2	2	3	8	8	8	10	6	5	7	7	10	11	11	10	10	6	7	9	10	9	1.8	12.3
Dir	83	108	89	314	160	196	200	206	249	233	207	210	264	240	278	265	274	323	353	44	104	116	123	140	209	108
9 Spd	11	6	9	9	7	7	3	7	13	12	10	7	9	10	12	11	10	5	8	2	21	10	6	4	4.0	20.8
Dir	134	197	187	183	170	14	1	30	38	22	19	10	342	341	352	3	5	350	342	19	296	41	87	227	6	296
10 Spd	2	5	5	5	2	3	3	3	4	6	3	5	3	3	5	5	8	7	12	10	10	9	11	11	4.3	11.7
Dir	344	160	166	48	150	163	169	358	77	93	41	35	92	112	231	155	103	157	126	155	141	138	135	137	130	126
11 Spd	11	11	13	12	13	11	11	10	21	24	23	26	36	36	29	31	29	36	30	20	13	12	13	12	17.8	36.4
Dir	142	147	144	144	145	146	157	155	199	202	212	218	225	220	222	215	227	220	222	210	221	210	216	212	205	220
12 Spd	13	18	16	15	18	22	31	24	23	24	24	26	22	24	22	23	21	21	26	25	23	18	19	17	19.7	31.5
Dir	220	242	229	224	224	232	281	280	277	296	274	281	285	306	284	276	280	292	305	291	282	273	271	270	274	281
13 Spd	17	19	19	21	19	22	20	22	20	19	17	18	19	24	24	21	19	16	13	13	8	5	4	6	14.6	24.2
Dir	265	263	271	273	282	294	293	293	302	292	293	297	292	296	297	311	313	318	353	341	340	63	125	128	296	296
14 Spd	4	2	4	6	8	7	8	14	19	24	18	19	22	21	24	23	28	30	32	24	19	18	18	17	15.8	32.3
Dir	117	175	171	193	195	215	231	233	253	247	267	261	253	252	241	232	242	242	232	222	204	206	203	204	232	232
15 Spd	16	16	17	12	11	14	14	23	30	28	27	30	33	35	29	31	33	34	33	31	28	18	11	5	22.7	35.4
Dir	213	209	213	211	217	209	227	229	233	252	248	243	232	243	247	241	231	242	241	221	221	218	217	244	232	243
16 Spd	11	12	10	14	11	11	12	13	20	19	15	15	19	21	22	25	20	17	17	25	13	5	8	5	12.3	24.8
Dir	222	222	218	240	239	216	218	219	234	258	276	262	275	279	287	304	278	267	276	336	337	299	276	288	267	304
17 Spd	7	7	7	9	9	9	10	11	11	13	13	12	12	11	9	11	14	13	13	8	5	4	12	16	7.9	16.2
Dir	267	261	271	214	202	206	212	222	250	249	247	276	256	244	233	256	261	222	179	350	89	275	269	330	248	330
18 Spd	18	11	4	7	6	6	5	10	9	8	11	13	9	12	7	13	19	9	3	5	7	6	7	7	5.0	19.3
Dir	347	14	49	252	255	194	241	288	278	297	332	338	328	334	316	337	8	32	349	293	248	191	161	171	321	8
19 Spd	6	8	8	8	9	8	8	8	10	6	6	9	10	6	10	6	6	11	4	8	6	7	6	6	3.5	10.5
Dir	190	164	179	211	220	245	234	239	245	293	288	302	300	302	39	311	355	47	312	343	317	240	215	206	263	47
20 Spd	7	6	7	6	7	7	6	7	5	4	3	5	5	2	5	3	7	4	5	5	2	6	10	12	3.3	11.9
Dir	185	191	191	198	191	196	208	210	245	280	286	309	244	250	264	279	205	185	316	289	90	116	126	135	203	135
21 Spd	13	8	6	10	6	3	6	5	5	3	3	4	5	6	20	24	27	16	13	10	11	13	11	4	7.5	26.8
Dir	137	143	152	139	140	279	253	176	192	128	83	164	221	236	212	153	118	95	123	132	133	134	141	89	146	118
22 Spd	5	8	2	6	2	2	7	7	11	14	12	12	11	8	6	5	9	14	11	11	13	7	9	9	6.0	14.3
Dir	125	135	162	213	188	253	237	171	186	206	184	199	228	280	306	316	242	248	267	254	291	269	207	190	226	248

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Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Portable-Bonanza - July 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	8	11	8	10	11	13	15	17	25	26	21	25	25	29	29	31	33	28	26	26	17	12	16	22	18.9	33.1
Dir	193	190	175	185	197	202	212	220	235	236	217	228	234	242	244	245	238	216	217	217	206	161	191	208	221	238
24 Spd	20	21	16	10	4	7	15	30	39	39	44	46	46	42	42	39	38	39	38	36	31	28	21	17	28.8	46.5
Dir	202	210	215	214	233	205	244	241	240	245	244	246	249	255	244	257	247	244	251	252	242	240	230	226	242	249
25 Spd	16	12	11	13	12	13	16	22	21	19	16	18	19	19	17	18	20	21	18	17	6	8	10	3	13.2	21.9
Dir	226	213	206	204	211	216	222	228	237	251	254	245	250	252	252	250	257	269	280	285	296	268	9	37	246	228
26 Spd	2	5	8	4	6	14	19	23	23	18	17	16	16	22	21	20	15	13	20	17	12	10	4	3	12.6	23.0
Dir	286	221	213	250	266	292	294	310	313	313	296	277	281	299	292	289	302	288	306	310	313	305	339	153	296	310
27 Spd	4	3	6	3	4	2	3	5	5	2	2	4	5	8	7	6	7	4	7	9	7	11	12	16	4.3	15.8
Dir	203	191	166	186	185	218	177	214	215	232	288	334	111	129	108	121	133	148	134	112	107	104	108	119	136	119
28 Spd	15	13	2	3	5	5	5	3	5	6	5	7	6	8	5	3	10	11	19	15	14	8	7	7	4.2	19.0
Dir	119	124	187	171	125	135	203	320	12	21	29	14	27	6	41	301	152	167	140	154	174	144	176	170	133	140
29 Spd	10	12	4	7	9	9	7	6	6	8	9	15	19	15	15	13	10	23	13	8	7	5	5	6	7.8	22.6
Dir	148	139	147	165	154	161	166	214	195	235	241	239	227	229	238	195	198	248	253	271	209	234	174	145	211	248
30 Spd	9	6	5	1	5	4	5	6	8	12	13	13	18	23	21	13	10	6	11	18	14	18	6	9	5.9	22.7
Dir	158	184	202	294	128	179	179	235	210	262	267	281	306	325	342	325	309	309	288	295	309	16	159	225	292	325
31 Spd	3	1	4	7	6	8	9	8	8	4	5	5	3	6	2	5	6	4	6	5	3	7	9	11	3.3	10.8
Dir	250	327	145	204	186	181	200	229	278	288	261	282	260	279	288	246	237	263	273	235	126	126	138	139	218	139
Spd	6.4	7.5	7.6	7.6	7.3	7.5	9.2	10.8	12.4	12.8	12.4	13.6	14.8	14.7	13.7	13.3	12.4	13.0	11.8	10.0	8.0	5.1	6.0	5.3	Diurnal Average	
Dir	201	202	207	213	212	221	234	241	247	255	257	257	256	262	260	260	253	250	252	256	242	213	199	201		
Spd	23.5	24.9	22.6	23.2	23.9	25.8	31.5	32.9	38.9	38.7	43.7	46.4	46.5	42.0	41.7	40.6	38.1	39.5	37.6	35.9	31.1	27.5	21.1	22.3	Diurnal Maximum	
Dir	202	200	204	207	234	203	281	219	240	245	244	246	249	255	244	224	247	244	251	252	242	240	230	208		

Maximum Speed Value: 46 km/h on Jul 24 13:00
Minimum Speed Value: 1 km/h on Jul 30 04:00
Maximum Daily Speed Average: 30.3 km/h on Jul 1
Minimum Daily Speed Average: 1.8 km/h on Jul 31
Maximum Diurnal Speed Average: 14.8 km/h at hour 13
Minimum Diurnal Speed Average: 5.1 km/h at hour 22

Monthly Average Velocity: 9.49 km/h 242.3 deg
Speed Percentiles: P_1 = 2.0 P_{10} = 4.5 Q_1 = 6.7 Median = 11.4 Q_3 = 19.8 P_{90} = 26.7 P_{99} = 39.8
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

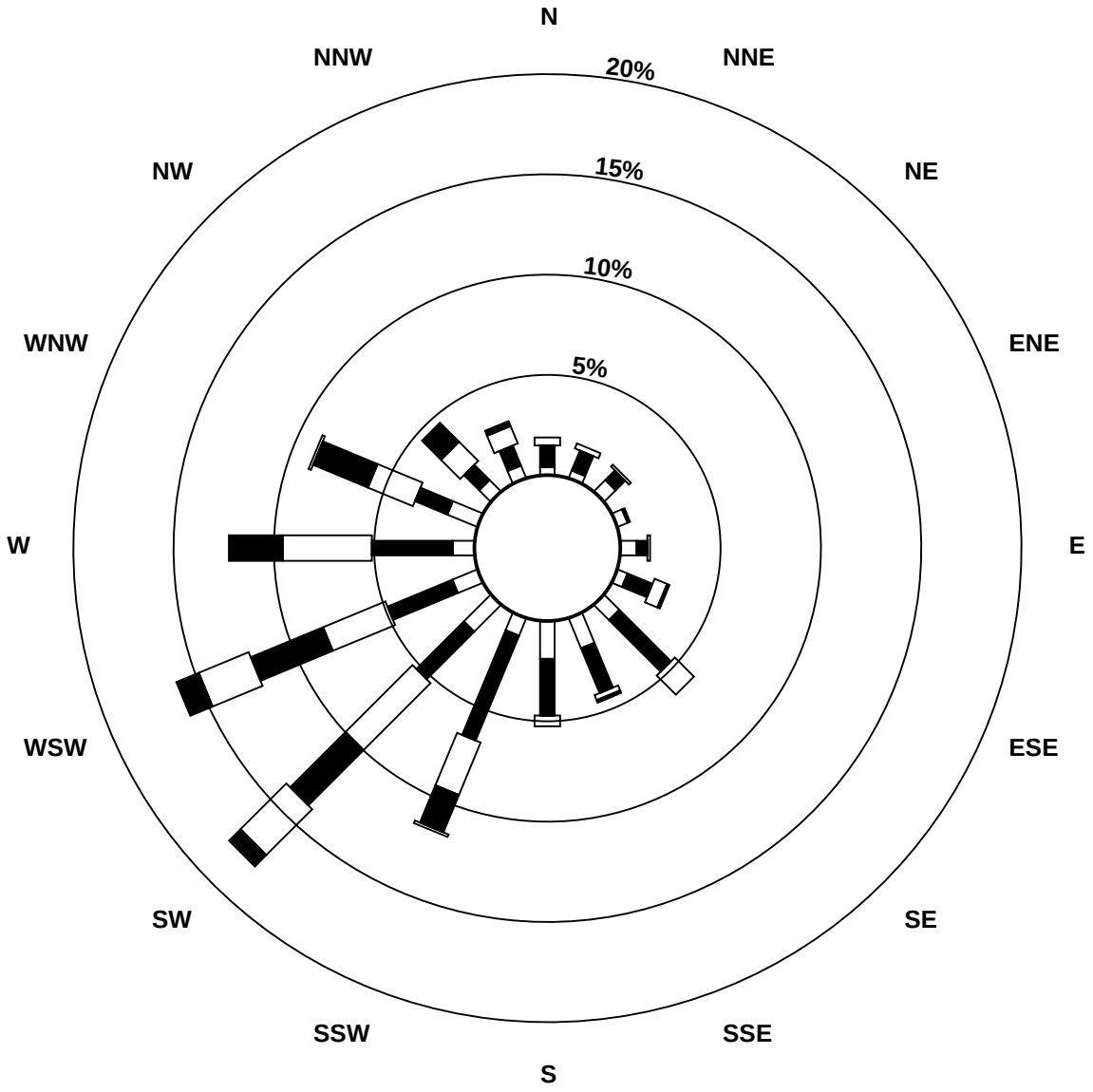
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	7	19	8	2	0	0	36
NorthEast	6	11	1	0	0	0	18
East	10	12	3	0	0	0	25
SouthEast	11	37	19	3	0	0	70
South	21	52	10	5	0	0	88
SouthWest	16	63	66	56	43	14	258
West	19	36	65	49	3	3	175
NorthWest	13	17	21	23	0	0	74
Total	103	247	193	138	46	17	744

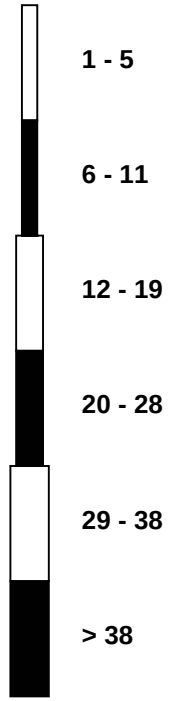
Wind Rose

Wind Speed (WS) (km/h)

Portable-Bonanza - July 2010



Wind Speed Classes (km/h)



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Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Portable-Bonanza - July 2010

Maximum Speed: 47 km/h on Jul 24 12:00

Maximum Daily Speed Average: 31.4 km/h on Jul 1

Minimum Speed: 2 km/h on Jul 27 06:00

Minimum Daily Speed Average: 7.0 km/h on Jul 20

Maximum Diurnal Speed Average: 19.8 km/h at hour 17

Minimum Diurnal Speed Average: 9.7 km/h at hour 5

Monthly Average Speed: 14.67 km/h

Percentiles: P_1 = 3.4 P_{10} = 5.6 Q_1 = 7.7 Median = 12.0 Q_3 = 20.5 P_{90} = 27.1 P_{99} = 40.2

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-Jul	24	25	23	23	23	26	29	33	33	31	40	40	42	40	41	41	39	39	37	35	31	24	21	17	31.4	42.1
2-Jul	17	18	18	18	16	16	22	25	25	26	26	27	29	27	28	28	27	29	29	27	25	18	11	10	22.6	29.2
3-Jul	8	7	7	5	5	13	14	13	15	22	22	23	25	24	27	29	35	33	31	29	26	21	19	14	19.5	34.7
4-Jul	15	22	21	21	24	24	23	22	28	28	26	28	21	27	24	27	24	22	19	17	14	11	16	12	21.6	28.4
5-Jul	13	12	11	11	12	7	9	12	17	21	23	26	26	24	22	22	19	21	22	20	13	8	9	9	16.3	26.4
6-Jul	11	7	10	10	11	8	8	12	10	9	10	14	16	17	17	19	13	14	11	8	4	7	8	8	10.9	19.2
7-Jul	5	4	8	6	6	3	3	7	7	12	10	10	13	13	13	13	13	12	10	7	4	7	9	11	8.6	13.3
8-Jul	10	13	9	4	4	4	8	8	9	10	7	8	9	9	12	13	13	12	10	6	7	9	10	9	8.9	13.3
9-Jul	11	8	9	9	7	8	5	7	13	12	11	8	10	11	13	12	10	6	8	6	22	12	8	5	9.7	21.9
10-Jul	5	5	6	5	3	4	4	4	5	7	6	6	6	7	8	8	9	9	13	11	10	9	11	11	7.2	13.1
11-Jul	12	11	13	12	13	11	11	10	21	25	24	27	36	36	30	32	30	37	30	21	13	12	13	12	20.5	36.7
12-Jul	14	18	16	15	18	23	32	24	23	24	25	26	23	25	23	24	22	22	27	25	23	18	19	18	21.9	31.7
13-Jul	17	19	20	21	19	22	20	22	20	19	17	18	19	24	24	21	19	16	14	13	8	5	5	6	17.0	24.4
14-Jul	4	3	5	7	8	7	8	14	19	24	19	20	22	22	25	24	29	31	33	25	20	18	18	17	17.6	32.5
15-Jul	16	16	17	13	11	14	15	23	31	29	27	30	34	36	30	31	34	34	33	31	29	18	12	6	23.7	35.7
16-Jul	11	12	10	15	12	11	12	13	20	20	15	15	20	22	23	26	21	18	17	25	13	6	8	6	15.4	25.6
17-Jul	7	7	8	9	9	9	10	11	12	13	14	13	13	13	11	13	15	16	13	12	6	6	17	18	11.4	17.7
18-Jul	19	11	6	8	7	6	6	11	9	9	12	13	10	13	8	14	20	10	5	5	7	6	7	8	9.5	19.6
19-Jul	7	8	8	9	9	8	8	9	10	7	8	10	11	11	10	9	11	11	5	8	7	7	7	7	8.5	11.4
20-Jul	7	6	7	6	7	7	7	7	6	5	5	7	8	9	7	6	9	7	7	5	4	7	10	12	7.0	11.9
21-Jul	13	8	7	10	7	4	6	5	6	4	4	6	8	10	22	25	27	17	13	10	11	13	11	4	10.5	27.2
22-Jul	6	8	5	6	3	2	7	7	12	14	12	12	11	9	6	7	10	15	12	11	13	8	9	9	8.9	14.6
23-Jul	8	11	8	10	11	13	15	17	25	27	21	25	26	29	30	31	33	29	26	26	18	12	17	22	20.5	33.5
24-Jul	20	21	16	11	6	7	15	31	39	39	44	47	47	42	42	39	39	40	38	36	31	28	21	17	29.9	46.9
25-Jul	16	12	12	13	12	13	16	22	21	20	17	19	20	20	18	19	22	22	18	18	8	10	11	4	16.0	22.1
26-Jul	3	5	8	5	7	14	20	24	23	18	18	16	17	22	21	20	15	14	20	17	13	10	6	5	14.3	23.5
27-Jul	5	4	6	4	4	2	3	5	5	3	4	8	9	9	9	9	9	6	8	9	7	11	13	16	7.0	15.8
28-Jul	15	13	4	3	6	6	5	4	5	6	6	8	8	9	8	7	16	12	19	15	14	8	8	7	8.8	19.3
29-Jul	10	12	6	7	9	9	7	7	7	8	11	15	20	16	16	14	12	24	17	9	7	7	6	6	10.9	23.9
30-Jul	9	6	7	5	7	4	6	6	9	12	13	15	18	24	21	13	11	9	12	19	14	22	8	9	11.6	24.3
31-Jul	7	4	5	7	6	8	9	8	9	6	6	7	6	8	7	8	8	7	6	5	4	7	9	11	7.0	10.8
	11.1	10.9	10.1	10.0	9.7	10.1	11.7	13.7	15.9	16.5	16.3	17.8	18.8	19.7	19.2	19.5	19.8	19.1	18.2	16.5	13.7	11.7	11.5	10.5	Diurnal Average	
	23.5	25.0	22.6	23.2	24.0	25.9	31.7	33.2	39.2	39.1	44.1	46.9	46.9	42.4	42.2	41.1	39.0	40.0	37.8	36.2	31.2	27.6	21.2	22.5	Diurnal Maximum	

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

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Peace Airshed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Portable-Bonanza - July 2010

Maximum Value: 96.5 deg on Jul 20 14:00

Minimum Value: 2.2 deg on Jul 28 00:00

Percentiles: P_1 = 3.0 P_{10} = 5.7 Q_1 = 8.2 Median = 13.5 Q_3 = 27.8 P_{90} = 50.6 P_{99} = 83.6

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-Jul	4	3	4	4	4	4	5	7	8	11	10	11	11	9	10	9	14	9	8	5	4	4	5	7	14.1
2-Jul	4	3	3	3	5	8	6	5	6	6	7	8	8	9	10	12	10	10	7	7	6	7	11	10	12.1
3-Jul	6	18	8	15	56	5	13	8	11	12	19	17	13	13	7	7	8	7	7	6	7	5	3	26	55.9
4-Jul	10	5	6	5	4	4	5	6	8	9	10	11	22	31	10	9	8	12	6	7	5	4	5	11	31.2
5-Jul	7	5	9	6	6	11	8	9	8	10	17	12	12	14	14	11	11	19	8	8	8	15	9	18	18.6
6-Jul	15	7	6	6	3	5	18	10	15	31	27	24	25	20	30	29	29	19	15	17	44	50	31	6	49.8
7-Jul	55	29	9	14	9	15	47	28	25	19	25	31	40	31	31	28	32	24	16	19	89	15	6	42	89.2
8-Jul	22	12	57	68	74	43	8	24	22	19	46	66	58	49	40	32	26	39	21	9	14	10	4	12	73.6
9-Jul	4	32	10	11	7	30	58	29	9	11	18	28	30	33	27	17	28	43	25	75	19	38	46	52	75.3
10-Jul	70	14	54	28	65	40	45	49	41	37	76	48	67	81	66	60	46	50	30	20	6	3	4	5	81.1
11-Jul	4	10	4	5	5	7	8	10	12	9	9	17	10	10	15	11	15	8	10	6	6	8	10	17	17.3
12-Jul	51	9	10	8	7	16	6	8	8	9	13	13	11	9	15	15	12	15	7	9	9	8	6	6	50.9
13-Jul	7	5	6	7	7	6	8	6	6	6	10	9	9	8	7	11	9	12	10	13	26	15	25	23	26.1
14-Jul	38	55	15	13	5	10	13	14	13	10	19	17	15	19	15	15	12	10	6	12	6	4	3	6	55.2
15-Jul	5	3	4	36	9	5	12	7	7	12	8	13	10	7	11	11	12	9	8	11	7	6	37	26	37.3
16-Jul	6	6	5	15	13	9	9	9	6	20	13	17	17	16	17	15	16	19	10	9	16	31	12	12	30.9
17-Jul	11	11	13	26	11	9	7	9	14	16	21	29	29	31	38	35	35	34	18	44	34	69	62	32	68.6
18-Jul	12	18	55	21	22	13	33	13	16	26	19	17	29	20	45	24	10	18	54	14	17	14	11	14	55.2
19-Jul	20	17	9	5	6	8	11	22	17	39	48	38	32	65	26	68	58	17	46	9	38	19	13	12	67.6
20-Jul	16	19	12	12	7	14	14	10	34	52	58	56	64	96	68	84	46	65	63	22	52	12	3	4	96.5
21-Jul	3	19	34	6	68	49	12	27	29	57	59	54	69	65	24	21	10	12	10	8	5	3	10	37	68.7
22-Jul	60	6	81	12	47	34	10	19	14	10	9	6	17	19	32	55	41	11	18	19	10	23	9	7	81.2
23-Jul	9	6	11	12	4	5	8	7	9	12	14	13	17	12	17	11	9	12	9	8	18	14	19	7	18.6
24-Jul	7	5	12	16	42	23	12	8	8	8	8	9	8	8	10	9	11	9	6	7	4	4	7	6	41.7
25-Jul	4	4	6	5	9	3	6	7	11	13	16	19	22	18	23	19	25	14	9	16	41	39	17	78	77.7
26-Jul	61	13	7	26	36	15	13	11	9	10	13	14	15	11	11	13	13	19	11	10	10	7	64	71	71.1
27-Jul	29	29	18	22	13	40	31	15	30	54	66	69	52	46	70	69	60	64	53	13	8	5	9	2	69.6
28-Jul	3	9	75	41	15	32	18	45	20	21	37	34	49	41	60	85	61	26	9	17	6	12	21	26	84.9
29-Jul	9	6	65	10	21	8	25	28	22	27	28	20	15	18	26	24	41	23	36	26	29	49	44	14	64.6
30-Jul	15	14	42	88	46	42	35	21	20	20	18	32	18	22	9	23	27	51	24	13	9	42	46	15	87.8
31-Jul	74	84	33	14	22	7	8	23	19	46	35	47	79	50	89	60	53	76	28	25	65	5	4	3	89.3
	74.4	83.8	81.2	87.8	73.6	48.5	57.7	49.4	40.7	56.7	75.8	69.0	79.1	96.5	89.3	84.9	60.6	75.9	62.9	75.3	89.2	68.6	64.4	77.7	

PASZA
Valleyview Station
Monthly Summary Tables, Graphs and Roses

PASZA
Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Valleyview - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8.4 ppb on Jul 16 21:00 Maximum Daily Average: 2.9 ppb on Jul 14

Minimum Value: 0 ppb on Jul 1 02:00 Minimum Daily Average: 0.0 ppb on Jul 1
Maximum Diurnal Average: 1.4 ppb at hour 10 Minimum Diurnal Average: 0.1 ppb at hour 6
Monthly Average: 0.66 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.2 Q_3 = 0.6 P_{90} = 2.0 P_{99} = 7.4

Hours in Service:	706
Hours of Data:	672
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Jul	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
2-Jul	A	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	2	2	1	1	0	0	0	0	0.5	2.4
3-Jul	A	0	0	2	2	2	3	1	1	1	0	1	0	1	0	1	0	1	2	2	3	2	0	0	1.2	3.2
4-Jul	A	0	0	0	0	0	5	1	2	1	3	2	1	0	3	1	0	0	0	0	0	1	0	0	1.0	4.9
5-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	0	0.3	3.0
6-Jul	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	C	C	NS	NS	NS	NS	NS	NS	--	0.8
7-Jul	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
8-Jul	NS	NS	NS	NS	NS	NS	NS	NS	C	C	C	1	0	0	0	0	0	0	0	0	0	0	0	0	--	0.6
9-Jul	A	0	0	0	0	0	0	0	0	0	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0.3	2.2
10-Jul	A	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	3.4
11-Jul	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
12-Jul	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	0.6
13-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	3	1	2	3	2	0.7	3.5
14-Jul	A	2	1	1	0	0	0	7	8	7	5	2	2	1	3	2	2	2	8	8	4	2	0	0	2.9	8.1
15-Jul	A	0	0	0	0	0	0	1	0	0	2	1	2	2	1	2	0	0	0	0	0	1	1	2	0.7	2.0
16-Jul	A	0	0	0	0	0	0	1	3	5	2	1	1	1	1	0	0	1	0	1	8	5	2	0	1.4	8.4
17-Jul	A	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.6
18-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.1	0.5
19-Jul	A	0	1	0	0	0	0	1	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	8.1
20-Jul	A	0	0	0	0	0	0	0	1	1	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0.3	2.2
21-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0.3	3.9
22-Jul	A	0	0	0	0	0	0	0	0	4	1	0	1	1	0	0	0	4	3	2	6	0	0	2	1.1	5.8
23-Jul	A	5	1	0	0	0	0	0	2	2	5	2	0	0	0	2	5	4	6	0	0	0	0	0	1.6	6.1
24-Jul	A	0	0	0	0	0	0	0	0	4	3	2	3	2	2	2	0	2	0	0	0	0	0	0	1.0	4.2
25-Jul	A	0	0	0	0	0	0	2	2	1	2	2	2	1	2	0	0	0	0	0	1	0	0	0	0.7	2.0
26-Jul	A	0	0	0	0	0	0	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	4.2
27-Jul	A	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	2	0.4	1.7
28-Jul	A	1	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0.7	1.3
29-Jul	A	0	0	0	0	0	0	0	0	2	5	6	2	1	0	0	0	2	0	0	0	0	0	0	0.9	5.8
30-Jul	A	0	0	0	0	0	0	0	0	1	2	0	4	1	0	1	0	0	4	8	0	0	0	0	1.0	8.0
31-Jul	A	0	0	0	0	0	0	3	1	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0.4	2.8
	--	0.3	0.2	0.1	0.1	0.1	0.3	0.9	1.2	1.4	1.3	0.9	0.7	0.6	0.5	0.5	0.5	0.8	1.1	1.0	0.9	0.7	0.4	0.4	Diurnal Average	
	--	4.8	1.3	1.6	1.7	2.3	4.9	7.4	8.1	6.7	5.4	5.8	3.6	2.3	2.9	2.3	4.6	4.3	7.8	8.1	8.4	4.9	3.5	2.5	Diurnal Maximum	

C - Calibration NS - Not in service A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 57 ppb

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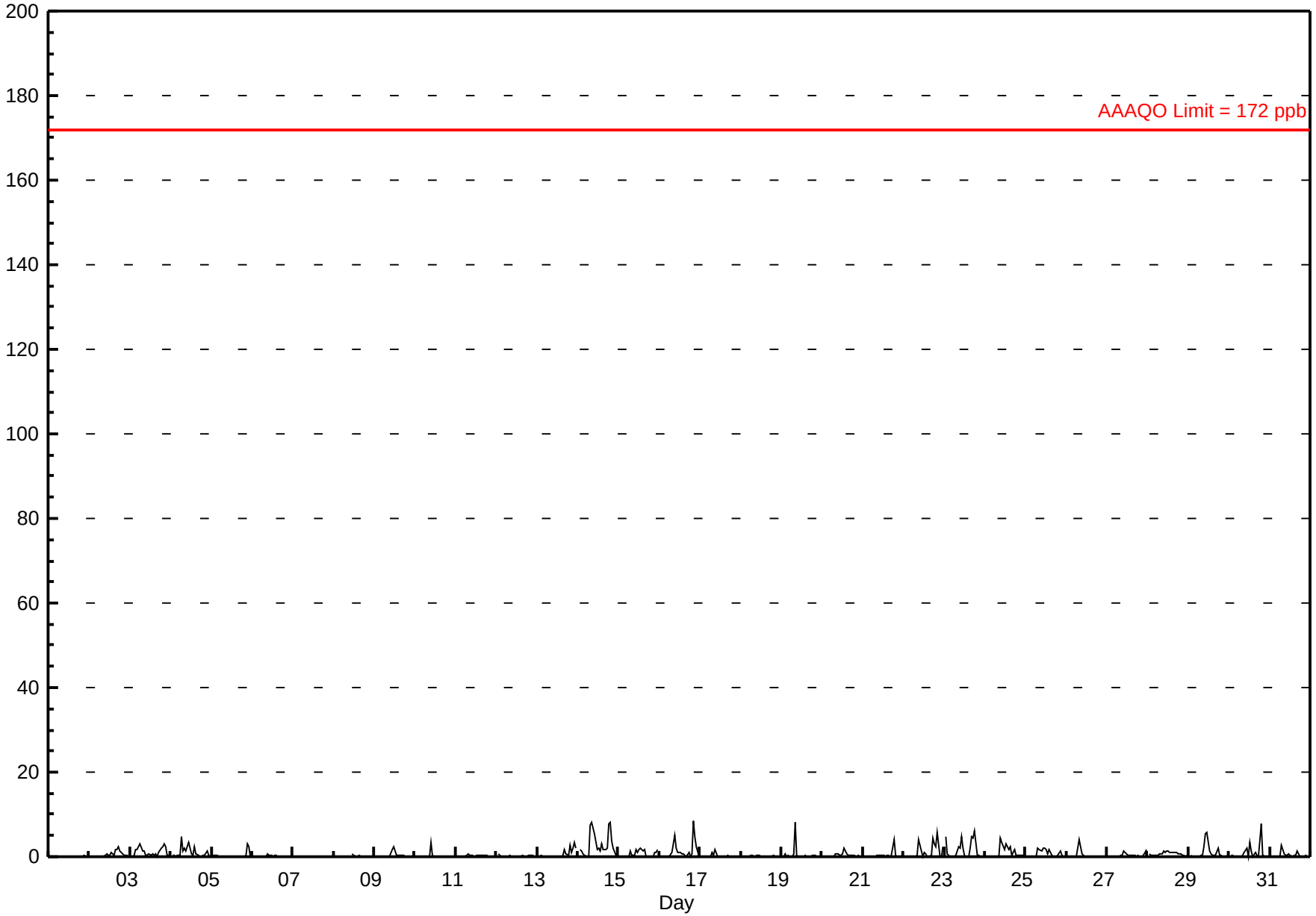
Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Valleyview - July 2010



PASZA
Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Valleyview - July 2010

Maximum Value: 33.8 ppb on Jul 23 19:00

Maximum Daily Average: 10.9 ppb on Jul 14

Minimum Value: 0 ppb on Jul 31 00:00

Minimum Daily Average: 0.5 ppb on Jul 1

Maximum Diurnal Average: 5.9 ppb at hour 13

Minimum Diurnal Average: 0.7 ppb at hour 6

Monthly Average: 3.11 ppb

Percentiles: $P_1 = 0.1$ $P_{10} = 0.4$ $Q_1 = 0.5$ Median = 0.7 $Q_3 = 2.5$ $P_{90} = 10.0$ $P_{99} = 25.7$

Hours in Service:	706
Hours of Data:	672
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Jul	A	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0.5	2.1
2-Jul	A	0	0	0	0	0	0	0	0	2	3	3	3	4	0	8	6	6	7	7	1	1	1	1	2.4	8.5
3-Jul	A	1	1	5	6	7	7	3	4	1	1	4	3	5	1	2	1	6	4	7	8	8	1	1	3.6	7.8
4-Jul	A	1	1	1	1	1	9	4	7	4	8	9	4	3	12	4	2	1	1	1	6	6	1	1	3.6	11.8
5-Jul	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6	8	1	1.2	7.7
6-Jul	A	1	1	1	1	1	1	1	1	3	3	1	1	2	5	1	C	C	NS	NS	NS	NS	NS	NS	--	4.6
7-Jul	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
8-Jul	NS	NS	NS	NS	NS	NS	NS	NS	C	C	C	2	30	0	0	5	0	0	0	0	0	0	0	0	--	30.4
9-Jul	A	0	0	0	0	0	0	0	0	0	8	16	10	1	1	1	1	0	0	0	0	0	0	1	2.0	15.7
10-Jul	A	0	0	0	0	0	0	0	0	12	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1.0	12.5
11-Jul	A	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0.7	1.1
12-Jul	A	5	4	1	1	0	0	1	3	1	1	1	1	0	1	1	1	1	1	1	1	1	0	0	1.0	5.4
13-Jul	A	0	0	0	0	0	0	1	1	1	1	1	1	0	1	8	7	2	1	10	4	9	6	4	2.5	9.7
14-Jul	A	3	3	2	1	1	1	23	21	14	15	10	16	9	26	12	16	10	26	23	18	5	1	1	10.9	26.0
15-Jul	A	1	0	0	0	0	0	9	2	1	11	7	13	13	10	10	0	0	0	0	0	6	4	8	4.3	13.5
16-Jul	A	0	0	1	1	0	1	13	10	19	10	6	9	10	8	2	2	9	1	2	27	14	8	1	6.7	27.1
17-Jul	A	0	0	1	1	0	0	12	7	9	1	0	1	0	1	1	8	0	0	0	1	1	0	0	1.9	12.3
18-Jul	A	0	0	0	0	0	1	1	1	1	1	1	0	0	0	2	0	0	1	3	1	2	1	0	0.7	2.8
19-Jul	A	0	5	1	1	0	0	9	17	4	0	0	0	0	6	0	0	0	1	1	0	0	0	0	2.2	17.2
20-Jul	A	0	0	0	0	0	1	0	2	3	1	1	3	10	2	1	1	1	1	0	0	0	1	0	1.4	9.9
21-Jul	A	0	0	0	0	0	0	0	1	1	1	1	1	0	1	1	0	1	24	1	0	1	0	1	1.6	23.5
22-Jul	A	0	0	0	0	1	1	0	1	16	11	1	9	6	0	1	2	21	12	13	33	1	0	13	6.3	32.9
23-Jul	A	20	2	1	0	0	0	3	14	8	13	21	4	1	0	18	23	23	34	2	2	1	1	1	8.4	33.8
24-Jul	A	0	0	0	0	0	0	0	0	25	17	12	16	17	14	20	8	21	1	2	1	1	1	1	7.0	25.3
25-Jul	A	1	0	0	1	0	1	9	4	10	12	15	18	3	10	1	1	0	0	0	3	1	0	1	4.0	18.3
26-Jul	A	1	1	1	1	1	1	16	16	1	1	0	0	0	0	0	0	0	0	1	0	0	1	0	1.9	16.1
27-Jul	A	1	0	0	1	0	0	0	1	1	2	2	1	1	1	1	1	1	0	1	0	1	2	2	0.9	2.3
28-Jul	A	1	1	1	1	0	1	1	1	2	2	2	2	2	2	2	1	2	1	2	1	1	1	1	1.3	2.5
29-Jul	A	1	1	1	1	1	1	1	1	6	11	8	4	2	1	1	2	12	1	1	0	0	0	3	2.6	12.0
30-Jul	A	3	2	0	0	0	0	0	0	5	12	1	24	7	0	5	1	0	16	30	1	1	1	0	4.9	30.2
31-Jul	A	1	1	1	1	1	1	34	6	1	1	6	1	1	1	1	4	2	1	1	1	1	1	1	2.7	33.7
	--	1.5	1.0	0.7	0.7	0.7	1.0	5.0	4.2	5.3	5.1	4.4	5.9	3.4	3.6	3.7	3.2	4.2	4.7	3.7	3.9	2.4	1.4	1.5	Diurnal Average	
	--	19.9	4.8	4.7	5.7	6.7	9.1	33.7	20.8	25.3	16.9	21.5	30.4	16.5	26.0	20.2	23.4	23.5	33.8	30.2	32.9	14.3	7.7	13.2	Diurnal Maximum	

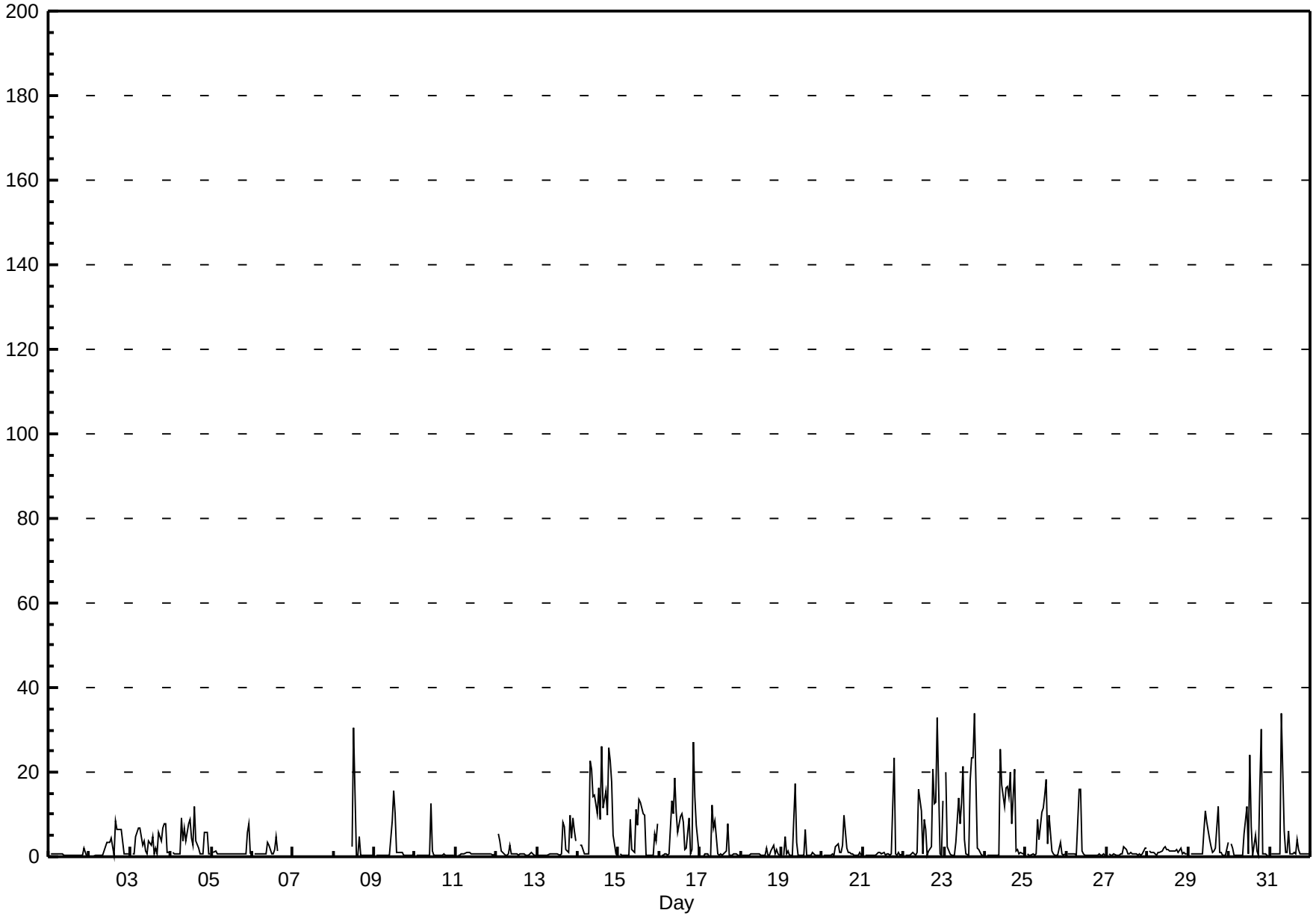
C - Calibration NS - Not in service A - Automated Daily Zero Span

PASZA
Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

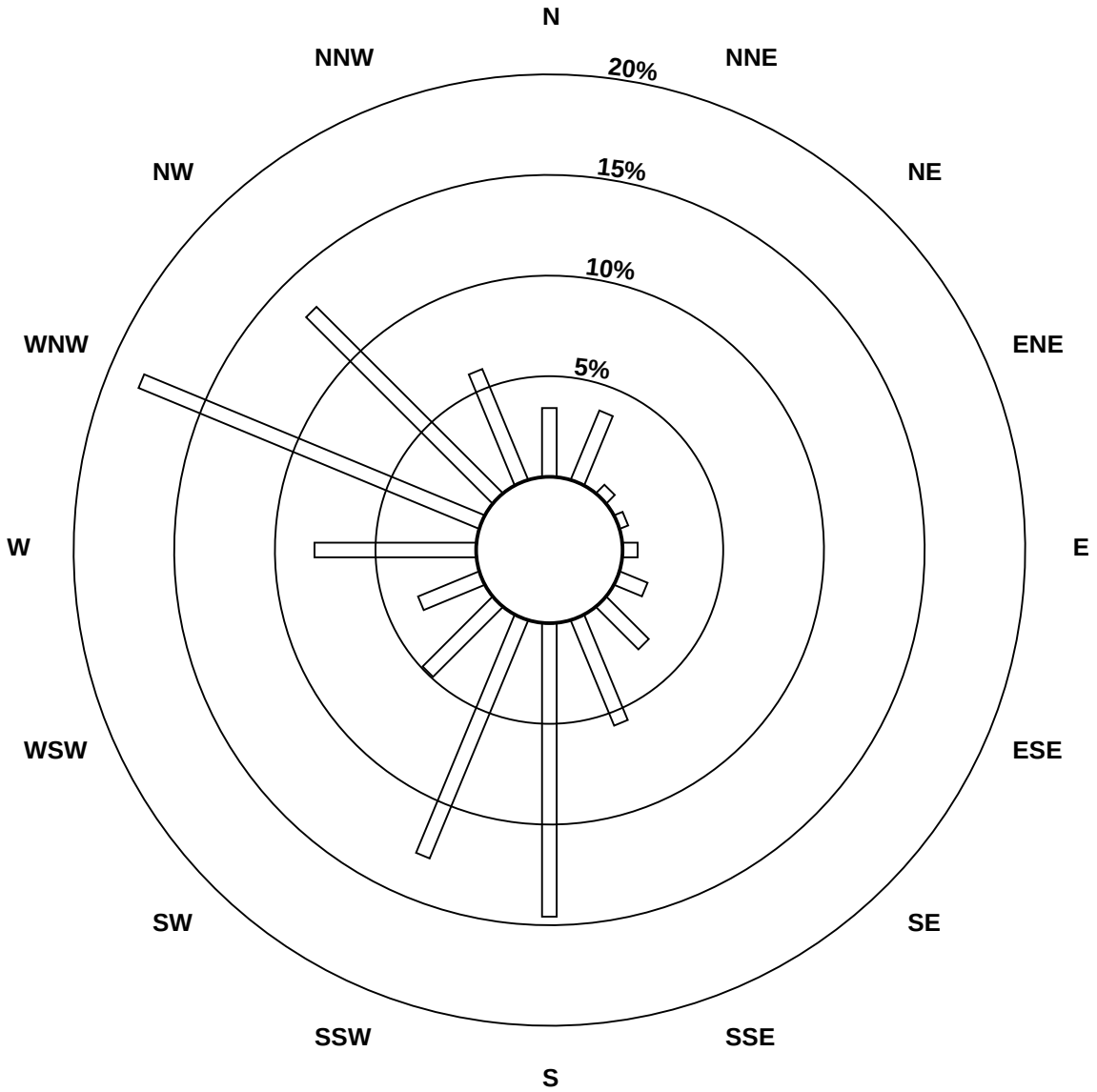
Valleyview - July 2010



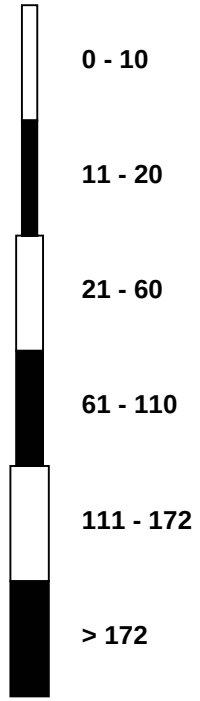
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Valleyview - July 2010



Pollutant Classes (ppb)



PASZA
Peace Airshed Zone Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Valleyview - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 0.8 ppb on Jul 4 17:00 Maximum Daily Average: 0.2 ppb on Jul 14

Minimum Value: 0 ppb on Jul 5 12:00 Minimum Daily Average: 0.0 ppb on Jul 24
Maximum Diurnal Average: 0.1 ppb at hour 2 Minimum Diurnal Average: 0.0 ppb at hour 15
Monthly Average: 0.06 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.0$ Median = 0.0 $Q_3 = 0.1$ $P_{90} = 0.1$ $P_{99} = 0.4$

Hours in Service:	707
Hours of Data:	671
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-Jul	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-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
3-Jul	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
4-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.1	0.8
5-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
6-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C	C	C	NS	NS	NS	NS	--	0.0
7-Jul	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
8-Jul	NS	NS	NS	NS	NS	NS	NS	NS	NS	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	--	0.2
9-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
10-Jul	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-Jul	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-Jul	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	0.4
13-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
14-Jul	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
15-Jul	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
16-Jul	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
17-Jul	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
18-Jul	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
19-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
20-Jul	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
21-Jul	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
22-Jul	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
23-Jul	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
24-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
25-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.1	0.5
26-Jul	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-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
28-Jul	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
29-Jul	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
30-Jul	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
31-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
	--	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	Diurnal Average	
	--	0.5	0.6	0.5	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.3	0.2	0.2	0.1	0.8	0.2	0.1	0.1	0.5	0.4	0.3	0.2	Diurnal Maximum	

C - Calibration NS - Not in service A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

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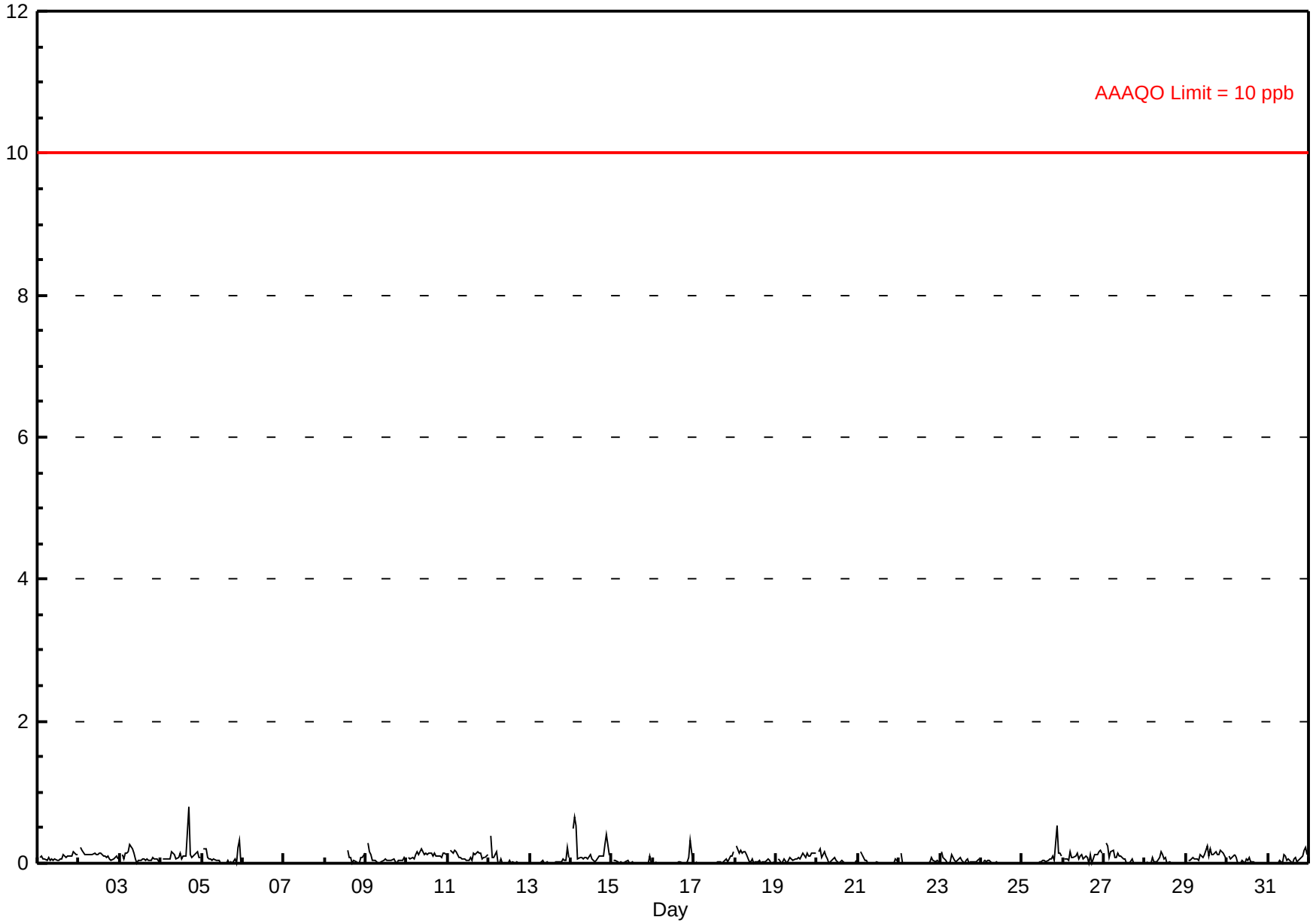
Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Valleyview - July 2010



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Hourly Maximums

Hydrogen Sulphide (H_2S) - ppb

Valleyview - July 2010

Maximum Value: 18.3 ppb on Jul 4 17:00

Maximum Daily Average: 1.2 ppb on Jul 4

Minimum Value: 0 ppb on Jul 21 15:00

Minimum Daily Average: 0.2 ppb on Jul 21

Maximum Diurnal Average: 0.9 ppb at hour 17

Minimum Diurnal Average: 0.3 ppb at hour 15

Monthly Average: 0.39 ppb

Percentiles: $P_1 = 0.1$ $P_{10} = 0.2$ $Q_1 = 0.3$ Median = 0.3 $Q_3 = 0.4$ $P_{90} = 0.5$ $P_{99} = 1.1$

Hours in Service:	707
Hours of Data:	671
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-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.4	0.6
2-Jul	A	1	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0.4	0.7
3-Jul	A	0	0	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
4-Jul	A	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	18	0	0	0	0	0	0	0	1.2	18.3
5-Jul	A	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0.5	1.1
6-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C	C	C	NS	NS	NS	NS	--	0.3
7-Jul	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
8-Jul	NS	NS	NS	NS	NS	NS	NS	NS	NS	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	--	0.5
9-Jul	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
10-Jul	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	0.5
11-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.4	0.9
12-Jul	A	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.1
13-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.3	0.6
14-Jul	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0.5	1.4
15-Jul	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.3	0.9
16-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0.3	1.0
17-Jul	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-Jul	A	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
19-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.4	1.1
20-Jul	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
21-Jul	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
22-Jul	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
23-Jul	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
24-Jul	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
25-Jul	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0.4	1.9
26-Jul	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.4	0.5
27-Jul	A	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8
28-Jul	A	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.3
29-Jul	A	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.4	1.0
30-Jul	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
31-Jul	A	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.4	0.9
	--	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.9	0.3	0.3	0.4	0.4	0.4	0.4	0.3	Diurnal Average	
	--	1.0	1.0	1.1	1.1	0.5	0.6	0.5	0.9	1.0	1.3	0.5	1.0	0.5	0.5	0.5	18.3	0.5	1.1	1.1	1.9	1.4	1.0	0.5	Diurnal Maximum	

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

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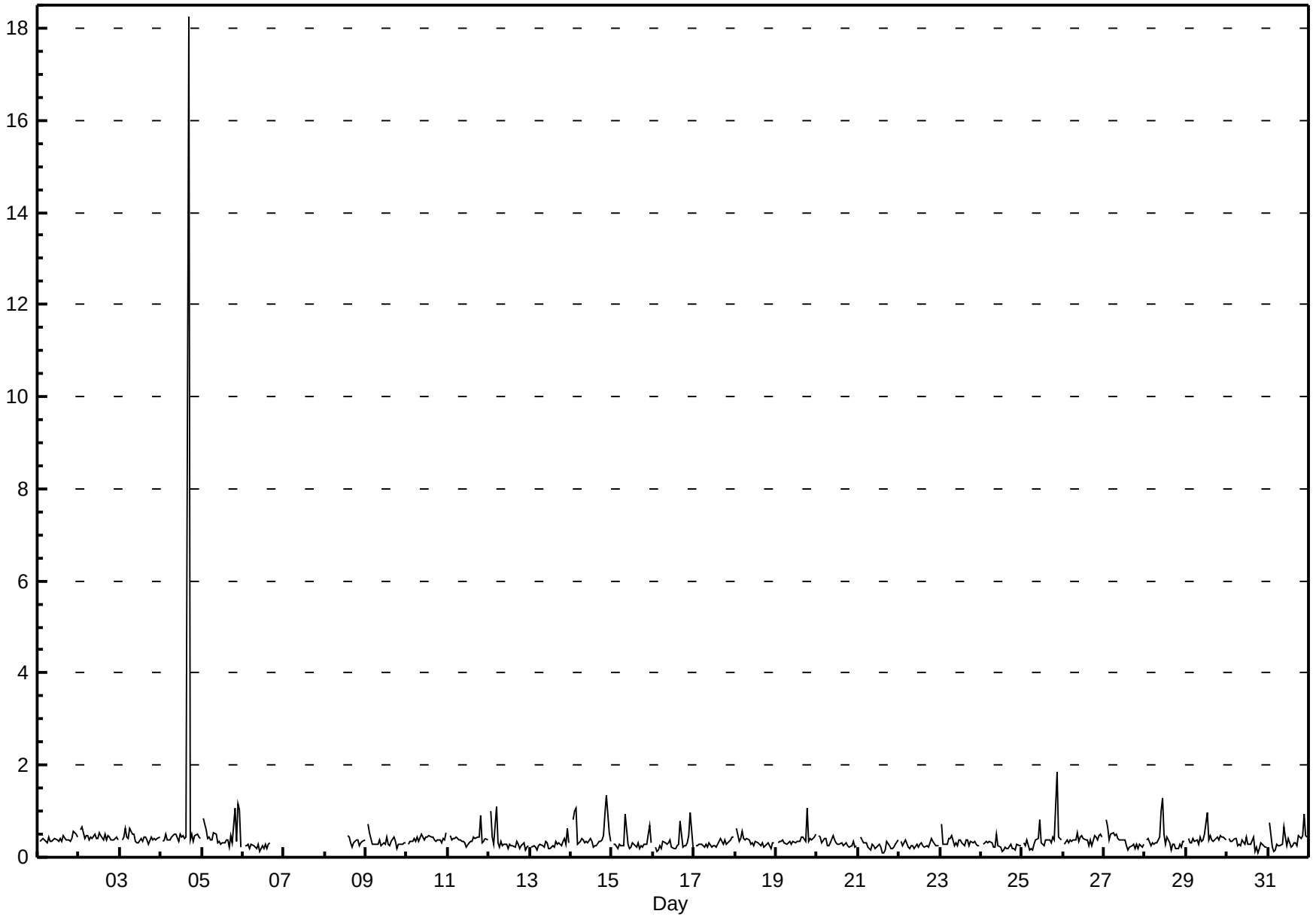
Hourly Maximums

Hydrogen Sulphide (H_2S) - ppb

Valleyview - July 2010



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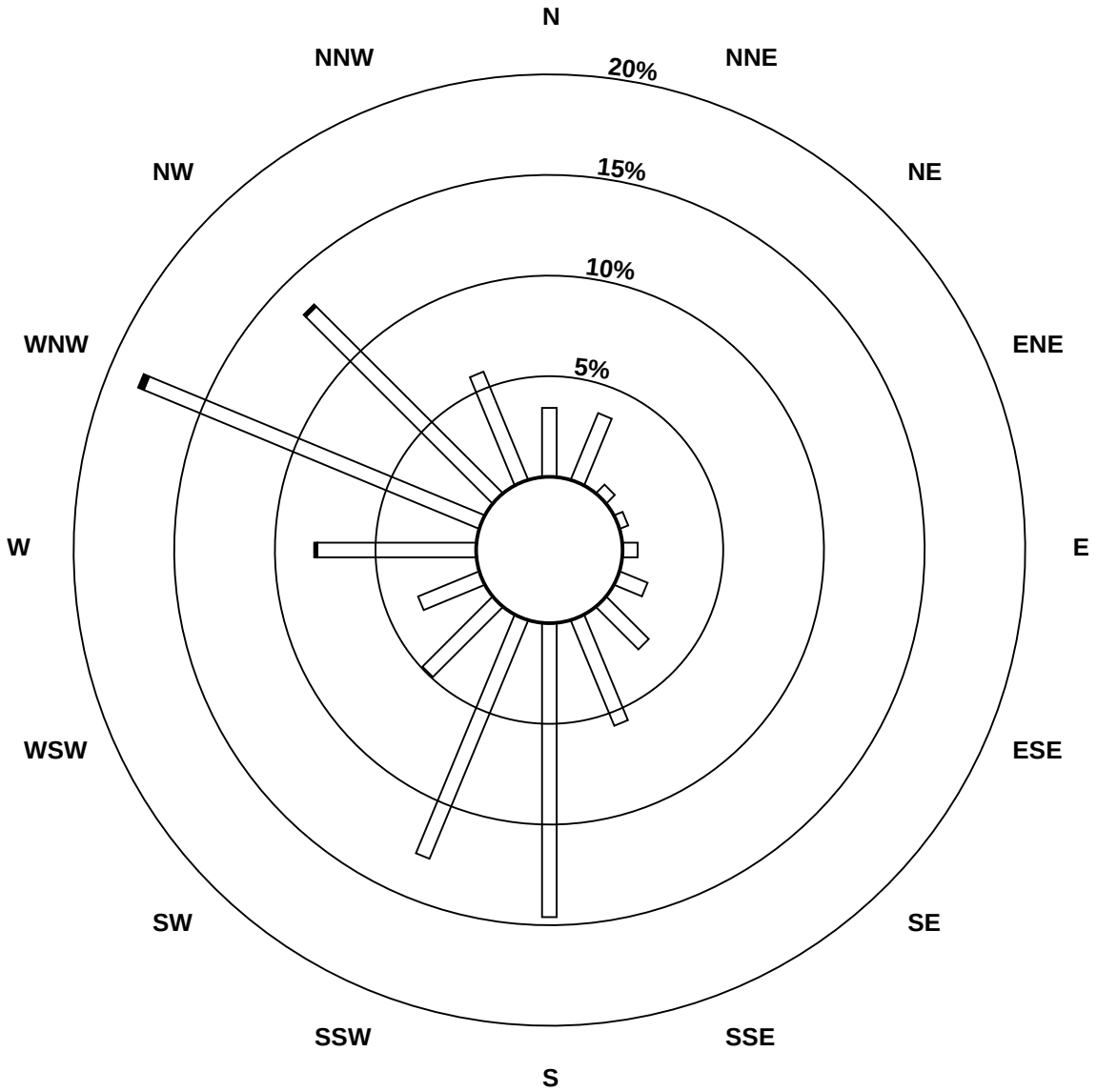
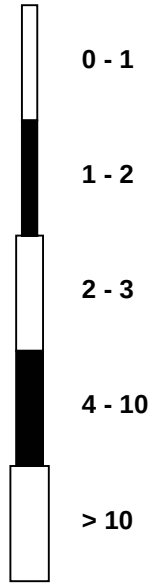
Pollutant Rose

Hydrogen Sulphide (H_2S) - ppb

Valleyview - July 2010



Pollutant Classes (ppb)



Hourly Averages

External Temperature (ET) - °C

Valleyview - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 28.6 °C on Jul 28 18:00 Maximum Daily Average: 19.9 °C on Jul 9

Minimum Value: 4 °C on Jul 1 05:00 Minimum Daily Average: 12.4 °C on Jul 2
Maximum Diurnal Average: 21.6 °C at hour 17 Minimum Diurnal Average: 9.7 °C at hour 5
Monthly Average: 16.49 °C Percentiles: P_1 = 5.3 P_{10} = 10.0 Q_1 = 12.6 Median = 16.3 Q_3 = 20.1 P_{90} = 23.5 P_{99} = 27.2

Hours in Service:	704
Hours of Data:	704
Hours of Missing Data:	0
Hours of Calibration:	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-Jul	7	5	5	4	4	4	7	10	13	14	15	16	17	18	19	19	20	19	19	18	17	16	12	10	12.9	19.5
2-Jul	8	7	5	5	5	6	8	12	15	15	15	15	16	16	15	15	15	16	17	16	15	14	13	13	12.4	17.1
3-Jul	12	11	11	12	12	12	12	12	13	15	15	17	18	19	20	20	19	20	19	18	18	16	14	13	15.4	19.7
4-Jul	12	13	13	11	11	11	13	13	13	14	14	15	15	16	16	17	16	17	16	16	15	13	12	10	13.8	17.0
5-Jul	10	10	10	10	10	10	10	11	13	14	15	16	17	17	18	19	20	20	19	19	18	17	17	13	14.6	20.1
6-Jul	13	12	12	11	11	11	14	15	16	17	18	20	21	22	22	23	23	22	22	NS	NS	NS	NS	NS	17.1	22.9
7-Jul	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
8-Jul	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	26	26	26	27	27	28	28	28	26	25	22	18	17	--	27.9
9-Jul	15	14	13	13	12	13	15	18	20	24	25	25	26	27	26	26	24	23	22	22	21	19	18	17	19.9	26.6
10-Jul	15	15	14	14	13	14	14	15	16	18	20	20	21	22	22	23	24	24	24	23	22	18	16	14	18.4	24.1
11-Jul	12	11	11	10	10	11	13	15	17	19	21	23	24	24	24	25	25	23	23	23	21	19	17	16	18.3	25.2
12-Jul	15	15	15	14	13	13	13	13	14	16	17	17	17	17	16	16	15	14	14	14	14	13	13	12	14.6	17.2
13-Jul	10	9	9	8	9	9	9	10	11	12	13	13	14	16	17	17	18	19	18	18	18	17	16	15	13.5	18.6
14-Jul	15	14	14	13	13	12	14	16	17	18	19	21	22	23	24	24	25	25	25	24	22	20	17	16	18.9	24.7
15-Jul	14	13	12	11	10	11	13	17	18	19	20	20	21	21	22	22	21	21	21	20	19	17	16	15	17.2	21.6
16-Jul	13	12	10	9	8	8	11	14	15	16	17	18	18	19	19	19	20	19	18	18	18	16	15	14	15.1	19.7
17-Jul	12	11	9	8	7	7	10	13	14	16	17	18	19	20	20	22	22	23	23	22	20	16	15	13	15.9	23.0
18-Jul	11	10	9	8	7	8	10	11	15	16	17	19	20	20	20	18	17	17	16	15	14	13	12	12	14.0	20.4
19-Jul	11	11	12	11	11	11	11	12	13	15	15	17	18	17	19	19	17	20	19	20	17	15	14	12	14.9	19.8
20-Jul	12	11	10	9	9	9	10	13	16	18	20	21	22	23	24	22	24	24	25	22	19	17	15	13	17.0	24.5
21-Jul	11	10	9	9	9	9	11	14	17	20	22	24	25	26	26	26	26	24	20	20	20	18	16	15	17.7	26.4
22-Jul	13	12	12	12	11	12	13	14	16	19	19	19	19	19	20	20	21	20	19	18	18	17	17	17	16.5	20.6
23-Jul	16	15	14	13	11	11	13	15	17	18	19	20	22	23	24	24	25	25	25	25	23	20	17	15	18.8	25.4
24-Jul	14	13	12	12	12	11	12	13	16	18	19	21	21	22	22	22	23	22	22	21	19	16	13	11	17.0	22.6
25-Jul	10	9	8	7	6	7	9	13	15	17	17	18	19	20	21	22	22	23	23	23	21	17	14	13	15.5	22.8
26-Jul	12	11	11	9	8	8	9	11	13	14	14	15	17	18	19	20	20	20	20	20	18	14	11	10	14.4	20.3
27-Jul	9	8	7	6	6	6	8	11	14	18	20	21	22	22	23	24	24	24	24	23	21	18	17	16	16.3	23.9
28-Jul	15	14	12	11	9	9	11	13	17	20	22	23	24	25	26	27	28	29	28	27	22	20	19	17	19.5	28.6
29-Jul	17	16	15	13	12	11	12	15	18	20	22	24	26	27	27	25	24	23	26	24	21	19	17	18	19.7	26.8
30-Jul	17	15	15	14	12	11	12	13	16	18	19	21	22	22	23	19	19	20	19	19	17	15	14	13	16.8	22.6
31-Jul	12	12	12	12	12	12	13	16	17	19	20	21	22	23	23	22	25	23	23	23	21	17	15	14	17.8	24.6
	12.5	11.8	11.0	10.3	9.7	9.9	11.3	13.4	15.4	17.0	18.2	19.5	20.4	21.0	21.4	21.5	21.6	21.6	21.2	20.6	19.0	17.0	15.2	13.9	Diurnal Average	
	16.6	16.0	15.5	14.1	13.4	13.6	15.2	18.1	20.5	23.5	24.9	25.5	26.2	26.7	26.9	27.3	27.8	28.6	28.4	27.0	24.8	21.8	18.5	18.2	Diurnal Maximum	

NS - Not in service

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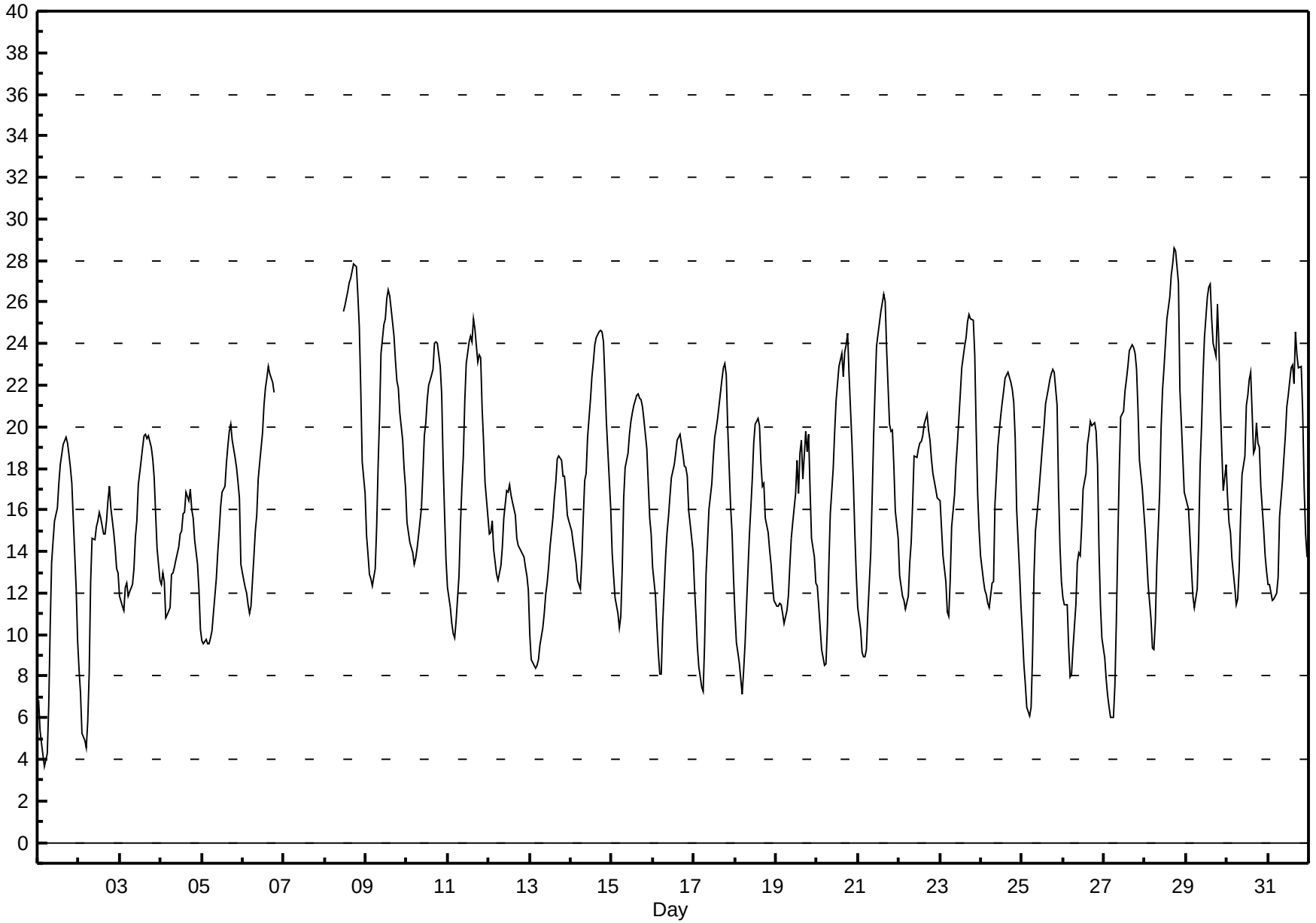
Hourly Averages

External Temperature (ET) - ^{o}C

Valleyview - July 2010



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Hourly Averages

Relative Humidity (RH) - %

Valleyview - July 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 97.4 % on Jul 20 05:00 Maximum Daily Average: 85.6 % on Jul 13

Minimum Value: 22 % on Jul 1 16:00 Minimum Daily Average: 44.3 % on Jul 1
Maximum Diurnal Average: 88.3 % at hour 5 Minimum Diurnal Average: 39.5 % at hour 18
Monthly Average: 60.70 % Percentiles: P_1 = 24.7 P_{10} = 32.8 Q_1 = 41.3 Median = 59.0 Q_3 = 80.6 P_{90} = 90.7 P_{99} = 96.4

Hours in Service:	703
Hours of Data:	703
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

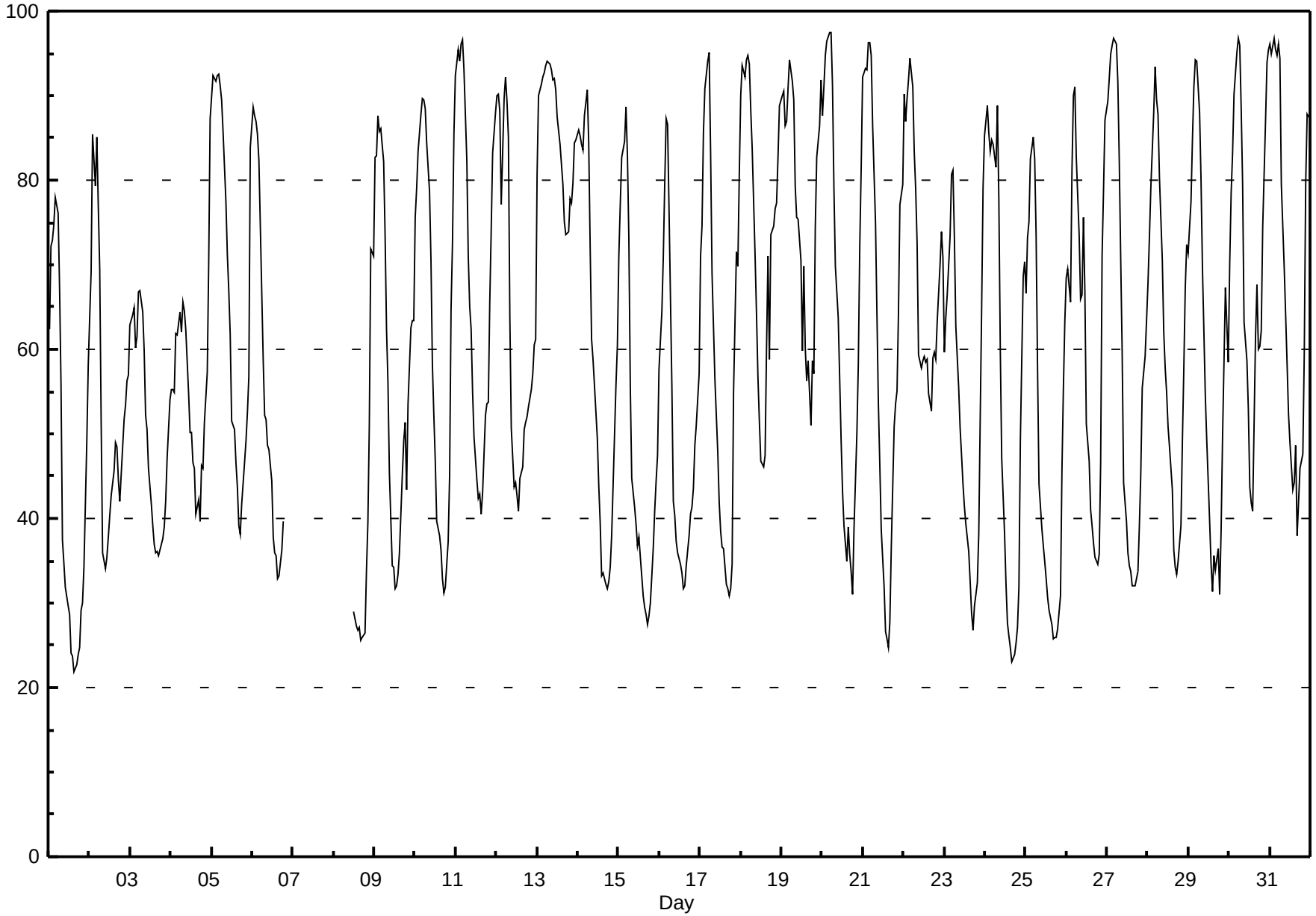
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	62	72	73	75	78	76	67	56	38	35	32	30	29	24	24	22	23	24	25	29	30	34	49	58	44.3	78.0
2-Jul	64	69	85	79	85	77	69	51	36	34	35	38	40	43	46	49	48	45	42	45	52	53	56	57	54.2	85.3
3-Jul	63	64	65	60	62	67	67	64	60	52	50	46	42	39	37	36	36	36	37	38	39	42	47	54	50.1	67.0
4-Jul	55	55	55	62	62	64	62	66	65	62	55	50	50	47	46	41	42	40	46	46	51	57	70	87	55.7	87.3
5-Jul	90	92	92	92	93	91	89	86	77	71	67	62	52	51	47	44	39	38	42	47	49	53	57	84	66.8	92.6
6-Jul	89	88	87	85	82	75	59	52	52	49	48	44	38	36	36	33	33	36	40	NS	NS	NS	NS	NS	55.8	88.6
7-Jul	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
8-Jul	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	29	27	27	27	26	26	27	34	39	51	72	71	--	71.8
9-Jul	83	83	88	86	86	82	74	62	56	45	34	34	32	32	33	36	45	49	51	43	53	63	63	63	57.4	87.6
10-Jul	76	79	83	88	90	89	88	84	79	70	58	52	47	40	38	36	33	31	32	37	45	65	73	85	62.4	89.7
11-Jul	92	95	94	96	97	93	82	71	65	62	55	50	45	42	43	41	43	52	54	54	66	74	83	88	68.2	96.6
12-Jul	90	90	88	77	90	92	89	85	64	51	44	44	43	41	45	46	51	51	52	53	55	57	60	61	63.3	92.3
13-Jul	81	90	91	92	93	94	94	94	93	92	92	91	88	84	82	79	75	74	74	78	77	80	84	85	85.6	94.1
14-Jul	86	85	84	84	88	91	84	72	61	59	56	49	44	39	33	34	32	32	33	34	38	44	56	61	57.4	90.7
15-Jul	71	77	83	85	89	83	73	56	45	41	39	37	38	35	31	29	29	28	28	30	36	41	44	48	49.8	88.7
16-Jul	58	64	71	80	87	87	77	56	42	40	37	36	35	34	32	32	34	38	40	41	43	49	51	57	50.8	87.3
17-Jul	71	75	86	91	94	95	83	69	63	56	48	42	39	37	36	32	32	31	32	35	55	71	70	81	59.2	95.1
18-Jul	90	94	92	94	95	94	88	84	71	64	57	51	47	46	48	60	71	59	74	75	77	77	83	89	74.1	94.7
19-Jul	90	90	86	87	91	94	92	89	79	76	76	70	60	70	60	56	59	51	59	57	74	83	86	92	76.2	94.2
20-Jul	88	91	95	96	97	97	91	79	70	64	57	49	43	39	35	39	36	34	31	39	50	58	72	81	63.8	97.4
21-Jul	92	93	93	96	96	95	86	75	64	54	46	39	32	27	26	25	28	37	51	54	55	64	77	79	61.8	96.3
22-Jul	90	87	90	92	94	91	83	79	73	59	58	59	59	58	59	55	53	59	60	59	63	70	74	71	70.6	94.4
23-Jul	60	64	67	73	81	81	73	63	55	51	48	44	41	39	36	33	29	27	30	32	38	52	65	79	52.5	81.2
24-Jul	85	89	86	83	85	84	82	89	78	60	47	38	32	28	26	25	23	24	25	27	32	49	69	70	55.7	88.9
25-Jul	67	73	75	83	85	82	73	58	44	39	37	35	33	31	29	27	26	26	26	27	31	46	55	63	48.8	85.0
26-Jul	68	69	66	81	90	91	83	74	66	66	76	67	51	47	41	39	37	35	35	36	47	71	79	87	62.6	91.1
27-Jul	89	92	95	96	97	96	92	82	71	60	44	40	36	34	34	32	32	33	34	39	45	55	59	63	60.4	96.8
28-Jul	68	73	79	88	93	90	88	80	70	62	58	55	51	48	43	36	34	33	35	39	49	58	67	72	61.3	93.3
29-Jul	71	77	85	91	94	94	88	80	69	62	54	49	40	35	31	36	34	36	31	39	50	59	67	58	59.6	94.3
30-Jul	70	78	83	90	95	97	96	88	80	63	59	53	44	42	41	62	68	60	60	62	74	87	94	95	72.6	96.8
31-Jul	96	95	97	95	95	96	94	80	70	64	58	52	49	43	44	49	38	42	46	48	60	80	88	87	69.4	96.8
	77.8	80.9	83.2	85.5	88.3	87.5	81.7	73.2	63.9	57.4	52.6	48.5	43.5	41.2	39.6	39.7	39.6	39.5	41.6	44.0	50.9	60.1	68.0	73.4	Diurnal Average	
	96.2	95.4	96.8	96.5	97.4	97.4	95.9	93.8	93.0	91.8	92.0	90.7	87.5	84.2	81.9	79.5	75.0	73.5	73.8	77.8	77.2	87.1	93.9	95.4	Diurnal Maximum	

NS - Not in service

Hourly Averages

Relative Humidity (RH) - %

Valleyview - July 2010



PASZA
Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Valleyview - July 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	5	4	6	4	5	5	5	4	8	8	8	9	7	8	10	10	8	9	10	5	8	6	3	2	5.8	9.9
Dir	186	191	189	197	193	190	191	194	234	235	241	248	234	245	249	255	263	261	264	249	260	279	198	202	236	249
2 Spd	3	3	3	3	2	2	3	4	11	15	15	15	12	12	10	6	10	13	14	12	6	4	3	3	6.5	15.2
Dir	196	189	184	189	174	165	171	214	261	278	281	287	301	291	302	277	282	286	280	268	254	241	237	220	271	278
3 Spd	3	3	2	12	16	12	8	11	13	15	13	14	14	15	16	15	16	17	17	15	13	11	5	3	11.0	17.3
Dir	195	200	214	286	292	289	286	291	290	299	303	300	308	295	305	299	302	292	284	285	285	272	247	205	290	284
4 Spd	3	3	3	3	3	3	10	9	11	10	14	15	13	13	13	15	17	19	15	17	15	12	10	11	9.7	19.1
Dir	202	196	206	198	211	207	279	272	278	267	277	292	309	302	294	306	310	303	315	301	299	294	316	306	293	303
5 Spd	10	7	9	12	12	11	11	10	14	14	13	13	18	15	15	16	19	17	15	9	9	7	3	3	11.2	18.7
Dir	292	274	291	296	303	314	317	312	317	317	301	312	322	324	326	323	316	313	302	299	294	281	308	133	309	316
6 Spd	3	3	3	2	3	3	6	12	10	10	9	9	10	12	12	13	12	13	9	NS	NS	NS	NS	NS	6.3	13.4
Dir	202	200	165	159	155	200	282	296	289	296	309	330	328	311	306	303	322	341	350	NS	NS	NS	NS	NS	308	303
7 Spd	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
Dir	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
8 Spd	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4	6	5	8	8	7	4	4	5	3	0	1	1	--	7.8
Dir	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	337	18	352	6	321	332	19	359	122	118	324	207	204	--	6
9 Spd	1	1	2	1	3	3	4	4	3	4	9	8	10	12	17	14	14	15	12	7	5	0	5	6	4.0	16.8
Dir	201	272	187	233	194	196	192	189	179	206	305	277	305	327	346	348	18	12	10	19	18	133	21	346	341	346
10 Spd	3	2	1	2	4	1	2	5	2	3	2	3	3	5	5	5	2	4	1	4	3	2	1	1	1.5	5.1
Dir	309	293	313	323	333	345	296	331	315	344	62	7	29	6	12	18	19	356	102	130	142	171	219	193	356	18
11 Spd	1	1	1	1	1	1	4	6	8	7	5	7	6	8	6	7	7	8	5	5	2	2	3	2	4.4	7.8
Dir	193	186	211	190	187	198	187	188	187	186	192	185	191	191	192	188	182	187	189	189	189	203	174	210	189	187
12 Spd	2	2	4	5	3	2	2	2	7	12	16	18	19	19	20	20	18	18	18	15	15	13	13	17	10.8	20.2
Dir	196	283	262	305	188	190	189	183	302	311	316	313	311	321	325	321	310	317	322	326	318	319	328	328	315	321
13 Spd	16	13	16	15	13	17	18	22	20	16	15	13	13	12	10	11	15	17	16	11	13	9	7	10	13.4	21.5
Dir	319	303	298	306	317	321	339	339	343	342	336	331	327	319	310	297	296	298	298	289	296	299	293	295	315	339
14 Spd	8	7	7	5	2	2	3	4	11	9	7	9	10	9	12	10	11	11	11	8	8	7	3	3	6.8	12.0
Dir	298	292	287	277	222	179	162	264	292	284	283	294	293	294	269	293	280	287	285	276	287	279	236	220	282	269
15 Spd	3	3	3	3	3	3	3	5	11	13	12	14	14	14	17	16	17	16	14	9	8	7	5	6	7.6	16.9
Dir	193	187	178	184	180	175	168	287	300	300	302	301	310	297	297	307	315	315	318	318	322	305	299	272	300	315
16 Spd	3	3	3	3	2	2	3	4	14	13	13	11	14	13	14	16	16	15	10	8	7	6	7	3	7.3	16.2
Dir	193	196	206	196	199	212	194	236	293	290	285	289	298	298	306	313	322	304	304	296	287	272	283	322	291	322
17 Spd	2	2	2	1	2	2	3	4	7	5	9	11	8	8	7	8	7	4	3	2	2	0	2	0	2.9	10.6
Dir	206	221	164	211	189	189	191	274	319	308	305	316	313	332	325	333	355	352	34	23	180	184	20	176	317	316
18 Spd	1	1	1	1	1	3	2	3	6	9	9	6	10	9	7	4	5	10	1	4	4	1	4	3	2.2	10.4
Dir	225	197	220	358	132	184	323	338	10	21	20	19	12	6	335	208	187	358	326	254	265	222	286	220	348	12
19 Spd	2	1	4	2	2	2	1	1	2	3	4	3	3	5	4	1	6	2	2	1	1	2	2	3	0.9	5.7
Dir	186	248	284	332	167	192	178	206	280	192	180	184	147	135	103	79	339	4	304	223	224	205	165	157	187	339
20 Spd	2	1	1	1	1	1	3	2	2	2	1	2	2	1	2	2	3	3	1	4	3	2	1	1	0.7	4.1
Dir	181	195	214	199	191	201	192	185	197	164	147	157	296	244	2	89	87	103	120	52	43	26	264	138	137	52
21 Spd	1	0	1	1	1	1	2	3	3	3	4	4	4	1	1	4	5	6	5	4	2	1	0	1	1.8	6.3
Dir	188	252	317	183	213	192	192	188	178	186	170	157	189	336	141	152	180	231	260	137	163	22	333	264	189	231
22 Spd	1	1	1	2	2	3	5	4	3	6	8	7	7	7	10	11	12	12	10	7	4	2	2	3	3.9	12.3
Dir	185	267	210	207	194	197	185	186	189	281	300	323	304	326	320	320	304	291	292	291	265	175	195	237	288	304

PASZA
Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Valleyview - July 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	8	4	4	2	3	3	3	3	8	11	10	9	8	7	6	10	11	10	10	5	4	2	2	3	5.4	10.6
Dir	288	259	250	188	188	190	189	233	270	292	283	270	262	236	232	266	273	269	285	265	263	206	209	197	261	292
24 Spd	2	2	2	3	2	2	2	2	3	9	7	11	15	16	14	18	16	15	13	9	5	2	2	2	5.9	17.8
Dir	201	195	234	195	191	178	193	183	185	285	290	298	295	293	295	296	303	300	302	308	326	194	160	197	289	296
25 Spd	2	3	2	3	3	3	3	4	12	14	15	14	11	10	8	9	10	10	7	5	5	3	3	3	5.4	14.6
Dir	225	211	213	196	197	193	193	266	296	302	287	293	299	301	297	315	319	321	326	308	289	217	211	196	289	287
26 Spd	1	1	2	2	2	2	2	4	10	11	12	12	15	13	13	14	15	13	10	7	1	1	1	2	5.2	15.4
Dir	174	116	324	150	170	189	172	255	294	302	347	346	337	340	330	328	349	1	14	21	105	203	174	197	337	337
27 Spd	2	1	2	1	2	2	3	3	2	2	5	5	6	7	7	6	6	8	9	6	5	4	4	3	3.8	8.9
Dir	169	287	187	221	155	210	166	177	167	148	177	175	149	155	140	158	134	136	135	128	132	149	157	164	152	135
28 Spd	3	2	0	0	0	1	2	1	2	1	2	3	3	3	2	3	2	1	2	3	15	2	1	2	0.2	15.3
Dir	159	176	308	188	215	217	160	156	113	204	195	195	210	156	18	36	81	118	183	281	348	98	259	241	208	348
29 Spd	1	1	1	1	2	2	3	2	2	2	1	3	2	8	12	13	7	3	2	3	5	5	3	9	1.0	12.6
Dir	107	175	64	30	215	190	186	190	181	143	127	161	65	347	355	305	197	353	137	195	188	185	204	257	247	305
30 Spd	4	2	1	2	0	1	3	3	4	6	3	3	6	6	5	6	3	4	9	5	2	2	2	2	2.6	8.6
Dir	194	245	162	194	133	265	187	174	185	274	221	192	273	258	223	275	216	213	285	279	177	187	184	181	235	285
31 Spd	2	2	2	1	2	1	2	4	5	7	6	3	5	3	4	4	1	1	4	1	1	1	1	1	1.0	6.6
Dir	166	198	211	201	183	166	189	290	311	333	339	314	8	357	3	24	147	4	41	126	161	162	224	216	335	333
Spd	1.8	1.9	1.9	1.9	1.7	1.7	1.8	2.9	5.2	6.3	6.4	6.3	6.9	6.9	7.2	7.7	6.9	7.2	6.2	4.1	3.8	2.6	1.7	2.0	Diurnal Average	
Dir	241	241	249	256	240	238	239	269	288	294	297	299	309	308	312	307	308	310	306	295	294	271	272	263		
Spd	15.6	13.5	16.2	15.0	15.9	17.3	17.7	21.5	20.1	16.2	16.3	18.2	19.4	19.3	19.7	20.2	18.7	19.1	18.4	17.0	15.3	12.6	12.7	16.9	Diurnal Maximum	
Dir	319	303	298	306	292	321	339	339	343	342	316	313	311	321	325	321	316	303	322	301	348	319	328	328		

Maximum Speed Value: 22 ppb on Jul 13 08:00
Maximum Daily Speed Average: 13.4 ppb on Jul 13
Maximum Diurnal Speed Average: 7.7 ppb at hour 16

Minimum Speed Value: 0 ppb on Jul 9 22:00
Minimum Daily Speed Average: 0.2 ppb on Jul 20
Minimum Diurnal Speed Average: 1.7 ppb at hour 6

Monthly Average Velocity: 4.03 ppb 293.8 deg

Speed Percentiles: P_1 = 0.4 P_{10} = 1.2 Q_1 = 2.2 Median = 4.4 Q_3 = 10.0 P_{90} = 14.1 P_{99} = 19.0

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

Hours in Service:	704
Hours of Data:	704
Hours of Missing Data:	0
Percent Operational Time:	100.0

NS - Not in service

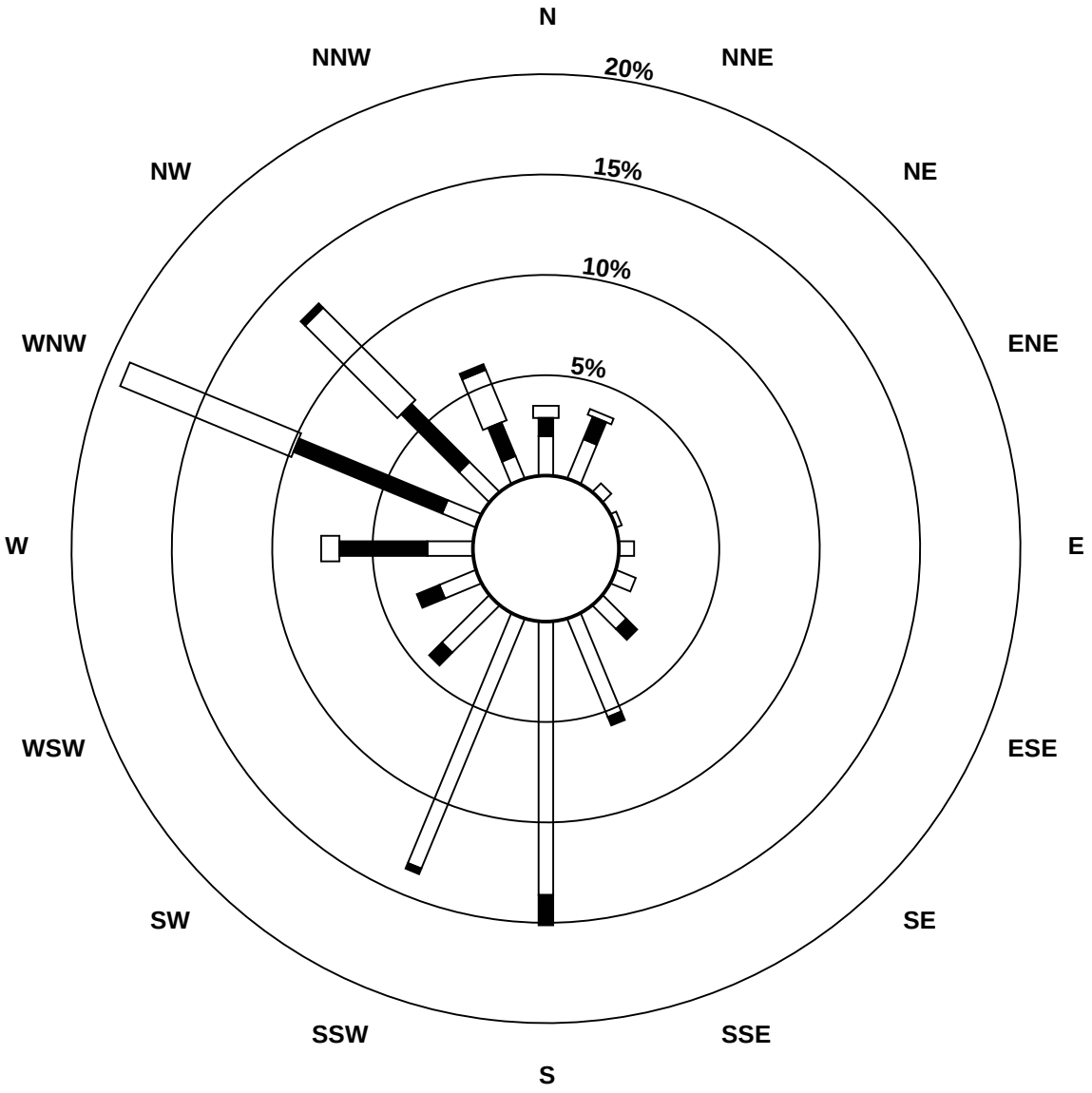
Frequency Distribution

Direction	Speed Range (ppb) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	21	23	15	2	0	0	61
NorthEast	13	0	0	0	0	0	13
East	10	0	0	0	0	0	10
SouthEast	35	8	0	0	0	0	43
South	174	20	0	0	0	0	194
SouthWest	67	10	0	0	0	0	77
West	30	61	28	0	0	0	119
NorthWest	23	63	96	5	0	0	187
Total	373	185	139	7	0	0	704

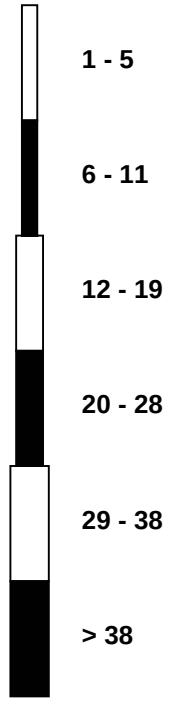
Wind Rose

Wind Speed (WS) (km/h)

Valleyview - July 2010



Wind Speed Classes (km/h)



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Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Valleyview - July 2010

Maximum Speed: 22 km/h on Jul 13 08:00

Maximum Daily Speed Average: 14.3 km/h on Jul 13

Minimum Speed: 1 km/h on Jul 28 06:00

Minimum Daily Speed Average: 2.7 km/h on Jul 20

Maximum Diurnal Speed Average: 10.7 km/h at hour 17

Minimum Diurnal Speed Average: 3.4 km/h at hour 2

Monthly Average Speed: 6.88 km/h

Percentiles: P_1 = 1.0 P_{10} = 1.9 Q_1 = 2.8 Median = 5.1 Q_3 = 10.6 P_{90} = 14.8 P_{99} = 19.2

Hours in Service: 704
Hours of Data: 704
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-Jul	5	4	6	4	5	5	5	5	9	9	9	10	8	10	11	11	9	10	10	5	8	7	3	2	7.0	10.9
2-Jul	3	3	3	3	2	2	3	5	12	16	16	16	13	12	10	7	10	13	14	12	6	5	3	3	8.0	15.9
3-Jul	4	3	3	13	16	12	8	11	13	15	14	14	14	16	17	16	16	17	18	16	14	11	5	3	12.0	17.5
4-Jul	3	3	3	3	3	4	10	9	11	11	15	15	13	13	14	16	18	19	16	17	15	13	11	11	11.1	19.4
5-Jul	10	7	9	12	12	11	11	10	14	14	14	14	18	15	15	16	19	17	15	10	9	7	5	4	12.1	19.4
6-Jul	3	3	3	2	3	3	7	12	11	11	10	10	11	13	13	14	13	13	9	NS	NS	NS	NS	NS	8.6	13.9
7-Jul	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
8-Jul	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	6	7	7	9	9	8	4	5	5	3	1	1	1	--	9.0
9-Jul	1	1	2	2	3	3	4	4	3	5	10	8	11	13	17	15	14	15	13	7	5	1	6	7	7.2	17.0
10-Jul	5	4	1	2	4	2	3	5	3	4	3	5	5	7	6	6	5	5	3	5	3	2	1	1	3.7	7.0
11-Jul	1	1	1	2	1	1	4	7	8	7	6	7	7	8	7	7	7	8	6	5	3	2	3	2	4.5	7.9
12-Jul	3	5	5	6	3	2	3	2	7	13	17	19	20	20	20	21	18	18	19	16	15	13	13	17	12.2	20.5
13-Jul	16	14	16	15	14	18	18	22	20	16	15	13	13	12	11	11	15	18	16	11	13	9	7	10	14.3	21.6
14-Jul	8	7	7	5	2	2	3	5	11	9	7	10	11	10	13	10	12	12	12	8	8	7	4	3	7.8	12.7
15-Jul	3	3	4	3	3	3	3	6	11	14	13	14	14	15	17	17	17	16	14	10	9	8	5	6	9.5	17.5
16-Jul	4	3	3	3	3	2	3	5	15	14	14	12	14	13	14	17	17	15	10	8	7	7	7	4	8.9	17.0
17-Jul	2	2	2	1	2	2	3	5	8	6	10	11	9	9	9	9	8	4	3	3	2	1	3	2	4.9	11.4
18-Jul	1	1	1	2	4	3	3	4	7	9	9	7	11	10	8	6	6	11	3	4	4	3	4	3	5.3	11.1
19-Jul	2	2	4	3	2	2	2	2	3	3	4	3	4	5	5	4	8	3	5	2	1	2	2	3	3.2	7.7
20-Jul	2	2	1	1	1	1	3	3	2	3	3	3	4	4	5	3	4	4	2	5	4	2	2	1	2.7	4.7
21-Jul	1	1	1	2	2	1	2	3	4	3	4	4	4	4	4	5	6	7	6	5	2	1	2	1	3.1	7.5
22-Jul	1	1	2	2	2	3	5	4	3	7	8	8	8	8	10	11	13	13	10	7	5	2	2	3	5.7	12.9
23-Jul	9	5	4	2	3	3	3	4	8	11	11	9	9	8	7	11	11	11	10	6	5	2	2	3	6.5	11.1
24-Jul	2	2	2	3	2	3	3	2	3	10	8	12	16	16	15	18	17	16	13	9	5	3	2	2	7.7	18.3
25-Jul	2	3	3	3	4	3	3	5	12	15	15	15	11	10	9	10	10	11	8	5	5	3	3	3	7.2	15.4
26-Jul	3	3	3	3	2	2	2	5	11	11	13	13	16	15	14	15	16	14	11	7	1	1	2	2	7.6	15.8
27-Jul	2	3	2	1	2	2	3	4	3	3	5	5	6	8	7	6	7	8	9	6	5	4	5	3	4.5	9.0
28-Jul	3	2	1	1	1	1	2	2	3	3	3	4	3	4	4	5	3	3	3	6	16	3	3	3	3.4	15.6
29-Jul	2	2	2	2	2	2	3	2	3	2	2	3	4	9	12	13	8	5	2	3	5	5	3	10	4.5	13.2
30-Jul	5	4	2	2	2	2	3	4	4	7	4	3	7	7	6	8	4	5	9	5	2	2	2	2	4.2	8.9
31-Jul	2	2	2	1	2	2	2	4	6	7	7	5	6	5	5	5	3	2	4	2	2	1	1	2	3.4	7.4
	3.8	3.4	3.4	3.6	3.7	3.5	4.3	5.5	7.8	8.8	9.2	9.3	10.0	10.3	10.4	10.7	10.7	10.5	9.3	7.2	6.2	4.4	3.9	4.1	Diurnal Average	
	15.8	13.6	16.3	15.2	16.1	17.5	18.0	21.6	20.2	16.3	16.8	18.6	19.8	19.9	20.2	20.5	19.4	19.4	18.6	17.3	15.6	12.8	12.9	17.1	Diurnal Maximum	

NS - Not in service
All monthly, daily, and diurnal averages have been calculated using scalar methods

PASZA
Peace Airshed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Valleyview - July 2010

Maximum Value: 96.6 deg on Jul 9 22:00

Minimum Value: 4.5 deg on Jul 1 05:00

Percentiles: P_1 = 7.0 P_{10} = 10.1 Q_1 = 13.9 Median = 22.8 Q_3 = 38.8 P_{90} = 66.8 P_{99} = 85.8

Hours in Service:	704
Hours of Data:	704
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

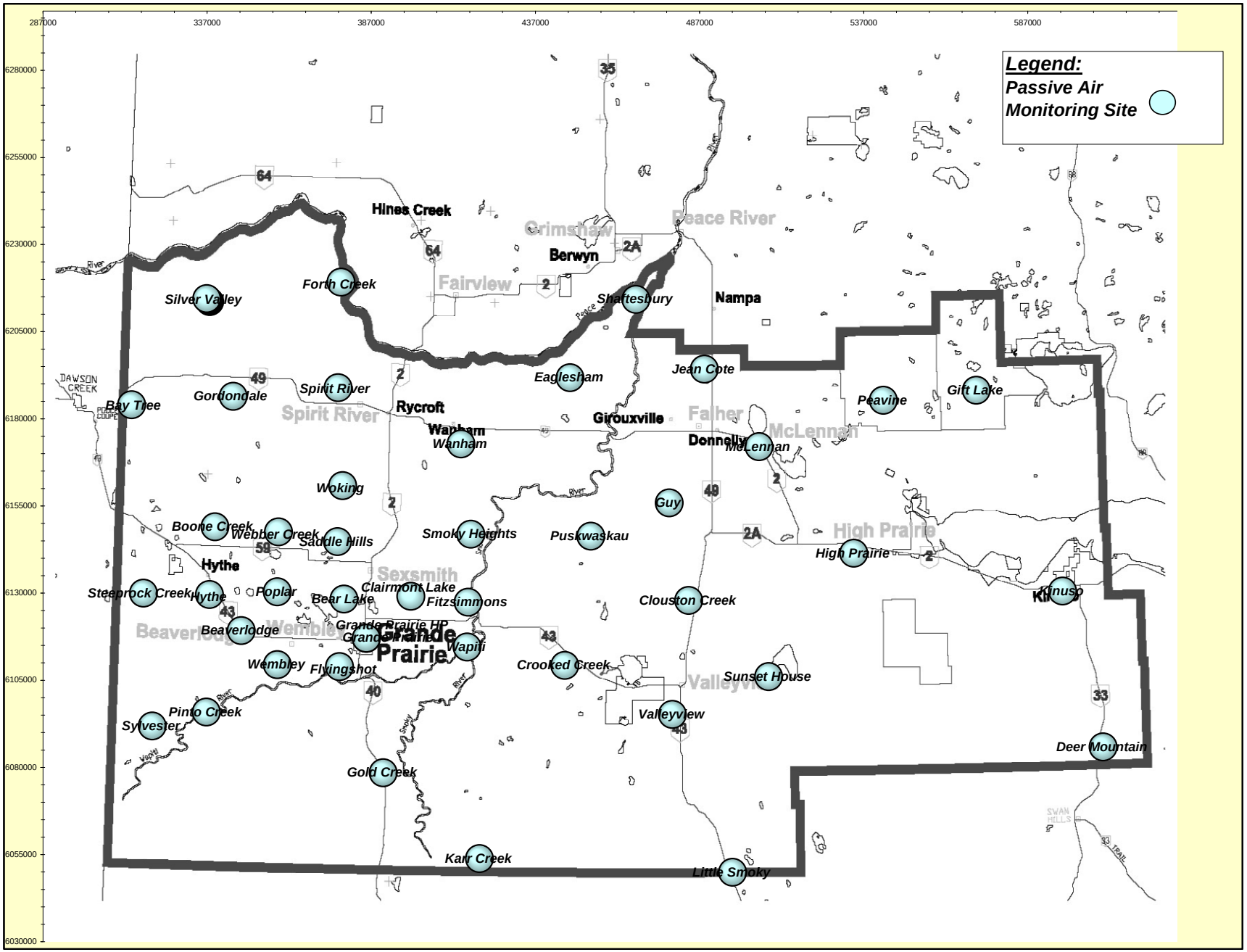
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Jul	7	7	6	5	5	8	8	29	26	25	30	30	36	32	29	29	31	25	12	26	15	34	7	10	36.0
2-Jul	29	20	8	8	25	15	12	32	24	15	16	23	18	13	12	22	15	13	14	9	15	31	22	25	31.6
3-Jul	11	11	28	22	8	10	12	10	9	12	15	18	21	17	15	15	12	13	10	11	11	12	22	11	28.1
4-Jul	10	8	14	9	12	23	9	14	17	16	10	17	14	18	14	17	16	10	14	10	10	9	16	11	23.3
5-Jul	11	12	11	10	8	10	10	12	10	15	17	17	15	14	13	14	15	14	11	11	8	9	63	45	63.3
6-Jul	31	18	20	28	22	31	58	12	19	16	17	20	21	25	21	16	15	8	8	NS	NS	NS	NS	NS	57.7
7-Jul	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
8-Jul	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	86	35	55	27	31	33	40	36	25	9	87	58	41	87.3
9-Jul	70	60	19	57	16	20	14	17	58	34	25	26	19	23	10	19	11	10	21	17	17	97	13	51	96.6
10-Jul	62	76	87	72	14	73	47	17	48	53	74	58	74	67	37	38	83	55	80	23	17	12	26	27	87.5
11-Jul	30	28	41	29	35	49	26	11	10	12	15	17	22	13	10	13	11	8	14	15	12	33	14	27	49.4
12-Jul	37	76	63	33	40	30	17	23	44	15	14	11	13	14	13	11	12	10	10	11	8	9	10	9	75.9
13-Jul	9	8	7	10	14	9	11	6	6	8	8	10	8	10	12	11	11	10	10	9	9	11	13	10	13.8
14-Jul	10	10	8	22	40	20	19	50	15	13	35	28	25	26	22	22	20	21	13	9	9	16	27	14	49.9
15-Jul	12	12	21	13	7	10	15	68	14	14	17	18	19	19	15	17	15	15	13	15	19	16	55	17	67.7
16-Jul	16	8	15	7	15	29	21	41	14	16	20	20	20	22	19	19	14	14	11	10	14	13	14	28	40.6
17-Jul	27	34	27	56	20	25	27	48	21	36	28	21	31	28	30	39	35	47	48	52	10	81	72	88	88.5
18-Jul	76	49	44	84	74	29	72	70	33	19	20	34	23	29	27	38	28	24	76	28	30	76	34	29	83.6
19-Jul	64	76	34	46	29	24	24	42	69	29	21	36	39	15	36	60	64	78	75	54	60	28	15	30	78.2
20-Jul	32	41	39	26	52	27	10	22	57	59	77	56	74	80	88	43	39	49	61	39	25	84	56	84	88.3
21-Jul	69	73	80	58	43	20	18	17	21	26	29	41	29	86	75	53	28	29	35	61	38	77	85	68	86.3
22-Jul	62	60	59	31	15	25	9	14	24	29	20	28	38	28	19	18	19	15	11	11	21	19	27	46	62.0
23-Jul	15	30	22	24	12	13	14	36	23	19	20	30	35	32	35	24	23	22	18	14	21	12	17	10	35.7
24-Jul	14	10	31	33	41	51	68	40	26	30	41	22	18	17	22	14	15	13	13	17	12	37	21	29	68.0
25-Jul	38	10	19	10	8	9	10	54	12	15	18	22	21	26	32	30	24	25	25	23	11	20	28	10	54.5
26-Jul	81	79	34	62	15	35	27	37	14	12	24	13	13	30	18	20	20	19	13	11	65	62	55	25	80.7
27-Jul	51	84	41	36	28	39	15	18	42	71	31	34	32	27	27	30	29	15	10	12	8	13	14	17	84.4
28-Jul	11	18	83	81	82	55	36	69	68	79	47	49	40	58	61	67	68	78	38	53	18	62	83	46	83.2
29-Jul	73	67	83	68	37	17	19	31	36	50	56	37	84	61	20	22	39	68	49	15	16	11	29	23	83.9
30-Jul	48	51	84	43	87	81	17	25	18	42	44	51	36	43	30	52	38	26	18	35	40	21	31	18	87.1
31-Jul	33	24	30	69	21	46	21	39	28	29	29	79	43	83	61	54	73	75	45	43	63	62	25	36	83.2
	80.7	84.4	87.5	83.6	87.1	81.3	72.1	70.0	68.7	79.2	77.3	85.9	83.9	86.3	88.3	67.0	82.9	78.2	79.9	61.2	64.6	96.6	85.1	88.5	

NS - Not in service

PASZA

Monthly Passive Data Summary

Location of PASZA Passive Monitoring Stations



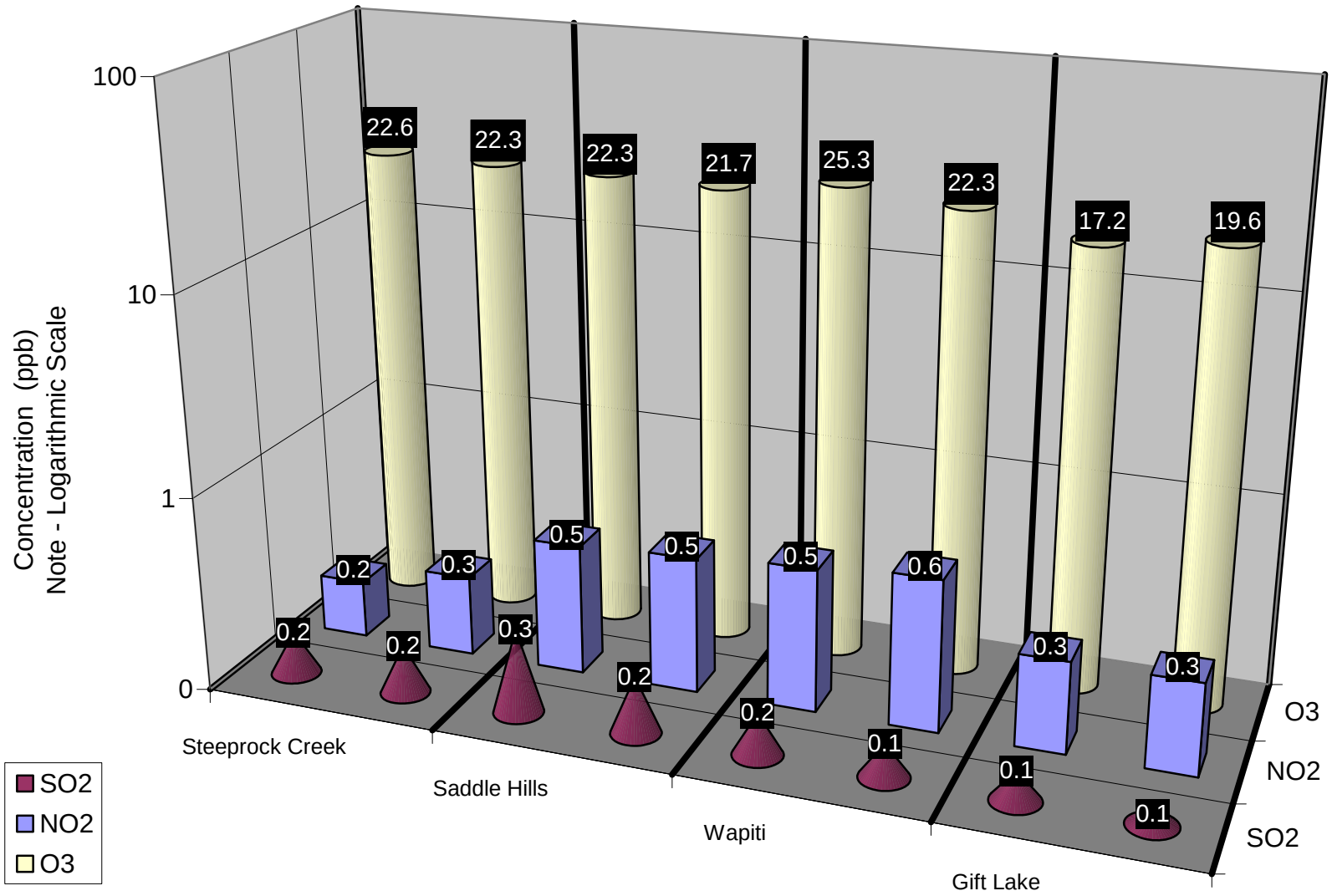
PASZA Passive Results for July 2010

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	Site Legal
Duplicates					
7a	Steeprock Creek	**0.2**	**22.6**	**0.2**	
7b	Steeprock Creek	**0.2**	**22.3**	**0.3**	
18a	Saddle Hills	**0.3**	**22.3**	**0.5**	
18b	Saddle Hills	**0.2**	**21.7**	**0.5**	
33a	Wapiti	**0.2**	**25.3**	**0.5**	
33b	Wapiti	**0.1**	**22.3**	**0.6**	
45a	Gift Lake	**0.1**	**17.2**	**0.3**	
45b	Gift Lake	**0.1**	**19.6**	**0.3**	
1	Silver Valley	**0.3**	**21.3**	**0.7**	08-27-081-11 W6M
2	Bay Tree	**0.1**	**22.8**	**0.4**	13-16-078-13 W6M
3	Fourth Creek	**0.2**	**26.4**	**0.3**	04-13-082-07 W6M
4	Gordondale	**0.2**	**23.9**	**0.5**	04-34-078-10 W6M
5	Boone Creek	**0.2**	**17.7**	**0.6**	16-36-074-11 W6M
7	Steeprock Creek	**0.2**	**22.4**	**0.2**	09-35-072-13 W6M
9	Spirit River	**0.2**	**23.4**	**0.9**	08-12-079-07 W6M
10	Woking	**0.3**	**21.8**	**0.8**	01-13-076-07 W6M
11	Webber Creek	**0.2**	**19.9**	**0.8**	09-36-074-09 W6M
12	Hythe	**0.1**	**19.4**	**0.6**	14-36-072-11 W6M
14	Sylvester	**0.1**	**17.7**	**0.6**	08-06-069-12 W6M
16	Beaverlodge	**0.2**	**27.4**	**0.7**	15-36-071-10 W6M
17	Poplar	**0.2**	**21.5**	**1.0**	13-06-073-08 W6M
18	Saddle Hills	**0.2**	**22.0**	**0.5**	04-25-074-07 W6M
19	Wanham	**0.2**	**24.9**	**0.5**	16-22-077-03 W6M
20	Shaftesbury	**0.2**	**26.0**	**0.4**	04-03-082-23 W5M
21	Eaglesham	**1.0**	**20.1**	**0.7**	16-21-079-25 W5M
23	Bear Lake	**0.2**	**24.6**	**0.9**	15-31-072-06 W6M

PASZA Passive Results for July 2010 (Continued)

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	Site Legal
24	Wembley	**0.2**	**19.5**	**1.0**	12-31-070-08 W6M
25	Pinto Creek	**0.1**	**22.8**	**0.4**	04-24-069-11 W6M
26	Flyingshot	**0.1**	**21.5**	**0.8**	15-36-070-07 W6M
27	Grande Prairie I	**0.2**	**22.8**	**1.1**	08-15-071-06 W6M
28	Clairmont Lake	**0.3**	**24.0**	**1.0**	09-06-073-04 W6M
29	Smoky Heights	**0.4**	**28.9**	**0.8**	04-06-075-02 W6M
30	Fitzsimmons	**0.1**	**21.8**	**0.5**	15-36-072-03 W6M
32	Gold Creek	**0.2**	**17.8**	**0.4**	06-33-067-05 W6M
33	Wapiti	**0.2**	**23.8**	**0.6**	02-25-071-03 W6M
34	Puskwaskau	**0.1**	**19.0**	**0.3**	15-35-074-25 W5M
35	Jean Cote	**0.2**	**21.1**	**1.3**	12-35-079-21 W5M
36	Guy	**0.2**	**22.4**	**0.9**	03-04-076-22 W5M
37	Crooked Creek	**0.1**	**25.7**	**0.5**	16-01-071-26 W5M
38	Karr Creek	**0.1**	**16.2**	**0.2**	10-16-065-02 W6M
39	Clouston Creek	**0.1**	**21.5**	**0.5**	12-01-073-22 W5M
40	McLennan	**0.3**	**21.9**	**1.4**	03-29-077-19 W5M
41	Valleyview	**0.2**	**23.2**	**0.4**	09-30-069-22 W5M
42	Sunset House	**0.2**	**22.5**	**0.4**	05-32-070-19 W5M
43	High Prairie	**0.1**	**21.4**	**0.5**	16-13-074-17 W5M
44	Peavine	**0.1**	**19.2**	**0.4**	03-05-079-15 W5M
45	Gift Lake	**0.1**	**18.4**	**0.3**	10-07-079-12 W5M
46	Little Smoky	**0.1**	**18.0**	**0.6**	12-01-065-21 W5M
47	Kinuso	**0.1**	**17.1**	**0.3**	12-10-073-10 W5M
48	Deer Mountain	**0.1**	**17.2**	**0.4**	15-22-068-09 W5M
49	Grande Prairie HP	**0.2**	**28.8**	**1.5**	17-26-071-06 W6M

*BDL = Below Detection Level



Duplicate Summary Chart

Passive Summary for July 2010

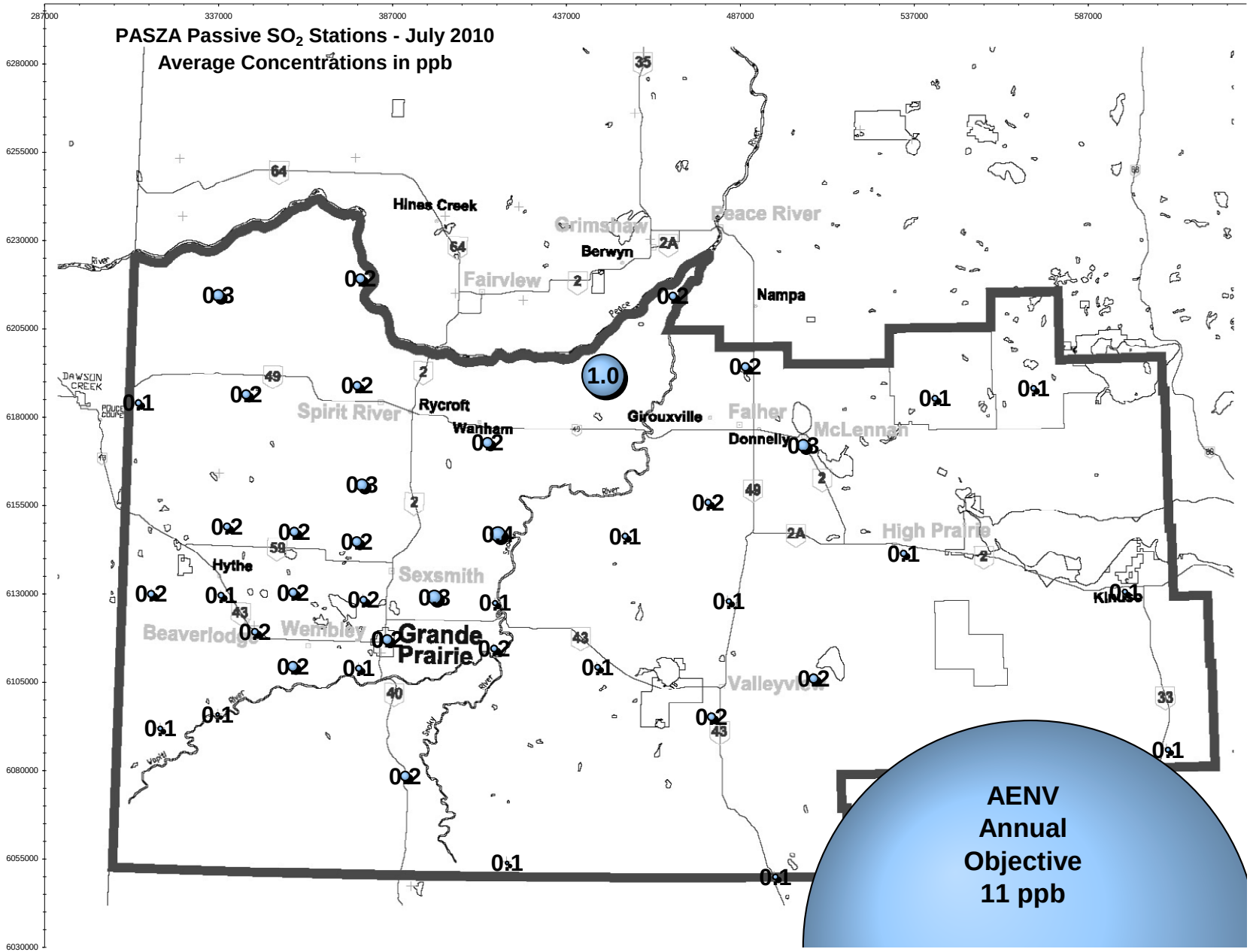
Stats	Sulphur Dioxide SO_2	Ozone O_3	Nitrogen Dioxide NO_2
	ppb	ppb	ppb
	Passive Summary for July 2010 (PASZA Zone)		
Mean	**0.2**	**21.9**	**0.6**
Standard Deviation	**0.1**	**3.1**	**0.3**
Minimum	**0.1**	**16.2**	**0.2**
Minimum At	**Pinto Creek (#25)**	**Karr Creek (#38)**	**Steeprock Creek (#7)**
Maximum	**1.0**	**28.9**	**1.5**
Maximum At	**Eaglesham (#21)**	**Smoky Heights (#29)**	**Grande Prairie HP (#49)**

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

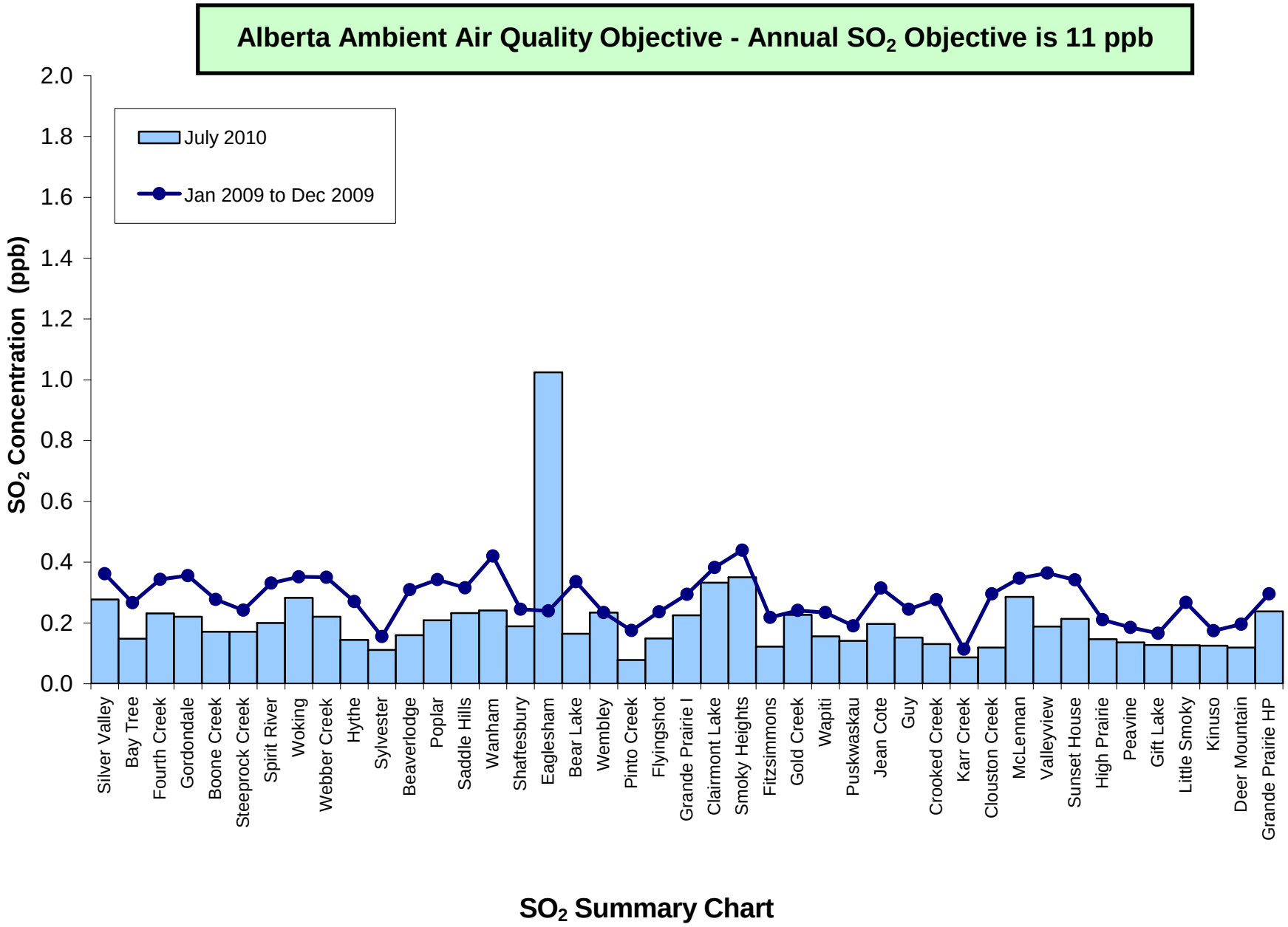
	SO_2	O_3	NO_2
PASZA Beaverlodge station	**0.3**	**24.3**	**1.7**
PASZA Beaverlodge passive	**0.2**	**27.4**	**0.7**

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

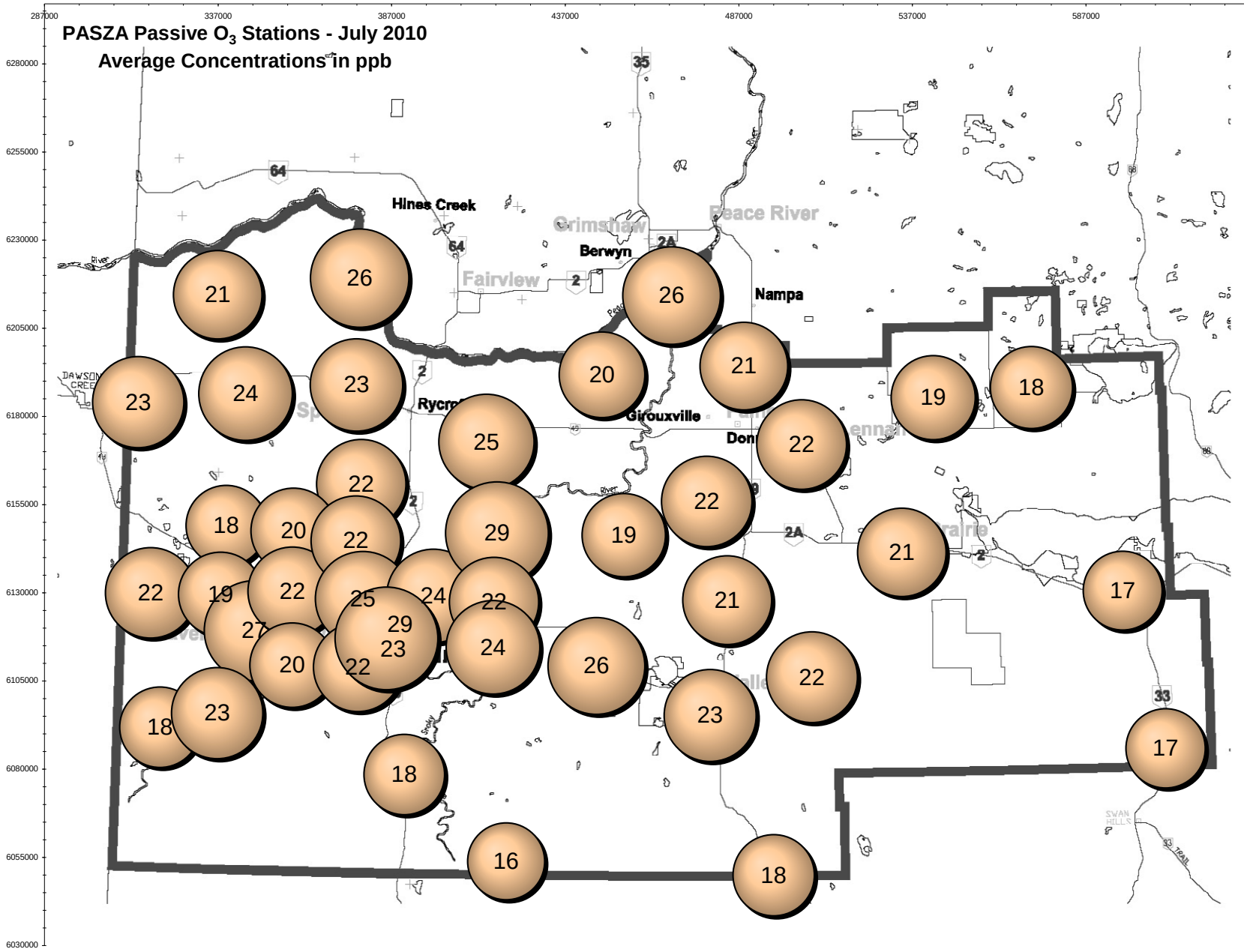
	SO_2	O_3	NO_2
PASZA Henry Pirker station	**0.2**	**25.2**	**4.0**
PASZA Grande Prairie passive	**0.2**	**28.8**	**1.5**



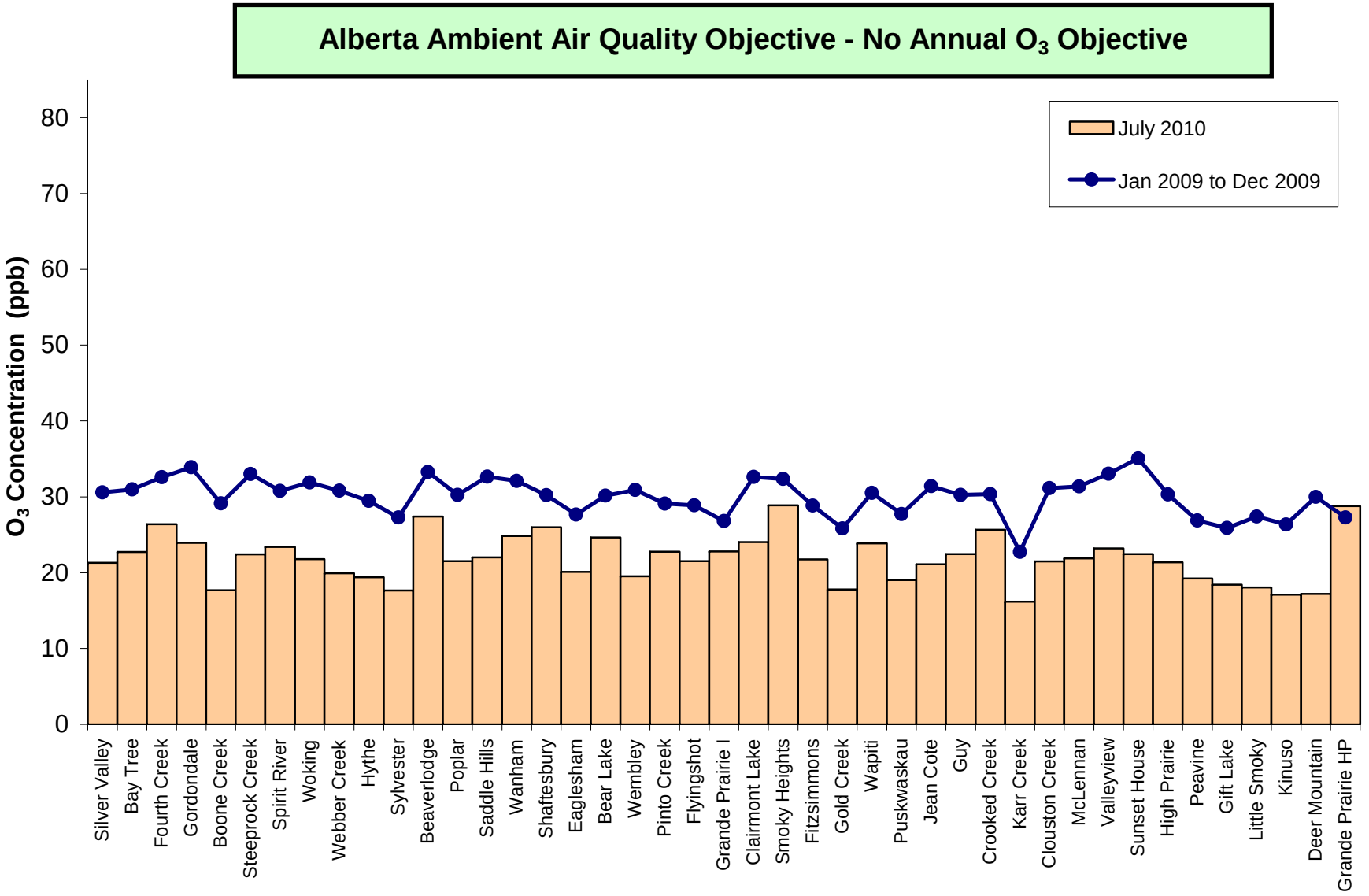
SO_2 Bubble Chart



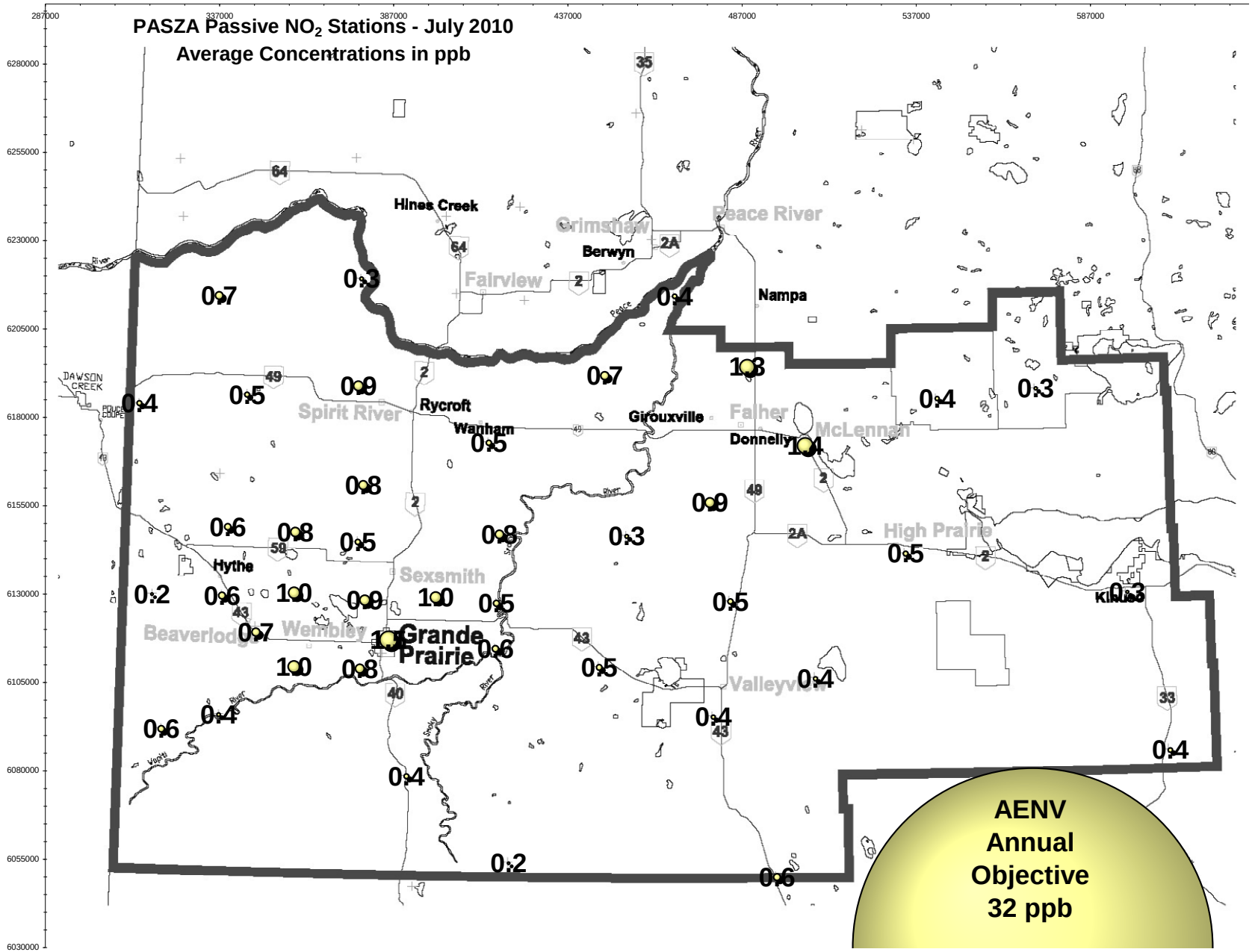
SO_2 Summary Chart



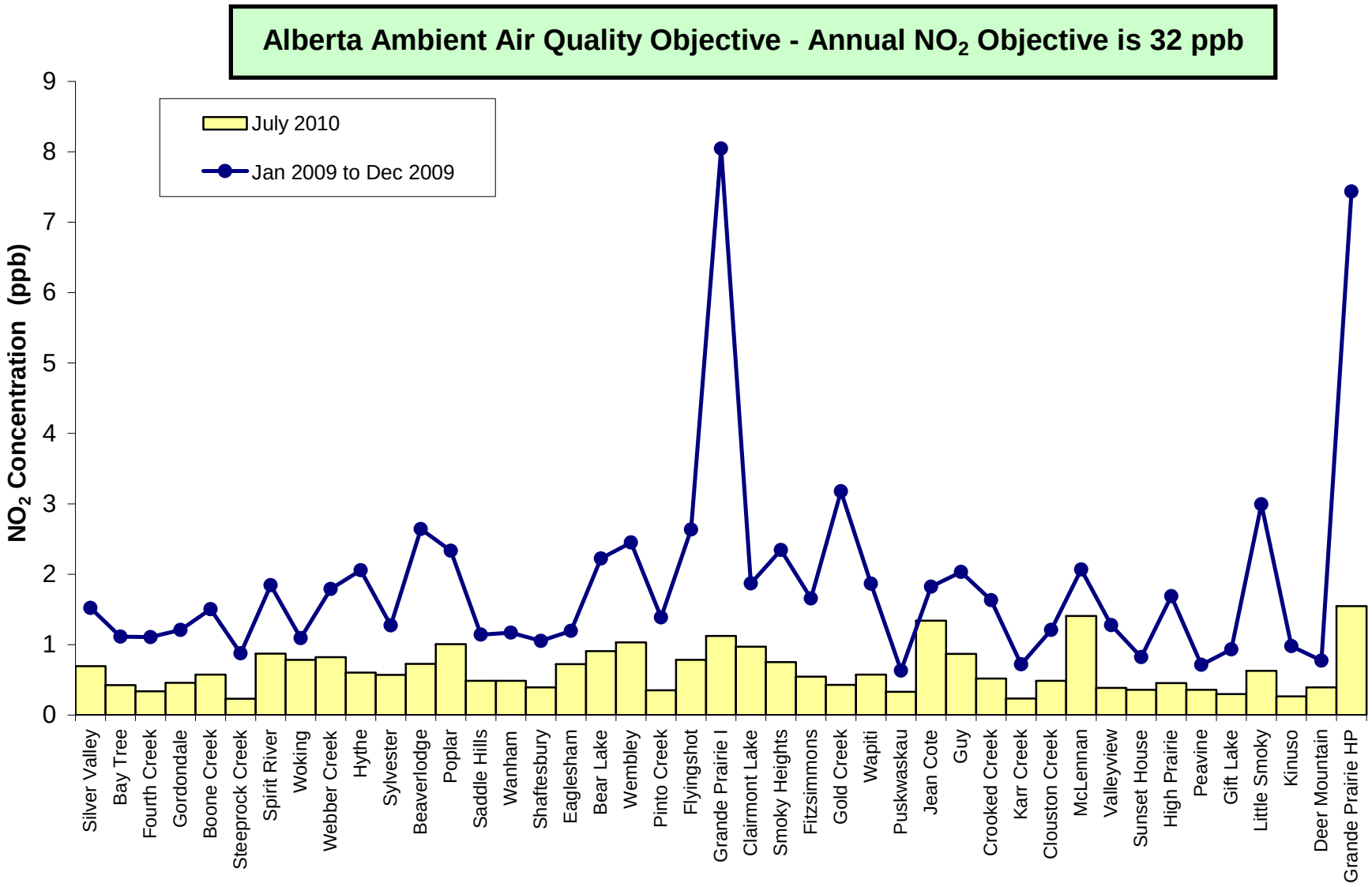
O_3 Bubble Chart



O_3 Summary Chart



NO_2 Bubble Chart



NO_2 Summary Chart

July 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	July 13, 2010	Previous Calibration	June 1, 2010
Station Number	1	Station Location	Henry Pirker
Reason:	Routine / Install / Removal / Other:		
Start Time (MST)	8:26	End Time (MST)	11:25
Barometric Pressure	0.924 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Conc	50.6 ppb	Cal Gas Cert Date	13/3/2009
		Cal Gas Cylinder #	AAL 15377
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	10
	Before		After
Calculated slope	1.002323	Calculated slope	0.995169
Calculated intercept	-1.420158	Calculated intercept	-1.521890
Analyzer make	TEI 43C	Analyzer serial #	610816292

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	8.7		8.5	
Coefficient	.815		.779	
Pressure	643.3	mm Hg	643.2	mm Hg
Flow	0.486	lpm	0.485	lpm
Lamp Voltage	43941	Hz	43047	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	0.5	N/A
4991	39.83	400.6	403.9	0.9918
4991	19.89	200.8	202.8	0.9902
4991	9.93	100.5	104.2	0.9643
4991	0.00	0.0	0.5	As Found Zero
4991	39.83	400.6	403.9	As Found Span
			Average Correction Factor	0.9821

Calculated value of As Found Response: 402.9 ppb Percent Change of As Found: -0.6%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.1	ppb
Auto span	239.8	ppb	249.4	ppb

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PASZA**

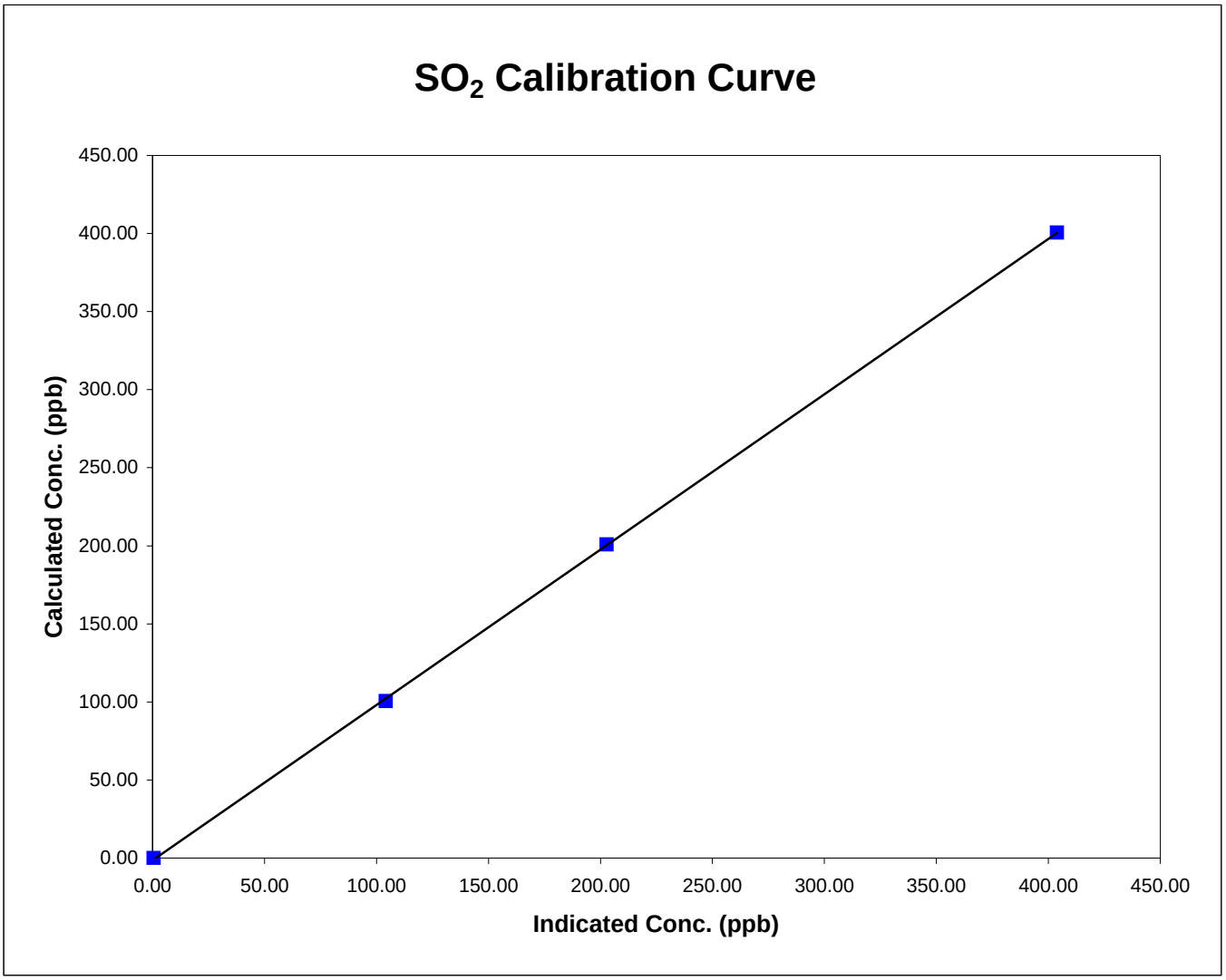
FOCUS AIR QUALITY MONITORING

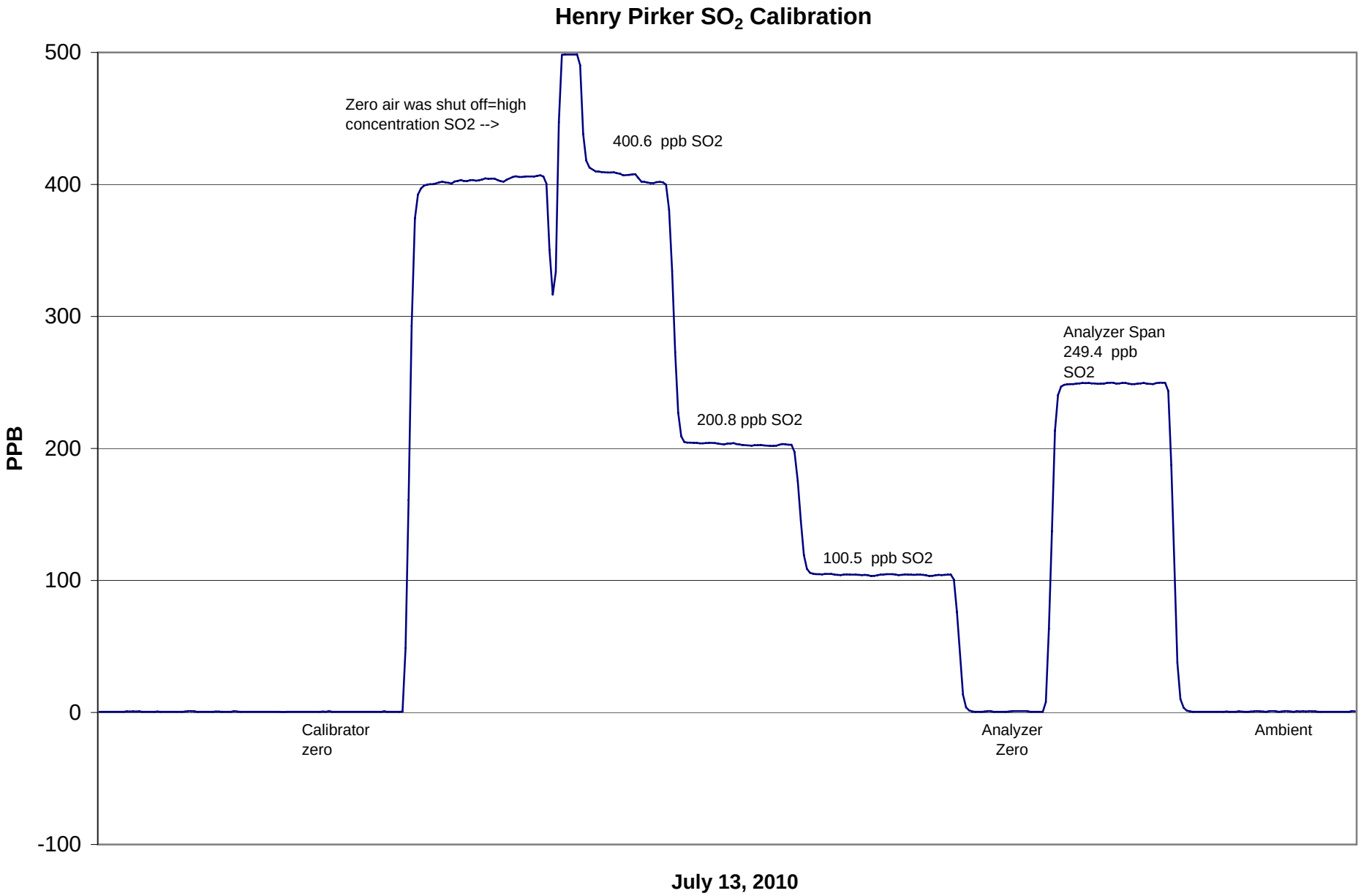
Station Information

Calibration Date	July 13, 2010	Previous Calibration	June 1, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:26	End Time (MST)	11:25
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	0.5	N/A		
400.6	403.9	0.9918	Correlation Coefficient	0.999952
200.8	202.8	0.9902		
100.5	104.2	0.9643	Slope	0.995169
			Intercept	-1.521890




Henry Pirker SO_2 Calibration
500
400
300
200
100
0
-100
PPB
Zero air was shut off=high concentration SO2 -->
400.6 ppb SO2
200.8 ppb SO2
100.5 ppb SO2
Analyzer Span 249.4 ppb SO2
Calibrator zero
Analyzer Zero
Ambient
July 13, 2010

Calibration Report

Parameter **TRS**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 14, 2010	Previous Calibration	June 10, 2010
Station Number	1	Station Location	Henry Pirker
Reason:	Routine / Install / Removal / Other:		
Start Time (MST)	8:30	End Time (MST)	10:53
Barometric Pressure	0.927 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	1.015601	Calculated slope	0.996588
Calculated intercept	0.662155	Calculated intercept	0.064477
Analyzer make	TEI 43C	Analyzer serial #	31990000000491

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Coefficient	1.641		1.641	
Background	26.2		28.5	
Pressure	644.0	mm Hg	648.1	mm Hg
Flow	0.641	ccm	0.601	ccm
Lamp Voltage	822	V	824	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)
4989	0.00	0.00	0.18	N/A
4989	79.79	81.07	81.57	0.9939
4989	39.87	40.83	40.30	1.0131
4989	9.93	10.23	10.27	0.9965
4989	0.00	0.00	0.18	As Found Zero
4989	79.78	81.06	81.87	As Found Span
			Average Correction Factor	1.0011

Calculated value of As Found Response: 83.6 ppb Percent Change of As Found: -3.2%

	before calibration		after calibration	
Auto zero	-0.29	ppb	0.35	ppb
Auto span	32.32	ppb	30.32	ppb

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **TRS**

Air Monitoring Network **PASZA**

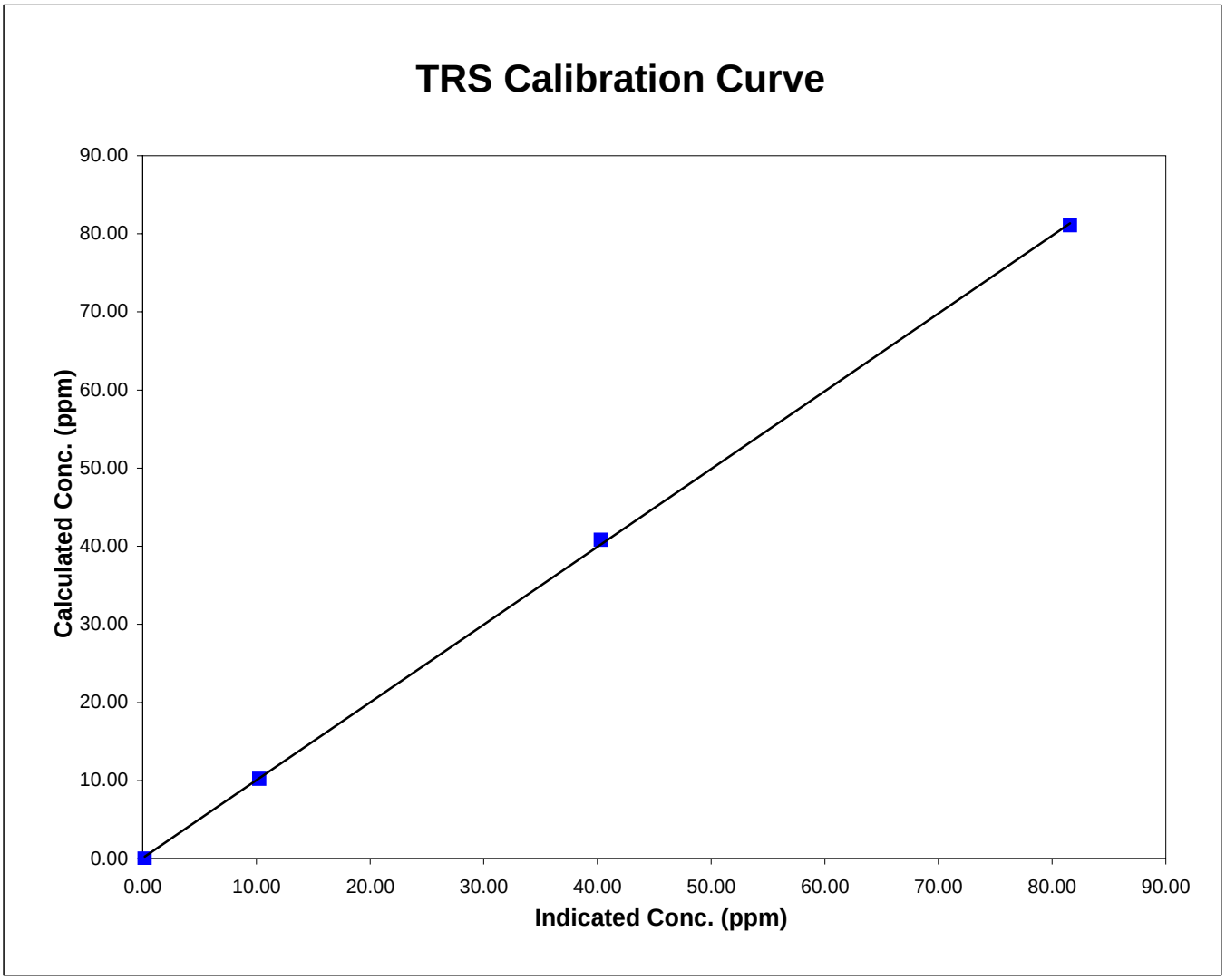
FOCUS AIR QUALITY MONITORING

Station Information

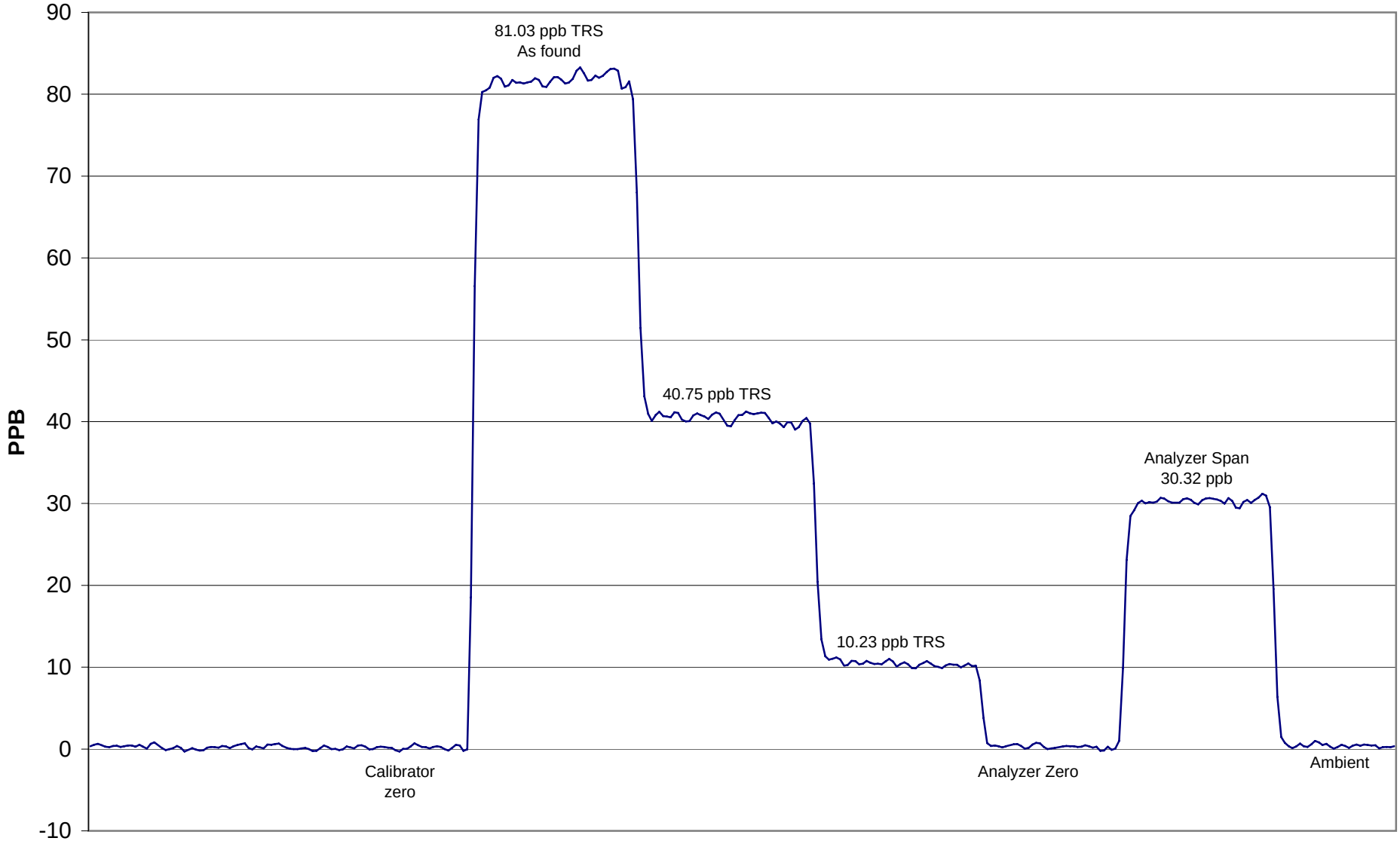
Calibration Date	July 14, 2010	Previous Calibration	June 10, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:30	End Time (MST)	10:53
Analyzer make/model	TEI 43C	Analyzer serial #	3.199E+13

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.183	N/A		
81.068	81.570	0.9939	Correlation Coefficient	0.999872
40.830	40.303	1.0131		
10.230	10.266	0.9965	Slope	0.996588
			Intercept	0.064477



Henry Pirker TRS Calibration



July 14, 2010

Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 9, 2010	Previous Calibration	June 1, 2010
Station Number	1	Station Location	Henry Pirker

Reason: Routine | Installation | Removal | Other:

Start Time (MST)	8:00		End Time (MST)	12:19	
Barometric Pressure	0.926	Atm	Station Temperature	20.0	Deg C
Calibrator	Environics		Serial Number	3474	
NO Cal Gas Conc	49.6	ppm	Cal Gas Expiry Date	June 8, 2008	
NOx Cal Gas Conc	49.6	ppm	Cal Gas Serial #	AAL 15377	

DACS Information

DACS make: Focus AP1000 DACS serial No.:

Parameter		NO2	NOx	NO
Before	Data Slope	1.000050	1.127906	1.127673
	Data Offset	-0.279852	0.476673	0.014364
After	Data Slope	0.995307	1.116753	1.134006
	Data Offset	0.110502	0.097804	0.004142
Channel #		8	6	7
Voltage Range		0 - 10 VDC	0 - 10 VDC	0 - 10 VDC

Analyzer Information

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

Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	10.2	mV	10.4	mV
NOx bkgnd	10.8	mV	10.6	mV
NO coefficient	0.776		0.778	
NOx coefficient	1.000		1.000	
NO2 conv temp	318.0	Deg C	318.0	Deg C
PMT Temp	-2.5	Deg C	-2.4	Deg C
PMT Volt	-786.0	mV	-786.0	mV
R Cell Press	200.2	in Hg	175.7	in Hg

Calibration Report

Parameter **NOx-NO-NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: July 9, 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	4988	0.00	0.0	0.0	0.0	-0.1	0.0	-0.1	N/A	N/A
1	4988	39.83	392.9	392.9	0.0	351.8	346.5	5.3	1.1170	1.1340
2										
3										
AFZ	4988	0.00	0.0	0.0	0.0	-0.1	0.0	-0.1	0.0000	0.0000
AFS	4988	39.83	392.9	392.9	0.0	351.8	346.5	5.3	1.1170	1.1340
							Average Correction Factor		1.1170	1.1340

As Found Concentrations: NO_X= 352.3 NO= 346.5 As Found Percent Change NO_X= -10.3% NO= -11.8%

GPT Calibration Data

Dilution Flow 4989 ccm Source Gas Flow 39.85 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	0.0	0.0	0.0	-0.1	0.0	-0.1	N/A	N/A	N/A	N/A
NO point	346.5	346.5	0.0	351.8	346.5	5.3	0.9850	1.0000	N/A	N/A
300	346.5	108.3	238.2	347.4	108.3	239.2	0.9973	1.0000	0.9958	100.4%
200										
100										
					Average Correction Factor		0.9973	1.0000	0.9958	100.4%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.1	0.0	0.0	ppb	-0.3	-0.2	0.0	ppb
Auto span	168.4	169.5	1.2	ppb	138.1	137.3	1.0	ppb

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

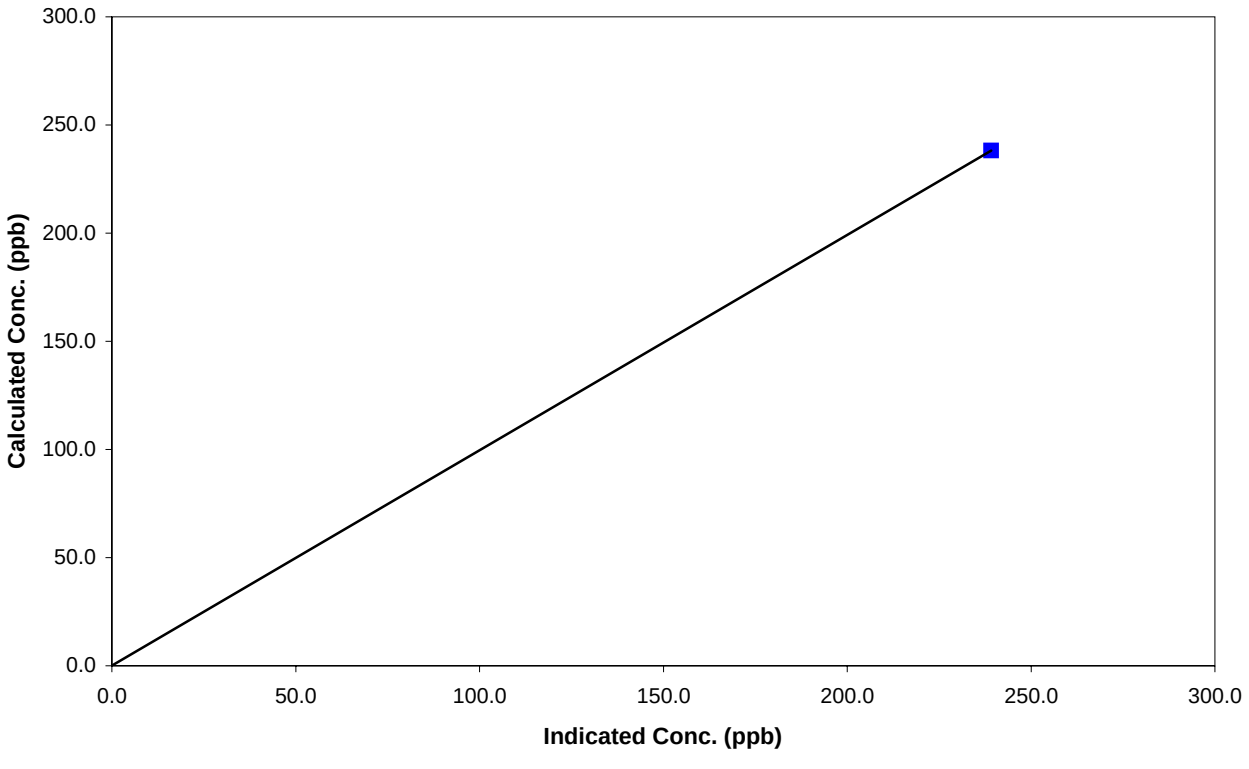
Station Information

Calibration Date	July 9, 2010	Previous Calibration	June 1, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:00	End Time (MST)	12:19
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		
238.2	239.2	0.9958	Correlation Coefficient	1.000000
			Slope	0.995307
			Intercept	0.110502

NO_2 Calibration Curve



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

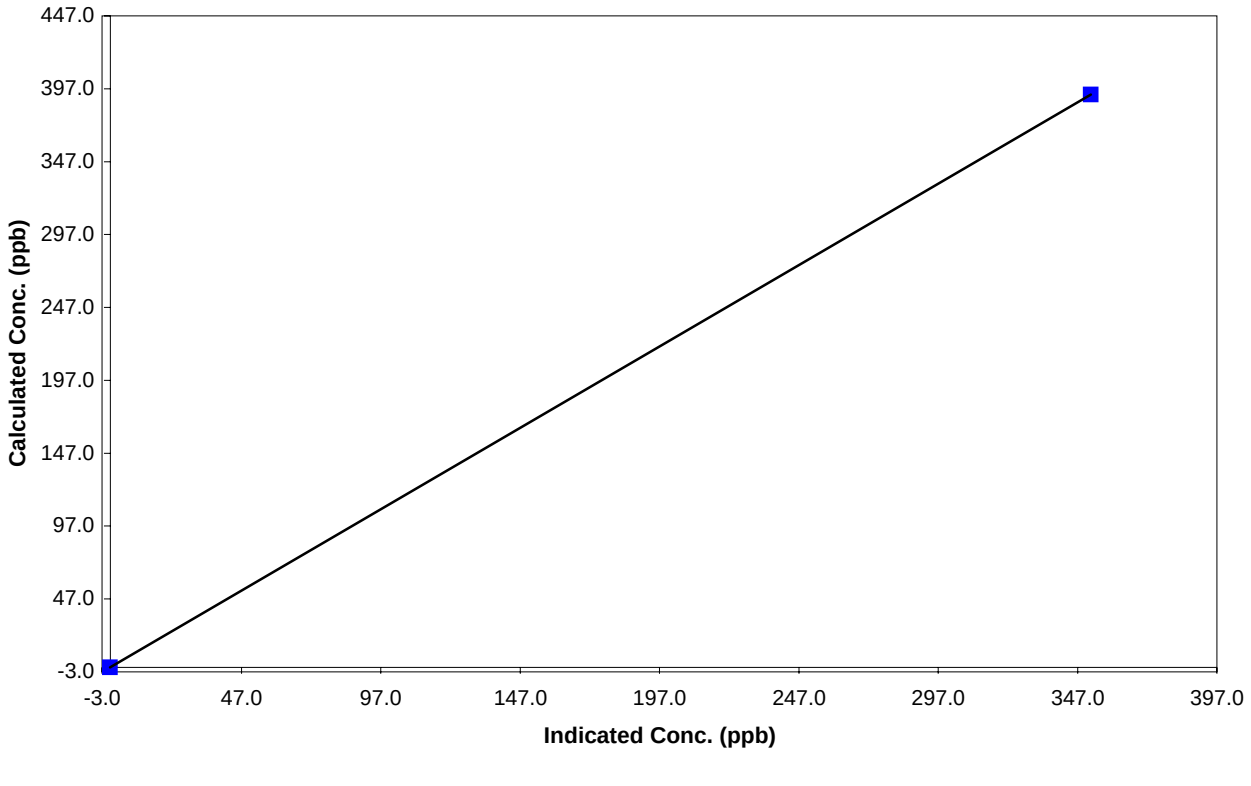
Station Information

Calibration Date	July 9, 2010	Previous Calibration	June 1, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:00	End Time (MST)	12:19
Analyzer make	TEI 42C	Analyzer serial #	508011073

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A		
392.9	351.8	1.1170	Correlation Coefficient	1.000000
			Slope	1.116753
			Intercept	0.097804

NOx Calibration Curve



Calibration Summary

Parameter **NO**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

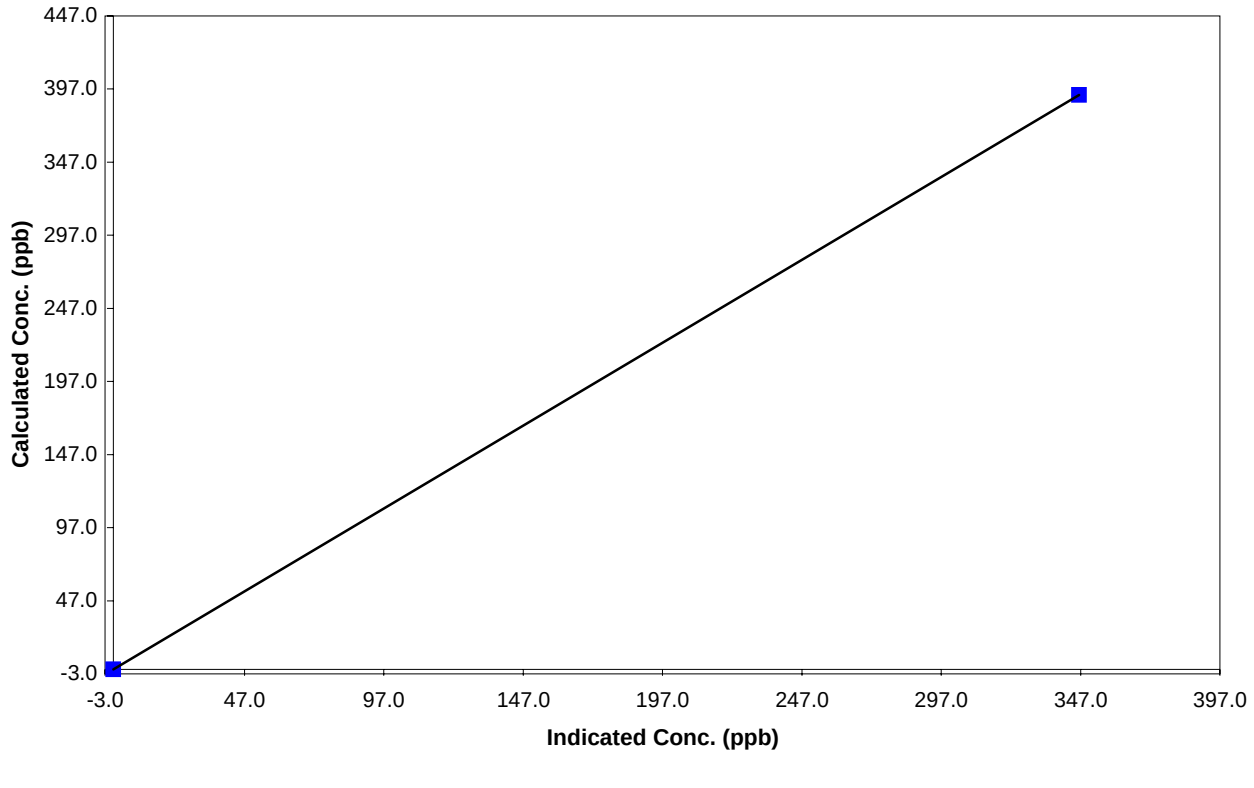
Station Information

Calibration Date	July 9, 2010	Previous Calibration	June 1, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:00	End Time (MST)	12:19
Analyzer make	TEI 42C	Analyzer serial #	508011073

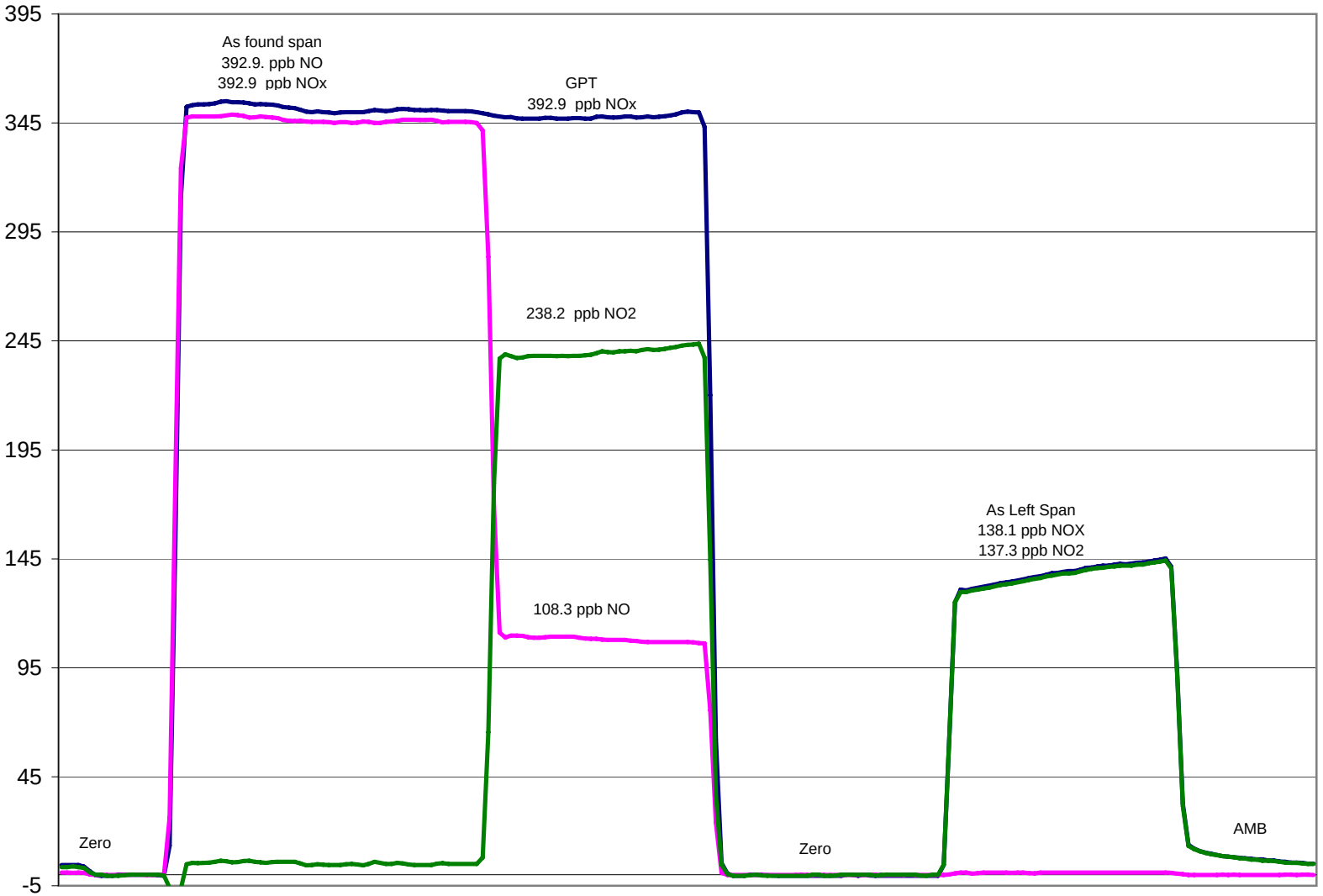
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
392.9	346.5	1.1340	Correlation Coefficient	1.000000
			Slope	1.134006
			Intercept	0.004142

NO Calibration Curve



Henry Pirker
NO_X Calibration



July 9, 2010

Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 13, 2010	Previous Calibration	June 1, 2010
Station Number	1	Station Location	Henry Pirker

Reason: **Routine** Installation Removal Other:

Start Time (MST)	8:26		End Time (MST)	12:40	
Barometric Pressure	0.924	Atm	Station Temperature	20.0	Deg C
Calibrator	Environics		Serial Number	3474	
NO Cal Gas Conc	49.6	ppm	Cal Gas Expiry Date	June 8, 2008	
NOx Cal Gas Conc	49.6	ppm	Cal Gas Serial #	AAL 15377	

DACS Information

DACS make: Focus AP1000 DACS serial No.:

Parameter		NO2	NOx	NO
Before	Data Slope	0.995307	1.116753	1.134006
	Data Offset	0.110502	0.097804	0.004142
After	Data Slope	0.997466	0.993406	0.993996
	Data Offset	0.096288	-2.172831	-2.468315
Channel #		8	6	7
Voltage Range		0 - 10 VDC	0 - 10 VDC	0 - 10 VDC

Analyzer Information

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

Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	10.2	mV	10.2	mV
NOx bkgnd	10.8	mV	10.8	mV
NO coefficient	0.776		0.776	
NOx coefficient	1.000		1.000	
NO2 conv temp	319.0	Deg C	319.0	Deg C
PMT Temp	-2.4	Deg C	-2.5	Deg C
PMT Volt	-787.0	mV	-786.0	mV
R Cell Press	200.8	in Hg	168.5	in Hg

Calibration Report

Parameter **NOx-NO-NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: July 13, 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	-0.4	0.0	-0.4	N/A	N/A
1	4991	39.83	392.7	392.7	0.0	396.0	396.1	-0.1	0.9916	0.9914
2	4991	19.89	196.9	196.9	0.0	201.9	202.2	-0.3	0.9751	0.9737
3	4991	9.93	98.5	98.5	0.0	103.9	103.9	-0.1	0.9481	0.9480
AFZ	4991	0.00	0.0	0.0	0.0	-0.4	0.0	-0.4	0.0000	0.0000
AFS	4991	39.83	392.7	392.7	0.0	337.5	337.4	15.4	1.1637	1.1638
							Average Correction Factor		0.9716	0.9710

As Found Concentrations: NO_X= 338.0 NO= 337.5 As Found Percent Change NO_X= -13.9% NO= -14.1%

GPT Calibration Data

Dilution Flow 4989 ccm Source Gas Flow 39.85 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	0.0	0.0	0.0	-0.4	0.0	-0.4	N/A	N/A	N/A	N/A
NO point	397.5	397.5	0.0	397.4	397.5	-0.1	1.0002	1.0000	N/A	N/A
300	397.5	114.2	283.2	397.6	114.2	283.6	0.9997	1.0000	0.9988	100.1%
200	397.5	206.7	190.8	397.8	206.7	191.4	0.9991	1.0000	0.9970	100.3%
100	397.5	294.5	102.9	397.8	294.5	103.5	0.9992	1.0000	0.9944	100.6%
					Average Correction Factor		0.9993	1.0000	0.9967	100.3%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.1	0.0	0.0	ppb	-0.4	-0.4	0.0	ppb
Auto span	168.4	169.5	1.2	ppb	160.4	159.4	1.0	ppb

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

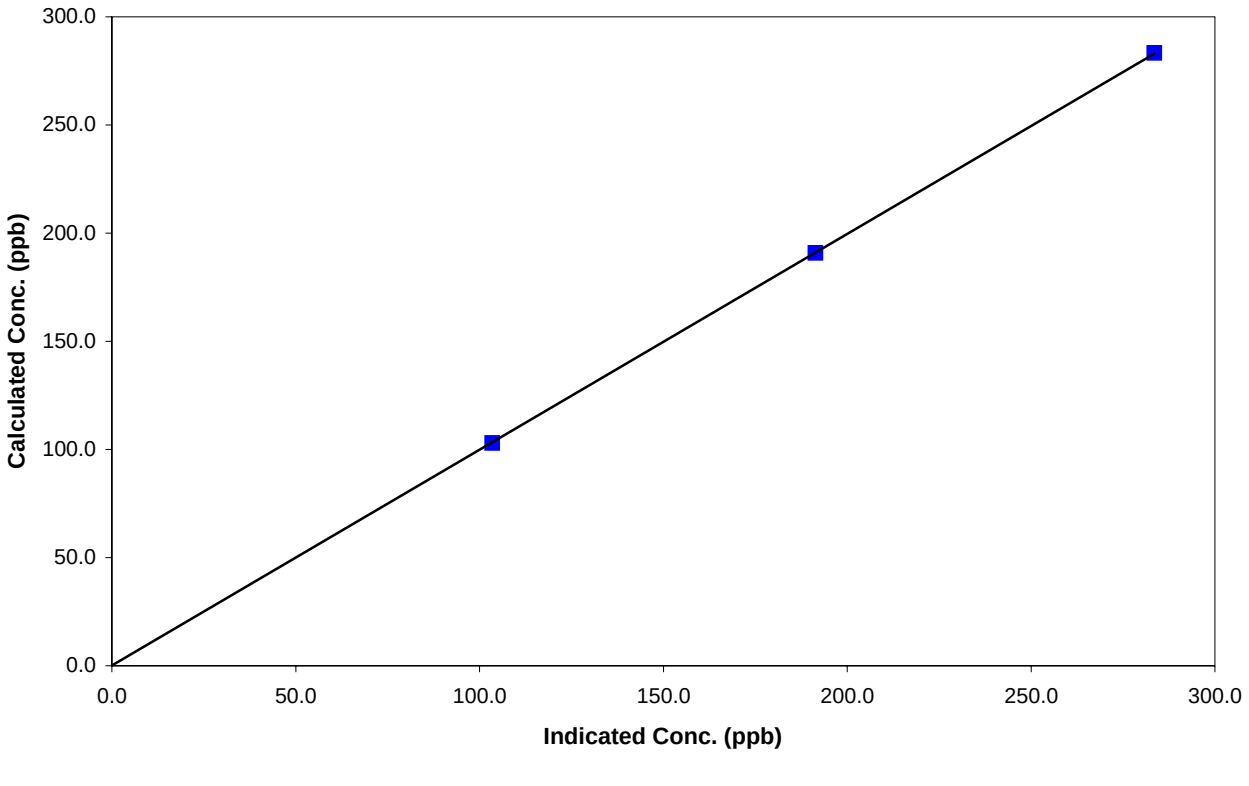
Station Information

Calibration Date	July 13, 2010	Previous Calibration	June 1, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:26	End Time (MST)	12:40
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	-0.4	N/A		
283.2	283.6	0.9988	Correlation Coefficient	0.999991
190.8	191.4	0.9970		
102.9	103.5	0.9944	Slope	0.997466
			Intercept	0.096288

NO_2 Calibration Curve



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

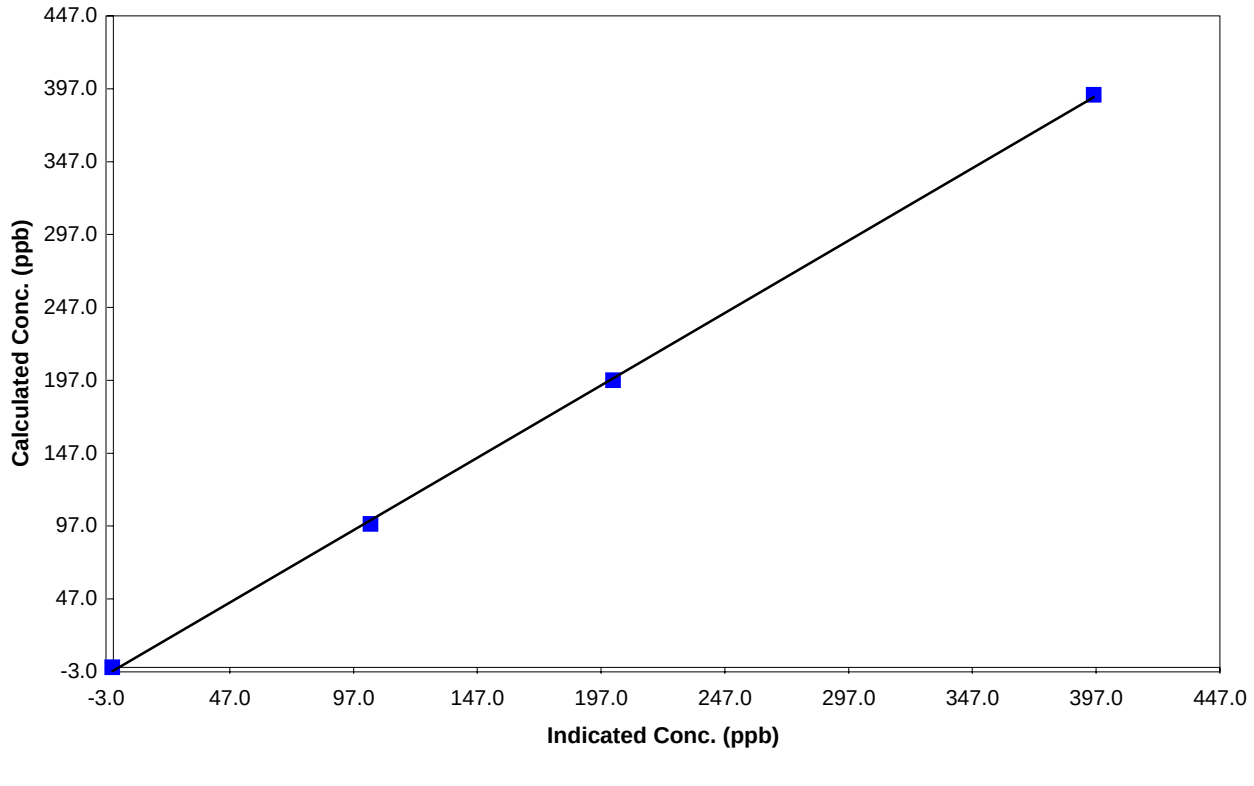
Station Information

Calibration Date	July 13, 2010	Previous Calibration	June 1, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:26	End Time (MST)	12:40
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	-0.4	N/A		
392.7	396.0	0.9916	Correlation Coefficient	0.999791
196.9	201.9	0.9751		
98.5	103.9	0.9481	Slope	0.993406
			Intercept	-2.172831

NOx Calibration Curve



Calibration Summary

Parameter **NO**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

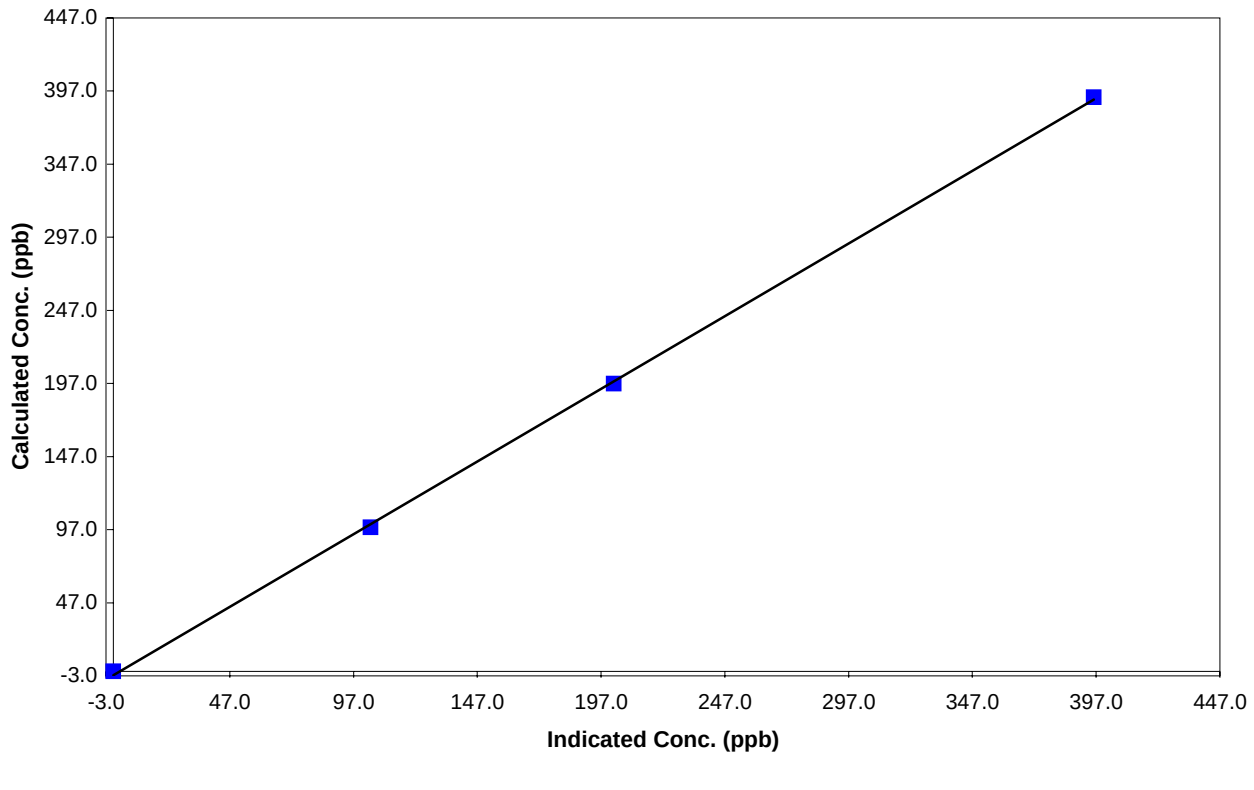
Station Information

Calibration Date	July 13, 2010	Previous Calibration	June 1, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:26	End Time (MST)	12:40
Analyzer make	TEI 42C	Analyzer serial #	508011073

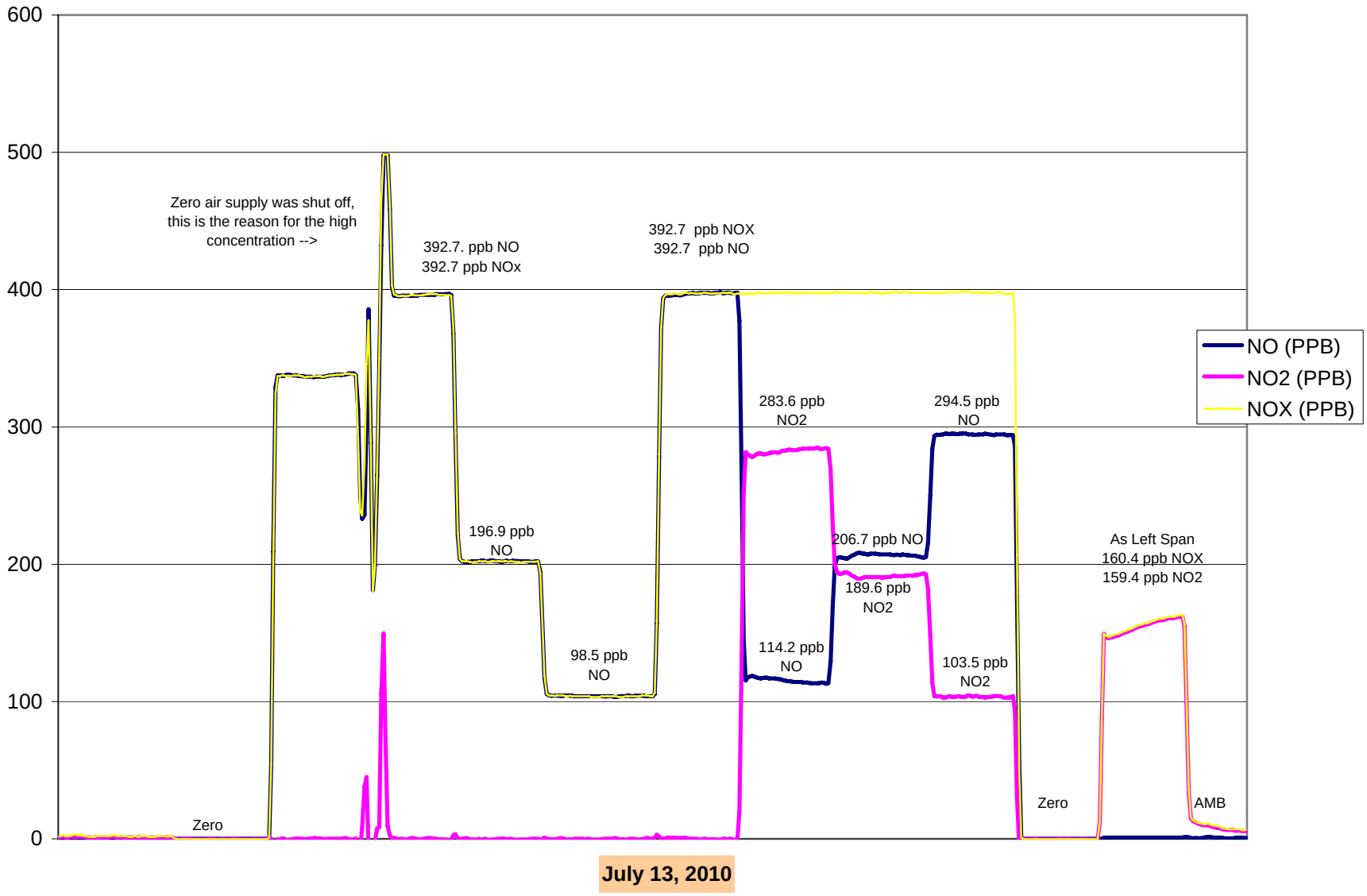
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
392.7	396.1	0.9914	Correlation Coefficient	0.999806
196.9	202.2	0.9737		
98.5	103.9	0.9480	Slope	0.993996
			Intercept	-2.468315

NO Calibration Curve



PASZA
NO_X Calibration



July 13, 2010

Calibration Report

Parameter **O3**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	July 13, 2010	Previous Calibration	June 1, 2010
Station Number	1	Station Location	Henry Pirker
Reason: Routine	Install	Removal	Other:
Start Time (MST)	10:15	End Time (MST)	13:55
Barometric Pressure	0.924 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	0.998751	Calculated slope	0.991776
Calculated intercept	0.343555	Calculated intercept	0.207748
Analyzer make	TECO 49C	Analyzer serial #	607415761

	before		after	
Concentration range	500	ppb	500	ppb
offset	-0.6	ppb	-0.7	ppb
slope	1.018		1.078	
O3 Lamp temp	71.1	Deg C	71	Deg C
Intensities	85442/73938	mV	86070/74454	mV
Pressure	684.7	inches Hg	694.8	inches Hg
Flow A	0.719	ccm	0.724	ccm
Flow B	0.734	ccm	0.741	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	0.5	N/A
300	4991	281.0	284.4	0.9882
200	4991	190.2	189.8	1.0020
100	4991	101.2	101.7	0.9953
			0.5	As found zero
			268.0	As found span
			Average Correction Factor	0.9952

Calculated value of As Found Response: 267.6 ppm Percent Change of As Found: NA

	before calibration		after calibration	
Auto zero	0.3	ppb	0.3	ppb
Auto span	153.0	ppb	160.5	ppb

Notes:

Calibration Performed By: **Courtney Thompson**

Calibration Summary

Parameter **O3**

Air Monitoring Network **PASZA**

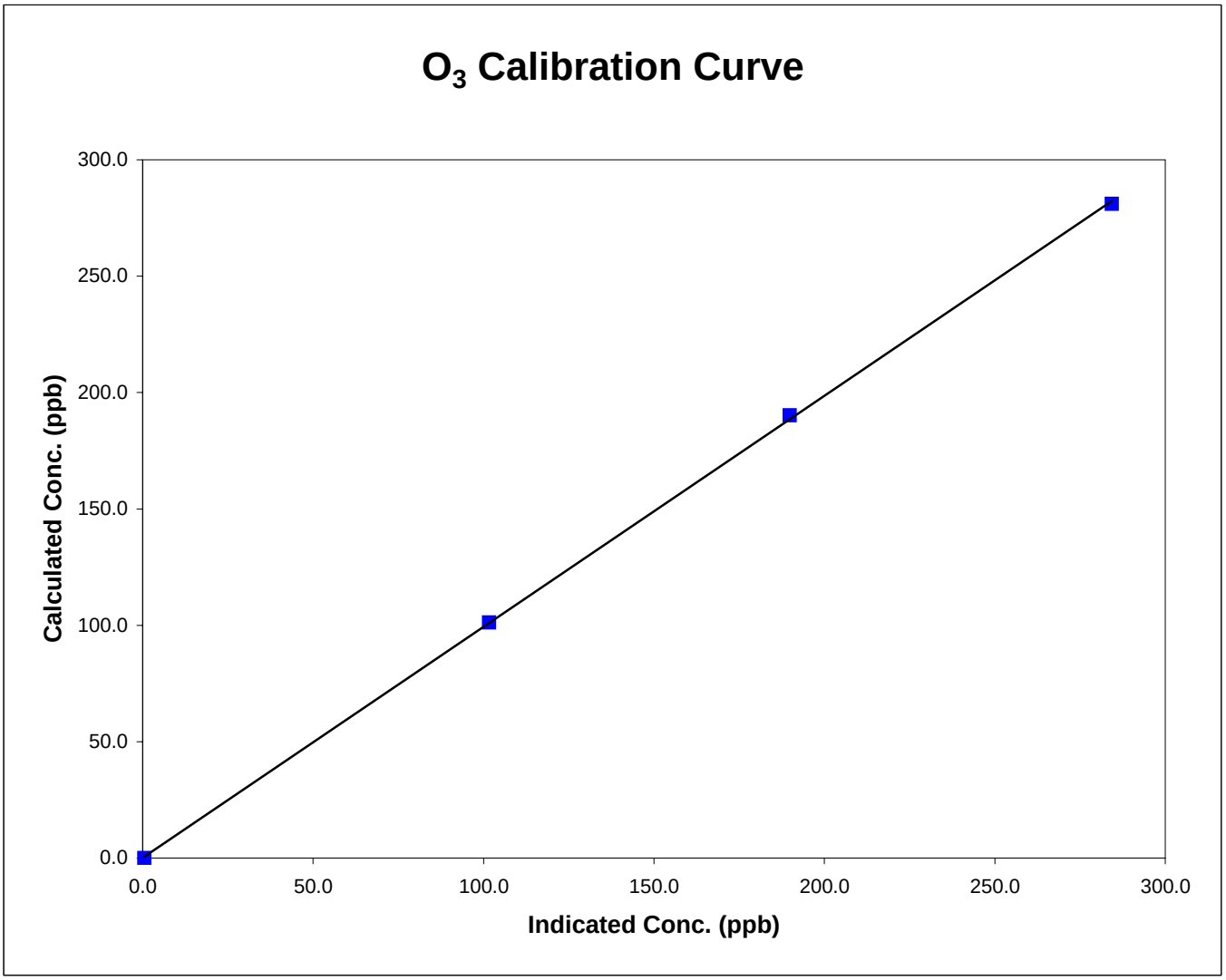
FOCUS AIR QUALITY MONITORING

Station Information

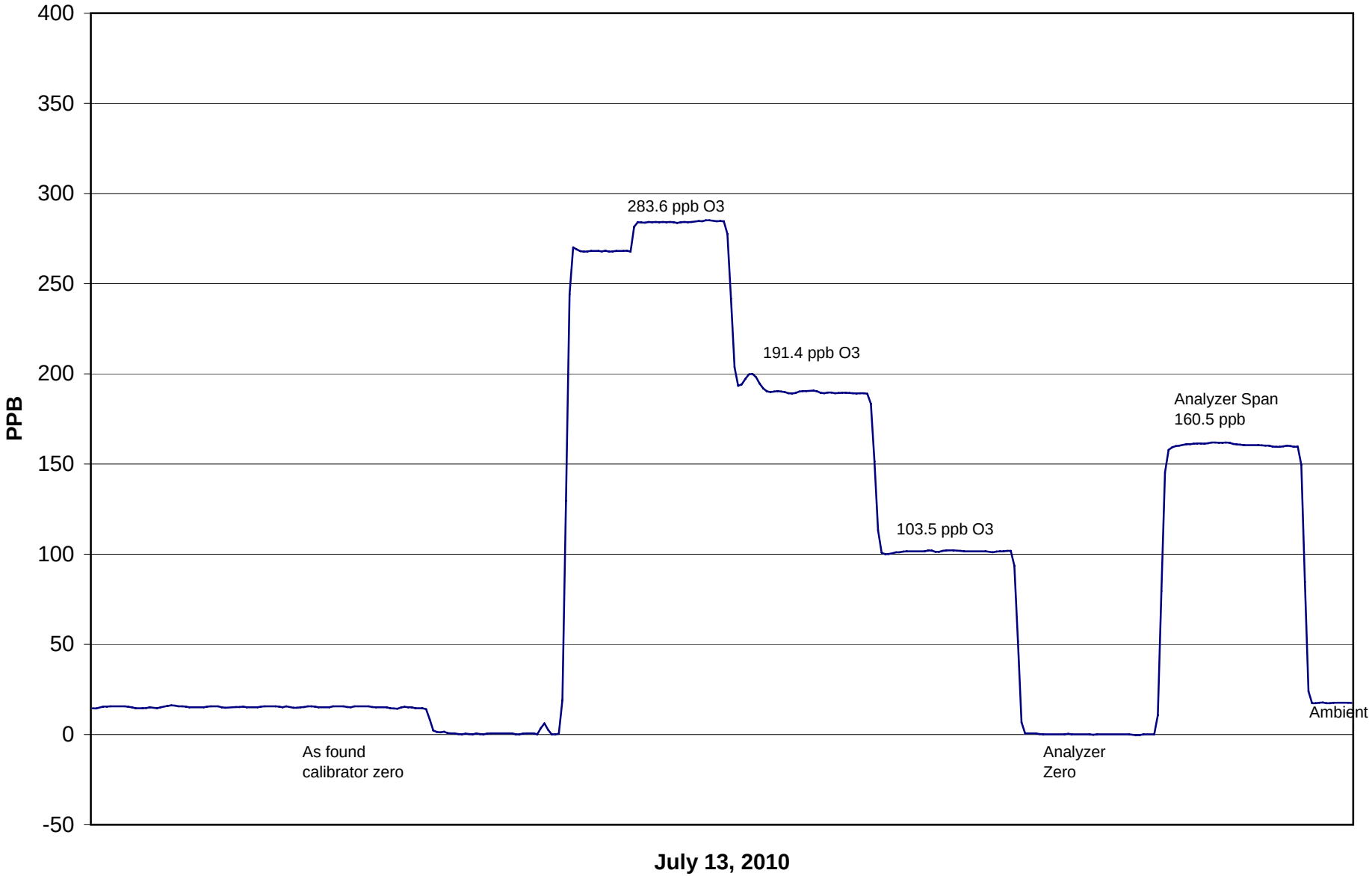
Calibration Date	July 13, 2010	Previous Calibration	June 1, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:15	End Time (MST)	13:55
Analyzer make/model	TECO 49C	Analyzer serial #	607415761

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	NA		
281.0	284.4	0.9882	Correlation Coefficient	0.999886
190.2	189.8	1.0020		
101.2	101.7	0.9953	Slope	0.991776
			Intercept	0.207748



Henry Pirker O_3 Calibration



Calibration Report

Parameter **CO**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 14, 2010	Previous Calibration	June 2, 2010
Station Number	1	Station Location	Henry Pirker
Reason:	Routine / Install / Removal / Other:		
Start Time (MST)	9:50	End Time (MST)	12:14
Barometric Pressure	0.927 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Conc	3000 ppm	Cal Gas Expiry Date	AUG 28/05
		Cal Gas Cylinder #	AAL20565
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	1.021092	Calculated slope	1.010206
Calculated intercept	-0.218260	Calculated intercept	-0.156745
Analyzer make	TEI Model 48C	Analyzer serial #	508011062

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO span setting	1.062		1.062	
CO zero setting	9.807		9.713	
Sample pressure	676.2	mm Hg	685.8	mm Hg
Sample Flow	1.127	LPM	1.137	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
4989	39.84	23.77	23.62	1.0062
4989	19.90	11.92	12.01	0.9923
4989	9.95	5.97	6.19	0.9644
4990	0.00	0.00	0.03	As Found Zero
4989	39.84	23.77	23.62	As Found Span
			Average Correction Factor	0.9876

Calculated value of As Found Response: 23.865 ppm Percent Change of As Found: -0.4%

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	19.43	ppm	19.33	ppm

Notes:

Calibration Performed By: Grover Christiansen/Courtney Thompson

Calibration Summary

Parameter **CO**

Air Monitoring Network **PASZA**

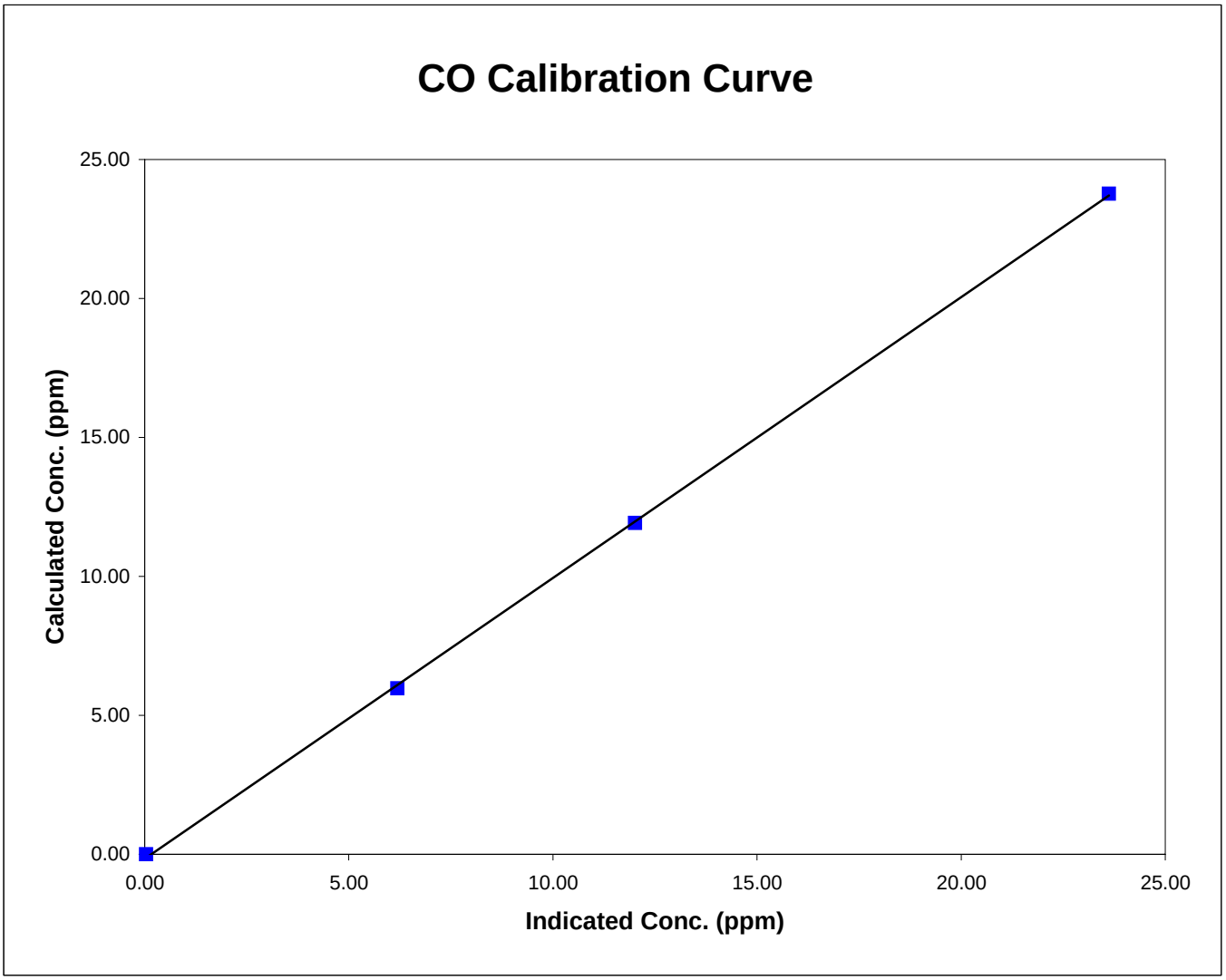
FOCUS AIR QUALITY MONITORING

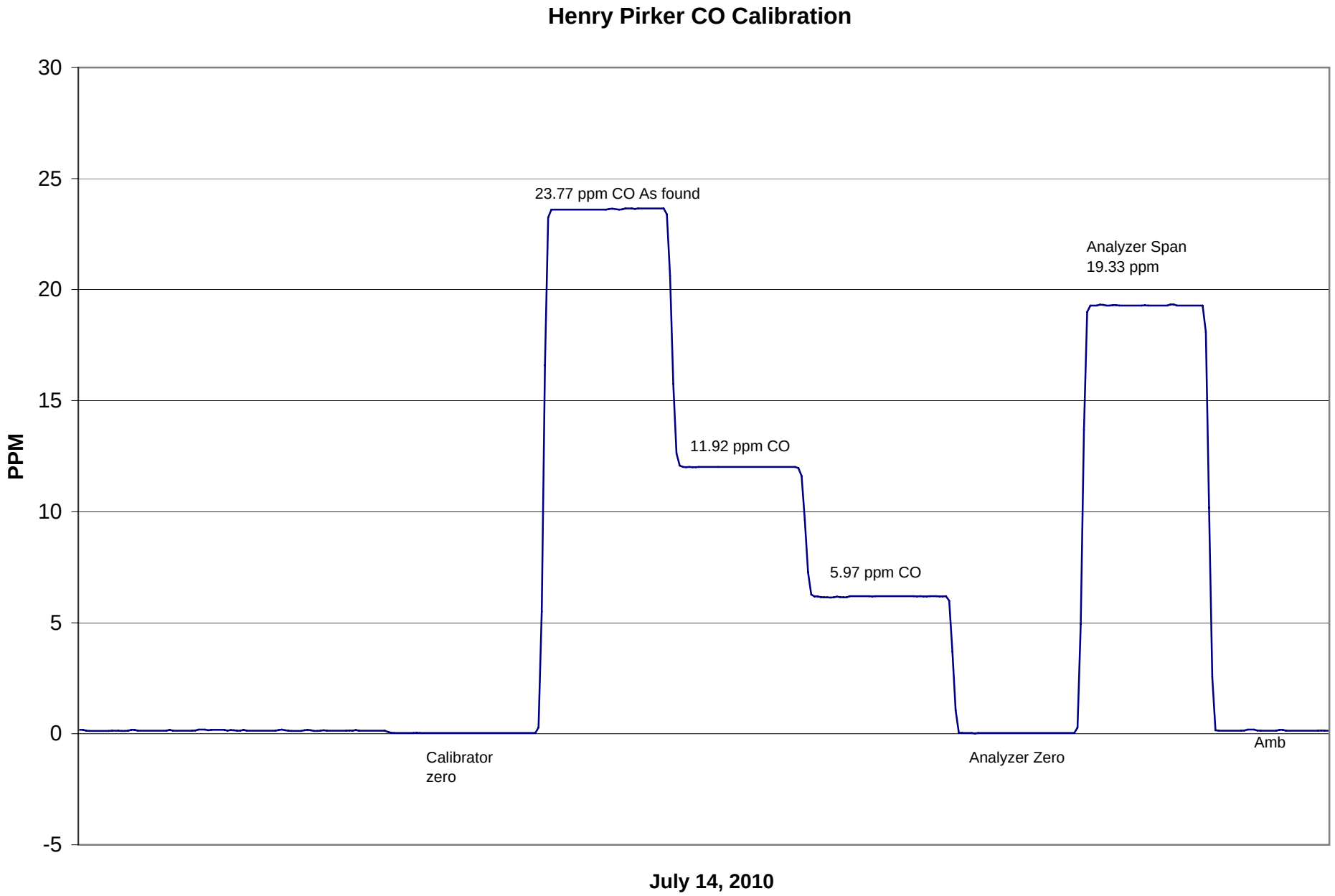
Station Information

Calibration Date	July 14, 2010	Previous Calibration	June 2, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:50	End Time (MST)	12:14
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	0.034	N/A		
23.767	23.620	1.0062	Correlation Coefficient	0.999875
11.919	12.011	0.9923		
5.971	6.192	0.9644	Slope	1.010206
			Intercept	-0.156745




Henry Pirker CO Calibration
30
25
20
15
10
5
0
-5
PPM
23.77 ppm CO As found
11.92 ppm CO
5.97 ppm CO
Analyzer Span
19.33 ppm
Calibrator
zero
Analyzer Zero
Amb
July 14, 2010

Calibration Report

Parameter **THC**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 14, 2010	Previous Calibration	June 2, 2010
Station Number	1	Station Location	Henry Pirker
Reason:	Routine / Install / Removal / Other:		
Start Time (MST)	11:40	End Time (MST)	15:30
Barometric Pressure	0.915 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	1.016572	Calculated slope	1.011351
Calculated intercept	0.060640	Calculated intercept	0.051047
Analyzer make	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

	before		after	
Concentration range	0 - 25	ppm	0 - 25	ppm
THC sample pressure	6.50	psi	6.50	psi
THC span counts	9615	capture	9611	capture
THC zero counts	431	capture	449	capture

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.00	0.03	N/A
4991	69.73	20.99	20.76	1.0110
4991	29.90	9.07	8.78	1.0328
4991	9.92	3.02	2.94	1.0278
4989	0.00	0.00	-0.09	As Found Zero
4989	69.50	21.01	20.55	As Found Span
			Average Correction Factor	1.0239

Calculated value of As Found Response: 21.035 ppm Percent Change of As Found: -0.1%

	before calibration		after calibration	
Auto zero	0.10	ppm	-0.04	ppm
Auto span	25.45	ppm	23.27	ppm

Notes:

Calibration Performed By: Grover Christiansen/Courtney Thompson

Calibration Summary

Parameter **THC**

Air Monitoring Network **PASZA**

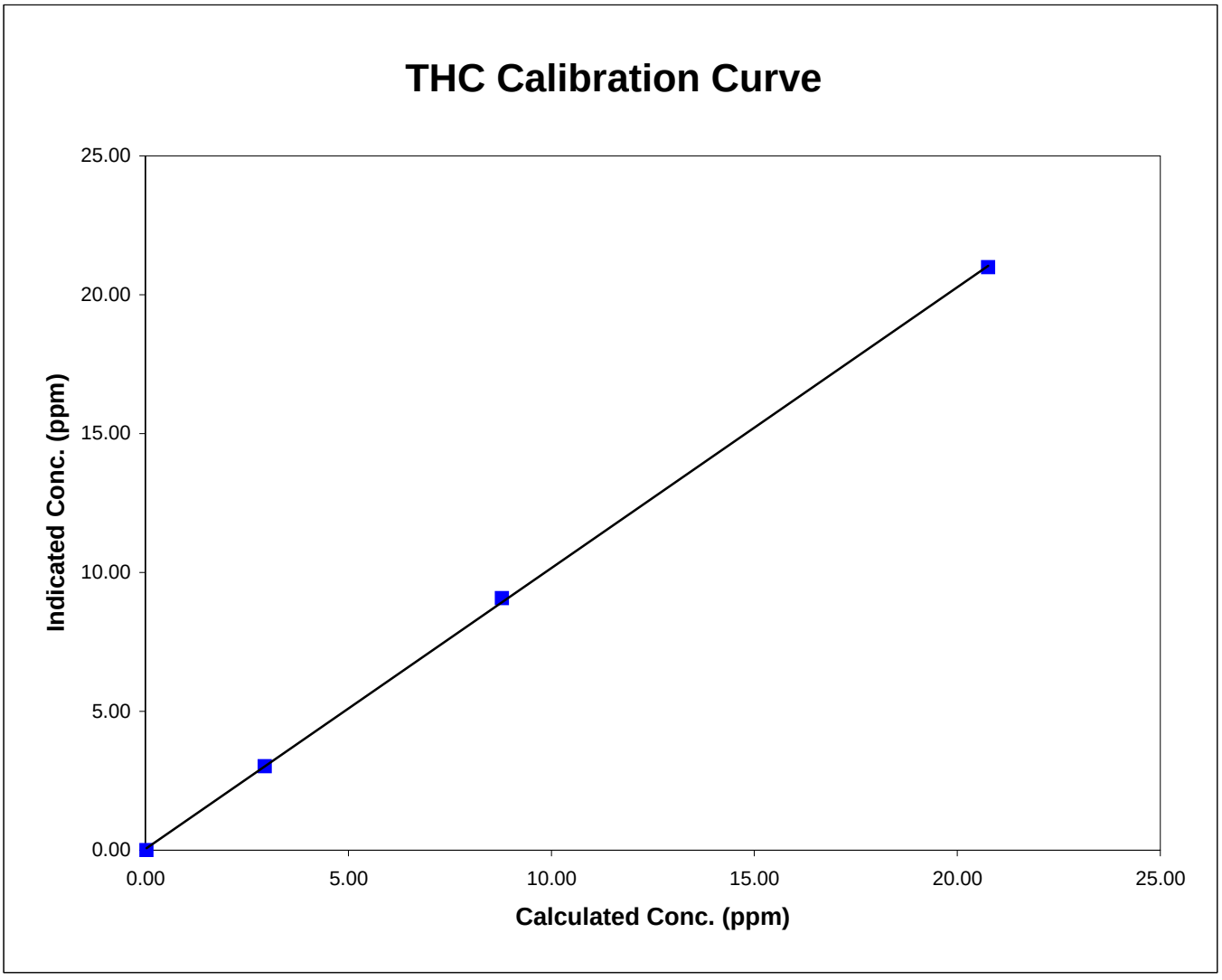
FOCUS AIR QUALITY MONITORING

Station Information

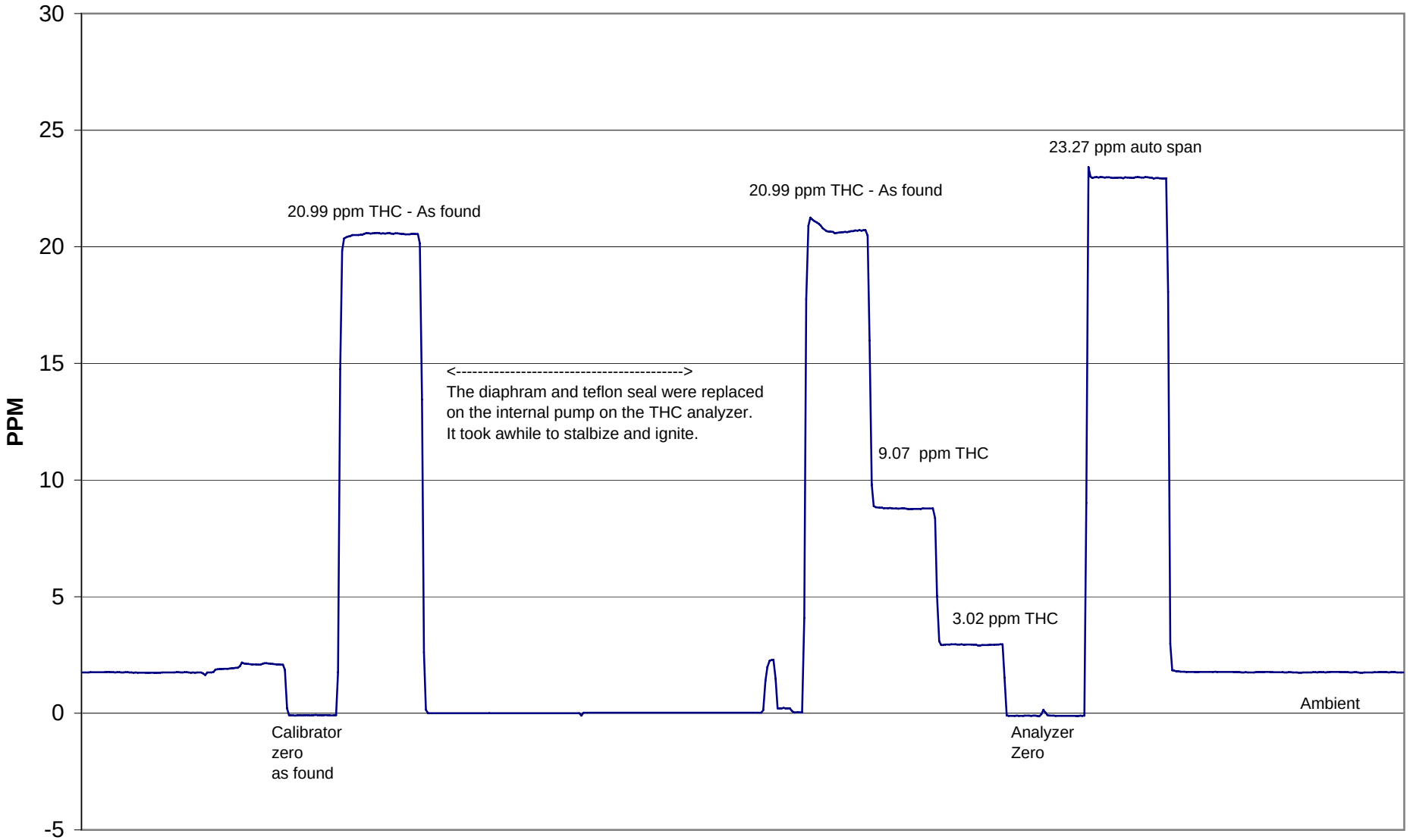
Calibration Date	July 14, 2010	Previous Calibration	June 2, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	11:40	End Time (MST)	15:30
Analyzer make/model	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.026	N/A		
20.988	20.759	1.0110	Correlation Coefficient	0.999891
9.071	8.783	1.0328		
3.022	2.940	1.0278	Slope	1.011351
			Intercept	0.051047



Henry Pirker THC Calibration



July 14, 2010

Calibration Report

Parameter **SO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 1, 2010	Previous Calibration	June 14, 2010
Station Number	2	Station Location	Evergreen Park
Reason: Routine	Install	Removal	Other:
Start Time (MST)	9:45	End Time (MST)	12:10
Barometric Pressure	0.921 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	50.6 ppm	Cal Gas Expiry Date	1/2/2009
Correction factor	0.031307	Cal Gas Cylinder #	LL16161
DACS make	Focus AP1000	DACS serial No.	52620
DACS voltage range	0 - 10 volt	DACS channel #	6
	Before		After
Calculated slope	1.010438	Calculated slope	1.011732
Calculated intercept	-2.737553	Calculated intercept	-2.489173
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	831	volts	828	volts
Chamber Temp	45.2	Deg C	45.1	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	664.3	mm Hg	661.6	mm Hg
Sample Flow	0.451	ccm	0.447	ccm
Lamp Intensity	90	%	90	%

Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4990	0.0	0.00	0.3	N/A
4991	39.85	400.81	397.5	1.0085
4991	19.91	201.05	202.4	0.9932
4991	9.96	100.78	104.1	0.9679
	0.0			
4991	0.0	0.00	0.3	As Found Zero
4991	39.85	400.81	397.5	As Found Span
			Average Correction Factor	0.9899

Calculated value of As Found Response: 398.524 ppm Percent Change of As Found: 0.6%

	before calibration		after calibration	
Auto zero	0.7	ppm	0.1	ppm
Auto span	286.9	ppm	292.6	ppm

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PASZA**

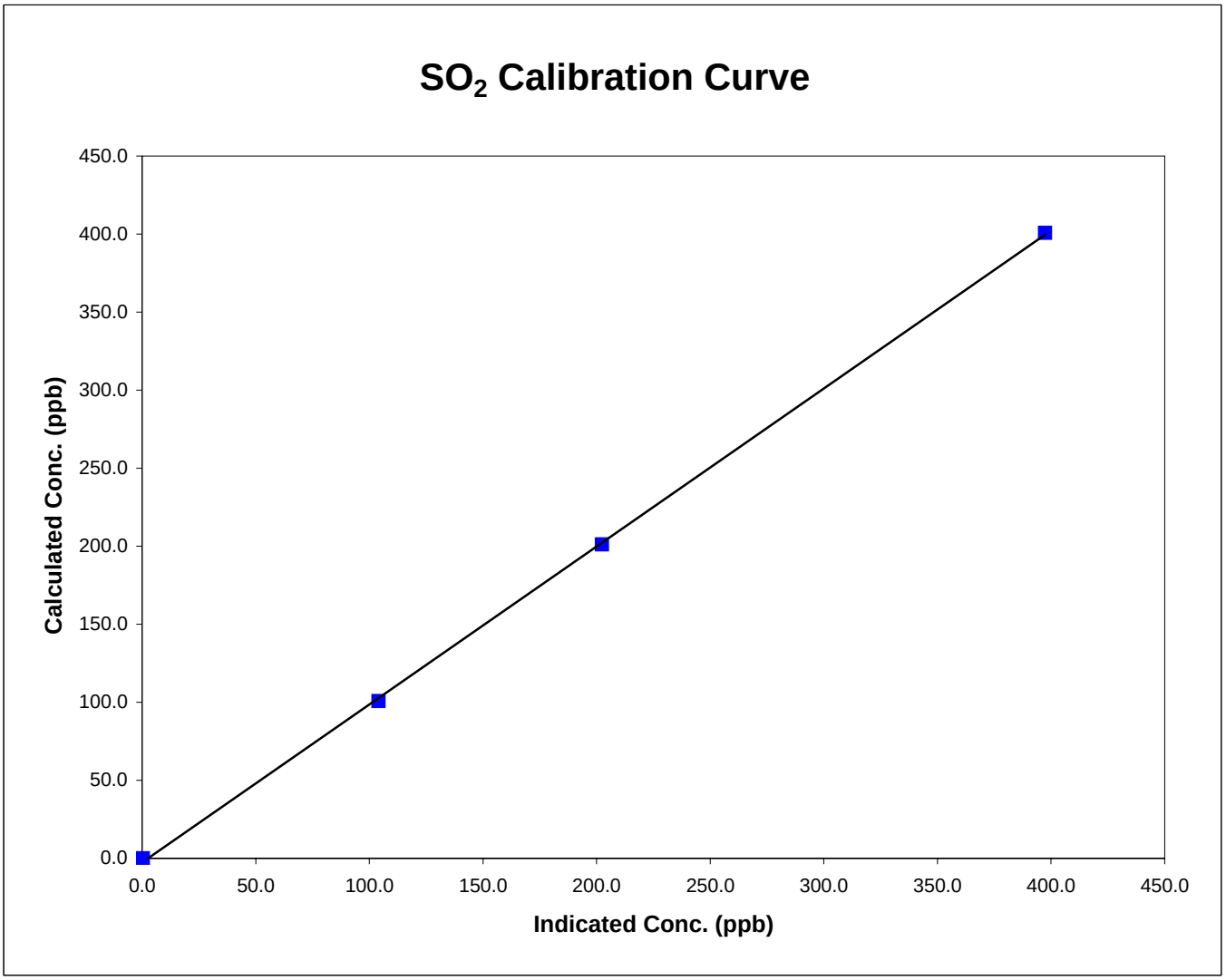
FOCUS AIR QUALITY MONITORING

Station Information

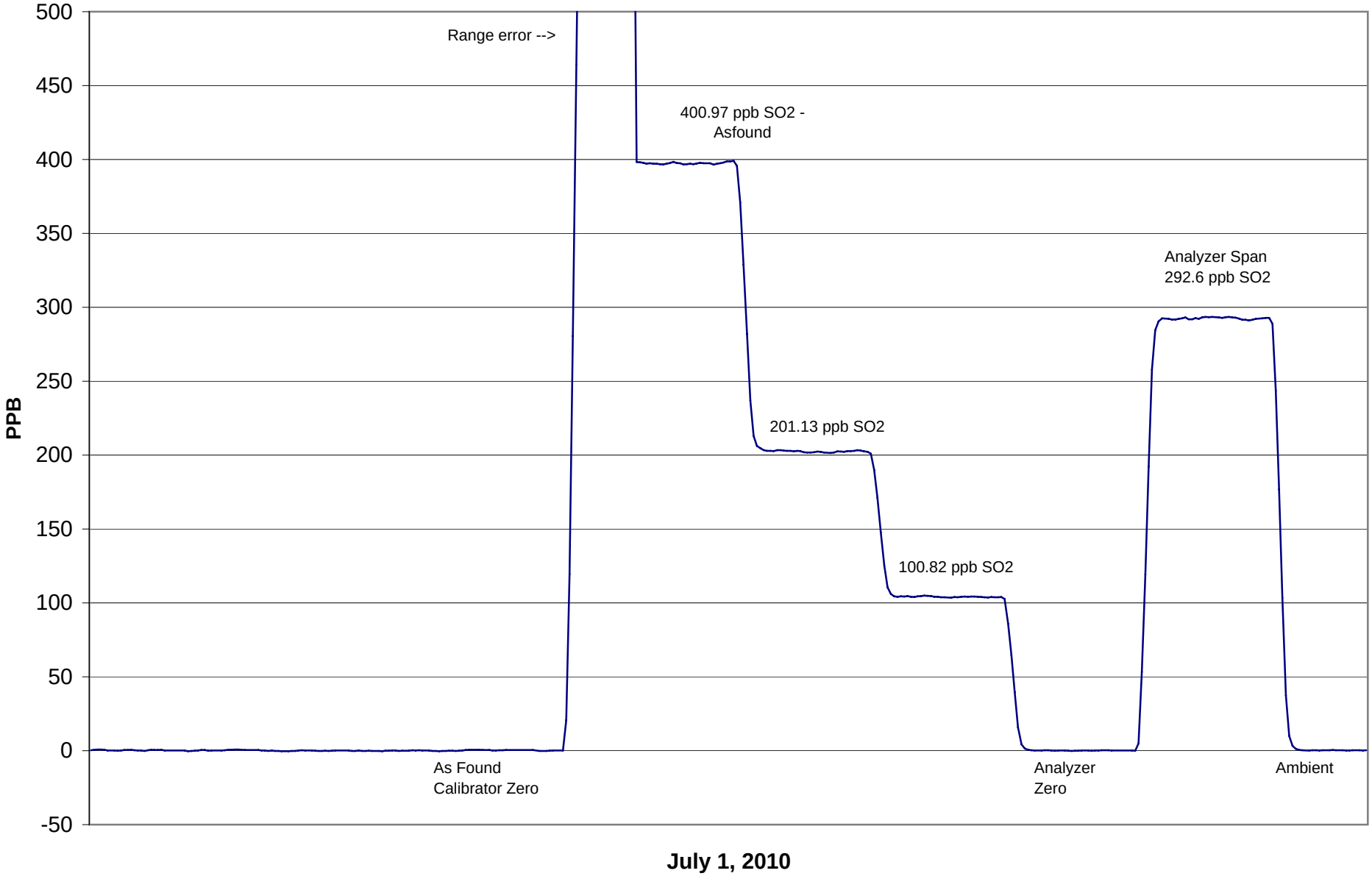
Calibration Date	July 1, 2010	Previous Calibration	June 14, 2010
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	9:45	End Time (MST)	12:10
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A		
400.8	397.5	1.0085	Correlation Coefficient	0.999864
201.1	202.4	0.9932		
100.8	104.1	0.9679	Slope	1.011732
			Intercept	-2.489173



Evergreen Park SO_2 Calibration



Calibration Report

Parameter **TRS**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	July 1, 2010	Previous Calibration	June 14, 2010
Station Number	2	Station Location	Evergreen Park
Reason:	Routine	Install	Removal	Other:
Start Time (MST)	8:05	End Time (MST)	11:02
Barometric Pressure	0.921 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	0.031307	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	1.011467	Calculated slope	1.011111
Calculated intercept	-0.427580	Calculated intercept	-0.657243
Analyzer make	TEI Model 43C	Analyzer serial #	436610005

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	15.4	ppb	15.5	ppb
coefficient	0.859		0.859	
Lamp Voltage	809	volts	810	volts
Chamber Temp	44.2	Deg C	44.2	Deg C
Perm Gas Temp	45	Deg C	45.01	Deg C
Pressure	644.2	mm Hg	639.4	mm Hg
Sample Flow	0.480	ccm	0.478	ccm
Lamp Intensity	45,883	mv	45,831	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	80.6	1.0057
4991	39.87	40.81	41.4	0.9860
4991	9.95	10.25	11.0	0.9313
4990	0.00	0.00	0.3	As Found Zero
4991	79.79	81.04	80.6	As Found Span
			Average Correction Factor	0.9744

Calculated value of As Found Response: 80.79 ppm Percent Change of As Found: 0.3%

	before calibration		after calibration	
Auto zero	-0.5	ppm	-0.2	ppm
Auto span	62.0	ppm	58.6	ppm

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **TRS**

Air Monitoring Network **PASZA**

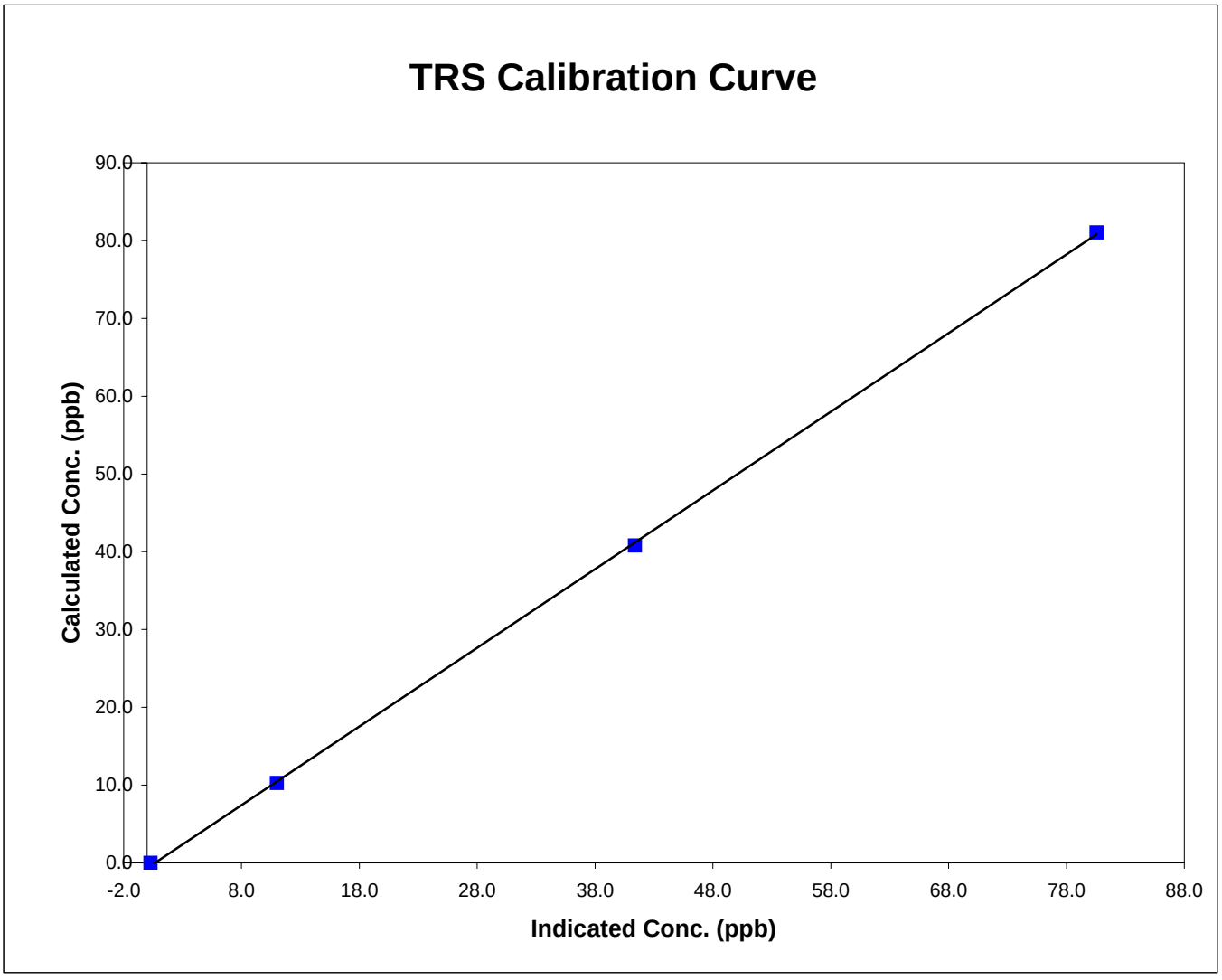
FOCUS AIR QUALITY MONITORING

Station Information

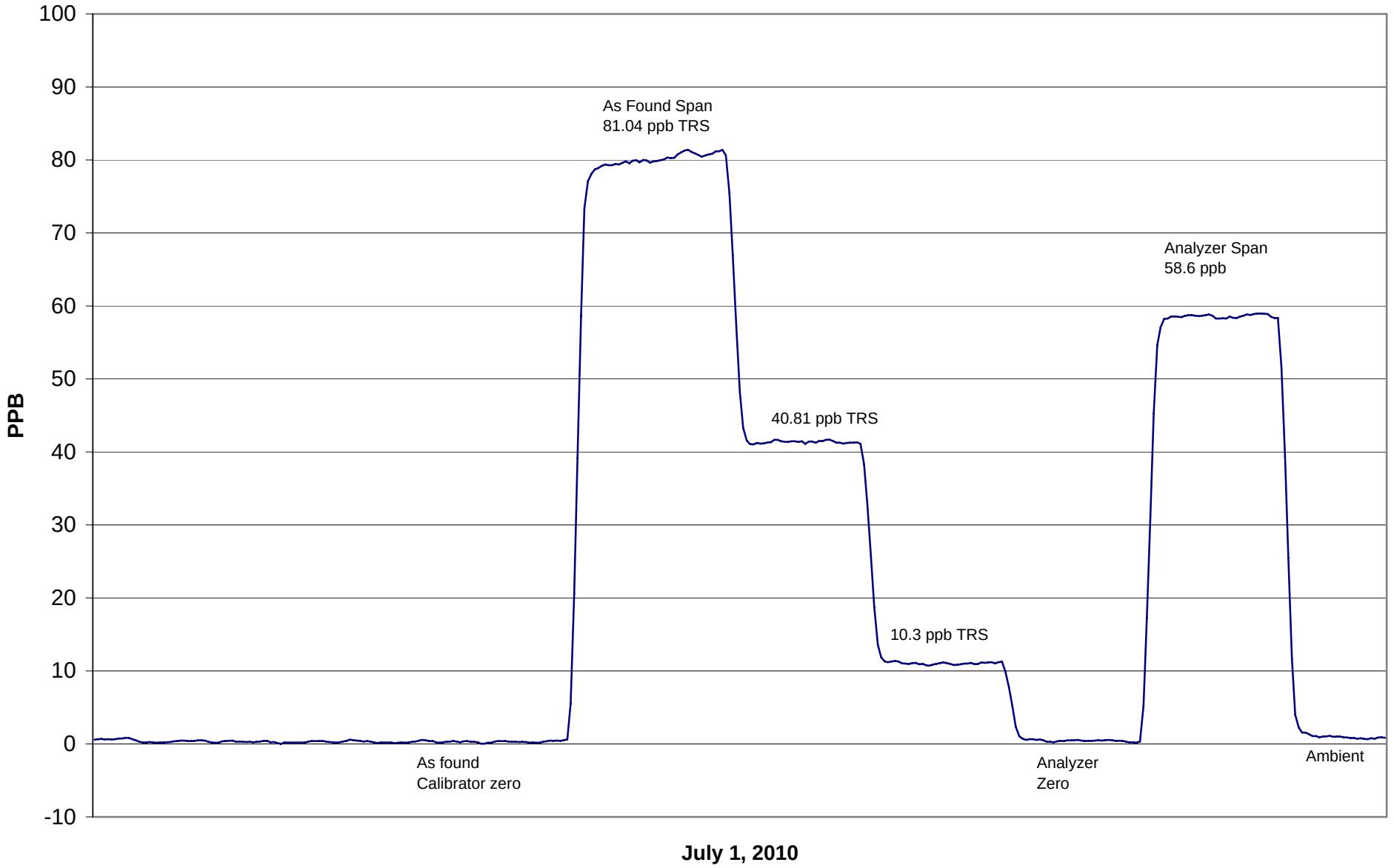
Calibration Date	July 1, 2010	Previous Calibration	June 14, 2010
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	8:05	End Time (MST)	11:02
Analyzer make/model	TEI Model 43C	Analyzer serial #	436610005

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A		
81.0	80.6	1.0057	Correlation Coefficient	0.999903
40.8	41.4	0.9860		
10.2	11.0	0.9313	Slope	1.011111
			Intercept	-0.657243



Evergreen Park TRS Calibration



Calibration Report

Parameter **TRS**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 12, 2010	Previous Calibration	July 1, 2010
Station Number	2	Station Location	Evergreen Park

Reason: Routine | Install | Removal | Other:

Start Time (MST)	13:45	End Time (MST)	15:16:00 PM
Barometric Pressure	0.926 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	0.031477	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	1.011111	Calculated slope	1.027175
Calculated intercept	-0.657243	Calculated intercept	-0.251523

Analyzer make	TEI Model 43C		Analyzer serial #	436610005

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	15.4	ppb	15.5	ppb
coefficient	0.859		0.859	
Lamp Voltage	809	volts	810	volts
Chamber Temp	44.2	Deg C	44.2	Deg C
Perm Gas Temp	45	Deg C	45.06	Deg C
Pressure	644.2	mm Hg	641.2	mm Hg
Sample Flow	0.480	ccm	0.479	ccm
Lamp Intensity	45,775	mv	45,679	mv

Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4990	0.00	0.00	0.2	N/A
4991	79.79	81.04	79.1	1.0240
4990	0.00	0.00	0.2	As Found Zero
4991	79.79	81.04	79.1	As Found Span
			Average Correction Factor	1.0240

Calculated value of As Found Response: 79.11 ppm Percent Change of As Found: 2.4%

	before calibration		after calibration	
Auto zero	-0.5	ppm	0.4	ppm
Auto span	62.0	ppm	48.1	ppm

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **TRS**

Air Monitoring Network **PASZA**

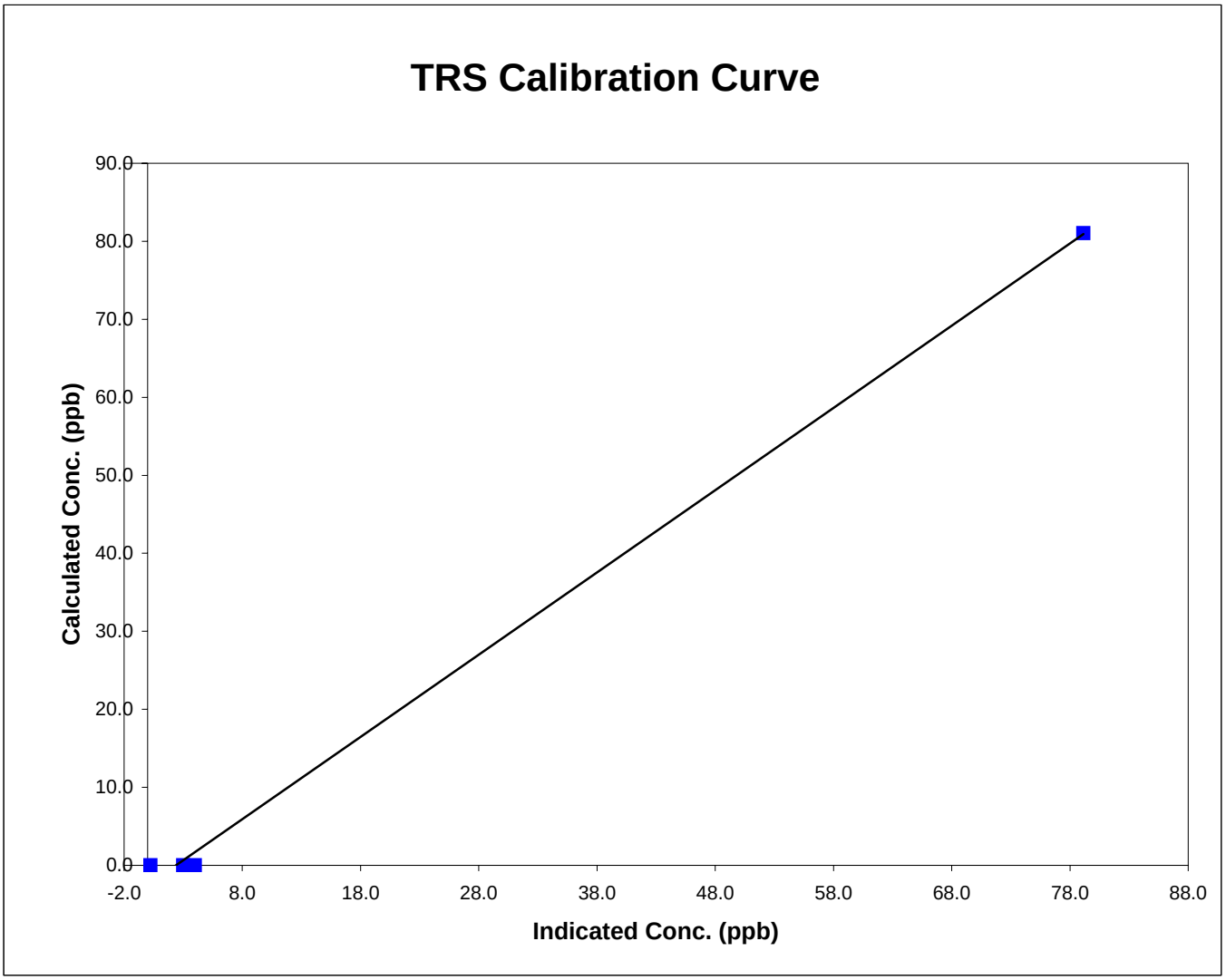
FOCUS AIR QUALITY MONITORING

Station Information

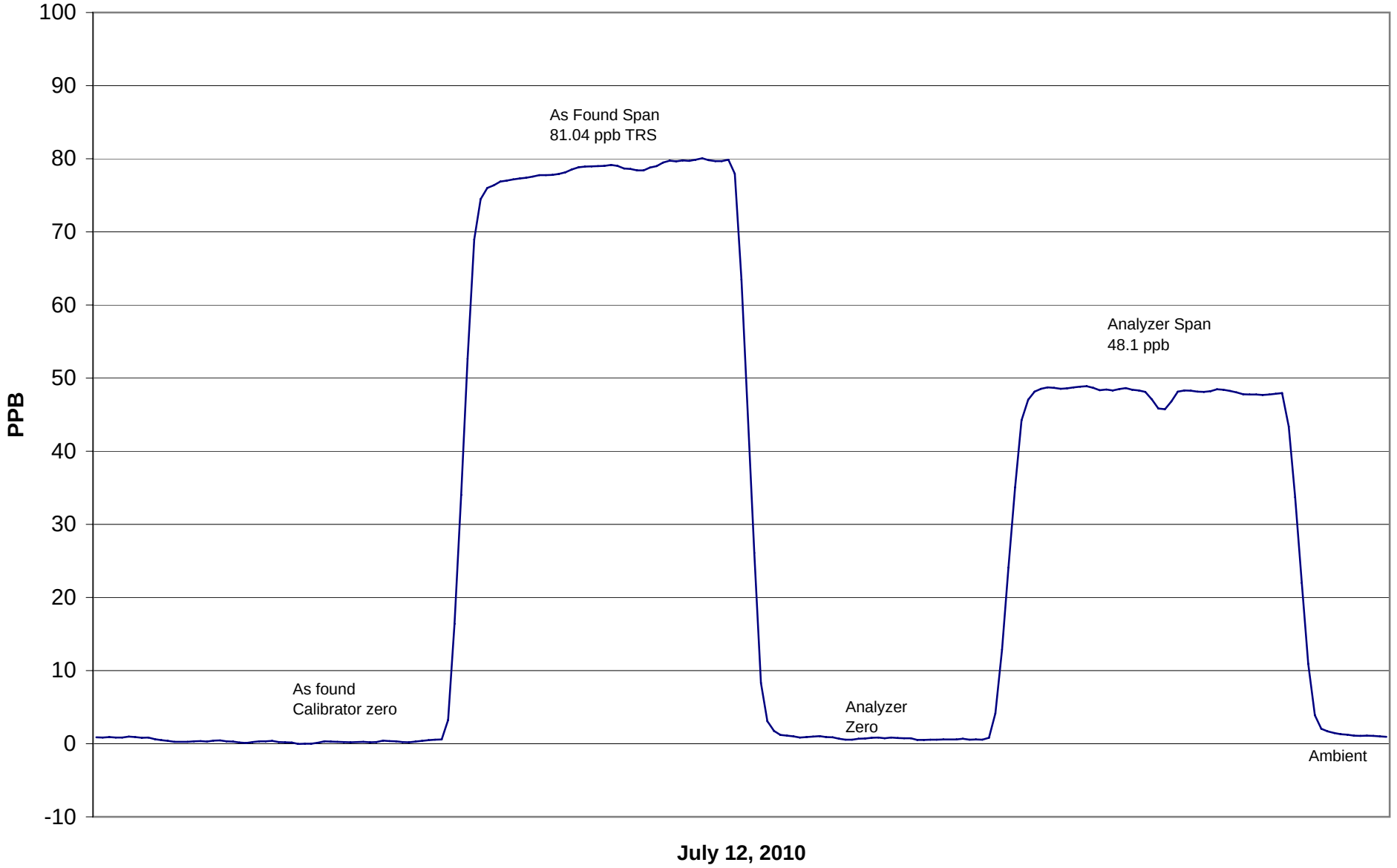
Calibration Date	July 12, 2010	Previous Calibration	July 1, 2010
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	13:45	End Time (MST)	15:16:00 PM
Analyzer make/model	TEI Model 43C	Analyzer serial #	436610005

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
81.0	79.1	1.0240	Correlation Coefficient	1.000000
			Slope	1.027175
			Intercept	-0.251523



Evergreen Park TRS Calibration



Calibration Report

Parameter **TRS**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 28, 2010	Previous Calibration	July 12, 2010
Station Number	2	Station Location	Evergreen Park

Reason: Routine | Install | Removal | Other:

Start Time (MST)	14:00	End Time (MST)	15:10
Barometric Pressure	0.927 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Conc	5.15 ppm	Cal Gas Expiry Date	4/2/2009
Correction factor	0.031511	Cal Gas Cylinder #	ALM 013295
DACS make	Focus AP1000	DACS serial No.	52620
DACS voltage range	0 - 10 volt	DACS channel #	5
	Before		After
Calculated slope	1.027175	Calculated slope	1.062745
Calculated intercept	-0.251523	Calculated intercept	-0.354817

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

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	15.4	ppb	15.4	ppb
coefficient	0.859		0.859	
Lamp Voltage	809	volts	808	volts
Chamber Temp	44.2	Deg C	44.1	Deg C
Perm Gas Temp	45.1	Deg C	45.2	Deg C
Pressure	644.2	mm Hg	641.7	mm Hg
Sample Flow	0.480	ccm	0.478	ccm
Lamp Intensity	45,861	mv	45,977	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
4988	79.79	81.08	76.6	1.0581
4988	0.00	0.00	0.3	As Found Zero
4988	79.79	81.08	76.6	As Found Span
			Average Correction Factor	1.0581

Calculated value of As Found Response: 78.12 ppm Percent Change of As Found: 3.7%

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

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **TRS**

Air Monitoring Network **PASZA**

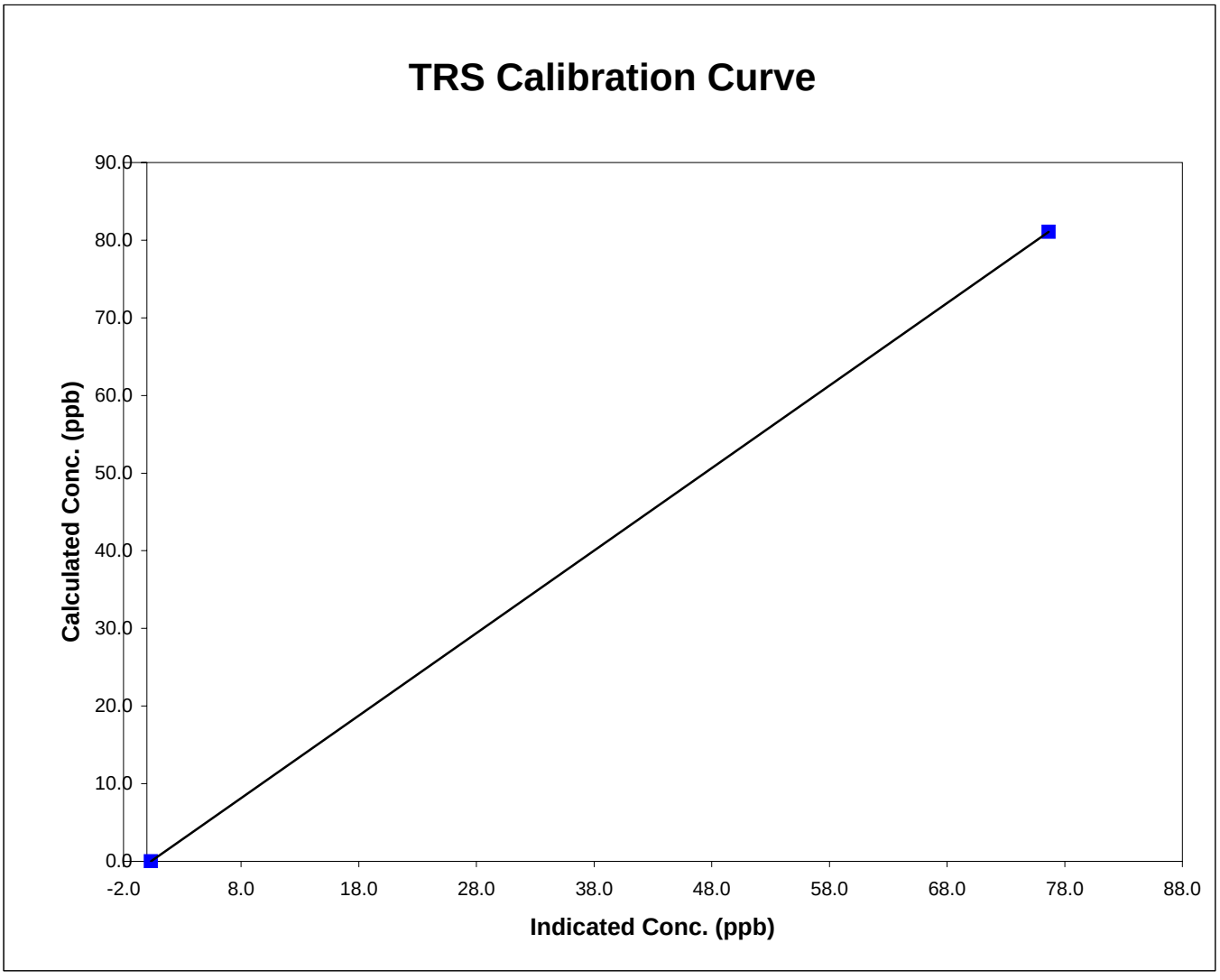
FOCUS AIR QUALITY MONITORING

Station Information

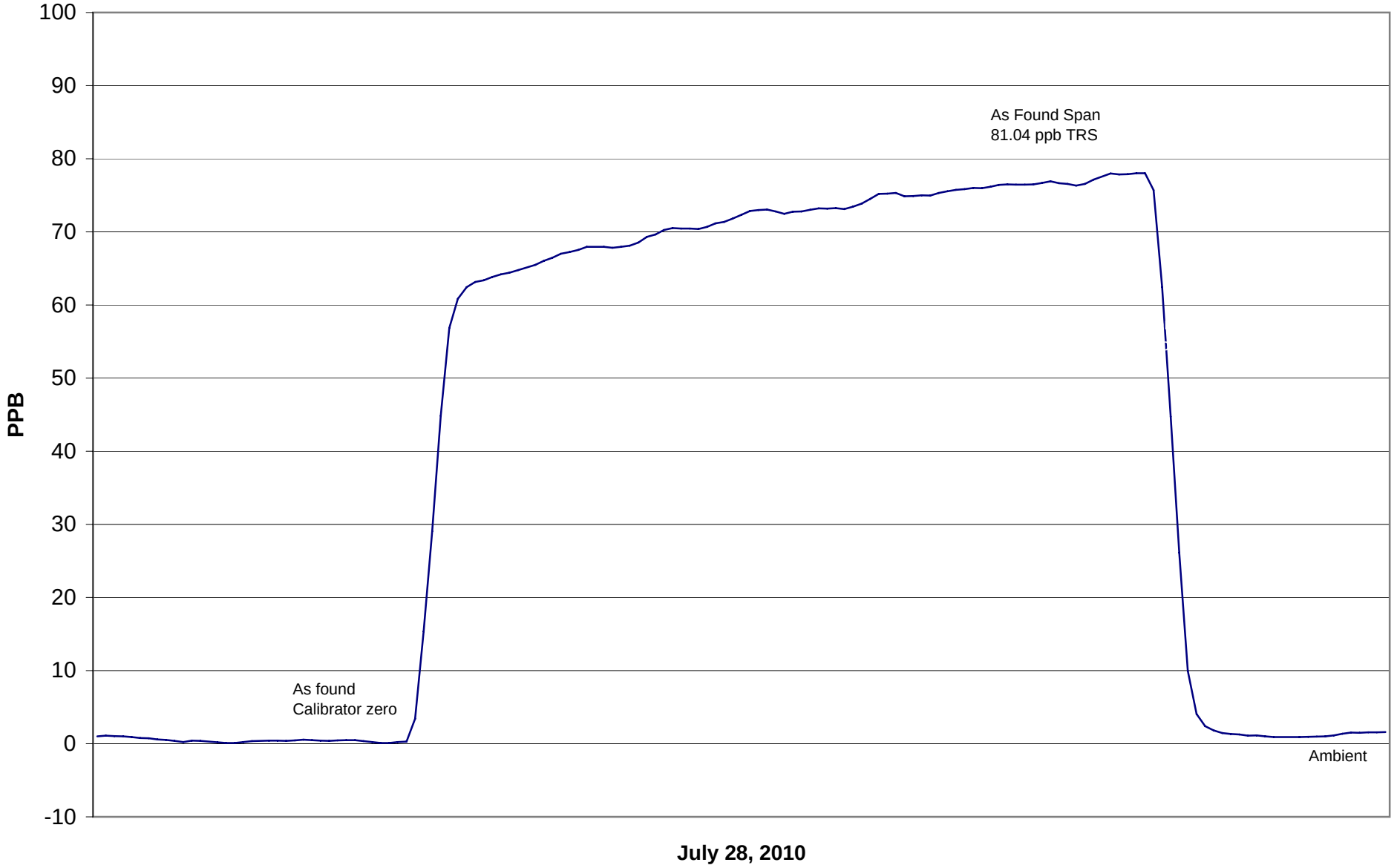
Calibration Date	July 28, 2010	Previous Calibration	July 12, 2010
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	14:00	End Time (MST)	15:10
Analyzer make/model	TEI Model 43C	Analyzer serial #	436610005

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A		
81.1	76.6	1.0581	Correlation Coefficient	1.000000
			Slope	1.062745
			Intercept	-0.354817



Evergreen Park TRS Calibration



Calibration Report

Parameter **SO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 16, 2010	Previous Calibration	June 15, 2010
Station Number	3	Station Location	Smokey Heights
Reason: Routine	Install	Removal	Other:
Start Time (MST)	7:20	End Time (MST)	9:36
Barometric Pressure	0.923 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	50.6 ppm	Cal Gas Cert Date	6/8/2008
Correction factor	0.031375	Cal Gas Cylinder #	AAL 15377
DACS make	Focus AP1000	DACS serial No.	45272
DACS voltage range	0 - 10 volt	DACS channel #	6
	Before		After
Calculated slope	1.003646	Calculated slope	1.005020
Calculated intercept	-2.009232	Calculated intercept	-2.419343
Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	8.8		8.9	
coefficient	0.698		0.698	
Lamp Voltage	923	volts	923	volts
Chamber Temp	45.2	Deg C	44.9	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	670.8	mm Hg	666.9	mm Hg
Sample Flow	0.442	ccm	0.44	ccm
Lamp Intensity	89	%	89	%

Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4989	0.0	0.00	0.4	N/A
4989	39.84	400.87	400.1	1.0019
4989	19.91	201.13	203.9	0.9865
4989	9.95	100.72	104.4	0.9643
4989	0.0	0.00	0.4	As Found Zero
4989	39.84	400.87	400.1	As Found Span
			Average Correction Factor	0.9842

Calculated value of As Found Response: 399.163 ppm Percent Change of As Found: 0.4%

	before calibration		after calibration	
Auto zero	0.4	ppb	0.3	ppb
Auto span	304.1	ppb	311.6	ppb

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PASZA**

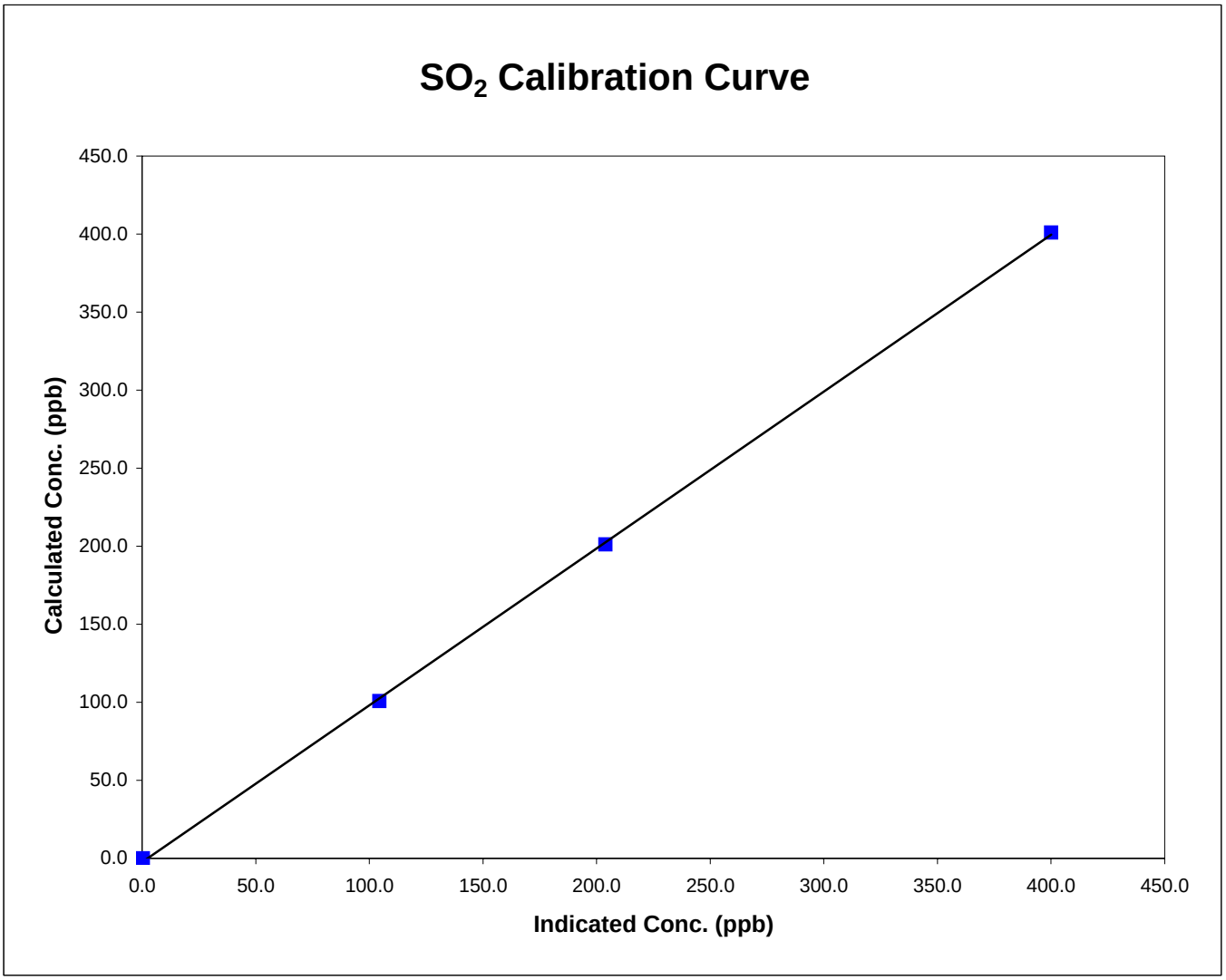
FOCUS AIR QUALITY MONITORING

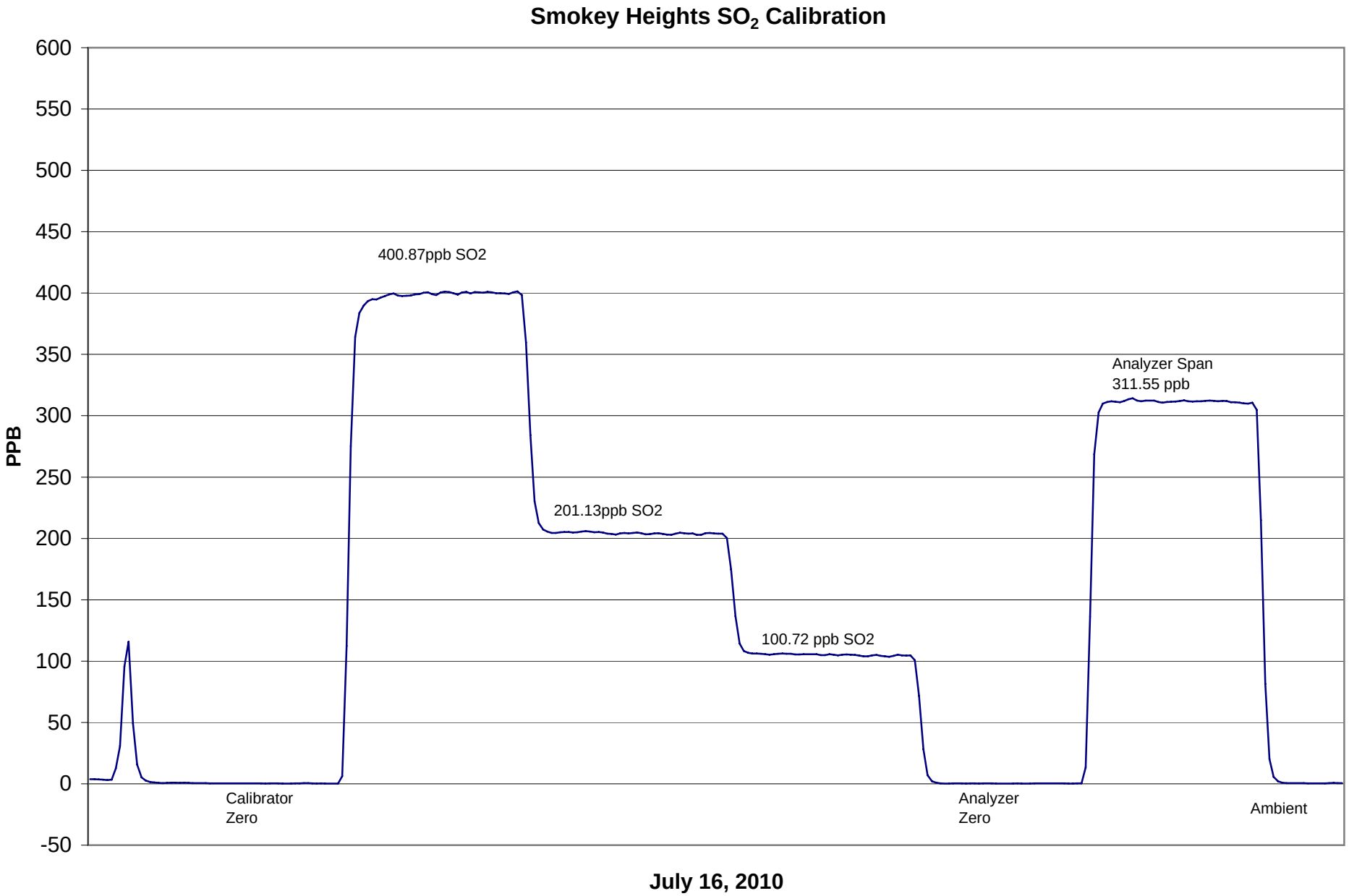
Station Information

Calibration Date	July 16, 2010	Previous Calibration	June 15, 2010
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	7:20	End Time (MST)	9:36
Analyzer make/model	Teco 43i	Analyzer serial #	701120009

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A		
400.9	400.1	1.0019	Correlation Coefficient	0.999879
201.1	203.9	0.9865		
100.7	104.4	0.9643	Slope	1.005020
			Intercept	-2.419343




Smokey Heights SO2 Calibration
600
550
500
450
400
350
300
250
200
150
100
50
0
-50
PPB
400.87ppb SO2
201.13ppb SO2
100.72 ppb SO2
Analyzer Span
311.55 ppb
Calibrator
Zero
Analyzer
Zero
Ambient
July 16, 2010

Calibration Report

Parameter **TRS**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 16, 2010	Previous Calibration	June 15, 2010
Station Number	3	Station Location	Smokey Heights

Reason: Routine | Install | Removal | Other:

Start Time (MST)	8:45	End Time (MST)	11:20
Barometric Pressure	0.923 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	0.031375	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	1.006195	Calculated slope	1.009022
Calculated intercept	-0.094834	Calculated intercept	-0.104999

Analyzer make	TEI Model 43C	Analyzer serial # 0436610005

	before		after	
Concentration range	100	ppb	100	ppb
Background	13.9	ppb	13.7	ppb
coefficient	0.995		0.995	
Lamp Voltage	763	volts	762	volts
Chamber Temp	43.7	Deg C	43.6	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	491.8	mm Hg	505.1	mm Hg
Sample Flow	0.722	ccm	0.737	ccm
Lamp Intensity	32,383	mv	32,580	mv

Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4989	0.0	0.00	0.1	N/A
4990	79.77	81.03	80.5	1.0068
4990	39.85	40.80	40.4	1.0110
4990	9.94	10.24	10.4	0.9841
4990	0.0	0.00	0.1	As Found Zero
4990	79.77	81.03	82.3	As Found Span
			Average Correction Factor	1.0006

Calculated value of As Found Response: 82.66 ppm Percent Change of As Found: -2.0%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.0	ppm
Auto span	40.8	ppm	41.1	ppm

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **TRS**

Air Monitoring Network **PASZA**

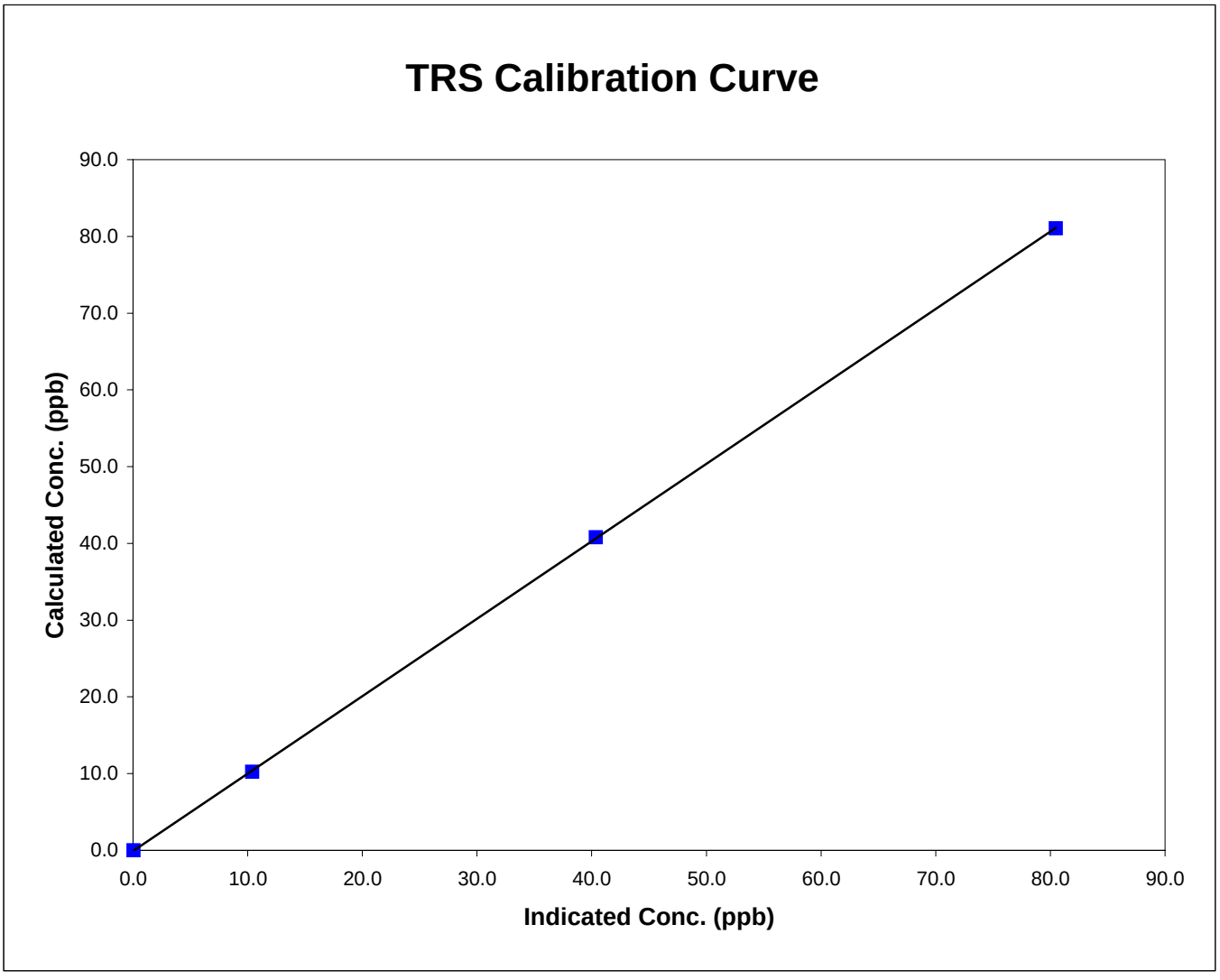
FOCUS AIR QUALITY MONITORING

Station Information

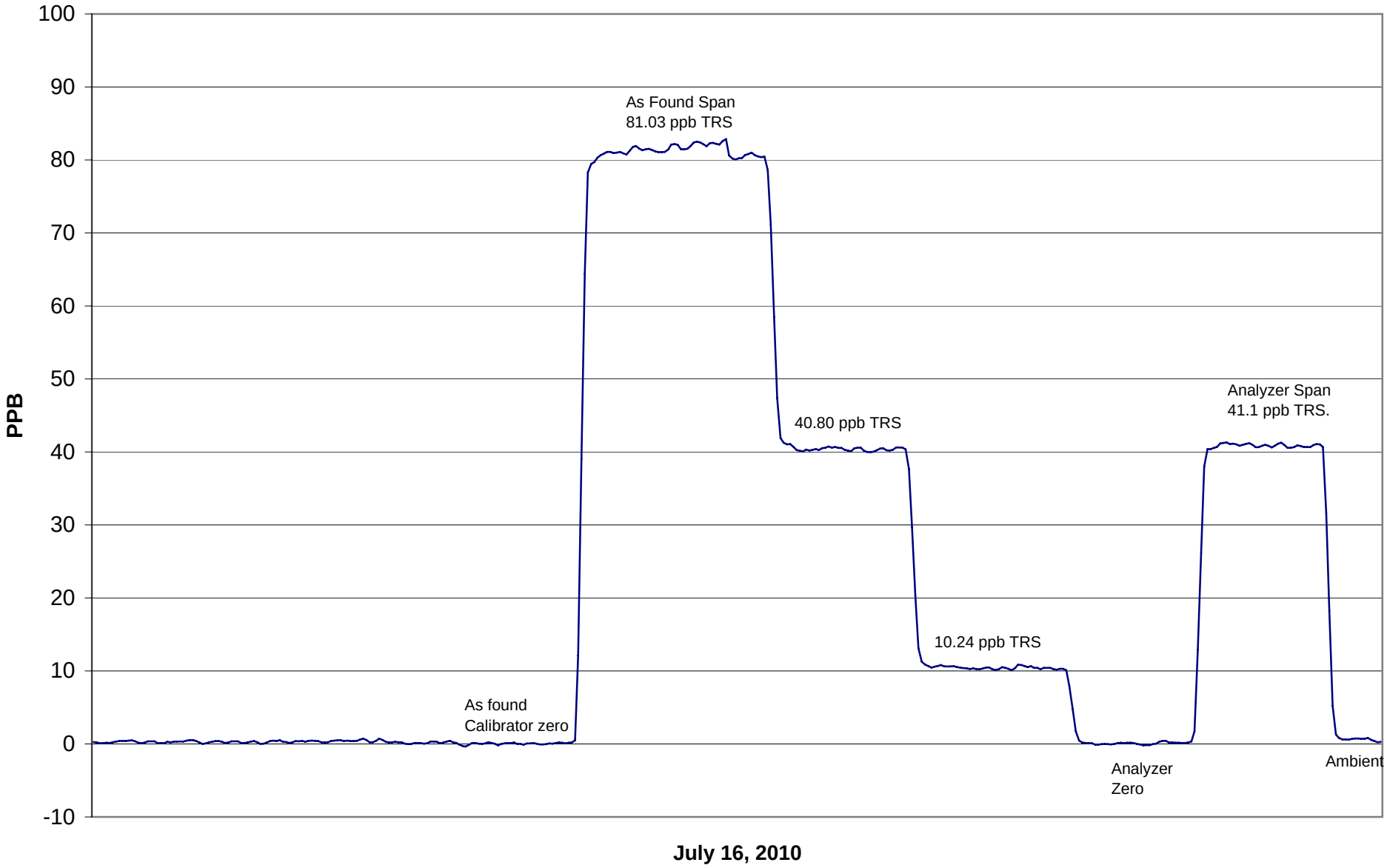
Calibration Date	July 16, 2010	Previous Calibration	June 15, 2010
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	8:45	End Time (MST)	11:20
Analyzer make/model	TEI Model 43C	Analyzer serial #	0436610005

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A		
81.0	80.5	1.0068	Correlation Coefficient	0.999984
40.8	40.4	1.0110		
10.2	10.4	0.9841	Slope	1.009022
			Intercept	-0.104999



Smokey Heights TRS Calibration



Calibration Report

Parameter **SO2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 5, 2010	Previous Calibration	June 11, 2010
Station Number	4	Station Location	Beaverlodge
Reason:	Routine	Install	Removal	Other:
Start Time (MST)	8:30	End Time (MST)	11:23
Barometric Pressure	0.915 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	1.046514	Calculated slope	0.986691
Calculated intercept	-0.367873	Calculated intercept	0.932630
Analyzer make	TEI Model 43i-TLE	Analyzer serial #	713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.45		2.49	
Coefficient	0.886		0.904	
PMT	-813.3	V	-812.9	V
UV Lamp Voltage	1078	V	1073	V
Chamber Temp	45.3	Deg C	45	Deg C
Pressure	665.2	mm Hg	664	mm Hg
Sample Flow	0.504	LPM	0.502	LPM
Lamp Intesity	88%	%	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	-0.1	N/A
4988	39.82	79.7	80.4	0.9915
4988	19.90	40.0	38.7	1.0342
4988	9.93	20.0	18.8	1.0620
4988	0.00	0.0	-0.1	As found zero
4988	39.82	79.7	82.9	As found span
			Average Correction Factor	1.0292

Calculated value of As Found Response: 86.526 ppm Percent Change of As Found: -8.6%

	before calibration		after calibration	
Auto zero	-0.3	ppb	0.9	ppb
Auto span	57.8	ppb	55.4	ppb

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PASZA**

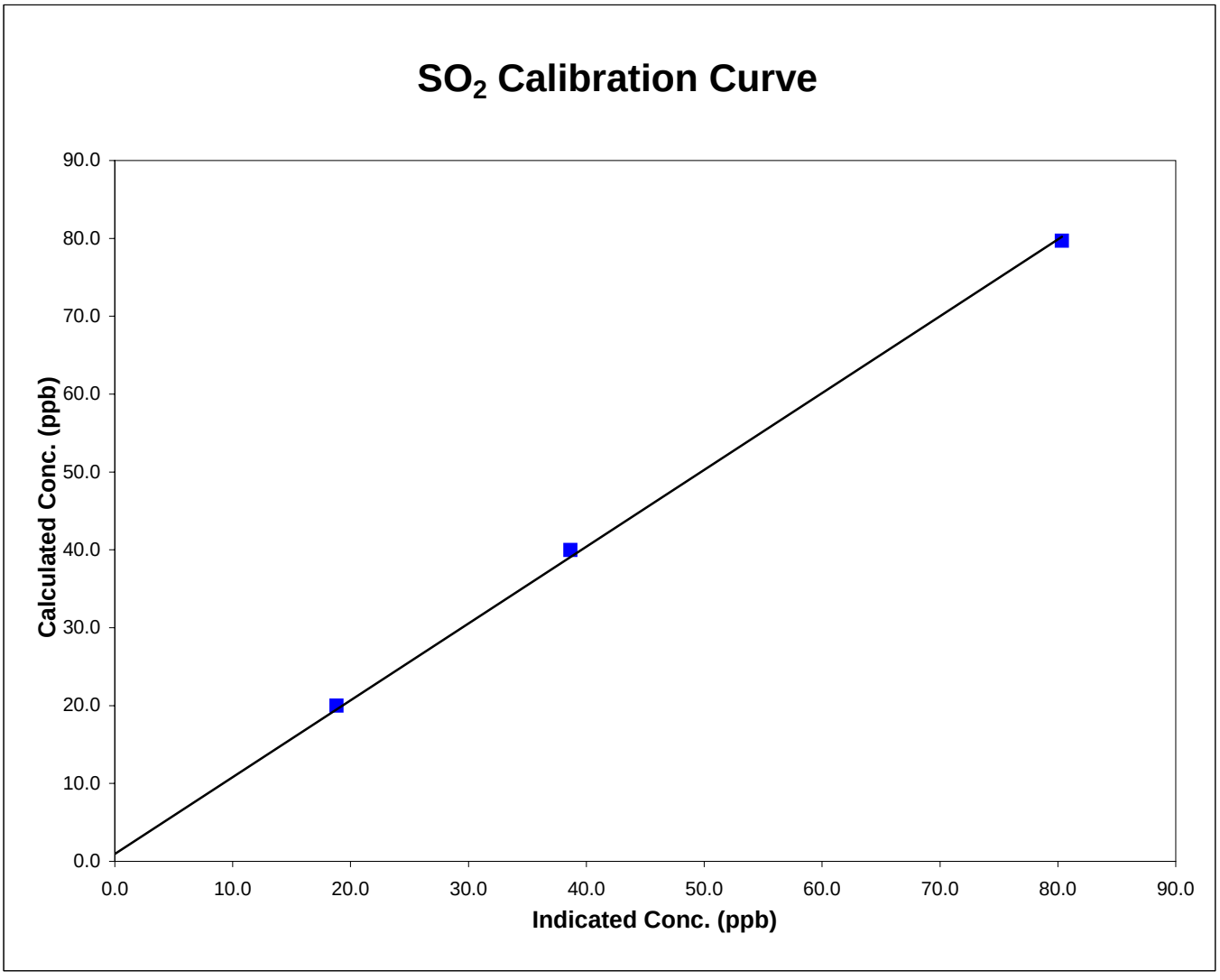
FOCUS AIR QUALITY MONITORING

Station Information

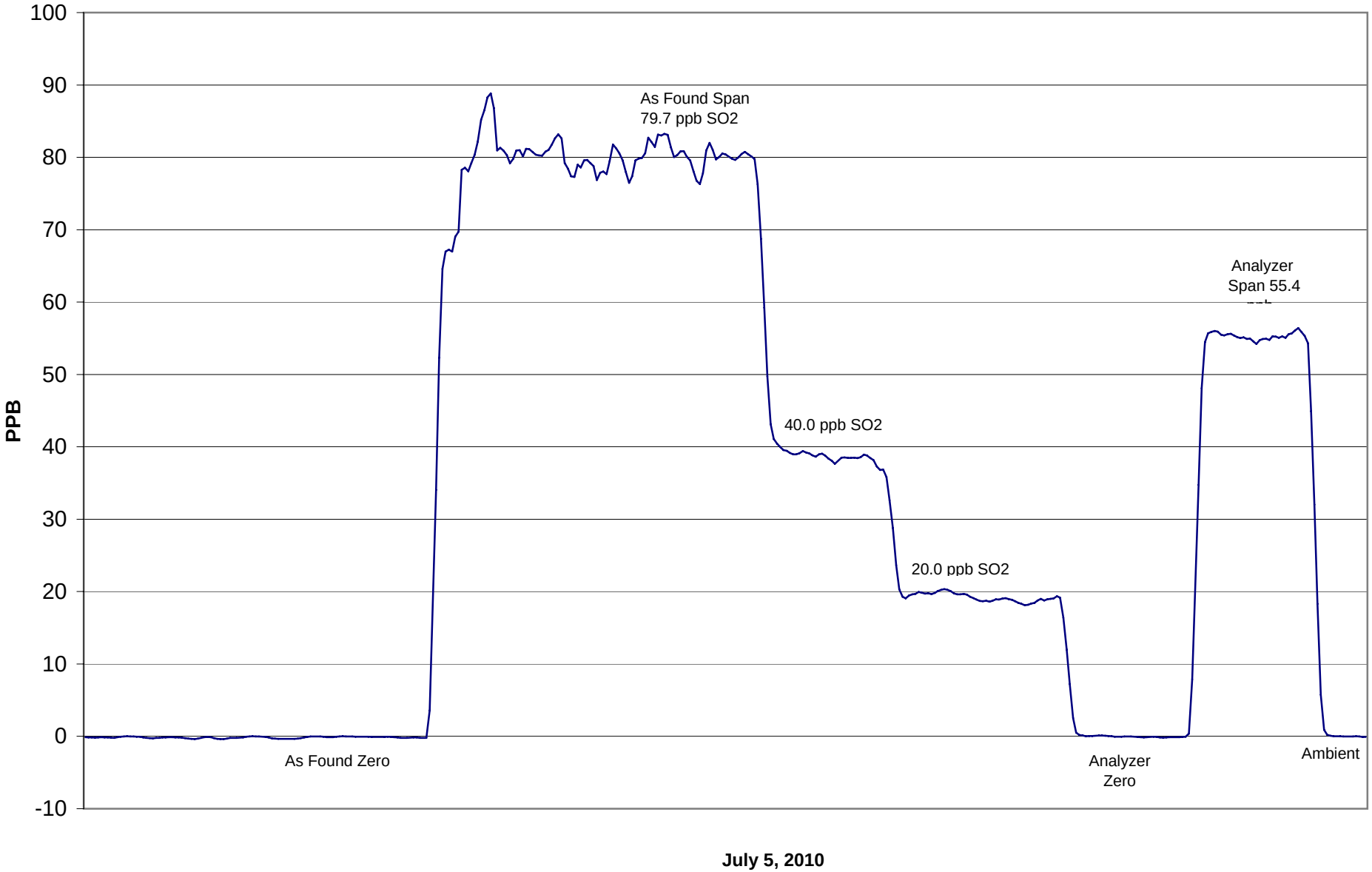
Calibration Date	July 5, 2010	Previous Calibration	June 11, 2010
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:30	End Time (MST)	11:23
Analyzer make/model	TEI Model 43i-TLE	Analyzer serial #	713021137

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A		
79.7	80.4	0.9915	Correlation Coefficient	0.999407
40.0	38.7	1.0342		
20.0	18.8	1.0620	Slope	0.986691
			Intercept	0.932630



Beaverlodge SO_2 Calibration



July 5, 2010

Calibration Report

Parameter **SO2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 15, 2010	Previous Calibration	July 5, 2010
Station Number	4	Station Location	Beaverlodge

Reason: Routine | Install | Removal | Other:

Start Time (MST)	8:10	End Time (MST)	11:57
Barometric Pressure	0.915 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	0.986691	Calculated slope	0.997466
Calculated intercept	0.932630	Calculated intercept	-0.461042

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

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.49		2.49	
Coefficient	0.904		0.904	
PMT	-813.3	V	-813.3	V
UV Lamp Voltage	1066	V	1070	V
Chamber Temp	45	Deg C	45	Deg C
Pressure	666.7	mm Hg	662.5	mm Hg
Sample Flow	0.505	LPM	0.504	LPM
Lamp Intesity	88%	%	86%	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.0	0.1	N/A
4988	39.82	79.7	80.1	0.9947
4988	19.90	40.0	40.9	0.9780
4988	9.93	20.0	20.8	0.9621
4988	0.00	0.0	0.1	As found zero
4988	39.82	79.7	80.1	As found span
			Average Correction Factor	0.9783

Calculated value of As Found Response: 79.871 ppm Percent Change of As Found: -0.2%

	before calibration		after calibration	
Auto zero	-0.3	ppb	-0.4	ppb
Auto span	59.7	ppb	58.3	ppb

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PASZA**

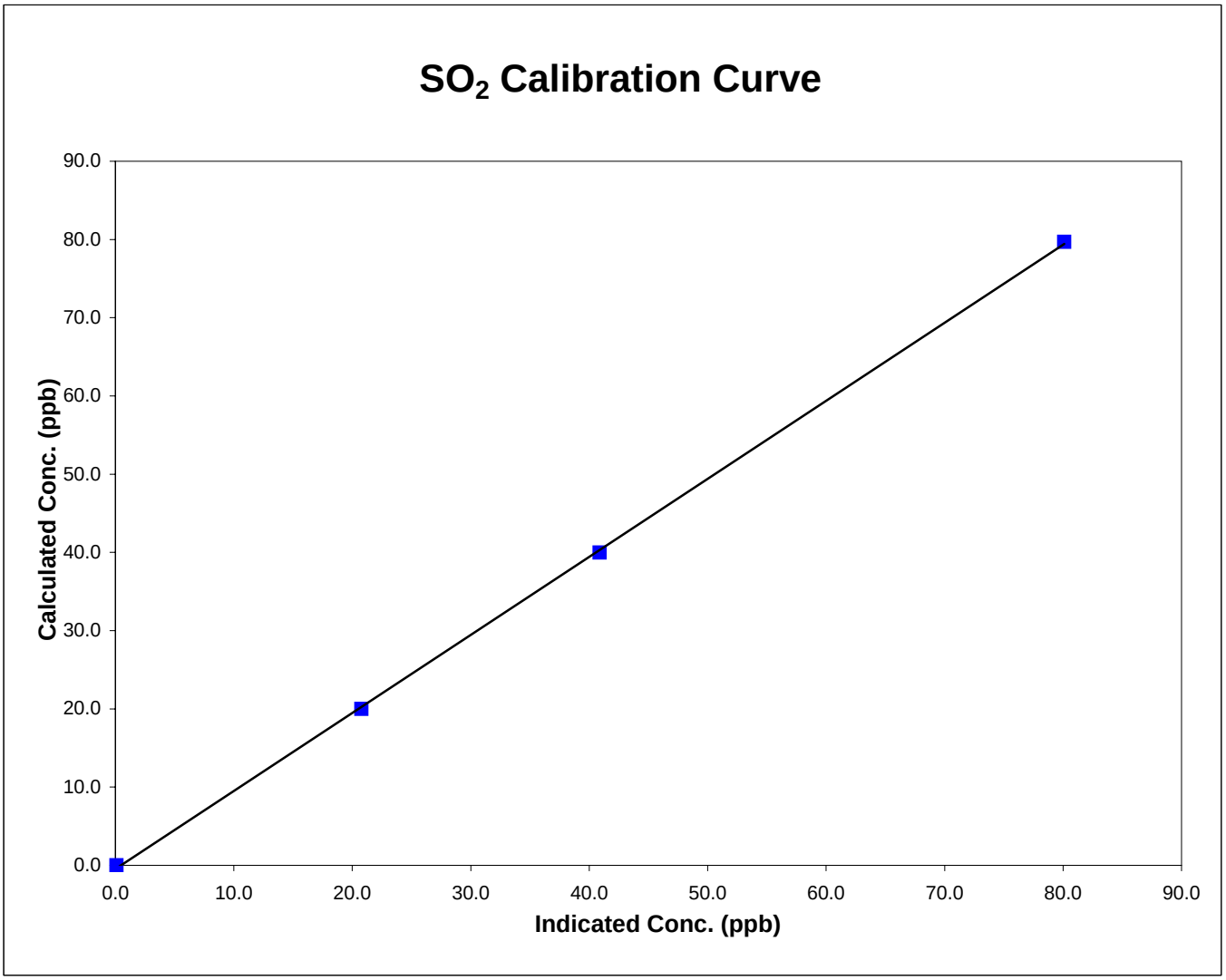
FOCUS AIR QUALITY MONITORING

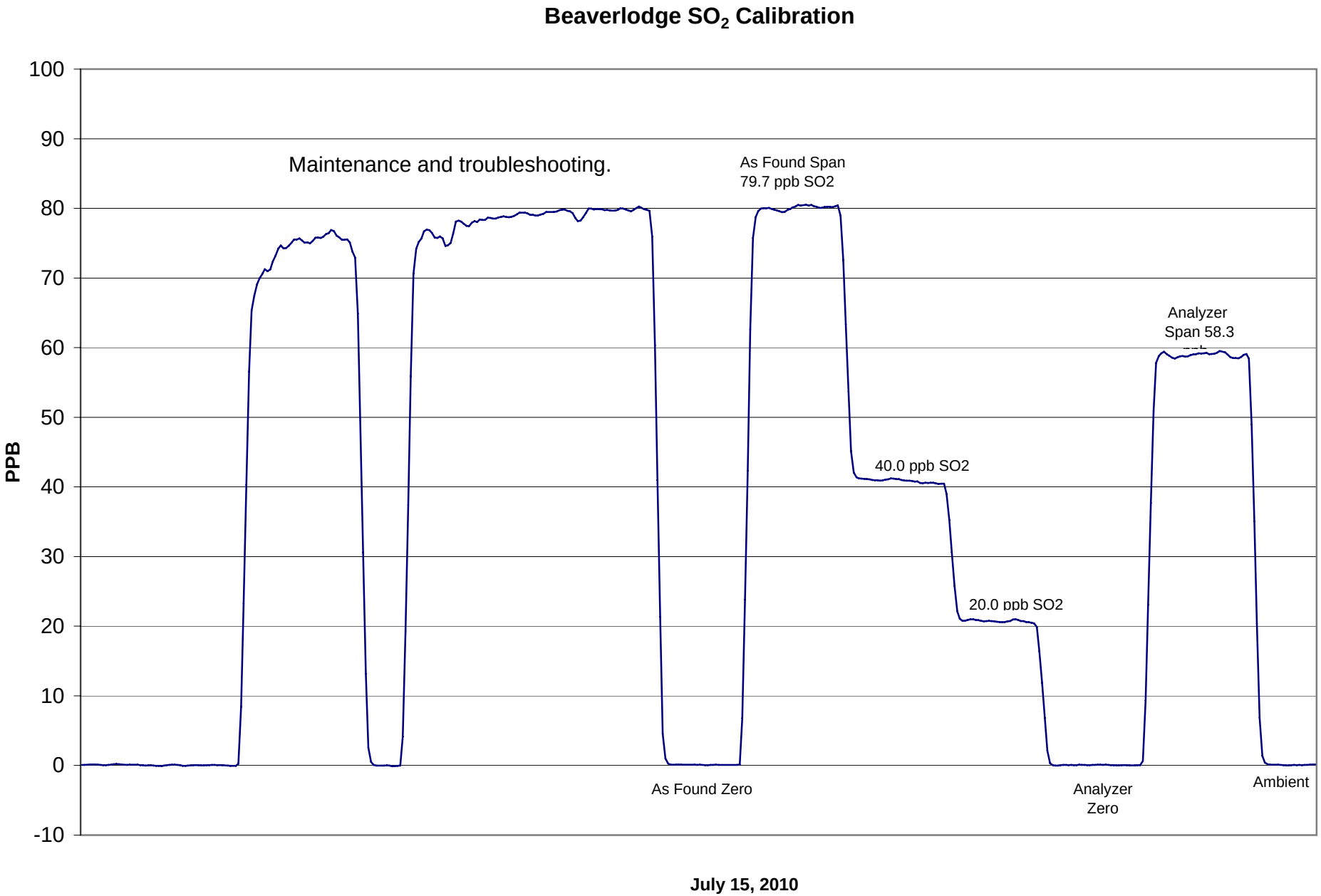
Station Information

Calibration Date	July 15, 2010	Previous Calibration	July 5, 2010
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:10	End Time (MST)	11:57
Analyzer make/model	TEI Model 43i-TLE	Analyzer serial #	713021137

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A		
79.7	80.1	0.9947	Correlation Coefficient	0.999891
40.0	40.9	0.9780		
20.0	20.8	0.9621	Slope	0.997466
			Intercept	-0.461042




Beaverlodge SO2 Calibration
100
90
80
70
60
50
40
30
20
10
0
-10
PPB
Maintenance and troubleshooting.
As Found Span
79.7 ppb SO2
40.0 ppb SO2
20.0 ppb SO2
Analyzer
Span 58.3
As Found Zero
Analyzer
Zero
Ambient
July 15, 2010

Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 5, 2010	Previous Calibration	June 11, 2010
Station Number	4	Station Location	BeaverLodge

Reason: **Routine** Installation Removal Other:

Start Time (MST)	8:30		End Time (MST)	12:57	
Barometric Pressure	0.915	Atm	Station Temperature	9.0	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	0.998443	1.004538	1.002358
	Data Offset	-0.355322	-2.377709	-1.353658
After	Data Slope	0.996963	1.042544	1.041132
	Data Offset	0.092437	-2.271972	-1.261478
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	2.3	mV	2.4	mV
NOx bkgnd	2.6	mV	2.6	mV
NO coefficient	1.405		1.405	
NOx coefficient	0.994		0.994	
NO2 conv temp	322.9	Deg C	326.3	Deg C
PMT Temp	-3.0	Deg C	-2.7	Deg C
PMT Volt	-676.4	mV	-676.0	mV
R Cell Press	185.8	in Hg	186.7	in Hg
Sample Flow	0.737	ccm	0.738	ccm

Calibration Report

Parameter **NOX-NO-NO2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: July 5, 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	0.0	0.0	-0.1	N/A	N/A
1	4988	39.82	397.6	396.8	0.8	382.3	381.6	0.4	1.0400	1.0398
2	4988	19.90	199.5	199.1	0.4	194.9	193.3	0.9	1.0233	1.0297
3	4988	9.93	99.7	99.5	0.2	99.8	97.9	1.7	0.9993	1.0166
AFZ	4988	0.00	0.0	0.0	0.0	0.0	0.0	-0.1	0.0000	0.0000
AFS	4988	39.84	397.8	397.0	0.8	382.3	381.6	0.4	1.0405	1.0404
							Average Correction Factor		1.0209	1.0287

As Found Concentrations: NO_X= 379.9 NO= 380.3 As Found Percent Change NO_X= -4.5% NO= -4.2%

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	0.0	0.0	0.0	0.0	0.0	-0.1	N/A	N/A	N/A	N/A
NO point	382.4	382.4	0.0	383.0	382.4	0.2	0.9985	1.0000	N/A	N/A
300	382.4	103.5	278.9	383.8	103.5	279.9	0.9966	1.0000	0.9967	100.3%
200	382.4	193.1	189.3	382.9	193.1	189.4	0.9988	1.0000	0.9994	100.1%
100	382.4	280.7	101.7	383.0	280.7	102.2	0.9986	1.0000	0.9959	100.4%
					Average Correction Factor		0.9980	1.0000	0.9973	100.3%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.2	-0.3	-0.2	ppb	0.2	0.0	0.1	ppb
Auto span	175.3	173.3	2.1	ppb	196.1	193.9	1.7	ppb

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

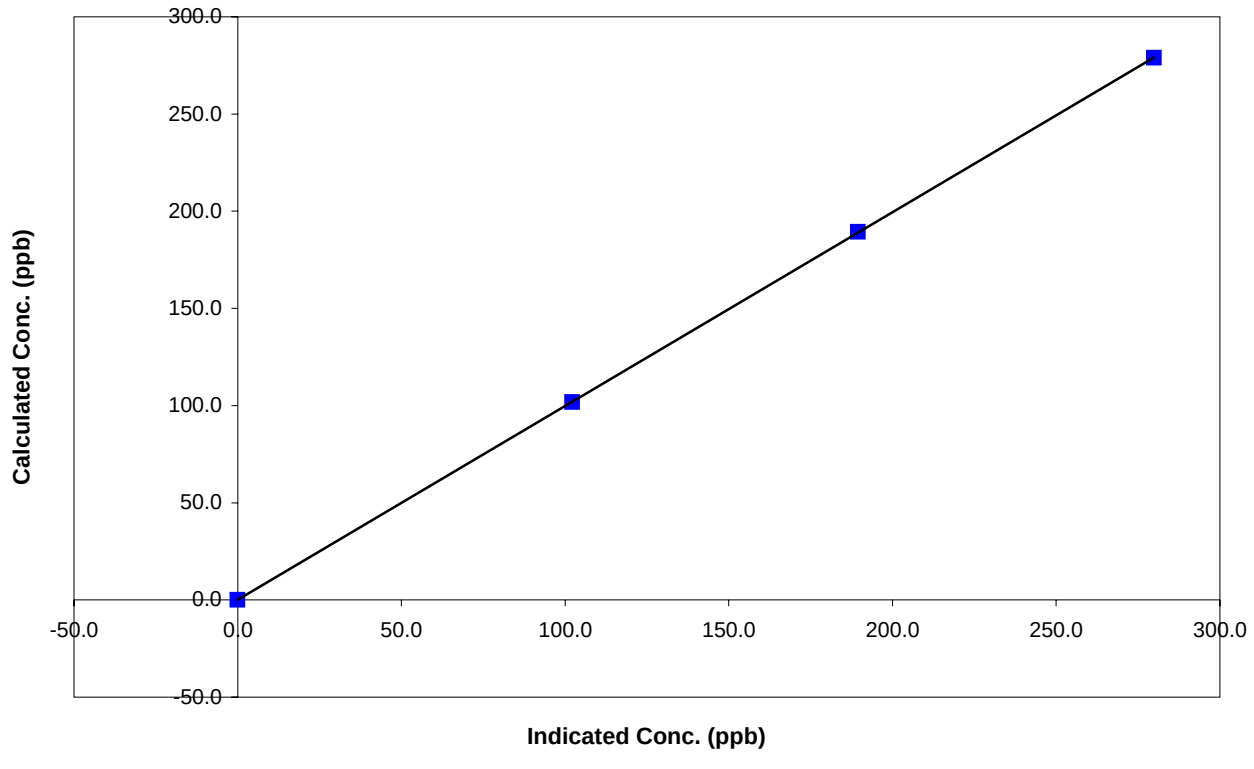
Station Information

Calibration Date	July 5, 2010	Previous Calibration	June 11, 2010
Station Number	4	Station Location	BeaverLodge
Start Time (MST)	8:30	End Time (MST)	12:57
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		
278.9	279.9	0.9967	Correlation Coefficient	0.999995
189.3	189.4	0.9994		
101.7	102.2	0.9959	Slope	0.996963
			Intercept	0.092437

NO_2 Calibration Curve



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

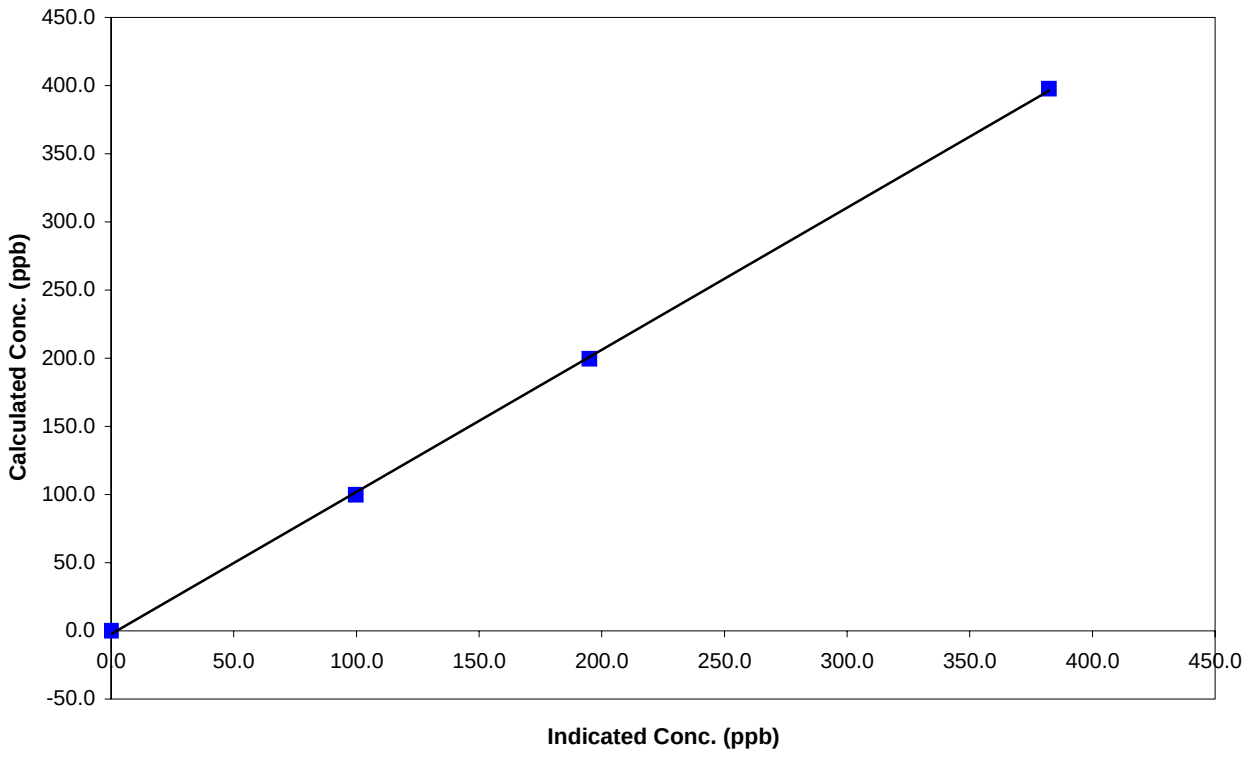
Station Information

Calibration Date	July 5, 2010	Previous Calibration	June 11, 2010
Station Number	4	Station Location	BeaverLodge
Start Time (MST)	8:30	End Time (MST)	12:57
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
397.6	382.3	1.0400	Correlation Coefficient	0.999849
199.5	194.9	1.0233		
99.7	99.8	0.9993	Slope	1.042544
			Intercept	-2.271972

NOx Calibration Curve



Calibration Summary

Parameter **NO**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

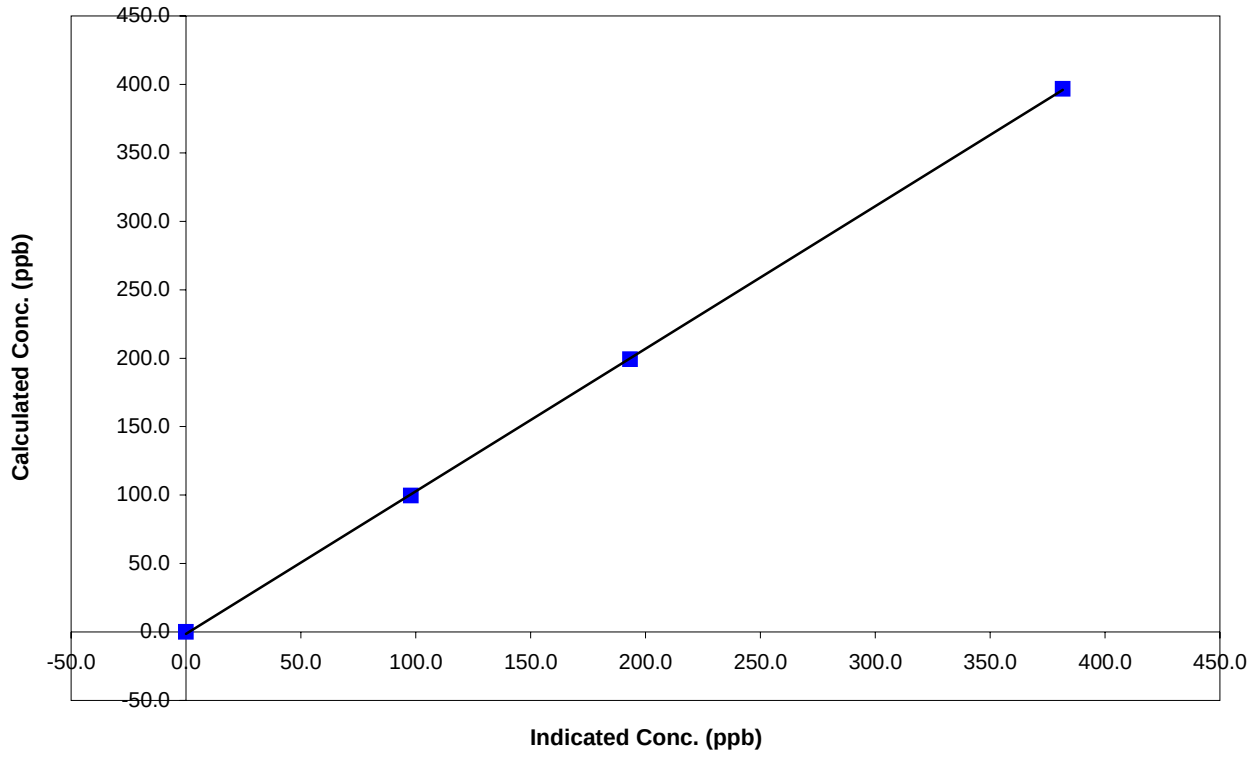
Station Information

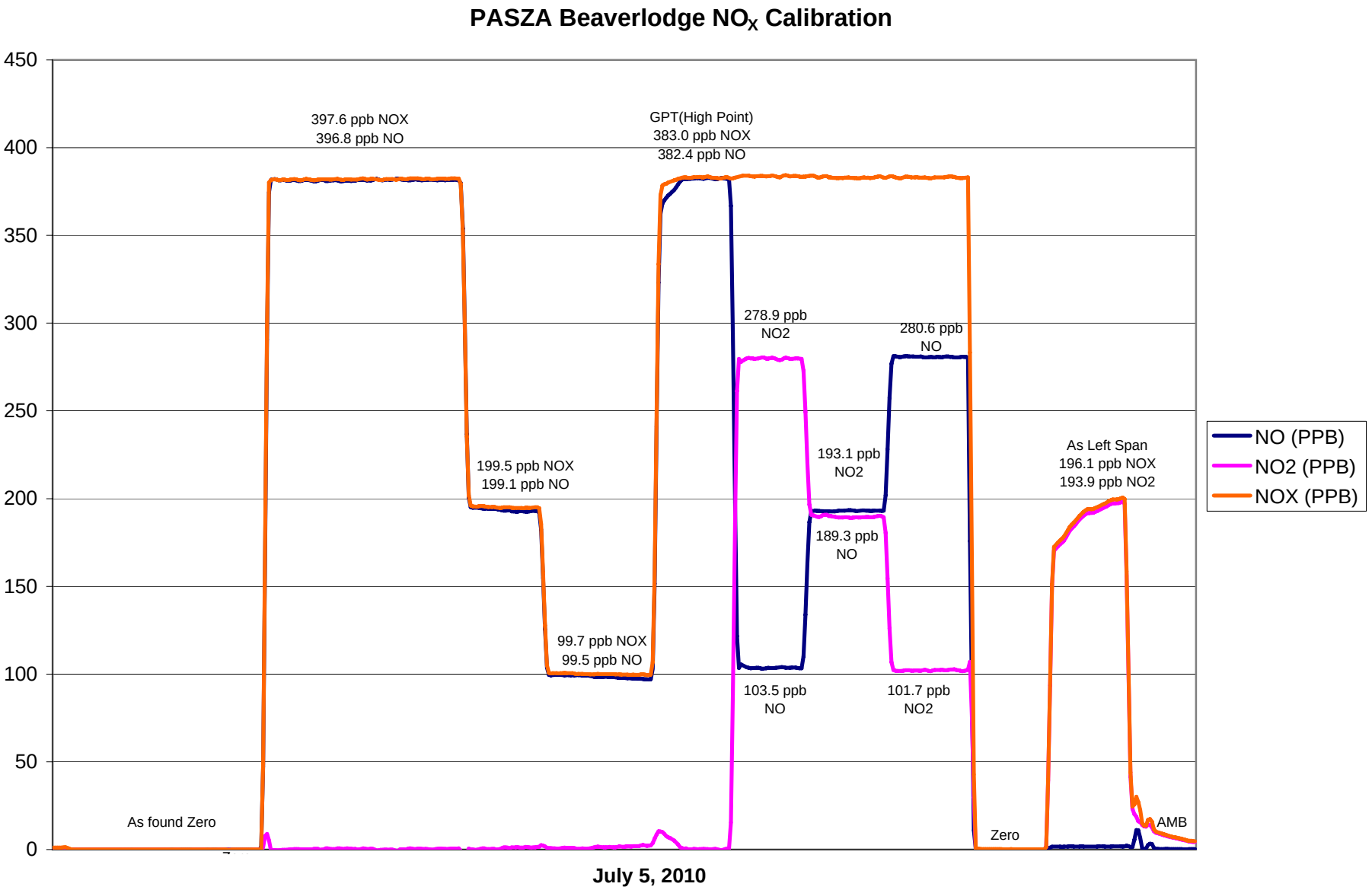
Calibration Date	July 5, 2010	Previous Calibration	June 11, 2010
Station Number	4	Station Location	BeaverLodge
Start Time (MST)	8:30	End Time (MST)	12:57
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
396.8	381.6	1.0398	Correlation Coefficient	0.999948
199.1	193.3	1.0297		
99.5	97.9	1.0166	Slope	1.041132
			Intercept	-1.261478

NO Calibration Curve




PASZA 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
278.9 ppb
NO2
280.6 ppb
NO
193.1 ppb
NO2
199.5 ppb NOX
199.1 ppb NO
189.3 ppb
NO
As Left Span
196.1 ppb NOX
193.9 ppb NO2
99.7 ppb NOX
99.5 ppb NO
103.5 ppb
NO
101.7 ppb
NO2
As found Zero
Zero
AMB
NO (PPB)
NO2 (PPB)
NOX (PPB)
July 5, 2010

Calibration Report

Parameter **O3**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 5, 2010	Previous Calibration	June 11, 2010
Station Number	4	Station Location	Beaverlodge

Reason: Routine | Install | Removal | Other:

Start Time (MST)	12:00	End Time (MST)	14:22
Barometric Pressure	0.915 atm	Station Temperature	21.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA

DACS make	Focus AP1000	DACS serial No.	45269
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	0.998409	Calculated slope	0.964840
Calculated intercept	0.743590	Calculated intercept	0.216343

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

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-0.70	ppb	-0.70	ppb
slope	1.008		1.008	
Lamp temp	56.5	mV	56.5	mV
Lamp Intensity A/B	68730/67974	mV	68823/68075	mV
Pressure	693.6	mm Hg	665.4	mm Hg
Flow A	0.715	ccm	0.693	ccm
Flow B	0.663	ccm	0.639	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	-0.2	N/A
4990	0.00	278.9	288.8	0.9656
4990	0.00	189.3	196.0	0.9660
4990	0.00	101.7	105.2	0.9670
4990	0.00	0.0	-0.2	As found zero
4990	0.00	278.9	288.8	As found span
			Average Correction Factor	0.9662

Calculated value of As Found Response: 289.3 ppm Percent Change of As Found: 3.7%

	before calibration		after calibration	
Auto zero	0.1	ppb	-0.1	ppb
Auto span	114.3	ppb	119.5	ppb

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **O3**

Air Monitoring Network **PASZA**

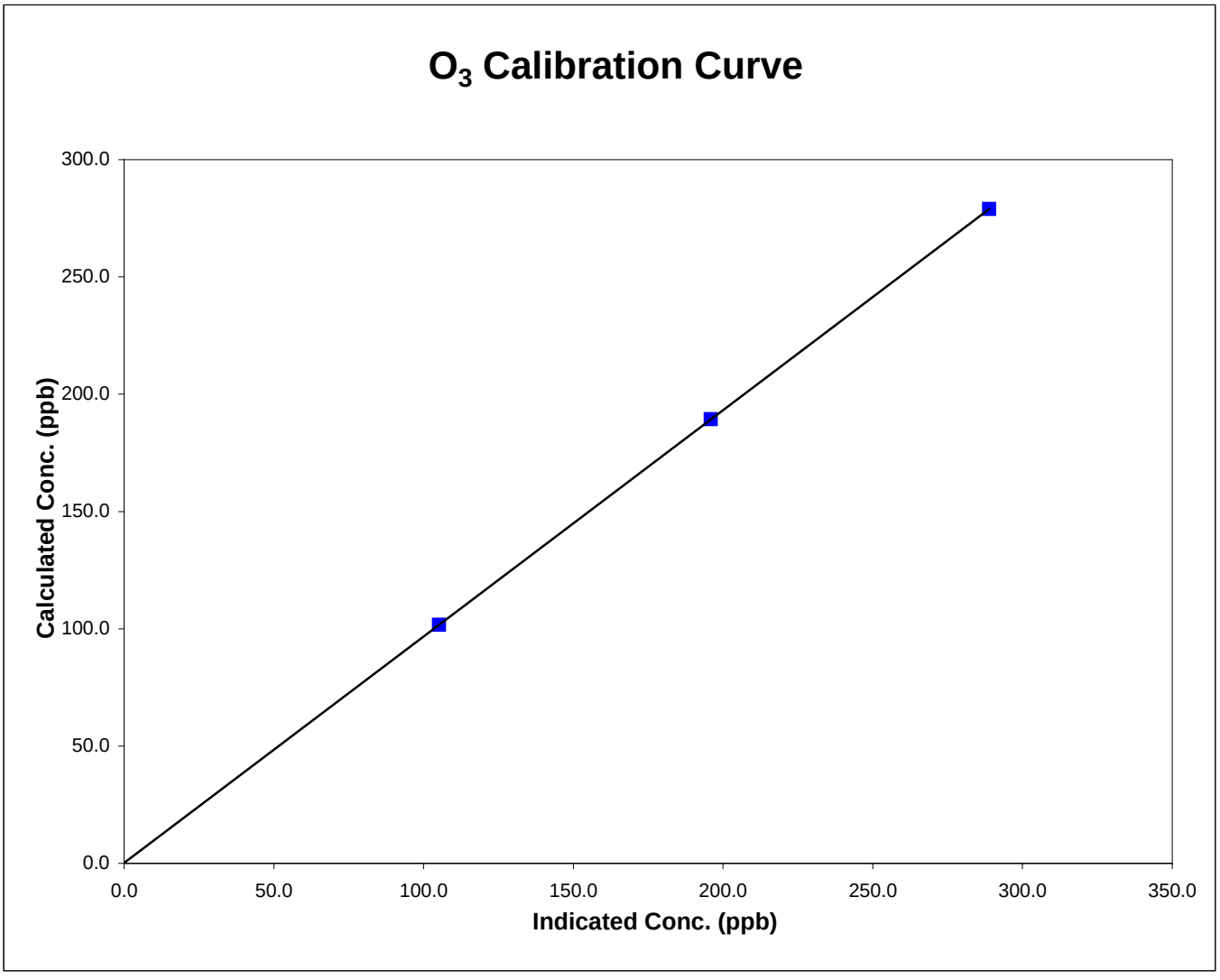
FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 5, 2010	Previous Calibration	June 11, 2010
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	12:00	End Time (MST)	14:22
Analyzer make/model	Teco 49C	Analyzer serial #	49C-76443-383

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.2	NA		
278.9	288.8	0.9656	Correlation Coefficient	1.000000
189.3	196.0	0.9660		
101.7	105.2	0.9670	Slope	0.964840
			Intercept	0.216343



Beverlodge O_3 Calibration

July 5, 2010

Calibration Report

Parameter **SO2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 20, 2010	Previous Calibration	June 18, 2010
Station Number	9	Station Location	Rover - Bonanza

Reason: Routine | Install | Removal | Other:

Start Time (MST)	8:15	End Time (MST)	11:16
Barometric Pressure	27.66 inches Hg	Station Temperature	15.7 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	50.6 ppm	Cal Gas Expiry Date	7/27/2009
Gas Cert Reference	LL 16161		
DACS make	Focus AP1000	DACS serial No.	52662
DACS voltage range	0 - 10 volt	DACS channel #	9
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.001749	Calculated slope	1.002130
Calculated intercept	-2.100578	Calculated intercept	-1.785903

Analyzer make	TEI 43C		Analyzer serial #	609716238

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	8.9		9.5	
Coefficient	0.985		0.994	
UV Lamp Voltage	793	V	794	V
Chamber Temp	44.5	C	44.4	C
Perm Gas Temp	45	C	45	C
Pressure	679.2	mm Hg	679.5	mm Hg
Sample Flow	0.490	LPM	0.491	LPM
Lamp Intesity	47731	Hz	47972	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4989	0.00	0.0	0.0	N/A
4991	39.84	400.7	400.8	0.9998
4991	19.90	200.9	203.1	0.9895
4991	9.93	100.5	103.9	0.9671
4991	0.00	0.0	0.0	As found zero
4991	39.84	400.7	397.5	As found span
			Average Correction Factor	0.9855

Calculated value of As Found Response: 396.075 ppm Percent Change of As Found: 1.2%

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

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PASZA**

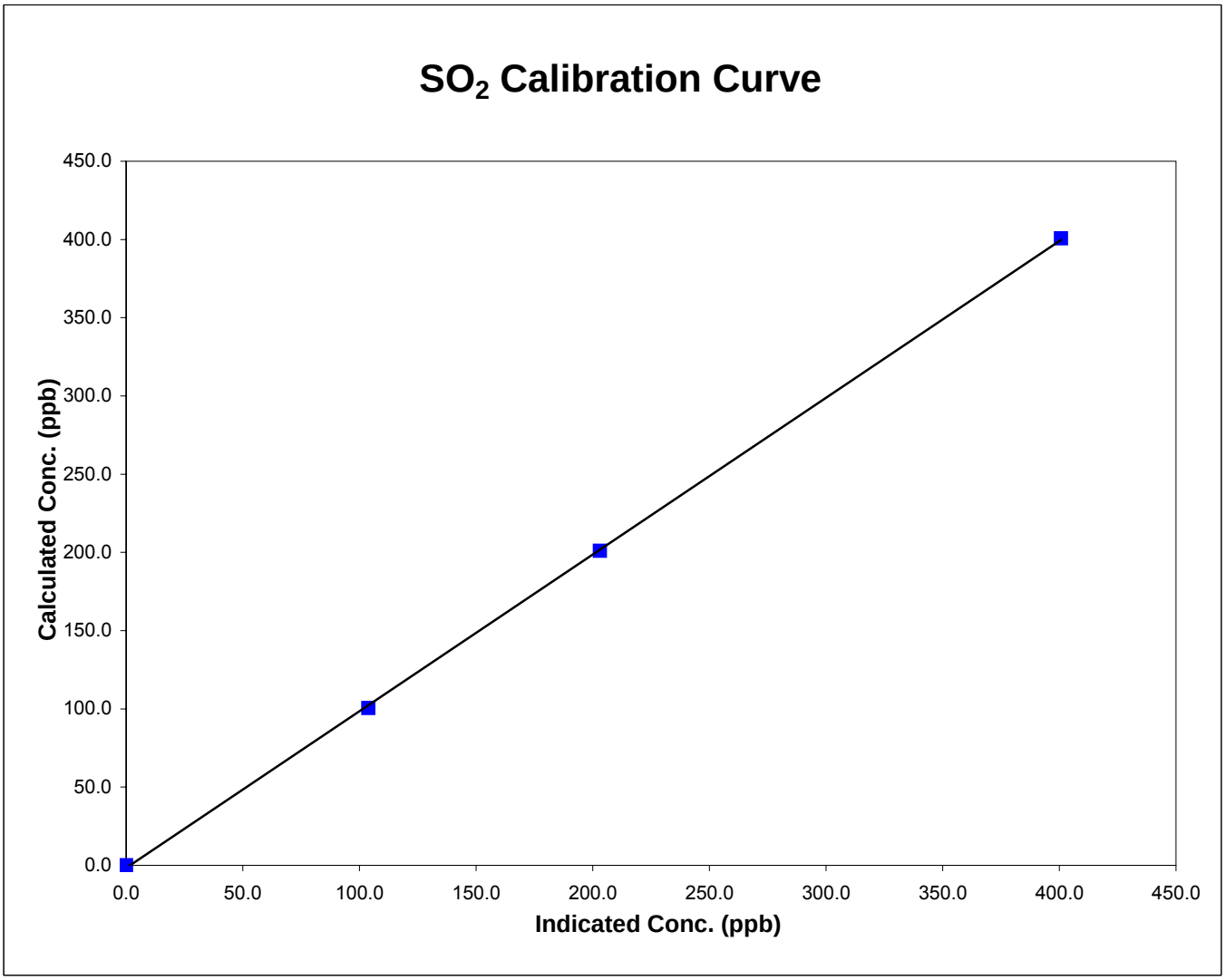
FOCUS AIR QUALITY MONITORING

Station Information

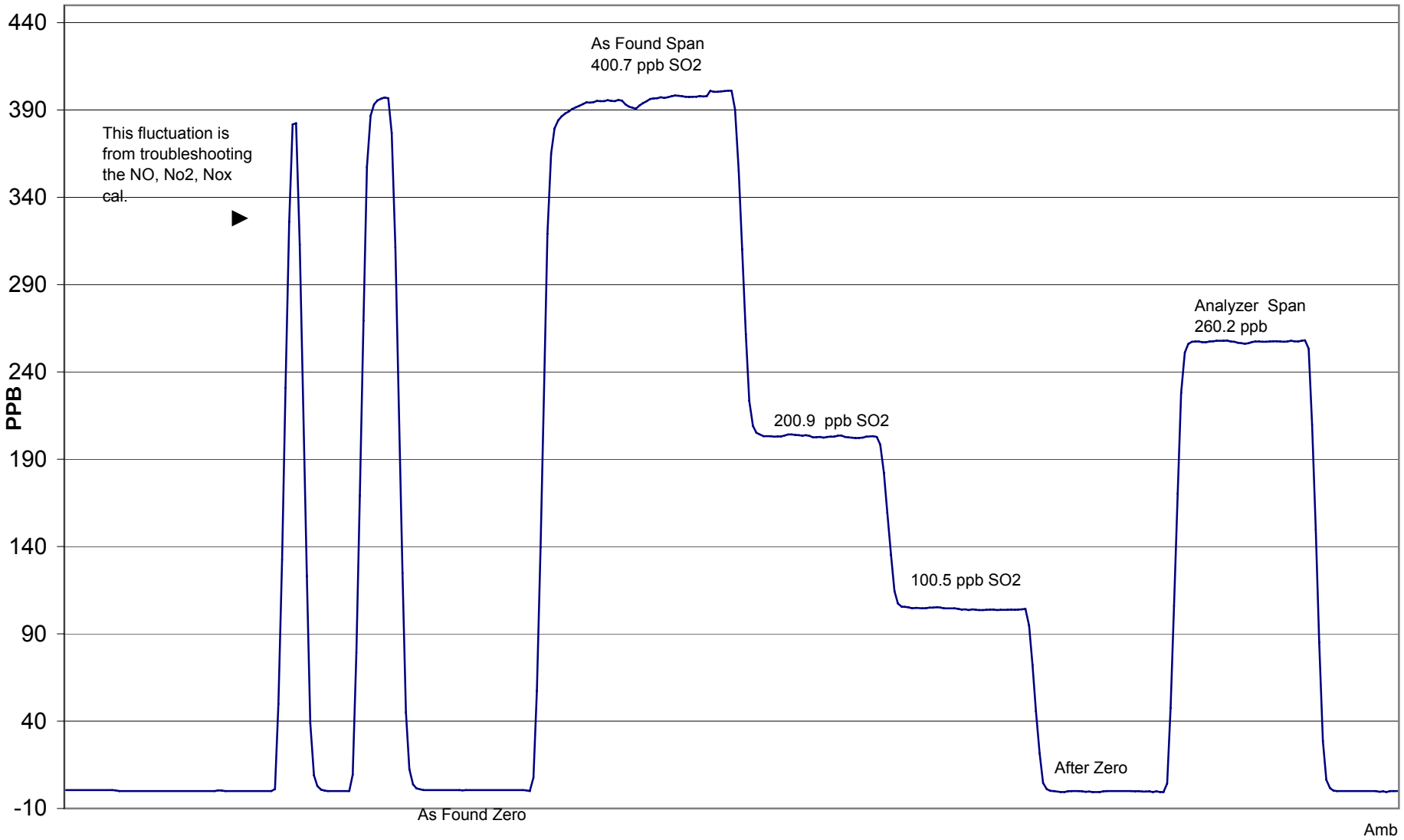
Calibration Date	July 20, 2010	Previous Calibration	June 18, 2010
Station Number	9	Station Location	Rover - Bonanza
Start Time (MST)	8:15	End Time (MST)	11:16
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
400.7	400.8	0.9998	Correlation Coefficient	0.999911
200.9	203.1	0.9895		
100.5	103.9	0.9671	Slope	1.002130
			Intercept	-1.785903



Bonanza SO_2 Calibration



July 20, 2010

Calibration Report

Parameter **TRS**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 20, 2010	Previous Calibration	June 18, 2010
Station Number	9	Station Location	Rover-Bonanza
Reason:	Routine / Install / Removal / Other:		
Start Time (MST)	10:24	End Time (MST)	12:50
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	1.000749	Calculated slope	1.006421
Calculated intercept	0.498726	Calculated intercept	-0.053281
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	9.8	ppb	9.8	ppb
Coefficient	1.397		1.379	
Lamp Voltage	788	V	789	V
Chamber Temp	43.8	C	43.9	C
Perm gas Temp	45.00	C	45	C
Pressure	662.8	mmHg	662.1	mmHg
Sample Flow	.441	ccm	.441	ccm
Lamp Intensity	38796.0	Hz	39299.0	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4989	0.0	0.0	-0.1	N/A
4991	79.74	81.0	80.5	1.0064
4991	39.80	40.7	40.6	1.0037
4991	9.93	10.2	10.4	0.9830
4991	0.00	0.0	-0.1	As found zero
4991	79.74	81.0	80.5	As found span
			Average Correction Factor	0.9977

Calculated value of As Found Response: 81.17 ppm Percent Change of As Found: -0.2%

	before calibration		after calibration	
Auto zero	-0.6	ppm	-0.1	ppm
Auto span	64.8	ppm	65.7	ppm

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **TRS**

Air Monitoring Network **PASZA**

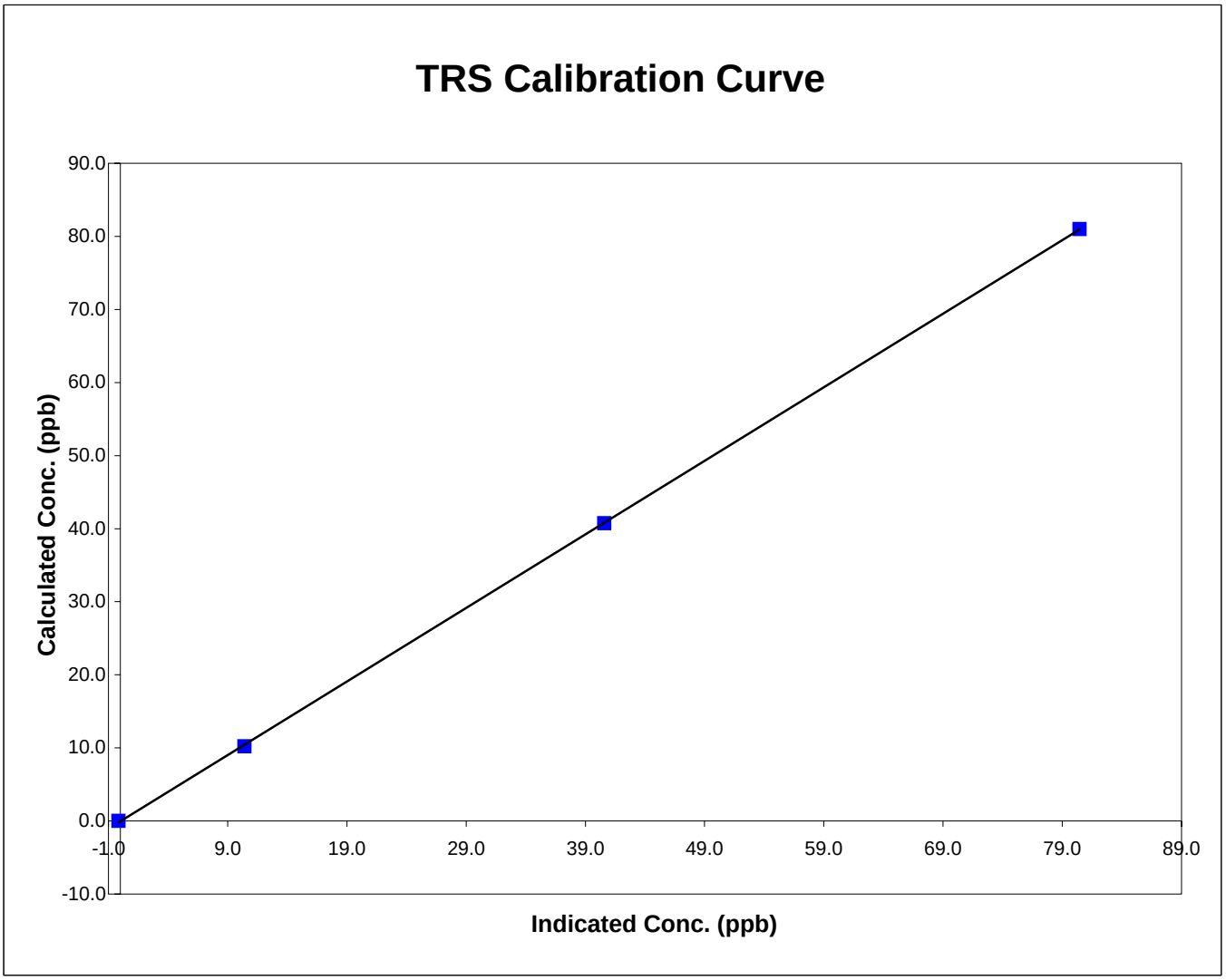
FOCUS AIR QUALITY MONITORING

Station Information

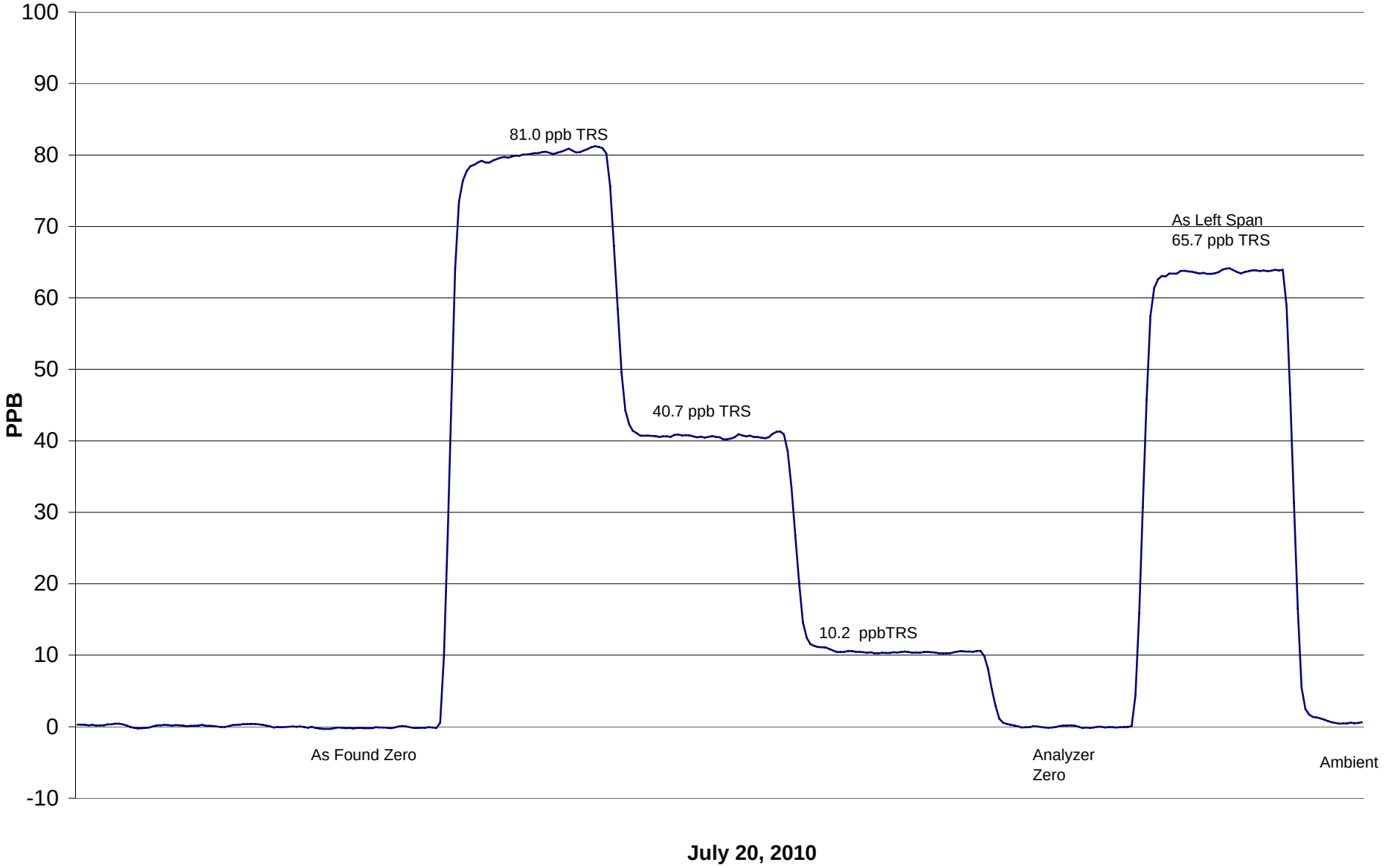
Calibration Date	July 20, 2010	Previous Calibration	June 18, 2010
Station Number	9	Station Location	Rover-Bonanza
Start Time (MST)	10:24	End Time (MST)	12:50
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A		
81.0	80.5	1.0064	Correlation Coefficient	0.999980
40.7	40.6	1.0037		
10.2	10.4	0.9830	Slope	1.006421
			Intercept	-0.053281



Bonanza TRS Calibration



July 20, 2010

Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 21, 2010	Previous Calibration	June 18, 2010
Station Number	9	Station Location	Rover Bonanza

Reason: Routine | Installation | Other:

Start Time (MST)	9:00		End Time (MST)	13:13	
Barometric Pressure	0.927	Atm	Station Temperature	15.7	Deg C
Calibrator	Environics 6100		Serial Number	3474	
NO Cal Gas Conc	50.1	ppm	Cal Gas Expiry Date	July 2, 2007	
NOx Cal Gas Conc	50.1	ppm	Cal Gas Serial #	CC114395	

DACS Information

DACS make: Focus AP1000 | DACS serial No.: 52662

Parameter		NO2	NOx	NO
Before	Data Slope	0.995766	0.997728	1.005136
	Data Offset	1.154511	-2.729008	-3.513829
After	Data Slope	0.995831	1.011305	1.004642
	Data Offset	0.641464	-6.758112	-3.543341
Channel #		8	6	7
Voltage Range		0 - 10 VDC	0 - 10 VDC	0 - 10 VDC

Analyzer Information

Analyzer make/model: TEI 42i | Analyzer serial #: 701120011

Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	4.8	mV	5.2	mV
NOx bkgnd	5.1	mV	5.6	mV
NO coefficient	0.875		0.956	
NOx coefficient	0.999		0.997	
NO2 conv temp	324.5	Deg C	325.0	Deg C
PMT Temp	-3.1	Deg C	-2.7	Deg C
PMT Volt	-829.9	mV	-829.9	mV
R Cell Press	165.4	in Hg	164.8	in Hg

Calibration Report

Parameter **NOx-NO-NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: July 21, 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	4989	0.00		0.0		0.1	0.5	-1.6	N/A	N/A
1	4989	39.84	396.9	396.9	0.0	399.1	396.9	-0.8	0.9944	0.9999
2	4989	19.91	199.1	199.1	0.0	203.7	203.4	-1.5	0.9778	0.9788
3	4989	9.96	99.8	99.8	0.0	105.3	105.8	-1.2	0.9475	0.9431
AFZ	4989	0.00	0.0	0.0	0.0	0.1	0.5	-0.9	0.0000	0.0000
AFS	4989	39.85	397.0	397.0	0.0	365.8	363.7	-0.7	1.0853	1.0916
							Average Correction Factor		0.9733	0.9739

As Found Concentrations: NO_X= 363.0 NO= 359.7 As Found Percent Change NO_X= -8.6% NO= -9.4%

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	0.1	0.5	-1.6	N/A	N/A	N/A	N/A
NO point	397.5	397.5	0.0	399.0	397.5	-1.5	0.9963	1.0000	N/A	N/A
300	397.5	125.5	272.0	399.9	125.5	272.6	0.9939	1.0000	0.9978	100.2%
200	397.5	212.3	185.2	399.9	212.3	185.1	0.9941	1.0000	1.0006	99.9%
100	397.5	298.5	99.0	400.0	298.5	98.9	0.9939	1.0000	1.0011	99.9%
					Average Correction Factor		0.9940	1.0000	0.9998	100.0%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.4	-0.9	0.7	ppb	0.0	-0.9	0.5	ppb
Auto span	275.6	274.9	2.9	ppb	299.3	294.6	3.1	ppb

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

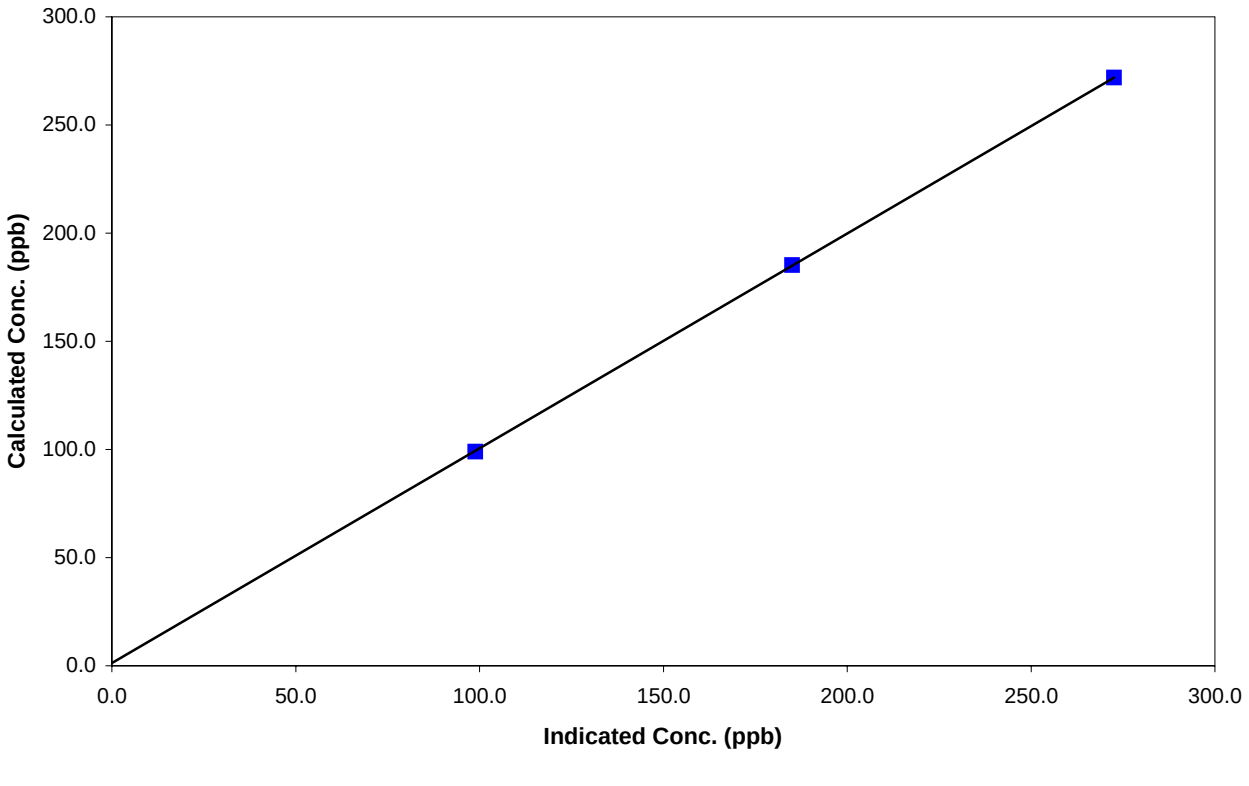
Station Information

Calibration Date	July 21, 2010	Previous Calibration	June 18, 2010
Station Number	9	Station Location	Rover Bonanza
Start Time (MST)	9:00	End Time (MST)	13:12
Analyzer make	TEI 42i	Analyzer serial #	701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
	-1.6	N/A		
272.0	272.6	0.9978	Correlation Coefficient	0.999994
185.2	185.1	1.0006		
99.0	98.9	1.0011	Slope	0.995831
			Intercept	0.641464

NO_2 Calibration Curve



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

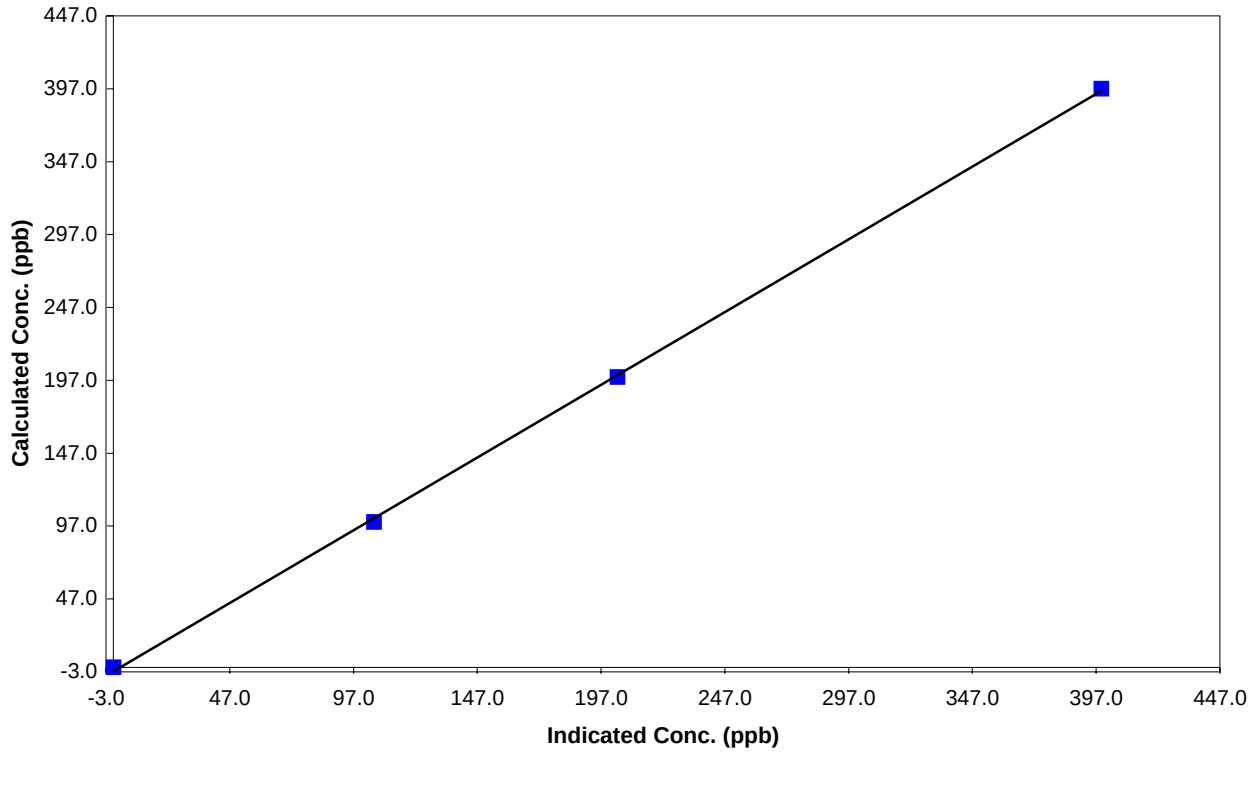
Station Information

Calibration Date	July 21, 2010	Previous Calibration	June 18, 2010
Station Number	9	Station Location	Rover Bonanza
Start Time (MST)	9:00	End Time (MST)	13:12
Analyzer make	TEI 42i	Analyzer serial #	701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
	0.1	N/A		
396.9	399.1	0.9944	Correlation Coefficient	1.000000
199.1	203.7	0.9778		
99.8	105.3	0.9475	Slope	1.011305
			Intercept	-6.758112

NOx Calibration Curve



Calibration Summary

Parameter **NO**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

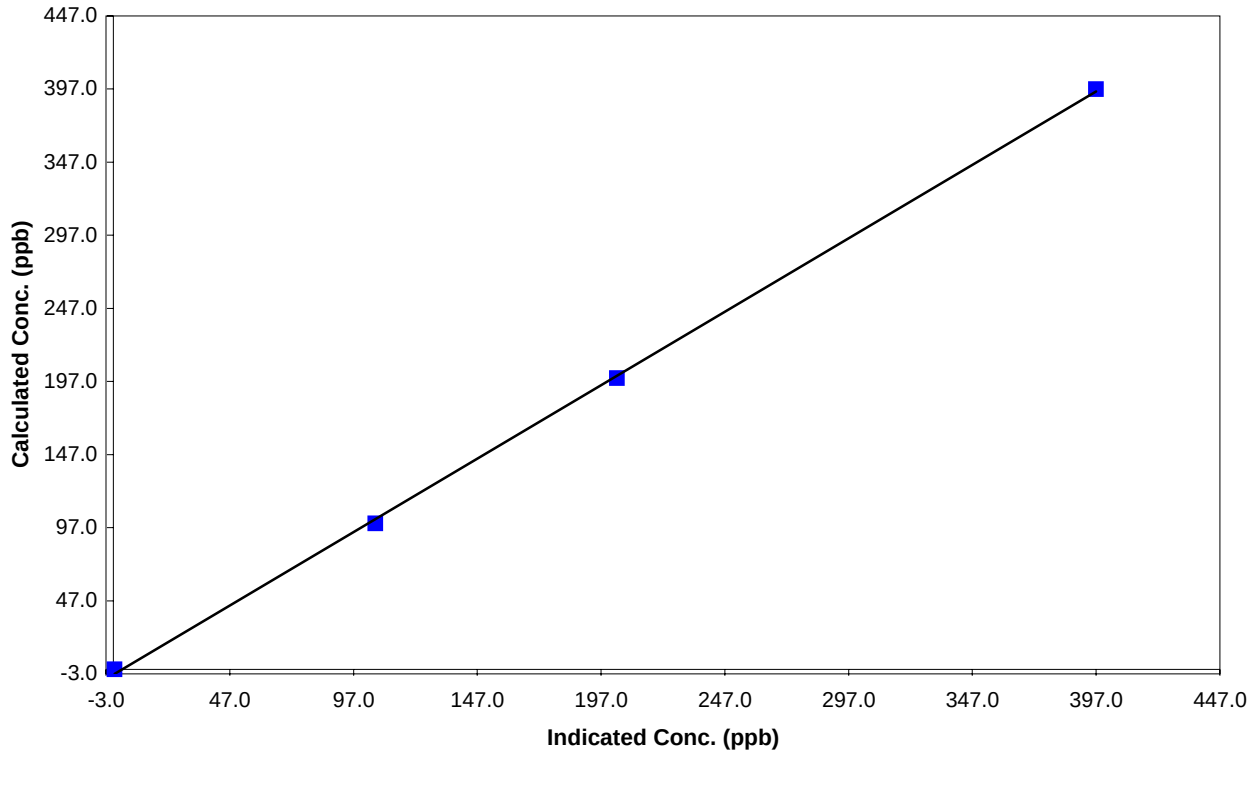
Station Information

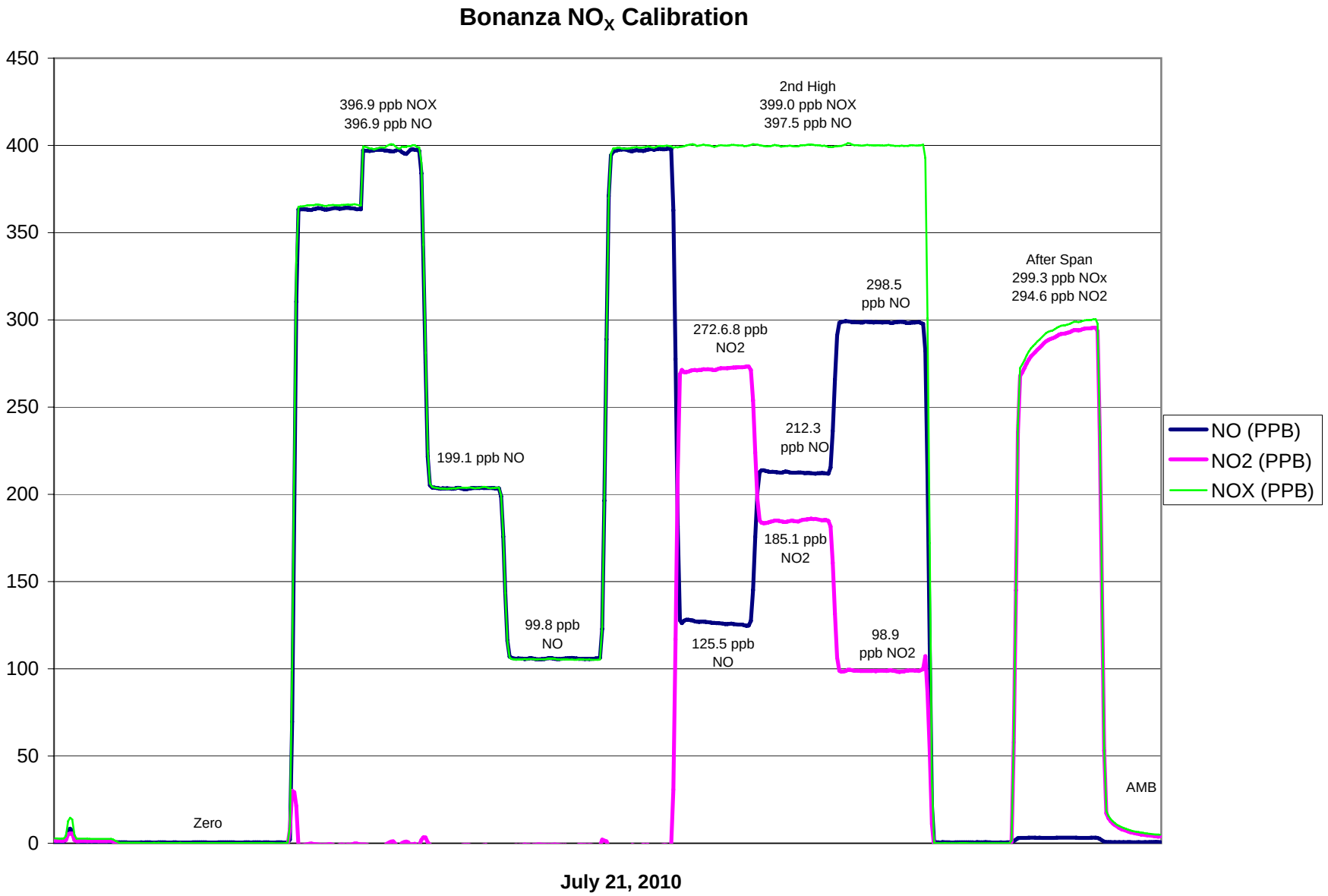
Calibration Date	July 21, 2010	Previous Calibration	June 18, 2010
Station Number	9	Station Location	Rover Bonanza
Start Time (MST)	9:00	End Time (MST)	13:12
Analyzer make	TEI 42i	Analyzer serial #	701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A		
396.9	396.9	0.9999	Correlation Coefficient	0.999726
199.1	203.4	0.9788		
99.8	105.8	0.9431	Slope	1.004642
			Intercept	-3.543341

NO Calibration Curve




Bonanza NOX Calibration
450
400
350
300
250
200
150
100
50
0
396.9 ppb NOX
396.9 ppb NO
2nd High
399.0 ppb NOX
397.5 ppb NO
After Span
299.3 ppb NOx
294.6 ppb NO2
298.5
ppb NO
272.6.8 ppb
NO2
212.3
ppb NO
199.1 ppb NO
185.1 ppb
NO2
99.8 ppb
NO
125.5 ppb
NO
98.9
ppb NO2
Zero
AMB
NO (PPB)
NO2 (PPB)
NOX (PPB)
July 21, 2010

Calibration Report

Parameter **O3**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 21, 2010	Previous Calibration	June 18, 2010
Station Number	12:00	Station Location	Rover - Bonanza

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

Start Time (MST)	12:00	End Time (MST)	14:05
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	1.005504	Calculated slope	0.993532
Calculated intercept	-1.583813	Calculated intercept	0.251780
Analyzer make	TEI Model 49C	Analyzer serial #	609-716240

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	-13.1	ppb	-14.3	ppb
Span	1.442		1.478	
Cell A intensity	75409	Hz	75251	Hz
Cell B intensity	90492	Hz	90437	Hz
Pressure	696.10	in Hg	691.40	in Hg
CellA Flow	0.586	ccm	0.715	ccm
Cell B Flow	0.711	cmm	0.682	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)
4988	0.00	0.0	-0.5	N/A
4990	0.30	272.6	273.9	0.9953
4990	0.20	185.1	186.3	0.9938
4990	0.10	98.9	99.5	0.9938
4990	0.00	0.0	-0.5	As found zero
4990	0.30	306.0	266.5	As found span
			Average Correction Factor	0.9943

Calculated value of As Found Response: 313.7 ppm Percent Change of As Found: 2.5%

	before calibration		after calibration	
Auto zero	2.1	ppb	0.6	ppb
Auto span	301.0	ppb	297.7	ppb

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **O3**

Air Monitoring Network **PASZA**

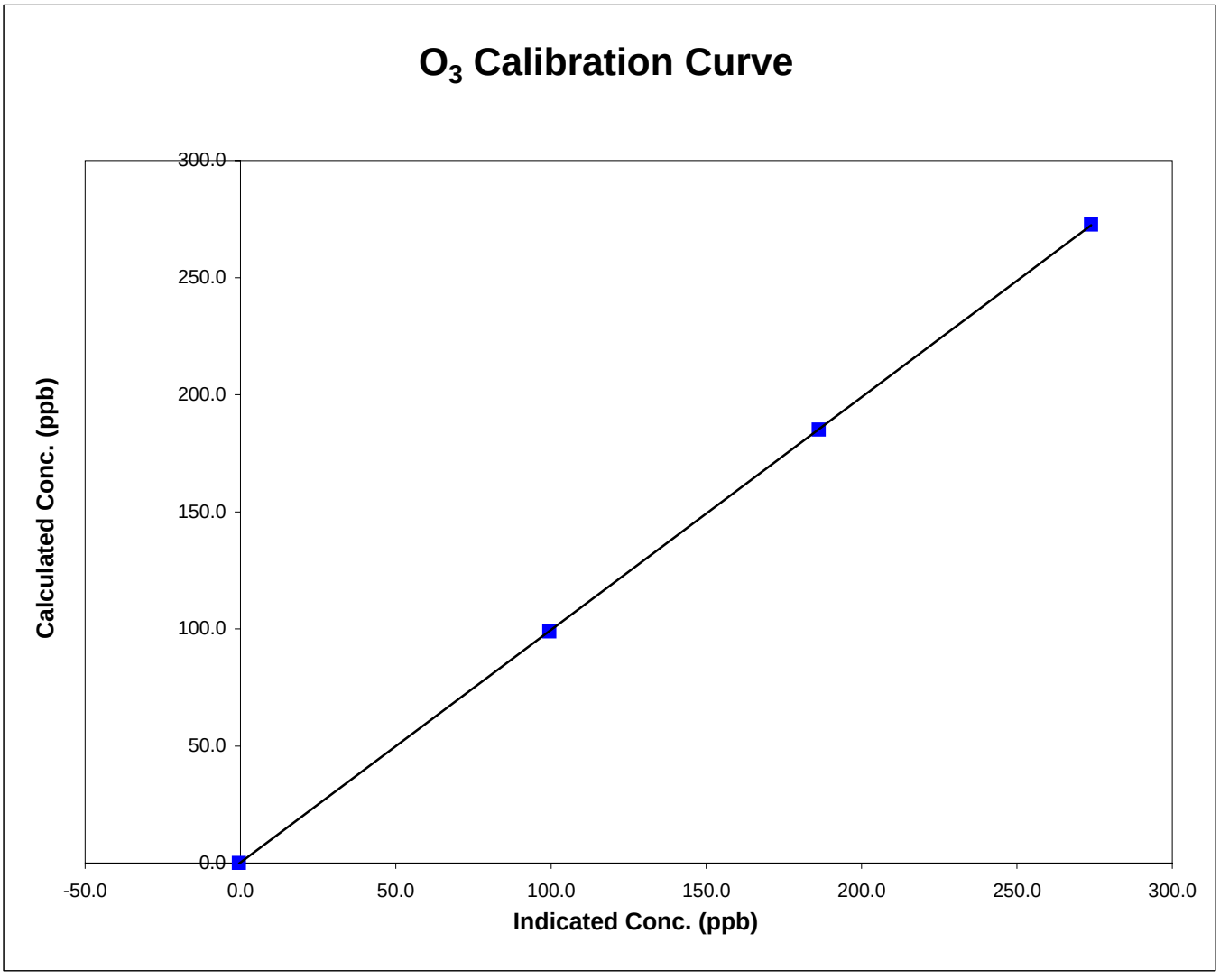
FOCUS AIR QUALITY MONITORING

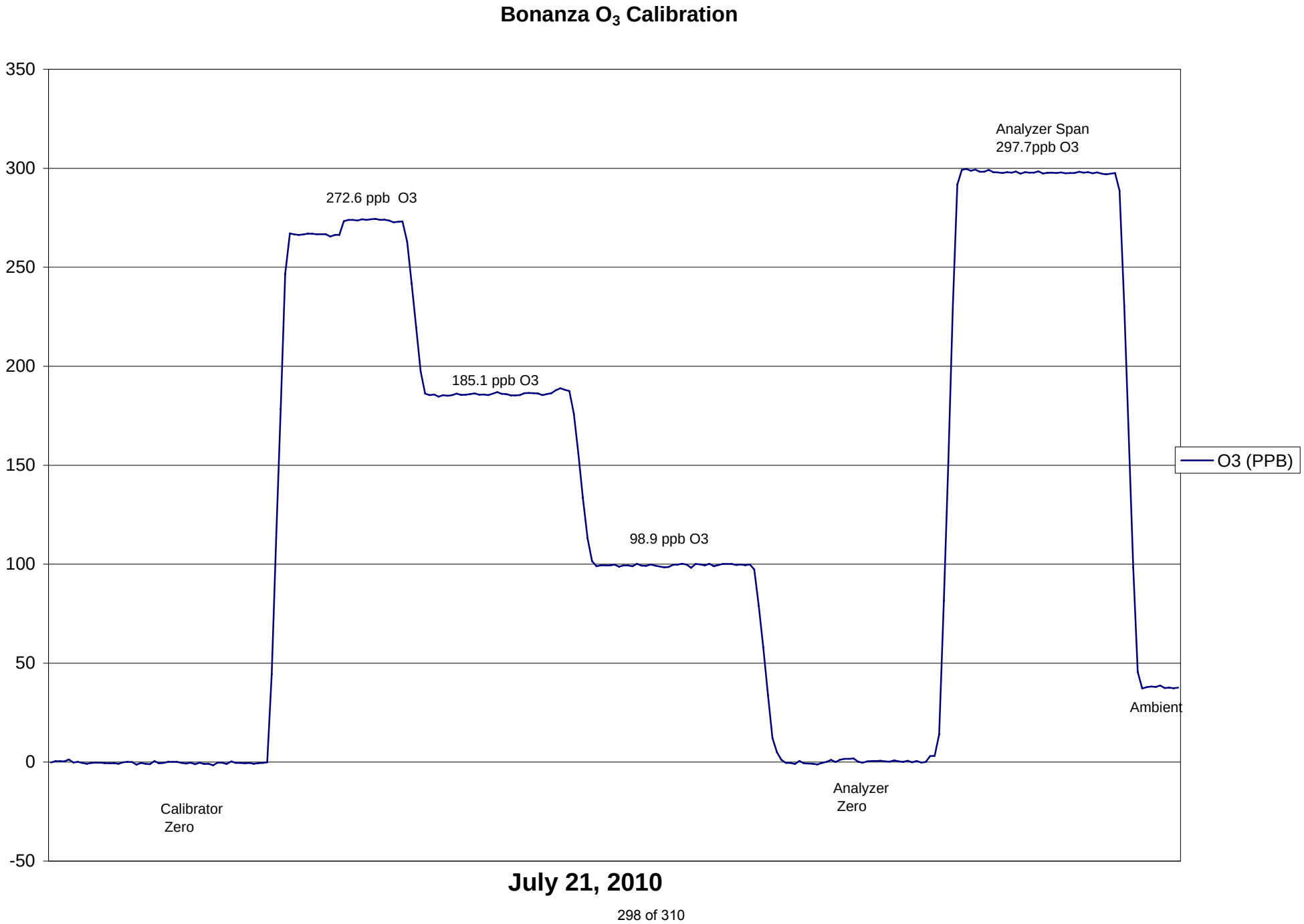
Station Information

Calibration Date	July 21, 2010	Previous Calibration	June 18, 2010
Station Number	0.5	Station Location	Rover - Bonanza
Start Time (MST)	12:00	End Time (MST)	14:05
Analyzer make/model	TEI Model 49C	Analyzer serial #	609-716240

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.5	NA		
272.6	273.9	0.9953	Correlation Coefficient	0.999996
185.1	186.3	0.9938		
98.9	99.5	0.9938	Slope	0.993532
			Intercept	0.251780




Bonanza O_3 Calibration
350
300
250
200
150
100
50
0
-50
Analyzer Span
297.7ppb O3
272.6 ppb O3
185.1 ppb O3
98.9 ppb O3
Ambient
Calibrator
Zero
Analyzer
Zero
O3 (PPB)
July 21, 2010

Calibration Report

Parameter **SO2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 6, 2010	Previous Calibration	May 24, 2010
Station Number	6	Station Location	Valleyview
Reason: Routine	Install	Removal	Other:
Start Time (MST)	4:30	End Time (MST)	18:39
Barometric Pressure	702.00 mm	Station Temperature	14.7 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	50.6 ppm	Cal Gas Cert Date	12/3/2009
Gas Cert Reference	AAL 56996		
DACS make	Focus AP1000	DACS serial No.	45274
DACS voltage range	0 - 10 volt	DACS channel #	4
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.002396	Calculated slope	0.995581
Calculated intercept	-2.325015	Calculated intercept	-2.218511
Analyzer make	TEI 45C	Analyzer serial #	45C-57531-313

	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
Background	24.4		N/A	
Coefficient	0.875		N/A	
UV Lamp Voltage	919	LPM	N/A	LPM
Chamber Temp	44	V	N/A	V
Perm Gas Temp	35.02	C	N/A	C
Pressure	625.6	in Hg	N/A	in Hg
Sample Flow	0.471	LPM	N/A	LPM
Lamp Intensity	48218	Hz	N/A	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.0	0.0	N/A
4988	39.85	401.0	403.9	0.9930
4988	19.89	201.0	205.2	0.9794
4988	9.94	100.6	105.7	0.9525
4988	0.00	0.0	0.0	As found zero
4988	39.88	401.3	403.7	As found span
			Average Correction Factor	0.9749

Calculated value of As Found Response: 402.418 ppm Percent Change of As Found: -0.3%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.0	ppm
Auto span	150.3	ppm	#DIV/0!	ppm

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PASZA**

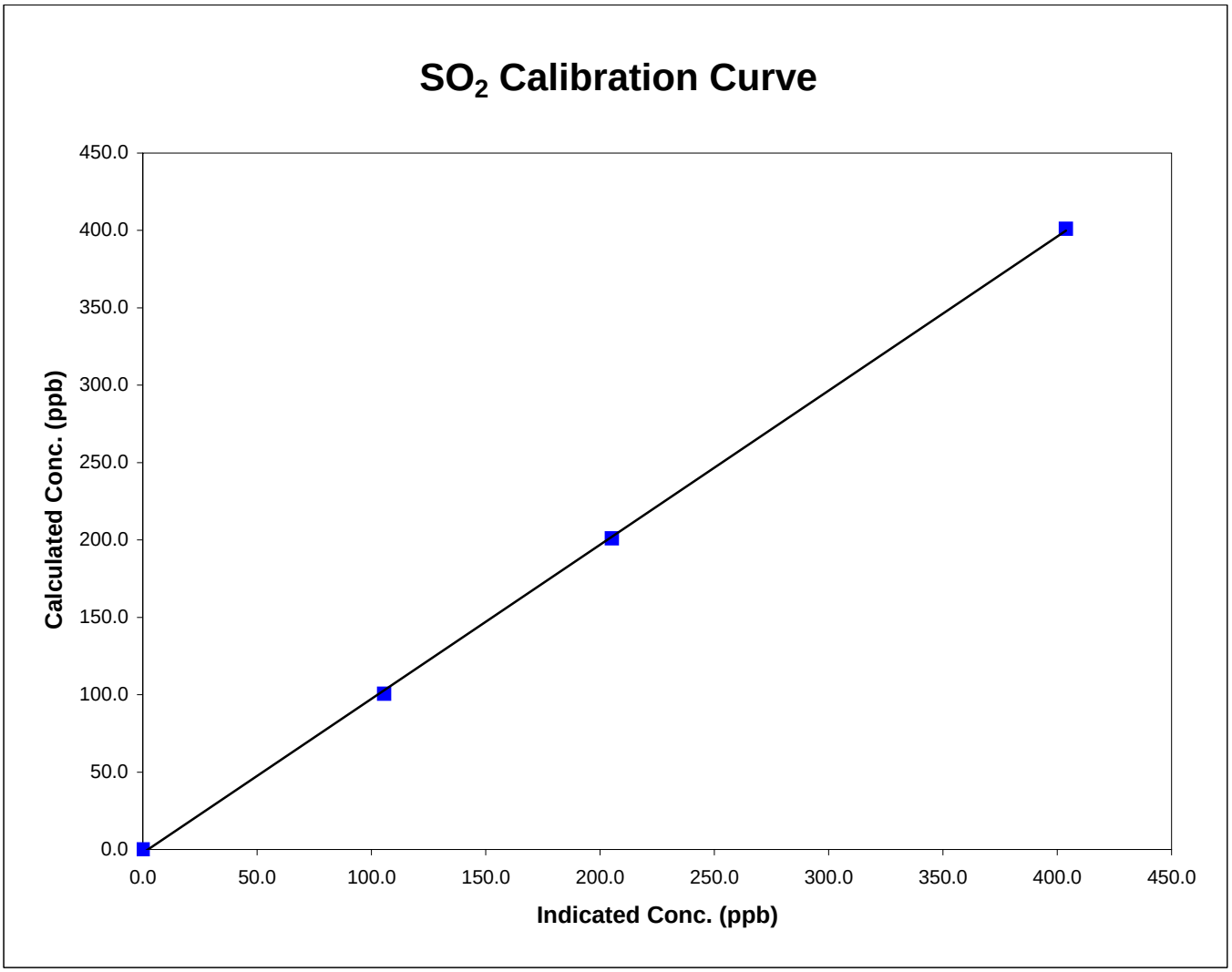
FOCUS AIR QUALITY MONITORING

Station Information

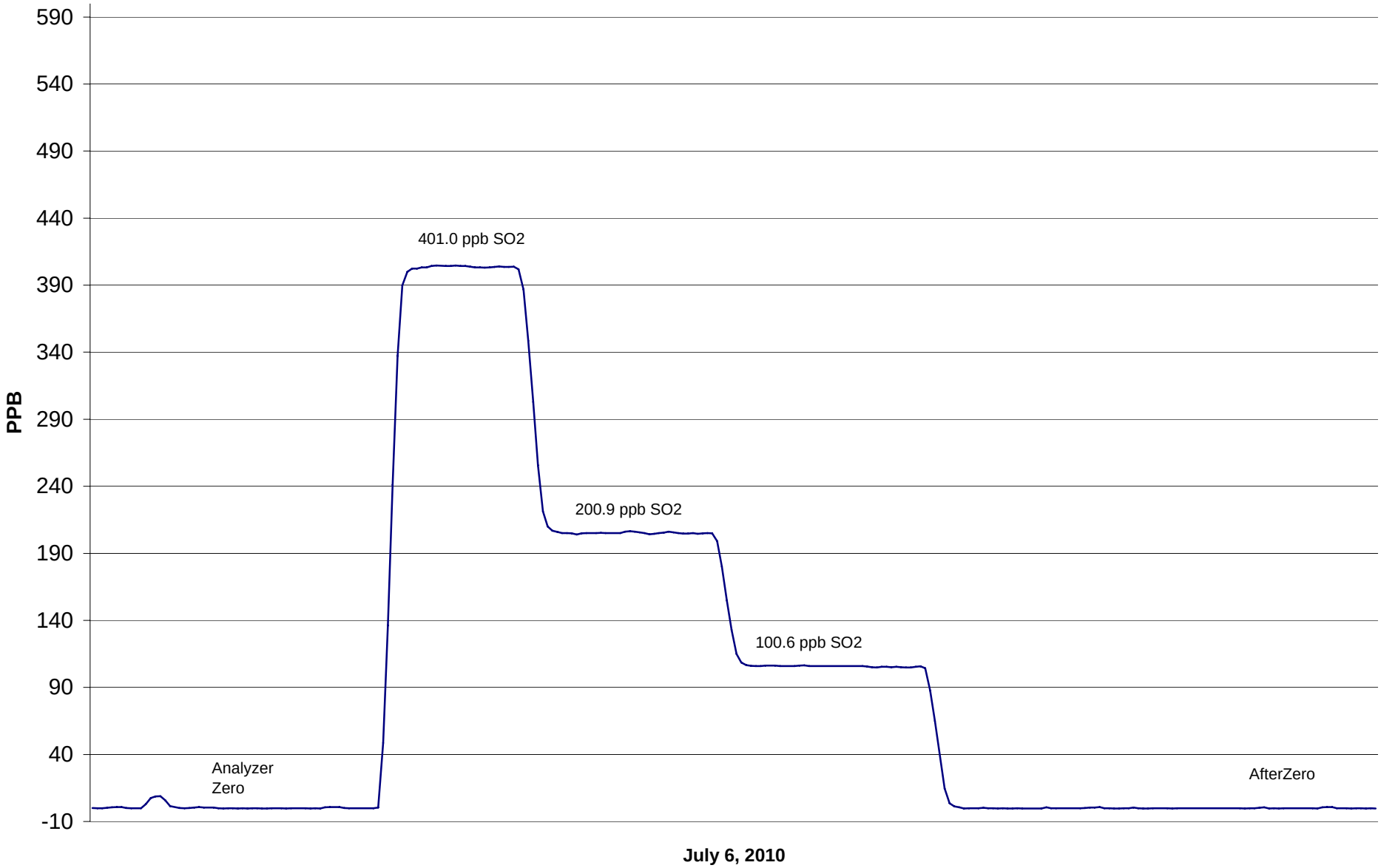
Calibration Date	July 6, 2010	Previous Calibration	May 24, 2010
Station Number	6	Station Location	Valleyview
Start Time (MST)	4:30	End Time (MST)	14:42
Analyzer make/model	[illegible]	Analyzer serial #	[illegible]

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
401.0	403.9	0.9930	Correlation Coefficient	0.999850
201.0	205.2	0.9794		
100.6	105.7	0.9525	Slope	0.995581
			Intercept	-2.218511



Vallyview SO_2 Calibration



Calibration Report

Parameter **SO2**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 8, 2010	Previous Calibration	May 24, 2010
Station Number	6	Station Location	Valleyview
Reason: Routine	Install	Removal	Other:
Start Time (MST)	8:11	End Time (MST)	11:01
Barometric Pressure	702.00 mm	Station Temperature	14.7 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	50.6 ppm	Cal Gas Cert Date	12/3/2009
Gas Cert Reference	AAL 56996		
DACS make	Focus AP1000	DACS serial No.	45274
DACS voltage range	0 - 10 volt	DACS channel #	4
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	N/A	Calculated slope	0.998736
Calculated intercept	N/A	Calculated intercept	-2.736664
Analyzer make	TEI 45C	Analyzer serial #	45C-57531-313

	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
Background	24.1		24.2	
Coefficient	0.875		0.862	
UV Lamp Voltage	926	LPM	923	LPM
Chamber Temp	44.1	V	44.2	V
Perm Gas Temp	34.9	C	34	C
Pressure	636.2	in Hg	681.7	in Hg
Sample Flow	0.478	LPM	0.470	LPM
Lamp Intensity	48448	Hz	48616	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	39.85	400.8	402.8	0.9950
4991	19.89	200.8	205.2	0.9790
4991	9.94	100.6	105.6	0.9521
				As found zero
				As found span
			Average Correction Factor	0.9754

Calculated value of As Found Response: NA

Percent Change of As Found: NA

	before calibration		after calibration	
Auto zero	N/A	ppm	0.0	ppm
Auto span	N/A	ppm	155.5	ppm

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PASZA**

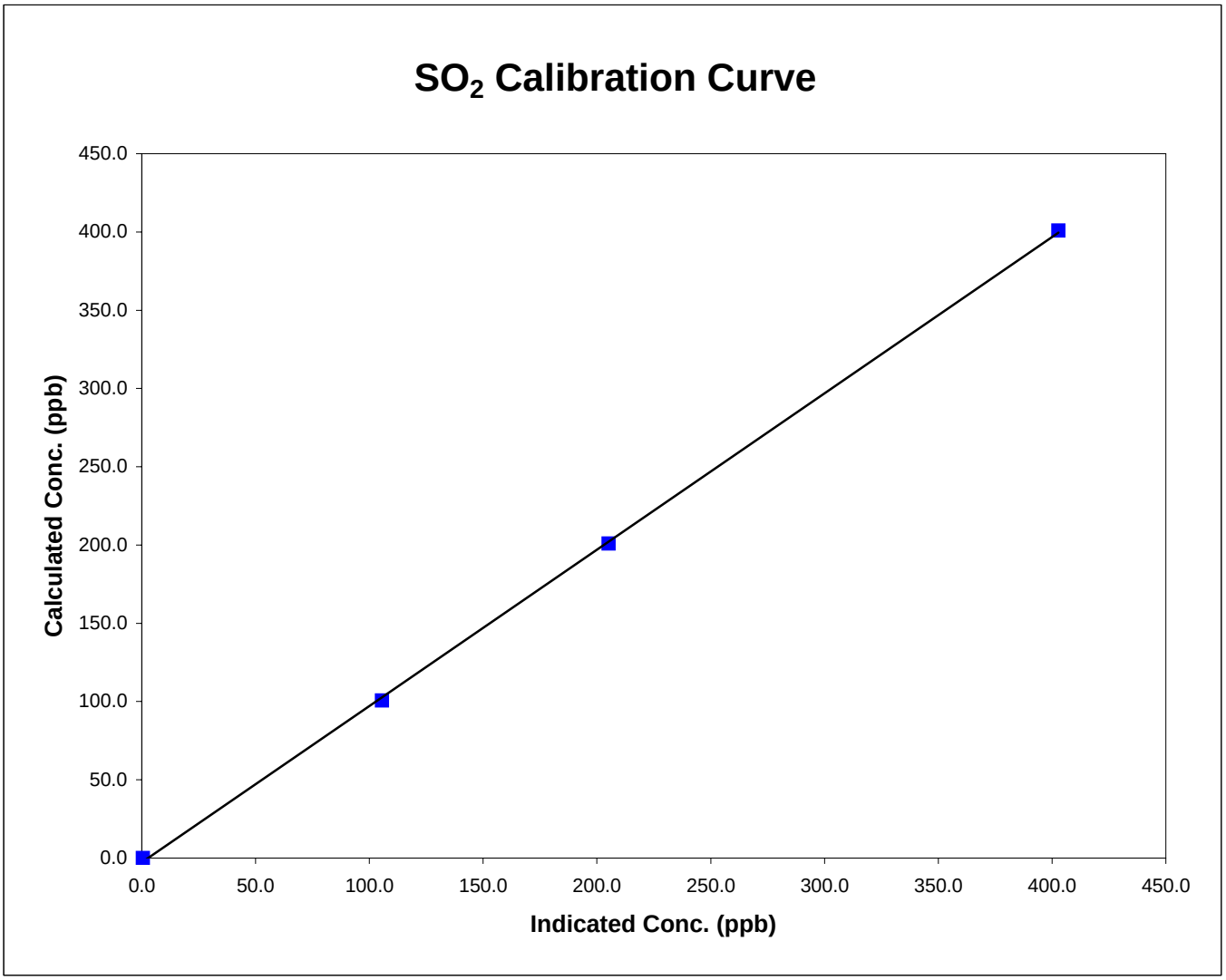
FOCUS AIR QUALITY MONITORING

Station Information

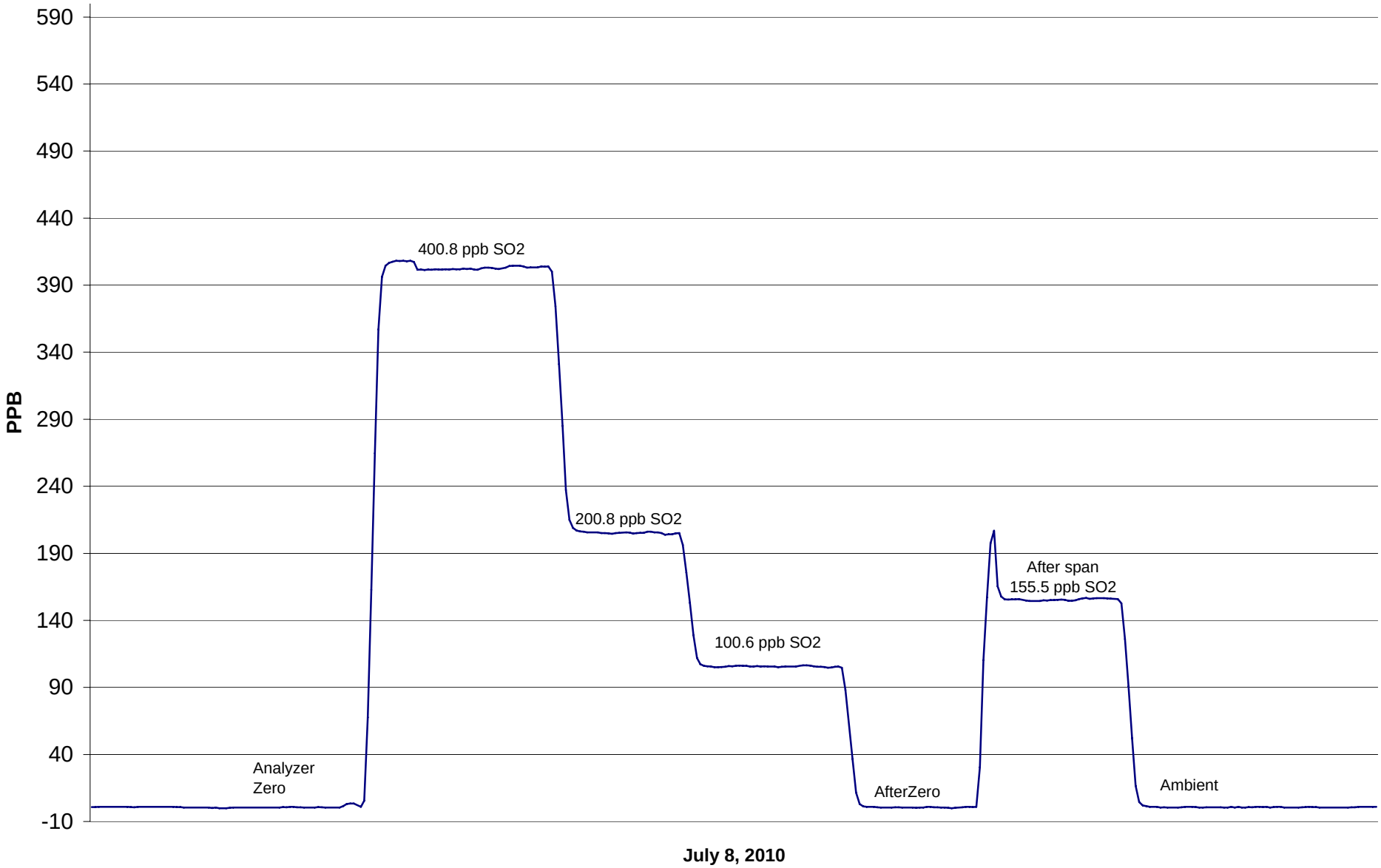
Calibration Date	July 8, 2010	Previous Calibration	May 24, 2010
Station Number	6	Station Location	Valleyview
Start Time (MST)	8:11	End Time (MST)	14:42
Analyzer make/model	TEI 45C	Analyzer serial #	45C-57531-313

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A		
400.8	402.8	0.9950	Correlation Coefficient	0.999849
200.8	205.2	0.9790		
100.6	105.6	0.9521	Slope	0.998736
			Intercept	-2.736664



Vallyview SO_2 Calibration



Calibration Report

Parameter **H2S**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 6, 2010	Previous Calibration	May 24, 2010
Station Number	5	Station Location	Valleyview

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

Start Time (MST)	16:30	End Time (MST)	19:12
Barometric Pressure	702.00 mm	Station Temperature	14.7 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	1.000385	Calculated slope	1.016152
Calculated intercept	-0.235862	Calculated intercept	-0.439195

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

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	4.7	ppb	4.8	ppb
Coefficient	1.056		1.056	
Lamp Voltage	787	V	789	V
Chamber Temp	45.0	c	45.5	c
Perm Oven Temp	45	c	45	c
Pressure	658	mm Hg	651	mm Hg
Sample Flow	.307	ccm	.323	ccm
Lamp Intensity	91.0	%	91.0	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.0	0.2	N/A
4988	79.75	81.0	80.0	1.0131
4988	39.83	40.8	40.9	0.9965
4988	9.93	10.2	10.6	0.9699
4988	0.00	0.0	0.2	As found zero
4988	79.75	81.0	80.0	As found span
			Average Correction Factor	0.9931

Calculated value of As Found Response: 79.58 ppm Percent Change of As Found: 1.8%

	before calibration		after calibration	
Auto zero	-0.1	ppm	0.0	ppm
Auto span	59.5	ppm	NA	ppm

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **H2S**

Air Monitoring Network **PASZA**

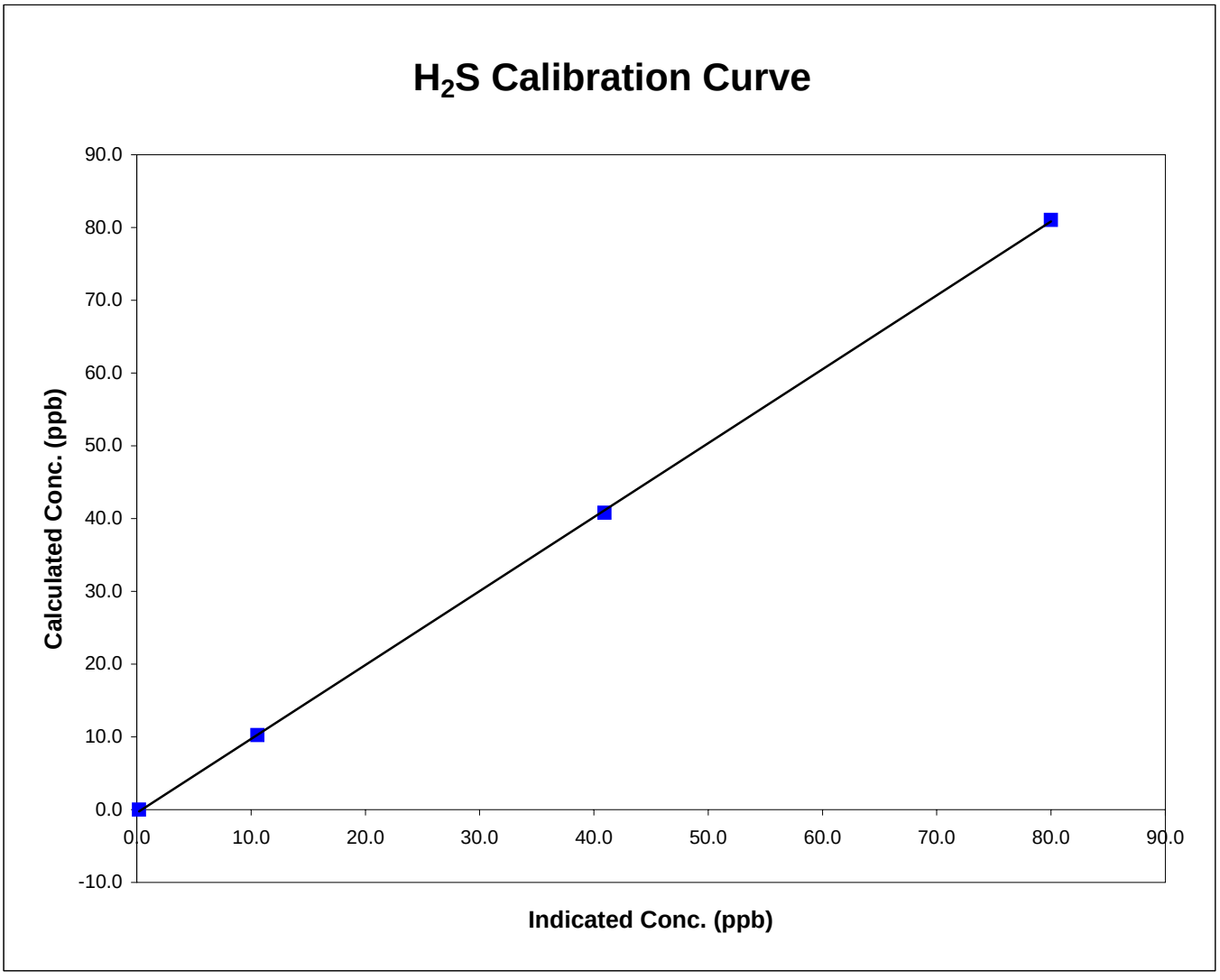
FOCUS AIR QUALITY MONITORING

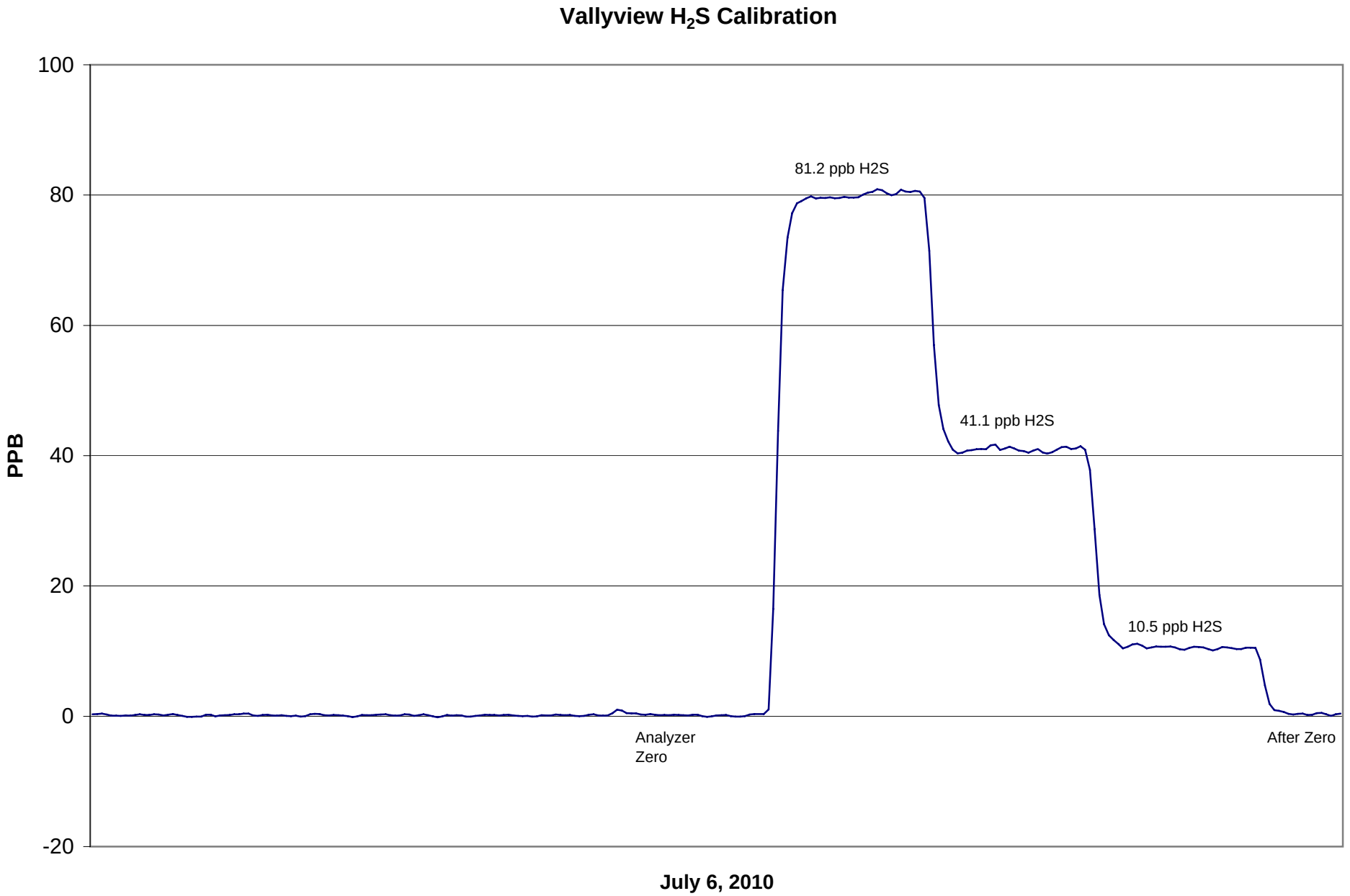
Station Information

Calibration Date	July 6, 2010	Previous Calibration	May 24, 2010
Station Number	5	Station Location	Valleyview
Start Time (MST)	16:30	End Time (MST)	19:12
Analyzer make/model	TEI Model 43i - APSCB	Analyzer serial #	701120010

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
81.0	80.0	1.0131	Correlation Coefficient	0.999944
40.8	40.9	0.9965		
10.2	10.6	0.9699	Slope	1.016152
			Intercept	-0.439195




Vallyview H2S Calibration
100
80
60
40
20
0
-20
PPB
81.2 ppb H2S
41.1 ppb H2S
10.5 ppb H2S
Analyzer
Zero
After Zero
July 6, 2010

Calibration Report

Parameter **H2S**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 8, 2010	Previous Calibration	May 24, 2010
Station Number	5	Station Location	Valleyview

Reason: Routine | Install | Removal | Other:

Start Time (MST)	9:30	End Time (MST)	12:53
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	N/A	Calculated slope	1.008581
Calculated intercept	N/A	Calculated intercept	-0.263147

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

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	4.7	ppb	4.7	ppb
Coefficient	1.056		1.056	
Lamp Voltage	784	V	783	V
Chamber Temp	45,0	c	45.0	c
Perm Oven Temp	45.01	c	45.01	c
Pressure	665	mm Hg	651	mm Hg
Sample Flow	.349	ccm	.339	ccm
Lamp Intensity	93.0	%	92.0	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.0	0.2	N/A
4988	79.75	81.0	80.6	1.0052
4988	39.83	40.8	40.7	1.0028
4988	9.93	10.2	10.5	0.9782
5988	9.92	83.7		SOX test
6000	10.00	8.6		As found zero
				As found span
			Average Correction Factor	0.9954

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

	before calibration		after calibration	
Auto zero	N/A	ppm	0.0	ppm
Auto span	N/A	ppm	70.6	ppm

Notes:

Calibration Performed By: Courtney Thompson

Calibration Summary

Parameter **H2S**

Air Monitoring Network **PASZA**

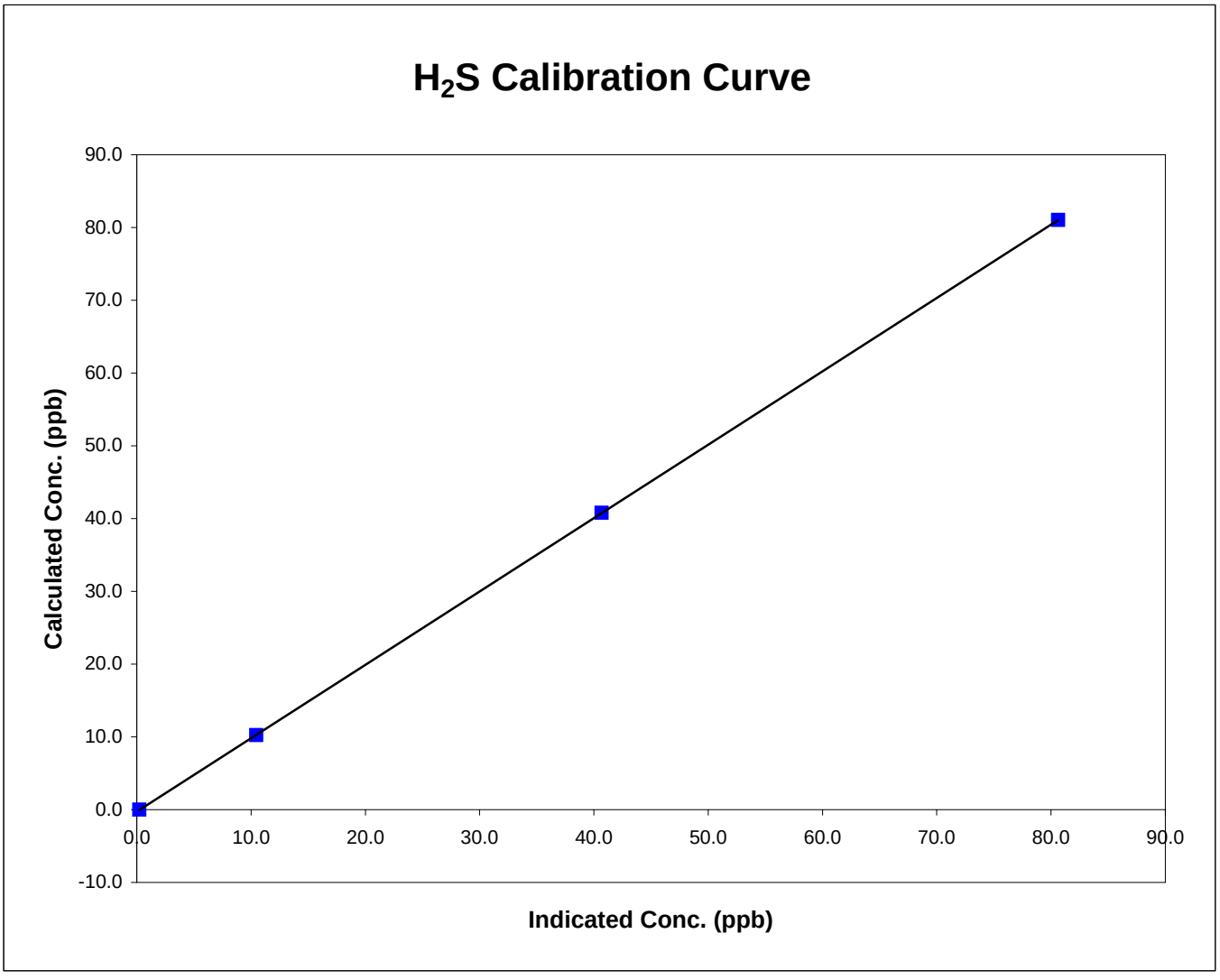
FOCUS AIR QUALITY MONITORING

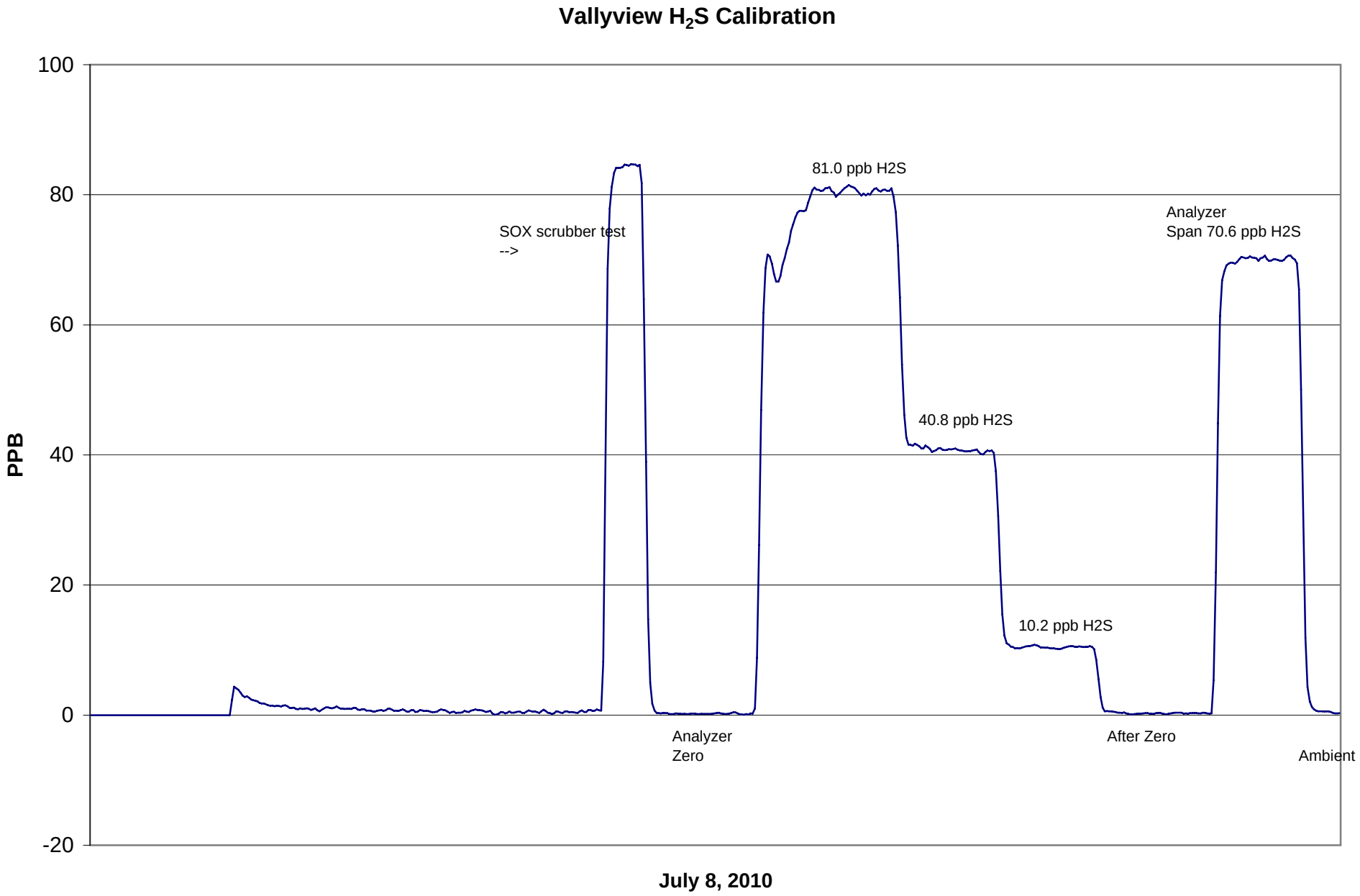
Station Information

Calibration Date	July 8, 2010	Previous Calibration	May 24, 2010
Station Number	5	Station Location	Valleyview
Start Time (MST)	9:30	End Time (MST)	12:53
Analyzer make/model	TEI Model 43i - APSCB	Analyzer serial #	701120010

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
81.0	80.6	1.0052	Correlation Coefficient	0.999999
40.8	40.7	1.0028		
10.2	10.5	0.9782	Slope	1.008581
			Intercept	-0.263147




Vallyview H2S Calibration
100
80
60
40
20
0
-20
PPB
SOX scrubber test
-->
81.0 ppb H2S
40.8 ppb H2S
10.2 ppb H2S
Analyzer
Span 70.6 ppb H2S
Analyzer
Zero
After Zero
Ambient
July 8, 2010