



Peace AirShed Zone Association

Ambient Air Monitoring Network Summary

**Continuous Ambient Air Quality Monitoring Program
Monthly Report
December 2009**

Operations and Reporting
FOCUS
AIR QUALITY MONITORING



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January 27, 2010

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

Enclosed is the PASZA Ambient Monitoring Network Report for the month of **December 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 December the following events were noted:

Henry Pirker Station:

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

Evergreen Park Station:

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

Smoky Heights Station:

- ◆ The measured ambient air quality was within the AAAQO for the Smoky Heights station, except the PM_{2.5} which had a one (1) hour exceedence on December 31st of 158.4 µg/m³ – **Alberta Environment Reference #222205**.
- ◆ All analyzers / sensors at the Smoky Heights station had an operational uptime greater than 90% for the month of December.

Beaverlodge Station:

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

Portable – 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 December.

Valleyview Station:

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

Passive Monitoring - 43 Stations throughout the PASZA zone:

There were four duplicate sites sampled in the month of December: Bay Tree, Boone Creek, Karr Creek and Peavine. The NO₂ passive sample was found damaged at the Shaftesbury Site; consequently there is no passive result for said sample. The passive sample analyses were performed by MAXXAM Analytics Inc.

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

- Monthly average concentrations for SO₂ passives ranged from 0.1 ppb to 0.6 ppb, with a mean of 0.3 ppb.
- Monthly average concentrations for NO₂ passives ranged from 0.8 ppb to 13.9 ppb, with a mean of 3.1 ppb.
- Monthly average concentrations for O₃ passives ranged from 17.2 ppb to 37.8 ppb, with a mean of 27.1 ppb.

If you have any questions or concerns, please contact Shelly Pruden, PASZA Program Manager at 780.833.443 or 780.882.4071.

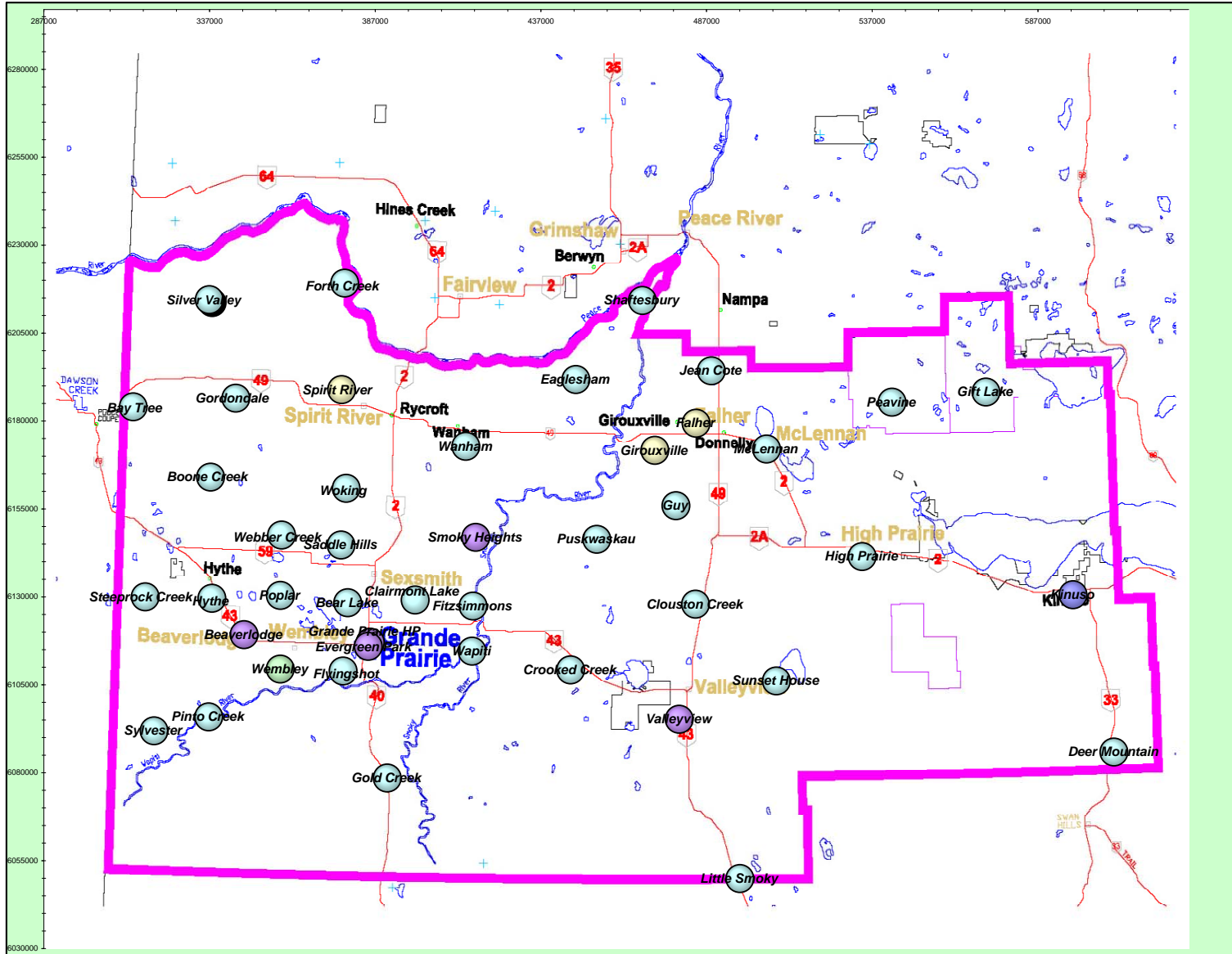
On Behalf of the,
Peace Airshed Zone Association

Shelly Pruden
Program Manager



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

Location of PASZA Continuous and Passive Monitoring Stations



PASZA Monthly Continuous Data Summary

Dec-2009 Peace Airshed Zone Association							Maximum Recorded Values				Operational Time (%)
Pollutant (units)	Objectives		Station	Monthly Average	Exceedence		1-hr		24-hr / 8-hr		
	1-hr	24-hr			1-hr	24-hr	Conc	Day	Conc	Day	
SO ₂ (ppb)	172	57	Henry Pirker	0.4	0	0	2.4	Dec-24 13:00	0.9	Dec-16	100.0%
SO ₂ (ppb)	172	57	Evergreen Park	0.3	0	0	1.3	Dec-22 16:00	0.6	Dec-17	100.0%
SO ₂ (ppb)	172	57	Smoky Heights	0.5	0	0	6.1	Dec-18 14:00	1.0	Dec-23	99.5%
SO ₂ (ppb)	172	57	Beaverlodge	0.6	0	0	5.4	Dec-03 07:00	1.4	Dec-03	100.0%
SO ₂ (ppb)	172	57	Portable-Kinuso	0.1	0	0	7.0	Dec-31 21:00	1.1	Dec-31	100.0%
SO ₂ (ppb)	172	57	Valleyview	0.4	0	0	0.9	Dec-15 21:00	0.7	Dec-15	99.9%
NO (ppb)			Henry Pirker	17.1	-	-	197.4	Dec-24 13:00	57.5	Dec-24	100.0%
NO ₂ (ppb)	212	106	Henry Pirker	20.2	0	0	66.7	Dec-24 13:00	38.0	Dec-24	100.0%
NO _x (ppb)			Henry Pirker	37.3	-	-	264.5	Dec-24 13:00	95.8	Dec-24	100.0%
NO (ppb)			Beaverlodge	2.5	-	-	58.4	Dec-03 18:00	12.7	Dec-16	100.0%
NO ₂ (ppb)	212	106	Beaverlodge	8.8	0	0	35.5	Dec-03 18:00	25.9	Dec-16	100.0%
NO _x (ppb)			Beaverlodge	11.4	-	-	94.3	Dec-03 18:00	38.7	Dec-16	100.0%
NO (ppb)			Portable-Kinuso	0.8	-	-	21.6	Dec-16 18:00	7.7	Dec-17	100.0%
NO ₂ (ppb)	212	106	Portable-Kinuso	4.2	0	0	21.3	Dec-16 18:00	14.6	Dec-17	100.0%
NO _x (ppb)			Portable-Kinuso	5.1	-	-	43.1	Dec-16 18:00	22.6	Dec-17	100.0%
O ₃ (ppb)	82		Henry Pirker	13.1	0	-	39.8	Dec-19 05:00	30.5	Dec-09	100.0%
O ₃ (ppb) - 8-hr			Henry Pirker		0				35.7	Dec-19	
O ₃ (ppb)	82		Beaverlodge	23.8	0	-	42.3	Dec-19 06:00	40.1	Dec-19	100.0%
O ₃ (ppb) - 8-hr			Beaverlodge		0				42.0	Dec-19	
O ₃ (ppb)	82		Portable-Kinuso	21.8	0	-	41.3	Dec-19 10:00	39.9	Dec-19	100.0%
O ₃ (ppb) - 8-hr			Portable-Kinuso		0				40.9	Dec-19	
CO (ppm)	13		Henry Pirker	0.27	0	-	1.8	Dec-01 09:00	0.6	Dec-24	100.0%
CO (ppm) - 8-hr		5	Henry Pirker		0				1.0	Dec-24	
THC (ppm)			Henry Pirker	2.60	-	-	4.0	Dec-26 09:00	3.5	Dec-26	100.0%
TRS (ppb)			Henry Pirker	0.4	-	-	1.9	Dec-24 13:00	1.1	Dec-25	99.9%
TRS (ppb)			Evergreen Park	0.8	-	-	5.1	Dec-07 23:00	1.5	Dec-24	100.0%
TRS (ppb)			Smoky Heights	0.3	-	-	1.1	Dec-26 05:00	0.6	Dec-17	99.5%
TRS (ppb)			Portable-Kinuso	0.4	-	-	0.7	Dec-25 10:00	0.6	Dec-17	100.0%
H ₂ S (ppb)	10	3	Valleyview	0.2	0	0	1.3	Dec-10 22:00	0.4	Dec-18	99.9%
PM _{2.5} (µg/m ³)	80	30	Henry Pirker	6.4	0	0	35.5	Dec-24 13:00	16.7	Dec-24	98.0%
PM _{2.5} (µg/m ³)	80	30	Evergreen Park	4.9	0	0	41.9	Dec-03 14:00	20.1	Dec-03	99.6%
PM _{2.5} (µg/m ³)	80	30	Smoky Heights	4.1	1	0	158.4	Dec-31 10:00	12.3	Dec-03	99.1%
PM _{2.5} (µg/m ³)	80	30	Beaverlodge	6.8	0	0	70.9	Dec-03 08:00	29.0	Dec-03	100.0%

PASZA Monthly Continuous Data Summary – continued

Dec-2009		Peace Airshed Zone Association					Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
RH (%)			Henry Pirker	69.6	-	-	86.9	Dec-04 13:00	79.6	Dec-18	100.0%
RH (%)			Evergreen Park	77.2	-	-	92.1	Dec-04 13:00	85.5	Dec-27	100.0%
RH (%)			Beaverlodge	77.0	-	-	93.4	Dec-26 01:00	88.3	Dec-27	92.3%
RH (%)			Valleyview	77.8	-	-	93.6	Dec-17 20:00	89.7	Dec-18	99.9%
SR (W/m ²)			Henry Pirker	15.3	-	-	178.1	Dec-28 13:00	27.6	Dec-01	100.0%
Temp (°C)			Henry Pirker	-17.3	-	-	2.2	Dec-18 15:00	-3.6	Dec-04	100.0%
Temp (°C)			Evergreen Park	-16.7	-	-	2.8	Dec-18 16:00	-2.9	Dec-04	100.0%
Temp (°C)			Smoky Heights	-17.5	-	-	2.0	Dec-18 19:00	-3.0	Dec-04	99.5%
Temp (°C)			Beaverlodge	-14.5	-	-	2.1	Dec-03 23:00	-3.4	Dec-04	100.0%
Temp (°C)			Portable-Kinuso	-16.8	-	-	0.7	Dec-19 00:00	-2.8	Dec-19	100.0%
Temp (°C)			Valleyview	-16.5	-	-	1.7	Dec-18 16:00	-3.8	Dec-04	99.9%
WSPD s (km/hr)			Henry Pirker	5.8	-	-	27.0	Dec-04 09:00	20.8	Dec-04	97.7%
WSPD s (km/hr)			Evergreen Park	371.0	-	-	20.0	Dec-04 18:00	13.8	Dec-04	96.4%
WSPD s (km/hr)			Smoky Heights	9.3	-	-	37.0	Dec-04 06:00	26.7	Dec-04	98.8%
WSPD s (km/hr)			Beaverlodge	7.2	-	-	40.0	Dec-19 05:00	23.2	Dec-19	100.0%
WSPD s (km/hr)			Portable-Kinuso	5.7	-	-	19.0	Dec-24 01:00	10.4	Dec-02	100.0%
WSPD s (km/hr)			Valleyview	4.7	-	-	31.0	Dec-04 21:00	17.0	Dec-04	99.5%
WSPD v (km/hr)			Henry Pirker	3.3	-	-	27.0	Dec-04 09:00	20.2	Dec-04	97.7%
WSPD v (km/hr)			Evergreen Park	1.6	-	-	20.0	Dec-04 18:00	13.0	Dec-04	96.4%
WSPD v (km/hr)			Smoky Heights	3.9	-	-	37.0	Dec-04 06:00	24.9	Dec-04	98.8%
WSPD v (km/hr)			Beaverlodge	3.3	-	-	40.0	Dec-19 05:00	22.7	Dec-19	100.0%
WSPD v (km/hr)			Portable-Kinuso	2.3	-	-	19.0	Dec-24 01:00	9.8	Dec-02	100.0%
WSPD v (km/hr)			Valleyview	1.6	-	-	31.0	Dec-04 21:00	15.4	Dec-04	99.5%
WDIR			Henry Pirker	NW	-	-	-	-	-	-	97.7%
WDIR			Evergreen Park	NW	-	-	-	-	-	-	96.4%
WDIR			Smoky Heights	W	-	-	-	-	-	-	98.8%
WDIR			Beaverlodge	NW	-	-	-	-	-	-	100.0%
WDIR			Portable-Kinuso	SW	-	-	-	-	-	-	100.0%
WDIR			Valleyview	NW	-	-	-	-	-	-	99.5%

Continuous Network Equipment Summary

PASZA – Henry Pirker Station

General Station Issues

Routine monthly calibrations were performed on December 4th (TRS, THC & CO) and December 5th (SO₂, NO_x & O₃).

Parameter	Make	Model	Notes
SO ₂	TEI	43C	No operational issues observed.
NO _x /NO/NO ₂	TEI	42C	Spans were just outside target December 12 th to the 16 th – due to external temperature influences (very cold).
O ₃	TEI	49C	Spans were outside target from December 17 th to the 31 st – losing vacuum in pump.
CO	TEI	48C	No operational issues observed.
THC	TEI	51-CLT	No operational issues observed.
TRS	TEI	43C	One (1) hour was flagged for maintenance – perm tube was replaced.
PM _{2.5}	R&P	1400AB	Thirteen (13) hours were flagged for maintenance on December 22 nd due to adjusting of TEOM hardware (roof of station repairs) and new software installation. Two (2) hours were flagged invalid due to baseline drift.
RH	Met One	083D	No operational issues observed.
ET	Met One	083D	No operational issues observed.
SR	Met One	096-1	No operational issues observed.
WS	Met One	010C	Seventeen (17) hours were flagged invalid due to flatlining (due to freezing).
WD	Met One	020C	Seventeen (17) hours were flagged invalid due to flatlining (due to freezing).

PASZA – Evergreen Park Station

General Station Issues

Routine monthly calibrations were performed on December 2nd (SO₂, TRS & PM_{2.5}).

Parameter	Make	Model	Notes
SO ₂	TEI	43i	New perm tube was installed on December 2 nd .
TRS	TEI	43C	TRS spans less than target December 1 st & 2 nd – new perm tube was installed December 2 nd .
PM _{2.5}	R&P	1400AB	Three (3) hours were flagged invalid on December 18 th due to moisture on filter – filter changed out & flow & leak check performed.
ET	Met One/Gill	083D	No operational issues observed.
RH	Met One/Gill		No operational issues observed.
WS	Met One/ Gill	010C	Twenty-Seven (27) hours were flagged invalid due to intermittent spiking (due to fog &/or snow).
WD	Met One/ Gill	020C	Twenty-Seven (27) hours were flagged invalid due to intermittent spiking (due to fog &/or snow).

PASZA – Smoky Heights Station

General Station Issues

Routine monthly calibrations were performed on December 3rd (TRS, SO₂ & PM_{2.5}). One (1) hour of data was flagged invalid for all parameters due to communication/DACS error on December 1st. Three (3) hours were flagged invalid for all parameters on December 2nd due to a power failure.

Parameter	Make	Model	Notes
SO ₂	TEI	43C	No operational issues observed.
TRS	TEI	43C	Spans were just outside target December 12 th to the 16 th – due to external temperature influences (very cold).
PM _{2.5}	R&P	1400AB	One (1) hour exceedence on December 31 st of 158.4 µg/m ³ – AE Reference #222205 . Three (3) hour were flagged invalid due to baseline drift.
ET	Met One	083D	No operational issues observed.
WS	Met One	010C	Five (5) hours were flagged invalid due to flatlining (due to freezing).
WD	Met One	020C	Five (5) hours were flagged invalid due to flatlining (due to freezing).

PASZA – Beaverlodge Station

General Station Issues

Routine monthly calibrations were performed on December 15th (SO₂, O₃, NO_x & PM_{2.5}).

Parameter	Make	Model	Notes
SO ₂	TEI	43CTL	No operational issues observed.
NO _x /NO/NO ₂	TEI	42C	Spans were just outside target December 5 th , 6 th & 31 st – due to external temperature influences (very cold).
O ₃	TEI	49C	No operational issues observed.
PM _{2.5}	R&P	1400AB	No operational issues observed.
ET	n/a	n/a	No operational issues observed.
RH	n/a	n/a	Fifty-seven (57) hours were flagged invalid – reason under investigation and in January all connections were checked and a loose connection was found. All connectors were cleaned and reconnected.
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 December 27th (SO₂, TRS, NO_x & O₃).

Parameter	Make	Model	Notes
SO ₂	TEI	43C	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
NO _x /NO/NO ₂	TEI	42I	No operational issues observed.
O ₃	TEI	49C	No operational issues observed.
ET	Met One		No operational issues observed.
WS	Met One		No operational issues observed.
WD	Met One		No operational issues observed.

PASZA – Valleyview Station

General Station Issues

Routine monthly calibrations were performed December 8th (SO₂ & H₂S). One (1) hour of data was flagged invalid for all parameters due to communication/DACS error on December 2nd.

Parameter	Make	Model	Notes
SO ₂	TEI	43i	New perm tube installed on December 8 th . No operational issues observed.
H ₂ S	TEI	43A	New perm tube installed on December 8 th which resulted in spans outside target range from December 14 th to end of month.
ET	Gill	Met Pak 3	No operational issues observed.
RH	Gill	Met Pak 3	No operational issues observed.
WS	Gill	Met Pak 3	Three (3) hours were flagged invalid due to intermittent spiking (due to fog &/or snow).
WD	Gill	Met Pak 3	Three (3) hours were flagged invalid due to intermittent spiking (due to fog &/or snow).

PASZA

Henry Pirker Station

Monthly Summary Tables, Graphs and Roses

**Peace Airshed Zone Association
Summary of Hourly Averages**

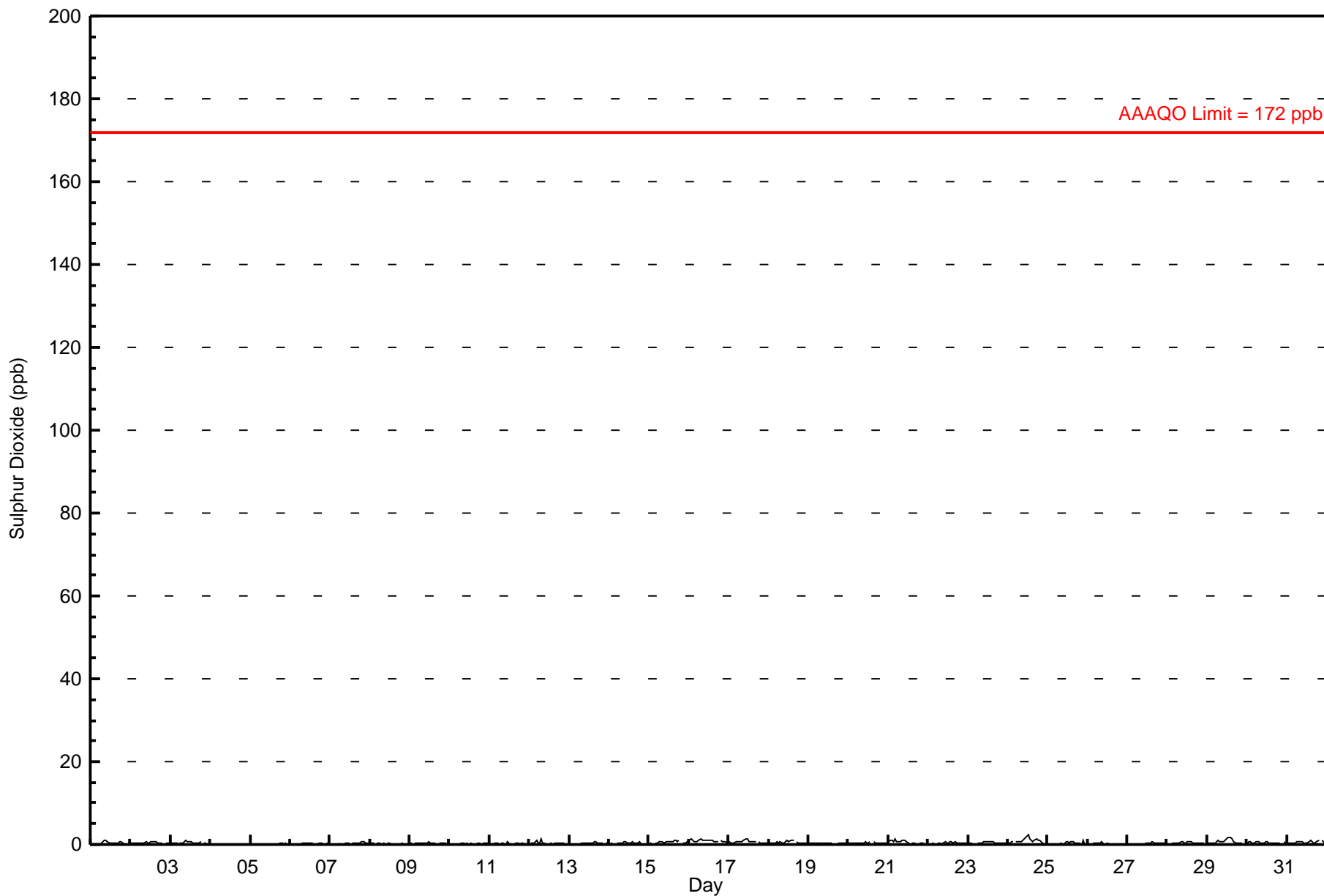
**Henry Pirker - Sulphur Dioxide (SO₂) - ppb
December 1, 2009 to January 1, 2010**

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 2.4 ppb on Dec 24 13:00	Maximum Daily Average: 0.9 ppb on Dec 16		Hours of Data:	709
Minimum Value: 0 ppb on Dec 1 04:00	Minimum Daily Average: 0.0 ppb on Dec 4		Hours of Missing Data:	35
Maximum Diurnal Average: 0.6 ppb at hour 12	Minimum Diurnal Average: 0.3 ppb at hour 4		Hours of Calibration:	35
Monthly Average: 0.38 ppb	Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.3 Q ₃ = 0.5 P ₉₀ = 0.8 P ₉₉ = 1.4		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	1	1	0	0	A	0	0	0.4	1.1
2-Dec	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	1	0	0	0	0	0	A	0	0	0.4	0.7
3-Dec	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	1	A	0	0	0	0	0.4	0.9
4-Dec	0	0	0	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
5-Dec	0	0	0	0	0	A	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0.1	0.2
6-Dec	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
7-Dec	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0.3	0.6
8-Dec	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
9-Dec	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
10-Dec	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
11-Dec	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.6
12-Dec	0	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.3	1.5
13-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	A	0	0	0.3	0.6
14-Dec	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	1	0	A	0	0	0	0.3	0.7
15-Dec	0	0	0	0	0	0	1	1	1	0	1	1	1	1	1	1	1	1	1	A	0	0	1	1	0.6	1.0
16-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	0.9	1.2
17-Dec	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	0	0	0	0	0.6	1.4
18-Dec	0	0	0	0	0	1	0	1	0	0	1	1	1	1	1	1	A	1	0	0	0	0	0	0	0.5	1.2
19-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	0.4
20-Dec	0	0	0	0	0	0	0	0	0	0	1	0	0	1	A	1	0	0	0	0	0	0	0	0	0.4	0.6
21-Dec	1	1	1	1	1	1	1	1	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0.6	1.2
22-Dec	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0.4	0.8
23-Dec	0	0	0	0	0	A	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.4	0.7
24-Dec	0	0	1	1	A	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	0	0	0.8	2.4
25-Dec	0	0	0	A	0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	0	0	1	0	0	0.3	1.0
26-Dec	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7
27-Dec	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.2	0.8
28-Dec	A	0	0	0	0	0	0	0	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0	A	0.4	0.7
29-Dec	0	0	0	0	0	0	1	1	1	1	1	1	2	2	2	1	1	0	0	0	0	0	0	0	0.6	1.6
30-Dec	0	1	1	0	0	1	1	1	0	0	1	1	0	0	0	0	0	0	0	1	0	A	1	0	0.5	0.8
31-Dec	0	0	0	0	0	0	1	1	1	1	1	0	0	1	1	1	0	0	1	1	A	1	1	0	0.6	1.0
	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	Diurnal Average	
	1.2	1.2	1.0	0.7	1.2	0.8	1.0	1.5	1.1	1.1	1.4	2.0	2.4	1.6	1.5	1.2	0.9	1.3	1.1	0.9	0.7	1.0	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 SO₂ at Henry Pirker December 2009



**Peace Airshed Zone Association
Summary of Hourly Maximums**

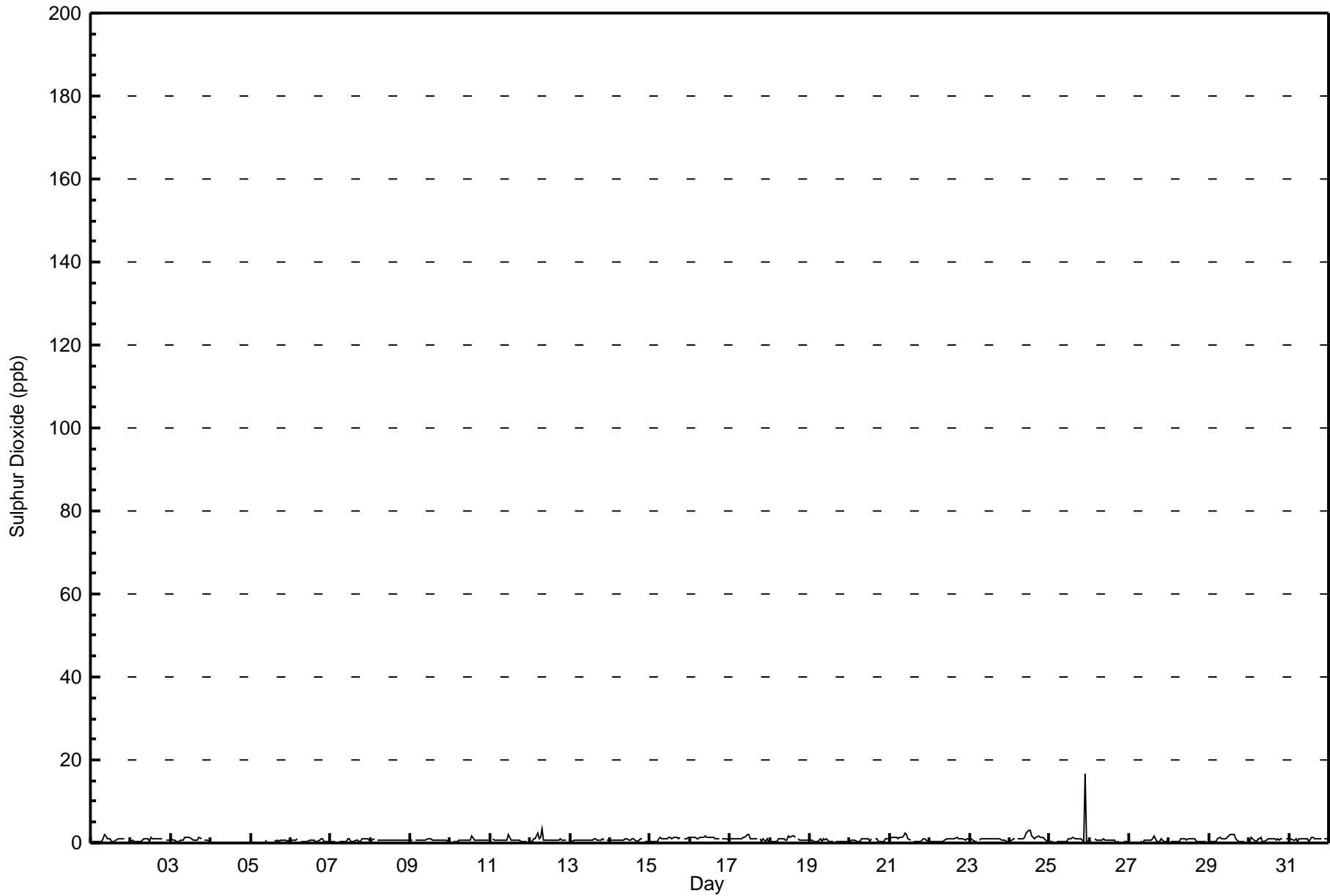
**Henry Pirker - Sulphur Dioxide (SO₂) - ppb
December 1, 2009 to January 1, 2010**

Maximum Value: 16.7 ppb on Dec 25 22:00	Maximum Daily Average: 1.4 ppb on Dec 25	Hours in Service: 744
Minimum Value: 0 ppb on Dec 26 19:00	Minimum Daily Average: 0.1 ppb on Dec 4	Hours of Data: 709
Maximum Diurnal Average: 1.2 ppb at hour 22	Minimum Diurnal Average: 0.6 ppb at hour 1	Hours of Missing Data: 35
Monthly Average: 0.77 ppb	Percentiles: P ₁ = 0.0 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.6 Q ₃ = 1.0 P ₉₀ = 1.3 P ₉₉ = 2.4	Hours of Calibration: 35
		Percent Operational Time: 100.0

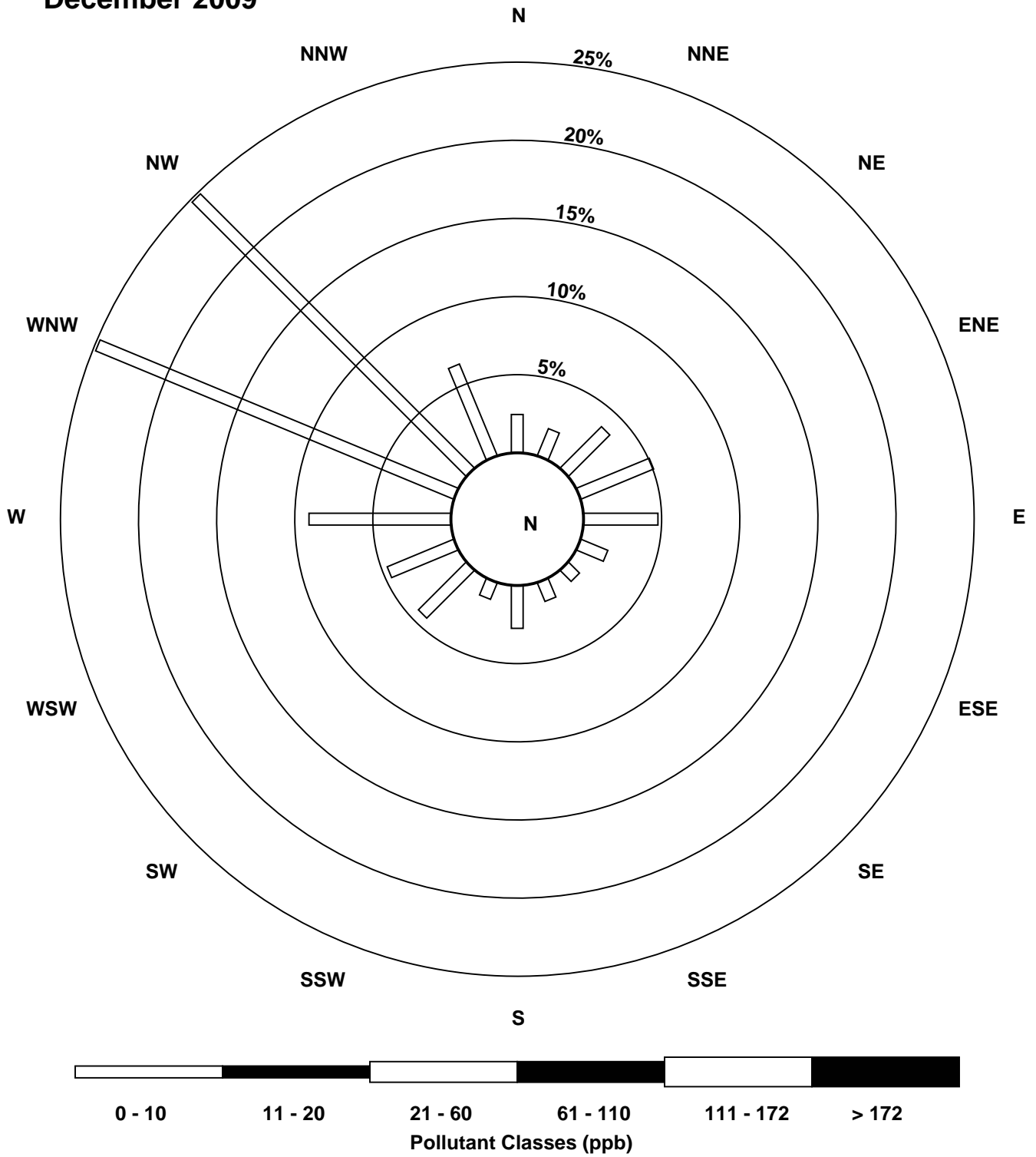
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Dec	0	0	0	0	0	0	0	1	2	2	1	1	0	0	0	1	1	1	1	1	1	A	0	0	0.8	2.0	
2-Dec	0	1	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	1.3
3-Dec	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	0.8	1.3	
4-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
5-Dec	0	0	0	0	0	A	0	0	0	1	C	C	C	C	1	0	1	0	1	1	1	1	0	1	0.4	0.6	
6-Dec	1	1	1	1	1	A	1	1	0	0	0	1	1	1	1	0	0	1	1	1	0	0	0	0	0.6	1.0	
7-Dec	0	0	0	0	A	0	0	0	0	0	1	1	0	0	0	1	1	0	0	1	1	1	1	1	0.6	1.0	
8-Dec	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.1	
9-Dec	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.1	
10-Dec	1	A	1	0	0	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	0.6	1.5	
11-Dec	A	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	0	0	A	0.6	2.0	
12-Dec	0	0	1	1	2	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.9	3.5	
13-Dec	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.6	1.1	
14-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0	0	0.7	1.0	
15-Dec	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.0	1.4	
16-Dec	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1.2	1.7	
17-Dec	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1	1	A	1	0	1	0	1	0	1.1	2.0	
18-Dec	0	0	0	0	0	1	1	1	1	1	1	2	1	2	2	1	A	1	1	1	1	1	1	1	0.9	1.8	
19-Dec	1	1	0	0	0	0	1	0	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.5	0.9	
20-Dec	0	1	1	1	0	0	0	1	1	1	1	0	1	0	1	A	1	1	0	0	0	0	0	1	0.7	1.0	
21-Dec	1	1	1	1	1	1	1	1	2	2	1	1	A	1	0	0	0	0	0	1	1	1	1	0	1.1	2.5	
22-Dec	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.4	
23-Dec	1	1	1	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0.8	0.9	
24-Dec	0	1	1	1	A	1	1	1	1	1	2	3	3	2	1	1	1	2	1	1	1	1	0	0	1.3	3.0	
25-Dec	0	0	0	A	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	17	0	0	1.4	16.7	
26-Dec	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.5	1.1	
27-Dec	0	A	0	0	0	0	0	0	0	1	1	1	1	1	1	2	0	0	0	0	1	1	0	0	0.4	1.7	
28-Dec	A	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	A	0.7	1.0	
29-Dec	0	0	0	0	0	1	1	1	1	1	1	2	2	2	2	1	0	0	1	1	1	1	A	1	1.0	2.0	
30-Dec	1	2	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.9	1.5	
31-Dec	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	A	1	1	0.9	1.5	
	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.8	0.8	0.9	0.9	1.0	0.9	0.9	0.9	0.8	0.7	0.7	0.7	0.7	0.7	0.6	1.2	0.6	0.6	Diurnal Average	
	1.4	1.5	1.5	1.5	2.4	1.0	1.5	3.5	2.0	2.5	2.5	3.0	3.0	2.0	2.0	2.0	1.4	1.7	1.5	1.5	1.3	16.7	1.0	1.3	Diurnal Maximum		

C - Calibration A - Automated Daily Zero Span

Hourly Maximums for SO₂ at Henry Pirker December 2009



Pollutant Rose for SO₂ at Henry Pirker December 2009



**Peace Airshed Zone Association
Summary of Hourly Averages**

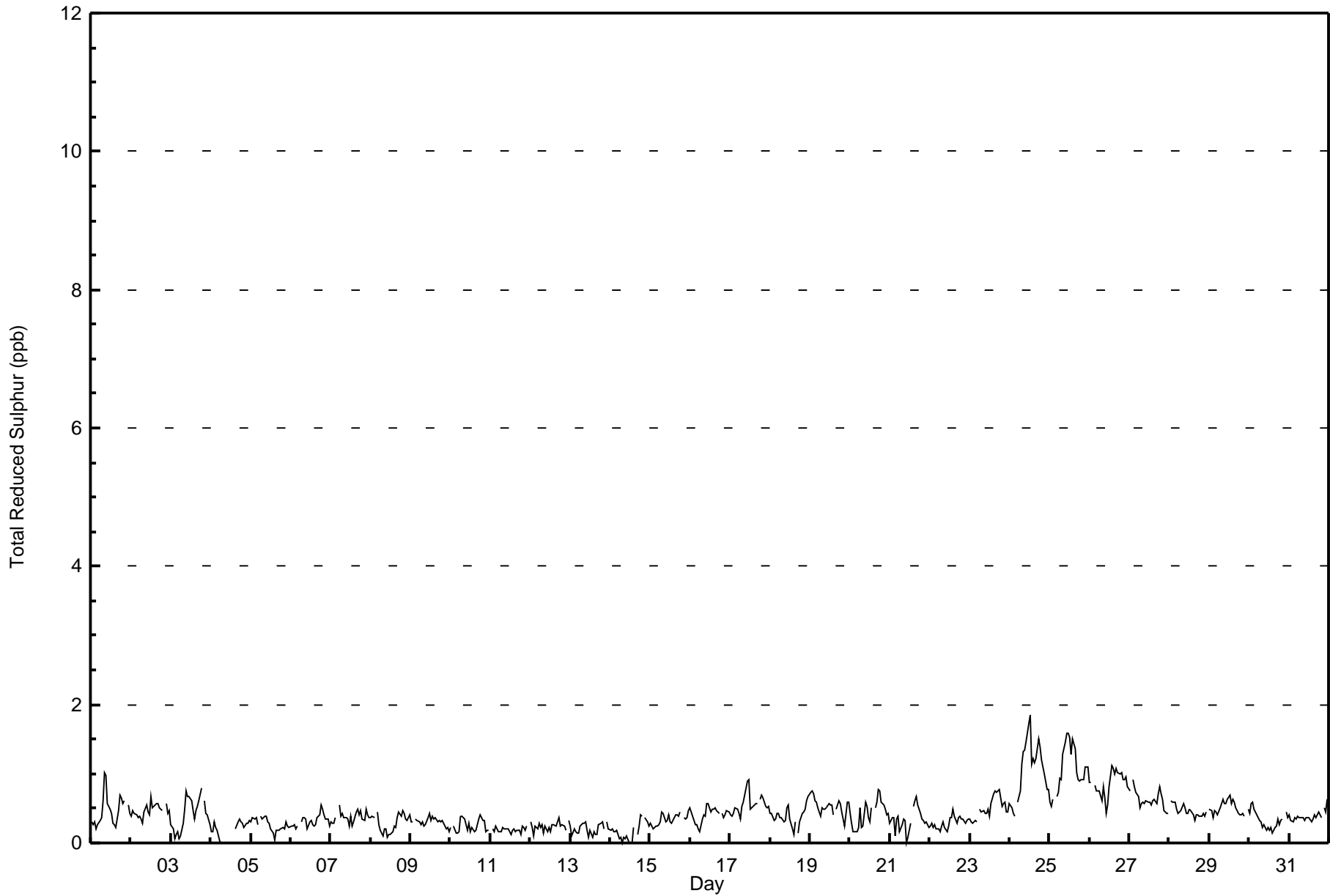
**Henry Pirker - Total Reduced Sulphur (TRS) - ppb
December 1, 2009 to January 1, 2010**

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 1.9 ppb on Dec 24 13:00	Maximum Daily Average: 1.1 ppb on Dec 25		Hours of Data:	709
Minimum Value: 0 ppb on Dec 4 07:00	Minimum Daily Average: 0.2 ppb on Dec 14		Hours of Missing Data:	35
Maximum Diurnal Average: 0.5 ppb at hour 19	Minimum Diurnal Average: 0.3 ppb at hour 4		Hours of Calibration:	34
Monthly Average: 0.43 ppb	Percentiles: P ₁ = 0.0 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.4 Q ₃ = 0.5 P ₉₀ = 0.7 P ₉₉ = 1.5		Percent Operational Time:	99.9

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

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

Hourly Averages for TRS at Henry Pirker December 2009



**Peace Airshed Zone Association
Summary of Hourly Maximums**

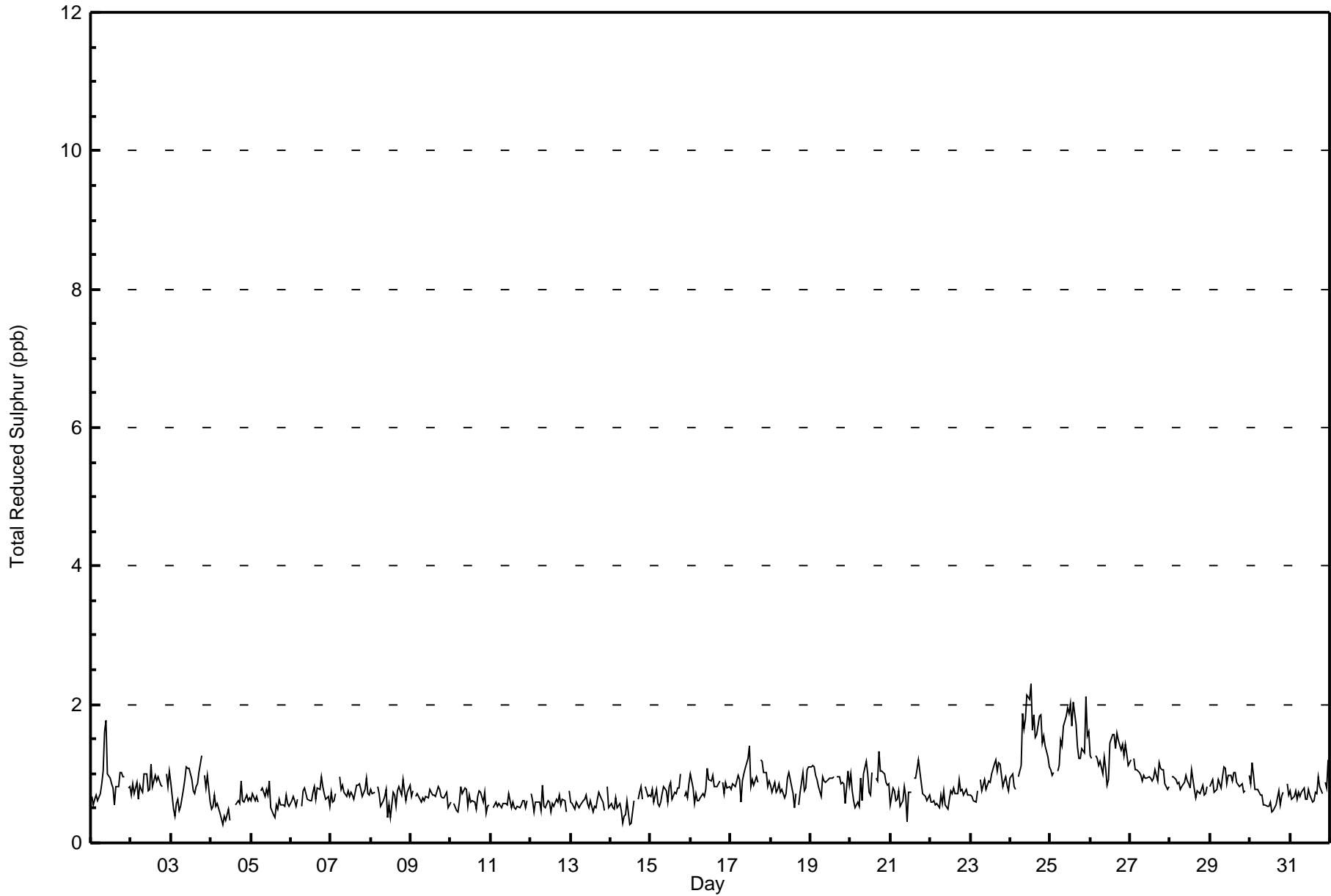
**Henry Pirker - Total Reduced Sulphur (TRS) - ppb
December 1, 2009 to January 1, 2010**

Maximum Value: 2.3 ppb on Dec 24 13:00	Maximum Daily Average: 1.5 ppb on Dec 25	Hours in Service: 744
Minimum Value: 0 ppb on Dec 4 08:00	Minimum Daily Average: 0.5 ppb on Dec 4	Hours of Data: 709
Maximum Diurnal Average: 0.9 ppb at hour 18	Minimum Diurnal Average: 0.7 ppb at hour 3	Hours of Missing Data: 35
Monthly Average: 0.81 ppb	Percentiles: P ₁ = 0.3 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.8 Q ₃ = 0.9 P ₉₀ = 1.1 P ₉₉ = 1.9	Hours of Calibration: 34
		Percent Operational Time: 99.9

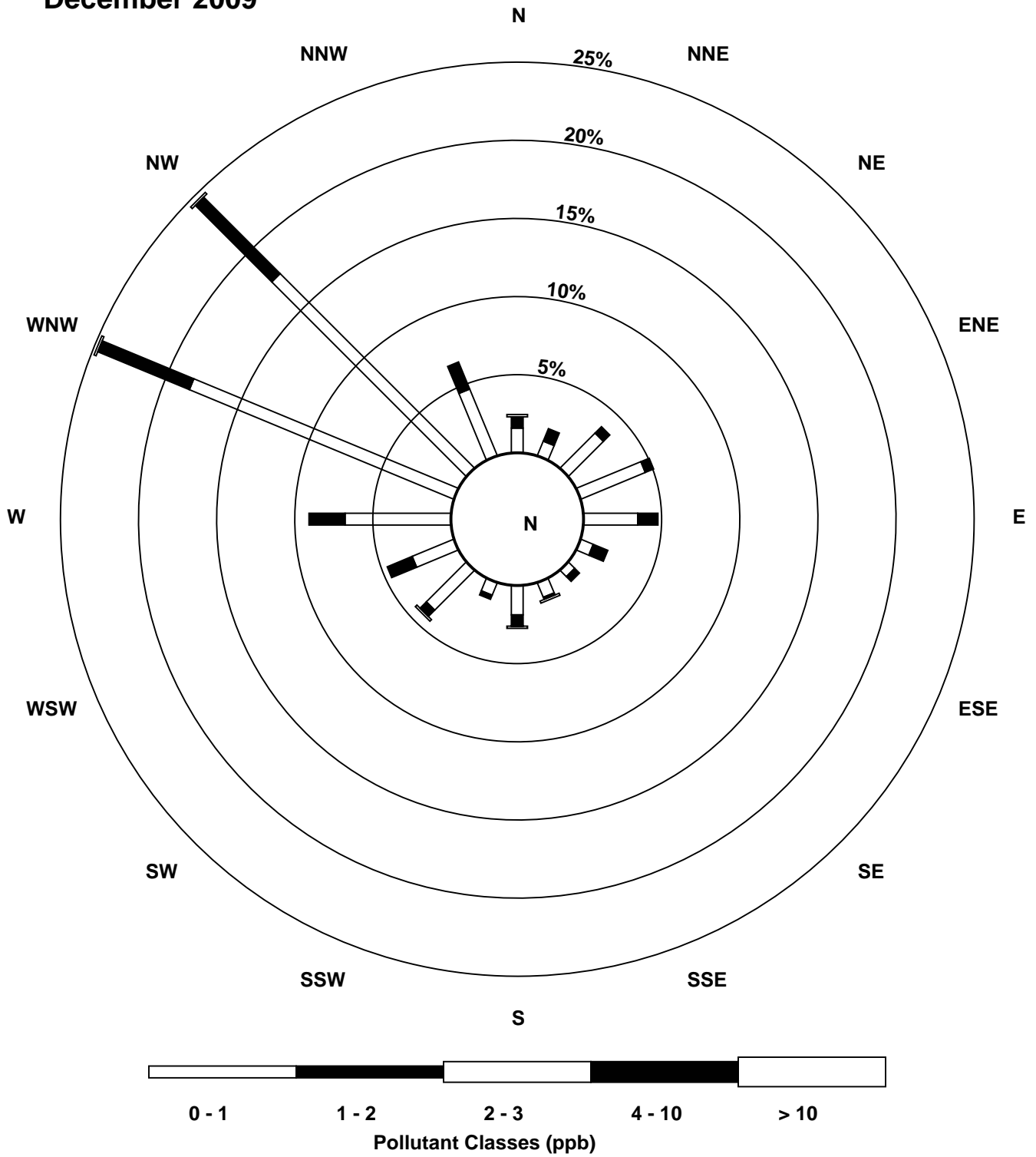
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.9	1.8
2-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.9	1.1
3-Dec	1	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.3
4-Dec	0	1	1	1	1	0	0	0	0	0	0	0	C	C	C	1	1	1	1	1	1	1	1	1	0.5	0.9
5-Dec	1	1	1	1	1	A	1	1	1	1	1	1	1	0	0	1	0	1	1	1	1	1	1	1	0.6	0.9
6-Dec	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
7-Dec	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
8-Dec	1	1	1	A	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
9-Dec	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8
10-Dec	1	A	1	0	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	1	1	0.6	0.8
11-Dec	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	A	0.6	0.7
12-Dec	1	1	0	1	1	1	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0	A	1	0.6	0.8
13-Dec	1	1	0	1	1	1	1	1	1	1	1	1	0	1	0	1	0	1	1	1	1	0	A	1	0.6	0.8
14-Dec	1	1	0	1	1	1	0	0	0	0	1	0	0	0	1	M	1	1	1	1	A	1	1	1	0.5	0.8
15-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	1.0
16-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.8	1.1
17-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.9	1.4
18-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.8	1.1
19-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.9	1.1
20-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.9	1.3
21-Dec	1	1	1	1	1	1	1	1	1	1	0	1	1	A	1	1	1	1	1	1	1	1	1	1	0.7	1.2
22-Dec	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
23-Dec	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
24-Dec	1	1	1	1	A	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	1	1	1.5	2.3
25-Dec	1	1	1	A	1	1	1	1	2	2	2	2	2	2	2	2	2	1	1	1	1	1	2	2	1.5	2.1
26-Dec	1	1	A	1	1	1	1	1	1	1	1	1	2	2	1	2	1	1	1	1	1	1	1	1	1.3	1.6
27-Dec	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.2
28-Dec	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1
29-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.1
30-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	A	1	0.7	1.2
31-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.7	1.2
	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.8	0.9	0.9	0.8	0.9	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	Diurnal Average
	1.3	1.2	1.2	1.3	1.2	1.1	1.5	1.9	1.7	1.8	2.1	2.1	2.3	1.7	2.0	1.7	1.6	1.8	1.9	1.5	1.6	2.1	1.5	1.6	Diurnal Maximum	

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

Hourly Maximums for TRS at Henry Pirker December 2009



Pollutant Rose for TRS at Henry Pirker December 2009



**Peace Airshed Zone Association
Summary of Hourly Averages**

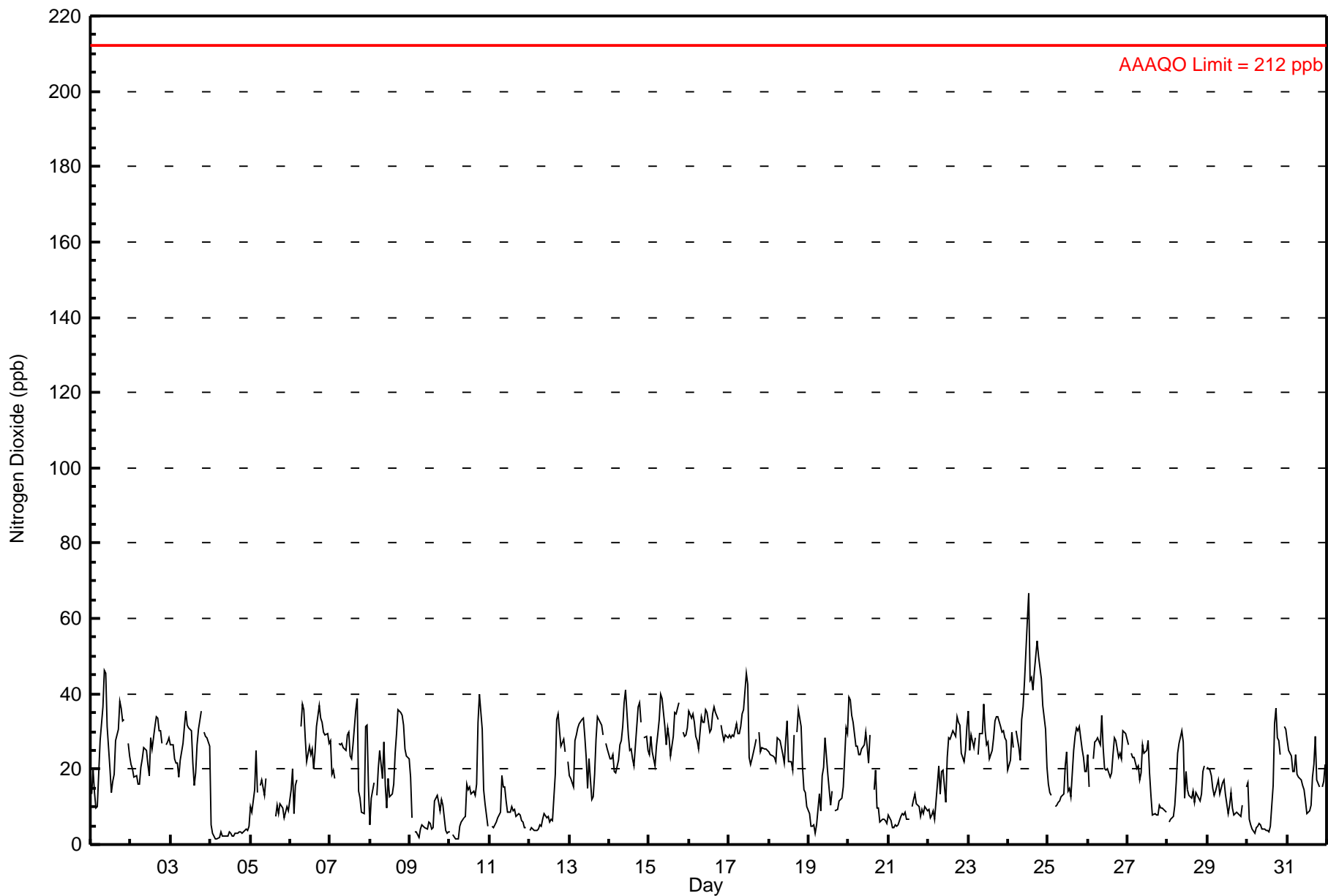
**Henry Pirker - Nitrogen Dioxide (NO₂) - ppb
December 1, 2009 to January 1, 2010**

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 66.7 ppb on Dec 24 13:00	Maximum Daily Average: 38.0 ppb on Dec 24		Hours of Data:	708
Minimum Value: 1 ppb on Dec 4 04:00	Minimum Daily Average: 2.9 ppb on Dec 4		Hours of Missing Data:	36
Maximum Diurnal Average: 25.3 ppb at hour 18	Minimum Diurnal Average: 15.2 ppb at hour 5		Hours of Calibration:	36
Monthly Average: 20.16 ppb	Percentiles: P ₁ = 2.0 P ₁₀ = 5.1 Q ₁ = 10.2 Median = 21.0 Q ₃ = 28.7 P ₉₀ = 33.3 P ₉₉ = 45.9		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	13	20	14	10	10	27	32	36	46	46	31	20	14	17	19	28	31	38	36	33	33	A	27	23	26.3	46.2
2-Dec	21	20	18	18	16	16	20	23	26	25	21	18	28	25	31	34	34	30	30	27	A	26	27	28	24.6	34.1
3-Dec	27	26	23	22	22	18	22	27	31	35	32	31	30	22	16	19	26	31	35	A	30	29	28	26	26.4	35.3
4-Dec	5	3	2	1	1	2	3	2	2	2	2	3	3	2	2	3	3	3	3	3	3	4	4	5	2.9	5.2
5-Dec	10	9	15	25	14	A	16	17	13	18	C	C	C	C	C	8	10	8	11	10	7	9	10	9	12.0	24.8
6-Dec	14	20	8	16	17	A	31	37	36	28	22	26	24	25	20	25	31	37	34	32	30	29	30	27	26.1	37.4
7-Dec	28	19	20	17	A	27	26	27	26	25	29	30	23	23	26	36	39	14	12	9	8	31	32	16	23.5	38.7
8-Dec	5	12	16	A	13	20	25	17	27	16	10	18	13	14	16	24	30	36	35	34	32	25	23	23	21.1	35.7
9-Dec	18	7	A	3	3	2	4	5	5	4	4	6	6	4	5	11	13	11	9	12	11	4	3	3	6.7	17.9
10-Dec	3	A	2	2	1	2	5	6	7	8	16	14	15	13	14	13	16	33	40	31	15	11	8	5	12.2	40.1
11-Dec	A	5	4	5	6	7	8	18	15	15	11	9	9	10	9	9	8	8	8	6	6	4	5	A	8.5	18.4
12-Dec	4	5	4	4	4	4	5	5	7	8	7	7	6	7	6	19	33	35	30	26	28	25	A	22	13.1	34.8
13-Dec	18	17	15	28	29	31	32	33	34	29	23	15	23	12	13	19	28	34	32	32	29	A	27	25	25.1	34.1
14-Dec	23	23	24	19	19	23	26	28	32	38	41	29	25	25	23	21	31	37	38	32	A	28	29	25	27.7	41.1
15-Dec	24	29	24	21	26	30	33	40	39	31	27	31	28	23	29	35	35	36	38	A	30	29	29	31	30.3	39.9
16-Dec	36	34	35	33	29	28	25	34	32	32	36	35	30	31	35	36	35	33	A	32	29	28	29	28	31.9	36.4
17-Dec	29	28	29	29	32	29	30	32	35	36	45	43	23	21	23	26	28	A	30	25	26	25	25	25	29.2	45.3
18-Dec	25	24	23	23	22	28	28	27	24	22	27	33	22	22	20	29	A	30	36	31	21	14	14	10	24.2	35.7
19-Dec	8	5	5	5	3	5	14	9	18	21	28	19	14	10	14	A	9	9	11	12	12	15	31	29	13.4	30.8
20-Dec	39	38	34	33	26	26	24	24	25	26	30	26	22	29	A	15	20	10	10	6	7	7	6	6	21.2	39.1
21-Dec	8	6	5	4	5	5	5	8	8	8	8	7	7	A	10	12	14	11	10	8	9	8	10	9	8.0	13.5
22-Dec	9	7	8	9	7	16	21	13	19	20	11	23	28	28	29	30	29	34	32	32	24	22	25	31	21.2	33.9
23-Dec	35	25	29	26	29	A	24	30	29	37	30	27	27	23	25	28	33	34	34	31	30	30	28	28	29.2	37.2
24-Dec	20	22	30	26	A	30	26	22	33	36	43	59	67	44	44	41	46	54	50	47	44	37	30	21	38.0	66.7
25-Dec	16	14	13	A	10	10	11	12	13	14	21	25	14	15	13	25	29	31	30	31	25	23	19	20	18.8	31.3
26-Dec	24	15	A	23	27	27	28	26	34	26	20	20	20	18	19	24	28	28	23	24	23	30	30	29	24.7	34.4
27-Dec	26	A	24	23	23	20	21	17	19	27	24	25	28	19	13	8	8	8	8	10	10	10	9	9	16.9	27.8
28-Dec	A	6	7	7	11	16	24	27	30	27	12	19	14	13	12	14	11	14	13	12	14	19	21	A	15.7	30.3
29-Dec	21	20	18	15	13	14	17	13	15	17	17	14	8	10	14	10	8	8	8	8	7	10	A	15	13.1	20.7
30-Dec	16	7	5	4	3	4	5	6	5	4	4	4	4	3	5	16	32	36	28	28	24	A	31	30	13.3	36.1
31-Dec	28	25	24	19	19	24	18	18	17	16	14	11	8	9	10	18	21	29	17	15	A	15	17	21	18.1	28.7
	19.1	16.9	16.5	16.2	15.2	17.6	19.8	20.6	22.7	22.4	21.7	21.5	19.4	17.9	17.8	21.2	23.9	25.3	24.4	22.0	20.2	19.6	21.0	20.0	Diurnal Average	
	39.1	38.4	34.7	32.6	32.0	31.0	33.3	39.9	46.2	45.6	45.3	59.4	66.7	43.8	44.3	40.9	46.0	54.1	49.8	46.8	44.0	37.1	31.5	31.3	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 NO₂ at Henry Pirker December 2009



**Peace Airshed Zone Association
Summary of Hourly Maximums**

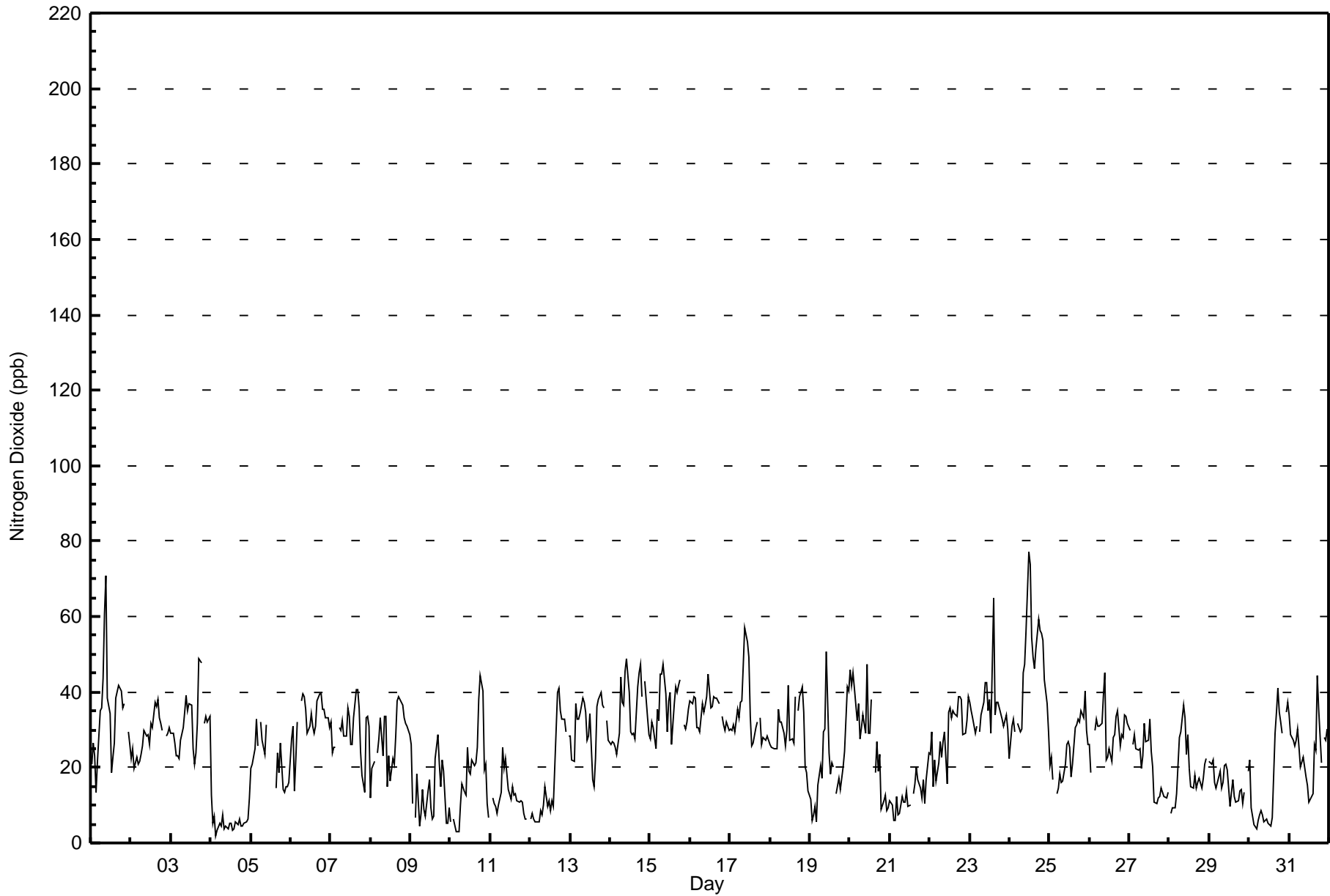
**Henry Pirker - Nitrogen Dioxide (NO₂) - ppb
December 1, 2009 to January 1, 2010**

Maximum Value: 77.3 ppb on Dec 24 12:00	Maximum Daily Average: 45.3 ppb on Dec 24	Hours in Service: 744
Minimum Value: 2 ppb on Dec 4 04:00	Minimum Daily Average: 5.5 ppb on Dec 4	Hours of Data: 708
Maximum Diurnal Average: 31.7 ppb at hour 18	Minimum Diurnal Average: 20.5 ppb at hour 5	Hours of Missing Data: 36
Monthly Average: 25.70 ppb	Percentiles: P ₁ = 3.9 P ₁₀ = 8.8 Q ₁ = 16.0 Median = 26.8 Q ₃ = 33.6 P ₉₀ = 39.4 P ₉₉ = 55.8	Hours of Calibration: 36
		Percent Operational Time: 100.0

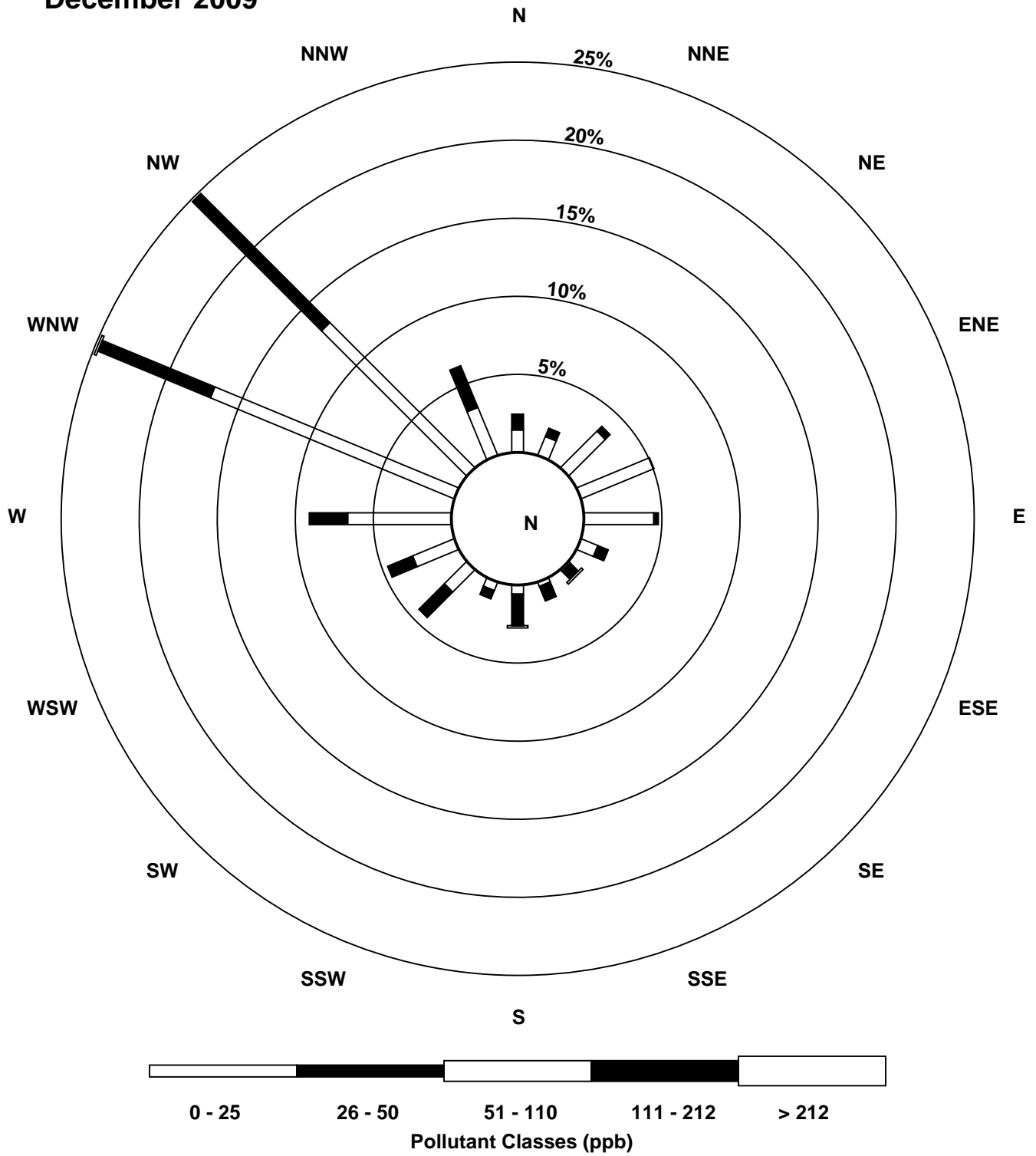
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Dec	21	27	23	13	22	35	36	44	61	71	39	34	19	23	26	39	42	41	40	36	37	A	29	26	34.0	70.8																							
2-Dec	22	25	20	23	21	22	24	26	30	28	29	26	32	31	37	36	38	33	32	30	A	28	29	30	28.3	37.9																							
3-Dec	29	29	26	23	23	22	27	31	35	39	35	37	37	25	21	24	32	49	48	A	32	34	32	33	31.4	48.7																							
4-Dec	13	5	7	2	3	5	4	8	4	4	4	5	5	4	4	6	5	7	5	5	5	6	6	12	5.5	12.7																							
5-Dec	20	21	25	33	26	A	32	27	24	31	C	C	C	C	C	14	24	18	26	14	13	15	15	16	21.9	32.8																							
6-Dec	28	31	14	22	32	A	38	39	39	35	29	31	34	31	29	31	38	39	39	35	35	33	33	31	32.5	39.4																							
7-Dec	32	24	25	25	A	30	30	32	29	28	36	33	26	26	33	41	41	36	24	18	14	33	34	31	29.7	40.7																							
8-Dec	12	20	21	A	24	27	33	23	33	33	15	23	17	22	21	29	38	39	37	37	33	32	31	29	27.4	38.7																							
9-Dec	26	11	A	7	18	5	8	14	9	7	14	17	9	6	7	22	29	21	15	22	19	5	5	9	13.2	28.6																							
10-Dec	6	A	6	3	3	3	10	16	13	13	25	19	18	22	20	21	25	38	44	40	19	21	10	7	17.6	44.3																							
11-Dec	A	12	10	10	8	10	13	25	20	22	18	14	11	15	13	13	11	11	11	11	8	6	6	A	12.8	25.4																							
12-Dec	6	8	6	5	5	5	8	7	10	15	10	11	8	11	10	30	40	41	35	33	33	29	A	28	17.3	41.1																							
13-Dec	28	22	21	37	33	33	34	38	37	35	27	28	34	17	15	22	36	38	40	37	36	A	32	27	30.8	39.7																							
14-Dec	26	27	27	25	23	29	44	37	36	45	49	40	29	29	29	27	41	45	47	39	A	43	33	29	34.8	48.7																							
15-Dec	28	32	31	25	35	32	45	45	47	40	30	37	40	26	37	41	40	42	43	A	31	30	32	35	35.8	47.3																							
16-Dec	38	37	39	38	31	30	29	37	35	37	39	45	36	36	39	39	38	37	A	33	31	30	32	30	35.5	44.7																							
17-Dec	30	30	31	30	35	33	37	38	47	57	54	49	33	26	27	31	32	A	33	26	28	27	28	27	34.4	57.1																							
18-Dec	26	26	25	25	25	35	32	32	29	26	30	42	27	28	26	39	A	35	39	42	34	20	19	14	29.4	41.7																							
19-Dec	12	6	7	10	6	15	20	17	30	30	51	24	18	21	20	A	13	17	14	17	20	24	41	40	20.6	50.9																							
20-Dec	46	42	45	41	32	37	28	31	34	29	48	29	29	38	A	19	27	19	23	9	11	12	9	9	28.1	47.5																							
21-Dec	11	10	6	6	12	8	8	12	11	11	14	10	10	A	13	16	20	17	14	12	17	11	17	24	12.6	23.8																							
22-Dec	24	29	15	22	16	21	27	23	27	29	16	35	36	33	35	34	34	39	39	38	29	29	33	39	29.2	38.9																							
23-Dec	37	35	33	29	31	A	30	34	37	43	43	35	38	29	65	34	37	37	36	33	31	32	34	30	35.8	64.9																							
24-Dec	22	31	33	29	A	32	29	30	45	47	56	77	74	54	49	46	52	59	56	56	54	43	37	29	45.3	77.3																							
25-Dec	21	23	17	A	13	15	18	16	17	21	26	27	25	18	21	31	31	33	32	35	33	40	30	26	24.7	40.2																							
26-Dec	26	19	A	30	33	31	31	32	39	45	22	23	25	22	28	29	34	35	26	29	28	34	33	32	29.7	45.0																							
27-Dec	30	A	26	29	25	24	25	20	23	32	27	27	33	24	20	11	11	12	12	15	13	12	12	13	20.7	32.8																							
28-Dec	A	8	9	9	13	20	28	29	37	33	24	29	20	15	14	18	14	16	17	14	17	21	22	A	19.5	36.6																							
29-Dec	22	21	22	16	15	16	19	15	16	21	21	19	10	13	17	12	11	11	14	14	11	13	A	19	16.0	22.0																							
30-Dec	22	9	7	5	4	6	7	8	7	6	6	5	5	4	7	29	35	41	35	32	29	A	35	37	16.6	41.1																							
31-Dec	34	29	27	26	27	30	25	20	23	20	17	15	11	12	13	26	25	44	35	21	A	28	27	30	24.7	44.5																							
																								24.0	22.3	20.9	20.6	20.5	21.9	25.2	26.0	28.5	30.1	28.4	28.2	25.0	22.8	24.0	26.9	29.7	31.7	30.5	27.0	25.1	24.8	25.5	25.7	Diurnal Average	
																								45.8	41.9	45.0	41.2	35.4	37.0	44.6	44.6	60.8	70.8	56.3	77.3	73.7	54.3	64.9	46.3	51.6	59.1	56.3	55.6	53.8	43.3	41.4	40.4	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

Hourly Maximums for NO₂ at Henry Pirker December 2009



Pollutant Rose for NO₂ at Henry Pirker December 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Henry Pirker - Nitrogen Oxide (NO) - ppb
December 1, 2009 to January 1, 2010

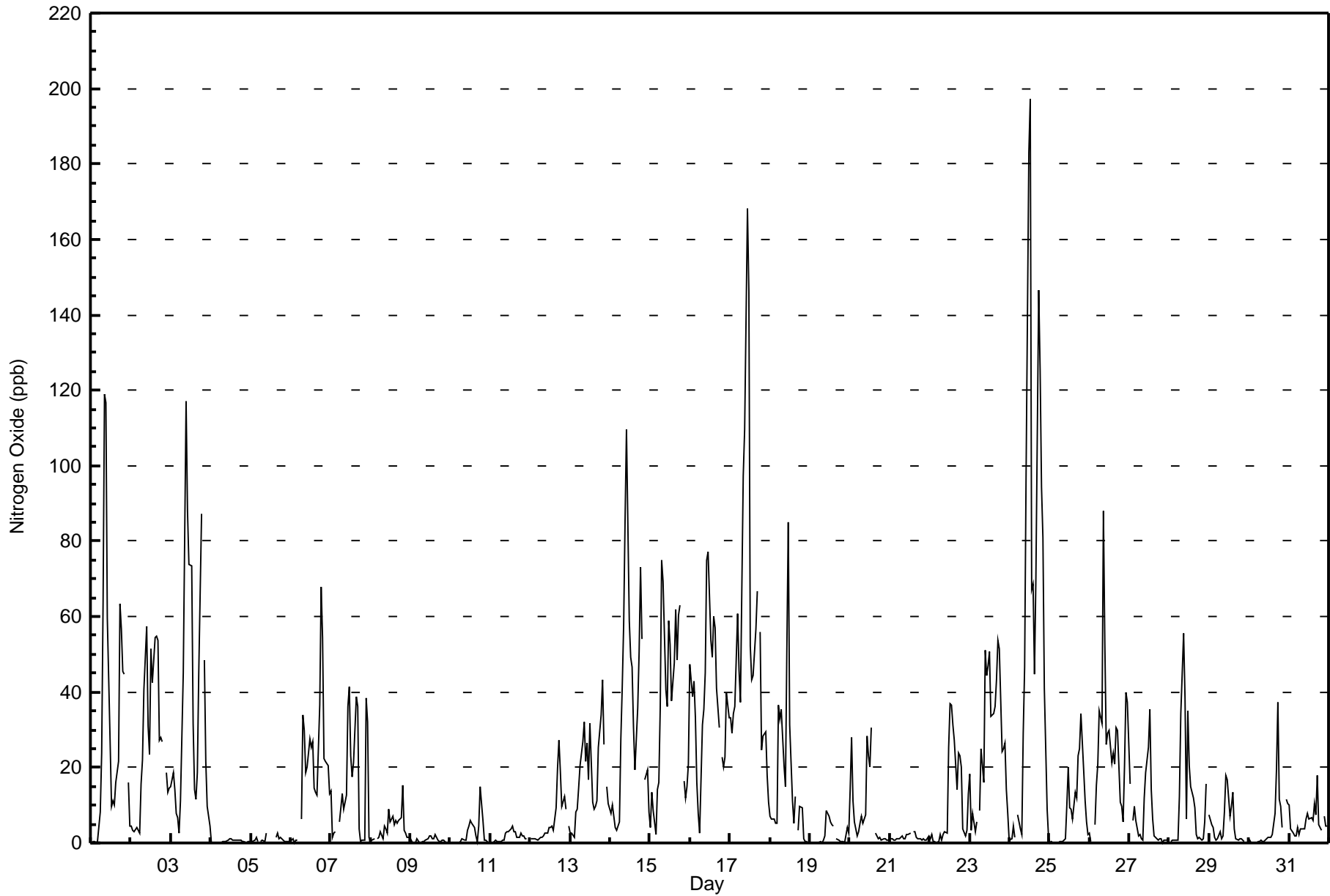
Maximum Value: 197.4 ppb on Dec 24 13:00	Maximum Daily Average: 57.5 ppb on Dec 24	Hours in Service: 744
Minimum Value: 0 ppb on Dec 4 03:00	Minimum Daily Average: 0.4 ppb on Dec 4	Hours of Data: 708
Maximum Diurnal Average: 36.1 ppb at hour 12	Minimum Diurnal Average: 4.8 ppb at hour 4	Hours of Missing Data: 36
Monthly Average: 17.05 ppb	Percentiles: P ₁ = 0.0 P ₁₀ = 0.4 Q ₁ = 1.1 Median = 6.0 Q ₃ = 24.8 P ₉₀ = 48.3 P ₉₉ = 115.0	Hours of Calibration: 36
		Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Dec	0	1	0	0	0	8	24	64	119	117	60	27	10	11	10	16	22	63	57	45	45	A	16	5	31.3	118.9	
2-Dec	4	3	3	4	3	3	16	22	41	57	31	24	52	43	55	55	54	27	28	27	A	19	13	15	25.9	57.4	
3-Dec	15	19	14	8	7	3	11	45	81	117	88	74	73	32	14	12	19	45	87	A	49	22	10	4	36.8	116.9	
4-Dec	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0.4	1.0
5-Dec	0	0	1	2	0	A	1	1	0	3	C	C	C	C	C	2	3	1	2	1	0	1	0	0	0.9	2.7	
6-Dec	1	1	0	1	1	A	6	34	30	19	20	28	25	27	14	13	12	36	68	54	22	22	21	13	20.4	67.9	
7-Dec	14	1	3	3	A	6	9	13	9	13	36	41	23	18	21	39	36	4	1	1	1	39	32	1	15.8	41.5	
8-Dec	0	1	1	A	1	1	3	1	5	4	3	9	6	7	5	6	5	6	7	15	3	3	2	1	4.1	15.2	
9-Dec	1	0	A	0	1	0	0	0	1	1	1	2	2	1	1	2	1	1	0	1	1	0	0	0	0.7	2.1	
10-Dec	0	A	0	0	0	0	0	1	1	1	3	4	6	5	4	2	0	5	15	6	1	1	0	0	2.4	14.7	
11-Dec	A	0	0	1	0	1	0	1	1	3	3	3	4	4	3	3	2	2	2	2	2	1	1	A	1.8	4.4	
12-Dec	1	1	1	1	1	1	1	1	2	3	3	4	4	4	3	9	20	27	19	10	12	9	A	5	6.2	27.3	
13-Dec	2	3	1	8	9	15	21	27	32	22	26	17	32	11	9	10	11	25	34	43	26	A	15	10	17.8	43.3	
14-Dec	8	10	7	4	3	6	28	42	58	85	110	59	49	47	31	19	36	51	73	54	A	17	19	8	35.7	109.7	
15-Dec	4	13	9	2	14	16	36	75	69	41	36	59	52	38	48	62	48	61	63	A	17	12	15	21	35.3	75.1	
16-Dec	47	39	43	33	16	8	3	31	35	45	75	77	54	49	60	57	41	30	A	23	20	23	40	33	38.4	77.1	
17-Dec	33	29	34	36	61	46	37	68	97	110	168	146	52	43	44	57	67	A	56	24	28	30	18	11	56.3	168.0	
18-Dec	7	6	6	5	5	36	33	35	21	15	51	85	31	11	5	12	A	3	10	9	1	0	0	0	17.0	85.1	
19-Dec	0	0	0	0	0	0	0	0	1	2	9	7	6	5	4	A	1	1	0	0	0	0	4	2	1.9	8.8	
20-Dec	14	28	11	6	2	3	5	7	5	7	28	23	20	31	A	3	2	1	1	1	1	1	1	1	8.8	30.6	
21-Dec	1	1	1	1	1	1	1	2	1	1	2	2	3	A	3	3	2	1	1	1	1	1	1	2	1.4	2.9	
22-Dec	1	2	0	1	0	0	2	1	2	3	3	25	37	36	31	27	14	24	23	20	4	2	3	13	11.5	37.0	
23-Dec	18	3	8	3	6	A	9	25	16	51	44	47	51	33	34	36	43	54	52	24	25	26	14	8	27.4	53.8	
24-Dec	1	1	4	2	A	7	4	2	29	47	96	183	197	67	69	45	70	147	126	94	81	41	9	1	57.5	197.4	
25-Dec	0	0	0	A	0	0	0	0	0	1	10	20	9	9	6	13	12	23	25	34	19	11	6	2	8.8	34.2	
26-Dec	3	1	A	5	15	21	35	32	88	53	26	29	30	21	24	21	30	30	11	10	5	21	40	37	25.5	87.8	
27-Dec	16	A	6	10	6	2	2	1	1	12	19	25	35	14	6	2	1	1	1	1	0	1	1	1	7.1	35.2	
28-Dec	A	1	1	1	1	1	12	34	56	38	6	35	20	15	12	9	2	1	1	1	1	5	16	A	12.3	55.7	
29-Dec	7	5	4	1	1	1	3	1	2	8	18	17	7	10	13	4	1	1	1	1	1	1	A	0	4.7	18.1	
30-Dec	1	0	0	0	0	0	0	1	0	0	1	1	2	2	2	8	19	37	12	10	4	A	12	10	5.3	37.1	
31-Dec	10	4	2	2	2	4	2	4	4	4	6	8	6	7	6	10	8	18	5	3	A	7	4	4	5.7	17.8	

7.3	6.0	5.6	4.8	5.4	6.8	9.9	18.4	26.0	28.4	32.8	36.1	30.0	20.7	18.6	18.6	19.4	24.2	26.0	17.8	13.3	11.2	10.8	7.3	Diurnal Average	
47.4	38.8	42.9	36.3	60.8	45.9	37.3	75.1	118.9	116.9	168.0	183.2	197.4	66.9	68.7	61.9	70.2	146.7	125.6	94.2	81.0	41.1	40.0	37.1	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

Hourly Averages for NO at Henry Pirker December 2009

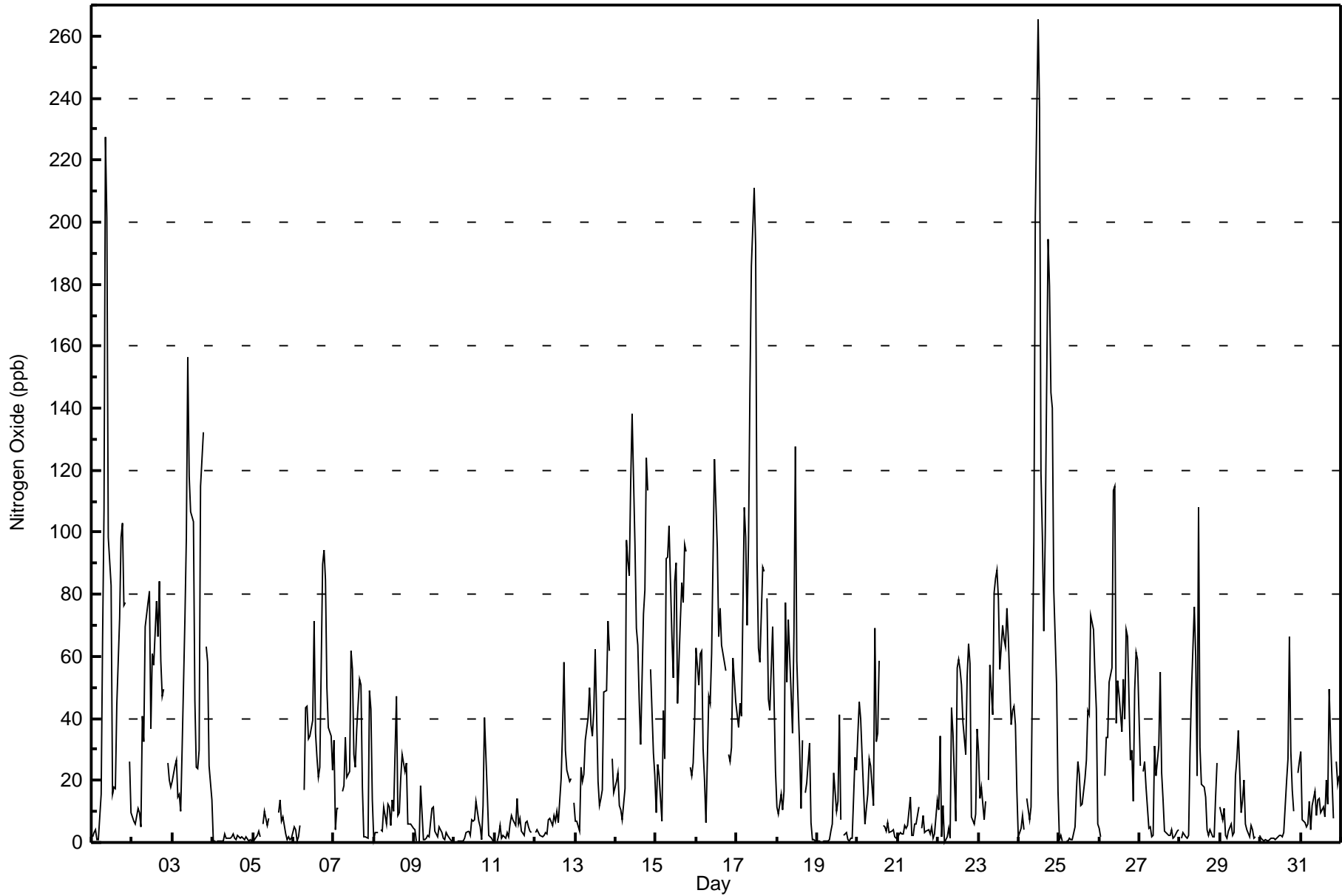


Peace Airshed Zone Association Summary of Hourly Maximums

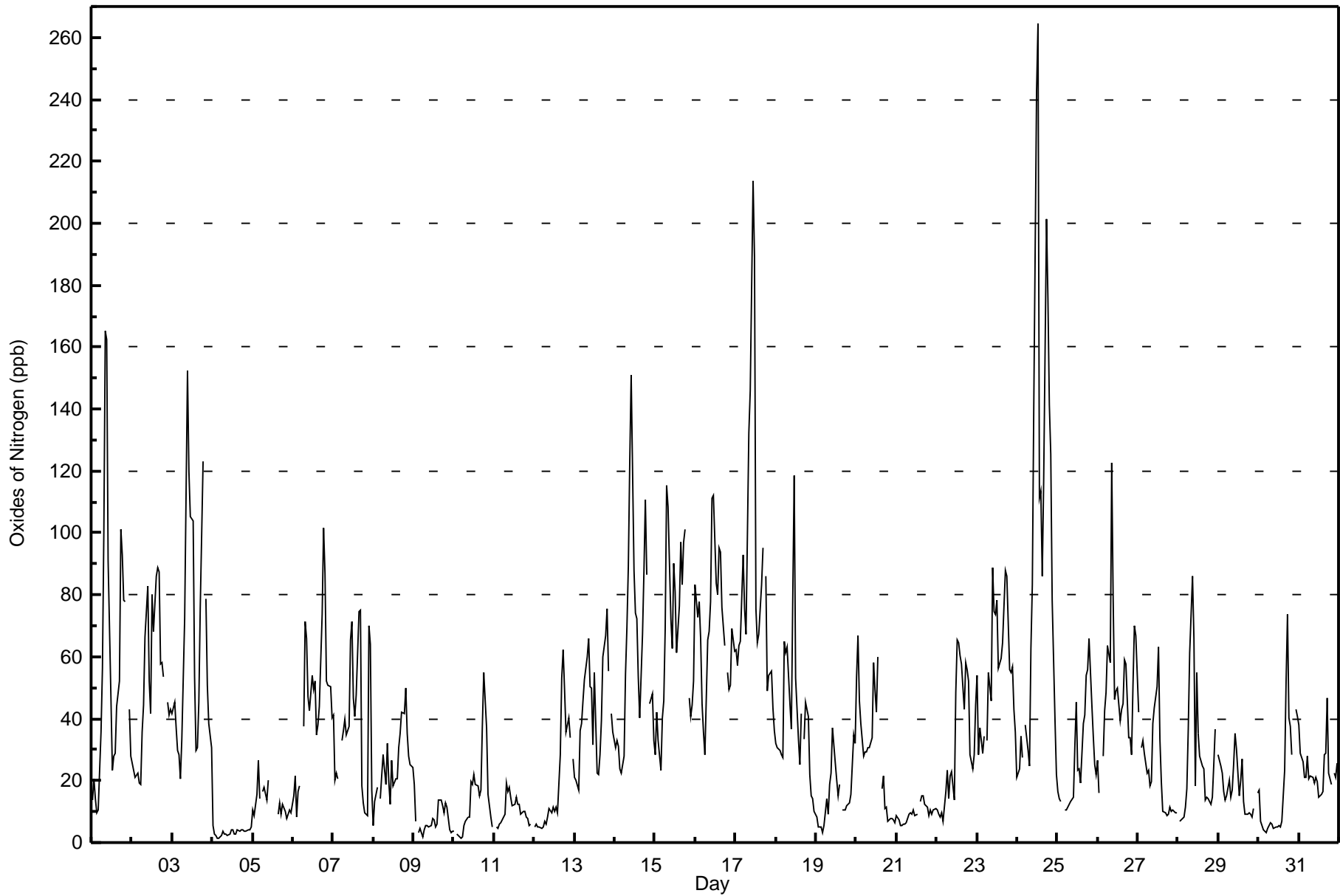
Henry Pirker - Nitrogen Oxide (NO) - ppb December 1, 2009 to January 1, 2010

Maximum Value: 265.4 ppb on Dec 24 12:00		Maximum Daily Average: 91.4 ppb on Dec 24																		Hours in Service: 744							
Minimum Value: 0 ppb on Dec 19 03:00		Minimum Daily Average: 1.2 ppb on Dec 4																		Hours of Data: 708							
Maximum Diurnal Average: 58.9 ppb at hour 12		Minimum Diurnal Average: 11.0 ppb at hour 4																		Hours of Missing Data: 36							
Monthly Average: 30.07 ppb		Percentiles: P ₁ = 0.3 P ₁₀ = 1.5 Q ₁ = 3.5 Median = 15.5 Q ₃ = 45.0 P ₉₀ = 77.7 P ₉₉ = 190.8																		Hours of Calibration: 36							
Percent Operational Time: 100.0																											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Dec	2	3	4	1	1	16	66	107	228	201	99	83	15	18	18	44	73	98	103	76	77	A	26	10	59.5	227.6	
2-Dec	8	7	6	11	9	5	41	32	69	78	81	37	61	57	78	66	84	59	47	49	A	26	20	18	41.3	84.2	
3-Dec	20	25	26	15	16	10	30	72	98	157	118	107	104	46	24	24	30	115	132	A	63	58	25	14	57.7	156.7	
4-Dec	0	0	0	0	0	1	0	3	1	1	2	2	3	1	1	2	1	2	1	1	1	2	0	1	1	1.2	2.9
5-Dec	2	1	2	4	2	A	6	10	5	8	C	C	C	C	C	10	14	7	8	3	1	2	1	2	4.8	13.7	
6-Dec	5	4	1	2	6	A	17	44	44	33	34	40	71	35	28	21	24	89	94	84	50	37	34	23	35.7	94.1	
7-Dec	33	4	11	11	A	16	19	34	21	23	62	56	28	24	37	53	51	18	2	2	1	49	43	14	26.6	61.9	
8-Dec	1	3	3	A	4	3	12	6	12	11	5	14	10	47	9	10	20	28	23	26	6	6	6	4	11.7	46.9	
9-Dec	4	0	A	0	18	1	1	1	2	2	11	11	4	3	2	5	3	2	1	3	2	1	1	1	3.4	18.5	
10-Dec	1	A	0	0	0	0	2	3	4	2	8	7	8	13	7	5	1	12	40	16	3	2	1	1	5.9	40.1	
11-Dec	A	1	2	6	2	2	1	3	2	6	9	7	6	14	6	8	3	3	6	7	5	4	3	A	4.8	14.4	
12-Dec	3	4	3	2	2	2	3	3	7	8	5	9	7	10	7	20	36	58	30	24	20	20	A	13	12.9	57.9	
13-Dec	7	7	3	24	20	22	33	40	50	38	34	43	62	20	12	14	17	49	49	71	62	A	27	16	31.3	71.3	
14-Dec	20	22	12	11	8	17	98	91	86	116	138	96	69	63	46	32	74	81	124	113	A	56	29	22	61.9	138.3	
15-Dec	9	25	22	7	43	27	92	92	102	67	53	84	90	45	72	84	77	96	94	A	24	22	26	39	56.1	101.9	
16-Dec	63	51	61	62	30	20	6	47	45	61	91	123	95	66	76	64	61	55	A	28	26	31	59	45	55.1	123.4	
17-Dec	41	37	45	41	108	99	70	97	147	186	211	193	91	63	58	89	88	A	79	46	43	69	46	23	85.6	210.9	
18-Dec	11	9	16	11	17	77	52	72	48	35	68	128	59	30	11	33	A	16	19	32	6	1	1	0	32.7	127.6	
19-Dec	1	0	0	0	0	0	1	1	4	6	22	10	13	41	8	A	2	3	1	1	2	1	27	24	7.3	41.2	
20-Dec	35	45	40	28	6	11	16	27	24	12	69	32	35	59	A	5	5	3	6	3	4	4	2	2	20.6	69.3	
21-Dec	2	3	3	3	5	5	6	14	2	2	6	6	12	A	5	9	3	4	4	3	5	2	3	14	5.2	14.5	
22-Dec	10	34	2	12	0	2	4	2	43	35	7	56	59	56	51	39	28	54	64	58	8	6	9	37	28.2	64.2	
23-Dec	29	14	18	7	13	A	20	57	41	80	85	88	79	56	70	65	63	75	66	38	43	44	38	17	48.1	87.9	
24-Dec	2	4	9	4	A	14	8	12	55	98	202	265	237	119	98	68	99	195	179	145	140	82	51	17	91.4	265.4	
25-Dec	1	2	0	A	0	0	1	1	1	5	17	26	22	12	12	21	27	42	41	73	69	55	43	6	20.8	73.4	
26-Dec	5	2	A	22	34	34	52	56	114	115	39	52	47	36	52	40	69	66	27	30	13	49	61	59	46.6	115.0	
27-Dec	25	A	23	26	18	4	5	2	2	31	22	31	55	23	14	4	3	2	2	4	1	2	4	4	13.4	54.7	
28-Dec	A	1	3	2	2	3	30	49	76	60	22	108	31	19	18	15	4	2	4	2	2	15	26	A	22.3	108.1	
29-Dec	11	8	11	3	2	3	6	2	3	22	27	36	10	14	20	6	4	2	6	4	2	2	A	2	8.8	35.9	
30-Dec	2	1	1	1	0	1	1	2	1	1	2	2	2	2	3	20	27	66	29	17	10	A	23	26	10.5	66.4	
31-Dec	29	7	7	5	6	13	4	12	17	9	14	14	10	11	8	20	12	50	33	8	A	26	19	21	15.4	49.5	
	13.1	11.3	11.5	11.0	12.8	14.6	22.6	32.0	43.7	48.7	52.1	58.9	46.5	34.6	29.3	29.8	33.5	45.1	43.8	33.3	24.6	23.9	22.5	16.2	Diurnal Average		
	62.8	50.7	60.8	62.0	108.2	98.6	97.7	107.0	227.6	201.3	210.9	265.4	236.5	119.2	98.5	88.9	99.3	194.6	179.5	144.9	140.2	81.5	61.2	59.0	Diurnal Maximum		
C - Calibration		A - Automated Daily Zero Span																									

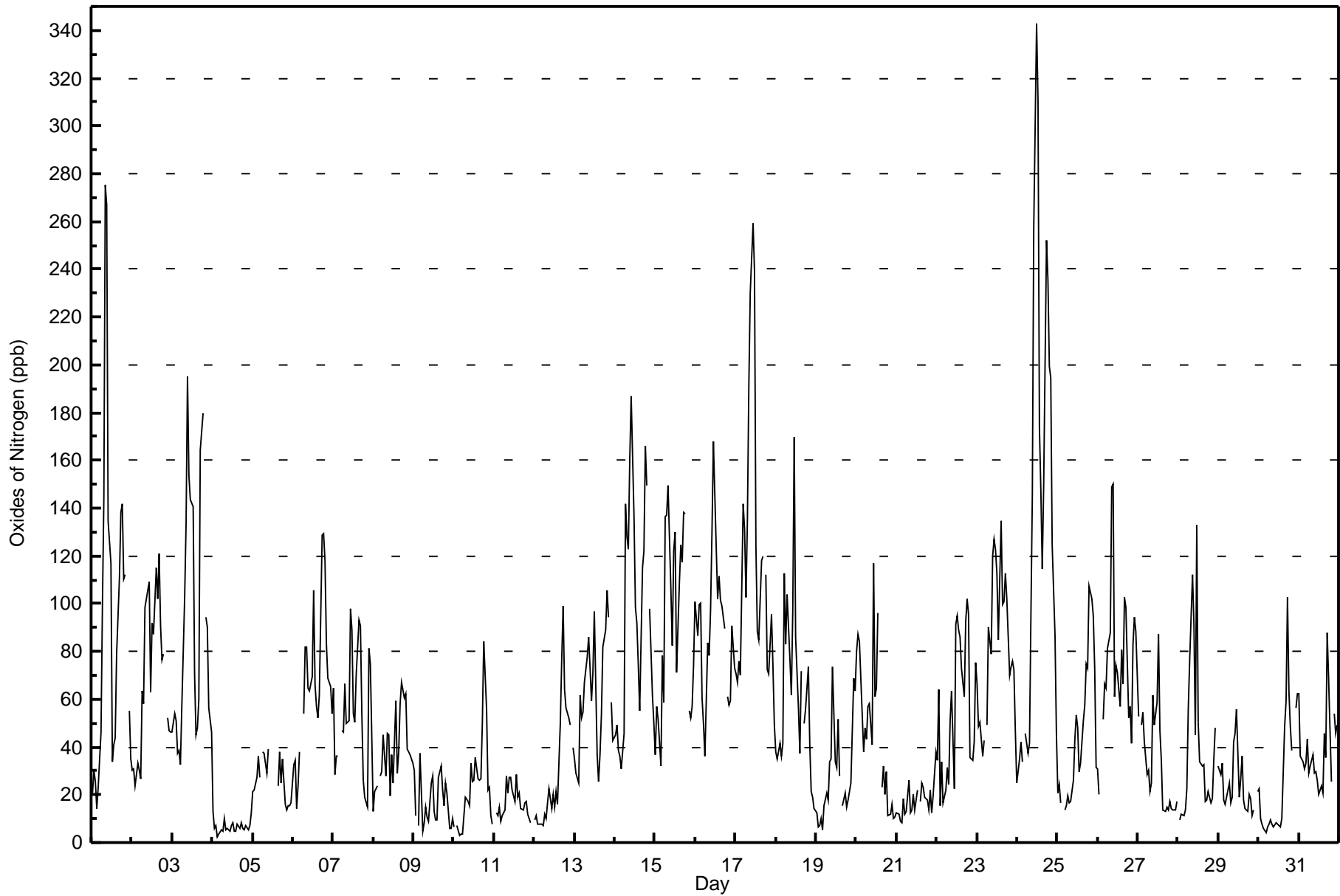
Hourly Maximums for NO at Henry Pirker December 2009



Hourly Averages for NO_x at Henry Pirker December 2009



Hourly Maximums for NO_x at Henry Pirker December 2009



**Peace Airshed Zone Association
Summary of Hourly Averages**

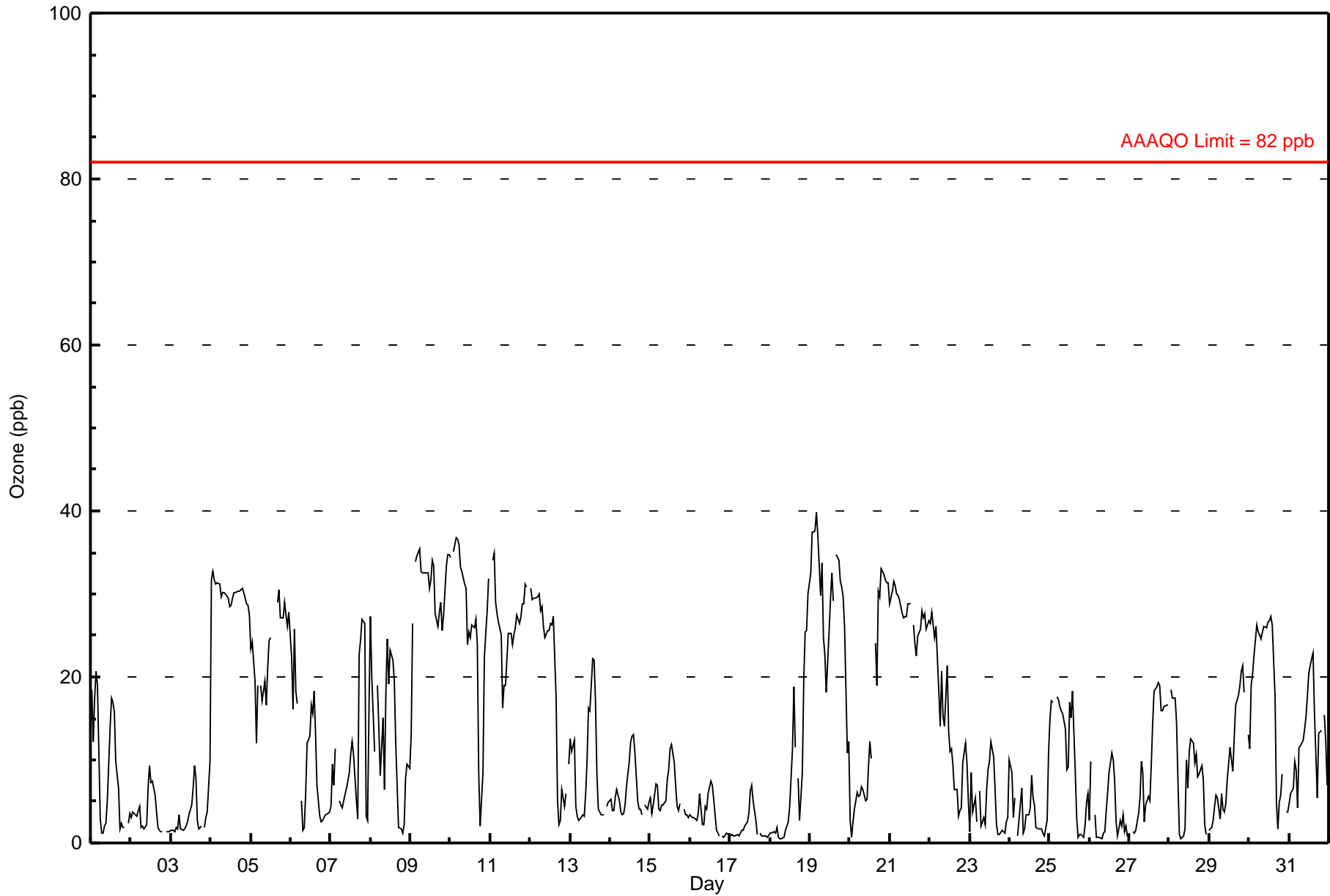
**Henry Pirker - Ozone (O₃) - ppb
December 1, 2009 to January 1, 2010**

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 39.8 ppb on Dec 19 05:00	Maximum Daily Average: 30.5 ppb on Dec 9		Hours of Data:	710
Minimum Value: 1 ppb on Dec 18 08:00	Minimum Daily Average: 2.0 ppb on Dec 17		Hours of Missing Data:	34
Maximum Diurnal Average: 16.8 ppb at hour 15	Minimum Diurnal Average: 10.9 ppb at hour 18		Hours of Calibration:	34
Monthly Average: 13.09 ppb	Percentiles: P ₁ = 0.6 P ₁₀ = 1.5 Q ₁ = 3.4 Median = 9.3 Q ₃ = 24.3 P ₉₀ = 29.9 P ₉₉ = 36.5		Percent Operational Time:	100.0

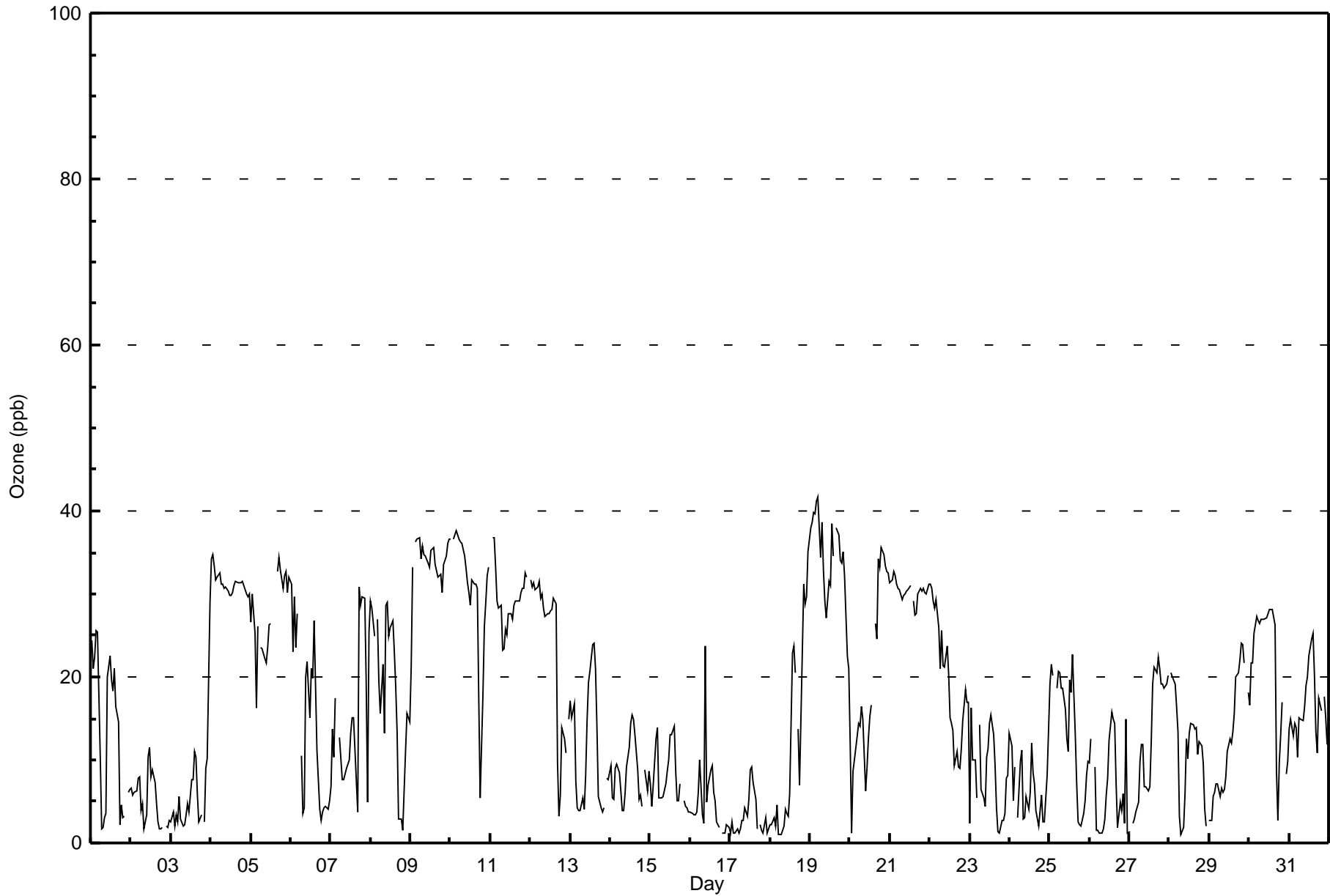
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	19	12	17	21	19	3	1	1	2	2	5	14	17	17	16	10	7	2	2	2	2	A	2	4	8.6	20.7
2-Dec	3	4	4	3	4	4	2	2	2	2	7	9	7	8	6	4	2	2	1	1	A	1	1	1	3.5	9.3
3-Dec	1	1	1	2	2	3	2	1	2	2	3	3	5	7	9	8	3	2	2	A	2	3	4	10	3.4	9.8
4-Dec	32	33	32	31	31	31	30	30	30	30	30	28	29	29	30	30	30	30	30	31	30	29	29	27	30.1	32.8
5-Dec	23	24	19	12	19	A	19	17	19	17	21	24	25	C	C	C	29	31	27	27	29	27	26	28	23.2	30.5
6-Dec	22	16	26	18	17	A	5	1	2	6	12	13	17	16	18	13	7	3	3	3	3	3	3	4	10.1	25.7
7-Dec	4	9	7	11	A	5	5	4	5	7	7	9	11	12	11	5	3	23	24	27	26	3	3	16	10.3	27.0
8-Dec	27	20	11	A	19	14	8	15	6	18	25	19	23	22	20	12	7	2	2	1	2	8	10	9	13.0	27.4
9-Dec	13	26	A	34	35	35	33	33	32	32	31	32	34	33	28	26	28	29	26	27	33	35	35	30.5	35.4	
10-Dec	34	A	35	37	37	36	33	33	31	31	24	25	25	26	26	27	24	8	2	8	22	25	28	32	26.5	36.7
11-Dec	A	34	35	29	28	27	25	16	19	19	22	25	24	25	26	27	27	26	27	29	29	31	31	A	26.4	34.9
12-Dec	31	29	29	30	30	30	28	26	25	26	26	26	26	27	17	5	2	3	6	4	6	6	A	9	20.4	30.7
13-Dec	13	11	12	4	3	3	3	3	3	6	10	16	16	22	22	17	8	4	3	3	3	A	4	5	8.6	22.2
14-Dec	5	4	4	5	6	5	4	3	4	5	7	10	12	13	13	11	5	4	4	3	A	5	4	5	6.1	13.1
15-Dec	5	4	5	7	7	4	4	5	5	5	8	9	11	12	10	7	4	4	5	A	4	3	3	3	5.8	11.8
16-Dec	3	3	3	3	3	4	6	2	2	4	4	6	7	7	5	3	2	1	A	1	1	1	1	1	3.2	7.4
17-Dec	1	1	1	1	1	1	1	2	2	2	3	4	6	7	5	3	1	A	1	1	1	1	1	1	2.0	6.9
18-Dec	1	1	1	1	2	1	1	1	1	2	2	3	4	11	19	12	A	8	3	8	19	25	26	30	7.9	30.1
19-Dec	33	37	37	38	40	37	30	34	25	23	18	25	29	33	29	A	35	34	32	31	30	26	11	12	29.5	39.8
20-Dec	3	1	3	4	6	6	6	7	6	5	5	9	12	10	A	24	19	30	30	33	32	32	31	31	15.0	33.0
21-Dec	29	30	31	31	30	30	29	28	27	27	29	29	A	26	24	23	25	26	28	27	28	26	27	27.7	31.4	
22-Dec	26	28	26	25	26	18	14	21	15	14	21	13	11	11	9	6	6	3	4	4	10	12	10	5	14.2	27.7
23-Dec	1	9	4	5	3	A	6	2	3	2	6	9	10	12	10	6	2	1	1	1	1	1	3	3	4.5	12.1
24-Dec	10	8	3	5	A	1	5	7	1	2	3	3	4	8	5	5	2	2	2	2	1	1	3	11	4.1	10.8
25-Dec	15	17	17	A	18	17	16	16	16	14	9	9	17	15	18	8	3	1	1	1	1	2	5	6	10.5	18.4
26-Dec	3	10	A	3	1	1	1	1	1	1	4	6	8	11	10	8	3	1	3	2	3	1	2	1	3.6	10.8
27-Dec	1	A	1	1	2	4	5	10	8	3	5	6	5	9	14	18	19	19	19	16	16	16	17	17	10.1	19.4
28-Dec	A	18	17	17	14	7	1	1	1	2	10	7	11	13	12	10	11	8	8	9	8	2	1	A	8.5	18.4
29-Dec	2	2	3	4	6	5	3	6	4	4	5	8	12	10	9	13	17	18	19	21	21	18	A	13	9.6	21.4
30-Dec	11	19	20	23	26	25	25	25	25	26	26	27	27	27	26	18	5	2	5	6	8	A	4	4	17.8	27.4
31-Dec	5	6	7	10	9	4	12	12	12	14	15	18	20	22	23	16	11	5	13	14	A	15	12	7	12.2	22.9
	13.0	14.4	14.2	14.4	15.2	12.9	11.7	11.8	10.9	11.3	12.9	14.3	16.0	16.4	16.8	13.4	11.5	10.9	11.0	11.9	13.0	12.9	11.5	12.3	Diurnal Average	
	34.4	37.4	37.5	37.6	39.8	37.1	33.3	33.8	32.5	32.5	32.5	30.6	31.6	34.0	33.4	30.2	34.8	34.0	31.6	33.0	32.4	33.5	34.7	34.7	Diurnal Maximum	

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

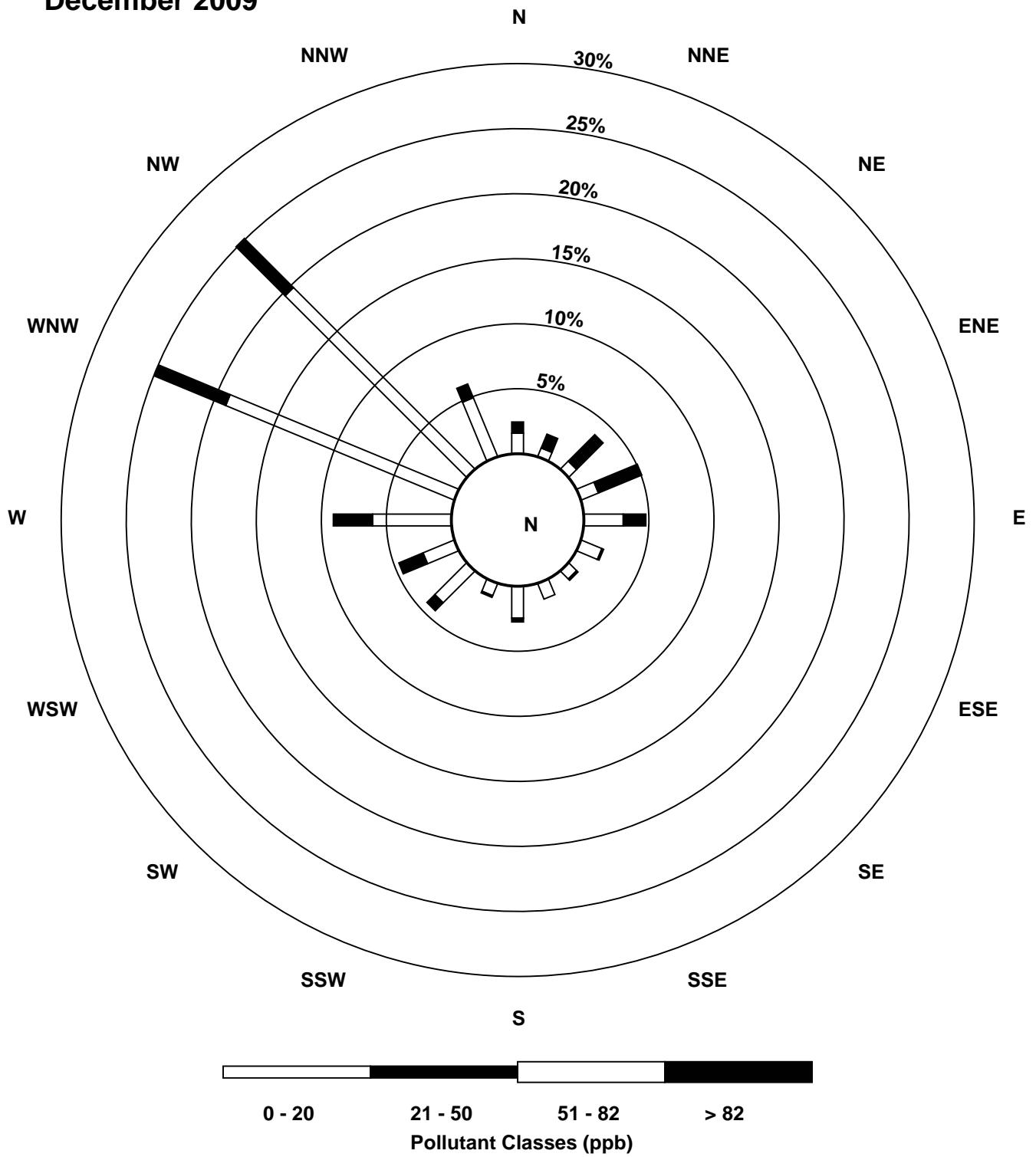
Hourly Averages for O₃ at Henry Pirker December 2009



Hourly Maximums for O₃ at Henry Pirker December 2009



Pollutant Rose for O₃ at Henry Pirker December 2009



**Peace Airshed Zone Association
Summary of Eight Hour Running Averages**

**Henry Pirker - Ozone (O₃) - ppb
December 1, 2009 to January 1, 2010**

Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 35.7 ppb on Dec 19 08:00	Hours in Service: 744 Hours of Data: 738 Hours of Missing Data: 6 Hours of Calibration: 6 Percent Operational Time: 100.0
Minimum Value: 0.9 ppb on Dec 18 00:00	
Percentiles: P ₁ = 0.9 P ₁₀ = 2.8 Q ₁ = 4.6 Median = 9.0 Q ₃ = 20.6 P ₉₀ = 29.5 P ₉₉ = 34.5	

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Dec	20	20	19	20	19	16	15	12	10	8	7	6	6	8	9	10	11	11	11	9	7	6	4	3	20.0
2-Dec	2	3	3	3	3	3	3	3	3	3	3	4	4	5	5	6	6	5	5	4	3	2	2	1	5.5
3-Dec	1	1	1	1	1	2	2	2	2	2	2	2	3	3	4	5	5	5	5	5	5	4	3	4	5.0
4-Dec	8	12	16	18	22	25	29	31	31	31	30	30	30	30	30	30	30	30	30	30	30	30	30	30	31.2
5-Dec	29	28	27	24	23	22	21	19	19	17	18	19	20	20	21	N	N	N	N	N	N	28	28	28	28.7
6-Dec	27	25	25	24	23	22	19	15	12	11	9	8	8	9	11	12	13	12	11	10	8	7	5	4	27.2
7-Dec	3	4	5	6	6	6	6	7	7	6	6	6	7	7	8	8	8	10	12	14	16	15	14	16	16.4
8-Dec	19	18	17	15	14	16	16	16	13	13	15	16	16	17	19	18	18	16	13	11	8	7	5	5	18.7
9-Dec	6	9	10	15	19	23	26	30	33	33	33	33	33	32	32	32	31	30	30	29	29	29	29	30	33.4
10-Dec	31	31	32	34	35	35	35	35	34	34	33	31	30	29	28	27	26	23	20	18	18	18	18	19	35.4
11-Dec	18	22	26	29	30	30	30	28	27	25	23	23	22	22	22	23	24	25	26	26	27	28	28	29	30.3
12-Dec	29	30	30	30	30	30	29	29	29	28	28	27	27	26	26	25	22	19	17	14	11	9	6	5	30.1
13-Dec	6	7	9	9	8	8	7	7	5	5	4	6	8	10	12	14	15	14	14	12	10	9	6	5	14.7
14-Dec	4	4	4	4	5	5	5	5	4	4	5	5	6	7	8	9	9	9	9	8	8	6	5	4	9.4
15-Dec	4	4	4	5	5	5	5	5	5	5	6	6	6	7	8	8	8	8	8	8	6	5	4	4	8.2
16-Dec	4	4	3	3	3	3	3	3	3	3	3	4	4	5	5	5	5	4	4	4	3	2	1	1	4.9
17-Dec	1	1	1	1	1	1	1	1	1	1	1	2	2	3	4	4	4	4	4	3	3	2	1	1	4.1
18-Dec	1	1	1	1	1	1	1	1	1	1	1	1	2	3	5	7	7	8	8	9	11	13	14	17	17.1
19-Dec	19	23	27	31	33	35	35	36	35	33	30	29	28	27	27	26	27	29	31	32	32	31	28	26	35.7
20-Dec	22	18	14	11	8	6	5	4	5	5	6	6	7	8	8	10	12	16	19	23	26	29	29	30	29.8
21-Dec	31	31	31	31	31	31	30	30	30	29	29	28	28	28	28	27	26	26	26	26	26	26	26	26	31.3
22-Dec	27	27	27	27	26	25	24	23	22	20	19	18	16	15	15	13	12	10	8	7	7	7	7	7	26.9
23-Dec	6	7	7	7	6	5	5	4	5	4	4	5	6	6	7	7	7	7	6	6	4	3	2	2	7.4
24-Dec	3	4	4	4	5	5	5	6	4	3	3	3	3	4	4	4	4	4	4	4	3	2	2	3	5.6
25-Dec	4	6	8	9	12	14	16	17	17	16	15	14	14	14	14	13	12	10	9	8	6	4	3	2	16.7
26-Dec	2	4	4	4	4	4	3	3	2	1	2	2	3	4	5	6	6	6	6	6	5	4	3	2	6.3
27-Dec	2	2	2	2	1	2	2	3	5	4	5	5	6	6	7	9	10	12	14	15	16	17	18	17	17.6
28-Dec	17	17	17	17	17	15	13	11	10	8	7	5	5	6	7	8	9	10	10	10	10	8	7	7	17.1
29-Dec	5	5	4	3	3	3	4	4	4	4	5	5	6	6	7	8	9	11	13	15	16	17	18	18	18.1
30-Dec	17	18	18	18	19	20	20	22	24	24	25	26	26	26	26	25	23	20	17	14	12	10	7	5	26.1
31-Dec	5	5	6	6	6	6	7	8	9	10	11	12	13	16	17	18	17	16	16	16	15	14	12	11	17.5
	31.1	31.3	32.2	33.8	35.1	35.4	35.2	35.7	34.7	34.0	33.3	32.9	32.5	32.4	32.5	31.8	31.0	30.4	31.0	31.8	31.8	30.9	29.9	29.9	
	Diurnal Maximums																								

N - Not Valid

**Peace Airshed Zone Association
Summary of Hourly Averages**

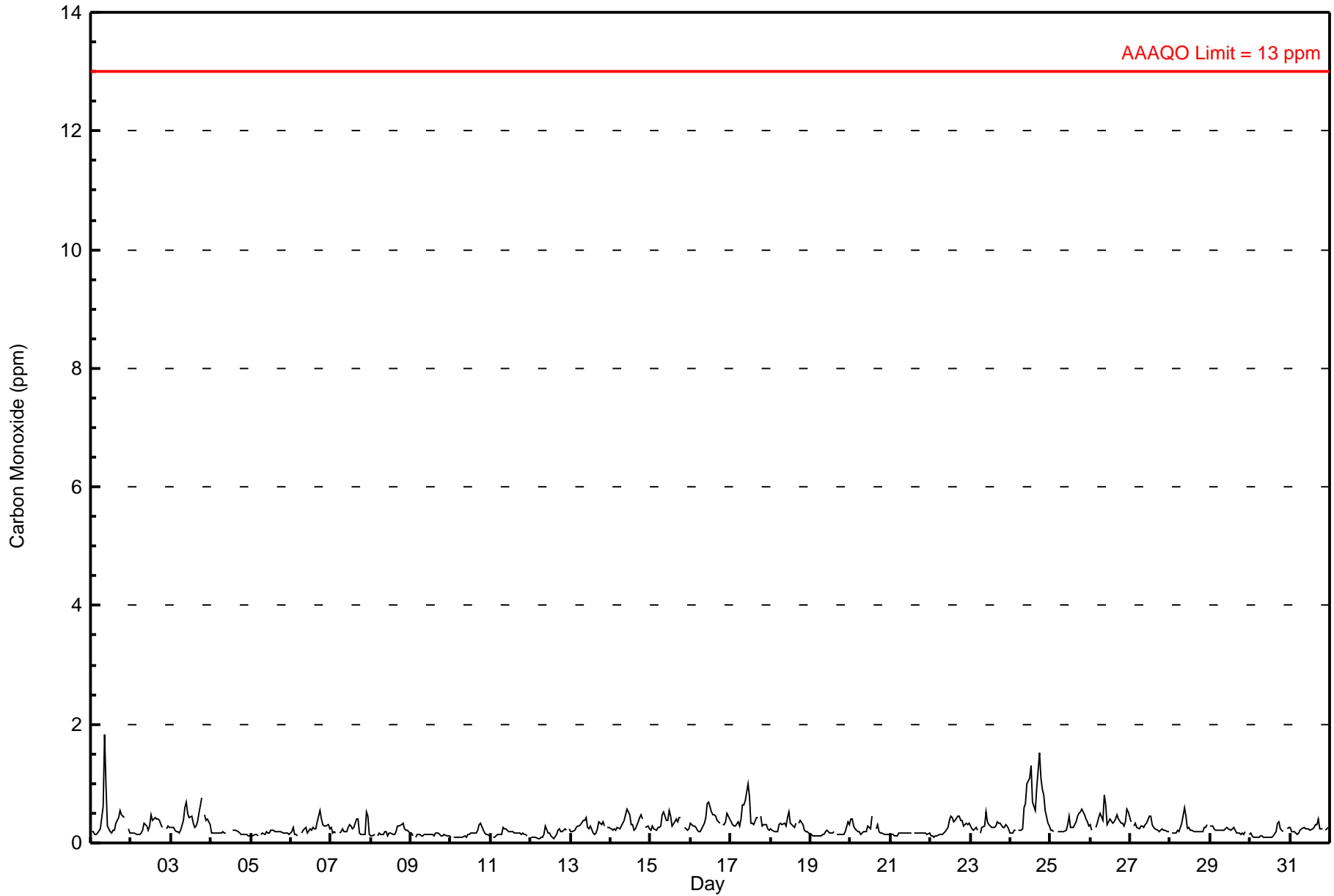
**Henry Pirker - Carbon Monoxide (CO) - ppm
December 1, 2009 to January 1, 2010**

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 1.82 ppm on Dec 1 09:00	Maximum Daily Average: 0.62 ppm on Dec 24		Hours of Data:	710
Minimum Value: 0.1 ppm on Dec 12 15:00	Minimum Daily Average: 0.13 ppm on Dec 9		Hours of Missing Data:	34
Maximum Diurnal Average: 0.35 ppm at hour 18	Minimum Diurnal Average: 0.18 ppm at hour 5		Hours of Calibration:	34
Monthly Average: 0.266 ppm	Percentiles: P ₁ = 0.10 P ₁₀ = 0.13 Q ₁ = 0.16 Median = 0.22 Q ₃ = 0.32 P ₉₀ = 0.45 P ₉₉ = 0.99		Percent Operational Time:	100.0

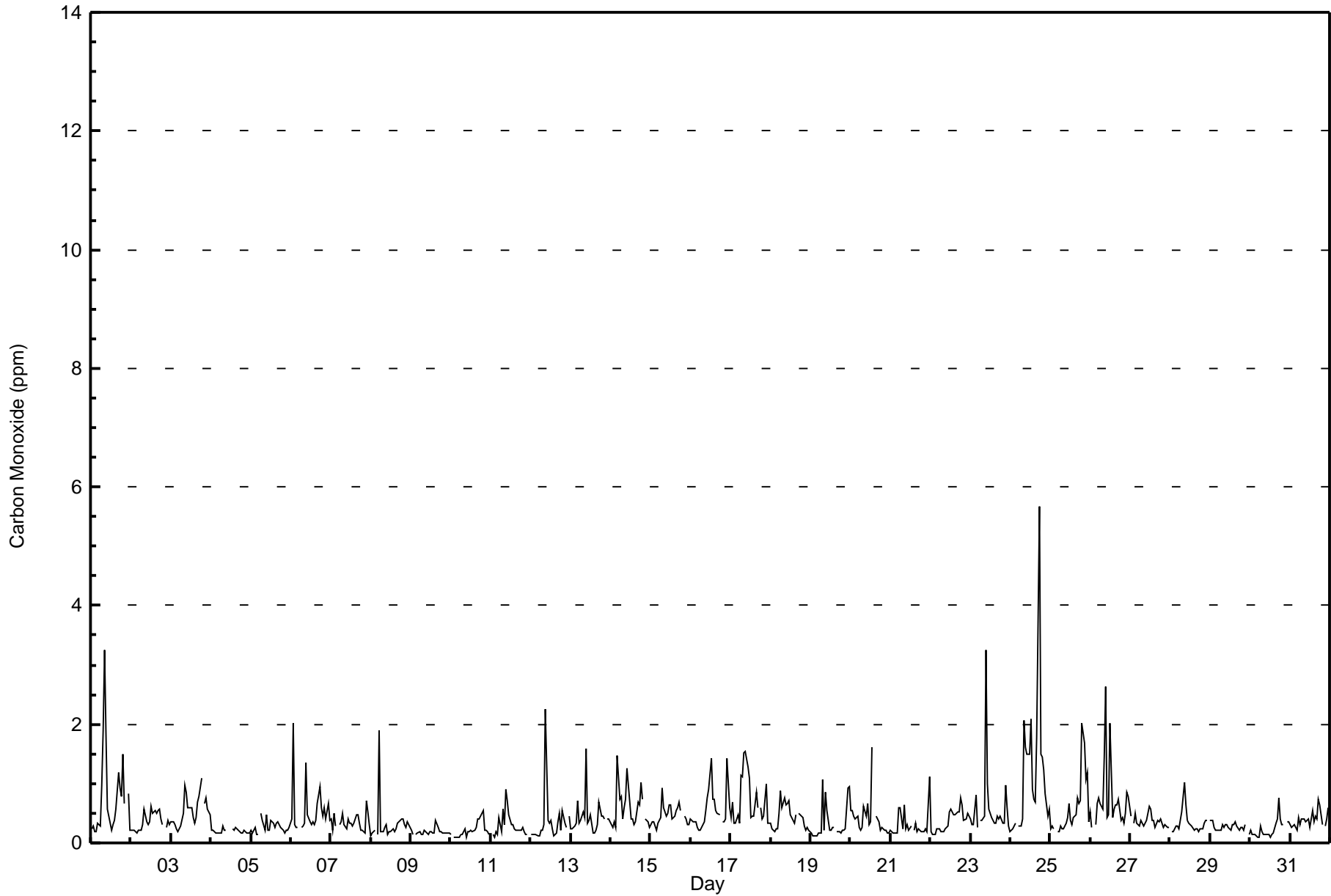
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Dec	0.2	0.2	0.1	0.2	0.2	0.2	0.4	0.6	1.8	1.0	0.3	0.2	0.2	0.2	0.2	0.3	0.4	0.5	0.5	0.4	0.4	A	0.2	0.2	0.39	1.82	
2-Dec	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.3	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.3	A	0.2	0.3	0.3	0.27	0.46	
3-Dec	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.4	0.6	0.7	0.5	0.4	0.4	0.3	0.3	0.3	0.4	0.5	0.8	A	0.5	0.4	0.4	0.3	0.37	0.76	
4-Dec	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	C	C	C	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.17	0.20	
5-Dec	0.1	0.1	0.1	0.1	0.1	A	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.16	0.20	
6-Dec	0.2	0.3	0.1	0.1	0.1	A	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.4	0.6	0.4	0.3	0.3	0.3	0.3	0.2	0.25	0.55	
7-Dec	0.3	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.3	0.4	0.4	0.2	0.1	0.2	0.1	0.5	0.5	0.2	0.25	0.53	
8-Dec	0.1	0.1	0.1	A	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.18	0.33	
9-Dec	0.2	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	0.17	
10-Dec	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.15	0.32	
11-Dec	A	0.1	0.1	0.1	0.1	0.2	0.1	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	A	0.17	0.25	
12-Dec	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.15	0.29	
13-Dec	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.2	0.3	0.2	0.1	0.2	0.2	0.4	0.3	0.4	0.3	A	0.3	0.2	0.27	0.44	
14-Dec	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.6	0.5	0.3	0.3	0.2	0.2	0.3	0.4	0.5	0.4	A	0.3	0.3	0.2	0.32	0.57	
15-Dec	0.2	0.3	0.2	0.2	0.3	0.3	0.3	0.5	0.5	0.4	0.4	0.5	0.4	0.3	0.3	0.4	0.4	0.4	0.4	A	0.3	0.2	0.2	0.2	0.34	0.54	
16-Dec	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.4	0.7	0.7	0.5	0.5	0.5	0.4	0.4	0.3	A	0.3	0.3	0.3	0.5	0.4	0.38	0.69	
17-Dec	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.6	0.6	0.7	1.0	0.8	0.3	0.3	0.3	0.4	0.4	A	0.4	0.3	0.3	0.3	0.2	0.2	0.42	1.01	
18-Dec	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.3	0.3	0.3	0.3	A	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.28	0.53	
19-Dec	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	A	0.1	0.2	0.1	0.2	0.2	0.2	0.4	0.3	0.17	0.37	
20-Dec	0.4	0.4	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.5	A	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23	0.46	
21-Dec	0.1	0.1	0.1	0.1	0.1	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	0.1	0.2	0.15	0.18	
22-Dec	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.27	0.45
23-Dec	0.3	0.2	0.2	0.3	0.2	A	0.2	0.3	0.3	0.5	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	0.2	0.29	0.51	
24-Dec	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.6	0.7	1.0	1.1	1.3	0.7	0.6	0.5	0.9	1.5	1.1	0.9	0.8	0.5	0.3	0.3	0.62	1.52	
25-Dec	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.6	0.5	0.4	0.4	0.3	0.31	0.57	
26-Dec	0.3	0.2	A	0.3	0.3	0.4	0.5	0.4	0.8	0.7	0.3	0.4	0.4	0.3	0.4	0.4	0.5	0.4	0.3	0.3	0.3	0.4	0.6	0.5	0.40	0.81	
27-Dec	0.4	A	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.27	0.46	
28-Dec	A	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.6	0.4	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	A	0.24	0.59	
29-Dec	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2	A	0.1	0.21	0.29	
30-Dec	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.2	0.2	0.2	A	0.2	0.3	0.16	0.36	
31-Dec	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	0.2	0.3	0.3	0.3	0.4	0.2	0.2	A	0.2	0.2	0.3	0.24	0.40	
	0.21	0.19	0.18	0.18	0.18	0.20	0.21	0.26	0.35	0.34	0.33	0.34	0.31	0.27	0.25	0.28	0.32	0.35	0.32	0.28	0.26	0.26	0.27	0.23	Diurnal Average		
	0.39	0.39	0.29	0.34	0.35	0.43	0.49	0.65	1.82	0.98	1.01	1.10	1.30	0.69	0.62	0.54	0.92	1.52	1.10	0.91	0.80	0.55	0.56	0.51	Diurnal Maximum		

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

Hourly Averages for CO at Henry Pirker December 2009

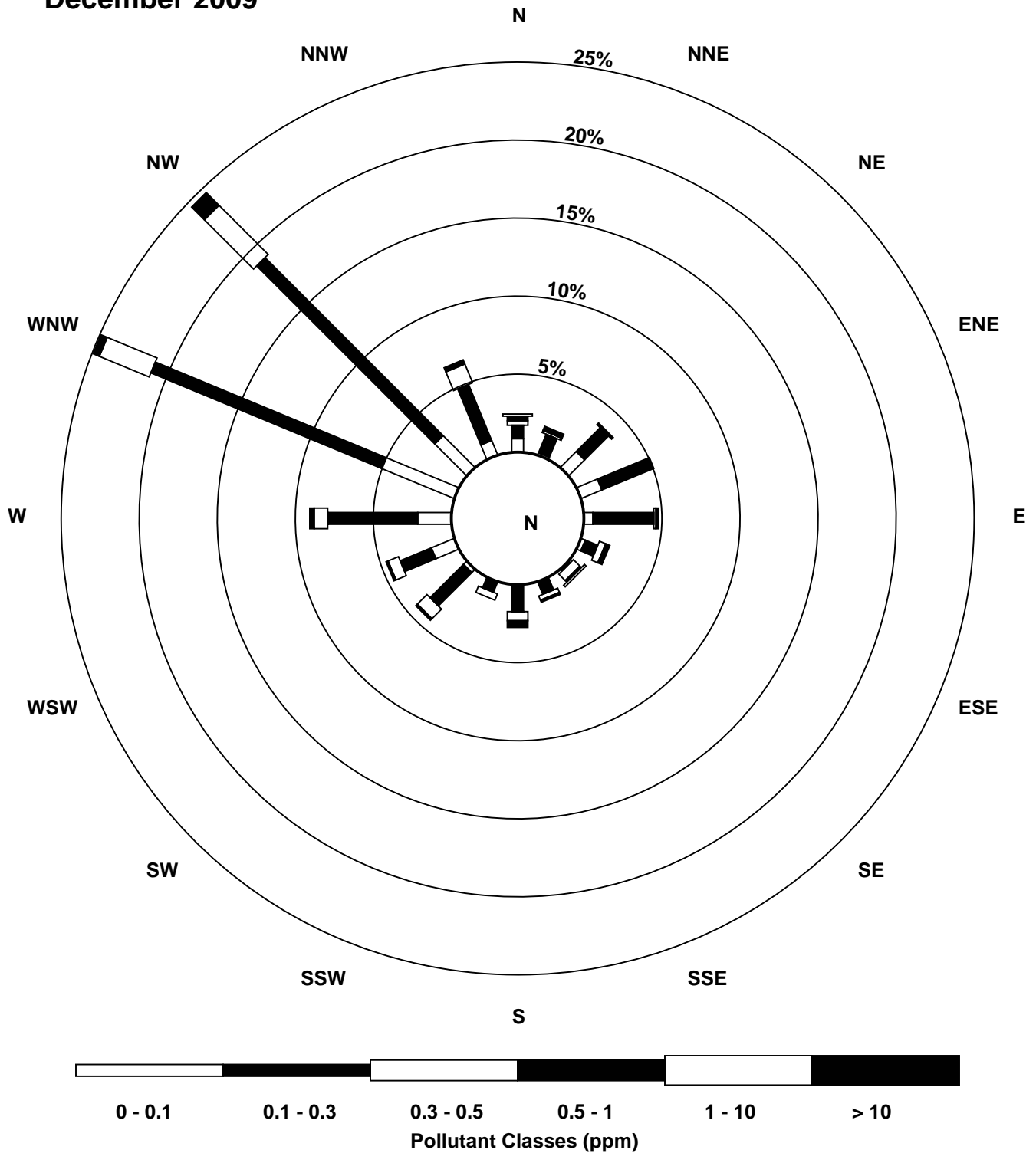


Hourly Maximums for CO at Henry Pirker December 2009



Pollutant Rose for CO at Henry Pirker

December 2009



**Peace Airshed Zone Association
Summary of Eight Hour Running Averages**

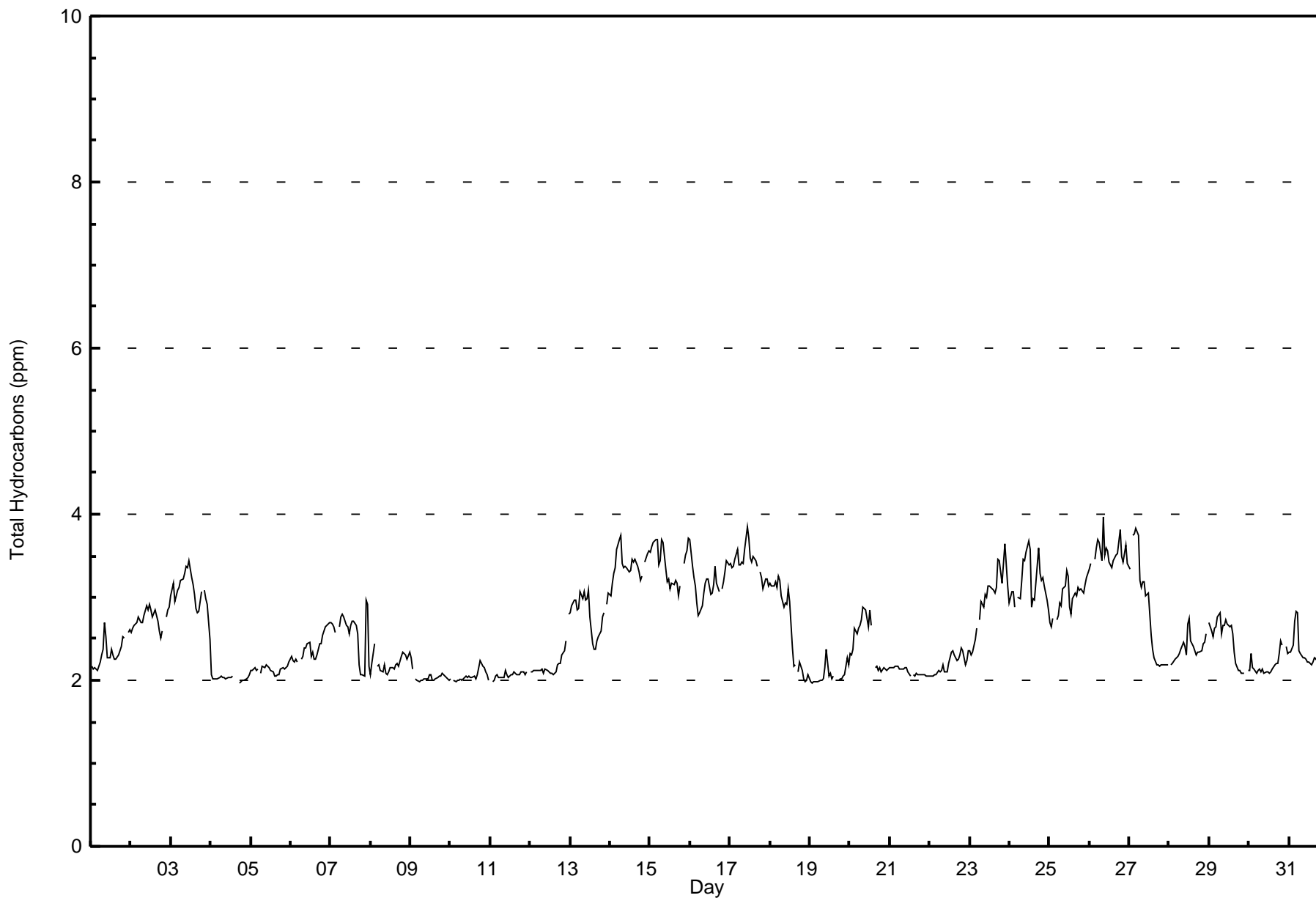
**Henry Pirker - Carbon Monoxide (CO) - ppm
December 1, 2009 to January 1, 2010**

Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 0.97 ppm on Dec 24 19:00	Hours in Service: 744 Hours of Data: 738 Hours of Missing Data: 6 Hours of Calibration: 6 Percent Operational Time: 100.0
Minimum Value: 0.09 ppm on Dec 12 07:00	
Percentiles: P ₁ = 0.10 P ₁₀ = 0.14 Q ₁ = 0.17 Median = 0.24 Q ₃ = 0.32 P ₉₀ = 0.41 P ₉₉ = 0.81	

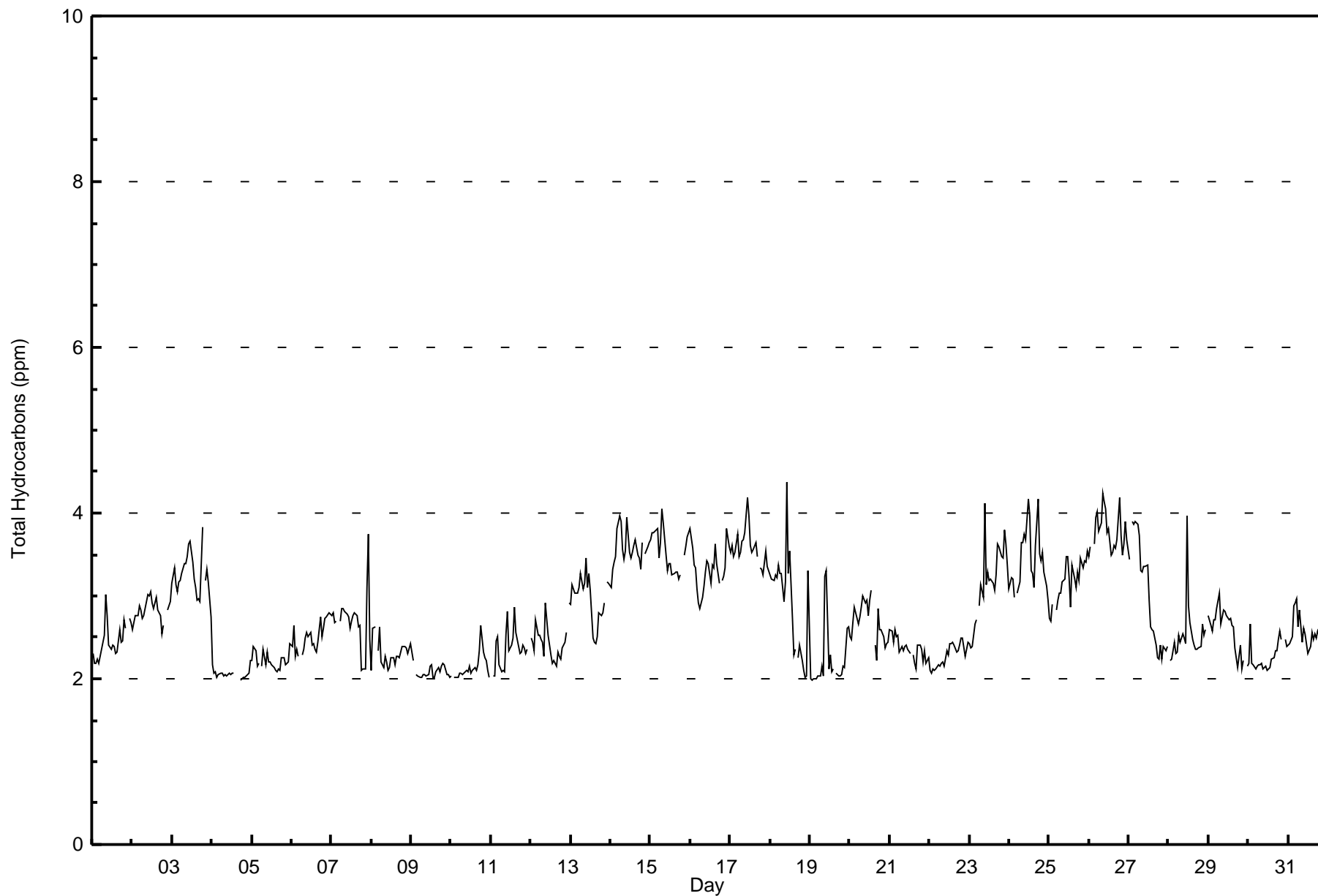
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Dec	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.59
2-Dec	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.38
3-Dec	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.46
4-Dec	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	N	N	N	N	N	N	0.2	0.2	0.2	0.2	0.2	0.1	0.43
5-Dec	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19
6-Dec	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.35
7-Dec	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	0.3	0.3	0.2	0.3	0.3	0.3	0.33
8-Dec	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.25
9-Dec	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.24
10-Dec	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22
11-Dec	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21
12-Dec	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22
13-Dec	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.32
14-Dec	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.39
15-Dec	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.42
16-Dec	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.51
17-Dec	0.4	0.4	0.4	0.3	0.4	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.60
18-Dec	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.36
19-Dec	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.24
20-Dec	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	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.30
21-Dec	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.16
22-Dec	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.41
23-Dec	0.3	0.3	0.3	0.3	0.3	0.3	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	0.35
24-Dec	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.6	0.7	0.7	0.8	0.8	0.9	1.0	1.0	1.0	0.9	0.9	0.8	0.8	0.97
25-Dec	0.7	0.5	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.71
26-Dec	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.48
27-Dec	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.39
28-Dec	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.32
29-Dec	0.2	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	0.26
30-Dec	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.26
31-Dec	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.28
Diurnal Maximums																									
0.71 0.55 0.43 0.38 0.38 0.36 0.33 0.36 0.47 0.57 0.59 0.60 0.66 0.72 0.77 0.81 0.85 0.96 0.97 0.95 0.89 0.87 0.83 0.80																									

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

Hourly Averages for THC at Henry Pirker December 2009

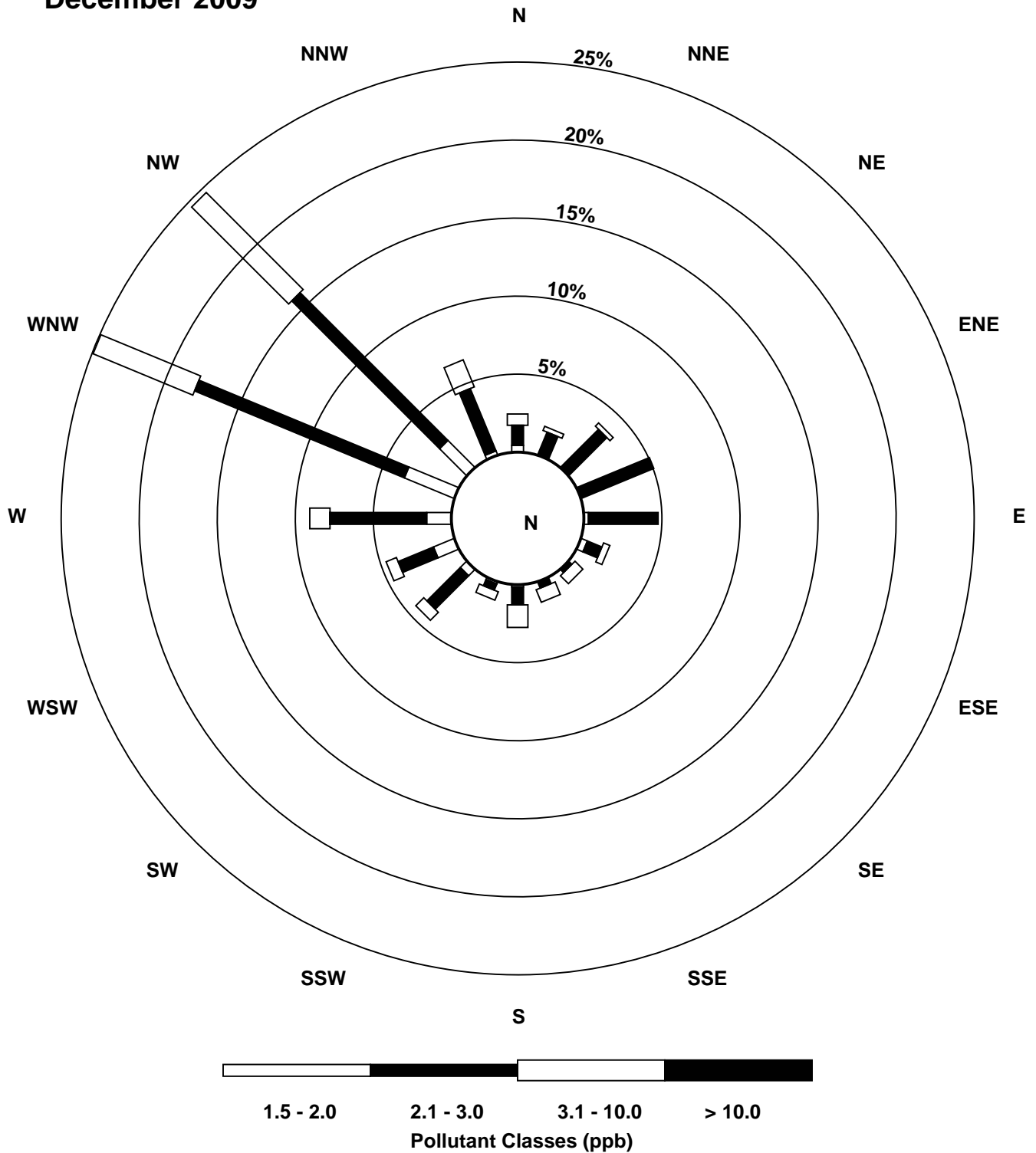


Hourly Maximums for THC at Henry Pirker December 2009



Pollutant Rose for THC at Henry Pirker

December 2009



**Peace Airshed Zone Association
Summary of Hourly Averages**

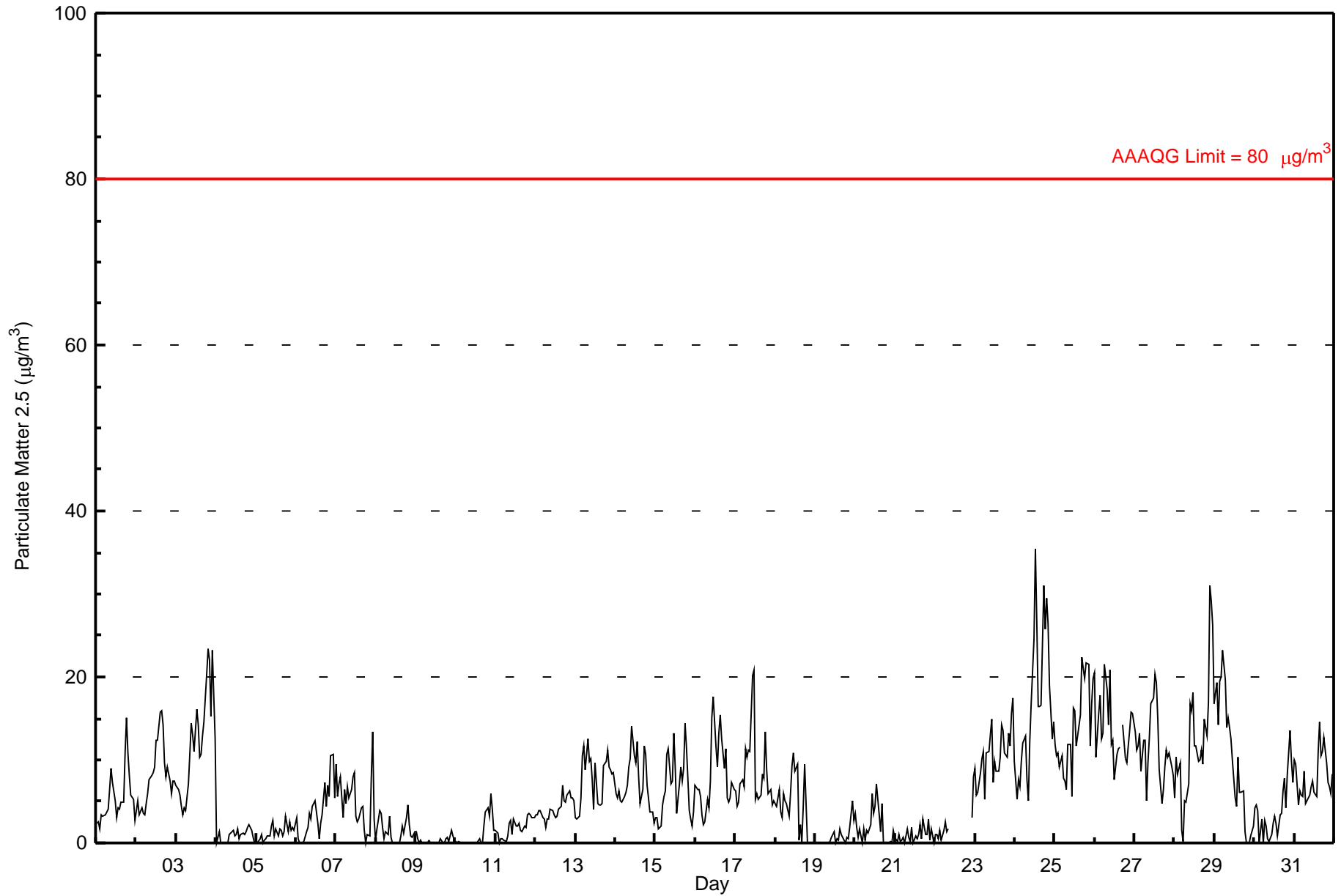
**Henry Pirker - Particulate Matter 2.5 (PM_{2.5}) - µg/m³
December 1, 2009 to January 1, 2010**

Number of Exceedences: 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 35.5 µg/m ³ on Dec 24 13:00	Maximum Daily Average: 16.7 µg/m ³ on Dec 24
Minimum Value: 0 µg/m ³ on Dec 4 01:00	Hours of Data: 729
Maximum Diurnal Average: 8.3 µg/m ³ at hour 19	Hours of Missing Data: 15
Monthly Average: 6.35 µg/m ³	Hours of Calibration: 0
Minimum Daily Average: 0.3 µg/m ³ on Dec 9	Percent Operational Time: 98.0
Minimum Diurnal Average: 4.4 µg/m ³ at hour 5	
Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 1.5 Median = 4.9 Q ₃ = 9.8 P ₉₀ = 14.2 P ₉₉ = 26.5	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Dec	2	3	2	3	3	3	4	4	7	9	7	5	3	4	4	5	5	11	15	11	8	6	5	3	5.5	15.1	
2-Dec	4	5	3	4	4	3	5	6	8	8	8	9	12	12	16	16	14	10	8	9	7	6	7	7	8.1	15.9	
3-Dec	7	6	6	4	3	4	4	7	11	14	13	11	16	14	10	11	13	15	20	23	22	15	23	13	11.9	23.3	
4-Dec	0	1	1	0	0	0	0	0	1	1	1	1	1	2	1	1	1	1	1	2	2	2	1	0	0.9	2.2	
5-Dec	0	0	0	1	0	0	1	1	1	2	3	1	2	1	2	2	1	1	3	1	3	2	2	1	1.3	3.2	
6-Dec	3	1	0	0	0	0	1	2	4	3	4	5	4	2	1	2	3	7	4	7	6	10	11	5	3.6	10.6	
7-Dec	9	6	7	8	3	7	5	7	5	6	8	9	3	3	3	4	4	1	0	1	1	8	13	3	5.2	13.4	
8-Dec	0	2	4	4	2	0	1	1	3	1	0	0	0	0	0	1	2	1	3	5	2	1	1	1	1.4	4.6	
9-Dec	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	0.3	1.5	
10-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	4	4	3	6	4	1	1.1	6.0
11-Dec	2	1	0	1	1	0	0	1	2	3	1	3	2	2	2	2	1	2	2	3	4	3	3	3	1.8	3.6	
12-Dec	3	3	4	4	3	3	2	3	3	4	4	3	3	3	4	4	7	5	5	6	6	5	5	5	4.1	7.0	
13-Dec	3	3	3	5	10	12	9	13	10	10	8	4	10	5	5	5	5	9	10	11	9	9	8	8	7.6	12.6	
14-Dec	6	5	6	5	5	6	6	7	9	10	14	11	10	12	8	5	6	12	11	7	6	4	4	2	7.3	14.2	
15-Dec	3	3	2	2	5	6	6	11	11	7	7	13	9	4	7	9	8	9	14	11	4	3	2	4	6.7	14.5	
16-Dec	7	6	7	6	3	2	3	5	4	7	15	18	11	9	13	15	12	9	11	5	5	5	7	6	8.1	17.6	
17-Dec	6	4	5	7	8	7	11	10	11	11	20	21	5	6	5	6	8	8	13	9	6	6	5	5	8.5	20.9	
18-Dec	5	4	6	4	3	6	5	5	3	6	9	11	9	9	0	2	0	4	9	0	BD	0	0	0	4.4	10.8	
19-Dec	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	2	1	0	0	1	1	2	5	3	0.7	5.0	
20-Dec	4	2	1	2	0	2	0	1	1	2	6	4	4	7	3	1	5	0	0	0	0	0	0	2	2.0	7.1	
21-Dec	1	0	1	0	0	1	0	2	1	0	2	0	1	0	1	2	0	3	1	1	3	0	2	0	0.9	2.9	
22-Dec	1	1	1	2	0	2	3	1	2	M	M	M	M	M	M	M	M	M	M	M	M	M	3	8	--	8.0	
23-Dec	9	6	6	8	10	11	5	11	11	13	15	7	10	9	9	10	14	13	11	10	13	12	16	17	10.7	17.4	
24-Dec	10	5	8	7	10	12	13	8	5	12	17	25	35	27	17	16	17	31	26	29	27	19	13	14	16.7	35.5	
25-Dec	12	10	11	9	11	8	8	6	12	12	6	16	16	12	13	15	22	21	20	22	21	12	17	20	13.8	22.5	
26-Dec	21	10	16	18	13	13	21	18	14	21	12	12	8	11	11	12	BD	14	10	10	12	13	16	16	14.0	21.5	
27-Dec	13	11	12	13	9	12	12	5	10	13	17	17	20	19	15	9	5	6	9	11	10	11	9	8	11.6	20.4	
28-Dec	5	10	8	10	1	0	5	5	7	17	16	18	12	12	10	10	11	10	15	13	17	31	29	26	12.4	31.0	
29-Dec	17	19	14	19	20	23	20	14	15	14	13	10	5	4	10	6	6	6	1	0	0	0	1	2	10.0	23.3	
30-Dec	4	5	4	0	3	0	3	2	0	0	1	2	3	2	1	3	4	6	8	4	8	14	10	7	4.0	13.5	
31-Dec	10	10	5	6	6	6	9	5	5	6	7	7	6	6	11	15	11	11	13	10	7	7	6	8	7.9	14.6	
	5.4	4.6	4.6	4.9	4.4	4.8	5.2	5.2	5.7	7.1	7.8	8.2	7.4	6.6	6.1	6.4	6.5	7.7	8.3	7.6	7.3	7.1	7.4	6.5		Diurnal Average	
	20.6	19.4	15.6	19.5	20.0	23.3	21.5	18.4	15.0	20.9	20.2	24.6	35.5	26.5	16.5	16.4	22.5	31.0	25.8	29.5	26.5	31.0	29.2	26.2		Diurnal Maximum	

M - Maintenance BD - Baseline Drift
 Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³

Hourly Averages for PM_{2.5} at Henry Pirker December 2009



**Peace Airshed Zone Association
Summary of Hourly Maximums**

**Henry Pirker - Particulate Matter 2.5 (PM_{2.5}) - µg/m³
December 1, 2009 to January 1, 2010**

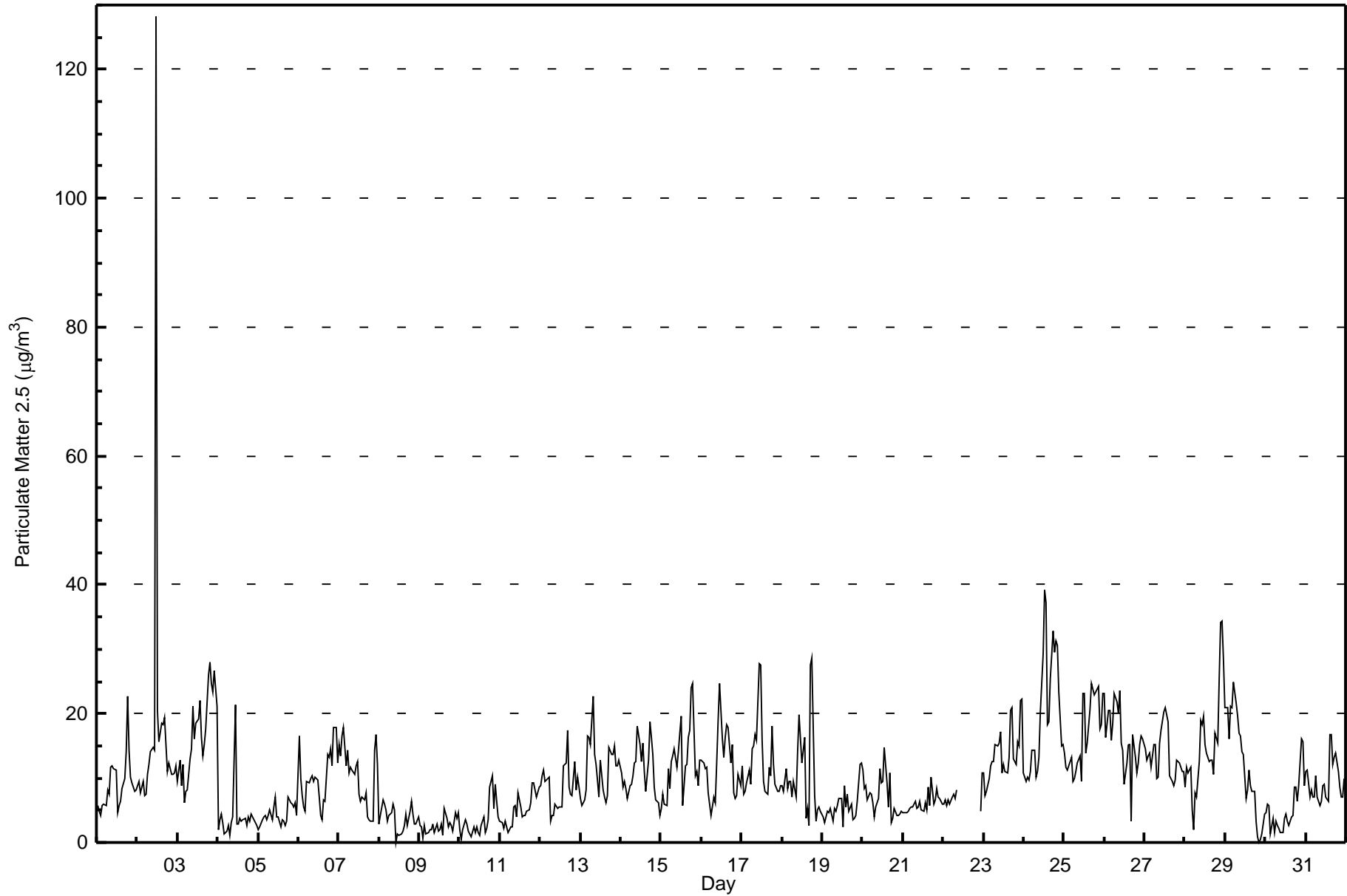
Maximum Value: 128.2 µg/m ³ on Dec 2 12:00	Maximum Daily Average: 20.0 µg/m ³ on Dec 24	Hours in Service: 744
Minimum Value: 0 µg/m ³ on Dec 8 11:00	Minimum Daily Average: 2.6 µg/m ³ on Dec 9	Hours of Data: 731
Maximum Diurnal Average: 15.9 µg/m ³ at hour 12	Minimum Diurnal Average: 8.1 µg/m ³ at hour 5	Hours of Missing Data: 13
Monthly Average: 10.18 µg/m ³	Percentiles: P ₁ = 1.0 P ₁₀ = 3.0 Q ₁ = 5.0 Median = 8.8 Q ₃ = 13.5 P ₉₀ = 18.6 P ₉₉ = 29.8	Hours of Calibration: 0
		Percent Operational Time: 98.3

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Dec	6	5	4	6	6	6	8	8	12	12	12	11	5	6	6	8	10	14	23	14	10	9	8	8	9.0	22.8	
2-Dec	9	10	8	9	7	8	11	12	14	15	14	128	20	16	19	18	19	15	11	12	11	11	11	12	17.5	128.2	
3-Dec	10	13	9	12	6	8	8	13	14	21	16	18	19	22	16	13	15	18	26	28	25	23	27	21	16.8	28.1	
4-Dec	2	4	4	3	1	2	3	1	3	4	21	3	3	4	3	3	4	3	4	3	4	4	3	3	3.8	21.4	
5-Dec	2	2	3	4	4	3	4	5	4	5	7	4	4	2	4	3	3	3	7	6	6	6	6	4	4.3	7.2	
6-Dec	16	10	7	5	5	9	9	10	10	10	10	10	7	4	3	7	6	14	13	15	12	18	18	12	10.0	17.8	
7-Dec	15	14	17	18	12	14	11	12	11	11	12	13	7	6	7	7	8	4	3	3	3	14	17	12	10.4	17.9	
8-Dec	3	4	7	6	5	3	4	5	6	5	0	1	1	1	2	3	4	3	5	6	4	3	3	4	3.7	6.5	
9-Dec	3	2	1	3	1	1	2	2	3	2	3	2	2	3	1	5	4	2	3	3	2	5	4	5	2.6	5.4	
10-Dec	2	0	2	4	3	2	1	1	2	2	2	2	1	3	4	1	2	3	9	10	5	9	6	4	3.4	10.3	
11-Dec	3	3	2	3	2	2	2	2	6	6	4	8	5	4	4	4	5	5	6	9	9	8	7	9	5.0	9.3	
12-Dec	9	10	11	9	10	10	3	4	4	6	5	5	6	5	12	12	17	9	7	7	12	8	10	9	8.5	17.4	
13-Dec	7	6	7	8	16	16	15	23	14	12	10	7	13	8	7	6	7	15	14	14	15	12	12	13	11.5	22.8	
14-Dec	11	9	10	8	7	9	9	10	12	13	18	15	13	16	11	8	13	19	16	14	9	7	6	4	11.0	18.7	
15-Dec	5	8	6	6	11	8	13	13	14	12	14	17	20	6	12	12	16	17	24	25	10	11	9	13	12.6	24.6	
16-Dec	13	12	11	12	8	6	4	7	6	12	19	25	16	13	16	18	18	12	15	8	7	7	11	9	11.9	24.7	
17-Dec	12	7	8	9	11	9	15	15	17	16	28	28	16	10	8	7	12	10	18	12	9	8	8	9	12.6	27.7	
18-Dec	9	8	12	8	9	9	7	10	7	14	20	16	12	16	4	5	3	28	29	7	3	5	5	5	10.5	28.7	
19-Dec	4	3	4	5	5	5	3	5	5	6	7	7	2	9	6	7	5	6	4	4	4	6	12	12	5.7	12.4	
20-Dec	11	8	9	7	8	8	6	4	5	7	11	9	10	15	9	6	11	3	4	5	4	4	4	5	7.2	14.8	
21-Dec	5	5	5	5	5	5	6	6	5	6	6	5	5	6	5	9	6	10	6	7	8	7	7	6	6.0	10.0	
22-Dec	6	7	6	7	6	7	8	7	8	M	M	M	M	M	M	M	M	M	M	M	M	M	M	5	11	--	10.9
23-Dec	11	7	8	10	12	12	12	15	15	15	17	11	12	11	11	13	21	21	13	12	16	15	22	22	14.0	22.2	
24-Dec	11	9	10	10	11	14	14	10	11	13	20	29	39	37	18	19	25	33	30	31	31	23	15	15	20.0	39.3	
25-Dec	14	12	11	12	13	9	10	11	12	13	9	23	23	14	16	21	25	24	23	23	24	18	18	23	16.7	24.6	
26-Dec	23	16	21	21	16	18	23	22	20	23	15	14	9	12	15	15	3	17	13	11	12	15	16	16	16.2	23.5	
27-Dec	15	13	14	14	12	15	15	10	10	15	17	20	21	20	19	10	9	9	10	13	13	12	11	11	13.7	21.0	
28-Dec	9	12	11	12	5	2	8	7	13	19	18	20	15	14	12	13	13	10	17	16	25	34	34	28	15.3	34.4	
29-Dec	21	21	16	21	21	25	22	20	17	17	14	14	7	8	11	9	8	8	3	1	0	1	1	4	12.1	24.8	
30-Dec	5	6	6	1	4	2	3	3	2	2	2	4	4	3	3	4	4	9	9	6	9	16	16	9	5.4	16.1	
31-Dec	11	11	7	8	7	7	10	7	6	6	9	9	7	6	17	17	12	13	14	11	9	7	7	10	9.6	16.8	

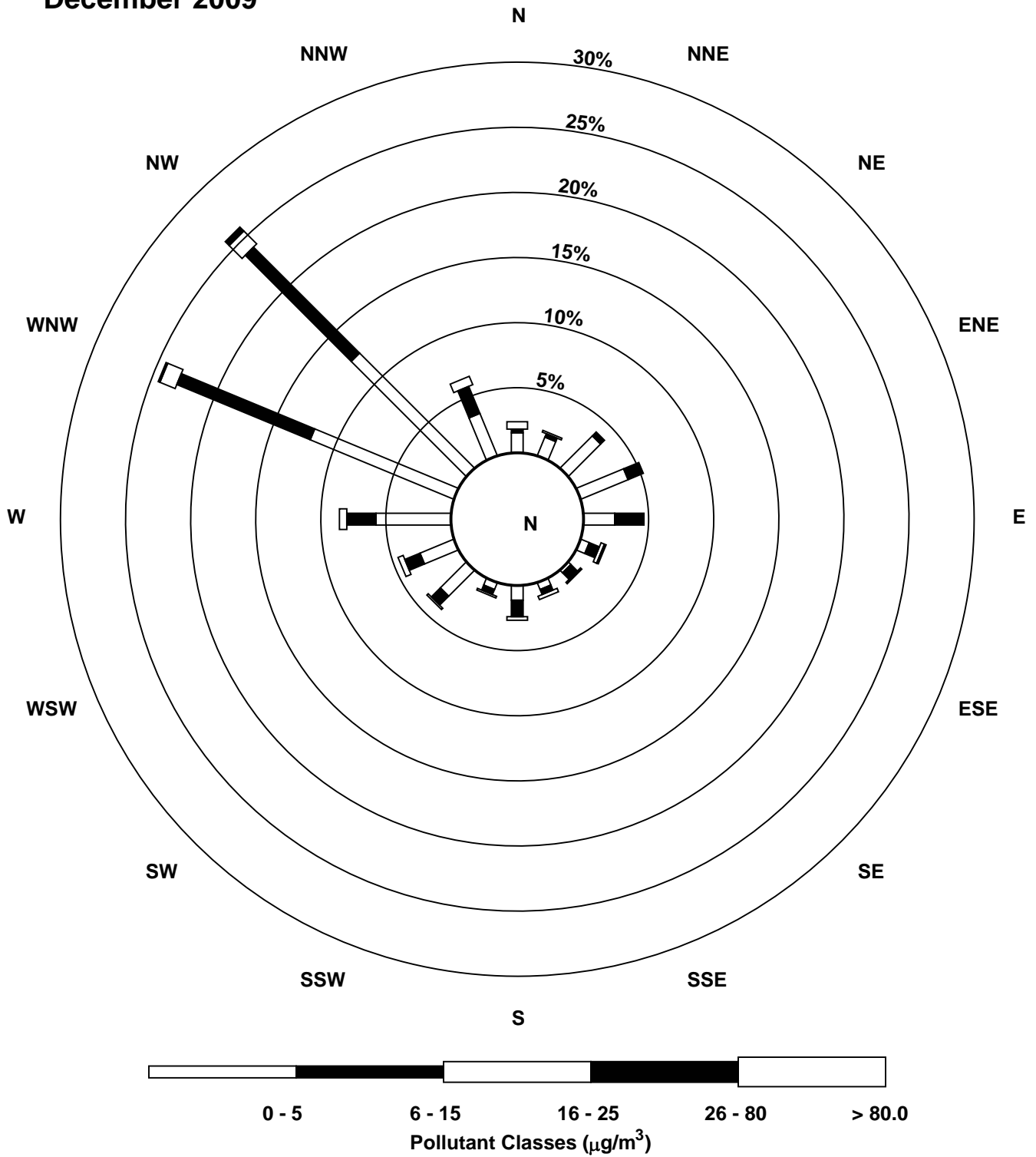
9.0	8.3	8.2	8.6	8.1	8.3	8.7	9.0	9.3	10.6	12.1	15.9	10.8	10.0	9.4	9.5	10.2	11.9	12.6	11.2	10.4	10.9	11.0	10.6		Diurnal Average
23.1	20.9	20.5	21.3	21.0	24.8	23.2	22.8	20.0	23.5	27.7	128.2	39.3	37.3	18.7	20.8	25.4	32.9	29.6	31.2	30.6	34.1	34.4	28.4		Diurnal Maximum

M - Maintenance

Hourly Maximums for PM_{2.5} at Henry Pirker December 2009



Pollutant Rose for PM_{2.5} at Henry Pirker December 2009

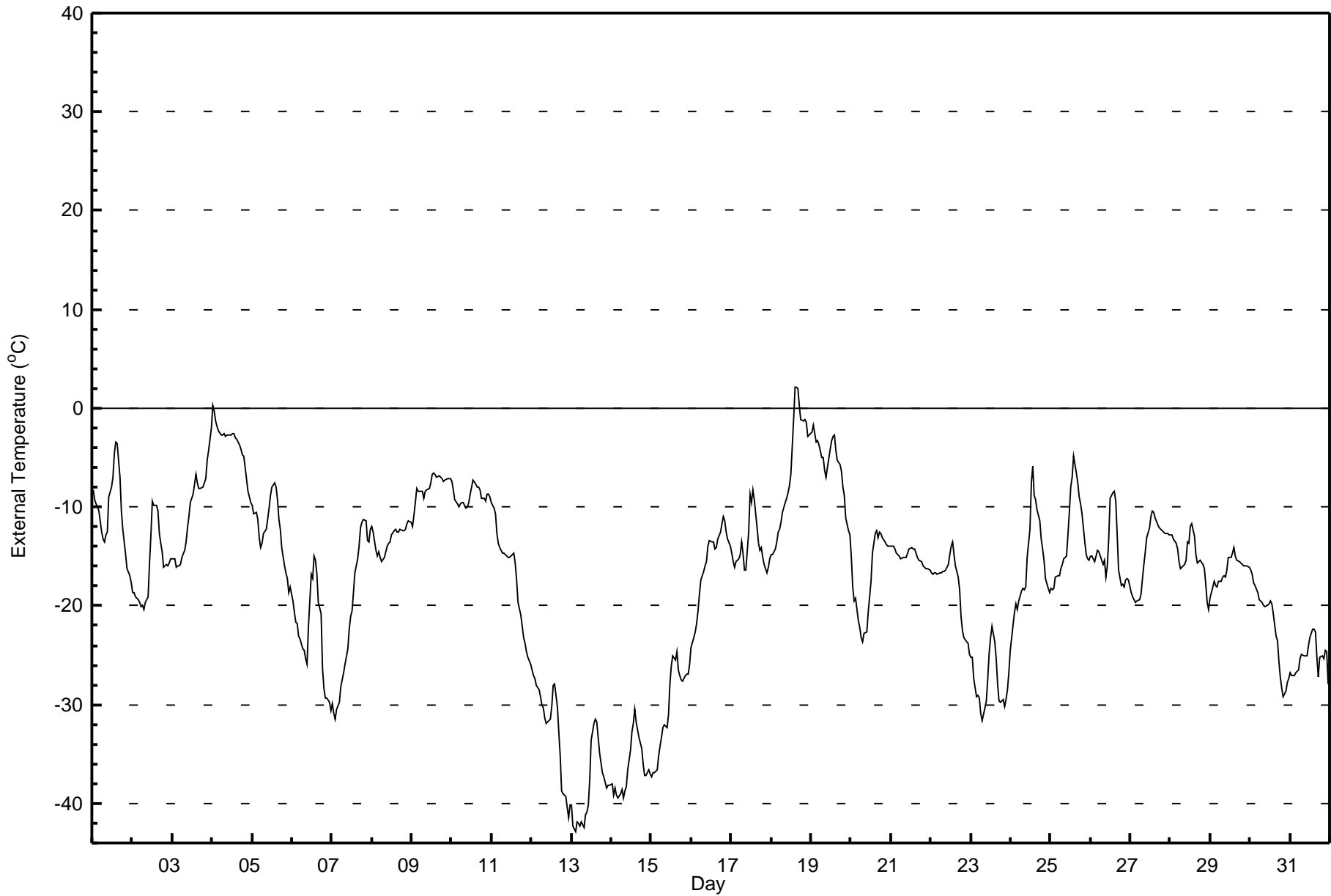


**Peace Airshed Zone Association
Summary of Hourly Averages**

**Henry Pirker - External Temperature (ET) - °C
December 1, 2009 to January 1, 2010**

Maximum Value: 2.2 °C on Dec 18 15:00		Maximum Daily Average: -3.6 °C on Dec 4		Hours in Service: 744																							
Minimum Value: -43 °C on Dec 13 03:00		Minimum Daily Average: -38.3 °C on Dec 13		Hours of Data: 744																							
Maximum Diurnal Average: -13.3 °C at hour 15		Minimum Diurnal Average: -19.1 °C at hour 6		Hours of Missing Data: 0																							
Monthly Average: -17.32 °C		Percentiles: P ₁ = -41.4 P ₁₀ = -30.6 Q ₁ = -22.7 Median = -15.4 Q ₃ = -11.4 P ₉₀ = -7.1 P ₉₉ = -1.7		Hours of Calibration: 0																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Dec	-8	-9	-10	-10	-10	-13	-13	-13	-13	-13	-9	-8	-7	-5	-3	-4	-7	-10	-12	-14	-15	-16	-17	-18	-10.7	-3.4	
2-Dec	-19	-19	-19	-19	-20	-20	-20	-20	-20	-19	-16	-13	-9	-10	-10	-10	-13	-14	-15	-16	-16	-16	-15	-15	-15.9	-9.4	
3-Dec	-15	-15	-16	-16	-16	-16	-15	-14	-14	-12	-11	-10	-9	-8	-7	-8	-8	-8	-8	-8	-7	-5	-4	-2	-10.5	-2.0	
4-Dec	0	0	-1	-2	-2	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-4	-4	-5	-5	-6	-8	-9	-10	-3.6	0.2	
5-Dec	-10	-11	-11	-11	-13	-14	-14	-13	-12	-11	-10	-9	-8	-8	-8	-9	-11	-12	-14	-16	-17	-17	-19	-18	-12.3	-7.6	
6-Dec	-19	-21	-22	-22	-23	-23	-24	-25	-25	-26	-22	-17	-17	-15	-15	-17	-20	-21	-26	-28	-29	-29	-30	-31	-22.8	-14.9	
7-Dec	-30	-31	-32	-30	-30	-28	-27	-27	-26	-24	-22	-21	-21	-19	-17	-15	-14	-12	-12	-11	-11	-13	-14	-12	-20.8	-11.2	
8-Dec	-12	-13	-14	-15	-14	-15	-16	-15	-15	-14	-14	-13	-13	-12	-12	-13	-13	-12	-12	-12	-12	-12	-11	-12	-13.2	-11.4	
9-Dec	-12	-11	-10	-8	-8	-8	-8	-9	-8	-8	-8	-8	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7	-8.0	-6.6	
10-Dec	-7	-8	-9	-10	-10	-10	-9	-10	-10	-10	-9	-9	-8	-7	-8	-8	-8	-8	-9	-9	-9	-9	-9	-9	-8.9	-7.2	
11-Dec	-10	-10	-11	-13	-14	-14	-15	-15	-15	-15	-15	-15	-15	-15	-16	-17	-20	-21	-22	-23	-24	-25	-25	-26	-17.0	-9.5	
12-Dec	-27	-27	-27	-28	-28	-29	-30	-30	-31	-32	-32	-32	-30	-28	-28	-30	-33	-35	-39	-39	-39	-40	-41	-40	-32.4	-26.6	
13-Dec	-40	-42	-43	-42	-42	-42	-42	-42	-41	-41	-40	-38	-34	-32	-31	-32	-33	-35	-37	-37	-38	-38	-38	-38	-38.3	-31.5	
14-Dec	-38	-39	-38	-39	-40	-39	-39	-39	-39	-38	-37	-35	-33	-32	-31	-32	-33	-34	-34	-36	-37	-37	-37	-37	-36.3	-30.5	
15-Dec	-37	-37	-37	-37	-35	-34	-33	-32	-32	-32	-31	-28	-26	-25	-25	-25	-26	-27	-27	-28	-27	-27	-27	-26	-30.1	-24.6	
16-Dec	-24	-23	-23	-22	-20	-19	-17	-16	-16	-15	-14	-13	-14	-14	-14	-13	-12	-12	-11	-11	-13	-13	-14	-15.8	-11.0		
17-Dec	-15	-15	-16	-15	-15	-15	-13	-15	-16	-16	-13	-9	-10	-8	-9	-12	-14	-14	-14	-15	-16	-17	-16	-15	-13.9	-8.3	
18-Dec	-15	-15	-14	-14	-13	-12	-12	-11	-10	-9	-9	-8	-7	-1	2	2	2	0	-1	-1	-1	-1	-3	-3	-6.3	2.2	
19-Dec	-2	-2	-3	-3	-3	-4	-5	-5	-6	-7	-6	-4	-3	-3	-4	-5	-6	-6	-8	-9	-11	-12	-13	-5.6	-1.8		
20-Dec	-15	-18	-19	-19	-21	-22	-23	-24	-23	-23	-21	-19	-18	-15	-13	-12	-13	-12	-13	-13	-14	-14	-14	-14	-17.1	-12.3	
21-Dec	-14	-14	-14	-15	-15	-15	-15	-15	-15	-15	-15	-14	-14	-14	-14	-15	-15	-15	-16	-16	-16	-16	-16	-16	-15.0	-13.9	
22-Dec	-17	-17	-17	-17	-17	-17	-17	-17	-16	-16	-16	-15	-14	-13	-15	-16	-17	-18	-21	-23	-23	-24	-24	-25	-17.9	-13.5	
23-Dec	-25	-25	-27	-29	-29	-29	-31	-32	-30	-30	-27	-25	-23	-22	-24	-25	-28	-30	-30	-29	-30	-30	-29	-27	-27.8	-22.1	
24-Dec	-24	-22	-21	-20	-20	-20	-18	-18	-18	-18	-15	-12	-8	-6	-9	-9	-10	-11	-13	-14	-15	-17	-18	-19	-15.7	-5.8	
25-Dec	-18	-18	-18	-17	-17	-17	-16	-16	-15	-15	-13	-11	-8	-7	-5	-7	-8	-9	-10	-11	-14	-15	-15	-15	-13.1	-4.9	
26-Dec	-15	-15	-16	-15	-14	-15	-15	-16	-15	-17	-16	-13	-9	-9	-8	-9	-13	-16	-18	-18	-18	-17	-17	-17	-14.7	-8.4	
27-Dec	-19	-19	-19	-20	-20	-19	-19	-17	-16	-14	-13	-12	-11	-10	-11	-11	-12	-12	-12	-12	-13	-13	-13	-13	-14.6	-10.4	
28-Dec	-13	-13	-13	-14	-14	-15	-16	-16	-16	-15	-14	-14	-12	-12	-13	-15	-16	-15	-15	-16	-16	-18	-20	-20	-15.0	-11.7	
29-Dec	-19	-18	-18	-18	-18	-18	-17	-17	-17	-17	-16	-15	-15	-14	-15	-15	-15	-15	-16	-16	-16	-16	-16	-16	-16.4	-14.1	
30-Dec	-16	-17	-18	-18	-19	-19	-19	-20	-20	-20	-20	-20	-20	-20	-20	-21	-23	-23	-26	-27	-28	-29	-29	-28	-21.9	-16.4	
31-Dec	-27	-27	-27	-27	-27	-26	-25	-25	-25	-25	-25	-24	-23	-22	-22	-23	-25	-27	-25	-25	-25	-25	-25	-28	-25.3	-22.3	
		-18.1	-18.4	-18.8	-18.8	-19.0	-19.1	-19.0	-18.9	-18.7	-18.5	-17.1	-15.6	-14.4	-13.4	-13.3	-14.1	-15.3	-16.2	-17.1	-17.6	-18.1	-18.5	-18.8	-18.8	Diurnal Average	
		0.2	-0.3	-1.3	-1.9	-2.3	-2.7	-2.7	-2.6	-2.9	-2.7	-2.8	-2.7	-2.6	-1.0	2.2	2.1	2.1	0.2	-1.1	-1.3	-1.1	-1.4	-2.9	-2.0	Diurnal Maximum	

Hourly Averages for External Temperature at Henry Pirker December 2009

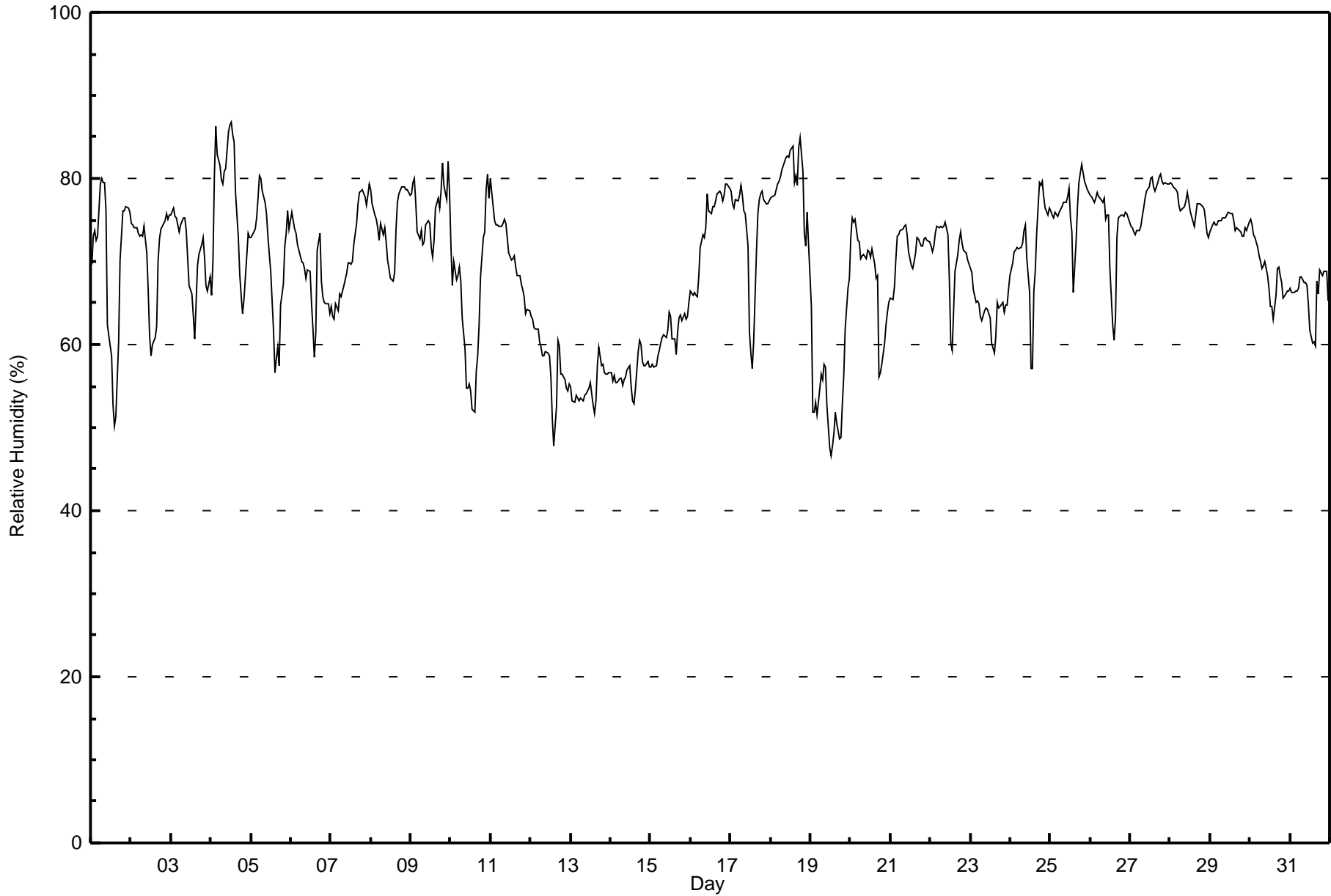


**Peace Airshed Zone Association
Summary of Hourly Averages**

**Henry Pirker - Relative Humidity (RH) - %
December 1, 2009 to January 1, 2010**

Maximum Value: 86.9 % on Dec 4 13:00		Maximum Daily Average: 79.6 % on Dec 18		Hours in Service: 744																							
Minimum Value: 47 % on Dec 19 13:00		Minimum Daily Average: 54.3 % on Dec 19		Hours of Data: 744																							
Maximum Diurnal Average: 71.3 % at hour 23		Minimum Diurnal Average: 64.3 % at hour 15		Hours of Missing Data: 0																							
Monthly Average: 69.62 %		Percentiles: P ₁ = 50.1 P ₁₀ = 56.8 Q ₁ = 64.1 Median = 71.8 Q ₃ = 75.8 P ₉₀ = 78.8 P ₉₉ = 83.7		Hours of Calibration: 0																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Dec	70	73	74	73	73	79	80	79	79	76	62	60	59	53	50	51	60	70	73	76	76	77	76	76	69.8	79.9	
2-Dec	75	74	74	74	73	73	73	73	74	71	66	61	59	60	61	62	70	73	74	74	75	76	75	76	70.7	75.7	
3-Dec	76	77	75	75	74	74	74	74	75	75	74	71	67	66	64	61	65	69	71	72	73	70	67	66	68	70.8	76.5
4-Dec	66	70	80	86	83	82	80	79	81	81	86	87	87	85	84	78	73	69	66	64	65	71	73	73	77.0	86.9	
5-Dec	73	73	74	75	78	80	80	78	77	76	73	71	69	62	57	58	60	57	65	67	72	73	76	74	70.8	80.4	
6-Dec	76	75	74	73	72	71	70	70	69	68	69	69	65	62	59	61	71	73	68	66	65	65	65	64	68.3	75.8	
7-Dec	65	63	63	65	64	66	66	66	67	69	70	70	70	70	72	75	77	78	79	79	78	77	78	79	71.0	79.4	
8-Dec	79	77	76	75	74	73	75	73	74	72	70	69	68	68	69	74	77	78	79	79	79	79	79	78	74.6	79.0	
9-Dec	78	79	80	77	73	73	74	72	72	74	75	75	72	71	73	76	78	76	78	82	79	77	82	78	76.1	82.0	
10-Dec	72	67	70	68	68	69	68	63	59	55	55	55	54	52	52	57	59	62	68	73	73	79	80	78	64.9	80.5	
11-Dec	80	77	75	74	74	74	74	75	75	75	73	71	70	70	71	69	68	68	67	67	66	64	64	64	71.1	80.0	
12-Dec	63	63	62	62	62	60	60	59	59	59	59	59	56	51	48	53	60	60	56	56	56	55	54	55	57.8	63.5	
13-Dec	55	53	53	54	54	53	54	53	54	54	54	55	55	53	52	53	57	60	57	58	57	56	57	57	54.9	59.6	
14-Dec	57	56	56	55	55	56	56	55	56	56	57	57	55	53	53	55	59	61	60	58	58	57	58	57	56.5	60.5	
15-Dec	57	58	57	58	59	59	60	61	61	61	62	64	63	61	61	59	62	63	64	63	64	63	63	65	61.1	65.0	
16-Dec	66	66	66	66	66	68	72	73	73	74	78	76	76	77	77	77	78	78	78	77	78	79	79	79	74.1	79.3	
17-Dec	78	77	77	77	77	78	79	78	76	76	72	62	59	57	60	71	76	77	78	78	77	77	77	77	73.9	79.2	
18-Dec	78	78	78	79	79	80	80	81	82	83	83	83	83	84	79	80	79	84	85	81	73	72	76	72	79.6	85.0	
19-Dec	65	52	52	53	51	53	56	56	58	57	53	48	47	48	49	52	50	49	49	53	56	62	67	68	54.3	68.1	
20-Dec	73	75	75	75	72	72	70	71	71	70	71	71	71	72	70	68	68	56	57	58	60	62	64	65	68.2	75.2	
21-Dec	66	65	67	70	73	73	74	74	74	74	73	71	70	69	70	71	73	73	72	72	73	73	72	72	71.4	74.5	
22-Dec	72	71	72	73	74	74	74	74	74	75	73	68	60	59	64	69	71	72	73	72	71	71	70	70	70.8	74.7	
23-Dec	69	69	67	65	65	65	63	63	64	64	64	64	63	60	59	61	65	64	65	65	64	65	65	67	64.4	69.1	
24-Dec	68	70	71	71	72	72	72	72	74	74	70	66	57	57	66	69	73	80	79	80	78	76	76	76	71.7	79.6	
25-Dec	76	76	75	76	75	76	76	77	77	77	78	79	75	74	66	72	77	79	81	82	80	79	79	78	76.7	81.6	
26-Dec	78	78	77	78	78	78	78	77	78	75	76	76	69	62	61	63	73	75	76	76	76	76	76	75	74.3	78.4	
27-Dec	74	74	74	73	74	74	74	76	76	78	78	79	80	80	79	79	80	80	81	80	79	79	79	79	77.5	80.6	
28-Dec	79	79	79	79	78	77	76	76	77	77	78	77	76	75	74	76	77	77	77	77	76	75	73	73	76.7	79.4	
29-Dec	74	74	75	74	74	75	75	75	75	75	76	76	76	76	75	74	74	74	74	73	73	74	74	75	74.5	76.0	
30-Dec	75	74	73	73	72	71	70	69	69	70	68	67	65	65	63	66	69	69	68	67	66	66	66	66	68.7	75.1	
31-Dec	67	66	66	66	67	67	68	68	67	67	65	62	60	60	60	68	66	69	68	69	69	69	69	65	66.1	68.9	
		70.9	70.3	70.5	70.8	70.5	70.8	71.0	70.7	71.0	70.6	69.7	68.2	66.3	64.8	64.3	66.3	69.4	70.1	70.5	70.7	70.4	70.7	71.3	71.0	Diurnal Average	
		80.0	79.4	80.3	86.3	83.0	81.6	80.2	81.1	82.0	82.5	85.6	86.5	86.9	85.3	84.3	80.3	79.6	83.7	85.0	81.8	79.7	79.4	82.0	79.4	Diurnal Maximum	

Hourly Averages for Relative Humidity at Henry Pirker December 2009

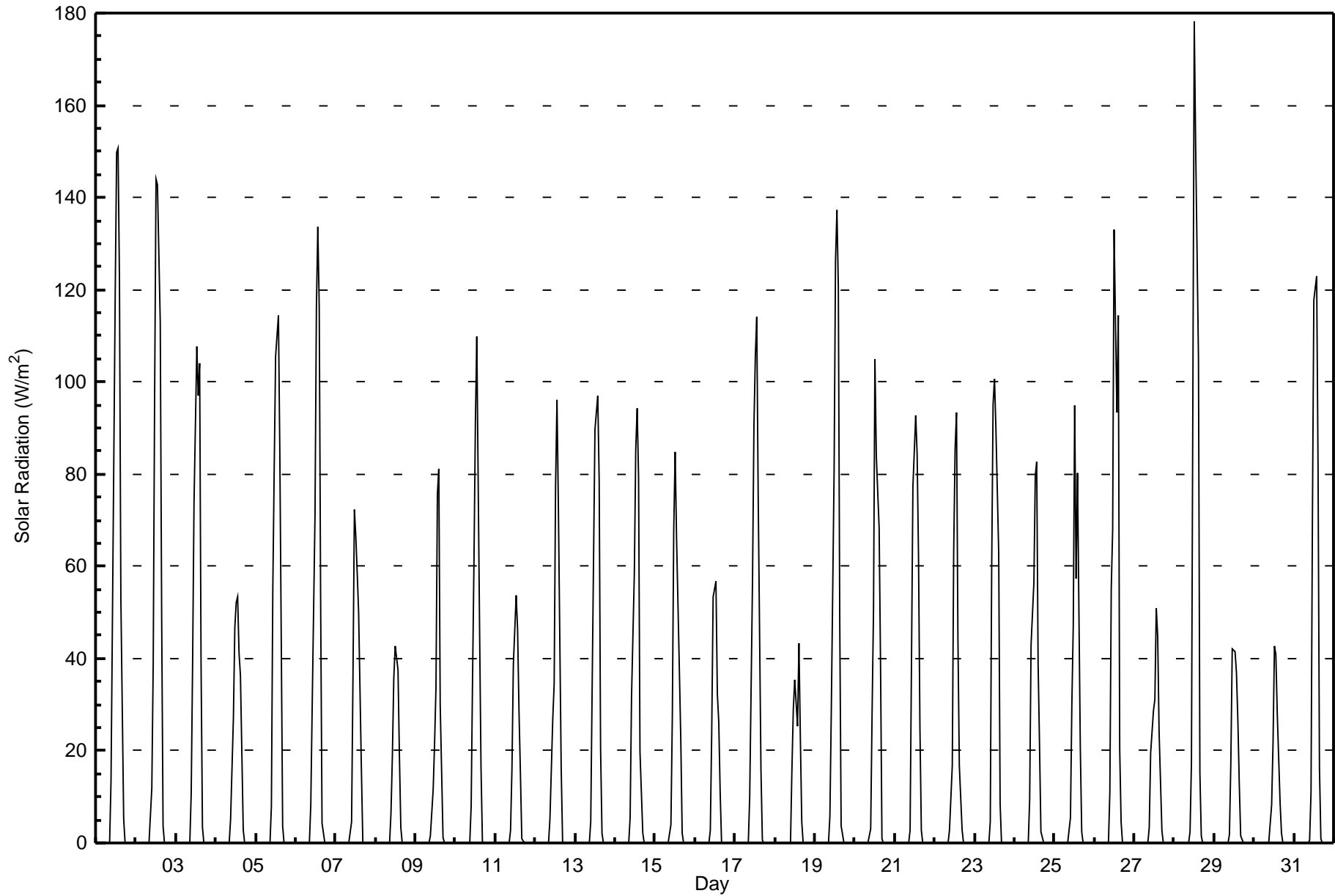


**Peace Airshed Zone Association
Summary of Hourly Averages**

**Henry Pirker - Solar Radiation (SR) - W/m²
December 1, 2009 to January 1, 2010**

Maximum Value: 178.1 W/m ² on Dec 28 13:00		Maximum Daily Average: 27.6 W/m ² on Dec 1		Hours in Service:	744																						
Minimum Value: 0 W/m ² on Dec 1 01:00		Minimum Daily Average: 6.4 W/m ² on Dec 30		Hours of Data:	744																						
Maximum Diurnal Average: 88.0 W/m ² at hour 13		Minimum Diurnal Average: 0.0 W/m ² at hour 1		Hours of Missing Data:	0																						
Monthly Average: 15.25 W/m ²		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 10.8 P ₉₀ = 60.3 P ₉₉ = 132.1		Hours of Calibration:	0																						
				Percent Operational Time:	100.0																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Dec	0	0	0	0	0	0	0	0	0	13	48	120	150	151	122	53	5	0	0	0	0	0	0	0	0	27.6	150.9
2-Dec	0	0	0	0	0	0	0	0	0	12	39	97	144	143	113	49	4	0	0	0	0	0	0	0	0	25.0	143.9
3-Dec	0	0	0	0	0	0	0	0	0	11	39	74	108	97	104	39	3	0	0	0	0	0	0	0	0	19.8	107.6
4-Dec	0	0	0	0	0	0	0	0	0	5	27	47	52	53	41	36	3	0	0	0	0	0	0	0	0	11.0	53.4
5-Dec	0	0	0	0	0	0	0	0	0	8	55	81	106	114	85	44	4	0	0	0	0	0	0	0	0	20.7	114.3
6-Dec	0	0	0	0	0	0	0	0	0	8	30	71	116	134	116	53	4	0	0	0	0	0	0	0	0	22.2	133.6
7-Dec	0	0	0	0	0	0	0	0	0	5	36	72	66	59	50	16	0	0	0	0	0	0	0	0	0	12.7	72.2
8-Dec	0	0	0	0	0	0	0	0	0	7	19	36	43	38	19	3	0	0	0	0	0	0	0	0	0	6.8	42.8
9-Dec	0	0	0	0	0	0	0	0	0	1	12	22	34	76	81	30	1	0	0	0	0	0	0	0	0	10.7	81.0
10-Dec	0	0	0	0	0	0	0	0	0	8	36	61	91	110	46	16	0	0	0	0	0	0	0	0	0	15.3	109.7
11-Dec	0	0	0	0	0	0	0	0	0	3	16	39	54	46	29	15	1	0	0	0	0	0	0	0	0	8.4	53.6
12-Dec	0	0	0	0	0	0	0	0	0	5	27	35	77	96	73	16	0	0	0	0	0	0	0	0	0	13.7	96.0
13-Dec	0	0	0	0	0	0	0	0	0	5	34	62	90	97	78	21	2	0	0	0	0	0	0	0	0	16.1	97.1
14-Dec	0	0	0	0	0	0	0	0	0	5	32	59	86	94	79	20	2	0	0	0	0	0	0	0	0	15.7	94.2
15-Dec	0	0	0	0	0	0	0	0	0	4	27	68	85	66	38	23	2	0	0	0	0	0	0	0	0	13.0	85.0
16-Dec	0	0	0	0	0	0	0	0	0	3	24	53	57	32	26	11	0	0	0	0	0	0	0	0	0	8.6	56.7
17-Dec	0	0	0	0	0	0	0	0	0	10	57	90	105	114	76	16	1	0	0	0	0	0	0	0	0	19.6	114.0
18-Dec	0	0	0	0	0	0	0	0	0	0	16	29	35	25	43	23	4	0	0	0	0	0	0	0	0	7.3	43.4
19-Dec	0	0	0	0	0	0	0	0	0	6	29	81	126	137	121	48	4	0	0	0	0	0	0	0	0	23.0	137.3
20-Dec	0	0	0	0	0	0	0	0	0	3	28	50	105	84	68	39	1	0	0	0	0	0	0	0	0	15.8	105.1
21-Dec	0	0	0	0	0	0	0	0	0	3	39	77	93	85	62	25	3	0	0	0	0	0	0	0	0	16.1	92.7
22-Dec	0	0	0	0	0	0	0	0	0	3	17	63	86	93	45	17	3	0	0	0	0	0	0	0	0	13.6	93.2
23-Dec	0	0	0	0	0	0	0	0	0	5	60	95	101	90	63	9	0	0	0	0	0	0	0	0	0	17.6	100.8
24-Dec	0	0	0	0	0	0	0	0	0	9	43	56	80	83	39	21	3	0	0	0	0	0	0	0	0	13.9	82.5
25-Dec	0	0	0	0	0	0	0	0	0	6	30	47	95	57	80	21	2	0	0	0	0	0	0	0	0	14.1	94.9
26-Dec	0	0	0	0	0	0	0	0	0	11	55	68	133	93	114	20	4	0	0	0	0	0	0	0	0	20.8	133.2
27-Dec	0	0	0	0	0	0	0	0	0	3	20	29	31	51	45	24	3	0	0	0	0	0	0	0	0	8.6	50.8
28-Dec	0	0	0	0	0	0	0	0	0	2	17	96	178	151	105	15	2	0	0	0	0	0	0	0	0	23.6	178.1
29-Dec	0	0	0	0	0	0	0	0	0	2	17	42	41	37	27	13	1	0	0	0	0	0	0	0	0	7.5	42.1
30-Dec	0	0	0	0	0	0	0	0	0	0	8	22	43	41	28	9	2	0	0	0	0	0	0	0	0	6.4	42.7
31-Dec	0	0	0	0	0	0	0	0	0	1	11	71	118	123	81	16	1	0	0	0	0	0	0	0	0	17.6	123.1
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	30.6	61.7	88.0	86.1	67.7	24.6	2.1	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	0.0	0.0	0.0	0.0	13.3	59.6	119.7	178.1	151.1	122.1	53.1	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Diurnal Maximum	

Hourly Averages for Solar Radiation at Henry Pirker December 2009



**Peace Airshed Zone Association
Summary of Hourly Averages**

Henry Pirker
December 1, 2009 to January 1, 2010
WS (km/h), WD (deg)

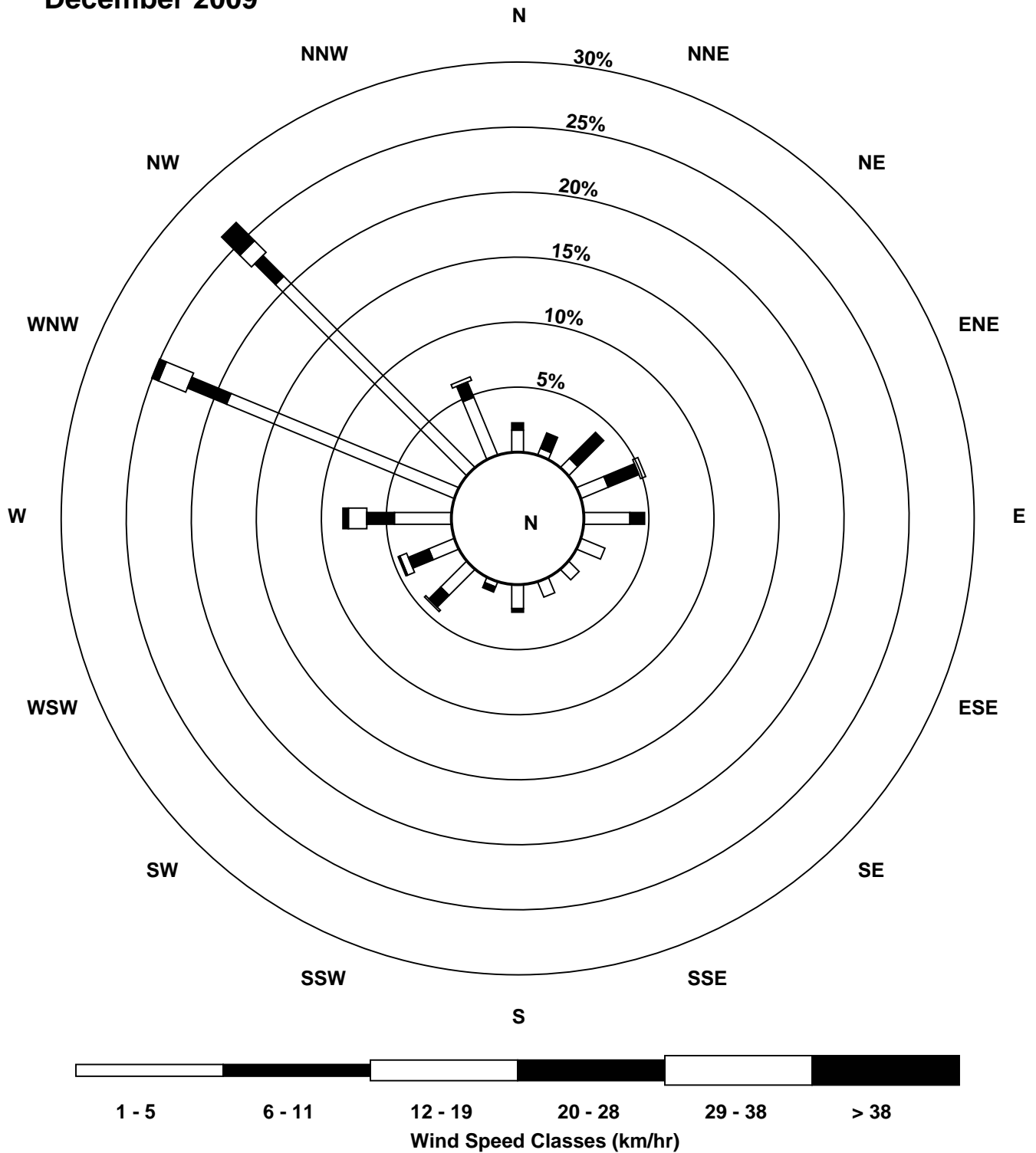
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	5	5	5	4	4	2	3	4	3	3	4	4	4	4	3	2	3	3	5	4	4	4	4	3	3.3	5.3
Dir	247	264	283	261	271	338	318	318	2	329	289	286	289	298	288	358	331	329	300	342	282	312	312	312	300.4	247.0
2 Spd	2	4	4	3	4	3	4	4	3	3	4	3	2	5	6	4	5	6	4	5	5	4	3	3	3.6	6.1
Dir	279	300	314	326	301	329	297	320	304	307	289	274	190	287	283	278	308	318	318	303	319	326	322	313	304.1	318.1
3 Spd	2	2	3	4	4	3	0	2	2	3	3	3	5	5	3	2	2	0	3	2	5	5	9	2.5	8.9	
Dir	349	347	317	314	309	300	169	167	176	290	286	289	307	318	287	295	299	288	255	303	297	245	232	238	284.5	237.8
4 Spd	17	19	19	24	23	24	23	24	27	24	22	21	21	22	22	23	25	26	24	21	14	8	11	15	20.2	26.9
Dir	259	276	289	294	305	305	303	303	308	308	308	311	309	308	310	316	314	312	316	318	319	295	292	284	304.2	308.2
5 Spd	14	14	9	6	6	5	3	4	4	7	7	9	8	7	11	10	13	12	11	8	9	8	5	9	7.5	14.0
Dir	280	282	270	261	281	298	252	285	302	325	320	298	320	330	341	339	342	334	322	316	305	311	300	297	308.2	279.8
6 Spd	5	5	5	5	3	3	3	3	2	3	2	2	4	2	4	3	1	3	4	3	2	4	3	2	2.7	5.3
Dir	300	315	291	304	257	294	295	312	341	299	317	327	285	259	260	306	94	97	310	302	280	315	323	314	301.1	314.7
7 Spd	3	3	3	5	2	0	3	2	3	3	3	4	4	5	5	3	2	10	8	9	7	1	1	4	3.0	9.7
Dir	289	300	327	318	306	266	309	309	292	288	252	218	216	228	234	227	171	294	287	315	333	128	261	293	282.7	293.9
8 Spd	7	4	4	4	4	4	2	5	3	7	11	10	9	6	3	1	0	0	3	3	3	4	3	4	2.0	10.6
Dir	333	42	122	125	43	33	272	298	227	280	270	260	257	265	299	181	172	307	149	157	176	231	256	322	271.3	270.5
9 Spd	6	8	8	17	17	15	10	15	14	14	15	14	17	17	13	9	10	11	9	11	12	16	17	14	12.6	17.4
Dir	288	294	285	307	300	304	294	298	302	302	303	304	307	310	291	290	277	293	302	280	278	296	300	312	298.2	299.9
10 Spd	13	18	15	19	20	19	20	21	19	15	10	11	8	8	10	7	4	3	5	7	9	10	8	6	9.1	21.2
Dir	315	321	305	298	293	286	279	280	282	285	261	242	229	213	187	172	143	37	267	330	327	324	336	351	287.7	280.0
11 Spd	5	9	10	5	4	5	5	4	5	5	6	7	6	6	8	10	9	10	11	12	12	10	10	10	6.3	11.6
Dir	299	338	355	44	67	83	113	117	109	77	80	81	81	82	73	68	72	74	59	57	57	61	56	56	61.5	56.9
12 Spd	11	8	9	8	7	8	9	8	8	8	7	7	7	4	3	2	4	5	4	5	4	4	4	4	4.3	11.5
Dir	62	44	46	56	45	49	65	70	80	84	77	77	83	85	68	348	338	318	304	302	322	312	306	332	45.4	61.7
13 Spd	5	5	4	3	3	3	3	3	2	2	3	4	3	6	6	5	4	3	4	2	4	3	4	3	3.1	6.3
Dir	320	307	305	315	322	308	290	297	294	298	288	294	245	223	237	227	236	294	293	313	308	322	303	315	286.5	236.6
14 Spd	4	3	2	3	4	2	3	2	2	3	1	3	4	5	4	3	3	3	3	4	5	4	4	3	3.0	5.1
Dir	302	330	298	304	312	306	294	312	304	311	219	312	284	282	286	295	334	297	311	283	325	295	320	289	301.9	325.3
15 Spd	4	2	4	4	2	3	2	3	3	5	2	2	3	4	2	4	4	4	4	5	5	3	4	1	2.3	4.9
Dir	314	325	317	298	304	321	261	310	249	170	142	165	204	297	223	291	314	305	305	308	313	296	310	297	292.5	169.7
16 Spd	2	1	1	4	2	4	3	4	3	3	1	4	4	4	5	5	3	3	4	3	3	4	2	3	1.2	5.1
Dir	180	294	234	176	254	340	298	207	174	133	109	152	123	316	316	303	312	261	238	228	162	161	231	210	230.3	316.0
17 Spd	2	2	3	0	3	4	2	1	3	2	1	3	4	3	4	4	4	4	5	4	5	4	4	3	2.4	5.4
Dir	239	280	303	184	174	172	268	142	281	324	350	291	296	276	291	314	304	315	310	317	317	318	327	312	297.8	310.0
18 Spd	3	2	3	2	1	1	0	4	3	N	N	N	6	10	10	9	10	N	N	7	10	10	9	11	4.8	10.8
Dir	322	332	307	316	281	283	20	301	306	N	N	N	282	233	205	209	221	N	N	215	234	229	251	233	240.3	233.3
19 Spd	13	20	11	11	16	15	12	12	9	7	7	10	11	15	12	18	22	19	16	12	9	4	1	4	11.5	21.9
Dir	237	258	251	236	261	256	233	256	257	291	267	250	233	262	262	281	273	266	260	255	261	274	219	233	257.9	273.0
20 Spd	3	2	4	3	4	5	5	3	4	3	2	3	4	3	5	5	5	10	8	10	9	7	7	8	2.9	9.9
Dir	331	302	301	340	315	319	313	273	323	312	294	292	293	344	70	91	98	65	54	65	53	46	47	48	22.6	64.9
21 Spd	10	10	11	12	11	8	10	8	7	6	6	8	8	10	8	8	8	6	7	7	7	6	6	6	7.8	11.7
Dir	56	56	63	60	58	49	59	60	51	43	43	38	30	32	24	14	18	28	29	38	30	34	27	10	41.7	59.7
22 Spd	5	6	5	3	3	4	6	8	7	5	6	5	4	5	5	6	9	7	6	6	6	4	5	3	4.2	8.6
Dir	359	355	3	337	277	235	238	246	263	289	290	291	280	232	231	273	244	272	312	324	299	291	305	256	282.2	244.4

**Peace Airshed Zone Association
Summary of Hourly Averages**

Henry Pirker
December 1, 2009 to January 1, 2010
WS (km/h), WD (deg)

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		
23 Spd	4	5	4	3	2	3	4	2	3	2	4	3	3	3	4	4	4	3	3	3	3	2	3	3	3.1	5.0
Dir	266	286	297	310	338	325	298	317	312	344	312	298	292	301	293	291	317	307	307	301	308	290	312	315	304.1	285.8
24 Spd	3	2	2	3	3	2	3	3	3	2	2	2	2	3	4	1	2	2	4	2	4	4	4	4	1.9	4.2
Dir	295	284	319	301	298	300	295	295	359	179	307	187	290	306	310	250	33	133	318	108	310	321	316	322	307.6	315.9
25 Spd	3	3	2	4	2	1	2	3	3	0	3	2	3	2	3	0	2	2	4	0	4	2	4	3	1.7	4.3
Dir	297	310	314	321	315	276	300	317	332	194	168	1	316	277	228	273	190	252	1	270	306	327	294	341	305.5	306.3
26 Spd	2	3	1	1	1	1	2	1	1	3	3	3	3	2	4	4	4	4	6	4	4	3	3	2	2.3	5.5
Dir	327	300	340	7	40	142	337	120	48	323	309	320	325	301	282	337	315	307	322	318	294	291	338	306	316.9	322.3
27 Spd	3	3	2	2	3	3	3	3	1	1	1	0	1	1	2	3	2	3	3	2	1	2	2	2	0.6	3.5
Dir	302	307	289	301	319	309	327	316	308	248	261	201	298	282	97	93	85	95	98	75	108	86	75	81	355.5	302.3
28 Spd	2	2	2	2	2	1	N	2	1	1	1	2	2	2	3	3	3	2	N	N	N	N	N	N	--	2.7
Dir	104	104	104	79	75	352	N	351	27	116	153	279	276	283	279	290	303	295	N	N	N	N	N	N	--	278.7
29 Spd	N	N	N	N	N	1	1	1	1	1	1	1	1	1	0	1	1	1	2	2	2	1	1	1	0.3	1.9
Dir	N	N	N	N	N	300	298	293	295	285	281	261	283	266	327	85	91	99	87	83	87	73	50	355	6.1	86.8
30 Spd	1	2	4	5	6	5	5	5	6	7	8	8	8	9	7	5	3	3	4	3	4	3	2	2	4.7	9.1
Dir	319	296	309	308	311	322	312	313	305	306	297	294	287	293	297	291	272	309	304	324	300	312	289	336	302.3	292.7
31 Spd	2	3	2	3	2	1	5	4	5	4	4	5	6	5	4	3	3	2	4	4	5	5	3	2	2.5	5.8
Dir	314	302	318	304	310	293	106	78	82	81	91	90	90	75	66	54	74	12	68	59	65	72	84	302	65.5	90.4
Spd	3.4	4.2	3.6	3.5	3.9	3.4	3.0	3.4	3.1	3.1	3.0	2.9	3.2	3.7	3.1	2.9	2.7	3.5	3.9	3.2	3.4	2.7	3.1	3.1	Diurnal Average	
Dir	299.9	306.8	310.2	308.2	306.1	307.9	295.9	296.7	304.1	308.3	298.8	292.6	290.1	290.1	287.2	301.6	304.2	315.3	315.8	319.0	315.3	312.9	315.2	308.5	Diurnal Maximum	
Spd	16.8	19.6	19.2	24.5	23.0	23.7	22.8	24.2	26.9	24.0	22.4	20.9	21.5	22.5	22.2	23.0	24.6	25.8	24.0	20.7	13.8	15.6	16.6	14.5	Diurnal Maximum	
Dir	259.3	257.5	288.6	293.7	304.6	305.0	303.4	302.5	308.2	308.2	308.1	311.4	308.8	308.3	309.5	316.5	314.1	311.7	316.1	317.6	319.3	295.6	300.2	284.2	Diurnal Maximum	
Maximum Speed Value: 27 km/h on Dec 4 09:00																		Minimum Speed Value: 0 km/h on Dec 27 12:00						Hours in Service:		744
Maximum Daily Speed Average: 20.2 km/h on Dec 4																		Minimum Daily Speed Average: 0.3 km/h on Dec 29						Hours of Data:		727
Maximum Diurnal Speed Average: 4.2 km/h at hour 2																		Minimum Diurnal Speed Average: 2.7 km/h at hour 17						Hours of Missing Data:		17
Monthly Average Velocity: 3.26 km/h 304.69 deg																		Speed Percentiles: P ₁ = 0.4 P ₁₀ = 1.7 Q ₁ = 2.6 Median = 3.8 Q ₃ = 6.7 P ₉₀ = 11.3 P ₉₉ = 24.0						Percent Operational Time:		97.7
All monthly, daily, and diurnal averages have been calculated using vector methods																										
N - Not Valid																										
Percentage Frequency Distribution																										
Speed Range (km/h)																										
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																			
North	3.71	1.38	0.28	0.00	0.00	0.00	5.36																			
NorthEast	1.93	4.95	0.83	0.00	0.00	0.00	7.70																			
East	5.64	2.61	0.00	0.00	0.00	0.00	8.25																			
SouthEast	2.34	0.14	0.00	0.00	0.00	0.00	2.48																			
South	3.30	0.28	0.00	0.00	0.00	0.00	3.58																			
SouthWest	3.30	3.16	0.41	0.00	0.00	0.00	6.88																			
West	12.79	4.68	2.61	0.83	0.00	0.00	20.91																			
NorthWest	33.43	6.19	2.75	2.48	0.00	0.00	44.84																			
Total	66.44	23.38	6.88	3.30	0.00	0.00	100.00																			

Wind Rose for WS at Henry Pirker December 2009



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

Henry Pirker - Wind Speed (WS) - km/h
December 1, 2009 to January 1, 2010

Maximum Speed: 27 km/h on Dec 4 09:00	Maximum Daily Speed Average: 20.8 km/h on Dec 4	Hours in Service: 744
Minimum Speed: 1 km/h on Dec 29 12:00	Minimum Daily Speed Average: 1.4 km/h on Dec 29	Hours of Data: 727
Maximum Diurnal Speed Average: 6.2 km/h at hour 14	Minimum Diurnal Speed Average: 5.2 km/h at hour 23	Hours of Missing Data: 17
Monthly Average Speed: 5.79 km/h	Percentiles: P ₁ = 1.2 P ₁₀ = 2.4 Q ₁ = 3.1 Median = 4.1 Q ₃ = 7.0 P ₉₀ = 11.3 P ₉₉ = 24.0	Percent Operational Time: 97.7

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	5	5	5	5	4	2	3	4	4	3	4	5	4	3	3	3	3	5	5	5	5	4	4	4.0	5.4	
2-Dec	2	4	4	3	4	4	4	4	4	3	4	3	4	6	6	4	5	6	4	5	5	4	4	4.2	6.2	
3-Dec	3	3	4	4	4	3	2	3	2	3	3	3	5	5	6	4	3	3	4	5	9	6	9	4.1	9.5	
4-Dec	17	19	19	25	23	24	23	24	27	24	22	21	22	23	22	23	25	26	24	21	14	8	11	15	20.8	26.9
5-Dec	14	14	9	6	6	5	3	5	4	7	7	9	8	7	11	10	13	12	11	9	9	9	6	9	8.5	14.1
6-Dec	5	5	5	5	4	4	4	4	3	3	3	2	4	3	4	3	3	4	3	3	4	3	2	3.5	5.4	
7-Dec	3	3	3	5	3	3	3	2	3	3	4	4	4	5	6	3	3	10	8	9	7	3	3	4	4.3	10.4
8-Dec	8	5	5	4	4	5	3	5	4	7	11	10	9	6	3	3	2	2	3	3	3	4	3	4	4.8	10.8
9-Dec	7	8	8	17	17	15	10	15	14	14	15	14	17	17	13	10	10	11	9	11	12	16	17	14	12.8	17.5
10-Dec	13	18	15	19	20	19	20	21	19	15	10	11	8	9	10	7	5	4	6	7	9	10	8	6	12.0	21.3
11-Dec	5	10	10	5	5	5	5	4	5	5	6	7	6	6	7	8	11	10	10	12	12	12	10	10	7.7	11.7
12-Dec	12	8	9	8	8	8	9	8	8	8	7	7	7	4	4	4	5	5	5	4	5	4	4	4	6.5	11.6
13-Dec	6	5	4	3	3	3	3	3	3	2	3	4	3	6	7	6	4	3	4	3	4	3	4	3	3.9	6.5
14-Dec	4	3	2	4	4	2	3	3	2	3	3	3	4	5	4	3	3	3	4	5	5	4	4	4	3.6	5.3
15-Dec	4	3	4	4	3	4	3	3	4	5	3	3	4	4	3	4	4	4	5	5	5	4	4	3	3.8	5.3
16-Dec	4	3	3	5	4	5	4	5	4	3	2	5	5	4	6	5	4	4	4	3	4	4	3	4	4.0	5.7
17-Dec	3	3	4	2	3	5	4	3	3	3	2	3	5	3	4	4	4	4	6	5	5	4	4	4	3.8	5.7
18-Dec	3	3	3	3	2	3	2	4	3	N	N	N	7	10	10	9	10	N	N	7	10	10	9	11	6.4	11.2
19-Dec	13	20	11	11	16	16	12	13	9	9	8	11	11	15	13	18	22	19	16	12	11	5	3	4	12.4	21.9
20-Dec	3	4	5	4	4	5	5	4	4	4	3	3	4	4	5	5	5	10	8	10	9	7	7	8	5.4	10.1
21-Dec	10	10	12	12	11	8	10	8	7	7	6	8	8	10	8	9	8	6	7	7	7	6	6	6	8.3	11.8
22-Dec	5	6	6	4	3	4	6	8	7	5	6	5	4	5	6	9	8	6	6	6	6	5	5	3	5.6	8.7
23-Dec	4	5	4	3	2	4	5	2	3	2	4	3	3	3	4	4	4	4	3	3	3	3	4	4	3.4	5.1
24-Dec	3	2	2	3	3	2	3	3	3	3	3	2	2	3	4	3	2	3	4	3	4	4	4	4	3.1	4.4
25-Dec	3	3	2	4	2	2	3	4	3	2	3	3	4	2	4	3	3	3	4	2	4	3	4	3	3.1	4.5
26-Dec	3	4	2	2	2	2	2	2	2	3	3	3	3	3	4	4	4	4	6	4	5	3	3	2	3.2	5.7
27-Dec	4	3	3	3	4	3	3	3	2	2	1	1	1	1	2	3	2	3	3	2	1	2	2	2	2.3	3.6
28-Dec	2	2	2	2	2	2	N	2	1	1	2	2	2	3	3	3	3	2	N	N	N	N	N	N	--	2.7
29-Dec	N	N	N	N	N	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1	1	1.4	1.9
30-Dec	1	2	4	5	6	5	5	5	6	7	8	8	8	9	7	5	3	4	4	4	4	3	3	2	4.9	9.2
31-Dec	2	4	3	3	3	2	5	4	5	4	5	6	6	5	5	3	3	3	4	4	5	6	3	3	4.0	5.9

5.7	6.1	5.7	6.1	6.0	5.6	5.6	5.9	5.5	5.5	5.4	5.7	6.0	6.2	6.2	5.8	5.9	6.0	6.2	6.0	6.0	5.5	5.2	5.2	Diurnal Average
16.9	19.8	19.3	24.5	23.1	23.8	22.8	24.3	26.9	24.1	22.4	20.9	21.5	22.5	22.3	23.1	24.7	25.9	24.1	20.7	13.9	15.7	16.7	14.5	Diurnal Maximum

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
December 1, 2009 to January 1, 2010**

Maximum Value: 98.5 deg on Dec 25 16:00																								Hours in Service:	744	
Minimum Value: 2.8 deg on Dec 5 00:00																								Hours of Data:	727	
Percentiles: P ₁ = 3.6 P ₁₀ = 6.6 Q ₁ = 11.4 Median = 17.3 Q ₃ = 30.1 P ₉₀ = 54.6 P ₉₉ = 89.4																								Hours of Missing Data:	17	
																								Hours of Calibration:	0	
																								Percent Operational Time:	97.7	
Day	Hourly Period Ending At (MST)																								Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	12	11	15	57	21	58	11	10	21	17	25	17	12	16	17	53	26	29	22	28	36	14	15	22	57.8	
2-Dec	54	14	8	24	9	23	14	30	24	15	29	49	59	12	12	18	28	10	17	8	22	24	47	33	58.7	
3-Dec	51	32	19	37	11	20	91	48	55	21	25	48	10	27	34	25	75	66	95	54	60	62	42	14	94.7	
4-Dec	8	4	5	4	5	4	3	6	4	4	3	4	4	4	5	6	5	4	4	5	7	13	8	3	12.9	
5-Dec	6	5	18	12	24	13	32	55	36	12	12	8	13	10	8	6	7	8	6	17	10	11	32	5	55.0	
6-Dec	13	9	12	16	35	24	32	24	45	35	25	42	7	47	26	10	81	53	17	22	30	20	22	34	81.3	
7-Dec	10	14	19	24	48	87	20	10	9	11	27	17	18	12	13	19	41	43	5	12	11	69	85	13	87.4	
8-Dec	12	33	28	18	26	50	39	20	42	13	12	8	8	18	23	75	88	81	19	15	31	14	45	17	87.9	
9-Dec	10	4	8	4	4	6	8	8	5	4	4	5	5	7	5	16	11	7	10	6	5	6	5	5	15.6	
10-Dec	10	5	7	4	4	4	4	4	4	7	11	9	12	21	10	14	24	34	18	13	10	5	11	10	34.4	
11-Dec	15	15	13	17	18	16	16	19	15	15	14	10	21	11	14	12	9	11	13	9	10	12	12	9	20.7	
12-Dec	10	13	14	13	14	14	11	12	11	10	12	12	12	27	33	69	14	13	16	9	13	27	19	8	69.2	
13-Dec	25	5	10	20	11	9	19	14	15	37	19	9	27	10	16	11	22	16	12	66	14	10	9	22	66.2	
14-Dec	12	30	20	24	18	65	52	48	60	26	67	18	16	18	17	41	24	29	24	47	18	35	22	41	66.6	
15-Dec	23	18	13	19	70	37	54	26	57	40	67	63	44	28	38	26	22	18	19	21	21	31	29	80	80.5	
16-Dec	79	80	72	49	63	20	53	26	38	36	70	53	49	32	29	18	30	35	23	35	19	18	57	68	79.7	
17-Dec	57	65	50	97	33	23	61	77	34	81	79	36	16	24	20	18	17	19	18	21	17	25	15	15	97.0	
18-Dec	23	36	34	65	79	73	93	17	23	N	N	N	33	22	7	14	10	N	N	12	13	6	17	16	92.6	
19-Dec	13	8	11	13	11	25	11	17	10	39	31	20	7	17	17	3	4	5	5	6	51	24	82	36	82.0	
20-Dec	45	62	15	30	14	9	13	37	14	23	26	20	18	51	20	31	24	14	9	8	12	13	10	11	62.2	
21-Dec	10	9	7	7	10	11	14	12	19	15	17	16	15	10	16	12	12	19	16	15	16	19	15	12	19.2	
22-Dec	15	16	21	56	20	31	8	6	17	7	6	7	30	26	13	11	10	15	15	12	13	33	24	30	56.4	
23-Dec	21	9	12	11	23	22	12	30	26	16	13	16	16	21	13	10	7	11	16	12	11	29	16	16	29.9	
24-Dec	21	29	23	12	18	27	23	45	24	70	80	48	69	30	18	83	49	44	29	55	57	23	12	26	83.3	
25-Dec	28	18	21	13	35	75	68	13	23	91	38	57	50	41	53	99	51	59	23	94	13	69	26	34	98.5	
26-Dec	33	26	73	71	65	74	52	78	70	23	22	23	14	32	16	16	25	14	14	17	30	40	18	35	78.1	
27-Dec	15	26	31	39	19	13	8	17	54	40	81	94	27	30	37	18	13	13	11	15	39	17	14	13	93.6	
28-Dec	13	12	12	10	9	49	N	13	22	29	39	51	13	9	8	6	12	10	N	N	N	N	N	N	51.0	
29-Dec	N	N	N	N	N	14	15	11	10	12	12	22	7	25	79	17	21	19	18	14	10	25	34	20	79.3	
30-Dec	10	8	6	5	5	8	8	9	5	6	6	4	5	5	6	8	15	14	24	23	17	8	45	30	44.6	
31-Dec	51	31	52	20	22	88	12	14	11	16	16	16	15	11	15	29	16	46	18	15	10	14	31	53	87.6	
	79.0	79.7	72.8	97.0	79.3	87.6	92.6	78.1	70.5	90.8	80.9	93.6	68.6	50.7	79.3	98.5	87.9	80.9	94.7	93.7	59.7	69.3	84.6	80.5		
N - Not Valid																										

PASZA

Evergreen Park Station

Monthly Summary Tables, Graphs and Roses

**Peace Airshed Zone Association
Summary of Hourly Averages**

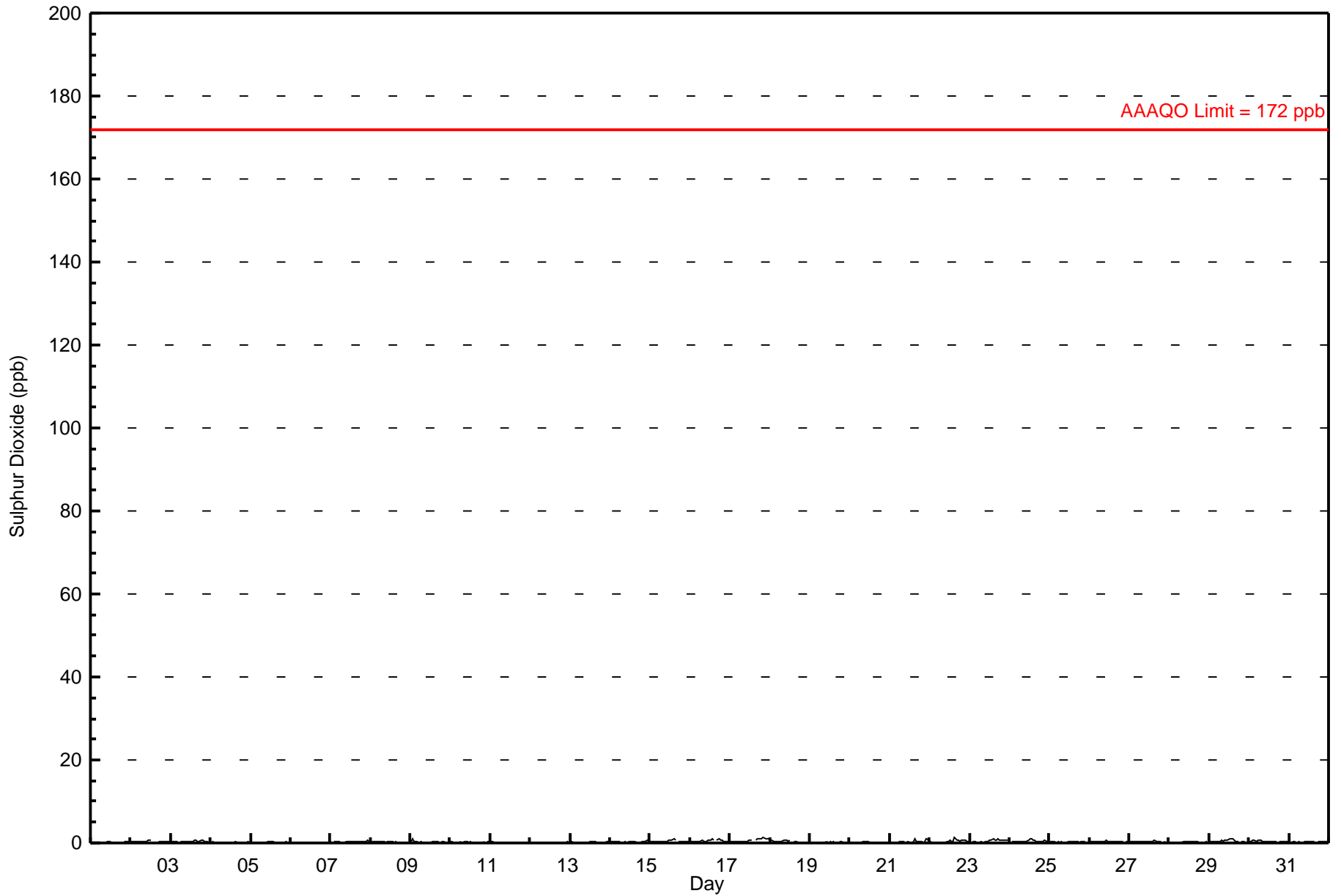
**Evergreen Park - Sulphur Dioxide (SO₂) - ppb
December 1, 2009 to January 1, 2010**

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 1.3 ppb on Dec 22 16:00	Maximum Daily Average: 0.6 ppb on Dec 17		Hours of Data:	709
Minimum Value: 0 ppb on Dec 1 18:00	Minimum Daily Average: 0.0 ppb on Dec 12		Hours of Missing Data:	35
Maximum Diurnal Average: 0.4 ppb at hour 16	Minimum Diurnal Average: 0.2 ppb at hour 6		Hours of Calibration:	35
Monthly Average: 0.27 ppb	Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.4 P ₉₀ = 0.5 P ₉₉ = 1.0		Percent Operational Time:	100.0

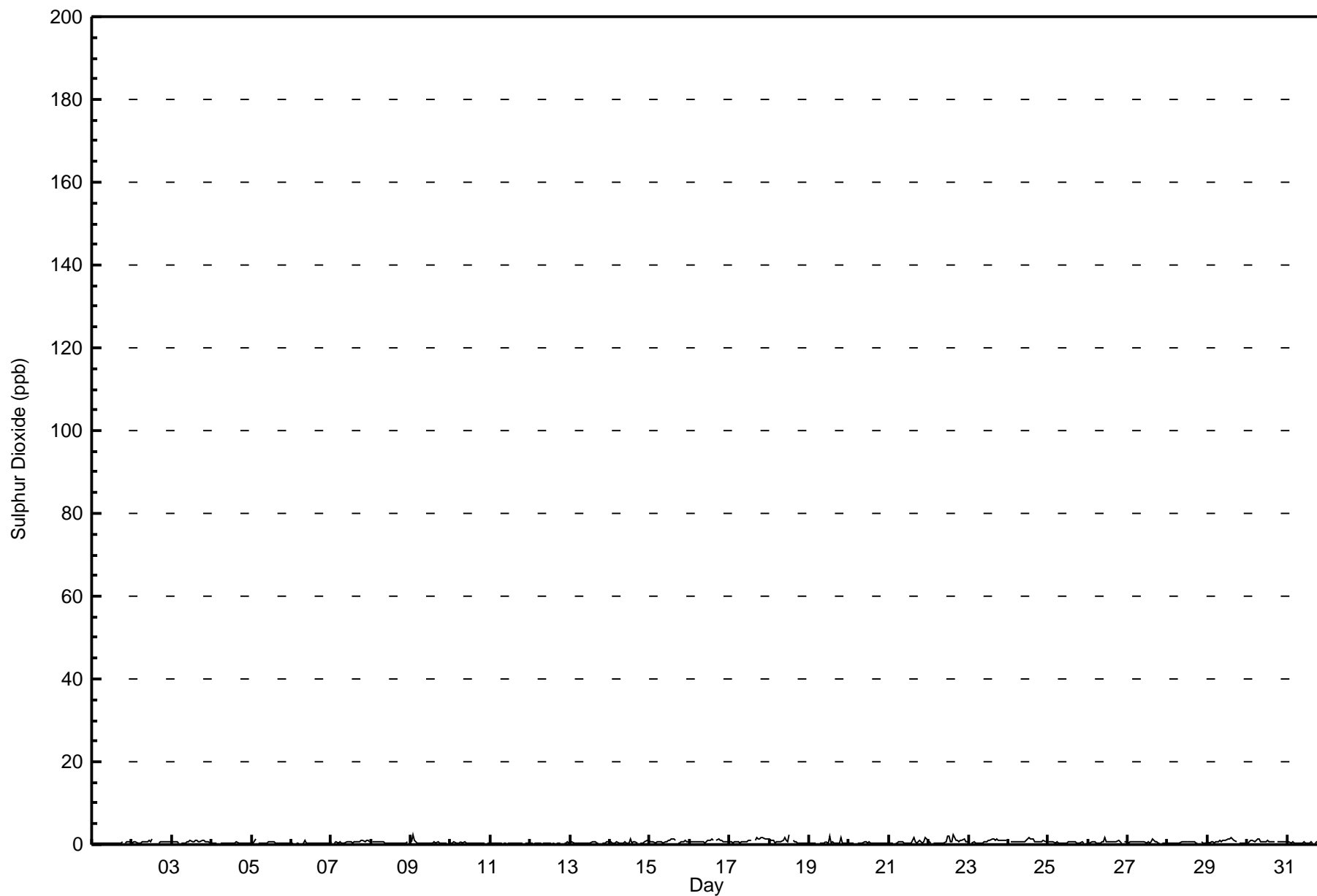
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.4
2-Dec	0	0	0	0	0	0	0	0	0	0	1	1	1	C	C	C	0	0	0	0	0	0	0	0	0.4	0.6
3-Dec	0	0	0	0	0	A	0	0	0	0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

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

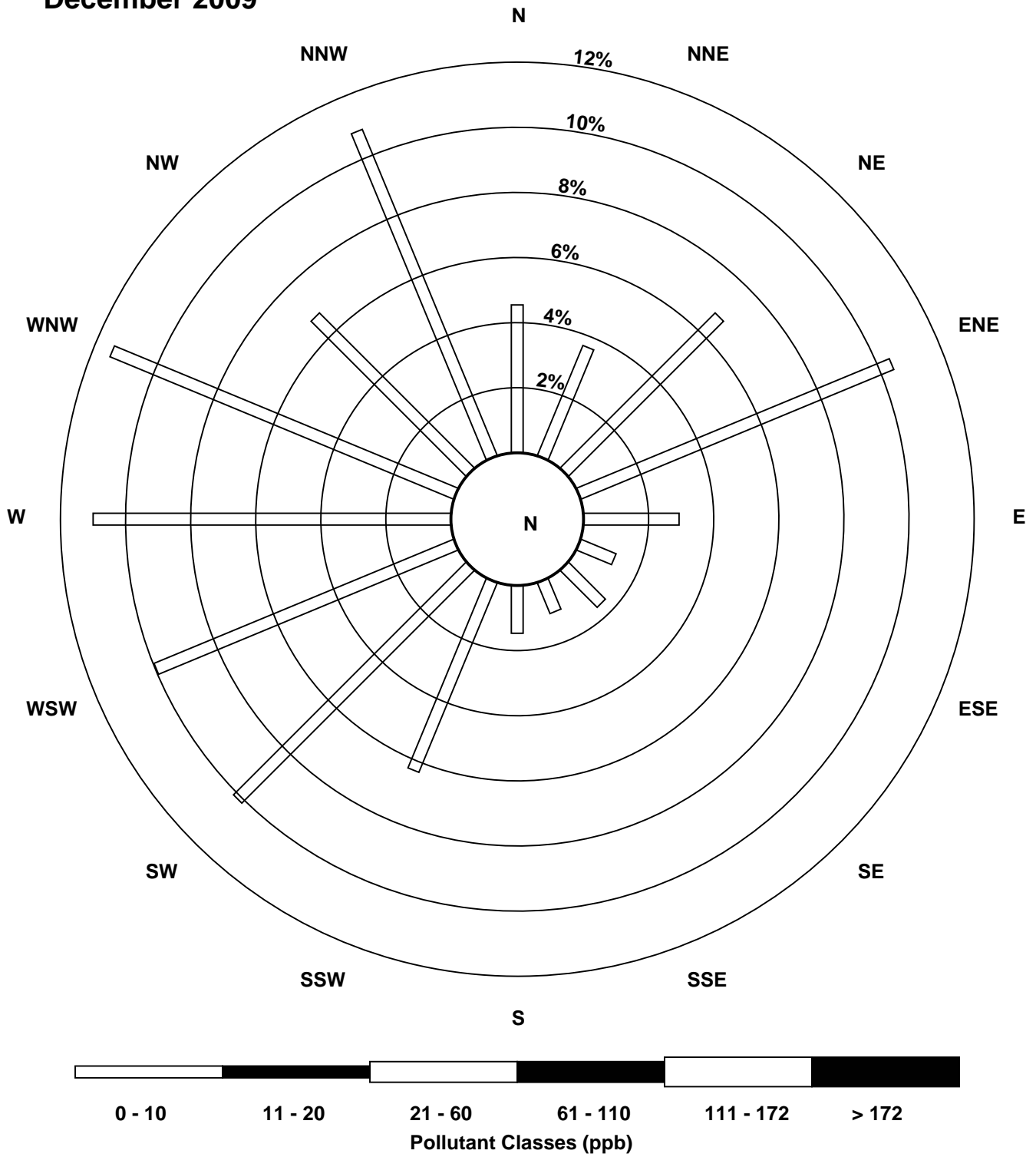
Hourly Averages for SO₂ at Evergreen Park December 2009



Hourly Maximums for SO₂ at Evergreen Park December 2009



Pollutant Rose for SO₂ at Evergreen Park December 2009



**Peace Airshed Zone Association
Summary of Hourly Averages**

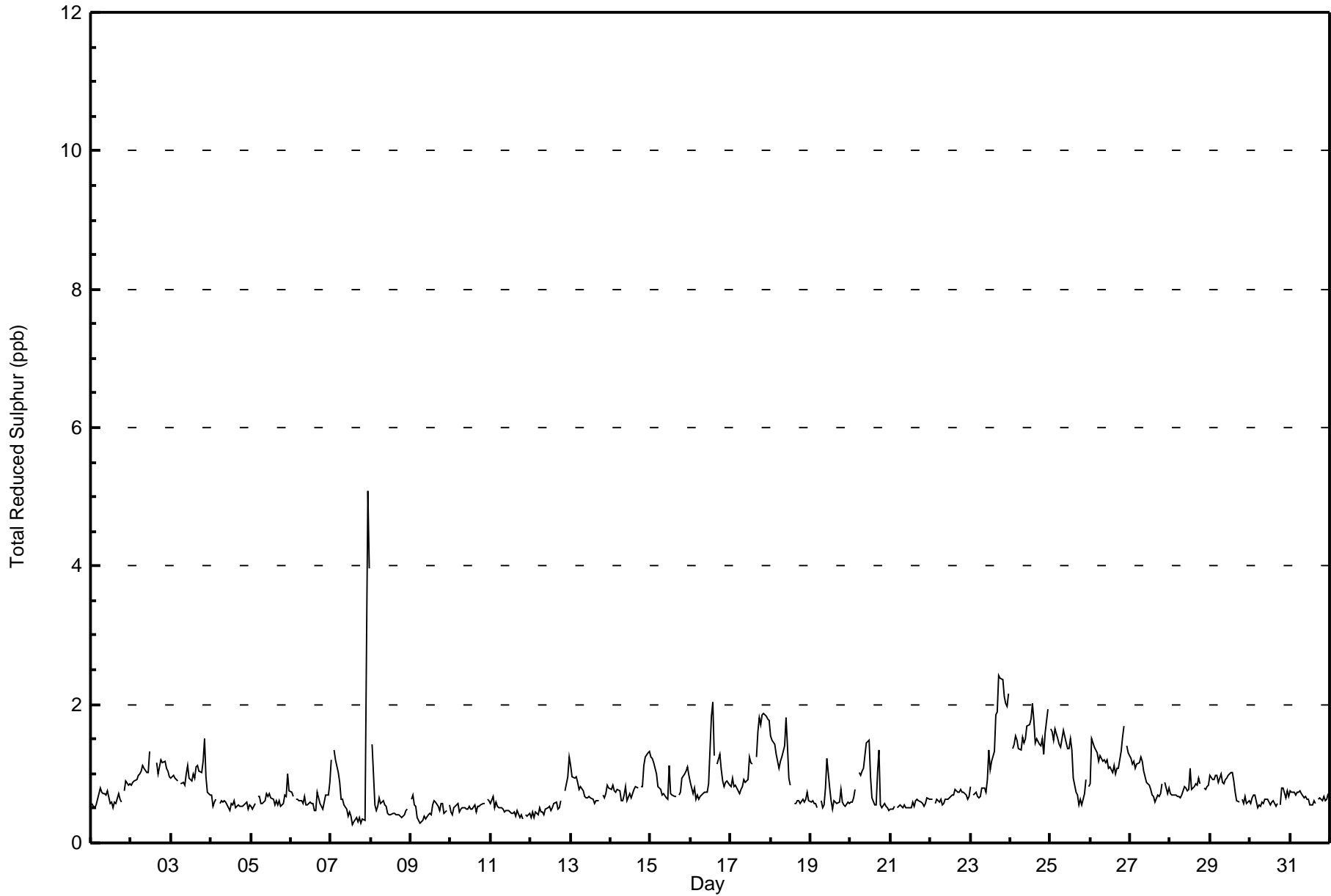
**Evergreen Park - Total Reduced Sulphur (TRS) - ppb
December 1, 2009 to January 1, 2010**

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 5.1 ppb on Dec 7 23:00	Maximum Daily Average: 1.5 ppb on Dec 24		Hours of Data:	709
Minimum Value: 0 ppb on Dec 7 14:00	Minimum Daily Average: 0.5 ppb on Dec 11		Hours of Missing Data:	35
Maximum Diurnal Average: 1.0 ppb at hour 23	Minimum Diurnal Average: 0.7 ppb at hour 15		Hours of Calibration:	35
Monthly Average: 0.82 ppb	Percentiles: P ₁ = 0.3 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.7 Q ₃ = 1.0 P ₉₀ = 1.4 P ₉₉ = 2.0		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	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
2-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	C	C	C	1	1	1	1	1	1	1	1	1.0	1.3
3-Dec	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1.0	1.5
4-Dec	1	1	1	1	A	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	0.6	0.7
5-Dec	1	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.0
6-Dec	1	1	A	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0	1	1	1	1	0.6	0.9
7-Dec	1	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3	5	4	1.0	5.1
8-Dec	A	1	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.5	1.4
9-Dec	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	0	1	1	0	0	0	A	1	0.5	0.7
10-Dec	0	0	1	1	1	0	0	1	1	0	0	1	0	0	1	0	1	1	1	1	1	A	1	1	0.5	0.6
11-Dec	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.5	0.7
12-Dec	0	0	0	0	0	1	0	0	0	0	1	0	1	1	1	1	0	1	1	A	1	1	1	1	0.6	1.2
13-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.7	1.1
14-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.8	1.3
15-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.9	1.2
16-Dec	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	A	1	1	1	1	1	1	1	1	0.9	2.0
17-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	2	2	2	2	2	2	2	2	1.2	1.9
18-Dec	2	1	1	1	1	1	1	1	1	2	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1.0	1.8
19-Dec	1	1	1	1	1	A	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0.6	1.2
20-Dec	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0.8	1.5
21-Dec	0	0	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
22-Dec	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8
23-Dec	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	1.4	2.4
24-Dec	A	1	1	2	1	1	1	2	1	2	2	2	2	2	2	1	1	1	1	2	1	2	2	A	1.5	2.0
25-Dec	2	2	1	2	2	1	1	2	2	1	1	1	2	1	1	1	1	1	1	1	1	1	A	1	1.2	1.6
26-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	A	1	1	1.2	1.7
27-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.9	1.2
28-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.8	1.1
29-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.8	1.0
30-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.6	0.8
31-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.7	0.8
	0.8	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.9	1.0	1.0	Diurnal Average	
	1.6	1.6	1.5	1.6	1.5	1.4	1.4	1.5	1.6	1.8	1.7	1.7	1.8	2.0	1.8	1.9	1.9	2.4	2.4	2.4	2.1	2.7	5.1	4.0	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 December 2009



**Peace Airshed Zone Association
Summary of Hourly Maximums**

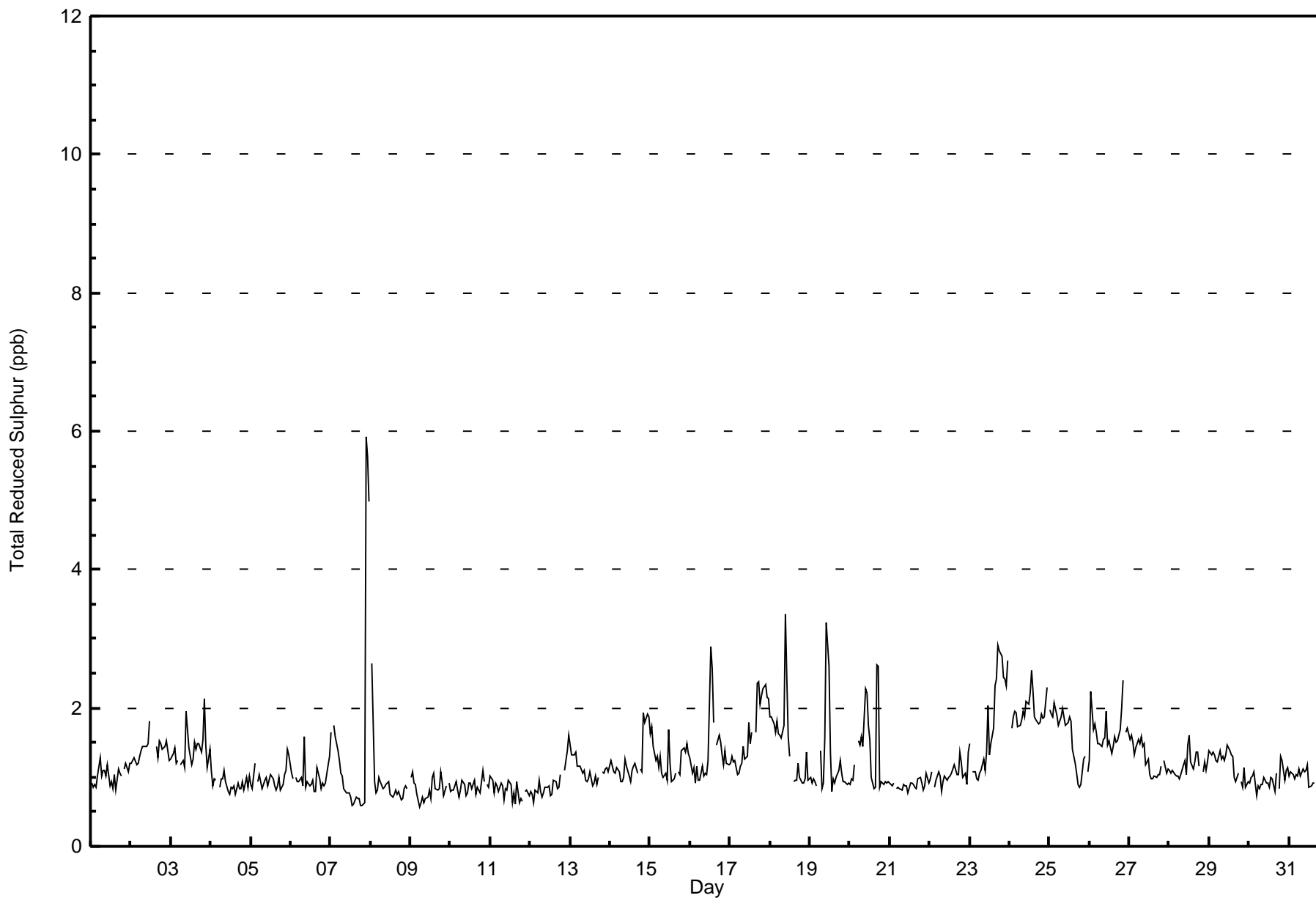
**Evergreen Park - Total Reduced Sulphur (TRS) - ppb
December 1, 2009 to January 1, 2010**

Maximum Value: 5.9 ppb on Dec 7 22:00	Maximum Daily Average: 2.0 ppb on Dec 24	Hours in Service: 744
Minimum Value: 1 ppb on Dec 9 06:00	Minimum Daily Average: 0.8 ppb on Dec 11	Hours of Data: 709
Maximum Diurnal Average: 1.4 ppb at hour 23	Minimum Diurnal Average: 1.1 ppb at hour 16	Hours of Missing Data: 35
Monthly Average: 1.21 ppb	Percentiles: P ₁ = 0.6 P ₁₀ = 0.8 Q ₁ = 0.9 Median = 1.1 Q ₃ = 1.4 P ₉₀ = 1.8 P ₉₉ = 2.9	Hours of Calibration: 35
		Percent Operational Time: 100.0

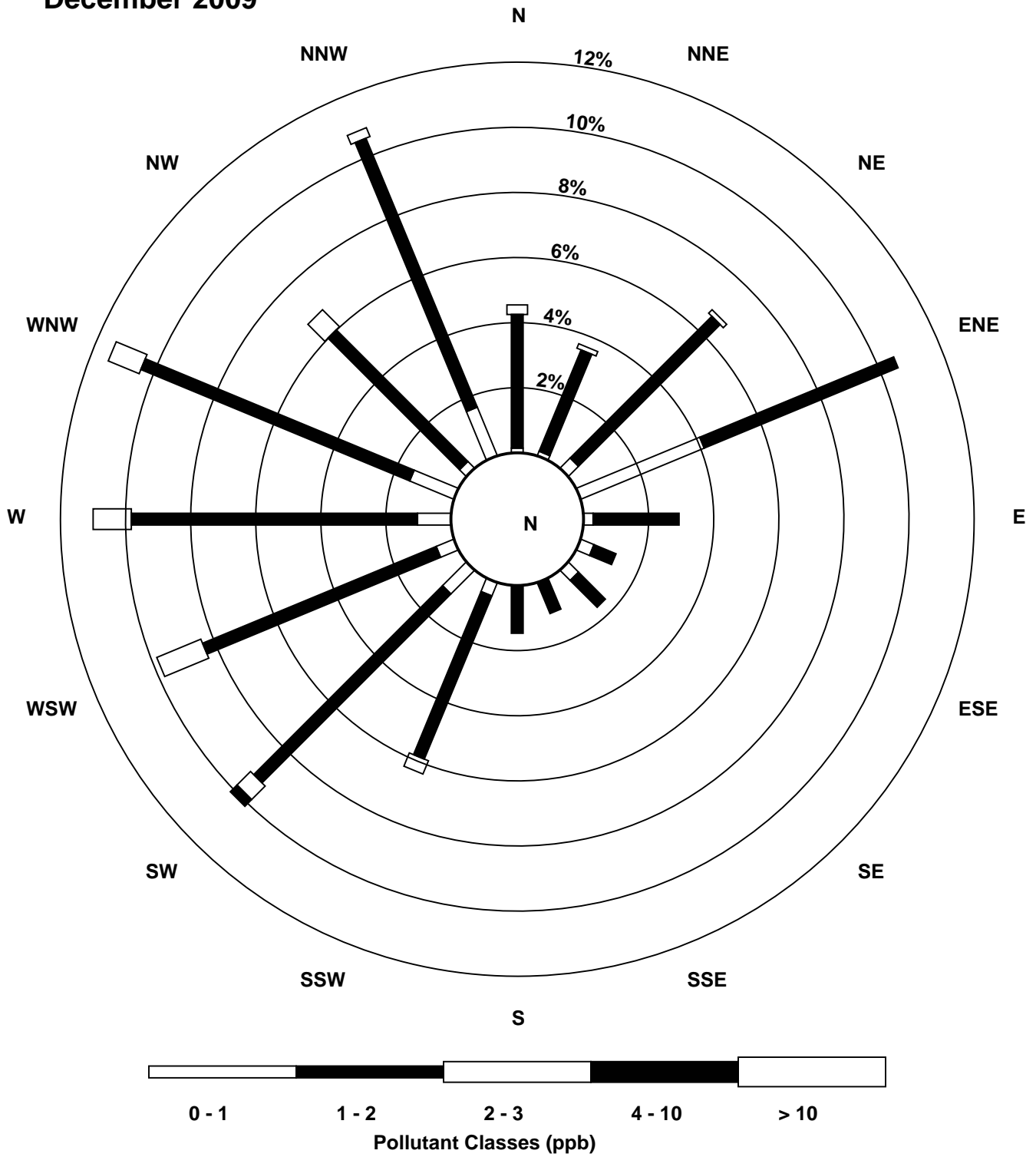
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1.0	1.3
2-Dec	1	1	1	1	1	1	1	1	1	1	1	2	C	C	C	1	1	2	1	1	1	2	1	1	1.4	1.8
3-Dec	1	1	1	1	1	A	1	1	1	2	2	1	1	1	2	1	1	1	1	2	2	1	1	1	1.4	2.1
4-Dec	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.1
5-Dec	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.4
6-Dec	1	1	A	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.6
7-Dec	2	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6	6	5	1.5	5.9
8-Dec	A	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.9	2.7
9-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.8	1.1
10-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.9	1.1
11-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.0
12-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	2	0.9	1.6
13-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1.1	1.5
14-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	2	2	2	2	1.2	1.9
15-Dec	2	2	1	1	1	1	1	1	1	1	2	1	1	1	1	A	1	1	1	1	1	1	1	1	1.3	1.7
16-Dec	1	1	1	1	1	1	1	1	1	1	1	3	3	2	A	1	2	2	2	1	1	1	1	1	1.3	2.9
17-Dec	1	1	1	1	1	1	1	1	1	1	1	2	1	2	A	2	2	2	2	2	2	2	2	2	1.7	2.4
18-Dec	2	2	2	2	2	2	2	2	2	3	2	2	1	A	1	1	1	1	1	1	1	1	1	1	1.5	3.4
19-Dec	1	1	1	1	1	A	1	1	1	2	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1.2	3.2
20-Dec	1	1	1	1	A	2	1	2	1	2	2	2	2	1	1	1	3	3	1	1	1	1	1	1	1.4	2.6
21-Dec	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.0
22-Dec	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.4
23-Dec	1	A	1	1	1	1	1	1	1	1	2	1	1	2	2	2	3	3	3	3	2	2	2	3	1.8	2.9
24-Dec	A	2	2	2	2	2	2	2	2	2	2	2	3	2	2	2	2	2	2	2	2	2	2	A	2.0	2.5
25-Dec	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	A	1	1.6	2.1
26-Dec	1	2	2	2	2	1	1	1	2	2	2	1	2	1	1	2	2	2	2	2	2	A	2	2	1.7	2.4
27-Dec	2	2	2	1	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1.3	1.6
28-Dec	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	A	1	1	1	1	1.2	1.6
29-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1.2	1.5
30-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1.0	1.3
31-Dec	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1.0	1.2
	1.2	1.3	1.2	1.2	1.1	1.1	1.1	1.1	1.2	1.3	1.3	1.3	1.2	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.4	1.4	1.4	Diurnal Average	
	2.0	2.7	1.9	2.1	1.9	1.8	1.8	1.9	2.0	3.4	3.2	2.6	2.9	2.6	2.2	2.3	2.6	2.9	2.8	2.7	2.4	5.9	5.6	5.0	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

Hourly Maximums for TRS at Evergreen Park December 2009



Pollutant Rose for TRS at Evergreen Park December 2009



**Peace Airshed Zone Association
Summary of Hourly Averages**

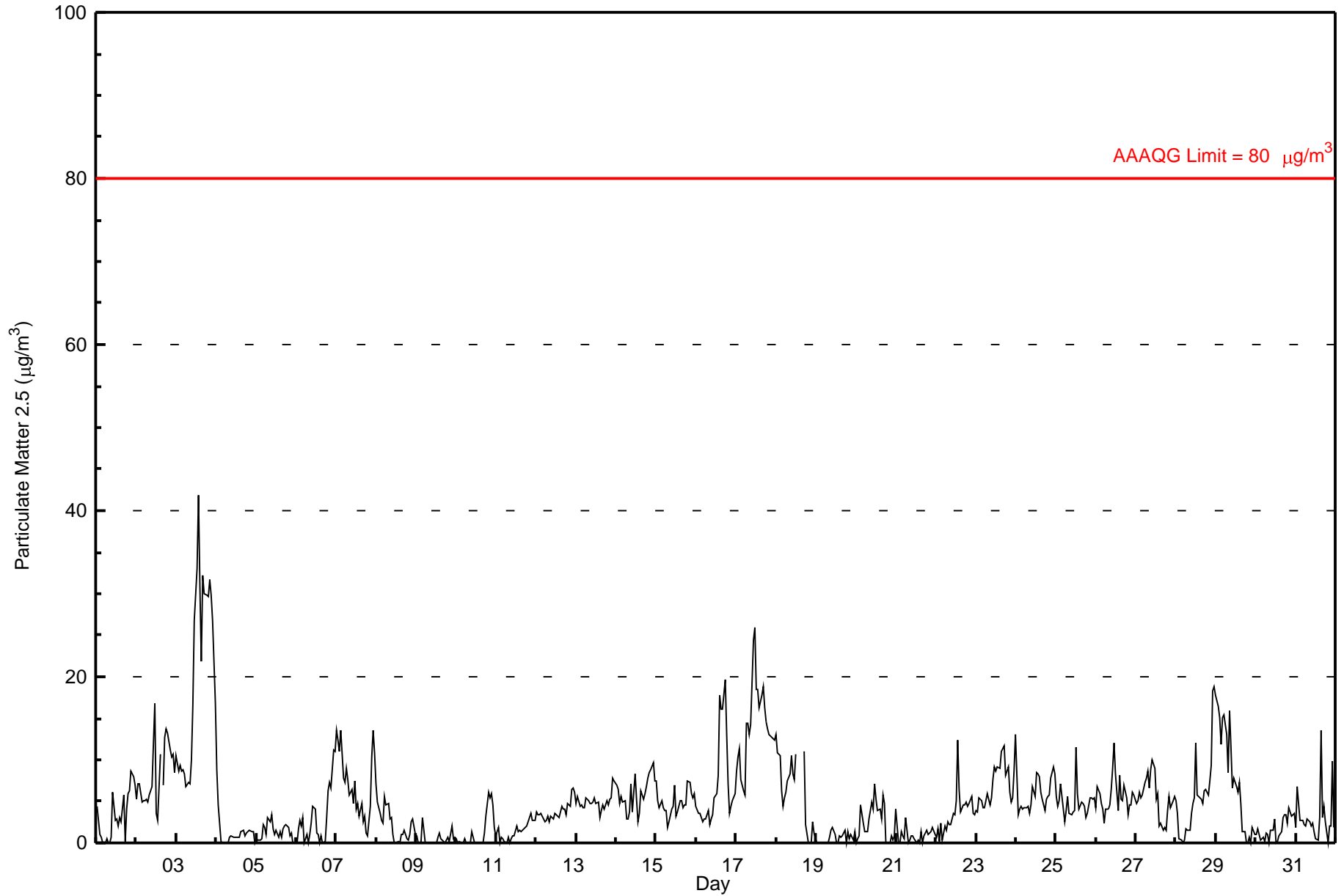
**Evergreen Park - Particulate Matter 2.5 (PM_{2.5}) - µg/m³
December 1, 2009 to January 1, 2010**

Number of Exceedences: 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 41.9 µg/m ³ on Dec 3 14:00	Maximum Daily Average: 20.1 µg/m ³ on Dec 3
Minimum Value: 0 µg/m ³ on Dec 1 05:00	Hours of Data: 739
Maximum Diurnal Average: 6.5 µg/m ³ at hour 23	Hours of Missing Data: 5
Monthly Average: 4.87 µg/m ³	Hours of Calibration: 2
Minimum Daily Average: 0.5 µg/m ³ on Dec 9	Percent Operational Time: 99.6
Minimum Diurnal Average: 3.3 µg/m ³ at hour 6	
Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 1.3 Median = 3.8 Q ₃ = 6.2 P ₉₀ = 10.9 P ₉₉ = 29.8	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	4	3	1	1	0	0	0	0	0	1	6	3	3	2	3	3	6	0	4	6	6	9	8	7	3.1	8.6
2-Dec	5	7	7	5	5	5	5	6	7	12	17	4	3	11	C	7	13	14	13	11	10	11	8	8	8.3	16.8
3-Dec	10	9	9	9	9	8	7	7	10	17	27	33	42	31	22	32	30	30	30	32	30	27	17	17	20.1	41.9
4-Dec	9	5	2	0	0	0	0	0	1	1	1	1	1	1	1	2	1	1	1	2	1	1	0	0	1.3	8.8
5-Dec	0	0	0	1	2	2	1	3	2	3	2	1	1	1	1	2	2	2	2	2	1	1	0	0	1.4	3.3
6-Dec	0	2	3	2	3	0	1	0	1	2	4	4	1	1	0	1	0	0	3	6	7	7	11	11	3.0	11.2
7-Dec	14	12	11	14	8	7	9	8	6	6	5	7	4	5	3	5	3	3	1	1	4	10	14	11	7.1	13.6
8-Dec	7	5	4	3	2	6	5	5	3	3	1	0	0	0	1	1	1	1	0	1	2	3	1	1	2.3	7.1
9-Dec	1	0	0	0	3	0	0	0	0	0	0	0	1	1	1	0	0	0	1	0	2	1	1	1	0.5	3.0
10-Dec	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	1	3	6	5	6	5	2	1.3	6.1
11-Dec	1	2	0	1	1	0	0	1	0	1	1	1	2	1	1	1	2	2	2	3	3	3	3	3	1.4	3.5
12-Dec	4	3	3	4	3	3	3	3	3	3	4	3	3	3	3	4	4	4	3	5	4	6	7	6	3.8	6.6
13-Dec	5	6	4	5	4	4	5	5	5	5	5	5	5	3	4	5	4	5	5	5	5	8	8	8	5.0	7.8
14-Dec	7	7	5	6	5	5	3	3	4	7	4	8	5	3	4	6	5	6	7	8	8	9	10	8	5.8	9.7
15-Dec	7	5	4	5	4	4	4	2	3	4	4	7	3	4	5	5	4	5	5	8	7	6	5	6	4.8	7.5
16-Dec	4	4	4	3	3	3	3	4	2	3	3	5	6	8	18	16	16	20	13	7	4	4	5	6	6.8	19.7
17-Dec	9	10	11	8	6	6	14	14	13	14	24	26	19	18	16	18	19	16	15	14	13	13	12	12	14.2	25.9
18-Dec	13	11	10	6	4	5	6	7	8	11	8	8	11	N	N	N	C	11	2	0	0	0	3	1	6.3	13.1
19-Dec	0	0	0	0	0	0	0	0	1	1	2	1	0	0	1	1	1	2	0	1	0	1	0	1	0.6	1.8
20-Dec	0	1	1	5	2	1	1	1	3	5	4	7	5	4	4	3	6	5	0	0	0	1	0	1	2.5	7.2
21-Dec	4	0	0	1	1	0	3	0	0	1	1	1	0	0	1	0	1	2	1	1	1	2	1	1	1.0	4.0
22-Dec	1	2	0	2	0	2	2	3	2	2	4	3	5	12	6	4	5	5	4	5	6	3	3	3	3.6	12.4
23-Dec	4	4	5	5	4	4	5	6	5	5	8	9	9	9	9	11	11	12	8	9	6	5	6	9	7.0	11.7
24-Dec	13	3	4	4	4	4	4	4	4	5	7	6	8	8	8	6	5	4	5	6	6	8	9	8	6.0	13.1
25-Dec	6	4	5	7	4	3	4	6	4	3	4	4	11	6	4	5	5	4	3	4	5	6	5	5	4.9	11.4
26-Dec	4	7	6	5	4	2	4	4	5	6	9	12	8	4	8	5	5	7	5	3	4	5	6	6	5.6	12.1
27-Dec	5	5	6	5	6	7	8	9	7	9	10	9	5	6	2	2	2	2	2	4	6	4	5	6	5.4	10.0
28-Dec	5	4	1	0	0	0	2	1	2	4	5	5	12	6	5	5	5	6	6	6	8	9	18	19	5.6	18.8
29-Dec	18	16	15	12	15	15	13	8	16	12	7	8	7	6	7	5	1	1	0	0	1	0	2	1	7.8	17.9
30-Dec	1	2	1	0	1	0	1	1	0	1	1	3	0	0	1	1	3	3	3	2	4	3	3	4	1.8	4.3
31-Dec	2	7	3	3	3	2	2	3	2	2	2	1	0	0	3	14	3	4	2	0	2	2	10	2	3.2	13.6
	5.3	4.6	4.1	3.9	3.4	3.3	3.7	3.7	3.6	4.5	5.3	6.2	5.6	5.3	5.4	5.2	5.3	5.7	5.0	5.0	5.3	5.7	6.5	5.6		Diurnal Average
	17.9	16.4	15.1	13.6	15.2	15.4	14.3	14.4	16.0	14.3	24.4	26.7	33.0	41.9	30.9	21.9	32.1	29.9	29.9	29.7	31.8	29.7	26.7	18.8		Diurnal Maximum

C - Calibration N - Not Valid
 Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³

Hourly Averages for PM_{2.5} at Evergreen Park December 2009

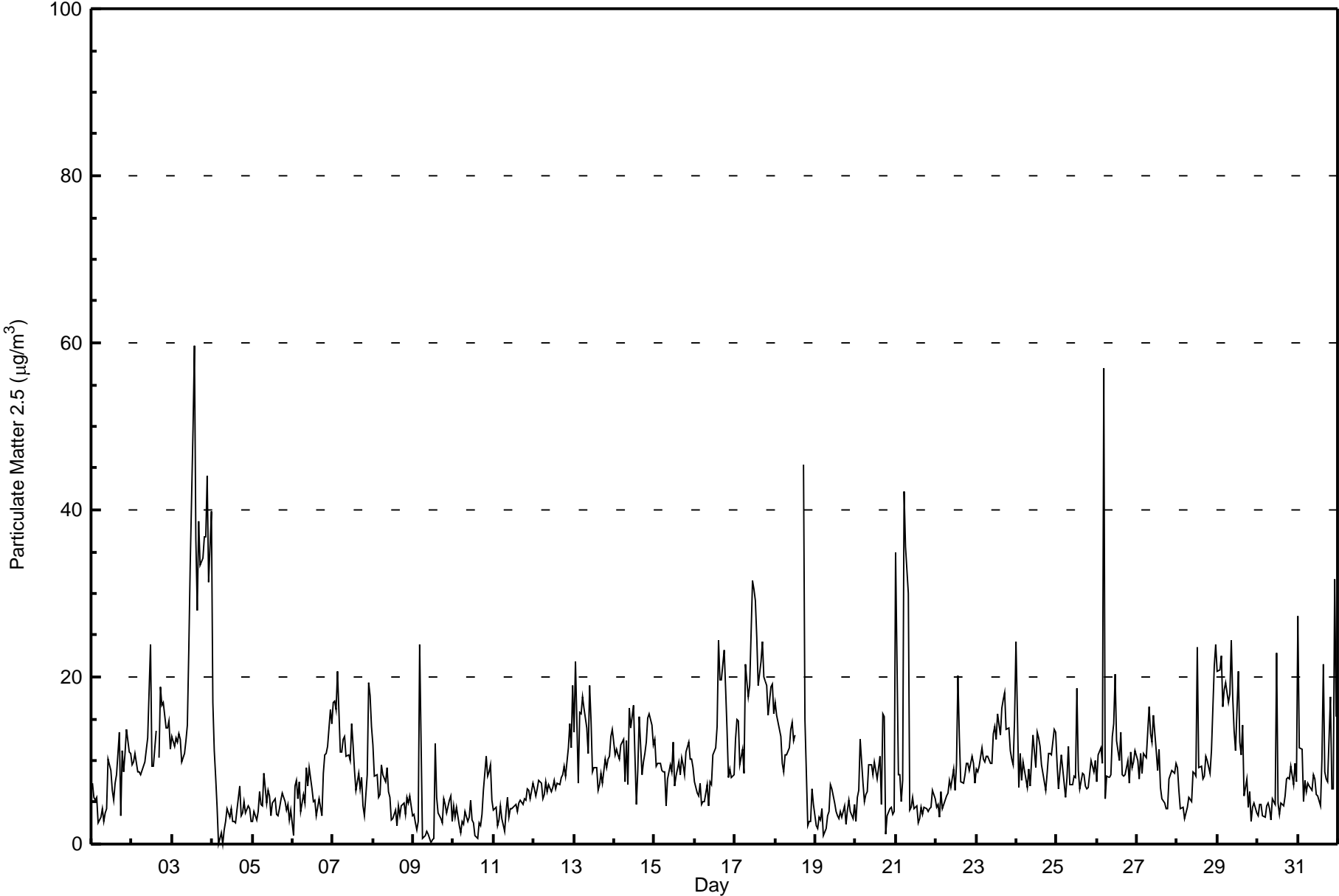


**Peace Airshed Zone Association
Summary of Hourly Maximums**

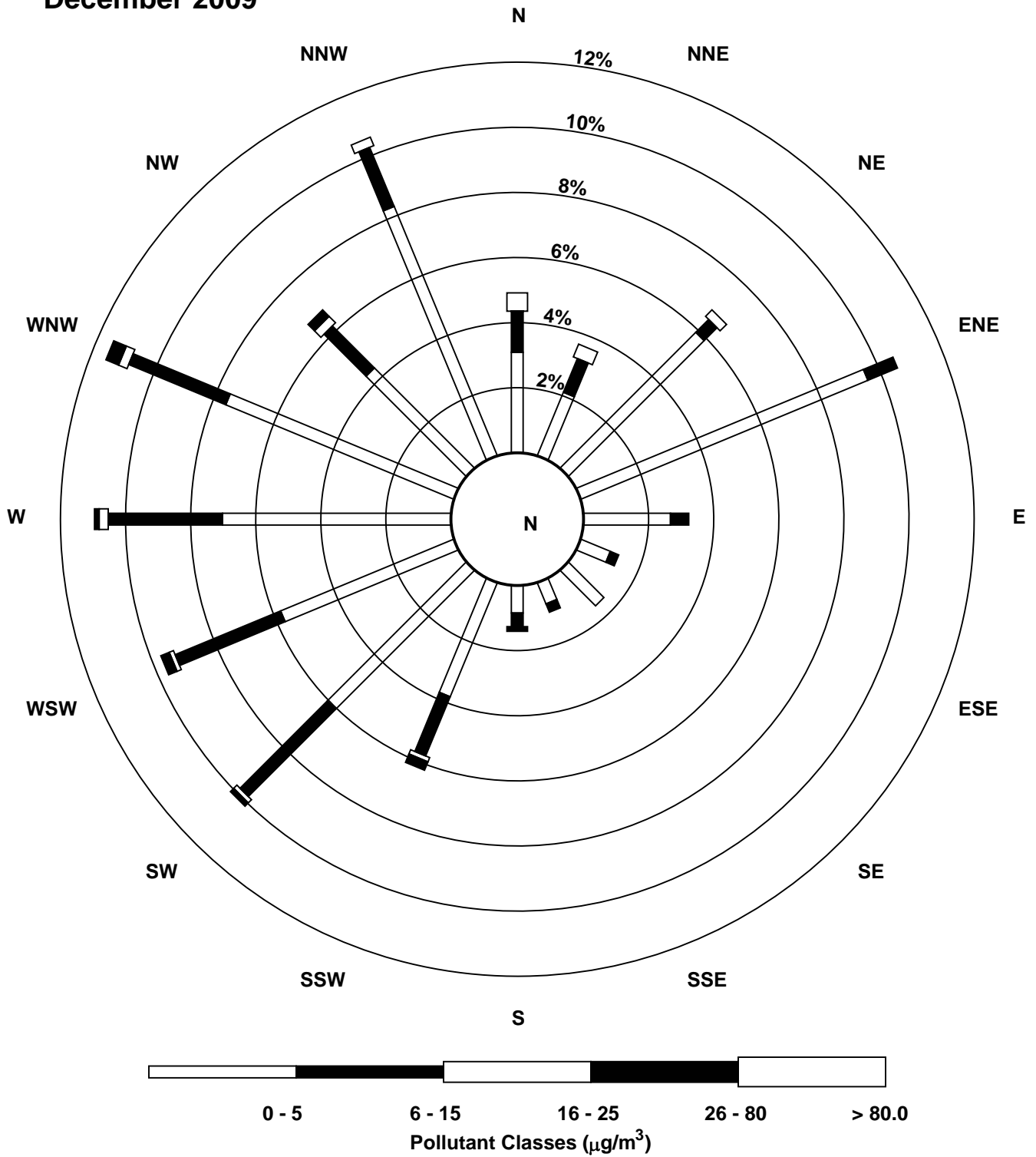
**Evergreen Park - Particulate Matter 2.5 (PM_{2.5}) - µg/m³
December 1, 2009 to January 1, 2010**

Maximum Value: 59.6 µg/m ³ on Dec 3 14:00		Maximum Daily Average: 27.0 µg/m ³ on Dec 3		Hours in Service: 744																																												
Minimum Value: 0 µg/m ³ on Dec 4 05:00		Minimum Daily Average: 3.7 µg/m ³ on Dec 19		Hours of Data: 739																																												
Maximum Diurnal Average: 11.2 µg/m ³ at hour 23		Minimum Diurnal Average: 8.0 µg/m ³ at hour 9		Hours of Missing Data: 5																																												
Monthly Average: 9.59 µg/m ³		Percentiles: P ₁ = 0.8 P ₁₀ = 3.3 Q ₁ = 4.9 Median = 8.2 Q ₃ = 11.5 P ₉₀ = 17.6 P ₉₉ = 37.6		Hours of Calibration: 2																																												
				Percent Operational Time: 99.6																																												
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Dec	7	6	5	6	3	3	4	3	4	4	10	9	7	5	7	8	13	3	11	9	11	14	11	11	7.2	13.7																						
2-Dec	10	10	11	9	9	8	9	9	10	13	18	24	9	9	14	C	10	19	17	17	14	14	15	11	12.5	23.8																						
3-Dec	13	12	13	12	13	12	10	11	12	14	23	33	50	60	37	28	39	33	34	37	37	44	31	40	27.0	59.6																						
4-Dec	17	11	8	4	0	1	0	2	3	4	3	4	3	3	3	4	7	3	4	5	4	5	4	3	4.3	17.0																						
5-Dec	3	4	3	4	6	5	5	8	5	6	6	3	5	5	4	3	4	5	6	5	4	5	3	4	4.6	8.4																						
6-Dec	1	7	8	5	7	4	6	5	9	7	9	7	5	5	3	4	5	3	8	11	11	12	16	14	7.3	16.0																						
7-Dec	17	17	16	21	11	11	13	13	11	11	10	14	12	9	6	8	7	8	5	3	8	19	18	14	11.7	20.7																						
8-Dec	12	8	8	6	6	9	8	7	9	6	6	3	3	4	2	5	3	5	5	4	6	5	6	3	5.8	11.9																						
9-Dec	4	3	2	3	24	1	1	1	2	1	0	0	1	12	6	4	3	3	5	5	4	5	6	3	4.0	23.9																						
10-Dec	5	3	4	2	1	3	2	4	3	3	5	3	2	1	1	3	2	4	6	11	8	9	10	5	4.2	10.5																						
11-Dec	4	4	2	3	5	3	2	4	6	3	4	4	5	5	4	5	5	5	5	5	7	6	5	7	4.5	7.3																						
12-Dec	7	6	7	8	7	5	6	7	6	7	6	7	8	7	7	7	8	8	9	8	11	14	12	19	8.2	19.0																						
13-Dec	13	22	7	16	16	18	16	14	11	19	15	9	9	9	7	7	8	7	10	9	10	10	13	14	12.0	21.9																						
14-Dec	11	11	11	10	12	13	7	12	7	16	14	17	10	5	9	15	8	10	11	12	15	16	14	12	11.6	16.6																						
15-Dec	13	9	10	10	9	9	9	5	8	9	9	12	7	8	10	8	10	10	8	11	12	10	10	9	9.3	12.5																						
16-Dec	7	6	6	7	5	5	5	7	5	7	7	11	12	14	24	20	20	23	19	14	8	9	8	8	10.7	24.4																						
17-Dec	12	15	15	9	11	8	22	20	18	19	32	31	29	25	19	22	24	20	19	19	15	19	19	16	19.1	31.6																						
18-Dec	17	15	14	13	10	9	11	11	11	14	15	12	13	N	N	N	C	45	15	2	3	3	7	5	12.1	45.4																						
19-Dec	2	2	3	3	4	1	2	3	4	7	7	5	4	3	3	4	3	5	2	4	5	4	3	5	3.7	7.1																						
20-Dec	3	6	6	13	7	5	6	6	9	10	8	10	9	8	10	5	16	15	1	3	4	4	4	4	7.2	15.6																						
21-Dec	35	8	8	5	8	42	36	30	4	4	6	4	5	3	3	4	3	4	4	4	4	4	6	5	10.1	42.2																						
22-Dec	4	5	3	6	4	5	6	6	8	7	9	7	10	20	13	7	7	8	10	10	9	10	10	7	8.0	20.2																						
23-Dec	9	9	9	12	10	10	11	11	10	10	13	14	13	16	13	16	17	18	14	14	11	10	9	15	12.2	18.1																						
24-Dec	24	7	11	8	10	9	7	9	7	10	13	9	13	13	12	9	8	6	9	11	11	11	14	13	10.6	24.2																						
25-Dec	10	7	9	11	7	6	8	12	7	7	8	8	19	9	7	8	8	7	7	7	10	9	9	10	8.6	18.6																						
26-Dec	7	11	12	10	57	5	8	8	8	13	14	20	12	10	13	8	8	8	10	7	11	9	10	11	12.2	56.9																						
27-Dec	10	8	11	8	11	10	13	16	13	12	15	11	9	11	7	5	5	4	4	8	8	9	8	10	9.5	16.5																						
28-Dec	9	6	4	4	3	4	4	6	5	9	8	8	23	9	9	8	8	10	10	9	11	16	21	24	9.6	24.0																						
29-Dec	21	21	23	16	18	19	17	18	24	18	14	11	21	12	11	14	6	8	4	6	3	4	5	4	13.2	24.4																						
30-Dec	3	5	5	3	3	5	5	4	3	5	5	23	5	4	5	5	6	8	8	8	9	7	10	7	6.3	22.8																						
31-Dec	27	12	11	5	8	6	7	7	6	8	8	6	6	5	10	22	9	8	7	18	7	7	32	15	10.6	31.6																						
																								10.8	8.8	8.5	8.1	9.8	8.2	8.5	9.0	8.0	9.2	10.3	10.9	10.8	10.3	9.3	9.3	9.4	10.5	9.3	9.5	9.4	10.5	11.2	10.6	Diurnal Average
																								34.9	21.9	22.5	20.7	56.9	42.2	35.5	29.9	24.4	19.0	31.6	33.3	49.6	59.6	36.5	27.9	38.7	45.4	34.2	36.9	36.7	44.0	31.6	39.8	Diurnal Maximum
C - Calibration																								N - Not Valid																								

Hourly Maximums for PM_{2.5} at Evergreen Park December 2009



Pollutant Rose for PM_{2.5} at Evergreen Park December 2009

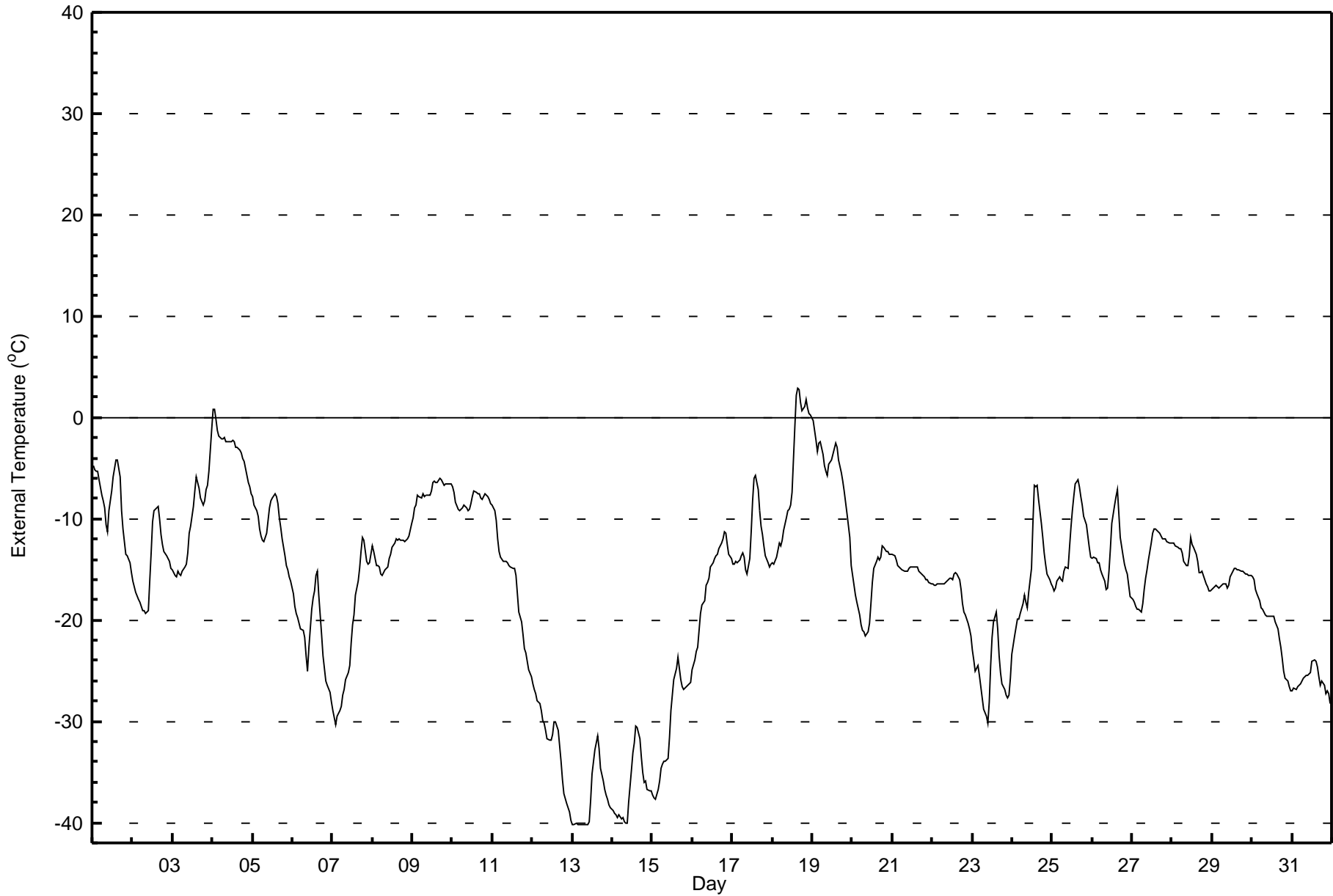


**Peace Airshed Zone Association
Summary of Hourly Averages**

**Evergreen Park - External Temperature (ET) - °C
December 1, 2009 to January 1, 2010**

Maximum Value: 2.8 °C on Dec 18 16:00		Maximum Daily Average: -2.9 °C on Dec 4		Hours in Service: 744																							
Minimum Value: -40 °C on Dec 13 06:00		Minimum Daily Average: -37.6 °C on Dec 13		Hours of Data: 744																							
Maximum Diurnal Average: -13.2 °C at hour 15		Minimum Diurnal Average: -18.4 °C at hour 9		Hours of Missing Data: 0																							
Monthly Average: -16.70 °C		Percentiles: P ₁ = -40.1 P ₁₀ = -30.3 Q ₁ = -21.2 Median = -15.1 Q ₃ = -10.8 P ₉₀ = -6.4 P ₉₉ = 0.7		Hours of Calibration: 0																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Dec	-5	-5	-5	-5	-6	-8	-8	-9	-11	-11	-9	-7	-6	-5	-4	-4	-6	-9	-11	-12	-13	-14	-14	-15	-8.5	-4.2	
2-Dec	-16	-17	-17	-18	-18	-19	-19	-19	-19	-19	-16	-13	-10	-9	-9	-9	-10	-12	-12	-13	-14	-14	-14	-15	-14.7	-8.8	
3-Dec	-15	-16	-16	-15	-15	-16	-15	-15	-15	-13	-11	-9	-7	-6	-6	-7	-8	-9	-8	-7	-7	-5	-1	-10.6	-1.1		
4-Dec	1	1	0	-1	-2	-2	-2	-2	-2	-2	-2	-2	-2	-3	-3	-3	-4	-4	-4	-5	-6	-7	-7	-2.9	0.8		
5-Dec	-8	-9	-9	-10	-11	-12	-12	-12	-11	-10	-9	-8	-8	-7	-8	-8	-10	-11	-12	-14	-15	-15	-16	-16	-10.9	-7.5	
6-Dec	-17	-19	-19	-20	-20	-21	-21	-22	-23	-25	-23	-19	-18	-17	-16	-15	-18	-21	-24	-25	-26	-26	-27	-28	-21.2	-15.2	
7-Dec	-29	-30	-30	-30	-29	-29	-27	-27	-26	-25	-24	-22	-20	-19	-18	-16	-15	-13	-12	-12	-14	-15	-14	-13	-21.3	-11.9	
8-Dec	-13	-13	-15	-15	-15	-15	-16	-15	-15	-15	-14	-13	-13	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-11	-13.2	-10.5	
9-Dec	-10	-9	-9	-8	-8	-8	-8	-8	-8	-8	-8	-7	-6	-6	-6	-6	-6	-6	-6	-7	-7	-7	-7	-7	-7.2	-6.0	
10-Dec	-7	-7	-8	-9	-9	-9	-9	-9	-9	-9	-9	-8	-8	-7	-7	-7	-8	-8	-8	-8	-8	-8	-8	-9	-8.2	-6.8	
11-Dec	-9	-9	-10	-12	-13	-14	-14	-14	-14	-14	-15	-15	-15	-15	-16	-17	-19	-20	-21	-23	-23	-24	-25	-26	-16.6	-8.7	
12-Dec	-26	-27	-27	-28	-28	-29	-30	-30	-31	-32	-32	-32	-31	-30	-30	-31	-32	-34	-36	-37	-38	-39	-39	-40	-32.0	-26.3	
13-Dec	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-38	-35	-33	-32	-32	-33	-35	-36	-37	-37	-38	-38	-39	-37.6	-31.5	
14-Dec	-39	-39	-39	-39	-39	-40	-40	-40	-40	-40	-38	-35	-33	-32	-30	-31	-32	-34	-35	-36	-36	-37	-37	-37	-36.5	-30.4	
15-Dec	-37	-38	-38	-37	-36	-35	-34	-34	-34	-34	-32	-29	-27	-26	-25	-24	-25	-26	-27	-27	-27	-26	-26	-26	-30.3	-23.6	
16-Dec	-25	-24	-23	-23	-21	-19	-19	-18	-17	-16	-16	-15	-14	-14	-14	-14	-13	-12	-12	-11	-11	-13	-14	-14	-16.3	-11.2	
17-Dec	-14	-15	-14	-14	-14	-14	-13	-14	-15	-15	-14	-11	-8	-6	-6	-7	-9	-11	-12	-13	-14	-14	-15	-15	-12.4	-5.7	
18-Dec	-14	-14	-14	-13	-12	-13	-12	-11	-10	-9	-9	-9	-7	-1	2	3	3	1	1	1	2	1	0	0	-5.6	2.8	
19-Dec	0	-1	-2	-3	-3	-2	-4	-5	-5	-6	-5	-4	-4	-3	-3	-3	-4	-5	-6	-7	-8	-9	-12	-15	-5.0	-0.3	
20-Dec	-16	-17	-18	-18	-19	-20	-21	-21	-22	-21	-20	-18	-16	-15	-14	-14	-14	-14	-13	-13	-13	-13	-14	-14	-16.6	-12.7	
21-Dec	-14	-14	-14	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15	-16	-16	-16	-16	-16	-16	-15.1	-13.6	
22-Dec	-16	-17	-17	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-15	-16	-16	-17	-18	-19	-19	-20	-21	-22	-17.1	-15.3
23-Dec	-23	-24	-25	-24	-25	-27	-28	-29	-30	-30	-28	-24	-22	-20	-19	-21	-24	-25	-26	-27	-27	-28	-27	-26	-25.4	-19.2	
24-Dec	-23	-22	-21	-20	-20	-19	-18	-18	-18	-19	-17	-15	-11	-7	-7	-7	-8	-10	-12	-13	-15	-15	-16	-16	-15.3	-6.6	
25-Dec	-17	-17	-17	-16	-16	-16	-16	-15	-15	-15	-13	-11	-9	-8	-7	-6	-7	-8	-9	-10	-11	-12	-13	-14	-12.3	-6.1	
26-Dec	-14	-14	-14	-14	-14	-15	-15	-16	-17	-17	-15	-13	-10	-9	-8	-7	-10	-12	-14	-14	-15	-16	-17	-18	-13.7	-7.1	
27-Dec	-18	-18	-19	-19	-19	-19	-18	-17	-16	-15	-14	-12	-11	-11	-11	-11	-11	-12	-12	-12	-12	-12	-12	-12	-14.4	-11.0	
28-Dec	-12	-12	-13	-13	-13	-13	-13	-14	-15	-15	-14	-12	-12	-12	-13	-13	-14	-15	-15	-15	-16	-16	-17	-17	-14.2	-11.8	
29-Dec	-17	-17	-17	-17	-17	-17	-16	-16	-16	-17	-17	-16	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15	-16	-16	-15.9	-14.8	
30-Dec	-16	-16	-17	-17	-18	-19	-19	-19	-20	-20	-20	-20	-20	-20	-20	-20	-21	-22	-23	-24	-25	-26	-26	-27	-20.8	-15.8	
31-Dec	-27	-27	-27	-27	-26	-26	-26	-26	-25	-25	-25	-25	-24	-24	-24	-25	-26	-26	-26	-26	-27	-27	-27	-28	-26.0	-24.0	
		-17.3	-17.5	-17.9	-18.0	-18.1	-18.2	-18.3	-18.3	-18.4	-18.4	-17.4	-16.0	-14.8	-13.7	-13.2	-13.3	-14.2	-15.2	-15.9	-16.5	-17.0	-17.4	-17.8	-18.0	Diurnal Average	
		0.8	0.8	-0.2	-1.3	-1.9	-2.1	-2.1	-2.0	-2.4	-2.4	-2.4	-2.3	-2.3	-0.9	2.2	2.8	2.7	1.5	0.7	1.1	1.8	0.9	0.4	0.2	Diurnal Maximum	

Hourly Averages for External Temperature at Evergreen Park December 2009

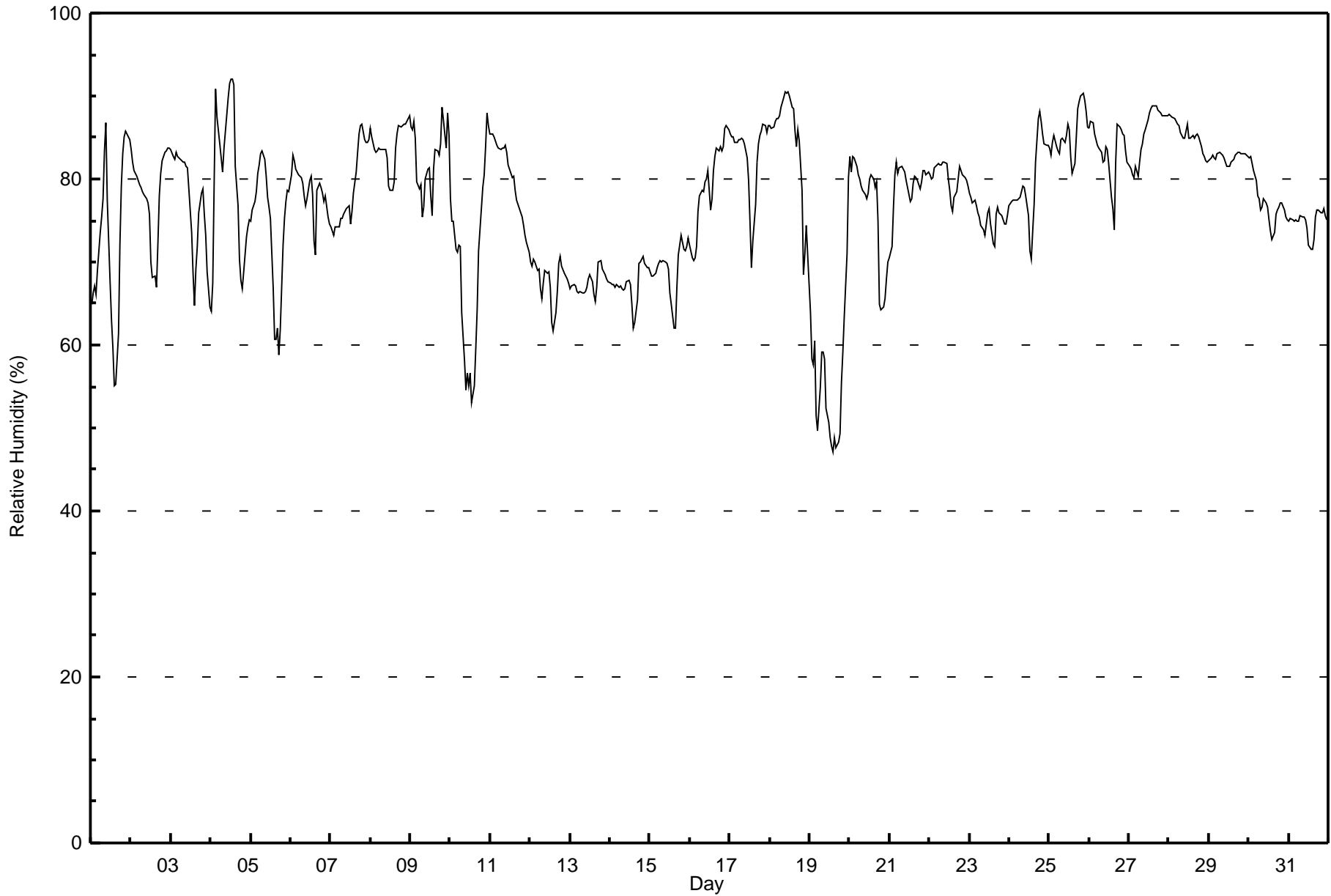


**Peace Airshed Zone Association
Summary of Hourly Averages**

**Evergreen Park - Relative Humidity (RH) - %
December 1, 2009 to January 1, 2010**

Maximum Value: 92.1 % on Dec 4 13:00		Maximum Daily Average: 85.5 % on Dec 27		Hours in Service: 744																						
Minimum Value: 47 % on Dec 19 15:00		Minimum Daily Average: 56.0 % on Dec 19		Hours of Data: 744																						
Maximum Diurnal Average: 78.8 % at hour 23		Minimum Diurnal Average: 73.1 % at hour 15		Hours of Missing Data: 0																						
Monthly Average: 77.21 %		Percentiles: P ₁ = 49.7 P ₁₀ = 66.7 Q ₁ = 71.9 Median = 78.8 Q ₃ = 83.4 P ₉₀ = 86.2 P ₉₉ = 90.4		Hours of Calibration: 0																						
				Percent Operational Time: 100.0																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	65	66	67	66	69	74	75	78	83	87	78	68	63	60	55	55	61	72	79	83	85	86	85	85	72.7	86.7
2-Dec	84	82	81	80	80	79	79	79	78	78	77	76	70	68	68	67	72	78	81	82	83	83	84	84	78.0	83.7
3-Dec	84	83	82	83	83	83	82	82	82	82	81	79	74	69	65	69	72	76	78	79	76	73	69	65	77.0	83.6
4-Dec	64	67	79	91	87	84	83	81	84	86	90	92	92	92	91	81	77	70	68	67	69	73	74	75	79.9	92.1
5-Dec	75	76	77	78	81	82	83	83	82	80	78	77	75	67	61	61	62	59	62	72	75	77	79	78	74.2	83.4
6-Dec	81	83	82	81	81	81	80	80	78	77	78	80	80	78	73	71	79	79	79	78	77	78	75	75	78.5	82.9
7-Dec	74	74	73	74	74	74	75	75	76	76	77	77	75	76	78	81	83	85	87	87	85	84	84	85	78.7	86.5
8-Dec	86	85	84	83	83	84	84	84	83	84	82	79	79	79	80	84	85	86	86	86	87	87	87	88	83.9	87.6
9-Dec	86	86	87	85	80	79	79	75	77	80	81	81	78	76	81	84	83	83	84	89	87	84	88	85	82.4	88.7
10-Dec	78	75	75	72	71	72	72	64	58	55	57	55	57	53	55	59	64	71	74	79	81	84	88	86	68.9	88.0
11-Dec	85	85	85	85	84	84	84	84	84	84	83	82	81	80	80	79	77	76	76	75	74	73	72	71	80.2	85.5
12-Dec	70	70	70	70	69	69	67	66	67	69	69	67	63	62	64	66	70	71	69	69	68	68	68	67	67.8	70.7
13-Dec	67	67	67	67	66	66	66	66	66	66	67	68	68	68	66	65	67	70	70	69	69	69	68	68	67.4	70.2
14-Dec	67	67	67	67	67	67	67	67	67	67	68	68	67	65	62	63	65	70	70	70	71	70	69	69	67.4	70.7
15-Dec	69	68	68	69	69	70	70	70	70	70	70	69	66	65	62	62	67	71	72	73	72	71	72	73	69.1	73.1
16-Dec	72	71	70	71	72	76	78	79	79	80	80	81	76	78	81	83	84	83	84	83	84	86	86	86	79.2	86.5
17-Dec	85	85	85	84	84	85	85	85	85	84	83	80	75	69	73	77	82	84	85	86	87	86	86	86	82.8	86.7
18-Dec	86	86	86	87	87	87	88	89	90	90	90	90	90	89	88	86	84	86	85	79	68	71	74	71	84.5	90.4
19-Dec	64	58	58	60	52	50	55	59	59	58	52	51	49	48	47	49	48	48	49	55	59	63	71	80	56.0	80.1
20-Dec	83	81	83	83	81	81	80	79	79	78	78	80	80	80	79	80	75	65	64	65	66	68	70	70	76.4	82.8
21-Dec	70	72	77	81	82	81	81	82	81	81	80	79	77	78	79	80	80	80	79	80	81	81	80	81	79.3	82.0
22-Dec	80	80	80	81	82	82	82	82	82	82	80	79	77	76	78	79	80	82	81	81	80	80	79	80	80.2	82.1
23-Dec	78	78	77	77	77	76	75	74	74	73	75	76	77	75	72	72	76	77	76	76	75	75	76	76	75.4	78.2
24-Dec	77	77	78	77	77	77	78	79	79	79	78	76	71	70	74	77	82	87	88	87	85	84	84	84	79.4	88.1
25-Dec	84	83	84	85	84	83	83	85	85	84	85	87	86	83	81	82	85	89	89	90	90	90	88	86	85.5	90.4
26-Dec	86	87	87	85	85	84	84	83	82	82	84	84	82	78	76	74	82	87	86	86	85	85	83	82	83.3	86.9
27-Dec	82	81	81	80	81	80	82	83	84	85	86	87	88	88	89	89	89	88	88	88	88	88	88	88	85.5	88.7
28-Dec	88	88	87	87	87	87	86	86	85	85	86	87	85	85	85	85	85	86	85	84	83	83	82	82	85.3	87.7
29-Dec	82	83	83	83	82	83	83	83	83	82	82	82	81	82	82	83	83	83	83	83	83	83	83	83	82.6	83.3
30-Dec	83	83	82	81	80	78	78	76	77	78	77	77	75	74	73	74	76	76	77	77	77	76	75	75	77.2	82.7
31-Dec	75	75	75	75	75	75	75	76	75	75	75	74	72	71	71	73	75	76	76	76	76	76	75	75	74.8	76.5
		77.7	77.5	78.0	78.4	77.9	77.8	78.0	77.8	77.9	78.0	77.6	76.9	75.3	73.6	73.1	73.6	75.8	77.5	77.9	78.5	78.3	78.5	78.8	78.6	Diurnal Average
		87.7	87.5	87.4	90.9	87.5	87.2	87.7	88.6	89.8	90.4	90.4	91.5	92.1	92.0	91.4	88.7	88.7	88.5	89.4	89.9	90.4	89.6	88.1	87.6	Diurnal Maximum

Hourly Averages for Relative Humidity at Evergreen Park December 2009



**Peace Airshed Zone Association
Summary of Hourly Averages**

Evergreen Park
December 1, 2009 to January 1, 2010
WS (km/h), WD (deg)

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 Spd	8	7	7	9	5	4	3	1	0	0	2	5	7	7	4	2	0	1	0	0	1	2	1	1	2.8	9.4
Dir	286	291	289	286	317	329	329	346	42	213	258	277	279	278	296	358	332	46	296	123	260	231	23	19	292.9	286.0
2 Spd	0	1	0	1	0	0	0	1	1	1	1	1	1	2	3	2	1	1	1	1	1	1	1	1	0.3	2.7
Dir	146	234	59	215	232	250	312	200	228	211	208	40	237	9	24	69	27	335	322	289	280	247	230	208	306.7	24.3
3 Spd	1	1	0	1	1	1	2	1	1	1	2	2	1	2	2	1	0	1	1	1	1	3	3	7	1.1	6.9
Dir	210	219	234	284	215	223	208	217	70	39	212	219	280	320	321	253	256	203	187	302	286	202	257	272	247.8	272.4
4 Spd	11	12	11	13	17	14	12	14	16	15	14	15	14	15	19	19	18	20	17	13	7	6	6	6	13.0	20.2
Dir	278	291	303	318	336	335	329	328	338	337	339	338	335	336	342	344	345	344	340	342	341	304	297	292	330.8	344.0
5 Spd	7	7	6	7	6	4	3	3	3	5	6	5	7	4	6	5	7	7	7	5	6	4	4	5	4.3	7.4
Dir	285	288	295	295	269	269	260	262	270	321	341	321	345	13	37	30	17	5	357	332	334	318	321	322	324.0	288.2
6 Spd	1	3	3	2	3	2	1	1	1	1	1	1	3	4	3	2	1	1	1	0	1	1	0	0	1.1	3.7
Dir	309	286	270	271	261	249	257	268	205	215	221	268	286	267	216	194	136	44	29	76	192	357	52	160	258.3	267.2
7 Spd	0	1	1	1	2	1	1	1	1	3	4	4	5	4	6	4	3	5	3	1	1	2	1	1	1.8	5.7
Dir	197	225	49	341	213	200	297	312	285	211	215	265	236	228	262	258	222	281	287	32	74	214	217	225	247.7	262.4
8 Spd	2	3	1	1	1	4	0	2	1	2	6	5	4	3	1	1	0	1	0	0	0	1	1	3	0.9	5.5
Dir	350	66	78	136	200	214	42	251	148	212	259	274	279	289	312	235	89	111	129	86	143	223	282	322	263.9	258.6
9 Spd	3	7	4	8	16	12	10	14	15	12	9	8	10	13	7	4	5	4	4	5	7	8	9	10	8.3	16.4
Dir	322	333	306	326	337	338	339	338	340	337	330	337	338	343	330	305	296	293	330	319	299	318	318	334	330.2	337.4
10 Spd	13	13	11	13	12	9	11	11	10	7	7	7	6	8	9	5	1	1	5	3	6	8	4	3	5.4	13.3
Dir	344	353	338	323	327	301	296	301	302	288	280	255	245	234	221	206	163	36	250	335	355	355	21	35	308.2	323.3
11 Spd	1	5	5	5	3	2	2	1	1	2	3	4	4	5	4	7	6	6	8	9	8	9	9	9	4.7	9.5
Dir	338	358	40	65	71	74	68	120	117	77	60	60	61	64	62	71	74	71	64	68	69	65	64	69	63.9	64.0
12 Spd	7	8	9	7	5	6	6	5	3	2	3	3	3	2	2	2	0	1	2	2	2	3	N	N	3.2	8.5
Dir	67	63	55	63	60	58	68	72	70	72	67	71	73	54	23	29	43	245	221	94	270	253	N	N	61.9	54.9
13 Spd	0	N	N	2	1	1	2	4	4	2	1	4	4	3	4	2	1	1	2	N	N	N	N	N	--	4.4
Dir	248	N	N	291	235	229	276	232	228	231	19	280	269	278	290	315	30	223	216	N	N	N	N	N	--	280.4
14 Spd	N	N	N	N	N	N	N	N	N	N	3	1	2	4	2	2	1	0	0	1	N	N	N	N	--	3.7
Dir	N	N	N	N	N	N	N	N	N	N	237	317	311	277	307	333	11	95	81	346	N	N	N	N	--	277.5
15 Spd	N	N	N	N	2	1	3	1	3	3	0	1	3	1	1	1	2	1	0	3	2	2	1	2	1.0	3.4
Dir	N	N	N	N	238	288	226	198	212	218	164	239	218	349	289	320	55	63	19	226	299	280	221	214	236.2	226.5
16 Spd	2	1	1	4	2	1	3	4	0	1	1	1	4	1	1	3	1	2	3	2	1	1	1	1	1.2	4.1
Dir	214	274	240	215	334	92	205	233	186	114	68	217	227	264	15	297	308	262	235	282	242	202	241	188	236.9	214.9
17 Spd	1	2	1	2	2	3	3	1	2	2	1	1	1	1	1	2	1	1	1	0	1	1	0	0	0.7	3.3
Dir	254	252	273	218	233	225	243	61	203	221	23	295	11	330	351	358	314	5	295	290	279	266	317	348	261.8	242.9
18 Spd	1	1	1	0	0	1	1	1	1	2	2	3	5	7	8	8	9	1	4	10	13	11	9	10	4.3	13.2
Dir	255	267	282	263	214	230	66	337	260	279	256	260	284	248	229	237	233	256	244	245	245	240	262	260	248.7	245.0
19 Spd	10	8	3	3	9	9	4	3	4	5	7	5	8	11	13	10	11	10	9	7	6	2	1	0	6.3	12.7
Dir	261	256	222	214	267	270	258	239	279	290	271	258	273	269	282	284	287	284	281	269	261	354	37	168	271.9	282.3
20 Spd	1	1	1	0	1	1	1	1	1	1	1	0	2	3	3	3	2	4	4	5	6	6	5	5	1.8	6.2
Dir	31	199	213	256	229	219	1	203	32	186	32	32	45	40	69	70	184	69	77	73	69	67	71	74	70.8	68.6
21 Spd	6	6	7	7	7	7	6	6	5	6	5	5	6	7	7	5	6	5	5	5	5	4	5	4	5.5	7.4
Dir	78	76	85	70	66	63	66	60	53	51	47	39	44	48	46	43	46	49	49	48	46	49	47	43	55.5	63.4
22 Spd	3	2	2	1	1	2	4	4	3	3	4	5	7	6	6	7	5	5	5	3	3	5	4	1	3.2	7.0
Dir	38	28	37	52	221	232	253	259	265	291	296	280	283	281	287	291	282	280	268	268	270	278	283	286	282.1	291.0

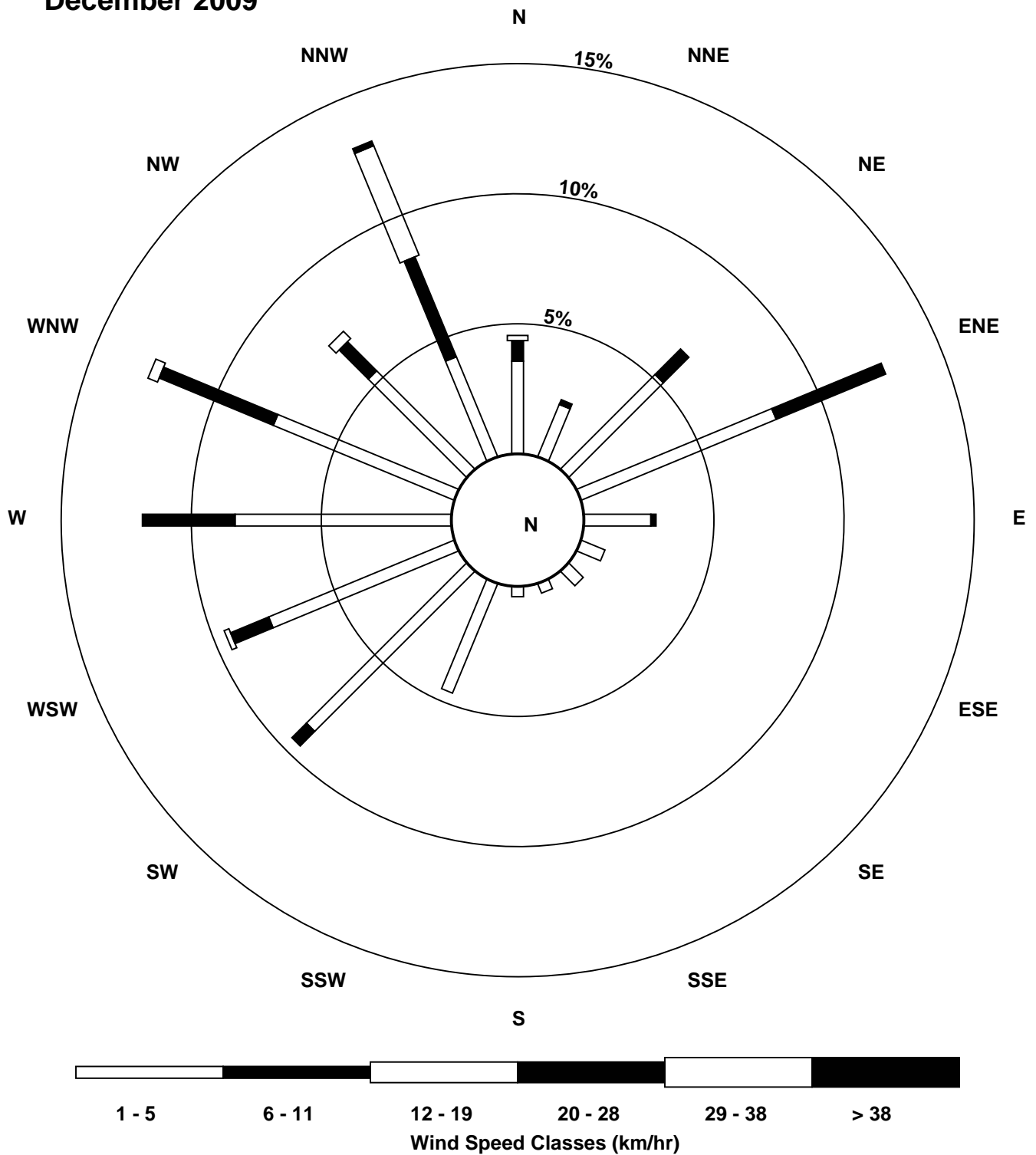
**Peace Airshed Zone Association
Summary of Hourly Averages**

Evergreen Park
December 1, 2009 to January 1, 2010
WS (km/h), WD (deg)

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			
23 Spd	1	1	2	2	2	1	2	1	1	0	1	1	1	2	1	2	2	1	1	1	1	0	0	1	0.6	1.9	
Dir	240	193	220	219	200	143	207	235	173	242	353	27	313	334	319	296	324	286	273	257	256	206	334	304	266.9	334.0	
24 Spd	2	1	1	1	1	0	1	2	0	1	2	1	1	0	2	0	1	0	1	1	0	0	1	1	0.5	2.0	
Dir	282	291	344	276	252	320	225	239	79	209	223	241	229	291	257	200	68	306	59	51	358	23	258	238	257.7	256.9	
25 Spd	1	0	1	1	1	1	0	1	0	1	1	1	2	1	3	0	1	1	1	1	1	1	1	1	0.6	3.4	
Dir	242	246	252	268	195	234	358	305	254	206	202	11	349	240	246	338	221	238	60	224	276	262	236	41	257.7	245.7	
26 Spd	0	2	0	1	0	1	1	1	1	1	2	0	1	1	2	1	1	1	2	1	1	2	0	0	0.6	2.4	
Dir	287	250	224	272	175	39	208	171	360	242	228	339	265	7	297	307	8	321	269	304	269	237	32	239	277.0	228.1	
27 Spd	0	1	0	1	0	0	1	1	2	3	2	0	1	2	2	3	3	2	2	1	1	1	2	2	0.4	3.1	
Dir	241	238	186	354	307	9	281	291	240	258	249	202	233	79	94	79	79	90	88	76	72	82	93	95	89.9	257.5	
28 Spd	1	1	2	2	2	1	1	1	0	0	1	0	2	5	4	3	2	1	2	2	1	0	1	0	0.5	4.9	
Dir	124	126	124	112	115	131	3	9	94	229	356	291	281	343	335	293	327	334	308	275	211	167	221	346	334.9	343.0	
29 Spd	1	1	1	1	1	2	1	2	2	3	2	2	2	1	2	2	1	1	1	1	1	1	1	0	0.6	3.1	
Dir	32	49	1	293	328	318	294	281	287	275	284	257	264	290	358	63	64	80	85	72	64	56	54	7	324.6	275.1	
30 Spd	1	3	6	7	9	9	7	8	7	6	6	7	7	7	5	5	3	3	2	3	1	0	0	0	4.7	9.0	
Dir	347	327	343	345	346	348	344	344	329	327	318	321	316	320	324	303	274	282	298	329	286	293	206	130	326.4	347.5	
31 Spd	0	0	2	1	1	1	1	1	2	2	2	2	2	4	4	3	2	1	2	1	2	2	0	2	1.2	3.7	
Dir	118	117	203	62	170	149	94	83	70	78	61	73	56	51	66	60	59	6	76	46	47	83	290	248	68.7	65.7	
Spd	1.5	1.8	1.4	1.8	2.1	1.7	1.6	1.7	1.7	1.6	1.7	2.0	2.5	2.6	2.3	1.7	1.4	1.6	1.4	1.2	1.2	1.0	1.0	1.0	Diurnal Average		
Dir	306.4	320.3	328.7	322.7	321.3	317.7	310.0	310.8	317.4	305.9	306.7	306.6	305.2	313.5	315.9	326.6	331.8	338.1	324.1	331.2	317.9	307.4	328.1	320.6	Diurnal Maximum		
Spd	12.6	13.3	11.2	13.3	16.5	14.0	12.4	14.4	16.5	15.3	14.3	14.8	13.6	15.3	19.0	18.6	18.1	20.2	17.0	13.2	13.2	11.1	9.5	9.7	Diurnal Maximum		
Dir	343.8	352.9	302.5	323.3	335.6	334.8	328.8	327.5	338.1	336.7	338.8	337.7	335.5	336.2	341.9	344.3	345.2	344.0	339.8	342.2	245.0	239.9	64.0	334.0	Diurnal Maximum		
Maximum Speed Value: 20 km/h on Dec 4 18:00																		Minimum Speed Value: 0 km/h on Dec 3 18:00						Hours in Service:		744	
Maximum Daily Speed Average: 13.0 km/h on Dec 4																		Minimum Daily Speed Average: 0.3 km/h on Dec 24						Hours of Data:		717	
Maximum Diurnal Speed Average: 2.6 km/h at hour 14																		Minimum Diurnal Speed Average: 1.0 km/h at hour 22						Hours of Missing Data:		27	
Monthly Average Velocity: 1.63 km/h 317.25 deg																		Speed Percentiles: P ₁ = 0.1 P ₁₀ = 0.5 Q ₁ = 0.9 Median = 1.9 Q ₃ = 4.8 P ₉₀ = 7.9 P ₉₉ = 16.4						Percent Operational Time:		96.4	
All monthly, daily, and diurnal averages have been calculated using vector methods																											
N - Not Valid																											
Frequency Distribution																											
		Speed Range (km/h)																									
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																				
North	46	17	15	1	0	0	79																				
NorthEast	75	27	0	0	0	0	102																				
East	51	15	0	0	0	0	66																				
SouthEast	20	0	0	0	0	0	20																				
South	31	0	0	0	0	0	31																				
SouthWest	127	7	2	0	0	0	136																				
West	120	43	5	0	0	0	168																				
NorthWest	74	27	14	0	0	0	115																				
Total	544	136	36	1	0	0	717																				

Wind Rose for WS at Evergreen Park

December 2009



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

Evergreen Park - Wind Speed (WS) - km/h
December 1, 2009 to January 1, 2010

Maximum Speed: 20 km/h on Dec 4 18:00	Maximum Daily Speed Average: 13.8 km/h on Dec 4	Hours in Service: 744
Minimum Speed: 1 km/h on Dec 2 06:00	Minimum Daily Speed Average: 1.3 km/h on Dec 23	Hours of Data: 717
Maximum Diurnal Speed Average: 4.8 km/h at hour 15	Minimum Diurnal Speed Average: 3.0 km/h at hour 24	Hours of Missing Data: 27
Monthly Average Speed: 3.71 km/h	Percentiles: P ₁ = 0.8 P ₁₀ = 1.0 Q ₁ = 1.4 Median = 2.3 Q ₃ = 5.1 P ₉₀ = 8.1 P ₉₉ = 16.7	Percent Operational Time: 96.4

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	8	7	7	10	5	4	3	2	1	1	3	5	7	7	5	2	1	1	1	1	1	2	1	1	3.6	9.5
2-Dec	1	1	1	1	1	1	1	1	1	1	1	1	2	2	3	2	2	2	2	2	1	1	1	1	1.4	3.4
3-Dec	1	1	1	1	2	1	3	2	1	1	2	2	2	2	2	2	1	2	2	2	3	4	4	7	2.2	7.0
4-Dec	11	12	12	13	17	14	13	15	17	15	15	15	14	15	19	19	18	20	17	13	8	6	6	7	13.8	20.4
5-Dec	8	8	6	7	6	4	3	4	3	5	6	6	8	4	6	6	7	7	7	5	6	4	5	5	5.7	7.6
6-Dec	2	3	3	2	3	2	2	2	1	1	1	1	4	4	3	2	2	1	1	1	1	2	1	1	1.9	4.0
7-Dec	1	1	1	2	2	2	2	1	1	3	4	4	5	4	6	4	3	6	4	3	2	2	1	1	2.7	5.8
8-Dec	3	3	2	1	1	4	1	3	2	3	6	6	4	3	2	2	1	1	1	1	1	1	2	3	2.3	5.7
9-Dec	4	7	4	8	17	12	11	14	15	13	10	8	10	13	7	4	5	4	4	5	7	8	10	10	8.8	16.5
10-Dec	13	13	11	14	13	10	11	11	10	7	7	7	6	8	9	5	2	2	5	3	6	8	4	3	7.9	13.6
11-Dec	1	6	5	6	4	3	2	2	1	2	3	4	4	5	4	7	7	7	8	9	9	9	10	9	5.2	9.6
12-Dec	7	8	9	7	5	6	7	5	3	2	4	4	3	2	3	2	2	1	3	5	2	3	N	N	4.2	8.6
13-Dec	1	N	N	3	1	1	2	4	4	2	1	5	4	3	4	2	1	1	3	N	N	N	N	N	--	4.7
14-Dec	N	N	N	N	N	N	N	N	N	N	3	1	3	4	3	2	1	1	1	2	N	N	N	N	--	4.0
15-Dec	N	N	N	N	3	2	4	1	4	3	2	1	3	2	1	1	2	1	1	3	2	3	2	3	2.2	3.6
16-Dec	3	2	2	4	2	1	4	4	1	2	2	3	4	1	2	3	2	3	3	2	1	2	2	2	2.3	4.2
17-Dec	3	2	2	2	3	3	5	2	3	4	1	2	1	1	1	2	1	1	1	1	1	1	1	1	2.0	5.3
18-Dec	1	1	1	1	2	2	1	1	1	2	2	3	5	8	8	8	9	2	4	10	13	11	10	10	5.0	13.4
19-Dec	10	8	4	4	10	10	4	4	5	5	7	5	8	12	13	10	12	10	9	8	6	4	2	1	7.1	13.2
20-Dec	1	2	1	2	1	1	1	2	1	1	1	1	2	3	4	3	2	4	4	5	6	6	5	6	2.8	6.4
21-Dec	6	6	7	7	7	8	6	6	5	6	5	5	7	7	7	6	6	5	5	5	5	4	5	4	5.8	7.6
22-Dec	3	2	3	1	1	2	4	4	4	3	4	5	7	6	6	7	5	5	5	3	4	5	4	2	4.0	7.1
23-Dec	1	1	2	2	2	2	2	1	1	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1.3	2.1
24-Dec	2	1	1	1	1	1	1	2	4	3	2	1	1	1	2	1	1	1	2	2	1	1	1	1	1.6	3.9
25-Dec	1	1	1	2	1	1	1	2	1	2	2	2	3	2	4	2	2	2	2	2	2	2	1	1	1.8	4.0
26-Dec	1	3	2	1	1	1	1	1	1	1	2	1	1	1	2	1	1	1	2	2	2	2	1	1	1.4	2.5
27-Dec	1	1	1	1	1	1	1	1	2	3	2	1	1	2	3	3	3	2	2	1	1	1	2	2	1.6	3.3
28-Dec	1	1	2	2	2	1	2	1	1	1	1	1	2	5	4	3	2	2	2	2	1	1	1	1	1.8	5.0
29-Dec	1	1	1	1	1	2	2	3	3	3	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1.5	3.1
30-Dec	1	3	6	7	9	9	7	8	7	6	6	7	8	8	8	5	5	3	3	2	3	1	1	1	5.3	9.1
31-Dec	1	1	2	1	2	1	1	1	2	2	2	2	2	4	4	4	2	1	2	1	2	3	2	2	2.0	3.9

3.4	3.9	3.6	4.0	4.2	3.7	3.6	3.6	3.6	3.6	3.5	3.6	3.6	4.3	4.7	4.8	4.0	3.6	3.3	3.5	3.4	3.4	3.5	3.1	3.0	Diurnal Average
12.7	13.4	11.8	13.6	16.8	14.3	12.7	14.8	16.7	15.5	14.5	15.1	13.8	15.5	19.2	18.7	18.3	20.4	17.2	13.4	13.4	11.1	9.6	9.9	Diurnal Maximum	

N - Not Valid
 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
December 1, 2009 to January 1, 2010**

Maximum Value: 100.0 deg on Dec 24 18:00	Hours in Service: 744
Minimum Value: 4.6 deg on Dec 18 15:00	Hours of Data: 717
Percentiles: P ₁ = 6.6 P ₁₀ = 10.4 Q ₁ = 15.1 Median = 31.6 Q ₃ = 63.2 P ₉₀ = 79.8 P ₉₉ = 94.8	Hours of Missing Data: 27
	Hours of Calibration: 0
	Percent Operational Time: 96.4

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-Dec	9	12	12	10	18	12	22	34	85	95	38	12	9	13	23	27	84	61	78	82	71	22	50	65	94.8
2-Dec	79	62	96	58	68	78	91	56	36	44	65	44	62	36	38	16	41	36	33	33	58	67	49	40	95.7
3-Dec	38	81	86	84	50	43	32	56	52	74	34	24	64	35	31	27	70	96	81	81	77	67	45	12	95.6
4-Dec	8	10	18	14	11	13	12	14	10	9	10	11	10	10	8	6	7	7	8	8	20	10	16	11	20.2
5-Dec	12	9	11	10	10	15	10	17	27	21	13	18	14	25	15	20	14	13	22	18	13	16	14	21	26.6
6-Dec	43	30	10	15	13	29	48	79	52	76	76	59	26	23	16	36	69	55	36	95	62	75	94	93	94.8
7-Dec	65	59	75	49	34	33	67	80	81	14	9	26	25	23	12	20	13	24	30	77	24	33	38	29	80.6
8-Dec	55	24	66	50	52	9	83	33	55	54	16	11	16	23	50	74	83	59	64	84	83	23	68	16	84.1
9-Dec	26	12	25	22	8	8	8	9	7	9	12	13	12	10	18	33	16	21	16	14	14	16	11	13	32.7
10-Dec	8	9	13	11	10	14	11	13	12	12	13	13	11	11	5	29	43	61	14	26	19	12	21	17	61.3
11-Dec	50	32	13	19	30	26	25	40	34	24	24	22	23	19	15	20	14	16	12	14	13	12	10	13	49.9
12-Dec	12	11	10	14	17	15	14	20	18	22	20	23	25	43	25	19	18	89	74	83	40	10	N	N	89.0
13-Dec	72	N	N	64	80	46	39	43	10	34	51	28	22	24	19	55	42	57	47	N	N	N	N	N	80.1
14-Dec	N	N	N	N	N	N	N	N	N	N	24	47	35	24	36	29	64	92	80	78	N	N	N	N	91.7
15-Dec	N	N	N	N	61	64	42	50	56	17	86	75	40	83	67	66	42	27	86	25	45	48	68	62	86.4
16-Dec	63	56	66	14	55	51	29	17	86	52	48	74	49	67	74	32	54	32	32	54	83	69	89	70	89.1
17-Dec	69	46	72	65	46	23	55	85	62	81	63	69	69	67	34	22	60	40	43	73	55	73	93	83	92.5
18-Dec	85	74	76	94	80	81	65	46	71	40	38	39	32	40	5	7	12	66	45	6	10	6	16	10	94.3
19-Dec	7	9	63	76	59	15	64	68	20	19	8	12	10	7	15	10	8	6	6	7	10	63	78	80	79.8
20-Dec	67	80	76	88	70	50	73	80	70	36	26	83	43	22	18	16	51	24	11	12	12	10	12	10	87.9
21-Dec	14	14	15	16	12	12	14	11	12	10	12	16	14	14	13	14	10	13	11	12	11	13	13	12	15.6
22-Dec	13	19	20	18	37	9	9	13	18	17	17	16	9	10	11	11	11	8	10	40	20	10	14	42	41.6
23-Dec	30	58	46	24	44	67	40	45	55	84	61	54	43	29	35	27	21	22	46	39	67	87	89	59	88.8
24-Dec	49	57	59	42	42	75	65	35	82	83	57	64	74	79	23	93	58	100	92	72	74	91	69	56	100.0
25-Dec	82	78	67	63	59	67	74	49	95	61	58	60	70	60	38	91	66	70	54	93	76	74	83	72	94.9
26-Dec	88	49	91	87	96	54	60	63	56	75	18	77	82	71	38	49	25	46	22	56	74	62	74	80	95.8
27-Dec	69	53	85	55	71	66	68	50	25	11	11	61	68	43	33	17	19	14	19	23	31	23	23	24	85.2
28-Dec	41	29	20	14	40	51	43	16	91	81	60	83	25	14	20	27	19	21	21	10	55	80	40	72	91.4
29-Dec	35	22	34	27	31	30	29	21	23	16	33	13	24	41	27	21	25	19	24	26	20	21	20	76	76.1
30-Dec	46	24	10	9	9	7	8	12	16	17	15	18	18	20	17	24	13	26	23	43	20	71	81	76	80.7
31-Dec	80	85	31	31	77	60	41	27	23	29	36	30	45	20	20	25	26	31	24	52	33	66	89	35	89.2
	87.8	84.8	95.7	94.3	95.8	81.3	90.9	84.9	94.9	94.8	86.3	82.7	82.0	82.9	74.5	93.3	84.1	100.0	91.7	94.8	83.2	91.1	93.8	93.4	

N - Not Valid

PASZA

Smoky Heights Station

Monthly Summary Tables, Graphs and Roses

**Peace Airshed Zone Association
Summary of Hourly Averages**

**Smoky Heights - Sulphur Dioxide (SO₂) - ppb
December 1, 2009 to January 1, 2010**

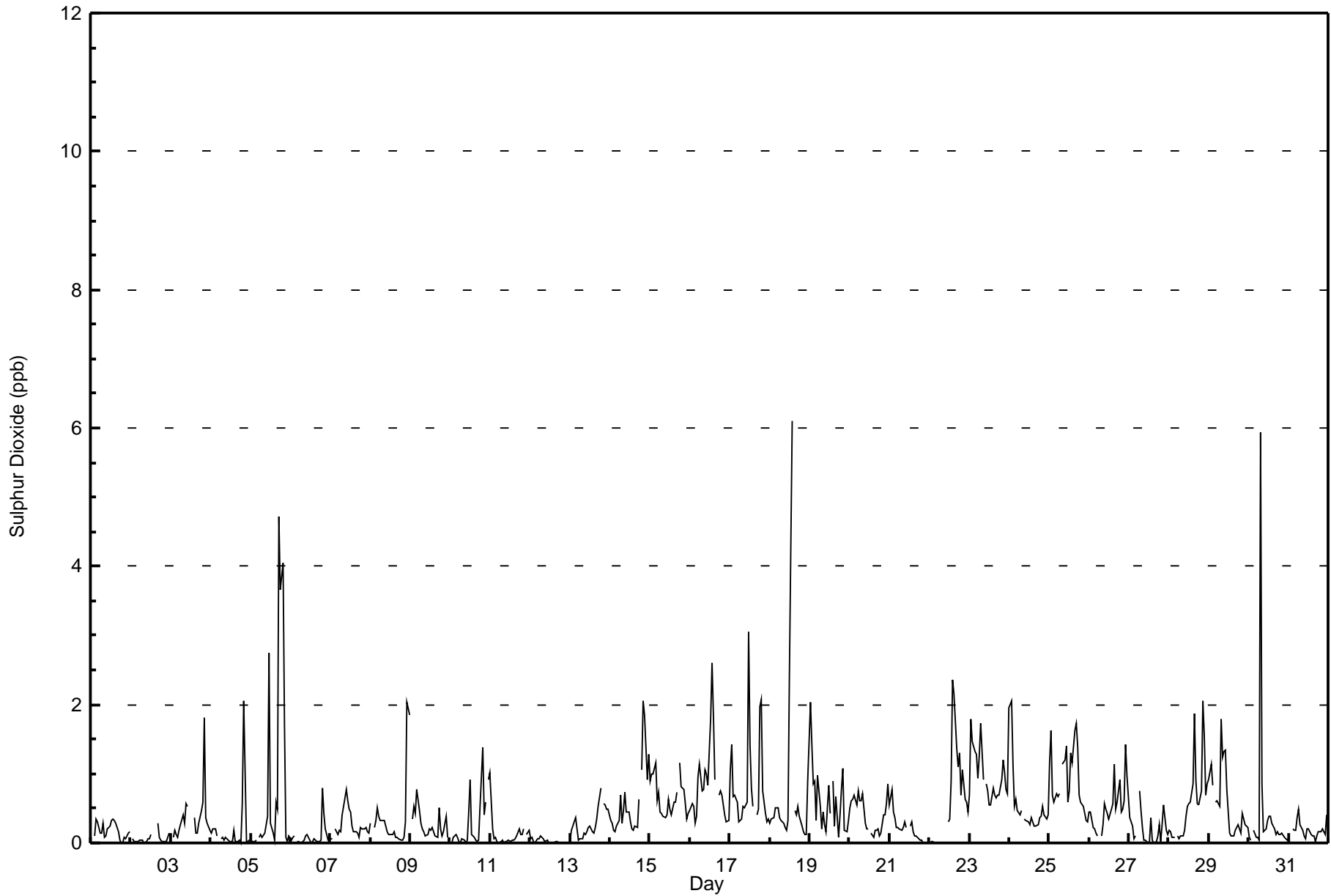
Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 6.1 ppb on Dec 18 14:00	Maximum Daily Average: 1.0 ppb on Dec 23		Hours of Data:	705
Minimum Value: 0 ppb on Dec 10 01:00	Minimum Daily Average: 0.0 ppb on Dec 12		Hours of Missing Data:	39
Maximum Diurnal Average: 0.7 ppb at hour 21	Minimum Diurnal Average: 0.3 ppb at hour 5		Hours of Calibration:	35
Monthly Average: 0.45 ppb	Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.3 Q ₃ = 0.6 P ₉₀ = 1.0 P ₉₉ = 2.6		Percent Operational Time:	99.5

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	N	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
2-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	P	P	P	0	0	0	0	0	0	0	0	0.1	0.3
3-Dec	A	0	0	0	0	0	0	0	0	1	1	C	C	C	0	0	0	0	0	1	2	0	0	0	0.4	1.8
4-Dec	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0.2	2.1
5-Dec	0	0	0	0	A	0	0	0	0	0	0	3	0	0	0	1	0	5	4	4	2	0	0	0	0.9	4.7
6-Dec	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.1	0.8
7-Dec	0	0	A	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8
8-Dec	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0.4	2.0
9-Dec	A	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.3	0.8
10-Dec	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	1	A	1	0.3	1.4
11-Dec	1	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	1.0
12-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.0	0.1
13-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	A	1	0	0	0	0.3	0.8
14-Dec	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	A	1	2	2	1	1	0.6	2.1
15-Dec	1	1	1	1	1	1	0	0	0	0	0	1	0	0	1	1	1	A	1	1	1	1	0	0	0.6	1.2
16-Dec	0	1	1	0	0	1	1	1	1	1	1	2	3	2	1	A	0	1	1	1	1	0	0	0	0.9	2.6
17-Dec	1	1	1	1	1	0	0	0	1	1	1	3	1	1	1	A	0	0	2	2	1	0	0	0	0.9	3.0
18-Dec	0	0	0	1	1	0	0	0	0	0	0	0	2	6	A	0	0	1	0	0	0	0	0	1	0.7	6.1
19-Dec	2	1	1	1	0	1	1	0	0	0	1	0	A	1	0	1	0	0	0	1	1	0	0	0	0.6	2.0
20-Dec	1	1	1	1	1	1	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	1	1	0.4	0.9
21-Dec	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8
22-Dec	0	0	0	0	0	0	0	0	0	0	0	A	0	1	2	2	1	1	1	1	1	1	1	0	0.6	2.4
23-Dec	1	2	1	1	1	1	1	2	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.8
24-Dec	2	2	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.6	2.1
25-Dec	1	2	1	1	1	1	1	A	1	1	1	1	1	1	1	2	2	1	1	1	1	0	0	0	0.9	1.7
26-Dec	0	0	0	0	0	0	A	0	0	1	0	0	0	0	1	1	0	1	1	0	0	1	1	1	0.5	1.4
27-Dec	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.2	0.7
28-Dec	0	0	0	0	A	0	0	0	0	0	0	1	1	1	2	1	1	1	1	1	2	2	1	1	0.6	2.0
29-Dec	1	1	1	A	1	1	1	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.6	1.8
30-Dec	0	0	A	0	0	0	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	5.9
31-Dec	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5

0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.5	0.4	0.3	0.4	0.5	0.5	0.6	0.4	0.4	0.3	0.5	0.5	0.6	0.7	0.4	0.4	0.4	Diurnal Average	
2.0	2.1	1.5	1.3	1.3	1.0	1.3	5.9	1.2	1.3	1.4	3.0	2.4	6.1	2.4	2.2	1.7	4.7	3.7	4.1	2.1	1.9	2.0	1.9	Diurnal Maximum	

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

Hourly Averages for SO₂ at Smoky Heights December 2009



**Peace Airshed Zone Association
Summary of Hourly Maximums**

**Smoky Heights - Sulphur Dioxide (SO₂) - ppb
December 1, 2009 to January 1, 2010**

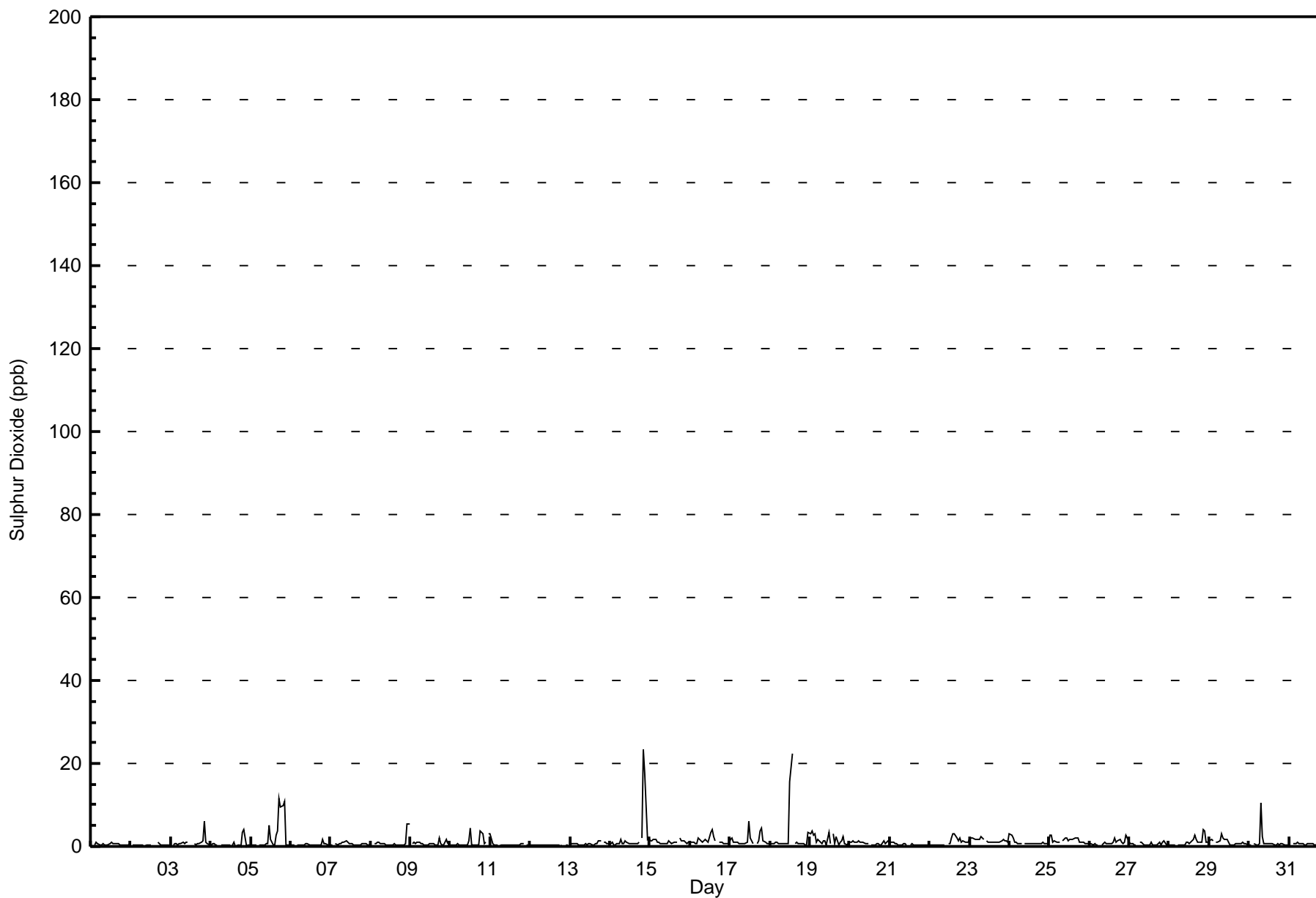
Maximum Value: 23.2 ppb on Dec 14 21:00	Maximum Daily Average: 2.6 ppb on Dec 5	Hours in Service: 744
Minimum Value: 0 ppb on Dec 12 19:00	Minimum Daily Average: 0.3 ppb on Dec 12	Hours of Data: 705
Maximum Diurnal Average: 2.3 ppb at hour 21	Minimum Diurnal Average: 0.7 ppb at hour 5	Hours of Missing Data: 39
Monthly Average: 1.06 ppb	Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.4 Median = 0.6 Q ₃ = 1.0 P ₉₀ = 1.9 P ₉₉ = 10.3	Hours of Calibration: 35
		Percent Operational Time: 99.5

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	N	A	0	1	1	0	0	1	0	0	0	1	1	1	1	1	0	0	0	0	0	1	1	0.5	1.1	
2-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	P	P	1	1	1	0	0	0	0	0	0.4	0.9	
3-Dec	A	0	1	1	0	1	1	1	1	1	1	C	C	C	1	0	1	1	1	2	6	1	1	1.0	6.1	
4-Dec	0	1	1	1	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	3	4	0	0	0.7	4.0	
5-Dec	0	0	0	0	A	0	0	0	0	1	1	5	2	0	0	3	4	11	9	10	11	0	0	2.6	11.5	
6-Dec	0	0	0	A	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2	1	1	0	0.4	1.5	
7-Dec	0	0	A	1	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	1	0	0.6	1.3	
8-Dec	1	A	1	1	1	1	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	1	5	0.9	5.3	
9-Dec	A	1	1	1	1	1	1	1	0	0	0	1	1	1	1	0	0	2	1	0	0	2	1	0.7	2.1	
10-Dec	0	0	0	0	1	0	0	0	0	0	0	1	5	0	0	0	0	0	4	3	1	1	A	3	1.0	4.6
11-Dec	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	A	0	0.5	3.2	
12-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0.3	0.4	
13-Dec	0	1	1	1	1	0	0	0	0	1	0	1	1	0	0	1	1	1	1	A	1	1	1	0.7	1.3	
14-Dec	1	1	0	0	1	1	2	1	1	1	1	1	1	1	1	1	1	1	A	2	23	18	2	2.6	23.2	
15-Dec	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1.1	2.1	
16-Dec	1	1	1	1	1	2	2	1	1	2	1	1	3	4	2	1	A	1	1	1	1	1	1	1.4	4.1	
17-Dec	2	2	1	1	1	1	1	1	1	1	1	6	2	1	1	A	1	1	4	4	1	1	1	1.6	6.2	
18-Dec	1	1	1	1	1	1	1	1	1	1	1	16	23	A	1	1	1	1	1	1	1	0	4	2.4	22.5	
19-Dec	3	4	3	3	1	2	1	1	1	2	0	3	1	A	3	1	3	0	1	1	2	1	0	1.6	3.8	
20-Dec	1	1	1	1	1	1	1	1	1	1	1	A	0	0	0	0	1	1	0	0	1	1	1	0.8	1.4	
21-Dec	1	1	1	1	1	0	0	0	1	1	0	A	0	1	0	0	0	0	0	0	0	0	0	0.5	1.2	
22-Dec	0	0	0	0	0	0	0	0	0	0	0	A	1	1	2	3	3	2	1	1	1	1	1	1.0	3.2	
23-Dec	2	2	2	2	2	2	2	2	2	2	A	1	1	1	1	1	1	1	1	1	2	1	1	1.5	2.5	
24-Dec	3	3	2	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	3.0	
25-Dec	3	3	1	1	1	1	1	A	2	2	2	1	2	2	2	2	2	2	2	1	1	1	1	1.4	2.8	
26-Dec	1	1	0	1	0	0	A	0	1	1	1	1	1	1	1	2	1	1	2	1	1	1	3	1.0	2.8	
27-Dec	1	1	1	0	0	A	1	1	1	0	0	0	0	1	0	0	0	1	1	0	1	1	0	0.6	1.3	
28-Dec	0	1	0	0	A	0	0	0	0	0	1	1	1	2	3	2	1	1	1	4	4	1	1	1.1	4.0	
29-Dec	1	2	1	A	1	1	1	3	2	2	2	2	0	0	0	1	1	1	1	1	1	1	0	1.1	3.0	
30-Dec	0	0	A	1	0	0	1	10	3	1	1	1	1	1	1	0	0	1	0	1	1	0	0	1.0	10.5	
31-Dec	0	A	1	1	1	1	1	1	1	0	0	1	1	1	1	0	0	1	0	0	1	0	0	0.6	0.9	

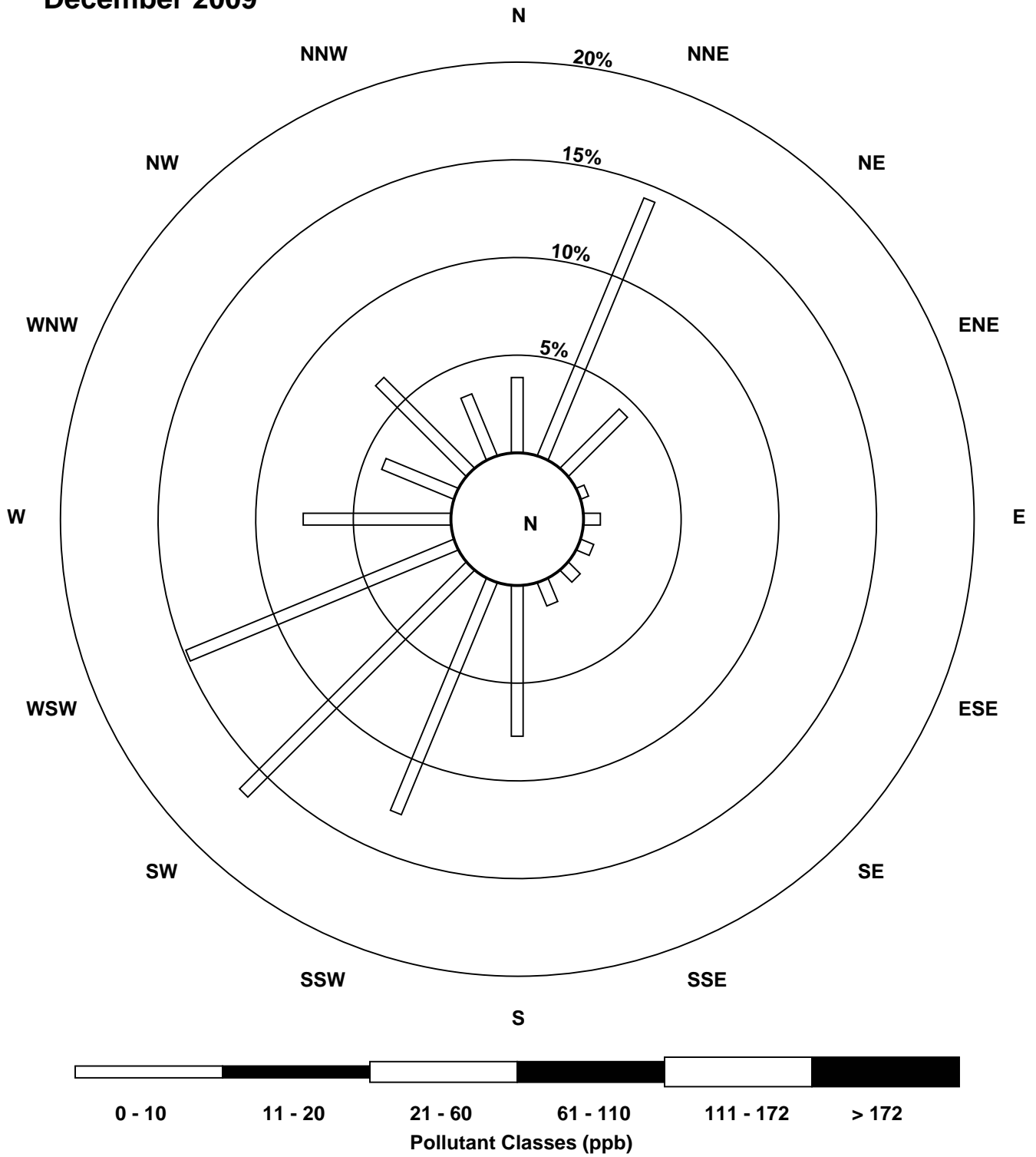
1.0	1.0	0.8	0.8	0.7	0.7	0.7	1.1	0.8	0.7	0.7	1.2	1.5	1.6	0.9	0.9	0.9	1.1	1.2	1.4	2.3	1.4	0.9	1.1	Diurnal Average
3.2	3.8	2.8	3.1	1.8	2.0	1.8	10.5	2.5	1.9	1.9	6.2	15.7	22.5	3.1	3.2	3.9	11.5	9.4	9.7	23.2	17.5	5.3	5.3	Diurnal Maximum

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

Hourly Maximums for SO₂ at Smoky Heights December 2009



Pollutant Rose for SO₂ at Smoky Heights December 2009



**Peace Airshed Zone Association
Summary of Hourly Averages**

**Smoky Heights - Total Reduced Sulphur (TRS) - ppb
December 1, 2009 to January 1, 2010**

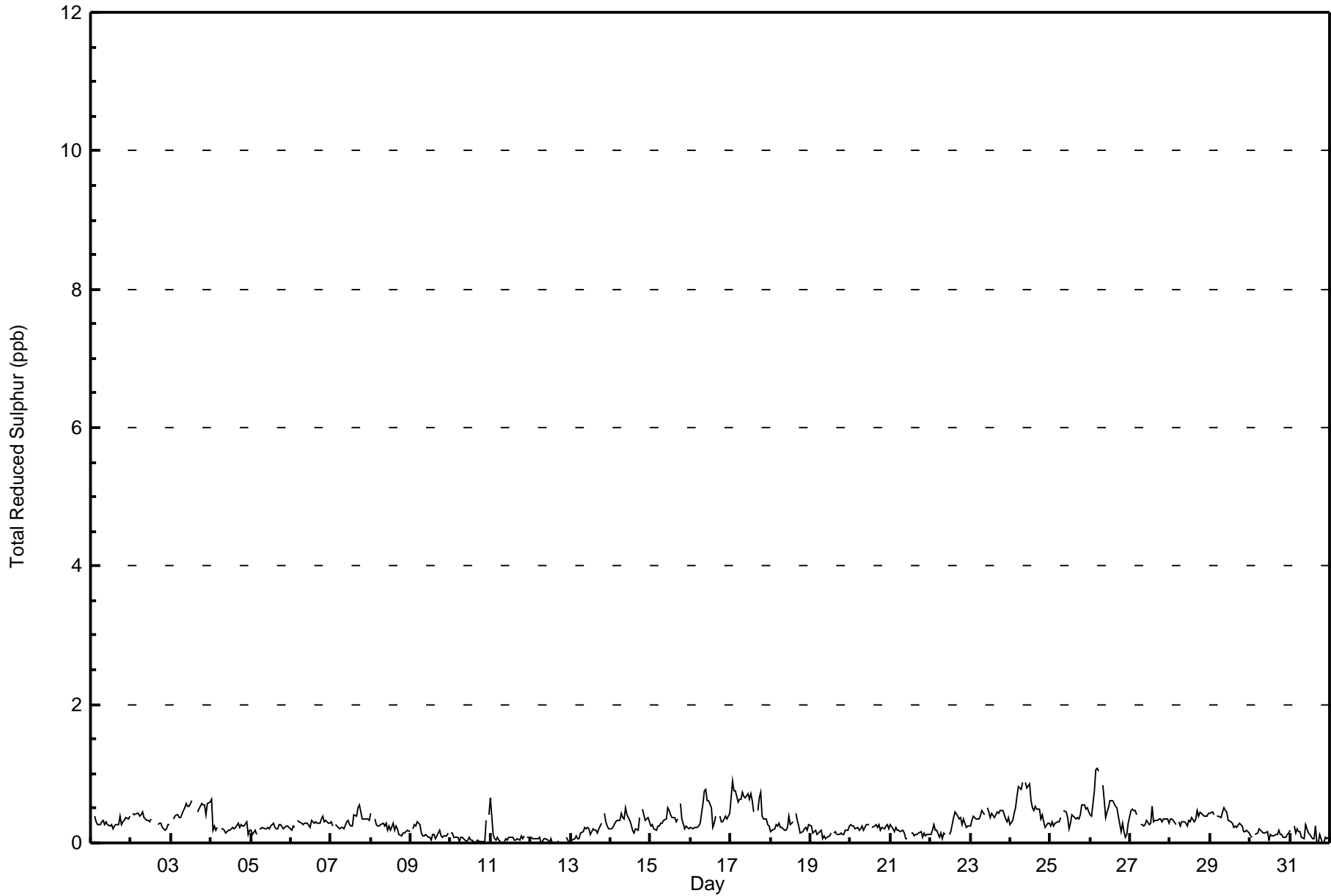
Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 1.1 ppb on Dec 26 05:00	Maximum Daily Average: 0.6 ppb on Dec 17		Hours of Data:	705
Minimum Value: 0 ppb on Dec 10 21:00	Minimum Daily Average: 0.0 ppb on Dec 12		Hours of Missing Data:	39
Maximum Diurnal Average: 0.3 ppb at hour 11	Minimum Diurnal Average: 0.2 ppb at hour 15		Hours of Calibration:	35
Monthly Average: 0.27 ppb	Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.3 Q ₃ = 0.4 P ₉₀ = 0.5 P ₉₉ = 0.8		Percent Operational Time:	99.5

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

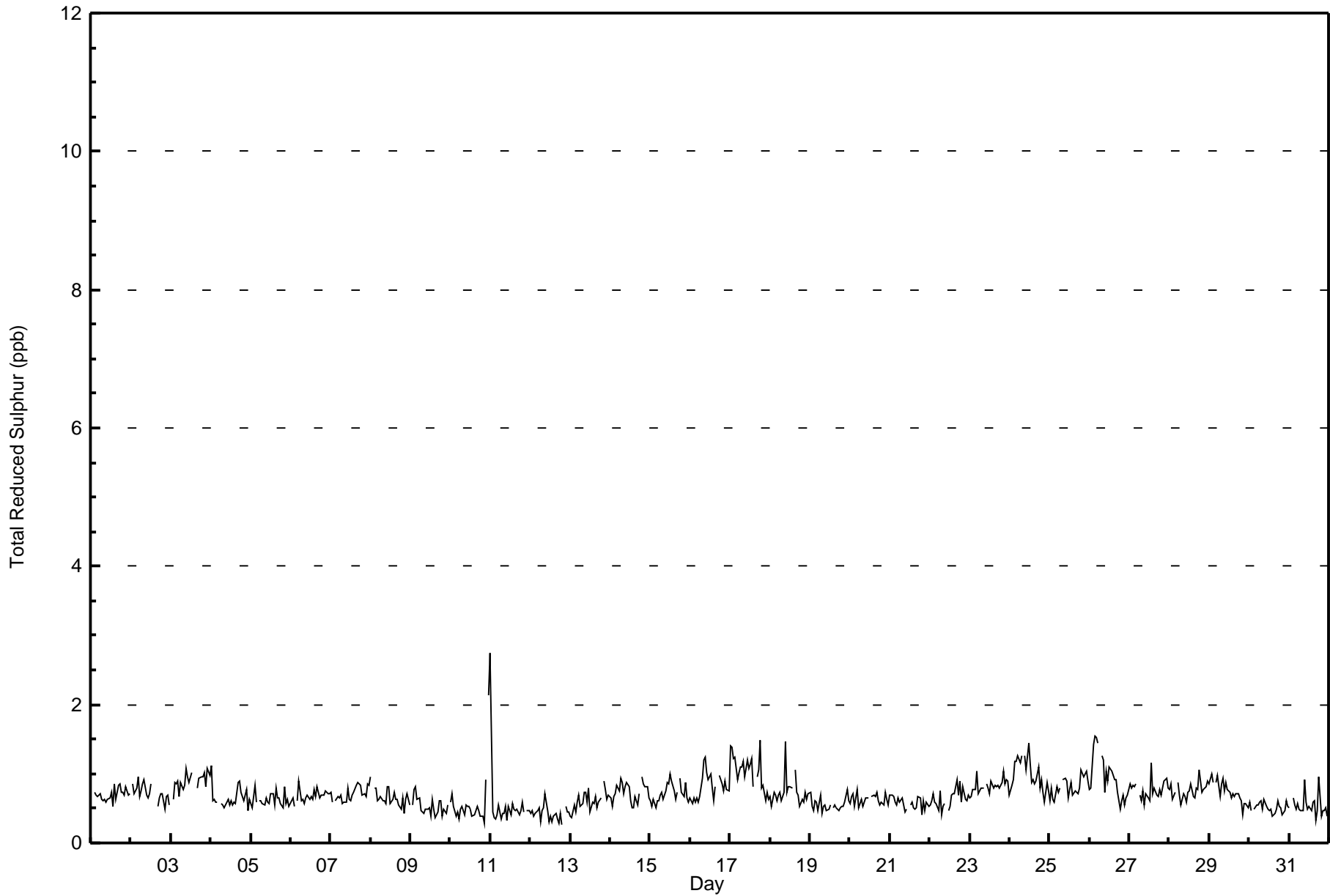
0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	Diurnal Average
0.7	0.9	0.7	1.1	1.1	1.0	0.8	0.9	0.8	0.9	0.8	0.9	0.8	0.9	0.7	0.6	0.6	0.5	0.5	0.6	0.7	0.6	0.6	0.5	0.6	0.6	Diurnal Maximum

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

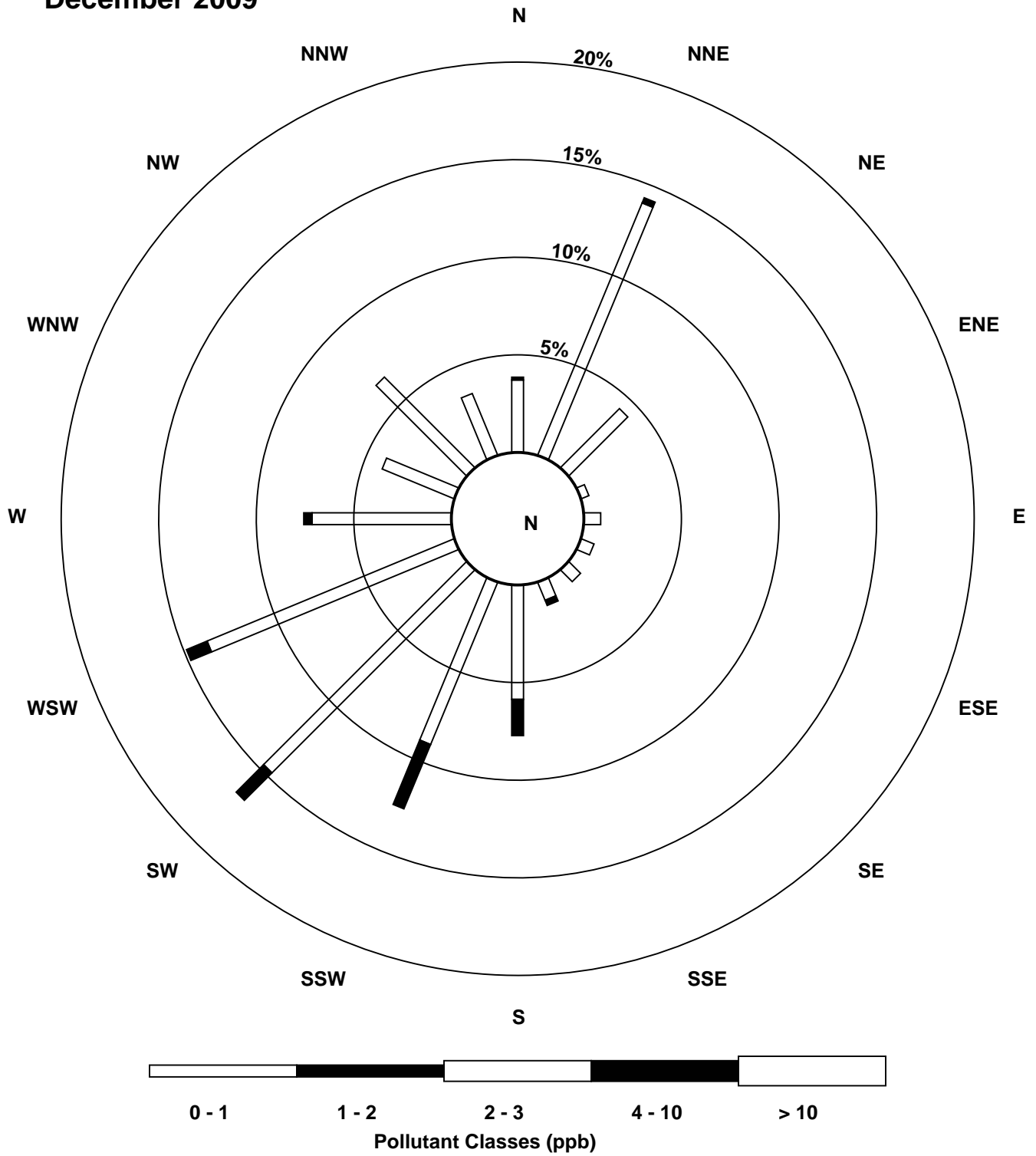
Hourly Averages for TRS at Smoky Heights December 2009



Hourly Maximums for TRS at Smoky Heights December 2009



Pollutant Rose for TRS at Smoky Heights December 2009



**Peace Airshed Zone Association
Summary of Hourly Averages**

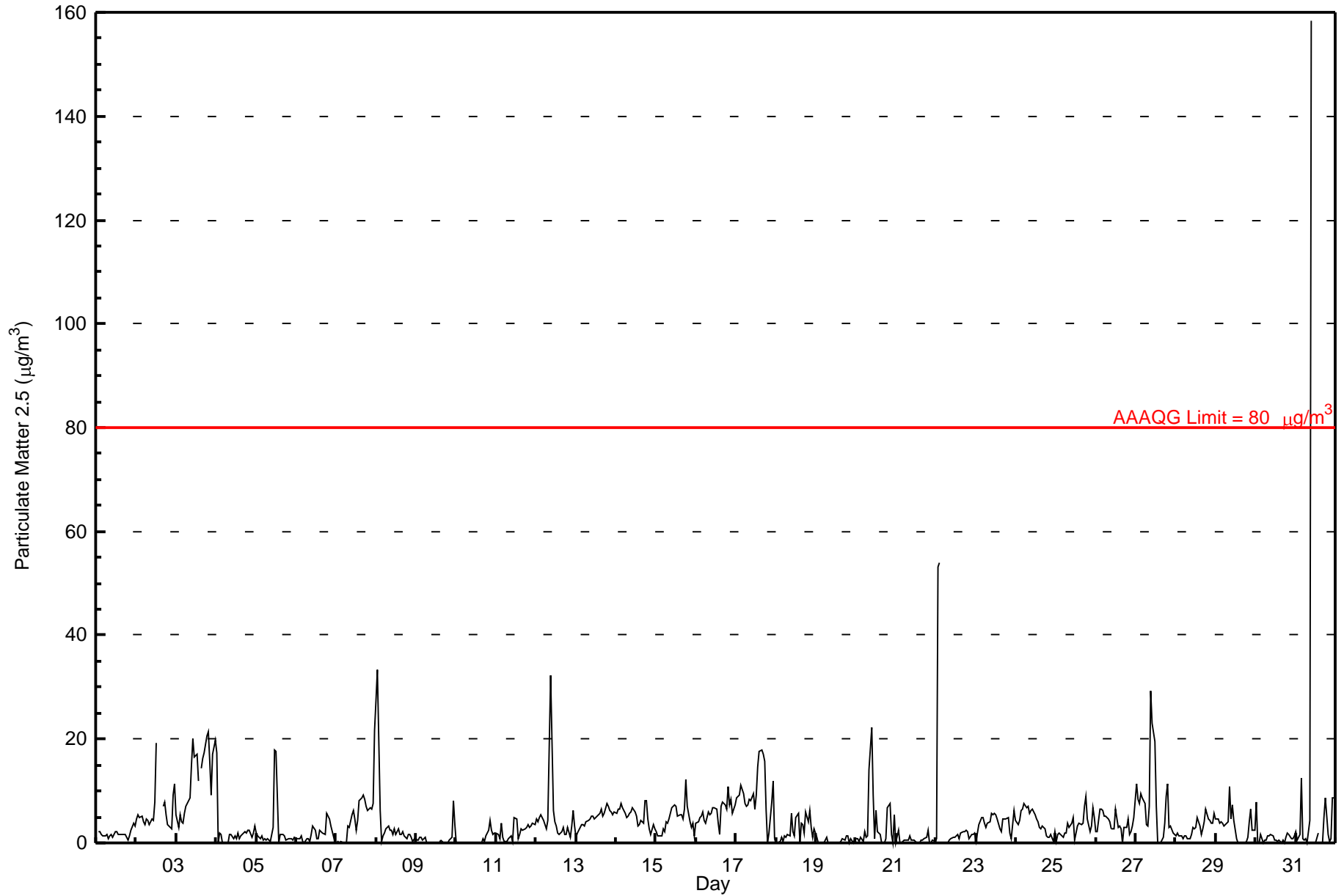
**Smoky Heights - Particulate Matter 2.5 (PM_{2.5}) - µg/m³
December 1, 2009 to January 1, 2010**

Number of Exceedences: 1-hr: 1 24-hr: 0	Hours in Service: 744
Maximum Value: 158.4 µg/m ³ on Dec 31 10:00	Maximum Daily Average: 12.3 µg/m ³ on Dec 3
Minimum Value: 0 µg/m ³ on Dec 4 02:00	Hours of Data: 736
Maximum Diurnal Average: 11.0 µg/m ³ at hour 10	Hours of Missing Data: 8
Monthly Average: 4.05 µg/m ³	Hours of Calibration: 1
Minimum Daily Average: 0.3 µg/m ³ on Dec 19	Percent Operational Time: 99.1
Minimum Diurnal Average: 2.4 µg/m ³ at hour 7	
Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.9 Median = 2.4 Q ₃ = 5.1 P ₉₀ = 8.0 P ₉₉ = 25.8	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Dec	N	2	2	2	1	1	1	1	1	2	1	2	2	2	2	2	2	2	1	1	1	2	4	3	1.7	3.8																						
2-Dec	5	5	5	5	4	3	5	4	4	5	4	8	19	P	P	P	7	8	5	3	3	3	9	11	6.0	19.2																						
3-Dec	5	3	5	4	4	6	7	8	9	15	20	17	17	12	C	14	16	17	21	21	16	9	17	20	12.3	21.4																						
4-Dec	17	0	2	2	0	0	0	0	2	2	1	1	1	2	1	1	2	2	2	2	2	1	2	3	2.0	17.3																						
5-Dec	2	1	1	1	1	1	1	1	0	2	3	18	18	0	2	2	2	1	1	1	1	1	1	1	2.5	17.8																						
6-Dec	1	1	1	1	0	0	1	1	0	2	3	2	1	1	2	2	2	2	6	5	5	3	1	0	1.8	5.7																						
7-Dec	0	0	0	0	0	0	0	3	3	5	6	5	2	4	8	9	9	8	7	6	7	7	8	22	5.0	21.8																						
8-Dec	27	33	6	0	1	2	3	3	2	2	2	3	2	3	2	2	2	1	1	2	2	1	0	1	4.3	33.3																						
9-Dec	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	8	4	0.8	8.1																						
10-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3	4	2	2	2	0.6	4.5																						
11-Dec	2	2	1	4	1	0	0	1	1	1	0	5	5	1	2	3	2	3	3	4	3	3	4	4	2.2	4.8																						
12-Dec	4	4	5	5	4	4	3	4	18	32	6	4	3	2	2	3	2	2	3	1	3	6	3	3	5.3	32.2																						
13-Dec	1	2	3	4	4	3	4	4	5	5	5	5	5	5	6	6	5	6	8	7	6	6	5	6	4.8	7.5																						
14-Dec	6	6	6	8	7	6	5	5	6	6	7	6	5	3	3	4	4	8	8	5	3	2	4	3	5.2	8.2																						
15-Dec	2	1	1	1	3	2	4	4	5	7	7	7	7	5	6	5	5	6	12	7	4	3	4	1	4.6	12.3																						
16-Dec	4	4	5	5	6	4	4	6	5	6	7	7	7	4	2	7	8	7	7	11	7	8	6	7	6.0	10.8																						
17-Dec	9	9	9	11	10	8	7	7	8	8	9	7	9	15	18	18	17	16	6	0	2	8	12	1	9.3	17.8																						
18-Dec	0	0	0	1	0	1	1	2	1	6	2	1	5	6	0	4	4	2	6	4	6	3	1	3	2.4	6.2																						
19-Dec	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1	0	1	0.3	1.4																						
20-Dec	1	1	0	1	0	2	1	1	14	22	9	1	6	2	2	0	0	0	1	7	8	2	0	5	3.6	22.2																						
21-Dec	0	2	0	0	0	0	0	0	1	1	0	1	0	0	0	1	1	1	1	2	0	0	1	0	0.6	2.4																						
22-Dec	1	53	54	BD	0	0	0	0	1	1	1	1	1	2	1	2	2	2	2	2	1	2	2	2	5.8	53.9																						
23-Dec	0	2	4	5	5	4	3	4	4	6	6	6	5	5	3	2	5	5	5	5	2	1	3	6	3.9	6.1																						
24-Dec	4	3	4	6	6	8	7	7	6	6	7	5	5	4	3	3	3	3	1	1	1	2	0	2	4.1	7.6																						
25-Dec	0	2	2	2	1	2	2	4	3	4	5	0	2	3	4	4	4	7	9	5	2	3	7	5	3.3	8.9																						
26-Dec	2	2	7	7	6	5	5	5	4	3	3	3	6	3	3	3	0	3	3	5	2	2	3	5	3.7	6.6																						
27-Dec	11	8	8	9	9	8	3	3	7	29	23	20	7	0	0	0	1	4	9	11	3	3	2	2	7.5	29.3																						
28-Dec	1	2	1	1	1	1	1	1	1	2	3	3	3	5	3	2	3	4	7	5	4	4	4	6	2.8	6.5																						
29-Dec	5	5	4	4	4	3	4	4	11	5	7	4	1	0	0	0	0	0	0	1	4	7	2	2	3.2	10.8																						
30-Dec	8	0	0	2	0	0	1	1	1	2	1	1	0	0	1	0	0	0	1	2	2	1	1	1	1.1	8.0																						
31-Dec	2	1	2	13	1	1	1	0	4	158	BD	0	0	2	BD	0	0	5	9	1	0	1	9	9	9.9	158.4																						
																								4.1	5.0	4.5	3.5	2.6	2.5	2.4	2.7	4.1	11.0	5.0	4.5	4.7	3.0	2.6	3.3	3.6	4.1	4.7	4.3	3.3	3.1	4.1	4.5	Diurnal Average
																								27.4	53.2	53.9	12.6	9.6	7.7	7.1	8.1	18.3	158.4	23.0	19.7	19.2	14.8	17.6	17.8	17.1	17.4	20.7	21.4	15.7	9.3	17.0	21.8	Diurnal Maximum

C - Calibration P - Power Failure N - Not Valid BD - Baseline Drift
 Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³

Hourly Averages for PM_{2.5} at Smoky Heights December 2009



**Peace Airshed Zone Association
Summary of Hourly Maximums**

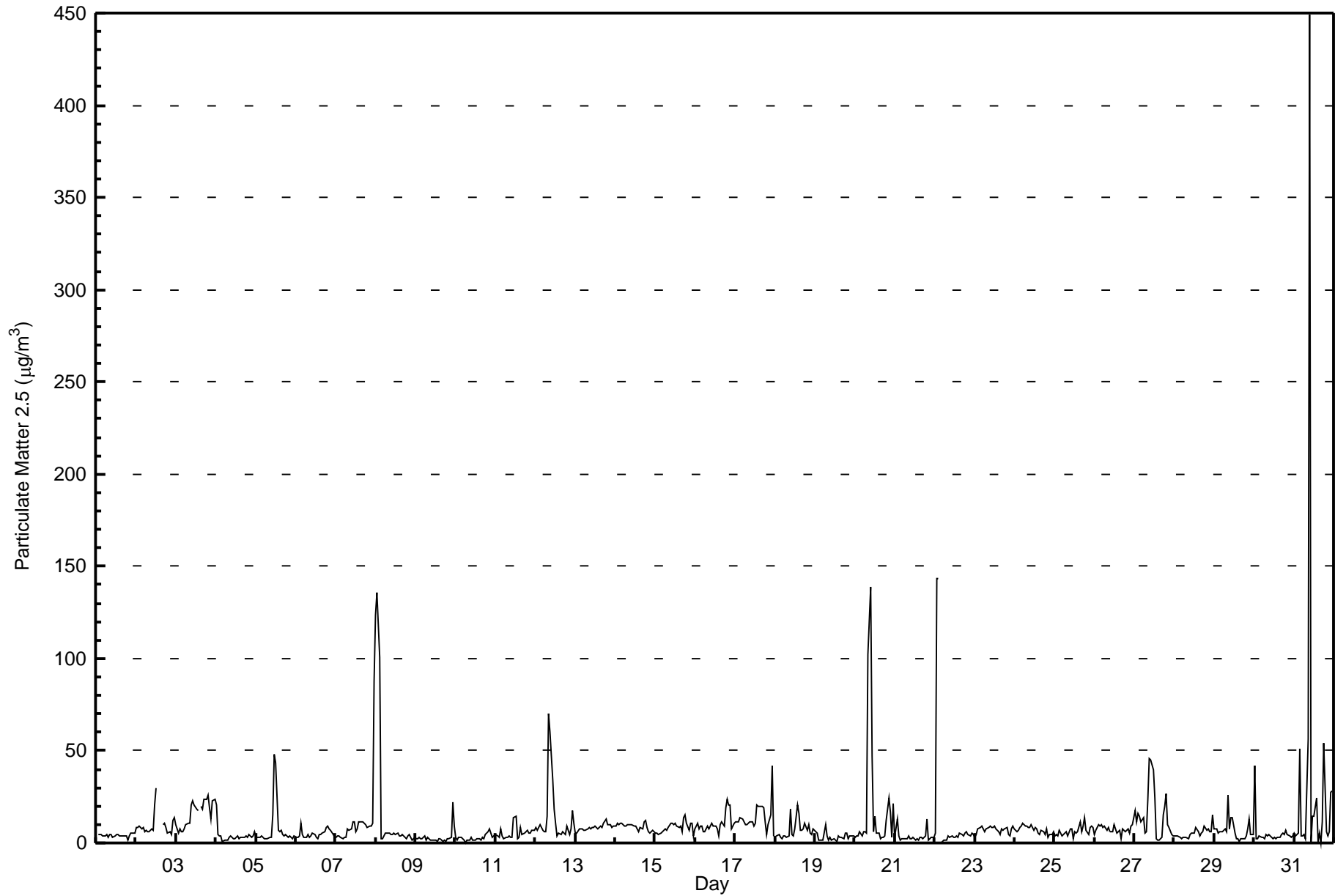
**Smoky Heights - Particulate Matter 2.5 (PM_{2.5}) - µg/m³
December 1, 2009 to January 1, 2010**

Maximum Value: 449.0 µg/m ³ on Dec 31 10:00	Maximum Daily Average: 32.6 µg/m ³ on Dec 31	Hours in Service: 744
Minimum Value: 0 µg/m ³ on Dec 22 05:00	Minimum Daily Average: 2.8 µg/m ³ on Dec 10	Hours of Data: 738
Maximum Diurnal Average: 28.4 µg/m ³ at hour 10	Minimum Diurnal Average: 5.2 µg/m ³ at hour 5	Hours of Missing Data: 6
Monthly Average: 9.43 µg/m ³	Percentiles: P ₁ = 0.7 P ₁₀ = 2.3 Q ₁ = 3.5 Median = 5.7 Q ₃ = 9.1 P ₉₀ = 14.8 P ₉₉ = 83.7	Hours of Calibration: 1
		Percent Operational Time: 99.3

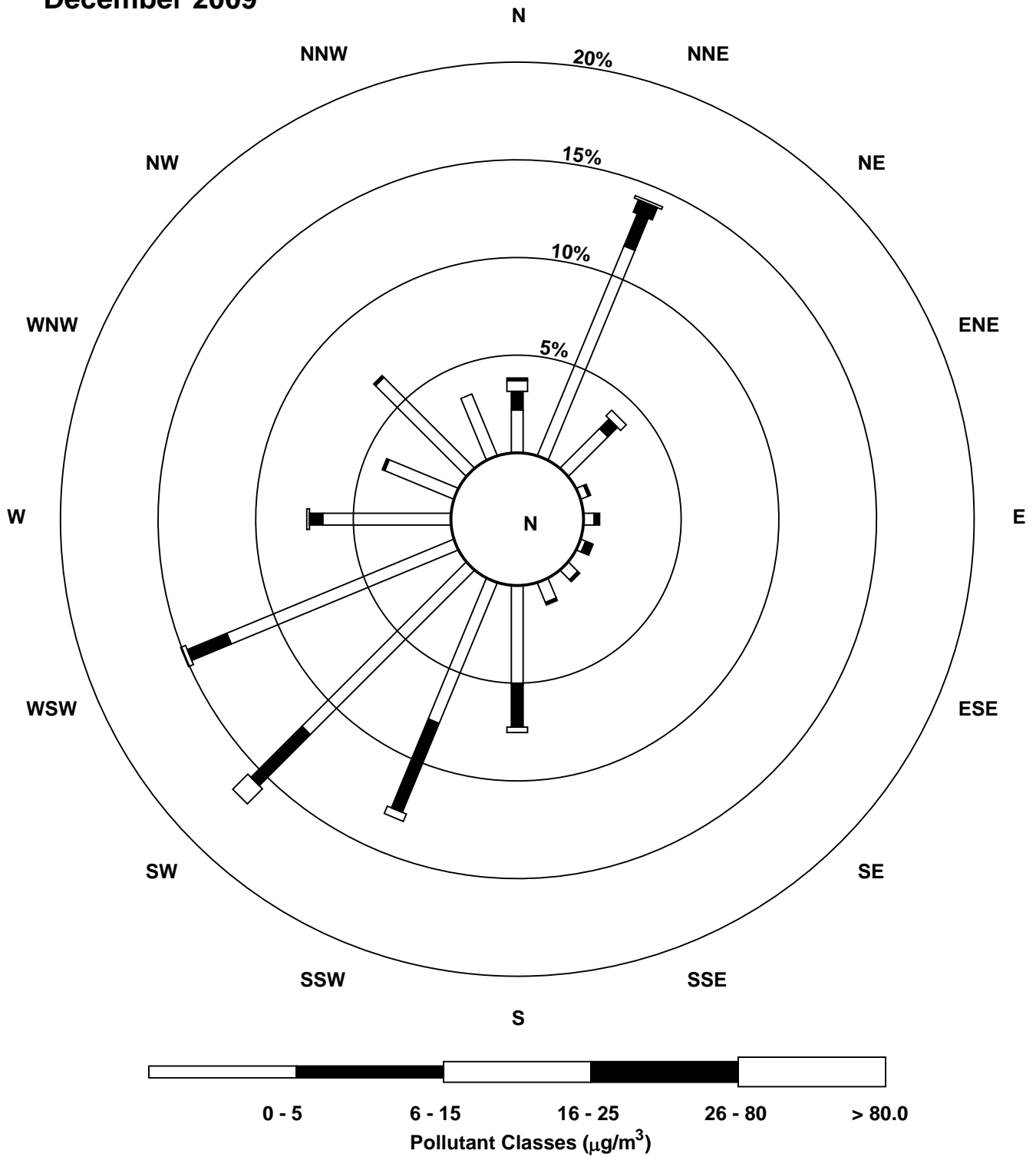
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	N	5	5	4	4	3	4	3	4	4	3	4	4	4	4	4	4	4	4	2	4	6	6	5	4.1	5.7
2-Dec	8	8	9	7	8	6	7	6	6	8	7	21	30	P	P	P	10	11	8	6	6	5	13	14	9.7	29.8
3-Dec	10	5	8	6	6	7	10	10	11	21	23	18	18	C	20	18	23	23	26	19	13	23	24	15.8	25.8	
4-Dec	20	4	4	4	1	1	1	2	3	4	2	2	3	4	2	3	3	3	3	4	3	4	6	3.8	20.2	
5-Dec	3	3	3	4	3	3	2	2	3	3	15	48	43	7	6	7	5	4	4	3	3	3	4	7.7	47.7	
6-Dec	3	3	3	11	5	3	3	4	3	4	5	5	3	2	5	5	6	6	8	9	8	7	4	3	5.0	10.9
7-Dec	3	4	3	3	2	3	3	8	6	8	12	12	6	8	11	11	12	11	10	8	9	9	10	87	10.8	87.4
8-Dec	124	135	101	2	2	4	5	5	5	5	4	6	5	6	4	4	4	4	2	4	4	3	2	3	18.5	135.5
9-Dec	3	2	3	2	2	4	1	3	2	1	1	1	2	1	2	3	1	2	1	2	2	3	22	9	3.2	22.4
10-Dec	3	1	3	3	2	2	0	2	1	3	1	2	1	2	2	2	3	2	4	6	8	5	3	4	2.8	7.6
11-Dec	5	4	3	8	4	2	3	3	4	3	3	14	15	2	3	8	5	5	6	7	5	6	7	7	5.4	14.6
12-Dec	9	7	9	10	7	6	6	14	70	60	34	19	11	4	5	4	6	5	5	9	5	7	17	10	14.2	70.2
13-Dec	5	5	7	7	8	7	7	8	9	8	8	8	9	8	8	9	8	10	13	10	10	10	8	9	8.3	12.6
14-Dec	9	11	10	11	11	9	9	10	10	10	10	9	9	7	6	8	8	11	12	9	6	5	7	6	8.8	11.9
15-Dec	5	5	5	5	6	7	8	7	9	11	10	10	10	9	8	10	6	14	15	11	7	11	11	4	8.4	15.0
16-Dec	8	11	8	9	9	6	6	9	7	9	10	9	9	7	4	10	11	9	19	24	21	21	8	10	10.6	23.7
17-Dec	11	11	12	14	13	11	10	10	11	12	11	9	11	21	19	20	20	19	11	5	10	15	42	4	13.8	41.7
18-Dec	3	4	4	3	2	4	4	3	4	18	5	4	7	21	16	7	7	7	11	7	10	5	5	7	7.0	20.6
19-Dec	6	5	2	2	1	1	10	4	1	3	1	2	1	1	4	3	3	2	5	5	3	4	4	4	3.2	10.2
20-Dec	3	4	4	6	4	6	6	5	102	138	47	6	15	5	6	2	3	3	3	12	25	16	3	22	18.7	138.5
21-Dec	3	13	4	2	3	2	3	2	4	3	3	3	2	2	1	3	3	3	4	13	2	2	3	3	3.5	13.2
22-Dec	6	143	144	BD	0	2	1	2	4	3	4	3	3	4	3	5	5	4	5	6	5	4	5	4	15.9	143.6
23-Dec	3	4	8	8	9	8	6	7	8	9	8	9	9	7	6	5	8	7	8	9	5	3	8	9	7.1	9.4
24-Dec	8	6	7	8	9	11	9	9	8	9	10	7	8	7	5	4	7	6	5	7	3	4	4	6	7.1	10.5
25-Dec	4	5	4	7	4	5	5	6	4	8	8	3	6	6	6	11	6	9	14	7	4	8	9	8	6.5	13.6
26-Dec	5	7	10	9	10	8	9	7	8	6	6	6	10	6	6	7	2	8	6	7	8	5	9	10	7.3	10.1
27-Dec	17	11	16	15	12	14	5	6	24	46	45	39	24	2	1	1	3	15	20	27	10	9	5	4	15.5	45.7
28-Dec	4	4	4	3	2	3	3	3	2	4	6	5	6	9	6	4	5	6	9	7	7	6	6	15	5.5	15.3
29-Dec	8	7	6	6	6	6	7	6	26	7	14	14	5	2	2	1	2	2	2	3	7	13	4	5	6.8	26.1
30-Dec	42	2	3	4	3	3	2	4	4	4	3	2	3	3	3	3	5	5	5	7	4	4	3	4	5.2	42.3
31-Dec	6	4	5	51	3	4	4	2	56	449	0	15	15	24	1	5	0	11	54	6	4	6	28	28	32.6	449.0
11.5 14.3 13.4 7.9 5.2 5.2 5.2 5.6 13.6 28.4 10.4 10.2 9.8 6.9 5.4 6.3 6.1 7.5 9.7 8.6 7.4 7.2 9.2 10.9																								Diurnal Average		
123.9 143.4 143.6 51.0 12.7 13.6 10.2 14.2 102.5 449.0 47.5 47.7 43.3 24.1 19.5 20.1 19.6 23.3 54.2 26.9 24.7 20.7 41.7 87.4																								Diurnal Maximum		

C - Calibration P - Power Failure N - Not Valid BD - Baseline Drift

Hourly Maximums for PM_{2.5} at Smoky Heights December 2009



Pollutant Rose for PM_{2.5} at Smoky Heights December 2009

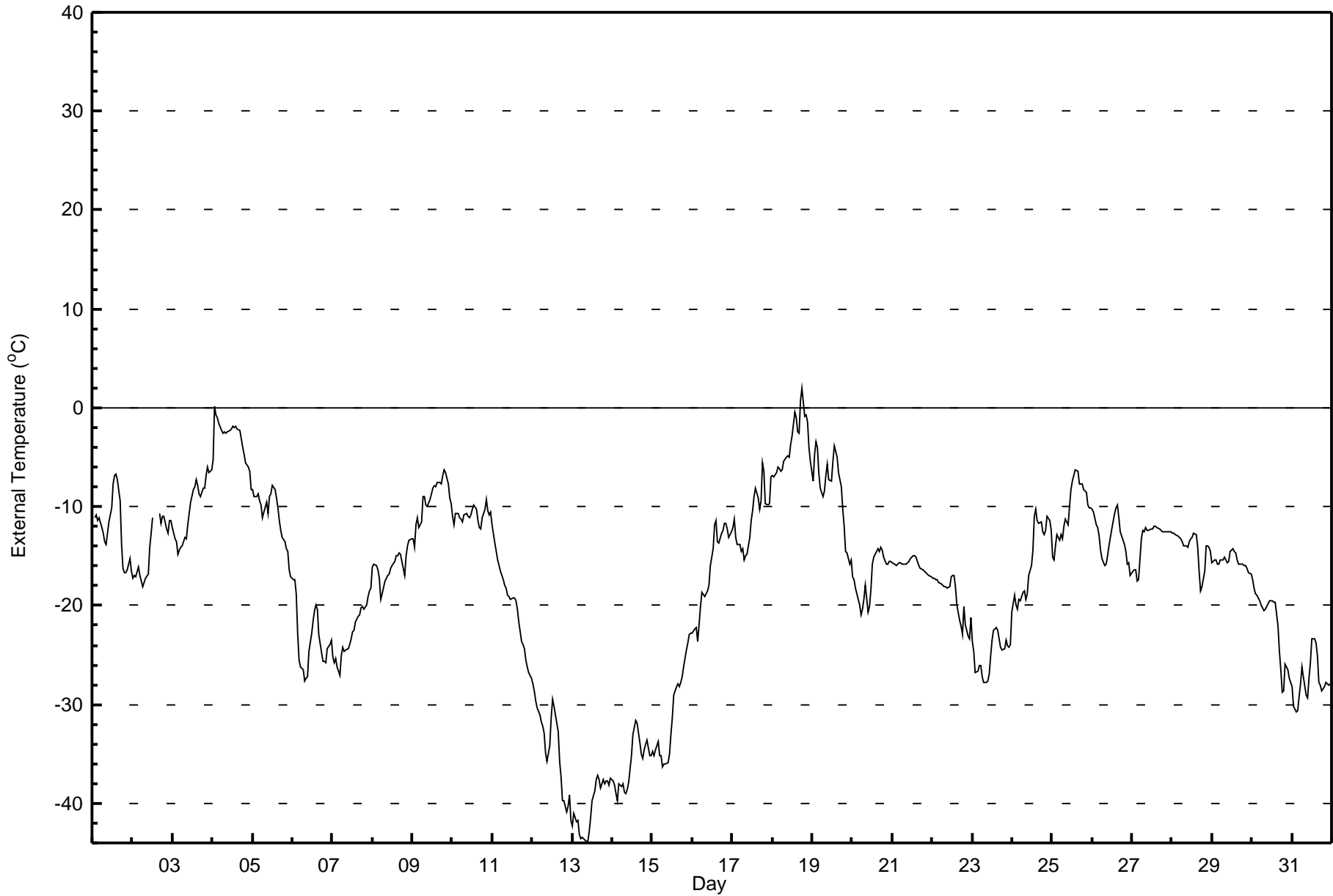


**Peace Airshed Zone Association
Summary of Hourly Averages**

**Smoky Heights - External Temperature (ET) - °C
December 1, 2009 to January 1, 2010**

Maximum Value: 2.0 °C on Dec 18 19:00		Maximum Daily Average: -3.0 °C on Dec 4		Hours in Service: 744																							
Minimum Value: -44 °C on Dec 13 09:00		Minimum Daily Average: -40.4 °C on Dec 13		Hours of Data: 740																							
Maximum Diurnal Average: -15.1 °C at hour 15		Minimum Diurnal Average: -18.8 °C at hour 8		Hours of Missing Data: 4																							
Monthly Average: -17.51 °C		Percentiles: P ₁ = -42.4 P ₁₀ = -31.8 Q ₁ = -22.9 Median = -15.7 Q ₃ = -11.3 P ₉₀ = -7.3 P ₉₉ = -0.9		Hours of Calibration: 0																							
				Percent Operational Time: 99.5																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Dec	N	-11	-11	-11	-11	-12	-13	-13	-14	-13	-11	-10	-8	-7	-7	-7	-9	-14	-16	-17	-17	-16	-15	-16	-12.2	-6.7	
2-Dec	-17	-17	-17	-16	-17	-18	-18	-18	-17	-17	-14	-13	-11	-8	P	P	P	-11	-12	-11	-11	-12	-13	-11	-11	-14.3	-10.6
3-Dec	-12	-13	-14	-15	-14	-14	-14	-13	-13	-12	-11	-10	-8	-8	-7	-8	-9	-9	-8	-8	-7	-6	-7	-6	-10.2	-5.9	
4-Dec	-5	0	-1	-1	-2	-2	-3	-2	-3	-2	-2	-2	-2	-2	-2	-2	-2	-3	-4	-5	-5	-6	-6	-8	-3.0	0.2	
5-Dec	-8	-9	-9	-9	-9	-10	-11	-10	-10	-11	-9	-9	-8	-8	-9	-10	-11	-12	-13	-14	-14	-15	-16	-17	-10.9	-7.8	
6-Dec	-17	-17	-19	-23	-25	-26	-26	-28	-27	-27	-25	-23	-22	-21	-20	-20	-23	-25	-26	-26	-26	-24	-24	-24	-23.5	-17.4	
7-Dec	-25	-26	-25	-26	-27	-25	-24	-25	-24	-24	-24	-23	-23	-22	-22	-21	-21	-20	-20	-20	-20	-19	-18	-18	-22.7	-18.3	
8-Dec	-16	-16	-16	-16	-17	-19	-19	-18	-17	-17	-17	-16	-16	-15	-15	-15	-15	-15	-16	-17	-15	-14	-13	-13	-16.0	-13.3	
9-Dec	-13	-14	-12	-11	-12	-11	-9	-9	-10	-10	-9	-9	-8	-8	-8	-8	-8	-8	-7	-6	-7	-8	-9	-10	-9.3	-6.3	
10-Dec	-11	-12	-11	-11	-11	-11	-12	-11	-11	-11	-11	-11	-10	-10	-10	-11	-12	-12	-11	-10	-9	-10	-11	-11	-10.9	-9.3	
11-Dec	-12	-14	-15	-15	-16	-17	-17	-18	-18	-19	-19	-19	-19	-19	-19	-20	-22	-24	-24	-24	-25	-26	-27	-27	-19.9	-11.8	
12-Dec	-28	-29	-30	-30	-31	-32	-32	-33	-35	-36	-34	-31	-30	-30	-31	-33	-36	-37	-40	-40	-41	-40	-39	-42	-34.1	-27.9	
13-Dec	-42	-41	-42	-42	-43	-44	-43	-44	-44	-44	-43	-41	-40	-39	-38	-37	-38	-38	-38	-38	-38	-38	-37	-37	-40.4	-37.2	
14-Dec	-38	-38	-39	-40	-38	-38	-38	-39	-39	-39	-38	-35	-33	-32	-32	-32	-34	-35	-35	-35	-34	-34	-35	-35	-36.0	-31.7	
15-Dec	-35	-35	-35	-34	-35	-35	-36	-36	-36	-36	-35	-33	-31	-29	-28	-28	-28	-28	-27	-26	-24	-24	-23	-23	-30.9	-22.8	
16-Dec	-23	-22	-22	-24	-22	-20	-19	-19	-19	-19	-18	-16	-14	-12	-11	-14	-14	-13	-12	-12	-12	-12	-13	-13	-16.4	-11.4	
17-Dec	-12	-11	-13	-14	-14	-15	-14	-15	-15	-15	-13	-11	-10	-9	-8	-9	-10	-9	-6	-6	-10	-10	-10	-7	-11.1	-5.5	
18-Dec	-7	-7	-7	-6	-6	-6	-6	-5	-5	-5	-5	-4	-3	0	-1	-2	-3	1	2	-1	-1	-1	-4	-5	-3.7	2.0	
19-Dec	-7	-5	-3	-4	-7	-8	-9	-8	-7	-6	-7	-7	-5	-4	-4	-5	-6	-8	-10	-12	-14	-15	-16	-15	-8.1	-3.4	
20-Dec	-17	-17	-18	-19	-20	-21	-20	-19	-18	-21	-20	-18	-16	-15	-14	-14	-15	-14	-14	-15	-16	-16	-16	-16	-17.1	-14.1	
21-Dec	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-15	-15	-15	-15	-16	-16	-16	-16	-16	-17	-17	-17	-17	-15.9	-15.0	
22-Dec	-17	-17	-17	-17	-18	-18	-18	-18	-18	-18	-17	-17	-17	-17	-18	-20	-21	-22	-23	-20	-22	-23	-23	-21	-19.2	-16.9	
23-Dec	-24	-25	-27	-27	-26	-26	-27	-28	-28	-28	-27	-25	-23	-23	-22	-22	-23	-24	-25	-24	-23	-24	-24	-24	-25.0	-22.2	
24-Dec	-21	-19	-20	-20	-19	-19	-19	-19	-19	-19	-17	-16	-14	-11	-10	-11	-12	-12	-12	-13	-12	-11	-11	-12	-15.4	-10.2	
25-Dec	-15	-15	-14	-13	-13	-13	-13	-12	-11	-12	-10	-8	-7	-7	-6	-6	-8	-8	-8	-8	-9	-10	-10	-10	-10.3	-6.3	
26-Dec	-10	-11	-12	-12	-13	-14	-15	-16	-16	-15	-14	-13	-12	-11	-10	-10	-11	-13	-13	-14	-15	-16	-16	-17	-13.2	-9.8	
27-Dec	-17	-16	-16	-18	-17	-13	-12	-13	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-13	-13	-13	-12	-13	-13	-13.3	-11.9	
28-Dec	-13	-13	-13	-13	-13	-13	-14	-14	-14	-14	-14	-13	-13	-13	-13	-14	-17	-18	-18	-17	-14	-14	-14	-15	-14.1	-12.6	
29-Dec	-16	-15	-15	-16	-16	-15	-15	-15	-15	-16	-16	-15	-14	-15	-15	-15	-16	-16	-16	-16	-16	-16	-17	-17	-15.5	-14.3	
30-Dec	-17	-18	-19	-19	-20	-20	-20	-20	-20	-20	-20	-19	-19	-20	-20	-22	-25	-26	-29	-29	-26	-27	-27	-28	-22.1	-17.4	
31-Dec	-28	-30	-31	-31	-29	-28	-26	-27	-29	-29	-27	-26	-23	-23	-24	-25	-28	-28	-29	-28	-28	-28	-28	-28	-27.6	-23.3	
																								Diurnal Average			
																								Diurnal Maximum			
-18.0 -17.7 -18.0 -18.3 -18.6 -18.7 -18.7 -18.8 -18.7 -18.7 -17.9 -16.8 -15.8 -15.2 -15.1 -15.7 -16.6 -17.1 -17.4 -17.4 -17.4 -17.6 -17.8 -18.0																											
-5.3 0.2 -0.7 -1.0 -1.6 -2.3 -2.5 -2.5 -2.5 -2.5 -2.3 -2.1 -1.9 -0.4 -1.0 -2.1 -2.3 0.7 2.0 -0.8 -0.7 -1.4 -4.0 -5.4																											
P - Power Failure N - Not Valid																											

Hourly Averages for External Temperature at Smoky Heights December 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Smoky Heights
 December 1, 2009 to January 1, 2010
 WS (km/h), WD (deg)

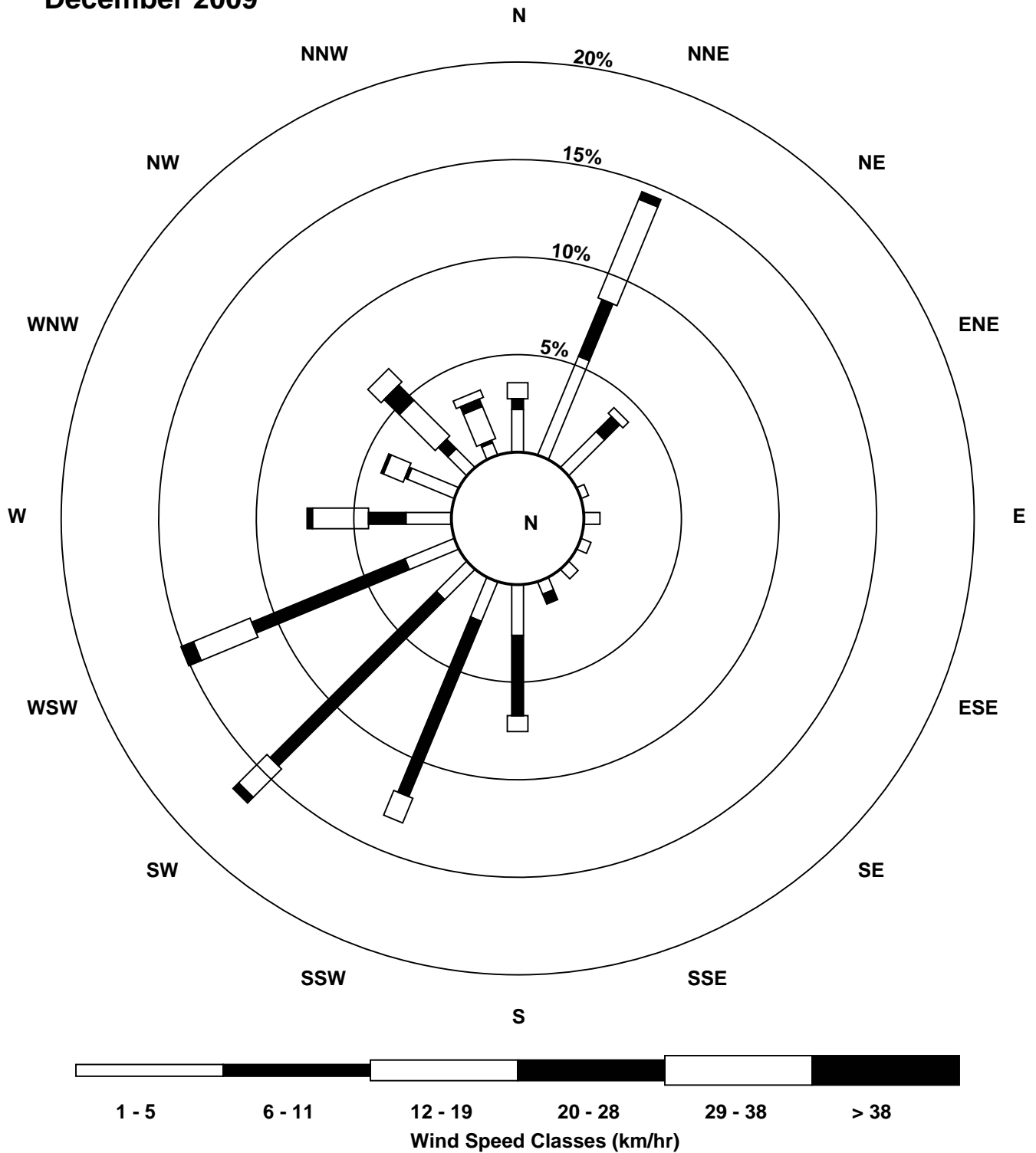
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	N	13	15	16	19	16	17	17	17	9	8	10	7	10	9	6	5	4	8	9	7	8	7	8	10.2	18.6
Dir	N	249	255	267	269	259	263	264	267	256	255	261	235	229	232	248	233	221	261	269	240	219	243	206	252.6	269.3
2 Spd	9	8	8	8	8	8	8	7	8	8	8	6	P	P	P	10	9	9	8	8	10	9	7.8	10.5		
Dir	208	224	228	222	234	241	223	224	243	235	212	218	224	P	P	P	271	250	235	248	257	236	231	205	232.1	230.8
3 Spd	9	10	11	10	12	13	11	10	10	10	10	11	10	13	12	11	10	9	12	11	9	9	8	2	9.7	13.5
Dir	210	208	225	216	197	212	235	220	203	225	222	226	215	188	192	194	203	224	234	256	230	240	180	208	215.0	211.7
4 Spd	6	17	15	21	33	37	36	35	33	24	27	26	28	26	26	32	34	36	34	32	22	21	18	12	24.9	36.6
Dir	176	268	279	307	315	317	310	309	317	326	325	326	322	331	333	327	326	324	332	343	338	324	314	273	319.7	316.8
5 Spd	12	14	14	18	17	18	14	12	14	12	14	10	14	16	17	13	13	15	15	15	13	14	15	14	13.0	17.8
Dir	285	280	275	305	304	308	296	322	324	312	341	356	8	357	358	350	348	346	342	343	331	321	306	316	324.8	304.7
6 Spd	13	10	6	4	5	9	6	5	7	6	6	6	5	6	8	8	8	10	10	8	7	7	8	7	5.5	12.9
Dir	309	320	322	213	238	257	253	214	237	206	187	202	191	168	181	189	201	258	253	249	224	233	228	205	233.6	309.5
7 Spd	7	8	8	7	6	7	7	5	7	5	5	4	5	6	5	4	4	4	3	3	2	3	3	2	4.5	8.1
Dir	205	221	224	228	231	225	223	229	210	200	197	181	173	177	181	170	191	212	179	246	239	220	219	37	208.7	224.3
8 Spd	4	3	3	2	1	2	2	2	3	2	4	2	3	2	2	3	3	2	1	2	3	4	3	3	1.0	4.4
Dir	359	13	42	71	166	229	257	200	206	197	170	196	132	159	151	125	141	145	309	237	220	244	236	230	189.7	358.7
9 Spd	3	3	4	1	3	3	15	22	18	17	19	21	16	17	18	18	10	10	16	19	17	13	13	8	10.9	22.2
Dir	245	220	286	93	115	338	321	325	336	336	326	325	330	318	304	304	257	250	288	301	327	6	2	13	319.4	325.0
10 Spd	3	9	15	16	14	15	10	14	21	18	12	16	15	14	8	2	3	7	9	9	11	13	14	14	9.6	21.1
Dir	80	313	311	312	306	301	281	295	297	292	262	241	243	241	248	183	290	240	259	253	328	342	339	343	290.4	297.5
11 Spd	12	13	10	10	10	8	8	8	8	10	9	11	11	10	13	15	15	13	16	18	18	15	17	17	12.3	18.5
Dir	22	43	45	21	29	38	36	35	31	32	37	29	35	37	38	36	25	25	33	32	31	29	29	31	32.2	31.9
12 Spd	16	16	15	9	10	10	8	6	5	5	10	7	3	2	4	6	5	5	2	2	3	1	2	4	5.0	16.1
Dir	27	30	21	29	22	22	13	15	35	23	28	24	3	277	256	262	290	325	22	307	294	349	14	244	10.2	30.1
13 Spd	7	6	3	5	6	7	8	8	10	9	8	10	8	8	7	7	8	9	7	8	8	9	8	7	7.0	9.7
Dir	256	221	178	207	193	187	190	197	192	195	195	188	184	179	182	184	203	222	235	240	229	228	228	217	205.3	192.0
14 Spd	7	10	9	10	11	9	10	10	10	9	9	8	7	6	6	5	7	8	12	14	15	13	11	8	8.4	15.4
Dir	219	192	197	189	202	206	225	200	216	214	211	215	187	162	181	179	206	251	258	256	257	233	219	225	217.1	257.4
15 Spd	11	11	8	7	7	4	5	6	7	7	9	8	12	11	10	12	12	12	10	8	12	8	13	11	8.3	12.6
Dir	236	256	245	233	198	223	207	211	196	194	207	211	185	176	184	189	205	236	259	252	252	226	214	232	217.9	213.9
16 Spd	9	7	5	6	7	11	9	8	8	5	7	4	7	8	3	3	0	3	3	2	3	4	7	8	4.2	10.7
Dir	222	212	198	180	196	208	199	166	164	180	202	212	256	258	227	104	356	40	34	87	82	208	209	200	200.2	208.4
17 Spd	12	12	13	11	13	14	10	10	11	9	10	12	10	10	11	10	9	12	11	7	2	1	4	7	8.7	13.6
Dir	232	224	199	211	201	204	204	236	229	230	242	251	242	204	201	225	237	265	278	272	304	118	277	248	229.6	204.4
18 Spd	9	9	7	11	10	9	10	10	8	4	8	10	14	20	9	9	10	19	24	21	18	20	15	10	11.5	24.3
Dir	240	244	234	242	228	233	244	261	280	278	246	241	251	247	193	186	188	219	234	226	230	226	248	242	234.5	233.8
19 Spd	10	17	21	19	12	16	4	11	14	20	12	14	15	24	25	26	22	19	15	2	7	11	5	13	14.2	26.1
Dir	220	234	240	233	224	227	173	239	248	256	242	236	248	255	256	264	261	262	252	299	255	265	238	258	247.6	263.6
20 Spd	12	8	2	3	3	2	1	5	5	3	0	3	1	2	5	10	12	12	14	14	12	13	15	16	5.1	16.1
Dir	256	257	291	252	314	84	40	20	12	41	139	238	72	104	33	33	26	26	26	22	20	26	26	26	16.9	26.5
21 Spd	15	17	18	18	18	16	16	18	19	21	21	20	18	18	17	16	16	15	15	15	15	14	14	10	16.6	21.2
Dir	27	26	30	28	27	30	32	29	28	28	27	28	31	28	29	27	30	29	31	30	31	31	32	31	29.1	27.4
22 Spd	9	8	6	5	5	5	2	2	5	5	5	4	6	8	7	11	13	16	13	13	10	16	14	14	5.9	16.3
Dir	28	20	18	39	58	41	76	244	217	244	253	250	254	263	259	262	266	269	276	283	262	264	270	280	277.6	264.5

**Peace Airshed Zone Association
Summary of Hourly Averages**

Smoky Heights
December 1, 2009 to January 1, 2010
WS (km/h), WD (deg)

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		
23 Spd	14	10	6	10	9	11	11	10	7	7	8	9	7	8	10	7	8	11	13	15	13	13	14	11	9.3	15.4
Dir	262	256	244	211	231	217	216	201	202	222	211	225	209	226	227	237	246	239	249	259	244	197	189	202	226.6	259.0
24 Spd	12	11	9	11	12	12	9	9	6	5	6	7	7	6	6	8	7	8	9	11	12	11	10	8	7.9	12.4
Dir	203	195	178	194	195	188	191	195	192	176	185	187	178	172	180	189	205	220	254	247	251	244	238	227	206.1	194.6
25 Spd	10	9	9	10	9	8	8	7	7	7	7	9	8	6	8	8	9	10	12	12	11	12	9	11	8.8	11.8
Dir	218	233	238	213	220	225	229	234	211	219	222	220	234	214	213	230	240	221	225	238	221	187	205	228	222.3	224.9
26 Spd	10	13	10	7	8	9	8	9	9	9	9	9	10	8	7	5	6	6	2	1	2	2	2	3	6.3	12.6
Dir	219	229	187	207	204	192	202	196	194	207	205	199	189	218	219	211	237	254	299	81	275	266	224	183	209.4	229.3
27 Spd	0	2	1	2	3	9	10	8	8	9	7	6	6	5	5	5	3	3	3	2	2	2	2	2	4.1	10.4
Dir	122	253	316	40	25	30	37	33	21	15	9	7	359	352	12	19	5	356	352	355	347	3	26	26	14.8	37.1
28 Spd	1	1	2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	3	3	2	1	0.7	3.4
Dir	336	11	158	153	194	216	169	146	185	215	251	241	272	291	261	276	274	283	291	327	349	1	15	356	273.2	0.9
29 Spd	2	2	2	2	2	N	N	2	3	2	2	2	2	3	2	3	3	3	2	2	2	N	N	N	1.5	3.0
Dir	269	269	265	260	272	N	N	35	17	351	1	35	35	31	28	49	47	44	39	32	14	N	N	N	12.7	17.0
30 Spd	4	5	4	5	5	3	3	3	2	3	4	6	6	5	5	3	4	4	4	4	4	1	3	1	2.7	5.7
Dir	33	36	32	20	20	15	337	317	298	283	297	317	316	317	320	299	278	300	291	281	293	179	271	173	323.7	317.3
31 Spd	2	2	2	3	3	4	4	3	2	4	4	1	4	4	4	5	5	6	5	5	4	5	4	5	3.6	5.9
Dir	285	306	321	37	29	25	23	24	7	20	25	6	28	26	28	24	21	19	24	16	11	13	14	17	17.1	18.6
Spd	3.6	4.4	3.8	3.7	3.7	4.2	4.0	3.9	4.1	3.7	3.4	3.8	3.2	3.5	2.9	2.8	3.8	5.3	5.8	5.4	4.7	3.8	3.6	3.3	Diurnal Average	
Dir	252.6	257.7	256.7	254.5	257.7	259.2	264.0	271.9	272.8	273.6	267.4	263.6	261.1	258.7	257.0	271.8	271.0	275.5	284.5	291.5	288.6	274.0	272.0	262.7	Diurnal Maximum	
Spd	15.6	17.4	21.1	20.7	33.4	36.6	35.6	34.9	33.3	24.0	26.8	26.5	27.7	26.2	26.4	32.0	33.8	36.4	34.2	32.2	22.0	21.2	17.5	17.1	Diurnal Maximum	
Dir	27.2	26.4	240.4	307.4	315.4	316.8	309.8	309.3	316.7	325.9	325.2	325.8	322.2	331.3	332.9	326.5	326.2	324.1	332.2	343.5	337.7	324.0	314.1	31.1	Diurnal Maximum	
Maximum Speed Value: 37 km/h on Dec 4 06:00																		Minimum Speed Value: 0 km/h on Dec 16 17:00						Hours in Service:		744
Maximum Daily Speed Average: 24.9 km/h on Dec 4																		Minimum Daily Speed Average: 0.7 km/h on Dec 28						Hours of Data:		735
Maximum Diurnal Speed Average: 5.8 km/h at hour 19																		Minimum Diurnal Speed Average: 2.8 km/h at hour 16						Hours of Missing Data:		9
Monthly Average Velocity: 3.87 km/h 268.70 deg																		Speed Percentiles: P ₁ = 1.0 P ₁₀ = 2.2 Q ₁ = 4.6 Median = 8.2 Q ₃ = 11.8 P ₉₀ = 16.4 P ₉₉ = 33.1						Percent Operational Time:		98.8
All monthly, daily, and diurnal averages have been calculated using vector methods																										
P - Power Failure N - Not Valid																										
Frequency Distribution																										
		Speed Range (km/h)																								
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																			
North	36	19	18	1	1	0	75																			
NorthEast	36	22	40	4	0	0	102																			
East	11	0	0	0	0	0	11																			
SouthEast	11	0	0	0	0	0	11																			
South	24	69	16	0	0	0	109																			
SouthWest	31	156	32	5	0	0	224																			
West	33	43	45	6	0	0	127																			
NorthWest	21	7	27	12	9	0	76																			
Total	203	316	178	28	10	0	735																			

Wind Rose for WS at Smoky Heights December 2009



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

Smoky Heights - Wind Speed (WS) - km/h
December 1, 2009 to January 1, 2010

Maximum Speed: 37 km/h on Dec 4 06:00	Maximum Daily Speed Average: 26.7 km/h on Dec 4	Hours in Service: 744
Minimum Speed: 1 km/h on Dec 28 01:00	Minimum Daily Speed Average: 2.1 km/h on Dec 28	Hours of Data: 735
Maximum Diurnal Speed Average: 10.4 km/h at hour 19	Minimum Diurnal Speed Average: 8.5 km/h at hour 24	Hours of Missing Data: 9
Monthly Average Speed: 9.31 km/h	Percentiles: P ₁ = 1.7 P ₁₀ = 2.6 Q ₁ = 4.7 Median = 8.4 Q ₃ = 12.1 P ₉₀ = 16.6 P ₉₉ = 33.2	Percent Operational Time: 98.8

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	N	13	15	16	19	16	17	17	17	10	8	10	7	10	9	6	5	5	8	9	8	8	7	9	10.8	18.6
2-Dec	9	8	8	8	9	8	8	7	8	8	8	9	7	P	P	P	10	9	9	8	8	8	11	9	8.3	10.6
3-Dec	9	10	11	11	12	14	11	10	10	10	10	11	10	13	13	11	11	9	12	12	10	10	8	3	10.5	13.6
4-Dec	11	17	15	21	34	37	36	35	34	24	27	27	28	26	27	32	34	36	34	32	22	21	19	12	26.7	36.7
5-Dec	12	14	15	18	17	18	15	13	14	13	14	11	14	17	18	13	13	15	15	15	13	14	15	14	14.6	18.0
6-Dec	13	10	6	5	5	10	7	6	7	7	6	6	5	6	8	8	8	10	10	9	7	7	8	8	7.6	13.0
7-Dec	7	8	8	7	6	7	7	6	7	5	5	4	5	6	5	5	4	4	3	4	2	3	3	2	5.1	8.1
8-Dec	4	3	3	2	2	3	2	2	3	3	4	3	3	3	3	3	3	2	2	2	3	4	3	3	2.9	4.5
9-Dec	3	3	5	2	3	5	15	22	18	17	19	22	16	17	18	18	11	10	16	19	17	14	13	8	13.1	22.4
10-Dec	4	10	15	16	15	15	10	14	21	19	13	16	15	14	8	3	4	8	10	9	12	13	14	14	12.1	21.2
11-Dec	13	13	10	10	10	8	8	8	8	10	9	11	11	10	13	15	15	13	16	19	18	15	17	17	12.5	18.5
12-Dec	16	16	15	9	10	10	8	6	5	5	10	7	4	3	4	6	5	5	2	3	4	4	2	4	6.8	16.2
13-Dec	7	6	4	5	6	7	8	8	10	9	8	10	8	8	7	7	8	9	7	8	8	9	8	7	7.6	9.8
14-Dec	7	10	9	10	11	10	9	11	10	9	10	8	7	6	6	5	8	8	12	14	16	14	11	8	9.5	15.6
15-Dec	12	11	8	7	7	5	6	6	7	8	10	8	12	12	11	12	12	13	10	8	12	10	13	12	9.6	13.0
16-Dec	9	8	7	6	7	11	10	8	8	5	7	4	7	8	3	3	2	3	3	3	4	5	7	9	6.1	10.9
17-Dec	12	12	13	11	13	14	10	10	11	9	11	13	11	11	12	10	10	12	11	7	3	3	5	7	9.9	13.6
18-Dec	9	9	7	11	10	10	10	10	8	4	9	11	14	20	12	9	10	20	24	21	18	20	15	11	12.6	24.3
19-Dec	11	17	21	19	12	16	6	12	15	21	13	14	15	24	25	26	22	19	17	4	7	11	7	14	15.3	26.1
20-Dec	12	8	5	4	3	2	2	5	5	3	3	3	3	3	5	10	12	12	14	14	12	13	15	16	7.7	16.1
21-Dec	15	17	18	18	18	16	16	19	20	21	21	20	18	18	17	17	16	15	15	15	15	14	14	10	16.7	21.2
22-Dec	9	9	6	5	5	5	2	3	5	5	5	5	6	8	7	11	13	16	13	13	10	16	16	14	8.7	16.4
23-Dec	15	11	6	10	9	11	11	10	8	7	8	9	7	8	10	7	8	11	13	15	13	13	14	12	10.2	15.4
24-Dec	12	11	9	11	13	12	9	9	7	5	6	7	7	6	6	8	7	8	9	11	12	11	10	8	8.9	12.6
25-Dec	10	10	10	10	10	8	8	7	8	8	8	10	9	6	8	8	10	10	12	12	11	12	9	11	9.2	11.9
26-Dec	10	13	10	7	8	9	9	9	9	9	9	9	10	8	7	5	6	6	5	3	3	3	3	3	7.2	12.8
27-Dec	2	2	2	3	3	9	10	8	8	9	7	6	6	5	5	5	3	3	3	2	2	2	2	2	4.6	10.4
28-Dec	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	4	3	1	2.1	3.5
29-Dec	2	2	2	2	2	N	N	2	3	2	2	2	2	3	2	3	3	3	2	2	2	N	N	N	2.3	3.1
30-Dec	4	5	4	5	5	3	3	3	3	3	4	6	6	5	5	3	4	4	4	4	4	2	3	2	3.9	5.7
31-Dec	2	3	2	3	3	4	4	3	2	4	4	2	4	4	5	5	5	6	5	5	5	5	4	5	3.9	6.0

8.8	9.3	8.8	8.9	9.2	10.0	9.3	9.4	9.7	8.9	9.0	9.2	9.0	9.7	9.3	9.3	9.1	9.9	10.4	9.8	9.2	9.6	9.3	8.5	Diurnal Average	
15.7	17.4	21.2	20.9	33.5	36.7	35.8	35.0	33.5	24.1	26.9	26.6	27.8	26.5	26.6	32.1	33.9	36.5	34.4	32.3	22.2	21.3	18.5	17.1	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**

**Smoky Heights - Wind Direction (WD) - deg
December 1, 2009 to January 1, 2010**

Maximum Value: 99.7 deg on Dec 27 01:00																								Hours in Service:	744
Minimum Value: 2.0 deg on Dec 13 10:00																								Hours of Data:	735
Percentiles: P ₁ = 3.0 P ₁₀ = 4.5 Q ₁ = 6.2 Median = 9.6 Q ₃ = 17.1 P ₉₀ = 32.8 P ₉₉ = 79.7																								Hours of Missing Data:	9
																								Hours of Calibration:	0
																								Percent Operational Time:	98.8
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-Dec	N	3	6	6	5	5	4	2	4	27	6	5	18	7	7	16	24	21	14	6	27	12	11	28	27.6
2-Dec	19	6	9	7	6	4	8	8	5	6	11	6	14	P	P	P	6	11	10	11	11	9	7	10	19.1
3-Dec	4	6	6	10	6	7	7	7	8	9	7	5	11	7	8	8	11	12	6	15	26	29	23	51	51.2
4-Dec	50	7	20	8	5	4	5	5	6	6	5	5	5	8	8	5	4	5	6	4	8	6	20	11	50.2
5-Dec	10	7	11	7	6	8	6	13	12	17	12	13	10	9	9	8	8	6	5	5	5	10	7	7	17.1
6-Dec	6	5	15	64	19	7	34	29	13	21	13	7	10	19	7	7	16	3	6	23	17	6	6	8	63.7
7-Dec	4	6	3	6	8	6	15	9	9	10	14	13	6	8	9	12	14	21	17	24	31	33	20	52	51.6
8-Dec	9	15	11	53	69	28	25	65	15	59	13	60	16	36	46	14	15	18	56	60	23	15	18	19	69.4
9-Dec	15	37	9	82	28	84	7	8	5	5	5	7	7	8	11	8	17	5	16	9	9	23	9	15	84.1
10-Dec	53	38	8	11	9	8	6	6	5	5	16	6	7	11	9	35	40	17	9	11	27	9	4	6	52.9
11-Dec	25	12	7	6	8	5	6	7	6	5	6	7	6	6	5	4	6	3	4	4	4	4	5	4	24.5
12-Dec	5	7	7	6	4	4	5	14	17	5	4	5	39	55	11	11	15	9	37	60	27	71	54	36	70.5
13-Dec	21	21	30	15	21	4	6	6	4	2	4	4	6	5	4	6	5	11	4	5	8	8	9	15	30.1
14-Dec	7	7	6	6	8	10	9	11	6	7	8	12	9	27	17	29	24	12	10	9	10	22	13	16	29.0
15-Dec	24	14	9	31	20	52	31	16	11	27	13	10	7	13	13	8	9	13	12	22	6	37	14	21	51.8
16-Dec	21	29	41	20	7	12	17	13	14	18	14	35	13	9	36	67	97	11	26	54	44	32	12	22	96.6
17-Dec	10	10	13	13	7	5	18	9	9	9	18	23	13	16	6	10	11	7	5	9	71	80	31	14	79.7
18-Dec	8	11	13	12	14	15	12	20	11	35	14	14	10	8	39	10	6	18	4	7	10	4	17	30	38.8
19-Dec	24	11	6	6	7	5	67	35	29	9	17	15	7	4	3	3	4	6	34	58	25	7	33	13	67.0
20-Dec	6	28	79	74	21	39	45	6	7	36	81	37	92	69	22	7	7	4	4	3	5	5	6	4	91.7
21-Dec	3	5	3	4	4	4	3	3	3	3	3	4	4	5	4	6	5	4	4	4	3	3	3	4	5.8
22-Dec	5	8	11	10	7	11	33	56	15	11	8	12	8	3	6	7	4	4	10	7	7	5	4	13	56.2
23-Dec	7	28	16	19	9	8	3	10	13	8	6	5	14	21	6	5	7	4	6	4	11	9	4	10	28.2
24-Dec	5	9	6	9	8	5	10	15	21	29	14	7	15	11	5	7	18	11	14	19	8	11	8	5	29.2
25-Dec	5	5	7	8	13	6	6	8	10	17	21	20	18	22	12	12	23	12	7	11	8	8	7	13	23.5
26-Dec	10	11	6	7	9	5	15	8	6	6	21	15	6	9	5	11	4	19	71	85	35	32	52	28	85.3
27-Dec	100	13	35	12	9	5	4	7	5	6	8	9	11	13	10	8	19	14	11	13	12	17	24	18	99.7
28-Dec	18	33	53	21	33	38	17	21	17	25	35	24	22	20	10	9	7	5	16	13	13	13	17	46	53.2
29-Dec	23	15	5	8	5	N	N	12	14	10	11	15	15	14	15	10	18	11	12	17	14	N	N	N	22.5
30-Dec	11	7	8	5	4	10	10	19	30	20	14	9	8	9	10	25	10	12	7	7	18	70	26	47	70.0
31-Dec	34	20	45	18	9	5	7	8	8	5	5	51	6	7	9	7	6	5	7	8	13	9	11	9	50.8
	99.7	38.0	79.3	81.7	69.4	84.1	67.0	65.0	29.8	58.6	80.6	60.5	91.7	68.6	46.4	66.7	96.6	21.1	71.5	85.3	70.8	79.7	53.8	51.6	
P - Power Failure N - Not Valid																									

PASZA

Beaverlodge Station

Monthly Summary Tables, Graphs and Roses

**Peace Airshed Zone Association
Summary of Hourly Averages**

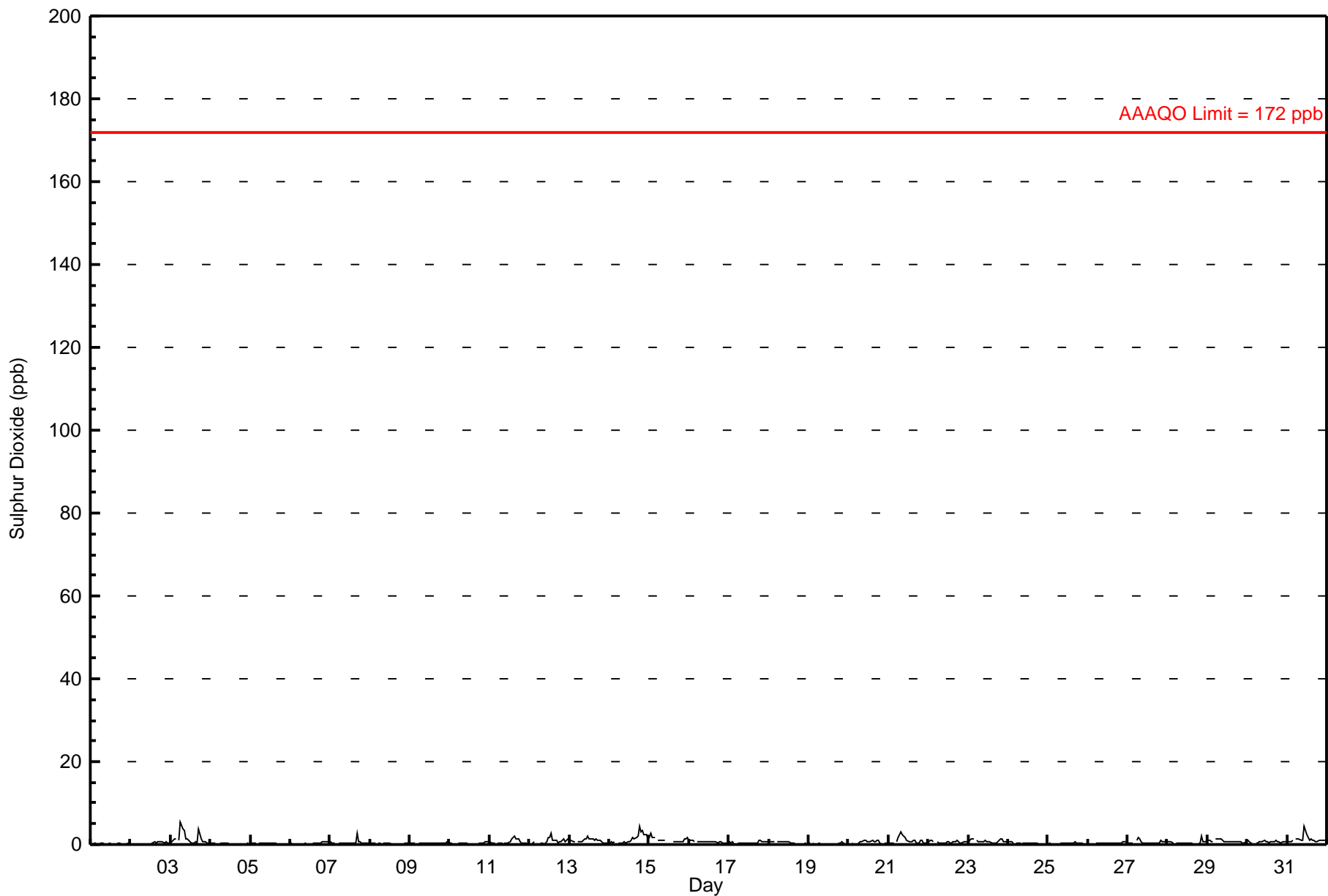
**Beaverlodge - Sulphur Dioxide (SO₂) - ppb
December 1, 2009 to January 1, 2010**

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 5.4 ppb on Dec 3 07:00	Maximum Daily Average: 1.4 ppb on Dec 3		Hours of Data:	709
Minimum Value: 0 ppb on Dec 19 12:00	Minimum Daily Average: 0.2 ppb on Dec 4		Hours of Missing Data:	35
Maximum Diurnal Average: 0.6 ppb at hour 11	Minimum Diurnal Average: 0.5 ppb at hour 6		Hours of Calibration:	35
Monthly Average: 0.56 ppb	Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.4 Q ₃ = 0.7 P ₉₀ = 1.1 P ₉₉ = 3.5		Percent Operational Time:	100.0

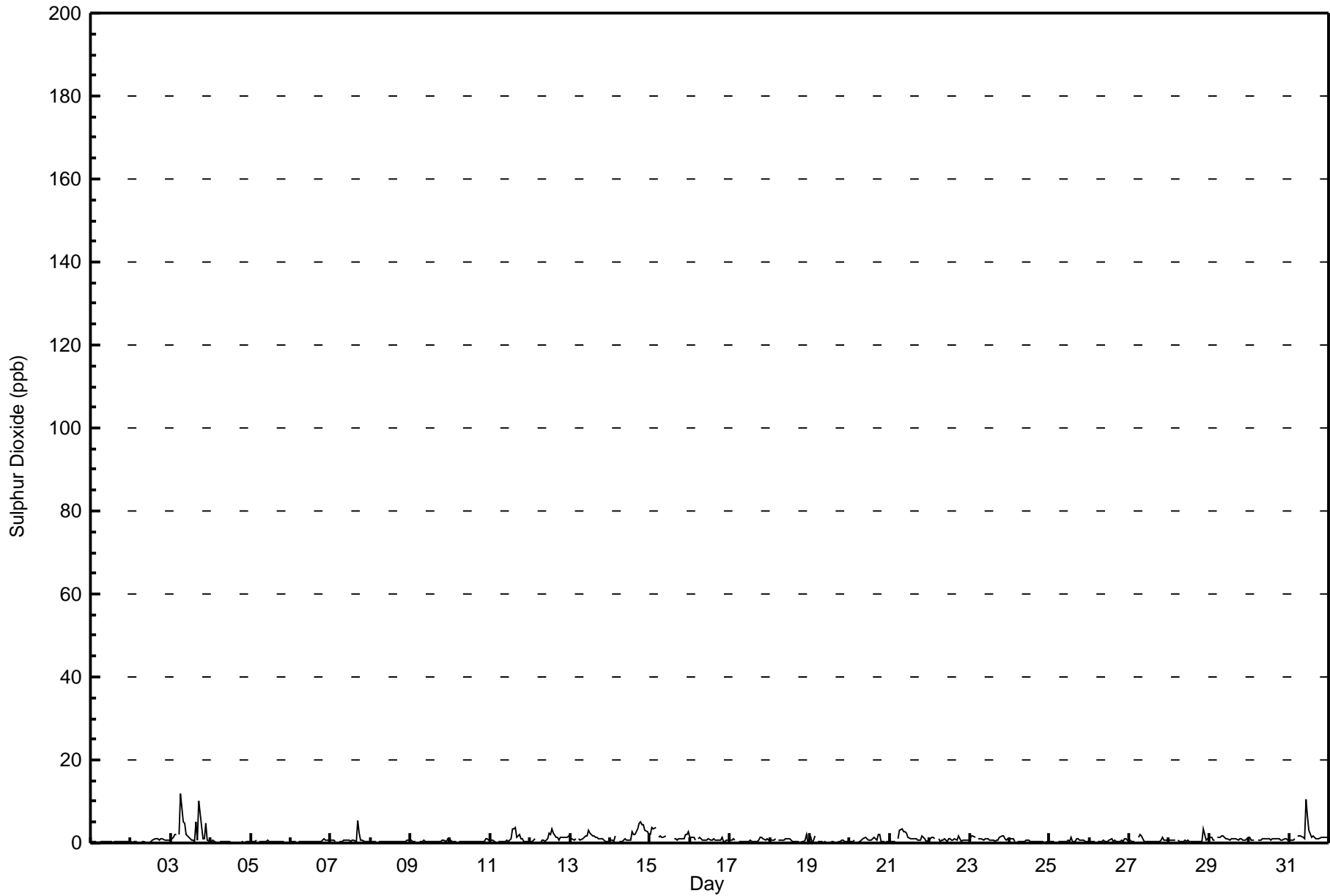
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
2-Dec	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	0	1	0	0	0.3	0.7
3-Dec	0	1	1	1	A	1	5	4	3	1	1	1	0	0	0	1	0	4	1	1	1	1	0	0	1.4	5.4
4-Dec	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
5-Dec	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
6-Dec	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0.3	0.7
7-Dec	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	3	1	1	0	0	0	0	0	0.5	2.8
8-Dec	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
9-Dec	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.3	0.8
10-Dec	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.3	0.8
11-Dec	1	0	0	0	A	0	0	0	0	0	0	1	2	2	2	1	1	1	1	0	0	0	0	0	0.6	2.0
12-Dec	0	0	0	1	A	0	0	0	0	0	1	2	2	3	1	1	1	0	1	1	1	1	1	1	0.8	2.8
13-Dec	1	1	1	1	A	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	0	0	0	0	0.9	2.0
14-Dec	0	1	0	1	A	0	0	0	0	1	0	1	1	1	2	1	2	2	4	3	3	2	2	1	1.3	4.3
15-Dec	2	3	2	2	A	1	1	1	1	1	C	C	C	C	1	1	1	1	1	1	1	1	2	1.1	2.6	
16-Dec	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0	0	1	0.6	1.1
17-Dec	1	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0.5	1.1
18-Dec	1	1	1	1	A	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	0	0	0.4	0.8
19-Dec	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.2	0.5
20-Dec	0	0	0	0	A	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0.5	1.2
21-Dec	0	0	0	0	A	1	2	3	2	2	2	1	1	1	1	1	1	0	1	1	0	0	0	0	0.9	3.0
22-Dec	1	1	1	1	A	1	0	0	0	1	0	1	1	0	0	1	1	1	1	0	0	1	1	1	0.6	1.1
23-Dec	0	1	1	1	A	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1	0.8	1.4
24-Dec	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8
25-Dec	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0.3	0.6
26-Dec	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.3	0.7
27-Dec	0	0	0	0	A	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.5	1.6
28-Dec	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	1	1	0.4	1.9
29-Dec	1	1	1	1	A	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0.8	1.5
30-Dec	1	1	1	0	A	0	0	1	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	1	0.7	0.9
31-Dec	1	1	1	1	A	1	1	1	1	1	5	3	2	1	1	1	1	1	1	1	1	1	1	1	1.3	4.5
	0.5	0.5	0.5	0.5	--	0.5	0.6	0.6	0.6	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.5	Diurnal Average	
	1.5	2.6	1.9	1.8	--	1.3	5.4	3.8	3.5	2.2	4.5	3.5	2.3	2.8	1.8	2.0	2.8	3.6	4.3	3.0	3.5	2.4	2.4	1.6	Diurnal Maximum	

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

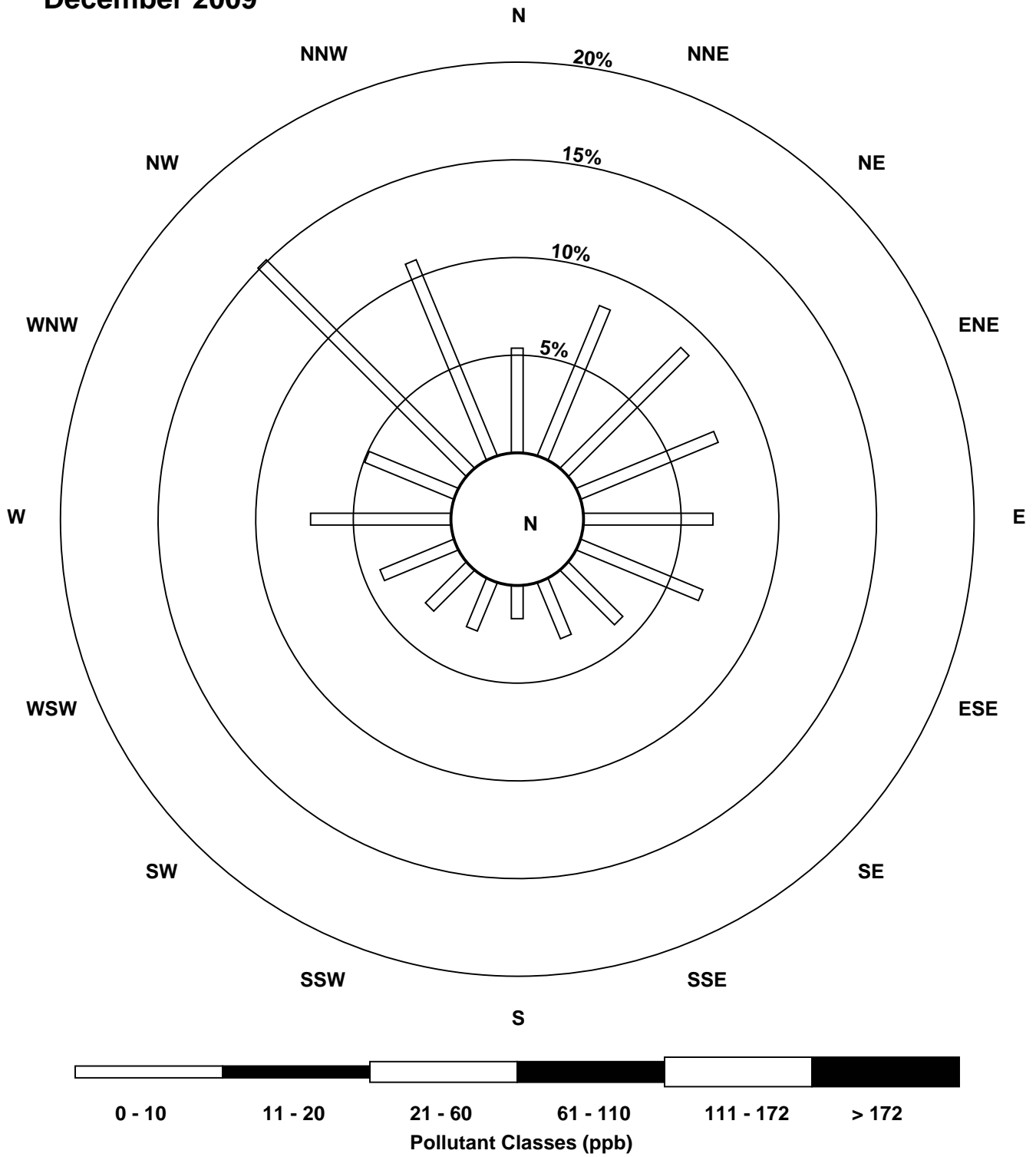
Hourly Averages for SO₂ at Beaverlodge December 2009



Hourly Maximums for SO₂ at Beaverlodge December 2009



Pollutant Rose for SO₂ at Beaverlodge December 2009



**Peace Airshed Zone Association
Summary of Hourly Averages**

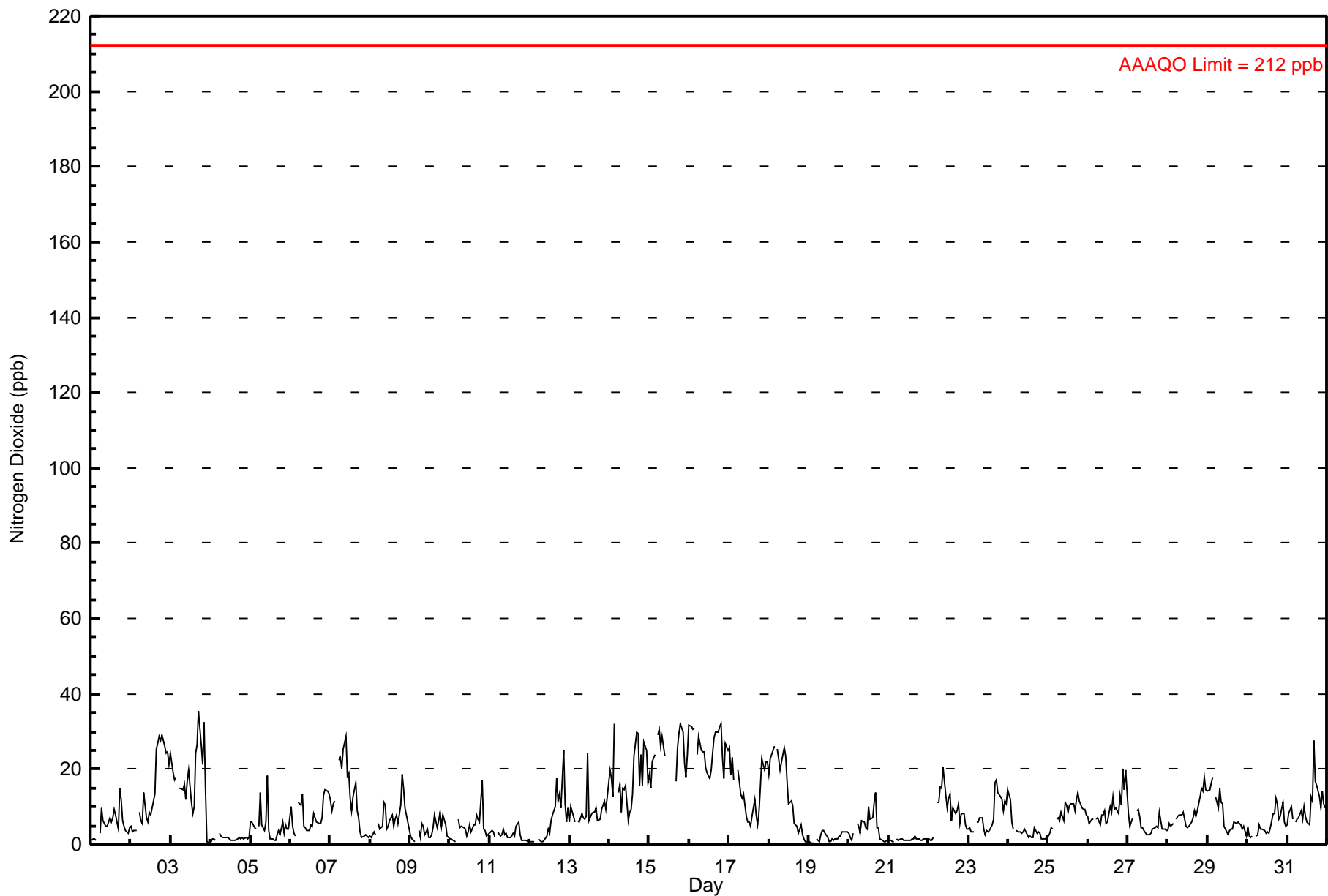
**Beaverlodge - Nitrogen Dioxide (NO₂) - ppb
December 1, 2009 to January 1, 2010**

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 35.5 ppb on Dec 3 18:00	Maximum Daily Average: 25.9 ppb on Dec 16		Hours of Data:	707
Minimum Value: 0 ppb on Dec 19 04:00	Minimum Daily Average: 1.3 ppb on Dec 21		Hours of Missing Data:	37
Maximum Diurnal Average: 11.0 ppb at hour 20	Minimum Diurnal Average: 5.9 ppb at hour 13		Hours of Calibration:	37
Monthly Average: 8.78 ppb	Percentiles: P ₁ = 0.6 P ₁₀ = 1.4 Q ₁ = 3.1 Median = 6.1 Q ₃ = 12.0 P ₉₀ = 21.8 P ₉₉ = 31.4		Percent Operational Time:	100.0

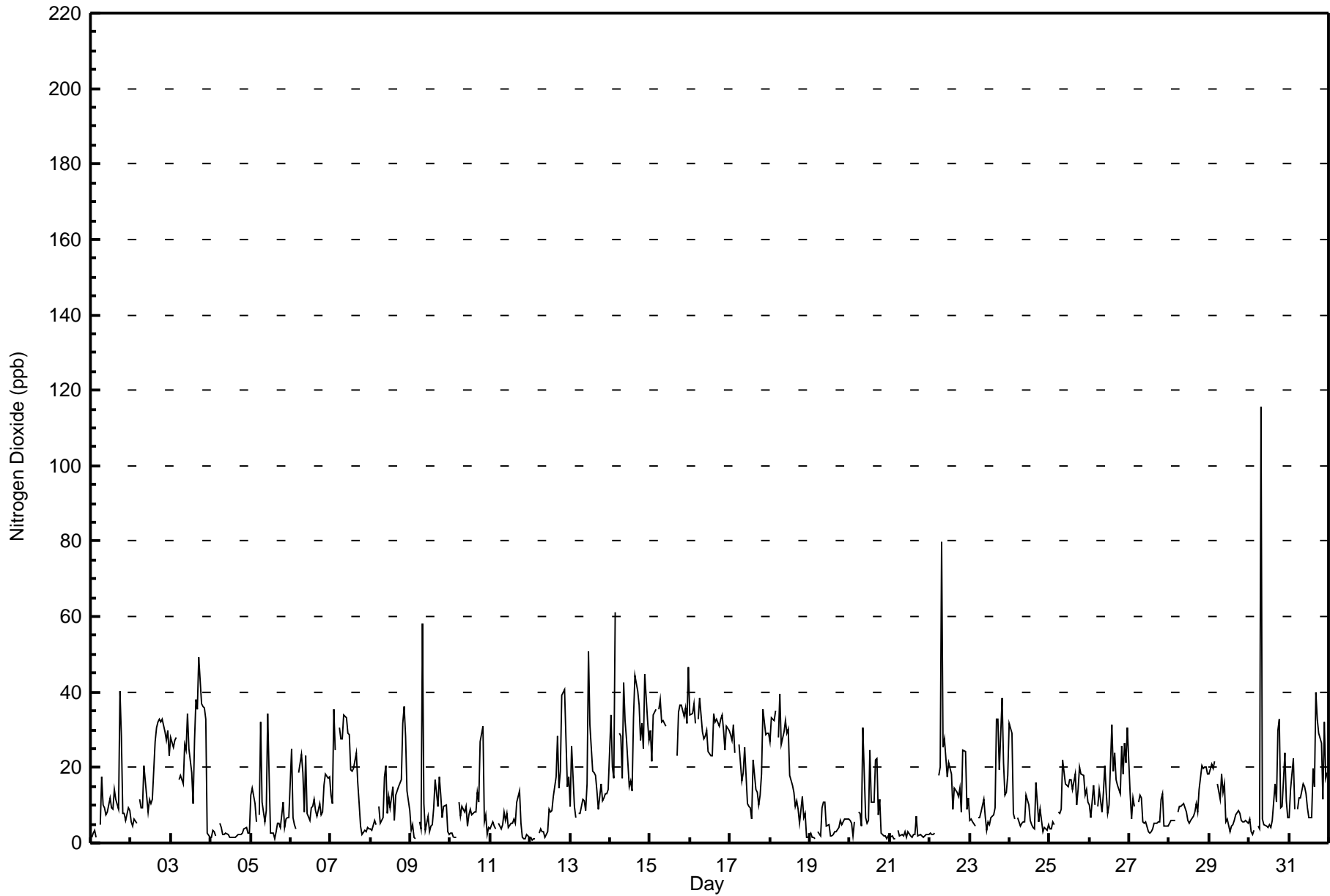
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	1	1	1	1	A	3	10	6	6	5	5	7	6	7	9	8	4	15	12	6	5	4	3	5	5.7	15.0
2-Dec	5	3	4	4	A	8	6	6	14	7	6	9	8	10	14	25	27	29	28	29	26	24	24	21	14.6	29.1
3-Dec	24	19	17	18	A	15	15	14	16	12	17	20	11	8	10	24	27	36	27	21	33	15	1	1	17.4	35.5
4-Dec	1	2	1	1	A	3	2	2	2	2	2	1	1	1	1	1	1	2	2	2	1	2	1	2	1.6	3.1
5-Dec	6	6	5	4	A	5	14	5	4	6	18	4	2	1	1	1	3	4	3	6	3	5	4	4	4.9	18.1
6-Dec	10	5	3	2	A	11	11	13	5	4	4	4	5	5	8	7	6	5	5	7	13	15	14	13	7.7	14.7
7-Dec	11	9	11	11	A	22	23	20	25	29	18	19	12	9	13	16	9	7	3	2	2	3	2	2	12.2	28.7
8-Dec	2	2	3	3	A	6	4	5	11	10	4	5	6	8	5	7	8	6	11	18	15	10	8	4	6.9	18.5
9-Dec	2	2	1	1	A	4	2	5	5	3	4	2	2	3	5	8	5	6	9	5	8	5	2	2	3.9	8.7
10-Dec	2	1	1	1	A	7	4	5	4	4	2	3	5	4	5	5	8	7	6	17	4	4	2	3	4.5	17.0
11-Dec	3	4	3	2	A	3	2	3	4	3	3	2	2	2	3	2	5	6	2	1	1	1	1	1	2.5	6.1
12-Dec	1	1	1	1	A	1	1	1	1	1	2	4	3	6	8	10	17	11	13	10	25	11	6	10	6.3	24.9
13-Dec	6	10	8	6	A	6	6	8	7	7	7	24	6	8	9	9	10	6	7	9	10	12	9	13	8.9	24.4
14-Dec	20	17	13	32	A	14	16	9	15	15	16	7	9	9	13	24	30	30	16	24	16	27	25	16	17.8	31.9
15-Dec	19	15	22	24	A	29	31	26	29	24	C	C	C	C	C	C	17	26	29	32	30	22	18	24	--	32.0
16-Dec	32	31	31	31	A	24	29	25	25	24	20	19	18	20	24	28	30	30	31	32	23	18	27	25	25.9	32.0
17-Dec	26	18	23	17	A	20	17	13	12	13	8	6	6	5	7	12	8	5	8	15	23	20	22	22	14.2	25.9
18-Dec	19	23	25	26	A	25	23	20	24	26	23	17	11	11	10	5	5	5	3	5	3	2	1	1	13.6	26.3
19-Dec	1	1	1	0	A	1	1	2	4	4	3	2	1	1	1	1	1	1	2	2	4	3	3	3	1.9	3.9
20-Dec	3	2	1	3	A	6	5	3	6	6	4	4	10	7	7	11	14	5	5	1	1	1	1	1	4.6	13.9
21-Dec	1	1	1	1	A	2	1	2	1	1	1	1	1	1	1	1	2	2	1	1	1	1	2	1	1.3	2.2
22-Dec	2	1	1	2	A	11	11	15	15	20	13	10	12	13	6	10	8	9	11	6	8	8	5	4	8.8	20.5
23-Dec	4	4	3	3	A	6	6	7	7	4	3	4	3	4	5	7	17	17	14	13	12	9	11	11	7.6	17.1
24-Dec	15	12	6	4	A	4	3	4	3	3	4	2	2	2	2	2	5	3	3	3	1	2	2	2	3.9	14.6
25-Dec	2	3	4	4	A	7	7	6	8	6	11	10	8	11	11	11	9	12	14	12	10	9	9	8	8.4	13.7
26-Dec	8	5	7	7	A	7	7	5	8	8	9	6	6	10	9	13	9	10	8	13	11	20	15	20	9.5	20.0
27-Dec	8	5	6	7	A	9	9	7	4	4	4	3	3	3	3	4	5	5	5	9	6	4	4	4	5.2	9.2
28-Dec	4	6	5	5	A	7	7	8	8	9	7	5	5	5	6	7	9	7	9	13	15	14	18	15	8.3	18.0
29-Dec	14	15	17	18	A	12	10	15	11	11	5	4	3	4	4	4	6	6	6	5	5	4	5	2	8.1	18.0
30-Dec	4	2	2	2	A	2	3	5	4	4	4	3	3	3	4	8	8	12	11	7	7	11	6	5	5.3	12.5
31-Dec	5	8	10	7	A	6	7	7	9	7	10	7	6	5	13	12	28	17	16	13	10	14	11	10	10.2	27.6
	8.4	7.6	7.6	8.0	--	9.2	9.5	8.8	9.6	9.1	7.9	7.1	5.9	6.2	7.3	9.5	10.9	11.0	10.3	11.0	10.7	9.6	8.5	8.2		Diurnal Average
	31.6	31.5	30.7	31.9	--	29.0	30.7	26.1	28.6	28.7	23.3	24.4	17.6	19.6	24.1	28.2	29.8	35.5	31.4	32.0	32.5	27.1	27.0	25.0		Diurnal Maximum

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

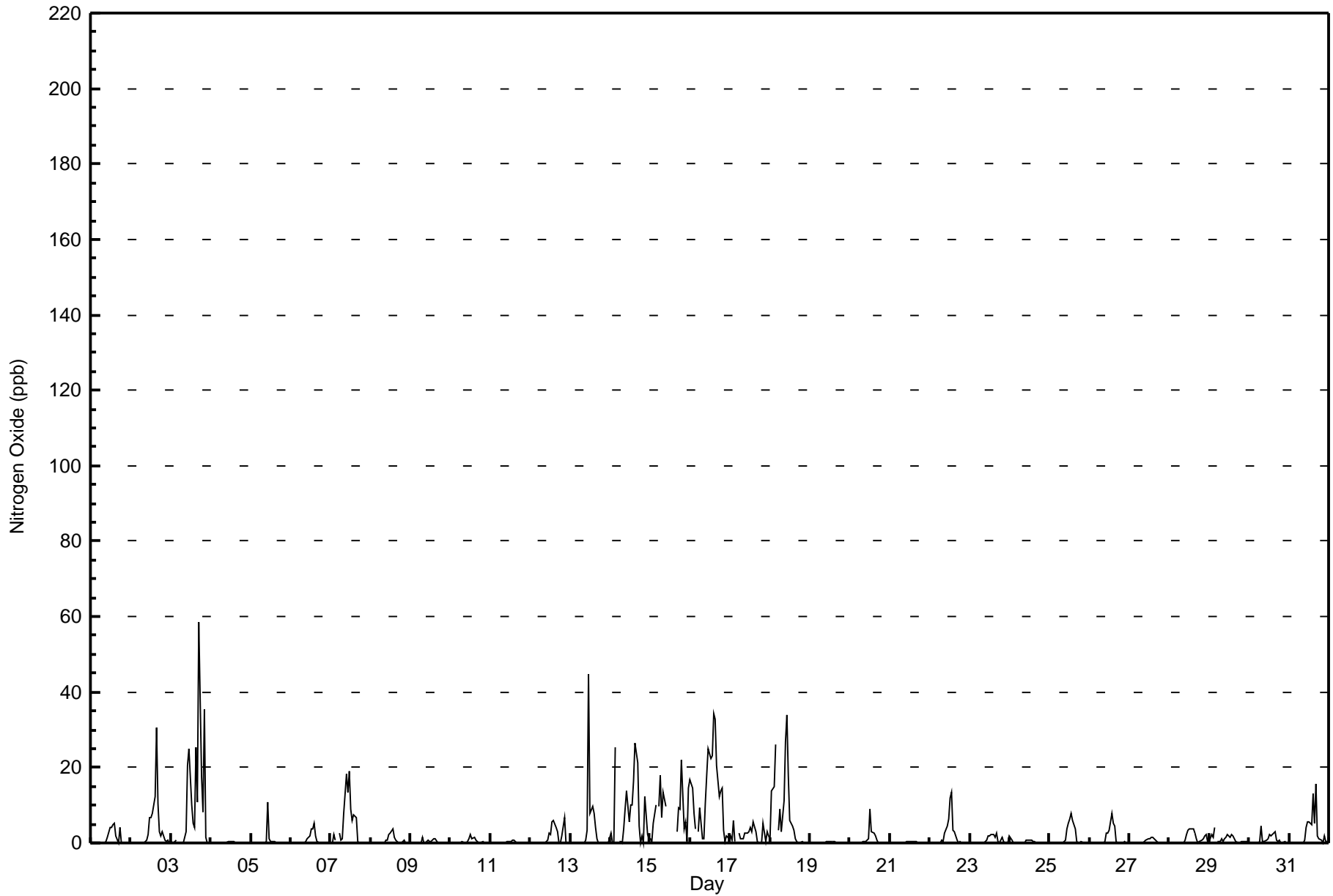
Hourly Averages for NO₂ at Beaverlodge December 2009



Hourly Maximums for NO₂ at Beaverlodge December 2009

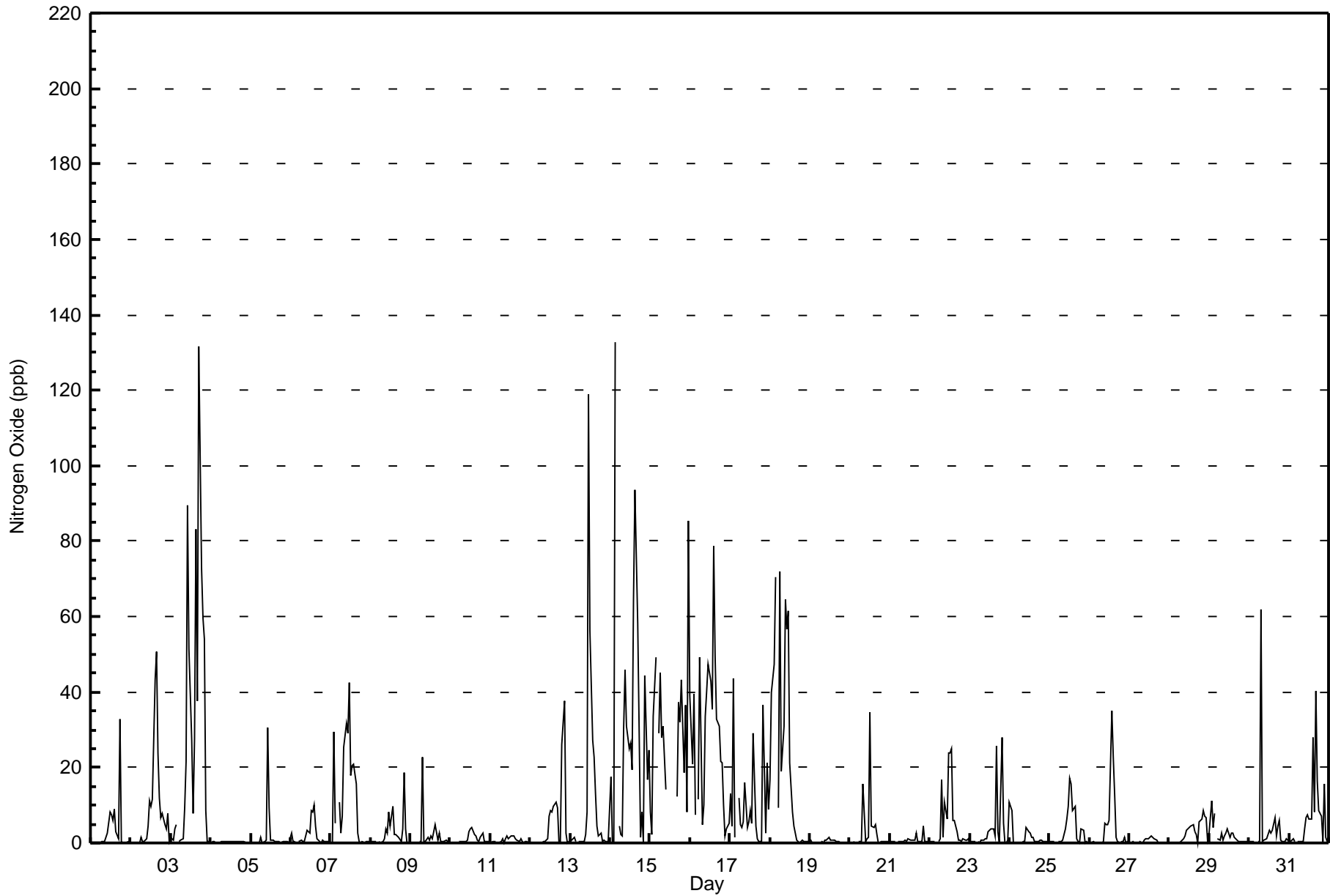


Hourly Averages for NO at Beaverlodge December 2009

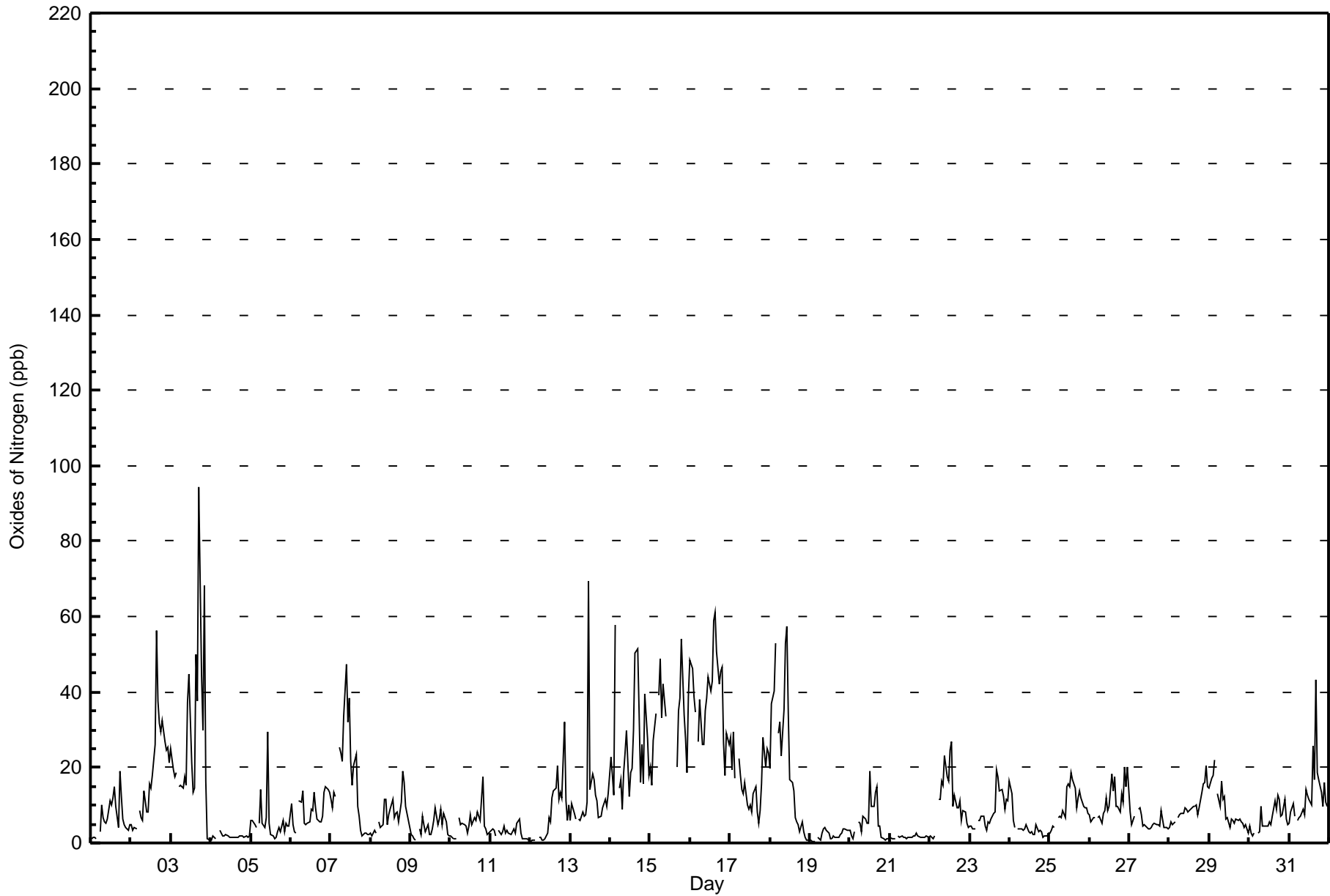


Hourly Maximums for NO at Beaverlodge

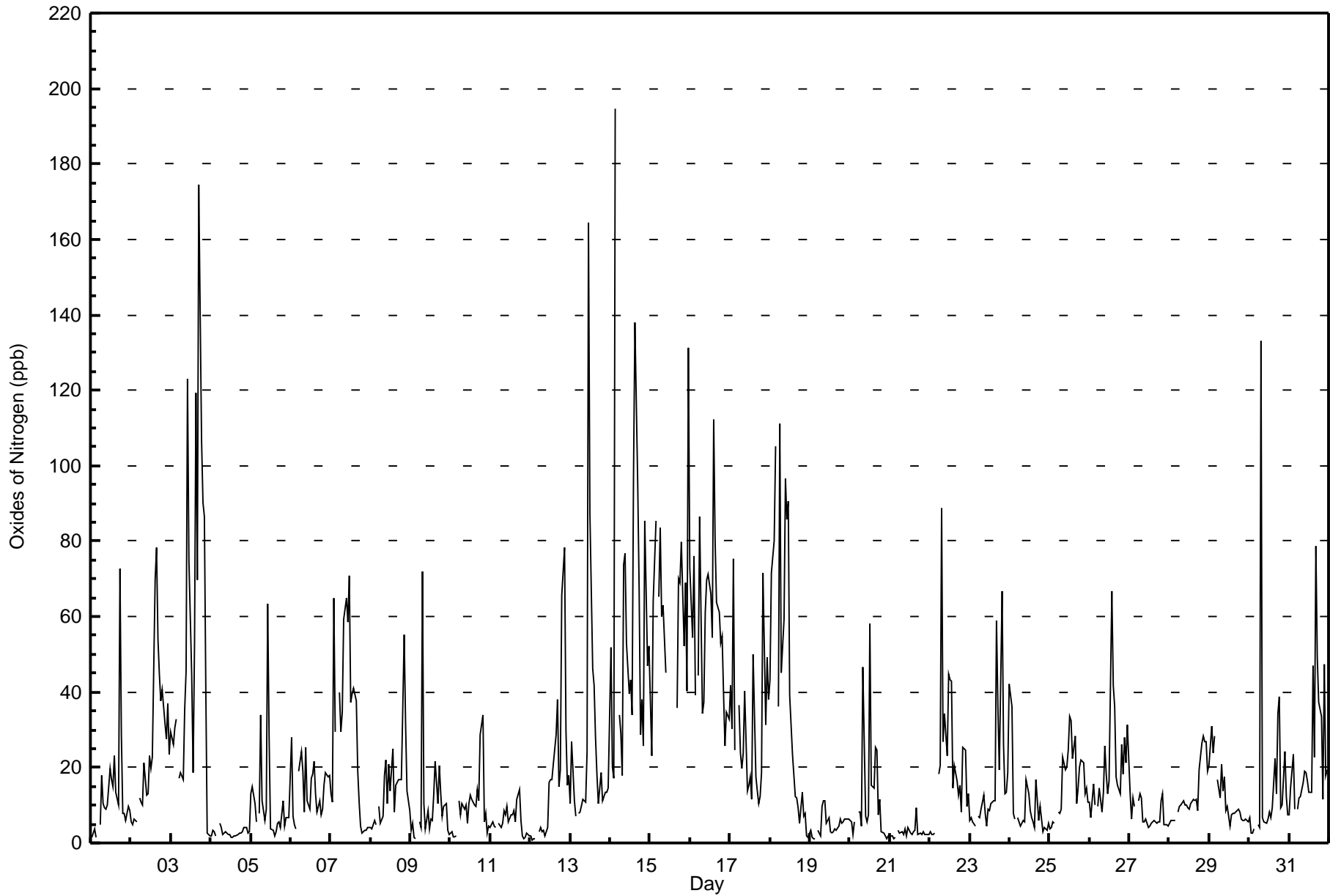
December 2009



Hourly Averages for NO_x at Beaverlodge December 2009



Hourly Maximums for NO_x at Beaverlodge December 2009



**Peace Airshed Zone Association
Summary of Hourly Averages**

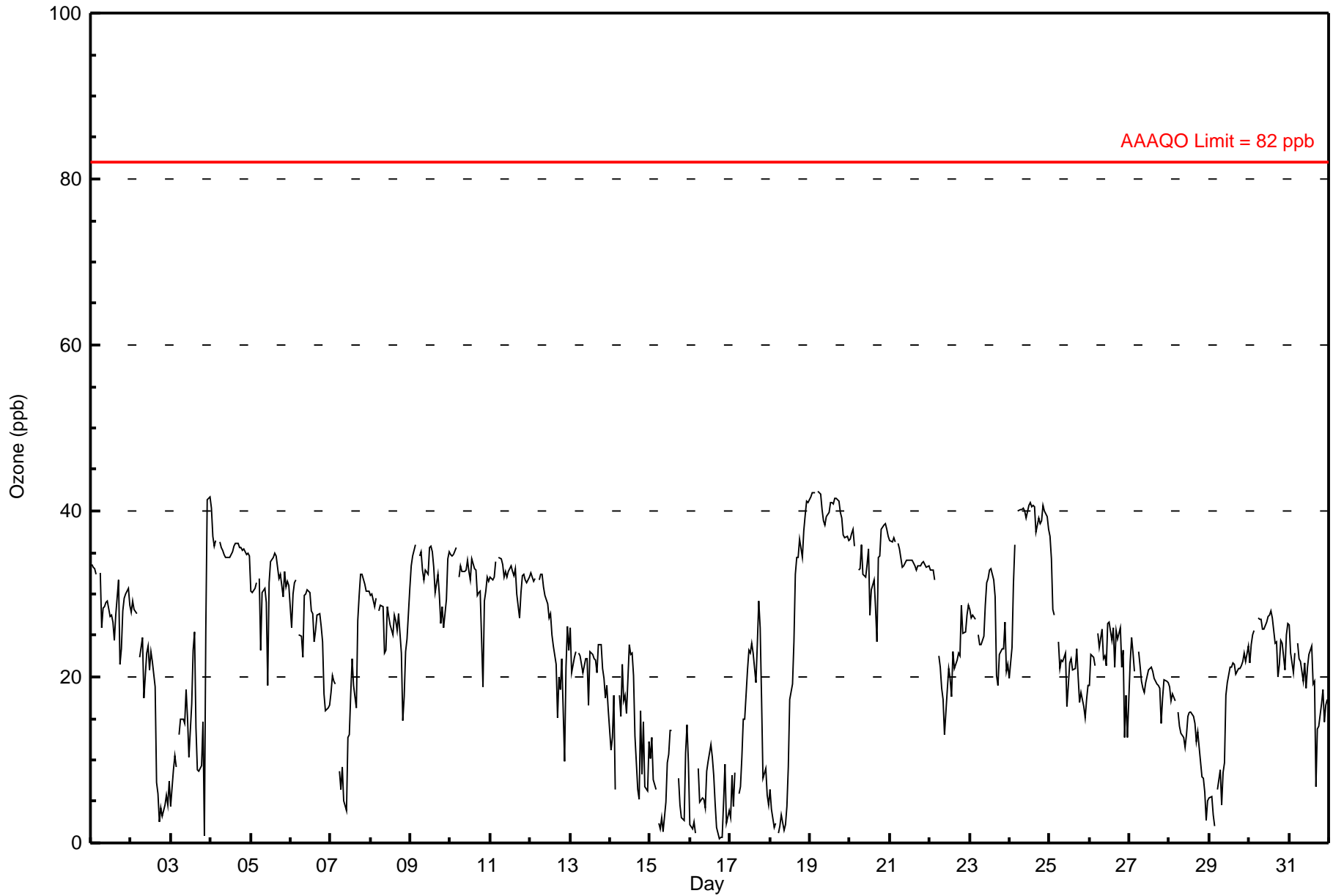
**Beaverlodge - Ozone (O₃) - ppb
December 1, 2009 to January 1, 2010**

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 42.3 ppb on Dec 19 06:00	Maximum Daily Average: 40.1 ppb on Dec 19		Hours of Data:	710
Minimum Value: 0 ppb on Dec 16 18:00	Minimum Daily Average: 5.0 ppb on Dec 16		Hours of Missing Data:	34
Maximum Diurnal Average: 26.1 ppb at hour 14	Minimum Diurnal Average: 22.0 ppb at hour 21		Hours of Calibration:	34
Monthly Average: 23.81 ppb	Percentiles: P ₁ = 1.5 P ₁₀ = 7.8 Q ₁ = 17.6 Median = 24.2 Q ₃ = 32.3 P ₉₀ = 35.9 P ₉₉ = 41.6		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Dec	34	33	33	32	A	33	26	28	29	29	29	27	27	27	24	27	32	22	23	28	29	30	31	29	28.8	33.6	
2-Dec	28	29	28	28	A	22	24	25	17	23	24	21	23	22	19	7	6	3	4	3	5	6	5	8	16.4	29.1	
3-Dec	4	9	11	9	A	13	15	15	14	18	15	10	17	23	25	14	9	9	4	15	1	26	41	42	15.8	41.6	
4-Dec	40	37	36	36	A	36	36	35	35	34	34	34	35	35	36	36	36	36	36	35	35	35	35	35	35.6	40.4	
5-Dec	30	30	31	31	A	32	23	30	31	29	19	31	34	34	35	35	33	32	32	30	33	31	31	31	30.8	34.9	
6-Dec	26	30	31	32	A	25	25	22	30	30	30	30	28	28	24	26	27	28	26	24	18	16	16	17	25.6	31.7	
7-Dec	18	20	19	19	A	9	6	9	5	4	13	13	18	22	19	16	27	30	32	32	31	30	30	30	19.8	32.4	
8-Dec	30	30	28	29	A	28	29	28	23	23	29	27	26	25	27	27	26	28	23	15	18	23	25	31	26.0	30.7	
9-Dec	33	35	35	36	A	35	35	33	32	33	32	36	36	35	33	30	32	30	27	28	26	29	34	35	32.6	36.0	
10-Dec	35	35	35	36	A	32	33	33	33	33	34	33	32	34	33	33	30	30	30	19	29	30	32	32	31.9	35.5	
11-Dec	32	32	32	34	A	34	34	34	32	33	32	33	33	32	33	30	27	30	32	32	32	31	32	32	32.2	34.5	
12-Dec	33	32	32	32	A	32	32	32	31	30	29	27	28	25	24	22	15	20	18	22	10	21	26	23	25.9	32.6	
13-Dec	26	21	22	23	A	23	23	21	21	22	22	17	23	23	22	22	21	24	24	21	20	17	19	16	21.4	26.0	
14-Dec	11	13	18	6	A	18	15	21	17	18	16	24	23	23	20	13	6	5	16	8	15	7	6	12	14.4	23.9	
15-Dec	10	13	8	6	A	2	2	3	1	5	10	11	13	14	C	C	C	8	5	3	3	11	14	10	7.5	14.3	
16-Dec	2	2	2	1	A	9	5	5	5	4	9	10	12	10	8	5	2	0	1	1	5	10	2	4	5.0	11.9	
17-Dec	3	8	4	8	A	6	7	10	15	15	21	23	23	24	23	19	24	29	26	17	8	9	6	5	14.5	29.1	
18-Dec	6	4	2	2	A	1	2	3	2	2	4	9	17	19	24	32	34	34	37	34	38	39	41	41	18.7	41.2	
19-Dec	42	42	42	42	A	42	42	40	39	38	39	40	41	41	41	42	42	41	40	39	37	37	37	36	40.1	42.3	
20-Dec	37	37	38	36	A	33	33	36	32	32	34	35	27	30	32	28	24	34	35	38	38	38	38	37	34.0	38.4	
21-Dec	36	36	37	36	A	36	35	33	33	34	34	34	34	34	33	33	33	33	34	34	34	33	33	33	34.3	36.7	
22-Dec	33	33	33	32	A	23	21	19	17	13	18	21	20	18	23	21	22	23	22	29	25	25	27	29	23.8	32.9	
23-Dec	28	27	28	27	A	25	24	24	25	29	31	32	33	33	32	30	20	19	23	23	23	27	21	22	26.3	33.0	
24-Dec	20	24	31	36	A	40	40	40	40	40	39	41	41	41	41	41	38	39	38	39	41	40	39	38	37.6	41.0	
25-Dec	37	34	28	27	A	24	21	22	22	23	17	19	22	22	21	21	23	20	17	18	16	15	17	19	22.0	36.9	
26-Dec	19	23	22	21	A	25	24	26	22	23	21	26	27	24	26	21	26	25	26	21	23	13	18	13	22.4	26.6	
27-Dec	22	25	23	21	A	23	21	19	19	18	19	21	21	21	21	20	19	19	19	14	17	20	20	19	20.0	24.7	
28-Dec	19	17	18	17	A	16	14	13	13	12	13	15	16	16	15	14	12	13	12	8	8	6	3	5	12.8	18.8	
29-Dec	5	6	3	2	A	7	9	5	8	10	18	19	21	21	22	22	20	21	21	21	22	23	22	24	15.2	23.7	
30-Dec	22	24	25	26	A	27	27	27	26	26	27	27	27	27	28	27	24	24	20	22	24	24	21	25	26	25.0	27.9
31-Dec	26	23	21	23	A	24	22	22	20	22	19	21	23	24	19	20	7	14	14	17	19	15	17	17	19.4	26.3	
	24.1	24.6	24.4	24.1	--	23.7	22.7	23.1	22.2	22.7	23.6	24.8	25.8	26.1	26.1	24.4	23.3	23.1	23.2	22.4	22.0	23.0	24.0	24.2	Diurnal Average		
	41.8	42.1	42.3	42.3	--	42.3	42.0	40.2	40.3	40.0	39.3	40.7	41.0	41.1	40.8	41.5	41.6	41.1	39.9	39.1	40.6	40.0	41.4	41.6	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 O₃ at Beaverlodge December 2009



**Peace Airshed Zone Association
Summary of Hourly Maximums**

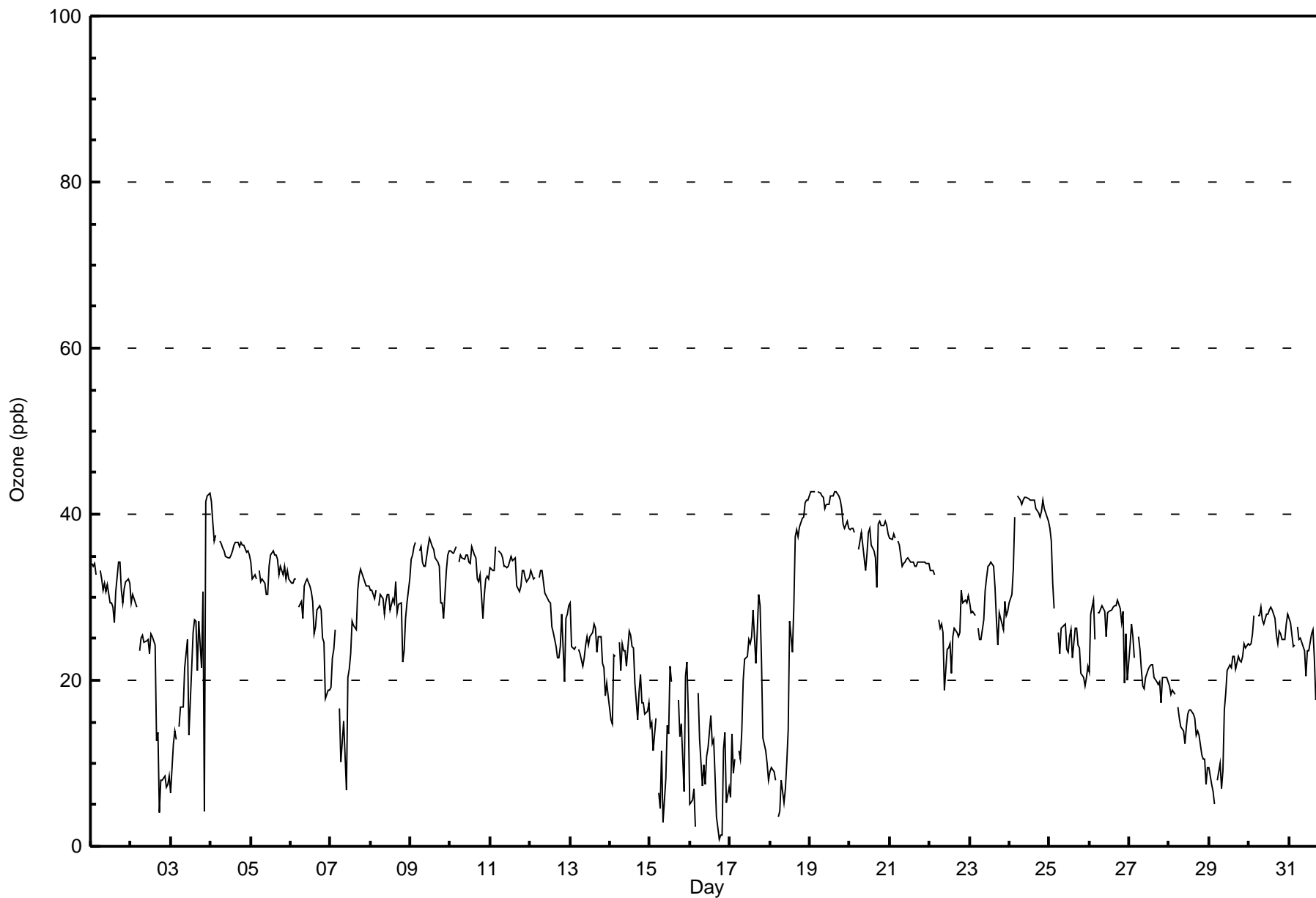
**Beaverlodge - Ozone (O₃) - ppb
December 1, 2009 to January 1, 2010**

Maximum Value: 42.8 ppb on Dec 19 03:00	Maximum Daily Average: 41.5 ppb on Dec 19	Hours in Service: 744
Minimum Value: 1 ppb on Dec 16 18:00	Minimum Daily Average: 8.4 ppb on Dec 16	Hours of Data: 710
Maximum Diurnal Average: 28.8 ppb at hour 15	Minimum Diurnal Average: 24.8 ppb at hour 21	Hours of Missing Data: 34
Monthly Average: 26.68 ppb	Percentiles: P ₁ = 4.1 P ₁₀ = 12.7 Q ₁ = 21.5 Median = 27.9 Q ₃ = 33.7 P ₉₀ = 37.5 P ₉₉ = 42.7	Hours of Calibration: 34
		Percent Operational Time: 100.0

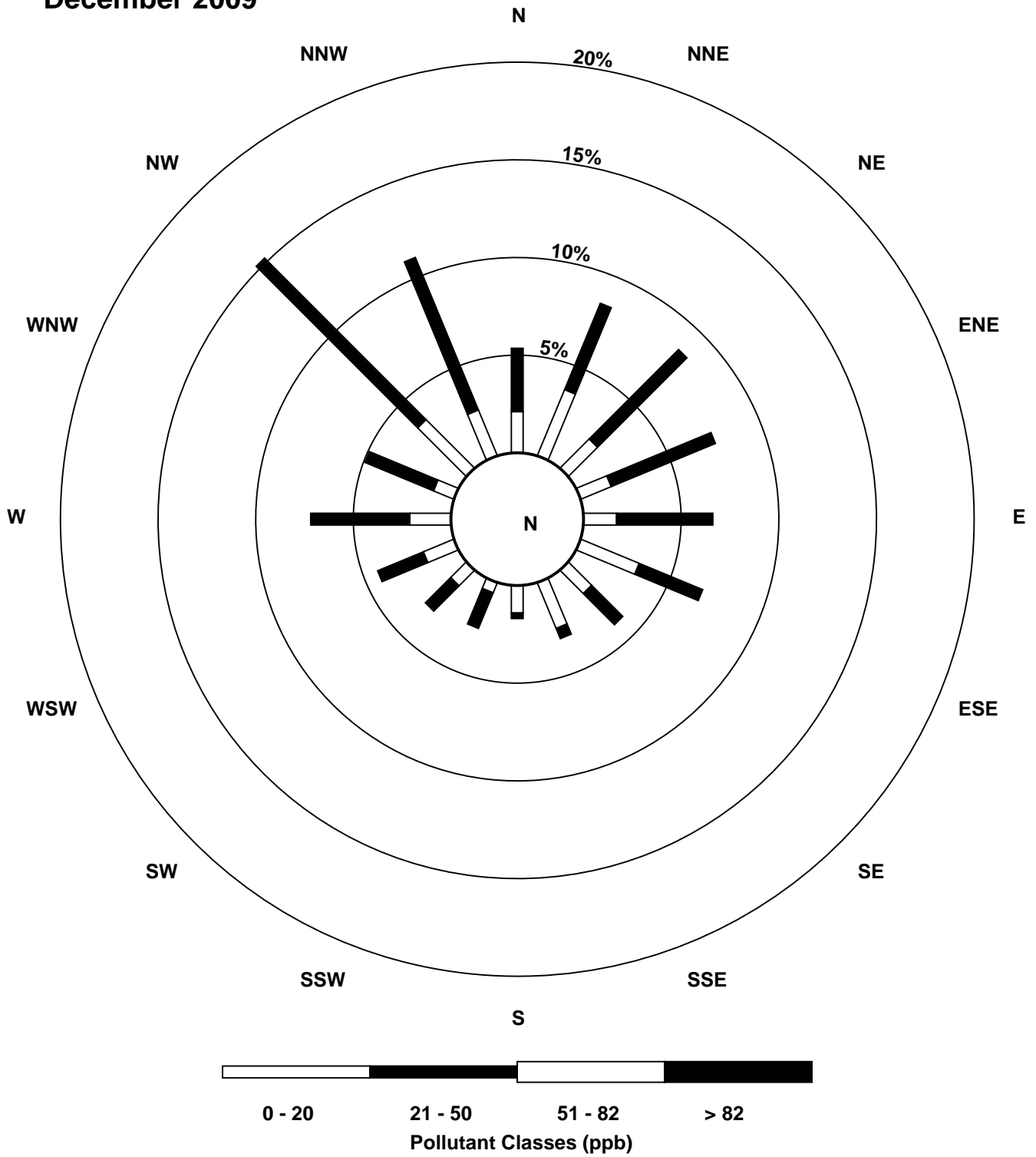
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	34	34	34	33	A	33	32	31	32	31	31	29	29	29	27	31	34	34	31	29	31	32	32	32	31.5	34.2
2-Dec	29	30	30	29	A	24	25	25	25	25	23	26	25	24	13	14	4	8	8	8	7	7	9	19.2	30.3	
3-Dec	6	12	14	13	A	14	17	17	22	23	25	13	21	26	27	27	21	27	21	31	4	42	42	42	22.1	42.5
4-Dec	41	39	37	37	A	37	37	36	36	35	35	35	35	36	36	37	37	36	37	36	36	35	36	35	36.3	41.5
5-Dec	34	32	33	32	A	33	32	32	32	30	30	34	35	36	35	35	35	33	34	33	34	32	33	32	33.1	35.6
6-Dec	32	32	32	32	A	29	30	27	31	32	32	31	31	29	26	27	28	29	28	25	25	18	19	19	28.0	32.3
7-Dec	19	23	24	26	A	17	10	13	15	7	20	21	23	27	27	26	31	33	33	33	32	31	31	31	24.0	33.3
8-Dec	31	31	30	31	A	29	30	30	28	29	30	30	28	30	29	32	28	29	29	22	24	27	29	32	29.2	32.3
9-Dec	35	35	36	37	A	36	36	34	34	34	36	37	37	36	36	35	34	34	29	29	27	33	35	36	34.4	37.1
10-Dec	36	35	35	36	A	34	35	35	35	35	35	34	34	36	35	35	32	32	33	28	30	32	33	32	33.8	36.1
11-Dec	34	33	33	36	A	36	35	35	34	34	34	35	34	35	35	31	31	31	33	33	32	32	32	32	33.5	36.1
12-Dec	33	33	32	32	A	32	33	33	32	31	30	29	29	27	26	24	23	23	24	28	20	27	28	29	28.6	33.3
13-Dec	29	24	24	24	A	24	23	22	23	24	25	24	25	26	27	26	23	25	25	22	22	18	20	18	23.6	29.4
14-Dec	15	15	23	23	A	25	21	24	24	24	22	26	26	24	24	20	15	19	21	17	17	16	16	17	20.6	26.0
15-Dec	14	15	12	15	A	6	5	12	3	8	15	13	22	20	C	C	C	18	13	15	7	20	22	16	13.5	22.2
16-Dec	5	6	7	2	A	18	13	7	10	7	11	12	16	12	13	8	4	1	1	1	12	14	5	7	8.4	18.4
17-Dec	6	14	9	11	A	12	11	14	20	22	23	25	24	25	28	22	26	30	29	22	13	11	10	8	18.1	30.4
18-Dec	9	9	9	8	A	4	4	8	5	7	10	14	27	23	29	37	38	37	39	40	40	41	42	42	22.7	41.7
19-Dec	43	43	43	43	A	43	43	42	42	41	41	41	42	42	42	43	43	42	42	41	39	38	39	38	41.5	42.8
20-Dec	38	38	38	38	A	36	37	38	36	33	35	38	38	36	36	35	31	39	39	39	39	39	39	38	37.1	39.2
21-Dec	37	37	38	37	A	37	36	34	34	34	35	35	34	34	34	34	34	34	34	34	34	34	34	34	34.9	37.6
22-Dec	33	33	33	33	A	27	26	27	26	19	24	24	24	21	25	26	26	25	26	31	29	30	29	30	27.3	33.3
23-Dec	29	28	28	28	A	26	25	25	27	31	32	34	34	34	31	27	24	28	27	26	29	28	28	28	28.9	34.3
24-Dec	29	30	33	40	A	42	42	41	42	42	42	42	42	42	42	42	41	40	40	40	42	41	40	39	39.7	42.1
25-Dec	38	37	32	29	A	26	23	26	26	27	24	23	25	26	23	26	26	24	24	21	20	19	20	22	25.6	38.2
26-Dec	21	28	30	25	A	28	28	29	29	28	25	28	28	28	29	29	29	30	29	27	28	20	26	20	27.0	29.7
27-Dec	24	27	25	23	A	25	24	21	19	19	20	21	22	22	22	20	20	19	20	17	20	20	20	20	21.4	26.7
28-Dec	19	18	19	18	A	17	15	14	14	12	14	16	16	16	15	13	14	13	11	10	10	8	10	14.4	19.4	
29-Dec	10	8	7	5	A	8	10	7	9	16	18	21	22	21	23	23	21	23	22	22	23	24	24	24	17.1	24.4
30-Dec	24	24	26	28	A	28	28	29	27	27	28	28	28	29	28	27	25	24	26	26	25	25	27	28	26.8	28.9
31-Dec	27	27	24	24	A	26	25	25	24	24	21	24	24	26	23	18	20	24	21	20	20	20	20	20	23.1	27.5
	26.4	26.8	26.7	26.7	--	26.2	25.5	25.6	25.6	25.5	26.7	27.1	28.5	28.4	28.8	28.1	26.9	26.9	26.9	26.1	24.8	26.5	26.6	26.5	Diurnal Average	
	42.7	42.7	42.8	42.7	--	42.7	42.6	42.2	42.0	42.0	42.0	41.9	42.2	42.2	42.2	42.7	42.7	42.2	41.7	40.7	41.7	41.5	42.2	42.5	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

Hourly Maximums for O₃ at Beaverlodge December 2009



Pollutant Rose for O₃ at Beaverlodge December 2009



**Peace Airshed Zone Association
Summary of Eight Hour Running Averages**

**Beaverlodge - Ozone (O₃) - ppb
December 1, 2009 to January 1, 2010**

Number of Exceedences (AAAQO): 8-hr: 0	Hours in Service: 744
Maximum Value: 42.0 ppb on Dec 19 07:00	Hours of Data: 738
Minimum Value: 2.1 ppb on Dec 18 10:00	Hours of Missing Data: 6
	Hours of Calibration: 6
	Percent Operational Time: 100.0
Percentiles: P ₁ = 3.2 P ₁₀ = 8.2 Q ₁ = 18.3 Median = 24.5 Q ₃ = 31.8 P ₉₀ = 35.3 P ₉₉ = 40.8	

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-Dec	33	33	33	33	33	33	32	31	31	30	29	29	29	28	28	27	28	27	26	26	27	27	28	28	33.5
2-Dec	27	28	29	29	29	28	27	26	25	24	23	22	22	22	22	20	18	16	13	11	9	7	5	5	29.0
3-Dec	5	5	6	7	7	8	10	11	12	14	14	14	15	16	17	17	17	15	15	15	13	13	15	19	18.8
4-Dec	23	26	30	32	37	38	38	37	36	36	35	35	35	35	35	35	35	35	35	36	36	36	35	35	38.4
5-Dec	35	34	33	33	32	32	30	30	30	30	28	28	29	29	30	31	31	32	33	33	33	33	32	32	34.5
6-Dec	31	31	30	31	30	30	29	27	28	28	28	28	28	28	28	28	28	28	27	26	25	24	23	22	30.7
7-Dec	20	19	19	18	18	17	15	14	13	10	9	8	10	11	13	14	16	20	22	25	26	27	29	30	30.4
8-Dec	31	31	30	30	30	29	29	29	28	27	27	27	27	26	26	26	26	27	26	25	23	23	23	23	30.8
9-Dec	24	25	27	29	31	33	34	35	34	34	34	34	34	34	34	33	33	33	32	31	30	29	30	30	34.5
10-Dec	30	31	32	33	34	34	34	34	34	33	33	33	33	33	33	33	33	32	32	30	30	29	29	29	34.4
11-Dec	29	29	30	32	32	33	33	33	33	33	33	33	33	33	33	33	32	32	31	31	31	31	31	31	33.3
12-Dec	31	32	32	32	32	32	32	32	32	31	30	29	28	27	25	24	22	22	22	22	19	19	19	20	32.1
13-Dec	21	21	21	22	23	23	23	23	22	22	22	21	21	21	21	22	21	22	22	22	22	21	21	20	23.5
14-Dec	19	18	17	15	14	14	14	15	15	16	16	18	19	20	20	19	18	16	16	14	13	11	10	9	20.2
15-Dec	10	11	10	10	9	8	8	6	5	4	4	5	6	7	8	9	N	N	N	N	N	N	7	8	10.9
16-Dec	7	6	6	6	6	6	4	4	4	5	6	7	7	8	8	8	7	7	6	5	4	4	3	3	7.9
17-Dec	3	4	5	6	6	5	6	7	8	9	12	14	15	17	19	20	22	23	24	23	21	19	17	15	23.9
18-Dec	13	10	7	5	5	4	3	3	2	2	2	3	5	7	10	14	18	22	26	29	32	34	36	37	37.4
19-Dec	38	39	40	41	41	42	42	42	41	41	40	40	40	40	40	40	40	41	41	41	40	40	39	39	42.0
20-Dec	38	38	37	37	37	36	36	36	35	34	34	34	33	33	32	31	30	31	31	31	32	33	34	35	38.0
21-Dec	37	37	37	37	37	37	36	36	35	35	35	34	34	34	34	34	34	34	34	34	34	34	33	33	37.3
22-Dec	33	33	33	33	33	31	30	28	25	22	20	19	19	18	19	19	19	21	21	22	23	24	24	25	33.4
23-Dec	26	27	27	27	27	27	27	26	26	26	26	27	28	29	30	31	30	29	28	27	25	25	23	22	30.5
24-Dec	22	23	24	25	26	28	30	33	36	38	39	40	40	40	40	40	40	40	40	40	40	39	39	39	40.4
25-Dec	39	38	37	36	35	33	30	28	26	24	22	21	21	21	21	21	21	21	21	21	20	19	19	18	38.9
26-Dec	18	18	19	19	20	21	22	23	23	23	23	24	24	24	24	24	24	25	25	24	24	23	22	20	25.1
27-Dec	20	20	20	20	19	21	21	22	22	21	20	20	20	20	20	20	20	20	20	19	19	19	18	18	22.0
28-Dec	18	18	18	18	18	18	17	16	15	15	14	14	14	14	14	14	14	14	14	13	12	11	10	8	18.5
29-Dec	8	7	6	5	4	4	5	5	6	6	8	11	12	14	15	18	19	20	21	21	21	21	22	21.7	
30-Dec	22	22	23	23	24	24	25	25	26	26	26	27	27	27	27	26	26	26	25	25	24	23	23	23	26.9
31-Dec	24	24	24	24	24	24	24	23	22	22	22	21	21	21	21	19	18	18	17	17	15	15	15	15	24.0
	38.9	39.3	40.0	41.0	41.4	41.9	42.0	41.8	41.4	40.9	40.4	40.1	40.2	40.3	40.3	40.4	40.4	40.8	40.9	40.8	40.3	39.8	39.3	38.9	
	Diurnal Maximums																								

N - Not Valid

**Peace Airshed Zone Association
Summary of Hourly Averages**

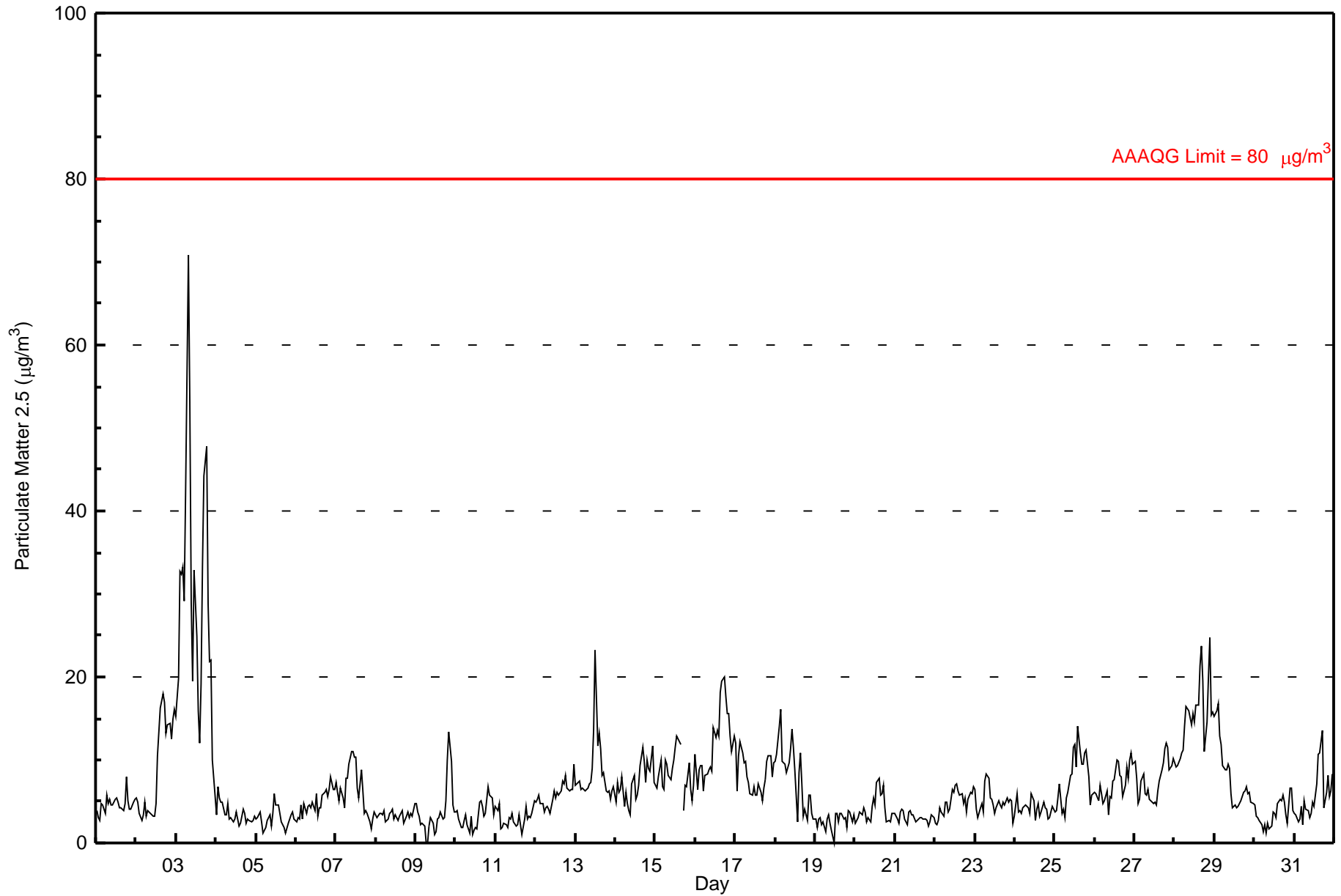
**Beaverlodge - Particulate Matter 2.5 (PM_{2.5}) - µg/m³
December 1, 2009 to January 1, 2010**

Number of Exceedences: 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 70.9 µg/m ³ on Dec 3 08:00	Maximum Daily Average: 29.0 µg/m ³ on Dec 3
Minimum Value: 0 µg/m ³ on Dec 9 07:00	Hours of Data: 743
Maximum Diurnal Average: 8.1 µg/m ³ at hour 17	Hours of Missing Data: 1
Monthly Average: 6.80 µg/m ³	Hours of Calibration: 1
Minimum Daily Average: 2.7 µg/m ³ on Dec 19	Percent Operational Time: 100.0
Minimum Diurnal Average: 5.6 µg/m ³ at hour 6	
Percentiles: P ₁ = 1.2 P ₁₀ = 2.6 Q ₁ = 3.5 Median = 5.0 Q ₃ = 8.1 P ₉₀ = 12.5 P ₉₉ = 33.1	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	4	3	3	5	5	4	6	5	5	5	5	5	5	5	4	4	4	5	8	5	4	4	5	5	4.6	7.9
2-Dec	5	5	4	3	3	5	3	4	3	3	3	3	5	10	16	17	18	17	13	14	14	13	15	16	8.9	18.0
3-Dec	15	20	33	32	33	29	42	71	53	29	20	33	25	16	12	19	33	44	48	29	22	22	10	6	29.0	70.9
4-Dec	3	7	5	5	5	3	3	5	3	3	3	3	4	3	2	2	4	4	2	3	3	3	3	3	3.5	6.8
5-Dec	3	3	4	3	1	2	2	3	3	2	3	6	5	5	4	2	2	2	1	2	3	3	4	3	2.9	5.9
6-Dec	3	3	3	5	3	5	4	4	5	4	5	4	6	3	4	4	6	6	6	6	7	8	6	6	4.8	8.0
7-Dec	7	6	5	7	5	4	8	8	10	11	11	10	10	7	5	9	6	3	4	4	2	2	3	4	6.3	11.0
8-Dec	3	3	3	4	3	4	3	3	4	4	4	3	3	3	3	3	4	2	3	4	3	4	3	5	3.4	4.8
9-Dec	5	4	3	2	2	2	0	0	2	3	2	1	1	3	3	4	3	3	5	10	13	10	5	4	3.8	13.4
10-Dec	4	4	3	2	2	3	3	2	1	3	1	2	2	2	5	5	4	3	3	7	6	6	5	3	3.4	6.8
11-Dec	4	4	5	2	2	2	2	2	3	3	4	2	2	2	3	2	1	3	4	3	3	3	4	5	3.0	5.0
12-Dec	5	5	6	5	5	4	4	4	4	4	5	6	5	6	6	6	7	7	8	7	6	6	6	10	5.8	9.6
13-Dec	7	7	7	6	7	6	6	7	7	7	9	13	23	12	13	11	8	9	6	6	6	5	6	7	8.5	23.1
14-Dec	5	7	6	6	8	4	6	5	4	3	7	8	5	6	7	9	12	10	7	10	9	9	12	7	7.2	11.8
15-Dec	7	7	8	10	7	6	10	9	8	8	9	10	11	13	12	12	C	4	7	7	10	6	5	7	8.4	12.9
16-Dec	11	6	9	9	9	6	8	8	9	9	9	14	13	14	13	18	20	20	18	16	16	13	11	13	12.1	20.1
17-Dec	12	6	11	12	11	10	10	8	7	6	6	7	6	6	7	6	5	7	8	10	11	10	8	10	8.2	12.2
18-Dec	10	11	14	16	10	10	10	8	10	11	14	11	9	2	8	11	7	3	4	3	6	6	3	3	8.4	16.2
19-Dec	3	2	3	3	2	3	1	3	3	2	2	0	4	3	3	3	4	3	3	2	4	4	3	3	2.7	3.9
20-Dec	2	3	3	4	3	4	4	3	3	2	4	5	5	7	8	6	6	7	4	3	3	3	4	3	4.1	7.8
21-Dec	4	3	2	4	4	4	3	2	4	4	3	3	3	3	3	3	3	3	3	3	2	2	3	3	3.1	4.1
22-Dec	2	2	3	4	4	3	5	5	4	4	6	6	7	7	6	6	6	5	5	4	5	6	6	7	4.9	7.2
23-Dec	6	4	3	4	5	4	8	8	8	5	5	5	3	4	5	5	4	5	5	5	5	5	5	2	5.0	8.4
24-Dec	3	6	4	4	4	4	5	4	4	4	6	5	3	4	5	3	4	5	4	4	3	3	4	4	4.1	5.9
25-Dec	4	4	5	7	4	4	3	5	6	8	8	11	12	9	14	11	9	10	11	11	8	5	6	6	7.6	14.1
26-Dec	6	6	5	7	6	5	5	6	3	6	5	8	8	10	10	8	8	6	7	9	8	10	11	9	7.1	10.9
27-Dec	10	8	5	5	7	8	6	6	6	5	5	5	5	5	6	8	9	10	11	12	11	9	9	10	7.6	12.1
28-Dec	10	9	9	10	11	11	14	16	16	15	14	16	15	17	17	21	24	20	11	15	20	25	15	16	15.2	24.7
29-Dec	15	16	17	13	12	9	9	9	9	9	6	4	5	4	4	5	5	6	6	7	6	6	5	5	8.0	16.8
30-Dec	5	3	3	3	2	1	2	1	2	2	2	4	4	3	5	5	5	6	5	3	2	7	7	4	3.6	6.7
31-Dec	3	3	3	3	4	2	5	4	4	3	4	5	4	7	11	11	12	14	4	6	8	6	6	8	5.9	13.6
	6.0	5.8	6.3	6.6	6.1	5.6	6.4	7.4	6.9	6.1	6.1	7.1	7.0	6.4	7.3	7.8	8.1	8.0	7.6	7.3	7.4	7.2	6.4	6.4	Diurnal Average	
	15.3	19.8	32.8	32.4	33.2	29.2	42.3	70.9	53.1	29.0	19.5	32.9	24.8	16.6	16.6	21.4	33.4	44.2	47.8	28.9	21.9	24.7	15.4	16.0	Diurnal Maximum	

C - Calibration
 Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³

Hourly Averages for PM_{2.5} at Beaverlodge December 2009

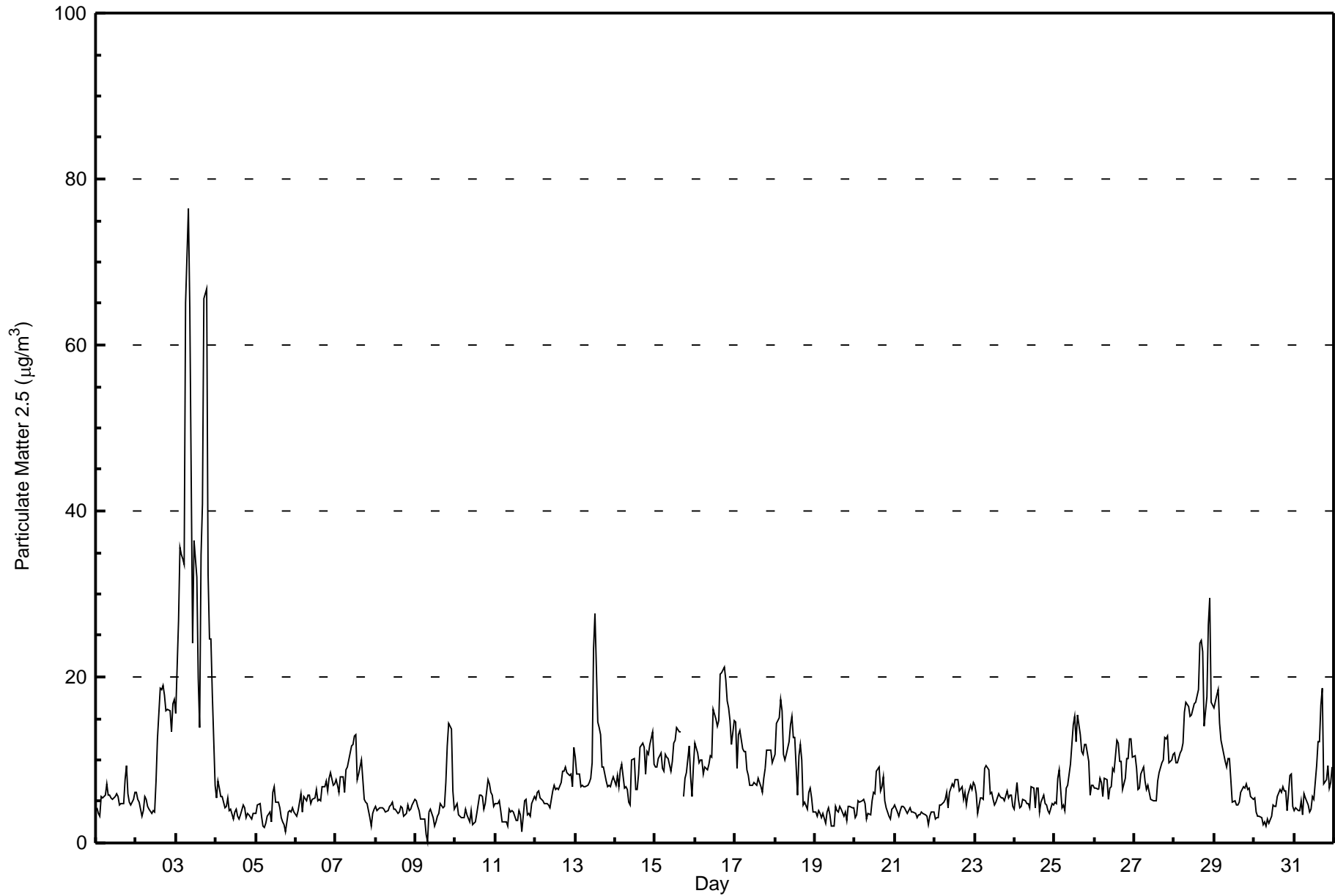


**Peace Airshed Zone Association
Summary of Hourly Maximums**

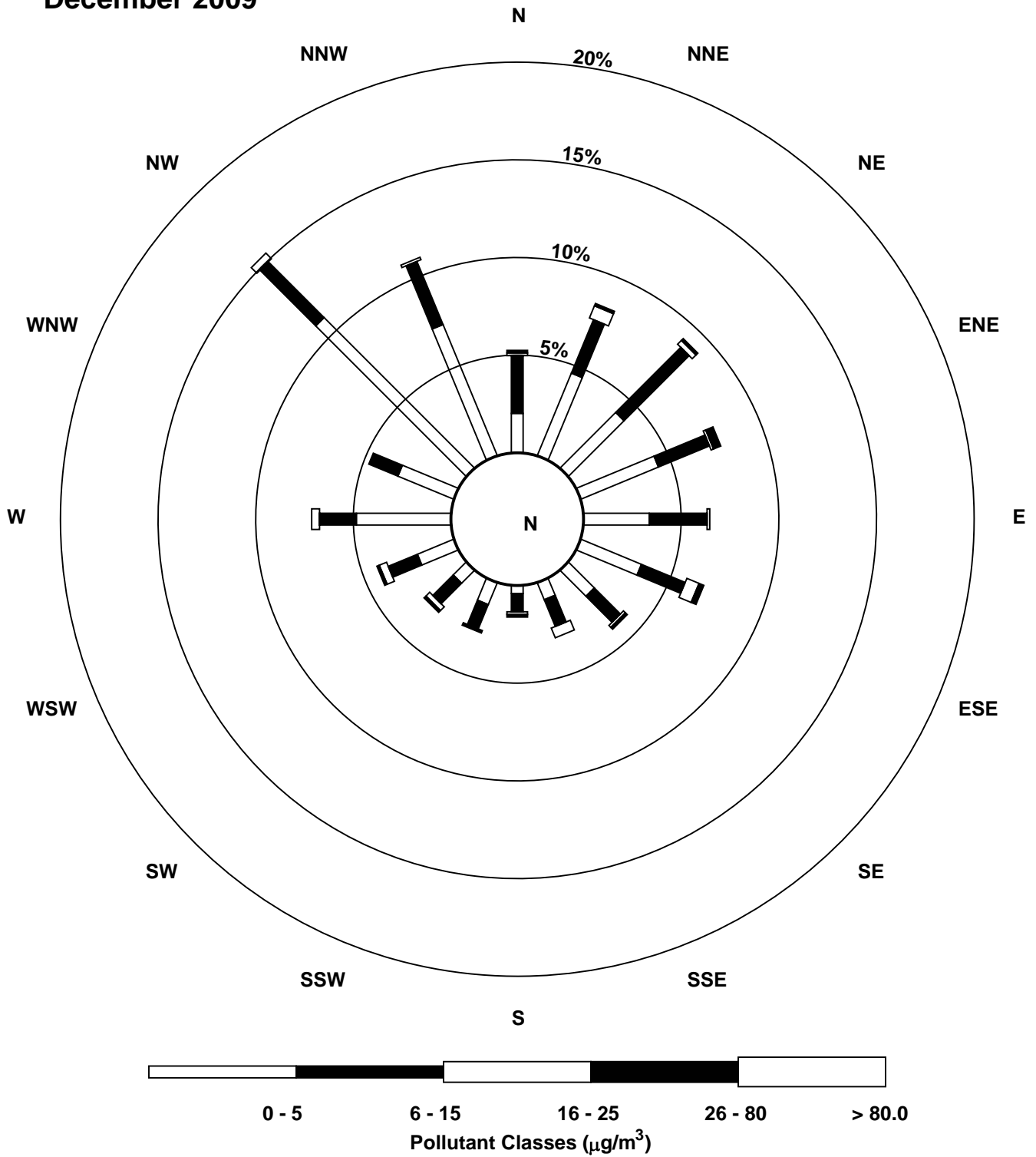
**Beaverlodge - Particulate Matter 2.5 (PM_{2.5}) - µg/m³
December 1, 2009 to January 1, 2010**

Maximum Value: 76.4 µg/m ³ on Dec 3 08:00		Maximum Daily Average: 36.3 µg/m ³ on Dec 3		Hours in Service: 744																							
Minimum Value: 0 µg/m ³ on Dec 9 08:00		Minimum Daily Average: 3.6 µg/m ³ on Dec 19		Hours of Data: 743																							
Maximum Diurnal Average: 9.9 µg/m ³ at hour 18		Minimum Diurnal Average: 6.7 µg/m ³ at hour 6		Hours of Missing Data: 1																							
Monthly Average: 8.11 µg/m ³		Percentiles: P ₁ = 2.0 P ₁₀ = 3.3 Q ₁ = 4.2 Median = 6.1 Q ₃ = 9.6 P ₉₀ = 14.5 P ₉₉ = 38.0		Hours of Calibration: 1																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Dec	4	4	3	6	5	6	7	6	6	5	5	6	6	6	5	5	5	8	9	6	5	5	5	6	5.5	9.3	
2-Dec	6	5	5	3	4	6	5	4	4	4	4	4	8	13	19	19	19	18	16	16	16	13	17	17	10.1	19.0	
3-Dec	16	27	36	35	34	34	65	76	64	44	24	37	32	20	14	35	41	66	67	32	25	25	18	7	36.3	76.4	
4-Dec	5	7	7	6	6	4	4	5	4	4	3	4	4	3	3	3	5	4	3	4	3	3	4	4	4.2	7.5	
5-Dec	4	5	5	3	2	2	2	3	4	3	6	7	5	5	4	3	3	2	1	4	4	4	4	4	3.6	6.8	
6-Dec	3	4	5	6	4	6	5	6	6	5	5	5	6	5	5	5	7	7	8	6	8	9	7	7	5.8	8.5	
7-Dec	8	7	6	8	8	6	9	9	10	12	12	13	13	8	8	10	8	5	5	5	3	2	4	4	7.6	13.1	
8-Dec	4	4	4	4	4	4	4	4	4	5	5	4	4	3	4	4	4	3	4	5	4	4	5	5	4.2	5.2	
9-Dec	5	4	4	3	3	3	1	0	4	4	3	2	3	3	3	5	4	4	7	12	14	14	6	4	4.8	14.4	
10-Dec	4	5	3	3	3	3	4	3	3	4	2	2	3	4	6	6	6	4	5	8	7	6	6	4	4.3	7.6	
11-Dec	5	5	5	4	3	3	3	2	4	4	4	4	3	3	4	3	1	5	5	3	4	3	5	6	3.7	5.5	
12-Dec	5	6	6	5	5	5	5	5	5	4	6	7	6	7	6	7	9	9	9	9	8	8	7	11	6.7	11.4	
13-Dec	10	8	8	7	7	7	7	7	7	8	10	23	28	15	14	13	9	9	8	7	7	7	7	8	10.0	27.6	
14-Dec	7	8	7	9	10	7	7	6	5	5	10	10	6	7	8	12	12	11	8	11	11	12	13	9	8.8	13.5	
15-Dec	9	9	10	11	9	9	11	10	10	9	10	12	12	14	13	13	C	6	8	8	12	8	6	9	9.9	13.9	
16-Dec	12	11	10	10	10	8	9	9	10	11	10	16	15	14	15	20	20	21	20	17	16	15	12	15	13.6	21.2	
17-Dec	14	9	13	13	11	11	11	9	8	7	7	7	7	7	8	7	6	8	9	11	11	11	10	10	9.4	14.5	
18-Dec	11	14	15	17	16	11	10	11	12	14	15	13	13	6	11	12	10	5	5	4	6	7	5	4	10.2	17.3	
19-Dec	4	3	4	4	3	4	2	4	4	3	2	2	4	4	4	4	4	3	4	3	4	4	4	4	3.6	4.5	
20-Dec	3	3	5	5	5	5	5	3	4	3	5	6	6	9	9	6	7	8	5	4	3	3	4	4	5.0	9.1	
21-Dec	5	4	3	4	4	4	4	4	4	4	4	4	4	3	3	3	4	4	3	3	2	3	4	4	3.7	4.5	
22-Dec	3	3	3	5	5	5	5	6	4	6	7	7	8	8	8	6	7	5	6	5	6	7	7	7	5.7	7.7	
23-Dec	7	6	4	5	5	5	9	9	9	9	6	6	5	5	5	6	5	5	5	6	5	6	6	4	5.9	9.4	
24-Dec	4	7	5	4	4	5	5	5	5	4	7	7	4	7	7	4	5	6	5	5	4	4	5	5	5.0	7.3	
25-Dec	5	5	8	9	4	4	4	7	7	10	12	14	15	12	15	13	11	11	12	12	10	6	7	7	9.1	15.4	
26-Dec	7	7	6	8	7	6	8	8	5	7	7	9	9	12	12	10	10	7	8	10	10	13	13	10	8.6	12.6	
27-Dec	11	9	6	7	8	9	7	6	7	6	5	5	5	5	7	8	10	10	13	13	13	10	10	11	8.4	12.9	
28-Dec	11	10	10	11	11	12	16	17	16	15	15	16	17	17	18	24	24	23	14	18	26	30	17	17	16.9	29.5	
29-Dec	16	18	18	14	12	11	10	9	10	10	8	5	5	5	5	5	6	7	7	7	7	7	6	5	8.9	18.5	
30-Dec	5	4	3	3	3	2	3	2	3	2	3	5	4	4	6	6	6	7	6	6	4	8	8	4	4.6	8.4	
31-Dec	4	4	4	4	5	3	6	5	5	4	4	6	5	9	12	12	17	19	7	8	9	7	7	9	7.3	18.6	
		7.0	7.2	7.5	7.6	7.2	6.7	8.1	8.4	8.1	7.4	7.3	8.6	8.5	7.8	8.5	9.4	9.4	9.9	9.4	8.6	8.6	8.4	7.6	7.3	Diurnal Average	
		16.3	26.7	35.7	34.8	34.2	33.5	65.1	76.4	64.4	44.0	24.1	36.5	32.0	19.9	18.6	34.8	40.9	65.6	66.9	32.4	26.3	29.5	18.0	17.3	Diurnal Maximum	
C - Calibration																											

Hourly Maximums for PM_{2.5} at Beaverlodge December 2009



Pollutant Rose for PM_{2.5} at Beaverlodge December 2009

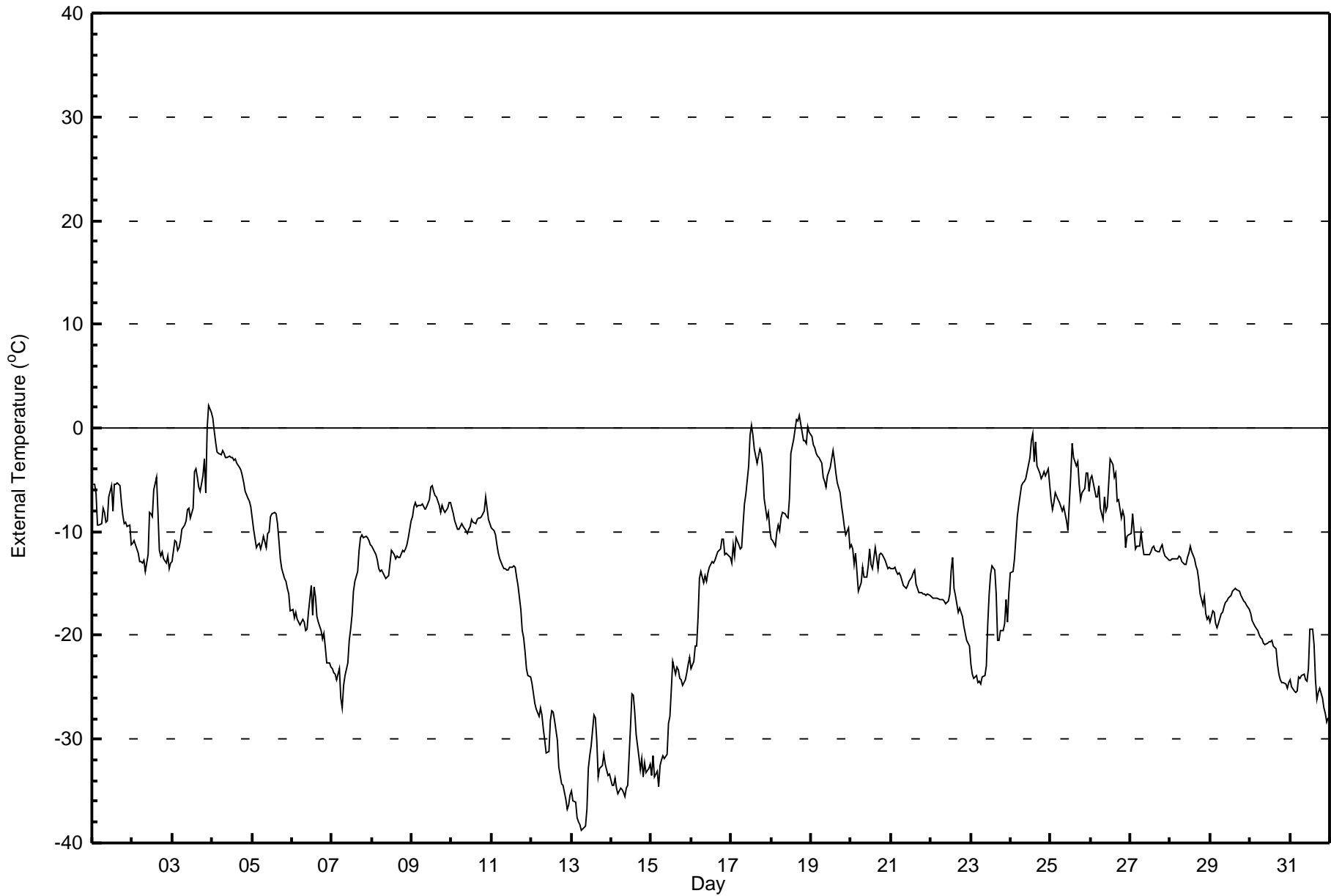


**Peace Airshed Zone Association
Summary of Hourly Averages**

**Beaverlodge - External Temperature (ET) - °C
December 1, 2009 to January 1, 2010**

Maximum Value: 2.1 °C on Dec 3 23:00		Maximum Daily Average: -3.4 °C on Dec 4		Hours in Service: 744																							
Minimum Value: -39 °C on Dec 13 07:00		Minimum Daily Average: -34.0 °C on Dec 13		Hours of Data: 744																							
Maximum Diurnal Average: -11.5 °C at hour 14		Minimum Diurnal Average: -15.8 °C at hour 5		Hours of Missing Data: 0																							
Monthly Average: -14.49 °C		Percentiles: P ₁ = -36.8 P ₁₀ = -27.7 Q ₁ = -19.4 Median = -12.6 Q ₃ = -8.1 P ₉₀ = -4.3 P ₉₉ = 0.1		Hours of Calibration: 0																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Dec	-5	-5	-6	-9	-9	-9	-8	-8	-9	-9	-7	-6	-8	-5	-5	-5	-6	-7	-8	-9	-9	-10	-9	-11	-7.7	-5.3	
2-Dec	-11	-11	-11	-12	-13	-13	-13	-13	-14	-12	-8	-8	-9	-6	-5	-8	-12	-12	-12	-13	-13	-12	-14	-13	-11.1	-4.8	
3-Dec	-13	-11	-11	-12	-11	-11	-10	-9	-9	-8	-8	-9	-8	-4	-4	-5	-6	-6	-5	-3	-6	0	2	2	-6.8	2.1	
4-Dec	1	0	-1	-2	-2	-3	-2	-2	-3	-3	-3	-3	-3	-3	-3	-3	-4	-4	-5	-5	-6	-7	-7	-8	-3.4	0.9	
5-Dec	-9	-10	-12	-11	-11	-12	-11	-10	-12	-10	-10	-9	-8	-8	-8	-9	-11	-13	-14	-15	-15	-15	-16	-18	-11.5	-8.1	
6-Dec	-18	-18	-18	-18	-19	-19	-18	-19	-20	-19	-18	-15	-18	-15	-16	-18	-19	-20	-20	-20	-21	-23	-23	-23	-18.9	-15.1	
7-Dec	-23	-24	-24	-24	-23	-26	-27	-25	-24	-23	-20	-19	-18	-16	-15	-14	-12	-11	-10	-11	-10	-11	-11	-11	-18.0	-10.3	
8-Dec	-11	-12	-12	-13	-14	-14	-14	-14	-15	-14	-14	-13	-12	-12	-13	-12	-12	-12	-12	-12	-12	-11	-11	-9	-12.5	-8.9	
9-Dec	-9	-8	-7	-8	-7	-7	-7	-8	-8	-8	-7	-6	-6	-6	-7	-7	-7	-8	-8	-8	-8	-8	-7	-7	-7.3	-5.6	
10-Dec	-8	-8	-9	-10	-10	-10	-9	-9	-10	-10	-10	-10	-9	-9	-9	-9	-9	-9	-9	-8	-7	-8	-9	-9	-8.9	-6.7	
11-Dec	-10	-10	-10	-11	-12	-13	-13	-14	-14	-14	-14	-13	-13	-13	-13	-14	-15	-17	-20	-20	-22	-23	-24	-24	-15.3	-9.6	
12-Dec	-25	-26	-27	-27	-28	-27	-28	-29	-30	-31	-31	-28	-27	-27	-28	-30	-33	-33	-34	-34	-36	-37	-36	-35	-30.4	-24.7	
13-Dec	-35	-36	-36	-38	-38	-38	-39	-39	-38	-37	-33	-32	-31	-28	-28	-30	-34	-33	-33	-31	-32	-33	-33	-33	-34.0	-27.6	
14-Dec	-34	-34	-34	-35	-35	-35	-35	-35	-35	-35	-35	-29	-26	-26	-27	-30	-32	-33	-32	-34	-32	-33	-33	-32	-32.5	-25.7	
15-Dec	-33	-32	-34	-33	-35	-33	-32	-32	-32	-31	-29	-28	-25	-22	-24	-23	-23	-24	-24	-25	-24	-24	-23	-22	-27.7	-22.1	
16-Dec	-23	-23	-21	-21	-18	-14	-14	-15	-14	-15	-14	-13	-13	-13	-12	-12	-12	-11	-11	-12	-12	-12	-13	-14.6	-10.7		
17-Dec	-13	-11	-12	-11	-11	-12	-12	-9	-7	-6	-4	-1	0	-1	-2	-3	-3	-2	-2	-4	-7	-9	-8	-10	-6.6	0.3	
18-Dec	-11	-11	-11	-10	-9	-10	-9	-8	-8	-9	-9	-7	-2	-1	0	1	1	1	0	-1	-1	-2	0	0	-4.8	1.3	
19-Dec	-1	-2	-2	-2	-3	-3	-3	-5	-5	-6	-5	-4	-3	-2	-3	-4	-5	-6	-7	-8	-10	-10	-10	-12	-5.0	-0.8	
20-Dec	-11	-12	-13	-12	-16	-15	-15	-13	-14	-14	-13	-12	-13	-14	-12	-13	-14	-12	-12	-12	-13	-13	-14	-13	-13.1	-11.3	
21-Dec	-14	-14	-13	-14	-14	-14	-14	-15	-15	-15	-15	-15	-14	-14	-14	-15	-15	-16	-16	-16	-16	-16	-16	-16	-14.9	-13.5	
22-Dec	-16	-16	-16	-16	-16	-16	-17	-17	-17	-17	-17	-16	-14	-13	-15	-16	-18	-17	-18	-18	-19	-20	-21	-21	-17.0	-12.5	
23-Dec	-23	-24	-24	-24	-25	-24	-25	-24	-24	-23	-19	-16	-14	-13	-14	-16	-21	-21	-20	-19	-19	-16	-19	-16	-20.0	-13.3	
24-Dec	-14	-14	-13	-11	-9	-7	-6	-5	-5	-5	-4	-3	-1	0	-3	-1	-4	-4	-5	-5	-4	-5	-4	-5	-5.7	-0.5	
25-Dec	-7	-8	-7	-6	-7	-7	-8	-8	-8	-9	-10	-7	-5	-2	-3	-4	-3	-5	-7	-6	-6	-4	-4	-6	-6.1	-1.5	
26-Dec	-5	-5	-6	-7	-7	-6	-8	-9	-7	-8	-8	-5	-3	-3	-5	-4	-7	-7	-9	-8	-8	-12	-10	-10	-6.9	-3.0	
27-Dec	-10	-8	-10	-12	-11	-11	-10	-11	-12	-12	-12	-12	-12	-12	-11	-12	-12	-12	-12	-11	-12	-12	-13	-13	-11.5	-8.3	
28-Dec	-13	-13	-13	-13	-13	-12	-13	-13	-13	-13	-12	-12	-11	-12	-13	-13	-14	-15	-16	-17	-16	-18	-18	-18	-13.9	-11.4	
29-Dec	-19	-18	-18	-19	-19	-19	-18	-18	-17	-17	-17	-16	-16	-16	-16	-15	-16	-16	-16	-16	-17	-17	-17	-17	-17.0	-15.5	
30-Dec	-18	-19	-19	-19	-19	-20	-20	-20	-21	-21	-21	-21	-21	-21	-21	-21	-21	-23	-24	-24	-25	-25	-25	-25	-21.5	-17.9	
31-Dec	-24	-25	-25	-25	-25	-24	-24	-24	-24	-24	-24	-23	-19	-19	-21	-24	-26	-25	-25	-26	-27	-28	-28	-28	-24.6	-19.4	
		-15.0	-15.0	-15.3	-15.6	-15.8	-15.6	-15.5	-15.5	-15.6	-15.4	-14.4	-13.2	-12.3	-11.5	-11.9	-12.7	-13.7	-14.0	-14.3	-14.6	-15.0	-15.2	-15.2	-15.4	Diurnal Average	
		0.9	-0.3	-1.4	-2.3	-2.4	-2.6	-2.2	-2.4	-2.8	-2.8	-2.7	-0.7	0.3	-0.5	-0.2	0.8	0.7	1.3	0.4	-1.3	-1.2	0.0	2.1	1.5	Diurnal Maximum	

Hourly Averages for External Temperature at Beaverlodge December 2009



**Peace Airshed Zone Association
Summary of Hourly Averages**

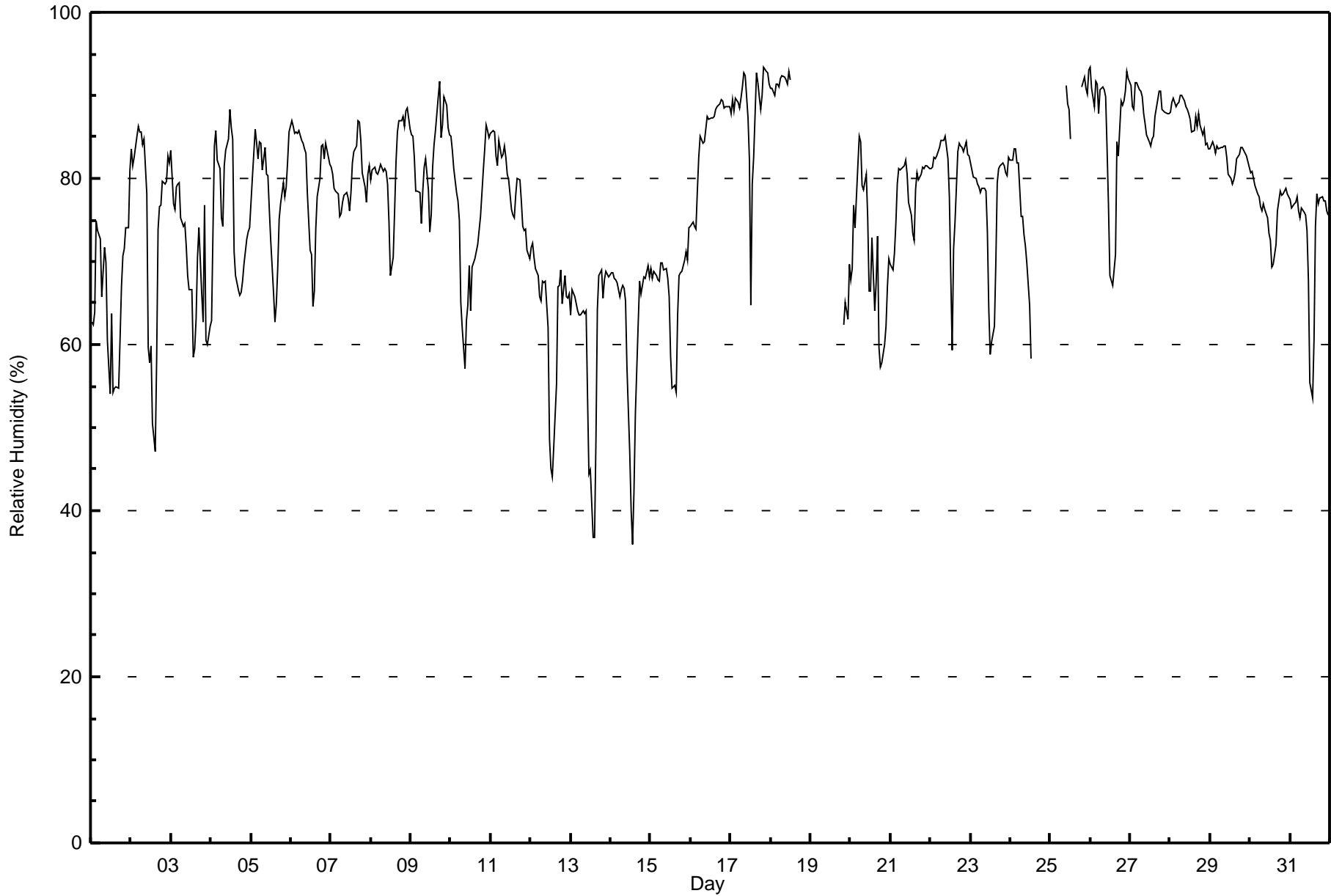
**Beaverlodge - Relative Humidity (RH) - %
December 1, 2009 to January 1, 2010**

Maximum Value: 93.4 % on Dec 26 01:00	Maximum Daily Average: 88.3 % on Dec 27	Hours in Service: 744
Minimum Value: 36 % on Dec 14 14:00	Minimum Daily Average: 60.4 % on Dec 13	Hours of Data: 687
Maximum Diurnal Average: 80.3 % at hour 5	Minimum Diurnal Average: 66.7 % at hour 14	Hours of Missing Data: 57
Monthly Average: 76.99 %	Percentiles: P ₁ = 44.9 P ₁₀ = 63.6 Q ₁ = 69.6 Median = 79.1 Q ₃ = 84.5 P ₉₀ = 89.0 P ₉₉ = 92.8	Hours of Calibration: 0
		Percent Operational Time: 92.3

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Dec	63	62	64	75	74	73	66	69	72	70	60	54	64	54	55	55	55	61	67	71	72	74	74	81	65.9	81.0	
2-Dec	83	82	83	85	86	86	86	84	85	78	60	58	60	51	47	58	74	77	80	79	80	83	82	82	75.0	86.2	
3-Dec	83	77	76	79	79	80	75	74	75	72	68	67	67	58	60	63	71	74	66	63	77	60	60	62	70.2	83.4	
4-Dec	63	74	84	86	82	81	75	74	82	83	85	88	86	85	71	68	67	66	66	68	70	73	74	74	76.0	88.3	
5-Dec	77	80	86	84	82	84	84	81	84	80	80	76	72	66	63	65	69	75	77	80	78	79	82	86	78.0	85.9	
6-Dec	87	86	85	86	85	86	85	84	83	83	78	71	71	64	66	74	78	80	84	84	82	84	83	82	80.5	87.0	
7-Dec	81	80	79	78	78	75	76	77	78	78	78	76	78	82	83	84	87	87	85	81	79	77	80	82	80.0	87.0	
8-Dec	80	81	81	81	81	81	82	81	81	81	79	75	68	70	76	82	86	87	87	87	86	88	88	86	81.5	88.4	
9-Dec	85	85	83	79	78	78	75	79	81	82	79	73	76	81	84	86	90	92	85	87	90	89	86	85	82.8	91.7	
10-Dec	85	83	81	78	77	75	65	62	57	63	65	69	64	69	70	71	72	74	75	81	83	86	86	85	74.1	86.4	
11-Dec	85	86	86	83	81	85	83	83	84	83	81	80	76	76	75	78	80	80	77	74	74	74	71	70	79.3	85.7	
12-Dec	72	72	71	69	68	66	65	68	68	62	49	45	44	48	55	67	67	69	65	68	66	66	66	66	63.4	72.2	
13-Dec	64	67	66	65	64	64	64	64	64	54	44	45	37	37	49	64	68	69	66	68	69	68	68	68	60.4	68.9	
14-Dec	69	69	68	68	67	66	67	67	67	65	57	47	40	36	42	52	62	68	66	67	68	68	70	68	61.8	69.5	
15-Dec	69	68	69	68	68	68	70	70	69	69	68	66	59	55	55	54	63	68	69	69	70	71	70	74	66.6	74.0	
16-Dec	74	75	74	74	78	83	85	84	84	86	87	87	87	87	87	88	89	89	89	89	89	89	89	89	84.7	89.5	
17-Dec	88	89	88	90	89	88	90	91	93	92	87	82	65	79	83	93	91	90	88	90	93	93	93	91	88.2	93.3	
18-Dec	91	91	90	91	91	91	92	92	92	92	91	93	92	N	N	N	N	N	N	N	N	N	N	N	--	92.8	
19-Dec	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	69.6	
20-Dec	68	69	77	74	82	85	84	79	79	80	75	66	67	73	64	68	73	60	57	58	60	62	67	70	70.7	85.1	
21-Dec	70	69	71	75	79	81	81	81	82	82	81	77	76	73	72	79	81	80	81	81	81	82	82	81	78.2	82.1	
22-Dec	81	81	83	82	83	84	85	85	85	82	78	68	59	72	75	83	84	84	84	83	84	83	83	83	80.6	85.0	
23-Dec	82	81	80	80	79	79	78	79	79	79	74	64	59	60	62	70	80	81	81	82	81	81	80	82	76.4	82.5	
24-Dec	82	82	83	83	82	82	75	75	73	72	70	65	58	N	N	N	N	N	N	N	N	N	N	N	--	83.5	
25-Dec	N	N	N	N	N	N	N	N	N	91	89	88	85	N	N	N	N	N	N	N	91	92	91	90	93	--	93.0
26-Dec	93	91	89	92	91	88	91	91	91	90	83	77	68	67	69	71	84	83	89	89	89	90	93	92	85.5	93.4	
27-Dec	91	89	88	91	92	91	91	90	88	87	85	84	84	85	85	88	89	90	91	88	88	88	88	88	88.3	91.6	
28-Dec	88	89	90	89	89	89	90	90	89	89	88	88	87	86	86	87	86	88	87	85	86	84	84	84	87.4	90.0	
29-Dec	84	84	84	83	84	84	84	84	84	84	82	81	80	79	80	81	82	83	84	84	83	83	83	81	82.6	84.4	
30-Dec	81	81	80	79	78	78	77	76	77	76	75	73	73	69	70	72	76	77	78	78	78	79	78	78	76.6	80.8	
31-Dec	77	76	77	77	78	76	75	76	76	76	74	68	55	54	61	74	78	77	78	78	77	77	76	76	73.6	78.2	
	79.2	79.3	79.8	80.1	80.3	80.1	79.1	79.0	79.3	79.3	76.0	72.2	69.2	66.7	67.5	71.8	77.0	77.9	78.0	78.5	78.9	78.8	78.9	79.6	Diurnal Average		
	93.4	90.9	89.9	91.8	91.6	91.1	92.1	92.3	92.8	92.3	91.3	92.8	91.9	87.3	87.4	92.6	91.5	91.7	90.5	91.1	93.3	92.9	92.8	93.0	Diurnal Maximum		

N - Not Valid

Hourly Averages for Relative Humidity at Beaverlodge December 2009



**Peace Airshed Zone Association
Summary of Hourly Averages**

Beaverlodge
December 1, 2009 to January 1, 2010
WS (km/h), WD (deg)

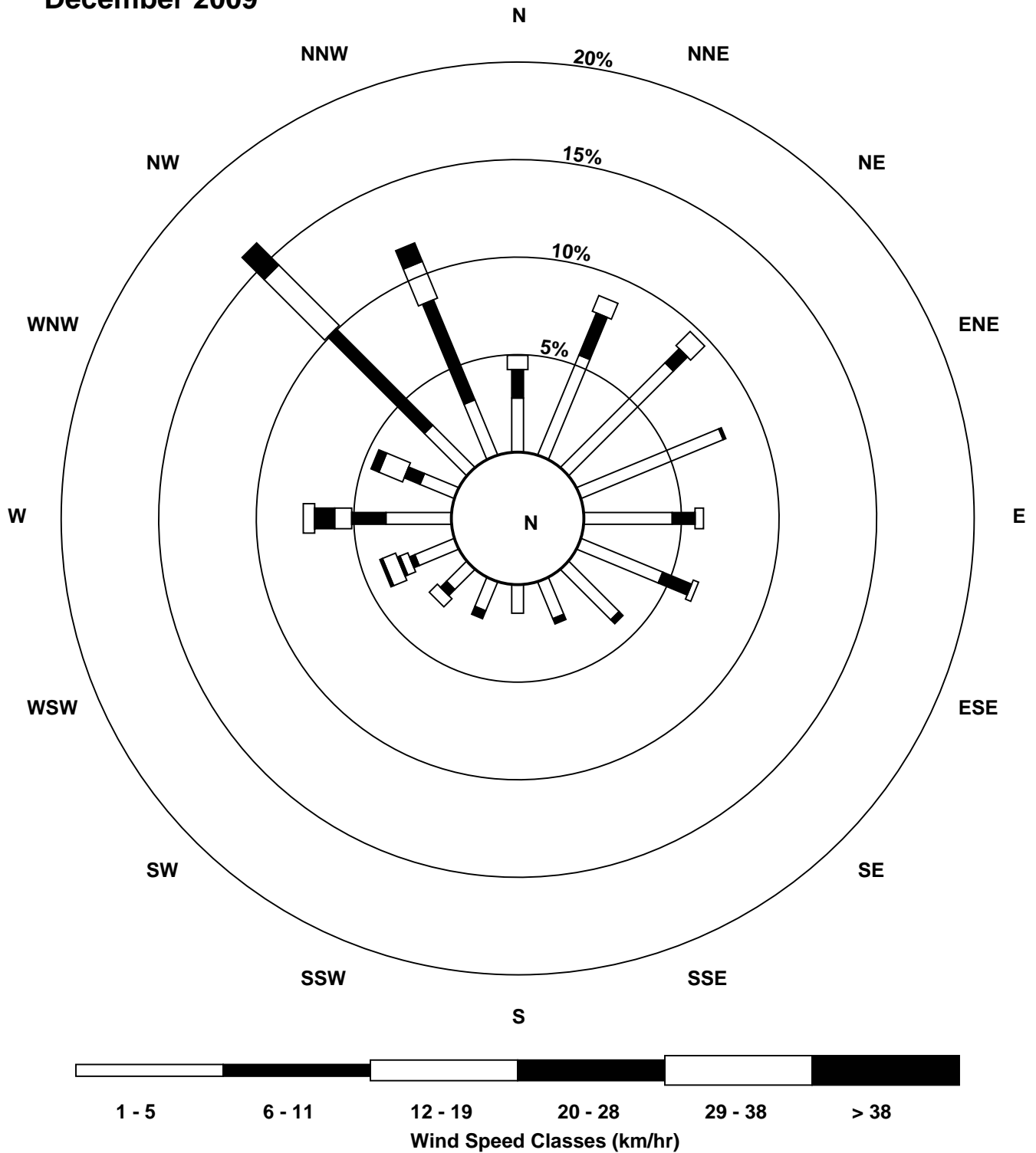
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	9	10	8	4	2	1	7	7	4	2	2	2	5	4	4	5	6	2	1	1	2	4	4	2	1.3	10.1
Dir	297	282	266	45	39	283	280	280	254	122	93	73	55	66	63	52	41	60	62	139	61	66	57	109	358.3	282.0
2 Spd	3	1	2	3	2	2	4	5	4	2	3	3	4	0	1	2	2	2	2	2	1	1	1	1	0.8	4.9
Dir	81	159	100	110	143	129	61	65	115	124	195	213	258	317	108	233	65	265	262	18	19	214	49	110	111.4	64.8
3 Spd	2	1	1	2	1	2	1	4	3	2	2	4	2	4	4	1	4	3	3	4	4	17	24	27	1.8	26.6
Dir	82	107	243	129	210	72	122	65	73	105	131	182	90	41	43	18	45	229	27	10	217	276	268	262	274.3	262.3
4 Spd	26	25	24	22	21	18	20	22	23	24	22	23	24	26	28	28	27	25	24	16	17	13	14	12	21.1	28.3
Dir	273	294	305	316	317	317	319	321	316	316	319	324	327	328	330	331	333	331	333	336	334	335	325	312	320.3	331.1
5 Spd	7	3	3	4	3	3	2	7	4	8	7	10	17	14	13	12	15	15	12	11	15	18	11	2	8.1	18.1
Dir	275	280	227	289	280	255	284	325	42	325	316	329	319	348	358	351	334	325	324	325	334	339	319	48	328.4	338.7
6 Spd	8	7	8	8	6	6	5	6	3	6	4	2	3	2	3	6	4	5	7	7	4	2	2	4	1.6	8.3
Dir	316	331	332	324	316	296	301	308	336	275	271	98	49	136	77	52	65	94	86	81	161	152	145	162	352.6	331.7
7 Spd	4	5	2	6	2	2	3	2	2	2	1	3	3	6	9	7	12	12	11	12	13	11	10	11	4.7	12.9
Dir	146	131	19	39	78	271	43	29	353	3	59	310	314	323	314	301	295	297	328	340	347	346	343	350	334.5	346.9
8 Spd	10	10	9	10	9	8	8	9	7	7	7	4	1	2	3	3	3	4	2	1	2	6	3	9	4.3	10.3
Dir	348	354	347	337	326	312	318	312	296	270	255	259	231	64	52	237	54	20	278	319	270	260	297	327	318.0	353.8
9 Spd	11	16	20	21	19	19	18	12	10	8	10	16	16	14	11	4	3	2	7	9	8	13	18	19	12.4	21.1
Dir	314	311	316	321	314	310	320	316	325	332	306	303	313	304	280	295	13	343	319	320	313	307	308	310	312.7	320.7
10 Spd	19	17	17	18	17	14	17	18	16	16	9	8	8	13	11	7	2	1	3	5	8	15	13	9	8.0	18.6
Dir	312	321	316	315	308	290	295	294	292	261	239	228	215	214	202	195	193	16	22	306	335	8	2	342	298.0	311.9
11 Spd	8	7	9	13	9	7	7	5	4	5	6	7	7	6	4	7	6	9	10	12	13	15	11	5	4.7	15.1
Dir	324	329	339	345	8	318	332	343	339	26	28	17	18	34	54	36	32	103	102	96	106	102	95	101	40.3	101.7
12 Spd	7	10	14	13	8	3	5	10	10	6	7	4	2	3	2	1	3	5	2	5	2	1	3	1	3.6	14.4
Dir	82	104	93	79	99	139	141	107	89	97	87	144	145	211	243	295	239	274	18	39	243	38	41	350	96.8	92.8
13 Spd	2	4	4	5	4	1	0	0	3	1	1	1	3	1	1	0	5	1	5	1	5	3	2	3	1.5	5.5
Dir	357	344	354	354	50	99	37	144	37	2	35	215	51	193	96	199	45	59	52	143	60	107	131	168	45.7	52.0
14 Spd	2	3	3	2	3	0	1	1	1	2	1	1	1	1	2	1	1	3	2	1	3	3	2	1	0.8	3.3
Dir	135	72	55	229	65	148	102	64	147	17	88	101	115	255	249	35	327	70	101	99	74	318	74	298	68.6	318.3
15 Spd	3	1	1	2	5	1	6	4	4	4	0	4	3	1	1	3	2	2	1	1	1	1	2	3	1.4	6.2
Dir	19	214	5	257	38	305	322	347	343	11	339	256	27	318	198	77	51	267	91	175	100	308	2	4	354.2	322.5
16 Spd	1	3	2	3	6	2	3	3	2	4	3	0	1	1	3	1	2	4	2	1	3	2	3	2	0.9	5.9
Dir	14	6	242	199	37	337	290	183	352	267	33	60	250	13	282	26	244	255	280	108	187	266	15	328	303.4	36.7
17 Spd	2	3	2	1	1	2	4	5	0	1	1	1	1	5	2	4	5	5	3	3	3	1	2	3	1.2	5.4
Dir	60	15	221	345	307	105	84	47	247	185	222	101	99	47	102	83	97	91	108	189	211	36	178	288	88.1	47.2
18 Spd	4	3	2	5	4	1	9	6	2	1	3	6	9	6	7	18	16	12	16	16	15	23	37	31	8.0	36.5
Dir	32	270	22	18	267	23	312	350	56	286	1	319	218	163	193	227	231	244	254	224	252	248	256	252	250.5	256.0
19 Spd	37	30	33	33	40	38	32	19	19	15	21	19	28	27	25	29	27	24	18	17	9	5	7	2	22.7	39.8
Dir	256	259	254	255	257	266	265	273	273	287	279	271	273	285	278	281	273	263	265	266	283	276	308	268.4	256.9	
20 Spd	4	4	2	7	2	1	2	3	3	1	2	6	3	1	7	2	3	6	2	9	12	18	19	18	4.3	19.1
Dir	306	26	70	18	41	58	16	98	130	218	91	103	151	348	113	175	222	57	61	44	51	46	44	39	52.9	43.6
21 Spd	12	13	12	16	15	15	14	12	12	11	10	9	7	7	8	12	11	11	9	10	9	6	5	6	10.2	16.1
Dir	27	23	39	45	33	33	39	13	12	12	14	6	5	10	17	10	13	18	25	22	17	18	356	13	21.6	45.0
22 Spd	7	6	4	2	2	3	6	3	5	5	4	4	5	2	2	1	4	5	7	9	7	1	3	2	3.0	9.0
Dir	11	10	25	349	332	307	267	277	279	295	299	310	271	136	234	300	268	313	309	305	312	7	42	93	312.1	305.1

**Peace Airshed Zone Association
Summary of Hourly Averages**

Beaverlodge
December 1, 2009 to January 1, 2010
WS (km/h), WD (deg)

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		
23 Spd	5	3	3	4	3	5	2	4	3	5	4	4	4	4	5	2	1	0	2	1	3	3	2	1	2.7	4.8
Dir	60	65	50	62	72	61	106	67	104	65	78	85	99	69	79	108	171	192	109	112	93	126	159	144	82.3	60.3
24 Spd	2	2	5	5	1	5	9	10	12	11	6	5	4	3	5	2	3	2	2	3	2	4	2	1	2.3	11.9
Dir	80	38	53	59	117	318	316	308	304	301	316	315	67	75	51	128	70	81	57	51	206	63	68	240	353.1	303.8
25 Spd	2	4	3	3	4	4	2	4	2	4	0	3	5	3	1	3	1	1	1	1	1	5	1	2	1.8	5.0
Dir	96	116	79	81	103	130	200	37	32	81	166	8	29	68	207	61	211	163	106	128	41	36	98	104	76.0	29.0
26 Spd	5	5	1	1	3	1	1	3	5	0	1	3	0	2	4	1	3	3	4	2	1	1	6	0	1.7	6.4
Dir	54	52	104	64	50	67	149	72	38	21	277	41	285	333	53	136	36	304	40	277	236	8	30	98	39.4	30.5
27 Spd	5	13	5	1	3	1	9	15	17	16	15	12	11	9	7	6	5	3	2	1	6	6	5	5	5.4	17.4
Dir	328	321	327	184	32	10	355	328	318	316	322	326	330	339	342	320	330	13	43	165	122	115	106	103	335.0	317.7
28 Spd	6	6	6	5	5	4	4	5	5	6	2	3	2	2	2	2	0	1	4	2	0	2	5	1	2.2	6.2
Dir	118	133	135	119	128	142	160	161	163	151	149	168	145	30	307	310	151	249	33	27	2	29	52	122	127.8	118.3
29 Spd	1	4	5	4	11	7	5	6	5	6	9	8	8	8	7	6	6	7	8	8	8	8	8	10	6.7	11.0
Dir	117	320	329	333	337	329	330	313	324	333	329	341	336	323	337	331	333	314	314	328	328	337	335	337	329.9	337.1
30 Spd	12	12	12	12	10	11	10	9	10	12	12	11	13	7	6	7	5	7	9	8	8	5	4	5	8.9	12.6
Dir	331	322	327	331	332	323	324	330	315	308	308	309	303	317	314	307	317	323	339	326	323	312	358	332	321.1	303.4
31 Spd	8	4	4	5	4	1	1	3	6	7	5	5	4	4	2	1	2	4	1	7	3	5	4	7	1.3	8.3
Dir	342	23	28	29	42	200	112	115	117	121	174	81	87	68	271	4	189	119	84	311	45	267	306	335	44.5	342.4
Spd	3.9	4.1	3.7	4.2	3.7	3.6	4.4	4.2	3.6	3.4	3.2	3.2	3.4	3.0	2.7	2.9	3.1	2.8	2.9	2.7	2.5	3.1	3.4	3.2	Diurnal Average	
Dir	318.2	324.6	325.6	339.7	332.4	307.7	313.7	328.2	323.9	318.0	314.4	318.9	316.7	327.2	328.7	318.1	326.1	321.6	338.9	333.3	338.7	337.9	328.7	315.9	Diurnal Maximum	
Spd	37.2	29.9	32.6	32.8	39.8	38.4	31.6	21.6	22.9	24.0	21.9	22.7	28.1	27.3	28.0	28.7	27.0	24.8	23.8	17.5	17.2	22.9	36.5	30.7	Diurnal Maximum	
Dir	256.5	259.2	253.5	255.2	256.9	266.3	264.6	320.5	316.4	315.9	319.0	324.0	270.6	273.1	330.4	277.5	333.0	331.5	332.8	265.3	333.9	248.0	256.0	251.6	Diurnal Maximum	
Maximum Speed Value: 40 km/h on Dec 19 05:00																		Minimum Speed Value: 0 km/h on Dec 26 10:00						Hours in Service: 744		
Maximum Daily Speed Average: 22.7 km/h on Dec 19																		Minimum Daily Speed Average: 0.8 km/h on Dec 14						Hours of Data: 744		
Maximum Diurnal Speed Average: 4.4 km/h at hour 7																		Minimum Diurnal Speed Average: 2.5 km/h at hour 21						Hours of Missing Data: 0		
Monthly Average Velocity: 3.34 km/h 324.56 deg																		Speed Percentiles: P ₁ = 0.4 P ₁₀ = 1.2 Q ₁ = 2.2 Median = 4.3 Q ₃ = 8.6 P ₉₀ = 15.7 P ₉₉ = 30.7						Percent Operational Time: 100.0		
All monthly, daily, and diurnal averages have been calculated using vector methods																										
Frequency Distribution																										
		Speed Range (km/h)																								
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																			
North	52	32	14	0	0	0	98																			
NorthEast	102	20	10	1	0	0	133																			
East	80	16	6	0	0	0	102																			
SouthEast	45	11	0	0	0	0	56																			
South	30	7	0	0	0	0	37																			
SouthWest	31	4	5	0	0	0	40																			
West	40	17	10	10	9	2	88																			
NorthWest	38	85	45	20	2	0	190																			
Total	418	192	90	31	11	2	744																			

Wind Rose for WS at Beaverlodge December 2009



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

Beaverlodge - Wind Speed (WS) - km/h
December 1, 2009 to January 1, 2010

Maximum Speed: 40 km/h on Dec 19 05:00	Maximum Daily Speed Average: 23.2 km/h on Dec 19	Hours in Service: 744
Minimum Speed: 1 km/h on Dec 23 18:00	Minimum Daily Speed Average: 2.9 km/h on Dec 14	Hours of Data: 744
Maximum Diurnal Speed Average: 8.4 km/h at hour 4	Minimum Diurnal Speed Average: 6.5 km/h at hour 17	Hours of Missing Data: 0
Monthly Average Speed: 7.24 km/h	Percentiles: P ₁ = 1.4 P ₁₀ = 2.3 Q ₁ = 3.3 Median = 4.9 Q ₃ = 8.8 P ₉₀ = 15.7 P ₉₉ = 30.7	Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	9	10	8	5	5	4	7	7	7	3	3	2	5	4	4	5	6	4	2	1	2	4	5	3	4.8	10.1
2-Dec	3	2	4	4	2	2	4	5	4	3	3	4	4	2	2	4	3	3	2	5	5	2	2	2	3.1	5.0
3-Dec	3	1	2	3	1	2	3	4	3	2	3	4	3	4	5	4	4	4	5	6	6	18	24	27	5.8	26.7
4-Dec	26	26	24	22	21	18	20	22	23	24	22	23	24	26	28	28	27	25	24	16	17	13	14	12	21.9	28.4
5-Dec	7	4	4	5	4	3	2	7	5	8	7	10	17	14	13	12	15	15	12	11	15	18	11	3	9.3	18.2
6-Dec	8	7	8	8	6	6	5	6	3	6	5	3	3	3	4	6	4	5	7	7	4	3	2	4	5.1	8.4
7-Dec	4	5	5	6	4	4	3	3	3	2	2	4	5	6	9	7	12	12	12	12	13	11	10	11	6.9	13.0
8-Dec	10	11	9	10	9	8	8	9	7	7	8	4	2	2	3	3	4	4	4	2	2	6	3	9	6.0	10.7
9-Dec	11	16	21	21	19	19	18	12	10	8	10	17	16	14	11	5	4	4	7	9	8	13	18	19	12.9	21.3
10-Dec	19	17	17	18	17	14	17	18	16	9	8	8	9	13	11	7	3	3	5	5	9	16	13	9	11.7	18.7
11-Dec	8	7	9	13	10	7	7	5	4	5	6	7	7	6	4	7	6	10	10	12	13	15	11	6	8.0	15.1
12-Dec	8	10	14	13	8	4	5	11	10	6	7	4	3	3	2	2	4	5	3	5	3	2	4	1	5.8	14.5
13-Dec	2	4	5	7	4	2	1	2	3	2	2	2	4	2	2	2	5	2	6	2	5	3	3	3	3.1	6.9
14-Dec	3	3	3	2	3	1	1	2	2	5	4	2	1	2	3	3	3	4	4	4	4	5	3	3	2.9	5.4
15-Dec	5	2	3	4	5	3	7	8	6	6	2	5	6	3	4	3	3	3	3	3	3	2	4	6	4.2	7.5
16-Dec	5	6	4	6	6	3	5	7	4	5	3	4	5	2	5	4	3	4	4	4	4	4	4	4	4.4	6.8
17-Dec	2	4	3	3	3	4	4	6	2	3	4	2	2	5	4	5	5	5	4	3	4	5	4	3	3.7	5.6
18-Dec	4	5	4	8	4	4	10	8	3	5	5	9	11	6	7	19	16	12	16	17	16	23	37	31	11.7	36.6
19-Dec	37	30	33	33	40	38	32	19	19	15	21	19	28	28	25	29	27	24	18	17	9	5	7	4	23.2	39.9
20-Dec	6	5	3	8	3	2	4	4	4	2	2	7	7	5	7	5	3	6	4	9	12	18	19	18	6.7	19.1
21-Dec	12	13	12	16	15	15	14	12	12	11	10	9	7	7	8	12	11	11	9	10	9	6	5	6	10.5	16.3
22-Dec	7	6	4	3	3	3	6	3	5	5	4	5	6	2	3	4	5	5	7	9	8	3	3	2	4.6	9.1
23-Dec	5	4	4	4	4	5	3	4	4	5	5	5	4	4	5	2	2	1	2	2	3	3	3	3	3.4	4.9
24-Dec	3	3	5	5	4	6	10	10	12	11	6	6	4	3	5	2	3	3	3	3	3	4	2	2	4.9	12.0
25-Dec	3	4	4	3	4	4	3	5	4	4	6	7	6	4	3	3	2	2	2	2	3	5	2	2	3.6	6.5
26-Dec	5	5	2	4	3	3	3	3	5	3	3	4	2	4	4	3	3	5	5	3	2	3	7	1	3.6	6.5
27-Dec	6	13	7	2	4	2	9	16	18	16	15	12	11	10	7	6	5	4	2	2	6	6	5	6	7.8	17.6
28-Dec	6	6	6	5	5	4	4	5	6	6	3	3	2	3	2	2	1	2	4	3	2	3	5	3	3.8	6.3
29-Dec	2	4	6	5	11	7	5	6	5	6	9	8	8	8	7	6	6	7	8	8	8	8	8	10	7.0	11.0
30-Dec	12	12	12	12	10	11	11	9	11	12	12	11	13	7	6	7	5	7	9	8	8	5	4	6	9.1	12.6
31-Dec	8	5	4	5	5	2	3	4	6	7	6	5	4	4	3	2	3	5	5	7	4	7	5	7	4.9	8.5

8.0	8.1	8.0	8.4	7.9	6.9	7.5	7.7	7.3	6.9	6.6	6.9	7.4	6.7	6.7	6.7	6.5	6.6	6.7	6.8	6.7	7.7	8.0	7.3	Diurnal Average
37.5	30.0	32.6	32.9	39.9	38.5	31.6	21.7	23.0	24.1	22.0	22.8	28.3	28.0	28.2	28.7	27.1	24.9	23.9	17.5	17.3	23.1	36.6	30.8	Diurnal Maximum

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

**Peace Airshed Zone Association
Summary of Hourly Standard Deviations**

**Beaverlodge - Wind Direction (WD) - deg
December 1, 2009 to January 1, 2010**

Maximum Value: 98.8 deg on Dec 16 01:00																						Hours in Service:	744		
Minimum Value: 2.5 deg on Dec 19 20:00																						Hours of Data:	744		
Percentiles: P ₁ = 3.4 P ₁₀ = 5.6 Q ₁ = 8.4 Median = 24.1 Q ₃ = 59.5 P ₉₀ = 76.7 P ₉₉ = 93.2																						Hours of Missing Data:	0		
																						Hours of Calibration:	0		
																						Percent Operational Time:	100.0		
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Dec	10	6	18	27	56	90	5	8	78	39	31	32	8	11	40	11	7	71	72	65	31	11	21	35	89.8
2-Dec	18	86	58	22	31	32	40	12	16	37	21	39	42	76	54	56	74	74	48	67	68	72	86	57	86.1
3-Dec	31	44	82	52	48	32	55	40	26	44	24	44	46	29	9	71	26	72	61	48	43	22	6	4	81.5
4-Dec	6	8	4	9	6	9	8	6	4	4	5	5	5	5	6	5	6	5	5	7	5	7	6	7	9.1
5-Dec	13	66	34	43	68	34	39	10	24	9	12	10	6	13	9	9	11	6	5	12	5	6	7	43	67.7
6-Dec	10	33	5	5	21	14	20	18	22	15	81	45	30	59	43	9	10	13	6	18	25	42	47	16	81.1
7-Dec	14	11	68	15	74	72	24	41	54	47	71	61	56	10	12	22	6	8	11	8	6	6	8	9	74.3
8-Dec	10	15	8	9	8	6	8	7	5	15	8	36	83	75	39	32	71	34	75	71	50	10	27	9	82.9
9-Dec	8	5	6	6	6	4	7	6	13	12	9	10	5	8	11	49	46	60	13	7	10	5	5	4	59.6
10-Dec	6	6	5	10	6	5	5	4	4	16	15	6	12	4	8	8	61	77	56	31	10	16	9	11	77.0
11-Dec	7	11	6	11	9	16	11	10	23	10	11	6	7	14	21	7	8	18	7	9	6	3	8	41	40.8
12-Dec	39	7	6	6	14	19	12	13	6	9	12	21	65	18	37	77	71	19	46	55	61	74	23	80	79.8
13-Dec	31	28	42	51	18	78	82	89	33	64	83	66	18	60	48	91	8	81	8	65	27	23	42	31	91.1
14-Dec	50	23	52	48	45	93	55	79	77	81	76	71	57	66	66	66	79	54	74	84	62	62	52	87	93.2
15-Dec	48	86	84	94	45	96	37	60	46	53	80	60	60	79	84	27	59	71	86	86	88	66	69	69	96.5
16-Dec	99	60	93	64	30	76	74	66	62	49	35	93	87	57	62	94	64	52	78	82	62	67	57	68	98.8
17-Dec	60	65	65	76	82	61	31	24	84	81	85	60	77	11	50	35	24	18	55	25	55	82	64	45	84.9
18-Dec	34	74	74	60	55	85	29	49	64	95	68	71	48	21	28	15	6	7	7	12	16	9	4	5	94.8
19-Dec	7	4	3	3	4	3	3	8	5	9	4	5	6	16	6	4	4	6	6	3	17	31	13	64	63.9
20-Dec	53	29	32	28	85	62	58	47	40	56	52	14	65	74	12	83	64	32	87	9	6	4	4	5	86.9
21-Dec	9	8	11	9	4	6	5	9	5	5	5	6	15	16	6	3	4	6	4	5	5	8	14	6	16.0
22-Dec	4	5	10	21	22	11	11	8	14	5	37	49	35	19	54	76	62	8	5	7	26	73	44	41	76.4
23-Dec	16	51	72	15	31	12	36	13	31	8	21	19	24	15	14	31	25	80	53	60	36	33	57	68	80.0
24-Dec	34	53	11	20	74	32	12	8	6	6	15	42	24	23	5	33	54	48	64	75	60	11	40	84	83.7
25-Dec	49	17	27	25	23	25	69	67	61	41	92	82	46	57	76	61	82	79	63	69	76	35	78	39	91.9
26-Dec	26	18	81	84	46	89	69	47	38	89	70	58	87	69	11	92	13	55	18	71	78	81	19	84	91.6
27-Dec	46	3	80	69	81	79	14	5	7	3	6	7	7	10	9	11	9	26	54	69	13	8	7	8	81.4
28-Dec	10	10	10	10	8	10	15	19	19	19	48	38	56	48	66	63	78	75	10	83	89	65	7	56	89.2
29-Dec	80	51	52	75	5	12	13	8	6	10	7	9	10	8	11	11	10	8	5	7	6	7	8	7	80.5
30-Dec	7	6	6	9	8	7	9	11	8	6	7	6	5	8	7	6	10	11	11	4	7	13	27	35	34.7
31-Dec	15	65	52	18	32	64	64	33	19	26	8	20	21	26	59	70	62	43	86	27	39	68	53	25	86.1
98.8	85.8	93.2	93.9	84.7	96.5	82.0	88.8	84.0	94.8	91.9	92.8	87.2	79.4	84.3	94.1	82.2	80.9	86.9	86.3	89.2	82.2	86.1	86.8		

PASZA

Portable – Kinuso Station

Monthly Summary Tables, Graphs and Roses

**Peace Airshed Zone Association
Summary of Hourly Averages**

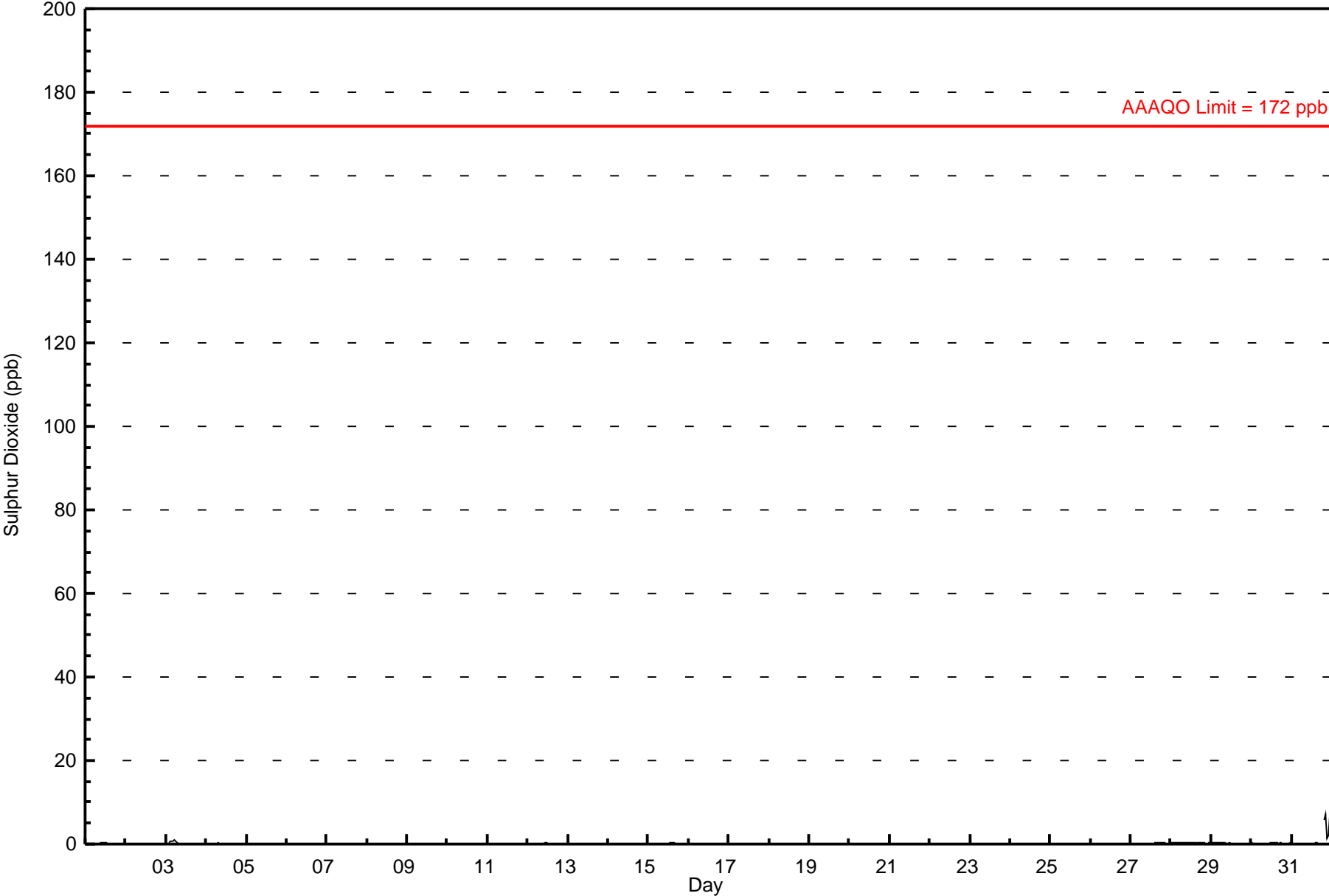
**Portable-Kinuso - Sulphur Dioxide (SO₂) - ppb
December 1, 2009 to January 1, 2010**

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 7.0 ppb on Dec 31 21:00	Maximum Daily Average: 1.1 ppb on Dec 31		Hours of Data:	707
Minimum Value: 0 ppb on Dec 1 20:00	Minimum Daily Average: 0.0 ppb on Dec 2		Hours of Missing Data:	37
Maximum Diurnal Average: 0.3 ppb at hour 24	Minimum Diurnal Average: 0.1 ppb at hour 9		Hours of Calibration:	37
Monthly Average: 0.11 ppb	Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.1 P ₉₀ = 0.2 P ₉₉ = 0.6		Percent Operational Time:	100.0

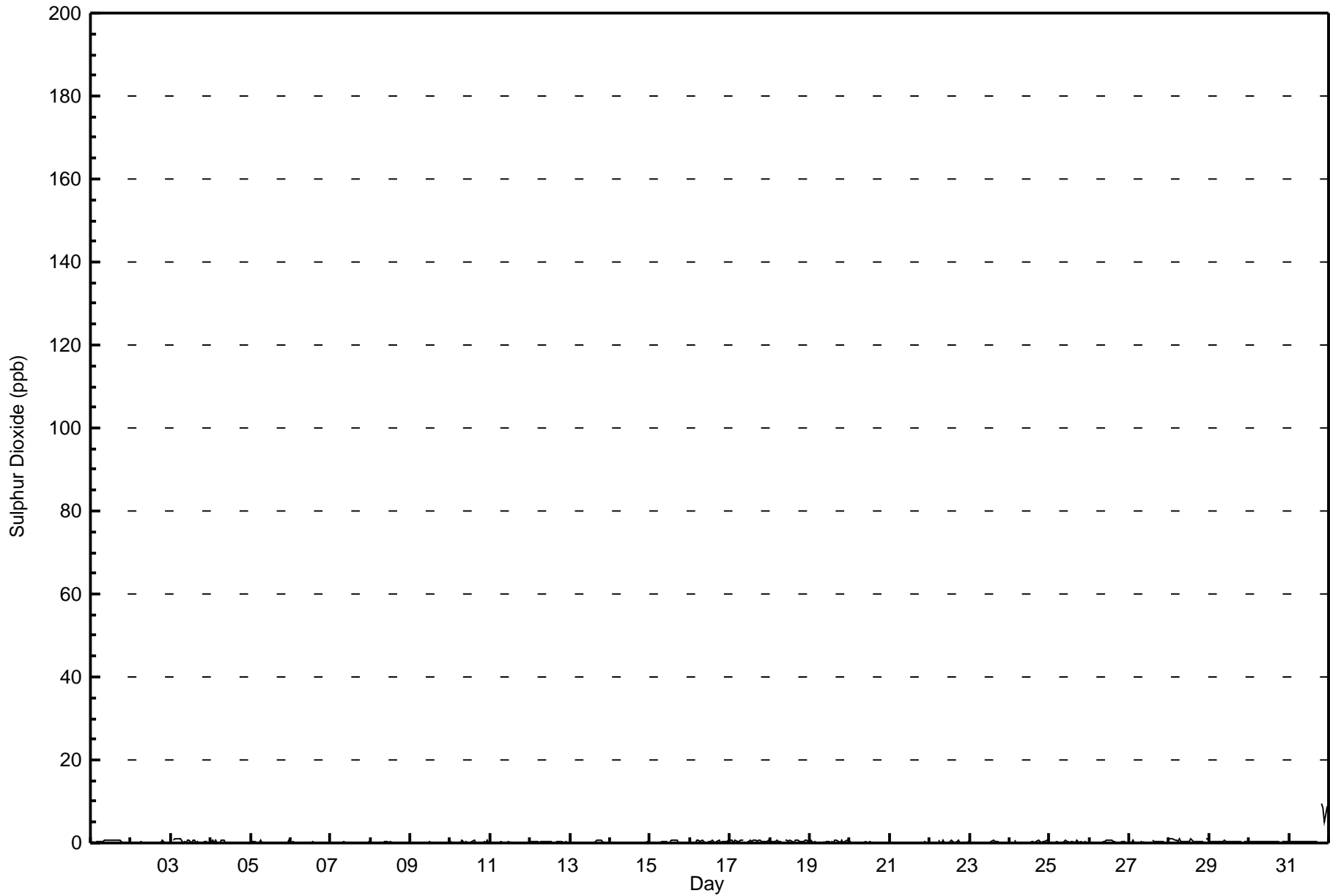
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
2-Dec	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
3-Dec	A	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
4-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.2
5-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.0	0.0
6-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.0	0.0
7-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.0	0.1
8-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.0	0.1
9-Dec	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	0.1
10-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.1
11-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.1
12-Dec	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
13-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.1
14-Dec	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
15-Dec	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
16-Dec	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	0.2
17-Dec	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	0.1
18-Dec	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
19-Dec	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
20-Dec	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
21-Dec	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
22-Dec	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
23-Dec	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
24-Dec	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
25-Dec	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
26-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.0	0.1
27-Dec	0	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	A	0	0.2	0.5
28-Dec	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.4	0.5
29-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.4
30-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.3
31-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	6	7	1	2	7	1.1	7.0
	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.1	0.1	0.3	Diurnal Average
	0.5	0.5	0.5	0.7	0.7	0.9	0.6	0.3	0.3	0.3	0.4	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	5.8	7.0	1.3	2.0	6.6	Diurnal Maximum

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

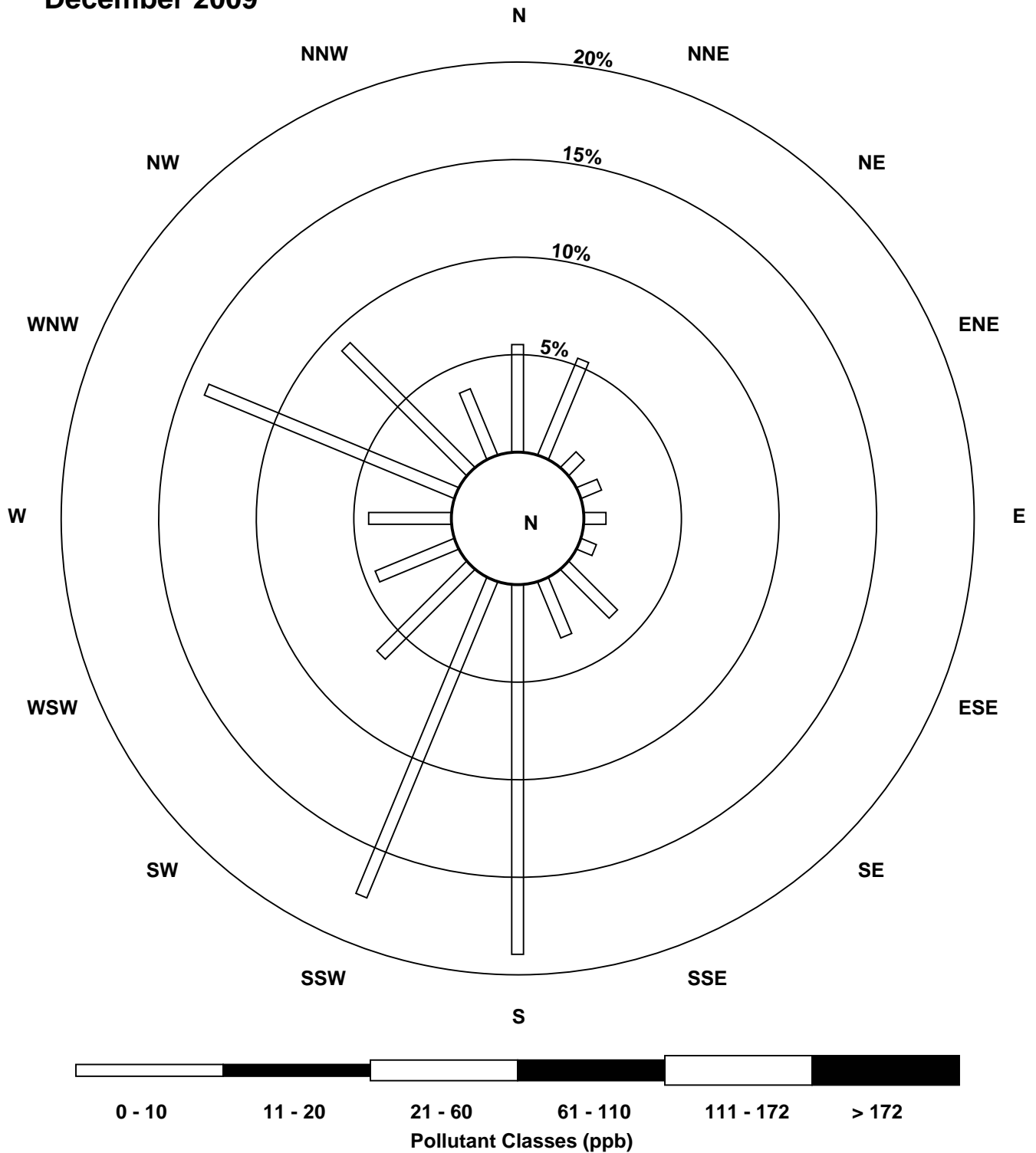
Hourly Averages for SO₂ at Portable-Kinuso December 2009



Hourly Maximums for SO₂ at Portable-Kinuso December 2009



Pollutant Rose for SO₂ at Portable-Kinuso December 2009



**Peace Airshed Zone Association
Summary of Hourly Averages**

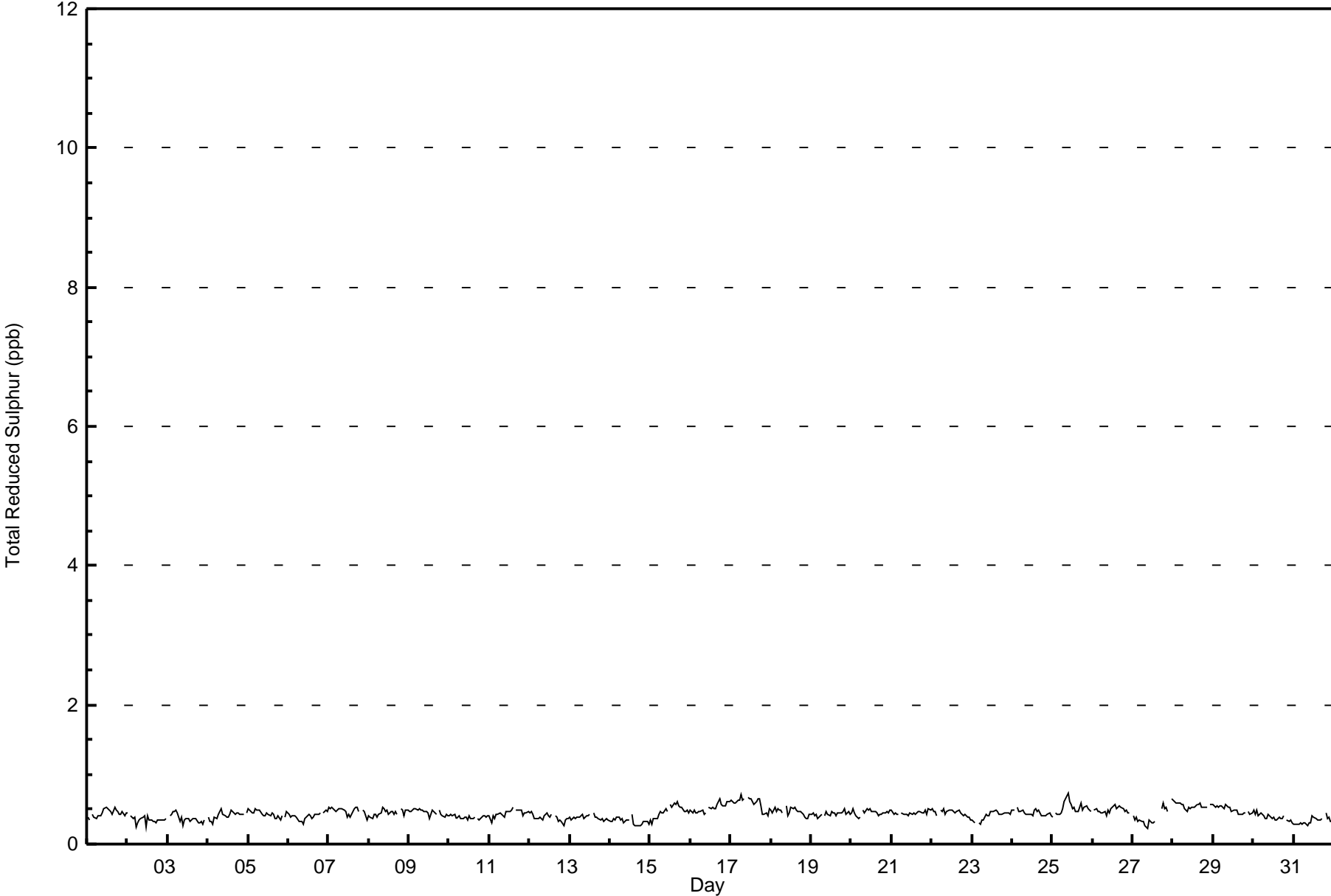
**Portable-Kinuso - Total Reduced Sulphur (TRS) - ppb
December 1, 2009 to January 1, 2010**

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 0.7 ppb on Dec 25 10:00	Maximum Daily Average: 0.6 ppb on Dec 17		Hours of Data:	708
Minimum Value: 0 ppb on Dec 27 10:00	Minimum Daily Average: 0.3 ppb on Dec 14		Hours of Missing Data:	36
Maximum Diurnal Average: 0.5 ppb at hour 15	Minimum Diurnal Average: 0.4 ppb at hour 22		Hours of Calibration:	36
Monthly Average: 0.44 ppb	Percentiles: P ₁ = 0.3 P ₁₀ = 0.3 Q ₁ = 0.4 Median = 0.4 Q ₃ = 0.5 P ₉₀ = 0.5 P ₉₉ = 0.7		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	0	0	A	0	0	0	0	0	0	0	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0.4	0.5
2-Dec	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
3-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
4-Dec	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.4	0.5
5-Dec	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.4	0.5
6-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.4	0.5
7-Dec	1	1	1	1	0	0	1	1	1	0	0	0	0	0	1	1	1	0	A	1	0	0	0	0	0.5	0.5
8-Dec	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0.5	0.5
9-Dec	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.5	0.5
10-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.4	0.4
11-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0.4	0.5
12-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.4	0.5
13-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.4	0.5
14-Dec	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
15-Dec	0	0	0	0	0	0	0	0	0	1	0	A	1	1	1	1	1	1	1	1	1	0	0	0	0.5	0.6
16-Dec	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.5	0.6
17-Dec	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	0	0	1	0.6	0.7
18-Dec	0	0	1	0	1	0	0	0	A	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0.5	0.6
19-Dec	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.4	0.5
20-Dec	0	1	0	0	0	0	A	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.5
21-Dec	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.4	0.5
22-Dec	1	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.5
23-Dec	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
24-Dec	0	0	A	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.4	0.5
25-Dec	0	A	0	0	0	0	1	1	1	1	1	1	1	1	0	0	1	1	0	1	1	1	0	0	0.5	0.7
26-Dec	A	0	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	A	0.5	0.6
27-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C	C	C	1	1	1	1	0	A	1	0.4	0.6
28-Dec	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.6	0.6
29-Dec	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0.5	0.6
30-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.4	0.5
31-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	0.4
	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	Diurnal Average	
	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.7	0.7	0.7	0.6	0.7	0.6	0.6	0.6	0.7	0.6	0.6	0.5	0.6	0.6	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 Portable-Kinuso December 2009



**Peace Airshed Zone Association
Summary of Hourly Maximums**

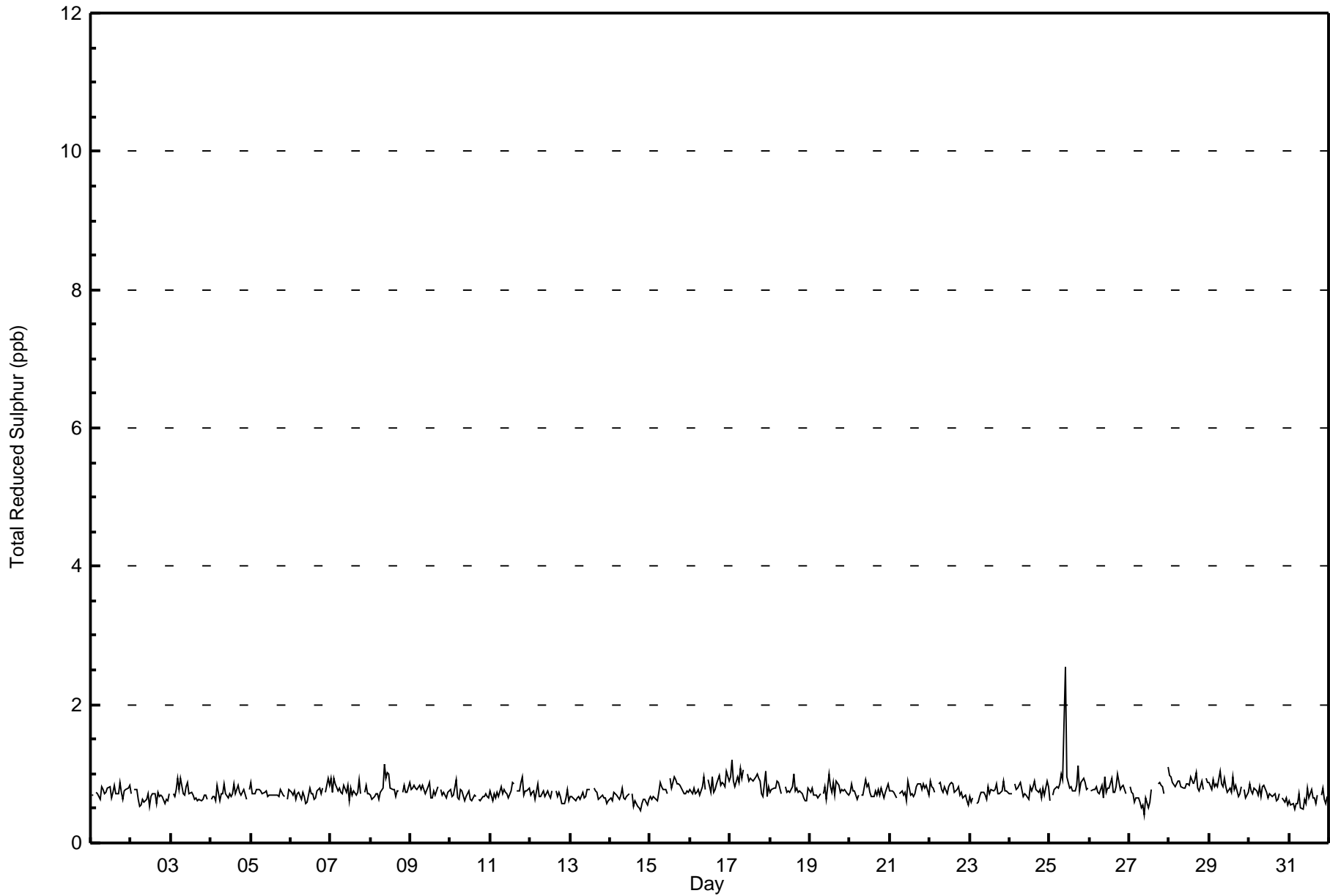
**Portable-Kinuso - Total Reduced Sulphur (TRS) - ppb
December 1, 2009 to January 1, 2010**

Maximum Value: 2.5 ppb on Dec 25 10:00	Maximum Daily Average: 0.9 ppb on Dec 17	Hours in Service: 744
Minimum Value: 0 ppb on Dec 27 10:00	Minimum Daily Average: 0.6 ppb on Dec 31	Hours of Data: 708
Maximum Diurnal Average: 0.8 ppb at hour 10	Minimum Diurnal Average: 0.7 ppb at hour 6	Hours of Missing Data: 36
Monthly Average: 0.75 ppb	Percentiles: P ₁ = 0.5 P ₁₀ = 0.6 Q ₁ = 0.7 Median = 0.7 Q ₃ = 0.8 P ₉₀ = 0.9 P ₉₉ = 1.1	Hours of Calibration: 36
		Percent Operational Time: 100.0

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

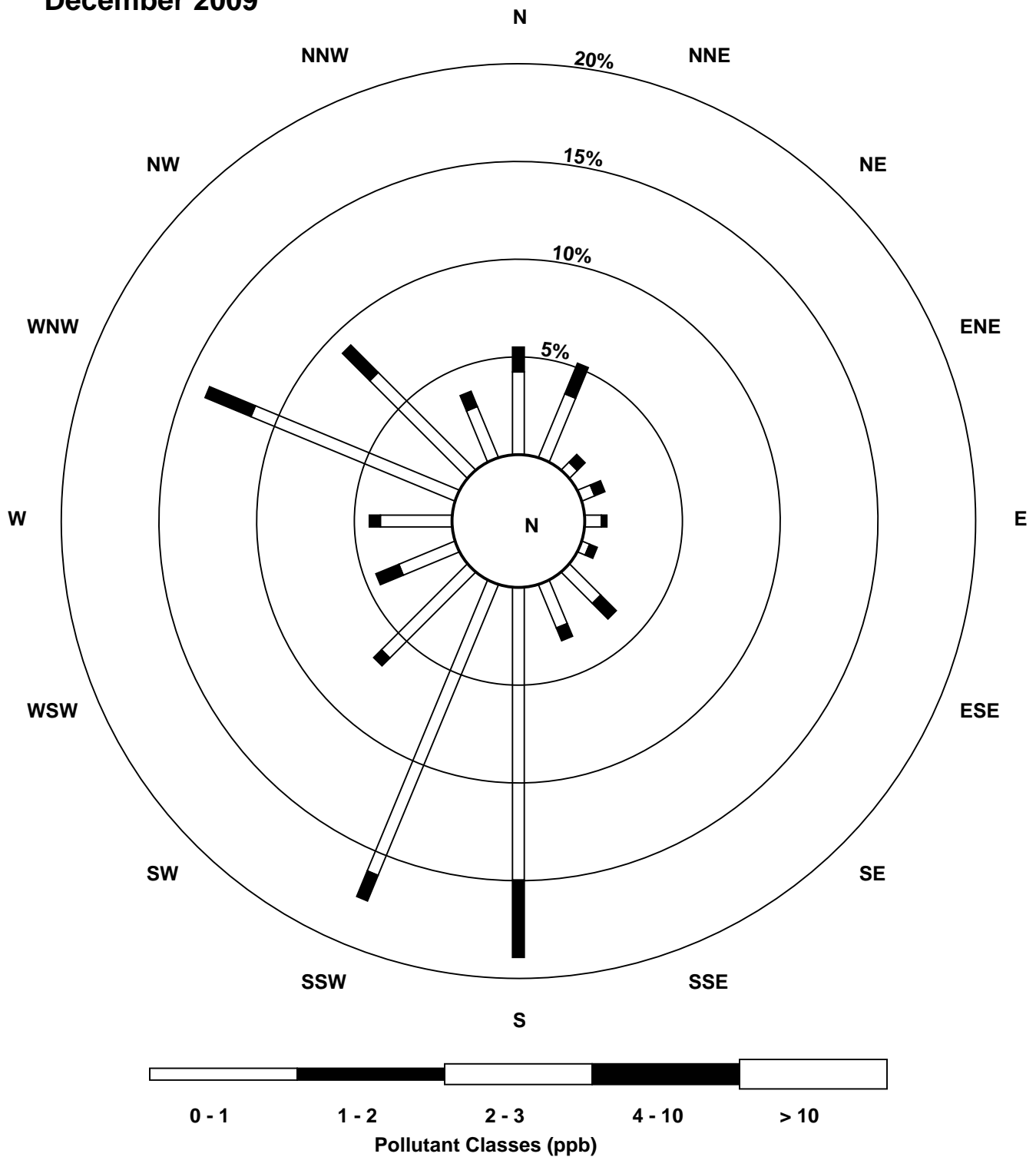
C - Calibration A - Automated Daily Zero Span

Hourly Maximums for TRS at Portable-Kinuso December 2009



Pollutant Rose for TRS at Portable-Kinuso

December 2009



**Peace Airshed Zone Association
Summary of Hourly Averages**

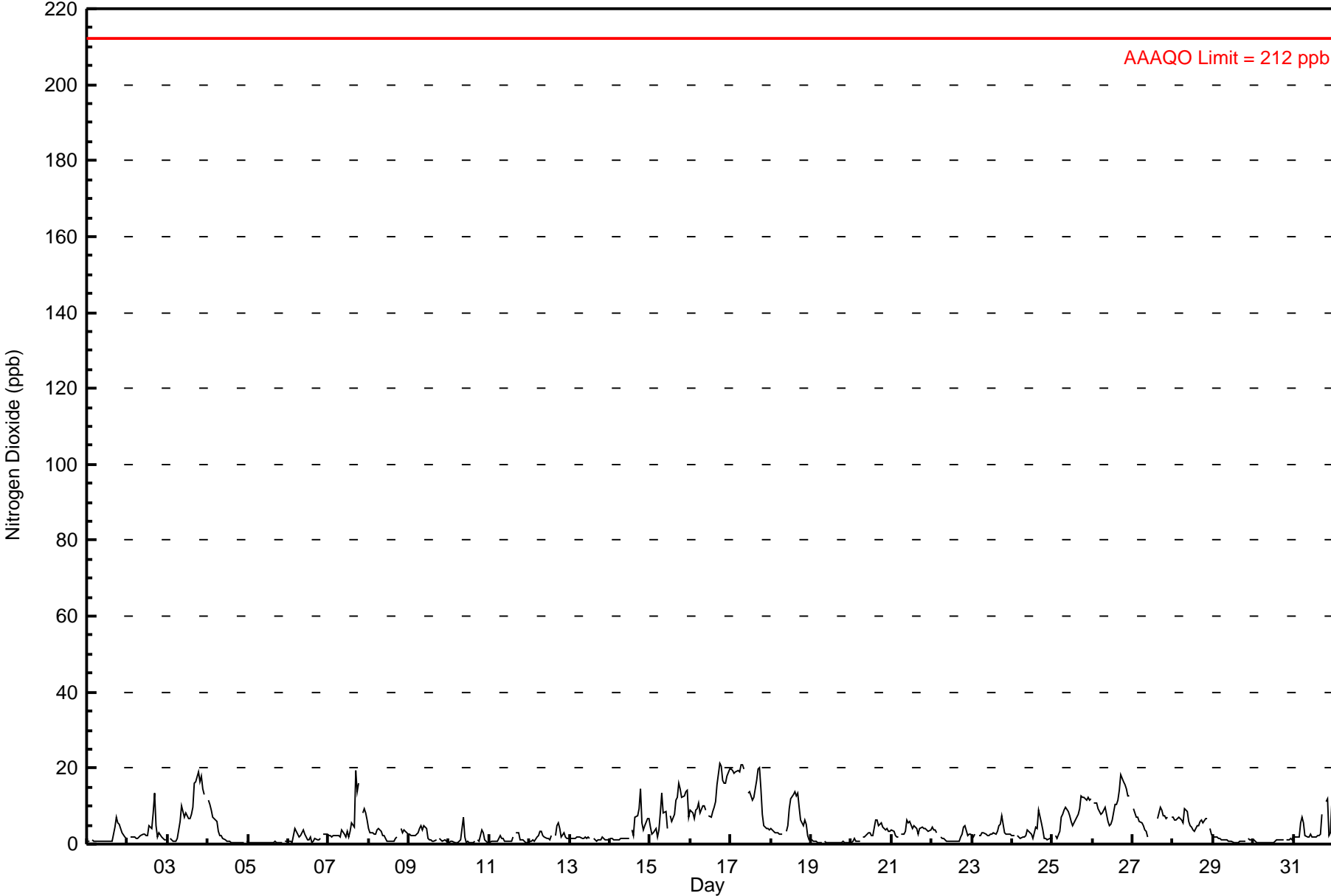
**Portable-Kinuso - Nitrogen Dioxide (NO₂) - ppb
December 1, 2009 to January 1, 2010**

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 21.3 ppb on Dec 16 18:00	Maximum Daily Average: 14.6 ppb on Dec 17		Hours of Data:	706
Minimum Value: 0 ppb on Dec 4 22:00	Minimum Daily Average: 0.4 ppb on Dec 5		Hours of Missing Data:	38
Maximum Diurnal Average: 7.0 ppb at hour 18	Minimum Diurnal Average: 3.0 ppb at hour 11		Hours of Calibration:	38
Monthly Average: 4.23 ppb	Percentiles: P ₁ = 0.3 P ₁₀ = 0.5 Q ₁ = 1.0 Median = 2.4 Q ₃ = 5.8 P ₉₀ = 11.2 P ₉₉ = 19.9		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Dec	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	4	7	6	5	4	3	2	1	1.9	7.0	
2-Dec	2	A	2	2	2	2	2	2	2	3	3	2	2	5	4	8	14	5	2	3	2	1	1	1	3.0	13.5	
3-Dec	A	1	1	1	1	1	1	6	10	8	7	8	7	7	8	10	16	16	19	16	18	15	13	A	8.6	19.0	
4-Dec	11	10	9	7	7	6	3	2	2	2	1	1	1	1	0	0	0	0	0	0	0	0	A	1	2.9	11.4	
5-Dec	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	A	1	1	0.4	0.8	
6-Dec	1	1	0	2	4	4	2	2	3	4	3	1	1	2	0	1	1	1	1	2	A	3	3	2	1.9	4.1	
7-Dec	2	2	2	2	2	2	2	2	4	3	2	3	2	3	6	4	19	14	16	A	8	9	8	6	5.4	19.4	
8-Dec	4	3	3	3	3	4	4	3	2	2	1	1	1	1	1	1	1	2	A	4	3	4	3	3	2.5	4.3	
9-Dec	3	2	2	2	2	3	4	5	4	5	4	1	1	1	1	1	1	A	2	1	1	1	1	1	2.1	4.9	
10-Dec	1	1	1	0	0	1	1	1	7	2	0	1	1	0	0	1	A	1	1	4	3	1	1	0	1.2	7.0	
11-Dec	1	1	1	1	1	1	2	1	2	1	1	1	1	1	2	A	3	3	1	1	1	1	0	0	1.2	3.1	
12-Dec	1	1	1	1	2	2	3	3	2	2	2	1	1	2	A	2	5	5	4	2	3	2	1	1	2.2	5.4	
13-Dec	1	1	2	2	2	2	2	2	2	2	2	2	2	A	1	1	1	1	1	2	1	1	1	1	1.4	1.9	
14-Dec	1	1	1	1	1	1	1	1	1	2	1	1	A	4	2	7	7	9	14	6	4	5	7	7	3.9	14.4	
15-Dec	4	2	3	4	2	4	8	13	8	9	4	A	7	6	8	12	12	16	14	12	13	14	14	7	8.6	16.1	
16-Dec	9	8	7	9	9	11	8	10	10	9	A	7	7	9	10	11	16	21	20	17	16	16	18	20	12.1	21.3	
17-Dec	20	19	19	19	19	19	21	21	20	A	14	14	13	12	12	17	20	20	14	8	5	4	4	4	14.6	21.0	
18-Dec	4	4	3	3	3	3	2	3	A	4	5	9	12	13	14	13	13	10	6	5	6	5	2	1	6.2	13.8	
19-Dec	1	1	1	1	1	0	0	A	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0.5	1.0	
20-Dec	0	1	2	1	1	1	A	2	2	3	3	3	2	2	7	6	5	5	6	4	4	4	3	4	3.0	6.5	
21-Dec	4	3	2	2	2	A	3	2	3	7	6	6	4	5	5	4	3	4	5	4	4	4	3	4	3.8	6.5	
22-Dec	5	4	4	3	A	2	1	1	1	1	1	1	1	1	1	1	1	2	3	4	5	2	3	2	2.1	5.0	
23-Dec	2	2	3	A	2	2	3	3	3	2	2	3	3	3	3	3	5	5	7	3	3	3	2	2	3.0	7.3	
24-Dec	2	2	A	2	2	2	2	2	2	4	4	3	2	3	5	4	9	6	4	2	1	1	1	2	2.8	8.8	
25-Dec	2	A	2	1	3	7	8	9	10	8	8	6	5	6	6	8	9	13	12	12	11	12	12	12	7.9	12.5	
26-Dec	A	11	11	9	9	8	8	10	8	6	5	5	6	11	10	12	14	18	16	15	15	13	13	A	10.6	18.4	
27-Dec	9	8	7	7	6	6	5	4	4	2	C	C	C	C	C	7	10	9	7	7	7	7	A	7	6.6	9.8	
28-Dec	7	6	6	7	7	6	6	9	9	6	5	4	4	4	5	5	6	6	5	7	7	A	4	3	5.8	9.5	
29-Dec	2	2	2	2	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	A	1	1	1.0	1.9	
30-Dec	1	1	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	A	1	1	2	1	0.8	1.6
31-Dec	2	2	2	2	6	7	6	2	2	2	3	2	2	2	2	2	3	8	A	11	12	2	3	11	4.1	11.8	
	3.5	3.5	3.4	3.2	3.3	3.6	3.8	4.2	4.2	3.2	3.0	3.1	3.1	3.6	4.0	4.8	6.7	7.0	6.6	5.5	5.5	4.7	4.4	3.7	Diurnal Average		
	19.7	19.4	18.6	19.0	19.3	19.0	20.8	21.0	19.9	8.9	13.5	13.9	12.7	12.9	13.8	16.6	19.8	21.3	20.4	16.7	17.9	16.1	17.9	19.9	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 NO₂ at Portable-Kinuso December 2009



**Peace Airshed Zone Association
Summary of Hourly Maximums**

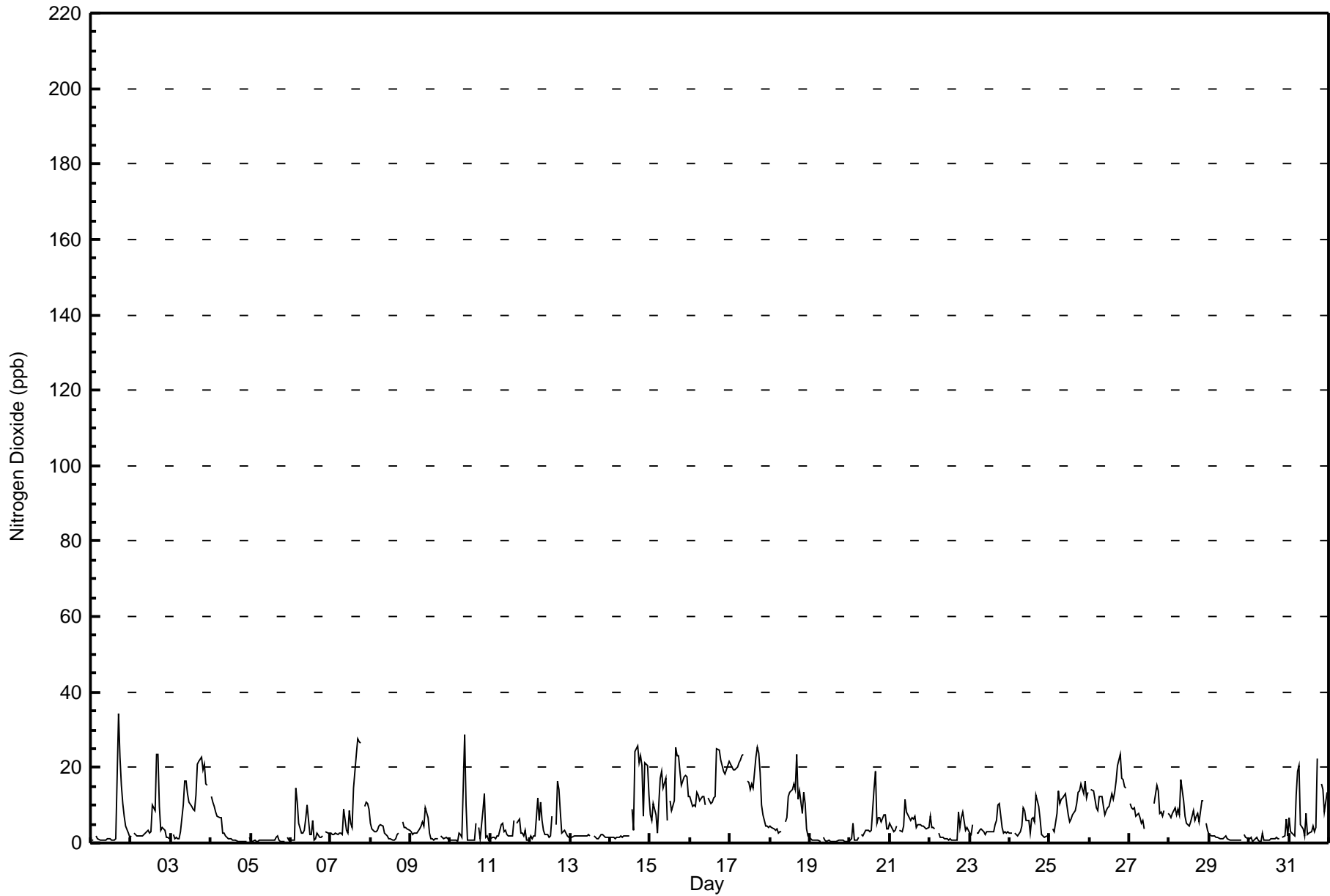
**Portable-Kinuso - Nitrogen Dioxide (NO₂) - ppb
December 1, 2009 to January 1, 2010**

Maximum Value: 34.3 ppb on Dec 1 17:00	Maximum Daily Average: 16.9 ppb on Dec 17	Hours in Service: 744
Minimum Value: 0 ppb on Dec 4 22:00	Minimum Daily Average: 0.7 ppb on Dec 19	Hours of Data: 706
Maximum Diurnal Average: 11.5 ppb at hour 17	Minimum Diurnal Average: 4.1 ppb at hour 13	Hours of Missing Data: 38
Monthly Average: 6.20 ppb	Percentiles: P ₁ = 0.4 P ₁₀ = 0.8 Q ₁ = 1.6 Median = 3.3 Q ₃ = 9.3 P ₉₀ = 15.7 P ₉₉ = 24.9	Hours of Calibration: 38
		Percent Operational Time: 100.0

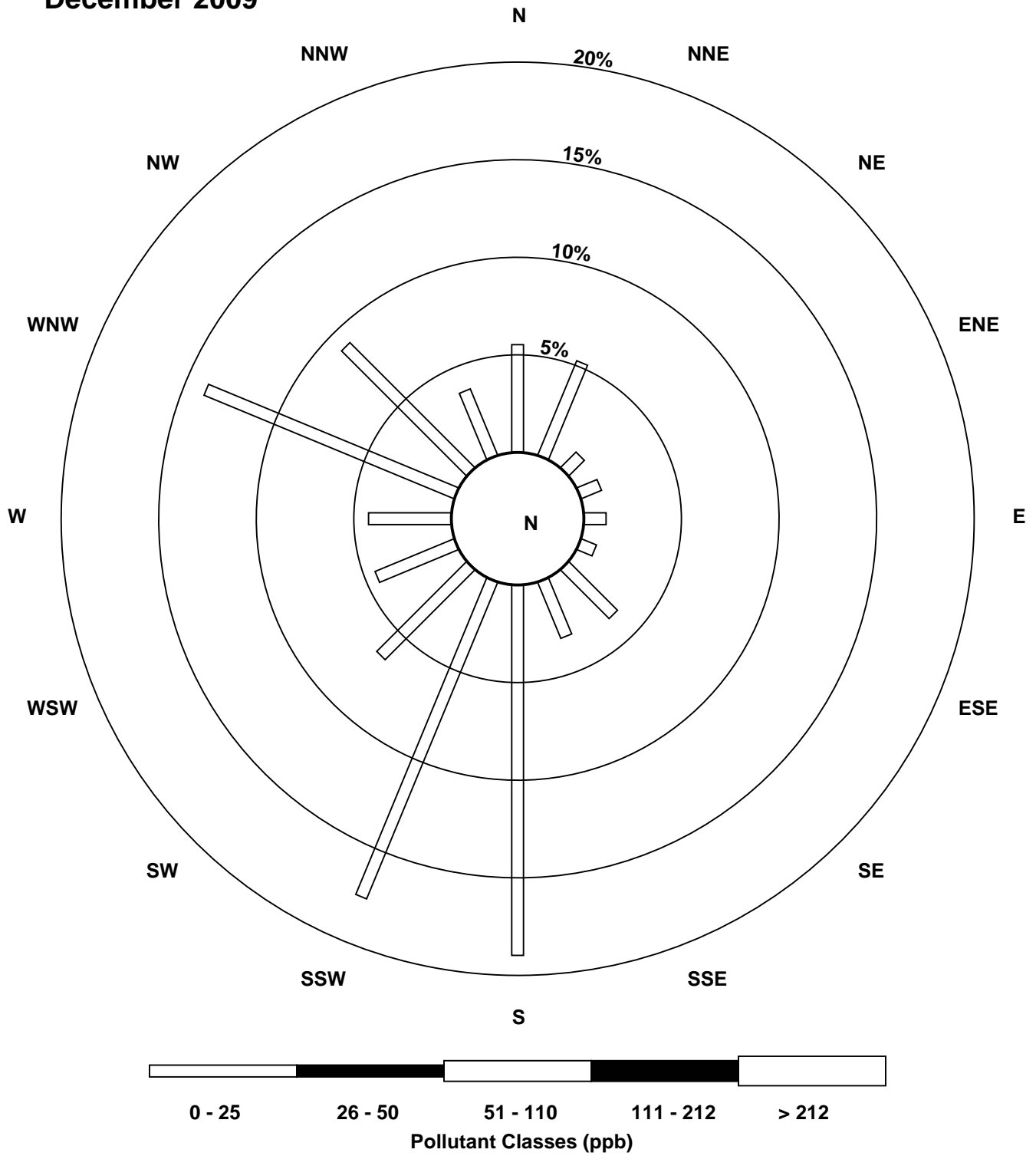
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Dec	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	34	23	15	10	7	4	3	2	4.9	34.3	
2-Dec	2	A	3	2	2	2	2	2	2	3	3	3	3	10	9	24	24	10	3	4	3	2	2	1	5.2	23.5	
3-Dec	A	2	1	1	1	1	3	10	16	17	13	11	10	9	8	13	21	22	23	20	21	16	15	A	11.5	22.8	
4-Dec	12	11	10	8	7	7	7	3	3	2	1	1	1	1	1	1	0	0	0	0	0	0	A	2	3.4	12.4	
5-Dec	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	2	1	0	0	0	A	1	1	0.7	2.0	
6-Dec	1	1	1	14	11	5	3	3	4	6	10	2	2	6	1	1	3	1	1	2	A	3	3	3	3.7	14.4	
7-Dec	3	2	2	3	2	2	2	2	9	3	2	9	5	4	14	24	28	27	27	A	10	11	11	9	9.2	27.5	
8-Dec	5	4	3	3	3	4	5	4	2	2	2	1	1	1	1	1	2	3	A	5	4	4	4	3	3.0	5.5	
9-Dec	3	2	3	3	3	4	5	5	5	9	7	3	1	1	1	1	1	A	2	2	1	1	1	1	2.8	9.2	
10-Dec	1	1	1	1	0	3	2	2	29	10	1	1	1	1	1	5	A	4	1	9	13	1	2	1	3.8	28.8	
11-Dec	1	2	2	1	2	2	5	5	3	3	2	2	2	2	6	A	5	6	3	3	2	3	1	1	2.8	6.4	
12-Dec	2	1	2	2	12	6	11	6	3	2	2	2	2	7	A	5	16	14	8	3	3	2	2	1	5.0	16.3	
13-Dec	1	2	2	2	2	2	2	2	2	2	2	2	2	A	2	1	1	1	2	2	2	1	2	1	1.8	2.4	
14-Dec	2	2	2	1	2	2	2	2	2	2	2	2	A	9	3	24	26	21	23	21	7	21	20	13	9.1	25.7	
15-Dec	7	6	10	7	3	11	17	19	14	17	6	A	11	9	11	25	23	23	19	15	18	18	18	12	14.0	25.2	
16-Dec	12	10	10	10	14	13	11	12	12	10	A	12	10	11	12	12	25	24	22	20	19	18	20	22	14.8	24.9	
17-Dec	21	20	19	20	20	21	22	23	23	A	16	16	14	15	15	23	25	24	19	10	7	5	4	4	16.9	25.2	
18-Dec	4	4	4	3	4	3	3	3	A	5	7	12	13	14	16	14	23	12	14	8	13	10	4	2	8.5	23.5	
19-Dec	1	1	1	1	1	1	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0.7	1.4	
20-Dec	1	1	5	1	1	1	A	2	2	3	3	3	3	4	14	19	5	7	7	5	7	7	4	4	4.8	18.9	
21-Dec	5	4	3	3	5	A	3	3	5	11	8	7	6	7	6	7	4	5	5	4	4	4	4	4	5.1	11.4	
22-Dec	7	4	4	4	A	3	2	2	1	1	1	1	1	1	1	1	1	8	4	7	8	3	4	3	3.1	8.0	
23-Dec	2	2	5	A	2	3	3	4	3	2	3	3	3	3	3	5	6	10	10	4	3	3	3	3	3.9	10.5	
24-Dec	3	2	A	3	2	2	3	4	9	9	6	6	2	6	7	6	13	10	6	2	2	1	2	2	4.7	12.8	
25-Dec	2	A	4	3	8	14	11	12	12	13	10	7	6	6	7	9	10	13	14	16	13	16	12	13	10.0	16.4	
26-Dec	A	14	14	12	9	9	12	12	10	8	9	9	10	13	11	13	16	20	23	17	17	15	14	A	13.1	23.5	
27-Dec	10	9	9	9	7	8	7	5	6	4	C	C	C	C	C	10	15	14	8	8	7	8	A	8	8.5	15.3	
28-Dec	8	7	8	9	7	9	8	17	11	7	5	5	5	5	8	6	7	8	6	11	11	A	5	3	7.7	16.8	
29-Dec	2	2	2	2	2	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	A	2	2	1	1.3	2.3
30-Dec	1	2	1	1	2	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	A	2	2	6	2	1.4	6.2
31-Dec	7	3	2	2	13	19	20	5	4	2	8	2	3	3	4	3	4	22	A	16	14	8	11	13	8.2	22.2	
	4.4	4.2	4.5	4.4	4.9	5.2	5.8	5.8	6.6	5.3	4.6	4.3	4.1	5.2	5.7	8.6	11.5	11.2	9.3	7.8	7.6	6.7	6.1	4.7	Diurnal Average		
	20.8	20.1	19.3	19.5	20.2	21.1	21.9	23.3	28.8	17.3	16.2	16.1	14.3	15.5	15.8	25.2	34.3	26.8	26.7	20.5	20.9	21.3	20.4	21.6	Diurnal Maximum		

C - Calibration A - Automated Daily Zero Span

Hourly Maximums for NO₂ at Portable-Kinuso December 2009



Pollutant Rose for NO₂ at Portable-Kinuso December 2009



**Peace Airshed Zone Association
Summary of Hourly Averages**

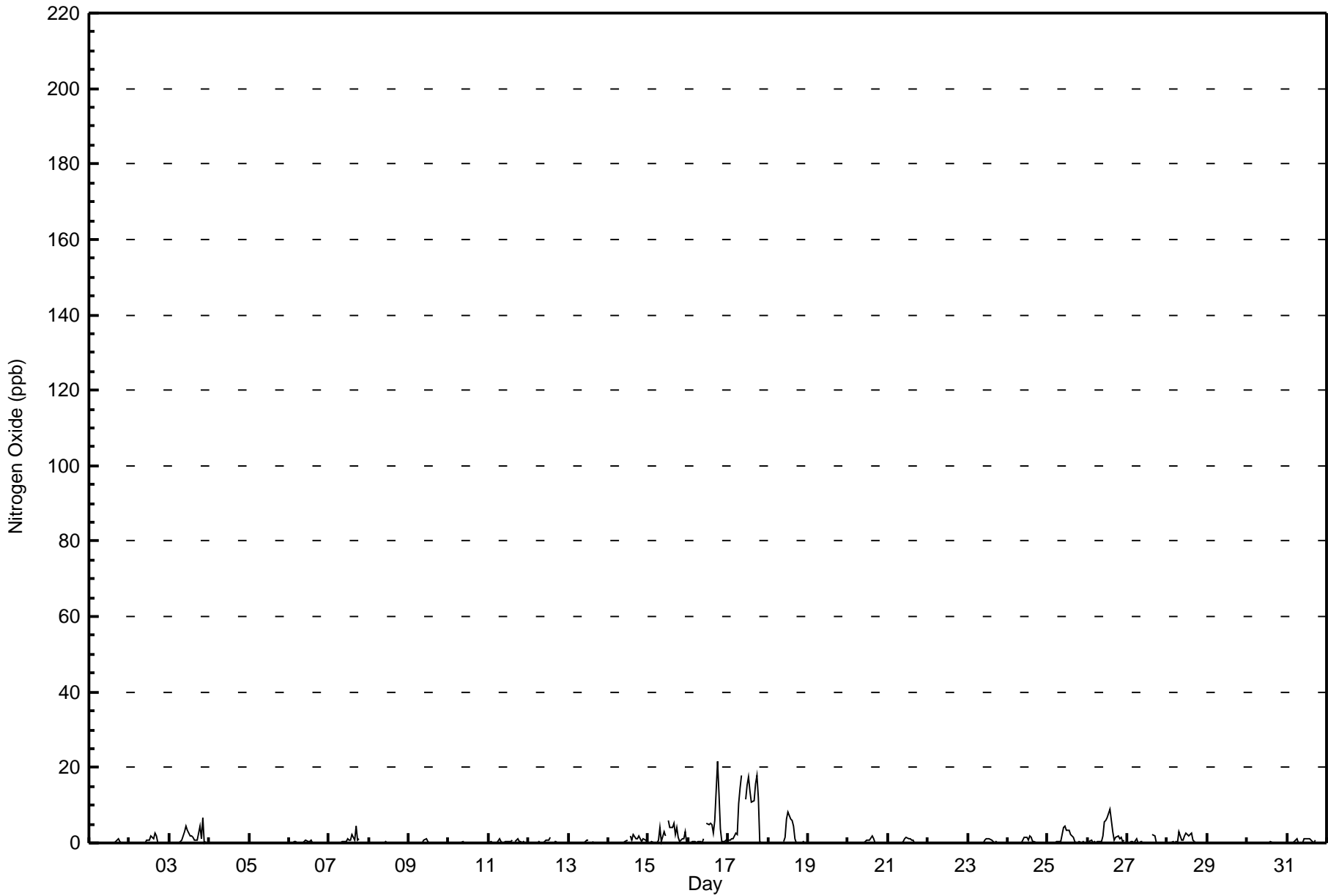
**Portable-Kinuso - Nitrogen Oxide (NO) - ppb
December 1, 2009 to January 1, 2010**

Maximum Value: 21.6 ppb on Dec 16 18:00	Maximum Daily Average: 7.7 ppb on Dec 17	Hours in Service: 744
Minimum Value: 0 ppb on Dec 2 03:00	Minimum Daily Average: 0.0 ppb on Dec 8	Hours of Data: 706
Maximum Diurnal Average: 2.1 ppb at hour 13	Minimum Diurnal Average: 0.1 ppb at hour 1	Hours of Missing Data: 38
Monthly Average: 0.81 ppb	Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.5 P ₉₀ = 1.8 P ₉₉ = 14.2	Hours of Calibration: 38
		Percent Operational Time: 100.0

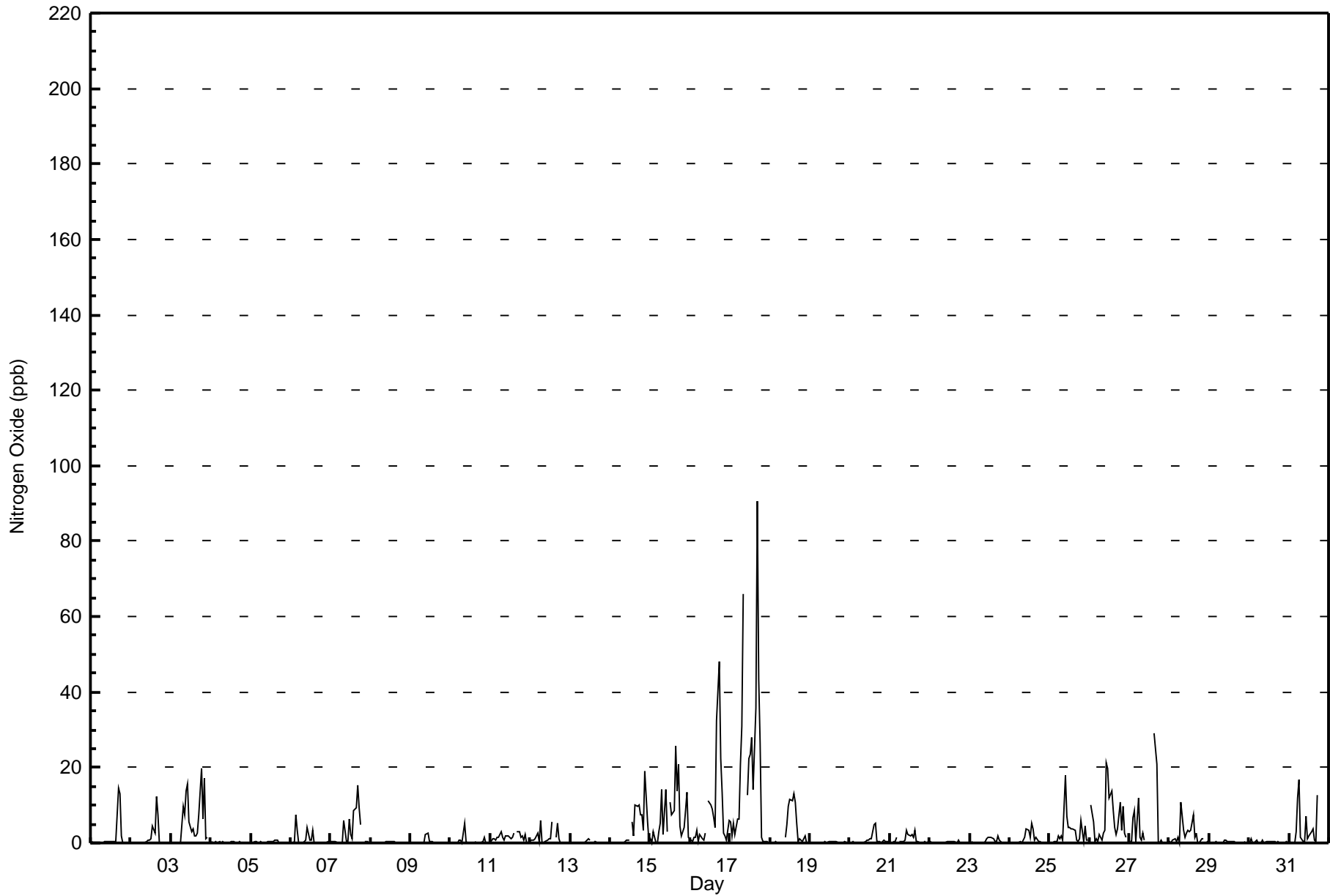
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Dec	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0.1	1.0	
2-Dec	0	A	0	0	0	0	0	0	0	0	1	1	1	2	1	3	2	0	0	0	0	0	0	0	0	0.4	2.5
3-Dec	A	0	0	0	0	0	0	1	2	3	4	3	2	2	1	1	1	1	5	1	7	0	0	A	1.5	6.5	
4-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.0	0.1	
5-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.0	0.1	
6-Dec	0	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	A	0	0	0	0.2	0.8	
7-Dec	0	0	0	0	0	0	0	1	0	0	1	1	1	2	1	5	1	1	A	0	0	0	0	0	0.6	4.5	
8-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.0	0.2	
9-Dec	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	1.0	
10-Dec	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.6	
11-Dec	0	0	0	0	0	0	1	0	0	0	0	0	0	1	A	1	1	0	1	0	0	0	0	0	0.3	1.2	
12-Dec	0	0	0	0	0	0	0	0	0	0	1	1	1	1	A	0	1	0	0	0	0	0	0	0	0.2	1.4	
13-Dec	0	0	0	0	0	0	0	0	0	0	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0.1	0.8	
14-Dec	0	0	0	0	0	0	0	0	0	0	0	1	A	2	1	2	1	1	2	1	0	1	1	0	0.6	2.1	
15-Dec	0	0	0	0	0	0	1	4	0	3	2	A	6	4	4	5	2	4	1	0	1	1	3	0	1.9	6.1	
16-Dec	0	0	0	0	0	0	0	0	0	1	A	5	5	5	5	3	6	22	13	4	1	0	0	1	3.1	21.6	
17-Dec	1	1	1	1	3	2	10	15	18	A	11	15	18	14	11	11	16	18	12	0	0	0	0	0	7.7	17.8	
18-Dec	0	0	0	0	0	0	0	0	A	0	1	6	8	6	6	4	1	0	0	0	0	0	0	0	1.5	8.2	
19-Dec	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	
20-Dec	0	0	0	0	0	0	A	0	0	0	0	1	1	1	2	1	0	0	0	0	0	0	0	0	0.3	1.9	
21-Dec	0	0	0	0	0	A	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.3	1.5	
22-Dec	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
23-Dec	0	0	0	A	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.3	1.2	
24-Dec	0	0	A	0	0	0	0	0	0	1	1	1	1	2	1	1	0	0	0	0	0	0	0	0	0.4	1.7	
25-Dec	0	A	0	0	0	0	0	1	0	4	4	3	3	3	2	1	0	0	0	1	0	0	0	0	1.1	4.4	
26-Dec	A	0	1	0	0	0	0	0	0	2	6	6	7	9	6	3	1	1	2	1	1	0	1	A	2.2	9.0	
27-Dec	0	0	0	0	0	1	0	0	0	0	C	C	C	C	C	2	2	0	0	0	0	0	0	0	0.4	2.3	
28-Dec	0	0	0	0	0	0	0	3	1	1	2	3	2	2	3	1	0	0	0	0	0	A	0	0	0.8	2.8	
29-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.0	0.1	
30-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.2	
31-Dec	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1	0	0	1	A	0	0	0	0	0	0.4	1.3	
	0.1	0.1	0.1	0.1	0.2	0.2	0.5	0.8	0.8	0.6	1.4	1.9	2.1	2.0	1.7	1.4	1.3	1.7	1.3	0.4	0.4	0.2	0.2	0.1	Diurnal Average		
	0.6	0.7	1.0	1.0	2.5	2.1	10.3	14.6	17.8	3.9	11.5	15.4	17.7	13.6	10.7	11.3	15.5	21.6	13.2	3.9	6.5	1.1	3.0	1.0	Diurnal Maximum		

C - Calibration A - Automated Daily Zero Span

Hourly Averages for NO at Portable-Kinuso December 2009



Hourly Maximums for NO at Portable-Kinuso December 2009



**Peace Airshed Zone Association
Summary of Hourly Averages**

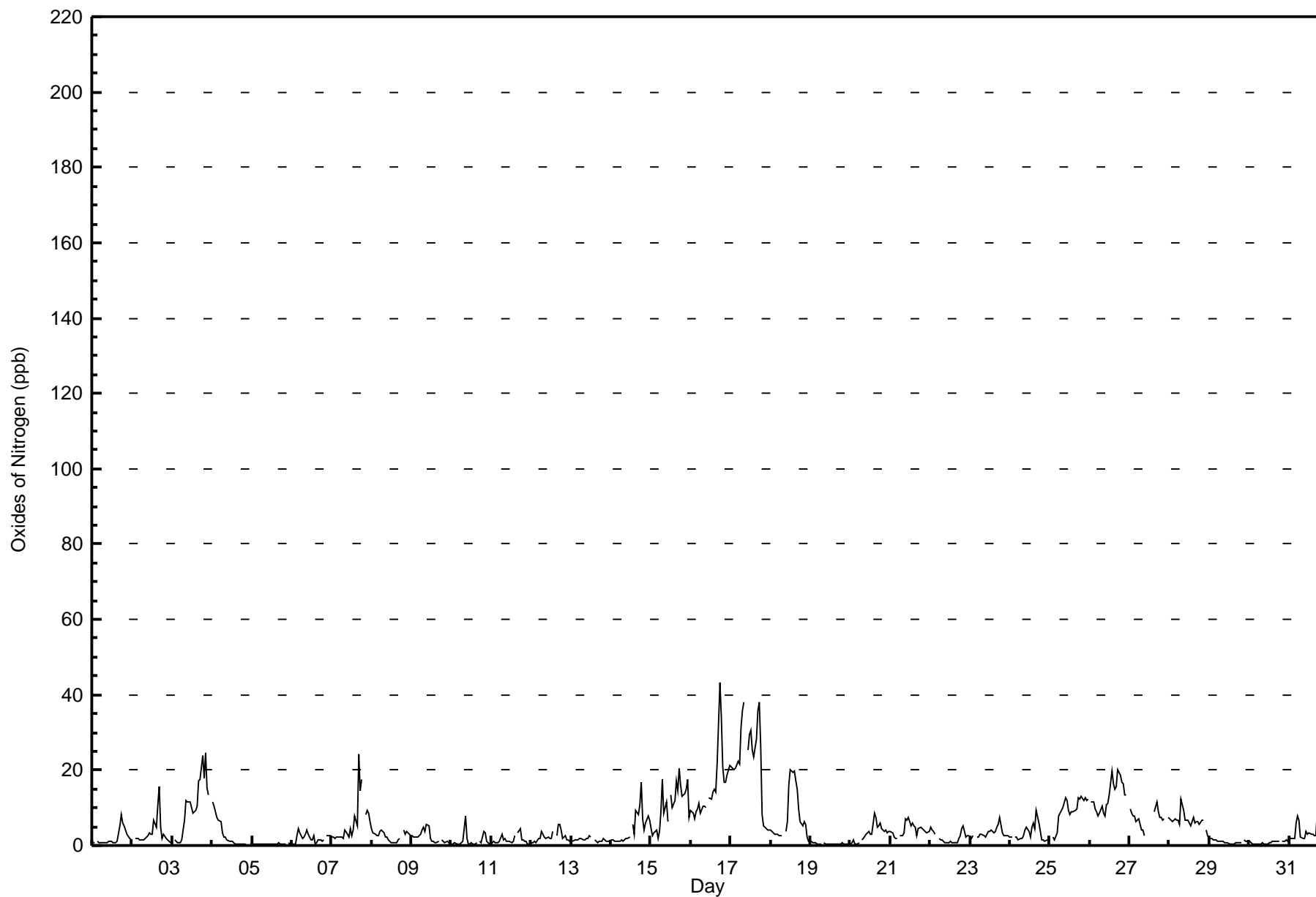
**Portable-Kinuso - Oxides of Nitrogen (NO_x) - ppb
December 1, 2009 to January 1, 2010**

Maximum Value: 43.1 ppb on Dec 16 18:00	Maximum Daily Average: 22.6 ppb on Dec 17	Hours in Service: 744
Minimum Value: 0 ppb on Dec 4 22:00	Minimum Daily Average: 0.4 ppb on Dec 5	Hours of Data: 706
Maximum Diurnal Average: 8.8 ppb at hour 18	Minimum Diurnal Average: 3.3 ppb at hour 4	Hours of Missing Data: 38
Monthly Average: 5.06 ppb	Percentiles: P ₁ = 0.3 P ₁₀ = 0.5 Q ₁ = 1.1 Median = 2.6 Q ₃ = 6.7 P ₉₀ = 12.9 P ₉₉ = 30.1	Hours of Calibration: 38
		Percent Operational Time: 100.0

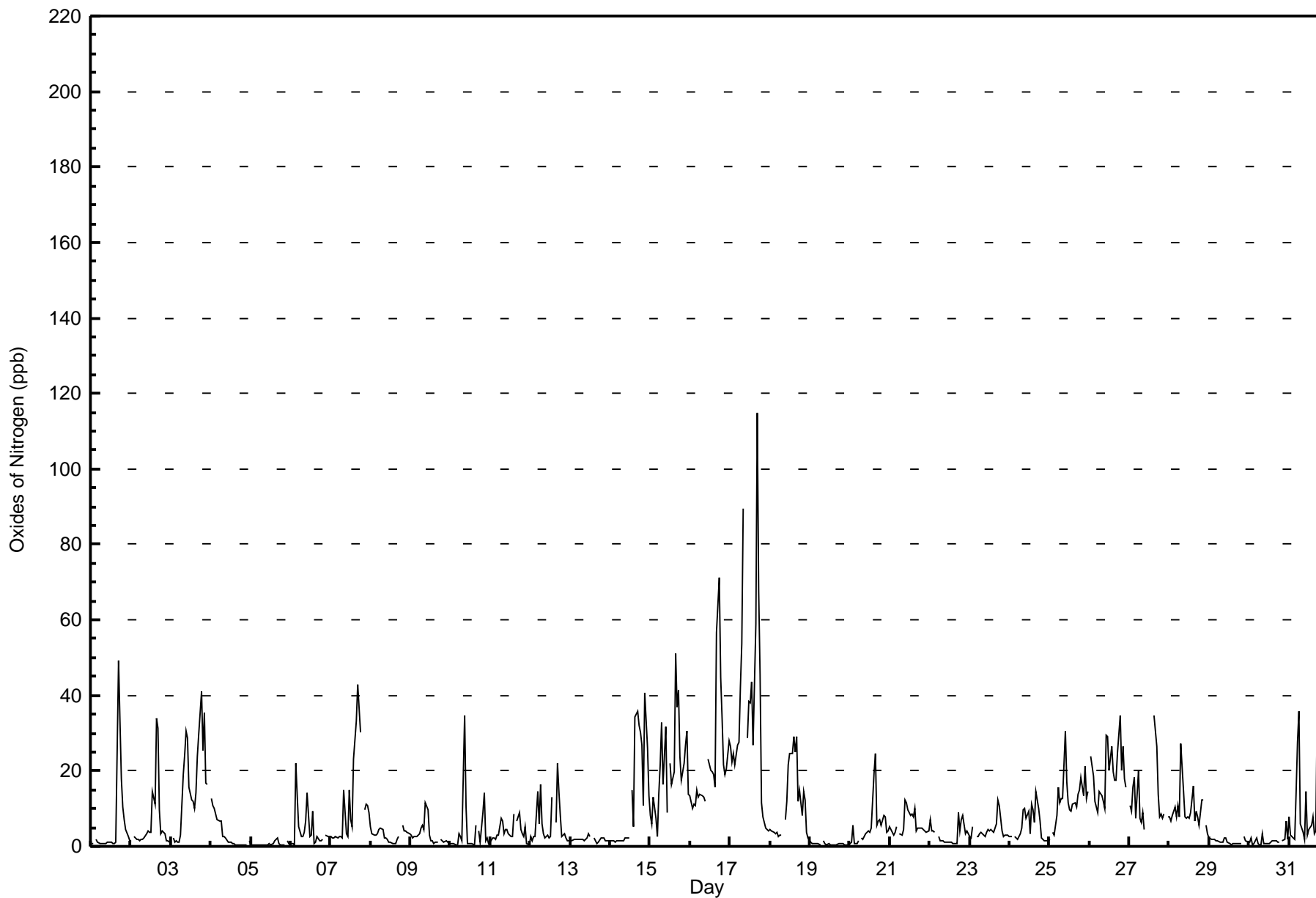
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Dec	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	5	8	6	5	4	3	2	1	2.1	8.0	
2-Dec	2	A	2	2	2	2	2	2	3	3	3	3	7	5	11	16	5	2	3	2	1	1	1	1	3.4	15.8	
3-Dec	A	1	1	1	1	1	1	7	12	11	11	12	9	9	11	17	17	24	18	25	15	14	A	10.3	24.8		
4-Dec	12	11	9	7	7	6	3	2	2	2	1	1	1	1	0	0	0	0	0	0	0	0	A	1	3.0	11.7	
5-Dec	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	A	1	1	0.4	0.7	
6-Dec	1	1	0	3	5	4	2	2	3	4	3	1	1	3	1	1	2	1	1	2	A	3	3	2	2.0	4.6	
7-Dec	2	2	2	2	2	2	2	2	4	3	2	4	3	4	8	5	24	15	17	A	8	9	8	6	6.1	24.3	
8-Dec	4	3	3	3	3	4	4	3	2	2	2	1	1	1	1	1	1	2	A	4	3	4	3	3	2.5	4.3	
9-Dec	3	2	2	2	2	3	4	5	4	6	5	2	1	1	1	1	1	A	2	1	1	1	1	0	2.2	5.6	
10-Dec	0	1	1	0	0	1	1	1	1	8	2	0	1	1	0	0	1	A	1	1	4	3	1	1	0	1.3	7.7
11-Dec	1	1	1	1	1	1	3	2	2	1	1	1	1	1	3	A	3	4	2	2	1	1	0	0	1.4	4.3	
12-Dec	1	1	1	1	2	2	4	3	2	2	2	2	4	A	3	5	6	4	2	3	2	1	1	1	2.4	5.6	
13-Dec	1	1	2	2	2	2	2	1	1	2	2	3	2	A	2	1	1	1	2	1	1	1	1	1	1.5	2.6	
14-Dec	1	1	1	1	1	1	1	1	1	2	2	2	A	6	3	9	8	11	17	7	4	6	8	7	4.5	16.6	
15-Dec	5	2	3	4	2	4	9	18	9	12	6	A	14	10	12	17	14	21	16	13	14	15	18	7	10.6	20.5	
16-Dec	9	9	7	9	10	11	9	10	11	10	A	13	12	14	15	14	22	43	34	21	17	17	19	21	15.5	43.1	
17-Dec	21	21	20	20	22	21	31	36	38	A	25	29	30	25	23	28	36	38	27	8	5	4	4	4	22.6	38.0	
18-Dec	4	4	3	3	3	3	2	3	A	4	6	16	20	20	20	17	15	10	6	5	6	5	2	1	7.8	20.2	
19-Dec	1	1	1	1	1	0	0	A	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0.5	1.0	
20-Dec	0	1	2	1	1	1	A	2	2	3	3	4	3	3	9	7	5	5	6	4	4	4	3	4	3.2	8.5	
21-Dec	4	3	2	2	2	A	3	3	3	7	7	7	5	6	5	5	3	4	5	4	4	4	3	4	4.2	7.3	
22-Dec	5	4	4	3	A	2	1	1	1	1	1	1	1	1	1	1	1	2	3	4	5	2	3	2	2.1	5.1	
23-Dec	2	2	3	A	2	2	3	3	3	2	3	4	4	4	3	4	5	6	8	3	3	3	3	3	3.3	7.6	
24-Dec	2	2	A	2	2	2	2	2	3	4	5	4	2	5	6	4	9	6	4	2	1	1	1	1	3.2	9.3	
25-Dec	2	A	2	2	3	8	8	9	10	13	12	9	8	9	9	9	10	13	12	13	12	13	12	12	9.2	13.1	
26-Dec	A	11	11	10	9	8	9	10	9	8	11	11	13	20	16	15	16	20	19	17	17	13	13	A	13.0	20.1	
27-Dec	10	9	8	8	6	7	5	4	4	2	C	C	C	C	C	9	11	9	7	8	7	7	A	7	7.2	11.5	
28-Dec	7	7	6	7	7	7	6	12	9	7	7	7	6	5	8	6	6	6	5	7	7	A	4	3	6.6	12.3	
29-Dec	2	2	2	2	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	A	1	1	1.0	1.9	
30-Dec	1	1	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	A	1	1	2	1	0.8	1.6
31-Dec	2	2	2	2	6	8	7	2	2	2	4	3	3	3	3	3	3	8	A	11	12	2	3	11	4.4	11.8	
	3.6	3.6	3.5	3.3	3.5	3.8	4.3	5.0	5.0	3.9	4.4	5.0	5.2	5.6	5.7	6.2	8.1	8.8	7.9	5.9	5.9	4.8	4.7	3.7	Diurnal Average		
	20.8	20.5	20.0	20.4	22.3	21.5	31.5	35.9	38.0	12.5	25.2	29.5	30.4	25.5	23.4	28.2	35.6	43.1	33.9	20.9	24.8	16.8	18.7	21.3	Diurnal Maximum		

C - Calibration A - Automated Daily Zero Span

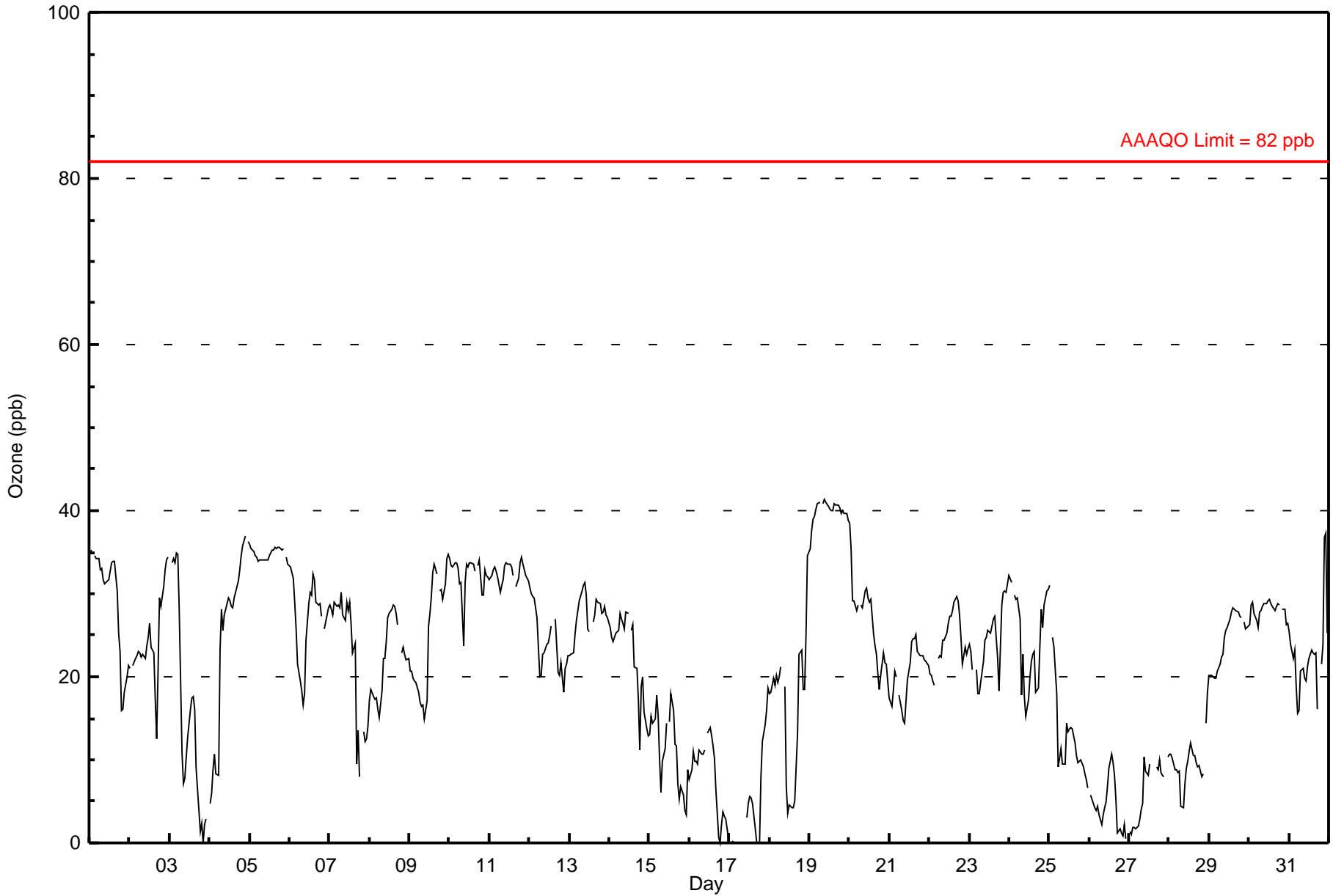
Hourly Averages for NO_x at Portable-Kinuso December 2009



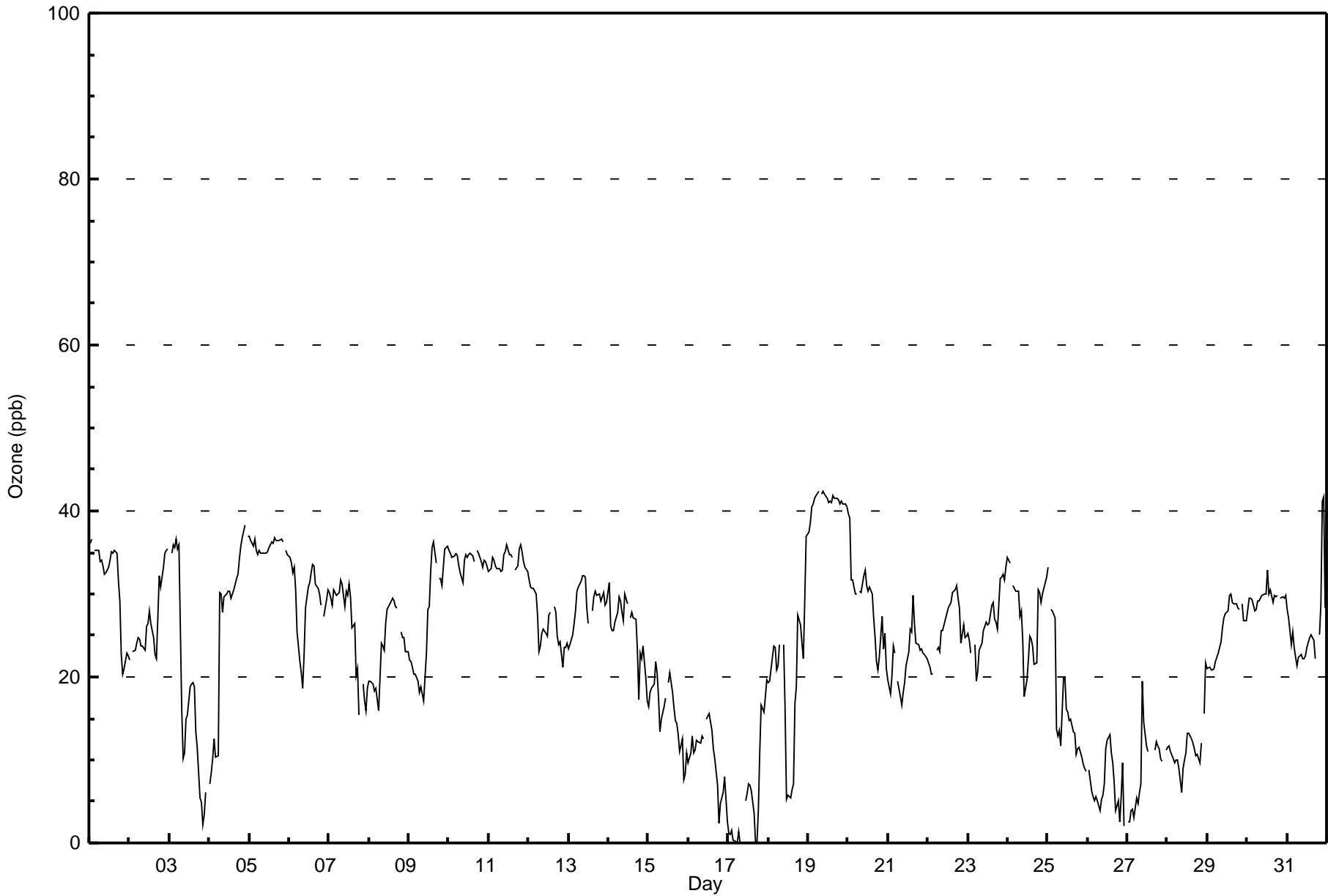
Hourly Maximums for NO_x at Portable-Kinuso December 2009



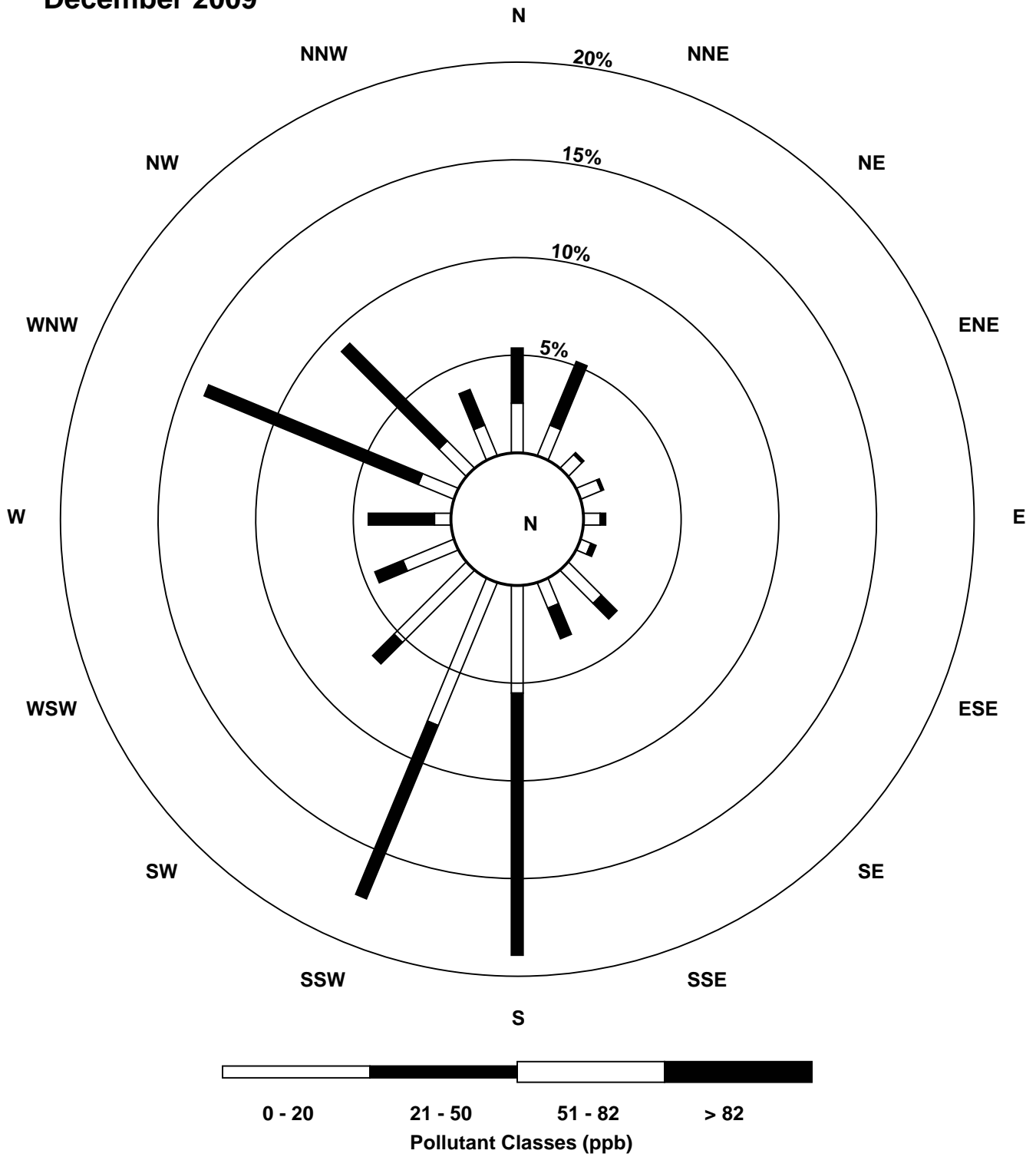
Hourly Averages for O₃ at Portable-Kinuso December 2009



Hourly Maximums for O₃ at Portable-Kinuso December 2009



Pollutant Rose for O₃ at Portable-Kinuso December 2009



**Peace Airshed Zone Association
Summary of Eight Hour Running Averages**

**Portable-Kinuso - Ozone (O₃) - ppb
December 1, 2009 to January 1, 2010**

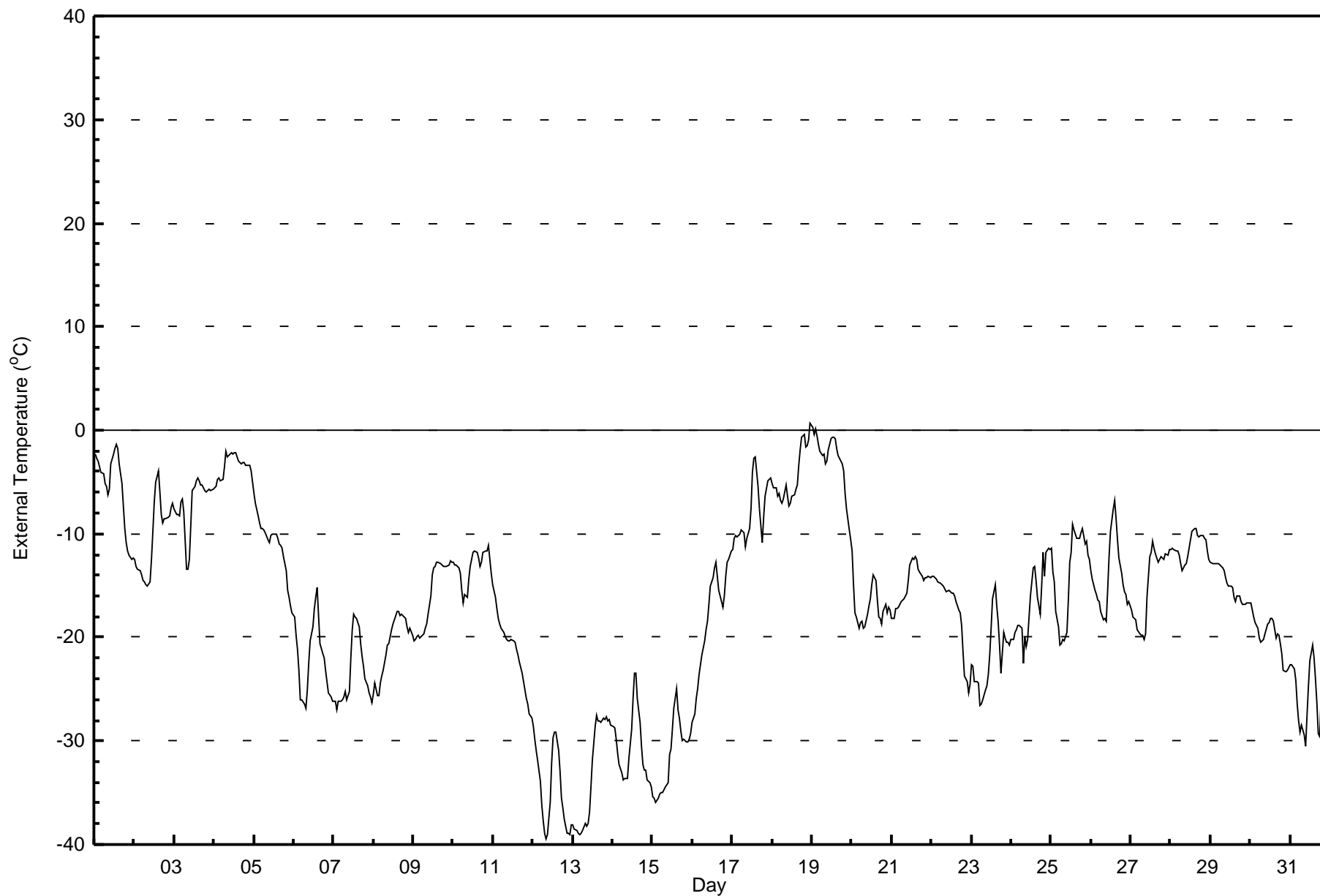
Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 40.9 ppb on Dec 19 13:00																					Hours in Service: 744				
Minimum Value: 0.0 ppb on Dec 17 07:00																					Hours of Data: 738				
Percentiles: P ₁ = 0.6 P ₁₀ = 7.0 Q ₁ = 14.7 Median = 23.2 Q ₃ = 28.6 P ₉₀ = 33.1 P ₉₉ = 40.6																					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-Dec	35	35	35	35	35	35	35	34	34	33	33	33	32	32	32	33	32	32	31	29	27	25	23	21	35.2
2-Dec	20	19	19	20	21	22	22	22	22	22	23	23	24	24	24	23	22	21	22	23	23	24	26	28	28.0
3-Dec	30	32	33	33	34	34	33	30	27	24	21	18	16	14	13	13	13	13	12	11	9	7	5	3	34.2
4-Dec	3	3	4	5	6	7	10	12	15	18	20	22	25	28	28	28	29	29	30	31	31	33	33	34	34.1
5-Dec	35	35	36	36	36	35	35	35	34	34	34	34	34	34	34	35	35	35	35	35	35	35	35	35	35.7
6-Dec	35	34	34	33	31	30	28	26	24	23	22	22	22	23	25	26	28	29	30	30	30	29	28	28	34.7
7-Dec	28	28	28	28	28	28	28	29	28	28	28	28	28	28	27	27	24	23	20	19	17	15	13	12	28.6
8-Dec	13	14	15	15	16	16	17	17	18	18	19	20	22	23	25	26	27	27	28	27	26	26	25	24	27.7
9-Dec	23	22	22	21	21	20	20	19	18	18	17	18	19	21	23	25	27	28	30	31	31	31	32	32	31.8
10-Dec	32	32	33	33	34	34	33	33	32	31	31	31	31	31	32	32	33	33	34	33	32	32	32	32	33.8
11-Dec	32	32	32	32	32	32	32	32	32	32	32	32	33	33	33	33	33	33	33	33	33	33	33	33	33.0
12-Dec	33	32	32	31	30	29	28	26	25	24	24	23	23	23	24	24	25	24	24	23	22	22	22	21	32.6
13-Dec	21	21	22	22	23	24	25	26	27	28	29	29	29	29	29	28	28	28	27	28	28	28	28	28	29.0
14-Dec	28	27	27	26	26	26	26	26	26	26	26	27	27	27	27	26	25	24	21	20	20	19	17	16	27.8
15-Dec	15	15	16	15	15	15	14	13	13	12	12	12	12	12	13	14	14	13	12	11	10	9	7	7	15.5
16-Dec	6	6	7	7	8	9	10	10	10	10	10	11	11	12	12	12	11	10	9	7	6	5	4	2	12.0
17-Dec	2	2	2	1	1	0	0	0	0	0	0	0	1	2	3	3	3	3	2	3	4	5	6	8	8.3
18-Dec	11	13	16	17	18	19	19	19	20	20	18	16	13	11	9	7	7	6	8	11	13	14	17	21	20.6
19-Dec	24	27	29	31	34	37	39	39	40	40	41	41	41	41	41	41	41	41	40	40	40	40	40	40	40.9
20-Dec	40	39	38	36	35	33	33	31	30	29	29	29	29	29	29	28	28	26	25	24	23	22	21	21	39.7
21-Dec	20	20	20	20	19	19	19	18	18	17	17	17	18	19	20	21	23	23	24	24	24	23	23	23	23.6
22-Dec	22	22	21	21	21	21	21	21	21	22	23	24	24	25	26	26	27	28	28	28	27	27	26	25	28.0
23-Dec	25	24	23	23	23	22	21	21	20	20	21	22	22	23	24	25	26	25	24	25	25	26	27	27	27.0
24-Dec	28	29	31	31	31	31	30	28	27	25	24	22	21	20	19	20	19	20	21	22	23	24	25	25	30.8
25-Dec	27	28	28	28	27	24	21	18	15	15	13	12	11	12	12	13	13	13	12	12	11	10	10	9	28.5
26-Dec	9	8	7	7	6	5	5	4	4	4	4	4	5	6	6	7	7	7	6	6	5	4	3	2	8.7
27-Dec	1	1	1	1	1	1	2	2	3	4	5	5	6	7	8	N	N	N	N	N	N	9	9	9	9.0
28-Dec	9	9	9	10	10	10	10	9	8	8	7	8	8	8	9	9	10	10	10	10	10	9	10	11	11.0
29-Dec	12	14	16	17	19	19	20	21	21	21	22	23	24	25	26	26	27	27	28	28	28	28	27	27	27.8
30-Dec	27	27	27	27	27	27	27	27	28	28	28	28	28	29	29	29	29	29	29	29	28	28	28	28	28.8
31-Dec	27	27	26	25	24	23	21	21	20	20	19	19	19	20	21	22	22	21	22	22	22	24	26	26	27.4
39.7 39.0 37.6 36.3 35.5 36.5 38.5 39.1 39.8 40.4 40.7 40.8 40.9 40.7 40.6 40.6 40.6 40.6 40.5 40.4 40.3 40.3 40.3 40.2 39.9																									
Diurnal Maximums																									
N - Not Valid																									

**Peace Airshed Zone Association
Summary of Hourly Averages**

**Portable-Kinuso - External Temperature (ET) - °C
December 1, 2009 to January 1, 2010**

Maximum Value: 0.7 °C on Dec 19 00:00		Maximum Daily Average: -2.8 °C on Dec 19		Hours in Service: 744																							
Minimum Value: -39 °C on Dec 12 09:00		Minimum Daily Average: -34.6 °C on Dec 12		Hours of Data: 744																							
Maximum Diurnal Average: -13.3 °C at hour 15		Minimum Diurnal Average: -19.1 °C at hour 8		Hours of Missing Data: 0																							
Monthly Average: -16.77 °C		Percentiles: P ₁ = -38.9 P ₁₀ = -29.1 Q ₁ = -21.9 Median = -16.1 Q ₃ = -10.9 P ₉₀ = -5.1 P ₉₉ = -0.7		Hours of Calibration: 0																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Dec	-2	-3	-3	-4	-4	-4	-5	-5	-6	-6	-3	-2	-2	-1	-2	-3	-5	-7	-10	-11	-12	-12	-12	-12	-5.7	-1.4	
2-Dec	-12	-13	-13	-14	-14	-14	-15	-15	-15	-15	-13	-10	-7	-5	-4	-6	-8	-9	-8	-9	-8	-8	-7	-7	-10.4	-3.9	
3-Dec	-8	-8	-8	-8	-7	-7	-8	-13	-13	-12	-9	-6	-5	-5	-5	-5	-5	-6	-6	-6	-6	-6	-6	-6	-7.2	-4.6	
4-Dec	-6	-5	-5	-5	-5	-5	-3	-2	-3	-2	-2	-2	-2	-2	-3	-3	-3	-3	-3	-3	-3	-3	-4	-5	-3.5	-2.1	
5-Dec	-6	-7	-8	-9	-9	-10	-10	-10	-11	-11	-10	-10	-10	-10	-10	-11	-11	-11	-12	-14	-15	-16	-17	-18	-11.1	-6.1	
6-Dec	-18	-20	-21	-23	-26	-26	-26	-27	-25	-23	-20	-19	-17	-16	-15	-18	-21	-22	-22	-23	-24	-25	-26	-26	-22.1	-15.2	
7-Dec	-26	-26	-27	-26	-26	-26	-26	-25	-26	-25	-22	-19	-18	-18	-18	-19	-21	-22	-23	-24	-25	-25	-26	-26	-23.6	-17.7	
8-Dec	-26	-24	-26	-26	-24	-24	-23	-22	-21	-21	-20	-19	-19	-18	-17	-17	-18	-18	-18	-18	-19	-20	-19	-20	-20.7	-17.4	
9-Dec	-20	-20	-20	-20	-20	-20	-20	-19	-19	-18	-16	-14	-13	-13	-13	-13	-13	-13	-13	-13	-13	-13	-13	-13	-15.9	-12.6	
10-Dec	-13	-13	-13	-13	-14	-15	-17	-16	-16	-14	-13	-12	-12	-12	-12	-12	-13	-13	-12	-12	-12	-11	-12	-14	-13.2	-11.1	
11-Dec	-15	-16	-17	-18	-19	-19	-20	-20	-20	-20	-20	-20	-21	-21	-22	-22	-23	-24	-25	-26	-26	-27	-28	-28	-21.3	-14.9	
12-Dec	-29	-30	-31	-32	-34	-36	-38	-39	-39	-39	-36	-32	-30	-29	-29	-31	-33	-35	-37	-38	-39	-39	-38	-38	-34.6	-28.6	
13-Dec	-38	-39	-39	-39	-39	-39	-39	-38	-38	-38	-37	-34	-32	-29	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-33.2	-27.6	
14-Dec	-29	-29	-30	-31	-32	-33	-34	-34	-34	-34	-32	-29	-26	-23	-23	-26	-28	-30	-32	-33	-33	-34	-34	-34	-30.7	-23.5	
15-Dec	-35	-36	-36	-36	-35	-35	-35	-35	-34	-34	-31	-31	-29	-27	-25	-27	-28	-29	-30	-30	-30	-30	-30	-29	-31.5	-24.9	
16-Dec	-28	-27	-26	-25	-24	-23	-22	-20	-19	-18	-17	-15	-14	-13	-13	-14	-15	-16	-17	-16	-14	-13	-13	-12	-18.1	-11.7	
17-Dec	-12	-10	-10	-10	-10	-10	-10	-10	-11	-10	-10	-8	-4	-3	-3	-5	-8	-9	-11	-8	-6	-5	-5	-5	-8.0	-2.5	
18-Dec	-5	-6	-6	-6	-6	-7	-7	-7	-5	-6	-7	-7	-6	-6	-6	-5	-3	-2	-1	0	-2	-1	1	1	-4.5	0.7	
19-Dec	0	0	0	-1	-1	-2	-2	-2	-3	-3	-2	-1	-1	-1	-1	-2	-2	-3	-3	-4	-6	-8	-10	-11	-2.8	0.3	
20-Dec	-12	-15	-18	-18	-19	-19	-19	-19	-19	-18	-17	-16	-15	-14	-15	-16	-18	-18	-19	-17	-17	-18	-17	-17	-17.0	-11.6	
21-Dec	-18	-18	-17	-17	-17	-17	-17	-16	-16	-16	-15	-13	-12	-12	-12	-13	-13	-14	-14	-15	-14	-14	-14	-14	-15.0	-12.2	
22-Dec	-14	-14	-14	-14	-15	-15	-15	-15	-15	-16	-15	-16	-16	-16	-16	-16	-17	-18	-19	-21	-24	-24	-25	-25	-17.3	-14.1	
23-Dec	-23	-23	-24	-24	-24	-27	-26	-26	-25	-25	-24	-22	-19	-16	-15	-17	-18	-21	-23	-20	-20	-20	-20	-21	-21.8	-15.0	
24-Dec	-20	-20	-19	-19	-19	-19	-19	-22	-20	-21	-20	-16	-15	-13	-13	-14	-16	-18	-15	-12	-14	-12	-11	-11	-16.7	-11.3	
25-Dec	-11	-14	-15	-18	-19	-21	-21	-20	-20	-20	-16	-13	-12	-9	-10	-10	-10	-10	-10	-9	-11	-11	-12	-12	-13.9	-9.0	
26-Dec	-14	-14	-15	-16	-16	-17	-17	-18	-18	-18	-15	-12	-10	-8	-7	-9	-11	-12	-14	-15	-16	-16	-17	-17	-14.2	-6.8	
27-Dec	-17	-18	-18	-18	-19	-20	-20	-20	-20	-20	-16	-12	-12	-11	-11	-12	-13	-13	-12	-12	-12	-12	-12	-12	-15.1	-10.7	
28-Dec	-12	-11	-12	-12	-12	-12	-13	-14	-13	-13	-12	-11	-11	-10	-10	-9	-10	-10	-10	-10	-10	-11	-12	-12	-11.3	-9.5	
29-Dec	-13	-13	-13	-13	-13	-13	-13	-13	-14	-14	-15	-15	-15	-15	-16	-17	-16	-16	-17	-17	-17	-17	-17	-17	-14.8	-12.7	
30-Dec	-17	-17	-18	-19	-19	-20	-20	-20	-20	-20	-19	-19	-18	-18	-18	-20	-20	-20	-21	-22	-23	-23	-23	-23	-19.9	-16.7	
31-Dec	-23	-23	-23	-24	-26	-28	-29	-28	-29	-31	-28	-25	-22	-21	-22	-24	-26	-29	-30	-22	-21	-21	-20	-20	-24.8	-20.1	
		-16.8	-17.2	-17.6	-18.0	-18.3	-18.7	-18.9	-19.1	-19.0	-18.7	-17.2	-15.5	-14.3	-13.4	-13.3	-14.4	-15.3	-16.1	-16.5	-16.4	-16.8	-16.8	-17.1	-17.2	Diurnal Average	
		0.3	-0.4	0.2	-0.6	-1.4	-2.0	-2.4	-2.1	-2.6	-2.5	-1.9	-0.8	-0.7	-0.7	-0.8	-1.7	-2.4	-1.9	-0.6	-0.4	-1.6	-1.5	-0.9	0.7	Diurnal Maximum	

Hourly Averages for External Temperature at Portable-Kinuso December 2009



**Peace Airshed Zone Association
Summary of Hourly Averages**

Portable-Kinuso
December 1, 2009 to January 1, 2010
WS (km/h), WD (deg)

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 Spd	10	11	10	9	9	10	7	6	5	4	3	4	6	7	7	6	2	5	2	3	4	7	5	9	4.5	10.7
Dir	299	301	299	299	297	296	292	298	307	306	295	302	310	313	310	308	334	107	143	224	213	207	204	194	288.4	300.7
2 Spd	12	13	15	15	17	17	14	13	15	14	13	10	8	6	2	4	3	5	6	8	8	7	11	8	9.8	16.8
Dir	191	185	180	183	183	182	185	187	192	187	179	171	183	141	90	90	136	189	208	188	190	191	176	187	182.0	182.1
3 Spd	5	6	5	7	8	7	5	2	1	1	2	3	4	3	2	2	1	1	1	1	1	2	1	2	1.2	8.4
Dir	212	192	204	197	185	196	208	11	101	276	358	337	351	343	325	2	22	208	10	146	338	324	357	190	216.1	185.0
4 Spd	4	5	6	5	3	3	3	6	5	7	7	8	8	8	8	10	8	7	8	9	10	11	11	10	5.5	10.9
Dir	180	190	194	200	224	214	280	295	298	303	299	301	305	314	323	324	323	318	316	320	324	324	320	318	304.5	324.0
5 Spd	7	7	6	6	6	7	7	6	5	6	7	7	8	9	12	11	9	8	10	10	7	8	6	5	6.8	12.1
Dir	310	303	302	298	298	298	296	297	304	304	301	302	328	347	6	6	7	334	334	334	321	323	317	305	323.2	5.9
6 Spd	5	4	4	0	3	3	3	3	2	2	3	5	4	1	4	3	6	8	12	14	14	15	18	18	5.5	18.4
Dir	292	278	293	237	129	195	200	221	191	184	203	198	157	132	271	205	188	183	175	178	183	188	181	179	189.8	178.9
7 Spd	15	12	14	16	14	12	13	16	8	6	13	5	3	4	3	3	3	3	1	2	4	5	5	5	6.5	15.9
Dir	182	187	185	188	187	185	179	182	153	183	179	149	60	324	1	340	130	205	232	189	203	216	195	205	184.3	181.7
8 Spd	4	6	6	5	5	4	4	3	4	4	5	3	4	4	3	4	7	7	7	7	7	9	10	12	4.4	11.6
Dir	201	205	206	199	203	199	204	257	277	281	287	279	297	282	257	195	171	180	180	181	187	181	177	186	204.3	186.0
9 Spd	10	11	10	5	6	6	5	4	4	3	2	3	5	7	5	5	5	3	2	2	2	4	7	7	2.7	10.7
Dir	187	186	187	186	193	192	198	199	202	198	204	303	306	313	305	309	298	293	279	242	273	323	324	317	239.8	186.2
10 Spd	7	7	7	7	10	4	2	2	2	5	6	7	9	7	5	2	4	3	2	2	0	4	11	9	3.7	11.0
Dir	317	303	314	322	332	330	295	245	188	295	294	301	299	295	289	220	199	228	233	140	38	303	11	11	310.3	11.4
11 Spd	11	16	10	7	5	5	7	6	7	9	7	6	7	8	6	7	7	10	14	11	10	11	6	6	8.2	15.5
Dir	20	26	12	9	1	6	28	23	17	22	24	14	20	18	27	33	21	33	32	24	16	18	3	357	19.9	25.6
12 Spd	6	7	6	5	3	2	2	4	5	5	6	5	5	4	3	2	1	1	2	3	5	6	6	7	1.7	7.5
Dir	6	11	13	11	352	244	208	220	211	203	203	198	185	137	131	152	207	158	225	220	203	207	197	192	202.3	192.1
13 Spd	10	10	13	13	11	13	13	15	14	14	12	10	8	4	4	3	3	1	3	3	3	5	4	5	7.9	14.7
Dir	193	197	195	192	196	195	196	187	191	193	197	195	195	197	191	232	262	260	185	206	194	180	191	184	194.9	187.4
14 Spd	6	7	9	10	12	13	14	15	17	17	15	10	6	2	2	3	1	2	2	2	3	1	1	1	6.5	17.0
Dir	187	186	188	192	184	184	183	185	183	186	183	189	168	101	348	25	202	187	128	126	111	139	201	144	181.2	185.5
15 Spd	1	2	2	3	2	2	0	1	1	1	1	0	2	4	1	0	4	2	2	3	2	1	0	1	1.1	4.3
Dir	261	218	216	233	232	228	256	201	239	169	213	194	141	124	224	208	182	78	286	214	193	261	223	212	204.0	123.7
16 Spd	2	1	1	0	1	1	1	2	0	2	1	1	1	2	2	2	1	0	0	1	2	1	3	0	0.4	2.6
Dir	210	282	229	283	344	318	90	148	43	347	342	125	93	342	337	310	206	56	95	237	17	315	26	42	341.4	25.6
17 Spd	1	1	0	1	1	2	0	1	1	1	1	1	0	1	1	1	1	1	3	6	9	11	13	15	2.3	15.2
Dir	130	190	32	28	71	1	103	253	20	251	254	146	291	354	20	326	260	201	209	202	192	189	183	182	189.3	182.4
18 Spd	15	14	10	11	12	16	15	13	13	3	2	2	2	2	1	4	3	6	5	5	4	5	4	5	6.1	15.8
Dir	185	185	185	189	191	181	186	186	190	136	288	6	359	323	273	73	182	196	187	190	175	169	203	249	187.6	181.3
19 Spd	3	3	8	7	6	6	8	8	6	7	7	6	7	9	8	9	9	9	9	11	7	3	3	4	6.7	11.1
Dir	216	262	284	286	293	293	283	290	279	285	286	283	292	297	293	291	289	292	289	301	317	289	268	267	288.4	301.4
20 Spd	3	3	3	5	5	9	8	7	9	16	14	10	6	5	3	4	3	5	3	6	4	4	3	3	5.5	16.2
Dir	262	207	185	212	205	199	198	201	195	185	190	191	190	191	149	208	210	196	196	192	171	132	207	186	192.9	184.9
21 Spd	1	3	4	3	1	1	2	2	1	2	2	1	0	2	3	3	2	2	2	2	2	2	2	1	0.7	3.9
Dir	233	211	172	131	143	260	232	225	283	14	339	249	221	350	3	5	316	292	270	277	252	252	252	349	267.9	171.7
22 Spd	1	1	1	2	2	3	3	3	4	3	3	4	4	4	4	5	4	2	2	3	3	4	4	6	2.3	5.9
Dir	249	252	244	233	266	282	279	287	311	317	298	306	294	295	292	297	291	215	203	189	206	207	215	204	264.3	204.4

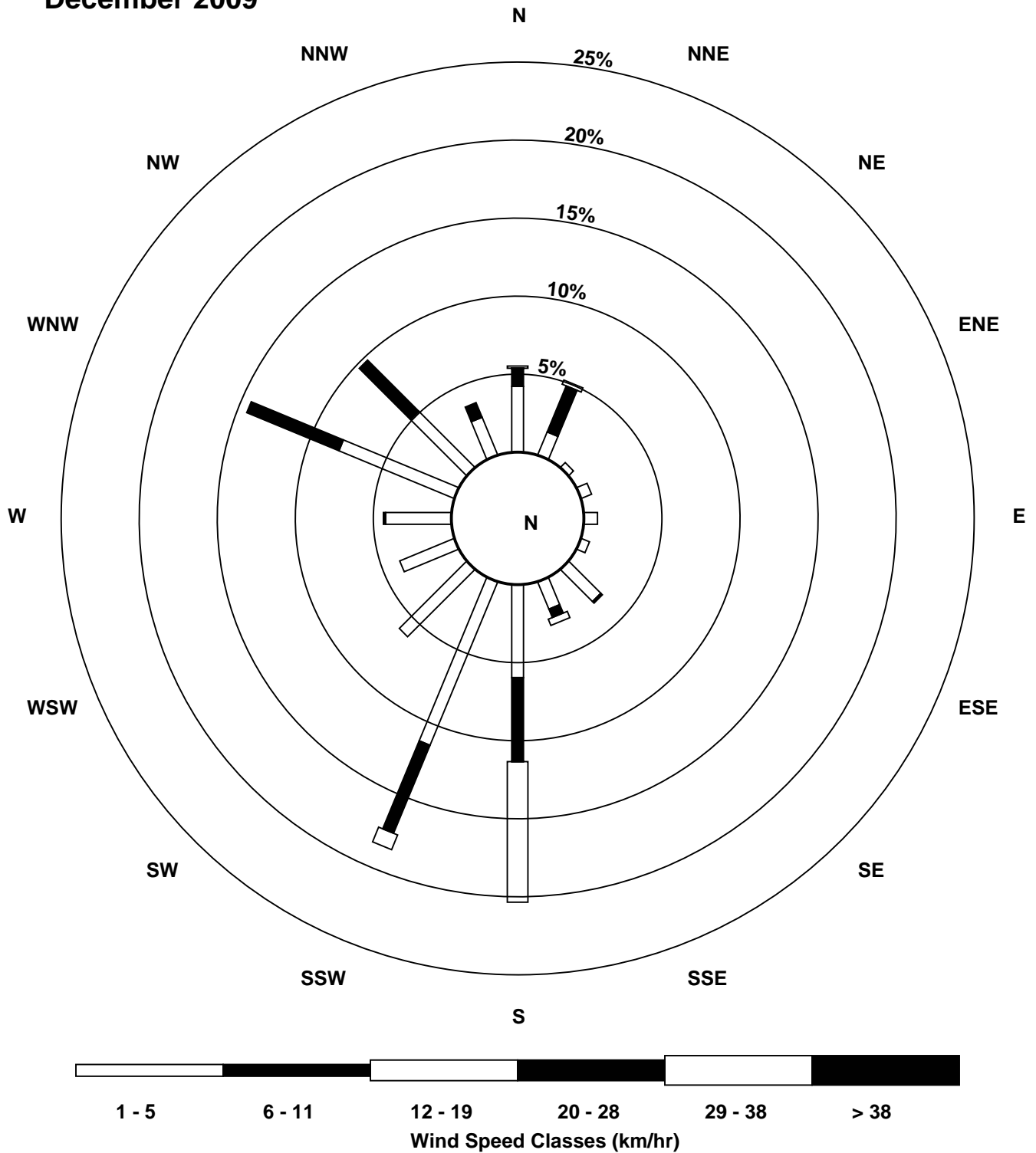
**Peace Airshed Zone Association
Summary of Hourly Averages**

Portable-Kinuso
December 1, 2009 to January 1, 2010
WS (km/h), WD (deg)

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		
23 Spd	4	3	3	4	4	3	6	9	11	12	12	11	8	6	5	5	7	4	6	15	16	17	16	18	8.4	17.5
Dir	203	213	199	210	208	225	206	196	191	182	187	189	195	203	207	200	193	204	199	180	184	185	183	183	191.2	182.7
24 Spd	19	17	16	8	12	13	5	2	2	1	1	1	3	4	2	1	1	2	8	10	8	15	16	17	6.6	18.7
Dir	180	186	187	189	189	184	178	171	157	88	337	288	357	11	18	242	64	203	185	196	198	181	177	184	184.7	179.7
25 Spd	15	8	6	4	3	2	3	3	0	2	3	2	3	1	2	1	1	3	4	2	2	1	1	0	0.4	14.6
Dir	182	195	197	101	153	350	42	39	38	18	30	315	349	323	349	319	327	0	185	28	314	118	158	215	170.7	182.0
26 Spd	1	2	1	2	1	2	0	0	3	0	1	2	1	0	2	2	2	2	1	2	1	2	1	2	0.7	2.7
Dir	8	227	57	235	45	220	245	226	222	125	58	286	8	154	349	288	228	222	27	238	349	255	35	210	250.3	221.9
27 Spd	2	1	3	2	2	0	2	2	2	2	2	2	2	2	4	2	2	3	4	2	2	2	2	4	1.2	4.0
Dir	229	340	238	240	231	152	237	224	224	221	224	234	76	3	28	349	137	204	190	186	241	203	202	167	214.0	189.6
28 Spd	4	4	3	3	2	0	2	2	3	6	6	6	5	3	3	1	3	2	3	2	2	5	8	7	1.7	7.6
Dir	159	194	188	144	172	188	240	163	192	186	182	175	174	186	137	247	346	267	239	170	321	325	313	307	207.3	312.9
29 Spd	6	5	4	4	4	5	5	5	4	6	6	6	6	6	4	4	4	3	3	3	3	1	2	3	4.0	6.2
Dir	296	287	289	290	292	299	303	301	310	353	352	330	325	320	313	305	293	294	285	288	288	335	269	310	307.8	324.6
30 Spd	3	7	4	2	2	2	2	2	2	3	4	5	4	5	4	4	4	4	3	2	3	2	1	2	2.7	6.6
Dir	324	13	352	307	312	298	281	281	282	284	291	297	300	306	310	305	292	297	284	248	266	277	222	224	300.2	13.4
31 Spd	2	1	1	2	1	2	4	7	6	2	5	5	3	0	3	1	1	1	4	11	15	16	16	11	4.4	16.2
Dir	151	198	263	267	206	201	200	195	201	203	184	184	182	331	4	270	239	176	186	168	161	158	164	152	174.9	163.8
Spd	3.3	3.2	3.2	3.1	3.2	3.6	3.4	3.4	3.2	2.5	2.7	2.2	1.5	1.9	2.0	1.6	1.1	1.2	1.7	2.5	2.5	2.9	3.1	3.7	Diurnal Average	
Dir	207.9	211.8	213.8	212.1	209.9	210.4	211.4	211.5	208.7	213.9	219.9	234.5	276.0	313.3	325.6	314.1	266.0	238.4	222.1	205.0	206.8	203.2	199.2	200.7	Diurnal Maximum	
Spd	18.7	17.4	15.9	15.6	16.5	16.8	14.8	15.9	16.6	17.0	14.5	11.0	9.0	9.0	12.1	10.9	8.8	10.1	14.5	15.3	15.5	16.6	18.0	18.4	Diurnal Maximum	
Dir	179.7	186.2	186.6	188.1	183.0	182.1	186.1	181.7	183.2	185.5	182.5	188.7	299.2	346.9	5.9	6.4	289.4	32.7	31.9	179.5	184.4	184.7	181.3	178.9	Diurnal Maximum	
Maximum Speed Value: 19 km/h on Dec 24 01:00																		Minimum Speed Value: 0 km/h on Dec 31 14:00						Hours in Service: 744		
Maximum Daily Speed Average: 9.8 km/h on Dec 2																		Minimum Daily Speed Average: 0.4 km/h on Dec 16						Hours of Data: 744		
Maximum Diurnal Speed Average: 3.7 km/h at hour 24																		Minimum Diurnal Speed Average: 1.1 km/h at hour 17						Hours of Missing Data: 0		
Monthly Average Velocity: 2.26 km/h 219.02 deg																		Speed Percentiles: P ₁ = 0.3 P ₁₀ = 1.2 Q ₁ = 2.1 Median = 4.0 Q ₃ = 7.0 P ₉₀ = 11.6 P ₉₉ = 16.7						Percent Operational Time: 100.0		
All monthly, daily, and diurnal averages have been calculated using vector methods																										
Frequency Distribution																										
		Speed Range (km/h)																								
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																			
North	48	25	3	0	0	0	76																			
NorthEast	21	6	3	0	0	0	30																			
East	16	0	0	0	0	0	16																			
SouthEast	37	2	1	0	0	0	40																			
South	70	81	77	0	0	0	228																			
SouthWest	110	14	0	0	0	0	124																			
West	79	14	0	0	0	0	93																			
NorthWest	60	76	1	0	0	0	137																			
Total	441	218	85	0	0	0	744																			

Wind Rose for WS at Portable-Kinuso

December 2009



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

Portable-Kinuso - Wind Speed (WS) - km/h
December 1, 2009 to January 1, 2010

Maximum Speed: 19 km/h on Dec 24 01:00		Maximum Daily Speed Average: 10.4 km/h on Dec 2		Hours in Service: 744																																													
Minimum Speed: 1 km/h on Dec 15 09:00		Minimum Daily Speed Average: 2.3 km/h on Dec 15		Hours of Data: 744																																													
Maximum Diurnal Speed Average: 6.9 km/h at hour 24		Minimum Diurnal Speed Average: 4.0 km/h at hour 17		Hours of Missing Data: 0																																													
Monthly Average Speed: 5.65 km/h		Percentiles: P ₁ = 1.6 P ₁₀ = 2.2 Q ₁ = 2.7 Median = 4.3 Q ₃ = 7.2 P ₉₀ = 11.4 P ₉₉ = 16.8		Percent Operational Time: 100.0																																													
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Dec	10	11	10	9	9	10	7	7	5	4	4	5	7	7	7	6	3	5	3	3	4	7	5	9	6.5	10.9																							
2-Dec	12	13	15	15	17	17	14	13	16	14	14	10	8	6	3	4	3	6	6	8	8	8	11	8	10.4	16.9																							
3-Dec	6	7	5	7	9	7	7	4	3	2	3	3	4	3	2	3	2	2	3	3	3	3	2	2	3.9	8.6																							
4-Dec	4	6	6	5	3	3	3	6	5	7	7	8	8	8	8	10	8	7	8	10	10	11	11	10	7.2	11.0																							
5-Dec	8	7	6	6	6	7	7	6	5	6	7	7	8	9	12	11	9	8	10	10	7	8	6	5	7.6	12.4																							
6-Dec	5	4	4	2	3	3	3	3	3	2	4	5	4	4	4	4	6	8	12	14	14	15	18	18	6.7	18.4																							
7-Dec	15	12	14	16	14	13	13	16	9	7	13	6	4	4	4	3	4	3	2	3	4	5	5	5	8.0	16.0																							
8-Dec	4	6	6	5	5	4	4	3	4	4	5	4	5	4	4	4	7	7	7	7	7	10	10	12	5.8	11.7																							
9-Dec	10	11	10	6	6	6	6	5	4	3	3	3	5	7	5	5	5	3	2	2	2	4	7	7	5.3	10.7																							
10-Dec	7	7	7	7	10	4	2	2	2	5	6	7	9	8	5	3	4	3	3	3	3	4	11	9	5.5	11.4																							
11-Dec	12	16	10	8	6	5	7	6	7	9	7	7	7	8	7	7	7	10	15	11	10	11	6	6	8.5	15.7																							
12-Dec	6	7	6	5	3	2	2	4	5	6	6	5	5	4	3	3	2	3	2	3	5	6	6	8	4.4	7.6																							
13-Dec	10	10	13	13	11	13	13	15	14	14	12	10	8	4	4	3	3	2	3	3	4	5	4	5	8.1	14.7																							
14-Dec	6	7	9	10	12	14	14	15	17	17	15	11	7	4	2	3	3	2	3	4	3	3	2	2	7.6	17.0																							
15-Dec	2	2	2	3	3	2	1	1	1	2	2	1	2	4	2	3	4	4	2	3	2	2	2	2	2.3	4.4																							
16-Dec	3	2	2	2	2	2	3	3	2	3	3	2	2	3	2	2	2	2	3	2	4	4	4	2	2.6	4.5																							
17-Dec	3	2	2	3	2	2	2	2	2	2	2	3	2	2	2	2	2	2	3	6	9	11	14	15	4.1	15.3																							
18-Dec	15	15	10	12	13	16	15	13	13	5	3	3	3	3	2	6	4	6	6	5	4	6	5	6	7.8	15.8																							
19-Dec	5	4	9	7	7	6	8	9	6	7	7	6	8	9	9	10	9	9	10	11	7	3	3	4	7.2	11.4																							
20-Dec	3	3	3	5	5	9	8	8	9	16	14	10	6	6	3	4	3	5	4	6	5	4	3	3	6.1	16.3																							
21-Dec	2	4	5	4	3	2	2	2	2	3	2	2	2	2	3	2	2	2	2	2	2	2	2	2	2.4	4.7																							
22-Dec	2	2	1	2	2	3	3	3	4	3	4	4	5	4	4	5	4	3	2	3	3	4	4	6	3.3	6.0																							
23-Dec	4	4	3	4	5	3	6	9	11	12	12	11	8	6	5	5	7	5	6	15	16	17	16	18	8.7	17.6																							
24-Dec	19	17	16	8	12	13	5	3	4	3	2	2	4	5	3	2	2	3	8	10	8	15	16	17	8.3	18.7																							
25-Dec	15	9	7	4	4	3	4	4	2	3	4	2	4	2	3	3	3	5	6	4	3	3	3	2	4.2	14.7																							
26-Dec	3	4	3	3	4	3	2	2	3	3	3	2	3	2	3	2	2	2	3	2	3	3	3	3	2.7	3.8																							
27-Dec	2	3	3	2	2	2	2	2	2	2	2	2	2	3	4	2	3	3	4	2	2	2	3	4	2.6	4.1																							
28-Dec	4	5	3	3	2	2	2	3	3	6	6	7	5	4	3	2	3	3	3	2	3	6	8	7	3.9	7.8																							
29-Dec	6	5	5	4	4	5	5	5	5	7	6	6	6	6	4	4	4	3	3	3	4	2	2	3	4.5	6.8																							
30-Dec	4	7	4	2	2	2	2	2	2	3	4	5	5	6	4	4	5	5	3	2	3	3	2	2	3.4	6.7																							
31-Dec	3	2	2	3	2	2	4	7	6	3	5	6	4	3	3	2	2	3	4	12	15	16	16	12	5.6	16.4																							
																								6.7	6.8	6.5	6.0	6.0	6.0	5.8	5.9	5.7	5.9	6.0	5.3	5.2	4.8	4.2	4.1	4.0	4.3	4.9	5.7	5.7	6.4	6.8	6.9	Diurnal Average	
																								18.7	17.5	16.0	15.6	16.6	16.9	14.9	16.0	16.6	17.0	14.6	11.0	9.3	9.3	12.4	11.2	9.0	10.2	14.6	15.4	15.6	16.7	18.1	18.4	Diurnal Maximum	
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
December 1, 2009 to January 1, 2010**

Maximum Value: 98.5 deg on Dec 17 03:00																								Hours in Service:	744
Minimum Value: 3.6 deg on Dec 13 04:00																								Hours of Data:	744
Percentiles: P ₁ = 4.2 P ₁₀ = 7.3 Q ₁ = 11.8 Median = 18.6 Q ₃ = 41.5 P ₉₀ = 67.4 P ₉₉ = 93.7																								Hours of Missing Data:	0
																								Hours of Calibration:	0
																								Percent Operational Time:	100.0
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Dec	9	12	12	11	10	10	11	14	14	20	37	24	16	14	14	15	42	16	49	13	20	11	22	13	48.7
2-Dec	7	5	4	5	6	6	9	6	6	5	13	10	15	11	60	11	29	22	22	11	17	10	8	14	59.7
3-Dec	17	21	15	18	10	10	44	56	98	76	60	29	30	29	37	42	61	51	75	68	83	55	87	32	98.3
4-Dec	20	15	16	35	30	32	19	10	12	12	12	12	10	10	11	9	7	10	10	8	7	8	9	10	35.0
5-Dec	11	11	10	9	11	11	10	14	13	12	11	12	11	15	14	12	11	11	9	8	9	7	10	9	15.0
6-Dec	11	11	11	76	30	12	23	21	28	37	36	16	22	83	17	30	9	7	4	5	6	7	5	4	82.8
7-Dec	4	7	6	4	6	9	7	5	18	23	6	41	49	11	36	44	67	32	37	54	19	16	14	15	67.1
8-Dec	30	13	15	13	12	13	14	33	15	17	14	33	24	24	29	31	11	10	9	9	7	7	7	5	33.5
9-Dec	8	7	9	25	17	15	18	21	28	25	35	53	16	13	17	15	16	14	22	19	22	18	13	11	52.6
10-Dec	12	11	11	14	8	30	26	28	45	23	15	14	12	14	21	45	23	27	42	54	95	16	17	23	94.9
11-Dec	12	9	12	18	28	16	12	14	10	7	15	18	18	15	16	8	21	8	8	10	11	9	23	17	28.4
12-Dec	22	8	9	15	26	47	18	11	23	21	12	10	15	24	27	50	64	64	14	12	9	24	13	13	64.4
13-Dec	6	6	5	4	6	5	7	5	5	4	6	8	8	14	12	35	21	30	20	27	18	13	24	21	35.4
14-Dec	6	8	6	6	6	5	5	8	4	4	5	7	28	58	28	21	52	41	46	72	56	85	44	82	85.3
15-Dec	60	52	31	20	31	43	78	43	20	57	29	67	53	11	55	93	20	52	66	27	53	39	73	50	92.7
16-Dec	44	43	80	79	64	60	84	54	92	45	82	63	68	48	50	42	61	98	94	70	66	81	82	98	98.5
17-Dec	70	57	98	88	73	63	93	73	91	70	70	81	86	71	67	53	63	61	17	12	6	6	5	6	98.5
18-Dec	8	6	15	19	13	5	5	7	9	59	53	51	50	51	71	69	50	23	13	18	41	38	44	37	71.3
19-Dec	50	49	15	15	21	24	12	12	23	15	15	17	14	11	13	14	12	12	14	13	20	21	12	11	50.3
20-Dec	20	21	35	18	24	20	14	17	15	4	11	11	31	32	35	18	16	38	47	24	29	23	34	22	47.2
21-Dec	57	42	35	35	70	53	23	22	47	43	52	52	80	44	38	45	20	29	13	16	20	19	17	72	79.9
22-Dec	36	22	7	10	18	19	17	17	17	13	20	17	19	20	23	13	14	39	18	19	22	18	19	16	39.1
23-Dec	16	18	34	13	22	19	10	9	8	5	6	6	7	9	24	18	8	45	30	5	5	5	6	6	45.1
24-Dec	5	5	6	15	7	7	33	59	57	80	79	78	45	37	62	57	93	61	34	19	16	6	4	4	93.5
25-Dec	7	15	52	24	54	58	26	34	94	66	49	38	36	51	62	63	90	54	46	90	30	81	88	81	94.3
26-Dec	82	58	85	33	91	25	79	78	22	87	95	48	71	83	47	43	16	32	83	37	75	45	82	14	95.1
27-Dec	28	71	12	20	30	82	13	17	16	14	16	24	30	72	11	44	54	18	14	39	18	17	22	9	82.4
28-Dec	18	16	25	20	31	89	16	44	26	15	9	12	15	26	28	77	30	50	19	39	50	9	12	15	88.6
29-Dec	15	14	14	13	13	14	12	11	13	27	19	11	12	10	13	18	16	18	14	17	15	65	30	17	64.7
30-Dec	21	12	22	29	24	21	15	17	37	25	19	18	16	12	15	13	16	18	24	22	14	17	50	23	49.9
31-Dec	51	42	49	34	67	36	25	26	26	55	26	18	35	91	43	52	47	62	40	13	10	8	9	17	91.3
82.1	71.4	98.5	88.2	91.1	88.6	92.7	78.2	98.3	87.1	95.1	80.6	85.8	91.3	71.3	92.7	93.5	98.5	94.2	90.5	94.9	85.3	88.3	97.6		

PASZA

Valleyview Station

Monthly Summary Tables, Graphs and Roses

**Peace Airshed Zone Association
Summary of Hourly Averages**

**Valleyview - Sulphur Dioxide (SO₂) - ppb
December 1, 2009 to January 1, 2010**

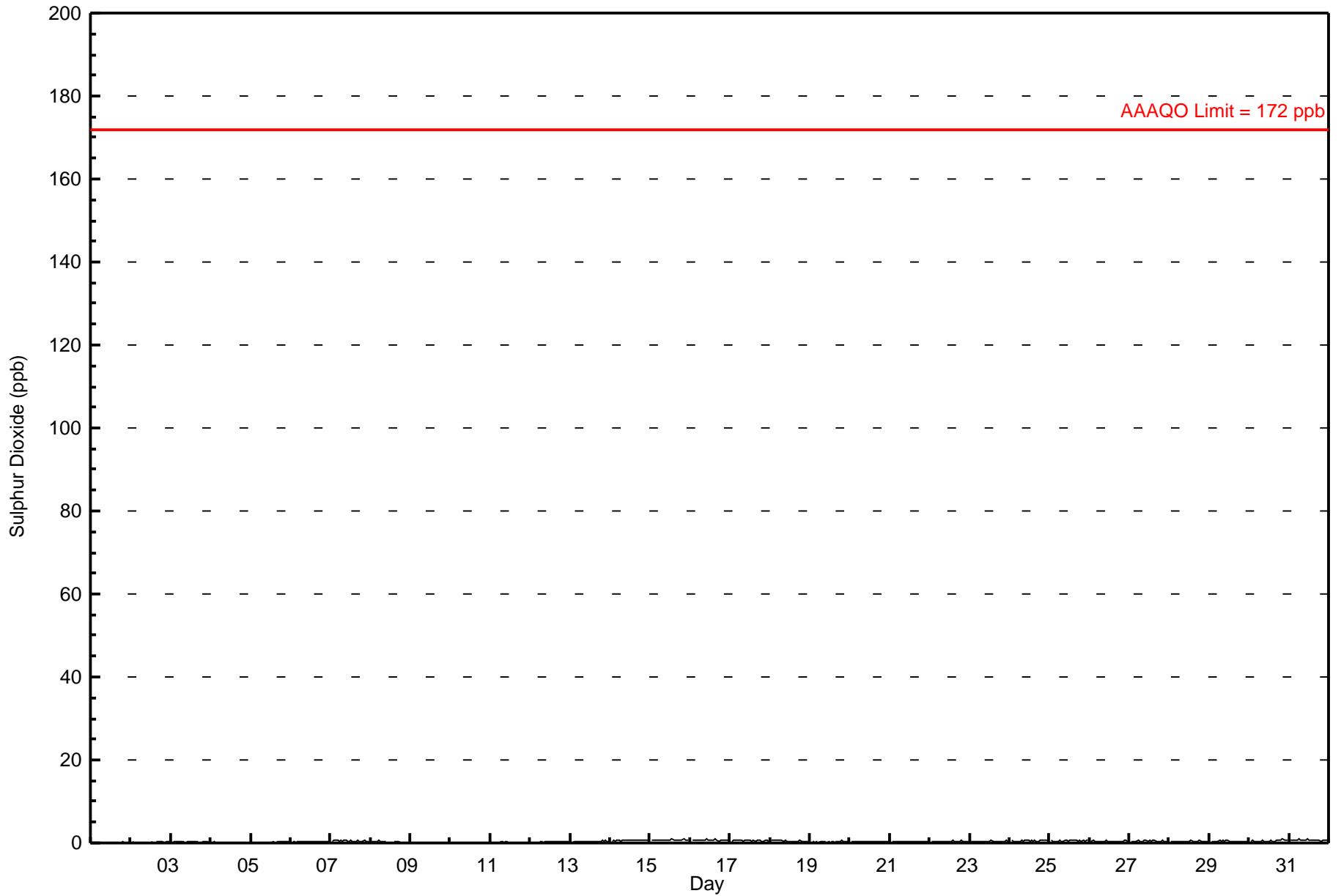
Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 0.9 ppb on Dec 15 21:00	Maximum Daily Average: 0.7 ppb on Dec 15		Hours of Data:	708
Minimum Value: 0 ppb on Dec 1 04:00	Minimum Daily Average: 0.0 ppb on Dec 9		Hours of Missing Data:	36
Maximum Diurnal Average: 0.4 ppb at hour 11	Minimum Diurnal Average: 0.3 ppb at hour 2		Hours of Calibration:	35
Monthly Average: 0.36 ppb	Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.4 Q ₃ = 0.5 P ₉₀ = 0.7 P ₉₉ = 0.9		Percent Operational Time:	99.9

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

--	0.3	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	Diurnal Average
--	0.8	0.8	0.7	0.7	0.8	0.9	0.7	0.7	0.7	0.8	0.9	0.9	0.8	0.9	0.8	0.9	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.8	0.8	Diurnal Maximum

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

Hourly Averages for SO₂ at Valleyview December 2009



**Peace Airshed Zone Association
Summary of Hourly Maximums**

**Valleyview - Sulphur Dioxide (SO₂) - ppb
December 1, 2009 to January 1, 2010**

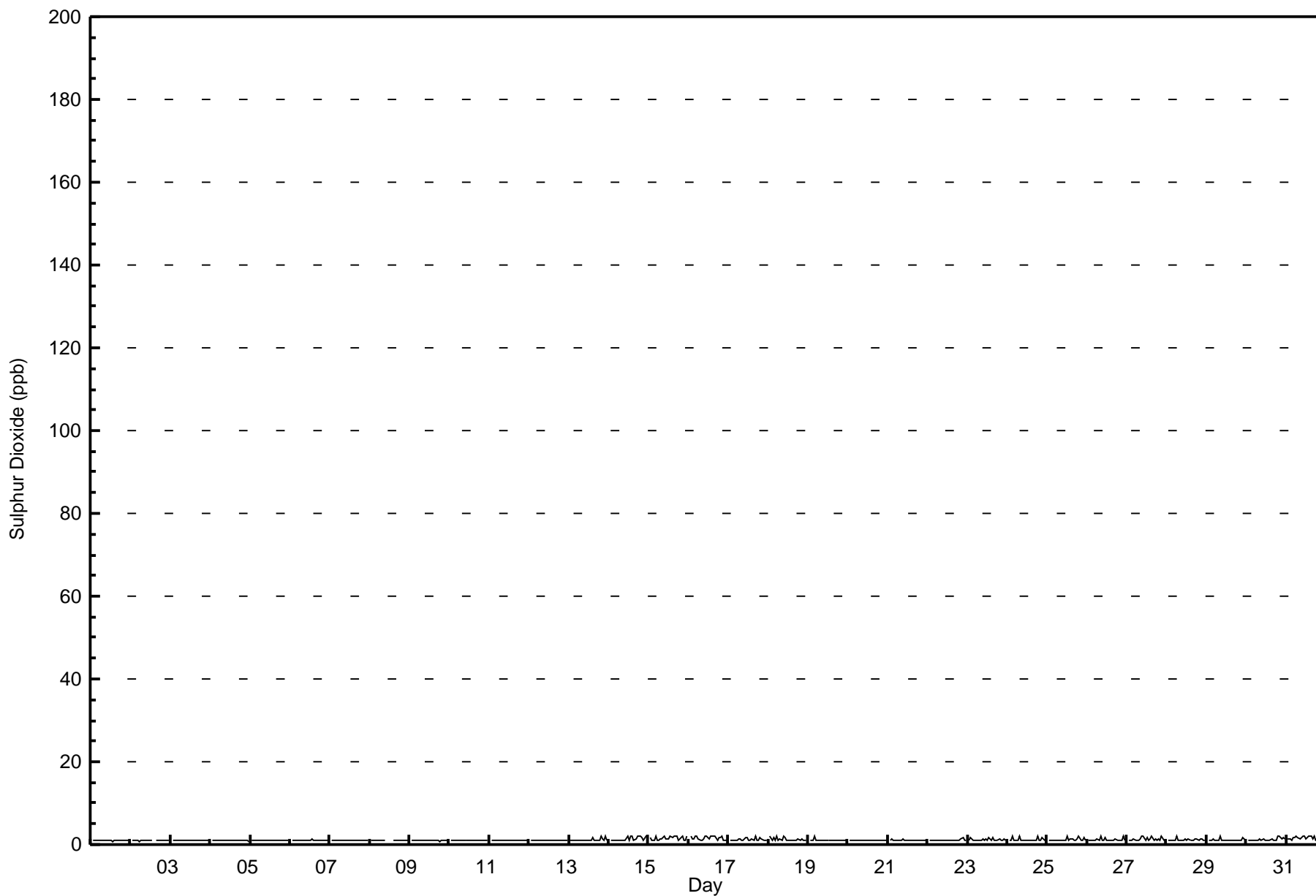
Maximum Value: 2.0 ppb on Dec 15 14:00	Maximum Daily Average: 1.6 ppb on Dec 31	Hours in Service: 744
Minimum Value: 1 ppb on Dec 1 14:00	Minimum Daily Average: 1.0 ppb on Dec 9	Hours of Data: 708
Maximum Diurnal Average: 1.2 ppb at hour 21	Minimum Diurnal Average: 1.1 ppb at hour 4	Hours of Missing Data: 36
Monthly Average: 1.14 ppb	Percentiles: P ₁ = 0.9 P ₁₀ = 1.0 Q ₁ = 1.0 Median = 1.0 Q ₃ = 1.1 P ₉₀ = 1.7 P ₉₉ = 2.0	Hours of Calibration: 35
		Percent Operational Time: 99.9

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

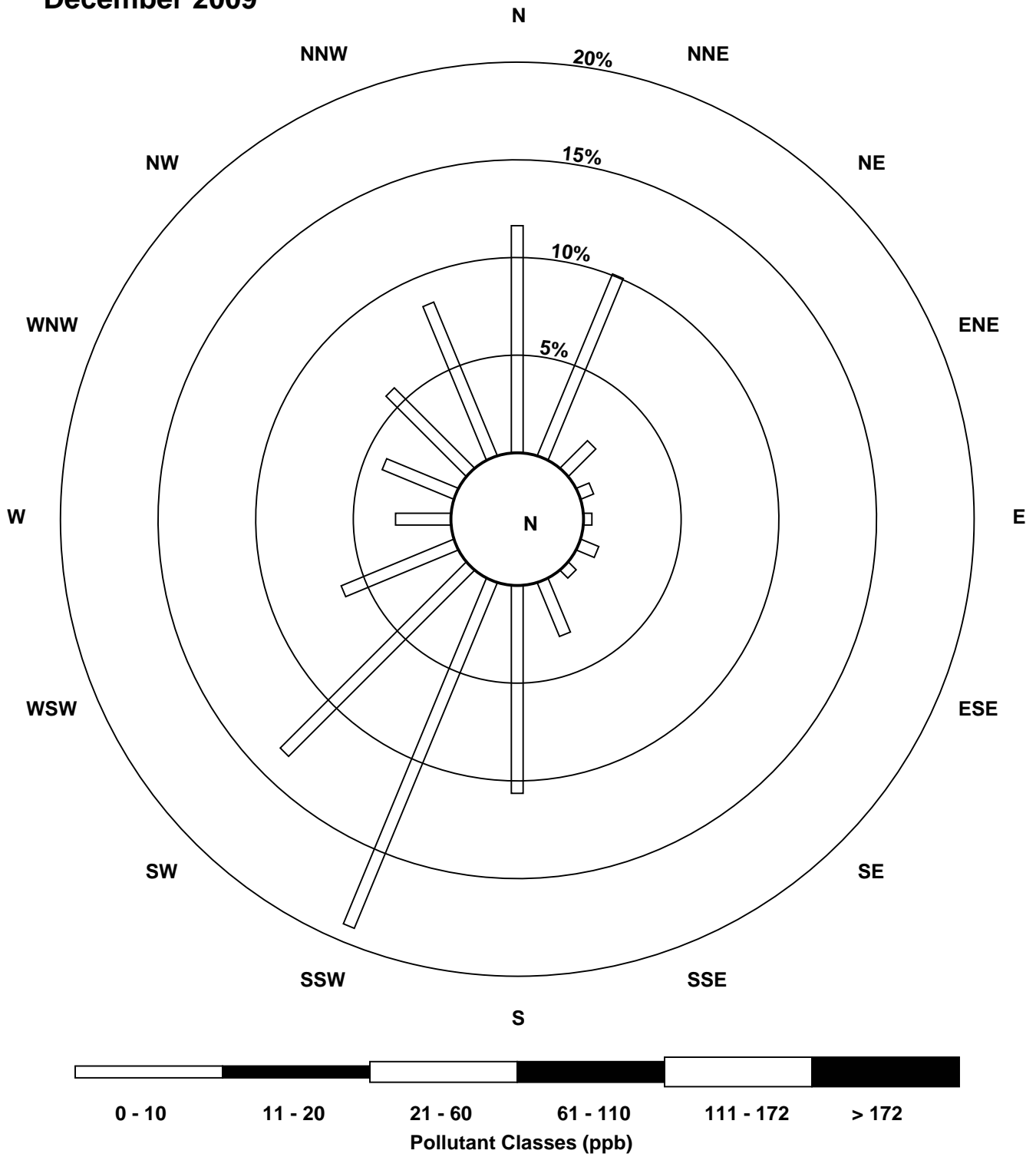
--	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.1	1.2	1.2	1.2	1.1	1.1	1.1	1.2	1.2	1.1	1.2	1.1	Diurnal Average
--	2.0	1.6	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	Diurnal Maximum

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

Hourly Maximums for SO₂ at Valleyview December 2009



Pollutant Rose for SO₂ at Valleyview December 2009



**Peace Airshed Zone Association
Summary of Hourly Averages**

**Valleyview - Hydrogen Sulphide (H₂S) - ppb
December 1, 2009 to January 1, 2010**

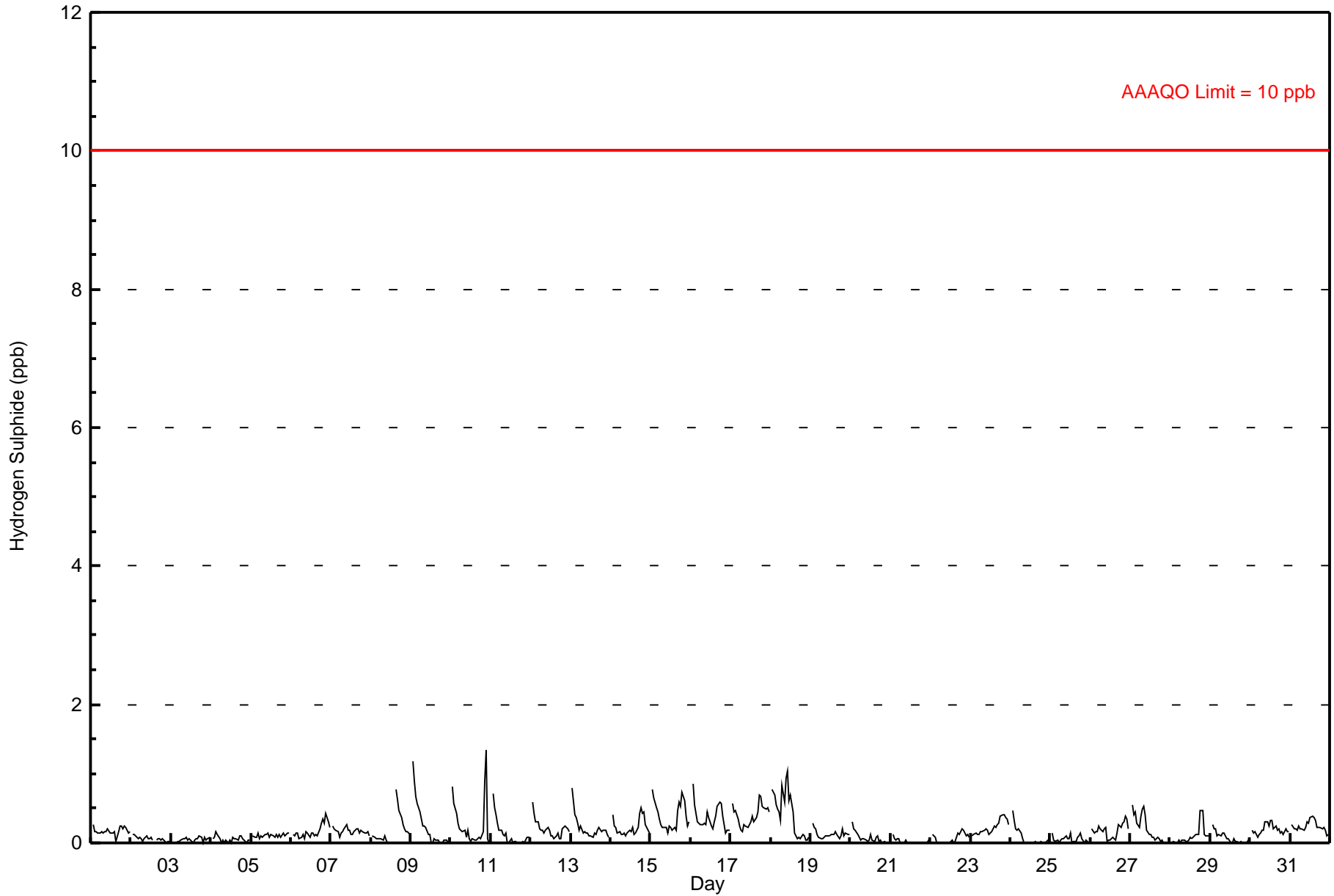
Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 1.3 ppb on Dec 10 22:00	Maximum Daily Average: 0.4 ppb on Dec 18		Hours of Data:	709
Minimum Value: 0 ppb on Dec 2 22:00	Minimum Daily Average: 0.0 ppb on Dec 21		Hours of Missing Data:	35
Maximum Diurnal Average: 0.4 ppb at hour 2	Minimum Diurnal Average: 0.1 ppb at hour 15		Hours of Calibration:	34
Monthly Average: 0.17 ppb	Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.4 P ₉₉ = 0.8		Percent Operational Time:	99.9

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

--	0.4	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	Diurnal Average
--	1.2	0.9	0.7	0.6	0.5	0.4	0.8	0.6	0.9	1.0	0.6	0.7	0.4	0.4	0.8	0.6	0.7	0.7	0.7	0.7	0.9	1.3	0.5	0.5	Diurnal Maximum

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

Hourly Averages for H₂S at Valleyview December 2009

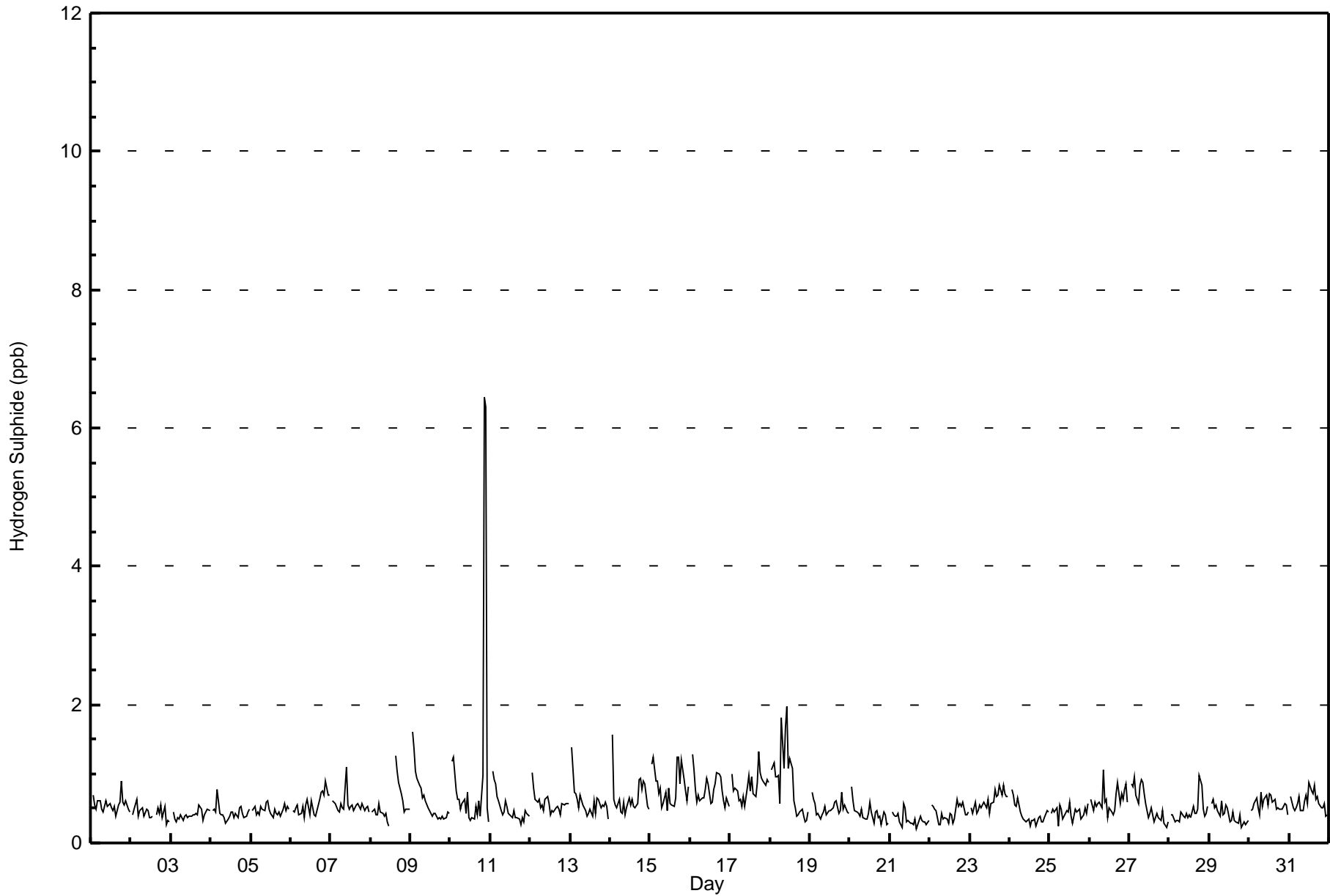


**Peace Airshed Zone Association
Summary of Hourly Maximums**

**Valleyview - Hydrogen Sulphide (H₂S) - ppb
December 1, 2009 to January 1, 2010**

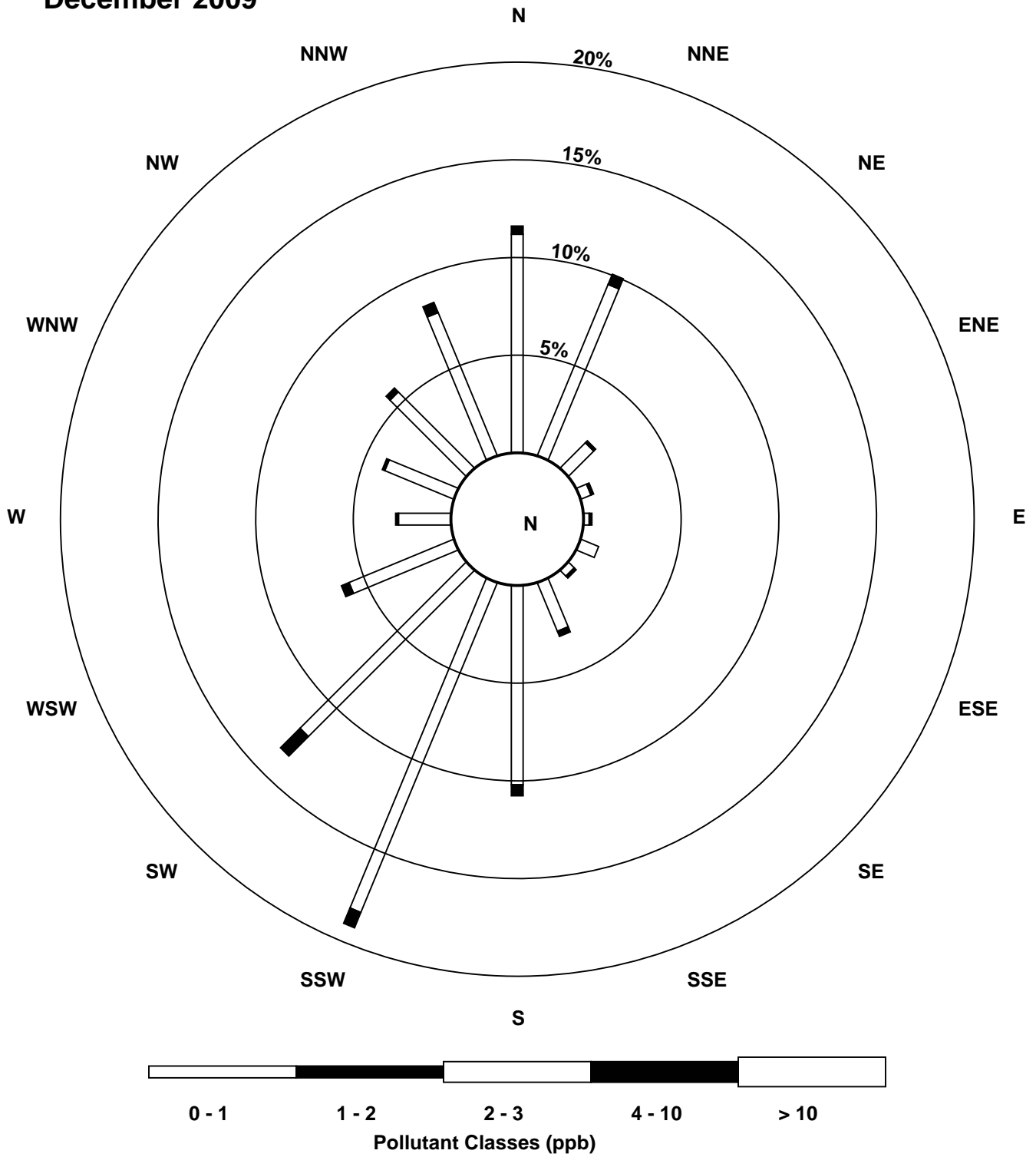
Maximum Value: 6.4 ppb on Dec 10 21:00		Maximum Daily Average: 1.1 ppb on Dec 10		Hours in Service: 744																						
Minimum Value: 0 ppb on Dec 21 17:00		Minimum Daily Average: 0.3 ppb on Dec 21		Hours of Data: 709																						
Maximum Diurnal Average: 0.8 ppb at hour 2		Minimum Diurnal Average: 0.5 ppb at hour 15		Hours of Missing Data: 35																						
Monthly Average: 0.57 ppb		Percentiles: P ₁ = 0.3 P ₁₀ = 0.3 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.6 P ₉₀ = 0.9 P ₉₉ = 1.6		Hours of Calibration: 34																						
				Percent Operational Time: 99.9																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	A	1	1	0	1	1	0	0	1	1	1	1	1	0	1	0	1	1	1	1	1	0	0	0.6	0.9	
2-Dec	A	0	0	1	0	0	0	1	0	0	0	0	0	0	N	0	1	0	1	0	1	0	0	0.4	0.6	
3-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.4	0.6	
4-Dec	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.4	0.8	
5-Dec	A	0	1	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	0.5	0.6	
6-Dec	A	0	0	1	1	0	0	1	0	1	1	0	1	0	0	0	0	1	1	1	1	1	1	0.6	0.9	
7-Dec	A	1	1	1	0	0	1	1	0	1	1	0	1	1	0	1	1	1	0	1	0	1	1	0.5	1.1	
8-Dec	A	0	0	0	0	1	0	0	0	0	0	0	C	C	C	1	1	1	1	1	0	0	0	0.5	1.3	
9-Dec	A	2	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.6	1.6	
10-Dec	A	1	1	1	1	1	0	1	1	0	1	0	0	0	0	1	0	1	0	1	6	6	1	1.1	6.4	
11-Dec	A	1	1	1	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.0	
12-Dec	A	1	1	1	1	1	1	1	0	1	1	1	0	0	0	1	1	0	0	1	1	1	1	0.6	1.0	
13-Dec	A	1	1	1	1	1	1	1	1	0	0	0	0	0	1	0	1	1	1	1	1	1	0	0.6	1.4	
14-Dec	A	2	1	1	1	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.6	
15-Dec	A	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2	
16-Dec	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.3	
17-Dec	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.3	
18-Dec	A	1	1	1	1	1	1	2	1	2	2	1	1	1	1	1	0	0	0	0	0	0	0	0.9	2.0	
19-Dec	A	1	1	1	0	0	0	0	0	1	0	0	0	0	1	1	1	0	0	1	0	1	0	0.5	0.7	
20-Dec	A	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.4	0.8	
21-Dec	A	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6	
22-Dec	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0.4	0.6	
23-Dec	A	1	0	1	0	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0.6	0.8	
24-Dec	A	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8	
25-Dec	A	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.4	0.6	
26-Dec	A	1	0	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	1	1	1	1	1	0.6	1.1	
27-Dec	A	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0.5	0.9	
28-Dec	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	1	0.5	1.0	
29-Dec	A	1	1	0	1	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6	
30-Dec	A	0	0	1	1	1	0	1	1	1	1	1	1	1	1	1	0	1	0	0	0	1	1	0.6	0.7	
31-Dec	A	1	1	0	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0.6	0.9	
	--	0.8	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.5	0.5	Diurnal Average	
	--	1.6	1.4	1.0	1.0	1.0	0.8	1.8	1.1	1.7	2.0	1.1	1.2	1.1	0.8	1.3	1.2	1.3	1.0	1.2	6.4	6.3	0.9	0.9	Diurnal Maximum	
C - Calibration		N - Not Valid					A - Automated Daily Zero Span																			

Hourly Maximums for H₂S at Valleyview December 2009



Pollutant Rose for H₂S at Valleyview

December 2009

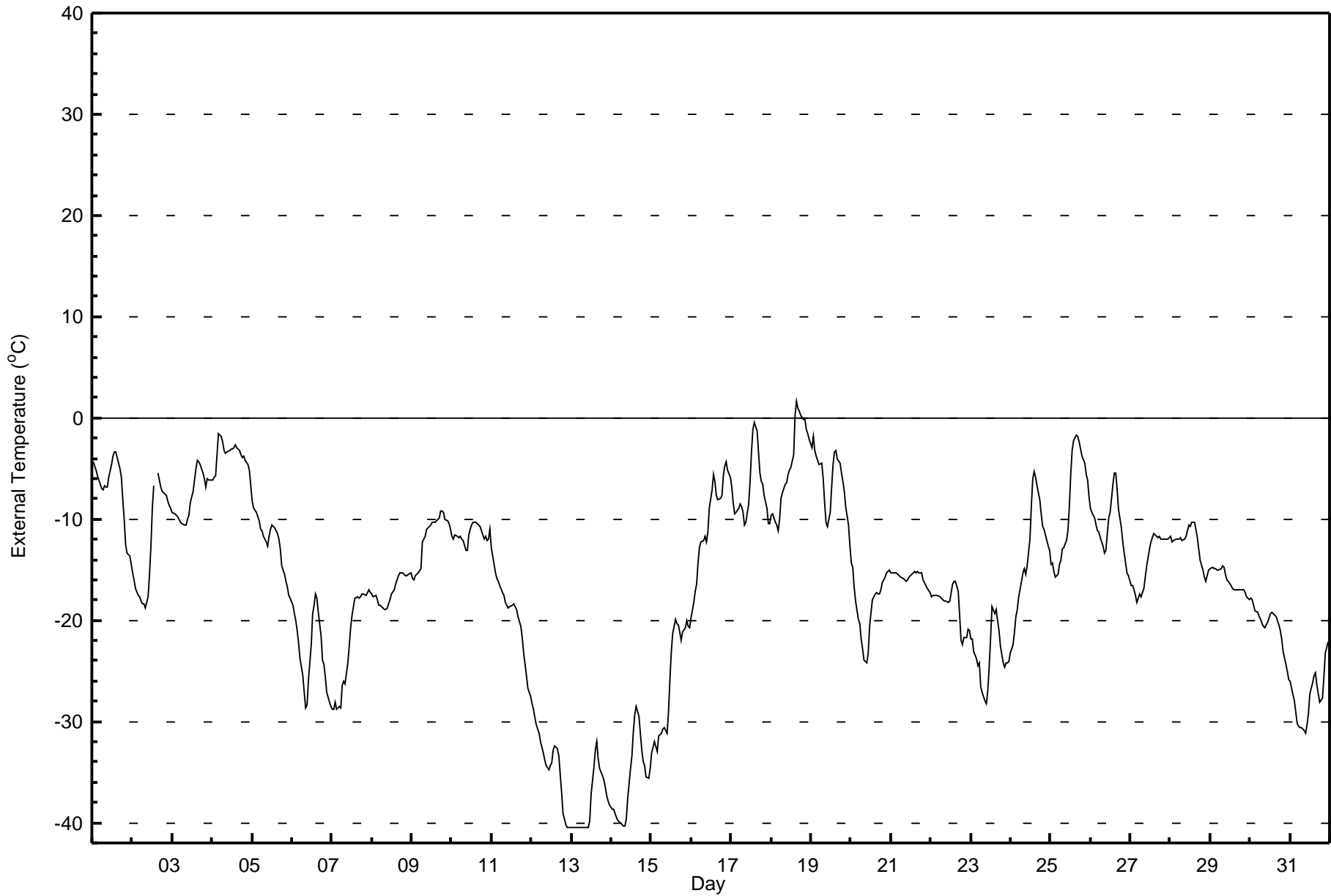


**Peace Airshed Zone Association
Summary of Hourly Averages**

**Valleyview - External Temperature (ET) - °C
December 1, 2009 to January 1, 2010**

Maximum Value: 1.7 °C on Dec 18 16:00		Maximum Daily Average: -3.8 °C on Dec 4		Hours in Service: 744																																													
Minimum Value: -40 °C on Dec 13 02:00		Minimum Daily Average: -37.9 °C on Dec 13		Hours of Data: 743																																													
Maximum Diurnal Average: -13.2 °C at hour 16		Minimum Diurnal Average: -18.5 °C at hour 9		Hours of Missing Data: 1																																													
Monthly Average: -16.46 °C		Percentiles: P ₁ = -40.4 P ₁₀ = -30.9 Q ₁ = -20.8 Median = -15.5 Q ₃ = -10.1 P ₉₀ = -5.2 P ₉₉ = -0.3		Hours of Calibration: 0																																													
				Percent Operational Time: 99.9																																													
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Dec	-4	-5	-5	-6	-6	-7	-7	-7	-7	-7	-6	-5	-4	-3	-3	-4	-5	-6	-8	-10	-12	-13	-14	-14	-7.0	-3.4																							
2-Dec	-15	-16	-17	-18	-18	-18	-18	-18	-19	-18	-15	-13	-9	-7	N	-5	-5	-6	-7	-7	-7	-8	-8	-9	-9	-12.4	-5.4																						
3-Dec	-9	-9	-10	-10	-10	-10	-10	-11	-11	-10	-10	-8	-7	-6	-5	-4	-4	-5	-5	-6	-7	-6	-6	-6	-6	-7.8	-4.2																						
4-Dec	-6	-6	-6	-4	-2	-2	-2	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-4	-4	-4	-4	-5	-5	-7	-3.8	-1.6																							
5-Dec	-8	-9	-9	-10	-10	-11	-11	-12	-12	-13	-12	-11	-11	-11	-11	-11	-12	-13	-15	-16	-16	-17	-17	-18	-12.3	-8.2																							
6-Dec	-18	-19	-20	-21	-22	-24	-25	-27	-29	-28	-26	-22	-19	-18	-17	-18	-19	-22	-24	-24	-26	-27	-28	-28	-23.1	-17.5																							
7-Dec	-29	-29	-28	-29	-29	-29	-26	-26	-26	-24	-22	-21	-20	-19	-18	-18	-18	-18	-17	-17	-18	-17	-17	-17	-22.1	-17.0																							
8-Dec	-17	-18	-18	-18	-18	-18	-19	-19	-19	-19	-18	-18	-17	-17	-16	-16	-16	-15	-15	-15	-16	-16	-15	-15	-17.1	-15.3																							
9-Dec	-16	-16	-16	-15	-15	-15	-12	-12	-12	-11	-11	-11	-10	-10	-10	-10	-10	-9	-9	-9	-10	-10	-10	-11	-11.8	-9.2																							
10-Dec	-12	-12	-12	-12	-12	-12	-12	-12	-13	-13	-12	-11	-11	-11	-10	-10	-11	-11	-11	-12	-12	-12	-12	-11	-11.5	-10.4																							
11-Dec	-13	-14	-15	-16	-16	-17	-17	-18	-18	-19	-19	-19	-19	-18	-19	-19	-20	-21	-22	-23	-24	-25	-27	-27	-19.3	-12.8																							
12-Dec	-28	-29	-30	-30	-31	-32	-33	-33	-34	-34	-35	-34	-34	-33	-32	-33	-33	-35	-37	-39	-40	-40	-40	-40	-34.2	-28.3																							
13-Dec	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-37	-35	-33	-32	-34	-35	-35	-36	-36	-37	-38	-38	-37.9	-32.1																							
14-Dec	-39	-39	-39	-40	-40	-40	-40	-40	-40	-40	-38	-35	-33	-31	-29	-29	-29	-31	-33	-34	-34	-35	-36	-35	-35.8	-28.5																							
15-Dec	-33	-33	-32	-33	-31	-31	-31	-31	-31	-31	-29	-26	-23	-21	-20	-20	-21	-21	-22	-21	-21	-20	-21	-21	-26.0	-20.0																							
16-Dec	-20	-18	-17	-16	-14	-13	-12	-12	-12	-12	-11	-9	-7	-6	-6	-8	-8	-8	-8	-6	-5	-4	-5	-6	-10.1	-4.4																							
17-Dec	-7	-8	-10	-9	-9	-9	-9	-9	-11	-10	-9	-6	-3	-1	-1	-1	-3	-5	-6	-7	-8	-9	-10	-10	-7.1	-0.5																							
18-Dec	-10	-9	-10	-11	-11	-10	-8	-7	-7	-6	-6	-5	-5	-4	0	2	1	1	0	0	0	-1	-2	-2	-4.6	1.7																							
19-Dec	-3	-2	-3	-4	-4	-5	-5	-6	-8	-10	-11	-9	-7	-5	-3	-3	-4	-4	-5	-6	-7	-9	-11	-13	-6.1	-1.9																							
20-Dec	-14	-15	-17	-18	-20	-20	-22	-23	-24	-24	-23	-21	-19	-18	-17	-17	-17	-17	-17	-16	-16	-15	-15	-15	-18.4	-14.4																							
21-Dec	-15	-15	-15	-15	-15	-16	-16	-16	-16	-16	-16	-16	-15	-15	-15	-15	-15	-15	-15	-16	-16	-17	-17	-17	-15.7	-15.2																							
22-Dec	-18	-18	-18	-18	-18	-18	-18	-18	-18	-18	-18	-18	-17	-16	-16	-16	-16	-17	-19	-22	-22	-22	-21	-21	-18.6	-16.1																							
23-Dec	-22	-22	-23	-24	-25	-24	-27	-27	-28	-28	-27	-25	-22	-19	-19	-19	-20	-21	-23	-24	-25	-24	-24	-24	-23.5	-18.6																							
24-Dec	-23	-22	-21	-20	-19	-18	-16	-15	-15	-15	-15	-12	-9	-6	-5	-6	-7	-8	-10	-11	-11	-12	-13	-13	-13.4	-5.3																							
25-Dec	-14	-14	-15	-16	-15	-14	-14	-13	-13	-12	-11	-9	-6	-3	-2	-2	-2	-2	-3	-4	-5	-6	-6	-8	-8.7	-1.7																							
26-Dec	-9	-9	-10	-11	-11	-11	-12	-13	-13	-13	-11	-10	-9	-7	-5	-5	-7	-9	-11	-12	-13	-14	-15	-16	-10.8	-5.4																							
27-Dec	-17	-17	-17	-18	-18	-17	-18	-17	-17	-16	-15	-13	-12	-12	-11	-12	-12	-12	-12	-12	-12	-12	-12	-12	-14.2	-11.5																							
28-Dec	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-11	-11	-11	-10	-10	-11	-12	-13	-14	-15	-16	-16	-16	-15	-12.5	-10.2																							
29-Dec	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15	-16	-16	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-18	-18	-16.1	-14.7																							
30-Dec	-18	-18	-19	-19	-19	-20	-20	-20	-21	-21	-20	-20	-19	-19	-19	-20	-20	-20	-21	-22	-23	-24	-25	-26	-20.6	-17.9																							
31-Dec	-26	-27	-28	-29	-30	-31	-31	-31	-31	-31	-30	-29	-27	-26	-25	-25	-26	-27	-28	-28	-26	-23	-23	-22	-27.5	-22.1																							
																								-17.1	-17.3	-17.6	-17.9	-18.0	-18.0	-18.0	-18.2	-18.5	-18.4	-17.6	-16.3	-14.9	-13.8	-13.4	-13.2	-13.8	-14.5	-15.4	-15.9	-16.3	-16.6	-17.0	-17.3	Diurnal Average	
																								-3.0	-1.9	-3.3	-3.7	-1.6	-1.9	-2.4	-3.3	-3.5	-3.4	-3.2	-3.1	-3.1	-1.2	0.2	1.7	0.9	0.6	0.2	-0.2	-0.2	-1.1	-1.6	-2.1	Diurnal Maximum	
N - Not Valid																																																	

Hourly Averages for External Temperature at Valleyview December 2009

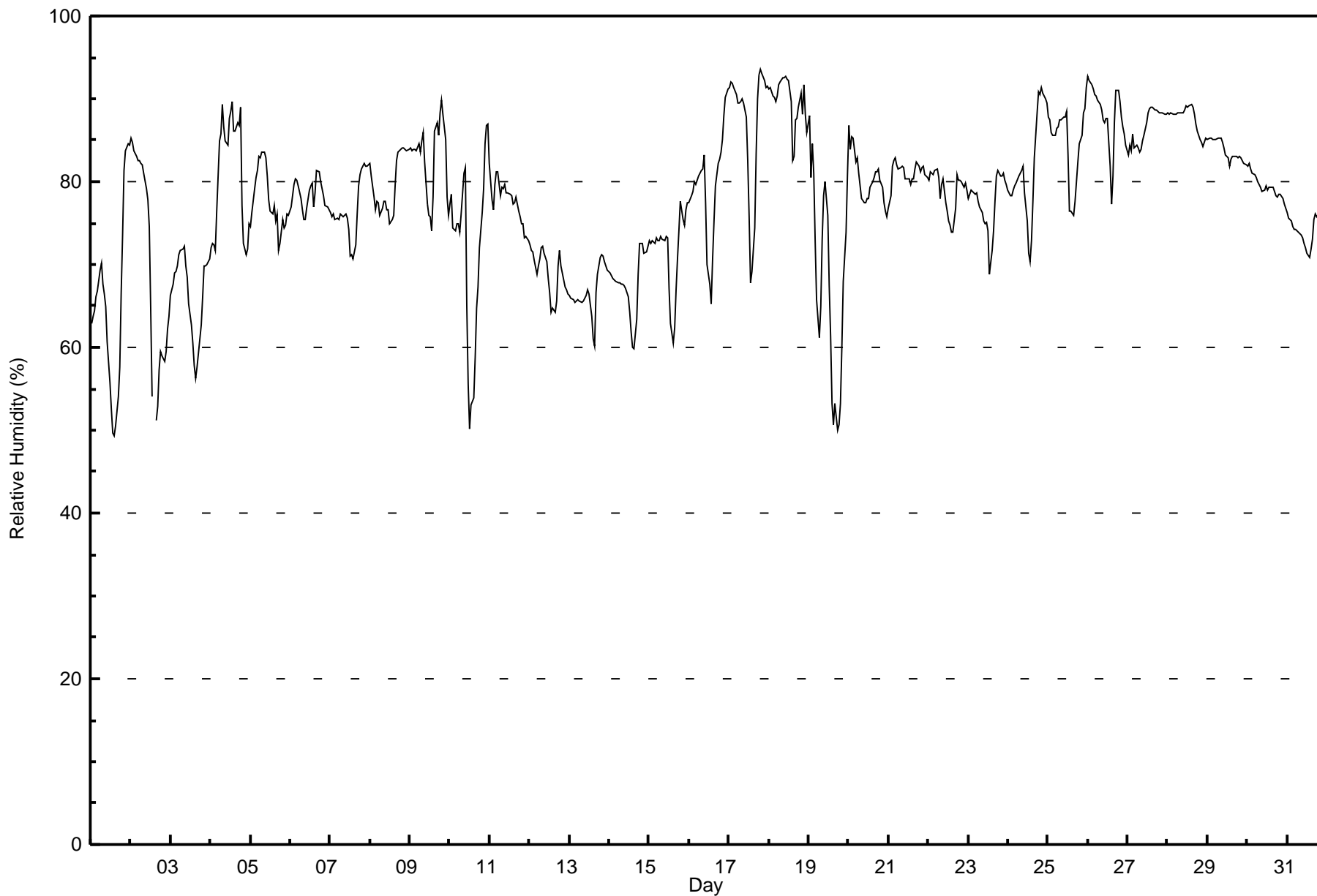


**Peace Airshed Zone Association
Summary of Hourly Averages**

**Valleyview - Relative Humidity (RH) - %
December 1, 2009 to January 1, 2010**

Maximum Value: 93.6 % on Dec 17 20:00																				Maximum Daily Average: 89.7 % on Dec 18					Hours in Service: 744																							
Minimum Value: 49 % on Dec 1 15:00																				Minimum Daily Average: 65.3 % on Dec 1					Hours of Data: 743																							
Maximum Diurnal Average: 79.6 % at hour 24																				Minimum Diurnal Average: 72.2 % at hour 14					Hours of Missing Data: 1																							
Monthly Average: 77.78 %																				Percentiles: P ₁ = 51.1 P ₁₀ = 66.0 Q ₁ = 72.9 Median = 78.9 Q ₃ = 83.9 P ₉₀ = 88.4 P ₉₉ = 92.5					Hours of Calibration: 0																							
																				Percent Operational Time: 99.9																												
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Dec	63	64	64	66	67	69	70	68	67	65	61	56	52	50	49	51	54	58	67	74	81	84	85	84	65.3	84.6																						
2-Dec	85	85	84	83	83	83	82	82	81	79	78	75	65	54	N	51	53	57	60	59	58	59	62	64	70.5	85.2																						
3-Dec	66	68	69	69	70	71	72	72	72	70	68	65	63	61	58	56	58	59	63	66	70	70	70	71	66.5	72.1																						
4-Dec	72	73	72	72	76	85	86	89	87	85	84	88	88	90	86	86	87	87	89	77	73	71	72	75	81.2	89.7																						
5-Dec	75	76	79	81	81	83	83	84	84	83	81	78	77	76	77	75	76	72	73	75	74	75	76	76	77.9	83.6																						
6-Dec	77	78	80	80	80	79	78	77	75	75	77	79	80	80	77	79	81	81	80	79	78	77	77	77	78.4	81.4																						
7-Dec	76	76	76	75	76	75	76	76	76	76	76	74	71	71	71	72	76	80	81	82	82	82	82	82	76.6	82.3																						
8-Dec	82	81	78	77	78	78	76	77	78	78	77	77	75	75	76	79	83	84	84	84	84	84	84	84	79.6	84.1																						
9-Dec	84	84	84	84	84	85	84	85	86	82	77	76	76	74	78	86	87	86	88	90	88	85	78	76	82.8	89.8																						
10-Dec	77	78	74	74	75	75	74	76	81	82	65	56	50	53	54	59	65	67	72	76	79	85	87	87	71.7	86.9																						
11-Dec	82	78	77	80	81	81	78	79	79	80	79	79	79	78	77	77	78	76	76	75	75	73	73	73	77.6	82.2																						
12-Dec	72	72	71	71	69	70	71	72	72	71	70	68	67	64	65	64	66	70	72	70	68	67	67	66	69.0	72.4																						
13-Dec	66	66	66	65	66	66	66	65	66	66	66	67	66	64	61	60	67	69	71	71	71	70	70	69	66.7	71.2																						
14-Dec	69	69	68	68	68	68	68	68	68	68	67	66	64	62	60	60	63	69	73	72	72	71	72	72	67.7	72.6																						
15-Dec	73	73	73	73	73	73	73	73	73	73	73	73	67	63	61	62	67	71	74	78	75	75	77	77	71.8	77.6																						
16-Dec	77	78	79	80	80	80	81	81	81	83	77	70	68	65	71	75	79	82	83	84	85	88	90	91	79.6	91.1																						
17-Dec	91	92	92	91	91	90	89	90	90	89	88	83	76	68	69	74	83	90	93	94	93	92	91	91	87.1	93.6																						
18-Dec	91	91	90	90	90	90	92	92	93	93	93	92	92	90	82	83	87	88	89	91	88	92	88	86	89.7	92.6																						
19-Dec	88	81	85	81	73	66	61	65	73	78	80	76	67	61	53	51	53	50	51	53	60	68	74	81	67.9	87.9																						
20-Dec	87	84	85	85	82	83	81	80	78	77	77	78	78	79	80	80	81	81	81	80	79	77	76	76	80.4	86.8																						
21-Dec	77	78	82	83	83	82	81	82	82	80	80	80	80	80	80	80	82	82	82	81	82	82	81	81	81.0	82.9																						
22-Dec	80	81	81	81	81	81	81	78	80	80	77	77	75	75	74	74	77	81	80	80	79	80	79	79	78.9	81.4																						
23-Dec	78	78	79	79	78	79	78	77	76	75	75	75	74	69	72	74	78	81	81	81	81	80	80	80	77.4	81.3																						
24-Dec	79	78	78	79	80	80	81	81	81	82	79	75	71	70	73	78	83	88	91	90	91	91	90	90	81.6	91.3																						
25-Dec	88	87	86	86	86	86	87	87	87	88	88	88	83	76	76	76	78	80	82	85	86	88	89	91	84.8	91.3																						
26-Dec	93	92	92	91	90	90	90	89	89	87	87	88	88	82	77	81	87	91	91	90	88	87	86	84	87.9	92.7																						
27-Dec	83	84	84	86	84	84	84	84	84	85	86	87	88	89	89	89	89	89	89	88	88	88	88	88	86.5	89.0																						
28-Dec	88	88	88	88	88	88	88	88	88	88	89	89	89	89	89	89	88	87	86	85	85	84	85	85	87.6	89.3																						
29-Dec	85	85	85	85	85	85	85	85	85	85	84	83	83	82	83	83	83	83	83	83	83	83	82	82	83.8	85.3																						
30-Dec	82	82	82	81	81	81	80	80	79	79	79	79	79	79	79	79	79	78	78	78	78	78	77	77	79.4	82.1																						
31-Dec	76	76	75	75	74	74	74	74	73	73	73	72	71	71	72	73	75	76	76	76	77	76	75	74	74.2	77.0																						
																								79.5	79.2	79.3	79.3	79.1	79.4	79.0	79.2	79.5	79.3	77.8	76.4	74.3	72.2	72.3	72.8	75.6	77.1	78.6	78.9	79.2	79.4	79.5	79.6	Diurnal Average
																								92.7	92.2	91.8	91.3	90.5	90.4	91.7	92.0	92.5	92.6	92.6	92.4	92.1	89.7	89.3	88.9	88.6	91.0	92.9	93.6	93.0	92.1	91.4	91.5	Diurnal Maximum
N - Not Valid																																																

Hourly Averages for Relative Humidity at Valleyview December 2009



Peace Airshed Zone Association
Summary of Hourly Averages

Valleyview
 December 1, 2009 to January 1, 2010
 WS (km/h), WD (deg)

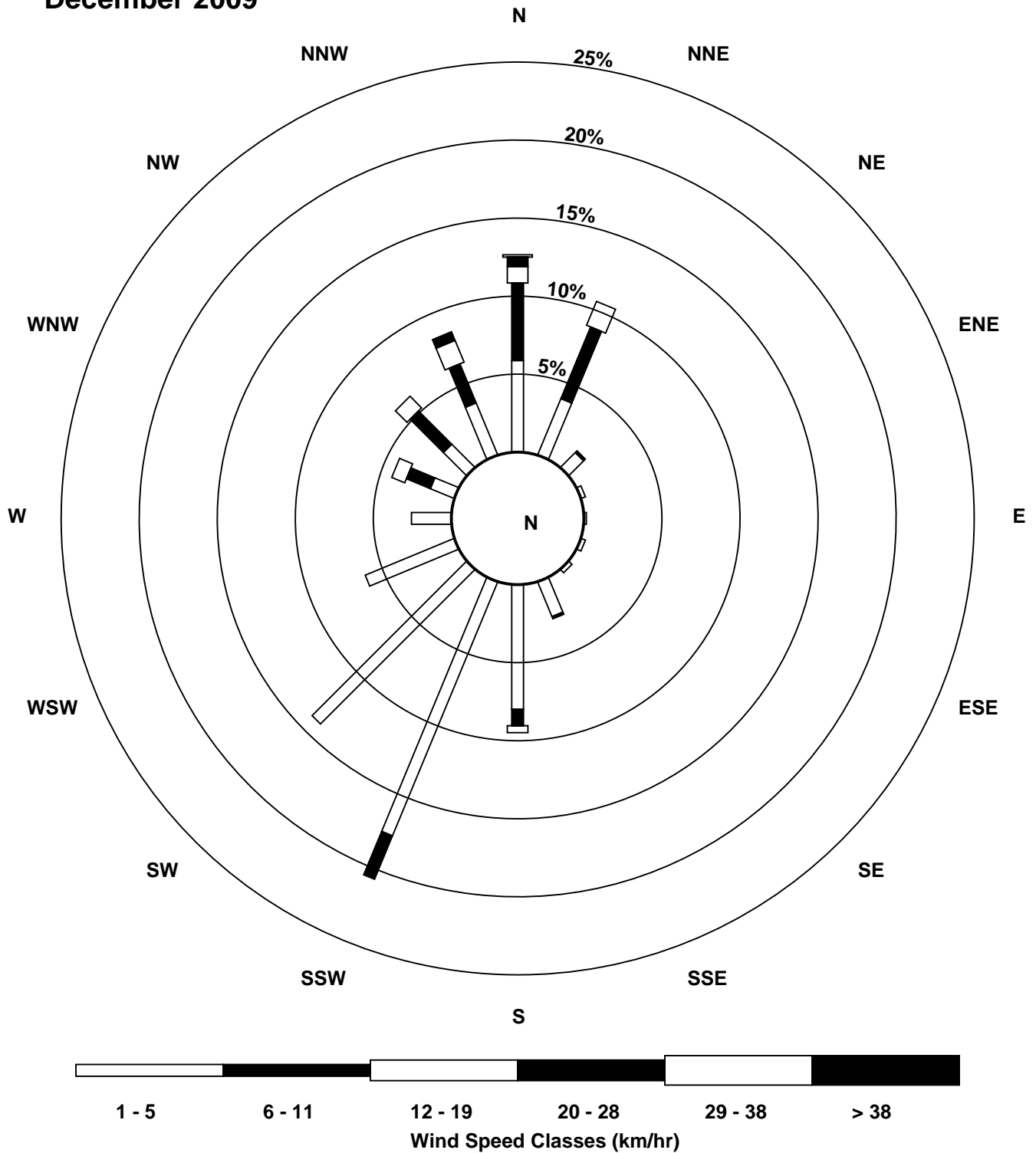
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1 Spd	13	12	9	9	9	6	1	12	12	11	11	7	8	9	9	7	5	2	2	2	3	3	4	2	5.8	12.9	
Dir	295	293	300	300	310	318	213	292	296	296	292	309	336	321	323	328	344	41	211	222	177	187	215	212	300.5	294.6	
2 Spd	1	1	1	1	1	1	1	1	1	1	1	2	2	5	9	N	7	5	9	12	13	11	13	11	10	5.2	13.1
Dir	214	201	208	205	213	216	203	238	234	229	205	183	191	188	N	182	185	181	181	186	192	191	194	194	190.7	185.8	
3 Spd	10	9	9	9	10	9	8	10	8	8	8	7	5	6	6	5	4	3	2	1	2	2	4	2	5.9	10.4	
Dir	195	192	197	195	190	196	203	193	195	198	192	198	198	200	194	204	203	205	273	267	239	272	197	158	198.1	189.9	
4 Spd	4	2	3	4	10	13	17	14	15	14	16	16	18	16	24	24	24	27	23	27	31	28	20	13	15.4	30.6	
Dir	203	201	201	245	292	316	329	325	317	319	326	324	338	331	345	348	348	354	356	1	356	353	343	319	338.4	355.6	
5 Spd	10	9	9	10	6	4	7	8	10	7	8	10	12	18	19	18	14	16	13	8	9	8	8	9	9.1	18.6	
Dir	308	308	308	293	298	293	297	302	305	310	314	336	347	8	5	6	22	14	4	334	336	321	308	304	335.6	5.4	
6 Spd	9	6	2	2	1	3	3	4	4	3	3	3	3	3	3	3	1	0	3	1	0	1	2	3	1.6	9.3	
Dir	308	304	310	319	102	163	175	178	182	194	186	176	147	174	185	179	187	224	199	233	201	247	224	209	209.4	307.7	
7 Spd	3	2	3	2	2	2	3	2	2	3	5	5	5	4	3	2	1	2	1	1	1	1	1	0	2.0	5.5	
Dir	207	225	210	221	249	222	211	222	211	220	212	205	210	213	209	229	207	226	190	120	2	18	36	21	215.2	212.4	
8 Spd	3	5	9	10	6	5	8	3	3	1	3	4	3	5	5	4	2	1	2	1	2	3	2	0	0.6	10.2	
Dir	334	332	4	12	15	13	23	39	59	112	170	181	168	181	187	192	200	185	189	166	180	177	192	59	39.7	12.0	
9 Spd	2	0	1	1	1	2	9	6	3	7	14	12	12	13	10	3	6	10	4	4	12	12	12	14	6.2	13.9	
Dir	30	318	192	188	135	351	347	350	27	348	339	335	329	340	339	310	312	325	358	56	29	20	16	11	351.8	10.9	
10 Spd	8	4	8	8	10	19	16	3	2	2	11	10	4	4	4	4	3	2	1	2	0	2	5	10	4.1	18.6	
Dir	360	347	339	331	334	344	343	309	198	175	329	326	300	237	203	181	176	177	176	245	97	20	13	351	332.7	344.4	
11 Spd	16	15	11	9	6	6	7	6	6	5	6	5	5	7	8	9	9	11	11	13	11	14	12	12	9.0	16.1	
Dir	7	16	11	20	30	8	11	6	23	20	5	1	351	359	21	21	20	26	18	15	9	16	12	14	13.8	6.9	
12 Spd	11	12	10	8	9	7	4	4	3	1	2	2	4	3	3	3	2	1	1	3	2	1	3	2	3.2	12.5	
Dir	14	16	11	3	14	15	5	18	25	24	39	352	337	342	344	349	351	345	186	196	209	260	199	213	5.9	16.4	
13 Spd	3	3	0	1	3	4	2	3	5	4	N	N	4	3	2	1	2	3	4	4	4	5	4	4	2.9	4.6	
Dir	222	210	345	217	214	213	227	219	215	209	N	N	179	196	183	235	246	213	218	222	218	217	216	215	213.2	217.3	
14 Spd	4	2	2	2	3	2	3	2	2	N	3	2	3	2	2	0	1	1	2	2	2	2	2	1	1.4	3.8	
Dir	222	236	222	242	237	241	220	208	238	N	210	224	3	313	317	331	132	189	169	237	205	180	202	186	226.0	222.1	
15 Spd	2	0	2	4	3	1	1	4	3	2	2	2	4	4	2	2	0	1	4	3	2	2	2	2	2.0	3.8	
Dir	192	261	253	224	205	172	190	186	193	212	239	209	209	199	196	250	203	338	246	218	210	218	262	249	214.1	185.7	
16 Spd	3	3	4	4	3	3	3	5	4	2	1	3	3	3	1	2	2	0	0	5	0	2	2	3	2.4	5.2	
Dir	209	217	216	228	215	213	224	205	208	155	191	192	193	198	236	251	209	189	43	191	112	244	214	220	208.8	190.6	
17 Spd	1	0	1	2	3	4	4	2	1	4	3	2	2	1	2	1	1	1	2	2	0	1	1	2	1.7	4.1	
Dir	238	177	172	232	225	214	211	222	238	219	215	203	213	207	198	240	229	62	190	297	314	48	236	224	218.7	213.6	
18 Spd	2	2	1	1	2	3	2	1	0	1	1	3	1	1	5	3	5	6	4	5	6	5	5	4	2.2	6.4	
Dir	271	218	224	228	194	197	224	5	250	225	229	353	149	268	311	251	196	196	212	196	190	211	198	181	213.6	196.2	
19 Spd	4	3	3	3	3	2	4	6	3	2	5	5	4	4	4	7	8	14	14	9	10	2	3	2	3.0	14.4	
Dir	137	208	174	160	237	235	227	147	207	230	214	195	190	201	261	288	313	302	292	289	337	278	240	182	256.8	302.3	
20 Spd	3	2	3	1	2	0	1	1	2	2	2	0	1	1	2	1	1	1	4	4	3	4	6	7	0.7	7.3	
Dir	192	203	215	52	214	330	28	222	158	215	207	230	150	107	34	267	338	96	25	22	33	37	37	28	41.6	27.5	
21 Spd	8	6	8	8	9	9	8	8	10	11	10	9	8	9	7	9	9	8	9	12	11	10	9	7	8.6	11.6	
Dir	29	27	30	25	28	27	26	22	25	24	27	26	21	15	12	10	14	11	9	2	3	1	5	3	17.2	1.9	
22 Spd	5	2	2	2	1	2	4	6	5	3	6	3	1	1	3	2	4	3	3	4	4	3	4	2	1.6	5.6	
Dir	357	18	13	52	43	21	357	351	348	347	329	320	310	233	300	293	276	201	200	213	216	226	264	256	310.1	328.8	

**Peace Airshed Zone Association
Summary of Hourly Averages**

Valleyview
December 1, 2009 to January 1, 2010
WS (km/h), WD (deg)

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		
23 Spd	2	2	3	3	4	3	2	2	3	2	3	3	4	2	3	2	0	2	2	1	3	3	2	2	1.8	4.3
Dir	202	152	166	152	185	218	257	239	215	228	214	204	209	200	0	296	153	292	209	234	216	225	229	249	212.6	185.2
24 Spd	2	2	3	3	4	5	4	5	4	4	5	4	4	3	3	4	3	3	3	2	1	1	1	1	2.8	4.8
Dir	238	226	229	231	214	209	212	208	211	216	210	202	179	149	196	196	192	206	218	207	201	245	301	261	207.9	208.1
25 Spd	2	2	2	2	2	1	2	2	1	1	1	1	4	7	4	7	5	8	4	4	4	3	4	2	2.9	8.4
Dir	219	217	257	230	229	240	214	244	241	268	281	223	196	192	207	191	198	193	214	198	215	219	223	229	210.5	193.4
26 Spd	2	2	3	3	1	3	3	3	3	2	2	1	1	0	2	2	1	1	0	0	1	1	2	2	1.5	3.3
Dir	227	251	234	230	238	246	237	217	215	233	246	242	191	205	175	164	170	146	228	253	180	192	188	182	218.0	229.6
27 Spd	3	1	0	1	3	2	3	1	1	1	1	0	3	3	3	2	1	2	2	1	1	1	1	0	0.7	3.3
Dir	355	334	191	330	183	175	0	261	15	120	189	208	309	342	4	353	293	355	2	48	107	163	144	162	346.9	4.0
28 Spd	0	1	1	0	1	0	1	2	1	1	1	1	2	1	1	1	1	1	2	2	3	2	2	2	0.7	3.2
Dir	5	71	80	26	24	38	1	358	13	181	180	191	206	185	281	286	10	345	354	341	336	338	301	293	334.6	335.6
29 Spd	0	2	2	2	2	2	2	2	3	6	6	7	8	7	6	6	3	3	3	3	3	3	3	3	3.4	7.5
Dir	341	266	266	276	314	327	353	360	350	6	9	6	5	358	1	11	19	20	19	14	13	9	352	351	359.5	4.8
30 Spd	2	6	6	6	6	7	5	5	5	2	3	7	7	7	6	6	6	5	5	5	3	1	1	1	4.2	7.4
Dir	349	3	9	7	9	13	15	8	357	333	351	353	352	344	332	341	323	314	308	321	360	206	204	160	349.2	351.7
31 Spd	1	0	1	0	0	1	1	1	1	0	1	2	2	3	3	3	2	3	1	1	2	5	6	8	0.3	7.5
Dir	201	329	175	151	258	17	211	170	5	177	343	350	347	353	359	327	11	359	332	352	184	185	192	180	241.6	179.5
Spd	1.7	1.5	1.3	1.3	1.3	1.6	2.0	1.4	1.4	1.4	2.1	2.0	1.6	1.6	2.6	2.0	1.7	1.8	1.5	1.3	1.6	1.3	1.2	1.2	Diurnal Average	
Dir	311.8	313.8	311.7	306.1	294.5	313.4	321.8	294.5	293.7	291.0	302.7	312.7	314.7	315.8	332.8	326.0	333.4	335.5	325.4	319.9	338.6	326.3	302.0	307.5	Diurnal Maximum	
Spd	16.1	14.8	11.3	10.2	10.4	18.6	17.5	14.2	14.5	14.4	16.1	16.5	18.3	17.7	23.9	24.1	24.3	26.8	22.8	26.8	30.6	28.0	20.2	13.9	Diurnal Maximum	
Dir	6.9	15.5	10.9	12.0	189.9	344.4	328.7	325.4	317.4	319.2	325.9	324.5	338.4	8.3	344.6	348.0	348.3	353.6	356.4	1.0	355.6	352.9	343.4	10.9	Diurnal Maximum	
Maximum Speed Value: 31 km/h on Dec 4 21:00																		Minimum Speed Value: 0 km/h on Dec 6 18:00						Hours in Service:		744
Maximum Daily Speed Average: 15.4 km/h on Dec 4																		Minimum Daily Speed Average: 0.3 km/h on Dec 28						Hours of Data:		740
Maximum Diurnal Speed Average: 2.6 km/h at hour 15																		Minimum Diurnal Speed Average: 1.2 km/h at hour 24						Hours of Missing Data:		4
Monthly Average Velocity: 1.55 km/h 315.63 deg																		Speed Percentiles: P ₁ = 0.3 P ₁₀ = 0.9 Q ₁ = 1.7 Median = 3.0 Q ₃ = 5.7 P ₉₀ = 10.2 P ₉₉ = 23.7						Percent Operational Time:		99.5
All monthly, daily, and diurnal averages have been calculated using vector methods																										
N - Not Valid																										
Frequency Distribution																										
Speed Range (km/h)																										
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																			
North	76	57	27	8	1	0	169																			
NorthEast	26	17	1	0	0	0	44																			
East	9	0	0	0	0	0	9																			
SouthEast	16	1	0	0	0	0	17																			
South	121	32	4	0	0	0	157																			
SouthWest	202	6	0	0	0	0	208																			
West	37	3	3	0	0	0	43																			
NorthWest	35	41	17	0	0	0	93																			
Total	522	157	52	8	1	0	740																			

Wind Rose for WS at Valleyview December 2009



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

Valleyview - Wind Speed (WS) - km/h
December 1, 2009 to January 1, 2010

Maximum Speed: 31 km/h on Dec 4 21:00	Maximum Daily Speed Average: 17.0 km/h on Dec 4	Hours in Service: 744
Minimum Speed: 0 km/h on Dec 28 01:00	Minimum Daily Speed Average: 1.5 km/h on Dec 28	Hours of Data: 740
Maximum Diurnal Speed Average: 5.5 km/h at hour 14	Minimum Diurnal Speed Average: 4.1 km/h at hour 10	Hours of Missing Data: 4
Monthly Average Speed: 4.74 km/h	Percentiles: P ₁ = 0.7 P ₁₀ = 1.5 Q ₁ = 2.0 Median = 3.2 Q ₃ = 5.9 P ₉₀ = 10.3 P ₉₉ = 24.1	Percent Operational Time: 99.5

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Dec	13	12	9	9	9	6	3	12	12	11	11	7	8	9	9	7	5	3	3	2	3	3	4	2	7.2	13.0
2-Dec	1	2	1	2	2	2	1	2	2	1	2	3	5	9	N	7	5	9	12	13	11	13	11	10	5.5	13.2
3-Dec	10	9	9	9	11	9	8	10	8	8	8	7	5	6	6	5	4	3	2	2	3	3	4	3	6.3	10.5
4-Dec	4	2	3	4	10	14	18	14	15	15	16	17	18	16	24	24	24	27	23	27	31	28	21	13	17.0	30.8
5-Dec	10	9	9	10	7	5	7	8	10	7	9	10	12	18	19	19	14	17	13	9	9	8	8	9	10.7	18.9
6-Dec	9	6	2	2	2	3	3	4	4	3	3	3	3	3	3	1	1	3	2	1	2	3	3	3.1	9.4	
7-Dec	3	2	3	2	3	2	3	2	2	3	6	5	5	4	3	2	2	2	2	1	3	1	1	1	2.7	5.5
8-Dec	3	5	9	10	6	5	8	3	3	2	3	5	3	5	5	4	2	1	2	1	2	3	2	1	4.0	10.3
9-Dec	2	2	2	2	1	3	9	6	3	7	14	12	12	13	10	3	6	10	4	4	12	12	12	14	7.3	14.0
10-Dec	8	4	9	8	10	19	16	4	3	3	11	10	4	4	4	4	4	2	2	3	2	3	5	10	6.4	18.8
11-Dec	16	15	11	9	6	6	7	6	6	5	6	5	5	7	8	9	9	11	12	13	11	14	12	12	9.2	16.2
12-Dec	11	13	10	8	9	7	4	4	4	2	3	2	4	3	3	3	2	2	1	3	2	1	3	2	4.4	12.5
13-Dec	3	3	1	2	3	4	2	3	5	4	N	N	4	3	2	1	2	3	4	4	4	5	4	4	3.2	4.6
14-Dec	4	2	2	2	3	2	3	2	3	N	3	3	3	3	2	1	2	2	2	2	2	2	3	1	2.2	3.9
15-Dec	2	1	2	4	3	2	1	4	3	2	2	2	4	4	2	3	2	2	2	4	3	2	2	2	2.5	3.9
16-Dec	4	3	4	4	3	3	3	5	4	2	1	3	4	3	2	2	3	3	3	6	4	3	2	3	3.1	6.0
17-Dec	2	1	2	2	3	4	4	3	2	4	3	2	2	1	2	1	2	1	2	2	1	1	1	2	2.2	4.2
18-Dec	2	2	2	2	2	4	2	2	1	2	2	4	2	5	9	5	5	6	4	6	6	5	5	4	3.7	8.5
19-Dec	5	4	4	4	3	3	4	6	4	2	5	6	4	4	5	7	8	14	14	9	10	4	3	3	5.7	14.5
20-Dec	3	2	3	2	2	1	3	1	2	2	2	1	1	2	2	2	2	2	4	4	3	4	6	7	2.7	7.3
21-Dec	8	6	8	8	9	10	8	8	10	11	10	9	8	9	8	9	9	8	9	12	11	10	9	7	8.8	11.6
22-Dec	5	2	3	2	1	2	4	6	6	4	6	3	2	2	4	3	4	3	3	4	4	3	4	3	3.3	5.7
23-Dec	3	4	3	4	4	3	3	2	3	2	3	3	4	2	3	2	1	2	2	2	3	3	2	2	2.8	4.4
24-Dec	2	2	3	3	4	5	4	5	4	4	5	4	4	4	3	3	4	3	3	2	2	1	2	2	3.2	4.8
25-Dec	2	2	2	2	2	2	2	2	1	1	1	1	4	7	4	7	5	8	4	4	4	3	4	3	3.2	8.5
26-Dec	2	2	3	3	2	3	3	3	3	2	2	1	2	1	2	2	1	1	1	1	1	1	2	2	1.9	3.4
27-Dec	3	2	1	2	3	2	3	1	1	1	1	1	3	4	3	2	1	2	2	1	1	1	1	1	1.8	3.7
28-Dec	0	1	1	1	1	1	1	2	1	1	1	1	2	1	1	2	2	1	2	2	3	2	2	2	1.5	3.3
29-Dec	1	2	2	2	2	2	3	2	3	6	6	7	8	7	6	6	4	3	3	3	3	3	3	3	3.8	7.6
30-Dec	2	6	7	6	6	7	5	5	5	2	3	7	8	7	6	6	6	5	5	5	3	2	1	2	4.9	7.5
31-Dec	1	1	1	1	2	2	2	2	1	1	2	2	2	3	3	3	2	3	2	1	3	5	6	8	2.4	7.6
	4.7	4.2	4.3	4.2	4.3	4.6	4.7	4.5	4.3	4.1	5.0	4.9	5.0	5.5	5.4	5.1	4.6	5.2	4.8	4.9	5.2	4.9	4.8	4.6	Diurnal Average	
	16.2	14.9	11.4	10.3	10.5	18.8	17.6	14.3	14.6	14.5	16.2	16.6	18.5	17.8	24.1	24.2	24.4	26.9	22.9	27.0	30.8	28.1	20.5	14.0	Diurnal Maximum	

N - Not Valid

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
December 1, 2009 to January 1, 2010**

Maximum Value: 99.2 deg on Dec 15 02:00																					Hours in Service:	744			
Minimum Value: 2.8 deg on Dec 29 14:00																					Hours of Data:	740			
Percentiles: P ₁ = 4.6 P ₁₀ = 6.6 Q ₁ = 9.4 Median = 17.0 Q ₃ = 35.6 P ₉₀ = 59.0 P ₉₉ = 91.1																					Hours of Missing Data:	4			
																					Hours of Calibration:	0			
																					Percent Operational Time:	99.5			
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Dec	6	6	8	7	11	17	60	7	8	6	11	22	26	11	9	6	24	30	29	24	13	20	6	37	60.0
2-Dec	59	31	27	46	44	29	32	41	44	23	18	21	12	8	N	10	12	11	6	7	6	6	5	7	59.1
3-Dec	6	7	5	7	7	6	8	9	9	9	9	14	16	10	9	11	9	11	44	52	38	54	13	42	53.7
4-Dec	17	20	23	17	9	12	6	8	7	7	8	7	8	5	9	4	5	4	5	6	5	5	11	10	23.2
5-Dec	8	7	10	11	14	41	10	7	5	11	9	10	13	6	7	14	10	11	5	15	10	11	7	6	41.1
6-Dec	6	12	47	76	73	22	18	10	10	17	16	12	24	11	15	10	67	89	14	55	85	74	20	21	88.6
7-Dec	30	34	17	15	22	16	16	10	19	21	6	7	9	14	14	25	67	31	44	58	73	68	49	84	84.0
8-Dec	17	19	10	8	13	13	11	12	34	45	20	15	22	17	11	10	35	37	25	44	27	13	18	77	77.5
9-Dec	23	91	46	50	77	73	10	12	46	19	8	9	9	7	11	40	13	17	29	10	12	7	7	7	90.8
10-Dec	14	25	9	9	9	8	10	46	23	32	16	10	29	22	7	13	35	45	82	57	81	54	11	7	82.0
11-Dec	8	6	7	9	15	17	9	10	9	13	5	12	8	11	10	8	7	11	12	6	5	5	4	6	16.6
12-Dec	7	7	8	10	7	6	8	9	12	79	20	28	13	20	16	12	18	27	37	12	54	35	8	17	79.2
13-Dec	9	21	73	80	15	8	10	9	6	8	N	N	14	18	18	59	24	8	8	5	4	3	7	8	80.2
14-Dec	10	55	19	12	13	23	18	25	19	N	18	47	13	21	29	82	50	21	49	21	28	32	29	53	82.0
15-Dec	19	99	22	17	31	45	37	15	50	47	47	57	16	36	31	38	24	86	59	6	10	43	31	38	99.2
16-Dec	17	18	11	16	13	19	13	17	10	17	59	23	16	23	23	15	27	84	92	37	96	24	55	42	95.7
17-Dec	52	91	74	22	13	4	14	54	62	6	8	20	9	30	19	19	35	81	23	42	81	61	52	24	91.4
18-Dec	34	38	23	48	41	31	18	81	96	51	54	46	78	69	82	56	19	5	10	12	10	8	12	30	96.1
19-Dec	47	56	41	36	27	54	19	35	28	37	7	18	17	10	39	9	12	8	5	18	7	50	14	49	56.3
20-Dec	15	43	22	76	11	87	64	82	39	8	8	89	52	52	45	77	60	57	19	12	50	9	8	6	89.3
21-Dec	8	9	8	8	8	7	9	8	7	7	7	7	9	7	9	7	6	6	7	5	5	5	5	8	9.3
22-Dec	8	19	16	15	19	23	29	9	13	21	11	29	60	41	25	19	11	19	21	7	8	11	32	38	59.7
23-Dec	48	66	18	12	10	25	13	12	11	11	5	12	8	16	31	48	93	36	28	31	15	12	31	25	92.6
24-Dec	26	13	13	11	7	6	10	9	9	5	5	15	12	14	15	28	23	22	9	29	32	63	81	56	81.0
25-Dec	37	21	32	36	19	22	29	14	50	44	33	33	19	9	13	7	7	6	13	18	5	24	7	17	50.1
26-Dec	20	23	13	13	45	9	17	12	13	10	37	32	48	60	27	28	69	50	84	72	44	34	12	56	84.2
27-Dec	13	39	75	54	27	37	23	54	36	57	18	59	20	36	10	35	29	24	5	26	41	21	23	59	74.9
28-Dec	31	12	42	58	26	56	11	6	32	49	38	63	36	27	82	45	67	38	15	39	17	17	22	15	82.1
29-Dec	94	18	21	28	22	17	29	10	17	7	10	6	5	3	5	8	10	17	15	11	17	10	10	5	93.7
30-Dec	8	7	5	7	7	9	8	6	8	29	21	6	11	11	11	12	16	13	11	19	10	78	28	36	78.2
31-Dec	70	83	76	65	75	43	23	49	73	82	63	29	25	19	20	16	58	19	73	69	76	12	12	11	83.0
93.7	99.2	75.9	80.2	77.2	87.1	63.5	82.2	96.1	81.9	62.7	89.3	77.6	68.8	82.4	82.0	92.6	88.6	91.8	72.4	95.7	78.2	81.0	84.0		
N - Not Valid																									

PASZA

Monthly Passive Data Summary

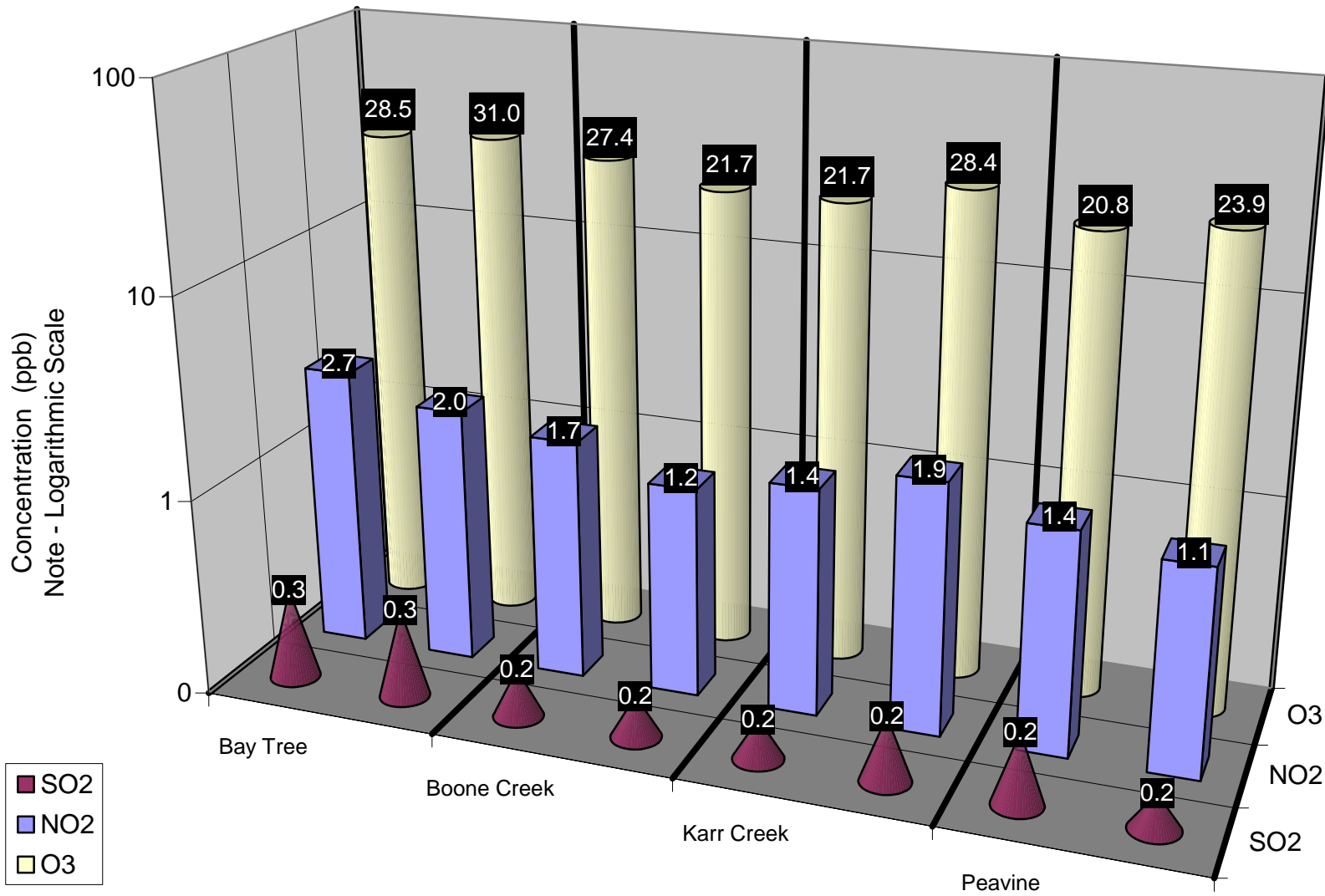
PASZA Passive Results for December 2009

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	Site Legal
Duplicates					
2a	Bay Tree	0.3	28.5	2.7	
2b	Bay Tree	0.3	31.0	2.0	
5a	Boone Creek	0.2	27.4	1.7	
5b	Boone Creek	0.2	21.7	1.2	
38a	Karr Creek	0.2	21.7	1.4	
38b	Karr Creek	0.2	28.4	1.9	
44a	Peavine	0.2	20.8	1.4	
44b	Peavine	0.2	23.9	1.1	
1	Silver Valley	0.6	30.9	1.9	08-27-081-11 W6M
2	Bay Tree	0.3	29.7	2.3	13-16-078-13 W6M
3	Forth Creek	0.5	32.8	2.8	04-13-082-07 W6M
4	Gordondale	0.5	34.4	1.6	04-34-078-10 W6M
5	Boone Creek	0.2	24.6	1.4	01-23-076-11 W6M
7	Steeprock Creek	0.3	33.4	1.1	09-35-072-13 W6M
9	Spirit River	0.4	26.8	2.8	08-12-079-07 W6M
10	Woking	0.4	33.1	1.2	01-13-076-07 W6M
11	Webber Creek	0.6	29.6	2.7	09-36-074-09 W6M
12	Hythe	0.4	26.4	3.4	14-36-072-11 W6M
14	Sylvester	0.2	25.7	1.2	08-06-069-12 W6M
16	Beaverlodge	0.4	33.2	5.4	15-36-071-10 W6M
17	Poplar	0.5	26.6	3.8	13-06-073-08 W6M
18	Saddle Hills	0.3	33.0	1.9	04-25-074-07 W6M
19	Wanham	0.6	30.2	2.9	16-22-077-03 W6M
20	Shaftesbury	0.3	27.3	N/A	04-03-082-23 W5M
21	Eaglesham	0.3	24.5	1.5	16-21-079-25 W5M
23	Bear Lake	0.5	30.4	2.8	15-31-072-06 W6M

PASZA Passive Results for December 2009 (Continued)

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	Site Legal
24	Wembley	0.3	28.4	4.3	12-31-070-08 W6M
25	Pinto Creek	0.2	25.9	2.3	04-24-069-11 W6M
26	Flyingshot	0.3	21.8	5.1	15-36-070-07 W6M
27	Grande Prairie I	0.4	19.0	13.9	08-15-071-06 W6M
28	Clairmont Lake	0.5	28.9	3.5	09-06-073-04 W6M
29	Smoky Heights	0.5	26.5	4.9	04-06-075-02 W6M
30	Fitzsimmons	0.3	22.6	4.0	15-36-072-03 W6M
32	Gold Creek	0.2	19.4	4.1	06-33-067-05 W6M
33	Wapiti	0.3	24.6	4.6	02-25-071-03 W6M
34	Puskaskau	0.2	25.9	0.9	15-35-074-25 W5M
35	Jean Cote	0.5	28.0	1.6	12-35-079-21 W5M
36	Guy	0.3	27.9	1.8	03-04-076-22 W5M
37	Crooked Creek	0.2	26.6	3.3	16-01-071-26 W5M
38	Karr Creek	0.2	25.1	1.7	10-16-065-02 W6M
39	Clouston Creek	0.5	31.3	2.2	12-01-073-22 W5M
40	McLennan	0.3	26.6	2.3	03-29-077-19 W5M
41	Valleyview	0.5	29.1	2.0	09-30-069-22 W5M
42	Sunset House	0.5	37.8	0.8	05-32-070-19 W5M
43	High Prairie	0.2	24.1	4.8	16-13-074-17 W5M
44	Peavine	0.2	22.4	1.2	03-05-079-15 W5M
45	Gift Lake	0.1	22.7	1.5	10-07-079-12 W5M
46	Little Smoky	0.3	20.9	4.8	12-01-065-21 W5M
47	Kinuso	0.1	21.2	2.0	12-10-073-10 W5M
48	Deer Mountain	0.1	30.3	1.0	15-22-068-09 W5M
49	Grande Prairie HP	0.3	17.2	12.1	17-26-071-06 W6M

*BDL = Below Detection Level



Duplicate Summary Chart

Passive Summary for December 2009

Stats	Sulphur Dioxide SO ₂	Ozone O ₃	Nitrogen Dioxide NO ₂
	ppb	ppb	ppb

Passive Summary for December 2009 (PASZA Zone)			
Mean	0.3	27.1	3.1
Standard Deviation	0.1	4.5	2.6
Minimum	0.1	17.2	0.8
Minimum At	Deer Mountain (#48)	Grande Prairie HP (#49)	Sunset House (#42)
Maximum	0.6	37.8	13.9
Maximum At	Wanham (#19)	Sunset House (#42)	Grande Prairie I (#27)

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

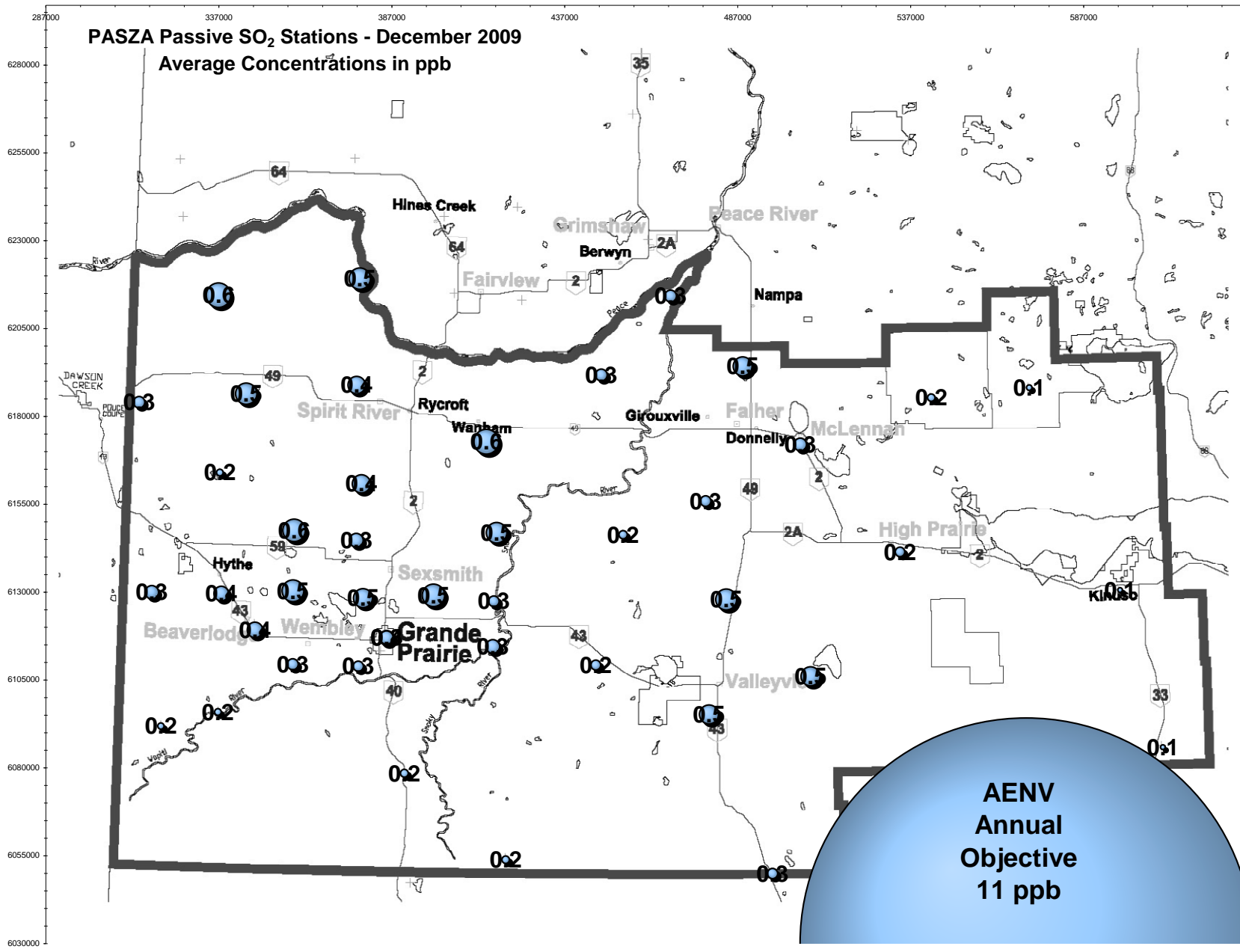
	SO ₂	O ₃	NO ₂
PASZA Beaverlodge station	0.6	23.8	8.8
PASZA Beaverlodge passive	0.4	33.2	5.4

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

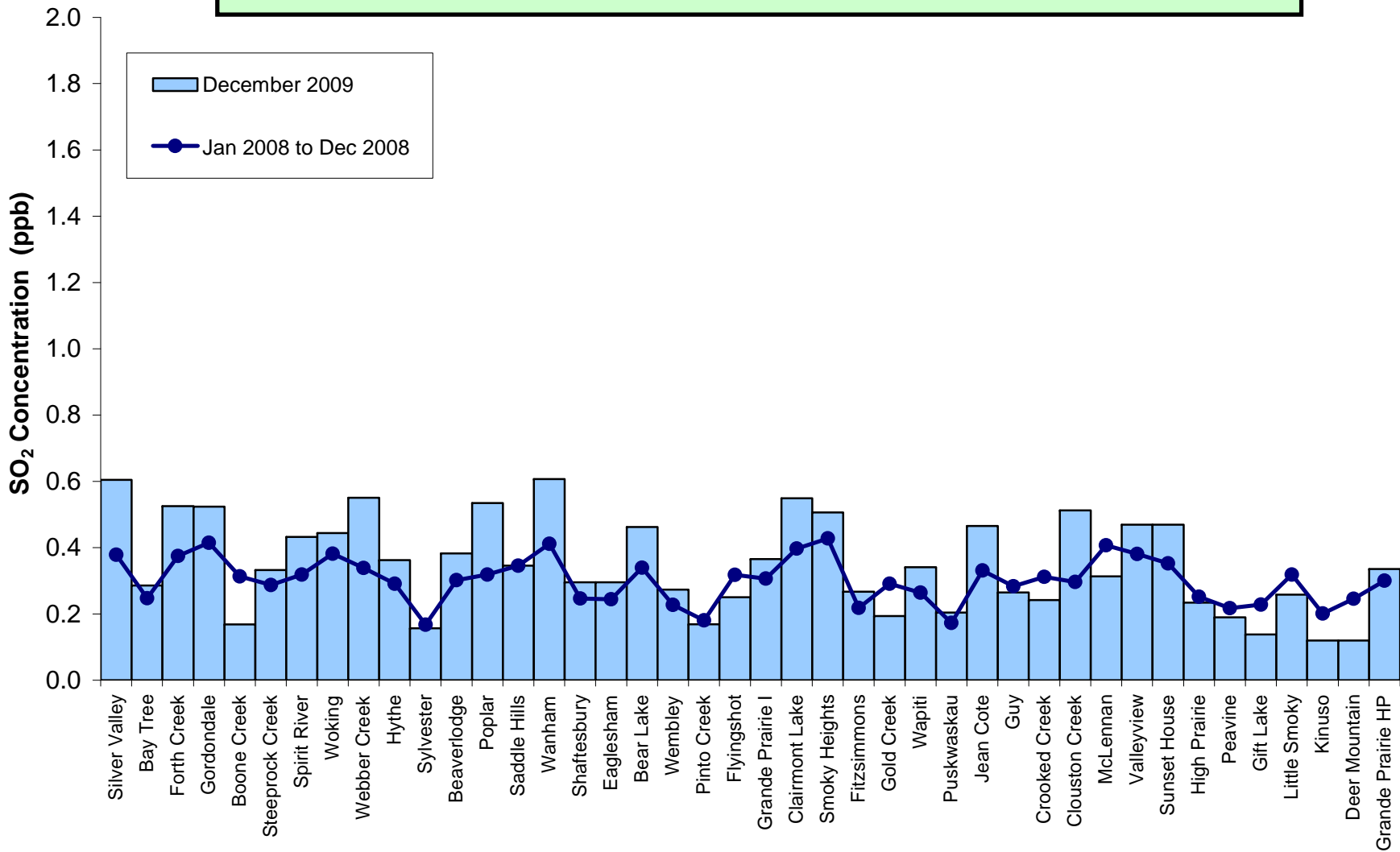
	SO ₂	O ₃	NO ₂
PASZA Henry Pirker station	0.4	13.1	20.2
PASZA Grande Prairie passive	0.3	17.2	12.1

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

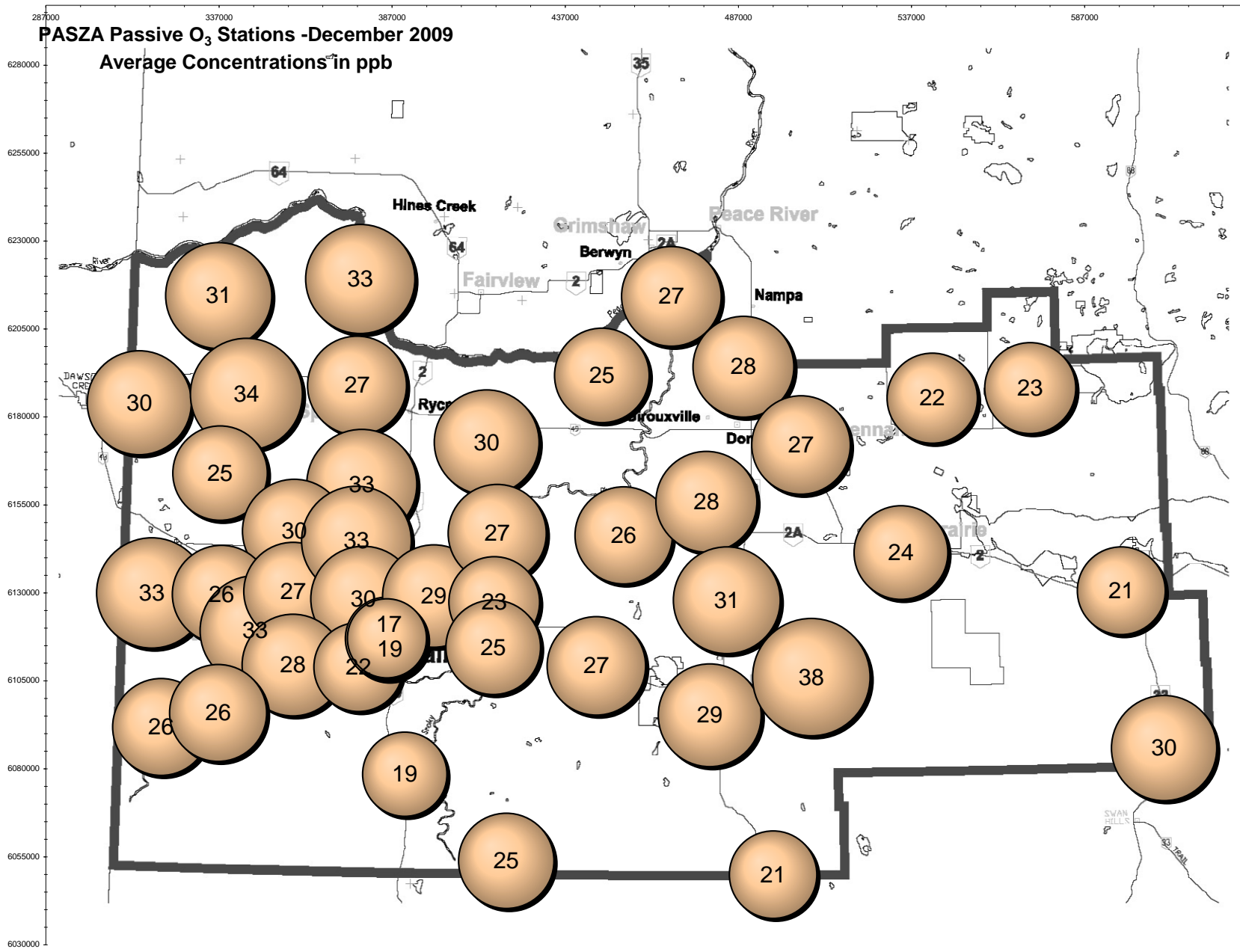
	SO ₂	O ₃	NO ₂
PASZA Portable Kinuso station	0.1	21.8	4.2
PASZA Kinuso passive	0.1	21.2	2.0



Alberta Ambient Air Quality Objective - Annual SO₂ Objective is 11 ppb

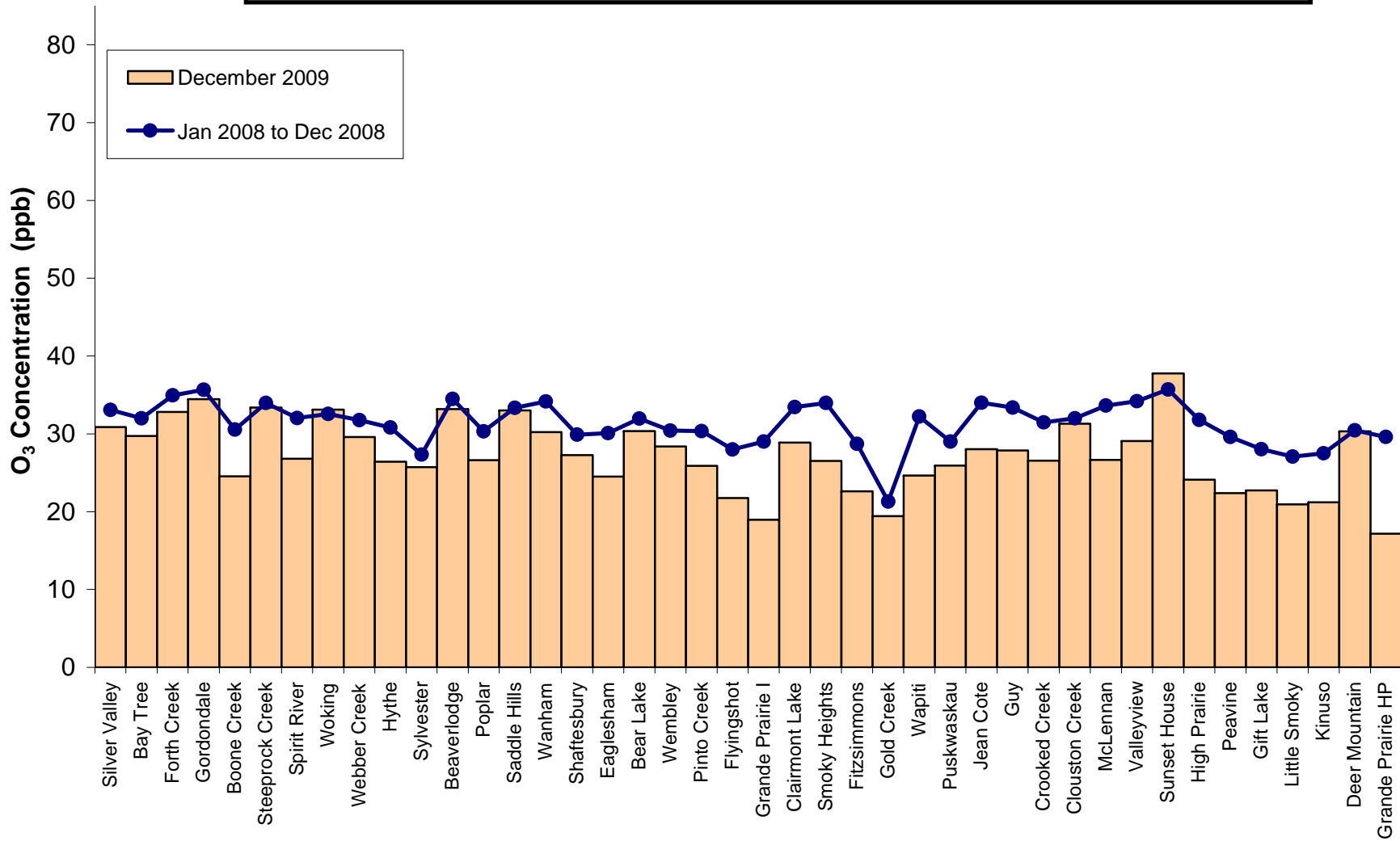


SO₂ Summary Chart



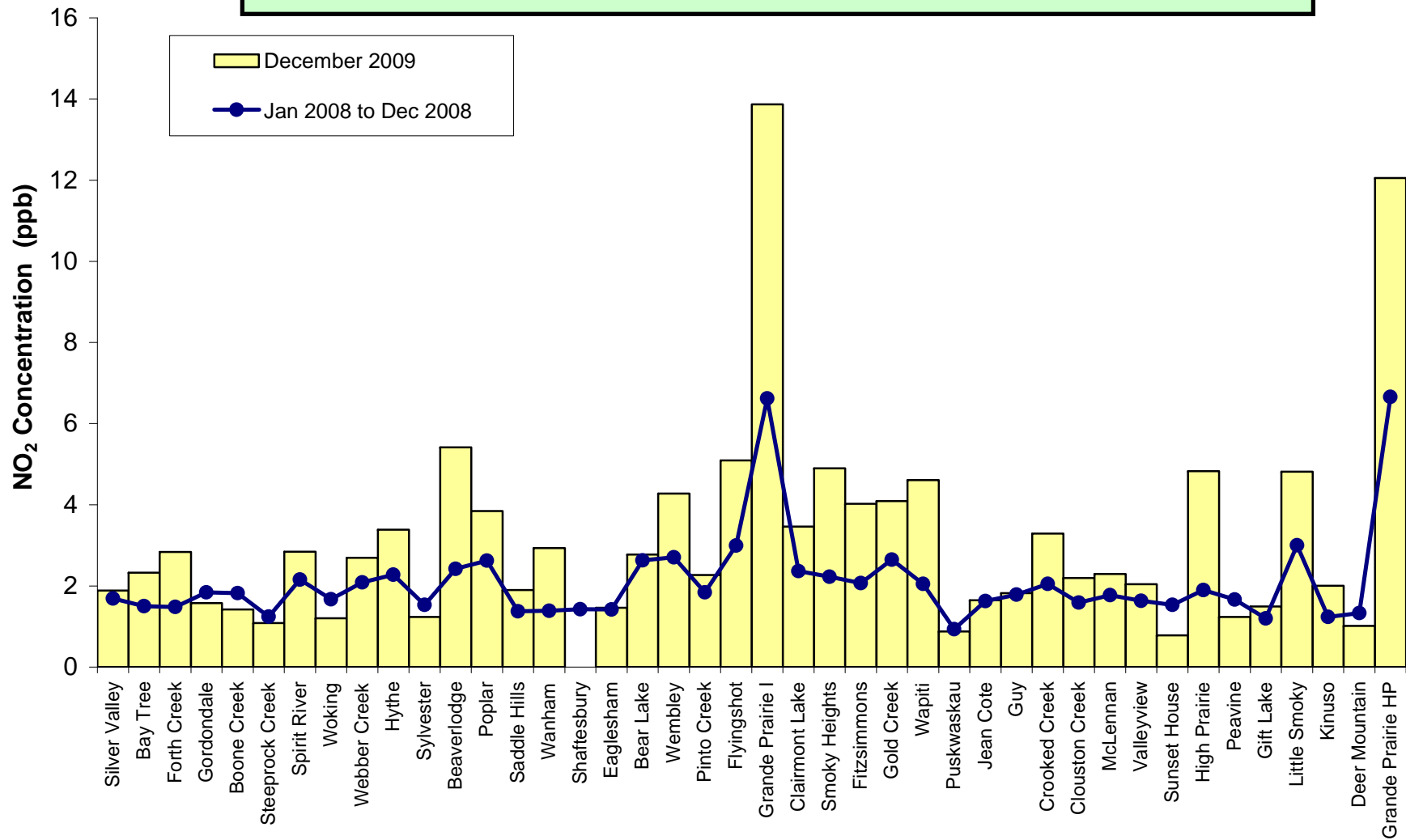
O₃ Bubble Chart

Alberta Ambient Air Quality Objective - No Annual O₃ Objective



O₃ Summary Chart

Alberta Ambient Air Quality Objective - Annual NO₂ Objective is 32 ppb



NO₂ Summary Chart

December 2009 Calibration Reports

**PASZA - Henry Pirker Station with the following calibrations:
SO₂, NO, NO₂, NO_x, O₃, CO, THC, TRS**

**PASZA – Evergreen Park Station with the following calibrations:
SO₂, TRS**

**PASZA – Smoky Heights Station with the following calibrations:
SO₂, TRS**

**PASZA – Beaverlodge Station with the following calibrations:
SO₂, NO, NO₂, NO_x, O₃**

**PASZA – Kinuso (Portable) Station with the following calibrations:
SO₂, TRS, NO, NO₂, NO_x & O₃,**

**PASZA – Valleyview Station with the following calibrations:
SO₂ & H₂S**

Calibration Report



Parameter SO2
 Air Monitoring Network PASZA

Station Information

Calibration Date	December 5, 2009	Previous Calibration	November 5, 2009
Station Number	1	Station Location	Henry Pirker
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	10:43	End Time (MST)	13:06
Barometric Pressure	0.958 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Conc	50.6 ppb	Cal Gas Cert Date	13/3/2009
		Cal Gas Cylinder #	AAL 15377
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	10
	<u>Before</u>		<u>After</u>
Calculated slope	1.002763	Calculated slope	0.999282
Calculated intercept	-2.767206	Calculated intercept	-1.223682
Analyzer make	TEI 43C	Analyzer serial #	610816292

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	8.4		8.5	
Coefficient	.823		.815	
Pressure	662.1	mm Hg	662.1	mm Hg
Flow	0.489	lpm	0.490	lpm
Lamp Voltage	45599	Hz	44501	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
4989	0.00	0.0	0.3	N/A
4991	39.85	400.8	402.0	0.9969
4991	19.91	201.1	202.3	0.9940
4991	9.95	100.7	103.3	0.9741
4989	0.00	0.0	0.2	As Found Zero
4991	39.85	400.8	402.3	As Found Span
Average Correction Factor				0.9884

Calculated value of As Found Response: 400.5 ppb Percent Change of As Found: 0.1%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.1	ppb
Auto span	311.6	ppb	262.0	ppb

Notes: _____

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PASZA



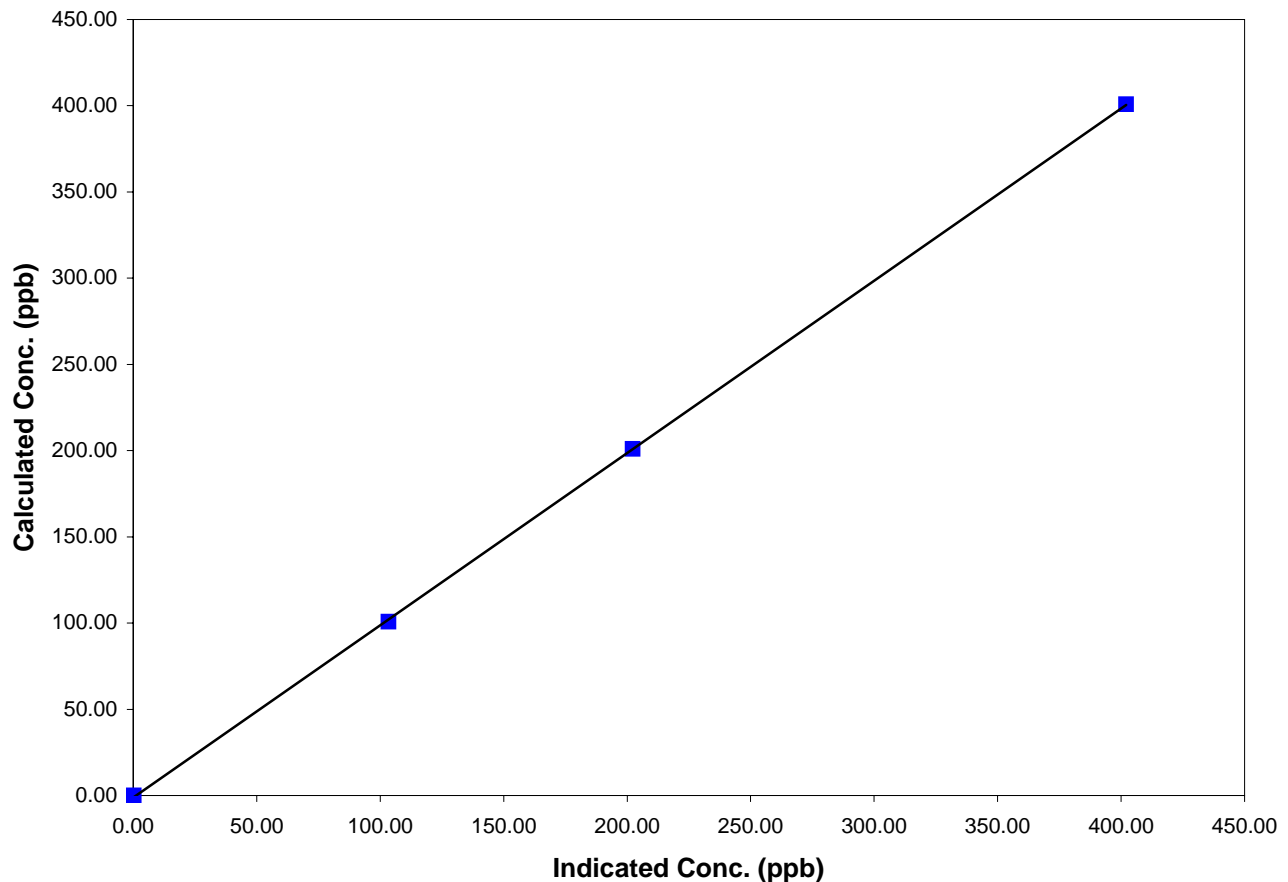
Station Information

Calibration Date	December 5, 2009	Previous Calibration	November 5, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:43	End Time (MST)	13:06
Analyzer make/model	TEI 43C	Analyzer serial #	610816292

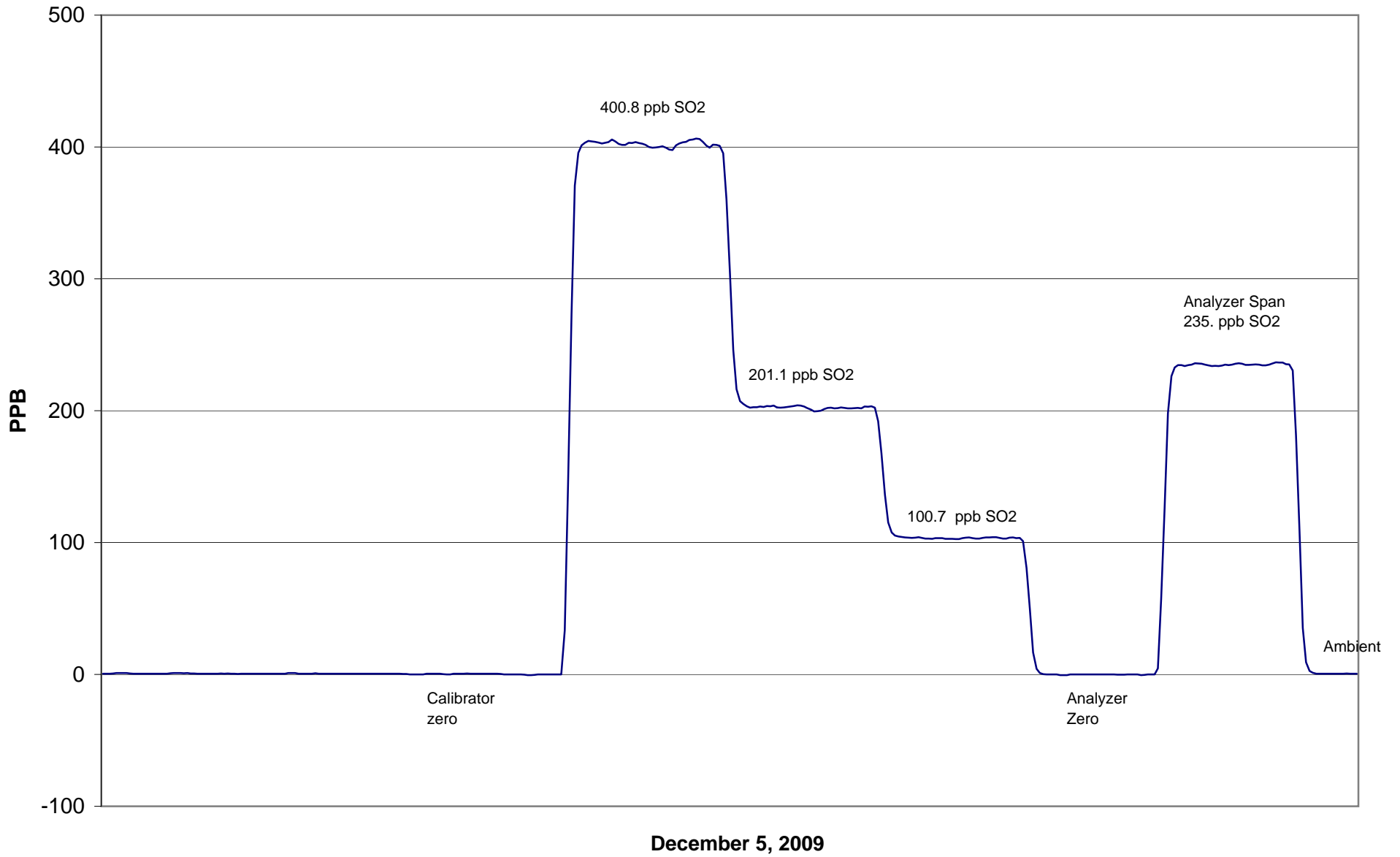
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A		
400.8	402.0	0.9969	Correlation Coefficient	0.999967
201.1	202.3	0.9940		
100.7	103.3	0.9741	Slope	0.999282
			Intercept	-1.223682

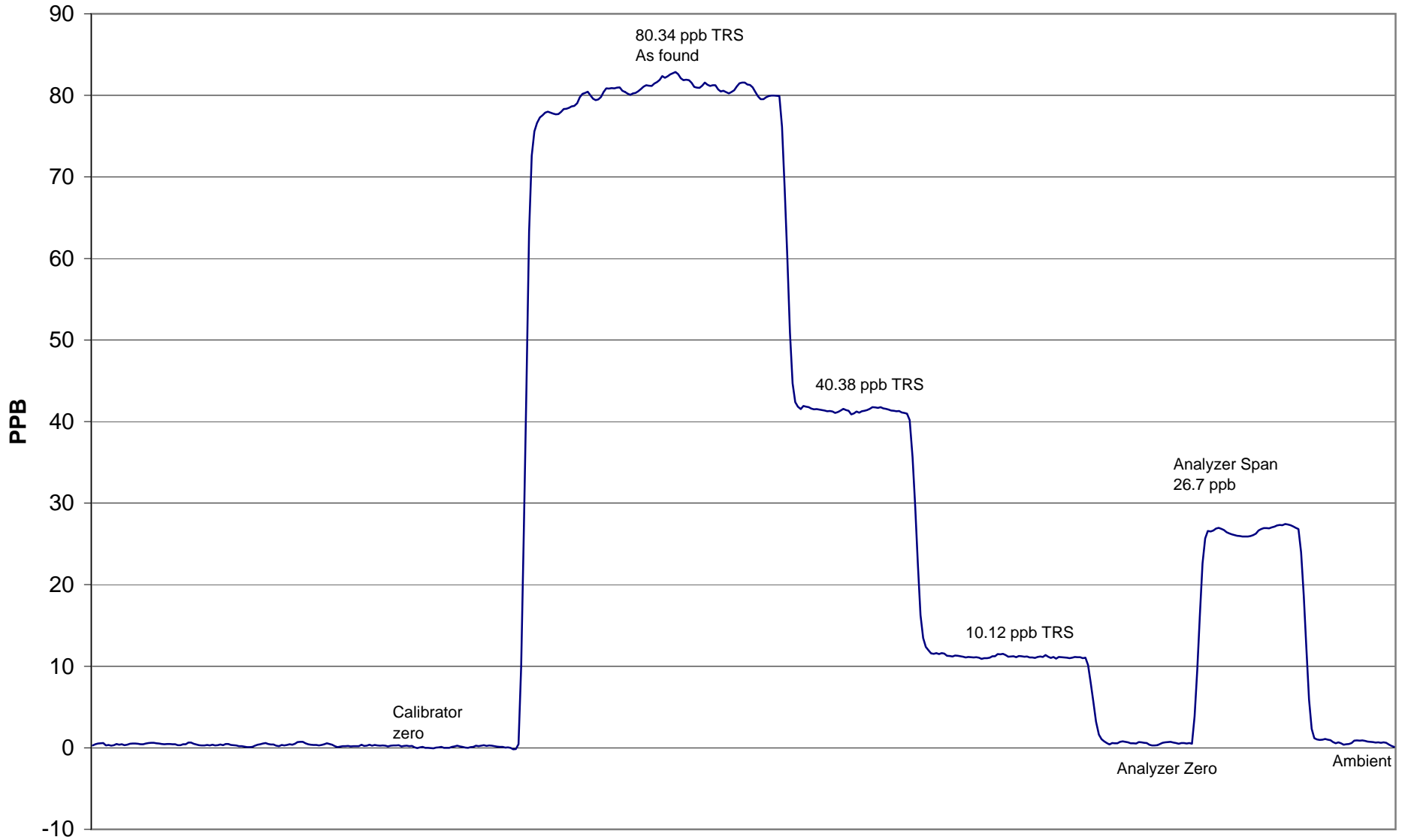
SO2 Calibration Curve



Henry Pirker SO₂ Calibration



Henry Pirker TRS Calibration



December 4, 2009

Calibration Report

Parameter **NO_x-NO-NO₂**
 Air Monitoring Network **PASZA**



Station Information

Calibration Date	December 5, 2009	Previous Calibration	November 5, 2009
Station Number	1	Station Location	Henry Pirker
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Installation	<input type="checkbox"/> Removal
Start Time (MST)	10:43	End Time (MST)	14:36
Barometric Pressure	0.958 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	0.997445	1.004540	1.003656
	Data Offset	-0.433103	-2.863358	-2.244783
After	Data Slope	1.000915	1.006418	1.005715
	Data Offset	-0.027066	-2.718584	-2.714903
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	9.2	mV	9.2	mV
NOx bkgnd	9.5	mV	9.9	mV
NO coefficient	0.705		0.708	
NOx coefficient	1.002		0.999	
NO2 conv temp	318.0	Deg C	319.0	Deg C
PMT Temp	-2.5	Deg C	-2.5	Deg C
PMT Volt	-786.0	mV	-787.0	mV
R Cell Press	172.1	in Hg	172.9	in Hg
Sample Flow	0.787	ccm	0.792	ccm

Notes:

Calibration Report

Parameter **NOx-NO-NO₂**
 Air Monitoring Network **PASZA**



Station Information

Calibration Date: December 5, 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	4989	0.00	0.0	0.0	0.0	0.3	0.0	0.2	N/A	N/A
1	4991	39.85	392.9	392.9	0.0	391.7	391.8	-0.1	1.0030	1.0027
2	4991	19.87	196.7	196.7	0.0	199.6	200.0	-0.4	0.9854	0.9836
3	4991	9.91	98.3	98.3	0.0	102.7	103.0	-0.4	0.9572	0.9546
AFZ	4991	0.00	0.0	0.0	0.0	0.3	0.0	0.2	0.0000	0.0000
AFS	4991	39.84	392.8	392.8	0.0	391.7	391.8	-0.1	1.0027	1.0025
Average Correction Factor									0.9818	0.9803

As Found Concentrations: NO_x= 388.5 NO= 389.6 As Found Percent Change NO_x= -1.1% NO= -0.8%

GPT Calibration Data

Dilution Flow 4989 ccm Source Gas Flow 39.84 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	0.0	0.0	0.0	0.3	0.0	0.2	N/A	N/A	N/A	N/A
NO point	392.6	392.6	0.0	392.0	392.6	-0.7	1.0017	1.0000	N/A	N/A
300	392.6	139.4	253.2	392.5	139.4	253.2	1.0004	1.0000	1.0000	100.0%
200	392.6	219.1	173.6	392.1	219.1	173.2	1.0014	1.0000	1.0022	99.8%
100	392.6	298.5	94.1	392.3	298.5	94.0	1.0009	1.0000	1.0015	99.9%
Average Correction Factor							1.0009	1.0000	1.0012	99.9%

AIC Data

Parameter	Previous calibration				Current calibration			
	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.1	0.0	0.0	ppb	-0.4	-0.4	0.0	ppb
Auto span	154.9	153.6	1.2	ppb	158.7	157.8	1.0	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter NO₂

Air Monitoring Network PASZA



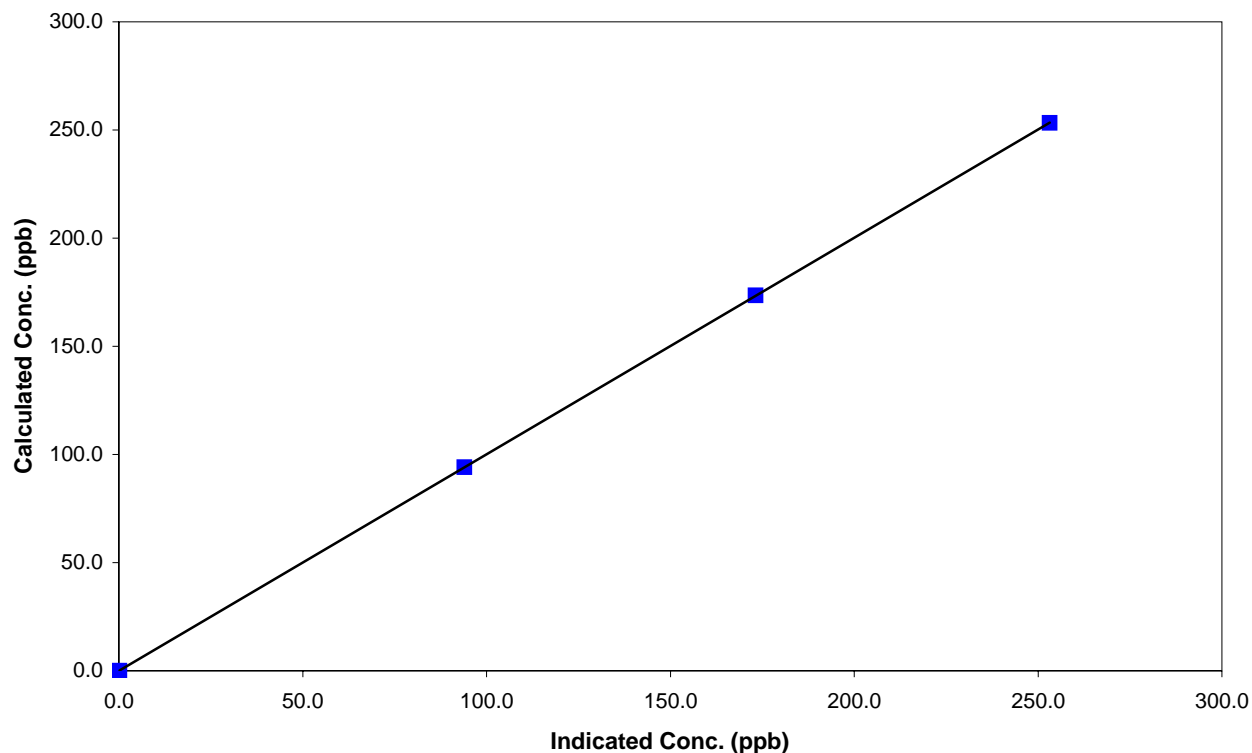
Station Information

Calibration Date	December 5, 2009	Previous Calibration	November 5, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:43	End Time (MST)	14:36
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	0.2	N/A	Correlation Coefficient	0.999996
253.2	253.2	1.0000		
173.6	173.2	1.0022	Slope	1.000915
94.1	94.0	1.0015		
			Intercept	-0.027066

NO₂ Calibration Curve



Calibration Summary



Parameter NO_x

Air Monitoring Network PASZA

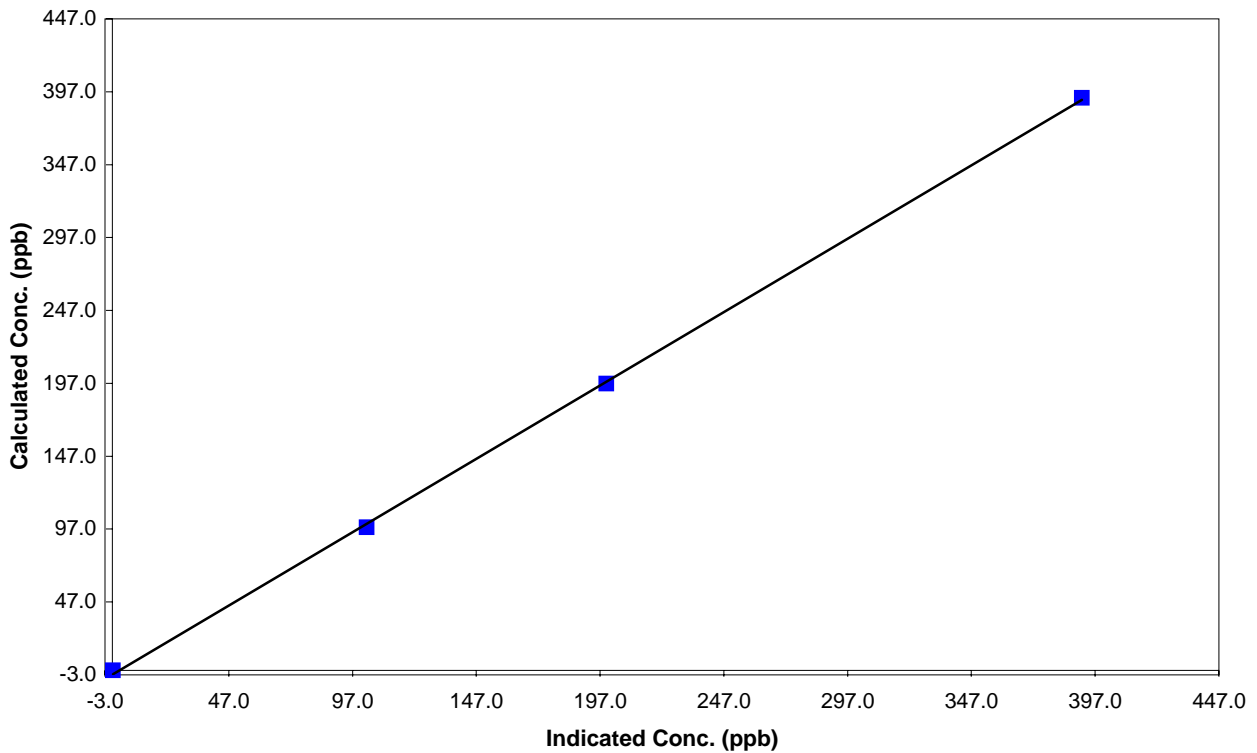
Station Information

Calibration Date	December 5, 2009	Previous Calibration	November 5, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:43	End Time (MST)	14:36
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	0.3	N/A	Correlation Coefficient	0.999816
392.9	391.7	1.0030		
196.7	199.6	0.9854	Slope	1.006418
98.3	102.7	0.9572		
			Intercept	-2.718584

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PASZA



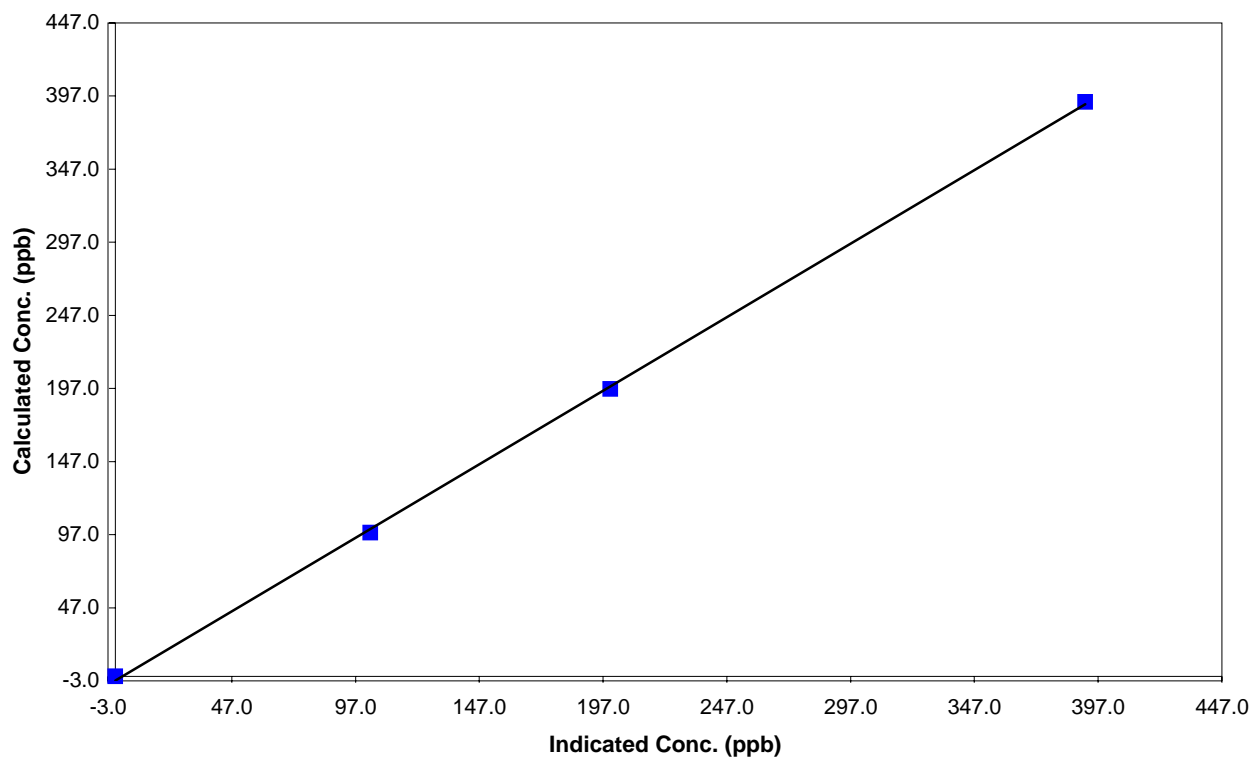
Station Information

Calibration Date	December 5, 2009	Previous Calibration	November 5, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:43	End Time (MST)	14:36
Analyzer make	TEI 42C	Analyzer serial #	508011073

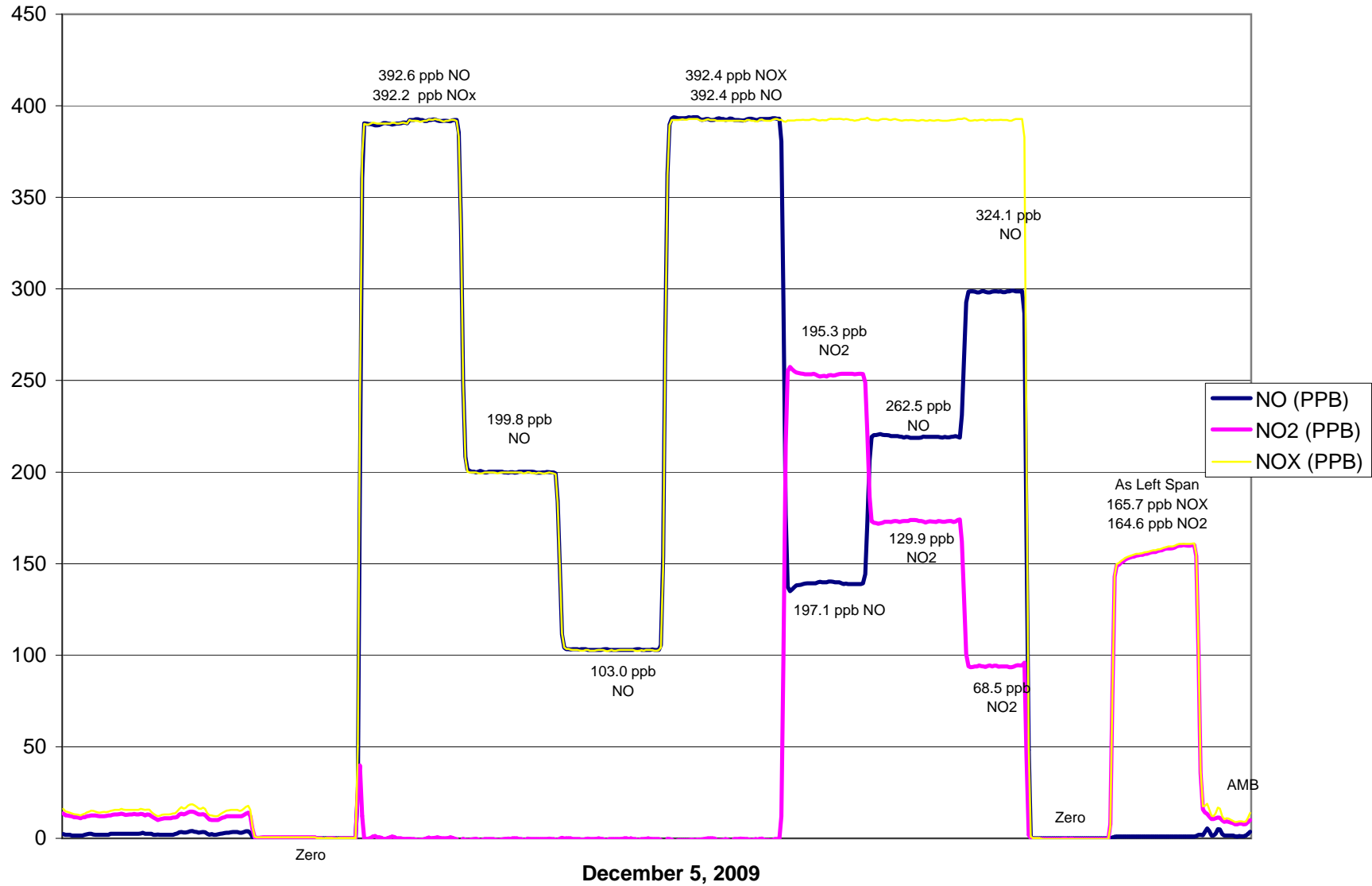
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999773
392.9	391.8	1.0027		
196.7	200.0	0.9836		
98.3	103.0	0.9546		
			Slope	1.005715
			Intercept	-2.714903

NO Calibration Curve



Henry Pirker NO_x Calibration



Calibration Report

Parameter 03
 Air Monitoring Network PASZA



Station Information

Calibration Date	December 5, 2009	Previous Calibration	October 15, 2009
Station Number	1	Station Location	Henry Pirker
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	13:40	End Time (MST)	15:50
Barometric Pressure	0.958 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
	<u>Before</u>		<u>After</u>
Calculated slope	0.862538	Calculated slope	1.008022
Calculated intercept	1.494055	Calculated intercept	-0.183426
Analyzer make	TECO 49C	Analyzer serial #	607415761

	before		after	
Concentration range	500	ppb	500	ppb
offset	-0.9	ppb	-0.9	ppb
slope	1.014		1.014	
O3 Lamp temp	71.2	Deg C	71	Deg C
Intensities	96093/80463	mV	90903/80527	mV
Pressure	706.3	inches Hg	717.6	inches Hg
Flow A	0.709	ccm	0.710	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	4991	0.0	0.1	N/A
300	4991	253.2	251.3	1.0075
200	4991	173.6	172.4	1.0069
100	4991	94.1	93.7	1.0047
0	4991	0.0	0.5	As found zero
300	4991	253.2	251.2	As found span
Average Correction Factor				1.0064

Calculated value of As Found Response: 217.8 ppm Percent Change of As Found: -14.0%

	before calibration		after calibration	
Auto zero	0.3	ppb	0.3	ppb
Auto span	160.6	ppb	165.8	ppb

Notes: _____

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter 03

Air Monitoring Network PASZA



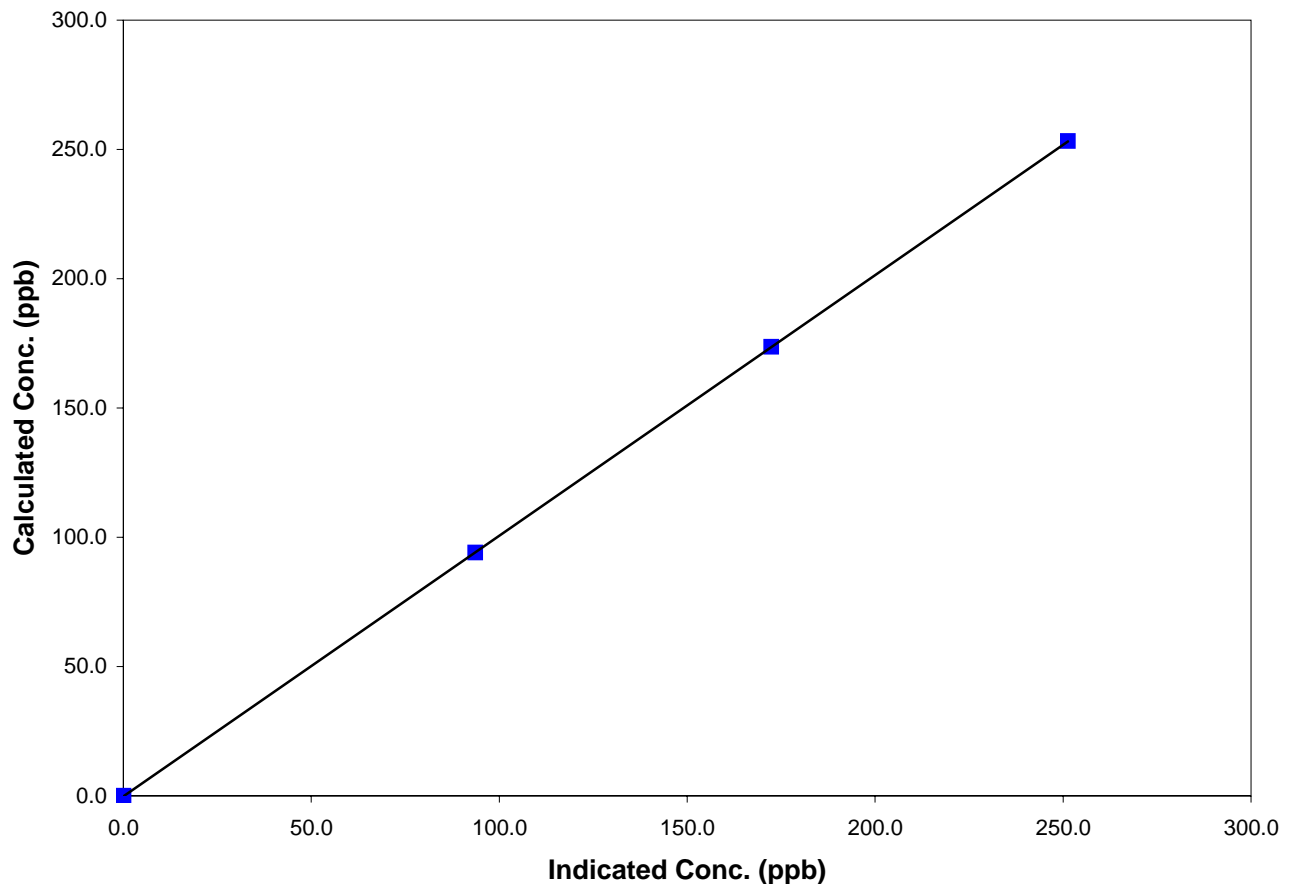
Station Information

Calibration Date	December 5, 2009	Previous Calibration	October 15, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	13:40	End Time (MST)	15:50
Analyzer make/model	TECO 49C	Analyzer serial #	607415761

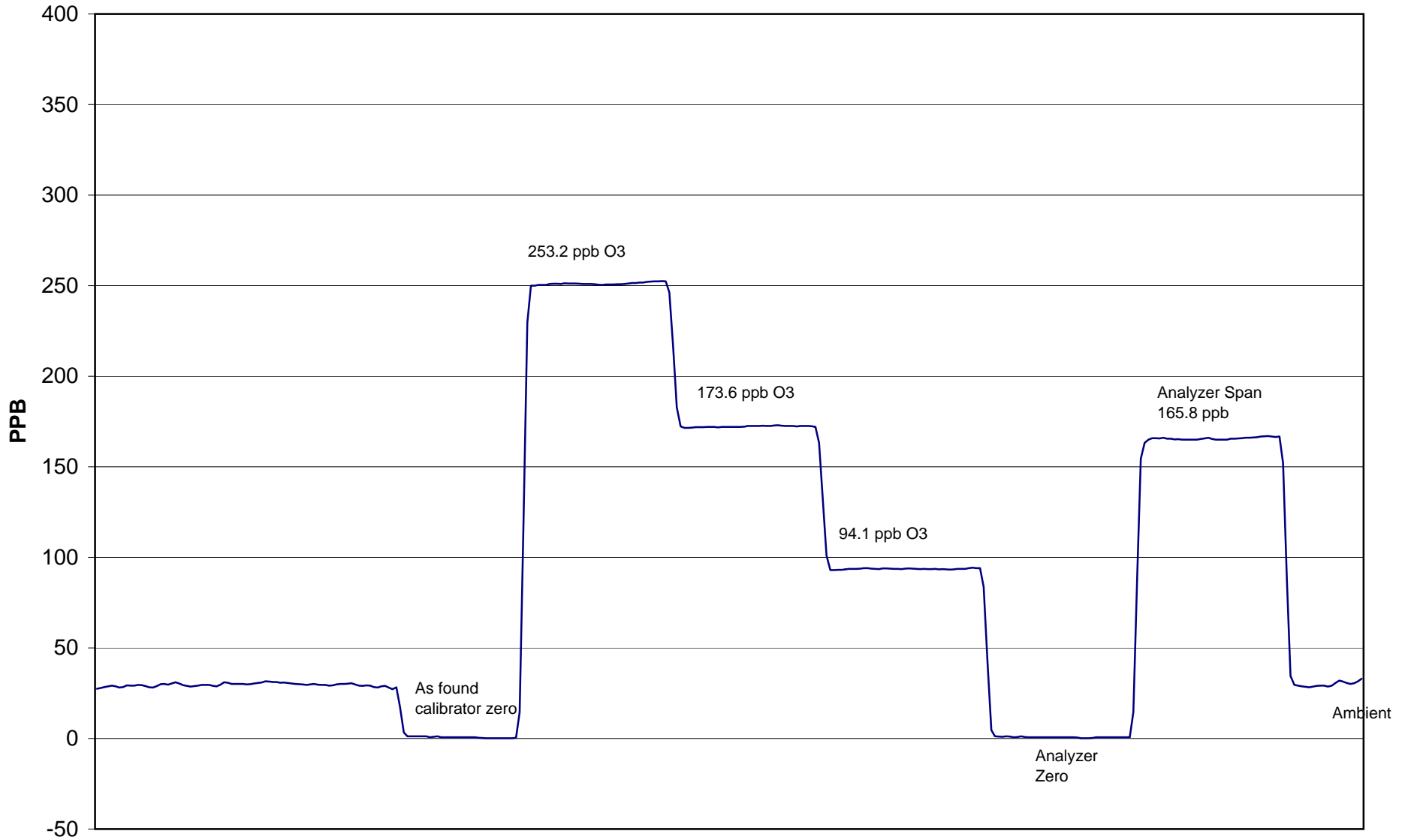
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	NA		
253.2	251.3	1.0075	Correlation Coefficient	0.999999
173.6	172.4	1.0069		
94.1	93.7	1.0047	Slope	1.008022
			Intercept	-0.183426

O3 Calibration Curve



Henry Pirker O₃ Calibration



December 5, 2009

Calibration Report



Parameter CO
 Air Monitoring Network PASZA

Station Information

Calibration Date	December 4, 2009	Previous Calibration	November 8, 2009
Station Number	1	Station Location	Henry Pirker
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	10:05	End Time (MST)	13:00
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
	<u>Before</u>		<u>After</u>
Calculated slope	1.017246	Calculated slope	0.997197
Calculated intercept	-0.334835	Calculated intercept	-0.236824
Analyzer make	TEI Model 48C	Analyzer serial #	508011062

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO span setting	1.054		1.054	
CO zero setting	7.599		7.599	
Sample pressure	689	mm Hg	681.3	mm Hg
Sample Flow	1.143	LPM	1.134	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	0.05	N/A
4991	39.85	23.76	23.97	0.9915
4991	19.88	11.90	12.27	0.9701
4991	9.94	5.96	6.41	0.9296
4990	0.00	0.00	0.05	As Found Zero
4991	39.85	23.76	23.97	As Found Span
Average Correction Factor				0.9638

Calculated value of As Found Response: 23.998 ppm Percent Change of As Found: -1.0%

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	18.92	ppm	18.84	ppm

Notes: _____

Calibration Performed By: Grover Christiansen

Calibration Summary



Parameter CO
 Air Monitoring Network PASZA

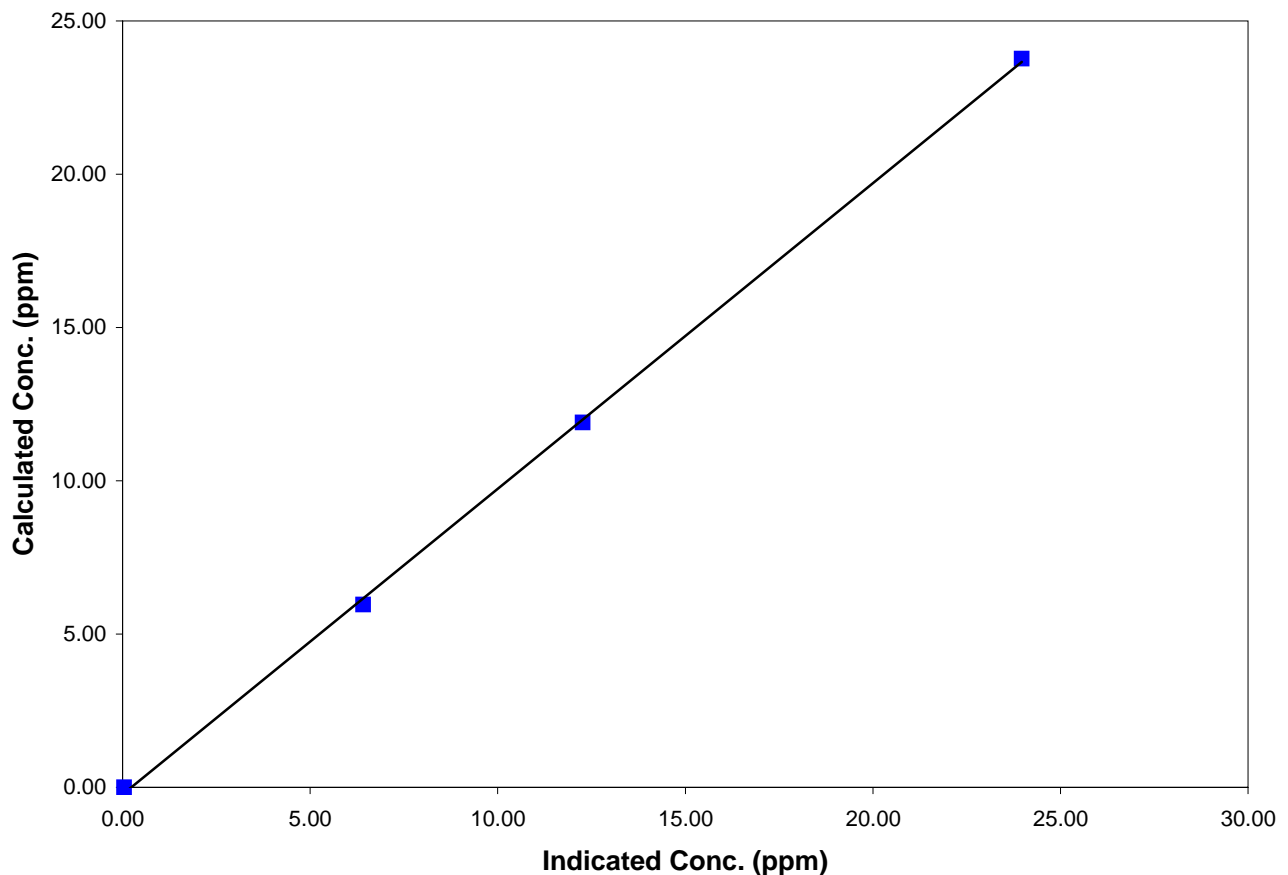
Station Information

Calibration Date	December 4, 2009	Previous Calibration	November 8, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:05	End Time (MST)	13:00
Analyzer make/model	TEI Model 48C	Analyzer serial #	508011062

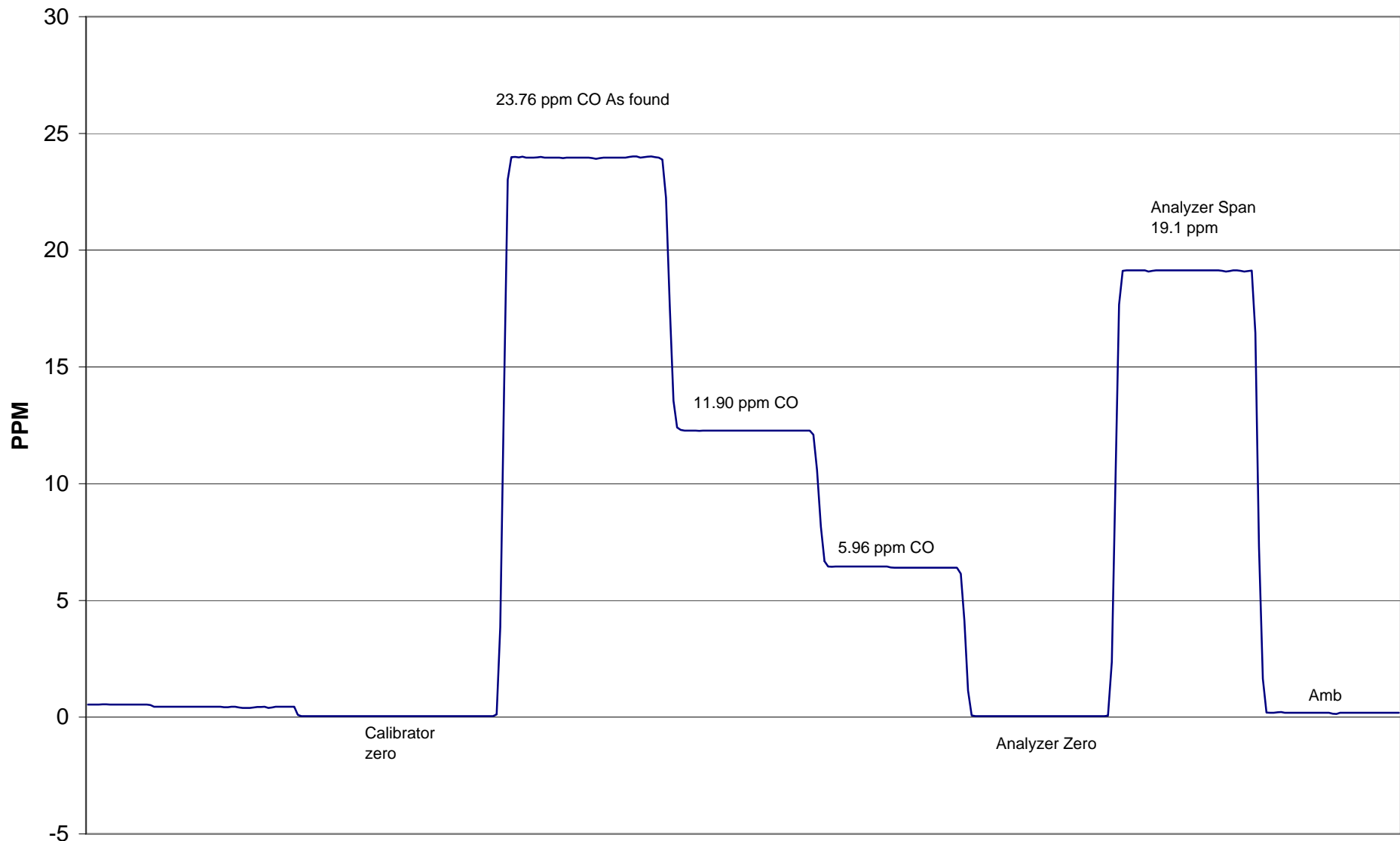
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.046	N/A	Correlation Coefficient	0.999694
23.763	23.966	0.9915		
11.902	12.269	0.9701	Slope	0.997197
5.960	6.411	0.9296		
			Intercept	-0.236824

CO Calibration Curve



Henry Pirker CO Calibration



December 4, 2009

Calibration Report



Parameter THC
 Air Monitoring Network PASZA

Station Information

Calibration Date	December 4, 2009	Previous Calibration	November 23, 2009
Station Number	1	Station Location	Henry Pirker
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	14:00	End Time (MST)	16:47
Barometric Pressure	0.937 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	701 ppm CH4/ 299 ppm C3H8	Cal Gas Expiry Date	2/4/2010
Cal Gas CH4 equiv	1523.25 ppm	Cal Gas Cylinder #	ALM 004476
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	9
	<u>Before</u>		<u>After</u>
Calculated slope	1.028802	Calculated slope	1.012401
Calculated intercept	-0.024193	Calculated intercept	-0.068855
Analyzer make	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

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

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.00	0.07	N/A
4990	69.50	20.92	20.77	1.0074
4989	29.94	9.09	8.94	1.0163
4988	9.92	3.02	3.12	0.9695
4988	0.00	0.00	0.07	As Found Zero
4988	69.82	21.03	20.77	As Found Span
Average Correction Factor				0.9978

Calculated value of As Found Response: 21.270 ppm Percent Change of As Found: -1.2%

	before calibration		after calibration	
Auto zero	0.10	ppm	0.00	ppm
Auto span	21.34	ppm	21.53	ppm

Notes: _____

Calibration Performed By: Grover Christiansen

Calibration Summary



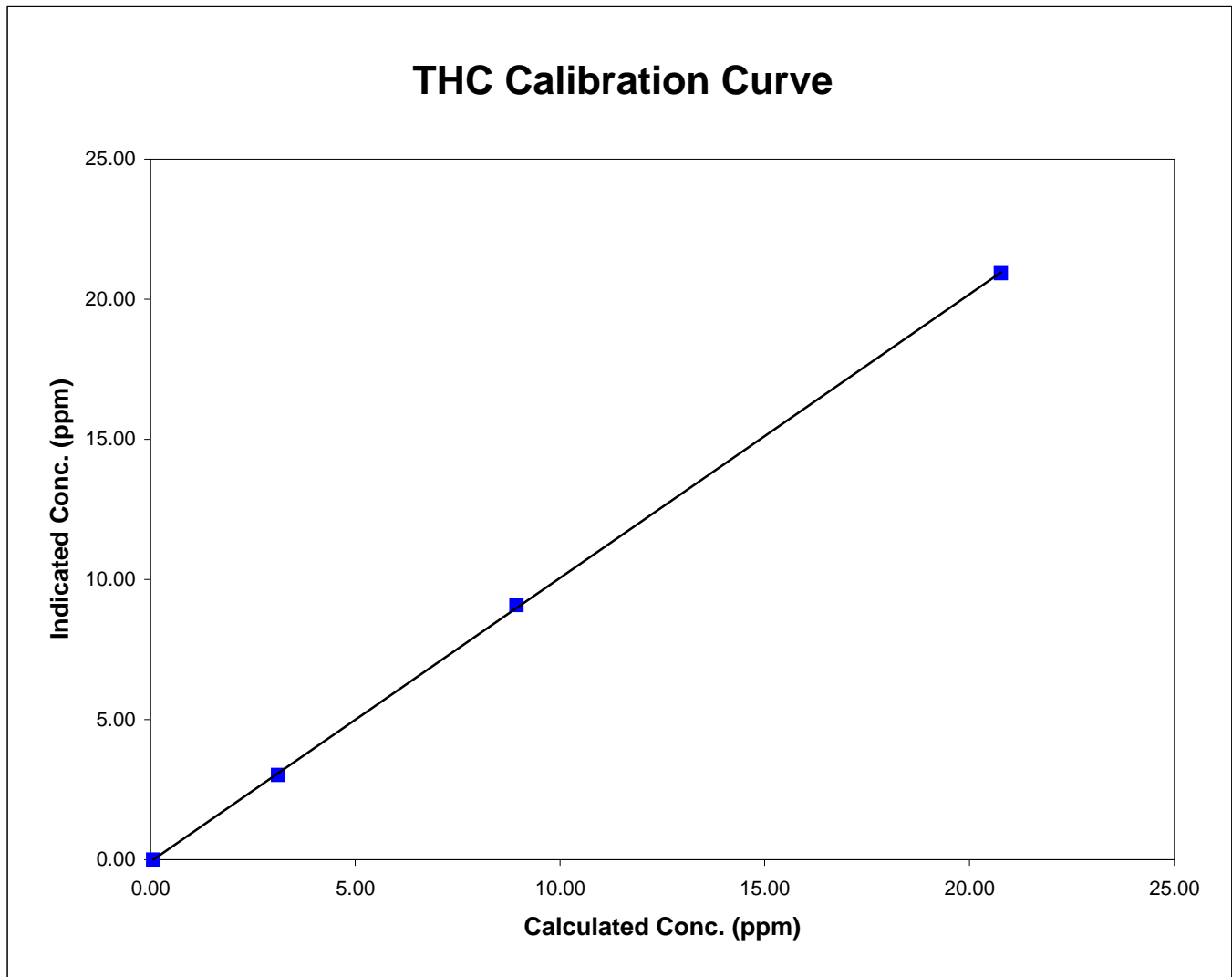
Parameter THC
 Air Monitoring Network PASZA

Station Information

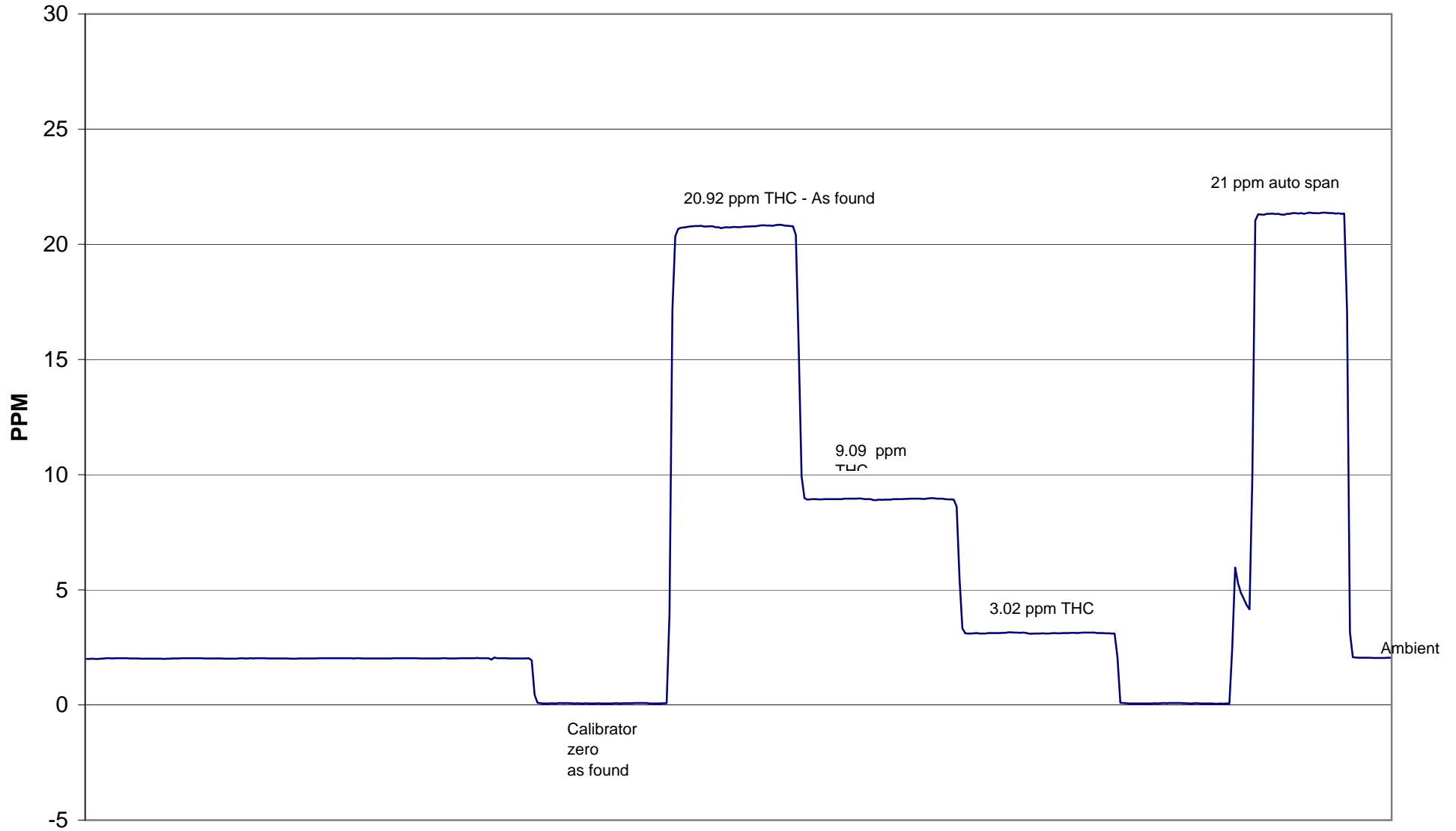
Calibration Date	December 4, 2009	Previous Calibration	November 23, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	14:00	End Time (MST)	16:47
Analyzer make/model	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.072	N/A	Correlation Coefficient	0.999936
20.924	20.771	1.0074		
9.087	8.941	1.0163		
3.023	3.118	0.9695		
			Slope	1.012401
			Intercept	-0.068855



Henry Pirker THC Calibration



December 4, 2009

Calibration Report



Parameter SO₂

Air Monitoring Network PASZA

Station Information

Calibration Date	December 2, 2009	Previous Calibration	November 21, 2009
Station Number	2	Station Location	Evergreen Park
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	13:30:00 PM	End Time (MST)	16:00
Barometric Pressure	0.939 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	50.6 ppm	Cal Gas Expiry Date	1/2/2009
Correction factor	0.031919	Cal Gas Cylinder #	LL16161
DACS make	Focus AP1000	DACS serial No.	52620
DACS voltage range	0 - 10 volt	DACS channel #	6
	<u>Before</u>		<u>After</u>
Calculated slope	1.003442	Calculated slope	1.002229
Calculated intercept	-2.264644	Calculated intercept	-2.388315
Analyzer make	Teco 43i	Analyzer serial #	701120008

	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
Background	10.5		10.5	
coefficient	1.034		1.034	
Lamp Voltage	834	volts	830	volts
Chamber Temp	45	Deg C	45.3	Deg C
Perm Gas Temp	45	Deg C	44.99	Deg C
Pressure	674	mm Hg	675.3	mm Hg
Sample Flow	453	ccm	454	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	0.0	0.0	N/A
4989	39.85	401.0	401.2	0.9994
4989	19.88	200.8	204.0	0.9846
4989	9.93	100.5	105.0	0.9568
4990	0.0	0.0	0.8	As Found Zero
4988	39.82	400.7	401.2	As Found Span
Average Correction Factor				0.9803

Calculated value of As Found Response: 399.5 ppm Percent Change of As Found: 0.3%

	before calibration		after calibration	
Auto zero	0.7	ppm	0.8	ppm
Auto span	266.0	ppm	216.2	ppm

Notes: Daily Span Perm Tube was replaced. 390 ng/min +/- 25% @ 50 deg C. (11:50am)

Calibration Performed By: Grover Christiansen

Calibration Summary



Parameter SO2
 Air Monitoring Network PASZA

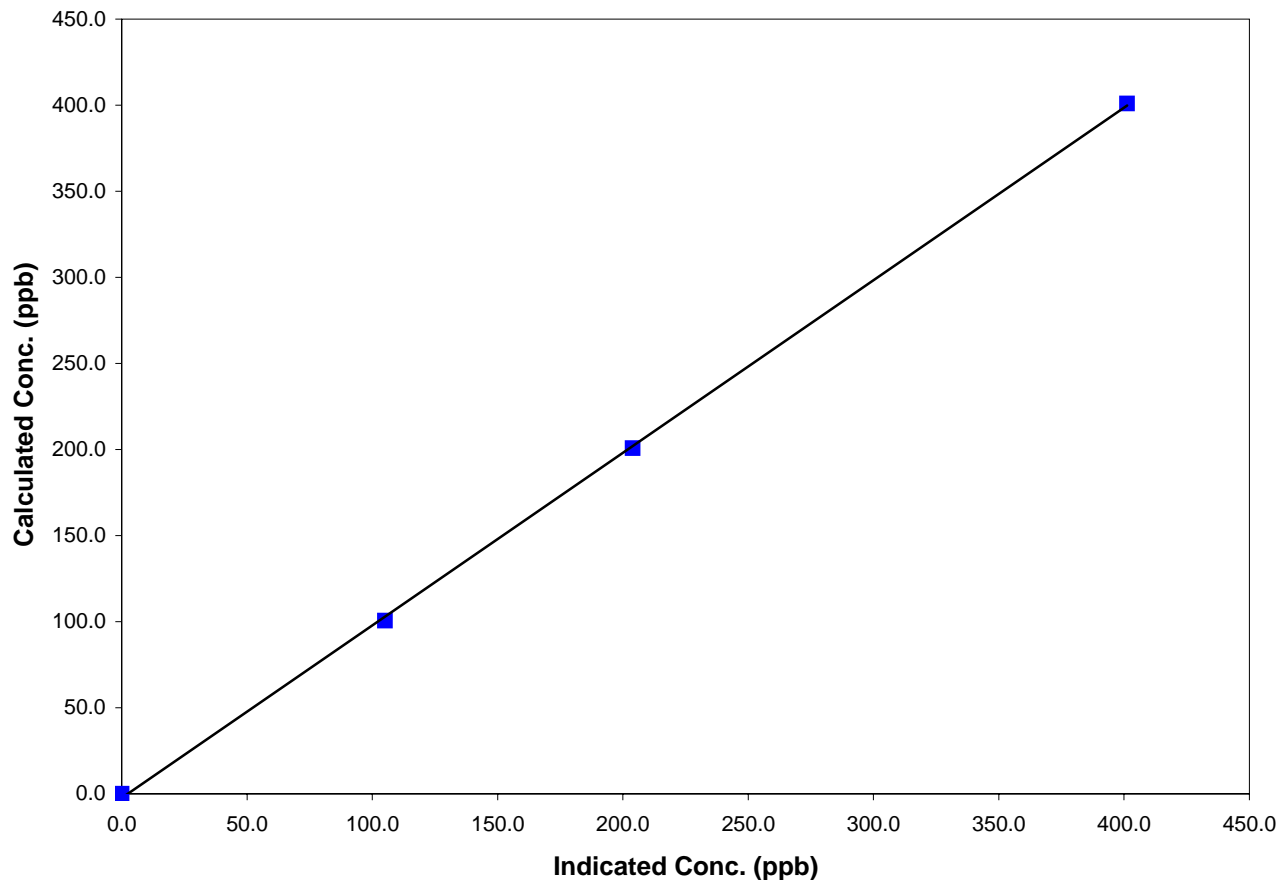
Station Information

Calibration Date	December 2, 2009	Previous Calibration	November 21, 2009
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	13:30:00 PM	End Time (MST)	16:00
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

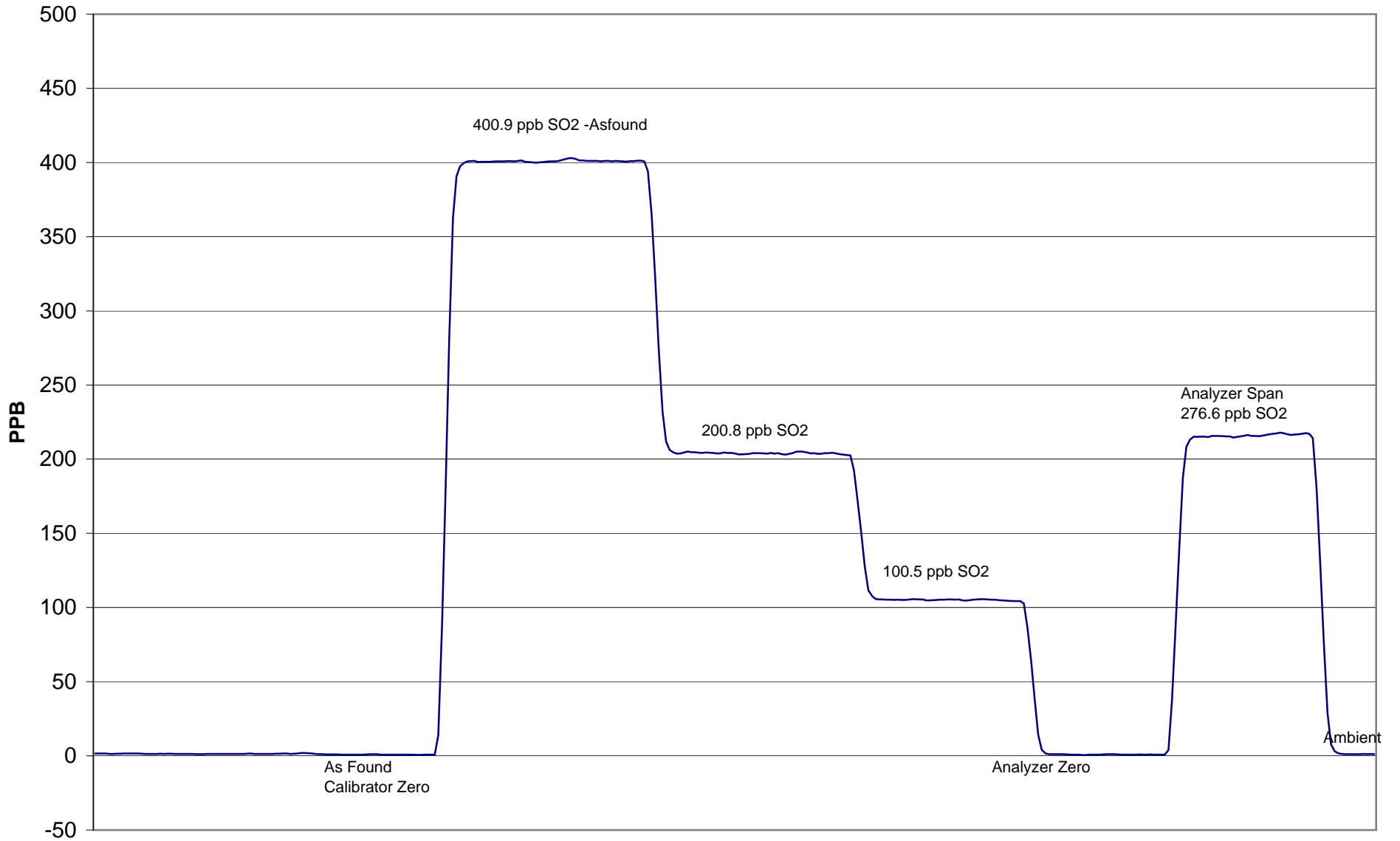
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
401.0	401.2	0.9994	Correlation Coefficient	0.999838
200.8	204.0	0.9846		
100.5	105.0	0.9568	Slope	1.002229
			Intercept	-2.388315

SO2 Calibration Curve

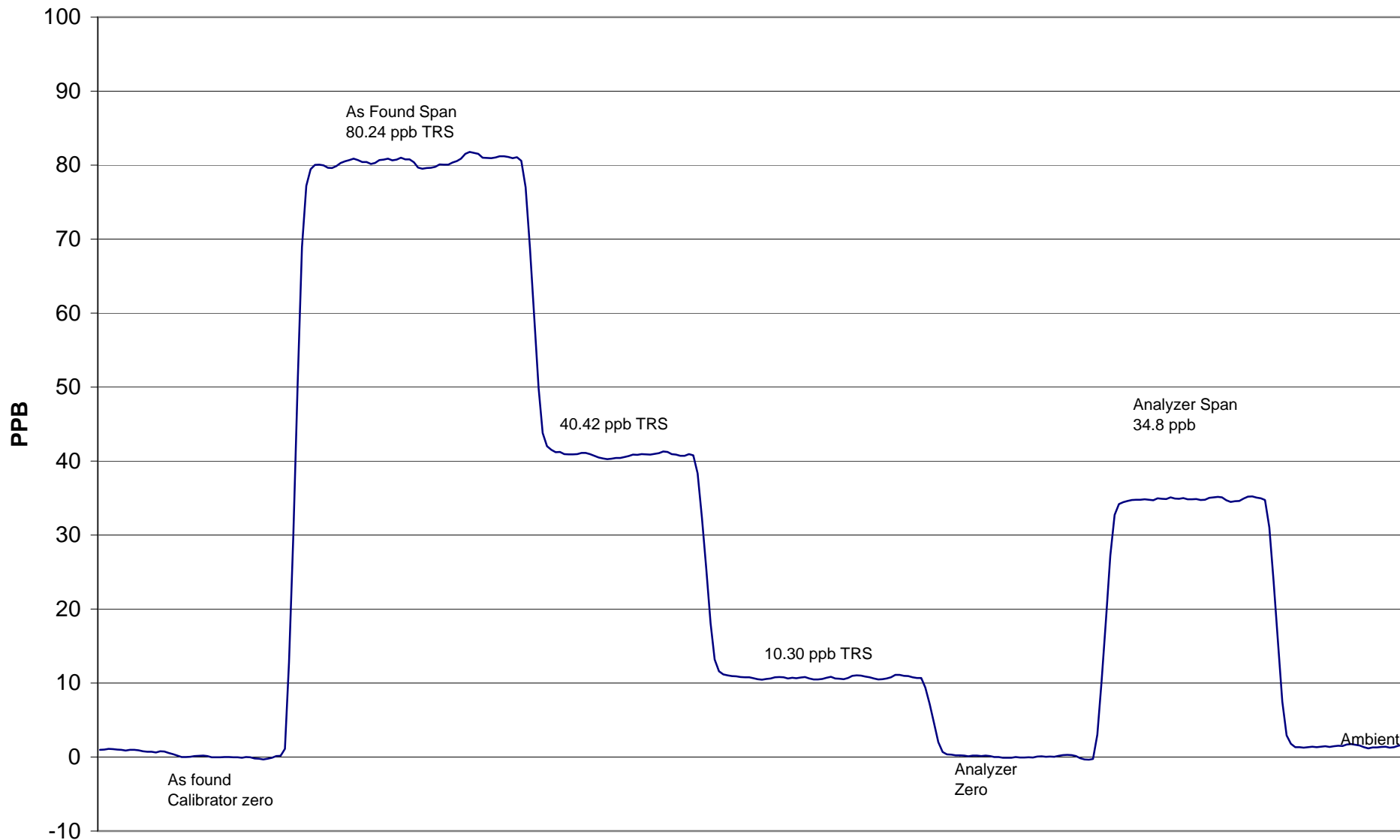


Evergreen Park SO₂ Calibration



December 2, 2009

Evergreen Park TRS Calibration



December 2, 2009

Calibration Report



Parameter SO₂
 Air Monitoring Network PASZA

Station Information

Calibration Date	December 3, 2009	Previous Calibration	November 26, 2009
Station Number	3	Station Location	Smoky Heights
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	11:00	End Time (MST)	14:30
Barometric Pressure	0.927 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	50.6 ppm	Cal Gas Cert Date	6/8/2008
Correction factor	0.031511	Cal Gas Cylinder #	AAL 15377
DACS make	Focus AP1000	DACS serial No.	45272
DACS voltage range	0 - 10 volt	DACS channel #	6
	<u>Before</u>		<u>After</u>
Calculated slope	1.006614	Calculated slope	1.009330
Calculated intercept	-1.942168	Calculated intercept	-2.152916
Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	8.6		8.6	
coefficient	0.701		0.701	
Lamp Voltage	918	volts	919	volts
Chamber Temp	45.4	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	671.4	mm Hg	671.2	mm Hg
Sample Flow	444	ccm	445	ccm
Lamp Intensity	89	%	89	%

Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4990	0.0	0.00	0.2	N/A
4990	39.85	400.89	398.3	1.0065
4990	19.95	201.49	202.8	0.9935
4990	9.95	100.70	103.8	0.9700
4990	0.0	0.00	0.3	As Found Zero
4990	39.85	400.89	398.3	As Found Span
Average Correction Factor				0.9900

Calculated value of As Found Response: 398.7 ppm Percent Change of As Found: 0.5%

	before calibration		after calibration	
Auto zero	0.7	ppb	0.7	ppb
Auto span	309.5	ppb	315.9	ppb

Notes: _____

Calibration Performed By: Grover Christiansen

Calibration Summary



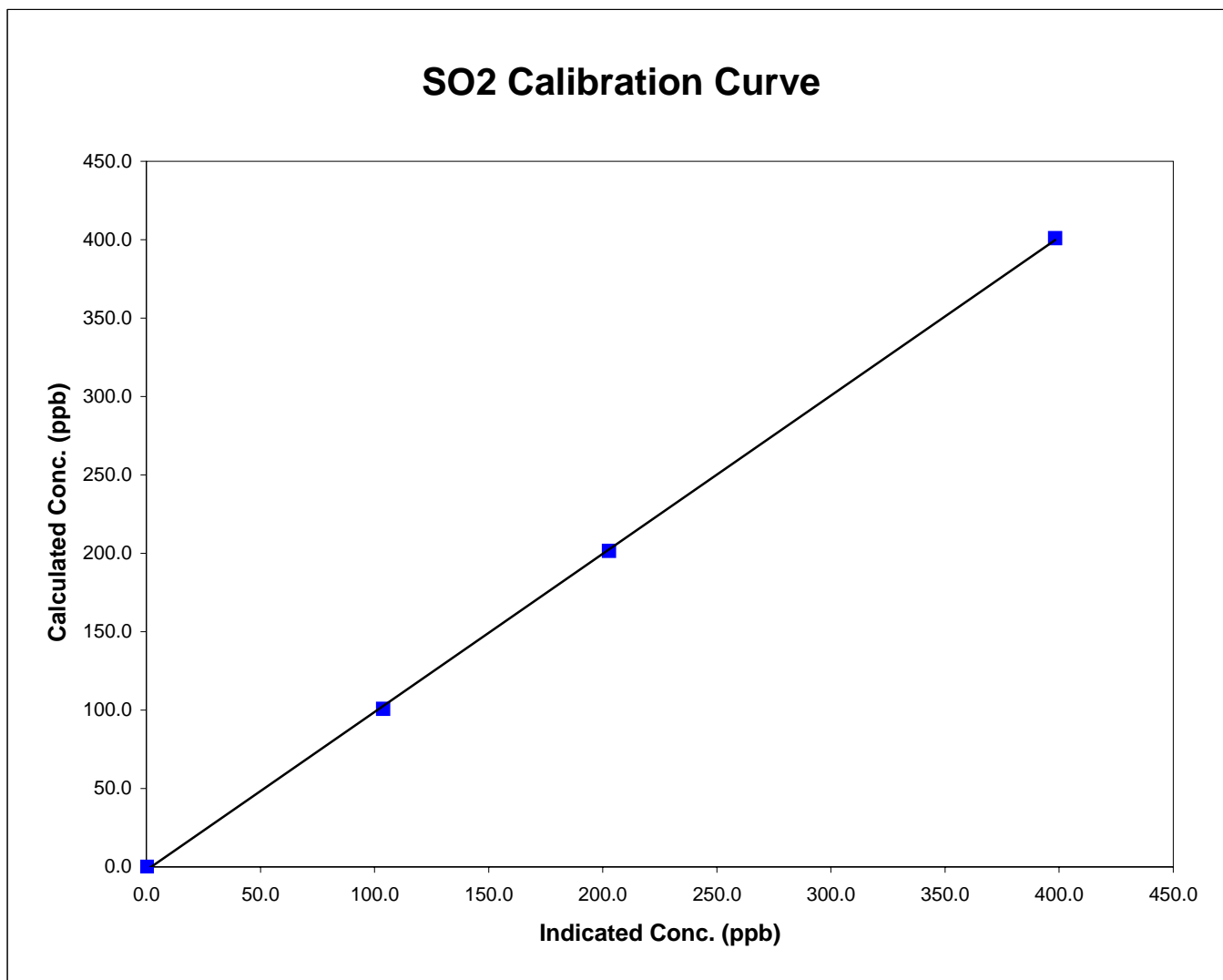
Parameter SO2
 Air Monitoring Network PASZA

Station Information

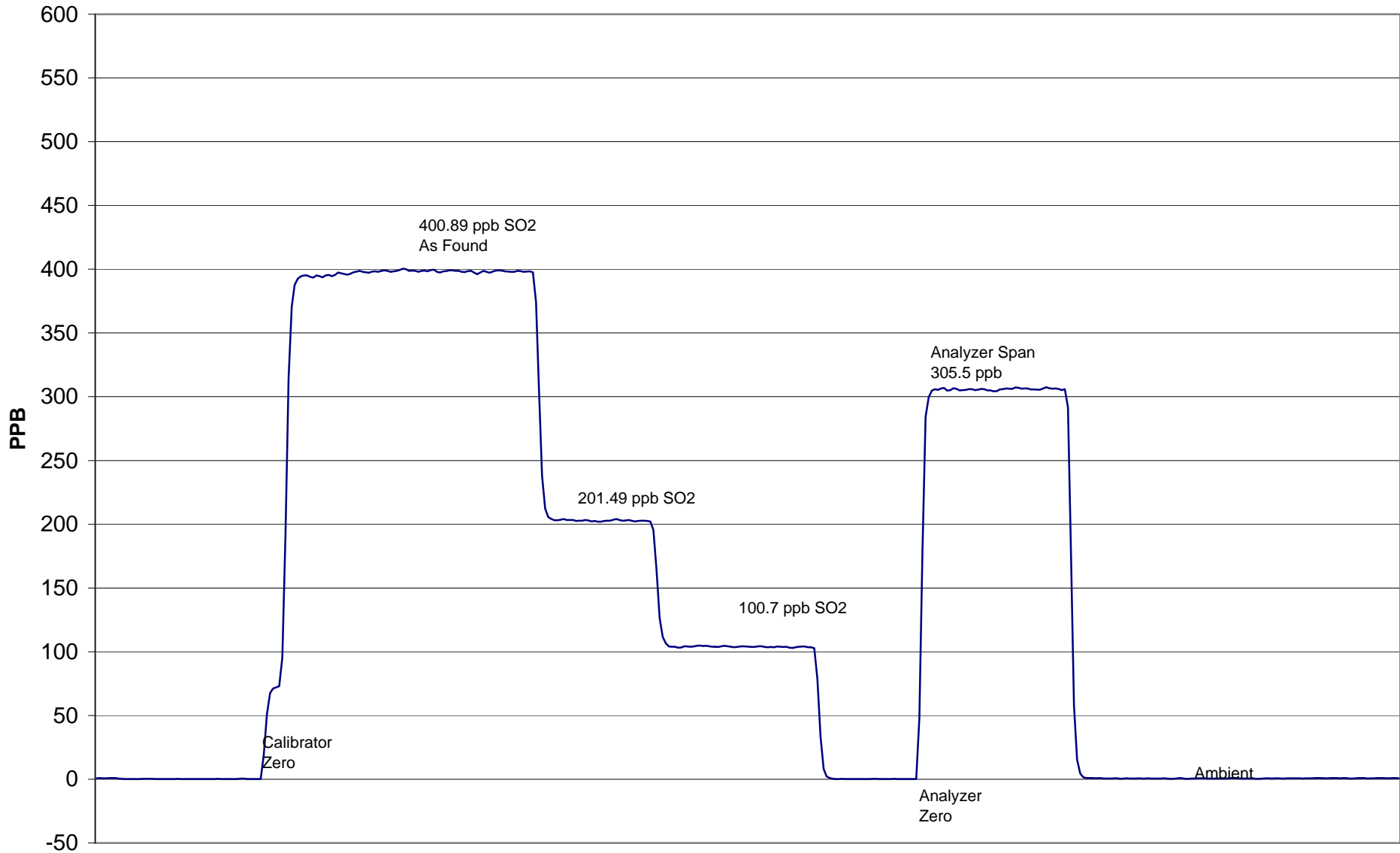
Calibration Date	December 3, 2009	Previous Calibration	November 26, 2009
Station Number	3	Station Location	Smoky Heights
Start Time (MST)	11:00	End Time (MST)	14:30
Analyzer make/model	Teco 43i	Analyzer serial #	701120009

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999889
400.9	398.3	1.0065		
201.5	202.8	0.9935		
100.7	103.8	0.9700	Slope	1.009330
			Intercept	-2.152916



Smoky Heights SO₂ Calibration



December 3, 2009

Calibration Summary

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

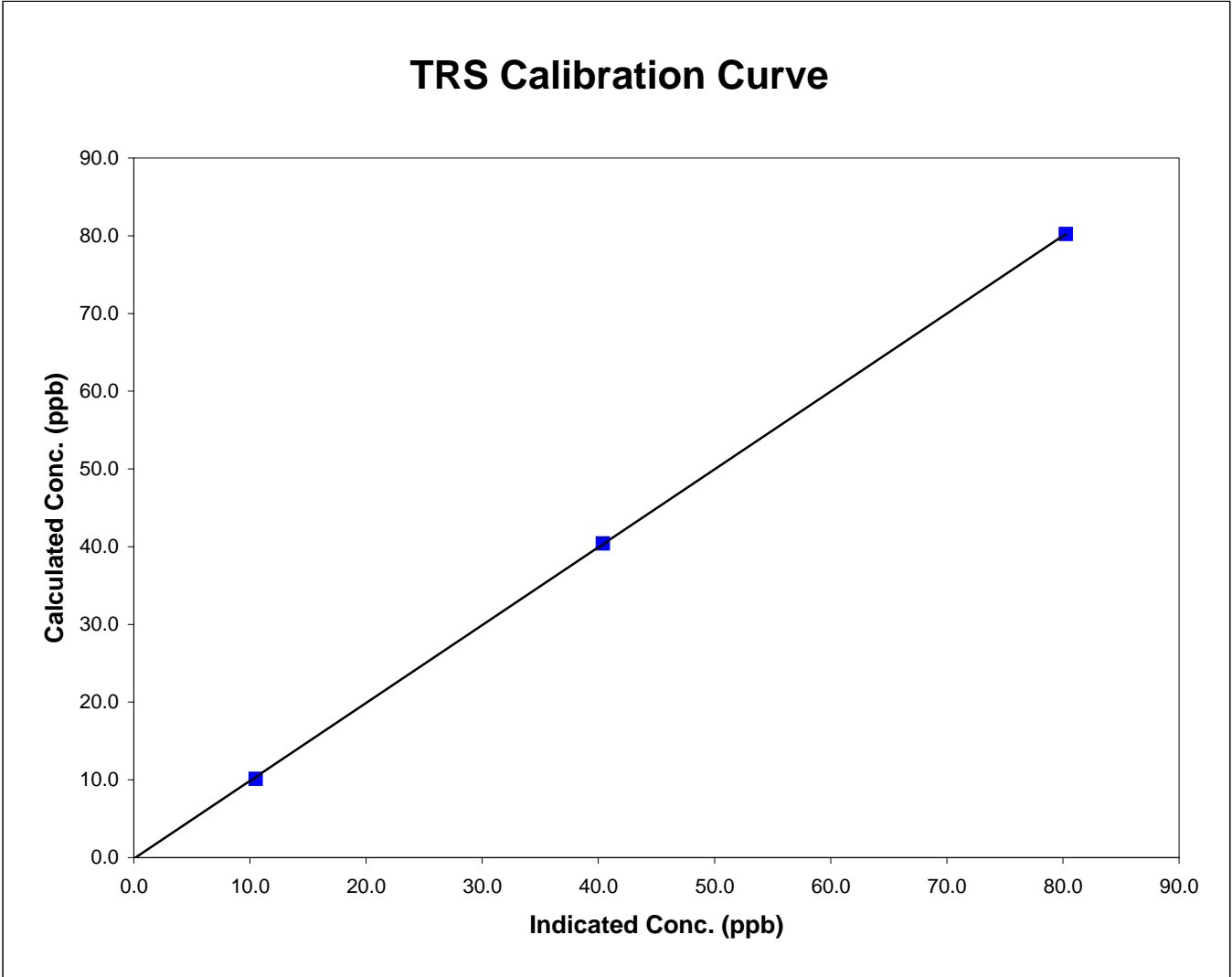


Station Information

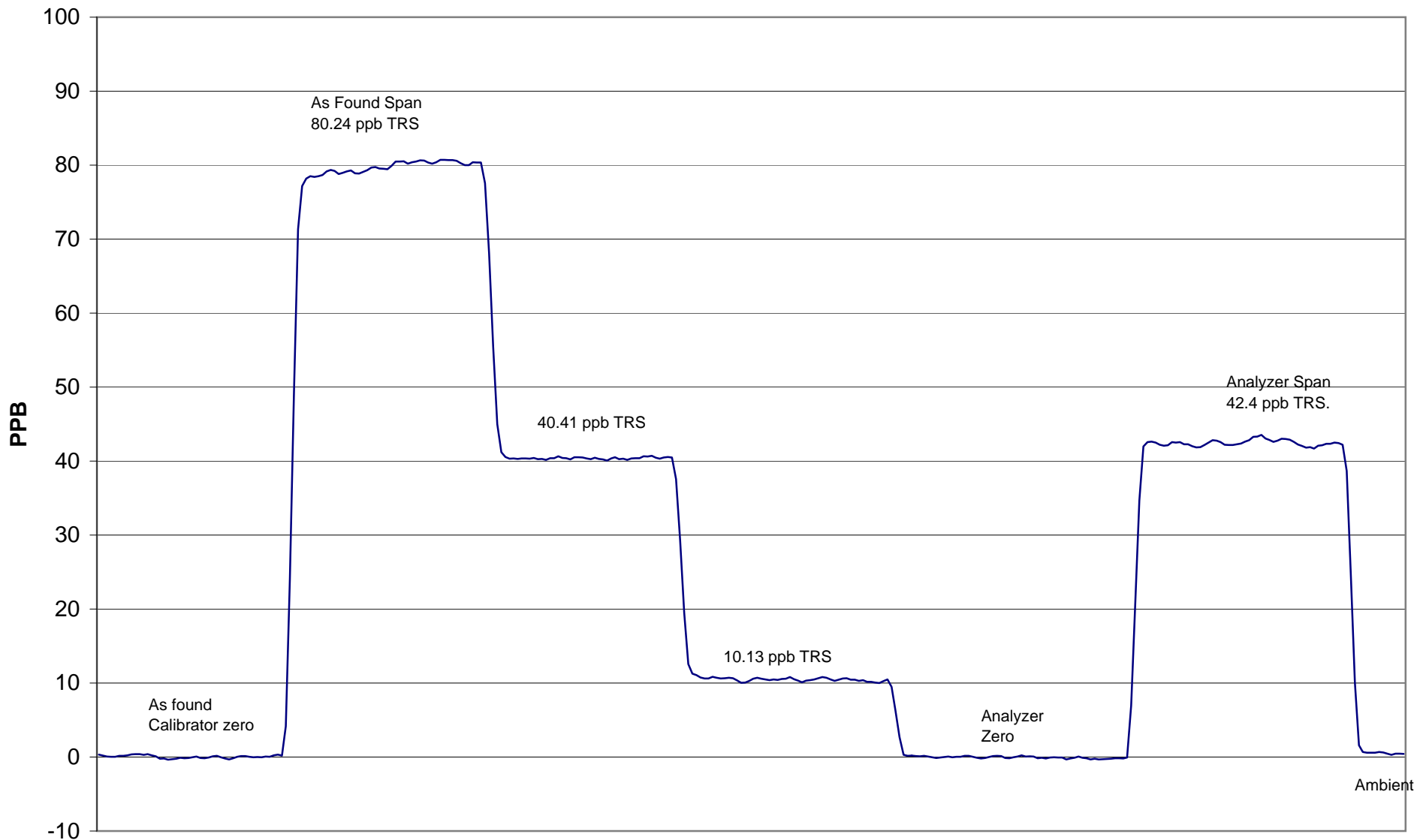
Calibration Date	<u> December 3, 2009 </u>	Previous Calibration	<u> November 26, 2009 </u>
Station Number	<u> 3 </u>	Station Location	<u> Smoky Heights </u>
Start Time (MST)	<u> 12:50 </u>	End Time (MST)	<u> 15:30 </u>
Analyzer make/model	<u> TEI Model 43C </u>	Analyzer serial #	<u> 0436610005 </u>

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
80.2	80.3	0.9997	Correlation Coefficient	0.999974
40.4	40.4	1.0001		
10.1	10.5	0.9649	Slope	1.001441
			Intercept	-0.133784



Smoky Heights TRS Calibration



December 3, 2009

Calibration Report



Parameter SO2

Air Monitoring Network PASZA

Station Information

Calibration Date	December 15, 2009	Previous Calibration	November 16, 2009
Station Number	4	Station Location	Beaverlodge
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	11:40	End Time (MST)	13:15
Barometric Pressure	0.896 atm	Station Temperature	23.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	10.06 ppm	Cal Gas Expiry Date	7/27/2009
Gas Cert Reference	CC 114395		
DACS make	Focus AP1000	DACS serial No.	45269
DACS voltage range	0 - 10 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.996245	Calculated slope	1.003872
Calculated intercept	-0.219410	Calculated intercept	-0.304927
Analyzer make	TEI Model 43i-TLE	Analyzer serial #	713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.73		2.71	
Coefficient	0.906		0.906	
PMT	-812.5	V	-812.9	V
UV Lamp Voltage	1082	V	1082	V
Chamber Temp	45	Deg C	45.1	Deg C
Pressure	659.2	mm Hg	657.4	mm Hg
Sample Flow	0.48	LPM	0.479	LPM
Lamp Intesity	82%	%	82%	%

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
4989	39.84	79.7	79.5	1.0027
4988	19.87	39.9	40.3	0.9895
4988	9.91	19.9	20.5	0.9752
4988	0.00	0.0	0.2	As found zero
4988	39.90	79.8	79.4	As found span
Average Correction Factor				0.9891

Calculated value of As Found Response: 78.698 ppm Percent Change of As Found: 1.4%

	before calibration		after calibration	
Auto zero	-0.3	ppb	-0.2	ppb
Auto span	57.8	ppb	57.6	ppb

Notes: _____

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2
 Air Monitoring Network PASZA

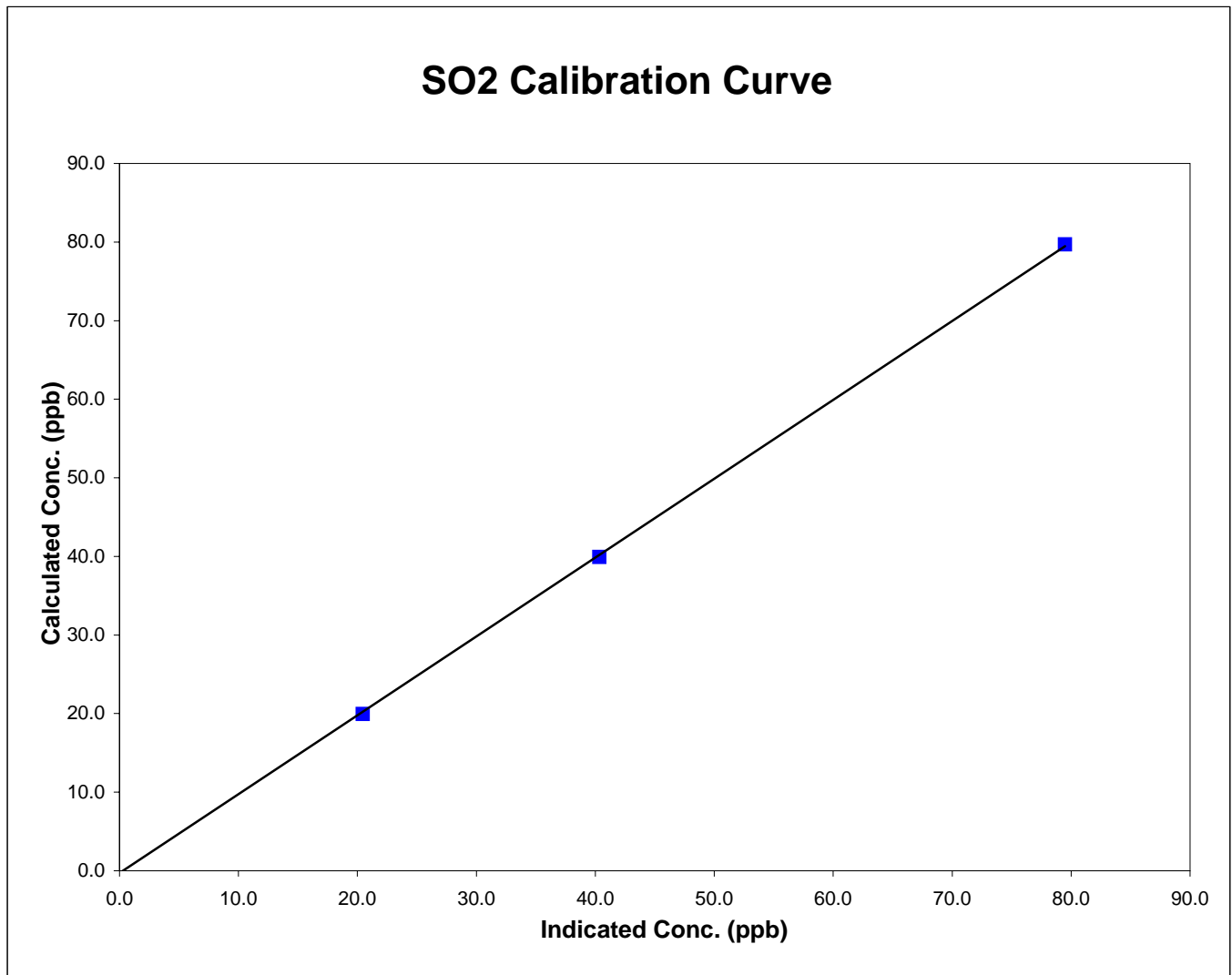


Station Information

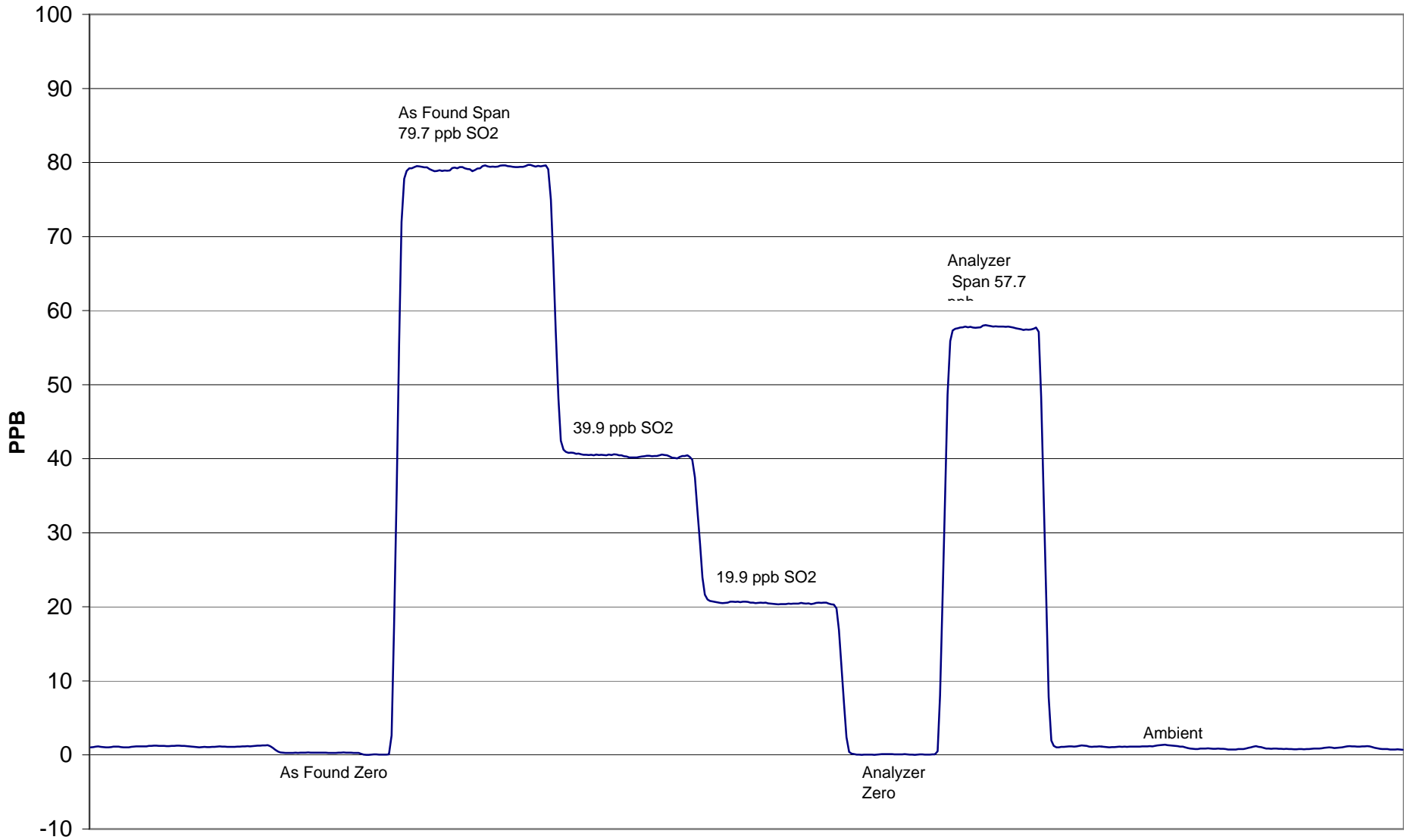
Calibration Date	December 15, 2009	Previous Calibration	November 16, 2009
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	11:40	End Time (MST)	13:15
Analyzer make/model	TEI Model 43i-TLE	Analyzer serial #	713021137

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
79.7	79.5	1.0027	Correlation Coefficient	0.999908
39.9	40.3	0.9895		
19.9	20.5	0.9752	Slope	1.003872
			Intercept	-0.304927



Beaverlodge SO₂ Calibration



December 15, 2009

Calibration Report

Parameter

NO_x-NO-NO₂

Air Monitoring Network

PASZA



Station Information

Calibration Date	December 15, 2009	Previous Calibration	November 16, 2009
Station Number	4	Station Location	BeaverLodge
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Installation	<input type="checkbox"/> Removal
Start Time (MST)	11:40	End Time (MST)	15:20
Barometric Pressure	0.905 Atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	2844
NO Cal Gas Conc	50.1 ppm	Cal Gas Expiry Date	
NOx Cal Gas Conc	50.2 ppm	Cal Gas Serial #	CC-114395

DACS Information

DACS make AP1000 DACS serial No. _____

Parameter		NO2	NOx	NO
Before	Data Slope	0.991082	1.001077	1.001016
	Data Offset	-0.078111	-1.736487	-0.857415
After	Data Slope	0.999049	1.003832	1.002444
	Data Offset	-0.157009	-2.550764	-1.047440
Channel #		8	6	7
Voltage Range		0 - 10 VDC	0 - 10 VDC	0 - 10 VDC

Analyzer Information

Analyzer make/model TEI 42i Analyzer serial # 906535068

Test Point	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
NO offset	2.3	mV	2.3	mV
NOx bkgnd	2.6	mV	2.9	mV
NO coefficient	1.438		1.427	
NOx coefficient	0.993		0.993	
NO2 conv temp	323.3	Deg C	322.4	Deg C
PMT Temp	-3.0	Deg C	-3.0	Deg C
PMT Volt	-675.3	mV	-676.0	mV
R Cell Press	177.4	in Hg	178.0	in Hg
Sample Flow	0.741	ccm	0.748	ccm

Notes:

Calibration Report

Parameter **NOX-NO-NO2**
 Air Monitoring Network **PASZA**



Station Information

Calibration Date: December 15, 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	4989	0.00	0.0	0.0	0.0	0.3	-0.1	0.1	N/A	N/A
1	4989	39.84	397.7	396.9	0.8	397.4	396.3	-0.5	1.0009	1.0015
2	4989	19.87	199.1	198.7	0.4	202.6	200.2	1.9	0.9828	0.9930
3	4989	9.91	99.5	99.3	0.2	103.6	101.1	2.0	0.9607	0.9825
AFZ	4988	0.00	0.0	0.0	0.0	0.3	-0.1	0.1	0.0000	0.0000
AFS	4988	39.84	397.8	397.0	0.8	402.2	399.9	1.0	0.9889	0.9928
Average Correction Factor									0.9814	0.9923

As Found Concentrations: NO_x= 400.2 NO= 399.1 As Found Percent Change NO_x= 0.6% NO= 0.5%

GPT Calibration Data

Dilution Flow 4989 ccm Source Gas Flow 39.84 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	-0.1	-0.1	0.0	0.3	-0.1	0.1	N/A	N/A	N/A	N/A
NO point	396.5	396.5	0.0	397.7	396.5	-0.3	0.9970	1.0000	N/A	N/A
400	396.5	157.7	238.7	397.7	157.7	239.1	0.9969	1.0000	0.9985	100.1%
200	396.5	235.4	161.1	397.5	235.4	161.4	0.9973	1.0000	0.9983	100.2%
100	396.5	312.1	84.4	397.9	312.1	84.8	0.9964	1.0000	0.9953	100.5%
Average Correction Factor							0.9969	1.0000	0.9974	100.3%

AIC Data

Parameter	Previous calibration				Current calibration			
	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.2	-0.3	-0.2	ppb	0.0	-0.3	0.1	ppb
Auto span	175.3	173.3	2.1	ppb	206.8	204.7	1.9	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter NO₂

Air Monitoring Network PASZA



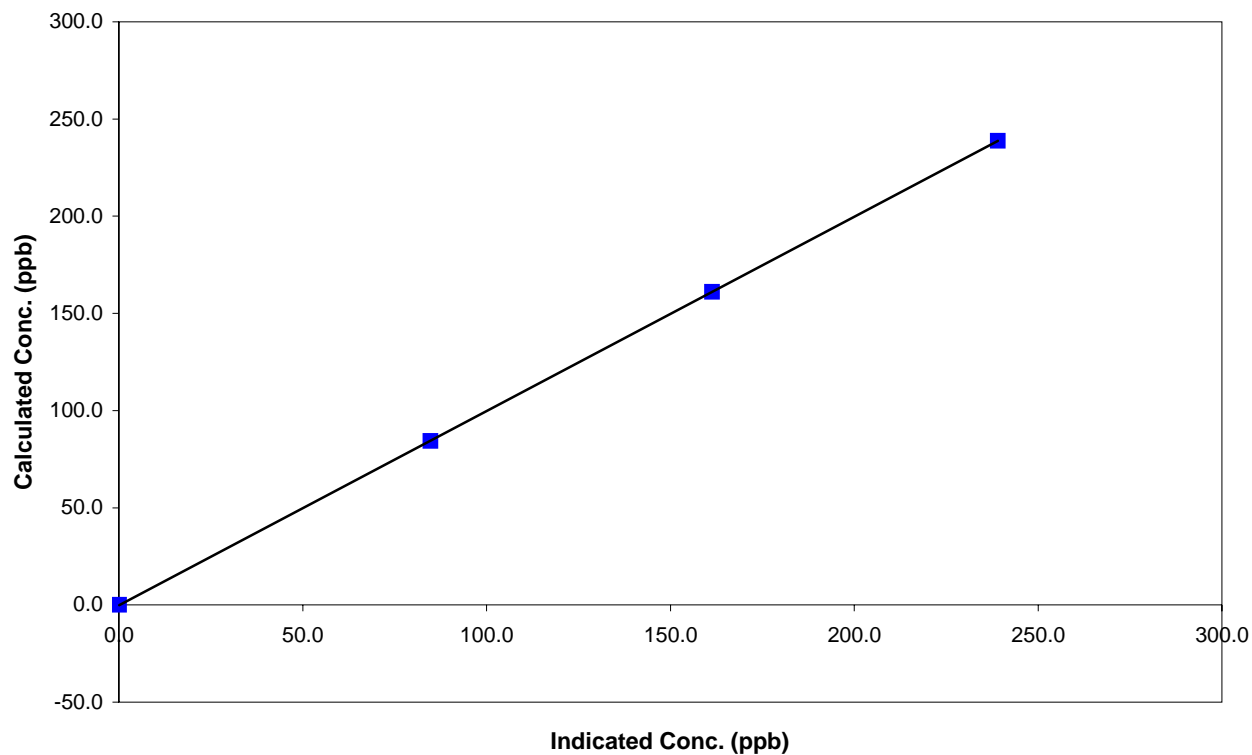
Station Information

Calibration Date	December 15, 2009	Previous Calibration	November 16, 2009
Station Number	4	Station Location	BeaverLodge
Start Time (MST)	11:40	End Time (MST)	15:20
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999999
238.7	239.1	0.9985		
161.1	161.4	0.9983	Slope	0.999049
84.4	84.8	0.9953		
			Intercept	-0.157009

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PASZA



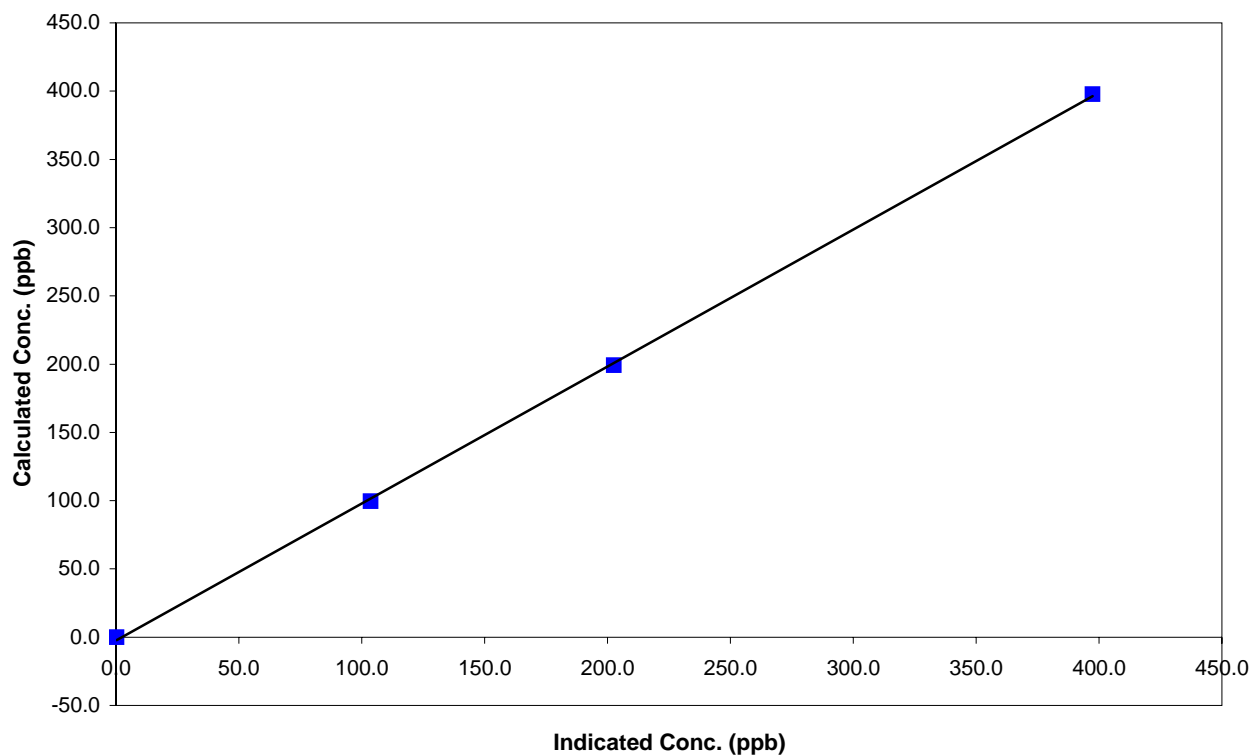
Station Information

Calibration Date	December 15, 2009	Previous Calibration	November 16, 2009
Station Number	4	Station Location	BeaverLodge
Start Time (MST)	11:40	End Time (MST)	15:20
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A	Correlation Coefficient	0.999842
397.7	397.4	1.0009		
199.1	202.6	0.9828	Slope	1.003832
99.5	103.6	0.9607		
			Intercept	-2.550764

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PASZA



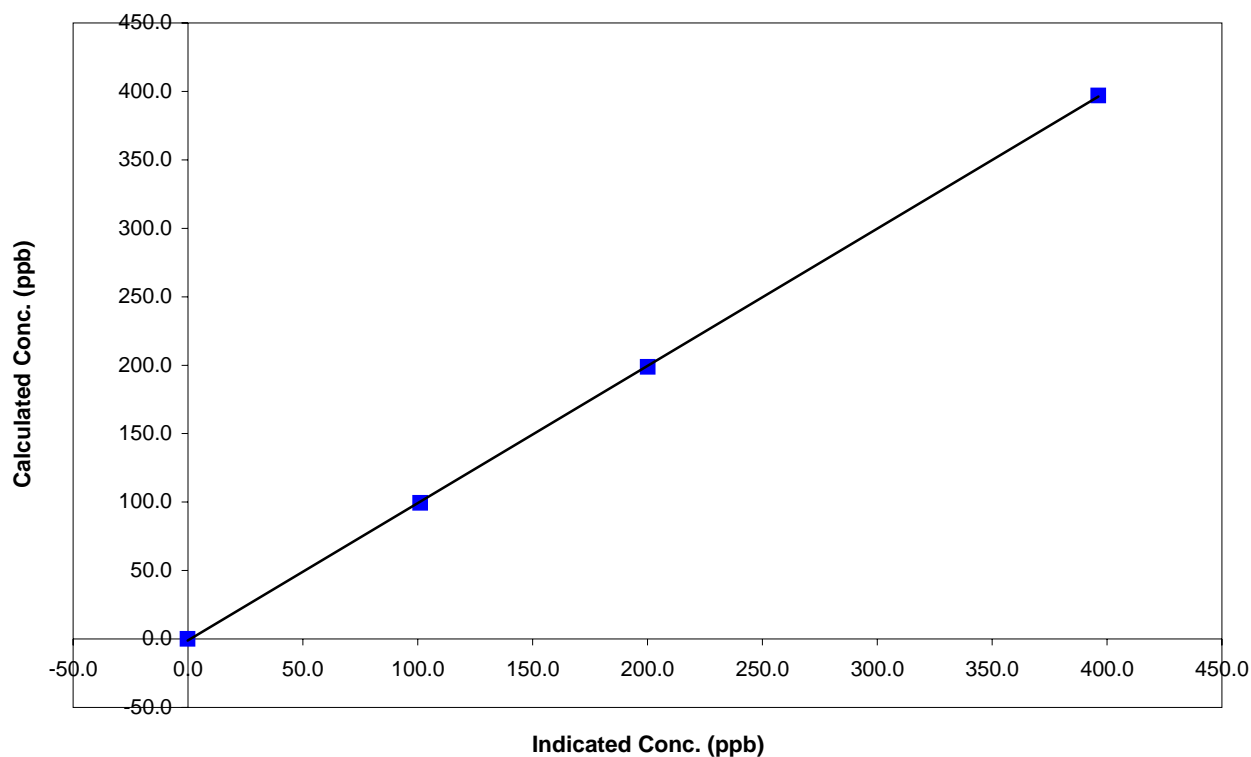
Station Information

Calibration Date	November 16, 2009	Previous Calibration	November 16, 2009
Station Number	4	Station Location	BeaverLodge
Start Time (MST)	11:40	End Time (MST)	15:20
Analyzer make	TEI 42i	Analyzer serial #	906535068

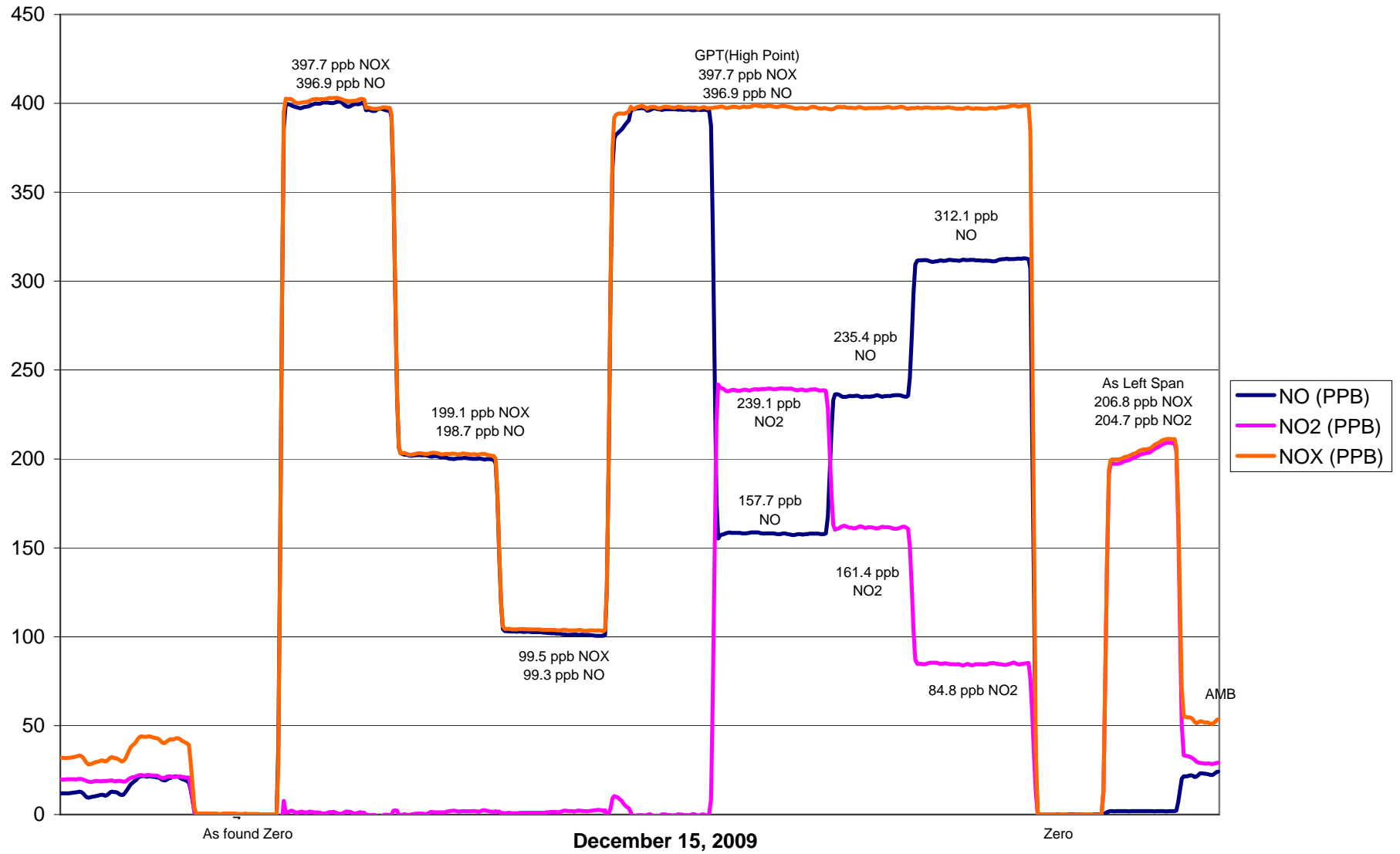
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A	Correlation Coefficient	0.999960
396.9	396.3	1.0015		
198.7	200.2	0.9930		
99.3	101.1	0.9825	Slope	1.002444
			Intercept	-1.047440

NO Calibration Curve



Beaverlodge NO_x Calibration



Calibration Report



Parameter 03

Air Monitoring Network PASZA

Station Information

Calibration Date	December 15, 2009	Previous Calibration	November 16, 2009
Station Number	4	Station Location	Beaverlodge
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	14:20:00 PM	End Time (MST)	16:49
Barometric Pressure	0.905 atm	Station Temperature	21.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	Focus AP1000	DACS serial No.	45269
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	0.963684	Calculated slope	0.994300
Calculated intercept	-0.971981	Calculated intercept	0.445131
Analyzer make	Teco 49C	Analyzer serial #	49C-76443-383

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-0.80	ppb	-0.80	ppb
slope	1.027		1.027	
Lamp temp	56.4	mV	56.2	mV
Lamp Intensity A/B	71218 / 71450	mV	71405 / 71350	mV
Pressure	681.2	mm Hg	681.8	mm Hg
Flow A	709	ccm	708	ccm
Flow B	658	ccm	660	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	238.7	239.8	0.9954
4990	0.00	161.1	161.2	0.9991
4990	0.00	84.4	84.6	0.9982
4990	0.00	0.0	-0.7	As found zero
4990	0.00	238.7	239.8	As found span
Average Correction Factor				0.9976

Calculated value of As Found Response: 230.8 ppm Percent Change of As Found: -3.3%

	before calibration		after calibration	
Auto zero	0.1	ppb	1.4	ppb
Auto span	114.3	ppb	122.8	ppb

Notes: _____

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter 03

Air Monitoring Network PASZA



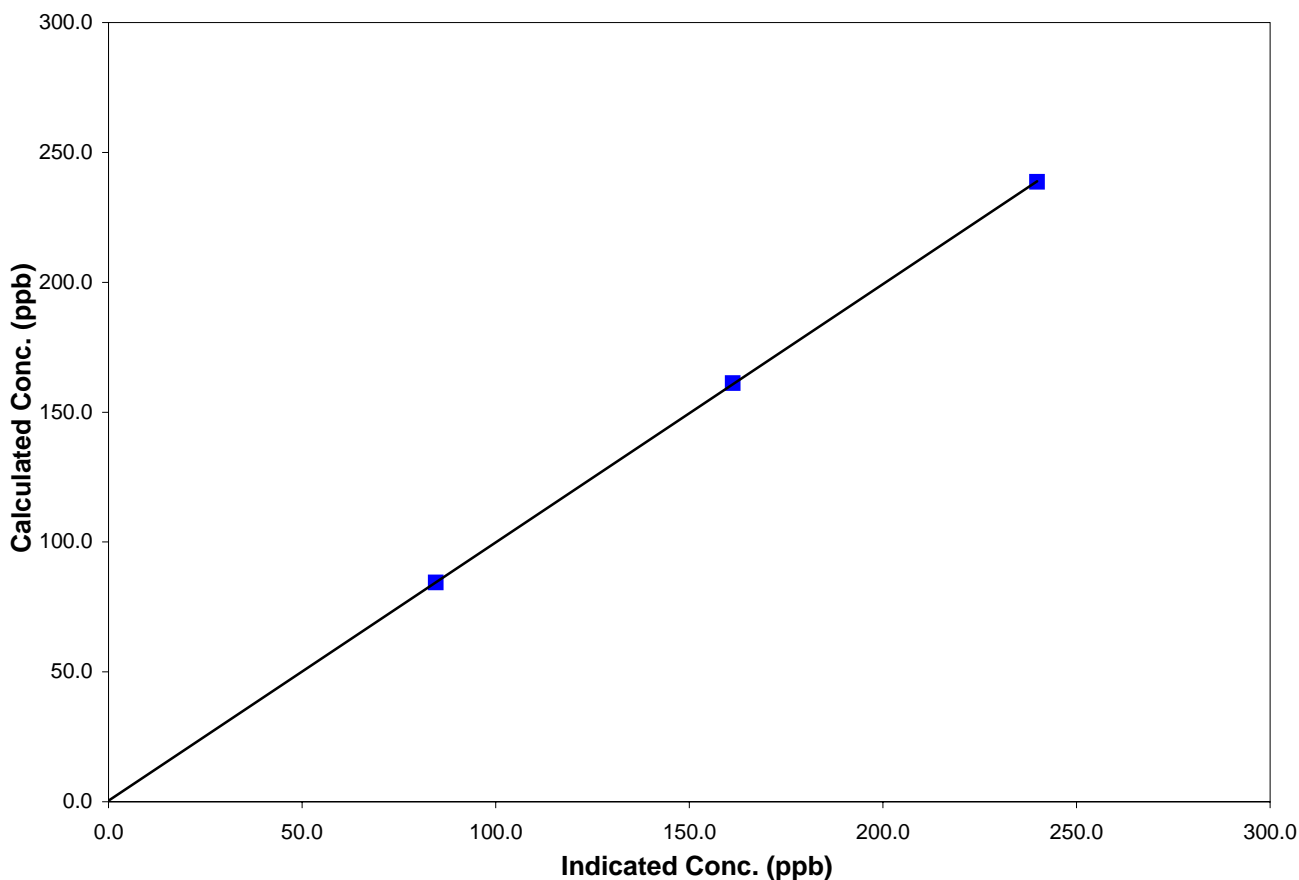
Station Information

Calibration Date	December 15, 2009	Previous Calibration	November 16, 2009
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	14:20:00 PM	End Time (MST)	16:49
Analyzer make/model	Teco 49C	Analyzer serial #	49C-76443-383

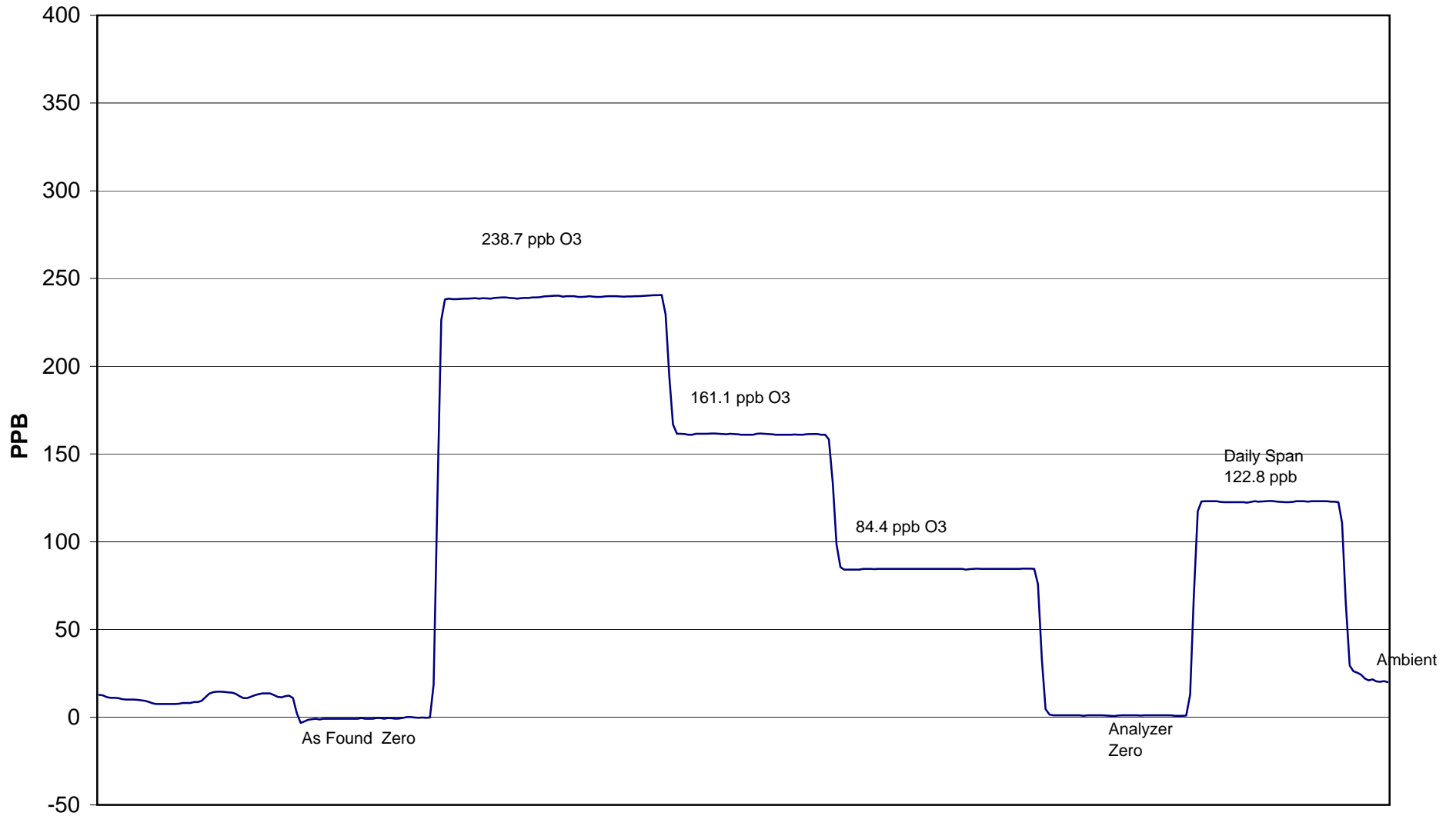
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.4	NA	Correlation Coefficient	0.999995
238.7	239.8	0.9954		
161.1	161.2	0.9991		
84.4	84.6	0.9982	Slope	0.994300
			Intercept	0.445131

O3 Calibration Curve



Beaverlodge O₃ Calibration



December 15, 2009

Calibration Report



Parameter SO2

Air Monitoring Network PASZA

Station Information

Calibration Date	December 27, 2009	Previous Calibration	November 29, 2009
Station Number	9	Station Location	Rover - Kinuso
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	9:11	End Time (MST)	13:13:00 PM
Barometric Pressure	27.66 inches Hg	Station Temperature	22.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	50.6 ppm	Cal Gas Expiry Date	7/27/2009
Gas Cert Reference	LL 16161		
DACS make	Focus AP1000	DACS serial No.	52662
DACS voltage range	0 - 10 volt	DACS channel #	9
	<u>Before</u>		<u>After</u>
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.003897	Calculated slope	1.004175
Calculated intercept	-2.076803	Calculated intercept	-2.496360
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	8.8		8.6	
Coefficient	0.87		0.87	
UV Lamp Voltage	808	V	805	V
Chamber Temp	44.6	C	44.6	C
Perm Gas Temp	45	C	45	C
Pressure	688	mm Hg	686.3	mm Hg
Sample Flow	0.495	LPM	0.494	LPM
Lamp Intesity	47779	Hz	476486	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	400.4	1.0009
4989	19.88	200.8	203.7	0.9858
4989	9.92	100.4	104.5	0.9605
4988	0.00	0.0	0.0	As found zero
4990	39.89	401.3	401.8	As found span
Average Correction Factor				0.9824

Calculated value of As Found Response: 401.237 ppm Percent Change of As Found: 0.0%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	258.2	ppm	256.4	ppm

Notes: Internal Pump Replaced

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PASZA

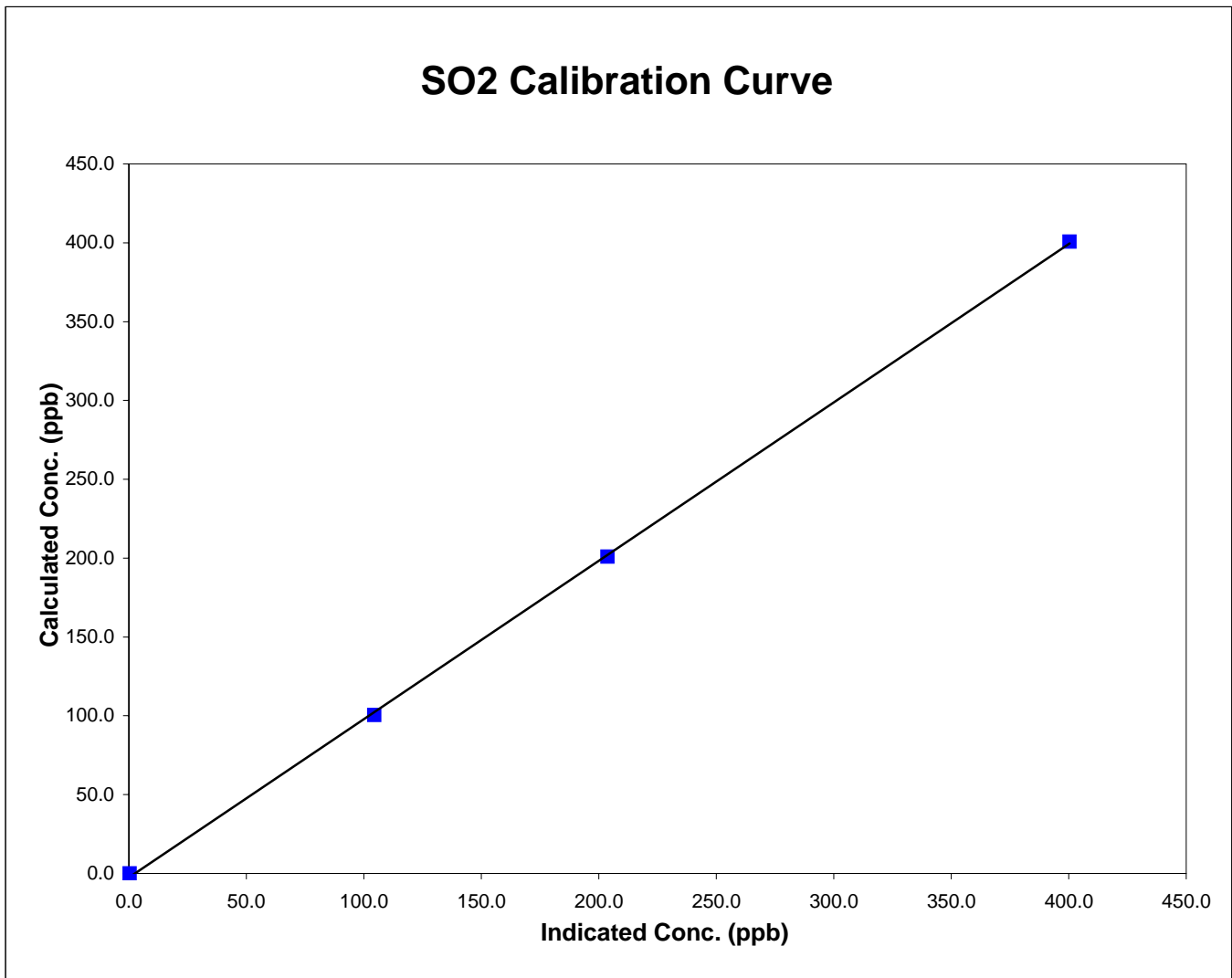


Station Information

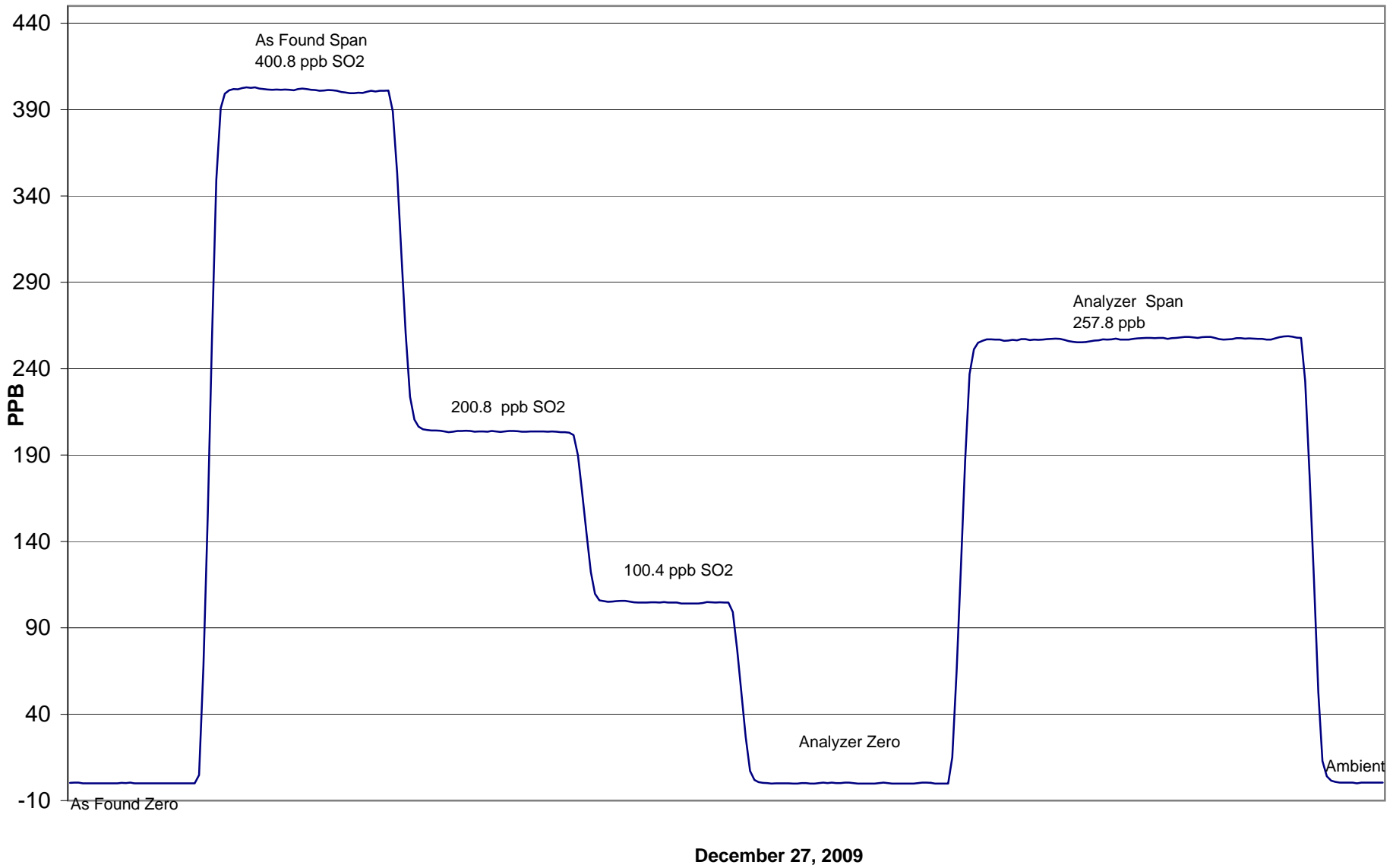
Calibration Date	December 27, 2009	Previous Calibration	November 29, 2009
Station Number	9	Station Location	Rover - Kinuso
Start Time (MST)	9:11	End Time (MST)	13:13:00 PM
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A		
400.8	400.4	1.0009	Correlation Coefficient	0.999867
200.8	203.7	0.9858		
100.4	104.5	0.9605	Slope	1.004175
			Intercept	-2.496360



Kinuso SO₂ Calibration



Calibration Report

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



Station Information

Calibration Date	<u>December 27, 2009</u>	Previous Calibration	<u>November 29, 2009</u>
Station Number	<u>9</u>	Station Location	<u>Rover-Kinuso</u>
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	<u>14:10</u>	End Time (MST)	<u>16:30</u>
Barometric Pressure	<u>27.5</u> inches Hg	Station Temperature	<u>21.0</u> Deg C
Calibrator	<u>EnviroNics 6100</u>	Serial Number	<u>3474</u>
Cal Gas Concentration	<u>5.1</u> ppm	Cal Gas Expiry Date	<u>11/15/2005</u>
Gas Cert Reference	<u>ALM013295</u>		
DACS make	<u>Focus AP1000</u>	DACS serial No.	<u>52662</u>
DACS voltage range	<u>0 - 5 volt</u>	DACS channel #	<u>8</u>
	<u>Before</u>		<u>After</u>
DACS Scale High	<u>100</u>	DACS slope	<u>100</u>
DACS Scale Low	<u>0</u>	DACS intercept	<u>0</u>
Calculated slope	<u>0.997254</u>	Calculated slope	<u>0.997775</u>
Calculated intercept	<u>-0.055531</u>	Calculated intercept	<u>0.243797</u>
Analyzer make	<u>TEI 43C</u>	Analyzer serial #	<u>609716238</u>

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	10.3	ppb	10.4	ppb
Coefficient	1.448		1.402	
Lamp Voltage	793	V	795	V
Chamber Temp	43.9	C	44.0	C
Perm gas Temp	45.	C	45	C
Pressure	673	mmHg	675	mmHg
Sample Flow	432	ccm	435	ccm
Lamp Intensity	39227.0	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	39.4	1.0268
4988	9.92	10.1	9.8	1.0314
4988	0.00	0.0	-0.1	As found zero
4988	79.88	80.4	80.6	As found span
Average Correction Factor				1.0178

Calculated value of As Found Response: 80.43 ppm Percent Change of As Found: -0.1%

	before calibration		after calibration	
Auto zero	<u>-0.4</u>	ppm	<u>-0.1</u>	ppm
Auto span	<u>66.6</u>	ppm	<u>65.6</u>	ppm

Notes: _____

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter
Air Monitoring Network



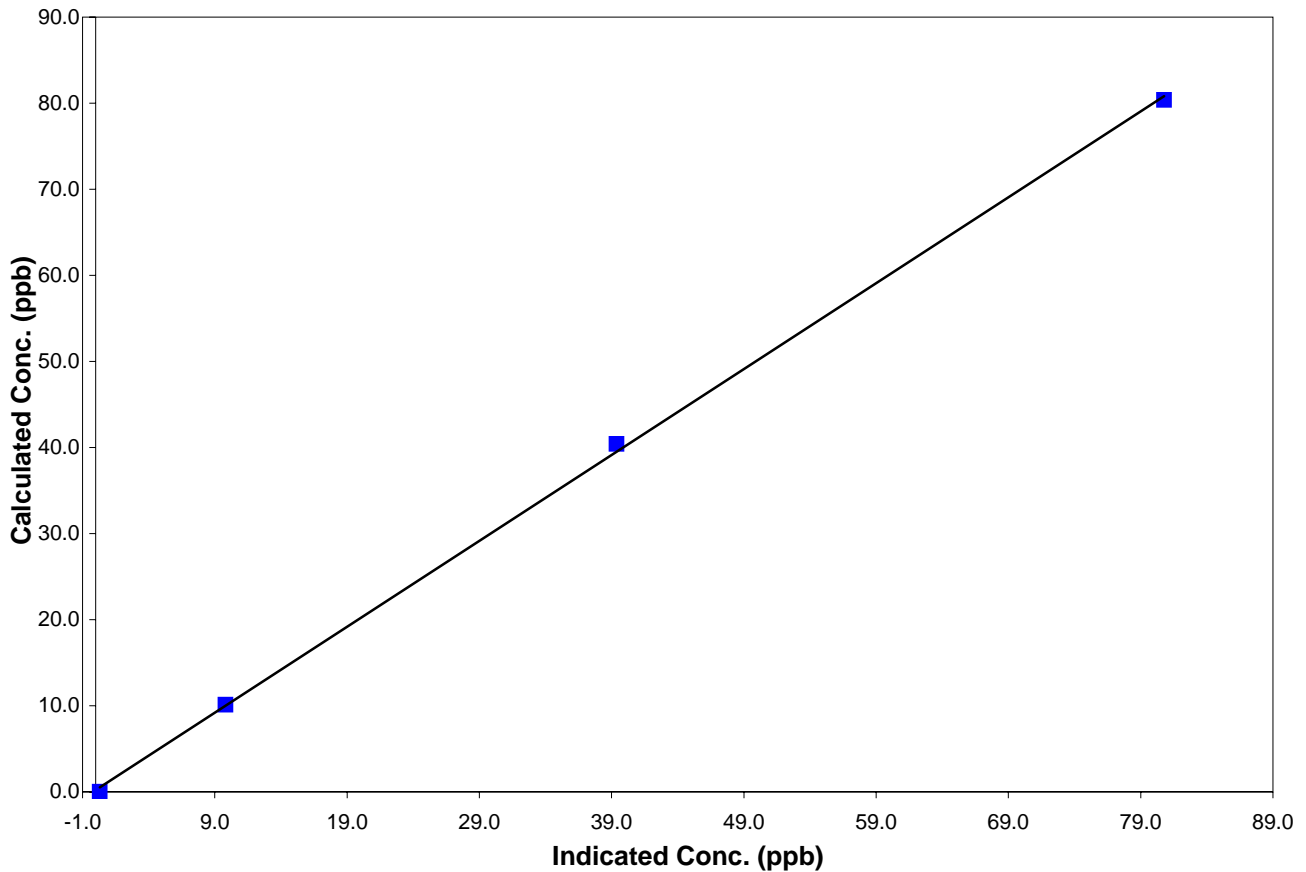
Station Information

Calibration Date	<u>December 27, 2009</u>	Previous Calibration	<u>November 29, 2009</u>
Station Number	<u>9</u>	Station Location	<u>Rover-Kinuso</u>
Start Time (MST)	<u>14:10</u>	End Time (MST)	<u>16:30</u>
Analyzer make/model	<u>TEI 43C</u>	Analyzer serial #	<u>609716238</u>

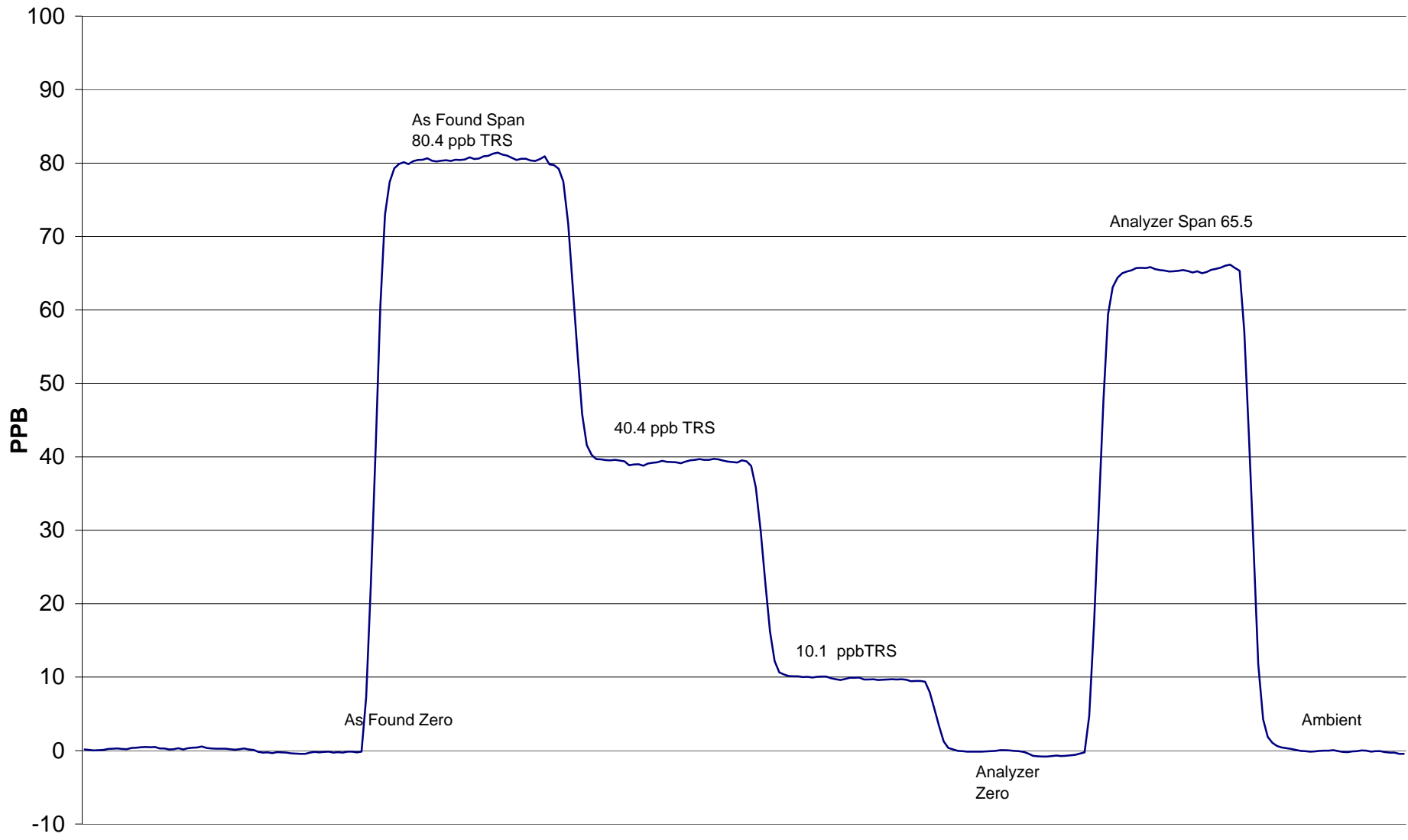
Calibration Data

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	0.999667
40.4	39.4	1.0268		
10.1	9.8	1.0314		
			Slope	0.997775
			Intercept	0.243797

TRS Calibration Curve



Kinuso TRS Calibration



December 27, 2009

Calibration Report

Parameter

NO_x-NO-NO₂

Air Monitoring Network

PASZA



Station Information

Calibration Date	December 27, 2009	Previous Calibration	November 29, 2009
Station Number	9	Station Location	Rover Kinuso
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Installation	<input type="checkbox"/> Removal
Start Time (MST)	10:45	End Time (MST)	14:18
Barometric Pressure	0.916 Atm	Station Temperature	25.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
NO Cal Gas Conc	49.6 ppm	Cal Gas Expiry Date	July 2, 2007
NOx Cal Gas Conc	49.6 ppm	Cal Gas Serial #	CC114395

DACS Information

DACS make Focus AP1000 DACS serial No. 52662

Parameter		NO2	NOx	NO
Before	Data Slope	0.994673	0.998746	1.004635
	Data Offset	0.304286	-2.580672	-3.094886
After	Data Slope	1.006450	0.996901	1.002857
	Data Offset	1.638236	-2.787218	-3.058891
Channel #		8	6	7
Voltage Range		0 - 10 VDC	0 - 10 VDC	0 - 10 VDC

Analyzer Information

Analyzer make/model TEI 42i Analyzer serial # 701120011

Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	4.2	mV	4.2	mV
NOx bkgnd	4.3	mV	4.5	mV
NO coefficient	0.788		0.771	
NOx coefficient	0.999		0.997	
NO2 conv temp	326.3	Deg C	323.9	Deg C
PMT Temp	-3.1	Deg C	-3.1	Deg C
PMT Volt	-829.2	mV	-829.5	mV
R Cell Press	142.4	in Hg	141.2	in Hg
Sample Flow	0.572	ccm	0.607	ccm

Notes:

Calibration Report

Parameter **NOx-NO-NO₂**
 Air Monitoring Network **PASZA**



Station Information

Calibration Date: December 27, 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	4990	0.00	0.0	0.0	0.0	0.2	0.5	-0.7	N/A	N/A	
1	4990	39.85	393.0	393.0	0.0	395.6	393.6	-0.9	0.9935	0.9983	
2	4990	19.87	196.7	196.7	0.0	201.6	200.3	-0.4	0.9756	0.9820	
3	4990	9.91	98.3	98.3	0.0	103.9	103.8	-0.6	0.9459	0.9472	
AFZ	4990	0.00	0.0	0.0	0.0	0.1	0.5	-0.9	0.0000	0.0000	
AFS	4990	39.84	392.9	392.9	0.0	405.5	404.3	-1.7	0.9688	0.9718	
									Average Correction Factor	0.9717	0.9758

As Found Concentrations: NO_x= 402.9 NO= 400.6 As Found Percent Change NO_x= 2.5% NO= 2.0%

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	0.2	0.5	-0.7	N/A	N/A	N/A	N/A	
NO point	393.9	393.9	0.0	395.2	393.9	-1.3	0.9967	1.0000	N/A	N/A	
300	393.9	156.6	237.2	393.5	156.6	234.8	1.0010	1.0000	1.0103	99.0%	
200	393.9	236.3	157.5	393.2	236.3	154.4	1.0017	1.0000	1.0205	98.0%	
100	393.9	312.5	81.3	393.0	312.5	78.1	1.0022	1.0000	1.0419	96.0%	
							Average Correction Factor	1.0016	1.0000	1.0243	97.6%

AIC Data

Parameter	Previous calibration				Current calibration			
	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.1	-1.0	0.6	ppb	0.2	-1.0	0.7	ppb
Auto span	305.0	300.2	3.0	ppb	313.1	308.7	2.8	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter NO₂

Air Monitoring Network PASZA



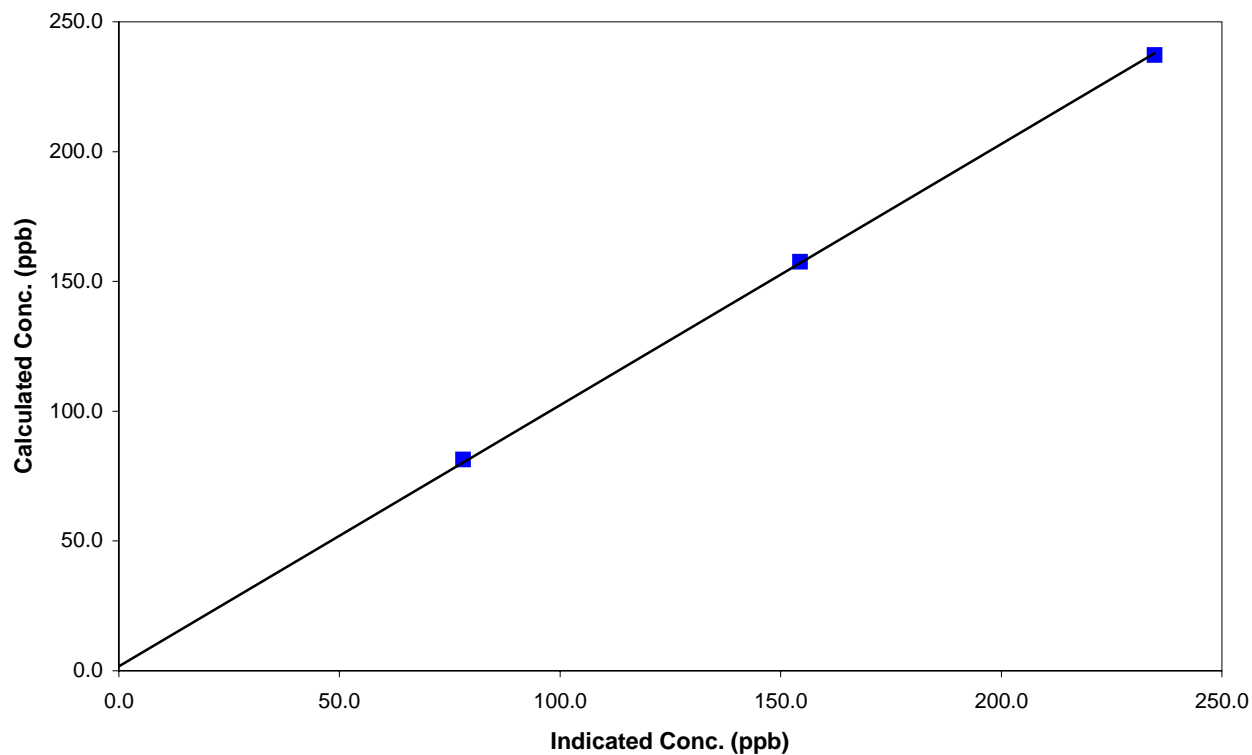
Station Information

Calibration Date	December 27, 2009	Previous Calibration	November 29, 2009
Station Number	9	Station Location	Rover Kinuso
Start Time (MST)	10:45	End Time (MST)	14:18
Analyzer make	TEI 42i	Analyzer serial #	701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.7	N/A	Correlation Coefficient	0.999905
237.2	234.8	1.0103		
157.5	154.4	1.0205		
81.3	78.1	1.0419		
			Slope	1.006450
			Intercept	1.638236

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PASZA



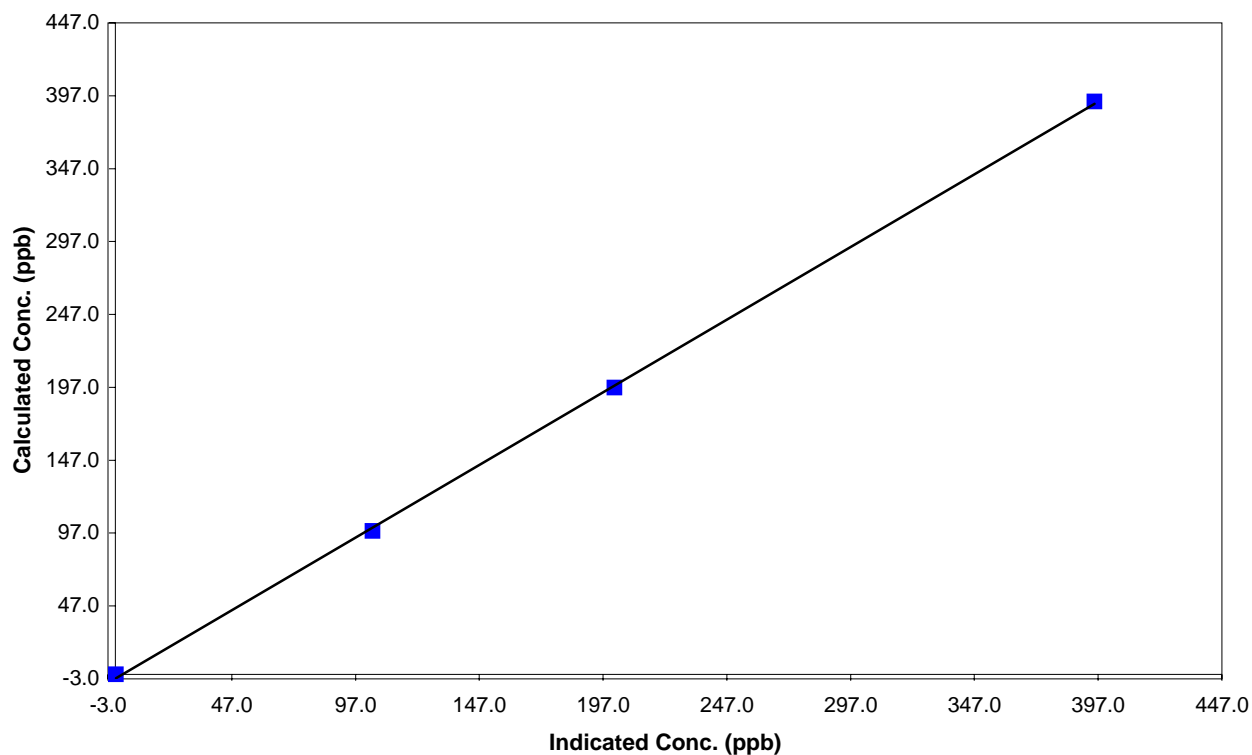
Station Information

Calibration Date	December 27, 2009	Previous Calibration	November 29, 2009
Station Number	9	Station Location	Rover Kinuso
Start Time (MST)	10:45	End Time (MST)	14:18
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	0.2	N/A	Correlation Coefficient	0.999795
393.0	395.6	0.9935		
196.7	201.6	0.9756	Slope	0.996901
98.3	103.9	0.9459		
			Intercept	-2.787218

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PASZA



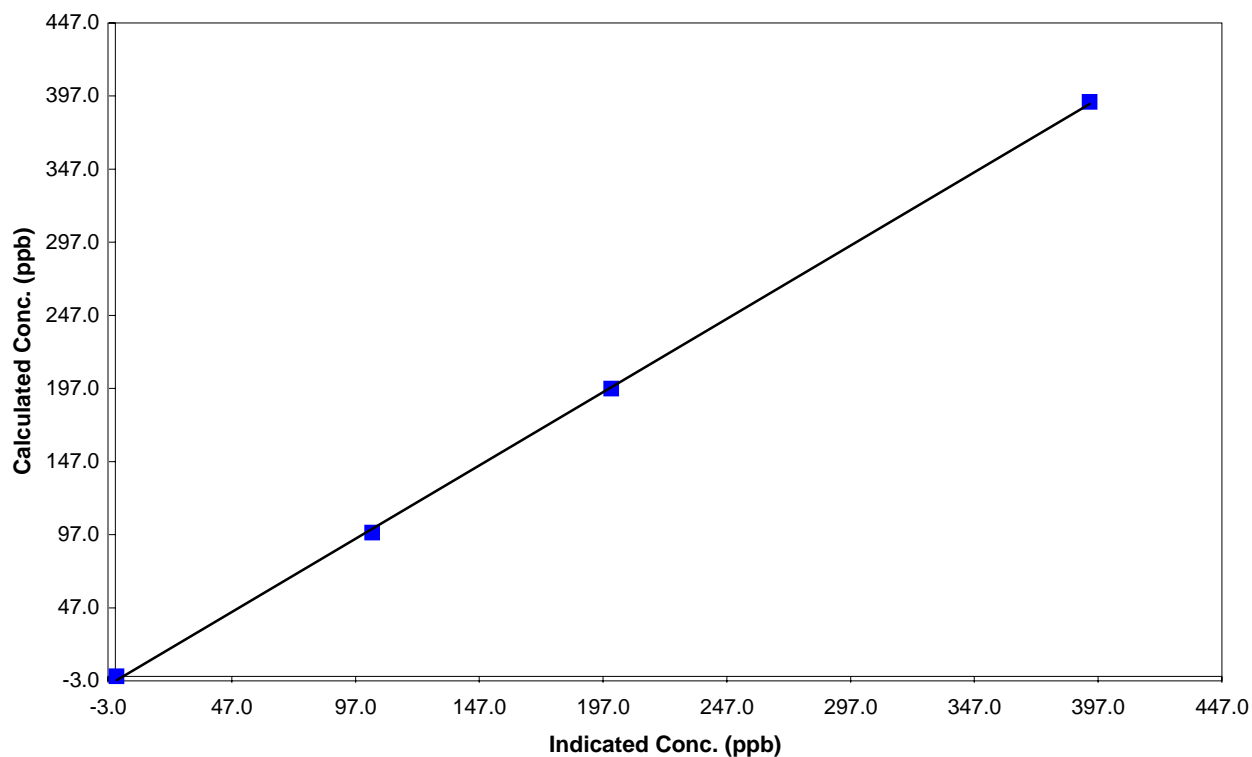
Station Information

Calibration Date	December 27, 2009	Previous Calibration	November 29, 2009
Station Number	9	Station Location	Rover Kinuso
Start Time (MST)	10:45	End Time (MST)	14:18
Analyzer make	TEI 42i	Analyzer serial #	701120011

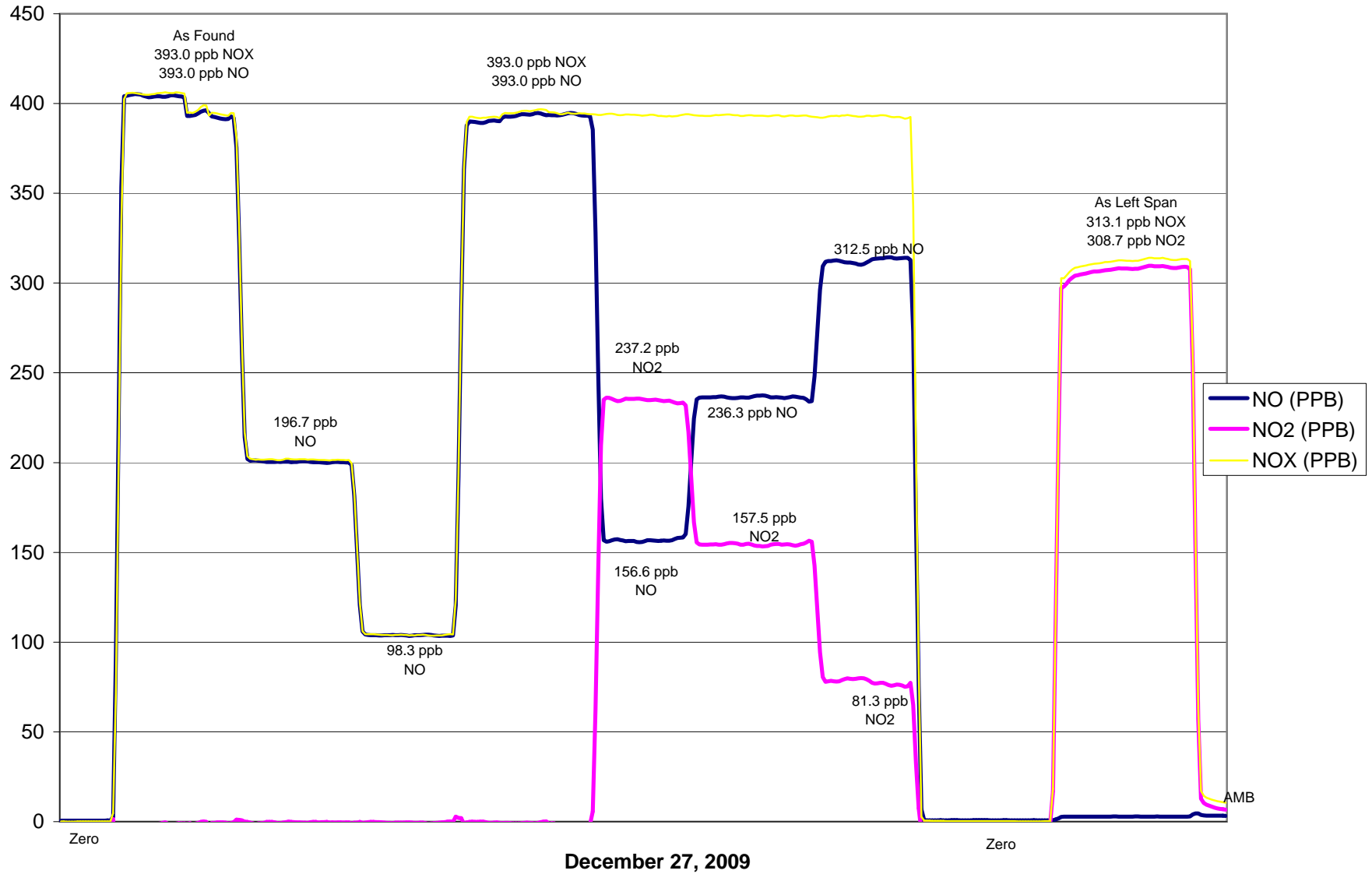
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A	Correlation Coefficient	0.999800
393.0	393.6	0.9983		
196.7	200.3	0.9820		
98.3	103.8	0.9472		
			Slope	1.002857
			Intercept	-3.058891

NO Calibration Curve



Kinuso NO_x Calibration



Calibration Report



Parameter 03
 Air Monitoring Network PASZA

Station Information

Calibration Date	December 27, 2009	Previous Calibration	November 29, 2009
Station Number	9	Station Location	Rover - Kinuso
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	13:18	End Time (MST)	15:22
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	0.999357	Calculated slope	1.034687
Calculated intercept	-0.249974	Calculated intercept	0.879377
Analyzer make	TEI Model 49C	Analyzer serial #	609-716240

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	-14.4	ppb	-13.8	ppb
Span	1.489		1.517	
Cell A	90475	Hz	90644	Hz
Cell B	98674	Hz	98378	Hz
Pressure	712	in Hg	709	in Hg
Cell A Flow	725	ccm	724	ccm
Cell B Flow	694	cmm	692	cmm

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4990	0.00	0.0	0.0	N/A
4990	0.00	237.2	233.7	1.0150
4990	0.00	157.5	155.8	1.0111
4990	0.00	81.3	78.8	1.0324
4990	0.00	0.0	0.0	As found zero
4990	0.00	237.2	228.9	As found span
Average Correction Factor				1.0195

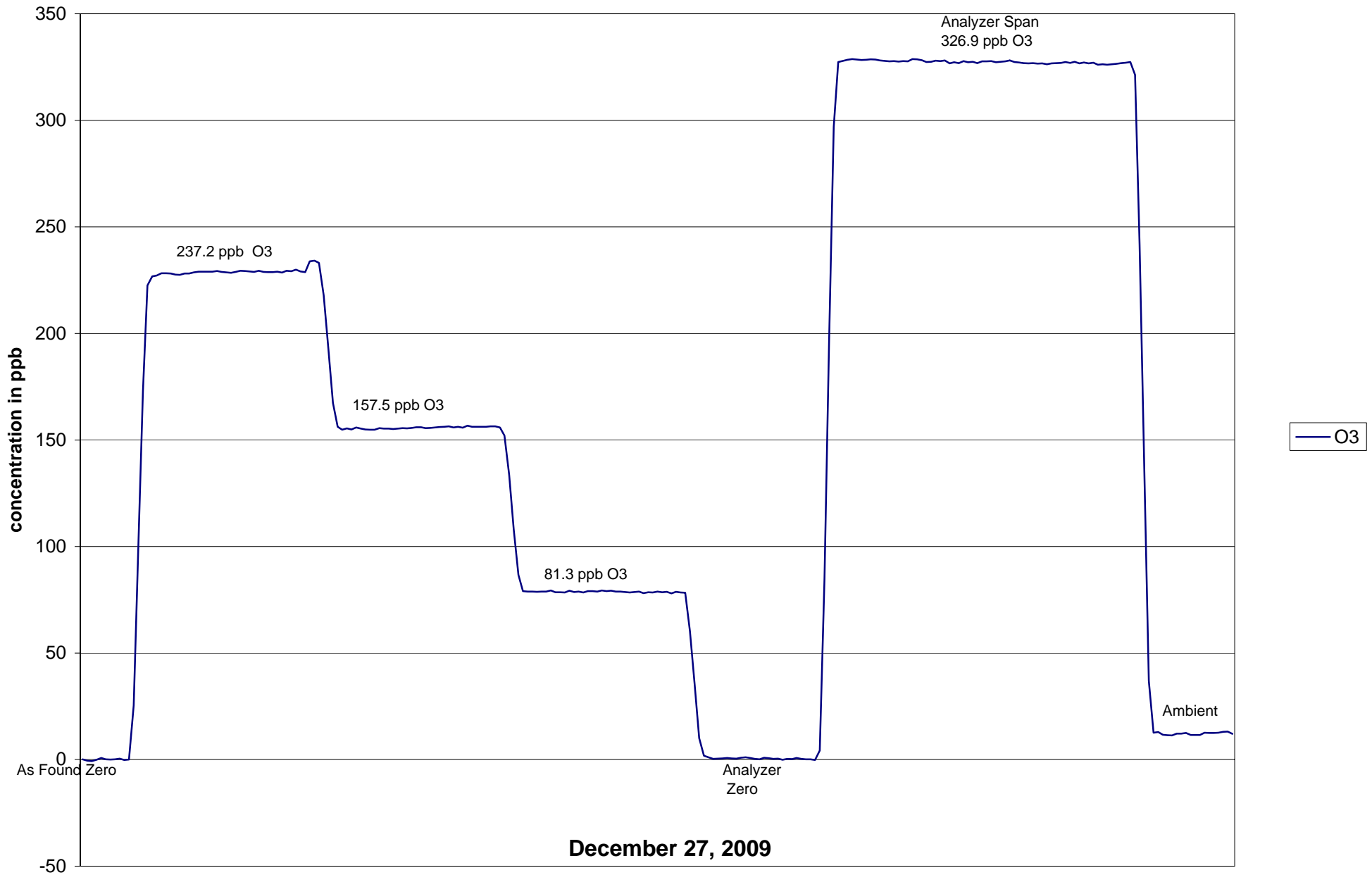
Calculated value of As Found Response: 228.5 ppm Percent Change of As Found: -3.7%

	before calibration		after calibration	
Auto zero	1.2	ppb	1.4	ppb
Auto span	275.5	ppb	339.2	ppb

Notes: _____

Calibration Performed By: Grover Christiansen

Kinuso O₃ Calibration



Calibration Report

Parameter SO2
 Air Monitoring Network _____

PASZA



Station Information

Calibration Date	December 8, 2009	Previous Calibration	November 15, 2009
Station Number	6	Station Location	Valleyview
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	11:00	End Time (MST)	13:20
Barometric Pressure	29.90 inches Hg	Station Temperature	25.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	50.6 ppm	Cal Gas Cert Date	12/3/2009
Gas Cert Reference	AAL 56996		
DACS make	Focus AP1000	DACS serial No.	45274
DACS voltage range	0 - 10 volt	DACS channel #	4
	<u>Before</u>		<u>After</u>
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.003473	Calculated slope	1.000695
Calculated intercept	-1.945767	Calculated intercept	-2.137951
Analyzer make	TEI 45C	Analyzer serial #	45C-57531-313

	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
Background	28.4		29.7	
Coefficient	0.707		0.713	
UV Lamp Voltage	702	LPM	700	LPM
Chamber Temp	44.3	V	44.2	V
Perm Gas Temp	35.1	C	35.1	C
Pressure	627	in Hg	625.1	in Hg
Sample Flow	0.471	LPM	0.471	LPM
Lamp Intesity	45612	Hz	45466	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)
4990	0.00	0.0	0.2	N/A
4990	39.85	400.9	401.7	0.9980
4990	19.92	201.2	204.2	0.9852
4990	9.90	100.2	104.2	0.9612
4990	0.00	0.0	0.9	As found zero
4990	39.88	401.2	398.2	As found span
Average Correction Factor				0.9814

Calculated value of As Found Response: 396.693 ppm Percent Change of As Found: 1.1%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.0	ppm
Auto span	167.3	ppm	138.0	ppm

Notes: **New Perm Tube installed SO2 390 ng/min +/- 25% @ 50 deg C.**

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PASZA



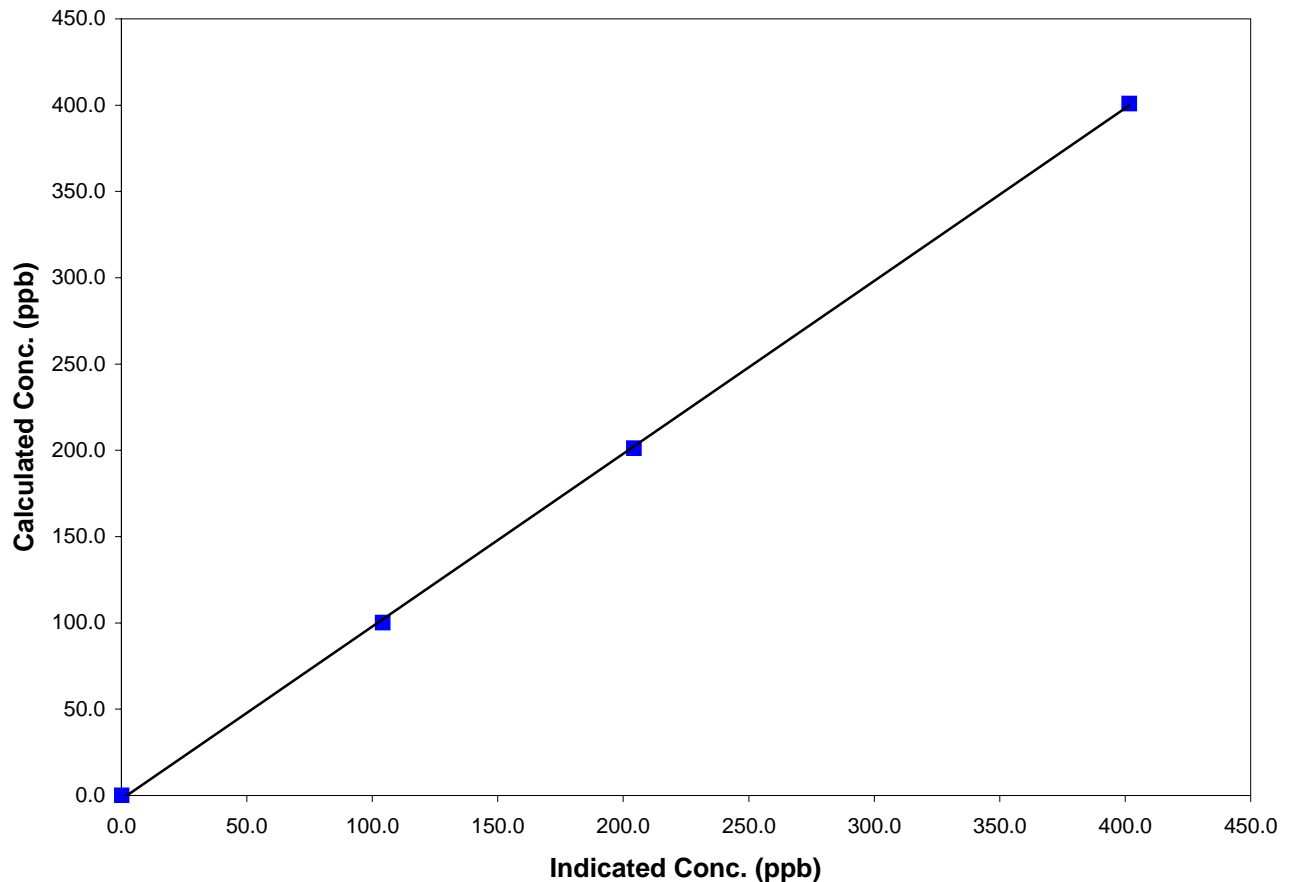
Station Information

Calibration Date	December 8, 2009	Previous Calibration	November 15, 2009
Station Number	6	Station Location	Valleyview
Start Time (MST)	11:00	End Time (MST)	13:20
Analyzer make/model	TEI 45C	Analyzer serial #	45C-57531-313

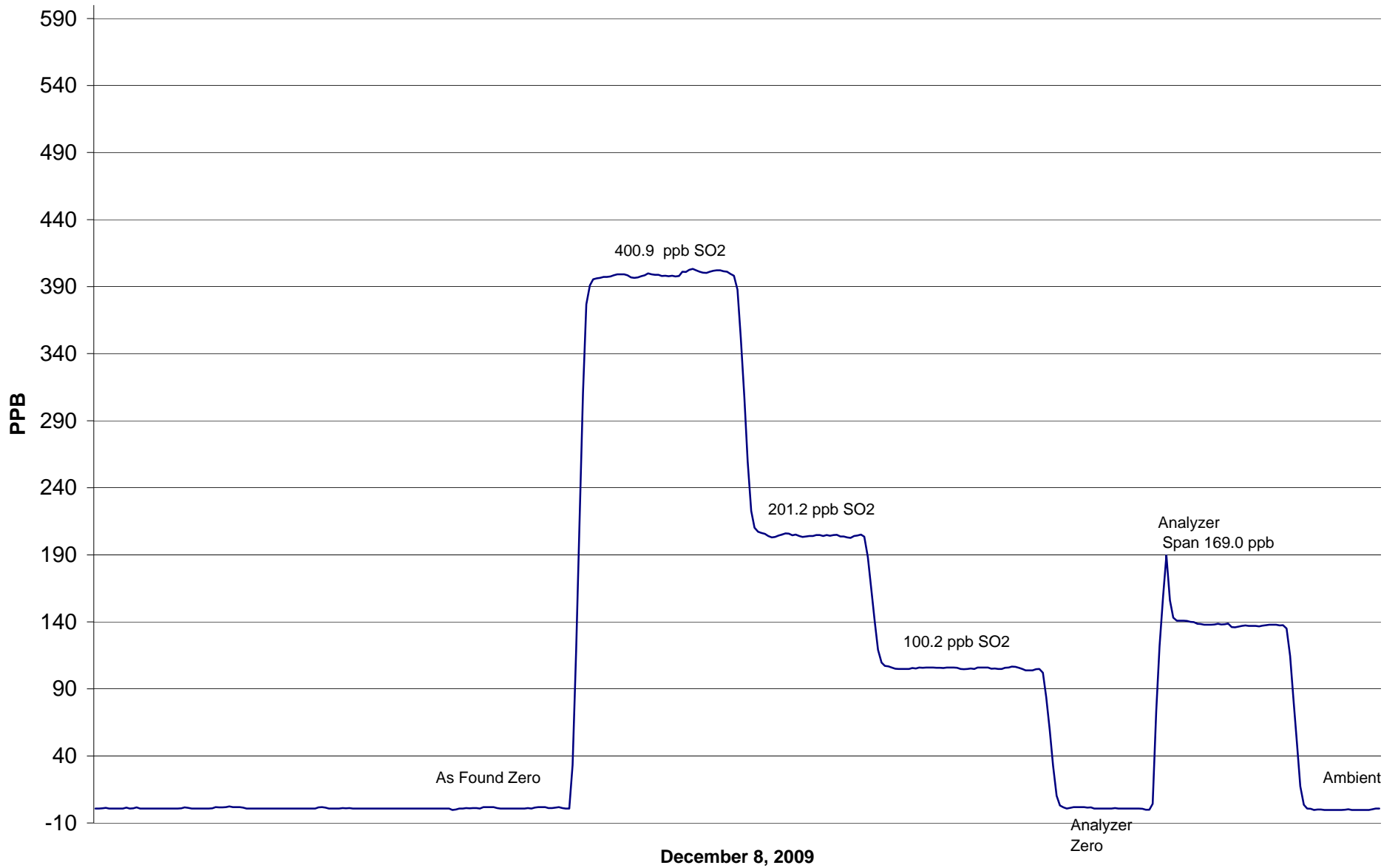
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999886
400.9	401.7	0.9980		
201.2	204.2	0.9852	Slope	1.000695
100.2	104.2	0.9612		
			Intercept	-2.137951

SO2 Calibration Curve



Valleyview SO₂ Calibration



Calibration Report



Parameter H2S

Air Monitoring Network PASZA

Station Information

Calibration Date	December 8, 2009	Previous Calibration	November 15, 2009
Station Number	5	Station Location	Valleyview
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	12:30	End Time (MST)	14:30
Barometric Pressure	0.00 inches Hg	Station Temperature	23.0 Deg C
Calibrator	Enviroics 6100	Serial Number	3474
Cal Gas Concentration	5.1 ppm	Cal Gas Expiry Date	4/4/2009
Gas Cert Reference	ALM013295		
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 10 volt	DACS channel #	9
	<u>Before</u>		<u>After</u>
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.997402	Calculated slope	0.997989
Calculated intercept	-0.168699	Calculated intercept	-0.303718
Analyzer make	TEI Model 43i - APSCB	Analyzer serial #	701120010

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	5.1	ppb	5.1	ppb
Coefficient	1.120		1.125	
Lamp Voltage	793	V	792	V
Chamber Temp	45.2	c	45	c
Perm Oven Temp	45.01	c	45	c
Pressure	643	mm Hg	642	mm Hg
Sample Flow	429	ccm	428	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	79.75	80.2	80.7	0.9944
4989	39.88	40.4	40.8	0.9903
4989	9.93	10.1	10.6	0.9602
4989	0.00	0.0	0.2	As found zero
4989	79.81	80.3	79.9	As found span
Average Correction Factor				0.9816

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

	before calibration		after calibration	
Auto zero	0.1	ppm	0.0	ppm
Auto span	67.4	ppm	42.9	ppm

Notes: **New Perm Tube installed H2S 76 ng/min +/- 25% @ 50 deg C.**

Calibration Performed By: Grover Christiansen

Valleyview H₂S Calibration

