Peace AirShed Zone Association

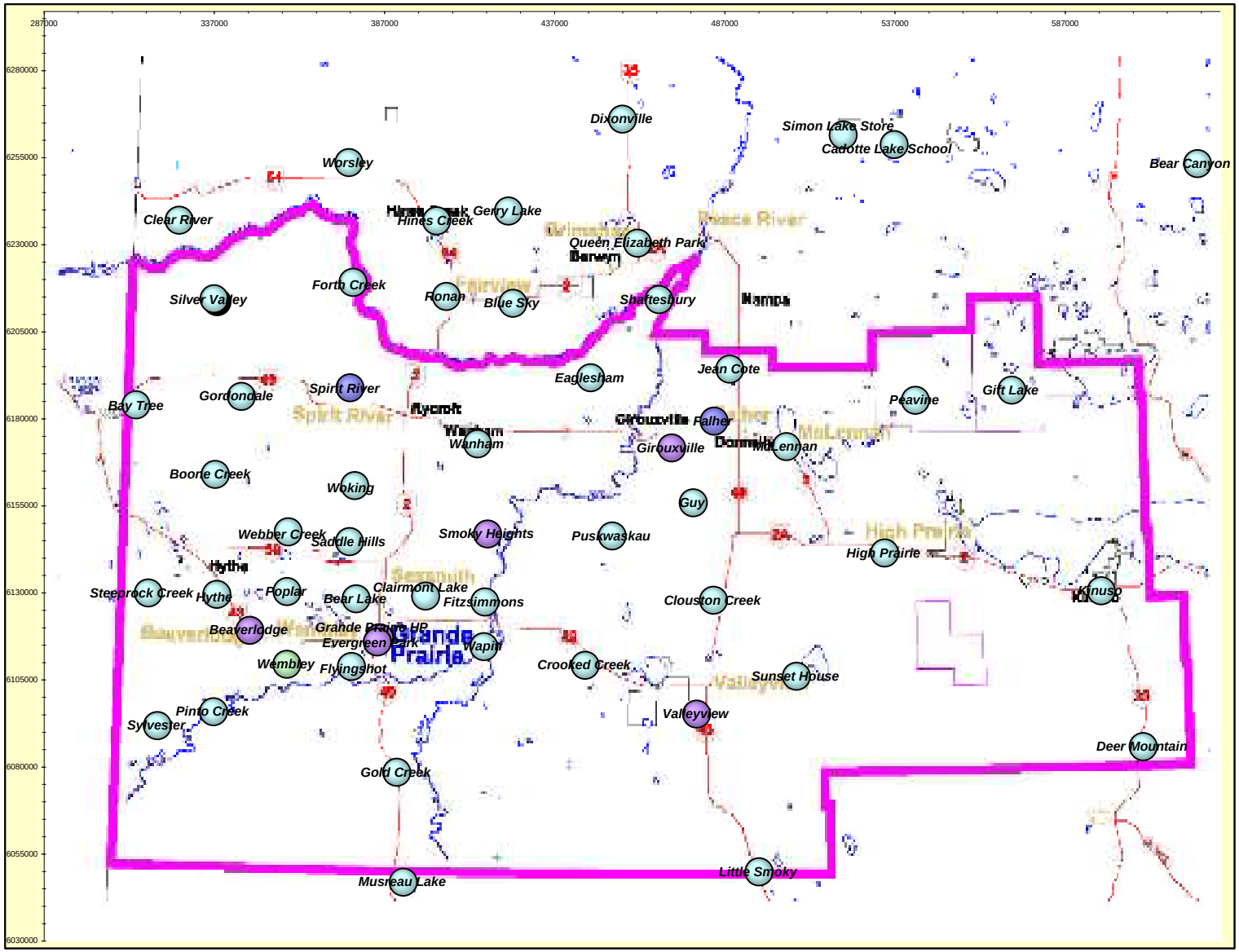
Ambient Air Monitoring Network Summary

Continuous Ambient Air Quality Monitoring Program
Monthly Report
July 2008

Operations and Reporting

FOCUS
AIR QUALITY MONITORING

Location of PASZA Continuous and Passive Monitoring Stations



PASZA
Peace AirShed Zone Association

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September 2, 2008

Alberta Environment
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Edmonton Alberta T6B 2X3

RE: Peace Airshed Zone Association (PASZA) – July 2008 Ambient Air Report

Enclosed is the PASZA Ambient Monitoring Network Report for the month of **July 2008**.

Continuous Monitoring: **Six (6) Stations including Henry Pirker (Grande Prairie), Evergreen Park, Smoky Heights, Beaverlodge, Spirit River (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.

The measured ambient air quality was within the Provincial and Federal objectives for the Henry Pirker, Evergreen Park, Smoky Heights, Beaverlodge, Spirit River and Valleyview stations.

During the month of July the following events were noted:

Henry Pirker Station:

- All analyzers / sensors at the Henry Pirker station had an operational uptime greater than 90%.

Evergreen Park Station:

- All analyzers / sensors at the Evergreen Park station had an operational uptime greater than 90%.
- The power bar failed at the station resulting in both the TRS and TEOM pumps to fail:
  - the TRS data was flagged invalid from July 1st to 2nd (thirty-two hours).
  - the TEOM data was flagged invalid from July 1st to 3rd (thirty-three hours).

Smoky Heights Station:

- All analyzers / sensors at the Smoky Heights station had an operational uptime greater than 90%.
- A power bump on July 17th resulted in one (1) hour of invalid data for the TEOM.

Beaverlodge Station:

- All analyzers / sensors at the Beaverlodge station had an operational uptime greater than 90%.
- A power bumps on July 5th, 6th and 15th resulted in several hours of invalid data for all parameters.

Portable – Spirit River Station:

- All analyzers / sensors at the Spirit River station had an operational uptime greater than 90%.
- Power bumps July 2nd, 3rd and 25th resulted in several hours of invalid data for all parameters.

Valleyview Station:

- All analyzers / sensors at the Valleyview station had an operational uptime of 100%.
- The H_2S analyzer had one (1) hour of invalid data due to baseline drift – reason unknown.

Passive Monitoring - 54 Stations throughout the PASZA zone:

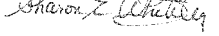
There were seven duplicate sites sampled in the month of July: Boone Creek, Steeprock Creek, Hythe, Shaftesbury, Eaglesham, Clear River and Grande Prairie HP. The SO_2 and NO_2 samples at the Deer Mountain site were found damaged – there are no results for the samples. The passive sample analyses were performed by MAXXAM Analytics Inc.

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

- Monthly average concentrations for SO_2 passives ranged from 0.1 ppb to 0.644 ppb, with a mean of 0.3 ppb.
- Monthly average concentrations for NO_2 passives ranged from 0.3 ppb to 2.4 ppb, with a mean of 1.0 ppb.
- Monthly average concentrations for O_3 passives ranged from 15.0 ppb to 28.5 ppb, with a mean of 22.3 ppb.

If you have any questions, please contact the Focus Intec office at 1.403.255.9440 (Kelly Baragar or Sharon Whiteley).

On Behalf of the,
Peace Airshed Zone Association



Michael Bisaga
PASZA Program Manager

Sharon Whiteley, B.Sc..
AQM Data Specialist

PASZA Monthly Continuous Data Summary

Jul-2008	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	3.0	Jul-12 10:00	0.6	Jul-02	100.0%
SO_2 (ppb)	172	57	Evergreen Park	0.5	0	0	9.0	Jul-30 13:00	2.0	Jul-07	100.0%
SO_2 (ppb)	172	57	Smoky Heights	0.4	0	0	7.0	Jul-28 03:00	1.5	Jul-11	100.0%
SO_2 (ppb)	172	57	Beaverlodge	0.3	0	0	3.0	Jul-28 10:00	0.8	Jul-02	99.1%
SO_2 (ppb)	172	57	Portable-Spirit River	0.3	0	0	5.0	Jul-23 01:00	0.7	Jul-23	99.1%
SO_2 (ppb)	172	57	Valleyview	0.8	0	0	13.0	Jul-13 02:00	2.5	Jul-30	100.0%
NO (ppb)			Henry Pirker	0.8	-	-	29.0	Jul-15 08:00	3.4	Jul-15	100.0%
NO_2 (ppb)	212	106	Henry Pirker	4.7	0	0	20.0	Jul-24 22:00	10.0	Jul-03	100.0%
NO_X (ppb)			Henry Pirker	5.6	-	-	43.0	Jul-15 08:00	11.9	Jul-03	100.0%
NO (ppb)			Beaverlodge	0.2	-	-	8.0	Jul-25 08:00	0.7	Jul-25	99.1%
NO_2 (ppb)	212	106	Beaverlodge	2.1	0	0	13.0	Jul-25 08:00	3.8	Jul-26	99.1%
NO_X (ppb)			Beaverlodge	2.4	-	-	21.0	Jul-25 08:00	4.4	Jul-03	99.1%
NO (ppb)			Portable-Spirit River	0.5	-	-	8.0	Jul-16 06:00	2.2	Jul-15	99.1%
NO_2 (ppb)	212	106	Portable-Spirit River	2.5	0	0	12.0	Jul-15 23:00	5.4	Jul-17	99.1%
NO_X (ppb)			Portable-Spirit River	2.9	-	-	19.0	Jul-15 23:00	96.6	Jul-17	99.1%
O_3 (ppb)	82		Henry Pirker	27.5	0	-	59.0	Jul-03 13:00	37.7	Jul-04	100.0%
O_3 (ppb) - 8-hr	65		Henry Pirker		0				53.3	Jul-03	
O_3 (ppb)	82		Beaverlodge	26.4	0	-	51.0	Jul-25 18:00	36.1	Jul-04	99.2%
O_3 (ppb) - 8-hr	65		Beaverlodge		0				46.1	Jul-03	
O_3 (ppb)	82		Portable-Spirit River	24.0	0	-	54.0	Jul-03 13:00	36.5	Jul-03	99.1%
O_3 (ppb) - 8-hr	65		Portable-Spirit River		0				50.7	Jul-03	
CO (ppm)	13		Henry Pirker	0.08	0	-	0.3	Jul-02 11:00	0.2	Jul-03	100.0%
CO (ppm) - 8-hr	5		Henry Pirker		0				0.3	Jul-01	
THC (ppm)			Henry Pirker	1.89	-	-	2.5	Jul-03 03:00	2.1	Jul-25	100.0%
TRS (ppb)			Henry Pirker	0.3	-	-	1.0	Jul-12 10:00	0.5	Jul-03	100.0%
TRS (ppb)			Evergreen Park	0.5	-	-	2.0	Jul-12 14:00	0.8	Jul-07	95.7%
TRS (ppb)			Smoky Heights	0.5	-	-	3.0	Jul-29 23:00	0.8	Jul-29	100.0%
TRS (ppb)			Portable-Spirit River	0.5	-	-	1.0	Jul-15 05:00	0.7	Jul-15	99.1%
H_2S (ppb)	10	3	Valleyview	0.1	0	0	2.0	Jul-04 17:00	0.3	Jul-01	99.9%
$PM_{2.5}$ ($\mu g/m^3$)	80	30	Henry Pirker	3.4	0	0	22.0	Jul-24 01:00	9.4	Jul-03	99.1%
$PM_{2.5}$ ($\mu g/m^3$)	80	30	Evergreen Park	5.4	0	0	42.0	Jul-12 11:00	11.9	Jul-03	94.8%
$PM_{2.5}$ ($\mu g/m^3$)	80	30	Smoky Heights	3.7	0	0	41.0	Jul-23 22:00	10.5	Jul-03	99.9%
$PM_{2.5}$ ($\mu g/m^3$)	80	30	Beaverlodge	3.0	0	0	20.0	Jul-03 19:00	7.2	Jul-26	90.2%

PASZA Monthly Continuous Data Summary - continued

Jul-2008	Peace Airshed Zone Assocation						Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
RH (%)			Henry Pirker	54.4	-	-	-	-	-	-	100.0%
RH (%)			Beaverlodge	50.4	-	-	-	-	-	-	99.2%
RH (%)			Portable-Spirit River	53.2	-	-	-	-	-	-	99.1%
RH (%)			Valleyview	62.3	-	-	-	-	-	-	100.0%
SR (W/m^2)			Henry Pirker	233.0	-	-	-	-	-	-	100.0%
Temp (°C)			Henry Pirker	17.6	-	-	-	-	-	-	100.0%
Temp (°C)			Evergreen Park	17.0	-	-	-	-	-	-	100.0%
Temp (°C)			Smoky Heights	16.7	-	-	-	-	-	-	100.0%
Temp (°C)			Beaverlodge	17.1	-	-	-	-	-	-	99.2%
Temp (°C)			Portable-Spirit River	17.6	-	-	-	-	-	-	99.5%
Temp (°C)			Valleyview	16.2	-	-	-	-	-	-	100.0%
WSPD v (km/hr)			Henry Pirker	10.3	-	-	35.0	Jul-30 16:00	20.1	Jul-07	100.0%
WSPD v (km/hr)			Evergreen Park	6.8	-	-	31.0	Jul-30 12:00	18.0	Jul-07	100.0%
WSPD v (km/hr)			Smoky Heights	10.0	-	-	40.0	Jul-09 12:00	23.5	Jul-09	100.0%
WSPD v (km/hr)			Beaverlodge	6.9	-	-	35.0	Jul-30 15:00	18.1	Jul-09	99.2%
WSPD v (km/hr)			Portable-Spirit River	4.3	-	-	20.0	Jul-12 16:00	12.4	Jul-09	99.5%
WSPD v (km/hr)			Valleyview	3.2	-	-	22.0	Jul-04 17:00	9.8	Jul-30	100.0%
WDIR (deg)			Henry Pirker	248.0	-	-	-	-	-	-	100.0%
WDIR (deg)			Evergreen Park	265.2	-	-	-	-	-	-	100.0%
WDIR (deg)			Smoky Heights	265.3	-	-	-	-	-	-	100.0%
WDIR (deg)			Beaverlodge	274.7	-	-	-	-	-	-	99.2%
WDIR (deg)			Portable-Spirit River	254.0	-	-	-	-	-	-	99.5%
WDIR (deg)			Valleyview	283.6	-	-	-	-	-	-	100.0%

Continuous Network Equipment Summary

PASZA – Henry Pirker Station

General Station Issues

Routine monthly calibrations were performed on July 9th (SO_2, NO_X & O_3) and July 10th (CO, TRS & 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	43C	No operational issues observed.
$PM_{2.5}$	R&P	1400AB	Seven (7) hour were flagged due to excessive baseline drift.
RH	Met One	083D	No operational issues observed.
AT	Met One	083D	No operational issues observed.
SR	Met One	096-1	No operational issues observed.
WS/WD	Met One	010C/020C	No operational issues observed.

PASZA – Evergreen Park Station

General Station Issues

Routine monthly calibrations were performed on July 22nd (SO_2, TRS).

Parameter	Make	Model	Notes
SO_2	TEI	43i	No operational issues observed.
TRS	TEI	43C	The power bar failed at the station resulting in the TRS pump to fail – data was flagged invalid from July 1st to 2nd (32 hours).
$PM_{2.5}$	R&P	1400AB	The power bar failed at the station resulting in the TEOM pump to fail – data was flagged invalid from July 1st to 2nd (33 hours). One (1) hour were flagged for maintenance.
AT	Met One	083D	No operational issues observed.
WS	Met One	010C	No operational issues observed.
WD	Met One	020C	No operational issues observed.

PASZA – Smoky Heights Station

General Station Issues

Routine monthly calibrations were performed on July 16th (SO_2, TRS & $PM_{2.5}$).

Parameter	Make	Model	Notes
SO_2	TEI	43C	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
$PM_{2.5}$	R&P	1400AB	A power bump resulted in one (1) hour of invalid data on July 17th.
AT	Met One	083D	No operational issues observed.
WS	Met One	010C	No operational issues observed.
WD	Met One	020C	No operational issues observed.

PASZA – Beaverlodge Station

General Station Issues

Routine monthly calibrations were performed on July 17th (SO_2 & NO_X) and July 18th (O_3). A number of power failures occurred during the month (July 5th, 6th & 15th) resulting in several hours of invalid data for all parameters.

Parameter	Make	Model	Notes
SO_2	TEI	43CTL	No operational issues observed – other than above noted power failures.
NOx/NO/NO_2	TEI	42C	No operational issues observed – other than above noted power failures.
O_3	TEI	49C	No operational issues observed – other than above noted power failures.
$PM_{2.5}$	R&P	1400AB	Due to an improperly seated filter and tech error in recognizing the TEOM failure – fifty-seven (57) hours were flagged invalid. Several hours were flagged invalid due to above noted power failures. Eight (8) hours were flagged invalid due to excessive baseline drift.
AT	n/a	n/a	No operational issues observed – other than above noted power failures.
RH	n/a	n/a	No operational issues observed – other than above noted power failures.
WS	Blue Sky	857	No operational issues observed – other than above noted power failures.
WD	Blue Sky	857	No operational issues observed – other than above noted power failures.

PASZA – Spirit River (Portable) Station

General Station Issues

Routine monthly calibrations were performed on July 4th (SO_2 & NO_X and) and July 7th (O_3 & TRS). Power failures on July 2nd, 3rd & 25th resulted in several hours of invalid data for all parameters.

Parameter	Make	Model	Notes
SO_2	TEI	43C	No operational issues observed – other than above noted power failures.
NOx/NO/NO_2	TEI	42i	No operational issues observed – other than above noted power failures.
TRS	TEI	43C	No operational issues observed – other than above noted power failures.
O_3	TEI	49C	No operational issues observed – other than above noted power failures.
AT	Gill	Met Pak 3	No operational issues observed – other than above noted power failures.
RH	Gill	Met Pak 3	No operational issues observed – other than above noted power failures.
WS	Met One		No operational issues observed – other than above noted power failures.
WD	Met One		No operational issues observed – other than above noted power failures.

PASZA – Valleyview Station

General Station Issues

Routine monthly calibrations were performed on July 11th (SO_2 and H_2S).

Parameter	Make	Model	Notes
SO_2	TEI	43i	No operational issues observed.
H_2S	TEI	43A	One (1) hour of data was flagged invalid due to baseline drift – reason unknown.
AT	Gill	Met Pak 3	No operational issues observed.
RH	Gill	Met Pak 3	No operational issues observed.
WS	Gill	Met Pak 3	No operational issues observed.
WD	Gill	Met Pak 3	No operational issues observed.

PASZA
Henry Pirker Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association
Summary of Hourly Averages

Henry Pirker - Sulphur Dioxide (SO_2) - ppb
July 1, 2008 to August 1, 2008

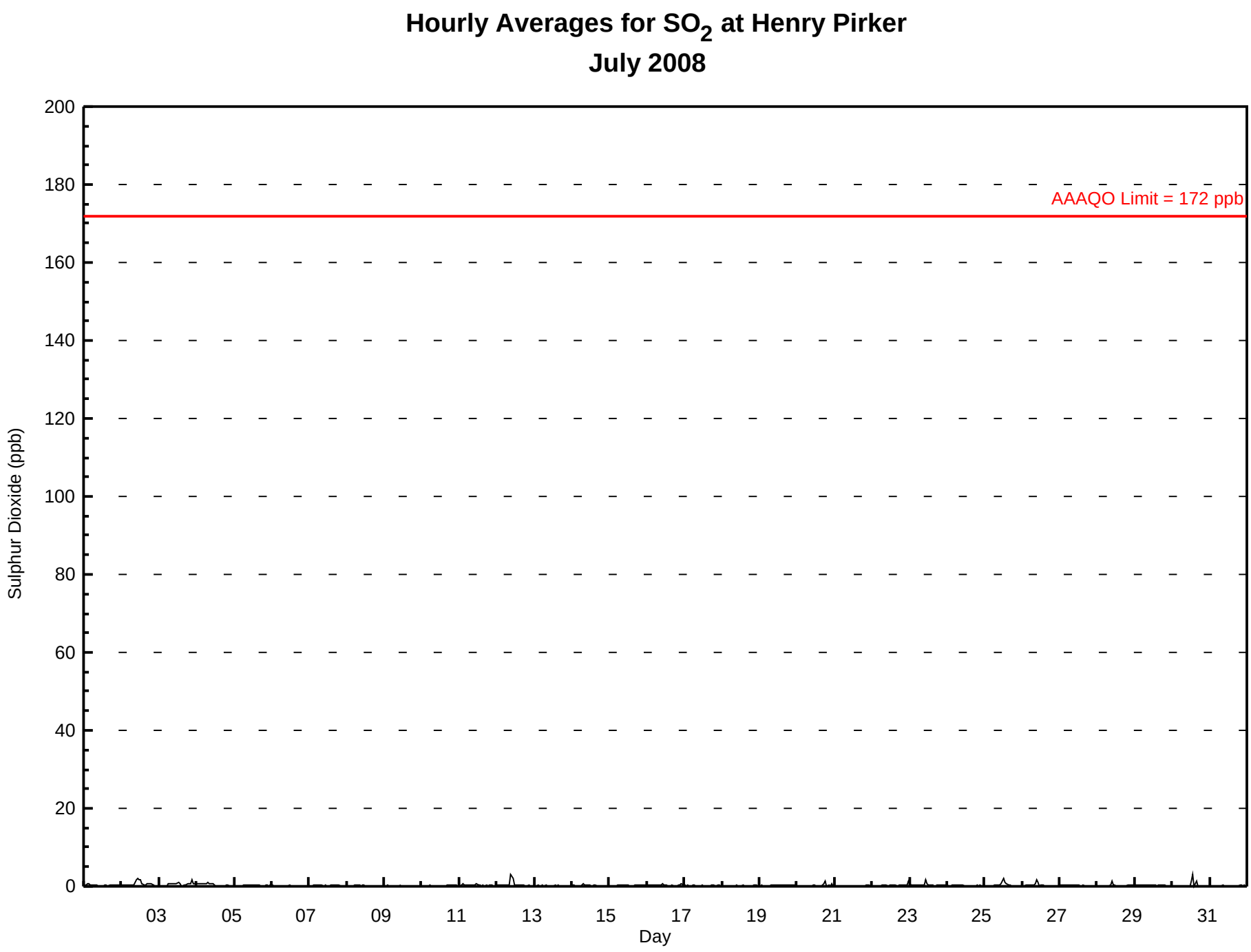
Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3 ppb on Jul 12 10:00 Maximum Daily Average: 0.6 ppb on Jul 2

Minimum Value: 0 ppb on Jul 3 04:00 Minimum Daily Average: 0.0 ppb on Jul 6
Maximum Diurnal Average: 0.5 ppb at hour 10 Minimum Diurnal Average: 0.1 ppb at hour 15
Monthly Average: 0.24 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.1$ Median = 0.2 $Q_3 = 0.3$ $P_{90} = 0.4$ $P_{99} = 1.7$

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.6
2-Jul	0	0	0	0	0	0	0	0	0	2	2	2	2	1	0	A	1	1	1	1	0	0	0	0	0.6	2.1
3-Jul	0	0	0	0	0	0	1	1	1	1	1	1	1	1	A	0	0	0	1	1	1	2	1	1	0.5	1.5
4-Jul	1	1	1	1	1	1	1	1	1	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0.4	0.8
5-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	0.2	0.4
6-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	0.0	0.2
7-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	0.2	0.4
8-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
9-Jul	0	0	0	0	0	0	0	0	A	0	C	C	C	A	0	0	0	0	0	0	0	0	0	0	0.0	0.2
10-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	0.3
11-Jul	0	0	1	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
12-Jul	0	0	0	0	A	0	0	0	0	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	3.1
13-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	0.4
14-Jul	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
15-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	0.5
16-Jul	A	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	A	0.3	0.8
17-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
18-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
19-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	0.3	0.5
20-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	A	0	0	1	0	0.2	1.4
21-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	0.4
22-Jul	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	1.4
23-Jul	1	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	A	0	0	0	0	0	0	0	0.5	1.7
24-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	0.2	0.5
25-Jul	0	0	0	0	0	0	0	0	0	0	1	1	2	1	A	0	0	0	0	0	0	0	0	0	0.3	1.9
26-Jul	0	0	0	0	0	0	0	0	1	2	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0.3	1.8
27-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	0.2	0.3
28-Jul	0	0	0	0	0	0	0	0	0	2	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.5
29-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	0.2	0.4
30-Jul	0	0	0	0	0	0	0	0	0	A	0	0	1	3	0	1	0	0	0	0	0	0	0	0	0.3	3.0
31-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	0.1	0.3
	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.5	0.5	0.4	0.4	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Diurnal Average	
	0.8	0.6	0.7	0.8	0.7	0.6	0.7	0.8	0.8	3.1	2.1	1.7	1.9	3.0	0.4	1.4	0.6	0.8	1.4	0.7	0.5	1.5	0.8	1.4	Diurnal Maximum	

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


Hourly Averages for SO_2 at Henry Pirker
July 2008
AAAQO Limit = 172 ppb
Sulphur Dioxide (ppb)
200
180
160
140
120
100
80
60
40
20
0
03
05
07
09
11
13
15
17
19
21
23
25
27
29
31
Day

Peace Airshed Zone Association
Summary of Hourly Maximums

Henry Pirker - Sulphur Dioxide (SO_2) - ppb
July 1, 2008 to August 1, 2008

Maximum Value: 6 ppb on Jul 30 14:00

Maximum Daily Average: 1.0 ppb on Jul 30

Minimum Value: 0 ppb on Jul 25 20:00

Maximum Diurnal Average: 0.9 ppb at hour 10

Monthly Average: 0.58 ppb

Minimum Daily Average: 0.3 ppb on Jul 18

Minimum Diurnal Average: 0.4 ppb at hour 6

Percentiles: $P_1 = 0.1$ $P_{10} = 0.3$ $Q_1 = 0.4$ Median = 0.4 $Q_3 = 0.5$ $P_{90} = 0.9$ $P_{99} = 3.8$

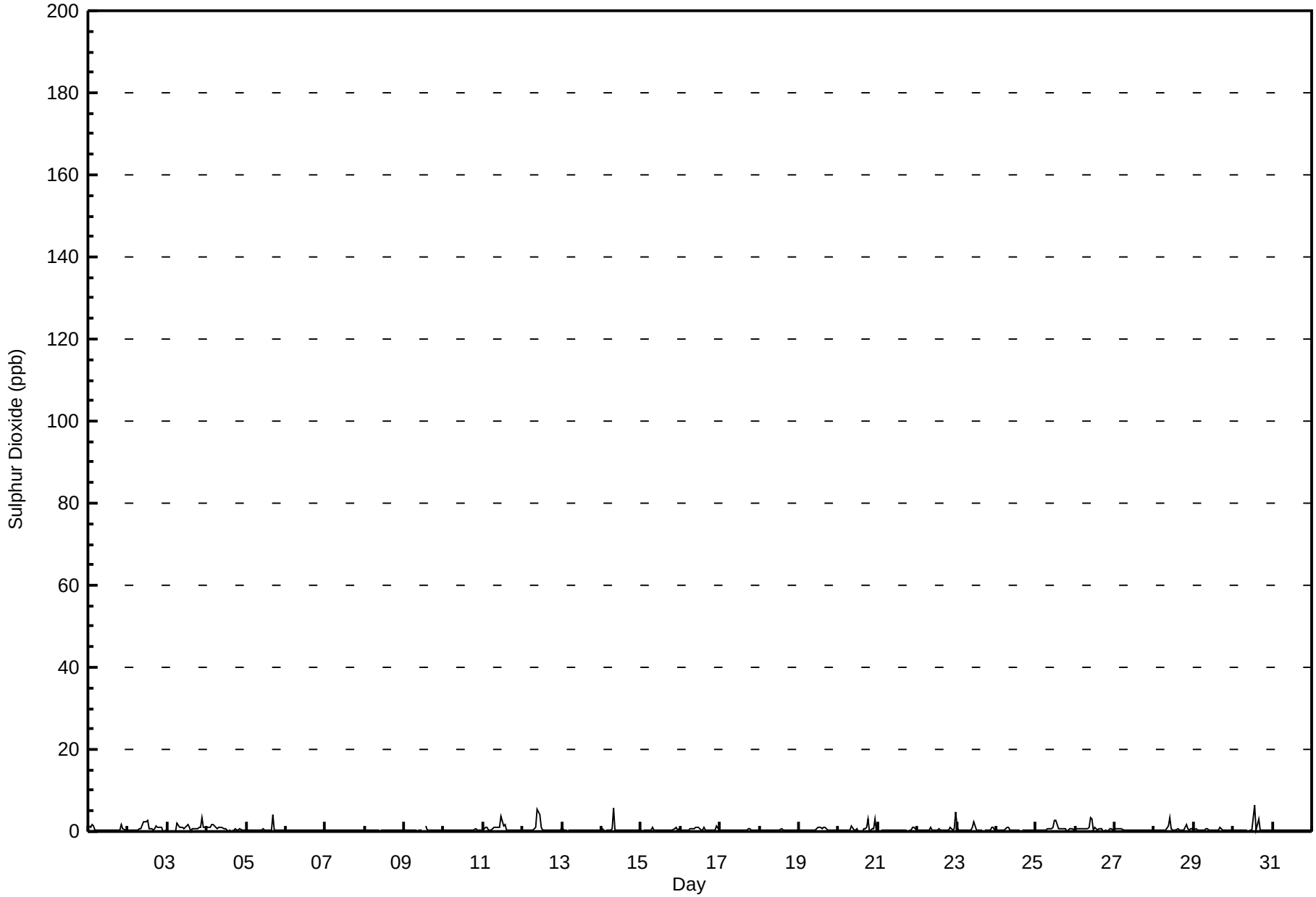
Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

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	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	2	1	0	0	0.6	1.9
2-Jul	0	0	0	0	0	0	0	1	1	2	2	2	3	1	1	A	1	1	1	1	1	0	0	0	0.9	2.7
3-Jul	0	0	0	0	0	0	2	1	1	1	1	1	2	1	A	1	1	1	1	1	1	4	1	1	0.9	3.5
4-Jul	1	1	1	2	2	1	1	1	1	1	1	1	0	A	0	0	0	1	0	0	1	0	0	0	0.7	1.6
5-Jul	0	0	0	0	0	0	0	0	0	0	1	0	A	0	0	0	4	0	0	0	0	0	0	0	0.6	4.0
6-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	0.5	0.5
7-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	0.5	0.5
8-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	0.3	0.4
9-Jul	0	0	0	0	0	0	0	0	A	0	C	C	C	A	0	0	0	0	0	0	0	0	0	0	0.4	0.4
10-Jul	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.4	0.5
11-Jul	0	1	1	0	0	A	1	1	1	1	1	4	1	2	0	0	0	0	0	0	0	0	0	0	0.8	3.9
12-Jul	0	0	0	0	A	0	0	1	1	5	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0.9	5.4
13-Jul	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.5
14-Jul	1	0	A	0	0	0	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	5.8
15-Jul	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0.5	1.0
16-Jul	A	0	0	0	0	0	1	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	1	A	0.6	1.3
17-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	A	0	0.4	0.8
18-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0.3	0.6
19-Jul	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	A	0	0	0	0.5	0.9
20-Jul	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	1	1	3	A	1	1	3	0	0.7	3.2
21-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	1	0	0.4	1.0
22-Jul	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	A	0	0	1	0	1	5	0.7	4.8
23-Jul	1	0	0	0	0	0	0	0	0	1	2	1	0	0	0	0	A	0	0	0	0	1	1	0	0.7	2.4
24-Jul	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.4	0.9
25-Jul	0	0	0	0	0	0	0	1	1	1	1	3	3	2	A	1	1	1	1	0	1	1	1	1	0.7	2.8
26-Jul	1	1	1	1	1	1	1	1	1	3	3	1	1	A	1	1	1	0	0	0	0	1	1	0	0.8	3.5
27-Jul	1	1	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7
28-Jul	0	0	0	0	0	0	0	0	1	3	1	A	0	0	1	0	0	0	0	2	1	0	1	1	0.6	3.3
29-Jul	0	1	0	0	0	0	0	1	1	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0.4	0.9
30-Jul	0	0	0	0	0	0	0	0	0	A	0	0	3	6	0	3	0	0	0	0	0	0	0	0	1.0	6.5
31-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	0.5	0.5
	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.7	0.6	0.9	0.8	0.8	0.8	0.8	0.4	0.5	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.6	Diurnal Average	
	1.5	1.1	1.9	1.6	1.6	1.1	2.1	5.8	1.3	5.4	3.9	3.9	3.5	6.5	0.9	3.1	4.0	1.2	3.2	1.8	1.8	3.5	3.1	4.8	Diurnal Maximum	

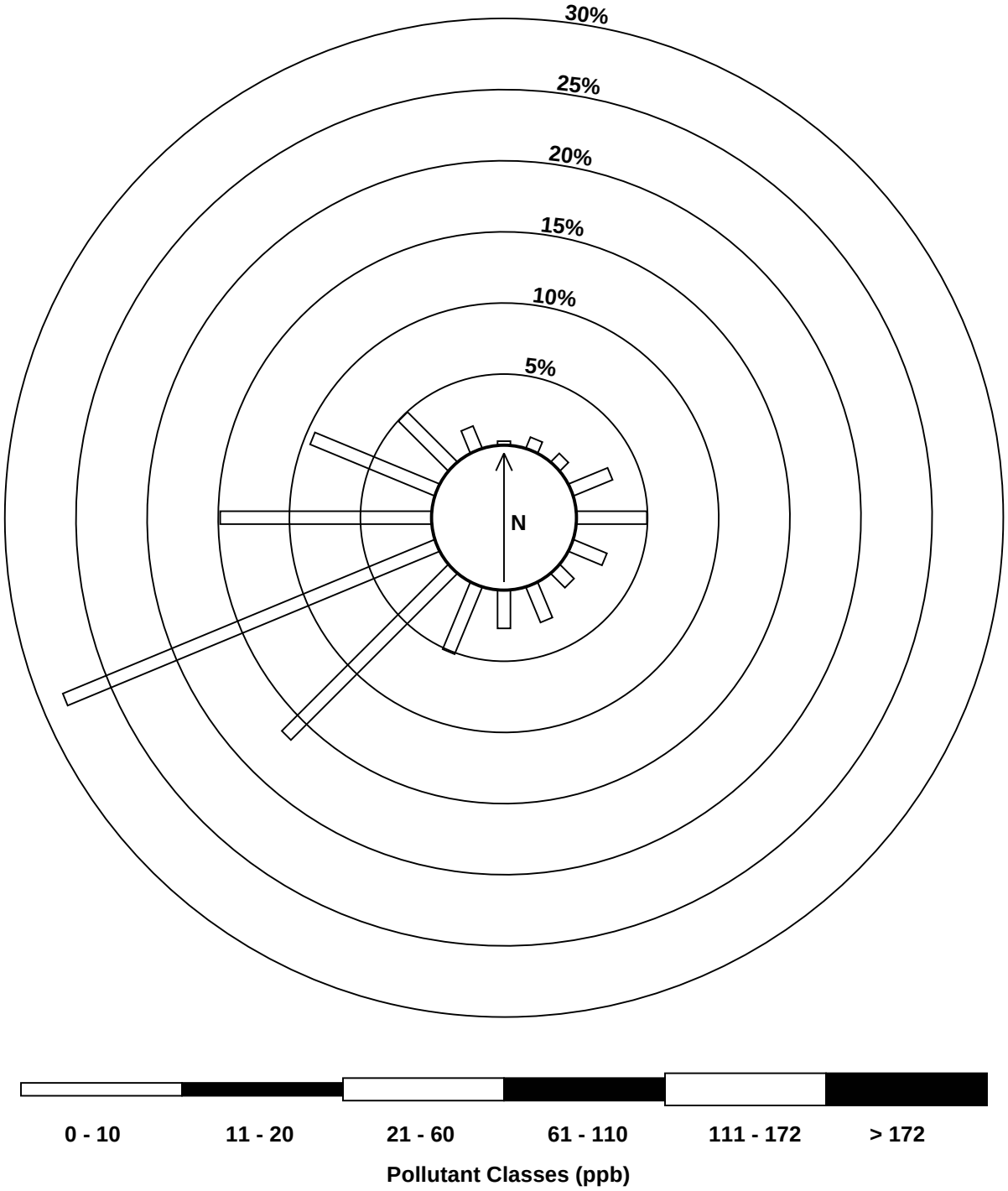
C - Calibration

A - Automated Daily Zero Span

Hourly Maximums for SO_2 at Henry Pirker
July 2008



Pollutant Rose for SO_2 at Henry Pirker
July 2008



Peace Airshed Zone Association
Summary of Hourly Averages

Henry Pirker - Total Reduced Sulphur (TRS) - ppb
July 1, 2008 to August 1, 2008

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1 ppb on Jul 3 07:00 Maximum Daily Average: 0.5 ppb on Jul 3

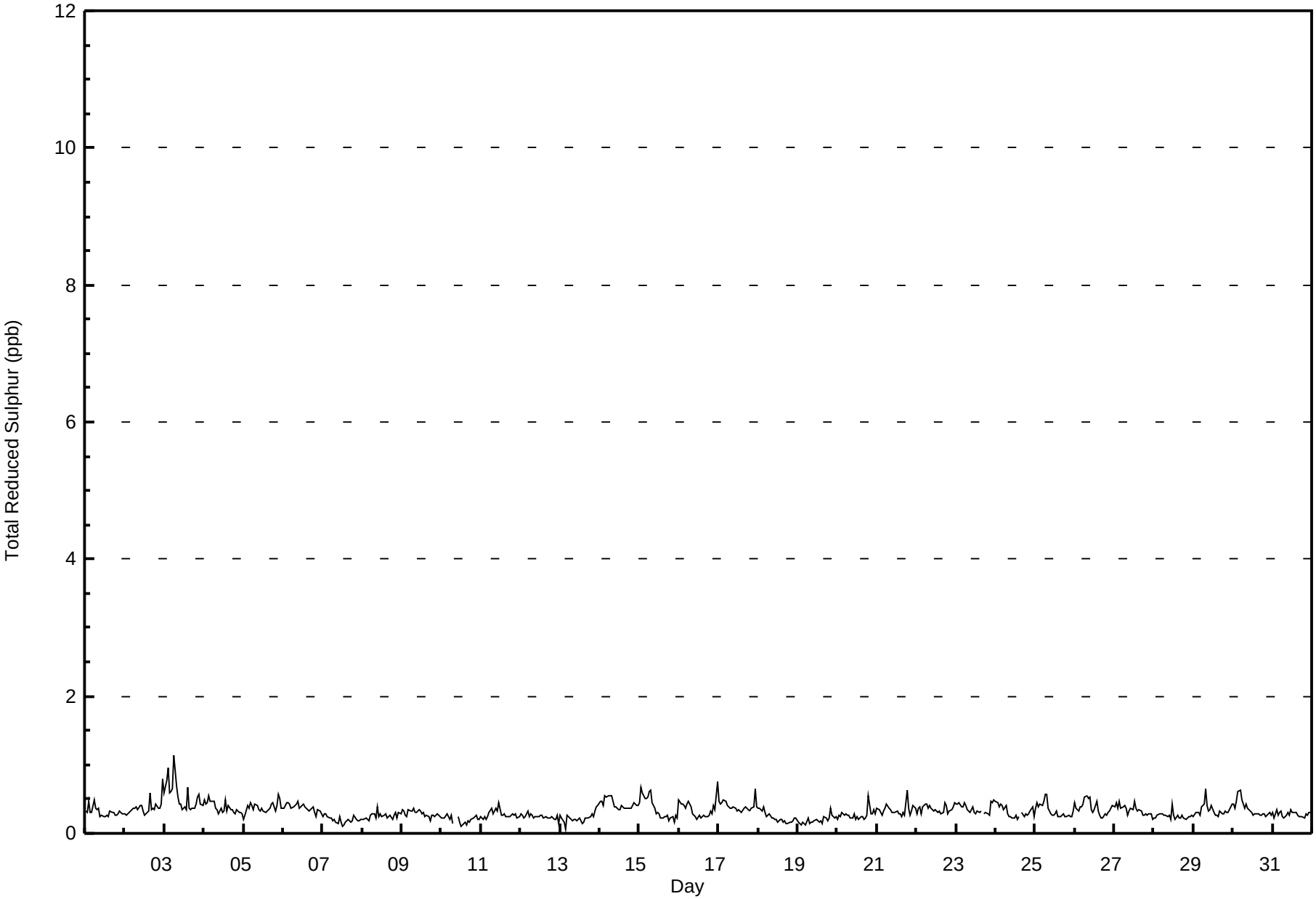
Minimum Value: 0 ppb on Jul 10 13:00 Minimum Daily Average: 0.2 ppb on Jul 19
Maximum Diurnal Average: 0.4 ppb at hour 7 Minimum Diurnal Average: 0.3 ppb at hour 14
Monthly Average: 0.32 ppb Percentiles: $P_1 = 0.1$ $P_{10} = 0.2$ $Q_1 = 0.2$ Median = 0.3 $Q_3 = 0.4$ $P_{90} = 0.4$ $P_{99} = 0.7$

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

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

Hourly Averages for TRS at Henry Pirker
July 2008



Peace Airshed Zone Association
Summary of Hourly Maximums

Henry Pirker - Total Reduced Sulphur (TRS) - ppb
July 1, 2008 to August 1, 2008

Maximum Value: 3 ppb on Jul 11 12:00

Maximum Daily Average: 1.0 ppb on Jul 3

Minimum Value: 0 ppb on Jul 19 03:00

Maximum Diurnal Average: 0.8 ppb at hour 7

Monthly Average: 0.67 ppb

Minimum Daily Average: 0.5 ppb on Jul 19

Minimum Diurnal Average: 0.6 ppb at hour 19

Percentiles: $P_1 = 0.4$ $P_{10} = 0.5$ $Q_1 = 0.6$ Median = 0.6 $Q_3 = 0.7$ $P_{90} = 0.8$ $P_{99} = 1.3$

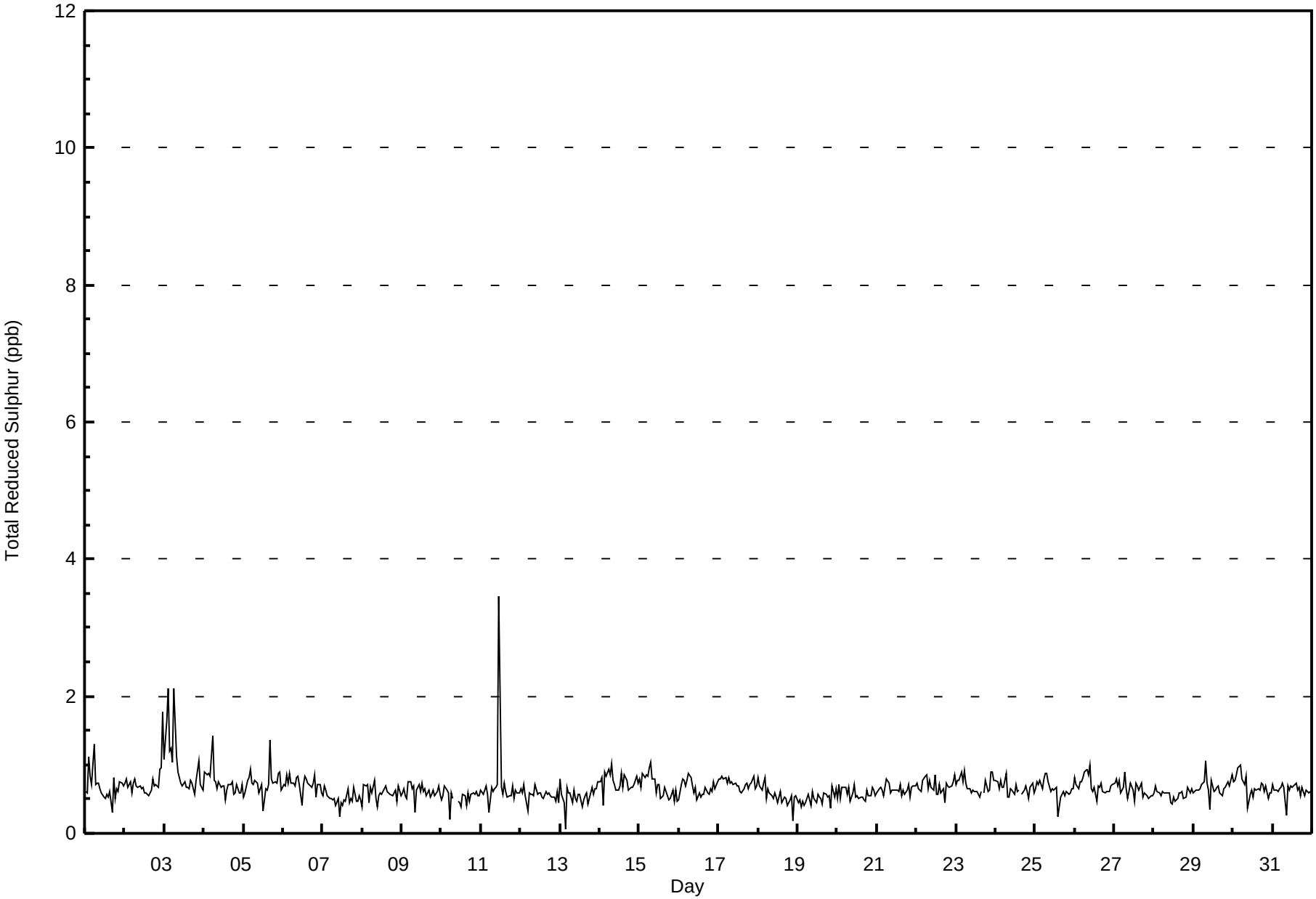
Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-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	0.7	1.3
2-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	2	0.8	1.8
3-Jul	1	2	2	1	1	1	2	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1.0	2.1
4-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	0.8	1.4
5-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	0.8	1.4
6-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	0.9
7-Jul	1	1	1	1	1	0	0	1	0	1	A	0	0	0	0	1	0	1	0	1	0	0	1	0	0.5	0.7
8-Jul	0	1	1	1	0	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0.6	0.8
9-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	0.6	0.8
10-Jul	0	1	1	1	1	A	1	1	C	C	A	0	0	1	1	0	1	0	1	1	1	1	1	1	0.5	0.7
11-Jul	1	1	1	1	1	A	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	0.7	3.5
12-Jul	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0.6	0.7
13-Jul	1	1	0	A	1	1	1	0	1	1	0	1	1	0	0	1	1	0	1	1	1	1	1	1	0.6	0.8
14-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	1.0
15-Jul	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	0	0.7	1.0
16-Jul	A	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	A	0.7	0.9
17-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	0.8
18-Jul	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	1	1	0	0	1	A	1	1	0.6	0.8
19-Jul	0	0	0	0	0	0	1	0	0	1	1	0	1	1	1	0	1	1	1	1	A	1	1	1	0.5	0.7
20-Jul	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	0	1	A	1	1	1	1	0.6	0.7
21-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	0.6	0.8
22-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	0.7	0.9
23-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	0.7	0.9
24-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	0.7	0.9
25-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	0.7	0.9
26-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	1.0
27-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	0.6	0.9
28-Jul	1	1	1	1	1	1	1	1	1	1	0	A	1	0	1	1	1	1	1	1	1	1	1	1	0.6	0.7
29-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	0.7	1.1
30-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	1.0
31-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	0.6	0.7
	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.6	0.7	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.6	0.7	0.7	0.7	Diurnal Average	
	1.1	1.6	2.1	1.2	1.2	1.4	2.1	1.1	0.9	1.0	0.7	3.5	0.8	0.9	0.8	0.8	1.4	0.8	0.8	0.8	0.9	1.1	1.0	1.8	Diurnal Maximum	

C - Calibration

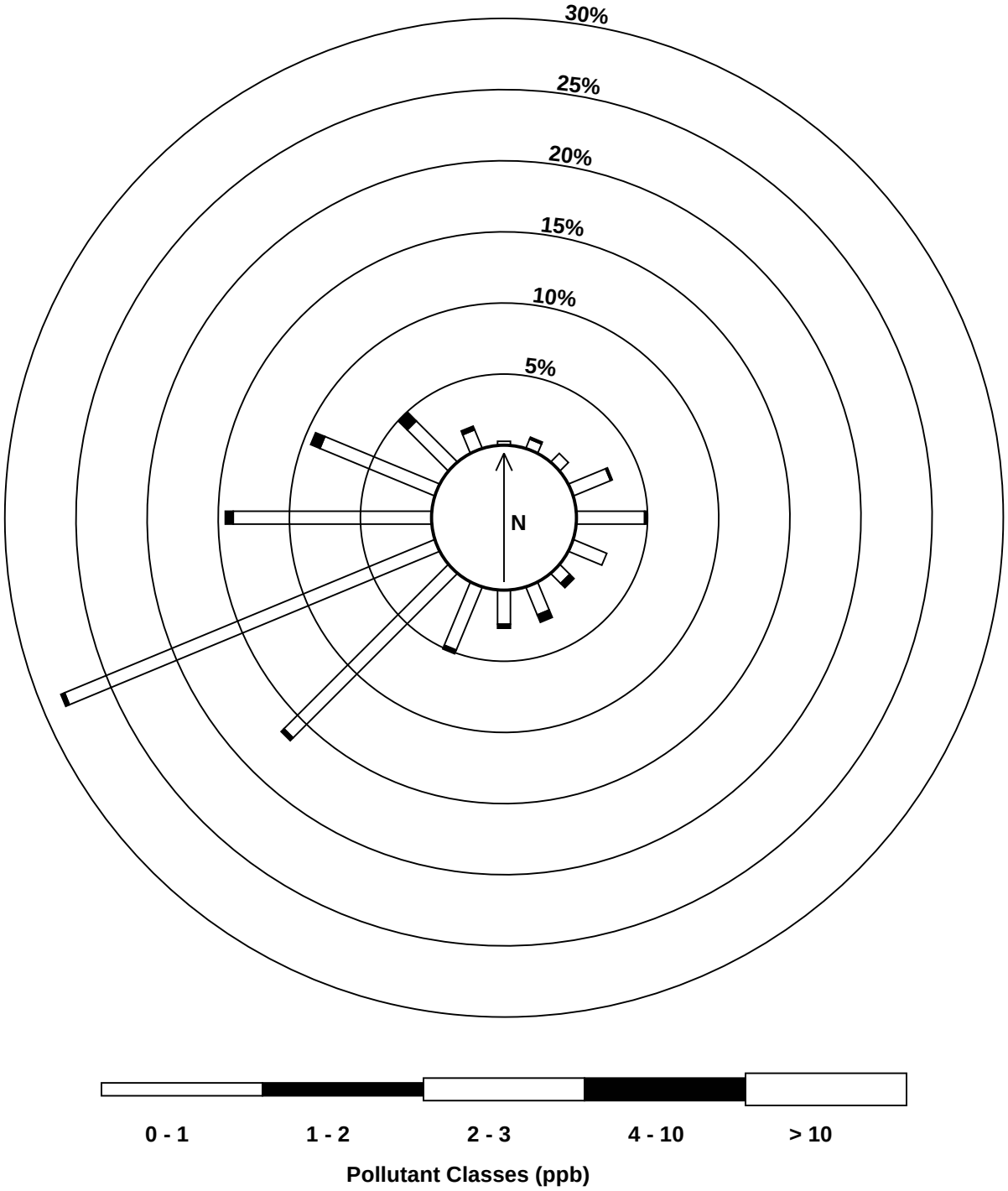
A - Automated Daily Zero Span

Hourly Maximums for TRS at Henry Pirker
July 2008



Pollutant Rose for TRS at Henry Pirker

July 2008



Peace Airshed Zone Association
Summary of Hourly Averages

Henry Pirker - Nitrogen Dioxide (NO_2) - ppb
July 1, 2008 to August 1, 2008

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 20 ppb on Jul 24 22:00 Maximum Daily Average: 10.0 ppb on Jul 3

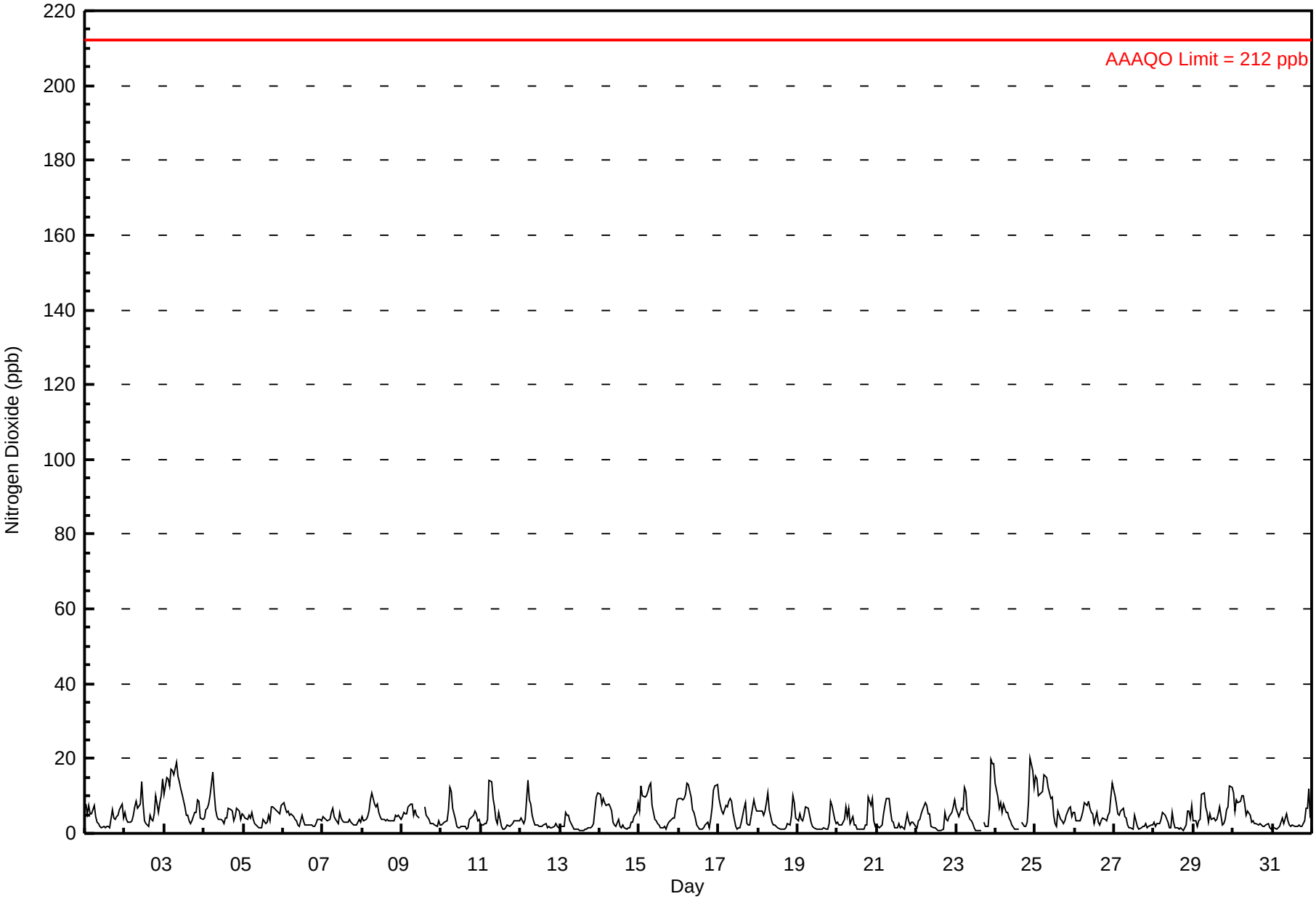
Minimum Value: 1 ppb on Jul 23 15:00 Minimum Daily Average: 2.8 ppb on Jul 13
Maximum Diurnal Average: 8.5 ppb at hour 6 Minimum Diurnal Average: 2.0 ppb at hour 15
Monthly Average: 4.70 ppb Percentiles: $P_1 = 0.9$ $P_{10} = 1.4$ $Q_1 = 2.1$ Median = 3.6 $Q_3 = 6.2$ $P_{90} = 9.4$ $P_{99} = 16.8$

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) 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	8	5	7	5	5	7	5	3	3	2	2	2	2	2	2	2	A	4	4	4	5	6	8	4	4.2	8.0
2-Jul	6	4	3	3	4	5	7	8	7	8	14	8	3	3	2	A	4	3	5	10	6	8	10	15	6.3	14.7
3-Jul	10	15	15	13	17	17	16	19	15	14	12	11	7	5	A	3	3	3	5	6	9	9	4	4	10.0	19.1
4-Jul	4	6	7	8	10	16	11	7	5	4	4	3	3	A	4	7	6	6	3	4	7	6	4	5	6.0	16.4
5-Jul	5	4	4	5	4	5	4	3	2	2	2	2	A	3	3	5	3	7	7	6	6	5	5	7	4.3	7.4
6-Jul	8	7	6	6	5	5	5	4	3	2	2	A	3	2	2	2	2	2	2	2	3	4	4	4	3.7	8.3
7-Jul	4	4	4	3	4	6	7	4	4	3	A	4	3	3	3	3	4	3	3	2	2	3	4	3	3.5	6.8
8-Jul	4	3	4	4	6	9	11	8	7	A	6	4	4	4	3	4	3	3	3	3	5	4	5	4	4.9	10.9
9-Jul	5	6	5	5	7	8	8	5	A	5	C	C	C	C	A	5	4	3	2	3	2	2	3	2	4.4	7.9
10-Jul	2	2	3	3	6	A	11	7	4	2	2	1	2	2	2	1	1	4	4	5	6	5	3	4	3.6	11.2
11-Jul	2	2	3	3	4	A	14	9	7	4	3	6	2	1	1	1	2	2	2	3	3	4	4	3	3.6	13.7
12-Jul	4	4	3	4	A	9	8	5	3	2	2	2	2	2	2	3	2	2	1	2	2	3	2	1	2.9	8.8
13-Jul	2	2	2	A	5	5	3	2	1	1	1	1	1	1	1	1	1	2	1	2	3	6	10	11	2.8	10.7
14-Jul	11	8	A	8	8	8	7	6	3	2	2	4	2	2	2	2	1	1	2	3	3	5	6	8	4.4	10.6
15-Jul	6	A	10	10	10	11	13	13	7	4	3	3	2	1	1	2	1	2	3	3	4	4	7	9	5.6	13.3
16-Jul	A	9	9	9	10	13	13	10	6	6	4	2	1	1	1	1	2	3	2	4	7	12	13	A	6.3	13.5
17-Jul	9	7	6	5	8	7	8	9	9	6	2	1	1	2	3	7	8	2	2	2	5	9	A	6	5.4	9.2
18-Jul	6	6	6	5	6	8	11	6	3	2	2	2	1	1	1	1	1	1	3	2	5	A	8	4	4.0	10.9
19-Jul	3	5	4	3	5	7	7	5	3	2	1	1	1	1	1	1	1	1	1	2	A	7	4	3	3.1	7.4
20-Jul	3	2	2	2	4	7	4	7	3	5	2	2	1	1	1	1	1	2	2	A	8	9	3	2	3.3	9.3
21-Jul	2	2	2	2	5	7	9	9	6	3	3	1	2	3	1	2	2	1	A	3	2	3	3	2	3.3	9.4
22-Jul	2	3	4	5	6	8	7	5	5	2	1	1	1	1	1	1	1	A	4	3	4	6	7	9	3.8	8.8
23-Jul	7	6	5	7	6	12	11	6	4	3	3	1	1	1	1	1	A	3	2	2	7	20	19	19	6.3	19.7
24-Jul	13	10	7	8	6	8	6	6	4	3	2	1	1	1	1	A	3	2	2	3	9	20	17	12	6.3	20.3
25-Jul	15	15	10	10	11	16	15	15	12	9	10	5	3	2	A	4	3	2	3	5	7	7	5	6	8.3	15.7
26-Jul	6	3	3	3	4	6	8	8	9	7	5	5	3	A	3	2	3	4	4	3	5	6	10	13	5.4	13.3
27-Jul	10	8	5	5	6	7	4	4	2	2	2	1	A	3	2	1	1	2	2	3	1	2	2	2	3.4	10.0
28-Jul	3	2	2	3	4	6	5	5	3	2	1	A	3	2	1	1	1	1	1	2	6	6	4	8	3.1	7.5
29-Jul	3	4	2	3	4	10	11	7	5	3	A	4	4	3	4	5	7	2	3	4	6	7	13	12	5.5	12.7
30-Jul	11	6	9	8	9	10	10	8	5	A	5	3	3	3	2	2	2	2	2	2	2	2	2	1	4.8	10.8
31-Jul	2	1	1	2	2	3	4	3	A	3	2	2	2	2	2	2	2	2	2	3	7	7	12	4	3.2	12.0
	5.9	5.4	5.0	5.4	6.4	8.5	8.5	6.9	5.2	3.8	3.6	3.0	2.3	2.0	2.0	2.5	2.7	2.7	2.7	3.4	4.8	6.6	6.6	6.2	Diurnal Average	
	15.5	14.9	14.6	12.8	17.1	16.8	15.7	19.1	15.2	13.9	13.8	10.6	7.0	4.7	4.2	6.7	8.1	7.1	6.9	10.0	9.1	20.3	18.5	18.6	Diurnal Maximum	

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

Hourly Averages for NO_2 at Henry Pirker
July 2008



Peace Airshed Zone Association
Summary of Hourly Maximums

Henry Pirker - Nitrogen Dioxide (NO_2) - ppb
July 1, 2008 to August 1, 2008

Maximum Value: 87 ppb on Jul 11 12:00

Maximum Daily Average: 13.3 ppb on Jul 3

Minimum Value: 1 ppb on Jul 28 19:00

Minimum Daily Average: 4.4 ppb on Jul 13

Maximum Diurnal Average: 11.2 ppb at hour 7

Minimum Diurnal Average: 3.7 ppb at hour 15

Monthly Average: 7.30 ppb

Percentiles: P_1 = 1.9 P_{10} = 2.6 Q_1 = 3.6 Median = 5.6 Q_3 = 9.5 P_{90} = 13.6 P_{99} = 24.5

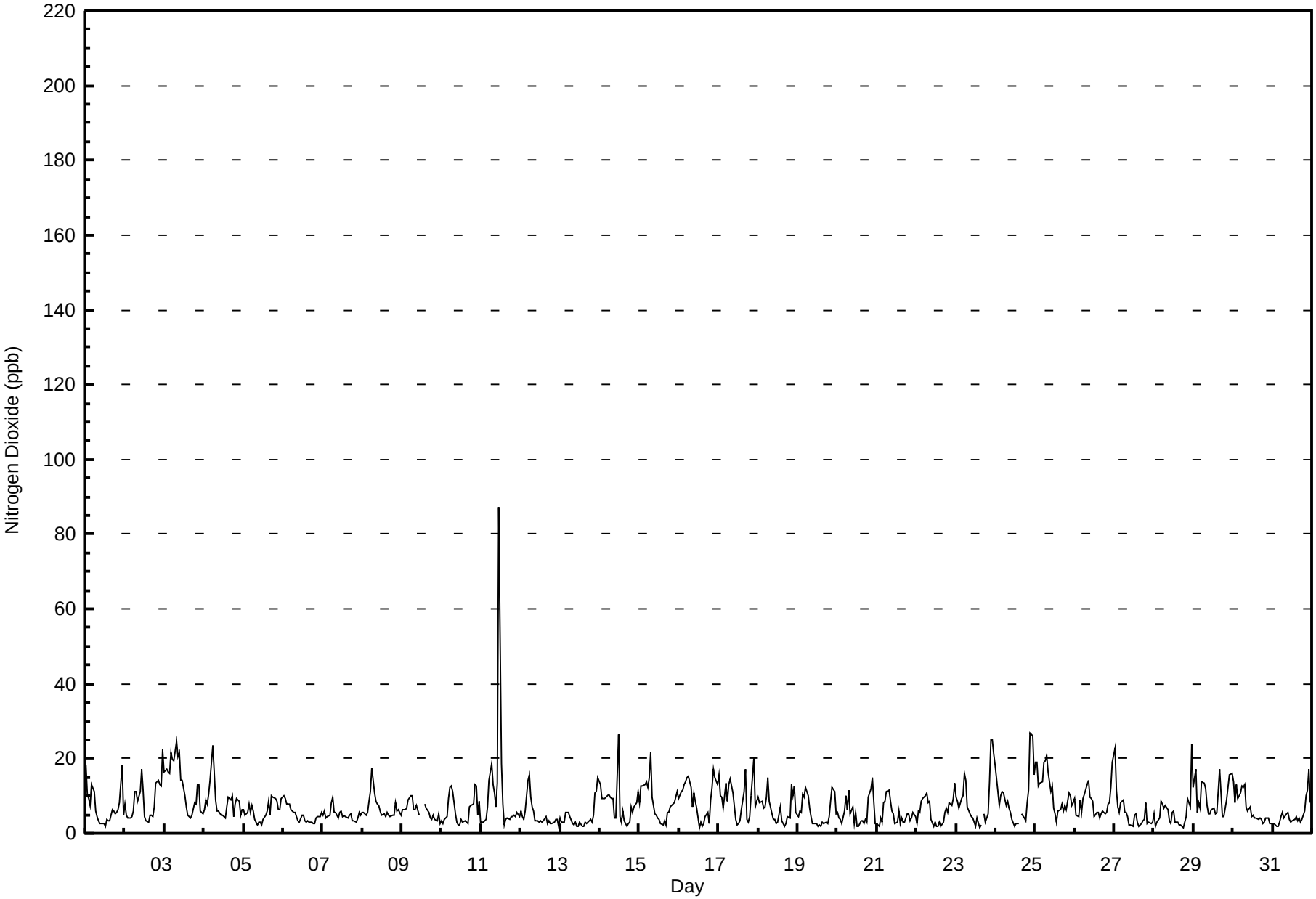
Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	18	11	9	7	13	11	6	5	4	3	3	3	2	4	3	3	A	6	5	6	6	8	18	5	6.9	18.4
2-Jul	8	5	4	4	5	6	11	11	9	11	17	12	5	4	3	A	5	5	7	14	14	13	13	22	8.9	22.2
3-Jul	17	17	17	16	22	20	20	25	21	22	14	14	10	7	A	4	4	5	8	8	13	13	6	5	13.3	24.6
4-Jul	6	9	8	10	14	24	17	9	6	6	5	5	4	A	7	10	9	10	4	8	9	8	5	6	8.7	23.6
5-Jul	6	5	5	8	5	7	6	4	2	3	3	2	A	5	6	8	5	10	10	9	8	6	6	9	6.2	9.9
6-Jul	10	9	8	8	8	6	5	5	4	3	3	A	5	3	3	3	3	3	2	2	4	4	4	6	5.0	10.0
7-Jul	5	6	4	5	5	8	10	6	6	4	A	6	5	5	5	4	5	5	3	3	3	4	5	5	5.0	9.6
8-Jul	5	5	5	5	8	11	17	11	8	A	7	6	5	5	5	5	5	4	5	5	8	6	6	5	6.8	17.4
9-Jul	6	7	6	7	9	10	10	6	A	7	C	C	C	C	A	7	5	4	4	5	4	3	5	3	6.0	10.0
10-Jul	3	3	4	4	9	A	13	11	5	3	2	2	4	3	3	3	3	7	7	8	13	12	5	9	6.0	13.1
11-Jul	3	3	4	4	7	A	19	13	11	7	13	87	19	8	2	4	4	4	5	4	5	5	6	5	10.4	87.2
12-Jul	6	5	4	6	A	16	10	7	6	3	3	3	3	3	3	5	3	3	3	3	3	4	4	2	4.6	15.8
13-Jul	4	3	3	A	6	6	5	3	2	3	2	2	3	2	2	3	2	3	4	3	5	11	11	15	4.4	14.9
14-Jul	13	9	A	9	10	11	10	9	9	4	4	27	5	3	6	3	2	3	3	7	6	7	8	11	7.8	26.5
15-Jul	8	A	13	13	14	12	15	22	10	5	5	4	4	3	2	3	2	6	6	7	8	8	10	11	8.2	21.6
16-Jul	A	11	12	13	14	15	15	12	7	11	9	7	2	3	2	3	5	6	3	9	12	17	15	A	9.1	17.0
17-Jul	16	10	10	7	14	9	13	14	13	11	4	2	3	3	6	11	17	4	3	5	10	20	A	9	9.2	20.0
18-Jul	10	8	8	7	7	10	15	9	5	4	4	3	3	7	3	3	2	3	4	4	13	A	13	6	6.4	14.7
19-Jul	5	6	6	10	10	12	10	7	5	3	3	3	2	2	2	3	3	3	3	4	A	12	11	5	5.6	12.4
20-Jul	6	4	4	3	6	10	6	11	5	7	3	6	2	2	3	3	3	4	3	A	12	15	9	3	5.6	14.8
21-Jul	3	2	4	3	8	9	11	12	9	6	5	3	3	6	3	4	3	3	A	5	3	4	6	5	5.1	11.7
22-Jul	3	6	6	9	9	10	11	8	9	4	2	3	2	2	3	2	3	A	7	6	8	8	9	13	6.1	13.2
23-Jul	10	9	7	9	10	16	14	7	5	5	4	3	2	4	2	2	A	5	3	5	14	25	25	21	9.0	25.1
24-Jul	18	11	8	10	11	11	8	8	7	5	4	2	3	3	3	A	5	4	3	8	12	27	26	16	9.2	27.0
25-Jul	19	19	13	13	14	19	19	21	16	11	13	7	5	3	A	6	8	6	7	7	11	10	7	8	11.4	20.9
26-Jul	9	5	5	9	6	9	11	13	14	10	9	8	5	A	6	4	5	6	5	6	8	8	12	19	8.3	19.2
27-Jul	23	12	7	6	8	9	6	6	5	2	2	2	A	5	3	2	3	4	4	8	3	3	3	3	5.4	22.8
28-Jul	5	2	3	4	9	8	7	8	6	3	3	A	6	3	3	2	2	2	1	5	9	8	7	24	5.7	23.9
29-Jul	12	17	6	8	7	14	13	12	8	5	A	6	7	5	6	11	17	5	5	7	9	12	16	16	9.6	17.3
30-Jul	14	8	13	9	11	13	12	13	7	A	7	5	5	4	4	4	4	4	3	3	4	4	3	3	6.7	13.7
31-Jul	3	3	2	2	3	5	6	4	A	6	4	3	3	4	4	3	4	3	4	6	10	12	17	8	5.1	17.3
	9.1	7.6	6.8	7.6	9.3	11.2	11.2	10.0	7.7	6.1	5.5	8.3	4.4	4.0	3.7	4.5	4.9	4.5	4.4	6.0	8.3	10.0	9.7	9.2	Diurnal Average	
	22.8	18.9	16.6	16.1	21.7	23.6	19.6	24.6	20.6	21.6	17.1	87.2	18.7	7.7	6.9	11.1	17.3	10.0	9.6	13.6	14.2	27.0	26.0	23.9	Diurnal Maximum	

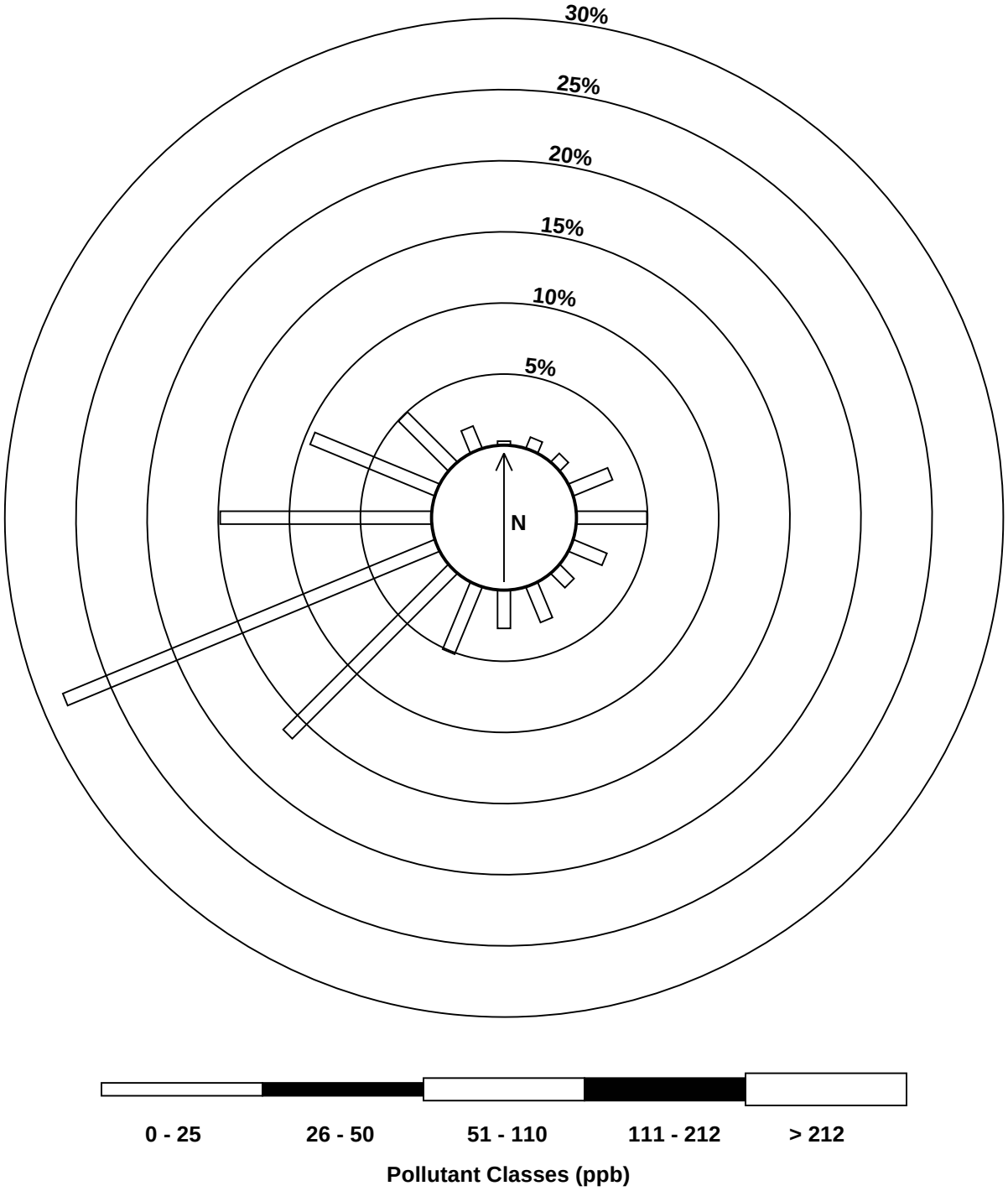
C - Calibration

A - Automated Daily Zero Span

Hourly Maximums for NO_2 at Henry Pirker
July 2008



Pollutant Rose for NO_2 at Henry Pirker
July 2008



Peace Airshed Zone Association
Summary of Hourly Averages

Henry Pirker - Nitrogen Oxide (NO) - ppb
July 1, 2008 to August 1, 2008

Maximum Value: 29 ppb on Jul 15 08:00

Maximum Daily Average: 3.4 ppb on Jul 15

Minimum Value: 0 ppb on Jul 3 16:00

Minimum Daily Average: 0.2 ppb on Jul 13

Maximum Diurnal Average: 3.9 ppb at hour 8

Minimum Diurnal Average: 0.1 ppb at hour 3

Monthly Average: 0.84 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.0$ Median = 0.3 $Q_3 = 0.7$ $P_{90} = 1.8$ $P_{99} = 11.1$

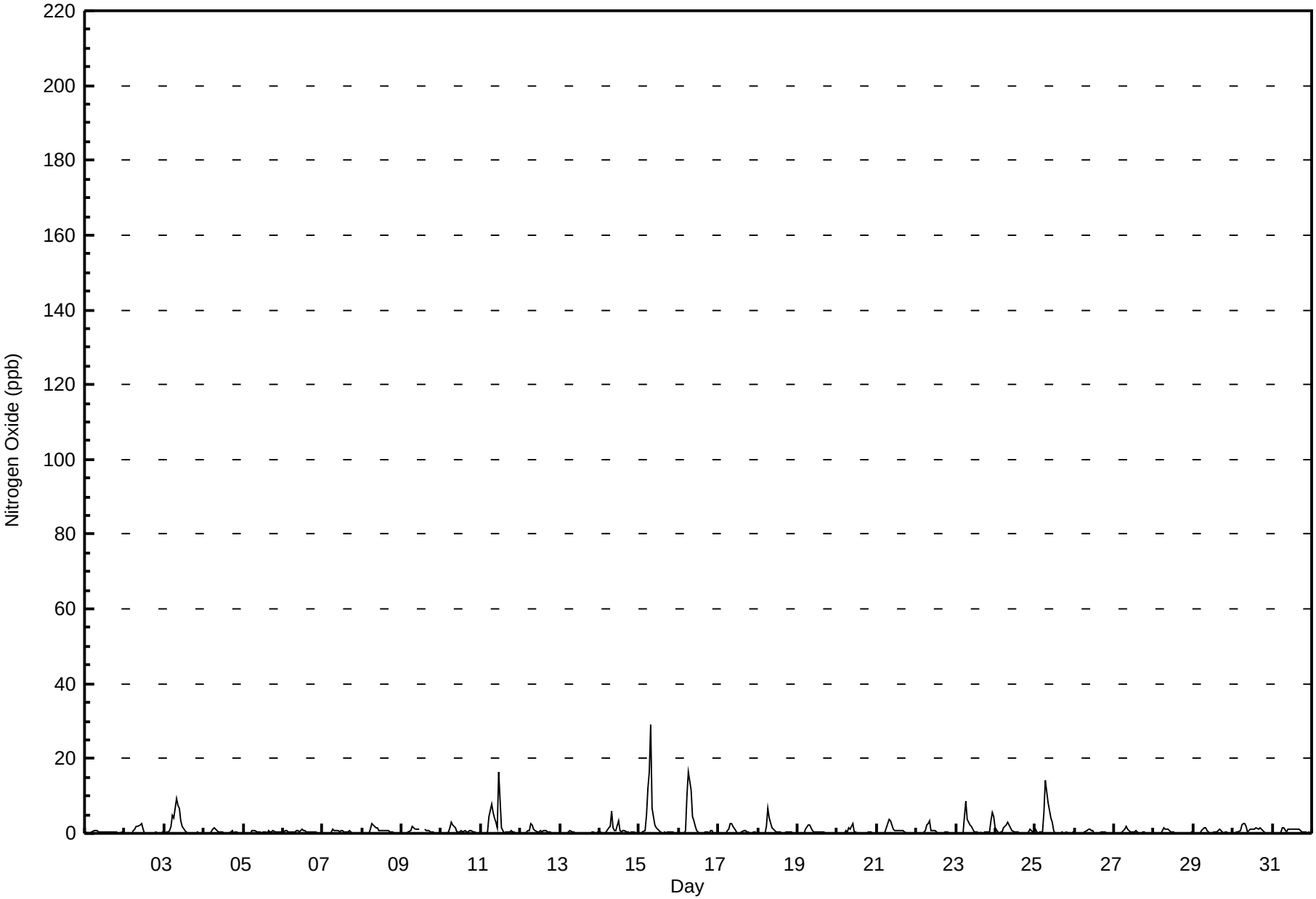
Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 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	1	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.8
2-Jul	0	0	0	0	0	1	1	2	2	2	3	1	0	0	0	A	0	0	0	0	0	0	0	1	0.6	2.8
3-Jul	0	0	1	1	2	5	4	9	7	7	3	2	1	0	A	0	0	0	0	0	0	0	0	0	1.8	9.5
4-Jul	0	0	0	0	0	1	1	1	1	1	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0.4	1.4
5-Jul	0	0	0	0	0	1	1	1	0	0	0	0	A	0	0	1	0	0	1	1	0	0	0	1	0.4	0.9
6-Jul	1	1	1	1	0	0	0	1	1	1	1	A	1	1	1	1	1	0	0	0	0	0	0	0	0.4	0.7
7-Jul	0	0	0	0	0	0	1	1	1	1	A	1	1	1	0	0	1	0	0	0	0	0	0	0	0.4	1.2
8-Jul	0	0	0	0	0	1	3	2	2	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.6	2.6
9-Jul	0	0	0	0	0	1	2	1	A	1	C	C	C	C	A	1	1	0	0	0	0	0	0	0	0.4	1.9
10-Jul	0	0	0	0	0	A	3	2	1	0	0	0	1	0	1	0	0	1	1	0	0	0	0	0	0.6	2.9
11-Jul	0	0	0	0	0	A	8	5	4	3	2	16	1	1	0	0	1	0	1	1	0	0	0	0	1.9	16.3
12-Jul	0	0	0	0	A	1	3	2	1	1	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0.5	2.6
13-Jul	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
14-Jul	0	0	A	0	0	1	2	6	1	1	1	3	1	1	1	1	0	0	0	0	0	0	0	0	0.9	6.1
15-Jul	0	A	0	1	5	12	17	29	7	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	3.4	29.3
16-Jul	A	0	0	0	1	10	16	11	5	3	2	1	0	0	0	0	0	1	0	1	1	0	0	A	2.3	16.4
17-Jul	0	0	0	0	0	1	1	3	3	2	1	0	0	0	0	1	1	0	0	0	0	0	A	0	0.6	2.7
18-Jul	0	0	0	0	0	2	7	4	2	1	1	1	0	0	0	0	0	0	0	0	1	A	0	0	0.8	6.7
19-Jul	0	0	0	0	0	1	2	2	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0.4	2.2
20-Jul	0	0	0	0	0	1	1	2	1	3	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0.4	2.5
21-Jul	0	0	0	0	0	1	2	4	3	2	1	1	1	1	1	1	1	0	A	0	0	0	0	0	0.8	3.9
22-Jul	0	0	0	0	0	1	2	3	3	1	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0.6	3.4
23-Jul	0	0	0	0	0	5	8	4	2	2	1	0	0	0	0	0	A	0	0	0	0	3	6	5	1.7	8.4
24-Jul	1	0	0	0	0	1	2	3	2	1	1	0	0	0	0	A	0	0	0	0	0	1	0	0	0.7	3.0
25-Jul	1	0	0	0	0	6	14	11	8	4	3	1	0	0	A	0	0	0	0	0	0	0	0	0	2.2	14.1
26-Jul	0	0	0	0	0	0	1	1	1	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0.3	1.1
27-Jul	0	0	0	0	0	1	1	2	1	1	1	0	A	1	0	0	0	0	0	0	0	0	0	0	0.3	1.7
28-Jul	0	0	0	0	0	1	1	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.3
29-Jul	0	0	0	0	0	1	2	1	1	1	A	0	0	0	0	1	1	0	0	0	0	0	0	0	0.4	1.6
30-Jul	0	0	0	0	1	2	2	3	2	A	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1.0	2.7
31-Jul	0	0	0	0	0	1	1	2	A	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.6	1.7
	0.1	0.1	0.1	0.1	0.4	2.0	3.6	3.9	2.3	1.5	1.0	1.2	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	Diurnal Average	
	1.4	0.6	0.6	0.6	4.9	12.0	16.6	29.3	8.2	6.6	3.4	16.3	1.4	1.1	1.3	1.1	1.4	1.0	0.7	0.6	0.6	3.5	5.6	4.6	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

Hourly Averages for NO at Henry Pirker
July 2008



Peace Airshed Zone Association
Summary of Hourly Maximums

Henry Pirker - Nitrogen Oxide (NO) - ppb
July 1, 2008 to August 1, 2008

Maximum Value: 236 ppb on Jul 11 12:00

Maximum Daily Average: 15.2 ppb on Jul 11

Minimum Value: 0 ppb on Jul 8 04:00

Minimum Daily Average: 0.7 ppb on Jul 13

Maximum Diurnal Average: 14.7 ppb at hour 8

Minimum Diurnal Average: 0.4 ppb at hour 3

Monthly Average: 2.85 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.5$ Median = 1.0 $Q_3 = 2.0$ $P_{90} = 4.6$ $P_{99} = 24.9$

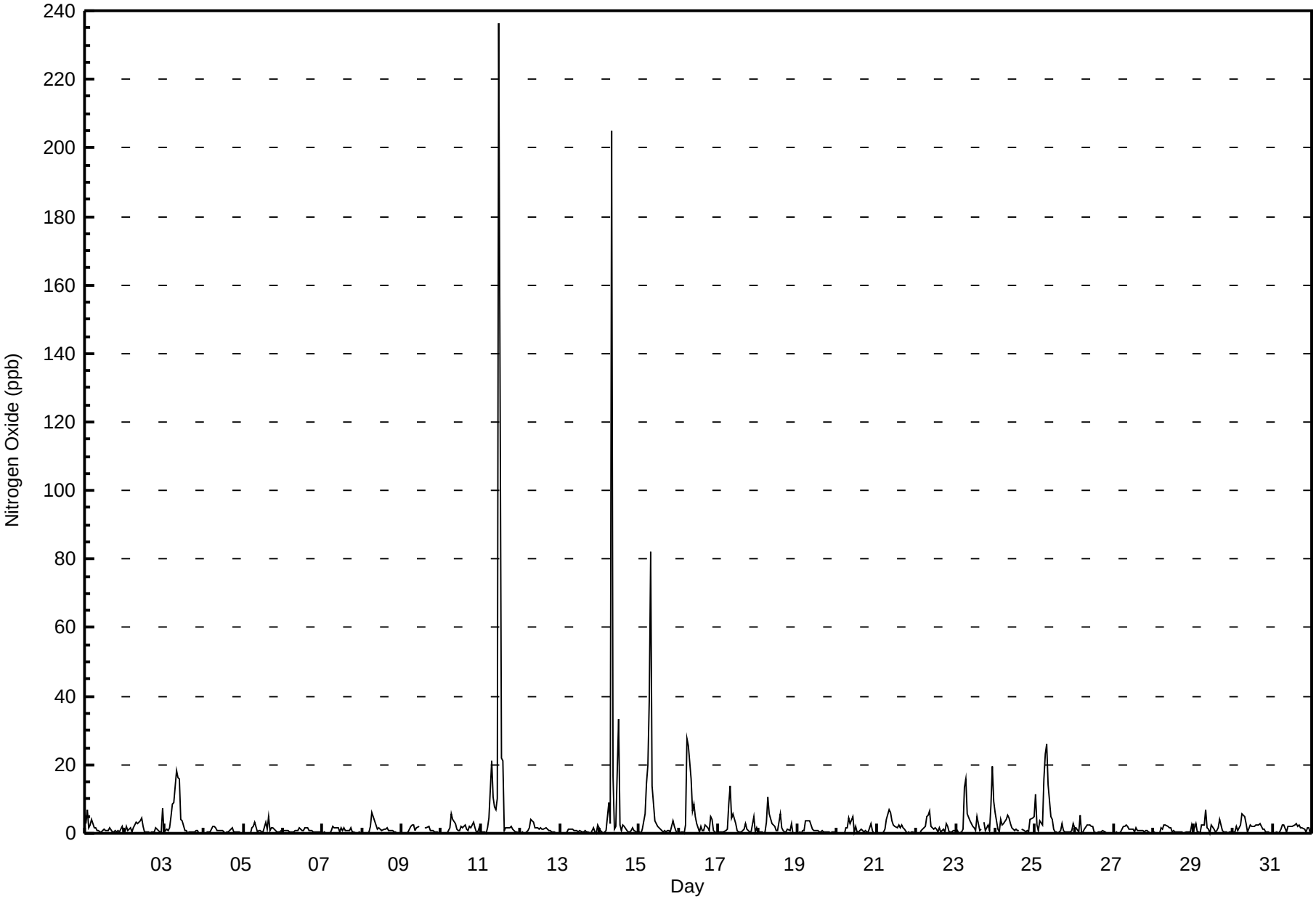
Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 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	3	7	1	2	4	2	1	1	1	1	1	1	1	1	1	2	A	1	1	1	1	1	2	1	1.6	6.7
2-Jul	1	2	1	2	1	2	3	3	3	4	5	2	1	1	1	A	1	1	1	1	1	0	1	7	1.7	7.1
3-Jul	1	1	1	1	5	8	9	18	16	16	4	4	1	1	A	0	0	0	0	1	1	0	0	0	3.9	18.3
4-Jul	0	0	0	0	1	2	2	2	1	1	1	1	1	A	0	1	1	2	1	1	1	1	0	0	0.8	2.0
5-Jul	0	0	0	0	0	2	2	3	1	1	1	1	A	3	1	5	1	2	2	1	1	1	1	1	1.2	5.0
6-Jul	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	1	0.9	1.5
7-Jul	0	0	0	0	0	1	2	1	2	1	A	2	1	1	1	1	1	2	1	0	0	0	0	0	0.8	2.2
8-Jul	1	0	0	0	1	2	6	3	2	A	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1.2	6.3
9-Jul	0	0	0	0	1	2	3	2	A	2	C	C	C	C	A	1	2	1	1	1	0	0	0	0	0.9	2.6
10-Jul	0	0	0	0	1	A	6	4	3	1	1	1	2	2	2	1	1	2	2	3	2	1	0	2	1.6	5.6
11-Jul	0	1	1	0	2	A	21	10	8	7	10	236	22	21	1	2	2	2	2	1	1	1	1	0	15.2	236.2
12-Jul	0	0	0	0	A	2	4	4	3	2	1	1	2	1	1	2	1	1	1	1	0	0	0	0	1.1	4.0
13-Jul	0	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	2	0	0	2	0.7	2.4
14-Jul	1	1	A	1	1	9	3	205	17	1	2	34	3	1	3	2	1	1	1	1	2	1	1	1	12.5	205.1
15-Jul	1	A	1	6	15	20	39	82	14	4	3	2	2	1	1	1	1	1	1	1	4	2	1	0	8.6	82.1
16-Jul	A	1	1	0	3	28	25	16	7	8	5	3	1	2	1	1	3	2	1	5	4	1	1	A	5.2	27.7
17-Jul	1	1	1	1	1	1	8	14	5	6	3	1	1	1	1	1	3	1	1	1	1	5	A	2	2.4	14.0
18-Jul	0	0	0	0	1	3	11	6	3	2	2	1	1	6	2	1	1	1	1	1	3	A	0	0	1.9	10.7
19-Jul	0	1	0	1	1	4	4	4	2	1	1	1	1	1	1	1	1	1	1	1	A	1	0	0	1.1	3.7
20-Jul	0	0	0	0	0	1	2	5	3	5	1	2	1	1	1	1	1	1	1	A	3	1	0	0	1.1	4.7
21-Jul	0	0	0	0	1	1	4	7	6	4	2	2	2	3	2	3	2	1	A	1	0	1	1	0	1.7	7.1
22-Jul	0	0	0	1	1	2	5	5	7	2	1	2	1	1	2	1	1	A	3	2	1	1	1	1	1.6	6.6
23-Jul	1	1	0	0	1	14	16	6	4	3	2	2	1	5	1	1	A	3	1	3	1	8	19	9	4.4	19.4
24-Jul	6	1	1	4	2	3	4	5	5	3	2	1	1	1	1	A	1	1	1	1	1	4	5	5	2.5	6.1
25-Jul	12	2	1	4	2	16	23	26	14	5	4	1	1	1	A	1	3	1	1	1	1	1	1	3	5.3	25.9
26-Jul	2	2	0	5	0	1	1	3	3	3	2	2	1	A	1	1	1	1	1	0	0	0	0	0	1.1	5.3
27-Jul	0	1	0	0	1	2	2	3	2	1	1	1	A	2	1	1	1	1	1	1	1	1	0	0	0.9	2.6
28-Jul	1	0	0	0	2	1	3	3	2	2	1	A	1	1	1	1	1	1	0	1	1	1	1	3	0.9	2.6
29-Jul	1	3	1	1	0	2	3	7	2	1	A	3	1	1	1	2	4	1	1	1	1	0	1	1	1.4	7.1
30-Jul	1	1	2	1	3	6	5	5	3	A	2	2	2	2	3	3	3	2	1	1	1	1	0	0	2.1	5.8
31-Jul	0	0	0	0	1	1	3	3	A	2	2	2	2	2	3	2	3	2	1	1	1	2	2	0	1.4	3.0
	1.0	0.9	0.4	1.0	1.6	4.7	7.1	14.7	4.7	3.1	2.3	11.1	1.9	2.2	1.2	1.3	1.3	1.1	0.9	1.1	1.0	1.1	1.2	1.2	Diurnal Average	
	11.6	6.7	2.0	5.7	14.7	27.7	39.0	205.1	16.6	16.1	10.2	236.2	22.0	21.2	3.0	5.0	3.9	3.4	2.8	4.9	4.0	8.1	19.4	9.4	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

Hourly Maximums for NO at Henry Pirker
July 2008



Peace Airshed Zone Association
Summary of Hourly Averages

Henry Pirker - Oxides of Nitrogen (NO_X) - ppb
July 1, 2008 to August 1, 2008

Maximum Value: 43 ppb on Jul 15 08:00

Maximum Daily Average: 11.9 ppb on Jul 3

Minimum Value: 1 ppb on Jul 28 19:00

Maximum Diurnal Average: 12.1 ppb at hour 7

Monthly Average: 5.58 ppb

Minimum Daily Average: 3.0 ppb on Jul 13

Minimum Diurnal Average: 2.4 ppb at hour 15

Percentiles: P_1 = 1.1 P_{10} = 1.7 Q_1 = 2.5 Median = 4.1 Q_3 = 7.0 P_{90} = 10.5 P_{99} = 23.2

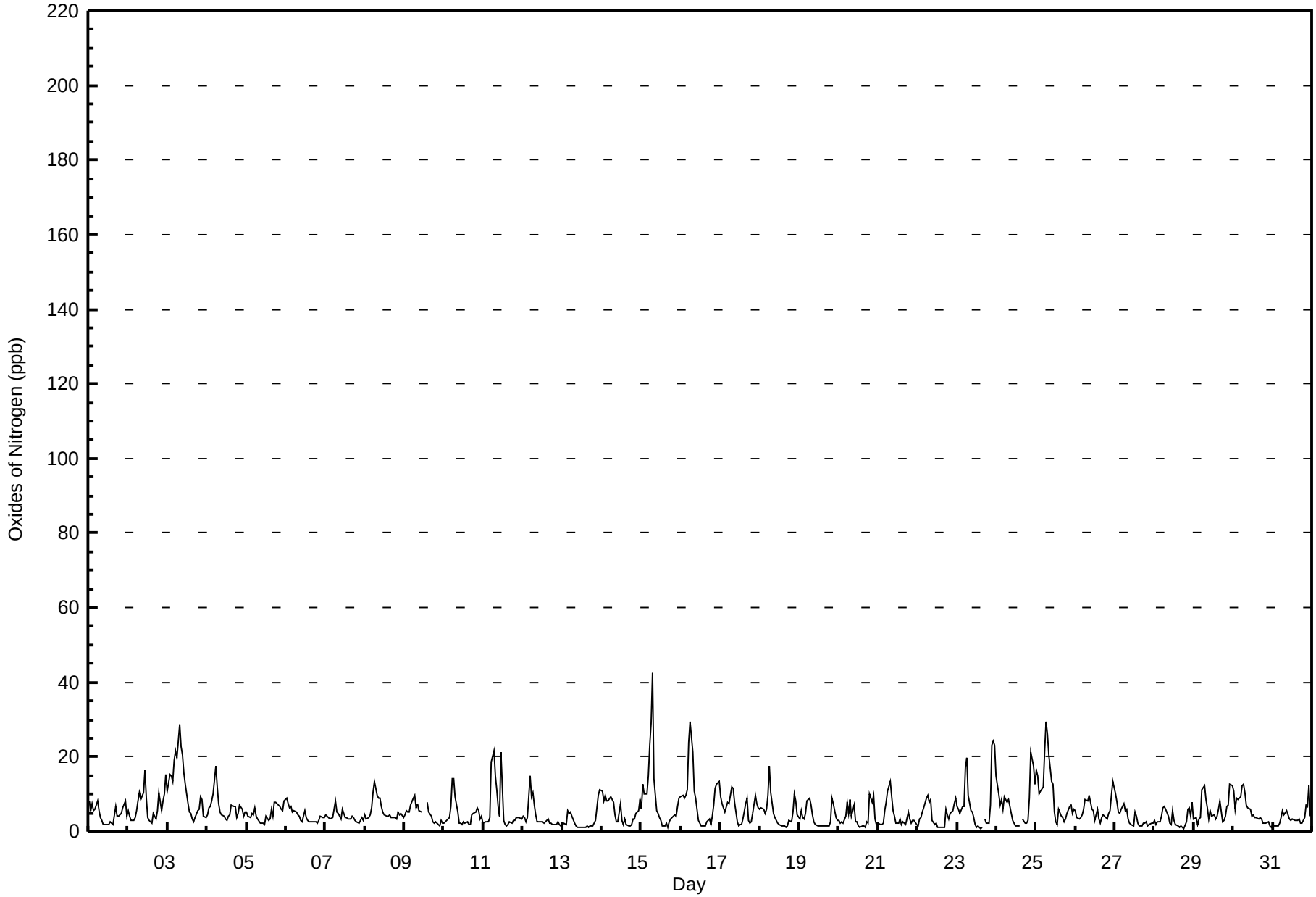
Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

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	8	5	8	6	6	8	5	4	3	2	2	2	2	2	2	2	A	4	4	5	5	6	8	4	4.5	8.4
2-Jul	6	4	3	3	4	5	8	10	9	10	17	9	4	3	2	A	4	4	5	10	6	8	10	15	6.9	16.6
3-Jul	11	15	15	13	19	21	20	29	23	20	16	13	8	5	A	3	3	4	6	6	9	9	4	4	11.9	28.6
4-Jul	4	6	7	8	10	18	12	8	5	4	4	4	3	A	4	7	7	7	4	5	7	6	4	5	6.5	17.7
5-Jul	5	4	4	5	4	6	4	3	2	2	2	2	A	3	3	6	4	8	8	7	7	6	6	8	4.8	8.0
6-Jul	9	8	6	7	5	6	5	4	4	3	2	A	4	3	3	3	3	3	2	2	3	4	4	4	4.2	9.0
7-Jul	4	4	4	3	4	6	8	5	5	3	A	5	4	4	3	3	4	4	3	3	2	3	4	3	3.9	8.1
8-Jul	5	3	4	5	6	10	14	10	9	A	7	5	4	4	4	4	4	4	4	3	5	5	5	4	5.5	13.5
9-Jul	5	6	5	5	7	9	10	6	A	6	C	C	C	C	A	5	4	2	2	3	2	2	3	2	4.7	9.6
10-Jul	2	3	3	4	7	A	14	9	5	2	2	2	3	2	3	2	2	4	5	5	6	6	3	4	4.3	14.3
11-Jul	2	2	3	3	4	A	21	15	11	7	4	21	3	2	1	2	3	2	3	3	4	4	4	3	5.5	21.5
12-Jul	4	4	3	4	A	9	10	7	4	3	3	3	3	2	3	3	2	2	2	2	2	3	2	1	3.5	10.3
13-Jul	2	2	2	A	5	5	4	2	2	1	1	1	1	1	1	1	1	2	1	2	3	7	10	11	3.0	11.0
14-Jul	11	8	A	8	8	9	9	8	4	3	3	7	3	2	3	2	1	2	2	3	3	5	6	8	5.2	10.9
15-Jul	6	A	10	10	15	23	29	43	14	6	5	4	3	2	2	2	1	3	3	4	4	4	7	9	9.1	42.7
16-Jul	A	10	9	10	11	24	29	21	11	9	6	3	1	1	1	1	2	4	2	4	7	12	13	A	8.7	29.5
17-Jul	9	8	6	5	8	8	10	12	11	8	3	2	2	2	3	7	9	3	2	2	5	10	A	6	6.1	11.9
18-Jul	6	6	6	5	6	10	18	11	5	4	3	2	2	2	1	1	1	2	3	3	5	A	8	4	4.9	17.6
19-Jul	4	5	4	3	5	8	9	7	4	2	2	2	1	1	1	2	2	1	1	3	A	8	4	3	3.6	9.0
20-Jul	3	2	2	2	4	8	5	8	4	7	3	3	1	1	1	1	1	2	2	A	8	10	3	2	3.7	9.5
21-Jul	2	2	2	2	5	8	11	13	9	6	4	2	2	3	2	3	2	2	A	3	2	3	3	2	4.1	13.3
22-Jul	2	3	4	5	6	9	10	8	8	3	2	2	1	1	1	1	1	A	4	3	5	6	7	9	4.4	9.6
23-Jul	7	6	5	7	7	17	20	10	6	5	4	2	1	1	1	1	A	3	2	2	7	23	24	23	8.0	24.2
24-Jul	15	10	7	9	6	9	8	9	7	5	3	1	2	2	1	A	3	2	2	3	9	21	17	13	7.1	21.3
25-Jul	16	15	10	11	12	21	30	26	20	14	13	5	3	2	A	4	4	3	3	5	7	7	5	6	10.5	29.5
26-Jul	6	4	3	4	5	6	9	8	10	8	6	6	3	A	3	2	4	5	4	3	5	6	10	13	5.7	13.3
27-Jul	10	8	5	5	6	7	6	6	3	2	2	2	A	4	2	1	2	2	2	3	2	2	2	2	3.8	10.1
28-Jul	3	2	2	3	4	6	7	6	4	2	2	A	3	2	2	1	1	1	1	3	6	6	4	8	3.4	7.8
29-Jul	3	4	2	3	4	11	12	8	6	4	A	4	4	4	4	6	8	3	3	4	7	7	13	12	5.9	12.8
30-Jul	11	6	9	9	9	12	13	10	7	A	6	4	5	4	4	3	4	3	2	2	2	3	2	1	5.7	12.5
31-Jul	2	1	1	2	2	4	5	4	A	5	3	3	3	3	3	3	3	2	2	4	7	7	12	4	3.8	12.3
	6.1	5.5	5.1	5.6	6.8	10.6	12.1	10.7	7.5	5.3	4.6	4.3	2.8	2.4	2.4	3.0	3.1	3.0	3.0	3.7	5.1	6.8	6.9	6.5	Diurnal Average	
	16.5	15.2	15.1	13.3	19.0	23.7	29.5	42.7	22.7	20.5	16.6	21.4	7.6	5.2	4.4	7.4	9.1	7.7	7.7	10.3	9.5	23.3	24.2	23.3	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

Hourly Averages for NO_X at Henry Pirker
July 2008



Peace Airshed Zone Association
Summary of Hourly Maximums

Henry Pirker - Oxides of Nitrogen (NO_X) - ppb
July 1, 2008 to August 1, 2008

Maximum Value: 307 ppb on Jul 11 12:00

Maximum Daily Average: 24.8 ppb on Jul 11

Minimum Value: 2 ppb on Jul 28 19:00

Maximum Diurnal Average: 18.6 ppb at hour 12

Monthly Average: 9.71 ppb

Minimum Daily Average: 5.0 ppb on Jul 13

Minimum Diurnal Average: 4.8 ppb at hour 15

Percentiles: P_1 = 1.9 P_{10} = 3.1 Q_1 = 4.6 Median = 6.7 Q_3 = 11.2 P_{90} = 17.1 P_{99} = 40.9

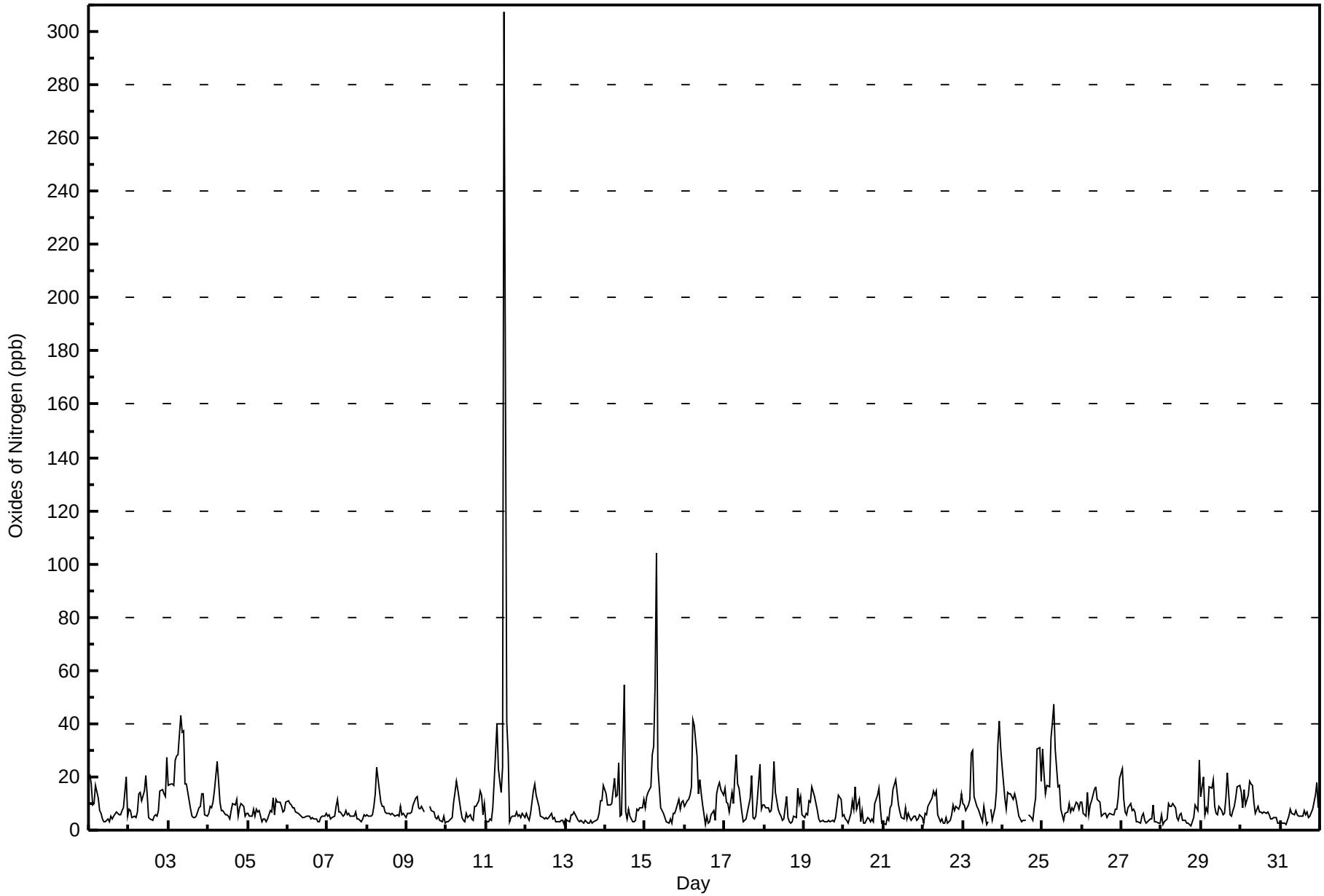
Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 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	21	17	10	10	17	12	7	6	4	3	3	4	3	5	4	5	A	7	6	6	7	9	20	5	8.3	21.2
2-Jul	8	7	5	5	5	7	14	14	11	15	21	13	5	4	4	A	6	5	8	15	15	13	13	27	10.4	27.2
3-Jul	17	18	18	17	26	28	28	43	37	37	18	17	11	8	A	5	5	5	8	9	14	13	6	6	17.1	43.2
4-Jul	7	9	8	11	15	26	19	11	8	7	6	6	5	A	7	10	10	11	5	8	10	9	5	7	9.5	25.6
5-Jul	7	5	6	8	6	8	7	7	3	4	4	3	A	8	7	12	6	11	11	11	9	7	7	11	7.2	11.9
6-Jul	11	10	9	9	9	7	7	6	5	4	4	A	6	5	4	5	4	4	3	3	5	5	5	6	5.9	11.0
7-Jul	5	6	4	5	5	9	12	7	7	5	A	7	6	6	6	5	6	7	4	4	3	4	6	5	5.7	11.6
8-Jul	6	6	5	6	9	14	24	15	11	A	9	7	6	6	6	7	6	5	6	5	9	6	7	5	8.0	23.7
9-Jul	7	7	7	7	10	12	12	9	A	9	C	C	C	C	A	8	7	5	4	5	4	3	5	3	6.7	12.5
10-Jul	3	3	4	5	11	A	18	15	8	5	4	3	6	5	6	4	4	9	9	11	15	13	6	10	7.6	18.5
11-Jul	3	3	4	4	9	A	40	23	18	14	24	307	41	29	3	5	5	5	7	5	6	5	6	5	24.8	307.1
12-Jul	6	5	4	6	A	17	13	11	9	5	5	4	5	4	5	6	4	5	3	3	3	4	4	2	5.7	17.2
13-Jul	4	4	3	A	6	7	6	4	3	4	3	3	4	2	2	4	3	3	4	4	6	11	11	17	5.0	16.9
14-Jul	14	10	A	10	10	19	13	13	25	5	6	55	7	4	8	5	3	3	4	8	7	8	9	12	11.2	54.7
15-Jul	9	A	14	16	29	32	54	104	24	9	8	6	5	3	3	4	3	6	6	8	11	8	10	11	16.6	103.9
16-Jul	A	11	12	13	16	42	40	28	14	19	14	10	2	5	3	3	6	7	3	14	16	18	15	A	14.1	41.8
17-Jul	16	11	10	7	14	10	20	28	17	16	7	3	4	4	7	12	20	5	4	5	11	24	A	10	11.5	28.3
18-Jul	10	8	9	7	7	13	26	14	8	6	5	4	4	13	5	3	2	3	5	5	16	A	13	6	8.3	25.5
19-Jul	5	6	6	11	11	16	13	10	7	4	3	4	3	3	3	4	3	4	3	5	A	13	12	5	6.6	16.1
20-Jul	6	4	4	3	6	11	8	16	8	12	3	8	3	3	5	4	3	4	3	A	13	16	9	3	6.6	16.3
21-Jul	3	2	5	3	9	10	15	19	14	10	7	5	4	9	4	7	5	4	A	5	4	4	6	5	6.7	18.8
22-Jul	3	6	6	9	10	12	15	13	15	6	3	4	3	3	5	3	4	A	10	7	9	8	9	14	7.5	14.8
23-Jul	10	9	7	9	12	29	30	13	9	8	6	5	3	9	2	3	A	8	4	8	15	32	41	31	13.1	41.1
24-Jul	24	12	8	14	13	14	12	14	11	9	5	3	4	4	3	A	6	5	4	9	12	30	31	19	11.5	31.0
25-Jul	30	21	14	17	16	35	41	47	31	16	17	8	6	4	A	7	10	7	8	7	11	10	8	10	16.5	47.2
26-Jul	10	7	5	14	6	10	11	15	16	12	11	11	5	A	6	5	6	7	6	6	8	8	12	19	9.3	19.2
27-Jul	23	12	7	6	8	10	7	8	7	3	3	3	A	6	4	3	3	4	4	10	3	3	3	3	6.1	23.0
28-Jul	6	2	3	4	10	9	9	10	9	5	4	A	6	4	4	3	3	2	2	5	10	9	7	26	6.5	26.3
29-Jul	12	20	6	9	7	16	16	19	9	6	A	9	8	6	6	12	21	6	5	7	9	12	16	17	11.1	21.4
30-Jul	14	9	15	10	13	18	17	17	11	A	9	7	7	6	7	6	7	6	4	4	5	5	3	3	8.7	18.4
31-Jul	3	3	3	2	4	5	8	6	A	7	6	5	5	5	8	6	7	5	5	8	11	13	18	8	6.5	17.8
	10.0	8.4	7.2	8.5	10.9	15.7	18.1	18.2	12.3	9.1	7.7	18.6	6.2	6.1	4.8	5.6	6.0	5.5	5.2	7.0	9.2	10.8	10.7	10.3	Diurnal Average	
	30.4	21.3	17.6	17.1	28.6	41.8	54.1	103.9	36.8	37.5	23.7	307.1	40.7	28.9	7.9	12.2	21.4	11.5	10.5	14.5	16.3	32.1	41.1	30.8	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

Hourly Maximums for NO_X at Henry Pirker
July 2008



Peace Airshed Zone Association
Summary of Hourly Averages

Henry Pirker - Ozone (O_3) - ppb
July 1, 2008 to August 1, 2008

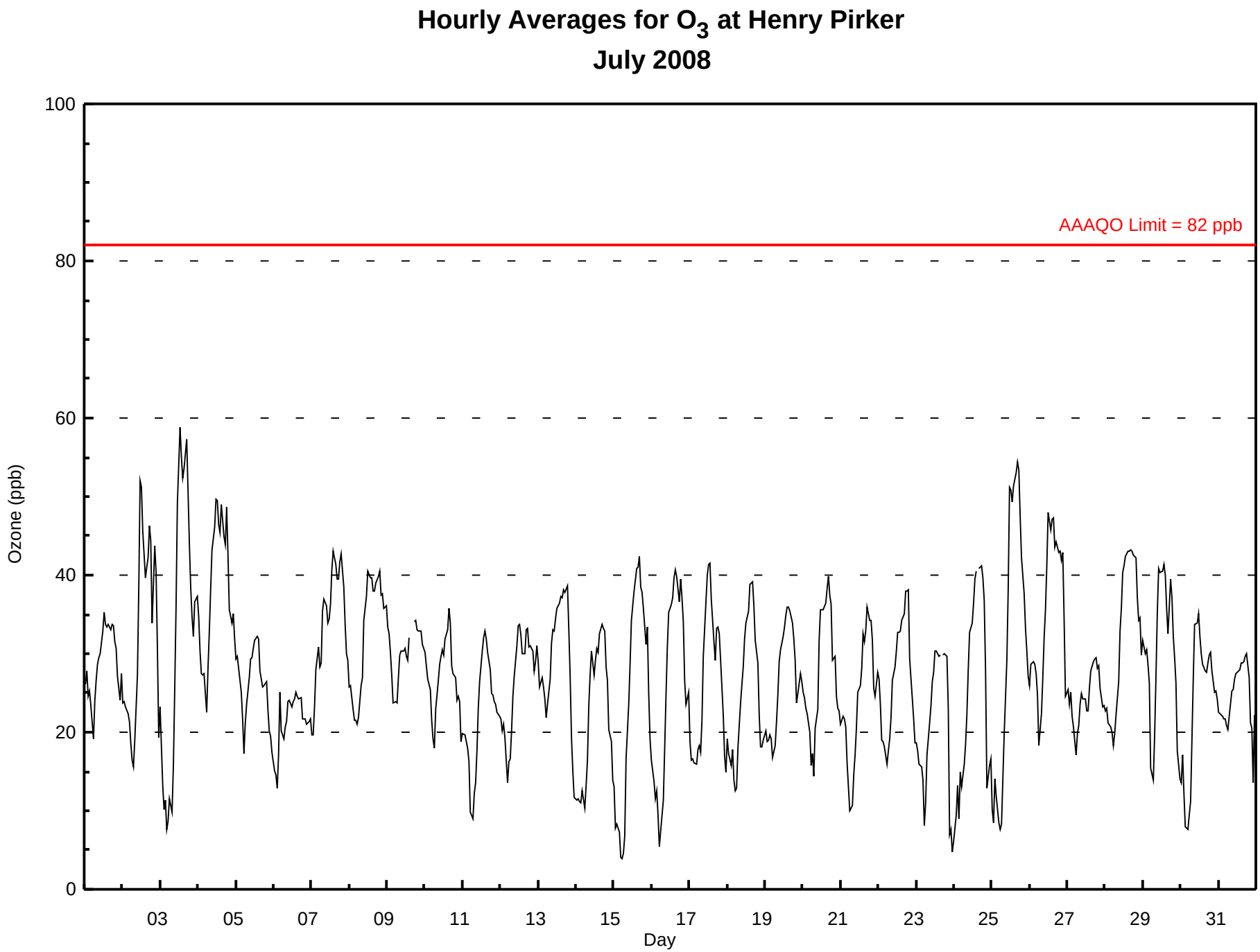
Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 59 ppb on Jul 3 13:00 Maximum Daily Average: 37.7 ppb on Jul 4

Minimum Value: 4 ppb on Jul 15 06:00 Minimum Daily Average: 20.4 ppb on Jul 23
Maximum Diurnal Average: 36.9 ppb at hour 17 Minimum Diurnal Average: 16.0 ppb at hour 6
Monthly Average: 27.53 ppb Percentiles: P_1 = 6.7 P_{10} = 14.8 Q_1 = 21.0 Median = 27.5 Q_3 = 33.9 P_{90} = 39.9 P_{99} = 53.3

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

Day	Hourly Period Ending At (MST) 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	26	28	25	25	23	19	24	27	29	30	30	33	35	34	33	34	A	34	34	31	31	27	24	28	28.8	35.3
2-Jul	24	24	23	22	21	19	16	16	19	27	38	52	51	46	40	A	42	46	44	34	44	40	31	19	32.1	52.0
3-Jul	23	13	10	11	8	9	12	10	16	25	36	49	59	55	A	53	55	57	44	38	35	32	37	37	31.5	58.7
4-Jul	35	30	27	27	27	22	28	33	38	43	46	50	49	A	45	49	45	44	49	43	36	34	35	32	37.7	49.7
5-Jul	29	30	27	25	22	17	21	24	27	29	29	31	A	32	32	28	27	26	26	26	23	20	20	18	25.6	32.1
6-Jul	15	15	13	17	25	20	19	21	21	24	24	A	24	24	25	25	24	24	22	22	22	21	21	22	21.3	25.2
7-Jul	20	20	23	28	31	28	29	35	37	36	A	34	36	41	43	41	40	40	42	43	38	34	30	29	33.8	43.0
8-Jul	26	26	23	22	22	21	22	26	27	A	36	37	41	40	40	38	38	39	40	41	38	38	36	36	32.6	40.6
9-Jul	33	33	30	27	24	24	24	27	A	30	30	31	30	29	C	C	C	34	34	33	33	33	31	31	30.0	34.2
10-Jul	30	28	27	25	21	A	18	23	27	29	30	30	30	32	33	36	34	29	28	27	24	25	24	19	27.3	35.7
11-Jul	20	20	19	18	16	A	9	12	14	18	23	26	30	32	33	32	30	28	25	25	24	23	23	22	22.7	32.9
12-Jul	22	20	21	19	A	16	17	20	25	27	31	34	34	32	30	30	33	33	31	31	30	28	29	31	27.1	33.7
13-Jul	29	26	27	A	24	22	24	27	31	33	33	34	36	36	37	37	38	38	39	33	27	19	15	12	29.5	38.6
14-Jul	11	11	A	11	13	10	13	17	23	27	30	27	29	31	30	33	34	33	33	28	27	20	19	14	22.8	33.7
15-Jul	13	A	8	7	4	4	5	7	17	24	29	34	36	38	41	41	42	38	38	36	31	33	25	19	24.8	42.3
16-Jul	A	14	11	12	9	5	7	11	18	25	31	35	36	37	40	41	40	37	39	37	34	27	24	A	26.0	40.7
17-Jul	19	16	17	16	16	18	18	17	22	30	37	40	41	42	37	32	29	33	33	33	29	22	A	15	26.6	41.5
18-Jul	19	17	16	18	14	13	13	18	24	26	28	32	34	35	39	39	39	36	32	29	22	A	18	19	25.2	39.1
19-Jul	20	19	19	20	19	17	18	21	25	29	31	32	33	35	36	36	35	34	32	29	A	25	28	26	26.9	36.0
20-Jul	25	24	23	22	20	16	17	14	21	23	32	36	36	36	36	38	40	37	36	A	30	25	23	23	27.5	39.8
21-Jul	21	22	22	21	16	13	10	11	15	17	20	25	26	28	33	32	33	36	A	34	32	26	25	28	23.6	36.0
22-Jul	27	24	19	19	18	16	18	19	22	27	28	30	33	33	33	34	35	A	38	38	29	24	22	19	26.2	38.1
23-Jul	19	18	16	16	14	8	11	17	21	23	27	28	30	30	30	30	A	30	30	30	23	7	8	5	20.4	30.4
24-Jul	6	9	13	9	15	13	16	18	22	28	33	34	36	40	41	A	41	41	40	37	28	13	16	17	24.6	41.1
25-Jul	10	9	14	12	9	8	8	14	20	29	38	51	51	49	A	53	54	53	47	42	38	33	30	27	30.4	54.5
26-Jul	26	29	29	29	27	25	18	22	27	32	36	41	48	A	47	47	44	44	43	43	42	43	34	25	34.8	47.9
27-Jul	25	24	25	22	21	17	20	21	24	25	24	24	A	23	26	28	29	29	29	28	29	26	23	23	24.6	29.5
28-Jul	23	23	21	21	20	18	20	22	26	33	36	A	41	42	43	43	43	43	43	42	37	34	35	30	32.2	43.2
29-Jul	32	30	31	29	26	15	14	20	27	35	A	40	41	41	40	36	33	39	37	32	29	26	18	14	29.8	41.3
30-Jul	14	17	12	8	8	9	11	19	27	A	34	35	32	30	29	28	28	29	30	30	28	25	25	24	23.1	35.1
31-Jul	23	22	22	22	22	21	20	22	A	25	27	28	28	28	29	29	29	30	30	27	21	21	14	22	24.3	30.0
	22.1	21.3	20.4	19.3	18.5	16.0	16.8	19.7	23.8	27.9	31.2	35.0	36.8	35.5	35.7	36.4	36.9	36.5	35.5	33.4	30.4	26.8	24.6	22.8	Diurnal Average	
	34.7	32.6	30.5	28.7	30.8	28.3	28.8	35.4	38.2	43.3	46.1	52.0	58.7	55.1	47.2	53.5	55.4	57.3	48.6	43.1	43.8	42.8	36.5	37.2	Diurnal Maximum	

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


Hourly Averages for O_3 at Henry Pirker
July 2008
AAAQO Limit = 82 ppb
Ozone (ppb)
100
80
60
40
20
0
03
05
07
09
11
13
15
17
19
21
23
25
27
29
31
Day

Peace Airshed Zone Association
Summary of Hourly Maximums

Henry Pirker - Ozone (O_3) - ppb
July 1, 2008 to August 1, 2008

Maximum Value: 62 ppb on Jul 3 13:00

Maximum Daily Average: 41.9 ppb on Jul 4

Minimum Value: 5 ppb on Jul 15 06:00

Minimum Daily Average: 23.1 ppb on Jul 23

Maximum Diurnal Average: 39.3 ppb at hour 18

Minimum Diurnal Average: 19.1 ppb at hour 6

Monthly Average: 30.24 ppb

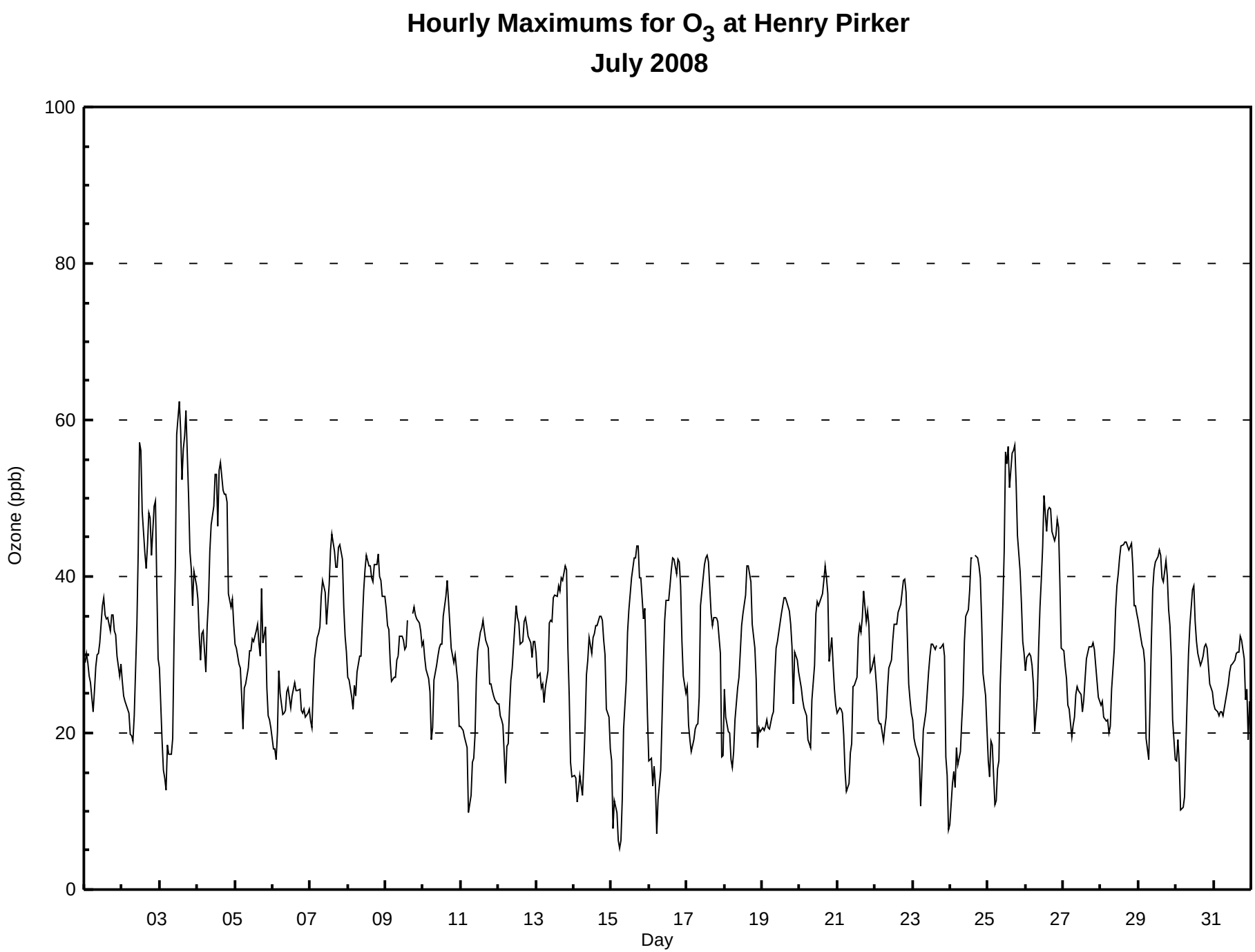
Percentiles: P_1 = 10.1 P_{10} = 18.2 Q_1 = 23.0 Median = 30.2 Q_3 = 36.3 P_{90} = 42.4 P_{99} = 56.5

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

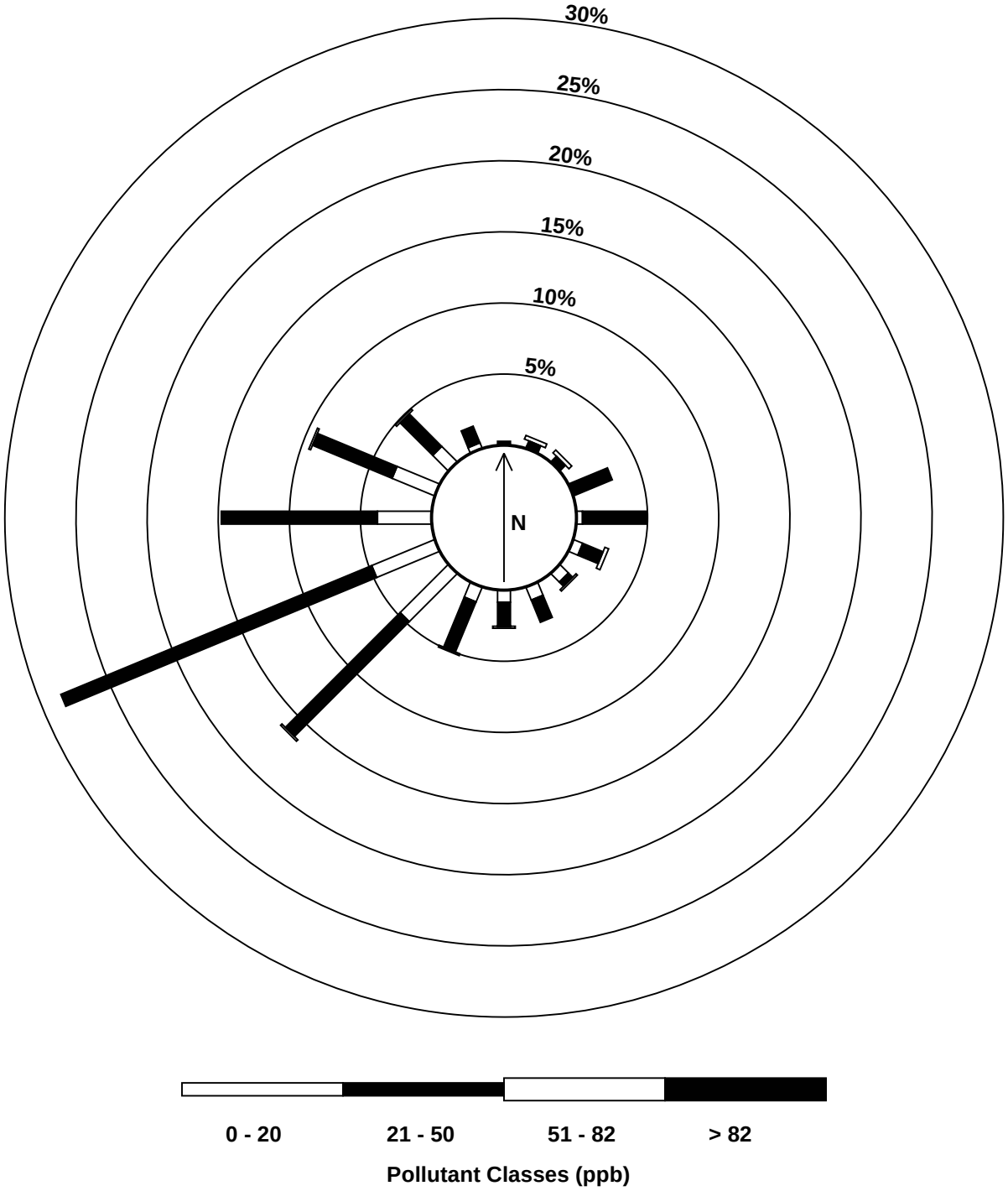
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Jul	29	30	29	27	26	23	25	28	30	30	32	36	37	35	35	35	A	35	35	33	32	30	27	29	30.9	37.3
2-Jul	27	25	24	23	22	20	20	19	22	34	43	57	56	48	43	A	44	48	47	43	49	50	39	30	36.2	57.2
3-Jul	28	19	15	14	13	18	17	17	19	32	41	58	62	59	A	56	58	61	50	43	41	36	41	39	36.5	62.4
4-Jul	37	33	29	33	33	28	34	37	43	47	49	53	53	A	54	55	51	50	51	50	38	36	37	34	41.9	54.5
5-Jul	31	31	29	28	25	21	26	26	28	30	30	32	A	33	34	32	30	38	32	34	26	22	22	21	28.7	38.4
6-Jul	18	18	17	20	28	25	22	23	23	25	26	A	25	26	26	25	25	26	23	22	23	22	23	23	23.2	27.9
7-Jul	22	21	26	30	32	33	34	37	39	38	A	36	39	43	46	43	41	41	44	44	42	36	32	30	36.1	45.5
8-Jul	27	27	25	23	26	25	28	30	30	A	38	41	43	41	41	40	39	41	41	43	40	39	37	37	34.9	43.0
9-Jul	36	34	33	29	27	27	27	29	A	32	32	32	31	31	C	C	C	35	36	35	35	34	33	31	32.0	36.1
10-Jul	32	30	28	27	25	A	21	27	29	30	31	31	31	35	37	40	37	34	31	29	30	28	26	21	30.0	39.5
11-Jul	21	20	20	19	18	A	12	16	17	20	27	30	33	33	34	33	32	31	26	26	25	25	24	24	24.7	34.5
12-Jul	24	22	22	21	A	18	19	23	27	28	34	36	35	34	31	32	34	35	34	32	31	30	32	32	29.0	36.3
13-Jul	30	27	28	A	26	24	26	28	34	34	34	37	38	38	39	38	40	40	41	41	31	25	16	14	31.7	41.4
14-Jul	15	14	A	13	15	12	16	21	28	29	32	30	32	33	34	34	35	35	34	32	30	23	22	18	25.5	34.9
15-Jul	16	A	11	10	6	5	6	11	21	27	33	36	38	40	42	42	44	44	40	40	35	36	29	22	27.6	43.9
16-Jul	A	17	13	16	13	7	12	15	22	29	34	37	37	39	41	42	42	40	42	42	39	32	27	A	29.0	42.4
17-Jul	26	21	19	18	19	21	21	21	25	36	40	42	42	43	42	35	34	35	35	35	34	30	A	17	30.0	42.8
18-Jul	26	22	20	20	17	16	18	22	26	27	30	34	35	38	41	41	40	39	34	31	27	A	21	20	28.0	41.4
19-Jul	21	20	21	22	21	20	22	23	27	31	32	34	35	36	37	37	37	36	34	31	A	30	29	28	28.9	37.4
20-Jul	27	26	24	23	22	19	19	18	24	29	35	37	36	37	38	40	41	40	38	A	32	29	26	24	29.7	41.3
21-Jul	22	23	23	23	20	15	13	13	18	19	26	26	27	32	34	33	35	38	A	36	34	28	28	30	25.8	38.2
22-Jul	28	25	22	21	21	19	21	22	26	28	29	32	34	34	34	35	36	A	39	40	38	26	24	22	28.6	39.7
23-Jul	22	19	18	17	17	11	15	20	23	25	28	30	31	31	31	31	A	31	31	31	30	17	15	8	23.1	31.4
24-Jul	8	14	15	13	18	16	18	21	25	32	35	36	38	42	42	A	43	42	41	40	34	28	25	21	28.1	42.7
25-Jul	16	14	19	19	11	11	15	16	26	36	43	56	54	57	A	56	56	57	52	45	41	37	32	30	34.8	56.7
26-Jul	28	30	30	30	29	26	20	25	31	36	40	44	50	A	48	49	49	46	45	45	47	46	39	31	37.5	50.4
27-Jul	30	29	27	23	23	19	21	22	25	26	25	25	A	24	27	30	31	31	31	31	31	29	25	24	26.5	31.5
28-Jul	24	24	22	22	22	20	21	26	31	36	39	A	42	44	44	44	44	44	43	44	41	36	36	35	34.1	44.4
29-Jul	34	32	31	31	29	19	17	24	32	38	A	42	42	43	43	40	39	42	40	36	34	30	22	17	32.9	43.4
30-Jul	16	19	16	10	11	12	18	25	30	A	38	39	34	32	30	29	29	30	31	31	31	26	26	25	25.6	38.8
31-Jul	24	23	23	22	23	23	22	23	A	26	28	29	29	29	30	30	30	32	32	30	24	26	19	24	26.2	32.4
	24.8	23.6	22.7	21.5	21.2	19.1	20.1	22.9	26.9	30.7	34.0	37.5	38.7	37.6	37.8	38.5	39.2	39.3	37.8	36.5	34.2	30.7	27.8	25.3	Diurnal Average	
	37.1	33.8	33.3	32.7	33.0	32.7	33.7	37.4	43.3	46.6	49.0	58.2	62.4	58.7	53.6	56.2	58.0	61.3	51.8	49.5	49.1	49.6	40.6	38.9	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span


Hourly Maximums for O_3 at Henry Pirker
July 2008
Ozone (ppb)
100
80
60
40
20
0
03
05
07
09
11
13
15
17
19
21
23
25
27
29
31
Day

Pollutant Rose for O_3 at Henry Pirker
July 2008



Peace Airshed Zone Association
Summary of Eight Hour Running Averages

Henry Pirker - Ozone (O_3) - ppb
July 1, 2008 to August 1, 2008

Number of Exceedences (AAAQO): 8-hr: 0
Maximum Value: 53.3 ppb on Jul 3 19:00

Minimum Value: 6.8 ppb on Jul 15 08:00

Percentiles: P_1 = 10.0 P_{10} = 17.2 Q_1 = 22.1 Median = 27.5 Q_3 = 32.7 P_{90} = 38.4 P_{99} = 46.9

Hours in Service:	744
Hours of Data:	737
Hours of Missing Data:	7
Hours of Calibration:	7
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily 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	34	33	30	28	26	24	24	25	25	25	26	27	28	30	31	32	33	33	34	34	33	32	31	30	33.8
2-Jul	29	28	26	25	24	23	22	21	20	20	22	26	30	33	36	39	42	45	46	43	42	42	40	38	45.9
3-Jul	35	31	27	24	19	16	13	12	11	13	16	20	27	33	36	42	48	52	53	52	48	45	44	42	53.3
4-Jul	39	36	34	33	32	30	29	29	29	31	33	36	39	41	44	46	47	47	47	46	44	43	42	40	47.3
5-Jul	38	36	33	31	29	27	25	24	24	24	24	25	26	28	29	30	30	29	29	28	27	26	24	23	37.6
6-Jul	22	20	19	17	18	18	18	18	19	20	21	22	22	22	23	24	24	24	24	24	23	23	23	22	24.3
7-Jul	22	21	21	22	23	24	25	27	29	31	32	33	34	36	38	38	39	39	40	41	41	40	38	37	40.9
8-Jul	35	33	31	28	26	25	24	23	24	23	25	27	30	33	35	37	38	38	39	39	39	39	38	38	39.4
9-Jul	37	37	35	34	32	30	29	28	27	27	27	27	28	29	30	N	N	N	N	N	N	N	33	33	37.5
10-Jul	32	32	31	30	28	28	26	25	24	24	25	25	27	27	29	31	32	32	31	31	30	29	28	26	32.4
11-Jul	24	23	22	21	20	19	17	16	15	15	16	17	19	21	24	26	28	29	30	29	29	27	26	25	29.6
12-Jul	24	23	22	22	21	20	20	19	20	21	22	24	25	27	29	30	31	32	32	32	31	31	31	31	32.1
13-Jul	30	29	29	29	28	27	26	25	26	27	28	29	30	32	34	35	36	36	37	37	36	34	31	28	37.0
14-Jul	24	21	18	15	13	12	12	12	14	16	18	20	22	25	27	29	30	31	31	31	31	30	28	26	31.4
15-Jul	23	22	18	15	12	10	8	7	7	9	12	15	19	24	28	32	36	37	39	39	38	38	36	33	38.8
16-Jul	32	28	24	21	18	14	11	10	11	13	15	18	21	25	29	33	36	37	38	38	38	37	35	34	38.4
17-Jul	31	28	25	22	19	18	17	17	18	19	22	25	28	31	33	35	36	36	36	35	33	31	30	28	36.3
18-Jul	26	24	22	19	17	16	16	16	16	18	19	21	23	26	29	32	34	35	36	35	34	34	31	28	35.7
19-Jul	25	23	21	20	19	19	19	19	20	21	22	24	26	28	30	32	33	34	34	34	34	32	31	30	34.2
20-Jul	28	27	26	25	24	23	22	20	20	20	21	22	24	27	29	32	34	36	37	37	36	35	33	31	37.1
21-Jul	28	26	24	23	21	20	18	17	16	15	15	16	17	19	22	24	27	29	30	32	32	32	31	30	32.4
22-Jul	29	28	27	25	23	22	21	20	19	20	21	22	24	26	28	30	32	32	34	35	34	33	32	29	34.8
23-Jul	27	26	23	20	18	16	15	15	15	16	17	19	21	23	26	27	28	29	30	30	29	26	22	19	29.9
24-Jul	17	15	13	10	9	10	11	13	15	17	19	22	25	28	31	33	36	38	39	39	38	34	31	29	39.3
25-Jul	25	21	18	15	12	12	11	10	12	14	17	22	27	33	36	42	47	50	51	50	48	46	44	41	51.4
26-Jul	37	34	32	30	29	28	26	26	26	26	27	29	31	32	36	40	42	44	45	45	44	44	43	40	45.1
27-Jul	37	35	33	30	27	24	22	22	22	22	22	22	22	23	24	25	26	26	27	27	28	28	28	27	37.4
28-Jul	26	26	25	24	23	22	21	21	21	23	25	25	28	32	35	38	40	42	43	43	42	41	40	38	42.6
29-Jul	37	35	34	32	31	28	26	25	24	25	24	25	27	31	35	37	38	39	38	37	36	34	31	29	38.6
30-Jul	26	23	20	17	15	12	12	12	14	13	17	20	24	27	29	31	31	30	30	29	29	28	28	27	30.7
31-Jul	27	26	25	24	23	23	22	22	22	22	23	24	24	25	27	28	28	28	29	29	28	27	25	24	28.7
Diurnal Maximums	39.4	36.7	35.5	33.8	32.1	30.4	29.4	28.8	29.3	30.9	33.2	36.0	38.8	41.1	43.6	45.9	47.6	52.2	53.3	51.8	48.4	45.9	44.0	42.0	

N - Not Valid
Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 65 ppb

Peace Airshed Zone Association
Summary of Hourly Averages

Henry Pirker - Carbon Monoxide (CO) - ppm
July 1, 2008 to August 1, 2008

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 0.3 ppm on Jul 2 11:00 Maximum Daily Average: 0.24 ppm on Jul 3

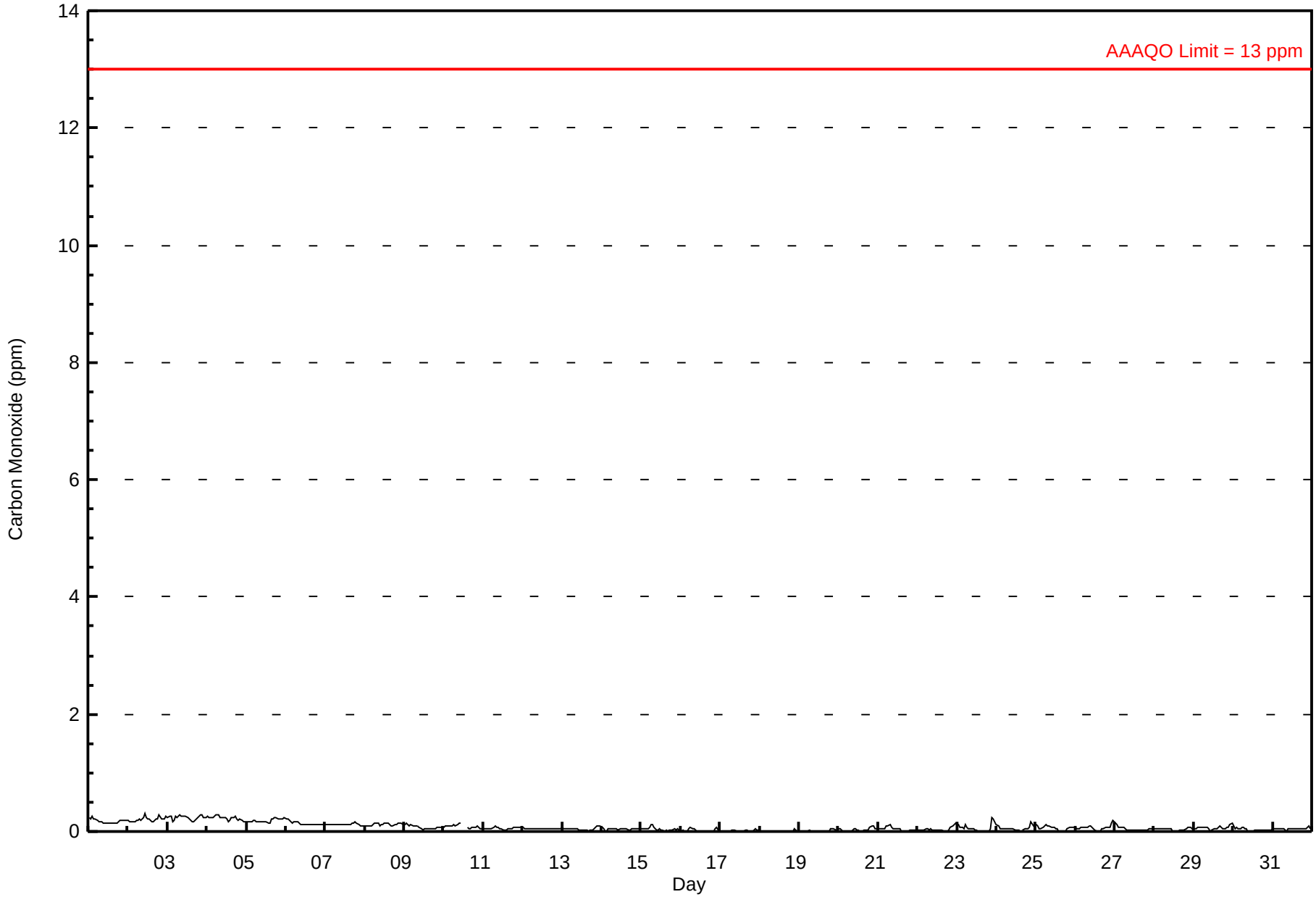
Minimum Value: 0.0 ppm on Jul 16 04:00 Minimum Daily Average: 0.00 ppm on Jul 18
Maximum Diurnal Average: 0.10 ppm at hour 22 Minimum Diurnal Average: 0.05 ppm at hour 15
Monthly Average: 0.080 ppm Percentiles: P_1 = 0.00 P_{10} = 0.00 Q_1 = 0.03 Median = 0.05 Q_3 = 0.12 P_{90} = 0.20 P_{99} = 0.28

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) 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	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	A	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.18	0.27
2-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.21	0.31
3-Jul	0.2	0.3	0.3	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	A	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.24	0.30
4-Jul	0.3	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	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.23	0.29
5-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	A	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19	0.23
6-Jul	0.2	0.2	0.2	0.2	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	0.1	0.1	0.1	0.1	0.1	0.14	0.22
7-Jul	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	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.12	0.16
8-Jul	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12	0.15
9-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.07	0.13
10-Jul	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.2	C	C	C	C	C	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.09	0.15
11-Jul	0.1	0.1	0.0	0.0	0.0	A	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.06	0.09
12-Jul	0.1	0.1	0.0	0.1	A	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.05	0.06
13-Jul	0.1	0.1	0.1	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.05	0.11
14-Jul	0.1	0.0	A	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.05	0.06
15-Jul	0.0	A	0.0	0.0	0.0	0.1	0.1	0.1	0.1	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	0.0	0.0	0.04	0.13
16-Jul	A	0.0	0.0	0.0	0.0	0.0	0.1	0.1	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	0.1	0.1	A	0.02	0.08
17-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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	A	0.0	0.01	0.06
18-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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.02
19-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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.1	0.0	0.0	0.01	0.05
20-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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.1	0.1	0.0	0.0	0.03	0.09
21-Jul	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.04	0.12
22-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	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.1	0.1	0.1	0.1	0.04	0.14
23-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.07	0.23
24-Jul	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.06	0.18
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	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.06	0.12
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	0.0	A	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.07	0.20
27-Jul	0.1	0.1	0.1	0.1	0.1	0.1	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	0.0	0.0	0.0	0.0	0.0	0.05	0.14
28-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.04	0.08
29-Jul	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.07	0.15
30-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	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	0.0	0.0	0.0	0.0	0.04	0.10
31-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	A	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.10
	0.10	0.09	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.08	0.07	0.07	0.06	0.06	0.05	0.06	0.06	0.07	0.07	0.08	0.09	0.10	0.10	0.10	Diurnal Average	
	0.26	0.26	0.27	0.24	0.24	0.29	0.29	0.28	0.25	0.27	0.31	0.26	0.24	0.21	0.19	0.24	0.23	0.25	0.24	0.29	0.30	0.29	0.25	0.25	Diurnal Maximum	

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

Hourly Averages for CO at Henry Pirker
July 2008



Peace Airshed Zone Association
Summary of Hourly Maximums

Henry Pirker - Carbon Monoxide (CO) - ppm
July 1, 2008 to August 1, 2008

Maximum Value: 0.8 ppm on Jul 24 22:00

Maximum Daily Average: 0.29 ppm on Jul 3

Minimum Value: 0.0 ppm on Jul 16 04:00

Minimum Daily Average: 0.01 ppm on Jul 18

Maximum Diurnal Average: 0.17 ppm at hour 22

Minimum Diurnal Average: 0.07 ppm at hour 15

Monthly Average: 0.117 ppm

Percentiles: P_1 = 0.00 P_{10} = 0.03 Q_1 = 0.05 Median = 0.09 Q_3 = 0.16 P_{90} = 0.26 P_{99} = 0.45

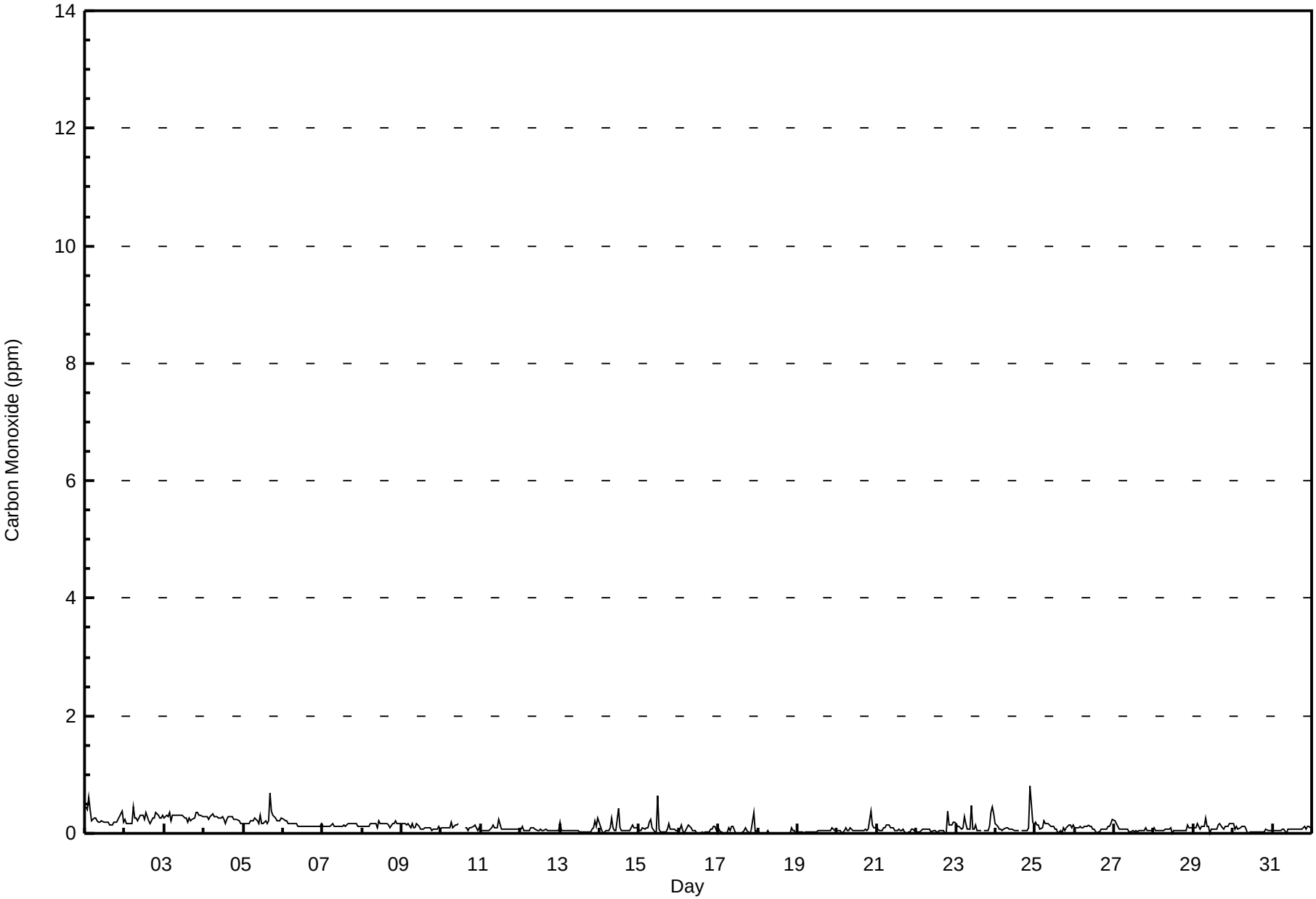
Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 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	0.5	0.4	0.6	0.4	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	A	0.2	0.2	0.2	0.2	0.3	0.4	0.2	0.26	0.61
2-Jul	0.2	0.2	0.2	0.2	0.2	0.5	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.4	0.2	A	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.27	0.45
3-Jul	0.3	0.3	0.3	0.4	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	A	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.29	0.36
4-Jul	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	A	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.26	0.34
5-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.2	A	0.2	0.2	0.2	0.7	0.4	0.3	0.3	0.2	0.2	0.2	0.3	0.24	0.69
6-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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	0.2	0.15	0.23
7-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	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	0.1	0.1	0.1	0.13	0.16
8-Jul	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	A	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	0.15	0.21
9-Jul	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.1	A	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	0.11	0.16
10-Jul	0.1	0.1	0.1	0.1	0.1	A	0.2	0.1	0.1	0.2	C	C	C	C	C	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.11	0.18
11-Jul	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	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	0.08	0.23
12-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	0.07	0.11
13-Jul	0.2	0.1	0.1	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.3	0.07	0.26
14-Jul	0.1	0.1	A	0.0	0.1	0.1	0.1	0.3	0.1	0.1	0.1	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	0.10	0.43
15-Jul	0.1	A	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.6	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.10	0.65
16-Jul	A	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	A	0.05	0.15
17-Jul	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.3	A	0.0	0.05	0.35
18-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	A	0.1	0.0	0.01	0.10
19-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	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	A	0.1	0.1	0.1	0.04	0.10
20-Jul	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	A	0.4	0.1	0.1	0.1	0.07	0.39
21-Jul	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	A	0.0	0.0	0.1	0.1	0.0	0.07	0.15
22-Jul	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.4	0.1	0.1	0.2	0.2	0.08	0.39
23-Jul	0.2	0.1	0.1	0.1	0.1	0.3	0.2	0.1	0.1	0.5	0.1	0.1	0.1	0.0	0.0	0.1	A	0.1	0.1	0.1	0.1	0.4	0.4	0.3	0.15	0.47
24-Jul	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	A	0.1	0.1	0.1	0.0	0.1	0.8	0.2	0.1	0.11	0.81
25-Jul	0.2	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	A	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12	0.22
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	A	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.10	0.23
27-Jul	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.07	0.22
28-Jul	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	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.07	0.14
29-Jul	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.3	0.1	0.1	A	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	0.12	0.26
30-Jul	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.06	0.16
31-Jul	0.1	0.0	0.1	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	0.07	0.12
	0.14	0.12	0.12	0.10	0.10	0.13	0.14	0.14	0.12	0.12	0.11	0.13	0.09	0.08	0.07	0.08	0.10	0.10	0.10	0.12	0.14	0.17	0.14	0.14	Diurnal Average	
	0.46	0.41	0.61	0.41	0.29	0.45	0.31	0.31	0.31	0.47	0.32	0.65	0.26	0.36	0.23	0.28	0.69	0.37	0.32	0.39	0.39	0.81	0.44	0.34	Diurnal Maximum	

C - Calibration

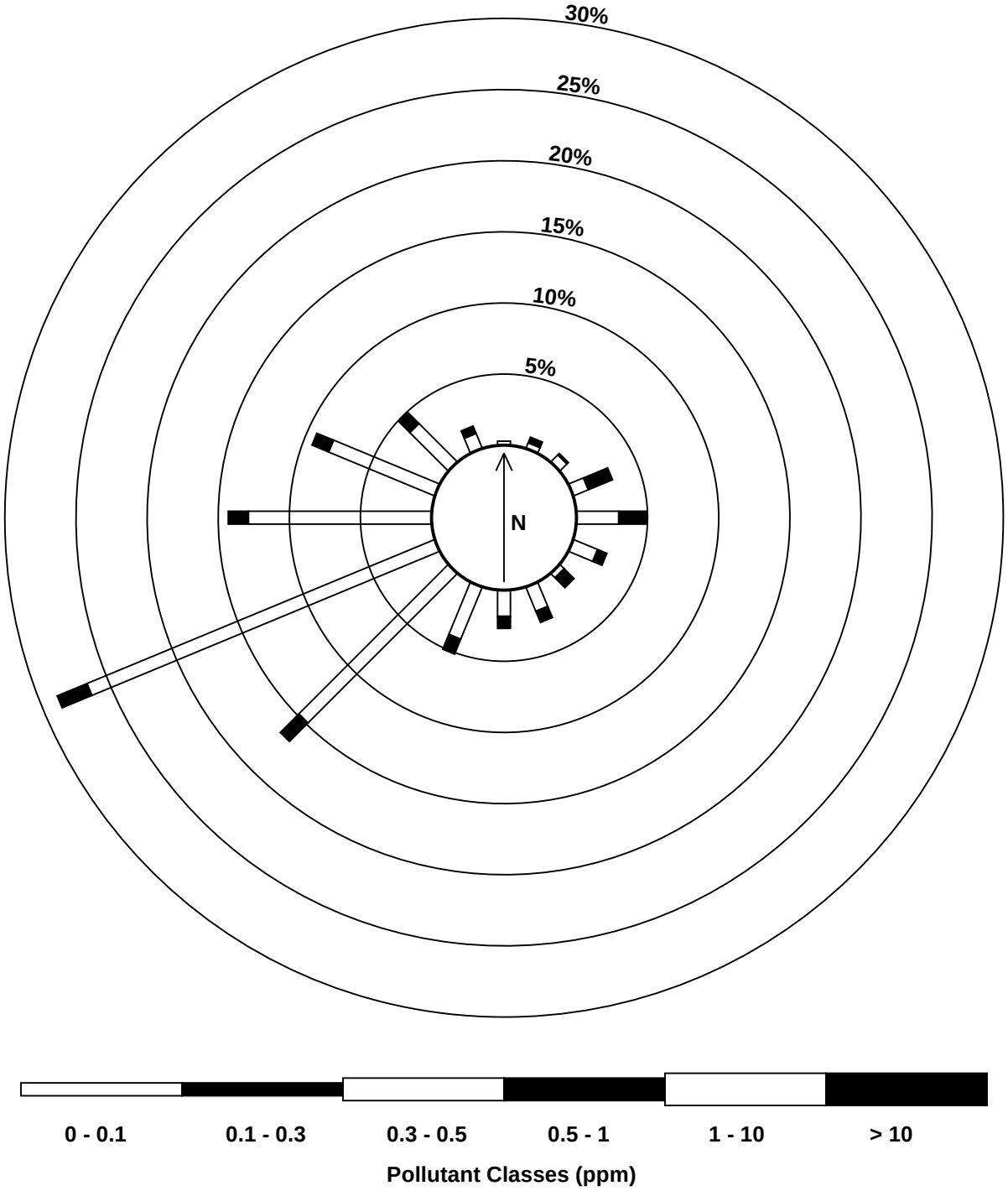
A - Automated Daily Zero Span

Hourly Maximums for CO at Henry Pirker
July 2008



Pollutant Rose for CO at Henry Pirker

July 2008



Peace Airshed Zone Association
Summary of Eight Hour Running Averages

Henry Pirker - Carbon Monoxide (CO) - ppm
July 1, 2008 to August 1, 2008

Number of Exceedences (AAAQO): 8-hr: 0
Maximum Value: 0.27 ppm on Jul 1 05:00

Minimum Value: 0.00 ppm on Jul 16 16:00

Percentiles: P_1 = 0.00 P_{10} = 0.01 Q_1 = 0.03 Median = 0.05 Q_3 = 0.12 P_{90} = 0.21 P_{99} = 0.26

Hours in Service:	744
Hours of Data:	735
Hours of Missing Data:	9
Hours of Calibration:	9
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-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	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.27
2-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	0.23
3-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26
4-Jul	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26
5-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	0.22
6-Jul	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	0.1	0.1	0.1	0.1	0.1	0.22
7-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
8-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
9-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	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.13
10-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	N	N	N	N	N	N	N	N	N	0.1	0.1	0.1	0.1	0.11
11-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	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.07
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	0.06
13-Jul	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.06
14-Jul	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07
15-Jul	0.0	0.1	0.1	0.1	0.0	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	0.0	0.0	0.0	0.0	0.07
16-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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03
17-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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02
18-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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01
19-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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02
20-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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05
21-Jul	0.1	0.1	0.1	0.1	0.0	0.0	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	0.0	0.0	0.0	0.07
22-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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.07
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.10
24-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.12
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10
26-Jul	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.09
27-Jul	0.1	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11
28-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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05
29-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
30-Jul	0.1	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09
31-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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.06
Diurnal Maximums	0.26	0.26	0.26	0.26	0.27	0.26	0.26	0.26	0.26	0.26	0.26	0.25	0.26	0.25	0.25	0.24	0.22	0.23	0.22	0.22	0.22	0.23	0.23	0.24	

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

Peace Airshed Zone Association
Summary of Hourly Averages

Henry Pirker - Total Hydrocarbons (THC) - ppm
July 1, 2008 to August 1, 2008

Maximum Value: 2.5 ppm on Jul 3 03:00

Maximum Daily Average: 2.07 ppm on Jul 25

Minimum Value: 1.7 ppm on Jul 10 18:00

Minimum Daily Average: 1.83 ppm on Jul 13

Maximum Diurnal Average: 1.98 ppm at hour 6

Minimum Diurnal Average: 1.82 ppm at hour 17

Monthly Average: 1.894 ppm

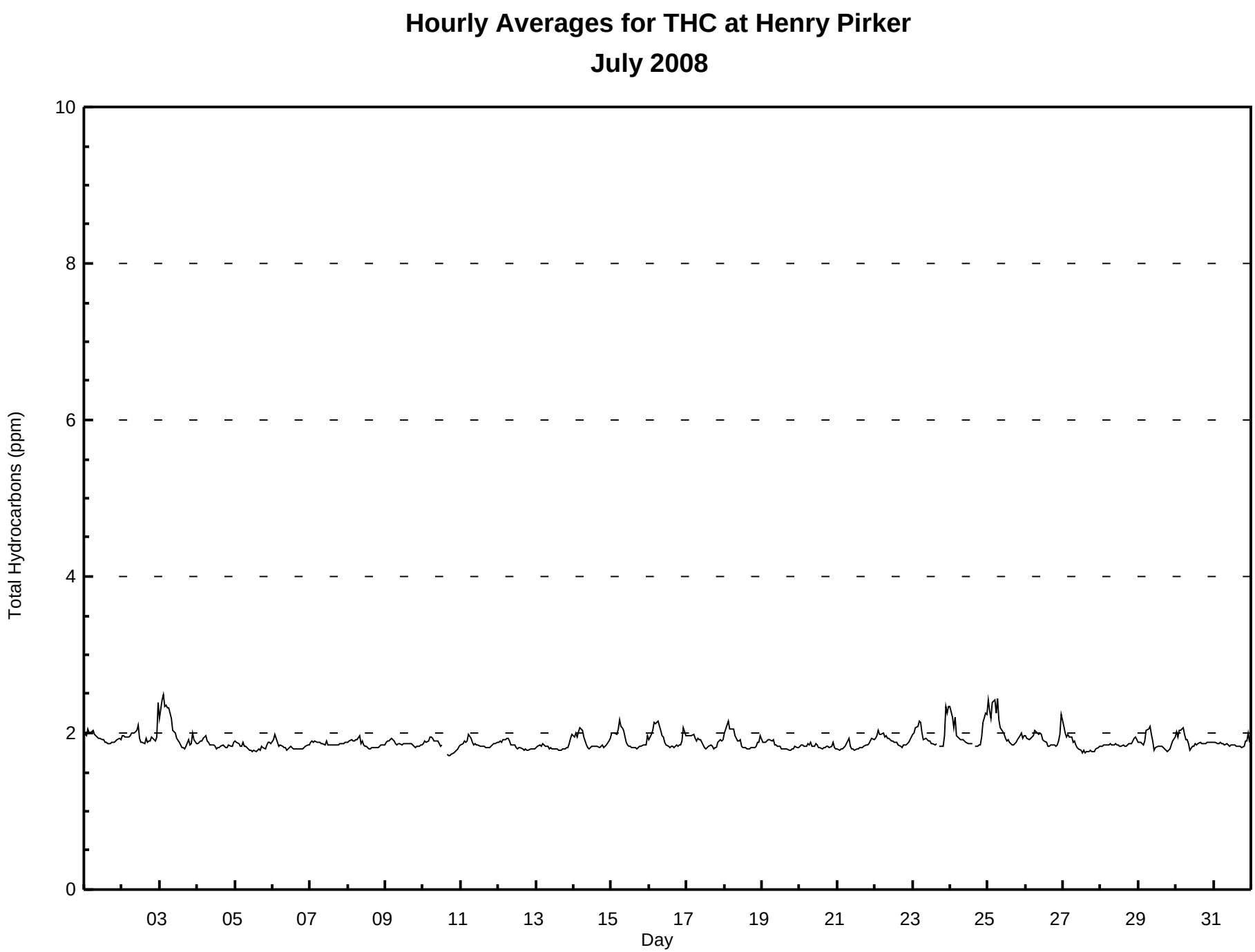
Percentiles: P_1 = 1.76 P_{10} = 1.80 Q_1 = 1.83 Median = 1.86 Q_3 = 1.92 P_{90} = 2.01 P_{99} = 2.38

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Jul	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	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.94	2.05
2-Jul	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.1	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.0	1.9	1.9	2.0	2.4	1.97	2.39
3-Jul	2.2	2.4	2.5	2.3	2.4	2.3	2.3	2.2	2.0	2.0	2.0	1.9	1.9	1.9	A	1.8	1.8	1.8	1.9	1.9	1.9	2.0	1.9	1.9	2.05	2.49
4-Jul	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.86	1.97
5-Jul	1.9	1.9	1.9	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.83	1.90
6-Jul	1.9	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.83	1.98
7-Jul	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	A	1.9	1.8	1.8	1.9	1.8	1.8	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.87	1.89
8-Jul	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.86	1.96
9-Jul	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	A	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.86	1.93
10-Jul	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.8	1.8	C	C	A	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.84	1.94
11-Jul	1.8	1.9	1.9	1.9	1.9	A	1.9	1.9	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.85	1.93
12-Jul	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.84	1.93
13-Jul	1.8	1.8	1.9	A	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.0	1.83	1.98
14-Jul	1.9	2.0	A	2.0	2.1	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.88	2.07
15-Jul	2.0	A	2.0	2.0	2.1	2.2	2.1	2.1	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.0	1.92	2.18
16-Jul	A	2.0	2.0	2.1	2.1	2.1	2.2	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.1	A	1.94	2.15
17-Jul	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.9	1.9	A	1.9	1.89	1.98
18-Jul	2.0	2.0	2.2	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.9	2.0	1.92	2.16
19-Jul	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.84	1.92
20-Jul	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.9	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.9	1.8	1.8	1.83	1.89
21-Jul	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.9	1.9	1.9	1.9	1.9	1.83	1.93
22-Jul	1.9	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	A	1.8	1.8	1.8	1.9	1.9	2.0	1.92	2.03
23-Jul	2.0	2.0	2.1	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	A	1.8	1.8	1.8	2.0	2.3	2.3	2.3	1.99	2.35
24-Jul	2.3	2.2	2.1	2.2	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.8	1.8	1.8	1.9	1.9	2.1	2.3	2.2	1.99	2.34
25-Jul	2.4	2.3	2.2	2.4	2.4	2.3	2.4	2.2	2.1	2.0	2.0	1.9	1.9	1.9	A	1.9	1.8	1.9	1.9	1.9	2.0	2.0	1.9	2.0	2.07	2.44
26-Jul	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	A	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.0	2.2	1.93	2.25
27-Jul	2.1	2.0	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	A	1.8	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.85	2.09
28-Jul	1.8	1.8	1.9	1.8	1.8	1.9	1.9	1.8	1.8	1.9	1.8	A	1.8	1.8	1.9	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.86	1.95
29-Jul	1.9	1.9	1.9	1.8	1.9	2.0	2.0	2.1	2.0	1.9	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.0	1.88	2.09
30-Jul	2.0	2.0	2.0	2.0	2.1	2.0	1.9	1.9	1.9	A	1.8	1.8	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.91	2.06
31-Jul	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.0	1.9	1.86	2.01
	1.95	1.96	1.96	1.97	1.97	1.98	1.96	1.94	1.90	1.88	1.87	1.85	1.84	1.83	1.83	1.82	1.82	1.82	1.83	1.83	1.86	1.90	1.92	1.95	Diurnal Average	
	2.42	2.42	2.49	2.38	2.42	2.32	2.44	2.18	2.07	2.03	2.10	1.94	1.91	1.91	1.88	1.88	1.88	1.90	1.91	1.96	1.97	2.34	2.26	2.39	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span


Hourly Averages for THC at Henry Pirker
July 2008
Total Hydrocarbons (ppm)
10
8
6
4
2
0
03
05
07
09
11
13
15
17
19
21
23
25
27
29
31
Day

Peace Airshed Zone Association
Summary of Hourly Maximums

Henry Pirker - Total Hydrocarbons (THC) - ppm
July 1, 2008 to August 1, 2008

Maximum Value: 3.4 ppm on Jul 3 03:00

Maximum Daily Average: 2.31 ppm on Jul 3

Minimum Value: 1.7 ppm on Jul 10 17:00

Minimum Daily Average: 1.88 ppm on Jul 13

Maximum Diurnal Average: 2.08 ppm at hour 3

Minimum Diurnal Average: 1.87 ppm at hour 17

Monthly Average: 1.975 ppm

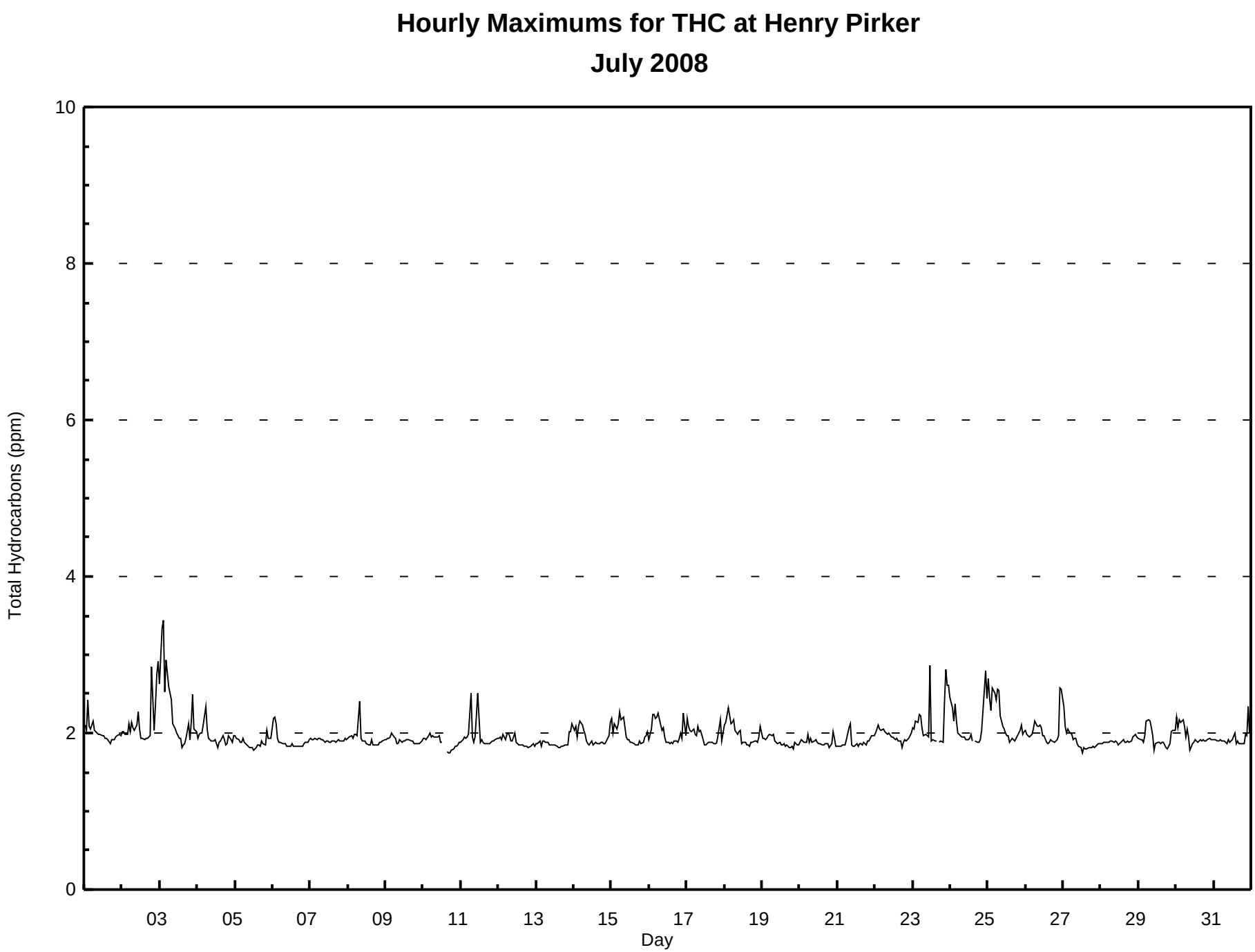
Percentiles: P_1 = 1.81 P_{10} = 1.84 Q_1 = 1.87 Median = 1.92 Q_3 = 2.00 P_{90} = 2.15 P_{99} = 2.80

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Jul	2.1	2.0	2.4	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.01	2.43
2-Jul	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.0	2.1	2.3	2.0	1.9	1.9	1.9	A	1.9	1.9	2.0	2.9	2.0	2.4	2.7	2.9	2.14	2.91
3-Jul	2.6	3.3	3.4	2.5	2.9	2.8	2.6	2.4	2.1	2.1	2.0	2.0	1.9	1.9	A	1.8	1.9	1.9	2.1	1.9	2.1	2.5	2.0	2.0	2.31	3.45
4-Jul	1.9	2.0	2.0	2.0	2.1	2.3	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	1.9	1.9	1.9	2.0	1.9	1.9	2.0	1.95	2.34
5-Jul	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.88	2.03
6-Jul	2.2	2.2	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	A	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.90	2.20
7-Jul	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	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.91	1.93
8-Jul	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.4	1.9	A	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.92	2.40
9-Jul	1.9	1.9	1.9	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	1.9	1.9	1.9	1.9	1.9	1.9	1.91	2.00
10-Jul	1.9	1.9	1.9	2.0	2.0	A	2.0	2.0	1.9	2.0	2.0	1.9	1.9	C	C	A	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.9	1.89	1.99
11-Jul	1.9	1.9	2.0	1.9	2.0	A	2.5	2.0	1.9	1.9	2.2	2.5	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.97	2.51
12-Jul	1.9	1.9	1.9	2.0	A	2.0	2.0	2.0	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.89	2.00
13-Jul	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.0	2.0	2.1	1.88	2.12
14-Jul	2.0	2.1	A	2.1	2.1	2.1	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	1.9	1.9	2.0	2.1	1.95	2.15
15-Jul	2.2	A	2.1	2.1	2.1	2.3	2.2	2.2	2.2	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	1.99	2.27
16-Jul	A	2.0	2.2	2.2	2.2	2.2	2.3	2.1	2.0	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.3	A	2.02	2.26
17-Jul	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2	A	2.0	1.97	2.18
18-Jul	2.1	2.1	2.3	2.2	2.1	2.1	2.2	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.9	1.9	A	1.9	2.1	2.00	2.31
19-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	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	A	1.9	1.9	1.8	1.89	1.98
20-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	A	1.9	2.0	1.9	1.8	1.89	2.01
21-Jul	1.8	1.8	1.8	1.9	1.9	1.9	1.9	2.1	2.1	1.8	1.8	1.8	1.9	1.8	1.9	1.9	1.8	1.9	A	1.9	1.9	1.9	2.0	2.0	1.89	2.12
22-Jul	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	2.0	2.0	1.97	2.10
23-Jul	2.1	2.0	2.1	2.1	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.4	2.8	2.6	2.6	2.15	2.86
24-Jul	2.4	2.3	2.2	2.4	2.1	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	2.0	1.9	A	1.9	1.9	1.9	1.9	2.0	2.3	2.8	2.4	2.09	2.80
25-Jul	2.7	2.4	2.3	2.6	2.5	2.4	2.6	2.5	2.2	2.1	2.1	2.0	2.0	2.0	A	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.0	2.0	2.18	2.70
26-Jul	2.0	2.0	1.9	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.6	2.6	2.03	2.57
27-Jul	2.3	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.91	2.35
28-Jul	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	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.90	1.99
29-Jul	1.9	1.9	1.9	1.9	2.0	2.1	2.2	2.1	2.1	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.9	2.0	2.0	2.0	1.94	2.17
30-Jul	2.2	2.1	2.2	2.1	2.2	2.1	1.9	2.1	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	1.97	2.20
31-Jul	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	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.3	2.0	1.93	2.33
	2.06	2.06	2.08	2.04	2.06	2.07	2.05	2.03	1.97	1.95	1.94	1.95	1.89	1.89	1.87	1.87	1.87	1.87	1.88	1.91	1.94	2.01	2.06	2.05	Diurnal Average	
	2.70	3.33	3.45	2.57	2.93	2.76	2.60	2.54	2.21	2.11	2.28	2.86	1.97	2.00	1.93	1.93	1.96	1.94	2.12	2.85	2.41	2.82	2.80	2.91	Diurnal Maximum	

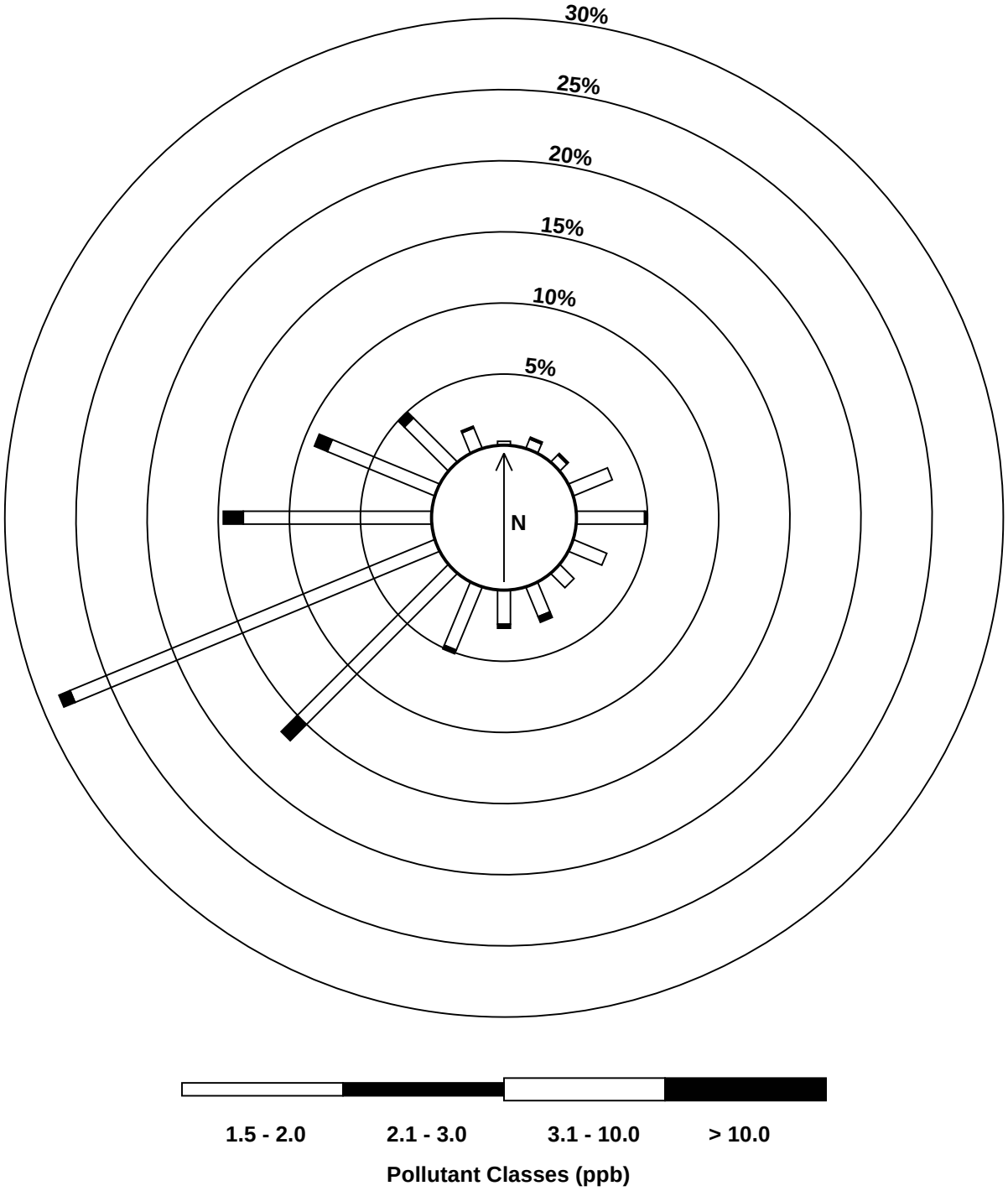
C - Calibration

A - Automated Daily Zero Span


Hourly Maximums for THC at Henry Pirker
July 2008
Total Hydrocarbons (ppm)
10
8
6
4
2
0
03
05
07
09
11
13
15
17
19
21
23
25
27
29
31
Day

Pollutant Rose for THC at Henry Pirker

July 2008



Peace Airshed Zone Association
Summary of Hourly Averages

Henry Pirker - Particulate Matter 2.5 ($PM_{2.5}$) - $\mu g/m^3$
July 1, 2008 to August 1, 2008

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 22 $\mu g/m^3$ on Jul 24 01:00
Maximum Daily Average: 9.4 $\mu g/m^3$ on Jul 3

Minimum Value: 0 $\mu g/m^3$ on Jul 4 13:00
Maximum Diurnal Average: 4.9 $\mu g/m^3$ at hour 22
Monthly Average: 3.39 $\mu g/m^3$

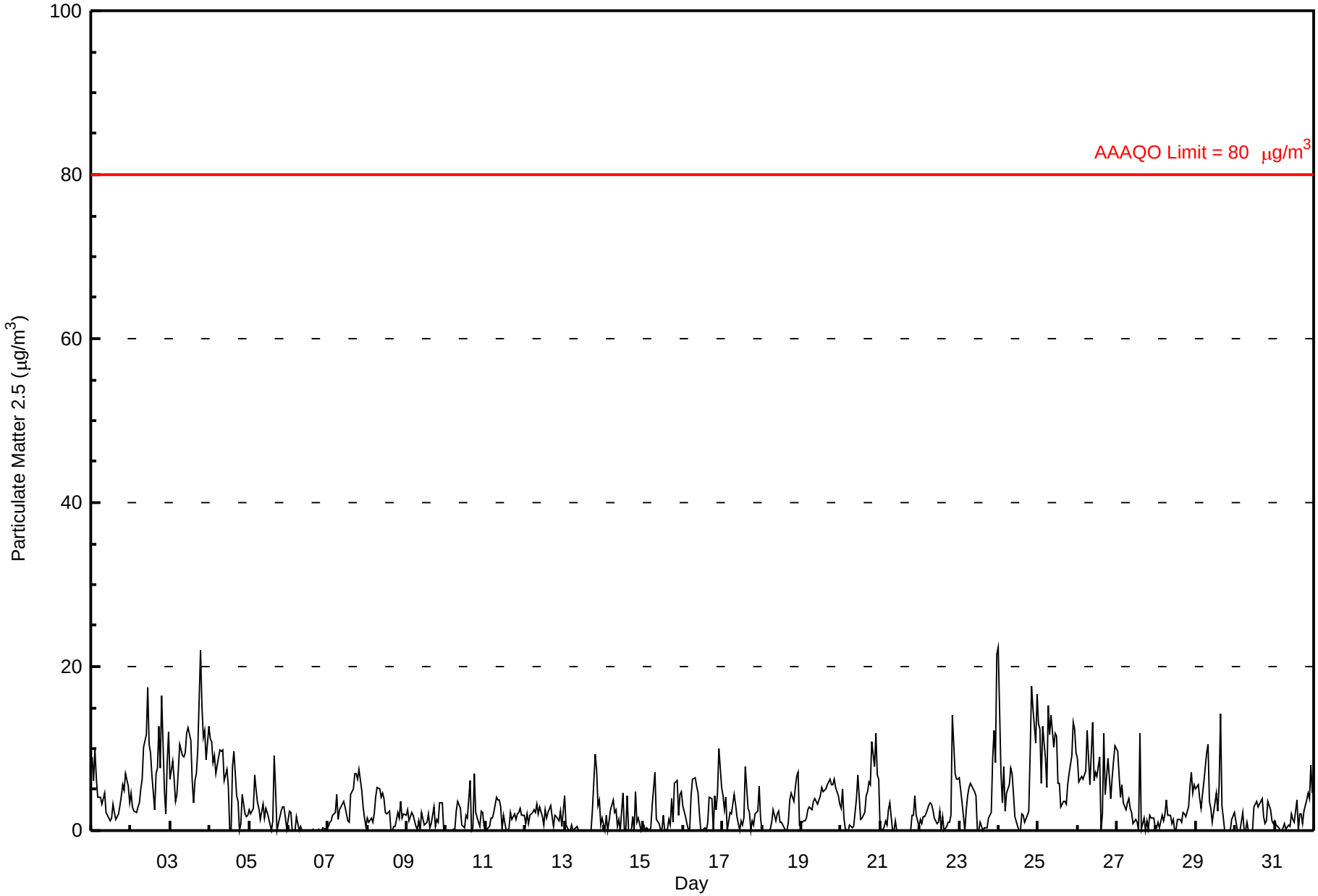
Minimum Daily Average: 0.4 $\mu g/m^3$ on Jul 6
Minimum Diurnal Average: 2.0 $\mu g/m^3$ at hour 14
Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.8$ Median = 2.2 $Q_3 = 4.8$ $P_{90} = 8.6$ $P_{99} = 16.2$

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) 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	9	6	10	6	4	4	3	4	5	2	2	1	2	3	2	1	2	3	4	6	5	7	5	3	4.2	9.9
2-Jul	5	3	2	2	3	3	5	6	10	12	17	11	9	7	2	7	8	13	8	16	5	2	8	12	7.4	17.5
3-Jul	6	9	6	4	4	7	11	9	9	9	12	12	11	6	3	6	7	10	22	15	11	12	9	13	9.4	22.0
4-Jul	11	11	8	9	7	9	10	10	10	6	7	5	0	0	8	10	4	4	0	1	4	2	2	2	5.8	11.2
5-Jul	2	2	3	7	5	3	3	1	3	2	3	2	2	0	1	9	5	0	1	2	3	3	2	0	2.7	9.1
6-Jul	2	2	0	0	0	2	0	0	0	BD	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	2.3
7-Jul	1	1	1	2	2	4	1	3	3	4	3	2	1	1	4	5	7	7	6	7	5	3	2	1	3.1	7.4
8-Jul	1	1	1	1	2	4	5	5	4	5	4	2	2	2	0	0	1	0	2	1	4	2	2	2	2.3	5.3
9-Jul	3	1	2	2	2	0	0	1	0	2	1	1	1	2	0	1	3	1	1	1	3	3	0	0	1.3	3.4
10-Jul	0	0	0	0	0	0	2	4	3	1	0	0	2	2	6	0	0	7	2	1	1	2	2	1	1.5	7.0
11-Jul	0	0	1	1	1	2	4	4	4	3	0	2	0	0	0	2	1	2	1	2	2	3	2	2	1.7	4.0
12-Jul	1	2	1	2	2	3	2	3	2	3	2	1	2	2	2	3	2	1	2	2	1	2	1	2	1.9	3.2
13-Jul	4	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	3	9	7	3	4	1	2	1.4	9.3
14-Jul	0	2	0	1	3	4	2	3	1	1	0	5	0	0	4	BD	0	2	0	5	1	1	0	1	1.5	4.8
15-Jul	1	0	0	0	0	3	5	7	1	1	0	0	2	0	0	1	1	4	1	6	6	2	4	5	2.1	7.1
16-Jul	3	2	1	0	0	4	6	6	5	5	2	0	0	0	0	1	4	4	0	4	3	5	10	5	3.0	10.0
17-Jul	4	3	4	0	2	2	3	4	3	2	0	1	1	1	8	3	2	0	1	1	2	2	6	1	2.4	7.9
18-Jul	0	0	0	0	0	0	1	2	1	2	2	1	1	0	0	0	1	4	5	4	5	7	7	1	1.8	7.1
19-Jul	1	1	1	2	2	3	2	4	4	4	3	4	5	5	5	5	6	6	6	6	6	5	4	3	3.9	6.3
20-Jul	3	5	2	0	0	1	1	0	1	4	7	4	1	1	2	4	5	6	6	11	8	12	7	6	4.0	11.9
21-Jul	0	0	0	1	1	2	3	0	0	1	BD	0	0	BD	BD	0	0	0	0	2	2	4	2	1	1.0	4.2
22-Jul	1	1	2	2	2	3	3	3	3	2	1	1	2	0	2	0	1	1	1	2	14	7	6	6	2.7	14.1
23-Jul	6	5	3	0	2	4	5	6	5	5	4	0	0	1	0	0	0	0	2	2	9	12	8	22	4.3	21.5
24-Jul	22	7	3	8	2	5	6	8	7	4	2	1	0	0	2	2	1	2	2	10	18	15	11	17	6.4	22.3
25-Jul	13	12	6	13	9	5	15	12	14	10	12	11	6	6	3	4	3	3	6	7	9	13	12	10	8.9	15.2
26-Jul	9	6	7	6	7	7	12	6	9	13	6	7	7	9	0	2	12	4	9	6	4	6	9	10	7.2	13.2
27-Jul	10	7	4	6	3	3	3	4	3	2	1	1	1	0	12	0	1	0	1	0	2	2	2	0	2.8	11.8
28-Jul	0	1	0	2	1	2	4	2	2	1	1	0	0	1	1	1	2	2	2	3	5	7	5	6	2.1	7.1
29-Jul	5	6	4	3	4	6	9	10	3	3	1	2	5	2	6	14	3	0	0	0	0	0	1	2	3.8	14.3
30-Jul	1	0	0	0	2	0	0	1	0	BD	BD	3	3	4	3	4	4	2	1	1	4	3	1	1	1.7	3.9
31-Jul	1	1	0	0	0	0	1	0	1	0	2	1	1	4	0	2	2	1	2	4	5	4	8	5	1.9	8.0
	4.1	3.1	2.4	2.6	2.5	3.1	4.2	4.1	3.7	3.7	3.3	2.7	2.2	2.0	2.6	2.9	2.8	2.9	3.3	4.4	4.8	4.9	4.4	4.5	Diurnal Average	
	22.3	12.3	9.9	12.8	8.8	9.0	15.2	11.7	14.1	13.2	17.5	12.5	11.0	9.0	11.8	14.3	11.9	12.6	22.0	16.4	17.6	15.0	12.4	21.5	Diurnal Maximum	

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

Hourly Averages for $PM_{2.5}$ at Henry Pirker
July 2008



Peace Airshed Zone Association
Summary of Hourly Maximums

Henry Pirker - Particulate Matter 2.5 ($PM_{2.5}$) - $\mu g/m^3$
July 1, 2008 to August 1, 2008

Maximum Value: 59 $\mu g/m^3$ on Jul 23 22:00

Maximum Daily Average: 19.1 $\mu g/m^3$ on Jul 3

Minimum Value: 0 $\mu g/m^3$ on Jul 30 11:00

Maximum Diurnal Average: 12.6 $\mu g/m^3$ at hour 23

Monthly Average: 9.45 $\mu g/m^3$

Minimum Daily Average: 5.0 $\mu g/m^3$ on Jul 6

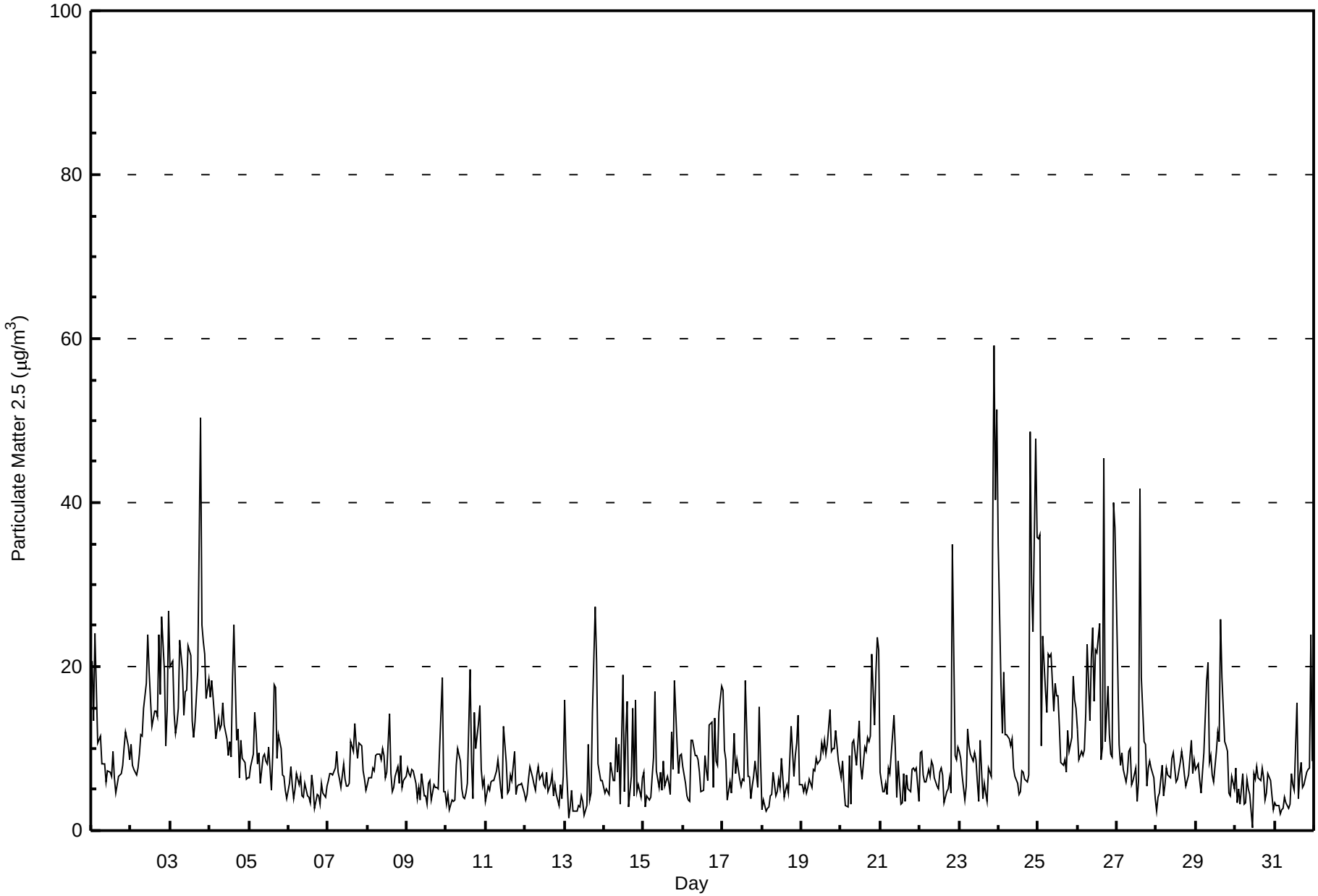
Minimum Diurnal Average: 7.0 $\mu g/m^3$ at hour 5

Percentiles: P_1 = 2.4 P_{10} = 4.0 Q_1 = 5.4 Median = 7.4 Q_3 = 10.8 P_{90} = 17.7 P_{99} = 38.1

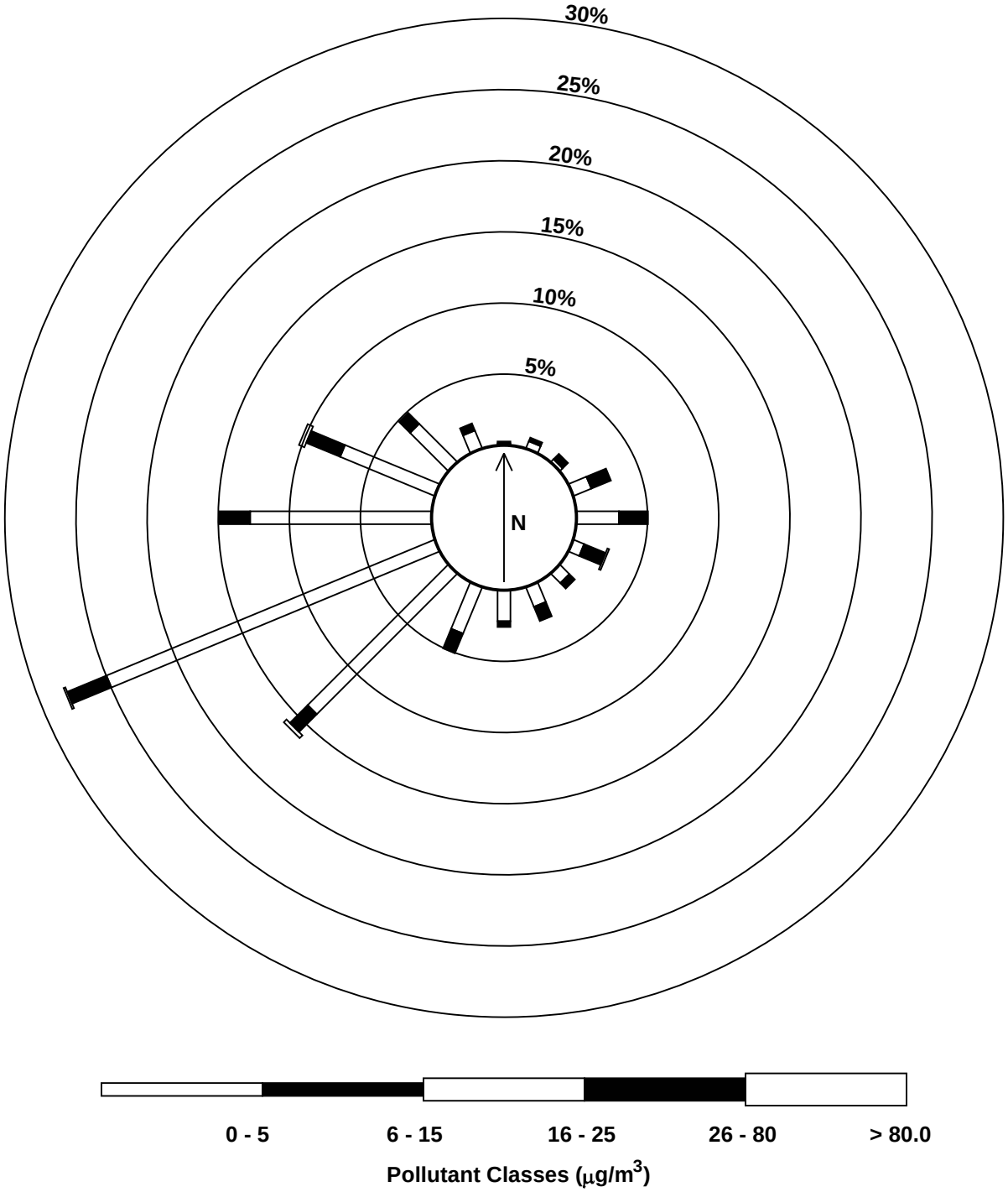
Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

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	21	13	24	17	11	12	8	8	8	6	7	7	7	10	6	5	7	7	7	8	10	12	10	9	10.0	24.1
2-Jul	11	8	7	7	8	9	12	12	15	18	24	20	16	13	15	15	14	24	17	26	20	10	15	27	15.0	26.8
3-Jul	20	21	14	12	13	15	23	20	14	17	17	23	21	13	11	13	16	20	50	25	23	21	16	18	19.1	50.4
4-Jul	16	18	16	14	11	14	12	13	16	13	11	9	11	9	18	25	11	12	6	11	9	8	6	7	12.4	25.2
5-Jul	7	8	9	14	12	8	9	6	9	9	9	8	10	5	10	18	17	9	12	10	7	7	5	4	9.2	17.8
6-Jul	6	8	6	4	5	7	6	7	4	4	6	4	4	3	7	5	3	4	4	3	6	5	4	5	5.0	7.8
7-Jul	6	7	7	7	8	10	7	6	5	8	6	5	5	6	11	10	13	10	9	11	10	7	6	5	7.7	13.0
8-Jul	6	6	7	8	7	9	9	9	9	10	9	6	7	14	7	5	5	7	8	6	9	5	6	7	7.6	14.3
9-Jul	8	7	7	7	7	6	4	5	4	7	4	4	3	6	6	4	6	5	5	5	10	19	5	5	6.2	18.7
10-Jul	3	4	2	4	4	4	8	10	8	5	4	4	5	6	20	8	4	14	10	13	15	7	5	6	7.3	19.6
11-Jul	3	5	5	6	6	6	7	9	7	5	4	13	8	5	5	7	6	10	4	5	6	6	6	5	6.2	12.8
12-Jul	4	4	6	8	6	6	5	7	8	6	7	6	5	7	5	6	7	4	6	4	3	6	4	7	5.7	7.9
13-Jul	16	9	2	3	5	2	2	2	3	3	4	4	2	3	11	4	5	14	27	21	8	7	6	6	7.0	27.2
14-Jul	5	5	5	4	8	6	6	11	7	11	3	19	5	12	16	3	7	15	4	16	5	6	4	6	7.8	18.9
15-Jul	7	3	4	4	4	7	9	17	7	5	7	5	8	5	7	6	4	12	7	18	10	7	9	9	7.6	18.3
16-Jul	8	6	4	4	3	11	11	9	9	9	7	5	5	9	7	6	13	13	5	14	8	8	14	18	8.6	17.6
17-Jul	17	10	9	4	6	5	8	12	7	9	6	5	6	6	18	7	7	4	5	7	8	5	15	8	8.1	18.4
18-Jul	2	4	2	3	3	4	4	7	4	5	6	5	9	4	5	6	5	9	13	7	9	11	14	6	6.1	14.1
19-Jul	6	5	6	5	5	6	5	7	7	9	8	9	11	10	11	9	10	15	10	10	10	12	8	8	8.4	14.7
20-Jul	6	8	5	3	3	9	3	11	11	8	11	13	8	6	10	10	11	11	12	22	13	19	24	22	10.8	23.5
21-Jul	7	5	5	6	4	8	7	12	14	10	4	8	3	3	7	4	7	5	5	7	8	7	8	3	6.5	14.1
22-Jul	9	10	7	6	6	8	7	9	8	6	5	5	7	8	7	3	5	5	6	5	35	9	9	10	8.1	34.9
23-Jul	10	9	7	4	5	12	10	9	9	9	9	6	4	11	4	6	5	3	8	7	35	59	40	51	13.8	59.1
24-Jul	35	18	12	19	12	12	11	10	11	8	7	6	4	5	7	7	6	6	7	49	30	24	48	36	16.2	48.6
25-Jul	36	36	10	24	17	14	22	21	22	15	18	17	16	13	8	8	9	7	12	10	11	19	16	15	16.4	36.1
26-Jul	12	9	10	9	10	14	23	13	21	25	16	22	22	25	9	10	45	11	18	12	9	9	40	37	17.9	45.5
27-Jul	20	10	8	10	8	6	7	10	10	6	6	8	4	6	42	19	11	11	5	8	8	8	6	4	9.9	41.7
28-Jul	2	4	5	8	4	6	8	7	6	9	10	8	6	6	8	10	8	7	5	7	9	11	7	9	7.0	11.0
29-Jul	8	8	6	5	7	9	18	20	8	9	7	6	10	12	11	26	19	11	10	10	5	4	7	5	10.0	25.8
30-Jul	8	3	5	3	7	3	3	6	5	4	0	7	6	8	6	6	8	6	4	5	7	6	4	3	5.2	7.7
31-Jul	3	3	3	2	3	3	4	3	3	3	7	6	5	16	4	7	8	5	6	7	8	8	24	8	6.2	23.9
	10.5	8.8	7.2	7.5	7.0	8.1	9.0	10.0	9.0	8.7	8.1	8.8	7.8	8.5	10.2	8.9	9.7	9.6	9.9	11.8	11.8	11.4	12.6	11.9	Diurnal Average	
	35.5	36.1	24.1	23.7	17.1	15.0	23.2	21.2	21.6	24.7	24.0	22.6	21.6	25.2	41.7	25.8	45.5	23.9	50.4	48.6	35.4	59.1	47.8	51.3	Diurnal Maximum	

Hourly Maximums for $PM_{2.5}$ at Henry Pirker
July 2008



Pollutant Rose for $PM_{2.5}$ at Henry Pirker
July 2008



Peace Airshed Zone Association
Summary of Hourly Averages

Henry Pirker - External Temperature (ET) - ^{o}C
July 1, 2008 to August 1, 2008

Maximum Value: 33 ^{o}C on Jul 3 17:00

Maximum Daily Average: 21.5 ^{o}C on Jul 3

Minimum Value: 7 ^{o}C on Jul 15 05:00

Minimum Daily Average: 12.3 ^{o}C on Jul 10

Maximum Diurnal Average: 23.4 ^{o}C at hour 15

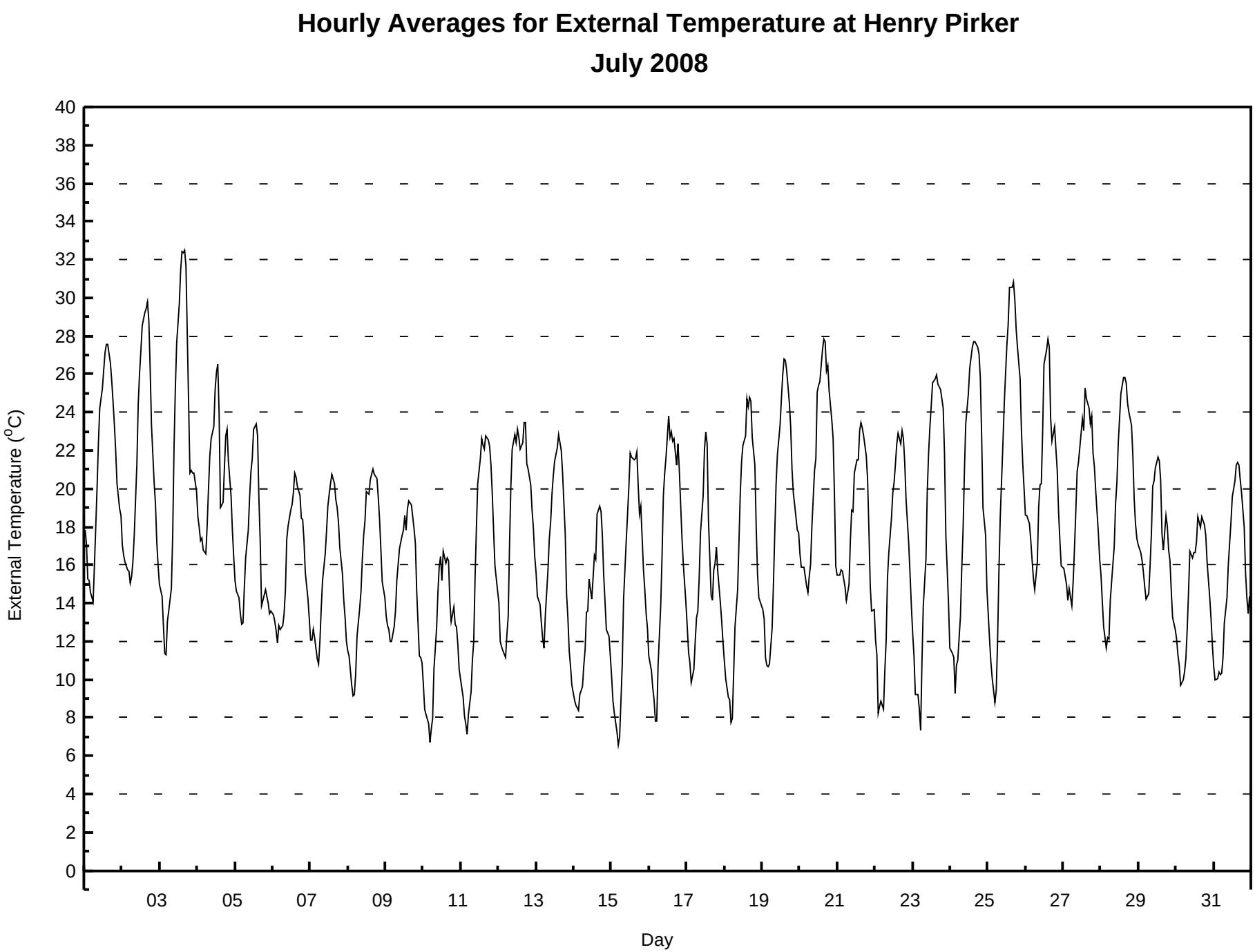
Minimum Diurnal Average: 11.3 ^{o}C at hour 5

Monthly Average: 17.56 ^{o}C

Percentiles: P_1 = 7.7 P_{10} = 10.8 Q_1 = 13.6 Median = 17.3 Q_3 = 21.4 P_{90} = 24.6 P_{99} = 30.3

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	18	17	15	15	15	14	16	18	20	22	24	25	26	27	28	28	27	26	25	23	22	20	19	19	21.2	27.6
2-Jul	17	17	16	16	16	15	15	16	18	21	24	26	27	29	29	29	30	29	26	23	20	19	17	16	21.4	29.8
3-Jul	15	14	13	11	11	13	14	15	18	22	25	28	30	31	32	32	33	32	24	21	21	21	21	20	21.5	32.5
4-Jul	19	18	17	17	17	17	18	20	22	23	23	25	26	27	24	19	19	21	23	23	21	20	18	16	20.5	26.5
5-Jul	15	15	14	13	13	13	15	16	18	20	21	22	23	23	23	20	17	14	14	15	14	14	13	14	16.6	23.4
6-Jul	13	13	13	12	13	13	13	13	15	17	18	19	19	20	21	21	20	20	18	18	17	16	14	13	16.2	20.8
7-Jul	12	12	13	12	11	11	12	14	15	17	18	19	20	20	21	20	19	19	18	17	16	14	13	12	15.6	20.8
8-Jul	12	11	10	9	9	10	12	14	15	16	18	18	20	20	20	21	21	21	21	20	18	17	15	14	15.9	21.0
9-Jul	13	13	13	12	12	13	14	15	16	17	18	18	19	18	19	19	19	19	18	17	15	11	11	11	15.3	19.3
10-Jul	10	8	8	8	7	7	8	11	13	15	16	16	15	17	16	16	16	14	13	14	13	13	12	11	12.3	16.7
11-Jul	10	9	8	8	7	8	9	11	12	15	18	20	22	23	22	22	23	23	22	21	20	18	16	15	15.9	22.8
12-Jul	14	12	12	11	11	12	13	17	20	22	23	22	23	23	22	22	23	23	21	21	20	19	18	16	18.5	23.5
13-Jul	16	14	14	13	12	12	13	16	17	18	20	21	21	22	23	22	22	21	18	15	13	11	11	10	16.4	22.8
14-Jul	9	9	9	8	9	10	11	12	14	14	15	14	15	16	16	19	19	19	18	15	14	13	12	11	13.3	19.1
15-Jul	10	9	8	7	7	7	9	11	14	17	19	20	22	22	22	22	22	20	19	19	16	15	13	13	15.0	21.9
16-Jul	11	10	10	9	8	8	11	14	16	20	21	22	24	23	23	22	23	21	22	21	19	18	16	14	16.9	23.8
17-Jul	13	11	11	10	11	12	13	14	15	18	20	22	23	22	18	14	14	16	16	17	16	14	13	12	15.2	23.0
18-Jul	11	10	9	9	8	8	10	13	15	17	20	21	22	23	25	24	25	25	23	21	18	16	14	14	16.7	24.8
19-Jul	14	13	11	11	11	11	13	15	18	20	22	23	25	26	27	27	26	25	23	21	20	19	18	18	18.9	26.8
20-Jul	17	16	16	16	15	15	15	16	18	21	22	25	25	26	27	28	28	26	26	25	24	23	20	16	21.0	27.9
21-Jul	15	15	16	16	15	15	14	15	17	19	19	21	22	22	23	23	23	23	22	21	18	15	14	14	18.1	23.5
22-Jul	12	11	8	9	9	8	10	12	15	17	18	20	20	21	22	23	22	23	23	21	19	17	16	14	16.4	23.0
23-Jul	12	11	9	9	8	7	11	14	16	20	22	23	24	26	26	26	25	25	25	24	22	18	16	14	18.1	26.0
24-Jul	12	11	11	9	11	11	13	16	18	21	23	25	26	27	27	28	28	27	27	26	23	19	18	15	19.7	27.7
25-Jul	13	12	11	10	9	9	12	16	18	22	24	26	28	29	31	31	31	30	28	27	26	23	21	20	21.1	30.8
26-Jul	19	19	18	17	16	15	15	16	19	20	20	23	27	27	28	27	24	22	23	22	21	19	17	16	20.5	27.8
27-Jul	16	15	15	14	15	14	15	17	19	21	21	23	24	23	25	25	24	23	24	22	21	20	18	16	19.6	25.2
28-Jul	15	14	13	12	12	12	14	15	17	19	20	22	24	25	26	26	26	25	24	23	22	20	18	17	19.2	25.9
29-Jul	17	17	16	16	15	14	14	16	18	20	20	21	22	21	20	18	17	19	18	17	16	15	13	13	17.2	21.6
30-Jul	12	11	11	10	10	10	11	13	15	17	16	17	17	17	19	18	19	18	18	18	16	14	13	12	14.6	18.5
31-Jul	11	10	10	10	10	10	11	13	14	16	17	18	20	20	21	21	21	20	20	18	16	14	13	14	15.5	21.4
	13.6	12.9	12.1	11.6	11.3	11.5	12.8	14.6	16.6	18.8	20.2	21.5	22.6	23.1	23.4	23.0	22.8	22.2	21.3	20.2	18.6	16.8	15.5	14.5	Diurnal Average	
	18.6	18.6	18.2	17.4	16.8	16.6	18.1	20.0	21.7	22.6	25.3	27.6	29.7	31.5	32.4	32.4	32.5	31.6	28.4	27.4	25.7	23.1	21.3	20.0	Diurnal Maximum	


Hourly Averages for External Temperature at Henry Pirker
July 2008
External Temperature (°C)
40
38
36
34
32
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
03
05
07
09
11
13
15
17
19
21
23
25
27
29
31
Day

Peace Airshed Zone Association
Summary of Hourly Averages

Henry Pirker - Relative Humidity (RH) - %
July 1, 2008 to August 1, 2008

Maximum Value: 95 % on Jul 15 05:00

Maximum Daily Average: 75.4 % on Jul 14

Minimum Value: 14 % on Jul 25 18:00

Minimum Daily Average: 40.1 % on Jul 24

Maximum Diurnal Average: 74.5 % at hour 5

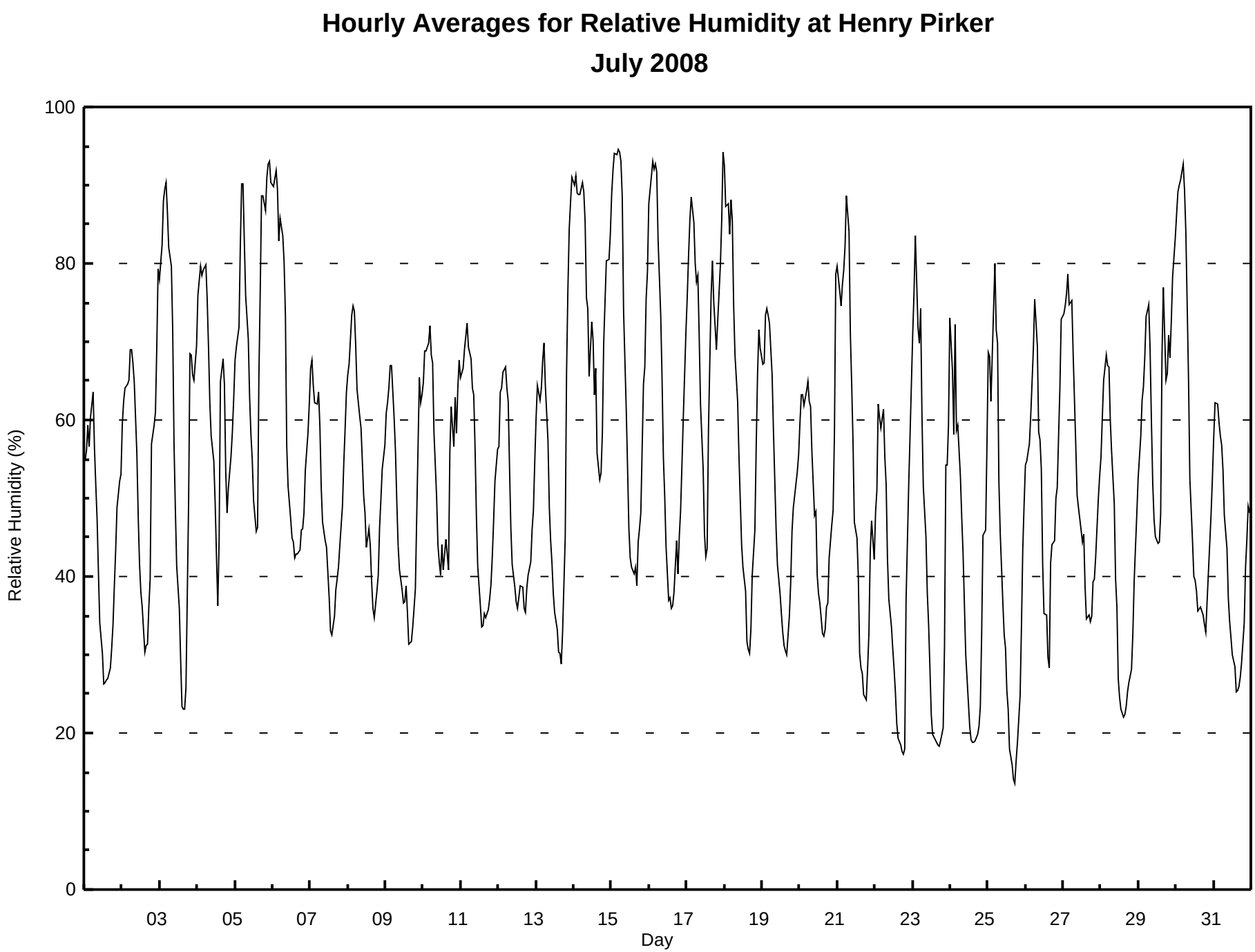
Minimum Diurnal Average: 34.7 % at hour 15

Monthly Average: 54.42 %

Percentiles: P_1 = 17.9 P_{10} = 30.2 Q_1 = 39.3 Median = 54.2 Q_3 = 68.3 P_{90} = 81.8 P_{99} = 93.0

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	55	56	59	57	60	64	56	52	47	41	34	30	26	26	27	27	28	31	34	39	43	49	52	53	43.6	63.6
2-Jul	59	62	64	65	65	69	69	67	65	56	48	42	38	36	30	31	31	36	40	57	59	61	69	79	54.1	79.4
3-Jul	78	82	88	90	90	87	82	80	72	57	49	41	36	29	23	23	23	26	49	69	68	66	65	69	60.1	90.3
4-Jul	76	78	80	78	79	80	75	69	62	58	55	49	43	36	45	65	68	65	53	48	51	55	58	63	62.1	79.8
5-Jul	68	69	72	82	90	90	83	76	70	63	58	55	50	46	46	66	77	89	89	87	91	93	93	90	74.7	93.0
6-Jul	90	91	92	90	83	86	84	80	73	57	52	47	45	44	42	43	43	43	46	46	48	54	58	62	62.4	91.9
7-Jul	67	68	64	62	62	64	59	51	47	45	44	40	37	33	33	35	38	40	41	44	49	54	59	64	50.0	67.6
8-Jul	66	67	73	75	74	70	64	61	59	55	50	48	44	46	44	39	36	35	38	40	46	50	54	57	53.7	74.5
9-Jul	61	62	64	67	67	60	56	50	44	41	38	37	37	39	35	31	32	34	36	39	48	65	62	63	48.6	67.0
10-Jul	65	69	69	70	72	68	67	58	50	44	42	40	44	41	45	43	41	56	62	57	63	58	64	68	56.5	72.0
11-Jul	65	67	69	71	72	69	68	64	63	56	48	41	36	34	34	35	35	36	37	39	43	47	52	56	51.6	72.4
12-Jul	57	64	64	66	67	64	62	54	46	42	39	37	36	37	39	39	36	35	38	40	42	46	48	55	48.0	66.9
13-Jul	60	64	63	64	68	70	64	57	49	45	42	38	35	33	30	30	29	33	45	66	77	84	88	91	55.2	91.0
14-Jul	90	91	89	89	89	90	89	85	76	74	66	72	70	63	67	56	52	53	58	70	75	80	80	84	75.4	91.1
15-Jul	89	92	94	94	95	94	93	88	74	61	54	46	42	41	40	41	39	44	46	48	65	67	75	79	66.8	94.6
16-Jul	88	91	93	92	93	92	83	73	65	55	50	44	37	37	36	36	38	45	40	45	48	54	60	71	61.2	93.0
17-Jul	76	81	86	88	85	80	78	78	71	62	54	45	43	44	59	76	80	75	72	69	73	80	86	94	72.2	94.3
18-Jul	92	87	88	84	88	85	75	68	62	55	50	44	41	38	32	31	30	33	40	46	57	66	71	69	59.7	92.5
19-Jul	67	67	73	74	73	72	66	59	52	46	41	38	35	33	31	30	30	35	39	46	49	50	53	56	50.7	74.3
20-Jul	60	63	63	62	64	65	62	62	56	48	48	40	38	37	33	32	33	36	37	42	47	49	58	79	50.5	78.7
21-Jul	80	76	75	77	79	82	89	84	71	65	57	47	45	40	30	28	28	25	24	28	33	43	47	42	54.0	88.7
22-Jul	48	51	62	60	59	61	55	52	42	37	33	31	28	25	21	19	18	18	17	18	37	52	58	64	40.4	64.4
23-Jul	71	76	84	72	70	74	60	52	45	38	34	28	22	20	19	19	19	18	19	21	31	54	54	59	44.1	83.5
24-Jul	73	66	58	72	59	59	53	47	43	37	30	24	21	19	19	19	19	20	21	23	33	45	46	57	40.1	73.1
25-Jul	69	68	62	68	80	72	70	52	46	37	33	31	25	23	18	16	14	14	16	19	25	33	43	49	40.9	80.0
26-Jul	54	55	57	60	65	69	75	69	58	57	54	42	35	35	30	28	42	44	45	50	51	58	64	73	53.0	75.4
27-Jul	74	75	76	79	75	75	68	62	57	50	49	46	44	45	39	35	35	34	35	39	40	42	50	53	53.2	78.6
28-Jul	55	60	65	68	67	67	60	56	49	40	36	27	25	23	22	22	23	25	26	28	33	39	44	48	42.1	68.4
29-Jul	53	58	63	64	68	73	75	69	60	52	47	45	44	44	48	68	77	65	66	71	68	73	78	83	63.0	83.2
30-Jul	86	89	90	91	93	89	84	75	65	52	45	40	40	38	36	36	36	35	34	33	37	44	48	53	57.0	92.7
31-Jul	58	62	62	60	58	57	53	48	44	37	34	32	30	28	25	25	26	27	29	34	41	45	49	48	42.2	62.1
	69.3	71.3	72.9	73.9	74.5	74.1	70.3	64.5	57.6	50.4	45.6	40.9	37.8	36.0	34.7	36.3	37.3	38.8	41.1	45.2	50.6	56.7	61.0	65.5	Diurnal Average	
	92.5	91.9	94.0	93.9	94.6	94.2	93.1	88.4	75.7	74.2	65.7	72.5	70.1	63.2	66.7	75.9	80.3	88.6	88.7	86.8	91.0	92.7	93.0	94.3	Diurnal Maximum	


Hourly Averages for Relative Humidity at Henry Pirker
July 2008
Relative Humidity (%)
100
80
60
40
20
0
03
05
07
09
11
13
15
17
19
21
23
25
27
29
31
Day

Peace Airshed Zone Association
Summary of Hourly Averages

Henry Pirker - Solar Radiation (SR) - W/m^2
July 1, 2008 to August 1, 2008

Maximum Value: 781 W/m^2 on Jul 9 13:00

Maximum Daily Average: 293.2 W/m^2 on Jul 7

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

Minimum Daily Average: 104.1 W/m^2 on Jul 29

Maximum Diurnal Average: 656.3 W/m^2 at hour 13

Minimum Diurnal Average: 0.3 W/m^2 at hour 3

Monthly Average: 232.97 W/m^2

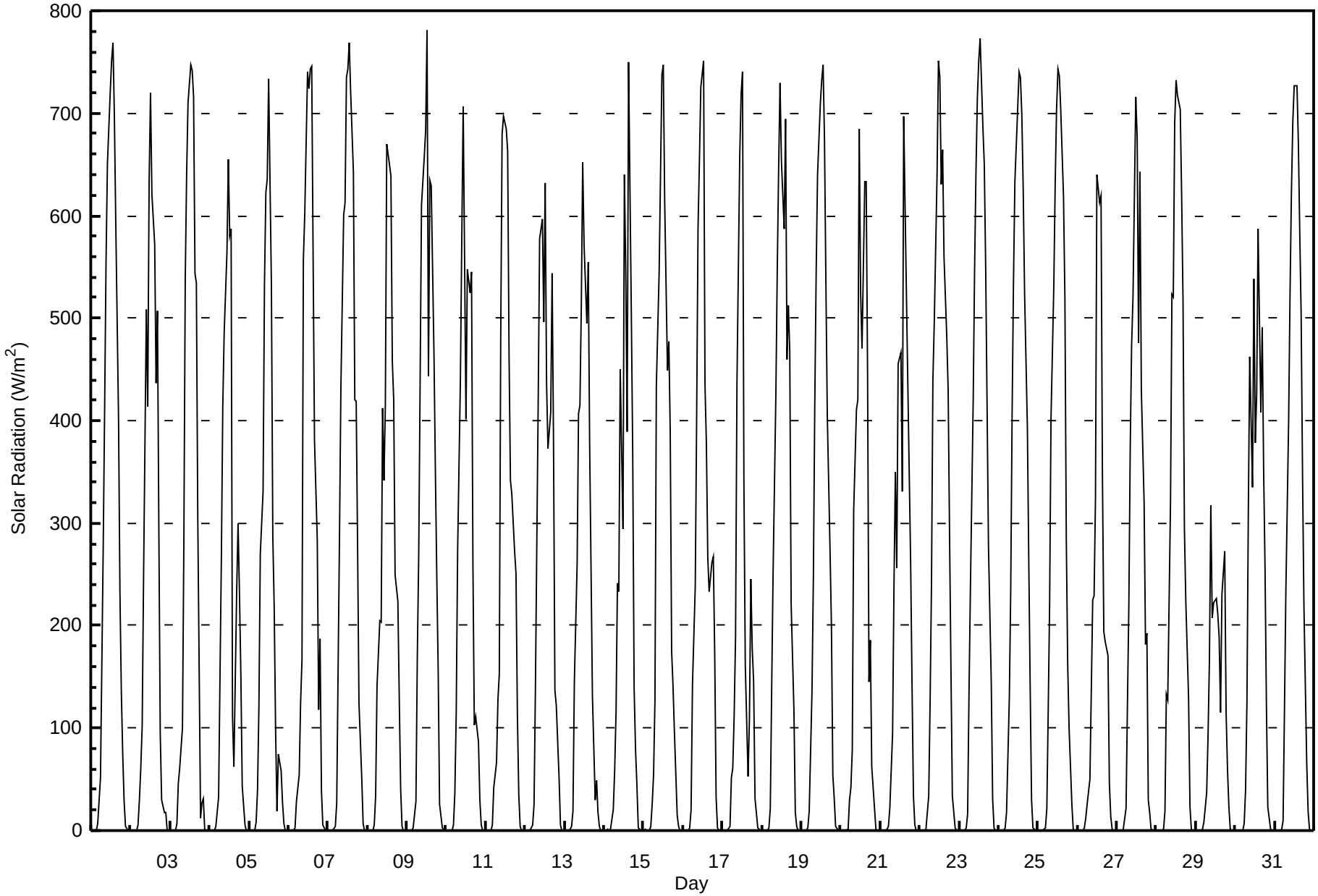
Percentiles: P_1 = 0.0 P_{10} = 0.3 Q_1 = 1.0 Median = 126.3 Q_3 = 442.7 P_{90} = 649.8 P_{99} = 750.4

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	0	0	0	0	7	51	166	280	413	556	651	720	751	769	697	593	401	232	136	75	29	5	0	0	272.1	768.9
2-Jul	0	0	0	0	6	29	61	102	247	509	414	634	720	620	573	436	508	294	95	30	17	17	0	0	221.3	719.6
3-Jul	0	0	0	0	7	46	61	101	283	539	641	711	746	742	716	544	535	307	12	28	31	1	0	0	252.1	746.5
4-Jul	0	0	0	0	5	33	150	267	413	485	564	655	580	588	111	63	234	300	232	153	43	6	0	0	203.3	655.3
5-Jul	0	0	0	0	8	39	120	270	331	533	623	637	734	531	288	219	100	19	75	58	27	7	0	0	192.4	733.5
6-Jul	0	0	0	0	2	28	54	125	167	557	602	741	724	743	746	562	381	283	117	186	40	5	0	0	252.7	746.4
7-Jul	0	0	0	0	4	27	159	289	432	601	613	735	743	769	721	643	420	418	279	125	51	7	0	0	293.2	769.4
8-Jul	0	0	0	0	6	34	141	204	203	412	341	416	670	649	638	458	421	250	224	129	41	5	0	0	218.5	670.3
9-Jul	0	0	0	0	3	29	171	269	435	610	658	683	781	444	635	629	464	350	248	157	25	2	0	0	274.7	780.8
10-Jul	0	0	0	0	6	36	115	273	441	579	707	558	401	548	524	545	262	102	112	87	30	6	0	0	222.2	706.7
11-Jul	0	0	0	0	5	42	67	128	154	478	679	696	684	664	465	342	329	273	251	113	35	5	0	0	225.5	696.5
12-Jul	0	0	0	0	6	25	141	283	422	578	596	496	632	437	373	408	543	380	136	121	51	5	0	0	234.9	632.2
13-Jul	0	0	0	1	3	19	145	260	407	415	511	652	571	495	555	377	256	132	30	49	18	4	0	0	204.2	652.1
14-Jul	0	0	1	0	2	21	58	115	241	233	450	295	640	543	389	750	505	367	140	81	44	2	0	0	203.3	749.8
15-Jul	0	1	0	0	4	26	54	128	434	544	640	738	748	614	449	477	387	175	142	97	15	4	0	0	236.5	747.5
16-Jul	1	0	0	0	3	21	143	239	402	588	653	725	752	436	379	267	233	261	267	173	32	3	0	1	232.5	751.6
17-Jul	0	0	0	0	4	51	61	113	190	435	658	718	740	341	161	53	110	245	177	145	32	3	1	0	176.8	740.5
18-Jul	0	0	0	0	2	22	139	251	424	547	645	730	654	588	694	459	513	468	221	119	18	4	0	0	270.8	730.1
19-Jul	0	0	0	0	3	19	136	246	415	544	641	709	733	747	674	535	407	273	200	54	31	4	0	0	265.5	747.5
20-Jul	0	0	0	0	2	30	42	78	311	410	421	684	525	470	633	633	447	145	186	63	21	2	0	0	212.7	684.4
21-Jul	0	0	0	0	1	4	22	95	238	350	257	455	466	331	697	607	519	433	260	142	33	5	0	0	204.9	697.3
22-Jul	0	0	0	0	2	34	126	241	440	496	640	751	735	631	665	560	481	429	287	157	33	3	0	0	279.7	750.5
23-Jul	0	0	0	0	2	16	135	235	419	547	642	715	752	773	686	650	548	413	278	145	31	2	0	0	291.4	773.0
24-Jul	0	0	0	0	2	17	129	233	406	535	633	704	740	736	699	625	524	394	264	141	30	2	0	0	284.0	740.2
25-Jul	0	0	0	0	2	22	118	220	403	531	631	703	743	737	704	618	520	284	163	101	26	2	0	0	272.1	743.3
26-Jul	0	0	0	0	3	12	26	50	137	225	229	325	640	613	620	347	194	184	170	46	13	1	0	0	160.0	640.5
27-Jul	0	0	0	0	1	22	124	219	372	474	521	716	677	477	643	430	320	182	192	29	18	1	0	0	225.8	715.8
28-Jul	0	0	0	0	1	19	133	128	321	524	521	690	733	717	704	620	516	294	224	129	23	1	0	0	262.5	732.5
29-Jul	0	0	0	0	1	9	37	92	166	318	208	223	227	212	188	115	230	272	115	59	23	1	0	0	104.1	317.6
30-Jul	0	0	0	0	1	6	39	127	312	462	335	539	379	425	587	408	490	352	258	123	24	1	0	0	202.9	586.9
31-Jul	0	0	0	0	1	9	118	233	400	523	622	692	727	727	672	583	503	348	219	67	19	1	0	0	269.4	726.9
	0.3	0.3	0.3	0.3	3.4	25.8	102.9	190.1	334.8	488.3	546.7	627.3	656.3	584.4	557.6	469.6	396.8	285.8	184.2	102.6	29.2	3.8	0.3	0.3	Diurnal Average	
	1.2	1.2	1.2	1.2	7.8	51.1	170.6	289.3	441.3	610.2	706.7	750.5	780.8	773.0	746.4	749.8	547.6	468.0	287.1	186.5	51.3	17.4	1.2	1.2	Diurnal Maximum	

Hourly Averages for Solar Radiation at Henry Pirker

July 2008



Peace Airshed Zone Association
Summary of Hourly Averages

Henry Pirker
July 1, 2008 to August 1, 2008
WS (km/h), WD (deg)

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1 Spd	8	6	3	6	5	5	8	11	10	12	12	11	12	11	12	12	14	15	14	11	10	8	7	8	9.4	14.8
Dir	65	67	74	62	60	110	73	81	85	92	96	93	83	78	84	95	96	85	76	85	87	72	75	82	83.2	85.1
2 Spd	7	8	8	10	9	6	5	5	4	1	2	2	7	7	10	8	9	11	12	6	10	4	3	1	4.9	12.1
Dir	97	72	65	71	93	85	121	81	132	235	220	48	103	82	126	135	84	98	119	104	186	326	310	224	101.1	119.4
3 Spd	1	2	2	4	2	3	5	3	3	3	2	2	3	4	3	6	4	5	17	10	3	8	12	9	2.6	16.6
Dir	147	341	160	296	34	101	163	266	291	327	291	193	173	200	263	289	313	221	216	306	129	178	193	223	226.8	215.9
4 Spd	8	8	4	5	3	5	7	7	8	13	14	11	15	15	15	13	8	7	10	13	9	15	16	11	9.1	16.4
Dir	262	262	249	207	208	213	191	200	238	236	245	245	271	277	266	243	174	177	215	241	240	237	241	234	238.7	240.8
5 Spd	11	16	13	11	7	5	9	10	11	13	11	10	7	7	7	6	6	4	4	2	8	6	5	5	4.6	15.5
Dir	232	240	255	283	311	286	306	314	279	293	307	304	313	310	263	22	339	27	68	153	158	145	146	129	282.7	239.6
6 Spd	3	5	7	6	8	8	7	10	10	20	23	29	27	26	23	23	26	24	27	26	18	13	11	9	15.9	28.8
Dir	130	177	241	278	241	227	245	242	263	255	251	258	247	254	246	245	246	244	246	245	246	235	231	230	245.9	257.8
7 Spd	8	10	15	15	16	14	13	21	24	26	24	24	24	24	22	25	24	28	28	29	27	19	15	9	20.1	29.3
Dir	227	228	239	241	243	235	240	250	247	249	242	245	243	244	244	241	238	241	243	242	243	239	232	221	241.4	241.7
8 Spd	11	11	6	7	8	11	10	11	12	17	19	15	21	22	20	22	26	22	23	22	12	12	10	10	14.7	26.3
Dir	226	235	247	265	256	237	255	245	242	236	242	220	235	244	229	246	253	256	231	245	227	232	222	220	239.6	253.0
9 Spd	6	7	6	8	11	14	16	22	27	28	27	28	26	25	23	24	24	25	22	22	17	17	13	14	18.1	28.5
Dir	214	209	240	241	227	235	223	237	242	238	231	242	239	241	230	232	237	258	264	261	281	286	235	227	242.2	237.9
10 Spd	11	10	12	11	8	10	10	17	19	17	16	17	14	16	20	19	15	13	11	6	6	8	10	15	11.9	20.1
Dir	235	235	233	233	219	240	241	242	253	273	267	273	273	284	278	290	287	252	256	248	222	207	206	237	255.1	278.2
11 Spd	16	14	13	11	9	11	10	9	11	14	15	13	13	14	15	15	15	16	20	19	17	13	11	7	12.8	19.5
Dir	235	237	239	257	266	245	246	249	262	246	250	265	281	277	280	277	274	271	252	238	239	234	228	223	253.6	251.9
12 Spd	8	5	5	5	3	6	6	8	11	12	16	26	25	26	27	26	27	25	31	23	20	16	18	18	16.1	30.8
Dir	224	275	293	232	243	232	221	242	233	242	241	253	257	252	249	252	258	251	262	254	248	242	241	243	249.6	261.6
13 Spd	17	13	14	15	16	11	11	19	24	21	17	18	16	17	19	17	18	13	26	15	10	3	3	2	13.8	25.7
Dir	247	225	234	238	241	242	250	245	253	269	271	271	281	273	272	272	275	262	275	292	332	244	190	214	261.7	274.7
14 Spd	4	3	4	4	8	6	7	10	11	12	14	15	13	13	12	11	9	8	7	7	9	7	7	6	8.2	15.1
Dir	315	290	292	308	322	291	275	266	284	278	261	271	288	305	274	307	291	276	242	289	305	303	254	274	284.2	271.0
15 Spd	6	3	1	2	1	3	2	4	5	5	5	2	5	7	7	9	8	12	9	2	7	4	6	5	3.9	12.4
Dir	262	303	254	290	226	306	308	238	209	242	216	293	241	234	251	250	265	292	342	286	352	356	282	289	274.2	291.9
16 Spd	5	4	4	5	3	4	4	6	6	5	5	6	4	4	4	3	6	13	10	10	5	5	3	3	3.0	13.2
Dir	303	309	274	281	265	264	249	241	233	214	196	169	210	298	328	318	273	251	302	345	39	93	48	343	275.7	251.3
17 Spd	5	6	6	6	6	6	3	6	2	3	9	3	1	3	20	15	8	12	8	6	4	1	5	6	4.3	20.2
Dir	327	306	296	282	232	270	340	193	143	281	323	310	303	314	243	257	253	288	277	230	264	260	96	140	267.3	243.3
18 Spd	4	5	3	6	4	5	7	10	12	10	7	9	7	6	4	7	5	11	14	18	9	6	6	8	7.2	17.6
Dir	221	247	259	225	195	236	223	233	230	239	244	212	246	267	241	229	249	236	236	260	264	286	270	239	241.8	260.4
19 Spd	7	10	5	4	6	5	5	7	6	10	15	14	13	13	12	14	17	21	17	11	10	10	10	10	9.4	21.3
Dir	218	232	276	208	228	225	205	187	203	211	222	227	227	219	230	219	249	274	287	278	282	255	269	256	241.5	274.2
20 Spd	8	8	7	9	6	5	6	3	5	3	5	6	8	7	6	8	7	7	6	3	5	4	17	16	3.6	16.8
Dir	258	239	238	250	273	297	299	249	185	149	162	207	205	238	203	176	148	104	163	285	332	26	308	297	244.2	307.9
21 Spd	11	11	10	9	5	5	6	8	5	7	12	13	16	19	26	23	25	26	23	15	14	11	9	12	12.0	26.0
Dir	288	280	256	235	201	198	161	170	215	217	242	240	261	256	256	256	262	271	277	282	279	288	295	280	259.5	270.9
22 Spd	5	8	3	6	4	5	6	7	9	10	7	9	10	7	6	4	3	1	3	6	10	10	7	5	3.3	10.3
Dir	287	242	265	182	153	165	253	258	248	249	235	213	185	234	221	194	246	111	85	88	101	120	113	107	200.7	248.9

Peace Airshed Zone Association
Summary of Hourly Averages

Henry Pirker
July 1, 2008 to August 1, 2008
WS (km/h), WD (deg)

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
23 Spd	5	4	3	7	5	2	7	10	9	7	6	8	9	7	10	12	13	12	9	6	3	2	3	3	4.6	13.5
Dir	106	118	170	236	244	233	232	233	235	239	208	219	284	290	302	307	313	315	312	311	295	215	226	302	269.4	313.3
24 Spd	4	3	3	2	7	7	8	12	13	15	15	14	13	16	14	15	13	14	10	9	5	3	5	2	8.9	15.5
Dir	246	224	263	286	280	274	278	256	236	236	248	257	250	260	261	265	263	263	272	278	288	268	278	302	260.0	260.0
25 Spd	3	2	4	3	2	5	4	5	4	4	4	5	8	7	3	3	4	4	7	9	8	9	9	4	1.6	9.3
Dir	250	256	293	306	215	277	267	207	215	234	147	142	113	108	346	39	11	13	90	81	80	69	68	47	85.1	69.3
26 Spd	4	8	8	7	7	3	4	5	7	9	10	4	9	15	14	11	22	18	11	6	9	6	3	1	2.0	22.1
Dir	51	66	67	73	88	111	310	330	69	162	210	321	308	261	284	280	240	254	240	172	104	111	104	284	249.0	240.1
27 Spd	4	3	3	5	9	10	14	12	14	16	16	14	16	18	15	15	15	13	14	15	16	18	16	14	11.9	18.1
Dir	213	159	233	241	228	249	244	238	241	227	214	213	211	236	264	277	267	251	256	265	276	247	240	241	243.2	246.8
28 Spd	12	10	7	8	12	13	13	11	14	17	14	13	9	4	6	3	7	4	8	8	8	8	10	8	4.4	17.1
Dir	239	244	262	275	229	234	250	262	264	301	308	301	295	254	225	203	181	149	155	119	100	93	99	101	247.3	300.5
29 Spd	9	9	8	6	2	5	6	6	6	8	10	4	4	8	14	14	7	8	10	7	8	5	3	4	3.5	14.1
Dir	92	84	76	83	181	286	294	295	302	302	295	290	210	243	257	249	263	282	282	265	240	237	154	150	266.4	257.5
30 Spd	2	4	4	2	5	7	5	11	12	21	30	33	31	30	32	35	32	31	33	29	24	20	16	14	18.7	34.9
Dir	292	289	306	306	175	240	297	244	249	245	242	243	242	246	242	245	246	240	252	257	246	235	235	225	245.1	244.6
31 Spd	13	14	14	18	18	18	18	22	25	28	32	28	25	23	20	19	20	19	17	12	9	8	3	8	17.6	31.5
Dir	222	224	232	240	245	241	247	242	244	251	246	244	238	235	234	233	241	240	259	267	277	276	285	222	242.8	246.4
Spd	4.4	4.4	4.4	4.6	4.6	5.6	5.9	8.0	9.0	10.5	11.1	10.8	10.4	11.1	12.0	11.3	11.0	10.8	10.8	8.7	5.8	4.9	5.0	5.2	Diurnal Average	
Dir	238.7	239.4	249.4	250.2	238.0	240.8	246.6	242.5	244.7	248.5	245.5	247.4	248.4	254.1	251.8	252.9	254.3	255.8	254.4	258.5	254.5	241.1	236.6	236.1		
Spd	17.0	15.5	15.0	18.3	17.6	18.0	18.2	22.4	27.0	28.5	31.5	32.9	31.2	30.1	31.9	34.9	32.2	30.6	32.8	29.3	27.0	20.0	18.5	18.0	Diurnal Maximum	
Dir	247.3	239.6	238.7	240.3	244.6	241.1	246.5	241.5	242.0	237.9	246.4	243.2	242.3	245.7	242.1	244.6	246.4	239.9	251.7	241.7	242.6	234.7	240.7	243.0		

Maximum Speed Value: 35 km/h on Jul 30 16:00
Minimum Speed Value: 1 km/h on Jul 2 10:00
Maximum Daily Speed Average: 20.1 km/h on Jul 7
Minimum Daily Speed Average: 1.6 km/h on Jul 3
Maximum Diurnal Speed Average: 12.0 km/h at hour 15
Minimum Diurnal Speed Average: 4.4 km/h at hour 3

Monthly Average Velocity: 7.89 km/h 248.59 deg
Speed Percentiles: $P_1 = 1.4$ $P_{10} = 3.3$ $Q_1 = 5.5$ Median = 9.0 $Q_3 = 14.1$ $P_{90} = 21.9$ $P_{99} = 30.9$
All monthly, daily, and diurnal averages have been calculated using vector methods

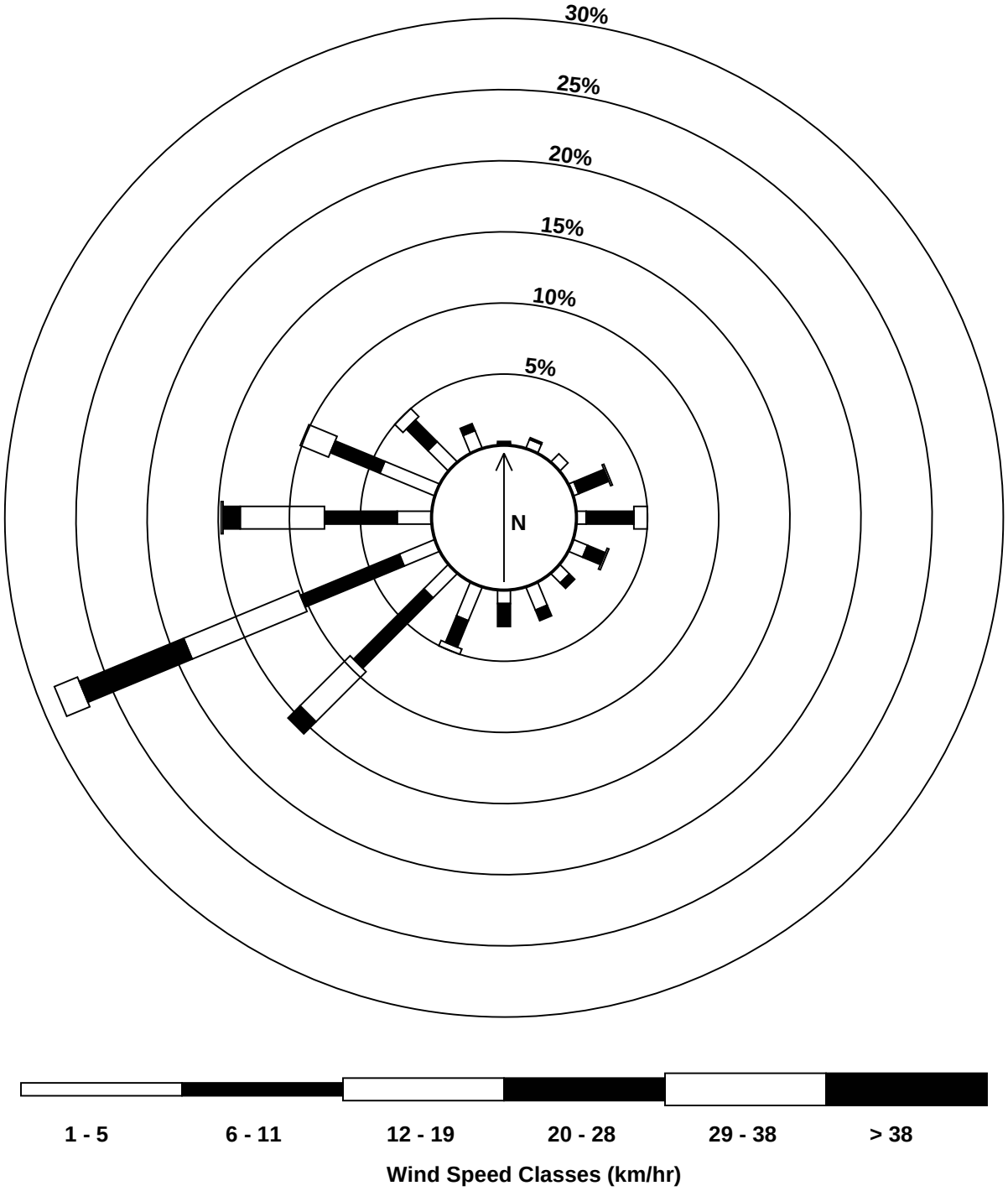
Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Percentage 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	0.94	0.67	0.00	0.00	0.00	0.00	1.61
NorthEast	1.08	1.08	0.00	0.00	0.00	0.00	2.15
East	1.75	5.24	1.48	0.00	0.00	0.00	8.47
SouthEast	1.88	1.75	0.13	0.00	0.00	0.00	3.76
South	1.88	3.23	0.13	0.00	0.00	0.00	5.24
SouthWest	4.57	13.58	12.10	6.18	1.75	0.00	38.17
West	4.84	10.48	10.62	4.17	0.67	0.00	30.78
NorthWest	4.17	4.17	1.48	0.00	0.00	0.00	9.81
Total	21.10	40.19	25.94	10.35	2.42	0.00	100.00

Wind Rose for WS at Henry Pirker

July 2008



Peace Airshed Zone Association
Summary of Hourly Standard Deviations

Henry Pirker - Wind Direction (WD) - deg
July 1, 2008 to August 1, 2008

Maximum Value: 96.4 deg on Jul 17 13:00

Minimum Value: 4.0 deg on Jul 31 21:00

Percentiles: P_1 = 5.3 P_{10} = 7.7 Q_1 = 10.4 Median = 16.1 Q_3 = 31.3 P_{90} = 53.4 P_{99} = 84.3

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 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	15	40	10	12	28	11	8	13	12	16	20	22	25	21	21	13	13	9	10	8	8	7	15	40.4
2-Jul	17	9	10	8	26	27	30	26	35	94	52	76	49	30	32	40	25	20	12	43	61	55	81	94	94.3
3-Jul	85	74	54	37	68	46	33	45	43	57	75	81	67	60	76	44	67	47	19	36	70	18	11	26	84.8
4-Jul	15	15	44	41	28	12	11	14	24	15	16	24	16	14	20	36	34	25	17	16	21	9	5	9	44.1
5-Jul	9	7	11	7	11	16	13	11	14	15	17	23	47	38	33	52	64	67	34	77	9	14	18	20	77.1
6-Jul	20	25	34	11	14	13	18	8	15	12	10	9	9	14	14	11	10	6	7	7	9	7	8	10	33.8
7-Jul	9	10	6	5	6	10	12	8	9	10	9	10	12	12	18	13	11	9	7	5	6	6	9	10	17.9
8-Jul	8	11	27	16	15	8	15	16	11	12	17	19	17	18	18	15	13	13	13	7	8	7	7	10	27.2
9-Jul	13	10	38	24	9	9	12	7	7	9	12	10	11	15	13	13	12	13	10	9	17	14	15	9	38.1
10-Jul	12	10	10	10	12	17	15	8	10	13	16	13	35	33	18	14	12	20	32	36	66	16	10	7	65.6
11-Jul	5	6	8	17	10	7	9	17	14	14	15	19	17	15	14	9	14	12	10	7	6	8	9	8	18.8
12-Jul	9	20	15	44	54	16	15	16	10	17	18	12	13	14	12	10	13	11	7	8	6	5	7	7	53.6
13-Jul	11	7	8	6	5	9	11	7	9	12	15	15	18	15	12	10	10	25	20	27	8	44	37	51	51.1
14-Jul	29	59	26	19	16	10	10	11	13	9	12	16	19	13	21	22	31	32	24	52	8	15	13	15	59.2
15-Jul	15	27	77	59	72	32	47	25	36	34	49	94	54	29	47	39	31	19	56	81	34	50	19	19	93.6
16-Jul	17	22	23	23	39	20	24	15	23	35	47	44	56	77	63	66	61	23	17	25	20	15	60	43	76.8
17-Jul	53	26	27	14	29	17	74	38	85	65	23	73	96	69	16	26	29	13	24	36	32	79	16	26	96.4
18-Jul	26	27	47	22	36	19	16	12	13	18	34	33	51	49	71	42	54	26	15	11	17	20	17	15	71.0
19-Jul	10	12	16	48	13	27	21	20	23	17	15	16	20	19	25	21	21	10	8	7	6	11	8	8	48.4
20-Jul	10	15	17	8	11	17	7	47	33	58	41	60	34	45	41	30	49	31	18	70	19	36	10	12	70.1
21-Jul	8	9	13	11	19	25	9	16	33	21	30	19	16	16	12	12	12	10	10	7	4	5	6	6	33.1
22-Jul	23	22	72	21	48	25	41	21	19	21	45	24	31	41	47	58	65	85	68	23	14	8	13	16	85.4
23-Jul	18	25	40	15	33	44	17	11	14	22	31	34	49	64	41	26	15	19	25	23	19	49	48	39	64.1
24-Jul	16	23	44	26	14	13	14	12	16	14	15	23	23	17	21	17	24	15	24	10	7	39	31	67	67.0
25-Jul	41	59	14	60	56	8	24	15	24	46	46	47	35	36	73	66	58	48	26	8	8	8	7	36	72.6
26-Jul	25	8	8	12	15	70	78	62	51	53	26	39	19	18	12	17	12	11	19	32	18	21	53	78	78.4
27-Jul	37	75	48	30	9	19	9	13	11	18	12	20	16	15	20	16	20	23	19	12	21	7	6	6	74.5
28-Jul	9	10	12	18	7	7	10	12	13	12	13	18	46	70	54	79	46	64	17	24	9	6	6	7	79.2
29-Jul	8	7	9	11	56	11	15	15	14	19	11	39	47	34	12	24	44	17	8	23	9	22	40	20	56.4
30-Jul	63	16	18	62	23	26	16	12	13	10	7	7	8	9	10	9	7	6	10	6	8	6	7	6	63.1
31-Jul	6	8	8	5	8	6	7	7	9	9	9	9	13	13	12	17	15	11	11	9	4	6	41	12	41.1
	84.8	74.5	77.2	61.5	72.1	70.0	78.4	61.7	85.3	94.1	75.1	93.6	96.4	76.8	75.8	79.2	67.3	85.4	67.8	81.1	70.3	79.3	81.2	94.3	

PASZA
Evergreen Park Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association
Summary of Hourly Averages

Evergreen Park - Sulphur Dioxide (SO_2) - ppb
July 1, 2008 to August 1, 2008

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 9 ppb on Jul 30 13:00 Maximum Daily Average: 2.0 ppb on Jul 7

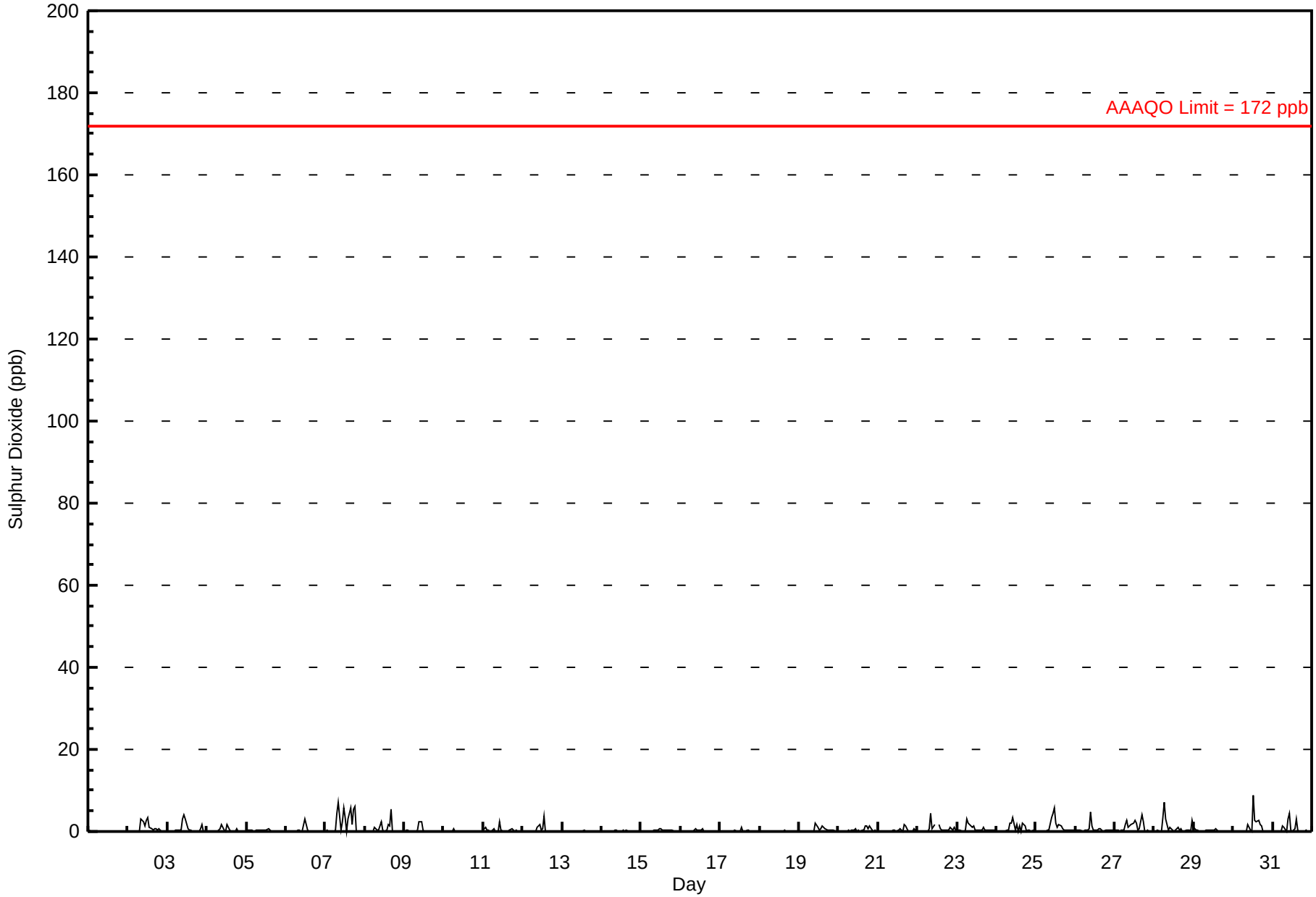
Minimum Value: 0 ppb on Jul 4 03:00 Minimum Daily Average: 0.0 ppb on Jul 18
Maximum Diurnal Average: 1.3 ppb at hour 11 Minimum Diurnal Average: 0.1 ppb at hour 5
Monthly Average: 0.49 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.1$ Median = 0.1 $Q_3 = 0.3$ $P_{90} = 1.4$ $P_{99} = 5.7$

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-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
2-Jul	0	0	0	0	0	0	0	0	3	3	1	3	3	1	1	0	1	1	0	1	0	0	0	0	0.8	3.5
3-Jul	0	0	0	0	0	A	0	0	0	3	4	3	1	0	0	0	0	0	0	0	1	2	0	0	0.7	3.9
4-Jul	0	0	0	0	A	0	0	0	1	2	0	0	2	1	0	0	0	0	1	0	0	0	0	0	0.4	1.8
5-Jul	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.2	0.6
6-Jul	0	0	A	0	0	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0.3	3.0
7-Jul	0	A	0	0	0	0	0	4	7	0	2	6	3	0	3	6	2	5	6	0	0	0	0	0	2.0	7.2
8-Jul	A	0	0	0	0	0	1	0	0	1	2	0	0	0	2	1	5	0	0	0	0	0	0	A	0.7	5.5
9-Jul	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	A	0	0.3	2.3
10-Jul	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.8
11-Jul	0	1	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	1	0	0	A	0	0	0	0.3	2.2
12-Jul	0	0	0	0	0	0	0	0	0	1	2	0	1	4	0	0	0	0	0	A	0	0	0	0	0.4	3.8
13-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	0.3
14-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	0.5
15-Jul	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	A	0	0	0	0	0	0	0	0.2	0.8
16-Jul	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0.2	0.8
17-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0.1	0.9
18-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	0.5
19-Jul	0	0	0	0	0	0	0	0	0	0	2	1	A	1	1	1	1	0	0	0	0	0	0	0	0.4	2.0
20-Jul	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	1	1	1	1	0	0	0	0	0.4	1.4
21-Jul	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0	2	1	0	0	0	0	1	0	0.3	1.8
22-Jul	0	0	0	0	0	0	0	1	4	A	C	C	C	2	1	0	0	0	0	0	1	0	1	0	0.6	4.2
23-Jul	0	0	0	0	0	A	3	2	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0.6	3.1
24-Jul	0	0	0	0	A	0	0	0	2	2	3	0	2	0	1	0	2	1	0	0	0	0	0	0	0.7	3.4
25-Jul	0	0	0	A	0	0	0	0	0	3	4	6	2	1	2	1	1	0	0	0	0	0	0	0	1.0	5.8
26-Jul	0	0	A	0	0	0	0	0	1	5	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0.5	4.7
27-Jul	0	A	0	0	0	0	2	3	1	1	2	2	3	2	0	1	4	2	0	0	0	0	0	0	1.0	4.0
28-Jul	A	0	0	0	0	3	7	3	0	1	1	0	0	0	1	0	1	0	0	0	0	0	0	A	0.9	7.1
29-Jul	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0.2	1.1
30-Jul	0	0	0	0	0	0	0	0	0	2	0	0	9	3	2	3	2	1	0	0	0	A	0	0	0.9	8.8
31-Jul	0	0	0	0	0	0	1	1	0	3	4	0	0	1	3	0	0	0	0	0	A	0	0	0	0.6	4.3
	0.1	0.1	0.1	0.1	0.1	0.2	0.6	0.6	0.8	1.1	1.3	1.0	1.1	0.7	0.7	0.6	0.8	0.6	0.4	0.2	0.2	0.2	0.2	0.1	Diurnal Average	
	1.1	1.2	0.4	0.3	0.2	3.3	7.1	4.3	7.2	4.7	4.3	5.8	8.8	3.8	3.2	5.9	5.5	5.5	6.0	1.3	0.9	1.6	1.1	0.5	Diurnal Maximum	

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

Hourly Averages for SO_2 at Evergreen Park
July 2008



Peace Airshed Zone Association
Summary of Hourly Maximums

Evergreen Park - Sulphur Dioxide (SO_2) - ppb
July 1, 2008 to August 1, 2008

Maximum Value: 20 ppb on Jul 7 17:00

Maximum Daily Average: 7.5 ppb on Jul 7

Minimum Value: 0 ppb on Jul 18 06:00

Maximum Diurnal Average: 5.0 ppb at hour 11

Monthly Average: 2.00 ppb

Minimum Daily Average: 0.3 ppb on Jul 1

Minimum Diurnal Average: 0.3 ppb at hour 4

Percentiles: P_1 = 0.1 P_{10} = 0.3 Q_1 = 0.3 Median = 0.4 Q_3 = 1.0 P_{90} = 7.5 P_{99} = 18.0

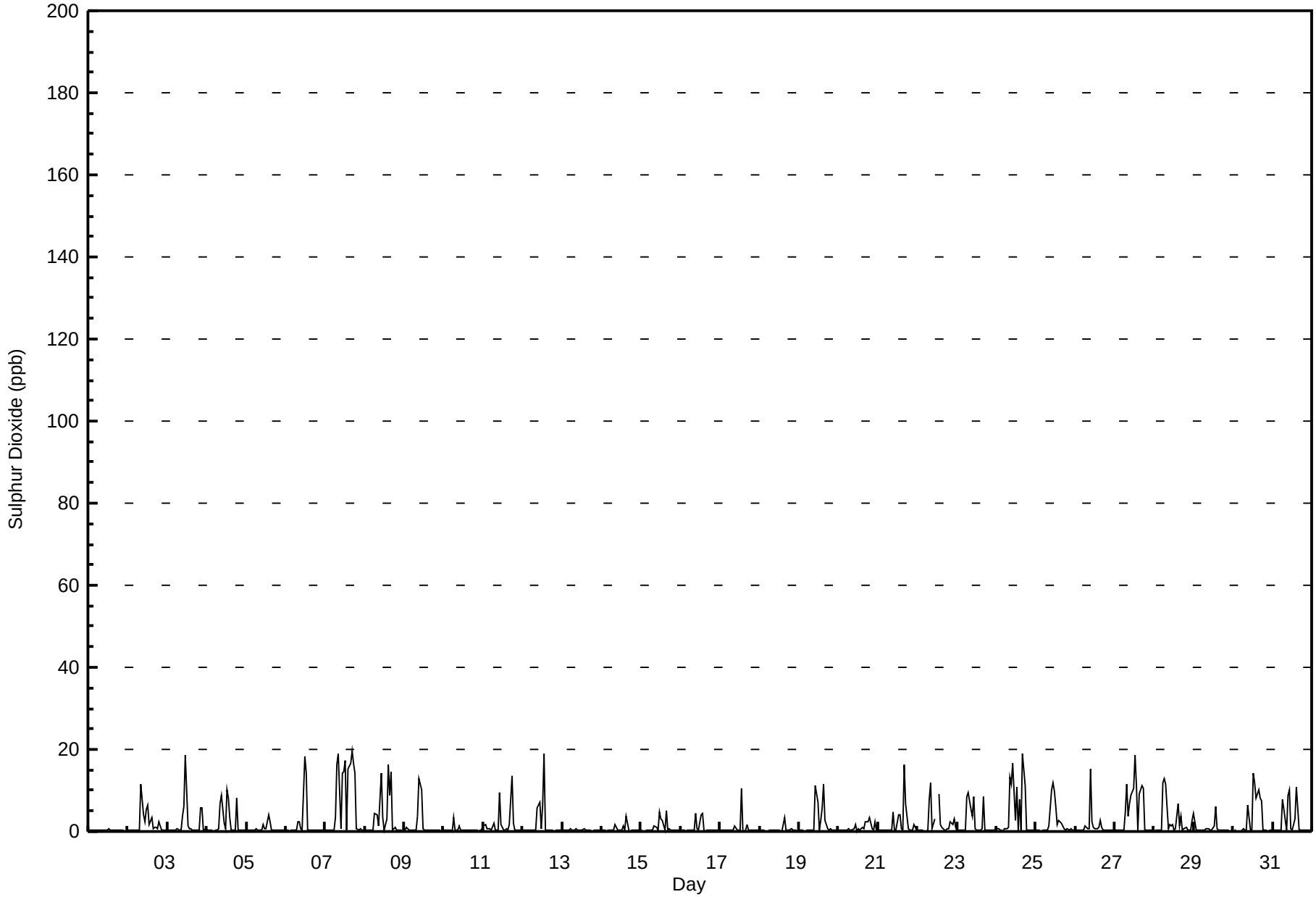
Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								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	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0.3	0.6
2-Jul	0	0	0	0	0	0	0	0	11	4	2	5	7	2	3	1	1	1	1	3	0	0	0	0	1.8	11.4
3-Jul	0	0	0	0	0	A	1	0	0	4	6	19	1	1	1	0	0	0	0	0	6	6	0	1	2.1	18.7
4-Jul	0	0	0	0	A	0	0	1	7	9	2	1	10	8	4	0	0	0	8	0	0	0	0	0	2.3	10.2
5-Jul	0	0	0	A	0	0	1	0	0	0	2	1	1	4	2	0	0	0	0	0	0	0	0	0	0.8	4.2
6-Jul	0	0	A	0	0	0	0	2	2	1	0	18	14	0	0	0	0	0	0	0	0	0	0	0	1.9	18.2
7-Jul	0	A	0	0	0	0	3	16	19	1	14	15	17	0	15	17	20	17	14	1	0	1	0	0	7.5	19.8
8-Jul	A	0	0	0	0	0	4	4	1	8	14	3	0	3	16	9	15	0	1	0	0	0	0	A	3.8	16.3
9-Jul	0	1	1	0	0	0	0	0	4	13	10	1	0	0	0	0	0	0	0	0	0	0	A	0	1.5	12.9
10-Jul	0	0	0	0	0	0	4	0	0	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.5	3.5
11-Jul	1	2	1	1	1	0	2	0	0	0	10	2	0	0	1	0	2	14	2	0	A	0	0	0	1.7	13.5
12-Jul	0	0	0	0	0	0	0	0	0	6	7	1	7	19	0	0	0	0	0	A	0	0	0	0	2.0	19.0
13-Jul	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	0	0	A	0	0	0	0	0	0.4	0.7
14-Jul	0	0	0	0	0	0	0	0	2	1	0	0	0	2	0	4	0	A	0	0	0	0	0	0	0.6	3.6
15-Jul	0	0	0	0	0	0	0	0	1	1	0	5	3	3	0	5	A	1	0	0	0	0	0	0	1.1	5.0
16-Jul	0	0	0	0	0	0	0	0	0	4	1	0	4	4	0	A	0	0	0	0	0	0	0	0	0.9	4.4
17-Jul	0	0	0	0	0	0	0	0	0	1	0	0	0	10	A	0	2	0	0	0	0	0	0	0	0.9	10.4
18-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	A	2	3	0	0	0	1	0	0	0	0	0.5	3.5
19-Jul	0	0	0	0	0	0	0	0	0	0	11	7	A	3	6	11	3	1	0	1	0	0	0	0	2.1	11.5
20-Jul	0	0	0	0	0	0	1	0	0	1	2	A	1	0	1	1	2	2	2	3	1	0	2	0	1.0	3.4
21-Jul	0	0	0	0	0	0	0	0	0	5	A	0	4	4	1	0	16	7	1	0	0	0	2	0	2.0	16.3
22-Jul	0	0	0	0	0	0	0	8	12	A	C	C	C	9	2	1	0	0	1	1	2	2	3	1	2.2	11.8
23-Jul	0	0	0	0	0	A	8	10	5	4	9	1	0	0	0	1	9	0	0	0	0	0	0	0	2.3	9.5
24-Jul	1	1	0	0	A	1	1	1	13	12	17	3	11	0	8	0	19	11	0	0	1	0	0	0	4.4	19.1
25-Jul	0	0	0	A	0	0	0	0	1	10	12	10	6	2	3	2	1	1	0	1	0	1	0	0	2.3	11.8
26-Jul	0	0	A	0	0	0	1	1	1	15	2	1	1	1	1	3	1	0	0	0	0	0	0	0	1.4	15.1
27-Jul	0	A	0	0	0	0	5	11	4	7	9	11	19	11	0	9	11	11	0	0	0	0	0	0	4.9	18.8
28-Jul	A	0	0	0	0	12	13	12	1	2	1	2	0	1	7	1	4	0	1	1	0	0	0	A	2.7	13.0
29-Jul	4	0	0	0	0	0	0	1	1	1	0	0	1	6	1	0	0	0	0	0	0	0	A	0	0.9	6.1
30-Jul	0	0	0	0	0	0	1	0	0	7	0	0	14	12	8	10	8	8	0	0	0	A	0	0	3.1	14.2
31-Jul	0	0	0	0	0	0	8	6	0	9	10	1	0	3	11	6	0	0	0	0	A	0	0	0	2.5	10.8
	0.5	0.4	0.3	0.3	0.3	0.7	1.9	2.5	2.9	4.2	5.0	3.7	4.3	3.7	3.1	2.9	4.0	2.6	1.3	0.6	0.6	0.6	0.6	0.4	Diurnal Average	
	4.3	1.8	0.7	0.6	0.6	11.8	13.0	16.3	18.8	15.1	16.6	18.7	18.8	19.0	16.3	16.6	19.8	16.8	14.4	3.4	5.8	5.9	3.0	1.0	Diurnal Maximum	

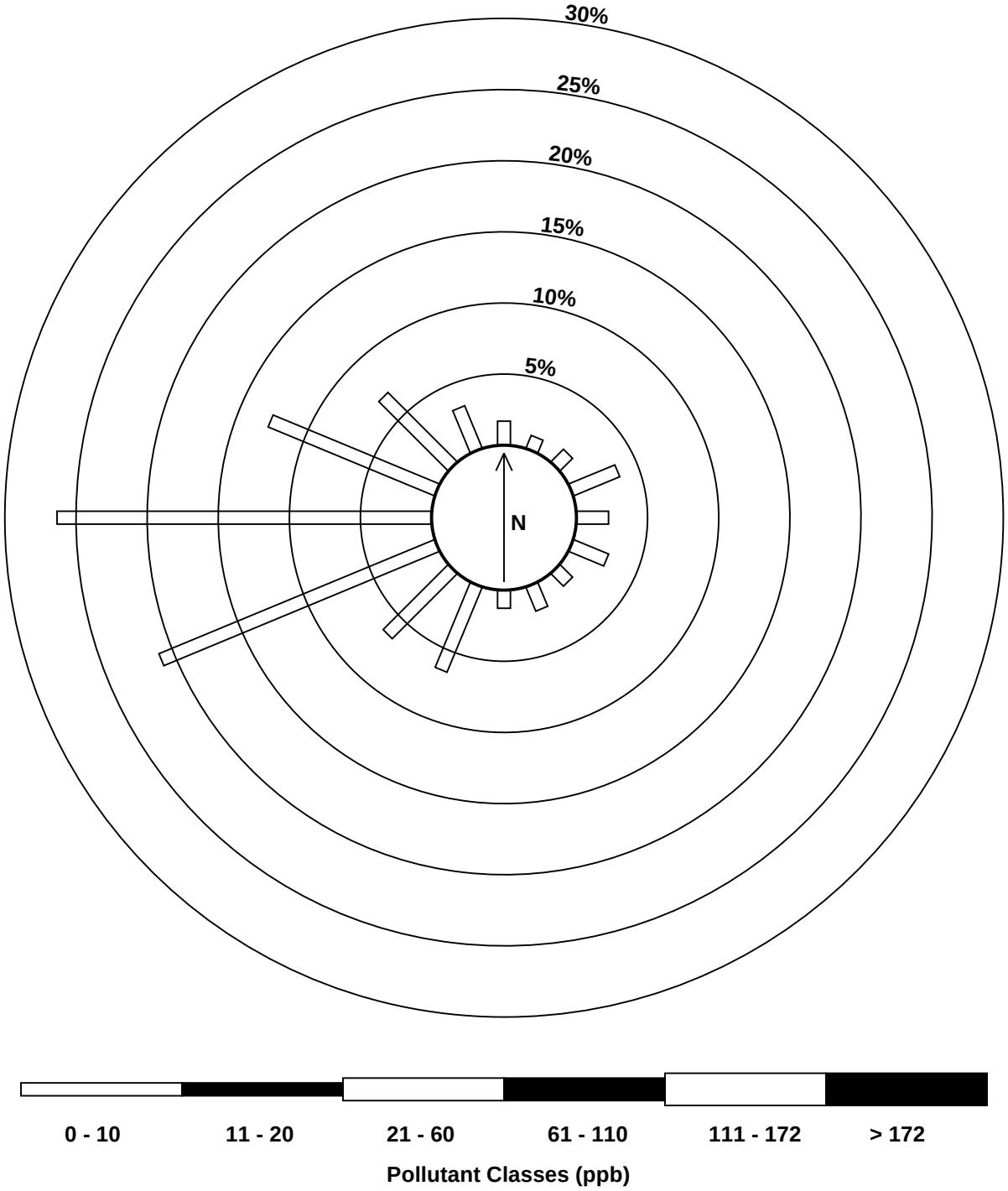
C - Calibration

A - Automated Daily Zero Span

Hourly Maximums for SO_2 at Evergreen Park
July 2008



Pollutant Rose for SO_2 at Evergreen Park
July 2008



Peace Airshed Zone Association
Summary of Hourly Averages

Evergreen Park - Total Reduced Sulphur (TRS) - ppb
July 1, 2008 to August 1, 2008

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 2 ppb on Jul 12 14:00 Maximum Daily Average: 0.8 ppb on Jul 7

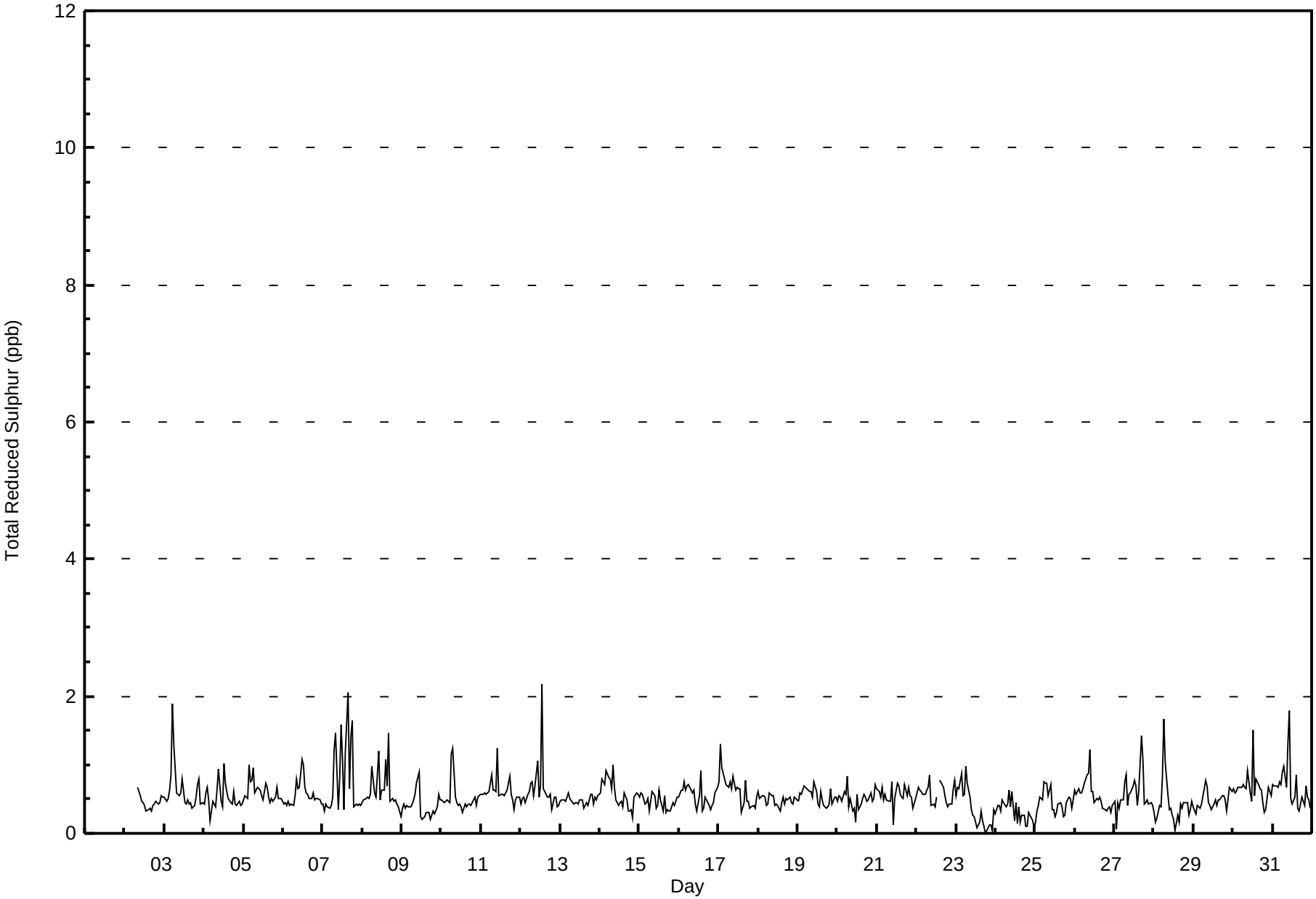
Minimum Value: 0 ppb on Jul 23 19:00 Minimum Daily Average: 0.3 ppb on Jul 24
Maximum Diurnal Average: 0.7 ppb at hour 7 Minimum Diurnal Average: 0.4 ppb at hour 20
Monthly Average: 0.54 ppb Percentiles: $P_1 = 0.1$ $P_{10} = 0.3$ $Q_1 = 0.4$ Median = 0.5 $Q_3 = 0.6$ $P_{90} = 0.8$ $P_{99} = 1.5$

Hours in Service:	744
Hours of Data:	678
Hours of Missing Data:	66
Hours of Calibration:	34
Percent Operational Time:	95.7

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

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 for TRS at Evergreen Park
July 2008



Peace Airshed Zone Association
Summary of Hourly Maximums

Evergreen Park - Total Reduced Sulphur (TRS) - ppb
July 1, 2008 to August 1, 2008

Maximum Value: 8 ppb on Jul 12 14:00

Maximum Daily Average: 2.3 ppb on Jul 7

Minimum Value: 0 ppb on Jul 23 19:00

Maximum Diurnal Average: 1.7 ppb at hour 11

Monthly Average: 1.17 ppb

Minimum Daily Average: 0.8 ppb on Jul 13

Minimum Diurnal Average: 0.8 ppb at hour 20

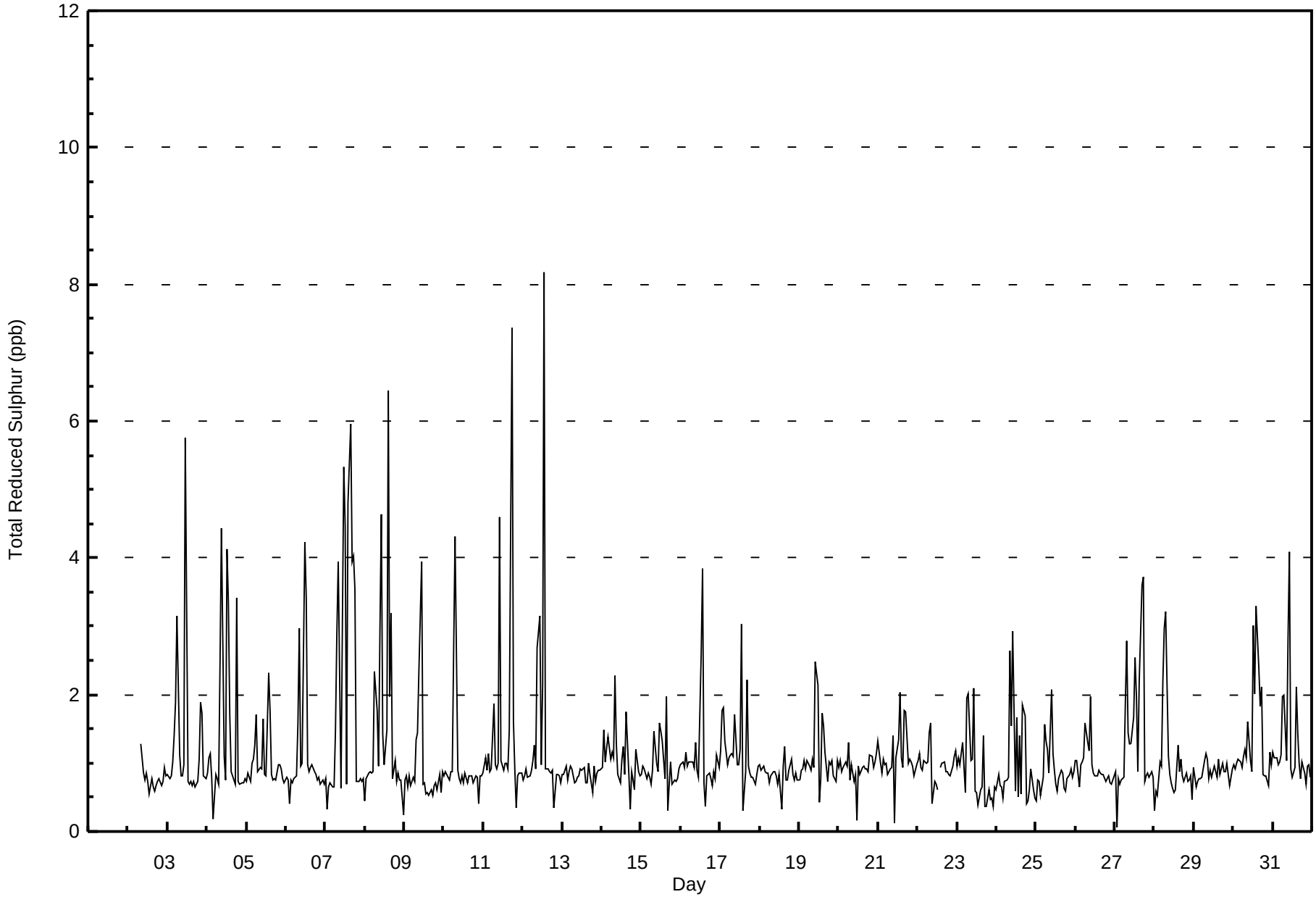
Percentiles: $P_1 = 0.5$ $P_{10} = 0.7$ $Q_1 = 0.8$ Median = 0.9 $Q_3 = 1.1$ $P_{90} = 2.0$ $P_{99} = 4.6$

Hours in Service:	744
Hours of Data:	678
Hours of Missing Data:	66
Hours of Calibration:	34
Percent Operational Time:	95.7

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	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
2-Jul	N	N	N	N	N	N	N	N	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	--	1.3
3-Jul	1	1	1	1	1	A	3	1	1	1	1	6	1	1	1	1	1	1	1	1	2	2	1	1	1.2	5.8
4-Jul	1	1	1	1	A	1	1	1	2	4	1	1	4	3	2	1	1	1	3	1	1	1	1	1	1.5	4.4
5-Jul	1	1	1	A	1	1	2	1	1	1	2	1	1	2	2	1	1	1	1	1	1	1	1	1	1.0	2.3
6-Jul	1	1	A	1	1	1	1	2	3	1	1	4	3	1	1	1	1	1	1	1	1	1	1	1	1.2	4.2
7-Jul	1	A	1	1	1	1	1	3	4	1	3	5	4	1	5	6	4	4	4	1	1	1	1	1	2.3	6.0
8-Jul	A	1	1	1	1	1	2	2	1	3	5	1	1	1	6	2	3	1	1	1	1	1	1	A	1.7	6.4
9-Jul	1	1	1	1	1	1	1	1	1	2	4	1	1	1	1	1	1	1	1	1	1	1	A	1	1.0	4.0
10-Jul	1	1	1	1	1	1	3	4	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1.0	4.3
11-Jul	1	1	1	1	1	1	2	1	1	1	5	1	1	1	1	1	1	7	2	1	A	1	1	1	1.5	7.4
12-Jul	1	1	1	1	1	1	1	1	1	3	3	1	2	8	1	1	1	1	1	A	1	1	1	1	1.4	8.2
13-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
14-Jul	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	2	1	A	1	1	1	1	1	1	1.1	2.3
15-Jul	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	2	A	1	1	1	1	1	1	1	1.0	2.0
16-Jul	1	1	1	1	1	1	1	1	1	1	1	1	3	4	1	A	1	1	1	1	1	1	1	1	1.1	3.8
17-Jul	1	2	2	1	1	1	1	1	1	2	1	1	1	3	A	1	2	1	1	1	1	1	1	1	1.2	3.0
18-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	1.2
19-Jul	1	1	1	1	1	1	1	1	1	1	2	2	A	1	2	2	1	1	1	1	1	1	1	1	1.1	2.5
20-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	1.0	1.3
21-Jul	1	1	1	1	1	1	1	1	1	1	A	1	1	2	1	1	2	2	1	1	1	1	1	1	1.1	2.0
22-Jul	1	1	1	1	1	1	1	1	2	A	1	1	C	C	A	1	1	1	1	1	1	1	1	1	1.0	1.6
23-Jul	1	1	1	1	1	A	2	2	1	1	2	1	1	0	1	1	1	0	0	1	0	0	0	1	0.9	2.1
24-Jul	1	1	1	1	A	1	1	1	3	2	3	1	2	1	1	1	2	2	0	0	1	1	1	0	1.0	2.9
25-Jul	0	1	1	A	1	2	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	2.1
26-Jul	1	1	A	1	1	1	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.0
27-Jul	1	A	1	1	1	1	2	3	1	1	1	2	3	2	1	2	4	4	1	1	1	1	1	1	1.5	3.7
28-Jul	A	1	1	1	1	2	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1.1	3.2
29-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	1.1
30-Jul	1	1	1	1	1	1	1	1	1	2	1	1	3	2	3	2	2	2	1	1	1	A	1	1	1.4	3.3
31-Jul	1	1	1	1	1	1	2	2	1	3	4	1	1	1	2	1	1	1	1	1	A	1	1	1	1.3	4.1
	0.9	1.0	0.9	0.9	0.9	1.0	1.4	1.5	1.4	1.5	1.7	1.4	1.5	1.5	1.4	1.3	1.3	1.3	1.0	0.8	0.8	0.9	0.8	0.8	Diurnal Average	
	1.3	1.8	1.8	1.3	1.4	2.2	3.1	4.3	3.9	4.4	4.6	5.8	4.5	8.2	6.4	6.0	3.9	7.4	3.5	1.1	1.9	1.7	1.2	1.2	Diurnal Maximum	

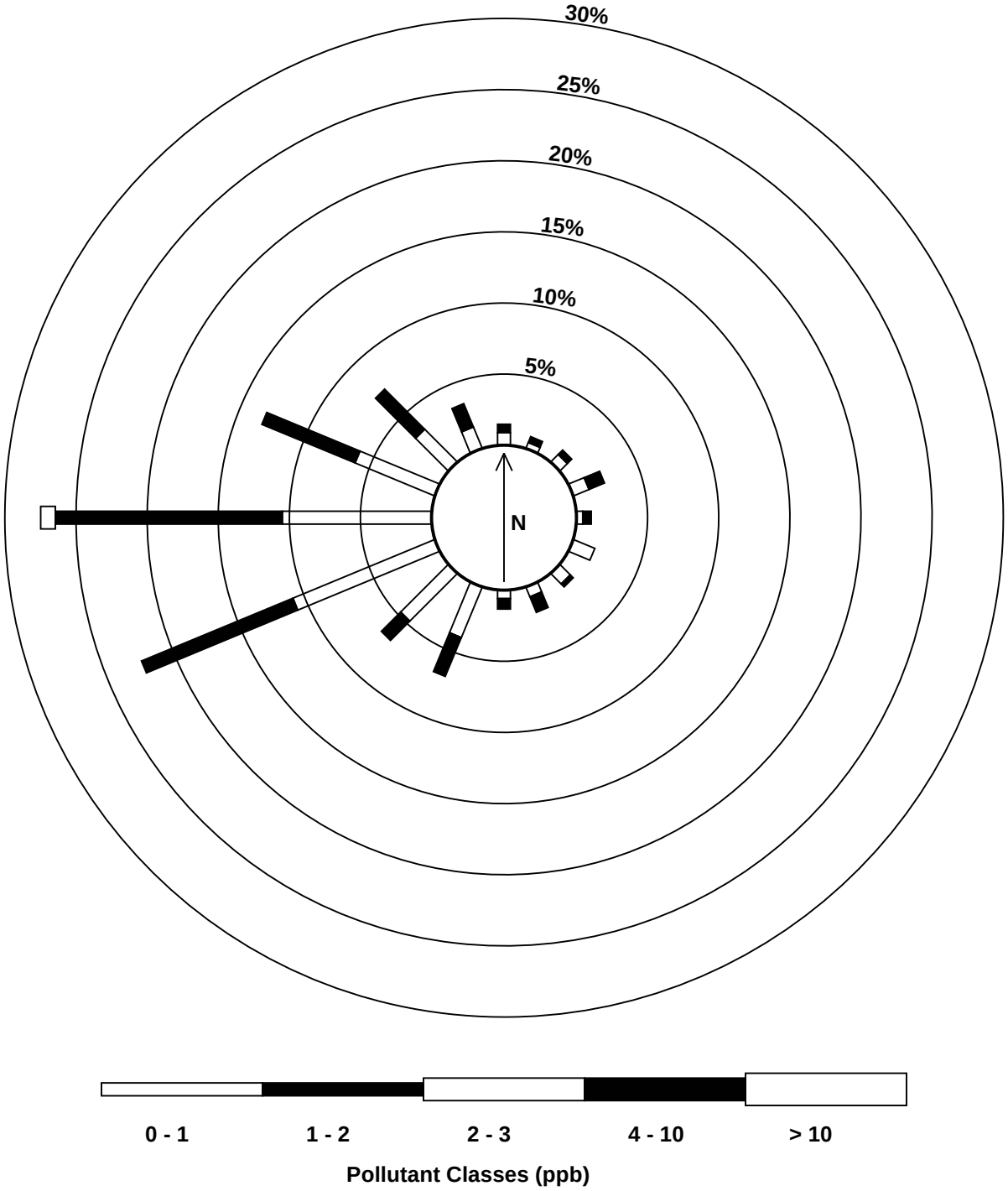
C - Calibration N - Not Valid A - Automated Daily Zero Span

Hourly Maximums for TRS at Evergreen Park
July 2008



Pollutant Rose for TRS at Evergreen Park

July 2008



Peace Airshed Zone Association
Summary of Hourly Averages

Evergreen Park - Particulate Matter 2.5 ($PM_{2.5}$) - $\mu g/m^3$
July 1, 2008 to August 1, 2008

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 42 $\mu g/m^3$ on Jul 12 11:00
Maximum Daily Average: 11.9 $\mu g/m^3$ on Jul 3

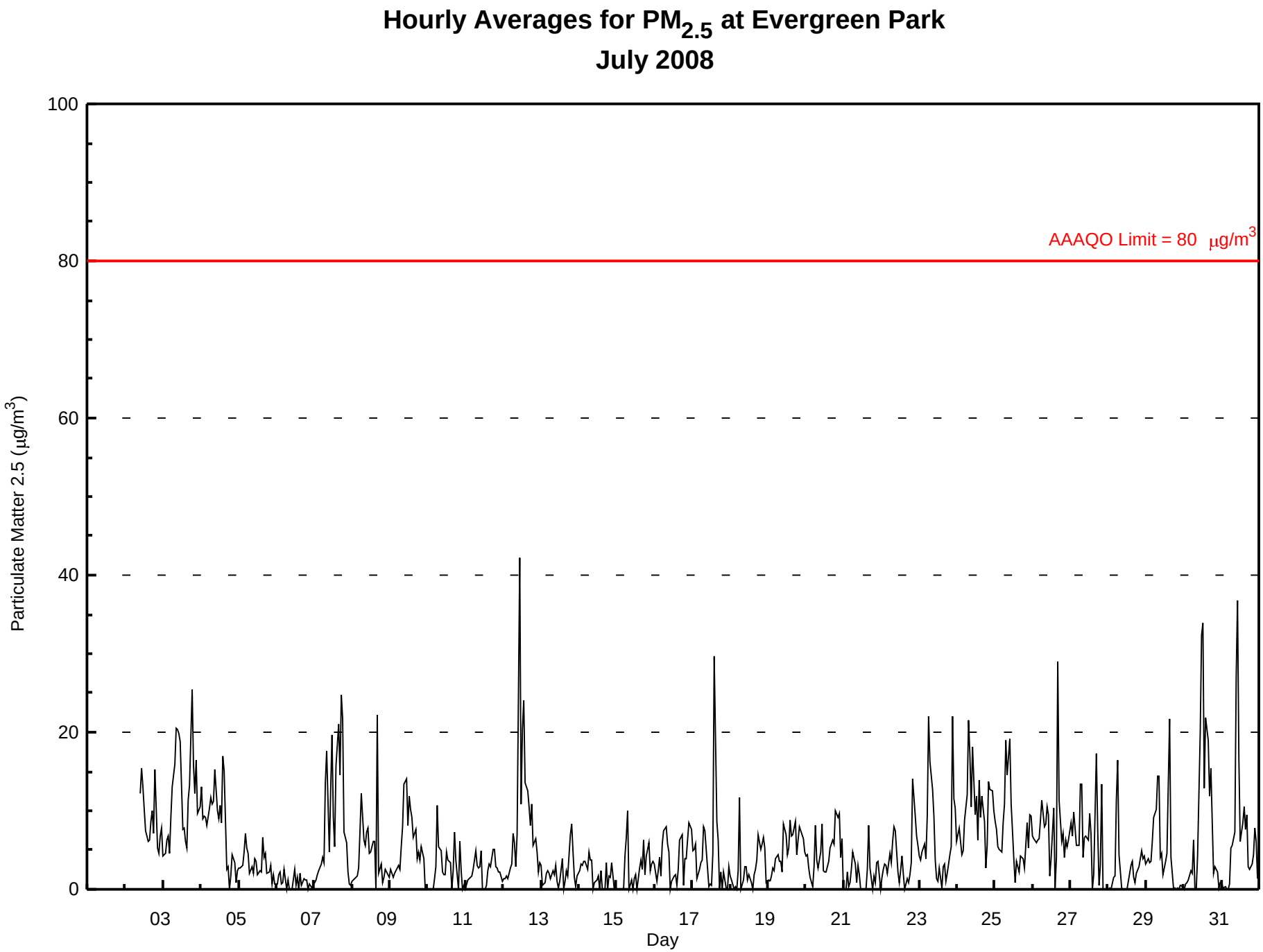
Minimum Value: 0 $\mu g/m^3$ on Jul 4 19:00
Maximum Diurnal Average: 9.0 $\mu g/m^3$ at hour 11
Monthly Average: 5.41 $\mu g/m^3$

Minimum Daily Average: 1.0 $\mu g/m^3$ on Jul 6
Minimum Diurnal Average: 2.8 $\mu g/m^3$ at hour 2
Percentiles: $P_1 = 0.0$ $P_{10} = 0.2$ $Q_1 = 1.7$ Median = 3.8 $Q_3 = 7.4$ $P_{90} = 12.3$ $P_{99} = 26.1$

Hours in Service:	744
Hours of Data:	705
Hours of Missing Data:	39
Hours of Calibration:	0
Percent Operational Time:	94.8

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
2-Jul	N	N	N	N	N	N	N	N	M	12	15	13	10	8	6	6	9	10	7	15	5	5	7	8	--	15.4
3-Jul	4	5	6	7	5	9	13	16	20	20	20	19	8	8	6	5	11	13	25	16	12	16	10	11	11.9	25.5
4-Jul	13	9	9	9	8	10	12	11	11	15	10	9	11	8	17	15	2	3	0	2	4	3	1	2	8.2	16.9
5-Jul	3	3	3	5	7	5	5	2	3	2	4	4	2	2	2	7	4	4	2	2	3	1	2	1	3.2	7.1
6-Jul	1	2	2	1	1	3	0	1	0	BD	0	3	0	2	0	2	1	1	1	1	0	1	0	1	1.0	2.6
7-Jul	1	1	2	2	3	4	3	14	18	5	13	20	9	5	16	21	15	25	22	7	6	2	1	1	8.9	24.8
8-Jul	1	1	2	2	3	7	12	6	6	7	8	4	5	6	6	0	22	2	3	1	1	3	2	1	4.7	22.2
9-Jul	3	2	2	2	2	3	3	5	8	13	14	8	12	10	9	7	8	4	5	4	5	4	0	0	5.5	14.0
10-Jul	0	0	0	0	1	3	11	5	5	2	2	2	5	4	3	0	2	7	4	0	6	2	0	0	2.7	10.6
11-Jul	0	1	1	2	2	3	5	3	3	3	5	0	0	0	2	3	3	5	5	3	3	2	2	1	2.4	5.1
12-Jul	1	1	2	1	3	3	7	6	3	7	42	11	20	24	14	13	11	8	11	6	6	5	2	3	8.8	42.3
13-Jul	3	1	1	2	2	2	1	2	2	3	1	0	1	4	0	1	2	2	7	8	5	2	0	2	2.2	8.2
14-Jul	2	3	3	4	4	2	5	4	4	0	1	1	2	0	2	0	0	3	0	2	2	3	0	0	1.9	4.8
15-Jul	0	0	0	0	0	4	7	10	0	1	0	1	2	0	3	4	3	6	2	4	6	2	3	4	2.6	9.9
16-Jul	3	1	2	4	2	6	7	8	6	5	0	1	2	2	1	3	6	7	1	4	4	6	8	8	4.0	8.4
17-Jul	5	5	6	1	3	3	4	8	7	5	0	1	1	5	30	9	6	0	2	0	2	0	0	3	4.4	29.7
18-Jul	2	1	0	0	0	2	12	BD	1	3	3	1	2	1	0	2	2	4	7	5	6	7	5	1	2.9	11.7
19-Jul	1	1	2	3	2	4	4	4	4	2	8	7	4	5	9	7	7	9	4	6	8	8	6	5	5.0	8.8
20-Jul	4	4	3	2	0	3	8	4	3	5	8	2	2	2	4	5	6	6	6	10	9	10	4	6	4.8	10.1
21-Jul	0	0	2	0	1	3	5	3	1	3	2	BD	BD	0	0	2	8	3	0	2	1	3	4	0	1.9	8.1
22-Jul	2	3	3	3	2	5	3	6	8	7	2	1	2	4	2	0	1	1	2	3	14	9	7	6	4.0	14.1
23-Jul	4	4	5	6	4	9	22	16	13	9	4	1	1	3	0	3	3	1	2	4	5	22	12	10	6.8	22.1
24-Jul	6	8	6	4	5	9	12	22	17	11	18	9	12	6	14	9	12	9	3	6	14	13	13	10	10.3	21.5
25-Jul	9	8	5	5	5	8	11	19	15	19	11	7	4	1	4	2	4	4	4	3	9	5	10	9	7.5	19.2
26-Jul	7	6	6	6	6	9	11	8	8	11	10	2	4	10	0	4	29	11	6	7	4	6	5	6	7.7	29.0
27-Jul	8	7	10	8	6	6	13	13	4	7	7	6	10	7	0	2	17	8	1	3	13	BD	0	0	6.7	17.3
28-Jul	0	0	0	1	2	11	16	4	0	0	0	0	0	1	3	4	2	1	2	3	4	5	4	4	2.8	16.4
29-Jul	3	4	3	4	6	9	10	14	14	4	5	2	4	5	13	22	4	BD	0	0	0	0	1	0	5.5	21.7
30-Jul	0	1	1	1	2	2	6	0	0	4	20	32	34	13	22	19	12	15	9	2	3	2	0	1	8.4	33.9
31-Jul	1	0	0	0	0	1	5	6	7	27	37	17	6	8	11	8	10	3	3	3	4	8	6	1	7.1	36.8
	3.0	2.8	3.0	2.9	3.0	5.1	8.1	7.9	6.6	7.4	9.0	6.4	6.0	5.2	6.6	6.1	7.4	6.0	4.8	4.4	5.5	5.3	3.8	3.5	Diurnal Average	
	13.1	9.0	9.8	9.1	8.2	11.4	22.0	21.5	20.4	27.2	42.3	32.4	33.9	24.1	29.7	21.7	29.0	24.8	25.5	15.7	14.1	22.1	12.6	10.5	Diurnal Maximum	

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


Hourly Averages for PM2.5 at Evergreen Park
July 2008
AAAQO Limit = 80 μg/m3
Particulate Matter 2.5 (μg/m3)
100
80
60
40
20
0
03
05
07
09
11
13
15
17
19
21
23
25
27
29
31
Day

Peace Airshed Zone Association
Summary of Hourly Maximums

Evergreen Park - Particulate Matter 2.5 ($PM_{2.5}$) - $\mu g/m^3$
July 1, 2008 to August 1, 2008

Maximum Value: 79 $\mu g/m^3$ on Jul 17 15:00

Maximum Daily Average: 19.3 $\mu g/m^3$ on Jul 3

Minimum Value: 0 $\mu g/m^3$ on Jul 28 00:00

Maximum Diurnal Average: 17.9 $\mu g/m^3$ at hour 11

Monthly Average: 10.94 $\mu g/m^3$

Minimum Daily Average: 4.1 $\mu g/m^3$ on Jul 6

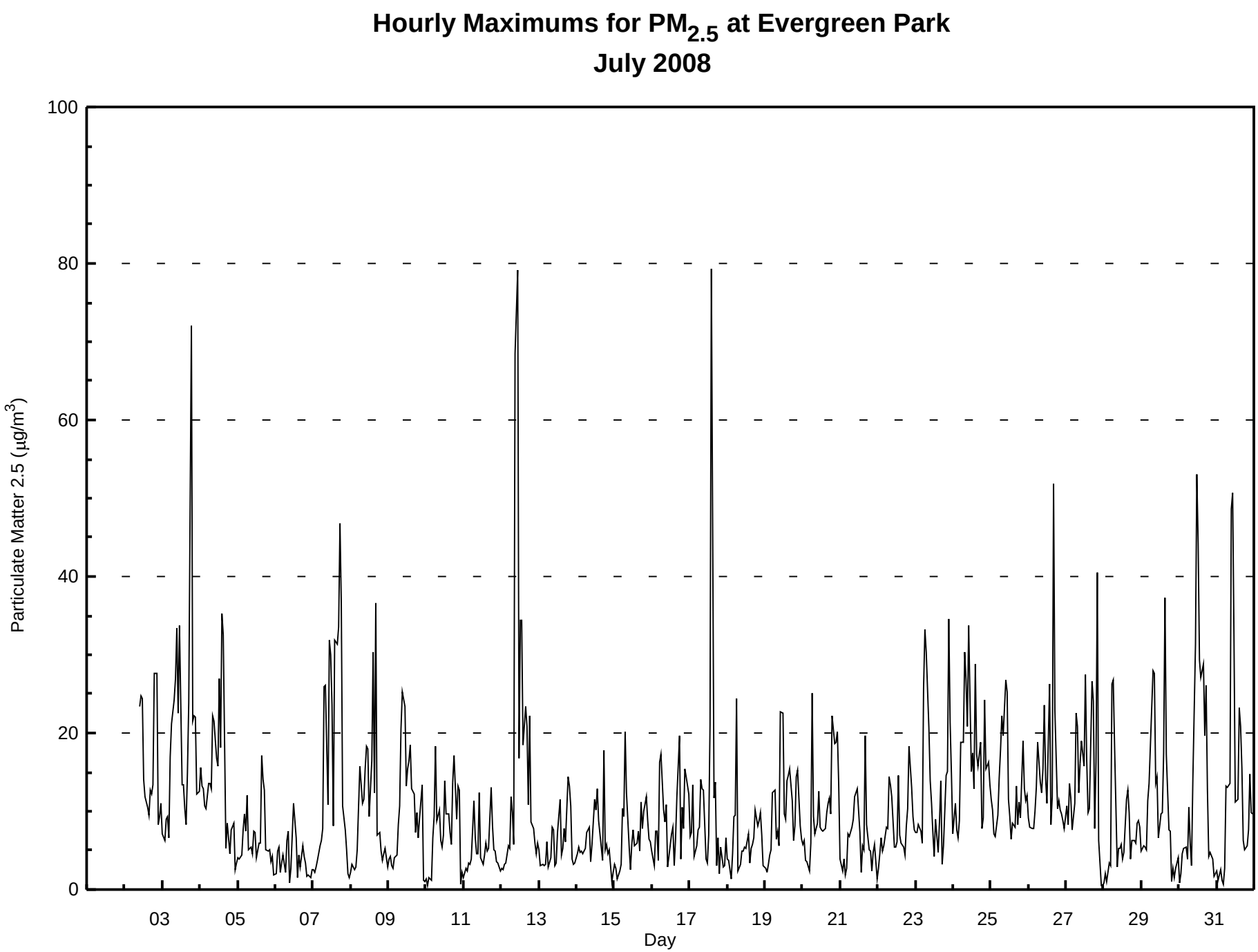
Minimum Diurnal Average: 4.8 $\mu g/m^3$ at hour 2

Percentiles: P_1 = 0.9 P_{10} = 2.8 Q_1 = 4.9 Median = 8.0 Q_3 = 13.5 P_{90} = 23.1 P_{99} = 50.1

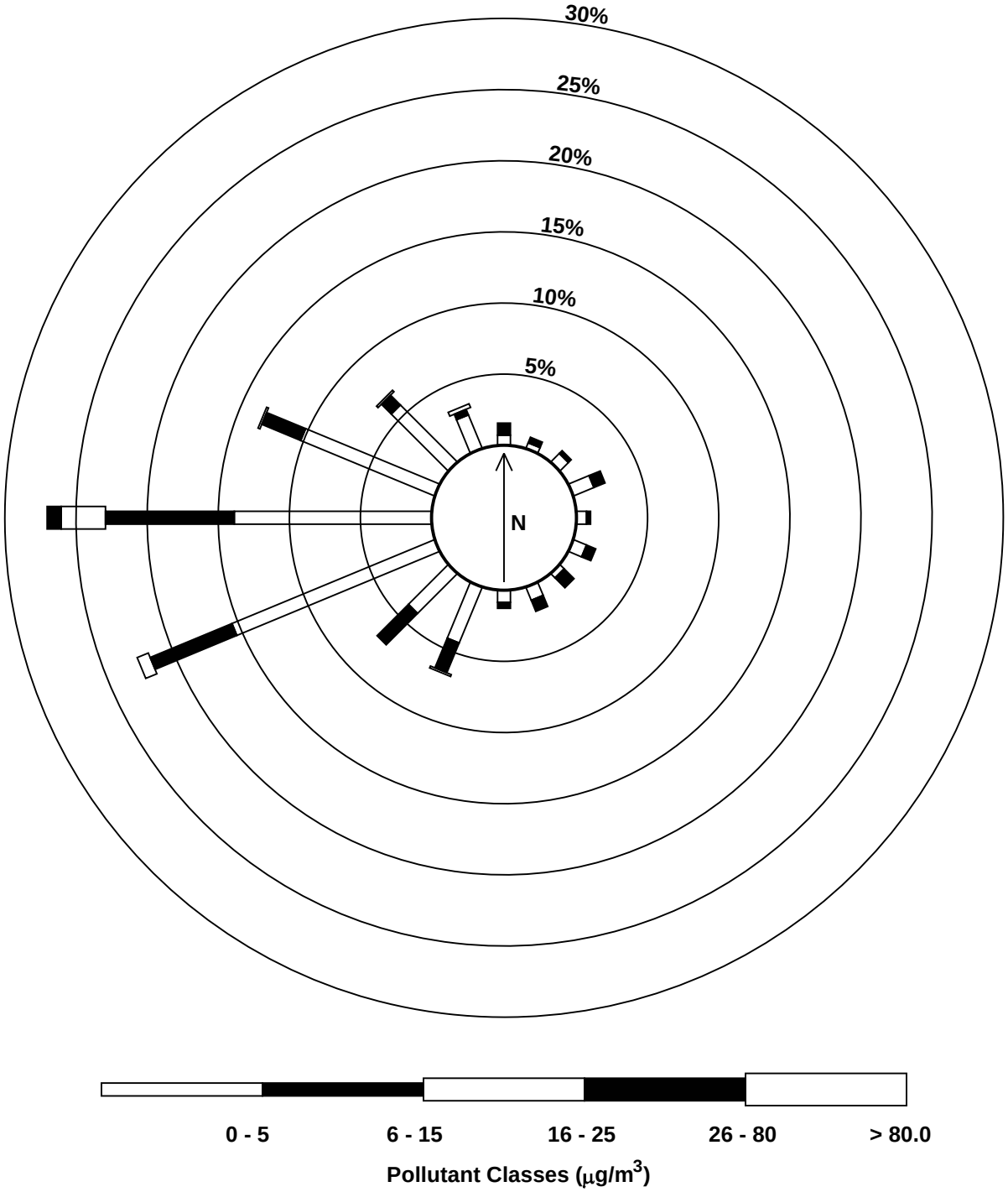
Hours in Service:	744
Hours of Data:	711
Hours of Missing Data:	33
Hours of Calibration:	0
Percent Operational Time:	95.6

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
2-Jul	N	N	N	N	N	N	N	N	M	23	25	24	14	12	10	10	13	12	13	28	28	8	9	11	--	27.6
3-Jul	7	6	9	9	7	17	21	24	27	33	23	34	13	13	10	8	15	24	72	21	22	22	12	13	19.3	72.0
4-Jul	16	13	13	11	10	14	13	13	22	22	17	16	27	18	35	33	5	9	7	5	8	8	3	3	14.1	35.3
5-Jul	4	4	4	8	10	7	12	5	5	4	7	7	4	6	6	17	14	13	5	5	5	4	4	2	6.8	17.2
6-Jul	2	5	5	2	3	4	2	6	7	1	3	11	9	7	2	4	3	6	4	3	2	2	1	3	4.1	11.1
7-Jul	3	2	3	4	6	6	8	26	26	11	32	30	24	8	32	31	34	47	37	11	8	5	2	1	16.4	46.8
8-Jul	2	3	3	3	5	11	16	11	11	15	18	18	9	16	30	12	37	7	7	5	4	5	5	3	10.7	36.6
9-Jul	4	4	3	3	4	4	8	11	21	25	23	13	15	16	18	13	12	7	10	7	9	13	1	1	10.3	25.2
10-Jul	1	1	2	1	7	9	18	9	10	6	5	7	14	10	10	7	6	14	17	9	13	13	1	2	8.0	18.3
11-Jul	2	3	2	3	3	4	11	7	5	5	12	4	3	4	6	5	5	13	8	5	5	3	3	2	5.2	13.1
12-Jul	3	3	3	3	6	5	12	10	6	68	79	17	34	34	18	23	21	11	22	9	8	6	5	6	17.2	79.1
13-Jul	5	3	3	3	3	6	3	4	8	8	3	3	7	12	4	5	8	6	14	13	11	4	3	3	6.0	14.4
14-Jul	5	5	5	5	5	5	7	8	8	4	6	12	10	13	9	7	4	18	5	6	5	5	1	2	6.6	17.8
15-Jul	3	3	1	2	3	10	9	20	12	6	3	6	8	6	6	7	5	11	8	10	12	9	6	6	7.2	20.3
16-Jul	5	3	7	8	4	16	17	10	9	11	3	4	7	8	3	6	12	20	4	10	8	15	14	12	9.1	19.6
17-Jul	7	7	13	4	6	8	8	14	13	13	4	3	7	21	79	12	14	3	7	2	5	3	3	7	10.9	79.3
18-Jul	4	4	1	4	9	10	24	2	3	5	5	5	5	7	3	5	6	7	10	8	9	10	7	3	6.6	24.5
19-Jul	3	2	3	4	5	12	13	6	7	6	23	23	10	9	14	15	15	11	6	8	14	15	8	6	10.0	22.6
20-Jul	6	6	4	4	2	6	25	9	7	8	13	8	8	7	8	10	11	12	10	22	19	19	20	13	10.7	25.2
21-Jul	4	2	4	2	3	7	7	8	9	12	12	13	7	2	6	5	20	8	5	5	2	5	6	1	6.5	19.7
22-Jul	3	5	7	5	6	8	8	14	13	12	5	5	6	15	7	6	5	4	8	10	18	13	9	8	8.4	18.3
23-Jul	7	7	8	7	6	26	33	30	21	14	11	7	4	9	5	9	14	3	6	15	15	35	21	15	13.7	34.6
24-Jul	7	11	8	7	9	19	19	30	27	21	34	15	17	13	29	17	16	19	8	9	24	15	16	13	16.8	33.8
25-Jul	11	10	7	7	9	14	18	22	20	27	25	11	9	7	8	8	13	8	11	9	19	13	11	12	13.0	26.8
26-Jul	9	8	8	8	10	13	19	14	12	15	24	14	11	26	8	12	52	23	10	11	10	10	9	8	14.3	51.8
27-Jul	11	8	14	12	8	11	23	21	12	16	19	16	28	16	10	10	27	24	8	16	41	6	1	0	14.8	40.5
28-Jul	1	2	1	3	3	26	27	18	3	5	5	6	4	5	12	13	10	4	6	6	6	8	9	8	8.0	26.9
29-Jul	5	6	5	5	11	14	23	28	28	14	14	7	10	10	17	37	17	8	8	1	3	2	3	4	11.6	37.3
30-Jul	1	2	5	5	5	4	11	6	3	14	31	53	44	29	27	29	20	26	13	4	5	4	2	2	14.3	53.0
31-Jul	2	1	2	1	1	3	13	13	14	49	51	33	11	12	23	21	15	6	5	6	8	15	10	10	13.5	50.7
	4.9	4.8	5.3	5.0	5.8	10.3	14.8	13.8	12.7	15.7	17.9	14.2	12.7	12.4	15.2	13.3	14.9	12.8	11.8	9.3	11.4	9.8	6.9	6.1	Diurnal Average	
	15.6	13.3	13.6	11.6	11.3	26.4	33.2	30.3	27.6	68.4	79.1	53.0	44.2	34.4	79.3	37.3	51.8	46.8	72.0	27.6	40.5	34.6	21.4	14.7	Diurnal Maximum	

M - Maintenance N - Not Valid


Hourly Maximums for PM2.5 at Evergreen Park
July 2008
Particulate Matter 2.5 (µg/m3)
100
80
60
40
20
0
03
05
07
09
11
13
15
17
19
21
23
25
27
29
31
Day

Pollutant Rose for $PM_{2.5}$ at Evergreen Park
July 2008



Peace Airshed Zone Association
Summary of Hourly Averages

Evergreen Park - External Temperature (ET) - ^{o}C
July 1, 2008 to August 1, 2008

Maximum Value: 32 ^{o}C on Jul 3 17:00

Maximum Daily Average: 20.7 ^{o}C on Jul 20

Minimum Value: 4 ^{o}C on Jul 15 05:00

Minimum Daily Average: 12.2 ^{o}C on Jul 10

Maximum Diurnal Average: 22.7 ^{o}C at hour 15

Minimum Diurnal Average: 10.2 ^{o}C at hour 5

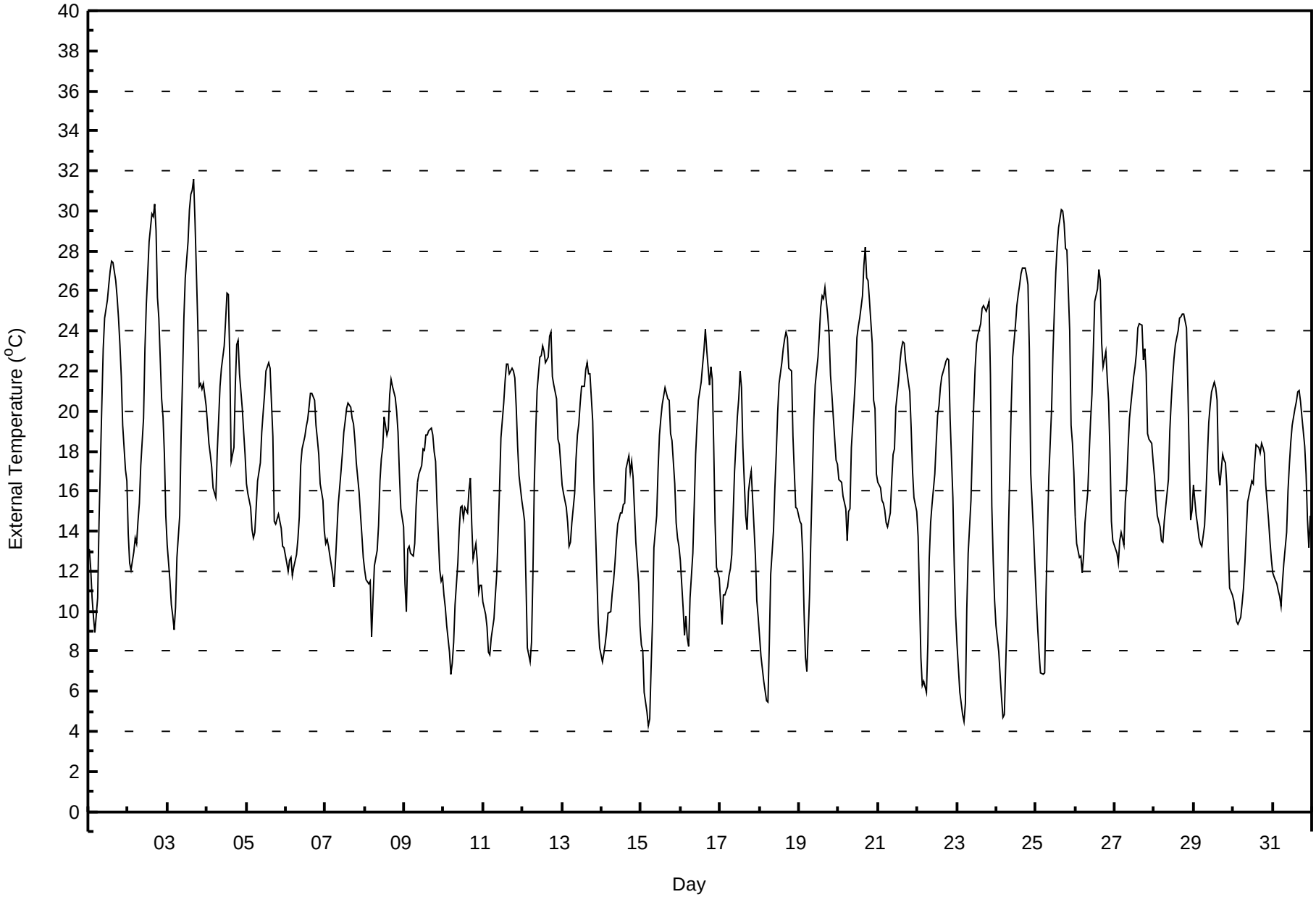
Monthly Average: 17.03 ^{o}C

Percentiles: $P_1 = 5.4$ $P_{10} = 9.8$ $Q_1 = 13.1$ Median = 16.8 $Q_3 = 21.1$ $P_{90} = 24.4$ $P_{99} = 30.0$

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	13	12	11	10	9	11	14	17	20	23	25	26	26	27	27	27	27	26	25	23	22	19	17	16	19.7	27.5
2-Jul	14	12	12	13	14	13	14	15	17	20	23	25	27	28	30	30	30	29	26	25	21	20	18	15	20.5	30.3
3-Jul	13	11	10	10	9	10	13	15	19	22	25	27	28	30	31	31	32	30	24	21	21	21	21	20	20.6	31.6
4-Jul	19	18	18	17	16	16	18	20	21	22	23	24	26	26	23	17	18	21	23	24	22	20	19	18	20.4	25.9
5-Jul	16	16	15	14	14	14	15	16	17	19	20	21	22	22	22	20	19	14	14	15	15	14	13	13	16.8	22.4
6-Jul	12	12	13	13	12	12	13	14	15	17	18	19	19	20	20	21	21	21	19	19	18	16	16	14	16.3	20.9
7-Jul	13	14	13	13	12	11	12	14	15	17	18	19	20	20	20	20	20	19	19	17	16	15	14	13	16.0	20.4
8-Jul	12	12	11	11	9	11	12	13	14	16	18	18	20	19	19	21	22	21	21	20	19	17	15	14	16.0	21.6
9-Jul	11	10	13	13	13	13	13	15	16	17	17	18	18	19	19	19	19	19	18	17	15	12	12	12	15.4	19.2
10-Jul	11	10	9	8	7	7	8	10	12	14	15	15	15	15	15	16	17	14	13	13	12	11	11	11	12.2	16.6
11-Jul	10	10	9	8	8	9	10	11	12	14	16	19	20	22	22	22	22	22	22	22	20	18	17	16	15.8	22.4
12-Jul	15	15	12	8	7	8	12	16	19	21	23	23	23	23	22	23	24	24	22	21	21	19	18	17	18.2	23.9
13-Jul	16	16	15	14	13	13	14	16	18	19	19	20	21	21	22	22	22	22	20	16	14	12	9	8	16.9	22.4
14-Jul	8	8	8	9	10	10	11	12	12	14	14	15	15	15	15	17	18	17	17	17	15	13	11	9	13.0	17.7
15-Jul	8	8	6	5	4	5	7	9	13	15	17	19	20	20	21	21	21	21	19	19	16	14	14	13	14.0	21.2
16-Jul	13	10	9	10	9	8	11	13	15	18	19	21	21	22	23	24	23	21	22	22	18	14	12	12	16.3	24.1
17-Jul	10	9	11	11	11	12	12	13	15	17	20	21	22	21	18	15	14	16	17	17	16	13	11	10	14.6	22.0
18-Jul	9	8	7	6	6	5	8	12	14	16	18	20	21	22	23	24	24	24	22	22	19	17	15	15	15.7	23.9
19-Jul	15	14	13	10	8	7	11	14	17	20	21	23	24	25	26	26	26	25	24	22	21	20	18	17	18.5	26.1
20-Jul	17	17	16	16	15	14	15	15	18	20	22	24	24	25	26	27	28	27	27	26	23	21	20	17	20.7	28.2
21-Jul	16	16	16	15	15	14	14	15	16	18	18	20	22	22	23	23	23	23	21	21	19	17	16	15	18.4	23.5
22-Jul	14	11	8	6	6	6	8	13	14	15	17	18	20	20	21	22	22	22	23	23	20	16	12	10	15.3	22.6
23-Jul	8	7	6	5	4	5	10	13	16	18	20	22	23	24	24	25	25	25	25	25	22	15	13	11	16.4	25.5
24-Jul	9	8	7	6	5	5	10	14	17	20	23	24	25	26	26	27	27	27	27	26	23	17	14	12	17.7	27.2
25-Jul	11	9	8	7	7	7	11	14	17	20	23	25	27	28	29	30	30	29	28	28	24	19	18	17	19.4	30.1
26-Jul	15	13	13	13	12	13	14	16	18	20	21	23	25	26	27	27	23	22	23	22	20	18	14	13	18.8	27.0
27-Jul	13	13	12	13	14	13	15	16	18	20	20	22	22	23	24	24	24	23	23	22	19	19	18	17	18.7	24.4
28-Jul	17	16	15	14	14	13	14	15	17	19	20	22	23	23	24	25	25	25	25	24	21	18	15	15	19.0	24.8
29-Jul	16	15	14	14	13	13	14	16	18	19	20	21	21	21	21	17	16	18	18	17	16	13	11	11	16.5	21.4
30-Jul	11	10	9	9	10	10	11	12	14	15	16	16	16	17	18	18	18	18	18	18	16	15	14	13	14.4	18.4
31-Jul	12	12	11	11	11	10	11	12	14	16	17	18	19	20	20	21	21	20	20	18	17	15	13	15	15.7	21.0
	12.8	12.0	11.3	10.7	10.2	10.3	12.3	14.1	16.1	18.1	19.6	20.9	21.8	22.4	22.7	22.7	22.6	22.1	21.4	20.7	18.8	16.4	14.8	13.9	Diurnal Average	
	19.3	18.4	17.8	17.2	16.1	15.7	18.0	19.5	21.3	23.1	24.7	26.7	28.4	30.0	30.8	31.1	31.6	29.5	28.1	28.1	24.0	21.1	21.3	20.2	Diurnal Maximum	

Hourly Averages for External Temperature at Evergreen Park
July 2008



Peace Airshed Zone Association
Summary of Hourly Averages

Evergreen Park
July 1, 2008 to August 1, 2008
WS (km/h), WD (deg)

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	1	3	1	1	2	4	5	5	7	7	7	10	8	8	8	9	9	8	8	6	5	4	3	5.2	10.0
Dir	71	6	38	1	232	73	69	68	87	98	109	96	104	97	93	96	112	111	104	101	97	81	63	119	94.6	104.4
2 Spd	3	4	5	6	2	1	1	2	4	3	2	4	6	7	7	7	6	9	7	5	12	5	3	3	2.5	11.7
Dir	59	66	70	79	123	73	29	77	215	288	186	167	174	150	140	112	101	122	138	193	206	1	309	199	137.9	206.2
3 Spd	1	1	1	1	1	1	3	3	1	1	2	4	5	4	4	3	4	11	16	4	4	9	13	8	3.2	15.7
Dir	95	269	232	306	183	123	228	286	343	342	274	261	207	254	339	325	250	218	242	325	167	206	216	234	237.8	241.7
4 Spd	10	8	4	5	2	6	6	5	7	10	11	11	14	11	15	9	7	7	10	12	8	11	14	11	8.1	15.5
Dir	272	291	244	215	256	209	196	198	250	264	266	286	270	302	259	247	195	231	242	264	240	255	259	257	255.1	259.1
5 Spd	11	11	11	7	7	4	7	10	8	9	8	8	7	5	7	6	7	2	2	1	5	6	3	2	4.0	11.3
Dir	242	259	280	288	324	303	319	337	308	325	324	324	347	320	313	20	12	61	101	154	186	186	177	155	305.8	259.0
6 Spd	2	3	6	5	4	6	5	6	7	15	17	17	20	21	19	19	20	20	21	23	16	14	14	10	12.4	22.9
Dir	47	216	268	256	209	227	250	260	292	278	270	277	282	270	276	271	279	271	272	265	260	252	251	229	267.0	265.4
7 Spd	13	14	15	16	15	13	17	19	21	20	22	22	20	20	21	20	20	22	23	20	20	19	13	12	18.0	22.9
Dir	243	251	253	259	256	251	254	258	261	272	262	265	270	270	270	267	268	265	264	268	269	261	248	240	261.8	264.4
8 Spd	11	11	10	10	1	7	8	7	8	12	14	13	18	14	15	18	23	20	17	15	12	8	8	9	11.7	23.2
Dir	238	232	240	249	243	256	258	227	250	250	257	248	255	281	258	260	264	260	251	251	237	243	229	232	251.4	264.2
9 Spd	7	5	9	8	9	10	14	18	22	23	23	23	22	23	24	22	22	17	15	15	12	11	10	15	15.2	23.9
Dir	209	228	239	254	253	251	244	255	254	258	255	253	257	261	259	254	258	268	273	280	299	315	258	247	258.8	259.0
10 Spd	14	11	10	9	7	6	9	14	16	14	13	12	12	13	12	13	13	11	10	5	3	7	10	13	9.6	16.3
Dir	249	247	242	232	230	261	269	267	275	283	289	291	292	258	274	322	309	285	274	299	238	215	227	255	268.9	275.5
11 Spd	12	12	11	7	8	7	9	11	10	13	12	11	11	11	11	11	10	12	13	14	13	11	9	8	10.3	13.7
Dir	252	255	259	272	277	280	282	267	277	270	270	281	289	294	291	294	295	282	274	265	253	245	241	241	271.0	264.7
12 Spd	8	8	2	1	1	1	2	5	11	12	13	17	21	20	19	21	19	17	19	13	10	8	14	17	11.4	21.2
Dir	244	246	279	71	171	348	257	269	261	264	260	259	279	266	275	276	278	273	279	276	271	257	260	264	268.3	276.4
13 Spd	15	14	13	16	11	12	17	17	19	17	13	14	14	12	13	12	10	12	15	17	8	3	3	2	11.2	18.9
Dir	261	253	250	254	259	264	258	259	269	282	300	292	294	289	295	295	275	271	297	327	358	206	197	252	277.4	269.2
14 Spd	2	3	2	3	4	5	7	9	9	7	10	13	9	9	9	8	7	10	6	8	8	4	3	2	5.9	13.4
Dir	282	354	240	308	305	268	269	259	250	283	252	264	282	293	294	272	304	242	289	316	333	282	274	251	278.7	264.2
15 Spd	3	3	1	3	1	1	2	6	4	5	3	3	6	7	10	10	10	10	6	1	5	4	2	4	3.4	10.3
Dir	296	240	209	199	300	252	207	235	253	297	272	289	281	285	251	259	225	261	340	68	17	30	272	263	266.9	225.0
16 Spd	4	2	4	5	5	4	7	8	6	4	5	4	4	5	5	6	6	12	9	5	3	1	2	2	4.0	12.0
Dir	296	277	258	280	258	278	281	274	279	216	208	253	290	286	282	251	279	278	288	349	62	142	332	3	277.0	277.9
17 Spd	2	2	5	6	6	3	3	4	2	3	4	6	5	6	19	10	8	8	6	5	2	2	2	2	3.8	19.4
Dir	315	301	283	267	259	271	164	194	156	344	348	343	320	310	262	270	290	307	291	283	265	216	48	253	283.6	262.0
18 Spd	1	4	2	3	3	2	1	9	13	10	8	7	6	6	6	6	8	9	10	13	9	7	5	9	6.0	13.0
Dir	254	218	218	203	212	209	224	254	257	267	269	279	243	274	343	285	259	271	282	282	272	266	263	237	263.8	256.6
19 Spd	9	10	6	3	1	2	2	6	6	12	13	11	11	9	9	10	14	13	13	9	6	6	4	6	6.7	13.5
Dir	232	256	235	165	100	69	131	200	210	238	265	273	264	257	262	272	270	295	296	295	287	257	296	272	262.8	269.8
20 Spd	5	7	7	5	4	2	3	6	3	3	3	4	5	3	1	5	6	5	4	1	3	3	15	13	2.3	15.3
Dir	266	257	254	253	287	247	264	198	188	222	210	285	291	294	318	204	139	151	121	7	352	58	335	326	270.0	334.7
21 Spd	8	7	5	4	3	3	2	3	5	6	6	4	8	14	16	20	19	18	15	12	12	11	9	8	7.6	19.6
Dir	310	292	283	297	222	199	206	157	197	217	219	201	264	270	290	276	279	287	289	308	311	321	329	303	282.7	276.1
22 Spd	5	5	3	3	6	2	3	8	11	9	9	9	11	8	6	6	4	4	3	2	5	4	1	1	3.4	10.7
Dir	269	220	196	203	212	69	345	284	264	263	258	244	237	270	303	285	288	318	347	79	134	138	166	64	257.5	263.6

Peace Airshed Zone Association
Summary of Hourly Averages

Evergreen Park
July 1, 2008 to August 1, 2008
WS (km/h), WD (deg)

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
23 Spd	2	0	0	4	4	4	7	10	11	7	6	9	7	7	7	9	8	6	8	2	1	3	3	2	4.3	11.1
Dir	65	1	39	207	208	234	266	255	251	255	253	254	276	310	314	286	299	308	328	6	295	240	222	219	272.2	250.8
24 Spd	4	2	2	2	2	2	4	7	12	14	15	15	14	14	14	13	12	9	8	7	4	3	3	1	7.1	15.2
Dir	226	214	250	247	223	224	215	252	253	257	265	259	258	272	273	274	272	293	307	282	279	220	265	208	263.9	258.6
25 Spd	3	2	3	5	4	3	6	5	6	4	5	5	7	4	1	5	2	6	6	6	5	5	5	2	1.1	6.6
Dir	206	241	202	203	226	323	223	259	260	273	222	172	156	148	104	117	318	53	63	91	92	71	73	349	162.9	155.9
26 Spd	2	3	4	2	1	1	5	4	3	8	8	4	6	10	9	8	21	16	11	3	5	2	1	2	2.7	20.7
Dir	20	59	65	39	198	38	315	61	94	196	280	17	334	291	323	304	262	260	261	133	116	198	37	351	287.3	261.7
27 Spd	1	2	4	6	6	4	8	11	12	16	15	15	17	16	14	12	13	12	10	8	8	12	13	13	9.9	16.7
Dir	226	7	211	243	251	264	263	259	249	252	247	249	251	256	269	280	269	245	251	274	215	249	264	260	255.1	250.7
28 Spd	13	10	12	12	13	13	12	9	13	12	11	9	7	8	2	4	6	5	3	5	6	4	4	3	5.5	12.9
Dir	256	249	253	259	260	257	265	281	287	311	312	316	316	289	273	256	203	212	202	132	110	106	108	139	266.8	256.0
29 Spd	5	4	3	2	2	2	3	4	4	7	7	4	4	7	12	10	5	6	7	7	6	3	2	2	3.2	11.5
Dir	108	71	78	45	318	292	243	303	297	332	325	321	293	310	280	250	321	308	308	277	264	235	195	239	294.4	279.6
30 Spd	1	2	1	4	6	6	4	9	11	18	27	31	27	26	28	26	24	29	26	21	21	16	16	16	16.3	30.9
Dir	345	281	254	203	223	263	265	271	261	261	266	263	268	267	263	263	274	255	265	261	256	249	248	245	260.9	263.0
31 Spd	17	18	18	18	20	15	15	16	20	24	27	25	21	18	16	18	17	15	12	7	6	4	5	7	15.4	27.1
Dir	244	249	250	256	250	254	258	253	253	262	271	268	278	276	280	267	269	277	286	289	285	264	219	244	263.0	271.2
Spd	4.7	4.9	4.7	4.6	4.4	4.0	5.1	6.6	8.2	9.1	9.7	9.4	9.4	9.6	10.0	9.4	9.4	9.1	8.5	6.3	4.4	4.2	4.7	5.5	Diurnal Average	
Dir	252.5	253.7	251.3	250.7	250.7	256.7	258.6	258.3	260.2	267.3	267.1	268.5	270.9	274.6	276.1	271.9	271.2	267.8	274.8	279.2	263.1	253.3	256.1	253.0		
Spd	16.5	18.0	18.5	18.5	19.7	15.4	16.6	18.9	21.9	23.7	27.3	30.9	27.1	25.6	28.5	25.8	23.9	29.3	26.4	22.9	21.1	18.6	15.8	17.4	Diurnal Maximum	
Dir	243.8	249.0	250.5	255.8	250.4	253.7	253.8	258.2	253.6	262.4	266.4	263.0	268.2	266.7	263.5	262.7	274.4	255.5	264.9	265.4	256.5	261.4	248.4	263.8		

Maximum Speed Value: 31 km/h on Jul 30 12:00
Maximum Daily Speed Average: 18.0 km/h on Jul 7
Maximum Diurnal Speed Average: 10.0 km/h at hour 15

Minimum Speed Value: 0 km/h on Jul 23 02:00
Minimum Daily Speed Average: 1.1 km/h on Jul 25
Minimum Diurnal Speed Average: 4.0 km/h at hour 6

Monthly Average Velocity: 6.83 km/h 265.19 deg

Speed Percentiles: $P_1 = 0.7$ $P_{10} = 2.0$ $Q_1 = 3.9$ Median = 7.3 $Q_3 = 12.1$ $P_{90} = 17.4$ $P_{99} = 25.8$

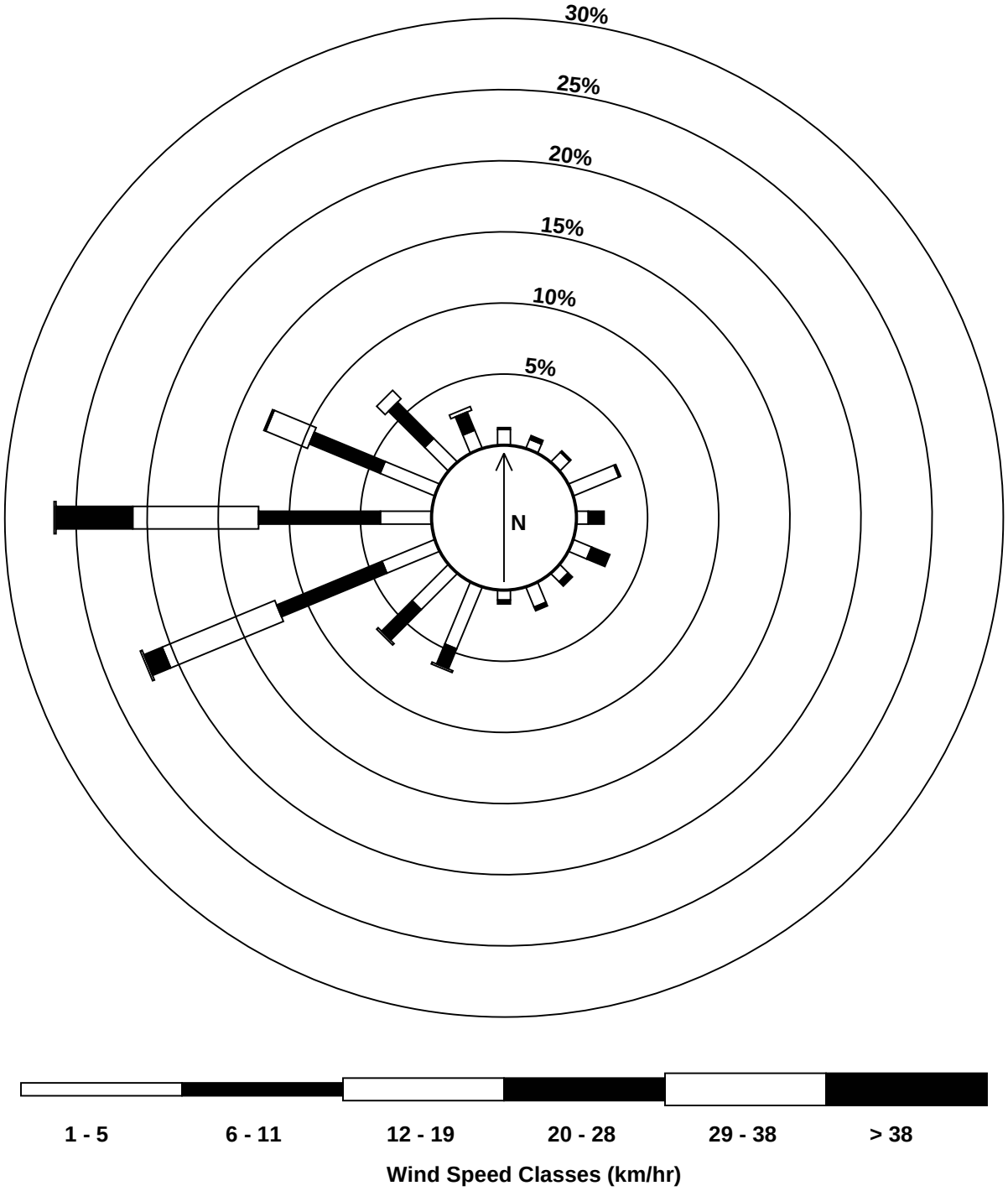
All monthly, daily, and diurnal averages have been calculated using vector methods

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

Percentage 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	3.23	1.08	0.00	0.00	0.00	0.00	4.30
NorthEast	2.82	0.27	0.00	0.00	0.00	0.00	3.09
East	3.49	2.42	0.00	0.00	0.00	0.00	5.91
SouthEast	2.02	1.34	0.00	0.00	0.00	0.00	3.36
South	3.09	1.48	0.00	0.00	0.00	0.00	4.57
SouthWest	7.66	6.99	2.02	0.00	0.00	0.00	16.67
West	7.26	16.67	18.15	7.26	0.40	0.00	49.73
NorthWest	4.03	5.91	2.42	0.00	0.00	0.00	12.37
Total	33.60	36.16	22.58	7.26	0.40	0.00	100.00

Wind Rose for WS at Evergreen Park
July 2008



Peace Airshed Zone Association
Summary of Hourly Standard Deviations

Evergreen Park - Wind Direction (WD) - deg
July 1, 2008 to August 1, 2008

Maximum Value: 95.7 deg on Jul 25 15:00

Minimum Value: 4.8 deg on Jul 31 03:00

Percentiles: P_1 = 5.8 P_{10} = 8.7 Q_1 = 13.6 Median = 23.4 Q_3 = 44.0 P_{90} = 66.3 P_{99} = 88.7

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 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	63	34	69	81	62	21	21	35	33	38	34	26	38	35	35	20	18	16	16	15	17	21	36	80.5
2-Jul	27	17	12	13	71	89	72	73	31	63	75	44	45	45	40	40	55	30	20	46	25	49	49	67	88.8
3-Jul	91	84	89	71	88	73	79	45	77	86	62	60	56	65	69	78	60	14	29	78	45	13	8	17	90.8
4-Jul	14	21	46	28	62	10	9	18	36	19	26	26	19	24	22	51	15	29	18	12	12	8	6	7	61.7
5-Jul	12	7	12	23	12	25	23	18	29	23	30	35	42	61	26	53	58	80	68	71	12	11	43	77	79.9
6-Jul	72	38	32	28	24	15	21	16	20	16	17	14	17	17	17	13	14	12	11	8	8	6	6	9	72.2
7-Jul	8	6	6	6	6	8	7	8	9	14	10	14	13	14	16	15	14	10	11	9	8	6	9	9	16.1
8-Jul	7	13	12	8	93	11	17	21	21	17	16	14	14	24	19	15	12	13	12	13	9	25	14	8	93.0
9-Jul	8	11	10	11	8	9	10	8	9	13	12	11	17	11	11	15	12	16	14	11	24	17	21	8	24.5
10-Jul	10	8	9	12	8	23	16	11	15	23	24	25	31	22	38	27	24	18	31	39	66	31	7	6	65.7
11-Jul	7	5	7	16	24	15	14	11	14	11	15	23	29	29	29	26	17	16	14	11	7	6	12	8	29.2
12-Jul	8	8	71	78	76	77	57	38	15	16	22	17	14	14	13	12	18	15	10	12	15	10	7	8	77.7
13-Jul	9	8	11	6	8	9	7	8	14	15	22	25	27	25	20	22	35	20	23	18	23	65	49	61	65.5
14-Jul	45	44	62	20	21	23	13	13	15	42	32	22	26	34	28	35	30	22	28	28	20	34	41	57	62.1
15-Jul	38	42	83	42	75	72	74	24	41	41	59	73	50	43	28	31	16	25	37	87	42	60	63	34	86.9
16-Jul	26	54	34	20	13	18	16	19	26	59	62	69	60	55	69	50	39	13	17	56	19	84	60	64	84.0
17-Jul	54	50	25	27	15	38	73	34	72	78	63	43	65	36	9	29	26	31	39	37	56	67	54	58	77.7
18-Jul	63	15	66	61	47	72	77	16	12	19	25	41	59	60	50	48	49	26	22	15	13	14	24	9	77.2
19-Jul	10	9	26	25	89	47	55	16	28	17	18	25	26	44	37	24	21	18	17	12	18	12	19	16	89.2
20-Jul	28	10	10	21	17	43	43	12	58	75	62	72	47	65	93	60	42	35	33	86	55	33	14	13	93.2
21-Jul	15	17	28	21	49	34	38	76	20	38	32	50	42	27	18	14	15	15	14	15	13	12	11	15	76.0
22-Jul	30	36	83	71	17	58	56	25	18	24	35	31	31	38	45	54	61	60	63	67	24	26	68	87	87.4
23-Jul	80	87	93	19	10	26	13	11	12	24	41	32	36	56	42	38	35	43	23	48	58	38	60	55	93.0
24-Jul	12	65	59	66	24	16	21	14	10	14	21	18	25	24	26	26	21	30	24	16	23	13	47	86	86.4
25-Jul	23	56	14	22	47	33	33	21	22	43	57	50	42	76	96	48	85	34	24	24	14	10	9	42	95.7
26-Jul	59	18	17	65	95	79	72	53	70	21	35	40	45	24	35	20	11	9	17	60	30	64	81	56	95.2
27-Jul	79	59	24	18	8	24	16	15	14	11	14	18	14	16	19	24	15	17	9	23	30	22	9	8	79.1
28-Jul	7	8	6	9	8	5	10	16	15	23	28	35	48	52	94	75	49	61	69	27	10	27	14	30	94.0
29-Jul	17	17	31	65	54	44	49	28	24	22	24	45	52	26	18	32	60	16	16	15	11	22	48	48	64.5
30-Jul	74	43	82	27	21	18	44	26	14	13	8	8	8	10	9	10	13	9	10	9	7	7	7	7	82.4
31-Jul	8	6	5	6	5	7	7	9	10	12	12	12	13	19	19	19	16	14	17	14	14	21	11	13	21.4
	90.8	87.3	93.0	77.7	95.2	88.8	79.2	76.0	77.2	85.7	75.3	72.5	65.1	75.7	95.7	77.8	85.0	79.9	68.6	86.9	65.7	84.0	81.1	87.4	

PASZA
Smoky Heights Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association
Summary of Hourly Averages

Smoky Heights - Sulphur Dioxide (SO_2) - ppb
July 1, 2008 to August 1, 2008

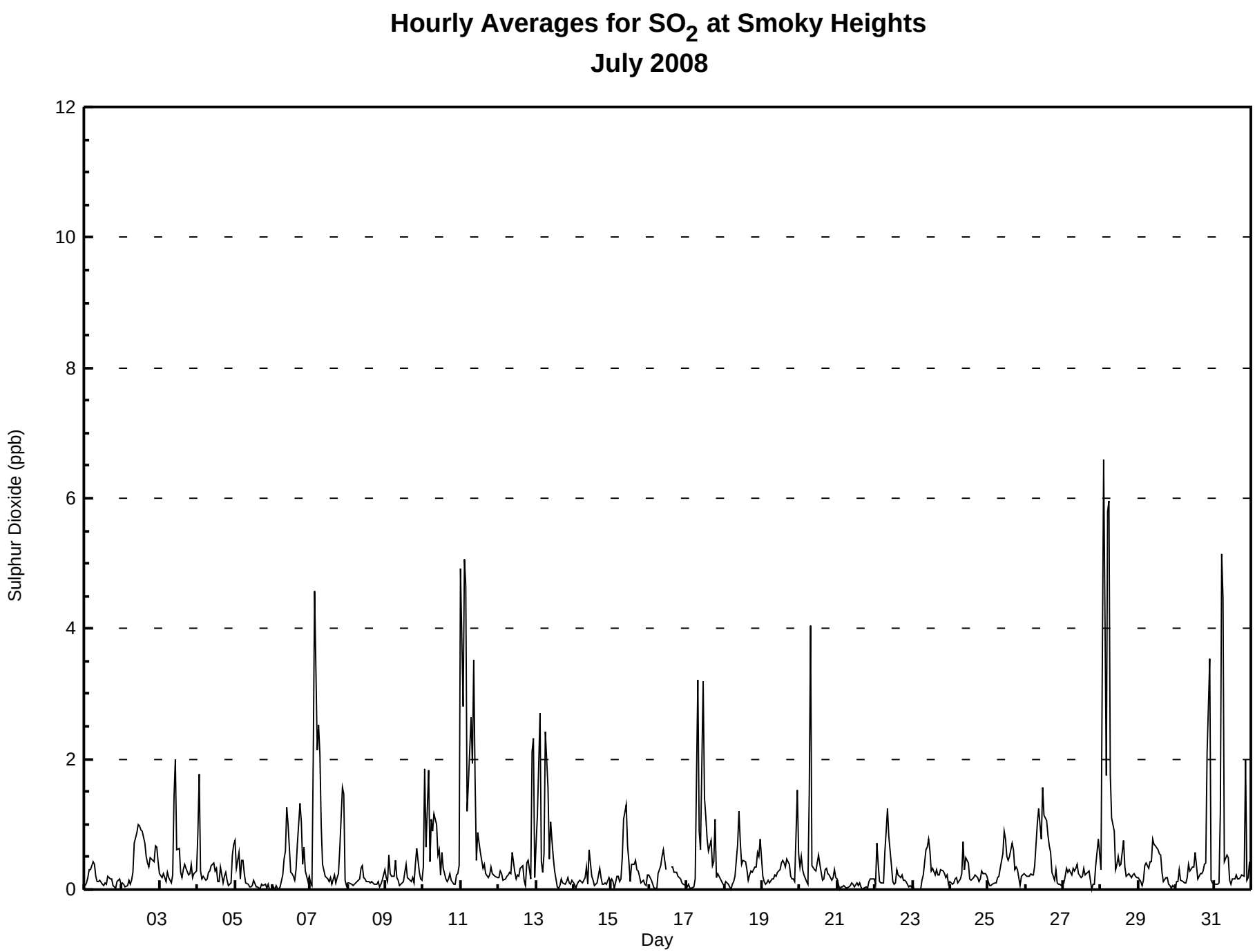
Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7 ppb on Jul 28 03:00 Maximum Daily Average: 1.5 ppb on Jul 11

Minimum Value: 0 ppb on Jul 5 23:00 Minimum Daily Average: 0.1 ppb on Jul 21
Maximum Diurnal Average: 0.7 ppb at hour 7 Minimum Diurnal Average: 0.2 ppb at hour 20
Monthly Average: 0.44 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.1$ Median = 0.2 $Q_3 = 0.4$ $P_{90} = 0.9$ $P_{99} = 4.5$

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) 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	0	0	0	0	0	0	0	0	A	0	0	0.2	0.4
2-Jul	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	A	1	1	0	0.5	1.0
3-Jul	0	0	0	0	0	0	0	0	0	1	2	1	1	0	0	0	0	0	0	A	0	0	0	0	0.4	2.0
4-Jul	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	1	0.3	1.8
5-Jul	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.8
6-Jul	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	A	1	1	0	1	0	0	0	0.4	1.3
7-Jul	0	0	2	5	2	3	2	1	0	0	0	0	0	0	0	A	0	0	0	1	2	1	0	0	0.9	4.6
8-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	0.1	0.4
9-Jul	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0.2	0.6
10-Jul	0	2	1	2	0	1	1	1	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0.6	1.8
11-Jul	5	3	5	5	1	2	3	2	4	2	0	A	1	0	0	0	0	0	0	0	0	0	0	0	1.5	5.1
12-Jul	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	2	2	0	0.4	2.3
13-Jul	1	1	3	0	0	1	2	2	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	2.7
14-Jul	0	0	0	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
15-Jul	0	0	0	0	0	0	0	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.3
16-Jul	0	0	0	0	0	0	A	0	1	1	0	C	C	C	A	0	0	0	0	0	0	0	0	0	0.2	0.6
17-Jul	0	0	0	0	0	A	2	3	1	1	3	1	1	1	1	1	0	0	1	0	0	0	0	0	0.7	3.2
18-Jul	0	0	0	0	A	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	0.4	1.2
19-Jul	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0.3	1.5
20-Jul	0	1	A	0	0	0	1	4	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.5	4.0
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	0.2
22-Jul	A	1	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.3	1.2
23-Jul	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0.3	0.8
24-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
25-Jul	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1	1	1	0	0	0	A	0	0	0	0.3	0.9
26-Jul	0	0	0	0	0	0	0	1	1	1	1	2	1	1	1	1	1	0	0	A	0	0	0	0	0.5	1.6
27-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	1	0.3	0.8
28-Jul	0	4	7	2	6	6	2	1	1	0	0	1	0	0	1	0	0	A	0	0	0	0	0	0	1.4	6.6
29-Jul	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	A	0	0	0	0	0	0	0	0.3	0.8
30-Jul	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0	2	4	0	0	0.5	3.5
31-Jul	0	0	0	0	1	5	4	0	1	0	0	0	0	0	A	0	0	0	0	0	2	0	0	0	0.7	5.1
	0.4	0.5	0.7	0.5	0.5	0.7	0.7	0.7	0.6	0.6	0.6	0.4	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.4	0.4	0.3	0.2	Diurnal Average	
	4.9	3.5	6.6	4.7	5.8	6.0	4.5	4.0	3.5	1.7	3.2	1.6	1.1	1.1	0.8	0.7	0.6	1.3	1.1	0.6	2.1	3.5	2.3	0.8	Diurnal Maximum	

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


Hourly Averages for SO_2 at Smoky Heights
July 2008
Sulphur Dioxide (ppb)
0
2
4
6
8
10
12
03
05
07
09
11
13
15
17
19
21
23
25
27
29
31
Day

Peace Airshed Zone Association
Summary of Hourly Maximums

Smoky Heights - Sulphur Dioxide (SO_2) - ppb
July 1, 2008 to August 1, 2008

Maximum Value: 19 ppb on Jul 28 03:00

Maximum Daily Average: 3.3 ppb on Jul 28

Minimum Value: 0 ppb on Jul 6 00:00

Minimum Daily Average: 0.4 ppb on Jul 21

Maximum Diurnal Average: 2.2 ppb at hour 3

Minimum Diurnal Average: 0.6 ppb at hour 15

Monthly Average: 1.11 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.3$ $Q_1 = 0.4$ Median = 0.6 $Q_3 = 0.9$ $P_{90} = 2.1$ $P_{99} = 11.9$

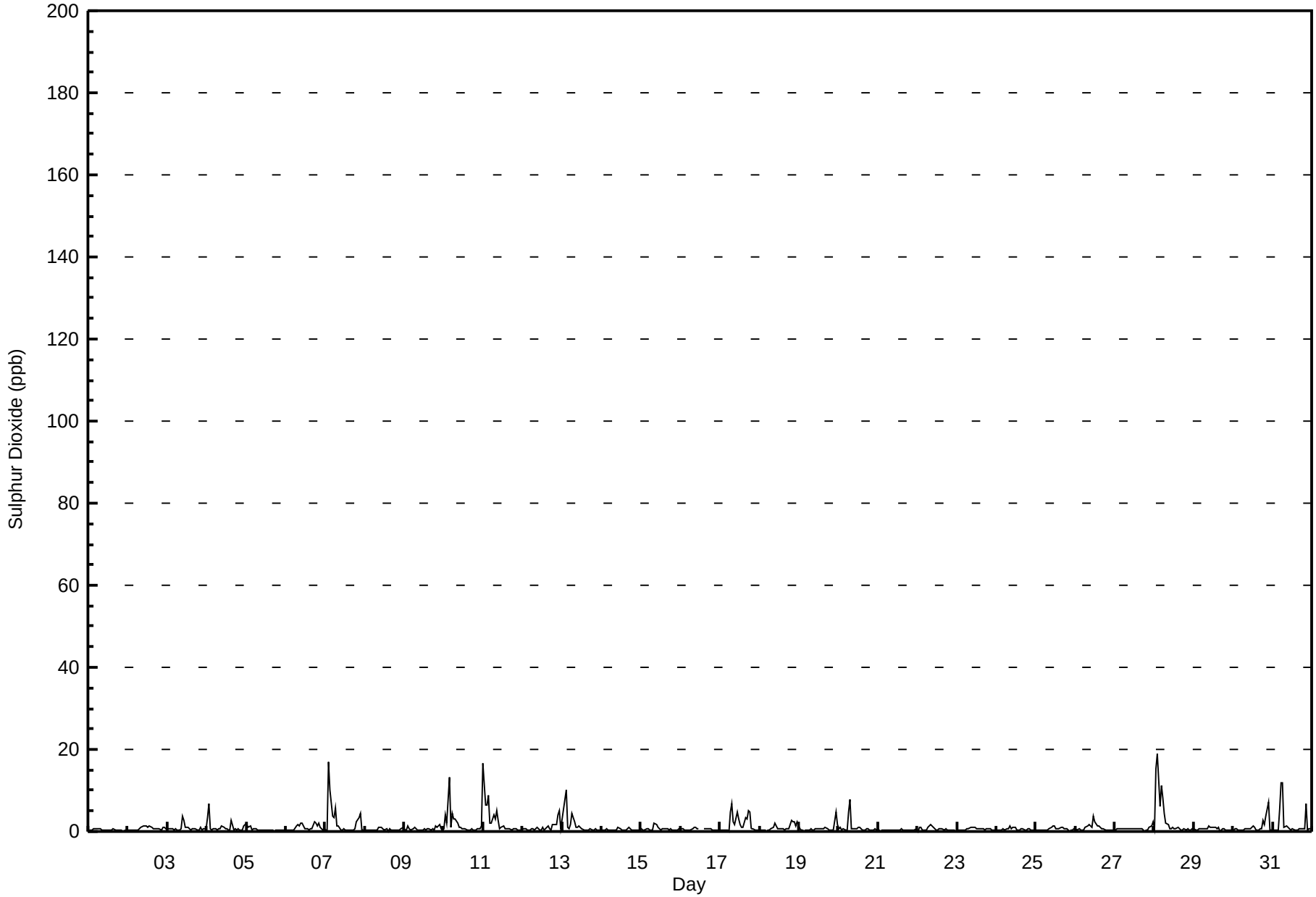
Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 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	1	1	1	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0.4	0.7
2-Jul	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.3
3-Jul	1	1	1	1	0	1	0	0	1	4	3	1	1	1	0	1	1	1	1	A	1	0	1	1	0.9	3.9
4-Jul	3	7	1	0	1	1	0	1	1	1	1	1	1	0	0	3	0	1	A	1	0	0	1	2	1.2	6.8
5-Jul	2	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.5	2.1
6-Jul	0	0	0	0	0	0	1	2	1	2	2	1	1	1	0	1	A	3	2	1	2	1	0	1	1.0	2.5
7-Jul	0	0	17	10	4	3	6	2	1	0	0	1	0	0	0	A	0	0	1	2	3	5	0	0	2.6	17.0
8-Jul	0	0	0	0	0	0	0	0	1	1	1	1	0	1	A	1	0	0	0	0	0	0	1	1	0.5	1.1
9-Jul	1	0	1	1	0	1	1	1	0	0	0	0	1	A	1	1	0	1	0	1	1	2	1	1	0.7	1.6
10-Jul	1	4	2	13	1	5	3	3	2	1	1	1	A	1	0	0	0	1	0	0	1	1	1	1	1.9	13.1
11-Jul	17	6	6	9	2	2	4	3	5	3	1	A	1	1	1	1	1	0	1	1	1	0	0	0	2.9	16.5
12-Jul	1	1	1	1	0	1	1	0	1	1	A	0	1	0	1	1	1	0	2	2	2	4	5	1	1.1	5.1
13-Jul	3	6	10	1	1	2	4	2	1	A	1	1	1	0	0	0	0	1	0	0	1	0	0	0	1.6	10.1
14-Jul	0	0	0	1	0	0	0	0	A	0	1	1	0	0	0	0	1	1	0	0	0	0	1	0	0.5	1.1
15-Jul	1	0	0	1	1	0	0	A	2	2	1	1	0	1	1	1	1	1	1	0	0	0	0	1	0.7	2.1
16-Jul	1	1	0	0	0	0	A	1	1	1	1	C	C	C	A	1	1	1	1	0	0	0	0	0	0.5	1.0
17-Jul	0	0	0	0	0	A	5	7	2	2	5	3	2	1	1	3	3	5	5	1	1	0	0	0	2.1	6.8
18-Jul	0	0	0	0	A	0	0	1	1	2	1	1	1	1	1	0	1	1	1	3	2	2	1	2	1.0	2.6
19-Jul	1	0	0	A	0	0	0	1	0	0	1	1	1	1	1	1	1	1	0	0	0	0	5	2	0.8	4.8
20-Jul	1	1	A	1	0	0	5	8	1	1	1	1	1	1	0	0	0	1	1	0	0	0	1	0	1.1	7.7
21-Jul	1	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.4	0.6
22-Jul	A	1	1	0	0	0	1	1	2	1	1	0	0	1	1	1	1	1	0	0	0	0	0	A	0.7	1.9
23-Jul	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	A	0	0.6	1.1
24-Jul	0	0	0	0	1	0	1	1	1	1	1	1	0	0	0	1	1	0	0	1	1	A	0	0	0.6	1.5
25-Jul	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	A	0	0	1	0.7	1.3
26-Jul	1	0	1	0	0	0	1	1	2	1	1	4	2	1	1	1	1	1	0	A	0	0	0	0	1.0	3.8
27-Jul	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	0	0	1	1	2	0.7	2.5
28-Jul	1	15	19	6	11	8	4	2	2	1	1	1	1	1	1	1	0	A	1	0	1	0	0	1	3.3	18.9
29-Jul	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	0	0	0	0	0.6	1.2
30-Jul	0	1	1	0	0	0	0	1	1	1	1	1	1	1	0	A	1	1	3	2	4	7	0	0	1.2	7.1
31-Jul	0	0	0	0	5	12	12	1	1	1	1	0	1	1	A	0	1	1	1	1	7	0	1	1	2.1	11.9
	1.3	1.7	2.2	1.7	1.2	1.4	1.9	1.4	1.2	1.1	1.1	0.9	0.8	0.7	0.6	0.8	0.7	0.8	0.8	0.7	1.1	1.1	0.9	0.7	Diurnal Average	
	16.5	15.2	18.9	13.1	11.1	11.9	11.9	7.7	4.9	3.9	4.6	3.8	2.5	1.4	1.5	3.3	3.0	5.0	4.7	2.6	6.9	7.1	5.1	2.5	Diurnal Maximum	

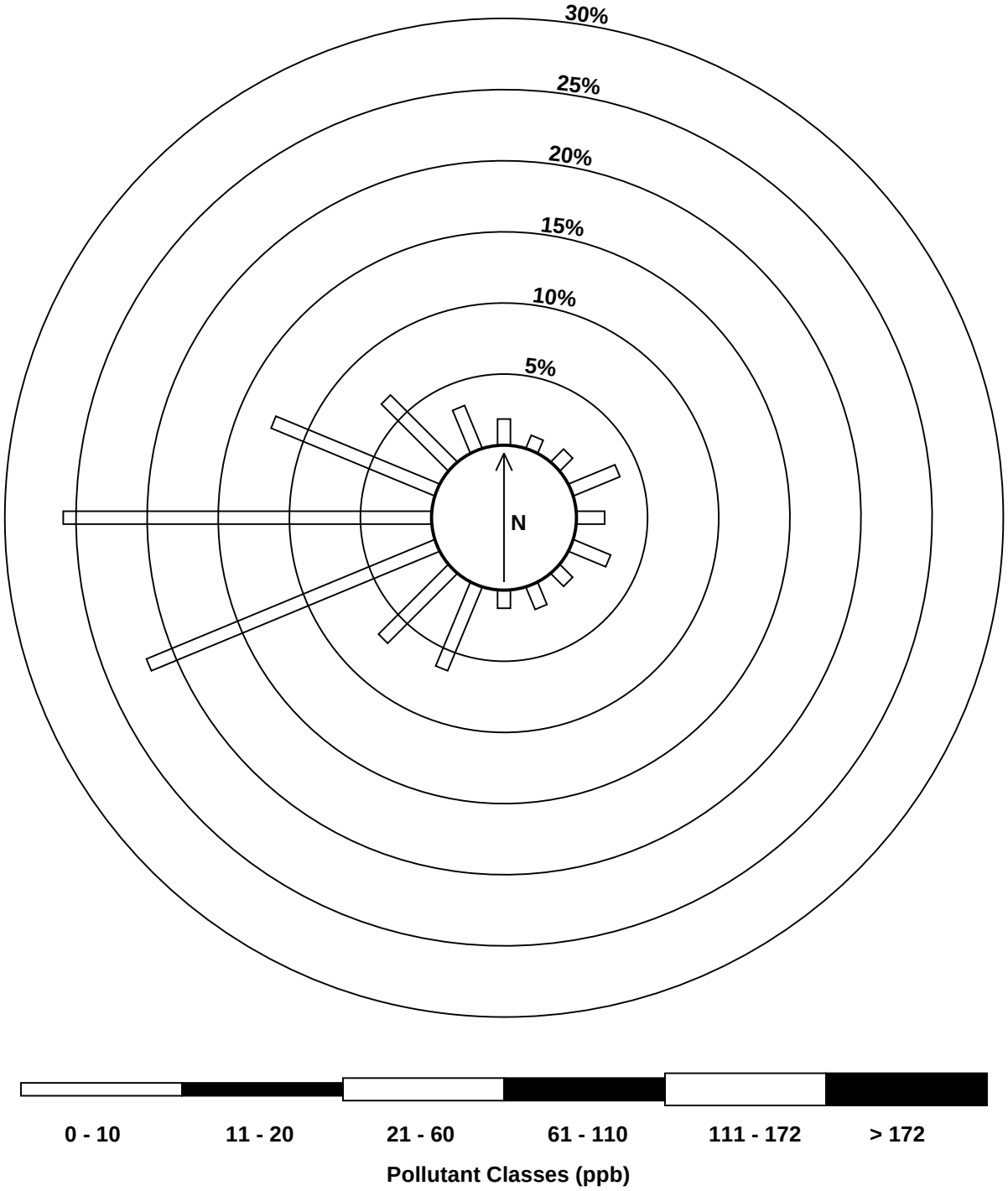
C - Calibration

A - Automated Daily Zero Span

Hourly Maximums for SO_2 at Smoky Heights
July 2008



Pollutant Rose for SO_2 at Smoky Heights
July 2008



Peace Airshed Zone Association
Summary of Hourly Averages

Smoky Heights - Total Reduced Sulphur (TRS) - ppb
July 1, 2008 to August 1, 2008

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3 ppb on Jul 29 23:00 Maximum Daily Average: 0.8 ppb on Jul 29

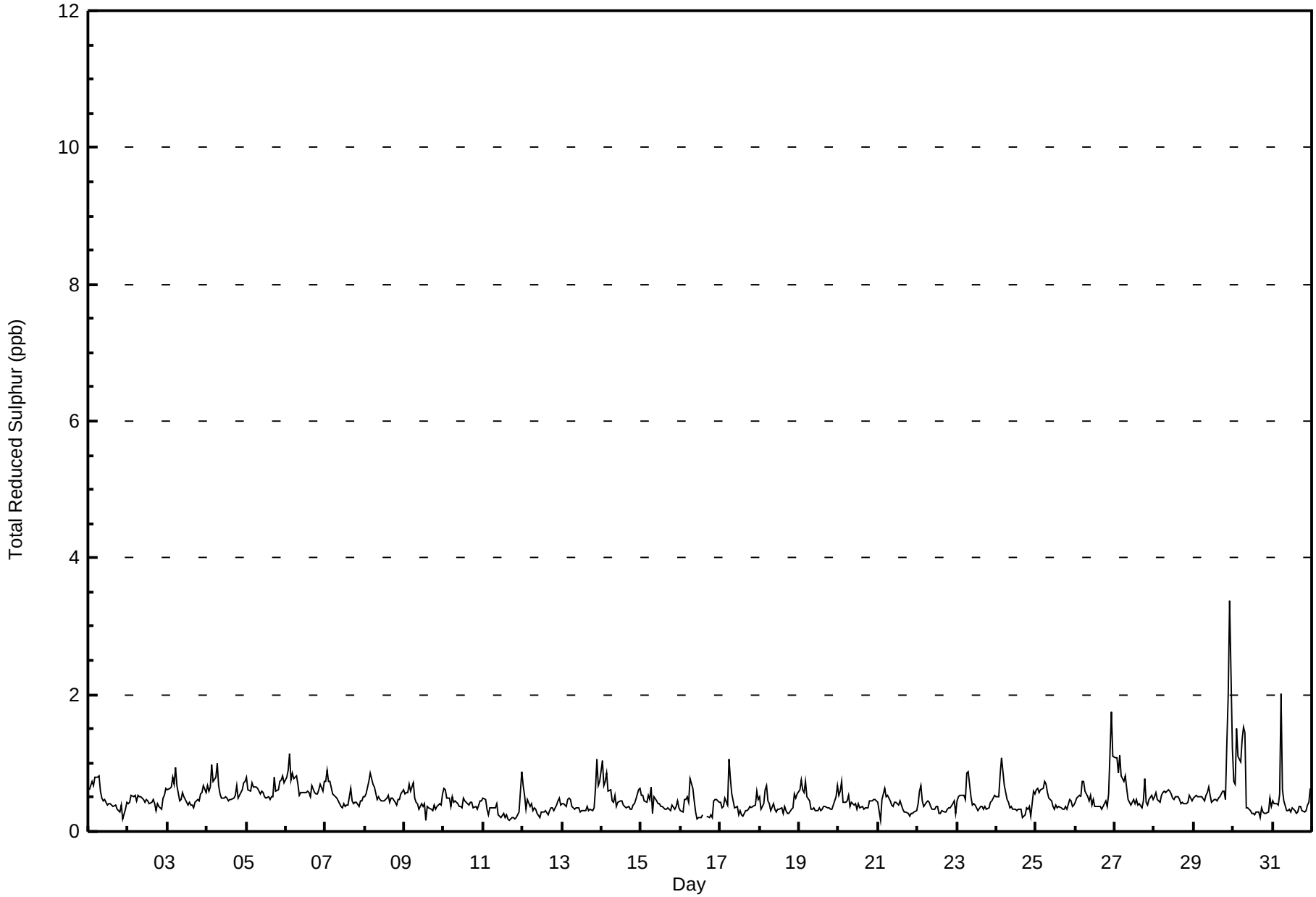
Minimum Value: 0 ppb on Jul 11 17:00 Minimum Daily Average: 0.3 ppb on Jul 11
Maximum Diurnal Average: 0.7 ppb at hour 6 Minimum Diurnal Average: 0.3 ppb at hour 17
Monthly Average: 0.48 ppb Percentiles: $P_1 = 0.2$ $P_{10} = 0.3$ $Q_1 = 0.3$ Median = 0.4 $Q_3 = 0.5$ $P_{90} = 0.7$ $P_{99} = 1.4$

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) 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	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.5	0.8
2-Jul	0	0	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	0.5	0.6
3-Jul	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	A	1	1	1	1	0.5	0.9
4-Jul	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0	1	A	0	1	1	1	1	0.6	1.0
5-Jul	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	A	1	1	1	1	1	1	0.6	0.8
6-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	0.7	1.1
7-Jul	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	0.5	0.9
8-Jul	1	1	1	1	1	1	1	0	1	0	0	0	0	0	A	0	0	0	0	0	0	0	1	1	0.5	0.9
9-Jul	1	1	1	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0.4	0.7
10-Jul	1	1	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
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	1	0.3	0.9
12-Jul	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7
13-Jul	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.4	1.1
14-Jul	1	1	1	1	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.5	1.0
15-Jul	1	1	0	0	1	0	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
16-Jul	0	0	0	0	1	0	A	1	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0.4	0.6
17-Jul	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.4	0.8
18-Jul	1	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.4	0.6
19-Jul	1	1	1	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.4	0.8
20-Jul	1	1	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
21-Jul	0	A	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
22-Jul	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.4	0.7
23-Jul	0	1	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0.5	0.9
24-Jul	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	0.5	1.1
25-Jul	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.5	0.7
26-Jul	0	0	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	A	1	1	2	1	0.6	1.7
27-Jul	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	0	0.6	1.1
28-Jul	1	1	0	0	1	1	1	1	1	1	1	0	0	1	1	0	0	A	0	0	0	1	0	0	0.5	0.6
29-Jul	0	1	1	1	1	1	0	1	1	1	1	0	0	0	0	0	A	1	1	0	1	2	3	1	0.8	3.4
30-Jul	1	1	1	1	1	1	2	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.6	1.5
31-Jul	0	0	0	0	1	2	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0.5	2.0
	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.6	0.6	0.6	Diurnal Average	
	1.1	1.1	1.5	1.1	1.0	2.0	1.5	1.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.6	0.6	1.3	2.0	3.4	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

Hourly Averages for TRS at Smoky Heights
July 2008



Peace Airshed Zone Association
Summary of Hourly Maximums

Smoky Heights - Total Reduced Sulphur (TRS) - ppb
July 1, 2008 to August 1, 2008

Maximum Value: 7 ppb on Jul 29 23:00

Maximum Daily Average: 1.5 ppb on Jul 29

Minimum Value: 0 ppb on Jul 24 17:00

Minimum Daily Average: 0.7 ppb on Jul 11

Maximum Diurnal Average: 1.2 ppb at hour 23

Minimum Diurnal Average: 0.7 ppb at hour 17

Monthly Average: 0.91 ppb

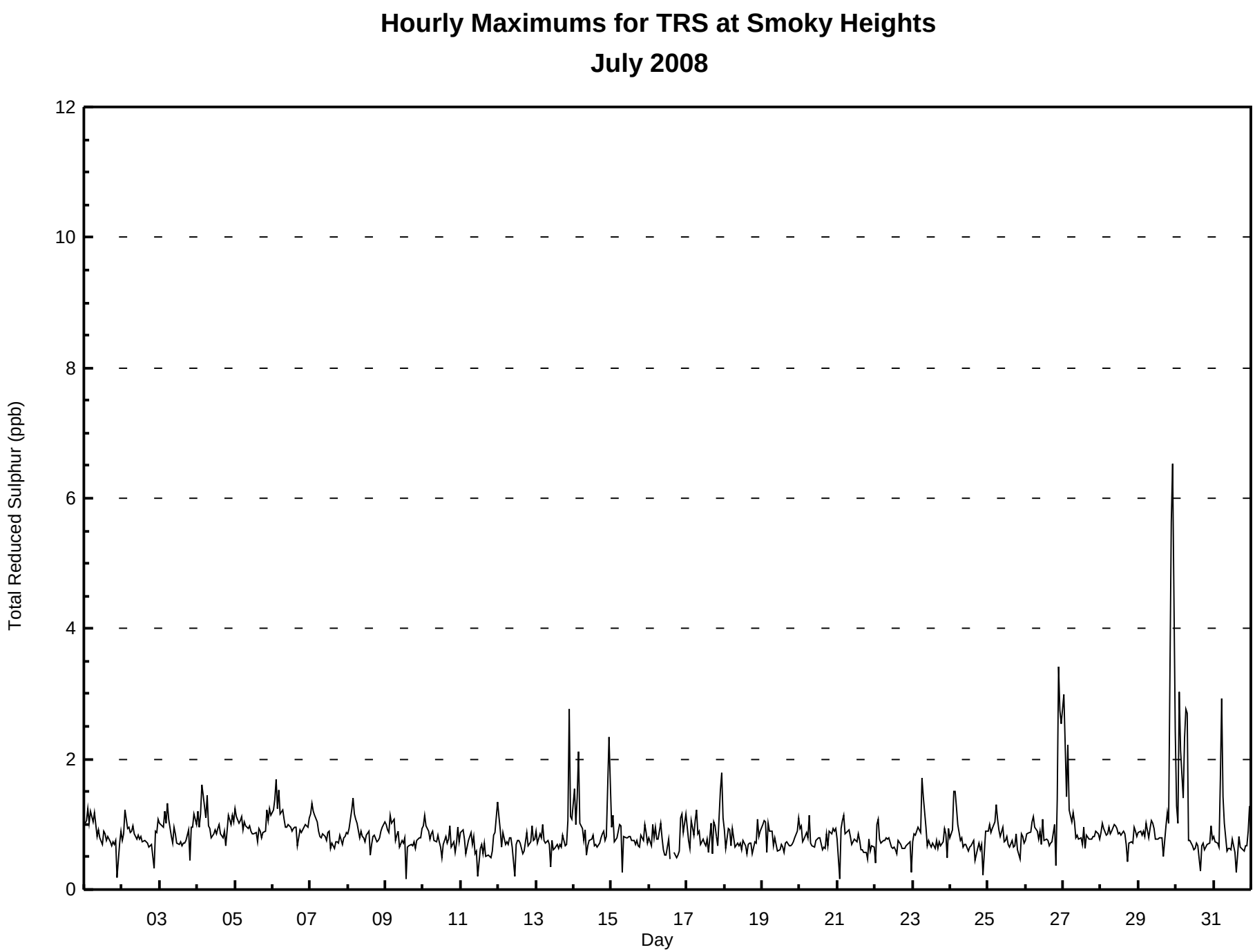
Percentiles: $P_1 = 0.5$ $P_{10} = 0.6$ $Q_1 = 0.7$ Median = 0.8 $Q_3 = 1.0$ $P_{90} = 1.1$ $P_{99} = 2.9$

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-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	1.3
2-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	1.2
3-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	0.9	1.3
4-Jul	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1.0	1.6
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	1.0	1.2
6-Jul	1	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1.1	1.7
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	0.8	1.1
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	0.8	1.1
11-Jul	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	1	1	1	1	0.7	1.3
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	1.1
13-Jul	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	3	1	1	0.9	2.8
14-Jul	2	1	1	2	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1.0	2.3
15-Jul	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1
16-Jul	1	1	1	1	1	1	A	1	1	1	1	1	1	C	C	C	1	0	1	1	1	1	1	1	0.8	1.2
17-Jul	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	0.9	1.8
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	0.8	1.1
19-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
20-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	1.1
21-Jul	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0.8	1.1
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	1.1
23-Jul	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.9	1.7
24-Jul	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	A	1	1	0.8	1.5
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	0.8	1.3
26-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	3	3	3	1.1	3.4
27-Jul	3	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1.1	3.0
28-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	1.0
29-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	3	6	7	2	1.5	6.5
30-Jul	1	1	3	2	1	2	3	3	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1.2	3.0
31-Jul	1	1	1	1	2	3	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.9	2.9
Diurnal Average	1.0	1.0	1.1	1.1	1.0	1.1	1.0	0.9	0.8	0.8	0.8	0.7	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.9	1.2	1.2	1.1		
Diurnal Maximum	3.0	2.2	3.0	2.2	1.7	2.9	2.8	2.7	1.1	1.0	1.0	1.1	0.9	1.0	1.0	1.0	0.9	1.0	1.2	1.0	3.3	5.6	6.5	2.5		

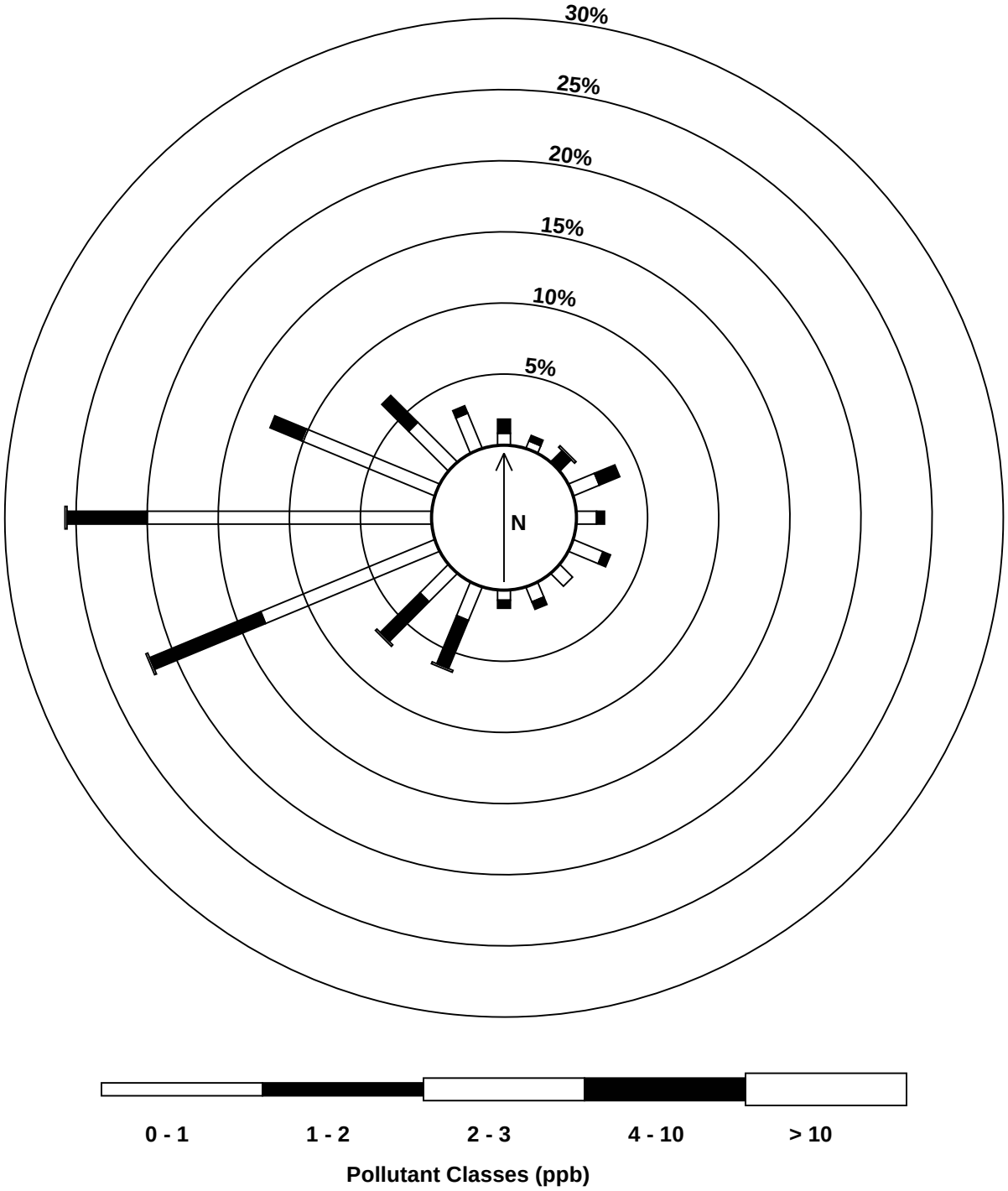
C - Calibration

A - Automated Daily Zero Span


Hourly Maximums for TRS at Smoky Heights
July 2008
Total Reduced Sulphur (ppb)
0
2
4
6
8
10
12
03
05
07
09
11
13
15
17
19
21
23
25
27
29
31
Day

Pollutant Rose for TRS at Smoky Heights

July 2008



Peace Airshed Zone Association
Summary of Hourly Averages

Smoky Heights - Particulate Matter 2.5 ($PM_{2.5}$) - $\mu g/m^3$
July 1, 2008 to August 1, 2008

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 41 $\mu g/m^3$ on Jul 23 22:00
Maximum Daily Average: 10.5 $\mu g/m^3$ on Jul 3

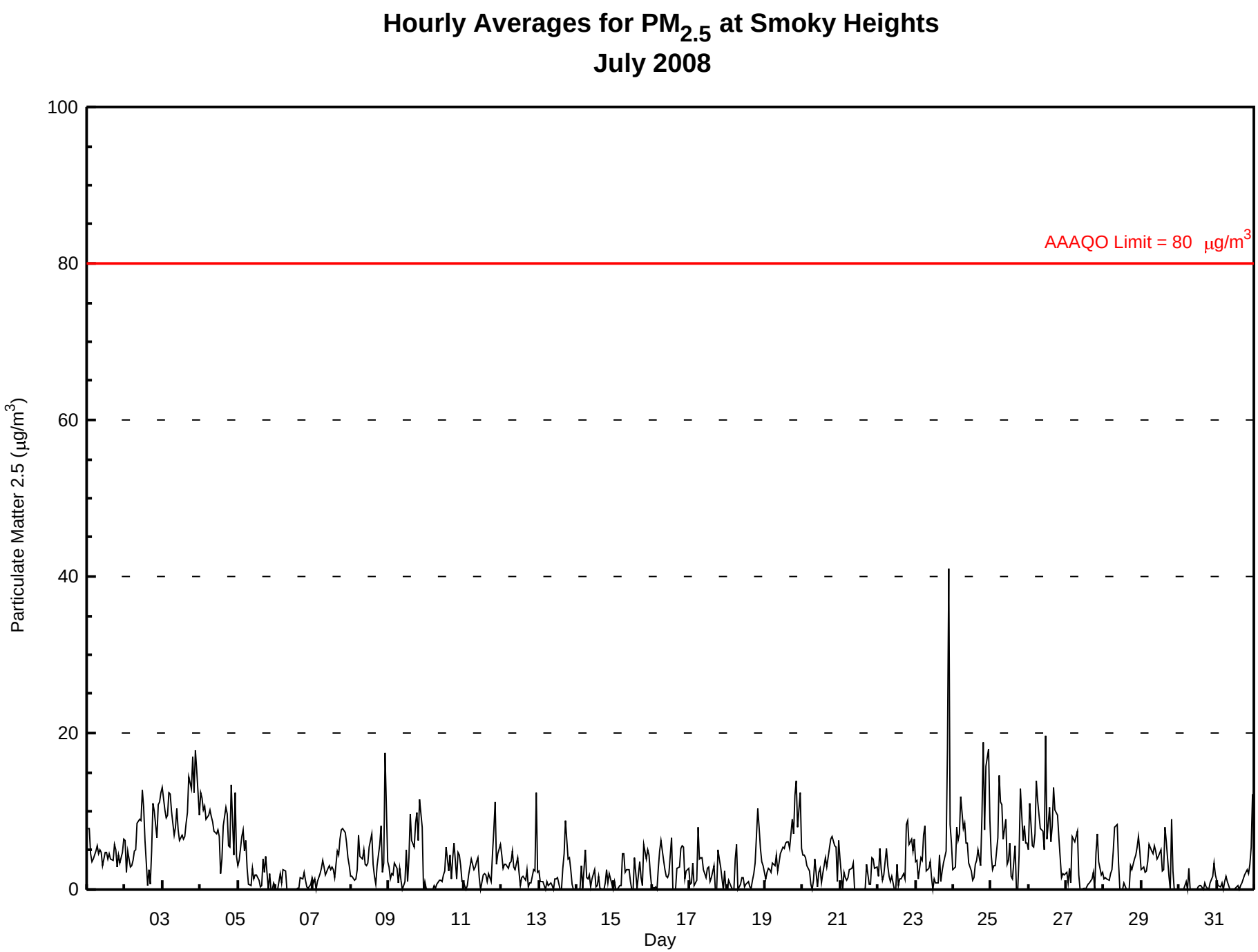
Minimum Value: 0 $\mu g/m^3$ on Jul 5 20:00
Maximum Diurnal Average: 6.2 $\mu g/m^3$ at hour 20
Monthly Average: 3.74 $\mu g/m^3$

Minimum Daily Average: 0.6 $\mu g/m^3$ on Jul 30
Minimum Diurnal Average: 2.2 $\mu g/m^3$ at hour 15
Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 1.0$ Median = 2.7 $Q_3 = 5.4$ $P_{90} = 8.6$ $P_{99} = 17.2$

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	8	8	5	4	4	5	6	4	5	5	3	5	5	4	5	4	4	6	5	3	4	3	5	6	4.7	7.8
2-Jul	6	2	5	3	3	4	5	5	8	9	9	13	11	6	1	3	1	5	11	10	7	11	11	12	6.6	12.7
3-Jul	13	10	9	9	12	12	10	7	8	10	8	6	7	6	7	8	10	14	13	17	12	18	15	9	10.5	17.8
4-Jul	12	12	10	11	9	10	10	9	9	8	7	8	7	2	4	8	10	10	6	5	13	4	12	4	8.3	13.5
5-Jul	3	4	7	8	5	6	3	1	0	3	1	2	2	1	0	1	4	2	4	0	2	0	0	1	2.5	7.6
6-Jul	0	0	1	2	1	2	2	0	0	0	0	0	0	0	0	0	1	1	2	1	0	0	1	2	0.7	2.5
7-Jul	1	1	0	1	2	3	4	3	2	3	3	3	3	3	1	5	4	6	8	8	7	6	4	3	3.5	7.9
8-Jul	2	2	1	1	3	7	4	4	5	3	3	3	5	7	3	2	1	3	6	8	2	3	17	4	4.2	17.5
9-Jul	3	1	2	2	3	3	1	3	1	0	1	5	1	4	10	6	5	9	10	6	12	8	0	1	4.0	11.6
10-Jul	0	0	0	0	0	1	0	1	1	1	1	2	2	5	2	4	1	4	6	1	5	4	3	1	2.0	6.0
11-Jul	1	0	1	2	3	4	3	3	4	4	1	0	2	2	2	1	2	1	4	8	11	3	5	6	3.0	11.2
12-Jul	4	3	3	3	3	3	4	5	3	3	4	2	1	2	2	1	3	0	1	1	2	2	12	2	2.9	12.4
13-Jul	2	1	1	1	0	1	1	1	0	0	1	1	1	0	0	3	4	9	4	4	3	1	0	0	1.6	8.9
14-Jul	0	0	0	3	0	5	2	1	2	0	1	3	0	0	2	0	0	0	1	3	1	2	1	0	1.1	5.1
15-Jul	1	0	0	1	1	5	5	2	3	2	1	0	0	4	0	2	4	2	0	6	4	5	4	2	2.2	5.7
16-Jul	0	0	0	0	3	5	6	4	3	2	2	2	7	0	0	0	3	3	5	6	6	1	2	3	2.6	6.7
17-Jul	1	1	3	0	1	8	4	4	4	2	1	3	3	1	2	P	0	0	5	4	3	0	2	0	2.3	8.0
18-Jul	0	1	0	0	0	4	6	0	1	2	2	0	1	1	0	0	1	2	3	10	8	5	4	3	2.3	10.4
19-Jul	1	2	3	3	2	3	3	4	2	3	5	5	5	6	6	6	5	9	7	12	14	8	12	5	5.6	14.0
20-Jul	4	4	4	3	2	1	0	1	4	0	2	3	1	2	4	3	4	5	6	7	6	5	1	6	3.3	6.7
21-Jul	4	0	2	1	1	2	2	3	3	0	0	0	0	0	0	0	0	3	1	1	4	4	3	3	1.5	4.0
22-Jul	2	5	3	1	2	5	3	2	1	2	0	0	3	1	1	1	2	1	8	9	6	6	5	6	3.2	8.8
23-Jul	4	4	1	4	4	7	8	2	3	4	1	0	1	1	1	4	1	2	3	5	18	41	8	6	5.6	41.0
24-Jul	2	3	8	6	7	12	8	8	6	6	3	2	1	2	3	4	5	3	9	19	8	16	18	9	7.0	18.8
25-Jul	4	3	3	3	7	15	11	11	6	9	3	4	6	2	1	6	0	0	4	13	6	8	6	6	5.7	14.5
26-Jul	5	11	6	5	7	14	11	8	8	7	5	20	6	10	6	8	13	10	10	7	4	2	2	2	7.8	19.7
27-Jul	2	1	3	1	7	6	7	7	2	0	0	0	0	0	1	1	1	2	0	5	7	4	2	2	2.5	7.4
28-Jul	1	2	1	1	2	3	5	8	8	3	0	0	0	1	0	0	0	3	3	4	4	5	7	5	2.8	8.3
29-Jul	3	3	2	2	4	6	5	5	6	5	4	4	5	2	3	8	6	2	0	9	2	0	0	0	3.5	9.0
30-Jul	0	0	0	0	1	0	3	0	0	0	0	0	0	0	1	0	1	0	0	0	1	2	3	2	0.6	3.4
31-Jul	1	1	0	1	0	1	2	1	0	0	0	0	0	1	0	1	1	1	2	3	2	3	5	12	1.5	12.2
	3.0	2.7	2.7	2.6	3.2	5.2	4.6	3.8	3.5	3.1	2.4	3.1	2.8	2.5	2.2	3.0	3.2	3.9	4.8	6.2	6.0	5.9	5.6	4.0	Diurnal Average	
	13.0	11.7	10.2	10.6	12.3	14.5	11.3	10.9	8.7	10.3	8.7	19.7	10.5	10.5	9.6	8.4	13.1	14.4	12.8	18.8	18.0	41.0	18.0	12.4	Diurnal Maximum	

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


Hourly Averages for PM2.5 at Smoky Heights
July 2008
AAAQO Limit = 80 µg/m3
Particulate Matter 2.5 (µg/m3)
100
80
60
40
20
0
03
05
07
09
11
13
15
17
19
21
23
25
27
29
31
Day

Peace Airshed Zone Association
Summary of Hourly Maximums

Smoky Heights - Particulate Matter 2.5 ($PM_{2.5}$) - $\mu g/m^3$
July 1, 2008 to August 1, 2008

Maximum Value: 192 $\mu g/m^3$ on Jul 23 22:00

Maximum Daily Average: 19.5 $\mu g/m^3$ on Jul 23

Minimum Value: 0 $\mu g/m^3$ on Jul 29 23:00

Minimum Daily Average: 3.2 $\mu g/m^3$ on Jul 6

Maximum Diurnal Average: 15.7 $\mu g/m^3$ at hour 20

Minimum Diurnal Average: 5.4 $\mu g/m^3$ at hour 4

Monthly Average: 9.23 $\mu g/m^3$

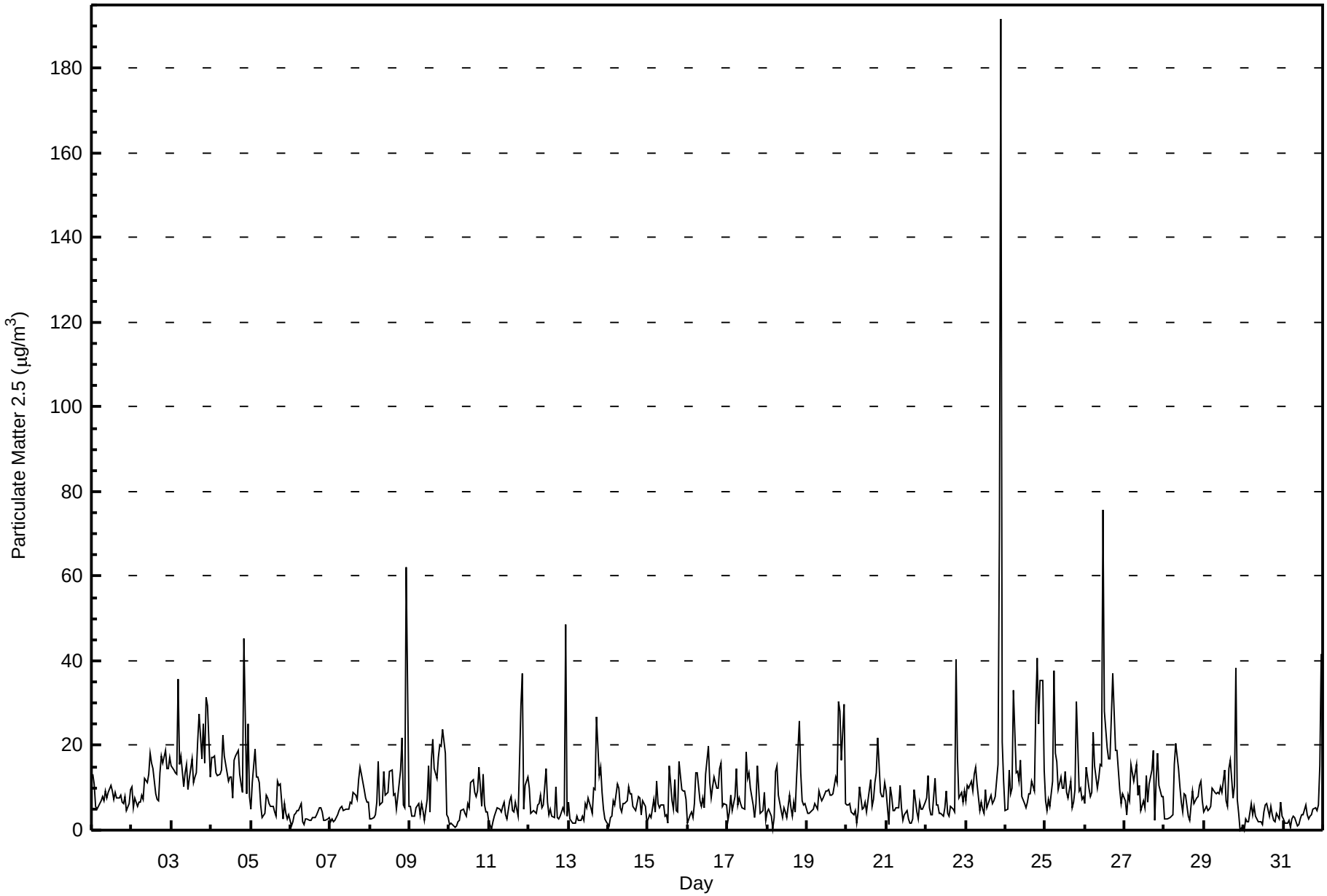
Percentiles: $P_1 = 0.9$ $P_{10} = 2.7$ $Q_1 = 4.4$ Median = 6.8 $Q_3 = 11.4$ $P_{90} = 16.5$ $P_{99} = 38.3$

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

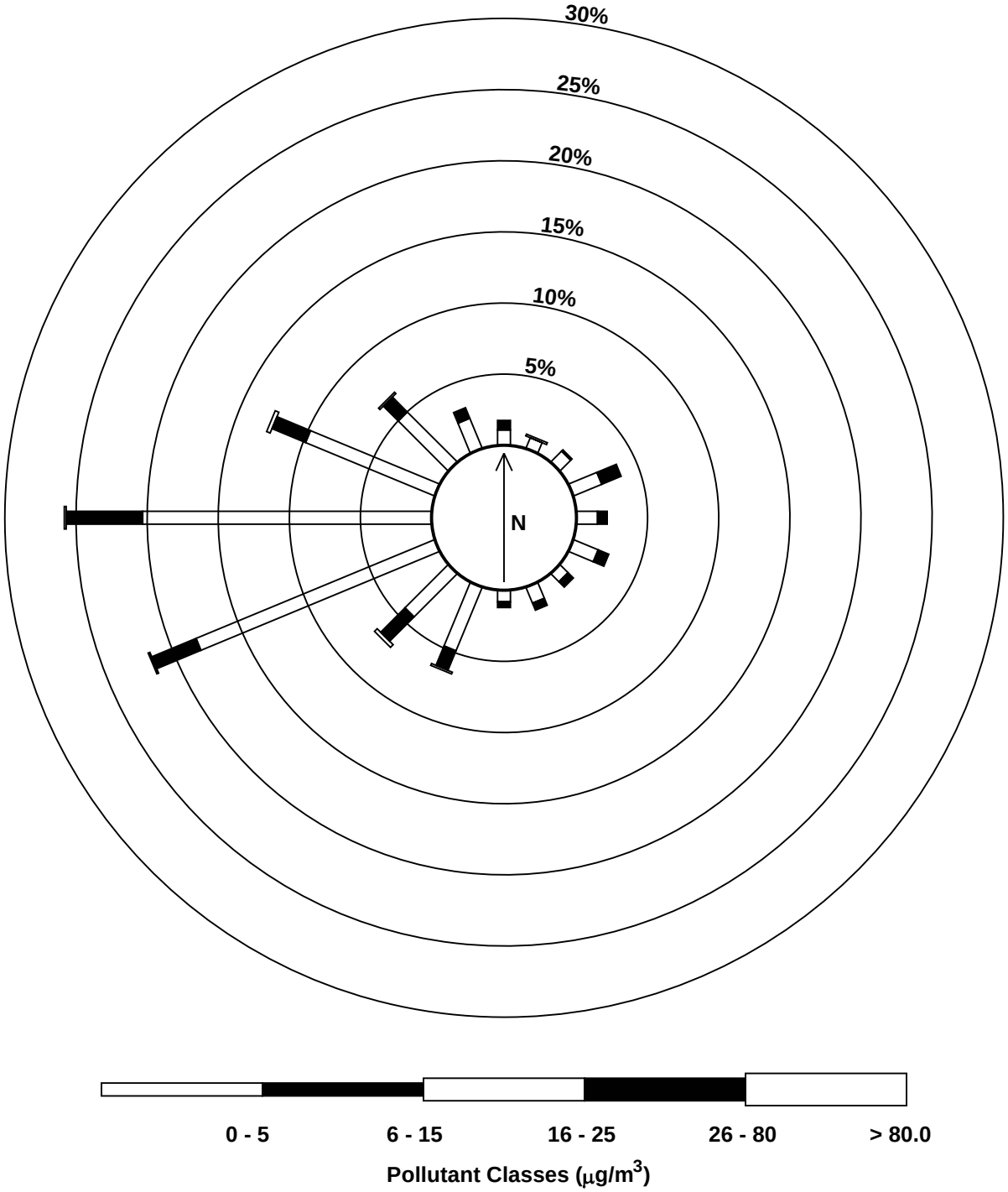
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	13	11	6	5	6	7	8	7	9	8	9	11	9	7	9	8	8	8	7	6	8	5	6	10	7.8	13.2
2-Jul	10	5	8	6	7	7	8	7	12	11	13	18	16	14	9	7	7	14	17	16	19	14	15	17	11.6	18.8
3-Jul	15	14	13	13	36	15	18	10	13	16	10	12	17	11	13	14	21	27	17	25	16	31	30	12	17.5	35.6
4-Jul	17	17	18	14	13	13	14	23	17	15	12	12	13	7	16	18	19	13	11	9	45	9	25	8	15.8	45.1
5-Jul	5	11	19	13	12	11	6	3	4	8	8	6	6	5	4	3	11	11	11	3	6	4	3	4	7.4	19.3
6-Jul	1	2	4	4	5	5	6	2	1	3	3	2	2	3	3	3	4	5	5	4	2	2	2	3	3.2	6.3
7-Jul	2	3	2	2	4	4	5	6	5	5	5	5	6	6	9	8	7	12	15	13	10	7	6	7	6.5	14.9
8-Jul	3	3	3	3	6	16	6	7	14	8	9	9	14	14	8	8	5	8	14	22	6	5	62	6	10.8	62.2
9-Jul	6	3	3	3	5	6	4	6	5	2	7	15	4	17	22	15	12	17	20	20	24	18	4	3	10.1	23.7
10-Jul	1	1	1	1	1	2	2	5	5	4	3	6	5	11	12	9	8	9	15	6	13	6	4	4	5.7	15.0
11-Jul	2	0	2	3	4	5	5	4	6	7	4	3	7	8	5	4	7	3	16	29	37	5	11	13	7.9	37.0
12-Jul	10	4	4	5	4	6	6	8	5	6	15	7	4	5	3	3	10	3	3	3	5	4	49	3	7.3	48.7
13-Jul	6	3	2	2	2	3	2	2	3	2	6	5	7	5	4	10	10	27	13	15	9	5	3	2	6.2	26.7
14-Jul	1	3	3	7	6	11	10	5	4	6	6	7	10	8	9	6	5	6	8	8	4	7	6	2	6.2	10.8
15-Jul	3	3	3	7	4	12	6	5	6	6	3	4	2	15	7	5	12	4	4	16	10	9	9	7	6.9	16.1
16-Jul	2	4	4	3	6	14	14	7	6	8	5	13	20	11	7	10	13	10	10	14	16	6	6	6	8.9	19.7
17-Jul	2	4	8	5	8	14	6	8	6	5	5	19	12	14	10	P	3	6	15	9	4	5	9	2	7.9	18.6
18-Jul	4	5	3	0	3	14	15	8	4	3	5	4	3	8	5	3	7	4	12	26	14	7	6	6	7.2	25.8
19-Jul	4	4	4	5	5	6	5	9	8	7	8	9	9	10	8	8	9	13	11	30	28	17	30	6	10.5	30.3
20-Jul	6	6	6	4	4	5	2	4	10	5	5	7	4	7	12	6	7	11	14	22	9	8	8	11	7.6	21.8
21-Jul	9	1	10	8	5	5	5	5	11	5	2	4	5	3	2	2	3	10	4	3	6	5	5	7	5.1	10.7
22-Jul	8	13	5	4	4	12	6	6	4	4	3	5	9	4	3	6	5	4	40	17	8	9	7	9	8.1	40.3
23-Jul	7	10	10	11	9	13	15	11	4	7	5	4	9	5	7	8	6	7	8	16	71	192	21	12	19.5	191.6
24-Jul	5	5	14	8	10	33	13	14	12	16	8	6	5	7	9	9	11	9	29	41	25	35	35	14	15.6	40.7
25-Jul	7	4	7	5	12	38	18	16	10	13	10	10	14	9	8	12	5	7	9	30	9	10	7	8	11.6	37.6
26-Jul	6	15	10	8	9	23	15	10	12	16	15	76	28	20	17	17	27	37	19	19	14	10	6	9	18.2	75.7
27-Jul	7	4	8	7	16	12	14	15	8	11	4	7	5	13	7	11	14	19	2	11	18	11	8	8	10.0	18.8
28-Jul	3	3	3	3	3	4	16	20	15	10	7	4	9	8	3	2	6	9	6	8	8	10	12	7	7.4	20.4
29-Jul	4	6	5	5	6	10	9	9	9	9	10	9	14	7	6	14	17	8	10	38	7	4	0	1	9.0	38.4
30-Jul	0	3	2	2	6	4	6	3	3	2	2	1	4	6	6	3	6	4	2	2	4	3	7	3	3.5	6.7
31-Jul	3	2	2	2	1	3	3	3	1	1	3	3	4	6	4	3	3	4	5	5	5	6	15	42	5.3	41.6
	5.6	5.5	6.3	5.4	7.1	10.7	8.7	8.1	7.5	7.4	6.8	9.8	9.0	8.9	7.9	7.8	9.2	10.6	12.1	15.7	14.8	15.1	13.4	8.1	Diurnal Average	
	17.2	17.1	19.3	13.6	35.6	37.6	18.1	22.6	17.5	16.4	15.3	75.7	28.1	19.6	21.6	17.7	26.6	37.1	40.3	40.7	70.8	191.6	62.2	41.6	Diurnal Maximum	

P - Power Failure

Hourly Maximums for $PM_{2.5}$ at Smoky Heights
July 2008



Pollutant Rose for $PM_{2.5}$ at Smoky Heights
July 2008



Peace Airshed Zone Association
Summary of Hourly Averages

Smoky Heights - External Temperature (ET) - ^{o}C
July 1, 2008 to August 1, 2008

Maximum Value: 31 ^{o}C on Jul 3 18:00

Maximum Daily Average: 21.1 ^{o}C on Jul 2

Minimum Value: 5 ^{o}C on Jul 15 05:00

Minimum Daily Average: 11.4 ^{o}C on Jul 10

Maximum Diurnal Average: 22.8 ^{o}C at hour 15

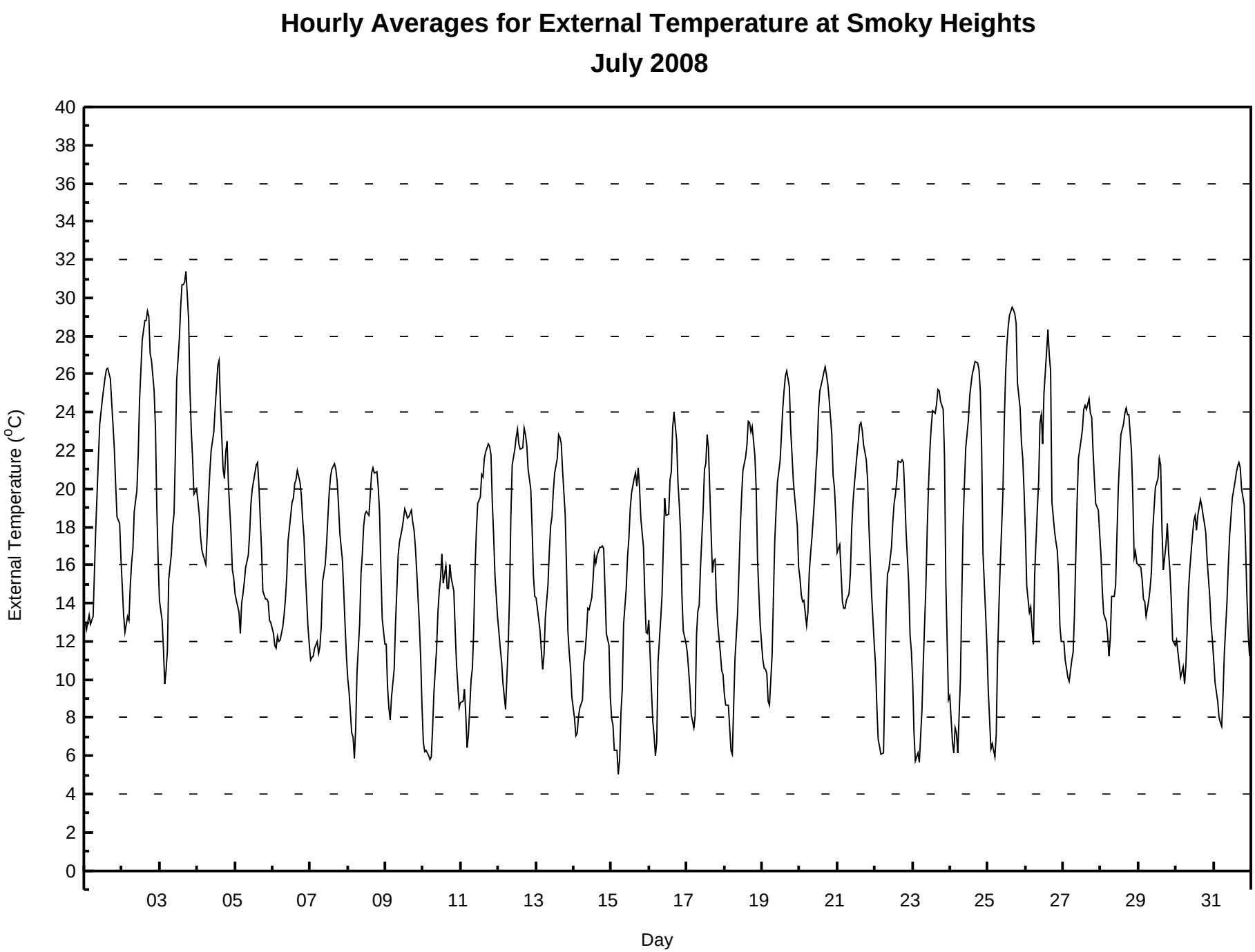
Minimum Diurnal Average: 9.6 ^{o}C at hour 5

Monthly Average: 16.69 ^{o}C

Percentiles: P_1 = 6.0 P_{10} = 8.9 Q_1 = 12.4 Median = 16.6 Q_3 = 20.9 P_{90} = 24.2 P_{99} = 29.2

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

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Jul	13	13	13	13	13	13	16	18	20	22	23	25	25	26	26	26	26	24	23	22	20	19	18	16	19.8	26.3
2-Jul	15	13	12	13	13	15	16	17	19	20	22	25	26	28	29	29	29	29	27	27	25	23	19	16	21.1	29.3
3-Jul	14	13	12	10	10	12	15	17	18	19	22	26	28	29	31	31	31	31	29	25	23	22	20	20	21.1	31.4
4-Jul	19	19	18	17	16	16	18	20	21	22	23	24	25	26	27	24	21	21	22	22	20	18	16	15	20.4	26.7
5-Jul	15	14	14	12	14	14	15	16	17	18	19	20	20	21	21	20	18	17	15	14	14	14	13	13	16.2	21.4
6-Jul	12	12	12	12	12	12	13	13	14	15	17	19	19	20	20	21	21	20	20	18	17	16	13	12	15.9	20.9
7-Jul	11	11	11	12	12	11	12	13	15	16	17	18	20	21	21	21	21	20	19	18	16	15	13	11	15.7	21.3
8-Jul	10	9	7	7	6	8	10	13	16	17	18	19	19	19	20	21	21	21	21	20	19	16	13	12	15.0	21.1
9-Jul	12	10	9	8	9	11	13	15	17	17	18	18	19	19	18	19	19	18	18	17	16	13	11	9	14.6	18.9
10-Jul	7	6	6	6	6	6	7	9	12	14	15	15	17	15	16	15	15	16	15	15	13	11	10	9	11.4	16.6
11-Jul	9	9	10	8	6	7	10	11	13	16	18	19	20	21	21	22	22	22	22	22	19	18	15	13	15.5	22.4
12-Jul	12	12	11	10	8	10	12	14	19	21	22	23	23	22	22	22	23	23	22	21	20	18	15	14	17.5	23.2
13-Jul	14	14	13	12	11	11	13	15	17	18	19	20	21	22	23	23	22	21	19	16	13	11	11	9	16.0	22.8
14-Jul	8	7	7	8	9	9	11	11	12	14	14	14	15	16	16	17	17	17	17	17	15	12	12	9	12.7	17.0
15-Jul	8	8	6	6	5	6	8	10	13	15	16	17	19	20	21	21	20	21	20	18	17	14	12	12	13.9	21.1
16-Jul	13	9	8	7	6	7	11	13	14	17	19	19	19	20	21	23	24	23	20	19	18	14	13	12	15.4	24.0
17-Jul	11	11	10	8	7	8	12	14	14	16	19	21	21	23	22	18	16	16	16	14	13	11	10	10	14.3	22.8
18-Jul	9	9	9	8	6	6	9	11	14	16	18	20	21	22	22	24	23	23	23	22	20	16	15	13	15.7	23.5
19-Jul	11	11	11	10	9	9	11	14	17	19	20	21	23	24	25	26	26	25	23	22	20	20	18	16	18.0	26.2
20-Jul	15	14	14	14	13	14	16	17	17	20	21	22	24	25	26	26	26	26	25	25	23	21	20	19	20.1	26.4
21-Jul	17	17	16	14	14	14	14	15	16	18	19	20	22	22	23	23	23	22	21	21	18	16	15	12	18.0	23.4
22-Jul	11	8	7	6	6	6	10	14	16	16	17	18	19	20	20	21	21	22	21	20	18	15	12	12	14.8	21.5
23-Jul	10	7	6	6	6	7	8	11	15	18	20	22	23	24	24	24	25	25	25	24	22	15	12	9	16.2	25.2
24-Jul	9	7	6	7	7	6	10	14	18	20	22	24	25	25	26	26	27	27	26	25	22	17	13	12	17.6	26.7
25-Jul	9	8	6	7	6	7	11	14	16	20	23	26	27	28	29	29	29	29	29	26	24	22	22	20	19.5	29.5
26-Jul	18	15	14	14	13	12	16	19	20	23	24	22	25	27	28	27	26	19	18	17	17	16	13	12	18.9	28.3
27-Jul	12	11	11	10	10	11	11	13	17	19	22	23	23	24	24	24	25	24	24	22	21	19	19	18	18.2	24.7
28-Jul	16	15	13	13	12	11	12	14	14	15	17	20	21	23	23	24	24	24	24	22	20	16	17	16	17.9	24.2
29-Jul	16	16	15	14	14	13	14	15	16	18	19	20	21	22	21	18	16	17	18	17	16	14	12	12	16.4	21.6
30-Jul	12	11	11	10	11	10	11	13	15	16	18	18	19	18	19	19	19	19	18	18	16	14	13	12	14.9	19.4
31-Jul	11	10	9	8	8	8	9	11	14	16	18	19	19	20	21	21	21	21	20	19	17	14	12	11	14.9	21.4
	12.3	11.2	10.4	10.1	9.6	10.0	12.1	13.9	15.9	17.7	19.3	20.5	21.6	22.3	22.8	22.7	22.6	22.1	21.3	20.1	18.4	16.1	14.4	13.1	Diurnal Average	
	19.4	18.7	17.5	16.8	16.5	16.0	17.6	19.5	20.9	23.5	23.9	25.9	27.9	29.5	30.7	30.7	30.8	31.4	28.9	26.8	25.2	23.2	21.6	20.0	Diurnal Maximum	


Hourly Averages for External Temperature at Smoky Heights
July 2008
External Temperature (°C)
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38
40
03
05
07
09
11
13
15
17
19
21
23
25
27
29
31
Day

Peace Airshed Zone Association
Summary of Hourly Averages

Smoky Heights
July 1, 2008 to August 1, 2008
WS (km/h), WD (deg)

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	7	7	8	8	7	7	5	6	8	10	11	11	13	11	13	15	14	12	11	9	10	9	6	7.7	14.7
Dir	71	6	38	1	232	73	69	68	87	98	109	96	104	97	93	96	112	111	104	101	97	81	63	119	90.8	112.1
2 Spd	4	5	5	8	7	6	6	5	3	5	5	8	9	8	7	11	11	9	7	5	7	8	9	5	3.2	11.3
Dir	59	66	70	79	123	73	29	77	215	288	186	167	174	150	140	112	101	122	138	193	206	1	309	199	123.9	112.1
3 Spd	8	5	5	7	7	1	3	11	11	8	7	8	8	7	6	6	4	3	10	22	12	1	11	11	3.9	21.8
Dir	95	269	232	306	183	123	228	286	343	342	274	261	207	254	339	325	250	218	242	325	167	206	216	234	265.9	324.9
4 Spd	17	11	2	2	11	10	11	15	17	18	21	20	19	22	21	26	29	19	15	15	8	5	13	15	13.1	28.7
Dir	272	291	244	215	256	209	196	198	250	264	266	286	270	302	259	247	195	231	242	264	240	255	259	257	251.6	194.9
5 Spd	18	12	6	8	9	7	9	13	11	10	9	12	12	12	13	12	9	11	7	5	3	8	6	4	4.9	17.8
Dir	242	259	280	288	324	303	319	337	308	325	324	324	347	320	313	20	12	61	101	154	186	186	177	155	314.9	242.2
6 Spd	3	3	4	5	7	7	11	13	15	19	22	28	25	25	26	28	29	26	26	27	24	17	13	15	16.5	29.1
Dir	47	216	268	256	209	227	250	260	292	278	270	277	282	270	276	271	279	271	272	265	260	252	251	229	267.4	278.6
7 Spd	16	16	18	22	22	21	16	18	28	27	24	24	25	27	27	27	26	27	32	32	31	26	20	17	23.5	32.2
Dir	243	251	253	259	256	251	254	258	261	272	262	265	270	270	270	267	268	265	264	268	269	261	248	240	261.9	268.3
8 Spd	16	14	13	13	13	12	9	13	20	24	26	30	28	21	26	27	27	28	26	22	24	15	8	11	19.1	30.4
Dir	238	232	240	249	243	256	258	227	250	250	257	248	255	281	258	260	264	260	251	251	237	243	229	232	251.0	247.8
9 Spd	12	11	14	12	14	12	15	22	30	36	38	40	38	35	34	31	29	32	27	24	18	28	21	15	23.3	40.1
Dir	209	228	239	254	253	251	244	255	254	258	255	253	257	261	259	254	258	268	273	280	299	315	258	247	260.0	253.5
10 Spd	13	13	16	16	18	19	18	19	25	21	12	14	18	18	13	24	19	23	25	19	12	11	12	12	15.3	25.4
Dir	249	247	242	232	230	261	269	267	275	283	289	291	292	258	274	322	309	285	274	299	238	215	227	255	269.6	274.2
11 Spd	14	20	24	21	16	12	15	18	18	17	20	18	16	15	14	15	14	16	15	14	8	17	16	17	15.5	23.9
Dir	252	255	259	272	277	280	282	267	277	270	270	281	289	294	291	294	295	282	274	265	253	245	241	241	270.7	258.6
12 Spd	19	18	18	12	13	10	10	12	19	27	26	25	30	30	28	31	32	33	28	29	21	14	13	10	18.9	33.3
Dir	244	246	279	71	171	348	257	269	261	264	260	259	279	266	275	276	278	273	279	276	271	257	260	264	268.4	272.8
13 Spd	16	16	19	19	18	18	21	23	30	24	19	22	25	27	26	28	23	15	13	11	3	3	6	3	16.6	29.5
Dir	261	253	250	254	259	264	258	259	269	282	300	292	294	289	295	295	275	271	297	327	358	206	197	252	275.9	269.2
14 Spd	5	6	5	4	4	2	6	11	12	10	11	11	10	4	9	8	13	15	7	5	10	7	3	3	6.8	15.0
Dir	282	354	240	308	305	268	269	259	250	283	252	264	282	293	294	272	304	242	289	316	333	282	274	251	278.9	242.2
15 Spd	10	9	9	2	4	3	5	3	5	7	5	9	8	5	7	6	8	9	9	7	5	9	7	8	4.3	9.8
Dir	296	240	209	199	300	252	207	235	253	297	272	289	281	285	251	259	225	261	340	68	17	30	272	263	273.2	296.5
16 Spd	9	3	4	6	1	4	3	5	7	6	8	5	9	11	8	6	4	9	2	12	5	3	4	5	4.2	11.8
Dir	296	277	258	280	258	278	281	274	279	216	208	253	290	286	282	251	279	278	288	349	62	142	332	3	282.9	348.5
17 Spd	6	6	6	1	2	5	5	5	9	4	3	1	10	1	3	29	23	16	9	13	7	6	8	6	5.4	29.2
Dir	315	301	283	267	259	271	164	194	156	344	348	343	320	310	262	270	290	307	291	283	265	216	48	253	282.5	270.4
18 Spd	8	6	7	8	8	9	10	11	14	12	12	15	13	10	12	12	12	11	12	11	18	14	15	13	10.1	18.4
Dir	254	218	218	203	212	209	224	254	257	267	269	279	243	274	343	285	259	271	282	282	272	266	263	237	259.8	271.7
19 Spd	11	16	17	11	7	8	10	12	17	19	23	20	20	19	20	20	24	25	26	22	18	15	14	13	13.1	25.7
Dir	232	256	235	165	100	69	131	200	210	238	265	273	264	257	262	272	270	295	296	295	287	257	296	272	262.4	295.5
20 Spd	12	10	11	11	10	12	12	10	12	10	9	9	13	15	13	9	7	6	4	7	6	5	18	20	5.9	20.2
Dir	266	257	254	253	287	247	264	198	188	222	210	285	291	294	318	204	139	151	121	7	352	58	335	326	270.6	325.8
21 Spd	18	19	5	4	5	9	8	9	13	14	17	24	23	30	31	33	34	35	34	27	12	10	12	7	14.2	35.2
Dir	310	292	283	297	222	199	206	157	197	217	219	201	264	270	290	276	279	287	289	308	311	321	329	303	273.5	286.9
22 Spd	12	7	9	11	13	12	9	13	11	11	11	13	15	13	11	7	8	7	8	16	11	10	2	5	4.3	15.8
Dir	269	220	196	203	212	69	345	284	264	263	258	244	237	270	303	285	288	318	347	79	134	138	166	64	255.2	79.2

Peace Airshed Zone Association
Summary of Hourly Averages

Smoky Heights
July 1, 2008 to August 1, 2008
WS (km/h), WD (deg)

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
23 Spd	4	3	3	5	11	9	9	13	13	9	9	11	8	7	11	13	8	12	10	6	2	4	3	7	5.6	12.9
Dir	65	1	39	207	208	234	266	255	251	255	253	254	276	310	314	286	299	308	328	6	295	240	222	219	272.4	250.8
24 Spd	5	8	10	6	8	8	9	13	17	20	21	23	20	17	16	16	13	15	14	12	5	5	6	5	11.3	23.1
Dir	226	214	250	247	223	224	215	252	253	257	265	259	258	272	273	274	272	293	307	282	279	220	265	208	260.0	258.6
25 Spd	4	3	5	6	7	4	5	6	6	5	6	7	8	11	10	7	12	12	11	11	13	11	14	7	2.0	13.9
Dir	206	241	202	203	226	323	223	259	260	273	222	172	156	148	104	117	318	53	63	91	92	71	73	349	116.6	73.4
26 Spd	7	5	5	8	6	5	2	6	6	8	4	23	14	12	3	12	12	27	4	12	8	3	7	9	2.5	26.6
Dir	20	59	65	39	198	38	315	61	94	196	280	17	334	291	323	304	262	260	261	133	116	198	37	351	333.6	260.1
27 Spd	6	5	6	6	10	9	6	8	16	17	19	21	23	22	21	21	15	16	11	11	10	11	7	17	12.4	22.5
Dir	226	7	211	243	251	264	263	259	249	252	247	249	251	256	269	280	269	245	251	274	215	249	264	260	255.4	250.7
28 Spd	19	19	20	22	22	18	15	8	4	13	5	7	6	7	10	10	10	4	7	10	8	7	11	8	6.9	21.9
Dir	256	249	253	259	260	257	265	281	287	311	312	316	316	289	273	256	203	212	202	132	110	106	108	139	253.5	258.8
29 Spd	6	4	6	4	4	7	6	8	4	1	6	4	13	7	6	13	11	10	8	4	0	2	5	7	3.8	13.2
Dir	108	71	78	45	318	292	243	303	297	332	325	321	293	310	280	250	321	308	308	277	264	235	195	239	293.9	249.6
30 Spd	11	1	2	8	6	5	9	19	25	27	30	33	35	39	38	39	40	36	34	36	30	22	23	26	23.1	40.0
Dir	345	281	254	203	223	263	265	271	261	261	266	263	268	267	263	263	274	255	265	261	256	249	248	245	261.9	274.4
31 Spd	23	20	23	21	23	22	19	20	29	35	37	35	30	28	27	26	25	23	23	21	16	13	11	10	22.7	37.3
Dir	244	249	250	256	250	254	258	253	253	262	271	268	278	276	280	267	269	277	286	289	285	264	219	244	264.6	271.2
Spd	7.4	7.4	7.6	6.1	7.8	5.9	7.2	9.2	12.1	13.3	13.5	13.7	14.7	14.4	13.7	14.8	13.6	13.5	11.7	9.5	6.6	5.7	5.7	7.4	Diurnal Average	
Dir	259.2	257.4	248.3	251.5	241.6	257.5	254.6	255.9	256.7	265.0	262.8	267.1	272.0	273.9	278.6	273.0	272.0	271.9	277.6	284.3	261.5	257.0	259.0	251.8		
Spd	22.9	20.0	23.9	22.5	23.0	22.2	21.3	23.0	30.3	36.2	37.7	40.1	37.9	39.4	37.9	39.4	40.0	35.9	34.0	36.0	30.8	28.0	22.7	26.0	Diurnal Maximum	
Dir	243.8	249.0	258.6	259.0	250.4	253.7	258.3	259.1	253.6	258.4	255.4	253.5	257.2	266.7	263.5	262.7	274.4	255.5	289.5	260.8	269.3	314.9	248.4	245.1		

Maximum Speed Value: 40 km/h on Jul 9 12:00
Minimum Speed Value: 0 km/h on Jul 29 21:00
Maximum Daily Speed Average: 23.5 km/h on Jul 9
Minimum Daily Speed Average: 2.0 km/h on Jul 16
Maximum Diurnal Speed Average: 14.8 km/h at hour 16
Minimum Diurnal Speed Average: 5.7 km/h at hour 22

Monthly Average Velocity: 9.96 km/h 265.25 deg
Speed Percentiles: P_1 = 1.3 P_{10} = 4.6 Q_1 = 6.9 Median = 11.2 Q_3 = 18.4 P_{90} = 26.2 P_{99} = 37.4
All monthly, daily, and diurnal averages have been calculated using vector methods

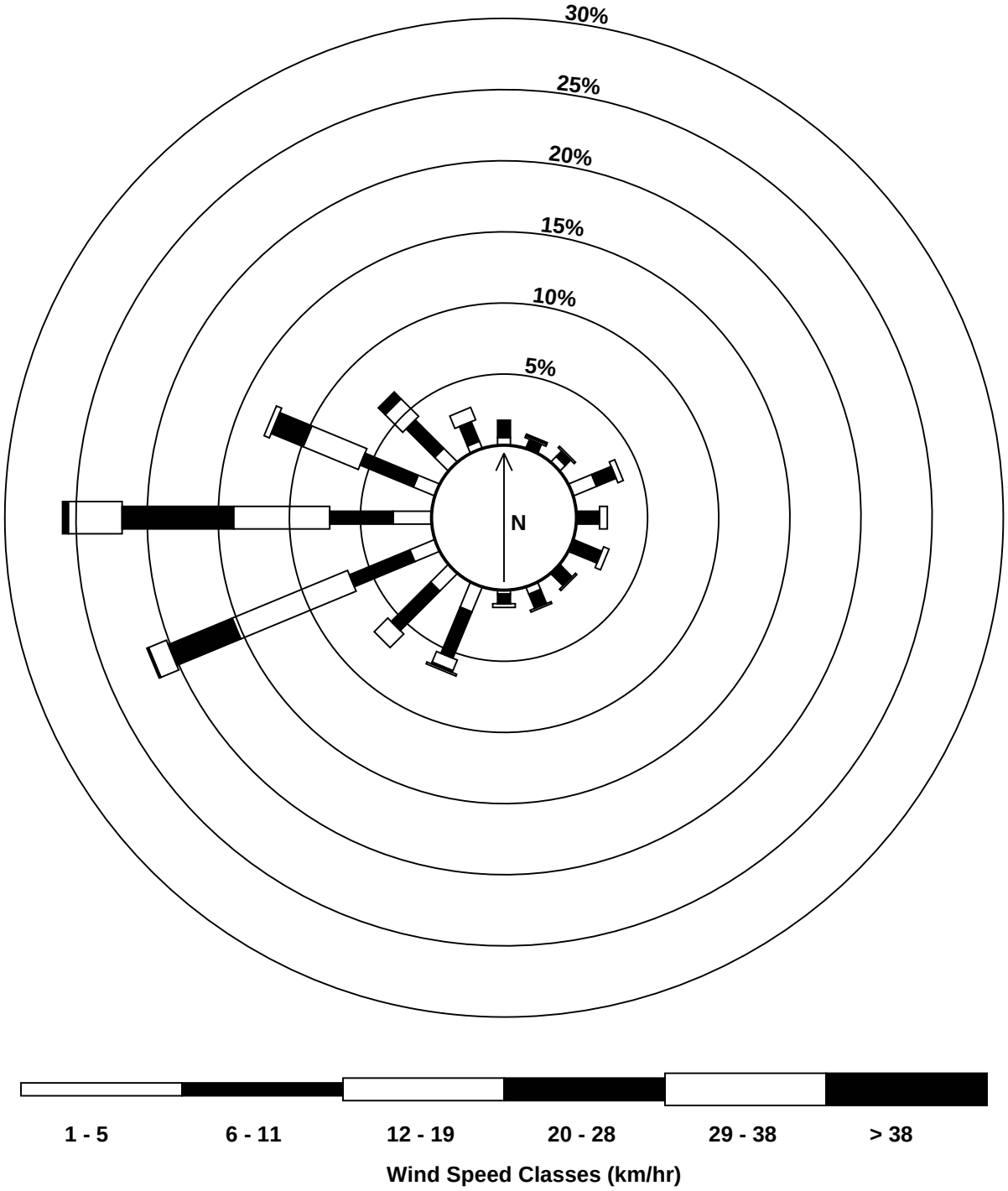
Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Percentage 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	0.94	2.55	0.67	0.13	0.00	0.00	4.30
NorthEast	1.21	1.61	0.27	0.00	0.00	0.00	3.09
East	0.54	3.49	1.88	0.00	0.00	0.00	5.91
SouthEast	0.54	2.55	0.27	0.00	0.00	0.00	3.36
South	0.81	2.55	0.94	0.13	0.13	0.00	4.57
SouthWest	2.42	7.80	5.38	1.08	0.00	0.00	16.67
West	4.17	10.62	14.25	14.11	6.05	0.54	49.73
NorthWest	2.02	4.44	4.03	1.61	0.27	0.00	12.37
Total	12.63	35.62	27.69	17.07	6.45	0.54	100.00

Wind Rose for WS at Smoky Heights

July 2008



Peace Airshed Zone Association
Summary of Hourly Standard Deviations

Smoky Heights - Wind Direction (WD) - deg
July 1, 2008 to August 1, 2008

Maximum Value: 94.1 deg on Jul 3 06:00

Minimum Value: 1.7 deg on Jul 12 02:00

Percentiles: P_1 = 2.6 P_{10} = 5.1 Q_1 = 8.1 Median = 14.2 Q_3 = 24.5 P_{90} = 47.0 P_{99} = 86.2

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

Day	Hourly Period Ending At (MST)																								Daily 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	6	5	7	8	7	10	10	17	18	19	20	20	21	19	28	18	18	13	7	5	3	6	9	9	28.0
2-Jul	34	33	21	6	5	6	11	16	31	33	32	19	20	33	52	23	23	21	12	7	27	36	22	35	52.5
3-Jul	12	49	35	24	18	94	58	11	10	15	17	30	36	46	58	66	56	63	15	25	55	82	15	14	94.1
4-Jul	11	51	70	60	13	10	9	8	10	17	12	16	18	16	19	11	6	8	8	8	24	29	8	4	69.8
5-Jul	3	38	37	18	12	17	12	11	17	22	24	25	20	19	21	20	19	51	43	21	44	14	13	24	51.3
6-Jul	46	36	23	26	23	13	16	7	8	6	7	9	12	14	11	10	9	9	6	8	4	5	5	6	45.8
7-Jul	2	3	5	3	3	6	7	7	7	7	8	14	15	14	13	13	9	9	6	5	4	4	4	3	15.1
8-Jul	3	4	4	4	6	9	9	10	8	8	10	10	13	13	16	15	13	9	9	15	5	4	23	13	22.9
9-Jul	9	10	8	8	3	8	9	5	8	7	8	8	10	10	10	9	11	9	8	10	6	13	8	8	13.3
10-Jul	7	9	4	5	6	4	5	5	8	11	24	23	22	18	33	27	16	9	9	9	8	3	4	5	32.9
11-Jul	4	3	2	3	4	4	7	4	6	22	12	19	15	16	12	15	16	12	17	8	18	5	9	2	22.4
12-Jul	3	2	3	14	4	9	7	13	9	10	8	13	12	13	8	9	12	6	7	6	6	7	6	9	13.7
13-Jul	11	9	5	3	3	3	4	5	7	12	14	16	15	15	12	13	11	32	12	57	84	60	22	33	84.1
14-Jul	39	43	28	36	44	82	35	8	9	22	15	17	23	60	51	23	20	15	23	25	17	29	51	87	87.3
15-Jul	11	3	17	71	36	58	21	55	37	26	58	30	44	66	47	56	39	22	21	48	54	17	15	16	71.4
16-Jul	7	63	29	17	89	24	42	21	12	28	39	66	29	12	37	77	69	16	72	18	32	57	44	44	89.4
17-Jul	21	24	37	91	73	64	42	47	17	46	64	93	26	88	81	11	6	21	21	8	29	33	14	26	93.3
18-Jul	17	26	21	15	11	13	7	18	11	16	24	19	22	40	37	31	27	25	20	11	7	5	3	8	40.4
19-Jul	11	3	3	19	20	12	8	9	8	11	12	18	15	20	14	16	12	13	7	4	4	6	7	3	20.4
20-Jul	8	8	15	8	11	6	7	32	13	20	28	22	28	20	27	36	41	40	16	12	14	31	11	20	40.8
21-Jul	6	5	80	51	35	10	8	16	6	15	16	12	18	12	12	12	7	6	6	5	18	13	16	20	79.8
22-Jul	9	26	17	11	7	13	18	14	21	16	24	18	22	29	38	60	46	42	27	7	7	8	73	23	73.3
23-Jul	21	15	23	14	3	13	5	6	9	27	23	32	63	79	23	23	57	23	19	19	59	12	52	19	78.6
24-Jul	27	23	5	20	13	10	4	15	9	9	14	13	16	18	24	19	25	17	12	8	10	42	12	47	47.3
25-Jul	36	49	14	10	13	23	28	17	21	23	29	30	41	36	38	57	30	20	11	17	7	9	9	29	56.6
26-Jul	14	13	19	8	5	32	56	26	35	23	63	13	16	21	74	30	22	23	84	17	56	58	18	15	84.5
27-Jul	21	17	14	22	22	7	18	10	6	9	13	15	13	14	15	13	27	27	13	12	4	3	39	8	38.8
28-Jul	6	3	3	3	3	4	6	20	72	14	62	43	52	56	38	31	32	56	51	8	14	17	6	9	71.5
29-Jul	19	38	23	46	37	13	21	13	50	85	51	55	13	25	24	39	14	19	16	40	91	17	11	11	91.5
30-Jul	3	80	80	9	29	25	8	5	8	10	11	9	9	6	7	8	8	7	7	6	3	4	3	3	80.0
31-Jul	3	4	2	3	6	3	6	6	7	7	7	10	13	13	14	14	13	13	11	6	6	6	18	8	18.4
	45.8	79.9	80.0	90.5	89.4	94.1	58.1	54.8	71.5	85.2	63.9	93.3	63.1	88.4	80.6	77.3	69.4	63.0	84.5	57.3	91.5	81.8	73.3	87.3	

PASZA
Beaverlodge Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association
Summary of Hourly Averages

Beaverlodge - Sulphur Dioxide (SO_2) - ppb
July 1, 2008 to August 1, 2008

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3 ppb on Jul 28 10:00 Maximum Daily Average: 0.8 ppb on Jul 2

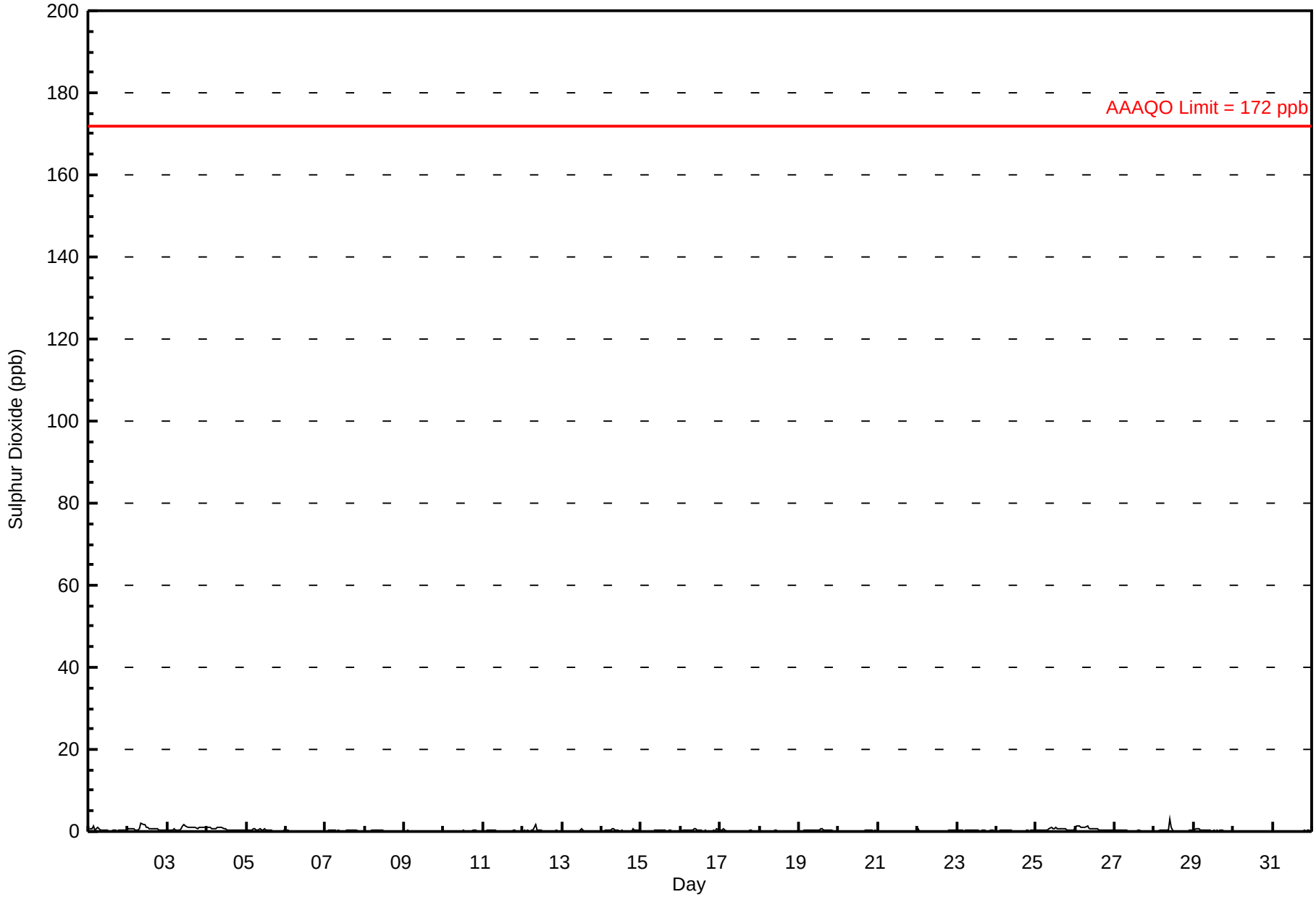
Minimum Value: 0 ppb on Jul 21 12:00 Minimum Daily Average: 0.0 ppb on Jul 30
Maximum Diurnal Average: 0.4 ppb at hour 10 Minimum Diurnal Average: 0.2 ppb at hour 24
Monthly Average: 0.26 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.1$ Median = 0.2 $Q_3 = 0.3$ $P_{90} = 0.6$ $P_{99} = 1.4$

Hours in Service:	744
Hours of Data:	702
Hours of Missing Data:	42
Hours of Calibration:	35
Percent Operational Time:	99.1

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Jul	1	1	1	1	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.2
2-Jul	1	1	1	1	A	0	0	1	2	2	2	1	1	1	1	1	1	1	1	0	0	0	0	0	0.8	2.0
3-Jul	0	0	0	0	A	0	0	0	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.6
4-Jul	1	1	1	1	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.6	1.0
5-Jul	0	0	0	0	A	1	0	0	P	0	0	1	0	0	P	0	0	0	0	0	0	0	0	0	0.3	0.6
6-Jul	0	0	0	0	A	0	0	0	P	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	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
8-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
9-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
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	0.3
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	0.5
12-Jul	0	0	0	0	A	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.8
13-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	0.1	0.5
14-Jul	0	0	0	0	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.3	0.8
15-Jul	0	0	0	0	A	N	N	N	N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
16-Jul	0	0	0	0	0	A	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.3	0.6
17-Jul	0	0	1	1	A	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0.2	0.6
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	0.1	0.2
19-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0.3	0.5
20-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
21-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
22-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	0.6
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	0.2	0.4
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	0.3
25-Jul	0	0	0	0	A	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0.5	0.9
26-Jul	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.6	1.3
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	0.2	0.4
28-Jul	0	0	0	0	A	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	3.1
29-Jul	0	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
30-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
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
	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Diurnal Average	
	1.0	1.3	1.3	1.2	0.4	0.9	0.9	1.3	2.0	3.1	1.6	1.5	1.0	0.9	0.9	0.9	0.9	0.9	0.8	0.9	1.0	0.9	0.9	1.1	Diurnal Maximum	

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

Hourly Averages for SO_2 at Beaverlodge
July 2008



Peace Airshed Zone Association
Summary of Hourly Maximums

Beaverlodge - Sulphur Dioxide (SO_2) - ppb
July 1, 2008 to August 1, 2008

Maximum Value: 5 ppb on Jul 28 10:00

Maximum Daily Average: 1.1 ppb on Jul 2

Minimum Value: 0 ppb on Jul 21 12:00

Minimum Daily Average: 0.1 ppb on Jul 30

Maximum Diurnal Average: 0.7 ppb at hour 9

Minimum Diurnal Average: 0.3 ppb at hour 18

Monthly Average: 0.41 ppb

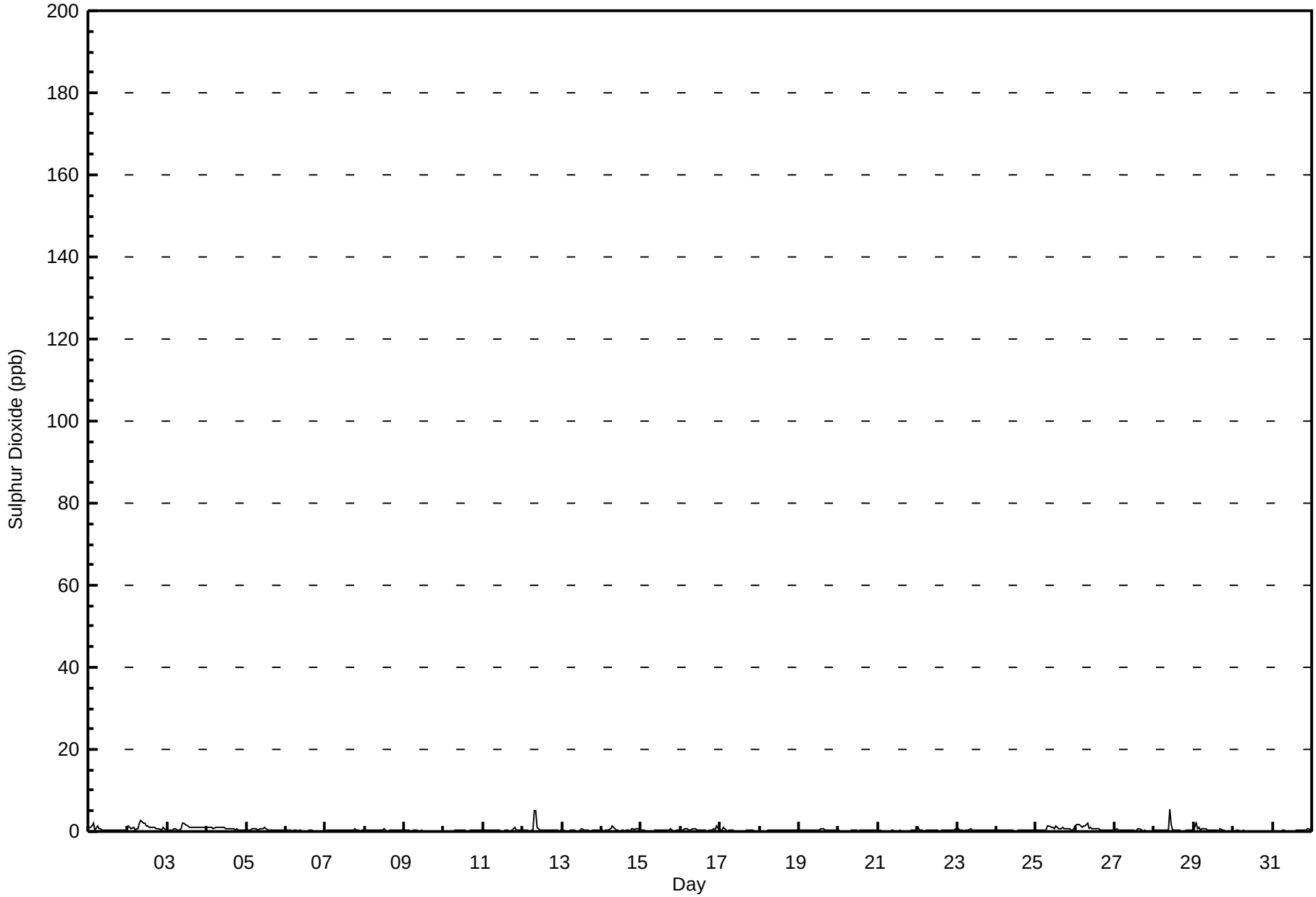
Percentiles: $P_1 = 0.1$ $P_{10} = 0.1$ $Q_1 = 0.2$ Median = 0.3 $Q_3 = 0.4$ $P_{90} = 0.9$ $P_{99} = 2.0$

Hours in Service:	744
Hours of Data:	702
Hours of Missing Data:	42
Hours of Calibration:	35
Percent Operational Time:	99.1

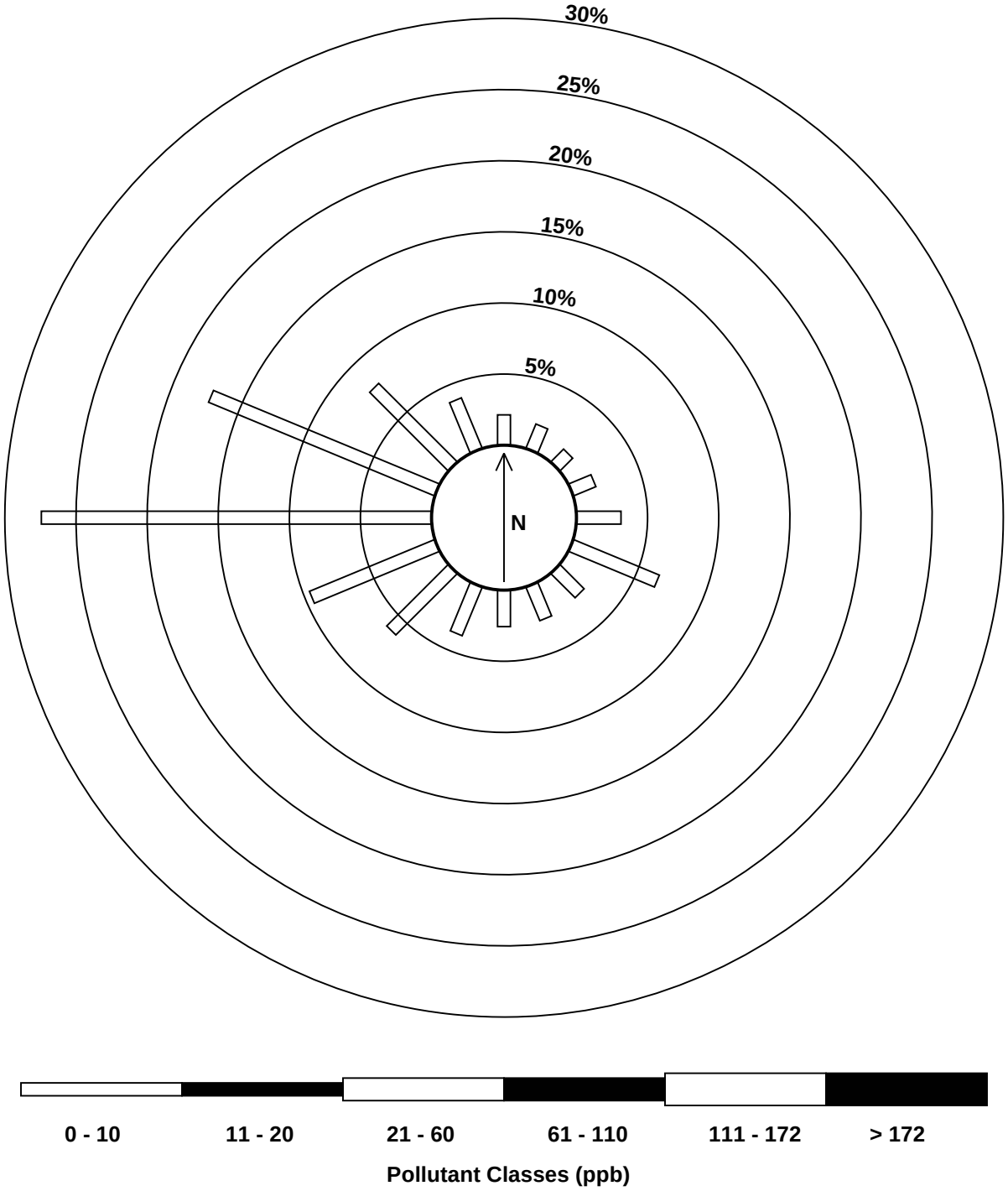
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	1	1	1	2	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	2.0
2-Jul	1	1	1	1	A	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1	0	1	1	0	1.1	2.6
3-Jul	0	0	0	0	A	1	0	0	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	0.9	2.0
4-Jul	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0	0	0	0.7	1.2
5-Jul	0	0	0	1	A	1	1	0	P	1	1	1	1	0	P	0	0	0	0	0	0	0	0	0	0.4	0.9
6-Jul	0	0	0	0	A	0	0	0	P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
7-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.3	0.5
8-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	0.3	0.7
9-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
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	0.2	0.4
11-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0.3	0.9
12-Jul	0	0	0	0	A	0	0	5	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	5.1
13-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
14-Jul	0	0	0	0	A	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	0.5	1.2
15-Jul	0	0	0	0	A	N	N	N	N	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.3	0.6
16-Jul	0	0	1	1	1	A	A	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0.4	1.2
17-Jul	0	0	1	1	A	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0.3	0.9
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	0.2	0.4
19-Jul	0	0	0	0	A	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0.4	0.7
20-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
21-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
22-Jul	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	1.0
23-Jul	1	1	1	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8
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	0.3	0.4
25-Jul	0	0	0	0	A	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0.7	1.5
26-Jul	1	2	2	1	A	1	2	2	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.9	2.1
27-Jul	0	1	1	0	A	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0.3	0.6
28-Jul	0	0	0	0	A	0	0	0	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	5.3
29-Jul	0	2	1	1	A	1	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.4	2.0
30-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
31-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0.2	0.8
	0.4	0.4	0.4	0.4	0.6	0.4	0.4	0.7	0.7	0.7	0.5	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	Diurnal Average	
	1.3	2.0	1.6	2.0	0.6	1.4	1.5	5.1	5.1	5.3	2.0	1.6	1.5	1.0	1.1	1.0	1.0	1.0	1.0	1.0	1.1	1.0	1.2	1.2	Diurnal Maximum	

C - Calibration P - Power Failure N - Not Valid A - Automated Daily Zero Span

Hourly Maximums for SO_2 at Beaverlodge
July 2008



Pollutant Rose for SO_2 at Beaverlodge
July 2008



Peace Airshed Zone Association
Summary of Hourly Averages

Beaverlodge - Nitrogen Dioxide (NO_2) - ppb
July 1, 2008 to August 1, 2008

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 13 ppb on Jul 25 08:00 Maximum Daily Average: 3.8 ppb on Jul 26

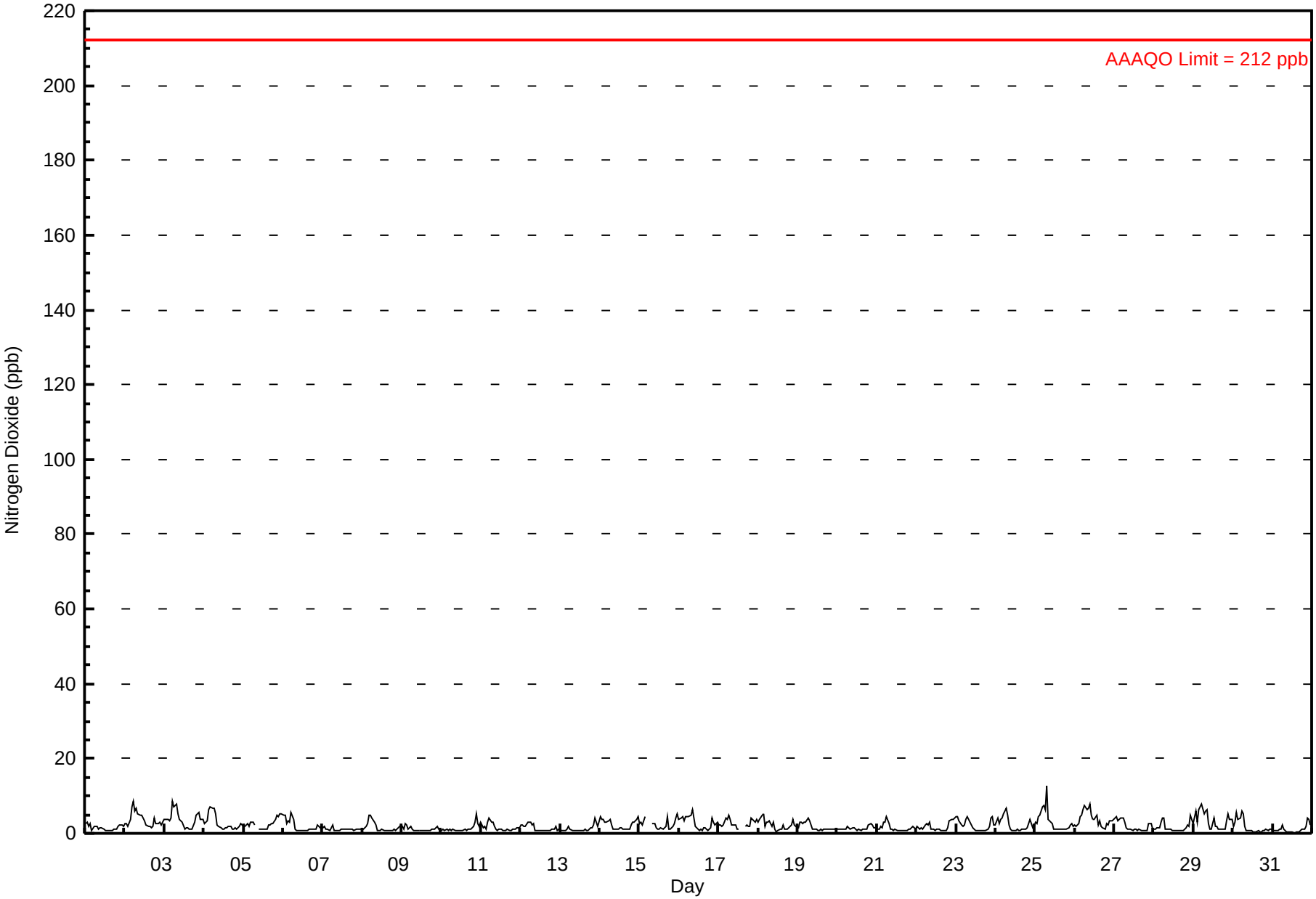
Minimum Value: 0 ppb on Jul 31 14:00 Minimum Daily Average: 1.1 ppb on Jul 7
Maximum Diurnal Average: 4.6 ppb at hour 5 Minimum Diurnal Average: 1.1 ppb at hour 15
Monthly Average: 2.09 ppb Percentiles: $P_1 = 0.4$ $P_{10} = 0.9$ $Q_1 = 0.9$ Median = 1.5 $Q_3 = 2.8$ $P_{90} = 4.3$ $P_{99} = 7.4$

Hours in Service:	744
Hours of Data:	700
Hours of Missing Data:	44
Hours of Calibration:	37
Percent Operational Time:	99.1

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Jul	3	3	2	2	A	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1.6	2.9
2-Jul	3	2	2	4	A	8	6	7	5	5	5	4	3	2	2	2	2	2	4	2	2	3	2	3	3.5	8.5
3-Jul	4	4	4	4	A	9	7	8	5	4	3	3	1	2	2	1	1	1	3	5	5	6	4	4	3.8	8.7
4-Jul	3	3	3	6	A	7	7	5	2	2	2	1	1	2	2	2	2	1	1	2	1	2	3	2	2.6	6.7
5-Jul	2	2	3	2	A	3	3	2	P	1	1	1	1	1	P	2	2	3	3	4	5	5	5	5	2.6	5.4
6-Jul	5	5	3	4	A	6	4	1	P	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2	2.0	5.7
7-Jul	2	2	1	1	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	2.1
8-Jul	1	1	2	2	A	5	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.6	4.7
9-Jul	2	1	3	2	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1.2	2.5
10-Jul	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	5	3	2	1.4	5.3
11-Jul	3	2	2	1	A	4	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.5	4.2
12-Jul	2	2	2	2	A	3	3	2	3	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1.5	3.1
13-Jul	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2	4	3	2	1.3	4.2
14-Jul	4	4	4	3	A	3	4	2	1	1	1	1	1	2	1	1	1	1	1	2	3	3	4	4	2.3	4.4
15-Jul	3	3	2	4	A	P	P	P	P	3	2	1	1	2	1	1	2	4	1	1	2	3	4	5	2.3	5.4
16-Jul	4	4	4	3	5	A	A	5	6	4	2	1	1	1	1	1	1	1	1	1	4	3	2	3	2.7	6.2
17-Jul	2	2	2	2	A	4	5	4	2	2	2	1	C	C	C	C	A	2	2	2	4	3	3	4	2.7	4.8
18-Jul	3	4	5	5	A	3	3	3	2	3	1	0	1	1	1	2	1	1	1	2	2	4	2	2	2.3	5.3
19-Jul	2	3	3	3	A	3	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.7	4.2
20-Jul	1	1	1	1	A	1	2	2	1	2	1	1	1	1	1	1	1	1	1	2	2	2	2	2	1.3	2.5
21-Jul	1	1	2	2	A	3	5	3	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1.4	4.6
22-Jul	2	1	1	1	A	2	2	2	3	1	1	1	1	1	1	1	1	1	1	1	3	4	4	4	1.8	4.0
23-Jul	5	5	3	2	A	2	4	5	3	2	2	1	1	1	1	1	1	1	1	1	2	4	5	2	2.3	4.6
24-Jul	2	4	2	4	A	5	7	5	2	1	1	1	1	1	1	1	1	1	1	1	3	4	1	2	2.2	6.6
25-Jul	3	3	4	5	A	8	6	13	4	3	3	1	1	1	1	1	1	1	1	1	1	2	3	2	3.0	12.6
26-Jul	2	2	3	5	A	6	7	6	7	8	5	4	4	5	2	3	2	1	1	3	2	3	3	3	3.8	7.9
27-Jul	4	4	4	4	A	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	3	3	1	1.8	4.4
28-Jul	1	1	1	2	A	4	4	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	5	4	1.7	4.9
29-Jul	3	6	3	6	A	8	5	6	6	2	1	1	4	2	2	1	1	1	1	1	3	5	4	4	3.4	7.9
30-Jul	2	3	6	4	A	6	5	2	1	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	1.7	6.0
31-Jul	1	1	1	1	A	1	2	1	0	0	0	0	0	0	0	0	1	1	1	1	2	4	4	2	1.1	4.0
	2.4	2.6	2.6	2.9	4.6	4.0	3.9	3.4	2.4	1.8	1.5	1.2	1.2	1.1	1.1	1.1	1.1	1.2	1.3	1.6	2.2	2.8	2.6	2.4	Diurnal Average	
	4.9	6.0	5.7	6.3	4.6	8.7	7.4	12.6	6.5	7.9	5.0	3.9	3.9	4.7	2.4	3.4	2.1	4.4	4.1	5.0	5.4	5.8	5.3	5.4	Diurnal Maximum	

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

Hourly Averages for NO_2 at Beaverlodge
July 2008



Peace Airshed Zone Association
Summary of Hourly Maximums

Beaverlodge - Nitrogen Dioxide (NO_2) - ppb
July 1, 2008 to August 1, 2008

Maximum Value: 81 ppb on Jul 25 08:00

Maximum Daily Average: 8.4 ppb on Jul 18

Minimum Value: 1 ppb on Jul 13 08:00

Minimum Daily Average: 2.1 ppb on Jul 7

Maximum Diurnal Average: 9.0 ppb at hour 5

Minimum Diurnal Average: 1.6 ppb at hour 15

Monthly Average: 3.78 ppb

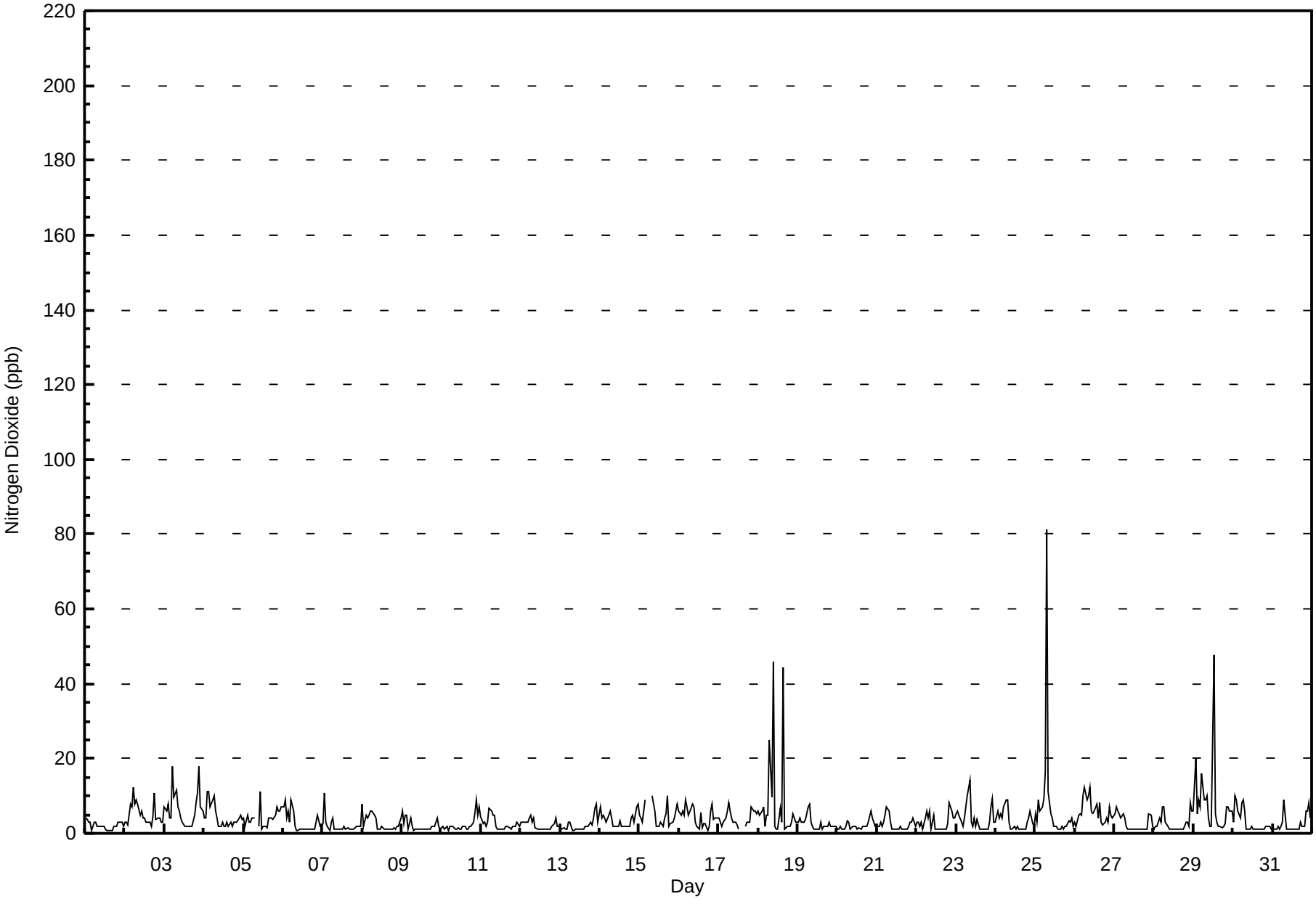
Percentiles: $P_1 = 0.9$ $P_{10} = 1.0$ $Q_1 = 1.0$ Median = 2.7 $Q_3 = 5.0$ $P_{90} = 6.8$ $P_{99} = 16.9$

Hours in Service:	744
Hours of Data:	700
Hours of Missing Data:	44
Hours of Calibration:	37
Percent Operational Time:	99.1

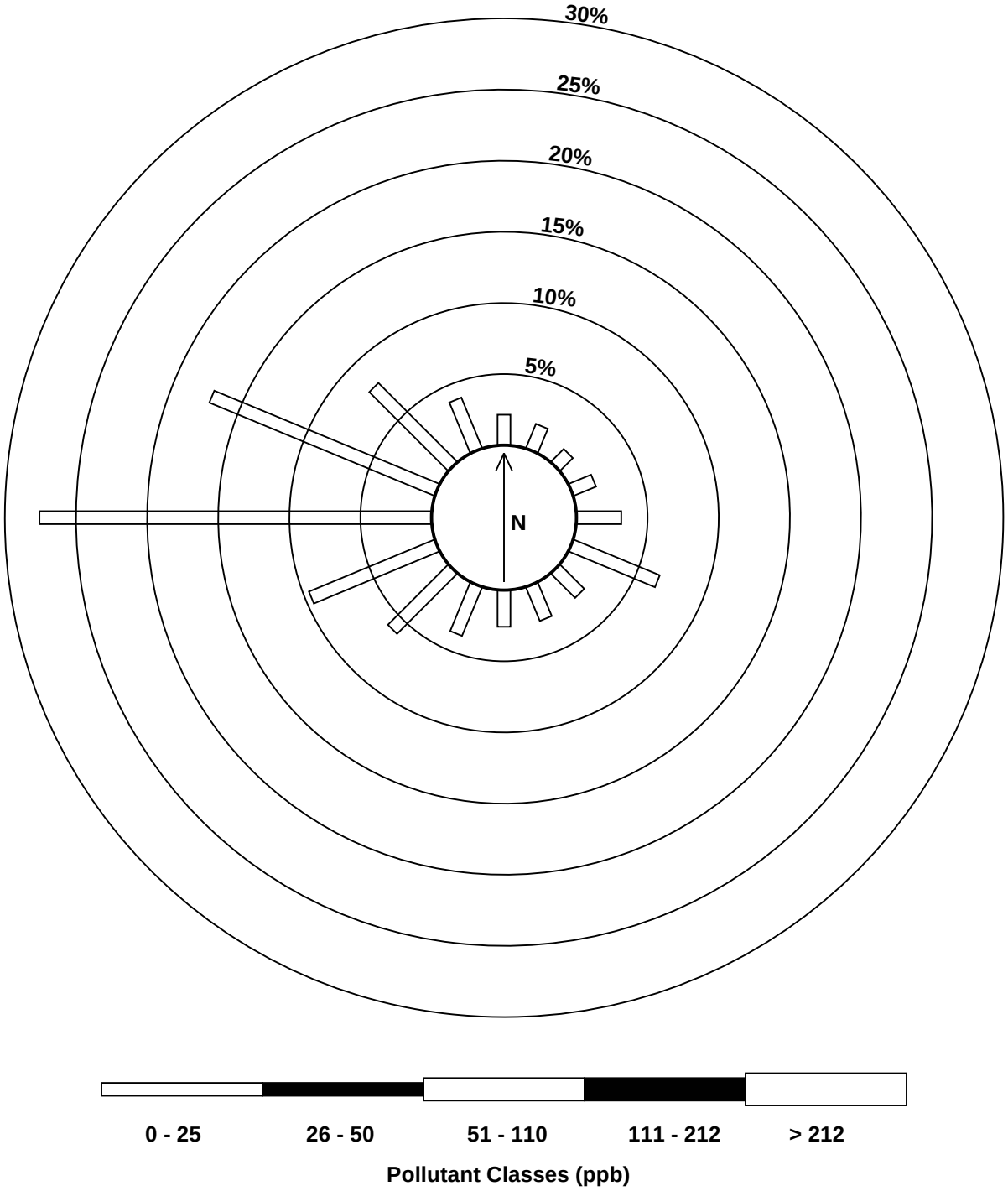
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	4	4	3	3	A	3	3	2	2	2	2	2	1	1	1	1	1	2	2	2	3	3	3	2	2.2	3.9
2-Jul	3	3	2	8	A	12	8	9	8	5	6	4	4	3	3	3	2	5	11	4	4	4	3	3	5.1	12.4
3-Jul	7	6	8	4	A	18	10	12	7	6	4	3	2	2	2	2	2	2	5	8	11	18	7	6	6.6	18.0
4-Jul	4	4	11	11	A	9	10	6	4	2	2	3	2	2	3	2	3	2	3	3	3	4	5	4	4.4	11.2
5-Jul	4	2	5	3	A	4	4	4	P	2	11	1	2	2	P	4	4	4	4	5	7	6	6	7	4.3	11.0
6-Jul	7	9	4	6	A	9	6	2	P	1	1	1	1	1	1	1	1	1	1	1	3	5	2	2	3.0	9.0
7-Jul	3	11	3	2	A	3	4	1	1	1	1	1	1	2	1	2	1	1	1	1	2	2	2	2	2.1	11.0
8-Jul	8	2	5	4	A	6	6	5	4	1	1	1	2	1	1	1	1	1	1	1	1	2	2	4	2.6	7.7
9-Jul	6	3	5	5	A	4	2	1	1	1	1	1	1	1	1	1	1	1	2	2	2	4	2	1	2.1	6.0
10-Jul	1	2	1	2	A	2	2	2	1	1	2	1	1	2	2	1	1	2	2	3	6	9	5	7	2.5	9.0
11-Jul	5	3	3	2	A	7	6	5	5	2	1	1	1	1	1	2	2	2	1	2	2	2	3	2	2.6	6.7
12-Jul	3	3	3	3	A	4	5	3	4	1	1	1	1	1	1	1	1	1	1	2	3	4	2	2	2.2	4.9
13-Jul	2	1	1	1	A	3	3	1	1	1	1	1	1	1	1	2	2	2	3	2	4	7	8	3	2.2	7.8
14-Jul	7	4	5	4	A	5	6	4	2	2	2	2	3	2	2	2	2	2	2	4	5	3	7	8	3.7	8.0
15-Jul	5	4	3	9	A	P	P	P	P	6	2	2	2	3	2	4	5	10	2	3	3	4	6	8	4.3	10.0
16-Jul	6	5	6	5	9	A	A	7	8	7	3	2	1	6	2	2	3	1	2	6	8	4	4	4	4.5	9.0
17-Jul	4	3	2	3	A	6	8	6	4	3	3	2	C	C	C	C	A	3	3	3	7	6	6	5	4.3	8.0
18-Jul	6	5	6	7	A	5	5	25	10	46	2	1	1	7	3	44	1	2	2	2	3	5	4	3	8.4	45.7
19-Jul	3	4	3	3	A	4	7	8	3	2	1	1	1	1	3	1	2	2	2	3	2	2	2	2	2.7	7.8
20-Jul	1	1	2	1	A	2	3	3	1	2	2	2	1	1	1	2	2	2	2	3	6	4	3	2	2.2	6.0
21-Jul	2	2	3	2	A	5	7	6	3	1	1	1	1	1	2	1	1	1	1	2	3	3	4	2	2.4	7.1
22-Jul	3	3	2	3	A	4	6	4	6	1	5	1	1	1	1	1	1	1	1	3	8	6	4	4	3.0	8.1
23-Jul	5	6	5	3	A	4	7	10	14	3	2	4	2	4	1	1	1	1	1	1	3	7	9	3	4.2	14.2
24-Jul	3	6	4	5	A	7	9	9	3	1	1	2	1	2	1	1	1	1	1	3	4	6	3	2	3.3	9.1
25-Jul	5	3	9	6	A	9	17	81	11	5	4	2	2	2	1	1	2	1	2	2	3	3	4	2	7.7	81.2
26-Jul	3	2	5	5	A	10	12	9	10	12	6	5	6	8	4	8	3	2	3	4	3	7	5	4	5.9	12.2
27-Jul	5	7	6	5	A	5	4	2	1	1	1	1	1	1	1	1	1	1	1	1	1	5	5	2	2.6	7.1
28-Jul	1	2	2	4	A	7	7	3	2	1	1	1	1	1	1	1	1	1	1	3	3	2	8	6	2.6	8.1
29-Jul	6	20	5	9	A	16	9	9	10	4	2	2	48	5	3	2	2	1	2	3	7	7	6	6	8.0	47.9
30-Jul	3	10	9	6	A	8	9	6	1	1	1	2	1	1	1	1	1	1	1	1	2	2	2	1	3.1	9.9
31-Jul	1	1	1	2	A	2	3	9	1	1	1	1	1	1	1	1	1	3	2	2	6	6	8	4	2.6	9.1
	4.0	4.5	4.3	4.4	9.0	6.3	6.5	8.4	4.6	4.0	2.4	1.8	3.1	2.2	1.6	3.2	1.7	2.0	2.2	2.7	4.1	4.9	4.5	3.6	Diurnal Average	
	7.7	20.3	11.2	11.2	9.0	18.0	16.5	81.2	14.2	45.7	11.0	5.1	47.9	7.8	4.0	44.3	5.0	10.0	11.0	8.3	10.8	18.0	9.1	8.0	Diurnal Maximum	

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

Hourly Maximums for NO_2 at Beaverlodge
July 2008



Pollutant Rose for NO_2 at Beaverlodge
July 2008



Peace Airshed Zone Association
Summary of Hourly Averages

Beaverlodge - Nitrogen Oxide (NO) - ppb
July 1, 2008 to August 1, 2008

Maximum Value: 8 ppb on Jul 25 08:00

Maximum Daily Average: 0.7 ppb on Jul 25

Minimum Value: 0 ppb on Jul 1 01:00

Minimum Daily Average: 0.0 ppb on Jul 1

Maximum Diurnal Average: 1.2 ppb at hour 8

Minimum Diurnal Average: 0.0 ppb at hour 3

Monthly Average: 0.18 ppb

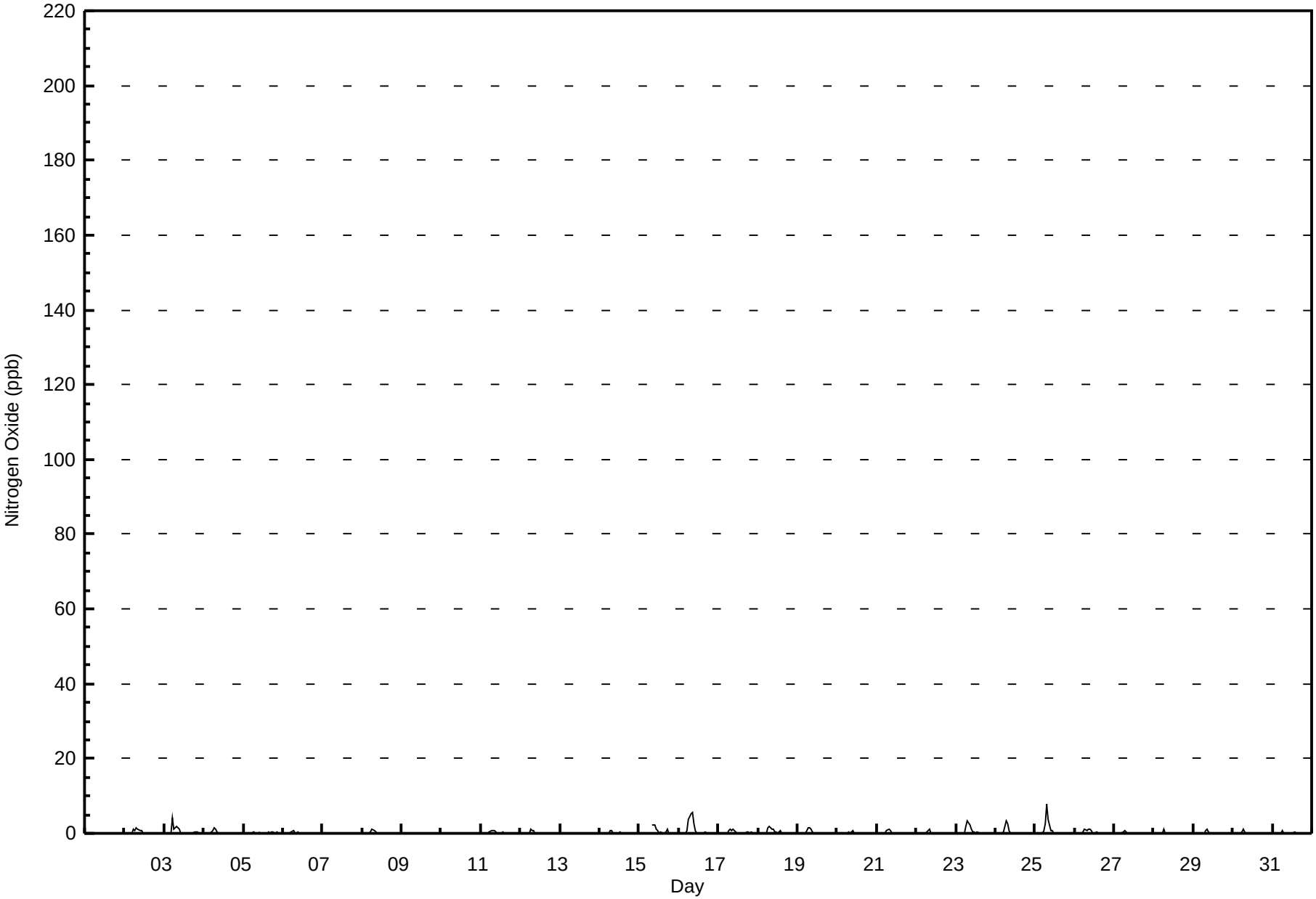
Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.0$ Median = 0.0 $Q_3 = 0.0$ $P_{90} = 0.6$ $P_{99} = 3.2$

Hours in Service:	744
Hours of Data:	700
Hours of Missing Data:	44
Hours of Calibration:	37
Percent Operational Time:	99.1

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-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	0.0
2-Jul	0	0	0	0	A	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.5
3-Jul	0	0	0	0	A	4	1	2	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.5	4.0
4-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	0.2	1.4
5-Jul	0	0	0	0	A	0	0	1	P	0	0	0	0	0	P	1	0	0	0	0	1	0	0	0	0.2	0.5
6-Jul	0	0	0	0	A	0	1	0	P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8
7-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
8-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	0.1	1.1
9-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	0.0
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	0.0	0.0
11-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	0.1	0.8
12-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	0.1	1.2
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	0.0	0.0
14-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	0.1	0.6
15-Jul	0	0	0	0	A	P	P	P	P	2	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0.3	2.1
16-Jul	0	0	0	0	0	A	A	5	5	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	5.4
17-Jul	0	0	0	0	A	0	1	1	1	1	1	0	C	C	C	C	A	0	0	0	0	0	0	0	0.3	1.0
18-Jul	0	0	0	0	A	0	2	2	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0.3	1.9
19-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	0.2	1.7
20-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	0.1	0.7
21-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	0.1	1.1
22-Jul	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.2
23-Jul	0	0	0	0	A	0	2	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	3.2
24-Jul	0	0	0	0	A	1	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	3.3
25-Jul	0	0	0	0	A	1	3	8	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	8.0
26-Jul	0	0	0	0	A	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.3
27-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
28-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	1.0
29-Jul	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.1
30-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	1.0
31-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	0.0	0.6
	0.0	0.0	0.0	0.0	0.1	0.3	0.9	1.2	0.9	0.5	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	Diurnal Average	
	0.0	0.1	0.0	0.2	0.1	4.0	3.3	8.0	5.4	2.8	1.0	0.8	0.3	0.7	0.2	0.5	0.3	1.0	0.4	0.6	0.5	0.1	0.1	0.1	Diurnal Maximum	

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

Hourly Averages for NO at Beaverlodge
July 2008



Peace Airshed Zone Association
Summary of Hourly Maximums

Beaverlodge - Nitrogen Oxide (NO) - ppb
July 1, 2008 to August 1, 2008

Maximum Value: 66 ppb on Jul 25 09:00

Maximum Daily Average: 5.2 ppb on Jul 25

Minimum Value: 0 ppb on Jul 1 01:00

Minimum Daily Average: 0.0 ppb on Jul 1

Maximum Diurnal Average: 4.8 ppb at hour 9

Minimum Diurnal Average: 0.1 ppb at hour 3

Monthly Average: 0.91 ppb

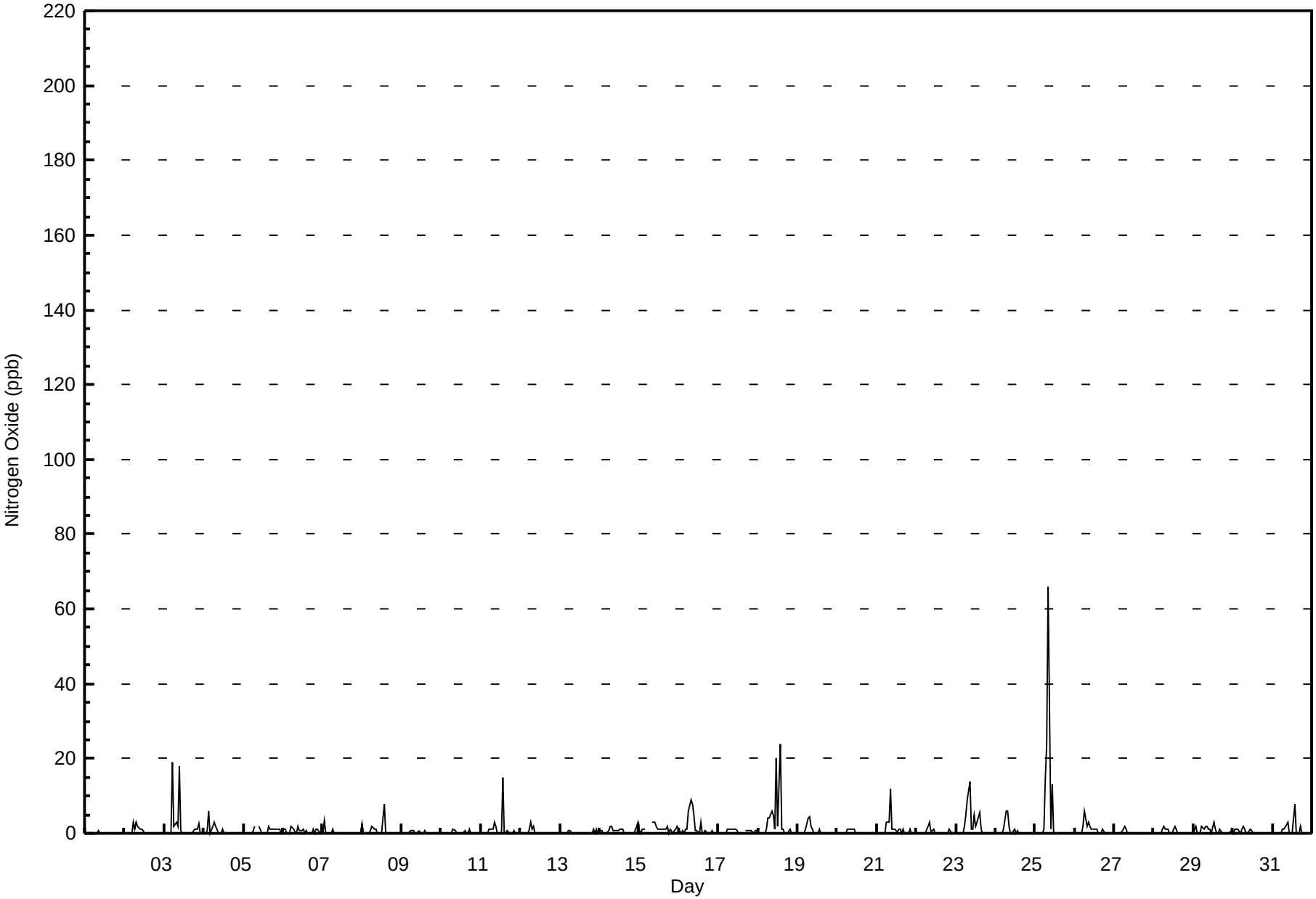
Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.0$ Median = 0.0 $Q_3 = 0.9$ $P_{90} = 2.0$ $P_{99} = 13.5$

Hours in Service:	744
Hours of Data:	700
Hours of Missing Data:	44
Hours of Calibration:	37
Percent Operational Time:	99.1

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-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	0.0	0.9
2-Jul	0	0	0	0	A	3	1	3	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	2.9
3-Jul	0	0	0	0	A	19	2	3	2	18	1	0	0	0	0	0	0	0	1	1	1	2	0	0	2.2	18.9
4-Jul	0	0	1	6	A	2	3	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.7	5.9
5-Jul	0	0	0	0	A	0	1	2	P	2	1	0	0	0	P	2	1	1	1	1	1	1	1	0	0.7	2.0
6-Jul	1	1	0	0	A	2	1	0	P	2	1	1	1	0	1	0	0	0	1	0	1	1	0	0	0.6	1.9
7-Jul	0	3	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	3.3
8-Jul	2	0	0	0	A	1	2	1	1	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0.7	8.0
9-Jul	0	0	0	0	A	1	1	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0.2	0.9
10-Jul	0	0	0	0	A	0	0	1	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0.1	1.0
11-Jul	0	0	0	0	A	1	1	1	3	2	0	0	0	15	0	0	1	0	0	0	1	0	0	0	1.1	15.0
12-Jul	0	0	0	0	A	1	3	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.9
13-Jul	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0.2	0.9
14-Jul	1	1	0	0	A	1	2	2	1	1	1	1	1	1	1	0	0	0	0	0	0	0	2	3	0.8	3.0
15-Jul	1	0	1	1	A	P	P	P	P	3	2	1	1	1	1	1	1	2	0	1	0	1	1	2	1.1	3.0
16-Jul	1	0	1	0	1	A	A	9	8	5	1	1	0	3	0	0	1	0	0	0	1	0	0	0	1.4	8.9
17-Jul	0	0	0	0	A	1	1	1	1	1	1	1	C	C	C	C	A	1	1	1	1	0	1	1	0.7	1.1
18-Jul	0	0	0	0	A	1	4	4	6	5	1	20	2	24	1	1	0	0	0	1	0	0	0	0	3.1	24.0
19-Jul	0	0	0	0	A	1	4	4	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.6	4.4
20-Jul	0	0	0	0	A	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.0
21-Jul	0	0	0	0	A	0	3	3	12	1	1	1	1	1	1	0	1	0	0	0	1	0	0	0	1.1	12.0
22-Jul	0	0	0	0	A	0	1	2	3	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0.4	3.0
23-Jul	0	0	0	0	A	2	5	9	14	1	1	5	2	3	6	1	0	0	0	0	0	0	0	0	2.1	13.8
24-Jul	0	0	0	0	A	1	6	6	2	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0.7	6.0
25-Jul	0	0	0	0	A	1	15	24	66	1	13	0	0	0	0	0	0	0	0	0	0	0	0	0	5.2	66.0
26-Jul	0	0	0	0	A	2	6	2	3	2	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0.9	6.0
27-Jul	0	0	0	0	A	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.9
28-Jul	0	0	0	0	A	1	2	1	1	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0.4	2.0
29-Jul	0	2	0	0	A	2	1	2	2	1	1	0	3	1	0	0	1	0	0	0	0	0	0	1	0.7	3.0
30-Jul	0	1	1	1	A	1	2	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.0
31-Jul	0	0	0	0	A	0	1	1	2	3	0	0	0	8	0	0	0	2	0	0	0	0	0	0	0.8	8.0
	0.2	0.3	0.1	0.3	0.9	1.5	2.5	2.9	4.8	1.6	1.0	1.1	0.4	2.3	0.4	0.2	0.2	0.3	0.1	0.2	0.3	0.2	0.2	0.2	Diurnal Average	
	2.4	3.3	1.0	5.9	0.9	18.9	14.7	24.0	66.0	17.9	13.0	20.0	3.0	24.0	5.8	2.0	1.0	2.0	1.0	1.0	1.0	2.4	1.7	3.0	Diurnal Maximum	

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

Hourly Maximums for NO at Beaverlodge
July 2008



Peace Airshed Zone Association
Summary of Hourly Averages

Beaverlodge - Oxides of Nitrogen (NO_X) - ppb
July 1, 2008 to August 1, 2008

Maximum Value: 21 ppb on Jul 25 08:00

Maximum Daily Average: 4.4 ppb on Jul 3

Minimum Value: 0 ppb on Jul 31 01:00

Minimum Daily Average: 1.1 ppb on Jul 7

Maximum Diurnal Average: 4.8 ppb at hour 5

Minimum Diurnal Average: 1.2 ppb at hour 15

Monthly Average: 2.36 ppb

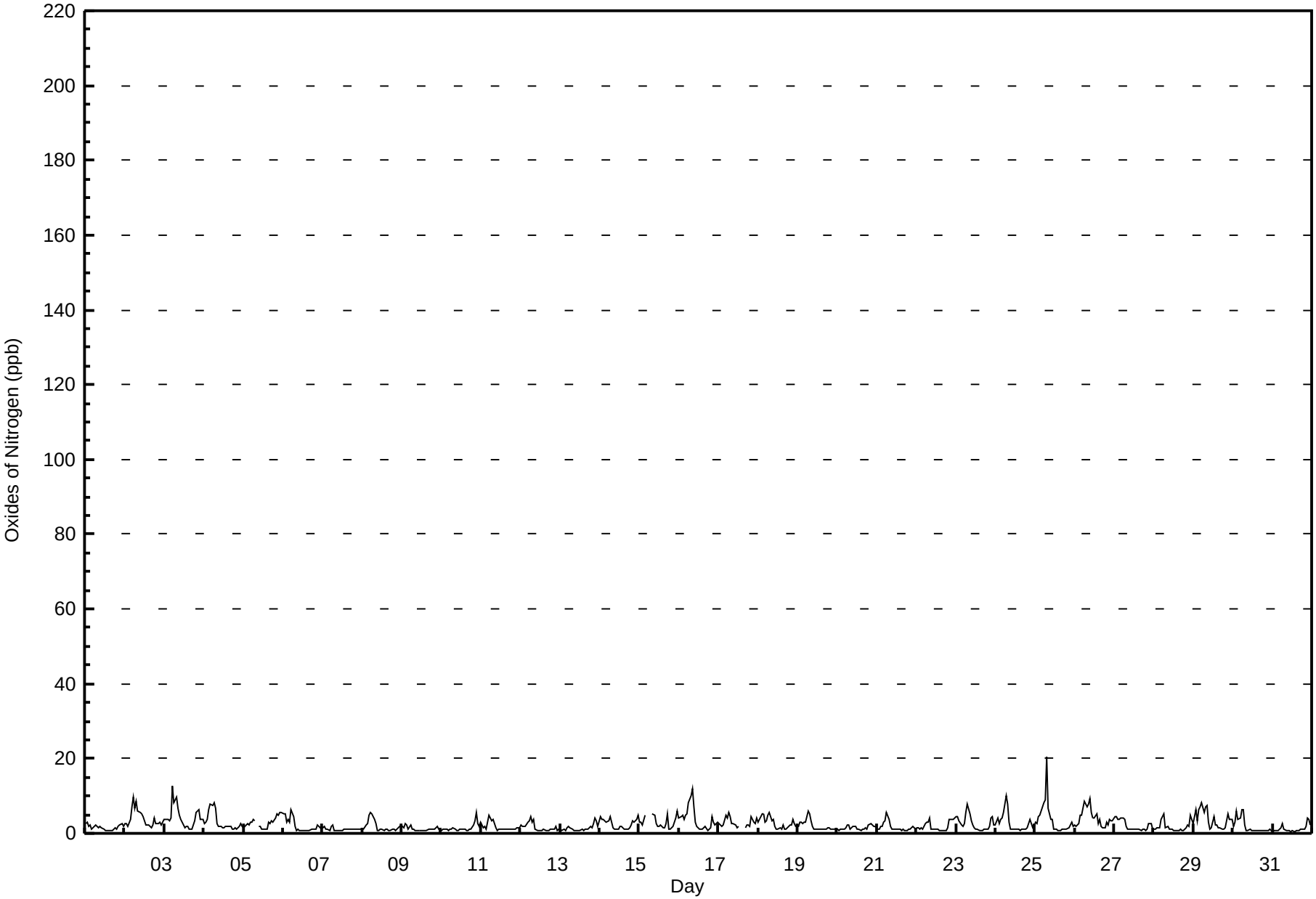
Percentiles: $P_1 = 0.6$ $P_{10} = 0.9$ $Q_1 = 1.0$ Median = 1.7 $Q_3 = 3.1$ $P_{90} = 4.9$ $P_{99} = 9.6$

Hours in Service:	744
Hours of Data:	700
Hours of Missing Data:	44
Hours of Calibration:	37
Percent Operational Time:	99.1

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Jul	3	3	2	2	A	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	2	2	2	2	1.7	2.9
2-Jul	3	2	2	4	A	10	7	8	6	6	5	4	3	2	2	2	2	2	4	3	3	3	2	3	3.8	9.7
3-Jul	4	4	4	4	A	13	8	10	7	5	4	3	1	2	2	1	1	1	3	6	6	6	4	4	4.4	12.8
4-Jul	3	3	4	6	A	7	8	7	3	2	2	2	1	2	2	2	2	1	1	2	1	2	3	2	2.9	8.2
5-Jul	2	2	3	2	A	3	4	3	P	2	2	1	1	1	P	3	3	3	3	4	5	5	5	6	3.0	5.5
6-Jul	5	5	3	4	A	6	5	2	P	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2.1	6.4
7-Jul	2	2	1	1	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	2.4
8-Jul	1	1	2	2	A	5	5	4	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.7	5.4
9-Jul	2	1	3	2	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1.2	2.5
10-Jul	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	5	3	2	1.5	5.4
11-Jul	3	2	2	1	A	5	4	4	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.6	4.7
12-Jul	2	2	2	2	A	3	4	3	4	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1.6	4.3
13-Jul	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1	3	4	3	2	1.4	4.2
14-Jul	4	4	4	3	A	3	4	3	2	1	1	1	2	2	2	1	1	1	2	2	3	3	4	5	2.5	4.7
15-Jul	3	3	2	5	A	P	P	P	P	5	3	2	2	2	1	2	2	5	1	1	2	3	4	6	2.9	5.8
16-Jul	4	4	5	4	5	A	A	10	12	7	3	2	1	1	1	2	2	1	1	2	4	3	2	3	3.6	11.8
17-Jul	2	2	2	2	A	4	6	5	3	3	2	2	C	C	C	C	A	2	2	2	4	3	3	4	2.9	5.5
18-Jul	3	4	5	5	A	3	5	5	3	4	2	1	1	2	1	2	1	1	1	2	2	4	3	2	2.7	5.5
19-Jul	2	3	3	3	A	3	6	5	3	2	1	1	1	1	1	1	1	1	1	2	1	1	1	1	2.0	5.8
20-Jul	1	1	1	1	A	1	2	2	1	2	2	2	1	1	1	1	1	1	1	2	3	2	2	2	1.5	2.6
21-Jul	1	1	2	2	A	3	6	4	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1.6	5.5
22-Jul	2	1	1	1	A	2	3	3	4	1	1	1	1	1	1	1	1	1	1	1	4	4	4	4	1.9	4.2
23-Jul	5	5	3	2	A	3	5	8	5	3	2	1	1	1	1	1	1	1	1	1	2	4	5	2	2.8	8.0
24-Jul	2	4	2	4	A	6	10	8	3	1	1	1	1	1	1	1	1	1	1	1	3	4	2	2	2.6	10.0
25-Jul	3	3	4	5	A	8	9	21	7	4	4	1	1	1	1	1	1	1	1	1	2	2	3	2	3.7	20.7
26-Jul	2	2	3	5	A	7	9	7	8	9	6	4	4	5	3	4	2	2	1	3	2	4	3	3	4.2	9.2
27-Jul	4	4	4	4	A	4	4	2	1	1	1	1	1	1	1	1	1	1	1	1	1	3	3	1	2.0	4.5
28-Jul	1	1	1	2	A	4	5	2	2	1	1	1	1	1	1	1	1	1	1	2	2	2	5	4	1.8	5.0
29-Jul	3	6	3	6	A	8	6	7	8	3	1	1	4	2	2	1	2	1	1	1	3	5	4	4	3.6	8.3
30-Jul	2	3	6	4	A	6	6	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.8	6.4
31-Jul	0	1	1	1	A	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	2	4	4	2	1.3	4.0
	2.4	2.6	2.6	2.9	4.8	4.5	4.8	4.7	3.4	2.4	1.7	1.4	1.3	1.3	1.2	1.3	1.2	1.3	1.4	1.7	2.3	2.9	2.7	2.5	Diurnal Average	
	5.0	6.2	5.8	6.4	4.8	12.8	10.0	20.7	11.8	9.2	5.6	4.3	4.3	5.1	2.6	3.7	2.5	5.4	4.2	5.7	5.9	6.2	5.4	5.8	Diurnal Maximum	

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

Hourly Averages for NO_X at Beaverlodge
July 2008



Peace Airshed Zone Association
Summary of Hourly Maximums

Beaverlodge - Oxides of Nitrogen (NO_X) - ppb
July 1, 2008 to August 1, 2008

Maximum Value: 105 ppb on Jul 25 08:00

Maximum Daily Average: 10.3 ppb on Jul 18

Minimum Value: 1 ppb on Jul 1 14:00

Minimum Daily Average: 2.3 ppb on Jul 1

Maximum Diurnal Average: 11.4 ppb at hour 8

Minimum Diurnal Average: 1.8 ppb at hour 15

Monthly Average: 4.46 ppb

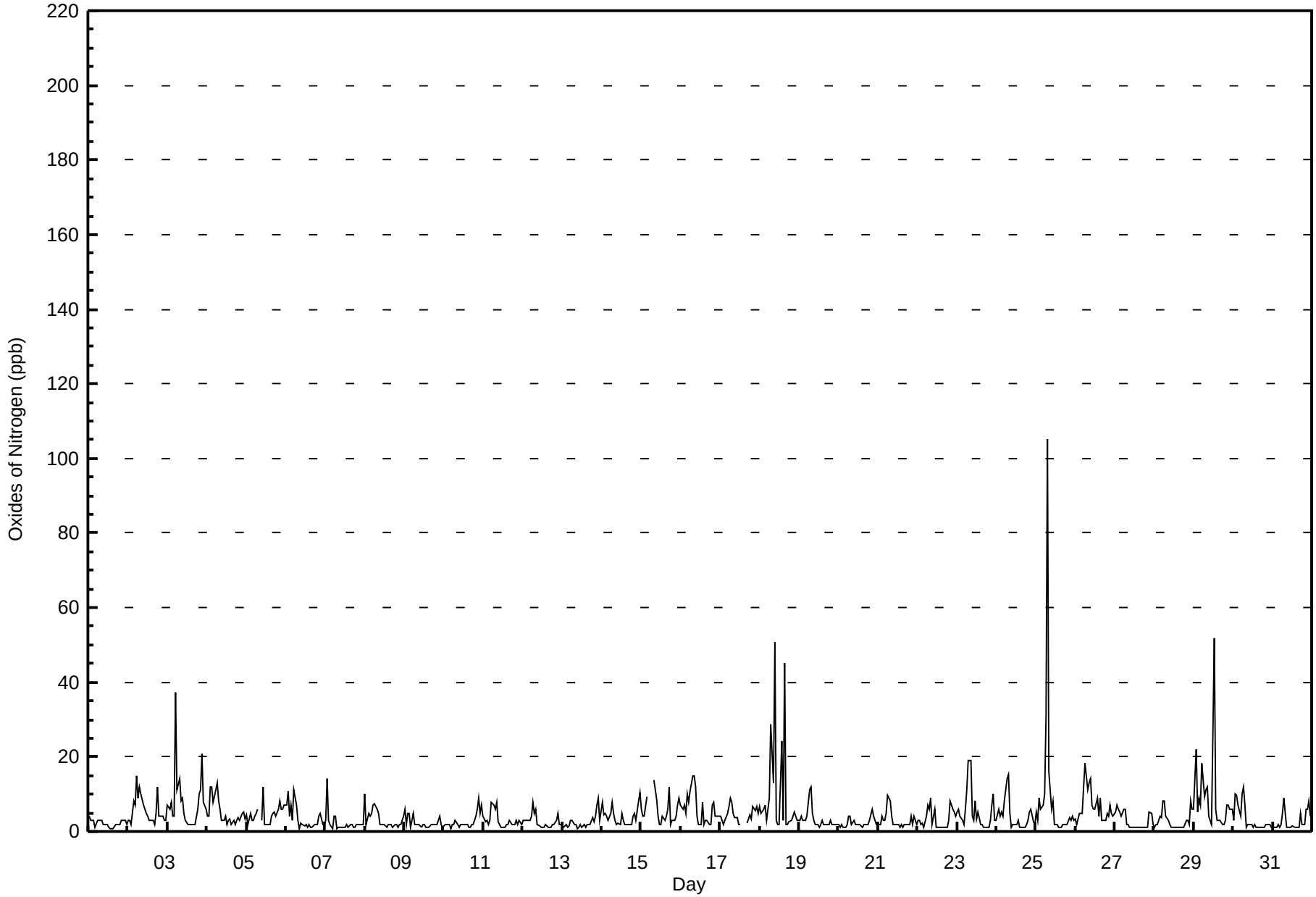
Percentiles: P_1 = 0.9 P_{10} = 1.0 Q_1 = 1.9 Median = 3.0 Q_3 = 5.0 P_{90} = 8.9 P_{99} = 27.5

Hours in Service:	744
Hours of Data:	700
Hours of Missing Data:	44
Hours of Calibration:	37
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	4	3	3	3	A	3	3	3	3	2	2	2	1	1	1	1	2	2	2	2	3	3	3	2	2.3	4.0
2-Jul	3	3	2	8	A	15	9	12	10	7	6	5	4	3	3	3	2	5	12	4	4	4	3	3	5.6	15.0
3-Jul	7	6	8	4	A	37	11	14	8	9	5	3	2	2	2	2	2	2	6	10	11	21	8	6	8.1	37.2
4-Jul	4	4	12	12	A	11	13	8	6	3	3	4	2	3	3	2	3	2	3	4	3	5	5	3	5.1	13.0
5-Jul	4	2	5	3	A	4	5	6	P	3	12	2	2	2	P	4	5	5	4	6	8	6	6	7	4.8	12.1
6-Jul	7	11	4	7	A	11	7	3	P	2	2	1	2	1	2	1	1	2	2	2	4	5	2	2	3.7	11.0
7-Jul	3	14	3	2	A	4	4	1	1	1	1	1	1	2	1	2	2	1	1	2	2	2	2	2	2.4	14.1
8-Jul	10	2	5	4	A	7	8	6	5	2	2	2	2	1	2	2	2	1	2	2	1	2	2	4	3.2	10.0
9-Jul	6	2	5	5	A	5	2	2	2	2	1	2	2	1	1	1	2	2	2	2	2	4	2	1	2.4	6.0
10-Jul	1	2	2	2	A	2	2	3	2	1	2	2	2	2	2	1	1	2	2	4	6	9	5	7	2.8	9.0
11-Jul	4	3	3	2	A	8	7	6	8	3	2	1	1	1	2	2	3	2	2	2	3	2	3	2	3.1	8.0
12-Jul	3	3	3	3	A	4	8	5	6	2	1	1	1	1	2	1	1	1	2	2	3	5	2	2	2.7	8.0
13-Jul	2	1	2	1	A	3	3	2	2	1	1	2	1	2	1	2	2	2	4	3	4	7	9	3	2.5	9.1
14-Jul	8	4	5	4	A	5	8	5	3	2	2	2	5	3	2	2	2	2	2	4	5	3	8	11	4.2	10.6
15-Jul	6	4	4	9	A	P	P	P	P	9	4	2	2	4	3	4	6	12	2	3	3	4	7	9	5.1	12.1
16-Jul	7	6	7	5	10	A	A	15	15	12	4	2	2	8	2	3	3	2	2	7	8	4	4	4	6.0	15.1
17-Jul	4	3	2	3	A	7	9	8	5	4	4	2	C	C	C	C	A	3	5	3	7	6	7	5	4.7	9.0
18-Jul	7	5	6	7	A	6	9	29	13	51	3	2	2	24	3	45	2	2	3	3	4	5	4	3	10.3	50.7
19-Jul	3	4	3	3	A	4	11	12	5	3	2	2	1	2	3	2	2	2	2	3	2	2	2	2	3.3	12.1
20-Jul	2	1	2	1	A	2	4	4	2	3	2	2	2	2	1	2	2	2	2	3	6	4	3	2	2.4	6.0
21-Jul	2	2	4	3	A	5	10	8	4	2	2	2	2	1	2	1	2	2	2	2	4	2	4	2	3.0	9.8
22-Jul	3	3	2	2	A	4	7	6	9	2	6	1	1	1	1	1	1	1	1	3	8	6	5	4	3.4	9.0
23-Jul	5	6	4	3	A	6	11	19	19	4	3	8	3	5	2	2	1	1	1	1	3	7	10	3	5.6	19.2
24-Jul	3	6	4	5	A	8	14	15	5	1	2	2	2	3	1	1	1	1	2	3	5	6	3	2	4.1	15.2
25-Jul	5	3	9	6	A	10	31	105	16	6	8	2	2	2	1	1	2	2	2	2	4	3	4	3	10.0	105.3
26-Jul	3	2	5	5	A	12	18	11	13	14	7	6	6	9	4	9	3	3	3	5	4	7	5	4	6.9	18.2
27-Jul	5	7	6	5	A	6	6	2	2	1	1	1	1	1	1	1	1	1	1	1	1	5	5	2	2.7	7.1
28-Jul	1	2	2	4	A	8	8	4	3	2	1	1	1	1	1	1	1	1	1	3	3	2	8	6	2.8	8.1
29-Jul	6	22	5	9	A	18	9	11	12	4	3	2	52	6	3	3	3	2	2	3	7	7	6	6	8.8	51.7
30-Jul	3	10	10	7	A	10	12	7	1	2	2	2	1	2	1	1	1	1	1	1	2	2	2	1	3.5	12.1
31-Jul	1	1	1	2	A	2	5	9	1	1	1	1	1	1	1	1	1	5	2	2	6	6	8	4	2.8	9.0
	4.3	4.7	4.4	4.5	10.0	7.8	8.8	11.4	6.4	5.1	3.1	2.2	3.6	3.2	1.8	3.5	2.0	2.4	2.5	3.1	4.4	5.0	4.7	3.8	Diurnal Average	
	10.0	22.1	12.0	12.0	10.0	37.2	31.1	105.3	19.2	50.7	12.1	8.1	51.7	24.3	4.0	45.2	6.1	12.1	11.8	10.0	11.0	21.0	10.1	10.6	Diurnal Maximum	

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

Hourly Maximums for NO_X at Beaverlodge
July 2008



Peace Airshed Zone Association
Summary of Hourly Averages

Beaverlodge - Ozone (O_3) - ppb
July 1, 2008 to August 1, 2008

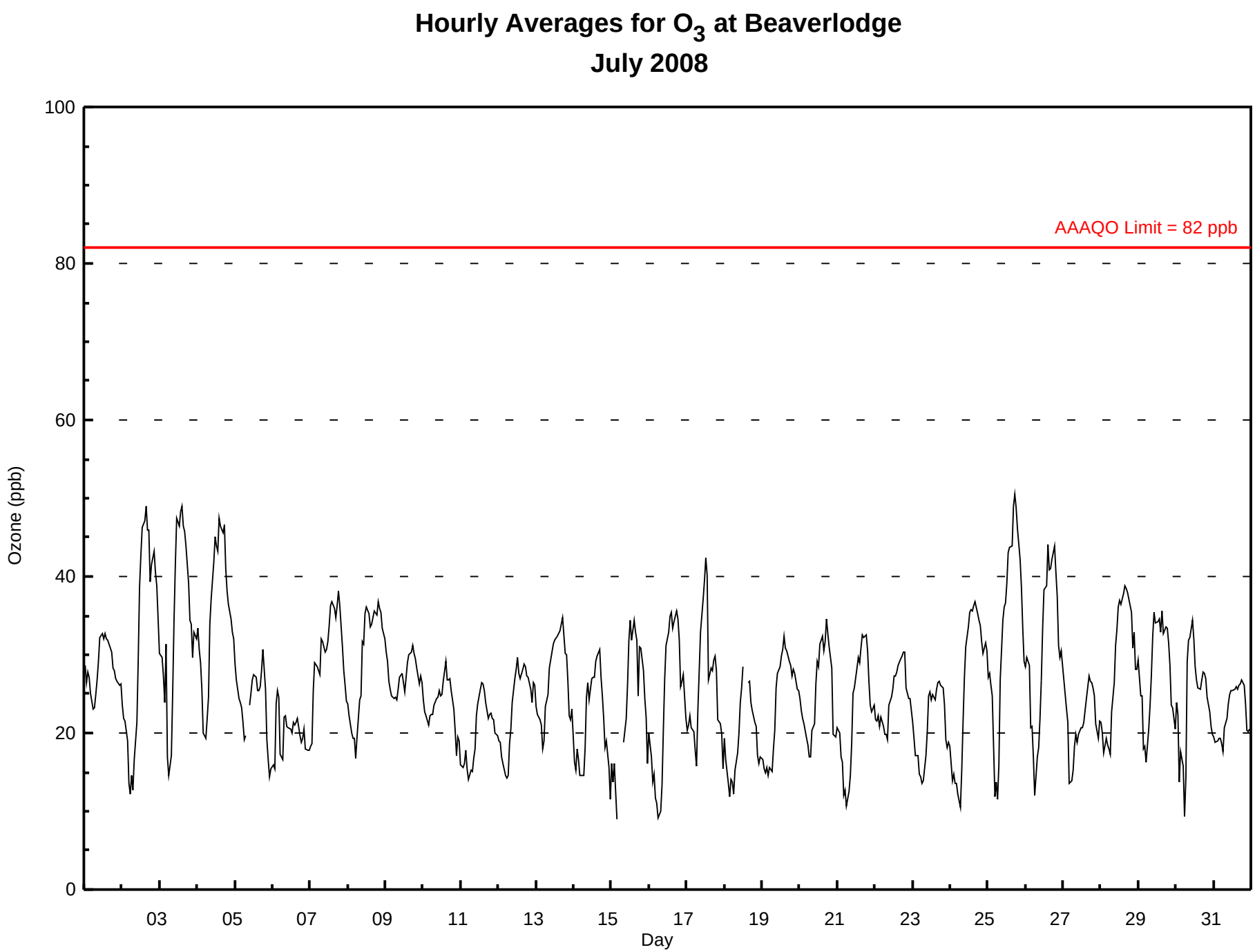
Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 51 ppb on Jul 25 18:00 Maximum Daily Average: 36.1 ppb on Jul 4

Minimum Value: 9 ppb on Jul 15 04:00 Minimum Daily Average: 19.2 ppb on Jul 18
Maximum Diurnal Average: 32.6 ppb at hour 15 Minimum Diurnal Average: 11.7 ppb at hour 5
Monthly Average: 26.28 ppb Percentiles: P_1 = 11.7 P_{10} = 16.6 Q_1 = 20.5 Median = 25.8 Q_3 = 31.1 P_{90} = 36.2 P_{99} = 47.0

Hours in Service:	744
Hours of Data:	703
Hours of Missing Data:	41
Hours of Calibration:	35
Percent Operational Time:	99.2

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	29	26	28	27	A	23	23	25	27	29	32	33	32	33	32	32	31	30	28	28	27	27	26	26	28.4	32.7
2-Jul	24	22	22	19	A	12	15	13	17	21	29	39	43	46	47	49	46	46	39	41	43	40	39	35	32.4	49.0
3-Jul	30	30	27	24	A	17	15	17	25	34	42	47	46	48	49	46	46	44	39	34	34	30	33	32	34.3	48.9
4-Jul	33	31	29	26	A	19	22	25	34	37	42	45	44	43	47	46	46	47	41	38	37	35	33	32	36.1	47.4
5-Jul	29	27	24	24	A	21	19	20	P	23	25	27	28	27	25	25	26	28	31	26	19	17	14	15	23.7	30.6
6-Jul	16	15	24	25	A	17	17	22	P	21	21	21	20	21	21	21	22	20	19	19	21	18	18	18	19.8	25.3
7-Jul	18	19	25	29	A	28	28	32	32	30	31	32	34	36	37	36	35	36	38	36	31	28	26	24	30.5	38.2
8-Jul	24	22	20	19	A	17	19	24	25	32	31	35	36	35	34	34	35	36	35	37	36	35	33	32	29.8	36.8
9-Jul	30	29	27	26	A	24	25	24	26	27	28	26	25	27	29	30	30	31	30	30	28	26	27	26	27.5	31.1
10-Jul	24	23	22	21	A	22	22	24	24	25	25	25	25	27	29	27	27	27	25	23	20	17	19	19	23.6	29.1
11-Jul	16	16	16	18	A	14	15	15	17	18	22	24	26	27	26	25	24	22	22	23	22	22	20	20	20.4	26.5
12-Jul	19	19	17	16	A	14	15	19	20	24	27	28	30	28	27	28	29	28	27	27	26	24	26	26	23.7	29.7
13-Jul	23	22	22	21	A	19	23	25	28	29	30	31	32	32	33	33	34	35	30	30	27	22	22	23	27.3	34.7
14-Jul	16	15	18	17	A	15	15	18	25	26	24	27	27	27	29	30	31	27	25	22	18	19	16	12	21.6	30.7
15-Jul	16	14	16	9	A	P	P	P	P	22	26	32	34	32	34	33	32	25	31	31	28	24	22	16	25.1	34.4
16-Jul	20	17	14	15	12	A	A	10	13	21	27	31	33	35	35	33	34	36	35	32	26	27	28	22	25.2	35.6
17-Jul	20	21	22	21	A	18	16	23	28	33	37	39	42	40	27	28	28	29	30	28	22	21	20	15	26.5	42.5
18-Jul	19	17	14	12	A	14	12	15	17	20	24	26	28	C	C	A	27	24	23	21	21	17	16	17	19.2	28.4
19-Jul	17	15	15	16	A	16	15	18	20	26	28	28	30	31	32	31	31	29	29	27	28	28	26	25	24.3	32.4
20-Jul	24	23	22	21	A	18	17	17	20	21	26	29	28	31	32	31	32	35	33	31	28	20	20	20	25.2	34.5
21-Jul	21	20	17	16	A	13	11	13	14	19	25	26	28	30	29	31	33	32	32	31	27	24	23	24	23.3	32.6
22-Jul	22	22	22	21	A	21	20	20	19	24	25	26	27	27	28	29	29	30	30	30	26	24	24	23	24.7	30.4
23-Jul	21	19	17	17	A	14	14	14	17	20	25	25	24	25	24	26	26	27	26	26	24	19	18	19	21.2	26.6
24-Jul	18	14	15	13	A	12	10	15	21	27	31	34	35	36	36	36	37	35	34	34	32	30	31	30	26.9	36.8
25-Jul	27	28	26	25	A	14	12	16	27	34	36	37	39	43	44	44	49	51	49	46	42	39	33	29	34.3	50.5
26-Jul	28	30	29	21	A	17	12	17	18	22	27	33	38	39	44	41	41	42	44	41	37	31	30	30	31.0	44.0
27-Jul	27	25	23	21	A	14	15	18	20	19	20	21	21	21	23	24	27	27	26	26	25	21	19	22	22.0	27.3
28-Jul	21	20	17	19	A	18	17	23	27	31	33	36	37	36	38	39	38	38	37	35	31	33	28	28	29.7	38.8
29-Jul	29	25	25	18	A	16	21	24	27	32	35	34	34	35	33	36	33	34	33	32	29	24	23	20	28.3	35.7
30-Jul	24	22	14	18	A	9	14	29	32	32	34	32	29	27	26	26	27	28	28	27	25	23	21	20	24.5	34.5
31-Jul	20	19	19	19	A	19	18	21	22	24	25	25	25	26	26	26	26	26	27	26	24	20	20	20	22.7	26.7
	22.8	21.5	20.9	19.8	11.7	17.1	17.1	19.8	23.0	25.9	28.8	30.8	31.7	32.4	32.6	32.5	32.6	32.3	31.5	30.2	27.8	25.3	24.4	23.3	Diurnal Average	
	33.3	30.7	29.0	29.0	11.7	28.0	27.5	32.0	33.9	37.1	41.9	47.4	46.5	48.3	48.9	49.0	48.9	50.5	48.8	46.1	43.1	40.5	38.9	34.5	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 for O_3 at Beaverlodge
July 2008
AAAQO Limit = 82 ppb
Ozone (ppb)
100
80
60
40
20
0
03
05
07
09
11
13
15
17
19
21
23
25
27
29
31
Day

Peace Airshed Zone Association
Summary of Hourly Maximums

Beaverlodge - Ozone (O_3) - ppb
July 1, 2008 to August 1, 2008

Maximum Value: 55 ppb on Jul 2 15:00

Maximum Daily Average: 39.3 ppb on Jul 4

Minimum Value: 12 ppb on Jul 16 08:00

Minimum Daily Average: 21.5 ppb on Jul 18

Maximum Diurnal Average: 34.6 ppb at hour 15

Minimum Diurnal Average: 14.6 ppb at hour 5

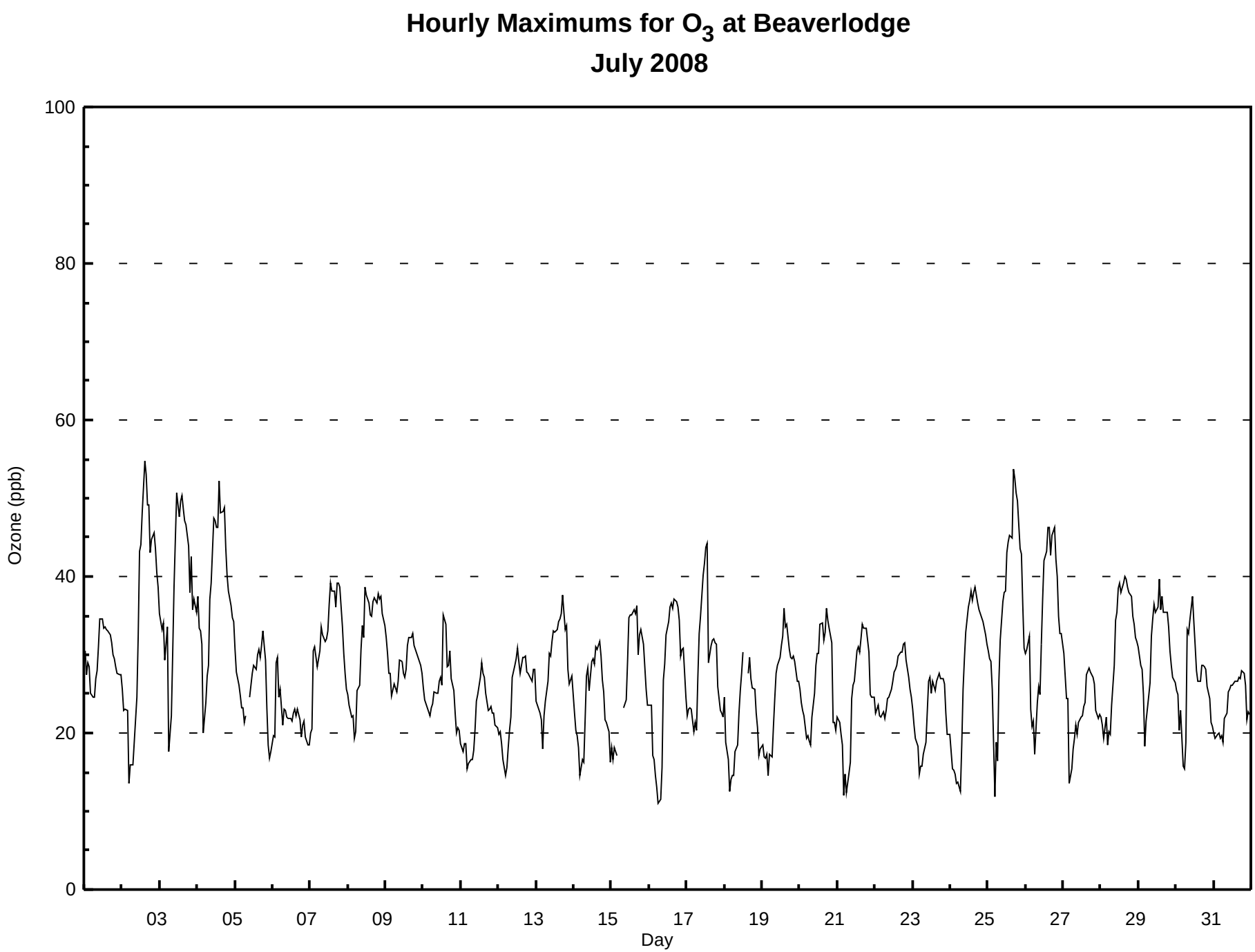
Monthly Average: 28.57 ppb

Percentiles: P_1 = 14.5 P_{10} = 18.7 Q_1 = 22.7 Median = 27.7 Q_3 = 33.4 P_{90} = 38.5 P_{99} = 50.7

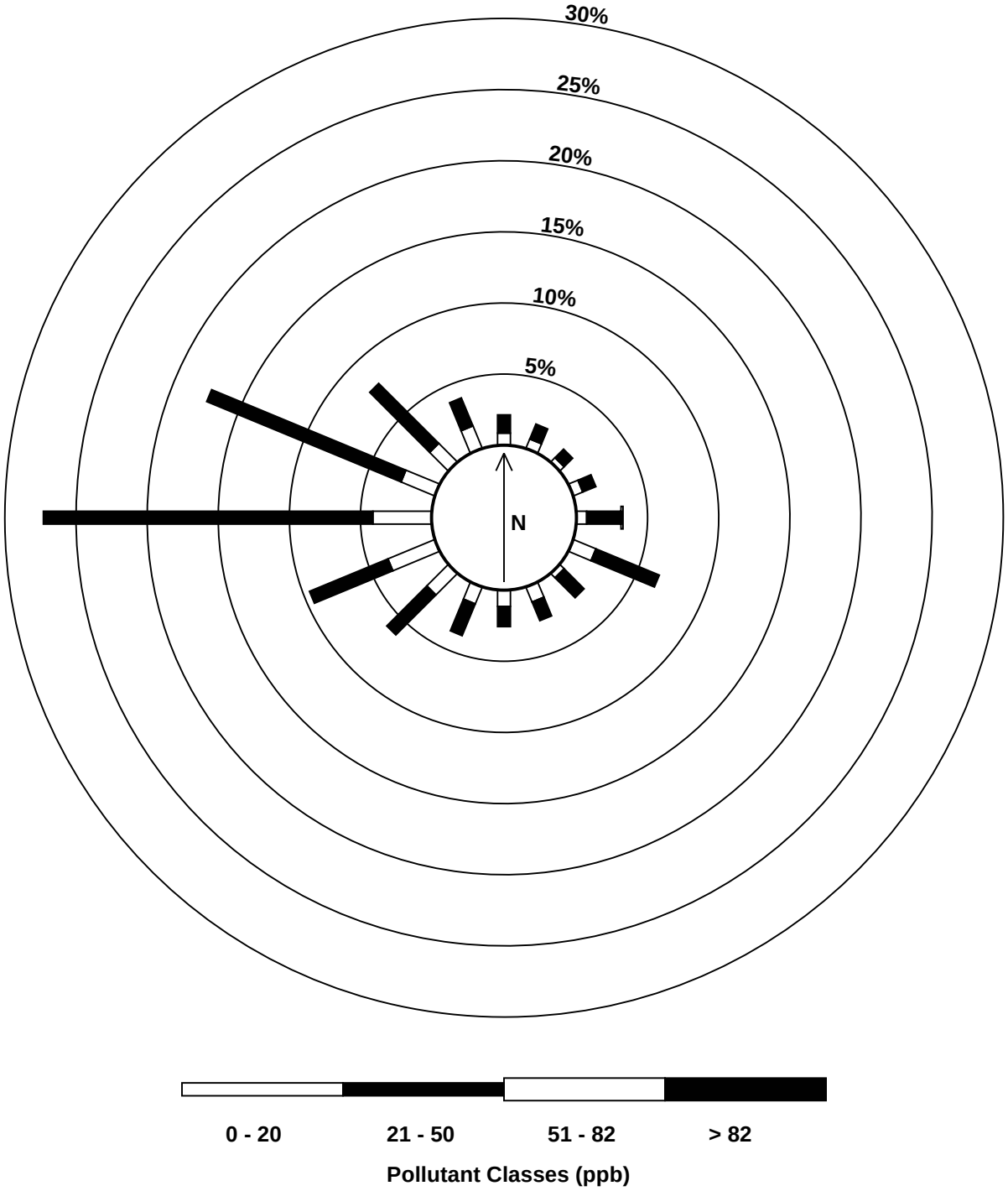
Hours in Service:	744
Hours of Data:	703
Hours of Missing Data:	41
Hours of Calibration:	35
Percent Operational Time:	99.2

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	31	28	29	29	A	25	25	27	28	31	35	35	33	34	33	33	33	31	30	30	29	28	28	27	29.9	34.5
2-Jul	26	23	23	23	A	16	16	16	19	25	33	43	44	48	55	53	49	49	43	45	46	44	41	39	35.5	54.7
3-Jul	35	33	34	29	A	34	18	22	30	39	45	51	48	50	50	49	47	47	44	38	42	36	37	35	38.8	50.7
4-Jul	38	33	33	31	A	24	27	29	37	39	47	47	46	46	52	48	48	49	44	40	38	36	35	34	39.3	52.2
5-Jul	31	28	26	25	A	23	21	22	P	25	26	28	29	28	30	31	30	31	33	29	23	18	17	18	26.0	33.0
6-Jul	20	19	29	30	A	26	21	23	P	22	22	22	22	23	23	22	23	22	20	21	22	20	19	19	22.1	29.6
7-Jul	20	21	31	31	A	30	31	34	33	32	32	33	36	39	38	38	36	39	39	39	34	30	28	26	32.5	39.1
8-Jul	25	24	22	22	A	20	25	26	31	34	32	39	38	37	35	35	37	37	37	38	37	37	35	34	32.0	38.7
9-Jul	32	30	28	28	A	26	26	25	27	29	29	28	27	28	31	32	32	33	31	31	30	29	29	28	29.1	32.7
10-Jul	26	24	24	23	A	23	24	25	25	25	27	27	26	35	34	29	29	31	27	25	23	20	21	20	25.7	35.2
11-Jul	19	18	19	19	A	16	17	17	18	21	24	25	27	29	28	27	25	23	23	23	23	23	21	21	21.8	29.0
12-Jul	20	20	19	17	A	16	18	20	22	27	29	29	31	29	28	30	30	30	28	28	27	27	28	28	25.1	30.8
13-Jul	24	24	23	22	A	22	24	27	30	30	32	33	33	33	34	35	35	38	33	34	28	26	27	27	29.2	37.7
14-Jul	23	20	20	18	A	17	16	22	27	28	25	29	29	29	31	31	32	30	27	25	22	21	20	16	24.3	31.7
15-Jul	18	17	18	17	A	P	P	P	P	24	29	35	35	35	36	35	36	30	33	33	31	28	26	24	28.5	36.3
16-Jul	24	24	17	17	15	A	A	12	16	27	29	33	34	36	37	36	37	37	36	34	30	31	31	24	27.9	37.2
17-Jul	22	23	23	23	A	21	20	27	33	35	40	42	44	44	29	31	32	32	32	31	26	23	23	22	29.5	44.3
18-Jul	24	19	17	13	A	15	15	18	19	23	25	28	30	C	C	A	30	27	26	26	22	21	17	18	21.5	30.4
19-Jul	19	17	17	17	A	17	17	21	24	28	29	30	31	32	36	34	34	31	30	29	30	29	27	27	26.2	35.9
20-Jul	26	24	23	22	A	20	19	18	22	25	29	30	30	34	34	32	33	36	34	33	31	21	21	20	26.9	35.9
21-Jul	22	21	20	19	A	15	12	15	16	24	26	27	30	31	30	32	34	33	33	32	30	25	25	25	25.1	33.9
22-Jul	23	23	24	22	A	23	22	23	24	25	26	27	28	28	29	30	30	30	31	32	29	27	26	25	26.3	31.5
23-Jul	23	21	19	18	A	16	16	17	19	23	27	27	25	27	25	27	27	28	27	27	26	22	20	20	22.9	27.7
24-Jul	20	15	15	15	A	14	13	18	26	29	33	36	37	38	37	38	39	37	36	35	35	34	33	31	28.8	38.6
25-Jul	31	29	29	26	A	19	17	27	32	37	38	38	43	44	45	45	54	52	51	50	44	43	37	31	37.4	53.7
26-Jul	30	31	32	23	A	22	17	24	26	25	31	37	42	43	46	46	43	45	46	42	40	35	33	33	34.5	46.4
27-Jul	30	27	24	24	A	15	18	19	21	20	21	22	22	23	24	27	28	28	27	27	26	23	22	22	23.7	30.2
28-Jul	22	21	19	22	A	20	20	24	29	34	35	38	39	38	39	40	40	39	38	38	35	34	32	32	31.6	40.0
29-Jul	31	29	28	25	A	22	25	26	32	35	36	35	36	40	36	37	35	35	35	34	31	29	27	26	31.6	39.7
30-Jul	25	25	20	23	A	15	19	33	33	34	37	34	31	28	27	27	29	29	29	28	26	24	21	21	26.9	37.5
31-Jul	20	19	20	20	A	20	19	22	23	25	26	26	26	27	27	27	27	27	28	28	26	22	23	22	23.8	28.0
	25.0	23.5	23.4	22.3	14.6	20.3	19.8	22.6	25.7	28.3	30.8	32.7	33.4	34.5	34.6	34.5	34.6	34.3	33.2	32.4	30.4	27.9	26.6	25.6	Diurnal Average	
	37.5	33.4	34.1	31.4	14.6	33.6	30.6	33.6	37.1	39.2	47.5	50.7	47.6	49.7	54.7	53.0	53.7	52.5	50.7	49.7	45.6	43.5	40.6	38.7	Diurnal Maximum	

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


Hourly Maximums for O_3 at Beaverlodge
July 2008
Ozone (ppb)
100
80
60
40
20
0
03
05
07
09
11
13
15
17
19
21
23
25
27
29
31
Day

Pollutant Rose for O_3 at Beaverlodge
July 2008



Peace Airshed Zone Association
Summary of Eight Hour Running Averages

Beaverlodge - Ozone (O_3) - ppb
July 1, 2008 to August 1, 2008

Number of Exceedences (AAAQO): 8-hr: 0
Maximum Value: 46.1 ppb on Jul 3 18:00

Minimum Value: 13.4 ppb on Jul 16 09:00

Percentiles: P_1 = 14.5 P_{10} = 18.2 Q_1 = 21.0 Median = 25.4 Q_3 = 30.1 P_{90} = 34.9 P_{99} = 44.8

Hours in Service:	744
Hours of Data:	730
Hours of Missing Data:	14
Hours of Calibration:	12
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Jul	34	32	30	29	28	27	27	26	26	26	27	27	28	29	30	31	32	32	31	31	30	29	29	28	33.7
2-Jul	27	26	25	24	24	22	20	18	17	17	18	21	24	28	32	36	40	43	44	45	45	44	43	41	44.8
3-Jul	39	37	36	34	32	29	25	23	22	23	25	28	30	34	39	42	45	46	46	44	43	40	38	36	46.1
4-Jul	35	33	32	31	30	29	27	26	26	27	29	32	33	36	40	42	44	45	45	44	43	42	40	38	45.0
5-Jul	36	34	32	30	29	27	25	23	23	22	22	23	23	24	25	26	26	26	27	27	26	25	23	22	36.3
6-Jul	21	19	18	18	18	18	19	19	20	21	20	20	20	20	21	21	21	21	21	20	21	20	20	19	21.0
7-Jul	19	19	19	21	21	22	24	26	27	29	30	30	31	32	33	33	34	35	35	36	36	35	33	32	36.0
8-Jul	30	29	26	24	23	22	21	21	21	22	24	26	27	30	32	33	34	34	35	35	35	35	35	35	35.1
9-Jul	34	33	32	31	30	29	28	26	26	25	26	26	26	26	27	27	28	28	29	29	29	29	29	29	34.3
10-Jul	28	27	26	25	24	24	23	23	23	23	23	24	24	25	25	26	26	26	26	26	26	24	23	22	27.9
11-Jul	21	19	18	18	17	17	16	16	16	16	17	18	19	20	22	23	24	24	24	24	24	23	22	22	24.5
12-Jul	21	21	20	19	19	18	17	17	17	18	19	21	22	24	25	26	28	28	28	28	28	27	27	27	28.1
13-Jul	26	25	25	24	24	23	22	22	23	24	25	27	27	29	30	31	32	33	33	32	32	30	29	28	32.6
14-Jul	26	23	22	20	19	18	17	16	17	19	20	21	22	24	25	27	28	28	28	27	26	25	23	21	27.8
15-Jul	19	18	17	15	14	14	N	N	N	N	N	N	N	N	30	30	31	31	32	32	31	30	28	26	31.6
16-Jul	25	24	22	19	17	16	16	14	13	14	16	19	22	24	26	29	31	33	34	34	33	32	31	30	34.1
17-Jul	28	26	25	23	23	22	20	20	21	23	25	28	30	32	34	34	34	34	33	32	29	27	26	24	34.4
18-Jul	23	21	19	17	17	16	15	15	14	15	16	18	20	20	22	N	N	N	N	N	N	22	21	21	23.1
19-Jul	19	18	17	17	16	16	16	16	16	18	20	22	23	24	27	28	30	30	30	30	30	29	29	28	30.1
20-Jul	27	26	25	25	24	23	22	20	20	20	20	21	22	24	26	27	29	31	31	32	32	30	29	27	31.5
21-Jul	26	24	22	20	19	18	17	16	15	15	16	17	19	21	23	25	28	29	30	31	31	30	29	28	30.7
22-Jul	27	25	24	23	22	22	22	21	21	21	21	22	23	23	24	26	27	28	28	29	29	28	28	27	28.9
23-Jul	26	25	23	22	21	20	18	17	16	16	17	18	19	21	22	23	24	25	25	25	25	25	24	23	26.2
24-Jul	22	20	19	18	17	16	15	14	14	16	19	22	23	26	29	32	34	35	35	35	35	34	34	33	35.4
25-Jul	32	31	30	29	28	26	23	21	21	22	23	25	27	30	34	38	41	43	44	46	46	45	44	42	45.9
26-Jul	40	37	35	31	30	27	24	22	20	19	19	21	23	26	30	33	36	38	40	41	41	40	38	37	41.2
27-Jul	35	33	31	28	27	24	22	20	19	19	18	18	18	19	20	21	22	23	24	24	25	25	24	24	35.3
28-Jul	23	23	21	21	20	20	19	19	20	22	24	26	28	30	33	35	36	37	37	37	37	36	35	34	37.5
29-Jul	32	31	29	27	27	24	23	22	22	23	25	27	28	30	32	33	34	34	34	34	33	32	30	28	34.2
30-Jul	27	26	23	22	21	19	17	19	20	21	24	26	26	29	30	30	29	28	28	27	26	26	25	25	30.1
31-Jul	24	23	22	21	20	19	19	19	19	20	21	22	22	23	24	25	25	26	26	26	26	25	24	24	26.0
Diurnal Maximums	39.7	37.2	35.7	33.5	32.1	29.0	27.5	26.4	27.5	29.1	29.9	32.0	33.5	36.5	39.7	42.4	44.9	46.1	45.8	45.5	45.9	45.3	44.1	42.2	

N - Not Valid
Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 65 ppb

Peace Airshed Zone Association
Summary of Hourly Averages

Beaverlodge - Particulate Matter 2.5 ($PM_{2.5}$) - $\mu g/m^3$
July 1, 2008 to August 1, 2008

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 20 $\mu g/m^3$ on Jul 3 19:00
Maximum Daily Average: 7.2 $\mu g/m^3$ on Jul 26

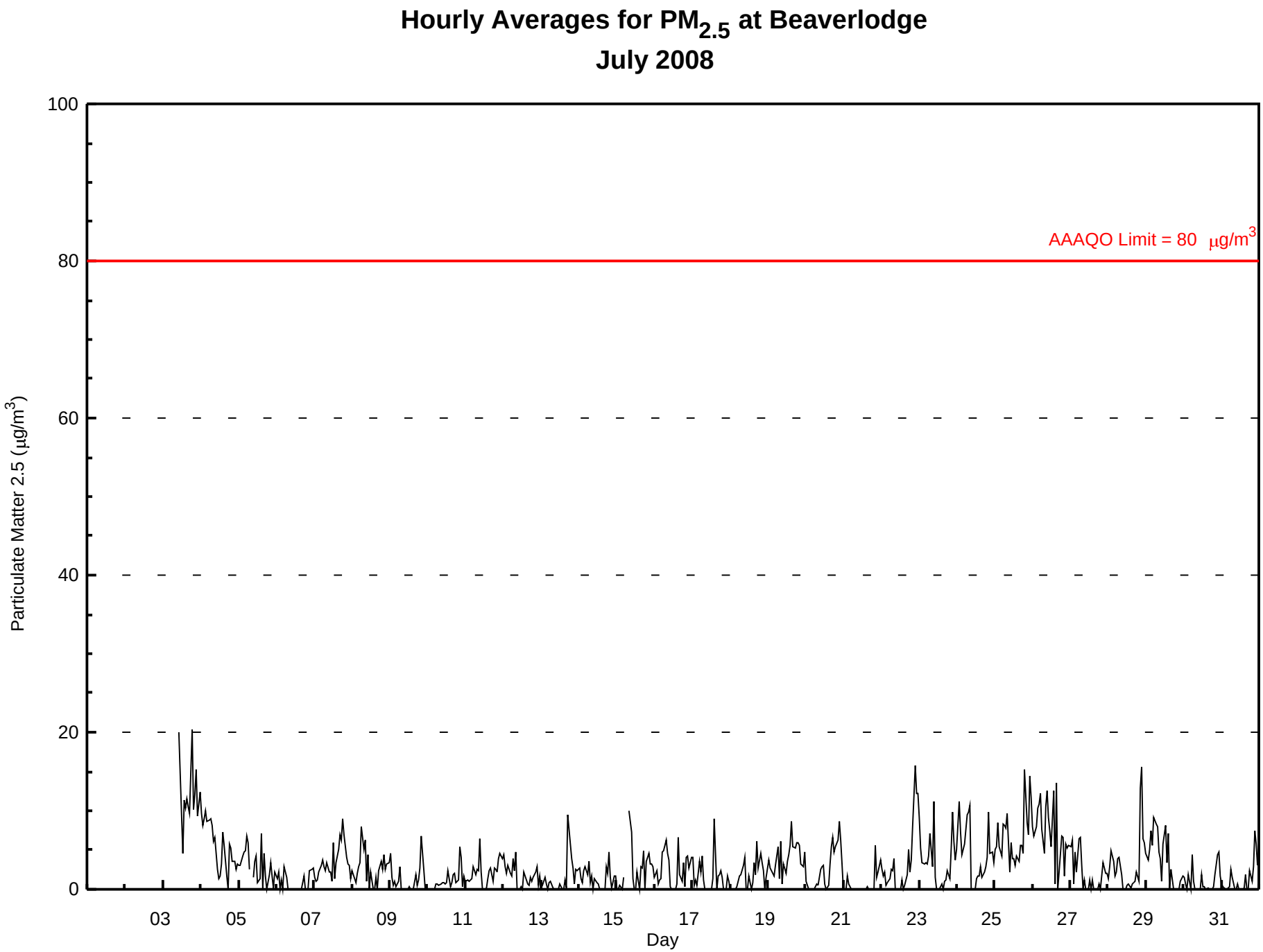
Minimum Value: 0 $\mu g/m^3$ on Jul 4 18:00
Maximum Diurnal Average: 4.8 $\mu g/m^3$ at hour 22
Monthly Average: 2.97 $\mu g/m^3$

Minimum Daily Average: 0.7 $\mu g/m^3$ on Jul 21
Minimum Diurnal Average: 1.6 $\mu g/m^3$ at hour 12
Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.4$ Median = 2.0 $Q_3 = 4.4$ $P_{90} = 7.4$ $P_{99} = 14.6$

Hours in Service:	744
Hours of Data:	670
Hours of Missing Data:	74
Hours of Calibration:	1
Percent Operational Time:	90.2

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	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
2-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
3-Jul	N	N	N	N	N	N	N	N	N	C	20	15	5	11	10	11	10	10	20	10	12	15	9	12	--	20.3
4-Jul	10	8	9	10	9	9	9	8	6	7	2	1	2	3	7	6	2	0	6	5	4	4	2	3	5.5	10.1
5-Jul	3	3	4	5	5	7	6	3	P	2	4	4	1	1	P	0	5	2	0	2	3	2	0	2	2.8	6.7
6-Jul	1	2	BD	1	0	3	1	0	P	0	0	0	BD	0	0	0	0	2	0	0	0	2	3	3	0.9	2.9
7-Jul	1	1	1	2	3	4	3	2	3	2	2	1	6	1	3	5	7	6	9	7	4	3	3	1	3.5	8.9
8-Jul	2	2	1	2	3	3	8	5	6	1	4	0	2	0	0	2	0	2	3	3	4	3	3	3	2.7	7.9
9-Jul	5	2	1	1	0	1	3	0	0	0	0	0	0	0	0	0	2	1	1	3	7	2	0	0	1.2	6.8
10-Jul	0	0	0	0	0	1	1	0	1	1	1	1	1	2	0	1	2	2	1	1	5	4	0	2	1.1	5.4
11-Jul	1	1	1	1	1	3	2	3	2	6	2	0	0	0	1	2	3	1	3	3	2	4	5	4	2.2	6.4
12-Jul	4	3	2	3	2	2	4	2	5	0	0	0	0	2	2	1	0	2	1	2	2	3	1	2	1.8	4.7
13-Jul	0	1	2	1	0	1	1	0	0	0	0	0	1	0	0	1	0	9	6	4	3	1	3	2	1.4	9.5
14-Jul	3	1	1	2	3	2	4	1	2	0	1	1	1	0	BD	0	0	3	2	5	2	0	2	2	1.6	4.7
15-Jul	0	0	1	0	P	P	P	P	P	7	1	0	0	2	0	3	3	5	0	4	5	3	3	3	2.1	7.2
16-Jul	1	2	1	1	1	5	5	6	5	4	0	0	0	0	1	7	2	1	3	0	4	4	3	4	2.5	6.6
17-Jul	4	1	1	1	4	2	4	1	0	0	0	0	0	1	9	0	2	2	2	2	0	0	2	1	1.6	8.9
18-Jul	0	0	0	0	0	1	2	2	3	4	0	0	2	0	1	3	2	6	3	5	3	2	0	2	1.7	6.1
19-Jul	4	3	2	2	2	3	5	1	6	1	3	2	4	4	6	9	5	5	6	6	6	3	3	5	4.0	8.7
20-Jul	1	0	0	0	0	0	0	1	1	2	3	3	1	0	0	3	5	7	5	5	6	9	6	3	2.6	8.7
21-Jul	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	2	2	4	0.7	5.6
22-Jul	2	2	2	1	1	1	3	2	4	0	0	0	0	1	0	0	2	5	2	4	8	16	12	12	3.4	15.8
23-Jul	9	5	3	3	3	3	4	7	3	11	1	0	0	0	1	0	1	1	2	1	5	10	6	4	3.6	11.3
24-Jul	5	11	7	4	5	6	9	10	11	0	0	0	1	2	2	3	2	2	3	4	10	5	5	3	4.6	11.1
25-Jul	5	5	8	5	4	8	8	8	10	2	6	4	4	3	4	4	6	6	5	15	8	7	14	12	6.7	15.3
26-Jul	8	7	8	10	11	12	8	5	10	12	9	7	5	12	1	14	0	2	7	7	2	6	5	6	7.2	13.6
27-Jul	5	6	1	5	2	6	7	3	BD	1	0	0	1	0	1	0	0	0	1	0	2	3	2	2	2.1	6.6
28-Jul	1	3	5	4	2	2	4	4	2	0	0	0	0	1	0	1	1	1	2	1	13	16	6	6	3.1	15.6
29-Jul	5	4	5	7	6	9	8	8	5	4	1	6	8	3	7	0	3	BD	0	0	0	0	1	2	4.0	9.1
30-Jul	1	1	0	2	0	4	1	BD	BD	0	0	2	0	0	0	0	0	0	0	0	2	4	5	2	1.2	4.8
31-Jul	1	0	0	0	0	0	3	2	0	0	1	0	BD	0	0	2	0	0	2	1	3	8	6	3	1.4	7.5
	3.0	2.7	2.5	2.7	2.5	3.6	4.2	3.2	3.6	2.4	2.2	1.6	1.7	1.8	2.1	2.7	2.2	2.9	3.3	3.4	4.5	4.8	3.9	3.7	Diurnal Average	
	9.6	11.1	9.0	10.3	10.8	12.2	9.5	9.8	10.7	12.5	19.9	14.7	8.2	12.5	10.3	13.6	10.4	9.7	20.3	15.3	12.9	15.8	14.5	12.4	Diurnal Maximum	

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


Hourly Averages for PM2.5 at Beaverlodge
July 2008
AAAQO Limit = 80 µg/m3
Particulate Matter 2.5 (µg/m3)
100
80
60
40
20
0
03
05
07
09
11
13
15
17
19
21
23
25
27
29
31
Day

Peace Airshed Zone Association
Summary of Hourly Maximums

Beaverlodge - Particulate Matter 2.5 ($PM_{2.5}$) - $\mu g/m^3$
July 1, 2008 to August 1, 2008

Maximum Value: 48 $\mu g/m^3$ on Jul 3 19:00

Maximum Daily Average: 21.4 $\mu g/m^3$ on Jul 26

Minimum Value: 0 $\mu g/m^3$ on Jul 6 03:00

Maximum Diurnal Average: 13.0 $\mu g/m^3$ at hour 18

Monthly Average: 9.18 $\mu g/m^3$

Minimum Daily Average: 5.0 $\mu g/m^3$ on Jul 6

Minimum Diurnal Average: 6.7 $\mu g/m^3$ at hour 1

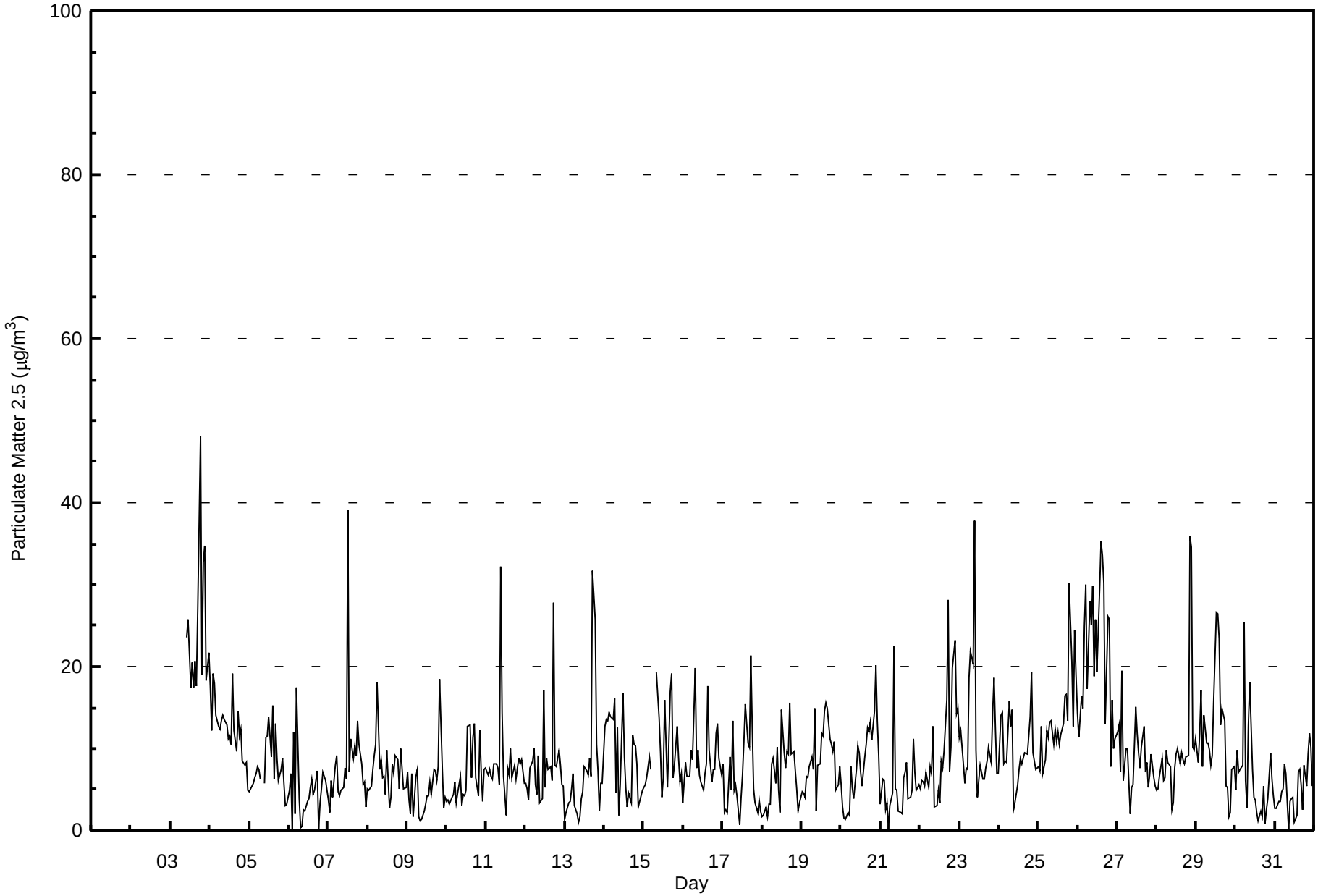
Percentiles: P_1 = 1.0 P_{10} = 3.0 Q_1 = 5.1 Median = 7.6 Q_3 = 11.4 P_{90} = 17.2 P_{99} = 34.5

Hours in Service:	744
Hours of Data:	678
Hours of Missing Data:	66
Hours of Calibration:	1
Percent Operational Time:	91.3

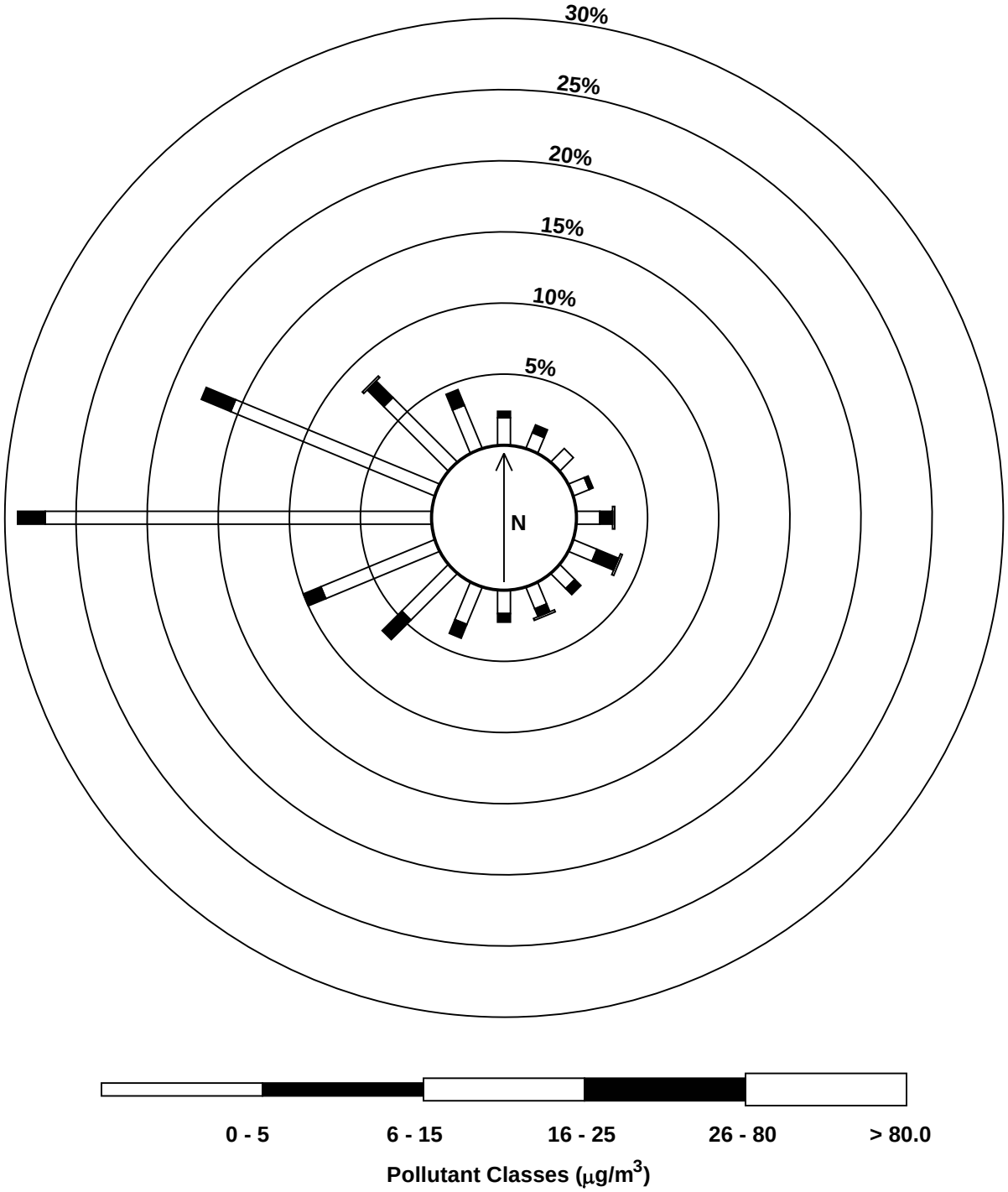
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
2-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
3-Jul	N	N	N	N	N	N	N	N	N	C	24	26	17	21	17	21	18	27	48	19	33	35	18	22	--	48.1
4-Jul	18	12	19	18	14	13	12	13	14	14	13	11	12	11	19	12	10	14	11	12	8	8	8	5	12.6	19.1
5-Jul	5	5	6	6	7	8	7	6	P	6	11	12	14	9	P	6	13	9	6	7	9	6	3	3	7.5	13.8
6-Jul	5	7	0	12	2	17	4	0	P	3	2	4	4	5	6	4	5	7	0	3	5	7	6	5	5.0	17.4
7-Jul	4	2	6	4	8	9	5	4	5	5	8	6	39	7	11	9	10	9	13	11	8	6	6	3	8.3	39.2
8-Jul	5	5	5	7	9	11	18	8	9	6	7	4	10	3	4	8	7	9	9	5	10	8	5	5	7.4	18.1
9-Jul	7	4	2	7	2	7	8	2	1	1	2	3	4	4	6	4	7	7	6	8	18	8	3	4	5.2	18.4
10-Jul	3	4	3	4	4	6	3	4	7	3	4	4	5	13	13	6	11	13	7	4	12	7	4	7	6.4	13.1
11-Jul	8	7	7	7	6	8	8	8	6	32	14	7	2	8	7	10	7	8	6	8	9	8	9	6	8.5	32.2
12-Jul	6	5	4	8	8	10	6	4	9	3	4	17	5	9	7	8	6	28	8	8	10	8	6	5	8.0	27.8
13-Jul	1	2	3	4	5	7	3	2	1	2	4	5	8	7	7	9	7	32	26	11	7	2	6	6	6.9	31.6
14-Jul	13	14	13	14	14	13	16	5	13	2	6	17	9	5	3	5	3	12	10	10	8	3	4	5	9.0	16.8
15-Jul	5	6	6	9	P	P	P	P	P	14	9	4	6	16	5	11	17	19	6	8	13	9	6	7	9.3	19.1
16-Jul	3	8	7	7	7	10	9	20	8	10	7	6	5	7	8	18	10	6	7	7	12	13	9	7	8.7	19.8
17-Jul	8	2	3	2	9	5	13	5	6	4	1	4	7	11	15	11	10	21	13	5	3	2	4	2	6.9	21.4
18-Jul	2	2	3	2	3	3	8	9	6	10	5	2	15	9	8	10	9	16	9	10	7	5	2	3	6.6	15.6
19-Jul	5	5	4	7	6	8	9	8	15	2	8	8	12	11	15	16	15	11	11	10	11	5	6	8	8.9	15.6
20-Jul	6	3	1	1	2	2	8	5	4	7	10	9	7	6	9	10	13	12	13	11	15	20	13	9	8.3	20.2
21-Jul	3	6	6	3	3	0	3	5	23	5	5	2	2	2	6	7	8	4	4	5	11	7	5	6	5.5	22.5
22-Jul	5	6	6	5	7	5	8	7	13	3	3	5	3	8	8	10	16	28	7	10	20	23	14	15	9.8	28.1
23-Jul	11	12	10	6	8	7	19	22	20	38	10	4	6	8	6	6	8	8	10	8	14	19	12	7	11.7	37.8
24-Jul	7	14	14	8	9	8	16	13	15	3	3	6	7	9	8	9	10	9	11	14	19	9	7	8	9.9	19.4
25-Jul	8	7	13	7	9	12	11	13	13	10	12	11	12	11	12	13	17	17	13	30	21	13	24	19	13.7	30.1
26-Jul	14	11	16	15	25	30	17	28	25	30	19	26	19	30	35	34	30	13	26	26	8	16	10	11	21.4	35.2
27-Jul	12	13	7	20	6	10	10	6	2	5	6	15	12	10	8	10	13	7	8	5	7	9	6	6	8.9	19.5
28-Jul	5	5	7	9	6	6	10	8	8	2	3	8	9	10	8	10	9	8	9	9	36	35	10	10	10.0	36.0
29-Jul	11	8	12	17	8	14	11	11	10	8	9	16	27	26	23	13	15	13	5	5	2	2	7	8	11.7	26.6
30-Jul	5	10	7	7	8	25	6	3	13	18	7	4	4	2	1	2	2	5	1	3	4	9	6	4	6.6	25.5
31-Jul	3	3	4	3	5	5	8	7	0	4	4	4	1	2	7	8	6	2	8	5	9	12	10	5	5.2	11.9
	6.7	6.7	7.0	7.8	7.4	9.7	9.5	8.3	9.7	8.9	7.6	8.6	9.8	9.6	10.1	10.3	10.7	13.0	10.9	9.6	12.1	10.8	8.0	7.3	Diurnal Average	
	17.6	14.0	19.1	19.5	25.0	30.0	18.7	28.0	25.1	37.8	23.6	25.8	39.2	29.6	35.2	33.6	30.1	31.6	48.1	30.1	36.0	34.7	24.4	21.7	Diurnal Maximum	

C - Calibration P - Power Failure N - Not Valid

Hourly Maximums for $PM_{2.5}$ at Beaverlodge
July 2008



Pollutant Rose for $PM_{2.5}$ at Beaverlodge
July 2008



Peace Airshed Zone Association
Summary of Hourly Averages

Beaverlodge - External Temperature (ET) - ^{o}C
July 1, 2008 to August 1, 2008

Maximum Value: 32 ^{o}C on Jul 3 15:00

Maximum Daily Average: 21.6 ^{o}C on Jul 1

Minimum Value: 6 ^{o}C on Jul 10 04:00

Minimum Daily Average: 11.9 ^{o}C on Jul 10

Maximum Diurnal Average: 22.3 ^{o}C at hour 15

Minimum Diurnal Average: 11.1 ^{o}C at hour 5

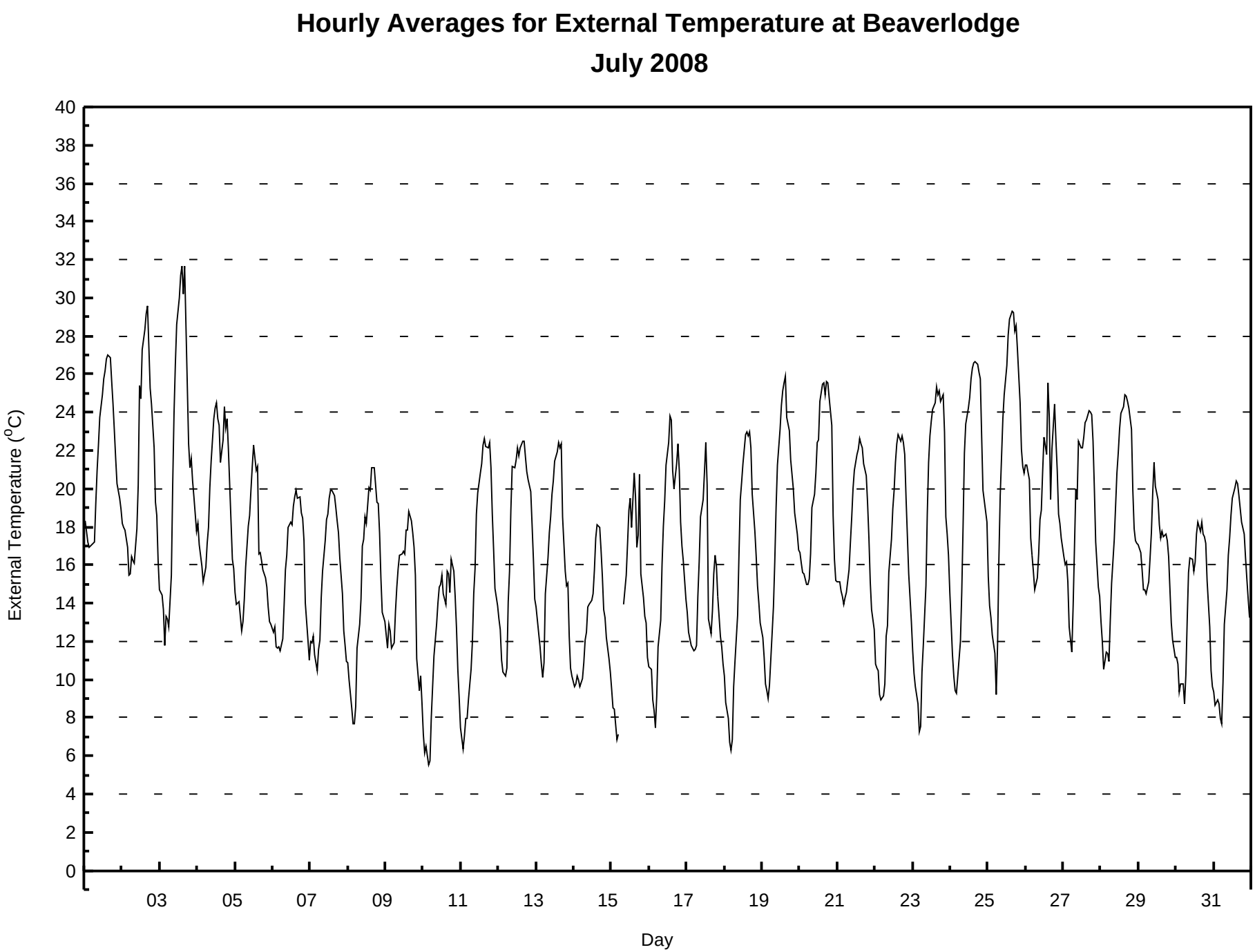
Monthly Average: 17.09 ^{o}C

Percentiles: P_1 = 6.8 P_{10} = 10.2 Q_1 = 13.1 Median = 16.9 Q_3 = 21.0 P_{90} = 24.0 P_{99} = 29.1

Hours in Service:	744
Hours of Data:	738
Hours of Missing Data:	6
Hours of Calibration:	0
Percent Operational Time:	99.2

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	18	18	17	17	17	17	17	19	21	22	24	25	26	26	27	27	27	26	24	23	22	20	20	19	21.6	27.0
2-Jul	18	18	18	17	15	16	16	16	16	18	20	25	25	27	28	29	30	28	25	24	22	19	19	16	21.1	29.5
3-Jul	15	14	14	12	13	13	13	15	20	24	27	29	30	31	32	30	32	29	22	21	22	20	20	18	21.4	31.7
4-Jul	18	17	17	16	15	16	17	18	20	21	24	24	25	24	23	21	23	24	23	24	22	18	16	16	20.1	24.5
5-Jul	15	14	14	13	13	13	14	16	P	19	20	21	22	21	21	17	17	16	16	15	15	14	13	13	16.1	22.3
6-Jul	13	13	12	12	12	12	12	14	16	17	18	18	18	19	20	20	19	20	19	18	17	14	12	11	15.6	19.9
7-Jul	12	12	12	11	10	12	12	14	16	17	18	19	20	20	20	20	19	18	18	16	14	13	12	11	15.3	19.9
8-Jul	11	10	9	8	8	9	12	13	14	17	17	19	18	20	20	21	21	21	19	19	18	15	14	13	15.2	21.1
9-Jul	12	12	13	13	12	12	14	15	16	17	17	17	17	18	18	19	18	18	17	15	11	9	10	9	14.4	18.8
10-Jul	7	6	6	6	6	8	10	11	13	14	15	15	15	14	14	16	16	15	16	16	14	13	11	9	11.9	16.3
11-Jul	7	6	7	8	8	9	11	12	14	16	19	20	21	21	22	23	22	22	22	21	19	17	15	14	15.7	22.6
12-Jul	13	13	11	10	10	11	14	16	19	21	21	22	22	22	22	22	22	22	21	20	20	18	16	14	17.6	22.5
13-Jul	14	13	12	11	10	11	14	16	18	19	20	20	21	22	22	22	22	19	16	15	15	12	11	10	16.0	22.4
14-Jul	10	10	10	10	10	10	11	12	12	14	14	14	14	16	17	18	18	17	15	14	13	12	11	10	13.0	18.1
15-Jul	9	9	8	7	P	P	P	P	P	15	17	19	20	18	21	20	17	18	21	16	14	13	13	11	15.0	20.8
16-Jul	11	11	9	8	7	9	12	13	16	18	19	21	22	24	24	21	20	21	22	21	18	17	16	14	16.5	23.8
17-Jul	14	12	12	12	11	12	12	14	16	19	19	21	22	20	13	12	14	16	17	16	14	12	12	11	14.7	22.4
18-Jul	10	9	8	7	6	7	10	11	13	16	19	20	21	23	23	23	23	22	20	18	16	15	14	13	15.3	23.0
19-Jul	12	11	10	9	9	10	12	14	16	19	21	23	24	25	26	26	24	23	22	21	20	19	18	17	17.9	25.9
20-Jul	17	16	16	16	15	15	15	17	19	20	21	22	23	25	25	26	25	26	26	25	23	19	16	15	20.0	25.6
21-Jul	15	15	15	14	14	14	15	16	17	18	20	21	22	22	23	22	22	21	21	19	17	15	14	13	17.7	22.6
22-Jul	11	11	10	9	9	9	10	12	13	16	17	19	20	21	22	23	23	23	22	22	19	16	14	13	16.0	22.8
23-Jul	12	10	10	9	7	8	10	12	15	19	21	23	24	24	25	25	25	25	25	25	23	19	18	17	17.8	25.4
24-Jul	15	11	10	9	9	10	12	15	18	22	23	24	25	26	26	27	27	27	26	26	23	20	19	18	19.5	26.7
25-Jul	15	14	13	12	11	9	12	16	20	24	25	26	26	28	29	29	29	28	29	27	25	22	21	21	21.3	29.3
26-Jul	21	21	20	17	16	16	15	15	17	18	19	21	23	22	26	24	19	22	24	23	21	19	18	17	19.8	25.5
27-Jul	16	16	16	15	13	11	14	17	20	19	22	22	22	23	23	24	24	24	24	22	20	17	15	14	19.0	24.1
28-Jul	13	12	11	11	11	11	13	15	17	19	21	22	23	24	24	25	25	25	24	23	20	18	17	17	18.4	24.9
29-Jul	17	17	16	15	15	15	15	16	18	20	21	20	19	18	17	18	17	18	17	16	15	13	12	11	16.5	21.4
30-Jul	11	11	9	10	10	9	10	13	16	16	16	16	16	18	18	18	18	18	18	17	15	13	10	10	14.0	18.3
31-Jul	9	9	9	9	8	8	10	13	15	17	17	19	20	20	20	20	20	19	18	18	16	15	14	13	14.8	20.4
	13.3	12.6	12.0	11.4	11.1	11.3	12.8	14.6	16.6	18.4	19.8	20.8	21.5	22.0	22.3	22.1	21.8	21.5	20.9	19.9	18.2	16.0	14.8	13.8	Diurnal Average	
	21.3	21.2	20.5	17.4	17.0	17.1	17.2	19.2	21.0	24.0	26.5	28.6	30.0	31.2	31.7	30.2	31.6	28.5	28.5	27.3	24.5	22.0	21.2	20.9	Diurnal Maximum	

P - Power Failure


Hourly Averages for External Temperature at Beaverlodge
July 2008
External Temperature (°C)
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38
40
03
05
07
09
11
13
15
17
19
21
23
25
27
29
31
Day

Peace Airshed Zone Association
Summary of Hourly Averages

Beaverlodge - Relative Humidity (RH) - %
July 1, 2008 to August 1, 2008

Maximum Value: 94 % on Jul 15 02:00

Maximum Daily Average: 72.8 % on Jul 14

Minimum Value: 15 % on Jul 25 16:00

Minimum Daily Average: 31.4 % on Jul 25

Maximum Diurnal Average: 71.1 % at hour 5

Minimum Diurnal Average: 32.5 % at hour 15

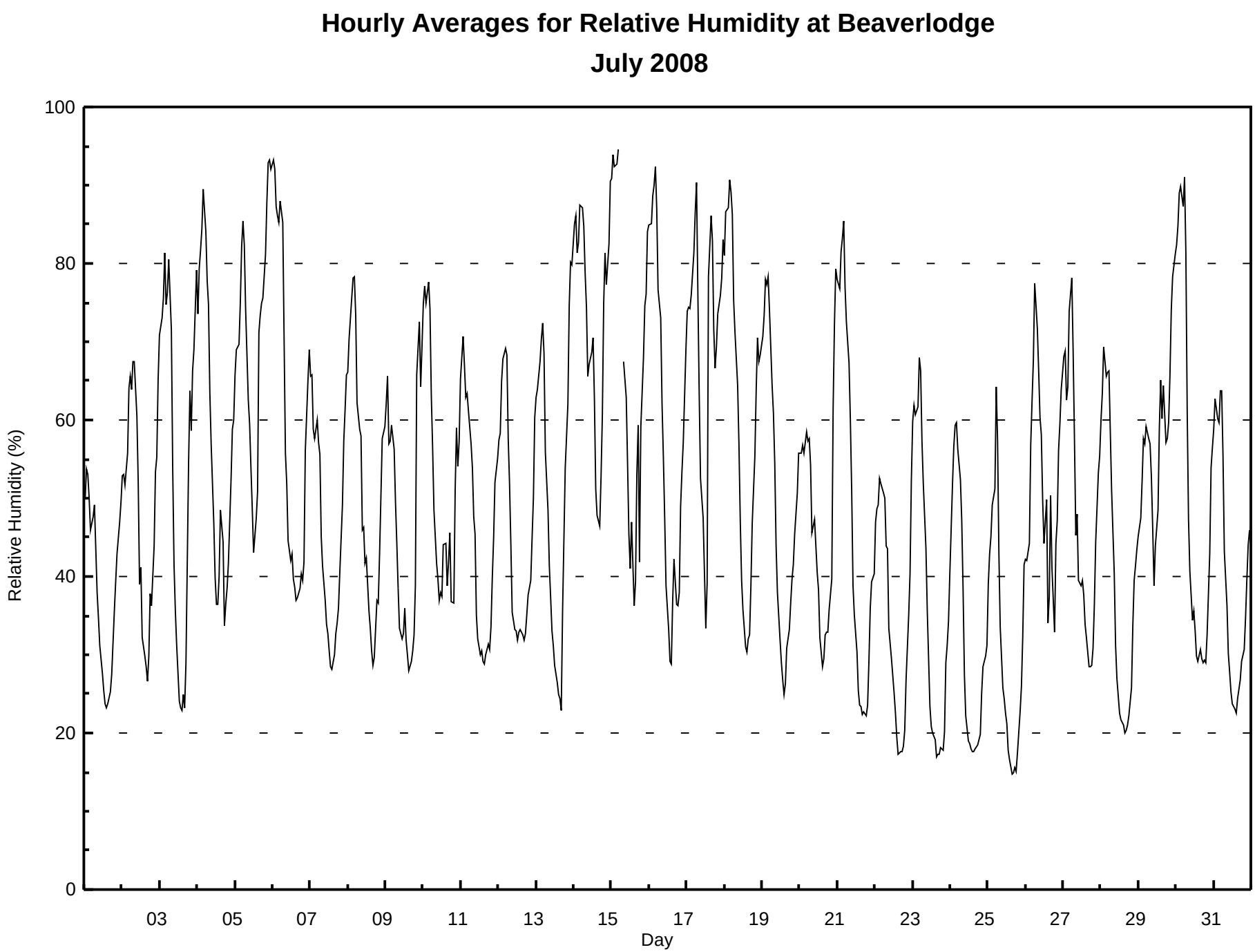
Monthly Average: 50.37 %

Percentiles: P_1 = 17.3 P_{10} = 25.6 Q_1 = 33.5 Median = 48.4 Q_3 = 65.2 P_{90} = 78.2 P_{99} = 92.3

Hours in Service:	744
Hours of Data:	738
Hours of Missing Data:	6
Hours of Calibration:	0
Percent Operational Time:	99.2

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	50	54	53	50	46	48	49	44	38	35	31	28	25	24	23	24	25	27	32	36	39	43	47	50	38.3	53.7
2-Jul	53	53	52	56	64	66	64	67	67	60	52	39	41	32	30	28	27	30	38	36	44	53	55	65	48.9	67.5
3-Jul	71	73	76	81	75	76	81	72	54	41	36	31	24	23	23	25	23	29	55	64	59	66	69	79	54.4	81.3
4-Jul	74	79	82	84	89	84	78	75	64	57	47	40	36	37	40	48	44	34	36	38	42	52	59	60	57.5	89.5
5-Jul	66	69	70	75	82	85	82	74	P	60	54	49	43	48	51	71	73	75	76	81	88	93	93	92	71.7	93.3
6-Jul	93	92	87	86	85	88	85	70	56	52	45	42	43	40	39	37	37	38	40	39	42	56	65	69	59.5	93.2
7-Jul	66	66	59	58	60	57	56	45	41	37	34	33	30	28	28	30	33	34	36	41	49	57	61	66	46.0	65.8
8-Jul	66	70	76	78	78	73	62	59	58	46	46	42	42	36	33	30	29	30	37	37	43	50	58	59	51.6	78.2
9-Jul	62	66	57	57	59	56	49	44	38	33	32	33	36	32	30	28	29	31	33	39	66	73	64	70	46.6	72.6
10-Jul	75	77	75	78	74	63	56	48	42	40	37	38	38	44	44	39	42	46	37	37	51	59	54	57	52.1	77.7
11-Jul	65	71	67	63	63	61	57	54	48	45	35	32	30	31	29	29	30	31	31	34	40	45	52	55	45.7	70.6
12-Jul	57	58	65	68	69	68	58	52	44	35	33	33	32	33	33	32	32	33	35	38	39	45	50	60	46.0	69.1
13-Jul	63	64	68	70	72	69	56	48	41	37	33	31	29	26	25	24	23	36	54	58	62	75	80	80	51.0	80.1
14-Jul	85	86	81	83	88	87	85	79	74	66	67	69	70	63	51	48	46	53	61	75	81	77	82	90	72.8	90.4
15-Jul	91	94	92	93	P	P	P	P	P	63	54	45	41	47	36	39	53	59	42	59	68	75	76	84	63.8	94.0
16-Jul	85	85	89	90	92	87	77	73	62	55	47	39	33	29	29	37	42	36	36	38	49	53	57	69	57.9	92.3
17-Jul	74	74	74	76	81	86	90	76	64	53	47	40	33	39	78	86	83	72	67	69	74	76	78	83	69.8	90.4
18-Jul	81	87	87	91	89	86	75	71	64	57	47	39	36	31	30	32	33	39	47	55	64	70	67	68	60.3	90.7
19-Jul	71	73	78	77	78	74	64	61	54	44	38	32	29	27	25	26	31	33	37	40	42	45	51	56	49.4	78.2
20-Jul	56	56	57	56	59	57	58	54	46	47	44	41	38	32	28	29	33	33	33	36	40	61	72	79	47.7	79.4
21-Jul	78	77	82	83	85	77	73	67	60	51	39	35	30	25	24	23	22	23	22	24	29	36	39	40	47.7	85.4
22-Jul	47	49	49	53	52	51	50	44	44	33	29	27	25	22	19	17	18	18	18	20	27	35	40	52	35.0	52.6
23-Jul	60	62	61	62	68	66	57	52	44	36	30	23	21	20	19	17	17	17	18	18	20	29	31	34	36.7	68.0
24-Jul	40	52	57	59	60	56	52	47	38	28	22	19	19	18	18	18	18	19	19	20	25	29	30	31	33.0	59.6
25-Jul	39	43	45	49	51	64	57	43	33	26	24	22	21	18	17	15	15	16	15	17	23	26	32	42	31.4	64.3
26-Jul	42	42	44	57	62	68	77	72	66	60	58	50	44	50	34	37	50	41	33	44	47	56	60	64	52.5	77.5
27-Jul	68	69	63	64	74	78	69	57	45	48	40	39	39	38	34	32	28	29	29	31	36	44	53	55	48.4	78.2
28-Jul	60	63	69	66	66	66	59	51	40	31	27	25	22	22	21	20	20	21	22	26	34	40	41	43	39.8	69.3
29-Jul	45	48	52	58	57	59	58	57	53	46	39	44	48	59	65	60	64	57	58	60	66	74	78	81	57.7	81.2
30-Jul	82	85	89	90	87	91	81	61	47	41	34	36	33	30	29	31	30	29	29	29	33	43	54	56	52.1	91.1
31-Jul	59	63	60	60	64	64	55	43	36	30	28	25	24	23	23	24	26	27	29	31	35	40	44	46	39.9	63.7
	65.3	67.7	68.2	70.0	71.1	70.4	65.7	58.7	50.4	44.9	39.7	36.1	34.1	33.1	32.5	33.5	34.7	35.3	37.2	40.9	46.9	54.1	57.9	62.5	Diurnal Average	
	93.2	94.0	92.4	92.7	92.3	91.1	90.4	78.9	74.5	65.6	67.2	68.6	70.5	62.7	78.3	86.1	82.8	74.9	75.5	81.2	87.8	92.9	93.3	92.1	Diurnal Maximum	

P - Power Failure


Hourly Averages for Relative Humidity at Beaverlodge
July 2008
Relative Humidity (%)
100
80
60
40
20
0
03
05
07
09
11
13
15
17
19
21
23
25
27
29
31
Day

Peace Airshed Zone Association
Summary of Hourly Averages

Beaverlodge
July 1, 2008 to August 1, 2008
WS (km/h), WD (deg)

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	7	9	8	9	7	7	10	13	13	14	13	13	16	16	14	15	16	16	11	11	10	10	9	11	11.5	16.2
Dir	88	84	98	97	101	113	87	107	111	111	112	114	102	108	114	100	102	119	114	107	114	107	105	107	106.0	119.0
2 Spd	13	13	5	2	2	2	3	5	5	2	3	2	4	6	9	9	8	6	13	6	12	6	8	2	3.3	13.4
Dir	108	110	117	194	228	259	109	247	176	180	106	63	31	142	140	133	140	207	280	175	154	222	261	197	156.5	110.3
3 Spd	4	4	0	2	5	5	2	2	1	4	3	2	4	4	4	5	3	8	8	8	3	11	10	4	1.3	11.3
Dir	135	105	324	79	68	286	73	164	231	313	323	139	265	311	277	259	305	228	162	84	22	208	230	224	222.1	208.3
4 Spd	9	5	3	3	2	1	3	4	8	10	11	16	16	16	20	12	6	13	16	9	16	12	6	6	8.3	20.2
Dir	315	304	288	250	96	110	205	211	244	256	272	287	291	303	298	321	246	253	275	270	268	264	254	253	277.1	297.7
5 Spd	8	7	8	6	7	6	6	7	P	9	8	6	6	6	6	6	3	3	5	4	5	5	3	2	2.5	8.7
Dir	258	277	312	332	339	341	340	348	P	335	335	359	3	34	80	325	352	159	154	176	174	168	121	155	334.8	334.6
6 Spd	0	6	5	2	3	4	6	11	19	18	23	24	26	24	22	23	22	27	27	21	14	13	10	7	14.7	26.7
Dir	67	261	267	225	263	217	240	265	277	271	267	269	261	270	268	276	278	266	271	276	273	261	270	266	268.5	270.8
7 Spd	9	6	10	8	5	6	7	17	19	20	22	22	19	20	22	22	25	25	24	24	19	15	15	12	16.2	25.5
Dir	259	249	266	257	259	238	233	270	266	283	277	272	274	274	280	273	278	271	274	274	266	259	262	262	269.9	271.4
8 Spd	12	11	9	3	2	1	0	4	8	18	17	21	21	26	26	26	25	26	24	22	17	15	10	5	14.1	26.1
Dir	262	265	248	212	215	135	225	258	236	283	271	263	288	282	281	275	287	268	260	269	265	265	266	259	270.3	275.1
9 Spd	6	6	7	8	9	13	17	23	25	27	27	28	26	28	25	25	26	23	20	17	14	9	16	14	18.1	28.0
Dir	264	257	297	297	286	266	268	264	270	269	269	273	268	267	263	266	271	281	279	282	317	274	253	262	271.5	267.3
10 Spd	12	3	11	6	0	11	9	17	19	16	15	14	16	14	13	16	13	13	10	10	3	2	6	8	9.9	19.0
Dir	258	273	271	255	246	267	269	278	287	300	308	305	286	308	307	269	274	304	276	295	103	94	276	275	285.5	287.1
11 Spd	1	0	2	7	5	5	8	9	13	12	13	13	12	12	14	17	16	20	19	19	17	14	6	7	10.5	19.8
Dir	179	217	327	288	309	295	295	292	295	288	288	272	285	296	289	293	287	274	277	264	258	263	252	241	279.9	273.5
12 Spd	4	2	2	2	2	2	2	7	9	19	26	25	23	24	23	23	22	28	23	18	16	14	15	13	13.4	28.3
Dir	246	210	90	122	143	122	154	233	244	264	270	268	281	288	271	267	267	271	274	270	270	265	265	262	267.7	271.4
13 Spd	13	11	10	11	8	1	16	18	21	22	19	15	17	18	18	16	16	16	12	10	3	2	4	1	11.2	21.7
Dir	273	249	258	263	269	123	266	273	290	291	289	298	287	293	290	298	294	282	290	343	346	78	67	59	286.4	290.7
14 Spd	3	5	7	7	5	7	7	9	11	12	13	13	14	9	9	5	3	13	10	5	5	6	1	4	7.2	14.2
Dir	309	354	335	330	301	310	302	310	315	302	288	304	308	343	332	1	302	292	311	325	342	331	340	254	313.6	308.3
15 Spd	4	3	2	1	P	P	P	P	P	3	5	4	6	11	7	8	8	6	3	11	8	3	4	3	2.5	11.0
Dir	273	55	33	311	P	P	P	P	P	213	215	232	251	248	265	295	287	287	303	48	46	42	313	354	294.4	48.4
16 Spd	5	6	3	2	1	0	1	2	3	2	3	4	2	4	7	12	15	8	4	4	3	6	8	10	1.8	15.4
Dir	46	326	13	9	46	210	121	208	302	179	177	206	358	236	217	255	232	247	295	273	358	15	6	30	282.1	231.7
17 Spd	8	10	8	2	5	3	2	1	4	2	4	4	2	10	17	2	7	5	7	5	4	6	2	2	3.0	16.8
Dir	6	325	321	33	216	100	328	323	3	224	228	227	283	234	239	298	230	313	271	253	240	259	295	78	272.3	238.8
18 Spd	6	2	3	2	3	2	2	5	5	5	5	7	5	6	7	9	12	20	14	12	8	8	9	6	5.5	20.4
Dir	235	149	202	147	88	111	172	214	217	241	286	275	280	234	256	267	268	281	273	307	299	249	258	257	263.6	281.4
19 Spd	5	2	2	2	2	2	2	5	8	13	12	16	19	18	20	19	21	19	16	13	15	17	13	11	9.9	20.6
Dir	230	199	104	105	97	86	174	192	222	243	251	274	281	278	273	285	291	292	293	296	285	279	282	278	275.4	291.2
20 Spd	13	12	10	11	9	5	5	3	5	5	7	9	11	8	10	13	8	5	2	2	3	12	13	8	5.0	13.1
Dir	281	289	271	264	261	266	242	255	220	199	194	236	249	239	201	185	163	158	221	121	340	350	325	307	252.5	281.4
21 Spd	7	5	2	6	5	6	4	7	10	17	29	30	26	25	24	26	27	22	21	20	10	6	10	11	14.4	29.7
Dir	289	278	258	280	276	290	295	286	276	269	274	274	275	284	285	284	277	290	294	301	316	336	322	306	285.5	274.0
22 Spd	9	13	12	10	9	5	4	5	8	10	5	5	4	4	1	5	6	4	5	9	6	5	5	4	2.5	13.0
Dir	308	297	298	299	311	282	345	317	296	295	286	257	207	223	229	289	81	48	97	134	123	107	104	112	298.4	296.6

Peace Airshed Zone Association
Summary of Hourly Averages

Beaverlodge
July 1, 2008 to August 1, 2008
WS (km/h), WD (deg)

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
23 Spd	2	1	3	1	1	2	2	4	4	3	4	5	10	9	8	6	6	9	7	6	4	2	6	7	3.5	9.7
Dir	188	28	341	181	210	75	190	217	208	232	218	273	289	307	328	302	321	298	307	324	324	307	308	313	296.4	289.0
24 Spd	3	3	3	3	2	2	2	6	12	13	15	15	14	14	17	15	13	12	12	11	9	8	9	8	7.5	16.5
Dir	301	161	112	124	125	175	130	219	236	270	285	295	281	280	269	265	276	288	280	287	291	300	315	331	278.1	268.7
25 Spd	1	1	2	5	2	5	1	3	3	1	5	8	8	5	5	5	6	9	10	7	6	7	8	11	3.2	11.3
Dir	206	59	246	53	0	253	28	273	269	297	171	160	149	145	103	144	100	92	87	95	72	76	93	109	109.7	109.1
26 Spd	10	9	2	5	2	2	4	4	8	6	6	8	2	8	4	4	21	13	10	13	9	3	6	3	1.9	21.0
Dir	119	105	140	281	333	358	113	280	319	326	33	16	171	152	30	211	263	296	249	231	250	171	148	210	253.6	262.6
27 Spd	3	4	6	3	2	2	4	6	15	13	13	16	17	17	13	13	13	16	18	23	19	11	5	7	10.1	22.6
Dir	236	284	296	284	211	158	222	216	268	259	271	275	278	285	292	292	278	286	289	285	284	279	245	250	276.1	284.8
28 Spd	7	6	2	3	7	7	3	8	12	16	14	9	7	5	7	8	6	6	6	9	6	6	6	7	3.5	15.8
Dir	262	245	81	311	274	258	246	255	294	305	311	305	295	263	243	237	221	210	193	143	104	97	128	114	260.8	305.0
29 Spd	5	4	3	4	6	6	6	6	6	5	6	6	6	8	10	10	8	11	9	8	3	3	3	1	3.9	10.7
Dir	131	105	126	299	339	329	355	342	314	313	271	257	233	231	260	253	270	296	269	268	257	196	250	17	276.9	296.5
30 Spd	3	1	3	1	0	2	5	13	22	27	29	28	31	34	35	31	29	31	25	26	22	15	13	12	17.7	34.7
Dir	90	339	296	67	332	205	269	288	283	277	269	273	281	280	275	274	277	280	280	279	273	261	264	261	275.9	275.2
31 Spd	12	12	13	12	10	7	7	15	18	24	30	26	22	21	19	20	21	17	17	12	7	4	3	2	14.5	30.3
Dir	262	260	263	263	266	261	241	262	264	274	277	279	285	273	275	266	260	278	275	286	289	298	264	249	271.2	276.9
Spd	3.1	2.3	3.0	2.7	2.1	2.2	2.5	5.9	8.7	10.0	10.7	11.0	11.0	10.7	10.9	10.9	10.8	11.6	10.4	7.6	5.6	4.5	4.4	3.3	Diurnal Average	
Dir	265.9	274.4	283.8	280.7	285.1	268.9	265.5	266.3	272.1	276.6	274.6	275.8	278.2	276.6	274.2	273.5	271.7	276.1	275.3	279.6	278.7	268.9	272.3	269.0		
Spd	13.1	13.4	12.8	12.5	9.7	13.3	16.9	23.3	25.5	27.3	30.3	29.7	31.4	33.6	34.7	31.2	29.3	30.9	26.7	25.9	21.5	16.9	16.3	14.5	Diurnal Maximum	
Dir	281.4	110.3	263.2	263.4	265.6	265.6	267.8	264.0	270.3	268.7	276.9	274.0	281.3	279.8	275.2	274.2	277.4	280.0	270.8	278.5	273.0	279.1	253.1	261.8		

Maximum Speed Value: 35 km/h on Jul 30 15:00
Minimum Speed Value: 0 km/h on Jul 30 05:00
Maximum Daily Speed Average: 18.1 km/h on Jul 9
Minimum Daily Speed Average: 1.3 km/h on Jul 3
Maximum Diurnal Speed Average: 11.6 km/h at hour 18
Minimum Diurnal Speed Average: 2.1 km/h at hour 5

Monthly Average Velocity: 6.90 km/h 274.69 deg
Speed Percentiles: $P_1 = 0.5$ $P_{10} = 2.2$ $Q_1 = 4.3$ Median = 7.8 $Q_3 = 13.4$ $P_{90} = 21.1$ $P_{99} = 29.2$
All monthly, daily, and diurnal averages have been calculated using vector methods

Hours in Service: 744
Hours of Data: 738
Hours of Missing Data: 6

Percent Operational Time: 99.2

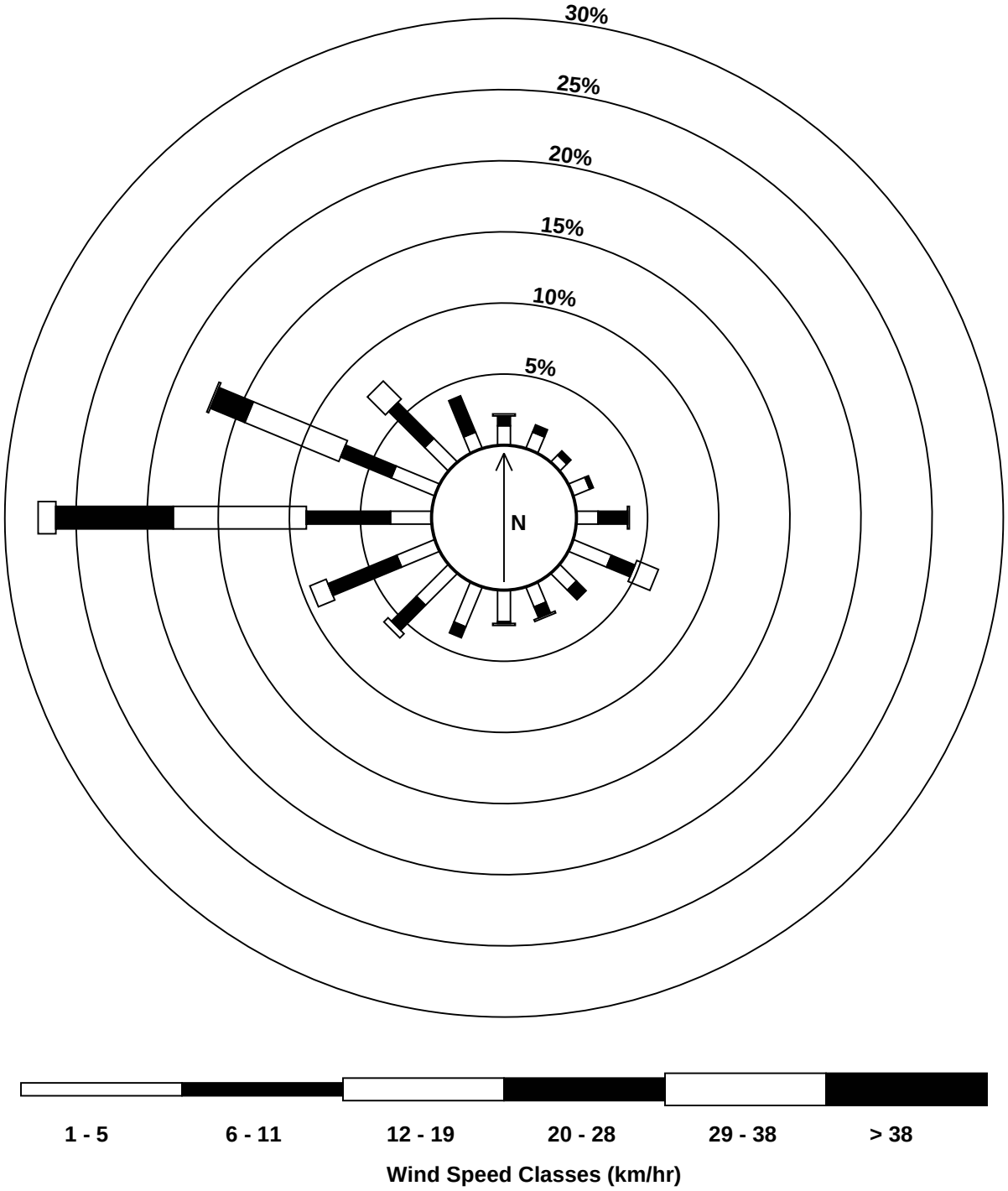
P - Power Failure

Percentage 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	2.57	2.17	0.14	0.00	0.00	0.00	4.88
NorthEast	2.44	0.68	0.00	0.00	0.00	0.00	3.12
East	3.66	3.25	1.76	0.00	0.00	0.00	8.67
SouthEast	2.85	2.71	0.54	0.00	0.00	0.00	6.10
South	3.39	1.49	0.14	0.00	0.00	0.00	5.01
SouthWest	6.64	4.74	0.81	0.00	0.00	0.00	12.20
West	4.74	11.25	14.63	10.98	1.76	0.00	43.36
NorthWest	4.20	7.86	4.20	0.41	0.00	0.00	16.67
Total	30.49	34.15	22.22	11.38	1.76	0.00	100.00

Wind Rose for WS at Beaverlodge

July 2008



Peace Airshed Zone Association
Summary of Hourly Standard Deviations

Beaverlodge - Wind Direction (WD) - deg
July 1, 2008 to August 1, 2008

Maximum Value: 95.8 deg on Jul 22 15:00

Minimum Value: 2.1 deg on Jul 31 00:00

Percentiles: P_1 = 2.7 P_{10} = 6.2 Q_1 = 8.9 Median = 15.7 Q_3 = 35.4 P_{90} = 57.5 P_{99} = 85.7

Hours in Service:	744
Hours of Data:	739
Hours of Missing Data:	5
Hours of Calibration:	0
Percent Operational Time:	99.3

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Jul	6	11	7	10	14	21	10	5	7	10	12	14	16	14	15	15	12	11	7	3	4	4	3	3	21.1
2-Jul	3	3	63	57	70	42	48	28	12	41	34	59	42	34	25	29	37	16	15	57	16	32	33	54	69.6
3-Jul	56	27	91	78	11	75	56	27	63	28	61	78	45	54	64	28	73	38	56	18	64	23	19	46	91.0
4-Jul	8	14	42	39	20	54	17	19	13	12	19	13	13	6	14	13	22	19	10	11	10	3	11	7	53.6
5-Jul	8	17	12	12	9	9	12	16	P	20	25	37	40	37	40	65	65	83	13	14	8	9	12	50	83.1
6-Jul	89	13	16	38	22	21	9	6	6	8	9	13	10	12	10	11	8	7	10	7	10	4	6	8	88.8
7-Jul	5	10	8	50	11	25	22	9	7	10	11	12	13	16	12	13	9	8	8	8	7	3	3	3	50.4
8-Jul	3	4	18	67	66	60	87	29	20	12	14	13	16	9	9	9	10	12	8	6	4	3	5	29	87.1
9-Jul	19	14	7	8	8	6	5	6	8	8	8	8	11	11	10	12	11	12	8	24	13	20	6	9	23.6
10-Jul	6	75	7	8	84	8	10	7	7	11	14	18	17	28	29	9	51	45	35	8	58	59	17	15	84.1
11-Jul	56	84	78	8	14	7	5	7	7	9	14	18	23	18	17	13	11	11	8	8	3	5	21	18	84.0
12-Jul	9	38	41	33	24	30	46	10	13	13	8	8	9	10	13	10	10	8	6	6	4	4	5	8	45.8
13-Jul	4	7	7	5	27	85	6	9	8	8	13	18	13	15	20	11	14	31	33	17	38	47	21	24	85.0
14-Jul	48	37	5	14	7	9	7	11	12	11	10	12	12	24	21	51	52	7	15	11	19	10	87	30	86.9
15-Jul	33	20	44	68	38	P	P	P	P	45	38	58	35	18	31	24	12	13	49	26	14	58	15	50	68.1
16-Jul	17	19	45	49	75	92	39	49	45	47	50	52	69	66	30	17	7	24	24	29	46	31	19	18	91.8
17-Jul	29	9	7	56	36	58	59	62	39	64	51	55	81	31	9	69	23	23	14	14	31	25	66	35	80.6
18-Jul	17	40	22	30	24	29	52	12	22	30	38	26	31	38	38	27	14	9	6	19	12	9	3	7	52.1
19-Jul	21	51	53	44	17	12	29	29	16	14	14	13	14	12	12	10	8	9	6	7	6	4	4	10	52.5
20-Jul	12	6	7	10	7	22	19	26	37	18	21	24	14	25	31	13	14	28	41	49	59	17	12	13	59.0
21-Jul	14	17	56	13	16	6	15	12	9	13	7	8	12	11	12	9	7	9	8	6	18	9	6	4	56.3
22-Jul	28	6	8	10	18	30	36	49	16	13	47	57	55	62	96	58	41	62	47	8	20	12	6	9	95.8
23-Jul	34	64	57	66	60	54	38	15	27	40	47	50	35	35	32	59	49	25	21	14	9	69	5	5	68.9
24-Jul	45	37	30	20	27	35	40	24	13	12	16	14	27	19	14	17	17	20	13	7	3	18	7	6	45.5
25-Jul	77	92	41	10	83	20	65	16	26	77	34	29	30	57	54	45	37	12	12	11	3	4	16	4	92.0
26-Jul	25	42	80	19	67	66	51	58	37	22	21	31	86	41	48	75	9	9	27	7	5	55	22	44	85.6
27-Jul	18	19	8	37	58	40	21	21	8	9	17	14	14	14	18	24	15	12	10	6	5	4	29	5	57.5
28-Jul	5	7	53	71	13	7	40	9	12	8	16	28	45	58	48	36	39	27	37	11	10	6	28	16	70.6
29-Jul	42	33	60	80	5	30	29	17	17	23	26	21	21	20	13	15	21	12	15	12	24	21	65	80	80.3
30-Jul	27	65	62	75	89	38	25	5	5	7	8	6	8	8	7	8	10	8	7	7	4	6	2	2	88.6
31-Jul	3	2	3	3	4	6	10	11	10	9	6	9	14	12	13	15	9	9	6	8	7	11	18	24	23.8
	88.8	92.0	91.0	80.3	88.6	91.8	87.1	62.0	63.0	77.1	61.1	78.5	85.6	66.1	95.8	74.7	72.8	83.1	55.7	57.0	63.9	68.9	86.9	80.0	

P - Power Failure

PASZA
Portable – Spirit River Station

Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association
Summary of Hourly Averages

Portable-Spirit River - Sulphur Dioxide (SO_2) - ppb
July 1, 2008 to August 1, 2008

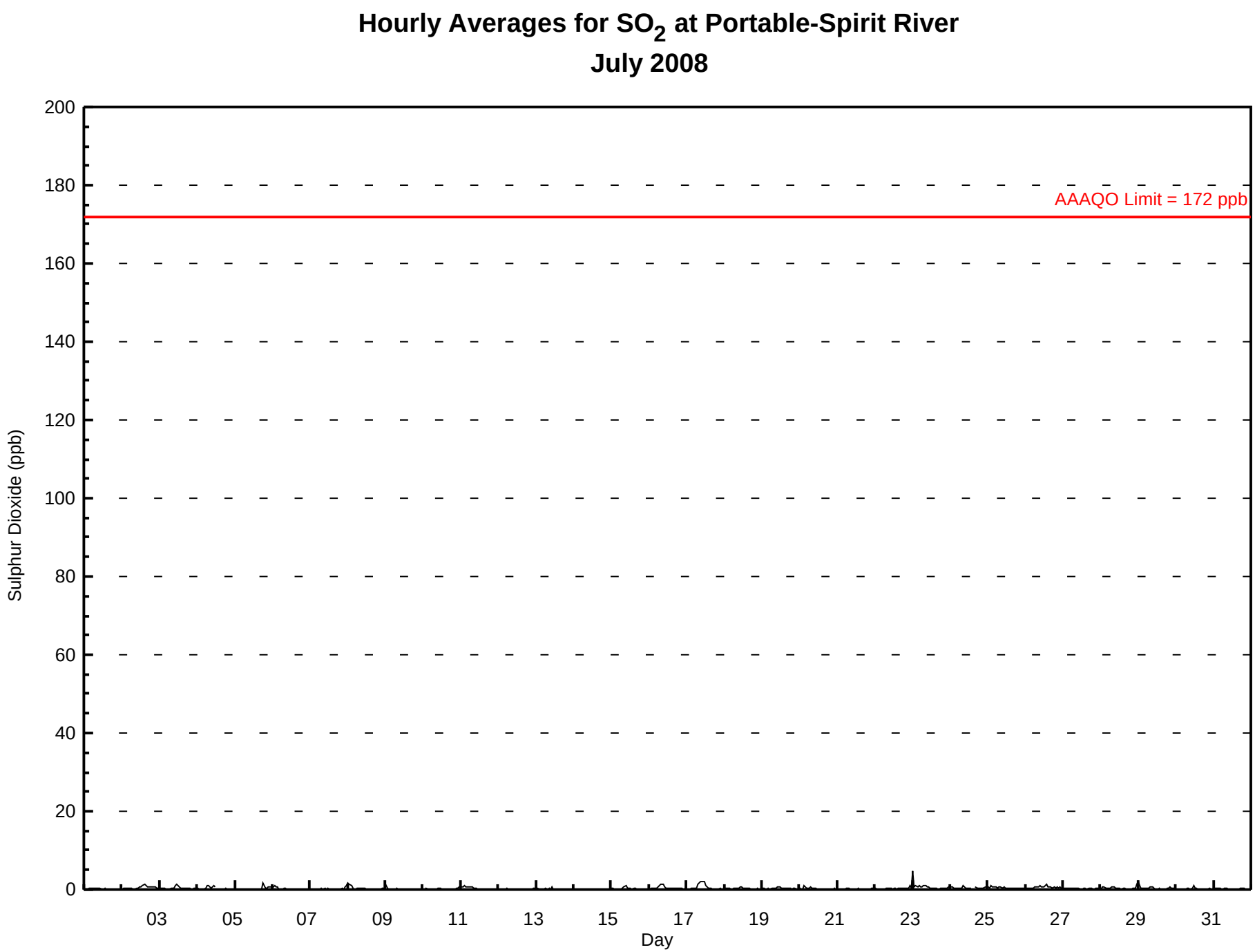
Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 5 ppb on Jul 23 01:00 Maximum Daily Average: 0.7 ppb on Jul 23

Minimum Value: 0 ppb on Jul 1 16:00 Minimum Daily Average: 0.0 ppb on Jul 14
Maximum Diurnal Average: 0.5 ppb at hour 1 Minimum Diurnal Average: 0.1 ppb at hour 17
Monthly Average: 0.27 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.0$ Median = 0.2 $Q_3 = 0.4$ $P_{90} = 0.6$ $P_{99} = 1.5$

Hours in Service:	744
Hours of Data:	702
Hours of Missing Data:	42
Hours of Calibration:	35
Percent Operational Time:	99.1

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-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	0.1	0.4
2-Jul	0	0	0	0	0	0	0	0	0	0	0	1	A	1	1	1	1	1	1	P	P	1	0	0	0.5	1.3
3-Jul	0	0	0	0	0	0	0	0	0	0	1	A	1	0	0	0	0	0	0	P	0	0	0	0	0.3	1.1
4-Jul	0	0	0	0	0	0	1	1	1	0	A	C	C	A	0	0	0	0	0	0	0	0	0	0	0.2	1.0
5-Jul	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	1	1	0.2	1.7
6-Jul	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.0
7-Jul	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.1	1.2
8-Jul	2	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.6
9-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	0.1	0.9
10-Jul	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	0.7
11-Jul	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.3	0.9
12-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	0.5
13-Jul	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.6
14-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	0.0
15-Jul	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	1.1
16-Jul	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0.5	1.4
17-Jul	0	0	0	0	0	0	0	1	2	2	2	2	1	1	0	0	0	A	0	0	0	0	0	0	0.6	2.1
18-Jul	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.6
19-Jul	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0.3	0.6
20-Jul	0	0	0	1	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.9
21-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	0.1	0.3
22-Jul	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0.2	0.9
23-Jul	5	1	1	1	1	1	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	1	0.7	4.8
24-Jul	1	1	0	0	0	0	0	0	1	1	A	1	0	P	P	P	P	0	0	0	0	0	1	1	0.5	1.0
25-Jul	1	0	1	1	1	1	0	1	1	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0.5	0.9
26-Jul	0	0	0	0	0	0	1	1	1	1	1	A	1	1	1	1	1	0	1	0	1	0	1	0	0.6	1.3
27-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
28-Jul	0	1	1	0	0	0	0	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	1.3
29-Jul	2	1	0	0	0	0	0	1	A	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.4	1.9
30-Jul	0	0	0	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.1
31-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
	0.5	0.3	0.3	0.3	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.3	0.3	Diurnal Average	
	4.8	1.3	1.2	0.9	0.9	0.7	0.9	1.4	1.6	2.1	2.0	2.0	1.0	1.3	1.3	1.1	0.7	0.5	1.7	0.4	0.6	0.7	0.9	1.3	Diurnal Maximum	

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


Hourly Averages for SO_2 at Portable-Spirit River
July 2008
AAAQO Limit = 172 ppb
Sulphur Dioxide (ppb)
200
180
160
140
120
100
80
60
40
20
0
03
05
07
09
11
13
15
17
19
21
23
25
27
29
31
Day

Peace Airshed Zone Association
Summary of Hourly Maximums

Portable-Spirit River - Sulphur Dioxide (SO_2) - ppb
July 1, 2008 to August 1, 2008

Maximum Value: 11 ppb on Jul 23 01:00

Maximum Daily Average: 1.5 ppb on Jul 23

Minimum Value: 0 ppb on Jul 9 23:00

Minimum Daily Average: 0.2 ppb on Jul 14

Maximum Diurnal Average: 1.1 ppb at hour 1

Minimum Diurnal Average: 0.4 ppb at hour 17

Monthly Average: 0.65 ppb

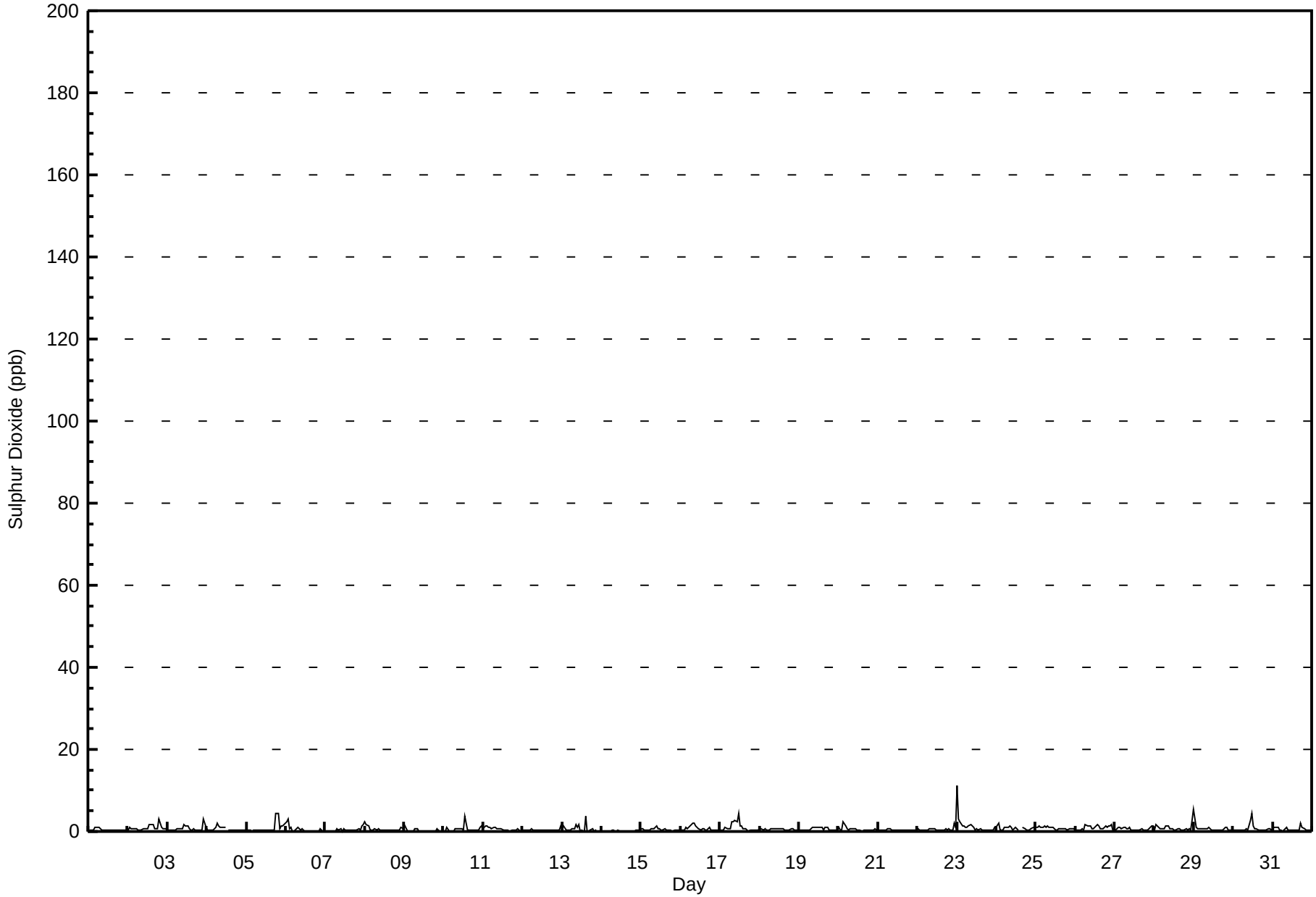
Percentiles: $P_1 = 0.1$ $P_{10} = 0.2$ $Q_1 = 0.3$ Median = 0.4 $Q_3 = 0.8$ $P_{90} = 1.3$ $P_{99} = 3.7$

Hours in Service:	744
Hours of Data:	702
Hours of Missing Data:	42
Hours of Calibration:	35
Percent Operational Time:	99.1

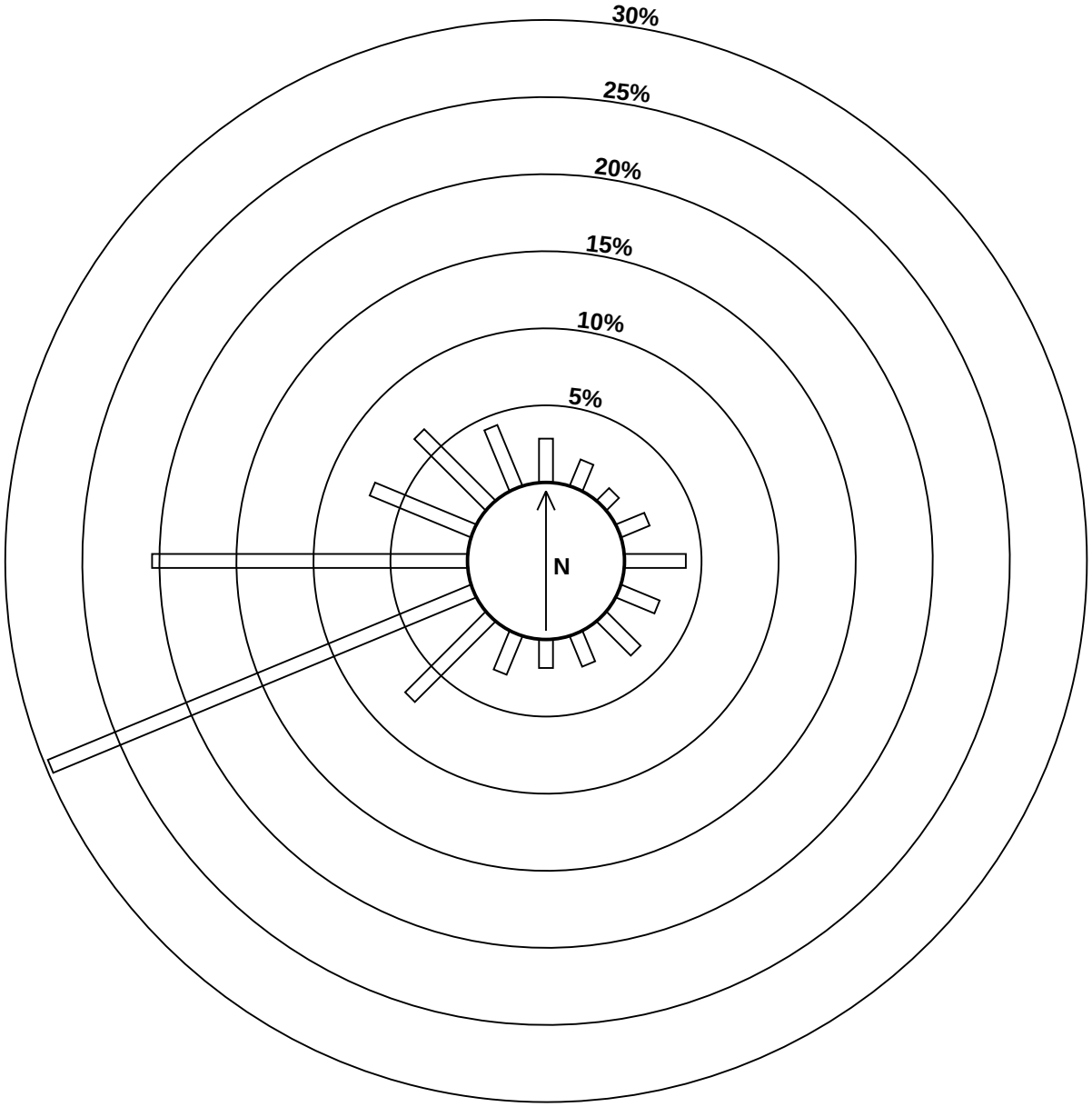
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Jul	0	0	0	0	1	1	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.4	0.9
2-Jul	0	1	1	1	1	1	0	0	0	1	1	1	A	2	2	2	1	1	1	P	P	1	1	1	0.9	1.9
3-Jul	0	0	0	0	0	0	1	1	1	1	2	A	1	1	0	0	1	0	0	P	0	0	3	1	0.7	2.9
4-Jul	0	0	0	0	0	1	2	1	1	1	A	C	C	A	0	0	1	0	0	0	0	0	0	0	0.6	1.9
5-Jul	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	1	1	1	2	0.8	4.3
6-Jul	2	3	A	1	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0.5	3.2
7-Jul	0	A	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	1	0	1	2	0.4	1.8
8-Jul	2	2	1	A	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.5	2.3
9-Jul	1	1	A	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.3	1.2
10-Jul	0	A	1	0	0	0	0	1	1	1	1	1	0	4	0	0	0	0	0	0	0	0	1	1	0.6	3.9
11-Jul	A	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	A	0.6	1.3
12-Jul	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0.3	1.2
13-Jul	1	1	0	0	0	0	1	1	2	1	2	0	0	0	4	0	0	0	1	0	0	A	0	0	0.6	3.7
14-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	0.2	0.2
15-Jul	1	1	0	0	0	0	1	1	1	1	1	1	0	0	1	0	0	0	0	A	0	0	0	0	0.5	1.4
16-Jul	0	0	0	1	1	1	1	2	2	1	1	1	0	1	1	0	0	1	A	0	0	0	0	0	0.8	2.0
17-Jul	0	0	0	1	1	1	1	2	2	3	2	4	1	1	1	1	0	A	0	0	0	0	0	0	1.1	4.4
18-Jul	1	1	0	1	0	0	0	1	1	1	1	1	1	1	1	0	A	0	0	1	1	0	0	0	0.6	0.8
19-Jul	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	A	1	1	0	0	0	0	0	0	0.6	0.9
20-Jul	1	0	0	2	1	1	0	1	1	1	1	0	0	0	A	0	0	0	0	0	0	0	1	0	0.6	2.3
21-Jul	0	0	0	0	0	0	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.3	0.8
22-Jul	1	0	0	0	0	0	0	1	1	1	1	0	A	0	0	0	0	1	0	1	0	0	2	1	0.5	1.9
23-Jul	11	3	2	1	1	1	1	1	2	2	1	A	1	1	1	0	1	0	0	0	0	0	0	1	1.5	11.1
24-Jul	1	2	0	0	0	1	1	1	1	1	A	1	1	P	P	P	P	1	0	0	0	1	1	1	0.8	2.0
25-Jul	1	1	1	1	1	1	1	1	1	1	1	1	A	0	1	1	1	1	1	0	1	1	1	1	0.9	1.4
26-Jul	0	0	0	0	1	0	2	1	1	1	1	A	1	2	1	1	1	1	1	1	1	1	2	0	1.0	1.8
27-Jul	0	1	1	1	1	1	1	1	1	1	A	0	0	0	0	0	1	0	0	0	0	1	1	1	0.7	1.4
28-Jul	0	2	1	1	1	1	1	1	1	A	1	1	0	0	1	1	0	0	0	1	0	1	0	3	0.8	2.8
29-Jul	5	1	1	1	1	1	1	1	A	1	1	0	0	0	0	0	0	0	1	1	1	0	0	0	0.8	5.4
30-Jul	0	0	0	0	0	0	0	A	1	0	3	4	1	1	1	0	0	0	0	0	0	1	1	0	0.7	4.4
31-Jul	1	1	1	1	0	0	A	0	1	0	0	0	0	0	0	0	0	2	1	1	0	0	0	0	0.6	1.9
	1.1	0.9	0.6	0.6	0.5	0.5	0.7	0.9	0.9	0.8	0.8	0.8	0.5	0.6	0.6	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.7	0.7	Diurnal Average	
	11.1	3.2	2.5	2.3	1.4	1.4	1.9	2.3	2.3	2.8	2.8	4.4	1.4	3.9	3.7	1.8	0.9	1.9	4.3	4.3	1.4	1.4	2.9	2.8	Diurnal Maximum	

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

Hourly Maximums for SO_2 at Portable-Spirit River
July 2008



Pollutant Rose for SO_2 at Portable-Spirit River
July 2008



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

Pollutant Classes (ppb)

Peace Airshed Zone Association
Summary of Hourly Averages

Portable-Spirit River - Total Reduced Sulphur (TRS) - ppb
July 1, 2008 to August 1, 2008

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1 ppb on Jul 15 05:00 Maximum Daily Average: 0.7 ppb on Jul 15

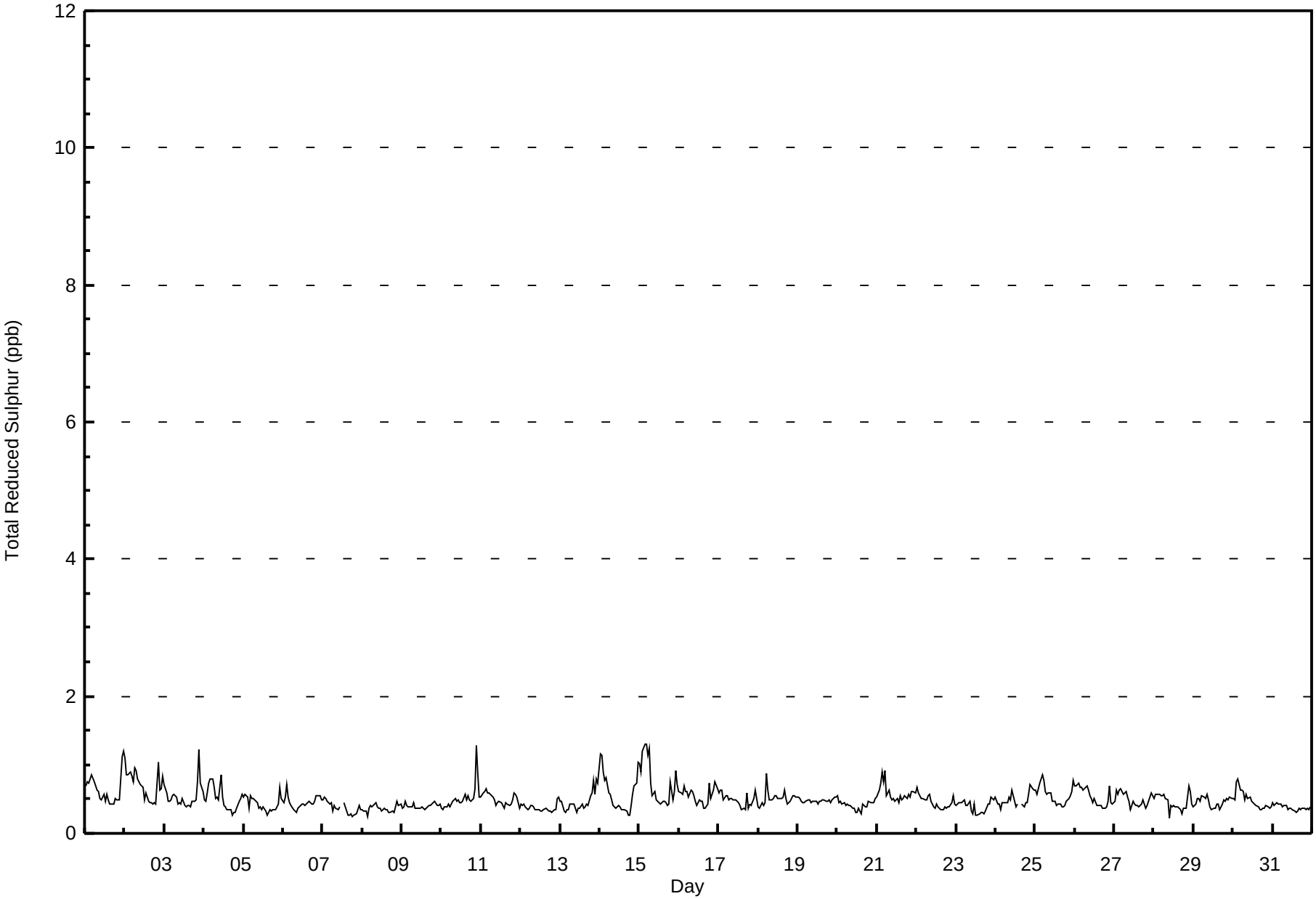
Minimum Value: 0 ppb on Jul 7 19:00 Minimum Daily Average: 0.4 ppb on Jul 7
Maximum Diurnal Average: 0.6 ppb at hour 23 Minimum Diurnal Average: 0.4 ppb at hour 18
Monthly Average: 0.49 ppb Percentiles: $P_1 = 0.3$ $P_{10} = 0.3$ $Q_1 = 0.4$ Median = 0.5 $Q_3 = 0.5$ $P_{90} = 0.7$ $P_{99} = 1.2$

Hours in Service:	744
Hours of Data:	702
Hours of Missing Data:	42
Hours of Calibration:	35
Percent Operational Time:	99.1

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

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

Hourly Averages for TRS at Portable-Spirit River
July 2008



Peace Airshed Zone Association
Summary of Hourly Maximums

Portable-Spirit River - Total Reduced Sulphur (TRS) - ppb
July 1, 2008 to August 1, 2008

Maximum Value: 3 ppb on Jul 1 23:00

Maximum Daily Average: 1.2 ppb on Jul 15

Minimum Value: 0 ppb on Jul 14 19:00

Minimum Daily Average: 0.6 ppb on Jul 12

Maximum Diurnal Average: 1.0 ppb at hour 22

Minimum Diurnal Average: 0.7 ppb at hour 17

Monthly Average: 0.80 ppb

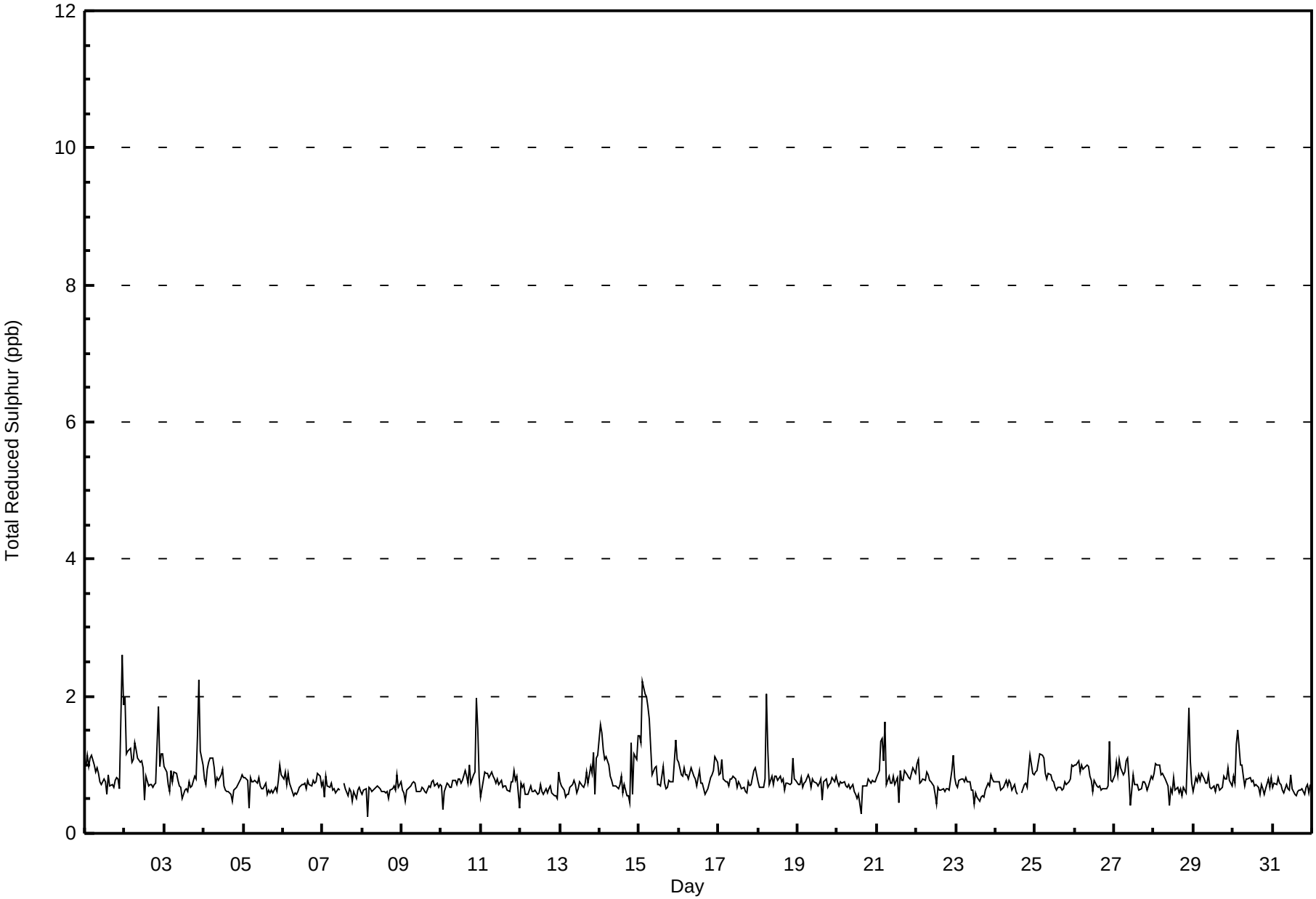
Percentiles: $P_1 = 0.5$ $P_{10} = 0.6$ $Q_1 = 0.7$ Median = 0.7 $Q_3 = 0.9$ $P_{90} = 1.1$ $P_{99} = 2.0$

Hours in Service:	744
Hours of Data:	702
Hours of Missing Data:	42
Hours of Calibration:	35
Percent Operational Time:	99.1

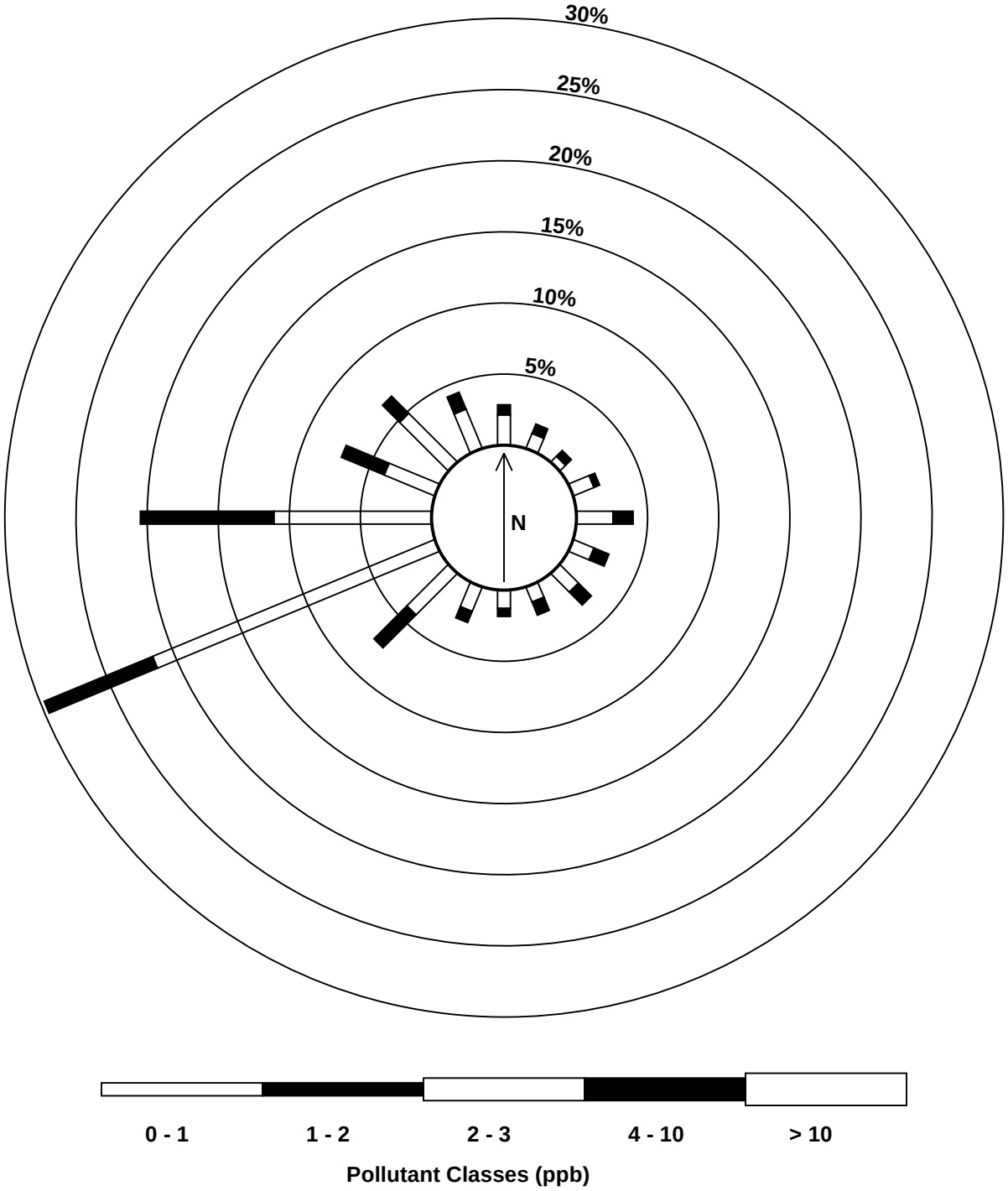
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	3	2	1.0	2.6
2-Jul	2	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	P	P	1	1	1	1.1	2.0
3-Jul	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	P	1	2	1	1	0.9	2.2
4-Jul	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	1	1	1	1	1	1	0.8	1.1
5-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
6-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	0.7	0.9
7-Jul	1	A	1	1	1	1	1	1	1	1	1	C	C	A	1	1	1	1	0	1	1	1	1	1	0.6	0.8
8-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	0.6	0.9
9-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	0.7	0.8
10-Jul	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	0.9	2.0
11-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
12-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	0.6	0.9
13-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	1.2
14-Jul	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	1	1	1	0.9	1.6
15-Jul	1	1	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1.2	2.2
16-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
17-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	1.1
18-Jul	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.8	2.0
19-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	0.8	0.9
20-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	0.7	0.8
21-Jul	1	1	1	1	1	2	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.9	1.6
22-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	0.8	1.1
23-Jul	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	1	1	1	1	1	1	1	1	1	0.7	0.8
24-Jul	1	1	1	1	1	1	1	1	1	1	A	1	1	P	P	P	P	1	1	1	1	1	1	1	0.8	1.1
25-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	0.8	1.2
26-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	0.8	1.3
27-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	1.1
28-Jul	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	2	1	1	0.8	1.8
29-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	1.0
30-Jul	1	1	1	2	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.5
31-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	0.7	0.9
	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	1.0	1.0	0.9	Diurnal Average	
	2.0	1.5	2.2	2.0	2.0	2.0	1.7	1.3	1.1	1.0	1.1	1.0	0.9	0.8	1.0	0.8	0.9	1.0	1.0	1.3	1.4	2.2	2.6	1.9	Diurnal Maximum	

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

Hourly Maximums for TRS at Portable-Spirit River
July 2008



Pollutant Rose for TRS at Portable-Spirit River
July 2008



Peace Airshed Zone Association
Summary of Hourly Averages

Portable-Spirit River - Nitrogen Dioxide (NO_2) - ppb
July 1, 2008 to August 1, 2008

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 12 ppb on Jul 15 23:00 Maximum Daily Average: 5.4 ppb on Jul 17

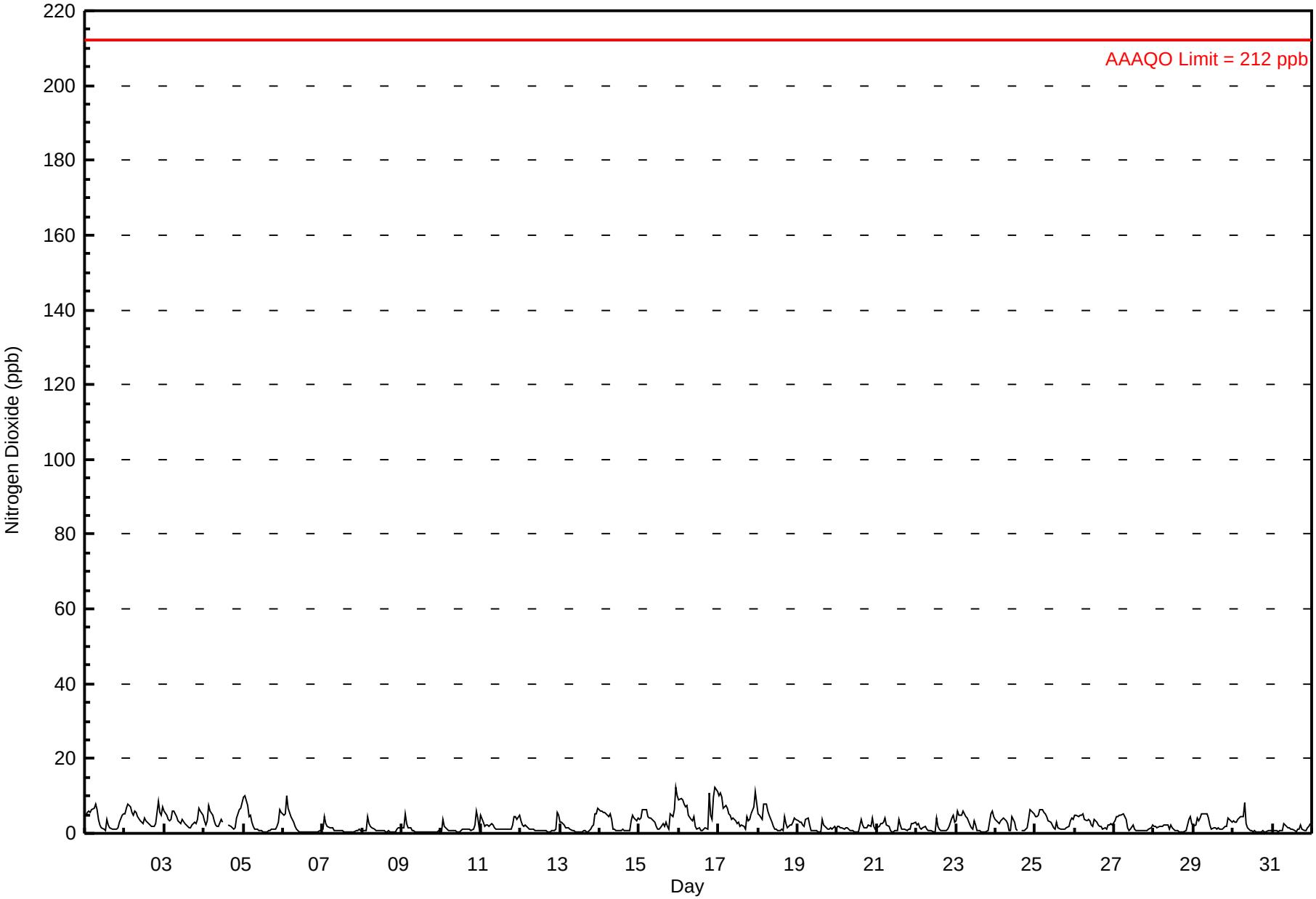
Minimum Value: 0 ppb on Jul 6 15:00 Minimum Daily Average: 0.7 ppb on Jul 9
Maximum Diurnal Average: 4.4 ppb at hour 23 Minimum Diurnal Average: 1.0 ppb at hour 16
Monthly Average: 2.49 ppb Percentiles: $P_1 = 0.3$ $P_{10} = 0.5$ $Q_1 = 0.8$ Median = 1.7 $Q_3 = 3.7$ $P_{90} = 5.6$ $P_{99} = 9.9$

Hours in Service:	744
Hours of Data:	700
Hours of Missing Data:	44
Hours of Calibration:	37
Percent Operational Time:	99.1

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Jul	5	6	6	6	6	7	8	6	4	2	1	1	1	A	2	1	1	1	1	1	1	3	5	5	3.5	7.7
2-Jul	5	7	8	7	6	5	6	5	4	4	3	3	A	3	3	2	2	2	2	P	P	6	5	7	4.4	7.7
3-Jul	6	5	4	3	4	6	6	4	3	3	3	A	3	2	2	1	2	2	3	P	4	7	6	5	3.8	6.6
4-Jul	3	2	3	7	6	5	3	2	2	2	A	C	C	C	C	A	2	1	1	1	4	6	7	8	3.7	8.1
5-Jul	10	10	8	A	5	3	2	1	1	1	1	1	1	0	0	1	1	1	1	1	2	3	6	5	2.8	10.0
6-Jul	5	5	A	7	6	5	3	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1.7	6.9
7-Jul	1	A	3	2	1	2	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	1	1	1	0.9	2.7
8-Jul	1	1	1	A	3	2	1	1	1	1	1	1	1	1	0	0	1	1	0	0	1	1	2	2	0.9	2.6
9-Jul	1	2	A	3	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0.7	2.6
10-Jul	0	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	6	4	2	1.3	6.0
11-Jul	A	3	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2	5	5	4	A	2.0	4.7
12-Jul	3	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	A	5	1.3	4.8
13-Jul	3	3	2	2	2	1	1	1	1	1	0	0	0	0	1	1	1	0	1	2	2	A	5	7	1.6	6.9
14-Jul	6	6	6	6	5	5	5	4	1	1	1	1	1	1	1	1	1	1	1	3	A	4	3	4	2.9	6.1
15-Jul	4	4	6	6	7	5	4	4	4	3	2	1	1	1	2	2	3	2	1	A	5	6	12	10	4.2	12.5
16-Jul	9	9	9	8	7	8	5	4	3	5	2	1	1	1	1	1	1	1	A	5	4	10	12	11	5.1	12.1
17-Jul	10	11	10	7	8	7	5	5	4	4	3	3	3	2	2	2	1	A	3	4	5	7	11	8	5.4	11.3
18-Jul	5	5	4	8	8	8	6	5	3	2	1	1	1	1	1	1	A	3	2	2	2	3	4	4	3.4	8.0
19-Jul	3	3	3	2	2	4	4	2	1	1	1	1	1	0	0	A	2	1	1	1	1	1	2	1	1.7	4.3
20-Jul	2	2	1	2	1	1	2	1	1	1	0	0	0	0	A	2	1	1	2	2	2	4	2	1	1.4	4.2
21-Jul	1	2	3	3	3	4	2	2	1	0	0	1	1	A	2	1	1	1	1	1	1	2	3	3	1.7	4.3
22-Jul	2	3	2	1	1	2	1	1	1	1	0	0	A	2	1	1	1	1	1	1	2	4	5	3	1.6	4.9
23-Jul	3	6	5	5	6	5	4	4	2	1	1	A	2	1	1	0	0	0	1	1	3	5	6	5	3.0	5.9
24-Jul	4	3	3	3	4	4	3	3	1	1	A	3	1	P	P	P	P	1	1	1	4	6	5	5	2.9	6.2
25-Jul	4	4	5	7	6	5	5	5	3	3	2	2	A	3	2	1	1	1	1	1	2	3	4	4	3.3	6.5
26-Jul	5	5	4	5	5	5	4	3	4	3	2	A	4	3	2	2	2	1	1	1	2	2	3	2	3.1	5.2
27-Jul	3	5	4	5	5	5	4	4	2	1	A	2	1	1	1	1	1	1	1	1	1	1	2	2	2.3	5.1
28-Jul	2	2	1	2	2	2	2	2	2	A	2	1	1	1	1	1	0	0	0	1	2	4	4	3	1.7	4.4
29-Jul	2	2	4	3	4	5	5	5	A	4	2	1	1	1	1	2	1	1	2	2	2	4	4	3	2.7	5.3
30-Jul	3	3	3	4	5	4	4	A	3	1	1	1	0	1	0	0	0	0	1	0	0	1	1	1	1.6	4.6
31-Jul	1	1	1	1	1	1	A	3	2	1	2	1	1	1	0	1	1	2	1	1	1	2	2	3	1.2	2.7
	3.8	4.1	3.9	4.0	4.0	3.9	3.4	2.9	1.9	1.7	1.3	1.1	1.1	1.1	1.1	1.0	1.1	1.0	1.1	1.4	2.1	3.7	4.4	4.0	Diurnal Average	
	10.2	10.6	9.6	8.0	8.0	7.7	7.7	6.3	4.3	4.6	3.4	3.0	3.6	3.3	2.6	2.3	3.1	2.5	3.3	4.9	5.4	9.7	12.5	11.2	Diurnal Maximum	

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

Hourly Averages for NO_2 at Portable-Spirit River
July 2008



Peace Airshed Zone Association
Summary of Hourly Maximums

Portable-Spirit River - Nitrogen Dioxide (NO_2) - ppb
July 1, 2008 to August 1, 2008

Maximum Value: 79 ppb on Jul 16 10:00

Maximum Daily Average: 11.1 ppb on Jul 16

Minimum Value: 0 ppb on Jul 9 17:00

Maximum Diurnal Average: 7.3 ppb at hour 22

Monthly Average: 4.07 ppb

Minimum Daily Average: 1.5 ppb on Jul 7

Minimum Diurnal Average: 1.8 ppb at hour 11

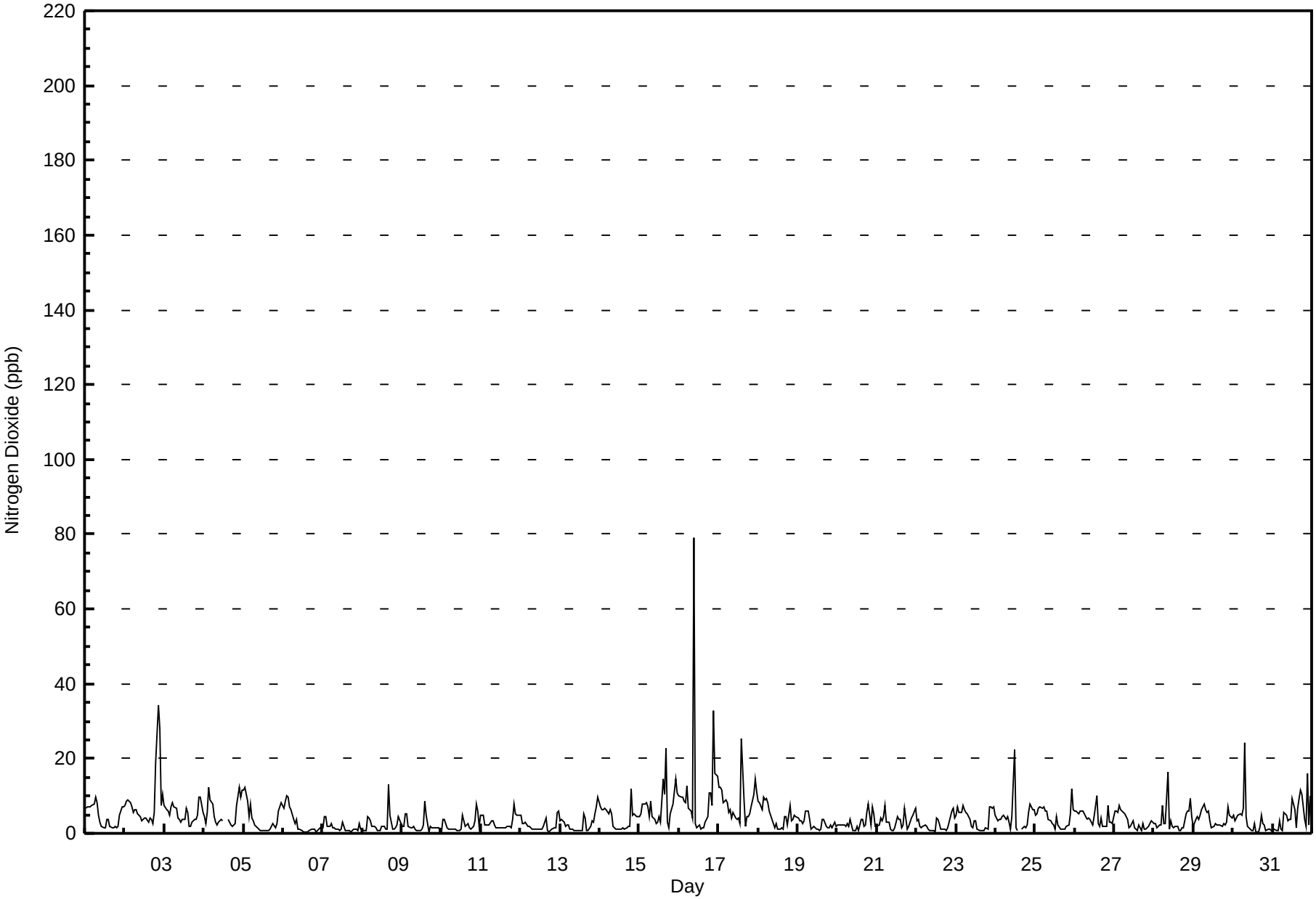
Percentiles: $P_1 = 0.5$ $P_{10} = 0.9$ $Q_1 = 1.5$ Median = 2.8 $Q_3 = 5.6$ $P_{90} = 8.1$ $P_{99} = 13.3$

Hours in Service:	744
Hours of Data:	700
Hours of Missing Data:	44
Hours of Calibration:	37
Percent Operational Time:	99.1

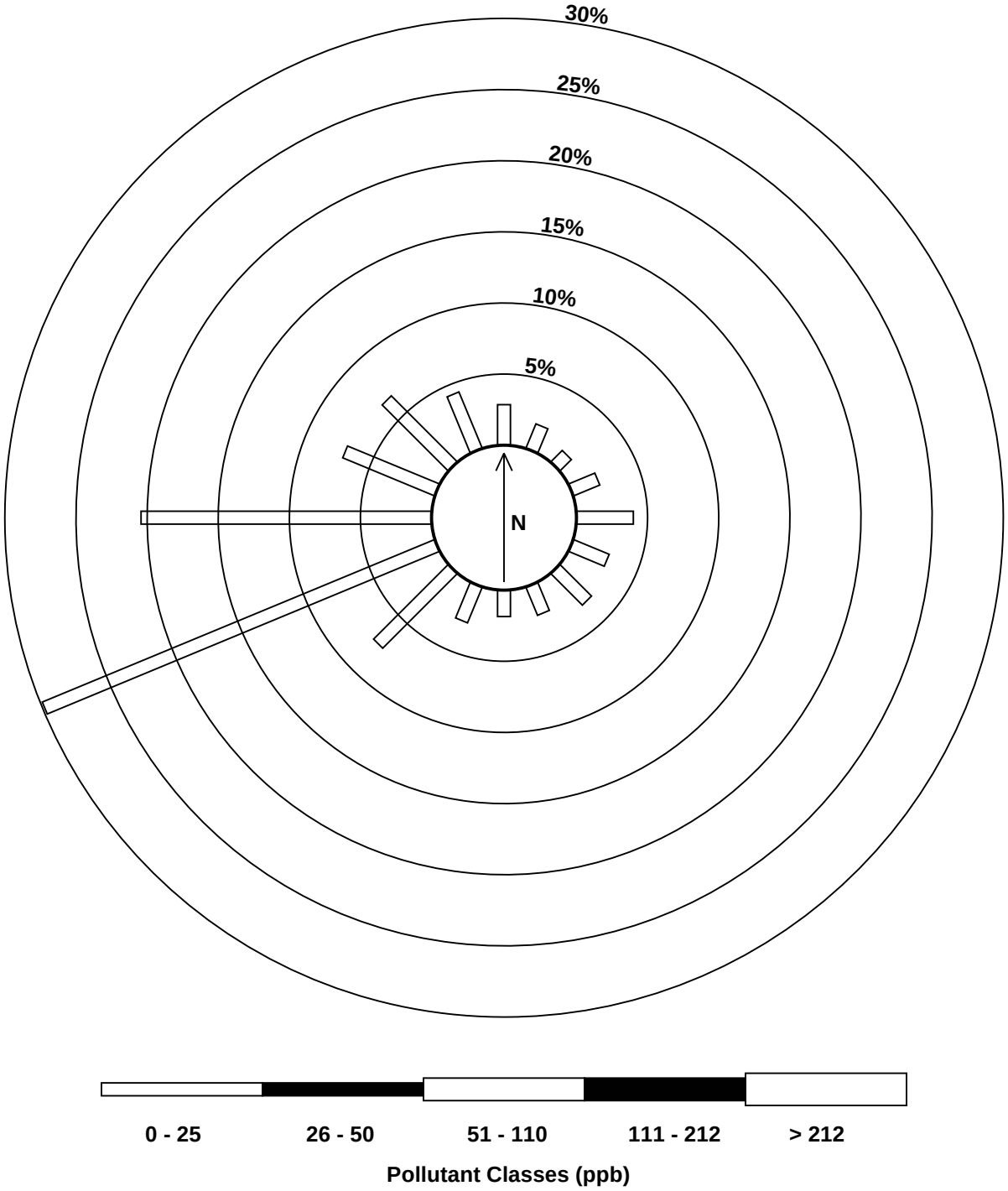
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Jul	7	7	7	7	7	8	10	8	5	3	2	1	1	A	4	2	1	2	2	1	2	5	7	7	4.6	9.7
2-Jul	7	8	9	8	7	6	6	6	5	4	3	4	A	4	3	4	4	2	6	P	P	28	7	11	6.9	27.8
3-Jul	7	6	6	5	7	8	7	7	4	4	3	A	4	7	6	2	2	3	4	P	5	10	10	6	5.5	9.5
4-Jul	4	3	6	12	9	8	4	3	2	3	A	C	C	C	C	A	2	2	2	2	8	12	10	12	5.8	12.3
5-Jul	11	12	9	A	8	4	4	2	1	1	1	1	1	1	1	1	1	2	3	2	3	6	7	8	3.8	12.2
6-Jul	7	9	A	10	7	6	4	2	4	1	1	1	0	0	0	0	1	1	1	1	1	1	2	2	2.7	9.7
7-Jul	2	A	4	2	2	3	2	1	1	1	1	1	3	2	1	1	1	0	1	1	1	1	3	1	1.5	4.4
8-Jul	1	1	1	A	4	3	2	2	1	1	1	1	2	2	1	1	13	5	1	1	1	2	5	2	2.4	12.9
9-Jul	2	2	A	5	2	2	2	2	1	1	1	1	1	2	9	5	0	2	1	1	2	2	2	1	2.0	8.7
10-Jul	1	A	4	2	1	1	1	1	1	1	1	1	1	5	2	2	2	2	1	2	3	8	6	2	2.2	7.7
11-Jul	A	5	2	2	2	2	3	3	2	2	1	1	1	2	2	2	2	2	2	4	8	5	5	A	2.7	7.8
12-Jul	5	3	2	3	2	2	2	1	1	1	1	1	1	1	2	4	1	1	1	1	1	2	A	6	1.9	5.9
13-Jul	4	4	3	2	2	2	1	1	1	1	1	1	1	1	5	4	1	1	2	3	3	A	7	10	2.6	9.8
14-Jul	7	7	6	7	6	5	6	5	2	1	1	1	1	1	1	1	2	2	2	12	A	5	5	5	4.0	11.8
15-Jul	4	5	8	8	8	7	5	9	5	4	3	3	4	3	14	10	23	3	1	A	8	11	14	11	7.4	22.7
16-Jul	10	10	10	9	8	13	7	6	4	79	3	2	2	1	1	2	3	5	A	11	7	33	16	15	11.1	79.2
17-Jul	12	12	12	8	9	8	6	6	4	6	4	4	4	3	25	9	2	A	4	5	7	11	14	11	8.1	25.2
18-Jul	9	8	6	10	9	9	8	6	4	3	1	3	1	1	1	1	A	4	2	7	3	4	5	4	4.8	9.5
19-Jul	4	3	3	3	3	6	6	4	1	1	2	1	1	1	1	A	4	2	2	2	2	2	3	2	2.5	6.0
20-Jul	2	2	2	2	2	2	3	2	4	1	1	1	2	1	A	4	2	2	6	8	2	7	5	2	2.7	7.8
21-Jul	2	2	4	4	5	7	3	3	1	1	1	1	4	A	4	1	2	7	1	2	3	4	5	7	3.2	7.4
22-Jul	3	4	2	2	2	2	2	1	1	1	1	1	A	4	3	1	1	1	1	2	3	6	7	4	2.3	6.6
23-Jul	5	7	6	6	7	6	6	5	4	2	1	A	4	1	1	1	1	1	1	1	7	7	7	7	4.1	7.5
24-Jul	5	3	4	4	4	5	4	4	3	1	A	23	1	P	P	P	P	2	2	2	6	8	6	6	4.9	22.5
25-Jul	5	5	7	7	7	7	6	6	4	4	3	2	A	4	2	1	1	1	1	2	2	5	12	6	4.4	12.1
26-Jul	6	6	5	6	6	6	5	4	4	4	3	A	5	10	2	2	4	2	2	2	7	3	3	3	4.3	10.0
27-Jul	6	6	6	7	6	6	5	4	4	1	A	3	2	1	1	2	1	3	1	1	1	2	3	3	3.3	7.4
28-Jul	3	3	2	2	2	7	2	3	16	A	3	2	1	2	2	1	1	1	2	5	6	6	9	4	3.7	16.4
29-Jul	2	4	4	4	5	6	8	6	A	6	3	2	2	2	2	2	2	2	3	2	3	7	5	4	3.8	8.0
30-Jul	5	3	4	5	5	5	7	A	5	2	1	1	1	2	0	0	2	5	3	2	1	1	1	1	2.7	6.6
31-Jul	1	1	1	1	3	1	A	6	5	3	4	4	9	6	2	7	9	11	10	4	2	16	2	10	5.1	16.2
	4.9	5.2	5.0	5.2	5.1	5.3	4.4	4.0	3.3	4.7	1.8	2.4	2.3	2.6	3.5	2.6	3.1	2.6	2.3	3.2	3.7	7.3	6.4	5.7	Diurnal Average	
	12.2	12.2	11.6	12.3	8.9	12.5	9.7	8.7	16.4	79.2	4.0	22.5	9.4	10.0	25.2	10.3	22.7	11.4	10.4	11.8	7.8	32.7	16.1	15.2	Diurnal Maximum	

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

Hourly Maximums for NO_2 at Portable-Spirit River
July 2008



Pollutant Rose for NO_2 at Portable-Spirit River
July 2008



Peace Airshed Zone Association
Summary of Hourly Averages

Portable-Spirit River - Nitrogen Oxide (NO) - ppb
July 1, 2008 to August 1, 2008

Maximum Value: 8 ppb on Jul 16 06:00

Maximum Daily Average: 2.2 ppb on Jul 15

Minimum Value: 0 ppb on Jul 6 18:00

Minimum Daily Average: 0.1 ppb on Jul 8

Maximum Diurnal Average: 1.5 ppb at hour 7

Minimum Diurnal Average: 0.2 ppb at hour 19

Monthly Average: 0.47 ppb

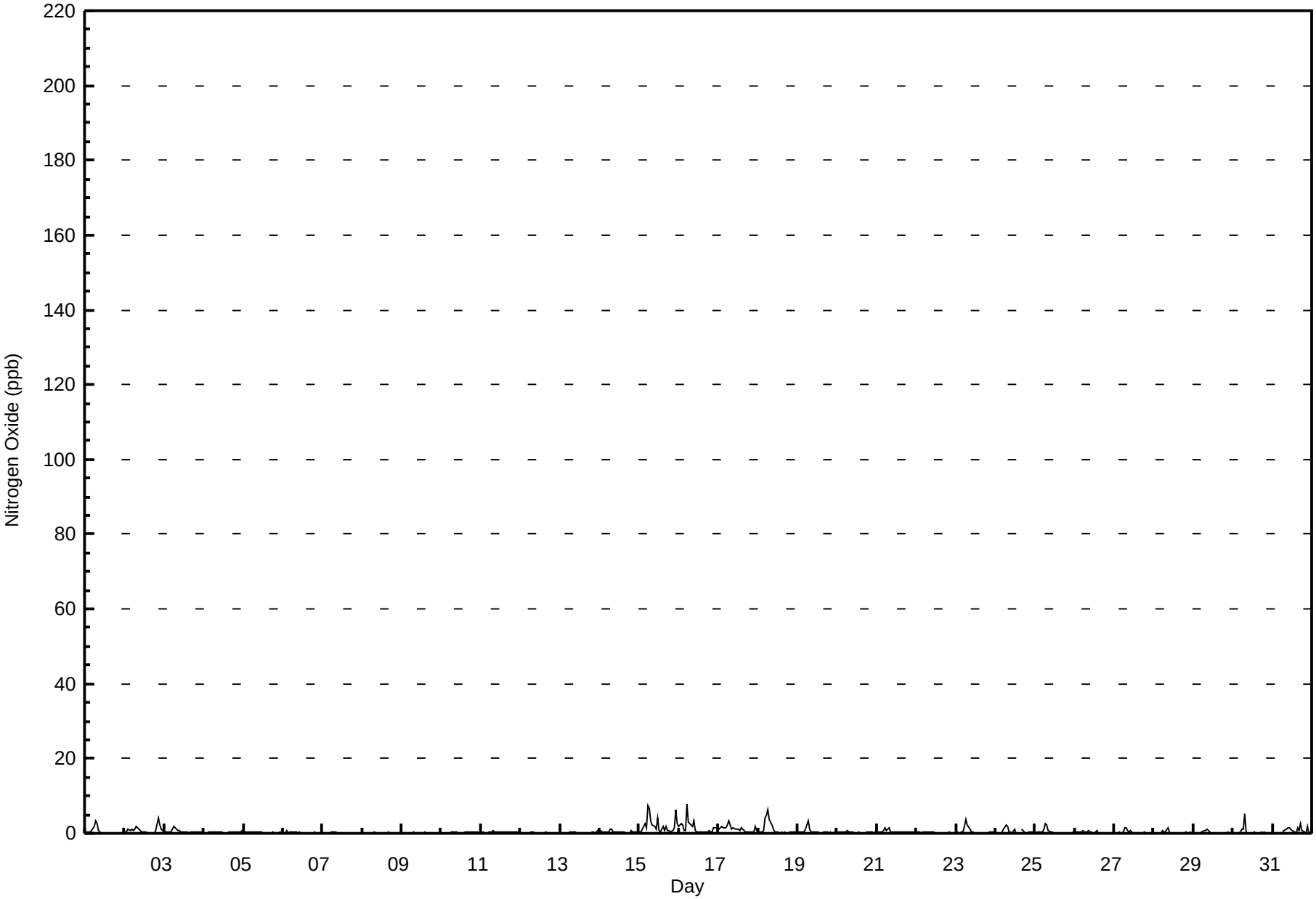
Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.1$ Median = 0.2 $Q_3 = 0.4$ $P_{90} = 1.2$ $P_{99} = 3.7$

Hours in Service:	744
Hours of Data:	700
Hours of Missing Data:	44
Hours of Calibration:	37
Percent Operational Time:	99.1

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Jul	0	0	0	0	1	2	3	3	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.5	3.4
2-Jul	0	0	1	1	1	1	1	2	1	1	0	0	A	0	0	0	0	0	0	P	P	2	1	1	0.7	2.2
3-Jul	0	0	0	0	0	1	2	1	1	1	0	A	0	0	0	0	0	0	0	P	0	0	0	0	0.5	2.0
4-Jul	0	0	0	0	0	0	1	0	0	0	A	C	C	C	C	A	0	0	0	0	0	0	0	1	0.3	0.6
5-Jul	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
6-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	0.1	0.4
7-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
8-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
9-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	0.1	0.3
10-Jul	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.2	0.5
11-Jul	A	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.3	0.9
12-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	0.3
13-Jul	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	0.7
14-Jul	1	1	1	0	0	1	1	1	0	0	0	0	0	0	1	0	0	0	0	1	A	0	0	0	0.4	1.2
15-Jul	0	0	1	2	2	7	7	3	2	2	1	4	1	0	2	1	2	1	1	A	1	1	6	3	2.2	7.3
16-Jul	2	3	2	1	1	8	3	2	2	3	1	0	0	0	0	0	0	0	A	0	0	1	2	1	1.5	7.8
17-Jul	1	2	2	1	1	2	3	2	1	1	1	1	1	1	1	1	0	A	0	0	1	0	2	1	1.2	3.4
18-Jul	0	0	0	1	4	5	6	4	2	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1.2	6.2
19-Jul	0	0	0	0	0	1	3	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.5	3.2
20-Jul	0	0	0	0	0	0	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	0.6
21-Jul	0	0	0	0	1	2	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.4	1.7
22-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	0.2	0.4
23-Jul	0	0	0	0	0	2	4	2	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.5	3.7
24-Jul	0	0	0	0	0	1	2	2	0	0	A	1	0	P	P	P	P	0	0	0	0	0	0	0	0.5	2.2
25-Jul	0	0	0	0	1	1	3	2	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.5	2.7
26-Jul	0	0	0	0	0	1	0	0	1	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0.3	0.9
27-Jul	0	0	0	0	0	0	1	2	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.6
28-Jul	0	0	0	0	0	1	0	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.4
29-Jul	0	0	0	0	0	0	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
30-Jul	0	0	0	0	0	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.0
31-Jul	0	0	0	0	0	0	A	1	1	1	1	1	1	0	0	1	1	3	1	0	0	2	0	0	0.6	2.5
	0.3	0.3	0.4	0.4	0.5	1.3	1.5	1.2	0.7	0.6	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.4	0.5	0.4	Diurnal Average	
	2.0	2.5	2.2	2.5	4.0	7.8	6.6	3.8	2.2	3.5	1.4	4.1	1.3	0.8	1.7	1.4	1.8	2.5	0.9	0.7	0.6	2.2	6.5	2.6	Diurnal Maximum	

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

Hourly Averages for NO at Portable-Spirit River
July 2008



Peace Airshed Zone Association
Summary of Hourly Maximums

Portable-Spirit River - Nitrogen Oxide (NO) - ppb
July 1, 2008 to August 1, 2008

Maximum Value: 145 ppb on Jul 15 12:00

Maximum Daily Average: 12.6 ppb on Jul 15

Minimum Value: 0 ppb on Jul 30 16:00

Maximum Diurnal Average: 6.7 ppb at hour 12

Monthly Average: 2.28 ppb

Minimum Daily Average: 0.5 ppb on Jul 7

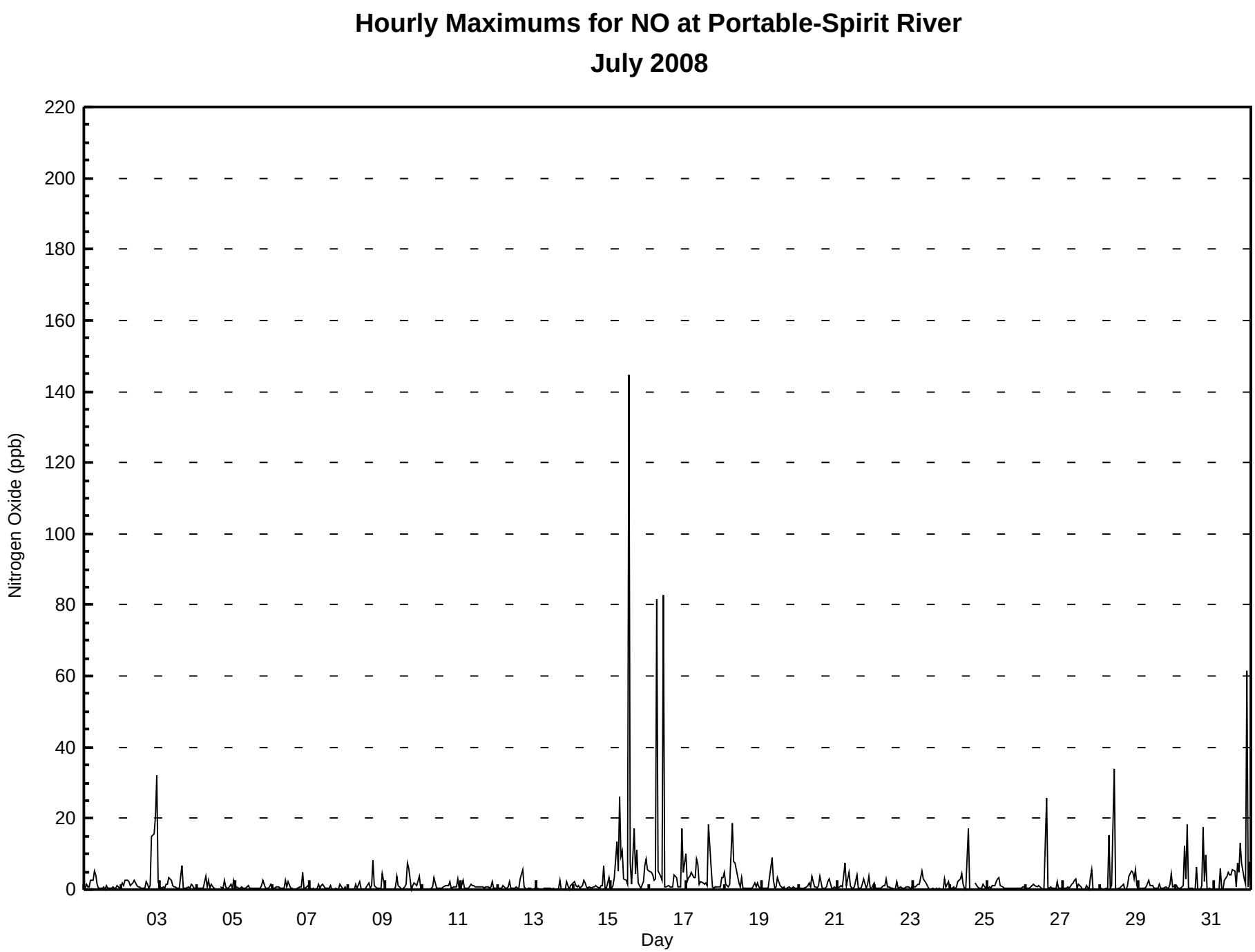
Minimum Diurnal Average: 0.8 ppb at hour 11

Percentiles: $P_1 = 0.1$ $P_{10} = 0.2$ $Q_1 = 0.3$ Median = 0.6 $Q_3 = 1.7$ $P_{90} = 4.2$ $P_{99} = 23.1$

Hours in Service:	744
Hours of Data:	700
Hours of Missing Data:	44
Hours of Calibration:	37
Percent Operational Time:	99.1

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Jul	1	2	1	1	2	3	5	4	2	1	0	0	1	A	1	0	0	0	1	0	0	1	1	1	1.2	5.4
2-Jul	2	1	3	3	2	1	1	2	3	1	1	1	A	0	0	2	2	1	1	P	P	20	32	2	3.8	32.0
3-Jul	1	0	1	0	1	2	3	3	1	1	1	A	0	4	7	0	0	1	1	P	2	1	0	0	1.4	6.6
4-Jul	0	0	0	0	0	4	1	3	0	2	A	C	C	C	C	A	0	2	1	0	1	1	0	2	1.1	3.9
5-Jul	1	1	0	A	1	0	1	0	1	1	0	0	0	0	0	0	0	1	3	0	0	0	1	2	0.7	2.8
6-Jul	0	0	A	1	1	1	0	0	3	1	2	0	0	0	0	0	0	1	1	5	0	0	1	0	0.8	4.7
7-Jul	0	A	0	0	0	2	0	1	2	0	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0.5	1.5
8-Jul	0	0	0	A	0	2	0	2	0	0	0	0	1	2	0	1	8	1	0	0	0	0	5	1	1.1	8.0
9-Jul	0	0	A	0	0	0	1	4	1	1	0	1	1	1	8	6	0	1	2	1	1	4	0	1	1.5	7.6
10-Jul	0	A	0	0	0	0	1	3	1	0	0	0	0	1	1	1	1	2	0	1	1	1	3	1	0.8	3.3
11-Jul	A	3	0	0	0	0	2	1	1	1	1	1	1	1	1	0	1	1	0	1	2	0	0	A	0.8	2.7
12-Jul	0	0	0	1	0	0	1	2	0	0	0	1	0	0	3	5	1	0	0	0	0	0	A	0	0.8	5.5
13-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	2	1	A	1	2	0.6	2.5
14-Jul	2	1	1	1	0	1	3	2	1	1	1	1	1	1	1	1	1	1	1	7	A	0	3	0	1.3	6.7
15-Jul	0	1	3	13	5	26	9	11	3	3	2	145	7	1	17	5	11	2	1	A	2	7	9	6	12.6	144.7
16-Jul	5	5	4	3	3	82	5	4	3	83	1	1	1	1	1	1	4	3	A	1	1	17	5	10	10.5	82.7
17-Jul	2	3	4	5	3	3	9	7	1	2	2	2	2	1	18	6	1	A	1	1	1	1	4	3	3.6	18.1
18-Jul	5	2	1	1	10	19	8	7	4	2	1	3	0	0	0	0	A	0	0	2	1	2	1	0	3.0	18.6
19-Jul	0	0	0	0	0	4	9	2	0	1	3	1	1	0	1	A	0	1	0	0	1	0	0	0	1.2	8.8
20-Jul	0	0	0	0	1	1	2	1	4	1	1	0	1	4	A	0	0	1	2	3	0	0	1	0	1.0	3.8
21-Jul	0	1	1	1	4	7	1	5	1	0	0	1	4	A	0	0	2	3	0	2	4	0	0	2	1.8	7.4
22-Jul	0	0	0	0	0	1	1	3	1	1	0	0	A	0	2	0	1	0	0	0	1	1	0	0	0.7	3.1
23-Jul	1	1	1	2	2	3	5	3	2	1	0	A	0	0	0	0	0	0	0	0	3	1	2	2	1.3	5.4
24-Jul	0	0	1	0	1	2	3	4	2	0	A	17	0	P	P	P	P	1	0	0	1	2	0	0	1.9	17.2
25-Jul	0	1	1	1	1	2	3	3	1	1	0	0	A	0	0	0	0	0	0	0	0	0	1	1	0.8	3.4
26-Jul	1	1	0	1	1	2	1	1	1	1	0	A	0	26	0	0	1	0	0	0	2	0	0	0	1.7	25.6
27-Jul	0	0	0	1	0	2	2	3	3	0	A	1	0	0	0	1	0	3	6	0	0	0	0	0	1.0	5.7
28-Jul	0	0	0	0	0	15	0	1	34	A	0	0	0	1	2	0	0	1	4	5	5	3	6	1	3.5	34.1
29-Jul	0	0	0	0	0	1	3	1	A	1	0	0	0	2	0	0	0	1	0	0	2	5	1	1	0.9	4.6
30-Jul	1	0	0	0	1	12	3	A	0	0	0	0	0	6	0	0	1	17	2	10	0	0	0	0	2.5	17.4
31-Jul	0	0	0	0	6	0	A	3	4	5	4	4	6	5	1	7	5	13	8	3	2	61	1	8	6.3	61.4
	0.9	0.9	0.9	1.3	1.6	6.4	2.8	2.9	2.6	3.7	0.8	6.7	1.1	2.2	2.3	1.5	1.5	2.0	1.2	1.7	1.1	4.4	2.6	1.6	Diurnal Average	
	5.2	4.8	4.3	13.3	9.9	81.5	9.3	10.9	34.1	82.7	4.1	144.7	7.4	25.6	18.1	7.3	11.2	17.4	7.6	9.7	4.8	61.4	32.0	10.2	Diurnal Maximum	

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


Hourly Maximums for NO at Portable-Spirit River
July 2008
Nitrogen Oxide (ppb)
0
20
40
60
80
100
120
140
160
180
200
220
03
05
07
09
11
13
15
17
19
21
23
25
27
29
31
Day

Peace Airshed Zone Association
Summary of Hourly Averages

Portable-Spirit River - Oxides of Nitrogen (NO_X) - ppb
July 1, 2008 to August 1, 2008

Maximum Value: 19 ppb on Jul 15 23:00

Maximum Daily Average: 6.6 ppb on Jul 17

Minimum Value: 0 ppb on Jul 30 16:00

Minimum Daily Average: 0.8 ppb on Jul 9

Maximum Diurnal Average: 5.1 ppb at hour 6

Minimum Diurnal Average: 1.2 ppb at hour 16

Monthly Average: 2.93 ppb

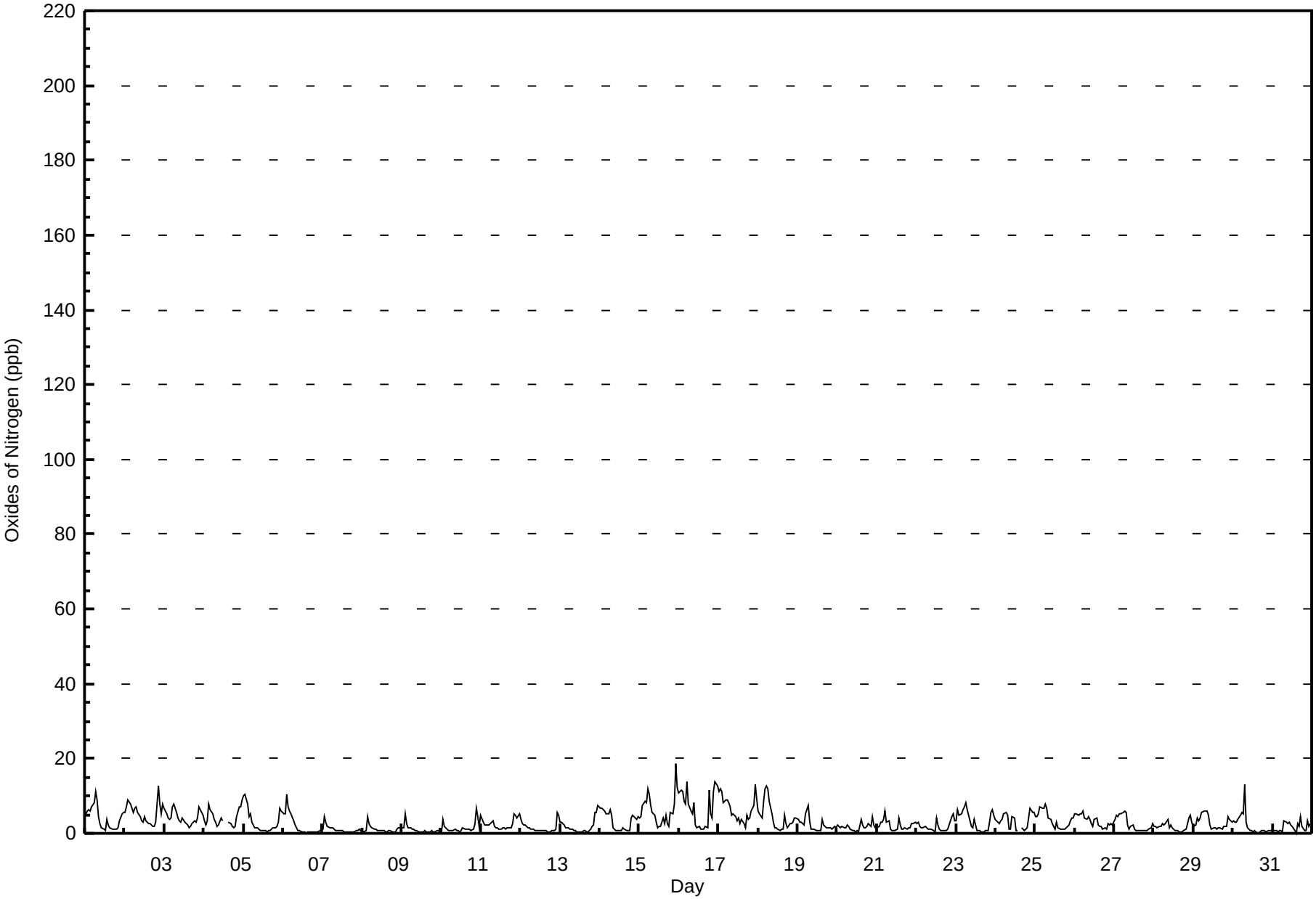
Percentiles: $P_1 = 0.2$ $P_{10} = 0.6$ $Q_1 = 1.0$ Median = 2.0 $Q_3 = 4.3$ $P_{90} = 6.6$ $P_{99} = 12.3$

Hours in Service:	744
Hours of Data:	700
Hours of Missing Data:	44
Hours of Calibration:	37
Percent Operational Time:	99.1

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Jul	5	6	6	6	7	8	11	9	5	2	2	1	1	A	2	1	1	1	1	1	1	3	5	6	4.0	11.1
2-Jul	6	7	9	8	7	6	7	7	6	4	3	3	A	3	3	2	2	2	2	P	P	8	5	8	5.1	8.8
3-Jul	7	5	4	4	4	7	8	6	4	3	3	A	3	3	2	2	2	2	3	P	4	7	6	5	4.3	7.8
4-Jul	3	2	4	8	6	5	4	3	2	2	A	C	C	C	C	A	2	2	2	2	5	7	7	9	4.2	8.8
5-Jul	10	11	8	A	5	3	2	2	1	1	1	1	1	1	1	1	1	1	2	1	2	3	7	6	3.0	10.5
6-Jul	5	5	A	7	6	5	3	2	1	1	1	0	0	0	0	0	0	0	0	1	0	0	1	1	1.9	7.1
7-Jul	1	A	3	2	1	2	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	1	1	1	0.9	2.8
8-Jul	1	1	1	A	3	2	2	1	1	1	1	1	1	1	0	0	1	1	0	0	0	1	2	2	0.9	2.7
9-Jul	1	2	A	3	1	1	1	1	1	1	0	0	0	0	1	0	0	1	1	0	0	1	1	0	0.8	2.6
10-Jul	0	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	7	4	2	1.5	6.6
11-Jul	A	3	2	2	2	2	3	3	2	1	1	1	1	1	1	1	1	2	1	2	5	5	4	A	2.3	5.1
12-Jul	4	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	A	5	1.4	4.9
13-Jul	3	3	2	1	2	2	1	1	1	1	1	0	0	0	1	1	0	0	1	2	2	A	5	8	1.7	7.5
14-Jul	7	7	6	6	5	5	6	5	1	1	1	1	1	1	1	1	1	1	1	4	A	4	4	4	3.2	6.8
15-Jul	4	5	7	9	8	12	11	7	6	5	3	2	2	2	4	2	5	3	2	A	5	8	19	12	6.1	18.8
16-Jul	11	12	11	9	8	14	8	6	5	8	2	1	2	1	1	1	2	1	A	5	4	11	14	13	6.5	13.8
17-Jul	11	12	11	8	9	9	8	7	5	5	4	4	4	3	4	3	2	A	4	4	6	8	13	9	6.6	13.0
18-Jul	6	5	4	9	12	13	12	9	5	3	2	1	1	1	1	1	A	3	2	3	3	3	4	4	4.5	12.7
19-Jul	4	3	3	2	2	5	7	4	1	1	1	1	1	1	1	A	2	2	1	1	1	1	2	1	2.2	7.4
20-Jul	2	2	2	2	1	2	2	2	1	1	1	1	1	1	A	2	2	1	2	2	2	4	2	1	1.7	4.4
21-Jul	2	2	3	3	4	6	3	3	1	1	1	1	1	A	2	1	1	1	1	1	1	3	3	3	2.1	5.9
22-Jul	3	3	2	1	2	2	1	1	1	1	1	0	A	2	1	1	1	1	1	1	2	4	5	3	1.8	5.1
23-Jul	3	6	5	5	6	7	8	6	3	2	1	A	2	1	1	0	0	0	1	1	3	5	6	5	3.5	8.1
24-Jul	4	3	3	4	4	5	6	5	1	1	A	4	1	P	P	P	P	1	1	1	4	7	6	5	3.4	6.6
25-Jul	5	5	5	7	7	7	8	7	4	4	3	2	A	3	2	1	1	1	1	2	2	3	4	4	3.7	8.0
26-Jul	5	5	5	5	5	6	4	4	4	4	3	A	4	4	2	2	2	1	1	1	3	2	3	2	3.4	6.2
27-Jul	4	5	5	5	5	6	6	5	2	1	A	2	1	1	1	1	1	1	1	1	1	1	2	2	2.5	5.9
28-Jul	2	2	1	2	2	2	2	3	4	A	2	1	1	1	1	0	0	0	1	1	3	4	5	3	1.9	4.7
29-Jul	2	2	4	3	4	6	6	6	A	5	2	1	1	1	1	2	1	1	2	2	2	4	4	3	2.9	6.0
30-Jul	3	3	3	4	5	5	5	A	3	1	1	1	0	1	0	0	0	1	1	1	0	1	1	1	1.8	5.4
31-Jul	1	1	1	0	1	1	A	3	3	3	3	2	2	1	0	3	2	5	2	1	1	3	2	3	1.8	4.7
	4.1	4.4	4.2	4.4	4.5	5.1	5.0	4.0	2.6	2.2	1.6	1.3	1.3	1.3	1.3	1.2	1.2	1.3	1.3	1.6	2.3	4.1	4.9	4.4	Diurnal Average	
	11.1	12.1	11.3	8.7	11.9	13.8	12.0	8.8	5.7	8.1	4.5	4.2	4.3	3.9	4.0	2.6	4.8	4.7	3.6	5.3	5.9	11.1	18.8	12.5	Diurnal Maximum	

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

Hourly Averages for NO_X at Portable-Spirit River
July 2008



Peace Airshed Zone Association
Summary of Hourly Maximums

Portable-Spirit River - Oxides of Nitrogen (NO_X) - ppb
July 1, 2008 to August 1, 2008

Maximum Value: 150 ppb on Jul 16 10:00

Maximum Daily Average: 19.5 ppb on Jul 16

Minimum Value: 0 ppb on Jul 30 16:00

Maximum Diurnal Average: 11.0 ppb at hour 22

Monthly Average: 5.76 ppb

Minimum Daily Average: 1.8 ppb on Jul 7

Minimum Diurnal Average: 2.4 ppb at hour 11

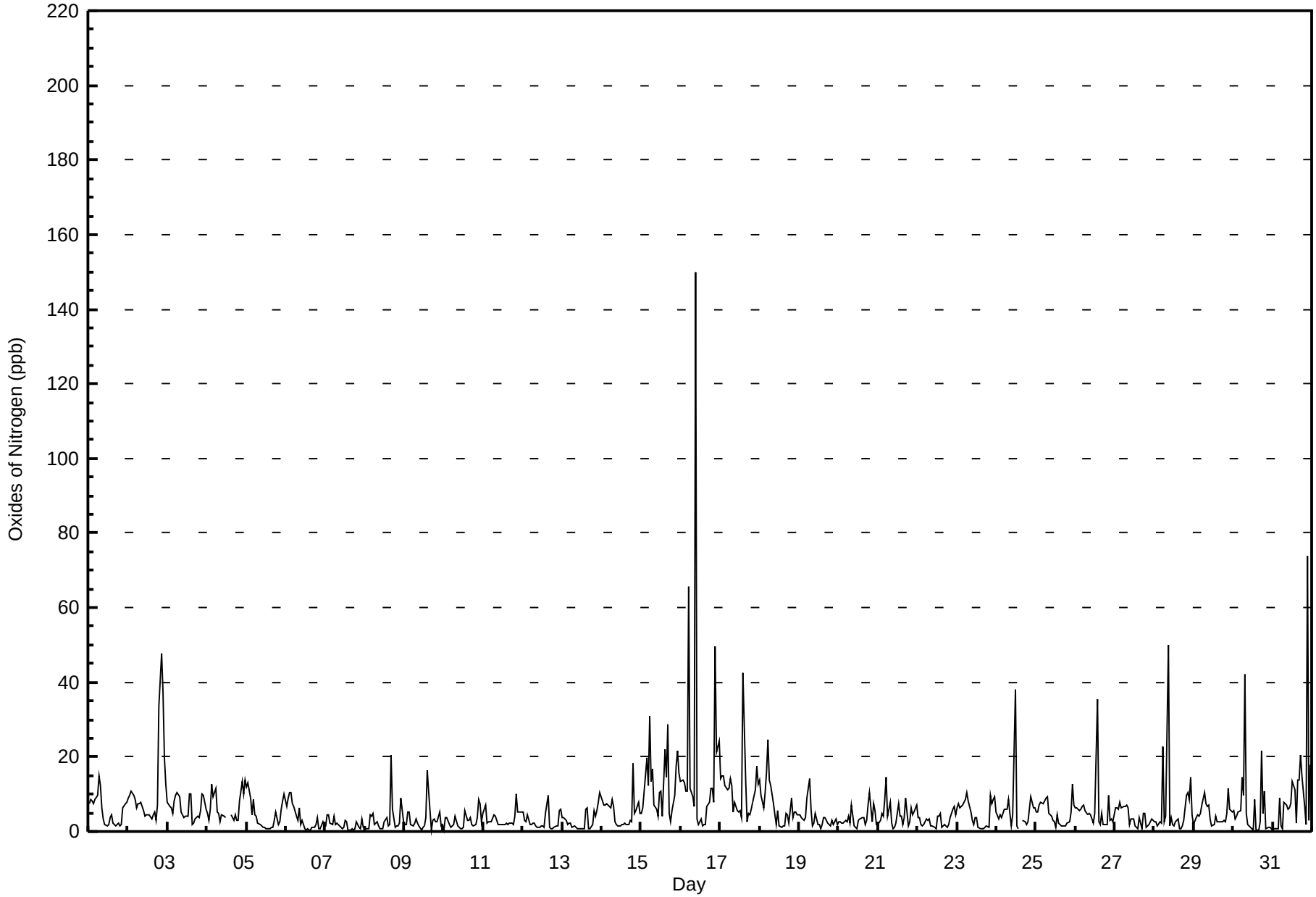
Percentiles: $P_1 = 0.5$ $P_{10} = 1.0$ $Q_1 = 1.8$ Median = 3.7 $Q_3 = 7.1$ $P_{90} = 11.2$ $P_{99} = 35.8$

Hours in Service:	744
Hours of Data:	700
Hours of Missing Data:	44
Hours of Calibration:	37
Percent Operational Time:	99.1

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Jul	7	9	8	8	8	10	15	12	6	3	2	1	2	A	4	2	2	2	2	2	2	6	8	8	5.6	14.8
2-Jul	9	10	11	10	9	6	8	7	8	5	4	5	A	4	3	5	5	3	7	P	P	37	20	13	9.0	37.4
3-Jul	8	7	6	5	8	10	10	9	5	4	4	A	4	10	10	2	2	3	4	P	6	10	10	6	6.6	10.5
4-Jul	5	3	6	13	9	12	5	5	3	4	A	C	C	C	C	A	3	4	3	3	8	13	10	14	6.8	13.7
5-Jul	12	13	9	A	9	4	4	2	2	1	1	1	1	1	1	1	1	3	5	2	3	6	8	10	4.4	13.1
6-Jul	7	9	A	10	8	7	4	3	6	2	3	1	1	1	0	1	1	1	2	4	1	1	3	2	3.3	10.4
7-Jul	2	A	4	2	2	4	2	2	2	1	1	1	3	3	0	1	1	1	1	3	1	1	3	1	1.8	4.5
8-Jul	1	1	1	A	4	5	2	2	2	1	1	1	2	4	1	2	21	6	1	1	2	2	9	3	3.2	20.6
9-Jul	2	2	A	5	2	2	2	3	2	1	1	1	2	4	16	11	0	3	3	3	3	5	1	2	3.3	16.2
10-Jul	0	A	4	2	1	1	2	4	1	1	1	1	1	6	3	3	4	2	1	2	4	8	7	2	2.7	8.5
11-Jul	A	7	2	2	2	3	4	4	3	2	2	2	2	2	2	2	2	2	2	4	10	5	5	A	3.3	10.2
12-Jul	5	3	3	4	2	2	2	2	1	1	1	2	2	1	5	10	1	1	1	1	1	2	A	6	2.5	9.5
13-Jul	4	4	3	2	2	2	1	1	1	1	1	1	1	1	6	6	1	1	2	5	4	A	8	11	3.0	10.6
14-Jul	8	7	7	8	7	6	9	7	2	2	1	2	2	2	2	2	2	3	3	18	A	6	8	5	5.1	18.5
15-Jul	5	6	11	20	12	31	13	17	7	6	4	10	11	4	22	15	29	5	2	A	10	18	22	16	12.8	31.1
16-Jul	14	14	13	11	11	66	11	9	7	150	3	2	3	2	2	2	7	8	A	11	8	50	21	24	19.5	149.7
17-Jul	14	15	15	12	11	11	14	12	5	8	6	5	6	4	42	14	3	A	5	6	8	11	18	13	11.2	42.4
18-Jul	14	10	7	10	16	25	14	12	8	5	2	6	1	1	1	1	A	5	2	9	4	5	5	5	7.3	24.6
19-Jul	4	4	3	3	4	9	14	6	1	2	5	2	2	1	2	A	4	2	2	2	3	2	3	2	3.6	14.3
20-Jul	3	3	2	2	3	3	4	2	7	1	1	1	3	3	A	4	2	3	7	10	3	7	5	2	3.6	10.4
21-Jul	2	3	5	4	8	15	4	8	2	1	1	2	8	A	4	2	4	9	1	3	6	5	5	7	4.7	14.7
22-Jul	4	4	2	2	2	4	3	3	1	1	1	1	A	4	5	1	2	1	1	2	4	6	7	4	2.8	6.9
23-Jul	6	8	6	7	8	9	10	8	5	3	2	A	4	1	1	1	1	1	1	1	10	8	8	9	5.1	10.3
24-Jul	5	3	5	4	5	6	6	9	5	1	A	38	1	P	P	P	P	2	2	3	6	9	6	6	6.5	38.0
25-Jul	5	5	7	8	7	8	9	9	5	4	3	3	A	5	2	1	1	1	1	2	3	5	13	7	5.0	12.8
26-Jul	6	6	6	6	7	7	6	4	5	4	3	A	5	35	3	2	5	2	2	2	10	3	3	3	5.9	35.3
27-Jul	6	6	6	8	6	7	7	7	7	2	A	3	2	1	1	4	1	5	5	1	1	2	3	3	4.0	8.0
28-Jul	3	3	2	3	2	23	3	4	50	A	4	2	2	2	3	1	1	2	3	10	10	9	14	5	6.9	49.9
29-Jul	2	4	5	4	5	7	11	7	A	7	4	2	2	4	2	2	2	2	3	2	5	12	6	5	4.5	11.6
30-Jul	6	4	4	5	6	14	10	A	5	2	1	1	0	9	0	0	3	22	5	11	1	1	1	1	4.8	21.8
31-Jul	1	1	1	1	9	1	A	8	7	6	6	8	13	11	2	14	14	21	15	7	2	74	3	18	10.5	73.7
	5.6	5.9	5.6	6.2	6.3	10.3	7.0	6.4	5.7	7.8	2.4	3.8	3.1	4.6	5.3	3.9	4.2	4.2	3.2	4.6	4.7	11.0	8.2	7.0	Diurnal Average	
	14.2	15.1	15.0	19.7	16.0	65.7	14.8	16.8	49.9	149.7	6.2	38.0	13.4	35.3	42.4	14.7	28.6	21.8	15.1	18.5	10.5	73.7	21.6	24.3	Diurnal Maximum	

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

Hourly Maximums for NO_X at Portable-Spirit River
July 2008



Peace Airshed Zone Association
Summary of Hourly Averages

Portable-Spirit River - Ozone (O_3) - ppb
July 1, 2008 to August 1, 2008

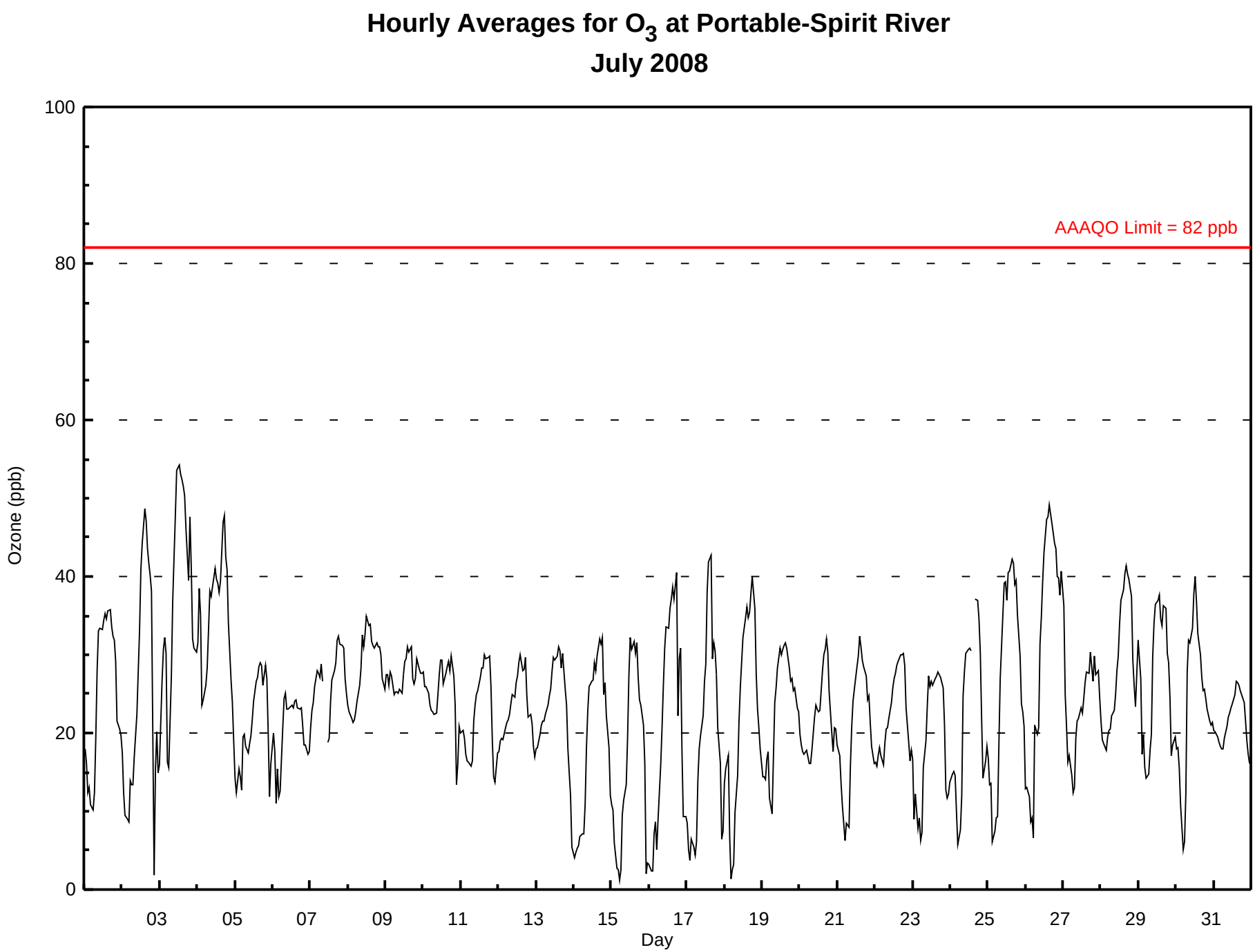
Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 54 ppb on Jul 3 13:00 Maximum Daily Average: 36.5 ppb on Jul 3

Minimum Value: 1 ppb on Jul 15 06:00 Minimum Daily Average: 16.0 ppb on Jul 15
Maximum Diurnal Average: 33.7 ppb at hour 16 Minimum Diurnal Average: 13.8 ppb at hour 6
Monthly Average: 23.97 ppb Percentiles: P_1 = 2.6 P_{10} = 10.8 Q_1 = 17.7 Median = 24.2 Q_3 = 29.9 P_{90} = 36.7 P_{99} = 48.5

Hours in Service:	744
Hours of Data:	702
Hours of Missing Data:	42
Hours of Calibration:	35
Percent Operational Time:	99.1

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Jul	18	16	12	13	11	10	12	19	28	33	33	33	34	A	35	36	36	34	32	32	29	22	21	20	24.7	35.7
2-Jul	17	12	9	9	9	14	13	13	17	22	28	33	A	44	49	47	44	42	40	P	P	15	20	15	24.5	48.7
3-Jul	16	27	31	32	30	16	16	27	37	42	48	A	54	53	52	51	50	46	40	P	41	32	31	30	36.5	54.3
4-Jul	32	39	35	24	24	26	28	33	38	37	A	41	40	39	38	39	47	48	43	41	34	27	24	19	34.6	47.8
5-Jul	14	12	15	A	13	19	20	18	18	19	20	22	24	27	27	28	29	29	26	29	27	20	12	16	21.0	29.0
6-Jul	20	18	A	15	12	13	21	24	25	23	23	23	24	23	24	24	23	23	23	21	19	18	17	18	20.6	25.0
7-Jul	21	A	24	26	28	28	27	29	27	C	C	A	19	24	27	28	29	32	32	31	31	31	27	25	27.3	32.3
8-Jul	24	23	22	A	22	23	24	26	28	33	31	33	35	34	34	32	31	31	31	31	31	30	27	26	28.7	34.9
9-Jul	27	28	A	28	27	25	25	25	25	26	25	27	29	29	31	30	31	27	26	27	30	28	28	28	27.5	31.0
10-Jul	28	A	26	25	24	23	23	22	22	25	28	29	29	26	28	29	29	28	30	27	24	13	16	21	25.0	29.9
11-Jul	A	20	19	17	16	16	16	17	22	24	25	25	27	28	28	30	30	30	30	26	19	14	14	A	22.4	29.9
12-Jul	18	19	19	19	21	21	22	22	24	25	25	26	27	29	30	28	28	30	25	22	22	21	A	17	23.5	30.1
13-Jul	18	18	20	21	22	22	22	24	25	26	28	30	29	30	31	31	28	30	26	23	18	A	12	5	23.4	30.9
14-Jul	4	5	5	6	7	7	7	11	18	23	26	27	27	29	28	30	32	31	32	25	A	22	18	12	18.8	32.1
15-Jul	11	10	6	3	3	1	3	10	11	13	19	27	32	31	32	30	32	27	24	A	21	16	2	3	16.0	32.3
16-Jul	3	2	2	7	9	5	9	16	21	26	31	34	33	36	37	39	37	40	A	29	31	18	9	9	21.1	40.5
17-Jul	8	5	4	6	5	4	6	14	18	20	22	27	29	38	42	43	30	A	30	28	21	16	6	8	18.7	42.7
18-Jul	14	15	17	7	1	2	3	10	15	21	26	29	32	35	36	35	A	38	40	36	28	23	21	18	21.8	40.0
19-Jul	14	14	14	17	18	12	10	17	24	26	28	31	30	31	31	A	31	28	27	27	25	26	23	23	22.9	31.2
20-Jul	20	18	18	17	18	17	16	16	18	22	24	23	23	23	A	30	31	32	30	25	20	18	21	21	21.7	32.1
21-Jul	19	17	14	11	8	6	8	8	16	21	24	26	29	A	32	31	29	28	27	24	25	21	18	16	19.9	32.3
22-Jul	16	16	17	18	17	16	19	20	21	22	24	26	A	28	29	29	30	30	30	29	23	19	16	18	22.3	30.1
23-Jul	17	9	12	8	9	6	7	16	19	23	27	A	27	26	27	27	28	27	27	26	21	13	12	12	18.5	27.9
24-Jul	14	15	15	15	10	6	8	12	25	28	A	31	31	P	P	P	P	37	35	30	22	14	17	18	20.0	36.9
25-Jul	17	13	14	6	7	9	9	18	27	35	39	39	A	40	41	42	42	39	40	35	30	24	23	21	26.5	42.2
26-Jul	13	13	12	9	9	7	21	20	21	31	35	A	43	47	48	49	48	47	44	44	40	40	38	41	31.2	49.2
27-Jul	36	25	21	16	17	15	12	13	19	21	A	23	22	24	26	28	28	30	28	27	30	28	28	25	23.6	36.3
28-Jul	22	19	19	18	20	20	21	22	23	A	28	30	34	37	38	40	41	40	40	37	29	26	23	28	28.5	41.3
29-Jul	32	27	17	20	16	14	15	18	A	30	34	36	37	38	35	34	36	36	30	29	25	17	18	19	26.6	37.7
30-Jul	18	18	16	11	5	6	12	A	32	31	33	38	40	37	33	30	27	25	26	24	23	21	21	21	23.9	40.0
31-Jul	20	20	20	19	18	18	A	19	21	22	23	23	24	25	27	26	26	25	25	24	22	19	17	16	21.7	26.6
	18.3	17.1	16.4	15.2	14.7	13.8	15.2	18.7	22.7	25.9	28.0	29.3	30.9	32.5	33.6	33.7	33.2	33.0	31.3	28.9	26.2	21.8	19.3	18.9	Diurnal Average	
	36.3	38.5	35.0	32.2	30.2	27.6	28.3	33.1	38.1	42.4	47.7	41.0	54.3	53.0	52.3	51.5	50.3	47.8	44.2	43.5	41.2	39.8	37.6	40.7	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 for O_3 at Portable-Spirit River
July 2008
AAAQO Limit = 82 ppb
Ozone (ppb)
100
80
60
40
20
0
03
05
07
09
11
13
15
17
19
21
23
25
27
29
31
Day

Peace Airshed Zone Association
Summary of Hourly Maximums

Portable-Spirit River - Ozone (O_3) - ppb
July 1, 2008 to August 1, 2008

Maximum Value: 56 ppb on Jul 3 13:00

Maximum Daily Average: 40.3 ppb on Jul 3

Minimum Value: 4 ppb on Jul 16 02:00

Minimum Daily Average: 19.8 ppb on Jul 15

Maximum Diurnal Average: 35.9 ppb at hour 16

Minimum Diurnal Average: 16.7 ppb at hour 6

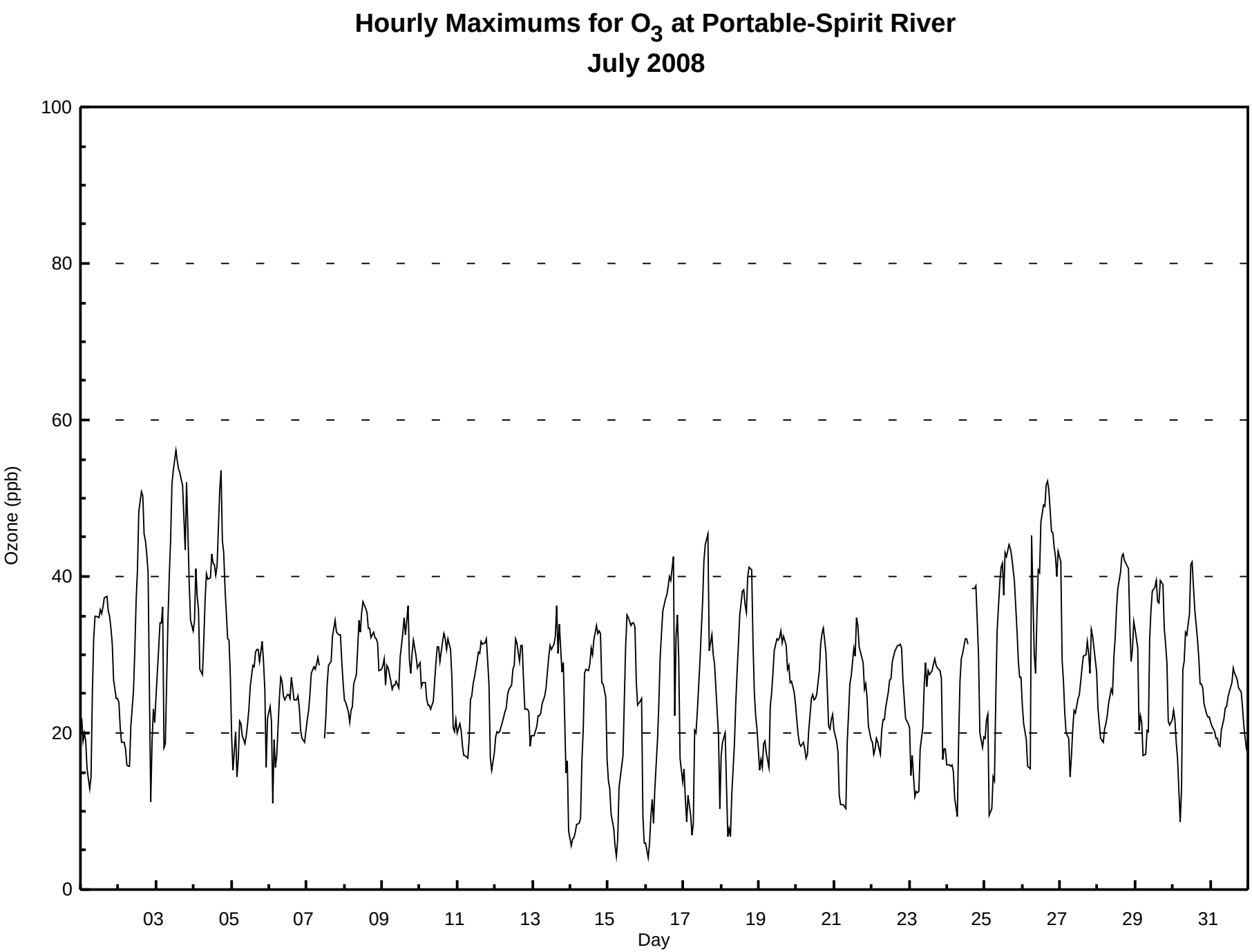
Monthly Average: 26.79 ppb

Percentiles: P_1 = 6.4 P_{10} = 15.6 Q_1 = 20.3 Median = 26.6 Q_3 = 32.2 P_{90} = 39.5 P_{99} = 52.1

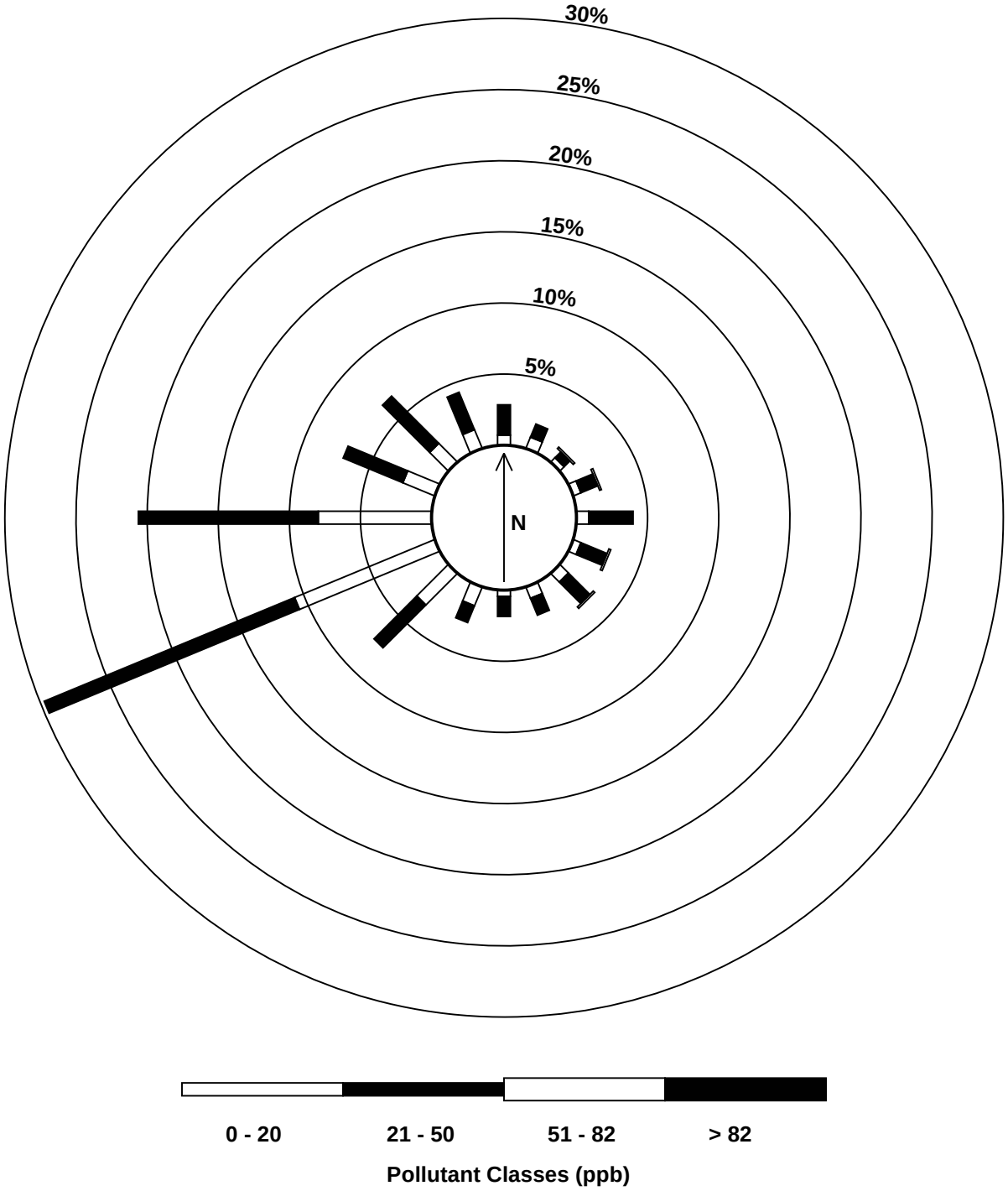
Hours in Service:	744
Hours of Data:	702
Hours of Missing Data:	42
Hours of Calibration:	35
Percent Operational Time:	99.1

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Jul	22	19	20	19	15	13	14	25	32	35	35	35	36	A	36	37	37	36	35	33	31	27	24	24	27.9	37.4
2-Jul	24	21	19	19	18	16	16	16	21	25	31	37	A	48	51	50	45	45	43	P	P	19	23	21	28.9	50.9
3-Jul	25	31	34	34	36	18	19	35	40	45	52	A	56	55	54	53	52	52	43	P	46	39	34	33	40.3	56.1
4-Jul	34	41	38	36	28	27	32	37	40	40	A	43	42	41	40	41	51	54	45	43	38	32	32	27	38.4	53.5
5-Jul	19	15	20	A	17	22	21	20	19	20	21	23	26	29	29	30	31	31	29	32	29	26	16	22	23.7	31.7
6-Jul	23	22	A	19	16	17	25	27	27	25	24	25	25	24	27	26	24	24	25	23	20	19	19	20	22.9	27.1
7-Jul	22	A	25	28	29	28	29	30	29	C	C	A	22	26	29	29	32	33	34	33	33	33	29	26	28.9	34.4
8-Jul	24	24	23	A	23	23	26	27	31	34	33	35	37	36	35	33	33	32	33	32	32	32	28	28	30.3	36.8
9-Jul	29	30	A	29	28	27	26	26	26	27	26	30	31	33	35	33	36	29	28	30	32	30	28	29	29.4	36.2
10-Jul	29	A	26	26	24	24	24	23	24	27	29	31	31	29	32	33	32	31	32	31	27	21	20	22	27.3	32.8
11-Jul	A	21	20	18	17	17	17	19	24	25	26	27	29	30	30	32	31	32	32	29	26	17	15	A	24.3	32.0
12-Jul	19	20	20	20	21	22	23	23	25	26	26	28	29	32	32	29	31	31	27	23	23	23	A	20	24.9	32.1
13-Jul	20	20	21	22	22	23	24	25	26	28	30	31	31	31	32	36	30	34	28	29	22	A	16	8	25.5	36.3
14-Jul	6	6	7	7	8	8	9	16	20	28	28	28	29	31	30	32	34	33	33	33	A	26	25	17	21.5	33.8
15-Jul	14	13	10	8	6	4	6	13	14	17	24	31	35	35	34	34	34	34	27	A	24	24	9	6	19.8	35.2
16-Jul	6	4	6	9	12	9	13	19	24	30	33	36	37	38	39	40	39	43	A	32	35	30	17	14	24.4	42.6
17-Jul	15	12	9	12	10	7	8	20	20	23	29	33	37	42	44	45	31	A	33	30	29	23	20	10	23.5	45.5
18-Jul	17	19	20	13	7	8	7	12	19	24	28	31	35	38	38	36	A	40	41	41	31	25	22	21	24.9	41.1
19-Jul	15	17	16	19	19	17	16	23	25	28	31	32	32	32	33	A	32	31	28	29	27	27	25	24	25.1	33.0
20-Jul	22	20	19	18	19	18	17	17	20	24	25	24	24	25	A	31	33	33	32	30	21	20	22	22	23.4	33.4
21-Jul	20	19	18	12	11	11	11	10	19	22	26	27	31	A	35	34	31	30	29	26	26	24	21	19	22.3	34.7
22-Jul	19	17	18	19	19	17	20	22	22	23	25	27	A	29	30	31	31	31	31	31	27	22	22	21	24.1	31.3
23-Jul	21	15	17	12	13	12	13	18	21	26	29	A	28	27	28	29	29	29	28	28	27	17	18	18	21.8	29.4
24-Jul	16	16	16	16	15	12	9	19	27	30	A	32	32	P	P	P	P	38	39	34	30	20	18	19	23.0	38.9
25-Jul	19	22	22	10	10	14	14	25	33	39	41	42	A	43	43	44	44	43	41	40	33	29	27	27	30.6	44.1
26-Jul	24	21	19	16	16	15	45	30	28	35	41	A	47	49	49	52	52	51	46	46	44	43	40	43	37.0	52.2
27-Jul	42	29	27	23	20	19	14	17	21	23	A	24	25	27	28	30	30	32	30	28	33	32	29	28	26.6	41.8
28-Jul	23	21	19	19	21	21	22	24	26	A	30	32	36	38	41	43	43	42	42	41	34	29	31	34	30.9	42.8
29-Jul	33	31	20	22	21	17	17	20	A	32	36	38	39	39	37	37	40	39	33	31	29	21	21	22	29.4	39.5
30-Jul	23	22	19	17	9	13	28	A	33	33	35	41	42	39	36	32	30	26	26	26	24	22	22	22	26.9	41.8
31-Jul	21	21	20	19	19	19	A	20	22	23	23	25	25	26	28	28	27	27	26	25	23	21	19	18	22.9	28.3
	21.6	20.2	19.5	18.6	17.7	16.7	18.8	22.0	25.2	28.1	30.2	31.4	33.1	34.8	35.6	35.9	35.4	35.5	33.3	31.7	29.5	25.7	23.1	22.2	Diurnal Average	
	41.8	40.9	37.5	35.7	36.2	28.2	45.2	37.1	40.4	44.7	51.9	42.8	56.1	54.8	53.8	53.2	52.3	53.5	45.7	45.6	45.9	42.6	40.1	43.2	Diurnal Maximum	

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


Hourly Maximums for O_3 at Portable-Spirit River
July 2008
Ozone (ppb)
100
80
60
40
20
0
03
05
07
09
11
13
15
17
19
21
23
25
27
29
31
Day

Pollutant Rose for O_3 at Portable-Spirit River
July 2008



Peace Airshed Zone Association
Summary of Eight Hour Running Averages

Portable-Spirit River - Ozone (O_3) - ppb
July 1, 2008 to August 1, 2008

Number of Exceedences (AAAQO): 8-hr: 0
Maximum Value: 50.7 ppb on Jul 3 18:00

Minimum Value: 4.3 ppb on Jul 16 06:00

Percentiles: P_1 = 6.1 P_{10} = 13.4 Q_1 = 18.7 Median = 24.0 Q_3 = 28.6 P_{90} = 34.3 P_{99} = 45.7

Hours in Service:	744
Hours of Data:	730
Hours of Missing Data:	14
Hours of Calibration:	10
Percent Operational Time:	99.5

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Jul	26	23	21	19	17	15	14	14	15	17	20	23	26	28	31	33	34	34	34	34	33	32	30	28	34.3
2-Jul	26	23	20	17	15	14	13	12	12	13	16	19	20	24	29	34	38	41	43	44	44	39	35	29	44.3
3-Jul	25	22	21	22	23	23	23	24	27	29	31	31	34	40	45	48	50	51	50	50	48	45	42	39	50.7
4-Jul	36	35	34	33	31	30	30	30	31	31	30	33	35	37	38	39	40	42	42	42	41	40	38	35	41.8
5-Jul	31	27	23	21	18	17	16	16	17	17	18	19	20	21	22	23	24	26	26	27	28	27	25	23	31.2
6-Jul	22	21	20	18	16	15	16	18	18	19	20	21	22	23	24	24	23	23	23	23	23	22	21	20	23.7
7-Jul	20	20	20	20	22	23	24	26	27	27	27	N	N	N	N	N	N	26	27	28	29	30	30	30	30.2
8-Jul	29	28	27	26	25	24	23	23	24	25	27	27	29	30	32	32	33	32	33	32	32	31	31	30	32.7
9-Jul	29	29	29	28	28	27	27	26	26	26	26	26	26	27	27	28	29	29	29	29	29	29	28	28	29.3
10-Jul	28	28	28	27	27	26	25	24	24	24	24	24	25	26	26	27	28	28	29	28	28	26	25	24	28.5
11-Jul	23	22	20	19	18	18	18	17	18	18	19	20	21	23	24	26	27	28	29	29	28	26	24	23	28.6
12-Jul	21	20	18	18	18	19	20	20	21	22	22	23	24	25	26	27	27	28	28	27	27	26	25	24	27.9
13-Jul	22	20	20	20	20	20	20	21	22	23	24	25	26	27	28	29	29	30	29	29	27	27	24	20	29.6
14-Jul	17	13	10	8	6	6	6	6	8	10	13	16	18	21	24	26	28	29	29	29	30	29	27	25	29.6
15-Jul	22	19	15	12	11	8	6	6	6	6	8	11	15	18	22	25	27	29	29	30	28	26	22	18	29.7
16-Jul	14	10	7	7	6	4	5	7	9	12	15	19	22	26	29	32	34	36	37	36	36	33	29	25	36.6
17-Jul	21	16	14	11	8	7	6	7	8	10	12	15	17	22	26	30	31	33	34	34	33	30	25	20	34.1
18-Jul	17	17	16	13	11	9	8	9	9	10	11	13	17	21	25	29	31	33	35	36	35	34	31	29	35.9
19-Jul	27	24	21	19	17	16	15	14	16	17	19	21	22	25	27	29	30	30	30	29	29	28	27	26	30.0
20-Jul	25	24	23	21	20	19	18	18	17	18	18	19	20	21	21	23	25	26	27	28	27	27	26	25	27.7
21-Jul	23	21	19	17	16	14	13	11	11	11	13	15	17	19	22	25	27	28	29	29	28	27	26	24	28.9
22-Jul	22	21	19	18	18	17	17	17	18	19	20	21	21	23	24	25	27	28	29	29	28	27	26	24	29.2
23-Jul	23	20	18	15	13	12	11	10	11	13	14	15	18	21	24	25	26	27	27	27	26	25	23	21	27.1
24-Jul	19	17	16	14	13	12	12	12	13	15	15	17	20	22	N	N	N	N	N	N	N	N	26	25	25.7
25-Jul	24	21	18	15	13	13	12	12	13	16	19	23	25	30	34	38	40	40	40	40	39	36	34	32	40.4
26-Jul	28	25	21	18	15	13	13	13	14	16	19	21	25	31	35	39	43	45	47	46	46	45	44	43	46.6
27-Jul	41	38	35	32	29	26	23	19	17	17	16	17	18	19	21	24	25	26	26	27	28	28	28	28	41.1
28-Jul	27	26	25	23	22	21	20	20	20	20	22	23	25	28	30	33	35	36	38	39	38	37	35	33	38.5
29-Jul	32	30	28	25	24	22	21	20	18	18	21	23	26	30	32	35	35	36	35	34	33	30	28	26	35.7
30-Jul	24	22	20	18	15	14	13	12	14	16	19	23	28	32	35	34	34	33	32	30	28	26	25	24	34.8
31-Jul	23	22	21	21	20	20	19	19	19	20	20	21	21	22	23	24	24	25	25	25	25	24	23	22	25.3
	41.1	38.4	35.5	32.9	30.8	30.0	29.7	30.0	30.9	30.7	31.0	32.6	34.8	39.6	44.8	48.3	50.2	50.7	49.6	49.6	47.7	44.9	43.6	42.6	
	Diurnal Maximums																								

N - Not Valid
Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 65 ppb

Peace Airshed Zone Association
Summary of Hourly Averages

Portable-Spirit River - External Temperature (ET) - ^{o}C
July 1, 2008 to August 1, 2008

Maximum Value: 30 ^{o}C on Jul 3 17:00

Maximum Daily Average: 22.3 ^{o}C on Jul 3

Minimum Value: 7 ^{o}C on Jul 15 06:00

Maximum Diurnal Average: 22.7 ^{o}C at hour 16

Monthly Average: 17.61 ^{o}C

Minimum Daily Average: 12.7 ^{o}C on Jul 14

Minimum Diurnal Average: 12.1 ^{o}C at hour 5

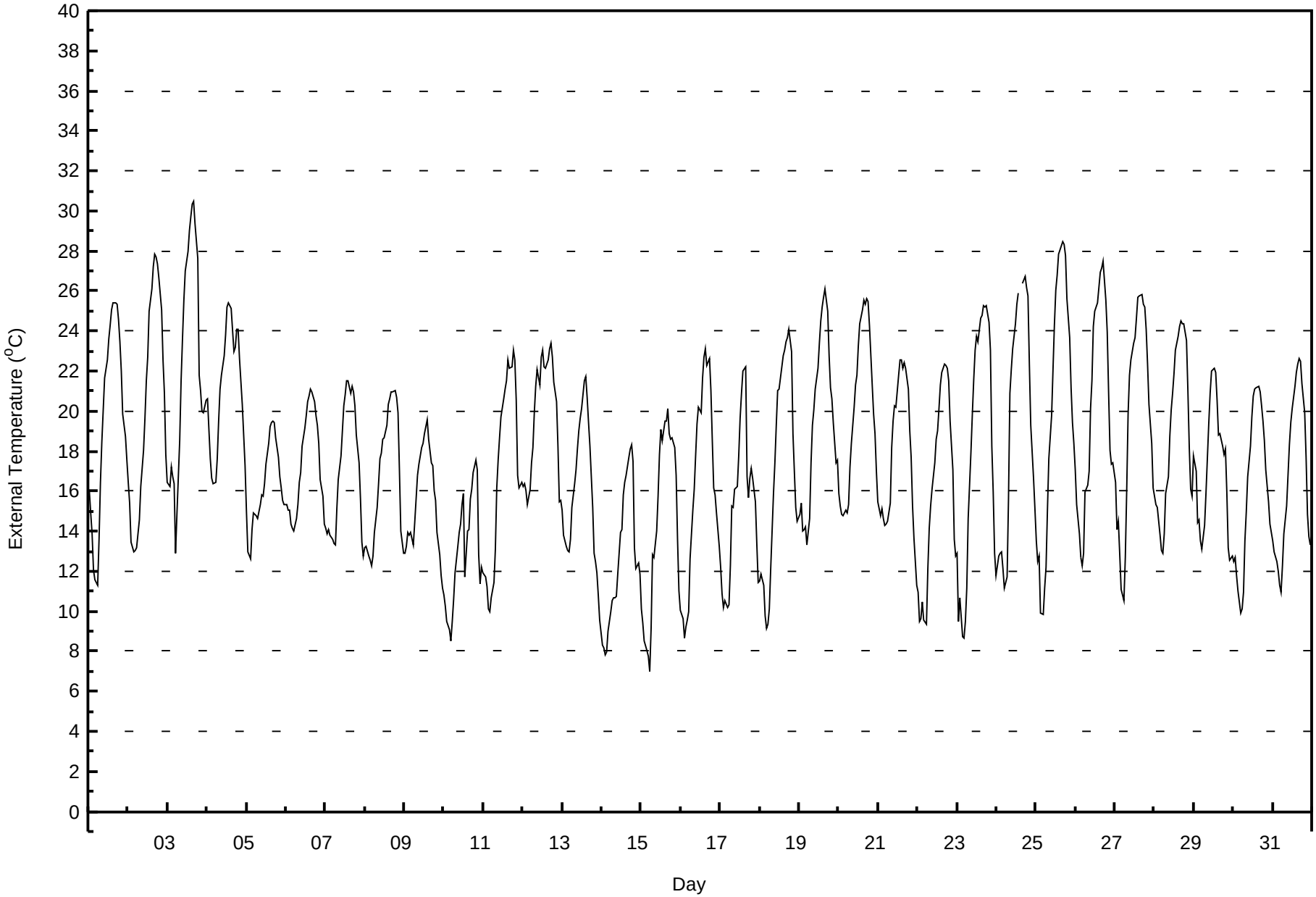
Percentiles: P_1 = 8.5 P_{10} = 11.4 Q_1 = 13.9 Median = 17.4 Q_3 = 21.2 P_{90} = 24.3 P_{99} = 28.2

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) 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	16	15	14	12	12	11	14	16	18	20	22	23	24	24	25	25	25	25	25	23	22	20	19	18	19.5	25.4
2-Jul	16	15	13	13	13	13	14	15	16	18	20	22	23	25	26	27	28	28	27	27	25	23	21	18	20.2	27.8
3-Jul	16	16	17	17	16	13	15	19	22	24	26	27	28	29	30	30	30	29	28	22	21	20	20	21	22.3	30.5
4-Jul	21	19	18	17	16	16	18	19	21	22	23	24	25	25	25	25	23	23	24	24	23	20	19	17	21.2	25.4
5-Jul	15	13	13	14	15	15	15	15	15	16	16	16	17	18	19	19	19	19	19	18	17	16	16	15	16.3	19.5
6-Jul	15	15	15	14	14	14	15	15	16	17	18	19	20	20	21	21	21	21	20	19	18	17	16	14	17.3	21.1
7-Jul	14	14	14	14	14	13	13	15	17	18	19	20	21	21	22	21	21	21	20	19	17	16	13	13	17.1	21.5
8-Jul	13	13	13	13	12	13	14	15	16	18	18	19	19	19	20	21	21	21	21	21	20	17	14	13	16.8	21.0
9-Jul	13	13	14	14	14	13	14	16	17	17	18	18	19	19	20	19	17	17	16	16	14	13	12	11	15.6	19.6
10-Jul	11	10	10	9	8	9	11	12	13	14	14	15	16	12	14	14	16	16	17	18	17	13	11	12	13.0	17.6
11-Jul	12	12	11	10	10	11	11	13	16	18	19	20	21	21	21	23	22	22	23	23	21	17	16	16	17.0	23.1
12-Jul	16	16	16	15	16	17	18	20	21	22	21	23	23	22	22	23	23	23	23	21	21	18	15	16	19.7	23.4
13-Jul	15	14	13	13	13	14	15	16	17	18	19	20	20	22	22	21	19	18	15	13	13	12	11	10	15.9	21.7
14-Jul	8	8	8	8	9	10	11	11	11	11	12	14	14	16	16	17	18	18	18	17	13	12	12	12	12.7	18.3
15-Jul	10	9	9	8	8	7	9	13	13	14	16	18	19	19	19	20	20	19	19	19	18	17	14	11	14.4	20.1
16-Jul	10	10	9	9	10	10	13	15	16	18	19	20	20	22	23	23	22	23	21	19	16	16	15	13	16.3	23.1
17-Jul	12	11	10	11	10	10	12	15	15	16	16	18	20	21	22	22	17	16	17	17	17	15	13	11	15.2	22.2
18-Jul	12	12	11	10	9	9	10	12	16	17	19	21	21	22	23	23	23	24	24	23	19	17	15	15	17.0	24.1
19-Jul	15	15	14	14	14	13	15	17	19	20	21	22	23	25	25	26	26	25	23	21	21	19	17	18	19.6	26.1
20-Jul	16	15	15	15	15	15	15	17	18	20	21	22	23	24	25	26	25	26	25	24	21	20	19	17	20.0	25.6
21-Jul	15	15	15	15	14	14	15	15	18	20	20	20	22	23	23	22	22	22	21	19	18	15	14	11	17.8	22.6
22-Jul	11	9	10	10	10	9	12	14	15	16	17	19	19	20	21	22	22	22	22	22	19	17	14	13	16.1	22.3
23-Jul	13	9	11	9	9	10	11	15	18	20	22	23	24	23	25	25	25	25	25	24	23	18	16	13	18.1	25.3
24-Jul	12	13	13	13	12	11	12	16	21	22	23	24	25	P	P	P	P	27	26	26	22	19	17	15	18.4	26.7
25-Jul	14	12	13	10	10	11	12	15	18	20	22	24	26	27	28	28	28	28	28	26	24	21	19	18	20.1	28.4
26-Jul	17	15	14	13	12	13	16	16	17	20	22	24	25	25	26	27	27	28	26	24	21	18	17	17	20.0	27.5
27-Jul	16	14	15	13	11	11	13	16	20	22	23	23	24	25	26	26	26	25	25	24	22	20	18	16	19.7	25.8
28-Jul	16	15	15	14	13	13	14	16	17	19	20	21	22	23	24	24	25	24	24	24	21	18	16	16	18.9	24.5
29-Jul	18	17	14	15	13	13	14	16	18	19	21	22	22	22	21	19	19	18	18	18	16	13	13	13	17.1	22.1
30-Jul	13	13	12	11	10	10	11	14	15	17	18	20	21	21	21	21	21	20	20	19	17	15	14	14	16.1	21.2
31-Jul	14	13	12	12	11	11	12	14	15	17	18	19	20	21	22	22	23	22	21	20	18	15	14	13	16.7	22.6
	14.0	13.3	12.9	12.3	12.1	12.1	13.3	15.3	17.0	18.3	19.5	20.6	21.4	21.9	22.5	22.7	22.6	22.5	22.0	20.9	19.2	17.0	15.5	14.5	Diurnal Average	
	20.6	19.1	17.6	16.7	16.4	17.4	18.2	19.9	21.5	23.6	25.5	27.0	28.0	29.0	29.7	30.3	30.5	29.4	27.7	26.6	25.1	22.6	20.9	20.6	Diurnal Maximum	

P - Power Failure

Hourly Averages for External Temperature at Portable-Spirit River
July 2008



Peace Airshed Zone Association
Summary of Hourly Averages

Portable-Spirit River - Relative Humidity (RH) - %
July 1, 2008 to August 1, 2008

Maximum Value: 96 % on Jul 14 01:00

Maximum Daily Average: 80.6 % on Jul 14

Minimum Value: 18 % on Jul 23 19:00

Minimum Daily Average: 36.1 % on Jul 31

Maximum Diurnal Average: 73.0 % at hour 6

Minimum Diurnal Average: 34.8 % at hour 16

Monthly Average: 53.52 %

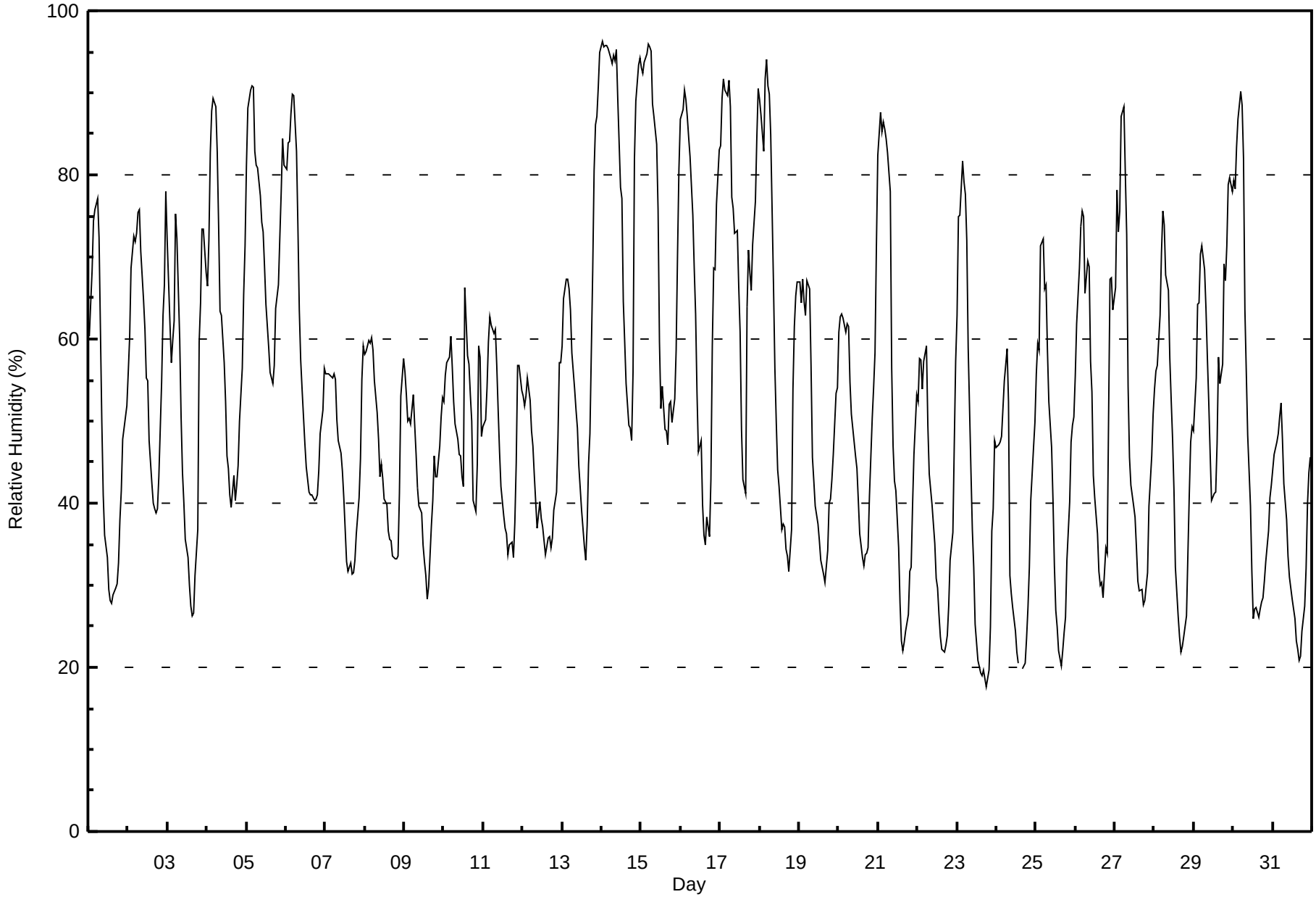
Percentiles: P_1 = 20.6 P_{10} = 29.8 Q_1 = 38.9 Median = 51.4 Q_3 = 66.5 P_{90} = 83.3 P_{99} = 95.3

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) 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	60	64	68	74	76	77	72	61	50	41	36	33	29	28	28	29	30	30	33	38	42	48	51	52	47.9	77.1
2-Jul	56	60	69	72	72	73	75	76	71	65	61	55	55	48	42	40	39	39	39	P	P	63	67	78	59.8	78.0
3-Jul	72	62	57	60	62	75	72	60	50	44	40	36	33	30	28	26	27	31	37	P	64	73	73	68	51.4	75.3
4-Jul	66	72	83	88	89	88	83	74	63	63	57	52	46	44	41	39	43	40	42	45	50	56	65	71	61.0	89.4
5-Jul	81	88	90	91	91	83	81	81	77	74	73	69	64	59	56	55	55	57	64	67	72	78	84	81	73.8	90.9
6-Jul	81	84	84	87	90	90	83	74	64	58	54	47	44	43	41	41	41	40	41	41	44	49	51	56	59.5	89.8
7-Jul	56	56	56	56	55	56	55	50	48	46	44	41	37	33	32	33	31	31	33	36	41	45	55	59	45.2	59.2
8-Jul	58	58	60	59	60	59	55	51	48	43	45	43	40	40	37	36	35	34	33	33	34	41	53	58	46.4	60.2
9-Jul	56	53	50	50	50	53	50	46	42	40	39	35	33	31	28	30	37	40	46	43	43	47	51	53	43.6	56.0
10-Jul	52	56	57	58	60	57	52	50	48	46	46	43	42	66	58	57	53	50	40	39	45	59	58	48	51.7	66.3
11-Jul	49	50	54	60	63	62	61	61	57	51	46	42	38	37	36	34	35	35	33	38	45	57	57	54	48.1	62.7
12-Jul	53	52	53	55	52	49	47	43	40	37	40	38	37	35	34	36	36	35	36	39	41	48	57	57	43.8	57.2
13-Jul	59	65	67	67	66	64	58	54	51	49	45	42	39	35	33	37	45	49	68	80	86	87	91	95	59.7	94.9
14-Jul	96	96	96	96	95	94	93	94	94	95	89	78	77	65	60	55	49	49	48	56	82	89	93	94	80.6	96.3
15-Jul	93	92	94	95	96	96	95	89	87	84	76	60	52	54	49	49	47	52	52	50	53	59	70	81	71.8	95.9
16-Jul	87	88	90	89	87	85	82	75	69	63	53	46	48	40	36	35	38	36	43	59	69	68	76	83	64.4	90.4
17-Jul	83	89	92	90	90	91	88	77	76	73	73	66	61	49	43	41	64	71	68	66	72	77	84	91	74.0	91.6
18-Jul	89	87	83	92	94	91	90	85	67	56	50	44	42	37	37	37	34	34	32	37	54	61	65	67	61.1	94.1
19-Jul	67	64	67	65	63	67	66	57	46	43	40	37	35	33	32	31	30	34	40	41	43	46	53	54	48.1	67.3
20-Jul	61	63	63	63	61	62	62	55	51	47	46	44	40	36	33	32	34	34	35	41	50	54	58	71	49.8	71.3
21-Jul	82	88	85	86	86	84	83	78	57	47	43	41	35	28	23	22	23	24	27	32	32	40	46	53	51.8	87.6
22-Jul	52	58	58	54	57	59	49	44	42	40	35	31	30	26	24	22	22	23	24	27	33	36	47	57	39.6	59.1
23-Jul	63	75	75	82	79	78	72	59	44	37	32	25	23	21	19	19	20	19	18	20	25	37	39	48	42.8	81.7
24-Jul	47	47	48	48	52	55	59	52	31	29	27	24	22	P	P	P	P	21	24	27	32	40	47	50	39.1	58.8
25-Jul	56	59	59	71	72	66	67	59	52	47	40	32	27	25	22	20	22	24	26	33	40	47	49	51	44.5	72.2
26-Jul	55	62	69	74	76	75	66	69	69	57	53	43	41	36	32	30	30	28	35	34	51	67	67	64	53.5	75.6
27-Jul	66	78	73	76	87	88	80	73	54	46	42	40	38	34	30	29	29	28	28	30	32	40	46	51	50.8	88.4
28-Jul	54	56	57	63	70	76	74	68	66	58	53	48	42	32	26	24	22	22	24	26	34	41	47	49	47.1	75.6
29-Jul	49	55	64	64	70	71	69	64	58	52	46	40	41	41	47	58	55	57	69	67	71	79	80	78	60.3	79.7
30-Jul	79	78	83	87	90	89	82	64	56	48	40	32	26	27	27	26	27	28	28	30	33	37	41	42	50.0	90.2
31-Jul	44	46	47	49	51	52	48	42	38	34	31	30	28	26	23	22	21	21	24	27	32	40	44	46	36.1	52.3
	65.3	67.8	69.4	71.6	73.0	73.0	70.0	64.0	56.9	52.0	48.2	43.2	40.2	38.0	35.3	34.8	35.9	36.0	38.4	41.4	48.1	55.2	60.3	63.2	Diurnal Average	
	96.3	95.6	95.8	95.8	95.9	95.6	95.1	94.5	93.9	95.3	89.4	78.5	77.2	66.3	59.6	57.7	64.0	70.9	69.2	80.5	86.1	89.0	93.4	94.9	Diurnal Maximum	

P - Power Failure

Hourly Averages for Relative Humidity at Portable-Spirit River
July 2008



Peace Airshed Zone Association
Summary of Hourly Averages

Portable-Spirit River
July 1, 2008 to August 1, 2008
WS (km/h), WD (deg)

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1 Spd	2	3	4	8	7	6	2	1	6	8	11	12	12	13	12	11	12	15	16	19	13	6	2	3	5.9	19.3
Dir	119	200	274	278	270	270	296	338	75	82	92	88	105	114	100	98	107	95	119	125	126	119	141	132	109.5	124.5
2 Spd	1	2	4	3	1	2	4	5	5	7	9	9	10	13	13	13	14	14	14	15	12	8	2	4	6.4	15.0
Dir	330	304	258	249	174	45	100	90	106	71	81	114	107	114	126	118	128	126	113	108	123	140	125	225	115.7	108.1
3 Spd	2	6	4	10	2	2	3	2	1	2	2	6	7	7	7	10	8	9	7	17	10	5	9	9	2.0	16.9
Dir	264	230	222	243	249	99	4	328	204	119	138	126	126	101	63	43	86	80	79	9	120	125	174	227	104.7	8.8
4 Spd	8	4	2	3	8	9	7	9	4	5	5	6	8	5	5	9	8	8	10	4	1	5	4	3	5.3	9.8
Dir	247	292	297	231	239	240	216	234	268	271	271	270	260	299	293	270	255	262	253	265	265	346	226	274	259.5	252.9
5 Spd	4	2	2	4	4	3	3	3	4	5	12	13	9	7	5	6	8	9	11	10	7	5	4	1	0.7	12.8
Dir	262	274	268	288	316	299	297	289	267	300	351	353	350	3	56	89	96	140	181	202	200	163	147	161	303.0	353.4
6 Spd	0	1	1	4	2	3	3	6	9	10	7	12	13	10	13	12	8	11	13	14	18	13	11	9	8.3	17.7
Dir	241	265	142	208	245	258	259	253	253	256	258	247	244	255	251	253	264	258	253	251	249	253	252	257	251.6	248.6
7 Spd	11	8	7	10	13	13	13	8	9	7	6	6	8	7	9	6	9	9	8	9	18	17	11	14	9.6	17.6
Dir	253	258	261	256	254	255	255	264	263	269	288	285	269	275	261	271	259	259	263	261	244	246	234	239	256.9	244.2
8 Spd	17	15	12	13	12	13	12	13	12	12	12	12	11	10	15	13	9	8	8	9	8	12	8	5	11.2	16.9
Dir	243	251	257	254	254	251	254	252	251	257	254	247	254	256	248	253	261	264	258	254	253	240	228	240	251.5	242.7
9 Spd	5	6	12	10	7	7	11	13	16	17	15	15	14	16	14	17	11	14	8	12	16	15	12	17	12.4	17.1
Dir	222	253	249	248	256	257	256	258	252	247	250	250	251	252	252	246	259	250	268	255	250	246	243	242	250.4	247.1
10 Spd	15	13	12	12	12	13	12	7	5	7	9	8	7	7	5	3	2	8	7	2	1	6	10	8	6.4	15.1
Dir	245	251	249	250	250	253	255	269	288	315	332	329	323	315	228	342	179	322	327	320	269	235	246	259	271.0	245.3
11 Spd	8	9	6	6	7	6	5	4	7	6	6	7	7	7	8	6	6	5	4	2	5	8	9	13	5.5	12.9
Dir	260	260	267	264	262	265	265	272	317	309	285	312	314	314	323	306	317	326	302	265	231	227	238	240	278.4	240.0
12 Spd	12	11	9	12	14	15	16	15	13	16	14	14	10	9	13	20	11	16	10	8	7	6	7	5	11.8	20.2
Dir	243	248	249	242	246	251	250	252	255	251	248	254	260	259	258	250	262	253	265	265	264	259	251	254	252.8	249.7
13 Spd	5	6	8	10	9	10	9	7	6	6	11	11	9	8	7	11	19	14	9	6	8	5	2	2	6.9	19.1
Dir	257	259	258	254	257	256	260	269	276	284	281	285	272	283	278	328	345	345	289	269	241	259	288	276	283.0	345.1
14 Spd	5	4	4	3	4	1	2	4	6	6	2	2	3	4	10	7	3	2	2	1	6	4	2	4	1.9	10.1
Dir	256	257	260	262	256	287	290	330	344	7	31	353	337	329	6	27	148	171	137	236	259	247	270	254	310.1	6.4
15 Spd	5	3	0	2	1	1	1	3	6	4	2	2	3	9	4	4	3	10	16	12	4	3	8	9	3.3	16.1
Dir	257	261	345	263	278	320	241	323	336	331	316	228	292	343	325	334	26	10	3	5	351	290	249	244	325.1	3.3
16 Spd	4	2	3	5	6	2	1	3	4	3	3	4	7	4	4	6	10	7	8	4	2	4	2	4	1.7	10.1
Dir	255	273	284	260	256	269	304	330	350	355	4	266	336	329	282	154	182	144	141	249	262	219	266	261	252.8	181.8
17 Spd	7	5	3	2	2	1	0	2	3	0	3	2	2	5	3	1	19	8	8	3	3	3	4	5	1.9	18.7
Dir	249	258	264	265	299	294	139	6	14	269	67	146	354	57	79	297	243	265	236	225	42	121	208	240	252.4	243.2
18 Spd	3	3	2	4	2	1	1	2	2	6	3	4	6	4	5	5	5	4	1	3	9	7	9	10	3.3	9.6
Dir	232	248	263	358	211	147	274	340	321	329	309	305	319	275	304	297	228	306	274	234	251	252	249	249	274.5	249.1
19 Spd	8	6	8	9	6	2	3	1	7	10	9	8	8	7	9	10	10	11	12	16	13	13	11	14	8.4	15.6
Dir	251	257	255	251	254	12	103	70	261	252	239	236	247	247	239	241	251	256	258	249	249	251	240	245	248.5	248.7
20 Spd	10	9	9	8	9	8	8	9	12	15	19	18	14	17	17	13	12	11	8	4	7	3	3	5	9.7	18.8
Dir	239	238	238	230	232	228	221	235	239	244	236	235	233	231	231	235	203	216	233	273	322	306	291	272	236.0	235.6
21 Spd	4	3	1	4	3	1	4	4	16	19	19	16	13	12	17	12	10	7	6	5	4	2	2	5	7.5	19.5
Dir	268	223	238	229	226	48	210	239	242	244	241	251	253	259	250	260	259	269	283	299	285	277	283	235	252.0	240.7
22 Spd	7	10	10	13	10	7	7	5	4	6	4	5	6	6	3	1	5	7	9	7	9	9	7	1	2.8	12.7
Dir	239	235	234	240	246	255	257	266	278	323	306	231	245	239	249	306	150	84	72	73	119	133	150	64	226.5	239.9

Peace Airshed Zone Association
Summary of Hourly Averages

Portable-Spirit River
July 1, 2008 to August 1, 2008
WS (km/h), WD (deg)

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
23 Spd	2	3	1	2	5	2	0	1	3	3	2	4	5	6	4	6	5	6	4	4	2	6	9	4	2.8	9.1
Dir	189	44	319	264	269	211	159	20	311	291	312	302	297	330	284	281	268	305	309	338	198	244	236	244	282.4	235.6
24 Spd	7	8	8	10	2	2	2	2	4	5	5	5	5	P	P	P	P	4	2	1	4	9	8	9	4.3	9.9
Dir	238	254	251	251	299	33	58	95	274	289	300	293	281	P	P	P	P	264	311	284	251	236	242	237	260.1	251.0
25 Spd	5	3	1	1	3	4	4	4	3	5	6	11	12	11	13	9	11	15	16	9	6	5	1	2	4.5	16.1
Dir	254	245	320	314	245	272	256	347	24	41	59	76	78	85	102	92	83	88	89	83	79	102	84	231	82.1	89.0
26 Spd	3	6	5	5	5	1	8	7	5	6	9	3	4	5	9	8	4	12	15	7	14	11	8	6	1.1	14.8
Dir	274	274	273	273	267	227	128	33	32	14	50	310	310	322	23	59	226	240	245	246	140	149	190	194	241.4	244.5
27 Spd	2	4	4	1	2	2	0	1	2	6	7	6	4	6	7	6	6	5	5	5	3	6	3	7	3.2	7.1
Dir	193	128	246	304	69	79	82	146	273	266	253	253	291	265	264	291	284	284	275	266	272	342	272	252	270.4	252.3
28 Spd	6	7	6	3	4	4	3	3	3	7	4	4	4	3	6	2	6	8	6	6	8	9	2	6	2.9	9.0
Dir	258	258	265	271	263	263	270	293	309	313	302	306	316	262	214	247	209	180	200	174	156	155	137	171	232.7	154.8
29 Spd	11	5	5	4	3	3	2	1	5	4	5	2	5	6	11	15	11	11	4	2	2	6	7	7	2.7	14.5
Dir	168	149	28	353	278	260	270	298	341	2	9	320	120	170	227	241	241	227	323	320	269	217	209	200	233.0	241.2
30 Spd	5	6	4	0	2	5	4	7	8	6	7	7	9	10	11	12	12	14	8	9	10	14	17	18	8.0	17.5
Dir	199	195	170	227	290	241	251	262	265	281	273	278	275	274	266	264	268	262	273	266	264	253	251	254	259.4	253.7
31 Spd	15	14	18	17	14	14	13	15	13	12	9	10	14	8	7	7	9	9	12	14	9	8	5	5	11.2	17.9
Dir	256	257	254	254	254	253	256	258	263	264	269	262	249	264	281	274	253	263	250	242	246	249	254	260	256.7	254.1
Spd	5.8	5.2	5.0	5.8	5.5	4.5	3.9	3.8	4.5	4.7	3.9	4.3	4.1	3.4	4.0	3.8	3.9	3.2	2.9	2.9	3.8	4.6	5.4	6.2	Diurnal Average	
Dir	243.2	248.4	254.4	254.1	254.4	255.6	250.0	268.3	274.0	278.9	277.3	266.6	269.1	270.4	257.0	262.5	240.4	251.1	250.8	254.6	227.5	229.4	232.5	241.0		
Spd	16.9	15.3	17.9	16.9	14.0	14.7	15.9	15.1	16.1	18.7	19.5	18.1	14.5	17.2	16.9	20.2	19.1	16.3	16.5	19.3	17.7	17.0	16.8	17.5	Diurnal Maximum	
Dir	242.7	250.6	254.1	254.0	254.4	251.0	250.3	251.6	242.0	243.5	240.7	235.1	251.3	230.5	231.5	249.7	345.1	253.2	118.7	124.5	248.6	245.5	250.6	253.7		

Maximum Speed Value: 20 km/h on Jul 12 16:00
Maximum Daily Speed Average: 12.4 km/h on Jul 9
Maximum Diurnal Speed Average: 6.2 km/h at hour 24

Minimum Speed Value: 0 km/h on Jul 17 07:00
Minimum Daily Speed Average: 0.7 km/h on Jul 14
Minimum Diurnal Speed Average: 2.9 km/h at hour 19

Monthly Average Velocity: 4.26 km/h 253.95 deg

Speed Percentiles: $P_1 = 0.6$ $P_{10} = 2.0$ $Q_1 = 3.7$ Median = 6.5 $Q_3 = 9.9$ $P_{90} = 13.4$ $P_{99} = 18.7$

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

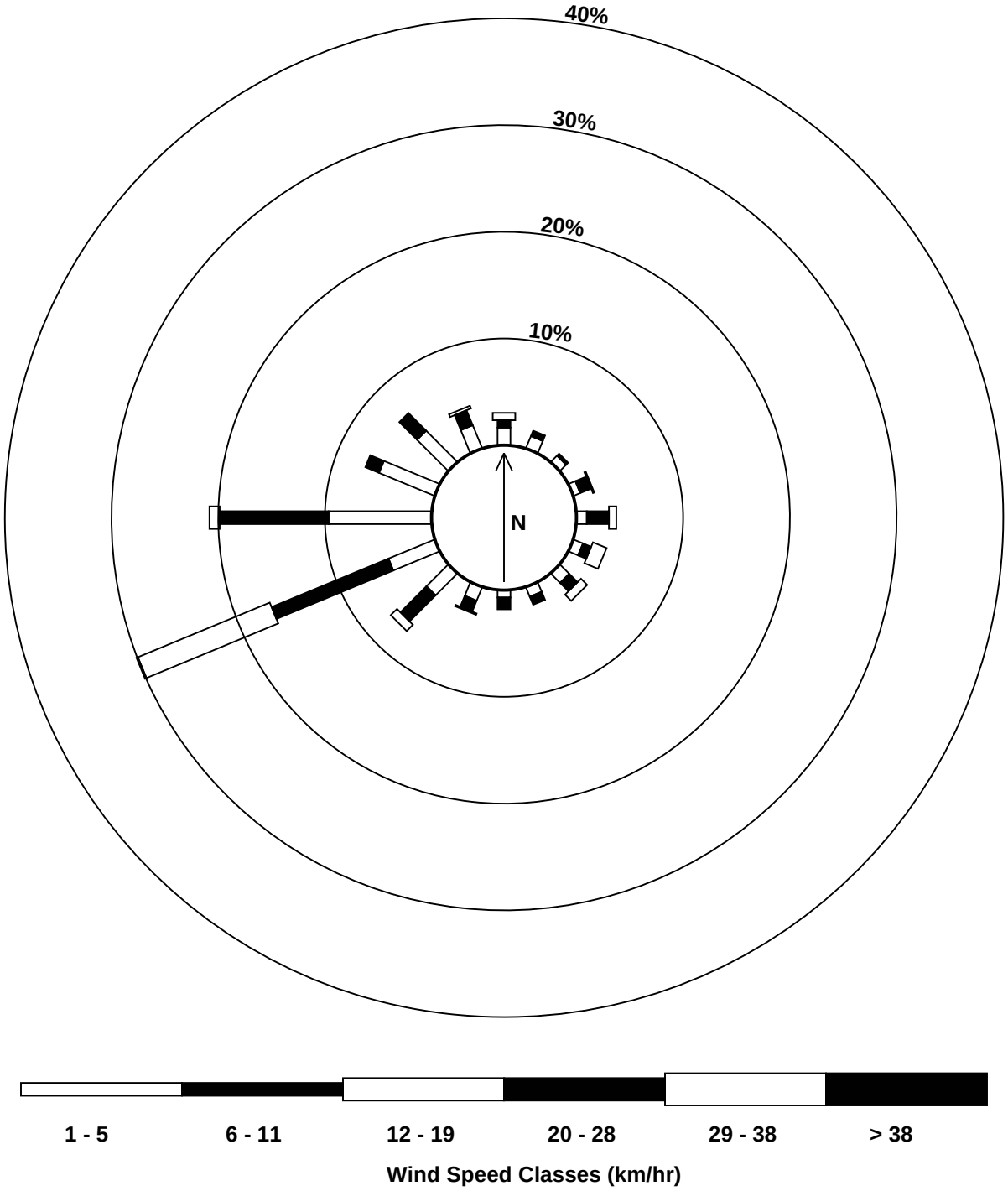
P - Power Failure

Percentage 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	2.84	1.49	0.81	0.14	0.00	0.00	5.27
NorthEast	1.89	1.35	0.00	0.00	0.00	0.00	3.24
East	1.62	2.97	1.49	0.00	0.00	0.00	6.08
SouthEast	2.70	2.43	1.49	0.14	0.00	0.00	6.76
South	1.35	2.30	0.00	0.00	0.00	0.00	3.65
SouthWest	5.14	7.57	5.41	0.14	0.00	0.00	18.24
West	13.65	19.86	11.08	0.14	0.00	0.00	44.73
NorthWest	8.11	3.92	0.00	0.00	0.00	0.00	12.03
Total	37.30	41.89	20.27	0.54	0.00	0.00	100.00

Wind Rose for WS at Portable-Spirit River

July 2008



Peace Airshed Zone Association
Summary of Hourly Standard Deviations

Portable-Spirit River - Wind Direction (WD) - deg
July 1, 2008 to August 1, 2008

Maximum Value: 94.9 deg on Jul 6 01:00

Minimum Value: 2.8 deg on Jul 24 04:00

Percentiles: P_1 = 3.5 P_{10} = 5.4 Q_1 = 10.9 Median = 23.7 Q_3 = 38.1 P_{90} = 59.1 P_{99} = 87.8

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 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	60	59	23	9	9	12	20	66	22	21	17	19	23	20	26	30	25	12	11	5	4	17	33	31	66.2
2-Jul	70	43	36	25	85	30	12	12	28	22	16	16	17	15	17	17	17	10	9	5	3	18	66	61	84.6
3-Jul	38	17	52	12	77	84	33	59	61	67	80	55	32	40	32	28	33	7	53	46	40	35	14	21	84.3
4-Jul	36	45	38	20	5	7	10	14	35	30	35	30	26	29	33	21	20	13	18	29	47	44	32	59	58.9
5-Jul	35	30	38	26	26	49	34	38	35	35	14	13	25	35	63	42	18	23	10	13	9	16	31	85	85.2
6-Jul	95	46	60	29	54	29	25	8	7	10	26	11	20	25	15	23	20	30	9	8	5	4	4	6	94.9
7-Jul	4	7	9	6	5	5	6	21	11	21	34	26	35	24	25	29	22	24	23	13	5	4	5	3	34.9
8-Jul	4	5	5	4	4	4	5	6	10	19	19	22	15	22	14	13	29	24	24	14	23	4	6	42	42.1
9-Jul	17	10	6	10	16	7	6	7	8	11	15	12	19	9	16	11	21	20	30	12	5	5	5	3	30.0
10-Jul	5	4	5	5	4	5	6	18	27	25	26	30	19	40	27	93	58	42	18	53	51	9	6	5	92.5
11-Jul	6	6	19	13	7	11	23	23	27	30	30	32	30	30	17	33	25	34	34	35	19	6	4	3	34.6
12-Jul	4	3	6	4	5	4	4	5	7	10	12	20	20	15	22	13	18	11	11	18	14	8	7	12	22.1
13-Jul	7	5	5	4	5	6	15	28	25	38	23	38	26	25	34	38	11	9	33	57	10	17	43	30	57.1
14-Jul	20	21	5	22	24	36	35	44	12	11	51	66	49	46	25	33	52	66	64	66	17	26	34	11	66.5
15-Jul	6	11	82	68	38	61	42	41	9	32	60	72	60	23	58	38	65	53	11	12	12	28	11	11	81.5
16-Jul	13	21	24	43	7	57	49	30	22	53	65	61	24	58	67	43	25	31	16	29	61	33	28	9	67.2
17-Jul	9	5	26	25	29	54	93	45	53	81	32	66	83	38	66	89	12	17	14	66	49	72	42	41	93.0
18-Jul	44	50	57	30	51	85	50	35	39	23	60	55	28	47	38	39	42	51	77	51	7	7	4	4	85.5
19-Jul	4	6	4	3	44	47	70	86	20	12	21	29	33	38	24	25	17	15	7	5	5	4	7	4	86.2
20-Jul	5	5	6	9	5	7	5	10	9	11	11	13	17	13	17	19	12	13	10	49	14	25	51	24	51.4
21-Jul	25	61	63	22	22	80	35	24	6	10	10	8	11	16	13	25	26	31	31	27	37	40	42	35	79.7
22-Jul	28	6	4	5	11	8	7	22	35	28	48	40	39	43	65	89	56	44	30	19	14	9	23	70	88.6
23-Jul	62	41	69	67	15	41	91	55	31	46	80	53	51	42	58	37	39	32	42	11	80	30	9	11	91.2
24-Jul	9	5	5	3	43	32	21	58	30	35	31	36	34	P	P	P	P	39	43	44	17	7	6	6	58.0
25-Jul	10	29	62	62	20	15	18	16	35	21	23	22	24	35	23	30	26	19	6	7	5	25	67	47	66.9
26-Jul	20	13	13	10	33	83	76	44	24	36	23	53	25	34	34	26	81	28	8	28	16	14	15	23	82.8
27-Jul	76	45	17	72	54	63	94	76	78	29	35	40	33	30	30	28	24	32	26	29	28	25	28	15	94.4
28-Jul	22	12	26	27	20	14	29	38	35	37	45	40	67	58	52	79	59	40	35	15	11	6	38	37	78.8
29-Jul	5	53	18	37	40	35	37	59	18	29	48	90	63	39	10	7	11	6	41	36	43	13	11	7	90.2
30-Jul	13	24	55	84	41	10	17	10	20	33	22	31	25	21	15	18	23	10	20	16	10	4	4	4	83.6
31-Jul	5	5	3	4	4	4	6	6	11	13	24	23	23	27	26	32	28	22	14	6	9	8	11	4	32.1
	94.9	60.5	81.5	83.6	84.6	85.5	94.4	86.2	77.8	81.4	79.7	90.2	83.0	58.0	67.2	92.5	80.7	66.2	77.3	66.1	80.4	72.0	66.9	85.2	

P - Power Failure

PASZA
Valleyview Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association
Summary of Hourly Averages

Valleyview - Sulphur Dioxide (SO_2) - ppb
July 1, 2008 to August 1, 2008

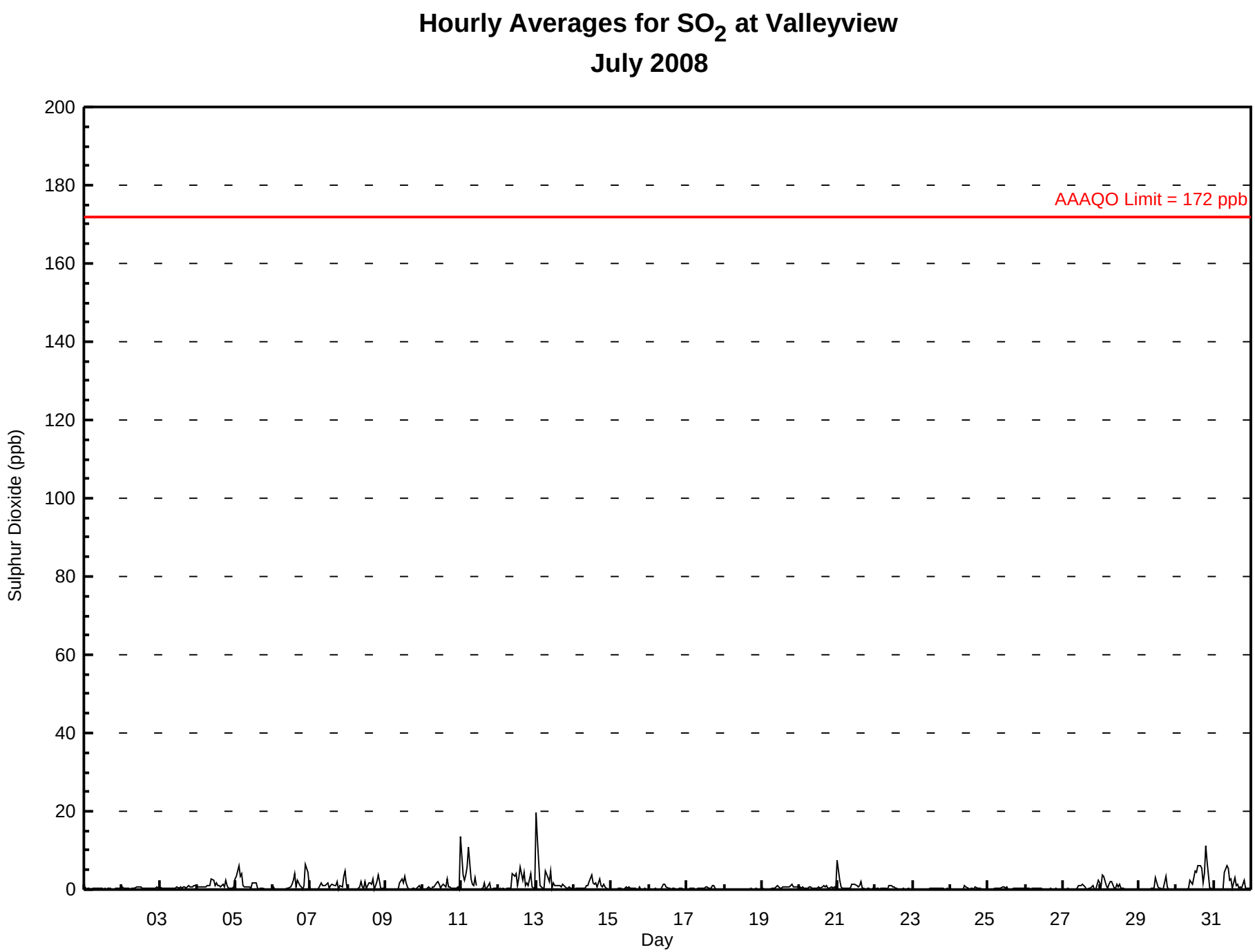
Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 13 ppb on Jul 13 02:00 Maximum Daily Average: 2.5 ppb on Jul 30

Minimum Value: 0 ppb on Jul 5 23:00 Minimum Daily Average: 0.0 ppb on Jul 18
Maximum Diurnal Average: 1.3 ppb at hour 10 Minimum Diurnal Average: 0.3 ppb at hour 24
Monthly Average: 0.77 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.1$ Median = 0.3 $Q_3 = 0.8$ $P_{90} = 1.9$ $P_{99} = 5.9$

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-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
2-Jul	A	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0.4	0.8
3-Jul	A	0	0	1	0	0	0	0	1	0	0	1	0	1	0	1	1	0	1	1	1	1	1	1	0.6	1.1
4-Jul	A	1	1	1	1	1	1	1	1	3	2	1	2	1	1	1	1	1	2	1	0	0	0	1	1.1	2.9
5-Jul	A	3	6	3	4	1	1	1	1	1	0	2	2	2	0	0	0	0	0	0	0	0	0	0	1.2	6.2
6-Jul	A	0	0	0	0	0	0	0	0	0	0	1	1	2	4	1	2	1	1	0	1	7	4	1	1.2	6.6
7-Jul	A	0	0	0	0	0	1	2	1	1	1	2	0	1	1	1	1	2	0	1	1	4	5	1	1.2	4.7
8-Jul	A	0	0	0	0	0	0	1	2	1	0	2	0	2	2	1	3	0	2	4	2	0	0	0	1.0	3.9
9-Jul	A	0	0	0	0	0	0	0	0	2	3	2	3	2	1	0	0	0	0	0	0	1	0	0	0.6	3.3
10-Jul	A	0	0	1	0	0	1	1	2	2	1	0	1	1	1	3	1	1	0	0	0	1	1	0	0.7	2.6
11-Jul	A	4	2	4	6	11	3	1	1	3	1	C	C	C	0	2	0	1	2	0	0	0	0	0	2.1	10.8
12-Jul	A	0	0	0	0	0	0	0	0	4	4	4	1	3	6	2	4	1	2	1	4	1	0	0	1.7	5.7
13-Jul	A	13	1	1	0	0	5	3	2	5	0	2	1	1	1	1	1	1	1	0	0	1	0	0	1.7	12.9
14-Jul	A	0	0	0	0	0	0	0	1	1	2	4	2	1	2	1	3	1	1	1	1	0	0	0	1.0	3.6
15-Jul	A	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0.2	0.7
16-Jul	A	0	0	0	0	0	0	0	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.5
17-Jul	A	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0.3	1.1
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	0.0	0.2
19-Jul	A	0	0	0	0	0	0	0	0	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	0.5	1.4
20-Jul	A	0	1	0	0	0	1	1	0	0	0	0	1	1	1	1	1	1	0	0	1	0	1	0	0.5	1.2
21-Jul	A	2	1	0	1	0	0	0	0	1	1	1	1	1	1	2	0	0	0	0	0	0	0	1	0.7	2.3
22-Jul	A	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	1.0
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	0.1	0.5
24-Jul	A	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0.2	0.9
25-Jul	A	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
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	0.2	0.4
27-Jul	A	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	1	1	0	0	2	2	0.5	2.3
28-Jul	A	4	3	1	0	1	2	2	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.8	3.7
29-Jul	A	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	4	1	0	0	0	0	0	0.4	3.5
30-Jul	A	0	0	0	0	0	0	0	0	2	1	3	5	4	6	6	5	2	4	11	7	0	0	0	2.5	11.2
31-Jul	A	0	0	0	0	0	0	4	6	5	2	3	0	3	1	1	0	1	0	2	0	0	0	0	1.4	6.0
	--	1.0	0.6	0.4	0.5	0.6	0.6	0.6	0.7	1.3	1.0	1.2	0.9	1.0	1.0	0.8	0.9	0.7	0.7	0.9	0.7	0.6	0.6	0.3	Diurnal Average	
	--	12.9	6.2	3.7	5.9	10.8	4.7	4.3	6.0	5.5	3.5	4.0	4.8	4.4	6.0	6.0	5.4	3.5	3.9	11.2	7.1	6.6	4.7	1.6	Diurnal Maximum	

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


Hourly Averages for SO_2 at Valleyview
July 2008
AAAQO Limit = 172 ppb
Sulphur Dioxide (ppb)
200
180
160
140
120
100
80
60
40
20
0
03
05
07
09
11
13
15
17
19
21
23
25
27
29
31
Day

Peace Airshed Zone Association
Summary of Hourly Maximums

Valleyview - Sulphur Dioxide (SO_2) - ppb
July 1, 2008 to August 1, 2008

Maximum Value: 36 ppb on Jul 13 02:00

Maximum Daily Average: 6.9 ppb on Jul 12

Minimum Value: 0 ppb on Jul 18 09:00

Minimum Daily Average: 0.9 ppb on Jul 26

Maximum Diurnal Average: 5.0 ppb at hour 12

Minimum Diurnal Average: 1.3 ppb at hour 4

Monthly Average: 2.98 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.6$ $Q_1 = 1.0$ Median = 1.2 $Q_3 = 3.1$ $P_{90} = 8.2$ $P_{99} = 19.2$

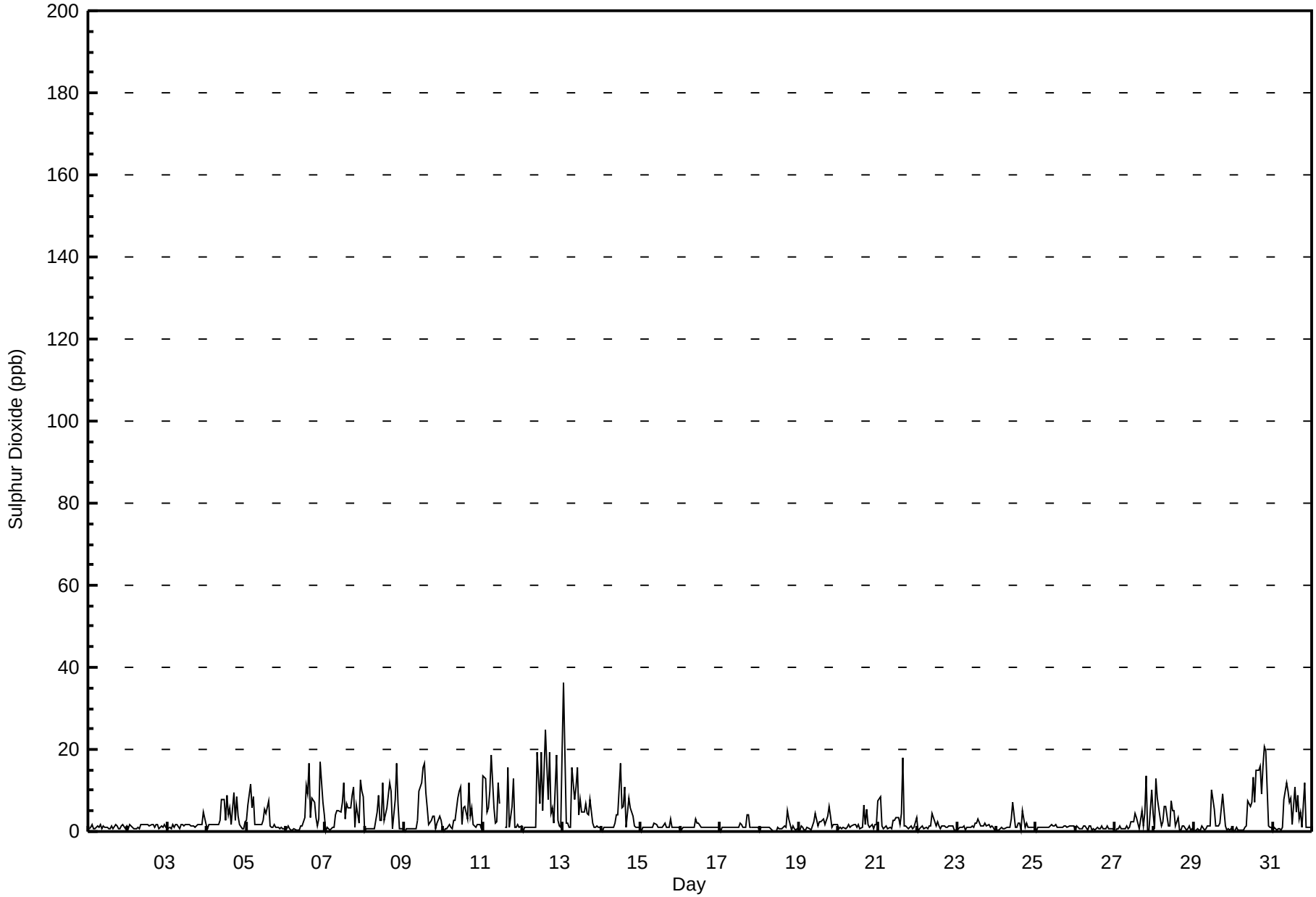
Hours in Service:	744
Hours of Data:	710
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 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	2	1	1	1	1	2	1	1	1	1	1	1	1	1	2	1	1	1	1	2	1	2	1.0	1.6
2-Jul	A	2	1	1	1	1	1	1	2	2	2	2	2	1	2	2	1	2	2	1	1	1	2	1	1.2	1.6
3-Jul	A	1	1	2	1	2	2	1	2	2	1	2	2	2	1	1	1	1	2	2	2	2	5	2	1.6	4.7
4-Jul	A	2	2	2	2	2	2	2	3	8	8	3	9	4	6	2	10	3	9	4	2	1	1	2	3.6	9.6
5-Jul	A	7	12	6	9	2	2	2	2	2	3	6	5	8	1	1	1	2	1	1	1	1	1	1	3.0	11.6
6-Jul	A	1	1	0	0	1	0	0	0	1	1	3	11	9	17	3	8	7	3	1	3	17	7	4	4.5	16.9
7-Jul	A	1	1	0	1	1	4	5	5	5	7	12	3	7	6	6	9	11	1	6	2	13	10	9	5.4	12.7
8-Jul	A	1	1	1	1	1	1	5	9	3	3	12	3	6	9	12	10	1	8	17	7	1	1	1	4.7	16.7
9-Jul	A	1	1	1	1	1	1	1	3	10	12	16	17	9	6	2	3	4	4	1	2	4	3	1	4.3	16.7
10-Jul	A	1	1	2	1	1	3	3	8	10	11	2	6	6	3	12	4	6	2	1	2	2	2	1	3.8	11.8
11-Jul	A	13	5	6	10	19	6	2	3	12	7	C	C	C	1	16	1	6	13	1	1	2	1	1	6.2	18.8
12-Jul	A	1	1	1	1	1	1	1	1	19	7	19	5	15	25	8	19	5	6	2	19	3	1	1	6.9	24.6
13-Jul	A	36	2	2	1	1	16	8	11	16	4	8	5	5	7	4	4	8	2	1	1	1	1	1	6.2	36.2
14-Jul	A	1	1	1	1	1	1	1	2	4	4	17	6	6	11	1	8	6	5	4	1	1	1	1	3.7	16.7
15-Jul	A	1	1	1	1	1	1	1	2	2	1	1	1	1	2	1	1	1	3	1	1	1	1	1	1.2	2.9
16-Jul	A	1	1	1	1	1	1	1	1	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1.2	3.0
17-Jul	A	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	4	4	1	1	1	1	1	1	1.4	4.0
18-Jul	A	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	5	3	0	1	1	0	1	1.1	5.1
19-Jul	A	1	1	0	0	1	1	0	1	2	4	2	2	2	3	3	2	4	6	4	1	2	2	2	2.0	5.9
20-Jul	A	1	1	1	1	1	2	1	1	2	2	1	2	1	1	7	2	6	2	1	2	1	2	2	1.7	6.6
21-Jul	A	8	1	1	1	1	1	1	1	3	3	4	3	2	4	18	2	2	1	1	1	1	1	3	2.7	18.0
22-Jul	A	1	1	1	1	1	1	1	1	4	2	1	2	1	1	1	1	1	1	1	1	1	0	0	1.3	4.3
23-Jul	A	1	1	1	1	0	1	1	1	1	1	2	2	3	1	1	1	2	1	2	1	1	1	0	1.3	3.2
24-Jul	A	0	1	1	1	1	1	1	1	3	7	1	1	2	2	0	5	1	2	1	1	1	1	1	1.6	7.0
25-Jul	A	1	1	1	1	1	1	1	1	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1.2	1.7
26-Jul	A	1	1	1	1	1	1	0	1	1	0	1	0	1	1	1	1	1	1	2	1	1	1	1	0.9	1.5
27-Jul	A	1	1	1	1	1	1	2	1	1	2	2	4	3	2	1	5	1	4	14	0	1	10	4	2.7	13.5
28-Jul	A	13	8	3	1	2	6	6	1	1	7	5	5	1	3	0	0	1	1	0	1	1	0	1	3.1	13.0
29-Jul	A	0	1	0	0	1	0	1	1	1	1	10	5	1	1	1	2	9	5	1	0	1	0	1	2.0	10.0
30-Jul	A	0	1	0	0	0	0	1	1	7	6	7	13	7	15	15	16	9	16	21	20	1	1	1	6.9	20.8
31-Jul	A	1	0	1	1	0	1	8	12	10	7	8	2	11	5	9	3	5	1	12	1	1	1	1	4.4	11.9
	--	3.3	1.6	1.3	1.4	1.6	1.9	1.9	2.6	4.4	3.8	5.0	4.1	4.0	4.5	4.3	4.2	3.7	3.4	3.4	2.6	2.1	1.9	1.6	Diurnal Average	
	--	36.2	11.6	5.8	9.8	18.8	15.7	7.8	11.9	19.3	11.8	19.2	16.7	14.6	24.6	18.0	19.3	10.9	15.8	20.8	19.6	16.9	10.3	8.5	Diurnal Maximum	

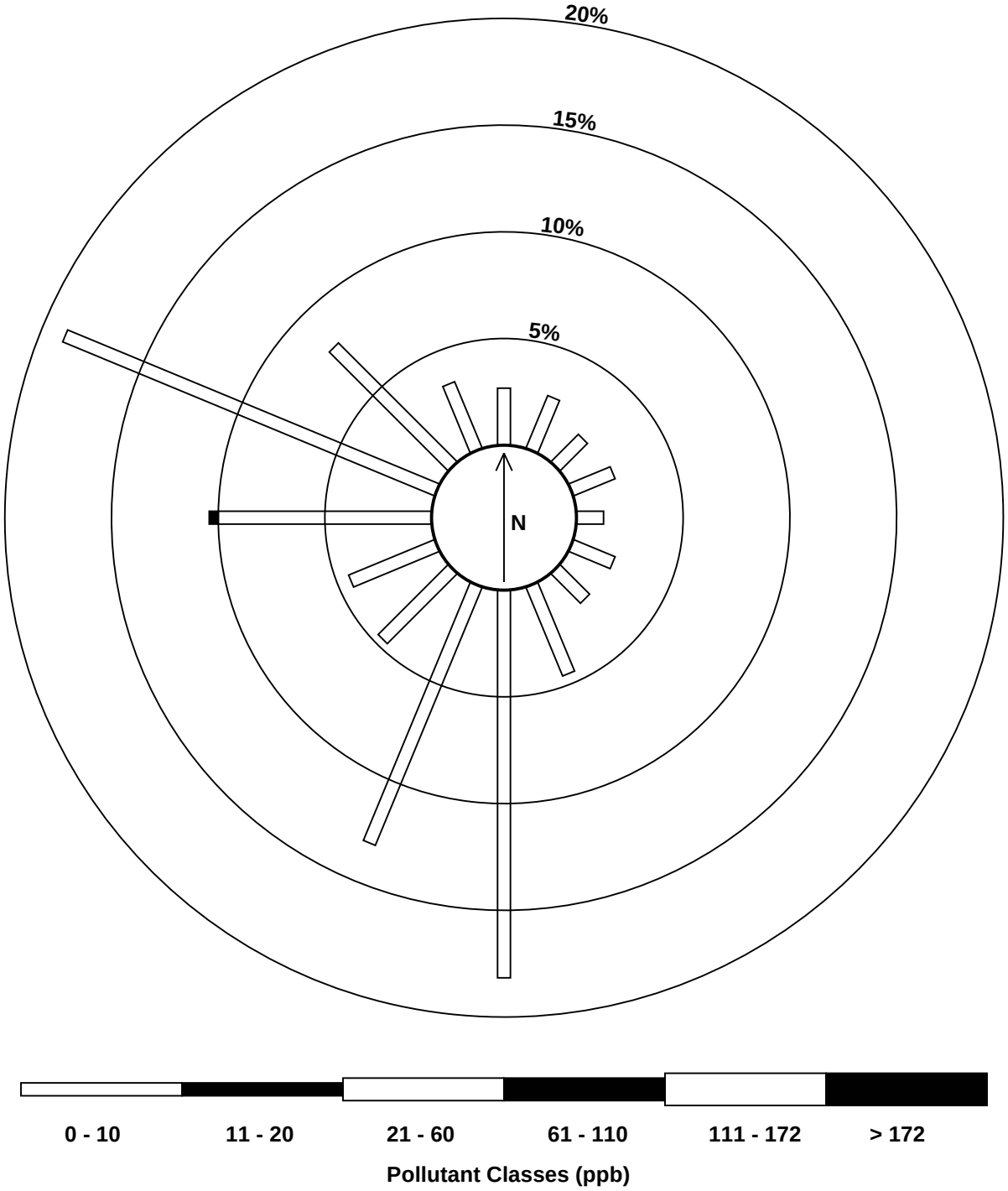
C - Calibration

A - Automated Daily Zero Span

Hourly Maximums for SO_2 at Valleyview
July 2008



Pollutant Rose for SO_2 at Valleyview
July 2008



Peace Airshed Zone Association
Summary of Hourly Averages

Valleyview - Hydrogen Sulphide (H_2S) - ppb
July 1, 2008 to August 1, 2008

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 2 ppb on Jul 4 17:00 Maximum Daily Average: 0.3 ppb on Jul 1

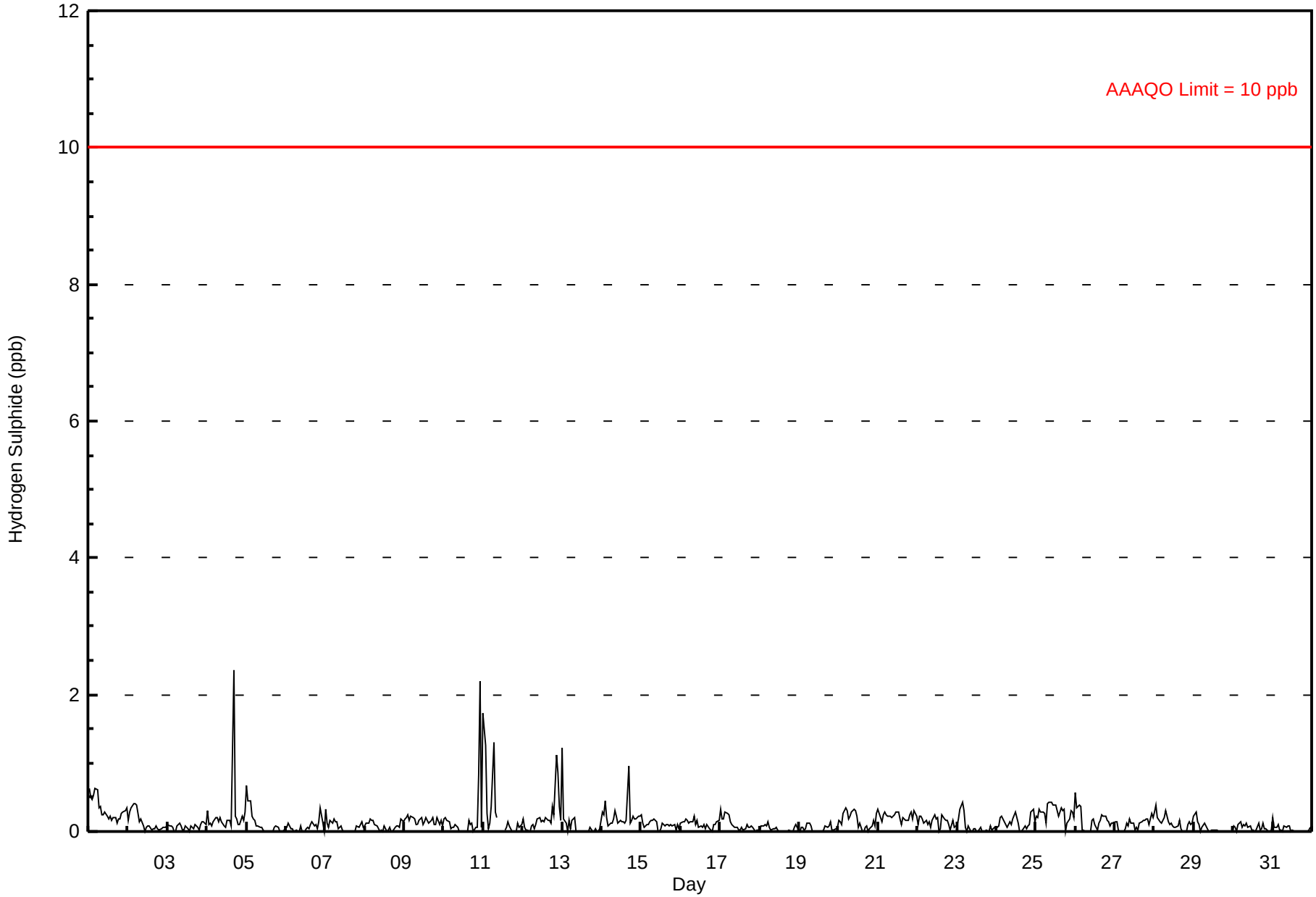
Minimum Value: 0 ppb on Jul 3 05:00 Minimum Daily Average: 0.0 ppb on Jul 31
Maximum Diurnal Average: 0.2 ppb at hour 2 Minimum Diurnal Average: 0.1 ppb at hour 15
Monthly Average: 0.13 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.2 P_{90} = 0.3 P_{99} = 0.8

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	A	1	0	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
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	0.4
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	0.2
4-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0.2	2.4
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	0.5
6-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
7-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
8-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
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	0.2	0.2
10-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0.2	2.2
11-Jul	A	1	0	0	0	0	1	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0.2	1.3
12-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0.2	1.1
13-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	BD	0	0	0	0	0	0.0	0.2
14-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	0.2	1.0
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	0.1	0.2
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	0.1	0.2
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	0.1	0.3
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	0.0	0.1
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	0.0	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	0.2	0.3
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	0.3
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	0.1	0.3
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	0.1	0.4
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	0.1	0.3
25-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
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	0.4
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	0.1	0.4
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	0.0	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	0.1	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	0.0	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	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	Diurnal Average	
	--	1.3	0.5	0.5	0.6	0.6	1.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.2	0.3	2.4	0.3	0.4	0.2	1.1	0.9	2.2	0.3	Diurnal Maximum	

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

Hourly Averages for H_2S at Valleyview
July 2008



Peace Airshed Zone Association
Summary of Hourly Maximums

Valleyview - Hydrogen Sulphide (H_2S) - ppb
July 1, 2008 to August 1, 2008

Maximum Value: 44 ppb on Jul 4 17:00

Maximum Daily Average: 2.4 ppb on Jul 4

Minimum Value: 0 ppb on Jul 26 10:00

Minimum Daily Average: 0.4 ppb on Jul 29

Maximum Diurnal Average: 2.5 ppb at hour 17

Minimum Diurnal Average: 0.4 ppb at hour 15

Monthly Average: 0.63 ppb

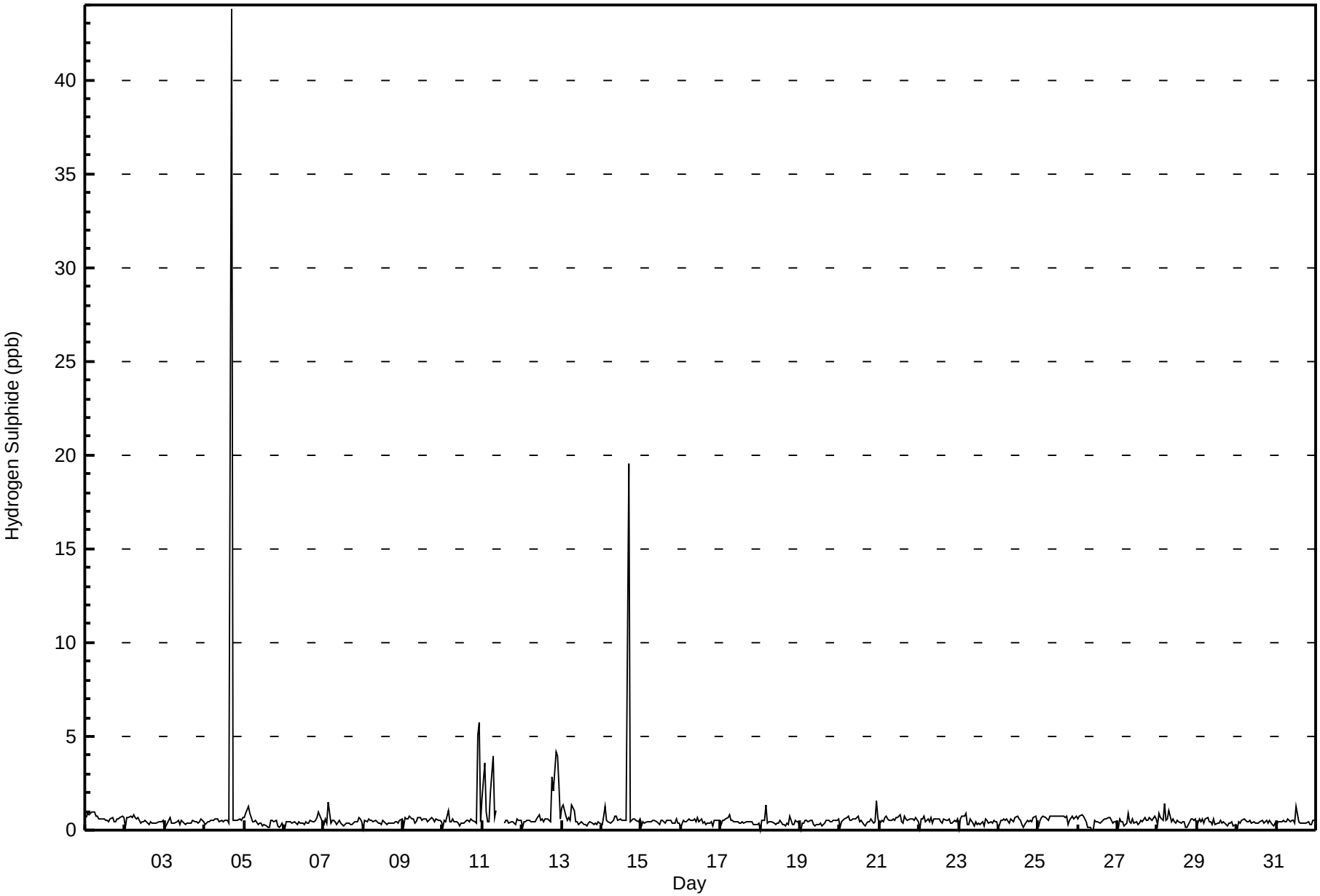
Percentiles: $P_1 = 0.1$ $P_{10} = 0.3$ $Q_1 = 0.4$ Median = 0.5 $Q_3 = 0.6$ $P_{90} = 0.7$ $P_{99} = 3.9$

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

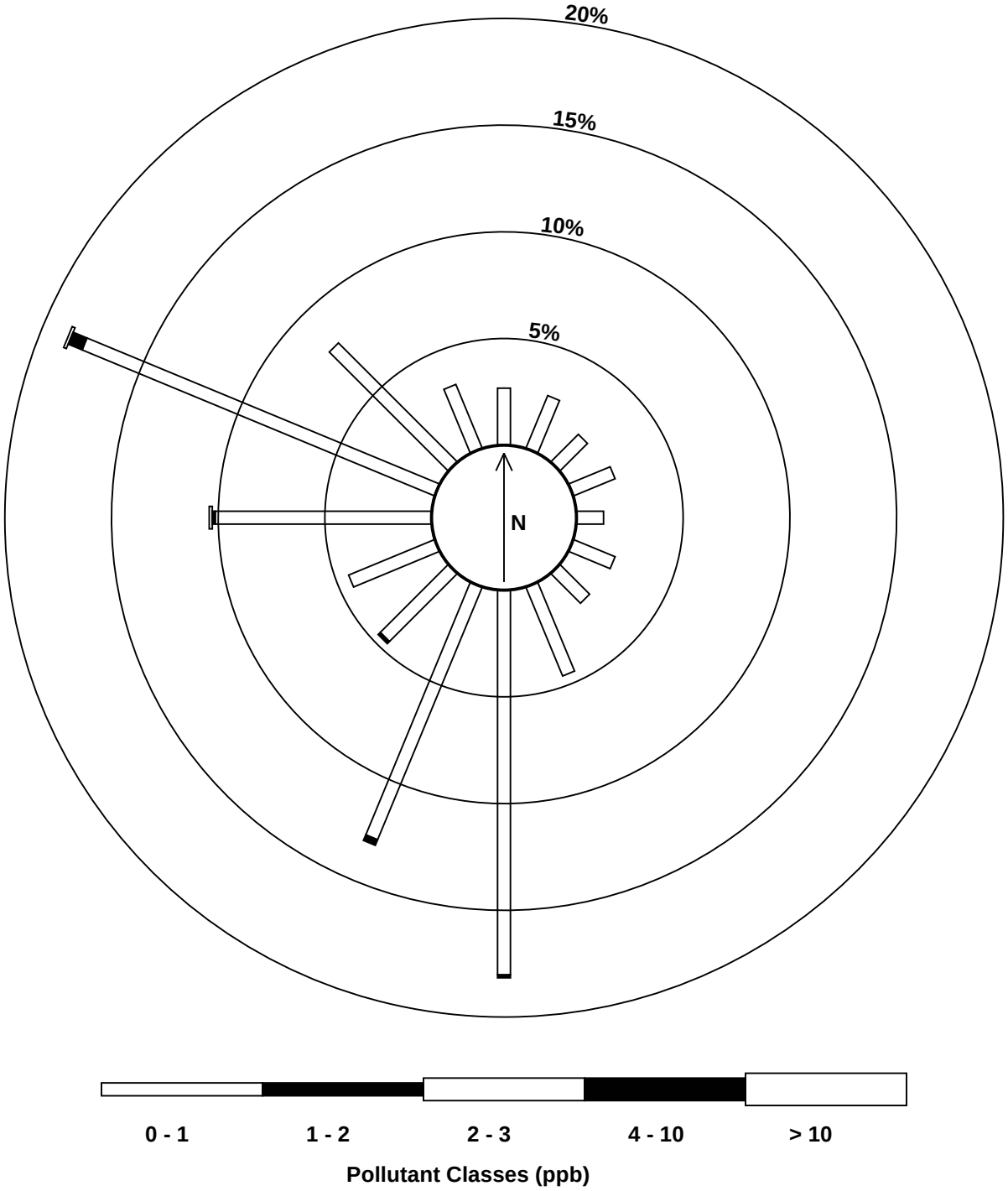
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Jul	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0	1	1	1	1	1	0.7	1.0
2-Jul	A	1	1	1	1	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.5	0.8
3-Jul	A	0	1	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0.4	0.7
4-Jul	A	0	0	0	1	1	1	1	1	0	0	0	1	1	1	0	44	1	1	1	1	1	1	1	2.4	43.7
5-Jul	A	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0.4	1.3
6-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	1	0	0.5	0.9
7-Jul	A	1	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0.5	1.5
8-Jul	A	1	0	1	1	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.4	0.6
9-Jul	A	1	1	1	1	1	1	0	0	1	1	1	1	1	1	0	1	1	1	0	1	0	1	0	0.6	0.7
10-Jul	A	1	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	1	1	0	0	5	6	0	0.9	5.7
11-Jul	A	4	1	0	0	2	4	1	1	C	C	C	C	0	1	1	0	0	0	0	0	1	1	1	0.9	3.9
12-Jul	A	0	0	0	1	0	0	0	0	1	1	1	1	0	1	1	1	0	3	2	4	4	2	1	1.1	4.2
13-Jul	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	BD	0	0	0	0	0	0.5	1.4
14-Jul	A	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	20	0	1	1	1	1	0	1	1.4	19.5
15-Jul	A	0	0	0	0	0	0	1	1	0	0	0	1	1	0	0	1	1	0	0	0	1	0	0	0.5	0.6
16-Jul	A	1	0	0	1	1	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	1	1	1	0.5	0.7
17-Jul	A	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.8
18-Jul	A	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0.4	1.3
19-Jul	A	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1	0.4	0.6
20-Jul	A	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	0	0	2	1	0.6	1.6
21-Jul	A	1	0	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	0	0.6	0.8
22-Jul	A	1	1	1	0	1	0	1	0	1	1	1	1	0	0	1	0	1	1	0	0	1	0	1	0.5	0.7
23-Jul	A	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0.5	0.9
24-Jul	A	0	1	1	1	1	0	1	0	0	1	1	1	1	0	0	0	0	0	1	0	1	1	0	0.5	0.8
25-Jul	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0.7	0.8
26-Jul	A	1	1	1	1	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1	0	0	0	0	0.5	0.8
27-Jul	A	1	0	0	0	0	1	0	0	1	0	0	0	0	1	0	1	1	0	1	1	0	1	1	0.5	0.9
28-Jul	A	1	1	0	1	1	1	1	0	1	0	0	1	0	0	0	0	0	0	0	1	1	1	1	0.6	1.4
29-Jul	A	1	0	1	0	1	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0.4	0.7
30-Jul	A	0	0	1	1	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0.4	0.6
31-Jul	A	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	1	0.5	1.3
	--	0.7	0.6	0.7	0.6	0.6	0.7	0.5	0.5	0.5	0.5	0.4	0.5	0.4	0.4	0.4	2.5	0.5	0.5	0.5	0.6	0.8	0.8	0.5	Diurnal Average	
	--	3.6	1.3	1.5	1.4	2.0	3.9	1.1	1.0	0.8	0.8	0.8	1.3	0.8	0.7	0.8	43.7	0.8	2.9	2.1	4.2	5.1	5.7	0.7	Diurnal Maximum	

C - Calibration BD - Baseline Drift A - Automated Daily Zero Span

Hourly Maximums for H_2S at Valleyview
July 2008



Pollutant Rose for H_2S at Valleyview
July 2008



Peace Airshed Zone Association
Summary of Hourly Averages

Valleyview - External Temperature (ET) - ^{o}C
July 1, 2008 to August 1, 2008

Maximum Value: 30 ^{o}C on Jul 3 17:00

Maximum Daily Average: 21.5 ^{o}C on Jul 3

Minimum Value: 4 ^{o}C on Jul 23 06:00

Minimum Daily Average: 11.8 ^{o}C on Jul 10

Maximum Diurnal Average: 21.6 ^{o}C at hour 16

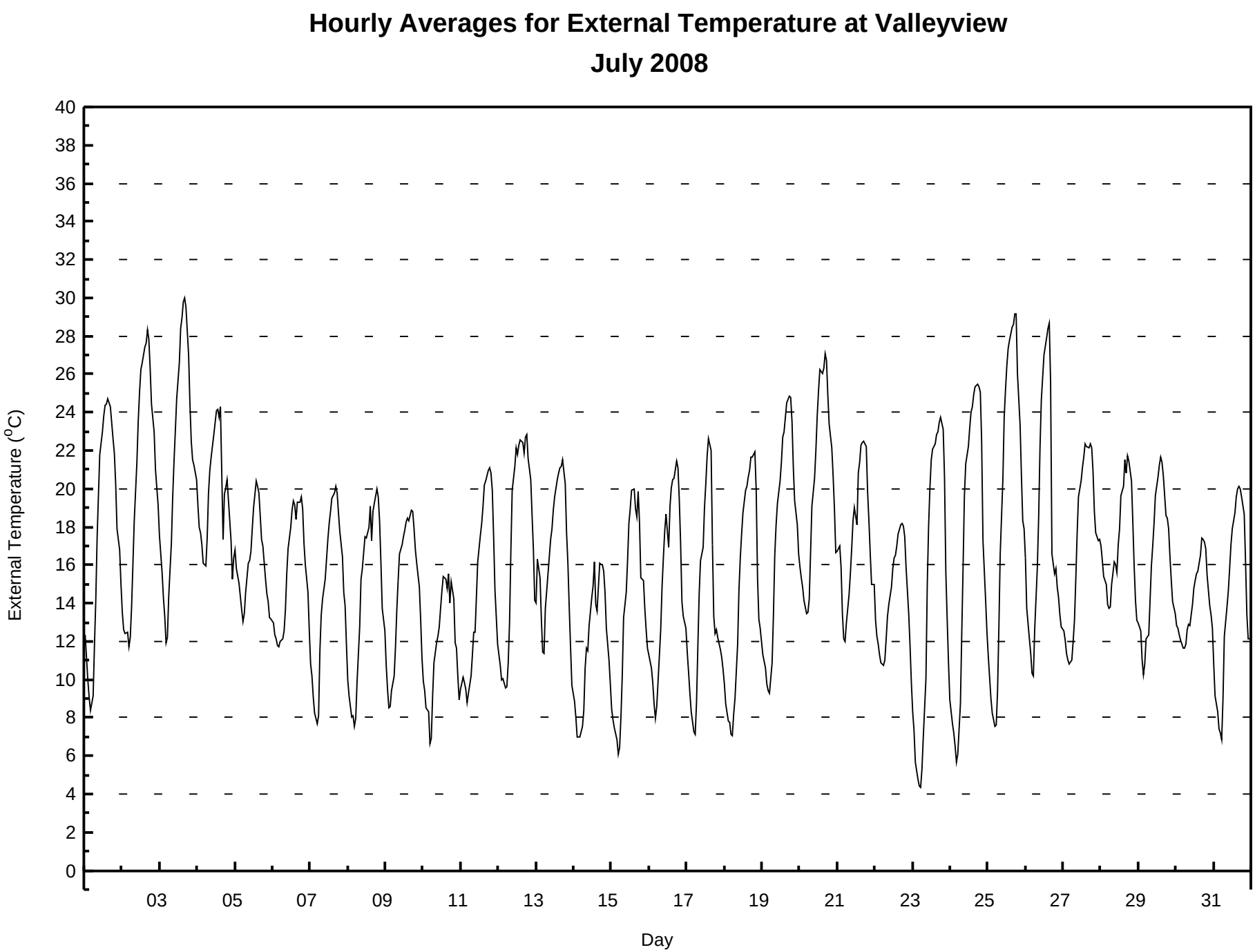
Minimum Diurnal Average: 9.6 ^{o}C at hour 5

Monthly Average: 16.18 ^{o}C

Percentiles: P_1 = 6.1 P_{10} = 9.3 Q_1 = 12.2 Median = 16.1 Q_3 = 20.0 P_{90} = 23.0 P_{99} = 28.4

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	12	11	10	9	8	9	12	14	17	20	22	23	24	24	24	25	24	23	23	22	20	18	17	15	17.8	24.7
2-Jul	14	13	12	12	12	12	14	16	18	21	24	25	26	27	27	28	28	28	26	24	23	21	20	19	20.5	28.3
3-Jul	18	16	14	13	12	12	14	17	20	21	23	25	27	28	29	30	30	30	27	24	23	22	21	20	21.5	30.0
4-Jul	19	18	18	17	16	16	17	20	21	22	23	23	24	24	24	24	17	20	20	20	19	17	15	16	19.7	24.3
5-Jul	17	16	15	14	14	13	13	15	16	16	17	18	19	20	20	20	19	17	17	15	15	14	13	13	16.1	20.4
6-Jul	13	12	12	12	12	12	12	13	14	16	17	18	19	19	19	18	19	19	20	19	17	16	15	13	15.6	19.5
7-Jul	11	10	9	8	8	8	12	13	14	15	16	17	18	19	20	20	20	20	19	18	16	15	14	12	14.7	20.1
8-Jul	10	9	8	8	8	8	10	13	15	16	17	17	17	18	19	17	19	19	20	20	18	16	14	13	14.5	20.0
9-Jul	11	9	8	9	9	10	12	14	15	17	17	17	18	18	18	18	19	19	18	17	16	15	13	11	14.5	18.9
10-Jul	10	9	9	8	7	7	9	11	12	12	13	14	15	15	15	15	16	14	15	14	12	12	10	9	11.8	15.6
11-Jul	9	10	10	9	9	9	10	11	13	12	14	16	18	18	19	20	20	21	21	21	20	17	15	12	14.8	21.1
12-Jul	11	11	10	10	10	10	11	13	17	20	21	22	22	22	23	22	22	23	23	22	20	19	17	14	17.2	22.8
13-Jul	14	16	15	13	11	11	14	16	16	17	18	19	20	20	21	21	21	22	20	18	16	14	12	10	16.5	21.5
14-Jul	9	8	7	7	7	8	8	11	12	12	13	14	15	16	14	14	16	16	16	16	15	13	11	10	11.9	16.1
15-Jul	8	8	8	7	6	6	8	10	13	15	16	18	19	20	20	19	19	20	18	15	15	14	13	12	13.6	20.0
16-Jul	11	11	10	9	8	9	10	13	15	16	18	19	17	19	20	20	21	21	21	19	17	14	13	13	15.1	21.4
17-Jul	11	10	9	8	7	7	9	12	14	16	17	19	20	22	23	22	17	13	12	13	12	12	11	11	13.7	22.6
18-Jul	10	9	8	8	7	7	8	9	12	15	16	18	19	20	20	21	21	22	22	22	20	15	13	13	14.7	21.9
19-Jul	11	11	11	10	9	9	11	13	17	18	19	20	21	23	23	24	25	25	25	24	21	19	18	17	17.6	24.8
20-Jul	16	15	15	14	13	13	14	17	19	21	22	24	25	26	26	26	27	27	25	23	22	21	19	17	20.3	27.1
21-Jul	17	17	16	13	12	12	13	14	16	17	18	19	18	21	21	22	22	23	22	20	18	17	15	15	17.4	22.5
22-Jul	13	12	12	11	11	11	11	12	13	14	15	16	16	17	17	18	18	18	18	17	16	13	12	10	14.2	18.2
23-Jul	8	7	6	5	4	4	5	7	10	15	18	20	22	22	22	23	23	23	24	23	21	16	13	11	14.7	23.8
24-Jul	9	8	7	7	6	6	9	12	16	20	21	22	23	24	24	25	25	25	25	25	22	17	14	12	16.9	25.5
25-Jul	11	10	9	8	8	8	9	13	17	20	24	25	26	27	28	28	29	29	29	26	23	21	18	18	19.4	29.2
26-Jul	16	14	12	11	10	10	13	16	19	22	25	26	27	28	28	29	26	17	16	16	15	14	13	13	18.1	28.6
27-Jul	13	12	11	11	11	11	12	13	15	18	20	20	21	22	22	22	22	22	22	21	19	18	17	17	17.2	22.4
28-Jul	17	16	15	15	14	14	14	15	16	16	16	17	18	20	20	22	21	22	21	20	18	16	14	13	17.1	21.7
29-Jul	13	13	11	10	11	12	12	14	16	17	18	20	21	21	22	21	21	19	18	18	16	15	14	13	16.1	21.7
30-Jul	13	13	12	12	12	12	12	13	13	13	14	15	15	16	16	17	17	17	17	17	15	14	13	13	14.1	17.4
31-Jul	11	9	8	7	7	7	9	12	14	15	16	17	18	19	20	20	20	20	20	19	16	13	12	12	14.2	20.1
	12.5	11.7	10.9	10.3	9.6	9.8	11.2	13.2	15.3	16.9	18.3	19.5	20.2	21.2	21.4	21.6	21.4	21.1	20.7	19.6	18.0	16.0	14.5	13.4	Diurnal Average	
	19.2	18.0	17.7	17.1	16.1	15.9	17.4	19.8	20.9	22.1	24.6	25.8	27.0	28.4	28.9	29.8	30.0	29.5	29.1	26.1	23.3	21.5	21.2	20.5	Diurnal Maximum	


Hourly Averages for External Temperature at Valleyview
July 2008
External Temperature (°C)
40
38
36
34
32
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
03
05
07
09
11
13
15
17
19
21
23
25
27
29
31
Day

Peace Airshed Zone Association
Summary of Hourly Averages

Valleyview - Relative Humidity (RH) - %
July 1, 2008 to August 1, 2008

Maximum Value: 99 % on Jul 18 06:00

Maximum Daily Average: 80.8 % on Jul 17

Minimum Value: 19 % on Jul 25 18:00

Minimum Daily Average: 47.1 % on Jul 31

Maximum Diurnal Average: 88.1 % at hour 5

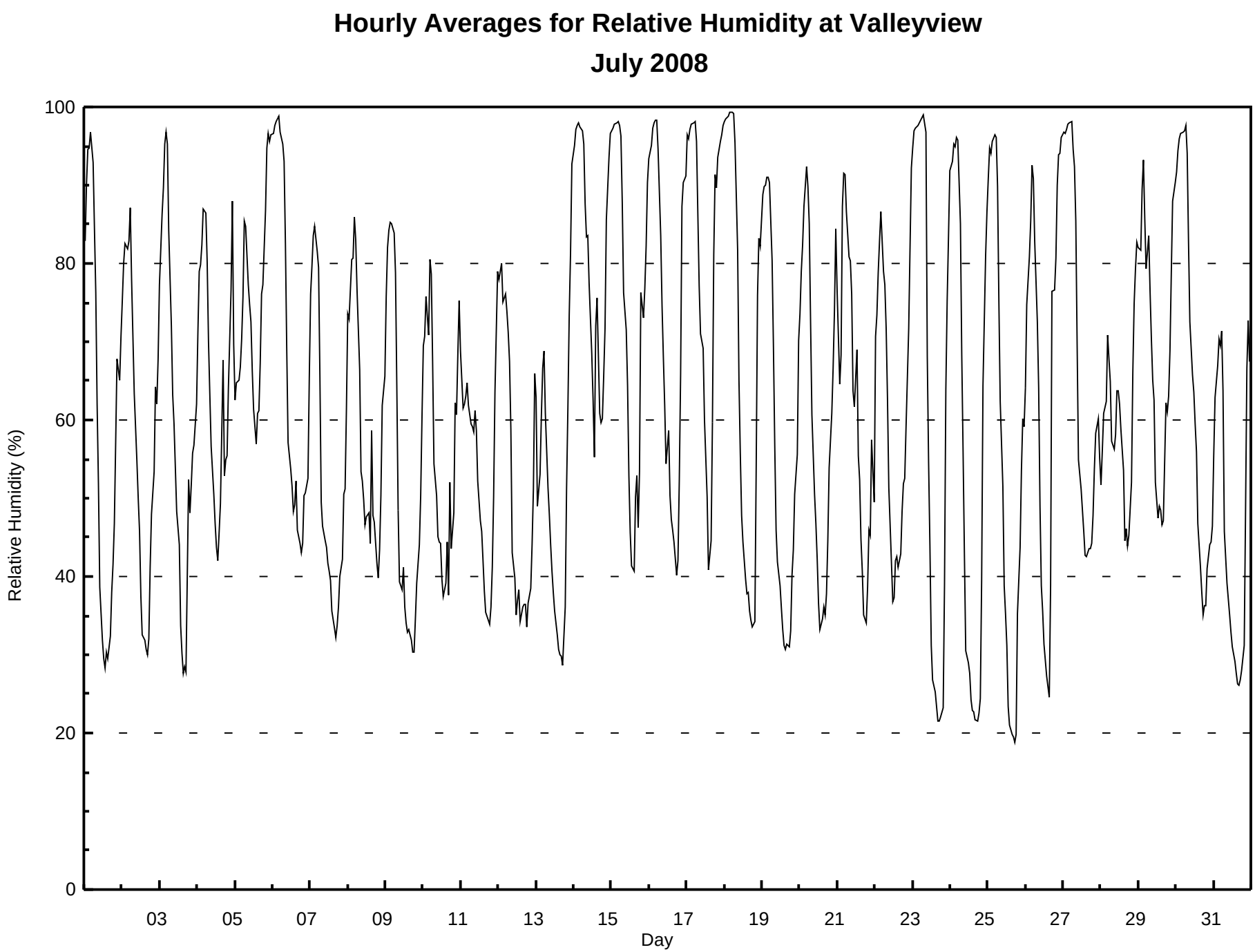
Minimum Diurnal Average: 39.4 % at hour 15

Monthly Average: 62.27 %

Percentiles: P_1 = 21.6 P_{10} = 33.7 Q_1 = 43.9 Median = 61.5 Q_3 = 81.6 P_{90} = 95.3 P_{99} = 98.8

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

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Jul	83	90	95	95	97	93	84	76	62	52	39	32	29	28	30	29	32	38	41	47	57	68	65	71	59.8	96.7
2-Jul	75	80	83	82	83	87	78	71	63	55	50	46	37	32	32	31	30	32	41	48	53	64	62	68	57.7	87.2
3-Jul	77	86	90	95	97	95	84	72	63	60	54	48	44	34	30	28	28	28	52	48	52	56	57	62	60.0	96.9
4-Jul	71	79	80	82	87	86	80	70	63	57	50	47	44	42	46	49	68	53	55	55	64	77	88	70	65.1	87.9
5-Jul	62	65	65	67	70	76	85	85	77	75	72	66	61	57	61	61	67	76	77	87	95	97	96	96	74.9	96.5
6-Jul	97	98	98	98	99	97	95	93	82	69	57	54	52	48	49	52	46	44	43	44	50	51	53	65	68.1	98.8
7-Jul	76	80	83	85	81	79	66	49	46	45	44	42	41	39	36	33	32	34	36	40	42	50	51	61	53.0	84.8
8-Jul	74	73	80	81	86	83	77	66	53	52	50	47	48	48	44	59	48	47	42	40	43	50	62	66	59.1	85.9
9-Jul	76	82	84	85	85	84	79	64	48	39	38	41	36	34	33	33	32	30	30	35	39	44	50	61	52.7	85.3
10-Jul	69	71	76	71	81	79	67	54	50	45	44	44	40	38	39	44	38	52	44	48	62	61	68	75	56.7	80.5
11-Jul	69	62	62	63	65	62	60	59	58	61	59	52	47	46	42	38	36	34	34	36	41	50	64	79	53.3	79.0
12-Jul	78	79	80	75	76	74	71	68	59	43	40	35	37	38	34	36	37	36	34	37	39	44	51	66	52.8	80.0
13-Jul	63	49	53	60	67	69	61	51	48	44	41	38	36	33	31	30	30	29	36	51	62	73	81	93	51.2	92.7
14-Jul	95	97	98	98	98	97	95	88	83	84	77	68	63	55	72	76	61	60	60	66	72	86	94	97	80.7	98.0
15-Jul	97	97	98	98	98	98	96	88	76	72	64	53	46	41	41	50	53	46	53	76	73	77	82	90	73.5	98.1
16-Jul	93	95	97	98	98	98	95	84	75	68	62	54	59	50	47	46	44	40	42	52	66	87	90	91	72.2	98.3
17-Jul	96	96	97	98	98	98	96	86	77	71	69	60	55	50	41	45	60	81	91	90	94	96	96	98	80.8	98.2
18-Jul	98	98	99	99	99	99	99	95	82	65	56	48	44	40	38	38	36	34	34	34	54	76	83	82	68.0	99.4
19-Jul	89	90	90	91	91	90	80	69	57	46	42	39	36	33	31	31	31	31	33	40	43	50	56	70	56.7	91.1
20-Jul	73	79	82	87	92	90	85	73	61	51	47	42	37	33	35	36	35	38	45	54	61	67	74	84	60.8	92.3
21-Jul	77	65	68	87	92	91	87	81	80	76	64	62	69	55	52	45	41	35	34	39	46	45	57	50	62.4	91.6
22-Jul	71	73	79	83	87	79	77	72	63	51	42	37	37	42	42	41	43	48	52	53	59	72	82	92	61.5	92.2
23-Jul	95	97	97	98	98	98	99	99	97	68	54	44	31	27	25	23	22	21	22	23	39	64	75	83	62.5	99.0
24-Jul	92	93	95	95	96	96	85	68	56	43	31	29	28	24	23	23	22	21	23	24	40	64	81	87	55.7	96.1
25-Jul	91	95	94	96	96	96	90	75	62	52	39	35	31	23	21	20	19	19	20	35	44	54	60	59	55.3	96.5
26-Jul	64	75	81	85	93	91	83	73	64	49	39	36	31	27	26	25	39	77	77	81	90	94	94	96	66.1	96.0
27-Jul	97	97	97	98	98	98	95	92	85	70	55	51	48	46	43	43	44	44	44	48	54	58	60	55	67.4	98.2
28-Jul	52	56	61	62	71	68	65	57	56	58	64	64	62	59	54	45	46	44	45	52	66	75	79	83	60.1	82.7
29-Jul	82	82	90	93	86	79	84	76	70	65	63	52	47	49	49	47	47	62	61	63	69	79	88	90	69.7	93.2
30-Jul	92	94	96	97	97	97	98	94	83	73	66	64	60	56	47	41	38	35	36	36	41	44	44	46	65.6	97.6
31-Jul	55	63	67	70	70	71	64	46	39	37	35	33	31	29	28	26	26	27	28	31	48	67	73	67	47.1	72.7
	80.0	81.8	84.4	86.2	88.1	87.1	82.5	74.0	65.9	57.8	51.8	47.2	44.1	40.6	39.4	39.5	39.6	41.9	44.0	48.8	56.7	65.8	71.5	75.9	Diurnal Average	
	98.1	98.5	98.9	99.3	99.3	99.4	99.2	99.0	96.8	83.5	77.5	68.5	69.0	58.7	72.0	75.5	67.6	81.1	91.3	89.7	94.7	96.5	96.4	97.6	Diurnal Maximum	


Hourly Averages for Relative Humidity at Valleyview
July 2008
Relative Humidity (%)
100
80
60
40
20
0
03
05
07
09
11
13
15
17
19
21
23
25
27
29
31
Day

Peace Airshed Zone Association
Summary of Hourly Averages

Valleyview
July 1, 2008 to August 1, 2008
WS (km/h), WD (deg)

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1 Spd	1	1	0	1	0	0	1	2	2	4	4	4	3	4	6	7	6	4	4	2	1	2	3	2	2.1	6.6
Dir	339	191	308	192	221	198	105	38	66	67	61	49	78	79	48	58	53	109	108	99	112	69	105	306	69.8	58.1
2 Spd	3	1	0	0	1	1	1	2	1	3	4	5	5	5	4	6	5	6	5	5	4	2	2	1	2.4	6.3
Dir	342	338	328	19	341	193	242	191	144	180	185	182	170	143	152	142	173	188	183	183	185	198	228	71	176.0	188.2
3 Spd	1	2	1	1	2	2	3	4	5	4	3	3	2	2	3	2	2	1	0	9	3	4	4	1	1.8	9.0
Dir	151	198	204	186	195	191	172	181	187	199	180	175	163	186	172	151	122	206	271	263	207	22	278	273	198.1	262.6
4 Spd	1	2	3	3	2	2	2	3	4	7	6	10	12	9	6	3	22	12	6	5	3	1	2	5	4.8	22.3
Dir	204	216	243	245	212	217	229	248	250	276	287	298	303	292	291	194	290	290	273	262	243	199	186	280	275.9	289.7
5 Spd	8	7	8	6	2	4	8	6	8	9	9	10	9	8	10	9	6	3	6	6	1	3	2	3	4.4	10.2
Dir	286	281	280	276	301	328	318	306	314	309	334	344	351	10	25	25	26	68	5	319	145	204	183	186	329.8	24.7
6 Spd	2	2	1	1	4	2	3	2	7	10	14	11	11	14	12	11	9	12	10	11	7	8	6	2	6.1	14.2
Dir	157	155	203	216	188	202	195	195	289	297	303	308	303	292	296	329	292	297	307	302	298	282	276	195	292.6	292.3
7 Spd	4	3	2	3	3	2	1	10	12	13	10	12	11	11	12	14	14	14	15	12	11	9	9	3	7.7	14.8
Dir	186	195	197	198	220	199	141	299	298	298	293	301	301	295	295	295	307	296	301	301	299	272	289	224	290.7	301.0
8 Spd	3	3	3	3	3	3	4	2	7	7	8	9	10	7	9	8	10	7	8	8	6	4	3	2	4.7	9.8
Dir	199	208	198	188	195	192	185	243	276	276	264	277	309	288	283	286	278	316	292	277	272	258	219	233	269.1	309.3
9 Spd	2	3	4	4	4	3	3	7	12	14	14	6	17	18	18	16	15	14	13	7	4	7	13	6	7.8	17.9
Dir	164	177	185	192	196	198	212	254	269	280	286	266	294	295	298	308	314	310	317	317	286	277	309	312	289.3	298.4
10 Spd	3	2	2	2	3	3	4	10	10	14	13	11	9	10	11	11	14	12	11	12	7	4	5	2	6.5	14.4
Dir	194	201	157	261	198	178	273	295	303	298	297	308	312	294	323	275	302	326	315	351	319	287	280	212	300.6	302.2
11 Spd	6	14	6	4	6	11	13	10	14	13	13	15	15	12	13	12	13	11	12	7	4	3	2	3	8.9	15.3
Dir	271	291	304	248	261	277	294	295	295	295	304	325	328	322	307	303	309	327	335	327	304	266	238	187	303.3	324.8
12 Spd	3	3	4	4	4	5	4	4	3	8	11	13	9	8	14	14	13	11	13	10	11	5	4	3	5.6	14.2
Dir	192	177	170	181	176	183	180	179	176	274	282	294	289	285	288	289	292	300	295	298	297	293	275	182	275.8	289.2
13 Spd	5	12	7	3	3	4	7	13	16	15	16	14	16	14	13	12	13	11	10	8	6	8	1	1	8.4	16.1
Dir	260	276	268	257	243	247	275	295	298	297	310	296	304	302	302	303	306	303	344	26	3	344	282	207	301.6	297.7
14 Spd	1	0	2	1	0	2	2	5	9	10	9	9	10	12	9	7	8	9	8	6	1	1	2	1	4.4	11.7
Dir	210	179	187	220	306	194	219	280	281	289	294	280	296	297	317	294	277	300	322	346	268	200	190	189	290.3	297.5
15 Spd	2	3	2	2	1	1	3	2	2	2	3	3	2	2	3	6	4	4	5	2	1	5	4	4	2.1	5.5
Dir	200	191	180	181	203	172	187	180	205	187	169	145	246	292	292	210	219	238	294	158	84	149	199	198	202.5	209.7
16 Spd	2	2	1	1	2	2	3	2	0	1	3	1	6	3	3	3	4	2	3	3	2	2	1	1	1.1	6.2
Dir	195	169	184	220	172	169	163	208	47	343	154	86	54	92	128	55	43	65	123	154	217	199	62	94	119.6	54.4
17 Spd	3	2	0	1	1	2	3	4	3	3	3	2	1	2	1	4	18	3	1	3	2	3	2	2	1.6	18.1
Dir	186	196	155	238	189	199	188	195	218	171	152	175	333	158	243	287	293	278	227	257	125	199	159	180	232.5	293.5
18 Spd	1	2	2	3	1	1	3	4	4	4	4	5	3	4	3	4	5	3	5	2	1	2	2	3	2.0	5.1
Dir	184	209	202	180	187	173	189	187	192	219	238	256	261	227	216	270	292	354	331	302	197	190	197	185	231.1	291.8
19 Spd	2	3	3	3	2	3	4	4	3	6	9	5	6	3	7	6	4	3	4	2	9	2	2	2	2.4	9.0
Dir	199	158	144	167	185	189	179	189	230	304	301	253	261	260	282	293	234	315	286	265	321	359	226	179	260.3	301.1
20 Spd	2	2	1	2	2	2	2	3	3	4	4	5	4	3	2	3	6	8	8	7	4	2	2	1	0.7	8.4
Dir	199	185	199	180	185	180	184	164	183	164	165	179	177	162	110	26	43	5	21	28	22	13	325	213	99.7	21.2
21 Spd	9	8	0	2	2	3	2	2	1	1	1	0	3	4	5	6	9	10	8	7	2	4	2	4	2.9	10.2
Dir	330	353	334	176	192	181	195	209	268	181	27	206	286	295	341	314	318	308	312	335	350	334	231	320	315.3	308.1
22 Spd	2	2	1	2	1	2	2	3	2	2	3	2	1	2	3	4	3	4	5	6	4	3	2	1	2.2	5.7
Dir	194	216	186	187	203	256	190	196	219	276	298	281	203	193	159	187	185	183	190	175	172	159	185	202	194.3	174.7

Peace Airshed Zone Association
Summary of Hourly Averages

Valleyview
July 1, 2008 to August 1, 2008
WS (km/h), WD (deg)

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
23 Spd	0	1	1	1	1	2	2	4	3	3	2	0	4	4	6	7	9	5	3	4	2	2	2	2	1.6	8.6
Dir	175	214	251	190	207	200	196	187	190	176	151	103	283	273	321	316	307	312	276	293	221	168	185	199	264.9	307.4
24 Spd	2	1	1	1	1	2	3	3	3	3	10	12	10	8	11	7	8	8	7	4	2	1	2	2	3.3	11.6
Dir	191	201	182	229	200	191	188	186	189	261	296	306	267	287	300	306	282	316	327	331	181	199	188	184	281.9	305.5
25 Spd	2	1	2	1	1	1	2	3	1	1	3	5	4	5	4	4	2	1	1	4	2	2	1	2	1.7	4.9
Dir	186	197	199	238	199	183	196	190	163	69	142	159	172	171	181	183	145	176	76	96	72	86	338	201	164.4	171.2
26 Spd	2	1	2	0	1	1	1	2	1	3	6	4	4	2	2	3	3	2	5	8	2	3	2	2	0.9	7.8
Dir	205	303	353	268	200	191	203	184	131	165	162	184	141	225	180	295	116	77	316	350	150	176	240	185	189.9	349.6
27 Spd	2	1	2	1	2	3	3	2	2	5	8	8	6	6	7	7	6	3	5	7	7	7	10	16	4.3	16.3
Dir	157	161	174	267	176	185	195	189	191	292	296	284	294	288	296	289	305	258	256	266	260	263	281	293	273.8	293.0
28 Spd	16	13	10	10	3	3	3	13	11	15	13	10	8	3	2	1	2	1	3	3	2	1	1	2	3.9	16.5
Dir	292	287	274	269	238	250	264	292	312	319	352	354	7	45	27	113	89	109	119	116	130	117	34	192	309.1	291.7
29 Spd	2	3	1	1	2	2	1	2	3	3	2	2	4	4	2	4	6	12	7	6	7	2	4	1	1.5	12.5
Dir	168	162	225	205	193	195	180	223	187	195	166	21	40	26	30	292	313	350	7	24	24	351	19	51	1.8	349.6
30 Spd	3	1	2	1	1	1	1	2	13	16	16	15	15	14	16	18	18	20	17	14	9	9	12	12	9.8	19.9
Dir	330	171	240	313	357	74	192	218	287	289	292	286	281	279	281	284	281	294	288	280	271	265	270	265	282.0	294.0
31 Spd	4	4	3	3	4	4	3	12	18	22	19	16	14	14	12	12	13	12	10	5	1	2	3	3	7.5	21.8
Dir	223	200	186	199	178	173	234	278	284	283	291	287	290	281	287	288	303	300	300	278	212	174	195	194	277.9	283.0
Spd	1.8	1.8	1.6	1.8	1.7	1.9	2.0	3.0	4.4	5.6	5.4	5.2	5.4	5.0	5.3	5.3	6.5	5.6	5.1	3.6	2.1	1.8	2.2	1.9	Diurnal Average	
Dir	248.5	246.3	229.4	222.8	206.3	208.7	222.5	256.1	275.5	284.5	291.8	293.2	300.0	291.5	299.2	296.7	299.4	307.7	311.6	309.7	289.0	265.8	262.8	242.6		
Spd	16.5	13.6	10.4	9.9	5.5	10.9	12.7	13.0	17.6	21.8	18.8	16.4	17.1	17.6	17.9	17.6	22.3	19.9	16.7	14.1	11.0	9.3	12.6	16.3	Diurnal Maximum	
Dir	291.7	291.5	273.8	269.3	261.5	277.5	294.0	294.7	284.0	283.0	290.5	286.9	294.1	295.5	298.4	283.8	289.7	294.0	288.4	280.0	296.7	264.7	309.4	293.0		

Maximum Speed Value: 22 km/h on Jul 4 17:00
Maximum Daily Speed Average: 9.8 km/h on Jul 30
Maximum Diurnal Speed Average: 6.5 km/h at hour 17

Minimum Speed Value: 0 km/h on Jul 14 05:00
Minimum Daily Speed Average: 0.7 km/h on Jul 16
Minimum Diurnal Speed Average: 1.6 km/h at hour 3

Monthly Average Velocity: 3.18 km/h 283.63 deg

Speed Percentiles: $P_1 = 0.3$ $P_{10} = 1.2$ $Q_1 = 1.9$ Median = 3.5 $Q_3 = 7.6$ $P_{90} = 12.2$ $P_{99} = 17.3$

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

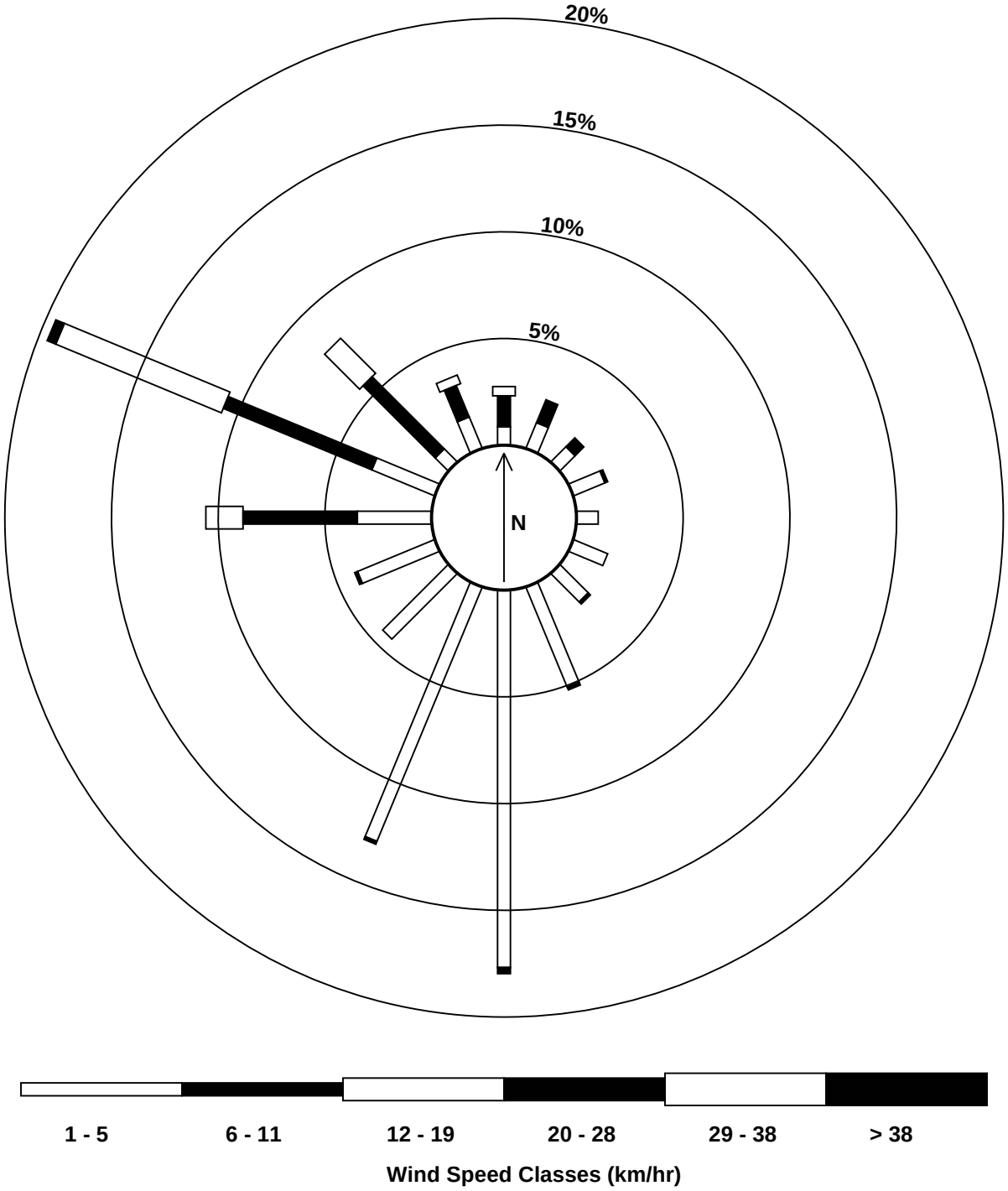
Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Percentage 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	2.42	2.15	0.40	0.00	0.00	0.00	4.97
NorthEast	2.55	1.61	0.00	0.00	0.00	0.00	4.17
East	3.49	0.00	0.00	0.00	0.00	0.00	3.49
SouthEast	4.44	0.27	0.00	0.00	0.00	0.00	4.70
South	30.51	0.94	0.00	0.00	0.00	0.00	31.45
SouthWest	10.48	0.13	0.00	0.00	0.00	0.00	10.62
West	6.32	8.60	4.84	0.27	0.00	0.00	20.03
NorthWest	3.36	8.33	8.74	0.13	0.00	0.00	20.56
Total	63.58	22.04	13.98	0.40	0.00	0.00	100.00

Wind Rose for WS at Valleyview

July 2008



Peace Airshed Zone Association
Summary of Hourly Standard Deviations

Valleyview - Wind Direction (WD) - deg
July 1, 2008 to August 1, 2008

Maximum Value: 95.8 deg on Jul 14 05:00

Minimum Value: 5.4 deg on Jul 9 03:00

Percentiles: P_1 = 6.7 P_{10} = 11.1 Q_1 = 15.4 Median = 25.6 Q_3 = 45.4 P_{90} = 65.2 P_{99} = 89.4

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 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	64	60	89	58	74	80	76	36	48	32	45	54	51	46	43	31	34	26	18	28	49	20	25	50	88.7
2-Jul	31	43	86	82	61	31	44	37	49	27	27	22	28	44	60	26	26	12	10	10	7	23	68	56	86.0
3-Jul	67	30	34	34	20	31	22	15	16	19	38	35	49	50	49	58	49	65	90	24	27	62	44	71	89.6
4-Jul	74	25	26	19	14	24	44	37	38	18	35	29	28	19	36	28	12	26	33	19	26	50	15	41	74.4
5-Jul	12	14	12	18	66	34	16	20	18	19	16	14	30	30	19	15	36	60	26	41	63	18	24	23	66.1
6-Jul	63	45	66	55	9	18	14	23	43	15	14	19	24	17	27	14	31	14	15	10	14	10	9	34	66.3
7-Jul	10	12	11	12	14	63	74	19	16	16	19	23	26	20	19	12	17	14	10	11	9	10	15	36	74.4
8-Jul	14	11	8	8	6	9	11	62	27	27	19	19	21	30	26	22	24	18	21	13	9	14	31	41	62.4
9-Jul	54	14	5	6	8	11	20	16	12	14	18	44	15	13	17	16	17	16	12	16	19	7	26	37	54.3
10-Jul	12	30	42	69	22	22	49	15	16	17	15	18	30	23	24	17	16	16	14	25	27	18	17	39	69.4
11-Jul	32	8	69	28	21	12	14	16	9	12	13	19	17	19	15	22	17	20	17	12	16	10	30	18	69.0
12-Jul	17	21	18	7	13	8	10	11	22	23	18	20	27	22	17	17	13	14	13	9	14	17	19	29	29.1
13-Jul	40	6	9	17	16	16	19	10	11	16	13	19	16	18	22	21	17	20	35	13	17	19	69	70	70.0
14-Jul	85	85	54	69	96	20	19	35	12	12	16	30	20	19	25	16	28	12	18	22	57	40	16	42	95.8
15-Jul	18	13	40	16	29	76	14	30	50	36	49	51	76	74	61	25	28	35	51	55	82	20	27	12	81.7
16-Jul	27	35	83	70	35	13	13	49	95	88	50	92	35	40	50	55	48	67	41	49	41	49	64	77	95.3
17-Jul	11	14	77	58	47	18	18	16	40	35	28	62	87	68	82	48	13	80	73	72	53	15	56	23	87.4
18-Jul	52	27	41	39	41	74	32	11	15	38	40	43	70	53	47	41	38	77	26	25	31	15	12	18	76.6
19-Jul	11	16	7	17	15	7	10	14	47	34	23	44	37	57	34	41	36	71	36	28	9	65	34	19	70.8
20-Jul	12	19	49	13	13	22	24	19	17	24	30	20	47	58	66	56	20	14	10	14	23	42	74	52	73.7
21-Jul	53	12	85	21	38	15	18	39	85	68	88	90	51	59	50	54	25	14	14	17	55	27	52	56	90.1
22-Jul	15	33	38	15	47	46	18	19	35	54	52	61	89	47	39	26	30	21	12	15	14	13	34	36	89.5
23-Jul	82	63	62	20	52	21	21	16	15	37	71	90	63	63	57	41	28	49	53	19	45	48	45	19	90.0
24-Jul	11	34	52	29	17	9	9	11	19	55	21	19	29	38	23	34	29	27	23	18	39	62	10	12	62.2
25-Jul	13	33	15	49	38	30	12	12	57	86	54	25	41	32	54	38	72	81	76	20	51	48	67	33	85.9
26-Jul	28	79	41	89	44	35	41	36	58	40	19	46	47	58	67	62	82	89	23	66	62	27	48	39	89.4
27-Jul	42	56	49	43	45	11	15	17	20	31	25	26	37	34	26	36	28	40	21	13	10	10	15	6	55.8
28-Jul	9	8	8	13	42	27	39	14	17	9	15	23	36	55	77	68	43	52	22	12	22	41	67	31	76.5
29-Jul	36	23	46	82	12	17	55	43	13	16	29	69	34	23	84	36	19	8	13	10	11	83	50	78	84.4
30-Jul	32	39	36	68	37	63	35	30	9	9	11	12	12	11	10	11	11	10	12	9	10	10	9	7	67.7
31-Jul	22	13	9	9	15	9	48	12	10	10	12	14	23	14	19	21	20	14	12	11	32	55	7	7	54.7
	84.7	84.9	88.7	88.9	95.8	79.7	76.3	62.4	95.3	88.3	87.8	92.3	89.5	73.7	84.4	68.2	81.7	89.4	89.6	72.4	81.7	83.3	73.7	78.2	

PASZA

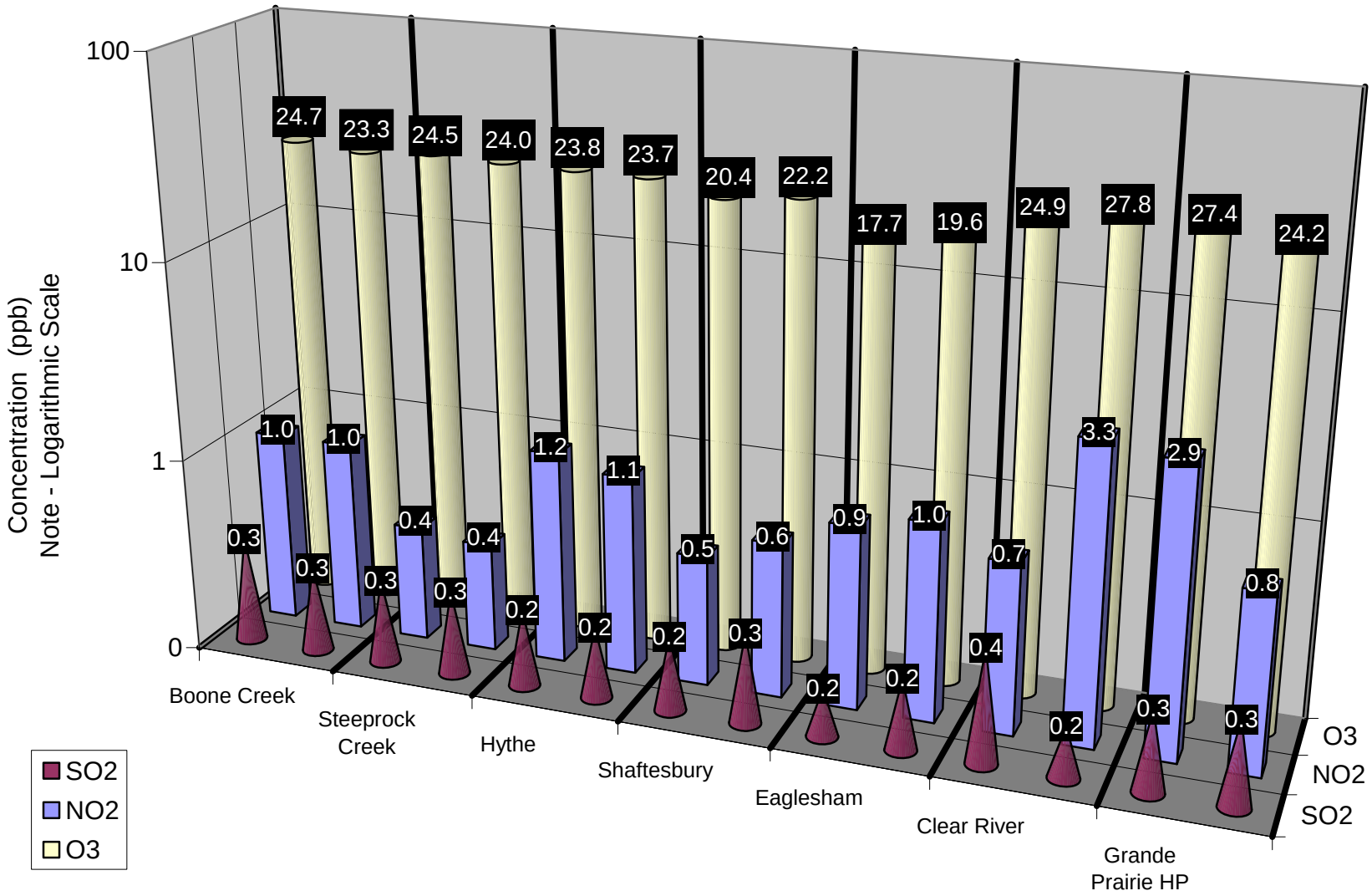
Monthly Passive Data Summary

PASZA Passive Results for July 2008

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	Site Legal
Duplicates					
5a	Boone Creek	**0.3**	**24.7**	**1.0**	
5b	Boone Creek	**0.3**	**23.3**	**1.0**	
7a	Steeprock Creek	**0.3**	**24.5**	**0.4**	
7b	Steeprock Creek	**0.3**	**24.0**	**0.4**	
12a	Hythe	**0.2**	**23.8**	**1.2**	
12b	Hythe	**0.2**	**23.7**	**1.1**	
20a	Shaftesbury	**0.2**	**20.4**	**0.5**	
20b	Shaftesbury	**0.3**	**22.2**	**0.6**	
21a	Eaglesham	**0.2**	**17.7**	**0.9**	
21b	Eaglesham	**0.2**	**19.6**	**1.0**	
50a	Clear River	**0.4**	**24.9**	**0.7**	
50b	Clear River	**0.2**	**27.8**	**3.3**	
49a	Grande Prairie HP	**0.3**	**27.4**	**2.9**	
49b	Grande Prairie HP	**0.3**	**24.2**	**0.8**	
1	Silver Valley	**0.3**	**23.5**	**1.4**	08-27-081-11 W6M
2	Bay Tree	**0.2**	**22.7**	**0.5**	13-16-078-13 W6M
3	Forth Creek	**0.3**	**27.3**	**0.6**	04-13-082-07 W6M
4	Gordondale	**0.3**	**24.2**	**0.9**	04-34-078-10 W6M
5	Boone Creek	**0.3**	**24.0**	**1.0**	01-23-076-11 W6M
7	Steeprock Creek	**0.3**	**24.2**	**0.4**	09-35-072-13 W6M
9	Spirit River	**0.4**	**24.2**	**1.8**	08-12-079-07 W6M
10	Woking	**0.4**	**25.2**	**0.8**	01-13-076-07 W6M
11	Webber Creek	**0.4**	**22.3**	**1.3**	09-36-074-09 W6M
12	Hythe	**0.2**	**23.8**	**1.1**	14-36-072-11 W6M
14	Sylvester	**0.1**	**21.9**	**0.6**	08-06-069-12 W6M
16	Beaverlodge	**0.2**	**28.3**	**1.3**	15-36-071-10 W6M
17	Poplar	**0.2**	**22.2**	**1.8**	13-06-073-08 W6M
18	Saddle Hills	**0.6**	**26.1**	**0.8**	04-25-074-07 W6M
19	Wanham	**0.3**	**26.3**	**0.6**	16-22-077-03 W6M
20	Shaftesbury	**0.3**	**21.3**	**0.5**	04-03-082-23 W5M
21	Eaglesham	**0.2**	**18.6**	**0.9**	16-21-079-25 W5M
23	Bear Lake	**0.2**	**24.4**	**1.6**	15-31-072-06 W6M

PASZA Passive Results for July 2008 (Continued)

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	Site Legal
24	Wembley	**0.2**	**21.2**	**1.5**	12-31-070-08 W6M
25	Pinto Creek	**0.2**	**24.5**	**0.8**	04-24-069-11 W6M
26	Flyingshot	**0.2**	**21.1**	**0.8**	15-36-070-07 W6M
27	Grande Prairie I	**0.3**	**25.4**	**2.4**	08-15-071-06 W6M
28	Clairmont Lake	**0.3**	**25.3**	**1.5**	09-06-073-04 W6M
29	Smoky Heights	**0.4**	**28.5**	**1.2**	04-06-075-02 W6M
30	Fitzsimmons	**0.2**	**21.8**	**1.1**	15-36-072-03 W6M
32	Gold Creek	**0.3**	**17.1**	**1.0**	06-33-067-05 W6M
33	Wapiti	**0.3**	**23.1**	**1.0**	02-25-071-03 W6M
34	Puskwaskau	**0.2**	**17.8**	**0.3**	15-35-074-25 W5M
35	Jean Cote	**0.2**	**22.8**	**1.1**	12-35-079-21 W5M
36	Guy	**0.2**	**21.7**	**1.1**	03-04-076-22 W5M
37	Crooked Creek	**0.4**	**21.8**	**0.8**	16-01-071-26 W5M
39	Clouston Creek	**0.2**	**20.6**	**0.6**	12-01-073-22 W5M
40	McLennan	**0.4**	**20.3**	**1.3**	03-29-077-19 W5M
41	Valleyview	**0.3**	**24.9**	**0.7**	09-30-069-22 W5M
42	Sunset House	**0.4**	**24.3**	**0.5**	05-32-070-19 W5M
43	High Prairie	**0.2**	**19.6**	**0.8**	16-13-074-17 W5M
44	Peavine	**0.2**	**17.1**	**0.3**	03-05-079-15 W5M
45	Gift Lake	**0.3**	**15.9**	**0.4**	10-07-079-12 W5M
46	Little Smoky	**0.3**	**19.0**	**1.1**	12-01-065-21 W5M
47	Kinuso	**0.2**	**17.7**	**0.3**	12-10-073-10 W5M
48	Deer Mountain	**N/A**	**18.5**	**N/A**	15-22-068-09 W5M
49	Grande Prairie HP	**0.3**	**25.8**	**1.9**	17-26-071-06 W6M
50	Clear River	**0.3**	**26.3**	**2.0**	SE-03-084-12 W6M
51	Bear Canyon	**0.5**	**21.1**	**0.5**	SE-28-085-12 W6M
52	Worsley	**0.4**	**20.8**	**1.2**	NE-34-085-07 W6M
53	Hines Creek	**0.2**	**20.4**	**1.3**	SW-09-084-04 W6M
54	Ronan	**0.3**	**24.3**	**2.1**	SE-03-082-04 W6M
55	Cadotte Lake School	**0.2**	**15.0**	**0.6**	NE-23-086-16 W5M
56	Simon Lake Store	**0.6**	**19.0**	**0.6**	SE-32-086-17 W5M
57	Dixonville	**0.2**	**20.2**	**0.7**	SE-14-087-24 W5M
58	Queen Elizabeth Park	**0.2**	**22.8**	**1.0**	NW-19-083-23 W5M
59	Blue Sky	**0.2**	**25.3**	**1.6**	SW-35-081-02 W6M
60	Gerry Lake	**0.3**	**20.9**	**0.3**	SW-22-084-02 W6M
61	Musreau Lake	**0.1**	**21.5**	**0.5**	NE-22-064-05 W6M



Duplicate Summary Chart

Passive Summary for July 2008

Stats	Sulphur Dioxide SO_2	Ozone O_3	Nitrogen Dioxide NO_2
	ppb	ppb	ppb
	Passive Summary for July 2008 (PASZA Zone)		
Mean	**0.3**	**22.3**	**1.0**
Standard Deviation	**0.1**	**3.1**	**0.5**
Minimum	**0.1**	**15.0**	**0.3**
Minimum At	**Musreau Lake (#61)**	**Cadotte Lake School**	**Kinuso (#47)**
Maximum	**0.6**	**28.5**	**2.4**
Maximum At	**Saddle Hills (#18)**	**Smoky Heights (#29)**	**Grande Prairie I (#27)**

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

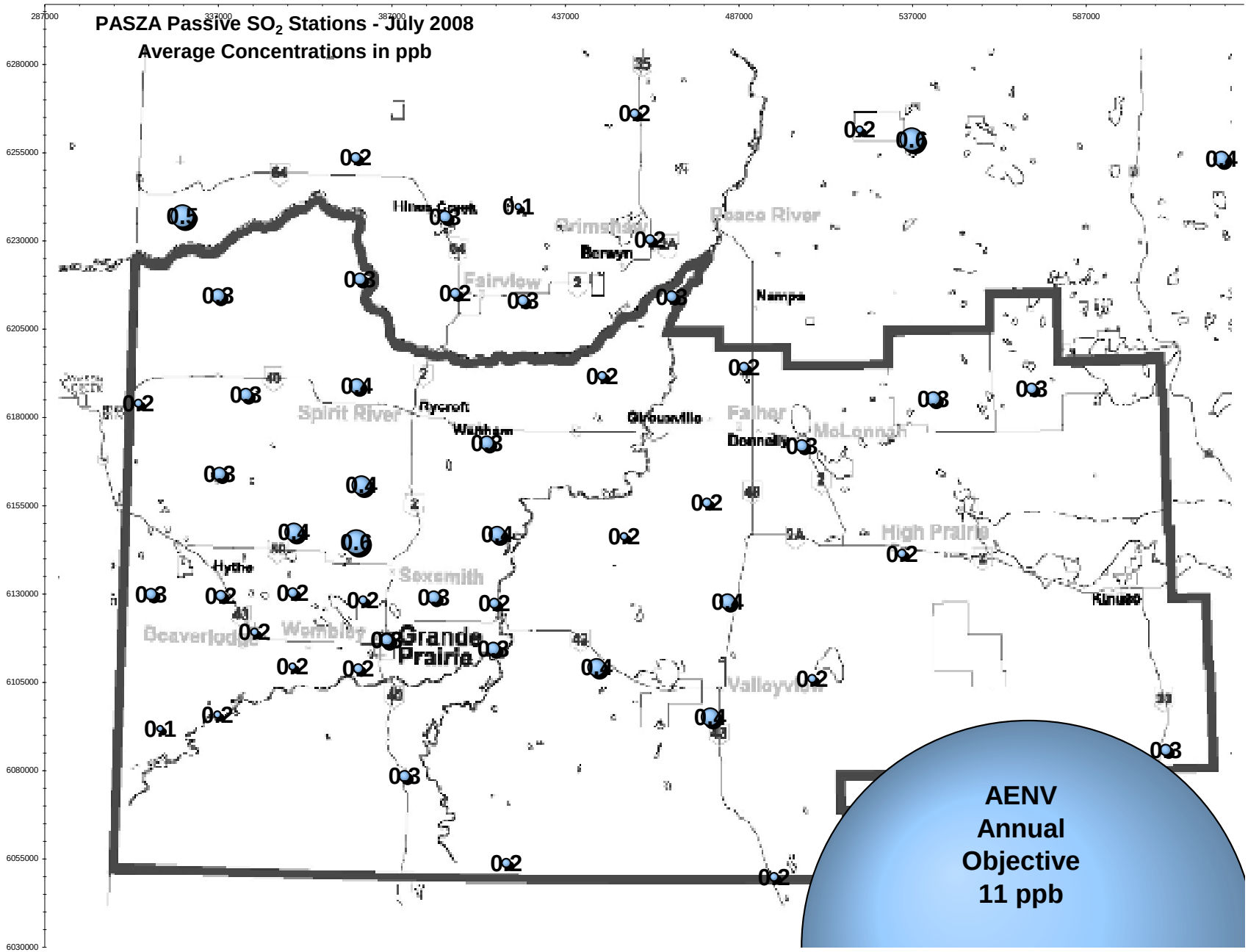
	SO_2	O_3	NO_2
PASZA Beaverlodge station	**0.3**	**2.3**	**2.1**
PASZA Beaverlodge passive	**0.2**	**28.3**	**1.3**

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

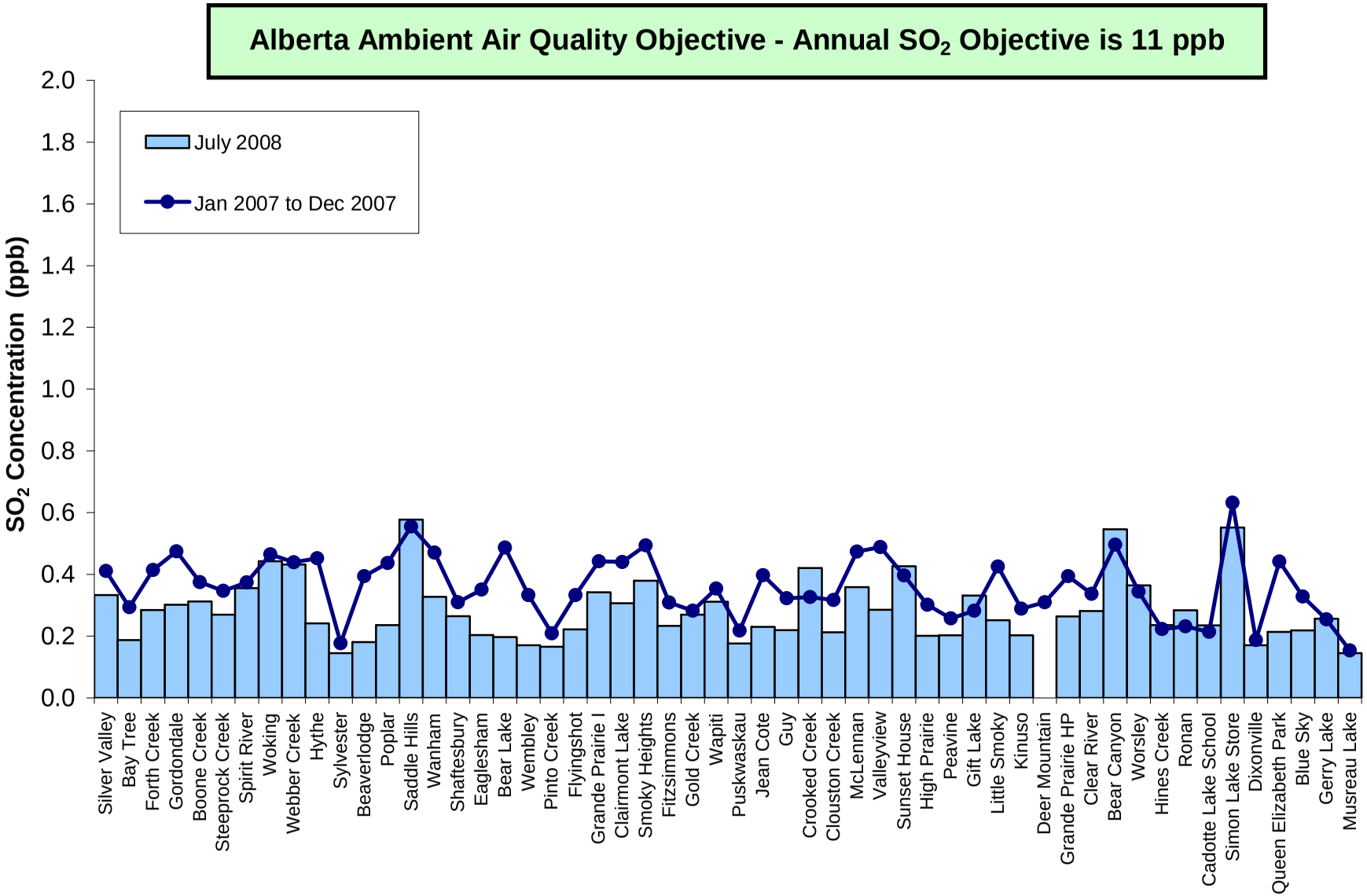
	SO_2	O_3	NO_2
PASZA Henry Pirker station	**0.2**	**27.5**	**4.7**
PASZA Grande Prairie passive	**0.3**	**25.8**	**1.9**

Comparison between Continuous and Passive monitoring at Spirit River (passive #9 Spirit River)

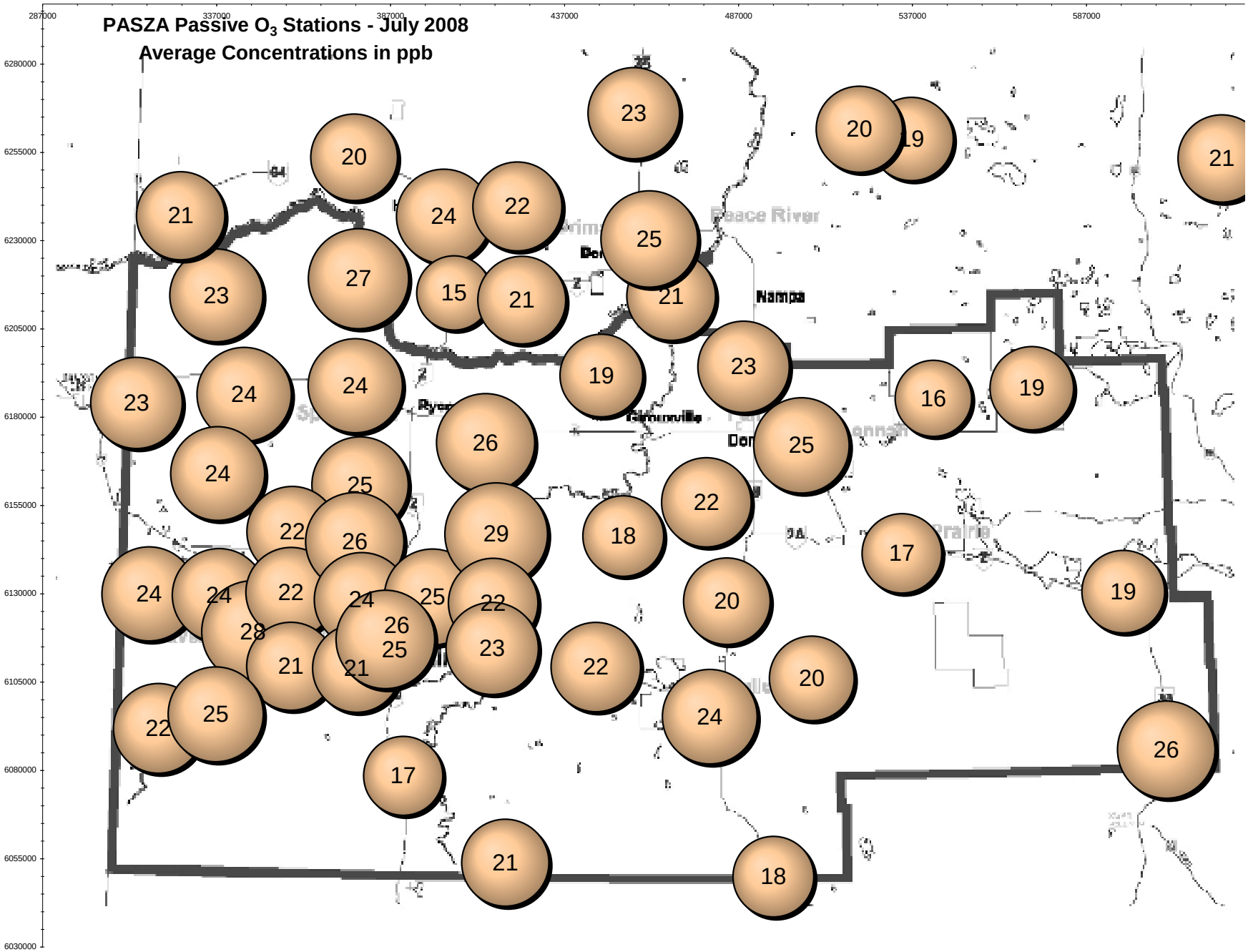
	SO_2	O_3	NO_2
PASZA Portable Spirit River station	**0.3**	**24.0**	**2.5**
PASZA Spirit River passive	**0.4**	**24.2**	**1.8**



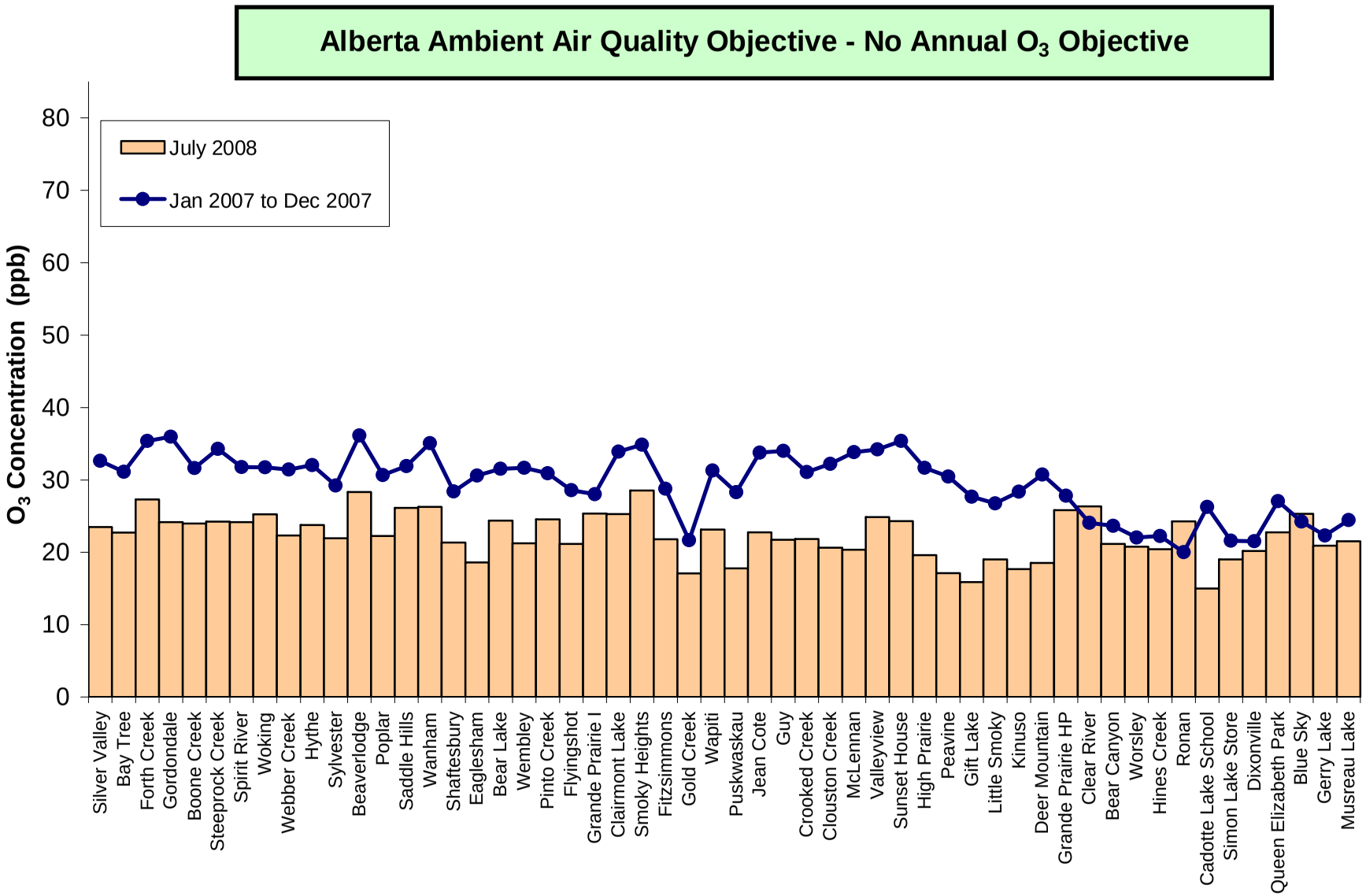
SO_2 Bubble Chart



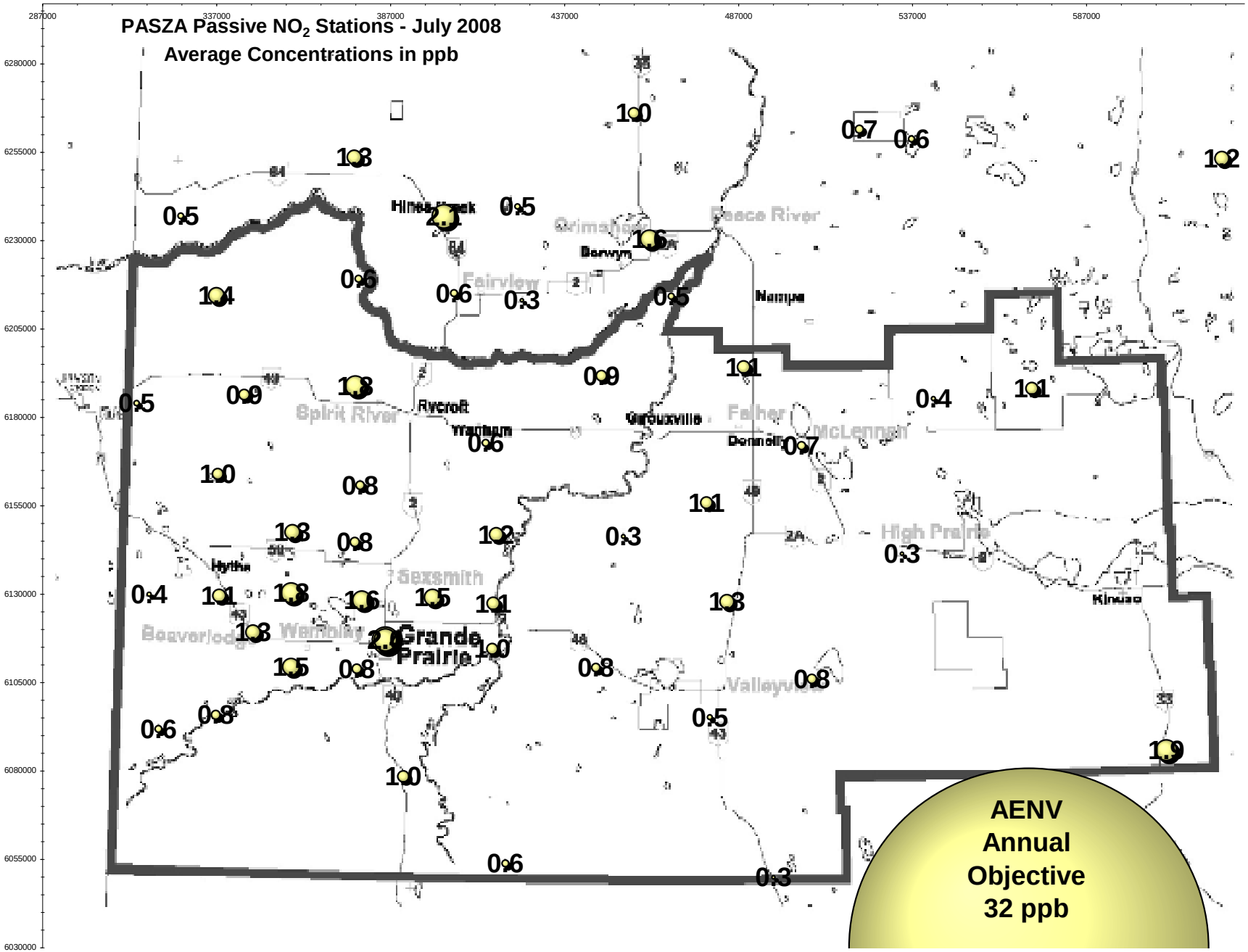
SO_2 Summary Chart



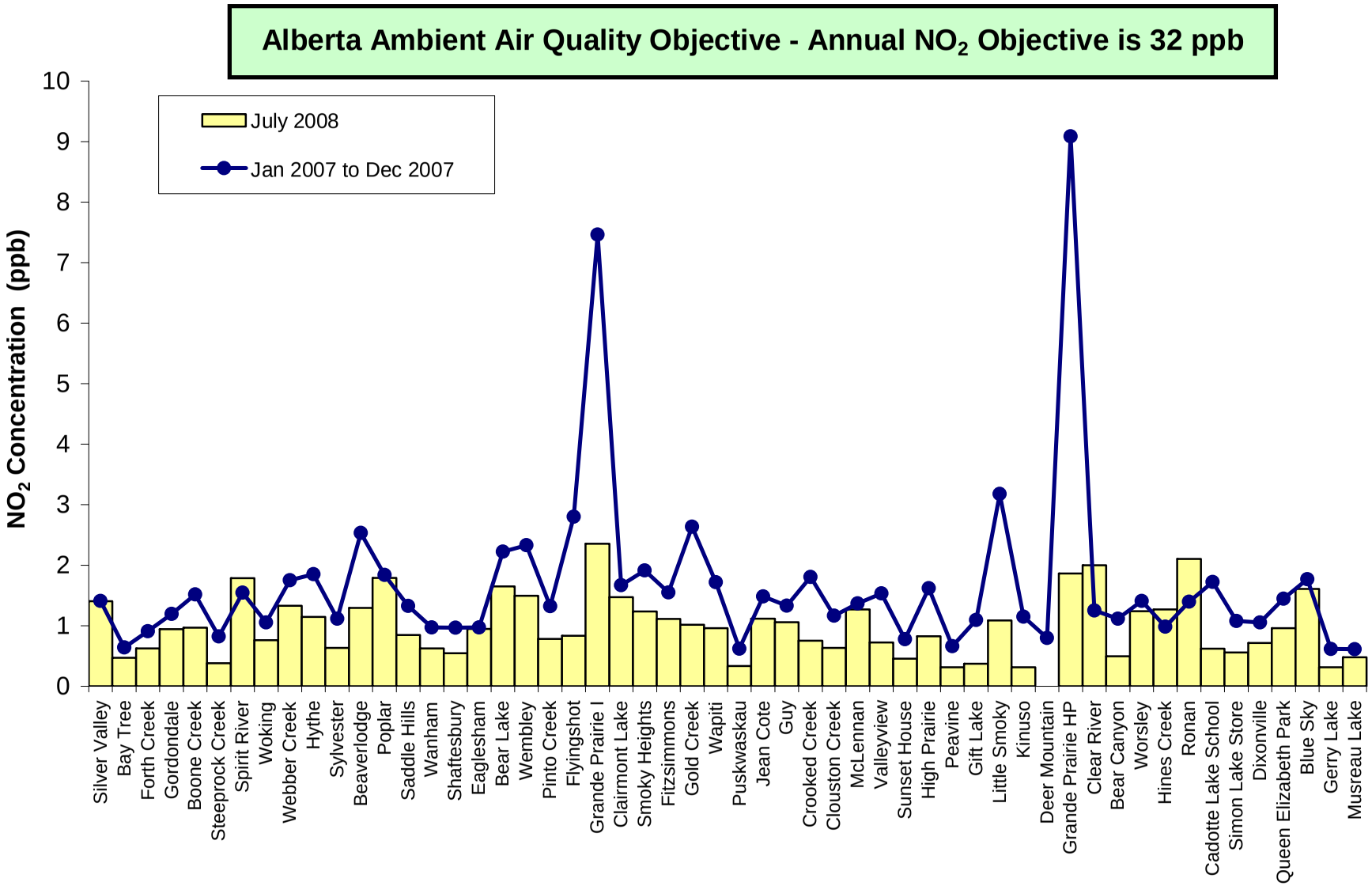
O_3 Bubble Chart



O_3 Summary Chart



NO_2 Bubble Chart



NO_2 Summary Chart

July 2008 Calibration Reports

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

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

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

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

PASZA – Spirit River (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 9, 2008	Previous Calibration	June 4, 2008
Station Number	1	Station Location	Henry Pirker
Reason: Routine	Install	Removal	Other:
Start Time (MST)	10:35	End Time (MST)	13:20
Barometric Pressure	0.919 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Conc	50.3 ppb	Cal Gas Expiry Date	1/2/2009
		Cal Gas Cylinder #	LL16161
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	10
	Before		After
Calculated slope	1.001323	Calculated slope	0.996259
Calculated intercept	-0.936299	Calculated intercept	-1.974511
Analyzer make	TEI 43C	Analyzer serial #	610816292

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	7.6		7.6	
Coefficient	.800		.800	
Pressure	637.6	mm Hg	637.6	mm Hg
Flow	0.481	lpm	0.481	lpm
Lamp Voltage	44657	Hz	44657	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)
4988	0.00	0.0	0.1	N/A
4991	39.84	398.3	400.9	0.9936
4988	19.92	200.1	203.6	0.9829
4988	9.91	99.7	104.1	0.9583
4988	0.00	0.0	0.1	As Found Zero
4991	39.84	398.3	400.9	As Found Span
			Average Correction Factor	0.9782

Calculated value of As Found Response: 400.4 ppb Percent Change of As Found: -0.5%

	before calibration		after calibration	
Auto zero	-0.2	ppb	-1.5	ppb
Auto span	334.1	ppb	332.7	ppb

Notes:

Calibration Performed By: Conor Whiteley

Calibration Summary

Parameter	SO2
Air Monitoring Network	PASZA

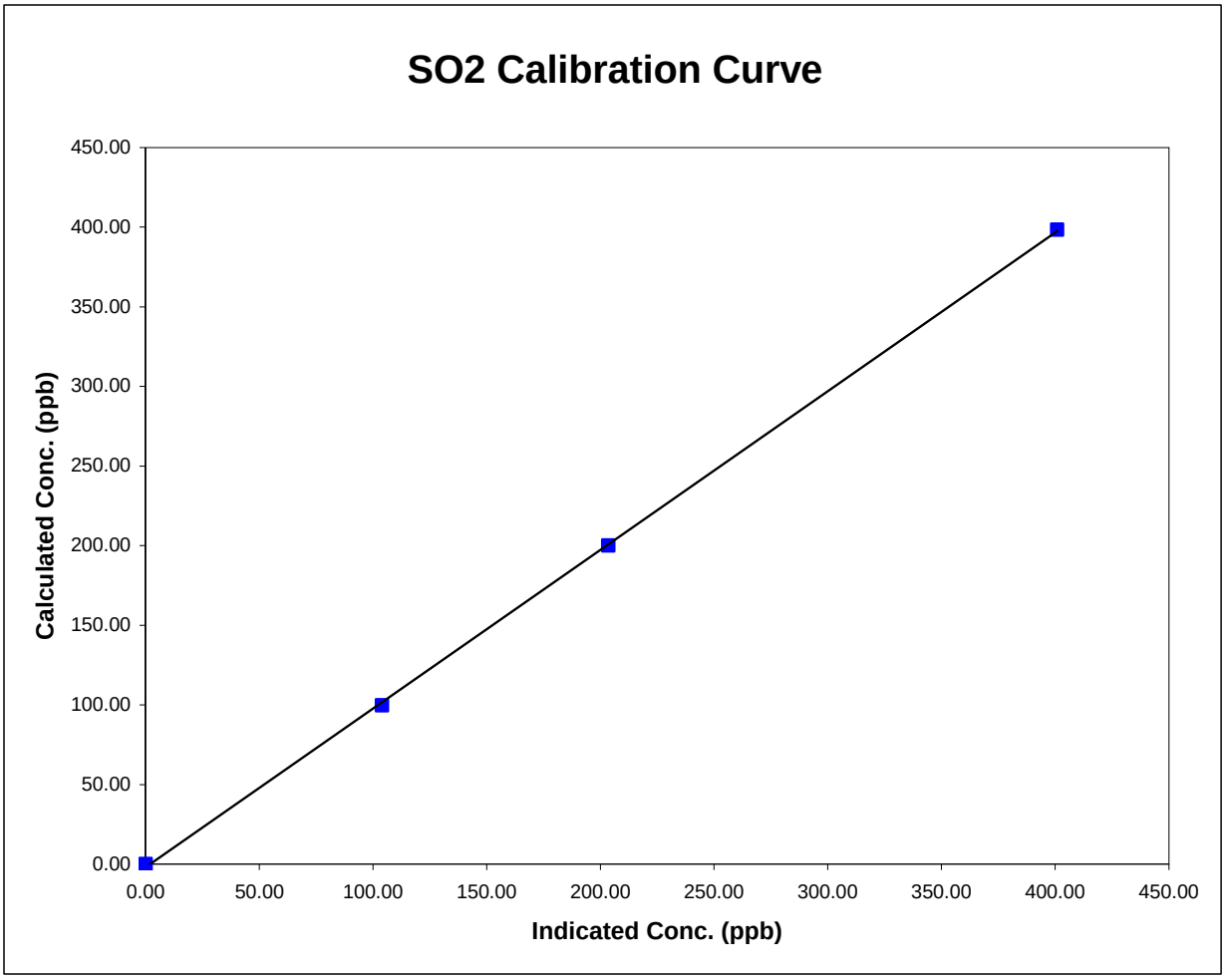
FOCUS AIR QUALITY MONITORING

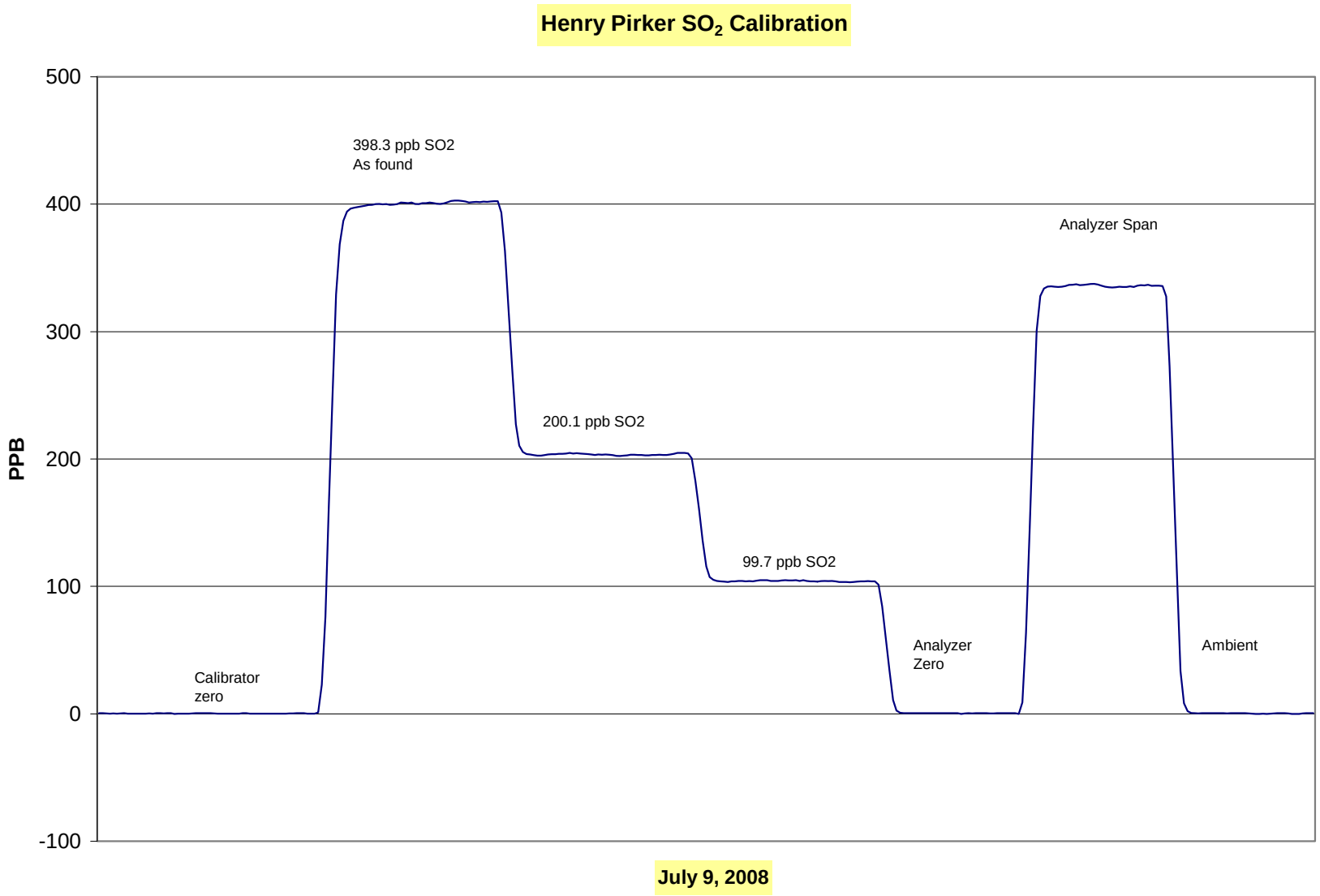
Station Information

Calibration Date	July 9, 2008	Previous Calibration	June 4, 2008
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:35	End Time (MST)	13:20
Analyzer make/model	TEI 43C	Analyzer serial #	610816292

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A		
398.3	400.9	0.9936	Correlation Coefficient	0.999901
200.1	203.6	0.9829		
99.7	104.1	0.9583	Slope	0.996259
			Intercept	-1.974511




Henry Pirker SO_2 Calibration
500
400
300
200
100
0
-100
PPB
398.3 ppb SO2
As found
200.1 ppb SO2
99.7 ppb SO2
Analyzer Span
Calibrator
zero
Analyzer
Zero
Ambient
July 9, 2008

Calibration Report

Parameter	**NOx-NO-NO_2**
Air Monitoring Network	**PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 9, 2008	Previous Calibration	June 4, 2008
Station Number	1	Station Location	Henry Pirker

Reason: Routine Installation Removal Other:

Start Time (MST)	10:35		End Time (MST)	14:45	
Barometric Pressure	0.919	Atm	Station Temperature	21.0	Deg C
Calibrator	Environics 6100		Serial Number	3474	
NO Cal Gas Conc	48.9	ppm	Cal Gas Expiry Date	1/2/2009	
NOx Cal Gas Conc	48.9	ppm	Cal Gas Serial #	LL16161	

DACS Information

DACS make	FOCUS AP1000	DACS serial No.	45269

Parameter		NO2	NOx	NO
Before	Data Slope	1.019407	1.018414	1.018011
	Data Offset	0.025816	-1.632066	-1.803434
After	Data Slope	1.020236	1.022163	1.018904
	Data Offset	0.046222	-3.148134	-2.590341
Channel #		8	6	7
Voltage Range		0 - 10 VDC	0 - 10 VDC	0 - 10 VDC

Analyzer Information

Analyzer make/model	Teco 42C	Analyzer serial #	508011073

Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO background	7.9	ppb	7.9	mV
NOx background	8.3	ppb	8.3	mV
NO coefficient	0.694		0.684	
NOx coefficient	0.999		0.997	
Chamber Temp	49.9	Deg C	50.0	Deg C
Cooler Temp	-2.5	Deg C	-2.4	Deg C
Converter Temp	318.0	Deg C	318.0	Deg C
Vacuum	167.9	mm Hg	168.8	mm Hg

Notes:

Calibration Report

Parameter	**NOx-NO-NO_2**
Air Monitoring Network	**PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: July 9, 2008 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	4990	0.00	0.0	0.0	0.0	1.1	0.5	0.6	N/A	N/A
1	4991	39.84	387.2	387.2	0.0	380.9	381.6	-0.7	1.0166	1.0148
2	4990	19.92	194.4	194.4	0.0	194.2	194.2	-0.1	1.0011	1.0010
3	4990	9.91	96.9	96.9	0.0	100.0	99.8	0.1	0.9692	0.9707
AFZ	4990	0.00	0.0	0.0	0.0	1.1	0.5	0.6	0.0000	0.0000
AFS	4990	39.85	387.4	387.4	0.0	380.9	381.6	-0.7	1.0171	1.0153
							Average Correction Factor		0.9956	0.9955

As Found Concentrations: NO_X= 378.2 NO= 379.3 As Found Percent Change NO_X= -2.4% NO= -2.1%

GPT Calibration Data

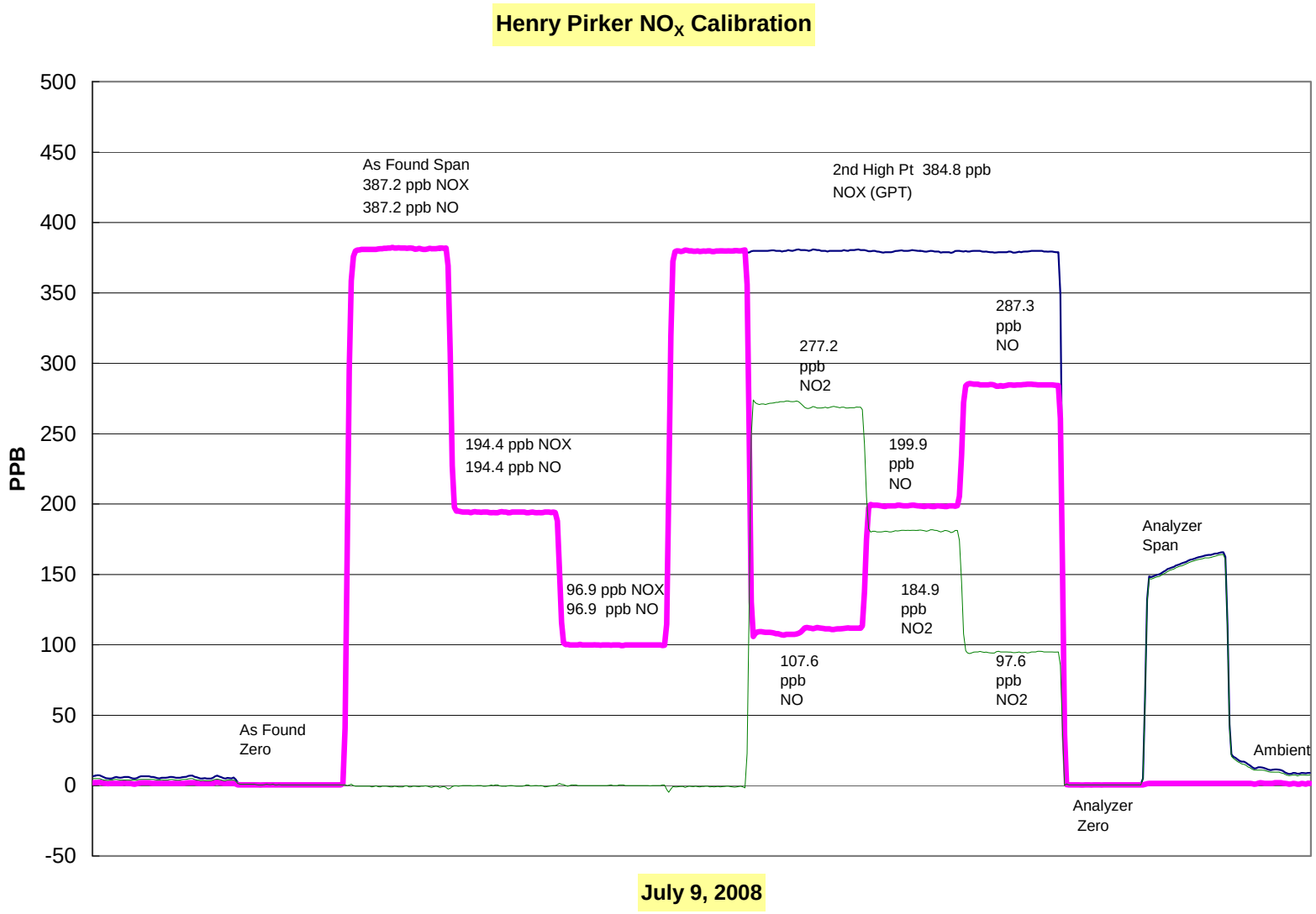
Dilution Flow 4990 ccm Source Gas Flow 39.88 ccm

O3 Setpoint (ppb)	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	NO2 Correction factor	Converter Efficiency
0	0.0	0.0	0.0	0.0	0.0	0.0	N/A	N/A	N/A	N/A
NO point	384.8	384.3	0.5	379.0	379.8	-0.7	1.0154	1.0121	N/A	N/A
300	384.8	107.6	277.2	380.1	108.2	272.1	1.0126	0.9950	1.0188	98.2%
200	384.8	199.9	184.9	379.6	198.8	181.0	1.0137	1.0059	1.0215	97.9%
100	384.8	287.3	97.6	379.0	284.5	94.7	1.0153	1.0098	1.0302	97.1%
					Average Correction Factor		1.0139	1.0035	1.0235	97.7%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.9	5.9	-348.6	ppb	-0.7	1.0	0.1	ppb
Auto span	165.7	166.1	-0.3	ppb	155.1	156.5	-1.1	ppb

Calibration Performed By: Conor Whiteley


Henry Pirker NOX Calibration
PPB
500
450
400
350
300
250
200
150
100
50
0
-50
As Found Span
387.2 ppb NOX
387.2 ppb NO
2nd High Pt 384.8 ppb
NOX (GPT)
287.3
ppb
NO
277.2
ppb
NO2
194.4 ppb NOX
194.4 ppb NO
199.9
ppb
NO
Analyzer
Span
96.9 ppb NOX
96.9 ppb NO
184.9
ppb
NO2
107.6
ppb
NO
97.6
ppb
NO2
As Found
Zero
Ambient
Analyzer
Zero
July 9, 2008

Calibration Summary

Parameter	NO_2
Air Monitoring Network	PASZA

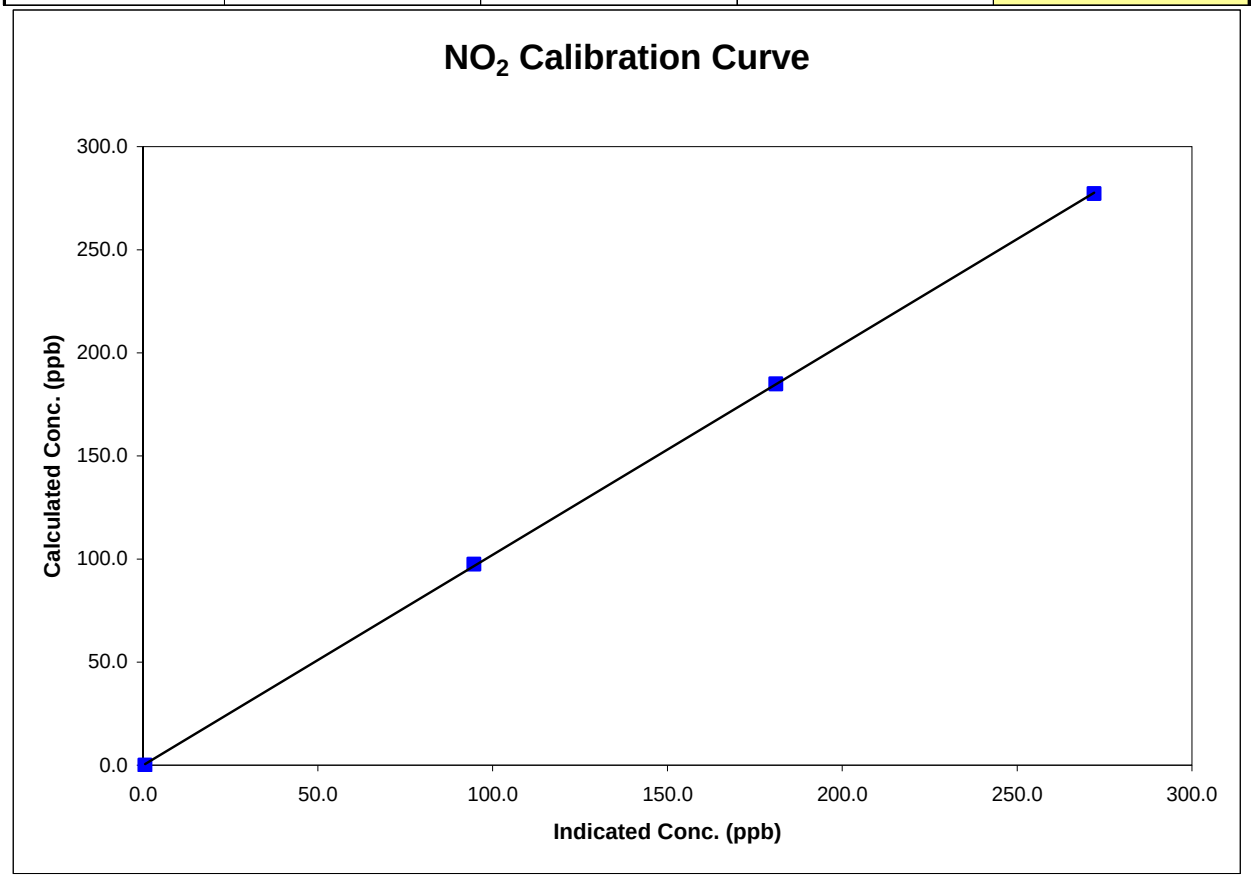
FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 9, 2008	Previous Calibration	June 4, 2008
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:35	End Time (MST)	14:45
Analyzer make	Teco 42C	Analyzer serial #	508011073

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.6	0.0000		
277.2	272.1	1.0188	Correlation Coefficient	0.999966
184.9	181.0	1.0215		
97.6	94.7	1.0302	Slope	1.020236
			Intercept	0.046222



Calibration Summary

Parameter	NO_x
Air Monitoring Network	PASZA

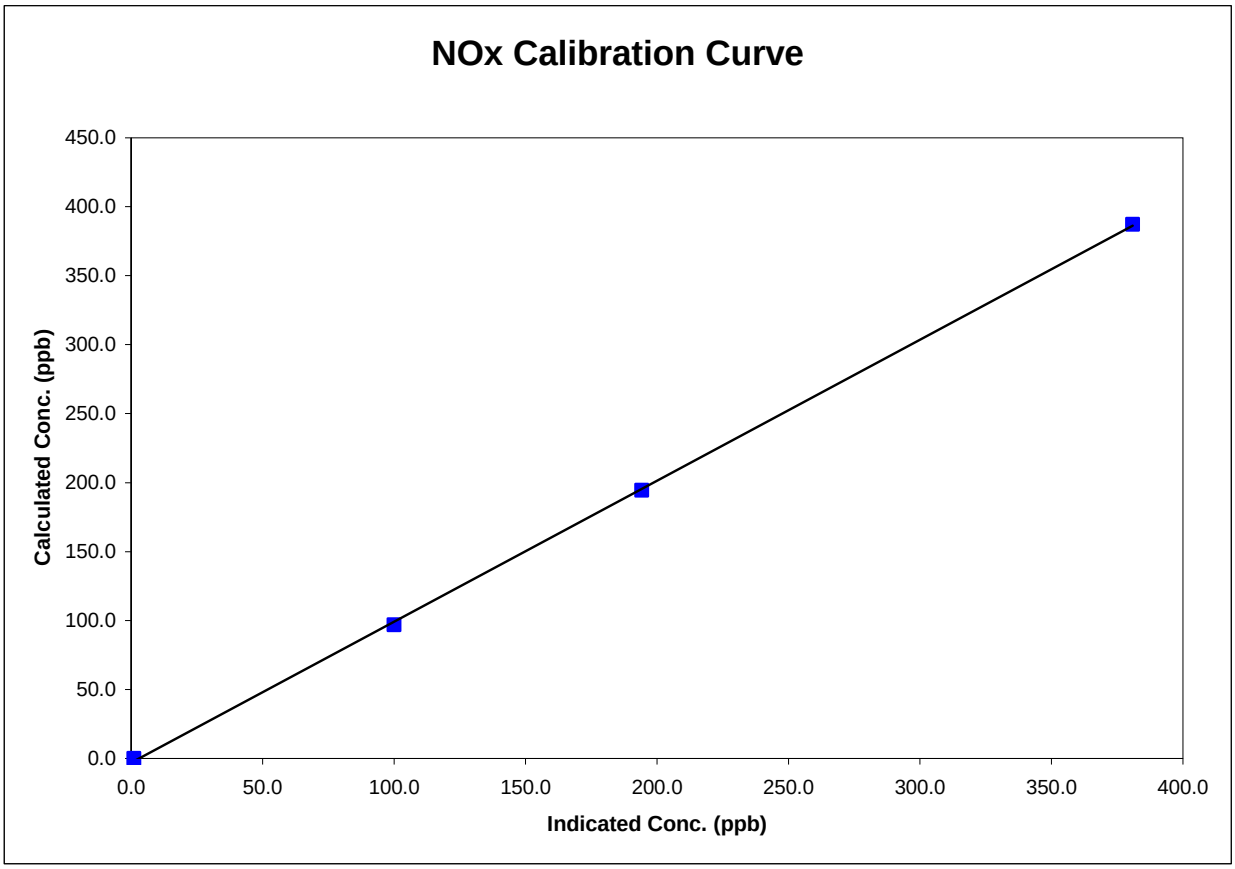
FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 9, 2008	Previous Calibration	June 4, 2008
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:35	End Time (MST)	14:45
Analyzer make	Teco 42C	Analyzer serial #	508011073

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	1.1	0.0000		
387.2	380.9	1.0166	Correlation Coefficient	0.999869
194.4	194.2	1.0011		
96.9	100.0	0.9692	Slope	1.022163
			Intercept	-3.148134



Calibration Summary

Parameter	**NO**
Air Monitoring Network	**PASZA**

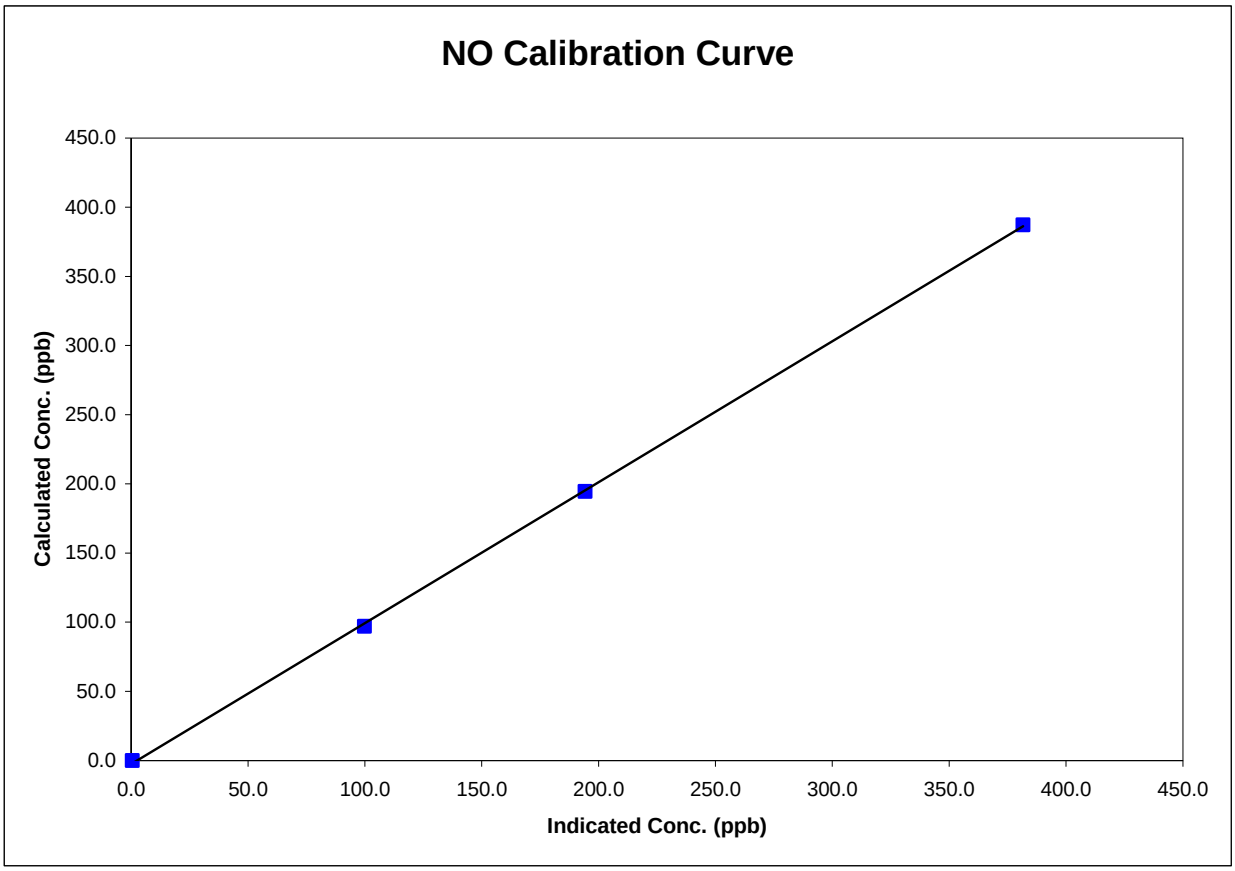
FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 9, 2008	Previous Calibration	June 4, 2008
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:35	End Time (MST)	14:45
Analyzer make	Teco 42C	Analyzer serial #	508011073

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A		
387.2	381.6	1.0148	Correlation Coefficient	0.999864
194.4	194.2	1.0010		
96.9	99.8	0.9707	Slope	1.018904
			Intercept	-2.590341



Calibration Report

Parameter	O3
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 9, 2008	Previous Calibration	June 5, 2008
Station Number	1	Station Location	Henry Pirker
Reason: Routine	Install	Removal	Other:
Start Time (MST)	12:05	End Time (MST)	14:35
Barometric Pressure	0.919 atm	Station Temperature	20.0 Deg C
Calibrator	Environics 6103	Serial Number	2844
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	Focus AP1000	DACS serial No.	45269
DACS voltage range	0 - 1 volt	DACS channel #	5
	Before		After
Calculated slope	1.040061	Calculated slope	1.012121
Calculated intercept	-0.295483	Calculated intercept	-0.481161
Analyzer make	TECO 49C	Analyzer serial #	607415761

	before		after	
Concentration range	500	ppb	500	ppb
offset	-0.6	ppb	-0.6	ppb
slope	1.023		1.023	
O3 Lamp temp	71.1	Deg C	71	Deg C
Intensities	100377/80071	mV	100819/81123	mV
Pressure	709.1	inches Hg	708.9	inches Hg
Flow A	678	ccm	683	ccm
Flow B	696	Deg C	695	Deg C

Calibration Data

Referenced concentration (ppb)	Dilution air flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
0	4990	0.0	0.1	N/A
300	4990	277.2	273.5	1.0135
200	4990	184.9	184.5	1.0023
100	4990	97.6	96.7	1.0084
0	4990	0.0	0.1	As found zero
300	4990	277.2	273.5	As found span
			Average Correction Factor	1.0080

Calculated value of As Found Response: 284.1 ppm Percent Change of As Found: 2.5%

	before calibration		after calibration	
Auto zero	-1.0	ppb	-2.3	ppb
Auto span	164.5	ppb	164.7	ppb

Notes:

Calibration Performed By: C Whiteley

Calibration Summary

Parameter	O3
Air Monitoring Network	PASZA

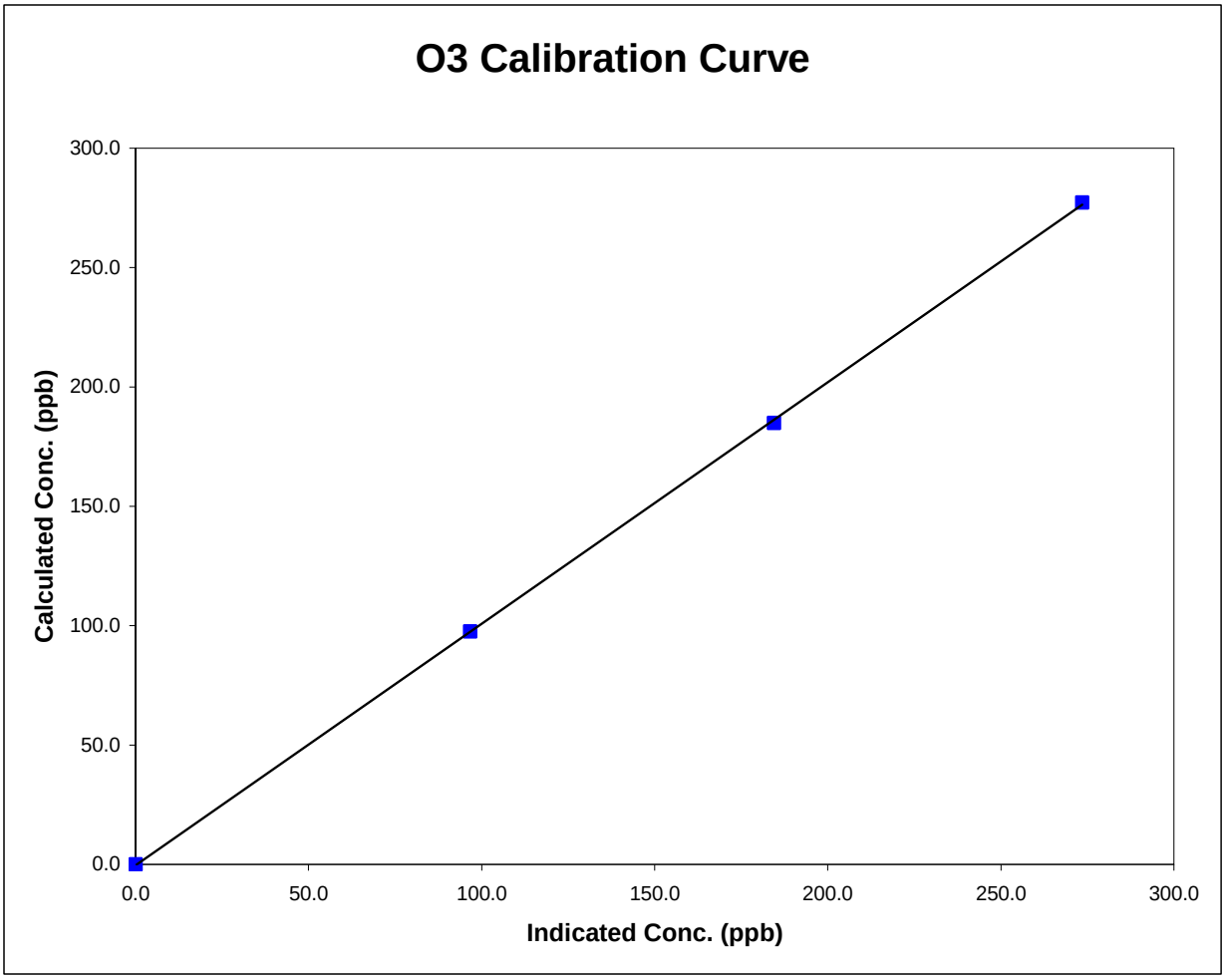
FOCUS AIR QUALITY MONITORING

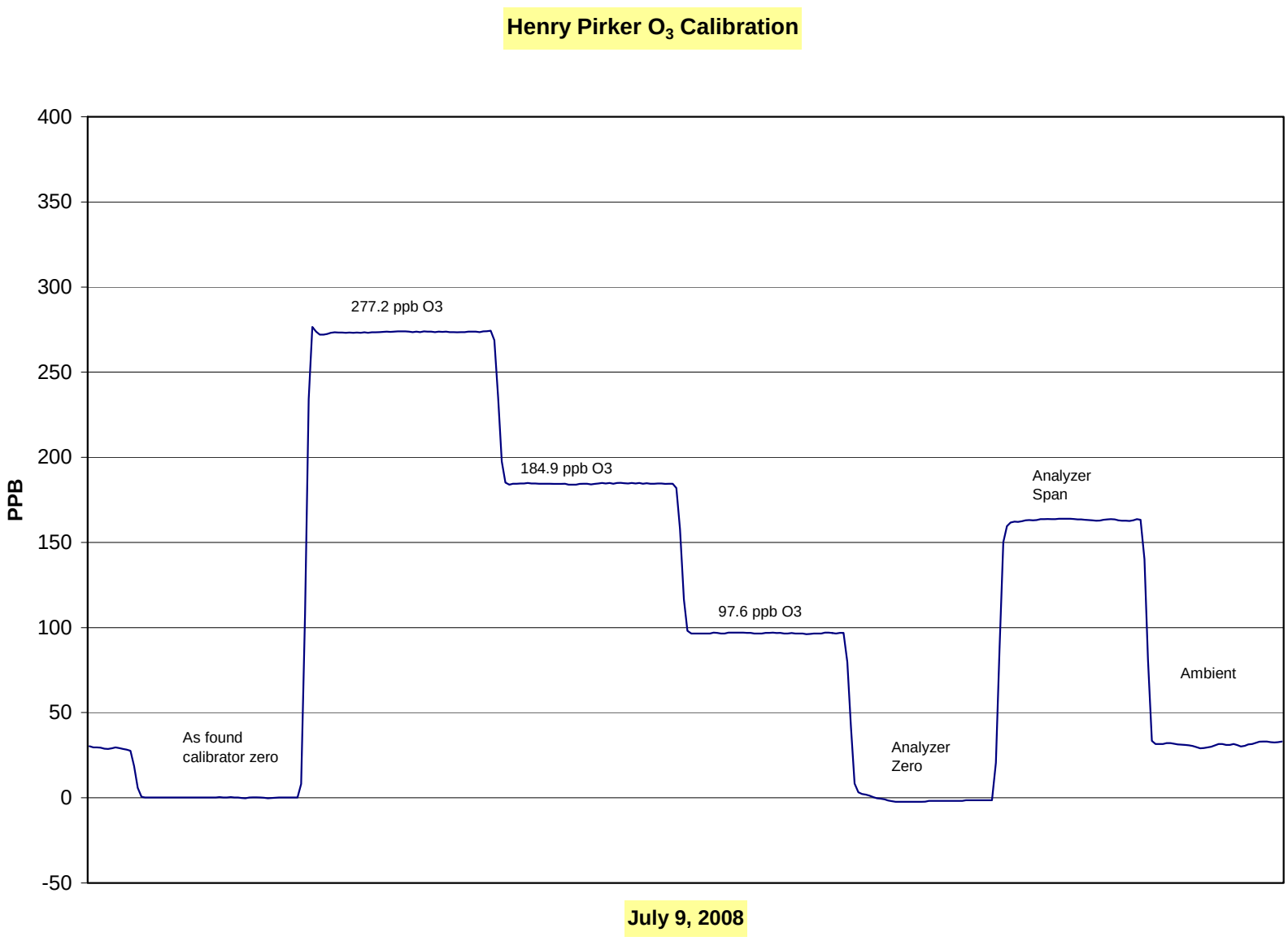
Station Information

Calibration Date	July 9, 2008	Previous Calibration	June 5, 2008
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:05	End Time (MST)	14:35
Analyzer make/model	TECO 49C	Analyzer serial #	607415761

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	NA		
277.2	273.5	1.0135	Correlation Coefficient	0.999937
184.9	184.5	1.0023		
97.6	96.7	1.0084	Slope	1.012121
			Intercept	-0.481161




Henry Pirker O_3 Calibration
PPB
400
350
300
250
200
150
100
50
0
-50
277.2 ppb O3
184.9 ppb O3
97.6 ppb O3
Analyzer
Span
Ambient
As found
calibrator zero
Analyzer
Zero
July 9, 2008

Calibration Report

Parameter	CO
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 10, 2008	Previous Calibration	June 5, 2008
Station Number	1	Station Location	Henry Pirker
Reason:	Routine / Install	Removal	Other:

Start Time (MST)	10:40	End Time (MST)	13:30
Barometric Pressure	0.917 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Conc	3000 ppm	Cal Gas Expiry Date	AUG 28/05
		Cal Gas Cylinder #	AAL20565
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	0.970099	Calculated slope	1.006837
Calculated intercept	-0.919543	Calculated intercept	-0.350001

Analyzer make	TEI Model 48C	Analyzer serial #	508011062

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO span setting	1.017		1.017	
CO zero setting	.808		.808	
Sample pressure	679.1	mm Hg	679.1	mm Hg
Sample Flow	1.12	LPM	1.12	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)
4989	0.00	0.00	0.26	N/A
4989	39.90	23.80	23.94	0.9941
4989	19.91	11.92	12.23	0.9752
4989	9.91	5.95	6.35	0.9362
4989	0.00	0.00	0.26	As Found Zero
4989	39.86	23.78	23.94	As Found Span
			Average Correction Factor	0.9685

Calculated value of As Found Response: 22.060 ppm Percent Change of As Found: 7.2%

	before calibration		after calibration	
Auto zero	0.00	ppm	0.02	ppm
Auto span	17.89	ppm	17.73	ppm

Notes: Out Flow on Regulator adjusted during Span

Calibration Performed By: Conor Whiteley

Calibration Summary

Parameter	CO
Air Monitoring Network	PASZA

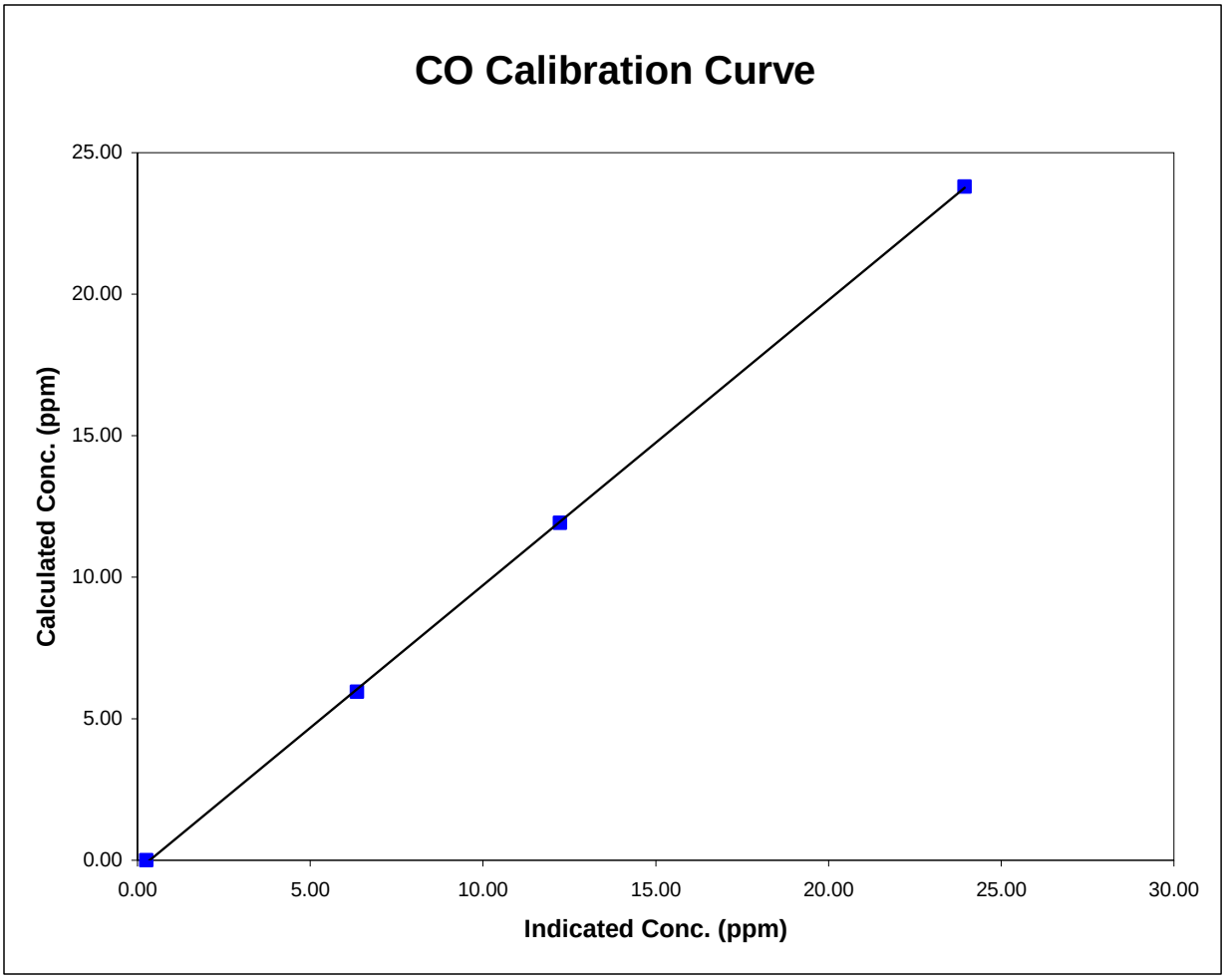
FOCUS AIR QUALITY MONITORING

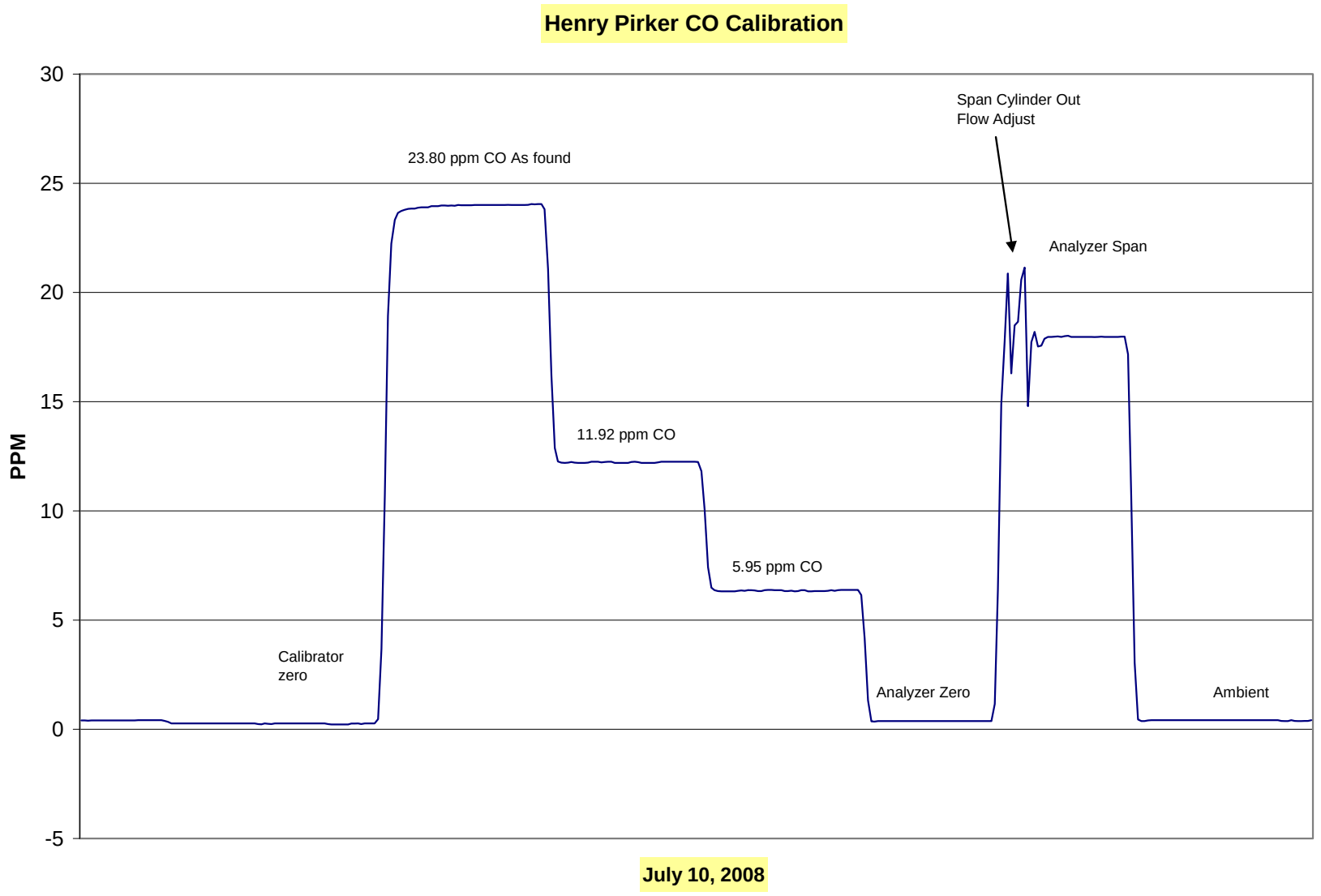
Station Information

Calibration Date	July 10, 2008	Previous Calibration	June 5, 2008
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:40	End Time (MST)	13:30
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	0.257	N/A		
23.802	23.944	0.9941	Correlation Coefficient	0.999931
11.925	12.229	0.9752		
5.947	6.352	0.9362	Slope	1.006837
			Intercept	-0.350001




Henry Pirker CO Calibration
30
25
20
15
10
5
0
-5
PPM
Span Cylinder Out
Flow Adjust
23.80 ppm CO As found
Analyzer Span
11.92 ppm CO
5.95 ppm CO
Calibrator
zero
Analyzer Zero
Ambient
July 10, 2008

Calibration Report

Parameter	THC
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 10, 2008	Previous Calibration	June 6, 2008
Station Number	1	Station Location	Henry Pirker
Reason:	Routine / Install	Removal	Other:

Start Time (MST)	12:55	End Time (MST)	15:30
Barometric Pressure	0.925 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	12/10/2005
Cal Gas CH4 equiv	1523.25 ppm	Cal Gas Cylinder #	ALM 005412
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	1.003289	Calculated slope	0.999068
Calculated intercept	0.171179	Calculated intercept	0.025116

Analyzer make	TEI Model 51C-LT		Analyzer serial #	51CLT-79009-390

	before		after	
Concentration range	0 - 25	ppm	0 - 25	ppm
THC sample pressure	6.11	psi	6.11	psi
THC span counts	7170	capture	7170	capture
THC zero counts	1121	capture	1121	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)
4990	0.00	0.00	-0.04	N/A
4991	69.78	21.00	21.01	0.9997
4991	29.91	9.07	9.02	1.0062
4990	9.93	3.03	3.04	0.9947
4990	0.00	0.00	-0.04	As Found Zero
4990	69.82	21.02	21.01	As Found Span
			Average Correction Factor	1.0002

Calculated value of As Found Response: 21.285 ppm Percent Change of As Found: -1.3%

	before calibration		after calibration	
Auto zero	-0.01	ppm	-0.03	ppm
Auto span	25.20	ppm	21.13	ppm

Notes:

Calibration Performed By: Conor Whiteley

Calibration Summary

Parameter	THC
Air Monitoring Network	PASZA

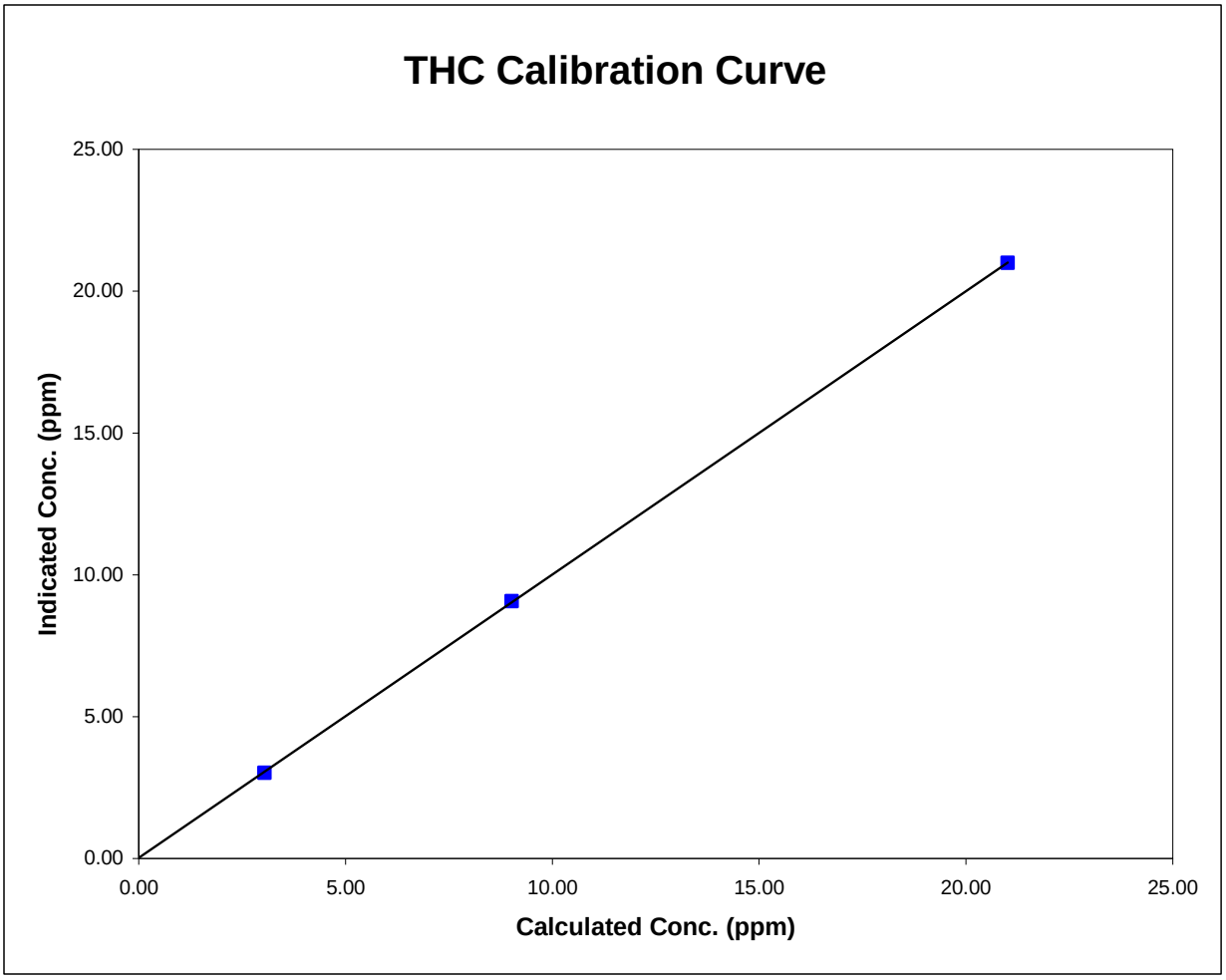
FOCUS AIR QUALITY MONITORING

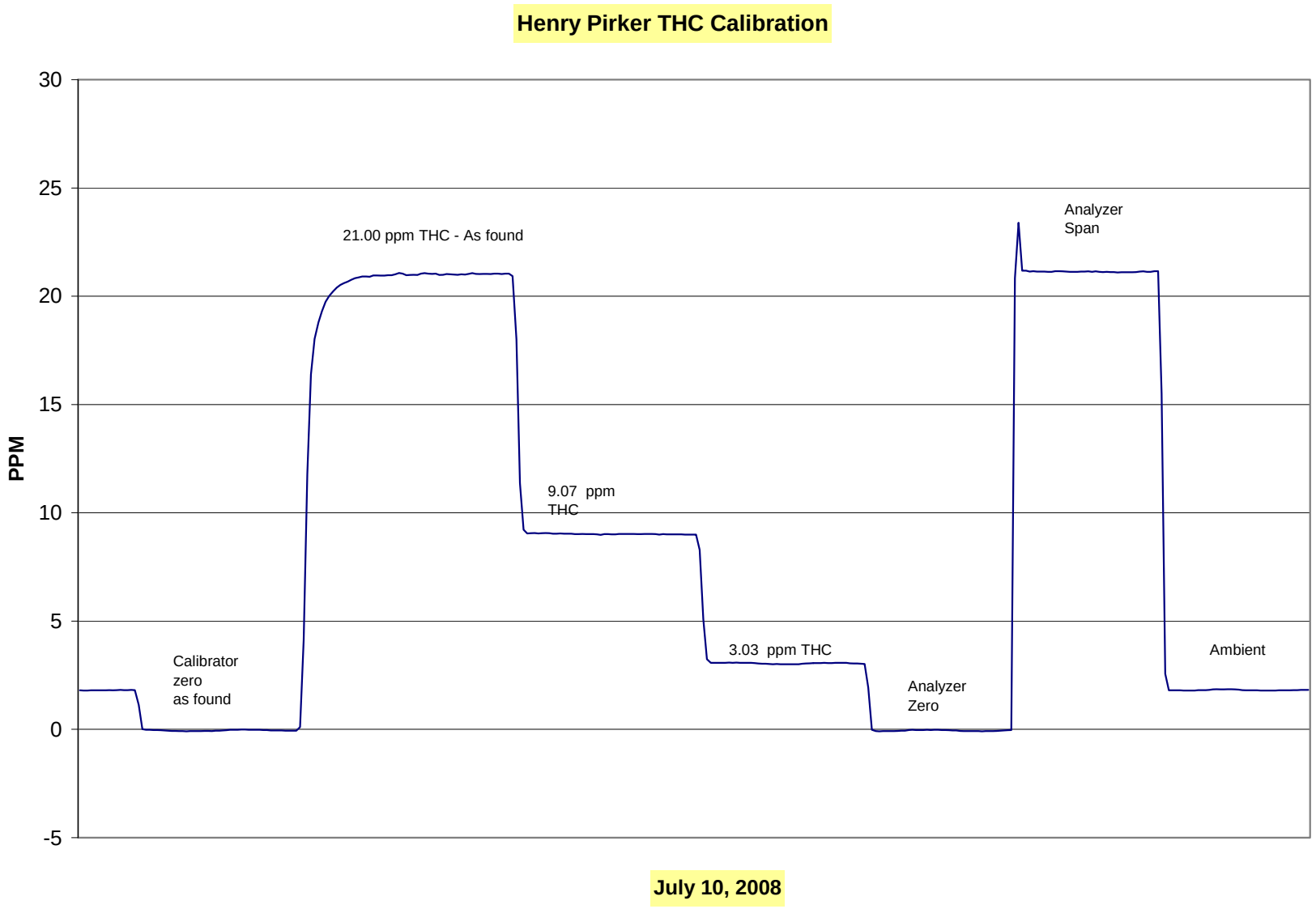
Station Information

Calibration Date	July 10, 2008	Previous Calibration	June 6, 2008
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:55	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	-0.036	N/A		
21.003	21.009	0.9997	Correlation Coefficient	0.999988
9.074	9.019	1.0062		
3.025	3.041	0.9947	Slope	0.999068
			Intercept	0.025116




Henry Pirker THC Calibration
PPM
30
25
20
15
10
5
0
-5
21.00 ppm THC - As found
9.07 ppm
THC
3.03 ppm THC
Analyzer
Span
Calibrator
zero
as found
Analyzer
Zero
Ambient
July 10, 2008

Calibration Report

Parameter	TRS
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 10, 2008	Previous Calibration	June 3, 2008
Station Number	1	Station Location	Henry Pirker
Reason:	Routine / Install	Removal	Other:

Start Time (MST)	8:00	End Time (MST)	10:45
Barometric Pressure	0.917 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Conc	5.1 ppb	Cal Gas Expiry Date	7/31/2008
		Cal Gas Cylinder #	ALM013295
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	0.987290	Calculated slope	0.975807
Calculated intercept	0.859327	Calculated intercept	0.822792

Analyzer make	TEI 45C		Analyzer serial #	630718528

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Coefficient	0.871		0.871	
Background	18.0		18.0	
Pressure	651	mm Hg	653	mm Hg
Flow	456	ccm	462	ccm
Lamp Voltage	847	V	848	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)
4990	0.00	0.00	-1.09	N/A
4990	79.79	80.27	81.16	0.9890
4990	39.91	40.47	41.11	0.9843
4990	9.91	10.11	9.53	1.0606
4990	0.00	0.00	-1.09	As Found Zero
4990	79.68	80.16	81.16	As Found Span
			Average Correction Factor	1.0113

Calculated value of As Found Response: 82.1 ppb Percent Change of As Found: -2.4%

	before calibration		after calibration	
Auto zero	-0.08	ppb	-0.17	ppb
Auto span	36.13	ppb	35.39	ppb

Notes:

Calibration Performed By: Conor Whiteley

Calibration Summary

Parameter	TRS
Air Monitoring Network	PASZA

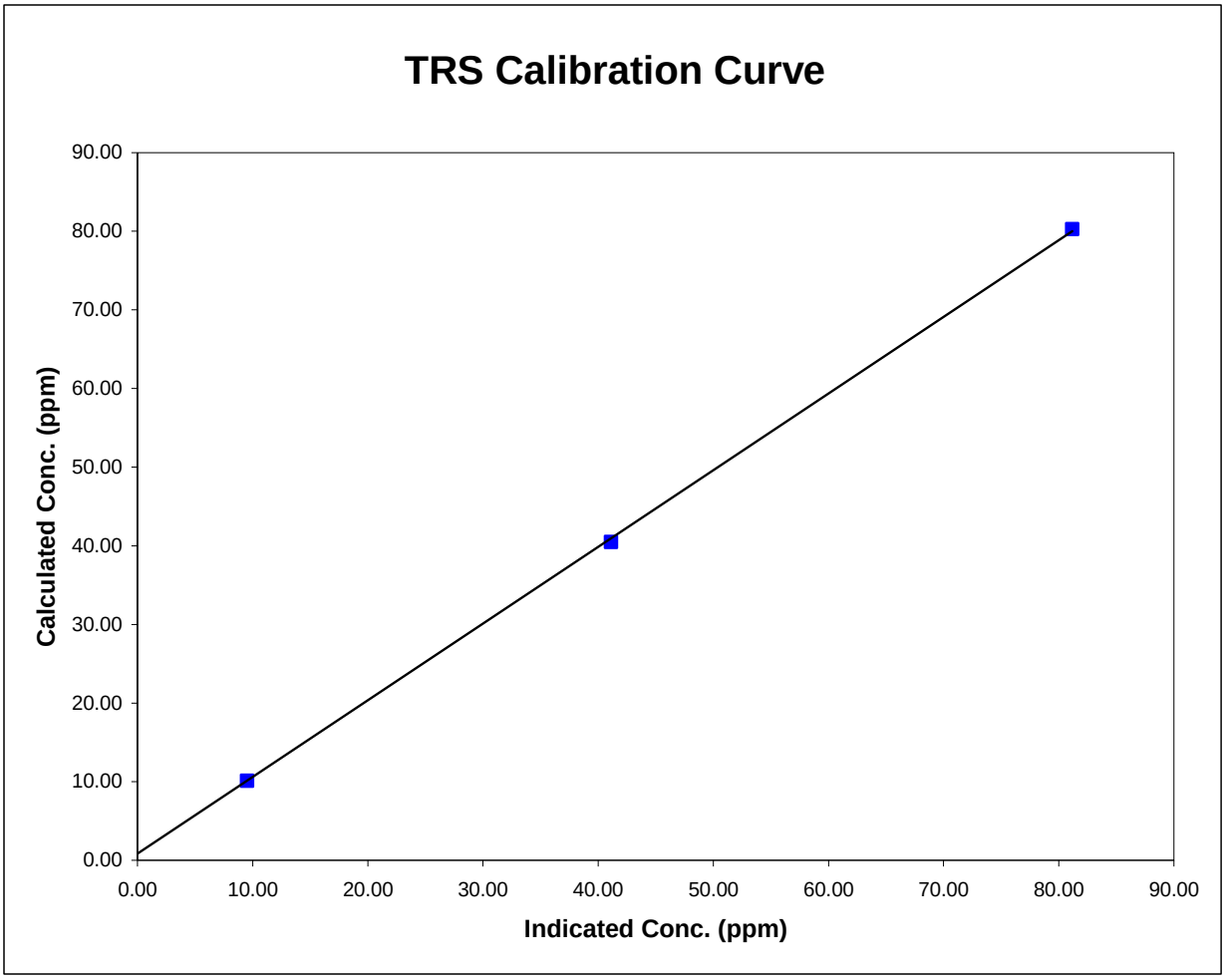
FOCUS AIR QUALITY MONITORING

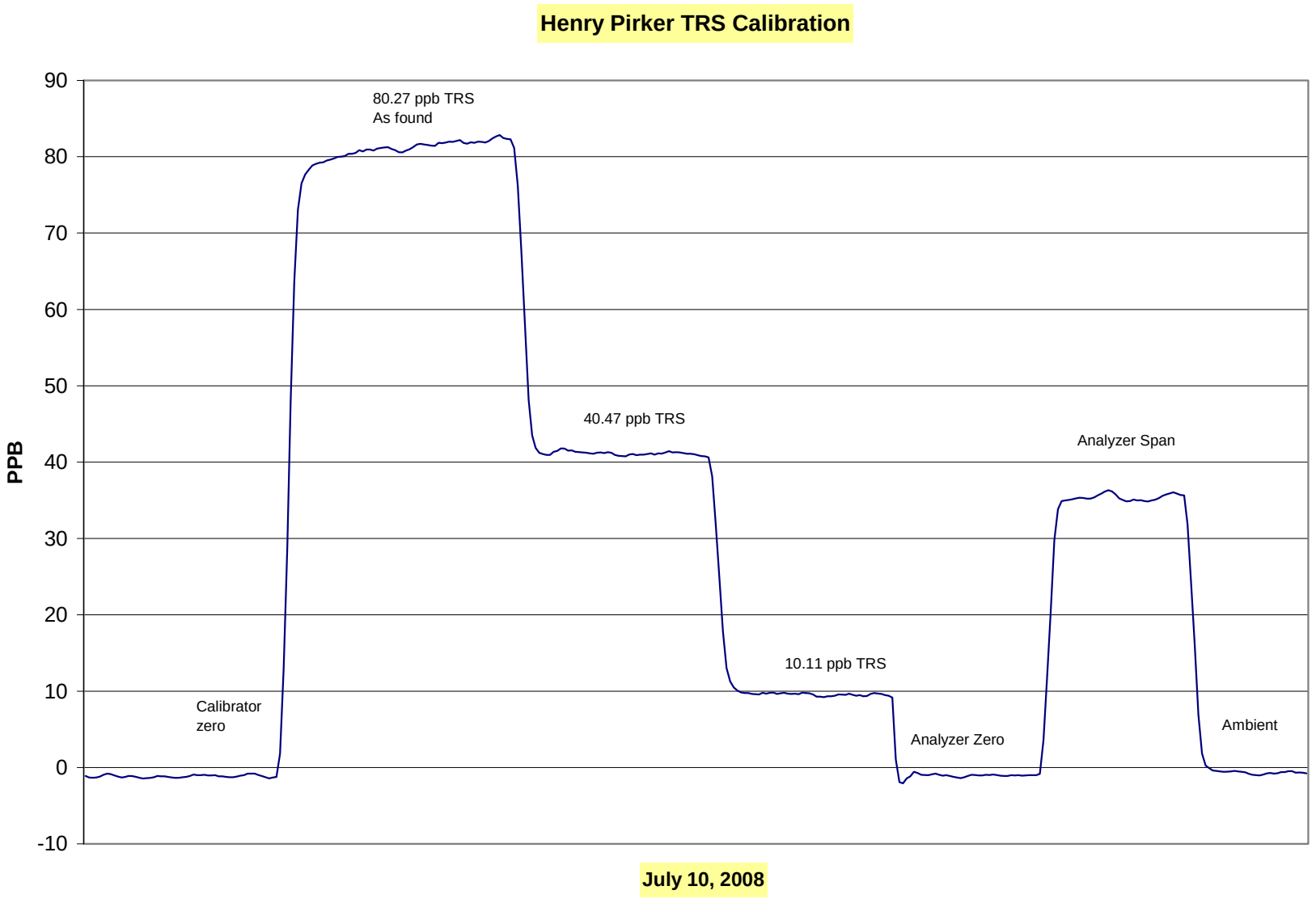
Station Information

Calibration Date	July 10, 2008	Previous Calibration	June 3, 2008
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:00	End Time (MST)	10:45
Analyzer make/model	TEI 45C	Analyzer serial #	630718528

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	-1.092	N/A		
80.265	81.162	0.9890	Correlation Coefficient	0.999912
40.466	41.110	0.9843		
10.108	9.531	1.0606	Slope	0.975807
			Intercept	0.822792




Henry Pirker TRS Calibration
PPB
90
80
70
60
50
40
30
20
10
0
-10
80.27 ppb TRS
As found
40.47 ppb TRS
10.11 ppb TRS
Analyzer Span
Calibrator
zero
Analyzer Zero
Ambient
July 10, 2008

Calibration Report

Parameter	SO_2
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 22, 2008	Previous Calibration	June 24, 2008
Station Number	2	Station Location	Evergreen Park
Reason:	Routine / Install	Removal	Other:

Start Time (MST)	10:15	End Time (MST)	12:57
Barometric Pressure	0.925 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	50.3 ppm	Cal Gas Expiry Date	1/2/2009
Correction factor	0.031443	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	1.035591	Calculated slope	1.008918
Calculated intercept	-1.889055	Calculated intercept	-3.139537

Analyzer make	Teco 43i	Analyzer serial #	701120008

	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
Background	9		9	
coefficient	0.928		0.928	
Lamp Voltage	837	volts	837	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	44.25	Deg C	44.25	Deg C
Pressure	659.5	mm Hg	659.5	mm Hg
Sample Flow	440	ccm	440	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)
4991	0.0	0.00	1.0	N/A
4991	39.78	397.74	396.3	1.0036
4991	19.89	199.66	201.9	0.9889
4991	9.91	99.68	104.1	0.9574
4991	0.0	0.00	1.0	As Found Zero
4991	39.80	397.94	396.3	As Found Span
			Average Correction Factor	0.9833

Calculated value of As Found Response: 407.443 ppm Percent Change of As Found: -2.4%

	before calibration		after calibration	
Auto zero	-0.7	ppm	-2.1	ppm
Auto span	281.7	ppm	269.7	ppm

Notes:

Calibration Performed By: Conor Whiteley

Calibration Summary

Parameter	SO2
Air Monitoring Network	PASZA

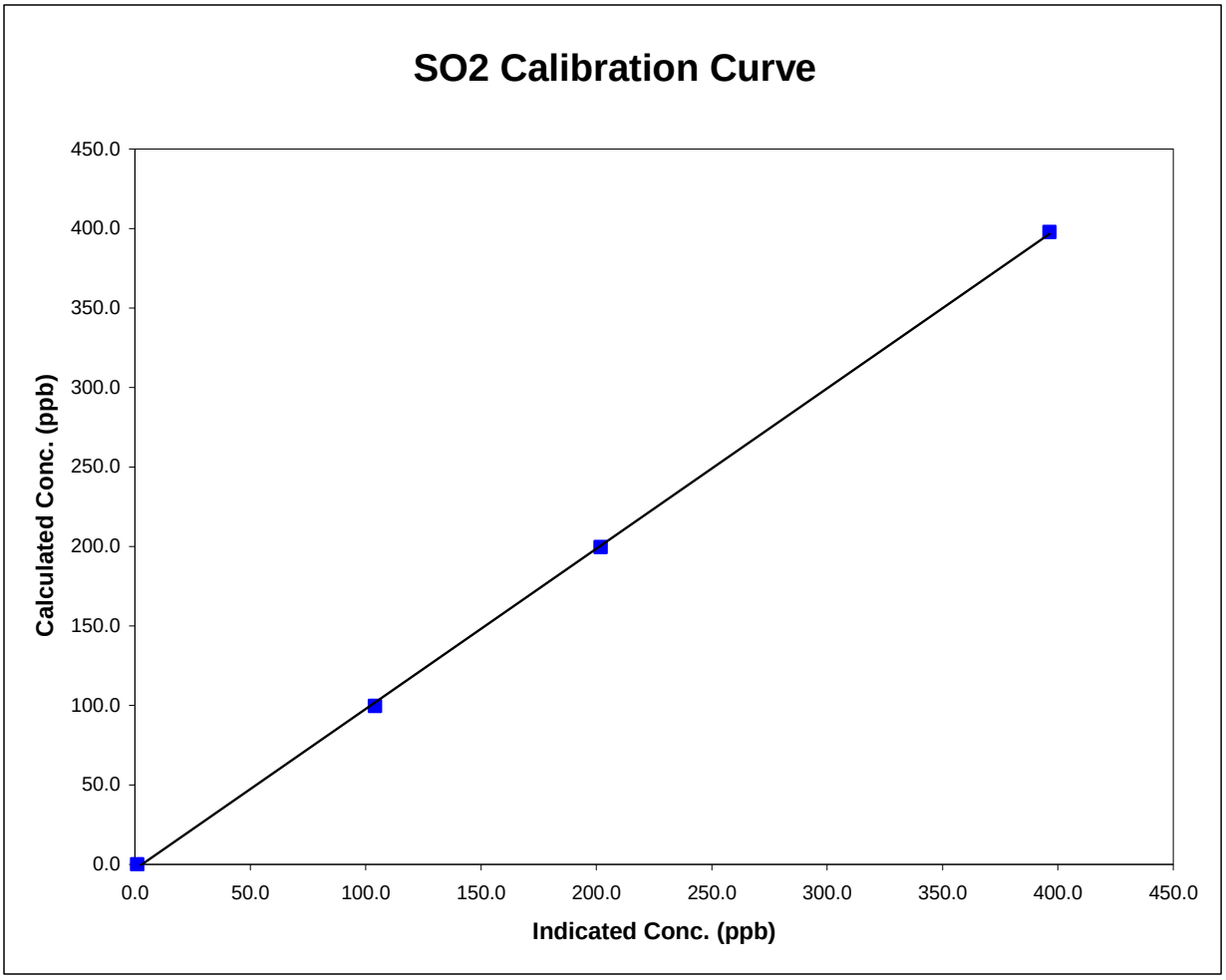
FOCUS AIR QUALITY MONITORING

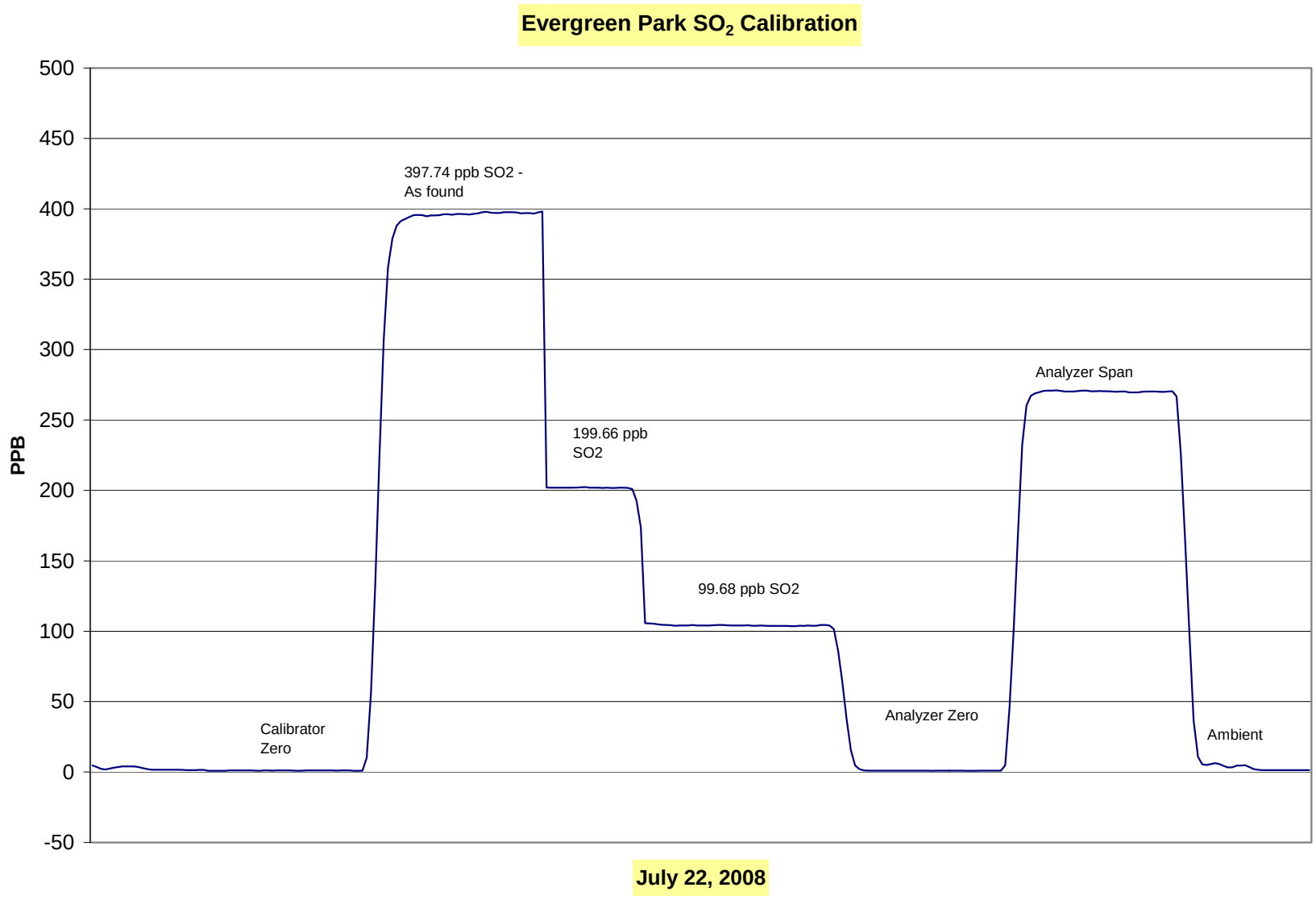
Station Information

Calibration Date	July 22, 2008	Previous Calibration	June 24, 2008
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	10:15	End Time (MST)	12:57
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	1.0	N/A		
397.7	396.3	1.0036	Correlation Coefficient	0.999870
199.7	201.9	0.9889		
99.7	104.1	0.9574	Slope	1.008918
			Intercept	-3.139537




Evergreen Park SO_2 Calibration
500
450
400
350
300
250
200
150
100
50
0
-50
PPB
397.74 ppb SO2 -
As found
199.66 ppb
SO2
99.68 ppb SO2
Analyzer Span
Calibrator
Zero
Analyzer Zero
Ambient
July 22, 2008

Calibration Report

Parameter	**TRS**
Air Monitoring Network	**PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 22, 2007	Previous Calibration	June 24, 2007
Station Number	2	Station Location	Evergreen Park
Reason: Routine	Install	Removal	Other:

Start Time (MST)	12:05	End Time (MST)	14:45
Barometric Pressure	0.925 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Conc	5.1 ppm	Cal Gas Expiry Date	4/2/2009
Correction factor	0.031443	Cal Gas Cylinder #	ALM 013295
DACS make	Focus AP1000	DACS serial No.	52620
DACS voltage range	0 - 10 volt	DACS channel #	5
	Before		After
Calculated slope	0.971076	Calculated slope	0.989074
Calculated intercept	0.838816	Calculated intercept	1.002811

Analyzer make	TEI Model 43C	Analyzer serial #	0436610005

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	15.2	ppb	15.2	ppb
coefficient	0.616		0.616	
Lamp Voltage	823	volts	823	volts
Chamber Temp	44.2	Deg C	44.2	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	626.4	mm Hg	626.4	mm Hg
Sample Flow	462	ccm	462	ccm
Lamp Intensity	45,127	mv	45,127	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	-0.9	N/A
4988	79.80	80.31	80.3	1.0006
4991	39.90	40.45	39.7	1.0178
4990	9.92	10.12	9.1	1.1063
4990	0.00	0.00	-0.9	As Found Zero
4988	79.72	80.23	80.3	As Found Span
			Average Correction Factor	1.0416

Calculated value of As Found Response: 79.63 ppm Percent Change of As Found: 0.7%

	before calibration		after calibration	
Auto zero	-0.2	ppm	-0.1	ppm
Auto span	68.5	ppm	66.3	ppm

Notes:

Calibration Performed By: Conor Whiteley

Calibration Summary

Parameter	TRS
Air Monitoring Network	PASZA

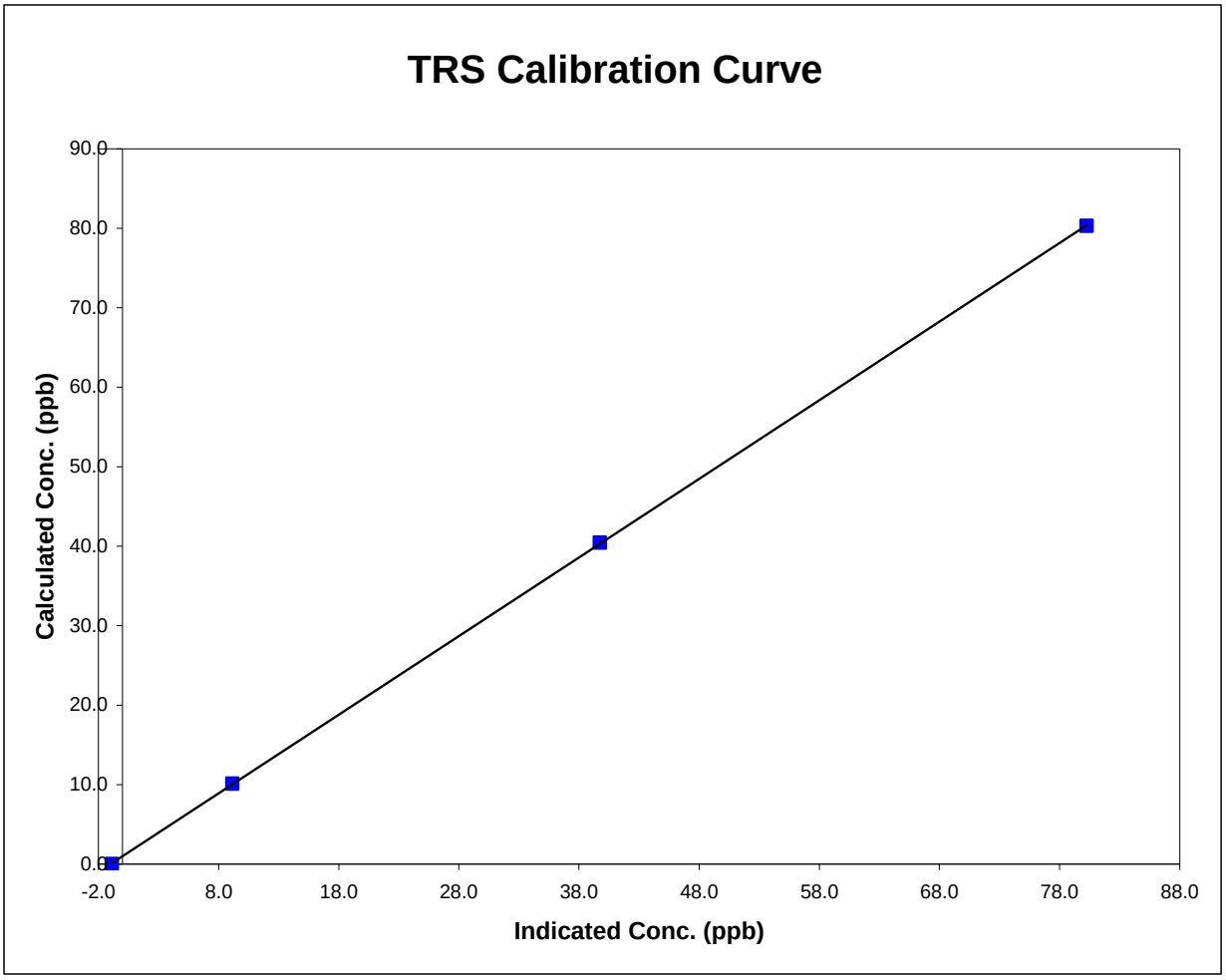
FOCUS AIR QUALITY MONITORING

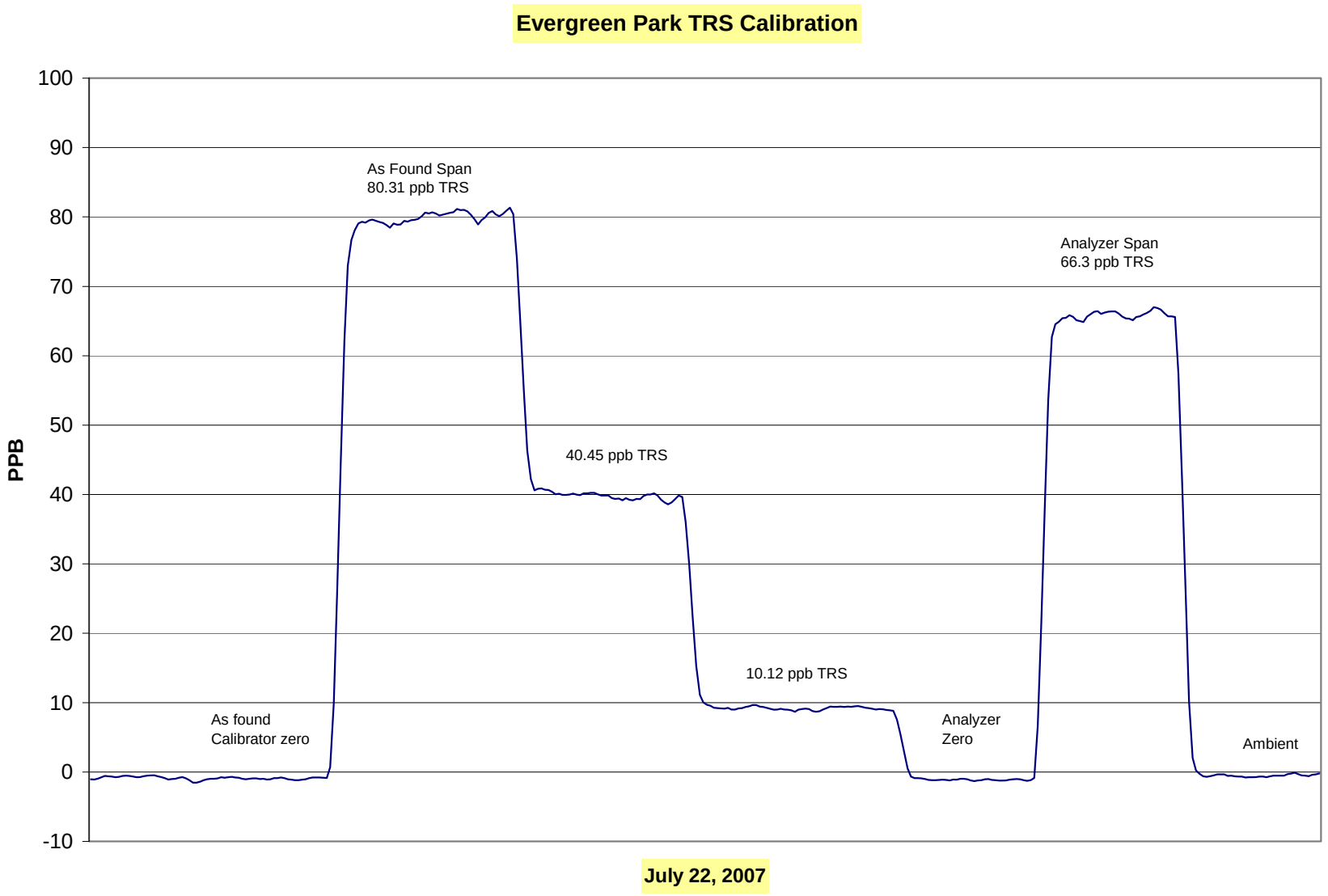
Station Information

Calibration Date	July 22, 2007	Previous Calibration	June 24, 2007
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	12:05	End Time (MST)	14:45
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	-0.9	N/A		
80.3	80.3	1.0006	Correlation Coefficient	0.999988
40.4	39.7	1.0178		
10.1	9.1	1.1063	Slope	0.989074
			Intercept	1.002811




Evergreen Park TRS Calibration
PPB
100
90
80
70
60
50
40
30
20
10
0
-10
As Found Span
80.31 ppb TRS
40.45 ppb TRS
10.12 ppb TRS
Analyzer Span
66.3 ppb TRS
As found
Calibrator zero
Analyzer
Zero
Ambient
July 22, 2007

Calibration Report

Parameter	SO_2
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 16, 2008	Previous Calibration	June 23, 2008
Station Number	3	Station Location	Smoky Heights
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	11:40	End Time (MST)	14:27
Barometric Pressure	0.927 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	50.3 ppm	Cal Gas Expiry Date	1/2/2009
Correction factor	0.031511	Cal Gas Cylinder #	LL16161
DACS make	Focus AP1000	DACS serial No.	45272
DACS voltage range	0 - 10 volt	DACS channel #	6
	Before		After
Calculated slope	1.005782	Calculated slope	1.000824
Calculated intercept	-2.656522	Calculated intercept	-2.508686
Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	6.2		6.4	
coefficient	0.712		0.722	
Lamp Voltage	924	volts	937	volts
Chamber Temp	44.9	Deg C	45.1	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	680	mm Hg	678	mm Hg
Sample Flow	452	ccm	450	ccm
Lamp Intensity	88	%	87	%

Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.0	0.00	0.6	N/A
4988	39.85	398.67	399.7	0.9973
4988	19.90	199.88	203.5	0.9820
4988	9.92	99.84	103.9	0.9607
4988	0.0	0.00	0.6	As Found Zero
4988	39.92	399.37	399.7	As Found Span
			Average Correction Factor	0.9800

Calculated value of As Found Response: 398.771 ppm Percent Change of As Found: 0.1%

	before calibration		after calibration	
Auto zero	-2.1	ppm	-1.9	ppm
Auto span	310.8	ppm	309.8	ppm

Notes:

Calibration Performed By: Conor Whiteley

Calibration Summary

Parameter	SO2
Air Monitoring Network	PASZA

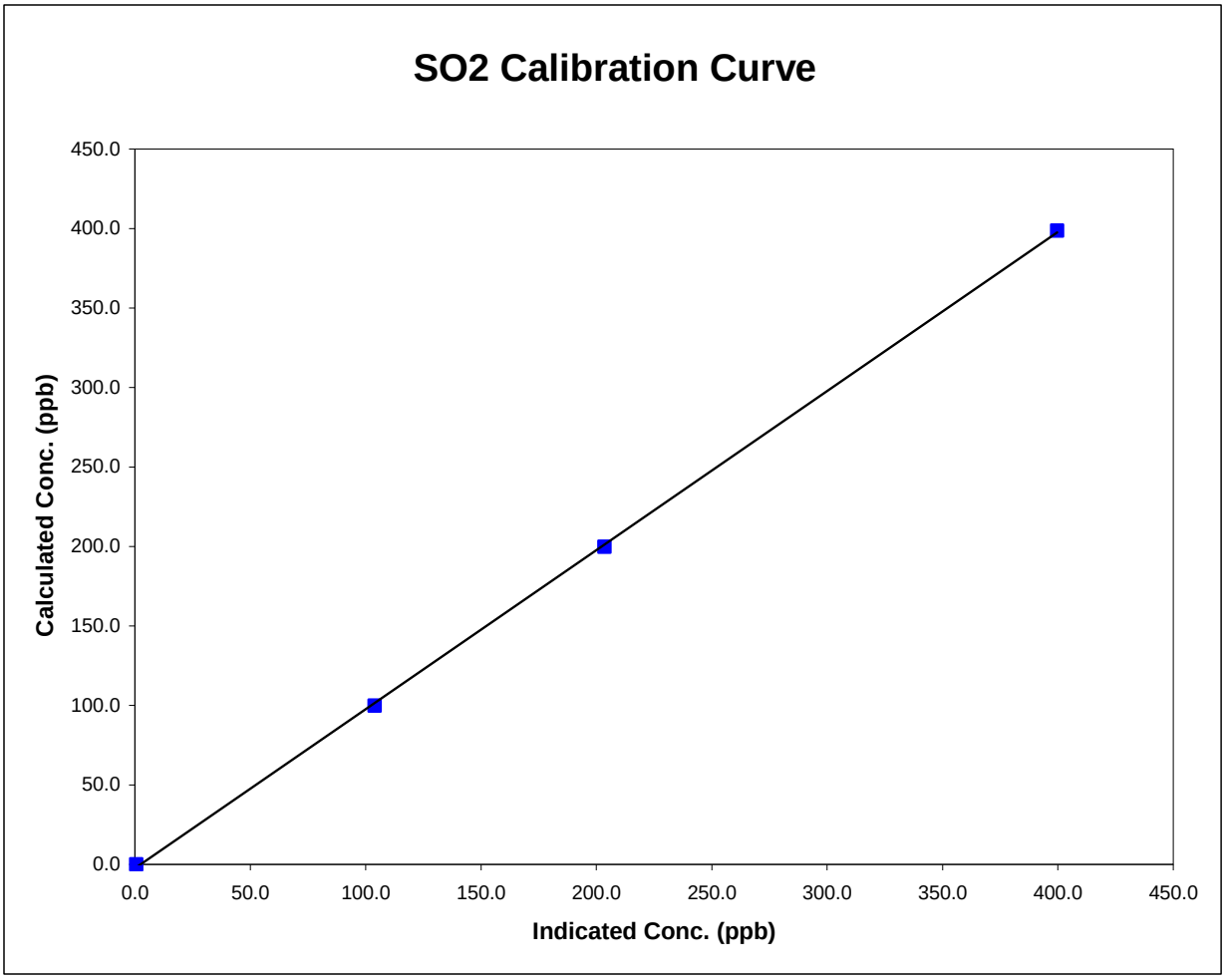
FOCUS AIR QUALITY MONITORING

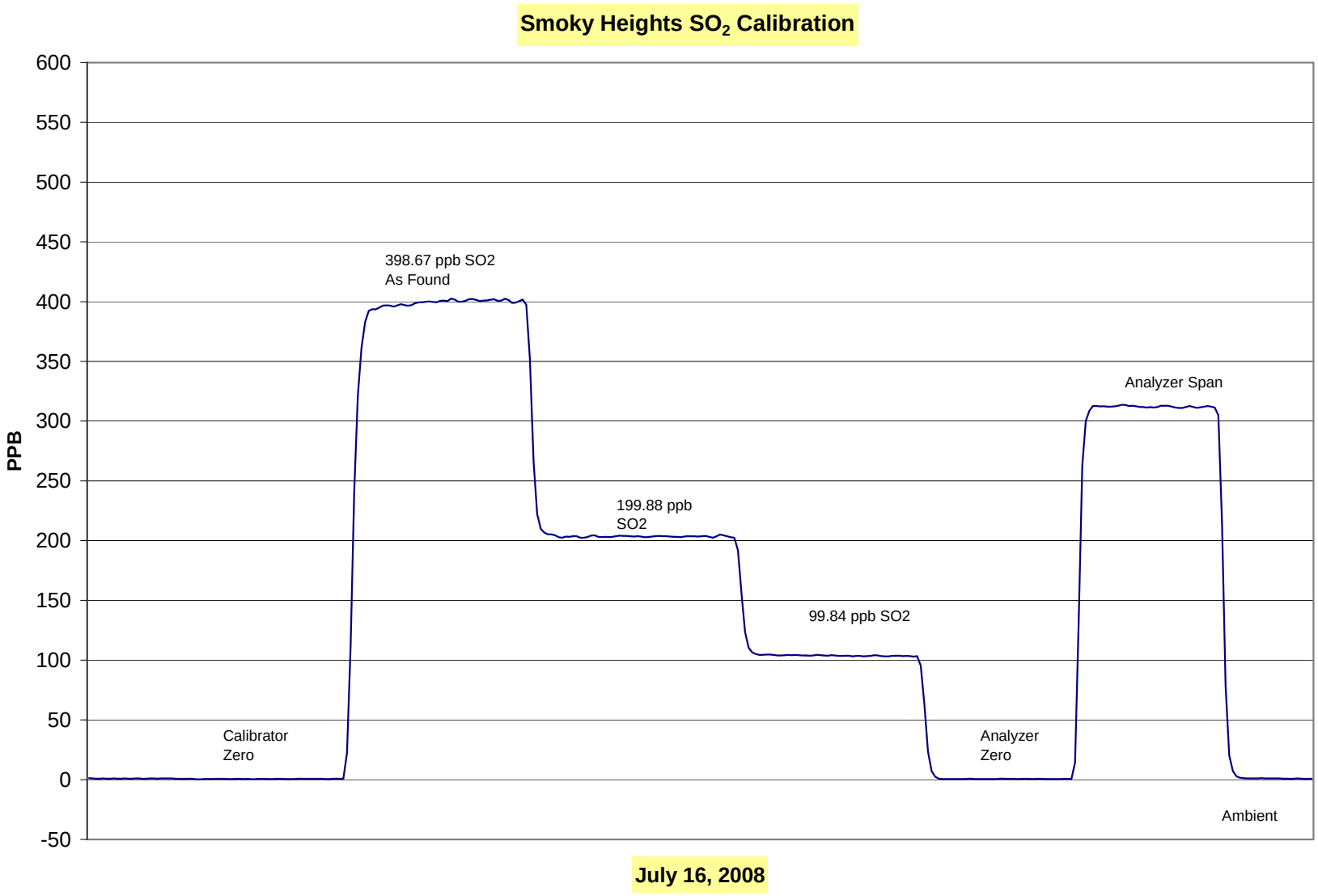
Station Information

Calibration Date	July 16, 2008	Previous Calibration	June 23, 2008
Station Number	3	Station Location	Smoky Heights
Start Time (MST)	11:40	End Time (MST)	14:27
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	0.6	N/A		
398.7	399.7	0.9973	Correlation Coefficient	0.999893
199.9	203.5	0.9820		
99.8	103.9	0.9607	Slope	1.000824
			Intercept	-2.508686




Smoky Heights SO_2 Calibration
PPB
600
550
500
450
400
350
300
250
200
150
100
50
0
-50
398.67 ppb SO2
As Found
199.88 ppb
SO2
99.84 ppb SO2
Analyzer Span
Calibrator
Zero
Analyzer
Zero
Ambient
July 16, 2008

Calibration Report

Parameter	**TRS**
Air Monitoring Network	**PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 16, 2008	Previous Calibration	June 23, 2008
Station Number	3	Station Location	Smoky Heights
Reason:	Routine / Install	Removal	Other:

Start Time (MST)	13:25	End Time (MST)	15:55
Barometric Pressure	0.927 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Conc	5.1 ppm	Cal Gas Expiry Date	4/2/2009
Correction factor	0.031511	Cal Gas Cylinder #	ALM013295
DACS make	Focus AP1000	DACS serial No.	52620
DACS voltage range	0 - 10 volt	DACS channel #	5
	Before		After
Calculated slope	1.007613	Calculated slope	1.005947
Calculated intercept	-1.204206	Calculated intercept	-1.269238

Analyzer make	TEI Model 43C	Analyzer serial #	0436610005

	before		after	
Concentration range	100	ppb	100	ppb
Background	11.4	ppb	11.5	ppb
coefficient	1.006		1.006	
Lamp Voltage	763	volts	772	volts
Chamber Temp	44.2	Deg C	43.9	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	489.76	mm Hg	482.4	mm Hg
Sample Flow	755	ccm	750	ccm
Lamp Intensity	32,355	mv	32,422	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	0.0	0.00	1.0	N/A
4990	79.81	80.29	81.0	0.9918
4990	39.78	40.34	41.6	0.9705
4990	9.88	10.08	11.4	0.8830
4990	0.0	0.00	1.0	As Found Zero
4990	79.81	80.29	81.0	As Found Span
			Average Correction Factor	0.9484

Calculated value of As Found Response: 79.31 ppm Percent Change of As Found: 1.2%

	before calibration		after calibration	
Auto zero	-0.4	ppm	-0.2	ppm
Auto span	42.5	ppm	42.8	ppm

Notes:

Calibration Performed By: Conor Whiteley

Calibration Summary

Parameter	TRS
Air Monitoring Network	PASZA

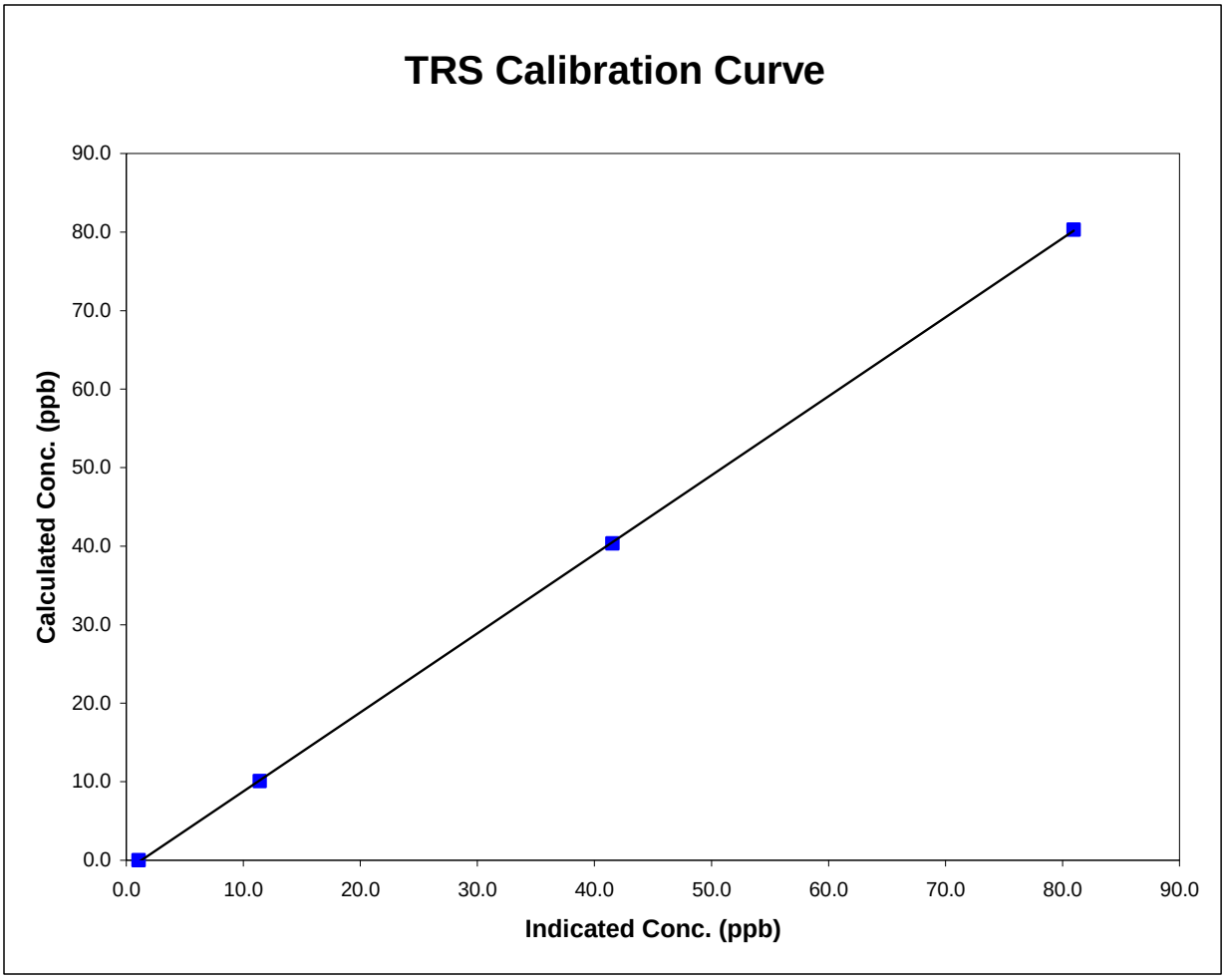
FOCUS AIR QUALITY MONITORING

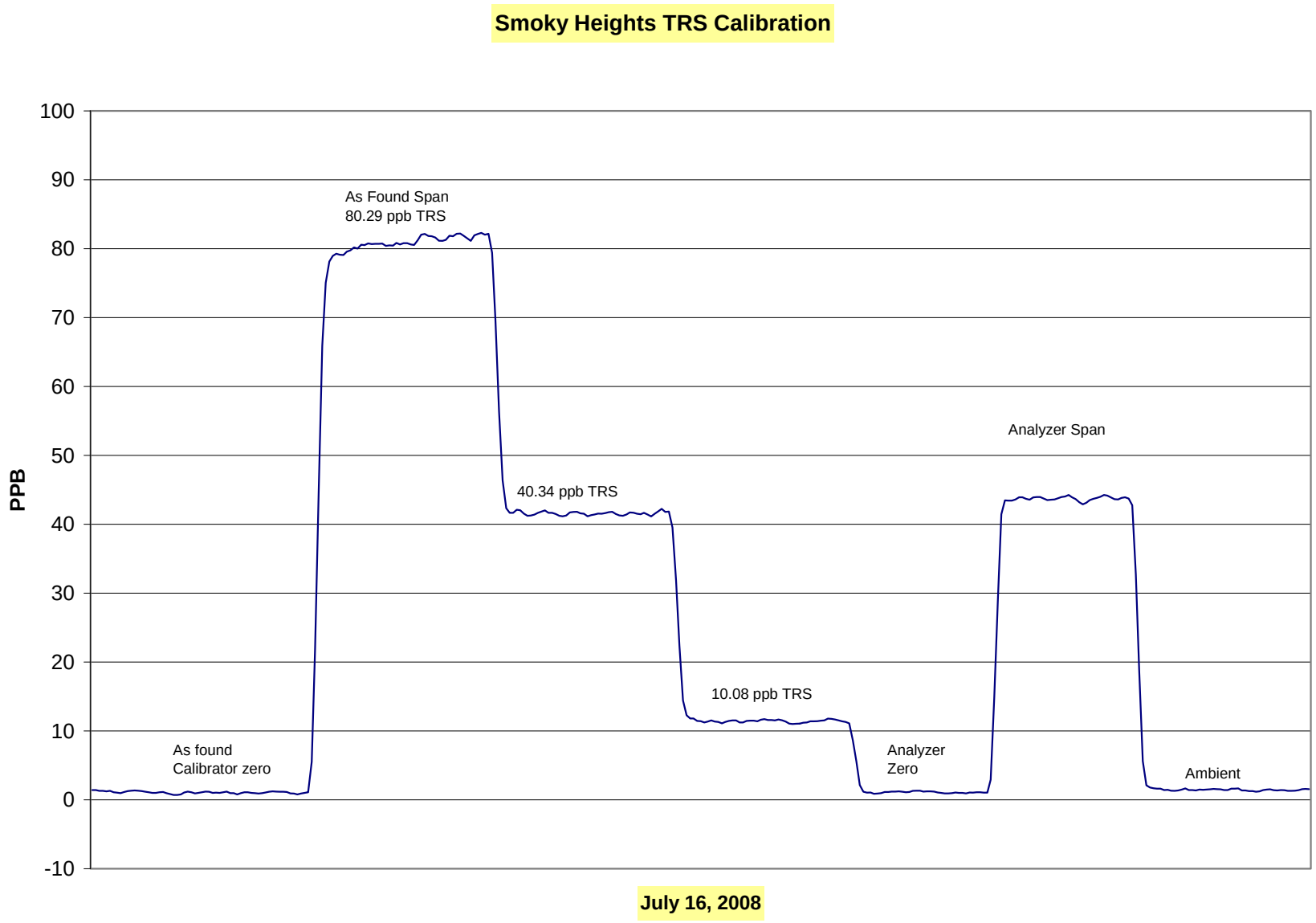
Station Information

Calibration Date	July 16, 2008	Previous Calibration	June 23, 2008
Station Number	3	Station Location	Smoky Heights
Start Time (MST)	13:25	End Time (MST)	15:55
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	1.0	N/A		
80.3	81.0	0.9918	Correlation Coefficient	0.999969
40.3	41.6	0.9705		
10.1	11.4	0.8830	Slope	1.005947
			Intercept	-1.269238




Smoky Heights TRS Calibration
PPB
100
90
80
70
60
50
40
30
20
10
0
-10
As Found Span
80.29 ppb TRS
40.34 ppb TRS
10.08 ppb TRS
Analyzer Span
As found
Calibrator zero
Analyzer
Zero
Ambient
July 16, 2008

Calibration Report

Parameter	SO2
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 17, 2008	Previous Calibration	June 26, 2008
Station Number	4	Station Location	Beaverlodge
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	12:00	End Time (MST)	14:55
Barometric Pressure	0.913 atm	Station Temperature	20.0 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 #	4
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.986307	Calculated slope	0.996908
Calculated intercept	-0.208823	Calculated intercept	-0.183351
Analyzer make	TEI Model 43CTL	Analyzer serial #	43CTL-74200-376

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.53		2.53	
Coefficient	0.95		0.95	
PMT	-812	V	-812	V
UV Lamp Voltage	1042	V	1042	V
Chamber Temp	45	Deg C	45	Deg C
Pressure	664.7	mm Hg	664.7	mm Hg
Sample Flow	0.47	LPM	0.47	LPM
Lamp Intesity	85%	%	85%	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.0	-0.2	N/A
4988	39.87	79.8	80.0	0.9977
4988	19.90	40.0	40.6	0.9845
4988	9.93	20.0	20.6	0.9724
4988	0.00	0.0	-0.2	As found zero
4988	39.87	79.8	80.0	As found span
			Average Correction Factor	0.9849

Calculated value of As Found Response: 78.863 ppm Percent Change of As Found: 1.1%

	before calibration		after calibration	
Auto zero	-0.4	ppm	-0.4	ppm
Auto span	55.3	ppm	55.1	ppm

Notes:

Calibration Performed By: Conor Whiteley

Calibration Summary

Parameter	SO2
Air Monitoring Network	PASZA

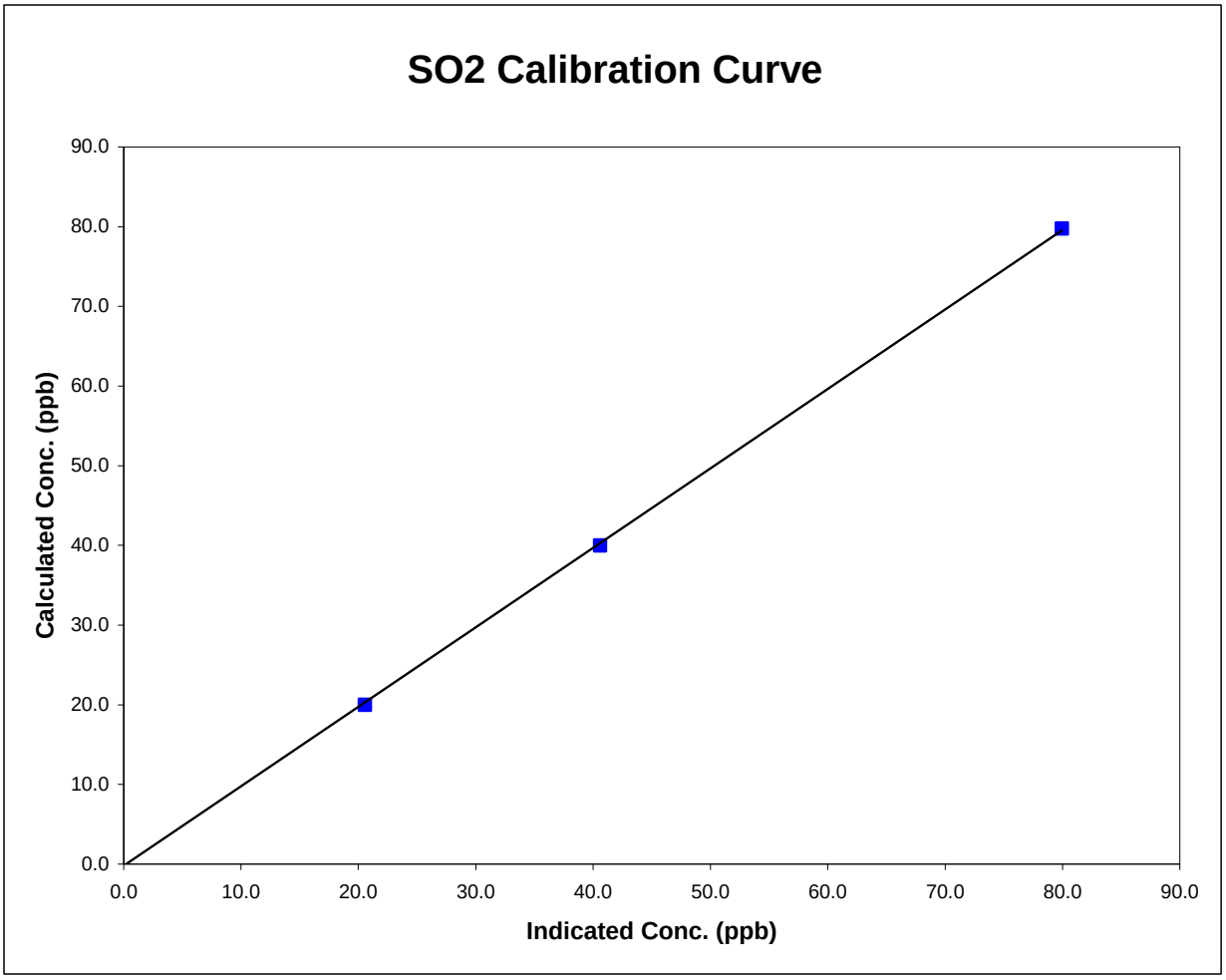
FOCUS AIR QUALITY MONITORING

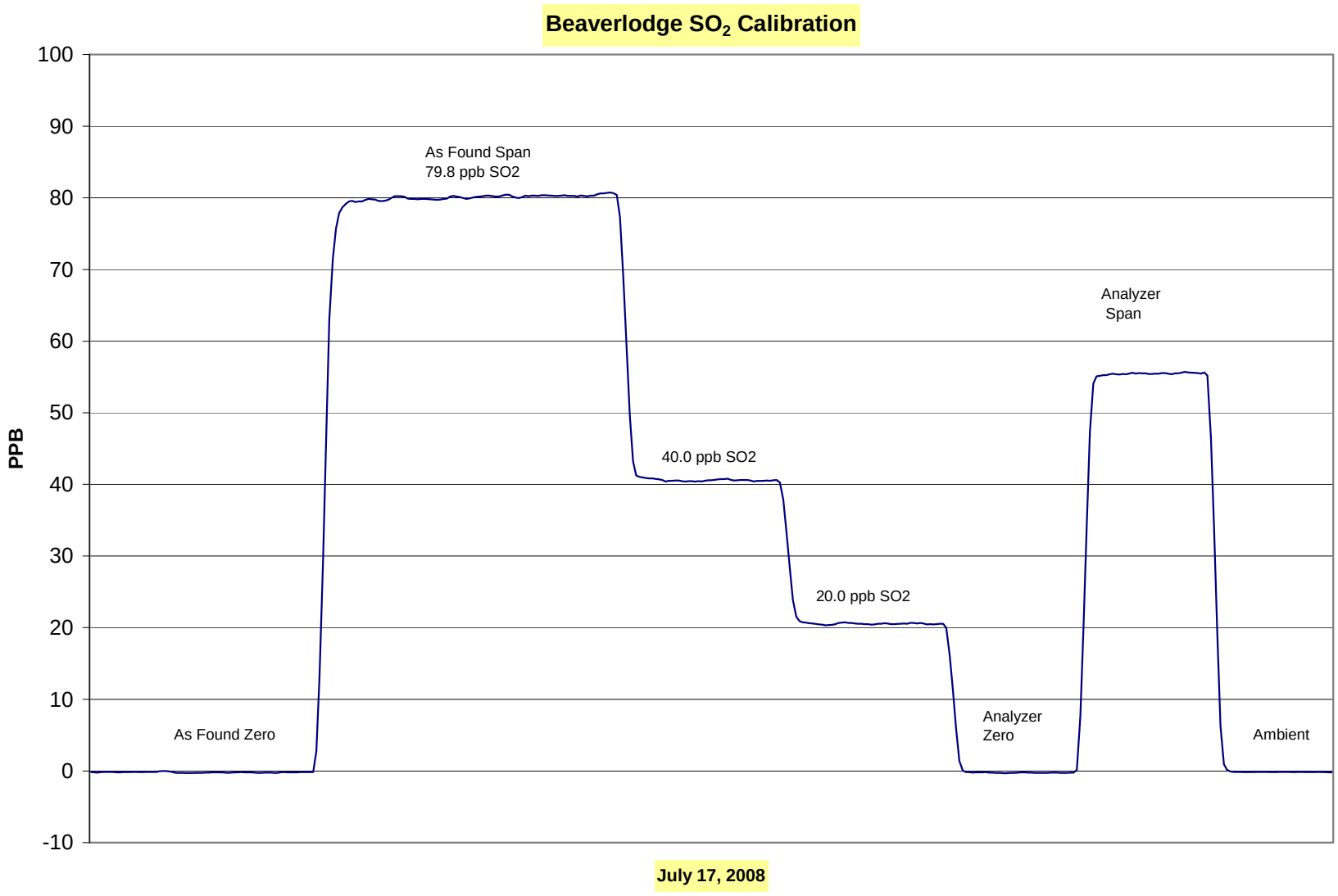
Station Information

Calibration Date	July 17, 2008	Previous Calibration	June 26, 2008
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	12:00	End Time (MST)	14:55
Analyzer make/model	TEI Model 43CTL	Analyzer serial #	43CTL-74200-376

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.2	N/A		
79.8	80.0	0.9977	Correlation Coefficient	0.999879
40.0	40.6	0.9845		
20.0	20.6	0.9724	Slope	0.996908
			Intercept	-0.183351




Beaverlodge SO_2 Calibration
PPB
100
90
80
70
60
50
40
30
20
10
0
-10
As Found Span
79.8 ppb SO2
40.0 ppb SO2
20.0 ppb SO2
Analyzer
Span
As Found Zero
Analyzer
Zero
Ambient
July 17, 2008

Calibration Report

Parameter	**NOx-NO-NO_2**
Air Monitoring Network	**PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 17, 2008	Previous Calibration	June 26, 2008
Station Number	4	Station Location	Beaverlodge

Reason: Routine Installation Removal Other:

Start Time (MST)	12:00:00		End Time (MST)	16:24:00	
Barometric Pressure	0.913	Atm	Station Temperature	20.0	Deg C
Calibrator	Environics 6100		Serial Number	3474	
NO Cal Gas Conc	50.1	ppm	Cal Gas Cert. Date	2-Jan-07	
NOx Cal Gas Conc	50.2	ppm	Cal Gas Serial #	CC 114395	

DACS Information

DACS make	FOCUS AP1000	DACS serial No.	45269

Parameter		NO2	NOx	NO
Before	Data Slope	1.006581	1.009623	1.002217
	Data Offset	1.798291	-1.504445	-1.205142
After	Data Slope	1.016470	1.013384	1.002431
	Data Offset	1.620292	-1.832331	-1.521175
Channel #		8	6	7
Voltage Range		0 - 10 VDC	0 - 10 VDC	0 - 10 VDC

Analyzer Information

Analyzer make/model	TEI Model 42	Analyzer serial #	42-28486-231

Test Point	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
NO background	1.3	ppb	1.3	mV
NOx background	1.4	ppb	1.4	mV
NO coefficient	1.094		1.094	
NOx coefficient	0.999		0.999	
PMT Voltage	-636	V	-636	V
Chamber Temp	49.5	Deg C	49.5	Deg C
Cooler Temp	-2.1	Deg C	-2.1	Deg C
Converter Temp	322.0	Deg C	322.0	Deg C
Sample Flow	0.779	LPM	0.779	LPM
Ozonator Flow	0.085	LPM	0.085	LPM
Pressure	177.4	mm Hg	177.4	mm Hg

Notes:

Calibration Report

Parameter	**NOx-NO-NO_2**
Air Monitoring Network	**PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: July 17, 2008 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	4988	0.00	0.0	0.0	0.0	-0.1	-0.2	-0.2	N/A	N/A
1	4988	39.87	398.1	397.3	0.8	393.6	396.9	-3.6	1.0113	1.0009
2	4988	19.90	199.5	199.1	0.4	199.6	201.0	-1.6	0.9992	0.9903
3	4988	9.93	99.7	99.5	0.2	102.2	102.5	-0.4	0.9762	0.9709
AFZ	4988	0.00	0.0	0.0	0.0	-0.1	-0.2	-0.2	0.0000	0.0000
AFS	4988	39.87	398.1	397.3	0.8	385.8	388.8	-3.4	1.0319	1.0217
							Average Correction Factor		0.9956	0.9874

As Found Concentrations: NO_X= 384.4 NO= 387.8 As Found Percent Change NO_X= -3.4% NO= -2.4%

GPT Calibration Data

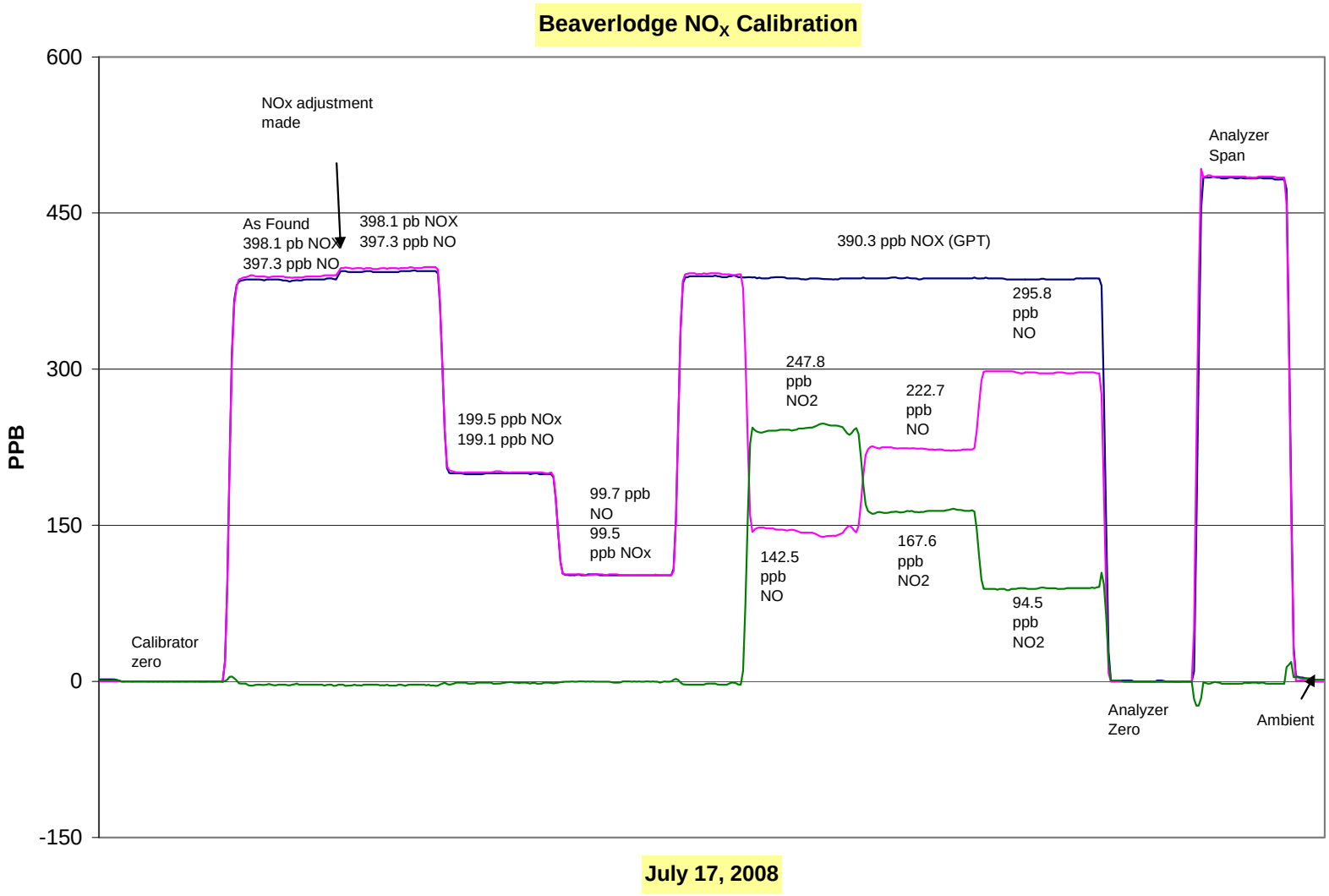
Dilution Flow 4990 ccm Source Gas Flow 39.82 ccm

O3 Setpoint (ppb)	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	NO2 Correction factor	Converter Efficiency
0	0.0	0.0	0.0	0.0	0.0	0.0	N/A	N/A	N/A	N/A
NO point	390.3	391.1	-0.8	389.1	391.7	-2.9	1.0032	0.9985	N/A	N/A
300	390.3	142.5	247.8	387.3	143.7	243.1	1.0078	0.9918	1.0194	98.1%
200	390.3	222.7	167.6	387.4	223.6	163.2	1.0076	0.9956	1.0273	97.3%
100	390.3	295.8	94.5	386.2	296.6	89.2	1.0105	0.9973	1.0593	94.4%
					Average Correction Factor		1.0087	0.9949	1.0354	96.6%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-1.6	1.7	-1.3	ppb	-1.8	1.4	-1.8	ppb
Auto span	474.5	1.7	471.2	ppb	488.1	-0.2	484.5	ppb

Calibration Performed By: Conor Whiteley


Beaverlodge NOx Calibration
600
450
300
150
0
-150
PPB
NOx adjustment made
As Found 398.1 pb NOX 397.3 ppb NO
398.1 pb NOX 397.3 ppb NO
199.5 ppb NOx 199.1 ppb NO
99.7 ppb NO 99.5 ppb NOx
390.3 ppb NOX (GPT)
247.8 ppb NO2
142.5 ppb NO
222.7 ppb NO
167.6 ppb NO2
295.8 ppb NO
94.5 ppb NO2
Analyzer Span
Calibrator zero
Analyzer Zero
Ambient
July 17, 2008

Calibration Summary

Parameter	NO_2
Air Monitoring Network	PASZA

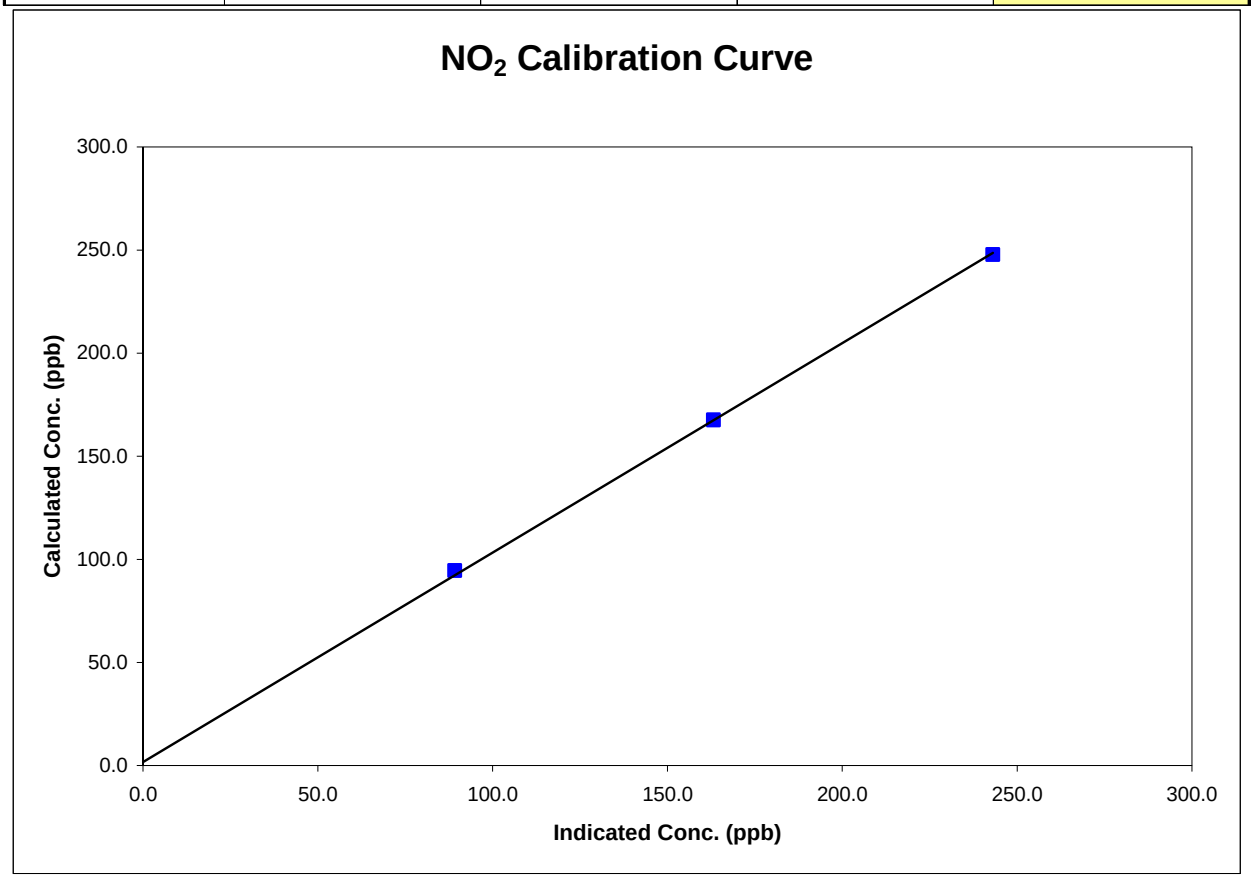
FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 17, 2008	Previous Calibration	June 26, 2008
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	12:00	End Time (MST)	16:24
Analyzer make	TEI Model 42	Analyzer serial #	42-28486-231

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.2	0.0000		
247.8	243.1	1.0194	Correlation Coefficient	0.999767
167.6	163.2	1.0273		
94.5	89.2	1.0593	Slope	1.016470
			Intercept	1.620292



Calibration Summary

Parameter	NO_x
Air Monitoring Network	PASZA

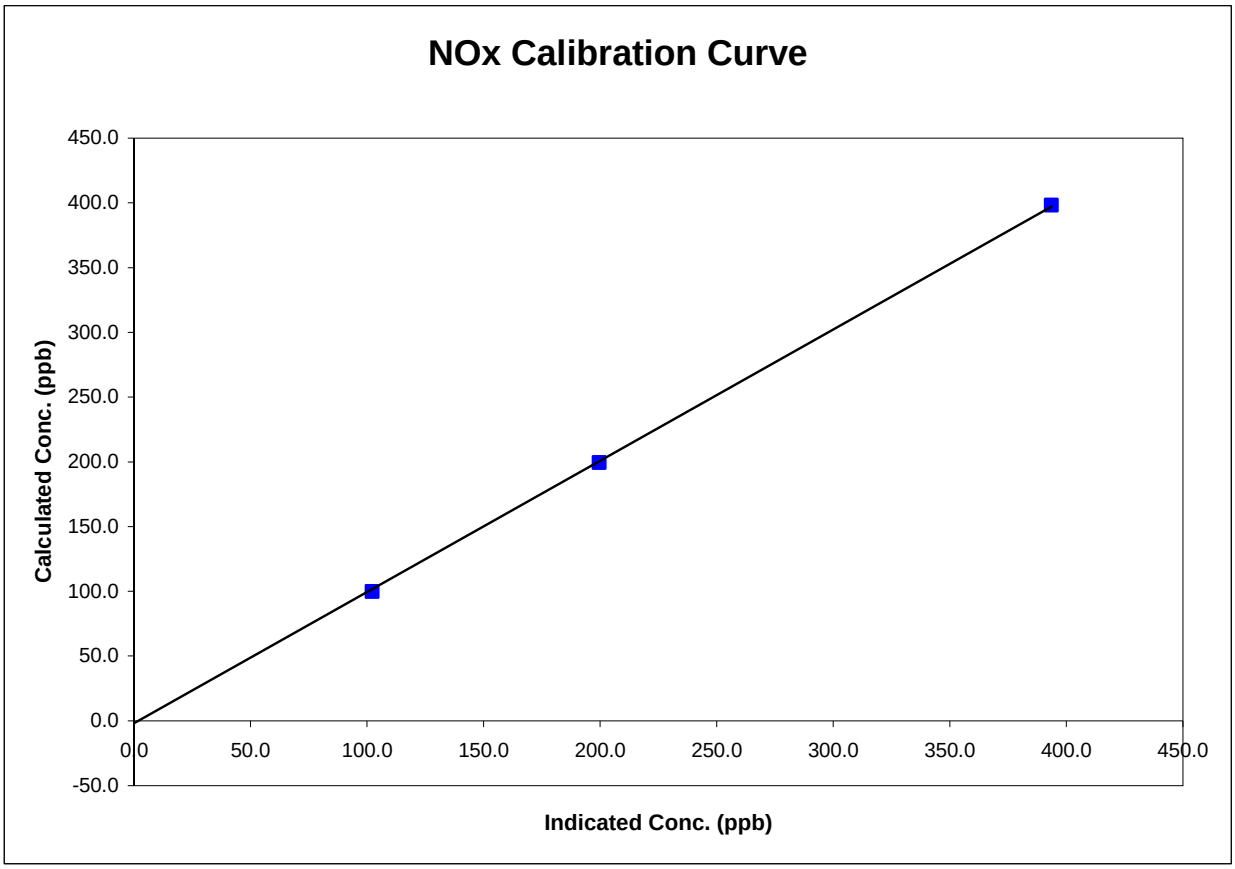
FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 17, 2008	Previous Calibration	June 26, 2008
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	12:00	End Time (MST)	16:24
Analyzer make	TEI Model 42	Analyzer serial #	42-28486-231

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	0.0000		
398.1	393.6	1.0113	Correlation Coefficient	0.999888
199.5	199.6	0.9992		
99.7	102.2	0.9762	Slope	1.013384
			Intercept	-1.832331



Calibration Summary

Parameter	**NO**
Air Monitoring Network	**PASZA**

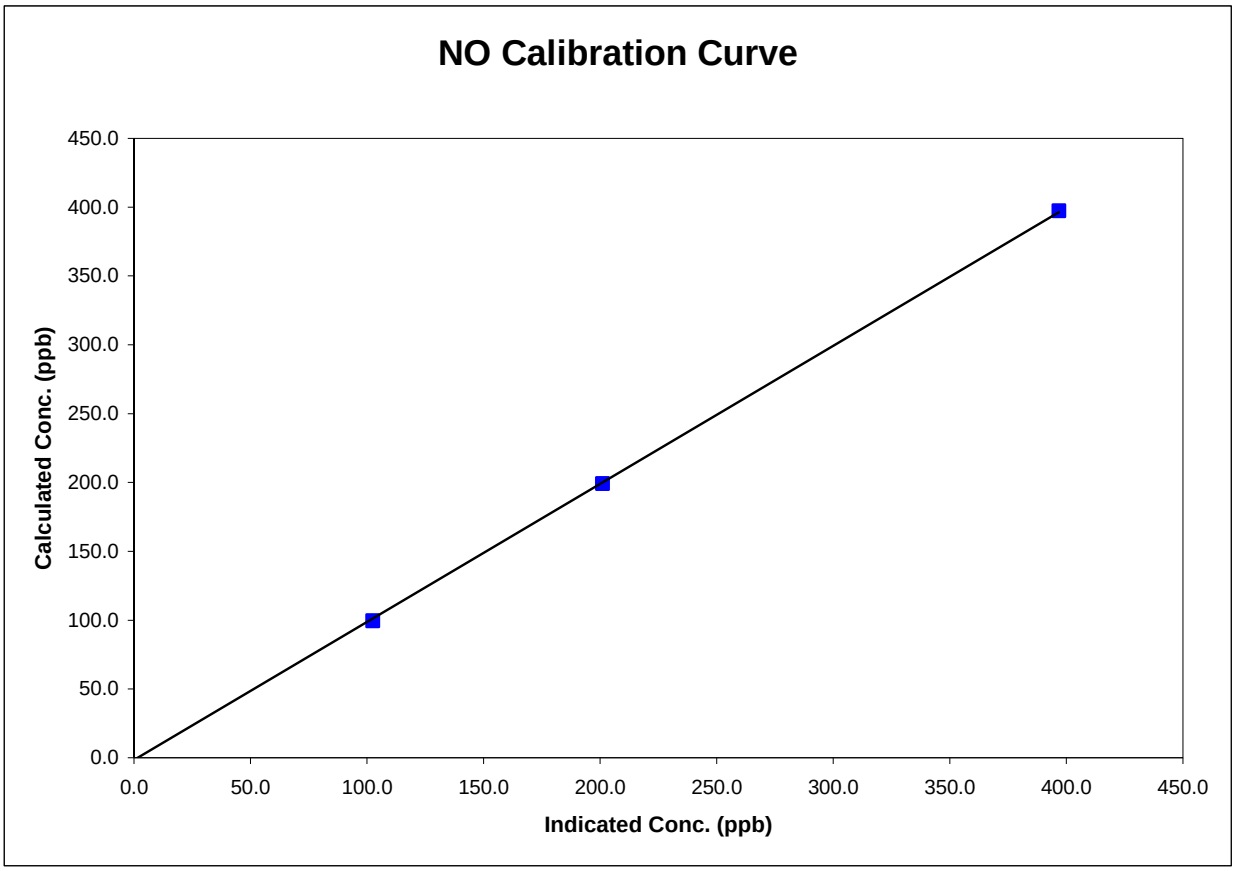
FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 17, 2008	Previous Calibration	June 26, 2008
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	12:00	End Time (MST)	16:24
Analyzer make	TEI Model 42	Analyzer serial #	42-28486-231

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.2	N/A		
397.3	396.9	1.0009	Correlation Coefficient	0.999912
199.1	201.0	0.9903		
99.5	102.5	0.9709	Slope	1.002431
			Intercept	-1.521175



Calibration Report

Parameter	O3
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 18, 2008	Previous Calibration	June 26, 2008
Station Number	4	Station Location	Beaverlodge

Reason: Routine | Install | Removal | Other:

Start Time (MST)	13:05	End Time (MST)	15:30
Barometric Pressure	0.910 atm	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	Focus AP1000	DACS serial No.	45269
DACS voltage range	0 - 1 volt	DACS channel #	5
	Before		After
Calculated slope	1.004388	Calculated slope	1.041493
Calculated intercept	2.898456	Calculated intercept	-0.378293
Analyzer make	Teco 49C	Analyzer serial #	49C-76443-383

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-0.20	ppb	-0.20	ppb
slope	1.023		0.963	
Lamp temp	56.4	mV	56.5	mV
Lamp Intensity A/B	79324/77530	mV	80386/78298	mV
Pressure	662.2	mm Hg	647.1	mm Hg
Flow A	730	ccm	726	ccm
Flow B	682	ccm	675	ccm

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4990	0.00	0.0	-0.4	N/A
4990	0.00	247.6	236.4	1.0477
4990	0.00	167.5	163.7	1.0231
4990	0.00	94.4	91.1	1.0369
4990	0.00	0.0	-0.4	As found zero
4990	0.00	247.6	236.4	As found span
			Average Correction Factor	1.0359

Calculated value of As Found Response: 240.7 ppm Percent Change of As Found: -2.8%

	before calibration		after calibration	
Auto zero	2.9	ppb	-0.3	ppb
Auto span	119.6	ppb	120.8	ppb

Notes:

Calibration Performed By: Conor Whiteley

Calibration Summary

Parameter	O3
Air Monitoring Network	PASZA

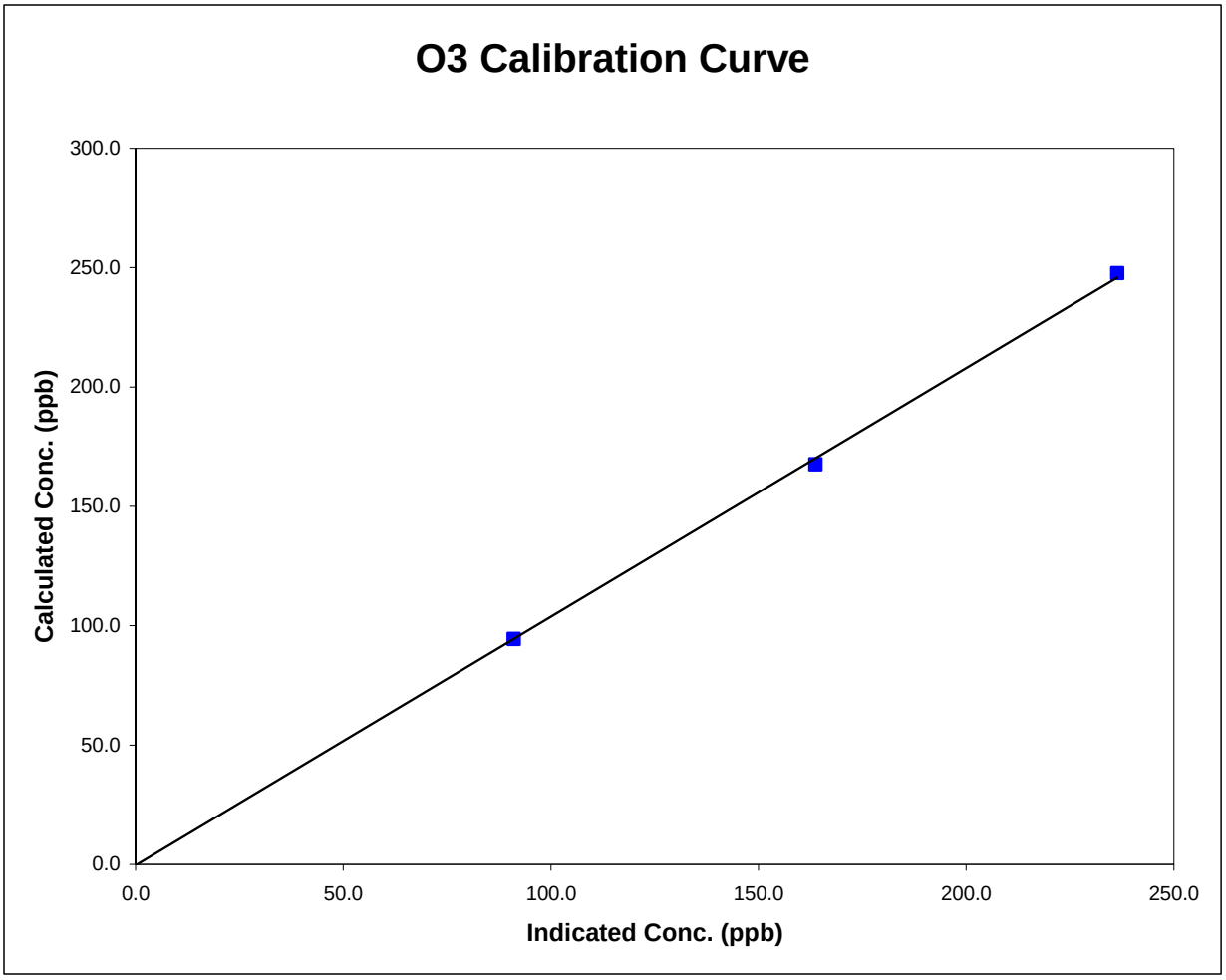
FOCUS AIR QUALITY MONITORING

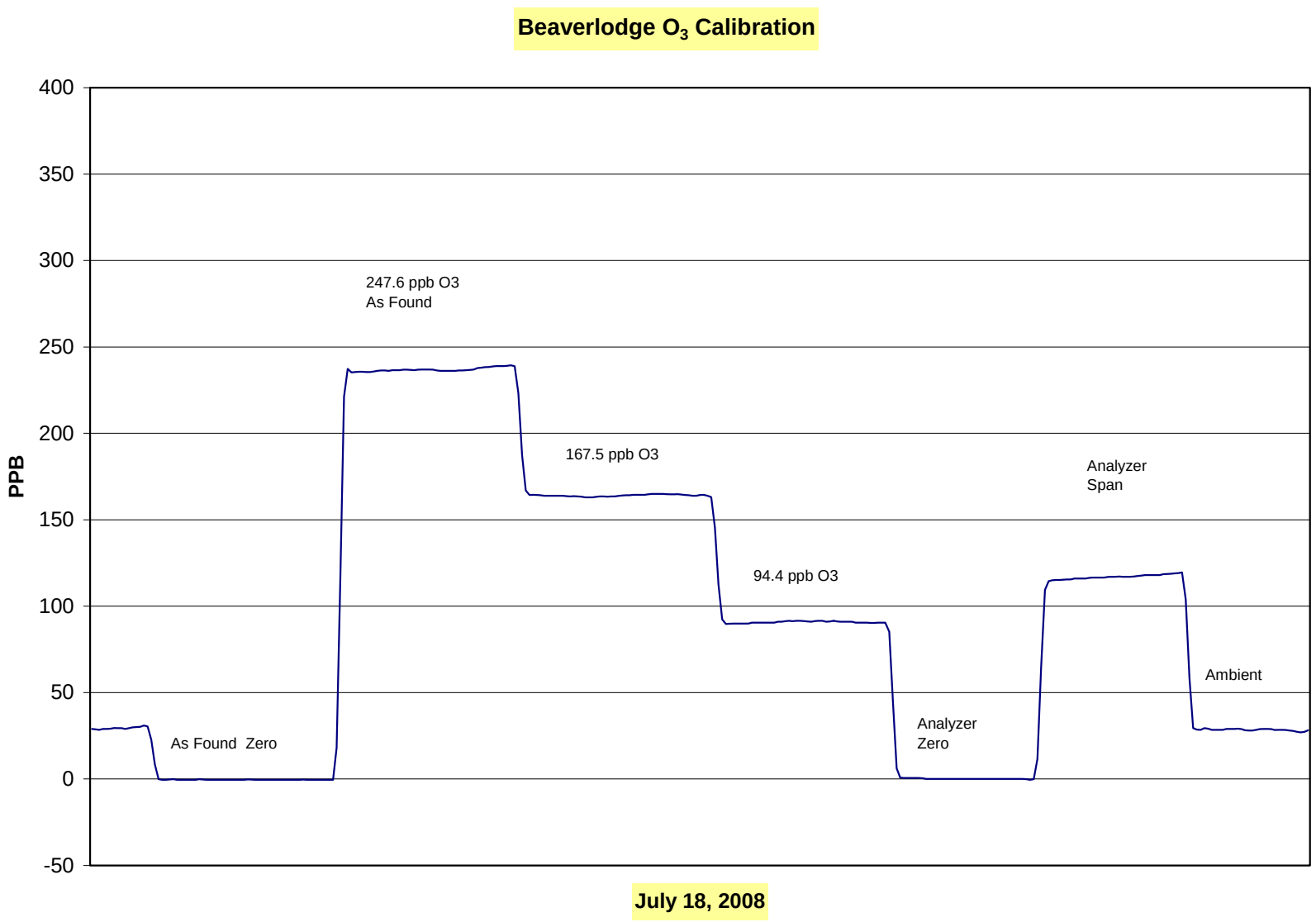
Station Information

Calibration Date	July 18, 2008	Previous Calibration	June 26, 2008
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	13:05	End Time (MST)	15:30
Analyzer make/model	Teco 49C	Analyzer serial #	49C-76443-383

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.4	NA		
247.6	236.4	1.0477	Correlation Coefficient	0.999669
167.5	163.7	1.0231		
94.4	91.1	1.0369	Slope	1.041493
			Intercept	-0.378293




Beaverlodge O_3 Calibration
PPB
400
350
300
250
200
150
100
50
0
-50
247.6 ppb O3
As Found
167.5 ppb O3
94.4 ppb O3
Analyzer
Span
Ambient
As Found Zero
Analyzer
Zero
July 18, 2008

Calibration Report

Parameter	SO2
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 4, 2008	Previous Calibration	June 12, 2008
Station Number	8	Station Location	Rover - Spirit River
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	11:15	End Time (MST)	13:50
Barometric Pressure	27.49 inches Hg	Station Temperature	22.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	50.3 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	1.023083	Calculated slope	1.022546
Calculated intercept	-2.027273	Calculated intercept	-1.308974
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	7.9		7.9	
Coefficient	1.137		1.137	
UV Lamp Voltage	725	V	733	V
Chamber Temp	44.6	C	44.6	C
Perm Gas Temp	45	C	44.99	C
Pressure	674.9	mm Hg	678	mm Hg
Sample Flow	488	LPM	488	LPM
Lamp Intesity	34441	Hz	34390	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	0.2	N/A
4988	39.82	398.4	390.2	1.0210
4988	19.84	199.3	197.1	1.0110
4988	9.94	100.0	100.0	1.0005
4988	0.00	0.0	0.2	As found zero
4988	39.82	398.4	390.2	As found span
			Average Correction Factor	1.0108

Calculated value of As Found Response: 396.984 ppm Percent Change of As Found: 0.3%

	before calibration		after calibration	
Auto zero	-1.8	ppm	-1.2	ppm
Auto span	258.9	ppm	262.7	ppm

Notes:

Calibration Performed By: Conor Whiteley

Calibration Summary

Parameter	SO2
Air Monitoring Network	PASZA

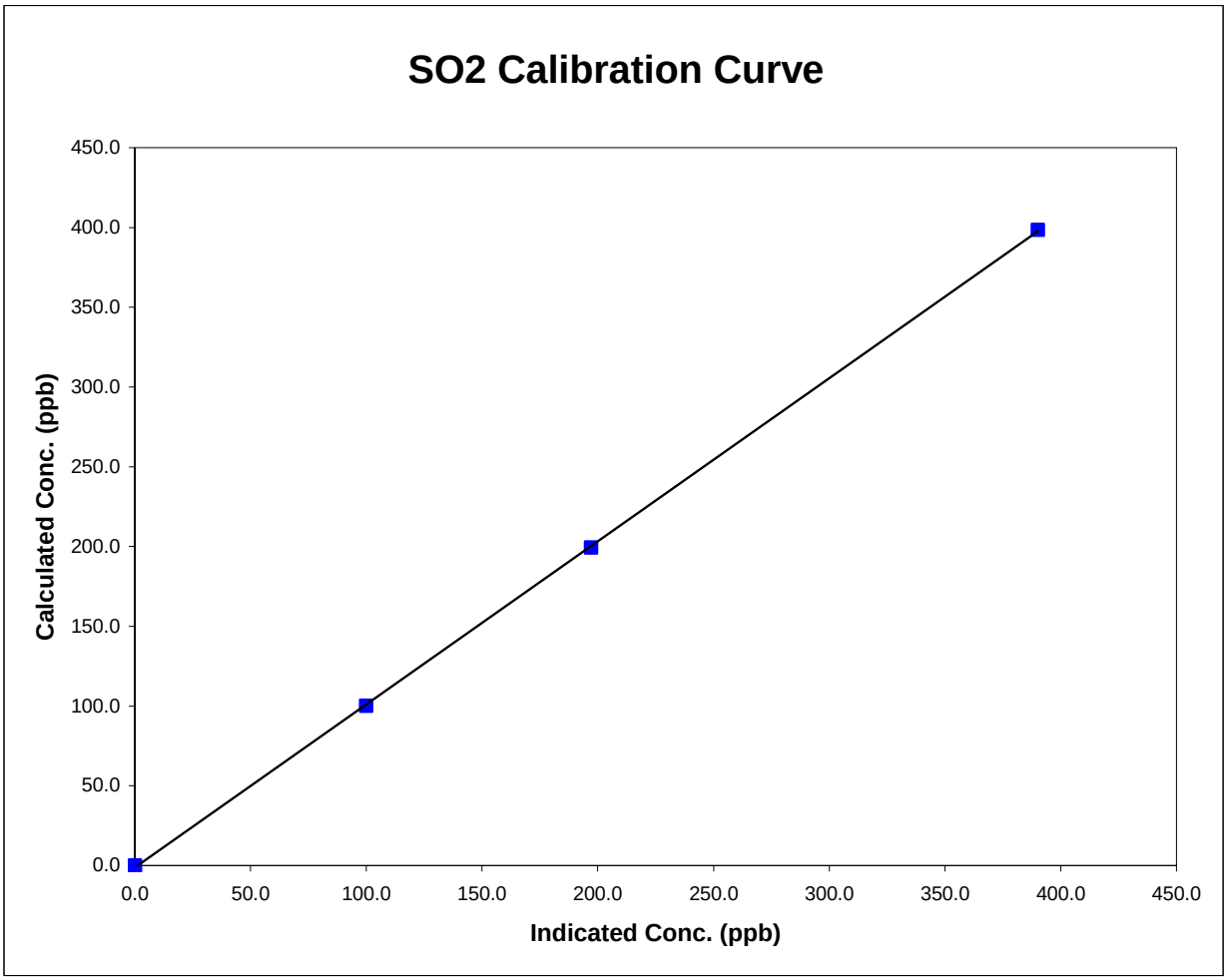
FOCUS AIR QUALITY MONITORING

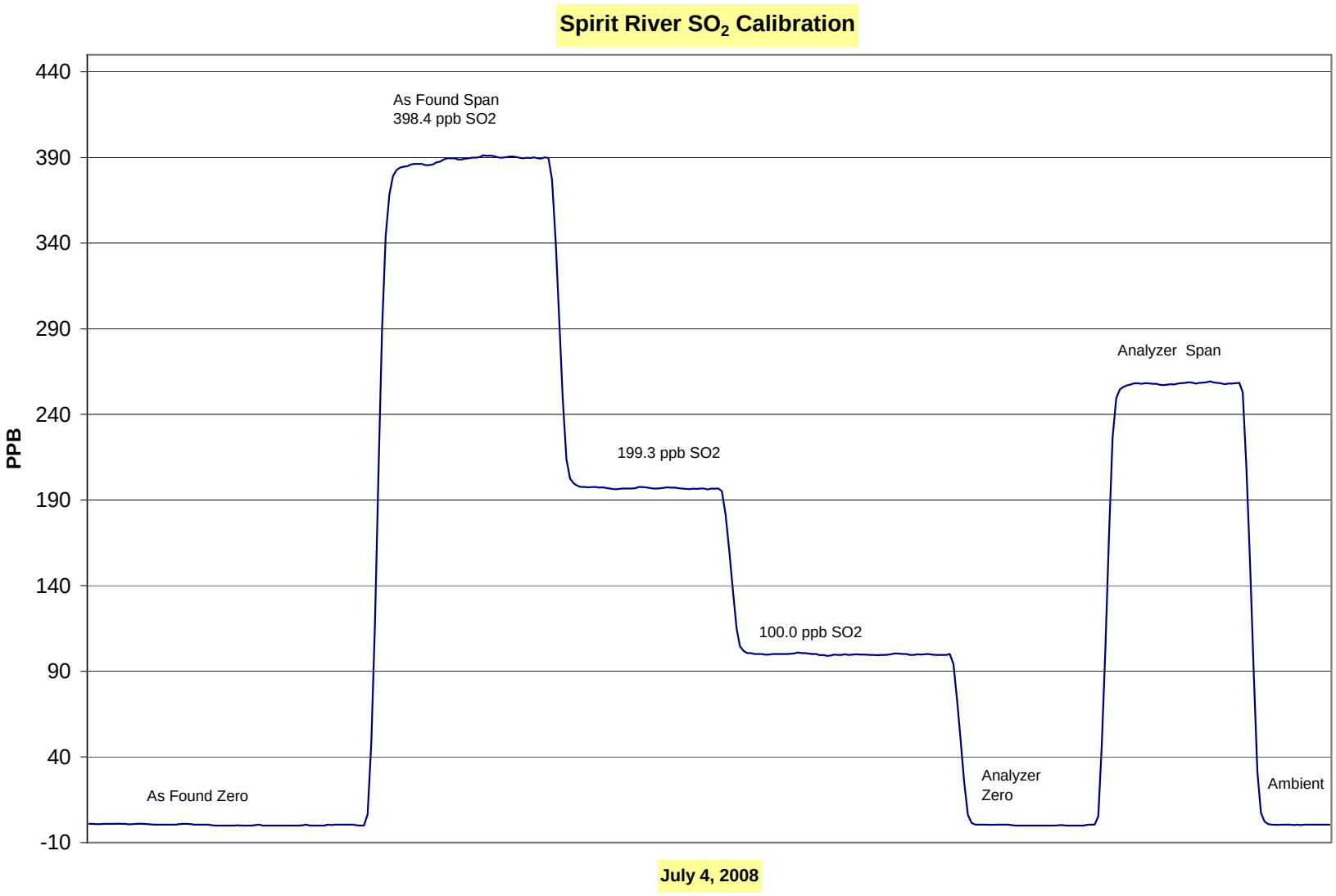
Station Information

Calibration Date	July 4, 2008	Previous Calibration	June 12, 2008
Station Number	8	Station Location	Rover - Spirit River
Start Time (MST)	11:15	End Time (MST)	13:50
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
398.4	390.2	1.0210	Correlation Coefficient	0.999959
199.3	197.1	1.0110		
100.0	100.0	1.0005	Slope	1.022546
			Intercept	-1.308974




Spirit River SO_2 Calibration
440
390
340
290
240
190
140
90
40
-10
PPB
As Found Span
398.4 ppb SO2
199.3 ppb SO2
100.0 ppb SO2
Analyzer Span
As Found Zero
Analyzer
Zero
Ambient
July 4, 2008

Calibration Report

Parameter	TRS
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 7, 2008	Previous Calibration	June 13, 2008
Station Number	6	Station Location	Portable-Spirit River
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	11:05	End Time (MST)	13:50
Barometric Pressure	27.9 inches Hg	Station Temperature	21.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	5.1 ppm	Cal Gas Expiry Date	11/15/2005
Gas Cert Reference	ALM013295		
DACS make	Focus AP1000	DACS serial No.	52662
DACS voltage range	0 - 5 volt	DACS channel #	8
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.975167	Calculated slope	0.983700
Calculated intercept	-0.065098	Calculated intercept	-0.025756
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	9.0	ppb	9.0	ppb
Coefficient	1.454		1.454	
Lamp Voltage	804	V	804	V
Chamber Temp	43.8	C	43.8	C
Perm gas Temp	44.90	C	44.90	C
Pressure	667	mmHg	667	mmHg
Sample Flow	438	ccm	438	ccm
Lamp Intensity	38844.0	Hz	38844.0	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.0	0.0	0.0	N/A
4988	79.71	80.2	81.5	0.9839
4988	39.81	40.4	41.2	0.9808
4988	9.94	10.1	10.3	0.9838
4988	0.00	0.0	0.0	As found zero
4988	79.71	80.2	81.5	As found span
			Average Correction Factor	0.9828

Calculated value of As Found Response: 79.44 ppm Percent Change of As Found: 1.0%

	before calibration		after calibration	
Auto zero	0.1	ppm	0.1	ppm
Auto span	70.7	ppm	70.8	ppm

Notes:

Calibration Performed By: Conor Whiteley

Calibration Summary

Parameter	TRS
Air Monitoring Network	PASZA

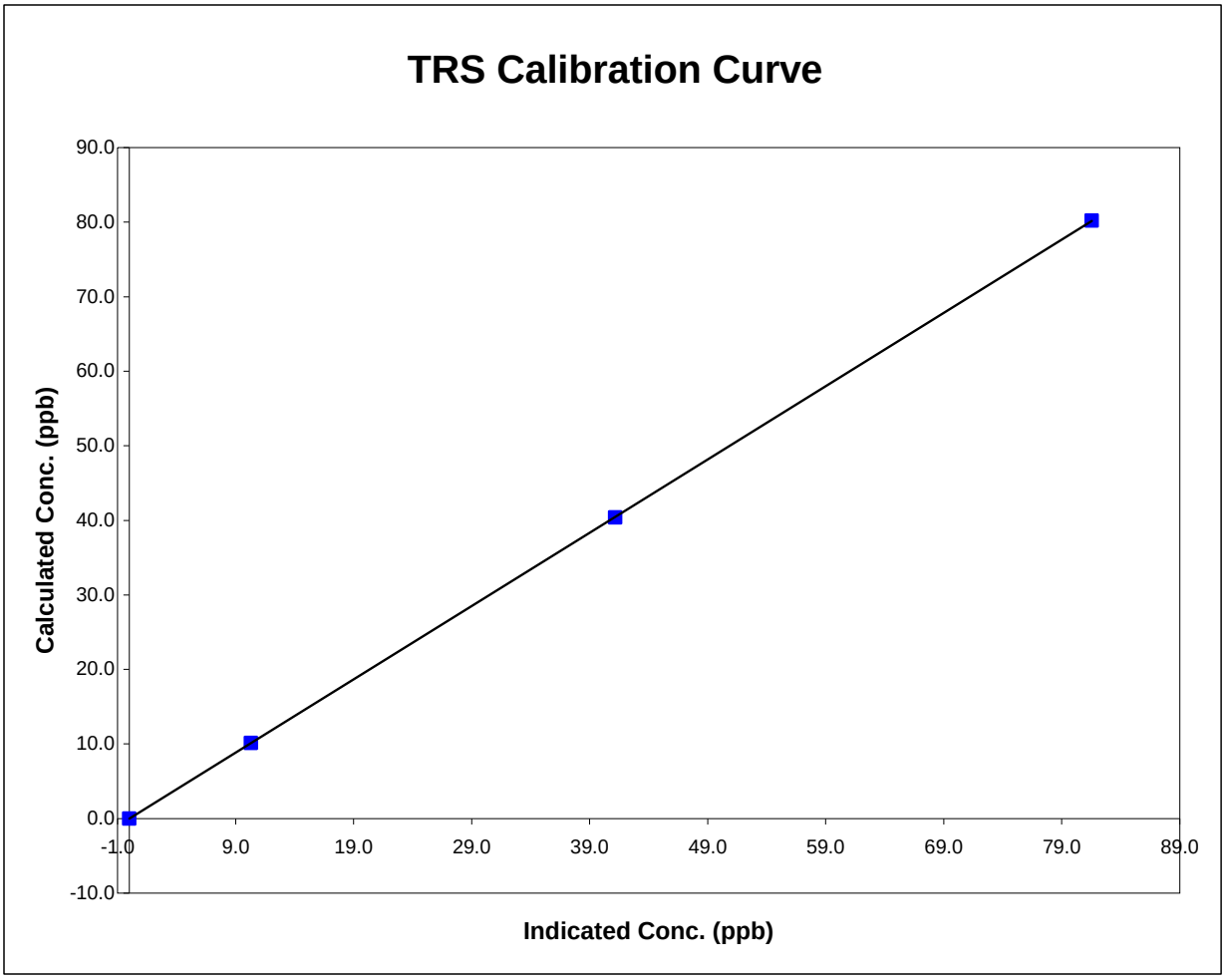
FOCUS AIR QUALITY MONITORING

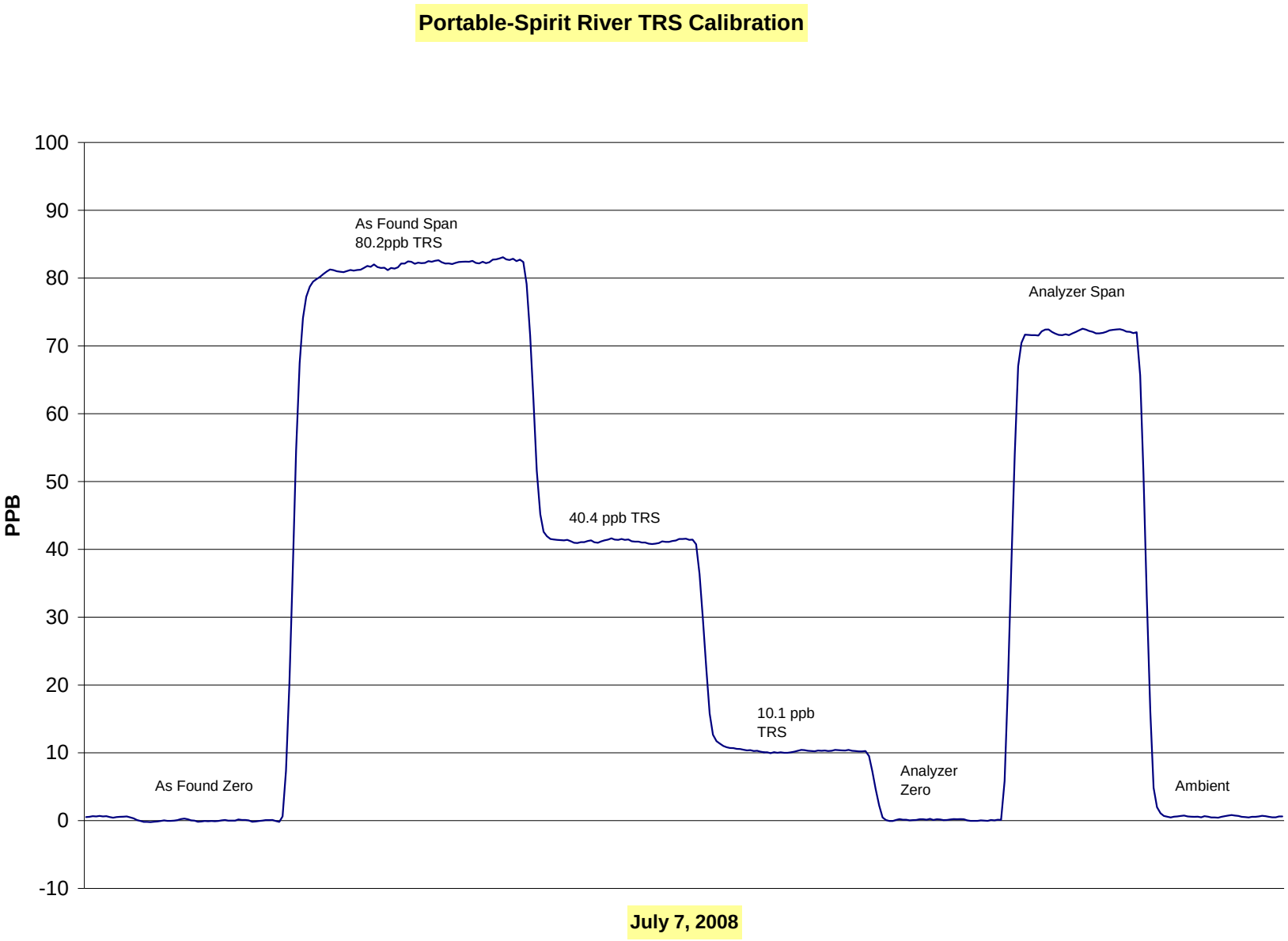
Station Information

Calibration Date	July 7, 2008	Previous Calibration	June 13, 2008
Station Number	6	Station Location	Portable-Spirit River
Start Time (MST)	11:05	End Time (MST)	13:50
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	0.0	N/A		
80.2	81.5	0.9839	Correlation Coefficient	0.999997
40.4	41.2	0.9808		
10.1	10.3	0.9838	Slope	0.983700
			Intercept	-0.025756




Portable-Spirit River TRS Calibration
PPB
100
90
80
70
60
50
40
30
20
10
0
-10
As Found Span
80.2ppb TRS
40.4 ppb TRS
10.1 ppb
TRS
Analyzer
Zero
Analyzer Span
As Found Zero
Ambient
July 7, 2008

Calibration Report

Parameter	O3
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 7, 2008	Previous Calibration	June 12, 2008
Station Number	8	Station Location	Rover - Spirit River
Reason: Routine	Install	Removal	Other:
Start Time (MST)	9:00	End Time (MST)	11:45
Barometric Pressure	0.927 atm	Station Temperature	21.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
DACS make	Focus AP1000	DACS serial No.	52662
DACS voltage range	0-5	DACS channel #	7
	Before		After
Calculated slope	1.001530	Calculated slope	0.994849
Calculated intercept	1.597501	Calculated intercept	-3.627374
Analyzer make	TEI Model 49C	Analyzer serial #	609-716240

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	0	ppb	0	ppb
Span	1.138		1.209	
Cell A	83140	Hz	75919	Hz
Cell B	79170	Hz	71953	Hz
Pressure	704	in Hg	691	in Hg
CellA Flow	676	ccm	668	ccm
Cell B Flow	675	cmm	668	cmm

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4990	0.00	0.0	0.0	N/A
4990	0.00	281.4	282.5	0.9960
4990	0.00	188.2	196.2	0.9595
4990	0.00	100.8	109.3	0.9227
4990	0.00	0.0	0.0	As found zero
4990	0.00	281.4	253.3	As found span
			Average Correction Factor	0.9594

Calculated value of As Found Response: 255.3 ppm Percent Change of As Found: -9.3%

	before calibration		after calibration	
Auto zero	2.8	ppb	-3.0	ppb
Auto span	208.7	ppb	207.4	ppb

Notes: O3 Adjusted

Calibration Performed By: Conor Whiteley

Calibration Summary

Parameter	O3
Air Monitoring Network	PASZA

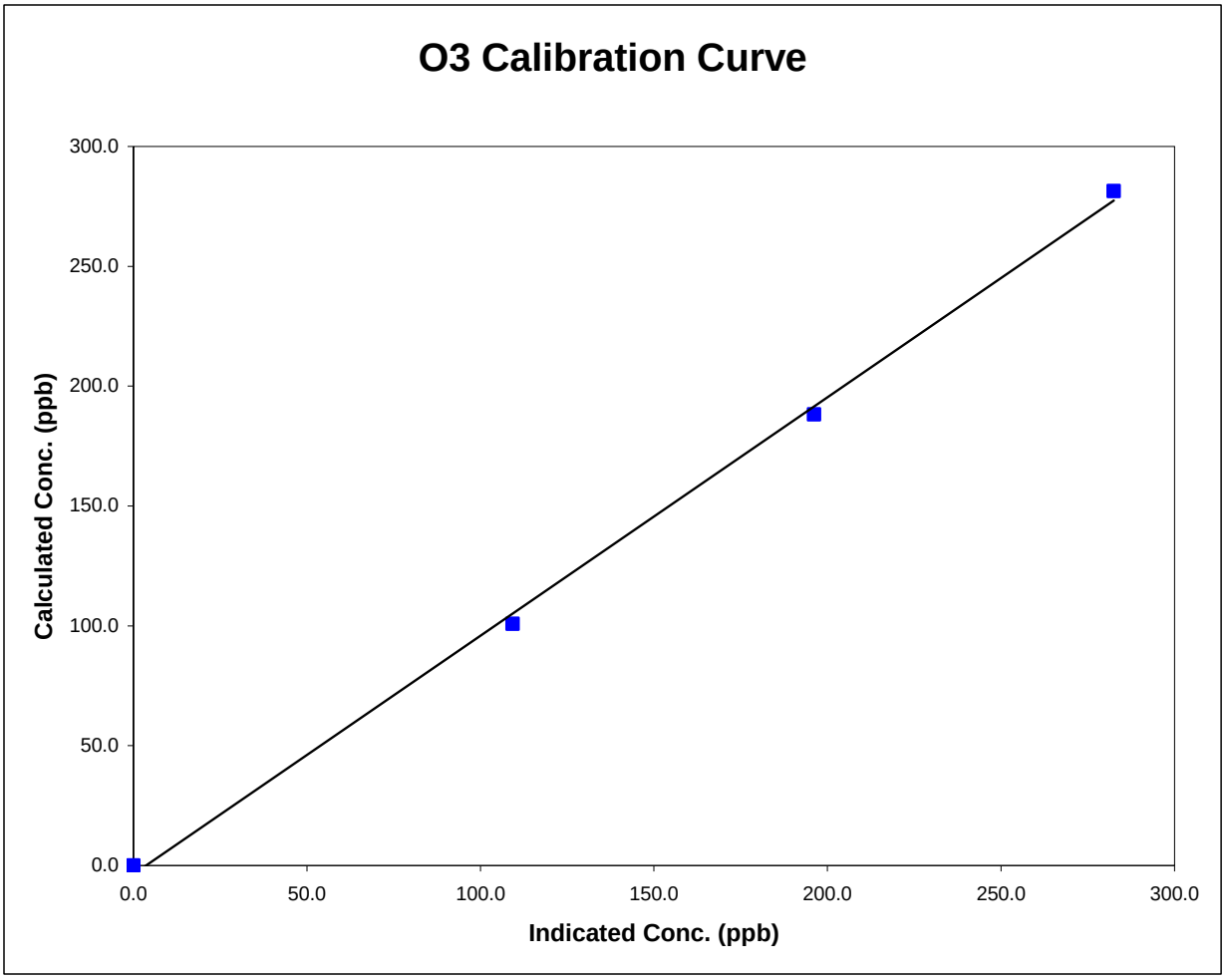
FOCUS AIR QUALITY MONITORING

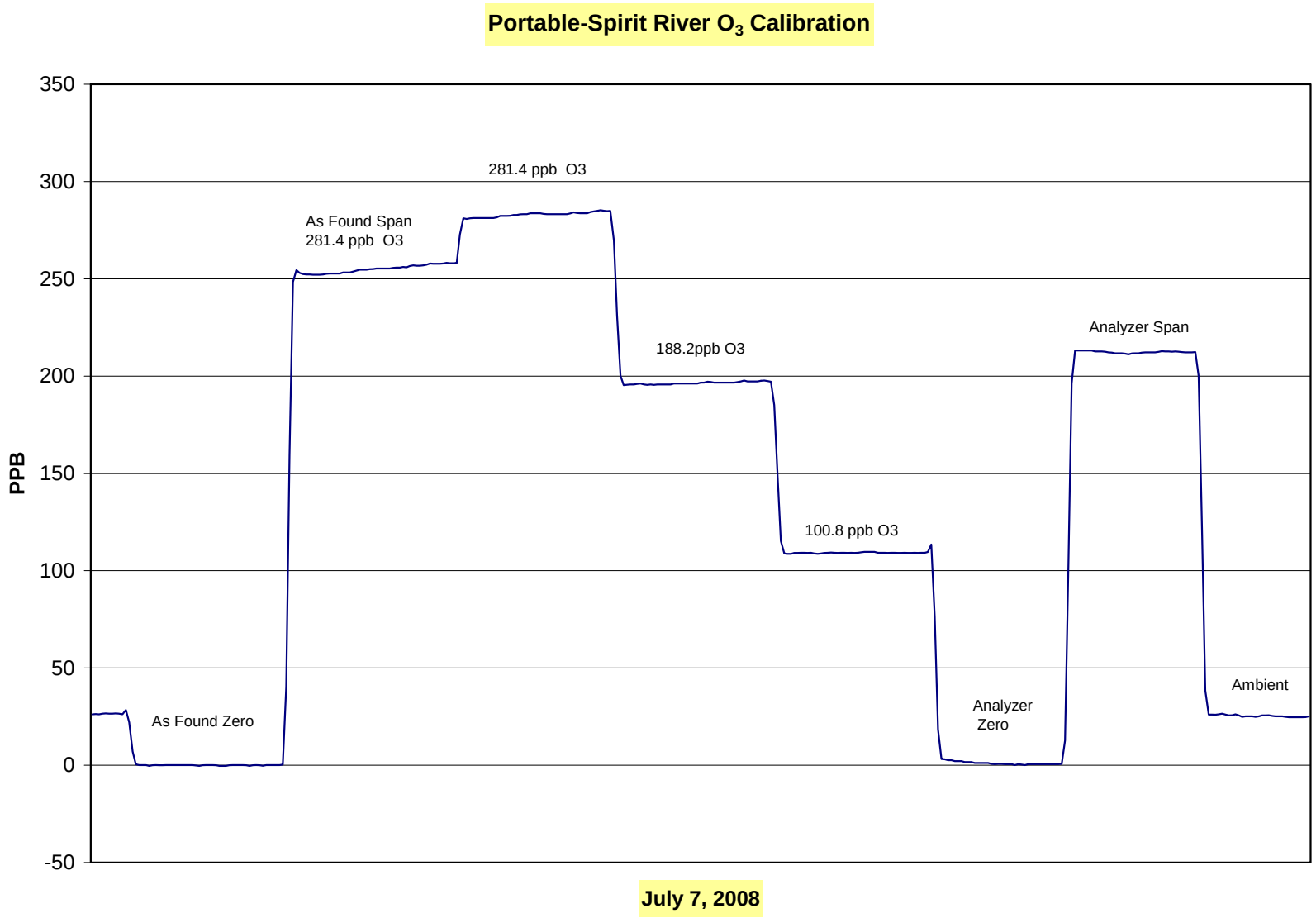
Station Information

Calibration Date	July 7, 2008	Previous Calibration	June 12, 2008
Station Number	8	Station Location	Rover - Spirit River
Start Time (MST)	9:00	End Time (MST)	11:45
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	0.0	NA		
281.4	282.5	0.9960	Correlation Coefficient	0.998674
188.2	196.2	0.9595		
100.8	109.3	0.9227	Slope	0.994849
			Intercept	-3.627374




Portable-Spirit River O_3 Calibration
350
300
250
200
150
100
50
0
-50
PPB
281.4 ppb O3
As Found Span
281.4 ppb O3
188.2ppb O3
Analyzer Span
100.8 ppb O3
Ambient
Analyzer
Zero
As Found Zero
July 7, 2008

Calibration Report

Parameter	**NOx-NO-NO_2**
Air Monitoring Network	**PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 4, 2008	Previous Calibration	June 12, 2008
Station Number	8	Station Location	Rover - Spirit River

Reason: Routine Installation Removal Other:

Start Time (MST)	11:15		End Time (MST)	15:20	
Barometric Pressure	27.49	Inches Hg	Station Temperature	22.0	Deg C
Calibrator	Environics 6100		Serial Number	3474	
NO Cal Gas Conc	48.9	ppm	Cal Gas Expiry Date	2-Jan-09	
NOx Cal Gas Conc	48.9	ppm	Cal Gas Serial #	LL-16161	

DACS Information

DACS make	FOCUS AP1000	DACS serial No.	52662

Parameter		NO2	NOx	NO
Before	Data Slope	1.005369	1.008463	1.008529
	Data Offset	-0.125282	-2.493996	-2.598434
After	Data Slope	1.028111	1.030307	1.031036
	Data Offset	-0.812043	-2.738523	-2.423432
Channel #		8	6	7
Voltage Range		0 - 10 VDC	0 - 10 VDC	0 - 10 VDC

Analyzer Information

Analyzer make/model	TECO 42i	Analyzer serial #	701120011

Test Point	before		after	
Concentration range	0-500	ppb	0-500	ppb
NO background	5.3	ppb	5.3	mV
NOx background	5.6	ppb	5.6	mV
NO coefficient	0.910		0.910	
NOx coefficient	0.996		0.996	
Chamber Temp	50.0	Deg C	50.0	Deg C
Cooler Temp	-2.9	Deg C	-2.9	Deg C
NO2 Converter Temp	326.6	Deg C	326.6	Deg C
Sample Flow	0.5	ccm	0.5	ccm
Ozonator Flow	OK	LPM	OK	LPM
Preasure	186.8	mm Hg	186.8	mm Hg

Notes:

Calibration Performed By: Conor Whiteley

Calibration Report

Parameter	**NOx-NO-NO_2**
Air Monitoring Network	**PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: July 4, 2008 Station Location: Rover - Spirit River

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	0.8	0.0	1.0	N/A	N/A
1	4988	39.82	387.3	387.3	0.0	377.4	376.4	1.8	1.0262	1.0288
2	4988	19.84	193.7	193.7	0.0	192.2	192.3	0.8	1.0079	1.0072
3	4988	9.94	97.3	97.3	0.0	98.5	98.4	0.9	0.9872	0.9881
AFZ	4988	0.00	0.0	0.0	0.0	0.8	0.0	1.0	0.0000	0.0000
AFS	4988	39.82	387.3	387.3	0.0	377.4	376.4	1.8	1.0262	1.0288
							Average Correction Factor		1.0071	1.0080

As Found Concentrations: NO_X= 374.1 NO= 373.8 As Found Percent Change NO_X= -3.4% NO= -3.5%

GPT Calibration Data

Dilution Flow 4988 ccm Source Gas Flow 39.82 ccm

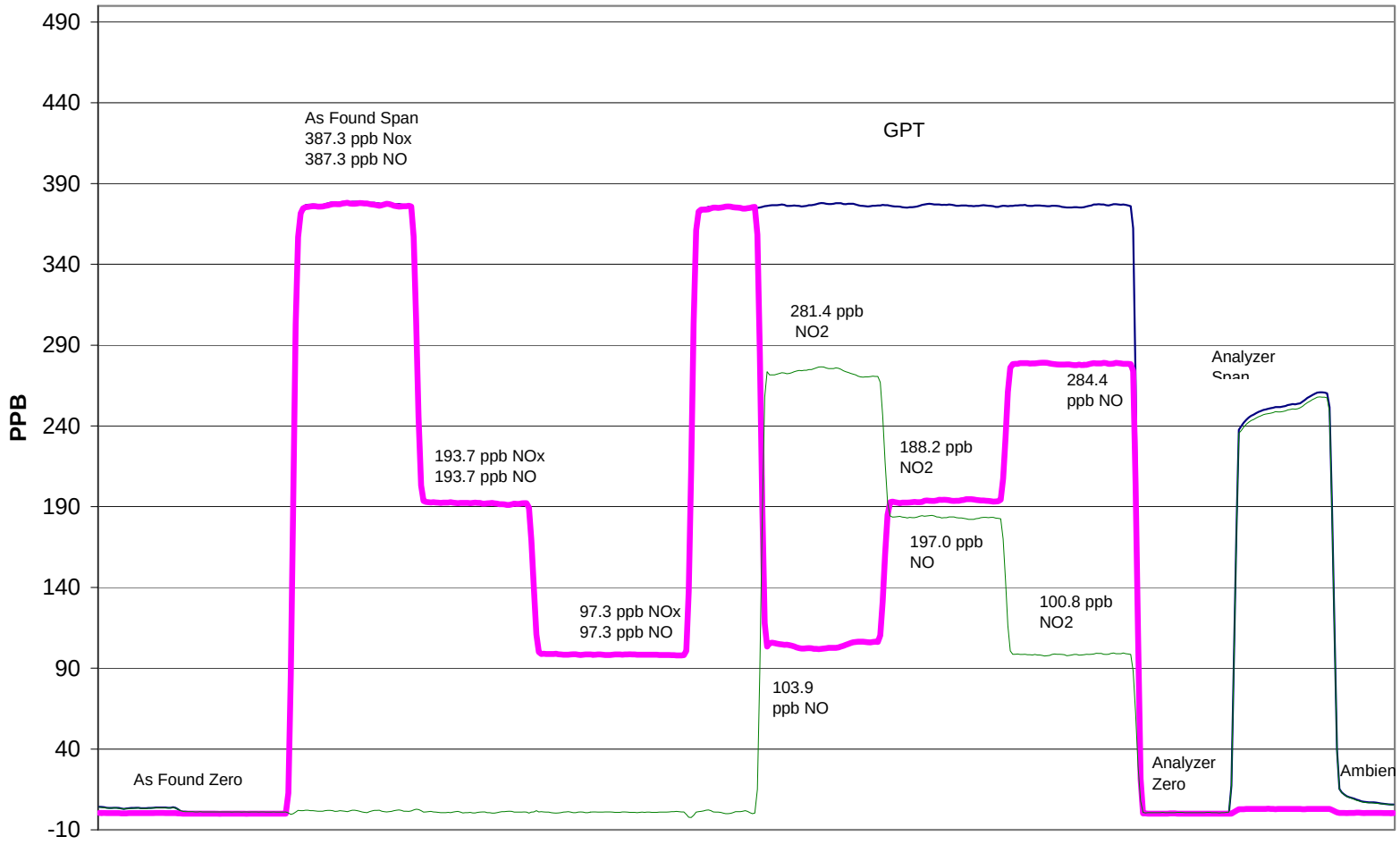
O3 Setpoint (ppb)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	0.0	0.0	0.0	0.0	0.0	0.0	N/A	N/A	N/A	N/A
NO point	385.2	384.2	1.1	375.2	374.9	1.0	1.0269	1.0246	N/A	N/A
300	385.2	103.9	281.4	377.1	103.1	274.7	1.0215	1.0075	1.0243	97.6%
200	385.2	197.0	188.2	376.5	193.4	183.6	1.0233	1.0185	1.0250	97.6%
100	385.2	284.4	100.8	376.1	278.2	98.6	1.0243	1.0223	1.0222	97.8%
					Average Correction Factor		1.0230	1.0161	1.0238	97.7%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.7	1.0	0.9	ppb	-0.4	0.9	0.9	ppb
Auto span	262.7	261.3	0.3	ppb	259.1	257.5	0.6	ppb

Calibration Performed By: Conor Whiteley

Portable-Spirit River NO_X Calibration



July 4, 2008

Calibration Summary

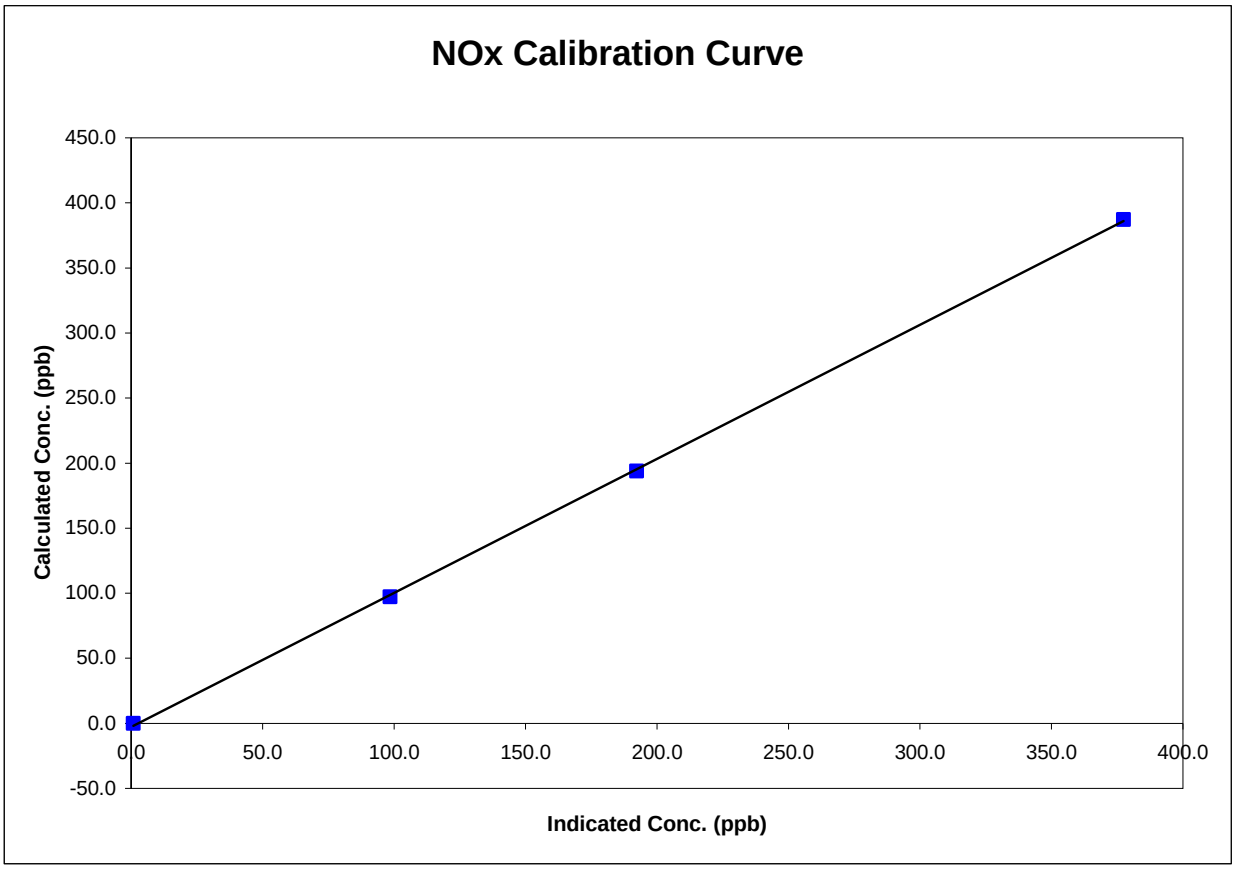
Parameter	NO_x
Air Monitoring Network	PASZA

Station Information

Calibration Date	July 4, 2008	Previous Calibration	June 12, 2008
Station Number	8	Station Location	Rover - Spirit River
Start Time (MST)	11:15	End Time (MST)	15:20
Analyzer make	TECO 42i	Analyzer serial #	701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.8	0.0000		
387.3	377.4	1.0262	Correlation Coefficient	0.999881
193.7	192.2	1.0079		
97.3	98.5	0.9872	Slope	1.030307
			Intercept	-2.738523



Calibration Summary

Parameter	NO_2
Air Monitoring Network	PASZA

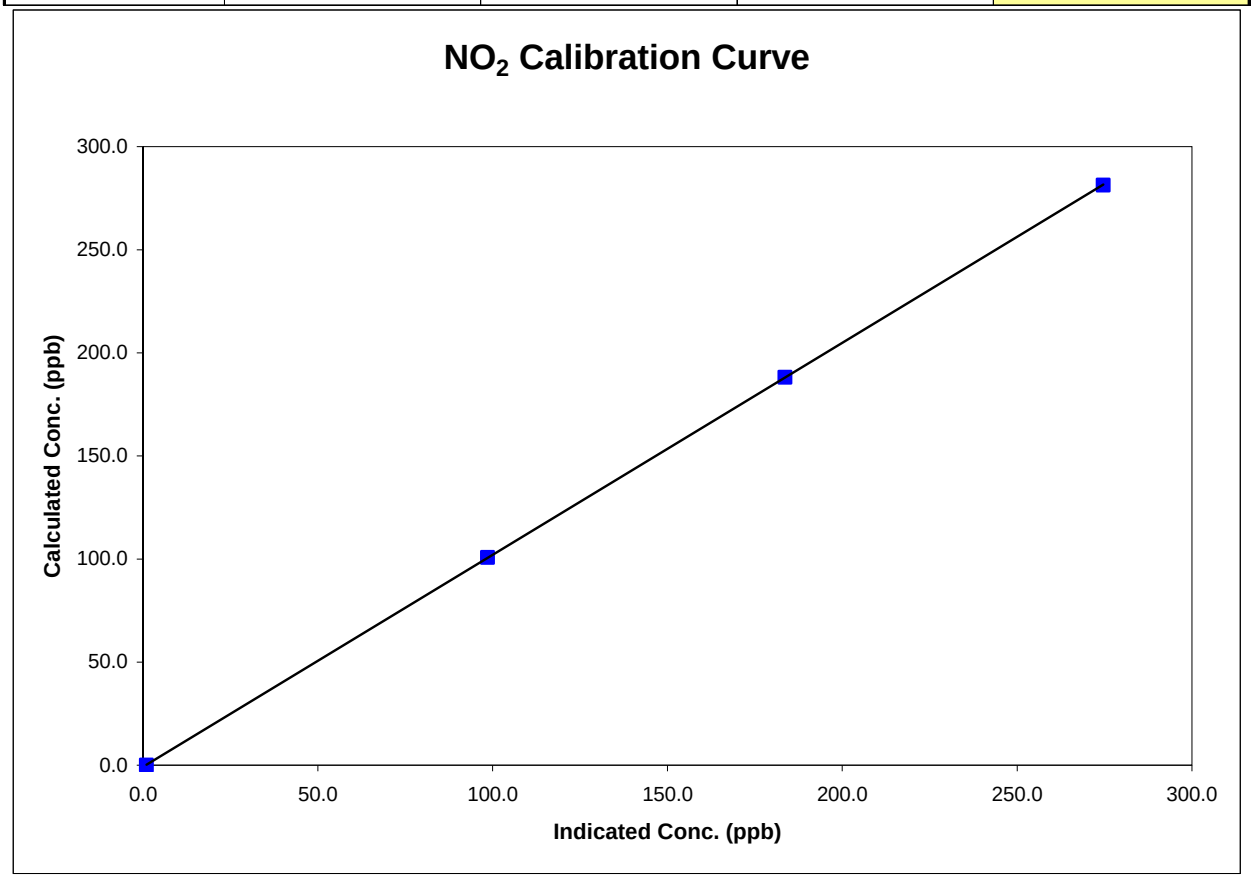
FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 4, 2008	Previous Calibration	June 12, 2008
Station Number	8	Station Location	Rover - Spirit River
Start Time (MST)	11:15	End Time (MST)	15:20
Analyzer make	TECO 42i	Analyzer serial #	701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	1.0	0.0000		
281.4	274.7	1.0243	Correlation Coefficient	0.999995
188.2	183.6	1.0250		
100.8	98.6	1.0222	Slope	1.028111
			Intercept	-0.812043



Calibration Summary

Parameter	**NO**
Air Monitoring Network	**PASZA**

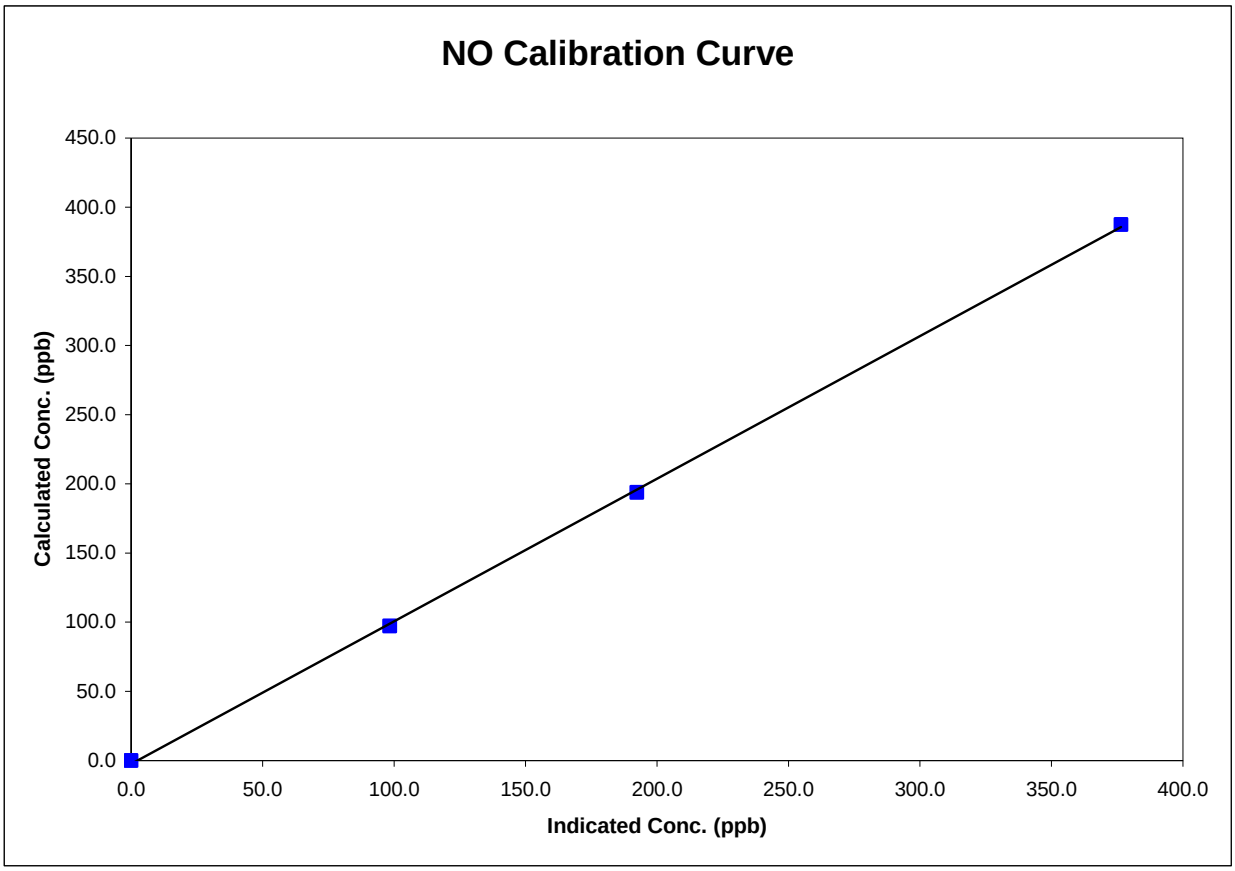
FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 4, 2008	Previous Calibration	June 12, 2008
Station Number	8	Station Location	Rover - Spirit River
Start Time (MST)	11:15	End Time (MST)	15:20
Analyzer make	TECO 42i	Analyzer serial #	701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
387.3	376.4	1.0288	Correlation Coefficient	0.999803
193.7	192.3	1.0072		
97.3	98.4	0.9881	Slope	1.031036
			Intercept	-2.423432



Calibration Report

Parameter	SO2
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 11, 2008	Previous Calibration	June 2, 2008
Station Number	6	Station Location	Valleyview
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	10:55	End Time (MST)	13:25
Barometric Pressure	27.75 inches Hg	Station Temperature	23.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	50.3 ppm	Cal Gas Expiry Date	7/27/2009
Gas Cert Reference	LL16161		
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	0.994759	Calculated slope	0.978740
Calculated intercept	-0.791060	Calculated intercept	-1.721490
Analyzer make	TEI 43i	Analyzer serial #	43C-57351-313

	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
Background	27.8		28	
Coefficient	0.74		0.74	
UV Lamp Voltage	693	LPM	695	LPM
Chamber Temp	44.2	V	44.2	V
Perm Gas Temp	25.2	C	26.1	C
Pressure	633.9	in Hg	626.3	in Hg
Sample Flow	0.473	LPM	0.47	LPM
Lamp Intesity	45518	Hz	45785	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	-0.2	N/A
4988	39.77	397.9	407.2	0.9770
4988	19.90	199.9	207.0	0.9658
4988	9.93	99.9	105.9	0.9436
4988	0.00	0.0	-0.2	As found zero
4988	39.77	397.9	407.2	As found span
			Average Correction Factor	0.9621

Calculated value of As Found Response: 404.553 ppm Percent Change of As Found: -1.7%

	before calibration		after calibration	
Auto zero	-1.0	ppm	-1.7	ppm
Auto span	161.6	ppm	161.4	ppm

Notes:

Calibration Performed By: Conor Whiteley

Calibration Summary

Parameter	SO2
Air Monitoring Network	PASZA

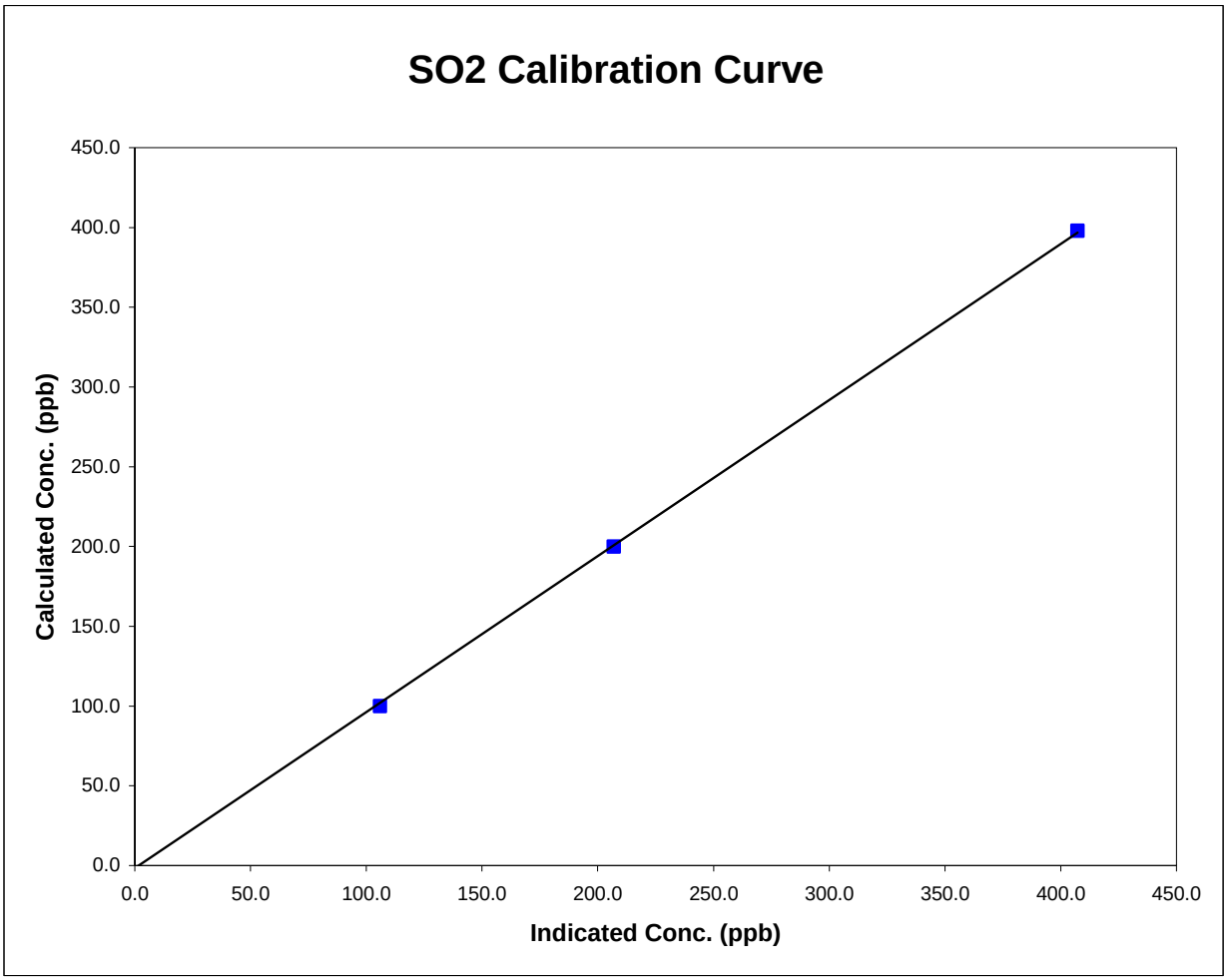
FOCUS AIR QUALITY MONITORING

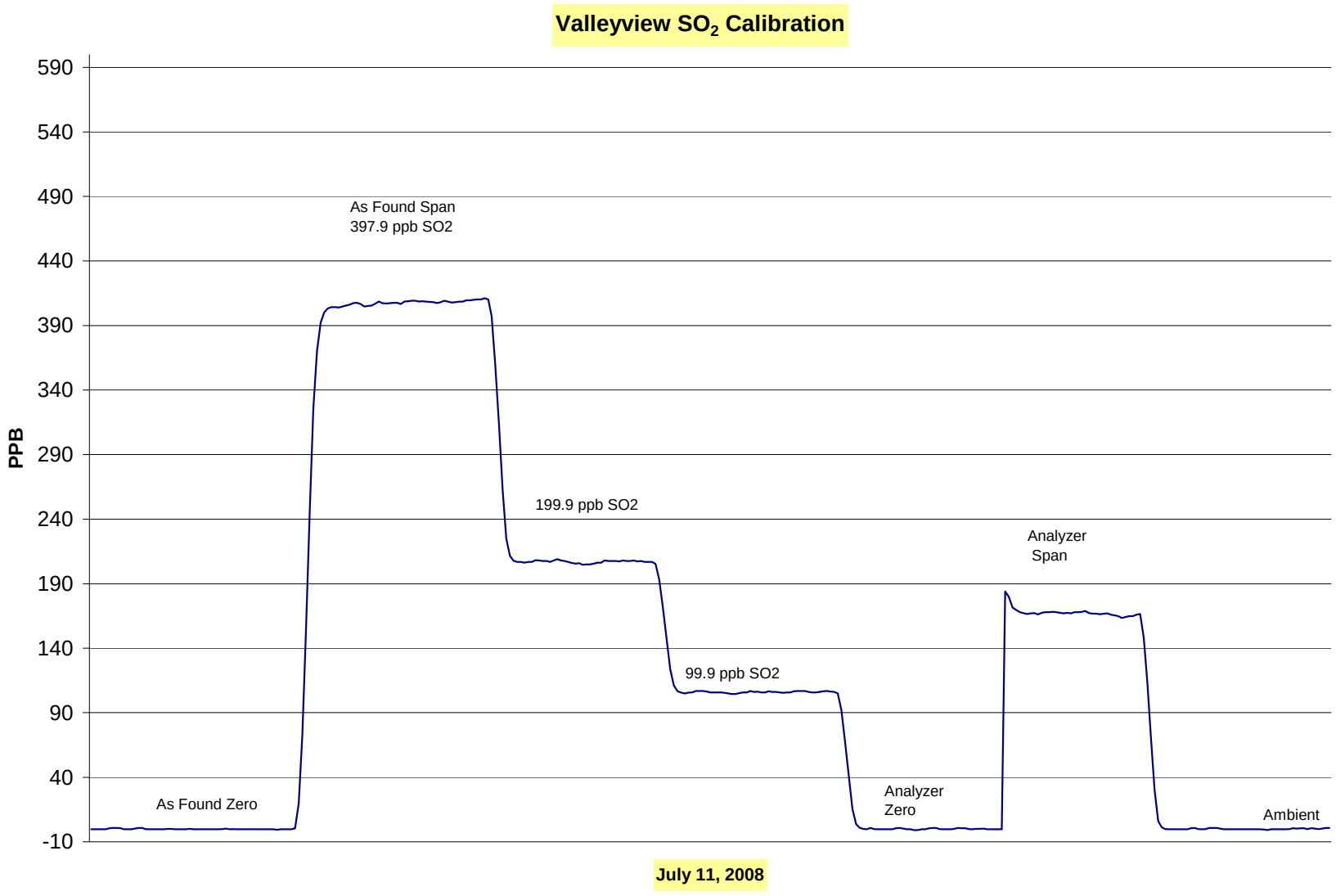
Station Information

Calibration Date	July 11, 2008	Previous Calibration	June 2, 2008
Station Number	6	Station Location	Valleyview
Start Time (MST)	10:55	End Time (MST)	13:25
Analyzer make/model	TEI 43i	Analyzer serial #	43C-57351-313

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.2	N/A		
397.9	407.2	0.9770	Correlation Coefficient	0.999888
199.9	207.0	0.9658		
99.9	105.9	0.9436	Slope	0.978740
			Intercept	-1.721490




Valleyview SO_2 Calibration
590
540
490
440
390
340
290
240
190
140
90
40
-10
PPB
As Found Span
397.9 ppb SO2
199.9 ppb SO2
99.9 ppb SO2
Analyzer
Span
As Found Zero
Analyzer
Zero
Ambient
July 11, 2008

Calibration Report

Parameter	H2S
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 11, 2008	Previous Calibration	June 2, 2008
Station Number	5	Station Location	Valleyview
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	9:05	End Time (MST)	11:40
Barometric Pressure	27.75 inches Hg	Station Temperature	23.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	5.1 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	1.022081	Calculated slope	1.020096
Calculated intercept	-0.214393	Calculated intercept	-0.350473
Analyzer make	TEI Model 43A	Analyzer serial #	43A-25575-221

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	4.7	ppb	4.6	ppb
Coefficient	1.026		1.026	
Lamp Voltage	798	V	798	V
Chamber Temp	45	c	45	c
Perm Oven Temp	44.99	c	45.01	c
Pressure	642	mm Hg	645	mm Hg
Sample Flow	428	ccm	429	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	0.4	N/A
4988	79.73	80.2	79.1	1.0148
4988	39.82	40.4	39.8	1.0154
4988	9.93	10.1	10.4	0.9779
4988	0.00	0.0	0.4	As found zero
4988	79.79	80.3	79.1	As found span
			Average Correction Factor	1.0027

Calculated value of As Found Response: 80.24 ppm Percent Change of As Found: 0.1%

	before calibration		after calibration	
Auto zero	-0.1	ppm	0.1	ppm
Auto span	65.0	ppm	63.6	ppm

Notes:

Calibration Performed By: Conor Whiteley

Calibration Summary

Parameter	H2S
Air Monitoring Network	PASZA

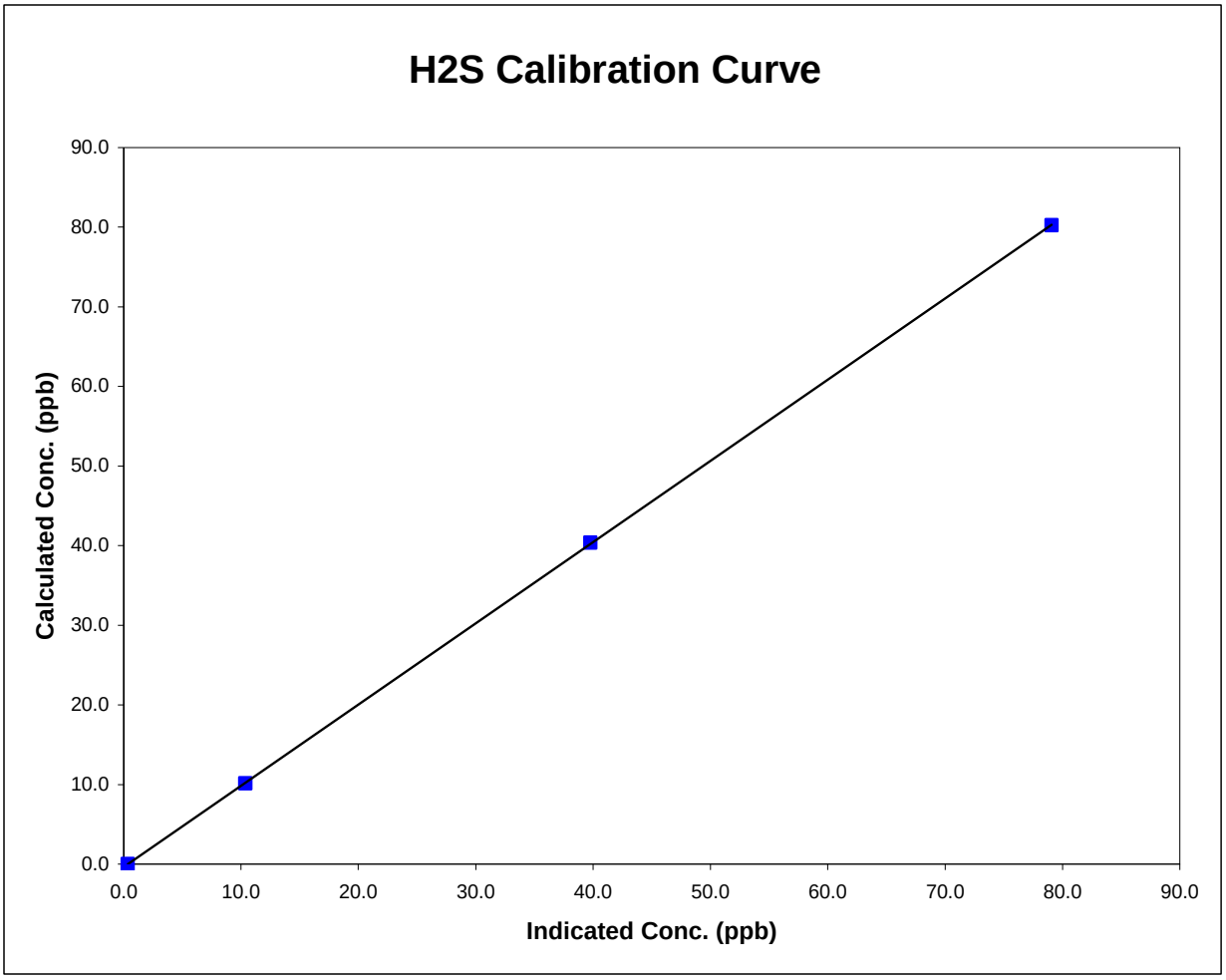
FOCUS AIR QUALITY MONITORING

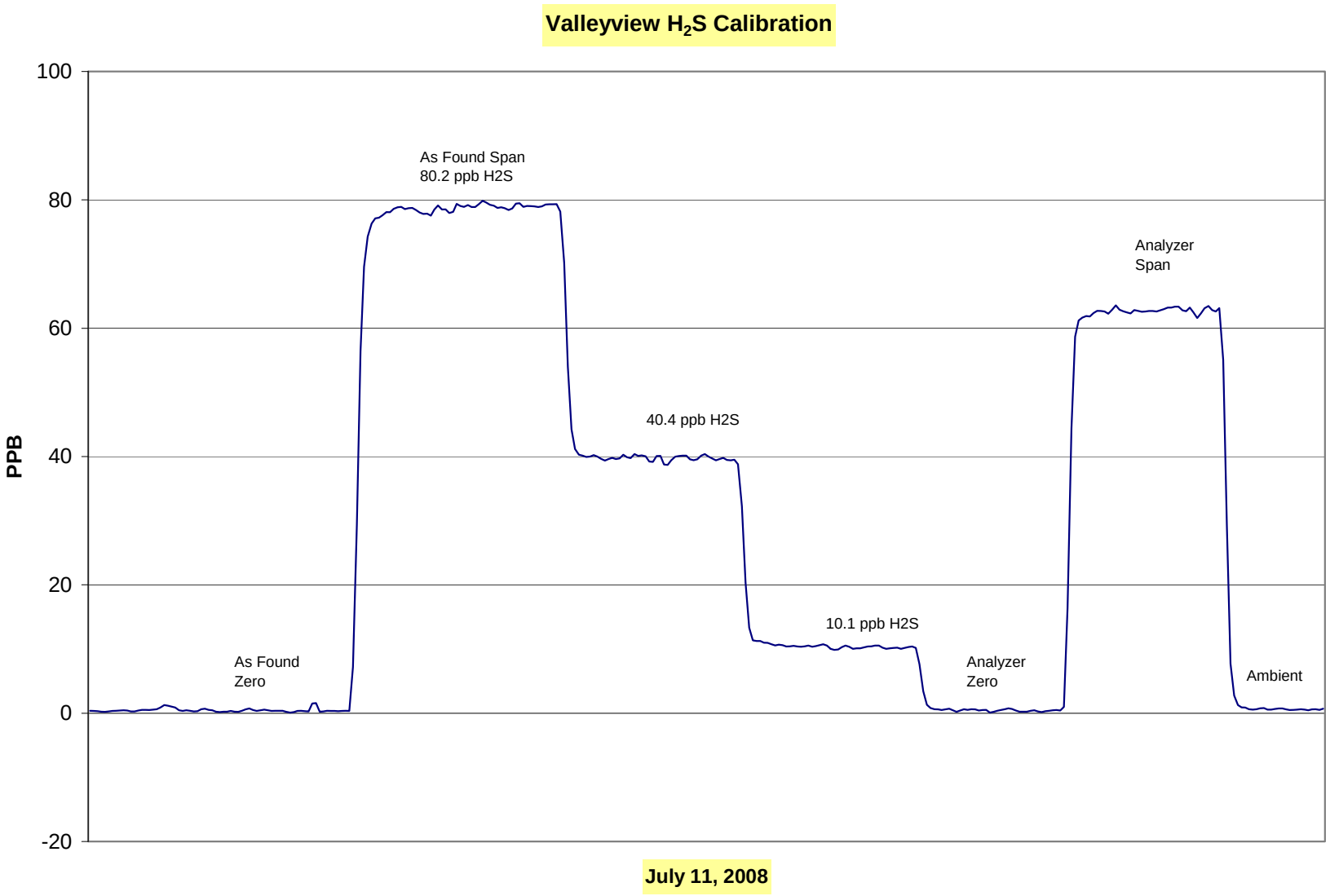
Station Information

Calibration Date	July 11, 2008	Previous Calibration	June 2, 2008
Station Number	5	Station Location	Valleyview
Start Time (MST)	9:05	End Time (MST)	11:40
Analyzer make/model	TEI Model 43A	Analyzer serial #	43A-25575-221

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A		
80.2	79.1	1.0148	Correlation Coefficient	0.999990
40.4	39.8	1.0154		
10.1	10.4	0.9779	Slope	1.020096
			Intercept	-0.350473




Valleyview H2S Calibration
100
80
60
40
20
0
-20
PPB
As Found Span
80.2 ppb H2S
40.4 ppb H2S
10.1 ppb H2S
As Found
Zero
Analyzer
Zero
Analyzer
Span
Ambient
July 11, 2008