Peace AirShed Zone Association

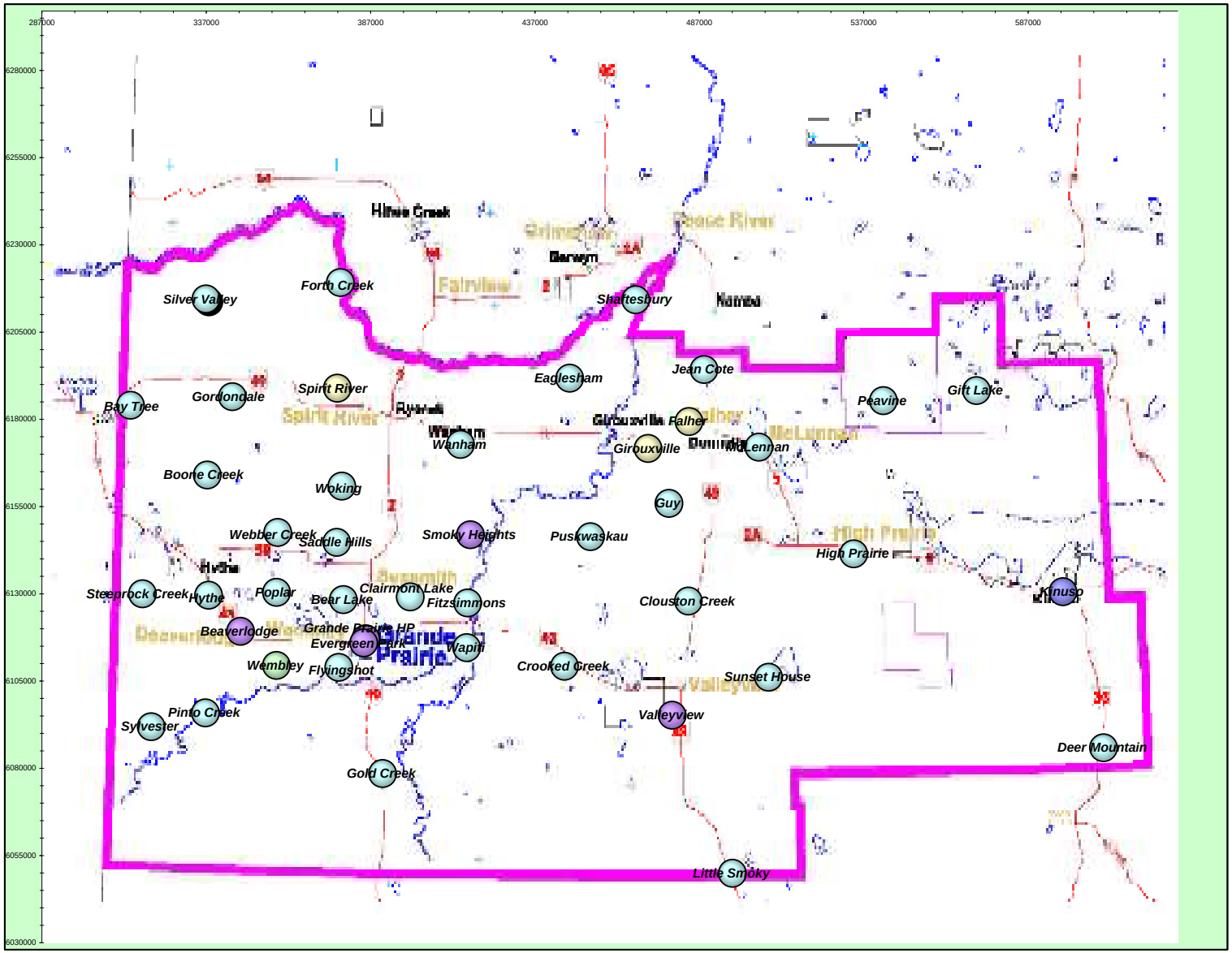
Ambient Air Monitoring Network Summary

Continuous Ambient Air Quality Monitoring Program
Monthly Report
May 2009

Operations and Reporting

FOCUS
AIR QUALITY MONITORING

Location of PASZA Continuous and Passive Monitoring Stations



PASZA
Peace AirShed Zone Association

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June 30, 2009

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

RE: Peace Airshed Zone Association (PASZA) – May 2009 Ambient Air Report

Enclosed is the PASZA Ambient Monitoring Network Report for the month of **May 2009**.

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

Included in this report is a summary of the monthly continuous monitoring, detailed hourly average reports and multipoint calibration reports of all instruments. Operational summaries can be found on the "Monthly Summary" and "Continuous Monitoring" pages of the report.

During the month of May the following events were noted:

Henry Pirker Station:

- The measured ambient air quality was within the Alberta Ambient Air Quality Objectives (AAAQO) for the Henry Pirker station.
- The SO_2, NO_X, O_3, CO, TRS, THC, solar radiation, wind speed and wind direction analyzers and sensors at the Henry Pirker station had an operational uptime greater than 90% for the month of May.

Evergreen Park Station:

- The measured ambient air quality was within the AAAQO for the Evergreen Park station, except for $PM_{2.5}$ - **Alberta Environment reference # 214865**.
  - 24-hr Objective: May 30 24:00: 60 µg/m^3
  - 1-hr Guideline: May 30 14:00: 217 µg/m^3
  - 1-hr Guideline: May 30 15:00: 122 µg/m^3
  - 1-hr Guideline: May 30 16:00: 435 µg/m^3
  - 1-hr Guideline May 30 17:00: 340 µg/m^3
  - 1-hr Guideline May 30 18:00: 136 µg/m^3

- All analyzers / sensors at the Evergreen Park station had an operational uptime greater than 90% for the month of May

Smoky Heights Station:

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

Beaverlodge Station:

- The measured ambient air quality was within the AAAQO for the Beaverlodge station.

- All analyzers / sensors at the Beaverlodge station had an operational uptime greater than 90% for the month of May.

Portable – Kinuso Station:

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

Valleyview Station:

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

Passive Monitoring - 43 Stations throughout the PASZA zone:

There were four duplicate sites sampled in the month of May: Bay Tree, Webber Creek, Wanham and Bear Lake. There was one passive sample that was found damaged; consequently there is no result for the O_3 sample at Forth Creek. 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 0.4 ppb, with a mean of 0.2 ppb.
- Monthly average concentrations for NO_2 passives ranged from 0.5 ppb to 3.4 ppb, with a mean of 1.2 ppb.
- Monthly average concentrations for O_3 passives ranged from 28.5 ppb to 39.3 ppb, with a mean of 34.0 ppb.

If you have any questions, please contact the Focus Intec office at 1.403.263.8200 (Kelly Baragar or Sharon Whiteley).

On Behalf of the,
Peace Airshed Zone Association

Sharon E. Whiteley

Dawn Ewan
PASZA Office Adminstrator

Sharon Whiteley, B.Sc..
FOCUS AQM Data Specialist

PASZA Monthly Continuous Data Summary

May-2009	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	May-01 19:00	1.1	May-02	99.9%
SO_2 (ppb)	172	57	Evergreen Park	0.3	0	0	8.6	May-28 09:00	1.1	May-28	100.0%
SO_2 (ppb)	172	57	Smoky Heights	0.4	0	0	7.7	May-04 23:00	1.4	May-03	100.0%
SO_2 (ppb)	172	57	Beaverlodge	0.2	0	0	1.6	May-02 11:00	0.8	May-02	100.0%
SO_2 (ppb)	172	57	Portable-Kinuso	0.2	0	0	3.3	May-01 19:00	0.8	May-01	99.9%
SO_2 (ppb)	172	57	Valleyview	0.2	0	0	6.4	May-12 12:00	0.5	May-07	99.5%
NO (ppb)			Henry Pirker	1.1	-	-	27.0	May-11 07:00	6.4	May-11	99.9%
NO_2 (ppb)	212	106	Henry Pirker	4.7	0	0	36.3	May-01 22:00	9.3	May-01	99.9%
NO_X (ppb)			Henry Pirker	5.6	-	-	51.1	May-10 23:00	14.1	May-11	99.9%
NO (ppb)			Beaverlodge	0.0	-	-	1.4	May-05 08:00	0.1	May-05	100.0%
NO_2 (ppb)	212	106	Beaverlodge	4.6	0	0	17.8	May-09 20:00	9.0	May-09	100.0%
NO_X (ppb)			Beaverlodge	4.7	-	-	18.0	May-09 20:00	9.2	May-09	100.0%
NO (ppb)			Portable-Kinuso	0.2	-	-	2.7	May-25 19:00	0.3	May-25	99.9%
NO_2 (ppb)	212	106	Portable-Kinuso	1.5	0	0	6.1	May-07 21:00	2.1	May-26	99.9%
NO_X (ppb)			Portable-Kinuso	1.6	-	-	6.4	May-07 21:00	2.3	May-26	99.9%
O_3 (ppb)	82		Henry Pirker	30.3	0	-	50.3	May-05 17:00	40.3	May-16	99.9%
O_3 (ppb) - 8-hr	65		Henry Pirker		0				48.8	May-24	
O_3 (ppb)	82		Beaverlodge	33.9	0	-	47.9	May-04 17:00	41.1	May-04	100.0%
O_3 (ppb) - 8-hr	65		Beaverlodge		0				44.5	May-04	
O_3 (ppb)	82		Portable-Kinuso	24.9	0	-	50.4	May-29 20:00	38.8	May-30	99.9%
O_3 (ppb) - 8-hr	65		Portable-Kinuso		0				49.1	May-29	
CO (ppm)	13		Henry Pirker	0.24	0	-	0.8	May-10 23:00	0.3	May-26	99.7%
CO (ppm) - 8-hr	5		Henry Pirker		0				0.5	May-11	
THC (ppm)			Henry Pirker	2.08	-	-	2.8	May-11 07:00	2.2	May-11	99.9%
TRS (ppb)			Henry Pirker	0.2	-	-	1.0	May-08 03:00	0.4	May-02	99.9%
TRS (ppb)			Evergreen Park	0.5	-	-	2.0	May-05 06:00	0.7	May-05	100.0%
TRS (ppb)			Smoky Heights	0.3	-	-	0.6	May-25 23:00	0.4	May-26	100.0%
TRS (ppb)			Portable-Kinuso	0.4	-	-	0.6	May-31 12:00	0.5	May-23	99.9%
H_2S (ppb)	10	3	Valleyview	0.1	0	0	0.4	May-08 23:00	0.2	May-08	99.6%
$PM_{2.5}$ ($\mu g/m^3$)	80	30	Henry Pirker	3.7	0	0	30.7	May-01 22:00	9.4	May-01	99.6%
$PM_{2.5}$ ($\mu g/m^3$)	80	30	Evergreen Park	6.2	5	1	435.1	May-30 16:00	60.0	May-30	99.5%
$PM_{2.5}$ ($\mu g/m^3$)	80	30	Smoky Heights	3.4	0	0	28.1	May-05 21:00	6.7	May-01	100.0%
$PM_{2.5}$ ($\mu g/m^3$)	80	30	Beaverlodge	2.8	0	0	24.5	May-02 21:00	6.4	May-25	99.7%

PASZA Monthly Continuous Data Summary - continued

May-2009	Peace Airshed Zone Assocation						Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
RH (%)			Henry Pirker	53.0	-	-	91.1	May-28 09:00	85.4	May-19	99.9%
RH (%)			Beaverlodge	52.3	-	-	95.5	May-15 04:00	88.8	May-19	100.0%
RH (%)			Valleyview	54.2	-	-	97.9	May-17 07:00	92.3	May-19	99.6%
SR (W/m^2)			Henry Pirker	196.7	-	-	774.5	May-30 13:00	286.6	May-30	99.9%
Temp (°C)			Henry Pirker	9.4	-	-	26.5	May-29 18:00	16.8	May-29	99.9%
Temp (°C)			Evergreen Park	9.2	-	-	26.5	May-29 18:00	16.7	May-29	100.0%
Temp (°C)			Smoky Heights	9.1	-	-	24.9	May-29 18:00	15.9	May-29	100.0%
Temp (°C)			Beaverlodge	9.1	-	-	25.5	May-29 17:00	16.8	May-29	100.0%
Temp (°C)			Portable-Kinuso	9.5	-	-	24.1	May-29 16:00	15.4	May-03	99.9%
Temp (°C)			Valleyview	8.7	-	-	24.8	May-29 18:00	15.4	May-29	99.6%
WSPD s (km/hr)			Henry Pirker	11.9	-	-	40.0	May-30 17:00	28.1	May-30	96.9%
WSPD s (km/hr)			Evergreen Park	7.7	-	-	30.0	May-30 15:00	20.1	May-30	100.0%
WSPD s (km/hr)			Smoky Heights	14.6	-	-	46.0	May-30 17:00	33.5	May-30	100.0%
WSPD s (km/hr)			Beaverlodge	10.6	-	-	42.0	May-30 15:00	27.3	May-30	100.0%
WSPD s (km/hr)			Portable-Kinuso	7.7	-	-	19.0	May-03 12:00	11.0	May-05	98.4%
WSPD s (km/hr)			Valleyview	7.9	-	-	27.0	May-30 16:00	16.9	May-30	99.6%
WSPD v (km/hr)			Henry Pirker	5.2	-	-	40.0	May-30 17:00	27.3	May-30	96.9%
WSPD v (km/hr)			Evergreen Park	3.9	-	-	29.0	May-30 15:00	19.6	May-30	100.0%
WSPD v (km/hr)			Smoky Heights	6.5	-	-	46.0	May-30 18:00	32.5	May-30	100.0%
WSPD v (km/hr)			Beaverlodge	3.8	-	-	41.0	May-30 15:00	26.7	May-30	100.0%
WSPD v (km/hr)			Portable-Kinuso	0.8	-	-	18.0	May-24 18:00	10.3	May-17	98.4%
WSPD v (km/hr)			Valleyview	3.5	-	-	27.0	May-30 16:00	16.2	May-30	99.6%
WDIR			Henry Pirker	W	-	-	-	-	-	-	96.9%
WDIR			Evergreen Park	WNW	-	-	-	-	-	-	100.0%
WDIR			Smoky Heights	W	-	-	-	-	-	-	100.0%
WDIR			Beaverlodge	WNW	-	-	-	-	-	-	100.0%
WDIR			Portable-Kinuso	S	-	-	-	-	-	-	98.4%
WDIR			Valleyview	NW	-	-	-	-	-	-	99.6%

Continuous Network Equipment Summary

PASZA – Henry Pirker Station

General Station Issues

Routine monthly calibrations were performed on May 26th (SO_2, NO_X & O_3) and May 27th (THC, CO & TRS). A power bump on May 16th resulted in at least one (1) hour of invalid data for all parameters.

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	One (1) hour was flagged maintenance due to cylinder change out and a span was initiated. No other operational issues observed.
THC	TEI	51-CLT	There were no spans from May 12th to May 19th due to cylinder running out. Cylinder changed out on May 19th. No other operational issues observed.
TRS	TEI	43C	No operational issues observed.
$PM_{2.5}$	R&P	1400AB	A total of two (2) hours were flagged invalid due to baseline drift for the month of May.
RH	Met One	083D	No operational issues observed.
ET	Met One	083D	No operational issues observed.
SR	Met One	096-1	No operational issues observed.
WS	Met One	010C	Twenty-two (22) hours were flagged invalid – due to instrument flatlining.
WD	Met One	020C	Twenty-two (22) hours were flagged invalid – due to instrument flatlining.

PASZA – Evergreen Park Station

General Station Issues

Routine monthly calibrations were performed on May 14th (SO_2 & TRS).

Parameter	Make	Model	Notes
SO_2	TEI	43i	No operational issues observed.
TRS	TEI	43C	Spans May 5th to 14th were outside the target – due to station temperature.
$PM_{2.5}$	R&P	1400AB	One (1) hour was flagged invalid due to instrument error. Three (3) hours were flagged invalid due to baseline drift. On May 30th - there were five 1-hour Alberta Environment guideline exceedences, and one 24-hour AAAQO exceedence – **AE reference # 214865**.
ET	Met One/Gill	083D	No operational issues observed.
WS	Met One/ Gill	010C	No operational issues observed.
WD	Met One/ Gill	020C	No operational issues observed.

PASZA – Smoky Heights Station

General Station Issues

Routine monthly calibrations were performed on May 20th (TRS & SO_2).

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

PASZA – Beaverlodge Station

General Station Issues

Routine monthly calibrations were performed on May 21st (SO_2, O3 & NO_X). On May 13th a test calibration was performed on the SO_2 and NO_X analyzers to compare the Environics calibrator.

Parameter	Make	Model	Notes
SO_2	TEI	43CTL	No operational issues observed.
NOx/NO/NO_2	TEI	42C	No operational issues observed.
O_3	TEI	49C	No operational issues observed.
$PM_{2.5}$	R&P	1400AB	One (1) hour was flagged invalid due to baseline drift. A power bump on May 3rd only affected the TEOM for one (1) hour.
ET	n/a	n/a	No operational issues observed.
RH	n/a	n/a	No operational issues observed.
WS	Blue Sky	857	No operational issues observed.
WD	Blue Sky	857	No operational issues observed.

PASZA – Kinuso (Portable) Station

General Station Issues

Routine monthly calibrations were performed on May 29th (SO_2, TRS, NO_X & O_3). A power failure on May 16th resulted in one (1) hour of invalid data for all parameters.

Parameter	Make	Model	Notes
SO_2	TEI	43C	No operational issues observed.
NOx/NO/NO_2	TEI	42i	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
O_3	TEI	49C	No operational issues observed.
ET	Gill	Met Pak 3	No operational issues observed.
RH	Gill	Met Pak 3	No operational issues observed.
WS	Met One		On May 19th eleven (11) hours were flagged invalid due to wind cups freezing.
WD	Met One		On May 19th eleven (11) hours were flagged invalid due to wind cups freezing.

PASZA – Valleyview Station

General Station Issues

Routine monthly calibrations were performed on May 15th (SO_2 & H_2S). There were four hours flagged for power issues during the month of May. (May 1st and 8th).

Parameter	Make	Model	Notes
SO_2	TEI	43i	Spans on May 2nd, 5th and 7th - 14th were outside the target range – probably due to the power issues.
H_2S	TEI	43A	Spans on May 2nd – 7th were outside the target range – probably due to the power issues.
ET	Gill	Met Pak 3	No operational issues observed.
RH	Gill	Met Pak 3	No operational issues observed.
WS	Gill	Met Pak 3	No operational issues observed.
WD	Gill	Met Pak 3	No operational issues observed.

PASZA
Henry Pirker Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association
Summary of Hourly Averages

Henry Pirker - Sulphur Dioxide (SO_2) - ppb
May 1, 2009 to June 1, 2009

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.0 ppb on May 1 19:00 Maximum Daily Average: 1.1 ppb on May 2

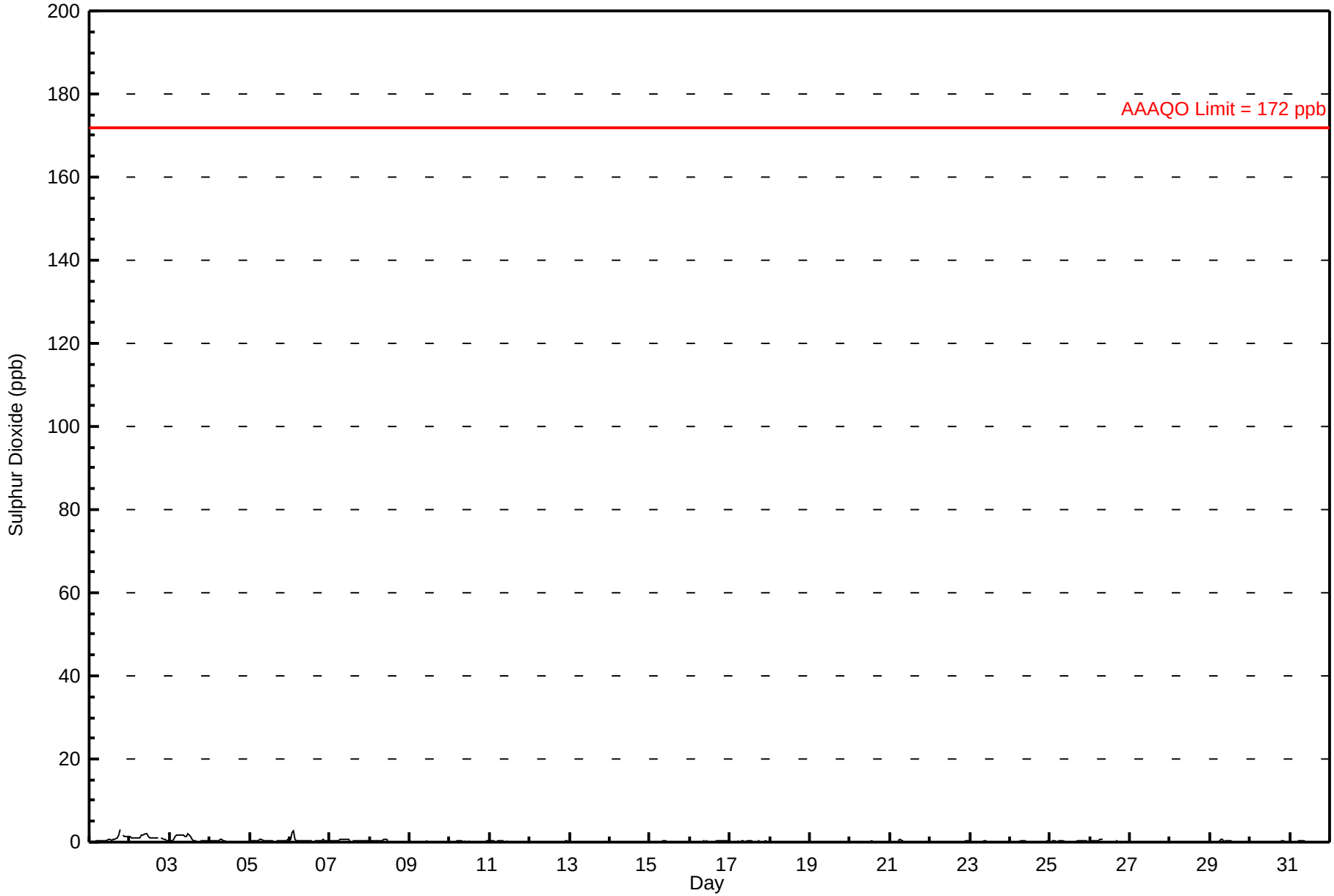
Minimum Value: 0 ppb on May 4 16:00 Minimum Daily Average: 0.0 ppb on May 13
Maximum Diurnal Average: 0.4 ppb at hour 8 Minimum Diurnal Average: 0.1 ppb at hour 15
Monthly Average: 0.21 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.3 P_{90} = 0.5 P_{99} = 1.7

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-May	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	2	3	A	2	1	1	1	0.8	3.0
2-May	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	A	1	1	1	0	0	1.1	2.1
3-May	0	0	1	1	2	2	2	2	2	1	1	2	1	1	0	0	0	A	0	0	0	0	0	0	0.9	2.1
4-May	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.6
5-May	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	0.4	0.7
6-May	1	2	3	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0.6	2.7
7-May	0	0	0	0	0	0	1	1	1	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0.4	0.7
8-May	0	0	0	0	0	0	0	0	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8
9-May	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
10-May	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
11-May	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
12-May	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	0.4
13-May	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
14-May	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	0.1
15-May	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
16-May	P	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
17-May	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
18-May	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
19-May	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	0.2
20-May	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
21-May	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	0.7
22-May	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
23-May	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
24-May	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
25-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.4
26-May	0	0	0	0	0	0	1	1	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
27-May	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
28-May	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	0.1
29-May	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	0.8
30-May	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	0.3
31-May	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
	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	Diurnal Average	
	1.3	2.3	2.7	1.3	1.6	1.7	1.8	1.8	1.7	2.1	2.0	2.1	1.2	1.1	1.0	0.9	1.0	1.7	3.0	0.9	1.7	1.2	1.3	1.5	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 Henry Pirker
May 2009



Peace Airshed Zone Association
Summary of Hourly Maximums

Henry Pirker - Sulphur Dioxide (SO_2) - ppb
May 1, 2009 to June 1, 2009

Maximum Value: 4.6 ppb on May 29 08:00

Maximum Daily Average: 1.6 ppb on May 2

Minimum Value: 0 ppb on May 14 05:00

Minimum Daily Average: 0.2 ppb on May 14

Maximum Diurnal Average: 0.8 ppb at hour 8

Minimum Diurnal Average: 0.4 ppb at hour 14

Monthly Average: 0.52 ppb

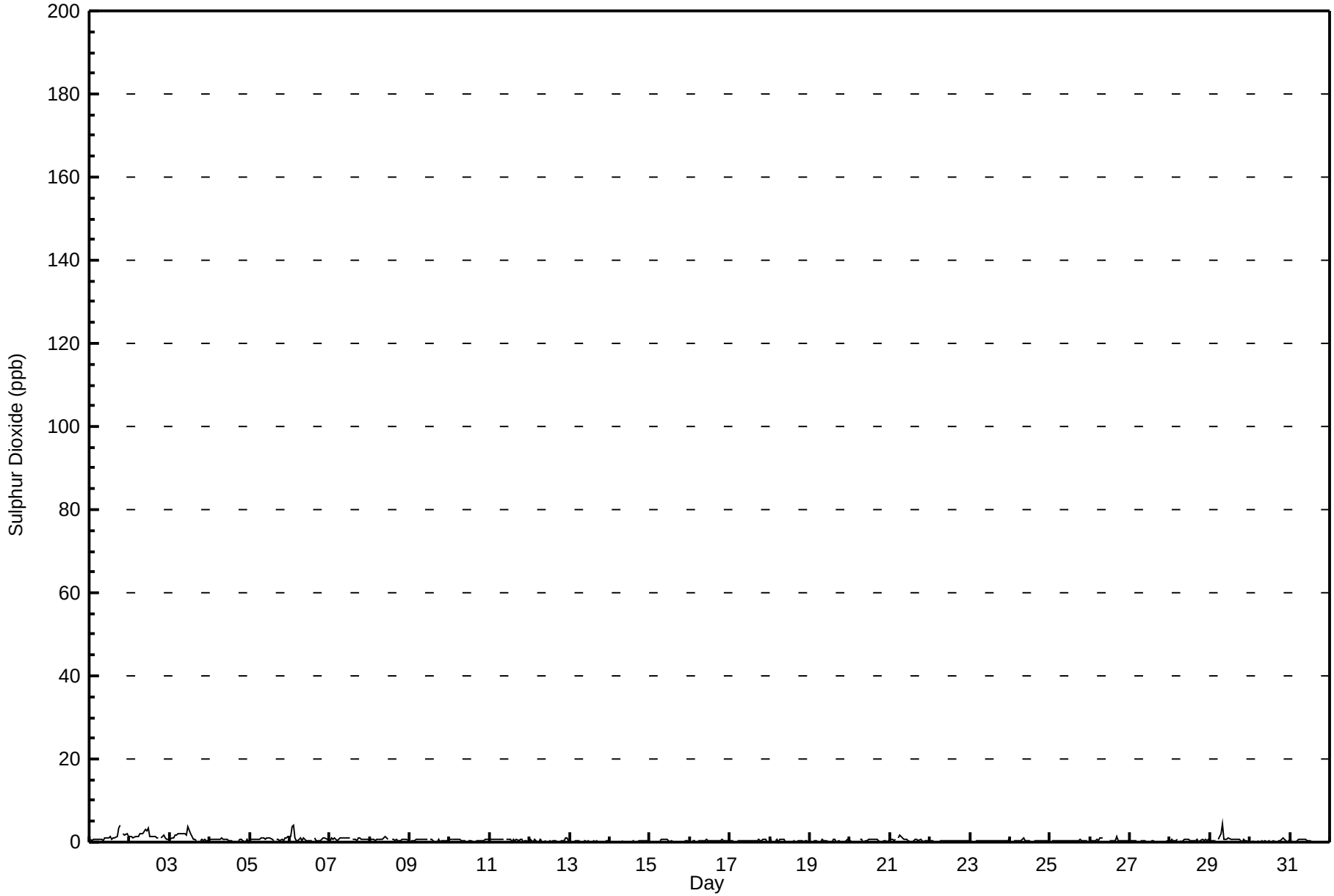
Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.2 Median = 0.5 Q_3 = 0.6 P_{90} = 1.0 P_{99} = 3.3

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

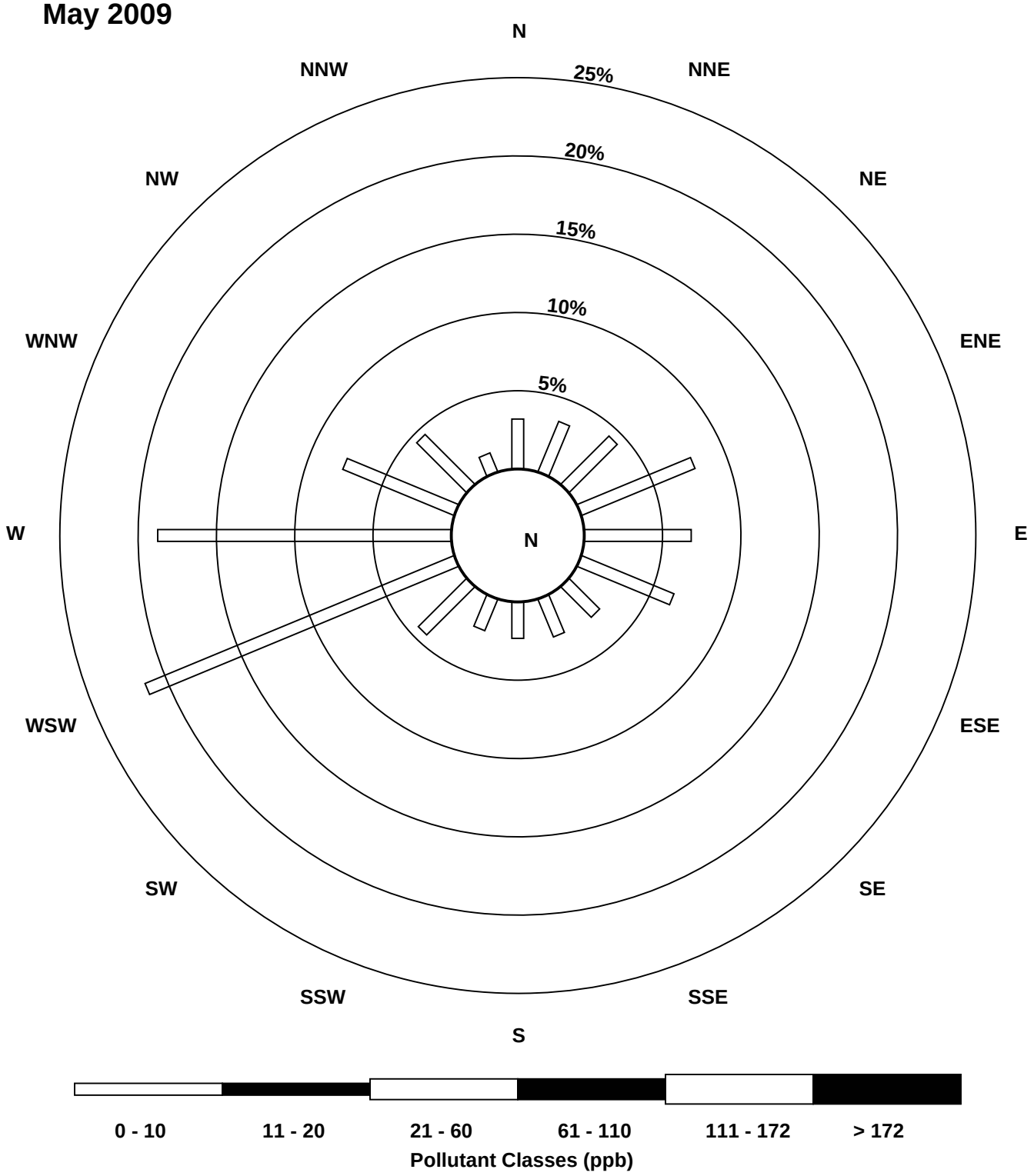
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	4	A	2	2	2	2	1.2	4.0
2-May	1	1	1	1	1	1	2	2	2	3	3	3	1	1	1	1	1	1	A	1	2	1	1	1	1.6	3.4
3-May	1	1	1	2	2	2	2	2	2	2	2	4	2	1	1	1	0	A	0	1	0	1	0	0	1.3	3.8
4-May	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	A	0	1	1	0	0	1	0	0.5	1.1
5-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.8	1.5
6-May	1	4	4	1	0	0	1	0	1	1	0	0	0	0	A	1	0	0	0	1	1	1	1	0	1.0	4.0
7-May	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	1	1	1	1	1	1	1	0.8	1.0
8-May	0	1	1	0	1	1	1	1	1	1	1	1	A	1	1	0	1	0	0	1	1	1	1	0	0.6	1.5
9-May	0	0	0	0	1	1	1	1	1	1	1	A	1	1	0	0	0	1	0	0	0	0	0	1	0.4	0.6
10-May	1	1	1	1	1	1	1	1	1	1	A	1	0	0	0	0	0	0	0	0	0	1	1	1	0.4	0.5
11-May	1	1	1	1	1	1	1	1	1	A	1	1	1	0	1	0	1	0	1	1	0	0	0	0	0.5	0.6
12-May	1	0	0	1	0	0	1	1	A	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.3	1.0
13-May	0	0	0	1	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
14-May	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0.2	0.5
15-May	0	0	0	0	0	A	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
16-May	P	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.3	0.6
17-May	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0.3	0.6
18-May	0	1	A	0	1	0	1	1	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0.3	0.6
19-May	0	A	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0.3	0.6
20-May	0	0	0	0	0	A	1	1	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0.4	0.6
21-May	1	1	0	1	A	1	2	1	1	1	1	0	0	0	0	1	1	1	1	1	0	1	0	0	0.5	1.8
22-May	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.5	0.5
23-May	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.5
24-May	1	A	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.0
25-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	A	0.5	0.6
26-May	1	0	1	1	1	1	1	1	C	C	C	C	0	0	0	0	1	0	0	0	0	0	0	0	0.5	1.3
27-May	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
28-May	0	1	0	0	1	A	0	0	1	1	1	1	0	0	0	0	1	0	0	1	0	1	0	1	0.4	0.6
29-May	0	0	0	0	A	1	2	5	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0	0	0.7	4.6
30-May	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	0	0	0	0.3	1.0
31-May	1	0	A	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
Diurnal Average	0.5	0.6	0.6	0.5	0.5	0.5	0.7	0.8	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.5	0.5	0.5	0.4		
Diurnal Maximum	1.5	3.7	4.0	1.6	1.8	2.1	2.2	4.6	2.0	3.0	2.8	3.8	1.9	1.5	1.5	1.3	1.5	3.5	4.0	1.0	2.0	1.8	2.0	1.5		

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

Hourly Maximums for SO_2 at Henry Pirker
May 2009



Pollutant Rose for SO_2 at Henry Pirker
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Henry Pirker - Total Reduced Sulphur (TRS) - ppb
May 1, 2009 to June 1, 2009

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.0 ppb on May 8 03:00
Maximum Daily Average: 0.4 ppb on May 2

Minimum Value: 0 ppb on May 28 22:00
Maximum Diurnal Average: 0.3 ppb at hour 3
Monthly Average: 0.22 ppb

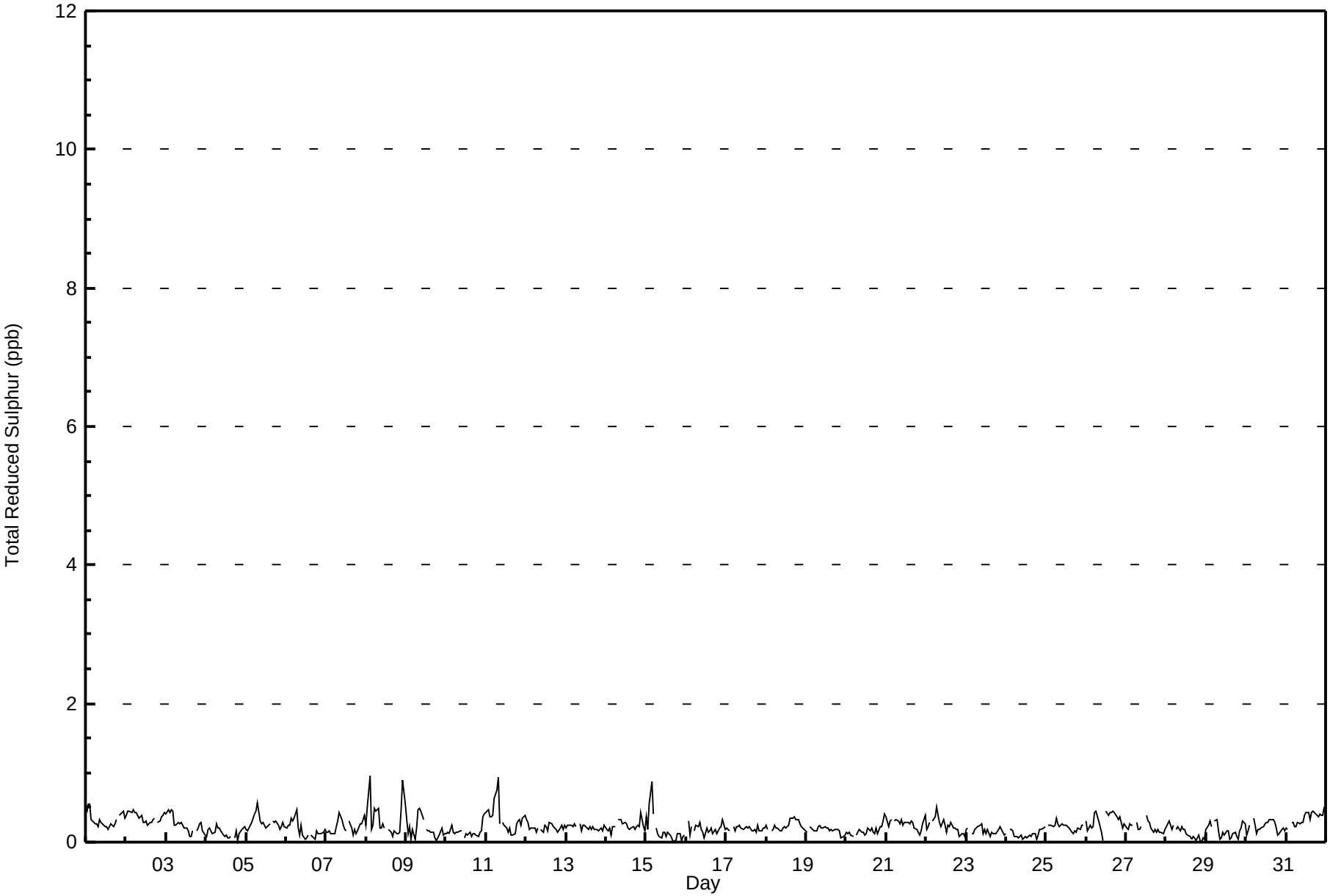
Minimum Daily Average: 0.1 ppb on May 24
Minimum Diurnal Average: 0.2 ppb at hour 19
Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.1$ Median = 0.2 $Q_3 = 0.3$ $P_{90} = 0.4$ $P_{99} = 0.5$

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

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

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

Hourly Averages for TRS at Henry Pirker
May 2009



Peace Airshed Zone Association
Summary of Hourly Maximums

Henry Pirker - Total Reduced Sulphur (TRS) - ppb
May 1, 2009 to June 1, 2009

Maximum Value: 1.9 ppb on May 8 03:00

Maximum Daily Average: 0.7 ppb on May 11

Minimum Value: 0 ppb on May 29 00:00

Maximum Diurnal Average: 0.7 ppb at hour 3

Monthly Average: 0.59 ppb

Minimum Daily Average: 0.5 ppb on May 24

Minimum Diurnal Average: 0.5 ppb at hour 19

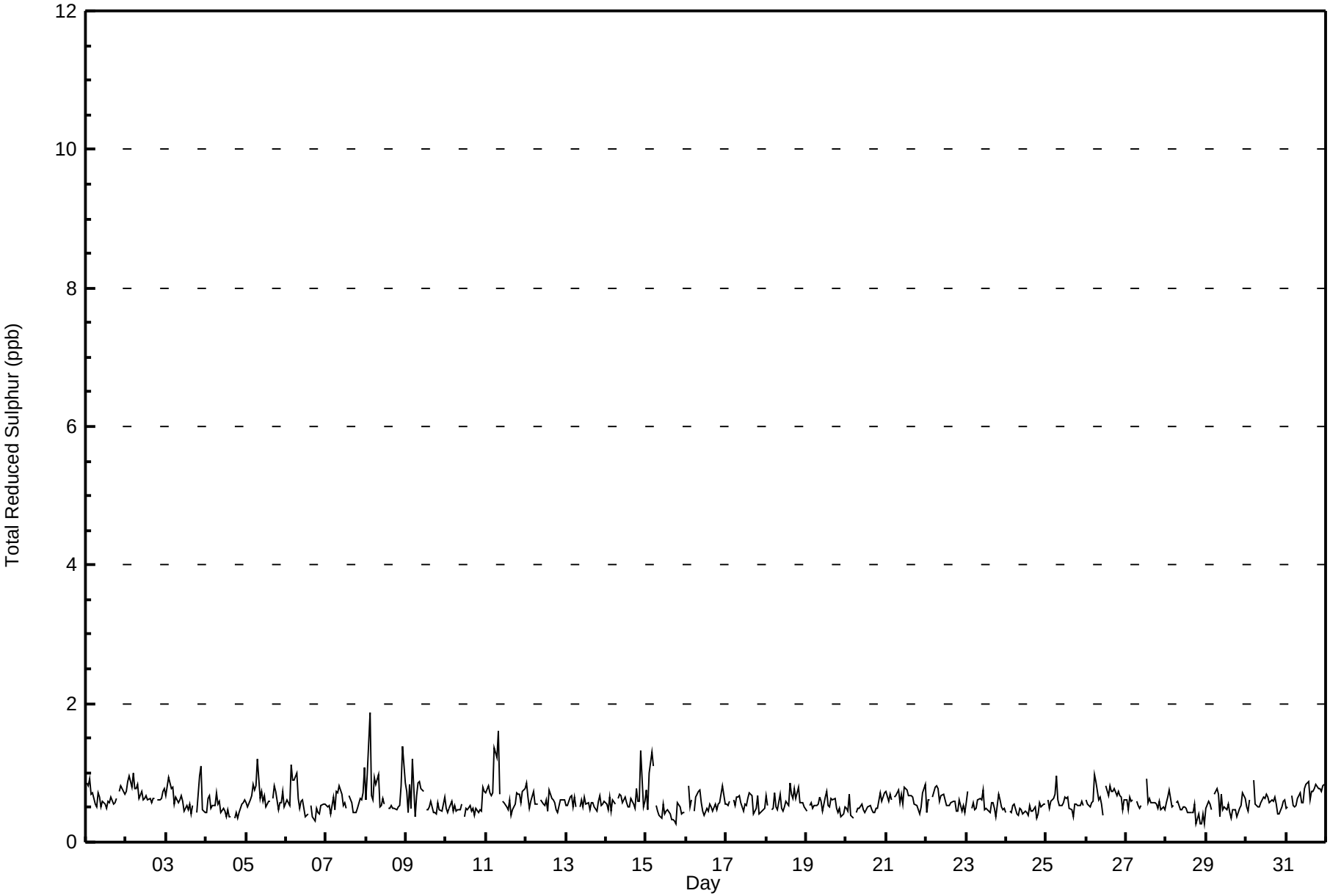
Percentiles: $P_1 = 0.3$ $P_{10} = 0.4$ $Q_1 = 0.5$ Median = 0.6 $Q_3 = 0.7$ $P_{90} = 0.8$ $P_{99} = 1.2$

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

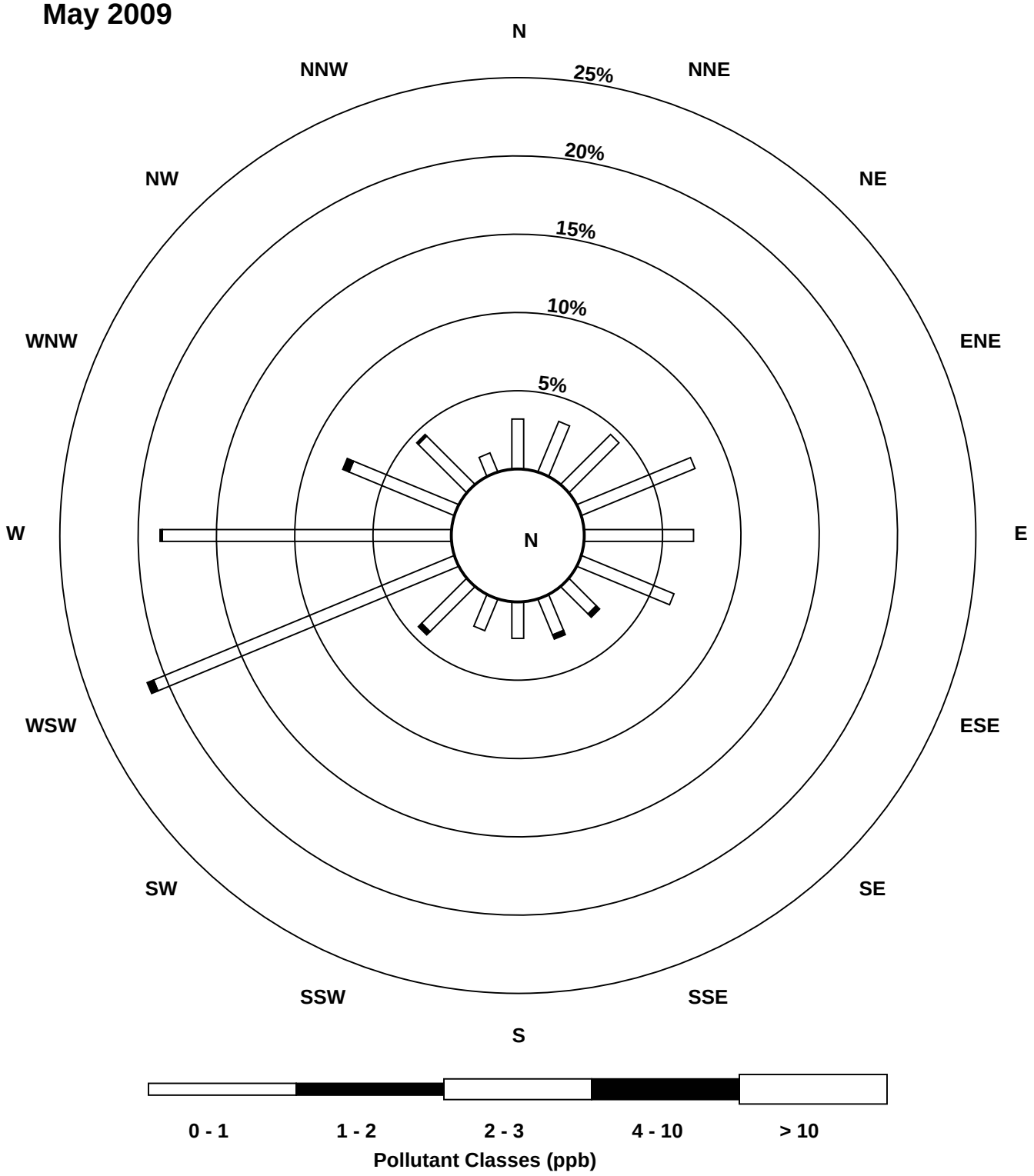
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-May	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	A	1	1	1	1	0.7	0.9
2-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.7	1.0
3-May	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0	1	A	0	1	1	1	0	0	0.6	1.1
4-May	0	1	1	0	1	1	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0	1	1	1	0.5	0.7
5-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	1	1	1	1	0.7	1.2
6-May	1	1	1	1	1	1	1	1	0	1	1	0	0	0	A	1	0	0	0	0	0	1	1	1	0.6	1.1
7-May	1	1	1	0	1	0	1	1	1	1	1	1	0	A	1	1	0	0	0	0	1	1	1	1	0.6	1.1
8-May	1	1	2	1	1	1	1	1	1	1	1	1	A	0	0	1	0	0	0	1	1	1	1	1	0.7	1.9
9-May	1	0	1	0	1	0	1	1	1	1	1	A	0	0	1	1	0	0	0	1	0	0	1	1	0.6	1.2
10-May	0	0	0	1	0	1	0	0	0	1	A	0	0	0	1	0	0	0	0	0	0	0	1	1	0.5	0.8
11-May	1	1	1	1	1	1	1	2	1	A	1	1	1	0	1	0	0	1	1	1	1	1	1	1	0.7	1.6
12-May	1	1	0	1	1	1	1	1	A	1	1	1	1	0	1	1	1	1	0	0	1	1	1	1	0.6	0.9
13-May	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	1	1	1	0	1	1	1	1	1	0.6	0.7
14-May	1	0	1	0	1	1	A	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0.6	1.3
15-May	1	0	1	1	1	A	1	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0.5	1.3
16-May	P	1	1	1	A	0	1	1	1	1	0	0	0	0	1	1	0	1	0	1	1	1	1	1	0.6	0.8
17-May	1	1	1	A	1	1	1	1	1	1	0	1	1	1	1	1	0	0	0	1	0	0	0	0	0.6	0.7
18-May	1	1	A	0	0	1	1	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9
19-May	0	A	1	1	0	1	1	1	1	1	0	1	1	1	1	1	1	1	0	0	0	0	0	1	0.5	0.7
20-May	0	0	1	0	0	A	0	0	0	1	0	0	0	1	1	0	0	0	0	0	1	1	1	1	0.5	0.7
21-May	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	0.6	0.8
22-May	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	1	0	0.6	0.8
23-May	1	1	A	0	1	0	0	1	1	1	1	0	0	0	0	1	1	0	0	1	1	1	0	0	0.5	0.8
24-May	0	A	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	1	1	0.5	0.6
25-May	A	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	A	0.6	1.0
26-May	1	1	1	1	1	1	1	1	1	1	0	C	1	1	1	1	1	1	1	1	1	1	0	1	0.7	1.0
27-May	1	0	1	1	1	A	1	1	0	1	C	C	1	1	1	1	1	1	1	0	1	0	0	0	0.6	0.9
28-May	1	1	1	1	1	A	1	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0.5	0.8
29-May	0	1	1	0	A	1	1	1	0	1	0	1	0	1	0	0	0	0	0	0	0	1	1	1	0.5	0.8
30-May	0	0	1	A	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	0.6	0.9
31-May	0	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
	0.6	0.6	0.7	0.6	0.7	0.6	0.7	0.7	0.6	0.6	0.6	0.5	0.6	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	Diurnal Average	
	0.9	1.0	1.9	1.3	1.2	1.4	1.2	1.6	0.9	0.8	0.8	0.8	0.9	0.9	0.9	0.7	0.7	0.8	0.8	0.8	1.0	1.3	1.4	1.1	Diurnal Maximum	

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

Hourly Maximums for TRS at Henry Pirker
May 2009



Pollutant Rose for TRS at Henry Pirker
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Henry Pirker - Nitrogen Dioxide (NO_2) - ppb
May 1, 2009 to June 1, 2009

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 36.3 ppb on May 1 22:00
Maximum Daily Average: 9.3 ppb on May 1

Minimum Value: 1 ppb on May 9 19:00
Maximum Diurnal Average: 9.5 ppb at hour 7
Monthly Average: 4.65 ppb

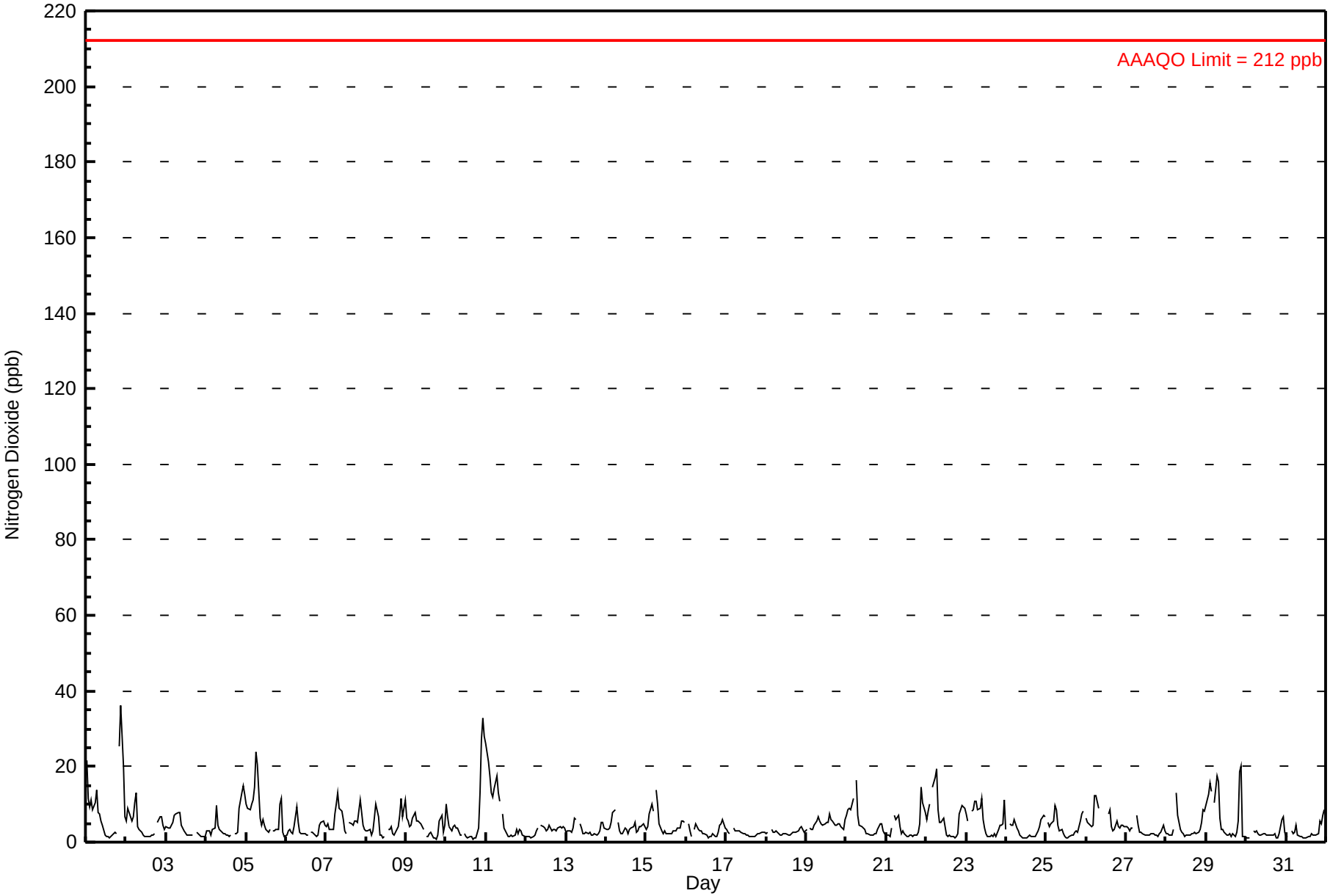
Minimum Daily Average: 2.4 ppb on May 17
Minimum Diurnal Average: 2.1 ppb at hour 13
Percentiles: P_1 = 1.2 P_{10} = 1.6 Q_1 = 2.1 Median = 3.3 Q_3 = 5.5 P_{90} = 9.5 P_{99} = 22.7

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	36
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-May	22	11	9	11	9	11	14	8	7	6	4	2	1	1	1	2	2	3	2	A	25	36	20	7	9.3	36.3
2-May	6	9	8	5	7	10	13	4	3	3	2	1	1	1	1	2	2	2	A	5	7	7	4	3	4.7	13.2
3-May	4	4	4	5	5	7	8	8	8	5	4	3	2	2	2	2	2	A	2	2	2	2	1	1	3.6	7.9
4-May	3	3	3	2	3	4	10	5	3	3	2	2	2	2	2	2	A	2	2	3	9	13	15	13	4.6	14.8
5-May	10	9	8	10	11	14	24	20	6	5	6	5	3	3	3	A	3	3	4	3	10	11	3	1	7.7	23.7
6-May	2	3	4	2	2	4	9	5	3	2	2	2	2	2	A	3	3	2	2	2	4	5	6	4	3.3	9.4
7-May	4	5	3	3	3	8	10	13	9	8	6	3	2	A	5	5	4	5	6	5	11	8	5	3	5.9	12.9
8-May	3	3	3	2	3	6	10	7	2	2	1	2	A	3	3	4	2	2	3	4	7	11	7	11	4.5	11.5
9-May	6	5	4	5	6	8	6	6	5	5	3	A	2	1	2	3	1	1	1	2	6	7	3	5	4.0	7.8
10-May	10	7	4	3	4	5	4	4	2	2	A	2	2	1	1	1	1	1	1	4	13	27	33	28	6.9	32.8
11-May	26	21	18	13	12	14	18	13	11	A	8	4	2	1	1	2	2	2	4	2	3	3	2	1	8.0	26.0
12-May	1	1	2	1	1	2	3	4	A	5	4	4	3	3	4	3	3	3	3	4	4	4	4	4	3.1	4.6
13-May	3	3	3	3	4	6	6	A	5	4	2	2	3	2	2	2	2	2	2	2	3	5	5	4	3.2	6.4
14-May	3	3	4	5	8	9	A	5	3	2	2	4	4	2	3	4	4	5	3	3	4	4	5	4	4.0	8.6
15-May	3	4	8	10	8	A	14	10	5	3	2	3	2	2	2	2	3	3	3	4	4	5	5	5	4.8	13.6
16-May	P	5	3	1	A	3	5	3	3	3	2	2	2	1	2	2	2	2	2	3	5	5	6	4	3.0	6.1
17-May	3	2	2	A	4	3	3	3	3	3	2	2	2	2	2	2	1	1	2	2	2	3	2	2	2.4	3.8
18-May	2	3	A	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	3	4	4	3	3	2.6	4.2
19-May	3	A	4	3	3	5	6	7	6	5	5	5	5	5	7	6	6	4	5	5	5	4	3	6	4.8	7.4
20-May	7	8	9	9	12	A	17	7	5	4	4	3	2	2	2	2	2	2	2	3	5	5	3	2	5.1	16.6
21-May	2	2	2	4	A	7	6	7	4	2	3	2	2	1	2	2	2	2	2	3	5	14	10	8	4.0	14.5
22-May	6	8	10	A	14	17	19	9	5	5	6	4	2	1	2	2	1	1	2	2	8	10	9	9	6.7	19.3
23-May	7	6	A	8	9	11	11	8	9	11	6	4	2	1	2	2	2	2	2	3	4	4	5	11	5.7	11.5
24-May	3	A	5	4	4	6	4	3	2	1	1	1	1	1	2	1	1	2	2	3	4	6	7	7	3.2	7.2
25-May	A	5	4	5	6	10	9	4	3	3	2	2	1	1	1	2	2	3	3	3	5	7	8	A	4.0	9.5
26-May	6	5	5	4	4	12	12	9	C	C	C	C	A	8	8	4	3	3	6	4	4	5	4	4	5.9	12.3
27-May	4	4	3	4	4	A	7	5	3	2	2	2	2	2	2	2	2	2	2	2	2	3	4	3	2.9	7.2
28-May	2	2	2	2	3	A	13	7	3	2	2	2	2	2	2	2	2	2	2	3	3	5	8	8	3.6	12.9
29-May	10	13	16	13	A	11	17	16	6	3	3	3	2	2	2	2	2	2	3	6	19	20	2	2	7.5	20.0
30-May	1	1	1	A	3	3	3	2	2	2	2	2	2	2	2	2	2	2	1	1	2	6	7	3	2.4	6.7
31-May	2	2	A	3	2	3	5	2	2	2	1	1	1	1	2	2	2	2	2	2	5	5	7	9	2.7	8.5
	5.7	5.5	5.3	5.1	5.7	7.4	9.5	6.9	4.5	3.6	3.2	2.6	2.1	2.1	2.5	2.4	2.3	2.4	2.5	3.0	6.3	8.2	6.7	5.9	Diurnal Average	
	26.0	21.3	17.6	13.3	14.4	17.3	23.7	20.4	10.7	11.5	7.6	4.8	5.1	7.5	8.5	5.8	5.6	5.5	5.6	5.7	25.5	36.3	32.8	28.0	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 Henry Pirker
May 2009



Peace Airshed Zone Association
Summary of Hourly Maximums

Henry Pirker - Nitrogen Dioxide (NO_2) - ppb
May 1, 2009 to June 1, 2009

Maximum Value: 44.7 ppb on May 1 22:00

Maximum Daily Average: 14.6 ppb on May 1

Minimum Value: 1 ppb on May 30 03:00

Minimum Daily Average: 4.3 ppb on May 30

Maximum Diurnal Average: 14.4 ppb at hour 7

Minimum Diurnal Average: 4.3 ppb at hour 14

Monthly Average: 7.82 ppb

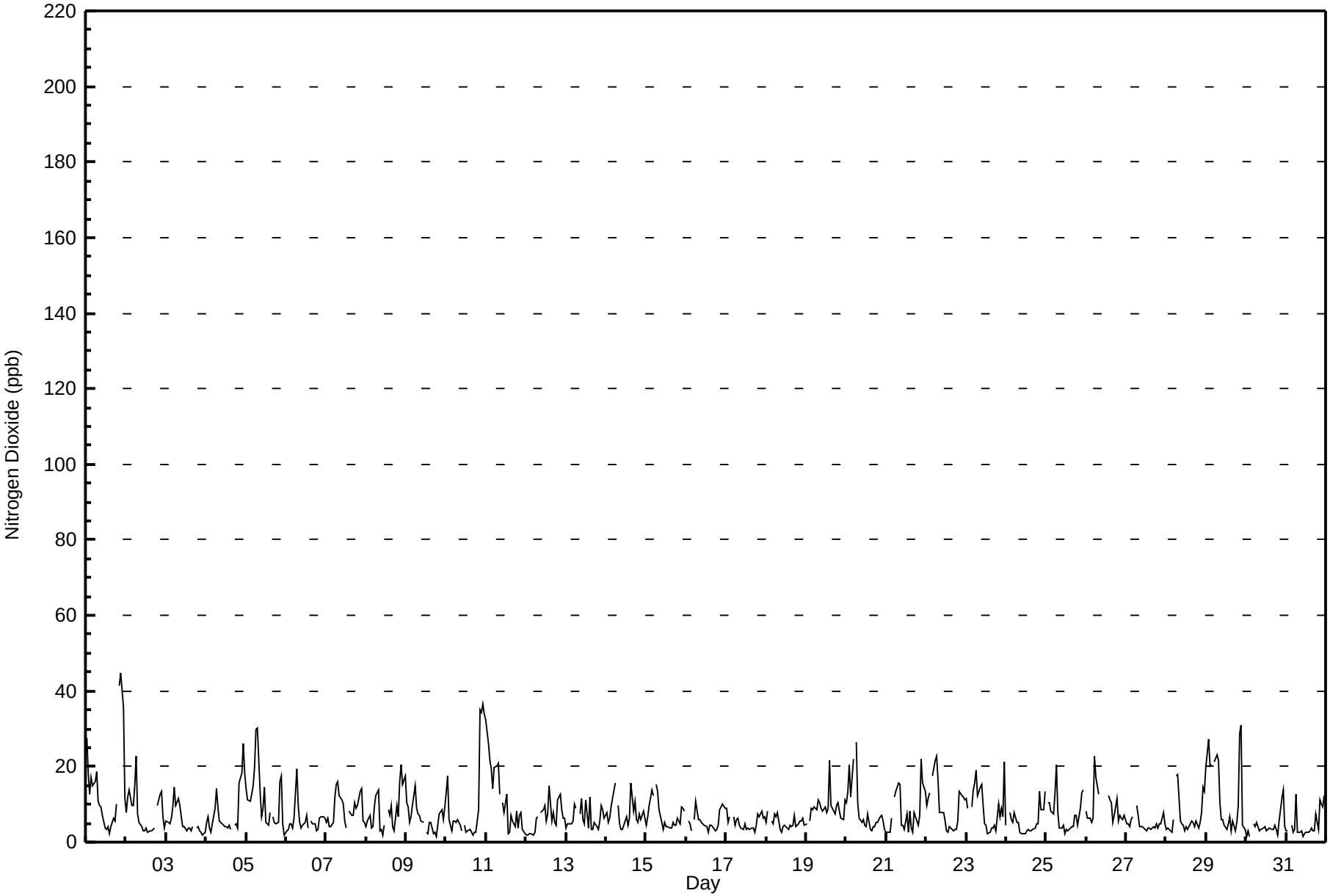
Percentiles: P_1 = 1.8 P_{10} = 2.9 Q_1 = 3.9 Median = 5.7 Q_3 = 9.7 P_{90} = 15.0 P_{99} = 33.6

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

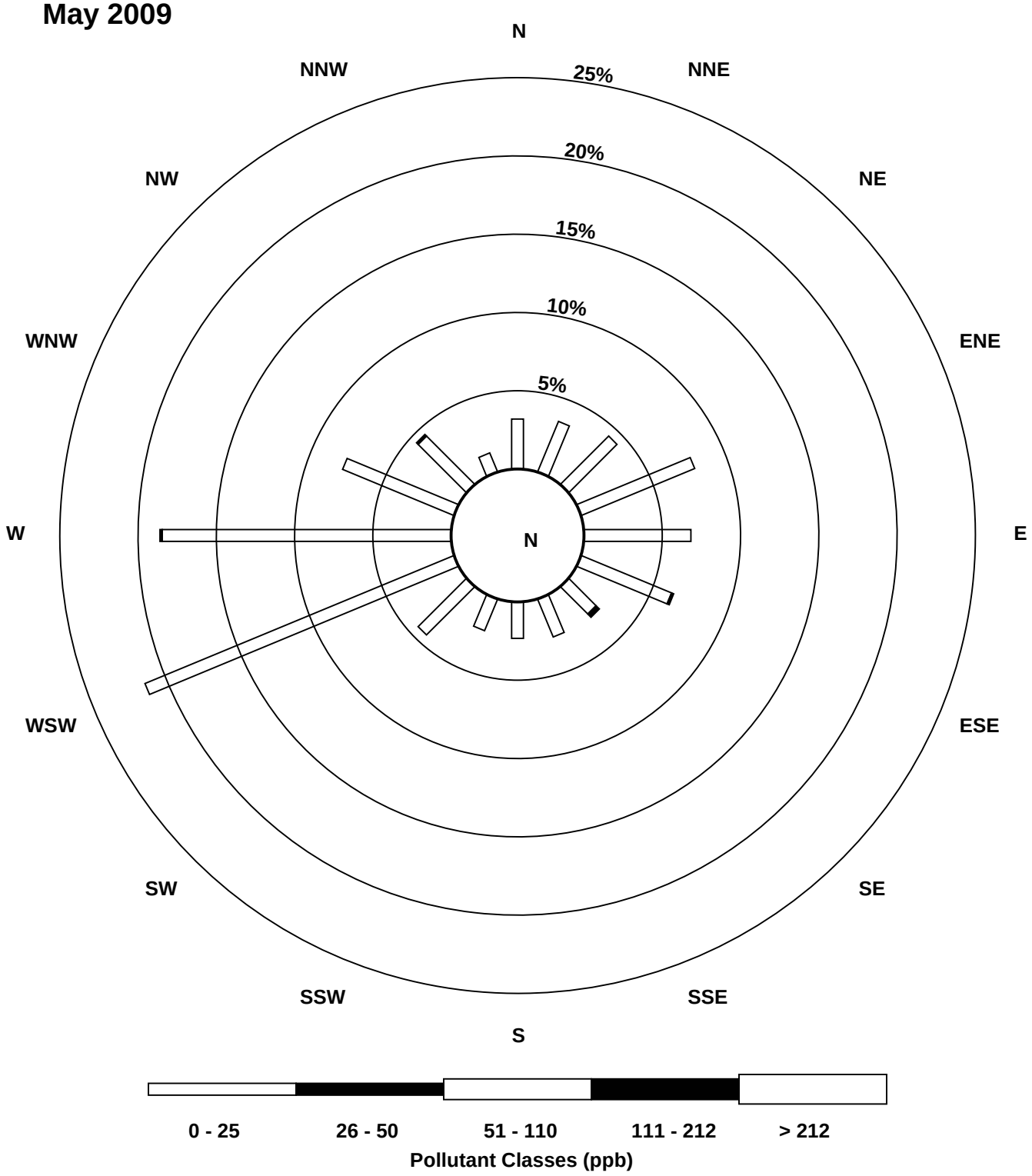
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-May	28	18	13	17	15	16	19	11	10	9	7	4	3	4	2	4	6	6	10	A	42	45	36	11	14.6	44.7
2-May	8	12	14	10	10	15	23	7	5	4	3	3	4	3	3	3	3	4	A	10	13	13	7	4	7.7	22.6
3-May	6	5	5	6	9	14	10	12	10	7	4	4	3	4	4	3	4	A	4	4	3	3	2	3	5.5	14.5
4-May	5	7	4	3	5	9	14	9	6	5	4	4	4	4	4	3	A	4	5	4	16	18	26	18	7.9	26.2
5-May	14	11	11	13	15	20	30	30	13	7	9	15	5	4	8	A	7	5	5	5	16	18	5	2	11.6	30.1
6-May	3	3	5	5	4	6	19	10	5	4	5	5	7	4	A	6	5	5	3	3	6	7	7	6	5.7	19.3
7-May	5	6	4	4	5	12	15	16	12	11	10	6	4	A	8	7	7	11	9	10	14	14	6	5	8.7	16.1
8-May	4	5	7	4	4	9	12	14	3	3	2	4	A	8	7	10	4	3	10	7	16	20	15	17	8.3	20.4
9-May	10	10	5	7	10	15	9	8	7	6	5	A	3	2	5	5	2	2	2	5	7	9	6	9	6.4	14.8
10-May	13	18	6	3	6	6	5	6	4	3	A	5	3	3	3	3	2	3	3	9	35	34	36	34	10.5	36.4
11-May	32	26	22	19	14	20	20	21	13	A	10	8	13	2	3	7	6	4	8	4	7	8	3	2	11.9	32.4
12-May	2	2	2	2	2	3	6	7	A	8	9	10	5	7	15	6	8	5	4	11	13	9	6	6	6.4	15.0
13-May	4	5	5	5	6	10	9	A	7	12	6	5	11	4	12	3	3	5	4	3	5	10	9	6	6.5	11.9
14-May	8	5	6	9	12	16	A	10	5	3	3	5	7	4	6	16	8	11	6	5	7	6	8	6	7.6	15.7
15-May	4	7	10	14	12	A	15	13	9	5	3	5	4	4	4	4	5	4	4	6	5	9	9	8	7.2	15.4
16-May	P	5	5	3	A	6	11	6	6	5	5	4	4	2	4	4	4	3	3	4	9	9	10	9	5.6	10.9
17-May	9	5	7	A	7	4	6	6	4	4	3	5	3	4	3	4	4	2	5	7	7	8	6	7	5.3	8.9
18-May	5	8	A	5	5	8	7	8	3	2	4	4	4	3	5	4	5	7	4	5	6	6	6	4	5.2	8.2
19-May	5	A	5	9	9	9	8	11	10	9	8	9	8	9	22	10	9	7	10	10	8	6	6	11	9.1	21.8
20-May	11	14	21	12	22	A	26	10	6	5	6	4	4	8	3	3	4	4	5	5	7	7	5	3	8.5	26.5
21-May	2	2	2	6	A	12	13	16	15	4	4	3	7	3	8	4	2	8	6	4	7	22	16	13	8.0	22.0
22-May	10	11	13	A	17	21	23	16	8	8	8	6	3	2	4	4	3	3	3	6	13	12	12	11	9.5	22.8
23-May	12	9	A	9	14	16	19	12	14	15	10	5	4	2	3	4	4	4	3	10	7	9	7	21	9.3	21.3
24-May	4	A	8	6	5	8	5	5	2	2	2	2	3	3	3	3	4	4	5	5	14	9	8	13	5.4	13.6
25-May	A	10	10	8	8	13	20	8	4	4	4	2	3	3	3	4	4	7	7	4	9	13	14	A	7.5	20.3
26-May	8	6	6	5	6	23	17	13	C	C	C	C	A	12	11	10	5	7	11	6	7	7	6	7	9.2	22.7
27-May	5	5	4	6	7	A	10	7	4	4	4	3	3	4	4	3	4	4	5	4	5	5	8	5	4.8	9.5
28-May	3	4	3	2	6	A	17	18	6	5	4	3	4	3	5	6	5	4	5	4	5	8	14	13	6.5	17.9
29-May	20	27	20	20	A	21	23	21	10	6	6	4	3	5	7	3	6	3	5	9	29	31	4	3	12.5	30.9
30-May	1	3	1	A	5	4	5	4	3	3	4	4	3	3	4	3	3	5	3	2	5	11	14	4	4.3	13.9
31-May	3	3	A	4	2	3	13	2	2	3	1	2	2	3	3	4	3	3	8	3	11	10	9	12	4.9	12.6
	8.5	8.8	8.0	7.8	8.6	11.8	14.4	11.3	7.2	5.8	5.4	5.1	4.7	4.3	5.9	5.1	4.6	4.9	5.5	5.9	11.4	12.8	10.6	9.3	Diurnal Average	
	32.4	27.3	21.6	20.3	22.1	22.7	29.8	30.1	15.3	15.5	10.5	14.7	12.9	12.4	21.8	15.7	8.8	10.9	11.5	11.4	41.5	44.7	36.4	33.9	Diurnal Maximum	

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

Hourly Maximums for NO_2 at Henry Pirker
May 2009



Pollutant Rose for NO_2 at Henry Pirker
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Henry Pirker - Nitrogen Oxide (NO) - ppb
May 1, 2009 to June 1, 2009

Maximum Value: 27.0 ppb on May 11 07:00

Maximum Daily Average: 6.4 ppb on May 11

Minimum Value: 0 ppb on May 3 23:00

Minimum Daily Average: 0.3 ppb on May 16

Maximum Diurnal Average: 4.1 ppb at hour 7

Minimum Diurnal Average: 0.4 ppb at hour 20

Monthly Average: 1.11 ppb

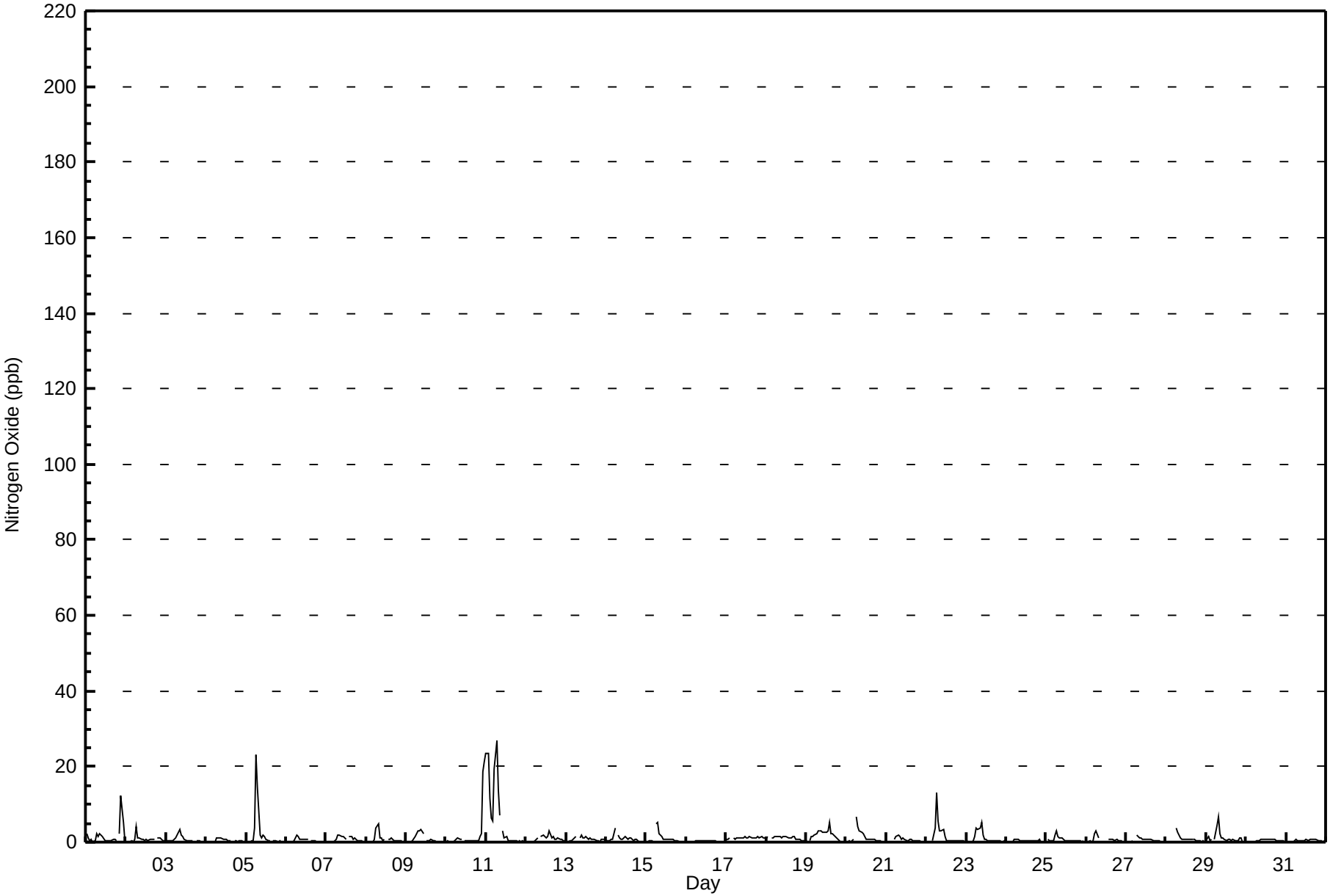
Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.2$ Median = 0.5 $Q_3 = 1.0$ $P_{90} = 2.0$ $P_{99} = 17.9$

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	36
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-May	2	1	0	1	0	1	2	2	2	2	2	1	0	0	0	0	1	1	1	A	2	12	5	0	1.7	12.1
2-May	0	0	0	0	0	1	4	1	1	1	1	1	1	0	1	1	1	1	A	1	1	1	0	0	0.7	4.0
3-May	0	0	0	0	0	1	1	2	3	2	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0.7	3.5
4-May	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	A	0	0	0	0	0	0	0	0.4	1.2
5-May	0	0	0	0	0	4	23	15	2	1	2	1	1	1	1	A	0	0	0	0	0	0	0	0	2.3	23.0
6-May	0	0	0	0	0	0	2	1	1	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0.4	1.7
7-May	0	0	0	0	0	0	1	2	2	2	2	1	1	A	1	2	1	1	1	0	0	0	0	0	0.7	1.9
8-May	0	0	0	0	0	1	4	5	1	1	1	1	A	1	1	1	1	0	1	0	0	0	0	0	0.8	4.7
9-May	0	0	0	0	0	1	2	3	3	3	2	A	0	0	1	1	0	0	0	0	0	0	0	0	0.8	3.4
10-May	0	0	0	0	0	0	1	1	1	1	A	1	0	0	0	0	0	0	0	0	1	2	18	21	2.2	21.1
11-May	23	24	12	6	6	20	27	14	7	A	3	1	2	0	0	0	0	0	0	0	0	0	0	0	6.4	27.0
12-May	0	0	0	0	0	0	1	1	A	1	2	2	1	2	3	1	1	1	1	1	1	1	0	0	0.9	3.0
13-May	0	0	0	0	1	1	1	A	1	2	1	1	1	1	1	1	1	1	0	0	0	1	1	1	0.8	1.9
14-May	0	0	0	1	1	4	A	2	1	1	1	2	1	1	1	1	1	1	1	1	0	0	0	0	0.8	3.6
15-May	0	0	0	0	0	A	5	5	2	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.9	5.1
16-May	P	0	0	0	A	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
17-May	1	1	1	A	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1.2	1.5
18-May	1	2	A	1	1	2	1	2	1	1	1	1	2	1	1	1	1	2	1	1	1	1	0	0	1.2	1.7
19-May	1	A	1	1	1	2	2	3	3	3	3	3	3	3	5	2	2	1	1	1	0	0	0	0	1.8	5.1
20-May	0	0	0	0	1	A	7	4	3	3	2	2	1	1	1	1	1	1	1	0	0	0	0	0	1.2	6.8
21-May	0	0	0	0	A	1	1	2	1	1	1	1	1	0	1	1	0	1	0	0	0	0	0	0	0.6	1.9
22-May	0	0	0	A	0	4	13	6	3	3	3	1	1	0	0	0	0	0	0	0	0	0	0	0	1.6	13.2
23-May	0	0	A	0	0	1	4	3	4	5	2	1	1	0	0	0	0	0	0	0	0	0	0	0	1.1	5.3
24-May	0	A	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0.3	0.9
25-May	A	1	0	0	0	2	3	1	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	A	0.7	3.1
26-May	0	0	0	0	0	2	3	1	C	C	C	C	A	1	1	1	1	0	1	0	0	0	0	0	0.6	2.8
27-May	0	0	0	0	0	A	2	2	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.5	1.8
28-May	0	0	0	0	0	A	4	3	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0.7	3.9
29-May	0	1	1	1	A	1	4	7	2	1	1	1	1	1	1	0	1	0	0	0	1	1	0	0	1.1	6.6
30-May	0	0	0	A	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.4	0.8
31-May	0	0	A	0	0	0	1	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0.4	0.9
	1.0	1.1	0.6	0.5	0.5	1.9	4.1	3.1	1.8	1.5	1.3	1.0	0.8	0.7	0.9	0.7	0.6	0.6	0.5	0.4	0.5	0.7	0.9	0.9	Diurnal Average	
	23.4	23.6	11.6	6.3	5.6	19.5	27.0	14.7	7.2	5.3	3.2	2.8	2.7	2.9	5.1	2.4	2.1	1.6	1.2	1.4	2.3	12.1	18.5	21.1	Diurnal Maximum	

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

Hourly Averages for NO at Henry Pirker
May 2009



Peace Airshed Zone Association
Summary of Hourly Maximums

Henry Pirker - Nitrogen Oxide (NO) - ppb
May 1, 2009 to June 1, 2009

Maximum Value: 69.8 ppb on May 11 06:00

Maximum Daily Average: 15.5 ppb on May 11

Minimum Value: 0 ppb on May 28 03:00

Minimum Daily Average: 0.8 ppb on May 16

Maximum Diurnal Average: 10.4 ppb at hour 7

Minimum Diurnal Average: 1.8 ppb at hour 20

Monthly Average: 3.56 ppb

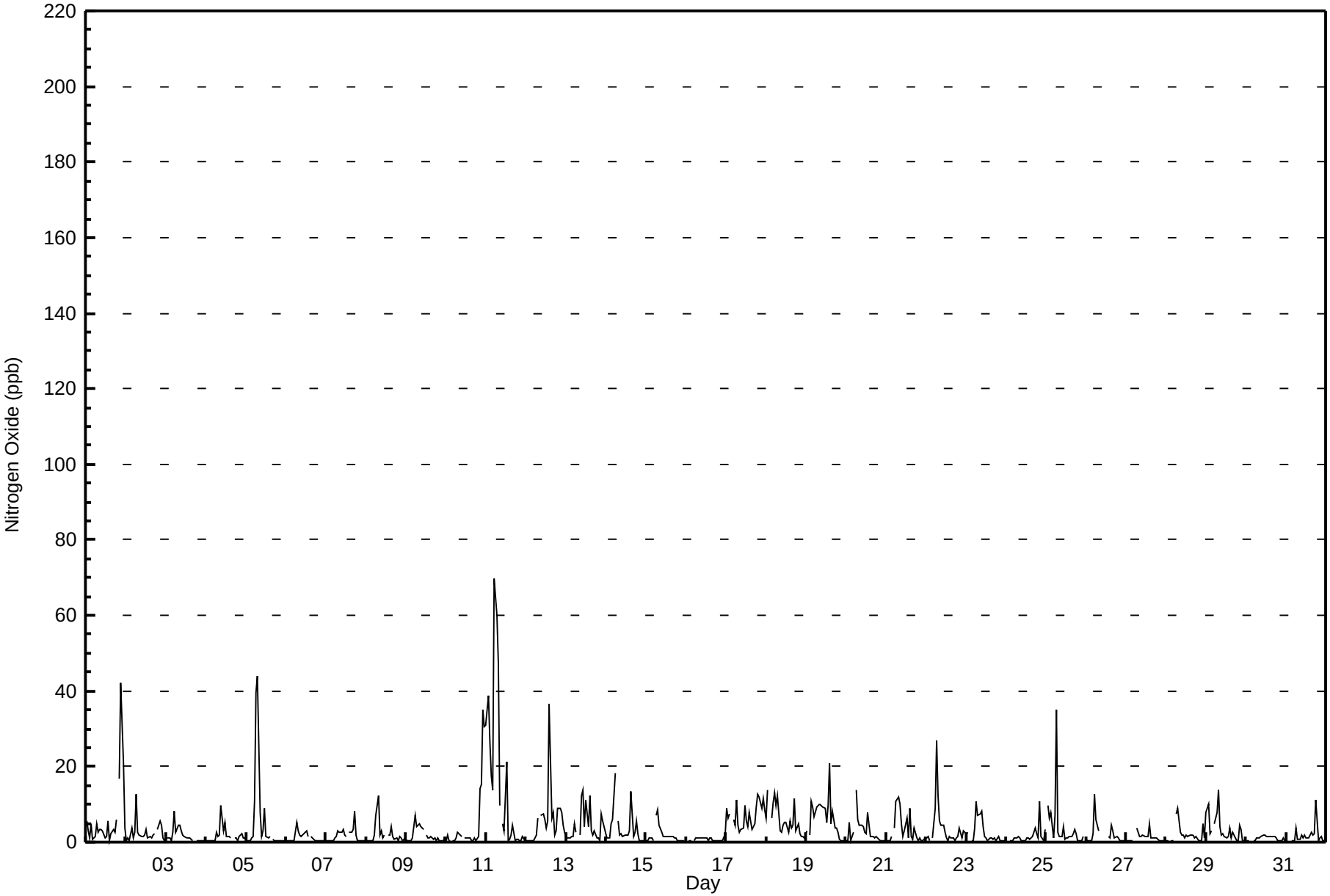
Percentiles: $P_1 = 0.3$ $P_{10} = 0.5$ $Q_1 = 0.5$ Median = 1.5 $Q_3 = 3.8$ $P_{90} = 8.9$ $P_{99} = 38.4$

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	36
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-May	6	3	1	5	1	1	5	2	3	3	3	1	1	5	1	2	4	2	6	A	17	42	21	4	6.1	42.1
2-May	0	1	0	4	1	2	13	2	2	1	1	2	3	1	2	1	2	2	A	3	6	5	1	1	2.5	12.5
3-May	1	1	1	1	2	8	2	4	4	3	2	1	1	1	1	1	1	A	1	1	1	1	0	1	1.7	8.2
4-May	1	1	0	1	0	1	2	2	2	10	3	5	1	1	1	1	A	1	1	1	1	2	1	1	1.8	9.8
5-May	1	1	1	1	1	11	40	44	8	1	3	9	2	1	1	A	1	1	1	0	1	1	1	0	5.6	44.2
6-May	0	0	0	0	1	1	5	3	2	1	2	2	3	1	A	1	1	1	1	1	1	0	0	0	1.3	5.2
7-May	0	0	0	0	0	1	2	3	3	2	3	2	1	A	2	2	3	8	2	1	1	1	1	1	1.8	8.2
8-May	1	1	0	1	1	2	7	12	2	3	1	2	A	2	2	4	1	1	1	1	1	1	0	1	2.1	12.2
9-May	0	1	1	0	1	7	4	4	5	4	3	A	2	1	1	1	1	1	1	1	1	1	1	1	1.8	6.9
10-May	1	2	1	0	0	1	1	2	2	1	A	1	1	1	1	1	1	1	1	1	14	15	35	31	4.9	34.9
11-May	31	39	26	17	14	70	60	47	10	A	5	3	21	1	1	2	5	1	1	1	0	1	1	1	15.5	69.8
12-May	1	0	0	0	1	1	2	6	A	7	7	6	4	6	36	6	8	2	3	9	9	8	4	2	5.6	36.4
13-May	1	1	1	1	1	5	2	A	2	12	14	4	11	4	12	3	2	3	1	1	1	8	6	4	4.4	14.0
14-May	1	1	1	5	6	18	A	5	2	2	1	2	2	2	3	13	1	2	6	2	0	1	0	0	3.5	18.1
15-May	0	0	1	1	0	A	7	8	5	2	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1.8	8.4
16-May	P	0	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	2	0.8	2.4
17-May	9	6	7	A	6	5	11	4	2	3	4	10	6	4	8	3	4	5	9	13	12	9	12	9	7.0	12.9
18-May	6	14	A	6	11	13	10	12	3	3	4	5	5	2	5	4	4	12	3	5	2	1	1	1	5.8	13.8
19-May	3	A	2	11	9	7	9	10	10	10	9	9	5	10	21	5	8	4	4	2	1	0	0	0	6.5	21.1
20-May	0	1	5	1	3	A	14	6	4	4	4	2	2	8	1	1	1	1	1	1	1	1	0	0	2.8	13.8
21-May	1	0	1	1	A	4	11	12	10	5	1	3	6	1	9	1	1	4	1	1	1	1	0	1	3.3	11.8
22-May	1	1	0	A	1	9	27	12	6	4	4	2	1	1	2	1	1	1	1	1	4	1	3	2	3.8	26.8
23-May	2	2	A	1	1	4	11	7	7	8	4	1	1	1	1	1	1	1	1	1	1	0	0	1	2.5	10.9
24-May	0	A	0	0	1	1	1	1	1	1	0	1	1	1	1	1	1	4	2	1	11	1	0	3	1.6	10.8
25-May	A	10	6	8	1	7	35	2	1	1	4	1	1	1	1	1	2	3	2	1	1	1	2	A	4.2	35.0
26-May	1	1	1	1	2	13	6	3	C	C	C	C	A	1	1	5	3	1	1	1	0	0	0	0	2.2	12.6
27-May	0	0	0	0	0	A	4	2	1	1	2	1	1	1	5	1	1	1	1	1	0	0	1	0	1.3	4.9
28-May	0	0	0	0	0	A	7	9	2	2	2	1	2	1	2	2	2	1	1	1	1	0	5	1	1.9	8.9
29-May	8	10	2	3	A	5	8	14	4	2	2	1	1	1	4	1	3	1	1	1	5	3	1	0	3.5	13.9
30-May	0	1	0	A	0	0	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	0	1	0	1.0	2.0
31-May	0	0	A	0	1	1	4	1	1	2	1	2	1	1	2	2	2	2	11	1	1	1	1	1	1.6	11.1
	2.7	3.4	2.2	2.5	2.4	7.3	10.4	8.2	3.7	3.6	3.3	3.0	3.2	2.2	4.4	2.5	2.2	2.3	2.2	1.8	3.0	3.4	3.3	2.4	Diurnal Average	
	31.0	38.8	26.3	17.4	13.9	69.8	59.9	47.3	10.2	12.4	14.0	9.8	21.4	9.7	36.4	13.2	8.0	11.6	11.1	12.9	16.8	42.1	34.9	30.7	Diurnal Maximum	

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

Hourly Maximums for NO at Henry Pirker
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Henry Pirker - Oxides of Nitrogen (NO_X) - ppb
May 1, 2009 to June 1, 2009

Maximum Value: 51.1 ppb on May 10 23:00

Maximum Daily Average: 14.1 ppb on May 11

Minimum Value: 1 ppb on May 30 03:00

Minimum Daily Average: 2.6 ppb on May 30

Maximum Diurnal Average: 13.4 ppb at hour 7

Minimum Diurnal Average: 2.6 ppb at hour 14

Monthly Average: 5.59 ppb

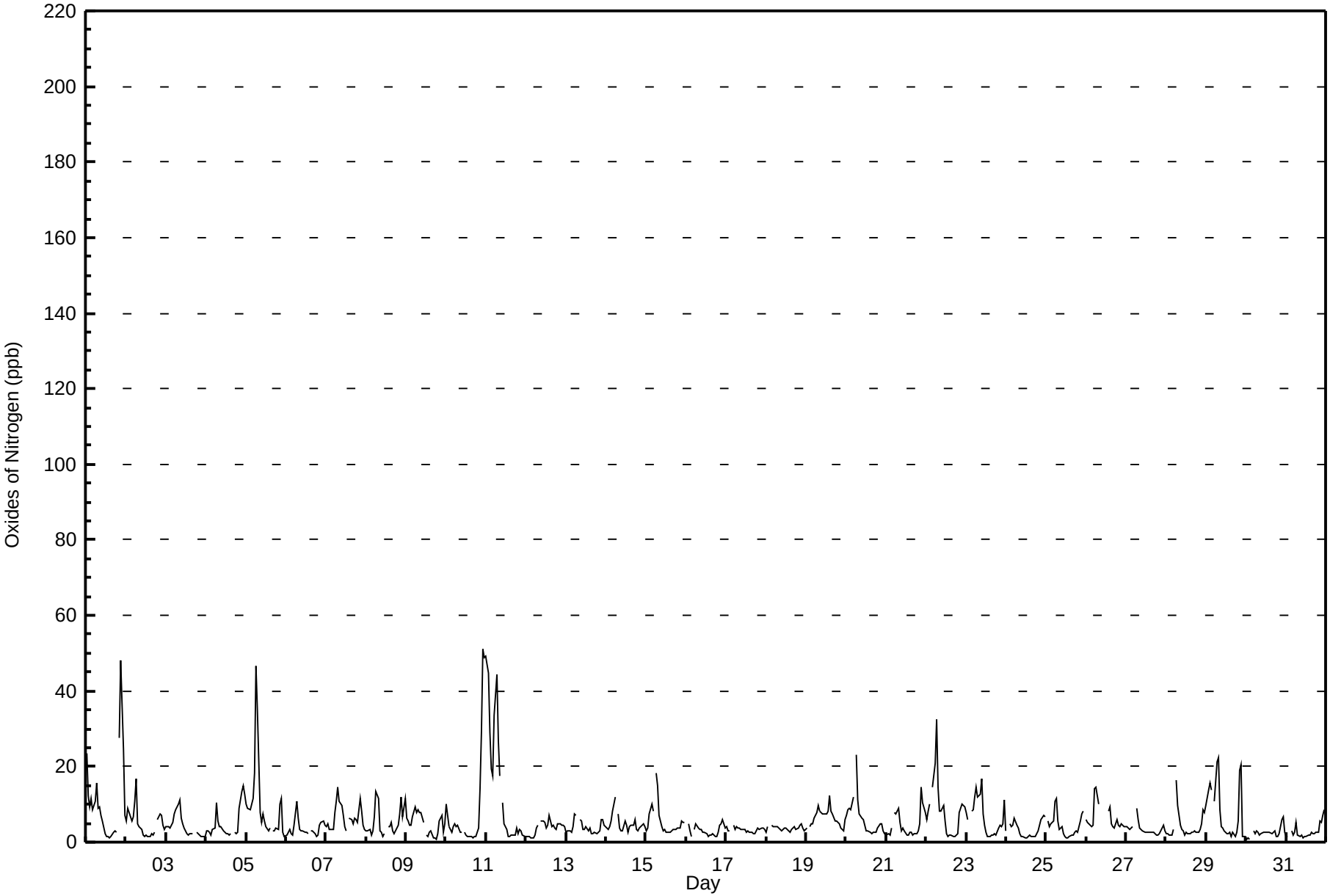
Percentiles: P_1 = 1.2 P_{10} = 1.7 Q_1 = 2.5 Median = 3.8 Q_3 = 6.3 P_{90} = 10.8 P_{99} = 44.3

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	36
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-May	24	12	9	12	9	11	16	9	9	7	6	2	1	2	1	2	2	3	2	A	27	48	25	7	10.7	48.2
2-May	6	9	8	6	7	11	17	5	4	3	2	2	2	1	2	2	2	3	A	6	8	7	4	3	5.1	16.9
3-May	4	4	4	5	5	8	8	10	11	6	5	4	2	2	2	2	2	A	3	2	2	2	1	1	4.1	11.1
4-May	3	3	3	2	3	4	11	5	4	4	3	3	2	2	2	2	A	3	2	3	9	13	15	13	5.0	14.9
5-May	10	9	8	10	11	18	46	35	8	5	7	6	4	3	4	A	3	3	4	3	10	11	3	1	9.7	46.5
6-May	2	3	3	2	2	4	11	6	3	3	3	3	2	2	A	3	3	2	2	2	4	5	6	4	3.5	10.9
7-May	4	5	3	3	3	8	11	14	11	10	7	4	3	A	6	6	5	6	6	5	11	8	5	3	6.5	14.5
8-May	3	3	3	2	3	7	14	12	3	3	2	2	A	4	4	5	3	2	4	5	7	12	7	12	5.2	13.6
9-May	6	6	4	5	7	9	8	8	8	8	5	A	2	2	3	3	1	1	1	2	6	7	3	5	4.7	9.2
10-May	10	7	4	3	4	5	4	5	3	3	A	3	2	1	2	1	1	1	1	4	14	29	51	49	9.0	51.1
11-May	49	45	29	19	17	33	44	27	18	A	10	5	3	1	1	2	2	2	4	2	3	3	2	1	14.1	49.2
12-May	1	1	1	1	1	2	4	5	A	6	6	5	4	5	7	4	5	4	3	5	5	4	4	4	3.8	7.2
13-May	3	3	3	3	4	8	7	A	6	6	4	3	4	3	4	2	2	3	2	2	3	6	6	4	3.9	7.5
14-May	4	3	4	6	8	12	A	7	4	3	3	5	4	3	4	5	4	6	3	3	4	4	5	4	4.8	12.1
15-May	3	4	8	10	8	A	18	15	7	4	3	3	3	3	3	3	3	3	3	4	4	5	5	5	5.5	18.2
16-May	P	5	3	1	A	3	5	4	3	3	3	3	2	1	2	2	2	2	2	2	5	5	6	4	3.1	6.0
17-May	4	3	3	A	4	3	4	4	4	4	3	3	3	3	3	3	2	2	3	4	3	4	4	3	3.3	4.4
18-May	3	4	A	4	4	4	4	4	3	3	4	4	4	3	3	3	4	4	3	4	4	5	4	3	3.7	4.7
19-May	4	A	4	5	5	6	8	10	8	8	7	7	8	8	12	8	8	6	5	5	5	4	3	6	6.5	12.3
20-May	7	8	9	8	12	A	23	11	7	6	6	5	3	3	3	2	2	2	3	4	5	5	3	2	6.1	23.1
21-May	2	2	2	4	A	8	7	9	5	3	4	3	2	2	3	2	2	2	2	3	5	15	10	8	4.6	14.6
22-May	6	8	10	A	15	21	32	14	8	8	10	5	2	2	2	2	2	2	2	2	8	10	10	9	8.2	32.4
23-May	8	6	A	8	9	12	15	12	13	17	7	5	3	1	2	2	2	2	2	4	4	4	5	11	6.6	16.7
24-May	3	A	5	4	4	6	4	4	2	2	1	1	1	1	2	1	1	2	2	3	4	6	7	7	3.3	7.1
25-May	A	6	4	5	6	11	11	5	3	4	2	2	1	1	1	2	2	3	3	3	5	7	8	A	4.4	11.4
26-May	6	5	5	4	4	14	15	10	C	C	C	C	A	8	9	5	4	4	6	4	4	5	5	4	6.4	14.7
27-May	4	4	3	4	4	A	9	6	4	3	3	3	3	3	3	3	3	2	2	2	2	3	4	3	3.4	9.0
28-May	2	2	2	2	3	A	17	10	4	3	3	2	3	2	2	3	3	3	3	3	3	5	8	8	4.1	16.6
29-May	10	14	16	14	A	11	21	22	8	4	4	3	2	2	2	2	3	1	3	6	19	21	1	1	8.3	22.3
30-May	1	1	1	A	3	2	3	2	2	2	3	3	2	3	2	2	2	3	1	1	2	6	7	3	2.6	6.7
31-May	2	2	A	3	2	3	5	2	2	2	1	2	2	2	2	3	2	2	3	2	6	5	7	9	3.0	8.5
	6.7	6.4	5.8	5.5	6.0	9.0	13.4	9.7	6.1	4.9	4.3	3.4	2.7	2.6	3.2	2.9	2.8	2.8	2.8	3.3	6.6	8.8	7.5	6.6	Diurnal Average	
	49.2	44.7	29.0	19.2	17.4	33.4	46.5	34.9	17.6	16.7	10.4	7.4	7.6	8.1	12.3	8.0	7.5	6.4	6.2	5.9	27.4	48.2	51.1	48.9	Diurnal Maximum	

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

Hourly Averages for NO_X at Henry Pirker
May 2009



Peace Airshed Zone Association
Summary of Hourly Maximums

Henry Pirker - Oxides of Nitrogen (NO_X) - ppb
May 1, 2009 to June 1, 2009

Maximum Value: 88.1 ppb on May 11 06:00

Maximum Daily Average: 26.4 ppb on May 11

Minimum Value: 2 ppb on May 30 01:00

Minimum Daily Average: 4.9 ppb on May 30

Maximum Diurnal Average: 24.1 ppb at hour 7

Minimum Diurnal Average: 6.1 ppb at hour 14

Monthly Average: 10.92 ppb

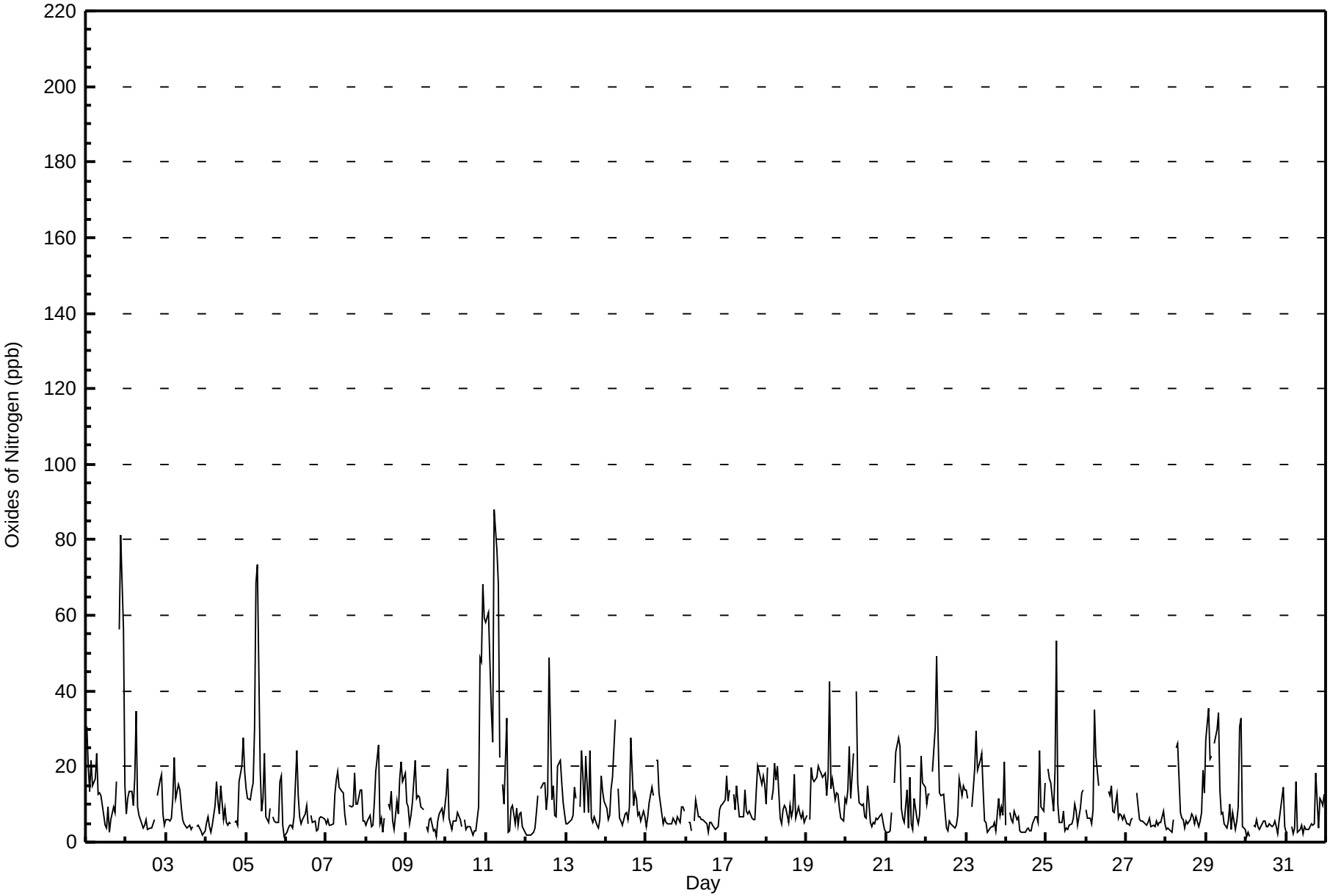
Percentiles: P_1 = 2.0 P_{10} = 3.6 Q_1 = 4.9 Median = 7.3 Q_3 = 13.4 P_{90} = 20.8 P_{99} = 68.0

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	36
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-May	30	20	13	22	15	17	24	12	13	12	10	5	4	9	3	6	9	8	16	A	56	81	56	15	19.9	81.4
2-May	7	11	13	13	10	17	35	9	7	5	4	4	6	3	4	4	5	6	A	12	16	18	7	4	9.7	34.6
3-May	6	6	5	6	12	22	12	15	14	9	6	5	4	4	4	3	4	A	4	5	4	3	2	3	6.9	22.3
4-May	5	7	4	3	5	10	16	11	7	15	6	9	5	5	5	5	A	5	5	5	16	20	28	18	9.3	27.5
5-May	14	12	11	14	16	30	69	73	19	8	12	23	7	5	9	A	7	6	5	5	16	17	5	2	16.7	73.4
6-May	3	4	5	5	4	7	24	12	7	5	6	8	10	5	A	7	5	5	3	3	6	7	6	6	6.6	24.4
7-May	5	6	5	4	5	13	17	19	15	13	13	7	4	A	10	9	10	18	10	10	14	14	5	5	10.1	18.6
8-May	4	5	7	4	4	10	19	26	5	6	2	6	A	10	9	14	6	3	11	7	17	21	16	18	10.1	25.7
9-May	10	9	5	7	10	22	11	12	12	9	8	A	4	3	6	6	3	3	2	5	7	9	6	9	7.9	21.7
10-May	13	20	6	3	5	5	5	8	6	4	A	6	3	4	4	3	2	3	3	9	49	48	68	59	14.7	68.3
11-May	58	61	48	35	27	88	77	68	22	A	15	10	33	3	3	9	10	5	9	4	7	8	4	2	26.4	88.1
12-May	2	2	2	2	2	4	8	12	A	14	16	16	9	13	49	11	15	7	7	20	22	16	11	8	11.6	48.9
13-May	5	5	6	6	7	15	12	A	9	24	18	8	23	8	24	6	5	7	5	4	6	18	13	11	10.5	24.1
14-May	9	6	7	14	17	32	A	14	6	6	4	7	8	6	9	28	10	13	11	7	8	6	8	7	10.6	32.5
15-May	4	7	10	14	12	A	22	22	13	8	5	6	5	5	5	5	6	6	5	7	5	9	9	8	8.6	21.5
16-May	P	5	5	3	A	6	11	7	7	6	6	6	5	3	5	5	5	3	4	4	9	10	10	11	6.1	11.3
17-May	18	11	14	A	13	9	15	10	7	7	7	14	8	8	8	6	6	6	13	20	18	15	18	15	11.6	20.2
18-May	10	20	A	11	14	21	17	20	6	5	8	10	9	5	10	7	9	18	6	9	7	6	8	5	10.5	20.9
19-May	7	A	6	20	17	16	17	20	19	18	17	18	12	18	43	14	17	11	13	13	9	7	6	11	15.1	42.5
20-May	11	14	26	12	23	A	40	16	11	10	10	7	6	15	5	4	5	5	6	6	7	7	5	3	11.0	40.0
21-May	3	2	3	8	A	16	24	28	25	9	6	5	14	4	17	5	3	12	6	5	7	23	16	14	11.1	27.7
22-May	10	13	13	A	19	30	49	29	13	12	13	8	4	3	6	5	4	4	4	7	17	12	15	14	13.1	49.2
23-May	14	11	A	9	14	19	30	19	22	24	14	6	5	3	4	4	4	5	3	12	7	9	7	21	11.6	29.6
24-May	4	A	8	6	5	8	6	7	3	3	3	3	4	4	3	3	5	7	7	5	24	9	8	16	6.5	24.2
25-May	A	20	17	16	8	19	53	10	5	5	8	3	4	4	4	5	6	10	8	4	9	13	14	A	11.2	53.2
26-May	8	6	6	5	8	35	23	15	C	C	C	C	A	13	12	15	8	8	13	6	7	7	6	7	11.1	34.9
27-May	5	5	4	6	6	A	13	9	6	5	6	5	5	5	6	4	5	4	6	4	5	5	8	5	5.8	13.2
28-May	3	4	3	3	6	A	25	26	8	6	6	4	6	5	6	7	7	5	7	4	5	8	19	13	8.1	26.1
29-May	27	35	22	23	A	26	30	34	14	7	8	5	4	6	10	3	8	4	5	9	31	33	4	4	15.3	35.3
30-May	2	3	2	A	5	4	6	4	3	4	5	6	4	4	5	4	5	6	4	2	6	12	15	4	4.9	14.6
31-May	3	3	A	4	2	4	16	3	3	4	2	4	3	3	4	5	4	5	18	4	12	11	10	13	6.1	18.3
	10.4	11.4	9.9	9.9	10.4	18.7	24.1	19.1	10.6	9.1	8.4	7.7	7.4	6.1	9.7	7.1	6.5	6.9	7.3	7.3	13.9	15.5	13.3	11.1	Diurnal Average	
	58.1	60.7	47.7	35.1	26.5	88.1	77.3	73.4	25.5	24.1	17.6	23.3	32.9	18.0	48.9	27.8	16.7	18.4	18.3	20.2	56.5	81.4	68.3	59.2	Diurnal Maximum	

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

Hourly Maximums for NO_X at Henry Pirker
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Henry Pirker - Ozone (O_3) - ppb
May 1, 2009 to June 1, 2009

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 50.3 ppb on May 5 17:00
Maximum Daily Average: 40.3 ppb on May 16

Minimum Value: 1 ppb on May 11 05:00
Maximum Diurnal Average: 38.5 ppb at hour 14
Monthly Average: 30.27 ppb

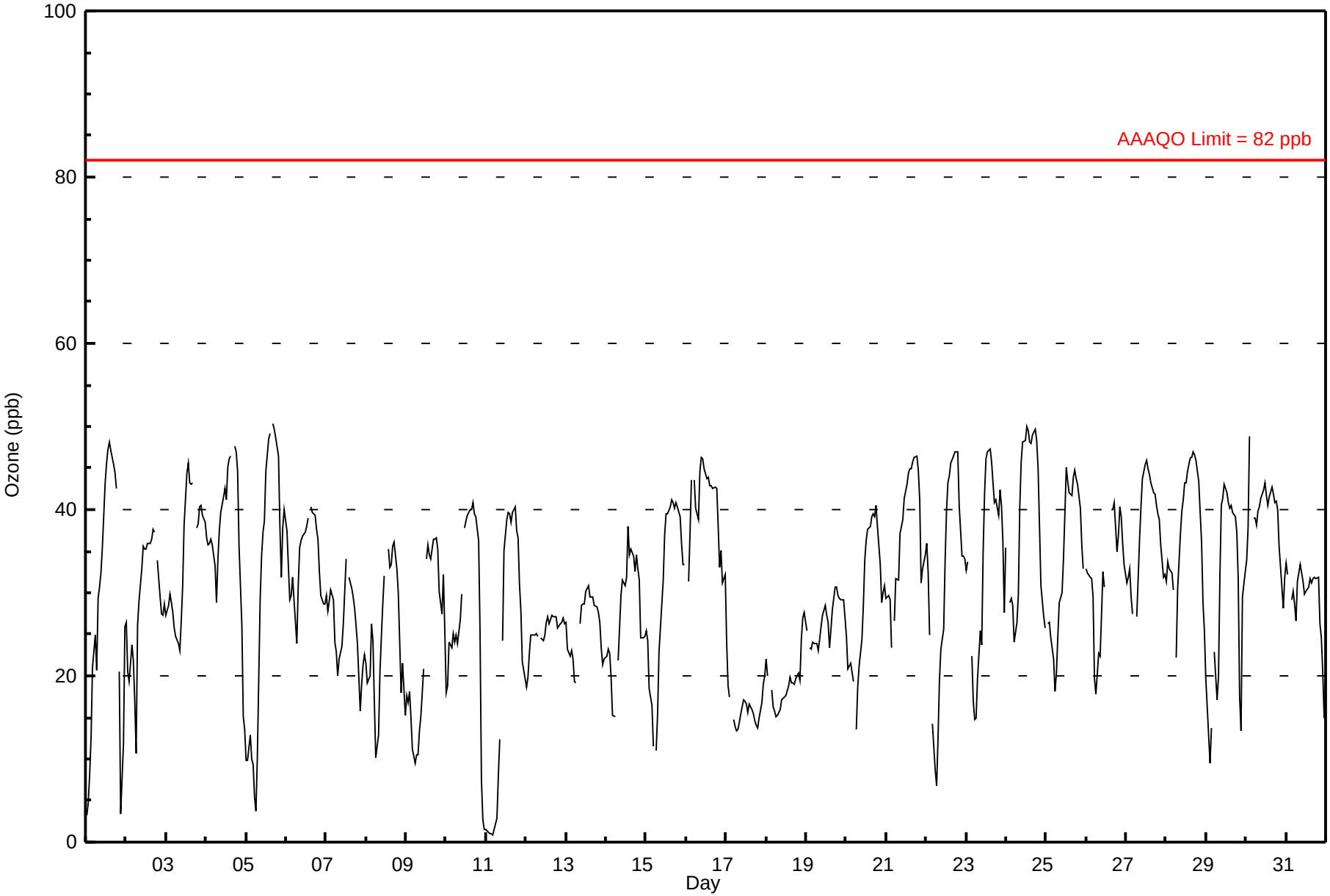
Minimum Daily Average: 16.2 ppb on May 17
Minimum Diurnal Average: 19.8 ppb at hour 7
Percentiles: P_1 = 2.7 P_{10} = 15.8 Q_1 = 23.4 Median = 30.7 Q_3 = 39.0 P_{90} = 43.7 P_{99} = 48.8

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-May	3	5	8	12	21	25	21	29	31	32	35	43	46	47	48	47	45	44	43	A	20	3	12	26	28.2	48.2
2-May	27	21	19	24	22	17	11	26	29	33	36	35	35	36	36	37	38	37	A	34	30	28	27	29	28.9	37.6
3-May	27	28	30	29	28	26	25	24	23	27	31	38	44	46	43	43	43	A	38	38	40	41	39	39	34.3	45.6
4-May	37	36	36	36	36	33	29	34	37	40	42	42	41	45	46	46	A	48	47	45	36	26	15	13	36.8	47.7
5-May	10	10	13	10	9	5	4	10	29	34	37	39	45	48	49	A	50	50	49	46	38	32	38	40	30.2	50.3
6-May	37	33	29	30	32	29	24	31	35	36	37	37	38	39	A	40	40	39	38	36	33	30	29	29	33.9	40.3
7-May	30	28	29	30	29	24	23	20	22	24	26	30	34	A	32	31	30	28	26	24	16	19	21	22	26.0	34.0
8-May	22	19	20	26	24	17	10	13	21	25	29	32	A	35	33	33	36	36	33	30	24	18	22	15	24.9	36.1
9-May	18	17	18	15	11	10	11	10	13	15	21	A	34	36	35	34	36	37	37	35	30	27	32	25	24.2	36.7
10-May	18	19	24	23	25	24	25	24	27	30	A	38	39	39	40	40	41	40	39	36	25	7	3	2	27.3	40.9
11-May	1	1	1	1	1	1	3	8	12	A	24	35	39	40	39	39	40	40	37	37	31	28	22	20	21.7	40.3
12-May	19	20	23	25	25	25	25	25	A	25	24	25	26	27	26	27	27	27	27	26	26	26	27	26	25.2	27.3
13-May	26	23	22	23	22	19	19	A	26	28	29	29	30	31	29	30	30	29	28	28	26	23	21	22	25.9	30.8
14-May	22	23	23	20	15	15	A	22	26	30	32	31	32	38	35	35	34	33	35	33	32	25	24	25	27.7	38.0
15-May	25	24	18	16	11	A	11	15	23	29	32	37	39	40	40	41	41	40	41	40	39	36	33	33	30.7	41.1
16-May	P	31	37	44	A	44	40	39	45	46	46	45	44	44	43	43	43	43	43	38	33	35	31	32	40.3	46.2
17-May	24	19	17	A	15	14	13	14	14	15	17	17	17	16	17	16	15	15	14	14	15	17	19	20	16.2	24.0
18-May	22	20	A	18	16	16	15	15	16	17	17	17	18	19	20	19	19	19	20	20	19	24	27	28	19.2	27.6
19-May	26	A	23	23	24	24	24	23	24	26	27	28	27	26	23	26	28	31	31	30	29	29	29	27	26.5	30.7
20-May	25	21	21	21	19	A	14	19	21	24	29	34	36	38	38	39	39	39	40	38	33	29	30	31	29.5	40.5
21-May	29	30	29	23	A	27	32	32	37	38	39	41	43	44	45	45	46	46	46	45	41	31	33	35	37.2	46.4
22-May	36	32	25	A	14	9	7	13	19	23	26	34	40	43	44	46	47	47	47	47	41	34	34	34	32.2	47.0
23-May	33	34	A	22	17	15	15	20	25	24	35	42	46	47	47	46	43	41	41	39	42	41	36	28	33.8	47.2
24-May	35	A	29	29	28	24	26	30	40	46	48	48	50	49	48	48	49	50	48	45	38	31	27	26	38.9	49.9
25-May	A	26	26	25	22	18	20	25	29	30	34	39	45	43	42	42	44	45	44	43	40	36	33	A	34.1	45.1
26-May	33	32	32	32	30	20	18	23	22	27	32	31	C	C	A	40	40	41	35	37	40	39	36	33	32.1	40.8
27-May	31	32	33	30	28	A	27	32	36	40	44	45	46	45	44	43	42	42	40	40	39	36	32	32	37.3	46.0
28-May	31	34	33	32	30	A	22	30	37	40	41	43	43	45	46	46	47	47	46	43	40	36	29	25	37.7	46.9
29-May	20	13	10	14	A	23	17	20	32	40	41	43	42	41	40	40	40	39	37	32	17	13	30	33	29.4	43.0
30-May	34	38	49	A	39	39	38	40	40	41	42	43	42	41	42	43	42	41	41	40	36	31	28	32	39.1	48.9
31-May	34	32	A	29	30	29	27	31	33	32	31	30	30	31	32	31	32	32	32	32	26	25	20	15	29.4	33.6
	25.3	24.2	24.2	23.7	22.3	21.1	19.8	23.2	27.6	30.6	32.8	35.8	37.6	38.5	38.0	37.9	38.2	38.1	37.4	35.7	31.5	27.6	27.1	26.5	Diurnal Average	
	37.4	37.9	48.9	43.5	38.9	43.5	40.2	39.8	44.7	46.2	48.1	48.3	49.9	49.5	49.2	47.9	50.3	49.7	48.7	47.0	42.4	40.6	39.3	40.0	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 Henry Pirker
May 2009



Peace Airshed Zone Association
Summary of Hourly Maximums

Henry Pirker - Ozone (O_3) - ppb
May 1, 2009 to June 1, 2009

Maximum Value: 52.0 ppb on May 30 02:00

Maximum Daily Average: 42.6 ppb on May 16

Minimum Value: 1 ppb on May 11 05:00

Minimum Daily Average: 17.5 ppb on May 17

Maximum Diurnal Average: 40.1 ppb at hour 14

Minimum Diurnal Average: 22.9 ppb at hour 7

Monthly Average: 32.65 ppb

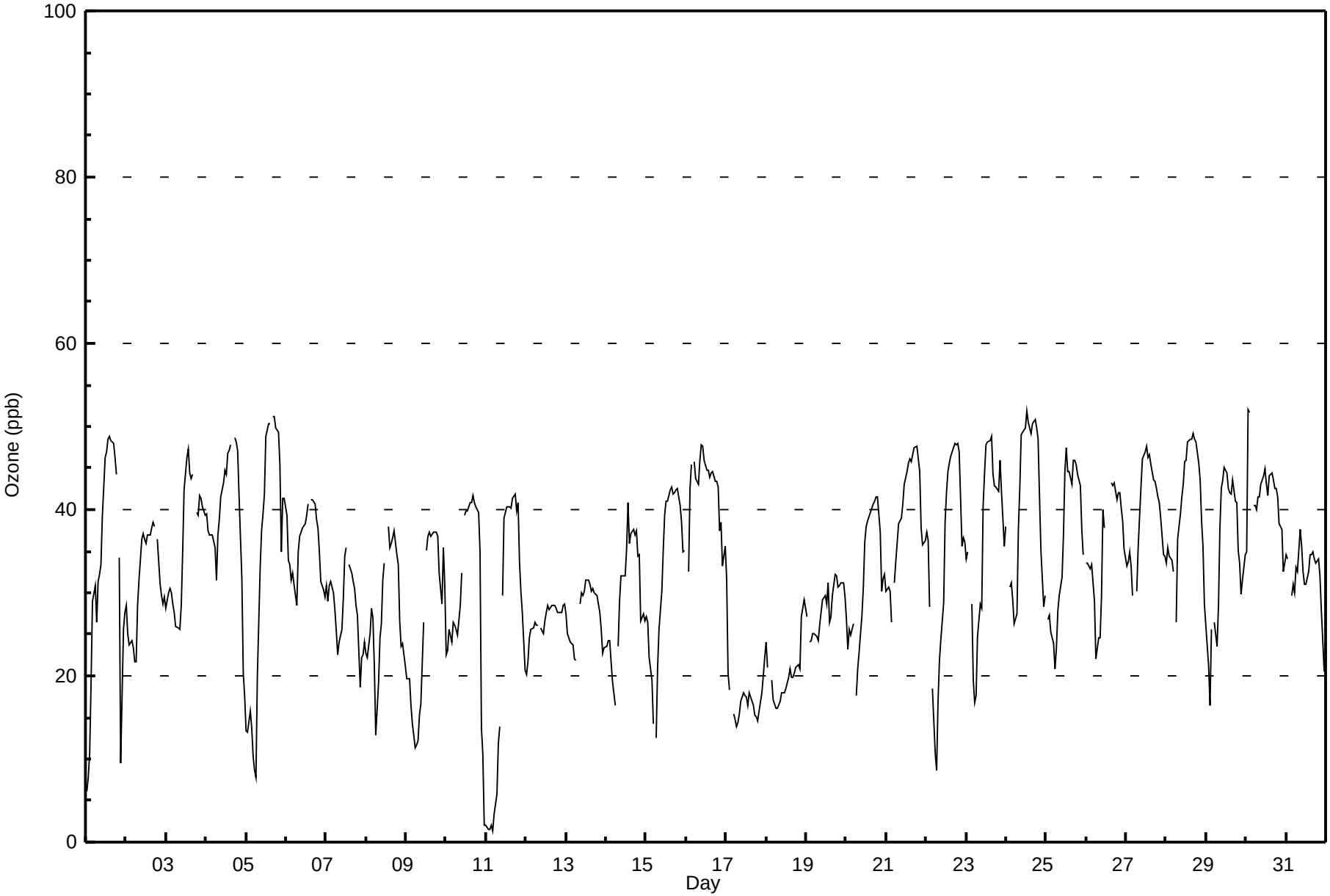
Percentiles: P_1 = 5.7 P_{10} = 18.4 Q_1 = 25.9 Median = 33.2 Q_3 = 40.9 P_{90} = 45.8 P_{99} = 50.4

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

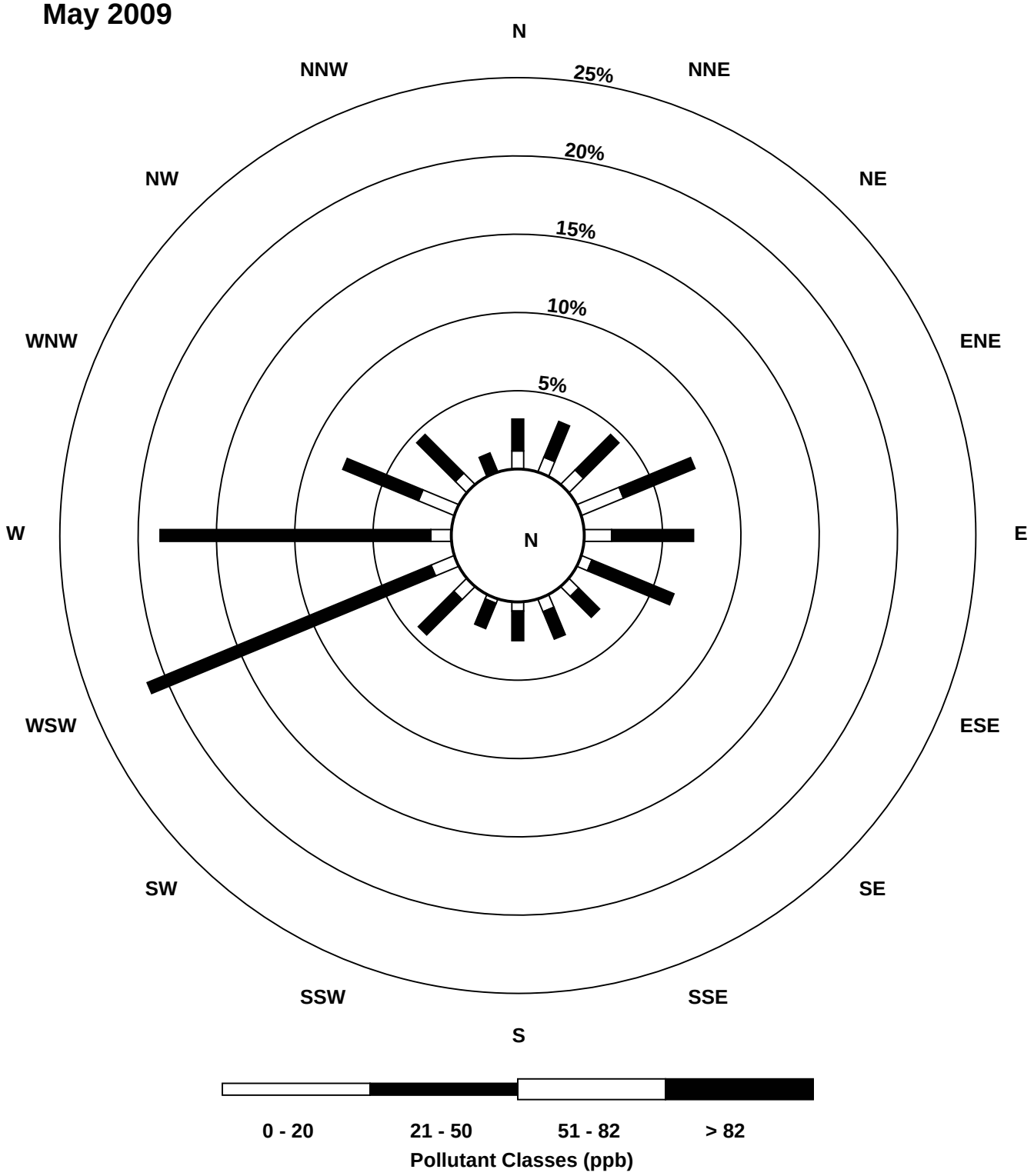
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-May	6	8	11	19	29	31	26	31	32	33	39	46	47	48	49	48	48	46	44	A	34	10	26	28	32.2	48.9
2-May	28	25	24	24	23	22	22	28	32	36	37	36	36	37	37	38	38	38	A	36	31	30	29	30	31.2	38.5
3-May	28	30	31	30	29	28	26	26	26	29	35	42	46	47	44	44	44	A	40	39	42	41	40	39	35.9	47.2
4-May	40	37	37	37	37	35	31	37	39	42	43	45	44	47	47	48	A	49	48	47	42	32	20	17	39.2	48.7
5-May	13	13	16	14	10	9	8	20	33	37	39	42	49	50	50	A	51	51	50	49	45	35	41	41	33.4	51.3
6-May	39	34	33	31	32	31	28	35	37	37	38	38	39	41	A	41	41	41	39	38	35	31	30	29	35.7	41.3
7-May	31	29	31	31	30	28	25	23	24	26	29	34	35	A	33	32	31	30	28	27	19	22	23	24	28.2	35.3
8-May	23	22	25	28	27	21	13	19	25	26	32	34	A	38	35	36	37	37	34	33	27	24	24	21	27.9	38.0
9-May	20	20	20	17	14	11	12	12	15	17	26	A	35	37	37	37	37	37	37	37	32	29	35	31	26.3	37.3
10-May	22	23	26	24	27	26	26	25	28	32	A	39	40	40	41	41	42	41	40	40	35	14	10	2	29.7	41.7
11-May	2	1	1	2	1	3	6	12	14	A	30	39	40	40	40	40	41	42	40	41	34	30	28	21	23.9	41.9
12-May	20	22	25	26	26	26	26	26	A	26	25	27	28	29	28	29	29	29	28	28	28	28	28	29	26.6	28.6
13-May	28	25	24	24	24	22	22	A	29	30	30	30	32	32	31	30	30	30	30	29	28	26	23	23	27.3	31.6
14-May	24	24	24	22	19	16	A	24	29	32	32	32	35	41	36	37	38	37	37	34	35	27	27	27	30.0	40.9
15-May	27	27	22	20	14	A	12	21	26	30	35	39	41	41	42	43	42	42	42	42	41	39	35	35	33.0	42.6
16-May	P	32	43	46	A	46	44	43	46	48	48	46	45	45	44	44	45	43	43	43	38	38	33	36	42.6	47.8
17-May	32	20	18	A	15	15	14	14	15	17	18	18	17	16	18	17	17	15	15	15	16	18	20	22	17.5	31.6
18-May	24	21	A	20	17	17	16	16	17	18	18	18	18	20	21	20	20	20	21	21	21	27	28	29	20.3	29.1
19-May	27	A	24	24	25	25	25	24	26	28	29	30	29	31	26	27	30	32	32	31	31	31	31	30	28.2	32.2
20-May	27	23	26	25	26	A	18	21	23	27	31	36	38	39	40	40	41	41	42	42	37	30	32	32	32.0	41.6
21-May	30	31	30	27	A	31	34	38	39	39	41	43	45	46	46	46	47	48	48	46	45	38	36	36	39.4	47.5
22-May	37	36	28	A	19	11	9	17	22	24	29	39	42	45	46	46	47	48	48	48	47	36	37	36	34.6	48.0
23-May	34	35	A	29	20	17	18	25	29	28	40	44	48	48	48	49	44	43	43	42	46	42	39	36	36.8	48.9
24-May	38	A	31	31	29	26	27	38	42	49	49	50	52	51	50	49	50	51	50	48	42	35	28	30	41.2	51.8
25-May	A	27	27	25	24	21	23	28	30	32	37	45	47	45	45	43	46	46	45	44	43	38	35	A	36.1	47.5
26-May	34	34	33	33	31	29	22	25	25	30	40	38	C	C	A	43	43	43	41	42	42	40	39	35	35.3	43.2
27-May	33	34	35	33	30	A	30	36	39	43	46	47	48	46	47	45	44	43	43	42	41	39	35	34	39.6	47.6
28-May	33	35	34	34	33	A	26	36	39	41	43	46	46	48	48	49	49	49	48	46	44	39	36	29	40.5	49.2
29-May	26	21	16	26	A	26	24	29	38	42	44	45	44	43	42	42	44	41	41	35	34	30	32	35	34.7	45.0
30-May	35	52	52	A	40	40	40	41	42	43	44	45	43	42	44	44	44	43	43	42	38	38	33	34	41.7	52.0
31-May	35	34	A	30	31	30	33	33	38	36	33	31	31	33	35	35	35	34	34	34	32	28	24	21	32.0	37.6
	27.5	26.8	26.7	26.1	24.4	23.9	22.9	26.7	29.9	32.6	35.3	38.1	39.3	40.1	39.7	39.4	39.8	39.7	39.1	38.0	35.5	31.0	30.2	29.0	Diurnal Average	
	39.5	52.0	51.7	45.5	40.5	45.8	43.7	43.0	46.0	48.9	49.4	49.9	51.8	50.6	50.3	49.1	51.2	51.3	49.9	49.3	46.9	42.1	41.4	41.4	Diurnal Maximum	

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

Hourly Maximums for O_3 at Henry Pirker
May 2009



Pollutant Rose for O_3 at Henry Pirker
May 2009



Peace Airshed Zone Association
Summary of Eight Hour Running Averages

Henry Pirker - Ozone (O_3) - ppb
May 1, 2009 to June 1, 2009

Number of Exceedences (AAAQO): 8-hr: 0
Maximum Value: 48.8 ppb on May 24 19:00

Minimum Value: 1.4 ppb on May 11 06:00

Percentiles: P_1 = 7.1 P_{10} = 18.2 Q_1 = 24.1 Median = 30.3 Q_3 = 37.6 P_{90} = 41.9 P_{99} = 47.2

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

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	25	19	14	9	10	10	12	16	19	22	26	30	33	36	39	41	43	45	45	46	42	36	31	28	45.8
2-May	25	22	18	19	19	21	21	21	21	23	25	26	28	30	33	35	36	36	36	36	35	34	33	32	36.3
3-May	30	29	29	28	28	28	28	27	27	26	26	28	30	32	34	37	39	41	42	42	42	41	40	40	42.2
4-May	39	38	38	38	37	36	35	35	35	35	36	37	37	39	41	42	43	44	45	45	45	42	37	33	45.4
5-May	30	25	21	17	13	11	9	9	11	14	17	21	25	31	37	40	43	45	47	48	47	45	43	43	48.2
6-May	41	39	37	35	34	34	32	31	30	31	32	33	33	35	36	38	38	39	39	39	38	37	36	34	41.2
7-May	33	31	30	30	29	28	28	27	26	25	25	25	25	26	27	28	29	30	30	29	27	26	24	23	32.8
8-May	22	21	20	21	22	22	20	19	19	19	21	21	21	23	27	30	32	33	34	34	33	30	29	27	34.0
9-May	24	22	20	18	17	16	14	14	13	13	13	13	16	20	23	27	30	33	35	35	35	34	34	33	35.4
10-May	30	28	26	25	24	24	23	23	24	25	25	27	29	32	34	36	38	39	39	39	38	34	29	24	39.5
11-May	19	14	10	5	2	1	1	2	4	4	7	12	18	23	28	33	36	37	39	39	38	36	34	32	38.8
12-May	29	27	25	23	23	22	23	23	24	25	25	25	25	25	25	26	26	26	27	27	27	27	27	27	29.1
13-May	27	26	25	25	25	24	23	22	22	23	24	25	26	27	29	29	29	29	29	29	29	28	27	26	29.4
14-May	25	24	24	23	21	20	20	20	21	21	23	24	27	30	31	32	33	34	34	34	34	33	31	30	34.2
15-May	29	28	26	24	21	21	19	17	17	18	20	23	27	28	32	35	37	39	40	40	40	40	39	38	40.3
16-May	38	36	36	36	36	37	38	39	40	42	43	43	44	44	44	44	44	44	43	42	41	40	38	37	44.4
17-May	35	32	29	27	25	22	19	17	15	15	15	15	15	15	16	16	16	16	16	15	15	15	16	16	34.8
18-May	17	18	18	19	19	19	18	18	17	16	16	16	16	17	17	18	18	19	19	19	19	20	21	22	22.1
19-May	23	23	24	24	25	25	24	24	24	24	24	25	25	26	26	26	27	27	28	28	28	28	29	29	29.2
20-May	29	28	26	25	24	23	21	20	19	20	21	23	25	27	30	32	35	37	38	39	38	37	36	35	38.5
21-May	34	33	31	29	29	28	29	29	30	31	32	35	36	38	40	42	43	44	45	45	45	43	42	40	45.0
22-May	39	37	35	33	29	26	22	19	17	16	16	18	21	26	30	34	38	41	43	45	45	44	43	41	45.1
23-May	40	38	37	33	30	27	24	22	21	20	22	24	28	32	36	39	41	43	44	44	43	43	41	39	44.1
24-May	38	38	36	34	32	30	29	29	30	32	34	36	39	42	45	47	48	49	49	48	47	45	42	39	48.8
25-May	38	34	31	28	26	24	23	23	24	24	25	27	30	33	36	38	40	42	43	43	43	42	41	41	43.4
26-May	39	37	36	34	32	30	28	27	26	25	25	25	25	26	N	N	N	N	N	N	39	39	39	38	39.0
27-May	37	35	35	34	33	32	31	30	31	32	34	36	39	39	42	43	44	44	44	43	42	41	39	38	43.9
28-May	36	35	35	34	33	32	31	30	31	32	33	35	37	38	41	43	44	45	45	45	45	44	42	39	45.4
29-May	36	32	27	23	21	19	17	17	18	22	27	31	32	35	37	40	41	41	40	39	36	32	31	30	41.0
30-May	29	29	31	30	34	37	38	39	40	41	40	40	41	41	41	42	42	42	42	41	41	39	38	36	41.9
31-May	35	34	33	32	31	31	30	30	30	30	30	30	30	31	31	31	31	31	31	31	31	30	29	27	35.2
Diurnal Maximums	41.2	39.2	38.2	37.9	37.4	37.2	38.5	39.5	40.4	42.0	43.3	43.5	43.5	43.6	45.0	47.2	48.3	48.8	48.8	48.4	47.2	44.9	43.2	42.8	

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
May 1, 2009 to June 1, 2009

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 0.77 ppm on May 10 23:00 Maximum Daily Average: 0.28 ppm on May 26

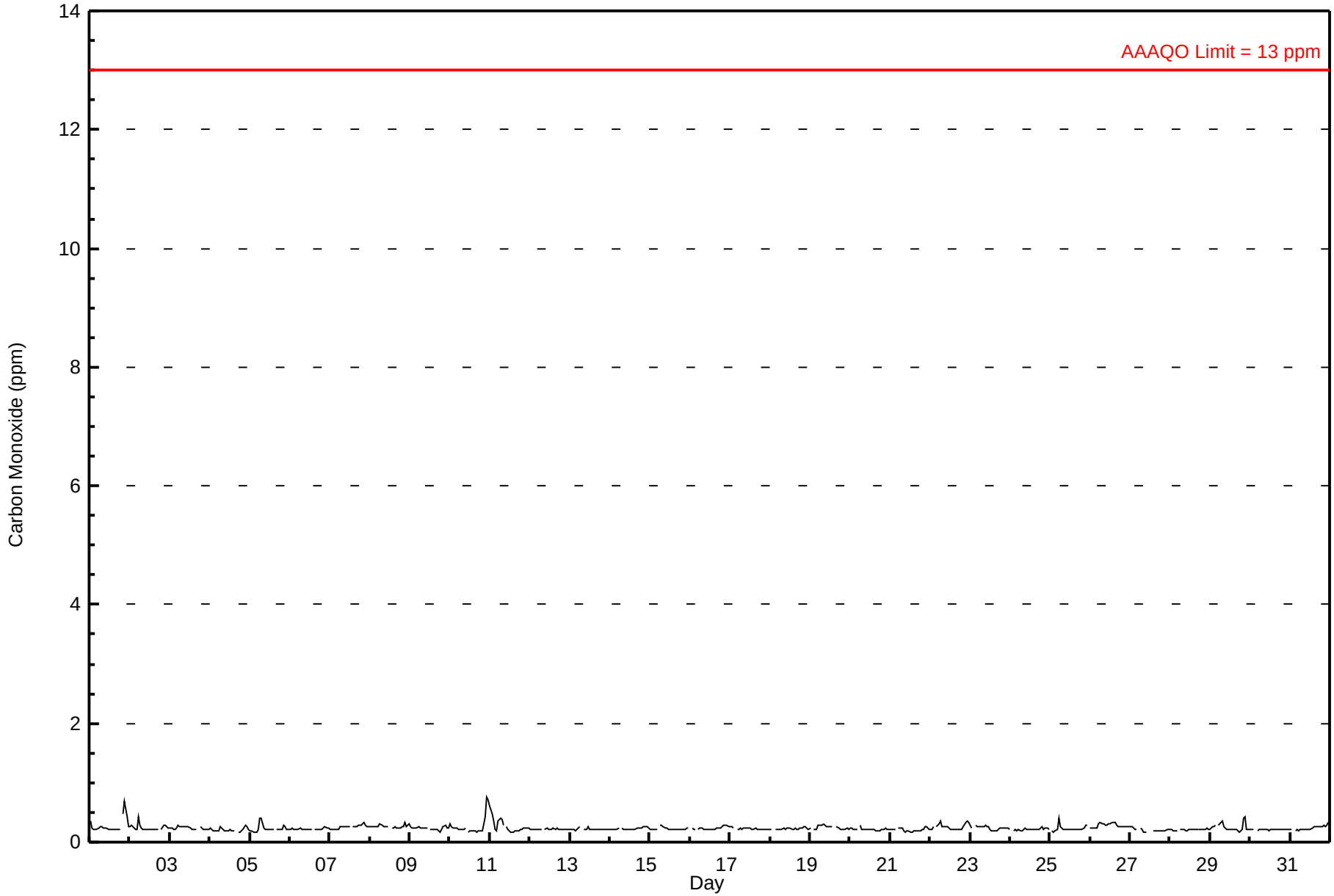
Minimum Value: 0.2 ppm on May 27 11:00 Minimum Daily Average: 0.20 ppm on May 30
Maximum Diurnal Average: 0.28 ppm at hour 22 Minimum Diurnal Average: 0.22 ppm at hour 18
Monthly Average: 0.235 ppm Percentiles: P_1 = 0.17 P_{10} = 0.20 Q_1 = 0.21 Median = 0.22 Q_3 = 0.25 P_{90} = 0.28 P_{99} = 0.42

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	35
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-May	0.4	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.5	0.7	0.4	0.3	0.27	0.68
2-May	0.3	0.3	0.3	0.2	0.2	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.3	0.3	0.3	0.2	0.25	0.42
3-May	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.23	0.28
4-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.21	0.28
5-May	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.23	0.41
6-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.22	0.26
7-May	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	A	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.26	0.32
8-May	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	A	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.26	0.32
9-May	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.23	0.29
10-May	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.8	0.7	0.27	0.77
11-May	0.6	0.5	0.4	0.2	0.2	0.3	0.4	0.4	0.3	A	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.27	0.61
12-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22	0.24
13-May	0.2	0.2	0.2	0.2	0.2	0.2	0.3	A	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22	0.27
14-May	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.23	0.27
15-May	0.2	0.2	0.2	0.2	0.2	A	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23	0.29
16-May	P	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.23	0.29
17-May	0.3	0.3	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23	0.27
18-May	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.23	0.26
19-May	0.2	A	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	M	A	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.25	0.32
20-May	0.2	0.2	0.2	0.2	0.2	A	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22	0.28
21-May	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.21	0.27
22-May	0.2	0.2	0.3	A	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.26	0.37
23-May	0.3	0.2	A	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	0.2	0.24	0.29
24-May	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.22	0.26
25-May	A	0.2	0.2	0.2	0.2	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	A	0.23	0.41
26-May	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.28	0.34
27-May	0.3	0.3	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	C	C	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20	0.26
28-May	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21	0.24
29-May	0.2	0.3	0.3	0.3	A	0.3	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.2	0.2	0.25	0.42
30-May	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20	0.22
31-May	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.23	0.32
	0.25	0.24	0.22	0.22	0.22	0.26	0.26	0.25	0.23	0.23	0.23	0.23	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.23	0.26	0.28	0.27	0.25	Diurnal Average	
	0.61	0.47	0.36	0.28	0.26	0.42	0.41	0.41	0.32	0.29	0.29	0.30	0.30	0.33	0.34	0.34	0.29	0.28	0.27	0.28	0.48	0.68	0.77	0.72	Diurnal Maximum	

C - Calibration P - Power Failure M - Maintenance 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
May 2009



Peace Airshed Zone Association
Summary of Hourly Maximums

Henry Pirker - Carbon Monoxide (CO) - ppm
May 1, 2009 to June 1, 2009

Maximum Value: 4.90 ppm on May 25 06:00

Maximum Daily Average: 0.51 ppm on May 26

Minimum Value: 0.2 ppm on May 27 10:00

Minimum Daily Average: 0.22 ppm on May 30

Maximum Diurnal Average: 0.70 ppm at hour 6

Minimum Diurnal Average: 0.25 ppm at hour 14

Monthly Average: 0.320 ppm

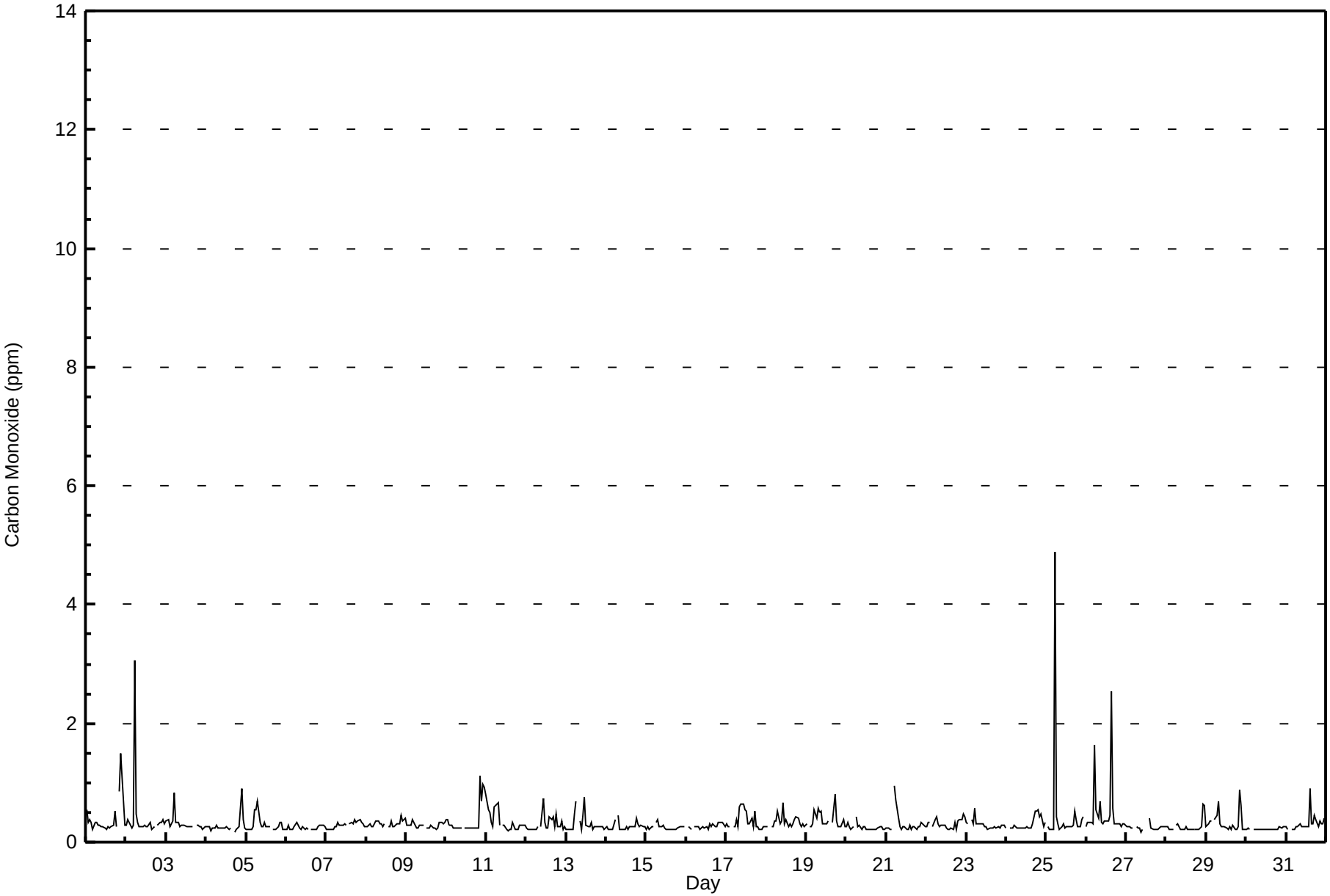
Percentiles: $P_1 = 0.20$ $P_{10} = 0.22$ $Q_1 = 0.23$ Median = 0.27 $Q_3 = 0.32$ $P_{90} = 0.43$ $P_{99} = 0.89$

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	35
Percent Operational Time:	99.7

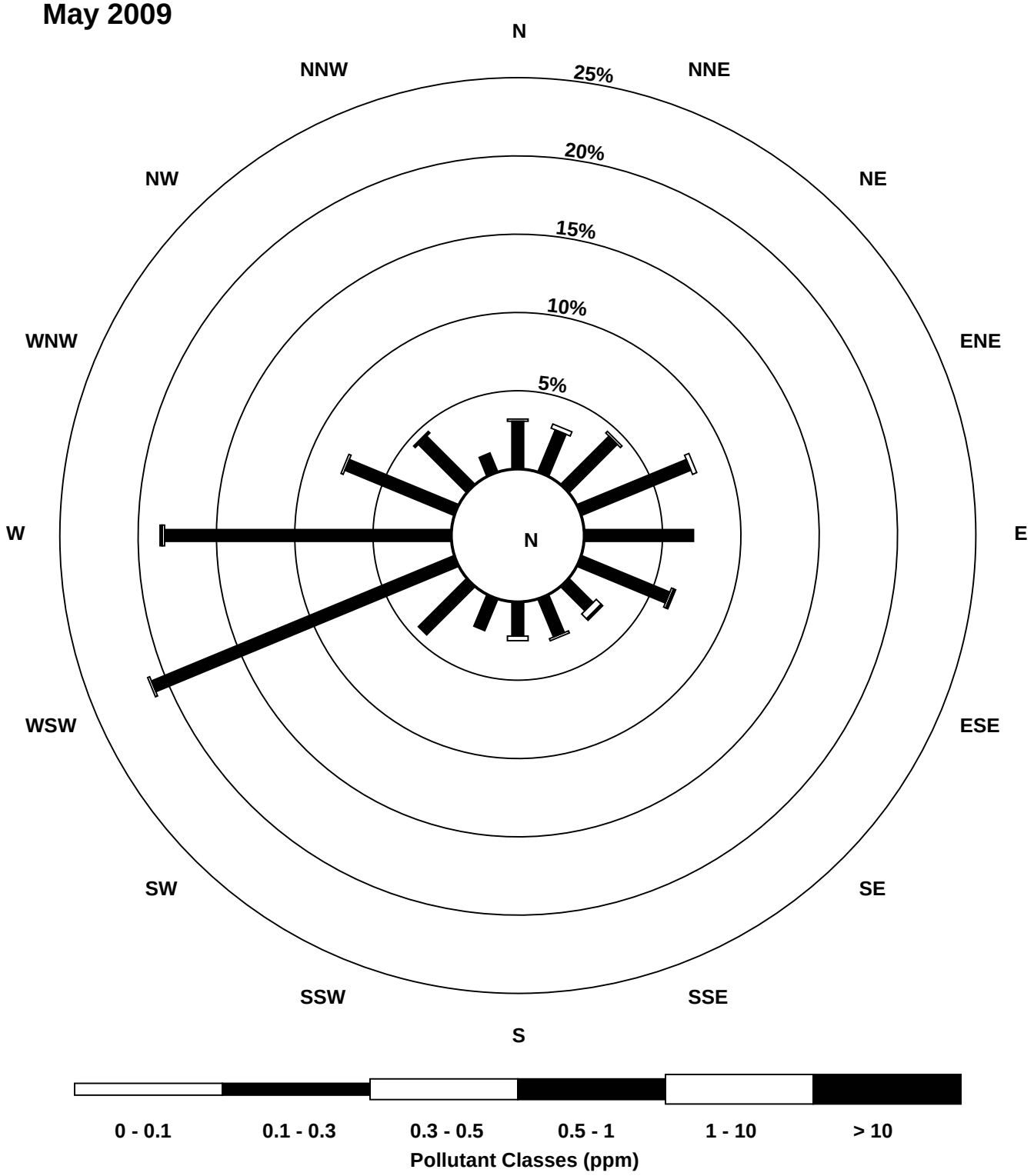
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-May	0.5	0.3	0.4	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.3	0.3	0.5	0.3	A	0.9	1.5	0.7	0.3	0.40	1.49
2-May	0.3	0.4	0.3	0.2	0.3	3.1	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	A	0.3	0.3	0.3	0.4	0.3	0.42	3.06
3-May	0.4	0.4	0.3	0.3	0.4	0.8	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	A	0.3	0.3	0.3	0.3	0.2	0.3	0.31	0.84
4-May	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	A	0.2	0.2	0.2	0.3	0.9	0.4	0.2	0.27	0.90
5-May	0.2	0.2	0.2	0.2	0.3	0.5	0.5	0.7	0.3	0.3	0.3	0.3	0.3	0.3	0.3	A	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.30	0.70
6-May	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.25	0.32
7-May	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	A	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.29	0.37
8-May	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	A	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.5	0.3	0.4	0.31	0.45
9-May	0.3	0.3	0.3	0.3	0.4	0.3	0.2	0.2	0.3	0.3	0.3	A	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.28	0.39
10-May	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.1	0.7	1.0	0.9	0.37	1.11
11-May	0.8	0.5	0.5	0.3	0.3	0.6	0.6	0.7	0.3	A	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.36	0.81
12-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	A	0.3	0.7	0.3	0.2	0.2	0.4	0.4	0.4	0.3	0.5	0.3	0.3	0.4	0.2	0.3	0.30	0.73
13-May	0.2	0.2	0.2	0.2	0.2	0.5	0.7	A	0.4	0.2	0.4	0.8	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.31	0.76
14-May	0.3	0.2	0.2	0.2	0.2	0.4	A	0.4	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.27	0.44
15-May	0.2	0.3	0.2	0.3	0.3	A	0.3	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	0.3	0.3	0.3	0.3	0.25	0.37
16-May	P	0.3	0.2	0.2	A	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.27	0.32
17-May	0.3	0.3	0.3	A	0.3	0.3	0.4	0.3	0.6	0.6	0.6	0.5	0.5	0.3	0.3	0.4	0.3	0.5	0.3	0.3	0.2	0.2	0.3	0.3	0.36	0.64
18-May	0.3	0.3	A	0.3	0.3	0.4	0.4	0.5	0.3	0.4	0.7	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.34	0.67
19-May	0.3	A	0.3	0.3	0.3	0.5	0.4	0.6	0.5	0.5	0.3	0.3	0.3	0.4	M	A	0.3	0.8	0.4	0.3	0.3	0.3	0.4	0.3	0.38	0.80
20-May	0.3	0.3	0.3	0.2	0.3	A	0.4	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.25	0.42
21-May	0.2	0.2	0.2	0.2	A	0.9	0.7	0.4	0.3	0.2	0.3	0.3	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.31	0.94
22-May	0.3	0.3	0.3	A	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.4	0.4	0.4	0.5	0.4	0.31	0.48
23-May	0.3	0.3	A	0.4	0.3	0.6	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	0.3	0.2	0.3	0.3	0.3	0.29	0.56
24-May	0.2	A	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.5	0.5	0.5	0.4	0.5	0.3	0.3	0.30	0.53
25-May	A	0.3	0.2	0.2	0.2	4.9	0.4	0.3	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.5	0.4	0.3	0.3	0.4	0.4	A	0.51	4.90
26-May	0.3	0.3	0.3	0.3	0.3	1.6	0.5	0.4	0.7	0.3	0.3	0.3	0.3	0.4	0.5	2.5	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.51	2.55
27-May	0.3	0.3	0.3	0.2	0.2	A	0.3	0.2	0.2	0.2	0.2	C	C	A	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.24	0.41
28-May	0.3	0.3	0.2	0.2	0.2	A	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.6	0.6	0.27	0.63
29-May	0.3	0.3	0.4	0.4	A	0.4	0.5	0.7	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.3	0.9	0.6	0.2	0.2	0.34	0.87
30-May	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.22	0.26
31-May	0.3	0.2	A	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.9	0.3	0.3	0.5	0.4	0.3	0.4	0.3	0.3	0.4	0.31	0.90
	0.29	0.29	0.27	0.26	0.26	0.70	0.37	0.35	0.30	0.28	0.31	0.29	0.27	0.25	0.30	0.34	0.28	0.31	0.29	0.28	0.36	0.39	0.35	0.32	Diurnal Average	
	0.81	0.55	0.49	0.37	0.39	4.90	0.72	0.70	0.68	0.64	0.73	0.76	0.52	0.36	0.90	2.55	0.56	0.80	0.52	0.53	1.11	1.49	0.97	0.91	Diurnal Maximum	

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

Hourly Maximums for CO at Henry Pirker
May 2009



Pollutant Rose for CO at Henry Pirker
May 2009



Peace Airshed Zone Association
Summary of Eight Hour Running Averages

Henry Pirker - Carbon Monoxide (CO) - ppm
May 1, 2009 to June 1, 2009

Number of Exceedences (AAAQO): 8-hr: 0
Maximum Value: 0.49 ppm on May 11 04:00

Minimum Value: 0.18 ppm on May 10 18:00

Percentiles: P_1 = 0.19 P_{10} = 0.20 Q_1 = 0.22 Median = 0.23 Q_3 = 0.25 P_{90} = 0.27 P_{99} = 0.41

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-May	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.38
2-May	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.37
3-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26
4-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22
5-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.27
6-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
7-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.28
8-May	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.28
9-May	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	0.2	0.2	0.2	0.2	0.2	0.2	0.27
10-May	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.38
11-May	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.49
12-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22
13-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
14-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.25
15-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.25
16-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.26
17-May	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.27
18-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.24
19-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.28
20-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
21-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22
22-May	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.28
23-May	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	0.30
24-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
25-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.25
26-May	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.31
27-May	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	N	N	N	N	N	N	N	0.2	0.2	0.2	0.2	0.2	0.26
28-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21
29-May	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.29
30-May	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26
31-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.27
Diurnal Maximums	0.43	0.47	0.49	0.49	0.47	0.46	0.42	0.38	0.33	0.31	0.30	0.30	0.31	0.31	0.31	0.31	0.31	0.30	0.30	0.30	0.29	0.32	0.35	0.38	

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
May 1, 2009 to June 1, 2009

Maximum Value: 2.84 ppm on May 11 07:00

Maximum Daily Average: 2.22 ppm on May 11

Minimum Value: 1.9 ppm on May 29 23:00

Minimum Daily Average: 2.02 ppm on May 6

Maximum Diurnal Average: 2.16 ppm at hour 7

Minimum Diurnal Average: 2.02 ppm at hour 17

Monthly Average: 2.075 ppm

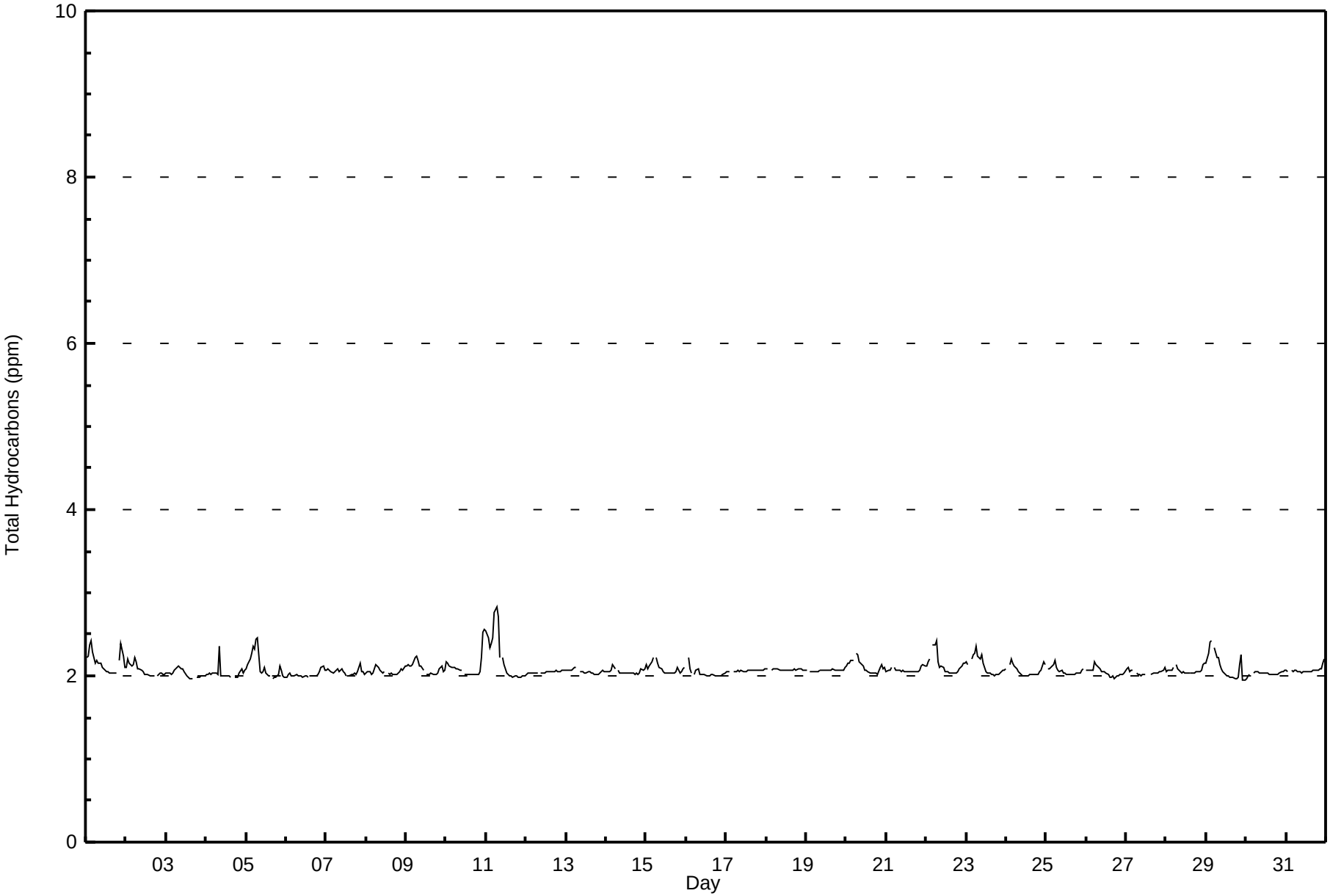
Percentiles: P_1 = 1.97 P_{10} = 2.00 Q_1 = 2.03 Median = 2.05 Q_3 = 2.09 P_{90} = 2.17 P_{99} = 2.42

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-May	2.2	2.2	2.4	2.4	2.3	2.2	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	A	2.2	2.4	2.2	2.1	2.16	2.42
2-May	2.1	2.2	2.2	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.07	2.21
3-May	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.03	2.12
4-May	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.4	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.03	2.36
5-May	2.1	2.1	2.2	2.3	2.4	2.3	2.4	2.5	2.0	2.0	2.1	2.1	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.12	2.45
6-May	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.02	2.12
7-May	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.1	2.0	2.05	2.16
8-May	2.0	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.05	2.14
9-May	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.09	2.24
10-May	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.5	2.6	2.11	2.56
11-May	2.5	2.5	2.3	2.4	2.5	2.8	2.8	2.7	2.2	A	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.22	2.84
12-May	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.04	2.07
13-May	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.05	2.10
14-May	2.0	2.0	2.1	2.1	2.1	2.1	A	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.05	2.13
15-May	2.1	2.1	2.1	2.2	2.2	A	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.09	2.23
16-May	P	2.2	2.1	2.0	A	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.03	2.22
17-May	2.0	2.0	2.1	A	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.06	2.08
18-May	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.08	2.09
19-May	2.1	A	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.06	2.11
20-May	2.1	2.2	2.1	2.2	2.2	A	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.11	2.27
21-May	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.07	2.13
22-May	2.1	2.2	2.2	A	2.4	2.4	2.4	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.13	2.43
23-May	2.2	2.1	A	2.2	2.3	2.3	2.4	2.2	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.12	2.36
24-May	2.1	A	2.1	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.06	2.20
25-May	A	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	A	2.06	2.19
26-May	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.04	2.17
27-May	2.1	2.1	2.1	2.1	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	C	C	A	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.04	2.10
28-May	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.06	2.15
29-May	2.2	2.3	2.4	2.4	A	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	1.9	2.0	2.11	2.42
30-May	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.03	2.07
31-May	2.1	2.1	A	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.07	2.20
	2.10	2.11	2.11	2.12	2.13	2.15	2.16	2.13	2.09	2.07	2.06	2.05	2.03	2.03	2.02	2.02	2.02	2.02	2.02	2.03	2.06	2.09	2.09	2.09	Diurnal Average	
	2.55	2.46	2.41	2.42	2.45	2.76	2.84	2.72	2.36	2.25	2.23	2.13	2.07	2.07	2.07	2.07	2.08	2.08	2.07	2.10	2.19	2.38	2.52	2.56	Diurnal Maximum	

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

Hourly Averages for THC at Henry Pirker
May 2009



Peace Airshed Zone Association
Summary of Hourly Maximums

Henry Pirker - Total Hydrocarbons (THC) - ppm
May 1, 2009 to June 1, 2009

Maximum Value: 3.40 ppm on May 11 01:00

Maximum Daily Average: 2.38 ppm on May 11

Minimum Value: 2.0 ppm on May 3 16:00

Minimum Daily Average: 2.05 ppm on May 6

Maximum Diurnal Average: 2.28 ppm at hour 6

Minimum Diurnal Average: 2.04 ppm at hour 17

Monthly Average: 2.129 ppm

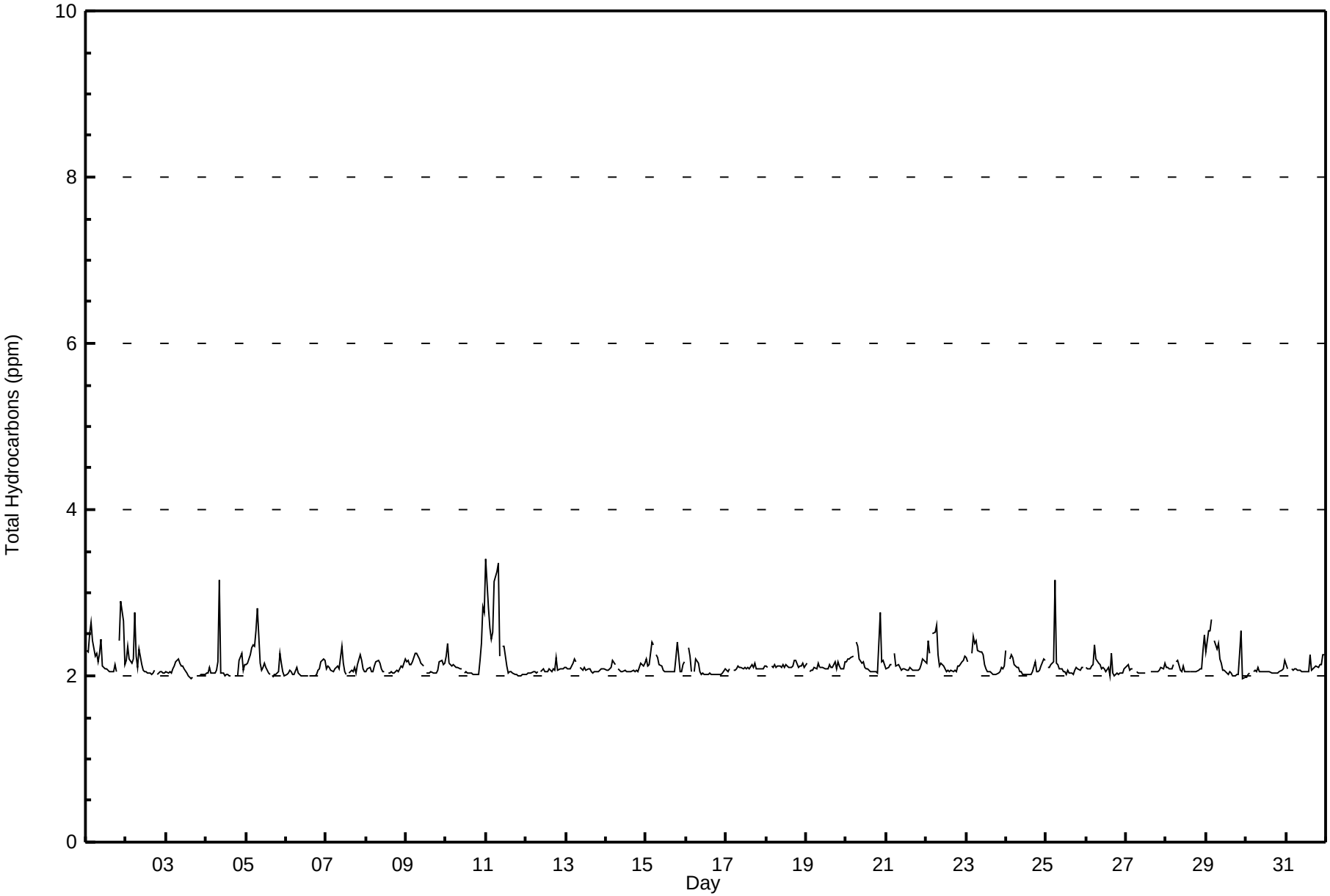
Percentiles: P_1 = 1.99 P_{10} = 2.02 Q_1 = 2.05 Median = 2.08 Q_3 = 2.14 P_{90} = 2.27 P_{99} = 2.77

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

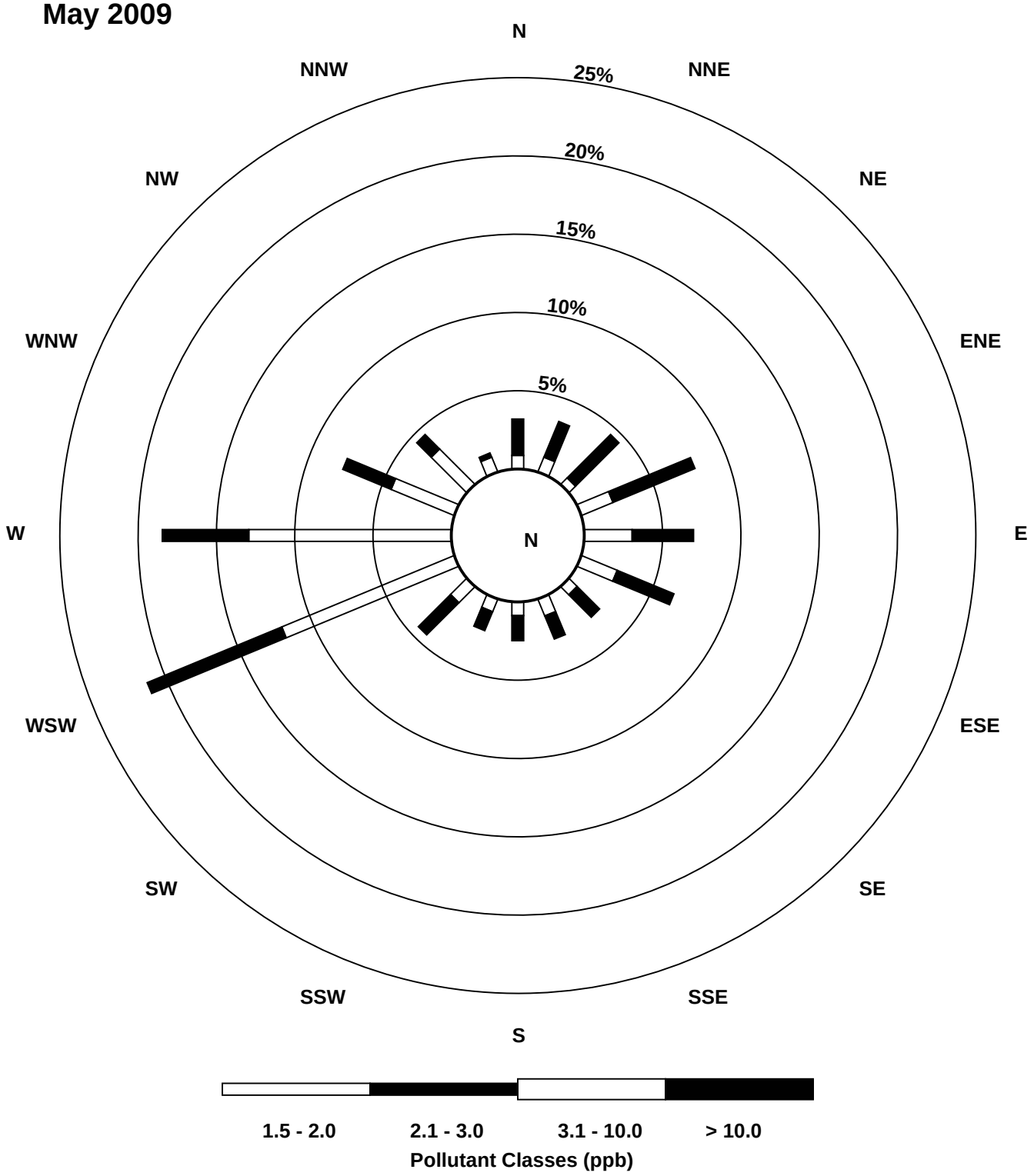
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-May	2.3	2.3	2.5	2.6	2.4	2.2	2.3	2.2	2.3	2.4	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.1	2.1	A	2.4	2.9	2.7	2.1	2.28	2.90
2-May	2.2	2.4	2.2	2.1	2.2	2.8	2.2	2.1	2.3	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	A	2.0	2.1	2.1	2.0	2.0	2.14	2.77
3-May	2.0	2.0	2.1	2.0	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.05	2.21
4-May	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.2	3.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.2	2.3	2.1	2.1	2.10	3.15
5-May	2.1	2.2	2.2	2.3	2.4	2.4	2.5	2.8	2.2	2.1	2.1	2.1	2.1	2.0	2.0	A	2.0	2.0	2.0	2.0	2.3	2.1	2.0	2.0	2.18	2.82
6-May	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.2	2.05	2.20
7-May	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.4	2.2	2.1	2.0	A	2.0	2.1	2.1	2.1	2.0	2.1	2.3	2.2	2.1	2.1	2.10	2.36
8-May	2.0	2.1	2.1	2.0	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	A	2.0	2.0	2.1	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.2	2.09	2.21
9-May	2.2	2.2	2.1	2.1	2.2	2.3	2.3	2.2	2.2	2.1	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.1	2.2	2.13	2.27
10-May	2.2	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.4	2.8	2.8	2.17	2.83
11-May	3.4	2.8	2.6	2.4	2.5	3.1	3.3	3.3	2.2	A	2.4	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.38	3.40
12-May	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.07	2.22
13-May	2.1	2.1	2.1	2.1	2.2	2.2	2.2	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.09	2.21
14-May	2.1	2.1	2.1	2.1	2.2	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.2	2.1	2.2	2.09	2.19
15-May	2.2	2.1	2.1	2.4	2.4	A	2.3	2.2	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.2	2.4	2.0	2.1	2.1	2.2	2.15	2.40
16-May	P	2.3	2.2	2.1	A	2.0	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.07	2.34
17-May	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.09	2.15
18-May	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.12	2.19
19-May	2.2	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.1	2.1	2.1	2.2	2.11	2.17
20-May	2.2	2.2	2.2	2.2	2.2	A	2.4	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.8	2.2	2.2	2.1	2.18	2.76
21-May	2.1	2.1	2.1	2.1	A	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.11	2.27
22-May	2.2	2.4	2.3	A	2.5	2.5	2.6	2.3	2.1	2.2	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.1	2.0	2.1	2.1	2.2	2.2	2.2	2.19	2.61
23-May	2.2	2.2	A	2.3	2.5	2.4	2.4	2.3	2.3	2.3	2.3	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.17	2.47
24-May	2.3	A	2.2	2.3	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.0	2.1	2.1	2.1	2.2	2.2	2.11	2.30
25-May	A	2.1	2.1	2.1	2.2	3.2	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	A	2.13	3.16
26-May	2.1	2.1	2.1	2.1	2.1	2.4	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.10	2.37
27-May	2.1	2.1	2.1	2.1	2.1	A	2.1	2.0	2.0	2.0	2.0	2.0	C	C	A	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.07	2.16
28-May	2.1	2.1	2.1	2.1	2.1	A	2.2	2.2	2.1	2.0	2.1	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.5	2.11	2.49
29-May	2.3	2.5	2.5	2.7	A	2.4	2.3	2.4	2.2	2.2	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.3	2.6	2.0	2.0	2.20	2.67
30-May	2.0	2.0	2.0	A	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.05	2.19
31-May	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.3	2.11	2.26
	2.17	2.18	2.17	2.18	2.18	2.28	2.23	2.22	2.16	2.11	2.10	2.07	2.06	2.05	2.05	2.06	2.04	2.06	2.06	2.07	2.13	2.16	2.15	2.15	Diurnal Average	
	3.40	2.81	2.58	2.67	2.52	3.16	3.26	3.35	3.15	2.44	2.36	2.35	2.14	2.11	2.25	2.28	2.11	2.19	2.22	2.40	2.76	2.90	2.83	2.76	Diurnal Maximum	

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

Hourly Maximums for THC at Henry Pirker
May 2009



Pollutant Rose for THC at Henry Pirker
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Henry Pirker - Particulate Matter 2.5 ($PM_{2.5}$) - $\mu g/m^3$
May 1, 2009 to June 1, 2009

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

Maximum Value: 30.7 $\mu g/m^3$ on May 1 22:00

Maximum Daily Average: 9.4 $\mu g/m^3$ on May 1

Minimum Value: 0 $\mu g/m^3$ on May 4 04:00

Maximum Diurnal Average: 6.4 $\mu g/m^3$ at hour 22

Monthly Average: 3.72 $\mu g/m^3$

Minimum Daily Average: 1.0 $\mu g/m^3$ on May 12

Minimum Diurnal Average: 2.5 $\mu g/m^3$ at hour 15

Percentiles: $P_1 = 0.0$ $P_{10} = 0.6$ $Q_1 = 1.3$ Median = 2.8 $Q_3 = 4.9$ $P_{90} = 7.8$ $P_{99} = 16.3$

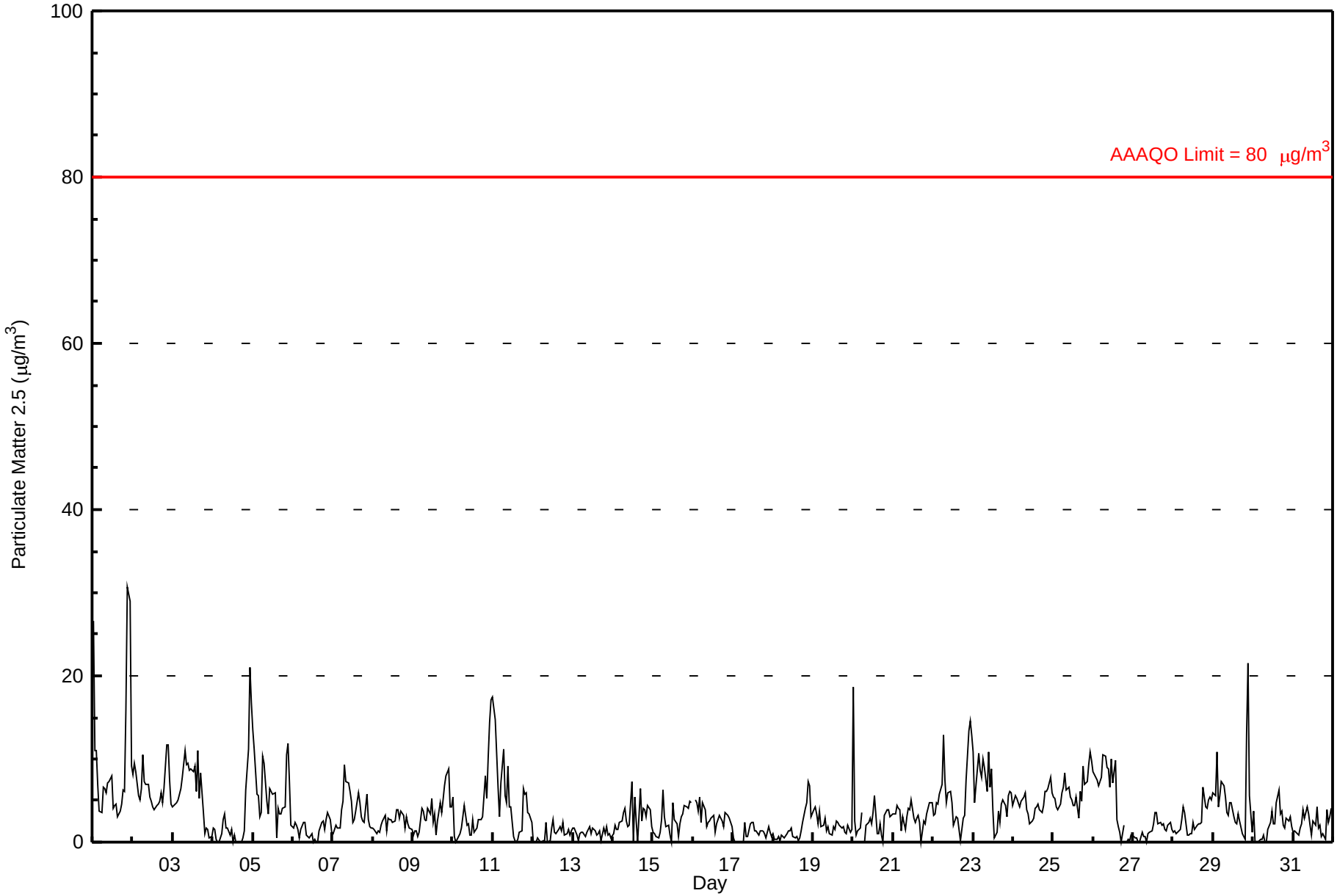
Hours in Service:	744
Hours of Data:	741
Hours of Missing Data:	3
Hours of Calibration:	0
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-May	27	11	11	7	4	4	7	7	6	7	7	8	4	4	5	3	4	5	6	6	16	31	29	9	9.4	30.7
2-May	8	10	9	6	5	6	11	7	7	7	5	5	4	4	4	5	5	6	5	6	12	12	7	5	6.7	11.7
3-May	4	5	5	5	6	6	8	11	9	9	9	9	8	9	6	11	5	8	4	1	2	1	1	1	6.0	11.0
4-May	2	1	0	0	0	1	3	3	2	2	1	2	0	1	0	0	0	0	0	1	6	11	21	17	3.1	21.0
5-May	14	11	6	6	3	3	10	9	5	3	6	6	6	6	0	4	3	3	4	4	10	12	7	2	6.1	13.6
6-May	2	2	2	1	0	2	2	2	1	1	1	1	0	0	0	0	1	2	3	1	3	4	3	1	1.5	3.6
7-May	1	2	2	2	2	4	5	9	7	7	6	5	2	3	4	6	5	3	2	2	6	3	2	2	3.8	9.4
8-May	2	1	1	1	1	2	2	3	1	3	3	3	2	2	4	4	3	4	3	2	3	2	2	1	2.4	4.0
9-May	1	1	1	1	1	4	4	3	3	4	3	5	2	3	1	3	5	4	5	7	8	9	4	4	3.6	8.8
10-May	5	1	0	1	1	2	3	4	2	2	1	1	3	1	2	3	3	3	3	8	5	10	14	17	3.9	17.2
11-May	17	15	11	7	3	7	11	6	5	9	4	4	1	0	0	0	1	1	6	6	6	4	3	2	5.4	17.4
12-May	0	0	0	0	0	0	0	0	2	0	0	2	3	1	1	1	2	1	2	1	1	2	1	1	1.0	2.8
13-May	2	2	1	0	1	1	1	1	1	2	2	1	2	1	1	1	1	0	2	1	2	1	1	1	1.2	1.9
14-May	1	2	1	2	2	3	4	4	2	2	2	7	0	5	2	0	6	3	4	4	3	4	4	2	2.9	7.3
15-May	1	1	1	0	1	3	6	3	2	2	1	0	5	3	2	1	2	3	3	4	4	4	5	5	2.6	6.2
16-May	P	5	5	4	5	2	5	4	2	2	3	3	3	1	2	3	3	2	2	4	3	3	3	2	3.1	5.4
17-May	1	0	0	0	0	0	0	2	1	1	2	2	2	1	1	1	1	1	1	1	0	2	1	1	1.0	2.4
18-May	1	0	0	1	0	1	1	1	1	1	1	2	1	1	1	0	1	1	2	4	5	7	7	3	1.8	7.3
19-May	4	4	3	2	4	2	2	3	1	2	1	1	2	2	3	2	2	2	2	1	1	2	1	2	2.1	4.2
20-May	19	3	1	1	2	4	BD	0	2	2	3	2	4	6	1	1	2	1	0	3	4	4	3	3	3.0	18.7
21-May	3	3	4	4	4	1	3	1	3	4	4	5	3	2	3	3	2	0	3	2	3	4	5	5	3.2	5.0
22-May	3	3	5	5	6	7	13	7	5	6	6	5	2	3	3	3	0	2	3	3	8	13	15	13	5.7	14.5
23-May	11	5	7	11	9	8	10	9	6	11	7	9	4	0	1	4	2	5	5	4	3	6	6	6	6.1	10.8
24-May	4	6	5	5	4	5	5	6	4	3	2	3	3	4	4	5	4	4	4	6	6	6	8	6	4.7	7.9
25-May	5	5	4	4	5	6	7	8	6	7	5	5	4	4	5	3	6	5	9	7	7	9	11	10	6.2	10.9
26-May	9	8	7	7	7	8	11	10	9	9	7	10	7	10	3	2	1	0	2	BD	0	0	0	1	5.5	10.5
27-May	1	0	0	0	0	1	1	1	0	1	1	1	2	4	4	2	2	2	2	2	1	2	2	2	1.5	3.6
28-May	1	1	1	1	1	3	4	4	1	1	1	1	2	1	2	2	2	2	7	4	4	5	5	5	2.6	6.6
29-May	6	6	11	4	6	7	7	5	4	3	5	5	3	2	2	3	3	1	1	0	13	22	6	1	5.2	21.6
30-May	4	0	0	0	0	0	1	0	0	1	2	4	2	2	5	6	3	4	2	2	3	3	3	2	2.1	6.2
31-May	1	1	1	1	2	2	4	3	4	3	2	1	3	2	4	2	2	1	1	0	4	2	3	4	2.2	4.2
	5.3	3.7	3.4	2.8	2.8	3.4	5.0	4.5	3.4	3.8	3.3	3.8	2.9	2.9	2.5	2.7	2.7	2.5	3.2	3.3	4.9	6.4	5.9	4.3	Diurnal Average	
	26.6	14.7	11.0	10.7	8.6	7.8	12.8	11.0	9.3	10.8	8.7	10.0	8.4	9.8	6.2	11.0	6.5	8.3	9.2	7.9	15.9	30.7	28.9	17.2	Diurnal Maximum	

P - Power Failure BD - Baseline Drift

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

Hourly Averages for $PM_{2.5}$ at Henry Pirker
May 2009



Henry Pirker - Particulate Matter 2.5 ($PM_{2.5}$) - $\mu g/m^3$
May 1, 2009 to June 1, 2009

Maximum Value: 72.9 $\mu g/m^3$ on May 20 01:00

Maximum Daily Average: 14.4 $\mu g/m^3$ on May 1

Minimum Value: 1 $\mu g/m^3$ on May 10 03:00

Maximum Diurnal Average: 10.5 $\mu g/m^3$ at hour 1

Monthly Average: 7.58 $\mu g/m^3$

Minimum Daily Average: 3.4 $\mu g/m^3$ on May 17

Minimum Diurnal Average: 5.8 $\mu g/m^3$ at hour 5

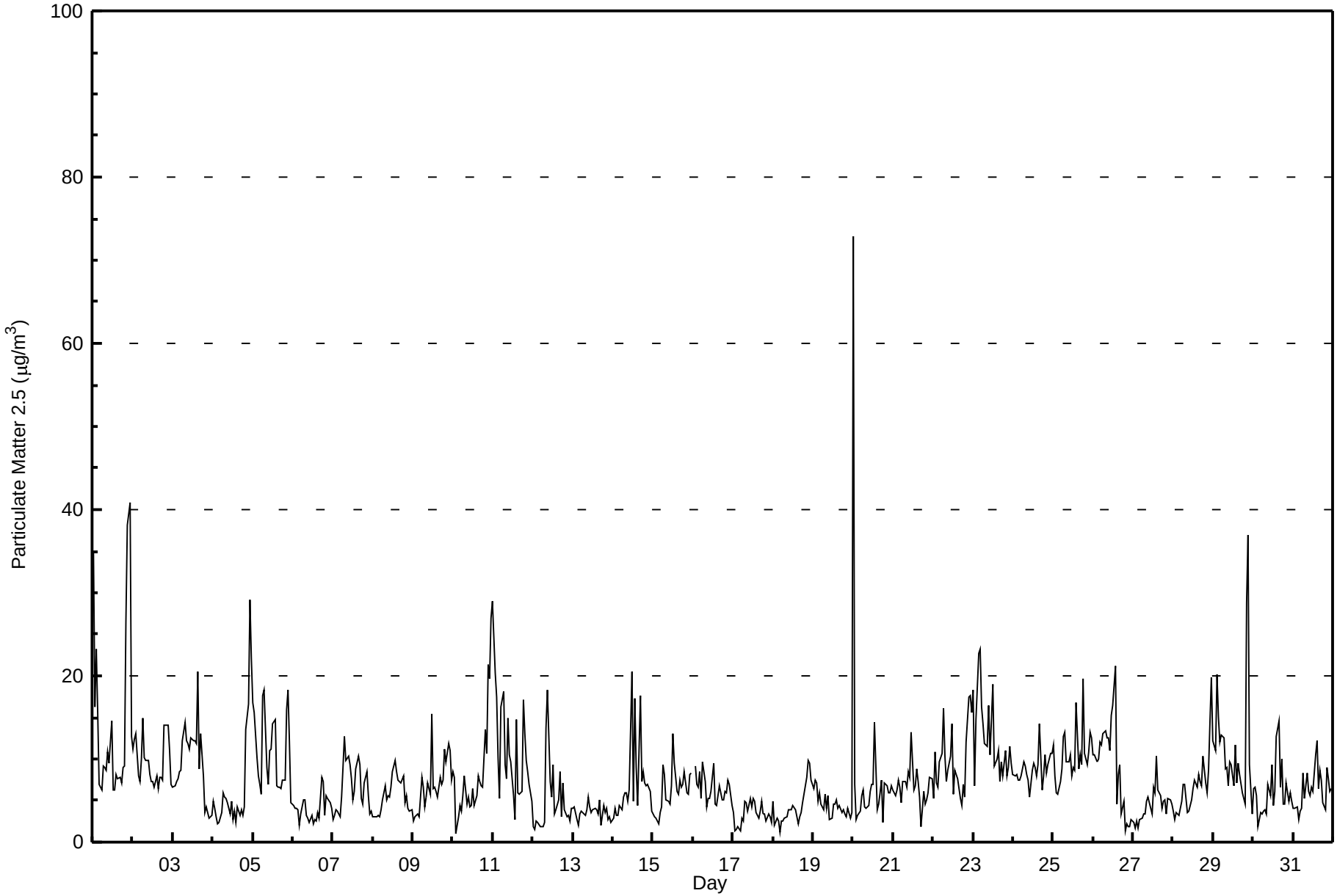
Percentiles: P_1 = 1.6 P_{10} = 3.0 Q_1 = 4.1 Median = 6.5 Q_3 = 9.3 P_{90} = 13.2 P_{99} = 29.0

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

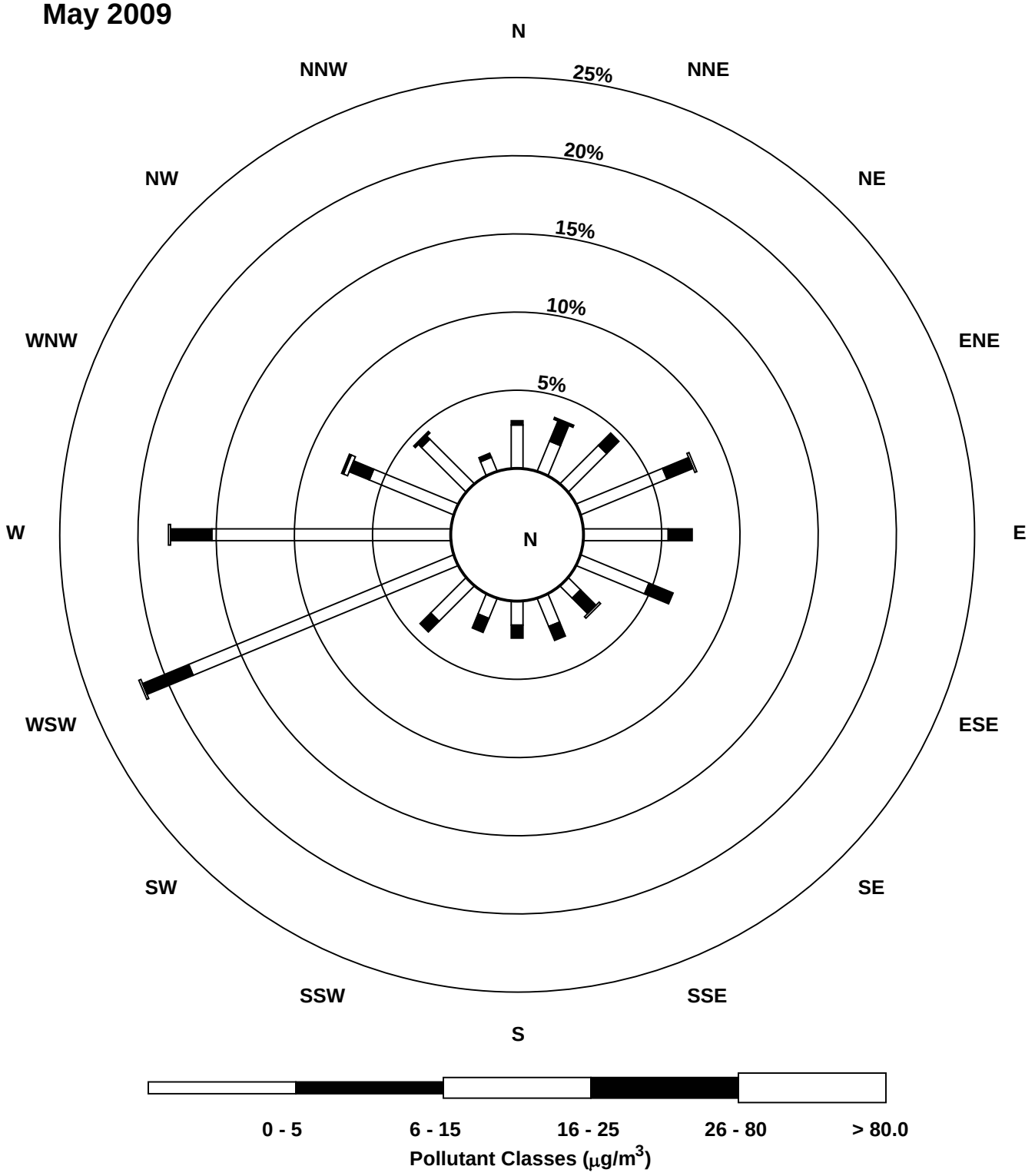
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-May	35	16	23	16	7	6	9	9	9	11	9	15	6	6	8	8	8	7	9	9	26	38	41	13	14.4	40.8
2-May	11	12	13	8	7	10	15	10	10	10	8	7	7	7	8	6	8	8	7	14	14	14	11	7	9.7	14.8
3-May	7	7	7	8	9	9	12	14	12	12	11	12	12	12	12	20	9	13	8	4	4	4	3	3	9.3	20.5
4-May	5	4	3	2	2	4	6	5	5	5	3	5	3	4	2	4	3	4	3	4	14	17	29	22	6.6	29.1
5-May	17	16	10	8	7	6	18	18	9	7	11	11	14	15	7	7	7	6	7	7	16	18	12	5	10.8	18.2
6-May	4	4	4	4	2	3	5	5	3	3	2	3	2	3	3	4	3	8	7	3	6	5	5	4	4.0	7.7
7-May	3	3	4	4	3	6	9	13	10	10	9	8	5	6	9	10	9	5	5	7	8	6	3	4	6.6	12.7
8-May	3	3	3	3	3	4	5	7	5	6	6	7	9	10	8	8	7	7	8	5	6	4	4	4	5.5	9.8
9-May	3	3	3	3	3	8	7	4	5	7	6	15	6	7	6	5	8	7	7	11	10	12	11	8	6.9	15.5
10-May	9	8	1	3	4	4	6	8	5	5	4	4	6	4	6	8	7	7	7	14	11	21	20	27	8.2	27.0
11-May	29	20	17	10	5	16	18	9	8	15	10	10	6	3	15	6	6	6	17	13	10	8	7	5	11.2	29.1
12-May	2	2	3	2	2	2	2	2	14	18	7	5	9	3	4	5	9	3	7	4	3	3	3	4	4.9	18.3
13-May	4	4	3	2	3	4	4	3	4	6	4	4	4	4	4	3	5	2	4	4	4	3	3	2	3.6	5.5
14-May	3	4	3	3	4	4	5	6	6	5	6	20	5	17	9	4	18	7	8	7	7	7	6	4	7.1	20.5
15-May	3	3	3	2	3	4	9	8	5	5	5	7	13	9	6	6	7	7	7	8	6	6	8	8	6.2	13.0
16-May	P	9	7	7	8	5	10	7	4	5	5	6	9	5	4	6	7	5	5	6	6	7	7	4	6.4	9.7
17-May	4	1	1	2	1	3	3	5	5	4	5	4	5	5	3	3	4	5	3	3	3	3	3	2	3.4	5.3
18-May	5	2	3	2	1	3	3	3	3	4	4	4	4	4	3	2	3	4	5	7	8	10	9	7	4.3	9.8
19-May	6	7	7	5	6	5	4	6	4	6	3	3	5	5	5	4	4	3	4	3	3	4	3	4	4.5	7.5
20-May	73	7	3	3	4	6	6	4	4	4	6	7	7	14	4	5	6	7	2	7	7	6	6	7	8.6	72.9
21-May	6	6	6	7	7	5	7	7	7	9	8	13	6	7	9	7	5	2	6	5	5	6	8	8	6.7	13.1
22-May	5	11	7	7	10	11	16	10	7	9	10	14	6	9	8	8	5	4	7	5	12	17	18	16	9.6	17.6
23-May	18	7	15	23	23	16	14	12	12	16	11	15	19	9	10	11	7	10	8	11	8	9	11	9	12.7	23.2
24-May	8	8	8	7	7	8	10	9	8	8	5	9	9	9	8	9	14	6	8	10	8	9	11	11	8.7	14.3
25-May	12	8	6	6	7	9	13	13	10	10	11	8	9	9	17	9	11	9	20	11	9	11	13	13	10.5	19.6
26-May	10	10	10	10	12	12	13	13	13	12	11	15	16	21	5	8	9	3	5	1	2	2	2	3	9.2	21.2
27-May	2	2	3	2	3	3	3	3	5	5	5	3	7	6	10	6	6	4	5	5	3	5	5	5	4.4	10.4
28-May	4	3	4	3	4	5	7	7	4	4	4	5	6	7	7	8	7	7	10	7	6	9	14	20	6.7	19.8
29-May	12	11	20	15	12	13	12	9	9	7	10	9	7	12	7	10	8	6	5	5	29	37	9	3	11.5	37.0
30-May	7	7	6	2	4	3	4	4	3	7	6	9	4	6	13	15	7	10	5	5	7	5	6	5	6.1	14.6
31-May	4	4	4	3	4	4	8	5	8	6	6	7	6	10	12	6	9	8	5	4	9	8	6	6	6.3	12.2
	10.5	6.9	6.8	5.9	5.8	6.4	8.5	7.8	6.9	7.7	6.9	8.6	7.6	8.0	7.5	7.1	7.3	6.2	7.0	6.8	8.7	10.1	9.6	7.8	Diurnal Average	
	72.9	20.4	23.2	22.7	23.2	16.2	18.1	18.2	13.8	18.3	11.2	20.5	19.0	21.2	16.7	20.5	17.7	13.0	19.6	14.1	28.8	38.2	40.8	27.0	Diurnal Maximum	

P - Power Failure

Hourly Maximums for $PM_{2.5}$ at Henry Pirker
May 2009



Pollutant Rose for $PM_{2.5}$ at Henry Pirker
May 2009



Henry Pirker - External Temperature (ET) - ^{o}C
May 1, 2009 to June 1, 2009

Maximum Value: 26.5 ^{o}C on May 29 18:00

Maximum Daily Average: 16.8 ^{o}C on May 29

Minimum Value: -4 ^{o}C on May 20 05:00

Minimum Daily Average: 0.7 ^{o}C on May 19

Maximum Diurnal Average: 14.3 ^{o}C at hour 16

Minimum Diurnal Average: 3.5 ^{o}C at hour 6

Monthly Average: 9.44 ^{o}C

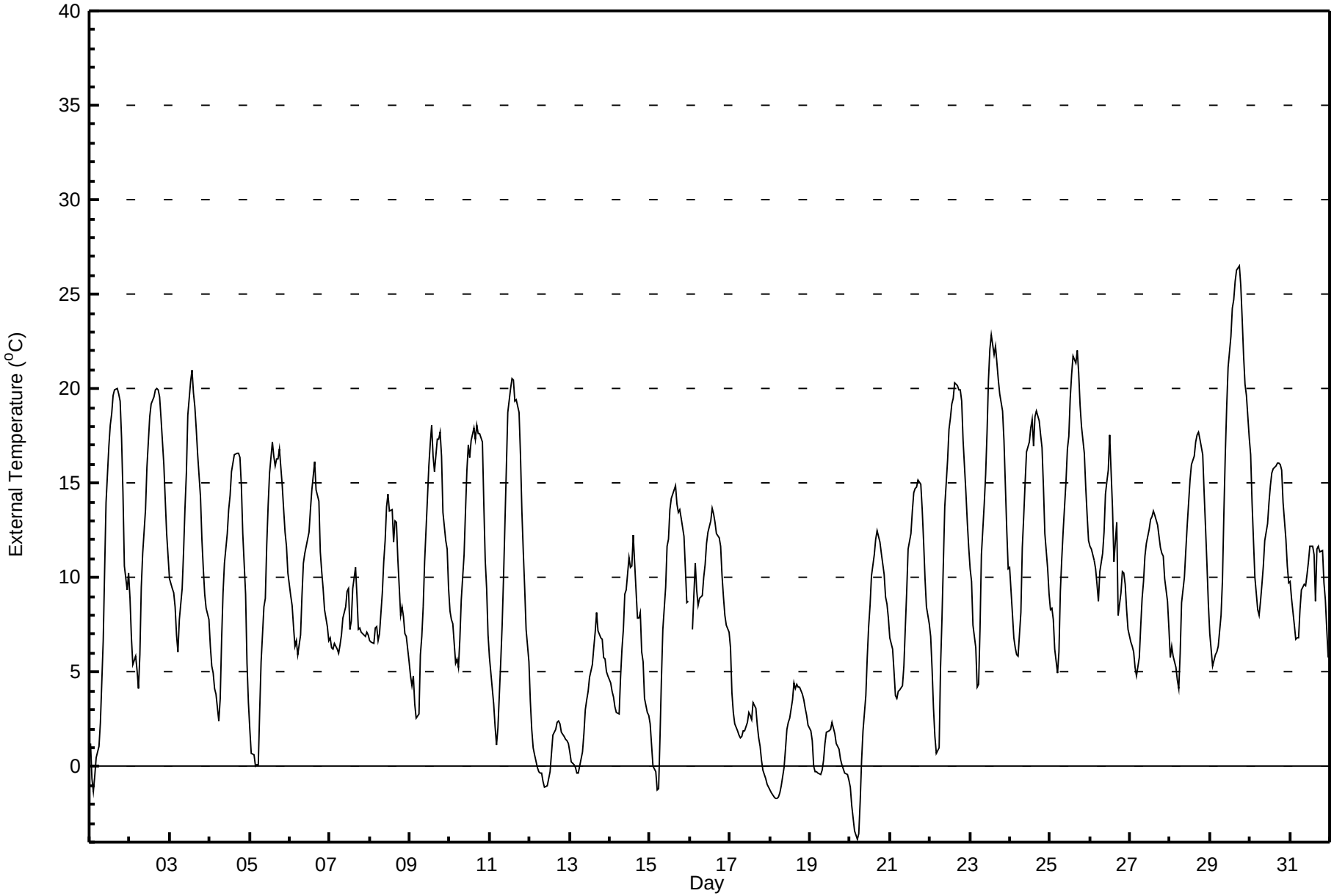
Percentiles: P_1 = -1.7 P_{10} = 1.1 Q_1 = 5.0 Median = 9.2 Q_3 = 13.8 P_{90} = 17.8 P_{99} = 23.1

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

Day	Hourly Period Ending At (MST) 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-May	1	-1	-1	0	0	1	2	5	7	10	14	17	18	19	20	20	20	20	19	17	14	11	9	10	10.5	20.0
2-May	9	7	5	6	5	4	6	9	11	14	16	17	19	19	20	20	20	20	20	18	16	14	12	11	13.3	20.0
3-May	10	9	9	8	7	6	8	9	11	14	16	19	20	21	20	19	18	17	14	12	10	9	8	8	12.6	21.0
4-May	6	5	5	4	4	2	4	7	9	11	12	14	14	16	16	16	17	17	16	15	12	9	5	3	10.0	16.6
5-May	2	1	1	0	0	0	3	6	8	9	12	14	16	17	16	16	16	16	17	15	14	12	12	10	9.7	17.2
6-May	9	9	7	6	7	6	7	9	11	11	12	12	14	15	15	16	15	14	11	10	9	8	7	7	10.3	16.1
7-May	7	6	6	6	6	6	6	7	8	8	9	9	7	8	9	11	9	7	7	7	7	7	7	7	7.5	10.6
8-May	7	7	7	7	7	7	7	9	11	12	14	14	14	14	12	13	13	11	8	8	8	7	7	6	9.5	14.4
9-May	5	4	5	3	3	3	6	7	8	11	14	16	17	18	16	16	17	17	18	16	13	12	12	9	11.1	18.1
10-May	8	8	8	5	6	5	7	9	11	14	16	17	16	17	18	17	18	18	18	17	14	11	9	7	12.2	18.1
11-May	6	4	3	2	1	2	6	7	10	13	16	19	20	21	20	19	19	19	16	14	11	9	7	6	11.3	20.5
12-May	3	2	1	1	0	0	0	0	-1	-1	-1	-1	0	1	2	2	2	2	2	2	2	1	1	1	0.9	3.4
13-May	1	0	0	0	0	0	0	1	2	3	4	4	5	5	6	7	8	7	7	7	6	6	5	5	3.6	8.1
14-May	4	4	4	3	3	3	5	6	7	9	9	11	11	11	12	11	8	8	8	6	6	4	3	3	6.6	12.2
15-May	2	1	0	0	-1	-1	2	5	7	10	12	12	14	14	15	15	14	13	14	13	12	10	9	9	8.3	14.9
16-May	P	7	9	11	9	9	9	9	10	11	12	12	13	14	13	13	12	12	12	10	9	8	7	7	10.4	13.7
17-May	6	4	3	2	2	2	2	2	2	2	2	3	3	2	3	3	2	2	1	0	0	-1	-1	-1	1.9	6.3
18-May	-1	-1	-2	-2	-2	-2	-1	-1	0	1	2	2	3	4	4	4	4	4	4	4	4	3	3	2	1.5	4.4
19-May	2	1	0	0	0	0	0	0	0	1	2	2	2	2	2	2	1	1	0	0	0	0	0	-1	0.7	2.3
20-May	-1	-2	-3	-3	-4	-4	-2	0	2	4	6	7	9	10	11	12	12	12	12	11	10	9	9	8	5.2	12.5
21-May	7	6	5	4	4	4	4	4	5	7	9	11	12	14	14	15	15	15	15	14	12	10	8	8	9.3	15.2
22-May	7	5	3	2	1	1	5	8	11	14	16	18	18	19	19	20	20	20	20	19	17	14	13	12	12.6	20.3
23-May	10	10	7	6	4	4	7	11	14	15	18	20	22	23	22	22	21	20	20	19	17	15	13	10	14.7	22.8
24-May	11	8	7	6	6	6	8	12	13	15	17	17	18	18	17	19	19	18	18	17	15	12	10	9	13.1	18.8
25-May	8	8	8	6	5	6	9	11	12	15	17	17	20	21	22	21	22	21	19	18	17	15	13	12	14.3	22.0
26-May	12	11	11	10	10	9	10	11	12	14	15	16	18	14	11	12	13	8	9	10	10	10	8	7	11.3	17.6
27-May	7	6	6	5	5	6	7	9	10	11	12	13	13	13	14	13	13	12	12	11	11	10	9	7	9.8	13.5
28-May	6	6	6	5	5	4	6	9	10	11	13	14	15	16	16	17	18	18	17	17	14	13	11	9	11.5	17.7
29-May	7	5	6	6	6	6	8	10	13	16	19	21	23	24	25	26	26	26	25	24	22	20	20	17	16.8	26.5
30-May	16	14	12	10	8	8	9	10	11	12	13	14	15	16	16	16	16	16	16	16	14	12	11	10	12.9	16.5
31-May	10	9	7	7	7	7	8	9	10	10	10	11	12	12	11	9	11	12	11	11	10	9	7	6	9.4	11.7
	6.2	5.3	4.7	4.1	3.6	3.5	5.1	6.7	8.3	9.9	11.5	12.7	13.5	14.1	14.2	14.3	14.2	13.7	13.1	12.3	10.9	9.4	8.2	7.2	Diurnal Average	
	16.5	14.0	12.0	10.7	9.6	8.7	10.3	11.6	13.9	16.5	19.1	21.1	22.7	24.3	24.7	25.7	26.3	26.5	25.5	23.7	21.8	20.2	19.6	17.4	Diurnal Maximum	

P - Power Failure

Hourly Averages for External Temperature at Henry Pirker
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Henry Pirker - Relative Humidity (RH) - %
May 1, 2009 to June 1, 2009

Maximum Value: 91.1 % on May 15 06:00

Maximum Daily Average: 85.4 % on May 19

Minimum Value: 17 % on May 29 18:00

Minimum Daily Average: 31.4 % on May 30

Maximum Diurnal Average: 69.4 % at hour 6

Minimum Diurnal Average: 39.0 % at hour 17

Monthly Average: 53.03 %

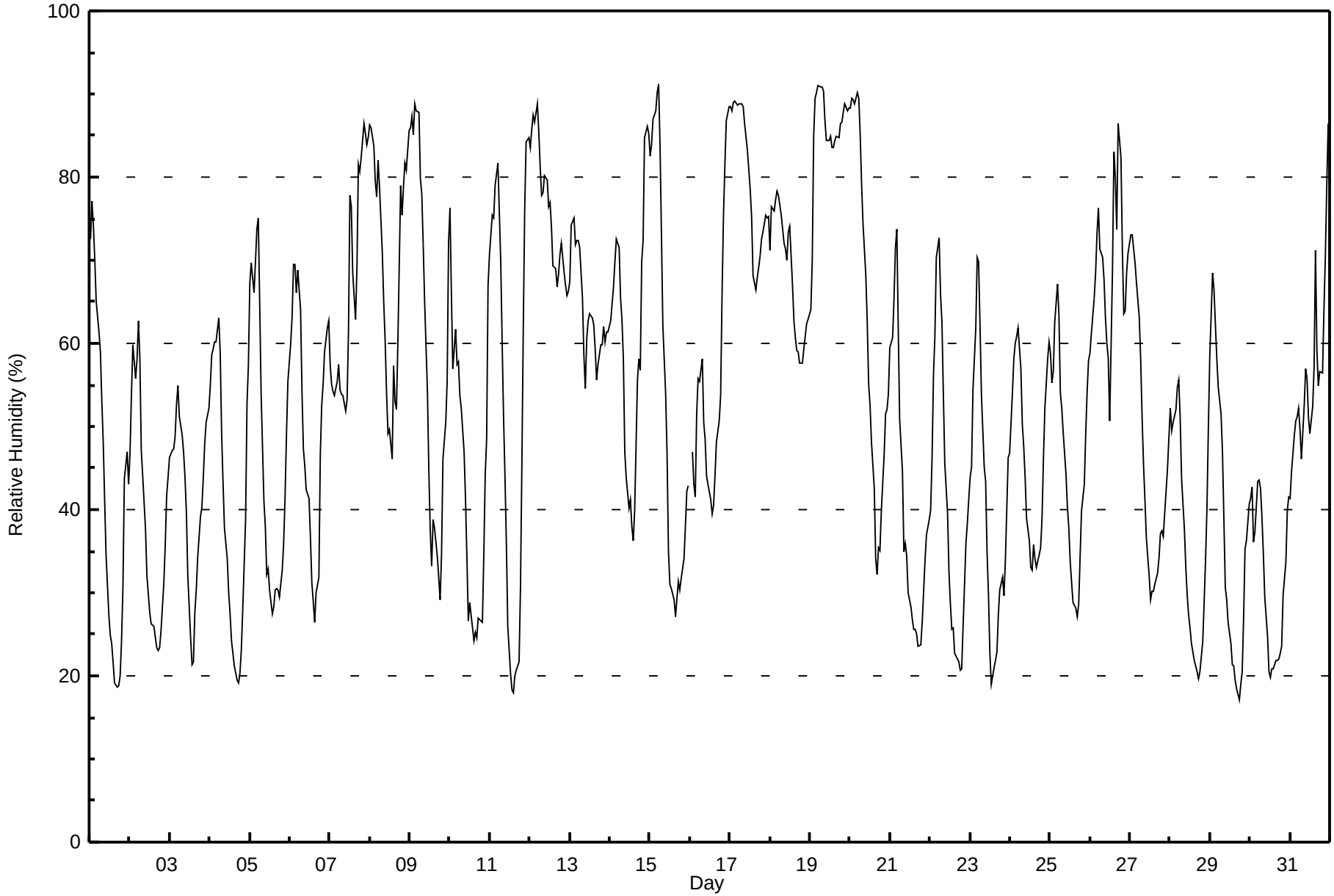
Percentiles: P_1 = 18.9 P_{10} = 25.7 Q_1 = 35.5 Median = 53.7 Q_3 = 69.4 P_{90} = 83.6 P_{99} = 90.1

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

Day	Hourly Period Ending At (MST) 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-May	73	77	74	70	65	61	59	53	48	41	35	27	25	24	22	19	19	19	20	24	31	44	47	43	42.5	77.1
2-May	47	54	60	56	58	63	58	47	44	38	32	30	28	26	26	25	23	23	23	25	31	36	42	44	39.1	62.8
3-May	46	47	47	49	53	55	51	49	47	44	40	32	25	21	22	28	30	34	39	40	44	48	51	52	41.4	54.9
4-May	55	59	59	60	60	63	59	49	43	38	34	30	27	24	23	21	20	19	20	23	28	39	53	57	40.2	63.0
5-May	67	70	66	70	74	75	65	54	41	38	32	33	30	27	28	30	31	30	29	33	36	42	49	55	46.1	75.0
6-May	60	63	69	70	66	69	64	54	47	45	42	41	37	31	29	26	30	32	47	53	55	59	62	63	50.6	69.6
7-May	57	55	54	54	55	58	54	54	54	52	53	61	78	76	69	63	69	82	81	82	86	85	84	85	66.7	86.5
8-May	86	86	84	80	78	82	79	71	65	60	54	49	50	46	57	53	52	60	79	75	79	82	81	86	69.7	86.3
9-May	86	87	85	89	88	88	80	78	72	65	54	45	38	33	39	38	34	32	29	35	46	51	55	72	59.1	88.7
10-May	76	66	57	62	58	58	54	52	47	41	34	27	29	27	24	25	25	27	27	26	35	44	48	67	43.2	76.3
11-May	71	76	75	79	80	82	70	60	51	44	36	26	20	18	18	20	21	22	30	45	62	76	84	85	52.1	84.8
12-May	84	86	87	87	89	85	81	78	78	80	80	76	77	74	69	69	67	68	71	72	68	67	66	66	76.1	88.7
13-May	67	74	75	72	72	72	71	65	59	55	61	63	64	63	62	59	56	57	60	60	62	60	61	61	63.8	75.2
14-May	63	65	67	70	72	72	65	63	58	47	44	40	41	38	36	40	56	58	57	70	72	85	86	85	60.4	86.2
15-May	83	84	87	88	90	91	84	73	62	54	47	35	31	31	29	27	29	31	30	32	34	38	42	43	53.1	91.1
16-May	P	47	43	42	52	56	55	58	50	48	44	43	41	40	41	44	48	51	54	66	75	81	87	89	54.5	88.5
17-May	88	88	89	89	89	89	89	89	88	86	83	81	79	75	68	67	68	69	71	73	73	75	75	75	79.9	89.2
18-May	71	76	76	77	78	78	77	75	72	71	70	73	74	67	63	61	59	59	58	58	59	61	62	63	68.3	78.2
19-May	64	70	85	89	90	91	91	91	90	87	84	84	85	84	84	84	85	85	86	87	88	89	88	88	85.4	91.0
20-May	88	90	89	89	90	90	85	79	74	68	63	55	53	48	43	34	32	35	35	40	47	52	52	54	61.9	90.1
21-May	59	61	65	71	74	62	51	45	35	36	34	30	28	27	26	26	25	24	24	26	30	34	37	39	40.3	73.8
22-May	40	46	56	61	70	73	66	63	54	46	40	32	29	26	26	23	22	22	21	21	26	36	38	41	40.6	72.7
23-May	44	45	54	62	70	70	62	54	45	43	35	30	23	19	21	22	23	27	30	32	30	34	40	46	40.1	70.4
24-May	47	54	58	60	61	62	57	50	48	44	39	36	33	33	36	34	33	35	35	39	46	52	58	60	46.3	61.9
25-May	59	55	57	63	67	63	54	52	49	44	40	38	34	31	29	28	27	29	34	40	43	49	54	58	45.7	67.2
26-May	59	61	65	69	73	76	71	70	68	63	60	58	51	69	83	80	74	86	82	71	64	64	69	71	69.1	86.5
27-May	73	73	71	70	67	63	58	51	45	41	37	32	29	30	30	31	32	34	37	38	37	40	45	49	46.4	73.0
28-May	52	49	51	52	55	56	51	44	38	33	30	27	26	24	22	21	20	20	21	24	29	34	40	50	36.1	55.6
29-May	59	68	66	62	58	55	52	47	39	31	29	27	24	21	21	20	18	17	19	21	27	35	36	41	37.2	68.5
30-May	41	43	36	37	43	44	42	39	35	29	25	21	20	21	21	22	22	22	23	24	30	34	40	42	31.4	43.6
31-May	41	45	49	51	51	52	50	46	53	57	56	51	49	52	57	71	59	55	57	56	64	71	79	86	56.6	86.5
	63.6	65.2	66.4	67.6	69.3	69.4	64.7	59.8	54.8	50.7	46.6	43.0	41.1	39.6	39.4	39.0	39.0	40.8	42.9	45.5	49.6	54.6	58.4	61.8	Diurnal Average	
	88.5	89.6	89.3	89.4	90.2	91.1	90.8	90.8	90.3	86.7	84.4	84.4	84.9	83.6	83.6	84.4	85.0	86.5	86.4	86.6	87.8	88.9	88.0	88.5	Diurnal Maximum	

P - Power Failure

Hourly Averages for Relative Humidity at Henry Pirker
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Henry Pirker - Solar Radiation (SR) - W/m^2
May 1, 2009 to June 1, 2009

Maximum Value: 774.5 W/m^2 on May 30 13:00

Maximum Daily Average: 286.6 W/m^2 on May 30

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

Maximum Diurnal Average: 551.3 W/m^2 at hour 13

Monthly Average: 196.73 W/m^2

Minimum Daily Average: 69.8 W/m^2 on May 12

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

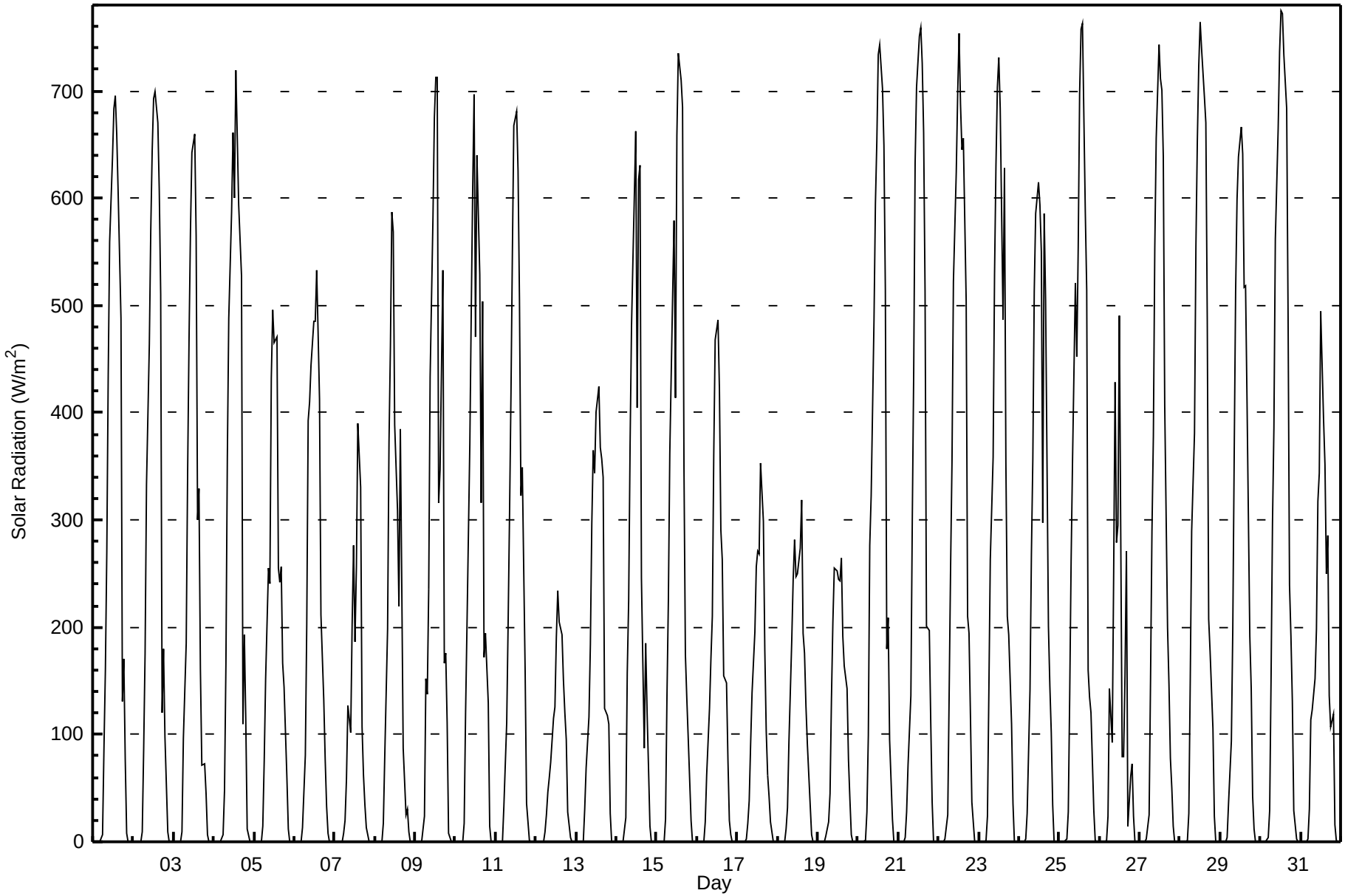
Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 97.4 Q_3 = 349.1 P_{90} = 614.0 P_{99} = 749.1

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

Day	Hourly Period Ending At (MST) 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-May	0	0	0	0	0	6	87	160	269	435	559	637	684	695	660	606	488	131	171	77	8	0	0	0	236.4	695.4
2-May	0	0	0	0	0	9	86	176	334	463	570	644	692	700	670	607	510	121	179	97	10	0	0	0	244.5	699.7
3-May	0	0	0	0	0	10	96	184	345	469	570	642	659	564	301	329	161	71	73	45	7	0	0	0	188.6	659.1
4-May	0	0	0	0	0	7	48	165	358	488	587	661	600	719	657	593	527	109	192	114	12	0	0	0	243.3	719.0
5-May	0	0	0	0	0	14	76	152	255	240	432	495	465	470	255	242	257	167	144	59	11	0	0	0	155.7	495.2
6-May	0	0	0	0	0	13	81	203	393	410	445	485	485	533	475	412	212	133	76	32	8	0	0	0	183.1	533.2
7-May	0	0	0	0	0	8	20	59	127	102	202	276	186	255	390	330	107	62	35	13	1	0	0	0	90.6	390.1
8-May	0	0	0	0	0	17	79	198	373	461	586	568	389	310	219	384	239	88	25	30	10	0	0	0	165.7	586.5
9-May	0	0	0	0	0	24	151	137	236	434	582	676	712	713	316	346	533	166	176	111	8	0	0	0	221.7	712.8
10-May	0	0	0	0	0	18	121	203	372	494	607	697	471	639	529	316	504	172	194	129	15	0	0	0	228.3	697.2
11-May	0	0	0	0	0	34	111	203	305	416	549	667	681	626	504	322	349	158	35	19	1	0	0	0	207.6	680.6
12-May	0	0	0	0	0	9	25	46	60	74	115	126	190	234	205	193	151	121	95	27	4	0	0	0	69.8	234.2
13-May	0	0	0	0	0	30	68	116	183	296	365	344	401	424	368	356	340	124	117	110	27	0	0	0	153.0	424.5
14-May	0	0	0	0	0	23	158	225	370	479	542	663	405	617	630	245	87	184	121	69	15	0	0	0	201.4	662.6
15-May	0	0	0	0	0	21	134	225	362	508	579	414	658	734	710	684	350	175	133	97	20	0	0	0	241.9	734.5
16-May	P	0	0	0	0	18	62	125	170	211	361	468	486	422	291	263	155	148	76	20	6	0	0	0	142.7	485.9
17-May	0	0	0	0	0	3	17	39	91	138	196	256	271	269	353	298	179	103	62	42	18	0	0	0	97.3	352.6
18-May	0	0	0	0	0	12	32	92	187	245	281	248	250	274	318	194	175	127	92	35	7	0	0	0	107.0	318.2
19-May	0	0	0	0	0	5	18	45	133	205	256	252	245	243	264	192	164	142	77	39	7	0	0	0	95.3	263.8
20-May	0	0	0	0	2	28	100	276	322	487	595	653	733	744	702	649	514	179	209	95	21	0	0	0	262.9	743.5
21-May	0	0	0	0	4	27	72	137	300	439	633	703	751	759	726	661	513	200	197	113	37	0	0	0	261.3	759.1
22-May	0	0	0	0	2	25	139	256	354	522	624	696	753	687	645	656	504	211	194	118	37	1	0	0	267.6	753.0
23-May	0	0	0	0	2	24	141	263	358	528	631	704	731	684	487	628	354	211	193	109	36	0	0	0	253.5	731.5
24-May	0	0	0	0	2	26	142	269	357	513	586	615	594	550	298	586	506	201	146	102	34	0	0	0	230.3	615.4
25-May	0	0	0	0	3	28	136	262	355	521	452	554	697	757	763	587	514	159	135	120	29	1	0	0	253.0	762.7
26-May	0	0	0	0	1	23	143	93	250	428	279	295	490	79	79	155	271	15	61	73	24	0	0	0	115.0	490.3
27-May	0	0	0	0	2	26	150	289	378	554	655	742	711	701	639	408	200	146	78	50	15	0	0	0	239.4	742.4
28-May	0	0	0	0	2	27	149	290	381	556	653	723	764	738	694	671	486	207	178	106	23	1	0	0	277.0	764.2
29-May	0	0	0	0	4	36	94	198	361	514	598	639	666	641	517	519	415	192	142	42	12	0	0	0	232.9	665.7
30-May	0	0	0	0	4	29	154	298	386	562	665	737	775	772	734	684	487	239	192	131	29	2	0	0	286.6	774.5
31-May	0	0	0	0	3	30	114	123	152	199	317	343	495	394	352	250	286	136	107	119	16	2	0	0	143.2	494.6
	0.0	0.0	0.0	0.0	0.9	19.7	96.9	177.6	286.4	399.8	486.3	536.2	551.3	546.7	475.8	431.2	339.9	148.4	125.9	75.6	16.3	0.2	0.0	0.0	Diurnal Average	
	0.0	0.0	0.0	0.0	3.9	36.2	157.5	297.9	392.8	561.9	665.4	742.4	774.5	771.6	762.7	684.5	532.9	239.3	209.4	131.0	37.2	2.2	0.0	0.0	Diurnal Maximum	

P - Power Failure

Hourly Averages for Solar Radiation at Henry Pirker
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Henry Pirker
May 1, 2009 to June 1, 2009
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	4	4	5	4	5	7	8	13	11	10	9	8	10	12	6	8	8	8	8	5	3	3	4	7	4.1	12.8
Dir	297	292	297	287	284	271	252	244	237	243	241	273	291	299	290	353	17	20	16	18	77	315	19	67	295.2	243.6
2 Spd	4	3	3	5	4	2	3	7	8	9	12	10	8	10	11	12	12	14	14	12	11	12	13	13	8.4	14.0
Dir	54	27	35	41	44	25	70	102	101	113	110	86	81	84	70	81	73	70	70	69	68	75	82	86	77.9	70.4
3 Spd	11	13	13	11	6	5	4	3	7	7	9	9	16	17	17	27	26	30	34	32	32	24	18	20	10.9	34.3
Dir	88	86	89	85	78	74	119	211	251	232	244	268	284	266	259	253	247	257	269	269	268	256	258	256	258.3	268.8
4 Spd	14	12	13	7	9	9	11	21	23	24	22	23	19	17	17	15	16	14	13	12	6	5	4	3	13.0	24.0
Dir	258	253	250	240	233	284	248	247	244	244	247	256	256	253	255	247	258	265	272	291	327	338	292	301	256.6	243.9
5 Spd	4	3	4	4	5	5	3	4	9	8	4	7	3	0	1	3	7	3	2	5	5	7	22	22	3.4	22.3
Dir	301	305	289	312	316	284	188	137	106	105	182	215	276	237	250	200	284	217	237	170	191	232	244	249	238.2	243.8
6 Spd	15	13	9	12	15	14	11	15	20	19	18	15	12	12	9	7	11	9	20	15	12	9	8	8	10.5	20.1
Dir	254	260	263	266	261	249	272	262	267	260	252	255	254	247	268	221	259	207	161	164	187	188	194	207	241.0	267.0
7 Spd	9	8	9	9	12	10	13	12	11	10	10	17	19	18	18	19	14	12	6	4	7	8	8	6	9.2	19.3
Dir	220	228	229	234	249	240	250	243	246	248	265	308	296	254	244	237	280	353	323	178	177	219	255	232	254.4	296.4
8 Spd	6	9	10	15	13	10	9	11	16	19	14	14	19	16	23	15	19	21	19	10	7	7	8	5	12.3	23.0
Dir	267	259	261	252	238	248	248	280	296	301	290	280	283	276	276	262	308	309	282	268	295	268	258	246	277.4	276.0
9 Spd	4	7	9	6	7	5	5	6	8	8	6	8	3	4	13	12	10	6	4	3	9	7	9	2	4.8	13.0
Dir	246	236	247	271	299	325	292	284	241	232	241	251	276	236	252	248	311	277	289	103	148	153	230	7	254.1	251.6
10 Spd	1	4	7	7	12	9	10	7	11	10	12	13	14	7	10	11	12	16	10	7	3	3	2	2	7.2	15.8
Dir	156	253	243	280	249	269	261	280	243	238	248	244	278	270	257	276	265	301	302	294	326	134	121	143	265.1	300.6
11 Spd	1	1	3	3	1	1	2	5	4	3	1	5	6	6	3	10	6	8	17	15	21	22	21	24	5.1	23.6
Dir	280	5	263	278	117	155	144	154	224	193	174	117	165	250	91	176	274	259	254	270	275	286	310	307	269.0	307.0
12 Spd	24	23	22	22	N	N	N	N	N	N	N	N	N	12	11	12	9	8	6	5	7	5	5	7	--	24.0
Dir	300	297	299	303	N	N	N	N	N	N	N	N	N	351	344	352	10	18	35	49	73	77	71	91	--	300.2
13 Spd	9	9	8	9	8	8	10	12	12	11	12	12	10	11	8	7	4	7	6	7	3	6	5	8	8.0	12.0
Dir	111	127	121	103	101	94	107	110	112	112	108	88	78	87	91	116	127	85	108	108	139	57	51	70	100.5	112.1
14 Spd	10	8	6	3	3	6	6	5	4	2	6	1	5	5	3	6	16	9	12	12	5	8	5	7	0.7	15.9
Dir	92	103	94	64	50	65	71	74	156	189	167	211	206	250	160	27	239	262	343	325	229	162	204	238	178.0	239.3
15 Spd	11	8	5	3	4	5	4	5	8	14	15	19	19	19	21	22	23	20	19	19	18	11	6	7	11.5	23.5
Dir	248	274	295	311	160	164	152	191	228	248	256	259	250	244	249	246	256	259	247	251	246	227	171	190	245.1	255.8
16 Spd	P	6	9	16	16	4	5	9	19	25	26	25	23	21	21	19	17	15	12	8	5	4	4	5	12.5	26.5
Dir	P	165	258	255	290	273	201	195	252	264	258	259	258	281	278	274	271	279	272	287	266	278	322	8	265.7	258.3
17 Spd	10	11	11	10	12	10	8	9	9	10	10	10	14	15	15	16	15	12	9	9	9	10	10	9	9.9	15.9
Dir	48	52	56	50	57	62	64	17	25	12	20	7	359	6	359	1	359	6	35	44	43	61	65	66	29.7	1.4
18 Spd	9	10	11	9	10	11	11	12	13	13	11	12	14	14	14	14	15	14	15	14	12	10	11	13	11.9	15.3
Dir	65	62	77	76	66	66	70	74	82	84	83	74	82	85	100	83	79	74	77	80	84	103	101	96	80.5	78.6
19 Spd	11	12	11	11	12	10	13	11	11	11	11	10	9	10	11	10	12	12	9	N	N	N	N	N	10.0	12.7
Dir	87	85	78	63	60	49	54	58	59	58	54	46	36	33	25	28	24	10	16	N	N	N	N	N	49.2	53.9
20 Spd	N	N	N	N	N	N	N	N	12	16	15	15	15	18	21	22	22	21	21	17	12	11	9	17	--	22.5
Dir	N	N	N	N	N	N	N	N	244	243	237	239	273	272	263	270	271	265	266	271	244	247	257	248	--	270.7
21 Spd	12	12	8	4	9	7	8	8	8	5	4	5	4	3	2	4	5	4	4	11	11	8	8	8	2.1	11.8
Dir	259	260	284	318	307	36	51	63	62	119	168	32	11	13	345	80	82	56	95	115	108	123	130	109	73.3	259.3
22 Spd	9	5	3	2	3	4	2	8	7	4	3	4	5	2	3	1	7	5	3	6	6	8	8	6	0.3	9.1
Dir	105	107	125	112	140	145	219	244	234	272	283	281	215	305	320	321	306	294	58	339	60	77	77	69	69.7	104.6

Peace Airshed Zone Association
Summary of Hourly Averages

Henry Pirker
May 1, 2009 to June 1, 2009
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	6	6	3	2	3	3	5	3	2	4	4	2	3	3	7	12	12	18	17	14	14	14	12	12	5.9	17.9
Dir	57	65	28	357	276	294	233	288	223	204	221	251	252	187	263	277	271	267	280	274	266	254	269	274	269.5	266.8
24 Spd	10	6	8	7	9	7	11	12	17	18	16	16	17	14	19	15	15	11	11	11	10	6	4	4	8.6	18.5
Dir	245	241	267	253	251	231	248	271	300	290	303	295	291	299	312	298	336	344	10	22	17	34	25	13	301.9	311.7
25 Spd	6	8	5	2	3	4	7	7	6	4	5	7	5	5	3	5	5	7	7	10	8	7	8	8	5.1	9.7
Dir	48	50	53	71	39	54	81	107	130	131	87	89	106	78	104	86	53	86	144	146	108	101	80	82	91.0	145.5
26 Spd	9	9	9	9	3	4	4	2	6	7	6	4	4	12	4	7	11	13	6	14	18	15	10	9	2.0	18.2
Dir	80	87	81	98	102	24	41	106	35	94	160	181	261	213	242	323	316	307	278	238	246	244	241	237	245.7	246.1
27 Spd	10	12	10	9	9	12	15	16	24	29	32	34	35	37	36	34	32	34	30	28	26	17	12	12	22.3	36.8
Dir	241	237	230	235	240	239	238	241	246	260	260	256	255	264	262	262	262	273	279	280	272	267	272	273	260.0	263.5
28 Spd	12	14	13	13	10	8	9	15	23	26	24	26	22	23	24	23	20	19	20	21	16	10	5	4	16.3	25.9
Dir	277	266	251	256	260	239	243	251	264	262	255	274	268	269	268	269	266	253	253	246	257	247	296	320	261.5	274.4
29 Spd	3	2	2	6	5	5	4	6	10	13	13	11	11	8	7	5	5	7	5	4	3	9	28	22	3.1	27.7
Dir	281	200	206	92	147	137	106	108	111	128	125	146	138	118	113	122	116	213	242	213	170	256	280	268	168.9	280.3
30 Spd	25	30	32	22	14	18	19	26	29	31	38	35	34	33	37	39	40	35	35	32	18	18	14	13	27.3	39.8
Dir	254	270	271	257	251	247	252	250	249	248	259	256	247	243	254	257	268	261	271	270	276	278	273	266	259.1	268.5
31 Spd	15	15	17	18	16	16	16	17	21	22	25	24	23	21	21	12	15	9	6	1	3	5	3	3	11.0	24.5
Dir	259	246	245	247	256	249	262	298	310	309	296	304	297	317	332	320	9	38	3	122	248	349	158	217	293.0	296.1
Spd	2.6	2.9	3.5	3.2	3.1	2.2	2.5	3.8	5.7	6.8	7.4	7.7	8.4	7.6	8.3	7.7	8.6	7.7	6.6	5.3	4.3	3.5	3.5	3.0	Diurnal Average	
Dir	264.0	260.4	265.6	271.0	264.0	259.1	241.4	246.3	254.5	253.5	253.4	267.4	271.0	272.6	274.9	271.1	286.4	287.5	281.6	269.3	257.0	249.0	264.1	261.5		
Spd	24.7	29.9	32.4	22.1	15.9	17.8	18.5	26.1	29.5	30.7	38.1	34.9	35.4	36.8	36.8	38.9	39.8	35.1	34.8	32.0	32.1	24.1	27.7	23.6	Diurnal Maximum	
Dir	254.2	270.3	270.5	303.1	290.2	247.2	252.2	249.6	248.9	247.7	259.0	256.1	255.2	263.5	253.7	256.7	268.5	261.1	270.8	270.4	267.9	256.2	280.3	307.0		

Maximum Speed Value: 40 km/h on May 30 17:00
Maximum Daily Speed Average: 27.3 km/h on May 30
Maximum Diurnal Speed Average: 8.6 km/h at hour 17

Minimum Speed Value: 0 km/h on May 5 14:00
Minimum Daily Speed Average: 0.3 km/h on May 22
Minimum Diurnal Speed Average: 2.2 km/h at hour 6

Hours in Service: 744
Hours of Data: 721
Hours of Missing Data: 23

Monthly Average Velocity: 5.18 km/h 267.38 deg

Speed Percentiles: $P_1 = 1.2$ $P_{10} = 3.4$ $Q_1 = 5.7$ Median = 9.6 $Q_3 = 14.6$ $P_{90} = 21.5$ $P_{99} = 34.8$

Percent Operational Time: 96.9

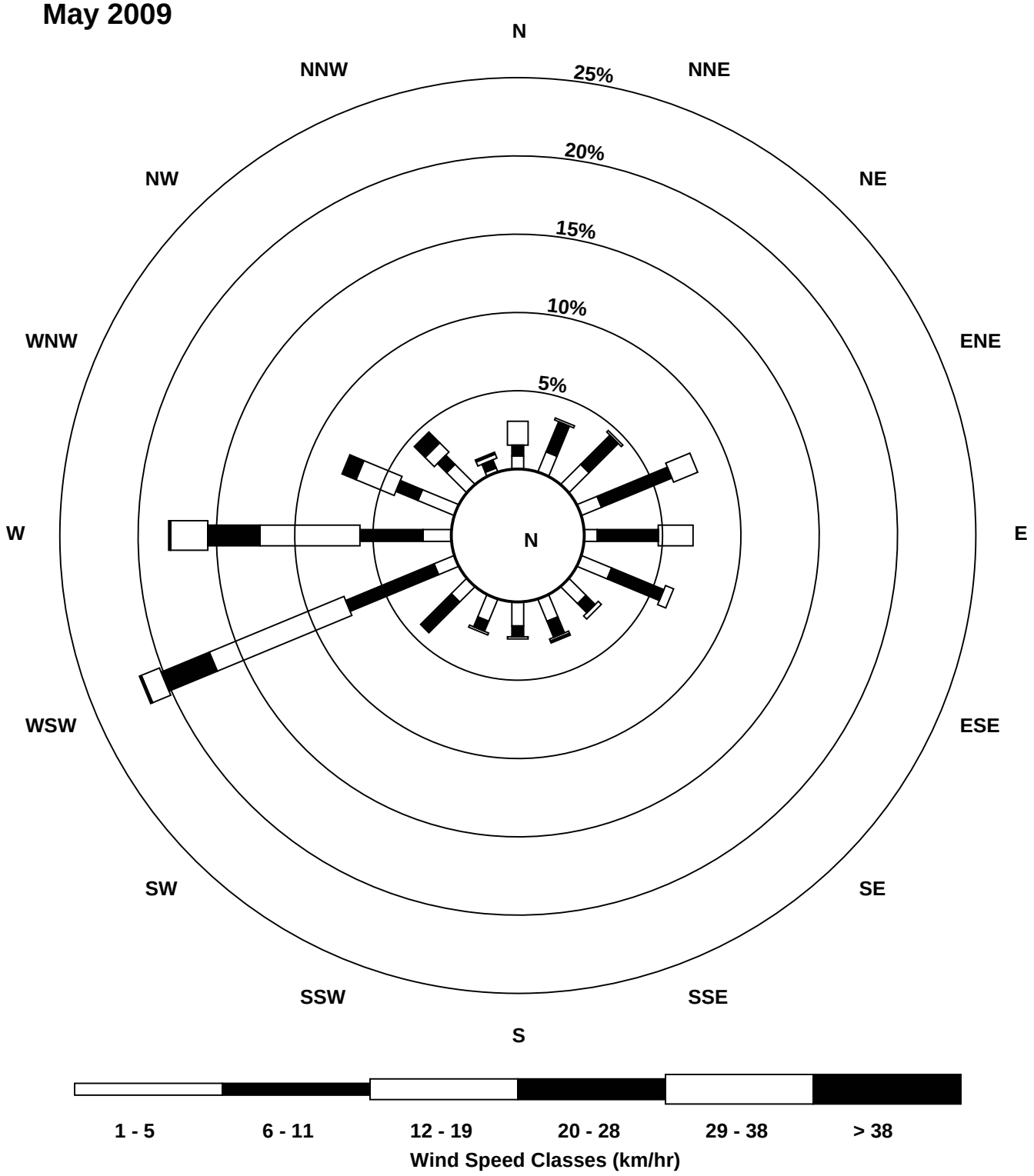
All monthly, daily, and diurnal averages have been calculated using vector methods

P - Power Failure N - Not Valid

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	1.25	2.77	1.80	0.00	0.00	0.00	5.83
NorthEast	2.36	6.24	1.11	0.00	0.00	0.00	9.71
East	2.64	7.91	5.13	0.00	0.00	0.00	15.67
SouthEast	3.05	2.50	0.42	0.00	0.00	0.00	5.96
South	2.64	1.80	0.28	0.14	0.00	0.00	4.85
SouthWest	2.64	7.21	3.74	1.53	0.28	0.00	15.40
West	3.47	7.77	12.62	6.10	3.33	0.42	33.70
NorthWest	2.64	1.80	2.36	2.08	0.00	0.00	8.88
Total	20.67	38.00	27.46	9.85	3.61	0.42	100.00

Wind Rose for WS at Henry Pirker
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages - Wind Speed (Scalar)

Henry Pirker - Wind Speed (WS) - km/h
May 1, 2009 to June 1, 2009

Maximum Speed: 40 km/h on May 30 17:00

Maximum Daily Speed Average: 28.1 km/h on May 30

Minimum Speed: 2 km/h on May 22 04:00

Minimum Daily Speed Average: 6.1 km/h on May 22

Maximum Diurnal Speed Average: 15.6 km/h at hour 17

Minimum Diurnal Speed Average: 8.0 km/h at hour 6

Monthly Average Speed: 11.89 km/h

Percentiles: $P_1 = 2.8$ $P_{10} = 4.7$ $Q_1 = 6.8$ Median = 10.2 $Q_3 = 15.0$ $P_{90} = 21.9$ $P_{99} = 35.2$

Hours in Service: 744

Hours of Data: 721

Hours of Missing Data: 23

Percent Operational Time: 96.9

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-May	4	4	5	4	6	8	8	13	11	10	10	9	11	14	8	10	10	10	9	5	3	3	6	7	7.8	13.7
2-May	5	4	3	5	4	3	4	7	8	10	13	11	9	11	12	13	13	14	14	12	11	12	13	13	9.4	14.3
3-May	11	13	13	11	6	5	4	4	7	8	10	11	17	18	18	27	26	30	34	32	32	24	19	20	16.8	34.4
4-May	14	12	13	7	9	9	11	21	24	24	23	24	21	18	18	16	17	14	13	12	6	5	5	3	14.1	24.3
5-May	4	4	4	4	5	5	3	5	10	8	6	8	7	6	6	7	8	6	3	5	5	8	22	22	7.1	22.4
6-May	15	14	10	12	15	14	12	16	20	19	18	16	13	13	10	8	11	12	20	15	12	9	8	8	13.3	20.4
7-May	9	8	9	9	12	10	13	12	11	10	11	17	20	18	18	19	19	12	7	5	7	8	8	6	11.6	19.6
8-May	7	10	10	15	13	10	9	11	17	19	15	15	19	16	24	16	19	21	20	11	8	8	8	5	13.5	23.7
9-May	5	7	10	7	7	5	5	6	8	8	7	8	7	7	14	12	11	7	5	6	9	7	12	6	7.7	13.9
10-May	3	5	7	7	12	9	10	7	11	11	13	13	17	10	11	12	14	17	11	7	4	4	3	2	9.1	17.2
11-May	2	2	3	4	3	4	3	6	4	4	5	7	8	8	7	10	9	10	17	19	21	22	21	24	9.3	23.6
12-May	24	23	22	22	N	N	N	N	N	N	N	N	N	12	12	13	10	9	7	6	7	6	5	8	--	24.1
13-May	10	9	8	9	8	8	10	12	12	12	12	12	11	12	9	8	6	8	7	7	4	6	6	8	8.9	12.3
14-May	10	8	6	3	4	6	6	5	6	5	7	6	8	8	6	10	18	10	14	12	6	8	6	8	7.7	17.8
15-May	11	8	5	4	4	5	5	6	8	14	15	20	20	21	22	22	24	21	20	19	18	11	6	7	13.2	23.8
16-May	P	6	11	17	16	8	7	11	19	26	27	25	24	21	22	20	18	15	13	9	5	5	4	5	14.5	27.0
17-May	10	11	11	11	12	10	8	9	9	11	11	11	14	15	16	16	16	12	9	10	9	10	10	9	11.2	16.3
18-May	9	10	11	10	10	11	11	12	13	13	12	12	14	14	15	15	16	14	15	15	12	10	11	13	12.3	15.5
19-May	11	12	11	11	12	11	13	11	11	11	11	11	10	10	11	10	12	12	9	N	N	N	N	N	11.0	12.8
20-May	N	N	N	N	N	N	N	N	12	16	15	15	15	18	22	23	23	22	21	17	12	11	10	17	--	23.2
21-May	12	12	9	6	9	8	9	8	8	6	6	7	7	6	7	7	7	6	6	11	11	8	8	8	8.0	12.0
22-May	9	5	4	2	3	4	4	8	7	5	4	5	8	7	8	6	8	8	5	7	7	8	8	6	6.1	9.2
23-May	6	6	4	4	4	4	5	4	4	5	6	4	5	6	9	13	12	18	17	14	14	14	13	12	8.5	18.4
24-May	11	7	8	7	9	7	11	12	17	18	17	17	17	15	19	16	17	12	11	11	10	6	4	4	11.8	18.8
25-May	6	8	5	2	3	5	7	7	7	5	6	8	8	7	7	8	7	8	10	10	8	7	8	8	6.9	10.2
26-May	9	9	9	9	7	4	5	3	7	8	7	5	6	13	5	7	15	14	7	14	18	15	10	10	9.0	18.2
27-May	10	12	11	9	9	12	15	16	24	29	33	34	36	37	37	35	33	35	30	29	26	17	12	12	23.1	37.2
28-May	12	14	13	13	10	8	9	15	23	26	24	26	23	23	25	23	21	20	21	21	16	11	6	5	17.0	26.4
29-May	3	3	3	6	6	5	5	7	10	13	14	12	11	9	9	7	7	10	6	5	3	11	28	23	9.1	28.0
30-May	25	30	33	22	14	18	19	26	30	31	38	35	34	33	37	40	40	35	35	32	19	18	14	13	28.1	40.1
31-May	15	15	17	18	16	16	17	17	21	22	25	25	23	21	23	12	16	10	6	3	5	6	4	4	14.9	24.8
	9.7	9.7	9.6	9.0	8.6	8.0	8.5	10.3	12.7	13.6	14.0	14.3	14.8	14.5	15.1	14.9	15.6	14.7	13.7	12.7	10.9	9.9	9.9	9.9	Diurnal Average	
	25.1	30.1	32.5	22.2	16.4	17.9	18.7	26.4	29.9	31.3	38.5	35.5	35.8	37.2	37.3	39.9	40.1	35.5	35.0	32.2	32.2	24.4	28.0	23.6	Diurnal Maximum	

P - Power Failure N - Not Valid

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

Peace Airshed Zone Association
Summary of Hourly Standard Deviations

Henry Pirker - Wind Direction (WD) - deg
May 1, 2009 to June 1, 2009

Maximum Value: 95.7 deg on May 5 15:00

Minimum Value: 3.8 deg on May 3 02:00

Percentiles: P_1 = 4.2 P_{10} = 7.0 Q_1 = 9.5 Median = 14.6 Q_3 = 27.1 P_{90} = 52.3 P_{99} = 85.3

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
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-May	14	18	13	19	26	12	10	7	11	15	13	30	30	31	61	52	47	38	21	17	28	39	40	9	61.0
2-May	48	65	38	11	27	52	57	18	18	20	18	27	31	26	23	22	21	14	12	10	6	7	5	5	64.9
3-May	4	4	4	7	11	11	27	41	20	21	26	31	16	22	18	9	7	11	5	5	4	7	7	6	41.2
4-May	10	8	9	13	12	11	6	5	7	9	13	12	20	21	24	22	22	17	18	10	19	16	13	13	23.9
5-May	14	39	22	10	10	10	44	32	23	18	51	29	77	95	96	77	25	63	65	10	17	32	5	5	95.7
6-May	14	8	14	6	8	7	12	8	10	12	12	18	23	27	32	37	18	41	10	8	12	12	8	6	40.6
7-May	8	9	13	12	6	7	7	8	10	10	25	10	10	9	7	9	43	9	26	44	7	11	12	33	44.0
8-May	38	21	12	16	6	6	7	18	9	8	16	17	11	13	14	16	11	8	18	19	27	15	10	18	38.5
9-May	22	11	25	18	15	15	13	9	19	15	35	27	87	70	31	24	34	34	67	72	10	13	50	84	86.8
10-May	68	38	15	11	10	8	10	20	13	15	22	18	31	50	29	28	26	24	24	13	25	56	50	33	67.9
11-May	84	67	27	39	90	84	49	37	40	61	81	62	54	53	86	26	64	48	13	39	5	7	9	4	89.5
12-May	5	5	5	5	5	9	8	7	7	6	7	8	10	16	16	14	20	19	18	27	16	24	17	17	27.2
13-May	9	14	18	8	7	10	8	8	13	18	16	17	24	16	25	38	66	33	29	16	45	18	16	10	66.0
14-May	11	7	14	16	20	10	21	35	53	71	37	86	66	60	76	49	27	34	34	11	26	8	38	13	85.8
15-May	6	11	20	17	55	11	12	30	21	15	17	12	18	19	17	13	10	14	10	10	5	12	18	15	54.7
16-May	P	8	51	10	16	81	43	26	10	9	11	11	12	15	12	17	15	14	14	13	15	14	14	20	80.8
17-May	11	9	9	11	11	14	18	23	18	18	22	16	13	13	14	14	14	17	16	15	11	12	11	12	23.5
18-May	20	10	10	10	10	9	9	10	10	14	13	12	12	13	16	13	10	10	10	8	7	9	8	8	19.8
19-May	9	10	8	9	8	9	9	9	9	9	10	11	15	14	12	13	11	9	14	18	12	81	31	9	81.2
20-May	12	12	11	17	26	68	18	9	9	7	11	16	11	12	11	11	14	15	7	5	8	13	37	17	68.0
21-May	9	10	28	45	18	26	18	18	15	36	54	48	69	78	85	61	50	62	52	12	7	9	12	9	85.5
22-May	5	15	23	22	32	13	62	15	19	38	65	63	59	94	78	84	45	68	65	39	26	6	7	12	93.6
23-May	11	10	33	56	38	41	21	45	76	37	51	80	74	81	63	24	17	14	9	7	5	5	9	5	80.7
24-May	14	25	16	16	20	14	10	17	8	12	14	16	13	20	10	15	24	26	17	11	12	13	12	39	39.1
25-May	24	10	20	49	42	17	13	17	31	48	38	29	67	63	81	70	55	44	53	20	16	7	7	6	80.8
26-May	7	7	9	18	68	37	34	57	19	34	23	42	54	25	47	27	40	21	31	15	5	5	7	9	68.2
27-May	7	7	11	13	11	9	8	12	8	13	9	9	8	9	9	10	9	10	7	5	6	9	5	5	13.4
28-May	4	8	7	7	9	15	12	12	10	10	11	10	15	15	13	12	15	14	11	7	6	7	42	60	59.8
29-May	36	41	53	40	31	16	26	21	13	15	15	28	22	41	48	48	64	49	32	37	39	40	8	17	63.5
30-May	9	7	5	8	12	7	8	9	10	12	8	11	11	8	9	12	7	8	6	7	5	4	4	12	12.5
31-May	6	8	4	4	6	6	22	6	10	7	8	10	9	16	22	16	21	21	33	69	46	68	61	50	69.2
	84.0	66.6	52.6	56.5	89.5	83.7	61.7	56.8	76.0	71.2	80.9	85.8	86.8	94.8	95.7	84.1	66.0	67.7	66.7	71.7	46.4	81.2	61.4	83.6	

P - Power Failure

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
May 1, 2009 to June 1, 2009

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8.6 ppb on May 28 09:00
Maximum Daily Average: 1.1 ppb on May 28

Minimum Value: 0 ppb on May 3 19:00
Maximum Diurnal Average: 0.8 ppb at hour 9
Monthly Average: 0.26 ppb

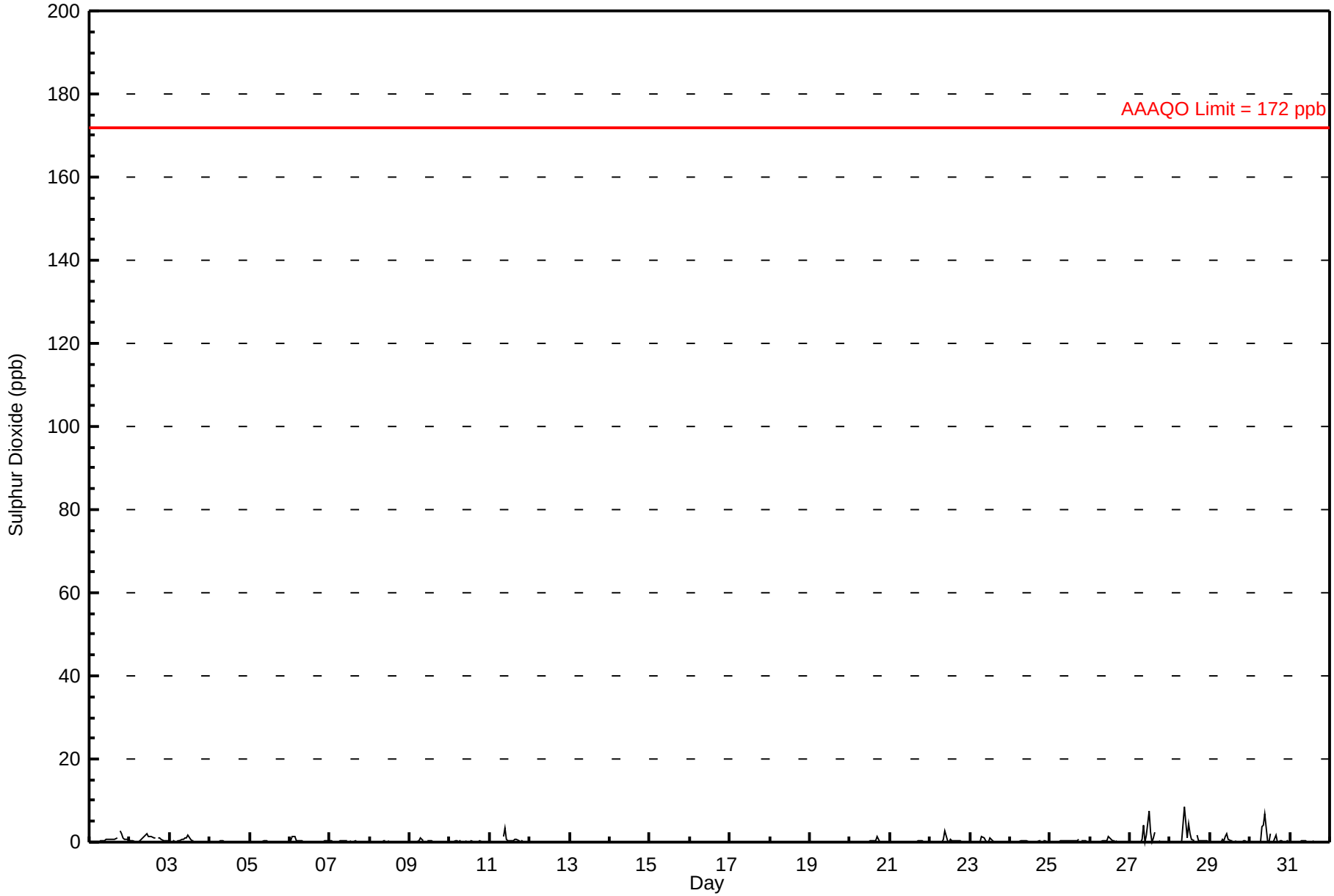
Minimum Daily Average: 0.0 ppb on May 17
Minimum Diurnal Average: 0.1 ppb at hour 5
Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.2 P_{90} = 0.6 P_{99} = 3.9

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-May	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	A	3	2	1	1	1	1	0.6	2.7
2-May	0	0	0	0	0	0	0	1	1	2	2	1	1	1	1	1	A	1	1	1	0	0	0	0	0.7	1.9
3-May	0	0	0	0	0	0	0	1	1	1	1	2	1	0	0	A	0	0	0	0	0	0	0	0	0.3	1.8
4-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.2
5-May	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.2
6-May	0	1	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	1.4
7-May	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
8-May	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
9-May	0	0	0	0	0	0	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.0
10-May	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
11-May	0	0	0	0	0	0	0	A	1	3	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0.4	3.4
12-May	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	0.1
13-May	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	0.1
14-May	0	0	0	0	A	0	0	0	0	0	C	C	A	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
15-May	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
16-May	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
17-May	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
18-May	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
19-May	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	0.2
20-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	A	0.2	1.2
21-May	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
22-May	0	0	0	0	0	0	0	0	1	3	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0.3	2.9
23-May	0	0	0	0	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0	A	0	0	0	0.2	1.3
24-May	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	0.4
25-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0.2	0.5
26-May	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	A	0	0	0	0	0	0	0.2	1.2
27-May	0	0	0	0	0	0	0	1	4	0	2	7	2	0	1	2	A	0	0	0	0	0	0	0	0.9	7.4
28-May	0	0	0	0	0	0	0	0	9	5	1	5	2	1	0	A	2	0	0	0	0	0	0	0	1.1	8.6
29-May	0	0	0	0	0	0	0	1	0	1	2	1	0	0	A	0	0	0	0	0	0	0	0	0	0.3	2.1
30-May	0	0	0	0	0	0	0	4	4	7	0	0	2	A	0	2	0	0	0	0	0	0	0	0	0.9	6.9
31-May	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.8	0.8	0.4	0.7	0.5	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	Diurnal Average	
	0.4	1.3	1.3	1.4	0.4	0.4	1.0	3.9	8.6	6.9	2.1	7.4	2.3	1.2	1.1	2.2	1.7	0.9	2.7	1.9	1.1	0.6	0.6	0.7	Diurnal Maximum	

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

Hourly Averages for SO_2 at Evergreen Park
May 2009



Peace Airshed Zone Association
Summary of Hourly Maximums

Evergreen Park - Sulphur Dioxide (SO_2) - ppb
May 1, 2009 to June 1, 2009

Maximum Value: 32.3 ppb on May 28 09:00

Maximum Daily Average: 6.0 ppb on May 28

Minimum Value: 0 ppb on May 23 03:00

Minimum Daily Average: 0.3 ppb on May 17

Maximum Diurnal Average: 3.5 ppb at hour 9

Minimum Diurnal Average: 0.3 ppb at hour 24

Monthly Average: 1.10 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.2$ $Q_1 = 0.3$ Median = 0.4 $Q_3 = 0.5$ $P_{90} = 1.4$ $P_{99} = 19.4$

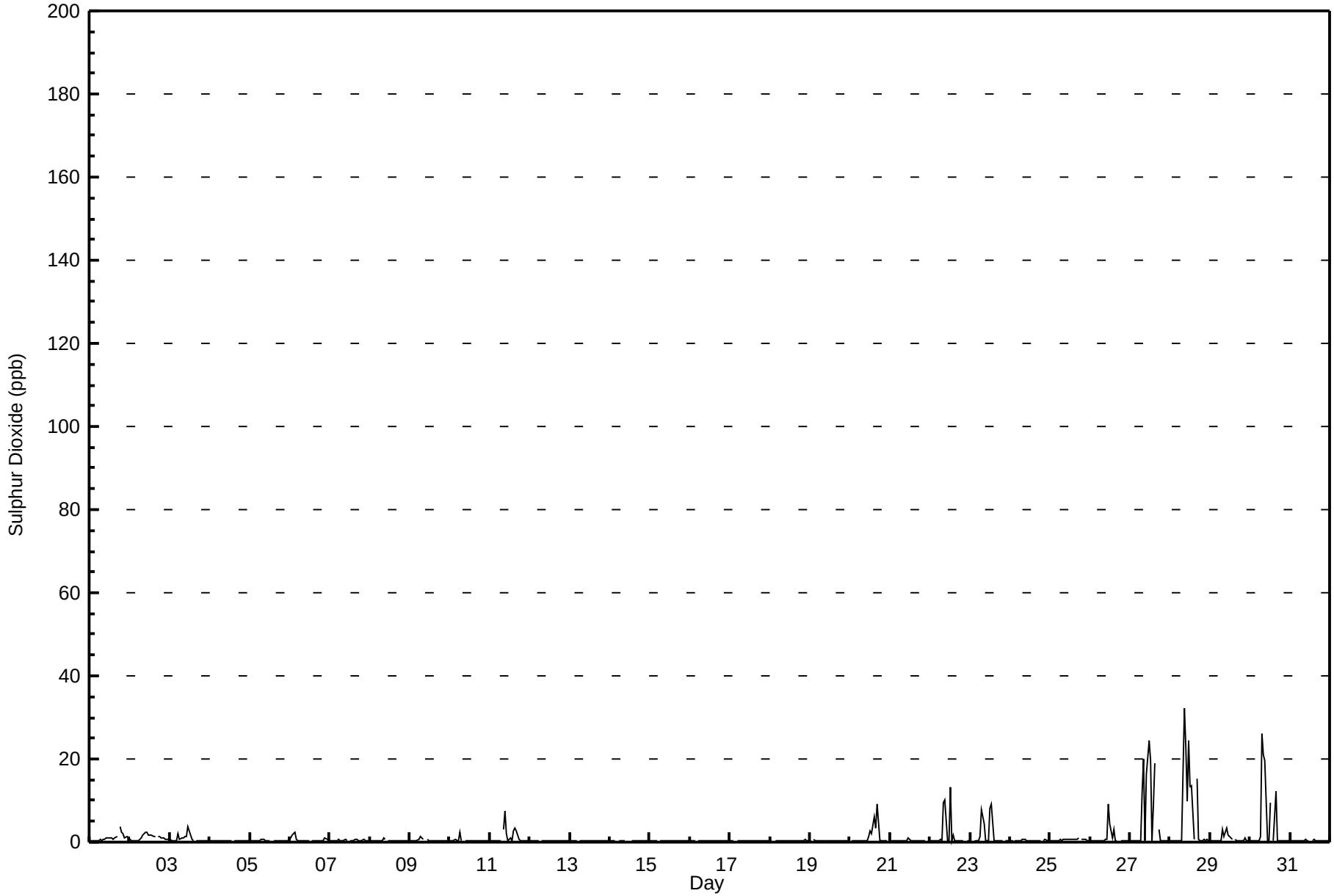
Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

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-May	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	A	4	2	2	1	1	1	1.0	3.8
2-May	1	0	0	0	0	0	1	1	2	2	2	2	2	2	1	1	A	1	1	1	1	1	1	1	1.1	2.3
3-May	1	0	0	0	0	2	1	1	1	1	1	4	2	1	0	A	0	0	0	0	0	0	0	0	0.8	3.6
4-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.4	0.5
5-May	0	0	0	0	0	0	0	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.4	0.7
6-May	1	2	2	2	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	1	0.7	2.2
7-May	0	0	0	0	0	1	0	0	0	1	0	A	0	0	0	1	1	0	0	0	1	0	0	0	0.4	0.8
8-May	0	0	0	0	0	0	0	0	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.9
9-May	0	0	0	0	0	1	1	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.4
10-May	0	0	0	1	0	0	2	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	2.3
11-May	0	0	0	0	0	1	0	A	3	7	2	1	1	1	3	3	3	1	0	0	0	0	0	0	1.2	7.5
12-May	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
13-May	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
14-May	0	0	0	0	A	0	0	0	0	0	C	C	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
15-May	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
16-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
17-May	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.3
18-May	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.3	0.6
19-May	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
20-May	A	0	0	0	0	0	0	0	0	0	0	1	3	2	6	3	9	5	0	0	0	0	0	A	1.5	9.1
21-May	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0.4	1.0
22-May	0	0	0	0	0	0	1	0	9	10	0	0	13	0	2	0	0	0	0	0	0	A	0	0	1.8	13.1
23-May	0	0	0	0	0	0	1	8	4	0	0	0	8	9	0	0	0	0	0	0	A	0	0	0	1.6	9.3
24-May	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	1	1	A	1	1	0	0	0.4	0.7
25-May	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	0	0.5	0.9
26-May	0	0	0	0	0	0	0	0	0	1	1	9	4	1	3	0	0	A	0	0	0	0	0	0	1.1	9.2
27-May	0	0	0	0	0	0	0	12	20	0	16	25	20	0	9	19	A	3	0	0	0	0	0	0	5.5	24.5
28-May	0	0	0	0	0	0	0	0	32	23	10	24	13	14	1	A	15	1	1	0	1	0	1	0	6.0	32.3
29-May	0	0	0	0	0	0	0	3	1	3	3	2	1	1	A	1	0	0	0	0	0	1	0	0	0.9	3.4
30-May	0	0	0	0	0	0	1	26	21	20	0	0	9	A	0	12	0	0	1	0	0	0	0	0	4.2	26.2
31-May	0	0	0	0	0	0	0	0	0	1	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0.4	0.7
	0.3	0.3	0.4	0.4	0.3	0.4	0.6	2.1	3.5	2.6	1.5	2.6	2.9	1.3	1.1	1.7	1.3	0.7	0.5	0.4	0.5	0.4	0.4	0.3	Diurnal Average	
	1.0	1.8	1.9	2.2	0.7	2.2	2.3	26.2	32.3	23.2	16.2	24.5	19.6	13.7	8.8	18.9	15.4	4.6	3.8	2.3	2.0	1.1	1.4	1.1	Diurnal Maximum	

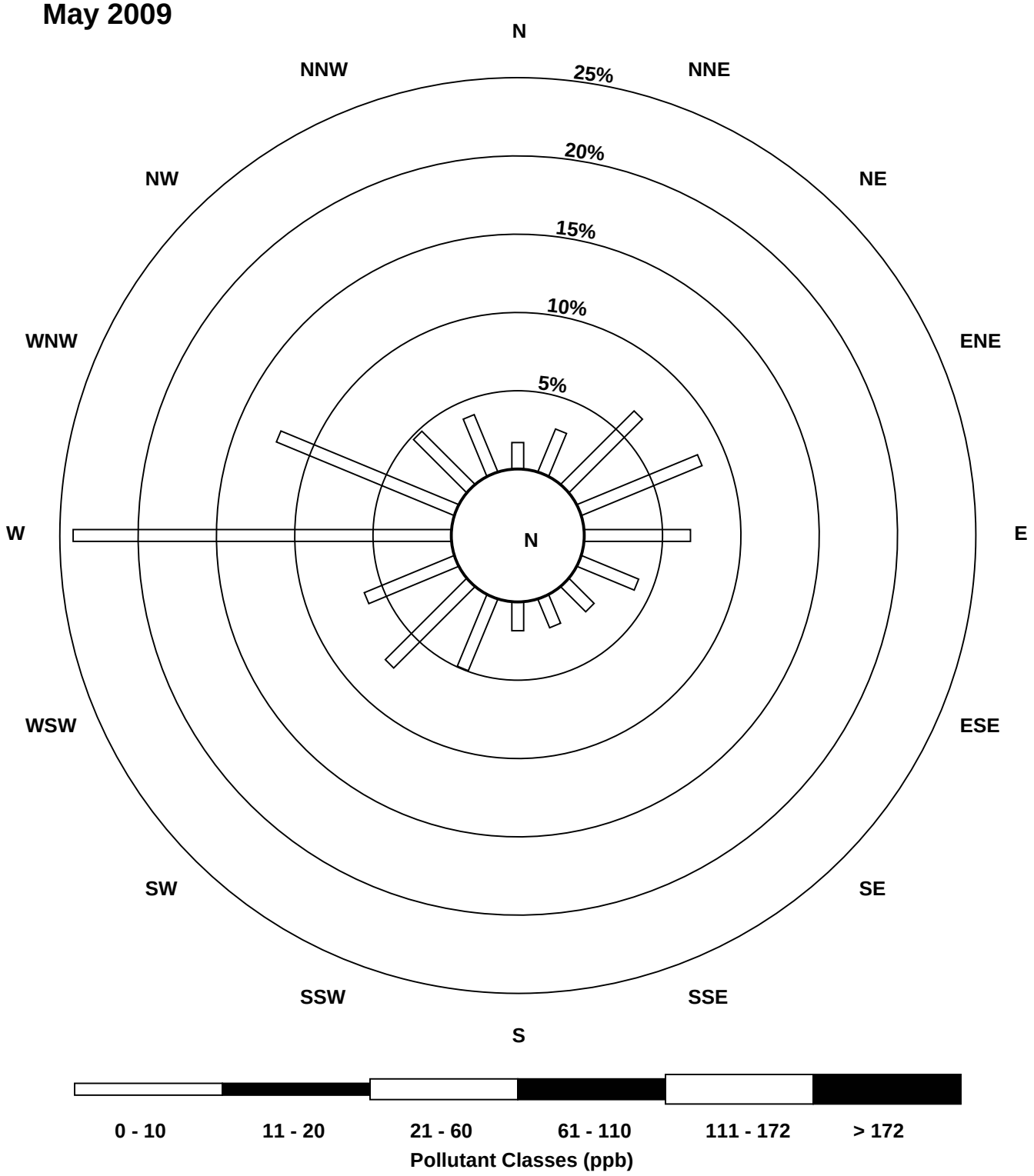
C - Calibration

A - Automated Daily Zero Span

Hourly Maximums for SO_2 at Evergreen Park
May 2009



Pollutant Rose for SO_2 at Evergreen Park
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Evergreen Park - Total Reduced Sulphur (TRS) - ppb
May 1, 2009 to June 1, 2009

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 2.0 ppb on May 5 06:00
Maximum Daily Average: 0.7 ppb on May 5

Minimum Value: 0 ppb on May 14 12:00
Maximum Diurnal Average: 0.5 ppb at hour 10
Monthly Average: 0.51 ppb

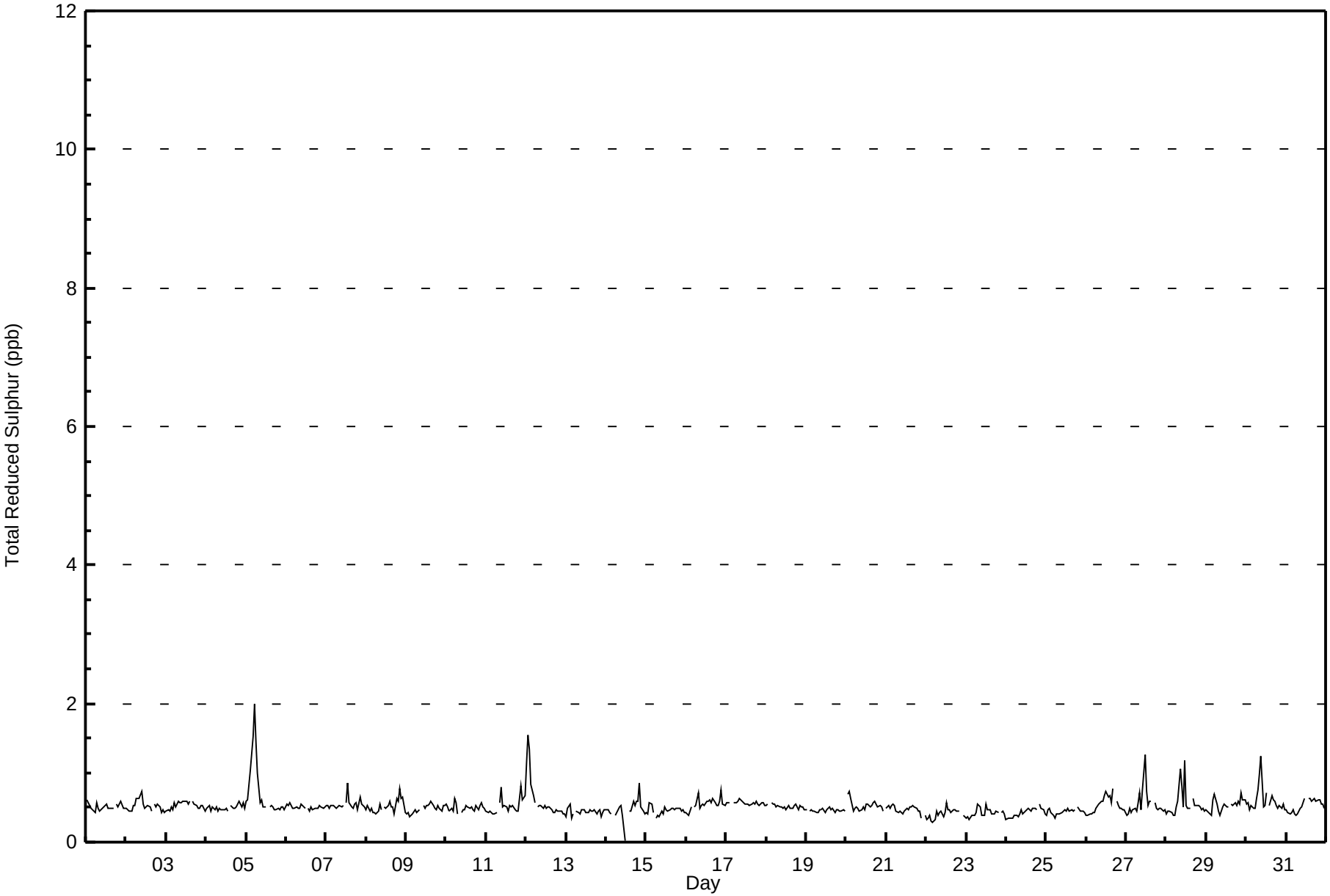
Minimum Daily Average: 0.4 ppb on May 22
Minimum Diurnal Average: 0.5 ppb at hour 24
Percentiles: $P_1 = 0.3$ $P_{10} = 0.4$ $Q_1 = 0.5$ Median = 0.5 $Q_3 = 0.5$ $P_{90} = 0.6$ $P_{99} = 1.2$

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

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

Hourly Averages for TRS at Evergreen Park
May 2009



Peace Airshed Zone Association
Summary of Hourly Maximums

Evergreen Park - Total Reduced Sulphur (TRS) - ppb
May 1, 2009 to June 1, 2009

Maximum Value: 4.9 ppb on May 28 12:00

Maximum Daily Average: 1.3 ppb on May 27

Minimum Value: 1 ppb on May 15 07:00

Minimum Daily Average: 0.7 ppb on May 24

Maximum Diurnal Average: 1.1 ppb at hour 13

Minimum Diurnal Average: 0.8 ppb at hour 24

Monthly Average: 0.91 ppb

Percentiles: $P_1 = 0.6$ $P_{10} = 0.7$ $Q_1 = 0.8$ Median = 0.8 $Q_3 = 0.9$ $P_{90} = 1.1$ $P_{99} = 2.8$

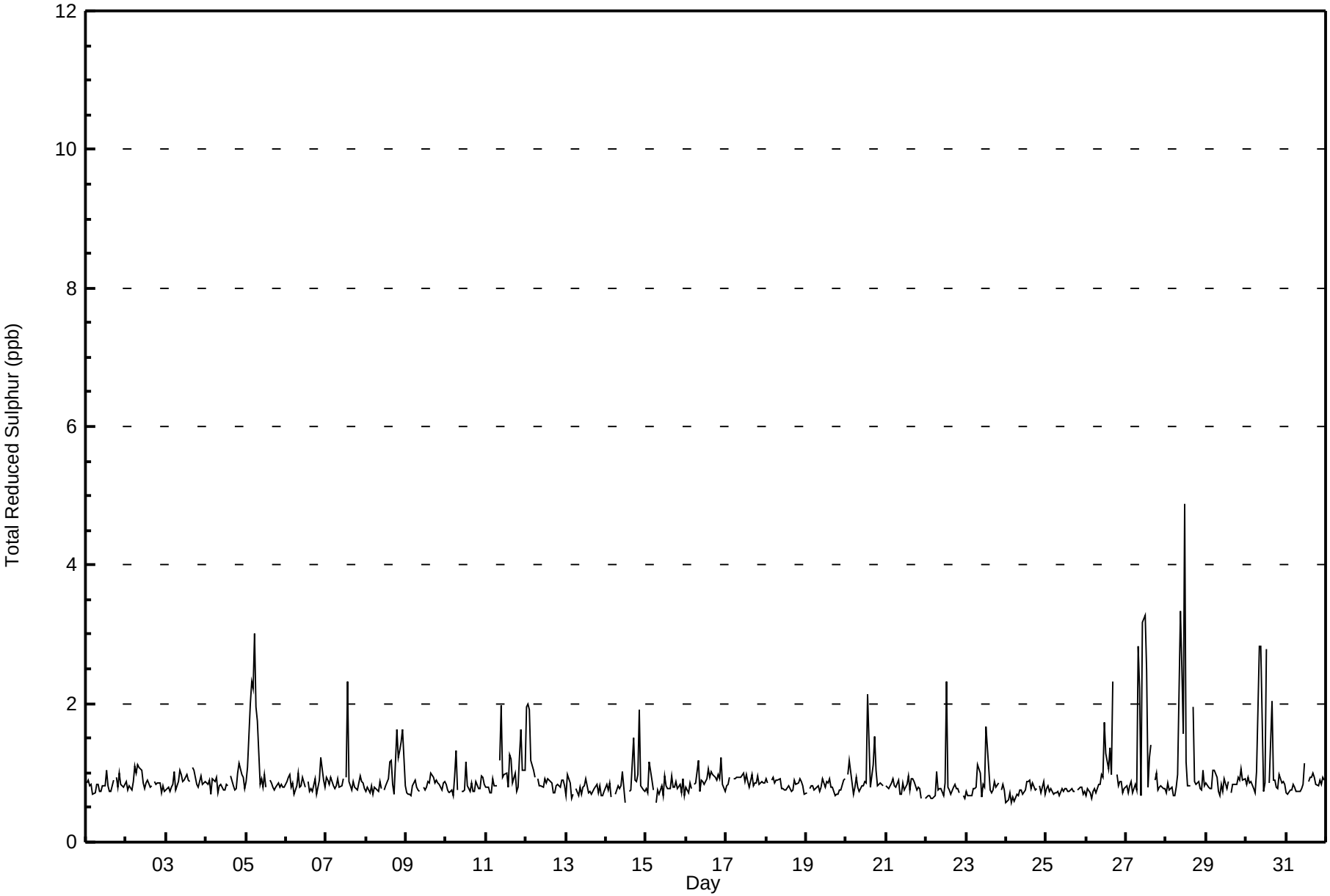
Hours in Service:	744
Hours of Data:	710
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.8	1.0
2-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.9	1.1
3-May	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	1.1
4-May	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	1.1
5-May	1	1	2	2	2	3	2	2	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1.2	3.0
6-May	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
7-May	1	1	1	1	1	1	1	1	1	1	1	A	1	2	1	1	1	1	1	1	1	1	1	1	0.9	2.3
8-May	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	2	1	1	1	2	1	1.0	1.6
9-May	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
10-May	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.3
11-May	1	1	1	1	1	1	1	A	1	2	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1.0	2.0
12-May	2	2	2	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.0
13-May	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
14-May	1	1	1	1	A	1	1	1	1	1	1	1	C	C	1	1	2	1	1	1	2	1	1	1	0.9	1.9
15-May	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
16-May	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
17-May	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.0
18-May	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	0.9
19-May	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	0.9
20-May	A	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	2	1	1	1	1	1	A	1.0	2.1
21-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.8	1.0
22-May	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	A	1	1	0.8	2.3
23-May	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	A	1	1	1	0.8	1.7
24-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.7	0.9
25-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.7	0.8
26-May	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	2	A	1	1	1	1	1	1	1.0	2.3
27-May	1	1	1	1	1	1	1	3	2	1	3	3	2	1	1	1	A	1	1	1	1	1	1	1	1.3	3.3
28-May	1	1	1	1	1	1	1	1	3	3	2	5	1	1	1	A	2	1	1	1	1	1	1	1	1.3	4.9
29-May	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	1.1
30-May	1	1	1	1	1	1	1	2	3	3	1	1	3	A	1	2	1	1	1	1	1	1	1	1	1.2	2.8
31-May	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
	0.8	0.8	0.9	0.8	0.8	0.9	0.9	1.0	1.0	1.0	0.9	1.1	1.1	1.0	0.9	0.9	1.0	0.9	0.9	0.8	0.9	0.9	0.9	0.8	Diurnal Average	
	2.0	2.0	2.0	2.3	2.2	3.0	2.0	2.8	3.3	2.8	3.2	4.9	2.8	2.3	1.4	2.0	2.3	1.5	1.6	1.2	1.9	1.6	1.6	1.0	Diurnal Maximum	

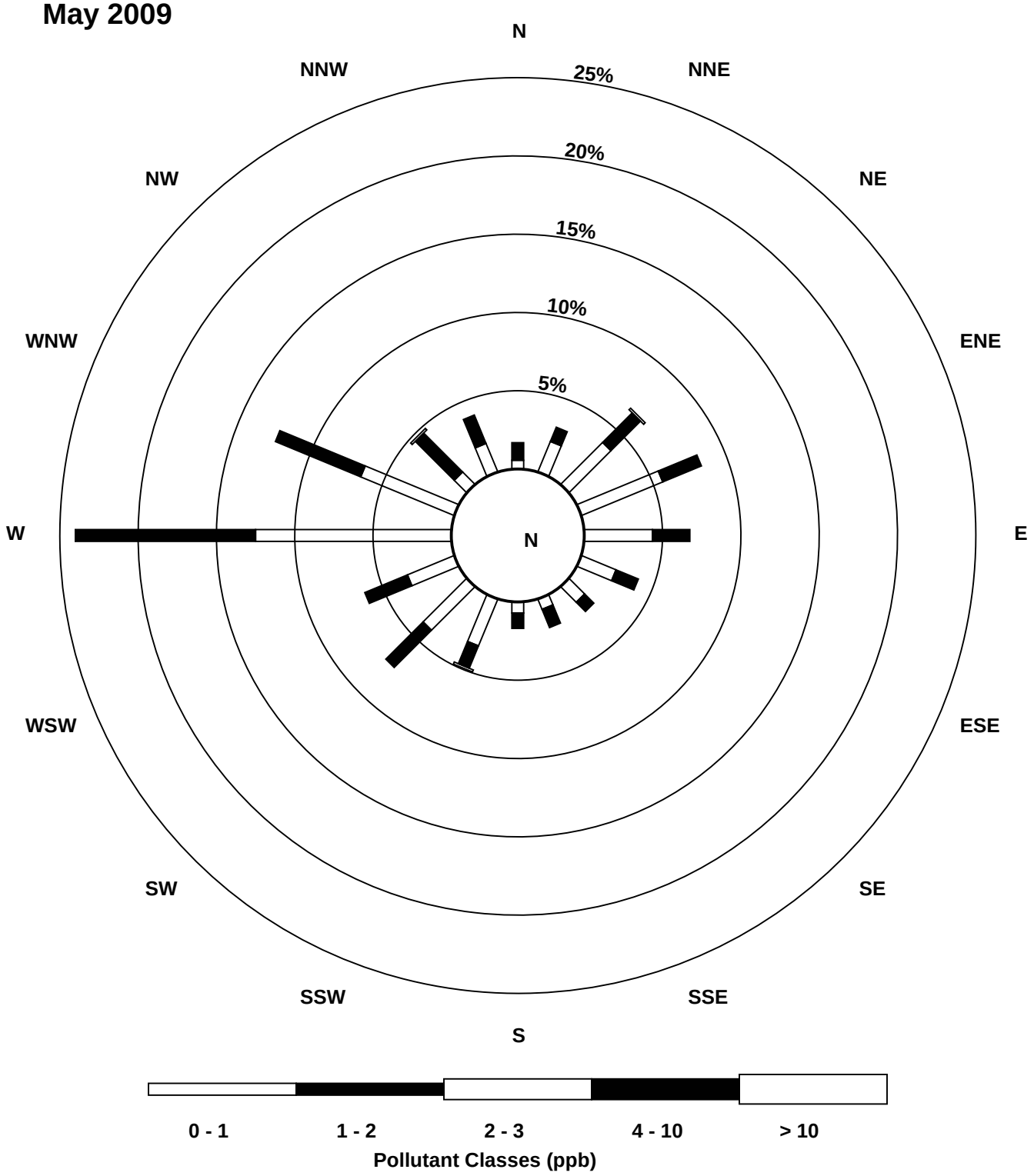
C - Calibration

A - Automated Daily Zero Span

Hourly Maximums for TRS at Evergreen Park
May 2009



Pollutant Rose for TRS at Evergreen Park
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Evergreen Park - Particulate Matter 2.5 ($PM_{2.5}$) - $\mu g/m^3$
May 1, 2009 to June 1, 2009

Number of Exceedances (AAAQO): 1-hr: 5 24-hr: 1

Maximum Value: 435.1 $\mu g/m^3$ on May 30 16:00

Maximum Daily Average: 60.0 $\mu g/m^3$ on May 30

Minimum Value: 0 $\mu g/m^3$ on May 4 03:00

Maximum Diurnal Average: 18.4 $\mu g/m^3$ at hour 16

Monthly Average: 6.21 $\mu g/m^3$

Minimum Daily Average: 0.8 $\mu g/m^3$ on May 12

Minimum Diurnal Average: 3.0 $\mu g/m^3$ at hour 4

Percentiles: P_1 = 0.0 P_{10} = 0.4 Q_1 = 1.3 Median = 3.2 Q_3 = 5.7 P_{90} = 8.9 P_{99} = 46.0

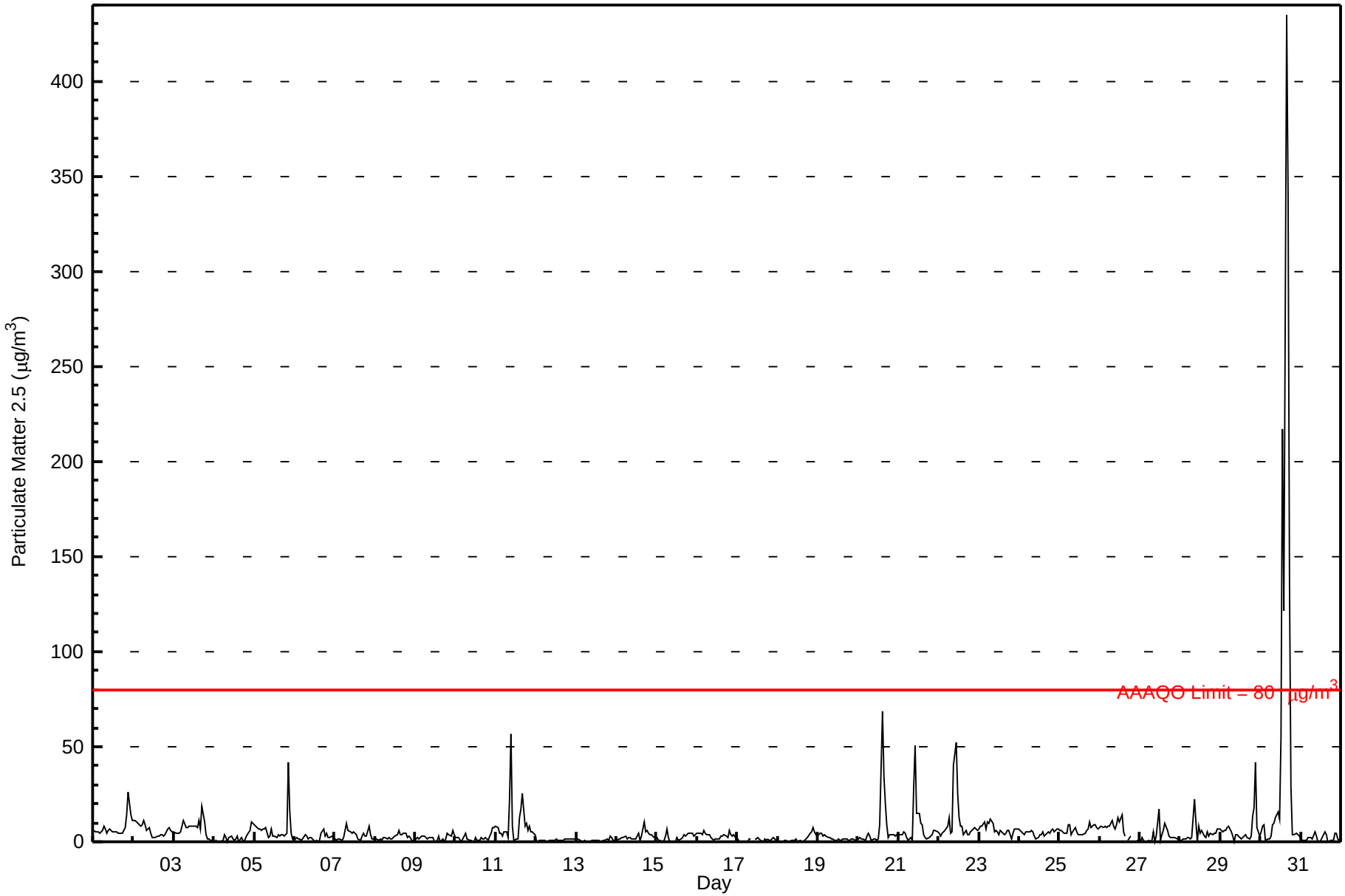
Hours in Service:	744
Hours of Data:	740
Hours of Missing Data:	4
Hours of Calibration:	0
Percent Operational Time:	99.5

Day	Hourly Period Ending At (MST) 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-May	6	5	6	5	5	6	8	7	4	6	7	5	5	5	5	5	5	5	6	7	14	26	14	11	7.4	26.3
2-May	11	11	10	9	8	9	11	9	6	7	4	2	2	2	3	3	4	4	3	4	6	8	6	5	6.3	11.5
3-May	5	5	4	5	5	8	11	7	7	8	8	8	9	8	8	12	7	19	10	4	2	2	1	0	6.7	18.6
4-May	0	0	0	0	0	1	4	2	0	2	3	2	1	1	3	0	2	1	0	2	3	6	10	10	2.3	10.4
5-May	9	9	7	7	6	6	7	8	2	3	7	3	3	2	4	3	4	3	3	4	42	17	4	2	6.8	41.6
6-May	2	2	2	2	1	2	4	3	1	2	2	1	0	1	0	0	4	7	3	4	2	2	3	1	2.1	6.5
7-May	1	1	1	2	1	2	6	9	6	5	4	5	5	4	1	1	3	4	3	3	8	4	2	2	3.5	9.4
8-May	2	2	1	1	1	2	2	1	2	1	2	2	3	4	6	3	4	5	5	2	3	2	1	0	2.4	5.6
9-May	1	3	2	2	3	3	2	1	2	2	2	0	0	1	3	0	2	0	2	5	4	3	6	4	2.3	6.1
10-May	2	2	2	0	1	3	5	2	0	0	0	0	2	1	1	2	2	1	2	1	3	5	7	7	2.2	7.2
11-May	8	8	4	4	3	5	5	3	22	57	8	0	1	1	13	17	26	8	9	6	8	5	5	4	9.7	56.8
12-May	0	0	0	0	1	0	0	0	1	1	1	1	1	1	1	1	1	1	2	2	1	2	1	1	0.8	1.8
13-May	0	2	1	0	0	1	0	0	0	1	1	1	1	1	0	0	1	1	1	1	3	2	1	1	0.8	3.0
14-May	0	2	2	2	2	3	2	2	2	1	2	2	3	4	1	3	11	5	6	4	3	4	2	2	2.9	10.5
15-May	2	1	1	0	1	3	6	2	0	0	0	0	2	1	1	2	4	3	4	4	5	5	3	4	2.3	6.4
16-May	4	4	5	4	6	5	4	4	3	2	1	1	1	1	3	3	4	3	2	6	4	3	3	2	3.3	6.1
17-May	1	0	0	0	0	0	0	2	1	N	2	1	2	1	1	0	1	1	1	1	1	2	1	1	0.9	2.3
18-May	0	0	0	0	1	1	0	0	0	1	1	1	0	0	0	0	1	1	2	4	5	7	6	3	1.5	7.4
19-May	4	5	4	3	4	3	3	2	2	1	1	1	2	1	1	2	2	2	1	1	2	2	1	1	2.0	4.6
20-May	2	2	1	2	1	3	5	3	1	1	1	1	1	9	69	34	20	9	2	4	4	3	3	4	7.7	68.8
21-May	4	4	4	5	5	2	1	2	0	29	51	15	15	9	9	4	2	2	2	3	4	6	6	5	7.9	50.5
22-May	4	3	4	5	6	8	12	4	5	40	52	26	13	8	8	4	6	4	4	5	6	7	7	6	10.3	52.1
23-May	7	8	8	10	7	10	10	12	10	5	6	5	4	6	5	4	4	6	6	2	5	7	6	7	6.6	11.7
24-May	7	5	4	3	5	5	5	6	6	3	1	2	3	4	5	3	4	5	5	6	7	5	7	6	4.7	7.0
25-May	6	6	5	4	5	9	9	3	5	7	5	3	4	4	4	5	6	7	10	8	9	9	7	7	6.2	10.1
26-May	8	8	8	8	8	8	8	11	8	7	9	13	11	14	5	3	BD	1	3	BD	BD	0	0	1	6.7	14.1
27-May	0	2	0	0	0	1	0	0	5	0	3	17	1	3	6	10	6	3	2	2	2	2	2	2	2.9	16.8
28-May	1	1	1	1	2	2	1	2	22	10	0	8	4	6	3	3	5	3	4	4	5	4	7	7	4.5	22.3
29-May	7	5	6	6	7	9	5	3	0	4	4	3	2	2	3	4	2	2	3	13	18	42	8	3	6.7	41.9
30-May	5	8	9	1	1	1	3	9	10	13	16	12	55	**217**	**122**	**435**	**340**	**136**	29	3	4	5	4	3	**60.0**	435.1
31-May	2	1	1	0	2	2	2	2	5	3	0	0	1	3	5	4	0	0	1	1	4	5	1	1	1.9	5.2
	3.6	3.7	3.4	3.0	3.2	4.0	4.6	3.9	4.6	7.5	6.6	4.6	5.0	10.6	9.6	18.4	16.0	8.1	4.5	3.9	6.2	6.5	4.4	3.7	Diurnal Average	
	11.0	11.5	10.4	10.2	8.2	10.2	12.5	11.7	22.4	56.8	52.1	25.6	55.1	217.0	121.6	435.1	339.6	135.7	29.0	13.1	41.6	41.9	14.3	10.9	Diurnal Maximum	

N - Not Valid BD - Baseline Drift

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

Hourly Averages for $PM_{2.5}$ at Evergreen Park
May 2009



Peace Airshed Zone Association
Summary of Hourly Maximums

Evergreen Park - Particulate Matter 2.5 ($PM_{2.5}$) - $\mu g/m^3$
May 1, 2009 to June 1, 2009

Maximum Value: 450.0 $\mu g/m^3$ on May 30 13:00

Maximum Daily Average: 129.2 $\mu g/m^3$ on May 30

Minimum Value: 0 $\mu g/m^3$ on May 26 20:00

Maximum Diurnal Average: 30.4 $\mu g/m^3$ at hour 15

Monthly Average: 13.39 $\mu g/m^3$

Minimum Daily Average: 3.1 $\mu g/m^3$ on May 12

Minimum Diurnal Average: 5.3 $\mu g/m^3$ at hour 4

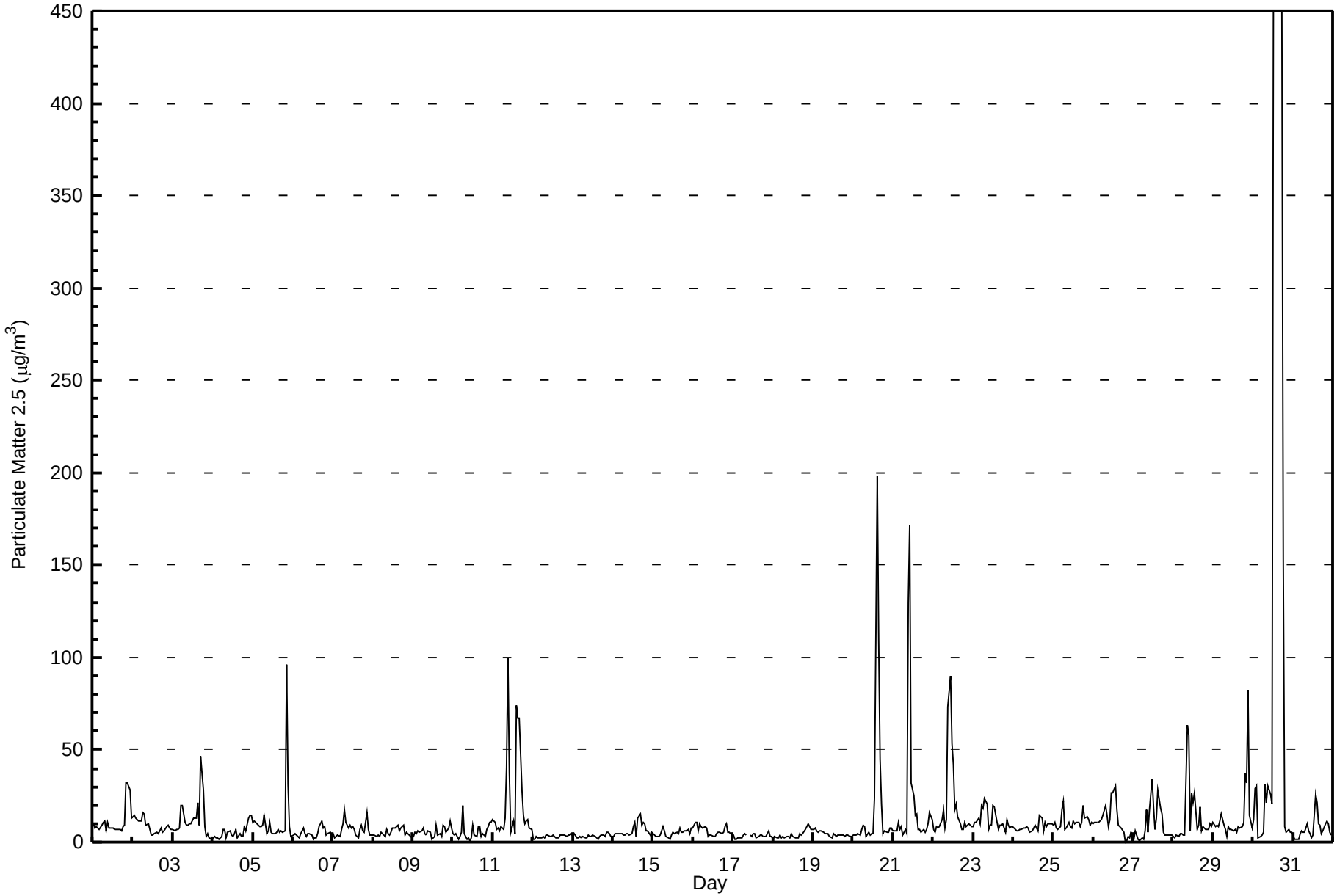
Percentiles: P_1 = 1.6 P_{10} = 2.7 Q_1 = 3.9 Median = 6.4 Q_3 = 9.7 P_{90} = 17.5 P_{99} = -35.6

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

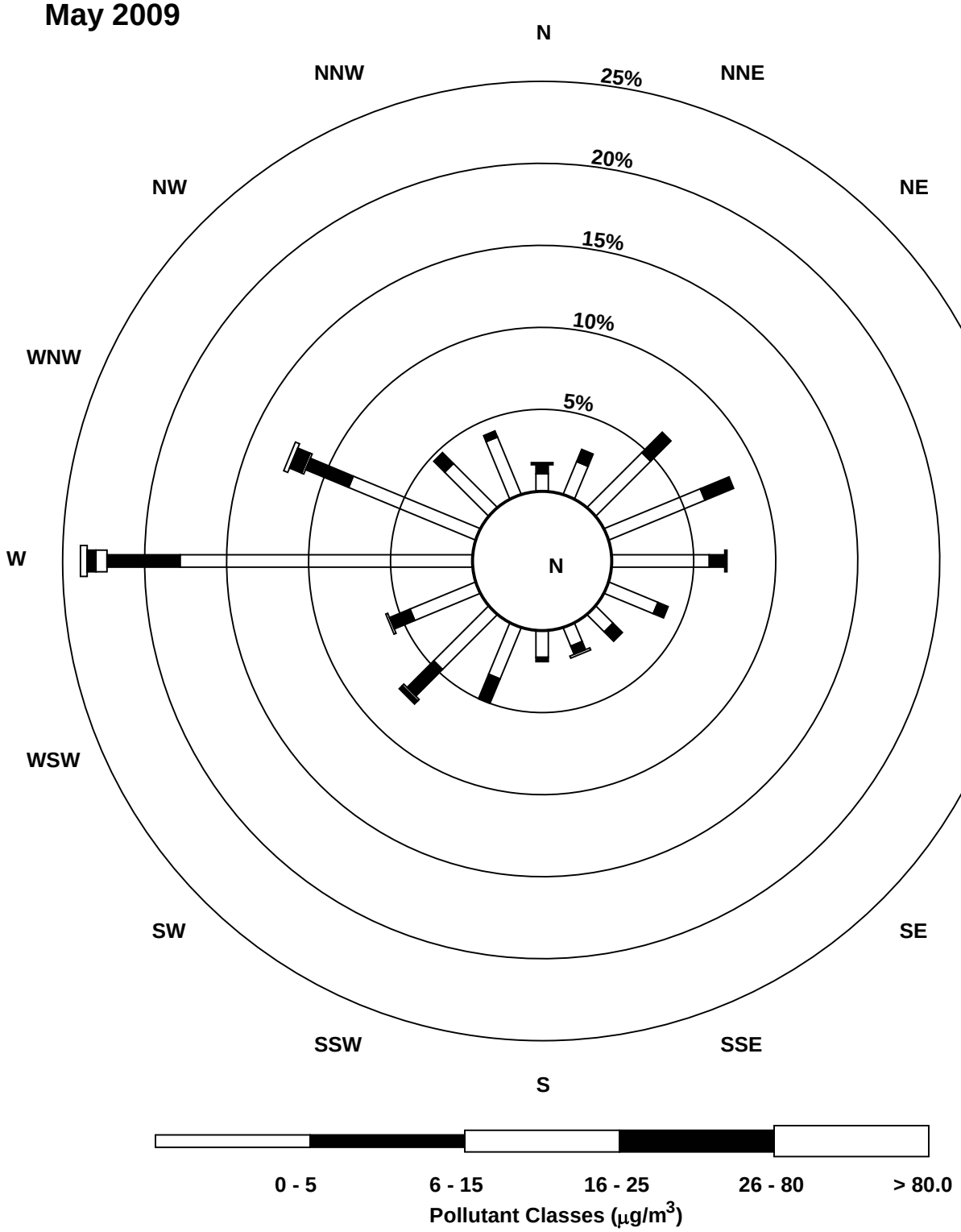
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-May	10	8	8	8	7	9	11	12	6	11	8	7	7	7	7	7	7	6	9	9	32	32	28	13	11.2	32.1
2-May	13	14	13	11	11	11	16	15	9	10	7	4	4	4	5	5	6	7	5	6	8	9	7	7	8.8	16.1
3-May	7	6	7	7	8	20	20	11	9	9	10	10	13	13	13	21	9	46	28	9	3	5	2	2	12.0	46.3
4-May	3	3	2	3	2	3	7	7	2	5	6	4	3	4	7	2	4	3	3	8	6	13	15	14	5.3	14.7
5-May	10	11	10	9	9	9	9	15	5	6	11	5	5	4	5	7	5	6	5	6	96	31	8	3	12.1	96.2
6-May	4	4	4	3	2	5	8	5	3	4	5	3	2	2	3	5	8	12	7	8	4	4	5	3	4.7	11.5
7-May	4	3	3	4	3	7	10	17	11	7	9	8	8	7	4	2	7	9	6	5	16	7	4	4	6.8	17.3
8-May	4	4	3	4	3	5	5	3	7	5	4	5	7	8	8	9	6	8	9	4	5	4	4	3	5.3	9.3
9-May	3	5	5	6	5	6	8	5	4	6	5	2	2	3	10	4	5	3	9	9	5	8	12	8	5.7	11.7
10-May	4	4	5	2	3	5	20	4	2	2	1	2	9	4	3	9	8	3	5	3	7	9	11	11	5.6	19.6
11-May	12	11	7	7	6	8	7	13	41	100	37	6	11	4	74	67	67	28	14	10	11	12	8	7	23.7	100.0
12-May	2	2	3	2	3	2	3	2	4	3	3	3	4	3	2	2	4	4	4	4	3	4	4	4	3.1	4.2
13-May	3	4	3	2	3	2	3	2	3	4	3	3	4	3	2	2	3	3	3	3	5	6	5	3	3.2	5.6
14-May	3	4	5	4	5	5	4	4	4	5	4	5	8	11	3	13	16	9	10	10	6	6	4	5	6.4	15.5
15-May	5	3	3	3	4	6	8	6	3	3	2	4	5	4	5	5	8	5	5	6	6	6	5	7	4.9	8.4
16-May	8	11	11	6	10	9	8	8	8	3	4	4	3	3	5	5	5	5	6	9	10	5	6	4	6.4	10.7
17-May	3	2	1	2	2	3	4	5	4	N	4	3	5	5	2	3	4	4	3	3	3	6	3	3	3.4	5.7
18-May	2	3	3	2	4	3	3	2	3	3	3	5	3	2	3	2	4	4	5	7	8	10	8	7	4.0	10.0
19-May	7	8	6	5	6	6	5	4	4	5	3	2	5	4	3	4	4	4	4	3	3	4	3	3	4.4	7.7
20-May	4	4	4	4	3	7	9	8	3	5	4	4	4	24	198	109	45	21	4	6	5	5	7	8	20.7	198.4
21-May	6	6	6	11	7	8	4	7	4	129	172	32	25	14	15	7	7	6	7	5	7	10	16	12	21.9	171.9
22-May	7	5	8	8	8	12	18	7	12	73	90	53	42	18	20	13	10	7	7	10	8	10	9	8	19.4	90.1
23-May	9	11	11	13	10	20	18	24	21	7	9	9	20	19	11	7	9	9	10	6	13	9	8	8	12.1	24.0
24-May	8	7	6	6	7	7	8	8	8	8	5	6	7	9	7	6	15	13	6	11	9	10	10	10	8.2	14.8
25-May	9	11	8	7	8	18	22	7	8	10	9	7	12	10	11	11	8	11	20	13	14	13	9	10	11.0	22.2
26-May	10	11	11	11	11	12	14	20	14	9	12	27	26	31	18	9	8	7	5	0	1	3	2	5	11.6	30.8
27-May	1	6	4	2	1	2	2	6	17	6	17	34	19	7	13	29	18	15	5	4	4	4	4	4	9.3	34.1
28-May	3	2	4	3	4	4	4	4	63	58	6	27	21	26	7	9	19	6	9	7	7	7	10	8	13.3	63.2
29-May	11	8	9	8	12	15	9	7	3	8	7	7	6	7	6	9	8	8	11	38	32	83	15	8	13.9	82.6
30-May	12	29	31	2	3	4	6	31	22	30	26	20	450	450	450	450	450	450	152	8	6	7	5	5	129.2	450.0
31-May	4	2	2	2	5	6	5	5	10	6	5	2	4	26	22	10	9	5	6	10	12	10	5	3	7.3	25.7
	6.1	6.9	6.6	5.3	5.6	7.7	9.0	8.9	10.2	18.0	15.8	10.1	24.0	23.8	30.4	27.2	25.4	23.4	12.4	7.7	11.5	11.2	7.8	6.4	Diurnal Average	
	13.4	29.2	30.8	12.9	11.7	20.0	22.2	31.4	63.2	129.4	171.9	53.3	450.0	450.0	450.0	450.0	450.0	450.0	152.5	37.6	96.2	82.6	28.4	14.5	Diurnal Maximum	

N - Not Valid

Hourly Maximums for $PM_{2.5}$ at Evergreen Park
May 2009



Pollutant Rose for $PM_{2.5}$ at Evergreen Park
May 2009



Evergreen Park - External Temperature (ET) - ^{o}C
May 1, 2009 to June 1, 2009

Maximum Value: 26.5 ^{o}C on May 29 18:00

Maximum Daily Average: 16.7 ^{o}C on May 29

Minimum Value: -2 ^{o}C on May 20 06:00

Minimum Daily Average: 0.3 ^{o}C on May 19

Maximum Diurnal Average: 13.8 ^{o}C at hour 17

Minimum Diurnal Average: 3.3 ^{o}C at hour 6

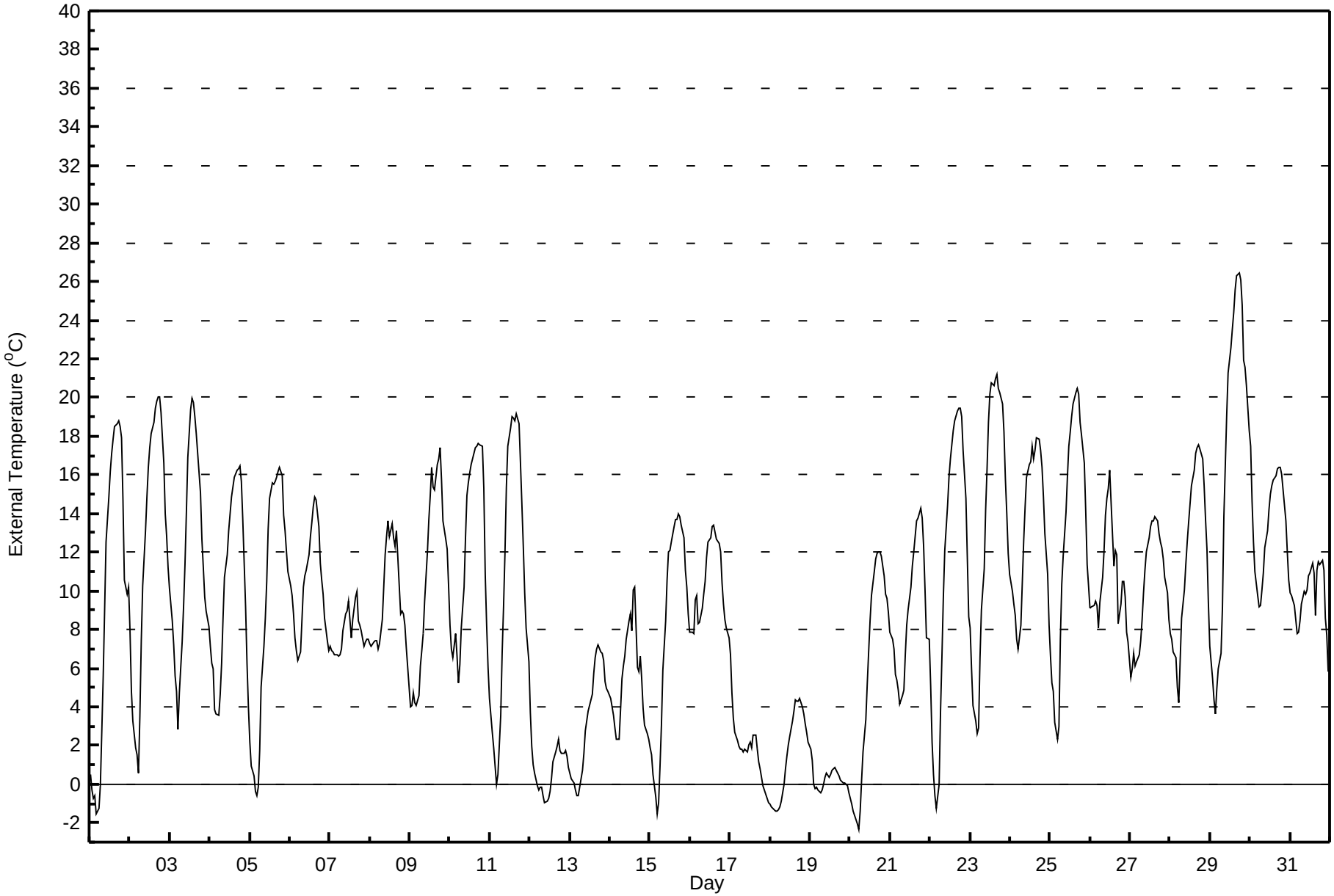
Monthly Average: 9.15 ^{o}C

Percentiles: P_1 = -1.4 P_{10} = 0.5 Q_1 = 4.4 Median = 9.0 Q_3 = 13.6 P_{90} = 17.4 P_{99} = 22.6

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

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-May	1	0	-1	-1	-2	-1	0	3	6	9	13	15	16	17	18	18	19	19	19	18	15	11	10	10	9.6	18.8
2-May	8	5	3	2	2	1	3	7	10	13	15	16	17	18	19	19	20	20	20	19	17	14	13	11	12.2	20.0
3-May	10	8	7	6	5	3	5	7	9	11	14	17	19	20	20	19	18	17	15	13	11	10	9	8	11.7	19.9
4-May	7	6	6	4	4	4	5	6	9	11	12	13	14	15	15	16	16	16	16	16	14	9	6	4	10.1	16.4
5-May	2	1	0	0	-1	0	2	5	7	9	11	13	15	16	16	16	16	16	16	16	14	13	12	11	9.4	16.4
6-May	10	10	9	8	7	6	7	8	10	11	11	12	13	14	14	15	15	13	11	11	10	9	7	7	10.3	14.9
7-May	7	7	7	7	7	7	7	7	8	9	9	9	8	8	9	10	10	8	8	8	7	7	8	7	7.8	10.0
8-May	7	7	7	7	7	7	7	8	10	12	13	14	13	13	13	12	13	12	9	9	9	8	7	5	9.6	13.6
9-May	4	4	5	4	4	5	6	7	8	9	12	14	15	16	15	15	16	17	17	16	14	13	12	10	10.8	17.4
10-May	8	7	7	8	7	5	6	8	10	13	15	16	16	17	17	17	17	18	18	17	15	11	8	6	11.9	17.7
11-May	4	3	2	1	0	1	4	7	9	12	15	18	18	19	19	19	19	19	17	14	12	10	8	6	10.6	19.2
12-May	4	2	1	1	0	0	0	0	-1	-1	-1	-1	0	0	1	2	2	2	2	2	2	2	1	1	0.8	3.7
13-May	1	0	0	0	-1	-1	0	1	2	3	3	4	4	5	6	7	7	7	7	7	6	5	5	5	3.4	7.2
14-May	4	4	4	3	2	2	4	5	6	7	7	8	9	8	10	10	6	6	7	5	4	3	3	2	5.4	10.2
15-May	2	2	0	-1	-2	-1	1	3	6	8	11	12	12	13	13	14	14	14	14	13	13	11	10	9	8.0	14.0
16-May	8	8	8	10	10	8	8	9	10	10	12	13	13	13	13	13	13	12	12	10	9	9	8	8	10.3	13.4
17-May	7	5	3	3	2	2	2	2	2	2	2	2	2	2	3	3	2	1	1	0	0	-1	-1	-1	1.8	6.7
18-May	-1	-1	-1	-1	-1	-1	-1	-1	0	1	1	2	2	3	4	4	4	4	4	4	4	3	3	2	1.5	4.4
19-May	2	1	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0.3	1.8
20-May	-1	-1	-1	-2	-2	-2	-1	0	2	3	5	7	8	10	11	12	12	12	12	12	11	10	10	9	5.6	12.0
21-May	8	7	7	6	5	5	4	5	5	7	8	9	10	11	12	13	14	14	14	14	12	10	8	8	9.0	14.2
22-May	5	2	0	-1	-1	0	4	7	10	12	14	16	17	18	18	19	19	19	19	19	17	15	12	9	11.2	19.5
23-May	8	6	4	3	3	3	7	9	11	14	16	19	20	21	21	21	21	20	20	20	18	16	14	12	13.6	21.2
24-May	11	10	9	9	8	7	8	10	13	14	16	17	17	17	17	17	18	18	17	16	15	13	11	8	13.2	17.9
25-May	7	5	5	3	2	3	7	10	12	14	16	17	18	19	20	20	20	20	19	18	17	14	11	10	12.9	20.5
26-May	9	9	9	9	9	8	9	11	12	14	15	15	16	13	11	12	12	8	9	10	10	10	8	7	10.8	16.2
27-May	6	6	7	6	6	7	7	8	10	11	12	13	13	14	14	14	14	13	13	12	12	11	10	9	10.2	13.8
28-May	8	8	7	7	5	4	6	9	10	11	13	14	14	15	16	17	17	18	17	17	15	14	12	9	11.8	17.6
29-May	7	5	4	4	5	6	7	9	14	16	19	21	23	24	24	26	26	26	26	25	22	22	21	18	16.7	26.5
30-May	17	15	13	11	10	9	9	10	11	12	13	14	15	15	16	16	16	16	16	16	15	14	12	11	13.5	17.4
31-May	10	10	9	9	8	8	8	9	10	10	10	11	11	11	11	9	11	12	11	12	11	9	8	6	9.7	11.6
	6.1	5.2	4.5	3.9	3.5	3.3	4.5	6.2	7.7	9.3	10.7	11.9	12.6	13.1	13.4	13.7	13.8	13.5	13.2	12.6	11.3	9.7	8.5	7.3	Diurnal Average	
	17.4	14.6	12.5	11.0	9.8	9.2	9.4	10.7	13.8	16.5	19.1	21.3	22.6	23.5	24.4	25.6	26.3	26.5	26.1	24.8	21.9	21.6	20.6	18.3	Diurnal Maximum	

Hourly Averages for External Temperature at Evergreen Park
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Evergreen Park
May 1, 2009 to June 1, 2009
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	1	2	1	3	3	6	9	8	8	8	7	7	6	2	6	6	6	3	1	0	4	4	1.5	9.1
Dir	227	218	213	221	202	217	223	253	259	261	277	280	307	335	26	36	39	46	45	53	219	218	63	78	307.0	258.6
2 Spd	1	1	1	1	0	0	1	1	2	4	7	5	5	4	6	7	6	7	7	6	4	6	6	4	3.4	7.4
Dir	42	33	36	30	200	304	203	139	108	154	140	106	122	140	114	122	109	95	103	99	72	74	81	83	106.0	140.4
3 Spd	5	5	4	2	2	1	1	5	7	8	9	10	10	14	12	19	15	22	23	19	16	15	13	11	8.7	22.7
Dir	99	82	82	70	36	236	258	262	269	269	275	294	308	277	285	275	286	277	267	284	274	281	273	275	279.4	267.3
4 Spd	12	10	12	4	11	12	13	14	18	19	20	17	16	13	12	13	11	8	6	6	2	1	0	0	9.9	20.0
Dir	275	264	260	220	237	236	254	259	259	277	270	281	267	283	269	262	280	289	297	328	344	223	123	234	267.9	270.4
5 Spd	0	0	0	1	0	1	1	0	3	1	5	6	5	3	3	3	3	3	3	3	4	11	17	15	3.0	16.6
Dir	255	10	230	270	36	206	219	158	125	163	250	251	278	226	287	87	305	275	329	235	216	239	256	266	253.1	255.9
6 Spd	10	5	6	8	8	6	7	10	13	13	11	9	12	8	6	8	7	8	12	10	9	5	5	6	7.3	13.5
Dir	271	285	269	275	272	274	281	281	284	281	290	274	266	273	302	245	262	201	202	204	228	223	220	228	259.8	284.1
7 Spd	6	6	7	2	5	6	7	6	11	10	8	9	14	12	17	19	12	6	2	2	5	6	6	5	6.5	19.2
Dir	233	224	228	271	264	265	269	267	267	267	259	318	336	279	261	259	280	18	26	207	211	245	259	263	269.3	259.1
8 Spd	1	6	8	10	8	6	6	8	10	11	11	9	10	9	14	12	14	16	13	8	6	4	3	0	7.5	15.5
Dir	266	258	274	263	254	271	273	286	292	333	337	321	287	287	310	285	312	340	315	288	275	288	246	99	296.8	340.0
9 Spd	2	3	2	3	4	4	8	10	9	7	5	6	3	3	12	8	5	4	1	5	3	6	5	1	3.7	12.3
Dir	214	226	249	263	279	311	290	289	270	267	281	278	300	337	272	292	333	336	331	160	178	195	229	220	273.6	272.4
10 Spd	1	1	2	7	2	1	2	4	7	8	8	7	12	7	10	13	7	8	6	3	1	1	1	0	4.6	12.8
Dir	182	101	230	259	284	269	231	259	263	272	288	280	290	309	287	263	286	281	313	313	333	201	200	253	278.9	263.4
11 Spd	1	0	1	1	0	1	2	4	4	2	2	4	5	6	3	8	6	2	15	9	11	10	15	14	3.4	14.9
Dir	204	55	204	214	176	209	207	217	272	259	178	180	210	229	264	235	284	270	229	259	290	322	343	332	270.5	343.0
12 Spd	14	12	13	12	12	10	12	11	12	9	7	7	6	6	6	7	6	5	5	2	2	0	0	1	5.9	13.6
Dir	317	312	313	319	326	329	349	354	354	2	12	15	22	30	29	39	37	31	54	85	116	154	182	162	351.1	316.7
13 Spd	2	2	2	3	2	2	3	4	6	6	7	5	5	5	3	3	1	1	3	3	1	1	2	3	3.0	6.9
Dir	118	148	84	93	107	93	107	125	124	138	135	112	109	115	116	89	91	90	67	87	45	56	70	77	108.3	134.9
14 Spd	4	2	1	1	1	2	3	3	2	2	1	2	3	2	4	3	10	3	2	1	5	4	4	4	1.1	10.2
Dir	106	107	115	45	69	81	82	64	323	225	298	12	213	170	220	235	255	183	154	31	196	210	222	223	201.4	255.2
15 Spd	4	2	1	1	1	1	2	3	6	7	11	10	13	13	18	17	17	17	15	14	11	8	7	3	7.8	17.7
Dir	255	264	307	198	209	203	210	203	224	251	271	289	271	250	261	271	275	281	278	271	264	236	231	200	262.5	260.9
16 Spd	2	3	1	7	5	3	3	5	7	15	17	17	14	12	11	11	8	8	7	4	2	2	1	2	5.9	17.4
Dir	199	203	215	264	322	7	188	235	256	275	270	293	300	312	314	295	308	312	288	279	319	258	207	65	287.1	269.5
17 Spd	6	8	7	8	7	7	6	5	7	7	8	6	8	10	9	10	9	10	7	6	6	5	5	4	7.0	10.0
Dir	68	74	71	67	69	70	65	44	48	43	44	46	51	40	48	43	44	47	63	64	68	77	79	72	57.1	42.6
18 Spd	5	4	5	5	5	5	5	6	6	6	6	5	7	7	8	8	8	8	7	7	6	5	5	6	6.0	8.2
Dir	81	83	92	87	77	80	82	86	96	107	99	87	82	103	110	104	77	78	90	91	112	113	113	101	93.1	78.0
19 Spd	5	6	5	6	7	9	9	8	7	7	6	8	7	7	7	7	7	7	6	4	2	2	2	3	5.3	9.0
Dir	97	97	79	72	69	68	72	72	68	72	74	67	58	60	50	47	43	39	36	25	12	88	289	259	61.9	67.9
20 Spd	4	3	4	3	2	0	2	6	8	11	12	13	12	14	14	16	16	17	14	11	9	8	6	15	9.1	16.6
Dir	277	278	272	270	238	346	229	259	263	264	267	261	282	286	285	284	282	278	276	272	265	255	283	267	273.1	278.3
21 Spd	12	13	12	5	5	4	4	6	5	3	3	5	4	4	4	3	3	3	3	4	4	2	2	2	1.1	13.0
Dir	280	265	271	345	307	37	71	67	78	93	4	344	11	35	35	92	71	75	87	126	126	140	172	173	2.3	264.8
22 Spd	1	1	0	0	1	1	4	6	5	2	4	5	5	2	4	7	5	4	5	4	4	3	2	1	1.3	6.5
Dir	109	68	100	34	212	212	233	260	262	288	291	264	314	297	334	342	309	45	34	58	74	89	74	55	323.9	341.6

Peace Airshed Zone Association
Summary of Hourly Averages

Evergreen Park
May 1, 2009 to June 1, 2009
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	3	1	0	2	0	2	3	4	4	2	2	2	5	6	9	8	8	11	10	8	9	10	7	6	4.5	10.6
Dir	71	21	6	212	335	226	279	280	241	211	290	288	299	269	278	298	306	288	299	302	287	273	297	270	285.8	287.8
24 Spd	7	7	6	8	5	6	9	9	9	10	11	11	10	11	12	10	8	9	7	8	7	4	1	1	5.4	12.1
Dir	268	262	267	266	291	293	278	288	285	297	292	324	315	300	340	342	350	41	33	53	49	53	18	250	314.9	339.6
25 Spd	1	1	2	1	1	1	1	1	3	1	4	4	4	5	6	4	6	5	7	5	2	1	2	3	1.7	6.7
Dir	12	31	224	37	31	282	279	184	161	63	46	80	75	58	66	73	58	62	216	152	137	97	84	86	85.3	215.6
26 Spd	2	2	3	2	1	2	2	1	3	3	4	3	1	13	2	3	6	5	4	12	13	9	4	5	2.2	13.5
Dir	75	81	75	104	79	48	63	9	44	125	226	238	292	258	251	15	323	333	234	254	259	249	236	232	262.5	258.9
27 Spd	1	4	6	5	10	12	13	16	21	19	18	20	21	21	23	22	22	20	18	20	13	11	11	8	14.3	22.6
Dir	257	259	258	256	256	260	256	259	264	252	265	268	268	285	289	290	283	294	296	285	285	279	280	291	275.3	289.2
28 Spd	8	10	8	8	2	1	5	13	16	20	19	19	18	18	16	13	14	15	17	13	10	7	3	0	11.1	20.0
Dir	283	276	281	272	254	64	273	273	276	276	274	274	274	273	275	292	296	279	265	273	273	273	304	296	276.6	275.5
29 Spd	1	2	0	2	3	0	2	2	5	7	8	6	6	5	6	1	6	8	9	2	1	6	15	15	2.5	15.1
Dir	231	209	142	73	214	126	74	94	146	153	160	175	179	158	131	289	244	243	243	265	160	260	292	283	220.3	291.6
30 Spd	18	17	20	19	16	17	18	17	17	19	26	26	26	27	29	28	27	25	21	22	16	8	7	6	19.6	29.4
Dir	271	288	285	290	278	269	274	268	267	268	267	268	273	283	273	280	280	284	290	283	286	289	280	274	277.5	273.3
31 Spd	8	11	14	14	12	13	10	9	13	16	18	20	17	14	13	6	10	6	4	2	1	2	1	1	7.1	20.1
Dir	277	275	269	269	270	269	284	326	336	340	342	343	337	345	5	355	40	56	43	104	263	101	206	259	322.5	343.0
Spd	2.2	2.4	2.9	2.6	2.5	2.0	2.6	3.7	4.8	5.1	5.7	5.7	5.9	5.7	5.8	5.8	5.9	4.5	4.1	3.4	3.1	2.8	2.7	2.5	Diurnal Average	
Dir	276.4	272.3	274.8	281.0	279.0	280.8	275.2	277.4	275.4	277.3	281.1	291.2	293.6	291.2	295.2	289.5	303.0	310.0	287.0	279.3	268.7	259.7	274.4	272.6		
Spd	17.6	17.2	19.9	19.2	16.0	17.3	18.1	17.0	21.3	20.0	26.3	25.6	26.2	26.5	29.4	28.2	27.3	25.3	22.7	21.7	16.5	14.6	16.6	15.4	Diurnal Maximum	
Dir	270.6	287.6	285.3	289.6	278.2	269.5	273.6	268.1	263.8	275.5	266.9	267.6	273.0	283.2	273.3	280.1	279.7	283.8	267.3	282.9	273.9	280.5	255.9	267.0		

Maximum Speed Value: 29 km/h on May 30 15:00
Maximum Daily Speed Average: 19.6 km/h on May 30
Maximum Diurnal Speed Average: 5.9 km/h at hour 13

Minimum Speed Value: 0 km/h on May 12 23:00
Minimum Daily Speed Average: 1.1 km/h on May 25
Minimum Diurnal Speed Average: 2.0 km/h at hour 6

Monthly Average Velocity: 3.86 km/h 284.58 deg

Speed Percentiles: $P_1 = 0.1$ $P_{10} = 1.1$ $Q_1 = 2.8$ Median = 6.0 $Q_3 = 9.8$ $P_{90} = 15.0$ $P_{99} = 25.1$

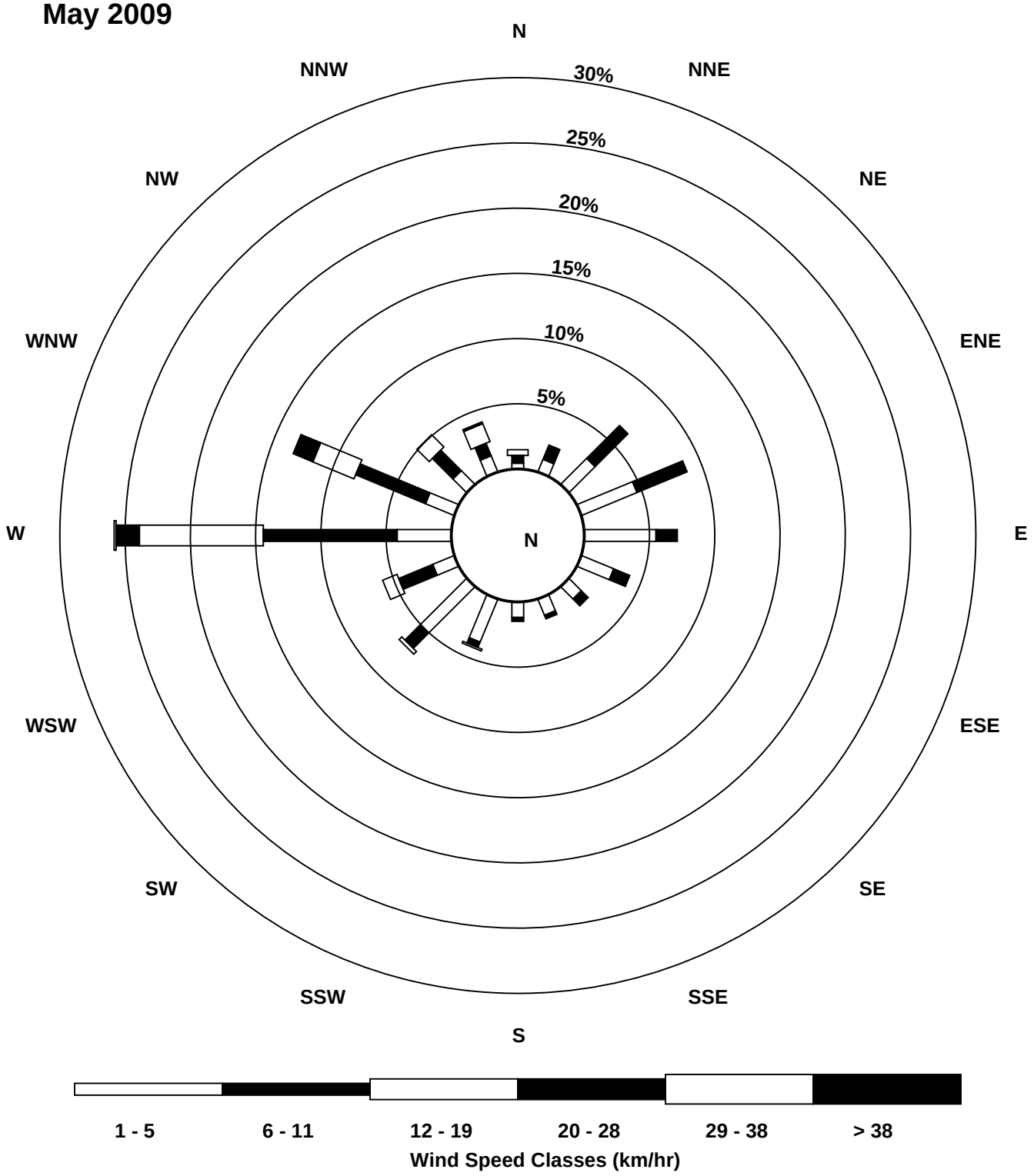
All monthly, daily, and diurnal averages have been calculated using vector methods

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

Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	16	10	9	1	0	0	36
NorthEast	41	41	0	0	0	0	82
East	64	46	0	0	0	0	110
SouthEast	22	12	0	0	0	0	34
South	26	6	1	0	0	0	33
SouthWest	67	22	3	0	0	0	92
West	50	110	95	25	2	0	282
NorthWest	24	32	18	1	0	0	75
Total	310	279	126	27	2	0	744

Wind Rose for WS at Evergreen Park
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages - Wind Speed (Scalar)

Evergreen Park - Wind Speed (WS) - km/h
May 1, 2009 to June 1, 2009

Maximum Speed: 30 km/h on May 30 15:00

Maximum Daily Speed Average: 20.1 km/h on May 30

Minimum Speed: 1 km/h on May 5 03:00

Minimum Daily Speed Average: 3.9 km/h on May 25

Maximum Diurnal Speed Average: 10.9 km/h at hour 15

Minimum Diurnal Speed Average: 4.9 km/h at hour 5

Monthly Average Speed: 7.70 km/h

Percentiles: $P_1 = 0.9$ $P_{10} = 1.7$ $Q_1 = 3.6$ Median = 6.6 $Q_3 = 10.3$ $P_{90} = 15.5$ $P_{99} = 25.7$

Hours in Service: 744

Hours of Data: 744

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								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-May	1	1	1	2	1	3	3	6	9	9	9	9	9	9	7	6	7	7	6	3	1	1	5	4	5.0	9.3
2-May	2	1	1	1	1	1	1	2	3	5	8	7	7	8	8	9	8	8	7	6	4	6	6	4	4.8	8.8
3-May	5	5	4	3	2	1	1	5	7	8	9	11	12	15	12	19	15	22	23	19	17	15	13	11	10.7	23.1
4-May	12	10	12	4	11	13	13	15	18	19	20	18	17	15	14	14	12	10	7	6	2	1	1	1	11.1	20.4
5-May	1	1	1	1	1	2	1	2	3	3	6	7	7	6	5	5	4	3	4	3	4	12	17	15	4.7	16.8
6-May	10	5	7	8	9	6	7	10	14	13	12	10	12	9	7	9	7	10	12	10	9	5	5	6	8.8	13.9
7-May	6	6	7	2	5	6	7	6	11	11	9	11	14	13	17	19	14	6	3	3	5	6	6	5	8.2	19.4
8-May	2	6	8	11	8	6	6	9	11	11	11	10	11	10	15	12	16	16	14	8	6	4	4	2	9.1	15.9
9-May	2	3	2	3	4	4	8	10	9	8	6	7	7	5	13	8	8	5	4	6	3	6	6	2	5.8	13.2
10-May	1	2	2	7	3	2	3	4	8	8	9	8	14	9	11	14	8	9	8	4	1	2	2	1	5.8	13.7
11-May	1	1	1	1	1	1	2	4	4	3	4	6	7	8	5	10	7	6	15	10	12	10	15	15	6.3	15.3
12-May	14	12	13	12	12	10	12	11	12	9	7	7	6	7	6	7	7	5	5	2	2	1	1	2	7.7	14.1
13-May	2	2	3	3	3	3	4	4	6	7	8	7	6	6	5	5	4	3	4	4	1	2	2	3	4.0	7.6
14-May	5	2	1	1	1	2	3	4	4	3	4	4	4	5	5	5	13	4	3	3	5	4	4	4	4.0	13.2
15-May	4	3	2	2	1	1	2	3	6	8	12	11	14	14	18	17	18	17	15	14	11	8	7	3	8.8	18.1
16-May	3	3	3	8	7	7	3	6	8	15	18	17	15	13	12	12	9	9	7	5	2	3	1	2	7.9	17.8
17-May	6	8	8	8	7	7	6	5	7	7	8	7	8	10	9	10	9	10	8	7	7	5	5	4	7.4	10.2
18-May	6	4	5	5	5	5	6	7	6	7	7	6	7	8	9	8	8	8	8	7	6	5	6	6	6.5	8.7
19-May	5	6	5	6	7	9	9	8	7	7	6	8	7	7	7	7	7	8	6	4	2	2	3	3	6.1	9.2
20-May	4	3	4	4	3	1	2	7	9	11	12	13	13	14	15	17	17	17	14	11	9	8	7	16	9.6	17.1
21-May	12	13	13	5	5	5	5	6	6	4	5	6	7	6	6	6	5	5	4	4	4	2	2	3	5.7	13.1
22-May	2	1	1	1	1	1	5	6	6	4	4	6	8	6	7	8	7	6	6	4	4	3	2	1	4.2	8.2
23-May	3	1	1	2	1	2	4	4	5	4	4	4	6	7	9	10	9	11	11	8	9	10	7	6	5.7	10.9
24-May	7	8	6	8	5	7	9	9	10	11	13	12	11	12	14	10	9	9	7	8	7	4	1	3	8.3	13.5
25-May	2	1	2	1	1	1	1	2	4	3	5	5	6	7	7	7	7	6	9	6	3	2	3	3	3.9	9.2
26-May	2	2	3	3	3	2	3	2	4	5	5	4	3	13	3	3	10	6	4	12	14	9	4	5	5.2	13.5
27-May	2	4	6	6	11	12	13	16	21	19	19	21	21	21	23	23	23	20	19	20	13	11	11	9	15.1	23.0
28-May	8	10	8	8	2	2	6	13	16	20	20	19	18	18	17	15	15	15	17	13	10	7	3	1	11.9	20.4
29-May	1	2	2	2	3	2	2	2	5	8	8	8	8	7	7	6	8	9	9	3	2	8	15	16	6.0	15.9
30-May	18	18	20	20	16	17	18	17	18	20	27	26	27	27	30	29	28	26	22	22	16	8	7	6	20.1	29.9
31-May	8	11	14	14	12	13	10	10	13	17	19	21	18	14	15	7	11	7	5	2	1	4	2	1	10.4	20.6
	5.0	5.1	5.3	5.3	4.9	5.0	5.7	7.0	8.7	9.2	10.1	10.2	10.7	10.7	10.9	10.9	10.7	9.8	9.2	7.7	6.2	5.6	5.6	5.4	Diurnal Average	
	18.1	17.5	20.1	19.6	16.2	17.4	18.3	17.4	21.5	20.4	26.6	26.1	27.1	27.2	29.9	28.7	27.9	25.8	23.1	22.1	16.8	14.7	16.8	15.9	Diurnal Maximum	

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

Peace Airshed Zone Association
Summary of Hourly Standard Deviations

Evergreen Park - Wind Direction (WD) - deg
May 1, 2009 to June 1, 2009

Maximum Value: 101.8 deg on May 29 00:00

Minimum Value: 3.9 deg on May 4 05:00

Percentiles: P_1 = 5.5 P_{10} = 9.4 Q_1 = 12.6 Median = 21.9 Q_3 = 43.2 P_{90} = 70.8 P_{99} = 91.9

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

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-May	18	17	15	32	27	33	12	11	9	14	24	24	56	45	44	80	45	33	24	29	83	76	22	10	82.7
2-May	43	71	70	59	86	73	55	86	48	36	29	52	55	66	48	48	36	31	21	16	7	7	8	12	86.3
3-May	11	6	7	22	41	66	29	11	16	17	24	27	30	21	18	13	19	12	11	10	11	8	9	10	65.8
4-May	10	10	9	24	4	5	6	8	8	12	12	18	19	30	27	21	28	40	34	17	31	66	92	91	92.4
5-May	72	78	94	48	73	89	41	84	42	68	33	37	63	65	59	58	54	54	66	17	5	21	8	15	94.0
6-May	13	11	12	7	8	11	14	13	15	16	16	24	22	32	47	37	34	39	12	10	9	12	6	5	47.0
7-May	9	7	4	56	9	9	11	11	12	17	16	33	17	24	8	8	38	22	38	57	9	14	7	25	57.3
8-May	58	7	9	13	16	30	10	15	25	24	22	32	25	32	22	19	29	12	20	11	10	14	18	84	83.6
9-May	37	11	20	51	27	16	11	10	10	22	32	40	86	61	22	28	50	39	89	25	16	18	47	85	88.5
10-May	81	66	32	7	21	60	18	20	13	20	30	24	31	44	28	24	49	37	37	33	93	83	78	94	94.3
11-May	61	93	76	65	78	41	31	20	33	54	67	57	52	58	84	56	45	82	26	23	18	20	11	19	92.6
12-May	15	13	13	12	14	16	9	15	16	17	19	20	20	25	25	20	20	30	22	40	33	71	89	58	89.3
13-May	21	31	23	18	15	16	20	20	17	31	27	36	40	37	70	71	80	93	45	28	64	38	14	9	93.5
14-May	22	17	78	35	45	13	25	37	68	78	83	74	52	82	48	76	45	58	64	71	16	13	9	11	82.7
15-May	23	72	72	55	26	58	18	15	16	34	20	31	20	27	12	14	13	13	11	7	12	6	7	30	72.1
16-May	17	21	81	11	56	82	41	34	19	12	12	15	20	26	22	25	25	25	25	21	37	37	79	12	82.1
17-May	12	12	12	12	19	13	16	25	19	16	19	20	14	14	17	15	15	13	14	14	19	16	17	20	24.5
18-May	19	18	19	16	17	16	21	17	24	25	24	33	27	30	24	22	16	15	17	14	16	16	18	15	33.0
19-May	16	16	16	15	11	11	14	12	15	14	17	10	13	15	12	12	14	11	15	26	32	30	37	9	36.9
20-May	8	10	12	11	49	71	11	16	9	9	10	10	24	16	18	18	17	13	11	9	7	7	36	9	70.8
21-May	12	7	12	24	18	41	29	24	23	64	64	57	66	50	64	75	79	70	59	43	16	25	51	59	79.0
22-May	44	72	84	95	59	34	21	12	28	69	50	40	70	79	78	41	46	49	32	16	9	9	19	30	95.1
23-May	11	39	86	36	90	65	26	27	31	67	66	66	48	48	31	37	29	14	18	17	13	7	21	9	90.2
24-May	9	5	17	18	23	27	10	13	16	23	29	31	26	27	31	23	32	18	22	12	9	16	58	74	73.7
25-May	82	65	26	57	29	63	57	96	53	91	51	53	65	57	37	49	37	29	70	24	38	53	18	12	96.0
26-May	32	30	28	47	92	38	44	85	48	59	62	48	83	23	54	29	58	40	37	9	6	10	12	8	92.5
27-May	80	23	7	30	7	4	8	9	8	11	14	13	14	13	11	12	12	11	11	12	10	9	9	12	80.4
28-May	11	9	9	11	74	57	58	10	12	12	16	14	17	17	21	28	23	14	12	12	8	14	22	102	101.8
29-May	80	20	79	29	31	80	28	31	28	25	23	34	37	48	40	90	58	33	16	80	80	34	13	20	90.3
30-May	13	12	8	11	9	6	8	12	13	11	9	11	14	13	10	10	13	11	13	10	11	12	13	10	14.4
31-May	10	8	6	6	7	7	12	23	15	11	12	13	18	24	28	35	27	23	39	54	71	59	75	65	74.7
	81.6	92.6	94.0	95.1	92.5	89.2	58.1	96.0	68.0	90.9	82.7	74.1	85.6	81.8	84.2	90.3	80.1	93.5	88.5	80.0	92.6	83.2	92.4	101.8	

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
May 1, 2009 to June 1, 2009

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7.7 ppb on May 4 23:00
Maximum Daily Average: 1.4 ppb on May 3

Minimum Value: 0 ppb on May 12 19:00
Maximum Diurnal Average: 0.5 ppb at hour 3
Monthly Average: 0.36 ppb

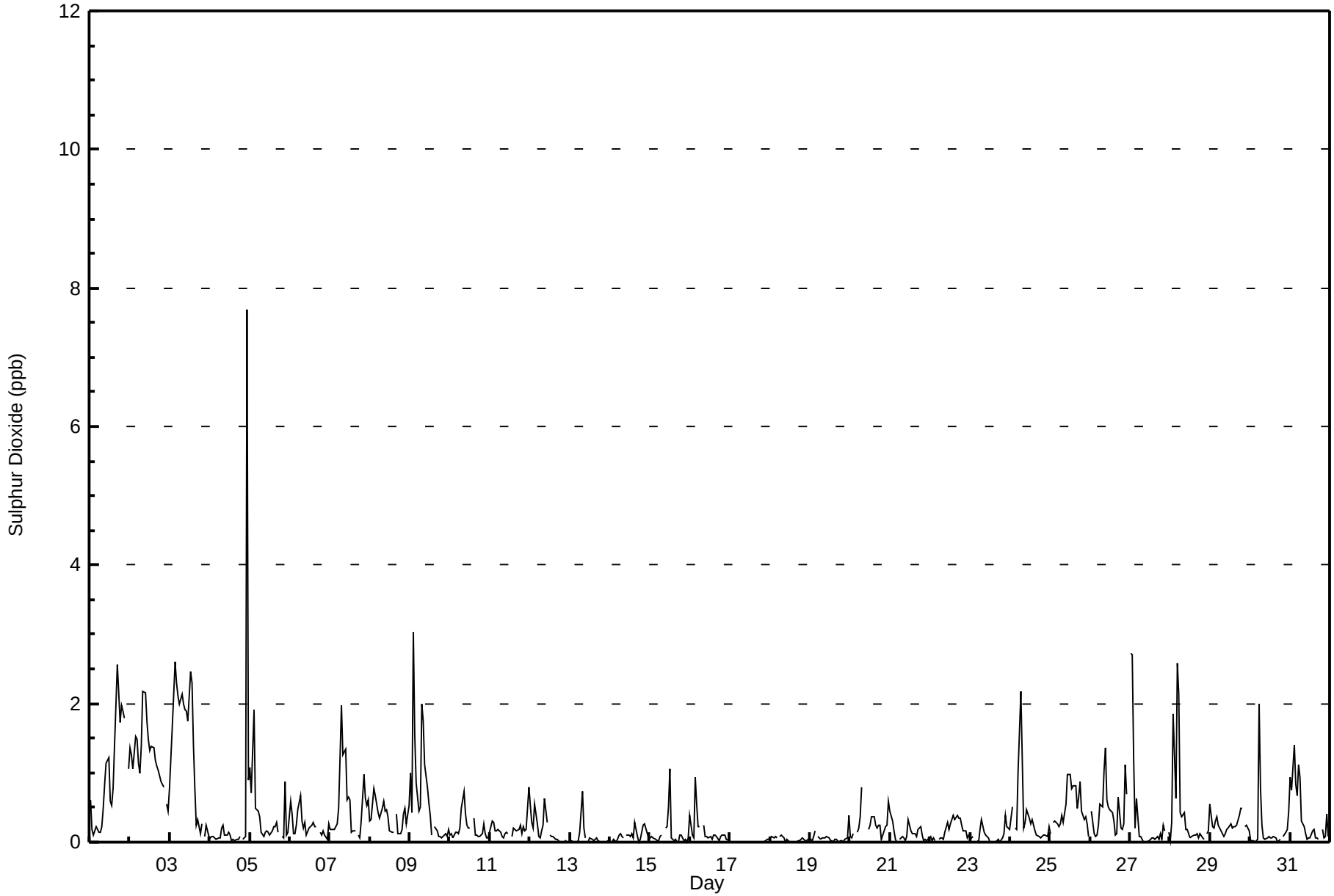
Minimum Daily Average: 0.0 ppb on May 17
Minimum Diurnal Average: 0.2 ppb at hour 20
Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.1 Q_3 = 0.4 P_{90} = 1.0 P_{99} = 2.5

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	3	2	2	2	2	2	A	1	1.0	2.6
2-May	1	1	1	2	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	A	1	0	1.3	2.2
3-May	1	2	2	3	2	2	2	2	2	2	2	2	2	2	1	1	0	0	0	0	A	0	0	0	1.4	2.6
4-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	8	1	0.4	7.7
5-May	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0	0.4	1.9
6-May	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.7
7-May	0	0	0	0	0	0	1	2	1	1	1	1	1	0	0	0	A	0	0	0	1	1	1	1	0.6	2.0
8-May	0	0	1	1	1	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	0.4	0.8
9-May	1	0	3	2	1	0	1	2	2	1	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0.7	3.0
10-May	0	0	0	0	0	0	0	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.7
11-May	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0.2	0.8
12-May	1	0	0	1	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
13-May	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7
14-May	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
15-May	0	0	0	0	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.1	1.1
16-May	0	0	0	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
17-May	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
18-May	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
19-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
20-May	0	0	0	A	0	0	0	1	C	C	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	0.8
21-May	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	0.5
22-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
23-May	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
24-May	0	1	A	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.2
25-May	0	A	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	1	1	0	0	0	0	0	0.5	1.0
26-May	A	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	1	0	0	0	1	1	A	0.5	1.4
27-May	3	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.4	2.7
28-May	0	0	2	1	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.4	2.6
29-May	1	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
30-May	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	2.0
31-May	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.4	1.4
	0.4	0.4	0.5	0.4	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.4	0.3	Diurnal Average	
	2.7	2.7	3.0	2.6	2.6	2.1	2.2	2.1	2.2	2.1	1.9	1.8	2.5	2.3	1.4	1.4	2.6	2.1	1.7	2.0	1.9	1.8	7.7	1.1	Diurnal Maximum	

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

Hourly Averages for SO_2 at Smoky Heights
May 2009



Peace Airshed Zone Association
Summary of Hourly Maximums

Smoky Heights - Sulphur Dioxide (SO_2) - ppb
May 1, 2009 to June 1, 2009

Maximum Value: 23.1 ppb on May 4 23:00

Maximum Daily Average: 2.0 ppb on May 3

Minimum Value: 0 ppb on May 13 00:00

Minimum Daily Average: 0.3 ppb on May 17

Maximum Diurnal Average: 1.4 ppb at hour 23

Minimum Diurnal Average: 0.6 ppb at hour 19

Monthly Average: 0.91 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.3$ $Q_1 = 0.4$ Median = 0.5 $Q_3 = 0.8$ $P_{90} = 1.9$ $P_{99} = 7.1$

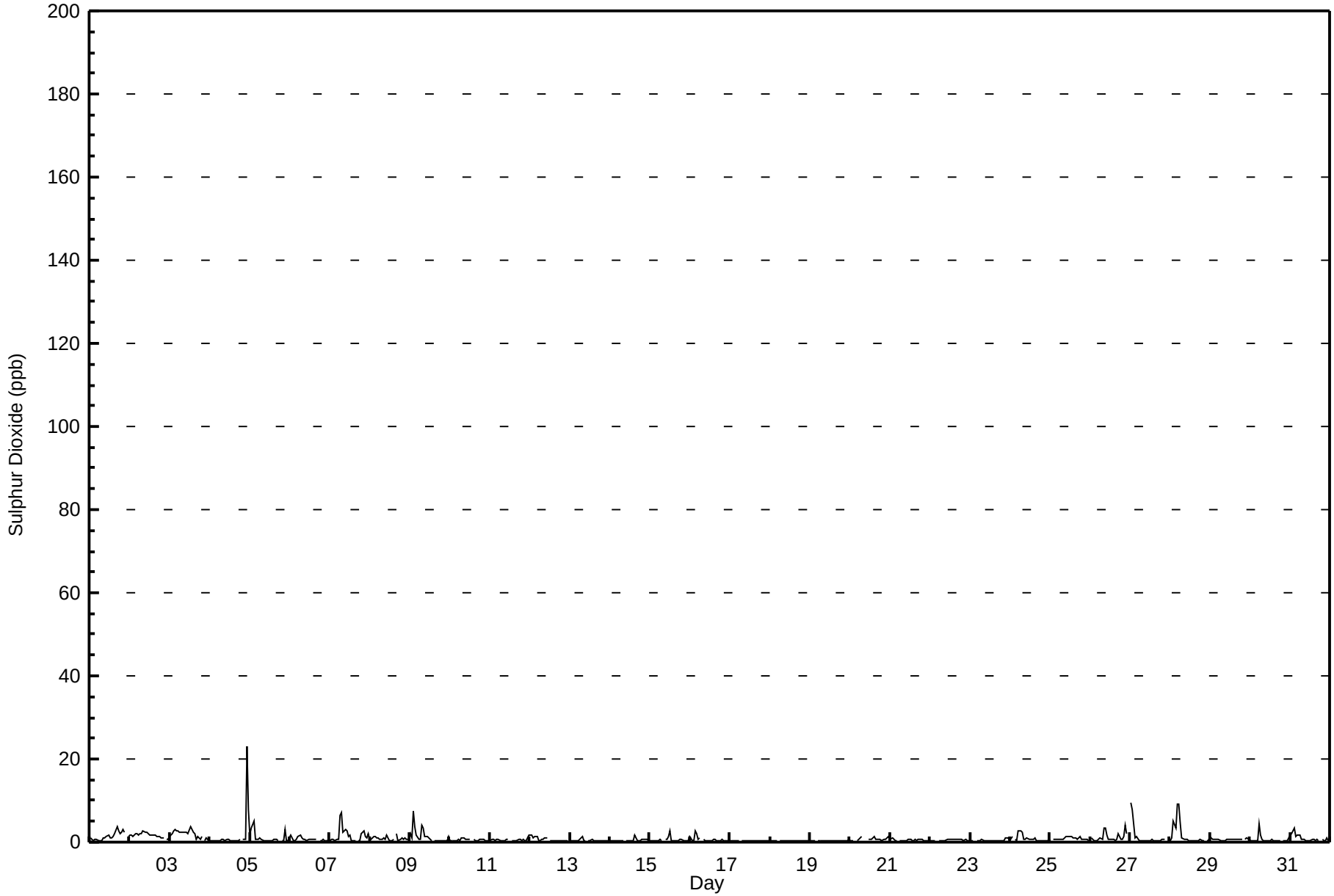
Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-May	1	1	0	1	1	0	0	0	1	1	1	2	1	1	1	2	4	3	2	2	3	2	A	1	1.4	3.7
2-May	2	2	1	2	2	2	2	2	3	2	2	2	2	2	2	2	1	1	1	1	1	A	1	1	1.7	2.8
3-May	2	2	3	3	3	3	2	2	2	2	2	2	4	3	2	2	1	1	1	1	A	0	1	0	2.0	3.7
4-May	0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	0	0	0	1	A	1	1	23	8	1.8	23.1
5-May	2	4	5	1	1	1	1	1	0	0	0	0	0	0	1	1	1	0	A	0	0	3	0	0	1.0	5.2
6-May	2	1	0	0	1	1	2	1	1	1	0	1	1	1	1	1	1	A	0	0	1	0	0	1	0.7	1.8
7-May	1	1	1	1	1	1	6	7	2	3	3	1	2	0	0	0	A	0	0	2	3	1	1	2	1.7	7.3
8-May	1	1	1	1	1	1	1	1	1	1	2	1	0	0	1	A	2	0	1	1	1	1	1	1	0.9	2.2
9-May	2	1	7	4	2	1	1	4	4	1	1	1	1	0	A	0	0	0	0	0	0	0	0	1	1.5	7.3
10-May	0	0	0	0	0	1	0	1	1	1	1	1	1	A	1	0	0	0	1	1	1	0	0	0	0.6	1.1
11-May	0	1	1	0	1	1	0	0	0	0	1	1	A	0	1	0	0	1	1	0	1	1	0	2	0.6	1.9
12-May	2	2	1	2	1	0	0	1	1	1	1	A	0	1	0	0	0	0	0	0	0	0	0	0	0.7	1.8
13-May	0	0	0	0	0	0	1	1	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0.4	1.2
14-May	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	2	0	0	0	1	1	1	1	0	0.5	1.9
15-May	0	0	0	0	0	0	1	0	A	1	1	1	3	0	0	0	0	0	1	1	0	0	0	0	0.5	2.6
16-May	1	1	0	3	2	1	1	A	1	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0.7	2.8
17-May	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
18-May	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
19-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	0.7
20-May	0	0	0	A	0	1	1	1	C	C	A	1	1	1	1	1	1	1	1	0	1	1	1	1	0.7	1.5
21-May	1	1	1	0	0	A	0	0	0	0	0	1	1	0	0	1	0	1	1	1	0	0	0	0	0.5	0.9
22-May	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0.5	0.8
23-May	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.5	1.2
24-May	0	1	A	1	0	3	3	2	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	0.8	2.7
25-May	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0.9	1.5
26-May	A	1	0	0	0	1	1	1	3	3	2	1	1	1	1	0	1	2	1	1	1	4	2	A	1.2	4.1
27-May	10	8	4	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1	A	1	1.4	9.6
28-May	0	1	5	4	9	9	5	1	1	1	1	0	0	0	0	0	0	0	1	0	0	A	0	0	1.8	9.3
29-May	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.6	1.2
30-May	0	0	0	0	0	4	2	1	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0	1	0.7	4.3
31-May	2	2	3	1	2	2	2	1	1	0	0	0	0	1	1	0	1	0	A	1	0	0	1	0	0.9	3.3
	1.1	1.1	1.3	1.0	1.1	1.2	1.2	1.2	1.0	0.9	0.9	0.7	0.8	0.6	0.6	0.7	0.6	0.6	0.6	0.7	0.7	0.8	1.4	0.9	Diurnal Average	
	9.6	7.8	7.3	3.9	9.3	9.3	6.4	7.3	3.5	3.5	2.9	2.1	3.7	3.0	2.3	2.2	3.7	2.7	2.1	2.4	3.0	4.1	23.1	8.0	Diurnal Maximum	

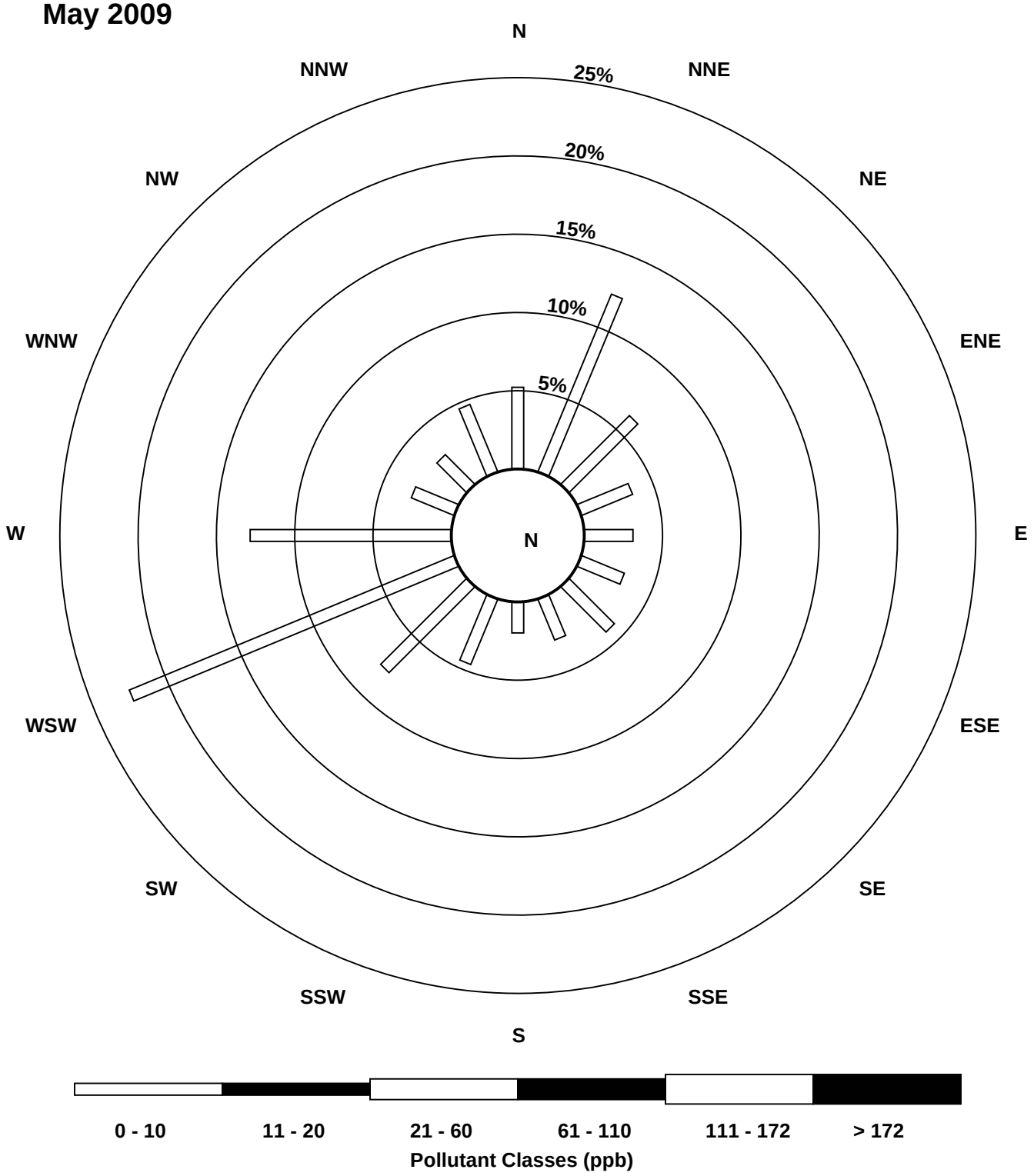
C - Calibration

A - Automated Daily Zero Span

Hourly Maximums for SO_2 at Smoky Heights
May 2009



Pollutant Rose for SO_2 at Smoky Heights
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Smoky Heights - Total Reduced Sulphur (TRS) - ppb
May 1, 2009 to June 1, 2009

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 0.6 ppb on May 25 23:00
Maximum Daily Average: 0.4 ppb on May 26

Minimum Value: 0 ppb on May 13 04:00
Maximum Diurnal Average: 0.3 ppb at hour 5
Monthly Average: 0.31 ppb

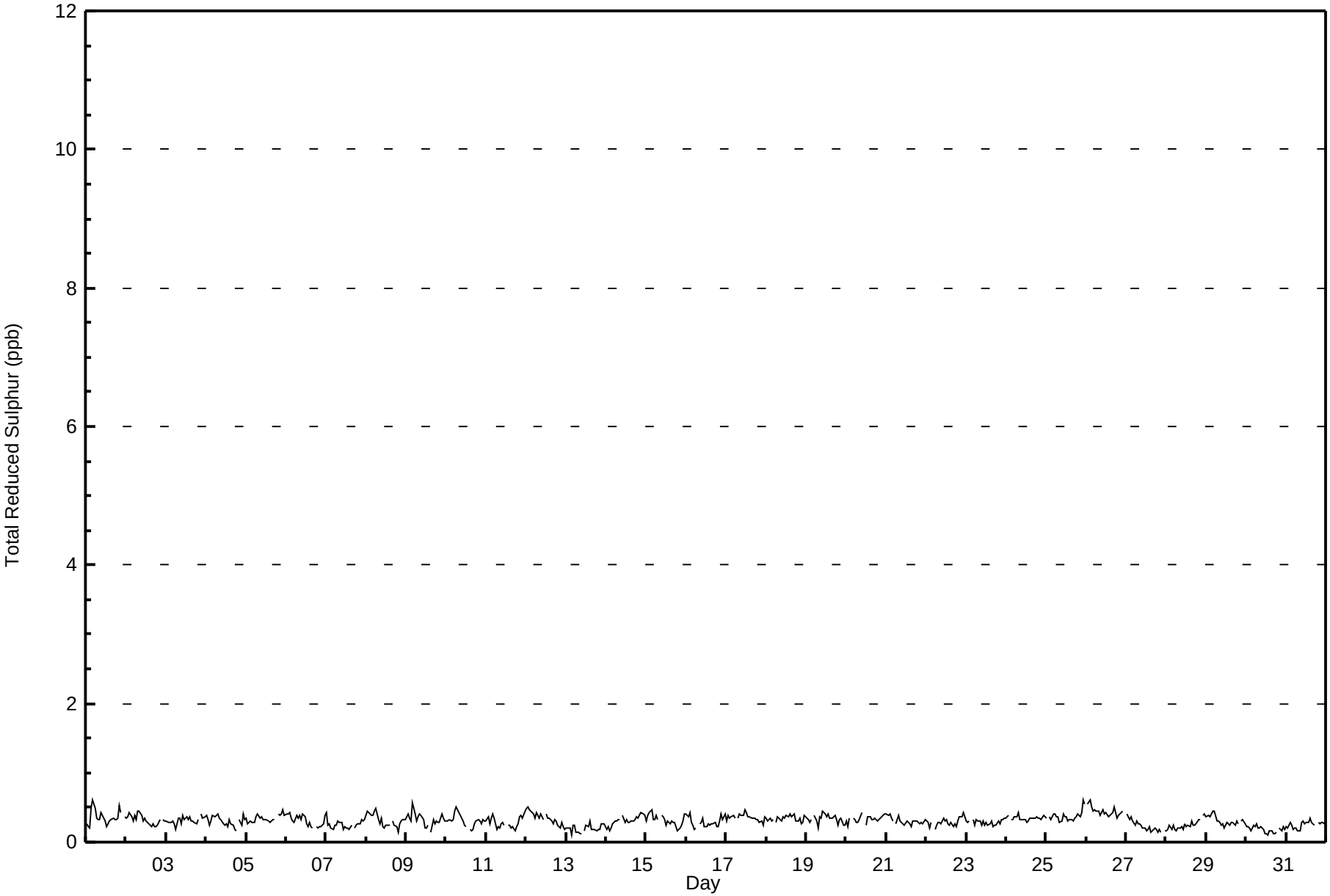
Minimum Daily Average: 0.2 ppb on May 30
Minimum Diurnal Average: 0.3 ppb at hour 19
Percentiles: $P_1 = 0.1$ $P_{10} = 0.2$ $Q_1 = 0.2$ Median = 0.3 $Q_3 = 0.4$ $P_{90} = 0.4$ $P_{99} = 0.5$

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-May	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	A	0	0.4	0.6
2-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.4
3-May	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	0.4
4-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.3	0.4
5-May	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	0.5
6-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.4
7-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.4
8-May	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
9-May	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	0.6
10-May	0	0	0	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.3	0.5
11-May	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
12-May	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
13-May	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
14-May	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
15-May	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
16-May	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
17-May	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	0.5
18-May	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
19-May	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
20-May	0	0	0	A	0	0	0	0	0	0	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
21-May	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
22-May	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
23-May	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.3
24-May	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
25-May	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.4	0.6
26-May	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	0.4	0.6
27-May	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
28-May	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
29-May	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	0.4
30-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.3
31-May	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
	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	Diurnal Average	
	0.5	0.6	0.6	0.5	0.6	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.5	0.4	0.6	0.6	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
May 2009



Peace Airshed Zone Association
Summary of Hourly Maximums

Smoky Heights - Total Reduced Sulphur (TRS) - ppb
May 1, 2009 to June 1, 2009

Maximum Value: 1.5 ppb on May 26 03:00

Maximum Daily Average: 0.9 ppb on May 26

Minimum Value: 0 ppb on May 30 18:00

Minimum Daily Average: 0.6 ppb on May 30

Maximum Diurnal Average: 0.8 ppb at hour 23

Minimum Diurnal Average: 0.6 ppb at hour 20

Monthly Average: 0.70 ppb

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

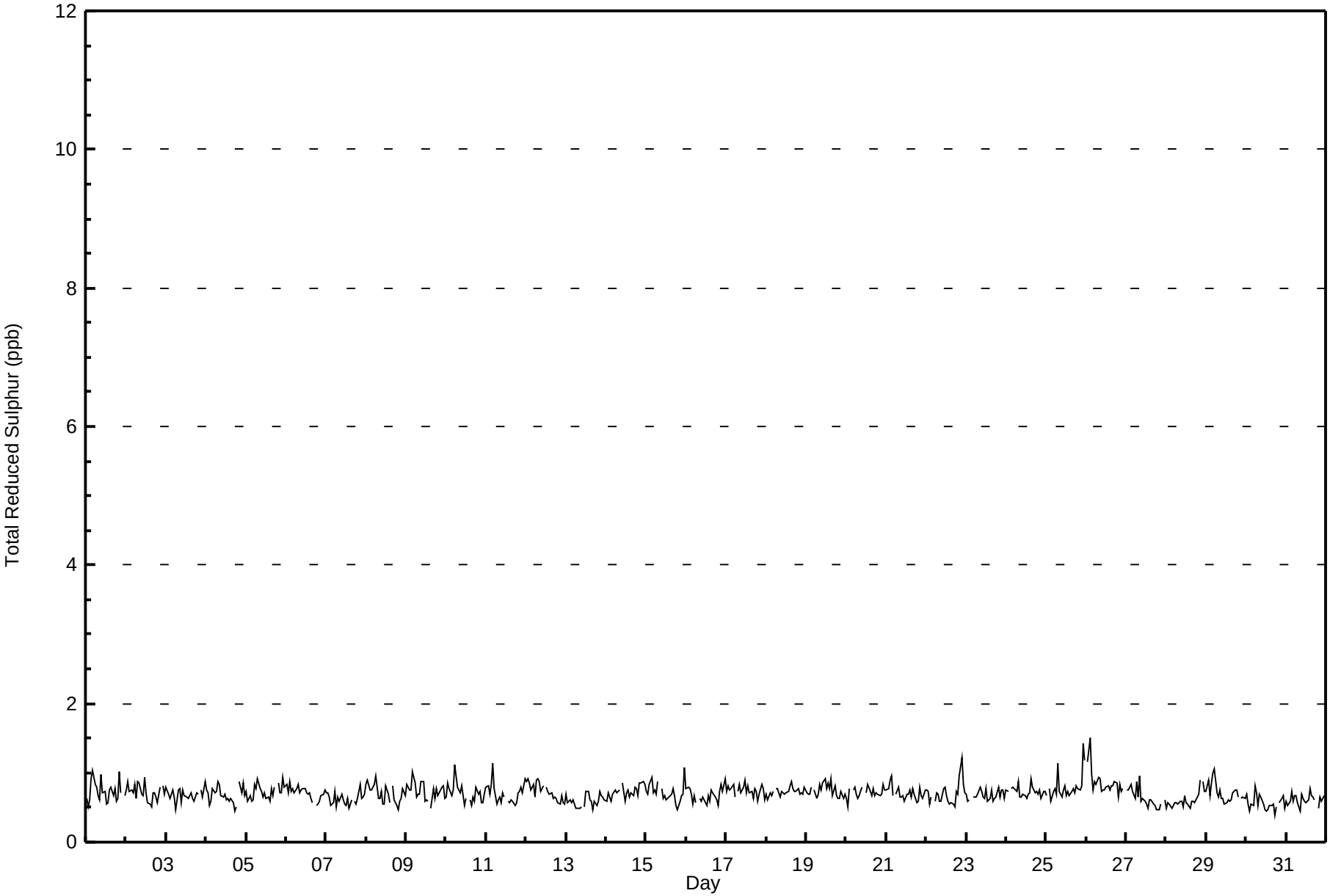
Hours in Service:	744
Hours of Data:	710
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

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

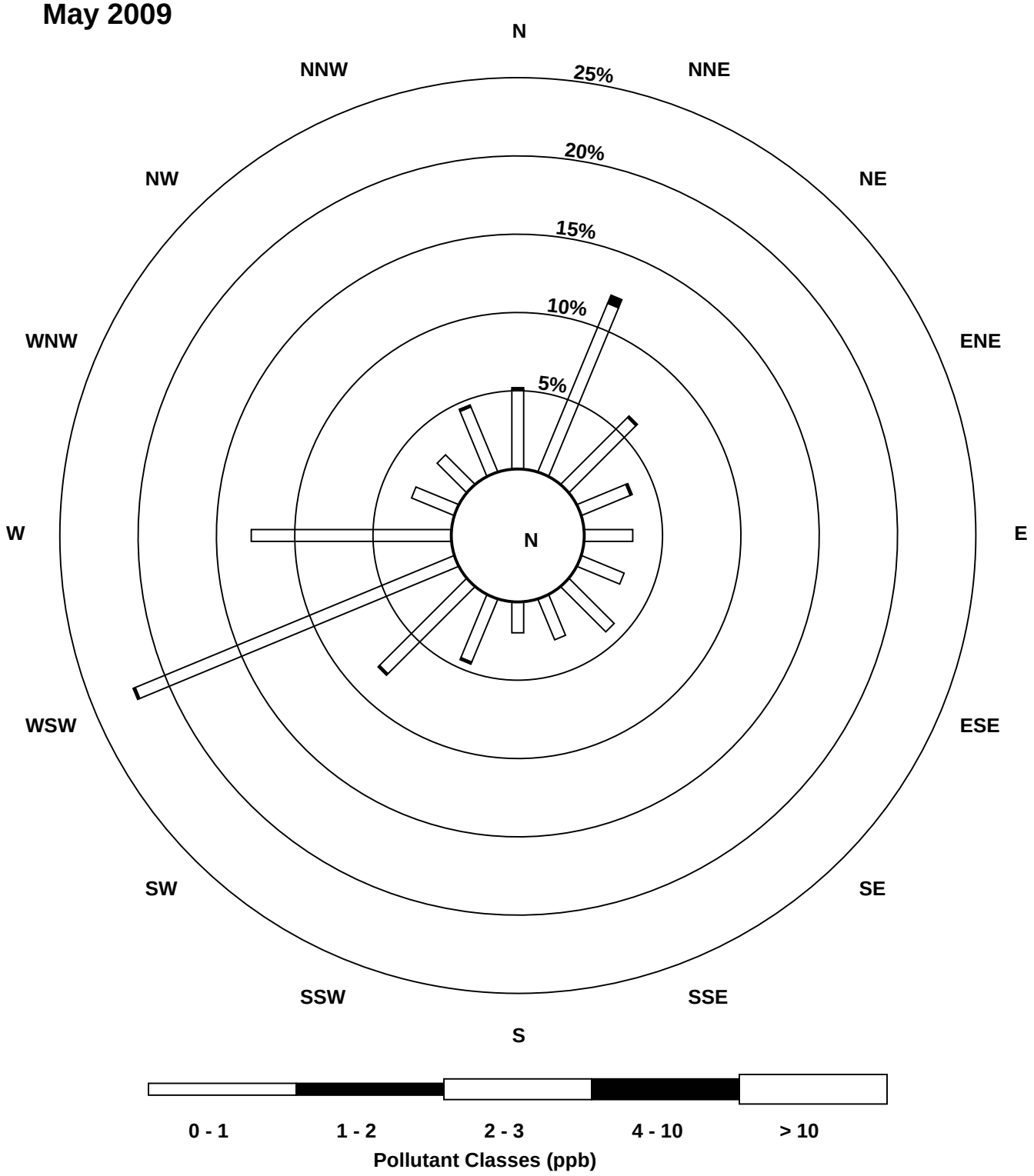
C - Calibration

A - Automated Daily Zero Span

Hourly Maximums for TRS at Smoky Heights
May 2009



Pollutant Rose for TRS at Smoky Heights
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Smoky Heights - Particulate Matter 2.5 ($PM_{2.5}$) - $\mu g/m^3$
May 1, 2009 to June 1, 2009

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 28.1 $\mu g/m^3$ on May 5 21:00
Maximum Daily Average: 6.7 $\mu g/m^3$ on May 1

Minimum Value: 0 $\mu g/m^3$ on May 4 02:00
Maximum Diurnal Average: 6.3 $\mu g/m^3$ at hour 21
Monthly Average: 3.38 $\mu g/m^3$

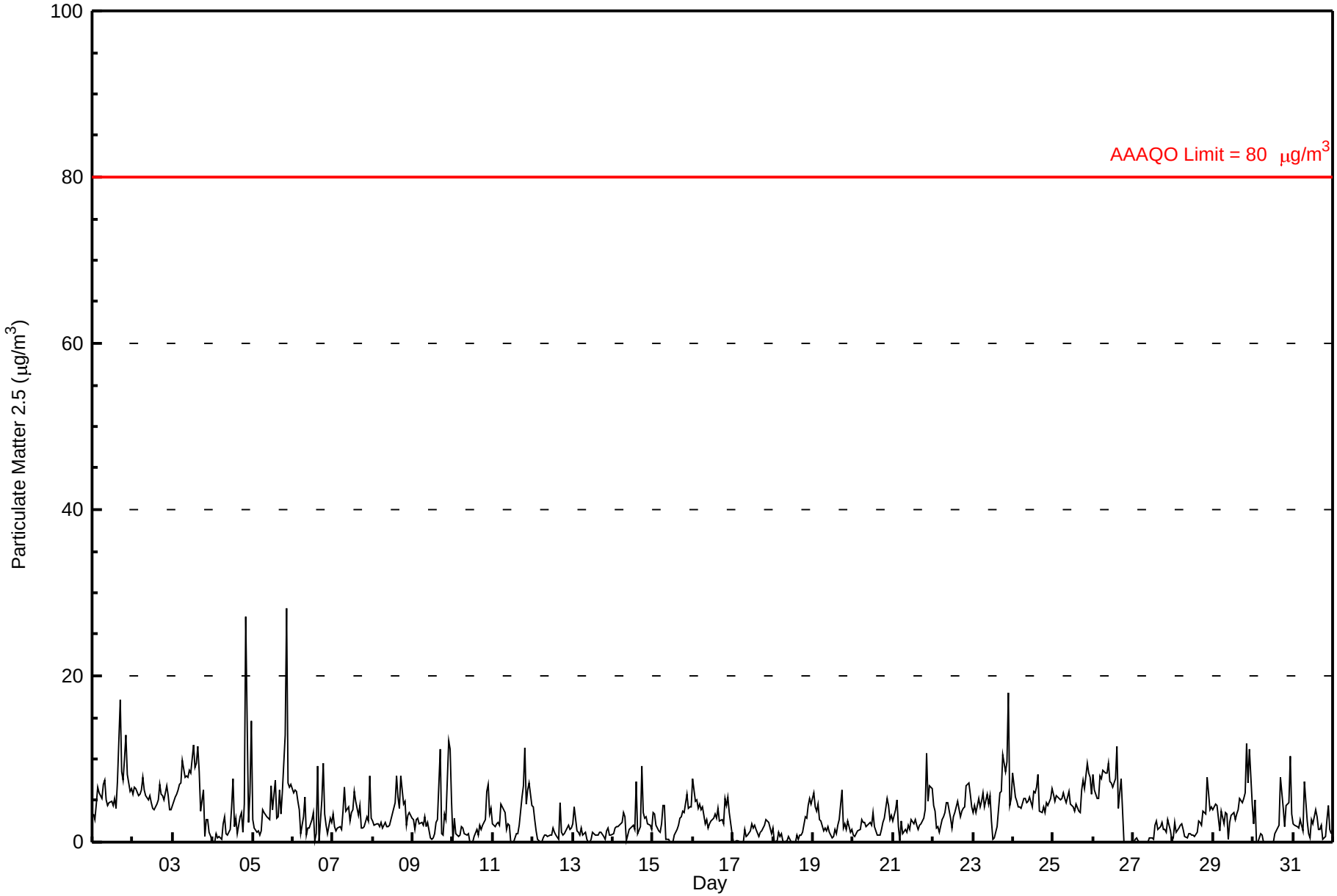
Minimum Daily Average: 0.9 $\mu g/m^3$ on May 27
Minimum Diurnal Average: 2.4 $\mu g/m^3$ at hour 11
Percentiles: $P_1 = 0.0$ $P_{10} = 0.4$ $Q_1 = 1.3$ Median = 2.7 $Q_3 = 4.7$ $P_{90} = 7.0$ $P_{99} = 12.7$

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) 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-May	3	3	5	7	6	5	7	7	5	4	5	5	4	5	4	7	17	8	7	10	13	8	6	6	6.7	17.1
2-May	6	7	6	6	6	6	8	6	6	5	6	5	4	4	5	5	7	6	6	5	7	6	4	4	5.5	7.7
3-May	4	5	6	6	7	7	10	8	8	8	9	8	12	9	9	12	9	4	6	1	3	3	1	0	6.4	11.7
4-May	0	0	1	0	1	0	2	3	1	1	1	4	8	2	3	1	3	4	1	5	27	2	6	15	3.8	27.2
5-May	3	2	1	1	1	1	4	4	3	3	3	7	4	7	3	3	6	3	6	13	28	7	7	7	5.3	28.1
6-May	6	6	6	5	4	1	3	5	1	2	2	3	4	0	1	9	0	5	9	3	2	1	3	2	3.5	9.5
7-May	3	2	1	2	2	2	4	7	4	4	3	4	4	6	5	3	4	2	2	2	3	3	8	3	3.3	7.9
8-May	3	2	2	2	2	2	2	2	2	2	2	3	3	5	8	5	4	8	5	5	2	3	4	3	3.4	8.0
9-May	3	2	3	3	2	2	2	3	2	2	0	0	1	1	2	3	11	1	1	3	3	12	11	5	3.3	12.2
10-May	0	3	1	1	1	2	2	1	1	1	0	0	0	1	2	1	2	1	2	3	6	7	3	4	1.8	7.0
11-May	2	2	2	2	2	5	4	3	2	2	2	0	0	1	1	1	2	5	7	11	5	6	7	4	3.3	11.4
12-May	4	3	1	0	0	0	1	1	1	1	1	1	2	1	1	0	5	1	1	1	2	2	1	2	1.3	4.7
13-May	2	4	1	1	1	2	1	1	0	0	0	0	1	1	1	1	1	1	1	0	1	2	1	1	1.1	4.2
14-May	1	2	2	2	2	2	4	3	0	1	2	2	2	2	7	1	2	9	4	3	3	2	2	2	2.5	9.1
15-May	4	3	2	1	1	2	4	4	0	0	0	0	0	1	2	2	3	3	4	4	6	4	4	4	2.5	5.8
16-May	8	5	5	4	5	4	4	2	3	2	2	3	3	3	3	4	3	3	2	5	4	5	4	1	3.6	7.7
17-May	0	0	0	0	0	0	0	2	1	1	1	2	2	2	1	1	1	1	2	2	3	2	2	1	1.1	2.8
18-May	2	0	0	1	1	1	0	0	0	1	0	0	0	0	1	0	1	1	1	3	3	4	5	5	1.3	5.2
19-May	6	4	4	5	3	3	1	2	1	2	1	0	1	1	1	2	3	6	2	2	1	2	1	1	2.3	6.3
20-May	1	1	1	1	2	3	2	2	2	2	2	2	4	2	1	1	1	2	2	3	5	4	3	3	2.2	5.3
21-May	3	4	5	2	0	3	1	2	1	2	2	3	2	3	2	2	2	2	3	4	11	5	7	7	3.1	10.7
22-May	4	4	2	2	1	3	3	3	5	5	3	2	3	4	4	5	3	4	4	4	7	7	6	4	3.8	7.2
23-May	4	4	4	5	4	5	6	4	6	5	6	3	0	1	2	4	6	6	11	8	10	18	4	5	5.4	17.9
24-May	8	5	5	4	4	4	5	5	5	5	5	4	6	6	7	8	4	4	4	4	5	4	5	6	5.1	8.3
25-May	6	5	6	5	5	5	6	5	5	6	5	4	4	4	5	4	3	6	7	6	10	8	8	6	5.6	9.5
26-May	8	6	5	5	8	8	9	8	8	9	7	7	7	8	12	4	6	8	0	0	0	0	0	0	5.6	11.5
27-May	0	0	1	0	0	0	0	0	0	0	1	1	0	2	3	2	2	2	1	2	1	3	1	0	0.9	2.8
28-May	1	2	1	2	2	2	2	1	0	1	1	1	1	1	1	2	2	2	4	3	8	6	4	4	2.3	7.8
29-May	4	5	4	3	1	4	2	4	3	0	2	3	3	3	3	4	5	5	5	6	12	7	11	5	4.4	11.8
30-May	2	5	0	0	1	1	0	0	0	0	0	0	0	1	1	2	8	6	4	2	4	5	10	3	2.3	10.4
31-May	2	2	2	2	3	2	1	7	3	1	0	3	2	4	3	1	1	2	0	1	3	4	2	1	2.2	7.3
	3.3	3.1	2.8	2.6	2.5	2.8	3.2	3.4	2.5	2.5	2.4	2.5	2.8	2.8	3.3	3.2	4.1	3.9	3.7	4.0	6.3	5.0	4.6	3.7	Diurnal Average	
	8.3	6.7	6.4	6.7	7.9	7.7	9.8	8.2	8.4	9.5	8.6	8.4	11.7	9.0	11.5	11.6	17.1	9.1	10.5	12.8	28.1	17.9	11.2	14.6	Diurnal Maximum	

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

Hourly Averages for $PM_{2.5}$ at Smoky Heights
May 2009



Maximum Value: 73.1 $\mu g/m^3$ on May 5 21:00

Maximum Daily Average: 12.4 $\mu g/m^3$ on May 5

Minimum Value: 0 $\mu g/m^3$ on May 30 04:00

Minimum Daily Average: 2.7 $\mu g/m^3$ on May 13

Maximum Diurnal Average: 13.5 $\mu g/m^3$ at hour 21

Minimum Diurnal Average: 4.3 $\mu g/m^3$ at hour 5

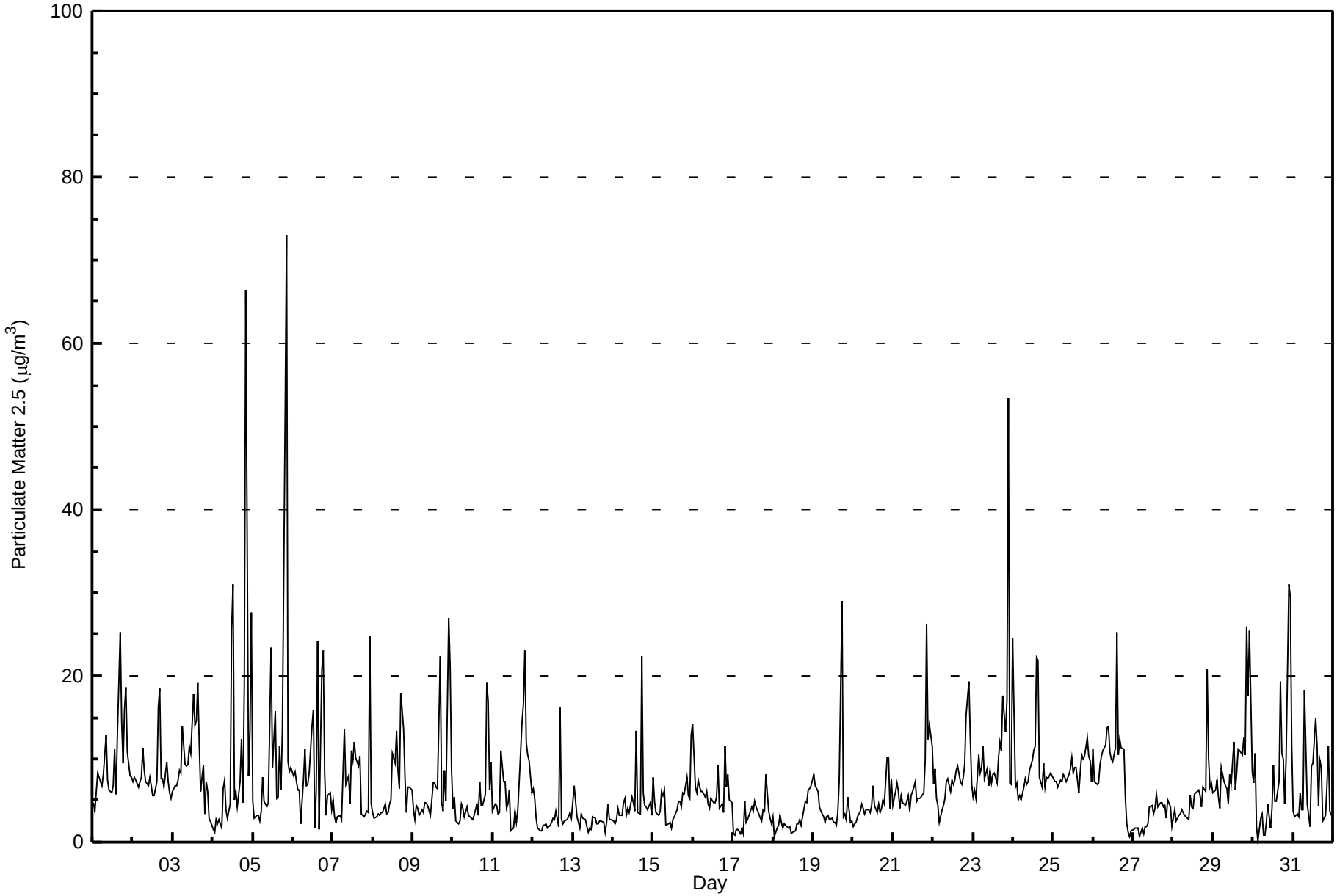
Monthly Average: 7.02 $\mu g/m^3$

Percentiles: P_1 = 1.0 P_{10} = 2.2 Q_1 = 3.3 Median = 5.5 Q_3 = 8.2 P_{90} = 12.5 P_{99} = 28.2

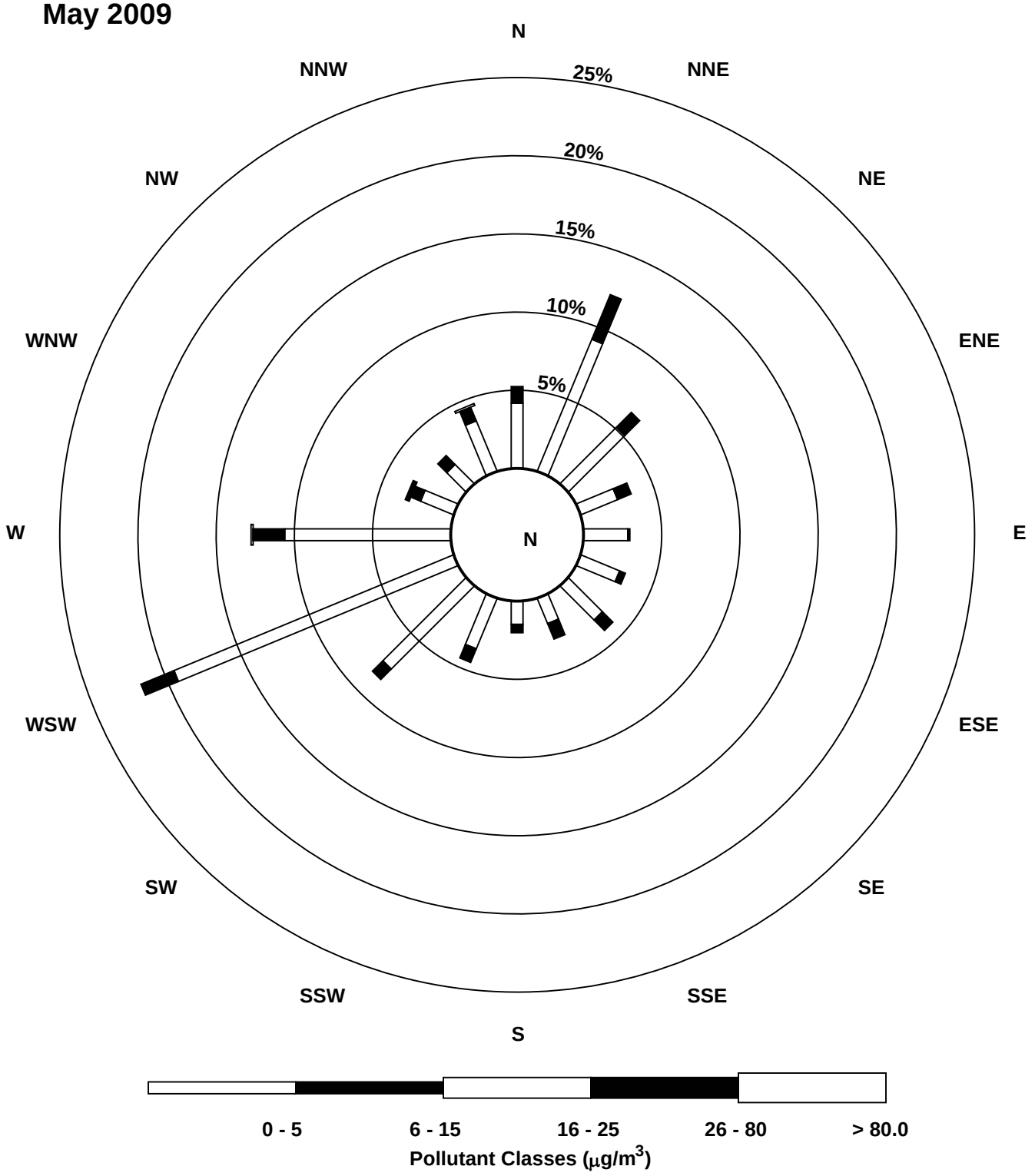
Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-May	5	4	6	8	8	7	8	11	13	7	6	6	7	11	6	13	25	15	10	16	19	11	8	8	9.8	25.2
2-May	7	8	7	7	7	8	11	9	7	7	8	7	6	6	7	16	18	8	8	7	10	7	6	5	8.2	18.4
3-May	6	7	7	7	9	8	14	9	9	9	11	11	18	14	15	19	12	6	9	3	7	6	3	2	9.3	19.2
4-May	2	1	3	2	3	2	7	8	4	3	5	26	31	5	6	4	7	12	5	19	66	8	13	28	11.2	66.4
5-May	5	3	3	3	3	4	8	5	4	5	14	23	9	16	5	5	11	6	13	52	73	10	9	9	12.4	73.1
6-May	8	9	7	6	6	2	8	11	7	7	8	14	16	2	6	24	1	21	23	8	3	6	6	4	8.9	24.3
7-May	5	3	2	3	3	3	8	13	7	8	5	11	10	12	10	9	10	3	3	3	4	4	25	5	7.1	24.8
8-May	4	3	3	3	3	4	4	5	3	4	5	5	11	9	13	9	6	18	14	8	4	7	7	6	6.5	18.0
9-May	4	3	4	4	3	4	4	5	5	4	3	5	7	7	7	6	22	5	4	9	5	27	21	9	7.4	27.0
10-May	4	5	2	2	3	5	4	3	4	3	3	3	3	3	5	3	7	4	4	6	19	17	6	10	5.4	19.2
11-May	4	5	4	3	4	11	7	7	4	5	6	1	2	4	2	4	7	14	17	23	12	10	10	6	7.2	23.1
12-May	6	5	3	2	1	1	2	2	2	2	2	2	3	3	4	2	16	3	2	2	3	3	4	3	3.3	16.3
13-May	5	7	3	2	2	3	3	3	2	1	2	2	3	3	2	2	3	3	2	1	2	5	3	3	2.7	6.8
14-May	3	2	3	4	3	3	5	5	3	4	3	5	5	4	13	4	3	22	6	4	4	4	5	3	5.1	22.3
15-May	8	5	4	3	4	6	6	6	2	2	2	2	3	3	4	5	5	4	6	6	8	6	5	13	4.8	12.9
16-May	14	7	6	8	7	6	6	5	6	5	4	5	5	5	5	9	4	5	4	12	7	8	5	5	6.3	14.2
17-May	1	1	2	2	1	2	1	5	2	3	4	4	4	5	4	3	3	3	4	4	8	4	3	2	3.1	8.1
18-May	3	1	2	2	3	2	2	2	2	2	2	1	1	1	2	2	3	2	3	5	5	6	6	7	2.8	6.7
19-May	8	7	6	6	4	4	3	2	3	3	3	3	2	2	2	4	7	29	3	3	3	5	2	3	4.9	29.0
20-May	2	2	2	3	4	5	4	3	4	4	4	4	7	4	4	5	4	4	5	5	10	10	4	8	4.6	10.2
21-May	4	6	7	6	4	6	5	4	5	6	4	6	7	7	5	5	5	5	6	10	26	12	14	11	7.4	26.2
22-May	7	9	5	4	2	4	4	5	7	8	6	7	7	8	9	9	7	7	8	9	15	19	12	7	7.8	19.4
23-May	5	6	5	10	8	9	11	8	9	7	9	7	8	8	7	10	12	11	18	13	17	53	7	7	11.2	53.5
24-May	25	7	7	5	6	5	7	8	7	7	9	10	11	12	22	22	8	7	10	7	8	8	8	8	9.6	24.7
25-May	8	7	7	7	7	7	8	8	7	8	9	10	8	9	9	6	9	11	10	10	13	10	10	7	8.6	12.5
26-May	11	7	7	7	9	10	11	12	14	14	11	10	10	11	25	10	12	11	11	5	2	1	1	1	9.4	25.3
27-May	1	2	2	2	1	2	1	2	2	2	4	4	3	4	6	4	5	5	4	4	3	5	4	2	3.1	5.7
28-May	3	4	3	3	3	4	4	3	3	3	6	4	4	6	6	6	6	4	7	6	21	10	7	7	5.5	20.9
29-May	6	6	7	5	4	9	7	7	6	5	8	7	12	6	8	11	11	11	13	11	26	18	25	8	9.9	25.9
30-May	7	11	2	0	3	3	1	1	2	5	2	4	9	5	5	7	19	11	10	5	10	31	30	12	8.1	31.0
31-May	4	3	3	3	6	4	4	18	5	3	2	9	9	15	11	4	10	9	3	3	7	11	4	3	6.4	18.3
	5.9	5.0	4.4	4.4	4.3	4.9	5.7	6.3	5.2	5.0	5.4	7.1	7.7	6.8	7.6	7.9	9.1	9.0	7.8	9.0	13.5	11.1	8.8	6.8	Diurnal Average	
	24.7	10.6	7.5	10.5	9.3	11.0	14.0	18.3	13.8	13.8	13.9	25.6	31.0	15.8	25.3	24.3	25.2	29.0	23.0	52.0	73.1	53.5	29.5	27.6	Diurnal Maximum	

Hourly Maximums for $PM_{2.5}$ at Smoky Heights
May 2009



Pollutant Rose for $PM_{2.5}$ at Smoky Heights
May 2009



Smoky Heights - External Temperature (ET) - ^{o}C
May 1, 2009 to June 1, 2009

Maximum Value: 24.9 ^{o}C on May 29 18:00

Maximum Daily Average: 15.9 ^{o}C on May 29

Minimum Value: -5 ^{o}C on May 20 05:00

Minimum Daily Average: 0.4 ^{o}C on May 19

Maximum Diurnal Average: 13.8 ^{o}C at hour 16

Minimum Diurnal Average: 3.2 ^{o}C at hour 5

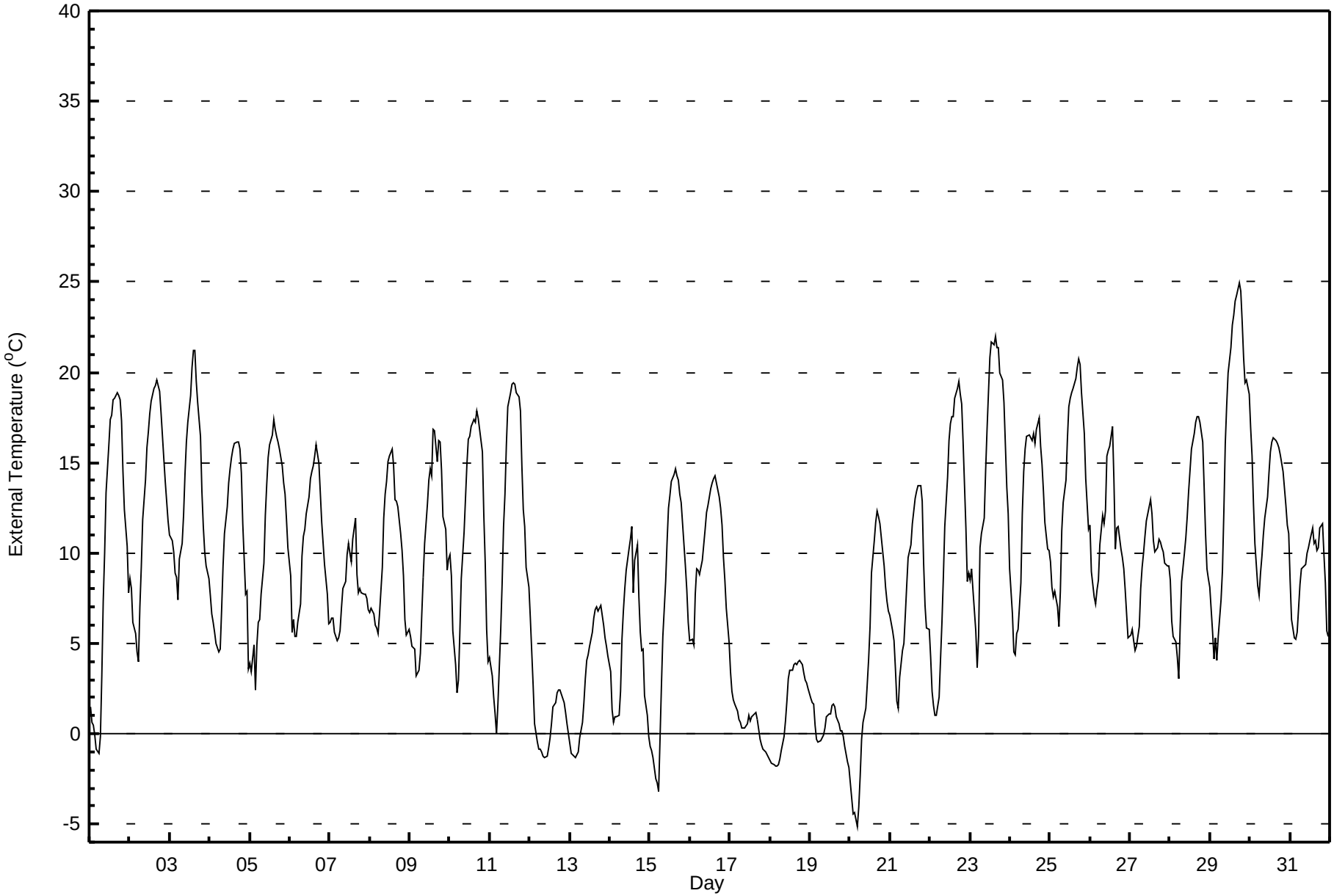
Monthly Average: 9.09 ^{o}C

Percentiles: P_1 = -2.8 P_{10} = 0.5 Q_1 = 4.6 Median = 9.1 Q_3 = 13.9 P_{90} = 17.3 P_{99} = 22.5

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

Day	Hourly Period Ending At (MST) 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-May	1	1	0	0	-1	-1	0	3	7	10	13	16	17	18	18	19	19	19	18	17	14	12	10	8	10.0	18.8
2-May	9	8	6	6	5	4	7	9	12	14	16	17	18	18	19	19	20	19	19	18	15	14	13	12	13.1	19.6
3-May	11	11	10	9	9	7	10	11	12	14	16	17	19	20	21	21	19	18	16	13	11	10	9	9	13.5	21.2
4-May	8	7	6	6	5	5	5	7	9	11	13	14	15	15	16	16	16	16	16	14	12	8	8	4	10.4	16.1
5-May	4	3	5	2	5	6	6	8	9	12	14	15	16	17	17	17	16	16	16	15	14	13	12	10	11.2	17.4
6-May	9	6	6	5	5	6	7	10	11	11	12	13	14	15	15	15	16	15	13	12	11	9	8	6	10.4	16.0
7-May	6	6	6	6	5	5	6	7	8	8	10	11	10	10	11	12	9	8	8	8	8	8	8	7	7.9	12.0
8-May	7	7	7	6	6	6	7	9	12	13	14	15	15	16	15	13	13	13	11	10	9	6	5	6	10.0	15.8
9-May	5	5	5	5	3	3	4	7	9	11	13	14	15	14	17	17	15	16	16	15	12	11	9	10	10.4	16.9
10-May	10	9	6	4	2	3	6	9	11	13	15	16	16	17	17	17	18	18	17	16	12	9	6	4	11.2	17.8
11-May	4	3	2	1	0	2	6	8	11	13	16	18	19	19	19	19	19	19	18	15	12	11	9	8	11.4	19.4
12-May	6	5	3	1	0	-1	-1	-1	-1	-1	-1	-1	0	1	2	2	2	2	2	2	2	1	1	0	0.9	6.4
13-May	-1	-1	-1	-1	-1	-1	0	1	2	3	4	4	5	6	6	7	7	7	7	7	6	5	5	4	3.3	7.1
14-May	3	1	1	1	1	1	2	5	7	8	9	10	11	11	8	10	10	8	6	5	5	2	1	0	5.2	11.5
15-May	-1	-1	-1	-2	-3	-3	0	3	5	8	11	12	13	14	14	15	14	14	13	13	10	9	8	6	7.2	14.7
16-May	5	5	5	8	9	9	9	10	10	11	12	13	14	14	14	14	14	13	12	12	10	9	7	5	10.1	14.3
17-May	3	2	2	2	1	1	1	0	0	0	1	1	1	1	1	1	1	0	0	-1	-1	-1	-1	-1	0.6	3.4
18-May	-1	-2	-2	-2	-2	-2	-1	-1	0	1	2	3	4	4	4	4	4	4	4	4	3	3	3	2	1.5	4.1
19-May	2	2	2	0	0	0	0	0	0	0	1	1	1	2	2	1	1	1	0	0	0	-1	-2	-2	0.4	2.0
20-May	-3	-4	-4	-4	-5	-4	-2	0	1	1	3	4	6	9	11	12	12	12	12	11	9	8	7	7	4.1	12.4
21-May	7	6	5	4	2	1	3	5	5	7	8	10	10	12	12	13	13	14	14	13	9	7	6	6	7.9	13.7
22-May	4	2	2	1	1	2	4	6	9	11	14	16	17	18	18	19	19	19	19	18	16	11	8	9	11.0	19.5
23-May	8	9	8	6	4	5	10	11	12	15	17	19	21	22	22	22	21	21	20	20	18	16	14	12	14.7	22.0
24-May	9	7	5	4	6	6	8	12	15	16	16	17	16	16	17	16	17	17	16	15	13	12	10	10	12.3	17.5
25-May	9	8	8	8	7	6	8	11	13	14	16	18	19	19	19	20	20	21	20	19	17	14	13	11	14.1	20.8
26-May	12	9	8	7	8	8	10	12	12	12	15	16	16	17	14	10	11	11	10	10	9	8	7	5	10.8	17.0
27-May	5	6	5	5	5	6	8	9	10	11	12	13	13	12	11	10	10	11	11	10	10	9	9	9	9.2	12.9
28-May	8	6	5	5	4	3	6	8	10	11	12	13	15	16	17	17	18	18	17	16	14	11	9	9	11.2	17.5
29-May	8	6	4	5	4	5	7	9	12	16	18	20	21	23	23	24	24	25	24	23	21	19	20	19	15.9	24.9
30-May	17	15	13	11	8	8	9	10	11	12	13	14	16	16	16	16	16	16	15	15	14	13	12	11	13.2	16.9
31-May	9	6	5	5	6	7	8	9	9	9	10	10	11	11	11	11	10	10	11	12	10	8	6	5	8.8	11.6
	6.0	4.9	4.2	3.6	3.2	3.3	4.9	6.6	8.2	9.6	11.1	12.3	13.0	13.5	13.7	13.8	13.8	13.6	13.0	12.1	10.5	9.0	7.7	6.8	Diurnal Average	
	16.9	15.3	12.7	10.5	9.1	9.1	10.5	12.2	14.5	16.0	18.2	20.0	21.4	22.6	23.2	23.9	24.2	24.9	24.5	22.7	20.8	19.4	19.6	18.8	Diurnal Maximum	

Hourly Averages for External Temperature at Smoky Heights
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Smoky Heights
May 1, 2009 to June 1, 2009
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	13	14	10	10	9	9	10	10	9	8	4	2	9	12	11	11	12	11	8	4	8	11	7	7	3.1	13.8
Dir	263	263	240	209	220	204	193	185	208	223	195	278	342	340	348	319	347	344	1	0	23	46	52	18	293.9	263.2
2 Spd	9	9	8	7	6	5	5	8	7	4	6	8	9	11	9	9	9	15	13	10	10	14	15	14	7.0	14.7
Dir	2	12	19	9	2	11	35	41	43	86	65	92	140	67	104	113	107	133	127	103	59	70	69	75	72.8	69.0
3 Spd	7	13	10	6	8	3	6	11	6	1	2	9	10	11	24	29	40	37	45	43	42	45	42	30	16.9	45.2
Dir	110	142	148	171	149	157	153	155	166	173	197	235	243	240	238	242	242	251	258	251	247	246	246	244	236.5	257.5
4 Spd	29	32	31	28	24	25	24	27	37	41	40	37	35	31	28	28	24	20	18	13	8	7	6	2	23.9	41.1
Dir	239	239	243	242	236	228	223	232	243	242	245	252	255	240	240	242	243	254	255	260	285	329	334	208	244.2	242.4
5 Spd	2	7	10	8	11	12	15	15	6	3	4	5	6	7	4	5	14	12	15	10	5	11	11	4	1.9	15.3
Dir	329	22	21	18	15	15	35	35	53	106	131	188	266	230	239	192	214	225	201	255	288	344	13	288	340.2	34.9
6 Spd	8	9	11	12	16	20	16	15	23	23	26	25	18	20	19	10	12	11	25	22	14	17	15	9	15.2	26.0
Dir	277	264	260	252	259	257	262	257	260	264	267	263	255	233	232	226	232	220	204	203	203	211	235	247	243.3	266.5
7 Spd	8	7	14	13	13	16	17	8	13	15	12	14	19	20	22	24	27	21	16	10	11	13	8	7	13.0	26.5
Dir	202	197	213	228	257	248	253	243	226	239	259	229	224	206	218	218	287	287	271	247	253	257	251	192	240.5	286.9
8 Spd	10	12	12	11	8	7	13	7	9	9	9	15	20	20	16	29	31	30	24	22	16	11	13	9	13.5	31.0
Dir	247	262	250	243	250	262	262	265	333	339	331	332	314	285	286	251	256	278	266	260	252	258	253	265	271.6	255.8
9 Spd	7	14	17	16	11	6	7	7	8	9	9	13	6	11	7	3	22	11	10	12	12	3	7	25	7.9	24.8
Dir	236	243	255	261	254	212	217	222	226	214	207	226	317	343	340	314	278	260	210	169	171	33	223	258	244.3	258.3
10 Spd	13	4	10	7	7	10	10	12	15	17	18	20	20	22	18	22	19	20	20	15	8	7	8	6	12.3	22.3
Dir	328	173	270	219	220	205	196	213	225	224	235	243	249	235	219	240	251	246	260	238	248	273	283	276	241.0	240.2
11 Spd	5	2	4	2	2	4	6	7	5	7	11	13	10	10	13	9	13	7	9	12	15	25	15	11	1.9	24.7
Dir	212	305	16	305	234	231	201	184	166	141	144	149	160	121	138	115	157	9	311	238	284	310	319	340	213.0	309.8
12 Spd	14	15	18	20	18	18	20	19	18	16	17	17	16	16	16	12	12	11	10	9	10	8	7	7	12.7	20.5
Dir	345	358	345	339	332	322	318	336	338	338	339	351	349	358	356	2	5	5	359	0	34	70	100	121	349.7	318.4
13 Spd	3	3	4	3	4	5	4	8	11	14	13	15	12	13	10	9	8	9	10	10	9	6	8	8	6.7	15.1
Dir	102	33	28	31	39	51	110	136	128	129	120	134	127	121	107	110	89	77	54	62	57	32	55	60	95.1	133.6
14 Spd	9	3	5	6	9	7	9	7	5	1	3	1	3	4	18	11	5	18	8	5	4	5	9	8	3.0	18.4
Dir	96	31	357	9	21	20	31	43	86	112	330	12	167	142	311	19	34	297	352	358	202	220	247	250	351.4	297.4
15 Spd	8	12	9	5	5	6	7	10	12	14	18	18	19	24	26	25	30	28	24	15	12	14	14	10	14.4	30.3
Dir	223	260	252	188	198	213	198	173	175	217	230	252	254	251	239	245	246	243	248	239	228	227	242	258	236.9	246.4
16 Spd	9	8	8	12	13	8	13	15	22	32	35	32	28	26	24	24	23	23	16	11	9	7	13	12	15.6	35.0
Dir	256	252	243	246	272	264	244	218	247	256	265	260	258	256	259	255	249	239	247	261	257	274	38	22	256.4	264.8
17 Spd	16	18	18	17	18	18	18	16	18	16	17	18	18	19	18	18	17	17	14	13	11	10	8	9	15.7	18.9
Dir	26	29	27	26	28	27	26	12	16	13	21	24	8	15	21	21	17	27	33	35	38	41	36	33	23.8	14.5
18 Spd	10	11	11	12	12	13	16	13	13	14	13	12	13	13	14	15	15	13	13	13	12	10	10	9	12.0	16.0
Dir	32	41	47	47	50	48	50	62	74	82	86	72	83	90	90	84	88	78	74	69	67	60	64	83	68.4	49.7
19 Spd	6	8	10	12	17	18	16	17	17	14	13	14	14	12	15	19	16	14	11	6	2	5	10	11	10.1	18.7
Dir	64	52	76	75	48	46	36	44	50	46	34	35	36	35	28	28	22	22	17	26	84	243	263	265	36.5	28.5
20 Spd	12	12	11	12	11	14	14	16	19	19	20	23	24	24	26	26	25	27	25	20	10	23	10	10	17.5	26.8
Dir	263	260	259	260	258	258	244	234	227	229	227	237	241	248	246	257	263	260	253	258	301	262	250	227	249.8	260.0
21 Spd	13	14	6	8	9	11	14	15	9	3	5	10	13	10	9	13	15	12	10	6	4	3	8	9	6.2	14.9
Dir	248	282	20	30	18	16	27	48	55	47	33	28	359	10	357	17	359	351	359	27	151	95	145	142	16.5	48.5
22 Spd	5	3	5	5	6	8	9	9	7	5	4	5	2	5	5	2	4	1	2	4	4	5	5	7	1.7	9.4
Dir	128	198	221	222	215	215	200	179	162	162	131	148	272	269	286	243	130	127	238	14	14	15	22	22	191.7	179.3

Peace Airshed Zone Association
Summary of Hourly Averages

Smoky Heights
May 1, 2009 to June 1, 2009
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	6	7	6	4	4	4	2	6	6	6	6	8	6	4	9	9	11	15	16	21	17	11	16	17	4.4	20.7
Dir	31	35	9	8	29	28	40	125	146	124	142	158	185	154	219	236	254	251	271	269	264	277	265	262	254.1	268.8
24 Spd	12	11	14	15	17	18	16	17	19	13	10	11	12	9	10	15	12	12	11	12	8	6	6	11	8.1	19.1
Dir	262	258	262	258	253	258	254	262	298	321	329	349	329	310	276	356	5	10	20	24	21	357	9	30	308.2	297.7
25 Spd	10	10	8	7	6	6	7	7	5	7	6	5	6	6	7	6	2	8	10	13	10	7	7	8	5.7	13.3
Dir	25	18	14	17	24	17	25	34	118	126	121	86	87	111	41	98	86	36	24	60	121	87	53	60	55.9	60.2
26 Spd	9	5	6	9	7	7	5	10	9	15	13	7	3	1	16	15	9	10	12	10	9	12	8	7	4.0	15.5
Dir	128	33	25	27	21	10	31	25	345	9	34	29	17	22	255	295	333	339	287	232	239	239	246	236	330.9	255.4
27 Spd	14	16	15	15	19	20	31	36	42	44	42	39	38	32	31	32	35	29	27	23	20	14	18	29	26.3	43.7
Dir	257	248	246	243	235	231	240	242	246	245	244	245	242	260	284	285	272	263	269	273	281	292	284	272	256.9	244.7
28 Spd	24	17	17	19	16	10	19	26	32	33	32	30	28	27	28	26	25	25	23	20	11	11	8	9	21.2	33.3
Dir	268	257	248	251	247	235	234	246	252	253	250	259	264	258	261	261	265	254	254	256	268	291	275	280	256.5	253.5
29 Spd	7	3	4	5	3	5	5	5	7	13	18	18	16	13	13	12	12	12	13	8	4	2	21	30	4.9	29.5
Dir	15	358	261	270	169	205	214	181	158	143	133	130	153	147	134	121	100	118	125	120	50	68	258	276	152.8	275.9
30 Spd	27	37	31	27	19	17	27	36	35	38	42	40	42	43	46	44	46	46	39	34	26	18	19	20	32.5	45.7
Dir	260	266	262	264	253	235	244	246	245	243	242	241	250	251	246	256	268	269	265	263	278	280	276	273	256.3	268.7
31 Spd	14	18	17	19	19	19	16	22	22	25	24	25	25	25	19	22	19	10	7	6	4	6	8	6	13.4	25.4
Dir	246	237	237	258	261	266	278	297	300	311	313	302	309	338	328	322	326	43	14	343	0	249	251	277	296.5	301.5
Spd	4.8	5.5	5.6	5.4	4.7	4.6	4.9	4.7	6.6	7.4	7.0	7.4	8.5	7.5	8.8	8.4	9.9	9.2	8.6	6.8	4.8	5.2	5.2	5.5	Diurnal Average	
Dir	271.3	273.2	272.9	271.2	274.9	268.4	258.6	248.2	250.6	250.3	252.3	255.0	263.7	261.4	261.6	267.7	271.9	274.1	267.8	261.1	268.1	280.2	276.0	274.0		
Spd	28.8	37.4	30.7	27.8	23.8	24.6	30.5	36.3	41.7	43.7	41.8	39.5	41.8	43.2	45.5	44.0	45.6	45.7	45.2	43.3	41.8	45.1	41.6	30.4	Diurnal Maximum	
Dir	239.4	265.5	242.7	242.3	236.3	228.0	240.2	242.0	246.1	244.7	241.6	240.9	249.8	251.2	245.9	256.0	268.5	268.7	257.5	250.9	246.7	245.9	246.1	244.5		

Maximum Speed Value: 46 km/h on May 30 18:00
Maximum Daily Speed Average: 32.5 km/h on May 30
Maximum Diurnal Speed Average: 9.9 km/h at hour 17

Minimum Speed Value: 1 km/h on May 26 14:00
Minimum Daily Speed Average: 1.7 km/h on May 22
Minimum Diurnal Speed Average: 4.6 km/h at hour 6

Monthly Average Velocity: 6.47 km/h 265.29 deg

Speed Percentiles: $P_1 = 1.8$ $P_{10} = 5.0$ $Q_1 = 7.7$ Median = 11.9 $Q_3 = 18.0$ $P_{90} = 26.0$ $P_{99} = 43.5$

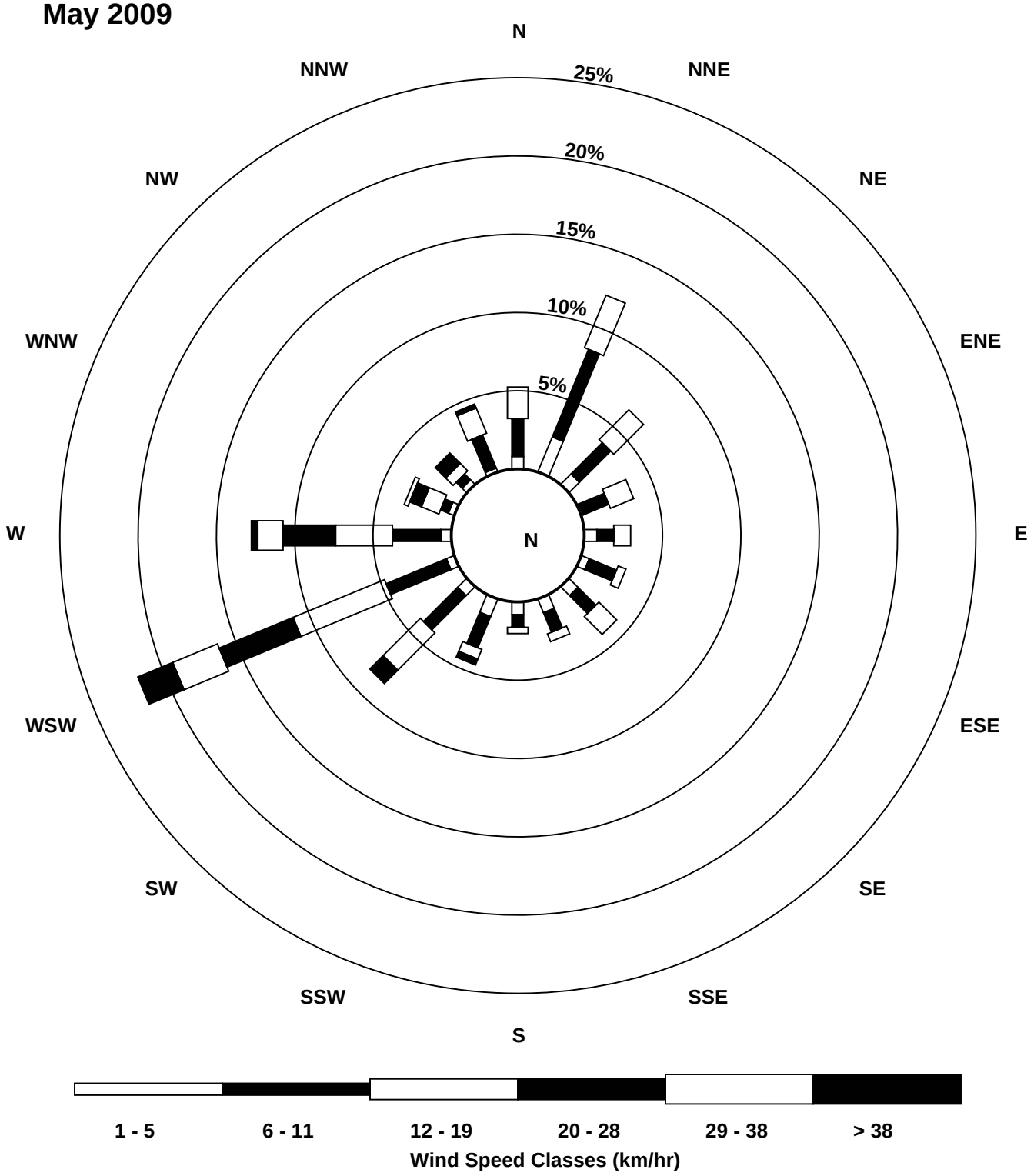
All monthly, daily, and diurnal averages have been calculated using vector methods

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

Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	12	52	40	2	0	0	106
NorthEast	14	50	41	0	0	0	105
East	9	20	17	0	0	0	46
SouthEast	10	24	21	0	0	0	55
South	11	23	4	0	0	0	38
SouthWest	7	48	44	32	15	14	160
West	7	36	70	49	24	8	194
NorthWest	5	10	12	13	0	0	40
Total	75	263	249	96	39	22	744

Wind Rose for WS at Smoky Heights
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages - Wind Speed (Scalar)

Smoky Heights - Wind Speed (WS) - km/h
May 1, 2009 to June 1, 2009

Maximum Speed: 46 km/h on May 30 17:00

Maximum Daily Speed Average: 33.5 km/h on May 30

Minimum Speed: 2 km/h on May 11 04:00

Minimum Daily Speed Average: 6.2 km/h on May 22

Maximum Diurnal Speed Average: 19.1 km/h at hour 17

Minimum Diurnal Speed Average: 11.3 km/h at hour 1

Monthly Average Speed: 14.64 km/h

Percentiles: $P_1 = 3.6$ $P_{10} = 6.2$ $Q_1 = 8.3$ Median = 12.4 $Q_3 = 18.3$ $P_{90} = 26.7$ $P_{99} = 43.1$

Hours in Service: 744

Hours of Data: 744

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	13	14	11	11	9	10	10	10	9	8	5	6	12	14	12	12	12	12	8	5	9	11	7	7	9.9	13.9
2-May	9	9	8	7	6	5	5	8	8	6	8	9	11	13	12	12	11	15	14	11	11	14	15	14	10.0	15.1
3-May	8	13	10	6	9	5	6	11	7	4	5	11	12	13	25	29	40	37	45	44	42	45	42	31	20.7	45.4
4-May	29	32	31	28	24	25	24	27	37	41	40	38	36	32	29	28	25	21	18	13	8	7	7	4	25.2	41.4
5-May	4	7	10	8	11	13	15	15	7	5	5	8	8	10	8	8	15	13	16	10	7	12	11	9	9.8	15.6
6-May	9	10	11	13	16	20	16	16	23	23	27	25	20	21	19	12	13	12	25	23	14	17	15	9	17.1	26.7
7-May	8	8	14	13	13	16	17	9	13	15	12	15	20	21	23	24	27	22	17	10	11	14	8	8	14.9	27.4
8-May	11	12	12	11	9	7	13	8	9	9	11	16	21	21	20	29	31	30	24	22	16	11	13	9	15.7	31.2
9-May	7	14	18	16	11	7	8	7	9	9	10	13	9	12	9	7	22	13	11	12	12	6	7	26	11.4	25.8
10-May	15	7	11	8	7	10	10	12	15	17	19	21	21	23	19	24	20	20	20	15	8	7	8	7	14.3	23.8
11-May	6	5	4	2	3	4	6	7	6	7	12	14	13	12	13	10	14	12	10	16	16	25	16	11	10.2	25.0
12-May	14	16	19	20	18	18	21	19	18	16	17	17	16	16	16	13	12	12	10	9	10	9	7	8	14.7	20.6
13-May	3	3	4	3	4	5	5	8	11	14	14	16	13	14	11	10	10	10	10	10	9	6	9	8	8.7	16.0
14-May	9	6	5	6	9	7	9	7	6	6	7	7	8	9	22	13	6	20	8	6	4	5	9	8	8.4	21.9
15-May	8	12	10	6	5	6	7	10	12	15	19	19	20	25	27	26	31	28	25	15	12	15	14	10	15.8	30.6
16-May	9	8	8	13	14	9	14	16	23	33	35	33	29	27	24	25	23	24	16	12	9	7	13	12	18.2	35.4
17-May	16	18	18	17	18	18	18	17	18	16	18	18	18	19	19	18	17	17	15	13	11	10	8	9	16.0	19.2
18-May	11	11	11	12	12	13	16	13	13	14	14	13	13	14	15	16	15	14	14	13	12	10	10	9	12.8	16.1
19-May	6	8	11	13	17	18	16	17	17	14	14	14	14	12	15	19	16	14	11	6	6	7	10	11	12.7	18.8
20-May	12	12	11	12	11	14	14	16	19	19	20	23	24	25	27	26	26	27	26	20	15	24	11	11	18.5	27.0
21-May	13	14	8	8	9	11	15	15	9	6	7	11	14	12	12	14	16	12	11	6	5	4	9	9	10.5	16.4
22-May	5	4	5	6	6	8	9	10	7	6	5	6	8	8	6	9	5	4	5	5	5	5	5	7	6.2	9.6
23-May	6	7	6	4	5	5	3	7	7	7	7	8	9	8	11	12	13	16	16	21	17	12	16	17	10.0	20.8
24-May	12	11	14	15	17	18	16	17	20	14	11	12	13	10	11	15	13	13	11	12	8	6	7	11	12.8	19.8
25-May	10	10	8	7	7	6	7	8	6	7	7	7	8	8	9	8	7	9	10	14	11	7	7	8	8.2	13.6
26-May	10	5	6	9	7	7	5	10	10	15	14	8	6	5	17	15	9	11	14	11	10	12	8	7	9.7	17.3
27-May	14	16	16	15	19	20	31	36	42	44	42	40	39	33	31	33	36	29	27	23	20	14	18	29	27.8	44.0
28-May	24	17	17	19	16	10	19	26	32	33	32	30	28	28	28	27	25	25	24	21	11	11	8	11	21.9	33.5
29-May	7	4	5	6	4	6	5	5	7	13	18	18	17	15	14	13	12	12	13	8	7	7	22	30	11.1	29.9
30-May	27	38	31	27	19	17	27	36	35	38	42	40	43	44	46	45	46	46	40	34	26	18	19	21	33.5	46.0
31-May	15	18	17	19	19	19	16	23	22	25	25	26	27	25	20	23	22	10	7	7	4	7	9	7	17.1	26.7
	11.3	11.9	12.0	11.7	11.4	11.5	12.9	14.3	15.4	16.2	16.8	17.5	17.7	17.6	18.3	18.5	19.1	18.1	16.8	14.4	11.9	11.8	11.9	12.1	Diurnal Average	
	28.9	37.6	30.8	27.8	23.9	24.7	30.6	36.4	41.9	44.0	42.3	40.0	42.7	43.7	45.8	44.9	46.0	46.0	45.4	43.6	42.0	45.1	41.7	30.5	Diurnal Maximum	

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

Peace Airshed Zone Association
Summary of Hourly Standard Deviations

Smoky Heights - Wind Direction (WD) - deg
May 1, 2009 to June 1, 2009

Maximum Value: 96.7 deg on May 14 10:00

Minimum Value: 0.2 deg on May 20 03:00

Percentiles: P_1 = 2.3 P_{10} = 4.7 Q_1 = 7.0 Median = 12.3 Q_3 = 22.2 P_{90} = 43.9 P_{99} = 84.6

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

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-May	3	3	23	6	10	12	4	5	25	24	50	80	49	30	35	35	19	26	22	20	14	7	9	5	79.7
2-May	6	6	5	11	9	10	26	7	17	47	47	43	49	38	51	48	42	17	16	17	14	7	7	8	51.2
3-May	16	6	9	31	9	62	10	10	28	79	74	37	28	46	16	8	5	5	5	6	4	3	4	4	79.2
4-May	5	4	4	3	4	5	3	8	5	7	11	11	12	12	16	12	15	15	10	7	15	19	46	50	50.4
5-May	61	6	5	9	3	5	6	6	35	63	42	59	60	57	66	47	26	21	17	20	59	13	13	68	67.9
6-May	34	26	10	14	4	2	9	22	8	8	13	14	24	15	14	38	36	22	8	6	7	7	16	15	38.0
7-May	16	28	6	12	7	5	6	24	11	7	19	19	10	10	11	12	15	6	10	7	7	8	24	23	27.6
8-May	19	7	4	4	13	5	2	30	17	24	31	26	19	27	39	6	7	8	6	6	5	11	6	14	38.7
9-May	20	7	7	5	7	26	11	13	10	12	19	17	56	37	50	88	8	27	20	17	7	72	18	20	87.5
10-May	34	73	8	35	17	11	7	8	10	10	12	17	16	16	19	22	18	14	11	6	7	8	6	15	73.0
11-May	19	65	34	45	37	33	14	17	23	21	19	23	49	36	25	32	33	63	27	61	17	11	8	9	65.1
12-May	8	12	14	7	8	7	6	12	6	7	10	10	11	14	13	15	14	15	14	13	14	8	20	6	19.6
13-May	23	37	7	7	6	5	35	12	13	15	22	20	23	23	28	30	38	25	19	15	12	10	16	11	38.1
14-May	18	54	8	14	5	6	9	14	40	97	73	93	77	72	74	25	47	36	18	43	24	17	15	17	96.7
15-May	18	7	20	21	18	16	10	7	12	20	15	20	21	17	12	16	8	9	9	9	4	4	5	10	21.0
16-May	7	5	12	23	18	30	16	24	15	10	10	10	10	12	12	12	11	9	13	24	16	24	16	5	30.1
17-May	4	3	4	4	3	3	4	11	9	9	8	7	12	10	10	9	9	6	9	10	10	10	10	5	11.9
18-May	8	6	6	7	5	5	5	10	14	12	15	19	18	17	14	12	14	13	10	11	7	6	8	7	19.1
19-May	8	4	21	17	5	5	5	6	5	6	7	6	7	7	4	4	5	5	4	14	70	50	1	2	69.8
20-May	3	2	0	0	0	1	8	6	5	5	5	5	5	7	10	11	11	7	6	3	48	17	21	22	48.0
21-May	19	17	26	13	7	8	10	8	16	71	52	35	22	31	36	22	25	21	22	30	44	65	29	11	70.6
22-May	30	45	19	15	6	4	10	9	19	36	50	54	97	60	53	85	56	81	82	46	20	10	14	7	96.5
23-May	9	11	6	13	58	35	62	22	20	21	32	26	57	79	39	54	31	28	9	5	5	21	5	3	78.5
24-May	4	11	5	3	4	3	5	10	16	20	27	21	15	36	20	15	21	13	12	7	11	10	11	6	35.7
25-May	6	4	4	9	13	9	10	16	39	28	40	54	52	53	52	47	86	35	14	14	31	10	16	21	85.7
26-May	21	13	11	5	8	12	18	9	22	10	16	25	61	90	51	19	10	23	37	19	12	15	11	27	89.6
27-May	5	4	11	10	5	5	3	5	5	6	7	8	9	13	7	4	15	9	7	5	6	11	6	5	14.6
28-May	6	3	3	3	6	8	5	6	7	6	8	10	12	14	12	14	12	10	10	5	13	7	17	53	53.4
29-May	16	32	43	31	34	28	20	28	20	13	12	14	18	32	18	15	17	17	12	14	62	85	37	9	84.9
30-May	4	6	5	6	4	7	6	6	11	7	8	9	12	9	7	12	8	7	7	5	11	6	5	5	11.6
31-May	16	5	11	4	2	4	7	9	13	12	11	11	19	16	16	10	30	17	27	32	27	27	23	27	32.5
	60.7	73.0	42.8	44.8	58.0	62.1	61.9	29.7	40.4	96.7	74.0	92.6	96.5	89.6	73.6	87.5	85.7	80.6	82.5	61.2	69.8	84.9	45.8	67.9	

PASZA
Beaverlodge Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association
Summary of Hourly Averages

Beaverlodge - Sulphur Dioxide (SO_2) - ppb
May 1, 2009 to June 1, 2009

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.6 ppb on May 2 11:00 Maximum Daily Average: 0.8 ppb on May 2

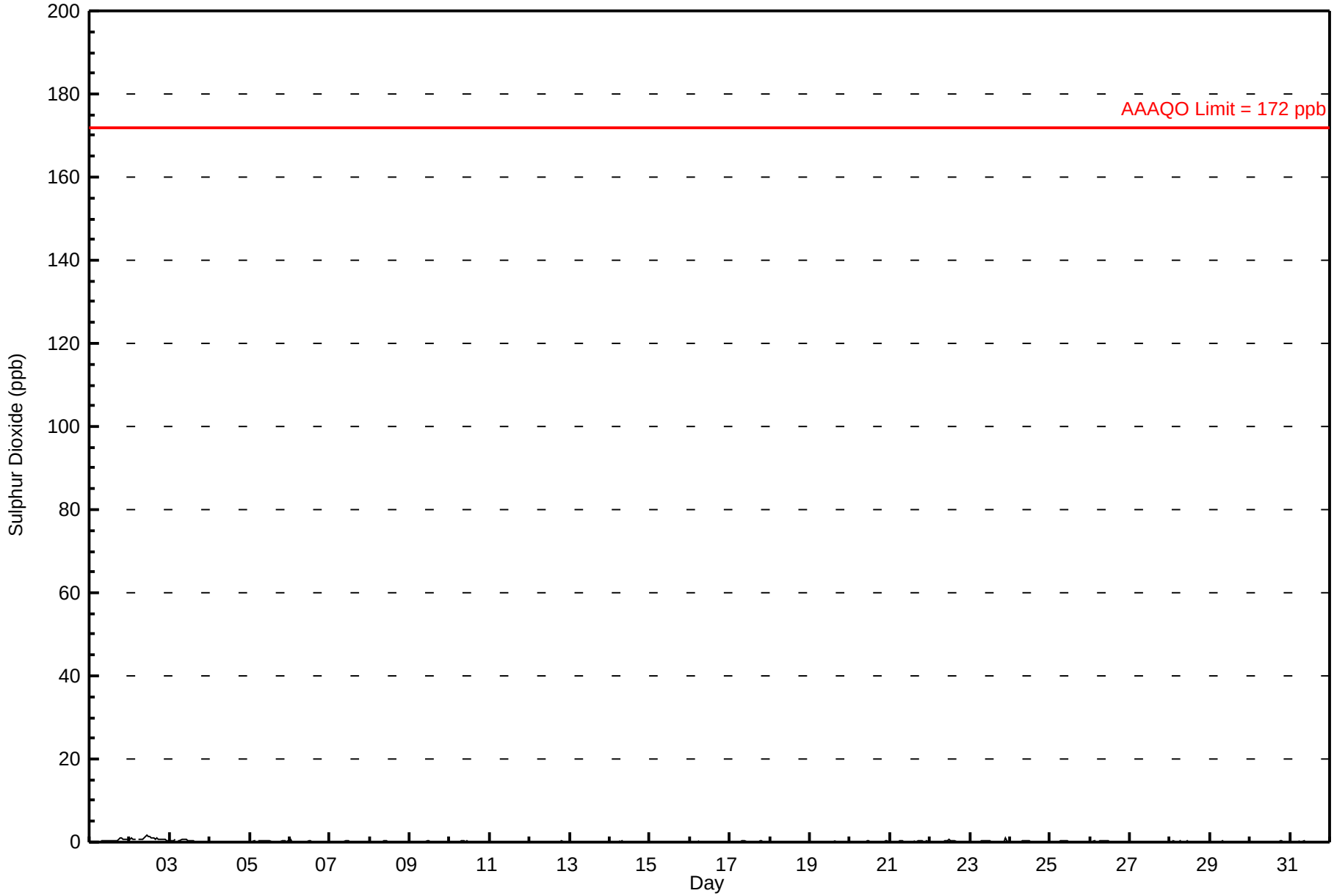
Minimum Value: 0 ppb on May 27 09:00 Minimum Daily Average: 0.0 ppb on May 27
Maximum Diurnal Average: 0.2 ppb at hour 11 Minimum Diurnal Average: 0.1 ppb at hour 17
Monthly Average: 0.15 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.1 Q_3 = 0.2 P_{90} = 0.3 P_{99} = 1.1

Hours in Service:	744
Hours of Data:	700
Hours of Missing Data:	44
Hours of Calibration:	44
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-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0.4	1.1
2-May	1	1	1	1	A	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	0	0	0.8	1.6
3-May	0	0	0	1	A	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
4-May	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
5-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
6-May	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
7-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
8-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
9-May	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-May	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
11-May	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
12-May	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
13-May	0	0	0	0	A	0	0	0	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	--	0.2
14-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
15-May	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
16-May	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
17-May	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
18-May	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
19-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
20-May	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
21-May	0	0	0	0	A	0	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0.2	0.3
22-May	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
23-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.2	0.9
24-May	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
25-May	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
26-May	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
27-May	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
28-May	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
29-May	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
30-May	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-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
	0.1	0.1	0.1	0.1	--	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	Diurnal Average	
	0.6	0.9	0.8	0.6	--	0.7	0.6	0.6	0.7	1.2	1.6	1.4	1.3	1.1	0.9	0.8	0.9	0.7	1.1	1.1	0.8	0.9	0.8	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 Beaverlodge
May 2009



Peace Airshed Zone Association
Summary of Hourly Maximums

Beaverlodge - Sulphur Dioxide (SO_2) - ppb
May 1, 2009 to June 1, 2009

Maximum Value: 1.9 ppb on May 2 14:00

Maximum Daily Average: 1.2 ppb on May 2

Minimum Value: 0 ppb on May 30 10:00

Minimum Daily Average: 0.1 ppb on May 27

Maximum Diurnal Average: 0.4 ppb at hour 11

Minimum Diurnal Average: 0.2 ppb at hour 17

Monthly Average: 0.28 ppb

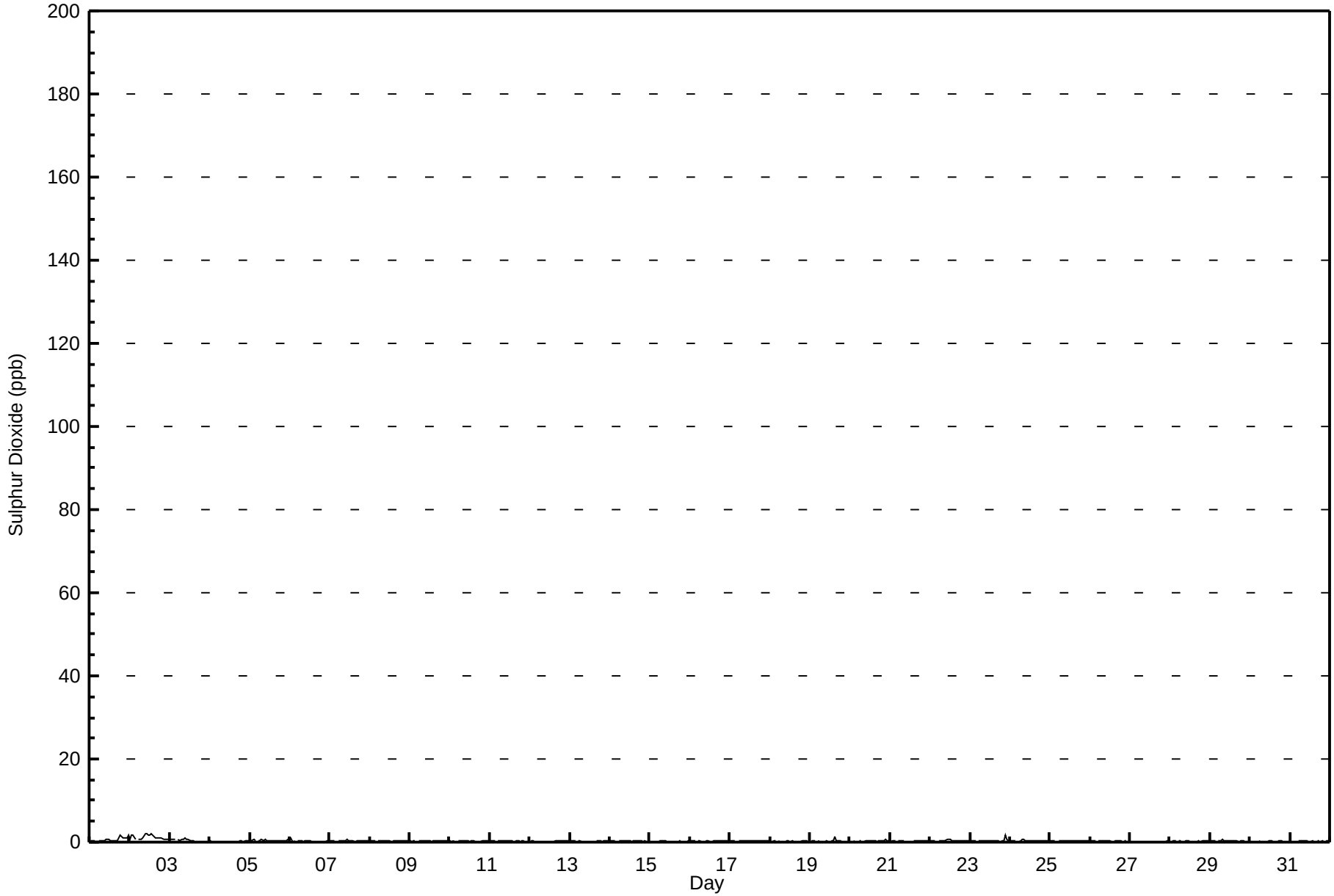
Percentiles: $P_1 = 0.1$ $P_{10} = 0.1$ $Q_1 = 0.2$ Median = 0.2 $Q_3 = 0.3$ $P_{90} = 0.5$ $P_{99} = 1.6$

Hours in Service:	744
Hours of Data:	700
Hours of Missing Data:	44
Hours of Calibration:	44
Percent Operational Time:	100.0

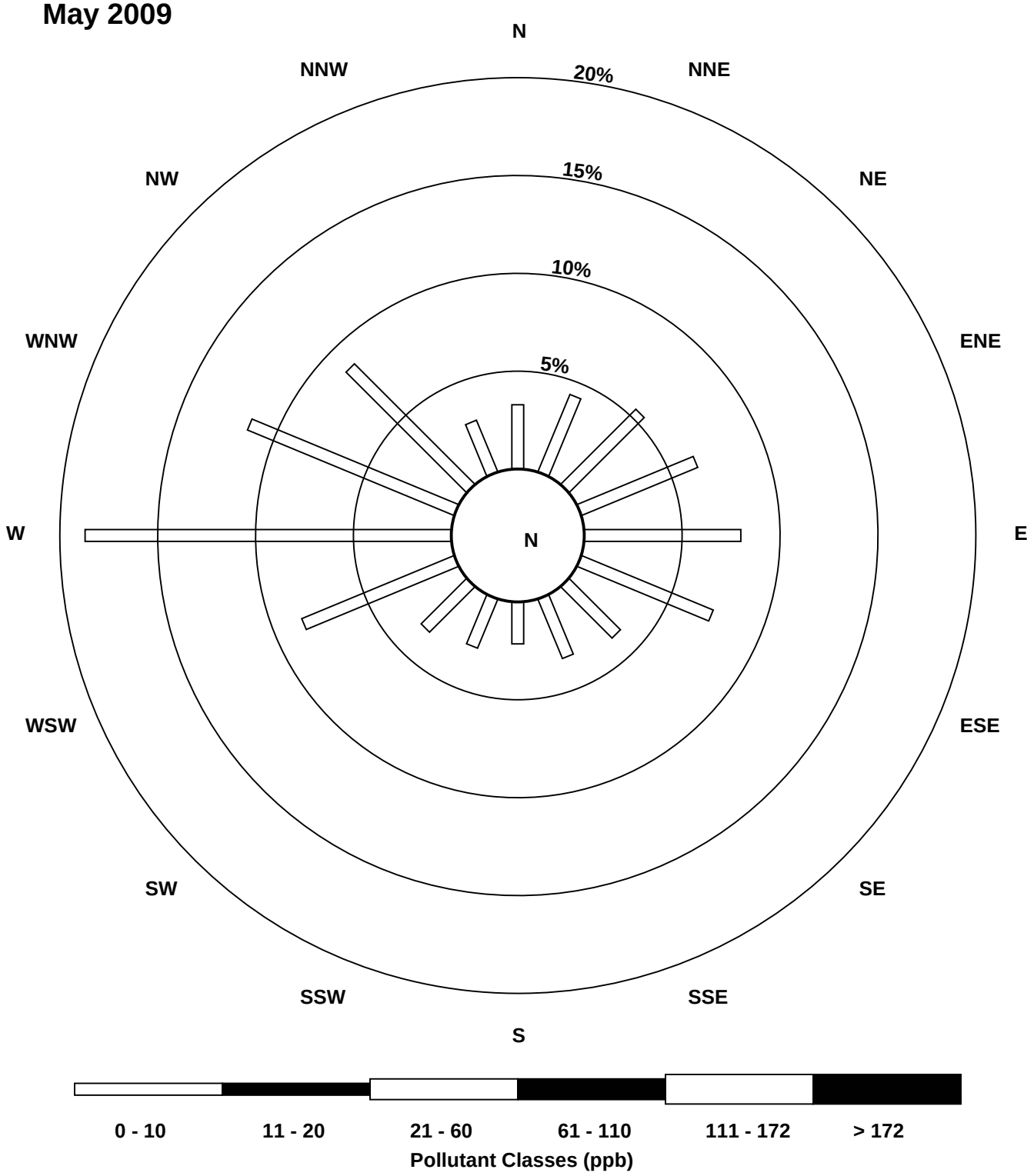
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-May	0	0	0	0	A	0	0	0	0	0	1	1	0	0	0	0	0	1	2	1	1	1	1	2	0.6	1.6
2-May	1	2	2	1	A	1	1	1	1	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1.2	1.9
3-May	1	1	1	1	A	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.9
4-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
5-May	0	0	1	0	A	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.4	0.7
6-May	1	0	0	0	A	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
7-May	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
8-May	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
9-May	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-May	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
11-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
12-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
13-May	0	0	0	0	A	0	0	0	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	--	0.3
14-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
15-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2
16-May	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
17-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
18-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2
19-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.2	1.3
20-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.2	0.7
21-May	0	0	0	0	A	0	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0.3	0.5
22-May	0	0	0	0	A	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8
23-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0.3	1.6
24-May	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
25-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
26-May	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
27-May	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
28-May	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
29-May	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
30-May	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
31-May	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
	0.3	0.3	0.3	0.2	--	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	Diurnal Average	
	0.9	1.8	1.6	0.8	--	0.8	0.8	0.8	1.0	1.9	1.9	1.9	1.7	1.9	1.5	1.3	1.1	1.0	1.6	1.4	1.0	1.6	1.0	1.6	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

Hourly Maximums for SO_2 at Beaverlodge
May 2009



Pollutant Rose for SO_2 at Beaverlodge
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Beaverlodge - Nitrogen Dioxide (NO_2) - ppb
May 1, 2009 to June 1, 2009

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 17.8 ppb on May 9 20:00
Maximum Daily Average: 9.0 ppb on May 9

Minimum Value: 1 ppb on May 28 14:00
Maximum Diurnal Average: 6.5 ppb at hour 21
Monthly Average: 4.63 ppb

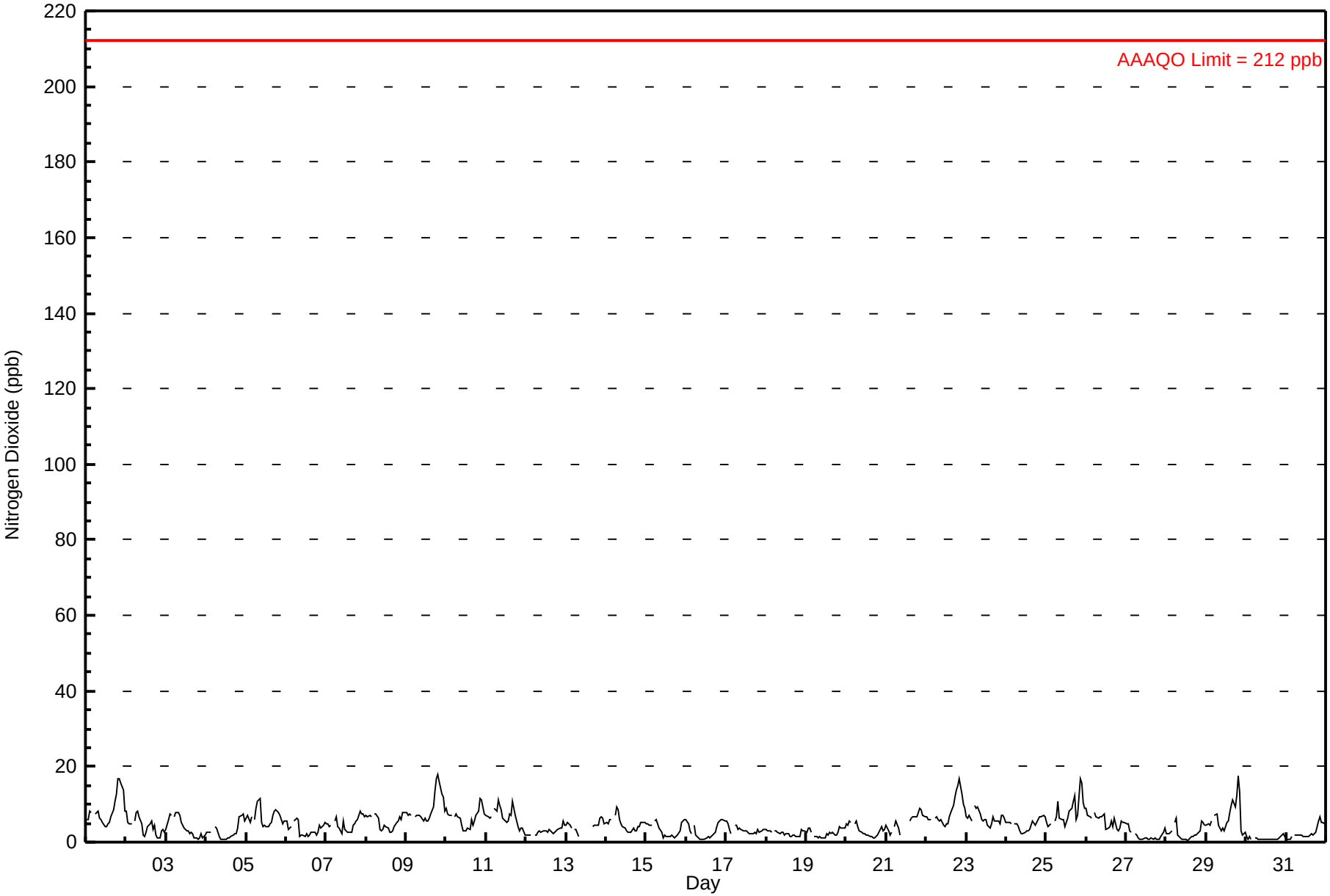
Minimum Daily Average: 1.1 ppb on May 30
Minimum Diurnal Average: 3.0 ppb at hour 13
Percentiles: P_1 = 0.9 P_{10} = 1.4 Q_1 = 2.4 Median = 4.2 Q_3 = 6.3 P_{90} = 7.9 P_{99} = 16.8

Hours in Service:	744
Hours of Data:	700
Hours of Missing Data:	44
Hours of Calibration:	44
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-May	6	6	8	8	A	7	8	8	6	6	5	4	4	5	5	7	8	11	13	17	17	16	14	8	8.6	16.8
2-May	8	5	5	5	A	6	8	8	7	5	2	2	2	4	5	5	3	4	2	1	1	3	3	3	4.3	8.2
3-May	3	6	7	7	A	7	8	8	7	5	4	4	3	3	2	3	2	1	1	1	1	2	1	2	3.9	7.9
4-May	3	3	3	2	A	4	4	3	2	1	1	1	1	1	1	1	2	2	2	4	7	7	7	6	2.9	7.4
5-May	6	7	5	7	A	6	9	11	12	5	4	5	4	4	5	5	7	8	9	8	7	6	5	6	6.5	11.6
6-May	6	4	4	4	A	6	6	6	1	2	2	2	2	1	2	3	3	3	2	2	5	4	5	5	3.4	6.3
7-May	5	5	4	4	A	6	7	4	4	2	5	3	3	3	3	3	4	5	5	6	8	7	7	7	4.8	8.2
8-May	7	7	7	7	A	7	7	6	3	3	3	4	4	4	3	3	3	4	5	6	7	6	8	8	5.3	8.0
9-May	8	7	8	7	A	7	7	7	7	7	6	6	6	6	6	7	9	13	17	18	16	13	12	8	9.0	17.8
10-May	9	8	7	7	A	7	7	7	6	4	3	3	3	4	3	6	4	6	7	8	12	11	9	8	6.5	11.7
11-May	7	7	6	7	A	9	8	11	10	9	6	6	5	6	7	7	11	7	6	4	3	4	4	2	6.5	11.0
12-May	2	2	2	2	A	2	2	3	3	3	3	3	3	3	3	3	2	3	3	3	4	4	5	4	2.9	5.5
13-May	5	5	5	4	A	3	4	2	C	C	C	C	C	C	C	C	4	4	4	5	6	7	6	5	--	6.8
14-May	5	5	6	6	A	7	9	9	6	5	4	4	3	3	3	3	4	3	3	4	4	5	5	5	4.8	9.3
15-May	5	5	5	4	A	6	6	5	4	2	1	2	1	2	2	2	2	1	2	2	3	5	6	6	3.3	5.9
16-May	6	5	3	2	A	4	2	1	1	1	1	1	1	2	1	2	2	2	4	5	6	6	6	5	3.0	5.9
17-May	5	5	3	2	A	5	4	3	4	3	3	3	3	2	2	2	2	3	2	3	2	3	3	3	3.2	5.4
18-May	3	3	3	3	A	3	3	2	2	3	3	2	2	2	2	1	2	2	2	2	1	3	3	3	2.4	3.4
19-May	3	4	4	3	A	2	1	1	2	1	1	1	2	2	3	2	2	2	2	3	4	4	4	4	2.4	4.2
20-May	5	5	5	5	A	5	6	4	3	3	2	2	2	2	1	2	1	1	1	2	3	4	3	4	3.1	5.6
21-May	4	3	2	2	A	4	5	4	2	C	C	C	C	C	6	6	7	7	7	8	9	9	7	7	5.4	9.0
22-May	7	6	6	6	A	6	7	6	6	6	5	4	5	5	7	8	10	12	14	15	17	13	10	9	8.1	16.9
23-May	7	6	7	6	A	10	9	9	7	6	5	6	6	4	4	5	7	6	6	6	5	7	7	6	6.4	9.7
24-May	5	5	5	5	A	5	5	4	3	2	2	3	3	3	3	4	6	4	5	6	7	7	7	7	4.6	7.2
25-May	5	4	4	5	A	6	7	11	7	6	6	4	5	6	8	9	11	12	6	7	17	16	10	9	7.9	16.9
26-May	9	7	7	6	A	8	7	6	7	7	7	8	3	4	4	6	4	6	3	3	4	6	5	5	5.7	9.0
27-May	5	5	3	3	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	4	1.8	4.9
28-May	2	2	2	3	A	5	6	2	1	1	1	1	1	1	1	1	2	2	2	2	3	6	5	5	2.5	6.2
29-May	4	5	4	6	A	7	7	4	4	3	4	3	5	5	8	10	11	9	12	18	14	3	2	3	6.6	17.7
30-May	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1.1	2.2
31-May	1	1	1	2	A	2	2	2	2	2	1	1	2	2	2	2	2	2	3	6	7	5	5	5	2.5	6.9
	5.1	4.8	4.6	4.5	--	5.3	5.6	5.1	4.3	3.6	3.2	3.0	3.0	3.0	3.4	4.0	4.5	4.8	4.9	5.7	6.5	6.2	5.8	5.2	Diurnal Average	
	9.0	7.6	8.3	7.8	--	9.7	9.3	11.0	11.6	8.7	7.1	7.6	6.1	6.3	8.1	9.7	11.0	13.3	16.8	17.8	16.9	15.7	13.6	9.0	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 Beaverlodge
May 2009



Peace Airshed Zone Association
Summary of Hourly Maximums

Beaverlodge - Nitrogen Dioxide (NO_2) - ppb
May 1, 2009 to June 1, 2009

Maximum Value: 39.0 ppb on May 11 08:00

Maximum Daily Average: 10.8 ppb on May 9

Minimum Value: 1 ppb on May 30 12:00

Minimum Daily Average: 1.5 ppb on May 30

Maximum Diurnal Average: 8.1 ppb at hour 22

Minimum Diurnal Average: 4.7 ppb at hour 10

Monthly Average: 6.24 ppb

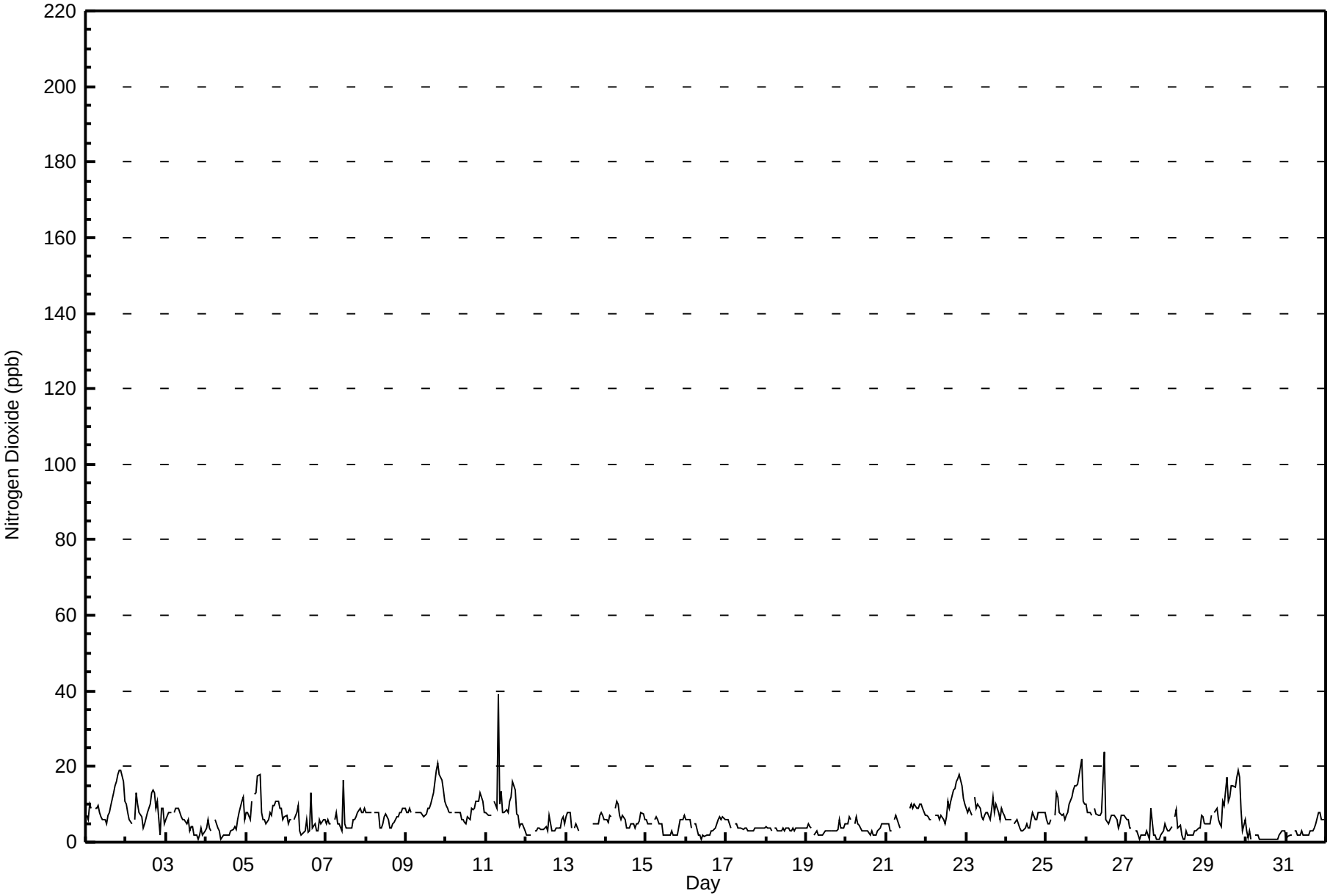
Percentiles: P_1 = 0.9 P_{10} = 1.9 Q_1 = 3.5 Median = 5.9 Q_3 = 7.9 P_{90} = 10.9 P_{99} = 18.8

Hours in Service:	744
Hours of Data:	700
Hours of Missing Data:	44
Hours of Calibration:	44
Percent Operational Time:	100.0

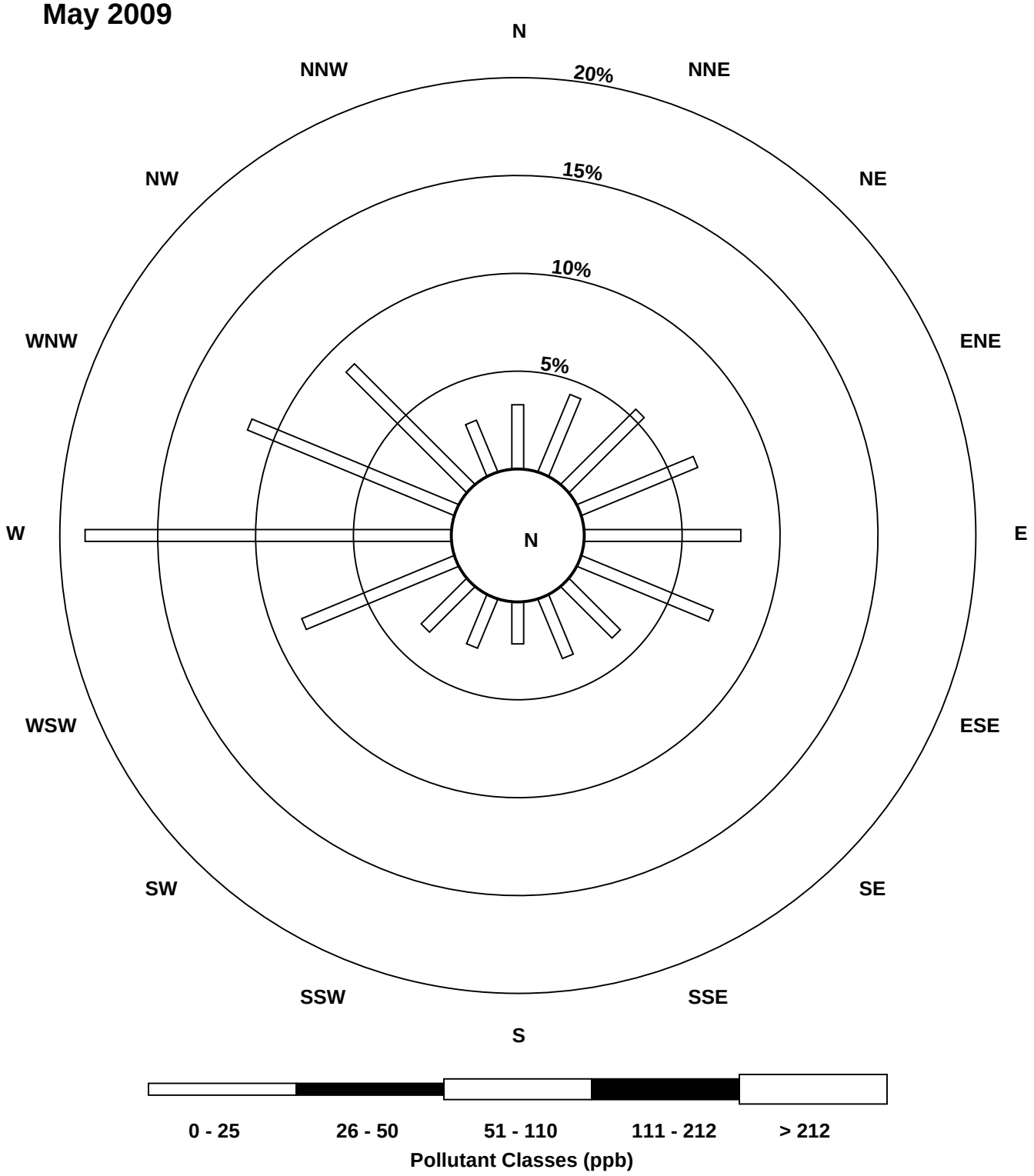
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-May	7	6	10	9	A	9	9	10	8	7	6	6	5	7	8	10	13	15	16	18	19	19	16	11	10.5	18.9
2-May	10	8	6	5	A	6	13	10	8	7	4	5	6	8	10	13	14	13	9	11	2	9	9	5	8.2	13.7
3-May	6	8	8	8	A	8	9	9	8	7	6	6	5	6	3	4	4	2	2	1	2	4	2	3	5.2	8.9
4-May	4	6	4	3	A	6	5	4	3	1	2	2	2	2	2	3	3	4	3	6	8	11	12	6	4.4	11.9
5-May	8	8	6	11	A	13	13	18	18	8	6	6	5	6	8	7	10	10	11	11	9	9	6	7	9.2	17.9
6-May	7	5	6	6	A	6	8	10	3	2	2	3	6	3	3	13	4	5	3	3	6	5	6	6	5.2	13.2
7-May	5	6	5	5	A	6	8	5	5	3	16	5	4	4	4	4	6	6	7	8	9	8	8	9	6.3	16.3
8-May	8	8	8	8	A	8	8	8	4	4	5	7	8	6	4	4	5	5	7	7	8	8	9	9	6.7	8.9
9-May	8	8	9	8	A	8	8	8	8	8	7	7	8	9	9	10	13	16	19	21	18	17	14	11	10.8	20.9
10-May	10	9	8	8	A	8	8	8	8	6	6	5	5	7	6	9	8	9	11	11	13	12	11	8	8.4	12.9
11-May	8	7	7	7	A	11	9	39	10	14	8	8	9	8	11	12	16	14	8	7	4	5	5	3	9.9	39.0
12-May	2	2	2	2	A	3	3	4	4	3	4	4	4	3	7	3	3	3	4	4	4	6	7	5	3.7	7.1
13-May	7	8	8	4	A	4	5	3	C	C	C	C	C	C	C	C	5	5	5	5	7	8	7	6	--	7.9
14-May	6	5	7	7	A	9	11	10	7	6	7	6	4	4	4	5	5	4	5	5	6	8	7	6	6.2	10.9
15-May	6	5	5	5	A	6	7	6	5	5	2	2	2	2	2	3	2	2	2	2	6	6	6	7	4.1	6.9
16-May	6	6	6	4	A	5	5	2	2	1	2	1	2	2	2	3	3	4	5	6	7	6	7	6	4.0	6.9
17-May	6	6	5	4	A	5	5	4	4	4	3	4	4	3	3	3	3	4	4	4	4	4	4	4	4.0	5.9
18-May	4	4	4	3	A	4	4	3	3	3	4	3	4	4	3	3	4	3	4	4	4	4	4	4	3.5	3.9
19-May	4	5	4	4	A	2	3	2	2	2	2	3	3	3	3	3	3	3	3	3	6	4	4	5	3.2	5.9
20-May	5	5	7	6	A	5	7	5	5	3	3	3	3	3	2	3	2	2	2	3	4	5	5	5	3.9	6.9
21-May	5	5	3	3	A	6	7	5	4	C	C	C	C	C	9	10	9	10	9	9	10	10	9	7	7.2	10.0
22-May	7	7	6	6	A	7	7	7	6	7	6	5	7	11	9	11	14	14	16	17	18	15	12	10	9.7	18.0
23-May	9	8	9	7	A	12	9	10	9	7	6	7	8	8	6	9	12	8	10	8	6	9	8	7	8.3	12.0
24-May	6	6	6	6	A	5	6	5	4	3	3	4	5	4	4	6	8	6	6	8	8	8	8	8	5.7	7.9
25-May	6	5	5	6	A	7	13	12	8	7	8	6	7	8	10	12	14	15	15	15	20	22	11	10	10.5	22.0
26-May	10	8	8	7	A	9	8	7	7	8	16	24	6	5	6	7	7	7	6	4	5	7	7	7	8.0	23.8
27-May	6	6	4	4	A	3	3	2	1	2	2	2	3	2	1	9	2	2	1	1	1	2	3	5	2.8	8.9
28-May	4	3	3	4	A	7	9	4	4	2	1	1	3	2	2	2	2	3	3	4	4	7	7	5	3.7	8.6
29-May	5	5	5	7	A	8	9	6	5	4	11	10	17	11	12	15	15	15	17	19	17	8	3	6	9.9	19.0
30-May	3	1	3	1	A	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	3	3	3	1.5	3.0
31-May	1	2	2	2	A	3	3	2	2	3	2	2	2	2	3	3	3	4	5	8	8	6	6	6	3.4	7.9
	6.0	5.7	5.7	5.4	--	6.4	7.1	7.3	5.4	4.7	5.1	5.0	5.0	4.8	5.2	6.6	6.8	6.8	7.0	7.5	7.8	8.1	7.2	6.4	Diurnal Average	
	9.9	8.9	9.9	10.9	--	12.8	12.9	39.0	17.9	13.6	16.3	23.8	17.2	11.0	12.0	15.0	15.9	15.9	18.8	20.9	19.9	22.0	15.9	10.9	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

Hourly Maximums for NO_2 at Beaverlodge
May 2009



Pollutant Rose for NO_2 at Beaverlodge
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Beaverlodge - Nitrogen Oxide (NO) - ppb
May 1, 2009 to June 1, 2009

Maximum Value: 1.4 ppb on May 5 08:00

Maximum Daily Average: 0.1 ppb on May 5

Minimum Value: 0 ppb on May 1 01:00

Maximum Diurnal Average: 0.3 ppb at hour 8

Monthly Average: 0.03 ppb

Minimum Daily Average: 0.0 ppb on May 4

Minimum Diurnal Average: 0.0 ppb at hour 1

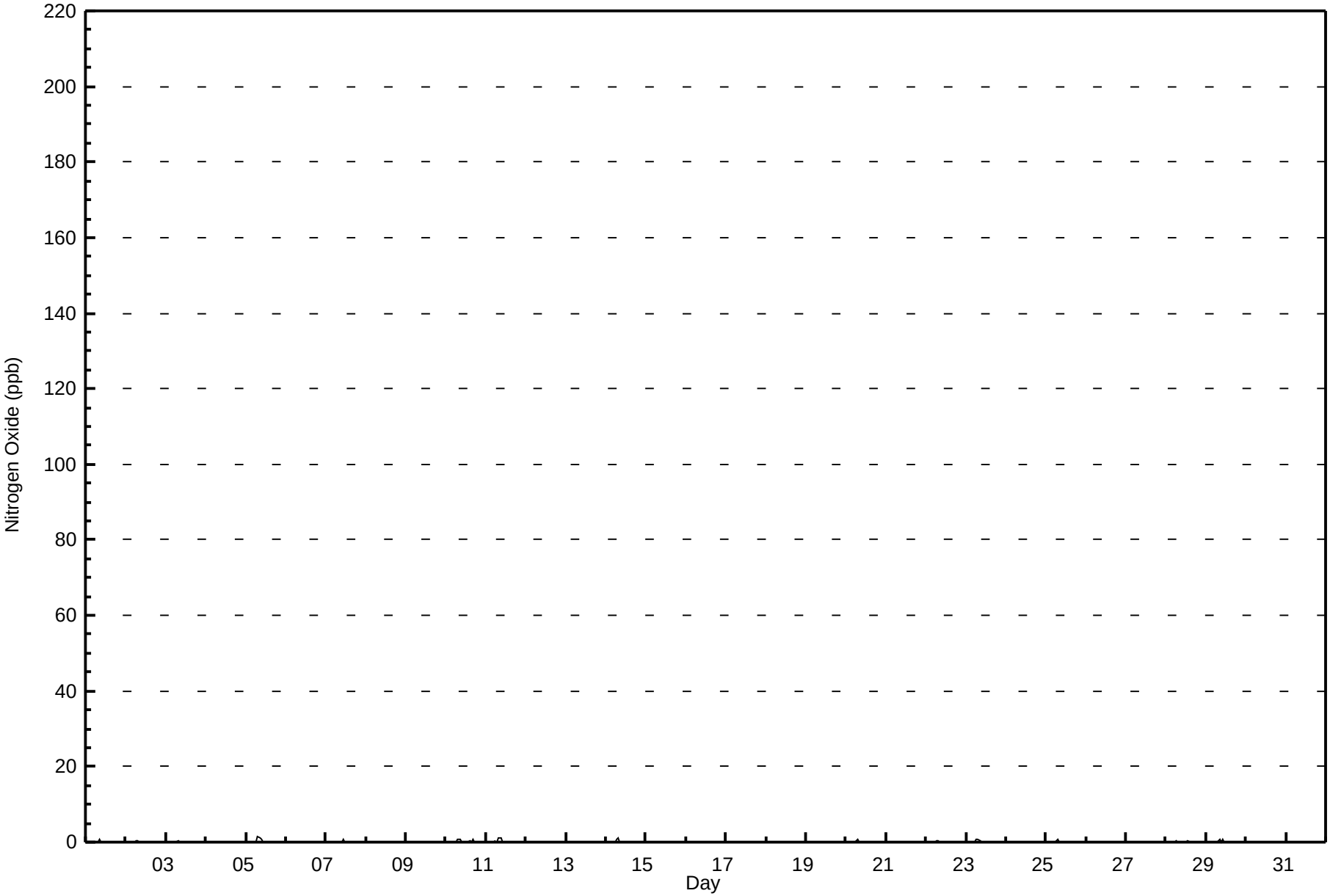
Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.0 P_{90} = 0.0 P_{99} = 0.9

Hours in Service:	744
Hours of Data:	700
Hours of Missing Data:	44
Hours of Calibration:	44
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-May	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	0.6
2-May	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	0.5
3-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
4-May	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
5-May	0	0	0	0	A	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.4
6-May	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
7-May	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.6
8-May	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
9-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
10-May	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.1	0.7
11-May	0	0	0	0	A	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.2
12-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
13-May	0	0	0	0	A	0	0	0	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	--	0.0
14-May	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	1.1
15-May	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
16-May	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
17-May	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
18-May	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
19-May	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
20-May	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8
21-May	0	0	0	0	A	0	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0.0	0.1
22-May	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.5
23-May	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
24-May	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
25-May	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.9
26-May	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
27-May	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
28-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.3
29-May	0	0	0	0	A	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8
30-May	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
31-May	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
	0.0	0.0	0.0	0.0	--	0.0	0.1	0.3	0.2	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	Diurnal Average	
	0.0	0.0	0.0	0.0	--	0.2	0.8	1.4	1.1	1.2	0.6	0.0	0.2	0.3	0.4	0.1	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

Hourly Averages for NO at Beaverlodge
May 2009



Peace Airshed Zone Association
Summary of Hourly Maximums

Beaverlodge - Nitrogen Oxide (NO) - ppb
May 1, 2009 to June 1, 2009

Maximum Value: 32.0 ppb on May 10 17:00

Maximum Daily Average: 2.4 ppb on May 10

Minimum Value: 0 ppb on May 1 01:00

Minimum Daily Average: 0.0 ppb on May 16

Maximum Diurnal Average: 1.9 ppb at hour 11

Minimum Diurnal Average: 0.0 ppb at hour 4

Monthly Average: 0.40 ppb

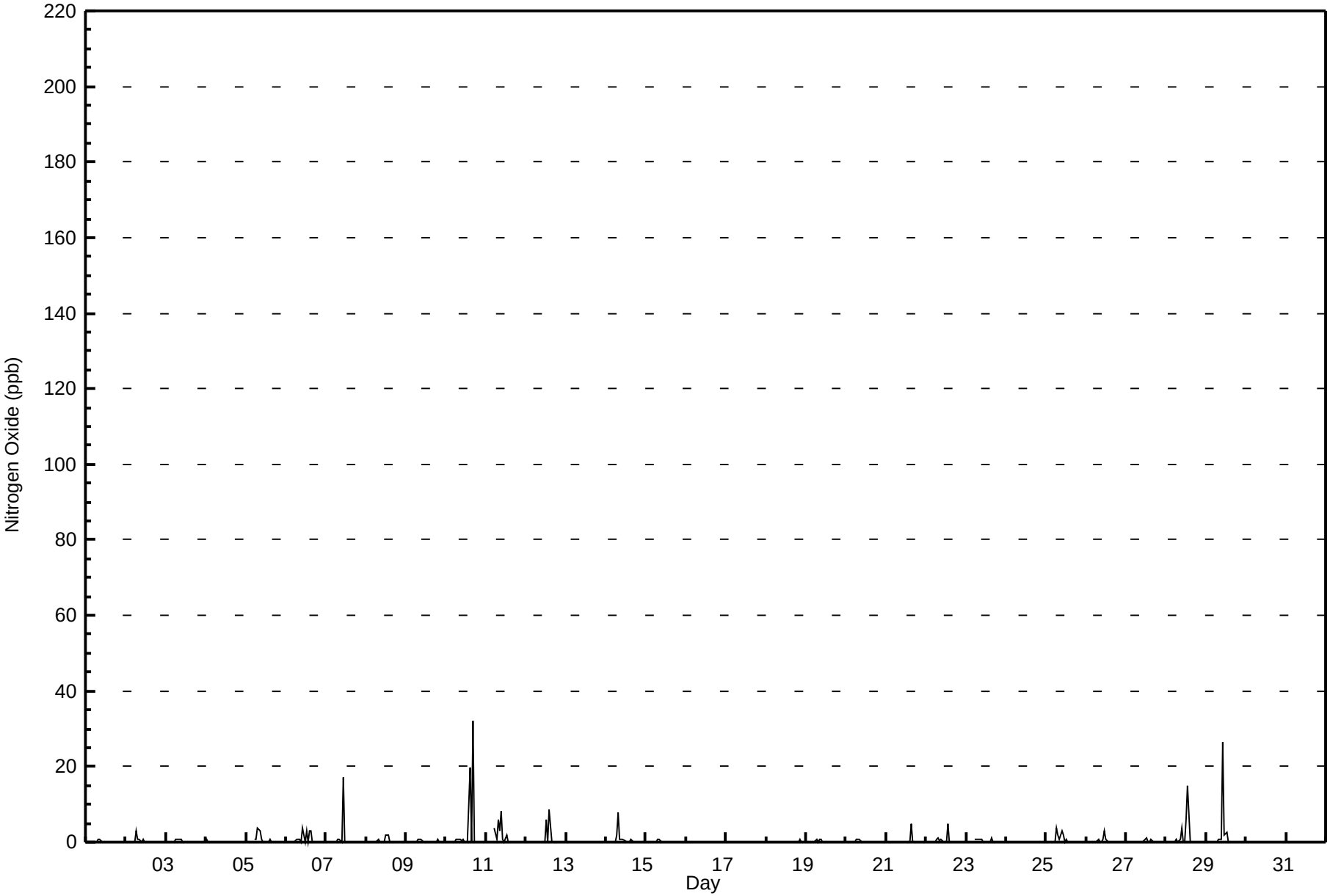
Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.0 P_{90} = 0.9 P_{99} = 8.2

Hours in Service:	744
Hours of Data:	700
Hours of Missing Data:	44
Hours of Calibration:	44
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-May	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	0.9
2-May	0	0	0	0	A	0	3	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	2.9
3-May	0	0	0	0	A	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
4-May	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.9
5-May	0	0	0	0	A	1	1	4	3	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.5	3.9
6-May	0	0	0	0	A	0	1	1	1	0	4	0	3	0	3	3	0	0	0	0	0	0	0	0	0.7	3.8
7-May	0	0	0	0	A	0	0	1	1	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8	17.0
8-May	0	0	0	0	A	0	0	1	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0.2	1.9
9-May	0	0	0	0	A	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.2	0.9
10-May	0	0	0	0	A	0	1	1	1	0	1	0	0	0	20	0	32	0	0	0	0	0	0	0	2.4	32.0
11-May	0	0	0	0	A	4	1	6	3	8	1	0	2	0	0	0	0	0	0	0	0	0	0	0	1.1	8.3
12-May	0	0	0	0	A	0	0	0	0	0	0	0	6	0	9	0	0	0	0	0	0	0	0	0	0.6	8.6
13-May	0	0	0	0	A	0	0	0	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	--	0.0
14-May	0	0	0	0	A	0	2	8	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0.6	7.7
15-May	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	0.9
16-May	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
17-May	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
18-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.0	0.9
19-May	0	0	0	0	A	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.9
20-May	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	0.9
21-May	0	0	0	0	A	0	0	0	0	C	C	C	C	C	0	5	0	0	0	0	0	0	0	0	0.3	5.0
22-May	0	0	0	0	A	0	1	1	0	1	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0.4	4.9
23-May	0	0	0	0	A	1	1	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.2	1.0
24-May	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
25-May	0	0	0	0	A	0	4	2	1	3	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0.6	3.9
26-May	0	0	0	0	A	0	0	1	0	0	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0.2	2.9
27-May	0	0	0	0	A	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0.1	1.3
28-May	0	0	0	0	A	0	1	0	1	4	0	0	6	15	0	0	0	0	0	0	0	0	0	0	1.2	14.9
29-May	0	0	0	0	A	0	0	1	1	1	27	2	3	0	0	0	0	0	0	0	0	0	0	0	1.5	26.5
30-May	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
31-May	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
	0.0	0.0	0.0	0.0	--	0.2	0.6	1.0	0.7	0.8	1.9	0.2	0.8	0.8	1.1	0.4	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Diurnal Average	
	0.9	0.0	0.0	0.0	--	3.9	3.9	7.7	2.9	8.3	26.5	2.9	5.9	14.9	19.9	5.0	32.0	0.0	0.0	0.9	0.9	0.0	0.0	0.0	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

Hourly Maximums for NO at Beaverlodge
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Beaverlodge - Oxides of Nitrogen (NO_X) - ppb
May 1, 2009 to June 1, 2009

Maximum Value: 18.0 ppb on May 9 20:00

Maximum Daily Average: 9.2 ppb on May 9

Minimum Value: 1 ppb on May 30 19:00

Minimum Daily Average: 1.0 ppb on May 30

Maximum Diurnal Average: 6.5 ppb at hour 21

Minimum Diurnal Average: 3.0 ppb at hour 13

Monthly Average: 4.70 ppb

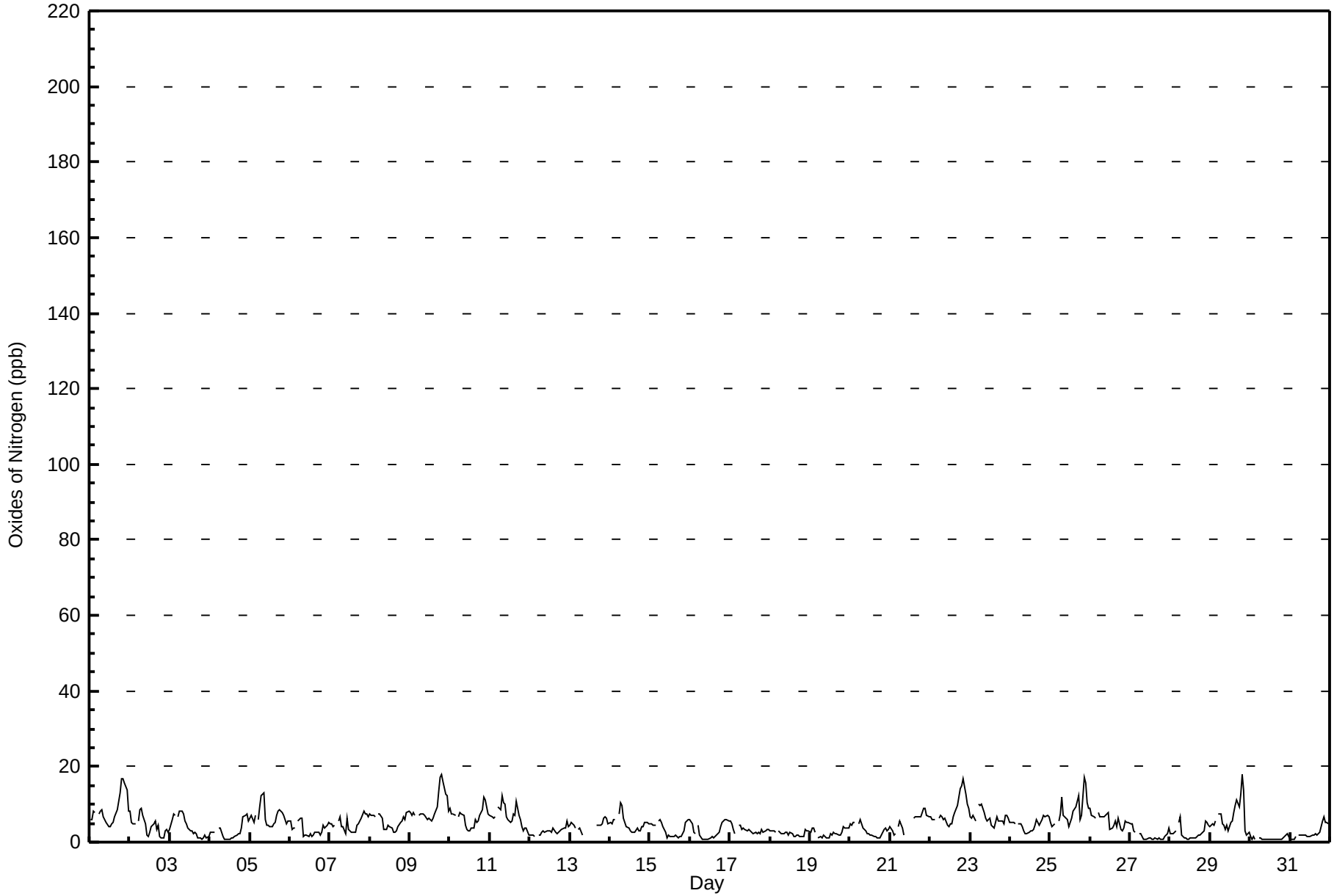
Percentiles: P_1 = 0.9 P_{10} = 1.3 Q_1 = 2.4 Median = 4.3 Q_3 = 6.4 P_{90} = 8.2 P_{99} = 16.9

Hours in Service:	744
Hours of Data:	700
Hours of Missing Data:	44
Hours of Calibration:	44
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-May	6	6	8	8	A	7	8	8	7	6	5	4	4	5	5	7	9	11	13	17	17	16	14	8	8.7	16.9
2-May	8	5	5	5	A	6	9	9	7	5	2	2	2	4	5	5	3	4	2	1	1	3	3	3	4.3	8.9
3-May	3	6	7	7	A	7	8	8	7	6	5	4	3	3	2	3	2	1	1	1	1	2	1	2	4.0	8.3
4-May	3	3	3	2	A	4	4	3	2	1	1	1	1	1	1	1	2	2	2	4	7	7	7	5	2.9	7.3
5-May	6	7	5	7	A	6	9	12	13	6	4	5	4	4	5	5	7	8	9	8	7	6	5	6	6.7	12.9
6-May	6	3	4	4	A	6	6	6	1	2	2	2	2	1	2	3	3	3	2	2	4	4	5	5	3.4	6.4
7-May	5	5	4	4	A	6	7	4	4	2	6	3	3	3	3	3	5	5	5	6	8	8	8	7	4.9	8.4
8-May	7	7	7	7	A	7	7	7	3	3	3	4	4	4	3	3	3	4	5	6	7	6	8	8	5.4	8.1
9-May	8	7	8	7	A	7	8	7	8	7	6	6	6	6	6	7	9	13	17	18	16	13	12	8	9.2	18.0
10-May	9	8	7	7	A	7	8	7	7	5	3	3	3	4	4	6	5	6	7	8	12	11	9	8	6.7	11.8
11-May	7	7	6	7	A	9	8	12	10	10	7	6	5	6	7	7	11	7	6	4	3	4	4	2	6.8	12.2
12-May	2	2	2	2	A	2	2	3	3	3	3	3	3	3	4	3	2	3	3	3	4	4	5	4	2.9	5.5
13-May	4	5	5	4	A	3	4	2	C	C	C	C	C	C	C	C	4	4	4	5	6	7	6	5	--	6.8
14-May	5	5	6	6	A	7	10	10	6	5	4	4	3	3	3	3	4	3	3	4	4	5	5	5	4.9	10.3
15-May	5	5	4	4	A	6	6	5	4	3	1	2	1	1	1	2	1	1	1	2	3	5	6	6	3.3	6.0
16-May	6	5	3	2	A	4	2	1	1	1	1	1	1	1	1	1	2	2	4	5	6	6	6	5	2.9	6.0
17-May	5	5	3	2	A	5	4	3	4	3	3	3	3	3	2	3	2	3	2	3	3	3	3	3	3.3	5.4
18-May	3	3	3	3	A	3	3	2	2	3	3	2	2	2	2	1	2	2	1	1	1	3	3	3	2.3	3.3
19-May	3	4	4	3	A	1	2	1	2	1	1	1	2	2	3	2	2	2	2	3	4	4	4	4	2.4	4.2
20-May	5	5	5	5	A	5	6	5	4	3	2	2	2	2	1	2	1	1	1	2	3	4	3	3	3.1	6.0
21-May	4	3	2	2	A	4	6	4	2	C	C	C	C	C	7	7	7	7	7	8	9	9	7	7	5.5	9.1
22-May	7	6	6	6	A	7	7	7	6	6	5	4	5	5	7	8	10	12	14	15	17	13	10	9	8.2	16.9
23-May	7	6	7	6	A	10	10	10	8	6	6	6	6	4	4	5	7	6	6	6	5	7	7	6	6.5	10.1
24-May	5	5	5	5	A	5	5	4	3	2	2	3	3	3	3	4	6	4	5	6	7	7	7	7	4.6	7.2
25-May	5	4	4	5	A	6	7	12	7	6	6	4	5	6	8	9	11	12	6	7	17	16	10	9	8.1	17.1
26-May	9	7	7	6	A	8	7	7	7	7	7	8	3	4	4	6	4	6	3	3	4	6	5	5	5.8	9.1
27-May	5	5	3	3	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	4	1.8	4.9
28-May	2	2	2	3	A	5	7	2	1	1	1	1	1	1	1	1	2	2	2	2	3	6	5	4	2.5	6.5
29-May	4	5	4	6	A	7	7	5	4	3	5	3	5	5	8	10	11	9	13	18	14	3	2	3	6.7	17.9
30-May	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1.0	2.2
31-May	1	1	1	1	A	2	2	2	2	2	1	1	2	2	2	2	2	2	3	6	7	5	5	5	2.5	6.9
	5.1	4.7	4.6	4.5	--	5.3	5.8	5.5	4.6	3.8	3.3	3.1	3.0	3.1	3.5	4.0	4.5	4.8	4.9	5.7	6.5	6.2	5.8	5.1	Diurnal Average	
	9.1	7.6	8.3	7.8	--	10.1	10.3	12.3	12.9	10.0	7.3	7.7	6.2	6.4	8.2	9.7	11.1	13.4	17.0	18.0	17.1	15.8	13.7	9.0	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

Hourly Averages for NO_X at Beaverlodge
May 2009



Peace Airshed Zone Association
Summary of Hourly Maximums

Beaverlodge - Oxides of Nitrogen (NO_X) - ppb
May 1, 2009 to June 1, 2009

Maximum Value: 45.0 ppb on May 11 08:00

Maximum Daily Average: 11.0 ppb on May 11

Minimum Value: 1 ppb on May 30 09:00

Minimum Daily Average: 1.5 ppb on May 30

Maximum Diurnal Average: 8.1 ppb at hour 22

Minimum Diurnal Average: 4.9 ppb at hour 14

Monthly Average: 6.46 ppb

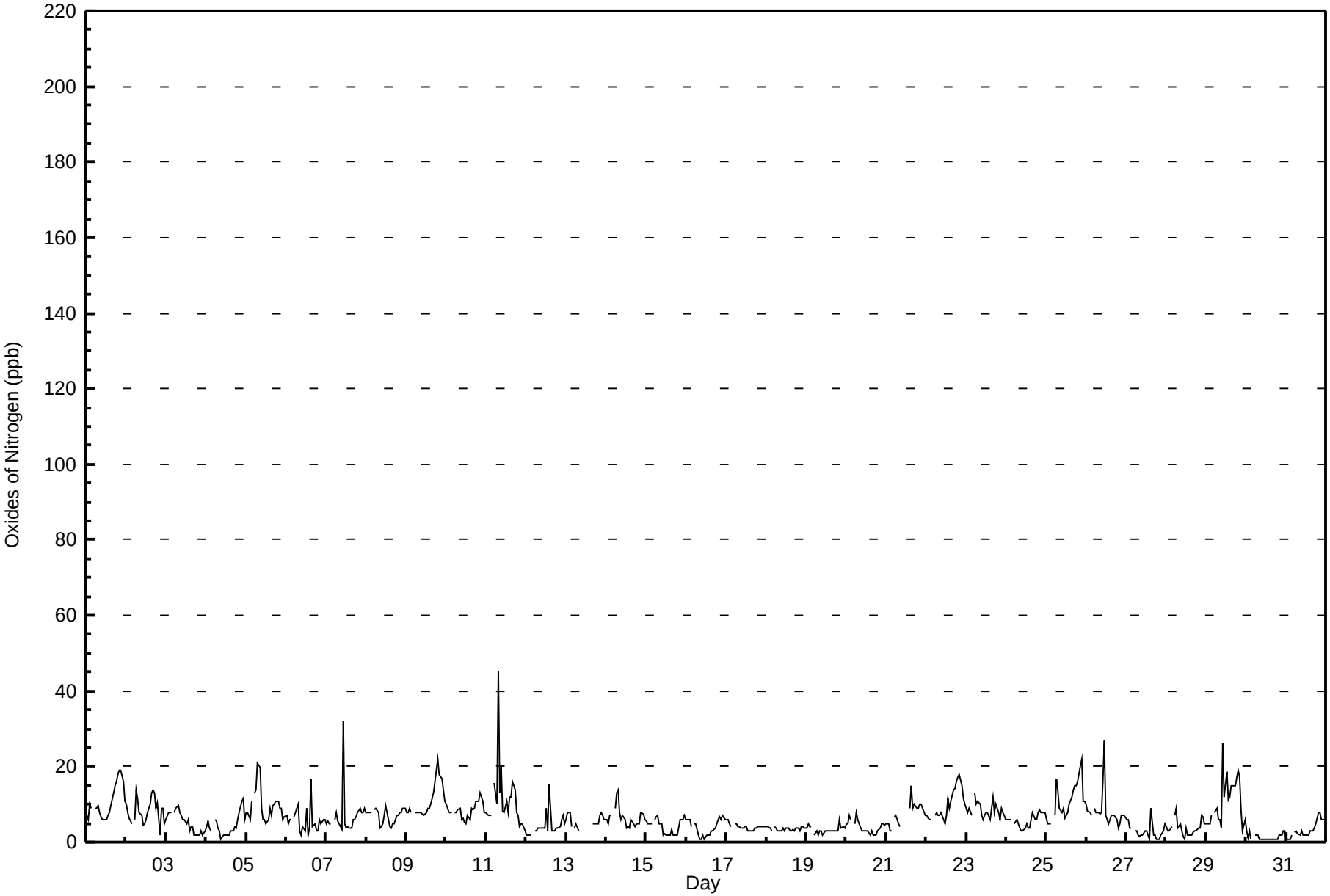
Percentiles: P_1 = 0.9 P_{10} = 1.9 Q_1 = 3.7 Median = 5.9 Q_3 = 7.9 P_{90} = 11.4 P_{99} = 20.3

Hours in Service:	744
Hours of Data:	700
Hours of Missing Data:	44
Hours of Calibration:	44
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-May	7	6	10	9	A	9	9	10	8	7	6	6	6	7	8	10	13	15	16	18	19	19	16	11	10.6	18.9
2-May	10	8	6	5	A	6	14	11	8	7	4	5	6	8	10	13	14	13	9	11	2	9	9	5	8.4	13.9
3-May	6	8	8	8	A	8	9	10	8	7	6	6	5	6	3	4	4	2	2	2	2	3	2	3	5.2	9.9
4-May	4	6	4	3	A	6	6	4	3	1	2	2	2	2	2	3	3	4	4	6	8	11	12	6	4.4	11.6
5-May	8	8	6	11	A	13	14	21	20	9	6	6	5	6	9	7	10	10	11	11	9	9	6	7	9.5	20.8
6-May	7	5	6	6	A	7	9	10	3	2	4	3	9	2	4	17	4	5	3	3	6	5	6	6	5.7	16.9
7-May	5	6	5	5	A	6	8	6	5	3	32	5	4	4	4	4	6	6	7	8	9	8	8	9	7.0	32.3
8-May	8	8	8	8	A	9	9	8	4	4	5	7	10	6	4	4	5	5	7	7	8	8	9	9	6.9	9.6
9-May	8	8	9	8	A	8	8	8	8	8	7	7	8	9	9	10	13	16	19	22	18	17	14	11	10.9	21.9
10-May	10	9	8	8	A	8	8	9	9	6	6	5	5	7	6	9	8	9	11	11	13	12	11	8	8.5	12.9
11-May	8	7	7	7	A	16	10	45	13	20	8	8	11	8	12	12	16	14	8	7	4	5	5	3	11.0	45.0
12-May	2	2	2	2	A	3	3	4	4	4	4	4	9	3	15	3	3	3	4	4	4	6	7	5	4.3	15.3
13-May	6	8	8	4	A	4	5	3	C	C	C	C	C	C	C	C	5	5	5	5	7	8	7	6	--	7.9
14-May	6	5	7	7	A	9	13	14	8	6	7	6	4	4	4	6	5	4	5	5	5	8	8	6	6.5	13.8
15-May	6	5	5	5	A	6	7	7	5	5	2	2	2	2	2	3	2	2	2	2	6	6	6	7	4.2	6.9
16-May	6	6	6	4	A	5	5	2	1	1	2	1	2	2	2	3	3	4	5	6	7	6	7	6	3.9	6.9
17-May	6	6	5	4	A	5	5	4	4	4	4	4	4	3	3	3	3	4	4	4	4	4	4	4	4.0	5.9
18-May	4	4	4	3	A	4	4	3	3	3	4	3	4	4	3	3	3	3	4	4	3	4	4	4	3.5	3.9
19-May	4	5	4	4	A	2	3	2	3	3	2	3	3	3	3	3	3	3	3	3	6	4	4	4	3.2	5.9
20-May	5	5	7	6	A	5	8	6	5	3	3	3	3	3	2	3	2	2	2	3	4	5	5	5	4.0	7.9
21-May	5	5	3	3	A	7	7	5	4	C	C	C	C	C	9	15	9	10	9	9	10	10	9	7	7.5	15.0
22-May	7	6	6	6	A	7	8	7	7	8	6	5	7	12	9	11	14	14	16	17	18	15	12	10	9.9	18.0
23-May	9	8	9	7	A	13	10	11	10	7	6	7	8	8	6	9	12	8	10	8	6	9	8	7	8.5	12.9
24-May	6	6	6	6	A	5	6	5	4	3	3	4	5	4	4	6	8	6	6	8	9	8	8	8	5.7	8.6
25-May	6	5	5	5	A	7	17	14	9	8	9	6	7	8	10	12	14	15	15	16	20	22	11	11	10.9	22.0
26-May	10	8	8	7	A	9	8	8	7	8	17	27	7	5	6	7	7	7	6	4	5	7	7	7	8.3	26.8
27-May	6	6	4	4	A	3	3	2	2	2	2	3	3	2	1	9	2	2	1	1	1	2	3	5	2.9	8.9
28-May	4	3	3	4	A	7	9	4	5	3	2	1	4	2	2	2	3	3	3	4	4	7	7	5	3.8	8.9
29-May	5	5	5	7	A	8	9	6	6	4	26	12	19	11	12	15	15	15	17	19	17	9	3	6	10.9	26.2
30-May	3	1	3	1	A	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2	3	3	1.5	3.0
31-May	1	1	1	2	A	3	3	2	2	3	2	2	2	2	3	3	3	4	5	8	8	6	6	6	3.3	7.9
	6.0	5.7	5.7	5.4	--	6.7	7.6	8.1	5.9	5.1	6.4	5.3	5.6	4.9	5.5	6.9	6.8	6.8	7.0	7.6	7.8	8.1	7.2	6.4	Diurnal Average	
	9.9	8.9	9.9	10.9	--	15.5	16.9	45.0	19.9	20.3	32.3	26.8	18.6	11.7	15.3	16.9	16.0	15.9	18.9	21.9	20.0	22.0	15.9	10.9	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

Hourly Maximums for NO_X at Beaverlodge
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Beaverlodge - Ozone (O_3) - ppb
May 1, 2009 to June 1, 2009

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 47.9 ppb on May 4 17:00
Maximum Daily Average: 41.1 ppb on May 4

Minimum Value: 18 ppb on May 17 21:00
Maximum Diurnal Average: 36.8 ppb at hour 16
Monthly Average: 33.93 ppb

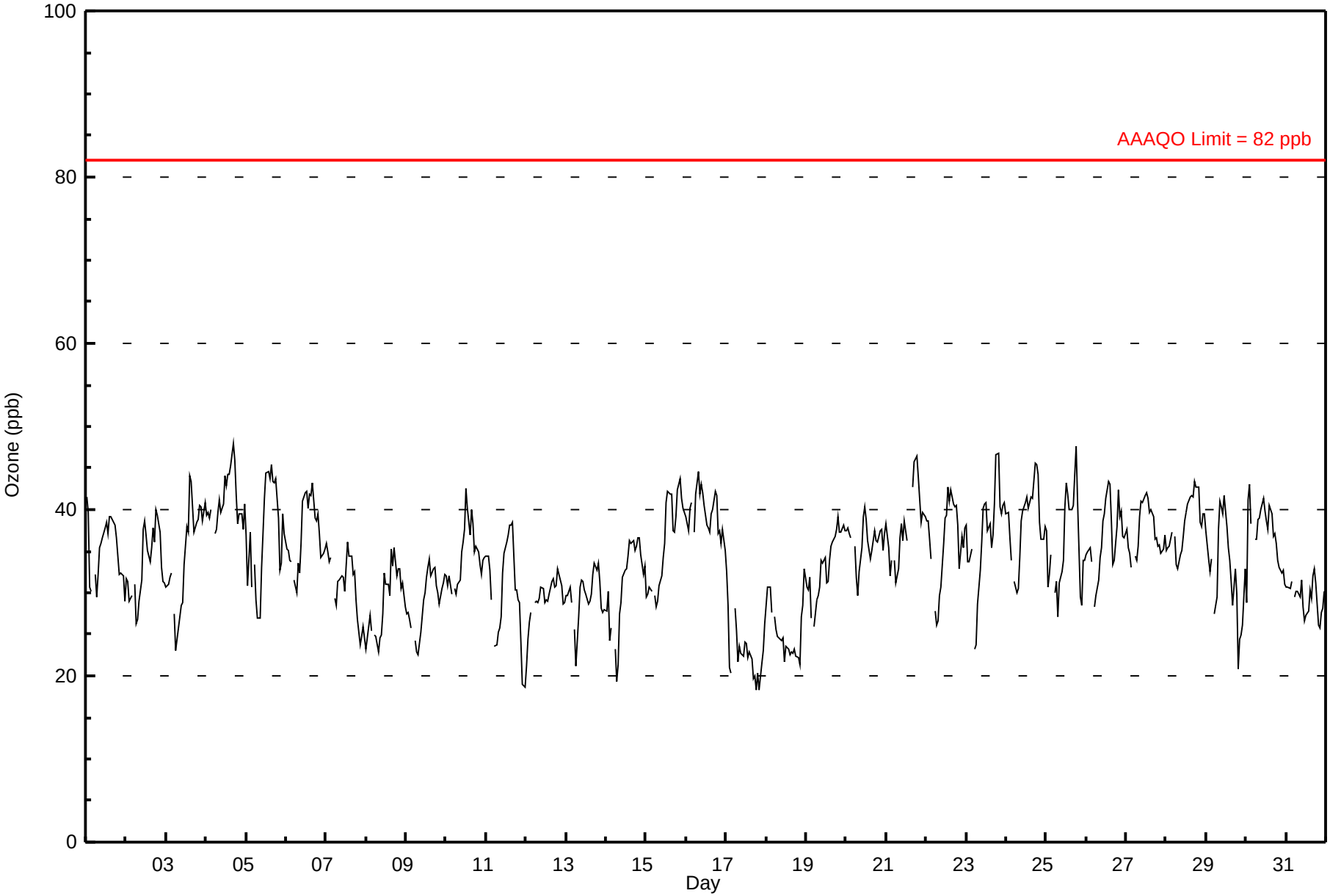
Minimum Daily Average: 23.0 ppb on May 17
Minimum Diurnal Average: 28.8 ppb at hour 7
Percentiles: P_1 = 20.2 P_{10} = 25.7 Q_1 = 29.9 Median = 34.1 Q_3 = 38.6 P_{90} = 41.3 P_{99} = 45.7

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

Day	Hourly Period Ending At (MST) 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-May	42	40	31	30	A	32	29	32	35	36	37	38	38	37	39	39	39	38	37	34	32	32	32	29	35.2	41.5
2-May	32	31	29	30	A	31	26	27	29	32	38	39	37	35	34	35	38	36	40	39	37	33	31	31	33.5	40.0
3-May	31	31	32	32	A	27	23	26	27	28	29	33	38	37	44	43	40	37	38	39	41	40	39	41	34.7	44.0
4-May	39	40	39	40	A	37	38	40	41	40	41	44	43	44	44	45	48	46	42	38	39	39	38	41	41.1	47.9
5-May	37	31	37	31	A	33	29	27	27	33	37	41	44	45	44	45	43	43	44	39	33	34	40	37	37.2	45.4
6-May	35	35	34	34	A	32	30	34	32	36	41	42	42	40	42	42	43	39	39	39	37	34	35	35	37.0	43.2
7-May	36	35	34	34	A	29	29	31	32	32	32	30	33	36	34	34	32	33	29	27	24	25	26	25	30.9	36.1
8-May	23	25	27	26	A	25	25	23	25	25	27	32	31	31	30	35	33	35	32	33	33	30	31	28	28.9	35.4
9-May	27	28	27	26	A	24	23	23	24	25	29	30	32	33	34	32	33	33	31	30	29	30	31	32	29.0	34.0
10-May	32	31	32	30	A	31	30	31	32	35	36	38	42	40	37	40	38	35	36	35	33	32	34	34	34.5	42.5
11-May	34	34	33	29	A	24	24	25	26	27	32	35	36	37	38	38	38	30	30	29	29	24	19	19	30.1	38.5
12-May	21	24	27	28	A	29	29	29	29	31	31	29	29	29	30	31	32	31	31	33	32	31	29	29	29.2	32.9
13-May	30	30	31	29	A	26	21	27	31	32	31	30	30	29	29	30	32	34	33	34	31	28	28	28	29.6	33.6
14-May	28	30	24	26	A	23	19	21	28	29	32	33	33	34	36	36	36	35	36	37	37	35	32	33	31.0	36.6
15-May	30	30	31	30	A	30	28	29	31	32	34	36	41	42	42	42	38	37	39	42	44	41	40	40	36.0	43.8
16-May	39	38	40	41	A	37	42	45	42	43	42	41	38	38	37	40	40	42	42	37	37	36	38	35	39.5	44.5
17-May	33	29	21	20	A	28	26	22	24	23	22	24	24	22	23	22	20	20	18	20	18	22	23	26	23.0	32.5
18-May	28	31	31	28	A	27	26	25	24	24	24	22	24	23	23	23	23	23	22	22	21	27	29	33	25.3	32.8
19-May	31	30	32	27	A	26	29	30	31	34	34	34	31	31	34	36	36	37	38	39	37	37	38	37	33.4	39.2
20-May	38	38	37	37	A	36	32	30	32	35	39	40	39	36	34	35	36	37	36	36	38	38	35	37	36.1	40.4
21-May	38	35	32	34	A	34	31	33	37	38	36	39	36	C	C	C	43	46	46	44	41	39	40	39	38.1	46.5
22-May	39	39	36	34	A	28	26	27	30	31	36	39	39	43	41	42	41	40	40	38	33	37	35	38	36.2	42.7
23-May	38	34	34	35	A	23	24	29	33	36	40	41	41	38	38	35	37	41	47	47	40	39	41	41	37.0	46.8
24-May	40	40	37	34	A	31	30	30	34	39	40	41	41	40	41	42	41	46	45	44	38	36	37	38	38.5	45.5
25-May	37	31	32	35	A	30	31	27	31	33	34	40	43	42	40	40	40	44	48	41	30	28	34	34	35.9	47.6
26-May	35	35	36	34	A	28	30	31	34	35	39	39	41	43	43	39	33	34	38	42	39	40	37	37	36.6	43.4
27-May	38	35	35	33	A	34	34	36	39	41	41	42	42	41	40	40	39	37	37	36	36	35	35	37	37.4	42.0
28-May	35	35	36	37	A	37	33	33	35	35	37	39	40	41	41	42	41	43	43	43	39	38	39	39	38.3	43.4
29-May	38	34	32	34	A	27	30	38	41	40	39	42	38	35	34	31	29	33	30	21	24	25	26	33	32.8	41.7
30-May	29	41	43	38	A	36	36	39	39	40	41	40	39	38	41	39	37	37	36	34	33	32	33	31	37.1	43.1
31-May	31	31	30	31	A	29	30	30	29	32	28	27	27	28	30	29	32	33	31	26	26	28	28	30	29.5	32.9
	33.6	33.2	32.6	31.8	--	29.9	28.8	29.9	31.7	33.3	34.8	36.1	36.6	36.3	36.5	36.8	36.5	36.6	36.5	35.5	33.6	33.1	33.3	33.8	Diurnal Average	
	41.5	41.1	43.1	40.9	--	37.3	41.9	44.5	41.8	43.1	42.0	44.1	44.3	44.6	44.2	45.4	47.9	45.9	47.6	46.8	43.8	41.3	40.6	40.9	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 Beaverlodge
May 2009



Peace Airshed Zone Association
Summary of Hourly Maximums

Beaverlodge - Ozone (O_3) - ppb
May 1, 2009 to June 1, 2009

Maximum Value: 54.7 ppb on May 25 19:00

Maximum Daily Average: 44.7 ppb on May 4

Minimum Value: 20 ppb on May 12 00:00

Minimum Daily Average: 26.5 ppb on May 17

Maximum Diurnal Average: 41.8 ppb at hour 17

Minimum Diurnal Average: 32.0 ppb at hour 7

Monthly Average: 37.52 ppb

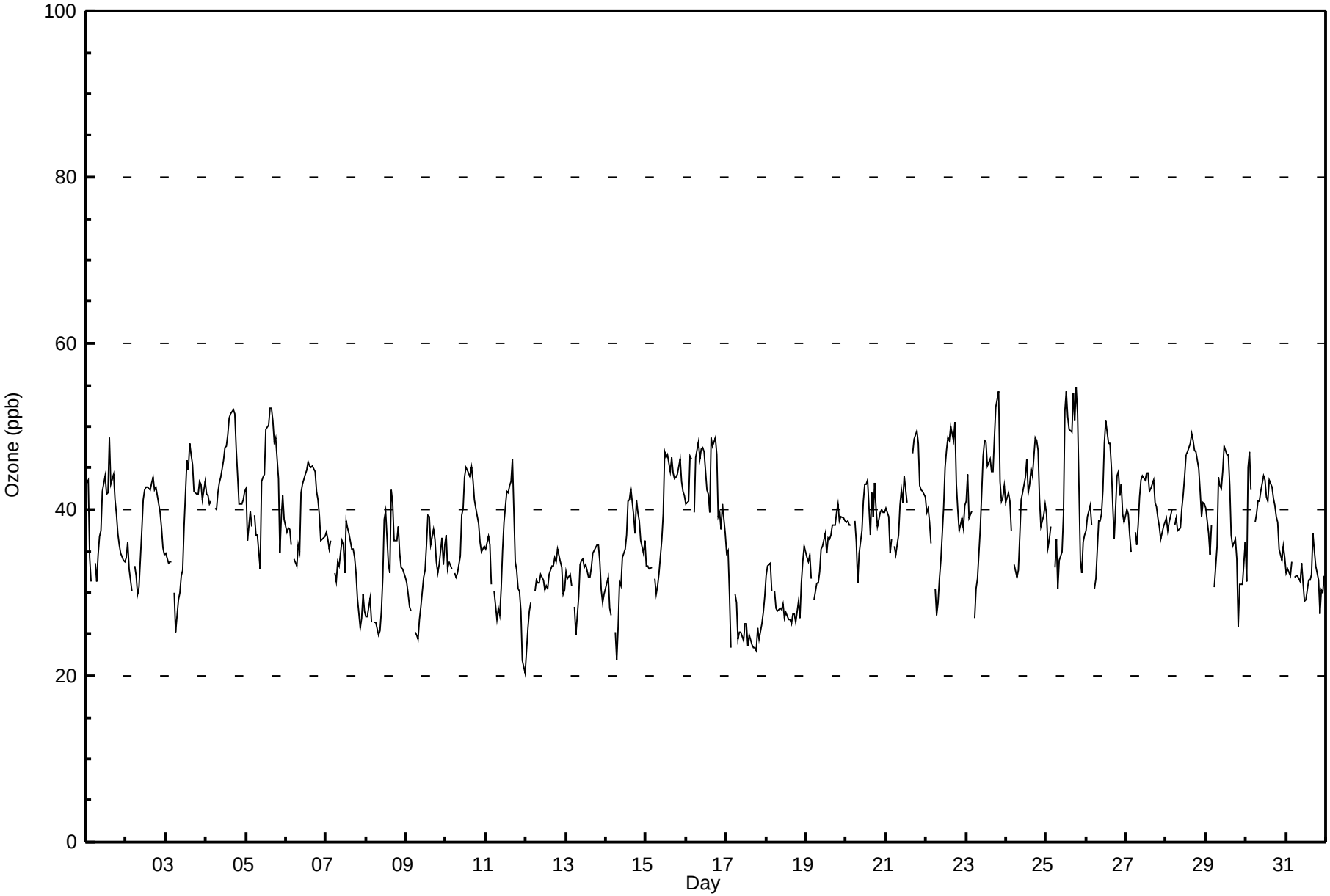
Percentiles: P_1 = 23.4 P_{10} = 28.8 Q_1 = 32.6 Median = 37.5 Q_3 = 42.3 P_{90} = 46.5 P_{99} = 52.1

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

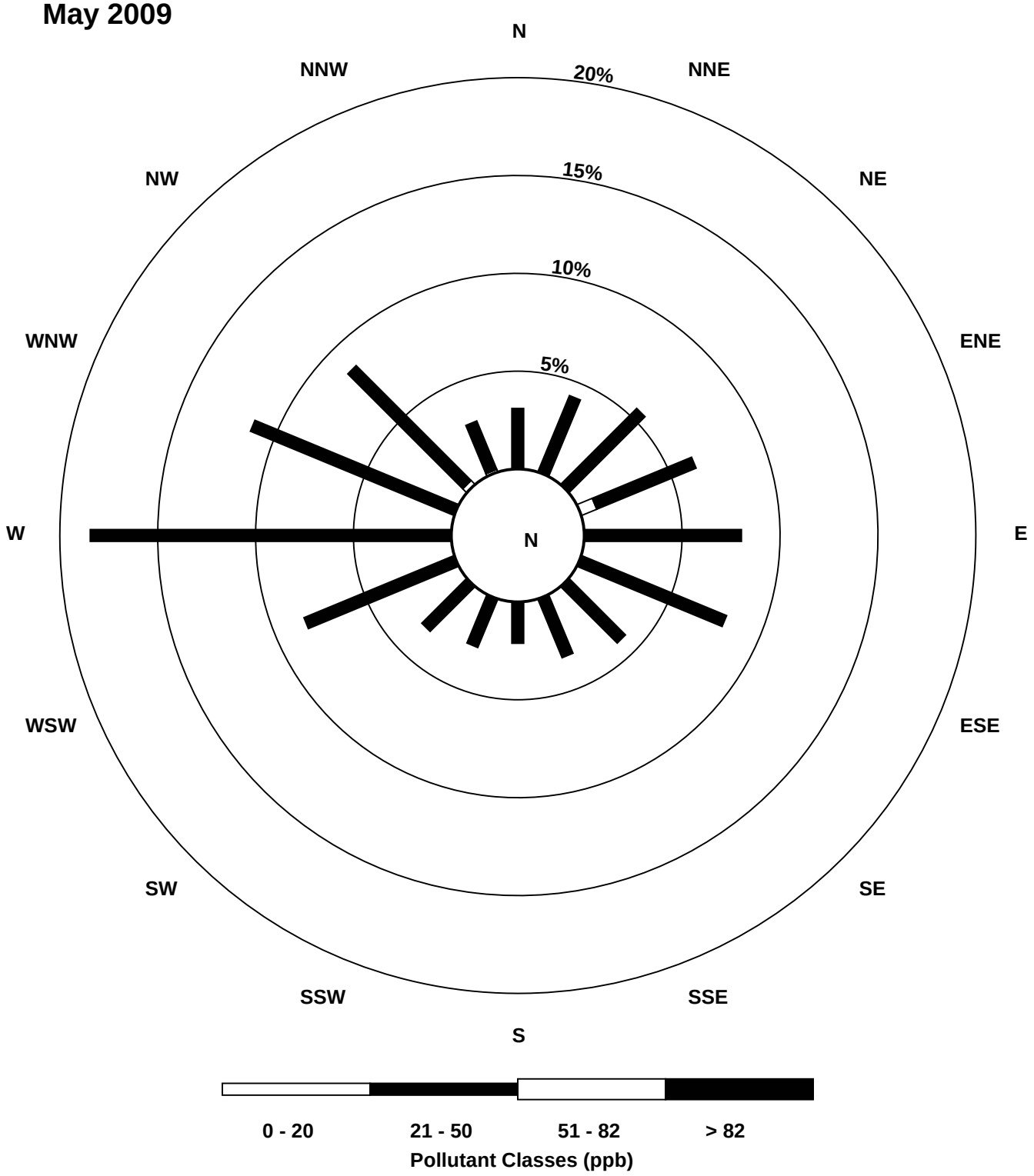
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-May	43	44	34	31	A	34	31	35	37	38	42	44	42	42	49	43	44	41	40	37	36	35	34	34	38.6	48.6
2-May	34	36	33	30	A	33	32	30	31	37	41	42	43	43	42	43	44	42	43	42	40	38	35	35	37.8	43.8
3-May	35	34	34	34	A	30	25	29	30	32	33	38	46	45	48	47	45	42	42	42	43	43	41	43	38.3	48.0
4-May	42	42	41	41	A	40	40	42	43	44	46	47	48	49	51	52	52	52	47	44	41	41	41	42	44.7	52.0
5-May	43	36	40	38	A	39	37	37	33	43	44	44	50	50	52	52	51	48	49	44	35	39	42	39	42.8	52.2
6-May	37	38	38	36	A	34	33	36	35	42	43	44	45	46	45	45	45	45	42	41	39	36	37	37	39.9	45.7
7-May	37	36	35	36	A	32	31	34	33	36	36	32	39	38	37	35	35	34	32	29	26	27	30	28	33.5	38.6
8-May	27	27	29	26	A	26	26	25	25	28	32	39	40	33	32	42	41	36	36	38	35	33	33	32	32.3	42.4
9-May	31	30	28	28	A	25	25	24	27	28	32	33	36	39	39	36	38	36	34	32	33	37	33	36	32.2	39.3
10-May	37	33	34	33	A	32	32	32	34	39	40	44	45	45	44	45	44	41	40	38	36	35	35	36	38.0	45.1
11-May	35	37	36	31	A	30	27	28	27	31	35	39	42	42	43	43	46	34	33	30	30	28	22	20	33.4	46.1
12-May	23	26	28	29	A	30	32	31	31	32	32	30	31	30	32	33	33	34	34	35	34	33	30	30	31.0	35.3
13-May	33	32	32	31	A	28	25	29	33	34	34	33	33	32	32	33	35	35	36	36	34	30	29	30	32.1	35.8
14-May	31	32	28	27	A	25	22	26	31	31	34	35	37	41	41	43	39	37	41	40	39	36	35	36	34.3	42.5
15-May	33	33	33	33	A	32	30	31	32	36	40	47	46	47	45	46	44	44	44	44	46	43	42	42	39.7	46.9
16-May	41	41	46	46	A	40	46	48	46	47	47	47	42	42	40	49	48	49	47	39	40	38	41	37	43.8	48.7
17-May	35	35	30	23	A	30	29	24	25	25	24	26	26	24	25	24	23	23	23	26	24	26	28	29	26.5	35.1
18-May	32	33	34	30	A	30	28	28	28	28	29	27	28	27	27	26	27	28	27	29	27	31	34	36	29.2	35.6
19-May	34	34	35	32	A	29	31	31	33	35	36	37	35	37	36	37	38	38	40	41	39	39	39	39	35.8	40.6
20-May	38	39	38	38	A	39	36	31	35	37	41	43	43	44	37	42	39	43	40	38	40	40	40	40	39.2	43.6
21-May	40	39	35	36	A	36	35	37	40	42	41	44	41	C	C	C	47	49	49	48	43	42	42	41	41.4	49.4
22-May	40	40	38	36	A	30	27	29	32	34	40	45	47	49	48	50	48	51	43	40	38	39	38	41	40.1	50.5
23-May	41	44	39	40	A	27	30	32	38	42	46	48	48	45	46	45	45	49	52	54	43	41	42	43	42.6	54.2
24-May	41	42	41	37	A	33	32	33	37	41	42	44	46	42	43	45	44	49	48	47	41	38	39	41	41.2	48.7
25-May	39	35	36	38	A	33	36	31	34	35	39	52	54	51	50	49	54	51	55	52	34	32	36	37	41.9	54.7
26-May	38	39	40	38	A	30	32	39	39	40	42	48	51	48	48	45	40	36	44	45	42	43	39	38	41.1	50.7
27-May	40	39	37	35	A	37	36	38	41	43	44	44	44	44	42	43	44	41	40	39	38	36	38	39	40.1	44.4
28-May	39	38	39	40	A	38	39	37	38	40	42	44	47	47	48	49	48	47	47	45	42	39	41	41	42.4	49.2
29-May	40	37	35	38	A	31	36	44	43	43	45	48	47	47	43	37	36	37	34	26	31	31	31	36	37.9	47.7
30-May	31	45	47	42	A	39	39	41	41	42	44	44	42	41	44	43	41	40	39	39	35	34	36	34	40.1	47.0
31-May	32	33	32	34	A	32	32	32	31	34	31	29	29	31	32	32	37	35	33	32	27	30	30	32	31.9	37.2
	36.2	36.4	35.6	34.5	--	32.5	32.0	33.0	34.3	36.8	38.6	40.7	41.6	41.3	41.4	41.8	41.8	40.9	40.4	39.0	36.5	36.0	35.8	36.2	Diurnal Average	
	43.2	45.0	47.0	46.1	--	40.1	46.3	48.1	46.2	47.3	47.5	51.9	54.3	51.2	52.2	52.1	54.0	51.6	54.7	54.2	46.1	43.5	42.3	43.5	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

Hourly Maximums for O_3 at Beaverlodge
May 2009



Pollutant Rose for O_3 at Beaverlodge
May 2009



Peace Airshed Zone Association
Summary of Eight Hour Running Averages

Beaverlodge - Ozone (O_3) - ppb
May 1, 2009 to June 1, 2009

Number of Exceedences (AAAQO): 8-hr: 0
Maximum Value: 44.5 ppb on May 4 19:00

Minimum Value: 20.4 ppb on May 17 22:00

Percentiles: P_1 = 22.1 P_{10} = 26.9 Q_1 = 30.3 Median = 34.4 Q_3 = 37.8 P_{90} = 40.3 P_{99} = 43.3

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

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	41	40	39	38	38	37	35	34	33	32	33	34	35	35	37	37	38	38	38	38	37	36	35	34	40.5
2-May	33	32	31	31	31	31	30	29	29	29	30	32	32	33	34	35	36	36	37	37	37	37	36	36	36.8
3-May	35	34	33	32	32	31	30	29	28	28	28	28	29	30	33	35	37	38	39	40	40	40	40	39	40.4
4-May	39	40	40	40	40	39	39	39	39	39	39	40	40	41	42	43	44	44	45	44	43	43	42	41	44.5
5-May	40	38	38	37	36	35	34	32	31	31	31	33	34	35	37	40	42	43	44	43	42	41	40	39	43.7
6-May	38	37	36	35	35	35	34	33	33	33	34	35	36	37	39	40	41	41	41	41	40	39	39	38	41.4
7-May	37	36	36	35	35	34	33	33	32	32	31	31	31	32	33	33	33	33	33	32	31	30	29	27	36.8
8-May	26	25	25	25	25	25	25	25	25	25	25	26	27	27	28	30	31	32	33	33	33	33	33	32	32.9
9-May	31	30	30	29	28	27	26	25	25	24	25	25	26	27	29	30	31	32	32	32	32	31	31	31	32.2
10-May	31	31	31	31	31	31	31	31	31	31	32	33	34	35	36	37	38	38	38	38	37	36	35	35	38.3
11-May	34	34	34	33	33	32	30	29	28	27	27	27	29	30	32	34	35	36	35	35	34	32	30	27	35.6
12-May	25	24	24	24	23	24	25	27	28	29	29	29	29	29	30	30	30	30	30	31	31	31	31	31	31.2
13-May	31	30	30	30	30	29	28	28	28	28	28	28	28	29	30	30	30	31	31	31	31	31	31	31	31.4
14-May	30	30	29	28	27	27	26	25	25	24	25	26	27	29	31	33	34	34	35	35	36	36	35	35	35.8
15-May	34	34	33	32	31	31	30	30	30	30	31	31	33	34	36	37	38	39	40	40	41	41	40	40	40.8
16-May	40	40	41	40	40	39	40	40	41	41	42	42	41	41	41	40	40	40	40	39	39	39	39	38	41.7
17-May	37	36	33	31	30	29	27	25	24	23	23	24	24	23	23	23	22	22	22	21	20	20	20	21	37.5
18-May	22	23	25	26	27	28	28	28	27	26	25	25	24	24	24	23	23	23	23	23	23	23	24	25	28.1
19-May	26	27	28	29	30	30	30	29	29	30	30	31	31	32	32	33	34	34	35	35	36	37	37	37	37.5
20-May	38	38	38	37	37	37	36	35	34	34	34	35	35	36	36	36	37	37	37	36	36	36	36	37	37.8
21-May	37	37	36	36	36	35	35	34	34	34	35	35	36	36	36	N	N	N	N	N	N	43	43	42	43.1
22-May	42	41	40	38	38	36	34	33	31	30	30	31	32	34	36	38	39	40	41	41	40	39	38	38	41.7
23-May	38	37	36	35	36	34	32	31	30	30	31	32	33	35	37	38	38	39	40	40	40	41	41	42	41.5
24-May	42	42	40	39	39	38	36	35	34	34	34	35	36	37	38	40	41	41	42	43	42	42	41	41	42.6
25-May	40	38	37	36	35	34	33	32	31	31	32	32	34	35	36	38	39	41	42	42	41	39	38	37	42.3
26-May	37	36	34	33	34	34	33	33	33	33	33	34	35	37	38	39	39	39	39	39	39	39	38	37	39.3
27-May	38	38	38	37	36	36	35	35	35	36	37	38	39	39	40	41	41	40	40	39	38	37	37	36	40.7
28-May	36	36	36	36	36	36	36	35	35	35	35	35	36	36	37	39	39	41	41	42	42	41	41	41	41.8
29-May	40	39	38	37	36	35	34	33	34	35	36	37	37	38	38	38	36	35	34	31	30	28	27	28	40.2
30-May	28	29	30	32	34	35	37	38	39	39	39	39	39	39	39	40	39	39	38	38	37	36	35	34	39.6
31-May	33	33	32	32	31	31	31	30	30	30	30	29	29	29	29	29	29	29	30	30	29	29	29	29	33.3
Diurnal Maximums	41.8	41.7	40.5	40.3	39.8	39.3	39.5	40.2	40.6	41.4	41.7	41.6	41.2	41.2	42.1	42.7	43.6	44.4	44.5	43.8	43.4	43.1	42.6	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 ($PM_{2.5}$) - $\mu g/m^3$
May 1, 2009 to June 1, 2009

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

Maximum Value: 24.5 $\mu g/m^3$ on May 22 21:00

Maximum Daily Average: 6.4 $\mu g/m^3$ on May 25

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

Maximum Diurnal Average: 4.6 $\mu g/m^3$ at hour 21

Monthly Average: 2.78 $\mu g/m^3$

Minimum Daily Average: 0.9 $\mu g/m^3$ on May 12

Minimum Diurnal Average: 1.9 $\mu g/m^3$ at hour 14

Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 1.0$ Median = 2.0 $Q_3 = 4.0$ $P_{90} = 6.3$ $P_{99} = 10.7$

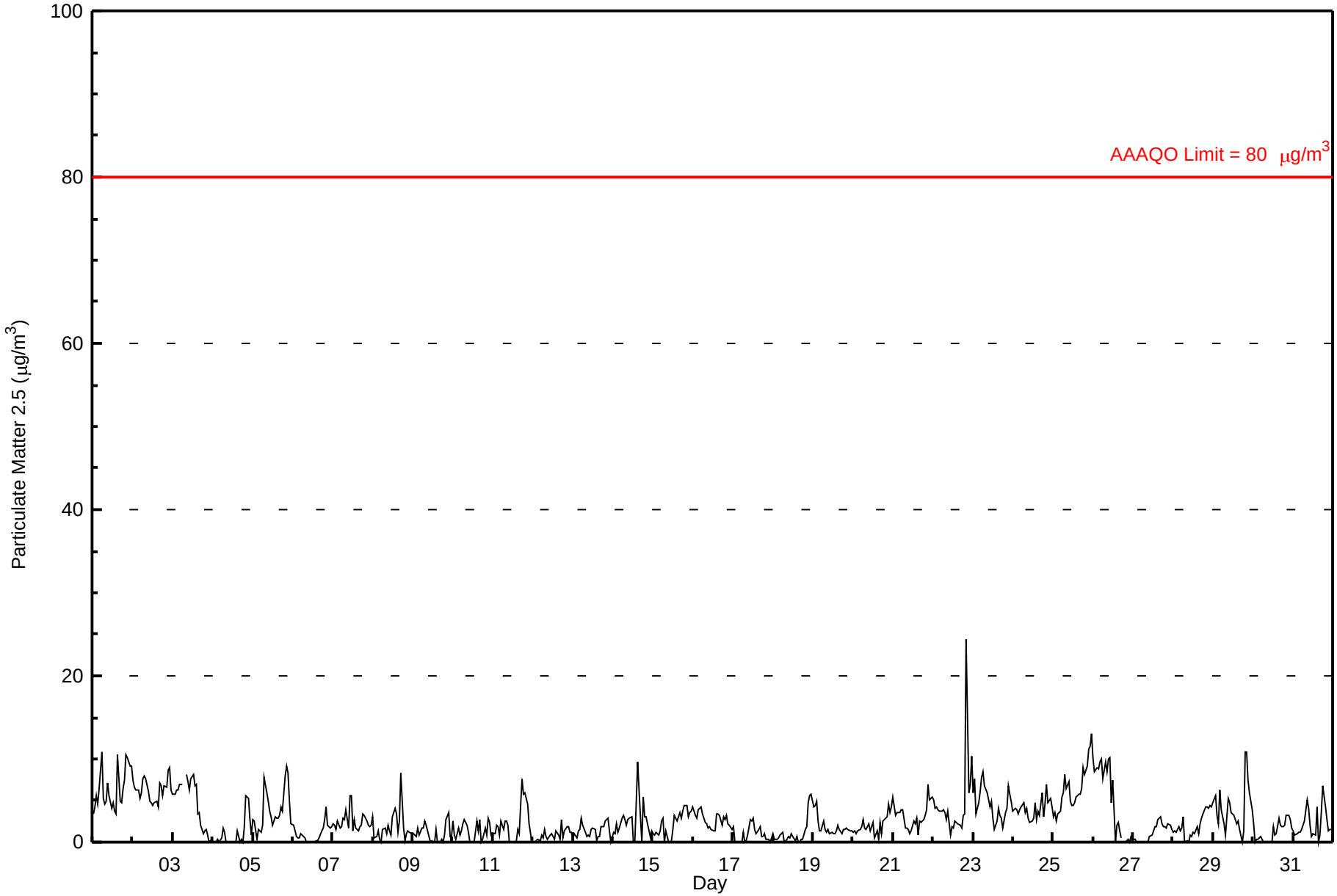
Hours in Service:	744
Hours of Data:	742
Hours of Missing Data:	2
Hours of Calibration:	0
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-May	3	4	6	5	6	11	5	5	5	7	6	4	5	4	3	11	5	5	7	8	11	10	9	9	6.3	10.9
2-May	7	7	6	6	5	6	8	8	8	6	5	5	4	5	5	4	7	7	6	7	7	9	9	6	6.3	8.9
3-May	6	6	6	6	7	7	7	P	8	7	6	8	8	7	7	3	4	2	1	1	2	1	0	0	4.8	8.2
4-May	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	1	0	0	0	2	6	5	3	1	0.9	5.6
5-May	3	2	0	1	1	1	2	8	6	5	4	3	2	3	3	3	3	4	4	8	9	8	5	2	3.8	9.2
6-May	2	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0	1	1	2	3	4	2	2	2	1.0	4.2
7-May	2	2	2	3	2	2	3	3	4	2	6	6	1	3	2	1	2	2	3	3	3	2	2	2	2.5	5.6
8-May	3	1	1	1	0	0	1	2	1	2	1	1	3	4	3	1	3	8	2	0	1	1	1	1	1.8	8.2
9-May	1	1	1	2	1	2	2	3	2	1	0	0	0	0	1	0	0	0	0	1	3	4	1	1	1.0	3.6
10-May	3	1	0	2	1	1	2	3	2	1	0	0	0	0	3	1	3	0	0	2	1	3	2	1	1.3	2.9
11-May	1	1	2	2	1	3	2	3	2	2	0	0	0	0	0	2	1	8	6	6	5	5	2	0	2.2	7.7
12-May	0	0	0	0	0	1	1	1	1	0	1	1	1	0	1	1	0	3	0	1	2	2	1	1	0.9	2.8
13-May	0	1	0	1	2	3	2	1	1	1	1	1	2	1	0	1	1	2	2	2	3	3	1	0	1.3	2.9
14-May	1	1	2	1	2	3	3	3	2	3	3	3	0	0	5	10	3	0	5	3	3	2	1	1	2.5	9.7
15-May	1	1	1	1	1	3	3	0	1	0	0	0	1	3	2	3	4	3	4	4	4	3	4	4	2.2	4.4
16-May	4	3	3	4	4	4	3	2	2	2	2	2	1	1	3	3	3	2	3	3	3	2	2	2	2.7	4.3
17-May	2	0	0	0	0	0	1	0	0	1	3	3	3	1	1	1	2	1	1	1	0	0	0	1	0.9	2.9
18-May	1	0	0	0	1	1	1	0	0	1	0	1	1	0	1	0	0	0	0	2	2	5	6	6	1.2	5.8
19-May	4	4	5	3	1	1	3	1	1	2	1	1	1	1	1	2	1	1	2	2	2	2	1	1	1.9	5.0
20-May	1	1	1	1	2	2	3	2	2	2	1	2	2	1	1	0	2	1	2	3	3	5	3	4	2.0	4.6
21-May	6	3	4	4	4	4	4	2	2	2	1	1	2	2	3	1	2	2	3	3	4	7	5	5	3.1	6.9
22-May	5	4	4	4	4	4	4	4	3	4	1	2	2	3	2	2	2	2	3	3	24	6	7	10	4.5	24.5
23-May	6	8	3	5	6	8	8	7	6	5	4	5	3	2	3	4	3	3	2	4	4	7	6	5	4.8	8.4
24-May	4	4	4	3	4	4	5	4	4	3	2	3	3	5	3	4	3	6	3	5	7	5	5	4	4.0	6.9
25-May	3	4	3	3	4	5	6	8	6	7	5	4	4	5	5	6	6	6	9	8	9	11	12	13	6.4	13.0
26-May	10	8	9	9	10	10	8	10	8	10	10	5	8	0	2	2	1	0	BD	0	0	0	0	1	5.3	10.2
27-May	0	0	0	0	0	0	0	0	0	0	1	1	1	2	2	3	3	2	2	2	2	2	2	2	1.1	3.0
28-May	1	1	1	2	1	2	3	0	0	0	1	1	1	1	2	1	2	3	3	4	4	4	4	4	2.0	4.3
29-May	5	6	3	2	6	4	2	1	3	5	5	4	3	3	2	3	2	0	1	11	11	7	6	4	4.1	10.9
30-May	2	0	0	0	1	0	0	0	0	0	0	0	2	1	1	3	2	2	2	2	3	3	3	2	1.2	3.3
31-May	1	1	1	1	1	2	2	2	5	4	2	1	1	1	4	0	1	4	7	4	3	1	2	1	2.2	6.7
	2.9	2.5	2.3	2.4	2.5	3.0	3.1	2.7	2.8	2.7	2.3	2.1	2.1	1.9	2.4	2.5	2.3	2.6	2.8	3.4	4.6	4.1	3.4	3.1	Diurnal Average	
	10.2	8.4	9.0	8.8	9.7	10.9	8.4	9.6	8.5	10.0	10.2	7.6	8.2	6.7	7.0	10.5	7.1	8.2	9.0	10.8	24.5	11.3	11.6	13.0	Diurnal Maximum	

P - Power Failure BD - Baseline Drift

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

Hourly Averages for $PM_{2.5}$ at Beaverlodge
May 2009



Peace Airshed Zone Association
Summary of Hourly Maximums

Beaverlodge - Particulate Matter 2.5 ($PM_{2.5}$) - $\mu g/m^3$
May 1, 2009 to June 1, 2009

Maximum Value: 45.9 $\mu g/m^3$ on May 22 21:00

Maximum Daily Average: 12.7 $\mu g/m^3$ on May 1

Minimum Value: 0 $\mu g/m^3$ on May 27 04:00

Maximum Diurnal Average: 8.2 $\mu g/m^3$ at hour 21

Monthly Average: 5.84 $\mu g/m^3$

Minimum Daily Average: 2.7 $\mu g/m^3$ on May 6

Minimum Diurnal Average: 4.2 $\mu g/m^3$ at hour 3

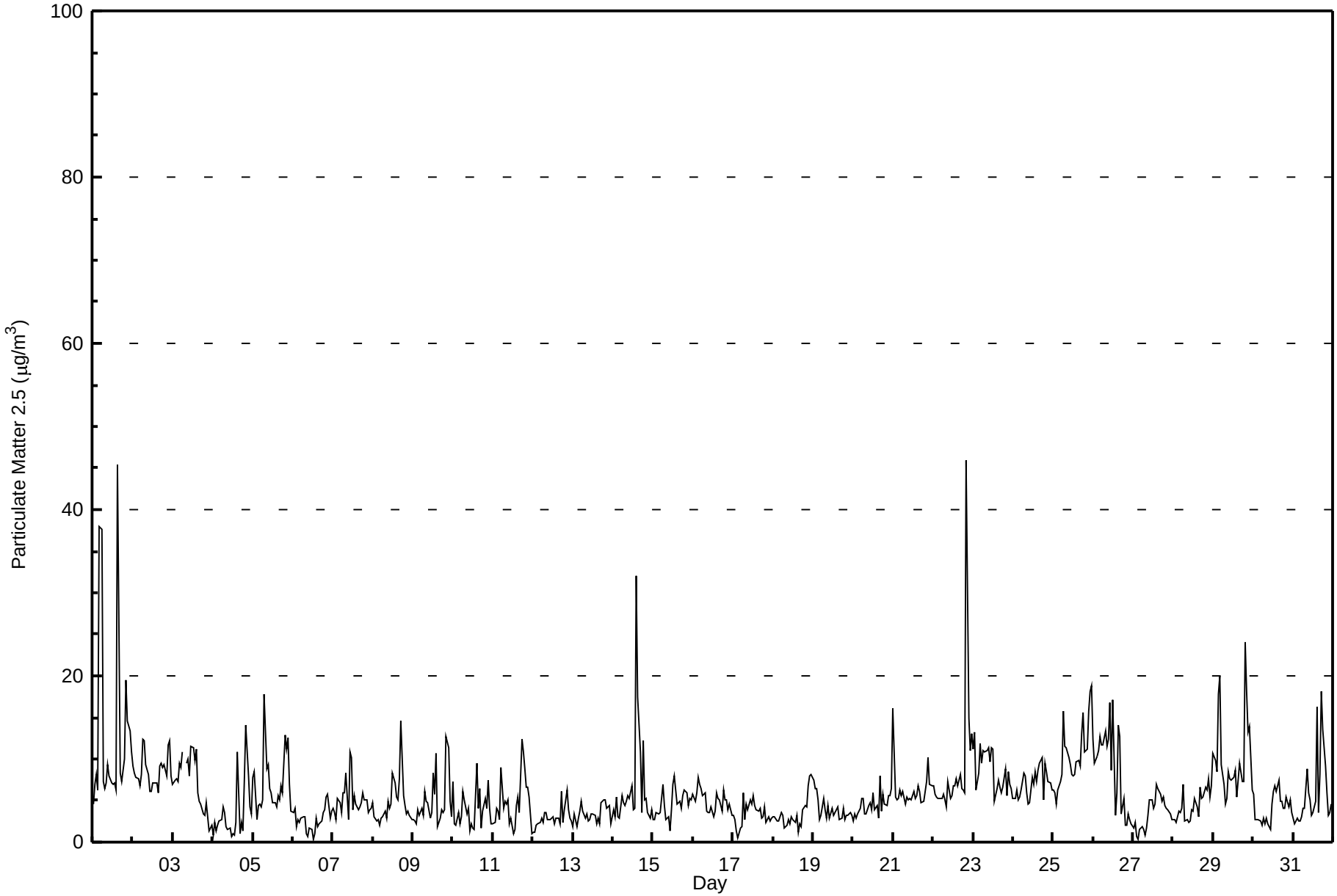
Percentiles: $P_1 = 0.9$ $P_{10} = 2.3$ $Q_1 = 3.1$ Median = 4.9 $Q_3 = 7.1$ $P_{90} = 10.8$ $P_{99} = 16.2$

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

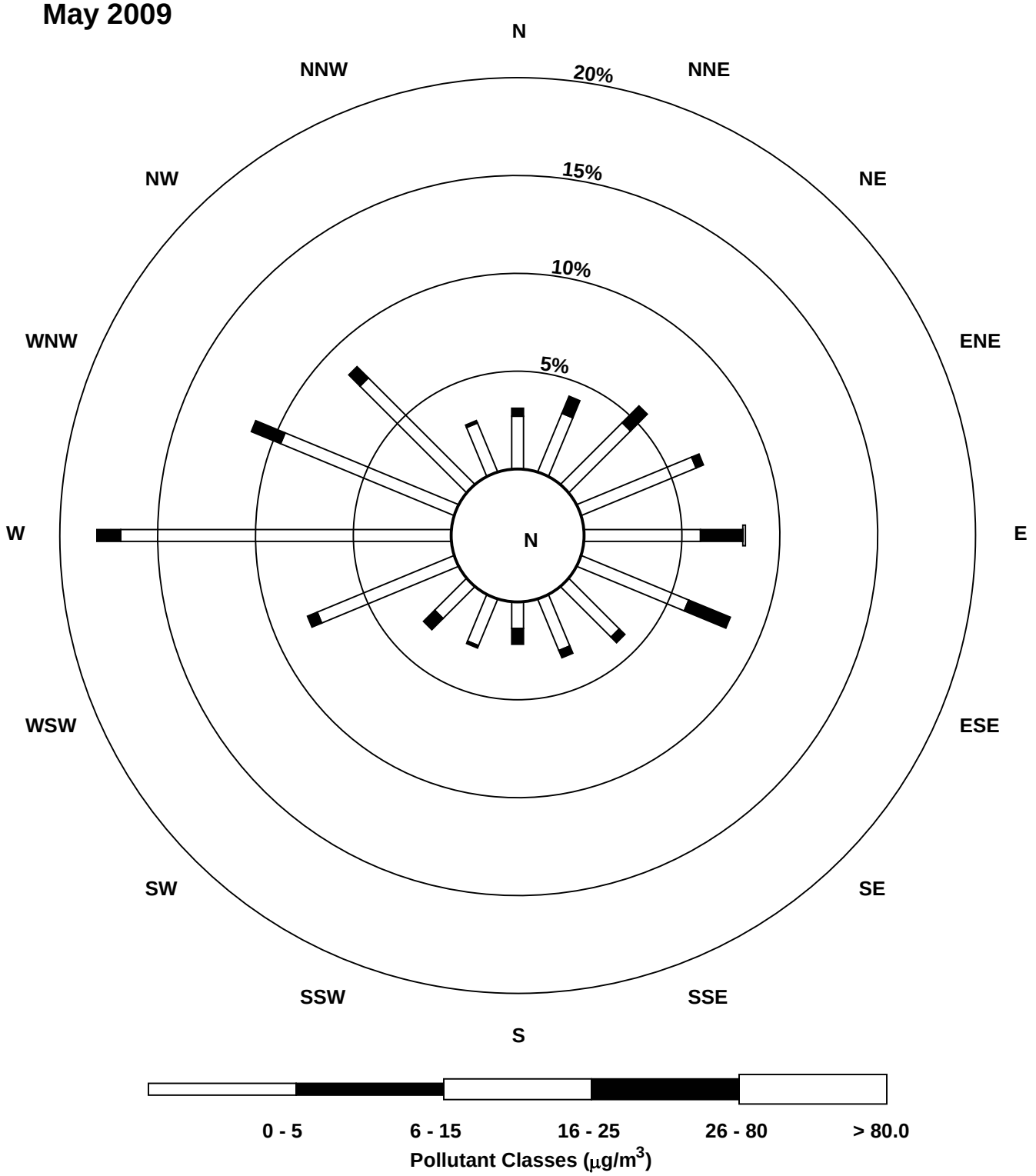
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-May	5	7	8	6	38	38	7	6	7	9	8	7	7	7	6	46	8	7	9	10	19	15	13	11	12.7	45.5
2-May	9	8	8	8	7	8	12	12	9	8	6	6	7	7	7	6	9	9	9	9	8	12	12	8	8.6	12.3
3-May	7	8	8	7	10	9	11	P	9	10	8	12	11	10	11	6	5	5	3	3	5	3	1	2	7.1	11.5
4-May	1	2	1	2	2	3	4	4	2	1	2	1	1	1	2	11	1	2	1	7	14	8	4	3	3.4	14.1
5-May	8	9	3	4	5	4	5	18	9	9	6	6	5	5	4	6	5	7	6	13	11	13	7	4	7.1	17.8
6-May	4	4	2	3	2	3	3	3	1	1	2	1	0	1	3	2	2	3	4	4	5	6	3	4	2.7	5.7
7-May	4	4	3	5	5	4	6	6	8	3	11	10	4	6	5	4	4	5	6	5	5	4	4	4	5.1	10.8
8-May	5	3	3	3	2	3	3	4	3	5	4	5	8	7	5	5	8	15	6	4	3	4	3	3	4.7	14.5
9-May	3	2	2	4	3	4	3	6	5	5	3	4	8	6	11	2	3	4	4	4	13	11	5	3	4.9	12.7
10-May	7	2	2	4	2	3	6	5	3	4	1	2	2	2	9	4	7	2	4	5	4	8	4	2	4.0	9.4
11-May	2	2	4	4	3	9	4	5	5	5	2	3	1	2	4	5	4	12	11	9	7	7	5	1	4.8	12.4
12-May	1	1	2	2	2	3	2	3	4	3	3	3	3	2	3	3	2	6	2	4	6	4	3	2	2.9	6.2
13-May	2	3	2	3	4	5	4	3	3	3	3	3	3	3	2	3	2	5	5	5	4	4	4	2	3.4	5.1
14-May	4	3	5	3	3	6	5	4	5	6	5	7	4	4	32	17	11	4	12	5	5	4	3	4	6.7	32.0
15-May	3	3	4	3	4	5	7	4	3	3	1	4	7	8	5	5	5	4	6	6	6	4	5	5	4.6	8.0
16-May	6	5	6	8	7	6	6	6	4	4	3	4	3	4	6	5	5	4	6	5	5	4	5	3	5.0	7.9
17-May	3	3	1	1	2	2	6	3	5	4	5	5	6	4	4	4	4	3	3	4	2	3	3	3	3.4	5.9
18-May	3	3	2	3	3	4	3	2	2	3	2	3	3	2	3	1	2	2	4	4	4	7	8	8	3.4	8.2
19-May	7	6	6	5	3	3	5	4	3	4	3	4	3	4	4	4	3	3	4	3	3	3	4	3	4.0	7.4
20-May	3	3	3	3	4	5	5	3	3	4	5	4	6	4	4	3	8	4	6	5	4	6	6	7	4.5	8.0
21-May	16	5	5	5	6	6	6	5	5	5	5	5	6	5	6	7	6	5	5	6	7	10	7	7	6.3	16.1
22-May	7	6	5	5	5	5	6	5	4	7	5	6	7	7	8	7	8	6	6	6	46	15	11	13	8.6	45.9
23-May	11	13	6	8	12	9	11	11	11	11	10	11	11	5	6	8	7	6	7	9	6	9	7	6	8.8	13.2
24-May	5	5	6	5	5	6	8	8	6	5	5	8	7	9	7	9	9	10	5	9	8	7	7	6	7.0	10.1
25-May	6	6	5	6	7	8	16	12	11	10	9	8	8	8	10	10	9	13	16	11	11	16	18	19	10.5	18.9
26-May	12	10	10	11	13	12	12	13	11	12	17	9	17	3	6	14	13	3	5	2	2	3	3	2	9.0	17.1
27-May	2	2	1	0	1	2	1	1	2	3	5	5	4	5	7	6	6	5	5	4	4	4	3	3	3.4	6.9
28-May	3	3	2	4	4	4	7	2	3	2	2	4	4	5	4	3	7	5	5	7	6	8	5	7	4.4	7.7
29-May	11	10	8	18	20	9	7	5	5	8	8	7	8	9	5	7	9	7	7	24	18	13	14	6	10.2	24.1
30-May	6	3	3	3	3	2	3	2	3	2	1	5	6	7	6	8	5	5	4	4	5	4	5	4	4.1	7.5
31-May	3	2	3	3	3	3	4	4	9	6	5	3	4	5	16	4	8	18	14	9	6	3	4	5	5.9	18.1
	5.4	4.8	4.2	4.8	6.1	6.2	6.1	5.6	5.3	5.4	5.0	5.3	5.6	5.0	6.9	7.2	6.0	6.1	6.1	6.7	8.2	7.1	6.0	5.2	Diurnal Average	
	16.1	13.2	10.4	17.7	38.0	37.6	15.8	17.8	11.5	12.4	16.7	11.5	17.1	9.8	32.0	45.5	12.7	18.1	15.5	24.1	45.9	15.8	18.1	18.9	Diurnal Maximum	

P - Power Failure

Hourly Maximums for $PM_{2.5}$ at Beaverlodge
May 2009



Pollutant Rose for $PM_{2.5}$ at Beaverlodge
May 2009



Beaverlodge - External Temperature (ET) - ^{o}C
May 1, 2009 to June 1, 2009

Maximum Value: 25.5 ^{o}C on May 29 17:00

Maximum Daily Average: 16.8 ^{o}C on May 29

Minimum Value: -3 ^{o}C on May 20 06:00

Minimum Daily Average: 0.0 ^{o}C on May 19

Maximum Diurnal Average: 13.8 ^{o}C at hour 16

Minimum Diurnal Average: 3.6 ^{o}C at hour 5

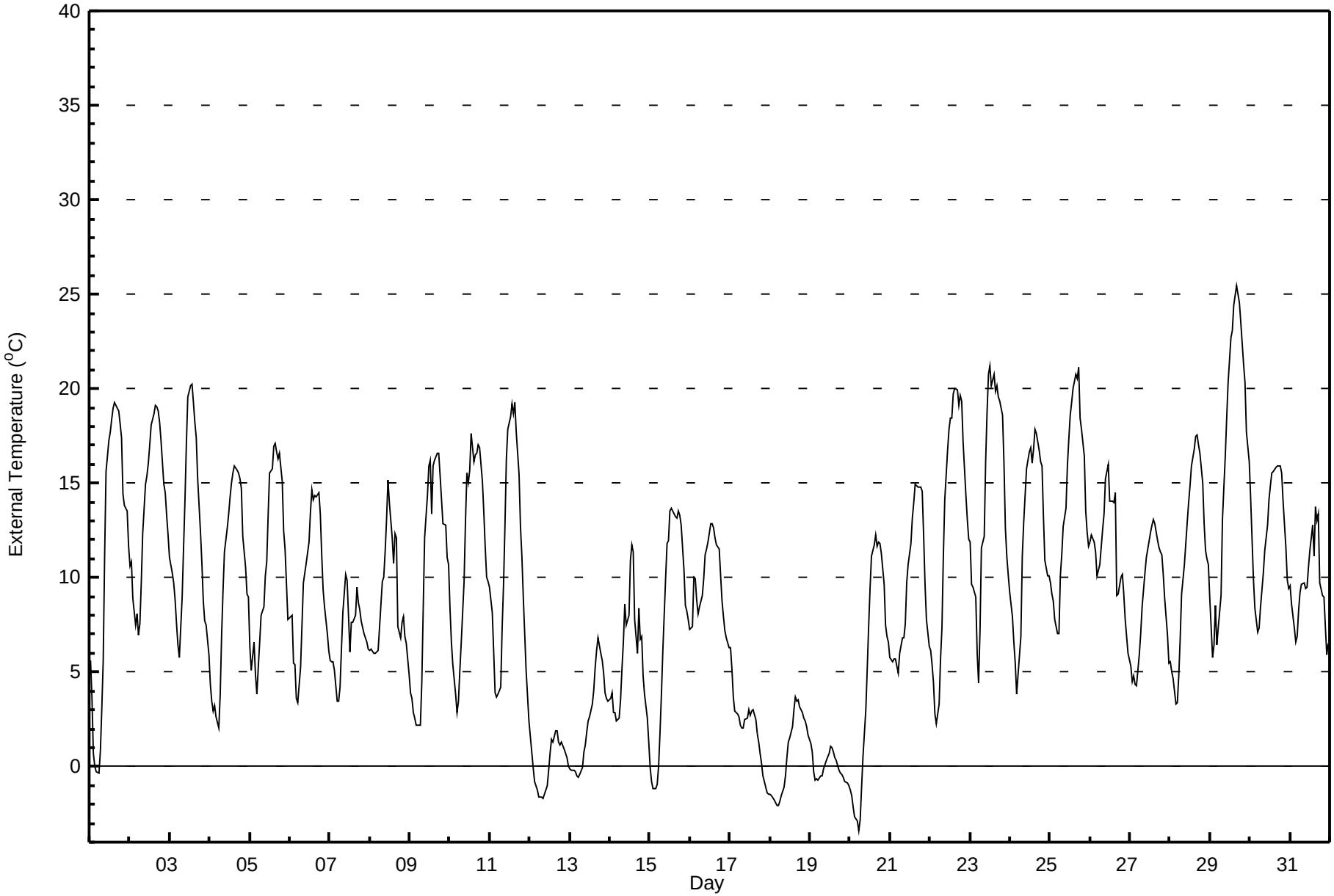
Monthly Average: 9.12 ^{o}C

Percentiles: P_1 = -1.9 P_{10} = 0.7 Q_1 = 4.4 Median = 9.1 Q_3 = 13.5 P_{90} = 17.3 P_{99} = 22.3

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-May	6	4	1	0	0	0	1	3	6	11	16	17	18	18	19	19	19	19	18	17	14	14	13	12	11.0	19.2
2-May	11	11	9	7	8	7	8	10	12	15	15	16	17	18	19	19	19	19	18	17	15	14	13	12	13.7	19.1
3-May	11	10	10	9	8	6	6	9	12	14	17	20	20	20	19	18	17	15	12	11	9	8	7	6	12.3	20.2
4-May	4	3	3	3	3	2	4	7	9	11	13	13	14	15	16	16	16	16	15	15	12	11	9	9	10.0	15.9
5-May	6	5	7	5	4	5	7	8	8	10	11	13	16	16	17	17	17	16	17	15	13	12	10	8	10.9	17.1
6-May	8	8	5	5	4	3	5	8	10	10	11	12	13	15	14	14	14	15	13	11	9	8	7	6	9.6	14.6
7-May	6	6	6	5	3	3	4	6	8	10	10	8	6	8	8	8	10	9	8	8	7	7	7	6	6.9	10.2
8-May	6	6	6	6	6	6	7	10	10	11	13	15	14	12	11	12	12	7	7	8	8	7	6	5	8.9	15.2
9-May	4	4	3	3	2	2	2	4	8	12	14	16	16	13	16	16	17	17	15	14	13	13	11	11	10.3	16.6
10-May	8	7	5	4	3	3	5	7	10	13	16	15	16	18	16	17	17	17	17	15	13	12	10	10	11.3	17.6
11-May	9	8	6	4	4	4	4	7	10	13	16	18	19	19	19	19	18	15	13	11	9	7	5	2	10.8	19.2
12-May	2	1	0	-1	-1	-2	-2	-2	-2	-1	-1	0	1	1	1	2	2	1	1	1	1	1	0	0	0.2	1.9
13-May	0	0	0	0	0	-1	0	0	1	1	2	2	3	3	4	5	6	7	6	6	5	4	4	3	2.5	6.8
14-May	4	4	3	3	2	3	4	5	7	9	7	8	11	12	11	8	6	8	7	7	5	4	3	1	5.8	11.7
15-May	0	-1	-1	-1	-1	0	2	4	6	10	12	12	14	14	13	13	13	13	13	13	10	9	8	8	7.6	13.7
16-May	7	7	10	10	9	8	8	9	10	11	12	12	13	13	13	12	12	12	10	9	8	7	7	6	9.8	12.9
17-May	6	5	4	3	3	3	2	2	2	2	3	3	3	3	3	2	2	1	1	0	0	-1	-1	-1	2.0	6.3
18-May	-1	-2	-2	-2	-2	-2	-2	-2	-1	-1	0	1	2	2	3	4	3	4	3	3	3	2	2	2	0.7	3.7
19-May	1	1	0	-1	-1	-1	0	0	0	0	0	1	1	1	1	1	0	0	0	0	-1	-1	-1	-1	0.0	1.2
20-May	-1	-2	-2	-3	-3	-3	-3	-1	1	3	5	7	9	11	12	12	12	12	12	11	10	7	7	7	5.0	12.2
21-May	6	6	6	6	5	5	6	7	7	8	10	11	12	13	14	15	15	15	15	15	12	10	8	6	9.6	14.9
22-May	6	5	4	3	2	3	6	7	11	14	17	18	18	18	20	20	20	19	20	19	17	14	13	12	12.8	20.0
23-May	12	10	9	9	6	4	7	12	12	16	19	21	21	20	21	20	20	20	19	19	16	13	11	10	14.4	21.2
24-May	9	8	7	5	4	5	7	11	13	14	16	17	17	16	17	18	18	17	16	16	13	11	10	10	12.3	17.8
25-May	10	9	9	8	7	7	10	11	13	14	16	17	19	19	20	21	21	21	18	18	16	14	12	12	14.2	21.1
26-May	12	12	12	11	10	10	11	13	13	15	16	16	14	14	14	15	9	9	10	10	9	8	7	6	11.5	16.0
27-May	5	5	5	4	4	6	7	8	9	10	11	12	12	13	13	13	12	12	11	11	10	9	7	5	9.0	13.1
28-May	6	5	5	3	3	5	7	9	11	12	13	14	15	16	17	17	18	17	17	15	13	11	11	11	11.2	17.5
29-May	9	6	6	9	6	7	9	13	15	16	18	20	23	23	24	25	25	25	24	22	21	20	18	16	16.8	25.5
30-May	14	12	10	8	7	7	8	9	10	11	13	14	15	16	16	16	16	16	16	16	14	12	10	9	12.3	15.9
31-May	10	9	7	7	7	8	9	10	10	9	9	11	11	13	11	14	13	13	10	9	9	7	6	7	9.5	13.8
	6.3	5.5	4.9	4.3	3.6	3.8	4.8	6.6	8.1	9.9	11.2	12.3	12.9	13.3	13.6	13.8	13.4	13.1	12.3	11.6	10.1	8.8	7.8	7.0	Diurnal Average	
	14.2	12.3	11.9	11.4	10.1	10.4	10.7	13.1	14.8	16.4	18.7	20.7	22.7	23.1	24.4	25.0	25.5	24.6	23.6	22.4	21.3	20.3	17.7	16.2	Diurnal Maximum	

Hourly Averages for External Temperature at Beaverlodge
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Beaverlodge - Relative Humidity (RH) - %
May 1, 2009 to June 1, 2009

Maximum Value: 95.5 % on May 15 04:00

Maximum Daily Average: 88.8 % on May 19

Minimum Value: 17 % on May 1 17:00

Minimum Daily Average: 28.7 % on May 30

Maximum Diurnal Average: 69.0 % at hour 5

Minimum Diurnal Average: 37.7 % at hour 16

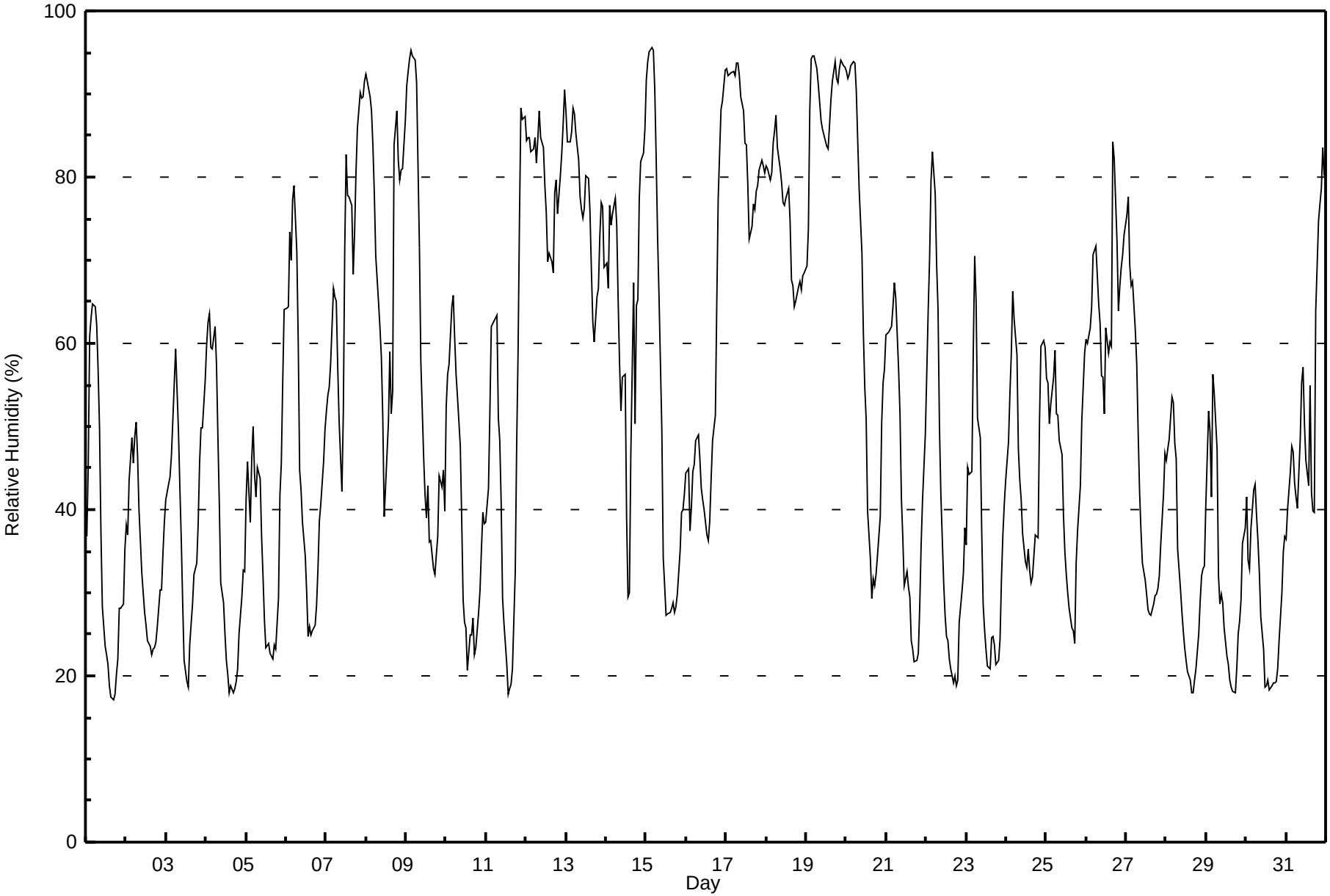
Monthly Average: 52.31 %

Percentiles: P_1 = 18.0 P_{10} = 23.4 Q_1 = 32.2 Median = 49.0 Q_3 = 71.4 P_{90} = 85.7 P_{99} = 94.5

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

Day	Hourly Period Ending At (MST) 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-May	37	45	61	63	65	64	62	57	50	37	28	24	22	21	19	17	17	18	20	22	28	28	29	35	36.3	64.7
2-May	38	37	44	49	46	49	50	46	40	32	30	28	26	24	24	23	23	23	24	26	30	30	35	38	34.0	50.5
3-May	41	43	44	46	51	55	59	50	43	37	29	22	19	19	24	26	29	32	34	38	46	50	50	56	39.2	59.3
4-May	60	63	64	59	59	62	57	49	41	31	29	25	22	20	18	19	18	18	19	21	25	29	33	32	36.4	63.6
5-May	41	46	39	46	50	44	41	45	44	37	32	27	23	24	23	22	22	24	23	29	42	46	55	64	37.0	64.1
6-May	64	64	73	70	77	79	71	60	45	42	39	34	30	25	26	25	25	26	29	33	39	41	46	50	46.4	79.0
7-May	52	54	55	58	67	66	65	57	51	42	52	71	83	78	78	77	68	73	81	86	90	90	90	91	69.7	91.5
8-May	92	91	90	88	84	78	71	65	62	58	51	39	43	51	59	52	54	84	88	82	80	81	81	87	71.2	92.3
9-May	91	93	94	95	95	94	91	81	72	58	46	42	39	43	36	36	33	32	35	37	44	43	45	40	58.9	95.2
10-May	52	56	58	64	66	61	56	54	48	39	29	26	26	21	25	25	27	22	23	28	30	35	40	38	39.6	65.8
11-May	38	43	52	62	62	63	63	51	48	41	29	26	21	18	19	19	21	33	48	59	75	88	87	87	48.1	88.3
12-May	84	85	85	83	83	85	82	85	88	85	84	79	76	70	71	70	69	78	80	76	80	83	86	90	80.6	90.5
13-May	88	84	84	85	88	88	85	82	78	76	75	76	80	80	76	69	63	60	66	67	73	77	76	69	76.9	88.3
14-May	70	67	77	74	76	77	74	65	58	52	56	56	39	30	30	47	67	50	65	65	77	82	83	86	63.4	85.8
15-May	92	94	95	96	95	90	82	73	66	50	34	31	27	27	28	28	29	28	28	30	35	40	40	42	53.3	95.5
16-May	44	45	37	40	45	45	48	49	46	42	41	40	37	36	39	44	48	51	65	77	83	88	89	93	53.1	92.9
17-May	93	92	92	93	93	92	94	94	92	90	88	84	84	79	72	74	77	76	78	79	81	82	81	80	85.0	93.8
18-May	81	81	80	80	84	86	87	84	81	79	77	77	78	79	75	68	67	64	65	67	68	66	68	69	75.4	87.5
19-May	69	74	88	94	95	95	93	91	89	87	86	84	84	83	86	89	92	94	92	91	93	94	93	93	88.8	94.7
20-May	93	92	92	93	94	94	90	84	79	71	61	55	51	40	34	29	32	31	32	34	39	50	55	57	61.8	93.9
21-May	61	61	62	62	64	67	65	57	51	41	37	31	33	31	30	24	23	22	22	23	28	36	41	49	42.6	67.3
22-May	56	64	70	80	83	78	69	64	50	42	31	27	25	24	22	21	19	20	19	19	26	30	32	38	42.1	83.1
23-May	36	45	44	45	59	71	65	51	49	37	29	26	23	21	21	25	25	24	21	22	24	32	37	41	36.3	70.5
24-May	44	48	54	59	66	63	59	47	44	41	37	34	33	35	33	31	32	37	37	37	51	60	60	59	45.8	66.3
25-May	56	55	50	53	56	59	52	51	48	47	39	35	32	30	28	26	25	24	33	37	43	51	55	59	43.5	59.2
26-May	61	60	62	64	71	71	72	65	62	56	56	52	62	59	60	60	84	82	72	64	67	69	71	73	65.6	84.2
27-May	75	78	70	67	67	61	58	49	42	37	34	32	30	28	27	27	29	30	30	30	32	36	42	47	44.1	77.6
28-May	46	47	48	54	53	48	46	35	30	28	25	23	22	21	20	18	18	20	21	25	29	32	33	33	32.3	53.6
29-May	41	52	49	42	56	54	47	32	29	30	29	26	22	21	19	19	18	18	21	25	27	29	36	38	32.5	56.3
30-May	42	34	33	38	42	43	39	36	32	27	23	19	19	20	18	19	19	19	19	21	24	30	35	37	28.7	43.0
31-May	36	40	45	48	47	43	42	40	48	55	57	50	46	43	55	42	40	40	64	75	77	79	84	80	53.1	83.6
	60.5	62.4	64.2	66.1	69.0	68.5	65.8	59.7	55.0	49.3	44.9	41.9	40.5	38.7	38.5	37.7	39.1	40.4	43.6	46.0	51.2	55.0	57.7	59.7	Diurnal Average	
	93.0	93.8	95.1	95.5	95.3	94.6	93.7	93.8	92.2	89.7	88.0	84.5	83.9	83.4	86.3	89.3	91.5	93.9	91.8	91.4	93.0	94.1	93.5	93.1	Diurnal Maximum	

Hourly Averages for Relative Humidity at Beaverlodge
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Beaverlodge
May 1, 2009 to June 1, 2009
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	3	3	4	2	2	2	1	3	5	2	3	6	8	8	9	8	9	6	7	4	4	2	3	11	2.6	11.3
Dir	77	155	179	128	127	96	120	183	212	214	275	315	8	24	26	13	32	16	36	19	39	75	21	86	39.3	86.4
2 Spd	5	5	11	10	7	0	2	2	2	6	13	12	11	9	11	11	13	14	19	18	18	16	20	19	9.2	20.0
Dir	89	30	56	50	62	7	264	237	232	144	134	129	119	129	106	120	110	91	85	84	82	96	104	108	99.0	103.7
3 Spd	15	12	10	9	5	3	5	5	6	8	10	12	14	14	28	26	25	32	32	29	24	17	22	18	11.3	32.4
Dir	115	110	106	108	100	292	331	318	290	285	303	316	278	279	253	263	271	274	273	276	270	269	273	266	272.4	274.3
4 Spd	12	11	11	10	8	11	8	12	19	28	24	28	25	24	20	18	16	16	14	11	6	7	6	7	12.9	27.8
Dir	268	257	253	265	244	238	238	237	259	278	273	264	273	269	273	261	251	259	275	284	322	12	41	40	267.6	277.9
5 Spd	3	3	6	2	3	7	6	2	4	10	9	4	3	4	2	4	3	3	2	8	11	10	10	8	1.1	10.8
Dir	51	323	38	35	41	29	25	37	188	155	148	195	193	155	280	262	311	146	276	322	313	281	252	252	281.0	313.0
6 Spd	5	10	10	6	5	2	1	5	19	14	17	16	13	17	15	14	12	14	19	19	10	9	8	6	10.8	19.1
Dir	272	278	271	267	253	216	249	268	285	275	253	244	245	262	253	256	244	265	264	263	266	283	283	288	263.7	285.1
7 Spd	4	4	6	2	2	2	4	6	6	11	8	11	9	12	13	15	4	5	7	2	2	3	2	5	2.7	14.5
Dir	291	292	308	282	174	227	250	263	290	298	3	41	300	224	218	225	332	32	103	165	157	66	206	250	271.1	225.2
8 Spd	1	3	2	4	5	3	5	10	15	13	12	7	13	15	18	15	12	13	6	9	6	7	3	1	7.5	18.0
Dir	59	258	220	284	291	313	314	306	314	308	304	286	299	313	297	275	284	21	349	281	271	281	302	236	301.1	297.2
9 Spd	1	1	1	1	1	3	2	3	2	4	5	3	6	7	5	6	5	1	3	2	2	4	1	5	1.1	7.2
Dir	84	155	175	77	100	80	101	83	157	304	355	358	314	301	18	58	120	68	64	30	54	254	251	296	10.0	300.8
10 Spd	2	5	4	3	1	2	4	6	6	7	10	10	11	8	8	6	7	9	8	9	5	2	2	3	4.1	11.5
Dir	208	206	224	87	150	144	195	213	206	219	259	271	234	252	300	240	271	283	272	256	249	98	111	70	245.7	234.1
11 Spd	4	3	3	2	5	1	2	2	1	3	1	2	5	4	4	6	3	15	14	16	18	16	18	22	3.9	22.0
Dir	67	82	151	184	57	97	262	257	188	194	159	167	168	155	221	212	139	299	308	303	308	337	330	326	308.2	325.7
12 Spd	22	21	20	19	18	15	16	14	12	11	10	9	10	11	10	9	10	9	7	6	7	5	3	4	8.5	22.0
Dir	326	323	321	322	326	327	329	334	340	2	9	11	21	33	32	40	36	52	64	86	81	120	168	154	353.7	326.1
13 Spd	6	6	5	6	7	8	11	13	15	15	14	12	11	10	9	7	3	2	3	3	3	2	4	6	7.1	14.7
Dir	113	119	104	118	116	116	128	135	130	122	119	118	117	109	115	133	87	139	147	190	211	126	58	64	120.0	121.8
14 Spd	2	3	1	3	5	2	3	4	3	4	6	2	6	7	7	12	7	11	9	5	7	5	6	2	3.7	12.4
Dir	48	133	261	31	24	4	309	303	321	249	233	290	278	291	306	285	321	320	353	349	260	255	280	284	302.3	285.1
15 Spd	2	1	1	2	2	2	2	4	7	12	20	17	21	23	23	23	20	20	19	24	14	5	4	3	10.0	23.6
Dir	92	116	93	83	106	160	178	202	228	265	279	278	261	253	255	258	273	276	273	259	253	220	201	189	259.4	259.3
16 Spd	2	1	10	12	7	6	17	20	23	26	25	21	19	17	18	16	14	9	5	4	2	2	2	4	10.8	25.9
Dir	138	141	280	311	304	306	277	272	278	275	274	278	291	299	290	283	275	269	273	315	0	3	57	55	284.3	275.0
17 Spd	6	11	12	12	7	4	1	10	9	9	12	10	12	17	15	14	14	12	12	11	12	12	12	12	10.0	16.6
Dir	58	92	76	68	82	95	6	45	20	44	36	35	23	37	36	44	57	58	69	77	74	81	81	85	57.8	37.2
18 Spd	12	9	9	12	12	11	11	14	14	13	13	16	15	14	16	16	17	16	18	17	17	13	14	14	13.8	18.3
Dir	88	100	102	111	103	93	99	104	106	108	98	93	107	104	106	113	101	104	92	87	86	98	111	108	100.8	91.9
19 Spd	16	14	12	15	14	16	18	17	16	19	15	15	13	14	12	13	13	13	14	8	8	8	6	5	10.6	18.6
Dir	111	101	93	84	76	73	74	71	71	75	73	74	61	61	49	36	32	43	34	349	322	313	314	322	61.7	74.9
20 Spd	5	5	4	4	4	2	3	7	8	9	12	12	12	14	18	17	19	19	16	14	9	9	10	6	9.2	19.2
Dir	310	311	313	313	309	304	286	224	230	236	236	251	260	282	293	292	285	278	288	291	283	263	266	285	276.4	278.4
21 Spd	3	8	14	12	10	7	6	8	11	9	4	5	6	7	7	10	10	10	10	8	6	6	7	5	3.7	13.7
Dir	245	280	297	313	327	8	40	134	126	139	79	59	52	34	72	356	11	0	19	41	61	92	101	106	29.4	297.4
22 Spd	3	2	2	2	1	1	1	3	3	3	3	4	3	5	2	4	1	2	3	4	4	6	7	6	0.8	6.6
Dir	102	111	104	144	103	108	194	211	280	314	333	307	341	217	238	291	172	63	103	67	90	65	78	90	72.5	77.9

Peace Airshed Zone Association
Summary of Hourly Averages

Beaverlodge
May 1, 2009 to June 1, 2009
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	6	3	2	2	1	2	2	1	5	2	2	3	3	10	14	12	10	12	15	14	14	10	8	6	5.4	15.3
Dir	80	322	47	7	79	260	48	215	239	204	193	313	309	286	269	280	289	278	262	265	282	287	290	303	280.4	262.3
24 Spd	6	4	3	2	1	2	3	7	11	13	13	11	11	15	12	10	7	16	13	11	9	9	4	5	6.4	15.6
Dir	302	283	280	295	77	98	76	322	324	317	317	320	316	319	323	343	350	24	30	33	42	39	10	40	346.0	24.0
25 Spd	6	10	7	4	6	1	1	2	3	3	4	7	5	6	5	4	5	2	13	9	6	6	6	7	3.7	12.6
Dir	52	61	78	62	45	344	226	265	180	179	113	116	141	100	94	1	107	185	167	147	121	97	93	96	105.9	167.5
26 Spd	8	8	7	5	1	5	8	5	4	4	4	3	16	13	10	3	12	5	14	15	13	6	8	7	3.9	16.3
Dir	103	102	109	119	286	19	37	124	180	275	220	255	264	260	256	316	297	303	259	258	259	249	259	254	259.4	264.3
27 Spd	7	6	12	11	15	17	21	30	36	36	36	34	35	37	33	33	31	28	29	25	23	15	11	9	23.4	36.8
Dir	247	251	266	265	259	258	256	258	257	258	262	256	259	263	270	268	272	281	280	279	276	277	283	282	265.8	263.0
28 Spd	11	11	11	8	8	7	5	15	20	25	24	23	22	22	21	19	17	20	20	22	14	6	5	6	14.8	24.5
Dir	285	286	278	267	271	279	270	281	282	283	277	273	273	269	268	277	275	261	260	256	271	299	315	331	274.6	283.1
29 Spd	3	2	5	3	2	5	6	12	14	13	12	10	8	8	4	4	2	7	7	3	5	23	25	23	2.8	24.7
Dir	315	168	64	63	200	94	97	126	135	141	157	139	164	133	163	172	103	238	202	102	216	285	288	269	190.5	287.8
30 Spd	25	29	21	20	15	18	21	26	31	36	35	36	36	34	41	38	35	35	32	26	19	14	11	15	26.7	41.2
Dir	286	278	270	275	282	274	273	263	263	262	257	271	270	270	276	277	284	280	281	283	291	296	291	291	275.1	275.8
31 Spd	16	14	14	12	11	12	11	13	15	15	18	18	16	15	15	12	13	10	8	6	4	5	5	2	7.9	18.3
Dir	286	283	280	279	281	287	307	329	325	342	327	330	334	334	21	357	29	38	107	142	96	76	92	61	329.1	326.6
Spd	1.1	1.5	1.8	1.6	1.4	1.4	1.8	3.0	4.9	5.6	5.5	5.1	6.6	6.5	6.8	7.0	5.5	6.0	4.9	5.2	3.8	2.6	2.2	1.5	Diurnal Average	
Dir	344.0	292.7	301.4	327.0	330.2	316.5	301.0	266.9	267.9	271.2	274.0	281.6	279.2	281.5	283.7	282.6	297.6	301.6	292.0	286.0	293.6	307.8	302.5	319.6		
Spd	25.0	29.2	21.3	20.4	17.7	17.7	20.9	30.1	36.2	36.2	35.5	35.6	36.3	36.8	41.2	38.4	34.8	34.7	32.4	28.7	23.9	23.2	24.7	23.0	Diurnal Maximum	
Dir	286.1	278.2	269.8	275.2	325.6	274.5	272.9	258.1	257.0	257.9	261.9	270.9	270.0	263.0	275.8	277.3	283.7	280.3	272.9	275.6	270.0	285.0	287.8	269.0		

Maximum Speed Value: 41 km/h on May 30 15:00
Maximum Daily Speed Average: 26.7 km/h on May 30
Maximum Diurnal Speed Average: 7.0 km/h at hour 16

Minimum Speed Value: 0 km/h on May 2 06:00
Minimum Daily Speed Average: 0.8 km/h on May 9
Minimum Diurnal Speed Average: 1.1 km/h at hour 1

Monthly Average Velocity: 3.75 km/h 288.22 deg

Speed Percentiles: $P_1 = 0.9$ $P_{10} = 2.1$ $Q_1 = 4.0$ Median = 8.4 $Q_3 = 13.9$ $P_{90} = 19.8$ $P_{99} = 35.2$

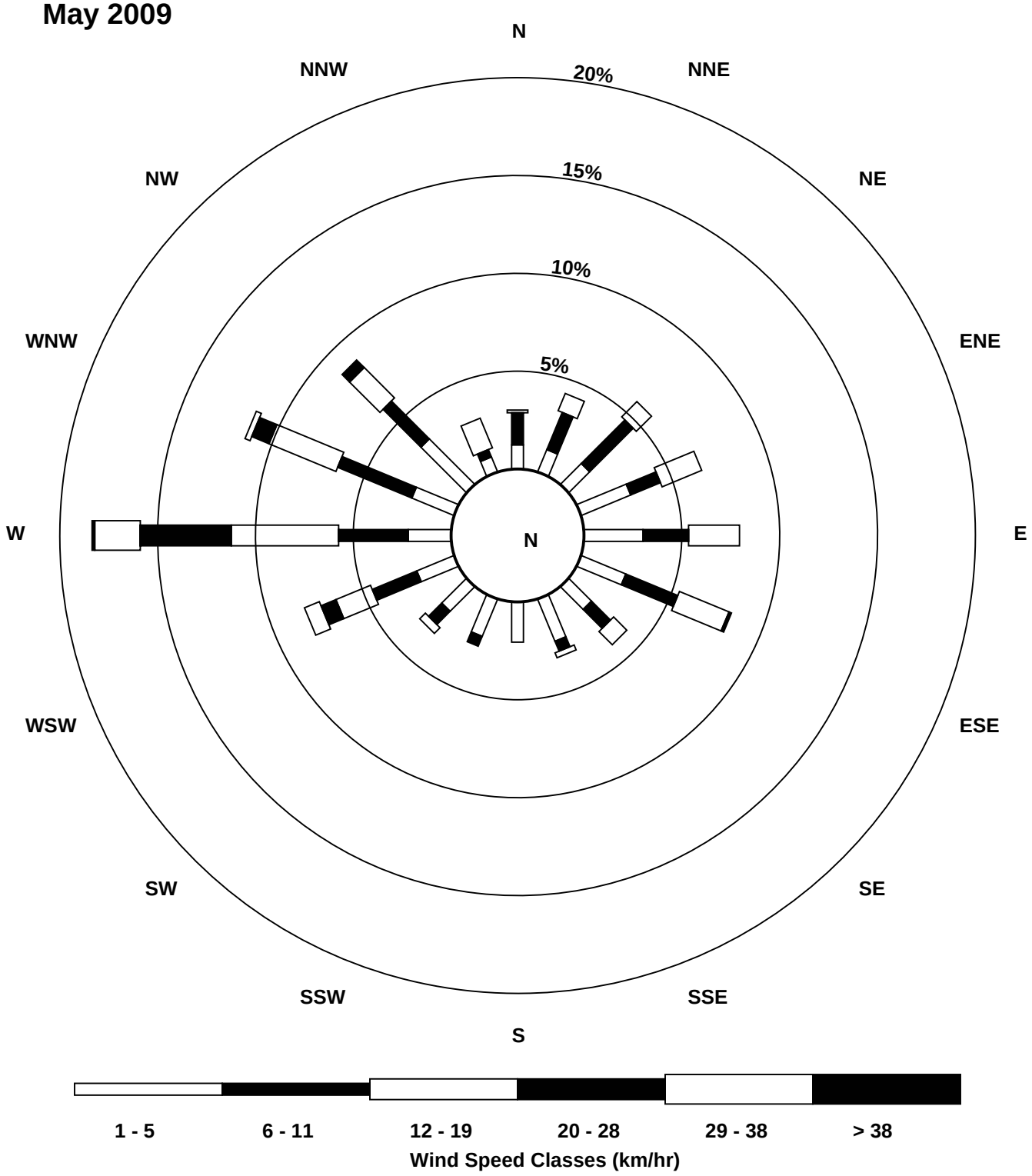
All monthly, daily, and diurnal averages have been calculated using vector methods

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

Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	16	21	5	0	0	0	42
NorthEast	26	42	18	0	0	0	86
East	41	33	48	2	0	0	124
SouthEast	25	24	17	0	0	0	66
South	33	2	1	0	0	0	36
SouthWest	23	16	10	0	0	0	49
West	33	59	70	52	24	2	240
NorthWest	27	32	37	5	0	0	101
Total	224	229	206	59	24	2	744

Wind Rose for WS at Beaverlodge
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages - Wind Speed (Scalar)

Beaverlodge - Wind Speed (WS) - km/h
May 1, 2009 to June 1, 2009

Maximum Speed: 42 km/h on May 30 15:00

Maximum Daily Speed Average: 27.3 km/h on May 30

Minimum Speed: 1 km/h on May 22 06:00

Minimum Daily Speed Average: 3.9 km/h on May 22

Maximum Diurnal Speed Average: 14.9 km/h at hour 15

Minimum Diurnal Speed Average: 6.3 km/h at hour 6

Monthly Average Speed: 10.63 km/h

Percentiles: $P_1 = 1.6$ $P_{10} = 2.9$ $Q_1 = 5.0$ Median = 9.1 $Q_3 = 14.3$ $P_{90} = 20.3$ $P_{99} = 35.6$

Hours in Service: 744

Hours of Data: 744

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-May	3	3	4	3	2	2	1	3	5	3	4	7	9	9	10	9	9	7	7	4	5	3	4	12	5.3	11.8
2-May	7	8	11	10	7	3	3	2	3	6	14	12	12	10	11	12	14	15	19	19	18	16	20	19	11.3	20.0
3-May	15	12	10	9	7	3	6	5	6	9	11	13	15	15	28	27	26	33	33	29	24	17	23	18	16.3	32.6
4-May	12	11	11	10	8	11	8	12	20	28	24	28	26	24	20	19	17	17	15	11	7	7	6	7	14.9	28.2
5-May	5	5	6	4	4	7	6	5	5	10	9	5	5	6	6	6	5	4	4	9	11	11	11	8	6.4	10.8
6-May	6	10	10	7	5	2	2	5	19	15	17	17	14	18	16	14	12	14	19	19	10	9	8	6	11.5	19.1
7-May	4	4	6	4	3	2	4	6	8	12	9	11	12	12	13	15	7	6	7	4	4	3	3	5	6.8	14.6
8-May	2	6	3	4	5	3	5	10	15	14	12	8	14	15	18	15	14	13	10	10	6	7	4	3	9.0	18.3
9-May	3	3	2	2	2	3	2	3	2	5	5	5	7	10	9	7	6	4	3	3	2	4	2	5	4.1	9.9
10-May	2	5	4	3	1	2	4	6	6	7	11	11	12	10	13	7	12	9	9	9	5	3	3	3	6.5	12.9
11-May	4	3	3	3	5	5	3	3	2	4	3	4	6	6	6	8	6	16	14	16	18	16	19	22	8.0	22.1
12-May	22	21	20	20	18	15	16	14	12	11	10	10	11	11	11	9	10	10	7	6	7	5	3	4	11.8	22.0
13-May	6	6	5	6	7	8	11	13	15	15	14	13	11	10	10	7	4	4	4	4	3	2	4	6	7.8	14.8
14-May	3	4	3	3	5	3	3	5	3	5	6	5	8	9	11	16	7	11	11	5	7	6	6	2	6.1	15.9
15-May	2	2	2	2	2	2	3	5	7	13	20	18	21	23	24	24	21	20	20	24	14	5	4	3	11.6	24.1
16-May	2	3	11	12	7	7	17	20	23	26	25	22	20	17	18	17	14	10	6	4	3	2	2	4	12.0	26.1
17-May	6	11	12	12	7	4	5	11	9	10	12	10	13	17	16	15	14	12	12	11	12	12	12	12	11.1	16.8
18-May	12	9	10	12	12	11	11	14	14	13	14	16	15	15	17	16	17	17	18	17	17	13	14	15	14.1	18.4
19-May	16	14	12	15	14	16	18	17	16	19	15	15	14	14	12	13	13	13	14	8	8	8	6	5	13.1	18.7
20-May	5	5	4	4	4	2	4	7	8	9	12	12	12	15	18	18	19	20	17	14	9	9	10	7	10.2	19.5
21-May	3	8	14	12	10	7	6	8	11	9	6	6	7	8	8	12	12	11	11	8	6	6	7	5	8.4	13.8
22-May	3	2	2	2	1	1	2	3	4	4	4	5	5	7	5	6	4	5	4	4	4	6	7	6	3.9	6.9
23-May	7	5	2	3	3	5	3	3	5	3	3	4	5	11	15	13	11	13	15	15	14	11	8	6	7.5	15.4
24-May	6	4	3	3	1	2	3	8	11	14	13	12	12	15	13	10	8	16	13	12	9	9	4	5	8.6	15.9
25-May	7	10	8	5	6	3	1	3	3	4	5	8	7	8	7	7	6	4	13	10	6	6	6	8	6.2	12.9
26-May	8	8	7	6	4	5	8	7	5	5	4	4	17	13	10	7	14	5	14	15	13	6	8	7	8.4	16.7
27-May	7	7	12	11	15	17	21	30	36	36	36	34	36	37	33	34	31	28	29	25	23	15	11	9	23.9	37.1
28-May	11	11	11	9	8	7	5	15	21	25	25	23	22	23	22	20	18	21	21	22	14	6	5	6	15.4	24.9
29-May	6	3	5	5	4	5	6	12	14	13	12	11	9	9	7	5	6	8	7	4	8	24	25	23	9.6	25.0
30-May	25	29	21	20	15	18	21	26	31	36	35	36	37	35	42	39	35	35	32	26	19	14	11	15	27.3	41.6
31-May	16	14	15	12	11	12	11	14	15	16	19	18	16	16	15	14	15	13	9	6	4	5	5	2	12.2	18.6
	7.6	7.9	8.1	7.5	6.6	6.3	7.0	9.5	11.4	12.8	13.3	13.0	13.8	14.4	14.9	14.2	13.1	13.3	13.4	11.9	9.9	8.6	8.3	8.3	Diurnal Average	
	25.3	29.3	21.4	20.5	17.8	17.8	21.0	30.1	36.3	36.3	35.8	35.9	36.7	37.1	41.6	38.8	35.1	34.9	32.6	28.8	24.0	23.6	25.0	23.1	Diurnal Maximum	

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

Maximum Value: 96.3 deg on May 22 17:00

Minimum Value: 0.1 deg on May 20 04:00

Percentiles: P_1 = 2.2 P_{10} = 4.7 Q_1 = 7.5 Median = 13.6 Q_3 = 31.4 P_{90} = 57.0 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
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-May	4	38	13	27	17	18	17	21	14	55	70	43	33	39	34	28	22	48	18	16	33	31	30	18	70.2
2-May	55	52	10	5	11	84	28	29	54	32	14	16	21	27	24	25	23	16	8	3	2	5	3	4	83.5
3-May	3	4	4	5	72	30	38	15	14	23	15	17	19	21	9	8	10	5	7	4	7	6	5	8	72.4
4-May	12	7	8	4	11	11	5	8	14	6	12	12	12	12	16	18	17	16	11	7	25	7	6	3	25.3
5-May	80	50	5	82	70	8	7	83	39	22	16	58	57	57	74	67	66	51	67	11	5	15	11	5	83.2
6-May	26	5	8	33	6	60	52	18	5	18	10	14	18	18	17	15	17	21	10	5	7	2	3	11	60.1
7-May	10	6	9	63	44	52	13	11	48	11	33	10	43	11	6	4	55	23	13	65	64	42	25	19	65.3
8-May	57	50	63	10	12	10	6	7	5	9	15	25	19	8	11	8	32	9	53	12	13	11	17	79	79.1
9-May	92	60	55	84	87	12	28	18	57	20	37	61	56	72	68	47	43	85	36	36	32	37	83	31	91.7
10-May	59	9	27	30	58	44	13	12	12	21	22	34	12	37	54	47	57	20	23	13	15	67	27	8	67.5
11-May	15	17	37	67	16	81	40	32	59	32	61	66	52	63	62	59	76	17	8	6	6	7	8	4	80.5
12-May	5	4	5	5	6	6	6	7	13	12	13	22	20	14	12	13	13	10	11	17	15	14	23	19	22.6
13-May	9	5	5	5	3	5	4	4	6	8	11	10	13	11	12	21	57	57	43	24	24	21	16	8	56.8
14-May	46	23	64	19	4	74	32	20	40	51	26	83	43	44	47	46	27	16	40	31	17	17	16	54	82.8
15-May	31	41	52	26	33	23	28	21	12	24	11	15	13	11	11	13	13	9	9	4	6	20	28	24	52.0
16-May	29	67	27	22	12	9	6	5	5	7	9	12	10	15	9	17	14	17	16	16	30	15	27	6	67.0
17-May	5	13	8	5	19	53	85	10	20	12	8	12	15	10	14	10	11	9	8	8	7	5	7	6	85.1
18-May	7	9	10	5	6	5	7	7	7	8	9	11	9	8	8	8	8	8	8	7	6	7	5	5	11.1
19-May	4	7	5	8	5	4	4	4	4	4	4	5	6	6	10	5	5	5	9	18	7	4	4	2	17.8
20-May	0	1	0	0	4	1	25	8	9	9	8	11	19	17	11	11	13	11	11	5	5	6	9	38	38.2
21-May	45	41	6	6	17	16	33	17	10	17	59	48	39	40	40	35	29	25	17	14	17	19	5	7	59.3
22-May	14	25	30	16	22	24	59	22	32	41	62	45	54	54	88	58	96	74	45	14	12	7	7	8	96.3
23-May	9	54	39	47	86	82	62	74	19	52	74	57	66	19	14	17	26	19	7	15	5	10	4	8	85.9
24-May	10	15	24	61	69	21	24	45	11	11	13	22	29	9	12	20	29	12	8	10	4	7	33	16	69.2
25-May	10	9	9	49	15	68	30	41	48	33	36	28	55	55	40	61	42	71	14	18	7	21	5	6	70.8
26-May	5	7	17	33	88	28	9	51	43	54	39	50	13	9	12	60	39	21	6	5	5	16	9	10	87.8
27-May	13	34	4	7	2	4	3	4	4	4	7	7	7	7	8	7	9	9	9	6	4	2	5	3	34.2
28-May	2	6	4	10	8	11	56	8	10	10	9	10	12	12	14	17	17	9	9	5	8	10	14	7	55.7
29-May	68	56	6	59	63	28	14	13	7	13	13	21	45	24	55	48	81	23	18	35	66	12	9	6	81.0
30-May	9	3	5	5	5	5	6	6	6	6	6	7	9	10	9	8	8	6	7	5	8	4	4	4	9.7
31-May	4	3	3	3	5	5	9	10	7	10	11	11	14	18	17	29	26	40	39	10	28	17	21	45	44.8
	91.7	67.0	64.2	84.1	87.8	83.5	85.1	83.2	59.5	55.2	73.9	82.8	65.7	72.1	87.7	66.9	96.3	84.9	66.6	65.3	66.0	67.5	83.1	79.1	

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

Peace Airshed Zone Association
Summary of Hourly Averages

Portable-Kinuso - Sulphur Dioxide (SO_2) - ppb
May 1, 2009 to June 1, 2009

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.3 ppb on May 1 19:00 Maximum Daily Average: 0.8 ppb on May 1

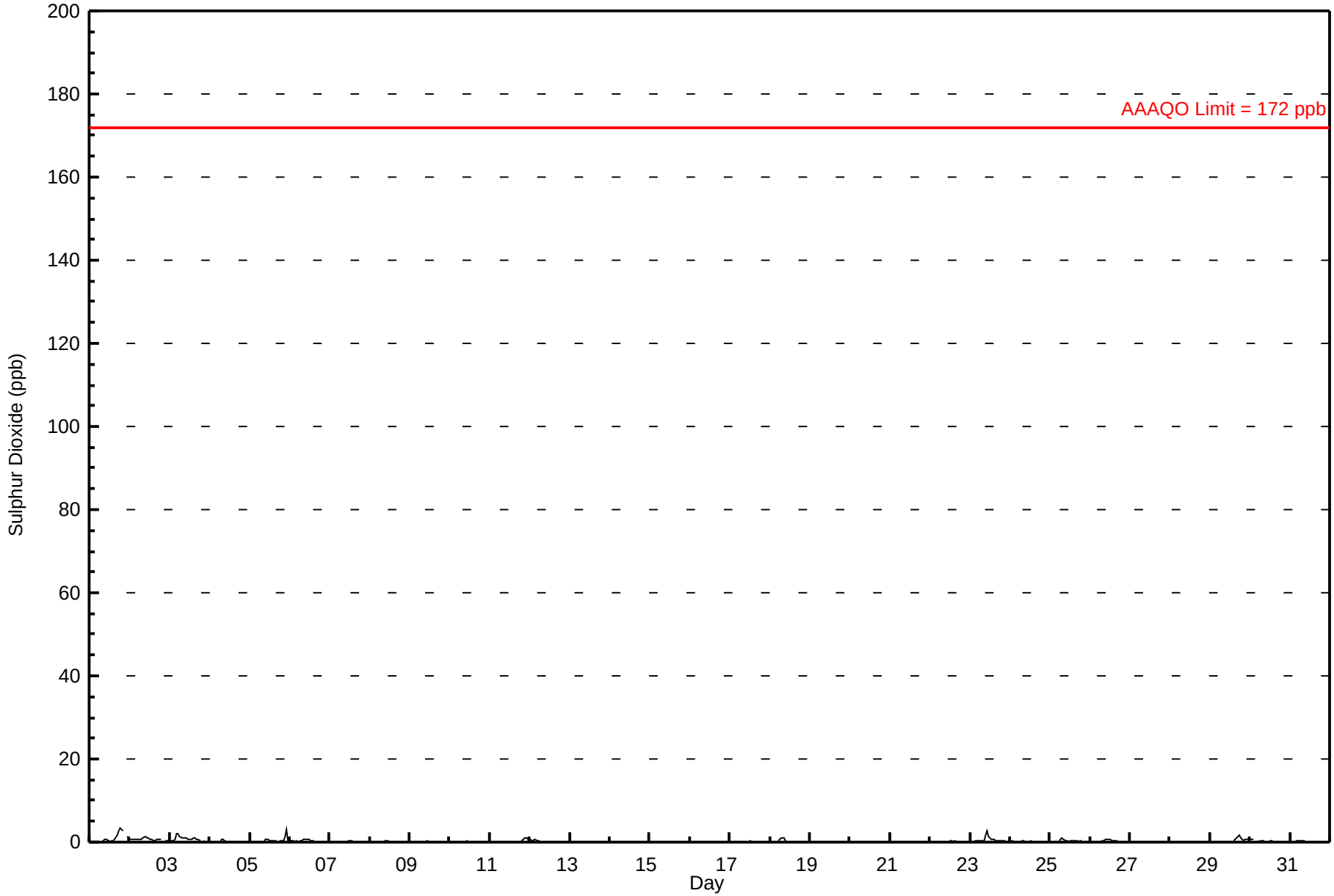
Minimum Value: 0 ppb on May 7 07:00 Minimum Daily Average: 0.0 ppb on May 19
Maximum Diurnal Average: 0.3 ppb at hour 11 Minimum Diurnal Average: 0.1 ppb at hour 2
Monthly Average: 0.20 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.2 P_{90} = 0.6 P_{99} = 1.6

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	36
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-May	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	2	3	3	3	3	A	1	1	0.8	3.3
2-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	A	0	0	0	0.6	1.2
3-May	0	0	0	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0	0	0	0	0.7	2.0
4-May	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.6
5-May	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	A	0	0	0	1	3	0	0.4	3.1
6-May	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.7
7-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.4
8-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.3
9-May	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.2
10-May	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
11-May	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	1	1	0.2	1.0
12-May	1	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8
13-May	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
14-May	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	0.1
15-May	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	0.1
16-May	0	0	0	0	0	0	A	0	P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
17-May	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	0.5
18-May	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.0
19-May	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
20-May	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
21-May	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
22-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.2
23-May	0	0	0	0	0	0	0	0	0	2	3	1	1	1	1	1	1	0	0	0	0	0	A	0	0.6	2.6
24-May	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
25-May	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.9
26-May	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	A	0	0	0	0	0.2	0.5
27-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.0	0.1
28-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.1
29-May	0	0	0	0	0	0	0	0	0	C	C	C	C	A	0	1	1	2	1	1	0	1	1	1	0.5	1.6
30-May	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
31-May	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
	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.1	Diurnal Average	
	0.6	0.6	0.8	0.8	2.0	2.0	1.3	1.1	1.1	1.6	2.6	1.4	1.0	0.7	0.9	0.9	1.6	2.6	3.3	3.0	2.7	1.4	3.1	1.2	Diurnal Maximum	

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

Hourly Averages for SO_2 at Portable-Kinuso
May 2009



Peace Airshed Zone Association
Summary of Hourly Maximums

Portable-Kinuso - Sulphur Dioxide (SO_2) - ppb
May 1, 2009 to June 1, 2009

Maximum Value: 5.2 ppb on May 5 23:00

Maximum Daily Average: 1.2 ppb on May 1

Minimum Value: 0 ppb on May 18 20:00

Maximum Diurnal Average: 0.8 ppb at hour 11

Monthly Average: 0.61 ppb

Minimum Daily Average: 0.3 ppb on May 19

Minimum Diurnal Average: 0.5 ppb at hour 2

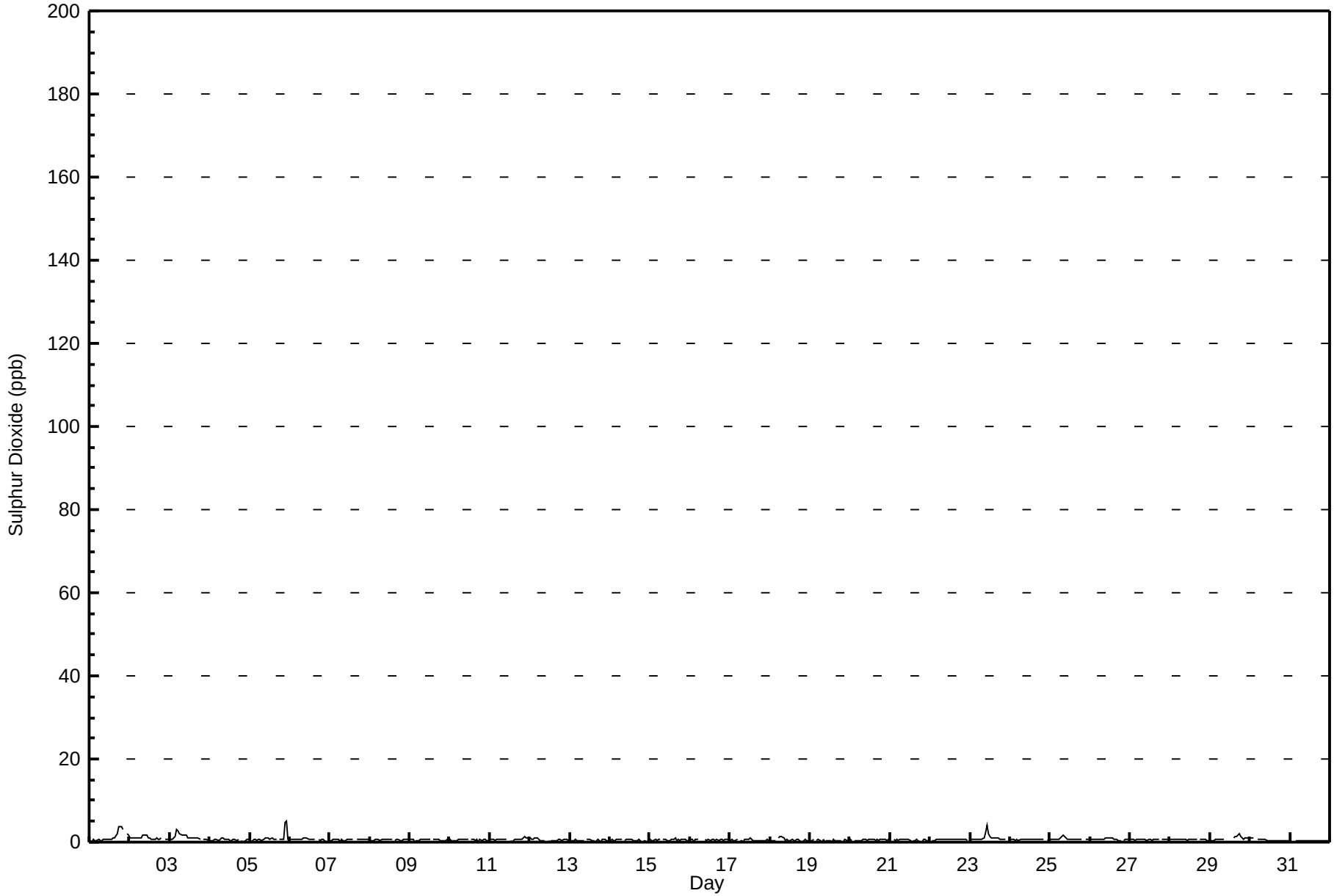
Percentiles: $P_1 = 0.0$ $P_{10} = 0.3$ $Q_1 = 0.5$ Median = 0.5 $Q_3 = 0.6$ $P_{90} = 1.0$ $P_{99} = 2.8$

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

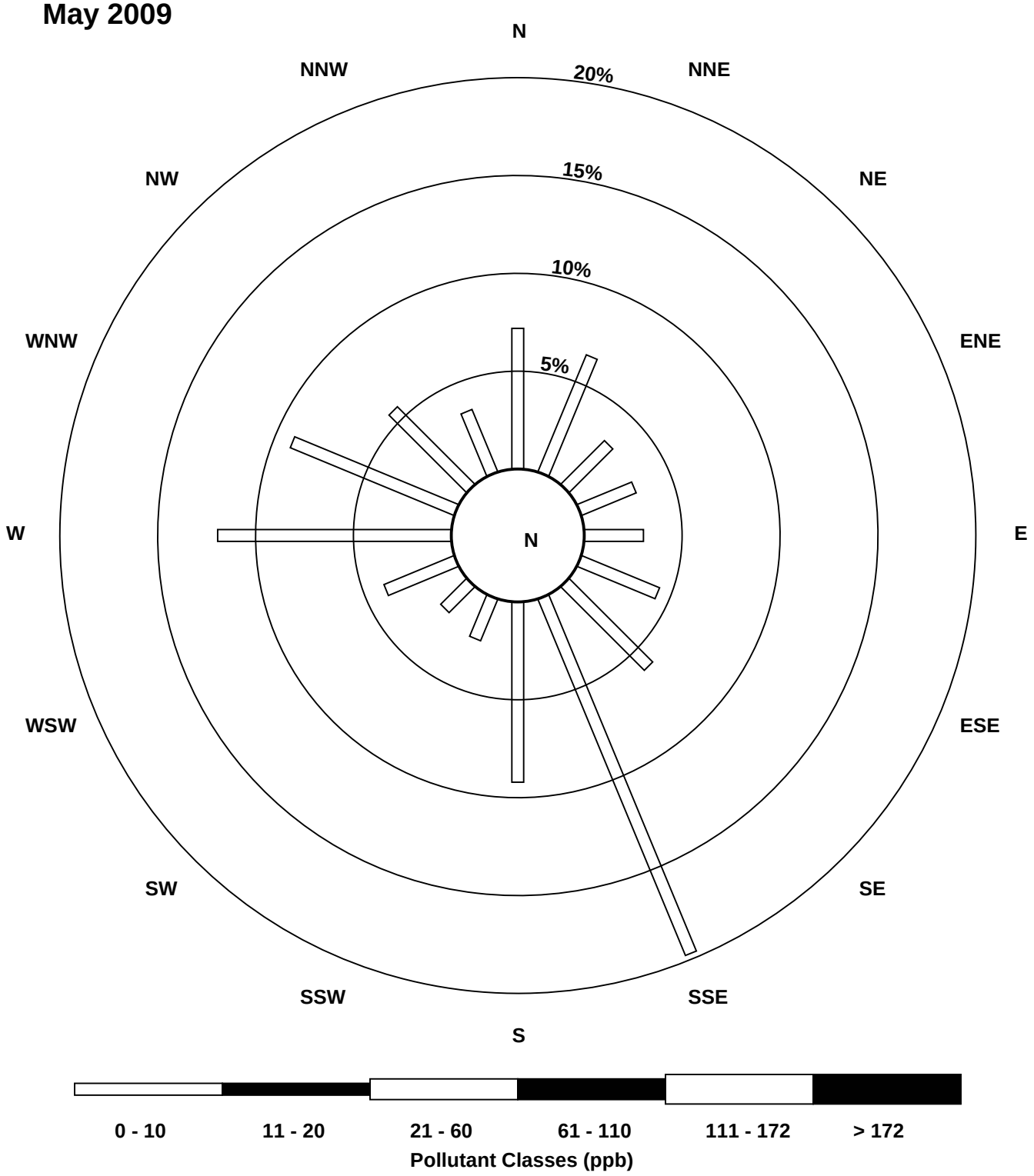
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-May	0	0	1	0	0	1	0	0	1	1	1	1	1	1	1	1	2	4	4	4	3	A	2	2	1.2	3.6
2-May	1	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	A	1	1	1	1.0	1.6
3-May	1	1	1	1	3	3	2	2	2	2	2	1	1	1	1	1	1	1	1	A	1	1	1	0	1.2	3.1
4-May	0	0	1	1	1	0	1	1	1	1	1	1	0	0	1	1	0	1	A	0	0	1	1	1	0.5	1.0
5-May	1	0	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	A	1	1	1	5	5	1	1.1	5.2
6-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	1	1	1	0	0	0.6	1.1
7-May	0	0	1	1	1	1	0	1	1	0	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.5	0.5
8-May	1	1	1	1	1	1	0	1	1	1	1	1	1	1	A	0	1	1	0	0	1	1	1	1	0.5	0.6
9-May	1	1	1	0	0	0	1	1	1	1	1	1	1	A	1	1	1	1	0	0	0	1	1	0	0.5	0.6
10-May	1	0	0	1	0	1	1	1	1	1	1	1	A	1	1	0	1	0	1	0	1	1	0	0	0.5	0.5
11-May	1	1	1	0	1	1	1	1	1	1	1	A	0	0	1	1	1	1	1	1	1	2	1	1	0.6	1.5
12-May	1	1	1	1	1	1	0	0	0	0	A	0	0	0	0	0	0	1	1	0	1	1	1	0	0.5	1.0
13-May	0	0	0	1	0	0	1	0	0	A	1	1	1	0	1	0	1	1	0	1	1	1	0	0	0.4	0.5
14-May	0	1	0	0	1	1	1	1	A	0	1	1	1	1	0	0	0	1	0	0	0	0	0	1	0.4	0.6
15-May	1	1	0	1	0	1	1	A	1	1	0	0	0	1	1	1	0	1	0	1	1	1	0	0	0.5	0.9
16-May	1	1	0	1	1	1	A	1	P	1	0	1	0	1	1	0	1	0	1	1	1	1	1	1	0.5	0.6
17-May	0	1	0	0	1	A	0	1	0	1	1	1	1	1	1	0	1	0	0	0	0	0	1	0	0.5	1.0
18-May	0	0	0	1	A	1	1	1	1	1	1	1	1	1	0	1	1	1	0	0	0	1	0	0	0.6	1.5
19-May	0	0	1	A	1	1	0	0	1	0	0	0	1	0	1	1	1	0	0	0	0	1	0	0	0.3	0.5
20-May	1	0	A	0	0	0	0	1	1	1	0	1	1	1	1	0	1	0	1	1	1	1	0	1	0.5	0.6
21-May	0	A	1	0	1	0	1	1	1	1	1	1	0	0	0	1	1	0	0	0	1	1	1	0	0.4	0.6
22-May	A	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	0.5	0.6
23-May	1	1	1	1	1	1	1	1	1	3	4	2	2	1	1	1	1	1	1	1	1	1	A	1	1.0	4.0
24-May	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	0.5	0.5
25-May	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	1.6
26-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	0	1	1	1	0.6	1.1
27-May	1	1	1	0	1	1	1	1	1	1	0	1	1	0	1	1	1	1	A	1	1	1	1	1	0.5	0.5
28-May	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	A	1	1	1	1	0	0	0.5	0.6
29-May	0	0	0	1	1	1	1	1	1	C	C	C	C	A	1	1	2	2	2	1	1	1	1	1	0.9	2.0
30-May	1	1	1	A	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0.6	1.0
31-May	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.5
	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.7	0.6	0.5	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.7	0.7	0.5	Diurnal Average	
	1.1	1.1	1.1	1.2	3.1	2.6	2.1	1.6	1.6	2.5	4.0	2.0	1.5	1.0	1.1	1.5	2.1	3.6	3.6	3.6	3.1	4.8	5.2	1.6	Diurnal Maximum	

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

Hourly Maximums for SO_2 at Portable-Kinuso
May 2009



Pollutant Rose for SO_2 at Portable-Kinuso
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Portable-Kinuso - Total Reduced Sulphur (TRS) - ppb
May 1, 2009 to June 1, 2009

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 0.6 ppb on May 31 12:00
Maximum Daily Average: 0.5 ppb on May 23

Minimum Value: 0 ppb on May 11 04:00
Maximum Diurnal Average: 0.4 ppb at hour 11
Monthly Average: 0.44 ppb

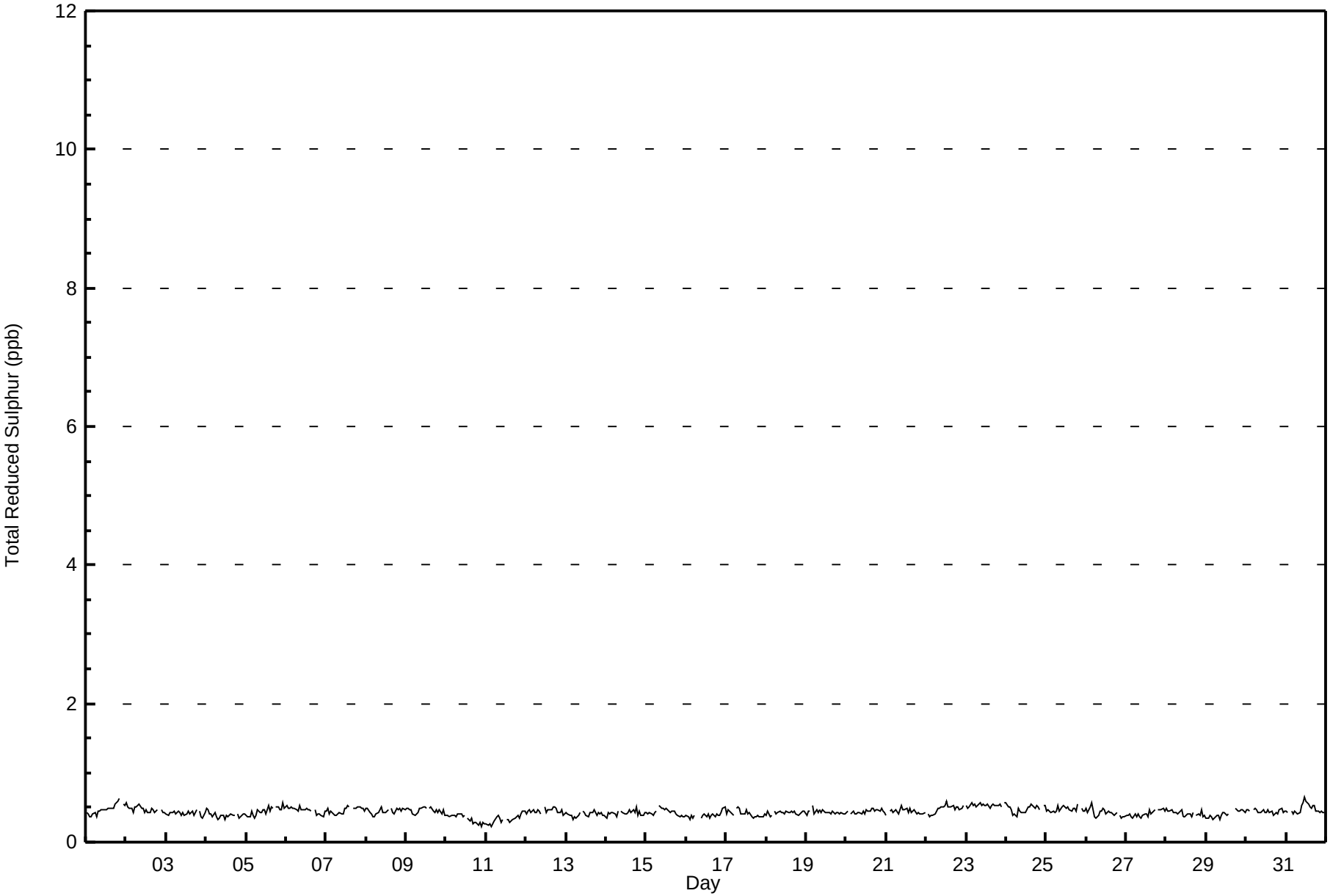
Minimum Daily Average: 0.3 ppb on May 11
Minimum Diurnal Average: 0.4 ppb at hour 5
Percentiles: $P_1 = 0.3$ $P_{10} = 0.4$ $Q_1 = 0.4$ Median = 0.4 $Q_3 = 0.5$ $P_{90} = 0.5$ $P_{99} = 0.6$

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	A	1	1	0.5	0.6
2-May	1	1	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.5	0.6
3-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.4	0.5
4-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.4	0.5
5-May	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	A	1	1	0	0	1	0	0.4	0.6
6-May	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.5	0.5
7-May	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	A	0	0	0	1	1	0	0	0	0.5	0.5
8-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.4	0.5
9-May	0	0	0	0	0	0	0	0	0	0	1	1	0	A	0	1	0	0	0	0	0	0	0	0	0.5	0.5
10-May	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
11-May	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
12-May	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	1	0	0	0	0	0	0	0	0.5	0.5
13-May	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
14-May	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
15-May	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
16-May	0	0	0	0	0	0	A	0	P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	0.5
17-May	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
18-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
19-May	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
20-May	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
21-May	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
22-May	A	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	1	1	0	0	1	A	0.5	0.6
23-May	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	A	1	0.5	0.6
24-May	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1	1	0	A	1	1	0.5	0.6
25-May	0	0	0	0	0	0	0	1	0	1	1	1	0	1	0	0	0	0	0	1	A	0	0	0	0.5	0.5
26-May	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.4	0.6
27-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.4	0.5
28-May	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
29-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0.4	0.5
30-May	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
31-May	0	0	A	0	0	0	0	0	0	1	1	1	1	1	1	0	1	1	0	0	0	0	0	0	0.5	0.6
	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	Diurnal Average	
	0.6	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.6	0.5	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.5	0.6	0.6	0.6	0.5	0.6	0.6	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-Kinuso
May 2009



Peace Airshed Zone Association
Summary of Hourly Maximums

Portable-Kinuso - Total Reduced Sulphur (TRS) - ppb
May 1, 2009 to June 1, 2009

Maximum Value: 1.2 ppb on May 20 20:00

Maximum Daily Average: 0.8 ppb on May 23

Minimum Value: 0 ppb on May 11 02:00

Maximum Diurnal Average: 0.8 ppb at hour 14

Monthly Average: 0.74 ppb

Minimum Daily Average: 0.6 ppb on May 10

Minimum Diurnal Average: 0.7 ppb at hour 5

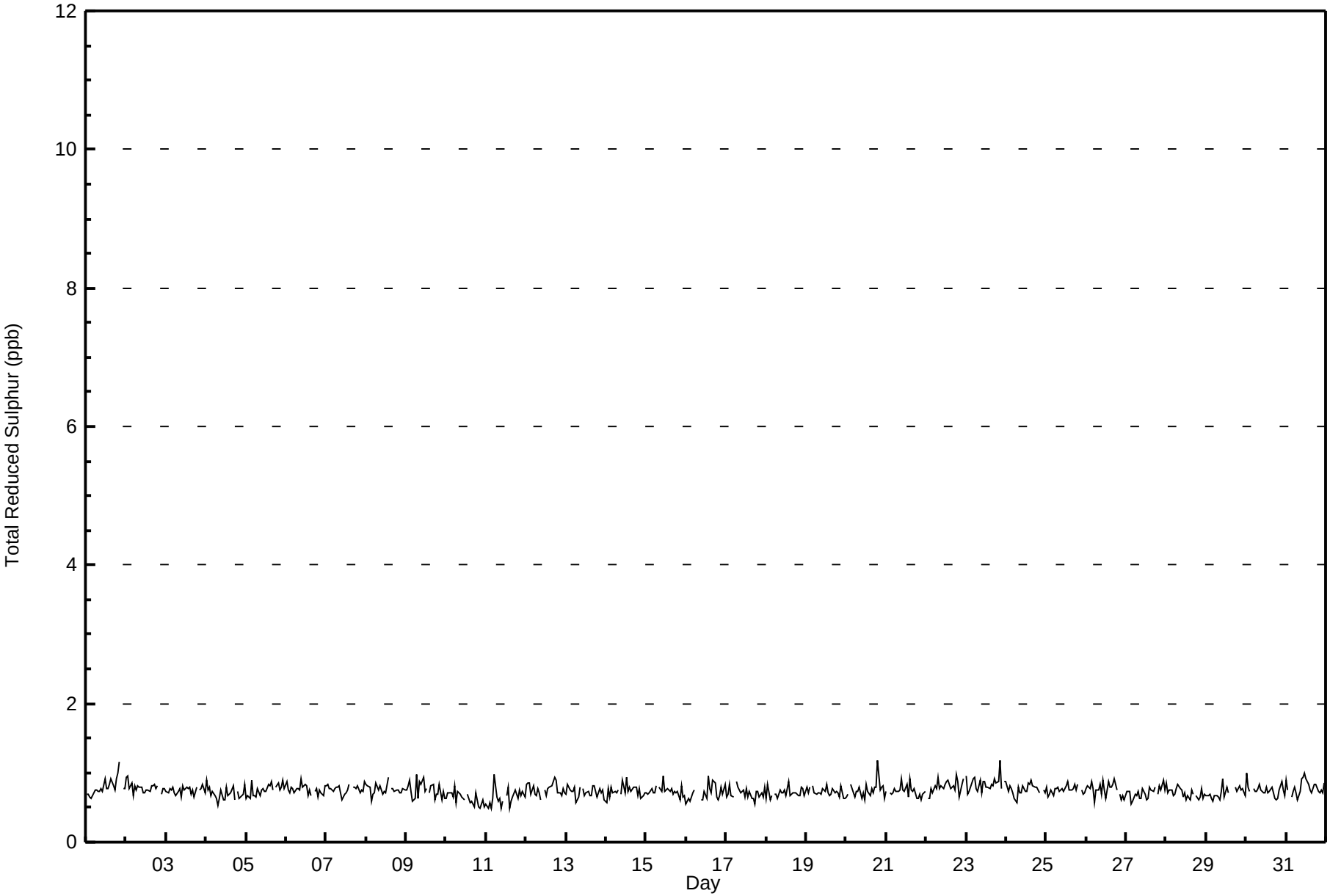
Percentiles: $P_1 = 0.5$ $P_{10} = 0.6$ $Q_1 = 0.7$ Median = 0.7 $Q_3 = 0.8$ $P_{90} = 0.9$ $P_{99} = 1.0$

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

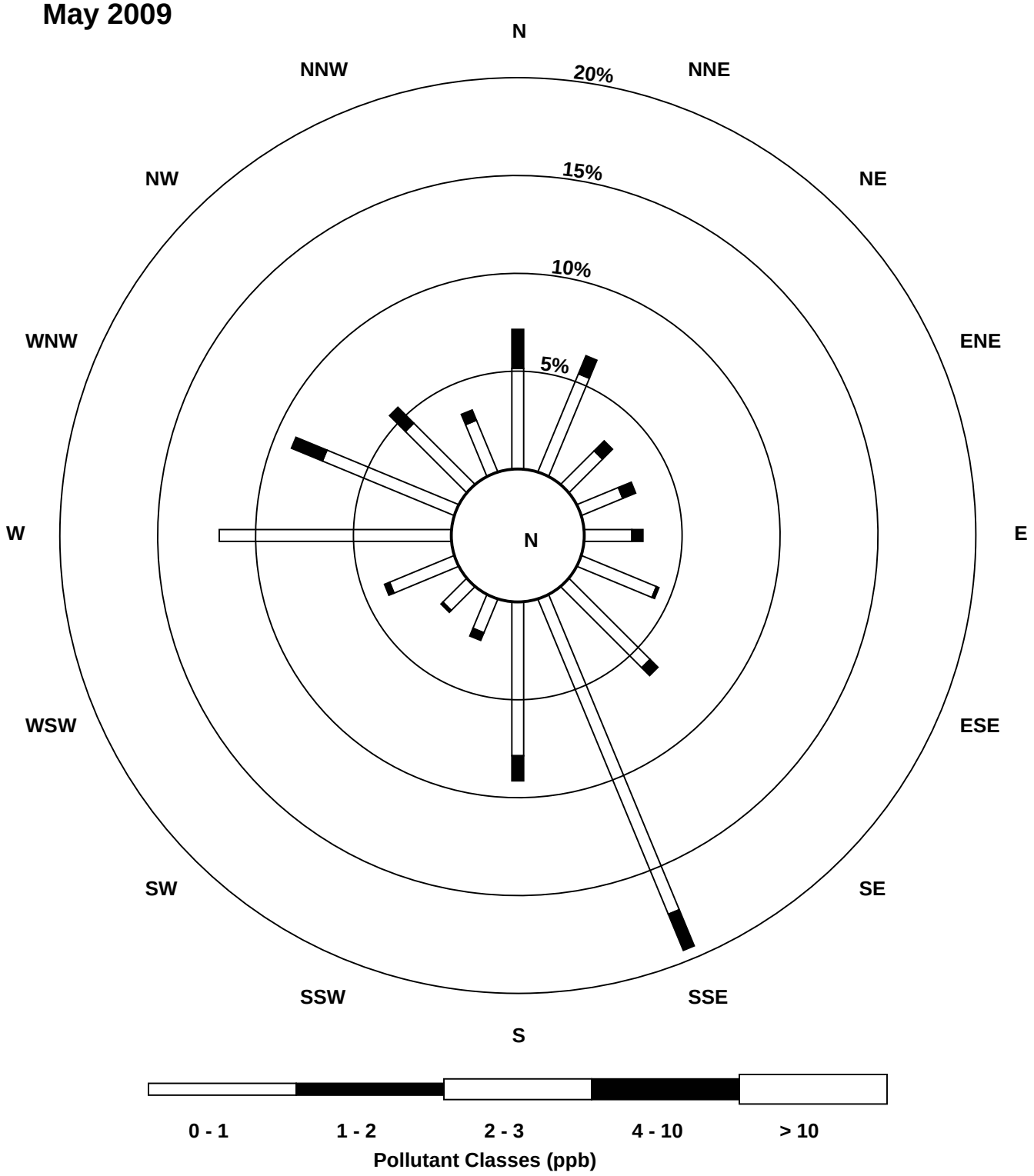
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.8	1.2
2-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.0
3-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1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

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

Hourly Maximums for TRS at Portable-Kinuso
May 2009



Pollutant Rose for TRS at Portable-Kinuso
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Portable-Kinuso - Nitrogen Dioxide (NO_2) - ppb
May 1, 2009 to June 1, 2009

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 6.1 ppb on May 7 21:00
Maximum Daily Average: 2.1 ppb on May 26

Minimum Value: 0 ppb on May 30 19:00
Maximum Diurnal Average: 2.2 ppb at hour 21
Monthly Average: 1.50 ppb

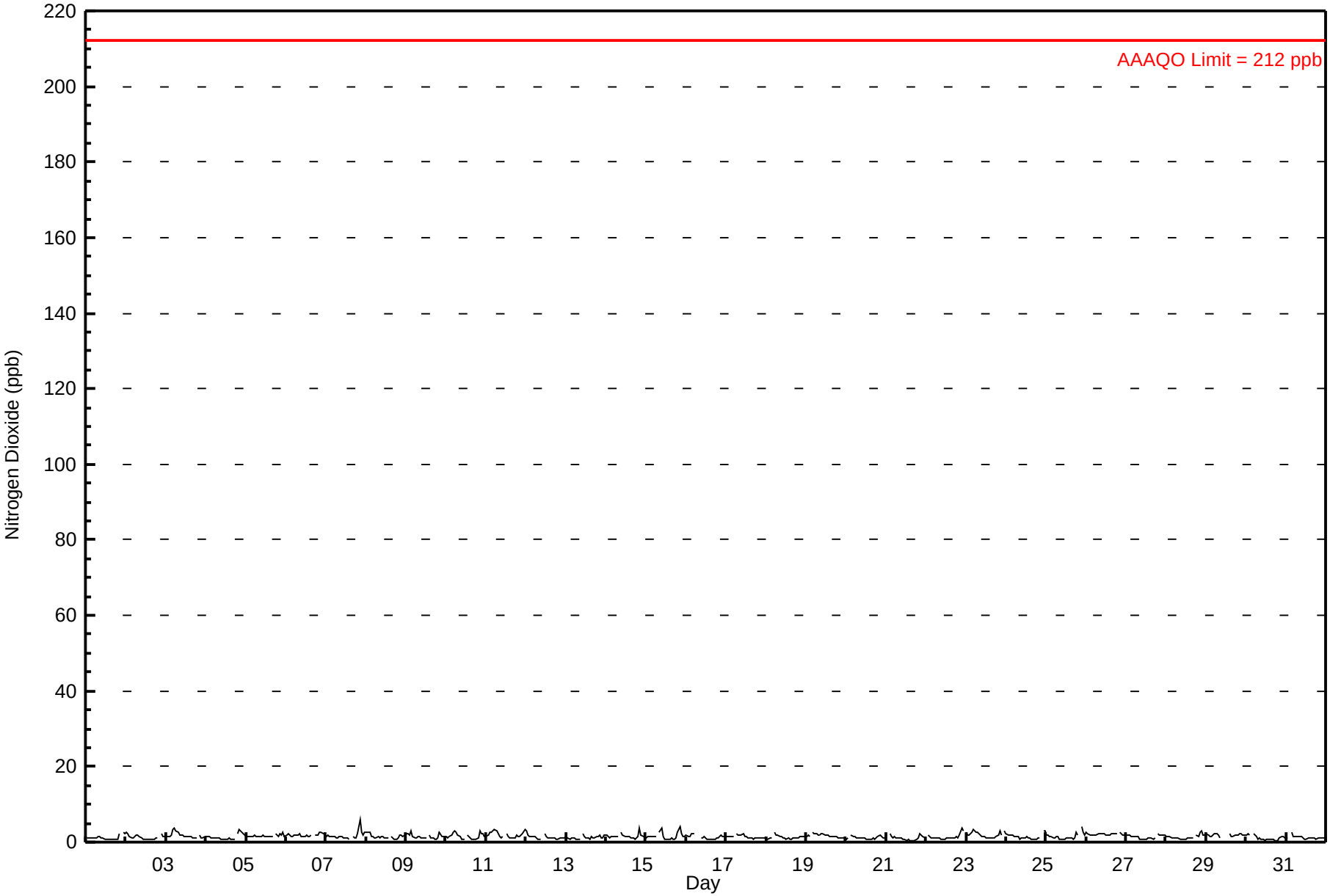
Minimum Daily Average: 1.1 ppb on May 21
Minimum Diurnal Average: 1.1 ppb at hour 17
Percentiles: $P_1 = 0.5$ $P_{10} = 0.8$ $Q_1 = 1.0$ Median = 1.4 $Q_3 = 1.8$ $P_{90} = 2.3$ $P_{99} = 3.5$

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	36
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-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	A	3	2	1.2	2.6
2-May	3	2	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	A	2	2	1	1.3	2.7
3-May	1	1	1	2	3	4	3	3	2	2	2	1	1	1	2	1	1	1	1	A	2	1	1	2	1.8	3.7
4-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	3	3	2	2	1.3	3.3
5-May	2	1	1	1	2	2	1	2	2	2	2	1	1	1	1	2	1	A	2	2	2	2	3	2	1.7	2.5
6-May	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2	2	A	2	2	2	3	3	2	2	1.9	2.6
7-May	2	2	2	1	1	1	1	1	2	2	1	1	1	1	1	A	2	1	1	2	6	3	2	3	1.7	6.1
8-May	3	3	3	2	2	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	2	2	2	2	1.5	2.8
9-May	2	2	2	3	2	1	1	1	2	1	1	1	1	A	2	1	1	1	1	1	3	2	2	1	1.5	3.1
10-May	1	1	1	2	3	3	3	2	1	1	1	1	A	2	1	1	1	1	1	1	3	2	2	1	1.6	3.0
11-May	1	2	3	3	3	3	3	2	2	1	1	A	2	1	1	1	1	1	2	2	1	2	2	3	2.0	3.4
12-May	3	2	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1.3	3.0
13-May	2	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	2	1	1	2	1.2	2.1
14-May	2	2	1	2	1	2	1	1	A	3	2	2	2	2	2	1	1	1	1	1	4	2	1	1	1.6	3.7
15-May	1	1	1	1	2	2	2	A	3	4	1	1	1	1	1	1	1	1	1	3	4	2	2	2	1.6	4.1
16-May	2	2	2	2	2	2	A	3	P	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1.5	2.8
17-May	1	2	1	1	2	A	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1.4	2.2
18-May	1	1	1	1	A	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1.3	2.5
19-May	2	2	2	A	3	2	2	2	2	2	2	2	2	2	1	1	2	2	1	1	1	1	1	1	1.7	2.6
20-May	1	1	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1.2	2.0
21-May	1	A	2	1	1	1	1	1	1	1	1	1	0	1	1	0	1	0	1	1	2	2	2	1	1.1	2.2
22-May	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	4	3	A	1.4	3.8
23-May	3	2	2	3	3	3	3	3	2	2	1	1	1	1	1	1	1	1	1	2	3	2	A	3	2.0	3.4
24-May	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	3	3	1.5	3.2
25-May	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	2	A	4	2	2	1.5	4.0
26-May	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	A	3	2	2	2	2.1	2.7
27-May	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	2	2	2	2	1.3	2.3
28-May	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	2	3	2	2	1.3	2.9
29-May	2	2	2	1	2	2	2	2	1	C	C	C	C	A	2	2	1	2	2	2	2	2	2	2	1.8	2.2
30-May	2	2	2	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	2	1	1.1	2.2
31-May	1	1	A	2	2	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	2.4
	1.8	1.7	1.6	1.7	1.8	1.8	1.7	1.6	1.4	1.4	1.3	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.3	1.4	2.2	2.0	1.8	1.7	Diurnal Average	
	3.0	2.8	2.7	3.1	3.4	3.7	2.9	2.8	2.8	3.6	2.3	2.3	2.3	1.9	2.1	2.2	2.1	2.2	2.6	2.7	6.1	4.0	3.2	3.2	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-Kinuso
May 2009



Peace Airshed Zone Association
Summary of Hourly Maximums

Portable-Kinuso - Nitrogen Dioxide (NO_2) - ppb
May 1, 2009 to June 1, 2009

Maximum Value: 24.6 ppb on May 25 19:00

Maximum Daily Average: 3.7 ppb on May 25

Minimum Value: 1 ppb on May 30 19:00

Maximum Diurnal Average: 5.1 ppb at hour 21

Monthly Average: 2.34 ppb

Minimum Daily Average: 1.6 ppb on May 27

Minimum Diurnal Average: 1.5 ppb at hour 17

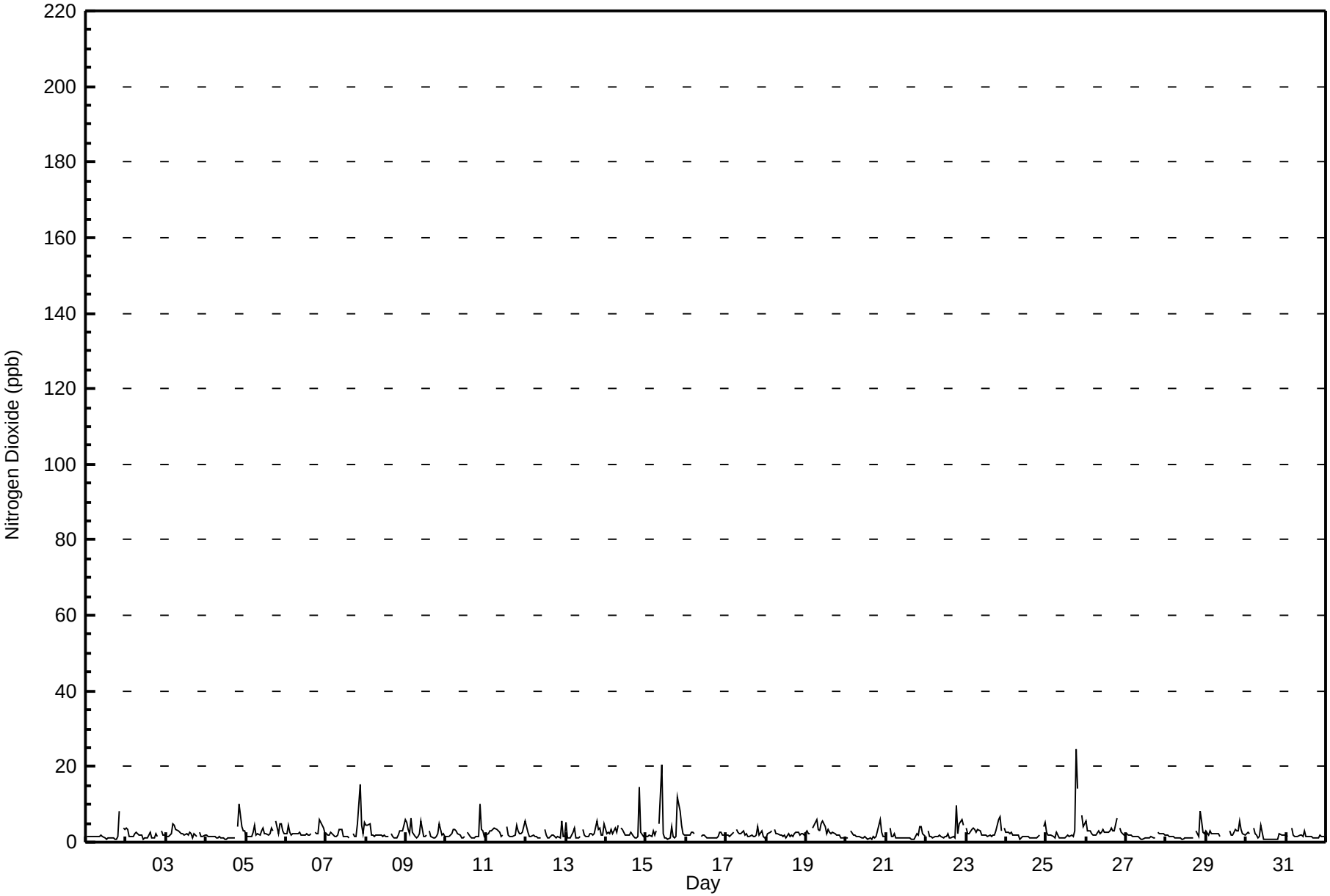
Percentiles: P_1 = 0.8 P_{10} = 1.1 Q_1 = 1.4 Median = 1.8 Q_3 = 2.7 P_{90} = 3.9 P_{99} = 9.1

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

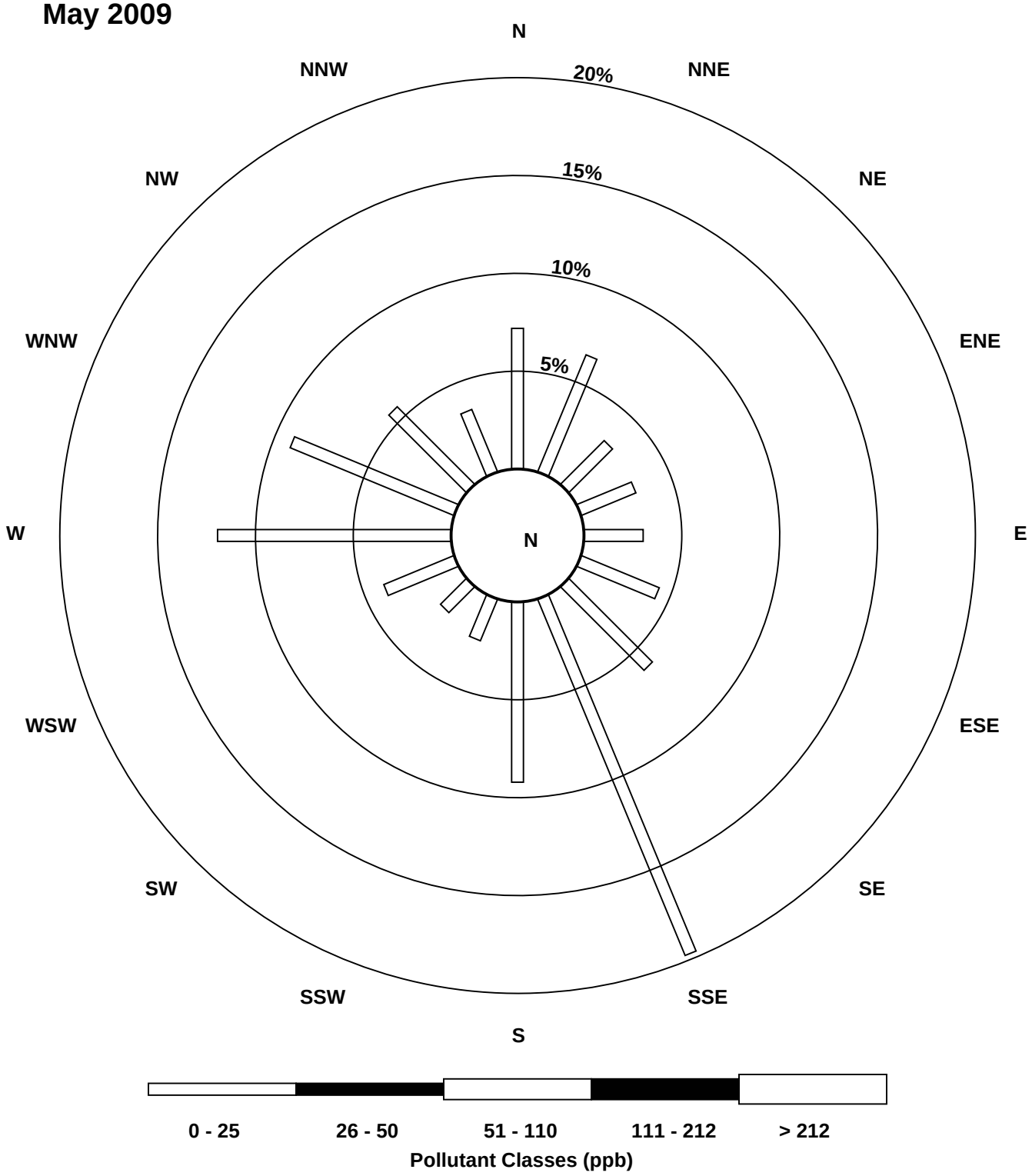
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-May	1	1	1	1	2	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	8	A	4	3	1.7	8.0
2-May	4	4	2	1	2	2	2	2	2	2	1	1	1	1	3	1	1	1	2	1	A	3	2	2	1.9	3.9
3-May	2	1	2	2	5	5	3	3	3	2	2	2	2	2	2	2	1	2	1	A	3	2	2	2	2.3	4.7
4-May	2	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	4	10	4	3	3	2.0	9.9
5-May	2	2	1	1	2	5	2	2	2	3	4	2	2	2	2	4	3	A	6	2	5	5	3	2	2.8	5.5
6-May	2	5	2	2	2	2	2	2	3	2	2	2	2	2	2	2	A	3	2	2	6	5	4	2	2.7	6.0
7-May	2	2	2	3	2	2	2	2	3	3	1	1	2	2	1	A	2	1	1	5	15	5	2	5	2.9	15.1
8-May	5	4	5	2	2	1	2	2	2	2	2	2	2	1	A	2	2	1	1	2	3	3	3	6	2.4	5.9
9-May	5	3	2	6	3	2	1	2	2	5	2	2	2	A	3	2	1	1	2	2	5	2	2	2	2.5	6.4
10-May	2	1	1	2	3	3	3	2	2	1	1	1	A	3	1	1	1	1	1	2	10	3	3	2	2.3	10.1
11-May	2	2	3	3	3	4	3	3	3	2	2	A	4	2	2	2	2	2	4	3	2	2	3	6	2.7	5.7
12-May	4	3	2	2	2	2	1	1	1	1	A	3	2	1	1	2	2	1	1	1	1	6	2	2	1.9	5.6
13-May	5	1	1	2	3	4	1	1	1	A	3	2	1	2	2	2	2	2	6	3	4	2	2	5	2.5	5.6
14-May	2	2	2	3	2	4	3	4	A	4	3	2	2	2	2	3	1	1	1	2	14	3	2	2	2.9	14.4
15-May	2	2	2	2	3	2	3	A	5	21	2	1	1	1	1	4	1	1	1	12	8	4	2	2	3.6	20.5
16-May	2	2	2	3	3	2	A	4	P	1	2	2	1	1	1	1	1	1	1	1	3	3	2	2	1.8	4.1
17-May	2	2	2	2	3	A	4	3	2	2	3	2	2	1	2	2	1	1	2	4	2	3	2	1	2.1	4.2
18-May	1	2	3	3	A	3	2	2	2	2	2	2	1	2	1	2	2	2	3	3	2	2	2	2	2.1	3.4
19-May	3	2	2	A	4	4	6	3	3	5	6	4	2	3	3	2	3	2	2	2	2	1	1	1	2.9	5.9
20-May	1	1	A	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	3	6	3	1	1	1.7	6.1
21-May	1	A	4	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2	4	4	2	1	1.7	4.3
22-May	A	3	2	1	1	1	1	1	2	2	1	1	2	2	1	1	1	1	10	2	5	6	5	A	2.4	9.6
23-May	4	2	2	3	4	3	3	3	3	2	2	2	2	1	2	1	2	2	3	6	7	3	A	4	2.9	6.6
24-May	3	2	2	2	2	2	2	2	1	1	1	2	2	1	1	1	1	1	1	2	2	A	4	5	1.9	5.1
25-May	2	2	2	2	1	1	3	2	1	1	1	1	1	2	1	2	2	3	25	14	A	7	4	5	3.7	24.6
26-May	6	3	3	2	2	2	2	3	2	3	3	3	3	3	3	4	3	3	6	A	4	3	2	2	3.0	6.4
27-May	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	A	3	2	2	2	2	1.6	2.8
28-May	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	3	2	8	6	3	2	1.9	8.2
29-May	3	2	3	2	2	2	2	2	2	C	C	C	C	A	3	2	2	3	3	3	6	3	2	2	2.6	5.5
30-May	2	3	2	A	4	2	2	1	2	4	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1.6	4.4
31-May	2	2	A	4	2	2	2	2	2	2	2	3	1	2	2	2	1	1	1	1	2	1	1	1	1.7	3.6
	2.6	2.2	2.2	2.3	2.3	2.4	2.2	2.1	2.0	2.7	1.9	1.7	1.6	1.6	1.7	1.8	1.5	1.6	3.3	3.2	5.1	3.4	2.4	2.6	Diurnal Average	
	5.7	4.7	4.8	6.4	4.7	4.6	5.9	4.4	5.0	20.5	5.6	4.1	4.0	3.5	3.1	4.2	3.1	3.4	24.6	14.0	15.1	7.0	4.6	5.9	Diurnal Maximum	

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

Hourly Maximums for NO_2 at Portable-Kinuso
May 2009



Pollutant Rose for NO_2 at Portable-Kinuso
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Portable-Kinuso - Nitrogen Oxide (NO) - ppb
May 1, 2009 to June 1, 2009

Maximum Value: 2.7 ppb on May 25 19:00

Maximum Daily Average: 0.3 ppb on May 25

Minimum Value: 0 ppb on May 1 17:00

Minimum Daily Average: 0.1 ppb on May 1

Maximum Diurnal Average: 0.3 ppb at hour 8

Minimum Diurnal Average: 0.1 ppb at hour 18

Monthly Average: 0.20 ppb

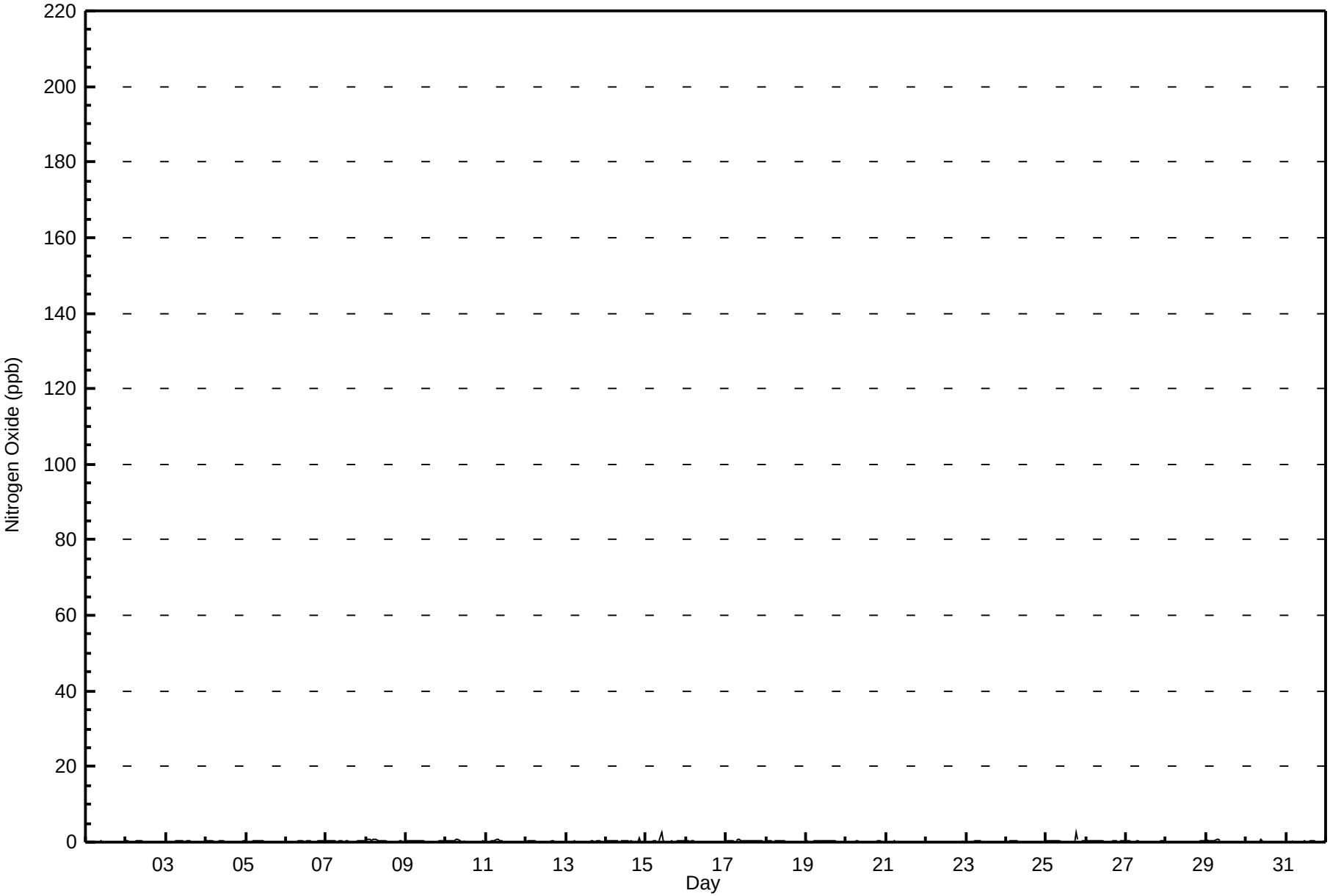
Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.1$ Median = 0.2 $Q_3 = 0.2$ $P_{90} = 0.4$ $P_{99} = 0.7$

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	36
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-May	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
2-May	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.5
3-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.5
4-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.2
5-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.4
6-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.4
7-May	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	0.4
8-May	0	1	1	1	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	0.7
9-May	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.3	0.5
10-May	0	0	0	0	0	0	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
11-May	0	0	0	0	0	0	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8
12-May	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
13-May	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
14-May	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.2	1.3
15-May	0	0	0	0	0	0	0	A	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.4
16-May	0	0	0	0	0	0	A	0	P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
17-May	0	0	0	0	0	A	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8
18-May	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-May	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.3	0.6
20-May	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
21-May	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-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.2
23-May	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	0.4
24-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.3
25-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	A	0	0	0	0.3	2.7
26-May	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.3	0.5
27-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.3
28-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	0	1	0.2	0.5
29-May	1	0	0	0	0	1	1	1	0	C	C	C	C	A	0	0	0	0	0	0	0	0	0	0	0.3	0.7
30-May	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8
31-May	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
	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	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	Diurnal Average	
	0.6	0.6	0.6	0.6	0.7	0.6	0.8	0.8	0.6	2.4	0.5	0.4	0.5	0.6	0.4	0.4	0.3	0.3	2.7	0.7	1.3	0.5	0.4	0.5	Diurnal Maximum	

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

Hourly Averages for NO at Portable-Kinuso
May 2009



Peace Airshed Zone Association
Summary of Hourly Maximums

Portable-Kinuso - Nitrogen Oxide (NO) - ppb
May 1, 2009 to June 1, 2009

Maximum Value: 56.9 ppb on May 25 19:00

Maximum Daily Average: 3.8 ppb on May 25

Minimum Value: 0 ppb on May 30 18:00

Minimum Daily Average: 0.2 ppb on May 1

Maximum Diurnal Average: 2.5 ppb at hour 19

Minimum Diurnal Average: 0.3 ppb at hour 23

Monthly Average: 0.63 ppb

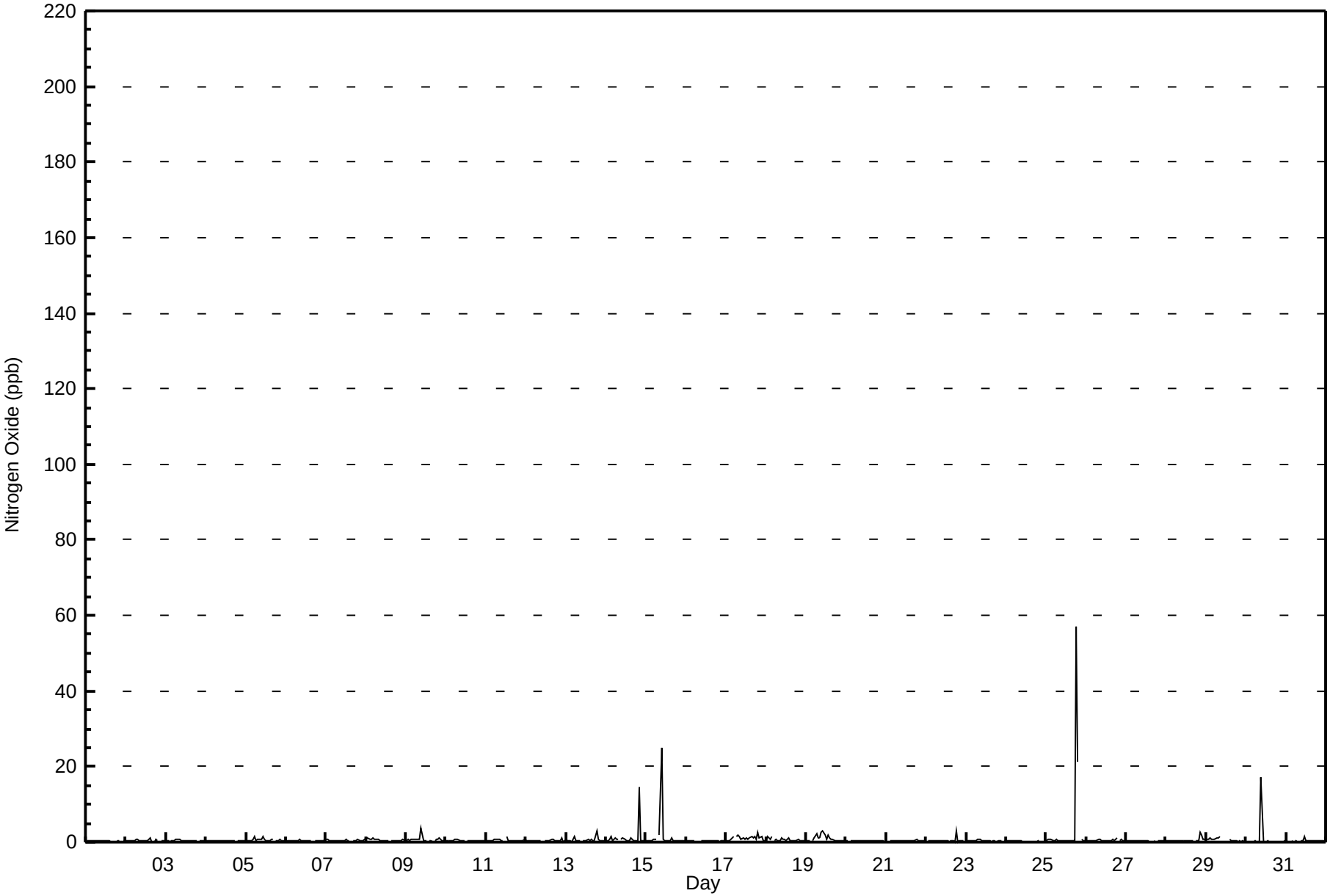
Percentiles: $P_1 = 0.1$ $P_{10} = 0.2$ $Q_1 = 0.2$ Median = 0.3 $Q_3 = 0.5$ $P_{90} = 0.8$ $P_{99} = 2.6$

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	36
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-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.5
2-May	0	0	0	0	0	0	1	1	1	0	0	0	0	0	1	0	0	0	1	0	A	0	0	0	0.4	1.0
3-May	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.3	0.7
4-May	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
5-May	0	0	0	0	1	2	0	1	1	1	1	1	0	0	0	1	1	A	0	0	1	0	0	0	0.5	1.5
6-May	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0	1	0	1	1	0.4	0.7
7-May	1	1	0	1	0	0	0	0	1	0	0	0	1	0	0	A	0	0	0	1	1	1	0	1	0.4	0.8
8-May	1	1	1	1	1	1	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	1	0.5	1.0
9-May	0	1	0	1	1	1	1	1	1	4	0	0	0	A	0	0	0	0	1	1	1	0	0	0	0.6	3.8
10-May	0	0	0	0	0	1	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.4	0.9
11-May	0	0	0	0	0	1	1	1	1	0	0	A	1	0	0	0	0	0	0	0	0	0	0	1	0.5	1.3
12-May	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	1	0	0	0	0	1	0	0	0.4	1.2
13-May	1	0	0	0	1	1	0	0	0	A	0	0	0	1	0	1	0	0	3	1	0	1	0	1	0.6	3.0
14-May	0	1	1	2	0	1	1	1	A	1	1	1	0	0	0	1	0	0	0	0	15	0	0	0	1.2	14.7
15-May	0	0	0	0	1	1	1	A	2	25	1	0	0	0	0	1	0	0	0	1	0	0	0	0	1.5	24.9
16-May	0	0	0	0	0	0	A	0	P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
17-May	0	0	0	1	1	A	1	2	2	1	1	1	1	1	1	2	1	2	1	2	1	2	0	0	1.1	2.5
18-May	0	1	1	2	A	0	1	0	0	1	1	1	0	1	0	0	0	1	1	1	0	0	0	0	0.6	1.6
19-May	0	0	0	A	0	1	2	1	1	3	3	2	1	2	1	1	1	0	0	0	0	0	0	0	0.9	2.8
20-May	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.3	0.5
21-May	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.3	0.7
22-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	A	0.4	2.9
23-May	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.3	0.8
24-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.5
25-May	0	1	1	1	0	0	1	0	0	0	0	0	0	1	0	0	0	1	57	21	A	1	0	0	3.8	56.9
26-May	0	0	0	0	1	0	0	1	1	1	1	0	0	0	0	0	1	0	1	A	1	1	1	0	0.5	1.2
27-May	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
28-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	3	2	1	1	0.5	2.7
29-May	1	1	1	1	1	1	1	1	1	C	C	C	C	A	1	0	0	0	0	0	0	0	0	0	0.6	1.4
30-May	0	0	0	A	0	0	0	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.9	17.1
31-May	0	0	A	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.5
	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.6	2.0	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.3	2.5	1.2	1.0	0.4	0.3	0.4	Diurnal Average	
	0.8	1.4	1.3	1.6	1.5	1.5	2.1	1.8	1.9	24.9	2.8	1.9	1.3	1.8	1.2	1.5	1.0	1.6	56.9	21.4	14.7	1.9	0.6	0.8	Diurnal Maximum	

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

Hourly Maximums for NO at Portable-Kinuso
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Portable-Kinuso - Oxides of Nitrogen (NO_X) - ppb
May 1, 2009 to June 1, 2009

Maximum Value: 6.4 ppb on May 7 21:00

Maximum Daily Average: 2.3 ppb on May 26

Minimum Value: 0 ppb on May 30 19:00

Maximum Diurnal Average: 2.4 ppb at hour 21

Monthly Average: 1.64 ppb

Minimum Daily Average: 1.1 ppb on May 21

Minimum Diurnal Average: 1.1 ppb at hour 17

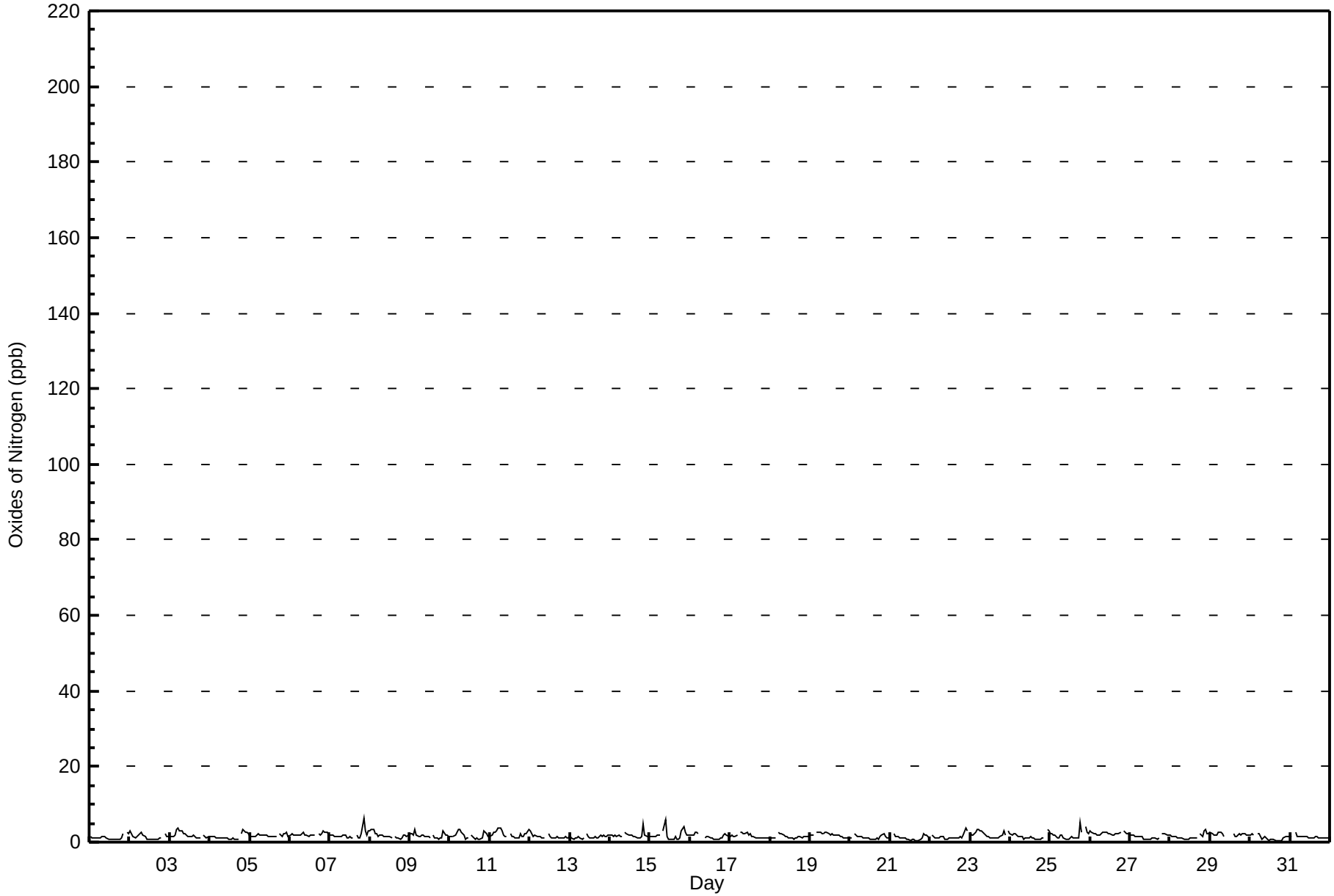
Percentiles: $P_1 = 0.5$ $P_{10} = 0.9$ $Q_1 = 1.1$ Median = 1.5 $Q_3 = 2.0$ $P_{90} = 2.6$ $P_{99} = 3.7$

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	36
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-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	A	3	2	1.2	2.6
2-May	3	2	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	A	2	2	2	1.4	2.8
3-May	1	1	1	2	3	4	3	3	2	2	2	2	2	2	2	1	1	1	1	A	2	1	1	2	1.9	3.9
4-May	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	3	3	3	2	1.4	3.4
5-May	2	2	1	1	2	2	2	2	2	2	2	2	1	1	1	2	1	A	2	2	2	2	3	2	1.8	2.6
6-May	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	A	2	2	2	3	3	2	2	2.0	2.8
7-May	2	2	2	2	2	1	1	1	2	2	1	1	1	1	1	A	2	1	1	2	6	3	2	3	1.9	6.4
8-May	3	3	3	2	2	2	2	2	1	2	1	1	1	1	A	2	1	1	1	1	2	2	2	2	1.8	3.3
9-May	2	2	2	3	2	2	1	2	2	1	1	1	1	A	2	1	1	1	1	1	3	2	2	2	1.7	3.4
10-May	2	1	1	2	3	3	3	3	2	1	1	1	A	2	1	1	1	1	1	1	3	2	2	2	1.8	3.3
11-May	1	2	3	3	3	4	4	3	2	1	2	A	2	1	1	1	1	1	2	2	2	2	2	3	2.1	3.8
12-May	3	2	2	2	2	2	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1.4	3.2
13-May	2	1	1	1	1	1	1	1	1	A	2	1	1	1	1	2	1	1	2	2	2	1	1	2	1.3	2.2
14-May	2	2	1	2	2	2	2	2	A	3	2	2	2	2	2	1	1	1	1	1	5	2	1	1	1.8	5.0
15-May	1	1	2	2	2	2	2	A	3	6	2	1	1	1	1	1	1	1	1	3	4	2	2	2	1.9	6.0
16-May	2	2	2	3	3	2	A	3	P	1	1	2	1	1	1	1	1	1	1	1	2	2	2	2	1.6	3.0
17-May	2	2	2	2	2	A	3	3	2	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1.6	2.7
18-May	1	1	1	1	A	3	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1.4	2.7
19-May	2	2	2	A	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1.9	2.7
20-May	1	1	A	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1	1.3	2.1
21-May	1	A	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	0	1	1	2	2	2	1	1.1	2.3
22-May	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2	4	3	A	1.5	3.8
23-May	3	2	2	3	4	3	3	3	2	2	2	1	1	1	1	1	1	1	1	2	3	2	A	3	2.1	3.5
24-May	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	3	3	1.5	3.2
25-May	2	2	2	2	1	1	2	2	1	1	1	1	1	1	1	1	1	1	5	3	A	4	3	2	1.8	5.1
26-May	3	3	2	2	2	2	2	3	3	3	3	2	2	2	2	2	2	2	3	A	3	3	2	2	2.3	3.0
27-May	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	A	2	2	2	2	2	1.4	2.4
28-May	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	3	3	2	2	1.5	3.4
29-May	3	2	2	2	2	3	3	2	1	C	C	C	C	A	2	2	1	2	2	2	2	2	2	2	2.1	2.7
30-May	2	2	2	A	2	2	2	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	2	1	1.2	2.4
31-May	1	1	A	3	2	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.3	2.6
	1.9	1.8	1.7	1.8	1.9	2.0	1.9	1.9	1.7	1.6	1.4	1.3	1.3	1.2	1.2	1.2	1.1	1.1	1.4	1.5	2.4	2.1	1.9	1.8	Diurnal Average	
	3.2	3.3	3.2	3.4	3.5	3.9	3.6	3.1	3.0	6.0	2.6	2.4	2.4	2.3	2.3	2.3	2.3	2.4	5.1	2.9	6.4	4.2	3.2	3.3	Diurnal Maximum	

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

Hourly Averages for NO_X at Portable-Kinuso
May 2009



Peace Airshed Zone Association
Summary of Hourly Maximums

Portable-Kinuso - Oxides of Nitrogen (NO_X) - ppb
May 1, 2009 to June 1, 2009

Maximum Value: 75.9 ppb on May 25 19:00

Maximum Daily Average: 7.1 ppb on May 25

Minimum Value: 1 ppb on May 30 19:00

Minimum Daily Average: 1.7 ppb on May 27

Maximum Diurnal Average: 6.0 ppb at hour 21

Minimum Diurnal Average: 1.7 ppb at hour 17

Monthly Average: 2.80 ppb

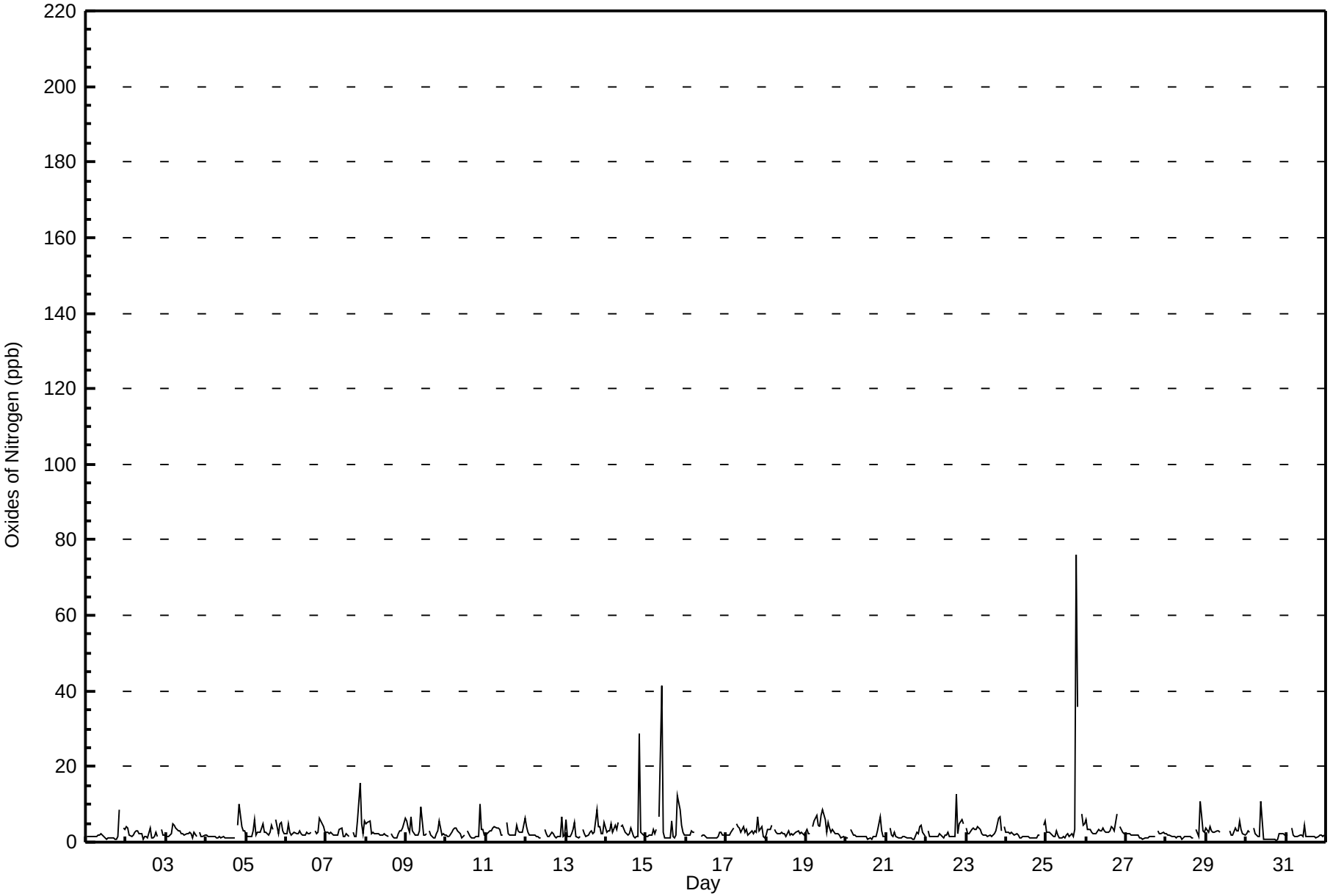
Percentiles: P_1 = 0.8 P_{10} = 1.2 Q_1 = 1.5 Median = 2.1 Q_3 = 3.0 P_{90} = 4.4 P_{99} = 12.4

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	36
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-May	2	1	1	2	2	1	2	2	2	2	2	1	1	1	1	1	1	1	1	2	8	A	4	3	1.8	8.4
2-May	4	4	2	1	2	2	3	3	2	2	1	1	1	1	4	1	1	1	3	2	A	3	2	2	2.1	4.2
3-May	2	2	2	2	5	5	4	3	3	2	2	2	2	2	3	2	1	3	1	A	3	2	2	2	2.4	4.8
4-May	2	2	2	2	1	1	1	1	2	1	1	1	1	1	1	1	1	1	A	4	10	4	3	3	2.1	10.2
5-May	2	2	2	2	3	6	2	3	2	4	5	3	3	2	3	5	3	A	6	2	5	5	3	2	3.2	6.0
6-May	2	5	3	2	2	3	2	2	3	2	2	2	3	2	2	3	A	3	2	3	6	6	4	3	2.9	6.2
7-May	3	3	2	3	2	2	2	2	3	4	1	1	2	2	1	A	2	2	2	5	16	5	2	6	3.2	15.7
8-May	5	5	6	2	3	2	2	2	2	2	2	2	2	2	A	2	2	1	1	2	3	3	4	6	2.8	6.3
9-May	6	4	3	7	3	2	2	2	3	9	2	2	2	A	3	2	1	1	2	3	5	2	2	2	3.0	9.2
10-May	2	2	2	3	3	4	4	3	2	1	1	2	A	3	2	1	1	1	2	2	10	3	3	2	2.5	10.2
11-May	2	2	3	3	4	4	4	4	3	2	2	A	5	2	2	2	2	2	5	3	2	2	3	6	3.0	6.4
12-May	4	3	2	2	2	2	2	1	1	1	A	3	2	1	1	3	2	2	1	1	2	7	1	2	2.1	6.8
13-May	6	1	1	2	3	5	1	1	1	A	3	2	2	2	2	3	2	3	9	4	4	2	2	5	3.0	8.6
14-May	3	3	3	5	3	5	3	5	A	4	4	3	2	2	2	4	2	1	1	2	29	3	2	2	3.9	28.8
15-May	2	2	2	2	3	2	3	A	7	42	3	1	1	1	1	5	2	1	2	12	8	5	2	2	4.9	41.6
16-May	2	2	2	3	3	2	A	4	P	1	2	2	1	1	1	1	1	1	1	2	3	3	2	2	1.9	4.4
17-May	2	2	2	2	4	A	5	4	4	3	4	2	3	2	2	3	2	3	3	7	3	4	2	1	3.0	6.8
18-May	2	3	3	4	A	4	3	2	2	3	2	2	1	3	2	2	2	2	3	3	2	2	2	2	2.5	4.3
19-May	3	2	2	A	4	6	7	4	4	7	8	6	3	5	4	2	3	2	2	2	2	1	1	1	3.7	8.5
20-May	1	1	A	3	2	2	1	1	1	1	1	1	1	1	1	1	2	1	1	3	7	3	1	1	1.8	6.7
21-May	1	A	4	2	2	3	1	1	1	1	1	1	1	1	1	1	1	1	3	2	4	4	3	1	1.8	4.3
22-May	A	3	2	1	1	1	2	2	2	2	1	2	2	3	1	1	1	1	13	2	5	6	5	A	2.7	12.5
23-May	4	2	2	3	4	4	3	4	3	2	2	2	2	1	2	1	2	2	3	6	7	3	A	4	3.0	6.8
24-May	3	3	2	3	2	2	2	2	1	1	1	2	2	1	1	1	1	1	1	2	2	A	4	6	2.0	5.6
25-May	3	3	3	2	2	2	3	2	1	1	2	1	2	2	2	2	2	3	76	36	A	7	4	5	7.1	75.9
26-May	6	3	3	3	2	2	2	3	3	3	4	3	3	3	3	4	4	3	8	A	4	3	3	2	3.3	7.6
27-May	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	A	3	2	2	3	2	1.7	2.9
28-May	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	A	3	2	11	7	3	3	2.3	10.9
29-May	4	2	4	3	2	3	3	3	3	C	C	C	C	A	3	2	2	4	3	3	6	3	2	2	3.0	5.7
30-May	2	3	2	A	4	2	2	1	2	11	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1.9	10.7
31-May	2	2	A	4	2	2	2	2	2	2	2	4	2	2	2	2	2	2	1	1	2	2	2	2	1.9	4.3
	2.8	2.5	2.4	2.6	2.6	2.8	2.6	2.5	2.4	4.1	2.3	2.0	1.9	1.8	1.9	2.1	1.7	1.8	5.5	4.2	6.0	3.7	2.6	2.8	Diurnal Average	
	6.0	5.2	5.6	6.8	4.8	6.0	7.3	5.1	6.9	41.6	8.5	5.9	5.3	5.3	3.8	5.4	3.7	3.8	75.9	35.7	28.8	7.4	4.7	6.4	Diurnal Maximum	

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

Hourly Maximums for NO_X at Portable-Kinuso
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Portable-Kinuso - Ozone (O_3) - ppb
May 1, 2009 to June 1, 2009

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 50.4 ppb on May 29 20:00
Maximum Daily Average: 38.8 ppb on May 30

Minimum Value: 4 ppb on May 8 05:00
Maximum Diurnal Average: 30.1 ppb at hour 17
Monthly Average: 24.87 ppb

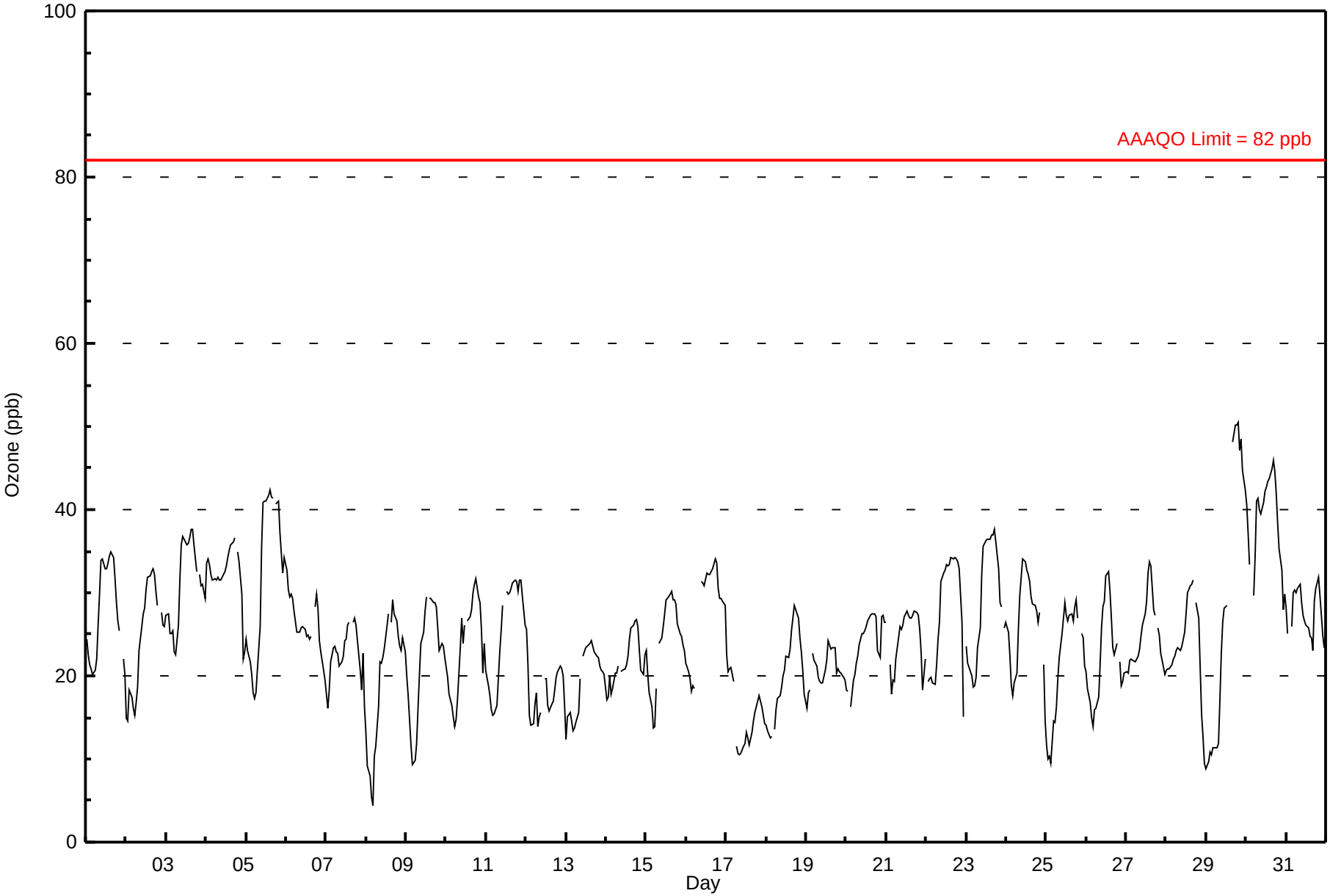
Minimum Daily Average: 15.2 ppb on May 17
Minimum Diurnal Average: 18.2 ppb at hour 4
Percentiles: P_1 = 9.4 P_{10} = 15.4 Q_1 = 20.1 Median = 24.5 Q_3 = 29.6 P_{90} = 34.1 P_{99} = 45.2

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

Day	Hourly Period Ending At (MST) 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-May	24	23	21	21	20	21	22	26	30	34	34	33	33	34	34	35	34	32	29	27	25	A	22	20	27.6	35.0
2-May	15	15	18	18	16	15	17	19	23	26	27	28	30	32	32	33	33	32	30	28	A	28	26	26	24.6	32.8
3-May	27	27	25	25	25	23	23	26	32	36	37	36	36	36	37	38	38	36	33	A	32	31	31	29	31.2	37.6
4-May	33	34	33	32	32	32	32	32	31	31	32	33	33	34	35	36	36	37	A	35	34	30	22	23	32.3	36.6
5-May	24	23	22	20	18	17	18	21	26	35	41	41	41	42	42	42	41	A	41	41	37	35	32	34	31.9	42.3
6-May	33	30	29	30	29	28	25	25	25	26	26	26	25	25	24	25	A	28	30	28	24	23	21	19	26.3	32.6
7-May	18	16	18	22	23	24	23	23	21	22	22	24	24	26	26	A	26	27	26	24	21	18	23	16	22.4	27.0
8-May	13	9	8	5	4	10	11	16	22	21	22	23	25	27	A	27	29	27	27	25	24	23	24	23	19.4	29.2
9-May	20	18	15	12	9	10	12	16	20	24	25	28	30	A	29	29	29	29	28	26	23	24	24	22	21.8	29.6
10-May	21	20	18	16	15	14	15	17	23	27	24	26	A	27	27	28	30	31	32	30	29	26	20	24	23.4	31.7
11-May	21	19	18	16	15	15	16	20	23	25	28	A	30	30	30	31	31	32	31	30	32	32	30	26	25.2	31.6
12-May	26	21	15	14	14	17	18	14	15	16	A	20	20	16	16	17	17	18	20	21	21	21	20	16	17.9	25.5
13-May	12	15	16	15	13	14	14	16	20	A	22	23	23	24	24	24	23	23	22	22	21	21	20	20	19.5	24.2
14-May	17	17	20	18	19	20	20	21	A	21	21	21	21	22	24	26	26	27	27	26	23	21	20	22	21.8	26.9
15-May	23	20	18	16	14	14	19	A	24	25	26	27	29	29	30	30	29	29	29	26	25	25	24	23	24.1	30.1
16-May	22	20	20	18	19	18	A	21	P	31	31	31	32	32	32	32	33	34	33	30	29	29	29	29	27.6	34.0
17-May	23	21	21	21	19	A	11	11	10	11	12	12	13	12	12	13	15	16	16	17	18	16	15	14	15.2	22.6
18-May	14	13	13	13	A	14	16	17	18	19	20	21	22	22	23	25	27	28	28	27	25	23	21	18	20.3	28.4
19-May	16	18	18	A	23	22	21	20	19	19	19	21	22	24	24	23	23	23	20	21	21	20	20	20	20.8	24.2
20-May	18	18	A	16	19	20	22	22	24	25	25	25	26	27	27	27	27	27	27	23	22	27	27	26	24.0	27.5
21-May	27	A	21	18	19	19	22	25	26	26	26	27	28	27	27	27	27	28	28	27	26	23	18	22	24.5	27.8
22-May	A	19	20	20	19	19	21	24	26	31	32	33	33	33	33	34	34	34	34	34	33	26	15	A	27.7	34.3
23-May	24	22	21	20	19	19	20	23	26	32	36	36	36	36	36	37	37	38	36	33	29	28	A	26	29.1	37.7
24-May	26	25	22	19	18	19	20	26	30	32	34	34	33	32	31	30	29	28	28	26	28	A	21	15	26.3	34.1
25-May	12	10	10	9	14	14	16	20	22	25	27	29	27	27	27	27	27	28	29	27	A	25	25	21	21.7	29.2
26-May	20	19	17	15	14	16	16	17	21	26	28	29	32	33	30	27	23	22	24	A	22	19	19	20	22.2	32.5
27-May	20	20	22	22	22	22	22	22	23	25	26	27	29	32	34	33	28	27	A	26	25	23	21	20	24.9	33.7
28-May	21	21	21	21	22	22	23	23	23	23	24	25	28	30	31	31	31	A	29	27	21	15	13	9	23.3	31.5
29-May	9	10	11	11	11	11	11	12	17	23	27	28	28	C	C	A	48	50	50	50	47	49	45	42	28.1	50.4
30-May	41	37	33	A	30	34	41	41	40	39	41	42	43	43	44	45	46	45	42	38	35	33	28	30	38.8	45.9
31-May	28	25	A	26	30	30	30	30	31	29	27	27	26	26	25	25	23	29	30	32	30	27	25	23	27.6	31.9
	21.6	20.2	19.5	18.2	18.9	19.1	19.9	21.6	23.8	26.1	27.5	27.9	28.6	29.0	29.3	29.5	30.1	29.9	29.6	28.5	26.9	25.5	23.4	22.7	Diurnal Average	
	40.7	37.3	33.4	32.2	31.6	34.4	41.1	41.4	39.9	39.4	40.9	42.2	42.7	43.4	43.8	44.9	48.2	50.1	50.2	50.4	47.2	48.5	44.7	42.4	Diurnal Maximum	

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

Hourly Averages for O_3 at Portable-Kinuso
May 2009



Peace Airshed Zone Association
Summary of Hourly Maximums

Portable-Kinuso - Ozone (O_3) - ppb
May 1, 2009 to June 1, 2009

Maximum Value: 52.7 ppb on May 29 17:00

Maximum Daily Average: 41.5 ppb on May 30

Minimum Value: 7 ppb on May 8 05:00

Minimum Daily Average: 16.5 ppb on May 17

Maximum Diurnal Average: 31.7 ppb at hour 17

Minimum Diurnal Average: 20.4 ppb at hour 4

Monthly Average: 26.89 ppb

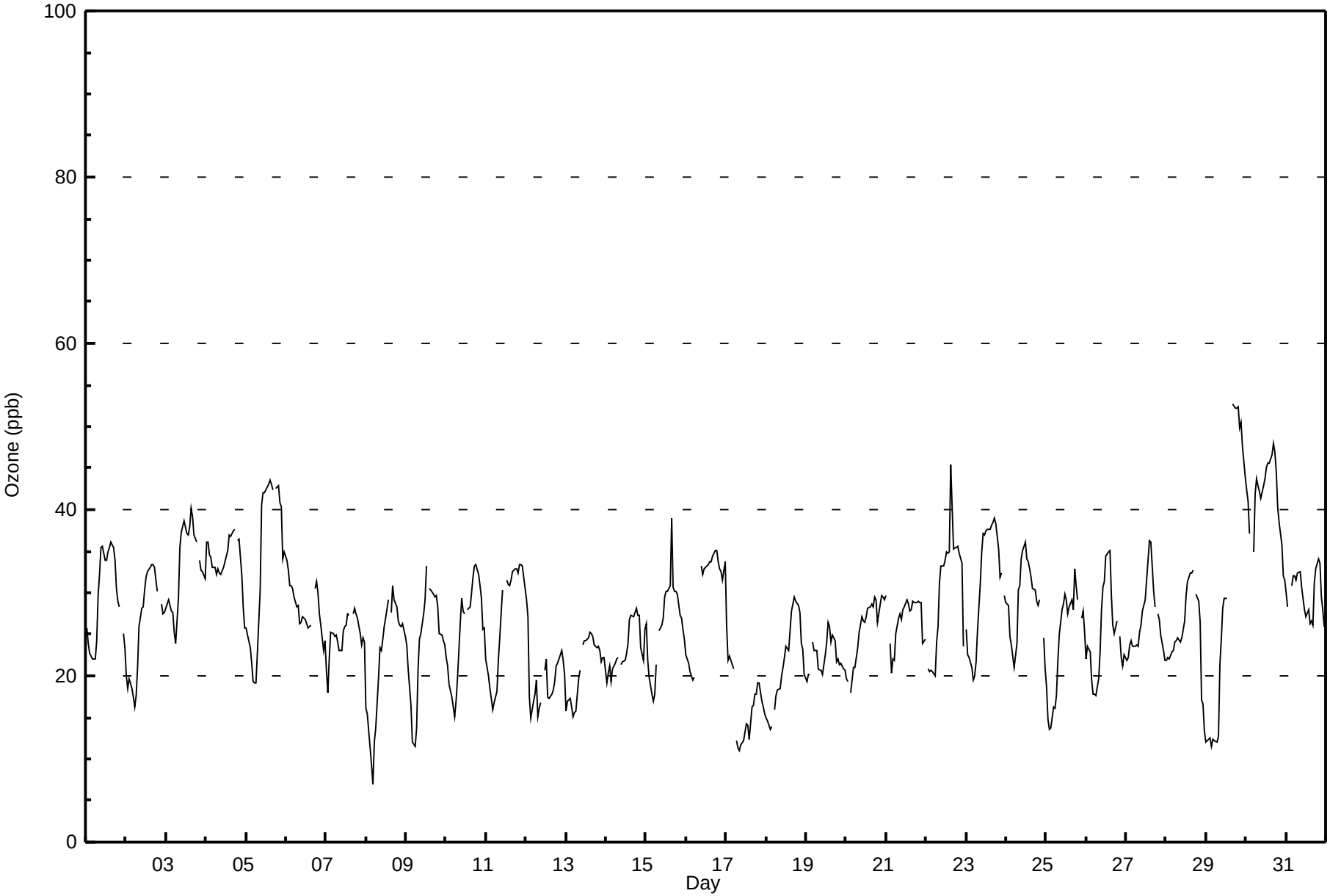
Percentiles: P_1 = 11.6 P_{10} = 17.5 Q_1 = 21.8 Median = 26.6 Q_3 = 31.5 P_{90} = 36.0 P_{99} = 46.9

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

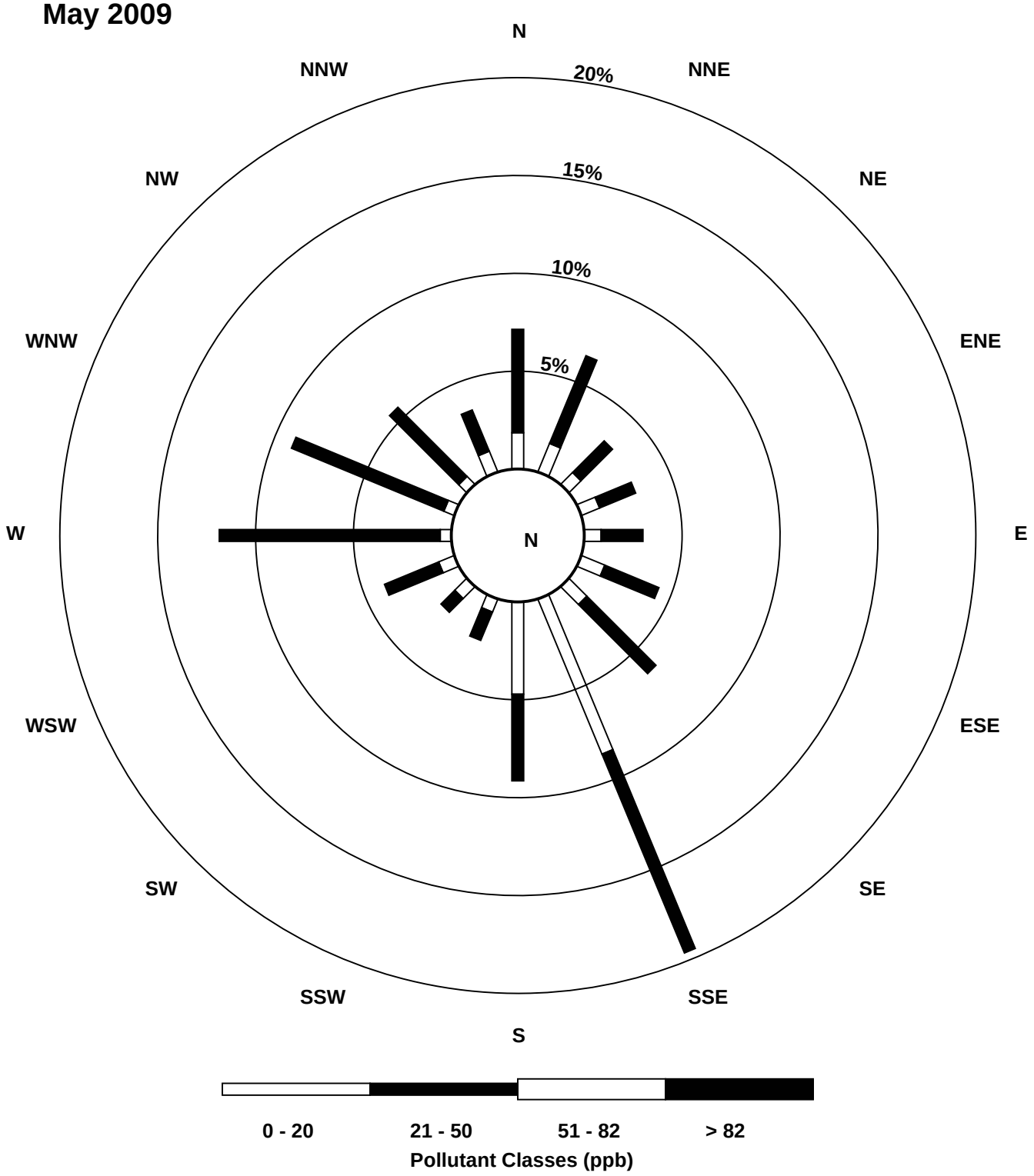
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-May	26	24	23	22	22	22	24	30	32	35	36	34	34	35	35	36	35	34	30	29	28	A	25	23	29.4	36.1
2-May	20	19	20	18	18	16	18	21	26	28	28	30	32	33	33	33	33	33	31	30	A	29	27	28	26.3	33.4
3-May	28	29	28	28	28	25	24	29	35	37	38	39	37	37	38	40	39	37	36	A	34	33	33	32	33.2	40.2
4-May	36	36	35	34	33	33	32	33	32	32	33	34	34	35	37	37	37	38	A	36	36	32	28	26	33.9	37.6
5-May	26	25	23	21	19	19	19	23	30	40	42	42	42	43	44	43	42	A	43	43	41	40	34	35	34.0	43.5
6-May	34	33	31	31	31	29	28	28	26	26	27	27	26	26	26	26	A	31	31	30	28	26	23	24	28.2	33.8
7-May	21	18	22	25	25	25	25	24	23	23	25	26	26	27	27	A	27	28	27	27	25	24	24	24	24.8	28.1
8-May	16	15	11	9	7	12	14	20	23	23	24	26	27	29	A	28	31	29	28	27	26	26	26	25	21.9	30.8
9-May	24	21	19	16	12	12	14	21	24	25	28	29	33	A	30	30	30	30	30	28	25	25	24	24	24.0	33.2
10-May	22	21	19	17	16	15	17	20	26	29	28	27	A	28	28	30	32	33	33	32	31	29	26	26	25.5	33.3
11-May	22	20	19	17	16	17	18	22	25	28	30	A	31	31	31	32	33	33	33	32	33	33	33	31	26.9	33.5
12-May	29	27	17	15	17	18	19	15	16	17	A	21	22	17	17	18	18	19	21	22	23	23	22	20	19.7	29.1
13-May	16	17	17	16	15	16	16	20	21	A	24	24	24	25	25	25	25	24	23	24	23	22	22	22	21.1	25.3
14-May	19	20	21	19	21	21	22	22	A	21	22	22	23	24	27	27	27	28	28	27	27	23	22	26	23.5	28.1
15-May	26	22	20	18	17	18	21	A	25	26	27	29	30	30	31	39	31	30	30	30	27	27	26	24	26.3	39.0
16-May	23	22	21	20	20	20	A	22	P	33	32	33	33	33	34	34	34	35	35	34	33	33	31	34	29.4	35.1
17-May	26	22	22	22	21	A	12	11	11	12	12	13	14	14	12	16	16	18	18	19	19	17	16	15	16.5	26.0
18-May	15	15	14	14	A	16	18	18	18	20	21	22	24	23	25	28	29	30	29	28	28	24	23	20	21.8	29.5
19-May	19	20	20	A	24	23	23	21	21	21	20	23	24	27	26	24	25	24	22	22	21	22	21	21	22.3	26.5
20-May	20	19	A	18	21	21	22	23	25	27	27	26	27	28	28	29	28	29	29	26	29	30	29	29	25.8	29.7
21-May	30	A	24	20	22	22	25	27	27	27	28	28	29	29	28	28	29	29	29	29	29	29	24	24	26.8	29.7
22-May	A	21	20	21	20	20	24	26	31	33	33	34	35	35	35	45	35	35	35	36	35	34	24	A	30.3	45.4
23-May	26	23	22	21	19	20	22	25	31	35	37	37	37	38	38	38	38	39	38	35	32	32	A	30	31.0	39.0
24-May	29	29	25	24	22	21	24	30	31	34	35	36	34	34	33	32	30	30	29	29	29	A	25	21	28.9	36.1
25-May	19	15	14	14	16	16	18	22	25	28	29	30	29	28	28	29	28	33	31	29	A	27	28	25	24.3	32.9
26-May	22	23	23	20	18	18	18	20	23	28	31	31	34	35	35	30	26	25	27	A	25	22	21	23	25.1	35.1
27-May	22	22	24	24	24	24	24	24	25	26	28	29	32	34	36	36	30	28	A	27	27	25	23	22	26.8	36.3
28-May	22	22	22	23	23	24	24	25	24	25	26	27	30	31	32	32	33	A	30	29	26	17	17	13	25.1	32.7
29-May	12	12	12	12	12	12	12	13	21	24	28	29	29	C	C	A	53	52	52	52	50	50	48	44	30.1	52.7
30-May	42	41	37	A	35	42	44	43	42	41	43	44	45	46	46	47	48	47	45	40	38	36	32	32	41.5	48.0
31-May	30	28	A	31	32	32	31	32	33	31	29	28	27	28	26	27	26	31	33	34	34	30	28	26	29.9	34.1
	24.0	22.7	21.5	20.4	20.9	21.0	21.7	23.7	26.1	27.9	29.0	29.4	30.2	30.4	30.8	31.7	31.7	31.4	31.3	30.6	29.7	28.2	26.2	25.6	Diurnal Average	
	42.4	41.0	37.2	34.2	34.9	41.8	43.8	42.9	42.2	41.3	42.8	43.8	45.0	45.6	45.7	46.6	52.7	52.1	52.1	52.4	49.8	50.5	47.7	43.9	Diurnal Maximum	

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

Hourly Maximums for O_3 at Portable-Kinuso
May 2009



Pollutant Rose for O_3 at Portable-Kinuso
May 2009



Peace Airshed Zone Association
Summary of Eight Hour Running Averages

Portable-Kinuso - Ozone (O_3) - ppb
May 1, 2009 to June 1, 2009

Number of Exceedences (AAAQO): 8-hr: 0
Maximum Value: 49.1 ppb on May 29 22:00

Minimum Value: 9.8 ppb on May 8 08:00

Percentiles: P_1 = 11.2 P_{10} = 16.7 Q_1 = 20.4 Median = 24.5 Q_3 = 28.7 P_{90} = 33.1 P_{99} = 43.4

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

Day	Hourly Period Ending At (MST) 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 Maximum
1-May	29	28	26	24	23	22	22	22	23	24	26	27	29	31	32	33	34	34	33	32	31	31	29	27	33.9
2-May	24	22	20	19	18	17	17	17	18	19	20	21	23	25	27	29	30	31	31	31	31	31	30	29	31.4
3-May	28	28	27	26	26	26	25	25	26	27	28	30	31	33	34	36	37	37	36	36	35	35	34	33	36.6
4-May	32	32	32	32	32	32	32	32	32	32	32	32	32	32	33	33	34	34	35	35	35	35	33	31	35.2
5-May	29	27	27	25	23	21	21	20	21	22	25	27	30	33	36	39	41	41	41	41	41	40	38	37	41.4
6-May	36	35	34	33	32	31	30	29	28	27	27	26	26	25	25	25	25	26	26	26	26	26	26	25	36.1
7-May	24	22	21	20	20	20	20	21	21	22	22	23	23	23	24	24	25	25	26	26	25	24	24	23	25.8
8-May	21	19	17	14	12	11	10	10	11	12	14	16	19	21	22	24	25	26	26	27	26	26	26	25	26.6
9-May	24	23	21	20	18	16	15	14	14	15	16	18	21	22	25	26	28	28	29	29	28	27	26	26	28.8
10-May	25	23	22	21	20	19	18	17	17	18	19	20	21	23	24	26	27	28	29	29	29	29	28	28	29.1
11-May	26	25	23	21	20	18	18	17	18	19	20	21	23	25	27	28	29	30	31	31	31	31	31	30	31.0
12-May	30	28	26	24	22	20	19	17	16	15	15	16	17	17	17	17	17	18	18	18	18	19	19	19	29.7
13-May	19	18	18	17	16	15	14	14	15	15	16	17	19	20	22	23	23	23	23	23	23	23	22	22	23.4
14-May	21	20	20	19	19	19	19	19	19	20	20	20	21	21	22	22	23	24	24	25	25	25	24	24	25.2
15-May	24	23	22	21	19	18	18	18	18	18	20	21	23	26	27	28	28	29	29	29	28	28	27	26	29.1
16-May	25	24	23	22	21	20	20	20	19	21	23	25	27	30	30	32	32	32	33	33	32	32	31	31	32.6
17-May	30	28	26	25	24	23	21	18	16	15	14	12	11	12	12	12	12	13	14	14	15	15	16	16	29.6
18-May	16	16	15	15	14	14	14	14	15	15	17	18	18	19	20	21	22	24	25	25	26	26	26	25	25.8
19-May	23	22	21	20	20	19	19	20	20	20	20	20	20	21	21	21	22	22	23	23	22	22	21	21	23.2
20-May	20	20	20	19	19	19	19	19	20	21	22	23	24	24	25	26	26	27	27	27	26	26	26	26	26.8
21-May	26	26	25	24	24	23	22	22	21	22	23	24	25	26	26	27	27	27	27	27	27	27	26	25	27.4
22-May	25	23	22	21	20	20	20	20	21	23	24	26	28	29	31	32	33	33	34	34	34	33	31	30	33.8
23-May	29	27	25	23	21	20	20	21	21	22	24	26	28	31	33	34	36	37	37	36	35	34	34	32	36.6
24-May	31	29	27	25	24	22	22	22	22	23	25	27	28	30	31	32	32	31	31	30	29	29	27	25	31.9
25-May	23	20	17	15	13	13	13	13	15	16	19	21	23	24	25	26	27	27	28	27	27	27	27	26	27.7
26-May	25	24	22	20	19	18	17	17	17	18	19	21	23	25	27	28	29	28	28	27	26	24	22	21	28.5
27-May	21	21	20	21	21	21	21	22	22	22	23	24	25	26	27	29	29	30	30	30	29	28	26	24	30.1
28-May	23	22	22	22	21	21	21	22	22	22	23	23	24	25	26	27	28	29	29	30	29	26	24	21	29.5
29-May	18	17	14	12	11	11	10	11	12	13	15	18	20	21	22	N	N	N	N	N	N	49	48	48	49.1
30-May	47	45	43	42	40	38	37	37	37	37	38	39	40	41	42	42	43	44	44	43	42	41	39	37	46.8
31-May	35	32	31	29	29	28	28	29	29	29	29	29	29	28	28	27	26	26	26	27	27	28	28	27	34.8
Diurnal Maximums	46.8	45.2	43.1	42.0	39.5	37.5	37.0	36.8	36.7	37.0	38.1	38.6	40.2	41.4	41.7	42.1	42.9	43.5	43.7	43.2	42.2	49.1	48.5	47.7	

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

Peace Airshed Zone Association
Summary of Hourly Averages

Portable-Kinuso - External Temperature (ET) - ^{o}C
May 1, 2009 to June 1, 2009

Maximum Value: 24.1 ^{o}C on May 29 16:00

Maximum Daily Average: 15.4 ^{o}C on May 3

Minimum Value: -3 ^{o}C on May 18 05:00

Minimum Daily Average: 0.7 ^{o}C on May 19

Maximum Diurnal Average: 14.4 ^{o}C at hour 15

Minimum Diurnal Average: 3.4 ^{o}C at hour 5

Monthly Average: 9.53 ^{o}C

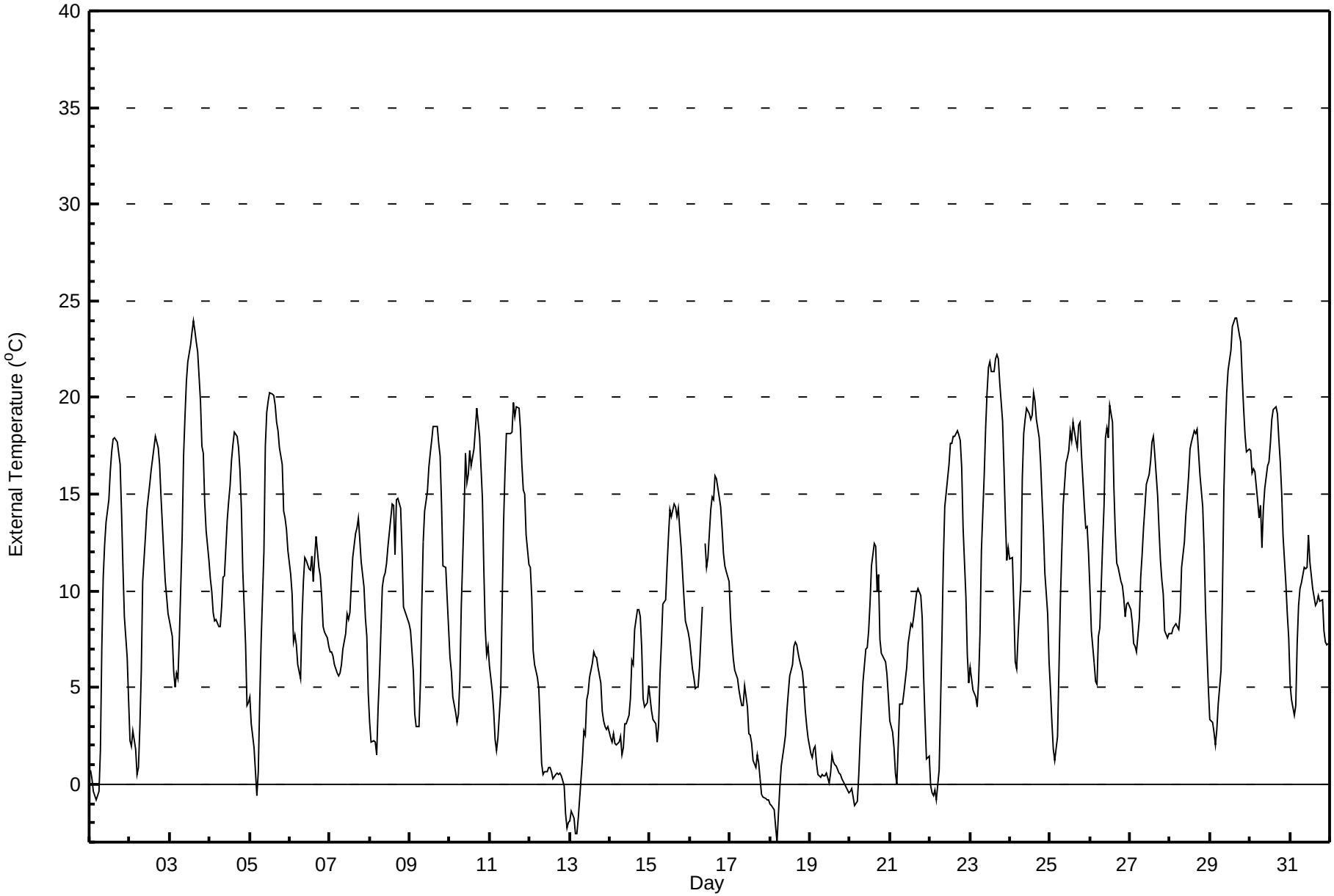
Percentiles: P_1 = -1.8 P_{10} = 0.9 Q_1 = 4.4 Median = 9.0 Q_3 = 14.7 P_{90} = 18.1 P_{99} = 23.3

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

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-May	1	0	0	-1	-1	0	2	7	11	12	14	15	16	17	18	18	18	17	17	14	11	9	7	4	9.3	17.9
2-May	2	2	3	2	0	1	3	6	11	13	14	15	15	16	17	18	18	17	17	15	12	11	10	9	10.2	18.0
3-May	8	8	6	5	6	5	8	13	17	19	21	22	23	23	24	23	23	22	20	18	17	15	13	12	15.4	23.9
4-May	11	10	9	8	8	8	8	9	11	11	14	15	15	17	18	18	18	17	16	14	11	7	4	4	11.8	18.2
5-May	4	3	2	1	-1	1	4	7	12	18	19	20	20	20	20	20	19	18	17	17	14	14	13	12	12.3	20.3
6-May	11	10	7	8	7	6	5	8	10	12	12	11	11	12	11	12	13	11	11	10	8	8	8	7	9.5	12.8
7-May	7	7	7	6	6	6	6	6	7	8	9	8	9	10	12	13	13	14	13	11	10	9	8	5	8.7	13.8
8-May	3	2	2	2	2	4	6	10	11	11	11	12	13	14	14	12	15	15	14	12	9	9	9	8	9.2	14.8
9-May	8	7	6	4	3	3	5	9	12	14	15	16	17	18	18	18	19	18	17	15	11	11	10	8	11.8	18.5
10-May	7	6	5	4	3	4	5	9	14	17	16	16	17	16	17	18	19	19	18	15	11	8	7	7	11.6	19.4
11-May	6	5	4	2	2	2	5	9	14	16	18	18	18	18	20	19	20	19	18	17	15	15	13	11	12.7	19.7
12-May	11	10	7	6	6	5	3	1	0	1	1	1	1	1	0	1	1	0	1	0	0	-2	-2	-2	2.1	11.2
13-May	-2	-1	-2	-3	-3	-2	-1	1	3	3	4	5	5	6	7	7	7	6	5	4	3	3	3	3	2.6	6.8
14-May	2	2	3	2	2	2	3	2	2	3	3	4	4	6	6	8	9	9	9	7	4	4	4	5	4.4	9.0
15-May	4	4	3	3	2	3	6	7	9	10	11	13	14	14	14	14	14	14	13	12	10	8	8	8	9.2	14.5
16-May	7	6	5	5	5	5	6	9	P	12	11	12	14	15	15	16	16	15	14	13	12	11	11	10	10.7	15.9
17-May	9	7	6	6	5	5	4	4	4	5	4	3	3	2	1	1	2	1	0	-1	-1	-1	-1	-1	2.9	8.7
18-May	-1	-1	-1	-2	-3	-2	0	1	2	3	4	5	6	6	7	7	7	7	6	6	5	4	3	2	2.9	7.4
19-May	2	1	2	2	1	0	0	0	0	0	1	0	1	2	1	1	1	1	0	0	0	0	0	0	0.7	2.0
20-May	0	0	-1	-1	-1	1	2	4	5	7	7	8	9	11	12	12	10	11	7	7	7	6	6	5	5.6	12.5
21-May	3	3	2	1	0	2	4	4	5	5	6	7	8	8	9	9	10	10	10	9	6	3	1	1	5.3	10.1
22-May	0	0	-1	0	-1	1	4	8	12	14	16	17	18	18	18	18	18	18	18	16	13	10	7	5	10.2	18.3
23-May	6	5	5	4	4	5	8	12	16	18	20	22	22	21	21	22	22	22	21	19	16	14	12	12	14.6	22.2
24-May	12	12	9	6	6	8	10	16	18	19	19	19	19	19	20	20	19	18	17	15	13	11	9	6	14.2	20.2
25-May	5	3	2	1	2	6	9	12	14	17	17	17	18	18	19	18	17	19	19	17	14	13	13	12	12.6	18.7
26-May	10	8	6	5	5	8	8	12	14	18	18	18	20	19	15	13	11	11	10	10	10	9	9	9	11.6	19.6
27-May	9	8	7	7	7	8	11	12	13	14	15	16	17	18	18	17	15	13	12	11	10	8	8	8	11.7	18.0
28-May	8	8	8	8	8	8	9	11	13	14	15	16	17	18	18	18	18	17	16	14	12	9	7	5	12.3	18.3
29-May	3	3	3	2	3	4	6	10	15	18	20	21	22	24	24	24	24	23	23	21	19	18	17	17	15.3	24.1
30-May	17	16	16	16	15	14	14	12	14	15	16	17	18	19	19	19	19	18	17	15	13	10	9	8	15.3	19.5
31-May	5	4	4	4	7	9	10	10	11	11	11	13	12	10	10	9	9	10	9	10	8	7	7	7	8.7	12.9
	5.8	5.1	4.3	3.7	3.4	4.2	5.6	7.9	10.0	11.5	12.4	12.9	13.6	14.1	14.4	14.3	14.3	13.9	13.1	11.7	9.9	8.4	7.4	6.8	Diurnal Average	
	17.3	16.1	16.3	16.1	14.6	13.8	14.4	15.8	18.1	19.0	20.8	21.9	22.8	23.6	23.9	24.1	24.1	23.3	22.9	21.1	19.4	18.1	17.2	17.3	Diurnal Maximum	

P - Power Failure

Hourly Averages for External Temperature at Portable-Kinuso
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Portable-Kinuso
May 1, 2009 to June 1, 2009
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	7	6	7	7	8	9	5	1	7	6	6	7	7	8	7	7	6	5	4	3	6	3	3	2.2	8.6
Dir	171	176	180	179	180	179	178	167	29	317	352	345	312	308	289	287	289	282	298	304	352	12	316	222	260.8	177.9
2 Spd	3	8	13	11	5	9	11	10	4	4	5	9	10	8	4	5	11	13	12	9	4	6	8	11	2.1	13.0
Dir	197	170	168	159	160	173	164	162	155	20	335	11	20	357	30	10	6	9	17	19	90	156	152	157	97.1	167.9
3 Spd	12	13	9	11	12	11	9	9	9	12	17	18	16	16	14	2	10	7	4	5	7	11	9	6	6.5	18.1
Dir	156	147	160	164	157	173	177	164	151	151	137	149	142	145	138	258	309	306	287	262	274	265	266	269	169.7	149.0
4 Spd	8	7	10	6	8	7	8	9	8	10	11	11	10	10	8	8	7	6	6	5	2	4	4	10	6.2	11.0
Dir	261	258	257	254	263	264	264	259	262	270	275	278	274	281	289	273	274	306	330	345	61	200	187	164	268.1	278.3
5 Spd	16	14	14	11	6	5	6	6	2	7	17	16	14	11	11	10	14	8	5	2	5	10	13	14	7.2	17.2
Dir	162	163	167	171	135	144	159	154	143	120	119	114	131	124	121	69	52	36	58	205	349	36	98	116	120.5	119.4
6 Spd	3	3	7	10	10	7	3	3	5	7	6	4	5	9	10	8	11	12	8	7	5	4	6	4	4.1	12.5
Dir	145	81	118	150	148	166	295	296	318	316	328	312	181	165	156	156	158	155	152	153	133	164	142	182	157.5	154.6
7 Spd	6	6	6	5	7	8	9	9	6	4	1	3	3	3	1	2	4	5	5	4	1	3	2	3	2.1	9.4
Dir	168	161	168	164	146	153	162	154	141	148	215	289	326	338	255	167	298	299	311	5	77	244	221	120	169.5	153.5
8 Spd	2	2	3	5	5	8	7	3	3	5	5	5	5	5	10	9	6	5	6	3	2	4	3	1	2.6	10.2
Dir	143	126	170	183	174	160	155	169	292	301	271	269	273	261	296	311	281	291	292	273	202	256	255	177	254.2	296.4
9 Spd	3	4	3	2	4	6	9	6	2	6	8	9	10	9	8	8	7	10	7	9	4	11	9	7	1.0	11.4
Dir	145	154	184	146	184	180	164	158	113	319	315	310	305	308	305	300	298	338	347	20	124	150	142	151	273.1	150.2
10 Spd	8	10	12	13	15	14	15	12	12	8	6	9	10	5	4	4	7	5	6	5	2	2	6	11	5.4	14.9
Dir	153	170	167	167	162	165	161	157	159	177	306	118	133	28	11	291	274	268	292	301	159	179	169	164	168.2	160.8
11 Spd	14	8	12	8	14	17	14	8	4	6	8	11	10	7	3	5	11	9	7	3	2	9	3	2	4.7	16.9
Dir	164	160	162	150	156	164	154	146	106	11	356	55	44	11	345	23	149	150	130	207	290	147	113	186	136.2	163.7
12 Spd	3	5	6	4	7	7	8	7	6	8	10	11	13	11	10	13	15	13	9	10	11	8	2	2	7.0	14.6
Dir	160	281	318	293	303	326	338	288	296	306	324	330	339	319	324	353	355	357	341	348	3	32	216	173	333.1	355.1
13 Spd	2	4	3	3	3	3	6	3	2	3	3	2	4	6	6	9	10	7	10	9	5	10	5	3	3.7	10.2
Dir	152	157	166	166	160	150	166	176	65	95	110	75	44	46	61	92	119	75	69	100	117	41	42	44	94.0	41.3
14 Spd	4	5	7	5	6	8	4	8	7	3	5	5	5	3	4	2	4	6	2	3	5	6	5	4	2.5	7.7
Dir	39	98	92	58	113	110	130	164	121	110	26	12	353	310	354	54	91	168	159	181	135	162	165	222	110.9	109.9
15 Spd	3	7	5	4	2	3	2	2	4	3	4	4	3	4	2	5	3	1	1	3	6	7	7	10	2.4	10.1
Dir	199	168	171	179	165	175	108	186	155	88	94	183	211	324	321	360	237	308	127	90	145	149	157	156	159.3	155.9
16 Spd	12	13	12	12	14	15	10	5	P	8	8	4	6	9	8	8	8	7	5	2	2	7	3	8	2.8	14.6
Dir	156	155	163	158	158	158	163	169	P	298	306	265	241	261	279	278	290	309	302	275	230	1	4	358	212.7	158.2
17 Spd	7	5	4	8	9	11	10	12	10	5	11	14	15	14	16	17	13	15	14	15	14	8	2	4	10.3	17.2
Dir	357	348	331	1	7	16	19	6	12	340	350	360	6	357	2	14	24	22	22	15	26	22	31	354	9.1	14.5
18 Spd	4	3	6	4	5	7	10	11	11	8	7	7	6	7	8	9	11	12	10	9	8	7	3	4	6.3	11.6
Dir	344	346	42	95	91	89	111	122	122	101	114	123	122	115	145	134	122	109	100	115	150	143	97	62	112.5	109.0
19 Spd	3	6	4	2	12	9	7	9	9	10	7	6	7	9	11	10	9	9	5	N	N	N	N	N	6.6	11.9
Dir	59	51	145	91	91	61	28	31	55	57	61	36	38	24	29	15	19	1	351	N	N	N	N	N	41.3	91.4
20 Spd	N	N	N	N	N	N	5	7	4	5	6	6	8	7	9	9	9	8	7	2	3	2	5	4	4.6	9.2
Dir	N	N	N	N	N	N	173	167	201	243	261	258	268	260	265	281	310	283	270	165	263	295	288	289	261.9	281.4
21 Spd	5	6	4	2	2	1	4	7	9	8	8	7	7	8	8	6	8	5	8	7	3	2	7	11	1.5	10.6
Dir	180	149	180	223	250	261	295	303	306	295	301	304	324	23	24	16	8	26	48	62	87	186	166	161	342.0	161.0
22 Spd	10	10	11	13	12	11	9	9	6	5	4	5	1	9	8	10	8	9	7	3	2	2	3	6	2.8	12.8
Dir	156	160	161	163	169	174	169	163	141	144	139	113	43	1	350	358	11	1	12	50	137	188	195	173	141.4	162.9

Peace Airshed Zone Association
Summary of Hourly Averages

Portable-Kinuso
May 1, 2009 to June 1, 2009
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	10	12	13	14	11	12	12	8	2	5	3	5	7	9	10	9	10	8	8	6	1	3	5	6	2.7	13.5
Dir	163	167	168	169	171	162	157	149	81	20	27	69	346	353	12	41	42	33	13	21	346	182	178	159	119.4	168.8
24 Spd	7	9	5	4	5	7	5	4	6	7	8	7	9	10	10	9	14	18	15	11	7	5	2	2	3.1	18.1
Dir	163	171	175	176	171	174	164	177	259	266	269	286	289	294	292	299	350	357	352	2	351	18	359	250	303.8	357.3
25 Spd	2	2	1	2	8	5	5	8	9	6	4	3	9	12	10	10	4	3	7	5	4	4	4	2	2.1	12.3
Dir	218	215	191	175	166	162	160	157	164	154	63	51	29	23	18	354	348	126	107	85	73	73	146	353	92.5	23.0
26 Spd	4	2	2	4	5	4	3	1	3	4	6	7	8	1	3	6	2	3	1	3	2	3	4	5	1.3	7.5
Dir	62	192	189	185	182	176	193	89	332	147	95	157	130	63	350	320	43	266	346	188	207	195	245	254	176.6	129.7
27 Spd	5	3	3	5	5	4	6	8	7	8	8	8	8	7	7	9	11	11	8	4	3	3	3	3	5.6	11.1
Dir	259	243	238	269	268	255	270	269	271	272	263	273	266	263	279	302	300	293	290	253	219	174	182	270	271.2	300.2
28 Spd	3	4	4	6	7	5	5	7	8	8	8	9	7	8	8	9	9	9	8	5	6	1	1	3	5.6	9.1
Dir	249	231	251	263	265	252	264	274	277	270	272	274	263	264	265	279	281	298	302	303	13	358	269	215	274.3	298.4
29 Spd	2	3	4	7	9	8	7	6	9	8	7	8	8	10	12	14	15	15	16	16	14	14	15	17	9.8	16.5
Dir	180	174	151	149	165	168	147	169	161	152	137	127	124	125	146	153	152	141	135	135	136	142	150	151	146.0	150.6
30 Spd	16	5	3	7	7	5	8	9	7	7	9	9	9	7	9	11	11	11	11	8	4	2	3	3	6.0	16.2
Dir	156	155	246	279	290	287	281	280	276	269	272	282	271	258	259	269	272	281	270	273	283	194	200	206	263.2	156.5
31 Spd	3	4	4	3	3	5	4	6	7	7	8	10	9	8	7	6	8	9	6	6	2	3	2	2	4.4	9.6
Dir	173	159	168	175	231	255	258	266	281	288	292	287	284	283	309	321	309	315	301	299	294	268	287	260	282.2	286.6
Spd	4.3	4.6	4.7	4.5	4.7	4.7	4.1	3.2	1.3	1.2	1.8	1.2	1.6	2.8	2.6	3.5	3.1	3.3	2.8	1.7	1.1	1.5	2.5	3.1	Diurnal Average	
Dir	164.0	164.6	169.9	170.8	166.6	166.7	169.6	178.2	187.8	278.7	319.2	330.5	327.7	330.5	329.9	335.6	339.5	344.2	356.6	20.7	79.5	131.6	161.4	166.3		
Spd	16.2	14.3	14.2	13.5	14.8	16.9	14.9	12.3	11.6	12.1	17.2	18.1	15.5	15.6	16.3	17.2	14.6	18.1	15.8	15.8	14.0	14.4	15.4	16.5	Diurnal Maximum	
Dir	156.5	163.0	167.2	168.8	162.5	163.7	160.8	6.4	159.1	151.4	119.4	149.0	142.4	145.3	2.1	14.5	152.0	357.3	135.0	135.2	25.9	142.4	149.5	150.6		

Maximum Speed Value: 18 km/h on May 24 18:00
Maximum Daily Speed Average: 10.3 km/h on May 17
Maximum Diurnal Speed Average: 4.7 km/h at hour 6

Minimum Speed Value: 1 km/h on May 7 15:00
Minimum Daily Speed Average: 1.0 km/h on May 26
Minimum Diurnal Speed Average: 1.1 km/h at hour 21

Monthly Average Velocity: 0.77 km/h 177.61 deg

Speed Percentiles: P_1 = 1.1 P_{10} = 2.5 Q_1 = 4.0 Median = 6.7 Q_3 = 9.1 P_{90} = 11.7 P_{99} = 16.2

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

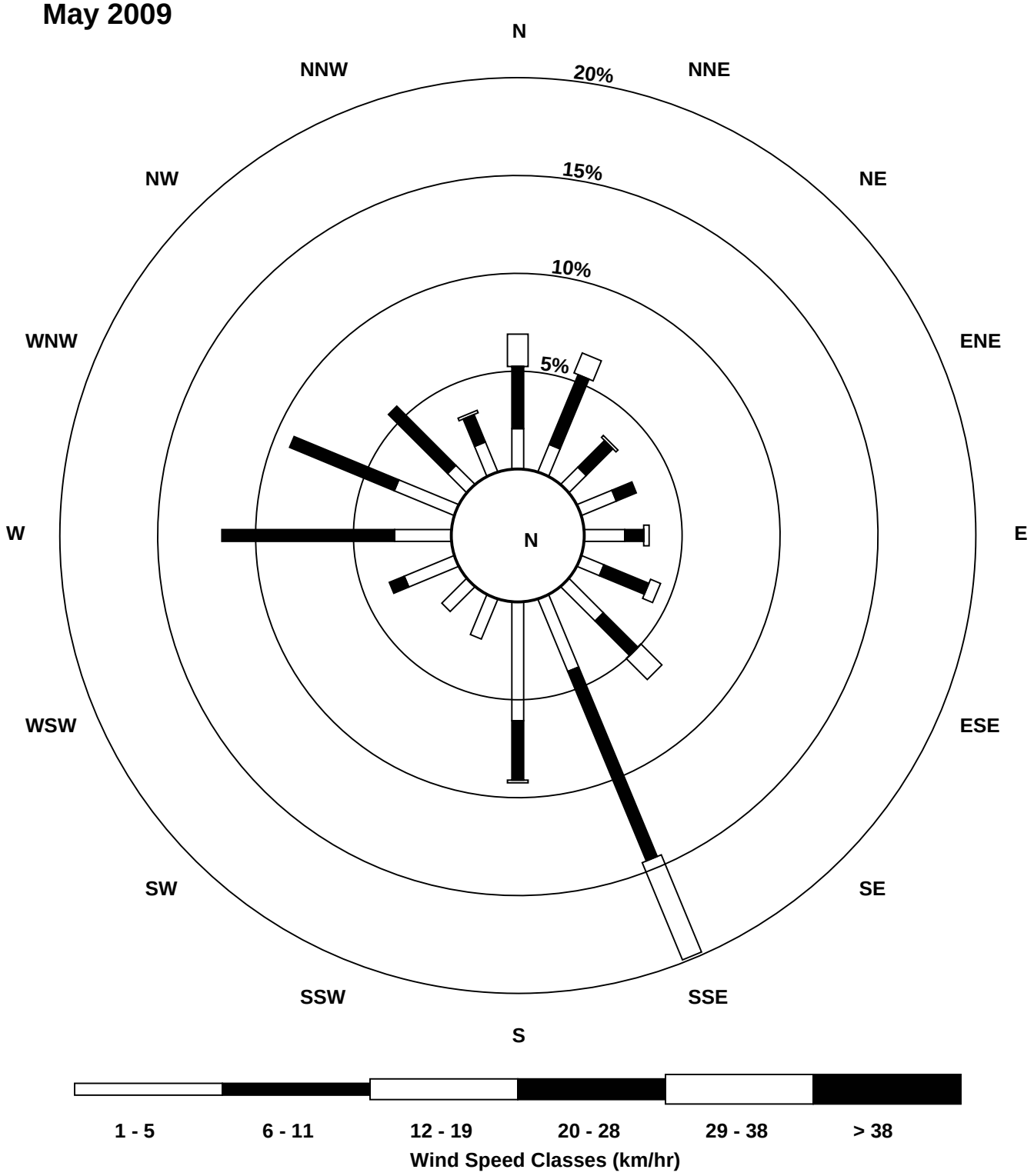
Hours in Service:	744
Hours of Data:	732
Hours of Missing Data:	12
Percent Operational Time:	98.4

P - Power Failure N - Not Valid

Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	24	51	21	0	0	0	96
NorthEast	24	28	6	0	0	0	58
East	24	14	3	0	0	0	41
SouthEast	29	70	33	0	0	0	132
South	68	68	25	0	0	0	161
SouthWest	24	2	0	0	0	0	26
West	37	99	3	0	0	0	139
NorthWest	21	56	2	0	0	0	79
Total	251	388	93	0	0	0	732

Wind Rose for WS at Portable-Kinuso
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages - Wind Speed (Scalar)

Portable-Kinuso - Wind Speed (WS) - km/h
May 1, 2009 to June 1, 2009

Maximum Speed: 19 km/h on May 3 12:00

Maximum Daily Speed Average: 11.0 km/h on May 5

Minimum Speed: 2 km/h on May 13 00:00

Minimum Daily Speed Average: 4.8 km/h on May 26

Maximum Diurnal Speed Average: 9.7 km/h at hour 17

Minimum Diurnal Speed Average: 5.5 km/h at hour 23

Monthly Average Speed: 7.68 km/h

Percentiles: $P_1 = 2.2$ $P_{10} = 3.6$ $Q_1 = 5.1$ Median = 7.4 $Q_3 = 9.8$ $P_{90} = 11.9$ $P_{99} = 16.9$

Hours in Service:	744
Hours of Data:	732
Hours of Missing Data:	12
Percent Operational Time:	98.4

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-May	8	7	7	8	7	8	9	5	6	7	8	8	8	9	8	8	8	7	5	4	4	6	4	3	6.7	8.9
2-May	4	8	13	11	5	9	11	10	5	5	7	11	11	9	7	8	12	13	13	9	5	6	9	11	8.7	13.1
3-May	12	13	9	11	12	11	9	9	10	13	18	19	16	16	15	9	10	8	4	5	8	11	9	7	11.0	18.9
4-May	8	8	10	6	8	8	8	10	8	10	11	11	10	10	9	8	8	7	7	6	4	4	4	10	8.1	11.3
5-May	16	14	14	11	6	5	6	6	4	10	18	17	15	12	12	11	14	11	10	6	6	11	13	15	11.0	18.0
6-May	5	6	7	10	10	8	4	4	6	7	7	5	6	9	10	9	11	13	9	8	6	5	6	4	7.2	12.7
7-May	6	6	6	5	7	8	9	9	7	4	3	3	4	4	6	5	5	6	5	5	3	3	3	3	5.2	9.5
8-May	2	2	3	5	5	8	7	4	4	6	6	6	6	6	11	9	6	6	6	3	2	4	4	3	5.2	11.0
9-May	4	4	3	3	4	6	9	7	3	7	8	10	10	9	9	9	7	11	8	9	6	11	9	8	7.3	11.5
10-May	8	10	12	13	15	15	15	12	12	9	7	11	11	6	6	6	8	5	6	5	2	3	6	11	8.9	15.0
11-May	14	10	12	9	14	17	14	9	5	7	9	12	11	7	6	6	12	9	7	7	8	10	4	4	9.3	17.0
12-May	4	6	6	5	7	7	9	7	7	8	10	11	13	12	10	13	15	14	9	10	11	9	2	2	8.6	14.8
13-May	3	4	4	3	4	3	6	4	4	4	5	4	7	8	8	10	11	8	11	10	6	10	6	4	6.1	10.6
14-May	4	5	8	6	6	8	8	8	7	4	5	6	6	5	5	5	6	7	4	3	5	6	6	4	5.7	8.2
15-May	4	7	5	4	2	3	3	5	5	7	5	6	7	7	5	7	5	6	5	3	6	7	7	10	5.5	10.2
16-May	12	14	12	12	15	15	10	6	P	8	8	6	7	9	8	9	8	8	5	3	2	7	5	8	8.6	14.7
17-May	8	6	4	9	9	12	10	12	10	6	12	14	15	14	17	17	13	15	14	15	14	8	2	4	10.9	17.4
18-May	4	3	6	5	5	7	10	11	12	10	8	9	9	9	10	10	12	12	10	9	8	7	4	4	8.1	12.1
19-May	4	6	5	3	13	9	7	9	9	10	7	6	7	9	11	10	9	9	6	N	N	N	N	N	7.9	13.0
20-May	N	N	N	N	N	N	5	7	5	6	7	6	9	7	9	10	10	8	8	3	5	4	6	5	6.7	9.6
21-May	5	6	4	3	3	2	4	7	9	8	9	8	8	10	10	9	9	6	8	7	4	2	7	11	6.7	10.7
22-May	10	11	11	13	12	11	9	9	7	6	6	8	7	11	10	11	10	10	7	4	3	2	3	6	8.1	12.9
23-May	10	12	13	14	11	12	12	8	4	5	7	7	8	10	11	10	11	9	8	6	3	4	5	6	8.6	13.5
24-May	7	10	5	4	6	7	6	6	7	8	8	8	9	10	10	10	15	19	15	11	7	5	3	2	8.3	18.5
25-May	2	3	2	3	8	5	6	8	10	7	7	6	12	13	11	10	5	6	7	5	4	4	5	4	6.3	12.6
26-May	4	3	3	4	5	4	3	3	4	5	6	8	8	7	7	7	5	4	4	3	3	4	4	5	4.8	8.4
27-May	5	4	4	5	5	5	7	9	8	8	8	9	9	8	9	9	11	11	9	4	3	3	3	4	6.7	11.4
28-May	4	5	5	6	7	6	6	8	8	8	9	9	8	9	9	10	9	10	8	5	6	3	3	4	6.8	9.8
29-May	3	4	4	8	9	8	7	6	10	9	8	10	10	11	13	14	15	15	16	16	14	15	15	17	10.6	16.6
30-May	17	7	4	7	7	6	8	9	8	8	9	10	10	8	10	12	12	11	11	8	4	2	3	3	8.1	16.6
31-May	3	4	4	4	4	5	5	7	8	8	9	10	9	8	9	8	8	9	7	7	3	3	3	2	6.2	10.2
	6.7	6.9	6.9	7.0	7.7	7.9	7.8	7.5	7.0	7.4	8.3	8.8	9.2	9.1	9.4	9.3	9.7	9.3	8.2	6.7	5.5	6.0	5.5	6.1	Diurnal Average	
	16.6	14.4	14.2	13.5	14.8	17.0	15.0	12.4	12.1	12.7	18.0	18.9	16.4	16.2	16.6	17.4	15.3	18.5	15.9	16.0	14.2	14.5	15.5	16.6	Diurnal Maximum	

P - Power Failure N - Not Valid

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

Peace Airshed Zone Association
Summary of Hourly Standard Deviations

Portable-Kinuso - Wind Direction (WD) - deg
May 1, 2009 to June 1, 2009

Maximum Value: 94.4 deg on May 26 19:00

Minimum Value: 3.3 deg on May 23 02:00

Percentiles: P_1 = 3.8 P_{10} = 8.7 Q_1 = 14.6 Median = 23.2 Q_3 = 37.7 P_{90} = 60.5 P_{99} = 87.8

Hours in Service:	744
Hours of Data:	732
Hours of Missing Data:	12
Hours of Calibration:	0
Percent Operational Time:	98.4

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-May	13	11	15	16	10	7	15	17	88	25	45	43	35	29	24	24	23	15	20	19	40	20	52	24	87.9
2-May	38	15	5	17	28	10	8	8	42	67	49	35	29	46	71	58	23	13	11	12	38	13	7	6	70.6
3-May	4	4	12	10	8	12	9	10	16	18	15	17	19	17	26	77	13	14	18	13	14	13	17	18	76.8
4-May	20	18	18	23	16	15	16	20	18	14	15	15	15	21	28	23	25	36	43	24	62	11	13	12	62.1
5-May	4	4	6	11	18	25	15	17	72	70	17	26	20	20	28	26	13	39	72	70	66	31	14	26	72.2
6-May	44	68	20	16	8	42	31	38	24	17	24	37	46	16	8	14	11	11	11	11	22	32	18	16	68.4
7-May	11	11	16	15	8	6	7	8	13	22	76	44	45	57	93	76	45	36	24	56	67	26	43	26	92.9
8-May	32	49	37	13	15	5	6	52	48	26	20	22	44	44	24	30	29	24	19	36	18	32	71	79	79.4
9-May	55	26	21	36	33	10	7	37	72	43	19	24	16	28	31	27	25	30	29	16	50	7	5	20	71.8
10-May	9	5	5	6	3	5	6	6	10	43	27	52	28	50	54	58	25	30	25	32	63	26	17	4	62.7
11-May	4	57	9	30	5	4	5	12	59	32	27	20	32	40	71	65	23	15	13	64	89	31	42	69	88.8
12-May	54	30	27	22	23	17	23	11	14	11	17	17	18	12	17	13	12	15	17	13	14	20	35	30	53.7
13-May	17	20	26	21	41	40	14	44	72	59	62	77	67	47	60	33	24	33	22	26	30	9	63	66	77.1
14-May	23	23	32	22	20	21	54	16	14	49	36	37	54	62	63	84	62	35	70	15	20	14	26	35	84.4
15-May	34	8	24	19	10	21	61	78	62	66	63	68	73	60	82	65	57	82	78	30	11	11	18	4	82.1
16-May	7	5	5	5	5	6	8	68	P	15	13	48	31	17	18	17	19	18	23	39	21	41	79	38	79.2
17-May	10	13	23	23	10	9	9	6	11	36	22	14	12	16	12	9	13	9	12	12	7	12	66	32	65.8
18-May	36	38	17	26	15	19	10	17	19	50	46	57	56	54	59	31	26	16	16	15	17	10	33	17	58.9
19-May	28	8	39	61	24	8	13	10	10	12	13	13	10	9	8	9	16	11	20	N	N	N	N	N	60.7
20-May	N	N	N	N	N	N	9	11	34	35	25	27	21	21	17	18	20	15	38	67	73	79	44	51	79.0
21-May	26	42	17	36	32	58	19	16	13	17	21	28	43	49	41	59	47	59	22	19	31	22	15	7	59.1
22-May	5	6	5	6	4	5	11	10	26	44	67	60	92	34	40	26	37	19	19	37	22	16	13	14	92.4
23-May	7	3	5	4	5	7	5	13	67	45	75	57	45	32	30	39	29	23	16	9	88	32	33	29	88.1
24-May	28	21	21	27	14	9	12	45	34	29	24	26	17	15	17	16	23	12	10	12	14	22	77	30	76.6
25-May	25	49	51	50	7	19	20	17	17	36	65	69	52	13	27	21	38	65	24	18	23	23	42	68	68.6
26-May	23	50	35	16	15	21	46	79	64	43	32	36	29	84	74	42	90	45	94	28	41	19	29	26	94.4
27-May	31	38	39	24	19	37	22	20	24	22	22	23	23	28	38	35	12	12	17	40	31	18	27	44	43.6
28-May	37	31	29	26	21	23	24	21	22	27	21	23	29	30	24	27	20	18	14	18	31	88	65	42	87.5
29-May	46	42	29	17	9	13	13	17	17	22	37	40	55	28	24	16	14	12	9	9	8	8	6	6	55.1
30-May	15	65	44	17	24	26	17	18	24	28	22	23	25	28	23	18	19	17	15	16	49	35	24	23	65.1
31-May	14	31	18	33	45	28	32	29	22	29	22	19	27	22	40	39	18	16	25	28	63	29	60	54	63.4
	54.5	68.4	50.9	60.7	45.3	58.2	60.9	78.7	87.9	70.3	75.8	77.1	92.4	83.8	92.9	84.4	89.8	82.1	94.4	70.3	88.8	87.5	79.2	79.4	

P - Power Failure N - Not Valid

PASZA
Valleyview Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association
Summary of Hourly Averages

Valleyview - Sulphur Dioxide (SO_2) - ppb
May 1, 2009 to June 1, 2009

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 6.4 ppb on May 12 00:00 Maximum Daily Average: 0.5 ppb on May 7

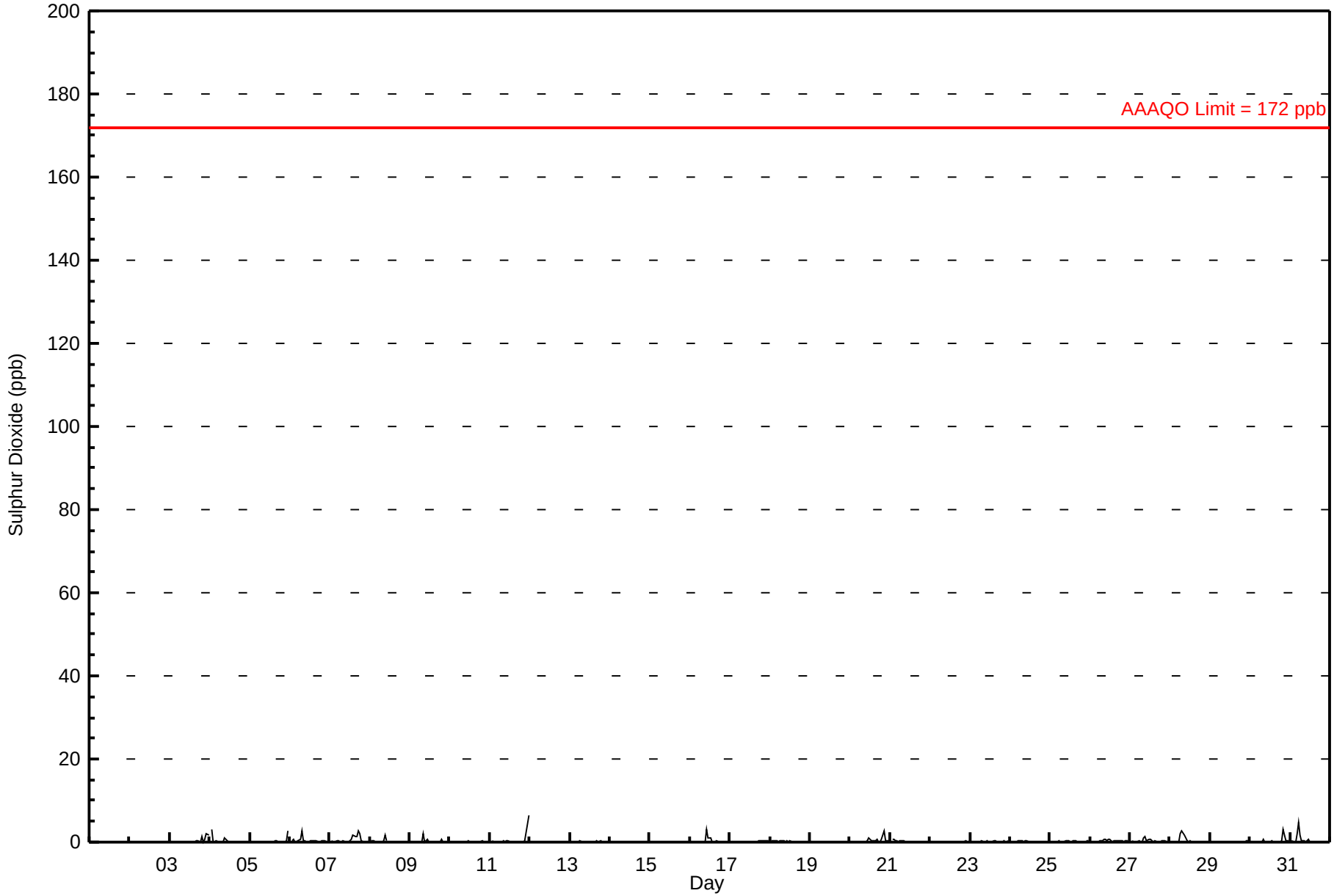
Minimum Value: 0 ppb on May 1 02:00 Minimum Daily Average: 0.0 ppb on May 2
Maximum Diurnal Average: 0.4 ppb at hour 24 Minimum Diurnal Average: 0.0 ppb at hour 4
Monthly Average: 0.18 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.2 P_{90} = 0.3 P_{99} = 2.9

Hours in Service:	744
Hours of Data:	705
Hours of Missing Data:	39
Hours of Calibration:	35
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-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	0	P	0	0	0	0	0	0	0.0	0.2
2-May	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
3-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	2	0.3	1.9
4-May	A	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	3.0
5-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.2	2.6
6-May	A	0	1	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.9
7-May	A	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	1	3	2	0	0	0	0	0	0.5	2.9
8-May	A	0	0	0	0	0	0	0	0	2	0	P	P	0	0	0	0	0	0	0	0	0	0	0	0.1	1.6
9-May	A	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.2	2.1
10-May	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
11-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	6	0.5	6.4
12-May	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
13-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
14-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
15-May	A	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
16-May	A	0	0	0	0	0	0	0	0	0	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0.2	2.9
17-May	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-May	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
19-May	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
20-May	A	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	1	3	0	0	0	0.3	2.6
21-May	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7
22-May	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
23-May	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
24-May	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-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
26-May	A	0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8
27-May	A	0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	1.3
28-May	A	0	0	0	0	0	2	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.7
29-May	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-May	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0.2	3.0
31-May	A	0	0	0	2	5	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	4.9
	--	0.2	0.1	0.0	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.2	0.4	Diurnal Average	
	--	3.0	0.6	0.3	1.9	4.9	2.1	2.9	2.1	1.6	2.9	0.9	0.9	0.7	1.6	1.5	1.3	2.9	2.0	1.3	3.0	0.8	2.2	6.4	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 Valleyview
May 2009



Peace Airshed Zone Association
Summary of Hourly Maximums

Valleyview - Sulphur Dioxide (SO_2) - ppb
May 1, 2009 to June 1, 2009

Maximum Value: 13.2 ppb on May 9 09:00

Maximum Daily Average: 2.3 ppb on May 7

Minimum Value: 0 ppb on May 16 23:00

Minimum Daily Average: 0.3 ppb on May 2

Maximum Diurnal Average: 1.8 ppb at hour 12

Minimum Diurnal Average: 0.6 ppb at hour 4

Monthly Average: 1.19 ppb

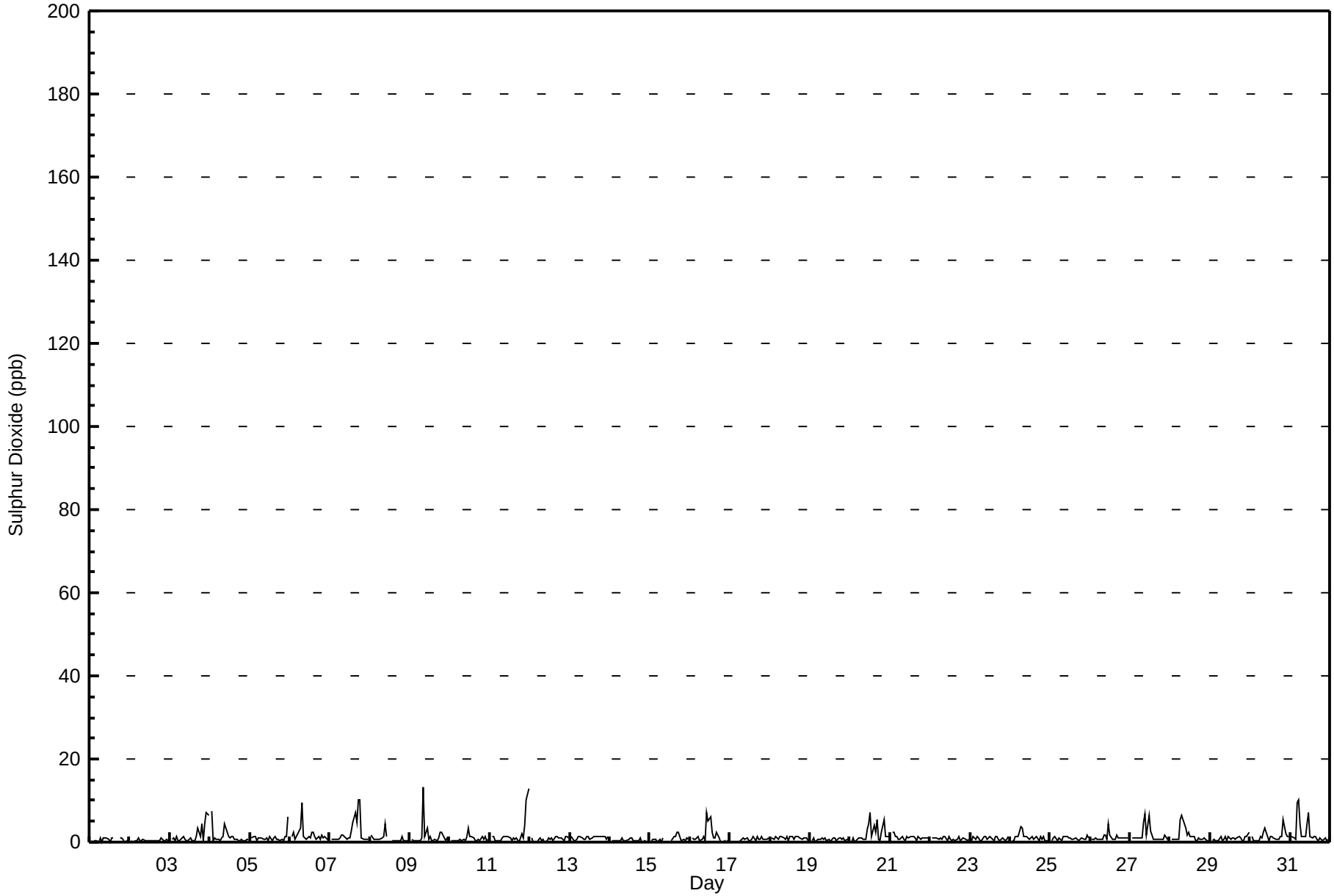
Percentiles: P_1 = 0.1 P_{10} = 0.3 Q_1 = 0.5 Median = 0.9 Q_3 = 1.3 P_{90} = 1.8 P_{99} = 9.3

Hours in Service:	744
Hours of Data:	705
Hours of Missing Data:	39
Hours of Calibration:	35
Percent Operational Time:	99.5

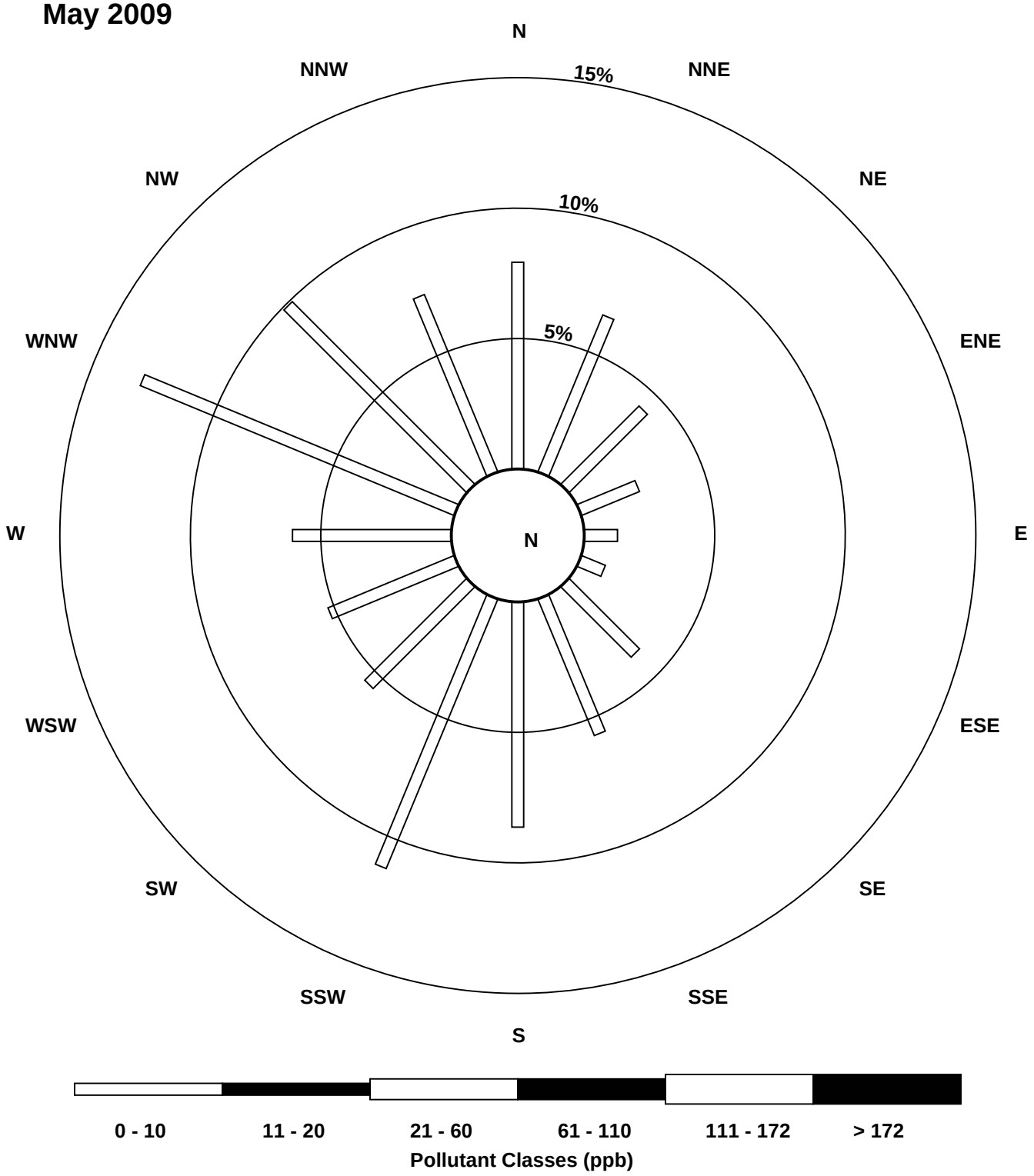
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-May	A	0	0	0	0	0	1	0	1	1	1	1	0	1	1	P	1	P	1	1	1	0	0	1	0.7	1.2
2-May	A	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0.3	1.0
3-May	A	1	1	0	1	0	0	1	1	1	0	0	1	0	0	0	1	3	1	4	0	4	7	6	1.7	7.1
4-May	A	7	0	1	1	1	0	1	1	4	2	1	1	1	1	1	1	0	0	1	0	0	1	1	1.3	7.4
5-May	A	1	1	1	0	1	1	1	1	1	1	0	1	0	1	1	1	1	0	1	0	1	1	6	1.1	6.1
6-May	A	1	2	1	1	2	3	10	2	1	1	1	1	2	2	1	1	1	1	2	1	1	1	1	1.7	9.5
7-May	A	1	1	1	1	1	1	2	2	1	1	1	1	3	5	7	5	10	10	1	1	1	1	1	2.3	10.0
8-May	A	2	1	1	1	1	1	1	1	4	1	P	P	0	0	0	0	0	0	1	0	0	0	0	0.9	4.5
9-May	A	1	0	0	0	0	0	1	13	1	3	1	1	0	0	1	0	1	2	2	2	0	1	0	1.4	13.2
10-May	A	0	0	0	0	0	1	0	1	0	1	3	1	1	1	0	0	1	0	1	1	1	0	1	0.8	3.3
11-May	A	1	1	0	0	1	0	1	1	1	1	1	1	0	1	1	1	0	1	2	1	4	10	13	2.0	13.0
12-May	A	1	0	0	0	1	1	0	1	0	0	1	1	1	0	1	1	1	1	1	0	1	1	1	0.7	1.3
13-May	A	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.3
14-May	A	0	0	0	0	0	0	1	0	0	0	1	1	1	0	0	0	0	1	0	0	0	0	0	0.4	1.2
15-May	A	0	1	1	0	0	1	0	1	C	C	C	C	0	1	1	2	2	1	0	1	0	1	1	0.9	2.3
16-May	A	1	1	1	1	1	0	1	1	0	7	5	6	2	1	1	2	1	0	0	0	0	0	1	1.5	7.2
17-May	A	0	0	0	0	0	0	1	1	1	1	0	0	1	1	0	1	1	1	1	1	1	1	1	0.6	1.4
18-May	A	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	1.0	1.5
19-May	A	0	1	0	0	1	1	1	1	1	0	1	0	1	1	1	0	1	1	1	1	0	1	1	0.7	1.1
20-May	A	0	1	0	1	1	1	1	1	1	3	4	7	1	4	2	5	1	0	2	5	1	1	1	2.1	7.2
21-May	A	2	2	1	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1.1	2.4
22-May	A	1	1	1	1	1	1	1	1	1	0	1	1	0	1	0	1	1	0	1	1	1	0	1	0.8	1.3
23-May	A	0	1	1	1	1	0	0	1	1	1	1	1	1	0	1	1	1	0	1	1	0	1	1	0.9	1.4
24-May	A	0	0	1	1	1	4	3	1	1	1	1	1	1	1	1	1	0	1	1	1	0	0	0	1.2	3.7
25-May	A	0	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	0.9	1.5
26-May	A	1	1	1	1	1	1	1	2	2	1	4	2	1	1	1	2	1	1	1	1	1	1	1	1.1	4.5
27-May	A	1	1	1	1	1	1	1	5	7	2	6	3	2	1	1	1	1	1	1	1	2	1	1	1.7	6.8
28-May	A	1	1	1	1	1	6	7	5	4	2	2	1	1	1	0	0	1	1	1	1	1	0	0	1.6	6.5
29-May	A	0	1	0	0	0	1	0	1	1	0	1	1	1	1	1	1	1	1	0	0	1	1	2	0.8	2.3
30-May	A	1	0	0	0	0	1	1	2	3	1	0	1	1	1	1	1	1	1	1	5	2	1	1	1.3	5.3
31-May	A	1	1	1	10	10	4	1	1	1	4	7	1	1	1	1	1	0	1	0	1	1	0	1	2.2	10.2
	--	1.0	0.8	0.6	0.9	1.0	1.2	1.4	1.7	1.5	1.4	1.8	1.4	1.1	1.1	1.1	1.2	1.2	1.1	1.1	1.0	1.0	1.3	1.5	Diurnal Average	
	--	7.4	2.5	1.5	9.5	10.2	5.5	9.5	13.2	6.8	7.2	7.2	7.2	2.6	4.6	7.3	5.3	10.0	10.0	4.4	5.3	4.4	10.0	13.0	Diurnal Maximum	

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

Hourly Maximums for SO_2 at Valleyview
May 2009



Pollutant Rose for SO_2 at Valleyview
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Valleyview - Hydrogen Sulphide (H_2S) - ppb
May 1, 2009 to June 1, 2009

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 0.4 ppb on May 8 23:00
Maximum Daily Average: 0.2 ppb on May 8

Minimum Value: 0 ppb on May 2 08:00
Maximum Diurnal Average: 0.1 ppb at hour 2
Monthly Average: 0.09 ppb

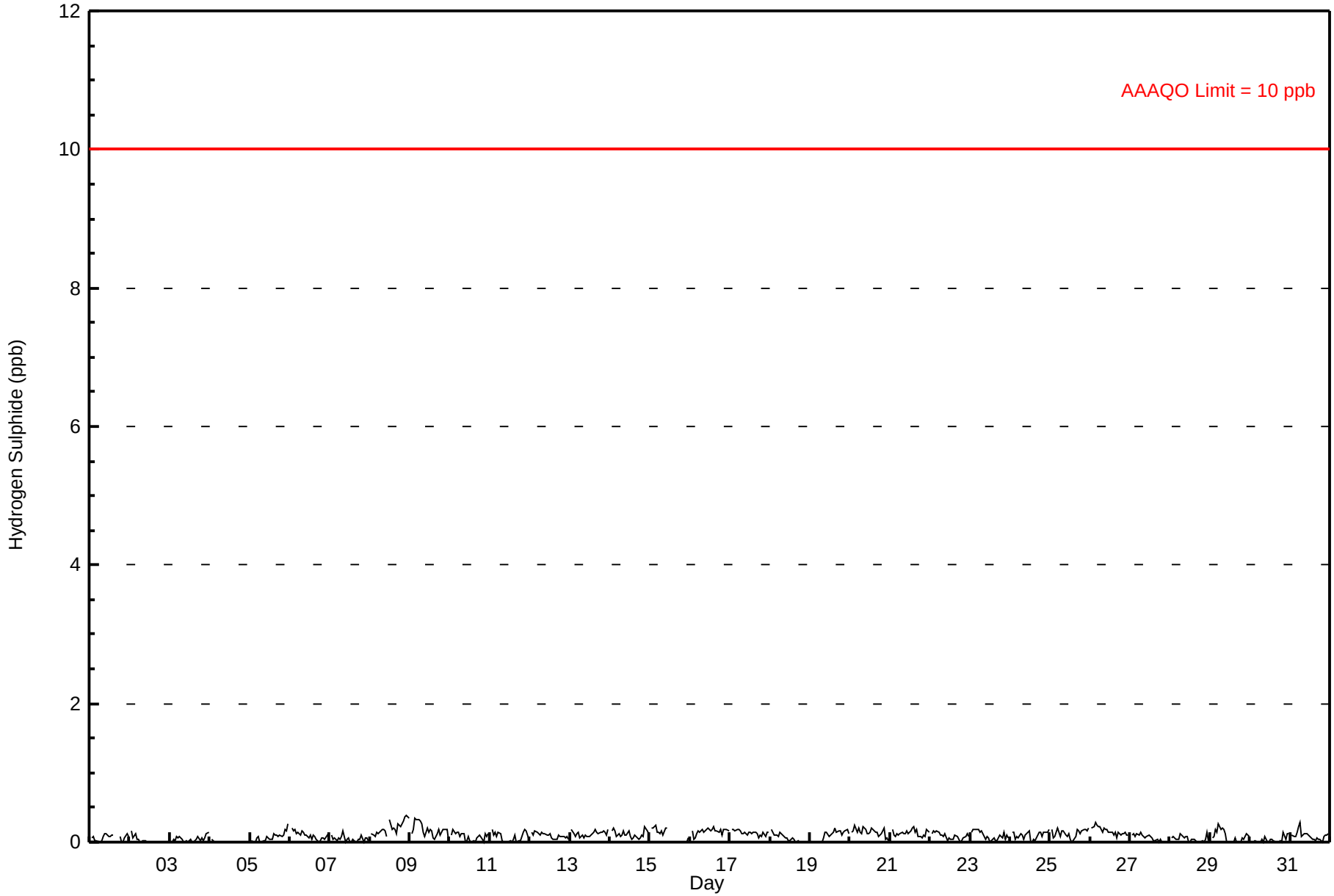
Minimum Daily Average: 0.0 ppb on May 4
Minimum Diurnal Average: 0.1 ppb at hour 14
Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.1 P_{90} = 0.2 P_{99} = 0.3

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	34
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	0	P	0	0	0	0	0	0	0.1	0.1
2-May	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
3-May	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
4-May	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
5-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
6-May	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
7-May	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
8-May	A	0	0	0	0	0	0	0	0	0	0	P	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
9-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
10-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
11-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
12-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
13-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
14-May	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
15-May	A	0	0	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0.1	0.2
16-May	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
17-May	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
18-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
19-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
20-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
21-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
22-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
23-May	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
24-May	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
25-May	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
26-May	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
27-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
28-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
29-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
30-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
31-May	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
	--	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	Diurnal Average	
	--	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.4	0.4	0.4	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 H_2S at Valleyview
May 2009



Peace Airshed Zone Association
Summary of Hourly Maximums

Valleyview - Hydrogen Sulphide (H_2S) - ppb
May 1, 2009 to June 1, 2009

Maximum Value: 1.6 ppb on May 21 17:00

Maximum Daily Average: 0.6 ppb on May 8

Minimum Value: 0 ppb on May 4 18:00

Minimum Daily Average: 0.2 ppb on May 4

Maximum Diurnal Average: 0.5 ppb at hour 5

Minimum Diurnal Average: 0.4 ppb at hour 19

Monthly Average: 0.45 ppb

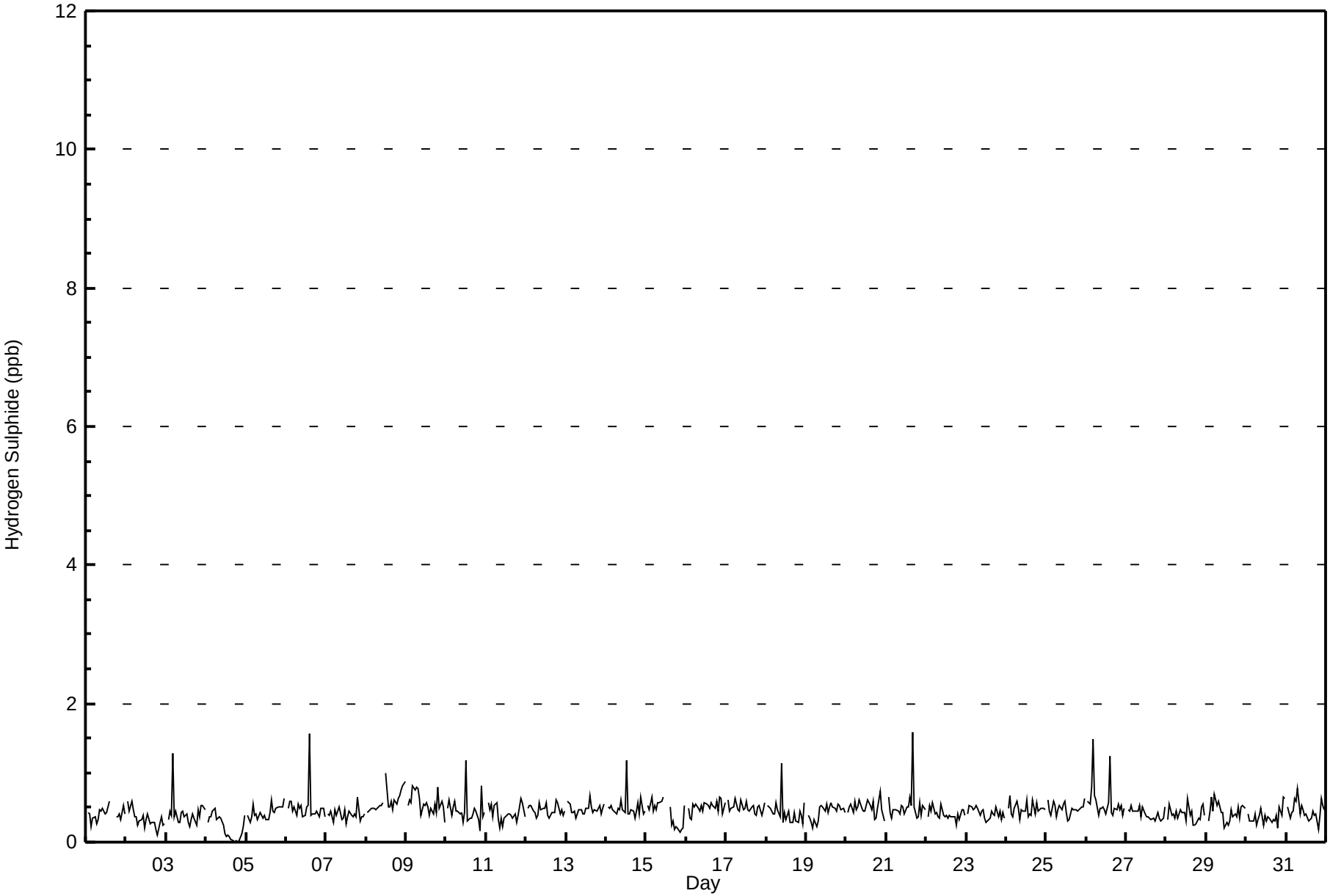
Percentiles: P_1 = 0.1 P_{10} = 0.3 Q_1 = 0.4 Median = 0.4 Q_3 = 0.5 P_{90} = 0.6 P_{99} = 1.2

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	34
Percent Operational Time:	99.6

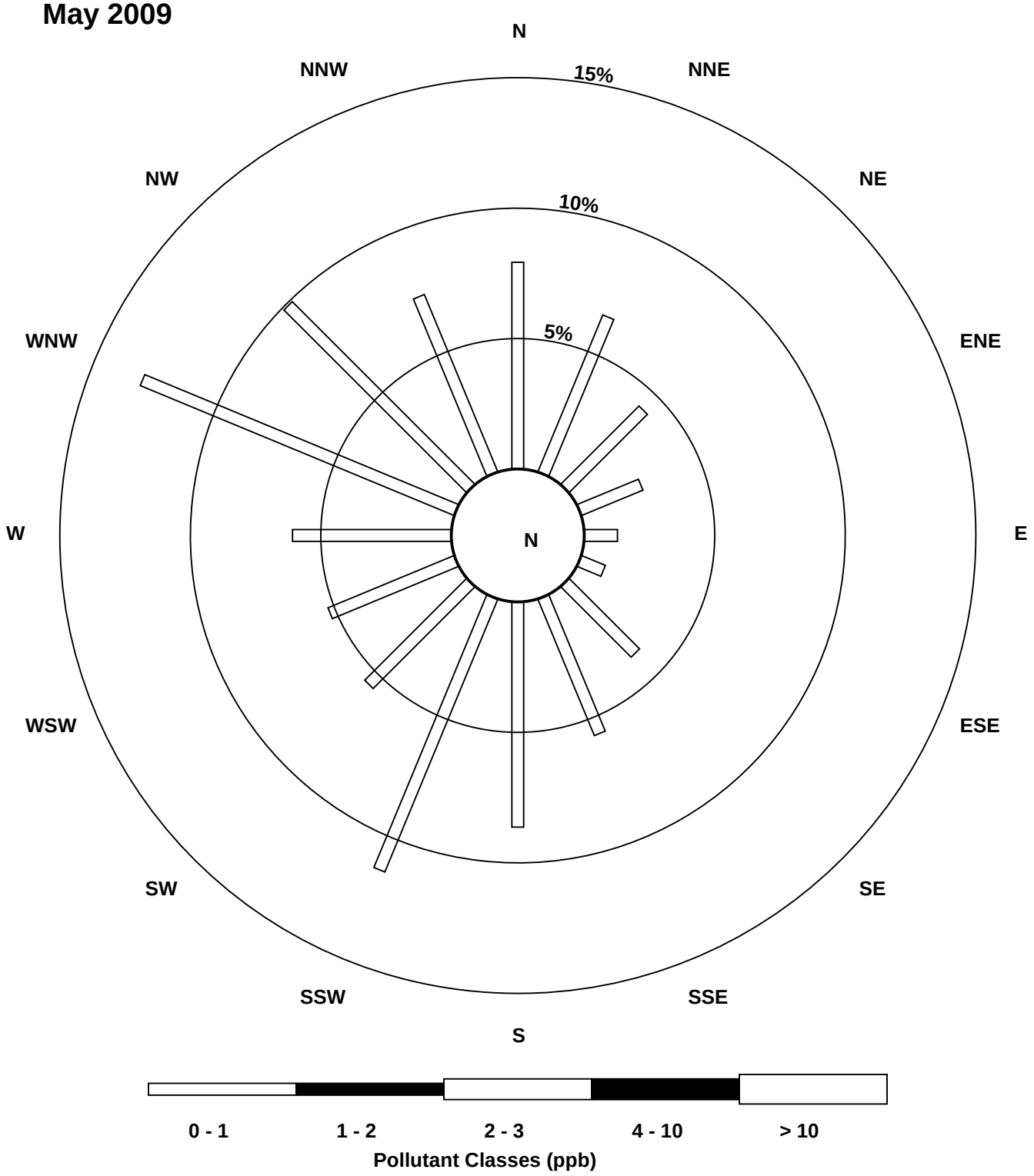
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-May	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	P	1	P	0	0	0	0	1	0	0.4	0.6
2-May	A	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
3-May	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1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

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

Hourly Maximums for H_2S at Valleyview
May 2009



Pollutant Rose for H_2S at Valleyview
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Valleyview - External Temperature (ET) - ^{o}C
May 1, 2009 to June 1, 2009

Maximum Value: 24.8 ^{o}C on May 29 18:00

Maximum Daily Average: 15.4 ^{o}C on May 29

Minimum Value: -2 ^{o}C on May 18 01:00

Minimum Daily Average: 0.0 ^{o}C on May 19

Maximum Diurnal Average: 13.5 ^{o}C at hour 17

Minimum Diurnal Average: 2.7 ^{o}C at hour 6

Monthly Average: 8.72 ^{o}C

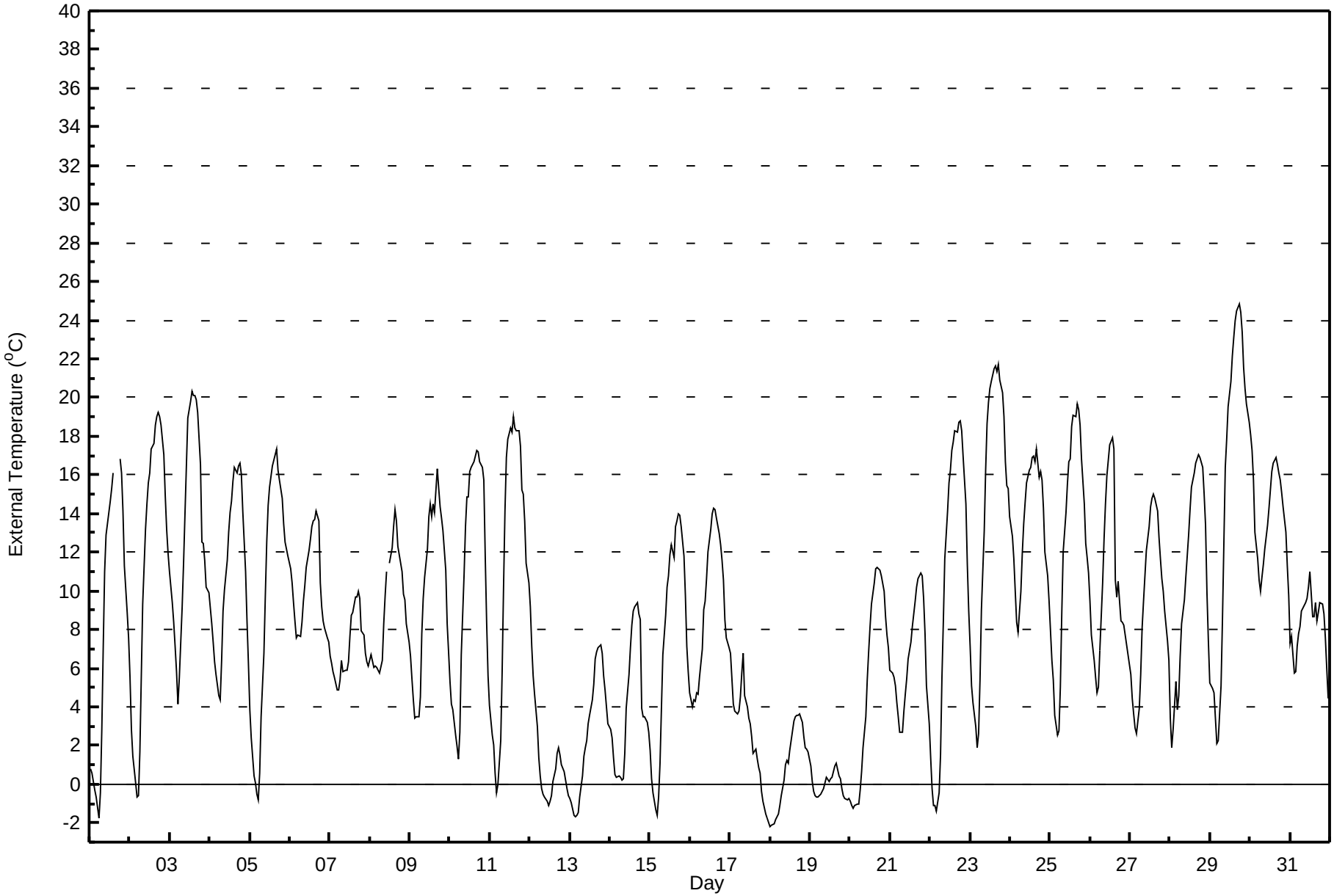
Percentiles: P_1 = -1.7 P_{10} = 0.2 Q_1 = 3.6 Median = 8.5 Q_3 = 13.8 P_{90} = 17.0 P_{99} = 21.3

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-May	1	1	0	0	-1	-2	0	3	7	11	13	14	15	15	16	P	17	P	17	16	14	11	9	8	8.4	17.0
2-May	6	3	1	0	-1	-1	2	6	9	13	14	16	16	17	18	19	19	19	19	19	17	15	13	12	11.3	19.2
3-May	11	9	8	7	6	4	5	9	11	14	16	19	20	20	20	20	20	19	17	13	12	12	10	10	13.1	20.3
4-May	9	8	7	6	6	5	4	6	9	10	12	13	14	15	16	16	16	16	17	16	14	11	8	6	10.9	16.6
5-May	4	2	0	0	-1	-1	1	3	7	10	13	14	15	16	17	17	17	16	16	15	13	13	12	12	9.7	17.3
6-May	11	10	9	8	8	8	8	8	9	10	11	12	13	13	14	14	14	14	10	9	8	8	8	7	10.2	14.1
7-May	7	6	6	6	5	5	5	6	6	6	6	6	8	9	9	10	10	10	10	8	8	7	6	6	7.0	10.0
8-May	6	7	6	6	6	6	6	6	8	10	11	P	11	12	13	14	14	12	11	11	10	10	8	7	9.3	14.2
9-May	7	5	4	3	3	3	4	8	10	11	12	14	14	14	14	14	16	15	14	14	13	11	8	7	10.0	16.3
10-May	5	4	4	3	2	1	3	7	11	13	15	15	16	16	17	17	17	17	17	16	16	12	8	6	10.7	17.3
11-May	4	3	2	1	0	0	2	6	10	14	17	18	18	18	19	18	18	18	17	15	15	14	11	10	11.2	19.0
12-May	9	7	6	5	3	1	0	0	-1	-1	-1	-1	-1	-1	0	1	2	2	1	1	1	0	0	-1	1.4	9.2
13-May	-1	-1	-2	-2	-2	-2	-1	0	1	2	2	3	4	4	5	6	7	7	7	7	6	5	4	3	2.7	7.2
14-May	3	2	1	0	0	0	0	0	0	2	4	6	7	8	9	9	9	9	9	4	3	3	3	3	4.0	9.4
15-May	2	0	0	-1	-2	-1	1	4	7	9	10	11	12	12	12	13	14	14	14	13	12	10	7	6	7.4	14.0
16-May	5	4	4	4	5	5	5	7	9	9	11	12	13	14	14	14	14	13	12	12	11	9	8	7	9.2	14.3
17-May	7	5	4	4	4	4	4	6	7	5	4	3	3	2	2	2	1	1	1	0	-1	-2	-2	-2	2.6	6.8
18-May	-2	-2	-2	-2	-2	-2	-1	-1	0	1	1	1	2	3	3	3	4	4	4	3	2	2	2	2	1.0	3.6
19-May	1	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	1	1	1	0	0	0	-1	-1	-1	-1	0.0	1.1
20-May	-1	-1	-1	-1	-1	-1	0	1	2	4	5	7	8	9	10	11	11	11	11	11	10	9	8	7	5.3	11.2
21-May	6	6	6	5	4	4	3	3	4	5	5	6	7	8	9	9	10	11	11	11	10	8	5	3	6.6	10.9
22-May	1	0	-1	-1	-1	0	2	6	8	12	14	16	16	17	18	18	18	19	19	18	17	15	11	9	10.4	18.8
23-May	7	5	4	3	2	3	5	9	13	16	19	20	20	21	22	22	21	22	21	20	19	17	15	15	14.2	21.7
24-May	14	13	12	10	8	8	10	12	13	15	16	16	16	17	17	17	17	16	16	16	14	12	11	9	13.5	17.3
25-May	8	6	5	4	3	3	5	9	12	14	16	17	17	19	19	19	20	19	19	17	14	12	12	11	12.4	19.7
26-May	9	8	6	6	5	5	7	10	13	14	16	17	18	18	17	11	10	10	8	8	8	8	7	7	10.3	17.9
27-May	6	4	4	3	3	4	6	8	9	11	12	13	14	15	15	15	14	13	12	11	10	9	7	6	9.3	15.0
28-May	3	2	3	5	4	5	7	8	10	11	12	13	14	15	16	17	17	17	17	16	15	13	10	7	10.7	17.1
29-May	5	5	5	3	2	2	5	9	12	16	18	20	21	22	23	24	24	25	24	23	22	20	20	19	15.4	24.8
30-May	18	17	16	13	12	11	10	11	11	12	13	14	15	16	17	17	17	16	16	15	14	13	11	10	14.0	18.1
31-May	7	8	6	6	7	8	8	9	9	9	10	10	11	9	9	9	8	9	9	9	9	8	6	4	8.2	11.0
	5.7	4.8	4.0	3.3	2.8	2.7	3.8	5.8	7.7	9.3	10.5	11.5	12.2	12.8	13.2	13.3	13.5	13.2	12.8	11.8	10.8	9.4	8.0	7.0	Diurnal Average	
	18.1	17.2	15.7	13.0	11.7	10.5	10.0	12.0	13.4	16.4	18.6	19.7	20.8	22.2	23.1	23.9	24.5	24.8	24.4	23.4	21.5	20.4	19.6	18.8	Diurnal Maximum	

P - Power Failure

Hourly Averages for External Temperature at Valleyview
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Valleyview - Relative Humidity (RH) - %
May 1, 2009 to June 1, 2009

Maximum Value: 97.9 % on May 17 07:00

Maximum Daily Average: 92.3 % on May 19

Minimum Value: 12 % on May 30 16:00

Minimum Daily Average: 24.9 % on May 30

Maximum Diurnal Average: 77.3 % at hour 5

Minimum Diurnal Average: 36.5 % at hour 17

Monthly Average: 54.23 %

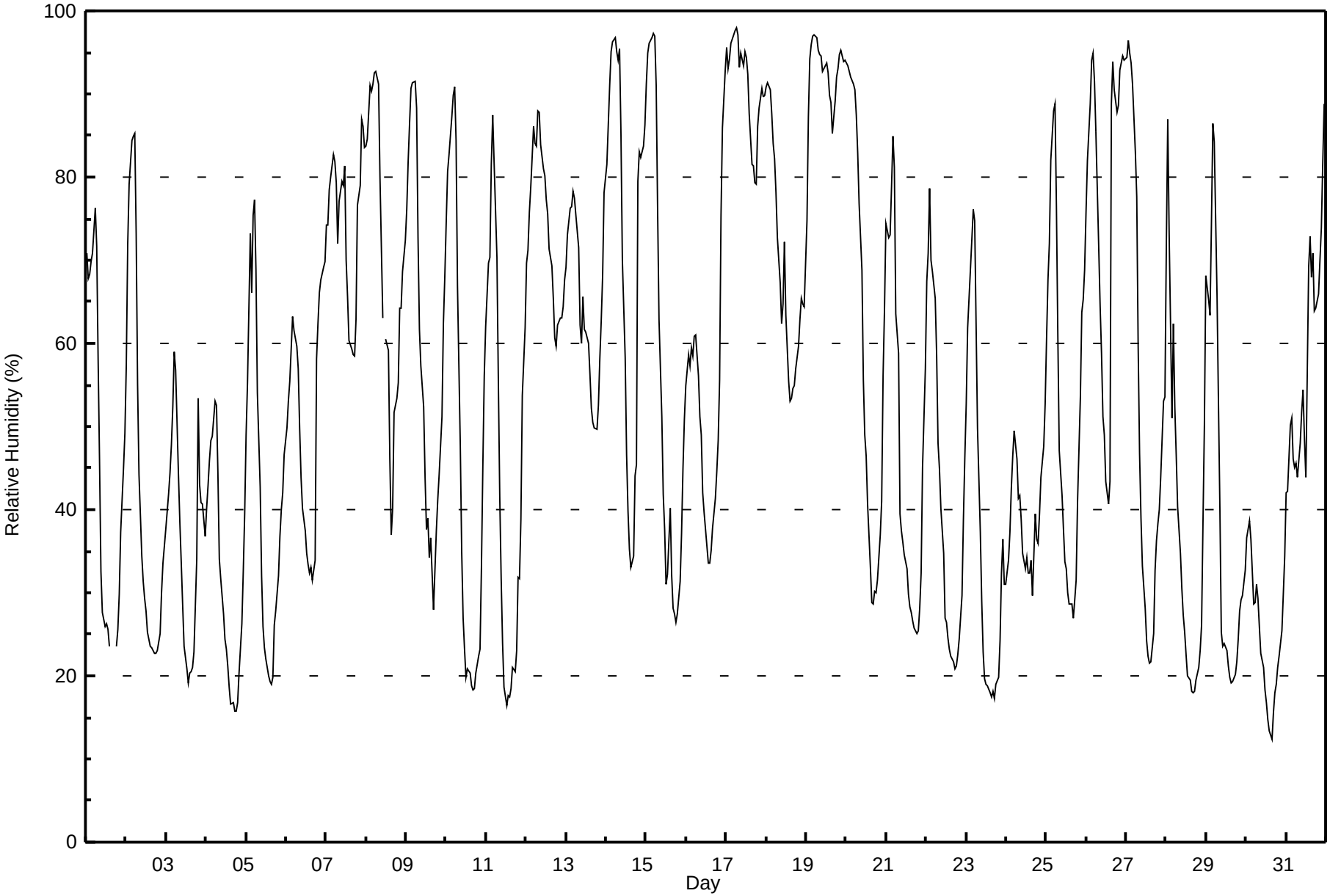
Percentiles: P_1 = 16.6 P_{10} = 22.5 Q_1 = 32.4 Median = 52.5 Q_3 = 75.7 P_{90} = 90.9 P_{99} = 96.9

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-May	71	68	68	70	71	76	72	58	46	33	28	26	26	26	24	P	22	P	24	26	30	37	45	49	45.1	76.3
2-May	57	72	79	84	85	85	73	55	44	34	31	29	28	25	24	23	23	23	23	23	25	30	34	36	43.6	85.3
3-May	38	42	44	48	52	59	57	44	38	34	28	24	21	19	20	20	21	23	34	53	43	41	41	37	36.7	59.0
4-May	40	43	46	48	49	53	52	44	34	32	27	24	23	21	19	17	17	16	16	17	20	26	32	39	31.6	53.1
5-May	49	55	73	66	75	77	69	54	43	32	26	23	22	20	19	19	20	26	28	32	37	40	42	47	41.4	77.4
6-May	50	53	55	59	63	61	60	57	50	44	40	38	35	33	32	33	31	34	58	62	66	68	69	70	50.9	69.9
7-May	74	74	78	80	83	82	79	72	77	80	79	81	70	66	60	59	59	58	63	77	79	87	86	84	74.5	86.9
8-May	84	85	91	90	91	93	93	91	80	71	63	P	61	59	46	37	40	52	53	55	64	64	69	72	69.8	92.8
9-May	76	82	87	91	91	91	88	73	62	57	52	44	38	39	34	37	28	33	37	41	44	51	62	68	58.6	91.5
10-May	75	81	83	87	90	91	84	67	48	35	27	23	20	21	20	19	18	18	20	22	23	33	45	56	46.1	90.9
11-May	62	70	70	82	87	82	70	55	41	32	24	19	16	18	18	18	21	20	23	32	32	39	54	62	43.6	87.4
12-May	70	71	76	79	86	84	84	88	88	84	81	80	77	76	71	69	65	61	60	62	63	63	64	68	73.7	87.9
13-May	69	73	76	77	78	77	75	72	62	60	66	62	61	60	56	52	50	50	50	53	58	63	68	78	64.4	78.3
14-May	82	86	91	95	96	97	95	94	95	85	70	58	47	40	35	33	34	44	45	80	83	82	84	86	72.4	96.7
15-May	91	95	96	97	97	97	91	76	63	51	42	38	31	32	40	32	28	28	26	27	31	37	45	51	56.0	97.3
16-May	55	59	57	60	58	61	61	56	51	49	42	40	36	34	34	35	38	41	45	48	56	75	86	93	52.9	92.9
17-May	96	93	94	96	97	98	98	97	93	95	93	95	94	92	88	81	81	79	79	86	88	91	90	90	91.1	97.9
18-May	91	91	91	88	84	82	78	73	67	62	65	72	63	55	53	53	55	55	57	60	63	65	65	64	68.9	91.4
19-May	75	87	94	96	97	97	97	95	95	95	93	93	94	93	90	89	85	89	92	93	95	95	94	94	92.3	97.1
20-May	94	93	93	92	91	90	88	83	77	69	56	49	47	41	33	29	29	30	30	32	37	41	56	64	60.0	93.7
21-May	74	73	73	79	85	81	64	59	40	37	36	35	33	30	28	28	27	26	25	25	28	32	45	57	46.6	84.8
22-May	67	71	79	70	69	65	59	48	45	40	35	27	26	25	23	22	22	21	21	23	24	30	39	46	41.5	78.6
23-May	53	62	65	72	76	75	62	50	37	29	23	20	19	19	18	17	18	17	19	20	24	32	36	31	37.3	76.0
24-May	31	34	37	43	46	49	46	41	42	39	35	33	34	32	32	34	30	40	36	36	39	44	48	53	38.9	52.8
25-May	60	68	72	82	88	89	76	61	47	42	38	34	33	30	29	29	27	29	31	41	54	64	65	69	52.4	88.9
26-May	76	82	89	94	95	91	85	72	65	59	51	49	43	41	43	89	94	90	88	89	93	94	95	94	77.5	94.9
27-May	94	96	95	94	91	83	78	60	47	39	33	28	24	22	21	22	25	33	36	38	40	44	53	54	52.1	96.5
28-May	72	87	73	51	62	52	47	40	35	30	27	25	23	20	19	18	18	18	20	21	23	26	39	50	37.4	86.9
29-May	68	65	63	74	86	84	65	53	40	25	24	24	23	21	20	19	19	20	22	24	28	29	30	33	40.0	86.5
30-May	37	38	39	36	29	29	31	29	26	23	21	18	17	15	13	12	16	18	19	21	22	25	30	34	24.9	38.7
31-May	42	42	50	51	46	45	46	44	48	52	54	48	44	69	73	68	71	64	64	66	70	74	82	89	58.4	88.8
	66.8	70.6	73.5	75.2	77.3	76.7	71.7	63.3	55.7	49.9	45.5	42.0	39.6	38.5	36.7	37.2	36.5	38.6	40.2	44.7	47.8	52.4	57.8	61.8	Diurnal Average	
	95.6	96.5	96.1	96.7	97.3	97.7	97.9	97.1	95.5	94.9	93.5	95.0	94.4	92.6	89.8	89.0	94.0	90.5	92.1	93.1	94.7	95.3	94.6	94.1	Diurnal Maximum	

P - Power Failure

Hourly Averages for Relative Humidity at Valleyview
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Valleyview
May 1, 2009 to June 1, 2009
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	4	5	4	4	2	1	2	4	3	3	8	12	14	12	14	P	8	P	6	4	3	4	2	2	2.8	14.5
Dir	185	195	199	194	196	221	209	192	198	256	309	318	340	316	311	P	9	P	32	7	350	343	23	324	312.3	311.1
2 Spd	1	1	1	2	3	2	2	3	3	2	4	3	6	2	3	5	5	7	8	6	6	7	5	6	3.6	8.1
Dir	325	180	161	208	201	182	196	172	164	147	132	123	112	160	153	147	138	156	141	142	134	143	168	163	151.4	141.4
3 Spd	7	5	4	4	4	2	2	9	9	5	4	3	11	10	14	12	14	15	20	16	12	19	18	20	7.5	20.1
Dir	176	195	187	193	207	221	231	188	190	191	197	221	308	302	316	312	293	283	261	275	261	275	289	290	268.5	289.7
4 Spd	14	10	6	4	5	4	5	7	17	20	17	14	11	10	10	8	6	8	5	4	3	4	2	1	7.0	20.3
Dir	289	270	257	245	253	207	196	232	270	278	274	286	281	294	279	267	273	310	315	354	45	357	5	331	279.1	278.0
5 Spd	1	1	2	3	2	1	2	2	2	6	1	2	3	4	4	4	5	10	7	7	6	3	1	14	3.1	13.8
Dir	337	196	190	203	38	257	205	193	180	208	250	292	314	316	257	264	238	254	255	267	264	230	218	288	256.1	287.6
6 Spd	18	13	12	7	3	4	6	10	13	14	12	12	9	6	4	5	1	7	11	8	5	2	1	2	6.4	17.7
Dir	279	274	269	258	223	256	256	283	302	311	319	336	317	312	322	335	20	255	246	235	230	229	198	206	284.0	278.9
7 Spd	4	5	3	5	5	5	3	1	13	12	12	10	12	12	14	14	12	10	11	9	2	2	3	1	6.1	14.4
Dir	209	222	199	200	185	176	189	195	290	294	294	285	305	293	286	289	285	278	292	298	236	224	236	187	275.9	286.5
8 Spd	2	3	3	3	2	2	3	3	5	8	8	P	5	7	14	13	9	17	21	15	10	3	3	3	4.2	21.4
Dir	261	249	215	223	193	221	181	204	260	286	314	P	73	74	17	22	350	312	327	318	330	286	245	248	322.2	326.8
9 Spd	4	3	5	3	3	2	3	4	7	6	6	6	6	12	13	10	2	6	8	8	2	1	3	3	1.8	12.6
Dir	260	187	198	147	171	164	174	213	276	306	313	324	301	40	35	357	331	268	272	291	218	145	182	191	298.5	34.7
10 Spd	2	3	3	2	0	3	4	5	4	3	6	6	6	7	4	6	9	8	8	3	1	0	2	2	2.5	8.9
Dir	247	191	197	198	130	214	205	202	203	211	301	284	256	314	311	286	334	309	336	327	275	162	184	186	274.5	333.5
11 Spd	2	2	2	0	2	1	2	3	3	3	4	8	8	6	4	6	11	8	8	10	10	13	12	13	3.7	13.4
Dir	199	216	207	161	203	230	205	205	186	186	169	158	172	181	208	213	185	197	175	265	333	296	270	276	224.2	276.3
12 Spd	13	16	15	16	16	18	17	15	19	24	23	22	21	21	21	19	16	16	14	11	10	8	4	3	14.9	23.7
Dir	302	330	337	331	353	339	328	320	338	354	356	360	0	356	356	355	358	5	12	16	28	35	37	356	351.0	354.2
13 Spd	3	1	4	3	2	3	2	4	7	7	7	7	6	5	5	2	3	4	2	4	7	5	4	3	2.3	7.4
Dir	324	301	342	27	57	64	125	145	142	137	156	147	142	127	150	115	80	44	75	44	45	60	14	16	99.0	137.2
14 Spd	6	8	7	3	4	4	7	7	6	3	4	2	5	7	6	9	4	6	4	17	9	6	2	2	4.3	17.2
Dir	12	35	27	62	23	27	0	357	25	349	89	354	25	31	12	7	283	245	278	342	314	293	354	323	357.4	341.9
15 Spd	1	2	2	2	3	2	4	4	6	7	6	11	9	9	15	6	10	10	8	10	5	2	3	4	3.9	15.1
Dir	234	184	197	202	174	178	185	192	191	201	271	295	297	265	340	253	277	300	289	303	307	210	205	198	269.1	339.6
16 Spd	3	5	6	4	2	1	1	2	5	6	12	8	13	16	14	11	10	13	13	12	8	6	3	1	5.4	15.9
Dir	212	202	195	202	246	174	148	180	308	309	282	285	291	300	306	298	306	335	338	338	341	355	324	155	302.8	299.8
17 Spd	2	6	7	6	5	5	4	4	7	14	13	14	16	19	20	18	18	17	17	16	13	9	7	8	10.7	20.1
Dir	70	35	30	19	16	28	48	36	344	359	7	13	6	7	9	13	6	355	356	1	5	29	36	34	10.4	9.3
18 Spd	8	8	6	5	5	6	5	6	7	8	7	7	8	8	8	8	7	9	7	8	8	5	4	7	4.6	8.7
Dir	35	30	32	38	48	57	77	122	132	138	165	187	158	151	146	152	162	135	130	183	185	160	142	131	131.4	135.2
19 Spd	8	5	6	8	10	7	8	7	6	3	3	4	2	4	4	8	10	12	9	9	7	8	3	3	5.2	12.0
Dir	137	94	75	70	60	60	66	66	64	45	52	31	50	68	43	29	17	9	7	6	6	355	337	318	40.4	9.1
20 Spd	3	4	4	5	3	3	4	4	5	6	8	10	10	14	14	15	16	14	13	13	10	7	19	11	7.8	18.6
Dir	322	319	309	292	241	245	241	227	221	228	272	278	275	301	298	293	316	309	311	297	284	267	346	320	295.7	345.5
21 Spd	9	6	4	3	1	9	11	8	10	11	12	12	13	12	12	11	8	7	4	4	5	3	2	2	5.5	13.3
Dir	290	277	336	334	355	10	23	18	23	11	5	359	30	26	38	29	33	47	52	99	132	153	190	165	19.3	30.3
22 Spd	0	1	1	1	1	1	3	5	4	3	2	1	1	4	2	3	5	3	4	5	4	2	3	2	0.3	5.0
Dir	28	290	197	238	236	246	205	200	197	169	191	196	212	215	207	329	339	25	37	39	43	50	357	322	248.5	199.7

Peace Airshed Zone Association
Summary of Hourly Averages

Valleyview
May 1, 2009 to June 1, 2009
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	1	1	1	0	1	1	4	4	4	2	2	7	3	3	2	2	4	3	8	5	7	9	7	10	1.6	10.5
Dir	315	230	200	304	315	230	205	205	204	222	192	165	281	246	236	271	332	92	14	7	330	320	312	319	295.5	318.8
24 Spd	9	6	5	3	3	3	3	13	14	14	14	17	16	14	15	14	14	19	13	9	6	8	8	4	8.3	18.6
Dir	315	298	287	231	237	203	261	295	305	299	300	317	313	329	336	339	332	12	12	24	4	10	19	28	328.6	11.9
25 Spd	2	2	2	1	1	2	2	2	8	8	7	8	6	5	4	4	5	5	4	4	4	3	6	5	3.0	7.7
Dir	48	39	31	88	215	198	201	192	186	181	186	184	154	138	121	80	116	95	118	216	144	164	179	179	157.1	185.5
26 Spd	1	2	1	1	4	2	1	2	6	6	4	5	13	11	13	6	3	2	13	5	3	3	3	3	2.2	12.8
Dir	98	351	156	93	9	297	194	165	174	180	230	281	303	336	348	247	26	346	296	277	223	216	190	204	289.4	295.6
27 Spd	2	3	4	4	4	4	3	7	12	13	15	14	16	18	16	18	21	24	21	15	11	5	2	3	8.3	24.0
Dir	212	203	205	202	202	191	163	284	284	276	289	285	298	304	303	311	329	349	341	331	327	319	203	250	305.0	349.0
28 Spd	3	3	4	3	3	5	6	11	14	15	14	12	15	17	15	17	17	15	12	9	6	4	1	2	8.3	17.5
Dir	200	185	247	246	236	259	273	286	282	285	295	288	293	309	305	313	320	324	320	326	316	283	11	200	297.2	312.5
29 Spd	1	3	3	1	0	1	3	2	3	9	11	11	10	8	8	10	11	10	9	10	9	10	9	4	6.1	11.2
Dir	171	179	194	190	74	196	179	183	147	171	182	185	181	165	159	139	135	136	160	166	167	170	175	242	166.6	181.6
30 Spd	11	8	22	20	16	13	13	18	16	20	17	19	17	19	23	27	23	23	24	18	14	9	4	3	16.2	26.8
Dir	317	300	314	314	319	311	301	297	288	287	288	304	287	298	297	290	297	302	302	301	286	295	270	260	298.8	290.2
31 Spd	3	5	3	4	11	11	11	10	14	17	19	19	20	19	21	20	24	19	12	8	4	3	3	2	10.0	24.1
Dir	219	272	214	247	273	284	288	301	317	313	301	321	328	333	337	1	359	355	330	311	338	50	282	232	322.2	358.9
Spd	2.4	1.8	1.7	1.3	1.0	1.2	1.2	2.4	3.7	4.5	5.1	5.4	5.8	6.1	6.9	6.2	6.0	6.3	6.1	5.6	3.1	2.0	1.6	2.2	Diurnal Average	
Dir	284.1	278.6	285.6	276.5	302.9	297.9	264.6	264.3	278.4	287.2	295.2	304.3	312.3	323.7	328.7	325.9	329.5	327.3	321.9	318.0	319.4	308.1	296.1	279.8		
Spd	17.7	16.0	22.2	19.6	16.4	18.3	16.5	18.1	18.6	23.7	22.6	22.2	21.5	21.2	22.6	26.8	24.1	24.0	24.0	18.4	13.5	19.3	18.6	20.1	Diurnal Maximum	
Dir	278.9	330.4	313.6	313.9	353.4	339.1	327.9	297.5	338.2	354.2	356.4	359.7	0.2	356.3	296.5	290.2	358.9	349.0	302.5	300.8	285.5	274.8	345.5	289.7		

Maximum Speed Value: 27 km/h on May 30 16:00
Maximum Daily Speed Average: 16.2 km/h on May 30
Maximum Diurnal Speed Average: 6.9 km/h at hour 15

Minimum Speed Value: 0 km/h on May 10 22:00
Minimum Daily Speed Average: 0.3 km/h on May 22
Minimum Diurnal Speed Average: 1.0 km/h at hour 5

Monthly Average Velocity: 3.51 km/h 308.95 deg

Speed Percentiles: $P_1 = 0.5$ $P_{10} = 1.8$ $Q_1 = 3.1$ Median = 5.8 $Q_3 = 10.7$ $P_{90} = 15.6$ $P_{99} = 22.4$

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

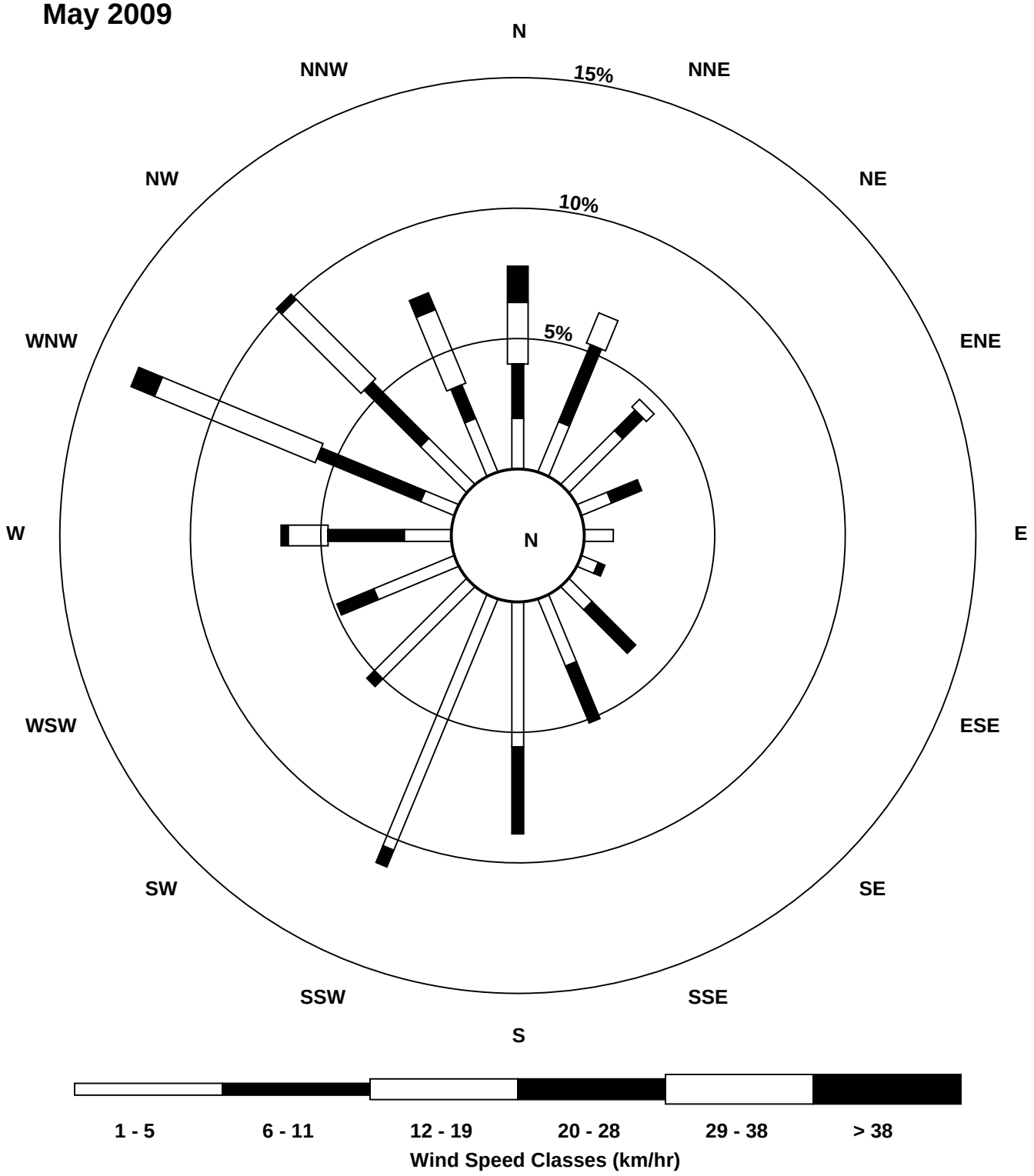
Hours in Service:	744
Hours of Data:	741
Hours of Missing Data:	3
Percent Operational Time:	99.6

P - Power Failure

Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	23	25	34	12	0	0	94
NorthEast	34	32	5	0	0	0	71
East	14	6	0	0	0	0	20
SouthEast	21	29	0	0	0	0	50
South	94	42	2	0	0	0	138
SouthWest	87	9	0	0	0	0	96
West	28	44	36	6	0	0	114
NorthWest	30	44	71	13	0	0	158
Total	331	231	148	31	0	0	741

Wind Rose for WS at Valleyview
May 2009



Peace Airshed Zone Association
Summary of Hourly Averages - Wind Speed (Scalar)

Valleyview - Wind Speed (WS) - km/h
May 1, 2009 to June 1, 2009

Maximum Speed: 27 km/h on May 30 16:00

Maximum Daily Speed Average: 16.9 km/h on May 30

Minimum Speed: 1 km/h on May 29 05:00

Minimum Daily Speed Average: 3.5 km/h on May 22

Maximum Diurnal Speed Average: 12.1 km/h at hour 15

Minimum Diurnal Speed Average: 4.4 km/h at hour 6

Monthly Average Speed: 7.93 km/h

Percentiles: $P_1 = 1.1$ $P_{10} = 2.3$ $Q_1 = 3.6$ Median = 6.4 $Q_3 = 11.2$ $P_{90} = 16.0$ $P_{99} = 22.9$

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-May	4	5	4	4	2	1	2	4	4	4	8	13	15	13	15	P	10	P	6	5	3	4	2	2	5.9	15.4
2-May	1	2	2	2	3	3	3	3	3	3	6	5	7	5	7	7	6	8	8	6	6	7	5	6	4.8	8.5
3-May	7	5	4	4	4	2	2	9	9	6	5	6	12	11	14	13	14	15	20	17	13	20	18	20	10.5	20.2
4-May	15	10	6	4	5	4	5	7	18	21	18	15	12	11	11	9	8	10	6	5	3	5	3	2	8.8	20.7
5-May	2	2	3	3	2	2	2	2	3	6	4	5	5	6	6	6	6	10	7	8	6	3	2	14	4.8	14.1
6-May	18	13	12	7	3	4	6	10	13	15	13	13	10	8	6	7	4	7	11	9	5	3	2	3	8.4	17.9
7-May	4	5	3	5	5	5	4	3	13	12	12	10	12	12	15	14	12	10	11	10	3	2	4	2	7.8	14.8
8-May	3	3	3	3	2	2	3	3	6	9	9	P	6	8	15	13	12	17	22	15	10	4	3	3	7.6	21.7
9-May	4	4	5	3	4	2	4	5	7	7	6	7	8	13	14	11	4	7	8	8	2	2	3	3	5.8	13.6
10-May	3	3	4	3	2	3	4	5	4	5	7	6	7	10	8	8	10	9	8	4	2	1	2	2	5.0	10.2
11-May	2	2	2	1	2	2	2	3	4	4	5	9	9	8	5	10	11	8	9	12	11	13	13	14	6.7	13.5
12-May	14	16	15	16	17	18	17	15	19	24	23	22	22	21	21	19	17	16	15	12	10	9	4	3	16.0	23.9
13-May	3	2	4	3	2	3	2	4	8	8	8	7	7	6	7	3	5	4	3	4	7	5	5	3	4.7	7.9
14-May	6	9	7	3	6	5	7	8	7	4	5	4	7	8	8	10	7	7	6	17	9	6	3	3	6.6	17.4
15-May	2	2	2	2	3	2	4	4	6	7	8	11	10	10	17	7	11	10	9	10	5	2	3	4	6.3	16.5
16-May	4	5	6	4	3	2	2	3	5	6	12	9	13	17	15	12	11	14	13	12	8	6	4	2	7.8	16.5
17-May	2	6	7	6	5	5	4	4	8	14	13	14	17	20	20	18	18	17	17	17	13	9	7	8	11.3	20.5
18-May	8	8	6	5	5	6	5	7	8	9	8	7	8	9	8	9	8	9	7	8	8	6	4	7	7.2	8.9
19-May	9	5	6	8	10	8	8	7	6	4	4	5	3	5	5	9	11	12	10	9	7	8	4	5	6.9	12.2
20-May	3	4	4	5	3	3	4	4	5	6	9	11	11	14	15	15	17	14	14	14	11	7	19	11	9.3	18.9
21-May	9	6	5	3	3	9	11	9	10	11	13	13	14	13	12	12	9	7	6	5	5	3	2	2	8.0	13.8
22-May	1	1	1	1	1	1	4	5	5	4	4	5	4	6	4	5	7	5	5	5	4	2	3	2	3.5	6.7
23-May	2	2	1	1	1	2	4	4	4	3	4	8	7	6	5	3	5	6	8	5	7	9	7	11	4.7	10.6
24-May	9	6	6	3	3	3	4	13	14	15	15	18	17	15	16	15	15	19	14	9	6	8	8	5	10.5	19.0
25-May	2	2	2	3	1	2	2	2	8	8	7	8	7	6	6	6	6	6	4	6	5	4	6	5	4.8	8.2
26-May	2	2	1	2	5	2	3	2	6	6	6	5	13	12	13	7	4	4	14	5	3	3	3	3	5.3	13.8
27-May	2	3	4	4	4	4	4	8	12	13	16	15	17	19	17	19	22	24	21	15	12	5	2	3	11.0	24.1
28-May	3	3	5	3	3	5	7	12	15	15	14	13	16	17	16	18	17	15	12	10	6	4	3	3	9.8	17.9
29-May	2	3	3	1	1	2	3	2	3	10	11	11	10	9	9	10	11	10	9	10	9	10	9	5	6.9	11.5
30-May	12	8	23	20	16	13	13	18	16	21	18	20	18	19	23	27	23	24	24	19	14	9	5	4	16.9	27.2
31-May	3	6	3	4	11	11	11	10	14	18	19	20	21	21	21	21	24	19	13	8	5	3	3	2	12.1	24.4
	5.1	5.0	5.1	4.5	4.4	4.4	4.9	6.3	8.5	9.5	9.9	10.5	11.1	11.5	12.1	11.5	11.1	11.4	11.0	9.6	7.0	5.8	5.2	5.2	Diurnal Average	
	17.9	16.1	22.6	19.8	16.6	18.4	16.8	18.4	18.9	23.9	22.7	22.4	21.7	21.5	23.0	27.2	24.4	24.1	24.2	18.7	13.6	19.5	18.9	20.2	Diurnal Maximum	

P - Power Failure

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

Peace Airshed Zone Association
Summary of Hourly Standard Deviations

Valleyview - Wind Direction (WD) - deg
May 1, 2009 to June 1, 2009

Maximum Value: 93.8 deg on May 6 17:00

Minimum Value: 3.9 deg on May 1 03:00

Percentiles: P_1 = 5.4 P_{10} = 9.0 Q_1 = 12.4 Median = 19.3 Q_3 = 35.0 P_{90} = 57.6 P_{99} = 82.5

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

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-May	6	5	4	4	68	71	11	10	39	53	31	27	23	24	22	P	32	P	17	17	38	10	46	32	71.0
2-May	76	78	60	28	10	18	15	22	37	65	62	64	41	78	84	71	46	35	18	13	7	10	18	15	84.0
3-May	16	11	14	9	13	29	49	11	14	22	41	54	30	33	17	27	20	14	9	10	10	8	8	7	54.0
4-May	10	10	24	23	16	11	12	26	9	10	16	18	31	22	31	34	51	39	38	26	23	42	35	64	63.6
5-May	80	74	57	27	47	65	31	19	38	12	83	86	57	62	55	49	33	15	11	7	16	41	69	16	86.2
6-May	9	7	8	8	21	21	13	14	14	12	21	21	26	42	63	76	94	29	15	15	27	60	78	27	93.8
7-May	17	14	19	8	11	18	24	75	7	9	9	13	15	18	13	12	15	13	11	15	29	11	14	48	75.3
8-May	41	21	14	24	33	24	29	10	27	25	28	P	43	35	15	19	41	15	10	13	16	26	14	18	42.8
9-May	12	22	9	28	33	28	14	32	25	37	32	44	54	31	27	20	82	33	13	11	23	77	18	32	82.1
10-May	22	27	16	29	80	17	9	7	17	49	62	37	50	54	79	50	34	29	14	47	53	83	16	28	82.8
11-May	16	62	25	81	21	17	11	13	23	37	46	33	34	51	48	69	18	19	25	35	20	15	10	8	81.4
12-May	19	7	10	12	10	8	11	7	10	6	6	8	9	9	8	8	12	10	9	11	9	8	13	21	21.0
13-May	13	44	18	18	16	13	47	25	20	23	29	26	31	46	47	75	43	37	51	25	13	23	23	15	75.0
14-May	16	13	14	40	51	26	17	29	24	63	52	79	62	53	63	39	58	21	38	12	15	31	54	53	78.9
15-May	47	33	18	24	21	17	12	17	18	22	40	24	30	34	36	38	27	24	24	13	8	38	19	12	46.9
16-May	7	6	4	15	52	55	49	22	37	17	12	33	20	18	16	25	27	21	12	8	8	5	54	38	55.1
17-May	27	9	11	9	12	11	19	25	64	11	12	13	9	9	11	10	8	10	10	7	8	16	12	9	63.5
18-May	9	9	10	13	10	11	21	17	20	23	24	18	20	40	21	21	18	12	14	15	10	22	14	11	40.4
19-May	13	21	17	12	8	13	11	12	14	31	33	23	37	34	36	16	14	10	8	7	10	7	54	54	54.3
20-May	26	10	10	13	20	18	21	24	19	22	34	20	20	18	19	19	17	14	12	9	9	8	12	20	33.7
21-May	19	15	47	40	89	10	11	17	15	21	24	23	15	25	22	25	33	33	46	46	9	21	27	27	89.4
22-May	75	58	63	61	15	41	8	10	17	33	64	78	79	42	72	73	54	65	40	18	17	37	21	47	78.6
23-May	72	70	72	91	80	53	14	13	24	61	64	35	77	74	68	63	67	52	12	15	7	5	11	9	91.2
24-May	9	8	13	19	17	6	44	10	13	15	23	15	19	27	16	18	20	14	11	13	20	5	6	11	44.1
25-May	36	35	33	61	72	21	16	34	14	20	30	24	28	45	52	51	43	40	39	51	24	17	13	9	72.2
26-May	71	56	69	65	36	55	74	35	17	21	40	32	16	32	22	48	57	55	26	27	18	24	23	12	74.1
27-May	9	7	6	5	7	16	11	59	15	19	22	21	19	18	17	15	21	7	7	8	8	12	23	26	59.4
28-May	16	9	42	25	16	8	16	13	14	13	21	19	15	18	20	13	15	13	15	10	11	9	79	46	79.3
29-May	69	14	8	47	63	77	22	35	28	16	13	14	19	25	27	18	15	18	17	11	13	10	12	46	77.1
30-May	35	17	11	9	8	12	13	11	13	11	15	15	14	15	11	10	12	11	8	10	9	10	15	35	35.3
31-May	9	21	12	14	7	9	8	13	12	15	17	17	13	21	10	16	9	10	21	10	38	48	42	46	47.6
	80.5	77.9	72.2	91.2	89.4	77.1	74.1	75.3	63.5	65.4	83.1	86.2	78.6	78.1	84.0	76.1	93.8	64.6	50.9	51.1	52.7	82.8	79.3	63.6	

P - Power Failure

PASZA

Monthly Passive Data Summary

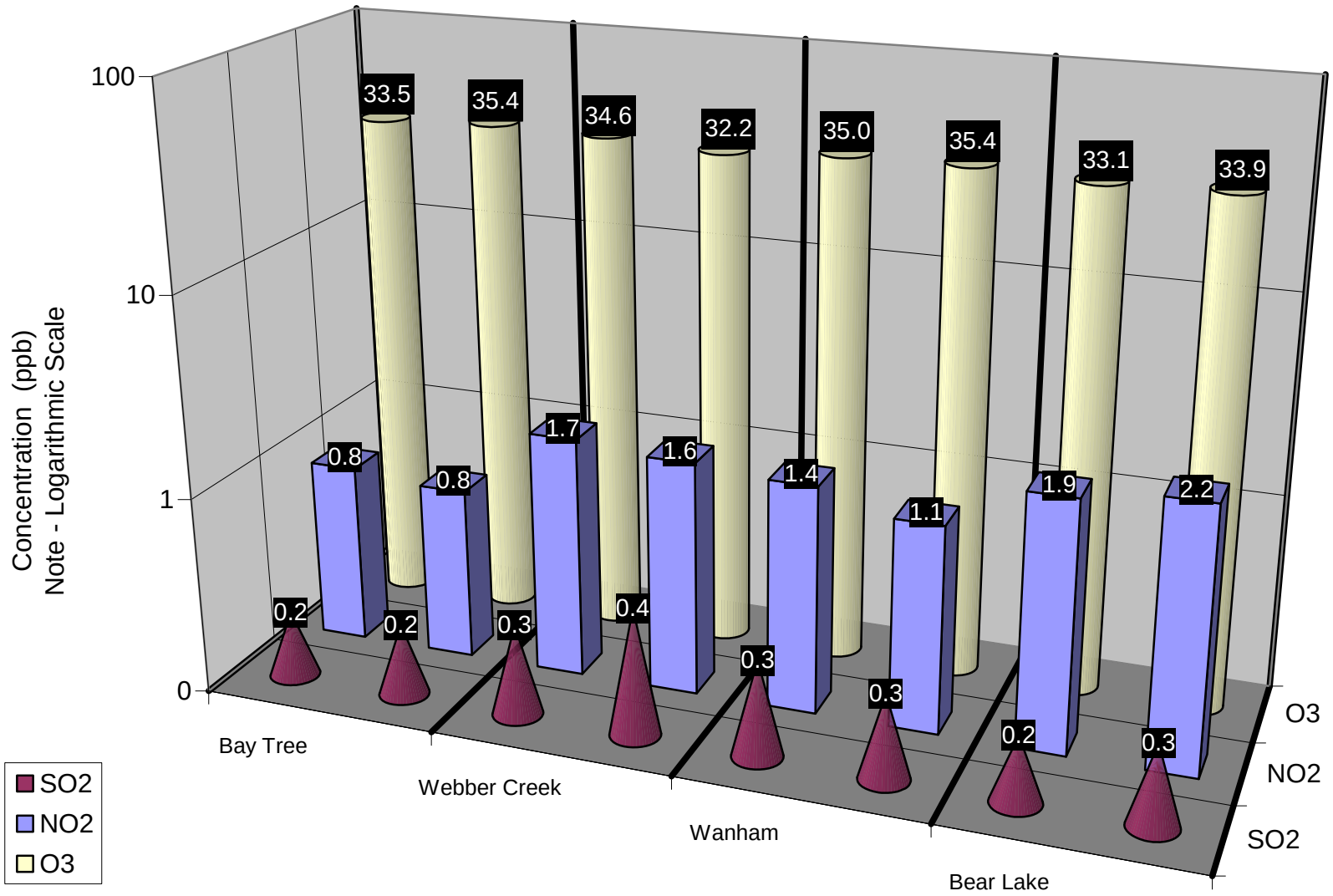
PASZA Passive Results for May 2009

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	Site Legal
Duplicates					
2a	Bay Tree	**0.2**	**33.5**	**0.8**	
2b	Bay Tree	**0.2**	**35.4**	**0.8**	
11a	Webber Creek	**0.3**	**34.6**	**1.7**	
11b	Webber Creek	**0.4**	**32.2**	**1.6**	
19a	Wanham	**0.3**	**35.0**	**1.4**	
19b	Wanham	**0.3**	**35.4**	**1.1**	
23a	Bear Lake	**0.2**	**33.1**	**1.9**	
23b	Bear Lake	**0.3**	**33.9**	**2.2**	
1	Silver Valley	**0.2**	**31.3**	**1.5**	08-27-081-11 W6M
2	Bay Tree	**0.2**	**34.4**	**0.8**	13-16-078-13 W6M
3	Forth Creek	**0.2**	**N/A**	**0.5**	04-13-082-07 W6M
4	Gordondale	**0.3**	**35.9**	**0.9**	04-34-078-10 W6M
5	Boone Creek	**0.2**	**35.9**	**1.2**	01-23-076-11 W6M
7	Steeprock Creek	**0.2**	**35.9**	**0.7**	09-35-072-13 W6M
9	Spirit River	**0.3**	**32.6**	**1.5**	08-12-079-07 W6M
10	Woking	**0.2**	**36.2**	**0.9**	01-13-076-07 W6M
11	Webber Creek	**0.4**	**33.4**	**1.6**	09-36-074-09 W6M
12	Hythe	**0.3**	**32.3**	**1.6**	14-36-072-11 W6M
14	Sylvester	**0.1**	**31.2**	**1.2**	08-06-069-12 W6M
16	Beaverlodge	**0.2**	**36.8**	**1.4**	15-36-071-10 W6M
17	Poplar	**0.2**	**35.7**	**1.4**	13-06-073-08 W6M
18	Saddle Hills	**0.3**	**33.3**	**1.0**	04-25-074-07 W6M
19	Wanham	**0.3**	**35.2**	**1.3**	16-22-077-03 W6M
20	Shaftesbury	**0.2**	**37.2**	**0.7**	04-03-082-23 W5M
21	Eaglesham	**0.2**	**31.9**	**1.4**	16-21-079-25 W5M
23	Bear Lake	**0.2**	**33.5**	**2.0**	15-31-072-06 W6M

PASZA Passive Results for May 2009 (Continued)

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	Site Legal
24	Wembley	**0.2**	**31.5**	**1.6**	12-31-070-08 W6M
25	Pinto Creek	**0.2**	**34.0**	**0.9**	04-24-069-11 W6M
26	Flyingshot	**0.2**	**33.5**	**1.6**	15-36-070-07 W6M
27	Grande Prairie I	**0.2**	**35.3**	**3.3**	08-15-071-06 W6M
28	Clairmont Lake	**0.3**	**36.7**	**1.1**	09-06-073-04 W6M
29	Smoky Heights	**0.4**	**39.3**	**1.4**	04-06-075-02 W6M
30	Fitzsimmons	**0.2**	**34.0**	**0.8**	15-36-072-03 W6M
32	Gold Creek	**0.1**	**29.4**	**1.1**	06-33-067-05 W6M
33	Wapiti	**0.2**	**37.4**	**1.3**	02-25-071-03 W6M
34	Puskwaskau	**0.2**	**31.5**	**0.7**	15-35-074-25 W5M
35	Jean Cote	**0.2**	**34.5**	**1.6**	12-35-079-21 W5M
36	Guy	**0.2**	**32.2**	**1.8**	03-04-076-22 W5M
37	Crooked Creek	**0.2**	**31.2**	**1.0**	16-01-071-26 W5M
38	Karr Creek	**0.1**	**28.5**	**0.5**	10-16-065-02 W6M
39	Clouston Creek	**0.2**	**36.4**	**0.8**	12-01-073-22 W5M
40	McLennan	**0.4**	**33.5**	**2.1**	03-29-077-19 W5M
41	Valleyview	**0.2**	**38.4**	**0.9**	09-30-069-22 W5M
42	Sunset House	**0.3**	**38.1**	**0.9**	05-32-070-19 W5M
43	High Prairie	**0.2**	**34.6**	**1.4**	16-13-074-17 W5M
44	Peavine	**0.2**	**32.5**	**0.6**	03-05-079-15 W5M
45	Gift Lake	**0.2**	**33.0**	**0.7**	10-07-079-12 W5M
46	Little Smoky	**0.2**	**33.2**	**1.3**	12-01-065-21 W5M
47	Kinuso	**0.2**	**31.8**	**0.7**	12-10-073-10 W5M
48	Deer Mountain	**0.2**	**31.3**	**0.6**	15-22-068-09 W5M
49	Grande Prairie HP	**0.2**	**34.7**	**3.4**	17-26-071-06 W6M

*BDL = Below Detection Level



Duplicate Summary Chart

Passive Summary for MAY 2009

Stats	Sulphur Dioxide SO_2	Ozone O_3	Nitrogen Dioxide NO_2
	ppb	ppb	ppb
	Passive Summary for May 2009 (PASZA Zone)		
Mean	**0.2**	**34.0**	**1.2**
Standard Deviation	**0.1**	**2.5**	**0.6**
Minimum	**0.1**	**28.5**	**0.5**
Minimum At	**Karr Creek (#38)**	**Karr Creek (#38)**	**Forth Creek (#3)**
Maximum	**0.4**	**39.3**	**3.4**
Maximum At	**Smoky Heights (#29)**	**Smoky Heights (#29)**	**Grande Prairie HP (#49)**

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

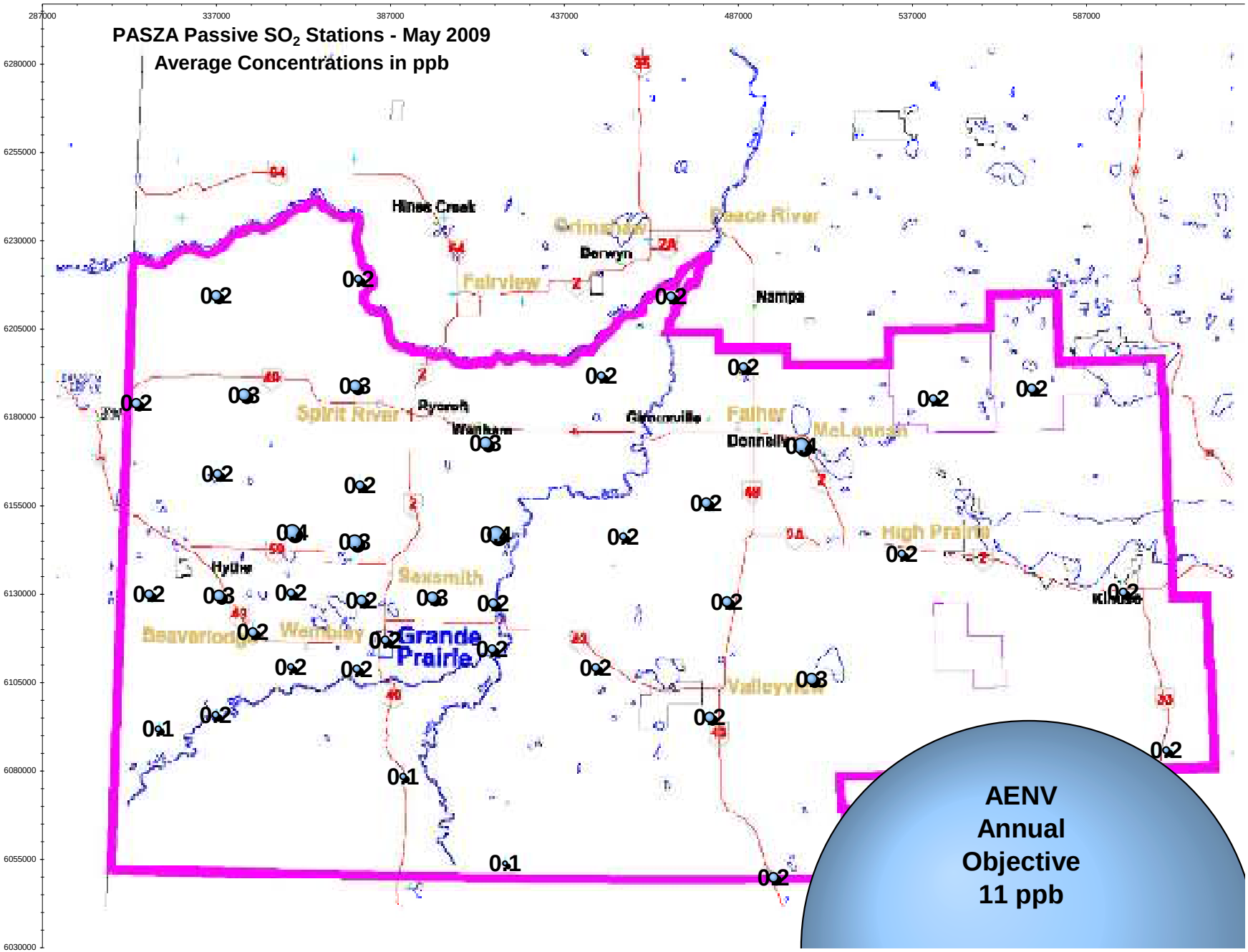
	SO_2	O_3	NO_2
PASZA Beaverlodge station	**0.2**	**33.9**	**4.6**
PASZA Beaverlodge passive	**0.2**	**36.8**	**1.4**

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

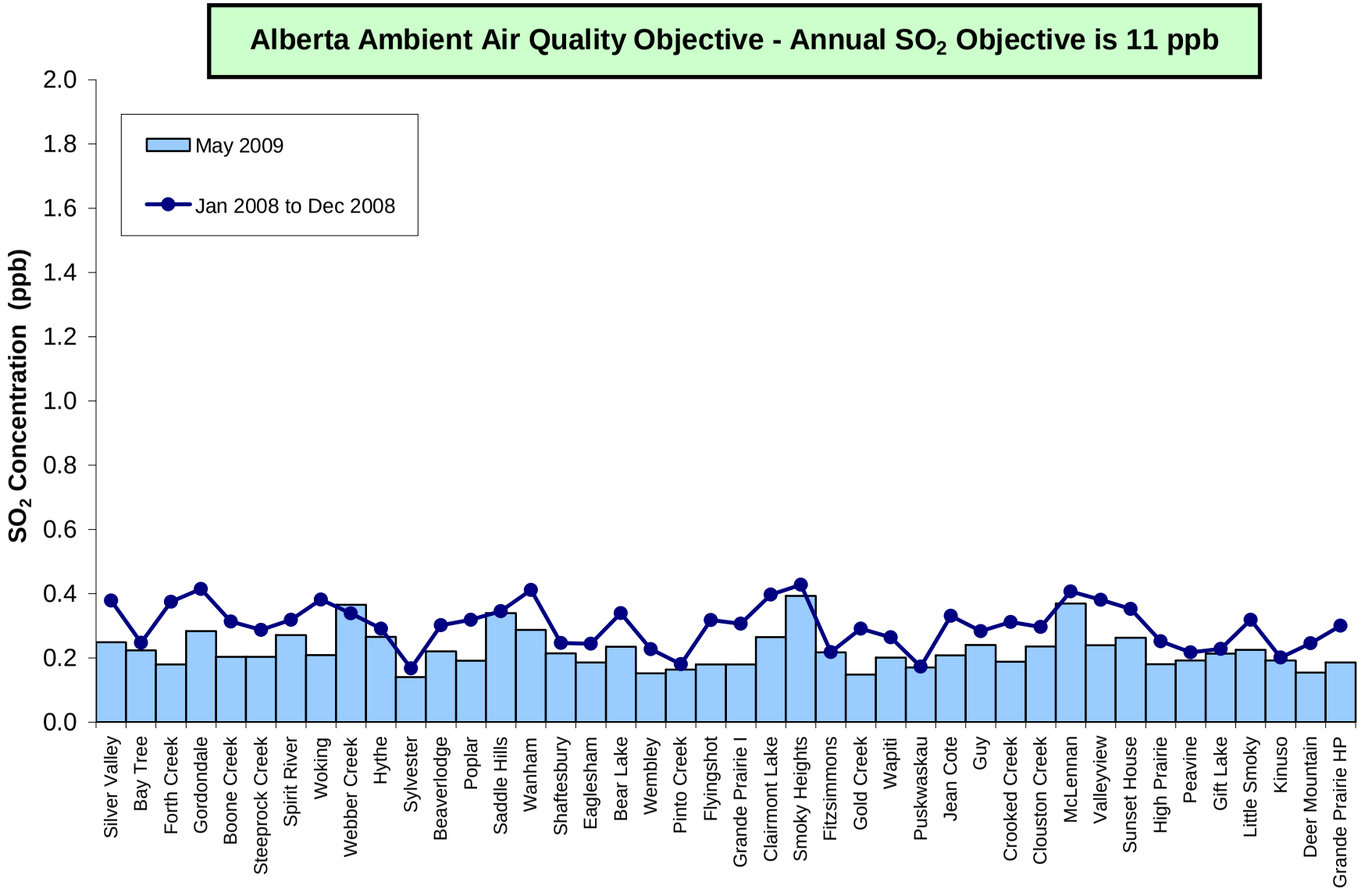
	SO_2	O_3	NO_2
PASZA Henry Pirker station	**0.2**	**30.3**	**4.7**
PASZA Grande Prairie passive	**0.2**	**34.7**	**3.4**

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

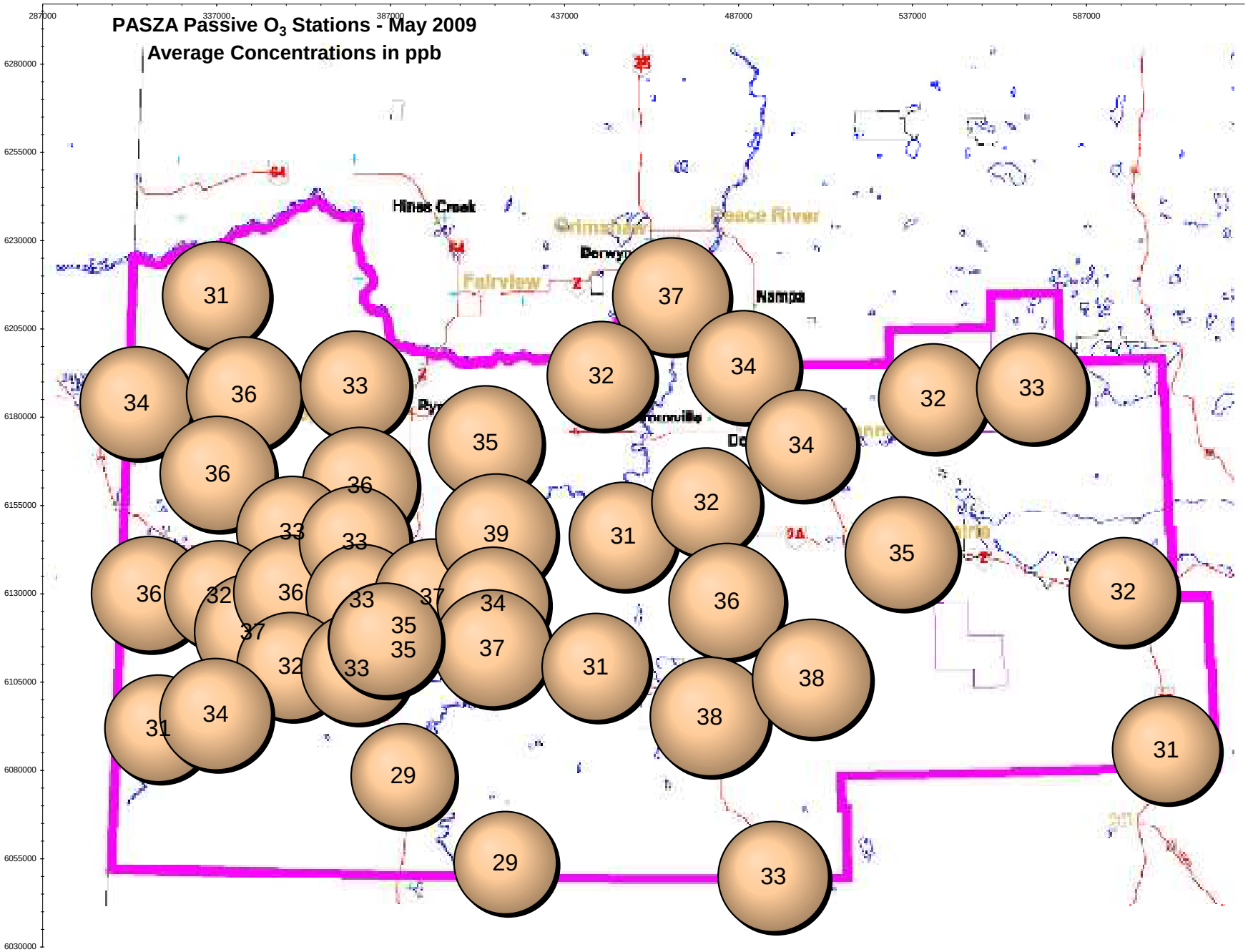
	SO_2	O_3	NO_2
PASZA Portable Kinuso station	**0.2**	**24.9**	**1.5**
PASZA Kinuso passive	**0.2**	**31.8**	**0.7**



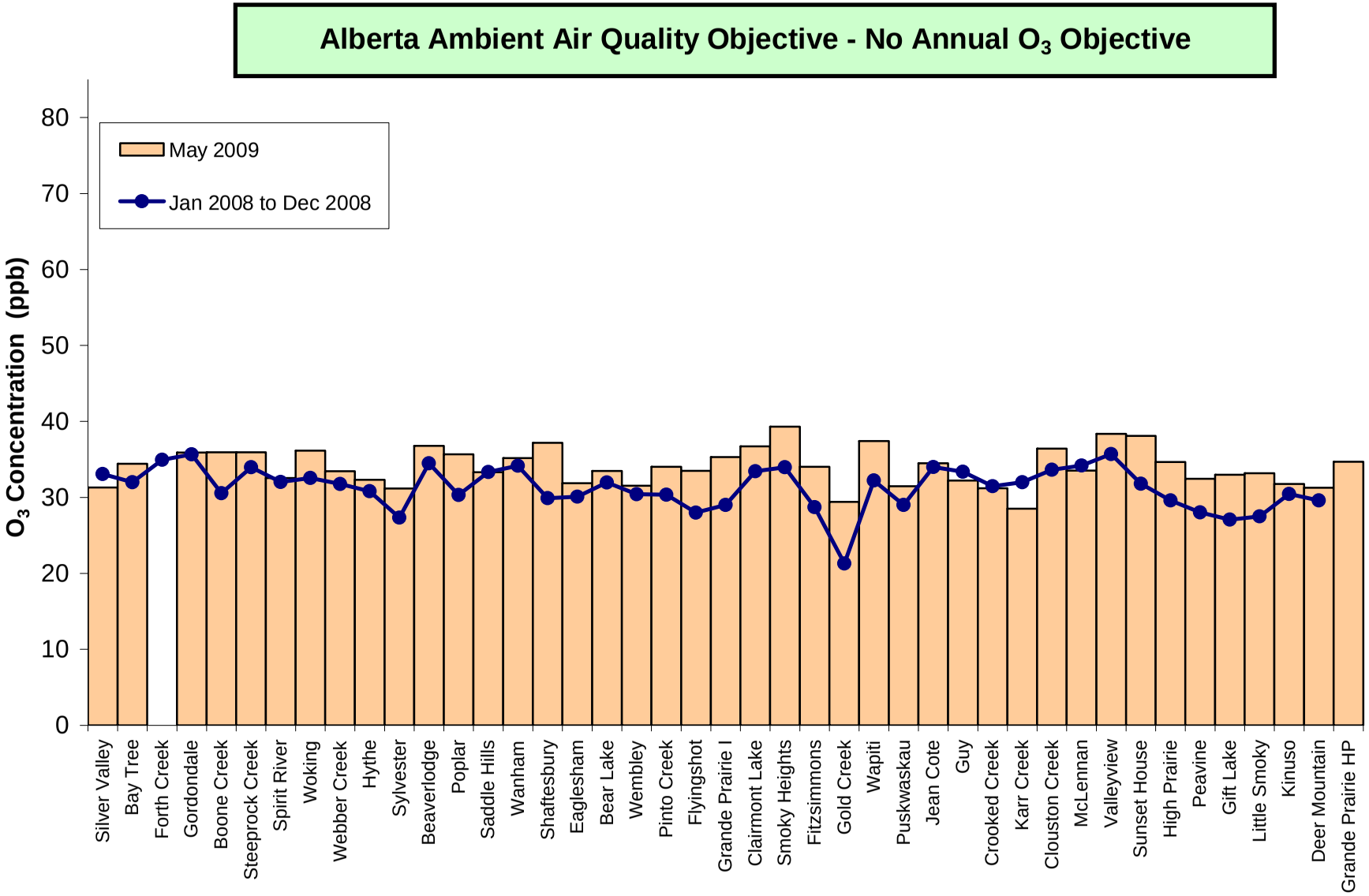
SO_2 Bubble Chart



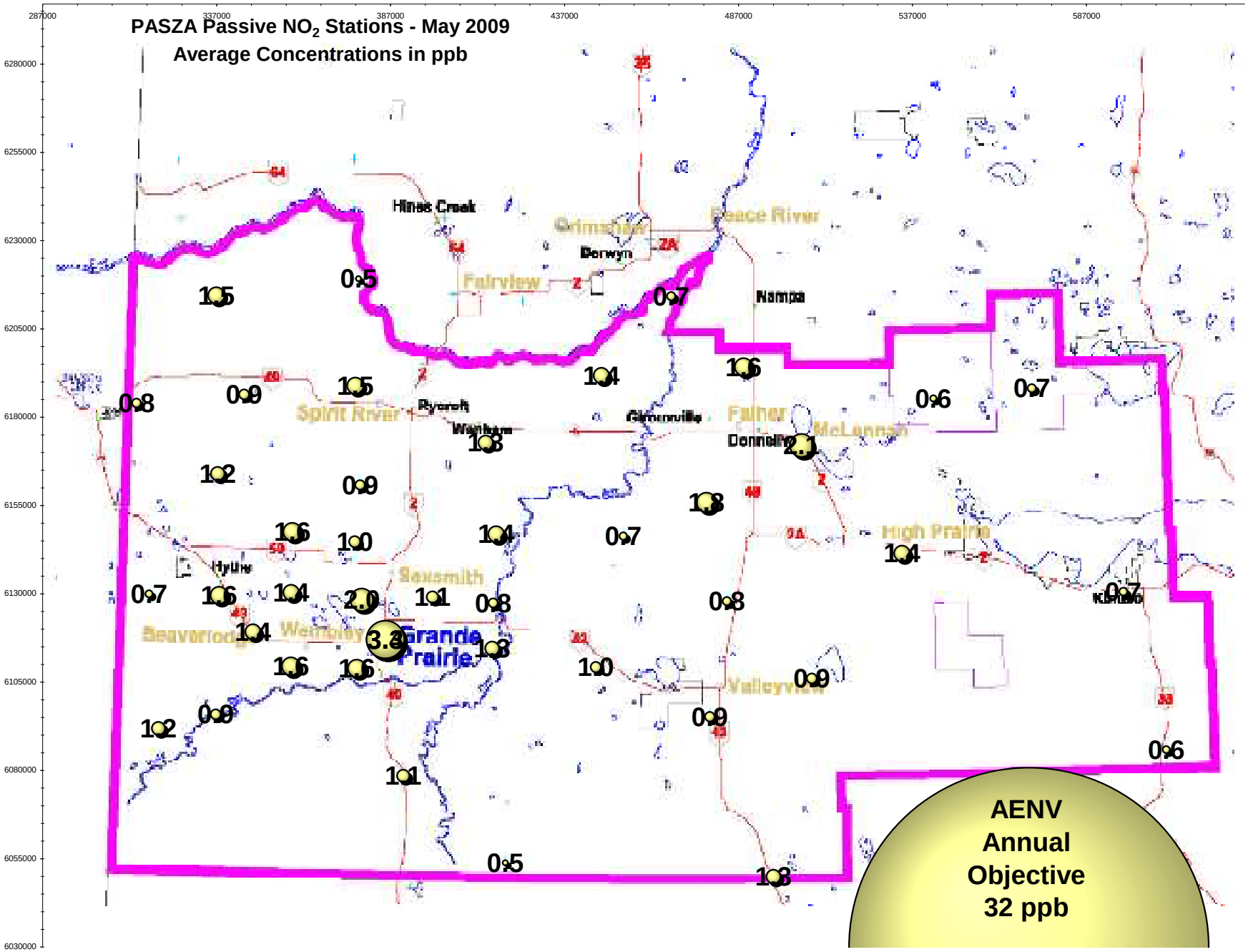
SO_2 Summary Chart



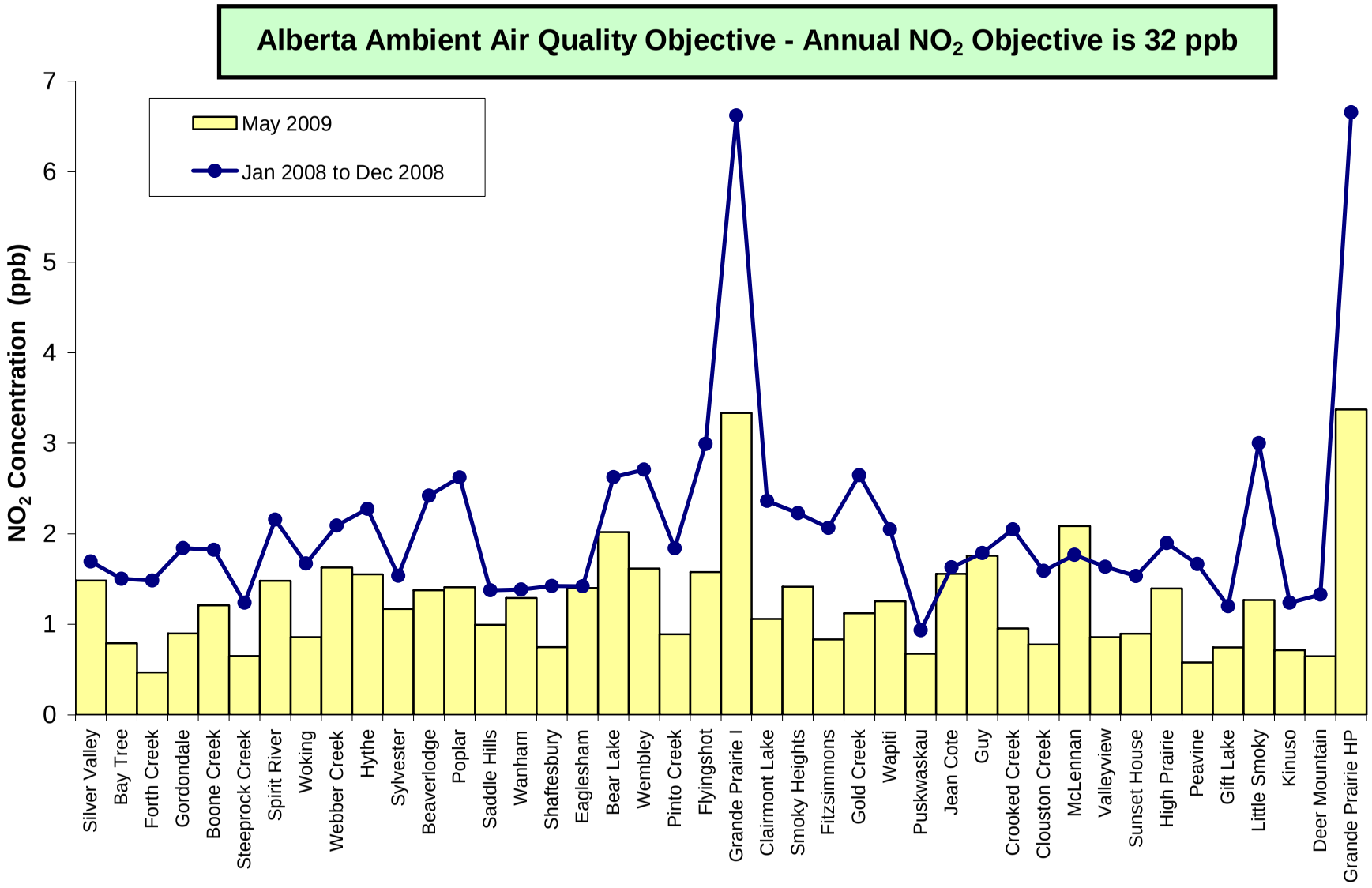
O_3 Bubble Chart



O_3 Summary Chart



NO_2 Bubble Chart



NO_2 Summary Chart

May 2009 Calibration Reports

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

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

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

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

PASZA – 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	May 26, 2009	Previous Calibration	April 13, 2009
Station Number	1	Station Location	Henry Pirker
Reason: Routine	Install	Removal	Other:
Start Time (MST)	8:00	End Time (MST)	11:26
Barometric Pressure	0.933 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Conc	49.1 ppb	Cal Gas Cert Date	13/3/2009
		Cal Gas Cylinder #	AAL 15377
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	10
	Before		After
Calculated slope	1.006500	Calculated slope	1.000015
Calculated intercept	-2.264536	Calculated intercept	-2.282042
Analyzer make	TEI 43C	Analyzer serial #	610816292

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	8.1		8.1	
Coefficient	.799		.826	
Pressure	645.1	mm Hg	649.1	mm Hg
Flow	0.526	lpm	0.542	lpm
Lamp Voltage	43640	Hz	44644	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	0.6	N/A
4988	39.87	389.4	390.6	0.9968
4989	19.91	195.2	198.8	0.9819
4989	9.95	97.7	101.4	0.9636
4988	0.00	0.0	0.1	As Found Zero
4989	39.87	389.3	390.6	As Found Span
			Average Correction Factor	0.9808

Calculated value of As Found Response: 390.8 ppb Percent Change of As Found: -0.4%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.1	ppb
Auto span	269.5	ppb	262.3	ppb

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter	SO2
Air Monitoring Network	PASZA

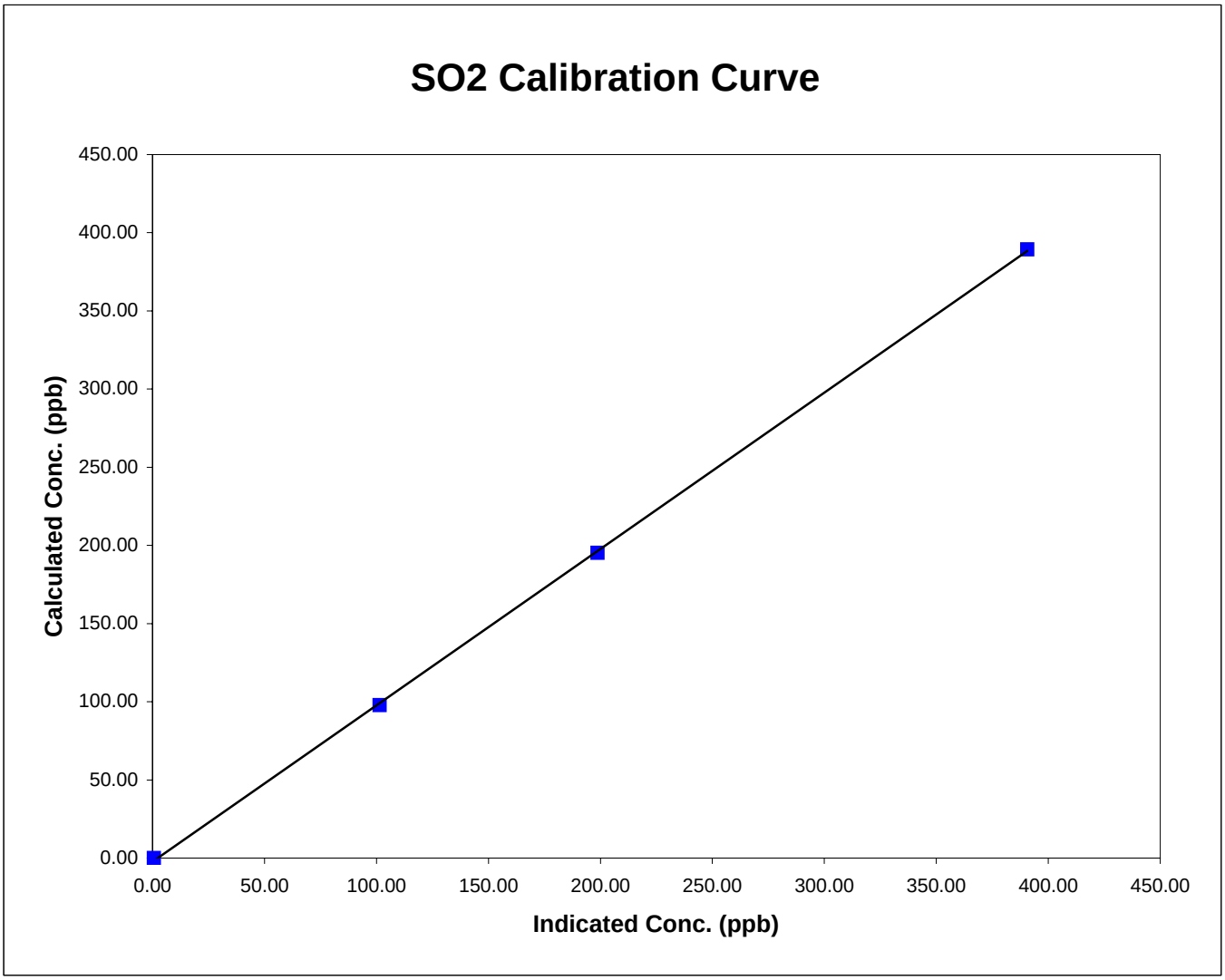
FOCUS AIR QUALITY MONITORING

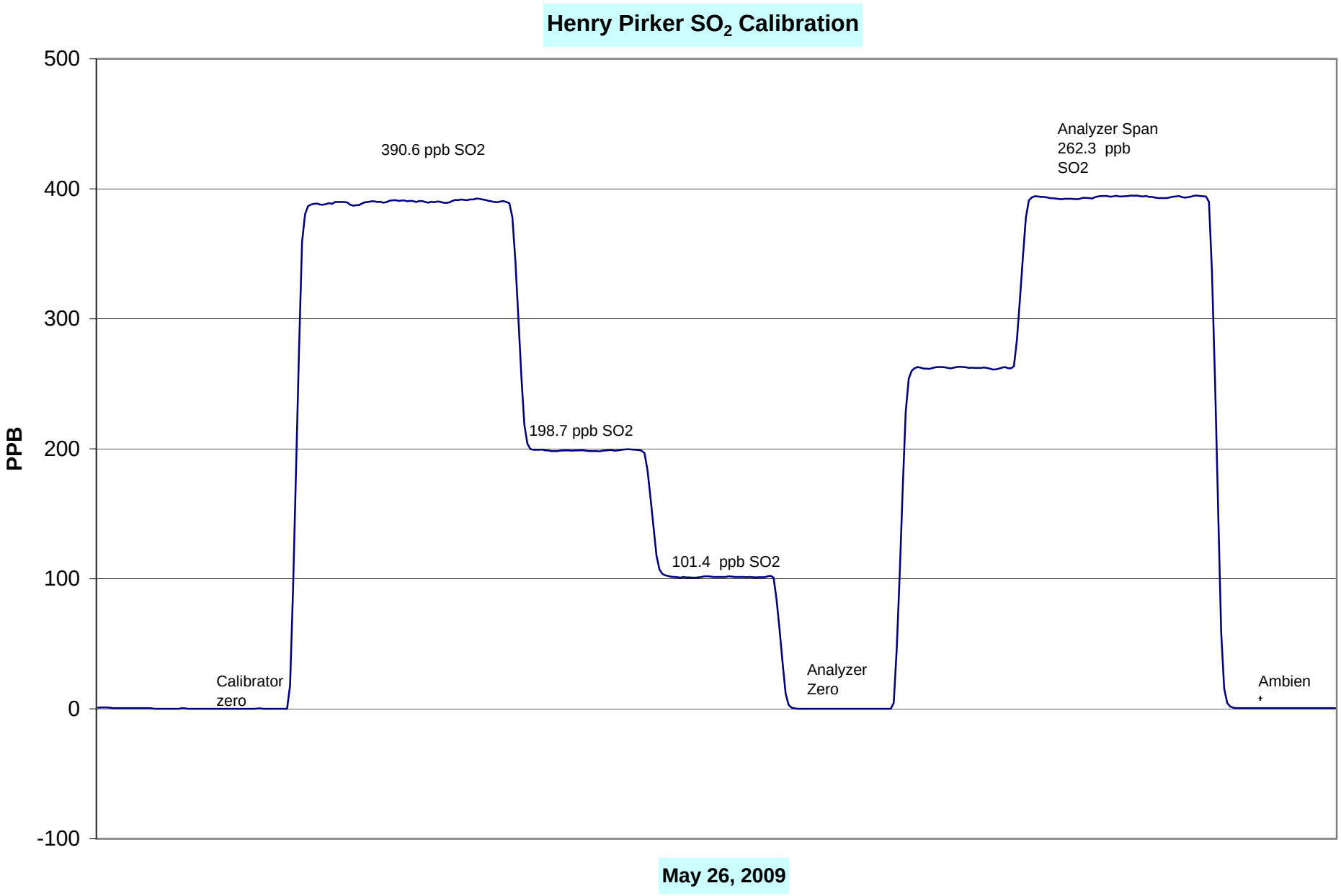
Station Information

Calibration Date	May 26, 2009	Previous Calibration	April 13, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:00	End Time (MST)	11:26
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	0.6	N/A		
389.4	390.6	0.9968	Correlation Coefficient	0.999908
195.2	198.8	0.9819		
97.7	101.4	0.9636	Slope	1.000015
			Intercept	-2.282042




Henry Pirker SO_2 Calibration
500
400
300
200
100
0
-100
PPB
390.6 ppb SO2
198.7 ppb SO2
101.4 ppb SO2
Analyzer Span
262.3 ppb
SO2
Calibrator
zero
Analyzer
Zero
Ambien
May 26, 2009

Calibration Report

Parameter	NO_X-NO-NO_2
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	May 26, 2009	Previous Calibration	April 13,2009
Station Number	1	Station Location	Henry Pirker

Reason: Routine Installation Removal Other:

Start Time (MST)	8:00		End Time (MST)	12:26	
Barometric Pressure	0.927	Atm	Station Temperature	25.0	Deg C
Calibrator	Environics		Serial Number	3474	
NO Cal Gas Conc	49.6	ppm	Cal Gas Expiry Date	June 8, 2008	
NOx Cal Gas Conc	49.6	ppm	Cal Gas Serial #	AAL 15377	

DACS Information

DACS make: Focus AP1000 DACS serial No.:

Parameter		NO2	NOx	NO
Before	Data Slope	0.992861	0.994352	0.995262
	Data Offset	-0.235868	-2.782363	-2.646376
After	Data Slope	1.000073	0.995083	0.996918
	Data Offset	0.014076	-2.605134	-2.704311
Channel #		8	6	7
Voltage Range		0 - 10 VDC	0 - 10 VDC	0 - 10 VDC

Analyzer Information

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

Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	9.8	mV	9.8	mV
NOx bkgnd	10.4	mV	10.4	mV
NO coefficient	0.792		0.792	
NOx coefficient	1.001		1.001	
NO2 conv temp	319.0	Deg C	319.0	Deg C
PMT Temp	-2.4	Deg C	-2.4	Deg C
PMT Volt	-787.0	mV	-787.0	mV
R Cell Press	192.7	in Hg	192.1	in Hg

Calibration Report

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

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: May 26, 2009 Station Location: Henry Pirker

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4988	0.00	0.0	0.0	0.0	0.1	0.0	-0.1	N/A	N/A
1	4988	39.84	393.0	393.0	0.0	396.1	395.4	0.8	0.9922	0.9941
2	4988	19.87	196.8	196.8	0.0	202.1	201.9	0.1	0.9740	0.9746
3	4988	9.91	98.3	98.3	0.0	103.8	103.8	-0.1	0.9477	0.9470
AFZ	4988	0.00	0.0	0.0	0.0	0.1	0.0	-0.1	0.0000	0.0000
AFS	4988	39.84	393.0	393.0	0.0	386.4	386.0	0.4	1.0172	1.0183
							Average Correction Factor		0.9713	0.9719

As Found Concentrations: NO_X= 383.5 NO= 383.3 As Found Percent Change NO_X= -2.4% NO= -2.5%

GPT Calibration Data

Dilution Flow 4988 ccm Source Gas Flow 39.84 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	0.0	0.0	0.0	0.1	0.0	-0.1	N/A	N/A	N/A	N/A
NO point	392.5	392.5	0.0	392.3	392.5	-0.3	1.0005	1.0000	N/A	N/A
300	392.5	121.7	270.8	392.2	121.7	270.7	1.0007	1.0000	1.0005	100.0%
200	392.5	209.2	183.3	392.4	209.2	183.4	1.0001	1.0000	0.9994	100.1%
100	392.5	295.3	97.1	392.3	295.3	97.1	1.0005	1.0000	1.0001	100.0%
					Average Correction Factor		1.0004	1.0000	1.0000	100.0%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	1.1	1.0	1.0	ppb	-0.3	-0.4	0.0	ppb
Auto span	169.2	170.6	-1.6	ppb	167.9	166.7	1.0	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter	NO_2
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

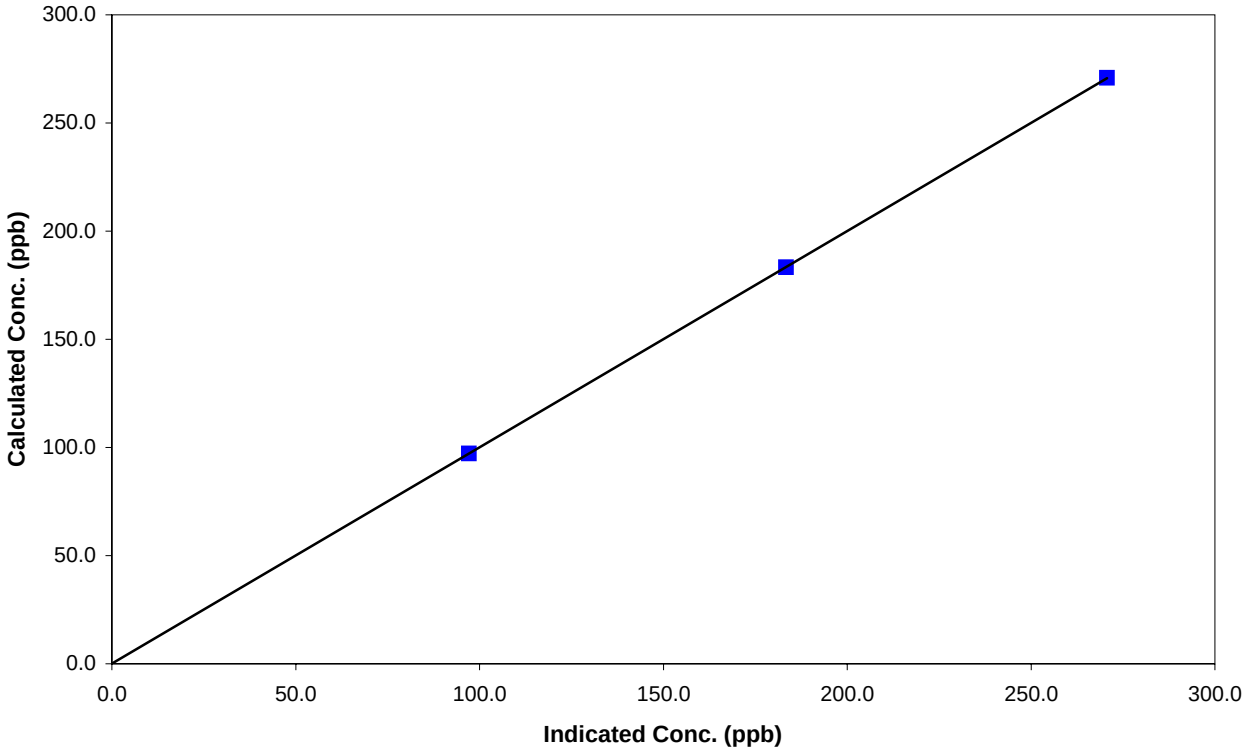
Station Information

Calibration Date	May 26, 2009	Previous Calibration	April 13,2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:00	End Time (MST)	12:26
Analyzer make	TEI 42C	Analyzer serial #	508011073

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A		
270.8	270.7	1.0005	Correlation Coefficient	0.999999
183.3	183.4	0.9994		
97.1	97.1	1.0001	Slope	1.000073
			Intercept	0.014076

NO_2 Calibration Curve



Calibration Summary

Parameter	NO_x
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

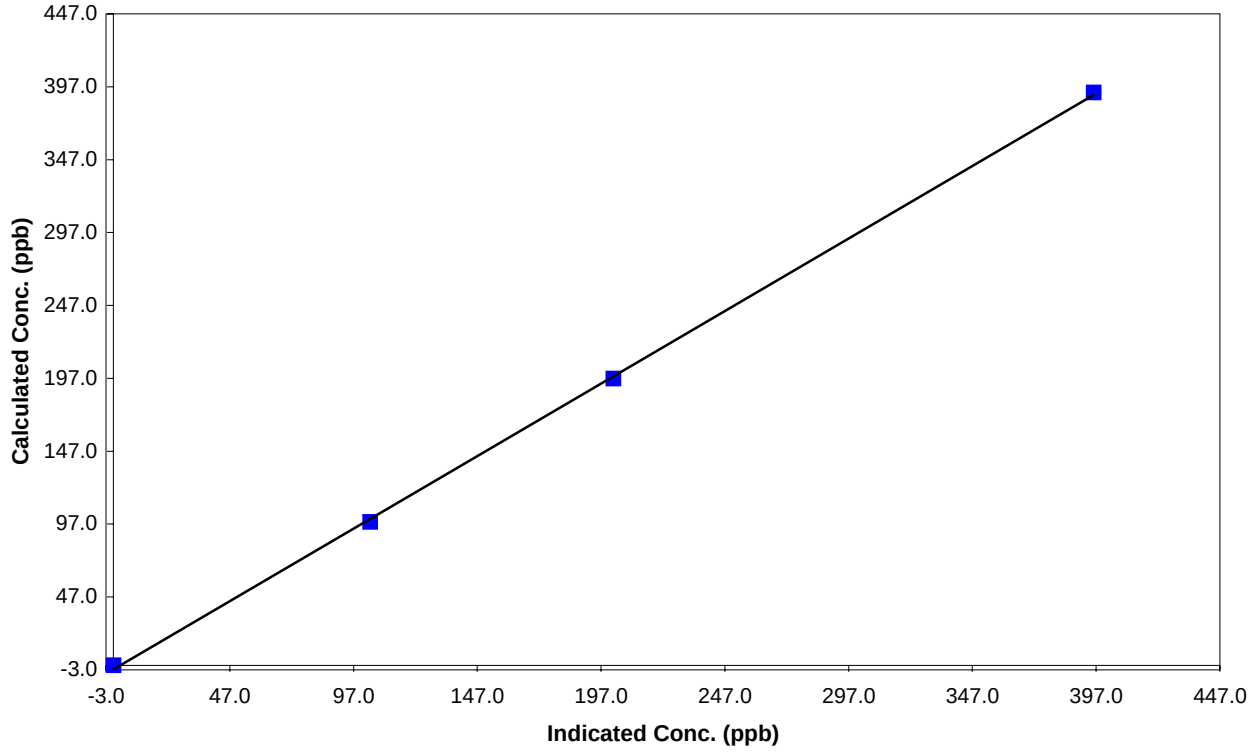
Station Information

Calibration Date	May 26, 2009	Previous Calibration	April 13,2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:00	End Time (MST)	12:26
Analyzer make	TEI 42C	Analyzer serial #	508011073

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A		
393.0	396.1	0.9922	Correlation Coefficient	0.999803
196.8	202.1	0.9740		
98.3	103.8	0.9477	Slope	0.995083
			Intercept	-2.605134

NOx Calibration Curve



Calibration Summary

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

FOCUS AIR QUALITY MONITORING

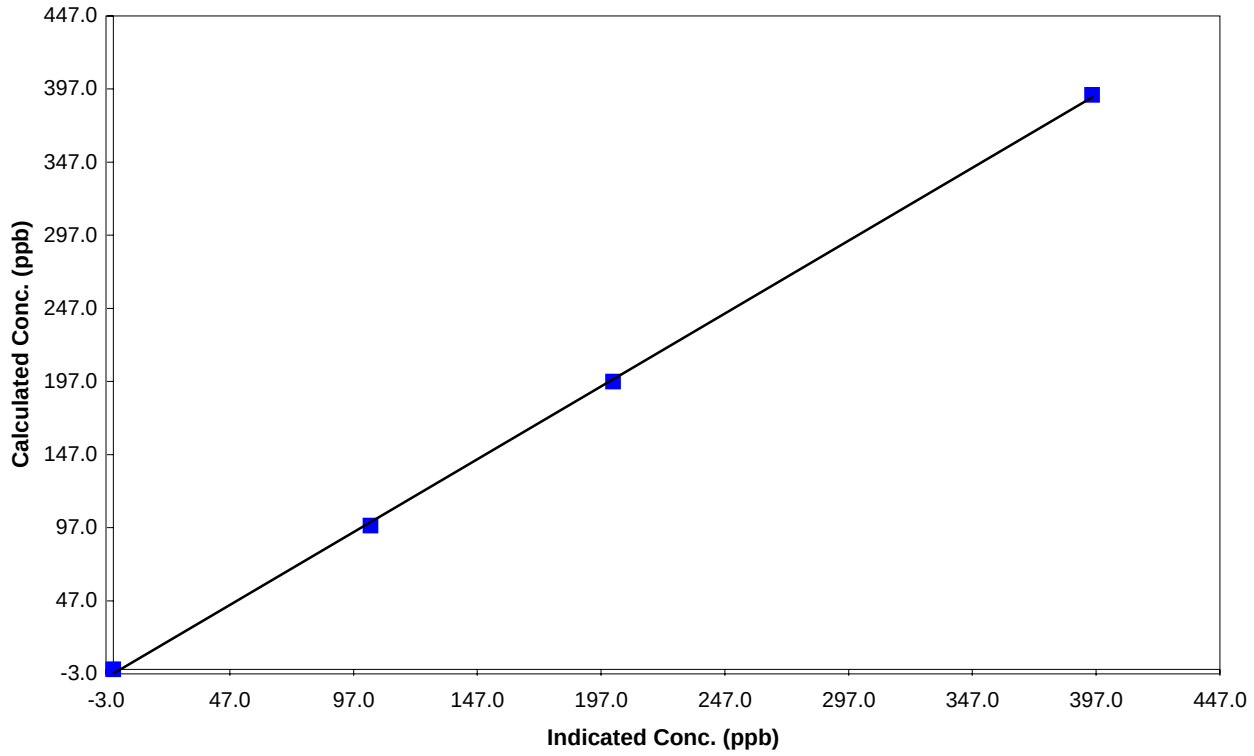
Station Information

Calibration Date	May 26, 2009	Previous Calibration	April 13,2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:00	End Time (MST)	12:26
Analyzer make	TEI 42C	Analyzer serial #	508011073

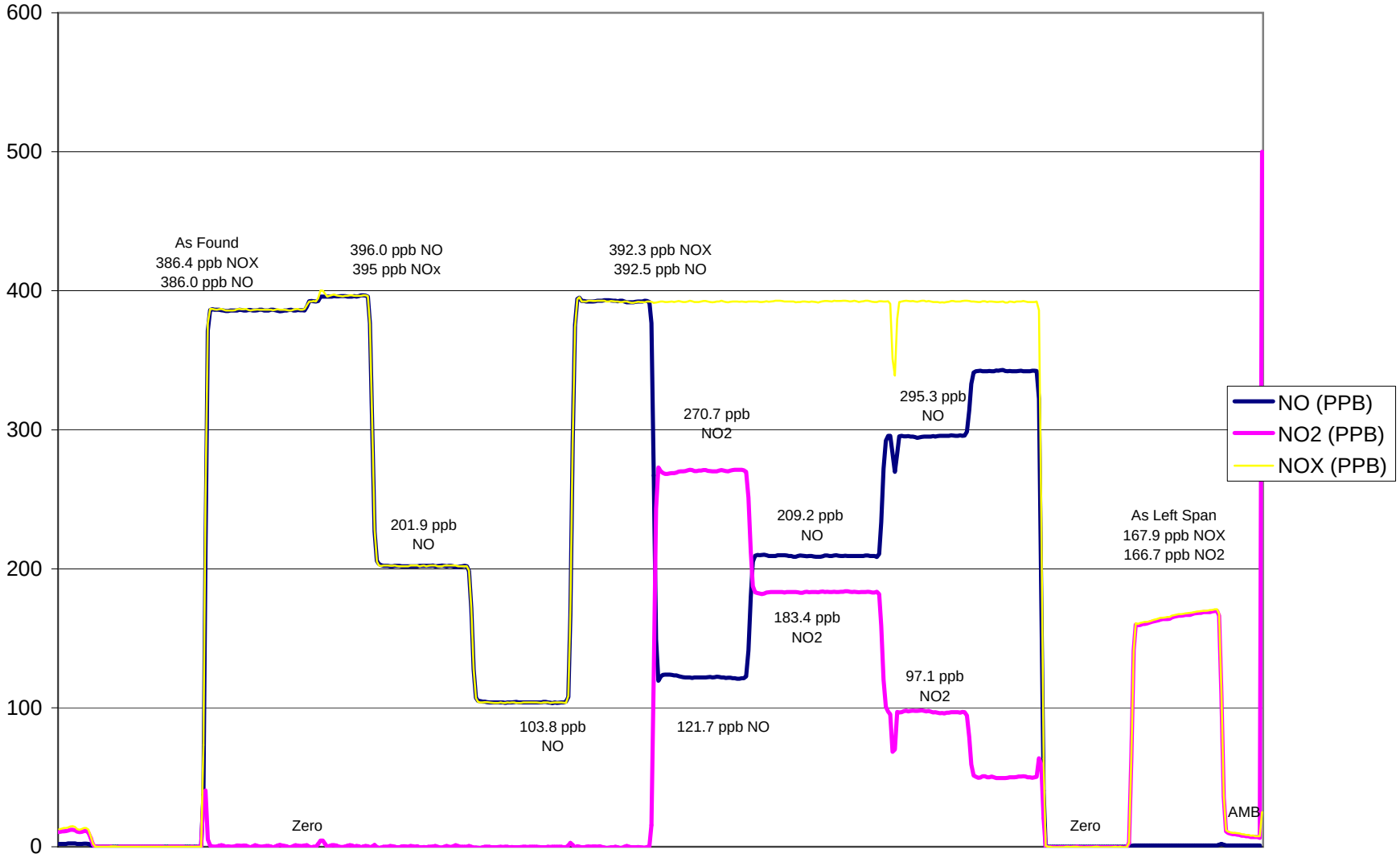
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
393.0	395.4	0.9941	Correlation Coefficient	0.999773
196.8	201.9	0.9746		
98.3	103.8	0.9470	Slope	0.996918
			Intercept	-2.704311

NO Calibration Curve



Henry Pirker NO_X Calibration



May 26, 2009

Calibration Report

Parameter	O3
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	May 26, 2009	Previous Calibration	April 13, 2009
Station Number	1	Station Location	Henry Pirker
Reason: Routine	Install	Removal	Other:
Start Time (MST)	12:01	End Time (MST)	14:36
Barometric Pressure	0.927 atm	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	Focus AP1000	DACS serial No.	45269
DACS voltage range	0 - 1 volt	DACS channel #	5
	Before		After
Calculated slope	0.883550	Calculated slope	0.999169
Calculated intercept	-1.536527	Calculated intercept	0.220293
Analyzer make	TECO 49C	Analyzer serial #	607415761

	before		after	
Concentration range	500	ppb	500	ppb
offset	-0.6	ppb	-0.6	ppb
slope	1.064		1.064	
O3 Lamp temp	71	Deg C	71	Deg C
Intensities	92118/76260	mV	92523/76701	mV
Pressure	694.3	inches Hg	695.1	inches Hg
Flow A	0.718	ccm	0.718	ccm
Flow B	0.732	Deg C	0.732	Deg C

Calibration Data

Referenced concentration (ppb)	Dilution air flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
0	4988	0.0	0.1	N/A
300	4989	270.7	271.1	0.9986
200	4989	183.4	182.9	1.0026
100	4989	97.1	96.7	1.0045
0	4988	0.0	-0.3	As found zero
300	4988	270.7	283.9	As found span
			Average Correction Factor	1.0019

Calculated value of As Found Response: 249.6 ppm Percent Change of As Found: -7.8%

	before calibration		after calibration	
Auto zero	0.3	ppb	0.3	ppb
Auto span	161.4	ppb	155.7	ppb

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter	O3
Air Monitoring Network	PASZA

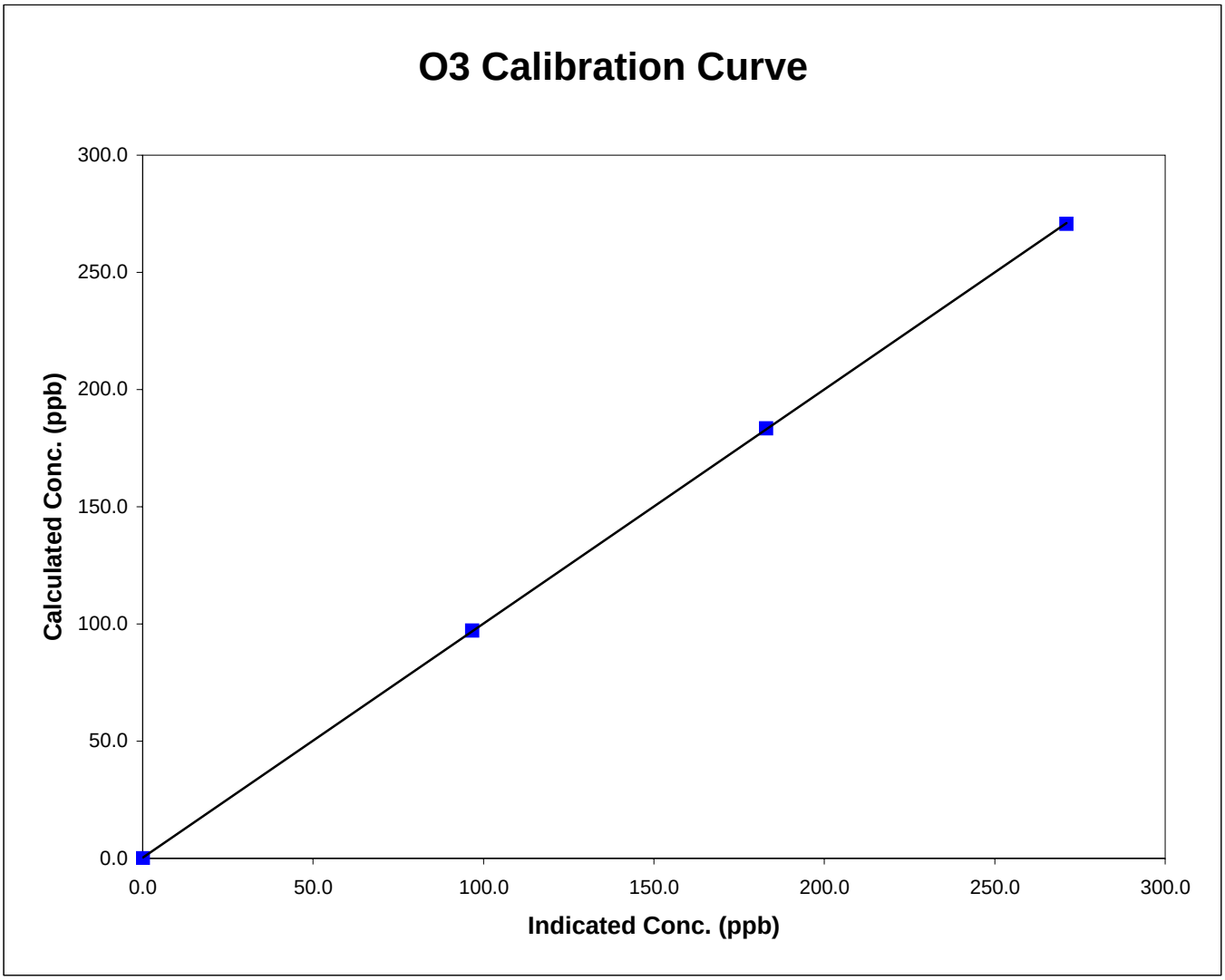
FOCUS AIR QUALITY MONITORING

Station Information

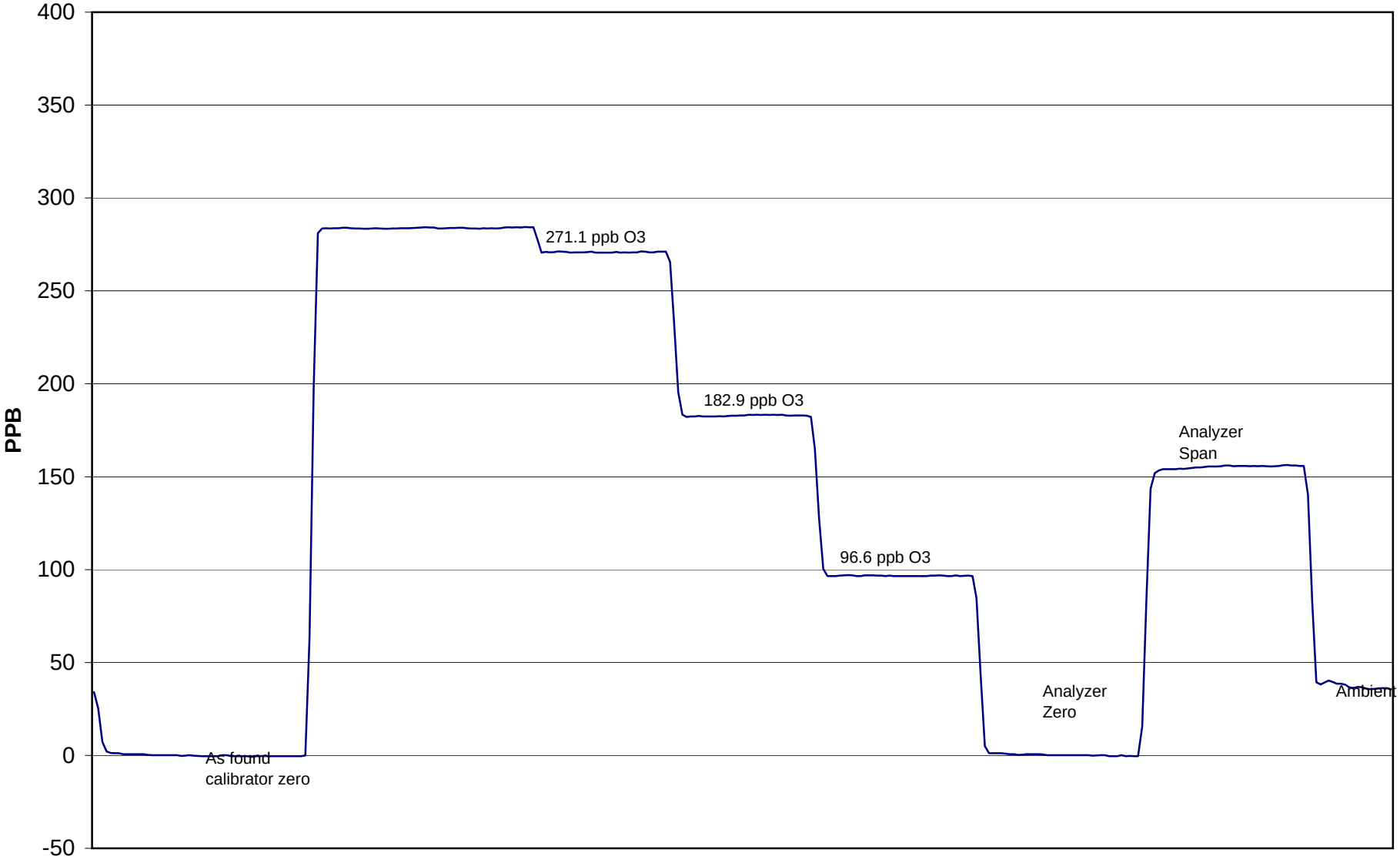
Calibration Date	May 26, 2009	Previous Calibration	April 13, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:01	End Time (MST)	14:36
Analyzer make/model	TECO 49C	Analyzer serial #	607415761

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	NA		
270.7	271.1	0.9986	Correlation Coefficient	0.999988
183.4	182.9	1.0026		
97.1	96.7	1.0045	Slope	0.999169
			Intercept	0.220293



Henry Pirker O_3 Calibration



May 26, 2009

Calibration Report

Parameter	TRS
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	May 27, 2009	Previous Calibration	April 14, 2009
Station Number	1	Station Location	Henry Pirker
Reason: Routine	Install	Removal	Other:
Start Time (MST)	9:50	End Time (MST)	12:16
Barometric Pressure	0.929 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	1.001489	Calculated slope	1.006037
Calculated intercept	-0.202173	Calculated intercept	-0.582610
Analyzer make	TEI 45C	Analyzer serial #	630718528

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Coefficient	0.847		.847	
Background	16.6		17.1	
Pressure	654.9	mm Hg	659	mm Hg
Flow	463	ccm	465	ccm
Lamp Voltage	848	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)
4988	0.00	0.00	-0.03	N/A
4988	79.83	80.34	80.02	1.0039
4988	39.81	40.38	41.43	0.9748
4988	9.92	10.12	10.95	0.9246
4988	0.00	0.00	0.36	As Found Zero
4988	79.77	80.28	80.95	As Found Span
			Average Correction Factor	0.9678

Calculated value of As Found Response: 80.5 ppb Percent Change of As Found: -0.3%

	before calibration		after calibration	
Auto zero	-0.29	ppb	-0.20	ppb
Auto span	27.12	ppb	27.19	ppb

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

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

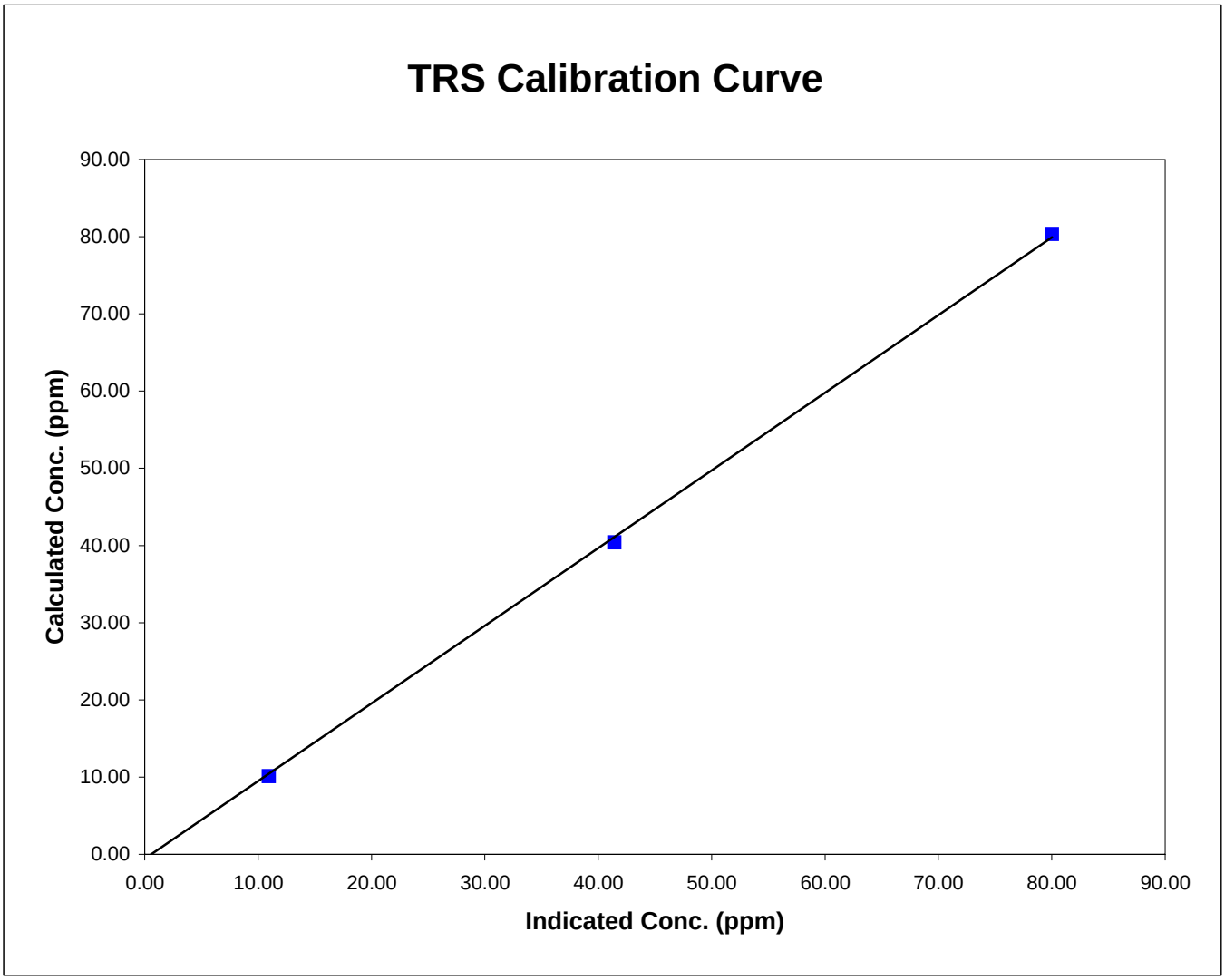
FOCUS AIR QUALITY MONITORING

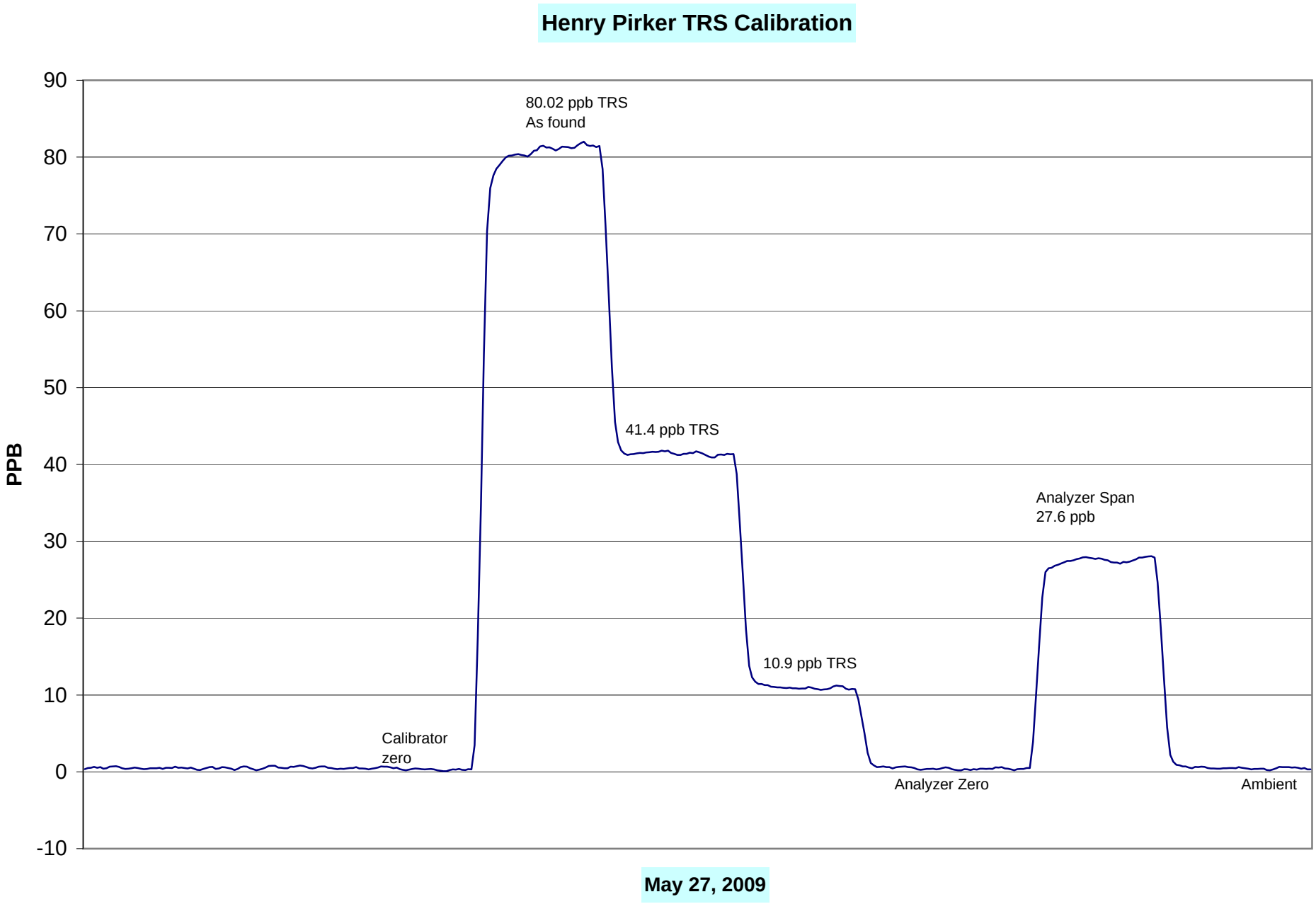
Station Information

Calibration Date	May 27, 2009	Previous Calibration	April 14, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:50	End Time (MST)	12:16
Analyzer make/model	TEI 45C	Analyzer serial #	630718528

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	-0.027	N/A		
80.337	80.025	1.0039	Correlation Coefficient	0.999707
40.382	41.427	0.9748		
10.123	10.948	0.9246	Slope	1.006037
			Intercept	-0.582610




Henry Pirker TRS Calibration
PPB
90
80
70
60
50
40
30
20
10
0
-10
80.02 ppb TRS
As found
41.4 ppb TRS
10.9 ppb TRS
Analyzer Span
27.6 ppb
Calibrator
zero
Analyzer Zero
Ambient
May 27, 2009

Calibration Report

Parameter	CO
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	May 27, 2009	Previous Calibration	April 14, 2009
Station Number	1	Station Location	Henry Pirker
Reason: Routine	Install	Removal	Other:
Start Time (MST)	11:00	End Time (MST)	13:24
Barometric Pressure	0.929 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Conc	3000 ppm	Cal Gas Expiry Date	AUG 28/05
		Cal Gas Cylinder #	AAL20565
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	1.006629	Calculated slope	1.020079
Calculated intercept	-0.245419	Calculated intercept	-0.222630
Analyzer make	TEI Model 48C	Analyzer serial #	508011062

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO span setting	1.029		1.029	
CO zero setting	6.013		6.013	
Sample pressure	683.3	mm Hg	684.1	mm Hg
Sample Flow	1.15	LPM	1.15	LPM

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4991	0.00	0.00	0.10	N/A
4991	39.82	23.74	23.43	1.0132
4991	19.88	11.90	11.95	0.9963
4991	9.94	5.96	6.17	0.9653
4990	0.00	0.00	0.11	As Found Zero
4990	39.86	23.77	23.43	As Found Span
			Average Correction Factor	0.9916

Calculated value of As Found Response: 23.239 ppm Percent Change of As Found: 2.3%

	before calibration		after calibration	
Auto zero	0.08	ppm	0.03	ppm
Auto span	19.01	ppm	19.40	ppm

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter	CO
Air Monitoring Network	PASZA

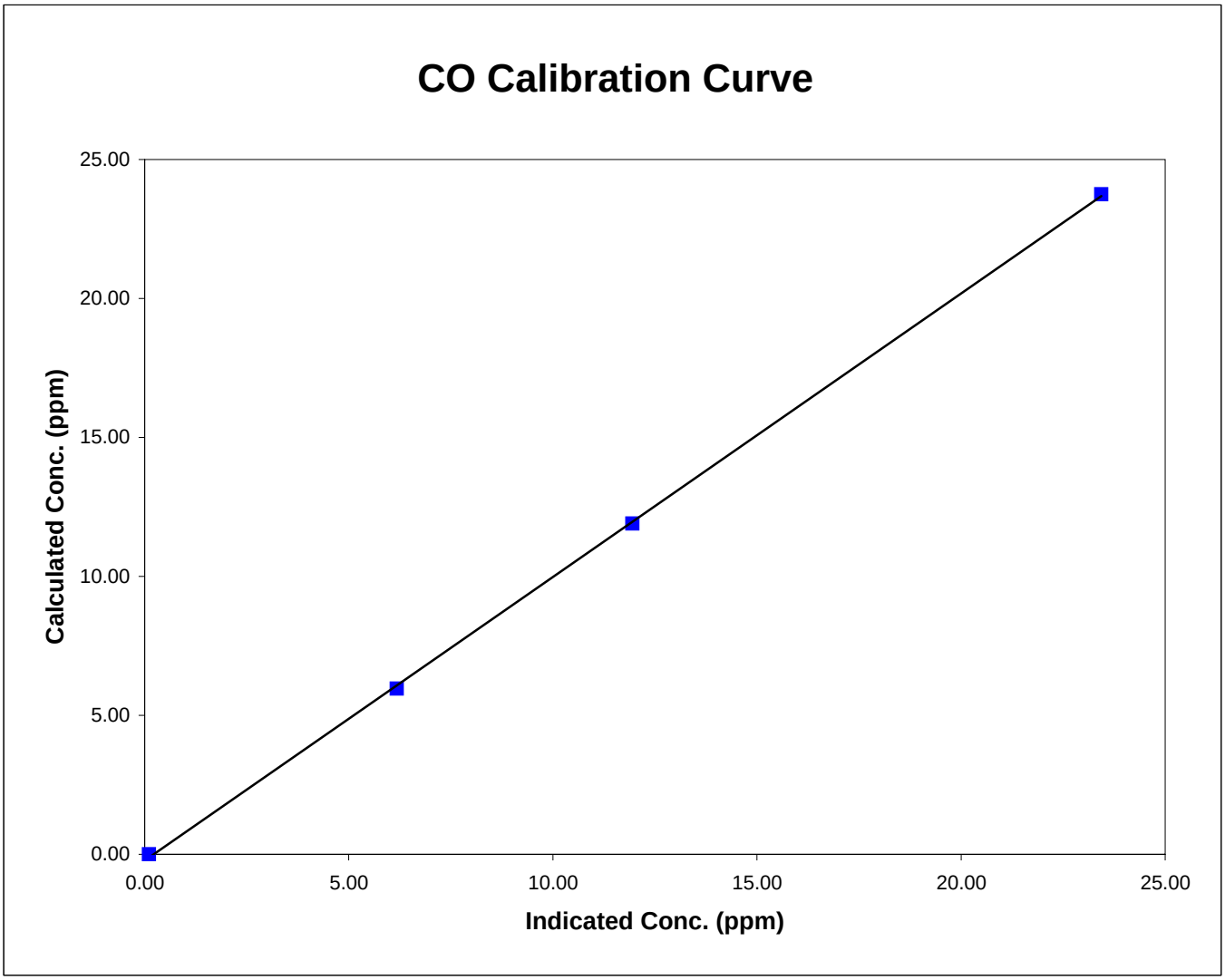
FOCUS AIR QUALITY MONITORING

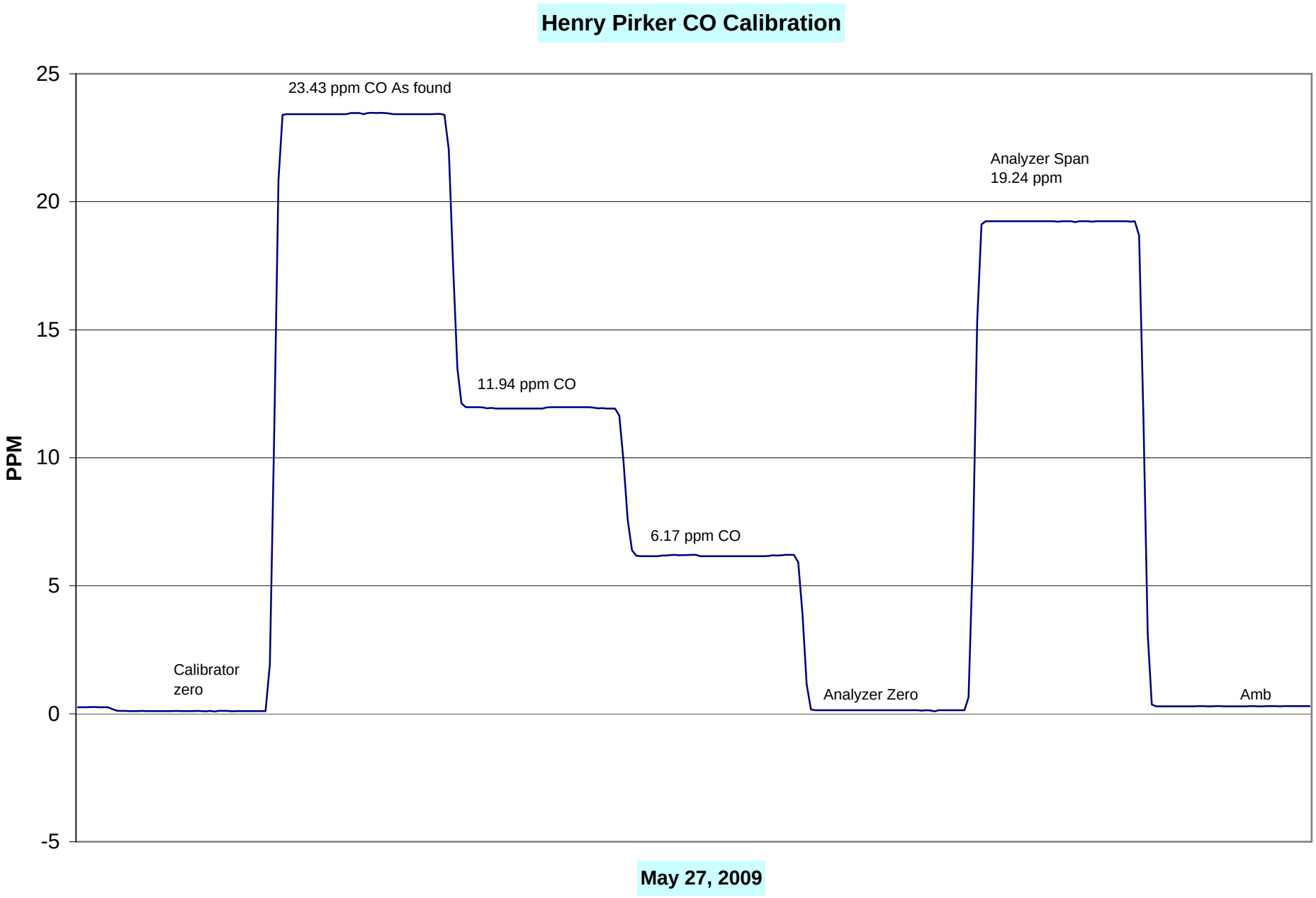
Station Information

Calibration Date	May 27, 2009	Previous Calibration	April 14, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	11:00	End Time (MST)	13:24
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	0.105	N/A		
23.744	23.435	1.0132	Correlation Coefficient	0.999889
11.902	11.946	0.9963		
5.960	6.174	0.9653	Slope	1.020079
			Intercept	-0.222630




Henry Pirker CO Calibration
25
20
15
10
5
0
-5
PPM
23.43 ppm CO As found
Analyzer Span
19.24 ppm
11.94 ppm CO
6.17 ppm CO
Calibrator
zero
Analyzer Zero
Amb
May 27, 2009

Calibration Report

Parameter	THC
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	May 27, 2009	Previous Calibration	April 14, 2009
Station Number	1	Station Location	Henry Pirker
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	12:20	End Time (MST)	15:30
Barometric Pressure	0.927 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	701 ppm CH4/ 299 ppm C3H8	Cal Gas Expiry Date	2/4/2010
Cal Gas CH4 equiv	1523.25 ppm	Cal Gas Cylinder #	ALM 005412
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	1.012373	Calculated slope	1.022459
Calculated intercept	-0.057904	Calculated intercept	-0.047999
Analyzer make	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

	before		after	
Concentration range	0 - 25	ppm	0 - 25	ppm
THC sample pressure	6.50	psi	6.50	psi
THC span counts	7170	capture	7205	capture
THC zero counts	1121	capture	1166	capture

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.00	0.07	N/A
4990	69.80	21.01	20.64	1.0180
4989	29.88	9.07	8.80	1.0309
4988	9.92	3.02	3.05	0.9902
4988	0.00	0.00	0.03	As Found Zero
4988	69.82	21.03	20.65	As Found Span
			Average Correction Factor	1.0130

Calculated value of As Found Response: 20.815 ppm Percent Change of As Found: 1.0%

	before calibration		after calibration	
Auto zero	0.04	ppm	-0.02	ppm
Auto span	24.90	ppm	23.09	ppm

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter	THC
Air Monitoring Network	PASZA

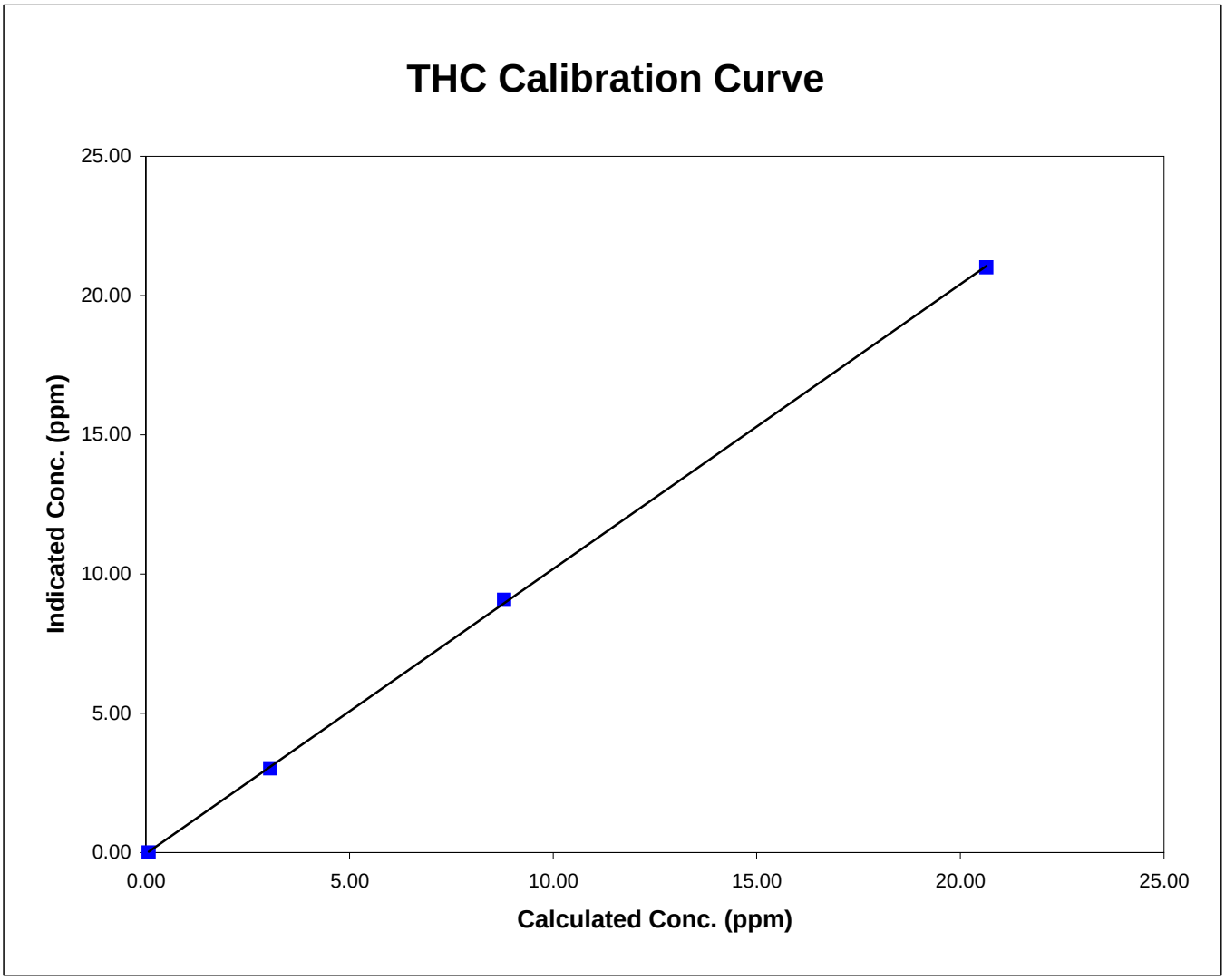
FOCUS AIR QUALITY MONITORING

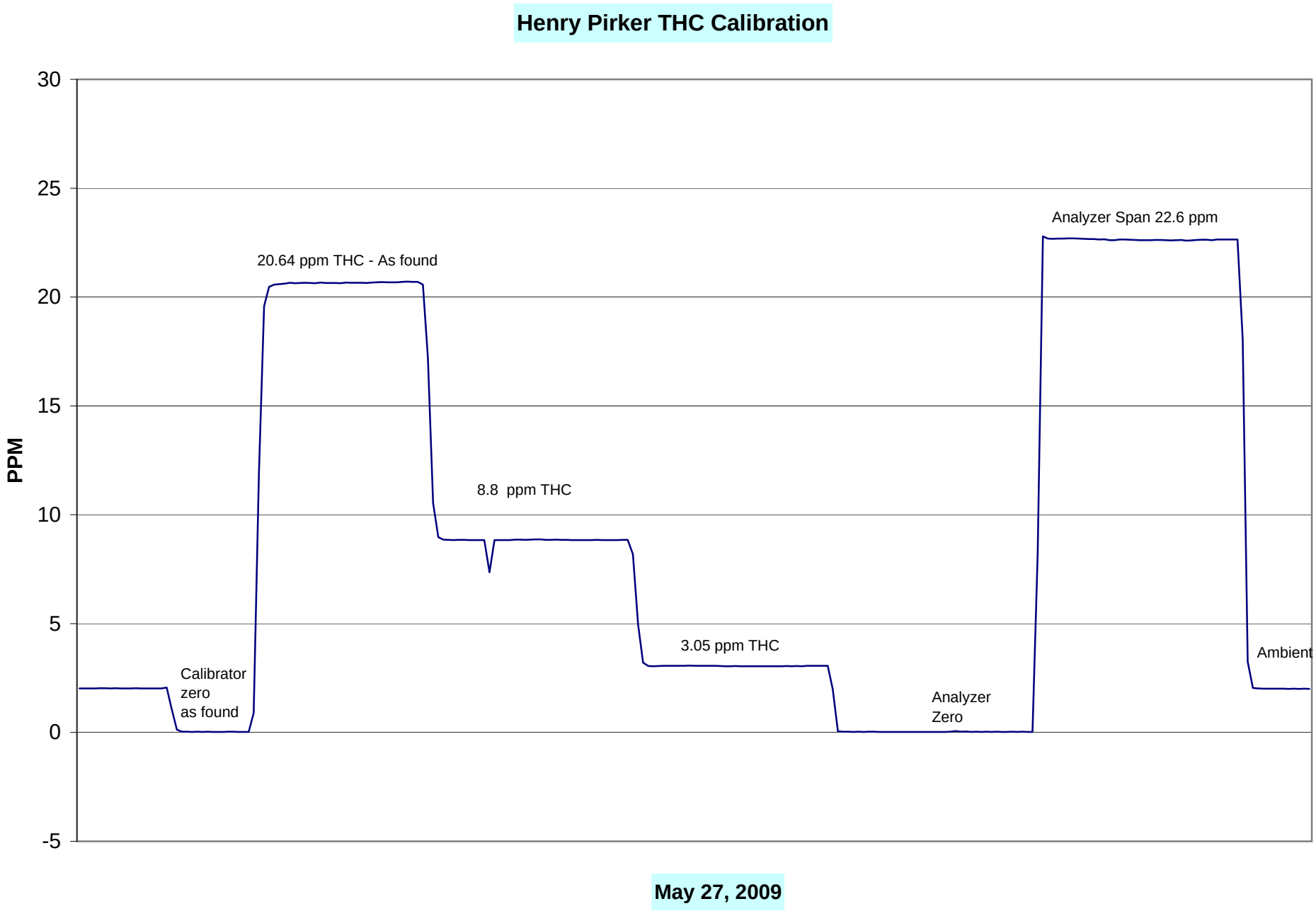
Station Information

Calibration Date	May 27, 2009	Previous Calibration	March 24, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:20	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	0.073	N/A		
21.013	20.642	1.0180	Correlation Coefficient	0.999922
9.069	8.797	1.0309		
3.023	3.053	0.9902	Slope	1.022459
			Intercept	-0.047999




Henry Pirker THC Calibration
30
25
20
15
10
5
0
-5
PPM
Calibrator
zero
as found
20.64 ppm THC - As found
8.8 ppm THC
3.05 ppm THC
Analyzer
Zero
Analyzer Span 22.6 ppm
Ambient
May 27, 2009

Calibration Report

Parameter	SO_2
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	May 14, 2009	Previous Calibration	April 19, 2009
Station Number	2	Station Location	Evergreen Park
Reason: Routine	Install	Removal	Other:

Start Time (MST)	10:38	End Time (MST)	12:44
Barometric Pressure	0.926 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	0.031477	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	1.002980	Calculated slope	1.003456
Calculated intercept	-2.051121	Calculated intercept	-1.903531

Analyzer make	Teco 43i	Analyzer serial #	701120008

	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
Background	10.1		10.2	
coefficient	1		1	
Lamp Voltage	834	volts	836	volts
Chamber Temp	45	Deg C	45.3	Deg C
Perm Gas Temp	45	Deg C	44.99	Deg C
Pressure	668.3	mm Hg	668.5	mm Hg
Sample Flow	449	ccm	450	ccm
Lamp Intensity	90	%	90	%

Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4990	0.0	0.00	0.0	N/A
4989	39.83	398.39	397.9	1.0014
4989	19.88	199.64	202.1	0.9880
4989	9.93	99.92	103.2	0.9685
4990	0.0	0.00	0.9	As Found Zero
4988	39.82	398.37	397.9	As Found Span
			Average Correction Factor	0.9859

Calculated value of As Found Response: 396.071 ppm Percent Change of As Found: 0.6%

	before calibration		after calibration	
Auto zero	-1.4	ppm	1.1	ppm
Auto span	269.0	ppm	272.0	ppm

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter	SO2
Air Monitoring Network	PASZA

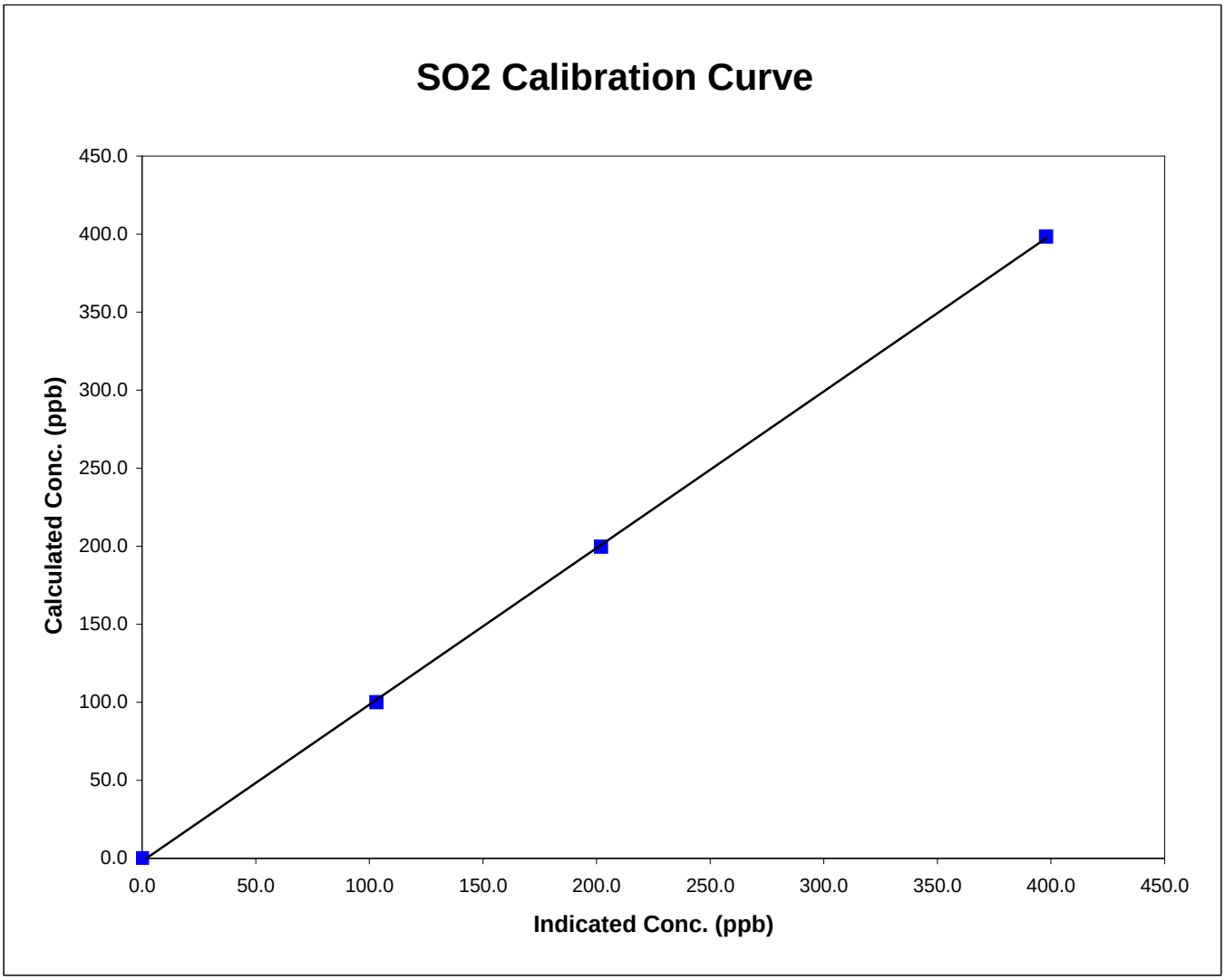
FOCUS AIR QUALITY MONITORING

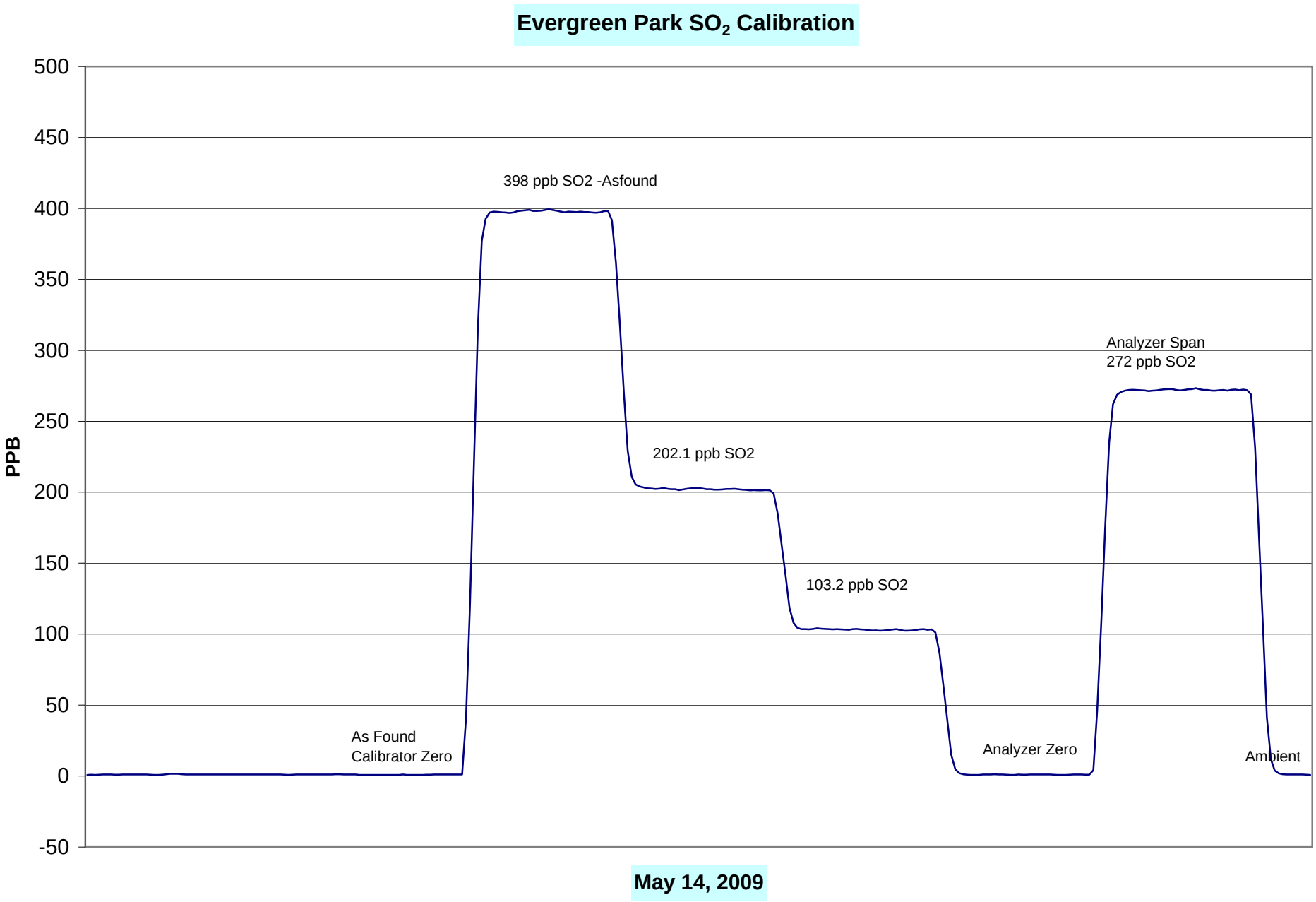
Station Information

Calibration Date	May 14, 2009	Previous Calibration	April 19, 2009
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	10:38	End Time (MST)	12:44
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
398.4	397.9	1.0014	Correlation Coefficient	0.999896
199.6	202.1	0.9880		
99.9	103.2	0.9685	Slope	1.003456
			Intercept	-1.903531




Evergreen Park SO_2 Calibration
PPB
500
450
400
350
300
250
200
150
100
50
0
-50
398 ppb SO2 -Asfound
202.1 ppb SO2
103.2 ppb SO2
Analyzer Span
272 ppb SO2
As Found
Calibrator Zero
Analyzer Zero
Ambient
May 14, 2009

Calibration Report

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

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	May 14, 2009	Previous Calibration	April 19, 2009
Station Number	2	Station Location	Evergreen Park
Reason: Routine	Install	Removal	Other:

Start Time (MST)	11:50	End Time (MST)	14:00
Barometric Pressure	0.926 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	0.031477	Cal Gas Cylinder #	ALM 013295
DACS make	Focus AP1000	DACS serial No.	52620
DACS voltage range	0 - 10 volt	DACS channel #	5
	Before		After
Calculated slope	1.008052	Calculated slope	1.010740
Calculated intercept	-0.279249	Calculated intercept	-0.297606

Analyzer make	TEI Model 43C	Analyzer serial #	0436610005

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	14.3	ppb	14.6	ppb
coefficient	0.586		0.586	
Lamp Voltage	820	volts	821	volts
Chamber Temp	44.4	Deg C	44.1	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	633.3	mm Hg	633.6	mm Hg
Sample Flow	0.461	ccm	0.462	ccm
Lamp Intensity	45,409	mv	45,455	mv

Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4990	0.00	0.00	0.2	N/A
4989	79.74	80.23	79.7	1.0067
4989	39.84	40.40	40.2	1.0061
4990	9.89	10.09	10.5	0.9605
4990	0.00	0.00	0.3	As Found Zero
4987	79.91	80.43	79.7	As Found Span
			Average Correction Factor	0.9911

Calculated value of As Found Response: 79.78 ppm Percent Change of As Found: 0.8%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.1	ppm
Auto span	60.3	ppm	99.9	ppm

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

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

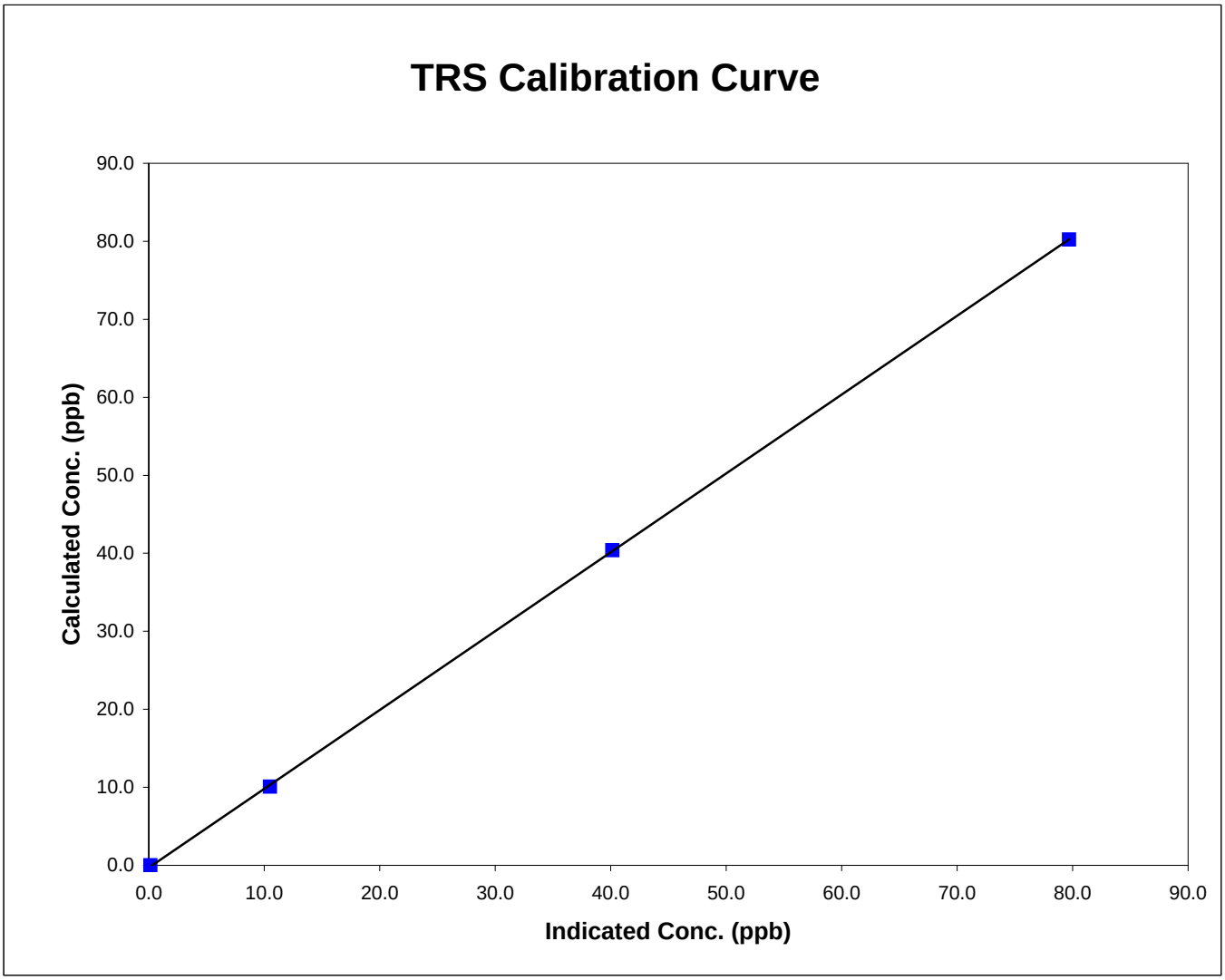
FOCUS AIR QUALITY MONITORING

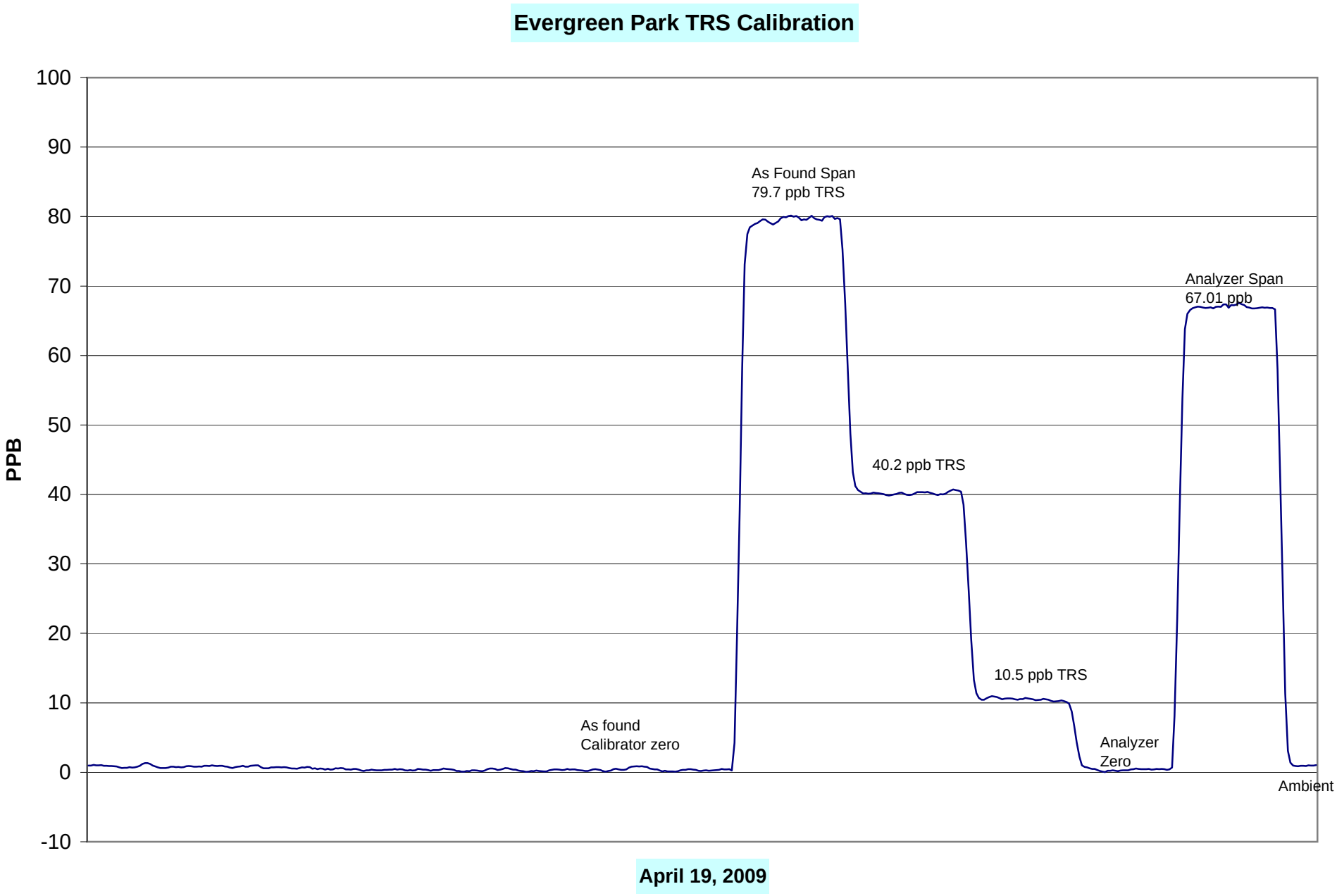
Station Information

Calibration Date	May 14, 2009	Previous Calibration	April 19, 2009
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	11:50	End Time (MST)	14:00
Analyzer make/model	TEI Model 43C	Analyzer serial #	0436610005

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
80.2	79.7	1.0067	Correlation Coefficient	0.999978
40.4	40.2	1.0061		
10.1	10.5	0.9605	Slope	1.010740
			Intercept	-0.297606




Evergreen Park TRS Calibration
PPB
100
90
80
70
60
50
40
30
20
10
0
-10
As Found Span
79.7 ppb TRS
Analyzer Span
67.01 ppb
40.2 ppb TRS
10.5 ppb TRS
As found
Calibrator zero
Analyzer
Zero
Ambient
April 19, 2009

Calibration Report

Parameter	SO_2
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	May 20, 2009	Previous Calibration	April 24, 2009
Station Number	3	Station Location	Smoky Heights
Reason: Routine	Install	Removal	Other:

Start Time (MST)	8:30	End Time (MST)	10:56
Barometric Pressure	0.938 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentratior	50.6 ppm	Cal Gas Cert Date	6/8/2008
Correction factor	0.031885	Cal Gas Cylinder #	AAL 15377
DACS make	Focus AP1000	DACS serial No.	45272
DACS voltage range	0 - 10 volt	DACS channel #	6
	Before		After
Calculated slope	1.003865	Calculated slope	1.007644
Calculated intercept	-1.517391	Calculated intercept	-1.536515

Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	7.2		7.2	
coefficient	0.708		0.708	
Lamp Voltage	930	volts	926	volts
Chamber Temp	45	Deg C	45.2	Deg C
Perm Gas Temp	45.01	Deg C	45	Deg C
Pressure	670.8	mm Hg	671.1	mm Hg
Sample Flow	444	ccm	442	ccm
Lamp Intensity	89	%	88	%

Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.0	0.00	0.2	N/A
4988	39.80	400.55	398.5	1.0052
4988	19.92	201.27	201.6	0.9986
4988	9.92	100.43	102.8	0.9770
4988	0.0	0.00	0.7	As Found Zero
4988	39.81	400.65	398.5	As Found Span
			Average Correction Factor	0.9936

Calculated value of As Found Response: 397.842 ppm Percent Change of As Found: 0.7%

	before calibration		after calibration	
Auto zero	-0.9	ppm	-0.9	ppm
Auto span	310.0	ppm	309.9	ppm

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter	SO2
Air Monitoring Network	PASZA

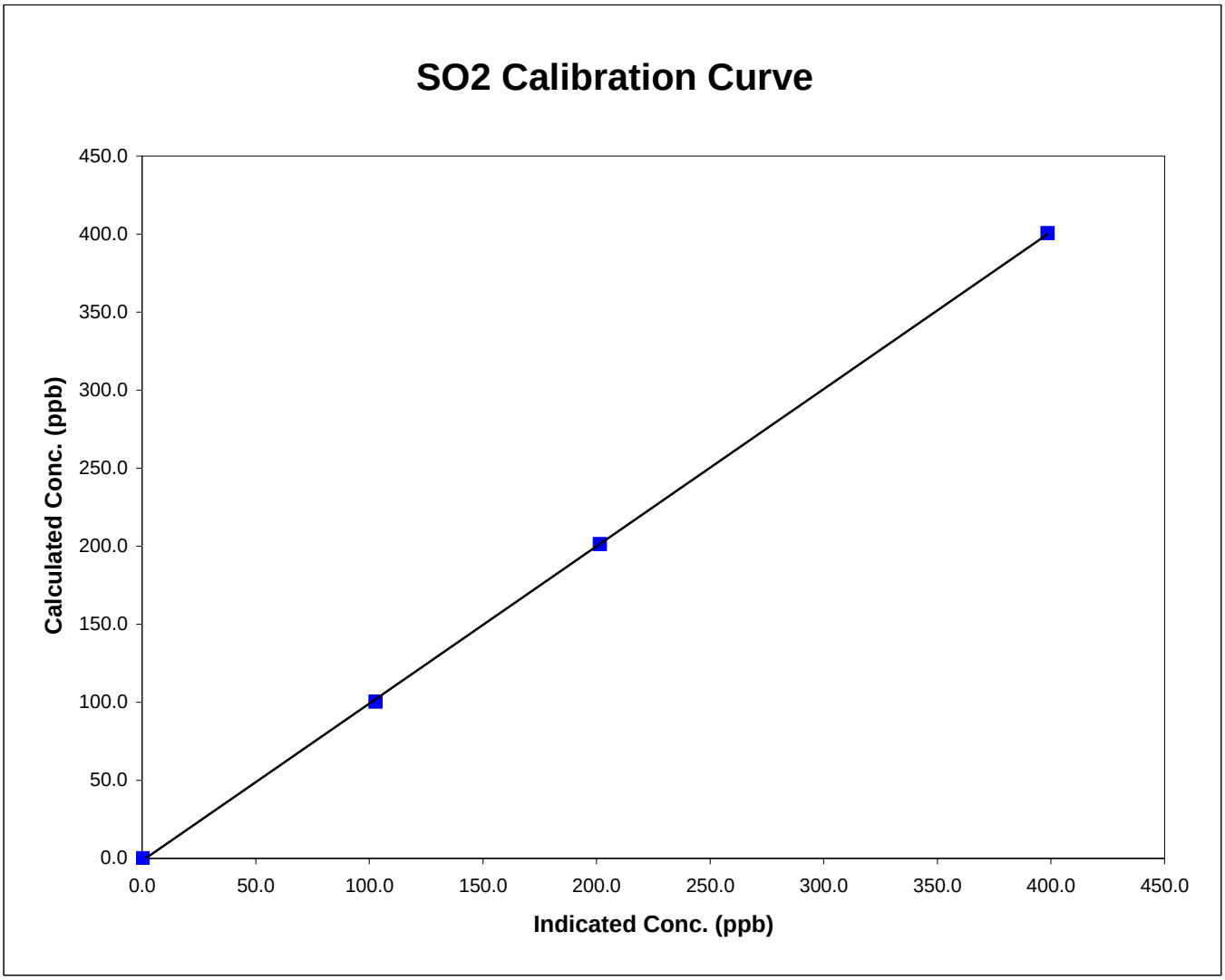
FOCUS AIR QUALITY MONITORING

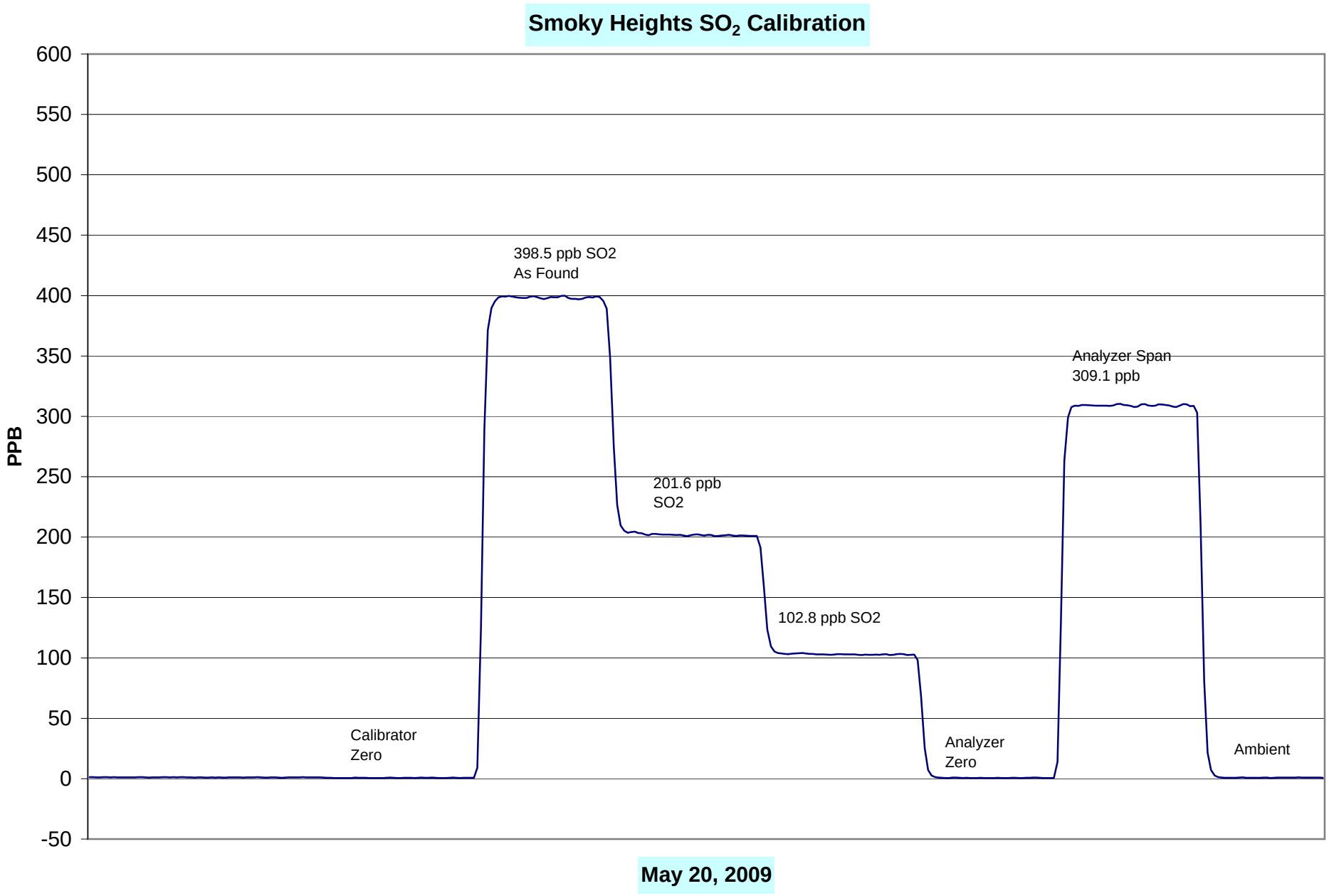
Station Information

Calibration Date	May 20, 2009	Previous Calibration	April 24, 2009
Station Number	3	Station Location	Smoky Heights
Start Time (MST)	8:30	End Time (MST)	10:56
Analyzer make/model	Teco 43i	Analyzer serial #	701120009

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
400.5	398.5	1.0052	Correlation Coefficient	0.999946
201.3	201.6	0.9986		
100.4	102.8	0.9770	Slope	1.007644
			Intercept	-1.536515




Smoky Heights SO_2 Calibration
PPB
600
550
500
450
400
350
300
250
200
150
100
50
0
-50
398.5 ppb SO2
As Found
201.6 ppb
SO2
102.8 ppb SO2
Analyzer Span
309.1 ppb
Calibrator
Zero
Analyzer
Zero
Ambient
May 20, 2009

Calibration Report

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

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	May 20, 2009	Previous Calibration	April 24, 2009
Station Number	3	Station Location	Smoky Heights
Reason: Routine	Install	Removal	Other:

Start Time (MST)	10:05	End Time (MST)	12:20
Barometric Pressure	0.923 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	0.031375	Cal Gas Cylinder #	ALM013295
DACS make	Focus AP1000	DACS serial No.	52620
DACS voltage range	0 - 10 volt	DACS channel #	5
	Before		After
Calculated slope	1.006714	Calculated slope	1.010665
Calculated intercept	-0.573713	Calculated intercept	-0.250450

Analyzer make	TEI Model 43C	Analyzer serial #	0436610005

	before		after	
Concentration range	100	ppb	100	ppb
Background	13.3	ppb	12.8	ppb
coefficient	1.027		1.027	
Lamp Voltage	765	volts	770	volts
Chamber Temp	44	Deg C	44	Deg C
Perm Gas Temp	45	Deg C	44.9	Deg C
Pressure	469.5	mm Hg	496	mm Hg
Sample Flow	0.729	ccm	756	ccm
Lamp Intensity	32,658	mv	32,341	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	0.3	N/A
4988	79.76	80.27	79.7	1.0074
4988	39.85	40.42	40.2	1.0047
4988	9.93	10.13	10.2	0.9911
4990	0.0	0.00	0.5	As Found Zero
4990	79.71	80.19	79.7	As Found Span
			Average Correction Factor	1.0010

Calculated value of As Found Response: 79.17 ppm Percent Change of As Found: 1.3%

	before calibration		after calibration	
Auto zero	0.1	ppm	-0.4	ppm
Auto span	43.1	ppm	42.5	ppm

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

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

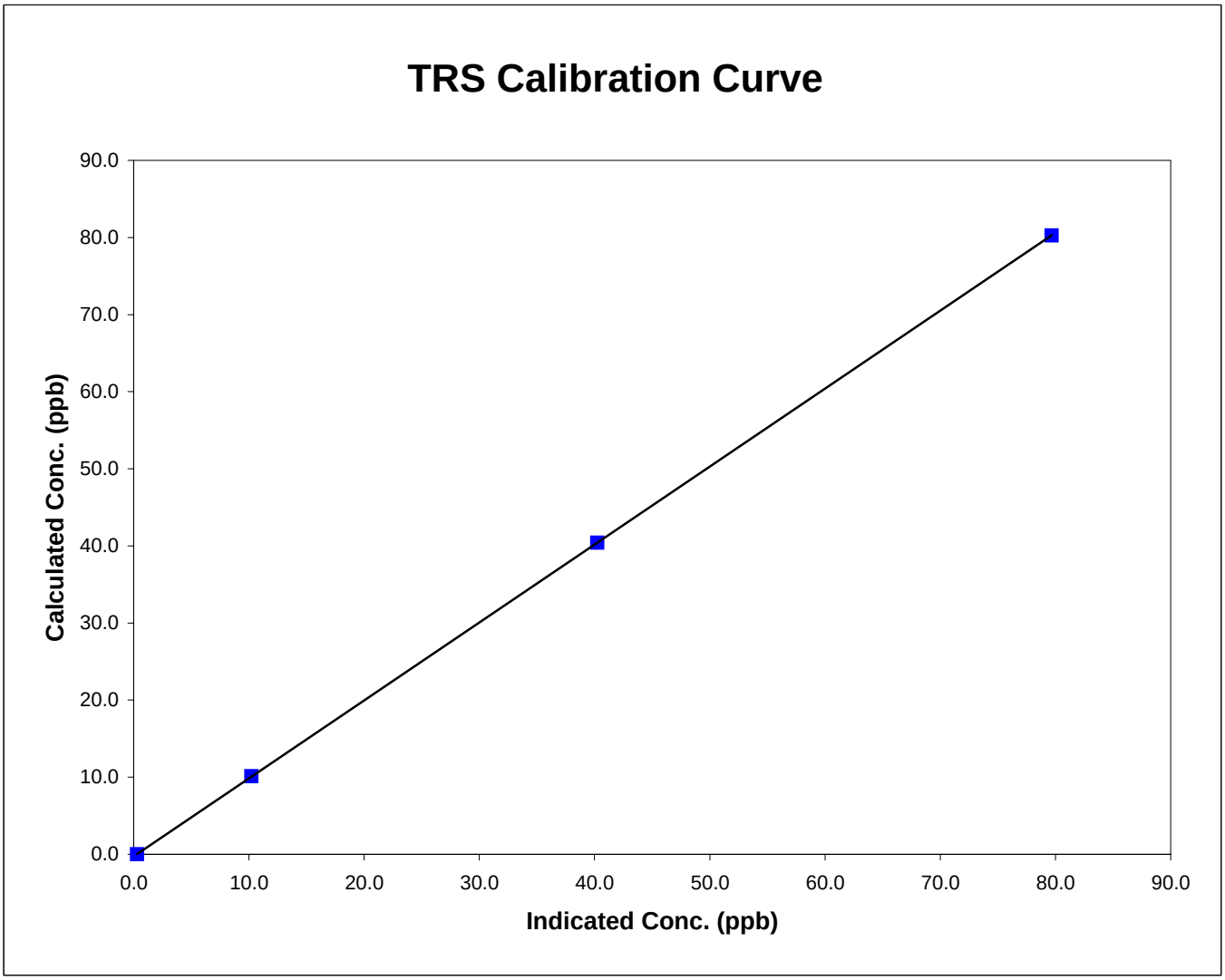
FOCUS AIR QUALITY MONITORING

Station Information

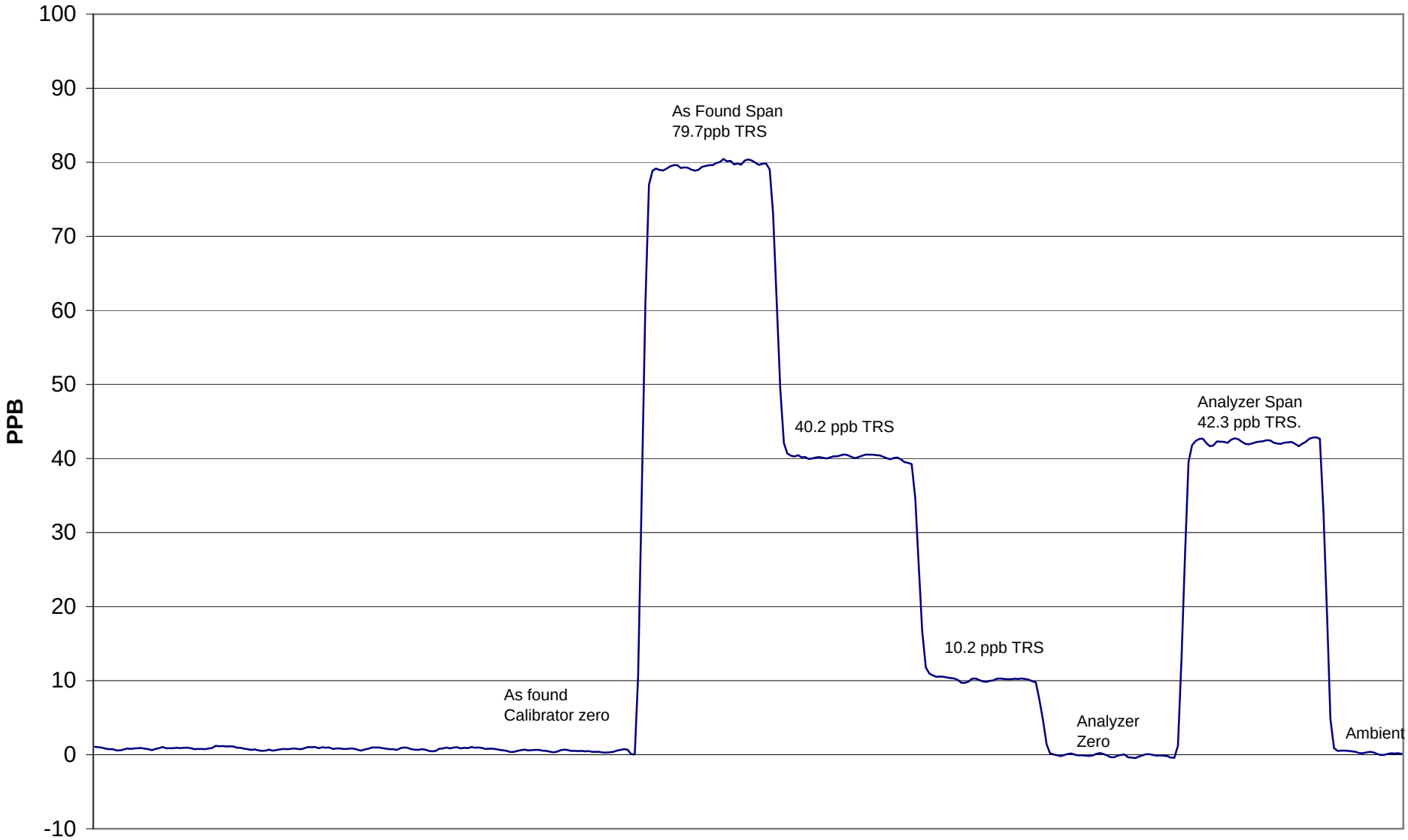
Calibration Date	May 20, 2009	Previous Calibration	April 24, 2009
Station Number	3	Station Location	Smoky Heights
Start Time (MST)	10:05	End Time (MST)	12:20
Analyzer make/model	TEI Model 43C	Analyzer serial #	0436610005

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A		
80.3	79.7	1.0074	Correlation Coefficient	0.999999
40.4	40.2	1.0047		
10.1	10.2	0.9911	Slope	1.010665
			Intercept	-0.250450



Smoky Heights TRS Calibration



May 20, 2009

Calibration Report

Parameter	SO2
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	May 21, 2009	Previous Calibration	April 23, 2009
Station Number	4	Station Location	Beaverlodge
Reason: Routine	Install	Removal	Other:
Start Time (MST)	9:00	End Time (MST)	14:25
Barometric Pressure	0.916 atm	Station Temperature	25.0 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	0.993980	Calculated slope	0.994336
Calculated intercept	-0.366749	Calculated intercept	-0.325321
Analyzer make	TEI Model 43CTL	Analyzer serial #	43CTL-74200-376

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.4		2.4	
Coefficient	0.901		0.901	
PMT	-813.3	V	-813	V
UV Lamp Voltage	1062	V	1062	V
Chamber Temp	45.3	Deg C	45.1	Deg C
Pressure	672.2	mm Hg	670.1	mm Hg
Sample Flow	0.485	LPM	0.482	LPM
Lamp Intesity	84%	%	84%	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.0	0.0	N/A
4988	39.84	79.7	80.3	0.9921
4988	19.87	39.9	40.5	0.9849
4988	9.91	19.9	20.8	0.9569
4988	0.00	0.0	0.1	As found zero
4988	39.90	79.8	80.3	As found span
			Average Correction Factor	0.9780

Calculated value of As Found Response: 79.434 ppm Percent Change of As Found: 0.5%

	before calibration		after calibration	
Auto zero	-0.3	ppm	-0.3	ppm
Auto span	55.5	ppm	54.9	ppm

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter	SO2
Air Monitoring Network	PASZA

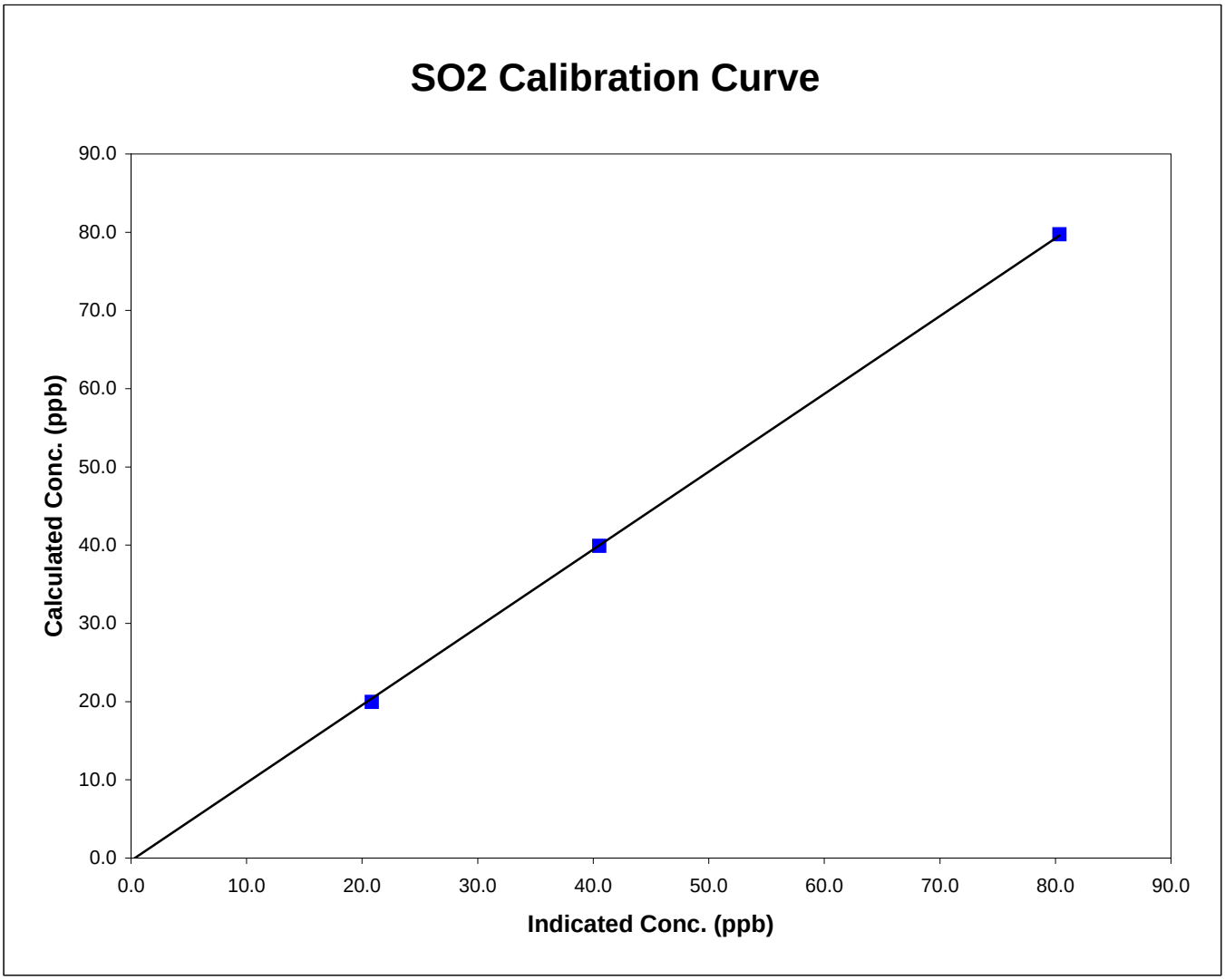
FOCUS AIR QUALITY MONITORING

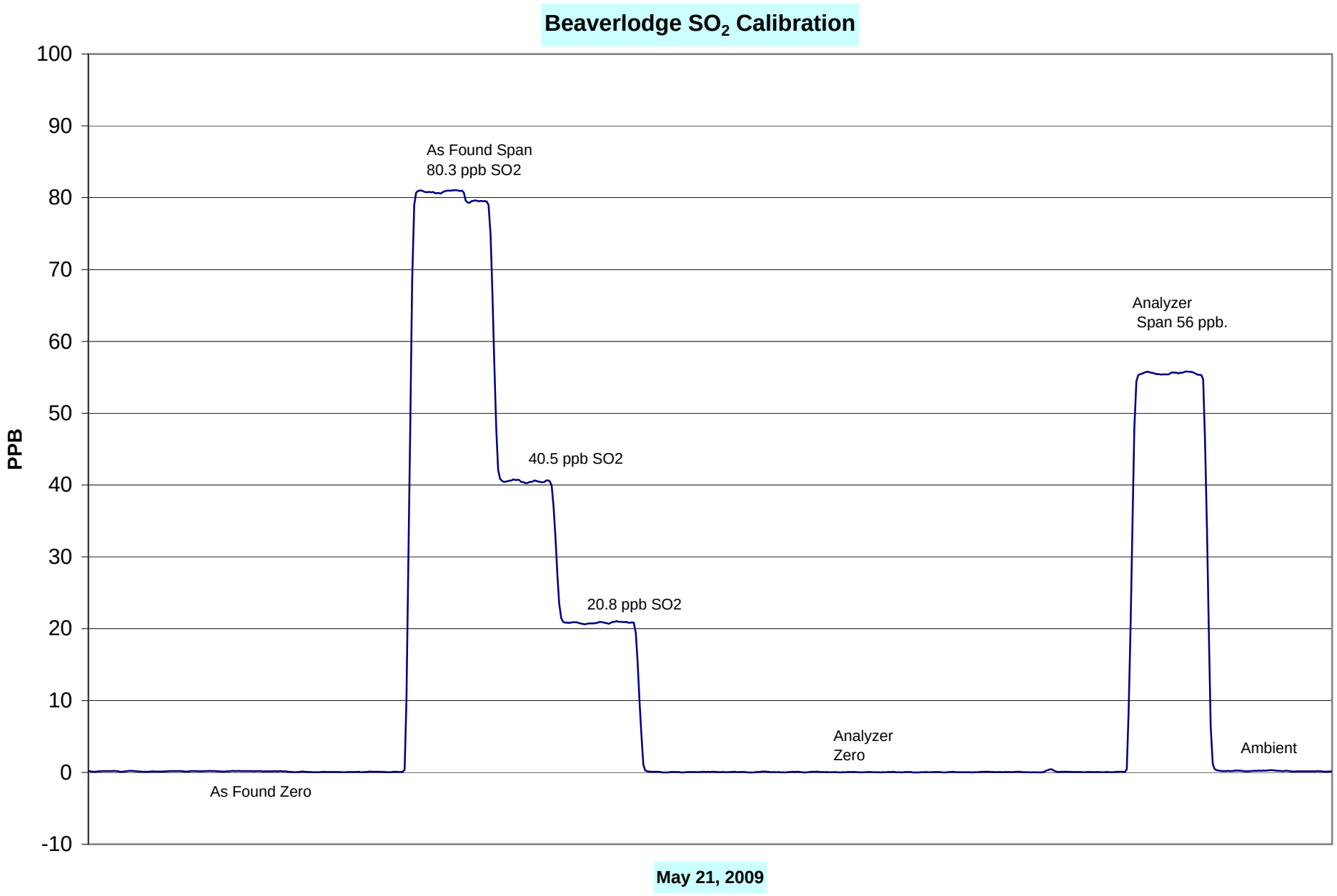
Station Information

Calibration Date	May 21, 2009	Previous Calibration	April 23, 2009
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	9:00	End Time (MST)	14:25:00 PM
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	0.0	N/A		
79.7	80.3	0.9921	Correlation Coefficient	0.999895
39.9	40.5	0.9849		
19.9	20.8	0.9569	Slope	0.994336
			Intercept	-0.325321




Beaverlodge SO_2 Calibration
PPB
100
90
80
70
60
50
40
30
20
10
0
-10
As Found Span
80.3 ppb SO2
40.5 ppb SO2
20.8 ppb SO2
Analyzer
Span 56 ppb.
Analyzer
Zero
Ambient
As Found Zero
May 21, 2009

Calibration Report

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

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	May 21,2009	Previous Calibration	April 23,2009
Station Number	4	Station Location	BeaverLodge

Reason: Routine Installation Removal Other:

Start Time (MST)	9:00		End Time (MST)	14:24	
Barometric Pressure	0.916	Atm	Station Temperature	25.0	Deg C
Calibrator	Environics		Serial Number	2844	
NO Cal Gas Conc	50.1	ppm	Cal Gas Expiry Date	July 2, 2007	
NOx Cal Gas Conc	50.1	ppm	Cal Gas Serial #	CC114395	

DACS Information

DACS make: Focus AP1000 DACS serial No.:

Parameter		NO2	NOx	NO
Before	Data Slope	1.000108	1.001243	1.001324
	Data Offset	-2.367020	-2.314984	-2.248080
After	Data Slope	1.003542	1.002204	1.002205
	Data Offset	0.048696	-2.266596	-1.931588
Channel #				
Voltage Range		0 - 10 VDC	0 - 10 VDC	0 - 10 VDC

Analyzer Information

Analyzer make/model: TEI 42C Analyzer serial #: 42C-60475-327

Test Point	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
NO offset	1.4	mV	1.3	mV
NOx bkgnd	1.3	mV	1.3	mV
NO coefficient	1.238		1.213	
NOx coefficient	0.998		1.005	
NO2 conv temp	323.0	Deg C	323.0	Deg C
PMT Temp	-2.1	Deg C	-2.2	Deg C
PMT Volt	-635.0	mV	-636.0	mV
R Cell Press	199.6	in Hg	200.1	in Hg

Calibration Report

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

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: May 21, 2009 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	-0.2	-0.3	-0.3	N/A	N/A
1	4988	39.84	397.0	397.0	0.0	397.1	396.8	-0.2	0.9997	1.0004
2	4988	19.87	198.8	198.8	0.0	201.8	201.5	-0.3	0.9850	0.9864
3	4988	9.91	99.3	99.3	0.0	103.9	103.2	0.1	0.9562	0.9626
AFZ	4988	0.00	0.0	0.0	0.0	-0.2	-0.3	-0.3	0.0000	0.0000
AFS	4988	39.84	397.0	397.0	0.0	401.8	405.0	-3.5	0.9879	0.9803
							Average Correction Factor		0.9803	0.9831

As Found Concentrations: NO_X= 399.7 NO= 403.0 As Found Percent Change NO_X= 0.7% NO= 1.5%

GPT Calibration Data

Dilution Flow 4988 ccm Source Gas Flow 39.84 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	-0.3	-0.3	0.0	-0.2	-0.3	-0.3	N/A	N/A	N/A	N/A
NO point	396.9	396.9	0.0	397.6	396.9	0.2	0.9983	1.0000	N/A	N/A
300	396.9	115.8	281.1	396.3	115.8	280.0	1.0017	1.0000	1.0038	99.6%
200	396.9	194.9	202.0	396.5	194.9	201.1	1.0010	1.0000	1.0046	99.5%
100	396.9	292.4	104.5	397.6	292.4	104.5	0.9983	1.0000	1.0000	100.0%
					Average Correction Factor		1.0003	1.0000	1.0028	99.7%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.1	-0.1	-0.2	ppb	-0.1	-0.1	-0.2	ppb
Auto span	492.4	2.0	489.8	ppb	483.9	2.9	480.5	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter	NO_2
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

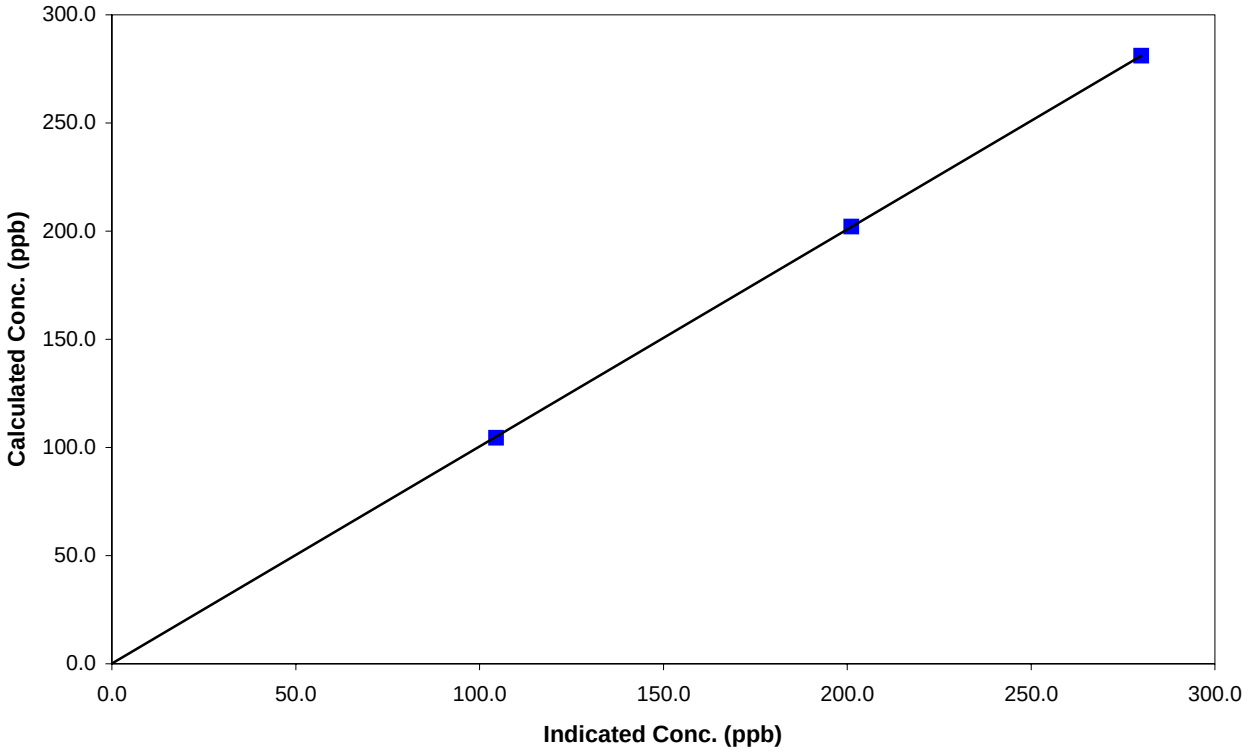
Station Information

Calibration Date	May 21,2009	Previous Calibration	April 23,2009
Station Number	4	Station Location	BeaverLodge
Start Time (MST)	9:00	End Time (MST)	14:24
Analyzer make	TEI 42C	Analyzer serial #	60475-327

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.3	N/A		
281.1	280.0	1.0038	Correlation Coefficient	0.999994
202.0	201.1	1.0046		
104.5	104.5	1.0000	Slope	1.003542
			Intercept	0.048696

NO_2 Calibration Curve



Calibration Summary

Parameter	NO_x
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

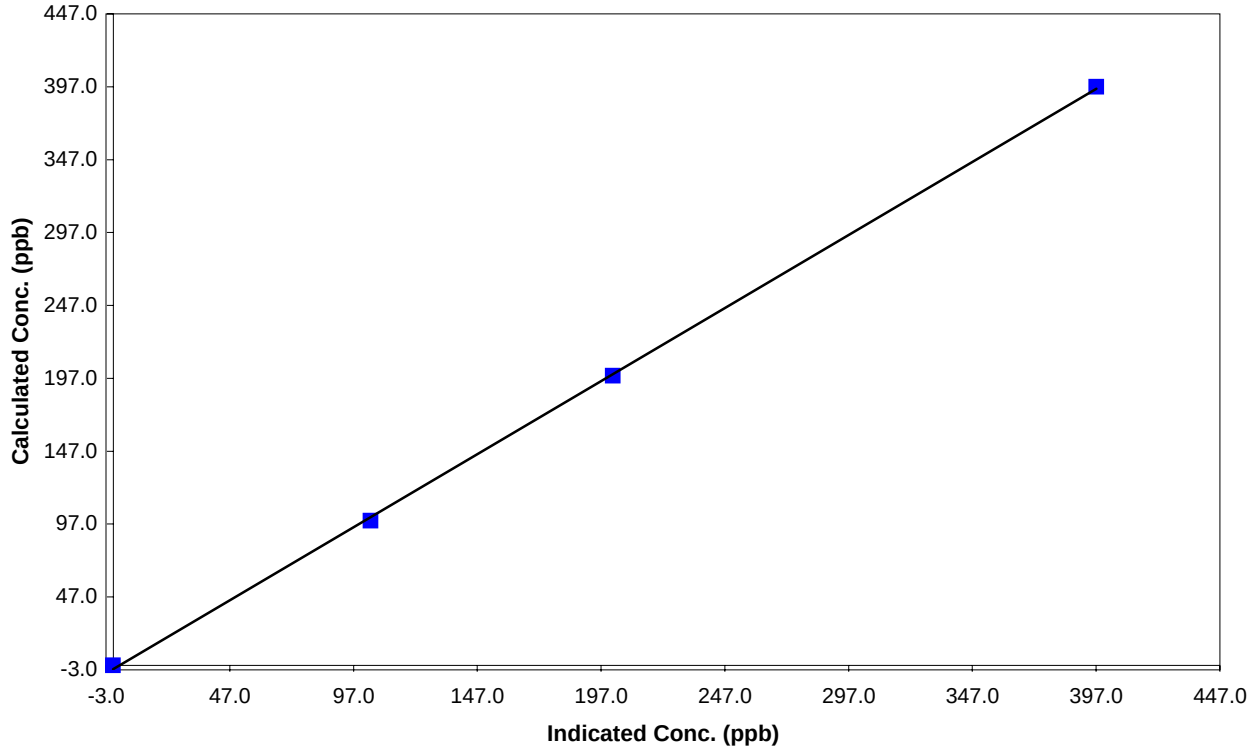
Station Information

Calibration Date	May 21,2009	Previous Calibration	April 23,2009
Station Number	4	Station Location	BeaverLodge
Start Time (MST)	9:00	End Time (MST)	14:24
Analyzer make	TEI 42C	Analyzer serial #	42C-60475-327

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.2	N/A		
397.0	397.1	0.9997	Correlation Coefficient	0.999821
198.8	201.8	0.9850		
99.3	103.9	0.9562	Slope	1.002204
			Intercept	-2.266596

NOx Calibration Curve



Calibration Summary

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

FOCUS AIR QUALITY MONITORING

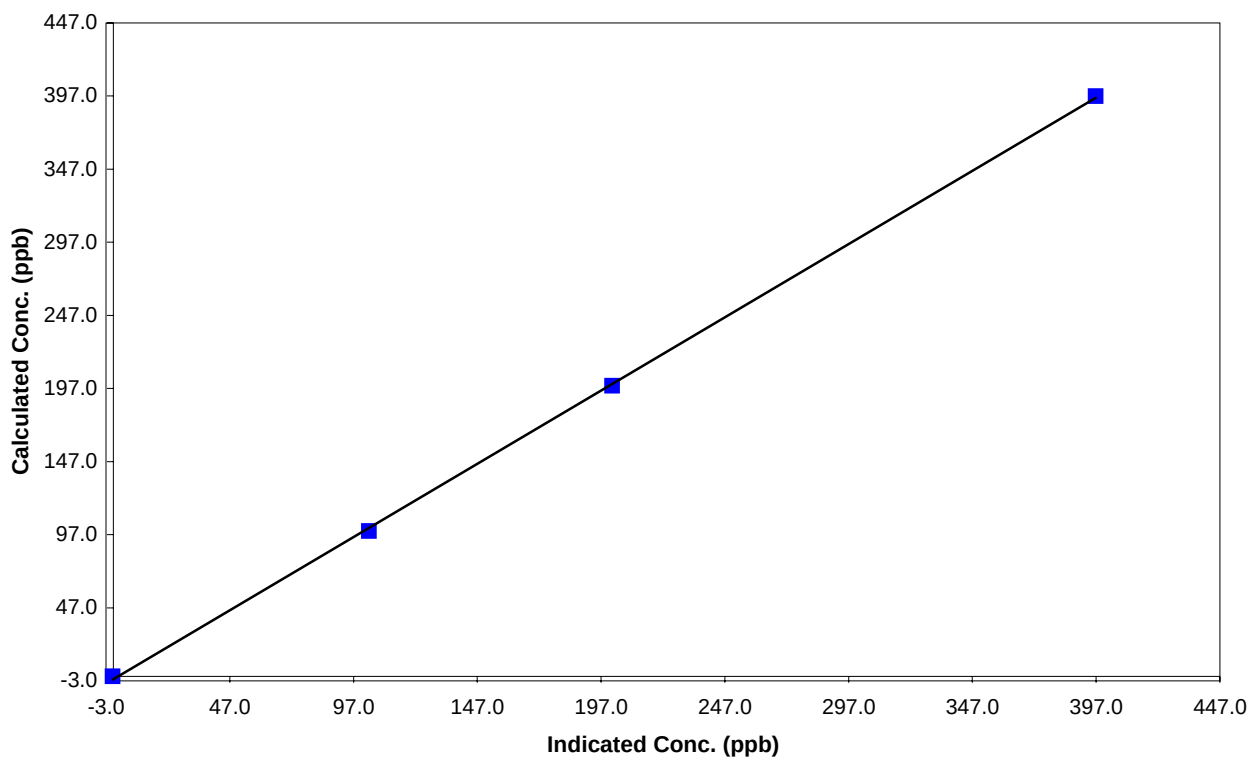
Station Information

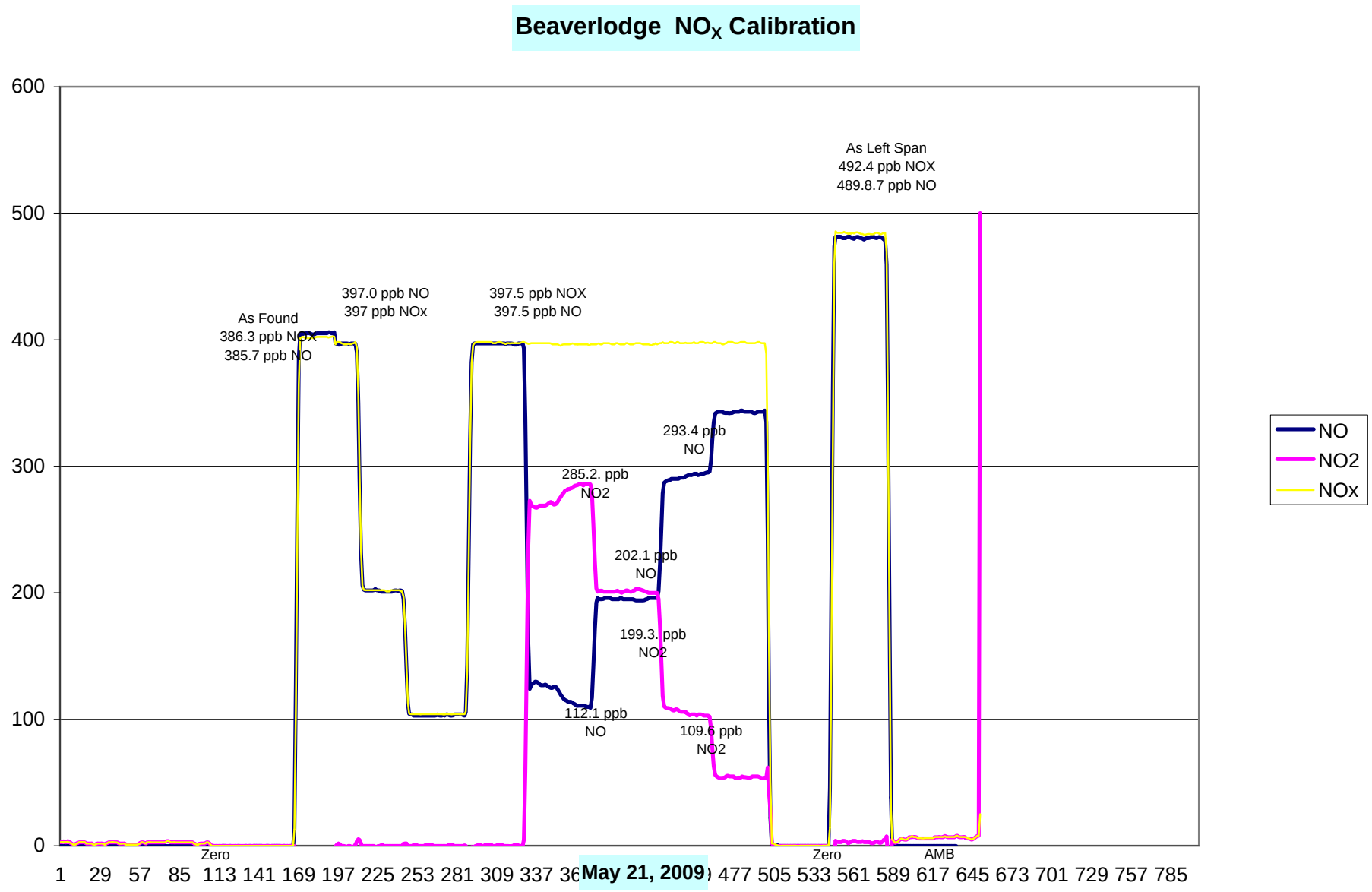
Calibration Date	May 21,2009	Previous Calibration	April 23,2009
Station Number	4	Station Location	BeaverLodge
Start Time (MST)	9:00	End Time (MST)	14:24
Analyzer make	TEI 42C	Analyzer serial #	60475-327

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.3	N/A		
397.0	396.8	1.0004	Correlation Coefficient	0.999854
198.8	201.5	0.9864		
99.3	103.2	0.9626	Slope	1.002205
			Intercept	-1.931588

NO Calibration Curve




Beaverlodge NOX Calibration
600
500
400
300
200
100
0
As Found
386.3 ppb NOx
385.7 ppb NO
397.0 ppb NO
397 ppb NOx
397.5 ppb NOX
397.5 ppb NO
285.2. ppb
NO2
293.4 ppb
NO
202.1 ppb
NO
199.3. ppb
NO2
112.1 ppb
NO
109.6 ppb
NO2
As Left Span
492.4 ppb NOX
489.8.7 ppb NO
Zero
Zero
AMB
1 29 57 85 113 141 169 197 225 253 281 309 337 36
May 21, 2009
477 505 533 561 589 617 645 673 701 729 757 785
NO
NO2
NOx

Calibration Report

Parameter	O3
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	May 21, 2009	Previous Calibration	April 23, 2009
Station Number	4	Station Location	Beaverlodge
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	13:07:00 PM	End Time (MST)	15:10
Barometric Pressure	0.918 atm	Station Temperature	22.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	Focus AP1000	DACS serial No.	45269
DACS voltage range	0 - 1 volt	DACS channel #	5
	Before		After
Calculated slope	0.994125	Calculated slope	1.012229
Calculated intercept	0.582210	Calculated intercept	1.844316
Analyzer make	Teco 49C	Analyzer serial #	49C-76443-383

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-0.80	ppb	-0.20	ppb
slope	1.020		1.020	
Lamp temp	71	mV	56.2	mV
Lamp Intensity A/B	71455/70790	mV	71405/70750	mV
Pressure	693.7	mm Hg	692	mm Hg
Flow A	744	ccm	744	ccm
Flow B	698	ccm	695	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	285.0	284.7	1.0010
4990	0.00	202.0	188.9	1.0691
4990	0.00	102.7	102.1	1.0063
4990	0.00	0.0	0.1	As found zero
4990	0.00	285.4	275.1	As found span
			Average Correction Factor	1.0255

Calculated value of As Found Response: 287.8 ppm Percent Change of As Found: 0.8%

	before calibration		after calibration	
Auto zero	-0.2	ppb	-0.2	ppb
Auto span	115.8	ppb	115.8	ppb

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter	O3
Air Monitoring Network	PASZA

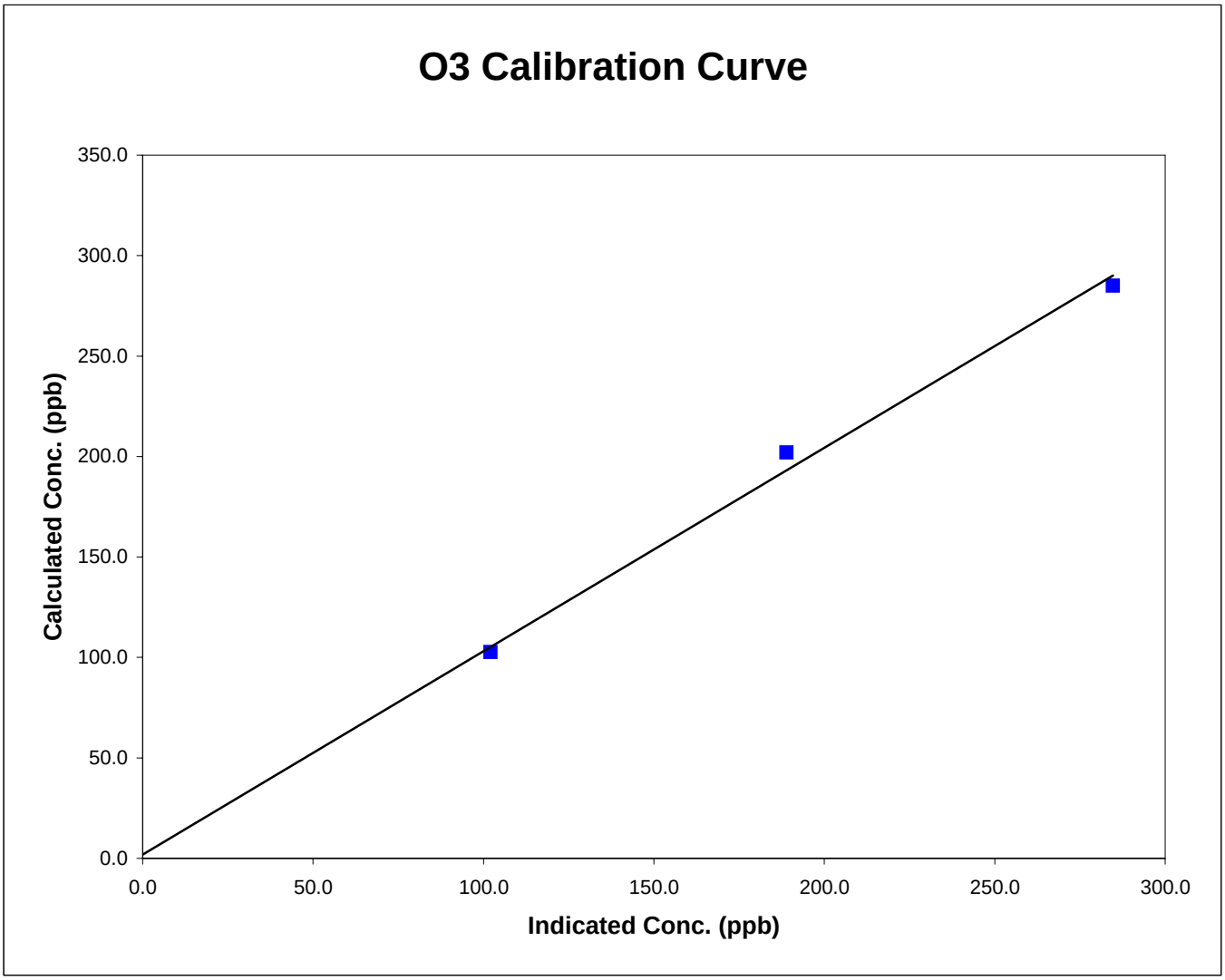
FOCUS AIR QUALITY MONITORING

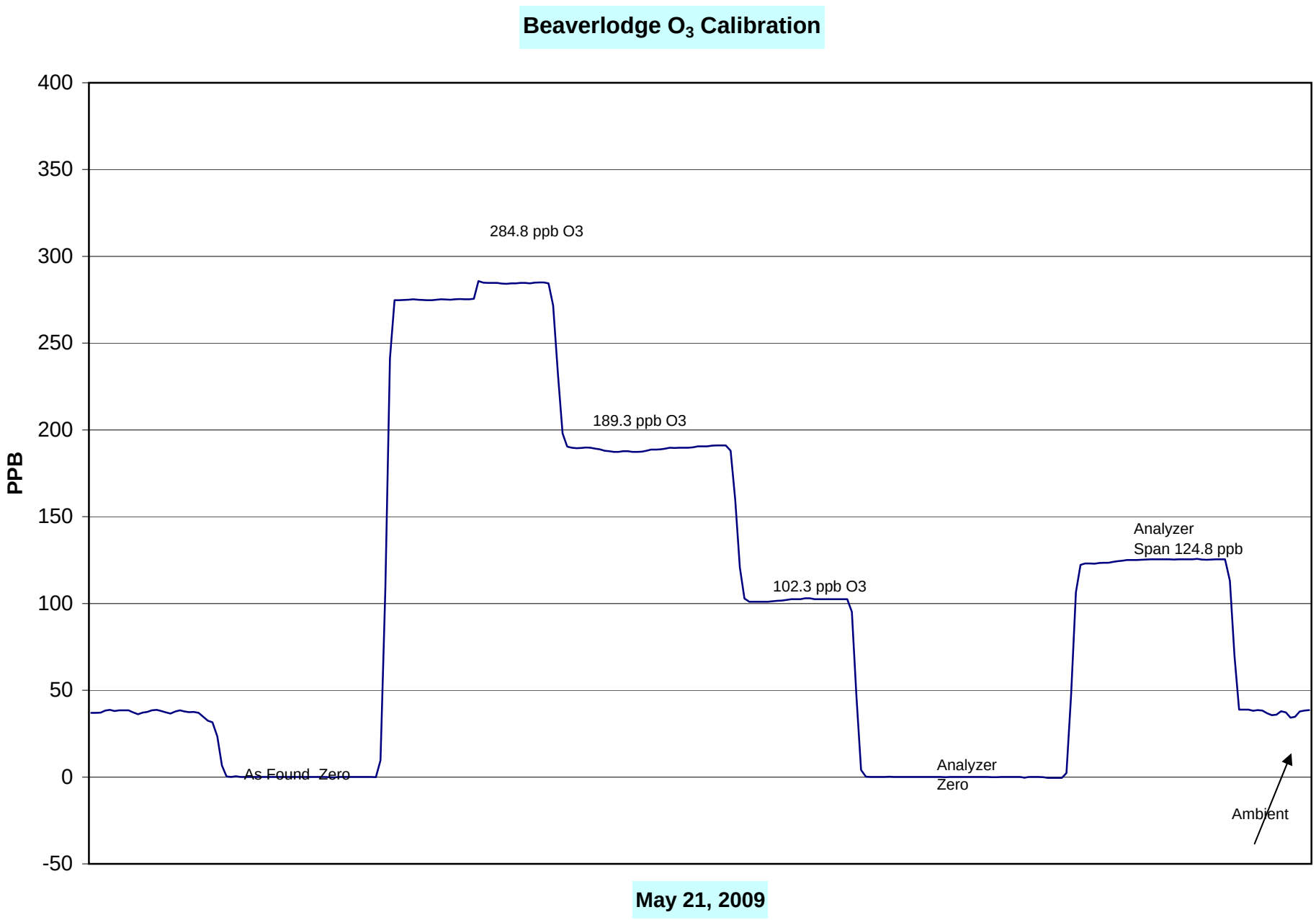
Station Information

Calibration Date	May 21, 2009	Previous Calibration	April 23, 2009
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	13:07:00 PM	End Time (MST)	15:10
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		
285.0	284.7	1.0010	Correlation Coefficient	0.997530
202.0	188.9	1.0691		
102.7	102.1	1.0063	Slope	1.012229
			Intercept	1.844316




Beaverlodge O_3 Calibration
PPB
400
350
300
250
200
150
100
50
0
-50
284.8 ppb O3
189.3 ppb O3
102.3 ppb O3
Analyzer
Span 124.8 ppb
As Found Zero
Analyzer
Zero
Ambient
May 21, 2009

Calibration Report

Parameter	SO2
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	May 29, 2009	Previous Calibration	April 2, 2009
Station Number	9	Station Location	Rover - Kinuso
Reason: Routine	Install	Removal	Other:
Start Time (MST)	8:40	End Time (MST)	11:02
Barometric Pressure	27.66 inches Hg	Station Temperature	22.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentratior	50.6 ppm	Cal Gas Expiry Date	7/27/2009
Gas Cert Reference	LL 16161		
DACS make	Focus AP1000	DACS serial No.	52662
DACS voltage range	0 - 10 volt	DACS channel #	9
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.001685	Calculated slope	1.001960
Calculated intercept	-2.056175	Calculated intercept	-2.323805
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	8.6		8.6	
Coefficient	1.2		1.19	
UV Lamp Voltage	722	V	728	V
Chamber Temp	44.5	C	44.6	C
Perm Gas Temp	45	C	45	C
Pressure	679.6	mm Hg	671.1	mm Hg
Sample Flow	0.491	LPM	0.486	LPM
Lamp Intesity	34496	Hz	34696	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.0	0.4	N/A
4989	39.83	400.8	401.3	0.9988
4989	19.88	200.8	203.8	0.9854
4989	9.92	100.4	104.5	0.9610
4988	0.00	0.0	0.3	As found zero
4990	39.89	401.3	401.8	As found span
			Average Correction Factor	0.9817

Calculated value of As Found Response: 400.109 ppm Percent Change of As Found: 0.3%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	265.5	ppm	256.9	ppm

Notes: Internal Pump Replaced

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter	SO2
Air Monitoring Network	PASZA

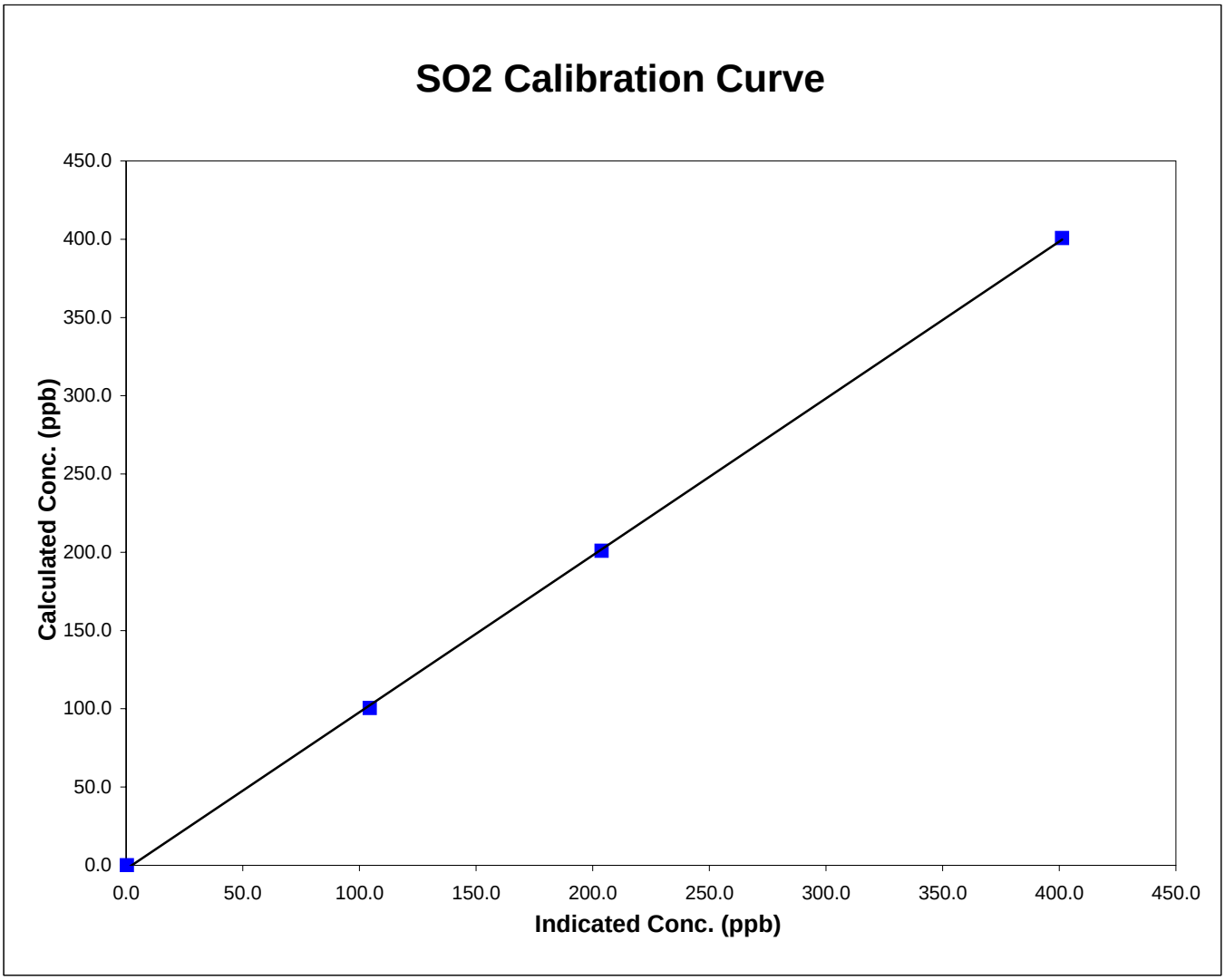
FOCUS AIR QUALITY MONITORING

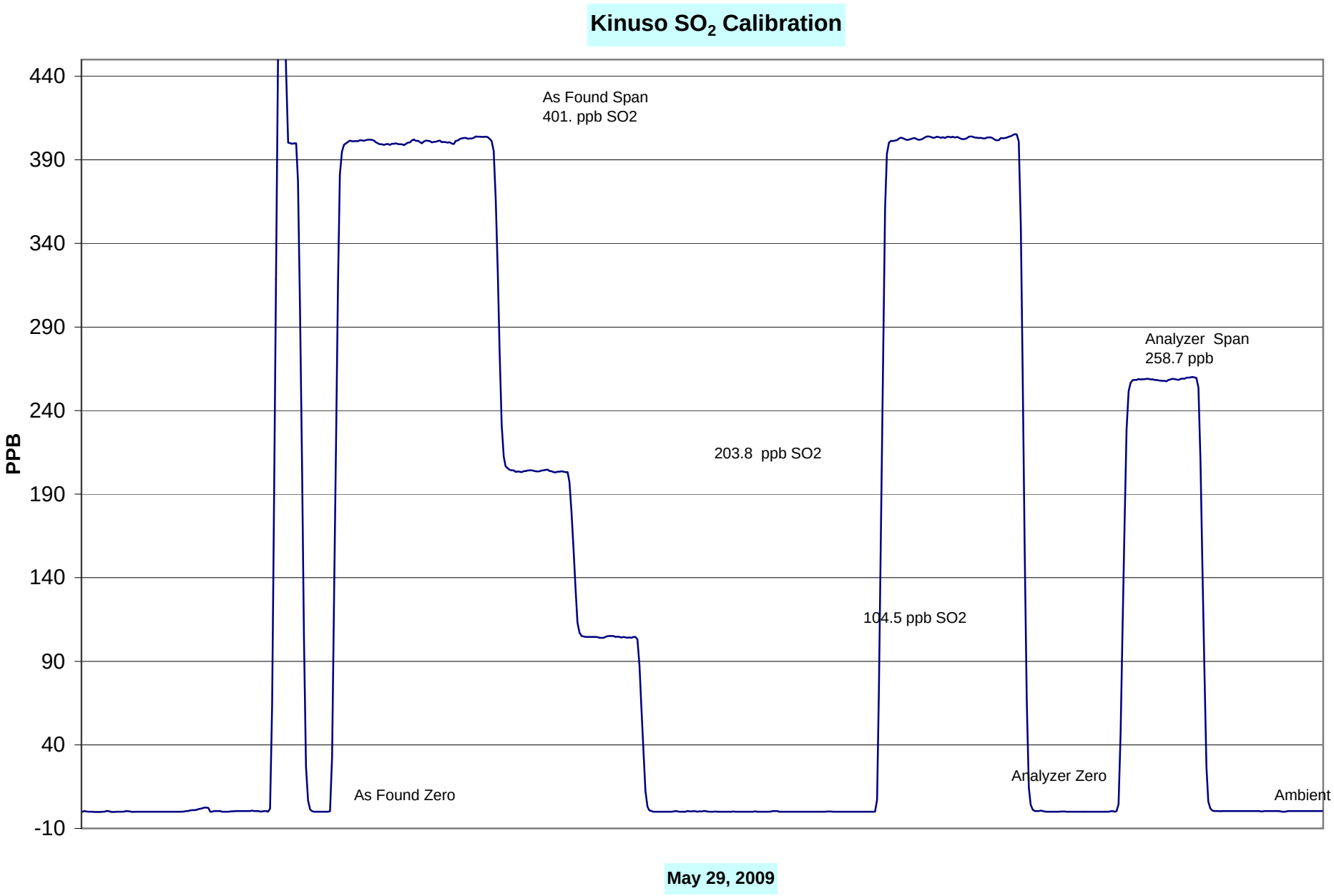
Station Information

Calibration Date	May 29, 2009	Previous Calibration	April 2, 2009
Station Number	9	Station Location	Rover - Kinuso
Start Time (MST)	8:40	End Time (MST)	11:02
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A		
400.8	401.3	0.9988	Correlation Coefficient	0.999888
200.8	203.8	0.9854		
100.4	104.5	0.9610	Slope	1.001960
			Intercept	-2.323805




Kinuso SO2 Calibration
440
390
340
290
240
190
140
90
40
-10
PPB
As Found Span
401. ppb SO2
203.8 ppb SO2
104.5 ppb SO2
Analyzer Span
258.7 ppb
As Found Zero
Analyzer Zero
Ambient
May 29, 2009

Calibration Report

Parameter	TRS
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	May 29, 2009	Previous Calibration	April 2, 2009
Station Number	9	Station Location	Rover-Kinuso
Reason: Routine	Install	Removal	Other:
Start Time (MST)	14:33:00 PM	End Time (MST)	17:03
Barometric Pressure	27.5 inches Hg	Station Temperature	21.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentratior	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	0.997692	Calculated slope	0.996274
Calculated intercept	-0.098419	Calculated intercept	0.137845
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	10.3	ppb	10.7	ppb
Coefficient	1.454		1.454	
Lamp Voltage	796	V	798	V
Chamber Temp	43.7	C	44.0	C
Perm gas Temp	45.	C	45	C
Pressure	665	mmHg	660	mmHg
Sample Flow	439	ccm	436	ccm
Lamp Intensity	39299.0	Hz	38687.0	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	0.3	N/A
4988	79.88	80.4	80.8	0.9953
4988	39.85	40.4	40.1	1.0092
4988	9.92	10.1	9.7	1.0384
4988	0.00	0.0	-0.7	As found zero
4988	79.88	80.4	80.9	As found span
			Average Correction Factor	1.0143

Calculated value of As Found Response: 81.36 ppm Percent Change of As Found: -1.2%

	before calibration		after calibration	
Auto zero	-0.6	ppm	-0.6	ppm
Auto span	68.0	ppm	66.6	ppm

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

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

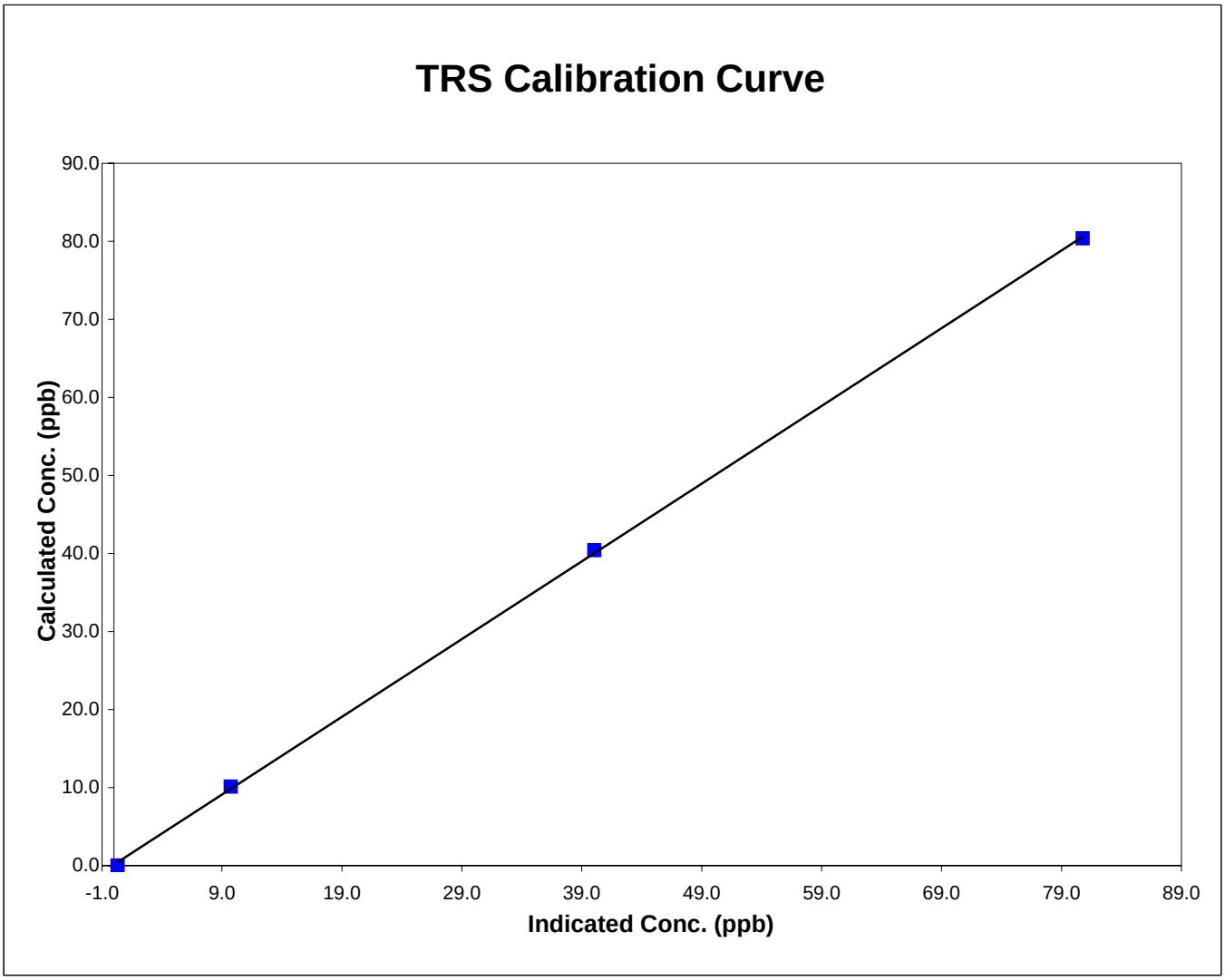
FOCUS AIR QUALITY MONITORING

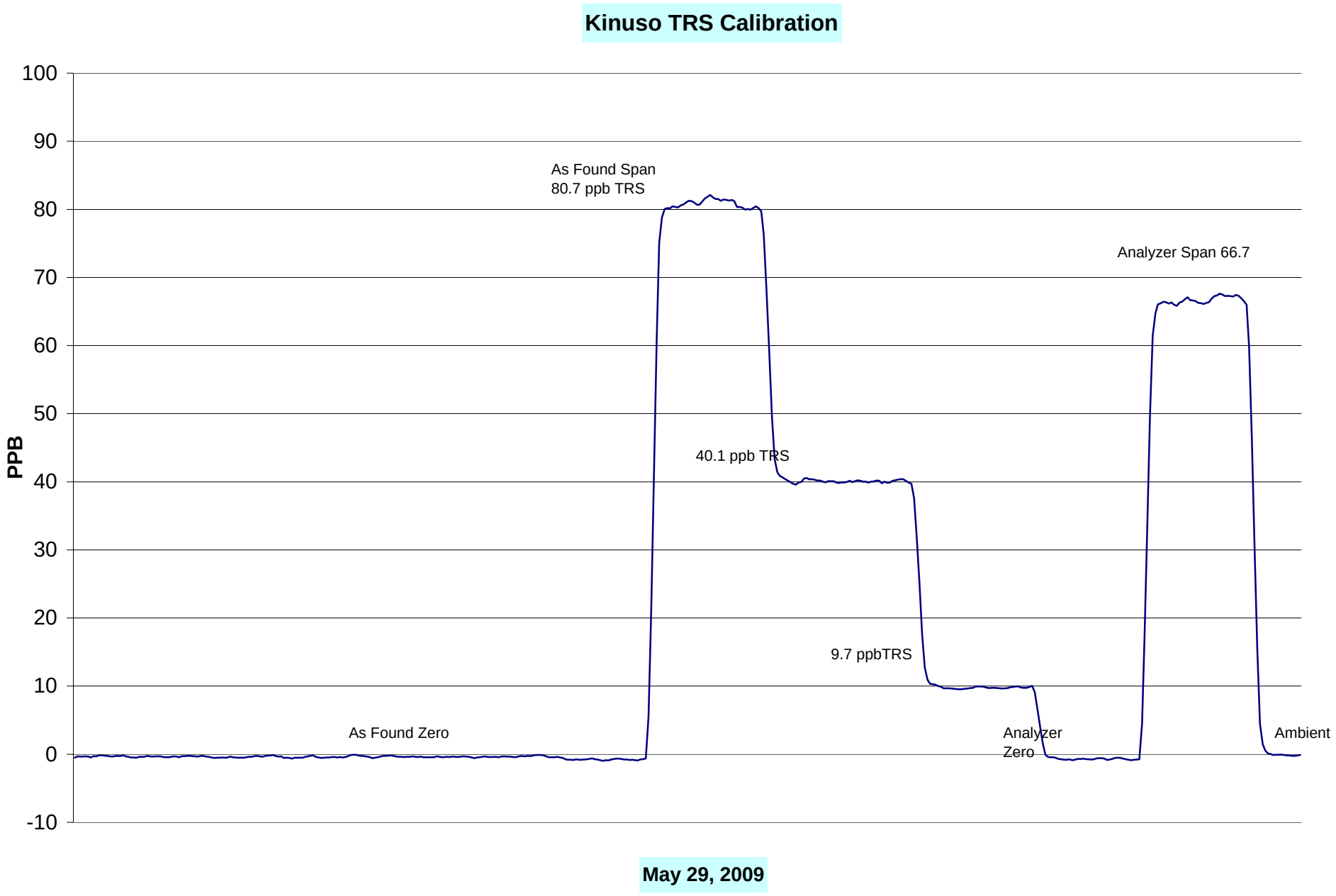
Station Information

Calibration Date	May 29, 2009	Previous Calibration	April 2, 2009
Station Number	9	Station Location	Rover-Kinuso
Start Time (MST)	14:33:00 PM	End Time (MST)	17:03
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	0.3	N/A		
80.4	80.8	0.9953	Correlation Coefficient	0.999884
40.4	40.1	1.0092		
10.1	9.7	1.0384	Slope	0.996274
			Intercept	0.137845




Kinuso TRS Calibration
100
90
80
70
60
50
40
30
20
10
0
-10
PPB
As Found Span
80.7 ppb TRS
Analyzer Span 66.7
40.1 ppb TRS
9.7 ppbTRS
As Found Zero
Analyzer
Zero
Ambient
May 29, 2009

Calibration Report

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

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	May 29,2009	Previous Calibration	April 2,2009
Station Number	9	Station Location	Rover Kinuso

Reason: Routine Installation Removal Other:

Start Time (MST)	8:40		End Time (MST)	14:03	
Barometric Pressure	0.916	Atm	Station Temperature	25.0	Deg C
Calibrator	Environics 6100		Serial Number	3474	
NO Cal Gas Conc	49.6	ppm	Cal Gas Expiry Date	July 2, 2007	
NOx Cal Gas Conc	49.6	ppm	Cal Gas Serial #	CC114395	

DACS Information

DACS make	Focus AP1000	DACS serial No.	52662

Parameter		NO2	NOx	NO
Before	Data Slope	1.004911	1.000794	1.002357
	Data Offset	0.729972	-2.916922	-2.796092
After	Data Slope	0.991466	0.996973	1.003918
	Data Offset	0.714035	-2.839568	-3.362070
Channel #		8	6	7
Voltage Range		0 - 10 VDC	0 - 10 VDC	0 - 10 VDC

Analyzer Information

Analyzer make/model	TEI 42i	Analyzer serial #	701120011

Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 1000	ppb
NO offset	4.7	mV	4.6	mV
NOx bkgnd	4.9	mV	4.8	mV
NO coefficient	0.853		0.853	
NOx coefficient	0.998		0.998	
NO2 conv temp	324.7	Deg C	325.6	Deg C
PMT Temp	-2.9	Deg C	-3.0	Deg C
PMT Volt	-829.5	mV	-636.0	mV
R Cell Press	151.8	in Hg	152.1	in Hg

Calibration Report

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

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: May 29, 2009 Station Location: Rover Kinuso

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4988	0.00	0.0	0.0	0.0	0.1	0.5	-0.9	N/A	N/A
1	4988	39.84	393.0	393.0	0.0	395.4	393.3	-0.7	0.9939	0.9993
2	4988	19.87	196.8	196.8	0.0	202.1	201.0	-0.6	0.9736	0.9792
3	4988	9.91	98.3	98.3	0.0	104.0	104.1	-0.7	0.9453	0.9449
AFZ	4988	0.00	0.0	0.0	0.0	0.1	0.5	-0.9	0.0000	0.0000
AFS	4988	39.84	393.0	393.0	0.0	399.1	397.0	-0.9	0.9848	0.9899
							Average Correction Factor		0.9709	0.9745

As Found Concentrations: NO_X= 396.1 NO= 393.7 As Found Percent Change NO_X= 0.8% NO= 0.2%

GPT Calibration Data

Dilution Flow 4988 ccm Source Gas Flow 39.84 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	0.5	0.5	0.0	0.1	0.5	-0.9	N/A	N/A	N/A	N/A
NO point	393.9	393.9	0.0	396.5	393.9	-0.3	0.9934	1.0000	N/A	N/A
300	393.9	202.3	191.6	396.9	202.3	192.3	0.9923	1.0000	0.9962	100.4%
200	393.9	262.7	131.2	396.9	262.7	131.8	0.9923	1.0000	0.9954	100.5%
100	393.9	324.0	69.9	396.3	324.0	69.9	0.9939	1.0000	0.9997	100.0%
					Average Correction Factor		0.9929	1.0000	0.9971	100.3%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.3	1.0	-1.3	ppb	0.1	-1.0	0.6	ppb
Auto span	318.6	316.2	0.9	ppb	310.5	306.0	3.0	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter	NO_2
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

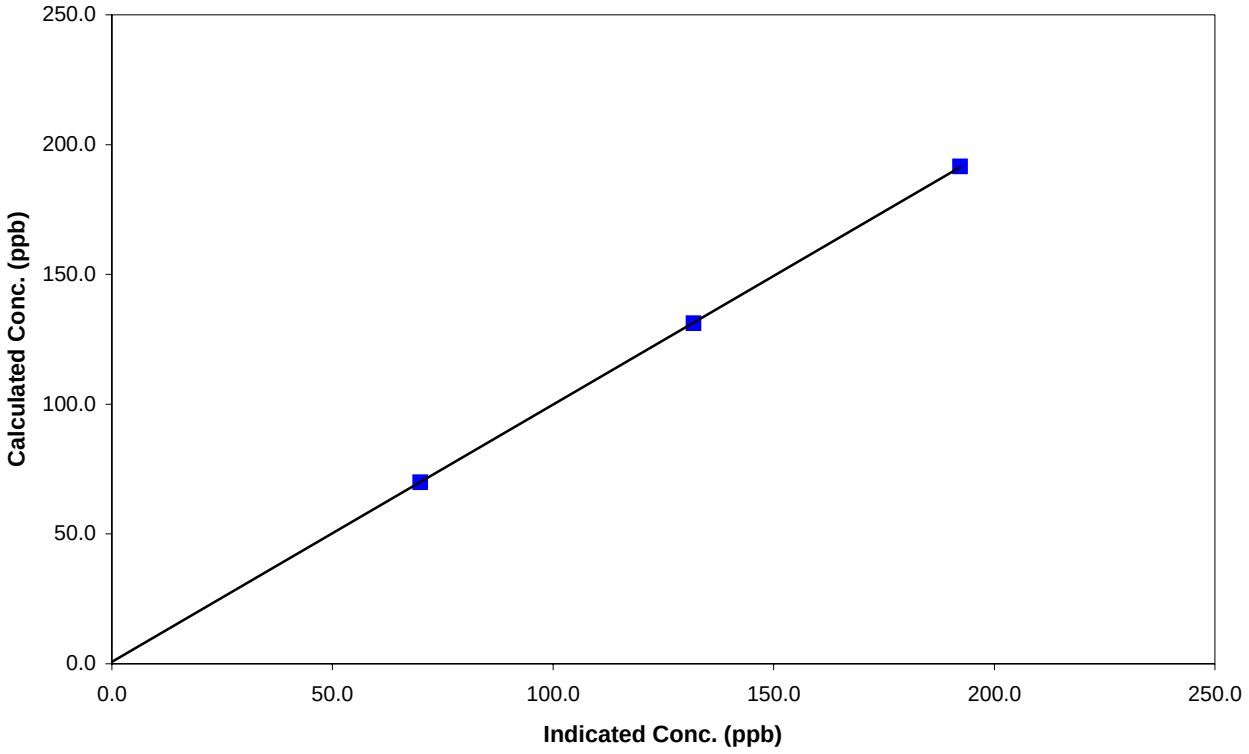
Station Information

Calibration Date	May 29,2009	Previous Calibration	April 2,2009
Station Number	9	Station Location	Rover Kinuso
Start Time (MST)	8:40	End Time (MST)	14:03
Analyzer make	TEI 42i	Analyzer serial #	701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.9	N/A		
191.6	192.3	0.9962	Correlation Coefficient	0.999994
131.2	131.8	0.9954		
69.9	69.9	0.9997	Slope	0.991466
			Intercept	0.714035

NO_2 Calibration Curve



Calibration Summary

Parameter	NO_x
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

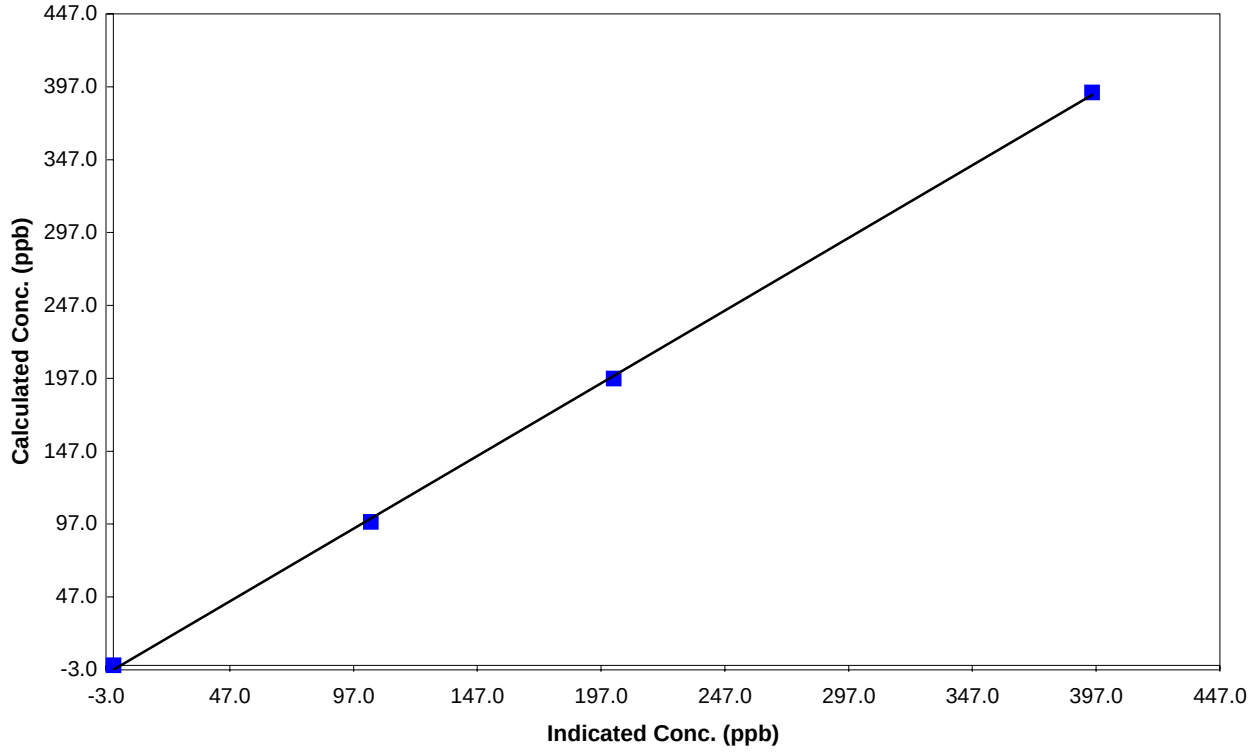
Station Information

Calibration Date	May 29,2009	Previous Calibration	April 2,2009
Station Number	9	Station Location	Rover Kinuso
Start Time (MST)	8:40	End Time (MST)	14:03
Analyzer make	TEI 42i	Analyzer serial #	701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A		
393.0	395.4	0.9939	Correlation Coefficient	0.999759
196.8	202.1	0.9736		
98.3	104.0	0.9453	Slope	0.996973
			Intercept	-2.839568

NOx Calibration Curve



Calibration Summary

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

FOCUS AIR QUALITY MONITORING

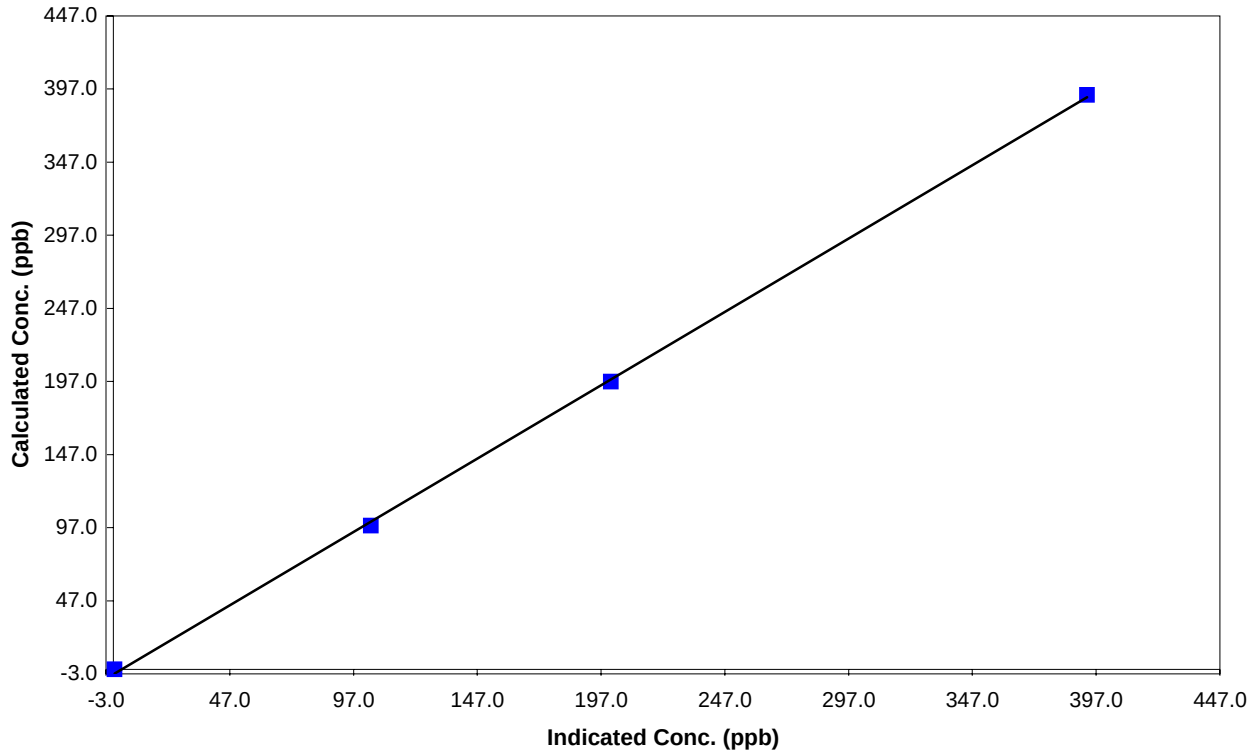
Station Information

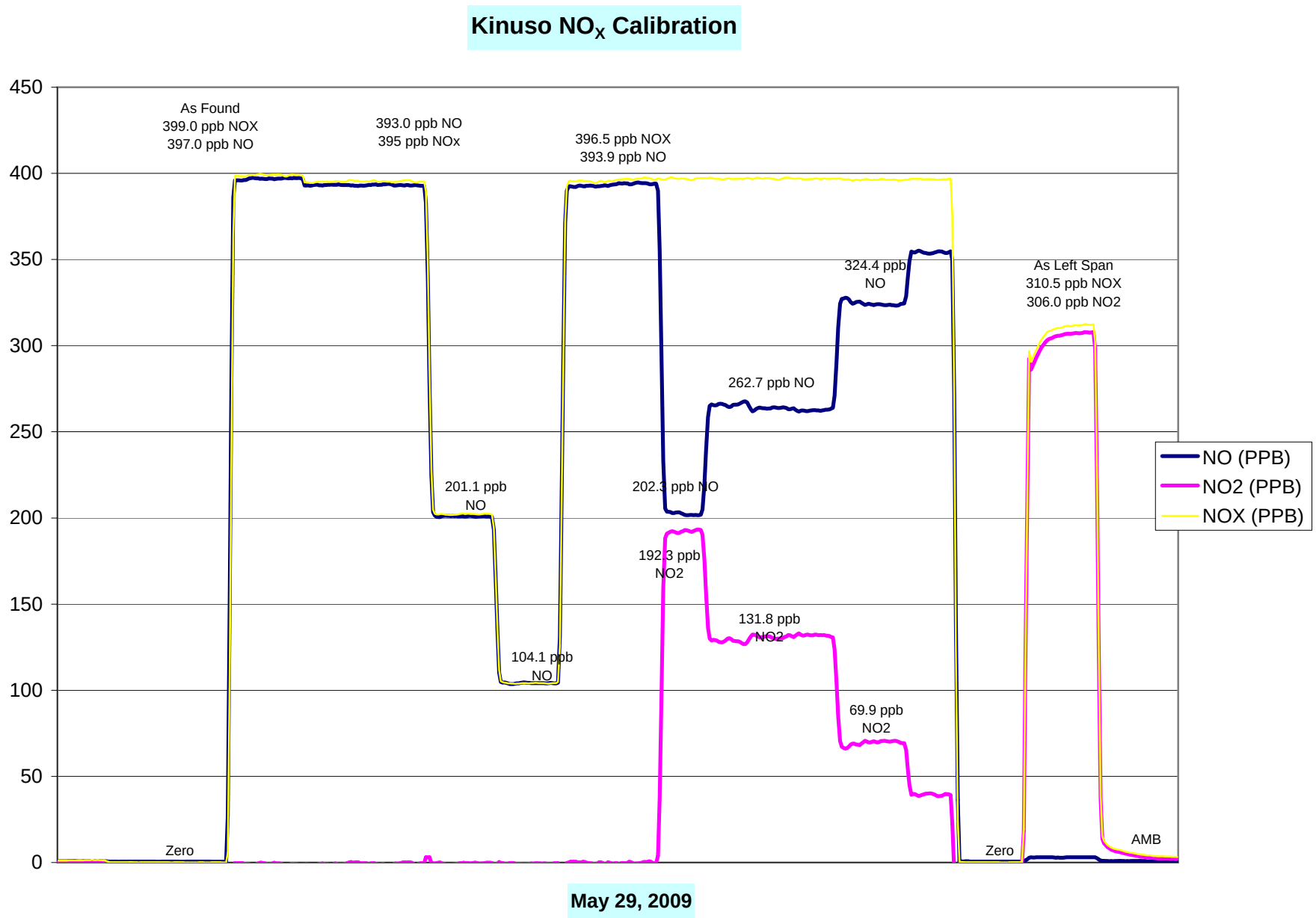
Calibration Date	May 29,2009	Previous Calibration	April 2,2009
Station Number	9	Station Location	Rover Kinuso
Start Time (MST)	8:40	End Time (MST)	14:03
Analyzer make	TEI 42i	Analyzer serial #	701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A		
393.0	393.3	0.9993	Correlation Coefficient	0.999755
196.8	201.0	0.9792		
98.3	104.1	0.9449	Slope	1.003918
			Intercept	-3.362070

NO Calibration Curve




Kinuso NOx Calibration
450
400
350
300
250
200
150
100
50
0
As Found
399.0 ppb NOX
397.0 ppb NO
393.0 ppb NO
395 ppb NOx
396.5 ppb NOX
393.9 ppb NO
324.4 ppb NO
As Left Span
310.5 ppb NOX
306.0 ppb NO2
262.7 ppb NO
201.1 ppb NO
202.3 ppb NO
192.3 ppb NO2
131.8 ppb NO2
104.1 ppb NO
69.9 ppb NO2
Zero
Zero
AMB
NO (PPB)
NO2 (PPB)
NOX (PPB)
May 29, 2009

Calibration Report

Parameter	O3
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	May 29, 2009	Previous Calibration	April 2, 2009
Station Number	9	Station Location	Rover - Kinuso
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	13:09	End Time (MST)	15:43
Barometric Pressure	0.935 atm	Station Temperature	21.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
DACS make	Focus AP1000	DACS serial No.	52662
DACS voltage range	0-5	DACS channel #	7
	Before		After
Calculated slope	0.973993	Calculated slope	0.993380
Calculated intercept	-1.984598	Calculated intercept	0.869571
Analyzer make	TEI Model 49C	Analyzer serial #	609-716240

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	0	ppb	-4	ppb
Span	1.048		1.49	
Cell A	97185	Hz	96742	Hz
Cell B	107736	Hz	107322	Hz
Pressure	702	in Hg	698	in Hg
CellA Flow	724	ccm	721	ccm
Cell B Flow	691	cmm	689	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	192.3	193.8	0.9921
4990	0.00	131.8	130.5	1.0097
4990	0.00	69.9	68.7	1.0168
4990	0.00	0.0	-2.3	As found zero
4990	0.00	194.3	139.0	As found span
			Average Correction Factor	1.0062

Calculated value of As Found Response: 135.6 ppm Percent Change of As Found: -30.2%

	before calibration		after calibration	
Auto zero	-1.1	ppb	1.1	ppb
Auto span	234.0	ppb	297.7	ppb

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

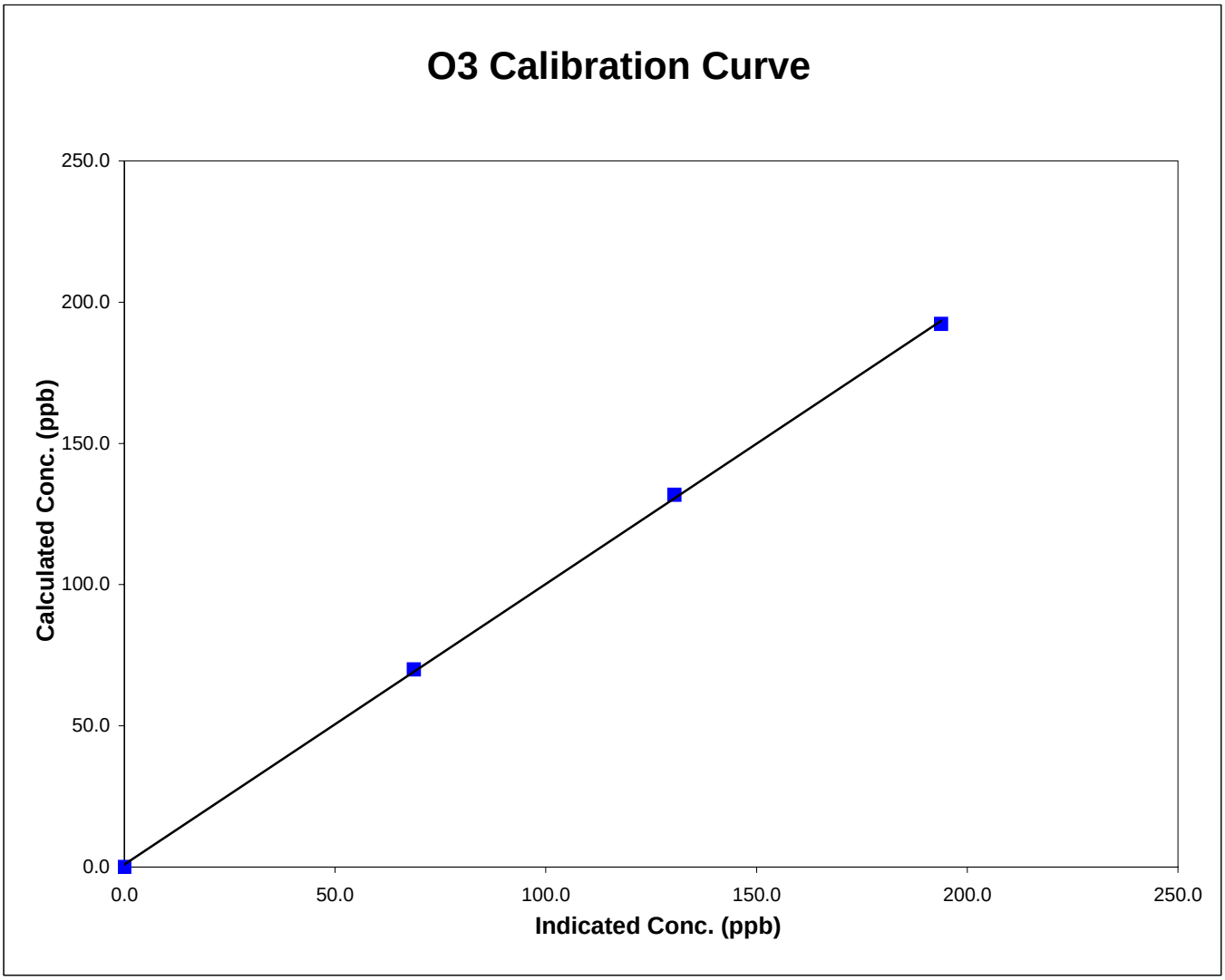
Parameter	O3
Air Monitoring Network	PASZA

Station Information

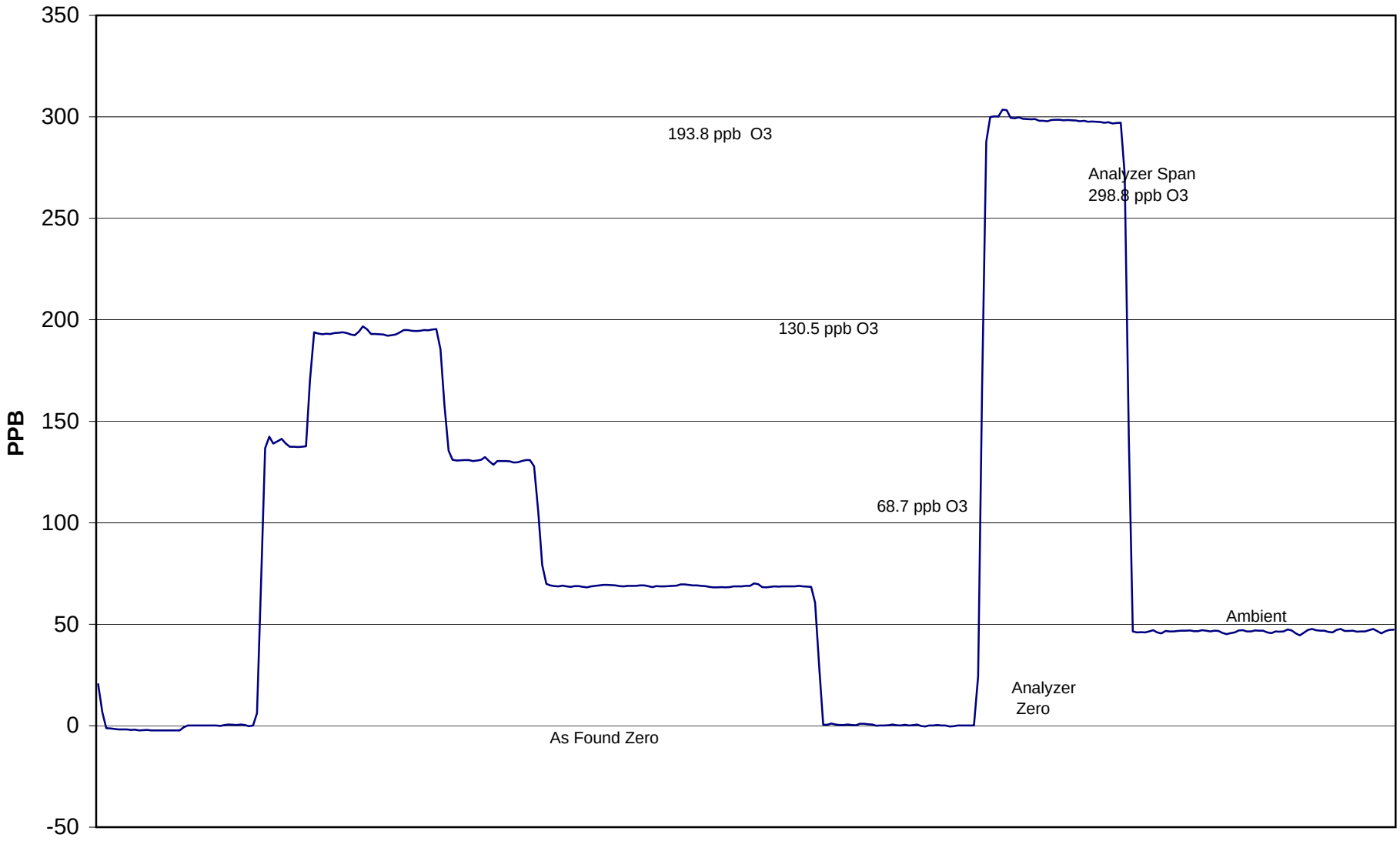
Calibration Date	May 29, 2009	Previous Calibration	April 2, 2009
Station Number	9	Station Location	Rover - Kinuso
Start Time (MST)	13:09	End Time (MST)	15:43
Analyzer make/model	TEI Model 49C	Analyzer serial #	609-716240

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	NA		
192.3	193.8	0.9921	Correlation Coefficient	0.999796
131.8	130.5	1.0097		
69.9	68.7	1.0168	Slope	0.993380
			Intercept	0.869571



Kinuso O_3 Calibration



May 29, 2009

Calibration Report

Parameter	SO2
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	May 15, 2009	Previous Calibration	April 12, 2009
Station Number	6	Station Location	Valleyview
Reason: Routine	Install	Removal	Other:
Start Time (MST)	9:37	End Time (MST)	12:20
Barometric Pressure	29.90 inches Hg	Station Temperature	25.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentratior	50.6 ppm	Cal Gas Cert Date	12/3/2009
Gas Cert Reference	AAL 56996		
DACS make	Focus AP1000	DACS serial No.	45274
DACS voltage range	0 - 10 volt	DACS channel #	4
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.997150	Calculated slope	1.000417
Calculated intercept	-1.302840	Calculated intercept	-2.155050
Analyzer make	TEI 45C	Analyzer serial #	43C-57531-313

	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
Background	28.3		28.3	
Coefficient	0.729		0.729	
UV Lamp Voltage	695	LPM	698	LPM
Chamber Temp	44.2	V	44.2	V
Perm Gas Temp	35	C	35.1	C
Pressure	624.9	in Hg	624.9	in Hg
Sample Flow	0.47	LPM	0.471	LPM
Lamp Intesity	45639	Hz	45247	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
4989	39.84	400.9	402.1	0.9970
4988	19.92	201.3	203.6	0.9884
4988	9.90	100.2	104.8	0.9560
4988	0.00	0.0	0.4	As found zero
4988	39.88	401.3	402.1	As found span
			Average Correction Factor	0.9805

Calculated value of As Found Response: 399.238 ppm Percent Change of As Found: 0.5%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.0	ppm
Auto span	165.9	ppm	163.9	ppm

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter	SO2
Air Monitoring Network	PASZA

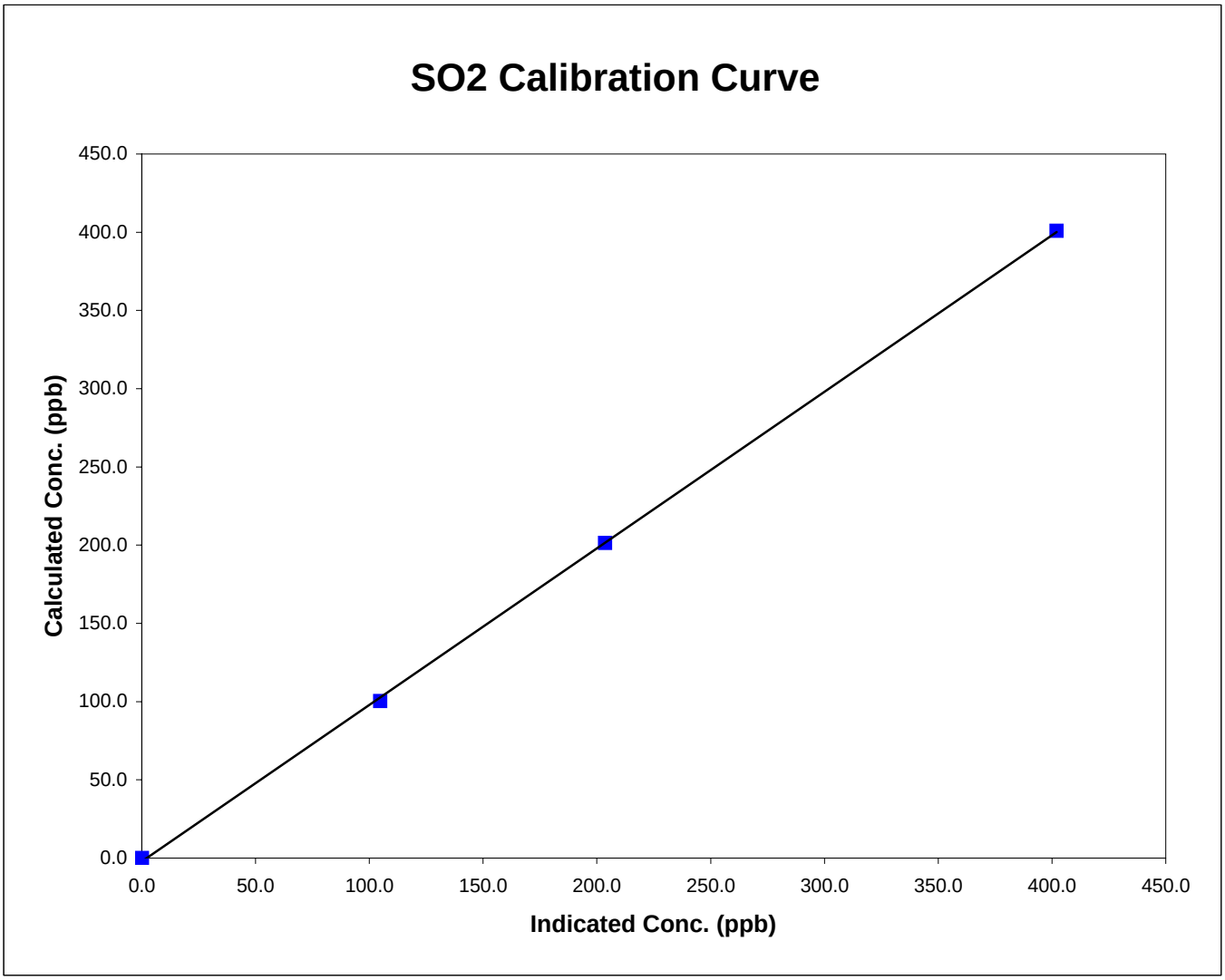
FOCUS AIR QUALITY MONITORING

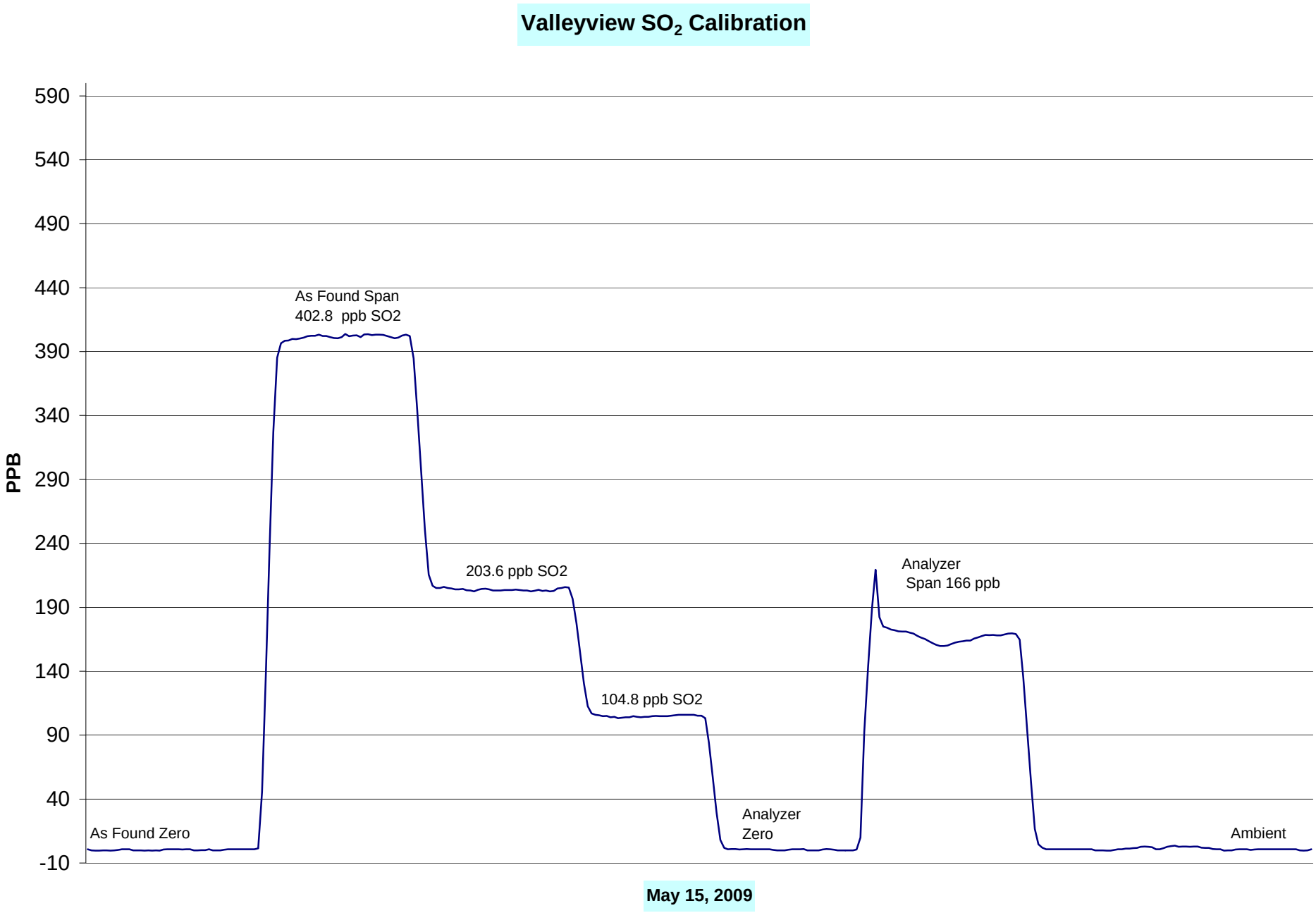
Station Information

Calibration Date	May 15, 2009	Previous Calibration	April 12, 2009
Station Number	6	Station Location	Valleyview
Start Time (MST)	9:37	End Time (MST)	12:20
Analyzer make/model	TEI 45C	Analyzer serial #	43C-57531-313

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
400.9	402.1	0.9970	Correlation Coefficient	0.999875
201.3	203.6	0.9884		
100.2	104.8	0.9560	Slope	1.000417
			Intercept	-2.155050




Valleyview SO_2 Calibration
590
540
490
440
390
340
290
240
190
140
90
40
-10
PPB
As Found Span
402.8 ppb SO2
203.6 ppb SO2
104.8 ppb SO2
Analyzer
Span 166 ppb
As Found Zero
Analyzer
Zero
Ambient
May 15, 2009

Calibration Report

Parameter	H2S
Air Monitoring Network	PASZA

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	May 15, 2009	Previous Calibration	April 12, 2009
Station Number	5	Station Location	Valleyview
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	11:00	End Time (MST)	13:05
Barometric Pressure	27.16 inches Hg	Station Temperature	23.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentratior	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	0.997897	Calculated slope	1.011353
Calculated intercept	0.072880	Calculated intercept	-0.314377
Analyzer make	TEI Model 43A	Analyzer serial #	43A-25575-221

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	4.9	ppb	4.9	ppb
Coefficient	1.070		1.070	
Lamp Voltage	792	V	798	V
Chamber Temp	45.1	c	45	c
Perm Oven Temp	44.30	c	45	c
Pressure	639	mm Hg	641	mm Hg
Sample Flow	459	ccm	446	ccm
Lamp Intensity	92.0	%	92.0	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.0	0.2	N/A
4989	79.74	80.2	79.7	1.0068
4988	39.88	40.5	40.2	1.0072
4988	9.93	10.1	10.5	0.9631
4988	0.00	0.0	0.3	As found zero
4988	79.81	80.3	79.6	As found span
			Average Correction Factor	0.9923

Calculated value of As Found Response: 79.22 ppm Percent Change of As Found: 1.4%

	before calibration		after calibration	
Auto zero	0.2	ppm	0.1	ppm
Auto span	63.1	ppm	67.4	ppm

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter	**H2S**
Air Monitoring Network	**PASZA**

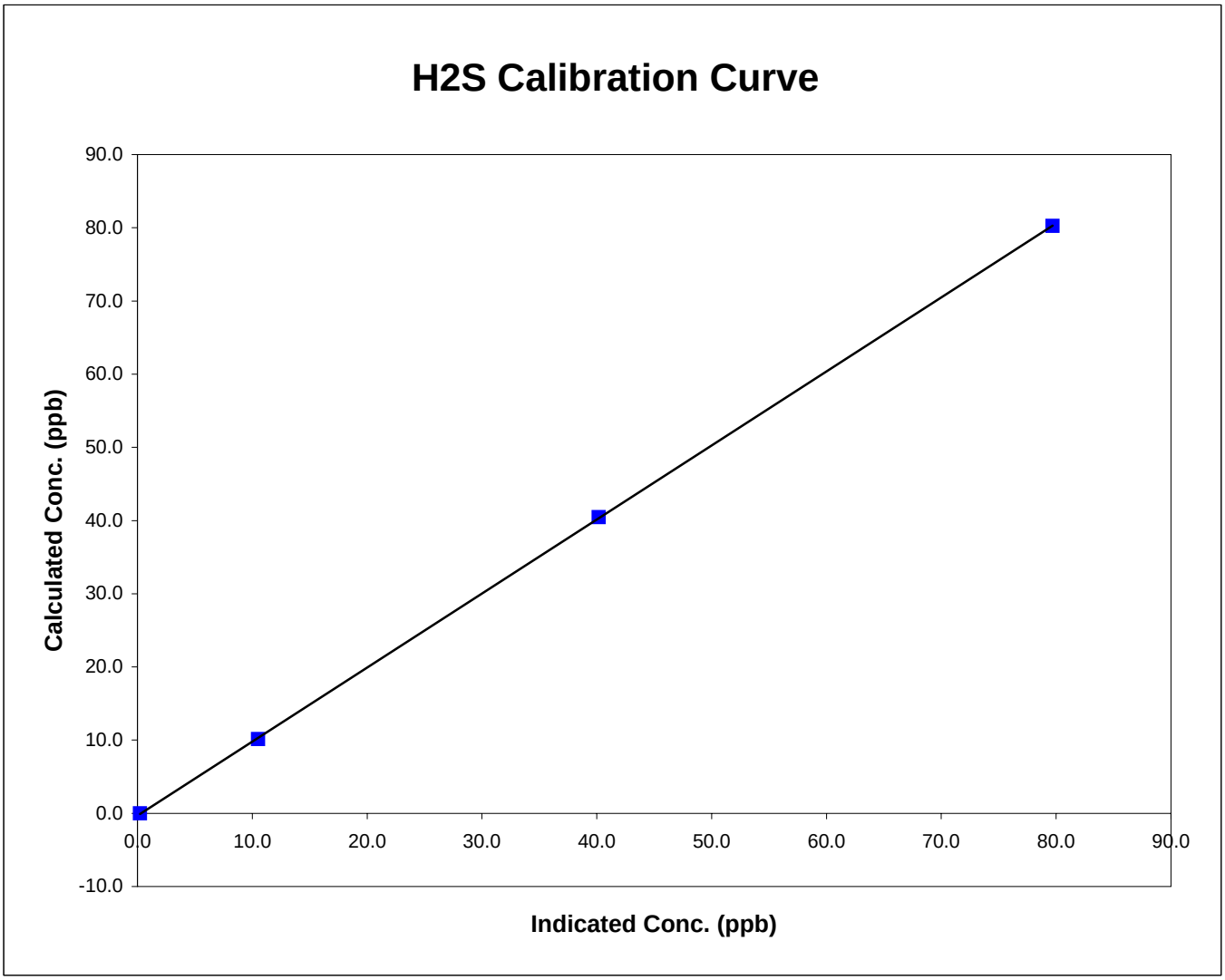
FOCUS AIR QUALITY MONITORING

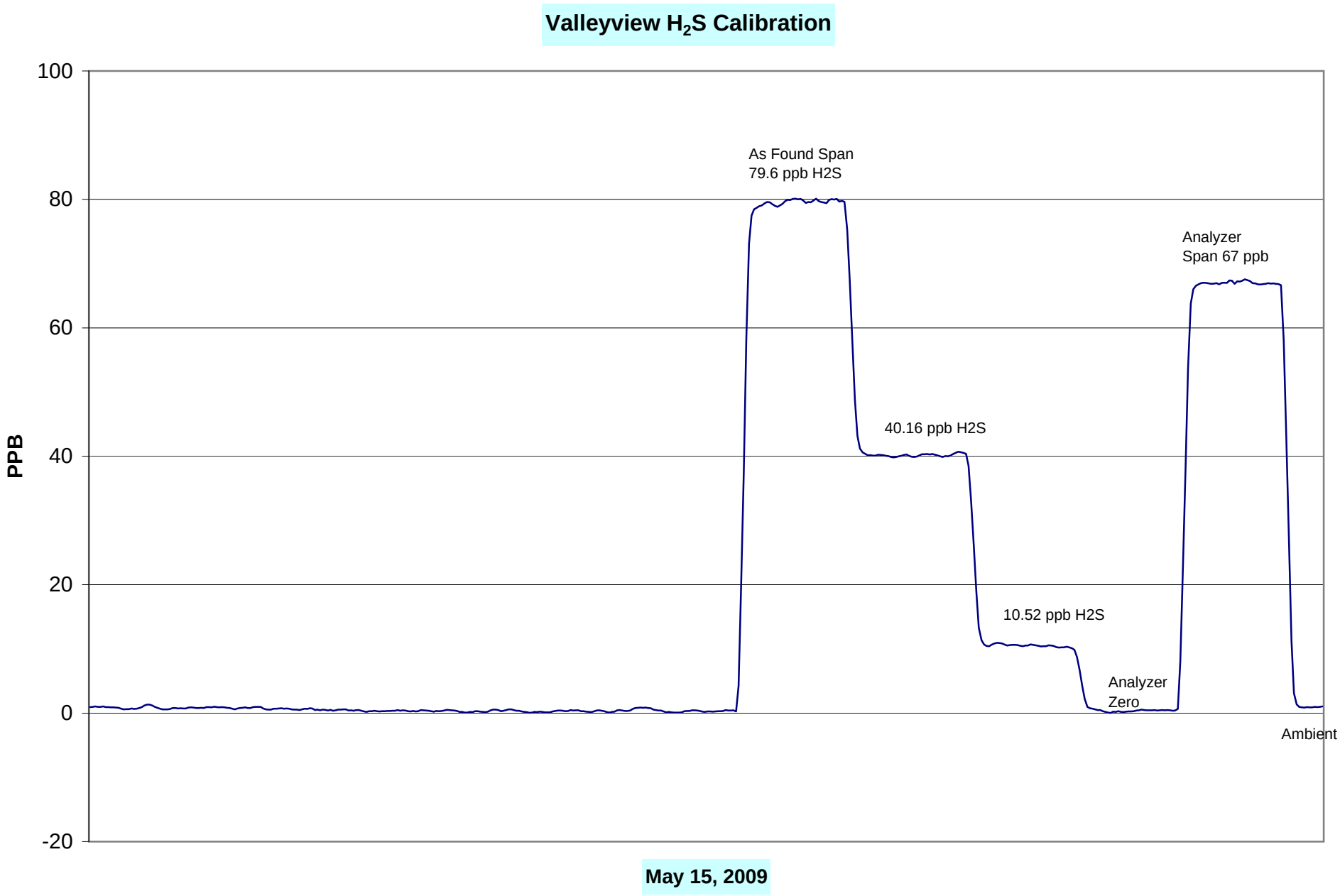
Station Information

Calibration Date	May 15, 2009	Previous Calibration	April 12, 2009
Station Number	5	Station Location	Valleyview
Start Time (MST)	11:00	End Time (MST)	13:05
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	0.2	N/A		
80.2	79.7	1.0068	Correlation Coefficient	0.999982
40.5	40.2	1.0072		
10.1	10.5	0.9631	Slope	1.011353
			Intercept	-0.314377




Valleyview H2S Calibration
100
80
60
40
20
0
-20
PPB
As Found Span
79.6 ppb H2S
40.16 ppb H2S
10.52 ppb H2S
Analyzer
Zero
Analyzer
Span 67 ppb
Ambient
May 15, 2009