



# **Peace AirShed Zone Association**

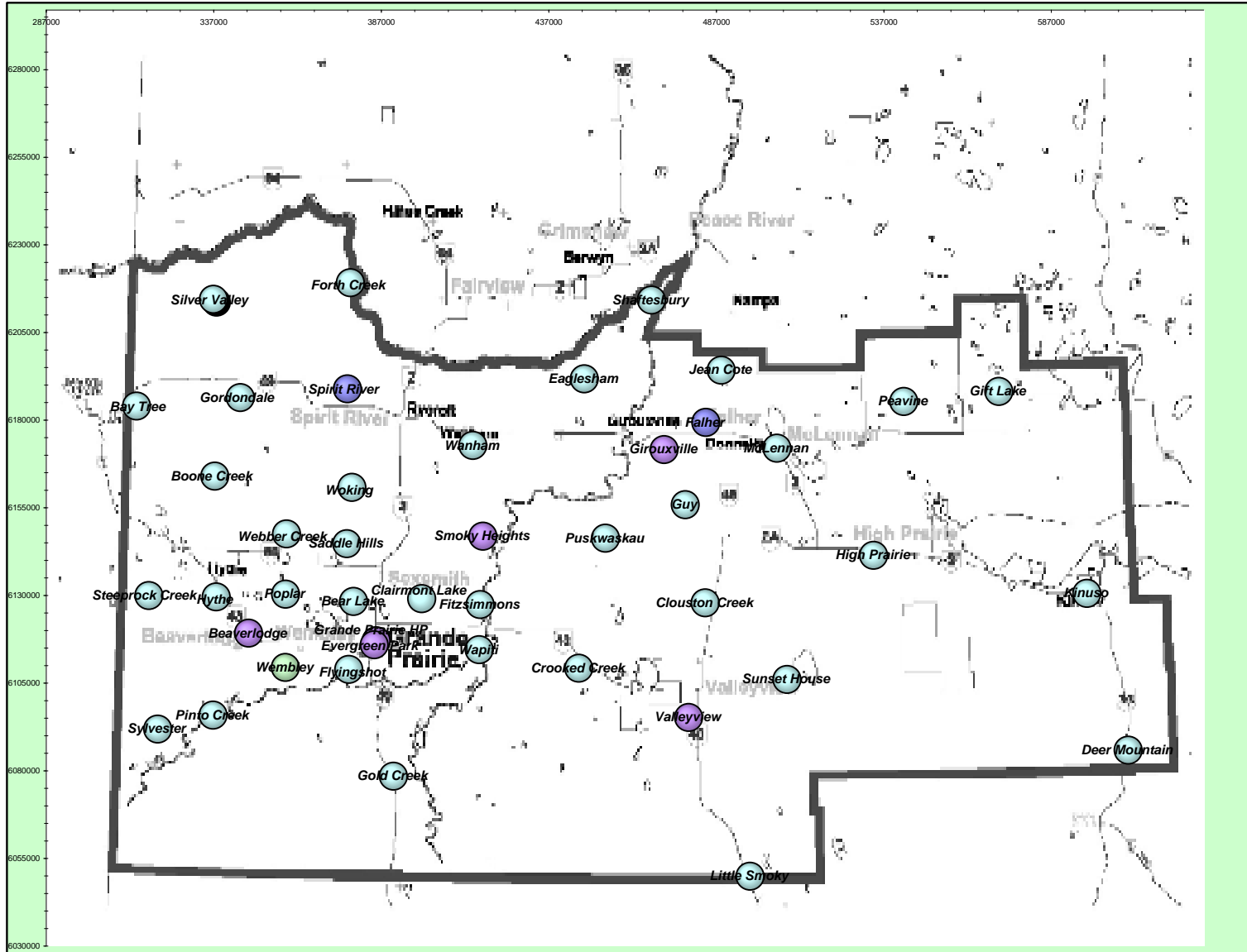
## **Ambient Air Monitoring Network Summary**

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

**Operations and Reporting**

**FOCUS**  
AIR QUALITY MONITORING

# Location of PASZA Continuous and Passive Monitoring Stations





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March 30, 2009

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

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

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

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

During the month of February the following events were noted:

**Henry Pirker Station:**

- ◆ The measured ambient air quality was within the Alberta Ambient Air Quality Objectives (AAAQO) for the Henry Pirker station.
- ◆ The SO<sub>2</sub>, NO<sub>x</sub>, O<sub>3</sub>, CO, TRS, THC, PM<sub>2.5</sub>, solar radiation, wind speed and wind direction analyzers and sensors at the Henry Pirker station had an operational uptime greater than 90% for the month of February.
- ◆ The temperature and relative humidity sensors were sent back to factory for repair, and have been out of service since November 6<sup>th</sup> - **Alberta Environment reference #209512**.

**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 February.

**Smoky Heights Station:**

- ◆ The measured ambient air quality was within the AAAQO for the Smoky Heights station, except the PM<sub>2.5</sub>. On February 27<sup>th</sup> the PM<sub>2.5</sub> exceeded the 1-hour guideline with a reading of 140.4 µg/m<sup>3</sup> - **Alberta Environment reference #211117**.
- ◆ All analyzers / sensors at the Smoky Heights station had an operational uptime greater than 90% for the month of February.

**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 February.

**Portable – Spirit River Station:**

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

**Valleyview Station:**

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

**Passive Monitoring - 49 Stations throughout the PASZA zone:**

There were seven duplicate sites sampled in the month of February: Saddle Hills, Wanham, Smoky Heights, Fitzsimmons, Deer Mountain and Grande Prairie HP. The passive sample analyses were performed by MAXXAM Analytics Inc.

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

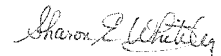
- Monthly average concentrations for SO<sub>2</sub> passives ranged from 0.2 ppb to 0.7 ppb, with a mean of 0.4 ppb.
- Monthly average concentrations for NO<sub>2</sub> passives ranged from 0.9 ppb to 13.6 ppb, with a mean of 2.7 ppb.
- Monthly average concentrations for O<sub>3</sub> passives ranged from 27.5 ppb to 47.3 ppb, with a mean of 39.5 ppb.

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

On Behalf of the,  
Peace Airshed Zone Association



Michael Bisaga  
PASZA Program Manager



Sharon Whiteley, B.Sc..  
AQM Data Specialist

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## PASZA Monthly Continuous Data Summary

Feb-2009 Peace Airshed Zone Association							Maximum Recorded Values				Operational Time (%)
Pollutant (units)	Objectives		Station	Monthly Average	Exceedence		Conc	1-hr		Day	
	1-hr	24-hr			1-hr	24-hr		Conc	Day		
SO <sub>2</sub> (ppb)	172	57	Henry Pirker	0.7	0	0	4.3	Feb-15 13:00	2.3	Feb-15	99.9%
SO <sub>2</sub> (ppb)	172	57	Evergreen Park	0.6	0	0	18.3	Feb-15 12:00	4.7	Feb-15	100.0%
SO <sub>2</sub> (ppb)	172	57	Smoky Heights	1.2	0	0	51.2	Feb-27 17:00	6.7	Feb-27	100.0%
SO <sub>2</sub> (ppb)	172	57	Beaverlodge	0.7	0	0	3.8	Feb-23 11:00	1.6	Feb-21	100.0%
SO <sub>2</sub> (ppb)	172	57	Portable-Spirit River	0.7	0	0	4.4	Feb-18 20:00	1.7	Feb-27	100.0%
SO <sub>2</sub> (ppb)	172	57	Valleyview	0.4	0	0	10.9	Feb-20 16:00	1.5	Feb-20	100.0%
NO (ppb)			Henry Pirker	10.4	-	-	159.3	Feb-27 09:00	38.5	Feb-17	99.9%
NO <sub>2</sub> (ppb)	212	106	Henry Pirker	19.5	0	0	52.3	Feb-27 09:00	35.4	Feb-27	99.9%
NO <sub>x</sub> (ppb)			Henry Pirker	29.9	-	-	211.7	Feb-27 09:00	72.1	Feb-27	99.9%
NO (ppb)			Beaverlodge	1.5	-	-	32.7	Feb-16 13:00	5.0	Feb-26	100.0%
NO <sub>2</sub> (ppb)	212	106	Beaverlodge	6.9	0	0	35.1	Feb-26 21:00	15.2	Feb-21	100.0%
NO <sub>x</sub> (ppb)			Beaverlodge	8.4	-	-	52.9	Feb-16 13:00	19.7	Feb-26	100.0%
NO (ppb)			Portable-Spirit River	0.8	-	-	27.1	Feb-22 07:00	2.6	Feb-17	100.0%
NO <sub>2</sub> (ppb)	212	106	Portable-Spirit River	4.5	0	0	25.6	Feb-22 07:00	10.1	Feb-17	100.0%
NO <sub>x</sub> (ppb)			Portable-Spirit River	5.2	-	-	52.6	Feb-22 07:00	12.7	Feb-17	100.0%
O <sub>3</sub> (ppb)	82		Henry Pirker	19.8	0	-	43.7	Feb-04 02:00	32.6	Feb-23	99.9%
O <sub>3</sub> (ppb) - 8-hr		65	Henry Pirker			0			39.6	Feb-04	
O <sub>3</sub> (ppb)	82		Beaverlodge	31.7	0	-	48.1	Feb-08 07:00	45.7	Feb-08	100.0%
O <sub>3</sub> (ppb) - 8-hr		65	Beaverlodge			0			47.6	Feb-08	
O <sub>3</sub> (ppb)	82		Portable-Spirit River	30.1	0	-	46.9	Feb-08 14:00	43.1	Feb-08	99.7%
O <sub>3</sub> (ppb) - 8-hr		65	Portable-Spirit River			0			46.3	Feb-08	
CO (ppm)	13		Henry Pirker	0.28	0	-	1.6	Feb-18 09:00	0.5	Feb-27	99.9%
CO (ppm) - 8-hr		5	Henry Pirker			0			0.7	Feb-27	100.0%
THC (ppm)			Henry Pirker	2.40	-	-	3.6	Feb-20 11:00	3.1	Feb-16	99.9%
TRS (ppb)			Henry Pirker	0.4	-	-	1.3	Feb-18 19:00	0.6	Feb-17	99.9%
TRS (ppb)			Evergreen Park	0.7	-	-	2.1	Feb-18 05:00	1.3	Feb-17	100.0%
TRS (ppb)			Smoky Heights	0.4	-	-	1.0	Feb-05 21:00	0.7	Feb-16	100.0%
TRS (ppb)			Portable-Spirit River	0.6	-	-	1.0	Feb-18 20:00	0.8	Feb-12	100.0%
H <sub>2</sub> S (ppb)	10	3	Valleyview	0.2	0	0	1.0	Feb-02 19:00	0.4	Feb-02	100.0%
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	80	30	Henry Pirker	5.2	0	0	26.4	Feb-20 11:00	14.5	Feb-16	99.7%
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	80	30	Evergreen Park	5.6	0	0	27.5	Feb-17 13:00	15.9	Feb-17	99.7%
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	80	30	Smoky Heights	5.5	1	0	140.4	Feb-27 19:00	20.0	Feb-27	99.7%
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	80	30	Beaverlodge	3.7	0	0	24.3	Feb-15 03:00	14.9	Feb-15	100.0%

## PASZA Monthly Continuous Data Summary - continued

Feb-2009		Peace Airshed Zone Association					Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
RH (%)		Henry Pirker	-	-	-	-	-	-	-	-	-
RH (%)		Beaverlodge	66.0	-	-	97.1	Feb-06 02:00	84.7	Feb-22	100.0%	
RH (%)		Portable-Spirit River	70.0	-	-	90.9	Feb-20 06:00	83.5	Feb-22	100.0%	
RH (%)		Valleyview	69.7	-	-	97.2	Feb-06 04:00	91.1	Feb-06	100.0%	
SR (W/m <sup>2</sup> )		Henry Pirker	55.5	-	-	390.1	Feb-27 14:00	98.8	Feb-25	99.9%	
Temp (°C)		Henry Pirker	-	-	-	-	-	-	-	-	
Temp (°C)		Evergreen Park	-9.0	-	-	12.3	Feb-03 16:00	5.5	Feb-03	100.0%	
Temp (°C)		Smoky Heights	-10.4	-	-	8.0	Feb-03 17:00	2.4	Feb-03	100.0%	
Temp (°C)		Beaverlodge	-7.6	-	-	9.4	Feb-03 16:00	5.2	Feb-03	100.0%	
Temp (°C)		Portable-Spirit River	-9.6	-	-	8.1	Feb-03 16:00	4.5	Feb-03	100.0%	
Temp (°C)		Valleyview	-9.7	-	-	9.1	Feb-04 02:00	4.0	Feb-04	100.0%	
WSPD s (km/hr)		Henry Pirker	6.5	-	-	32.0	Feb-04 02:00	14.9	Feb-04	99.9%	
WSPD s (km/hr)		Evergreen Park	4.1	-	-	27.0	Feb-04 02:00	12.1	Feb-04	100.0%	
WSPD s (km/hr)		Smoky Heights	9.5	-	-	48.0	Feb-04 04:00	22.0	Feb-04	100.0%	
WSPD s (km/hr)		Beaverlodge	6.3	-	-	41.0	Feb-04 00:00	21.2	Feb-04	97.2%	
WSPD s (km/hr)		Portable-Spirit River	5.7	-	-	39.0	Feb-04 02:00	18.4	Feb-07	99.0%	
WSPD s (km/hr)		Valleyview	5.0	-	-	19.0	Feb-26 15:00	10.0	Feb-23	99.7%	
WSPD v (km/hr)		Henry Pirker	2.2	-	-	32.0	Feb-04 02:00	12.8	Feb-04	99.9%	
WSPD v (km/hr)		Evergreen Park	1.1	-	-	27.0	Feb-04 02:00	11.2	Feb-04	100.0%	
WSPD v (km/hr)		Smoky Heights	2.4	-	-	48.0	Feb-04 04:00	20.6	Feb-04	100.0%	
WSPD v (km/hr)		Beaverlodge	2.0	-	-	41.0	Feb-04 00:00	20.2	Feb-04	97.2%	
WSPD v (km/hr)		Portable-Spirit River	2.4	-	-	39.0	Feb-04 02:00	18.1	Feb-07	99.0%	
WSPD v (km/hr)		Valleyview	0.6	-	-	18.0	Feb-26 15:00	9.9	Feb-23	99.7%	
WDIR (deg)		Henry Pirker	NW	-	-	-	-	-	-	99.9%	
WDIR (deg)		Evergreen Park	WNW	-	-	-	-	-	-	100.0%	
WDIR (deg)		Smoky Heights	WNW	-	-	-	-	-	-	100.0%	
WDIR (deg)		Beaverlodge	NW	-	-	-	-	-	-	97.2%	
WDIR (deg)		Portable-Spirit River	WSW	-	-	-	-	-	-	99.0%	
WDIR (deg)		Valleyview	W	-	-	-	-	-	-	99.7%	

# Continuous Network Equipment Summary

## PASZA – Henry Pirker Station

### General Station Issues

Routine monthly calibrations were performed on February 10<sup>th</sup> (SO<sub>2</sub>, NO<sub>x</sub>, O<sub>3</sub> & TRS) and February 11<sup>th</sup> (CO & THC). A power failure on February 27<sup>th</sup> resulted in one (1) hour of invalid data for all parameters.

Parameter	Make	Model	Notes
SO <sub>2</sub>	TEI	43C	No operational issues observed.
NOx/NO/NO <sub>2</sub>	TEI	42C	No operational issues observed.
O <sub>3</sub>	TEI	49C	A number of spans were less than target range – reason under investigation.
CO	TEI	48C	No operational issues observed.
THC	TEI	51-CLT	No operational issues observed.
TRS	TEI	43C	A number of spans were less than target range – reason under investigation.
PM <sub>2.5</sub>	R&P	1400AB	No operational issues observed.
RH	Met One	083D	No operational issues observed.
ET	Met One	083D	No operational issues observed.
SR	Met One	096-1	No operational issues observed.
WS	Met One	010C	No operational issues observed.
WD	Met One	020C	No operational issues observed.

## PASZA – Evergreen Park Station

### General Station Issues

Routine monthly calibrations were performed on February 18<sup>th</sup> (SO<sub>2</sub> & TRS).

Parameter	Make	Model	Notes
SO <sub>2</sub>	TEI	43i	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
PM <sub>2.5</sub>	R&P	1400AB	Two (2) hours were flagged maintenance on February 17 <sup>th</sup> – TEOM filter replaced.
ET	Met One/Gill	083D	No operational issues observed.
WS	Met One/ Gill	010C	No operational issues observed.
WD	Met One/ Gill	020C	No operational issues observed.

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**PASZA – Smoky Heights Station**

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**General Station Issues**

Routine monthly calibrations were performed on February 20<sup>th</sup> (TRS & SO<sub>2</sub>).

Parameter	Make	Model	Notes
SO <sub>2</sub>	TEI	43C	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
PM <sub>2.5</sub>	R&P	1400AB	One (1) hour was flagged invalid due to baseline drift. One (1) hour was flagged invalid on February 22 <sup>nd</sup> – suspect a power bump. On February 27 <sup>th</sup> the PM <sub>2.5</sub> exceeded the 1-hour guideline with a reading of 140.4 µg/m <sup>3</sup> - <b>Alberta Environment reference #211117.</b>
ET	Met One	083D	No operational issues observed.
WS	Met One	010C	No operational issues observed.
WD	Met One	020C	No operational issues observed.

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**PASZA – Beaverlodge Station**

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**General Station Issues**

Routine monthly calibrations were performed on February 13<sup>th</sup> (SO<sub>2</sub>, O<sub>3</sub> & NO<sub>x</sub>).

Parameter	Make	Model	Notes
SO <sub>2</sub>	TEI	43CTL	No operational issues observed.
NO <sub>x</sub> /NO/NO <sub>2</sub>	TEI	42C	No operational issues observed.
O <sub>3</sub>	TEI	49C	Adjustment made..
PM <sub>2.5</sub>	R&P	1400AB	No operational issues observed.
ET	n/a	n/a	No operational issues observed.
RH	n/a	n/a	No operational issues observed.
WS	Blue Sky	857	A total of nineteen (19) hours were flagged invalid due to flatlining – frozen cups.
WD	Blue Sky	857	A total of nineteen (19) hours were flagged invalid due to flatlining – frozen cups.



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**PASZA – Spirit River (Portable) Station**

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**General Station Issues**

Routine monthly calibrations were performed on February 8<sup>th</sup> (SO<sub>2</sub>, O<sub>3</sub>, TRS & NO<sub>x</sub>).

Parameter	Make	Model	Notes
SO <sub>2</sub>	TEI	43C	Internal pump replaced.
NOx/NO/NO <sub>2</sub>	TEI	42i	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
O <sub>3</sub>	TEI	49C	Spans were less than target range from February 1 <sup>st</sup> to 8 <sup>th</sup> due to perm tube replacement.
ET	Gill	Met Pak 3	No operational issues observed.
RH	Gill	Met Pak 3	No operational issues observed.
WS	Met One		A total of seven (7) hours were flagged invalid – due to intermittent spiking (fog and snow).
WD	Met One		A total of seven (7) hours were flagged invalid – due to intermittent spiking (fog and snow).

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**PASZA – Valleyview Station**

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**General Station Issues**

Routine monthly calibrations were performed on February 3<sup>rd</sup> (SO<sub>2</sub> & H<sub>2</sub>S).

Parameter	Make	Model	Notes
SO <sub>2</sub>	TEI	43i	No operational issues observed.
H <sub>2</sub> S	TEI	43A	No operational issues observed.
ET	Gill	Met Pak 3	No operational issues observed.
RH	Gill	Met Pak 3	No operational issues observed.
WS	Gill	Met Pak 3	Intermittent spiking (fog or snow) resulted in a total of two (2) hours of invalid data.
WD	Gill	Met Pak 3	Intermittent spiking (fog or snow) resulted in a total of two (2) hours of invalid data.

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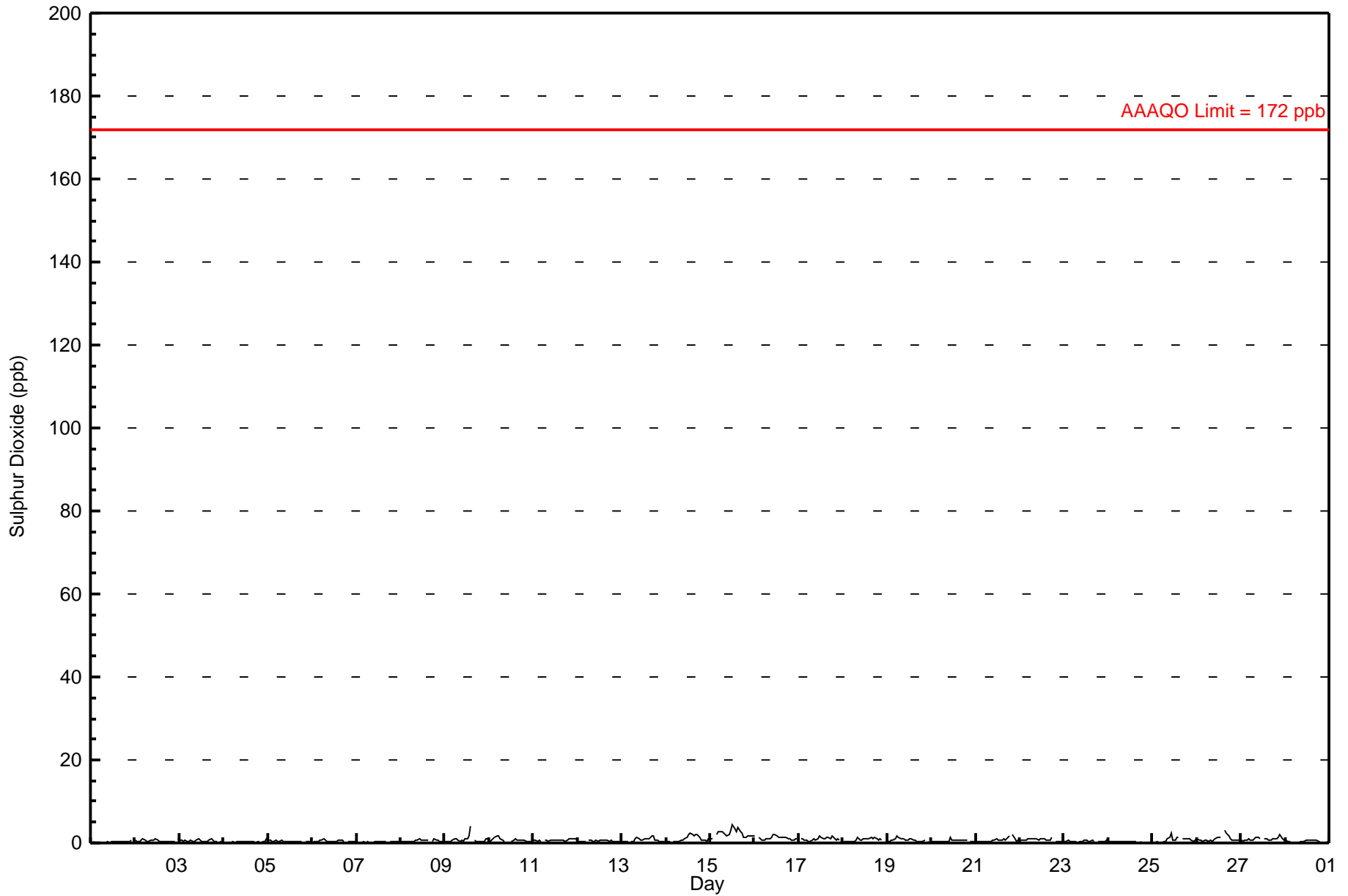
PASZA  
Henry Pirker Station  
Monthly Summary Tables, Graphs and  
Roses

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

**Henry Pirker - Sulphur Dioxide (SO<sub>2</sub>) - ppb  
February 1, 2009 to March 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0										Hours in Service: 672																																							
Maximum Value: 4.3 ppb on Feb 15 13:00										Maximum Daily Average: 2.3 ppb on Feb 15										Hours of Data: 640																													
Minimum Value: 0 ppb on Feb 7 02:00										Minimum Daily Average: 0.2 ppb on Feb 7										Hours of Missing Data: 32																													
Maximum Diurnal Average: 1.0 ppb at hour 16										Minimum Diurnal Average: 0.4 ppb at hour 2										Hours of Calibration: 31																													
Monthly Average: 0.70 ppb										Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.2 Q <sub>1</sub> = 0.4 Median = 0.5 Q <sub>3</sub> = 0.9 P <sub>90</sub> = 1.3 P <sub>99</sub> = 2.9										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-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0.2	0.7																							
2-Feb	1	0	0	1	1	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	A	1	0.6	1.0																							
3-Feb	1	1	0	1	0	0	1	0	0	1	1	1	0	0	0	0	1	1	1	0	0	A	0	0	0.5	0.9																							
4-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0.3	1.0																							
5-Feb	1	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.5	0.7																							
6-Feb	0	0	0	1	1	1	1	1	0	0	0	0	0	0	1	1	1	0	A	0	0	0	0	0	0.5	0.9																							
7-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.5																							
8-Feb	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	A	0	1	1	1	0	0	0	0.6	0.9																							
9-Feb	0	0	0	0	1	1	1	1	1	1	0	1	1	2	4	A	1	0	0	0	0	0	1	1	0.8	4.2																							
10-Feb	0	1	1	1	2	2	1	1	0	C	C	A	0	1	1	1	1	1	1	1	0	0	0	0	0.7	1.8																							
11-Feb	1	1	1	1	0	A	1	1	0	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0.7	1.1																							
12-Feb	0	0	0	0	0	A	1	1	0	0	1	0	1	1	1	1	1	0	1	0	0	0	0	0	0.5	0.8																							
13-Feb	0	0	0	0	A	0	0	1	1	1	1	1	1	1	1	1	2	2	1	1	0	0	0	0	0.8	1.9																							
14-Feb	0	0	0	A	0	0	0	0	1	1	1	2	2	2	2	2	2	2	1	1	1	1	0	1	1.0	2.3																							
15-Feb	1	1	A	2	3	3	3	2	2	2	2	3	4	3	3	4	3	2	1	1	2	2	2	2	2.3	4.3																							
16-Feb	2	A	1	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1.2	2.1																							
17-Feb	A	1	1	1	1	0	0	1	1	1	1	2	1	1	1	1	1	1	2	1	1	1	1	A	1.0	1.6																							
18-Feb	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0	0.8	1.4																							
19-Feb	0	0	1	1	1	2	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	A	0	0	0.7	1.8																							
20-Feb	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	A	0	0	0	0.5	1.2																							
21-Feb	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	A	2	1	1	1	0.7	2.2																							
22-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	A	0	0	0	0	0	0.8	1.5																							
23-Feb	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	1	0	A	0	0	0	0	0	1	0.4	0.8																							
24-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.5																							
25-Feb	0	0	0	0	0	0	0	0	1	1	3	1	1	1	1	A	1	1	1	1	1	1	0	1	0.7	2.5																							
26-Feb	1	1	1	0	1	1	0	1	0	1	1	1	1	1	A	3	2	2	1	1	1	1	1	1	1.0	3.2																							
27-Feb	1	0	1	1	1	1	1	1	1	1	1	P	1	1	1	1	1	1	1	1	1	2	1	1	1.0	1.9																							
28-Feb	1	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0.3	0.6																							
																								0.5	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.8	0.9	0.9	0.9	1.0	0.9	0.9	0.8	0.6	0.6	0.6	0.5	0.6	Diurnal Average		
																								1.6	1.0	1.4	2.1	2.8	2.8	2.7	2.5	2.1	1.9	2.5	3.0	4.3	3.4	4.2	3.6	2.6	2.5	1.9	1.4	2.2	1.9	1.7	1.7	Diurnal Maximum	
C - Calibration P - Power Failure A - Automated Daily Zero Span																																																	
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 57 ppb																																																	

# Hourly Averages for SO<sub>2</sub> at Henry Pirker February 2009

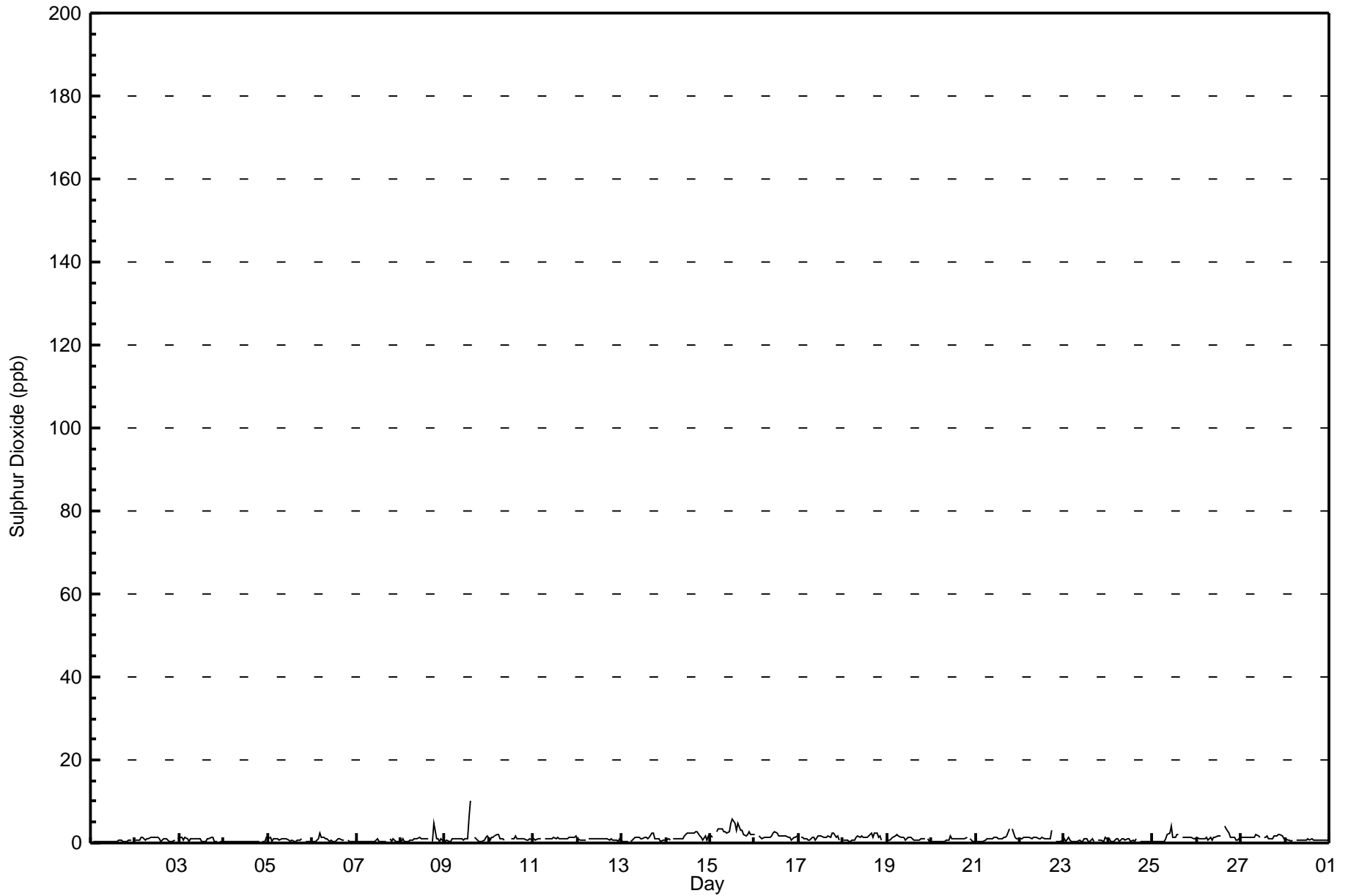


**Peace Airshed Zone Association  
Summary of Hourly Maximums**

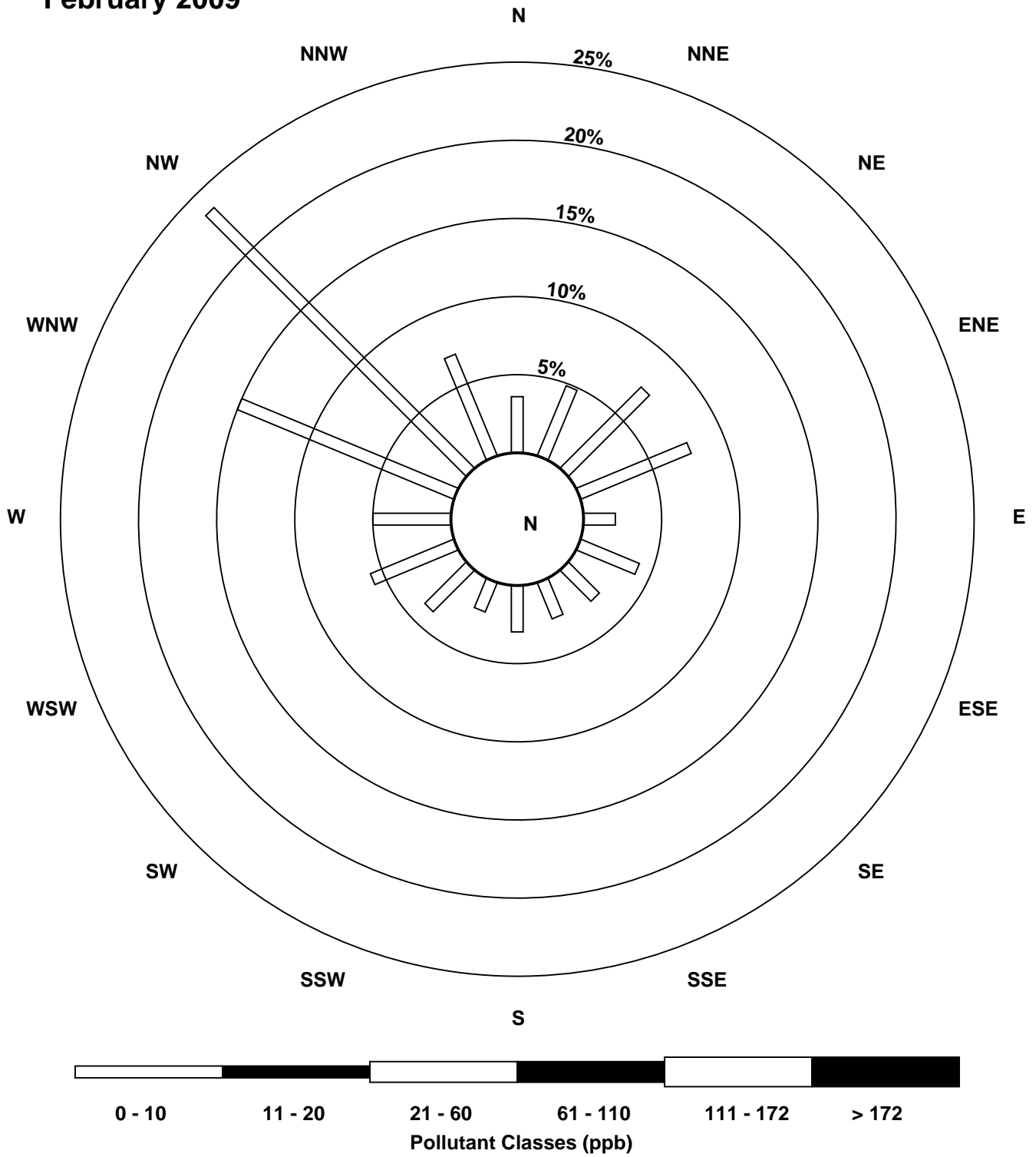
**Henry Pirker - Sulphur Dioxide (SO<sub>2</sub>) - ppb  
February 1, 2009 to March 1, 2009**

Maximum Value: 10.0 ppb on Feb 9 15:00		Maximum Daily Average: 3.0 ppb on Feb 15		Hours in Service: 672																																												
Minimum Value: 0 ppb on Feb 18 04:00		Minimum Daily Average: 0.5 ppb on Feb 7		Hours of Data: 640																																												
Maximum Diurnal Average: 1.4 ppb at hour 15		Minimum Diurnal Average: 0.7 ppb at hour 3		Hours of Missing Data: 32																																												
Monthly Average: 1.08 ppb		Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 0.4 Q <sub>1</sub> = 0.5 Median = 0.9 Q <sub>3</sub> = 1.3 P <sub>90</sub> = 1.8 P <sub>99</sub> = 4.7		Hours of Calibration: 31																																												
				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-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	1	A	0.5	0.8																						
2-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	0	1	1	A	1	0.9	1.4																						
3-Feb	1	1	1	1	1	0	1	1	1	1	1	1	0	0	0	1	1	1	1	0	0	A	0	0	0.8	1.4																						
4-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	1	0	1	0.5	1.5																						
5-Feb	1	1	0	1	1	1	1	1	1	1	1	1	0	1	0	0	1	1	1	A	0	0	0	0	0.7	1.5																						
6-Feb	0	0	0	1	2	1	1	1	1	0	1	0	0	1	1	1	1	1	A	1	0	0	0	0	0.8	2.4																						
7-Feb	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	1	0	1	0	0	0	0.5	0.9																						
8-Feb	0	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	A	0	5	1	1	0	1	0	1.0	4.9																						
9-Feb	0	1	0	0	1	1	1	1	1	1	1	1	1	6	10	A	1	1	0	0	0	1	1	2	1.5	10.0																						
10-Feb	1	1	1	2	2	2	1	1	1	C	C	A	1	1	2	1	1	1	1	1	1	1	1	1	1.1	2.2																						
11-Feb	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.1	1.8																						
12-Feb	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0.8	0.9																						
13-Feb	0	0	0	0	A	0	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	0	1	1	1.1	2.4																						
14-Feb	1	1	1	A	1	1	1	1	1	1	2	2	2	2	2	2	3	3	2	1	1	2	1	2	1.5	2.7																						
15-Feb	2	1	A	3	3	3	3	3	3	2	3	5	6	5	3	5	3	3	2	2	2	3	2	2	3.0	5.7																						
16-Feb	2	A	2	1	1	1	1	1	1	2	2	3	2	2	2	2	2	2	1	1	1	1	1	2	1.6	2.7																						
17-Feb	A	1	1	1	1	1	1	1	1	1	2	2	2	1	1	1	2	1	2	2	1	2	1	A	1.4	2.3																						
18-Feb	1	1	1	0	0	1	1	1	2	1	2	1	1	1	2	2	1	2	2	1	2	1	A	1	1.2	2.2																						
19-Feb	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	1.1	2.1																						
20-Feb	0	0	0	0	0	0	0	0	1	1	2	1	1	1	1	1	1	1	1	1	A	1	0	0	0.7	1.9																						
21-Feb	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	2	4	A	3	1	1	1	1.1	3.5																						
22-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	A	0	0	0	0	1	1.1	3.0																						
23-Feb	1	0	1	1	0	0	0	0	1	0	0	1	1	0	0	1	0	A	1	1	1	0	1	1	0.7	1.5																						
24-Feb	1	0	0	0	1	1	0	1	1	1	1	1	0	1	0	1	A	0	0	0	0	0	0	0	0.6	1.0																						
25-Feb	0	0	0	0	0	0	0	1	2	2	4	1	1	2	2	A	1	1	1	1	1	1	1	1	1.3	3.9																						
26-Feb	1	1	1	1	1	1	1	1	1	1	1	2	2	2	A	4	3	2	1	1	1	1	1	1	1.4	4.0																						
27-Feb	1	1	1	1	1	1	1	2	2	1	P	1	1	2	1	1	1	1	2	2	2	2	2	1	1.4	2.2																						
28-Feb	1	1	1	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1																						
																								0.8	0.8	0.7	0.9	1.0	1.0	0.9	1.0	1.1	1.0	1.3	1.3	1.3	1.4	1.4	1.3	1.3	1.3	1.3	1.0	1.0	0.9	0.9	1.0	Diurnal Average
																								2.1	1.5	1.9	2.8	3.2	3.2	3.2	2.7	2.7	2.4	3.9	4.7	5.7	6.0	10.0	4.7	3.3	3.0	4.9	2.3	3.4	2.7	2.2	2.2	Diurnal Maximum
C - Calibration																								P - Power Failure						A - Automated Daily Zero Span																		

# Hourly Maximums for SO<sub>2</sub> at Henry Pirker February 2009



# Pollutant Rose for SO<sub>2</sub> at Henry Pirker February 2009



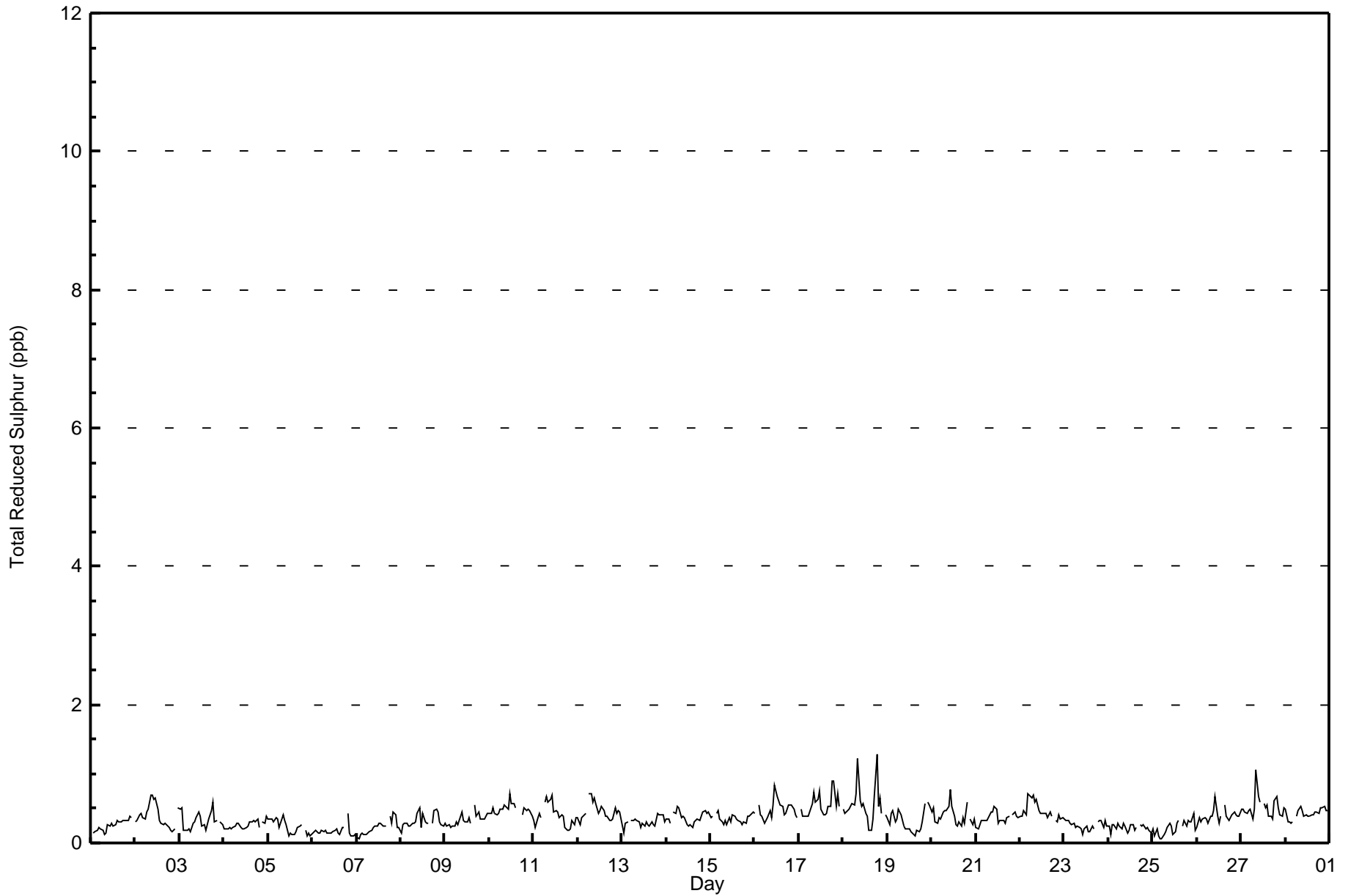
**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Henry Pirker - Total Reduced Sulphur (TRS) - ppb  
February 1, 2009 to March 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0										Hours in Service: 672																																						
Maximum Value: 1.3 ppb on Feb 18 19:00										Maximum Daily Average: 0.6 ppb on Feb 17										Hours of Data: 640																												
Minimum Value: 0 ppb on Feb 25 05:00										Minimum Daily Average: 0.2 ppb on Feb 6										Hours of Missing Data: 32																												
Maximum Diurnal Average: 0.4 ppb at hour 9										Minimum Diurnal Average: 0.3 ppb at hour 2										Hours of Calibration: 31																												
Monthly Average: 0.36 ppb										Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.2 Q <sub>1</sub> = 0.3 Median = 0.3 Q <sub>3</sub> = 0.4 P <sub>90</sub> = 0.5 P <sub>99</sub> = 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-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.3	0.4																						
2-Feb	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	0.7																						
3-Feb	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	A	0	0.3	0.6																							
4-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.4																							
5-Feb	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																							
6-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.4																							
7-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.4																							
8-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.5																							
9-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0.3	0.5																							
10-Feb	0	0	1	0	0	0	0	1	1	0	1	1	1	1	1	C	C	A	0	1	0	0	0	0.5	0.7																							
11-Feb	0	0	0	0	0	A	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7																							
12-Feb	0	0	0	0	0	A	1	1	1	1	1	0	0	1	0	0	0	0	0	0	1	0	0	0.5	0.7																							
13-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4																							
14-Feb	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5																							
15-Feb	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																							
16-Feb	0	A	1	0	0	0	0	0	0	0	1	1	1	1	1	0	0	1	1	1	1	0	0	0.5	0.8																							
17-Feb	A	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	0.6	0.9																							
18-Feb	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	1	1	0	A	0.6	1.3																							
19-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	1	0.3	0.6																							
20-Feb	0	1	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	1	A	0	0.4	0.8																							
21-Feb	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0.4	0.5																							
22-Feb	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0.5	0.7																							
23-Feb	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																							
24-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.3																							
25-Feb	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																							
26-Feb	0	0	0	0	0	0	0	0	0	0	1	0	0	0	A	1	0	0	0	0	0	0	0	0.4	0.7																							
27-Feb	0	0	0	0	0	0	0	1	1	1	P	1	1	1	0	0	0	0	1	1	1	0	0	0.5	1.1																							
28-Feb	0	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0.4	0.5																							
																								0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	Diurnal Average
																								0.5	0.5	0.5	0.5	0.7	0.7	0.7	0.7	1.2	0.7	0.8	0.8	0.7	0.6	0.6	0.6	0.5	0.7	1.3	0.9	0.7	0.7	0.6	0.5	Diurnal Maximum
C - Calibration P - Power Failure A - Automated Daily Zero Span																																																
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																																																



# Hourly Averages for TRS at Henry Pirker February 2009

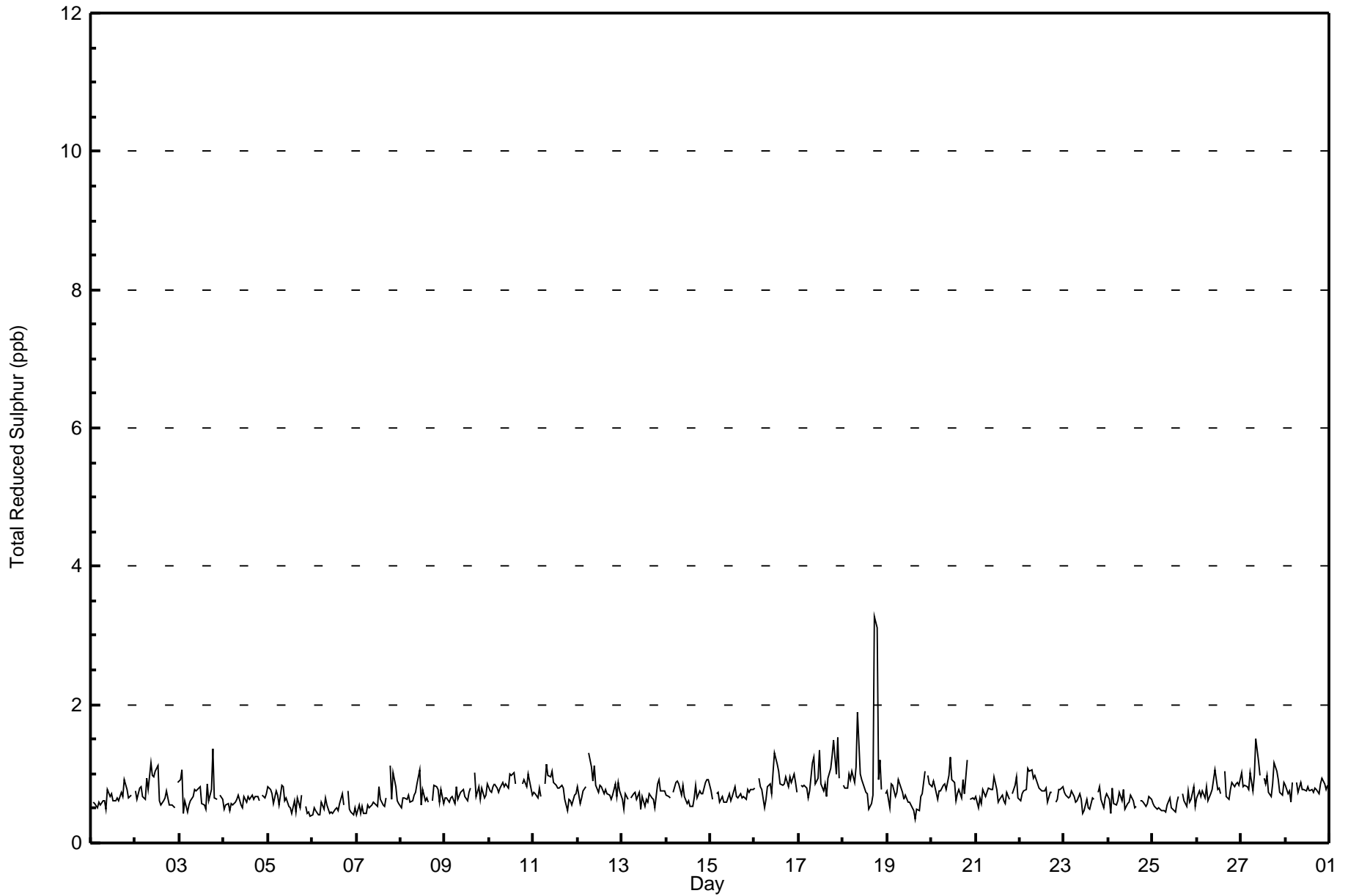


**Peace Airshed Zone Association  
Summary of Hourly Maximums**

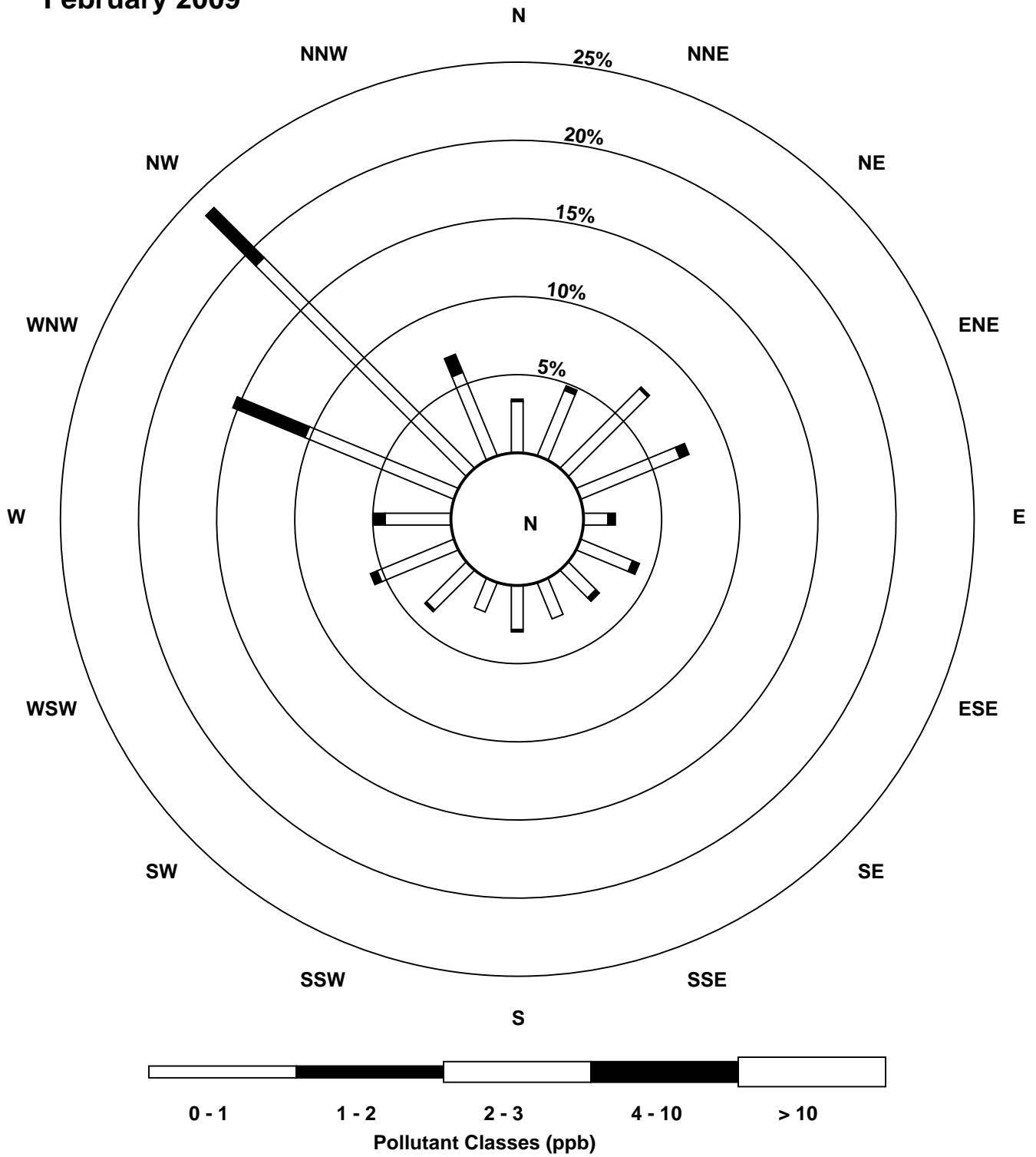
**Henry Pirker - Total Reduced Sulphur (TRS) - ppb  
February 1, 2009 to March 1, 2009**

Maximum Value: 3.3 ppb on Feb 18 18:00		Maximum Daily Average: 1.1 ppb on Feb 18		Hours in Service: 672																							
Minimum Value: 0 ppb on Feb 19 16:00		Minimum Daily Average: 0.5 ppb on Feb 6		Hours of Data: 640																							
Maximum Diurnal Average: 0.9 ppb at hour 19		Minimum Diurnal Average: 0.7 ppb at hour 15		Hours of Missing Data: 32																							
Monthly Average: 0.74 ppb		Percentiles: P <sub>1</sub> = 0.4 P <sub>10</sub> = 0.5 Q <sub>1</sub> = 0.6 Median = 0.7 Q <sub>3</sub> = 0.8 P <sub>90</sub> = 1.0 P <sub>99</sub> = 1.5		Hours of Calibration: 31																							
				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-Feb	A	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.6	0.9	
2-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2	
3-Feb	1	1	0	1	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	A	1	0.7	1.4	
4-Feb	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.6	0.7	
5-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	A	1	0	0	0	0.6	0.8	
6-Feb	0	0	0	0	0	1	0	1	1	0	0	0	0	1	0	1	1	1	A	1	0	0	0	1	0.5	0.8	
7-Feb	0	1	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.6	1.1	
8-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.7	1.1	
9-Feb	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	1.0	
10-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	C	C	A	1	1	1	1	1	1	0.9	1.0	
11-Feb	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0.8	1.1	
12-Feb	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.3	
13-Feb	1	0	1	1	A	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9	
14-Feb	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	
15-Feb	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	
16-Feb	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3	
17-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	A	1.0	1.5	
18-Feb	1	1	1	1	1	1	1	1	2	1	1	1	1	1	0	1	1	3	3	1	1	1	A	1	1.1	3.3	
19-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	A	1	1	0.7	1.0	
20-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.3	
21-Feb	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	1.0	
22-Feb	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	
23-Feb	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0	1	1	A	1	1	1	1	1	1	0.6	0.8	
24-Feb	1	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.6	0.8	
25-Feb	1	1	0	1	0	0	0	0	1	1	1	0	0	1	1	A	1	1	1	1	1	1	1	1	0.6	0.8	
26-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.8	1.1	
27-Feb	1	1	1	1	1	1	1	1	2	1	1	P	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.5	
28-Feb	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	0.9	
																								Diurnal Average			
																								Diurnal Maximum			
C - Calibration																								P - Power Failure		A - Automated Daily Zero Span	

# Hourly Maximums for TRS at Henry Pirker February 2009



# Pollutant Rose for TRS at Henry Pirker February 2009



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

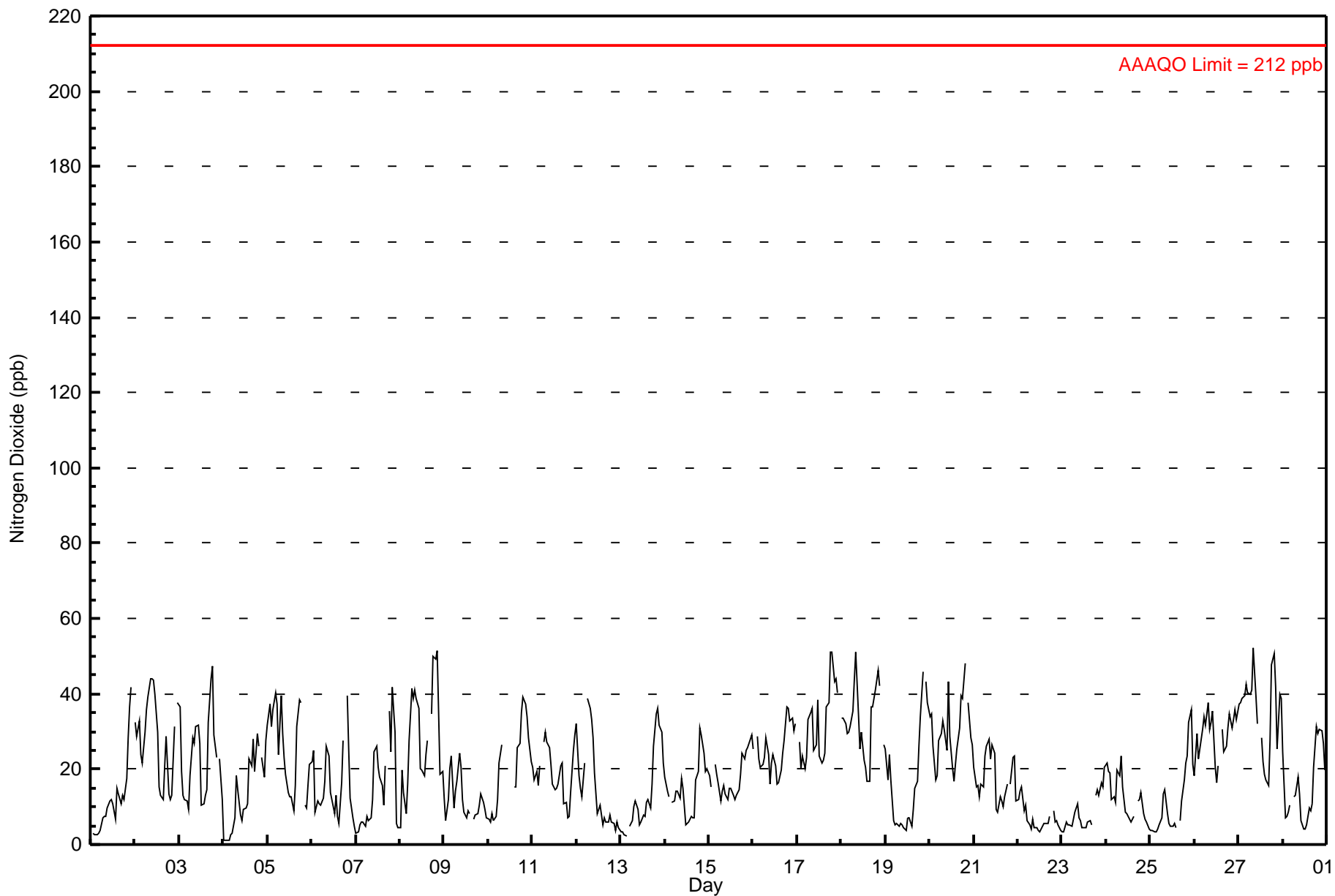
**Henry Pirker - Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
February 1, 2009 to March 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 672
Maximum Value: 52.3 ppb on Feb 27 09:00	Maximum Daily Average: 35.4 ppb on Feb 27
Minimum Value: 1 ppb on Feb 4 02:00	Hours of Data: 637
Maximum Diurnal Average: 28.3 ppb at hour 20	Hours of Missing Data: 35
Monthly Average: 19.46 ppb	Hours of Calibration: 34
Minimum Daily Average: 6.9 ppb on Feb 22	Percent Operational Time: 99.9
Minimum Diurnal Average: 12.1 ppb at hour 14	
Percentiles: P <sub>1</sub> = 2.6 P <sub>10</sub> = 5.4 Q <sub>1</sub> = 9.0 Median = 17.3 Q <sub>3</sub> = 28.2 P <sub>90</sub> = 37.1 P <sub>99</sub> = 50.2	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Feb	A	3	3	3	3	4	7	7	8	10	12	12	11	7	15	14	11	13	12	18	28	37	42	A	12.6	41.9																							
2-Feb	33	29	33	24	22	30	36	39	44	44	40	30	15	13	12	21	29	13	12	13	31	A	38	28.0	44.1																								
3-Feb	37	19	13	12	11	9	18	28	27	31	32	27	10	11	13	15	32	44	47	29	23	A	23	22.8	47.3																								
4-Feb	1	1	1	1	3	3	7	18	15	8	6	9	10	11	23	21	28	19	30	26	A	23	18	28	13.5	29.6																							
5-Feb	32	37	31	36	40	37	24	39	30	23	18	14	13	13	9	16	31	39	38	A	11	10	16	21	25.0	40.2																							
6-Feb	22	25	8	12	11	10	12	17	26	24	14	12	8	13	8	5	16	28	A	40	25	12	7	5	15.7	39.7																							
7-Feb	3	4	5	6	6	5	8	6	7	12	25	26	20	18	16	10	21	A	35	25	42	30	5	4	14.7	41.9																							
8-Feb	5	20	14	8	16	28	42	39	41	39	36	20	20	18	24	28	A	35	50	49	52	35	19	20	28.5	51.6																							
9-Feb	12	6	12	20	23	10	14	17	24	20	12	9	7	9	8	A	7	8	8	11	13	11	9	7	12.1	24.2																							
10-Feb	7	6	8	7	7	12	22	27	C	C	C	C	C	A	15	15	26	27	35	39	37	34	28	22	20.8	39.2																							
11-Feb	21	17	20	16	21	A	27	30	27	26	21	16	14	15	16	21	21	11	11	7	8	14	25	29	18.8	30.0																							
12-Feb	32	18	15	13	22	A	39	36	33	28	19	8	9	10	5	7	6	6	8	6	5	4	6	4	14.8	38.7																							
13-Feb	3	3	3	2	A	5	6	10	12	9	5	6	8	7	11	12	10	16	26	35	36	32	30	22	13.5	36.0																							
14-Feb	18	14	13	A	11	12	14	14	12	18	15	5	5	6	8	7	7	17	19	31	29	24	20	20	14.7	30.8																							
15-Feb	18	15	A	21	19	16	12	14	16	13	12	15	15	13	12	13	15	19	24	23	25	26	27	29	17.9	29.1																							
16-Feb	25	A	29	23	21	21	23	28	24	16	22	24	21	16	17	20	24	28	37	36	33	34	30	32	25.3	36.7																							
17-Feb	A	27	20	24	20	23	33	35	36	25	26	38	23	22	22	24	36	38	51	51	43	44	40	A	32.0	51.0																							
18-Feb	33	33	32	29	30	31	36	43	51	34	25	30	22	20	17	17	37	36	41	44	46	42	A	26	33.0	51.3																							
19-Feb	25	17	24	17	7	5	6	5	5	5	4	4	7	7	5	9	15	17	26	34	46	A	43	38	16.1	46.0																							
20-Feb	34	35	26	17	18	27	30	33	31	25	43	29	20	17	21	25	31	40	39	48	A	38	28	26	29.6	48.0																							
21-Feb	21	15	15	13	16	15	23	26	28	23	27	24	9	9	13	12	10	13	16	A	16	23	24	11	17.4	27.8																							
22-Feb	12	14	15	9	10	7	5	4	7	5	4	4	3	5	6	6	6	8	A	9	6	6	5	4	6.9	15.3																							
23-Feb	3	3	6	5	5	5	7	9	11	7	6	5	5	5	6	6	5	A	13	15	13	16	15	20	8.3	20.4																							
24-Feb	22	19	19	12	12	11	20	18	24	15	9	8	7	6	7	8	A	12	12	14	8	7	6	4	12.1	23.5																							
25-Feb	4	4	3	3	4	5	7	13	15	8	5	5	5	6	4	A	6	11	17	22	24	33	36	21	11.4	35.7																							
26-Feb	18	29	23	26	30	34	32	38	31	32	35	20	16	21	A	30	25	26	31	35	31	33	36	33	29.0	37.8																							
27-Feb	37	38	39	40	42	40	40	41	52	39	32	P	28	22	19	17	16	28	48	51	42	25	40	39	35.4	52.3																							
28-Feb	25	7	8	9	11	A	13	13	18	13	6	4	4	5	10	9	11	20	31	30	30	30	27	20	15.3	31.1																							
																								19.3	17.0	16.2	15.0	16.4	16.2	20.1	23.2	24.2	20.5	19.1	15.9	13.1	12.1	12.6	14.6	18.2	22.5	27.7	28.3	26.4	25.2	23.2	20.6	Diurnal Average	
																								37.2	37.8	38.7	39.6	42.4	40.2	41.5	43.5	52.3	44.0	43.7	40.1	29.8	21.8	24.0	30.4	36.7	44.0	50.9	51.0	51.6	43.9	43.3	38.6	Diurnal Maximum	

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

# Hourly Averages for NO<sub>2</sub> at Henry Pirker February 2009

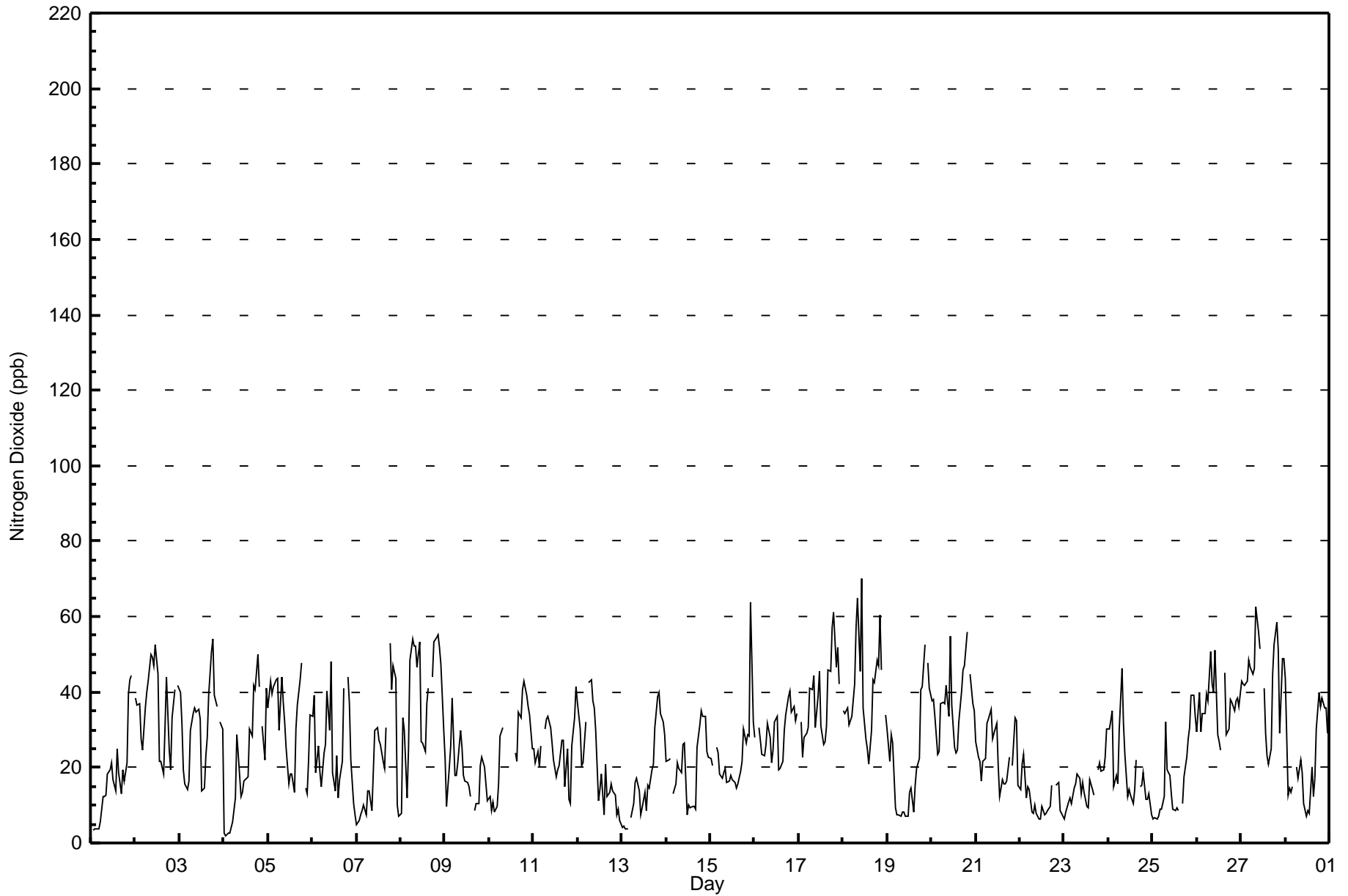


**Peace Airshed Zone Association  
Summary of Hourly Maximums**

**Henry Pirker - Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
February 1, 2009 to March 1, 2009**

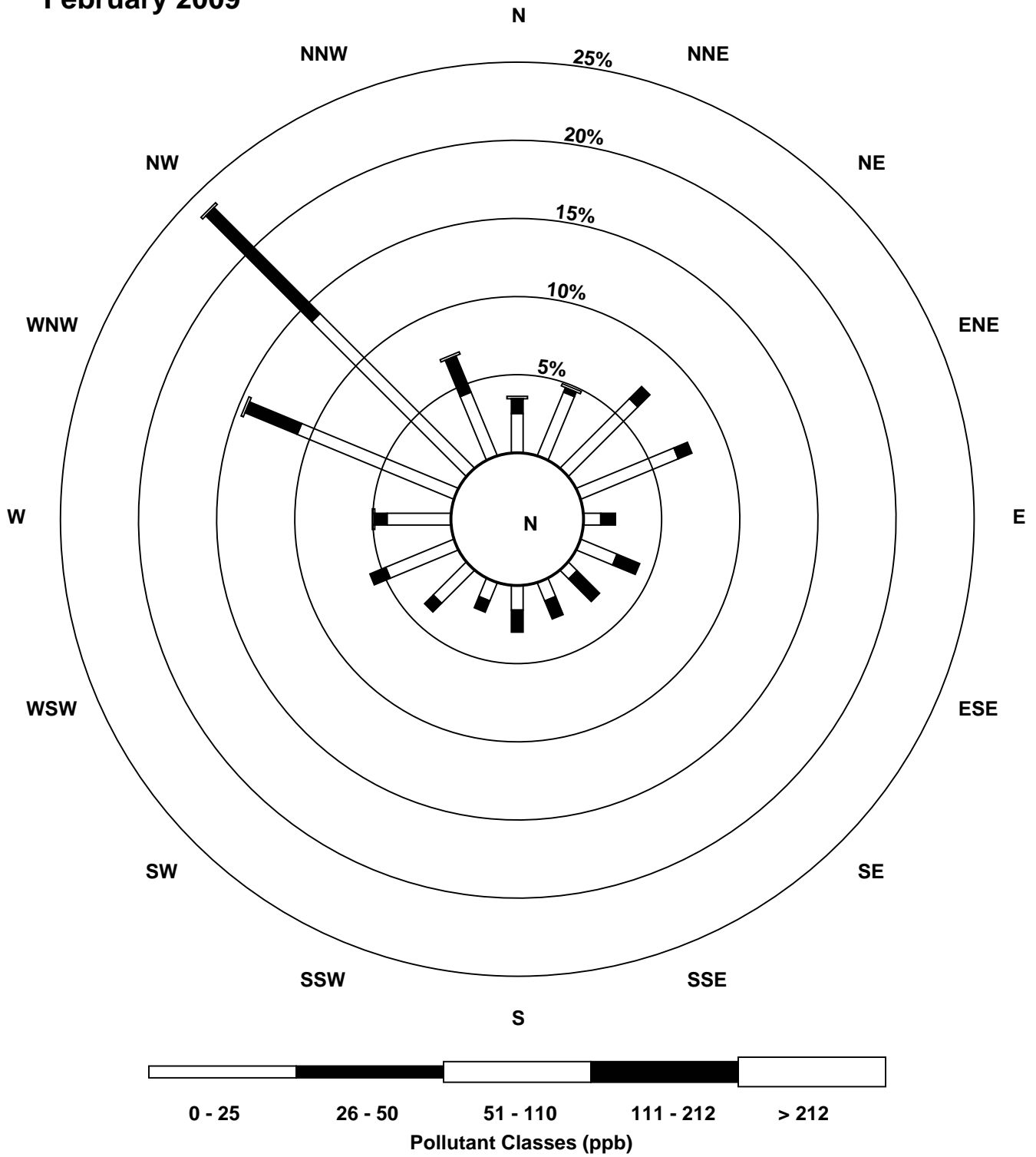
Maximum Value: 70.1 ppb on Feb 18 11:00		Maximum Daily Average: 43.4 ppb on Feb 27		Hours in Service: 672																							
Minimum Value: 2 ppb on Feb 4 02:00		Minimum Daily Average: 11.6 ppb on Feb 22		Hours of Data: 637																							
Maximum Diurnal Average: 35.6 ppb at hour 19		Minimum Diurnal Average: 17.2 ppb at hour 14		Hours of Missing Data: 35																							
Monthly Average: 26.02 ppb		Percentiles: P <sub>1</sub> = 3.7 P <sub>10</sub> = 8.8 Q <sub>1</sub> = 15.1 Median = 24.6 Q <sub>3</sub> = 35.9 P <sub>90</sub> = 44.5 P <sub>99</sub> = 60.0		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-Feb	A	3	4	4	4	6	12	12	13	18	19	21	17	14	25	19	13	19	16	21	40	43	44	A	17.7	44.5	
2-Feb	38	36	37	28	25	36	40	43	50	49	47	53	45	22	22	18	31	44	25	19	33	41	A	42	35.8	52.5	
3-Feb	40	32	19	16	14	16	30	34	36	35	36	33	14	15	23	28	39	51	54	39	36	A	32	30	30.5	54.2	
4-Feb	3	2	3	3	4	6	12	29	24	12	13	16	17	18	30	28	42	41	50	41	A	31	22	41	21.1	50.0	
5-Feb	36	43	40	41	43	44	30	44	37	32	25	16	18	18	14	30	37	43	48	A	15	13	22	34	31.4	47.6	
6-Feb	34	39	19	26	19	15	24	26	40	30	48	19	14	23	12	17	22	41	A	44	37	22	10	7	25.5	48.2	
7-Feb	5	6	7	8	10	7	14	14	8	19	30	31	27	26	22	20	30	A	53	41	47	44	10	7	21.2	52.8	
8-Feb	8	33	30	12	25	49	54	52	52	47	53	27	27	24	37	41	A	44	53	55	55	52	47	30	39.4	55.1	
9-Feb	22	10	20	26	38	18	18	21	30	25	18	16	16	15	12	A	8	10	10	21	23	20	16	11	18.5	38.4	
10-Feb	12	9	11	8	10	16	28	31	C	C	C	C	C	A	24	22	34	33	40	43	39	36	34	25	25.3	42.9	
11-Feb	25	21	24	20	26	A	30	33	34	31	26	22	17	19	21	27	27	15	25	12	11	26	33	41	24.6	41.2	
12-Feb	37	30	21	21	32	A	42	43	38	36	30	11	14	18	8	21	12	13	16	14	13	8	9	6	21.4	43.3	
13-Feb	4	5	4	4	A	7	11	16	17	14	8	9	14	9	15	14	20	21	31	39	40	34	32	29	17.1	39.7	
14-Feb	22	22	22	A	13	16	21	20	19	26	27	7	10	9	10	10	9	25	31	35	33	33	24	23	20.3	34.9	
15-Feb	22	21	A	25	24	18	17	19	20	16	16	18	17	16	15	16	19	22	30	27	29	28	64	32	23.0	63.7	
16-Feb	28	A	31	27	23	23	26	32	28	21	25	32	33	19	20	22	30	34	39	40	35	36	33	34	29.2	40.4	
17-Feb	A	32	23	28	29	31	41	41	44	31	39	45	31	26	27	31	46	46	57	61	47	52	42	A	38.6	61.2	
18-Feb	35	34	36	31	32	33	42	57	65	46	70	36	28	25	21	30	43	43	49	47	61	46	A	34	41.0	70.1	
19-Feb	30	22	29	27	9	8	8	7	8	8	7	7	14	15	8	15	20	23	41	41	53	A	48	41	21.1	52.6	
20-Feb	38	38	34	23	24	37	37	37	42	34	55	37	25	24	25	32	40	46	47	56	A	45	37	35	36.8	55.8	
21-Feb	27	23	22	16	21	22	32	33	36	28	29	32	21	12	17	16	16	16	23	A	21	33	32	15	23.6	35.6	
22-Feb	14	21	23	12	15	14	8	8	10	8	6	6	10	7	8	8	10	15	A	15	16	16	9	7	11.6	23.3	
23-Feb	6	8	11	12	10	14	16	18	17	13	16	13	10	9	17	14	13	A	19	21	19	19	23	30	15.2	30.1	
24-Feb	30	33	35	15	18	16	30	46	32	23	12	14	13	10	14	22	A	15	15	19	11	12	13	7	19.8	46.4	
25-Feb	7	7	6	7	9	9	12	32	19	18	13	9	9	9	9	A	10	18	23	27	31	39	39	34	17.2	39.2	
26-Feb	29	40	29	34	34	39	38	51	42	40	51	29	27	25	A	45	29	30	38	37	35	38	39	36	36.3	51.0	
27-Feb	43	42	42	43	48	46	45	46	63	56	52	P	41	29	23	21	25	45	53	58	51	29	49	49	43.4	62.6	
28-Feb	44	13	15	13	15	A	20	17	22	19	10	7	9	8	20	12	17	30	40	36	39	36	36	29	22.0	43.8	
		24.6	23.1	22.0	19.6	21.3	21.8	26.4	30.8	31.3	27.2	28.9	21.8	19.8	17.2	18.3	22.3	24.7	30.1	35.6	35.0	33.3	32.0	30.7	27.3	Diurnal Average	
		43.8	42.8	41.7	43.1	48.4	48.6	54.2	57.1	64.8	55.8	70.1	52.5	44.6	29.0	36.8	45.0	45.9	50.6	57.0	61.2	60.5	51.9	63.7	48.7	Diurnal Maximum	
C - Calibration		P - Power Failure						A - Automated Daily Zero Span																			

# Hourly Maximums for NO<sub>2</sub> at Henry Pirker February 2009





# Pollutant Rose for NO<sub>2</sub> at Henry Pirker February 2009

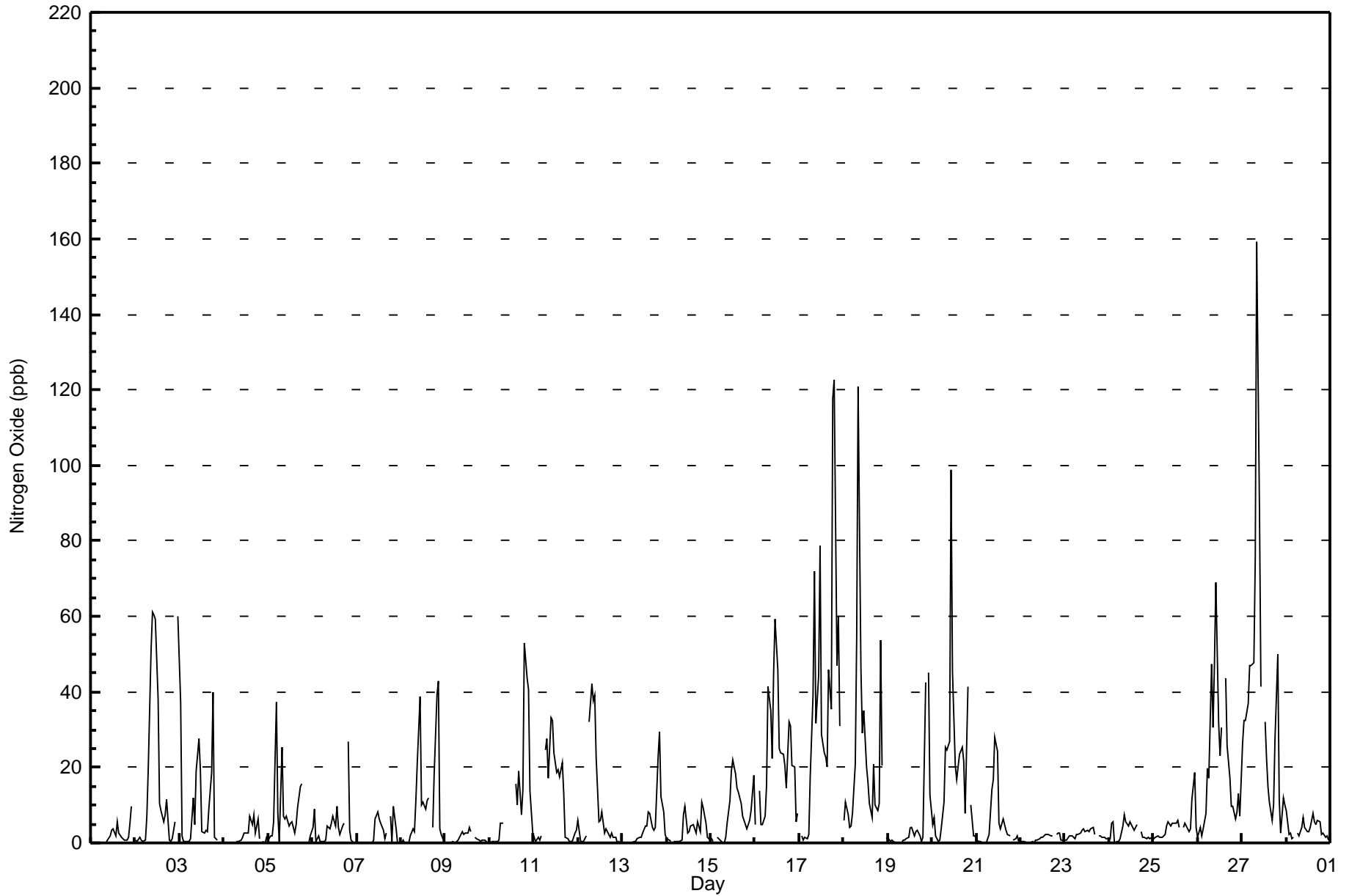


**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Henry Pirker - Nitrogen Oxide (NO) - ppb  
February 1, 2009 to March 1, 2009**

Maximum Value: 159.3 ppb on Feb 27 09:00		Maximum Daily Average: 38.5 ppb on Feb 17		Hours in Service: 672																							
Minimum Value: 0 ppb on Feb 4 01:00		Minimum Daily Average: 1.1 ppb on Feb 22		Hours of Data: 637																							
Maximum Diurnal Average: 22.9 ppb at hour 9		Minimum Diurnal Average: 2.6 ppb at hour 4		Hours of Missing Data: 35																							
Monthly Average: 10.40 ppb		Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.2 Q <sub>1</sub> = 0.9 Median = 3.5 Q <sub>3</sub> = 10.9 P <sub>90</sub> = 31.8 P <sub>99</sub> = 77.0		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-Feb	A	0	0	0	0	0	0	0	0	1	2	3	4	2	5	3	2	1	1	1	2	5	10	A	1.8	9.7	
2-Feb	1	0	2	1	0	1	7	20	51	61	60	59	38	11	8	6	7	12	1	0	1	6	A	60	18.0	61.2	
3-Feb	37	2	1	0	1	0	1	12	5	19	28	19	3	3	3	9	19	40	1	1	A	0	0	9.0	40.1		
4-Feb	0	0	0	0	0	0	0	1	0	1	1	3	3	2	7	5	7	3	6	1	A	0	0	2	1.8	7.4	
5-Feb	1	2	2	6	37	8	0	25	7	6	7	4	5	5	3	5	9	15	16	A	0	0	0	2	7.2	37.3	
6-Feb	4	9	0	2	1	0	0	1	4	4	5	7	4	10	4	2	5	5	A	27	3	1	0	0	4.3	27.0	
7-Feb	0	0	0	0	0	0	0	0	0	1	6	8	7	5	3	1	3	A	7	0	10	4	0	0	2.4	9.6	
8-Feb	0	1	0	0	0	2	4	3	11	21	39	10	11	9	11	12	A	4	18	39	43	4	2	0	10.6	42.8	
9-Feb	0	0	0	0	0	0	0	1	2	3	2	3	3	4	3	A	1	1	1	0	1	1	0	0	1.2	4.0	
10-Feb	0	0	0	0	0	1	5	5	C	C	C	C	C	A	15	10	19	8	14	53	44	41	14	2	12.9	52.9	
11-Feb	1	1	2	1	2	A	25	28	17	33	32	24	19	19	18	21	13	2	1	1	0	0	2	3	11.5	33.3	
12-Feb	6	1	0	1	2	A	32	42	38	39	23	5	6	8	2	4	3	2	3	2	2	0	0	0	9.5	42.1	
13-Feb	0	0	0	0	A	0	0	0	1	2	1	3	5	4	8	8	4	3	4	23	29	12	8	2	5.2	29.3	
14-Feb	1	1	0	A	0	0	0	0	1	8	10	3	3	4	5	4	3	5	3	11	9	5	1	1	3.5	10.9	
15-Feb	1	0	A	2	1	1	0	0	2	5	11	19	22	18	15	13	10	7	6	4	5	6	8	18	7.6	21.9	
16-Feb	5	A	14	5	5	7	15	41	35	22	45	59	46	25	24	24	21	15	32	31	21	20	5	8	22.8	59.4	
17-Feb	A	2	1	2	1	2	17	39	72	32	44	79	29	24	23	20	46	36	118	123	47	60	31	A	38.5	122.6	
18-Feb	6	11	8	4	4	8	21	55	121	46	29	35	20	16	10	7	21	10	8	10	54	20	A	1	22.9	121.0	
19-Feb	1	0	1	0	0	0	0	0	1	1	1	1	4	4	2	3	3	2	0	2	42	A	45	13	5.5	45.0	
20-Feb	5	7	2	0	1	4	11	25	25	27	99	46	21	17	20	24	26	21	8	41	A	10	2	2	19.2	98.8	
21-Feb	1	0	0	0	0	0	1	2	14	17	28	24	5	4	6	5	3	2	2	A	1	1	2	0	5.2	27.8	
22-Feb	0	0	0	0	0	0	0	0	1	1	1	1	2	2	2	2	2	2	A	2	3	3	1	1	1.1	2.7	
23-Feb	1	1	2	2	2	1	2	2	3	3	4	3	3	3	4	4	2	A	2	2	2	1	1	1	2.2	4.0	
24-Feb	1	5	6	0	0	0	1	4	7	6	4	5	5	4	4	5	A	3	2	1	1	1	1	1	3.0	7.4	
25-Feb	1	2	2	1	2	1	2	4	6	5	5	5	5	6	4	A	4	5	4	3	4	12	18	4	4.6	18.5	
26-Feb	1	4	2	4	8	20	17	47	31	47	69	32	23	30	A	43	26	17	10	10	6	8	13	7	20.7	68.8	
27-Feb	27	32	32	37	47	47	48	76	159	87	41	P	32	22	15	11	6	10	28	50	11	3	12	10	36.7	159.3	
28-Feb	9	2	3	1	2	A	3	2	4	7	4	3	3	4	8	6	5	6	6	2	2	2	2	1	3.7	8.7	
																								Diurnal Average			
																								Diurnal Maximum			
C - Calibration																								P - Power Failure		A - Automated Daily Zero Span	

# Hourly Averages for NO at Henry Pirker February 2009

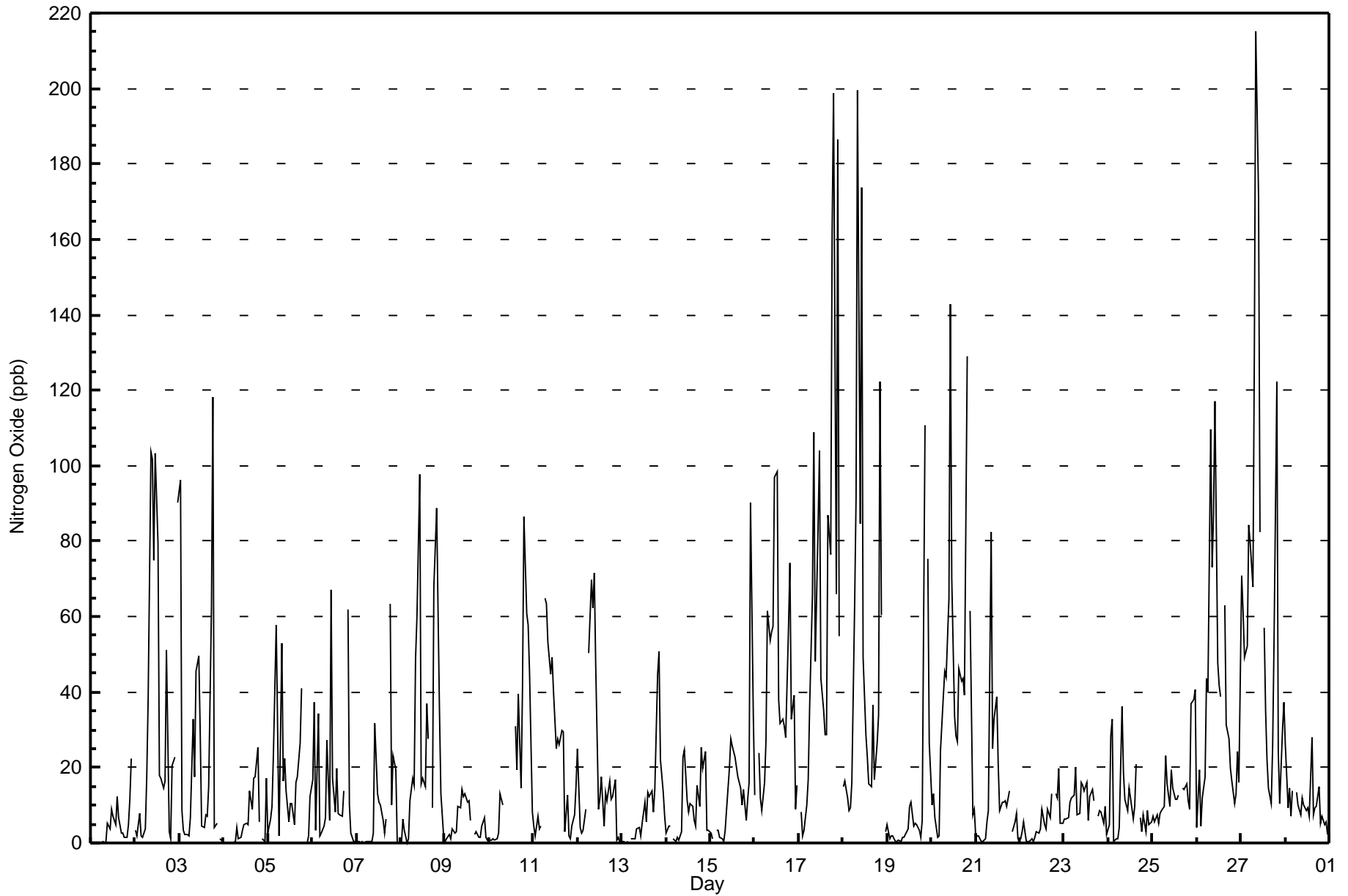


**Peace Airshed Zone Association  
Summary of Hourly Maximums**

**Henry Pirker - Nitrogen Oxide (NO) - ppb  
February 1, 2009 to March 1, 2009**

Maximum Value: 215.3 ppb on Feb 27 09:00		Maximum Daily Average: 66.1 ppb on Feb 17		Hours in Service: 672																																													
Minimum Value: 0 ppb on Feb 5 21:00		Minimum Daily Average: 4.4 ppb on Feb 1		Hours of Data: 637																																													
Maximum Diurnal Average: 46.1 ppb at hour 11		Minimum Diurnal Average: 7.1 ppb at hour 4		Hours of Missing Data: 35																																													
Monthly Average: 22.13 ppb		Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 1.0 Q <sub>1</sub> = 3.6 Median = 10.6 Q <sub>3</sub> = 27.3 P <sub>90</sub> = 61.4 P <sub>99</sub> = 168.5		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-Feb	A	0	0	0	0	0	1	0	0	5	4	9	7	5	12	7	2	2	1	2	5	12	23	A	4.4	22.6																							
2-Feb	3	2	8	2	2	4	18	38	104	102	75	103	79	18	17	14	17	51	3	1	21	23	A	90	34.5	103.5																							
3-Feb	96	9	3	2	2	2	7	33	18	46	50	29	5	4	7	7	15	63	118	4	5	A	1	0	22.9	118.1																							
4-Feb	0	0	0	0	0	0	1	4	1	2	4	5	5	5	14	9	17	17	25	6	A	1	1	17	5.8	25.5																							
5-Feb	3	6	10	23	58	30	2	53	16	23	14	6	10	11	5	16	18	27	41	A	0	0	2	12	16.7	57.8																							
6-Feb	17	37	3	34	2	2	4	7	27	6	67	17	8	20	8	8	7	14	A	62	10	3	1	0	15.8	67.1																							
7-Feb	1	0	0	0	0	0	0	1	1	3	32	13	11	10	6	3	6	A	63	10	23	19	0	0	8.8	63.5																							
8-Feb	0	6	4	0	1	11	17	15	49	60	98	15	17	15	37	28	A	9	68	89	61	35	13	1	28.2	97.9																							
9-Feb	0	1	2	1	4	3	3	10	9	14	12	13	11	11	6	A	2	3	2	2	5	7	2	1	5.3	14.0																							
10-Feb	1	1	1	1	1	3	13	10	C	C	C	C	C	A	31	19	40	14	41	87	61	58	45	8	24.1	86.6																							
11-Feb	4	2	7	4	5	A	65	63	53	45	49	40	25	28	26	30	30	3	13	2	1	4	7	15	22.6	64.9																							
12-Feb	25	4	3	3	9	A	50	70	62	72	47	9	12	18	5	13	11	17	12	12	17	1	1	1	20.6	71.7																							
13-Feb	0	0	0	1	A	1	1	1	4	4	2	5	11	6	13	12	14	8	14	45	51	22	14	7	10.2	50.6																							
14-Feb	3	5	5	A	1	1	1	1	3	23	25	11	8	10	10	6	4	15	10	25	20	24	4	3	9.4	25.4																							
15-Feb	3	1	A	4	4	2	1	1	4	9	20	28	26	23	20	17	14	10	14	6	12	16	90	34	15.5	90.1																							
16-Feb	13	A	24	12	9	16	27	61	54	56	57	97	98	38	32	33	31	28	57	74	33	39	9	15	39.7	98.3																							
17-Feb	A	8	2	4	10	17	36	66	109	48	84	104	43	35	29	29	87	76	162	199	66	187	55	A	66.1	198.8																							
18-Feb	15	17	12	9	9	16	64	91	200	85	174	49	29	23	16	15	36	17	27	34	122	60	A	3	48.7	199.5																							
19-Feb	5	1	2	2	0	1	1	1	2	1	2	4	10	11	5	5	5	4	2	6	111	A	75	27	12.2	110.9																							
20-Feb	10	13	7	2	2	24	39	46	44	65	143	70	34	28	27	46	43	44	39	129	A	62	8	9	40.5	142.9																							
21-Feb	2	2	1	1	1	1	6	9	82	25	33	39	21	9	11	11	11	10	14	A	3	6	8	1	13.2	82.4																							
22-Feb	1	3	6	1	1	1	1	1	2	3	3	4	9	5	4	9	7	13	A	13	12	20	5	5	5.4	19.8																							
23-Feb	6	6	7	11	12	13	20	8	8	16	15	14	16	6	12	14	11	A	7	9	8	5	10	2	10.3	20.0																							
24-Feb	5	28	33	1	1	1	4	36	19	12	8	14	12	6	10	21	A	7	3	7	3	8	5	6	10.9	36.3																							
25-Feb	7	5	7	5	8	8	10	23	16	10	19	15	11	12	13	A	14	14	16	11	9	37	38	41	15.2	40.8																							
26-Feb	4	19	5	12	17	44	40	109	73	87	117	48	42	39	A	63	31	28	20	16	11	13	24	16	38.2	117.2																							
27-Feb	71	61	49	52	84	80	68	130	215	171	83	P	57	35	22	15	11	26	54	122	24	10	30	37	65.5	215.3																							
28-Feb	26	9	14	7	14	A	13	10	7	12	10	8	9	7	28	8	9	10	15	5	7	5	5	2	10.6	28.1																							
																								12.3	9.2	7.9	7.1	9.5	11.2	18.3	32.0	43.7	37.2	46.1	29.6	23.2	16.1	15.7	17.5	19.0	20.3	32.3	37.6	26.9	26.0	18.2	13.6	Diurnal Average	
																								96.1	61.0	49.1	52.3	84.3	79.7	67.7	130.2	215.3	171.0	173.9	104.2	98.3	38.8	36.9	63.0	86.9	76.4	161.9	198.8	122.2	186.6	90.1	90.2	Diurnal Maximum	
C - Calibration																								P - Power Failure						A - Automated Daily Zero Span																			

# Hourly Maximums for NO at Henry Pirker February 2009

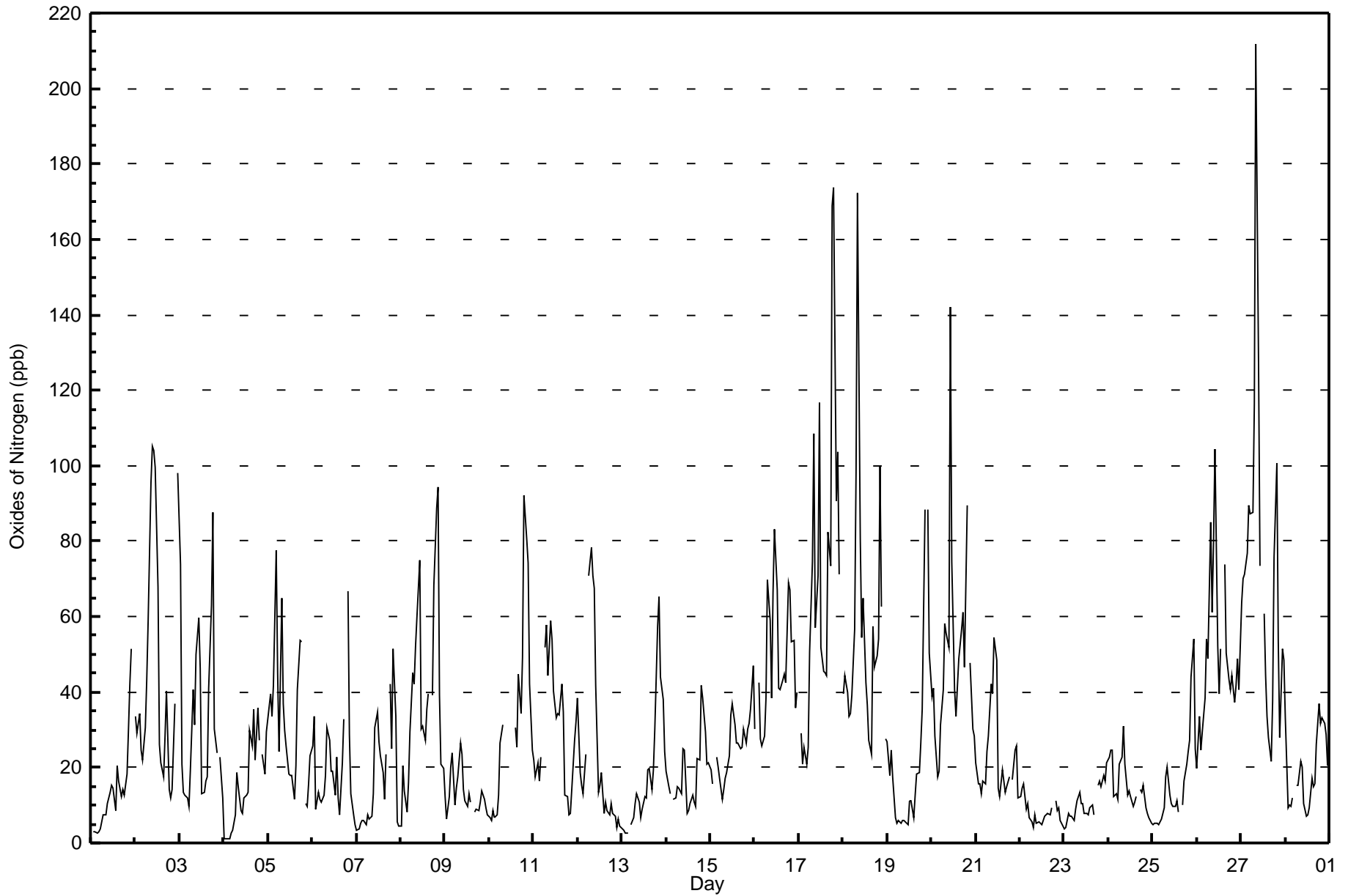


**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Henry Pirker - Oxides of Nitrogen (NO<sub>x</sub>) - ppb  
February 1, 2009 to March 1, 2009**

Maximum Value: 211.7 ppb on Feb 27 09:00		Maximum Daily Average: 72.1 ppb on Feb 27		Hours in Service:	672																																												
Minimum Value: 1 ppb on Feb 4 02:00		Minimum Daily Average: 8.1 ppb on Feb 22		Hours of Data:	637																																												
Maximum Diurnal Average: 47.0 ppb at hour 9		Minimum Diurnal Average: 17.6 ppb at hour 4		Hours of Missing Data:	35																																												
Monthly Average: 29.87 ppb		Percentiles: P <sub>1</sub> = 2.7 P <sub>10</sub> = 6.8 Q <sub>1</sub> = 11.6 Median = 21.7 Q <sub>3</sub> = 40.5 P <sub>90</sub> = 65.2 P <sub>99</sub> = 112.9		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-Feb	A	3	3	3	3	4	7	7	8	11	13	15	14	9	20	16	12	14	13	18	30	42	52	A	14.4	51.6																							
2-Feb	33	29	34	25	22	31	43	59	95	105	104	100	68	26	21	18	28	40	14	12	14	37	A	98	46.0	105.2																							
3-Feb	74	21	13	13	12	10	19	40	31	50	59	46	13	13	16	18	41	63	87	30	24	A	23	12	31.8	87.5																							
4-Feb	1	1	1	1	3	3	7	19	15	9	8	12	13	13	30	26	36	22	36	27	A	24	18	30	15.4	35.9																							
5-Feb	33	39	33	42	78	45	24	65	37	30	26	18	18	18	12	21	40	54	53	A	11	10	16	23	32.4	77.7																							
6-Feb	26	34	9	13	11	11	13	18	31	27	19	19	13	23	12	8	21	33	A	67	29	13	7	5	20.0	66.7																							
7-Feb	3	4	5	6	6	5	7	7	7	13	31	35	27	23	19	12	23	A	42	25	52	34	5	4	17.2	51.6																							
8-Feb	5	21	14	8	16	29	45	42	52	60	75	30	31	27	35	40	A	39	68	89	94	39	21	20	39.2	94.5																							
9-Feb	12	6	12	20	24	10	15	18	26	23	14	11	10	13	11	A	8	9	9	11	14	12	9	7	13.3	26.5																							
10-Feb	7	6	9	7	8	13	26	31	C	C	C	C	C	A	31	25	45	34	49	92	81	74	42	25	33.5	92.0																							
11-Feb	22	18	21	16	23	A	52	58	44	59	54	40	33	34	34	42	35	13	12	8	8	14	27	32	30.4	59.1																							
12-Feb	38	19	15	13	23	A	71	78	71	67	42	14	15	19	8	11	9	8	11	8	7	4	6	5	24.4	78.4																							
13-Feb	4	4	3	3	A	5	7	11	13	11	7	9	12	12	20	20	14	19	30	57	65	44	38	24	18.7	65.4																							
14-Feb	19	15	13	A	11	12	15	14	13	25	25	8	8	10	12	11	10	22	22	42	39	30	21	21	18.2	41.6																							
15-Feb	19	16	A	23	20	17	12	14	17	19	23	34	37	31	27	26	25	25	30	27	30	32	35	47	25.5	47.0																							
16-Feb	30	A	42	28	26	28	38	70	59	39	67	83	67	41	41	43	45	42	69	67	53	54	36	40	48.2	83.2																							
17-Feb	A	29	21	25	21	25	51	74	108	57	71	117	52	46	45	44	82	73	169	174	91	104	71	A	70.5	173.7																							
18-Feb	39	44	40	33	34	39	57	98	172	80	54	65	43	36	27	23	57	47	50	54	100	63	A	28	55.9	172.2																							
19-Feb	27	18	25	18	7	5	6	5	6	6	5	5	11	11	7	12	18	18	26	35	88	A	88	50	21.7	88.5																							
20-Feb	39	41	28	18	19	31	41	58	55	52	142	75	41	34	41	49	56	61	47	89	A	48	30	28	48.9	142.0																							
21-Feb	21	16	16	13	16	16	24	28	42	39	54	49	15	12	19	17	13	15	18	A	17	25	26	12	22.7	54.4																							
22-Feb	12	15	16	9	11	7	5	4	7	5	6	5	5	7	8	8	7	9	A	11	9	9	6	4	8.1	15.8																							
23-Feb	4	4	8	7	7	6	9	11	13	11	10	8	8	8	9	10	7	A	15	16	15	18	16	21	10.6	21.4																							
24-Feb	23	25	25	12	13	12	21	23	31	21	13	14	12	10	11	12	A	14	13	15	9	8	7	5	15.2	31.0																							
25-Feb	5	5	5	5	6	6	9	18	20	13	11	10	10	11	8	A	10	16	21	24	27	44	54	25	15.8	54.1																							
26-Feb	20	34	24	29	38	54	49	85	61	80	104	52	40	51	A	74	50	43	41	45	37	42	49	40	49.7	104.3																							
27-Feb	64	70	71	77	90	87	88	117	212	126	73	P	61	44	34	28	22	38	76	101	53	28	52	49	72.1	211.7																							
28-Feb	33	9	10	10	12	A	15	15	22	20	11	7	7	9	17	15	16	26	37	32	33	32	29	20	19.0	36.9																							
																								23.6	20.1	19.1	17.6	20.7	20.4	27.8	38.9	47.0	39.2	41.5	33.8	25.3	22.0	21.3	24.2	28.2	30.8	40.7	45.2	39.6	33.9	30.2	26.0	Diurnal Average	
																								74.0	70.2	71.1	76.7	89.5	87.4	87.8	116.5	211.7	126.4	142.0	116.8	68.0	51.3	45.2	73.9	82.2	73.3	168.8	173.7	99.9	103.8	88.4	97.9	Diurnal Maximum	
C - Calibration																								P - Power Failure						A - Automated Daily Zero Span																			

# Hourly Averages for NO<sub>x</sub> at Henry Pirker February 2009



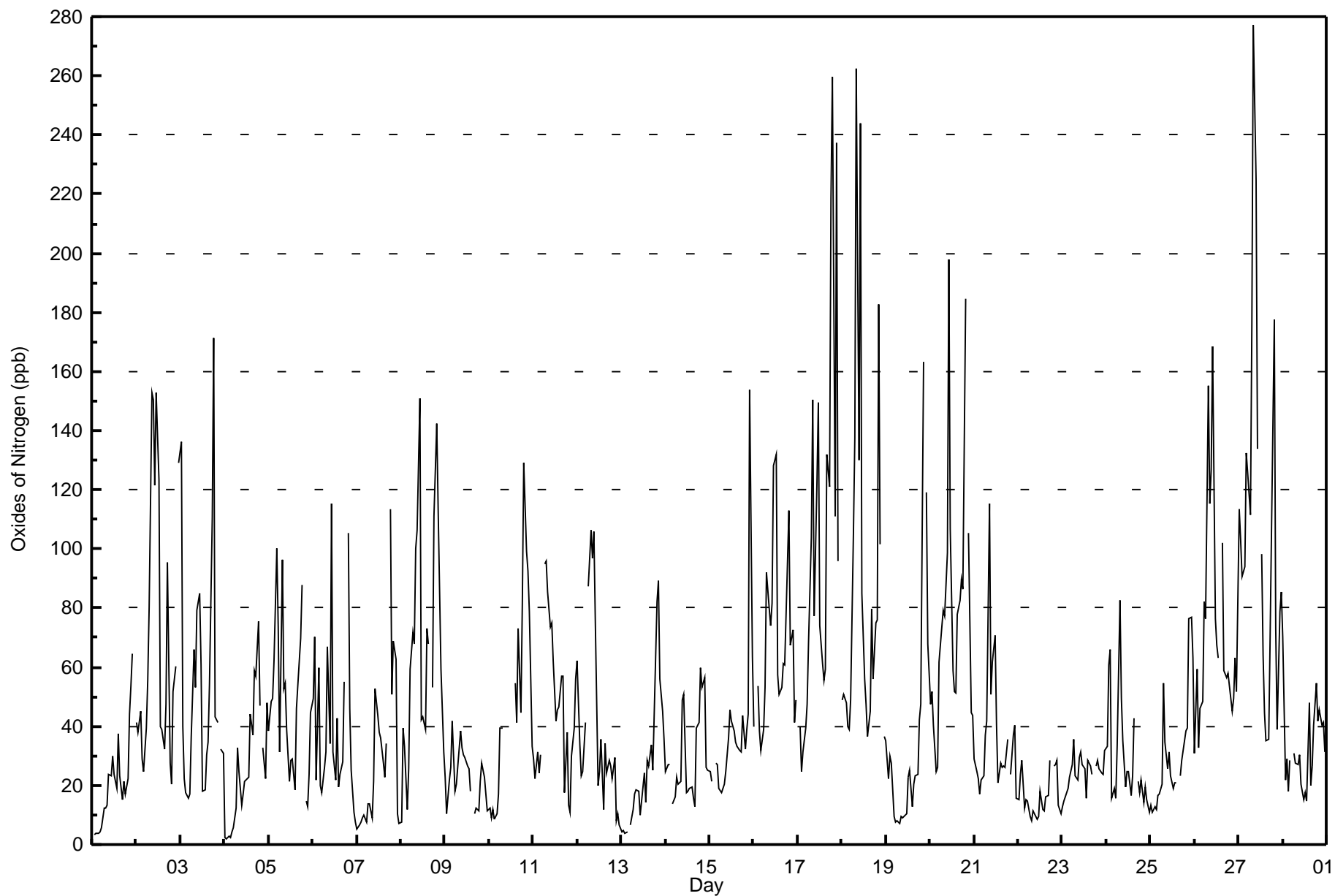
**Peace Airshed Zone Association  
Summary of Hourly Maximums**

**Henry Pirker - Oxides of Nitrogen (NO<sub>x</sub>) - ppb  
February 1, 2009 to March 1, 2009**

Maximum Value: 277.0 ppb on Feb 27 09:00      Maximum Daily Average: 108.2 ppb on Feb 27																					Hours in Service: 672 Hours of Data: 637																									
Minimum Value: 2 ppb on Feb 4 02:00      Minimum Daily Average: 16.4 ppb on Feb 22 Maximum Diurnal Average: 74.5 ppb at hour 11      Minimum Diurnal Average: 26.2 ppb at hour 4 Monthly Average: 47.40 ppb      Percentiles: P <sub>1</sub> = 3.9 P <sub>10</sub> = 12.3 Q <sub>1</sub> = 21.3 Median = 34.6 Q <sub>3</sub> = 59.8 P <sub>90</sub> = 101.5 P <sub>99</sub> = 213.7																					Hours of Missing Data: 35 Hours of Calibration: 34 Percent Operational Time: 99.9																									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																						
1-Feb	A	4	4	4	4	6	13	12	13	24	23	30	24	19	37	23	15	21	17	22	44	54	65	A	21.7	64.8																				
2-Feb	41	38	45	29	25	39	55	80	153	150	121	153	124	40	39	33	48	95	27	20	52	60	A	129	69.4	152.9																				
3-Feb	136	40	23	18	15	17	37	66	53	79	85	61	18	19	30	35	54	111	172	43	41	A	32	31	52.8	171.5																				
4-Feb	3	2	3	3	4	6	12	33	25	13	17	22	22	23	44	37	59	57	75	47	A	33	22	48	26.4	75.5																				
5-Feb	38	48	49	62	100	74	31	96	53	55	39	21	29	29	19	46	54	70	88	A	15	13	24	45	47.7	100.2																				
6-Feb	49	70	22	60	20	17	26	31	67	34	115	31	22	43	20	24	28	55	A	105	46	25	11	8	40.4	115.4																				
7-Feb	5	6	8	9	10	8	14	14	9	21	53	44	38	36	28	23	34	A	113	51	69	63	10	7	29.2	113.4																				
8-Feb	8	39	33	12	26	59	71	68	100	106	151	42	43	39	73	68	A	53	111	143	113	86	59	31	66.8	151.1																				
9-Feb	23	10	22	26	42	18	20	26	39	33	30	30	27	26	18	A	10	12	11	21	27	23	17	11	22.7	41.9																				
10-Feb	12	9	12	9	10	17	39	39	C	C	C	C	C	A	55	41	73	45	82	129	99	92	79	33	48.6	129.0																				
11-Feb	29	22	31	24	30	A	95	96	86	74	75	62	42	46	46	57	57	18	38	13	11	30	40	56	46.8	95.8																				
12-Feb	62	34	23	24	41	A	87	106	97	106	76	20	25	36	12	34	24	28	26	22	29	8	10	7	40.8	106.1																				
13-Feb	4	5	4	4	A	7	12	17	18	18	10	15	24	14	28	27	34	25	44	82	89	56	45	36	26.9	89.1																				
14-Feb	25	27	27	A	14	16	23	20	22	49	51	18	18	19	19	16	13	39	41	60	53	56	26	25	29.4	60.0																				
15-Feb	25	21	A	28	27	19	18	19	20	24	36	46	42	39	35	33	32	31	44	32	39	44	154	63	37.8	153.9																				
16-Feb	40	A	53	38	32	39	53	92	80	74	82	128	132	57	51	53	61	61	96	113	67	72	41	49	68.0	131.8																				
17-Feb	A	40	25	31	39	48	69	104	151	77	122	149	74	61	56	60	132	121	219	260	111	237	96	A	103.7	259.7																				
18-Feb	49	51	48	40	39	49	106	137	262	130	244	85	56	48	36	45	80	56	75	76	183	102	A	37	88.4	262.4																				
19-Feb	35	22	30	28	10	8	8	7	9	9	9	11	23	25	13	20	23	24	42	47	163	A	119	68	32.8	163.4																				
20-Feb	47	52	40	25	26	62	74	79	78	99	198	107	59	52	51	78	83	89	86	185	A	105	45	44	76.7	198.0																				
21-Feb	29	25	23	17	22	23	37	42	115	51	62	71	41	21	28	26	27	26	35	A	24	37	40	16	36.3	115.5																				
22-Feb	15	24	29	12	15	15	9	8	11	11	9	10	18	12	11	16	17	29	A	27	27	29	13	10	16.4	28.7																				
23-Feb	13	15	18	19	23	27	36	23	22	29	31	27	26	15	29	27	24	A	27	28	26	24	24	32	24.5	35.6																				
24-Feb	33	61	66	16	19	16	34	83	49	35	19	25	25	17	23	43	A	21	18	22	14	20	15	11	29.7	82.6																				
25-Feb	13	11	13	12	17	17	20	54	35	25	31	23	19	21	21	A	23	29	35	38	40	76	77	63	31.0	76.8																				
26-Feb	31	59	33	46	48	82	77	155	115	127	168	76	67	63	A	102	59	57	58	54	45	49	63	52	73.3	168.3																				
27-Feb	114	103	91	94	132	126	112	176	277	225	134	P	98	64	45	35	36	70	106	178	73	39	79	85	108.2	277.0																				
28-Feb	70	22	29	18	29	A	31	27	27	30	20	15	18	15	48	20	27	40	55	42	46	40	41	31	32.2	70.1																				
																					36.5	31.8	29.7	26.2	30.3	32.5	43.5	61.2	73.5	63.3	74.5	50.8	42.6	33.2	33.9	39.3	43.2	49.3	67.0	71.6	59.5	56.7	48.0	39.5	Diurnal Average	
																					136.2	103.1	90.7	93.9	132.3	125.5	111.7	176.0	277.0	224.7	243.9	152.8	131.8	63.9	73.3	102.2	131.9	121.0	218.9	259.7	182.7	237.4	153.9	129.1	Diurnal Maximum	
C - Calibration																					P - Power Failure						A - Automated Daily Zero Span																			



# Hourly Maximums for NO<sub>x</sub> at Henry Pirker February 2009

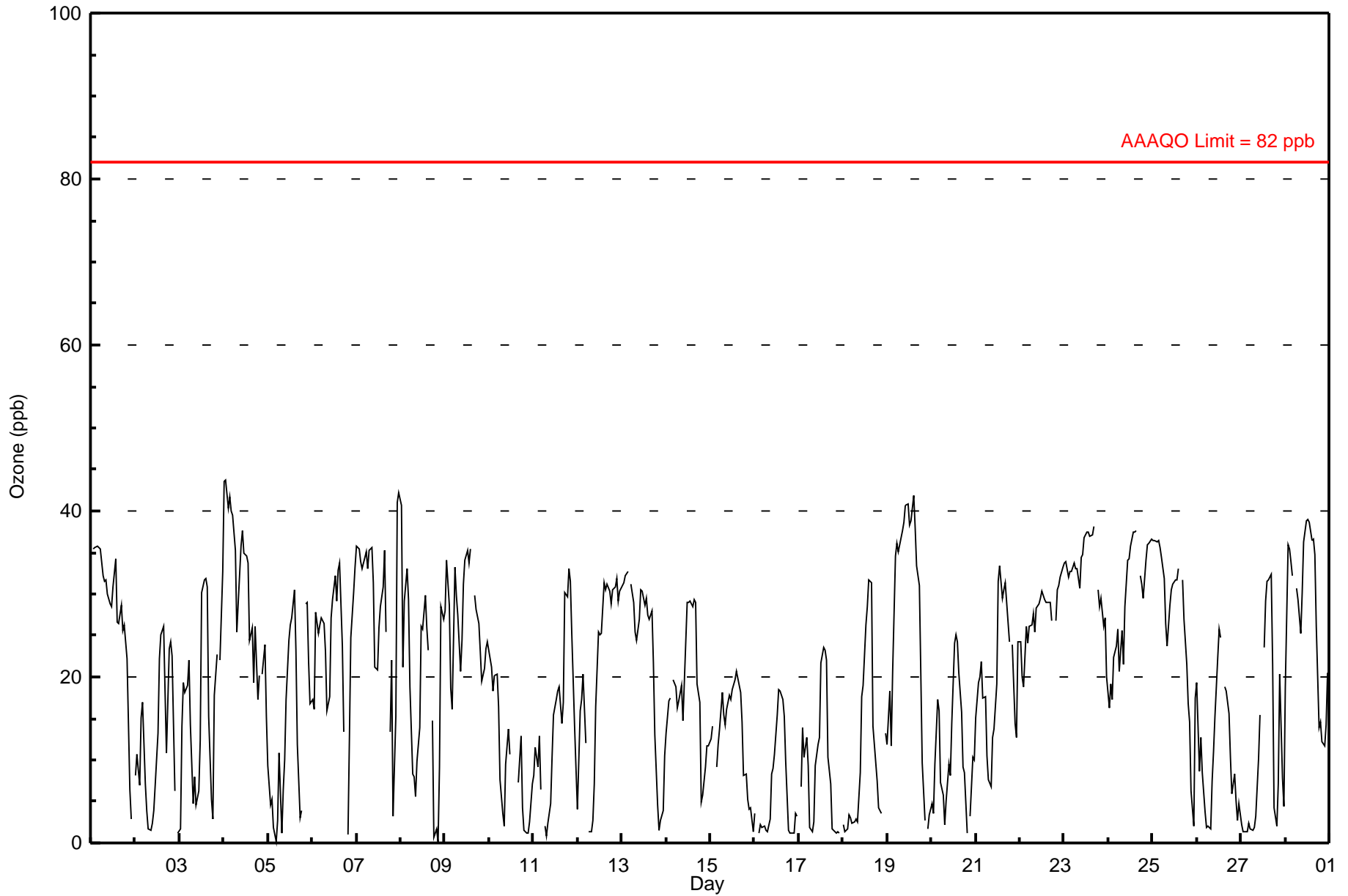


**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Henry Pirker - Ozone (O<sub>3</sub>) - ppb  
February 1, 2009 to March 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 43.7 ppb on Feb 4 02:00 Maximum Daily Average: 32.6 ppb on Feb 23		Hours in Service: 672 Hours of Data: 639 Hours of Missing Data: 33 Hours of Calibration: 32 Percent Operational Time: 99.9																																															
Minimum Value: 0 ppb on Feb 8 21:00 Maximum Diurnal Average: 29.4 ppb at hour 15 Monthly Average: 19.76 ppb		Minimum Daily Average: 6.5 ppb on Feb 16 Minimum Diurnal Average: 13.7 ppb at hour 20 Percentiles: P <sub>1</sub> = 1.1 P <sub>10</sub> = 2.6 Q <sub>1</sub> = 9.4 Median = 20.3 Q <sub>3</sub> = 29.8 P <sub>90</sub> = 34.8 P <sub>99</sub> = 40.2																																															
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Feb	A	35	36	36	36	35	32	32	32	30	29	29	31	34	27	27	29	26	26	22	14	7	3	A	27.5	35.8																							
2-Feb	8	11	7	15	17	7	4	2	1	2	4	7	13	22	25	26	18	11	23	24	23	6	A	1	12.1	26.1																							
3-Feb	2	14	19	18	19	22	14	5	8	5	6	12	30	32	32	31	15	5	3	18	23	A	22	33	16.9	32.7																							
4-Feb	44	44	40	42	40	39	35	25	29	36	38	35	35	34	24	26	19	26	17	20	A	20	24	15	30.8	43.7																							
5-Feb	9	5	5	2	0	3	11	1	6	10	17	24	26	27	31	23	12	3	4	A	29	29	22	17	13.8	30.6																							
6-Feb	17	16	28	25	26	27	26	23	16	18	27	29	32	29	33	34	24	13	A	1	13	25	30	33	23.7	33.8																							
7-Feb	36	35	34	33	34	35	33	35	36	31	21	21	26	28	31	35	25	A	13	22	3	15	41	42	29.0	42.2																							
8-Feb	41	21	29	33	29	19	8	8	6	10	14	26	26	30	26	23	A	15	1	2	0	9	28	27	18.7	40.6																							
9-Feb	28	34	29	19	16	33	30	27	21	24	31	34	35	34	35	A	30	28	26	23	20	21	23	24	27.2	35.4																							
10-Feb	22	21	18	20	20	17	8	4	2	9	14	11	C	C	C	C	7	13	4	2	1	1	3	7	10.2	22.2																							
11-Feb	8	11	9	13	7	A	2	1	2	5	10	15	17	18	19	14	17	30	30	33	32	25	14	9	14.9	33.1																							
12-Feb	4	16	17	20	12	A	1	1	3	7	16	25	25	25	31	31	31	30	29	31	31	32	29	30	20.8	31.9																							
13-Feb	31	31	32	33	A	31	29	25	24	27	31	30	29	30	27	27	28	22	13	5	2	3	4	10	22.8	32.6																							
14-Feb	13	17	17	A	20	19	16	17	19	15	20	29	29	29	29	29	29	19	17	5	6	9	12	12	18.5	29.4																							
15-Feb	13	14	A	9	12	14	18	15	14	16	18	17	18	20	21	20	18	15	8	8	5	4	4	1	13.2	20.7																							
16-Feb	4	A	1	2	2	2	1	1	3	8	9	11	15	18	18	17	15	10	2	1	1	1	4	3	6.5	18.5																							
17-Feb	A	7	14	10	13	9	2	1	2	9	12	13	22	23	23	22	10	7	2	2	1	1	1	A	9.4	23.5																							
18-Feb	2	1	2	3	3	2	3	3	3	8	18	19	26	29	32	31	14	12	7	4	4	4	A	13	10.6	31.7																							
19-Feb	12	18	12	21	35	36	35	37	38	39	41	41	38	39	42	38	33	31	20	10	3	A	2	3	27.0	41.8																							
20-Feb	5	4	9	17	16	7	6	2	5	9	8	14	24	25	24	20	16	9	9	1	A	3	10	10	11.1	25.2																							
21-Feb	15	19	20	22	18	18	11	8	7	13	14	19	32	33	29	30	31	29	24	A	24	14	13	24	20.3	33.3																							
22-Feb	24	20	19	26	24	26	26	28	25	28	29	29	30	29	29	29	29	27	A	27	31	31	32	33	27.5	33.1																							
23-Feb	34	34	32	33	33	34	33	33	31	34	35	37	37	37	37	37	38	A	30	28	29	26	27	20	32.6	38.1																							
24-Feb	16	19	17	22	24	26	21	26	22	28	34	34	36	37	37	38	A	32	31	30	34	36	36	37	29.3	37.6																							
25-Feb	36	37	36	36	36	34	32	27	24	29	31	31	32	32	33	A	32	27	22	17	15	6	2	18	27.0	36.5																							
26-Feb	19	9	13	8	4	2	2	2	7	11	15	22	26	25	A	19	18	16	10	6	8	5	3	5	11.1	25.7																							
27-Feb	2	1	1	1	2	2	2	2	3	10	15	P	23	29	32	32	32	21	4	2	7	20	8	4	11.2	32.4																							
28-Feb	19	36	35	34	32	A	31	29	25	30	36	39	39	39	36	37	35	26	14	15	12	12	14	20	28.1	39.0																							
																								17.8	19.7	19.7	20.5	19.5	20.0	16.9	15.0	14.8	18.0	21.1	24.3	27.9	29.2	29.4	27.9	23.4	19.4	15.0	13.7	14.2	14.1	15.8	17.4	Diurnal Average	
																								43.6	43.7	40.3	41.8	40.0	39.5	35.2	36.7	37.6	38.7	40.6	40.9	39.0	38.9	41.8	37.9	38.1	32.3	31.2	33.1	34.2	36.0	40.9	42.2	Diurnal Maximum	
C - Calibration P - Power Failure A - Automated Daily Zero Span																																																	
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na																																																	

# Hourly Averages for O<sub>3</sub> at Henry Pirker February 2009

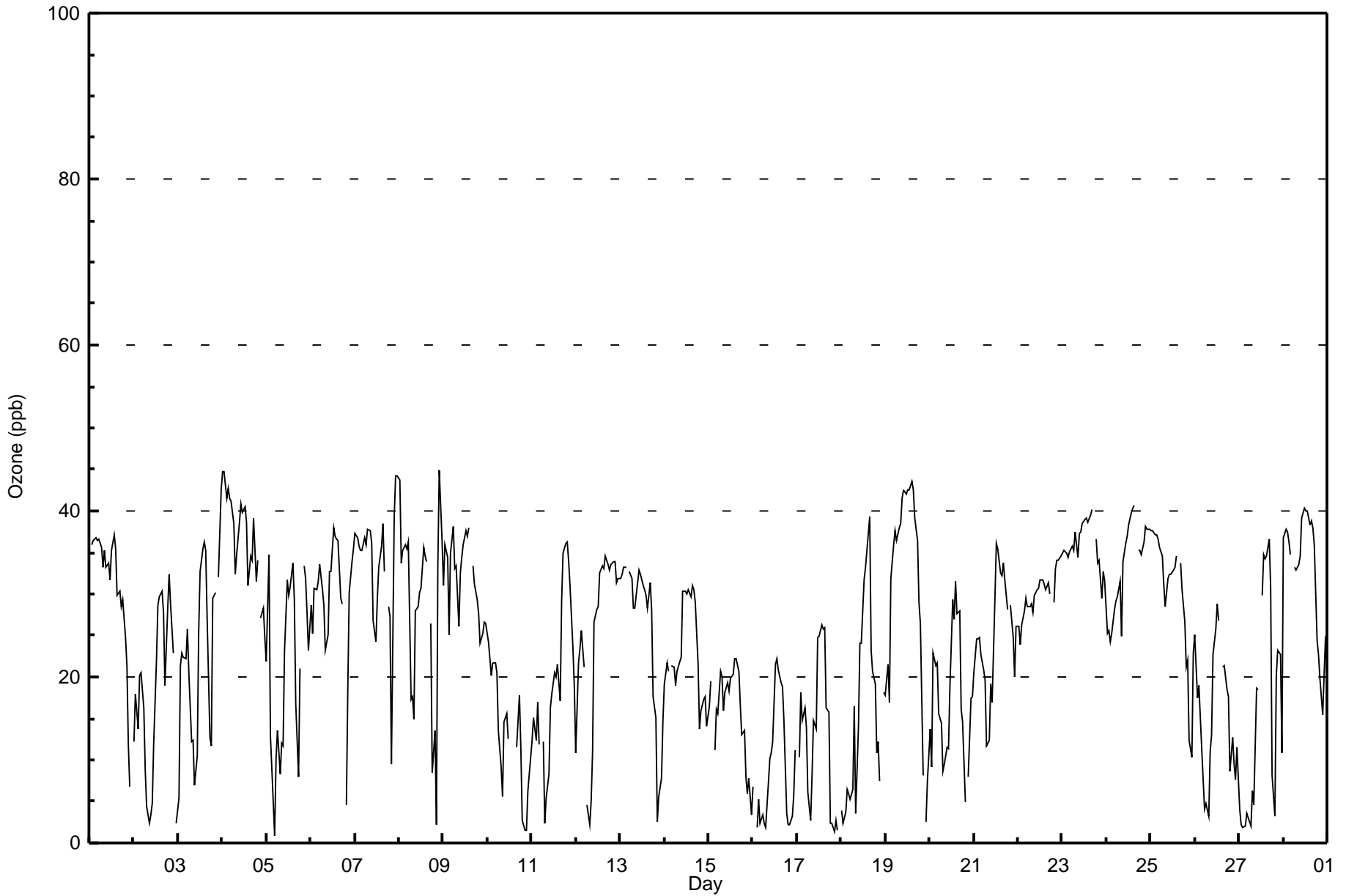


**Peace Airshed Zone Association  
Summary of Hourly Maximums**

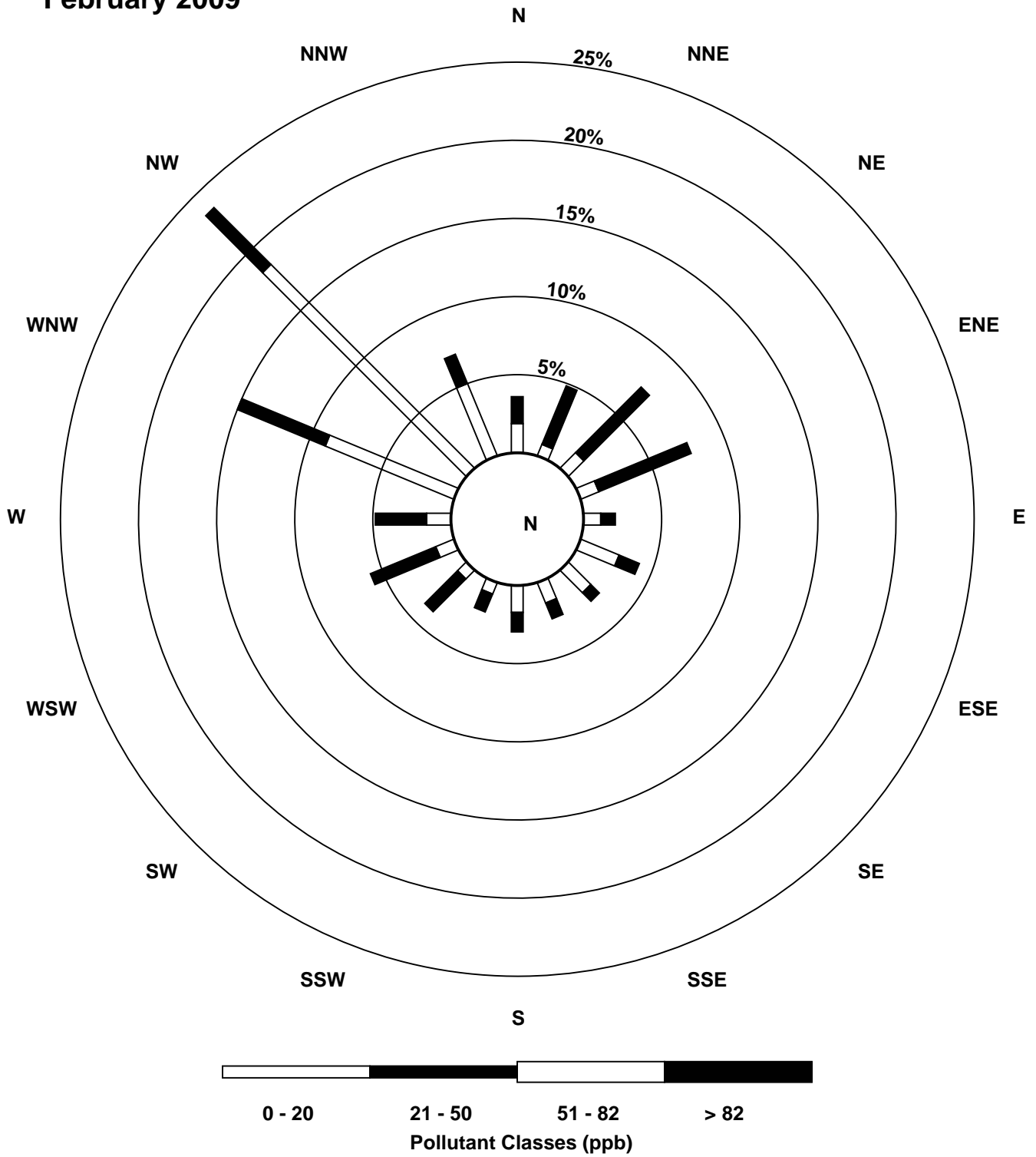
**Henry Pirker - Ozone (O<sub>3</sub>) - ppb  
February 1, 2009 to March 1, 2009**

Maximum Value: 44.8 ppb on Feb 8 23:00		Maximum Daily Average: 36.7 ppb on Feb 4		Hours in Service: 672																						
Minimum Value: 1 ppb on Feb 5 05:00		Minimum Daily Average: 9.1 ppb on Feb 16		Hours of Data: 639																						
Maximum Diurnal Average: 32.9 ppb at hour 15		Minimum Diurnal Average: 18.8 ppb at hour 9		Hours of Missing Data: 33																						
Monthly Average: 24.36 ppb		Percentiles: P <sub>1</sub> = 1.8 P <sub>10</sub> = 6.8 Q <sub>1</sub> = 15.7 Median = 26.6 Q <sub>3</sub> = 33.7 P <sub>90</sub> = 37.3 P <sub>99</sub> = 43.2		Hours of Calibration: 32																						
				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-Feb	A	36	37	37	36	37	36	33	35	33	34	32	35	37	35	30	30	28	29	25	21	12	7	A	30.7	37.2
2-Feb	12	18	14	20	20	16	9	4	2	3	5	12	22	29	30	30	28	19	28	32	29	23	A	2	17.8	32.4
3-Feb	5	21	23	22	22	26	21	12	12	7	11	25	33	35	36	35	27	13	12	30	30	A	32	43	23.2	42.6
4-Feb	45	45	42	43	42	41	39	32	35	39	41	40	40	39	31	35	34	39	31	34	A	27	28	25	36.7	44.7
5-Feb	22	35	13	9	1	10	13	8	12	12	23	32	30	31	34	29	17	8	21	A	33	32	28	23	20.7	34.8
6-Feb	29	25	31	30	31	34	31	29	23	25	33	33	38	37	37	36	29	29	A	5	18	30	34	35	29.6	37.9
7-Feb	37	37	36	35	35	37	36	38	38	36	27	24	29	33	36	39	33	A	29	27	10	39	44	44	33.8	44.2
8-Feb	44	34	35	36	35	36	17	18	15	28	28	30	31	36	35	34	A	26	9	14	2	33	45	36	28.6	44.8
9-Feb	31	36	34	25	35	38	33	33	26	33	34	36	38	37	38	A	33	31	29	28	24	25	27	26	31.8	38.2
10-Feb	24	22	20	22	22	20	13	9	6	15	16	13	C	C	C	C	11	18	12	3	2	1	6	10	13.2	24.2
11-Feb	12	15	12	17	12	A	12	2	5	8	16	18	21	20	21	17	29	35	36	36	34	31	24	19	19.7	36.3
12-Feb	11	22	23	26	21	A	5	2	5	11	27	28	29	33	33	33	34	34	33	34	34	34	31	32	24.9	34.5
13-Feb	32	32	33	33	A	33	32	28	28	31	33	32	31	30	30	28	31	28	18	15	3	6	8	15	25.7	33.3
14-Feb	19	22	21	A	21	21	19	21	22	22	30	30	30	30	31	31	29	21	14	16	17	18	14	23.0	31.0	
15-Feb	16	20	A	11	16	16	21	20	16	18	19	18	20	20	22	22	21	17	13	13	8	6	8	3	15.9	22.2
16-Feb	7	A	2	5	2	3	2	2	7	10	11	12	22	22	21	19	19	15	4	2	2	3	6	11	9.1	22.2
17-Feb	A	10	18	15	16	14	6	3	8	15	14	25	25	26	26	26	16	16	2	2	1	3	2	A	13.1	26.3
18-Feb	4	2	4	7	6	5	6	17	4	14	24	24	32	33	35	39	23	21	19	11	12	7	A	18	16.0	39.3
19-Feb	18	21	17	32	36	38	37	38	39	42	43	42	43	43	44	43	39	36	29	26	8	A	3	7	31.4	43.6
20-Feb	14	9	23	21	22	16	14	9	10	11	11	19	29	27	31	28	28	16	15	5	A	8	18	18	17.4	31.5
21-Feb	20	25	25	25	23	21	20	12	12	19	17	29	36	35	33	32	34	32	28	A	29	25	20	26	25.1	36.1
22-Feb	26	24	26	28	29	28	28	29	28	30	31	31	32	32	31	31	31	30	A	29	33	34	34	35	30.0	34.7
23-Feb	35	35	35	34	35	36	35	37	34	37	37	39	39	39	39	39	40	A	37	34	34	30	33	31	35.9	40.2
24-Feb	25	26	24	25	28	29	30	32	25	34	36	37	38	40	40	41	A	35	35	35	36	38	38	38	33.3	40.7
25-Feb	38	38	37	37	37	36	35	31	29	32	32	32	33	33	35	A	34	30	27	21	22	12	10	23	30.1	37.6
26-Feb	25	17	19	15	8	4	5	3	11	13	23	26	29	27	A	21	21	18	18	9	13	9	8	11	15.3	28.8
27-Feb	4	2	2	2	4	3	2	6	5	19	19	P	30	35	34	35	37	31	8	3	20	23	23	11	15.5	36.7
28-Feb	37	38	37	36	35	A	33	33	34	35	39	40	40	40	38	39	38	36	24	23	20	15	20	25	32.9	40.4
																								Diurnal Average		
																								Diurnal Maximum		
C - Calibration                      P - Power Failure                      A - Automated Daily Zero Span																										

# Hourly Maximums for O<sub>3</sub> at Henry Pirker February 2009



# Pollutant Rose for O<sub>3</sub> at Henry Pirker February 2009



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

**Henry Pirker - Ozone (O<sub>3</sub>) - ppb  
February 1, 2009 to March 1, 2009**

Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 39.6 ppb on Feb 4 07:00																								Hours in Service: 672	
Minimum Value: 1.5 ppb on Feb 18 02:00																								Hours of Data: 665	
Percentiles: P <sub>1</sub> = 1.9 P <sub>10</sub> = 6.6 Q <sub>1</sub> = 11.7 Median = 20.0 Q <sub>3</sub> = 28.5 P <sub>90</sub> = 33.3 P <sub>99</sub> = 38.0																								Hours of Missing Data: 7	
																								Hours of Calibration: 7	
																								Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Feb	34	34	34	35	35	35	35	35	34	33	33	32	31	31	30	30	29	29	28	28	26	22	19	18	35.0
2-Feb	15	13	10	9	10	10	10	9	8	7	7	6	5	7	10	13	15	16	18	20	22	20	19	15	21.6
3-Feb	13	13	13	12	11	14	14	14	15	14	12	11	13	14	16	19	20	20	20	21	20	18	17	17	20.7
4-Feb	21	26	32	35	38	38	40	39	37	36	36	35	34	33	32	32	31	30	27	25	24	22	22	20	39.6
5-Feb	19	16	14	12	10	8	6	4	4	5	6	9	12	15	18	21	21	20	19	18	18	19	17	16	21.3
6-Feb	17	19	22	23	23	22	23	24	23	24	24	24	25	25	26	27	28	28	28	24	21	20	20	20	28.2
7-Feb	22	25	26	30	32	34	34	34	34	34	32	31	30	29	29	29	27	27	26	26	23	21	22	23	34.4
8-Feb	25	25	27	28	31	32	28	24	19	18	16	15	15	16	18	20	22	23	21	17	14	11	11	12	31.9
9-Feb	14	16	20	22	24	27	27	27	26	25	25	27	30	30	30	31	32	33	32	30	28	26	24	24	32.5
10-Feb	23	23	22	21	21	21	19	16	14	12	12	10	9	8	N	N	N	N	N	N	N	5	4	5	23.5
11-Feb	5	5	5	7	7	8	8	7	6	5	6	6	8	9	11	13	15	18	20	22	24	25	24	24	25.0
12-Feb	22	20	19	17	15	13	11	10	10	9	9	11	13	17	21	24	27	29	29	30	31	30	30	30	30.7
13-Feb	30	30	31	31	31	31	31	30	29	29	29	28	28	28	28	28	29	28	26	22	19	16	13	11	31.2
14-Feb	9	8	9	10	12	14	16	17	18	18	18	19	20	22	23	25	26	27	26	23	20	18	16	14	26.6
15-Feb	11	11	10	11	11	12	13	14	14	14	15	16	16	17	17	18	19	18	17	16	14	12	10	8	18.5
16-Feb	6	5	4	3	3	2	2	2	2	3	4	5	6	8	11	13	14	14	13	12	10	8	6	5	14.2
17-Feb	3	3	4	6	7	9	8	8	7	8	7	8	9	11	13	16	17	17	15	14	11	9	6	3	16.8
18-Feb	2	1	1	2	2	2	2	2	2	3	5	7	10	13	17	21	22	23	21	19	17	14	11	8	22.6
19-Feb	8	9	10	12	16	21	23	26	29	31	35	38	38	38	39	39	39	38	35	31	27	25	20	15	39.3
20-Feb	11	7	5	6	8	8	8	8	8	9	9	9	10	12	14	16	18	18	18	16	15	12	10	8	17.7
21-Feb	8	10	11	14	15	16	17	16	15	14	14	13	15	17	19	22	25	27	29	30	29	26	24	23	29.9
22-Feb	22	21	20	21	21	22	24	24	24	25	27	27	28	28	29	29	29	29	29	29	29	29	29	30	29.9
23-Feb	31	32	32	32	33	33	33	33	33	33	33	34	34	35	35	36	37	37	36	35	34	32	31	29	36.9
24-Feb	25	25	23	22	21	21	21	21	22	23	25	27	28	30	32	33	35	36	35	34	34	34	34	34	35.5
25-Feb	34	35	35	36	36	36	36	34	33	32	31	30	30	29	30	30	31	31	30	28	25	22	17	17	36.3
26-Feb	16	13	12	11	10	9	9	7	6	6	6	8	11	14	15	18	19	20	19	17	15	12	11	9	20.1
27-Feb	7	5	4	3	3	2	2	2	2	3	5	5	8	12	16	21	25	26	25	22	20	19	16	13	26.5
28-Feb	11	13	16	20	24	24	27	31	32	31	31	32	33	34	34	35	36	36	33	30	27	23	21	19	36.3
Diurnal Maximums																									
34.5 34.6 35.2 36.1 37.7 37.9 39.6 38.7 36.9 35.9 35.6 37.6 38.0 38.4 39.2 39.3 38.8 37.8 36.3 35.1 34.2 34.0 33.8 33.7																									
N - Not Valid																									
Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 65 ppb																									

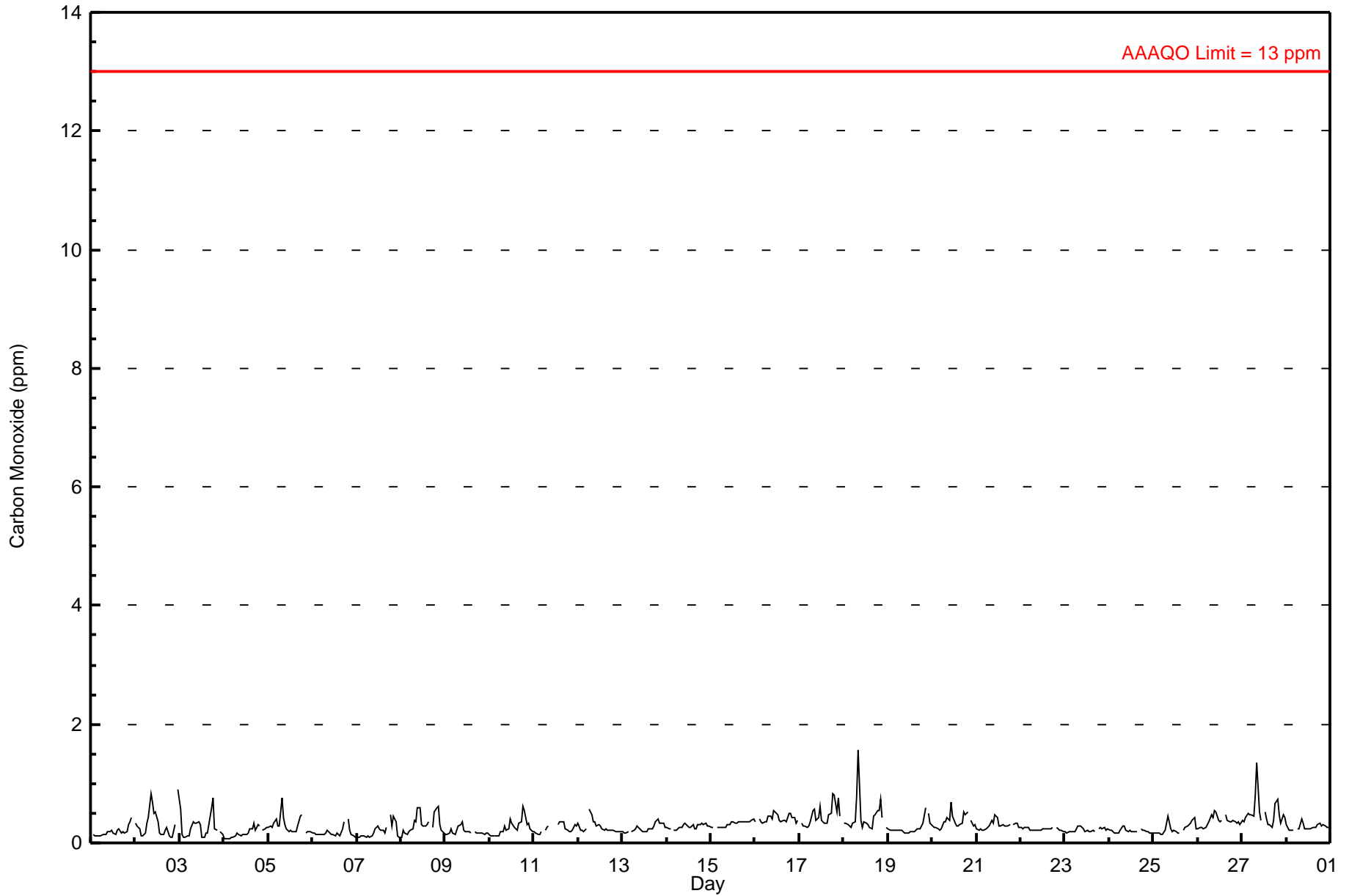
**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Henry Pirker - Carbon Monoxide (CO) - ppm  
February 1, 2009 to March 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 1.58 ppm on Feb 18 09:00      Maximum Daily Average: 0.50 ppm on Feb 27																						Hours in Service: 672 Hours of Data: 639																											
Minimum Value: 0.1 ppm on Feb 4 01:00 Maximum Diurnal Average: 0.41 ppm at hour 9 Monthly Average: 0.284 ppm											Minimum Daily Average: 0.17 ppm on Feb 4 Minimum Diurnal Average: 0.21 ppm at hour 4 Percentiles: P <sub>1</sub> = 0.10 P <sub>10</sub> = 0.15 Q <sub>1</sub> = 0.19 Median = 0.25 Q <sub>3</sub> = 0.34 P <sub>90</sub> = 0.45 P <sub>99</sub> = 0.80											Hours of Missing Data: 33 Hours of Calibration: 32 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-Feb	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	A	0.19	0.43																							
2-Feb	0.3	0.3	0.2	0.1	0.1	0.2	0.3	0.4	0.8	0.7	0.5	0.4	0.2	0.1	0.1	0.2	0.3	0.3	0.1	0.1	0.3	A	0.9	0.32	0.89																								
3-Feb	0.6	0.2	0.1	0.1	0.1	0.1	0.2	0.4	0.3	0.3	0.4	0.3	0.1	0.1	0.2	0.2	0.3	0.6	0.8	0.2	0.2	A	0.2	0.1	0.26	0.75																							
4-Feb	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.3	0.2	0.3	0.3	A	0.2	0.2	0.3	0.17	0.33																							
5-Feb	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.8	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.5	A	0.2	0.2	0.2	0.2	0.29	0.76																							
6-Feb	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.4	A	0.4	0.2	0.1	0.1	0.1	0.18	0.41																							
7-Feb	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.3	A	0.5	0.3	0.4	0.4	0.1	0.1	0.20	0.48																							
8-Feb	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.4	0.4	0.6	0.6	0.3	0.3	0.3	0.3	0.4	A	0.3	0.5	0.6	0.6	0.3	0.2	0.2	0.32	0.62																							
9-Feb	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.3	0.3	0.4	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	0.19	0.36																							
10-Feb	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.4	0.3	0.3	0.2	0.2	0.3	0.3	0.6	0.6	0.3	0.3	0.2	0.2	0.26	0.62																							
11-Feb	0.2	0.2	0.1	0.2	0.2	A	0.2	0.3	0.3	C	C	C	A	0.3	0.3	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.24	0.36																							
12-Feb	0.3	0.2	0.2	0.2	0.2	A	0.6	0.5	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	0.27	0.57																							
13-Feb	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.24	0.40																							
14-Feb	0.3	0.2	0.2	A	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.27	0.34																							
15-Feb	0.3	0.3	A	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.4	0.3	0.4	0.4	0.32	0.39																							
16-Feb	0.3	A	0.4	0.4	0.3	0.4	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.5	0.5	0.4	0.4	0.3	0.4	0.41	0.54																							
17-Feb	A	0.3	0.3	0.3	0.3	0.3	0.4	0.6	0.6	0.4	0.4	0.6	0.4	0.3	0.3	0.3	0.5	0.5	0.8	0.8	0.5	0.8	0.4	A	0.46	0.84																							
18-Feb	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.8	1.6	0.4	0.3	0.4	0.3	0.3	0.3	0.2	0.4	0.5	0.5	0.6	0.7	0.4	A	0.3	0.44	1.58																							
19-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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	0.6	A	0.5	0.25	0.60																							
20-Feb	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.7	0.4	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.5	A	0.4	0.3	0.3	0.35	0.68																							
21-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	A	0.3	0.3	0.3	0.30	0.47																							
22-Feb	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	A	0.3	0.2	0.2	0.2	0.23	0.27																							
23-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.3	0.2	0.3	0.2	0.22	0.28																							
24-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.20	0.29																							
25-Feb	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.3	0.5	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.2	0.24	0.46																							
26-Feb	0.2	0.3	0.2	0.2	0.3	0.3	0.4	0.5	0.4	0.5	0.5	0.4	0.4	0.4	A	0.5	0.4	0.4	0.3	0.4	0.3	0.3	0.4	0.3	0.36	0.54																							
27-Feb	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.8	1.3	0.5	0.4	P	0.5	0.4	0.3	0.3	0.3	0.4	0.7	0.7	0.5	0.3	0.5	0.4	0.50	1.35																							
28-Feb	0.3	0.2	0.2	0.2	0.2	A	0.2	0.2	0.4	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.27	0.40																							
																								0.24	0.21	0.21	0.21	0.21	0.21	0.26	0.35	0.41	0.32	0.32	0.30	0.26	0.24	0.24	0.26	0.29	0.32	0.39	0.37	0.33	0.31	0.28	0.27	Diurnal Average	
																								0.56	0.36	0.44	0.49	0.48	0.46	0.57	0.82	1.58	0.69	0.68	0.61	0.52	0.40	0.37	0.46	0.48	0.59	0.84	0.81	0.73	0.77	0.49	0.89	Diurnal Maximum	
C - Calibration      P - Power Failure      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 February 2009

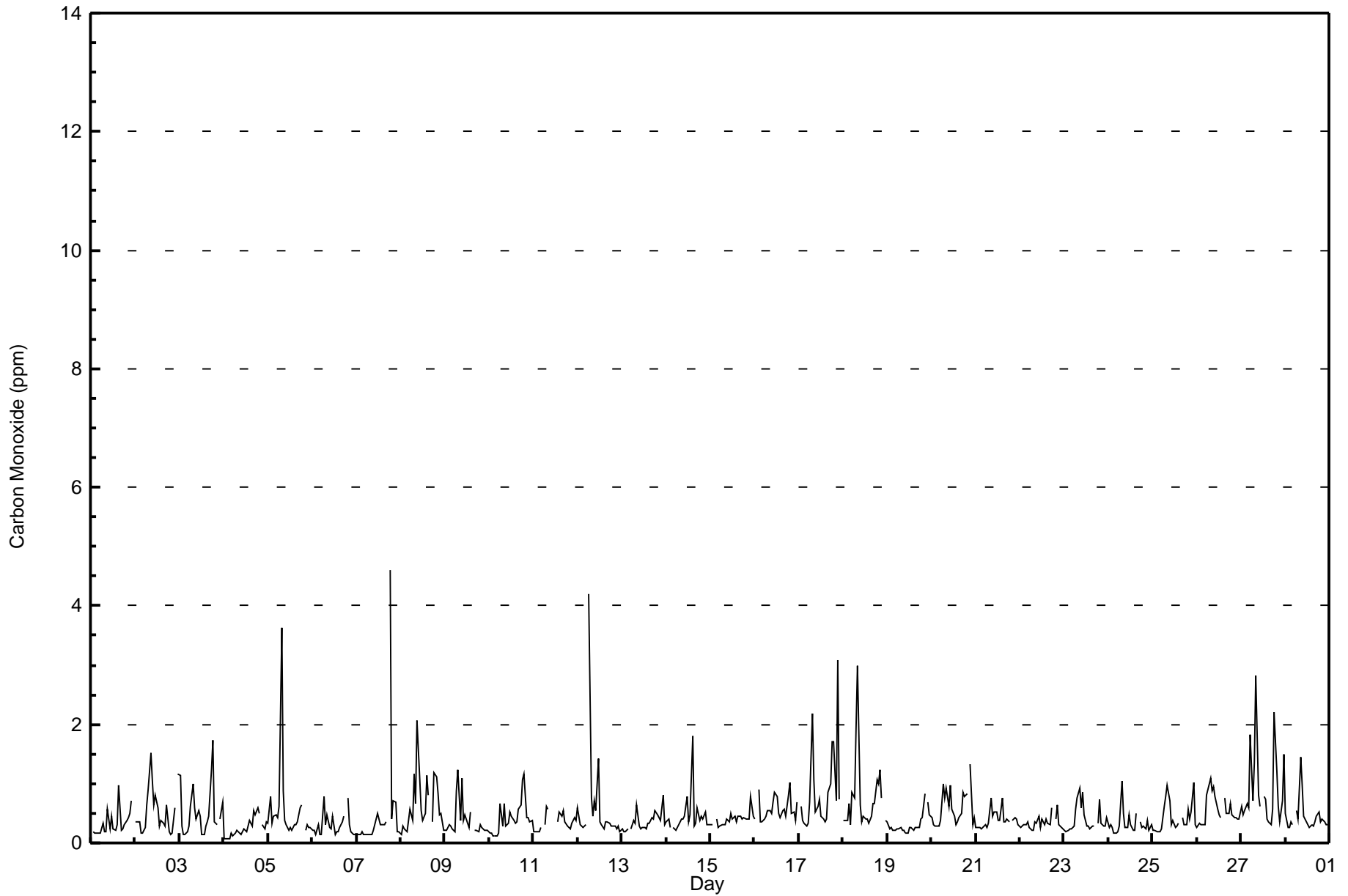


**Peace Airshed Zone Association  
Summary of Hourly Maximums**

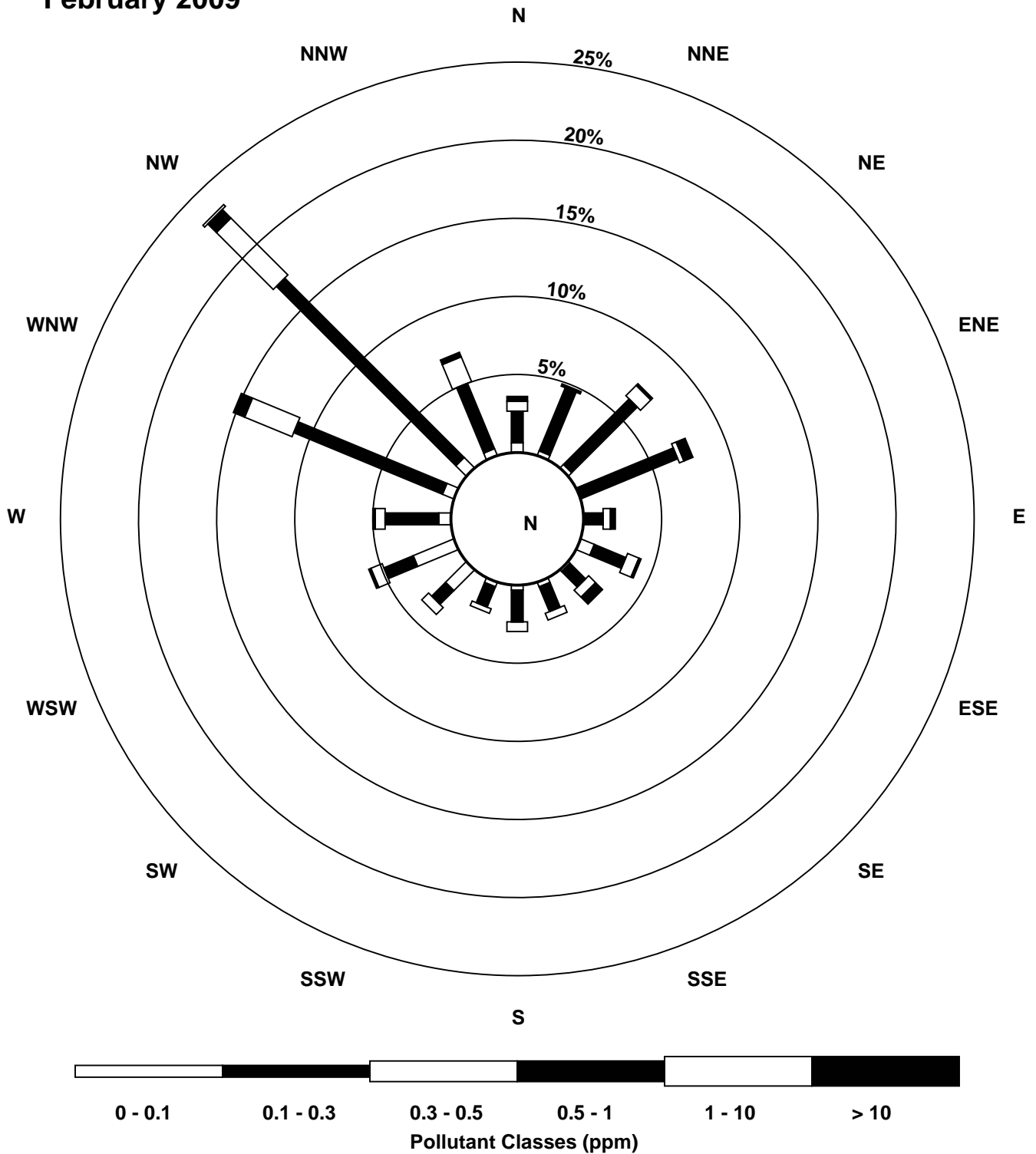
**Henry Pirker - Carbon Monoxide (CO) - ppm  
February 1, 2009 to March 1, 2009**

Maximum Value: 4.60 ppm on Feb 7 19:00		Maximum Daily Average: 0.91 ppm on Feb 27		Hours in Service: 672																						
Minimum Value: 0.1 ppm on Feb 4 01:00		Minimum Daily Average: 0.25 ppm on Feb 4		Hours of Data: 639																						
Maximum Diurnal Average: 0.84 ppm at hour 19		Minimum Diurnal Average: 0.27 ppm at hour 5		Hours of Missing Data: 33																						
Monthly Average: 0.480 ppm		Percentiles: P <sub>1</sub> = 0.12 P <sub>10</sub> = 0.19 Q <sub>1</sub> = 0.27 Median = 0.36 Q <sub>3</sub> = 0.54 P <sub>90</sub> = 0.84 P <sub>99</sub> = 2.66		Hours of Calibration: 32																						
				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-Feb	A	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.6	0.2	0.4	0.2	0.2	0.3	1.0	0.2	0.2	0.3	0.4	0.4	0.5	0.7	A	0.34	0.97
2-Feb	0.4	0.4	0.4	0.2	0.2	0.3	0.6	0.9	1.5	1.0	0.6	0.8	0.6	0.3	0.4	0.3	0.3	0.6	0.2	0.1	0.2	0.6	A	1.2	0.52	1.53
3-Feb	1.1	0.3	0.1	0.1	0.2	0.3	0.6	1.0	0.6	0.4	0.5	0.4	0.1	0.1	0.3	0.3	0.4	1.2	1.7	0.4	0.3	A	0.4	0.7	0.52	1.74
4-Feb	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.4	0.3	0.5	0.5	0.6	0.5	A	0.3	0.2	0.3	0.25	0.59
5-Feb	0.3	0.8	0.3	0.5	0.5	0.4	0.6	3.6	0.9	0.4	0.3	0.2	0.3	0.2	0.3	0.3	0.4	0.6	0.7	A	0.2	0.3	0.3	0.3	0.55	3.63
6-Feb	0.2	0.2	0.2	0.3	0.2	0.2	0.8	0.3	0.5	0.3	0.2	0.4	0.2	0.2	0.2	0.3	0.4	0.5	A	0.8	0.3	0.2	0.2	0.1	0.30	0.78
7-Feb	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.5	0.4	0.3	0.3	0.3	0.4	A	4.6	0.4	0.7	0.7	0.2	0.2	0.47	4.60
8-Feb	0.1	0.3	0.2	0.2	0.4	0.6	0.4	1.2	0.7	2.1	1.1	0.5	0.4	0.5	1.1	0.8	A	0.4	1.2	1.1	0.8	0.5	0.5	0.2	0.66	2.07
9-Feb	0.2	0.2	0.3	0.3	0.2	0.2	0.9	1.2	0.4	1.1	0.4	0.5	0.3	0.2	0.5	A	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.38	1.24
10-Feb	0.2	0.2	0.1	0.1	0.1	0.2	0.7	0.3	0.7	0.3	0.3	0.5	0.5	0.4	0.3	0.4	0.6	0.7	1.1	1.2	0.4	0.4	0.4	0.4	0.42	1.16
11-Feb	0.2	0.2	0.2	0.2	0.2	A	0.3	0.6	0.6	C	C	C	A	0.4	0.5	0.4	0.6	0.3	0.3	0.3	0.2	0.3	0.4	0.4	0.35	0.62
12-Feb	0.6	0.3	0.3	0.3	0.3	A	4.2	0.8	0.5	0.7	0.5	1.4	0.4	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.58	4.19
13-Feb	0.2	0.2	0.2	0.2	A	0.2	0.4	0.3	0.6	0.3	0.2	0.3	0.3	0.2	0.3	0.3	0.4	0.4	0.5	0.5	0.4	0.4	0.8	0.3	0.36	0.81
14-Feb	0.4	0.4	0.3	A	0.3	0.2	0.3	0.3	0.4	0.4	0.5	0.8	0.4	0.5	1.8	0.3	0.3	0.6	0.4	0.5	0.4	0.5	0.3	0.3	0.45	1.81
15-Feb	0.3	0.3	A	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.4	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.8	0.5	0.40	0.77
16-Feb	0.4	A	0.9	0.4	0.4	0.4	0.4	0.5	0.6	0.5	0.7	0.8	0.8	0.5	0.4	0.5	0.6	0.5	0.8	1.0	0.5	0.5	0.4	0.7	0.57	1.02
17-Feb	A	0.6	0.4	0.3	0.3	0.3	0.7	2.2	1.1	0.5	0.6	0.7	0.5	0.4	0.4	0.4	0.8	1.0	1.7	1.7	0.7	3.1	0.7	A	0.87	3.08
18-Feb	0.4	0.4	0.4	0.7	0.3	0.8	0.8	1.9	3.0	0.7	0.3	0.4	0.4	0.4	0.3	0.5	0.7	0.7	1.1	1.0	1.2	0.8	A	0.4	0.76	2.99
19-Feb	0.4	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.8	A	0.7	0.5	0.31	0.83
20-Feb	0.4	0.3	0.3	0.3	0.3	0.4	1.0	0.8	0.9	0.6	1.0	0.6	0.5	0.3	0.4	0.4	0.5	0.9	0.8	0.8	A	1.3	0.3	0.4	0.58	1.34
21-Feb	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.8	0.4	0.5	0.5	0.4	0.4	0.8	0.4	0.4	0.4	0.4	A	0.4	0.4	0.4	0.3	0.39	0.76
22-Feb	0.3	0.3	0.3	0.3	0.4	0.3	0.2	0.4	0.3	0.4	0.3	0.4	0.3	0.4	0.3	0.4	0.3	0.6	A	0.4	0.6	0.3	0.3	0.2	0.34	0.65
23-Feb	0.2	0.2	0.2	0.2	0.2	0.3	0.6	0.8	0.9	0.6	0.8	0.5	0.3	0.3	0.2	0.3	0.3	A	0.3	0.7	0.3	0.3	0.3	0.4	0.40	0.92
24-Feb	0.3	0.3	0.3	0.2	0.2	0.2	0.3	1.0	0.5	0.3	0.3	0.5	0.3	0.2	0.2	0.5	A	0.4	0.3	0.3	0.2	0.4	0.2	0.3	0.33	1.04
25-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.6	0.8	1.0	0.7	0.3	0.4	0.3	0.3	0.3	A	0.4	0.3	0.3	0.6	0.4	0.5	1.0	0.3	0.43	1.01
26-Feb	0.3	0.3	0.3	0.3	0.3	0.8	0.9	1.1	0.9	0.9	0.8	0.6	0.5	0.4	A	0.8	0.5	0.5	0.7	0.5	0.4	0.4	0.4	0.4	0.56	1.09
27-Feb	0.6	0.5	0.6	0.7	0.6	1.8	0.7	1.4	2.8	0.8	0.6	P	0.8	0.7	0.4	0.4	0.3	0.6	2.2	1.2	0.6	0.4	0.7	1.5	0.91	2.81
28-Feb	0.5	0.3	0.3	0.3	0.3	A	0.5	0.4	1.5	1.0	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.3	0.4	0.4	0.3	0.3	0.44	1.45
																								Diurnal Average		
																								Diurnal Maximum		
C - Calibration                      P - Power Failure                      A - Automated Daily Zero Span																										

# Hourly Maximums for CO at Henry Pirker February 2009



# Pollutant Rose for CO at Henry Pirker February 2009



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

**Henry Pirker - Carbon Monoxide (CO) - ppm  
February 1, 2009 to March 1, 2009**

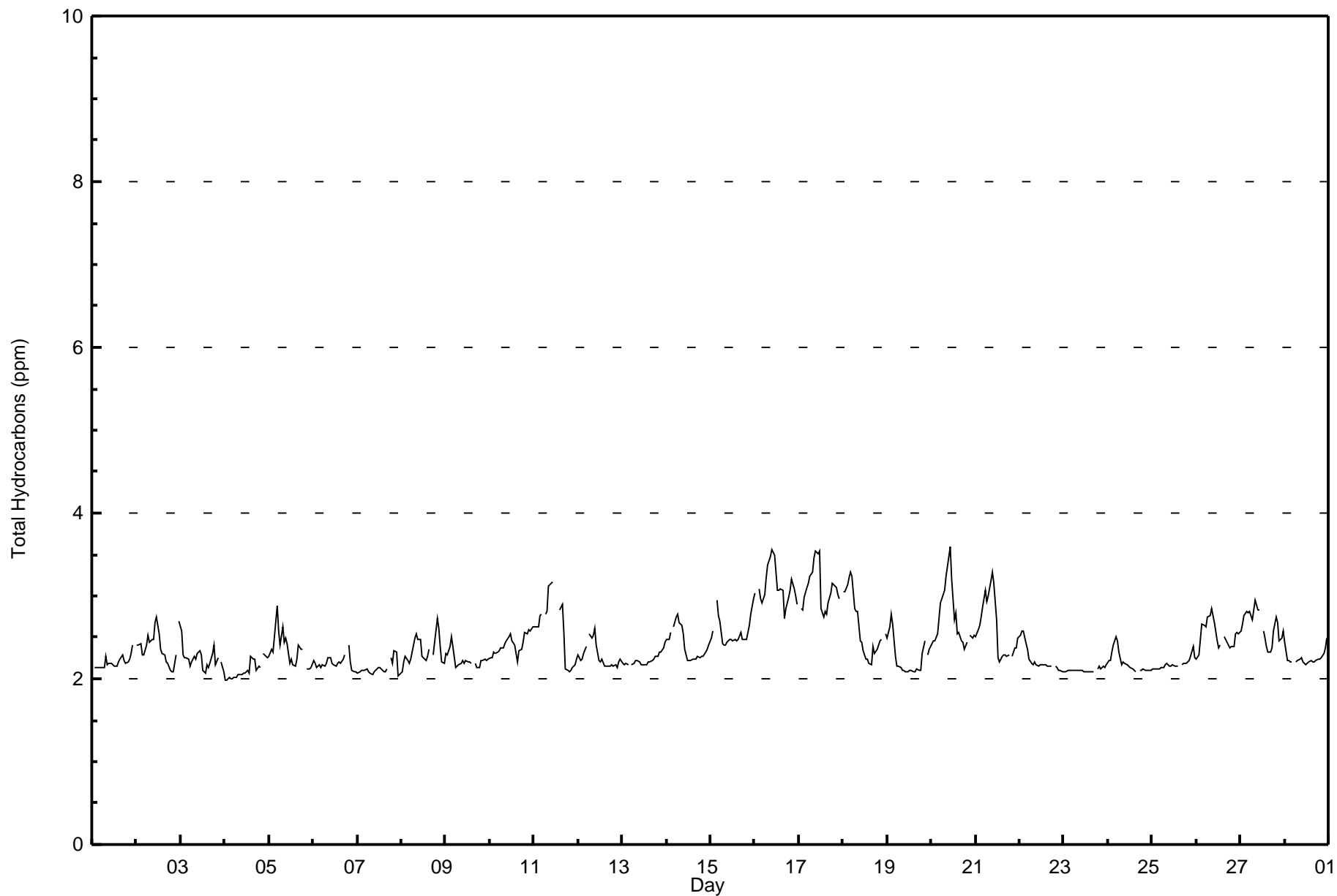
Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 0.65 ppm on Feb 27 13:00																						Hours in Service: 672			
Minimum Value: 0.09 ppm on Feb 4 07:00																						Hours of Data: 664			
Percentiles: P <sub>1</sub> = 0.11 P <sub>10</sub> = 0.17 Q <sub>1</sub> = 0.21 Median = 0.27 Q <sub>3</sub> = 0.35 P <sub>90</sub> = 0.42 P <sub>99</sub> = 0.62																						Hours of Missing Data: 8			
																						Hours of Calibration: 8			
																						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-Feb	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	0.3	0.3	0.26
2-Feb	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.48
3-Feb	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.35
4-Feb	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.31
5-Feb	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.38
6-Feb	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26
7-Feb	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.32
8-Feb	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	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.42
9-Feb	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.35
10-Feb	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.37
11-Feb	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	N	N	N	N	N	N	N	N	0.3	0.3	0.3	0.3	0.3	0.2	0.35
12-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.37
13-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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	0.32
14-Feb	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.32
15-Feb	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.36
16-Feb	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.45
17-Feb	0.4	0.4	0.4	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	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.62
18-Feb	0.6	0.6	0.5	0.4	0.4	0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.60
19-Feb	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.46
20-Feb	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.41
21-Feb	0.4	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	0.3	0.39
22-Feb	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.30
23-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.24
24-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
25-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.31
26-Feb	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.44
27-Feb	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.65
28-Feb	0.5	0.5	0.4	0.3	0.3	0.3	0.3	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	0.48
0.60 0.58 0.50 0.43 0.39 0.41 0.42 0.48 0.61 0.63 0.62 0.64 0.65 0.64 0.62 0.54 0.43 0.43 0.47 0.50 0.52 0.57 0.58 0.62																									
Diurnal Maximums																									
N - Not Valid																									
Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 5 ppm																									

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

**Henry Pirker - Total Hydrocarbons (THC) - ppm  
February 1, 2009 to March 1, 2009**

Maximum Value: 3.60 ppm on Feb 20 11:00		Maximum Daily Average: 3.12 ppm on Feb 16		Hours in Service:	672																																												
Minimum Value: 2.0 ppm on Feb 4 01:00		Minimum Daily Average: 2.11 ppm on Feb 4		Hours of Data:	640																																												
Maximum Diurnal Average: 2.53 ppm at hour 10		Minimum Diurnal Average: 2.29 ppm at hour 14		Hours of Missing Data:	32																																												
Monthly Average: 2.398 ppm		Percentiles: P <sub>1</sub> = 2.02 P <sub>10</sub> = 2.10 Q <sub>1</sub> = 2.17 Median = 2.28 Q <sub>3</sub> = 2.53 P <sub>90</sub> = 2.88 P <sub>99</sub> = 3.48		Hours of Calibration:	31																																												
				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-Feb	A	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.4	A	2.20	2.41																							
2-Feb	2.4	2.4	2.4	2.3	2.3	2.4	2.5	2.4	2.5	2.5	2.7	2.7	2.6	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.3	A	2.7	2.38	2.75																							
3-Feb	2.6	2.3	2.3	2.3	2.2	2.2	2.2	2.3	2.2	2.3	2.3	2.1	2.1	2.2	2.1	2.2	2.3	2.4	2.2	2.3	A	2.2	2.1	2.24	2.57																								
4-Feb	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.3	2.2	2.2	2.1	2.1	2.1	A	2.3	2.3	2.2	2.11	2.31																							
5-Feb	2.3	2.4	2.3	2.5	2.9	2.6	2.4	2.6	2.4	2.5	2.4	2.2	2.2	2.2	2.2	2.4	2.4	2.4	A	2.1	2.1	2.1	2.1	2.35	2.89																								
6-Feb	2.2	2.2	2.1	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	A	2.4	2.2	2.1	2.1	2.1	2.19	2.40																								
7-Feb	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.2	2.2	2.3	2.3	2.0	2.0	2.12	2.35																							
8-Feb	2.1	2.2	2.3	2.2	2.2	2.2	2.4	2.5	2.5	2.5	2.5	2.3	2.3	2.2	2.3	2.4	A	2.3	2.4	2.7	2.6	2.4	2.2	2.2	2.34	2.73																							
9-Feb	2.3	2.3	2.4	2.5	2.4	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.23	2.50																							
10-Feb	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.4	2.3	2.2	2.3	2.4	2.4	2.6	2.5	2.6	2.6	2.6	2.41	2.63																							
11-Feb	2.6	2.6	2.6	2.8	2.8	A	2.8	2.8	3.1	3.2	3.2	C	C	C	2.8	2.9	2.6	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.58	3.17																							
12-Feb	2.3	2.2	2.2	2.3	2.4	A	2.5	2.5	2.5	2.6	2.4	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.2	2.2	2.28	2.61																							
13-Feb	2.2	2.2	2.2	2.2	A	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.4	2.4	2.23	2.44																							
14-Feb	2.5	2.5	2.6	A	2.6	2.7	2.8	2.7	2.6	2.5	2.4	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.41	2.78																							
15-Feb	2.5	2.6	A	2.9	2.8	2.7	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.5	2.5	2.5	2.6	2.6	2.8	3.0	2.56	2.97																							
16-Feb	3.0	A	3.1	3.0	2.9	3.0	3.2	3.4	3.5	3.6	3.5	3.5	3.1	3.1	3.1	3.1	2.7	2.8	3.0	3.1	3.2	3.1	3.0	2.9	3.12	3.57																							
17-Feb	A	2.8	2.8	3.0	3.1	3.2	3.2	3.3	3.5	3.5	3.5	3.5	2.8	2.8	2.8	2.8	2.9	3.0	3.1	3.1	3.1	3.0	3.0	A	3.09	3.54																							
18-Feb	3.1	3.1	3.1	3.2	3.3	3.2	2.8	2.8	2.8	2.5	2.4	2.3	2.2	2.2	2.2	2.2	2.4	2.3	2.4	2.4	2.5	2.5	A	2.5	2.63	3.29																							
19-Feb	2.5	2.6	2.8	2.7	2.3	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.5	A	2.3	2.4	2.25	2.78																							
20-Feb	2.4	2.5	2.5	2.5	2.7	2.9	3.0	3.1	3.2	3.5	3.6	3.2	2.7	2.8	2.5	2.6	2.5	2.4	2.3	2.4	A	2.5	2.5	2.5	2.74	3.60																							
21-Feb	2.5	2.6	2.6	2.7	2.9	3.1	2.9	3.0	3.2	3.3	3.2	2.7	2.3	2.2	2.3	2.3	2.3	2.3	2.3	A	2.3	2.4	2.4	2.5	2.61	3.28																							
22-Feb	2.5	2.6	2.6	2.4	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	A	2.2	2.1	2.1	2.1	2.1	2.23	2.58																							
23-Feb	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.2	2.1	2.2	2.1	2.2	2.11	2.17																							
24-Feb	2.2	2.2	2.3	2.4	2.5	2.5	2.3	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.19	2.50																							
25-Feb	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	A	2.2	2.2	2.2	2.2	2.2	2.3	2.4	2.3	2.18	2.40																							
26-Feb	2.2	2.3	2.5	2.7	2.6	2.6	2.8	2.8	2.8	2.8	2.7	2.5	2.4	2.4	A	2.5	2.5	2.4	2.4	2.4	2.4	2.5	2.6	2.5	2.53	2.84																							
27-Feb	2.6	2.7	2.8	2.8	2.8	2.8	2.7	2.8	3.0	2.8	2.8	P	2.6	2.5	2.4	2.3	2.3	2.4	2.6	2.8	2.7	2.5	2.5	2.6	2.63	2.95																							
28-Feb	2.4	2.2	2.2	2.2	2.2	A	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.4	2.5	2.25	2.50																							
																								2.38	2.37	2.42	2.46	2.49	2.47	2.46	2.49	2.53	2.53	2.51	2.40	2.31	2.29	2.30	2.32	2.32	2.30	2.33	2.36	2.36	2.37	2.36	2.37	Diurnal Average	
																								3.06	3.05	3.14	3.23	3.29	3.23	3.24	3.38	3.48	3.57	3.60	3.54	3.07	3.07	3.09	3.06	2.92	3.04	3.15	3.13	3.20	3.09	3.00	2.97	Diurnal Maximum	
C - Calibration																								P - Power Failure						A - Automated Daily Zero Span																			

# Hourly Averages for THC at Henry Pirker February 2009



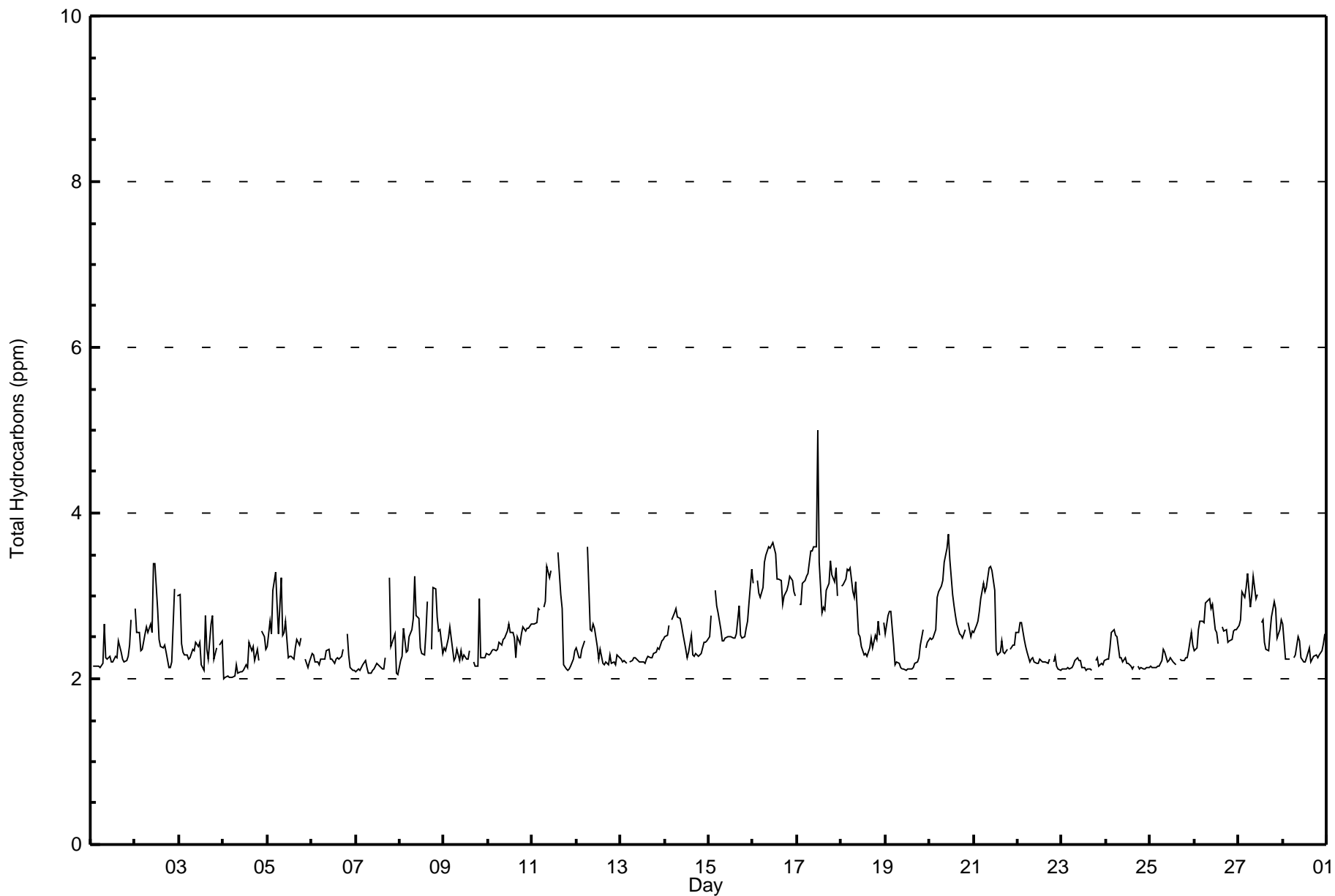
**Peace Airshed Zone Association  
Summary of Hourly Maximums**

**Henry Pirker - Total Hydrocarbons (THC) - ppm  
February 1, 2009 to March 1, 2009**

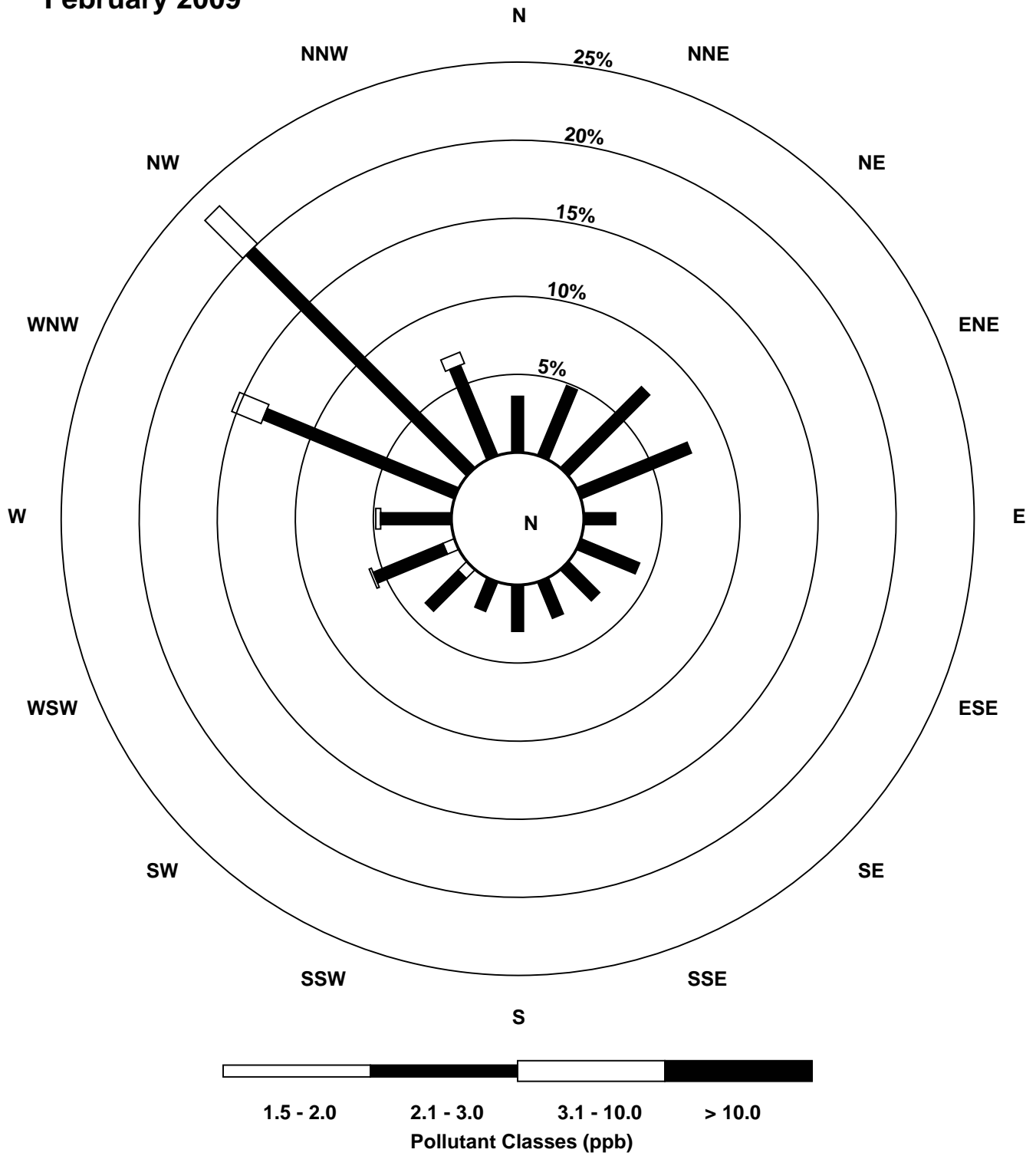
Maximum Value: 4.99 ppm on Feb 17 12:00		Maximum Daily Average: 3.28 ppm on Feb 17		Hours in Service:	672																																												
Minimum Value: 2.0 ppm on Feb 4 01:00		Minimum Daily Average: 2.16 ppm on Feb 23		Hours of Data:	640																																												
Maximum Diurnal Average: 2.66 ppm at hour 9		Minimum Diurnal Average: 2.36 ppm at hour 14		Hours of Missing Data:	32																																												
Monthly Average: 2.504 ppm		Percentiles: P <sub>1</sub> = 2.03 P <sub>10</sub> = 2.14 Q <sub>1</sub> = 2.23 Median = 2.38 Q <sub>3</sub> = 2.67 P <sub>90</sub> = 3.10 P <sub>99</sub> = 3.59		Hours of Calibration:	31																																												
				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-Feb	A	2.2	2.1	2.2	2.2	2.1	2.2	2.7	2.3	2.2	2.3	2.2	2.2	2.3	2.2	2.5	2.3	2.2	2.2	2.2	2.3	2.4	2.7	A	2.28	2.71																							
2-Feb	2.9	2.6	2.6	2.3	2.4	2.5	2.6	2.6	2.7	2.6	3.4	3.4	2.8	2.5	2.4	2.4	2.4	2.3	2.1	2.1	2.2	3.1	A	2.4	2.60	3.39																							
3-Feb	3.0	2.4	2.3	2.3	2.3	2.2	2.3	2.4	2.3	2.4	2.4	2.4	2.2	2.1	2.8	2.3	2.2	2.7	2.8	2.2	2.4	A	2.4	2.5	2.41	3.01																							
4-Feb	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.4	2.3	2.4	2.2	2.4	2.2	A	2.6	2.5	2.4	2.19	2.58																							
5-Feb	2.4	2.7	2.5	3.1	3.3	2.9	2.5	3.2	2.5	2.6	2.7	2.2	2.3	2.3	2.2	2.4	2.5	2.4	2.5	A	2.2	2.2	2.1	2.2	2.52	3.28																							
6-Feb	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.4	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.4	A	2.5	2.3	2.1	2.1	2.1	2.25	2.55																							
7-Feb	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.2	A	3.2	2.4	2.4	2.5	2.1	2.1	2.22	3.21																							
8-Feb	2.2	2.3	2.6	2.3	2.3	2.5	2.6	2.7	3.2	2.8	2.7	2.4	2.3	2.3	2.6	2.9	A	2.4	3.1	3.1	2.7	2.6	2.6	2.3	2.59	3.23																							
9-Feb	2.4	2.3	2.5	2.6	2.5	2.2	2.2	2.4	2.2	2.3	2.2	2.3	2.2	2.2	2.3	A	2.2	2.2	2.2	3.0	2.2	2.3	2.3	2.3	2.33	2.96																							
10-Feb	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.5	2.5	2.6	2.7	2.6	2.6	2.5	2.3	2.5	2.4	2.5	2.6	2.6	2.6	2.6	2.7	2.48	2.66																							
11-Feb	2.7	2.7	2.7	2.9	2.8	A	2.9	2.9	3.4	3.2	3.3	C	C	C	3.5	3.0	2.8	2.2	2.1	2.1	2.1	2.2	2.2	2.3	2.70	3.53																							
12-Feb	2.4	2.3	2.3	2.4	2.5	A	3.6	2.6	2.6	2.7	2.6	2.4	2.2	2.4	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.3	2.3	2.39	3.59																							
13-Feb	2.2	2.2	2.2	2.2	A	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.5	2.5	2.27	2.47																							
14-Feb	2.5	2.5	2.6	A	2.7	2.8	2.8	2.7	2.7	2.6	2.5	2.4	2.3	2.3	2.5	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.5	2.49	2.85																							
15-Feb	2.5	2.8	A	3.1	2.9	2.8	2.6	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.9	2.5	2.5	2.5	2.6	2.7	2.9	3.3	2.65	3.33																							
16-Feb	3.2	A	3.2	3.0	3.0	3.1	3.4	3.5	3.6	3.6	3.6	3.6	3.5	3.2	3.2	3.2	2.9	3.0	3.1	3.1	3.2	3.2	3.1	3.0	3.24	3.65																							
17-Feb	A	2.9	2.9	3.1	3.2	3.2	3.3	3.5	3.5	3.6	3.6	5.0	3.4	2.8	2.9	2.8	3.1	3.2	3.4	3.3	3.2	3.3	3.0	A	3.28	4.99																							
18-Feb	3.1	3.1	3.2	3.3	3.3	3.3	3.0	3.0	3.2	2.5	2.5	2.4	2.3	2.3	2.3	2.4	2.5	2.4	2.5	2.5	2.7	2.5	A	2.7	2.74	3.34																							
19-Feb	2.5	2.8	2.8	2.8	2.4	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.4	2.6	A	2.4	2.4	2.32	2.82																							
20-Feb	2.5	2.5	2.5	2.6	3.0	3.0	3.1	3.2	3.4	3.6	3.8	3.4	3.0	2.9	2.8	2.7	2.5	2.5	2.5	2.6	A	2.7	2.5	2.6	2.86	3.75																							
21-Feb	2.6	2.6	2.7	2.8	3.0	3.1	3.0	3.1	3.3	3.4	3.3	3.1	2.3	2.3	2.3	2.5	2.3	2.3	2.3	2.4	A	2.3	2.4	2.4	2.6	2.70	3.36																						
22-Feb	2.6	2.7	2.7	2.5	2.4	2.3	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	2.2	2.3	2.1	2.1	2.1	2.28	2.68																						
23-Feb	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.2	2.3	2.2	2.2	2.2	2.2	2.16	2.25																						
24-Feb	2.2	2.2	2.4	2.6	2.6	2.5	2.5	2.3	2.3	2.2	2.3	2.2	2.2	2.1	2.1	2.2	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.25	2.60																						
25-Feb	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.4	2.3	2.2	2.2	2.3	2.2	2.2	2.2	A	2.2	2.2	2.2	2.3	2.3	2.3	2.6	2.4	2.24	2.56																							
26-Feb	2.3	2.4	2.6	2.7	2.7	2.7	2.9	2.9	3.0	2.9	2.9	2.6	2.6	2.4	A	2.6	2.6	2.6	2.4	2.5	2.5	2.6	2.6	2.6	2.63	2.96																							
27-Feb	2.6	2.7	3.0	3.0	3.1	3.3	2.9	3.0	3.2	3.0	3.0	P	2.7	2.7	2.4	2.4	2.3	2.6	2.7	2.9	2.8	2.5	2.6	2.7	2.79	3.28																							
28-Feb	2.7	2.2	2.2	2.2	2.2	A	2.3	2.3	2.5	2.5	2.3	2.2	2.2	2.3	2.4	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.4	2.5	2.32	2.67																							
																								2.48	2.44	2.51	2.55	2.58	2.57	2.59	2.63	2.66	2.61	2.64	2.57	2.42	2.36	2.44	2.43	2.41	2.39	2.49	2.47	2.44	2.48	2.45	2.47	Diurnal Average	
																								3.15	3.13	3.21	3.31	3.31	3.34	3.59	3.54	3.59	3.60	3.75	4.99	3.51	3.21	3.53	3.18	3.07	3.15	3.42	3.26	3.24	3.34	3.06	3.33	Diurnal Maximum	
C - Calibration						P - Power Failure						A - Automated Daily Zero Span																																					



# Hourly Maximums for THC at Henry Pirker February 2009



# Pollutant Rose for THC at Henry Pirker February 2009

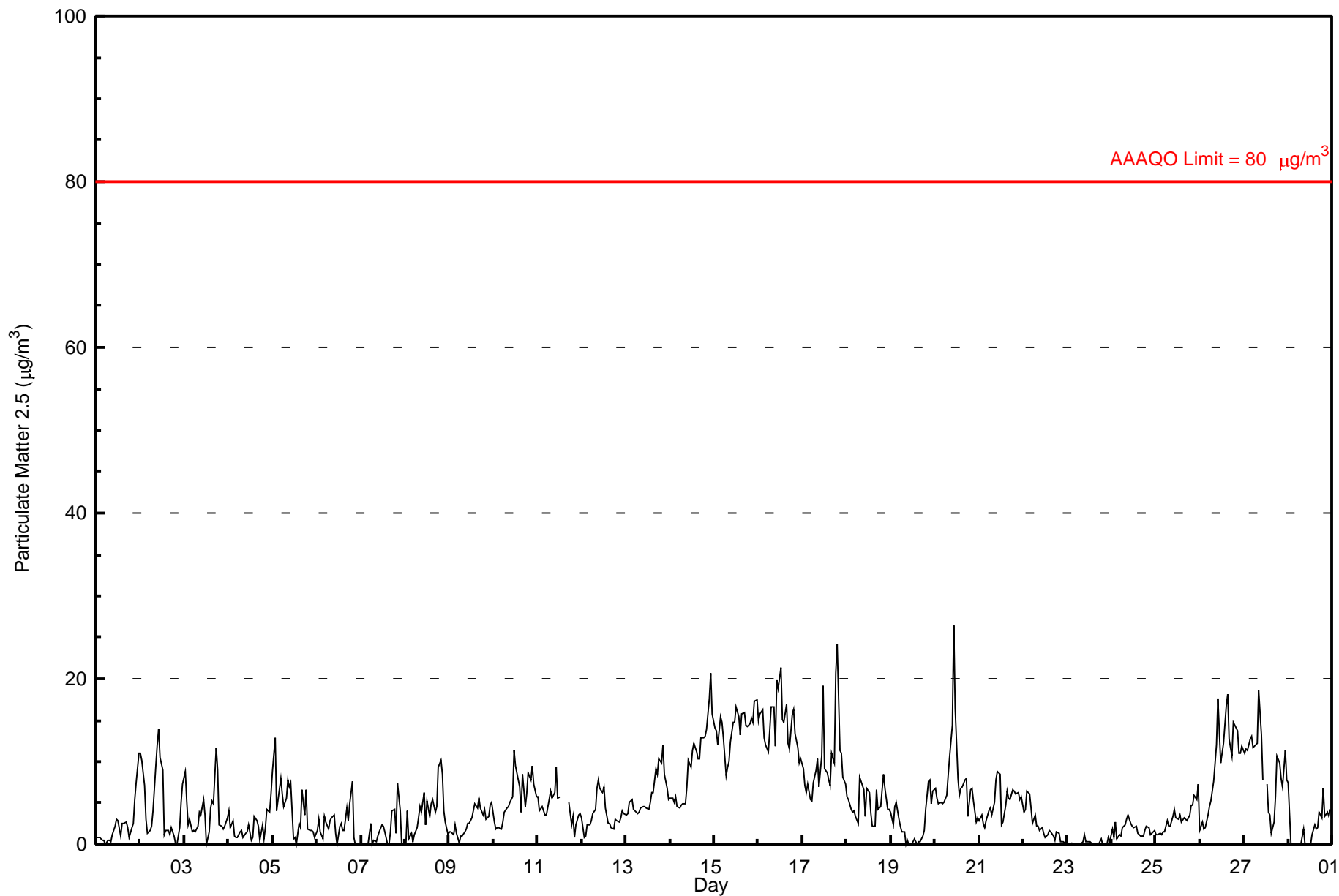


**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Henry Pirker - Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>  
February 1, 2009 to March 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0		Hours in Service: 672																																															
Maximum Value: 26.4 µg/m <sup>3</sup> on Feb 20 11:00		Maximum Daily Average: 14.5 µg/m <sup>3</sup> on Feb 16																																															
Minimum Value: 0 µg/m <sup>3</sup> on Feb 1 06:00		Hours of Data: 666																																															
Maximum Diurnal Average: 7.3 µg/m <sup>3</sup> at hour 11		Hours of Missing Data: 6																																															
Monthly Average: 5.19 µg/m <sup>3</sup>		Hours of Calibration: 4																																															
Minimum Daily Average: 0.2 µg/m <sup>3</sup> on Feb 23		Percent Operational Time: 99.7																																															
Minimum Diurnal Average: 3.6 µg/m <sup>3</sup> at hour 6																																																	
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.4 Q <sub>1</sub> = 1.7 Median = 3.9 Q <sub>3</sub> = 7.3 P <sub>90</sub> = 12.1 P <sub>99</sub> = 19.1																																																	
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-Feb	1	1	1	1	0	0	0	0	0	1	2	3	3	1	3	3	3	2	1	2	3	5	7	11	2.3	11.0																							
2-Feb	11	10	7	3	1	2	2	4	9	12	14	11	9	1	2	2	1	2	1	0	0	2	5	7	4.9	13.9																							
3-Feb	9	5	2	3	2	2	2	4	4	4	5	4	0	1	4	5	5	12	9	2	2	2	2	3	3.8	11.6																							
4-Feb	4	2	3	1	1	1	2	2	1	1	2	2	0	1	3	3	2	0	2	1	2	4	4	6	2.1	6.0																							
5-Feb	9	13	4	5	8	6	5	6	8	7	7	1	1	0	3	2	7	3	7	2	2	2	1	1	4.5	12.9																							
6-Feb	2	3	2	1	3	3	2	3	3	3	1	0	2	3	2	2	4	3	5	8	1	0	0	0	2.3	7.6																							
7-Feb	0	0	0	0	0	2	0	0	0	1	1	2	2	1	0	0	2	4	4	1	7	4	0	0	1.4	7.5																							
8-Feb	0	4	1	1	0	1	2	3	4	4	6	2	5	3	5	5	4	5	9	10	8	4	3	1	3.9	10.2																							
9-Feb	2	1	1	2	1	0	1	1	2	2	3	3	3	4	5	4	6	4	4	4	3	3	5	5	2.9	5.6																							
10-Feb	3	2	2	2	2	3	4	4	5	5	6	11	9	8	7	4	8	5	6	9	8	10	7	6	5.6	11.3																							
11-Feb	6	4	5	4	4	4	5	7	6	6	9	6	6	C	C	C	C	5	2	3	1	2	4	4	4.6	9.3																							
12-Feb	3	1	1	2	2	3	4	4	7	8	7	6	7	4	3	3	2	2	3	3	3	3	4	4	3.7	7.8																							
13-Feb	4	4	5	6	4	4	4	4	4	5	5	4	4	5	6	6	9	8	10	10	12	9	7	5	6.0	12.1																							
14-Feb	6	6	5	6	5	4	5	5	5	7	10	9	11	12	11	10	10	13	13	13	14	18	21	16	9.8	20.6																							
15-Feb	14	14	12	15	15	13	8	9	10	12	15	15	17	15	13	16	16	14	14	15	15	15	17	17	14.0	17.5																							
16-Feb	15	16	16	13	12	11	14	17	17	12	20	19	21	15	15	17	12	11	16	16	13	12	10	10	14.5	21.4																							
17-Feb	9	7	6	7	5	5	7	9	10	7	11	19	9	9	8	7	11	10	21	24	11	11	8	7	10.0	24.2																							
18-Feb	6	5	4	4	4	3	2	8	8	7	3	7	6	4	2	2	7	4	5	7	9	7	4	4	5.1	8.5																							
19-Feb	4	2	5	5	3	2	2	2	0	0	0	0	0	1	0	0	0	1	2	4	8	8	5	6	2.5	7.8																							
20-Feb	7	6	5	5	5	5	6	8	11	14	26	16	8	6	7	7	8	8	3	7	7	5	3	3	7.7	26.4																							
21-Feb	3	3	3	2	3	4	4	4	5	8	9	8	2	3	5	6	6	5	7	6	6	6	5	6	5.0	8.8																							
22-Feb	4	4	6	6	4	3	4	2	2	2	1	1	1	1	2	2	1	1	1	1	0	0	0	0	2.1	6.4																							
23-Feb	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0.2	1.1																							
24-Feb	2	1	3	1	1	1	2	2	3	4	2	2	2	2	1	1	1	1	2	2	2	1	1	2	1.8	3.6																							
25-Feb	1	1	1	1	1	2	3	2	2	3	4	3	3	4	3	3	3	3	4	5	5	6	5	7	3.2	7.4																							
26-Feb	2	3	2	2	4	5	5	8	10	12	18	10	11	12	17	18	13	11	15	14	14	11	11	12	9.9	18.2																							
27-Feb	11	11	11	13	13	12	12	12	19	13	8	P	7	4	4	1	3	6	11	10	8	7	11	8	9.3	18.7																							
28-Feb	7	0	0	0	0	0	0	0	2	0	BD	0	0	1	2	2	2	4	3	7	3	4	3	4	2.0	7.5																							
																								5.1	4.6	4.0	4.0	3.7	3.6	3.8	4.6	5.6	5.8	7.3	6.1	5.4	4.5	4.8	4.9	5.3	5.3	6.4	6.7	6.0	5.7	5.6	5.6	Diurnal Average	
																								14.9	15.7	16.2	15.4	14.7	12.9	13.7	16.6	18.7	14.4	26.4	19.2	21.4	15.5	16.7	18.2	15.9	14.3	20.7	24.2	15.2	17.7	20.6	17.5	Diurnal Maximum	
C - Calibration P - Power Failure BD - Baseline Drift																																																	
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 80 µg/m <sup>3</sup> 24-hr 30 µg/m <sup>3</sup>																																																	

# Hourly Averages for PM<sub>2.5</sub> at Henry Pirker February 2009

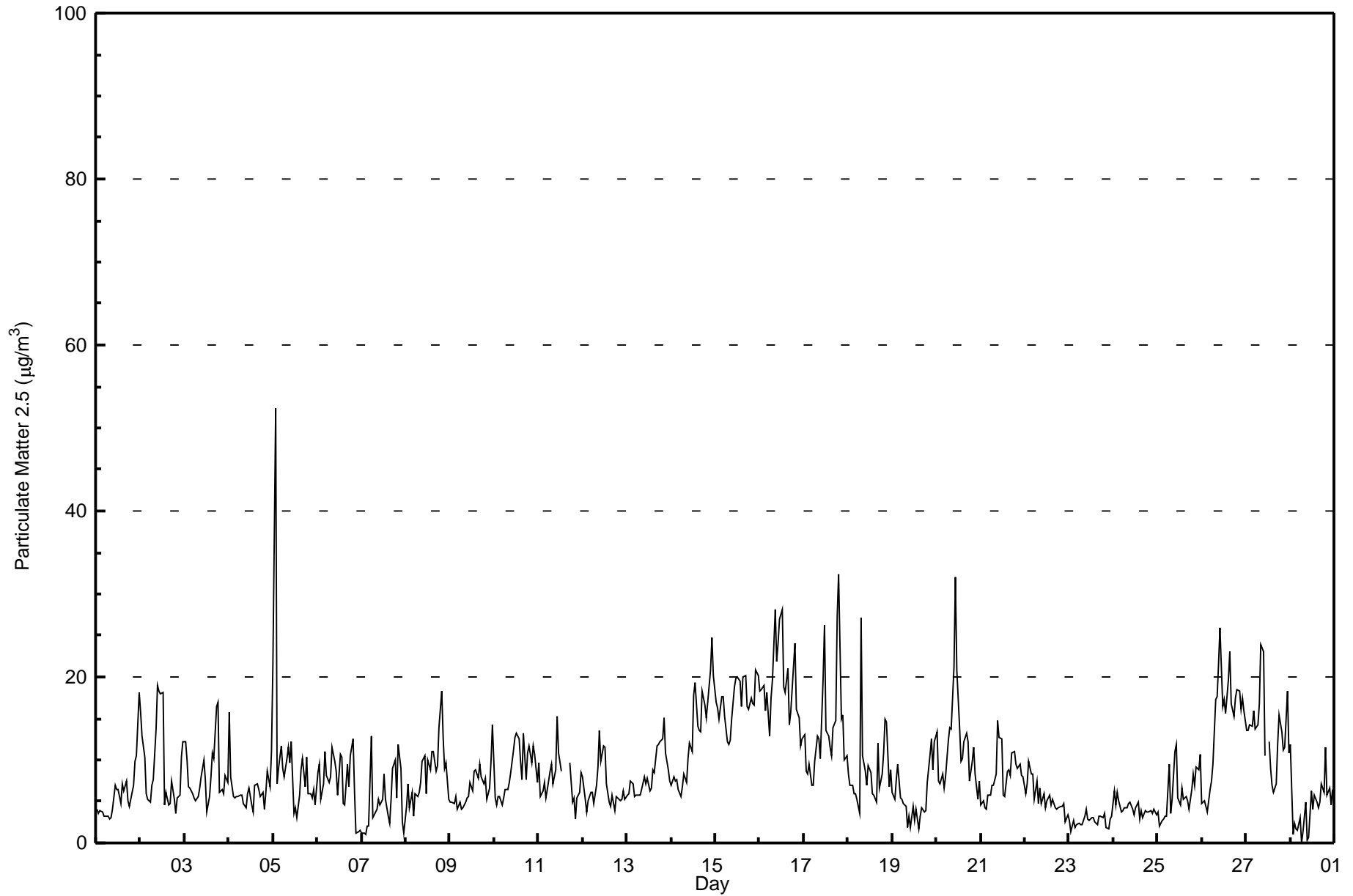


**Peace Airshed Zone Association  
Summary of Hourly Maximums**

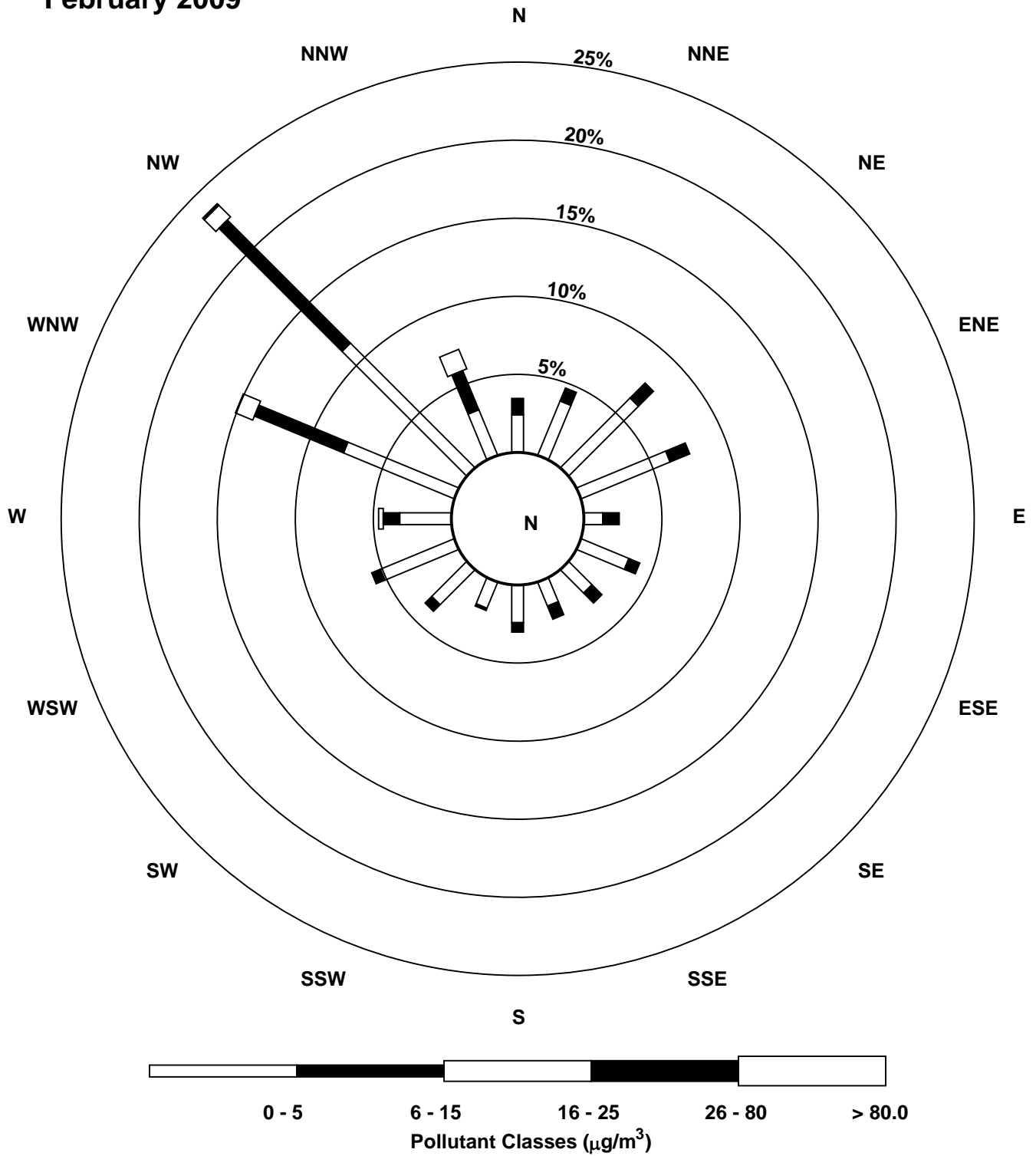
**Henry Pirker - Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>  
February 1, 2009 to March 1, 2009**

Maximum Value: 52.4 µg/m <sup>3</sup> on Feb 5 02:00		Maximum Daily Average: 19.1 µg/m <sup>3</sup> on Feb 16		Hours in Service: 672																							
Minimum Value: 0 µg/m <sup>3</sup> on Feb 28 07:00		Minimum Daily Average: 2.7 µg/m <sup>3</sup> on Feb 23		Hours of Data: 667																							
Maximum Diurnal Average: 11.3 µg/m <sup>3</sup> at hour 11		Minimum Diurnal Average: 6.7 µg/m <sup>3</sup> at hour 5		Hours of Missing Data: 5																							
Monthly Average: 8.83 µg/m <sup>3</sup>		Percentiles: P <sub>1</sub> = 1.1 P <sub>10</sub> = 3.3 Q <sub>1</sub> = 5.0 Median = 7.1 Q <sub>3</sub> = 11.5 P <sub>90</sub> = 16.7 P <sub>99</sub> = 27.1		Hours of Calibration: 4																							
				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-Feb	4	4	4	4	3	3	3	3	3	4	7	6	6	5	7	6	8	5	4	6	7	10	10	18	5.9	18.2	
2-Feb	16	13	10	6	5	5	7	8	14	19	18	18	18	5	6	5	5	7	5	4	5	6	10	12	9.4	19.0	
3-Feb	12	10	7	7	6	5	5	6	7	8	10	8	4	6	8	11	10	16	17	6	6	6	8	7	8.1	17.0	
4-Feb	16	8	6	5	6	6	6	6	5	4	6	7	5	4	7	7	6	6	6	4	6	9	7	11	6.5	15.8	
5-Feb	21	52	7	9	12	9	8	10	12	10	12	4	4	3	6	9	10	7	10	6	6	5	6	5	10.1	52.4	
6-Feb	8	9	5	7	11	8	7	8	12	10	9	6	11	10	5	5	9	7	11	13	6	1	1	2	7.5	12.6	
7-Feb	1	1	1	2	2	13	3	3	4	5	5	5	8	5	3	2	5	9	10	5	12	9	3	1	5.0	12.9	
8-Feb	4	7	4	6	3	6	6	6	7	10	11	6	10	9	11	11	9	9	14	18	13	9	10	5	8.5	18.3	
9-Feb	5	5	5	6	4	5	4	4	5	5	6	7	6	9	9	8	9	8	7	8	5	7	10	14	6.7	14.2	
10-Feb	5	5	6	6	5	5	6	6	7	9	11	13	13	12	10	8	13	8	11	12	10	12	11	7	8.7	13.3	
11-Feb	10	6	6	7	5	6	9	10	7	9	15	11	9	C	C	C	C	10	5	5	3	5	6	8	7.6	15.3	
12-Feb	8	5	4	5	6	6	5	7	9	13	10	12	12	7	5	4	6	4	6	5	5	5	6	5	6.7	13.5	
13-Feb	6	6	8	7	6	6	6	6	6	8	7	8	6	7	9	9	12	12	12	13	15	11	9	7	8.3	15.0	
14-Feb	7	8	7	8	6	6	7	8	7	10	12	11	18	19	14	14	13	18	17	15	17	21	25	20	12.8	24.7	
15-Feb	17	16	15	18	18	15	12	12	12	15	19	20	20	20	17	20	20	16	16	17	17	17	21	20	17.0	20.8	
16-Feb	18	18	19	16	18	13	17	20	28	22	24	27	28	19	18	21	14	16	21	24	16	15	12	12	19.1	28.1	
17-Feb	13	9	8	10	7	7	10	13	12	10	20	26	14	13	11	10	14	15	27	32	15	15	10	10	13.8	32.4	
18-Feb	8	7	7	6	6	5	4	27	10	9	7	9	8	6	6	5	12	7	8	11	15	15	7	9	8.9	27.1	
19-Feb	6	5	8	10	6	5	5	4	2	3	2	4	3	4	2	3	4	4	4	7	11	13	9	12	5.6	12.5	
20-Feb	13	8	7	8	7	8	12	14	14	21	32	21	14	10	10	12	13	12	7	10	12	8	5	8	12.0	32.1	
21-Feb	5	5	4	4	6	6	7	7	8	15	13	12	6	6	9	9	8	11	11	10	9	9	8	8	8.1	14.7	
22-Feb	6	7	10	8	8	5	7	5	7	5	6	4	5	6	5	5	4	4	4	4	4	5	3	3	5.5	9.8	
23-Feb	3	1	3	2	2	2	2	2	3	4	3	3	3	3	3	2	3	3	3	3	2	2	3	3	2.7	4.0	
24-Feb	6	5	6	5	4	4	4	4	5	5	4	3	4	5	3	4	3	4	4	4	4	4	4	3	4.2	6.2	
25-Feb	4	2	3	3	3	3	9	4	5	11	12	5	5	7	5	6	5	4	6	8	7	9	9	11	6.1	11.9	
26-Feb	5	5	4	4	6	7	10	17	18	22	26	16	17	16	20	23	17	15	18	18	18	16	17	16	14.6	25.9	
27-Feb	14	14	14	14	16	14	14	17	24	23	10	P	12	9	7	6	7	12	15	13	11	11	18	11	13.4	23.8	
28-Feb	12	1	2	2	2	3	0	1	5	0	1	6	4	6	5	4	5	7	6	12	6	7	5	6	4.5	11.9	
		9.1	8.6	6.8	6.9	6.7	6.7	7.0	8.5	9.2	10.3	11.3	10.3	9.8	8.4	8.1	8.5	9.1	9.1	10.2	10.5	9.4	9.3	9.0	9.2	Diurnal Average	
		21.4	52.4	19.0	17.7	18.1	15.3	17.5	27.1	28.1	23.0	32.1	27.0	28.1	19.5	19.6	23.1	20.1	18.4	27.3	32.4	18.2	20.8	24.7	20.3	Diurnal Maximum	
C - Calibration		P - Power Failure																									

# Hourly Maximums for PM<sub>2.5</sub> at Henry Pirker February 2009



# Pollutant Rose for PM<sub>2.5</sub> at Henry Pirker February 2009



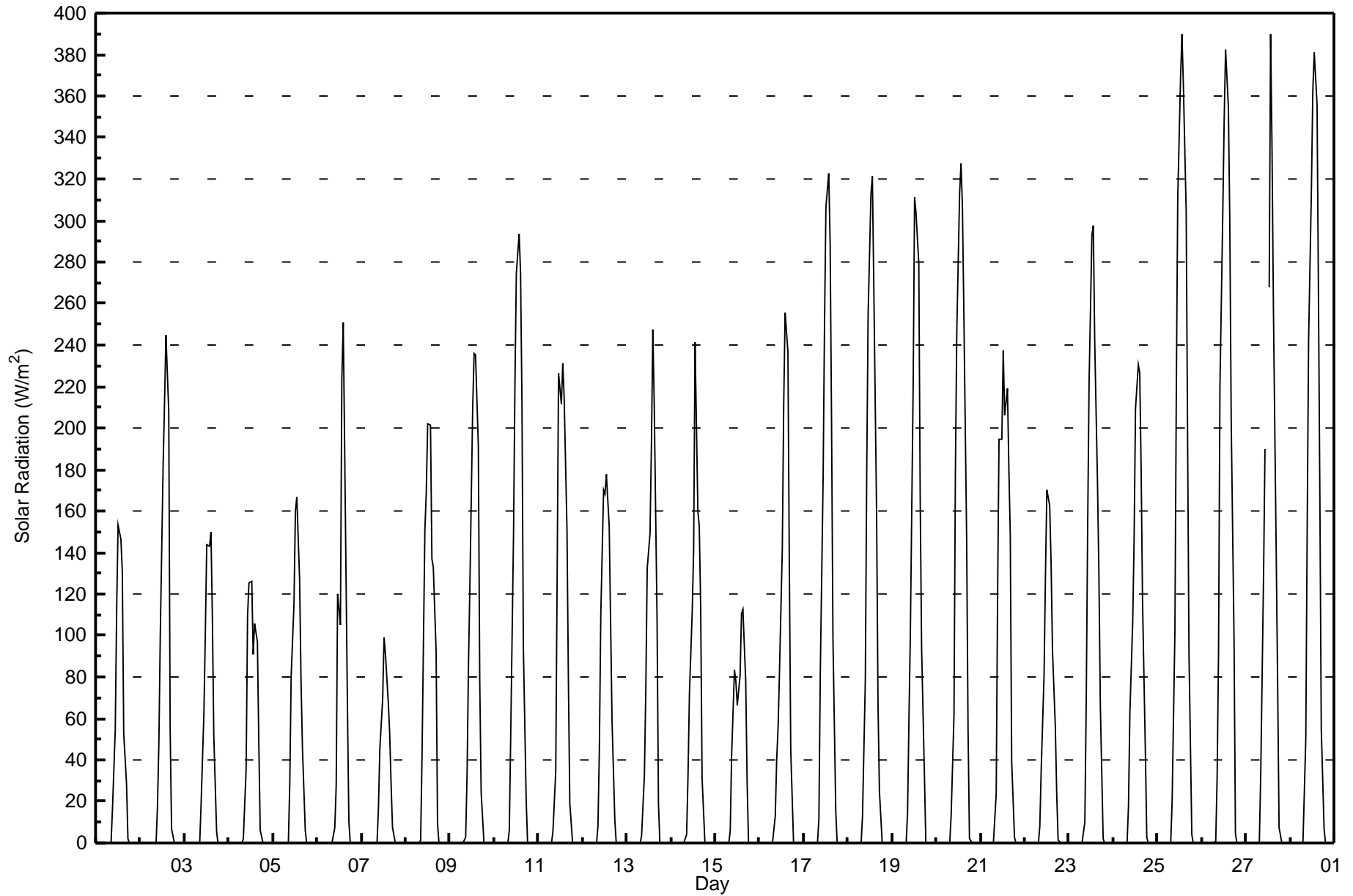
**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Henry Pirker - Solar Radiation (SR) - W/m<sup>2</sup>  
February 1, 2009 to March 1, 2009**

Maximum Value: 390.1 W/m <sup>2</sup> on Feb 27 14:00		Maximum Daily Average: 98.8 W/m <sup>2</sup> on Feb 25		Hours in Service: 672																							
Minimum Value: 0 W/m <sup>2</sup> on Feb 1 01:00		Minimum Daily Average: 19.9 W/m <sup>2</sup> on Feb 7		Hours of Data: 671																							
Maximum Diurnal Average: 237.7 W/m <sup>2</sup> at hour 14		Minimum Diurnal Average: 0.0 W/m <sup>2</sup> at hour 2		Hours of Missing Data: 1																							
Monthly Average: 55.54 W/m <sup>2</sup>		Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.0 Q <sub>3</sub> = 90.9 P <sub>90</sub> = 211.6 P <sub>99</sub> = 362.5		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-Feb	0	0	0	0	0	0	0	0	0	16	55	114	153	146	131	53	29	2	0	0	0	0	0	0	29.1	153.1	
2-Feb	0	0	0	0	0	0	0	0	0	17	49	101	182	212	245	208	55	7	0	0	0	0	0	0	44.8	244.6	
3-Feb	0	0	0	0	0	0	0	0	0	19	63	101	144	143	150	109	52	6	0	0	0	0	0	0	32.8	149.8	
4-Feb	0	0	0	0	0	0	0	2	36	109	125	126	91	106	97	48	6	0	0	0	0	0	0	0	31.1	125.8	
5-Feb	0	0	0	0	0	0	0	0	28	81	115	160	167	127	78	46	6	0	0	0	0	0	0	0	33.7	167.0	
6-Feb	0	0	0	0	0	0	0	0	7	28	120	105	223	251	191	65	10	0	0	0	0	0	0	0	41.6	250.6	
7-Feb	0	0	0	0	0	0	0	0	16	45	69	99	91	68	53	28	8	0	0	0	0	0	0	0	19.9	99.3	
8-Feb	0	0	0	0	0	0	0	1	43	151	169	202	201	137	133	92	10	0	0	0	0	0	0	0	47.4	202.2	
9-Feb	0	0	0	0	0	0	0	2	33	86	124	210	236	235	191	78	24	0	0	0	0	0	0	0	50.8	235.8	
10-Feb	0	0	0	0	0	0	0	6	52	148	221	274	294	275	212	94	20	0	0	0	0	0	0	0	66.5	293.7	
11-Feb	0	0	0	0	0	0	0	5	35	128	226	212	231	214	151	78	19	0	0	0	0	0	0	0	54.1	231.4	
12-Feb	0	0	0	0	0	0	0	8	45	109	170	168	177	153	106	59	11	0	0	0	0	0	0	0	41.9	177.5	
13-Feb	0	0	0	0	0	0	0	4	32	73	132	149	192	248	211	108	19	0	0	0	0	0	0	0	48.7	247.8	
14-Feb	0	0	0	0	0	0	0	4	33	72	112	142	241	160	153	113	31	0	0	0	0	0	0	0	44.2	241.2	
15-Feb	0	0	0	0	0	0	0	6	43	83	78	66	81	110	113	78	29	0	0	0	0	0	0	0	28.6	112.6	
16-Feb	0	0	0	0	0	0	0	13	40	56	83	142	212	256	236	133	45	0	0	0	0	0	0	0	50.6	255.6	
17-Feb	0	0	0	0	0	0	0	11	82	176	250	306	323	289	202	98	15	0	0	0	0	0	0	0	73.1	323.0	
18-Feb	0	0	0	0	0	0	0	13	79	180	256	312	321	269	159	68	25	0	0	0	0	0	0	0	70.1	321.5	
19-Feb	0	0	0	0	0	0	0	14	60	101	221	311	304	280	166	94	32	0	0	0	0	0	0	0	65.9	311.5	
20-Feb	0	0	0	0	0	0	0	14	62	178	247	313	327	306	257	146	55	2	0	0	0	0	0	0	79.4	327.4	
21-Feb	0	0	0	0	0	0	0	24	120	194	194	238	206	219	180	149	39	3	0	0	0	0	0	0	65.3	237.5	
22-Feb	0	0	0	0	0	0	0	8	36	81	129	170	163	135	93	56	24	1	0	0	0	0	0	0	37.4	170.5	
23-Feb	0	0	0	0	0	0	0	10	70	153	222	293	298	242	173	129	66	2	0	0	0	0	0	0	69.1	297.9	
24-Feb	0	0	0	0	0	0	0	17	63	107	146	209	231	227	180	116	44	3	0	0	0	0	0	0	55.9	230.8	
25-Feb	0	0	0	0	0	0	0	20	102	219	310	369	390	365	304	196	92	4	0	0	0	0	0	0	98.8	389.8	
26-Feb	0	0	0	0	0	0	1	32	92	221	303	349	382	355	299	203	99	4	0	0	0	0	0	0	97.5	382.0	
27-Feb	0	0	0	0	0	0	0	34	129	190	P	268	390	334	258	139	77	7	0	0	0	0	0	0	79.4	390.1	
28-Feb	0	0	0	0	0	0	1	50	152	243	315	363	381	356	265	167	55	7	0	0	0	0	0	0	98.1	381.3	
		0.0	0.0	0.0	0.0	0.0	0.0	0.1	10.7	55.1	120.7	172.3	215.6	237.7	222.9	172.5	97.0	31.2	1.2	0.0	0.0	0.0	0.0	0.0	Diurnal Average		
		0.0	0.0	0.0	0.0	0.0	0.1	1.0	50.1	152.4	243.0	315.2	368.9	390.1	365.1	304.2	203.3	98.8	7.2	0.0	0.0	0.0	0.0	0.0	Diurnal Maximum		
P - Power Failure																											



# Hourly Averages for Solar Radiation at Henry Pirker February 2009



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

Henry Pirker  
 February 1, 2009 to March 1, 2009  
 WS (km/h), WD (deg)

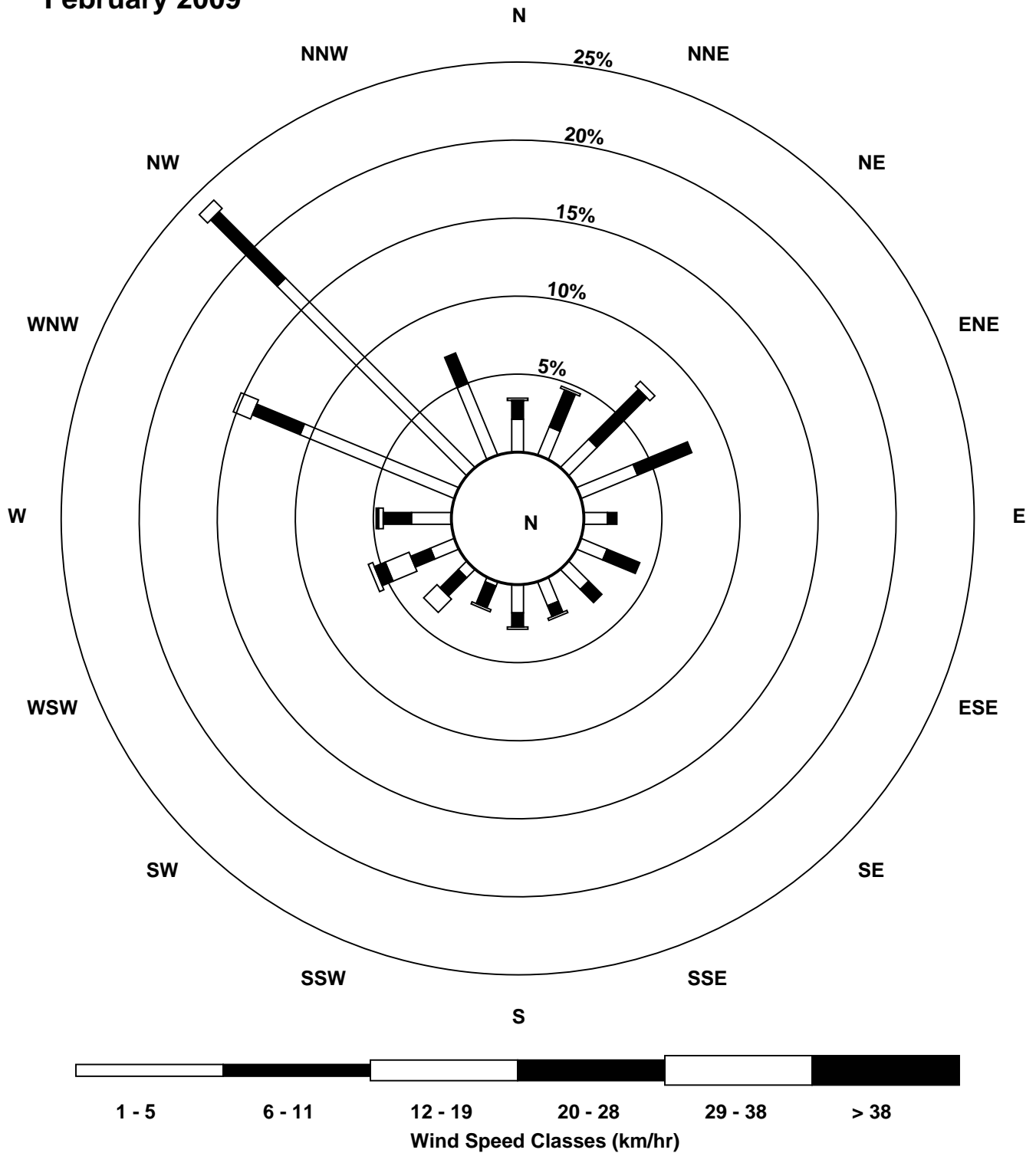
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	19	23	19	21	16	16	10	3	8	6	7	2	4	4	6	10	11	9	10	7	6	5	4	5	4.3	23.0
Dir	248	247	250	246	250	253	295	243	269	296	244	293	264	169	113	100	103	102	104	109	125	140	131	150	228.1	247.3
2 Spd	4	3	4	6	4	3	5	5	3	3	1	3	6	7	8	3	6	8	13	9	5	3	2	3	1.9	12.7
Dir	148	143	123	110	106	153	114	144	78	326	185	272	200	246	288	308	230	250	251	275	293	187	85	139	220.6	251.0
3 Spd	4	6	7	5	6	7	3	4	6	3	5	7	13	11	11	10	7	5	8	10	5	9	6	12	6.1	12.8
Dir	101	110	114	108	107	108	103	107	106	125	134	165	152	143	133	145	114	99	143	143	129	143	175	235	135.3	152.0
4 Spd	30	32	27	28	18	19	13	5	13	22	24	17	19	14	6	5	4	8	9	8	7	9	6	3	12.8	31.9
Dir	247	247	257	247	231	229	232	273	251	253	261	255	263	268	195	149	208	287	254	221	172	182	155	91	243.8	247.0
5 Spd	3	2	0	3	2	3	3	4	6	6	8	9	13	12	6	2	2	4	2	7	8	6	3	4	2.9	12.9
Dir	337	332	45	184	183	162	162	45	107	148	173	181	192	184	279	220	168	152	121	227	208	213	295	339	188.4	192.5
6 Spd	4	5	6	8	7	7	5	6	5	4	7	2	6	4	5	4	4	5	4	4	10	11	11	13	2.1	12.6
Dir	8	354	337	13	29	8	22	15	13	331	351	358	284	268	225	170	118	117	145	256	241	255	252	239	304.0	239.1
7 Spd	18	14	11	8	8	8	4	14	18	13	8	7	7	8	11	7	2	4	6	6	5	7	13	13	8.4	17.7
Dir	229	219	223	220	225	203	278	250	245	245	234	230	210	220	225	218	237	122	242	209	142	197	234	227	226.4	244.8
8 Spd	10	6	7	6	5	3	6	4	3	3	4	6	3	1	2	2	4	5	1	2	2	1	7	7	1.6	9.7
Dir	201	104	184	163	244	183	200	177	154	127	126	126	85	72	60	40	37	316	328	250	2	202	168	353	159.7	201.0
9 Spd	8	8	1	1	3	5	5	5	4	5	5	6	6	4	5	8	16	15	11	7	8	8	7	7	4.6	16.3
Dir	308	312	257	336	5	9	28	43	62	61	68	51	39	29	316	299	299	313	319	279	281	290	302	304	326.3	298.6
10 Spd	8	9	9	8	6	6	6	3	5	6	4	4	6	5	5	4	2	5	4	2	4	5	5	5	4.4	8.6
Dir	304	310	312	320	331	329	325	304	302	301	289	293	287	284	278	281	2	62	76	322	306	326	313	295	311.7	312.3
11 Spd	5	4	3	4	3	4	4	3	4	4	4	5	6	6	5	5	9	13	11	13	11	6	6	3	5.7	13.1
Dir	325	312	302	307	330	308	303	299	307	309	295	304	289	280	311	303	316	313	307	305	291	277	287	336	304.1	305.3
12 Spd	4	5	5	3	2	4	4	4	5	4	4	6	4	2	6	7	6	7	8	6	5	2	5	6	2.7	7.6
Dir	335	315	322	294	287	331	351	334	293	295	86	108	99	29	41	34	62	63	59	61	61	7	314	326	16.0	59.4
13 Spd	6	6	7	7	7	7	6	4	6	5	5	5	4	5	7	9	6	7	6	4	4	4	5	5	5.0	9.3
Dir	319	313	309	308	308	320	318	312	327	322	296	300	301	291	339	356	25	28	27	11	302	314	319	314	326.4	356.3
14 Spd	5	5	5	5	5	4	3	4	3	5	2	6	4	3	4	8	7	6	7	3	3	5	4	4	3.5	7.7
Dir	322	312	320	314	292	297	303	299	293	289	56	80	66	73	28	343	328	310	324	314	316	294	312	321	324.9	342.8
15 Spd	4	3	3	3	3	2	2	2	3	3	2	3	5	6	9	7	8	7	6	6	5	5	5	3	4.1	8.6
Dir	298	292	317	318	338	331	323	292	308	319	308	355	342	349	340	336	344	322	312	321	320	310	307	298	324.2	339.5
16 Spd	4	4	2	4	5	4	3	4	4	4	2	4	6	5	5	4	4	5	3	5	5	4	4	3	3.9	5.7
Dir	313	333	335	311	326	319	308	345	305	300	346	286	290	306	294	299	307	296	314	297	331	324	312	312	310.9	290.5
17 Spd	4	4	5	5	4	4	3	4	4	5	3	4	5	5	5	4	5	4	2	4	4	3	4	4	3.9	5.1
Dir	310	307	299	328	310	296	306	309	299	305	288	288	290	286	288	280	288	315	346	279	325	300	310	298	300.9	286.4
18 Spd	4	4	4	5	4	5	5	5	5	5	5	5	6	5	4	3	2	4	4	3	3	2	4	4	2.7	5.6
Dir	312	324	318	308	307	307	315	324	321	314	291	288	286	253	272	330	47	100	108	104	66	51	309	332	315.7	285.8
19 Spd	5	6	5	9	12	15	14	18	16	14	12	9	7	10	6	4	4	4	4	5	2	4	4	5	6.8	18.0
Dir	309	319	315	301	305	291	290	287	291	289	301	287	275	261	280	243	190	165	170	170	286	333	299	304	287.1	287.0
20 Spd	4	3	3	5	4	4	4	4	4	3	2	4	4	4	4	3	4	4	4	4	5	5	4	5	3.2	4.9
Dir	321	322	281	310	305	315	323	289	307	315	304	313	315	293	284	279	304	90	59	328	320	320	302	320	312.6	320.2
21 Spd	4	5	4	5	4	4	3	4	4	2	2	0	5	4	6	5	7	6	5	4	4	3	6	9	2.5	9.0
Dir	306	318	312	296	309	285	314	282	311	269	248	231	77	43	7	36	74	70	70	58	345	302	309	317	344.3	317.3
22 Spd	7	6	6	6	7	10	10	13	11	10	12	9	7	5	5	4	6	6	6	7	9	9	7	9	5.1	13.0
Dir	319	314	319	296	269	295	287	296	309	313	311	314	331	343	12	48	40	49	53	58	62	57	40	36	339.9	296.3

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

Henry Pirker  
February 1, 2009 to March 1, 2009  
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	10	9	8	7	7	7	9	9	9	8	7	6	4	6	5	6	6	6	5	5	5	4	4	3	6.0	9.5
Dir	38	38	56	64	62	70	71	70	73	62	69	56	63	15	18	69	71	83	69	64	63	47	35	348	57.2	38.0
24 Spd	5	5	5	4	6	5	5	5	7	6	8	9	12	11	10	10	9	10	11	8	10	13	11	10	7.2	12.6
Dir	315	326	319	305	326	312	345	24	5	11	22	14	10	20	28	32	34	33	28	32	35	32	37	43	16.8	31.9
25 Spd	10	12	12	12	11	6	7	6	5	7	7	7	8	8	7	7	7	7	5	4	4	3	5	4	7.0	12.3
Dir	41	43	46	44	48	52	45	42	54	43	55	61	27	22	54	69	44	50	61	21	68	39	3	32	45.0	43.8
26 Spd	4	2	5	4	3	1	5	2	4	1	5	3	3	5	7	9	8	9	7	6	6	6	4	4	3.7	9.0
Dir	70	181	290	330	354	90	301	281	311	215	275	289	189	283	311	342	346	319	317	319	316	315	323	308	314.7	319.2
27 Spd	3	4	3	3	2	3	5	4	4	5	3	P	5	5	6	4	3	2	4	4	5	6	4	5	2.0	6.3
Dir	287	305	253	230	268	338	281	309	302	286	314	P	223	253	247	273	267	151	58	31	43	52	10	315	298.6	246.7
28 Spd	7	10	9	7	5	5	6	5	3	4	7	9	5	3	6	6	6	6	5	5	5	4	5	5	3.3	10.4
Dir	37	59	59	67	51	51	54	61	90	31	67	97	65	328	281	284	317	335	310	318	322	316	319	325	20.1	58.5
Spd	3.6	3.3	3.0	2.9	2.7	2.7	2.8	2.5	2.9	3.1	2.1	1.2	1.7	2.3	2.3	1.8	2.1	2.3	1.6	1.3	1.6	1.4	2.4	3.1	Diurnal Average	
Dir	291.9	298.5	294.7	291.5	301.2	295.5	313.8	314.8	305.3	300.4	300.2	303.9	285.1	286.5	314.1	347.6	3.6	7.7	5.9	318.2	331.8	312.7	306.2	310.0	Diurnal Maximum	
Spd	30.2	31.9	26.8	28.4	18.1	19.2	13.7	18.0	17.7	21.9	24.5	17.4	19.0	14.0	11.3	10.1	16.3	15.4	12.7	13.1	10.9	12.6	13.3	13.1	Diurnal Maximum	
Dir	246.7	247.0	257.2	246.6	230.7	229.2	290.4	287.0	244.8	252.5	261.3	254.9	263.5	268.1	132.9	32.5	298.6	312.8	251.0	305.3	291.5	31.9	233.7	227.5	Diurnal Maximum	
Maximum Speed Value: 32 km/h on Feb 4 02:00																		Minimum Speed Value: 0 km/h on Feb 21 12:00						Hours in Service:		672
Maximum Daily Speed Average: 12.8 km/h on Feb 4																		Minimum Daily Speed Average: 1.6 km/h on Feb 20						Hours of Data:		671
Maximum Diurnal Speed Average: 3.6 km/h at hour 1																		Minimum Diurnal Speed Average: 1.2 km/h at hour 12						Hours of Missing Data:		1
Monthly Average Velocity: 2.19 km/h 309.85 deg																		Speed Percentiles: P <sub>1</sub> = 1.0 P <sub>10</sub> = 2.9 Q <sub>1</sub> = 3.9 Median = 5.0 Q <sub>3</sub> = 7.0 P <sub>90</sub> = 10.4 P <sub>99</sub> = 21.7						Percent Operational Time:		99.9
All monthly, daily, and diurnal averages have been calculated using vector methods																										
P - Power Failure																										
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	4.02	3.43	0.30	0.00	0.00	0.00	7.75																			
NorthEast	4.92	9.39	0.75	0.00	0.00	0.00	15.05																			
East	3.58	4.32	0.00	0.00	0.00	0.00	7.90																			
SouthEast	3.13	2.24	0.45	0.00	0.00	0.00	5.81																			
South	2.68	2.09	0.30	0.00	0.00	0.00	5.07																			
SouthWest	1.49	3.28	1.49	0.45	0.45	0.00	7.15																			
West	6.56	5.37	2.38	0.60	0.00	0.00	14.90																			
NorthWest	24.14	11.03	1.19	0.00	0.00	0.00	36.36																			
Total	50.52	41.13	6.86	1.04	0.45	0.00	100.00																			

# Wind Rose for WS at Henry Pirker February 2009



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

**Henry Pirker - Wind Speed (WS) - km/h**  
**February 1, 2009 to March 1, 2009**

Maximum Speed: 32 km/h on Feb 4 02:00		Maximum Daily Speed Average: 14.9 km/h on Feb 4		Hours in Service: 672																																												
Minimum Speed: 2 km/h on Feb 15 08:00		Minimum Daily Speed Average: 4.1 km/h on Feb 20		Hours of Data: 671																																												
Maximum Diurnal Speed Average: 7.6 km/h at hour 2		Minimum Diurnal Speed Average: 5.8 km/h at hour 23		Hours of Missing Data: 1																																												
Monthly Average Speed: 6.45 km/h		Percentiles: P <sub>1</sub> = 2.7 P <sub>10</sub> = 3.6 Q <sub>1</sub> = 4.3 Median = 5.3 Q <sub>3</sub> = 7.4 P <sub>90</sub> = 10.6 P <sub>99</sub> = 21.9		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-Feb	20	23	19	21	16	16	11	5	8	6	7	3	4	4	7	10	11	9	10	7	6	5	4	5	9.9	23.0																						
2-Feb	4	3	4	6	4	4	5	5	4	4	3	4	6	8	10	4	7	9	13	10	5	3	3	4	5.6	13.0																						
3-Feb	5	7	8	6	6	7	4	5	6	4	5	7	13	11	11	10	7	5	8	10	5	10	6	13	7.5	12.9																						
4-Feb	30	32	27	29	18	19	13	8	13	22	25	18	19	14	6	5	5	8	9	8	8	9	6	4	14.9	32.2																						
5-Feb	4	3	3	3	3	4	3	4	6	7	8	9	13	12	9	4	3	4	5	8	8	6	4	4	5.7	13.0																						
6-Feb	4	5	7	8	7	7	5	6	5	4	7	4	7	4	5	4	5	5	4	6	10	11	11	13	6.4	12.7																						
7-Feb	18	14	11	8	8	8	6	15	18	13	8	7	7	8	11	8	4	4	6	7	5	8	13	13	9.4	17.8																						
8-Feb	11	6	7	6	6	5	6	6	6	4	5	6	4	3	4	3	5	5	3	4	3	4	8	7	5.4	10.6																						
9-Feb	9	8	4	3	4	5	5	5	4	5	5	7	6	5	5	8	16	15	11	8	8	8	7	7	7.1	16.4																						
10-Feb	8	9	9	8	6	6	6	4	5	6	4	4	6	5	5	5	4	5	4	4	5	5	5	6	5.4	8.6																						
11-Feb	5	4	4	5	4	4	4	3	4	4	4	5	6	6	5	6	9	13	11	13	11	7	6	4	6.1	13.2																						
12-Feb	5	5	5	4	3	4	5	4	5	4	5	6	4	4	7	8	7	7	8	7	6	3	5	6	5.3	8.0																						
13-Feb	7	6	7	7	7	7	6	4	6	5	6	5	5	5	7	10	6	7	6	4	5	4	5	5	5.9	9.6																						
14-Feb	5	5	5	5	5	4	4	4	4	5	4	7	5	5	4	8	8	7	7	3	4	5	4	4	5.0	8.1																						
15-Feb	4	3	3	3	3	2	2	2	3	3	3	3	5	6	9	7	8	8	6	6	5	5	5	3	4.4	8.8																						
16-Feb	4	4	3	4	5	4	3	4	5	4	3	4	6	6	5	4	5	6	4	5	5	4	4	3	4.3	5.8																						
17-Feb	4	4	5	5	5	4	3	4	4	5	3	4	5	5	5	4	5	5	3	4	4	4	4	5	4.2	5.1																						
18-Feb	4	4	4	5	4	5	6	5	5	5	5	5	6	5	4	4	4	4	4	3	4	3	5	5	4.5	5.6																						
19-Feb	5	6	5	10	12	15	14	18	17	14	12	9	7	11	7	5	4	4	4	5	3	4	4	5	8.2	18.0																						
20-Feb	4	3	3	5	5	4	4	4	5	3	3	5	5	4	4	3	4	5	4	4	5	5	4	5	4.1	5.0																						
21-Feb	5	6	5	5	4	4	3	4	4	3	3	3	6	4	6	6	7	7	5	5	6	4	6	9	4.9	9.1																						
22-Feb	7	6	6	6	7	10	10	13	11	10	12	9	8	5	6	5	6	6	7	7	9	9	7	9	8.1	13.1																						
23-Feb	10	9	8	7	7	7	9	9	9	8	7	6	5	6	6	6	6	6	5	5	5	4	5	4	6.6	9.7																						
24-Feb	5	5	5	4	6	5	5	5	7	7	8	9	12	11	10	10	9	10	11	8	10	13	12	10	8.3	12.7																						
25-Feb	10	12	12	12	11	6	8	6	6	7	8	8	9	8	8	7	7	7	5	4	5	4	5	5	7.5	12.4																						
26-Feb	4	4	5	4	4	4	5	3	5	4	7	4	5	5	7	9	9	9	7	6	6	6	4	4	5.4	9.5																						
27-Feb	3	4	4	3	3	3	5	4	4	5	3	P	5	5	7	4	3	3	4	5	5	6	4	5	4.2	6.7																						
28-Feb	8	11	9	7	5	5	6	5	4	5	7	9	5	5	6	6	6	7	5	5	5	5	5	5	6.1	10.5																						
																								7.5	7.6	7.0	7.0	6.4	6.4	5.9	6.0	6.5	6.2	6.5	6.3	6.9	6.6	6.6	6.1	6.4	6.8	6.4	6.0	5.9	5.9	5.8	6.2	Diurnal Average
																								30.2	32.2	26.9	28.5	18.3	19.4	13.7	18.0	17.8	22.1	24.8	18.0	19.2	14.1	11.5	10.3	16.4	15.5	13.0	13.2	11.0	12.7	13.5	13.5	Diurnal Maximum
P - Power Failure																																																
All monthly, daily, and diurnal averages have been calculated using scalar methods																																																

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

**Henry Pirker - Wind Direction (WD) - deg  
February 1, 2009 to March 1, 2009**

Maximum Value: 93.8 deg on Feb 21 12:00																								Hours in Service:	672	
Minimum Value: 3.2 deg on Feb 1 04:00																								Hours of Data:	671	
Percentiles: P <sub>1</sub> = 4.0 P <sub>10</sub> = 7.5 Q <sub>1</sub> = 11.1 Median = 16.5 Q <sub>3</sub> = 26.0 P <sub>90</sub> = 49.5 P <sub>99</sub> = 84.9																								Hours of Missing Data:	1	
																								Hours of Calibration:	0	
																								Percent Operational Time:	99.9	
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-Feb	5	3	5	3	5	7	15	64	10	11	21	56	27	15	16	9	4	4	3	4	13	11	12	13	64.0	
2-Feb	18	18	14	9	35	42	20	10	49	63	90	56	41	30	34	58	26	24	12	8	53	39	46	50	90.4	
3-Feb	51	16	26	39	18	12	39	61	16	55	45	17	7	6	12	15	10	33	19	7	17	13	20	17	61.0	
4-Feb	4	9	4	6	10	9	9	54	10	7	10	16	8	8	24	17	30	23	24	19	12	12	17	63	63.1	
5-Feb	58	62	88	29	36	52	29	25	14	33	7	12	8	9	47	61	61	15	74	26	9	17	32	15	88.1	
6-Feb	17	21	14	12	10	12	17	13	20	19	14	85	26	26	28	21	24	16	22	44	7	12	11	9	85.2	
7-Feb	7	8	6	13	16	19	52	11	5	6	7	8	7	11	7	10	61	17	45	32	19	34	10	14	61.1	
8-Feb	25	21	27	18	44	61	26	52	75	25	41	14	53	85	58	60	43	39	86	79	61	83	47	27	86.5	
9-Feb	15	20	80	88	42	35	28	15	17	14	23	27	22	38	28	13	7	6	23	25	10	9	12	8	88.3	
10-Feb	7	8	7	8	11	8	9	29	10	10	11	11	6	13	8	20	63	12	16	58	16	9	8	17	62.9	
11-Feb	20	9	23	29	35	9	33	37	16	12	10	13	19	14	19	16	7	7	10	7	7	49	8	47	49.5	
12-Feb	26	14	25	38	66	23	18	28	17	19	55	18	30	77	30	25	22	20	19	22	30	63	14	7	76.8	
13-Feb	9	17	9	9	11	10	16	27	13	12	17	19	58	16	21	15	28	12	9	16	12	8	6	6	57.6	
14-Feb	10	12	6	7	16	9	26	14	15	8	68	24	39	54	37	19	14	11	6	14	22	16	13	13	67.8	
15-Feb	18	20	15	17	16	19	26	17	16	18	38	19	16	15	14	15	23	8	10	6	9	22	17	30	37.7	
16-Feb	20	20	83	13	9	11	15	14	27	23	69	16	12	15	18	21	21	27	24	21	16	16	14	26	83.2	
17-Feb	10	13	13	11	16	20	19	21	25	11	14	7	7	5	8	17	25	29	65	37	12	35	15	16	64.7	
18-Feb	8	7	12	10	12	9	17	11	9	7	10	9	8	21	17	39	49	17	19	15	50	57	55	54	57.0	
19-Feb	17	6	15	22	9	4	3	4	5	5	6	11	8	13	7	34	25	7	10	12	65	17	17	6	64.6	
20-Feb	17	20	22	10	15	13	10	21	20	54	48	29	36	17	17	12	30	34	15	27	10	18	23	17	53.7	
21-Feb	19	22	27	21	20	19	30	15	14	47	34	94	25	26	20	23	16	24	22	25	41	21	12	7	93.8	
22-Feb	16	10	8	14	19	9	5	6	6	7	5	7	20	22	30	32	24	14	16	9	9	9	16	15	31.8	
23-Feb	12	14	11	13	12	11	11	9	10	12	16	21	39	21	27	23	16	17	15	17	13	20	19	42	41.8	
24-Feb	9	14	12	16	12	18	23	21	14	26	22	16	9	14	12	12	19	12	9	16	10	9	10	11	25.9	
25-Feb	11	9	9	9	14	26	15	15	30	16	18	18	30	20	27	22	16	14	21	39	32	26	15	20	39.0	
26-Feb	23	59	11	19	29	81	21	77	38	91	63	36	53	21	15	13	13	19	6	7	9	11	17	18	90.8	
27-Feb	20	26	42	18	49	51	19	17	16	11	26	P	15	22	20	15	22	52	15	30	16	9	26	14	51.6	
28-Feb	33	9	8	12	15	14	16	13	55	34	19	17	41	63	22	12	17	12	8	6	6	22	14	15	62.5	
	57.8	61.6	88.1	88.3	65.5	80.5	51.6	76.6	74.5	90.8	90.4	93.8	57.6	85.1	58.0	61.0	62.9	51.6	86.5	79.3	64.6	82.9	55.3	63.1		
P - Power Failure																										

PASZA  
Evergreen Park Station  
Monthly Summary Tables, Graphs and  
Roses

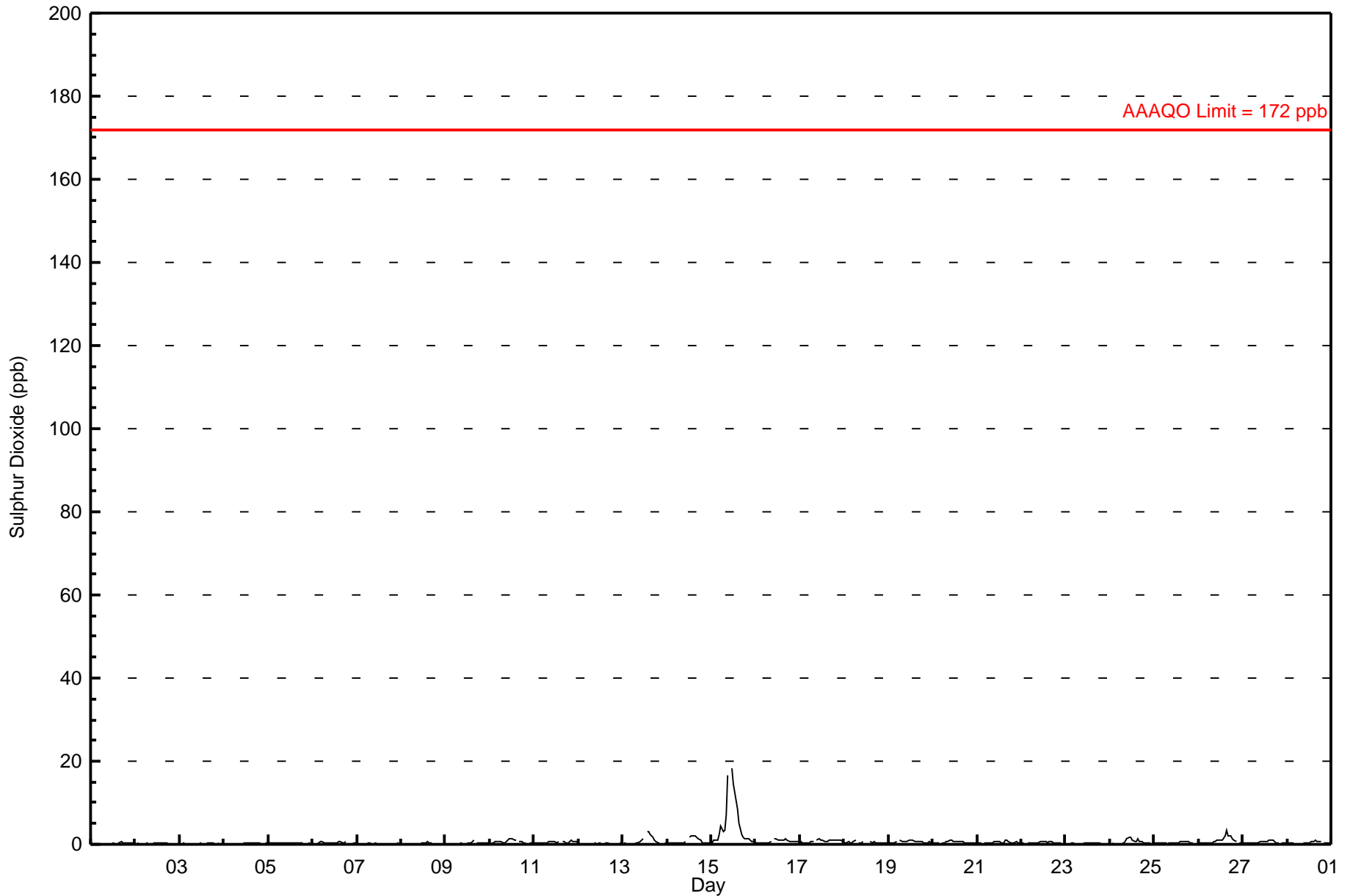
**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Evergreen Park - Sulphur Dioxide (SO<sub>2</sub>) - ppb  
February 1, 2009 to March 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0		Hours in Service: 672																																														
Maximum Value: 18.3 ppb on Feb 15 12:00		Maximum Daily Average: 4.7 ppb on Feb 15																																														
Minimum Value: 0 ppb on Feb 2 22:00		Hours of Data: 639																																														
Maximum Diurnal Average: 1.3 ppb at hour 12		Hours of Missing Data: 33																																														
Monthly Average: 0.58 ppb		Hours of Calibration: 33																																														
Minimum Daily Average: 0.1 ppb on Feb 7		Percent Operational Time: 100.0																																														
Minimum Diurnal Average: 0.3 ppb at hour 3																																																
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.2 Median = 0.3 Q <sub>3</sub> = 0.6 P <sub>90</sub> = 0.9 P <sub>99</sub> = 6.3																																																
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-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.2	0.7																						
2-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5																						
3-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3																						
4-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.3																						
5-Feb	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																						
6-Feb	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	1	A	0	0	0	0	0.3	0.7																						
7-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.2																						
8-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0.1	0.7																						
9-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0.2	1.1																						
10-Feb	0	0	0	1	1	1	1	0	0	1	1	1	1	1	1	A	1	1	1	0	0	0	0	0	0.6	1.4																						
11-Feb	0	0	0	0	0	0	0	0	1	1	1	1	0	1	A	1	1	0	0	0	1	1	1	1	0.5	0.9																						
12-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.4																						
13-Feb	0	0	0	0	0	0	0	0	0	1	1	1	A	3	3	2	2	1	1	1	0	0	0	0	0.8	3.2																						
14-Feb	0	0	0	0	0	0	0	0	0	1	A	2	2	2	2	2	1	1	1	0	0	0	0	0	0.7	2.1																						
15-Feb	1	1	1	1	2	4	3	3	7	16	A	18	14	11	8	5	2	2	1	1	1	1	1	1	4.7	18.3																						
16-Feb	0	0	0	0	0	0	0	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2																						
17-Feb	1	1	0	0	0	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2																						
18-Feb	0	1	1	0	0	1	1	A	0	1	1	C	C	C	1	0	1	0	0	0	0	0	0	0	0.4	0.9																						
19-Feb	0	0	0	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	0.6	1.0																						
20-Feb	0	0	0	0	A	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.5	1.1																						
21-Feb	0	0	0	A	0	0	0	0	0	1	1	1	1	0	0	1	1	1	0	0	0	1	0	0	0.5	1.2																						
22-Feb	0	0	A	0	0	0	0	0	0	0	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0.4	0.8																						
23-Feb	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																						
24-Feb	A	0	0	0	0	0	0	0	1	1	2	2	1	1	1	1	1	1	0	1	0	0	0	A	0.6	1.6																						
25-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	A	0.4	0.7																						
26-Feb	0	0	0	0	0	0	0	0	1	1	1	1	1	1	2	3	2	2	1	1	1	A	0	0	0.9	3.5																						
27-Feb	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	A	0	0	0	0.5	1.0																						
28-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	A	0	0	0	0	0.4	0.9																						
																								0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.6	1.0	0.5	1.3	1.1	1.1	1.0	1.0	0.8	0.6	0.5	0.4	0.4	0.3	0.3	0.3	Diurnal Average
																								0.6	0.9	1.2	1.1	2.4	4.5	3.1	3.2	7.2	16.5	1.5	18.3	14.5	10.5	8.3	5.1	2.4	1.9	1.2	1.5	1.4	1.1	1.0	0.8	Diurnal Maximum
C - Calibration A - Automated Daily Zero Span																																																
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 57 ppb																																																



# Hourly Averages for SO<sub>2</sub> at Evergreen Park February 2009

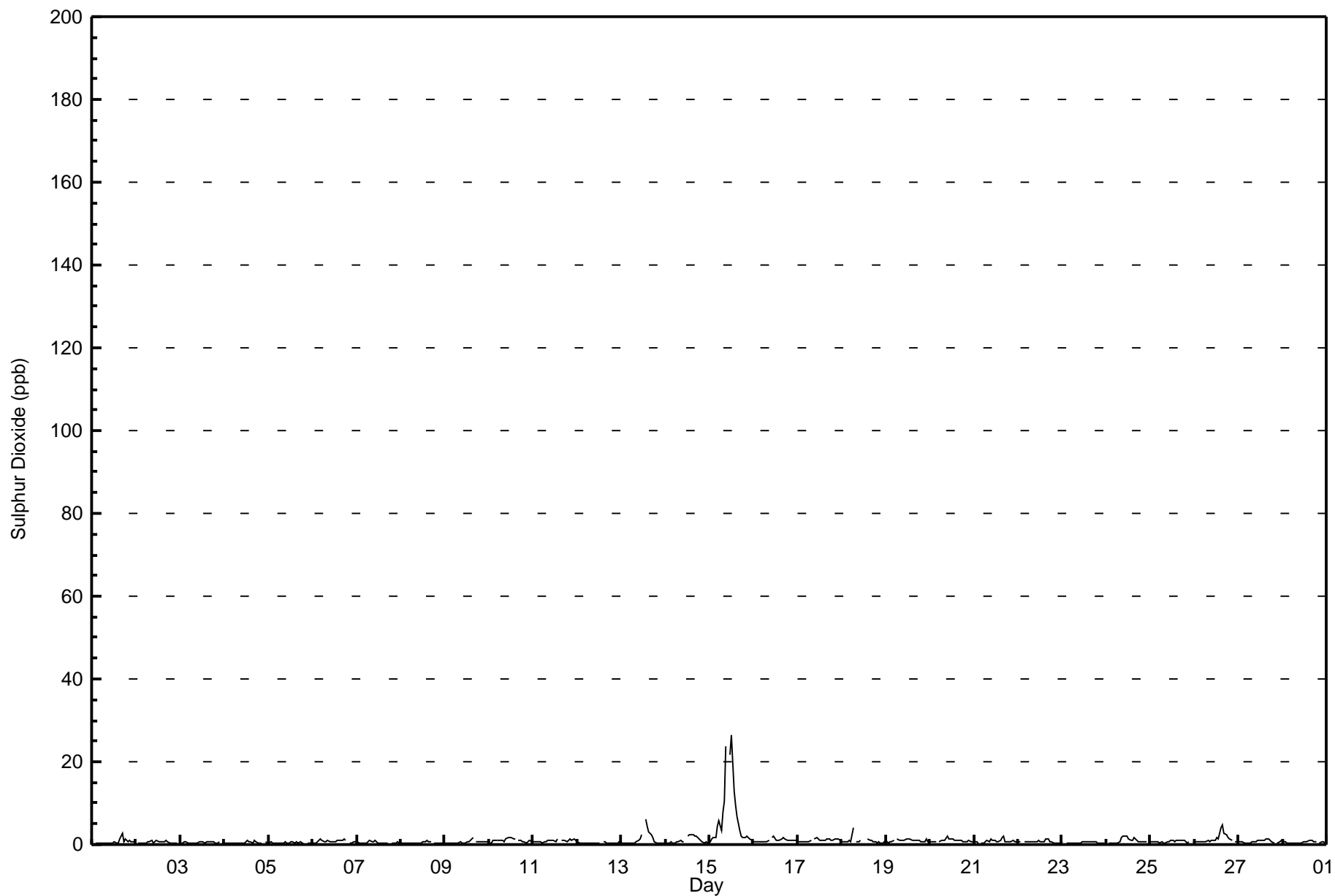


**Peace Airshed Zone Association  
Summary of Hourly Maximums**

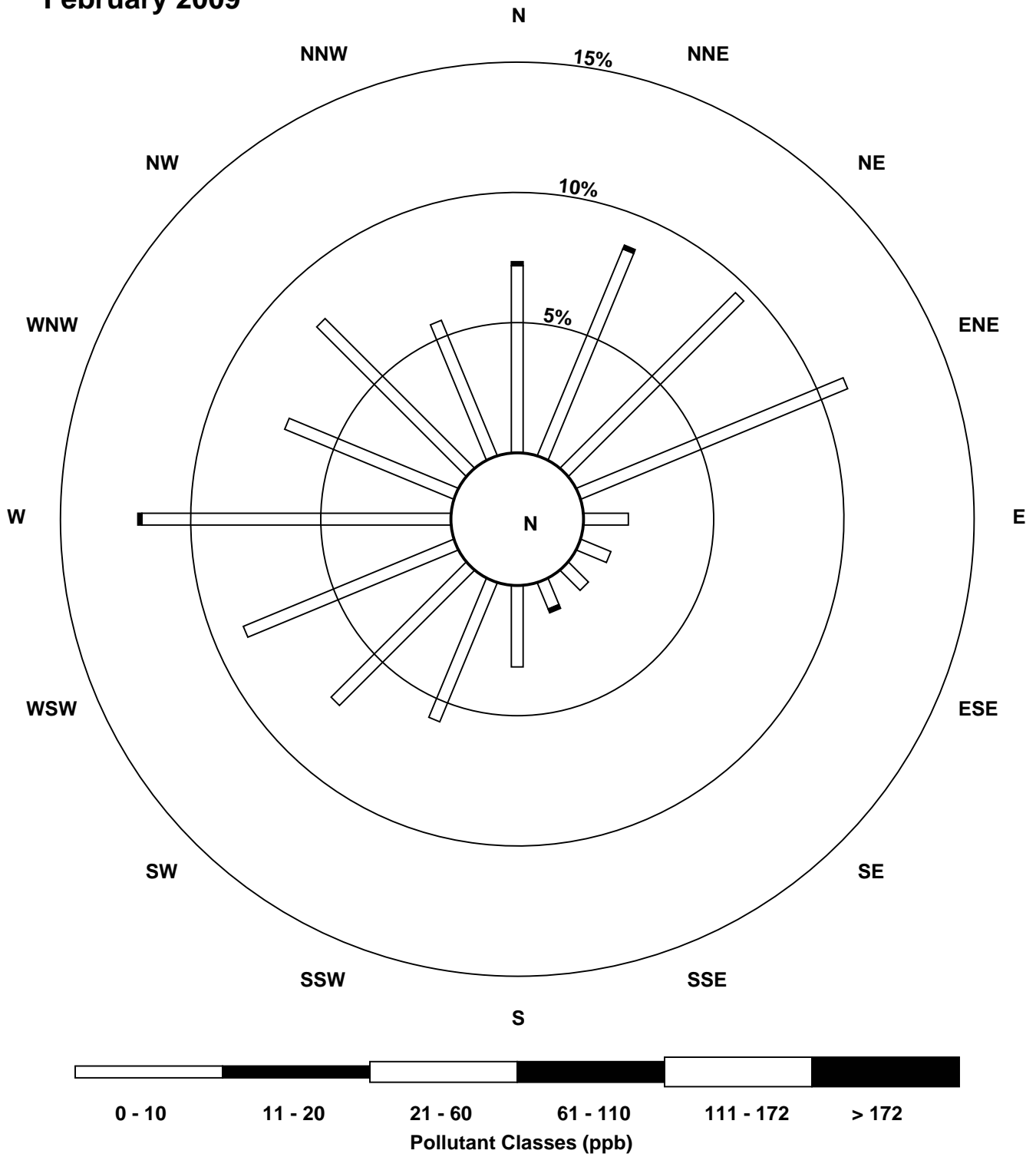
**Evergreen Park - Sulphur Dioxide (SO<sub>2</sub>) - ppb  
February 1, 2009 to March 1, 2009**

Maximum Value: 26.3 ppb on Feb 15 13:00		Maximum Daily Average: 6.7 ppb on Feb 15		Hours in Service: 672																						
Minimum Value: 0 ppb on Feb 8 19:00		Minimum Daily Average: 0.4 ppb on Feb 8		Hours of Data: 639																						
Maximum Diurnal Average: 1.9 ppb at hour 13		Minimum Diurnal Average: 0.6 ppb at hour 2		Hours of Missing Data: 33																						
Monthly Average: 1.00 ppb		Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.3 Q <sub>1</sub> = 0.5 Median = 0.6 Q <sub>3</sub> = 1.0 P <sub>90</sub> = 1.4 P <sub>99</sub> = 8.8		Hours of Calibration: 33																						
				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-Feb	1	A	0	0	0	0	0	0	0	0	0	1	0	0	1	3	1	2	1	1	1	1	1	1	0.7	2.7
2-Feb	A	0	0	0	0	0	1	1	1	0	1	1	1	1	1	1	1	0	0	0	0	0	0	A	0.5	0.9
3-Feb	0	0	1	1	0	0	0	0	0	0	1	1	1	0	1	1	1	1	0	0	0	1	A	0	0.5	0.8
4-Feb	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	1	0	0	0	A	1	0	0.5	1.0	
5-Feb	0	1	0	0	0	0	0	0	0	1	0	0	1	1	0	1	0	1	0	0	A	0	1	0	0.5	0.7
6-Feb	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0	0	1	1	0.7	1.5	
7-Feb	1	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	A	0	0	0	1	0	0.4	0.9
8-Feb	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	A	0	0	0	0	0	0	0.4	1.2
9-Feb	0	0	0	0	0	0	0	0	1	0	0	1	1	1	2	A	1	1	1	1	1	1	1	1	0.5	1.8
10-Feb	0	0	1	1	1	1	1	1	1	1	2	2	2	1	1	A	1	1	1	1	1	0	1	1	0.9	1.7
11-Feb	1	1	1	1	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.8	1.5
12-Feb	1	0	0	0	0	1	0	0	0	0	0	0	A	6	4	1	0	0	0	0	0	0	0	1	0.5	0.8
13-Feb	0	0	0	0	0	0	0	0	1	1	1	2	A	6	4	3	2	2	1	0	0	0	0	0	1.3	6.0
14-Feb	0	0	0	1	1	1	1	1	1	1	1	A	2	2	2	2	2	2	1	1	1	0	1	0	1.1	2.5
15-Feb	1	1	2	2	4	6	4	8	10	24	A	22	26	13	10	7	4	2	2	2	2	2	1	1	6.7	26.3
16-Feb	1	1	1	1	1	1	1	1	1	1	A	2	2	1	1	1	2	1	1	1	1	1	1	1	1.1	1.9
17-Feb	1	1	1	1	1	1	1	1	1	A	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.8
18-Feb	1	1	1	1	1	1	4	A	1	1	1	C	C	C	1	1	1	1	1	0	1	0	0	1	1.0	4.1
19-Feb	1	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.5
20-Feb	1	1	1	1	A	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	2.0
21-Feb	1	1	0	A	0	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	0.9	2.2
22-Feb	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0.8	1.2
23-Feb	1	A	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0.5	0.8
24-Feb	A	1	0	0	0	0	0	1	2	2	2	2	1	1	1	2	1	1	1	1	1	1	1	A	1.0	2.1
25-Feb	1	1	1	1	1	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	0	1	A	1	0.7	1.2
26-Feb	1	1	1	1	1	1	1	1	1	1	1	2	1	4	5	3	2	2	1	1	A	1	1	1	1.4	4.7
27-Feb	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	0	1	1	0.8	1.4
28-Feb	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	A	0	1	1	0	0.7	1.1
																								Diurnal Average		
																								Diurnal Maximum		
C - Calibration																								A - Automated Daily Zero Span		

# Hourly Maximums for SO<sub>2</sub> at Evergreen Park February 2009



# Pollutant Rose for SO<sub>2</sub> at Evergreen Park February 2009



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

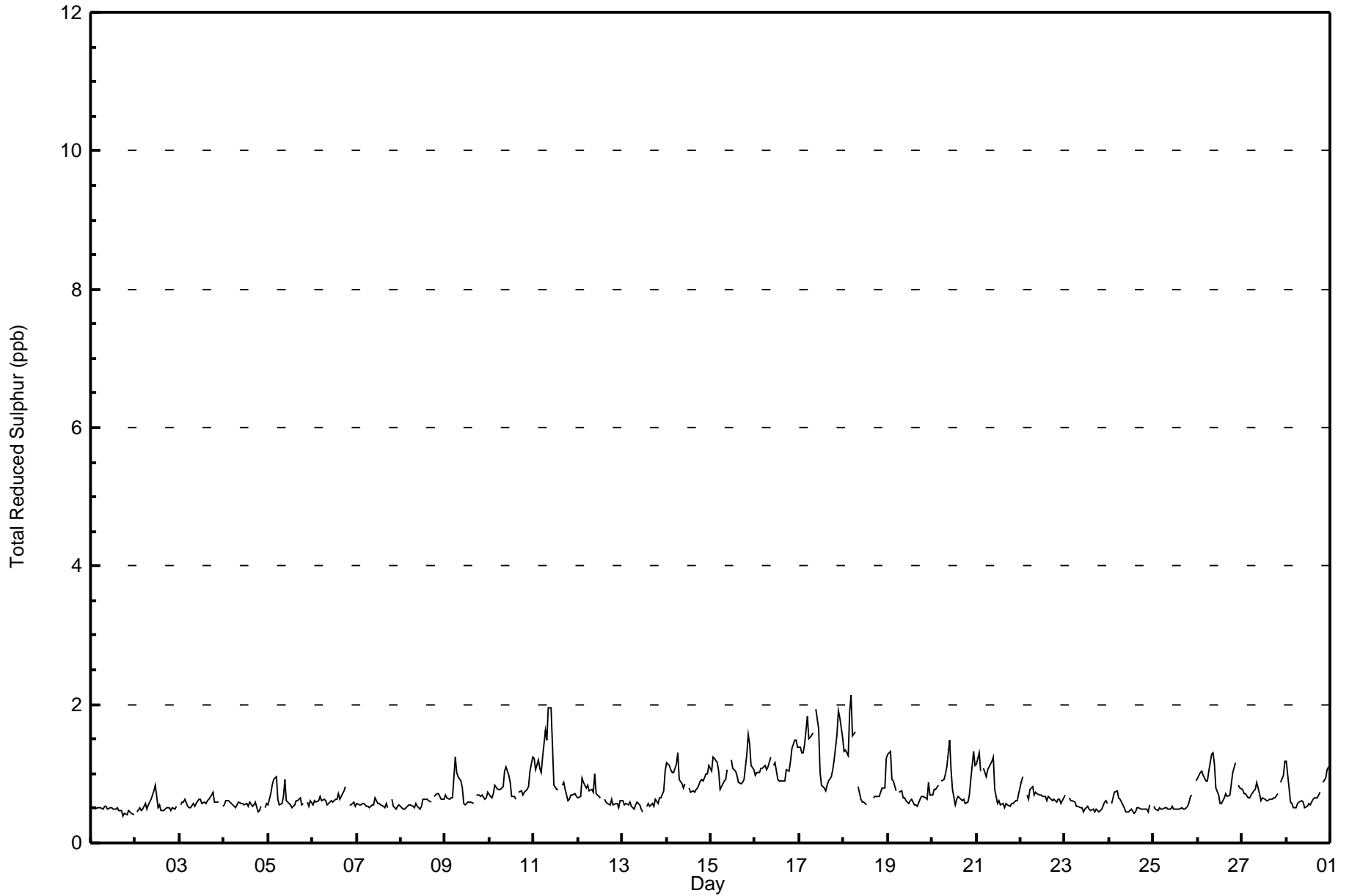
**Evergreen Park - Total Reduced Sulphur (TRS) - ppb  
February 1, 2009 to March 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 672
Maximum Value: 2.1 ppb on Feb 18 05:00	Maximum Daily Average: 1.3 ppb on Feb 17
Minimum Value: 0 ppb on Feb 1 18:00	Hours of Data: 639
Maximum Diurnal Average: 0.9 ppb at hour 24	Hours of Missing Data: 33
Monthly Average: 0.74 ppb	Hours of Calibration: 33
Minimum Daily Average: 0.5 ppb on Feb 1	Percent Operational Time: 100.0
Minimum Diurnal Average: 0.6 ppb at hour 14	
Percentiles: P <sub>1</sub> = 0.4 P <sub>10</sub> = 0.5 Q <sub>1</sub> = 0.6 Median = 0.6 Q <sub>3</sub> = 0.9 P <sub>90</sub> = 1.1 P <sub>99</sub> = 1.9	

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-Feb	0	A	0	1	1	1	0	1	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0.5	0.5
2-Feb	A	0	1	0	0	1	0	1	1	1	1	1	1	1	0	0	0	0	1	0	1	0	1	A	0.5	0.8
3-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.6	0.7
4-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	A	1	1	0.6	0.6
5-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.6	1.0
6-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.6	0.8
7-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	1	1	0.6	0.6
8-Feb	1	0	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	A	1	1	1	1	1	1	0.6	0.7
9-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.7	1.2
10-Feb	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	1.2
11-Feb	1	1	1	1	1	1	2	1	2	2	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1.0	2.0
12-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.7	1.0
13-Feb	1	1	1	1	1	1	0	1	1	1	0	0	A	1	1	1	1	1	1	1	1	1	1	1	0.6	1.0
14-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3
15-Feb	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	2	1	1	1.1	1.6
16-Feb	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.5
17-Feb	1	1	1	1	2	2	2	2	A	2	2	1	1	1	1	1	1	1	1	1	1	2	2	2	1.3	1.9
18-Feb	1	1	1	2	2	2	A	1	1	1	1	1	1	C	C	A	1	1	1	1	1	1	1	1	1.0	2.1
19-Feb	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	1.3
20-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.5
21-Feb	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.3
22-Feb	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
23-Feb	1	A	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0.5	0.7
24-Feb	A	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	1	A	0.5	0.8
25-Feb	1	0	0	1	0	0	1	1	0	0	1	0	0	0	0	1	0	0	1	1	1	1	A	1	0.5	0.9
26-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.9	1.3
27-Feb	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
28-Feb	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	1.2
	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.9	Diurnal Average	
	1.4	1.3	1.3	1.9	2.1	1.6	1.6	1.6	2.0	2.0	1.6	1.2	1.1	1.0	1.0	0.9	0.9	1.1	1.1	1.3	1.6	1.9	1.8	1.5	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 February 2009

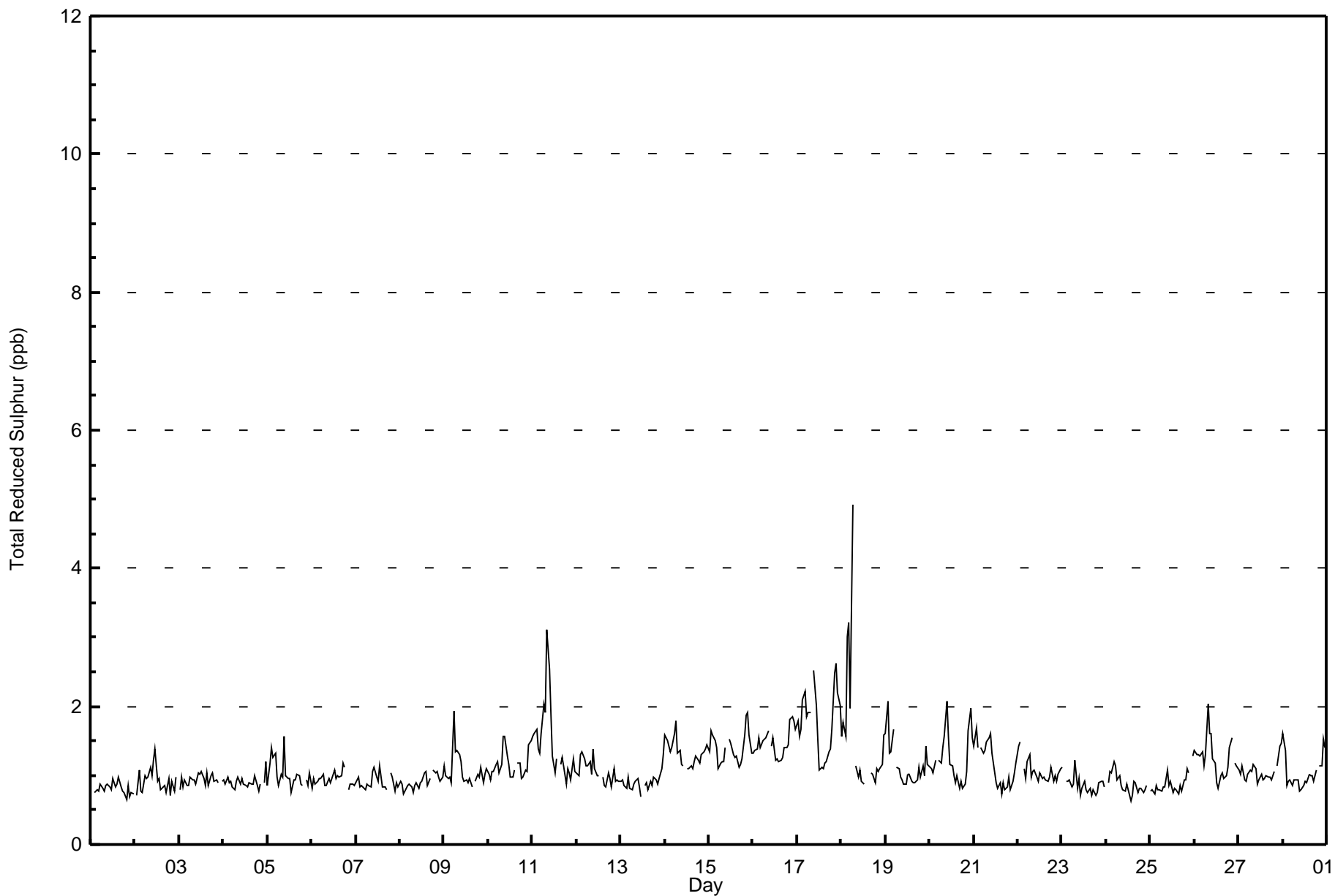


**Peace Airshed Zone Association  
Summary of Hourly Maximums**

**Evergreen Park - Total Reduced Sulphur (TRS) - ppb  
February 1, 2009 to March 1, 2009**

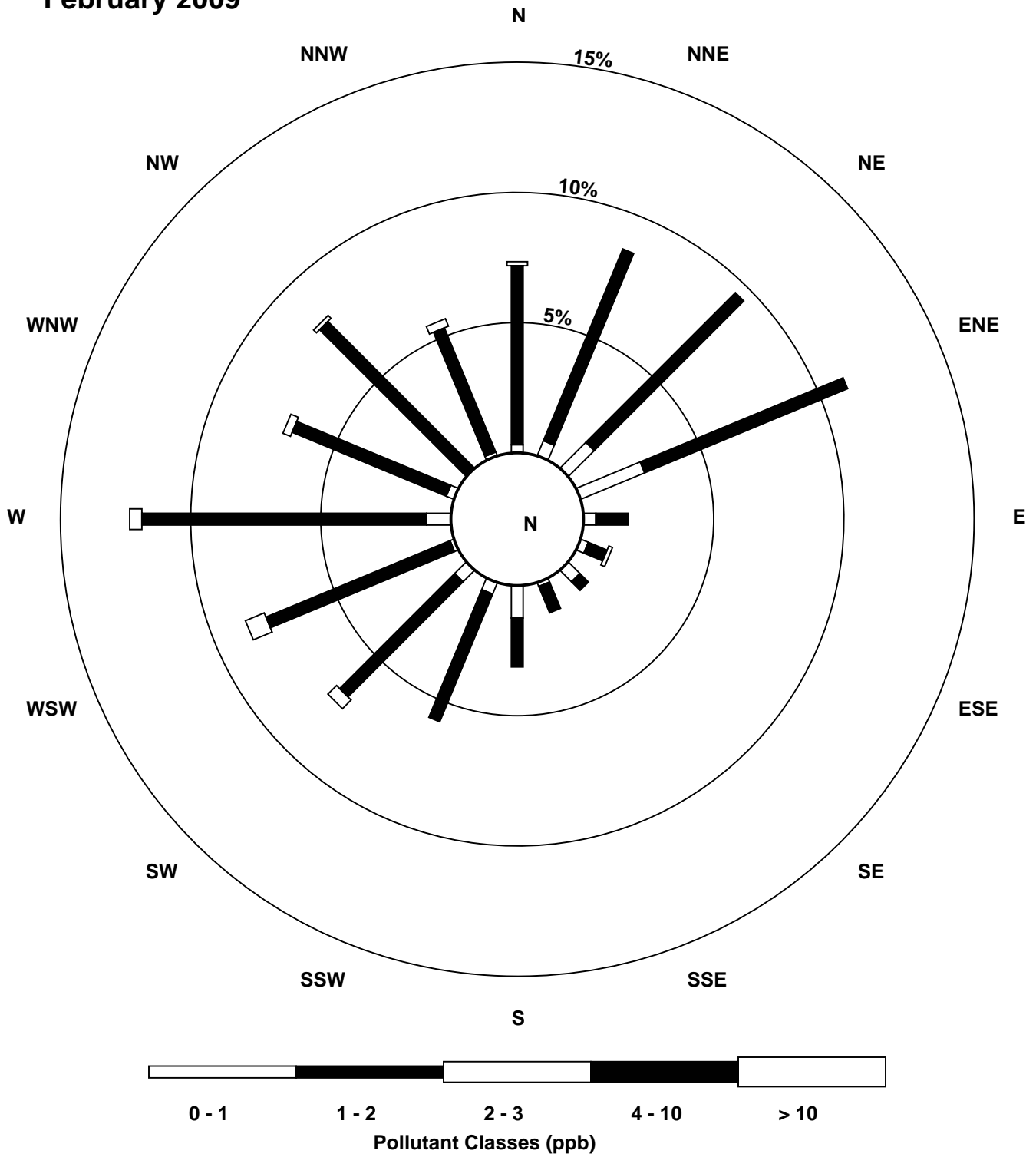
Maximum Value: 4.9 ppb on Feb 18 07:00		Maximum Daily Average: 1.8 ppb on Feb 17		Hours in Service: 672																																												
Minimum Value: 1 ppb on Feb 24 14:00		Minimum Daily Average: 0.8 ppb on Feb 1		Hours of Data: 639																																												
Maximum Diurnal Average: 1.3 ppb at hour 7		Minimum Diurnal Average: 1.0 ppb at hour 15		Hours of Missing Data: 33																																												
Monthly Average: 1.11 ppb		Percentiles: P <sub>1</sub> = 0.7 P <sub>10</sub> = 0.8 Q <sub>1</sub> = 0.9 Median = 1.0 Q <sub>3</sub> = 1.2 P <sub>90</sub> = 1.6 P <sub>99</sub> = 2.5		Hours of Calibration: 33																																												
				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-Feb	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.3																						
2-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.4																						
3-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.9	1.1																						
4-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.9	1.2																						
5-Feb	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.0	1.6																						
6-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.9	1.2																						
7-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.9	1.1																						
8-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.9	1.1																						
9-Feb	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1.1	1.9																						
10-Feb	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1.2	1.6																						
11-Feb	2	2	2	1	1	2	2	2	3	3	2	1	1	1	A	1	1	1	1	1	1	1	1	1	1.5	3.1																						
12-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1.1	1.4																						
13-Feb	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3																						
14-Feb	2	2	1	1	1	2	2	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1.3	1.8																						
15-Feb	1	2	2	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	2	2	2	2	1.4	1.9																						
16-Feb	1	1	1	2	1	2	2	2	2	A	1	2	1	1	1	1	1	1	1	1	2	2	2	2	1.5	1.9																						
17-Feb	2	2	2	2	2	2	2	2	A	3	2	2	1	1	1	1	1	1	1	2	2	3	2	2	1.8	2.6																						
18-Feb	2	2	2	3	3	2	5	A	1	1	1	1	1	C	C	A	1	1	1	1	1	1	2	1.6	4.9																							
19-Feb	2	2	1	1	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	2.1																							
20-Feb	1	1	1	1	A	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	2	2	2	1.2	2.1																						
21-Feb	1	2	1	A	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.7																						
22-Feb	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.5																						
23-Feb	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2																						
24-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.9	1.2																						
25-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.9	1.3																						
26-Feb	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	2	A	1	1	1.3	2.0																						
27-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.1	1.5																						
28-Feb	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	2	1	1.0	1.6																						
																								1.2	1.2	1.1	1.2	1.2	1.2	1.3	1.2	1.2	1.3	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.2	1.2	Diurnal Average
																								1.8	2.1	1.7	3.0	3.2	2.0	4.9	2.0	3.1	2.5	2.0	1.5	1.5	1.3	1.3	1.3	1.3	1.4	1.4	1.7	2.5	2.6	2.2	2.0	Diurnal Maximum
C - Calibration																								A - Automated Daily Zero Span																								

# Hourly Maximums for TRS at Evergreen Park February 2009





# Pollutant Rose for TRS at Evergreen Park February 2009

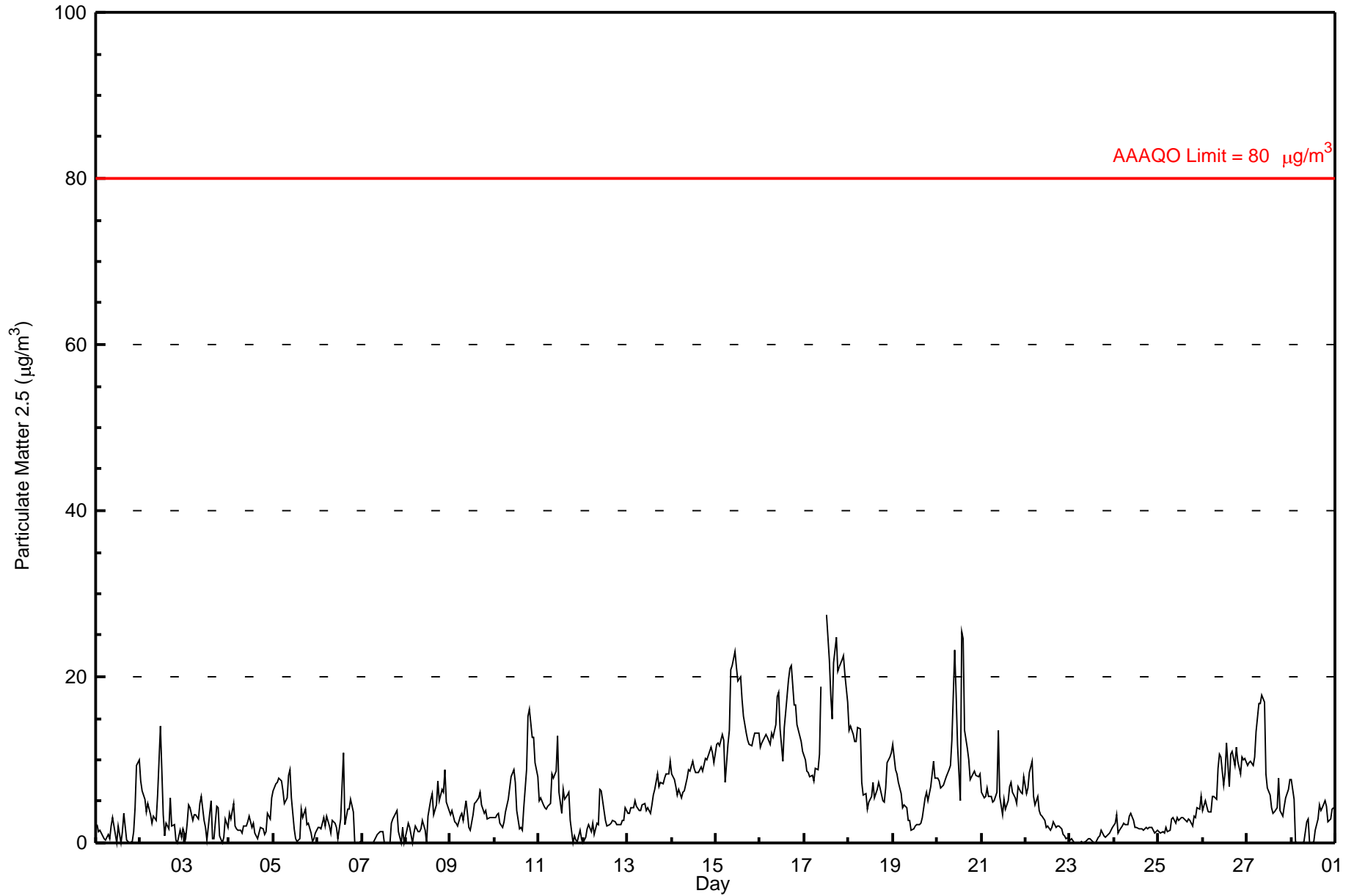


**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Evergreen Park - Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>  
February 1, 2009 to March 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0		Hours in Service: 672																																															
Maximum Value: 27.5 µg/m <sup>3</sup> on Feb 17 13:00		Maximum Daily Average: 15.9 µg/m <sup>3</sup> on Feb 17																																															
Minimum Value: 0 µg/m <sup>3</sup> on Feb 1 12:00		Hours of Data: 670																																															
Maximum Diurnal Average: 7.7 µg/m <sup>3</sup> at hour 10		Hours of Missing Data: 2																																															
Monthly Average: 5.56 µg/m <sup>3</sup>		Hours of Calibration: 0																																															
Minimum Daily Average: 0.5 µg/m <sup>3</sup> on Feb 23		Percent Operational Time: 99.7																																															
Minimum Diurnal Average: 4.6 µg/m <sup>3</sup> at hour 6																																																	
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.5 Q <sub>1</sub> = 1.9 Median = 4.0 Q <sub>3</sub> = 7.9 P <sub>90</sub> = 12.7 P <sub>99</sub> = 22.5																																																	
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-Feb	2	1	1	1	1	0	1	1	2	3	1	0	2	0	1	4	0	0	0	0	1	4	9	10	1.9	9.9																							
2-Feb	7	6	5	4	5	3	2	3	3	6	10	14	3	1	2	2	5	2	2	0	0	1	1	2	3.8	14.1																							
3-Feb	1	2	5	4	3	3	3	3	5	6	3	2	0	3	5	1	1	4	4	1	0	1	3	2	2.7	5.5																							
4-Feb	4	3	5	2	2	2	2	1	2	2	3	3	2	2	1	1	1	2	2	1	1	4	3	5	2.2	5.5																							
5-Feb	6	7	7	8	8	6	5	5	8	9	5	2	1	0	1	4	3	4	2	2	1	0	1	1	4.0	8.8																							
6-Feb	2	2	2	3	2	3	2	1	3	2	2	0	3	7	11	2	4	4	5	4	0	0	0	0	2.7	10.8																							
7-Feb	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	2	3	4	4	1	0	2	0	0.9	3.8																							
8-Feb	1	2	2	0	1	2	1	1	2	3	2	0	3	5	6	3	5	7	5	6	6	9	5	4	3.4	8.8																							
9-Feb	3	4	3	2	2	3	3	3	5	4	2	1	3	5	5	5	6	5	4	4	3	3	3	3	3.5	6.1																							
10-Feb	3	3	4	2	2	3	4	5	7	8	9	7	4	2	2	1	4	9	15	16	13	13	10	8	6.4	16.2																							
11-Feb	5	5	5	4	4	4	5	8	8	9	13	6	4	6	5	6	6	3	0	1	0	0	2	1	4.6	12.9																							
12-Feb	0	1	2	2	1	2	1	2	2	6	6	4	3	2	2	2	3	3	2	2	2	3	3	4	2.6	6.4																							
13-Feb	3	4	4	4	5	4	4	4	5	5	4	4	4	5	6	6	8	7	7	7	8	8	8	10	5.6	9.8																							
14-Feb	8	8	7	6	6	5	6	6	8	9	9	10	9	8	9	9	9	9	10	10	11	12	11	10	8.5	11.6																							
15-Feb	12	12	12	13	12	7	12	14	21	21	23	21	19	20	17	15	13	12	12	12	12	13	13	13	14.7	23.1																							
16-Feb	11	12	13	13	13	12	13	13	14	18	18	14	10	14	16	20	21	21	17	17	14	13	12	11	14.5	21.4																							
17-Feb	10	9	8	8	8	7	9	9	11	19	M	M	27	22	18	15	22	25	21	21	22	23	20	17	15.9	27.5																							
18-Feb	13	14	13	12	12	14	14	7	6	6	4	5	6	7	5	6	7	7	5	5	7	10	10	11	8.6	14.0																							
19-Feb	12	9	8	7	6	4	5	4	3	3	2	2	2	2	2	2	3	5	6	5	7	8	10	8	5.2	11.9																							
20-Feb	8	7	7	7	7	8	9	9	12	23	18	12	5	25	25	14	11	10	8	8	9	8	8	8	11.1	25.4																							
21-Feb	6	5	6	7	6	6	5	5	6	14	6	3	5	4	5	7	7	6	5	5	7	6	6	8	6.0	13.6																							
22-Feb	6	7	8	10	6	5	6	4	3	3	3	2	2	2	2	2	2	2	2	2	1	1	1	1	3.3	9.8																							
23-Feb	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	2	1	1	1	1	2	2	0.5	1.9																							
24-Feb	2	3	1	2	2	2	2	2	3	4	3	2	2	2	2	2	2	2	2	2	2	2	1	2	2.0	3.5																							
25-Feb	1	1	1	1	2	1	1	3	3	2	3	3	3	3	3	3	3	3	2	3	3	4	4	6	2.6	5.5																							
26-Feb	4	5	4	4	4	6	6	5	9	11	10	7	9	12	7	11	11	9	11	10	8	10	10	10	8.0	12.0																							
27-Feb	9	10	10	9	10	13	17	17	18	17	8	7	6	4	4	4	4	8	4	3	4	5	6	8	8.6	17.7																							
28-Feb	8	5	0	0	0	0	0	0	3	3	0	0	0	1	3	5	4	4	5	4	3	3	4	4	2.5	7.6																							
																								5.4	5.3	5.1	4.8	4.6	4.6	4.9	4.9	6.1	7.7	6.2	4.9	4.9	5.9	5.8	5.4	6.1	6.3	5.8	5.6	5.3	5.9	6.0	6.0	Diurnal Average	
																								13.5	14.0	13.1	13.1	12.7	13.9	16.7	16.8	20.9	23.3	23.1	21.2	27.5	25.4	24.6	19.6	21.8	24.7	20.6	21.2	22.0	22.6	20.3	16.9	Diurnal Maximum	
M - Maintenance																																																	
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 80 µg/m <sup>3</sup> 24-hr 30 µg/m <sup>3</sup>																																																	

# Hourly Averages for PM<sub>2.5</sub> at Evergreen Park February 2009

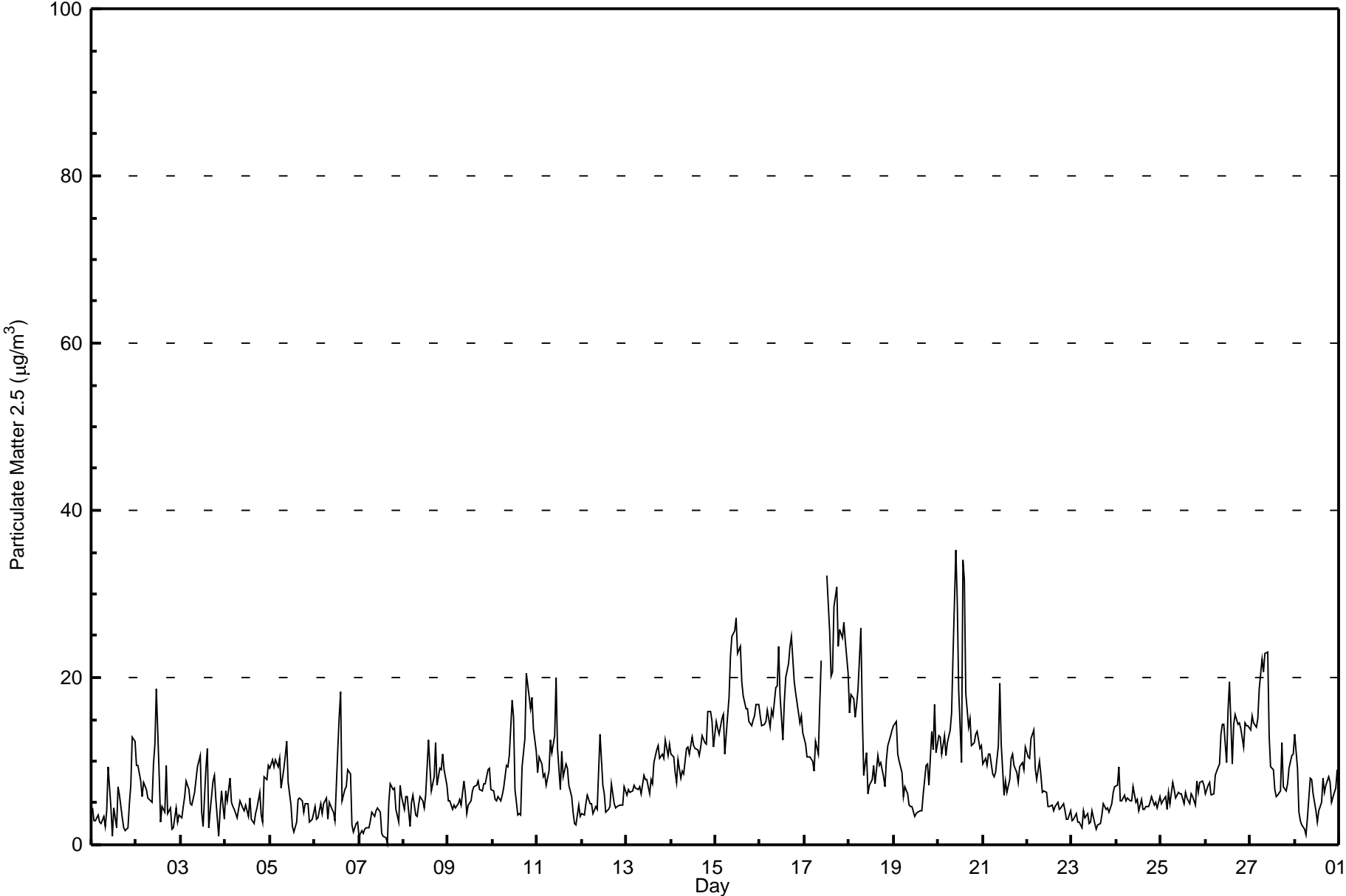


**Peace Airshed Zone Association  
Summary of Hourly Maximums**

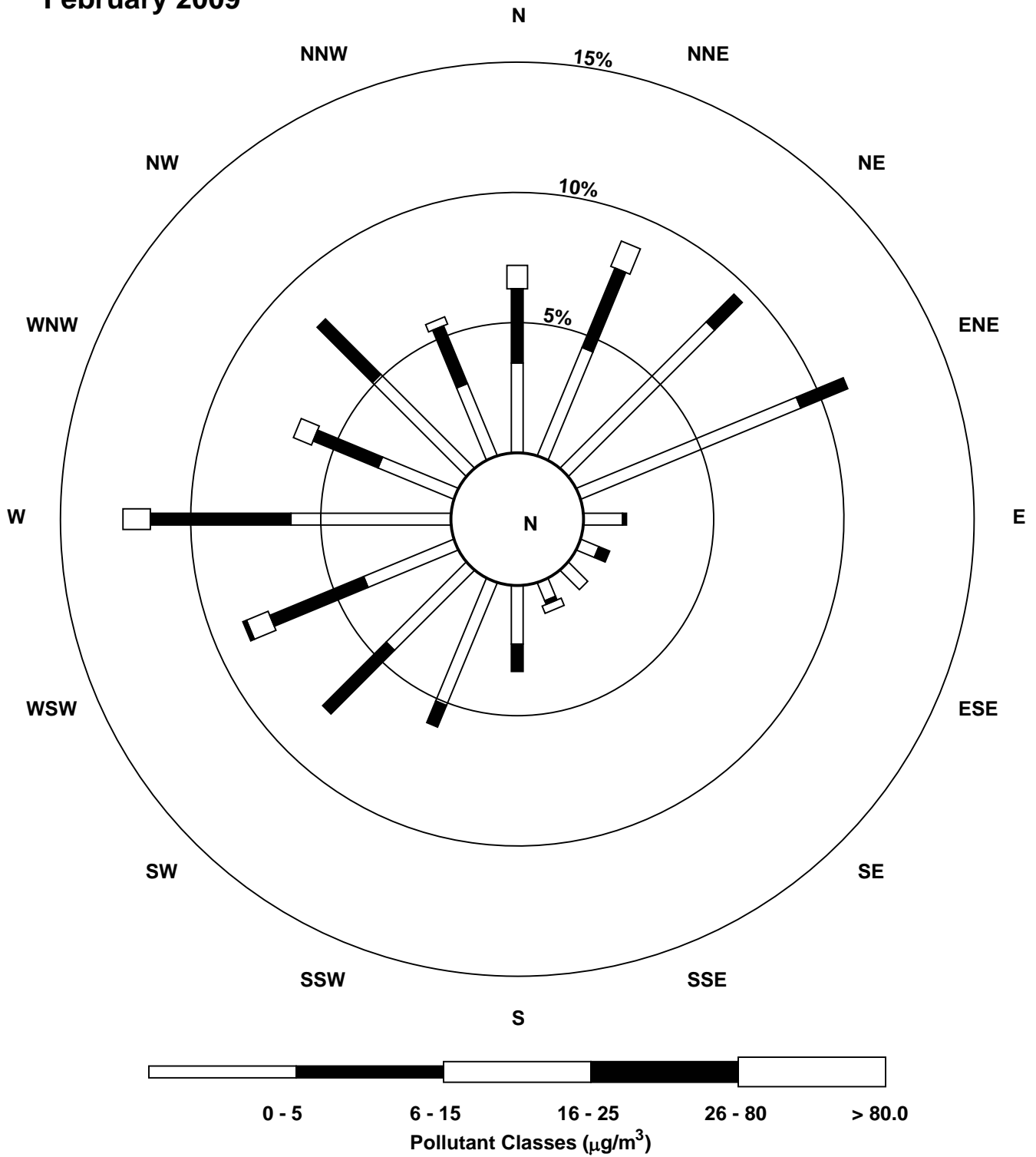
**Evergreen Park - Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>  
February 1, 2009 to March 1, 2009**

Maximum Value: 35.2 µg/m <sup>3</sup> on Feb 20 10:00		Maximum Daily Average: 19.4 µg/m <sup>3</sup> on Feb 17		Hours in Service: 672																																													
Minimum Value: 0 µg/m <sup>3</sup> on Feb 7 16:00		Minimum Daily Average: 3.4 µg/m <sup>3</sup> on Feb 7		Hours of Data: 670																																													
Maximum Diurnal Average: 11.5 µg/m <sup>3</sup> at hour 10		Minimum Diurnal Average: 7.4 µg/m <sup>3</sup> at hour 6		Hours of Missing Data: 2																																													
Monthly Average: 8.81 µg/m <sup>3</sup>		Percentiles: P <sub>1</sub> = 1.4 P <sub>10</sub> = 3.1 Q <sub>1</sub> = 4.7 Median = 7.1 Q <sub>3</sub> = 11.5 P <sub>90</sub> = 16.2 P <sub>99</sub> = 28.4		Hours of Calibration: 0																																													
				Percent Operational Time: 99.7																																													
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Feb	4	3	3	4	3	3	3	2	4	9	4	1	4	2	7	6	3	2	2	2	5	7	13	12	4.5	12.8																							
2-Feb	9	9	8	6	7	7	6	5	5	10	12	19	8	3	5	4	10	4	4	2	2	4	3	4	6.4	18.6																							
3-Feb	3	5	6	8	7	5	5	6	8	9	11	4	2	9	11	2	4	8	8	5	1	4	6	3	5.8	11.5																							
4-Feb	6	5	8	5	5	4	3	4	5	4	4	5	3	6	3	3	4	4	6	4	3	8	8	10	5.0	9.5																							
5-Feb	9	10	9	10	9	10	7	9	11	12	7	5	2	2	3	5	6	5	4	5	5	3	3	3	6.4	12.4																							
6-Feb	5	3	3	5	4	5	6	3	5	4	4	3	11	15	18	5	7	7	9	9	2	2	3	3	5.8	18.4																							
7-Feb	1	2	1	2	2	2	3	4	3	4	4	4	1	1	1	0	5	7	7	7	4	3	7	6	3.4	7.3																							
8-Feb	4	6	6	2	5	6	3	3	5	6	5	4	6	12	9	6	8	12	7	9	9	11	9	7	6.8	12.5																							
9-Feb	5	5	4	5	4	5	5	5	8	6	4	5	5	7	7	7	8	7	6	7	7	9	9	7	6.1	9.1																							
10-Feb	6	5	5	6	5	6	7	9	9	11	17	15	7	4	4	3	9	13	21	19	16	18	14	11	10.0	20.6																							
11-Feb	9	10	10	8	8	7	9	12	11	13	20	11	7	11	8	10	9	7	6	4	3	2	5	3	8.5	20.1																							
12-Feb	4	4	5	6	5	5	4	5	4	9	13	7	6	4	4	5	7	5	4	5	5	5	5	7	5.4	13.2																							
13-Feb	6	7	6	6	7	7	7	7	6	8	8	8	6	8	7	10	11	12	10	11	10	12	11	12	8.5	12.5																							
14-Feb	11	10	9	7	10	8	9	9	11	12	11	13	12	11	11	11	12	13	12	12	16	16	15	12	11.4	15.9																							
15-Feb	15	14	13	15	16	11	15	18	23	25	26	27	23	24	20	18	16	16	15	14	15	15	17	17	17.7	27.1																							
16-Feb	15	14	14	15	16	14	16	15	19	19	24	18	13	17	20	22	24	25	20	18	17	15	15	13	17.4	25.0																							
17-Feb	12	11	10	11	10	9	12	11	17	22	M	M	32	25	20	21	28	31	24	26	25	27	24	20	19.4	32.3																							
18-Feb	16	18	17	15	17	19	26	16	8	11	6	7	8	10	7	11	9	10	8	7	10	12	13	14	12.3	25.9																							
19-Feb	14	15	11	10	9	6	7	6	5	5	5	3	4	4	4	4	6	9	10	7	13	11	17	11	8.1	16.8																							
20-Feb	13	13	11	13	11	12	14	16	23	35	29	18	10	34	32	18	14	15	12	12	13	14	12	12	16.8	35.2																							
21-Feb	10	10	10	11	11	9	8	9	12	19	12	6	8	6	8	10	11	9	9	7	9	10	9	12	9.8	19.4																							
22-Feb	10	10	13	14	9	8	10	8	6	6	6	5	5	5	4	5	4	4	5	4	4	3	3	4	6.5	13.8																							
23-Feb	3	3	4	3	3	2	4	3	4	3	3	4	3	2	2	3	4	5	4	4	4	5	6	7	3.6	6.9																							
24-Feb	7	9	5	5	6	5	6	5	5	7	5	5	4	5	4	4	4	5	5	6	5	5	4	6	5.4	9.4																							
25-Feb	5	5	6	4	6	5	7	7	6	6	6	6	5	6	6	5	6	6	5	8	6	7	8	7	6.0	7.7																							
26-Feb	6	7	7	6	6	8	9	10	13	14	14	10	16	20	10	14	16	14	15	14	12	15	14	14	11.9	19.5																							
27-Feb	14	15	15	14	15	19	22	21	23	23	13	9	9	7	6	6	6	12	7	6	7	9	11	11	12.5	23.1																							
28-Feb	13	9	4	3	2	2	1	3	8	8	6	4	3	4	5	8	6	7	8	7	5	6	7	9	5.8	13.3																							
																								8.5	8.5	7.9	7.8	7.8	7.4	8.4	8.3	9.5	11.5	10.4	8.4	7.9	9.4	8.8	8.0	9.2	9.8	9.0	8.7	8.4	9.2	9.6	9.1	Diurnal Average	
																								15.7	17.9	17.4	15.3	16.7	18.6	25.9	20.6	22.9	35.2	28.9	27.1	32.3	34.1	31.7	21.7	28.5	30.9	23.7	25.7	24.8	26.6	24.5	20.5	Diurnal Maximum	
M - Maintenance																																																	

# Hourly Maximums for PM<sub>2.5</sub> at Evergreen Park February 2009



# Pollutant Rose for PM<sub>2.5</sub> at Evergreen Park February 2009

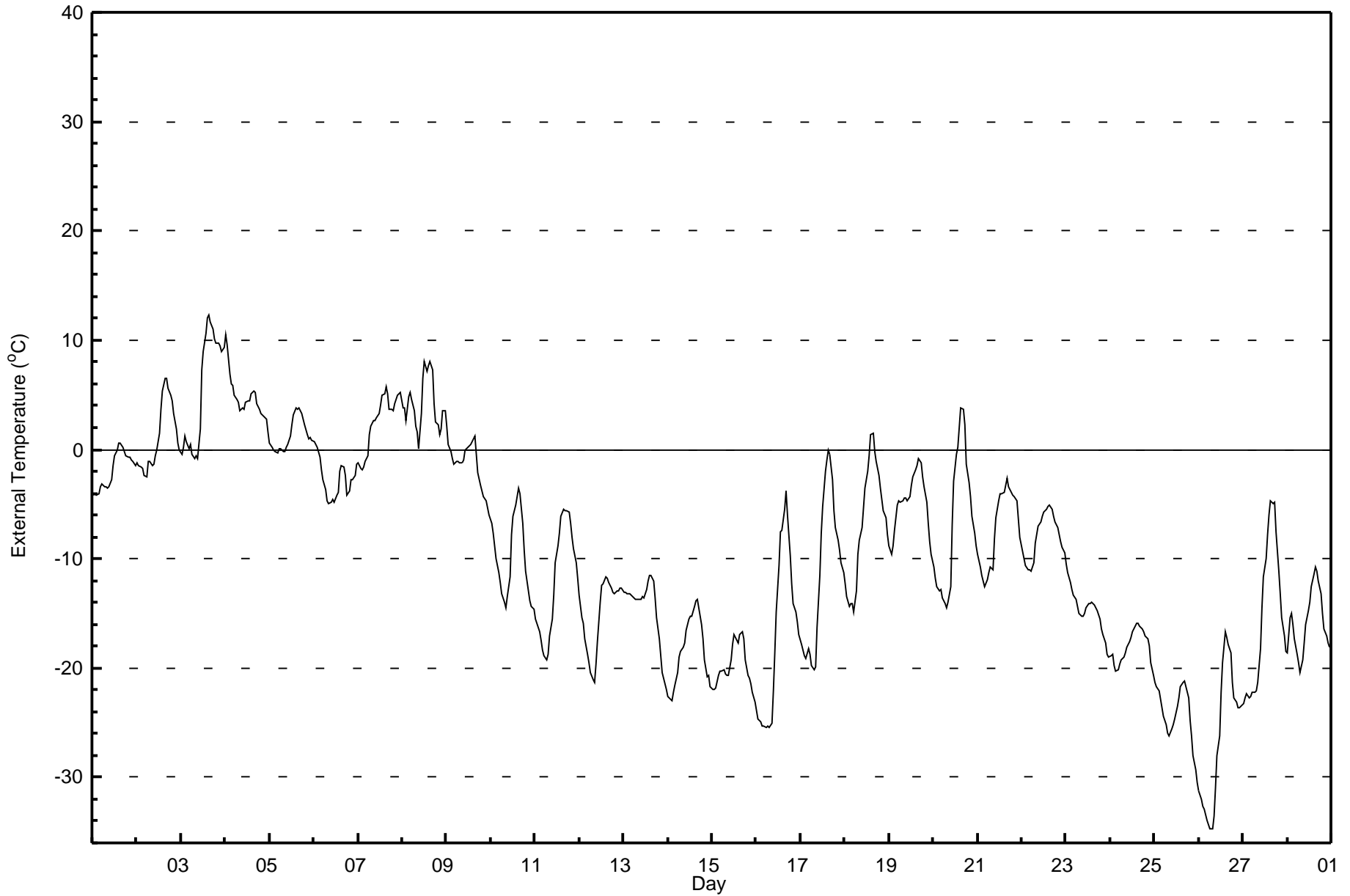


**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Evergreen Park - External Temperature (ET) - °C  
February 1, 2009 to March 1, 2009**

Maximum Value: 12.3 °C on Feb 3 16:00		Maximum Daily Average: 5.5 °C on Feb 3		Hours in Service: 672																																												
Minimum Value: -35 °C on Feb 26 08:00		Minimum Daily Average: -26.5 °C on Feb 26		Hours of Data: 672																																												
Maximum Diurnal Average: -4.1 °C at hour 16		Minimum Diurnal Average: -12.1 °C at hour 8		Hours of Missing Data: 0																																												
Monthly Average: -9.02 °C		Percentiles: P <sub>1</sub> = -32.7 P <sub>10</sub> = -21.7 Q <sub>1</sub> = -16.7 Median = -8.9 Q <sub>3</sub> = -0.9 P <sub>90</sub> = 3.6 P <sub>99</sub> = 10.1		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-Feb	-4	-4	-4	-4	-3	-3	-3	-3	-4	-3	-3	-1	-1	0	1	1	0	0	-1	-1	-1	-1	-1	-1	-1.9	0.6																						
2-Feb	-1	-1	-2	-2	-2	-2	-1	-1	-2	-1	-1	0	1	4	5	6	6	6	5	4	3	2	1	0	1.1	6.5																						
3-Feb	0	0	1	1	0	0	0	-1	-1	-1	2	7	9	11	12	12	12	11	10	10	10	9	9	5.5	12.3																							
4-Feb	11	10	7	6	6	5	5	4	4	4	4	4	4	4	5	5	5	4	4	3	3	3	3	2	4.8	10.5																						
5-Feb	1	0	0	0	0	0	0	0	0	0	0	1	2	3	4	4	4	3	3	2	1	1	1	1	1.3	3.8																						
6-Feb	1	0	0	-1	-2	-3	-4	-5	-5	-5	-5	-5	-4	-4	-2	-2	-2	-2	-4	-4	-3	-3	-2	-1	-2.7	0.7																						
7-Feb	-1	-2	-2	-2	-1	-1	1	2	3	3	3	3	4	5	5	6	5	4	4	4	4	5	5	5	2.6	5.7																						
8-Feb	4	4	3	5	5	5	3	2	2	0	3	7	8	7	8	8	7	4	3	2	1	2	4	4	4.1	8.1																						
9-Feb	2	0	0	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	1	1	0	-2	-3	-4	-4	-5	-5	-6	-1.4	2.1																						
10-Feb	-7	-8	-9	-10	-11	-12	-13	-14	-14	-13	-12	-8	-6	-5	-4	-4	-4	-7	-9	-11	-13	-14	-14	-15	-9.9	-3.6																						
11-Feb	-16	-16	-17	-17	-18	-19	-19	-19	-17	-15	-13	-10	-9	-8	-6	-5	-6	-6	-6	-7	-8	-9	-10	-12	-12.0	-5.4																						
12-Feb	-13	-15	-16	-17	-19	-19	-20	-21	-21	-20	-18	-14	-12	-12	-12	-12	-12	-13	-13	-13	-13	-13	-13	-13	-15.2	-11.7																						
13-Feb	-13	-13	-13	-13	-13	-13	-14	-14	-14	-14	-13	-14	-13	-12	-12	-11	-12	-14	-15	-17	-19	-20	-21	-22	-14.6	-11.5																						
14-Feb	-23	-23	-23	-22	-22	-20	-19	-18	-18	-18	-17	-16	-15	-15	-14	-14	-14	-14	-16	-17	-19	-21	-21	-22	-18.4	-13.7																						
15-Feb	-22	-22	-22	-21	-20	-20	-20	-20	-21	-21	-19	-18	-17	-18	-18	-17	-17	-17	-19	-21	-21	-21	-22	-23	-19.9	-16.7																						
16-Feb	-24	-25	-25	-25	-25	-25	-25	-25	-25	-22	-19	-15	-11	-8	-7	-5	-4	-6	-10	-12	-14	-15	-16	-17	-16.9	-3.9																						
17-Feb	-18	-18	-19	-19	-18	-19	-20	-20	-20	-16	-12	-8	-5	-2	-1	0	0	-3	-6	-7	-8	-9	-10	-11	-11.2	-0.1																						
18-Feb	-12	-13	-14	-14	-14	-15	-13	-10	-8	-7	-5	-4	-2	-1	1	1	0	-1	-2	-4	-5	-6	-6	-8	-6.7	1.5																						
19-Feb	-9	-10	-9	-7	-5	-5	-5	-5	-4	-4	-5	-4	-3	-2	-2	-1	-1	-1	-2	-3	-5	-7	-8	-10	-4.9	-0.9																						
20-Feb	-11	-12	-13	-13	-13	-14	-14	-15	-14	-13	-7	-3	-1	0	2	4	4	2	-1	-3	-4	-6	-8	-9	-6.6	3.8																						
21-Feb	-10	-11	-12	-12	-13	-12	-11	-11	-11	-8	-6	-5	-4	-4	-4	-3	-3	-3	-4	-4	-4	-5	-6	-8	-7.2	-2.6																						
22-Feb	-9	-10	-11	-11	-11	-11	-10	-9	-8	-7	-7	-6	-6	-6	-5	-5	-5	-6	-7	-7	-8	-8	-9	-9	-8.0	-5.1																						
23-Feb	-11	-11	-12	-13	-13	-14	-14	-15	-15	-15	-15	-15	-14	-14	-14	-14	-14	-15	-16	-16	-17	-18	-19	-19	-14.7	-10.6																						
24-Feb	-19	-19	-20	-20	-20	-20	-19	-19	-19	-18	-18	-17	-17	-16	-16	-16	-16	-16	-16	-17	-17	-17	-18	-20	-21	-18.1	-15.9																					
25-Feb	-21	-22	-22	-23	-24	-24	-25	-26	-26	-26	-25	-25	-24	-23	-22	-21	-21	-22	-23	-25	-26	-28	-29	-30	-24.3	-21.2																						
26-Feb	-31	-32	-33	-33	-34	-34	-35	-35	-34	-31	-28	-26	-22	-19	-17	-17	-18	-19	-21	-23	-23	-24	-24	-24	-26.5	-16.7																						
27-Feb	-23	-23	-22	-23	-23	-22	-22	-22	-21	-18	-14	-12	-10	-8	-6	-5	-5	-5	-8	-11	-13	-15	-17	-18	-15.3	-4.7																						
28-Feb	-19	-15	-15	-16	-17	-19	-20	-20	-19	-18	-16	-15	-14	-13	-11	-11	-11	-12	-13	-15	-16	-17	-18	-18	-15.7	-10.7																						
																								-10.7	-11.1	-11.5	-11.7	-11.9	-12.1	-12.1	-12.1	-11.9	-11.0	-9.4	-7.7	-6.4	-5.5	-4.6	-4.1	-4.4	-5.3	-6.7	-7.7	-8.5	-9.3	-10.0	-10.6	Diurnal Average
																								10.5	9.6	6.9	6.0	5.8	5.0	4.6	4.3	3.5	3.7	3.7	7.2	9.0	10.6	12.0	12.3	11.7	11.0	10.2	9.7	9.7	9.5	8.9	9.3	Diurnal Maximum

# Hourly Averages for External Temperature at Evergreen Park February 2009





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

Evergreen Park  
 February 1, 2009 to March 1, 2009  
 WS (km/h), WD (deg)

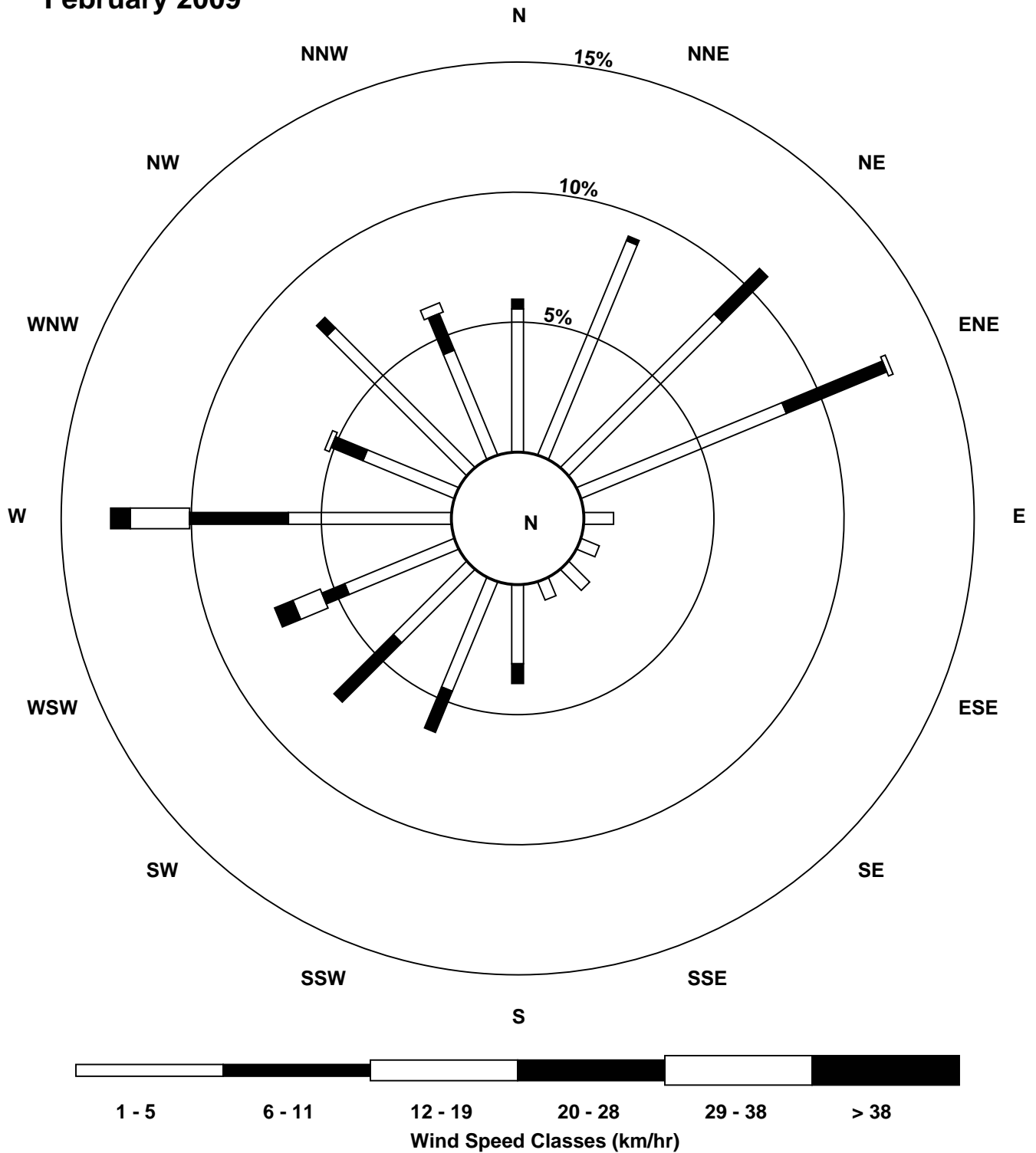
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	15	13	12	12	12	11	10	8	1	0	3	5	3	3	3	4	4	2	2	1	3	3	2	2	4.2	14.6
Dir	265	272	272	267	273	272	261	259	280	11	220	252	252	214	182	138	134	133	110	140	183	183	174	190	251.7	265.3
2 Spd	2	2	1	1	1	1	5	3	1	2	1	4	5	5	12	9	8	9	9	6	0	1	1	1	2.7	11.6
Dir	191	188	174	104	79	208	199	195	204	20	218	216	213	287	284	282	273	271	275	269	60	190	91	190	255.1	284.2
3 Spd	1	1	1	1	2	2	2	2	1	1	2	7	7	7	7	7	6	6	5	7	8	7	5	11	3.5	11.2
Dir	81	122	164	83	76	89	65	67	76	63	187	189	183	190	194	191	194	195	185	194	201	201	199	238	189.1	238.4
4 Spd	24	27	20	21	22	22	16	11	6	14	15	17	10	8	6	7	8	3	7	7	6	2	2	1	11.2	27.3
Dir	261	263	277	265	246	249	257	248	258	261	261	276	291	263	261	266	290	268	230	219	213	203	185	65	259.5	263.5
5 Spd	2	0	0	1	1	3	1	2	2	4	7	9	10	9	5	2	1	1	7	4	6	5	1	1	2.8	9.5
Dir	27	308	235	216	218	218	193	56	157	199	213	216	216	220	236	308	203	116	219	253	236	227	321	4	222.6	215.9
6 Spd	1	2	2	4	5	4	4	4	3	2	2	3	2	5	1	2	2	1	0	7	8	12	13	17	1.4	16.9
Dir	45	53	27	32	42	49	44	38	39	36	48	61	315	275	270	206	164	143	162	236	246	240	246	261	274.2	260.8
7 Spd	20	10	11	11	11	8	17	20	19	14	10	7	9	16	15	15	3	2	4	4	5	6	5	7	9.7	20.3
Dir	249	234	230	230	233	229	243	255	261	261	260	267	253	250	248	259	195	118	195	201	199	203	199	216	242.3	254.6
8 Spd	5	1	1	8	6	5	6	1	0	1	1	2	1	1	3	3	2	2	1	0	1	2	1	1	0.8	8.5
Dir	201	175	161	229	215	207	221	199	344	136	180	196	196	331	27	22	39	17	84	351	11	24	42	45	212.5	229.1
9 Spd	4	1	0	1	1	2	0	0	1	1	2	4	4	4	3	5	12	9	5	4	4	4	3	2	2.7	11.6
Dir	331	311	292	248	344	324	73	285	257	52	58	49	14	14	23	353	335	340	336	295	308	316	320	306	341.3	334.7
10 Spd	0	3	3	3	1	2	2	0	1	2	3	2	4	4	5	3	3	5	2	0	1	1	1	1	1.6	4.7
Dir	299	355	354	11	42	357	21	203	320	328	279	320	281	306	309	3	359	54	60	14	31	17	341	295	343.1	308.7
11 Spd	1	1	1	1	0	0	0	0	1	0	1	2	4	3	3	6	4	5	9	14	7	3	3	2	2.7	13.9
Dir	318	278	279	219	24	320	256	266	344	111	263	290	322	310	348	344	286	308	345	346	331	300	276	318	324.2	345.6
12 Spd	1	1	0	1	1	0	1	0	1	1	2	3	5	5	6	5	4	4	5	3	2	1	1	2	1.9	6.3
Dir	325	357	206	216	224	84	43	28	41	51	63	23	69	76	53	40	44	75	59	54	53	360	208	297	51.0	53.0
13 Spd	3	3	3	4	3	3	3	2	2	2	4	4	2	2	1	4	5	5	2	1	0	0	0	0	0.9	4.8
Dir	315	331	319	299	278	318	335	324	317	322	205	227	218	143	193	47	63	58	17	354	260	15	357	261	328.4	62.5
14 Spd	0	1	1	1	3	2	2	2	2	3	2	4	3	4	6	5	4	2	3	1	0	1	1	1	1.2	5.6
Dir	349	289	316	311	241	320	260	272	279	253	271	63	62	18	7	30	17	33	327	311	236	269	295	312	346.7	7.1
15 Spd	2	2	2	0	1	1	0	0	1	1	1	1	2	4	5	4	4	3	2	2	1	1	1	1	1.0	4.6
Dir	317	309	333	308	106	207	296	103	152	154	270	273	2	13	12	18	26	37	330	306	312	257	243	218	351.5	12.1
16 Spd	1	0	0	1	1	1	2	0	1	2	1	3	2	2	3	2	2	2	2	0	1	1	1	1	0.7	3.1
Dir	229	2	221	239	231	219	218	36	237	272	21	272	274	2	358	8	338	14	26	297	334	291	258	243	312.5	358.0
17 Spd	1	1	0	1	1	2	1	0	0	0	1	2	3	2	4	2	2	2	2	0	1	1	1	1	0.9	3.7
Dir	221	253	239	326	285	216	231	278	214	330	259	286	249	285	275	308	269	16	8	304	350	273	288	251	280.1	275.3
18 Spd	1	0	1	1	1	1	2	3	5	6	6	7	6	5	3	2	2	1	1	1	2	2	1	1	1.7	7.2
Dir	225	357	360	246	238	222	244	273	281	269	268	273	265	257	251	15	66	75	95	71	36	17	304	288	275.0	273.1
19 Spd	1	3	4	3	6	6	5	7	8	8	10	8	6	11	9	6	1	0	1	1	0	0	1	1	3.9	10.7
Dir	291	306	277	304	334	314	292	302	304	318	341	341	280	282	282	282	254	236	189	157	47	8	255	254	302.9	282.3
20 Spd	0	0	0	0	1	0	0	0	0	1	1	1	3	3	2	2	2	2	2	1	1	2	1	1	0.6	3.2
Dir	67	276	268	245	220	331	246	241	196	241	277	296	300	283	0	350	20	68	55	19	359	345	274	301	332.5	283.2
21 Spd	1	2	1	2	1	1	0	0	0	1	2	3	4	3	4	4	4	5	2	1	2	3	2	5	1.5	4.9
Dir	300	335	274	249	270	292	249	352	241	241	47	28	18	17	11	11	57	70	72	76	344	33	7	332	14.7	70.2
22 Spd	3	3	2	4	6	4	4	4	1	5	6	5	4	4	4	3	3	5	5	4	7	7	7	7	2.4	7.0
Dir	327	315	280	266	274	270	264	273	298	337	344	357	6	9	14	43	50	55	67	63	62	62	62	56	8.3	55.9

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

Evergreen Park  
February 1, 2009 to March 1, 2009  
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	8	7	7	7	6	5	5	7	5	5	5	5	4	4	4	5	4	3	2	2	2	1	1	1	4.2	8.2
Dir	53	50	61	67	69	71	73	69	77	68	75	61	35	28	22	40	73	83	75	66	80	7	25	19	60.0	53.4
24 Spd	1	1	1	1	2	2	1	3	5	5	5	7	7	8	8	10	9	7	6	6	8	10	13	10	5.4	12.6
Dir	37	34	311	290	338	339	19	38	45	51	43	46	46	52	50	51	55	60	57	58	57	57	61	61	50.8	61.1
25 Spd	8	9	7	9	6	4	4	4	5	5	4	6	5	6	6	8	8	6	3	1	1	1	1	0	4.6	9.0
Dir	61	59	60	57	63	58	53	50	57	60	15	5	12	20	49	59	53	60	61	355	40	33	29	353	48.7	56.7
26 Spd	0	1	0	1	0	0	1	1	1	2	4	4	3	4	3	4	4	4	4	2	2	2	1	2	0.7	4.5
Dir	226	240	207	44	4	213	353	232	315	221	278	274	205	183	173	11	28	36	329	318	295	262	265	242	284.6	28.4
27 Spd	3	4	4	2	2	4	4	3	4	4	4	4	6	6	4	2	2	1	2	2	1	1	0	0	2.1	6.0
Dir	231	259	256	222	232	237	236	248	252	258	260	264	273	264	276	313	358	81	64	48	28	37	292	4	262.9	264.4
28 Spd	1	8	6	5	4	4	1	2	1	5	5	5	4	3	4	4	3	2	2	2	1	1	1	1	2.6	8.2
Dir	27	65	73	71	65	64	24	65	41	65	72	28	24	360	335	12	33	37	349	318	324	315	306	316	40.4	65.1
Spd	2.0	1.6	1.4	1.5	1.5	1.7	1.9	1.4	1.2	1.3	1.4	1.8	1.6	2.0	1.9	2.1	1.8	1.7	0.8	0.8	0.5	0.4	0.4	1.1	Diurnal Average	
Dir	274.1	289.3	287.3	271.1	265.9	262.0	256.4	274.2	291.9	295.1	291.4	293.4	290.7	291.2	311.3	350.6	18.8	40.6	1.9	302.7	285.4	263.8	270.6	274.3		
Spd	23.9	27.3	20.2	20.5	22.1	22.5	16.7	20.3	19.1	13.8	15.3	16.5	9.7	16.0	15.2	14.7	11.6	8.9	9.5	13.9	8.3	12.1	12.6	16.9	Diurnal Maximum	
Dir	260.9	263.5	277.1	265.5	246.1	249.0	243.2	254.6	261.3	260.6	260.8	275.6	290.7	249.6	248.0	259.2	334.7	270.8	344.8	345.6	201.4	239.6	61.1	260.8		
Maximum Speed Value: 27 km/h on Feb 4 02:00																			Minimum Speed Value: 0 km/h on Feb 10 08:00					Hours in Service:		672
Maximum Daily Speed Average: 11.2 km/h on Feb 4																			Minimum Daily Speed Average: 0.6 km/h on Feb 20					Hours of Data:		672
Maximum Diurnal Speed Average: 2.1 km/h at hour 16																			Minimum Diurnal Speed Average: 0.4 km/h at hour 23					Hours of Missing Data:		0
Monthly Average Velocity: 1.13 km/h 295.31 deg																			Speed Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.5 Q <sub>1</sub> = 1.2 Median = 2.5 Q <sub>3</sub> = 4.9 P <sub>90</sub> = 8.1 P <sub>99</sub> = 20.2					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	85	11	1	0	0	0	97																			
NorthEast	101	38	1	0	0	0	140																			
East	31	9	0	0	0	0	40																			
SouthEast	14	0	0	0	0	0	14																			
South	36	12	0	0	0	0	48																			
SouthWest	67	23	5	1	0	0	96																			
West	91	28	17	8	0	0	144																			
NorthWest	85	7	1	0	0	0	93																			
Total	510	128	25	9	0	0	672																			

# Wind Rose for WS at Evergreen Park February 2009



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

**Evergreen Park - Wind Speed (WS) - km/h**  
**February 1, 2009 to March 1, 2009**

Maximum Speed: 27 km/h on Feb 4 02:00		Maximum Daily Speed Average: 12.1 km/h on Feb 4		Hours in Service: 672																							
Minimum Speed: 1 km/h on Feb 14 01:00		Minimum Daily Speed Average: 1.6 km/h on Feb 17		Hours of Data: 672																							
Maximum Diurnal Speed Average: 5.5 km/h at hour 14		Minimum Diurnal Speed Average: 2.9 km/h at hour 23		Hours of Missing Data: 0																							
Monthly Average Speed: 4.09 km/h		Percentiles: P <sub>1</sub> = 0.7 P <sub>10</sub> = 1.1 Q <sub>1</sub> = 1.6 Median = 2.9 Q <sub>3</sub> = 5.2 P <sub>90</sub> = 8.2 P <sub>99</sub> = 20.4		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-Feb	15	13	12	12	12	11	10	8	3	2	3	5	3	3	4	4	3	2	2	3	3	2	3	5.9	14.7		
2-Feb	3	2	2	2	2	3	5	3	4	2	1	5	5	5	12	10	8	9	10	7	2	1	1	2	4.3	12.3	
3-Feb	2	3	2	2	3	2	2	3	2	2	3	8	7	7	7	6	6	5	7	8	7	5	12	4.9	11.6		
4-Feb	24	27	20	21	22	23	17	12	7	14	15	17	11	8	6	7	9	4	7	7	6	3	2	2	12.1	27.4	
5-Feb	2	2	1	1	2	4	2	3	3	4	7	9	10	9	6	3	2	1	7	6	7	5	2	1	4.0	9.6	
6-Feb	1	2	2	4	5	4	4	4	3	2	3	3	2	5	2	2	3	1	2	7	8	12	13	17	4.7	17.0	
7-Feb	20	11	11	11	11	8	17	20	19	14	10	7	9	16	15	15	5	2	5	4	5	6	6	8	10.6	20.4	
8-Feb	5	3	3	9	7	5	6	2	2	2	2	2	2	4	3	4	3	2	2	1	1	3	3	2	3.2	8.7	
9-Feb	4	2	2	1	2	2	1	1	1	2	2	5	5	4	4	6	12	9	6	4	4	4	4	2	3.7	11.9	
10-Feb	1	3	3	3	2	2	2	1	1	2	3	2	4	5	5	3	3	5	2	1	1	1	1	2	2.5	5.1	
11-Feb	1	1	1	1	1	1	1	2	1	1	1	3	4	4	4	6	4	5	10	14	8	3	4	2	3.5	14.0	
12-Feb	2	2	1	1	1	1	1	1	1	2	3	3	6	6	6	5	5	5	5	3	2	2	1	3	2.9	6.5	
13-Feb	3	3	3	4	3	3	3	2	2	3	4	5	3	3	3	5	5	5	2	1	1	1	1	1	2.9	5.3	
14-Feb	1	1	1	1	3	2	2	2	2	3	2	5	4	5	6	5	4	3	3	1	1	1	1	1	2.5	6.2	
15-Feb	2	2	2	1	1	2	1	1	1	2	1	2	3	4	5	4	4	3	2	2	1	1	2	2	2.1	4.8	
16-Feb	1	1	1	1	1	1	2	1	1	2	2	3	2	2	3	2	2	2	2	1	1	1	1	1	1.7	3.3	
17-Feb	1	1	1	1	1	2	1	1	1	1	1	3	3	2	4	3	2	2	2	1	1	1	1	1	1.6	3.8	
18-Feb	1	1	1	2	1	2	2	3	5	6	6	7	6	5	3	3	3	1	1	1	2	3	2	2	2.8	7.2	
19-Feb	2	3	4	3	7	6	5	7	8	8	10	8	7	11	9	6	2	1	1	1	2	1	1	1	4.7	10.9	
20-Feb	1	1	1	1	1	1	1	1	1	2	1	2	4	4	2	2	2	2	2	1	2	2	2	2	1.7	4.0	
21-Feb	1	2	2	2	1	1	1	1	1	1	3	3	4	3	4	4	5	5	2	1	2	3	2	5	2.6	5.1	
22-Feb	3	3	2	4	6	4	4	4	2	5	6	6	4	4	4	3	3	5	5	4	7	7	7	7	4.7	7.2	
23-Feb	8	7	7	7	6	5	6	7	6	5	6	5	5	4	5	5	5	3	2	2	2	1	1	1	4.6	8.3	
24-Feb	1	1	1	1	2	2	1	3	5	6	7	7	7	8	8	10	9	7	6	6	8	10	13	10	5.8	12.7	
25-Feb	8	9	7	9	6	4	5	4	5	5	4	6	5	7	7	8	8	6	3	1	1	1	1	1	5.1	9.1	
26-Feb	1	1	1	1	1	1	1	2	2	2	4	4	4	5	4	4	5	4	4	2	2	2	2	2	2.5	4.8	
27-Feb	3	4	4	2	2	4	5	3	4	5	4	4	6	6	4	4	2	1	2	2	1	1	1	1	3.1	6.1	
28-Feb	2	8	6	5	4	4	1	2	2	5	5	5	6	4	4	4	4	3	2	2	2	1	2	1	3.5	8.2	
4.3		4.2	3.8	4.1	4.1	3.9	3.9	3.7	3.4	3.9	4.3	5.1	5.1	5.5	5.4	5.2	4.5	3.8	3.7	3.4	3.3	3.1	2.9	3.4	Diurnal Average		
24.0		27.4	20.4	20.7	22.2	22.7	16.9	20.4	19.2	13.9	15.4	16.8	10.6	16.1	15.3	14.8	11.9	9.0	9.7	14.0	8.4	12.1	12.7	17.0	Diurnal Maximum		
All monthly, daily, and diurnal averages have been calculated using scalar methods																											

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

**Evergreen Park - Wind Direction (WD) - deg  
February 1, 2009 to March 1, 2009**

Maximum Value: 94.8 deg on Feb 11 08:00																								Hours in Service:	672
Minimum Value: 3.7 deg on Feb 5 12:00																								Hours of Data:	672
Percentiles: P <sub>1</sub> = 4.7 P <sub>10</sub> = 9.5 Q <sub>1</sub> = 15.0 Median = 27.8 Q <sub>3</sub> = 52.6 P <sub>90</sub> = 76.3 P <sub>99</sub> = 92.4																								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-Feb	6	5	6	5	6	5	7	6	78	84	30	17	38	14	29	24	21	17	13	35	12	9	27	34	84.5
2-Feb	25	47	38	50	52	93	16	19	80	43	80	8	14	20	22	13	11	9	10	35	89	59	69	70	92.5
3-Feb	60	71	58	70	44	36	32	26	63	57	68	10	9	12	12	19	13	11	11	11	6	7	11	16	71.3
4-Feb	6	5	6	8	6	8	9	40	62	6	7	10	25	8	17	19	13	38	22	12	15	48	35	93	92.9
5-Feb	39	85	88	78	51	25	39	23	54	14	6	4	5	6	42	54	80	57	48	49	7	18	28	13	87.9
6-Feb	24	24	19	15	15	14	16	17	21	31	28	40	35	17	55	29	20	37	87	19	7	4	8	7	87.4
7-Feb	5	8	5	4	7	9	8	5	5	4	4	8	6	6	7	6	55	48	56	11	9	13	22	23	56.3
8-Feb	34	88	84	13	27	17	14	75	91	74	77	47	57	84	27	28	18	21	79	94	52	35	74	71	94.4
9-Feb	23	54	90	90	40	50	91	85	89	46	44	47	23	24	27	25	13	12	25	19	22	26	28	21	91.2
10-Feb	82	20	21	23	49	42	26	91	46	48	16	38	27	31	25	32	30	9	53	79	80	59	41	49	90.5
11-Feb	29	56	46	69	83	87	94	95	59	65	85	39	21	29	41	21	21	25	13	6	15	18	15	47	94.8
12-Feb	62	51	75	79	73	85	54	79	49	44	40	39	17	28	16	23	27	23	16	26	52	63	64	44	84.9
13-Feb	18	19	20	30	28	24	17	55	24	28	32	36	56	62	75	57	15	8	13	42	71	67	63	88	87.5
14-Feb	73	57	48	26	15	29	35	40	34	15	39	35	45	32	27	22	26	40	12	37	94	58	31	48	94.0
15-Feb	15	18	28	81	79	35	90	91	70	65	35	88	69	21	17	25	21	12	37	18	30	64	70	59	91.2
16-Feb	53	73	84	73	59	58	13	84	72	38	66	29	28	36	21	29	27	21	41	78	47	38	43	73	84.1
17-Feb	65	60	82	56	49	11	23	77	92	86	47	38	30	42	17	45	30	24	15	59	47	48	50	36	92.5
18-Feb	51	94	51	50	67	30	34	22	9	11	8	9	10	10	26	39	21	43	56	66	29	44	72	56	94.3
19-Feb	62	22	13	32	11	17	16	16	14	14	11	15	27	11	12	12	23	71	42	65	80	84	66	35	84.5
20-Feb	91	86	78	76	47	71	86	92	90	47	54	73	53	38	35	19	26	19	18	55	58	50	78	69	92.3
21-Feb	38	35	56	41	71	71	91	84	76	55	59	35	30	29	21	22	22	14	26	62	32	13	36	15	90.6
22-Feb	29	23	20	16	11	9	13	12	37	16	19	27	26	24	22	33	20	13	13	14	11	11	11	12	37.2
23-Feb	11	11	10	13	14	15	16	12	16	18	27	30	37	31	38	25	26	25	16	10	22	55	24	54	55.0
24-Feb	24	33	31	41	27	19	47	14	10	18	16	17	19	14	15	13	12	12	12	11	10	9	8	10	47.4
25-Feb	9	7	11	10	12	25	14	11	12	27	28	18	28	19	23	13	11	16	20	42	63	28	23	83	82.6
26-Feb	74	58	90	46	81	70	68	69	55	24	46	23	51	40	57	17	25	21	25	18	30	35	39	53	90.0
27-Feb	7	12	29	49	21	13	14	9	11	12	15	11	14	10	26	52	62	77	12	8	23	24	69	78	78.3
28-Feb	44	8	8	11	6	11	58	38	56	15	18	33	24	28	42	26	18	16	30	18	23	38	65	43	64.8
91.3	94.3	90.1	89.6	83.1	92.5	94.4	94.8	92.5	86.3	84.7	87.6	68.7	83.8	75.5	57.0	80.4	76.6	87.4	94.4	94.0	84.5	77.7	92.9		

PASZA  
Smoky Heights Station  
Monthly Summary Tables, Graphs and  
Roses

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

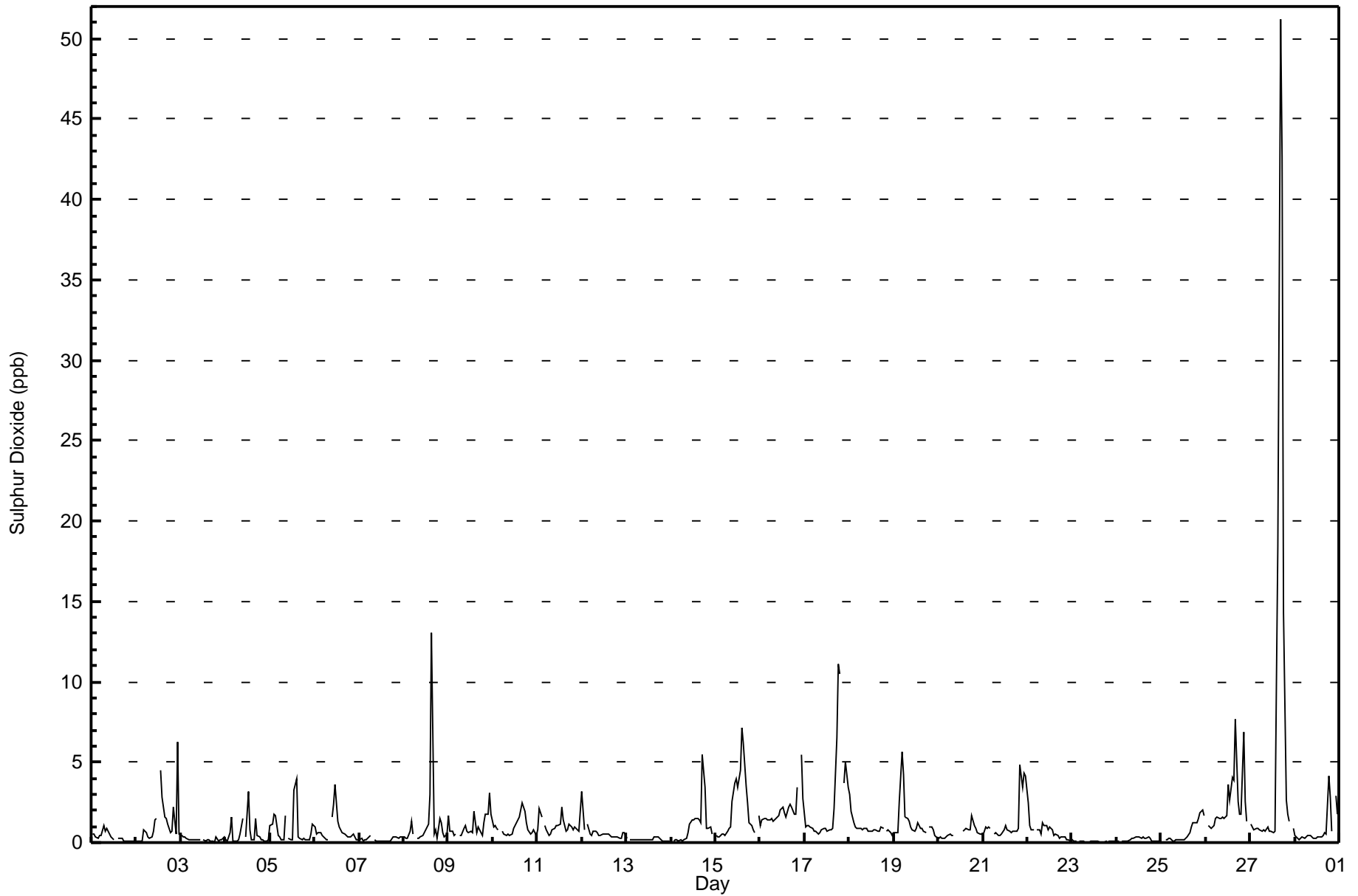
**Smoky Heights - Sulphur Dioxide (SO<sub>2</sub>) - ppb  
February 1, 2009 to March 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 672
Maximum Value: 51.2 ppb on Feb 27 17:00	Maximum Daily Average: 6.7 ppb on Feb 27
Minimum Value: 0 ppb on Feb 23 18:00	Hours of Data: 639
Maximum Diurnal Average: 3.0 ppb at hour 17	Hours of Missing Data: 33
Monthly Average: 1.17 ppb	Hours of Calibration: 33
Minimum Daily Average: 0.1 ppb on Feb 23	Percent Operational Time: 100.0
Minimum Diurnal Average: 0.5 ppb at hour 8	
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.3 Median = 0.6 Q <sub>3</sub> = 1.1 P <sub>90</sub> = 2.2 P <sub>99</sub> = 9.4	

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-Feb	1	0	0	0	0	0	1	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.4	1.1
2-Feb	0	0	0	0	1	1	0	0	0	0	1	1	A	4	3	2	1	1	1	1	2	1	6	1	1.2	6.2
3-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
4-Feb	0	0	1	2	0	0	0	0	0	2	A	0	3	1	0	0	1	0	0	0	0	0	0	0.5	3.2	
5-Feb	1	1	2	2	0	0	0	0	2	A	0	0	0	3	4	0	0	0	0	0	0	0	1	0.9	3.9	
6-Feb	1	1	1	1	0	0	0	0	A	2	2	4	1	1	1	1	1	0	0	0	0	1	0	0.8	3.6	
7-Feb	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5	
8-Feb	0	0	0	1	1	1	A	0	0	0	0	1	1	1	3	13	0	1	0	1	1	1	0	1.3	13.1	
9-Feb	2	1	1	0	1	A	0	0	1	1	1	1	1	1	2	1	1	1	0	1	2	2	3	2	1.0	3.1
10-Feb	1	1	1	1	A	1	1	0	0	0	1	1	1	1	2	2	2	2	1	1	1	1	1	1.0	2.4	
11-Feb	1	2	2	A	1	1	0	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1.1	2.2	
12-Feb	3	1	A	1	1	0	1	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0	1	0.6	3.1	
13-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
14-Feb	A	0	0	0	0	0	0	0	0	1	1	1	1	2	1	1	1	5	3	1	1	1	1	1.1	5.5	
15-Feb	0	0	0	1	1	0	1	1	1	3	4	4	3	5	7	6	3	2	1	1	1	1	A	2	2.1	7.1
16-Feb	1	1	2	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	3	A	5	2.0	5.5
17-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	7	11	10	A	4	5	3	2.4	11.1
18-Feb	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	1.0	3.0
19-Feb	1	1	1	3	6	4	2	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	0	1.3	5.7
20-Feb	0	0	0	0	0	0	0	0	0	C	C	C	A	1	1	1	1	1	2	1	1	1	0	0	0.6	1.7
21-Feb	0	1	1	1	1	A	1	1	0	0	1	1	1	1	1	1	1	1	1	1	5	3	4	4	1.3	4.8
22-Feb	3	1	1	1	A	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.7	2.5
23-Feb	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
24-Feb	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
25-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	2	2	2	0.6	2.0
26-Feb	A	1	1	1	1	2	2	2	1	2	2	2	4	3	4	4	8	3	2	2	7	3	1	A	2.4	7.7
27-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10	18	51	43	14	3	2	1	A	1	6.7	51.2
28-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4	3	1	A	3	2	0.8	4.2
	0.8	0.7	0.6	0.7	0.8	0.7	0.6	0.5	0.7	0.8	0.8	0.9	1.0	1.2	1.7	2.1	3.0	2.7	1.8	1.2	1.2	0.9	1.4	1.0	Diurnal Average	
	3.1	2.2	1.8	2.6	5.7	4.2	1.6	1.5	1.7	2.6	3.7	4.0	3.6	4.5	9.8	18.4	51.2	42.7	14.2	10.5	6.9	3.7	6.2	4.1	Diurnal Maximum	

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

# Hourly Averages for SO<sub>2</sub> at Smoky Heights February 2009



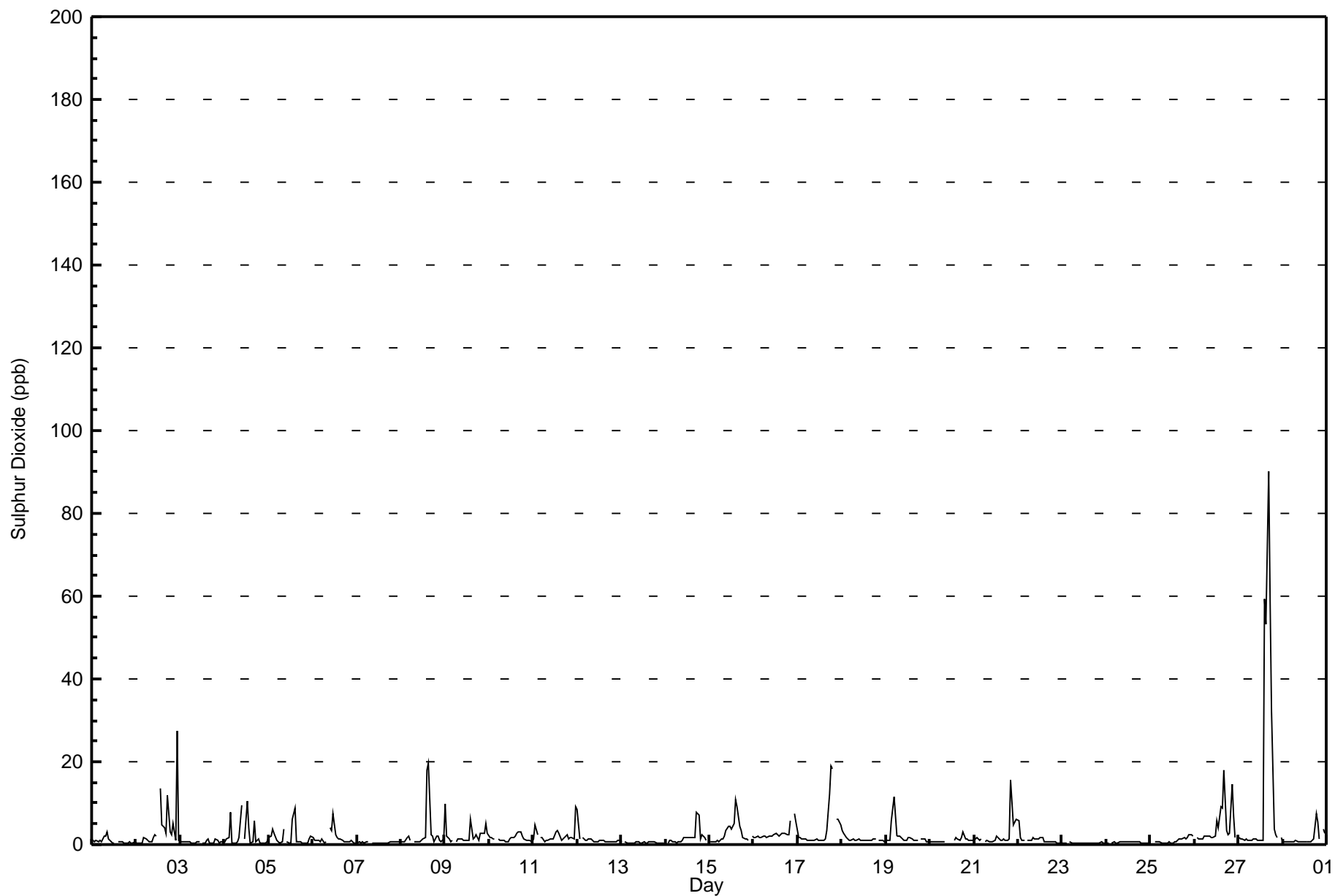


**Peace Airshed Zone Association  
Summary of Hourly Maximums**

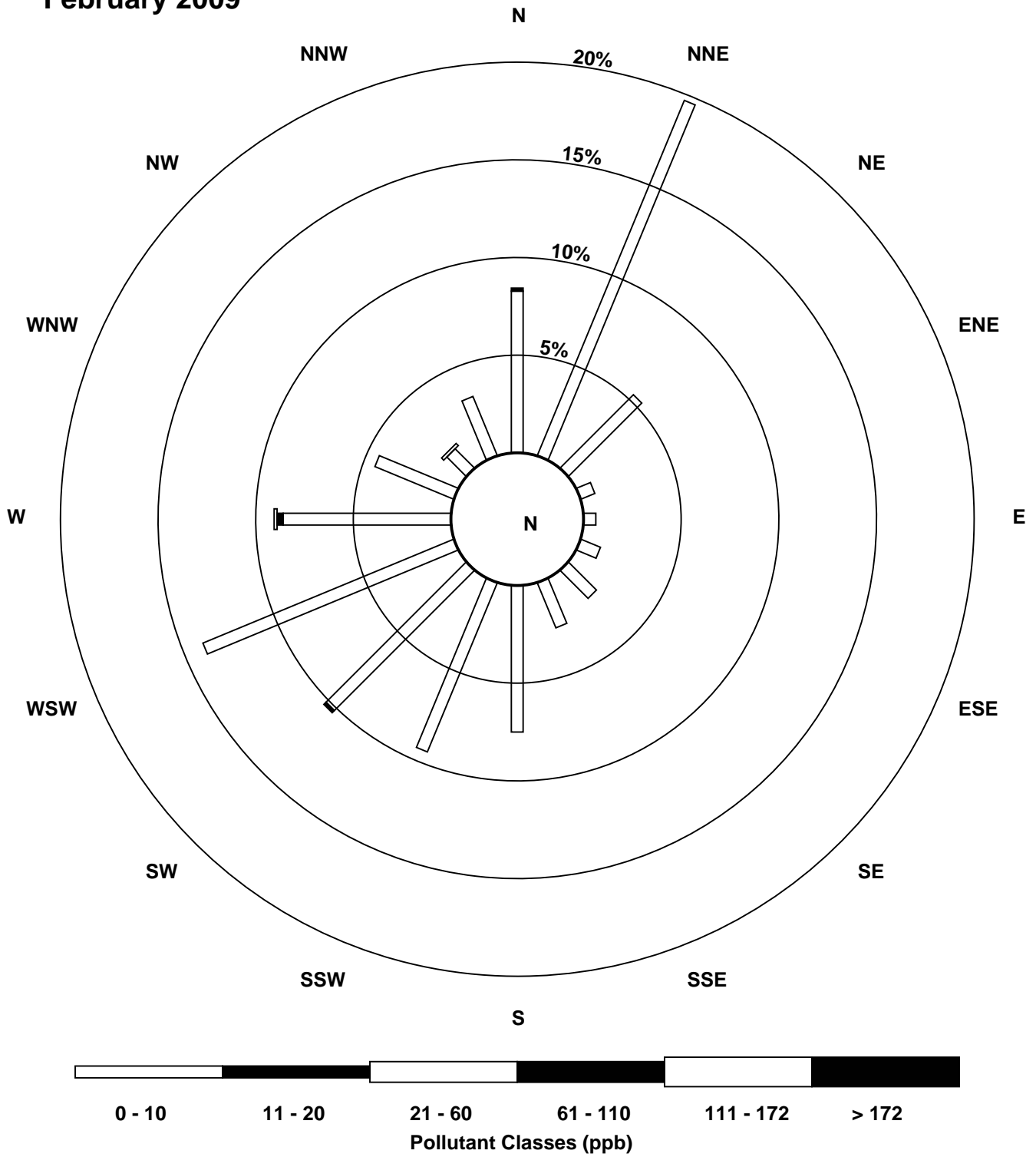
**Smoky Heights - Sulphur Dioxide (SO<sub>2</sub>) - ppb  
February 1, 2009 to March 1, 2009**

Maximum Value: 90.2 ppb on Feb 27 17:00		Maximum Daily Average: 13.9 ppb on Feb 27		Hours in Service: 672																																												
Minimum Value: 0 ppb on Feb 23 10:00		Minimum Daily Average: 0.4 ppb on Feb 23		Hours of Data: 639																																												
Maximum Diurnal Average: 5.4 ppb at hour 17		Minimum Diurnal Average: 0.9 ppb at hour 7		Hours of Missing Data: 33																																												
Monthly Average: 2.25 ppb		Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 0.4 Q <sub>1</sub> = 0.6 Median = 1.0 Q <sub>3</sub> = 1.7 P <sub>90</sub> = 3.9 P <sub>99</sub> = 23.0		Hours of Calibration: 33																																												
				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-Feb	1	1	1	1	1	1	2	2	3	1	1	1	0	A	1	1	1	0	0	0	1	0	0	1	0.9	3.2																						
2-Feb	0	0	0	0	2	1	1	1	1	2	2	2	A	14	5	4	3	12	3	2	5	1	27	1	3.9	27.3																						
3-Feb	1	1	1	1	1	1	0	0	0	1	1	A	0	0	1	1	0	0	0	1	1	0	1	1	0.6	1.4																						
4-Feb	1	1	2	8	0	0	0	1	2	10	A	1	10	4	0	1	6	1	1	0	0	0	0	1	2.2	10.3																						
5-Feb	2	2	4	3	1	1	0	1	4	A	1	0	0	6	9	1	1	1	0	0	0	1	1	2	1.8	8.8																						
6-Feb	2	1	1	1	1	1	0	1	A	4	4	7	2	2	1	1	1	1	1	1	1	1	0	0	1.5	7.4																						
7-Feb	0	1	0	1	0	1	1	A	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0.5	0.8																						
8-Feb	1	1	1	2	2	1	A	1	1	1	1	1	1	2	18	20	2	2	1	2	2	1	1	1	2.8	19.6																						
9-Feb	10	2	1	1	1	A	1	1	1	1	1	1	1	1	6	1	2	2	1	3	3	3	5	3	2.2	9.9																						
10-Feb	2	2	1	1	A	1	1	1	1	1	1	1	2	2	2	3	3	3	2	1	1	1	1	1	1.5	3.2																						
11-Feb	1	5	2	A	2	2	1	1	1	1	1	3	3	3	1	1	2	2	1	2	2	1	9	2.1	9.0																							
12-Feb	8	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.3	8.4																						
13-Feb	1	A	1	0	0	0	0	0	1	1	0	1	1	0	0	1	1	1	1	0	0	0	0	0	0.5	0.8																						
14-Feb	A	0	1	1	1	1	0	1	1	1	2	2	2	2	2	2	2	8	7	1	2	2	1	A	1.8	7.8																						
15-Feb	1	1	1	1	1	1	1	1	2	4	4	4	4	5	11	9	4	3	2	1	1	1	A	2	2.9	11.0																						
16-Feb	2	2	2	2	2	2	2	2	2	2	2	3	3	2	2	3	3	3	2	2	6	A	8	6	2.7	7.5																						
17-Feb	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	12	19	18	A	6	6	5	3.9	18.9																						
18-Feb	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1.3	3.6																						
19-Feb	1	1	1	6	12	7	2	2	2	1	1	2	2	2	1	1	1	1	1	A	1	1	1	1	2.2	11.6																						
20-Feb	1	1	1	1	1	1	1	1	1	C	C	C	A	1	2	1	1	2	3	1	1	1	1	1	1.1	2.9																						
21-Feb	1	2	1	1	1	A	1	1	1	1	1	1	2	2	1	1	1	1	1	1	16	5	5	6	2.3	15.6																						
22-Feb	6	2	1	1	A	1	1	1	2	1	1	1	2	2	1	1	1	1	1	1	1	1	0	0	1.2	5.8																						
23-Feb	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.4	0.7																						
24-Feb	0	0	A	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0.5	0.7																						
25-Feb	0	A	1	1	1	1	0	0	0	0	1	1	0	1	1	1	1	1	2	2	2	2	2	2	1.0	2.3																						
26-Feb	A	2	1	1	1	2	2	2	2	2	2	6	4	9	9	18	3	2	3	15	7	2	A	2	4.4	17.9																						
27-Feb	2	1	1	1	1	1	1	1	1	1	1	1	1	1	59	53	90	59	32	4	2	2	A	2	13.9	90.2																						
28-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7	5	1	A	4	3	1.5	7.5																						
																								1.9	1.3	1.2	1.5	1.4	1.2	0.9	1.0	1.2	1.6	1.2	1.5	1.8	2.2	5.0	4.3	5.4	4.4	3.5	2.1	2.5	1.6	2.8	1.9	Diurnal Average
																								9.9	4.6	3.9	7.9	11.6	6.8	2.1	2.0	3.8	9.6	4.3	7.4	10.3	13.6	59.4	53.1	90.2	58.8	32.1	18.3	15.6	6.7	27.3	9.0	Diurnal Maximum
C - Calibration																								A - Automated Daily Zero Span																								

# Hourly Maximums for SO<sub>2</sub> at Smoky Heights February 2009



# Pollutant Rose for SO<sub>2</sub> at Smoky Heights February 2009

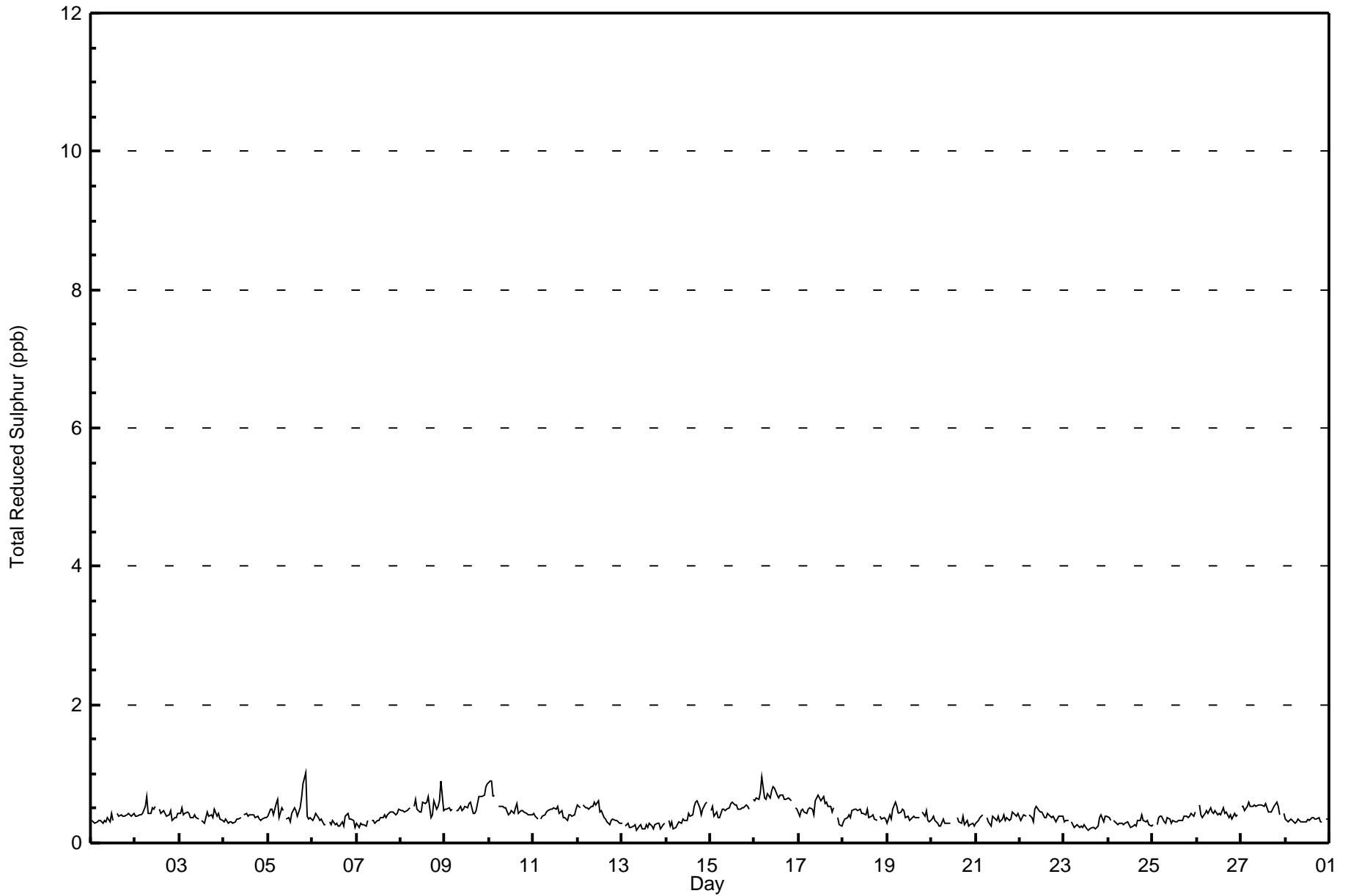


**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Smoky Heights - Total Reduced Sulphur (TRS) - ppb  
February 1, 2009 to March 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0														Hours in Service: 672																																			
Maximum Value: 1.0 ppb on Feb 5 21:00														Maximum Daily Average: 0.7 ppb on Feb 16																																			
Minimum Value: 0 ppb on Feb 23 14:00														Hours of Data: 640																																			
Maximum Diurnal Average: 0.4 ppb at hour 20														Hours of Missing Data: 32																																			
Monthly Average: 0.41 ppb														Hours of Calibration: 32																																			
Minimum Daily Average: 0.2 ppb on Feb 13														Percent Operational Time: 100.0																																			
Minimum Diurnal Average: 0.4 ppb at hour 17														Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.3 Q <sub>1</sub> = 0.3 Median = 0.4 Q <sub>3</sub> = 0.5 P <sub>90</sub> = 0.6 P <sub>99</sub> = 0.8																																			
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-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.4	0.4																						
2-Feb	0	0	0	0	0	1	1	0	0	1	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7																						
3-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5																						
4-Feb	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	0.4	0.4																						
5-Feb	0	0	0	0	1	1	0	1	0	A	0	0	0	0	1	0	0	1	1	1	1	0	0	0	0	0.5	1.0																						
6-Feb	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	0.3	0.4																						
7-Feb	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	0.3	0.5																						
8-Feb	0	0	0	0	0	0	A	1	1	0	0	0	1	1	1	1	0	0	1	0	1	1	1	0	0	0.5	0.9																						
9-Feb	0	0	1	0	0	A	0	0	1	0	0	1	1	1	1	0	0	0	1	1	1	1	1	1	1	0.6	0.9																						
10-Feb	1	1	1	1	A	1	1	1	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0.5	0.9																						
11-Feb	0	0	0	A	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5																						
12-Feb	1	1	A	1	1	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6																						
13-Feb	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	0.3																						
14-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	1	1	A	0.4	0.6																							
15-Feb	0	1	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	1	1	1	1	0	A	1	0.5	0.6																							
16-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	0.7	1.0																							
17-Feb	0	0	0	0	0	0	1	0	0	1	1	1	1	1	1	1	1	1	0	1	A	0	0	0	0.5	0.7																							
18-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.4	0.5																							
19-Feb	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.4	0.6																							
20-Feb	0	0	0	0	0	0	0	0	0	0	0	C	C	A	0	0	0	0	0	0	0	0	0	0	0.3	0.4																							
21-Feb	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.4																							
22-Feb	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5																							
23-Feb	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																							
24-Feb	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4																							
25-Feb	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																							
26-Feb	A	1	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.4	0.5																							
27-Feb	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	0	A	0	0.5	0.6																							
28-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.4																							
																								0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	Diurnal Average	
																								0.9	0.9	0.7	0.7	1.0	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.7	0.6	0.6	0.7	0.9	1.0	0.7	0.9	0.9	Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																																																	
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																																																	

# Hourly Averages for TRS at Smoky Heights February 2009

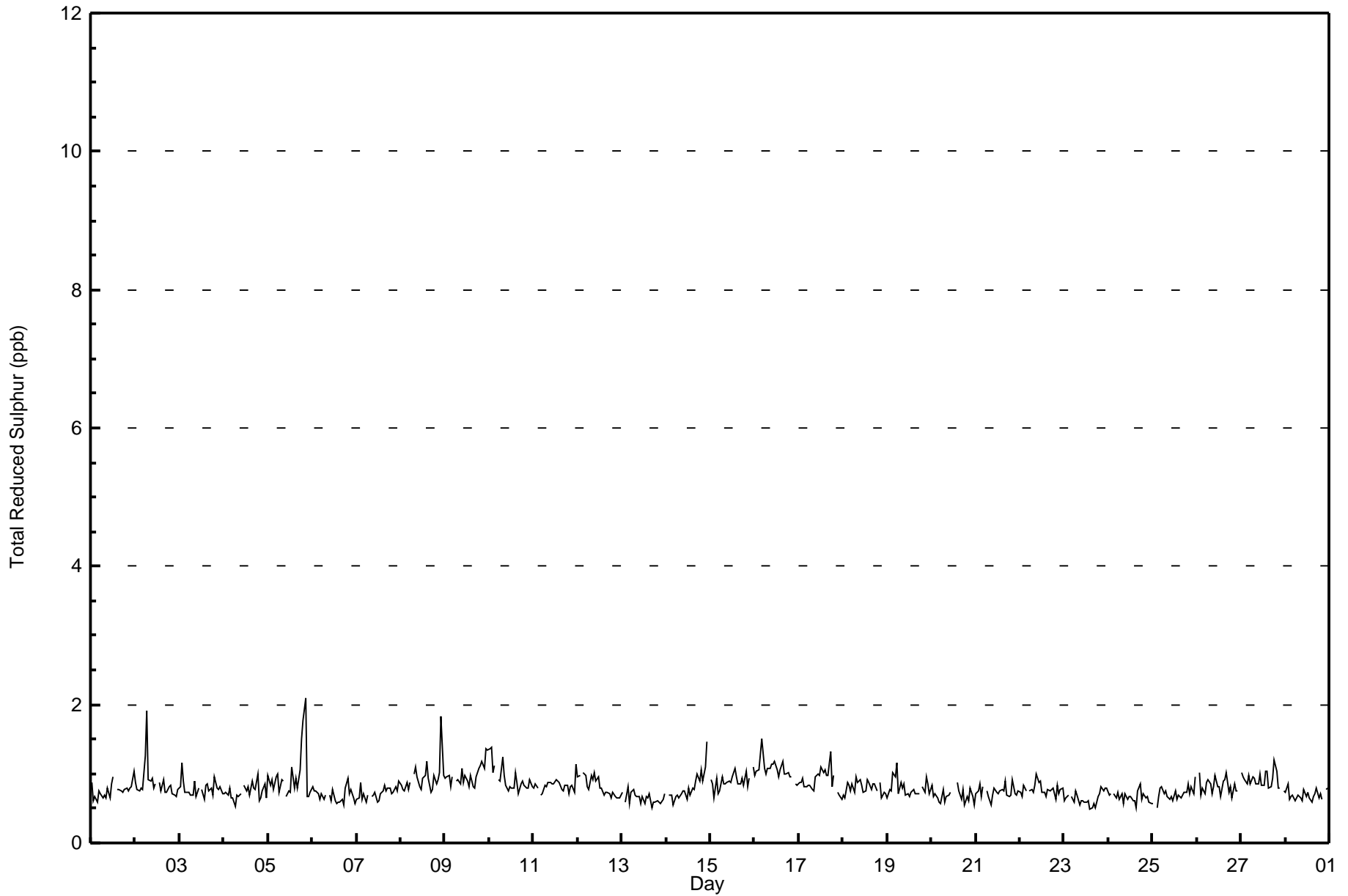


**Peace Airshed Zone Association  
Summary of Hourly Maximums**

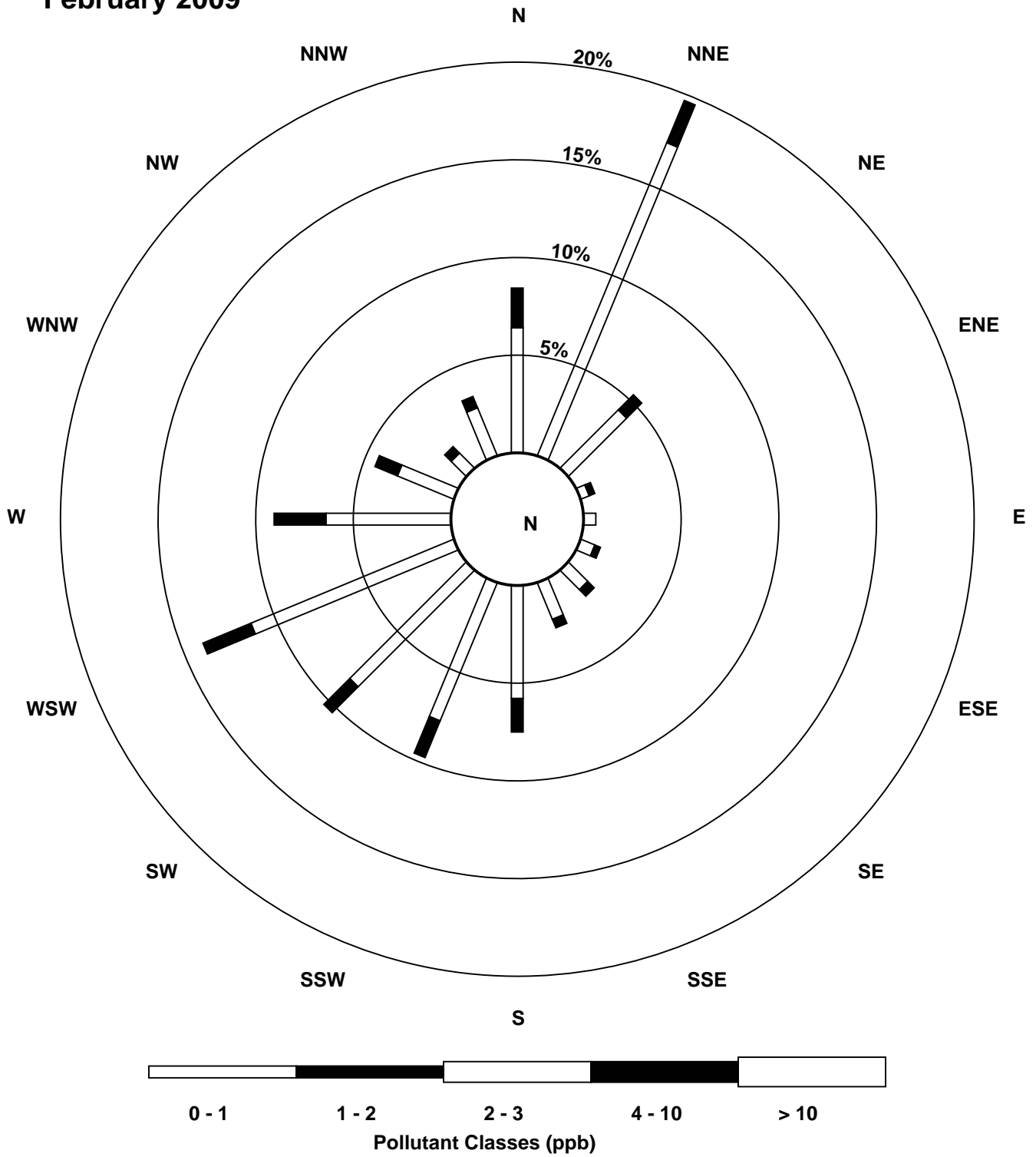
**Smoky Heights - Total Reduced Sulphur (TRS) - ppb  
February 1, 2009 to March 1, 2009**

Maximum Value: 2.1 ppb on Feb 5 21:00		Maximum Daily Average: 1.1 ppb on Feb 16		Hours in Service: 672																																												
Minimum Value: 0 ppb on Feb 23 15:00		Minimum Daily Average: 0.6 ppb on Feb 23		Hours of Data: 640																																												
Maximum Diurnal Average: 0.9 ppb at hour 20		Minimum Diurnal Average: 0.8 ppb at hour 17		Hours of Missing Data: 32																																												
Monthly Average: 0.81 ppb		Percentiles: P <sub>1</sub> = 0.5 P <sub>10</sub> = 0.6 Q <sub>1</sub> = 0.7 Median = 0.8 Q <sub>3</sub> = 0.9 P <sub>90</sub> = 1.0 P <sub>99</sub> = 1.5		Hours of Calibration: 32																																												
				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-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.8	1.0																						
2-Feb	1	1	1	1	1	1	2	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.9	1.9																						
3-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2																						
4-Feb	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0																						
5-Feb	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	2	2	2	1	1	1	1.0	2.1																						
6-Feb	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9																						
7-Feb	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9																						
8-Feb	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	0.9	1.8																						
9-Feb	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.4																						
10-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.4																						
11-Feb	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1																						
12-Feb	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0																						
13-Feb	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8																						
14-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	1.5																						
15-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.9	1.1																						
16-Feb	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1.1	1.5																						
17-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.9	1.3																						
18-Feb	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																						
19-Feb	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	1.2																						
20-Feb	1	1	1	1	1	1	1	1	1	1	C	C	A	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9																						
21-Feb	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-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0																						
23-Feb	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0.6	0.8																						
24-Feb	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9																						
25-Feb	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0																						
26-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	1.0																						
27-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.9	1.2																						
28-Feb	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	0.8																						
																								0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.8	0.8	Diurnal Average
																								1.4	1.4	1.1	1.3	1.5	1.3	1.9	1.2	1.1	1.1	1.1	1.2	1.1	1.1	1.2	1.2	1.0	1.3	1.5	1.8	2.1	1.1	1.8	1.3	Diurnal Maximum
C - Calibration																								A - Automated Daily Zero Span																								

# Hourly Maximums for TRS at Smoky Heights February 2009



# Pollutant Rose for TRS at Smoky Heights February 2009



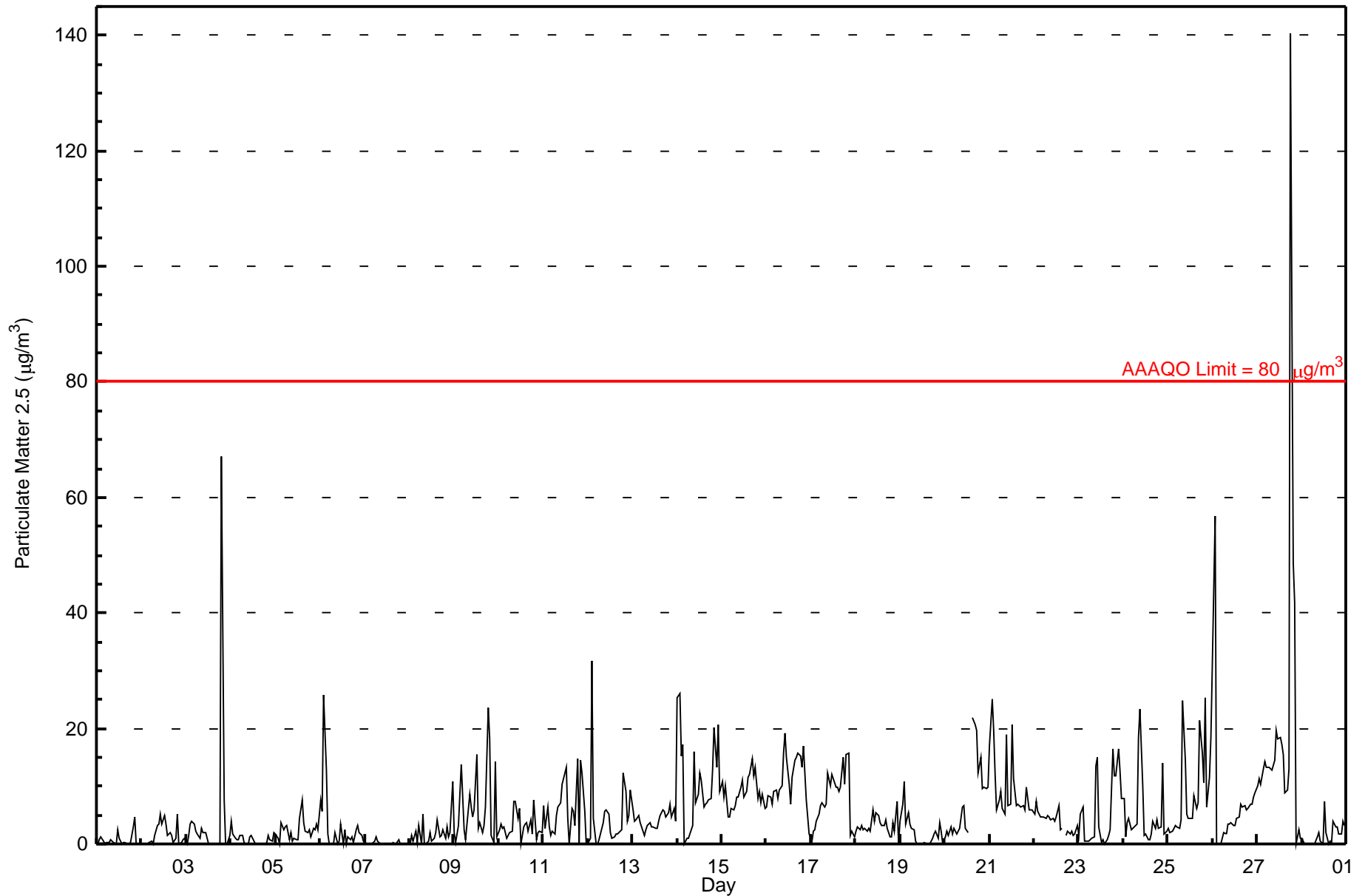


**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Smoky Heights - Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>  
February 1, 2009 to March 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 1 24-hr: 0		Hours in Service: 672																																															
Maximum Value: 140.4 µg/m <sup>3</sup> on Feb 27 19:00		Maximum Daily Average: 20.0 µg/m <sup>3</sup> on Feb 27																																															
Minimum Value: 0 µg/m <sup>3</sup> on Feb 1 05:00		Hours of Data: 668																																															
Maximum Diurnal Average: 11.1 µg/m <sup>3</sup> at hour 19		Hours of Missing Data: 4																																															
Monthly Average: 5.45 µg/m <sup>3</sup>		Hours of Calibration: 2																																															
Minimum Daily Average: 0.2 µg/m <sup>3</sup> on Feb 7		Percent Operational Time: 99.7																																															
Minimum Diurnal Average: 2.8 µg/m <sup>3</sup> at hour 7																																																	
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 1.0 Median = 3.0 Q <sub>3</sub> = 7.0 P <sub>90</sub> = 13.2 P <sub>99</sub> = 30.8																																																	
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-Feb	0	1	1	0	0	0	0	1	1	0	0	2	1	0	0	0	0	0	0	3	5	0	0	0	0.7	4.8																							
2-Feb	0	0	0	0	0	1	0	2	3	3	5	3	5	3	2	2	2	0	1	5	0	0	1	1	1.6	5.3																							
3-Feb	0	1	3	4	3	2	2	1	3	2	2	1	0	0	0	0	0	0	0	67	8	0	0	2	4.2	67.1																							
4-Feb	4	2	1	1	1	1	1	0	0	0	1	2	1	0	0	0	0	0	0	0	1	1	0	2	0.8	3.8																							
5-Feb	2	1	0	4	2	3	3	1	2	1	1	1	1	4	8	4	2	2	3	1	3	2	3	2	2.3	7.6																							
6-Feb	8	6	26	13	2	0	0	0	2	0	1	3	0	3	0	1	1	1	0	2	3	2	2	0	3.1	25.8																							
7-Feb	0	0	BD	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.2	1.3																							
8-Feb	0	2	1	2	0	3	0	5	0	0	1	2	1	1	2	4	1	1	2	1	3	1	2	11	1.9	10.8																							
9-Feb	2	0	3	9	14	2	1	3	9	6	5	6	15	3	4	2	3	6	24	18	2	0	14	1	6.3	23.6																							
10-Feb	3	3	3	3	1	1	2	2	7	7	4	6	0	3	3	4	2	4	2	8	1	2	2	2	3.2	7.7																							
11-Feb	7	3	6	3	2	2	2	5	6	7	10	11	13	4	0	6	6	3	15	0	14	12	6	0	6.0	14.8																							
12-Feb	0	1	32	4	0	0	1	3	4	6	6	5	2	1	1	2	2	2	3	12	9	4	5	9	4.7	31.6																							
13-Feb	6	4	4	5	4	3	1	2	3	4	3	3	3	3	4	5	6	6	5	5	7	5	6	4	4.1	6.9																							
14-Feb	25	26	15	17	0	1	1	2	3	16	7	8	12	11	6	7	7	8	8	13	20	13	21	9	10.7	26.1																							
15-Feb	11	8	10	5	5	6	6	7	8	8	10	11	8	9	11	12	15	12	13	8	9	7	9	6	8.9	14.8																							
16-Feb	6	8	8	7	9	9	8	9	10	16	19	15	10	7	12	15	15	16	15	13	17	8	5	2	10.8	19.2																							
17-Feb	1	2	3	4	5	7	7	6	7	12	10	12	11	10	10	9	10	15	10	16	16	2	2	1	7.8	15.8																							
18-Feb	2	3	2	3	2	3	2	3	2	6	4	5	5	4	3	3	4	3	1	1	4	2	7	0	3.1	7.4																							
19-Feb	4	7	11	3	5	3	3	2	0	0	0	0	0	0	0	0	1	2	2	1	4	2	0	0	2.2	10.9																							
20-Feb	1	2	1	3	2	3	2	2	3	6	7	3	2	C	C	22	21	20	12	15	10	10	10	10	7.5	21.9																							
21-Feb	17	25	20	12	6	8	9	6	5	19	7	7	21	11	7	7	7	6	7	6	10	6	6	6	10.0	25.1																							
22-Feb	5	7	6	5	5	5	4	5	5	4	4	4	5	7	2	3	N	2	2	2	2	2	2	3	3.9	7.4																							
23-Feb	2	5	6	1	1	1	1	1	1	13	15	3	0	1	0	1	1	3	16	12	12	17	13	8	5.5	16.5																							
24-Feb	8	1	4	4	2	3	3	3	18	23	10	1	2	1	1	2	4	3	4	3	3	14	2	2	5.1	23.4																							
25-Feb	3	2	2	3	3	3	3	4	25	14	5	4	4	4	8	6	7	21	16	11	25	6	12	18	8.8	25.4																							
26-Feb	31	57	0	0	0	1	2	2	3	3	4	3	3	4	5	7	7	7	6	6	7	7	8	9	7.6	56.8																							
27-Feb	10	11	10	13	14	13	13	13	13	15	20	18	19	17	15	9	9	13	140	49	42	0	3	1	20.0	140.4																							
28-Feb	1	0	0	0	0	0	0	0	1	2	1	0	7	2	0	0	0	4	3	3	2	2	4	3	1.5	7.5																							
																								5.6	6.8	6.6	4.6	3.2	3.0	2.8	3.3	5.2	7.0	5.7	5.0	5.4	4.2	3.9	4.7	4.8	5.6	11.1	10.1	8.4	4.6	5.2	4.0	Diurnal Average	
																								31.0	56.8	31.6	17.3	14.2	13.3	13.3	13.1	24.9	23.4	19.8	18.2	20.7	17.2	15.5	21.9	20.8	21.4	140.4	67.1	41.8	16.5	20.6	18.4	Diurnal Maximum	
C - Calibration N - Not Valid BD - Baseline Drift																																																	
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 80 µg/m <sup>3</sup> 24-hr 30 µg/m <sup>3</sup>																																																	

# Hourly Averages for PM<sub>2.5</sub> at Smoky Heights February 2009

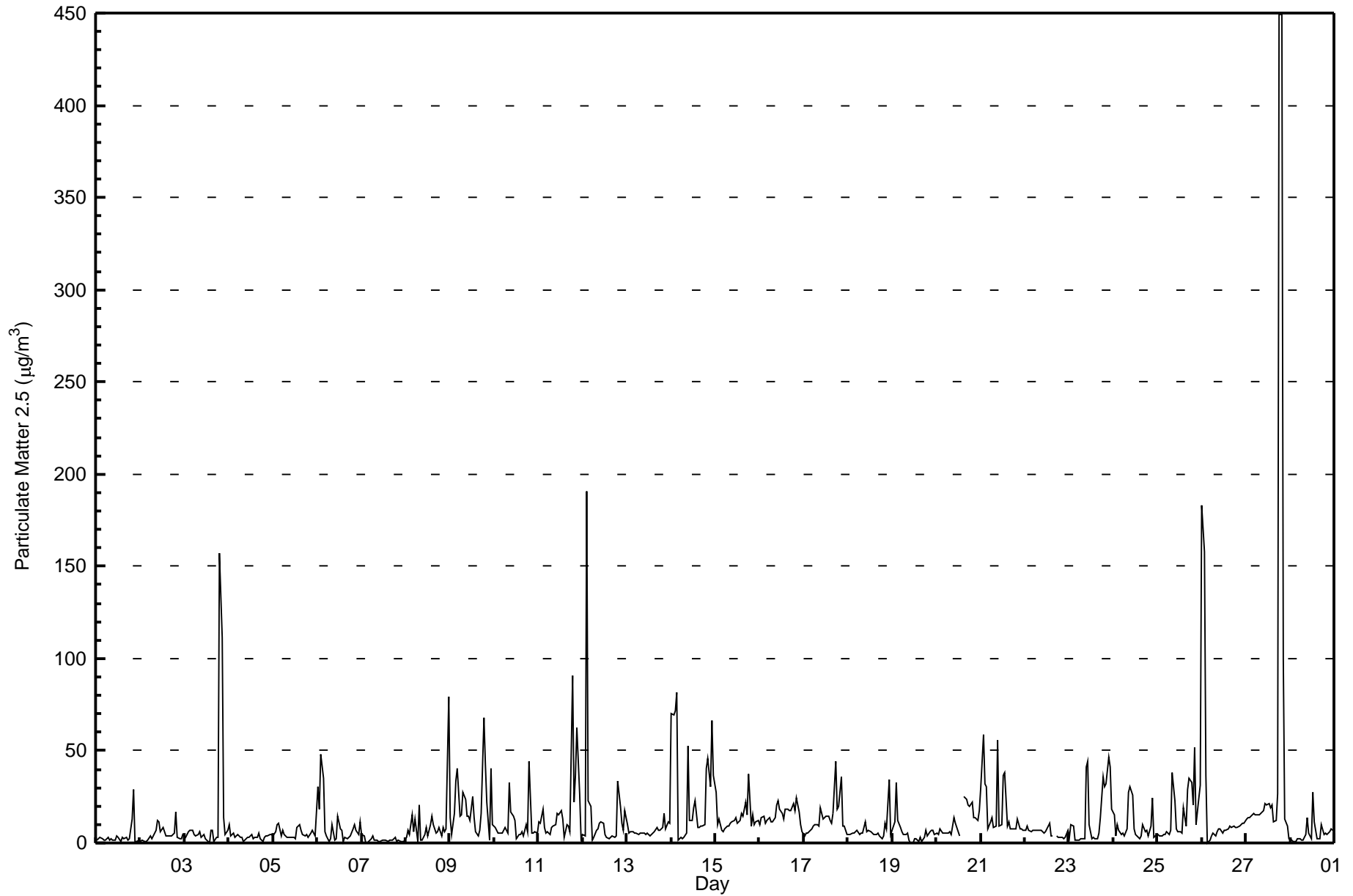


**Peace Airshed Zone Association  
Summary of Hourly Maximums**

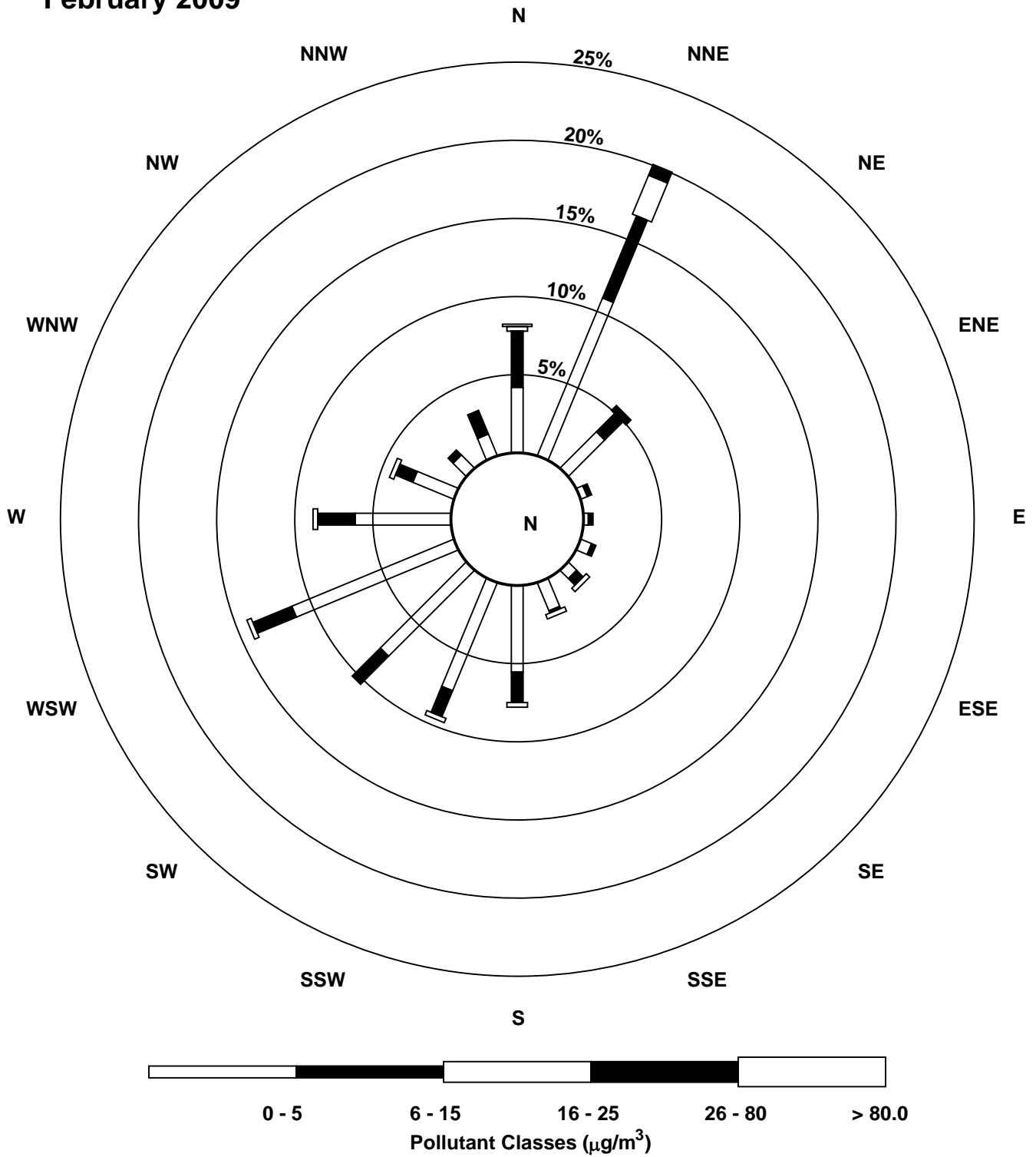
**Smoky Heights - Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>  
February 1, 2009 to March 1, 2009**

Maximum Value: 449.0 µg/m <sup>3</sup> on Feb 27 19:00		Maximum Daily Average: 55.3 µg/m <sup>3</sup> on Feb 27		Hours in Service: 672																																													
Minimum Value: 0 µg/m <sup>3</sup> on Feb 7 03:00		Minimum Daily Average: 1.6 µg/m <sup>3</sup> on Feb 7		Hours of Data: 669																																													
Maximum Diurnal Average: 35.8 µg/m <sup>3</sup> at hour 20		Minimum Diurnal Average: 5.6 µg/m <sup>3</sup> at hour 7		Hours of Missing Data: 3																																													
Monthly Average: 13.20 µg/m <sup>3</sup>		Percentiles: P <sub>1</sub> = 0.5 P <sub>10</sub> = 2.0 Q <sub>1</sub> = 3.7 Median = 6.7 Q <sub>3</sub> = 12.8 P <sub>90</sub> = 26.2 P <sub>99</sub> = 102.4		Hours of Calibration: 2																																													
				Percent Operational Time: 99.9																																													
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Feb	2	2	3	3	1	2	3	2	2	2	2	4	3	1	3	2	3	2	2	13	29	1	1	1	3.7	28.7																							
2-Feb	1	2	1	1	2	4	2	4	7	12	11	6	9	6	4	4	4	4	5	17	3	3	2	5	4.9	16.8																							
3-Feb	3	5	6	7	7	5	4	5	6	3	4	2	1	0	7	7	0	3	3	157	111	14	4	7	15.5	157.4																							
4-Feb	10	4	5	3	4	4	3	3	1	2	3	3	5	2	3	3	5	2	1	3	4	3	5	4	3.6	10.1																							
5-Feb	4	6	10	11	4	7	5	3	3	3	3	3	2	8	10	7	5	4	5	3	5	7	5	4	5.3	10.9																							
6-Feb	31	18	48	35	6	4	1	2	10	2	2	15	7	7	1	3	3	3	3	8	10	7	4	12	10.1	48.0																							
7-Feb	4	4	0	0	1	2	4	1	2	1	1	2	1	2	1	2	2	2	3	1	1	1	1	1	1.6	4.4																							
8-Feb	3	7	5	15	6	13	0	20	2	1	5	8	4	10	14	10	5	6	9	4	9	6	8	79	10.4	79.4																							
9-Feb	14	5	16	34	41	15	15	28	23	15	15	13	25	14	6	4	7	16	68	43	22	1	40	10	20.3	67.8																							
10-Feb	8	7	5	5	5	7	8	5	33	17	15	12	3	5	5	6	4	10	6	44	6	5	6	6	9.7	43.9																							
11-Feb	11	10	18	8	5	6	5	8	9	10	16	15	18	13	3	10	9	6	91	22	37	63	27	2	17.6	90.8																							
12-Feb	4	4	191	23	20	2	3	7	7	10	12	11	4	3	2	3	4	3	4	33	20	11	7	17	16.9	191.0																							
13-Feb	10	5	6	6	5	5	4	6	5	5	5	4	4	5	6	8	7	7	8	16	8	11	11	6.8	15.9																								
14-Feb	70	69	72	82	2	3	2	3	6	52	12	13	19	23	8	8	9	9	10	40	46	31	66	36	28.8	81.6																							
15-Feb	27	10	13	7	6	8	9	9	11	11	12	14	10	12	16	15	22	15	37	9	16	10	11	12	13.4	37.3																							
16-Feb	10	14	15	10	12	14	12	12	13	21	23	18	16	13	18	19	18	18	21	18	25	17	10	6	15.4	24.7																							
17-Feb	4	5	6	6	8	9	10	10	9	19	13	14	14	15	12	11	16	44	18	20	36	9	9	5	13.4	44.0																							
18-Feb	5	5	5	5	6	7	4	6	5	11	6	7	6	6	5	5	6	4	3	4	11	8	35	5	7.0	34.6																							
19-Feb	7	12	33	12	8	6	4	5	5	1	0	0	2	3	1	3	1	3	7	4	6	7	7	5	5.9	32.5																							
20-Feb	5	5	7	6	5	6	5	6	5	14	11	8	4	C	C	25	23	21	20	22	14	14	12	18	11.6	25.3																							
21-Feb	30	58	32	31	7	11	14	8	9	55	9	10	37	38	10	11	8	7	8	8	13	8	7	7	18.2	58.4																							
22-Feb	7	9	7	6	7	7	7	7	7	7	6	6	7	11	4	4	N	3	3	3	3	3	3	7	5.8	10.5																							
23-Feb	3	10	9	2	2	2	2	2	2	41	44	10	3	3	2	2	5	14	36	30	32	47	41	18	15.1	46.5																							
24-Feb	15	4	10	7	5	5	4	8	28	30	26	8	4	3	3	4	10	6	7	4	9	24	3	5	9.6	30.2																							
25-Feb	4	4	4	5	5	6	5	7	38	23	8	6	6	6	19	9	29	35	33	21	52	10	24	31	16.2	51.7																							
26-Feb	183	158	37	0	1	4	5	4	6	8	8	5	7	7	7	9	8	9	8	8	9	10	10	11	21.8	183.0																							
27-Feb	13	14	14	16	16	16	15	15	16	18	21	21	21	19	21	11	12	26	449	449	100	13	9	2	55.3	449.0																							
28-Feb	2	1	1	1	2	2	2	2	5	14	5	2	27	11	2	2	3	10	5	6	4	6	8	7	5.4	27.5																							
																								17.6	16.2	20.7	12.4	7.1	6.4	5.6	7.0	9.8	14.6	10.5	8.6	9.7	9.0	7.1	7.3	8.4	10.5	31.1	35.8	23.1	12.3	13.5	11.9	Diurnal Average	
																								183.0	157.6	191.0	81.6	40.5	15.6	14.9	27.8	37.8	55.3	44.0	20.8	36.8	37.8	20.9	25.3	28.6	44.0	449.0	449.0	111.1	62.6	66.0	79.4	Diurnal Maximum	
C - Calibration		N - Not Valid																																															

# Hourly Maximums for PM<sub>2.5</sub> at Smoky Heights February 2009



# Pollutant Rose for PM<sub>2.5</sub> at Smoky Heights February 2009

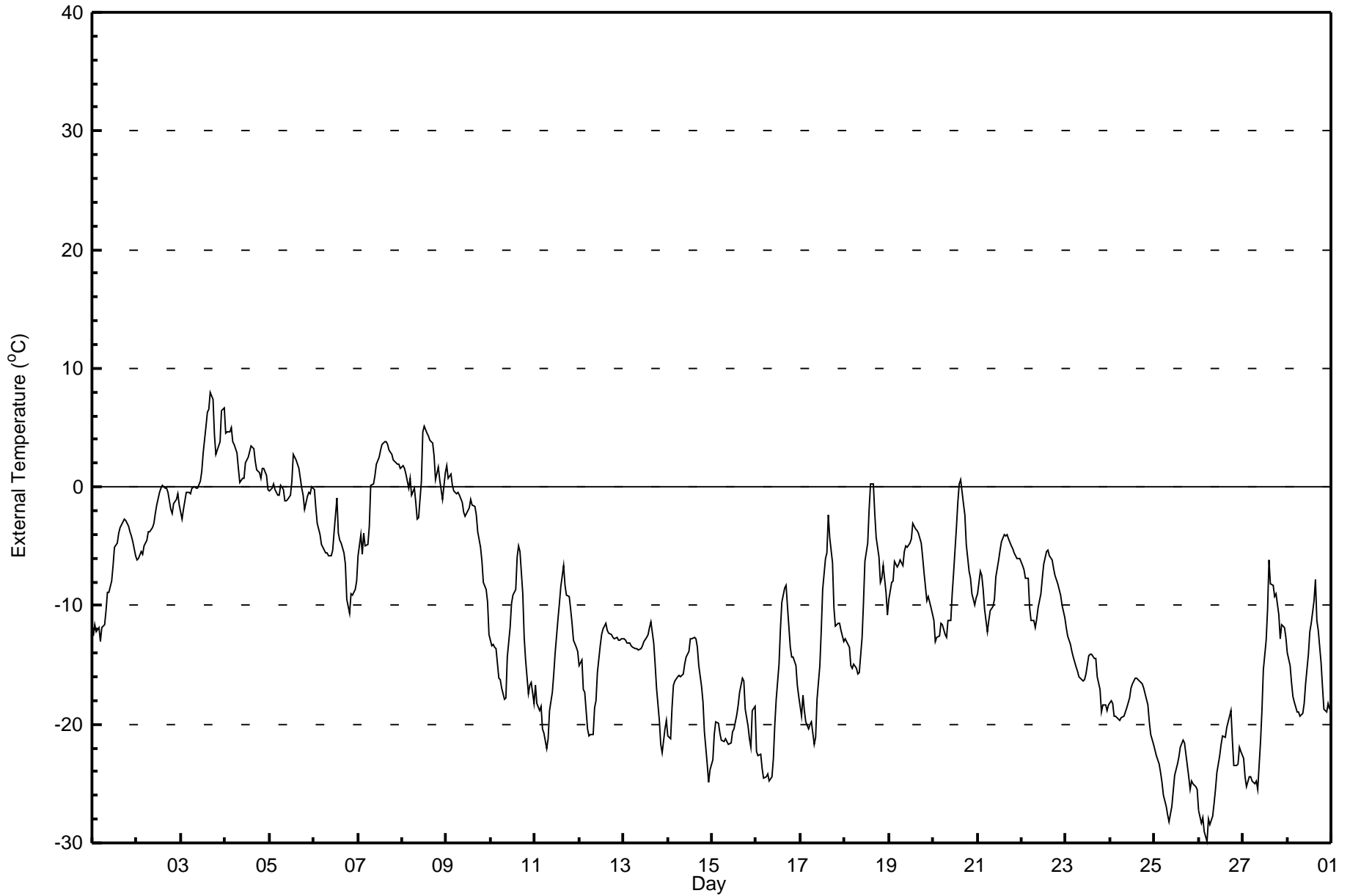


**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Smoky Heights - External Temperature (ET) - °C  
February 1, 2009 to March 1, 2009**

Maximum Value: 8.0 °C on Feb 3 17:00		Maximum Daily Average: 2.4 °C on Feb 3		Hours in Service: 672																							
Minimum Value: -30 °C on Feb 26 05:00		Minimum Daily Average: -24.4 °C on Feb 25		Hours of Data: 672																							
Maximum Diurnal Average: -6.0 °C at hour 16		Minimum Diurnal Average: -13.2 °C at hour 8		Hours of Missing Data: 0																							
Monthly Average: -10.43 °C		Percentiles: P <sub>1</sub> = -27.9 P <sub>10</sub> = -21.7 Q <sub>1</sub> = -17.3 Median = -11.1 Q <sub>3</sub> = -3.5 P <sub>90</sub> = 0.8 P <sub>99</sub> = 4.8		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-Feb	-13	-12	-12	-12	-13	-12	-12	-10	-9	-9	-8	-7	-5	-5	-4	-3	-3	-3	-3	-4	-4	-5	-6	-7.3	-2.7		
2-Feb	-6	-6	-5	-6	-5	-5	-4	-4	-3	-3	-2	-2	0	0	0	0	0	-2	-2	-1	-1	-1	-2	-2.5	0.1		
3-Feb	-3	-2	-1	0	0	-1	0	0	0	0	0	1	3	5	6	7	8	7	4	3	3	4	6	7	2.4	8.0	
4-Feb	5	5	5	5	4	4	3	2	0	1	1	2	2	3	3	3	2	1	1	1	2	2	1	0	2.3	5.0	
5-Feb	0	0	0	0	-1	-1	0	0	-1	-1	-1	-1	0	3	2	2	2	0	-1	-2	-1	0	-1	0	-0.1	2.7	
6-Feb	0	-2	-3	-4	-5	-5	-6	-6	-6	-6	-5	-4	-1	-4	-4	-5	-6	-6	-10	-11	-9	-9	-9	-8	-5.5	-0.2	
7-Feb	-6	-4	-6	-4	-5	-5	-3	0	0	1	2	3	3	4	4	4	4	3	3	2	2	2	2	2	0.3	3.9	
8-Feb	2	2	1	0	1	-1	0	-1	-3	-3	1	5	5	5	4	4	4	3	1	2	1	0	-1	1	1.2	5.1	
9-Feb	2	1	1	0	0	-1	0	-1	-1	-2	-2	-2	-2	-1	-1	-2	-2	-4	-5	-6	-8	-9	-10	-12	-2.9	1.7	
10-Feb	-13	-13	-14	-14	-16	-16	-17	-18	-18	-14	-12	-10	-9	-9	-6	-5	-5	-9	-13	-15	-17	-17	-16	-18	-13.1	-5.0	
11-Feb	-17	-18	-19	-19	-20	-21	-22	-21	-19	-17	-16	-14	-11	-10	-8	-7	-8	-9	-9	-10	-11	-13	-14	-14	-14.5	-6.6	
12-Feb	-15	-15	-17	-17	-20	-21	-21	-21	-19	-18	-16	-13	-12	-12	-12	-12	-12	-12	-13	-13	-13	-13	-13	-13	-15.1	-11.5	
13-Feb	-13	-13	-13	-13	-13	-14	-14	-14	-14	-14	-13	-13	-13	-12	-12	-11	-13	-15	-17	-20	-22	-22	-20	-20	-14.9	-11.4	
14-Feb	-21	-21	-19	-17	-16	-16	-16	-16	-16	-15	-14	-14	-13	-13	-13	-13	-13	-15	-17	-18	-21	-23	-25	-24	-17.0	-12.7	
15-Feb	-23	-21	-20	-20	-21	-21	-21	-21	-21	-22	-22	-21	-20	-19	-18	-17	-16	-16	-19	-20	-21	-22	-19	-18	-20.0	-16.2	
16-Feb	-22	-23	-23	-24	-25	-24	-24	-25	-24	-23	-20	-18	-15	-12	-10	-9	-8	-10	-13	-14	-14	-15	-17	-18	-17.9	-8.2	
17-Feb	-19	-18	-19	-20	-20	-20	-20	-22	-21	-18	-15	-12	-9	-6	-6	-2	-4	-6	-10	-12	-12	-11	-12	-13	-13.6	-2.3	
18-Feb	-13	-13	-14	-15	-15	-15	-15	-16	-16	-13	-10	-6	-5	-2	0	0	-2	-4	-6	-8	-8	-7	-9	-11	-9.2	0.3	
19-Feb	-9	-8	-8	-6	-7	-7	-6	-7	-5	-5	-5	-5	-4	-3	-4	-4	-4	-5	-6	-7	-10	-9	-10	-10	-6.4	-3.1	
20-Feb	-11	-13	-13	-13	-12	-12	-12	-13	-11	-11	-9	-7	-3	-1	0	1	-1	-2	-5	-7	-8	-9	-10	-9	-8.0	0.6	
21-Feb	-9	-7	-7	-9	-10	-12	-11	-10	-10	-9	-8	-6	-5	-5	-4	-4	-4	-4	-5	-5	-6	-6	-6	-6	-7.1	-4.0	
22-Feb	-7	-7	-8	-8	-10	-11	-11	-12	-11	-10	-9	-8	-6	-5	-5	-6	-6	-7	-8	-8	-9	-9	-10	-11	-8.4	-5.4	
23-Feb	-12	-13	-13	-14	-14	-15	-16	-16	-16	-16	-16	-16	-14	-14	-14	-14	-14	-16	-17	-19	-18	-18	-19	-18	-15.6	-11.9	
24-Feb	-18	-18	-19	-19	-20	-20	-19	-19	-19	-19	-18	-17	-17	-16	-16	-16	-16	-17	-17	-17	-18	-20	-21	-22	-18.2	-16.1	
25-Feb	-22	-23	-23	-24	-25	-26	-27	-28	-28	-27	-26	-24	-23	-23	-22	-21	-22	-23	-24	-25	-25	-25	-25	-26	-24.4	-21.3	
26-Feb	-27	-28	-28	-29	-30	-28	-28	-28	-27	-26	-24	-23	-22	-21	-21	-20	-20	-19	-21	-23	-24	-23	-22	-22	-24.3	-18.9	
27-Feb	-23	-24	-25	-24	-24	-25	-25	-25	-26	-21	-19	-15	-13	-10	-6	-8	-8	-9	-9	-11	-13	-12	-12	-13	-16.7	-6.1	
28-Feb	-14	-15	-16	-18	-18	-19	-19	-19	-19	-18	-17	-14	-12	-12	-10	-8	-11	-12	-15	-17	-19	-19	-18	-19	-15.7	-7.8	
		-11.7	-11.8	-12.1	-12.2	-12.9	-13.1	-13.1	-13.2	-13.0	-12.1	-10.8	-9.3	-7.9	-7.0	-6.3	-6.0	-6.5	-7.5	-9.1	-10.3	-10.8	-11.1	-11.2	-11.5	Diurnal Average	
		4.5	4.6	4.6	5.0	3.8	3.6	2.9	1.6	0.3	1.0	1.9	4.6	5.1	5.1	6.3	6.5	8.0	7.4	4.4	2.7	3.4	3.8	6.5	6.6	Diurnal Maximum	

# Hourly Averages for External Temperature at Smoky Heights February 2009





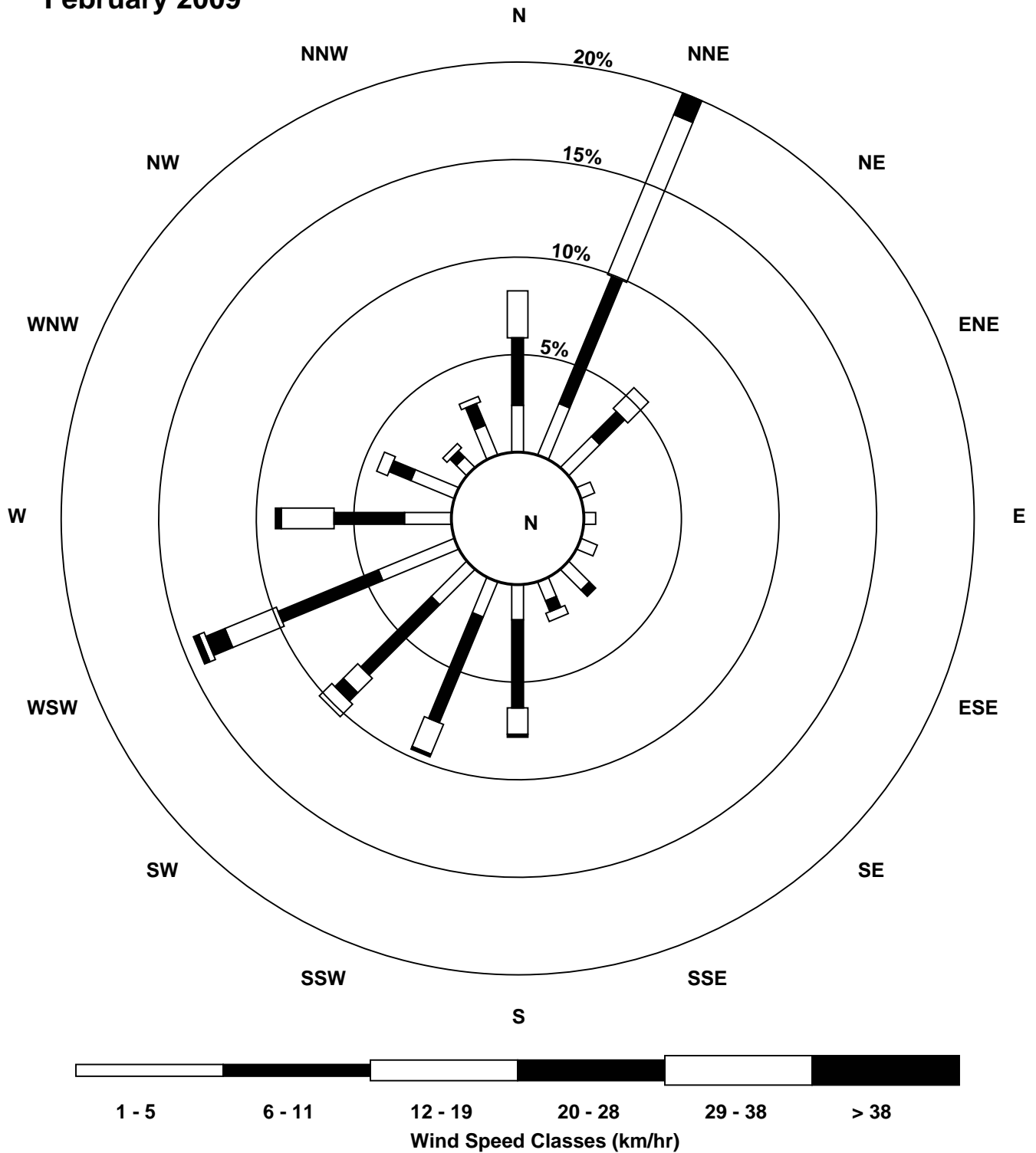


**Peace Airshed Zone Association  
Summary of Hourly Averages**

Smoky Heights  
February 1, 2009 to March 1, 2009  
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	16	13	15	16	14	17	15	13	14	13	12	11	10	10	10	10	9	8	6	5	8	7	6	9	10.9	17.0
Dir	39	19	19	35	35	31	37	36	32	22	24	22	18	8	349	348	357	3	19	8	18	15	9	14	21.0	31.4
24 Spd	11	13	11	12	11	10	12	11	11	14	14	16	18	16	19	18	18	17	13	17	19	22	20	21	15.0	21.5
Dir	16	16	12	13	9	10	9	9	10	18	22	24	22	25	23	21	22	28	27	27	27	23	27	26	20.7	23.4
25 Spd	21	19	18	20	22	20	17	17	12	11	12	11	13	13	15	14	13	11	11	10	10	12	13	13	14.5	22.2
Dir	25	27	27	23	24	28	22	19	17	17	13	12	10	10	19	20	16	12	18	17	19	20	20	24	20.0	23.8
26 Spd	8	6	4	8	8	11	8	11	11	14	12	16	15	12	13	13	11	9	5	6	9	9	12	8	6.6	16.2
Dir	24	37	184	189	187	180	178	180	179	166	192	190	187	239	268	269	268	281	283	265	261	249	232	248	219.1	190.2
27 Spd	11	9	6	7	7	8	8	9	9	7	9	7	4	4	5	6	6	0	6	9	8	12	13	20	1.7	20.1
Dir	186	187	187	203	208	206	210	219	189	209	179	170	155	159	245	235	279	312	6	41	21	20	23	34	190.3	33.7
28 Spd	18	15	13	11	10	9	12	13	13	13	14	12	10	8	4	4	5	2	9	5	5	5	7	9	6.9	17.8
Dir	42	37	21	18	18	11	16	19	16	28	20	29	22	2	328	13	296	320	278	317	294	238	251	244	8.0	41.8
Spd	2.8	3.2	2.6	2.7	2.7	2.7	2.3	2.3	2.5	2.3	2.8	2.6	2.0	3.0	3.6	2.8	2.0	1.4	2.1	2.6	2.9	3.1	3.1	3.1	Diurnal Average	
Dir	301.5	305.3	299.9	290.0	267.7	247.5	245.5	264.9	270.6	261.6	255.7	246.7	247.5	263.5	267.3	281.0	280.1	290.4	320.9	338.2	312.7	294.0	289.3	307.7		
Spd	22.0	24.0	33.7	47.8	40.5	37.0	30.5	22.3	22.2	26.0	30.3	34.3	32.6	29.2	29.0	21.8	17.7	17.1	17.0	19.2	19.2	21.5	23.5	21.6	Diurnal Maximum	
Dir	241.9	241.7	251.1	250.0	237.5	230.6	235.3	220.8	228.7	231.9	235.1	237.8	234.9	219.3	227.1	220.6	21.7	28.2	192.9	198.9	27.1	23.4	189.0	197.1		
Maximum Speed Value: 48 km/h on Feb 4 04:00																			Minimum Speed Value: 0 km/h on Feb 27 18:00					Hours in Service:		672
Maximum Daily Speed Average: 20.6 km/h on Feb 4																			Minimum Daily Speed Average: 1.7 km/h on Feb 10					Hours of Data:		672
Maximum Diurnal Speed Average: 3.6 km/h at hour 15																			Minimum Diurnal Speed Average: 1.4 km/h at hour 18					Hours of Missing Data:		0
Monthly Average Velocity: 2.40 km/h 281.46 deg																			Speed Percentiles: P <sub>1</sub> = 1.0 P <sub>10</sub> = 2.8 Q <sub>1</sub> = 4.8 Median = 8.2 Q <sub>3</sub> = 12.0 P <sub>90</sub> = 16.2 P <sub>99</sub> = 30.0					Percent Operational Time:		100.0
All monthly, daily, and diurnal averages have been calculated using vector methods																										
Frequency Distribution																										
Direction	Speed Range (km/h)							Total																		
	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38																				
North	25	53	66	0	0	0	144																			
NorthEast	27	25	36	9	0	0	97																			
East	10	0	0	0	0	0	10																			
SouthEast	20	4	0	0	0	0	24																			
South	18	52	18	3	0	0	91																			
SouthWest	30	76	26	8	7	1	148																			
West	33	54	30	6	1	1	125																			
NorthWest	17	12	4	0	0	0	33																			
Total	180	276	180	26	8	2	672																			

# Wind Rose for WS at Smoky Heights February 2009



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

**Smoky Heights - Wind Speed (WS) - km/h**  
**February 1, 2009 to March 1, 2009**

Maximum Speed: 48 km/h on Feb 4 04:00		Maximum Daily Speed Average: 22.0 km/h on Feb 4		Hours in Service: 672																							
Minimum Speed: 1 km/h on Feb 18 16:00		Minimum Daily Speed Average: 3.9 km/h on Feb 10		Hours of Data: 672																							
Maximum Diurnal Speed Average: 10.9 km/h at hour 4		Minimum Diurnal Speed Average: 7.8 km/h at hour 20		Hours of Missing Data: 0																							
Monthly Average Speed: 9.46 km/h		Percentiles: P <sub>1</sub> = 1.9 P <sub>10</sub> = 3.4 Q <sub>1</sub> = 5.2 Median = 8.5 Q <sub>3</sub> = 12.1 P <sub>90</sub> = 16.4 P <sub>99</sub> = 30.1		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-Feb	15	16	13	16	17	15	15	15	10	8	8	7	6	8	10	9	14	14	8	3	3	4	3	5	10.1	17.1	
2-Feb	7	8	7	5	7	10	6	11	6	7	8	9	11	16	14	16	17	15	14	9	19	15	11	7	10.6	18.9	
3-Feb	6	3	5	5	3	4	7	7	9	9	9	10	9	11	6	7	13	11	7	5	6	16	23	22	8.9	23.5	
4-Feb	16	24	34	48	41	37	31	21	15	23	21	24	19	24	24	18	14	11	17	19	16	16	9	7	22.0	47.9	
5-Feb	7	6	5	6	6	7	16	8	9	10	12	5	6	6	14	11	5	4	4	4	4	8	12	10	7.8	15.7	
6-Feb	7	12	13	16	17	13	13	12	12	11	10	5	3	10	13	12	11	9	8	10	10	9	8	7	10.3	16.7	
7-Feb	22	24	11	19	18	18	17	22	22	26	30	34	33	29	29	22	17	16	14	11	14	17	11	11	20.4	34.4	
8-Feb	5	7	9	9	12	6	9	3	6	5	5	3	4	4	8	12	12	8	6	6	4	6	3	7	6.6	12.1	
9-Feb	10	12	14	15	11	11	12	13	16	15	13	13	13	10	11	11	10	9	8	11	11	12	7	2	11.3	15.6	
10-Feb	2	3	3	3	3	3	2	3	3	3	2	3	6	6	3	2	4	2	3	4	5	9	9	4	3.9	9.2	
11-Feb	2	4	3	5	7	5	6	9	7	6	7	7	5	9	9	3	3	7	11	6	4	3	6	11	6.0	11.0	
12-Feb	10	8	4	5	4	3	3	5	4	2	2	4	5	6	8	8	9	7	6	3	3	5	5	5	5.3	10.0	
13-Feb	5	4	3	2	2	3	6	6	7	8	7	6	6	5	4	3	4	7	6	4	3	2	2	2	4.4	7.5	
14-Feb	4	5	4	5	4	5	7	6	5	5	4	3	3	5	7	10	9	8	7	6	3	2	3	3	5.1	9.8	
15-Feb	3	2	2	2	2	4	5	5	4	4	4	3	4	4	8	8	6	3	5	5	5	5	8	8	4.6	8.3	
16-Feb	9	10	10	9	8	9	11	10	9	10	8	10	10	8	4	4	3	3	6	12	12	9	7	7	8.3	12.1	
17-Feb	9	10	8	7	8	6	6	8	9	8	8	7	5	4	4	2	4	5	5	7	12	13	12	12	7.4	12.8	
18-Feb	13	12	13	9	9	10	10	6	5	4	5	4	5	4	3	1	2	2	3	3	6	6	4	3	6.0	13.2	
19-Feb	7	7	4	11	8	5	4	3	12	18	17	15	10	10	15	12	7	4	3	6	7	12	14	14	9.5	18.2	
20-Feb	8	7	10	12	10	8	8	10	10	10	7	8	6	5	4	6	6	3	8	3	3	4	6	6	6.9	12.3	
21-Feb	9	11	10	10	9	6	10	12	12	11	9	7	7	8	10	12	11	12	13	13	16	14	13	13	10.8	16.4	
22-Feb	12	14	11	10	5	6	4	5	9	4	4	4	6	10	9	9	8	9	12	15	15	17	16	17	9.7	17.3	
23-Feb	16	13	16	16	14	17	15	13	14	13	12	11	10	11	10	11	10	8	6	6	8	7	6	9	11.3	17.1	
24-Feb	11	13	11	12	11	10	12	11	11	14	14	16	18	16	19	18	18	17	13	17	19	22	20	21	15.2	21.6	
25-Feb	21	19	18	20	22	20	17	17	12	11	12	11	13	13	15	14	14	11	11	10	10	12	13	13	14.6	22.2	
26-Feb	8	6	5	8	8	11	8	11	11	14	12	16	15	14	13	13	11	9	6	6	9	9	13	8	10.2	16.3	
27-Feb	11	9	6	7	8	8	8	9	9	7	9	7	4	4	5	7	6	2	7	9	8	12	13	20	8.1	20.1	
28-Feb	18	15	13	11	10	9	12	13	13	13	14	12	10	9	5	4	6	3	9	5	5	6	7	9	9.6	17.8	
		9.8	10.1	9.4	10.9	10.2	9.7	10.0	9.7	9.6	10.0	9.8	9.4	9.0	9.7	10.1	9.5	9.1	7.9	8.1	7.8	8.7	9.7	9.5	9.5	Diurnal Average	
		22.1	24.1	33.8	47.9	40.6	37.1	30.6	22.4	22.3	26.1	30.3	34.4	32.9	29.3	29.1	22.1	17.8	17.2	17.4	19.3	19.3	21.6	23.5	21.7	Diurnal Maximum	
All monthly, daily, and diurnal averages have been calculated using scalar methods																											

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

**Smoky Heights - Wind Direction (WD) - deg  
February 1, 2009 to March 1, 2009**

Maximum Value: 94.3 deg on Feb 13 04:00																					Hours in Service: 672				
Minimum Value: 2.2 deg on Feb 20 00:00																					Hours of Data: 672				
Percentiles: P <sub>1</sub> = 2.7 P <sub>10</sub> = 4.3 Q <sub>1</sub> = 6.2 Median = 10.9 Q <sub>3</sub> = 23.3 P <sub>90</sub> = 46.9 P <sub>99</sub> = 81.2																					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-Feb	5	6	5	5	6	4	4	3	33	5	11	8	15	11	6	4	17	5	62	80	49	32	16	14	80.0
2-Feb	7	9	13	21	20	25	16	12	56	60	25	8	15	7	7	16	4	17	20	68	7	5	14	15	67.9
3-Feb	14	67	14	33	40	51	18	27	17	12	17	26	19	11	18	37	6	10	44	40	59	66	3	6	67.3
4-Feb	9	5	4	4	4	4	5	6	9	7	10	10	9	6	7	13	5	9	13	4	6	6	25	25	25.0
5-Feb	21	28	47	24	19	38	6	20	16	7	7	29	11	61	10	17	24	38	11	15	14	7	12	14	61.4
6-Feb	51	7	4	4	5	11	10	8	9	9	9	42	78	11	3	7	6	13	5	8	13	8	7	42	78.3
7-Feb	3	4	17	11	9	8	13	6	6	3	3	3	7	4	5	10	13	6	23	10	6	3	10	14	22.9
8-Feb	47	82	77	29	30	57	20	80	30	17	21	41	44	28	10	6	7	40	63	50	43	18	39	21	82.1
9-Feb	32	17	20	4	9	4	5	8	5	3	13	13	14	16	13	11	9	8	5	6	6	4	18	86	85.9
10-Feb	46	68	27	45	74	66	32	13	52	42	86	27	10	15	54	72	17	31	20	40	30	9	4	93	92.6
11-Feb	26	24	18	17	11	15	10	12	16	12	8	6	15	25	32	47	53	17	47	65	81	76	22	9	80.5
12-Feb	29	48	71	10	49	34	9	10	33	47	57	7	7	9	13	14	14	16	33	39	14	12	15	15	70.6
13-Feb	17	20	63	94	88	34	24	9	9	23	19	18	26	38	39	43	37	11	6	23	14	82	21	78	94.3
14-Feb	20	6	23	6	19	36	7	14	16	12	27	58	62	21	16	11	10	5	9	8	48	66	26	33	66.4
15-Feb	12	61	48	31	61	15	23	18	23	9	7	9	4	5	5	4	69	29	10	9	13	31	19	7	68.9
16-Feb	16	15	10	9	9	11	7	10	11	8	20	13	7	25	40	25	25	37	20	6	4	35	24	8	39.9
17-Feb	10	8	26	11	4	11	9	11	9	6	5	4	20	11	23	37	17	11	12	10	6	6	6	4	36.6
18-Feb	4	8	6	4	4	8	8	22	14	12	12	20	11	10	13	53	42	36	57	66	17	22	38	45	65.8
19-Feb	13	40	53	13	9	78	18	39	22	9	10	7	31	14	4	4	7	32	55	17	12	4	3	2	77.7
20-Feb	15	10	8	4	9	13	15	20	19	7	17	10	25	58	6	5	14	74	32	55	39	57	16	37	73.9
21-Feb	5	5	7	8	7	11	7	4	4	6	7	9	11	7	4	22	9	7	5	7	12	7	6	6	21.5
22-Feb	7	9	9	6	61	47	54	34	12	33	20	41	46	12	11	8	10	8	5	4	4	5	6	5	61.1
23-Feb	6	7	7	5	6	5	5	5	4	4	5	5	16	18	12	12	10	9	9	8	5	6	10	7	17.7
24-Feb	5	3	6	5	6	6	5	6	6	5	6	4	4	4	4	4	5	4	4	4	5	3	3	3	6.3
25-Feb	3	3	3	3	3	3	5	4	5	8	7	9	9	11	7	6	6	6	7	10	5	4	6	4	10.7
26-Feb	8	30	27	11	6	5	6	4	8	7	11	7	12	30	4	5	7	5	31	11	11	10	24	17	30.8
27-Feb	6	5	21	9	7	12	15	9	9	13	9	15	14	25	20	26	18	93	20	7	5	2	5	4	92.8
28-Feb	3	5	4	2	3	7	4	3	3	7	3	5	8	17	43	34	44	47	12	9	19	23	17	9	47.0
50.7	82.1	76.9	94.3	87.7	77.7	54.5	80.2	55.5	59.8	86.4	58.2	78.3	61.4	54.3	72.0	68.9	92.8	63.0	80.0	80.5	81.9	38.8	92.6		

# PASZA

## Beaverlodge Station

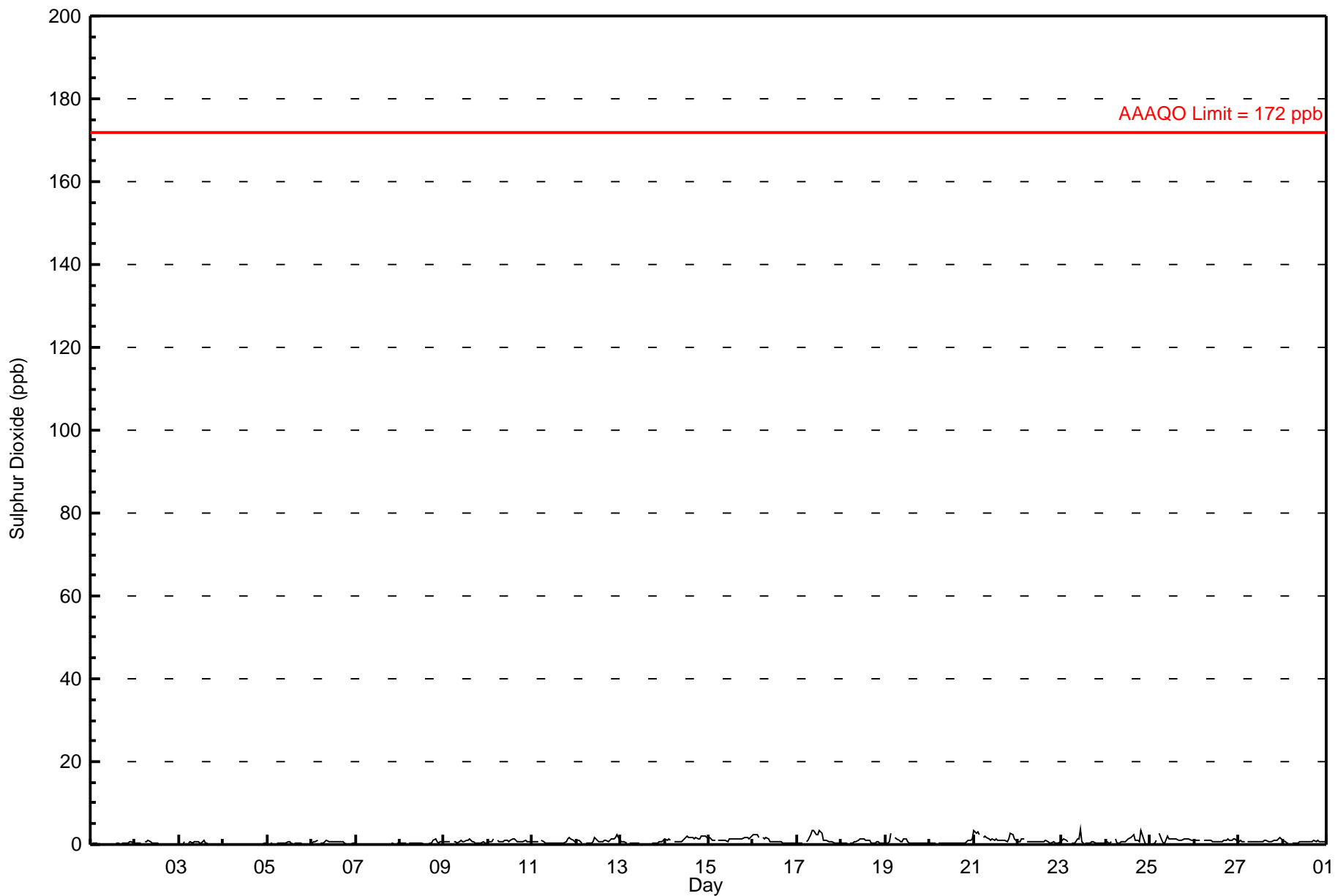
### Monthly Summary Tables, Graphs and Roses

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

**Beaverlodge - Sulphur Dioxide (SO<sub>2</sub>) - ppb  
February 1, 2009 to March 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0		Hours in Service: 672																																															
Maximum Value: 3.8 ppb on Feb 23 11:00		Maximum Daily Average: 1.6 ppb on Feb 21																																															
Minimum Value: 0 ppb on Feb 2 21:00		Hours of Data: 638																																															
Maximum Diurnal Average: 0.9 ppb at hour 11		Hours of Missing Data: 34																																															
Monthly Average: 0.72 ppb		Hours of Calibration: 34																																															
Minimum Daily Average: 0.1 ppb on Feb 4		Percent Operational Time: 100.0																																															
Minimum Diurnal Average: 0.6 ppb at hour 18																																																	
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.3 Median = 0.6 Q <sub>3</sub> = 1.0 P <sub>90</sub> = 1.5 P <sub>99</sub> = 3.1																																																	
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-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0.2	0.6																							
2-Feb	0	0	0	0	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9																							
3-Feb	0	0	0	1	A	0	1	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0.3	1.2																							
4-Feb	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-Feb	0	0	0	0	A	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7																							
6-Feb	0	1	1	1	A	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.5	1.2																							
7-Feb	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																							
8-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	1	0.4	1.2																							
9-Feb	1	1	1	1	A	1	1	0	1	1	1	1	1	1	1	1	1	0	0	0	0	1	0	0	0.7	1.4																							
10-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.4																							
11-Feb	1	1	1	1	A	1	1	0	0	0	0	0	0	0	0	0	0	0	1	2	2	1	1	1	0.7	1.8																							
12-Feb	1	1	1	0	A	0	0	0	0	1	2	1	1	1	1	1	1	1	1	1	1	2	2	2	1.0	2.4																							
13-Feb	1	1	1	0	A	0	0	0	0	0	0	C	C	C	C	C	A	0	0	0	0	1	1	1	--	0.9																							
14-Feb	1	1	1	1	A	1	1	1	1	1	1	2	2	2	2	2	2	2	1	1	2	2	2	2	1.4	2.0																							
15-Feb	2	1	1	1	A	1	1	1	1	1	1	1	2	1	1	1	1	1	1	2	2	2	1	2	1.3	2.1																							
16-Feb	3	2	2	2	A	2	1	2	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1.0	2.5																							
17-Feb	0	0	0	0	A	1	1	3	3	3	2	2	3	3	1	1	1	1	1	1	1	0	0	0	1.3	3.5																							
18-Feb	0	0	0	0	A	0	0	1	1	1	1	1	1	1	1	0	0	0	0	1	1	0	0	0	0.6	1.5																							
19-Feb	0	0	1	3	A	2	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.7	2.7																							
20-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.4	1.3																							
21-Feb	3	3	3	2	A	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	3	2	1	1	1.6	3.3																							
22-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0	1	0.7	1.4																							
23-Feb	1	1	1	1	A	1	0	1	1	1	4	1	0	0	0	0	1	1	0	0	0	0	0	0	0.7	3.8																							
24-Feb	1	0	0	1	A	1	0	0	1	1	1	1	1	2	2	2	1	1	1	3	2	0	0	0	1.0	3.3																							
25-Feb	0	0	0	1	A	3	1	0	0	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	2.6																							
26-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.3																							
27-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	0.9	1.6																							
28-Feb	1	1	0	0	A	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.0																							
																								0.7	0.7	0.7	0.8	--	0.7	0.6	0.7	0.7	0.8	0.9	0.8	0.8	0.8	0.7	0.7	0.6	0.6	0.6	0.8	0.8	0.7	0.7	0.7	Diurnal Average	
																								3.3	2.7	2.9	2.7	--	2.6	2.0	2.5	3.4	3.5	3.8	2.3	3.2	2.8	1.9	2.5	1.5	1.6	1.5	3.3	2.7	2.4	2.4	2.1	Diurnal Maximum	
C - Calibration																								A - Automated Daily Zero Span																									
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 57 ppb																																																	

# Hourly Averages for SO<sub>2</sub> at Beaverlodge February 2009



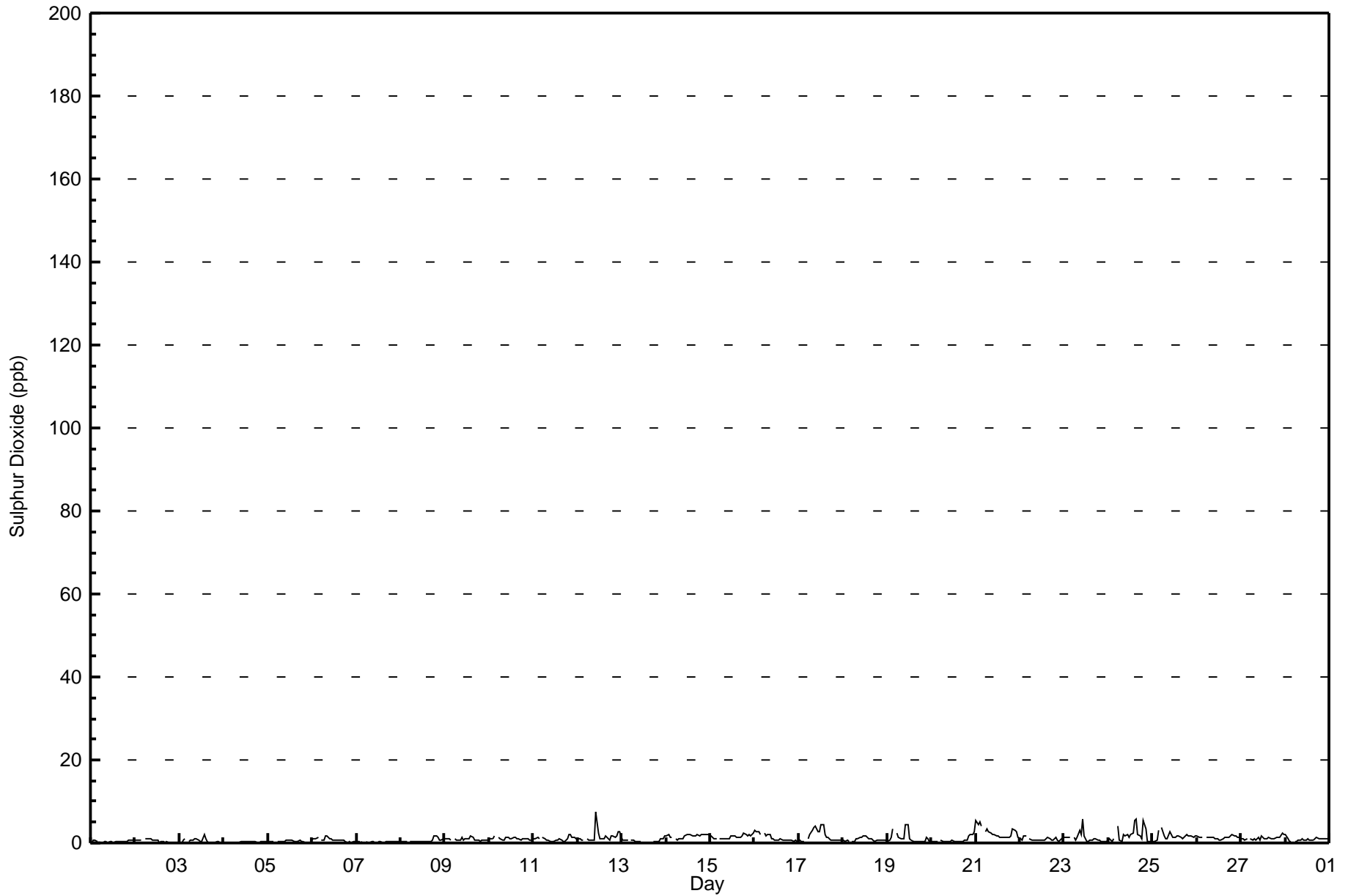
**Peace Airshed Zone Association  
Summary of Hourly Maximums**

**Beaverlodge - Sulphur Dioxide (SO<sub>2</sub>) - ppb  
February 1, 2009 to March 1, 2009**

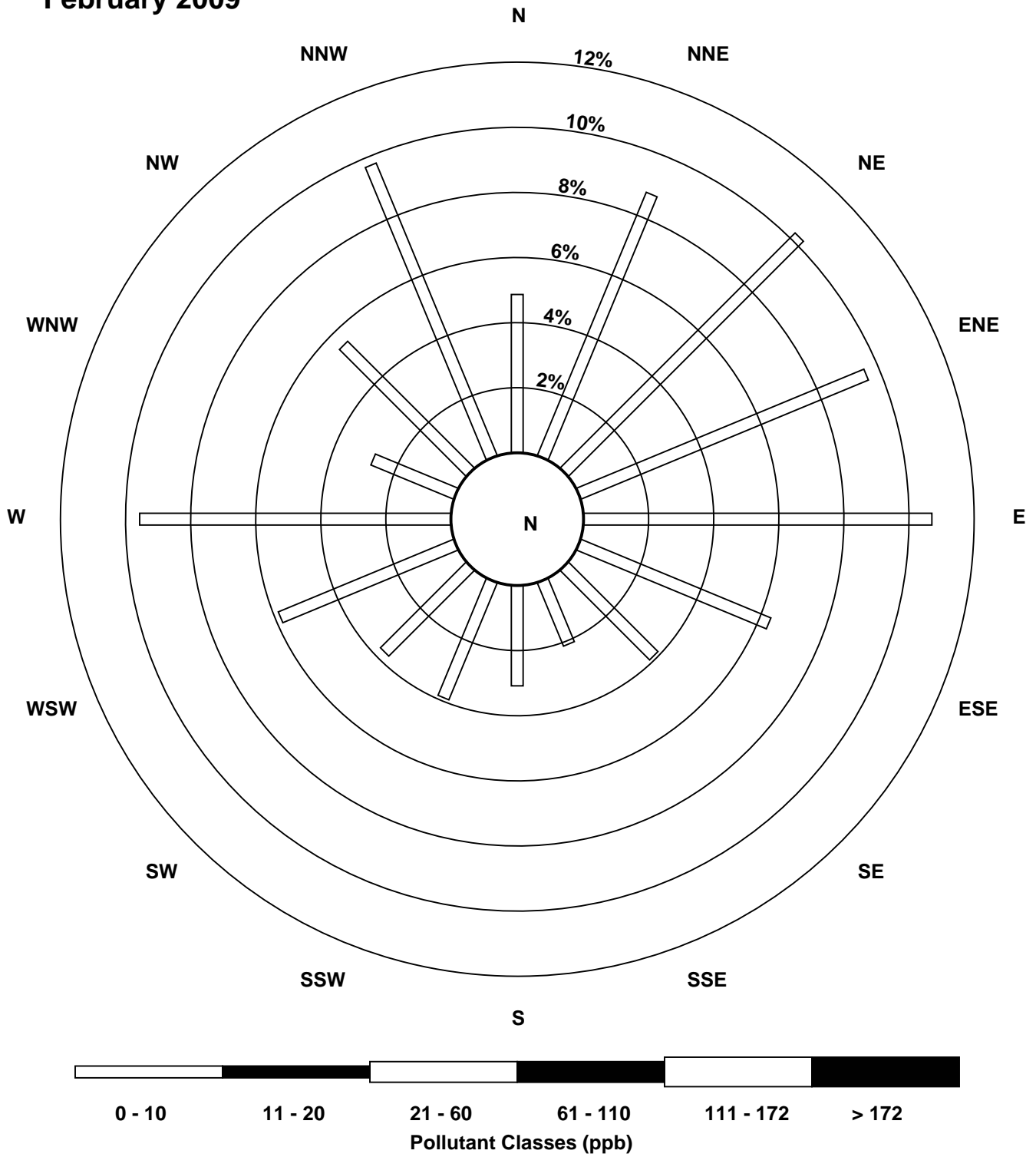
Maximum Value: 7.5 ppb on Feb 12 11:00		Maximum Daily Average: 2.5 ppb on Feb 21		Hours in Service: 672																							
Minimum Value: 0 ppb on Feb 2 23:00		Minimum Daily Average: 0.2 ppb on Feb 7		Hours of Data: 638																							
Maximum Diurnal Average: 1.5 ppb at hour 11		Minimum Diurnal Average: 0.8 ppb at hour 18		Hours of Missing Data: 34																							
Monthly Average: 1.04 ppb		Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.2 Q <sub>1</sub> = 0.4 Median = 0.8 Q <sub>3</sub> = 1.4 P <sub>90</sub> = 2.0 P <sub>99</sub> = 5.3		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-Feb	0	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.4	0.6	
2-Feb	1	1	1	1	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.1	
3-Feb	0	0	1	1	A	0	1	1	1	1	1	0	0	2	1	0	0	0	0	0	0	0	0	0	0.5	2.1	
4-Feb	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	
5-Feb	0	0	0	0	A	0	0	0	0	0	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0.4	0.8	
6-Feb	1	1	1	1	A	1	1	2	2	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.8	1.9		
7-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3		
8-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	1	1	1	1	0.6	1.9	
9-Feb	1	1	1	1	A	1	1	1	1	2	1	1	1	1	2	1	1	1	1	0	1	1	1	1	0.9	1.8	
10-Feb	1	1	1	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.8	
11-Feb	1	1	1	1	A	1	1	1	1	0	0	1	1	1	1	0	0	1	2	2	1	1	1	1	0.9	2.1	
12-Feb	1	1	1	1	A	1	1	1	1	1	7	2	1	1	1	2	1	1	2	2	2	2	3	3	1.6	7.5	
13-Feb	1	1	1	1	A	1	1	0	0	0	0	C	C	C	C	C	A	0	0	0	1	1	2	--	1.5		
14-Feb	2	2	1	1	A	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.7	2.2	
15-Feb	2	1	1	1	A	1	1	1	1	1	1	2	2	2	1	2	2	2	2	2	2	2	2	2	1.5	2.4	
16-Feb	3	3	3	2	A	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1.3	3.0	
17-Feb	1	0	0	0	A	1	2	3	4	4	3	3	5	4	2	1	1	1	1	1	1	1	1	1	1.7	4.5	
18-Feb	1	0	1	0	A	0	0	1	1	1	2	2	2	1	1	1	1	0	1	1	1	1	1	1	0.8	1.7	
19-Feb	0	1	1	3	A	2	1	1	1	1	4	4	1	1	0	0	0	0	0	0	0	1	1	0	1.2	4.5	
20-Feb	0	0	0	0	A	1	0	0	0	0	0	1	1	0	0	0	0	0	1	1	2	2	2	3	0.7	2.8	
21-Feb	5	4	5	4	A	3	3	3	2	2	2	2	1	1	1	1	1	1	1	2	4	3	3	1	2.5	5.4	
22-Feb	1	1	2	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0.9	1.8	
23-Feb	1	2	1	1	A	1	1	1	3	2	6	2	0	0	1	1	1	1	1	1	0	0	0	0	1.2	5.8	
24-Feb	1	1	0	1	A	4	1	0	2	2	2	1	2	2	6	6	2	2	1	5	4	0	0	0	2.0	5.8	
25-Feb	0	0	1	3	A	4	2	1	1	3	2	1	1	2	2	1	1	1	2	2	2	2	1	2	1.6	3.7	
26-Feb	2	2	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1.3	1.9	
27-Feb	1	1	1	1	A	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	3	2	1.2	2.5	
28-Feb	2	1	0	0	A	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.9	
		1.1	1.0	1.0	1.2	--	1.1	0.9	1.0	1.1	1.1	1.5	1.2	1.1	1.1	1.1	0.8	0.8	0.9	1.1	1.1	1.0	1.0	1.0	Diurnal Average		
		5.4	4.2	5.0	4.2	--	4.1	3.4	3.1	3.8	4.2	7.5	4.4	4.5	4.3	5.5	5.8	1.9	2.1	2.3	5.3	3.5	3.1	2.9	2.8	Diurnal Maximum	
C - Calibration					A - Automated Daily Zero Span																						



# Hourly Maximums for SO<sub>2</sub> at Beaverlodge February 2009



# Pollutant Rose for SO<sub>2</sub> at Beaverlodge February 2009

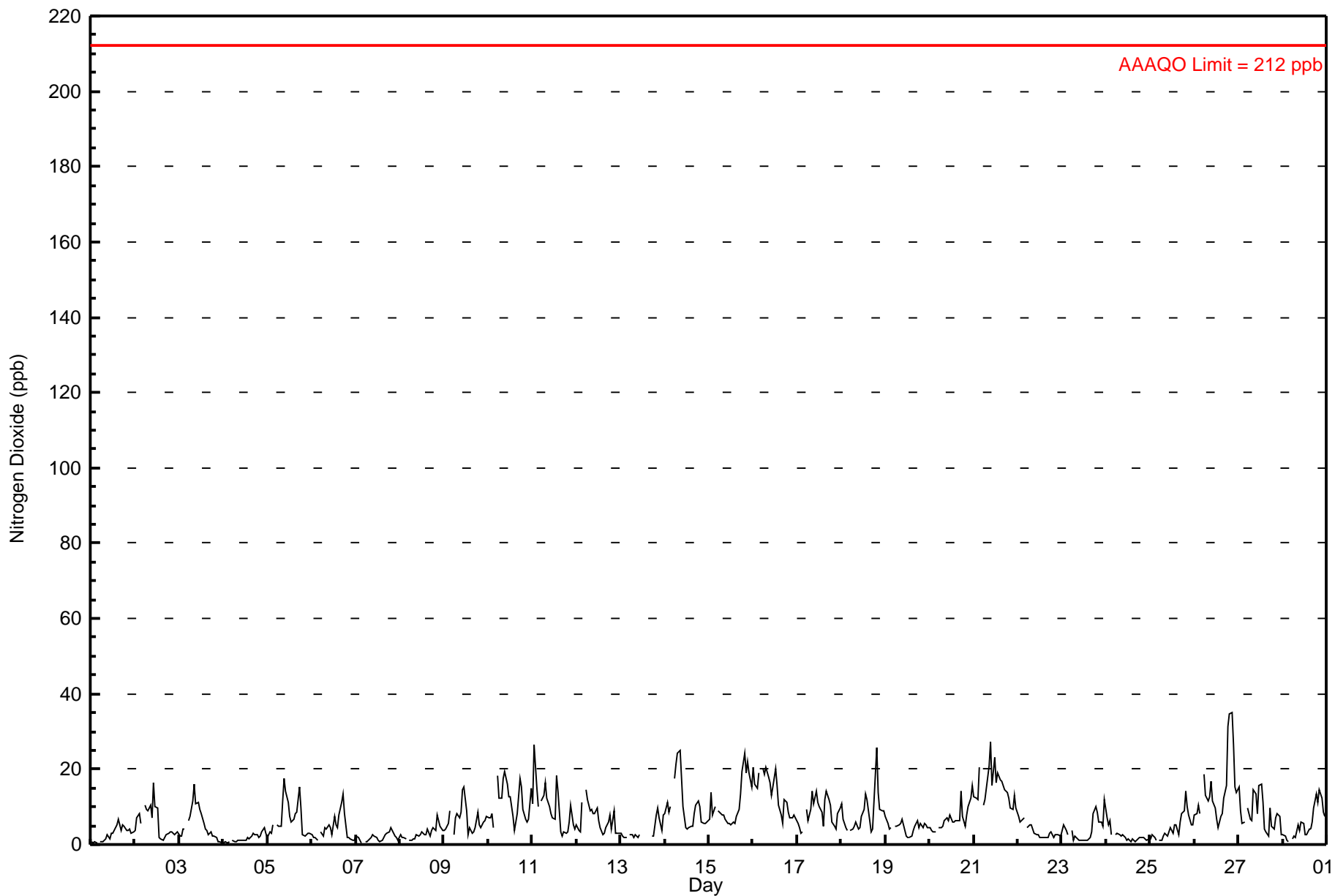


**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Beaverlodge - Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
February 1, 2009 to March 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0		Hours in Service: 672																																															
Maximum Value: 35.1 ppb on Feb 26 21:00		Maximum Daily Average: 15.2 ppb on Feb 21																																															
Minimum Value: 0 ppb on Feb 1 04:00		Hours of Data: 638																																															
Maximum Diurnal Average: 8.8 ppb at hour 19		Hours of Missing Data: 34																																															
Monthly Average: 6.85 ppb		Hours of Calibration: 34																																															
Minimum Daily Average: 1.7 ppb on Feb 4		Percent Operational Time: 100.0																																															
Minimum Diurnal Average: 5.2 ppb at hour 16																																																	
Percentiles: P <sub>1</sub> = 0.6 P <sub>10</sub> = 1.4 Q <sub>1</sub> = 2.7 Median = 5.2 Q <sub>3</sub> = 9.4 P <sub>90</sub> = 14.8 P <sub>99</sub> = 26.2																																																	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Feb	1	0	1	0	A	1	1	1	1	3	1	3	4	5	7	4	5	5	4	4	4	3	3	2.8	6.9																								
2-Feb	4	7	8	6	A	10	9	9	10	7	16	10	10	2	1	2	3	3	4	3	2	3	3	5.8	16.5																								
3-Feb	2	2	4	4	A	6	8	12	16	11	11	9	8	5	4	4	3	3	2	2	1	1	0	5.3	16.0																								
4-Feb	0	1	0	1	A	1	1	1	1	1	1	1	2	2	2	3	2	2	2	2	3	4	3	1.7	4.3																								
5-Feb	2	3	3	5	A	5	5	5	11	17	14	11	7	6	7	8	9	15	10	2	2	3	3	6.9	17.4																								
6-Feb	2	2	2	1	A	3	2	4	4	5	5	3	8	5	5	8	11	13	8	2	2	1	1	4.3	13.3																								
7-Feb	2	2	1	1	A	1	1	1	2	3	2	2	1	1	1	2	3	3	3	4	4	2	2	1.9	4.3																								
8-Feb	3	2	2	2	A	1	1	2	2	3	2	3	3	3	4	2	4	5	4	8	7	5	4	3.1	7.8																								
9-Feb	4	4	6	9	A	2	7	8	7	9	15	15	9	2	5	3	3	5	8	5	4	6	6	6.5	15.4																								
10-Feb	7	7	8	4	A	18	12	12	18	20	16	13	13	8	4	6	8	17	15	9	7	6	7	10.8	19.6																								
11-Feb	11	26	15	10	A	12	13	16	12	10	8	7	7	18	14	3	2	3	3	3	6	10	5	9.6	26.3																								
12-Feb	5	4	3	11	A	15	12	9	9	8	8	10	6	4	3	3	5	6	8	4	9	3	3	6.6	14.6																								
13-Feb	3	2	2	2	A	3	3	2	3	2	3	C	C	C	C	C	A	2	2	8	10	7	4	--	9.7																								
14-Feb	8	11	9	10	A	18	21	24	25	18	10	4	4	4	5	5	8	11	12	10	6	6	5	6	10.4	24.9																							
15-Feb	7	14	8	10	A	9	8	8	8	7	6	6	5	6	5	7	9	14	19	24	19	22	19	15	11.1	24.1																							
16-Feb	21	16	15	19	A	20	19	21	18	16	13	15	20	16	11	8	6	12	11	9	7	7	8	7	13.6	20.6																							
17-Feb	6	4	3	3	A	9	6	9	14	11	14	11	10	9	5	12	14	12	10	6	5	4	8	10	8.5	14.3																							
18-Feb	11	7	5	4	A	4	4	5	6	4	4	7	9	13	12	6	3	4	19	26	14	9	9	9	8.4	25.7																							
19-Feb	8	6	4	5	A	5	5	5	5	7	5	2	2	2	2	4	5	6	5	6	5	5	4	4	4.7	7.5																							
20-Feb	4	4	3	3	A	4	5	5	6	7	6	8	6	6	6	6	6	14	8	5	8	10	12	16	6.9	15.6																							
21-Feb	13	12	12	20	A	10	12	15	21	27	16	23	16	19	17	17	16	14	14	12	10	9	13	10	15.2	27.1																							
22-Feb	7	6	6	7	A	4	5	5	4	3	3	3	2	2	2	2	2	3	3	2	3	3	3	2	3.5	7.3																							
23-Feb	4	5	4	3	A	4	1	2	2	1	1	1	1	1	1	2	3	8	10	9	6	6	5	12	4.0	11.9																							
24-Feb	7	5	6	3	A	3	3	3	2	3	2	1	1	1	1	1	1	1	2	2	2	1	1	1	2.3	7.1																							
25-Feb	1	3	2	1	A	1	1	2	3	2	3	4	3	5	5	3	6	8	9	14	10	8	5	5	4.6	14.2																							
26-Feb	8	8	11	8	A	19	13	11	13	17	12	10	7	5	7	8	12	15	31	35	35	26	15	14	14.8	35.1																							
27-Feb	15	9	5	6	A	10	7	6	14	13	8	16	16	11	4	3	2	10	5	4	7	8	7	3	8.3	16.2																							
28-Feb	3	2	1	1	A	1	2	2	5	4	6	6	2	3	4	4	6	10	13	11	15	12	9	7	5.6	14.7																							
																								6.0	6.2	5.3	5.6	--	7.1	6.7	7.4	8.7	8.5	7.6	7.5	6.7	6.0	5.2	5.2	5.7	8.1	8.8	8.1	7.6	6.9	6.2	6.3	Diurnal Average	
																								20.6	26.3	15.0	20.5	--	20.0	21.1	24.3	24.9	27.1	16.5	23.1	20.3	18.9	17.3	16.7	15.6	17.5	31.2	34.9	35.1	26.4	19.1	15.6	Diurnal Maximum	
C - Calibration																								A - Automated Daily Zero Span																									
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 212 ppb 24-hr 106 ppb																																																	

# Hourly Averages for NO<sub>2</sub> at Beaverlodge February 2009

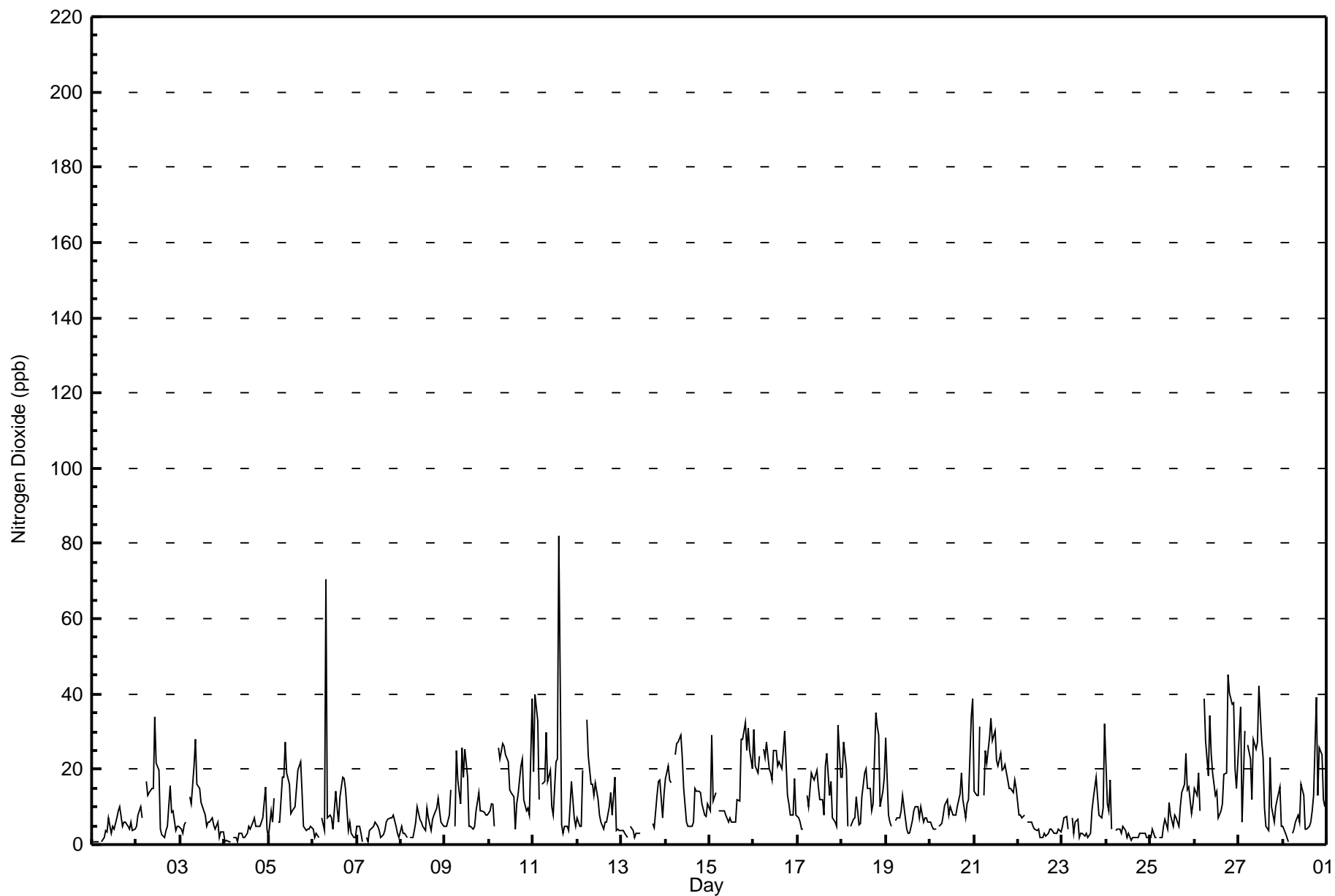


**Peace Airshed Zone Association  
Summary of Hourly Maximums**

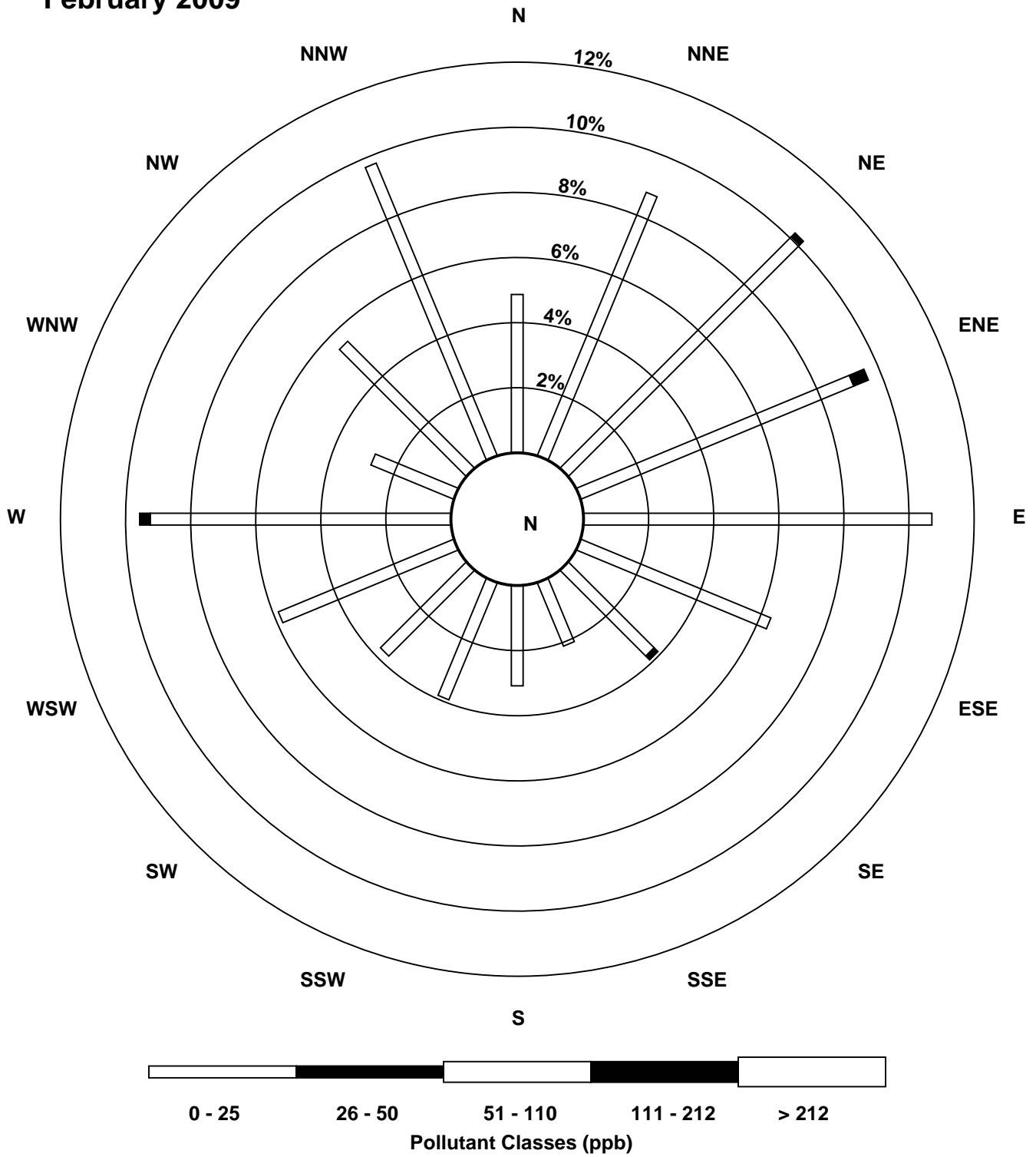
**Beaverlodge - Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
February 1, 2009 to March 1, 2009**

Maximum Value: 82.0 ppb on Feb 11 15:00		Maximum Daily Average: 22.0 ppb on Feb 26		Hours in Service: 672																							
Minimum Value: 1 ppb on Feb 4 03:00		Minimum Daily Average: 3.9 ppb on Feb 4		Hours of Data: 638																							
Maximum Diurnal Average: 14.8 ppb at hour 19		Minimum Diurnal Average: 8.7 ppb at hour 16		Hours of Missing Data: 34																							
Monthly Average: 11.29 ppb		Percentiles: P <sub>1</sub> = 0.9 P <sub>10</sub> = 2.9 Q <sub>1</sub> = 4.9 Median = 8.0 Q <sub>3</sub> = 15.9 P <sub>90</sub> = 25.1 P <sub>99</sub> = 39.7		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-Feb	1	1	1	1	A	1	2	4	3	7	3	5	4	7	9	10	5	6	6	5	4	6	4	4	4.2	9.9	
2-Feb	5	8	10	7	A	17	13	14	15	15	34	22	20	4	3	2	4	5	16	9	9	4	5	5	10.6	34.0	
3-Feb	4	3	5	6	A	13	11	21	28	16	15	11	10	8	5	6	6	7	5	4	6	2	3	3	8.6	28.0	
4-Feb	1	1	1	1	A	2	2	1	3	3	2	2	3	5	4	6	7	5	5	5	6	7	15	4	3.9	15.3	
5-Feb	2	9	6	12	A	6	6	18	18	27	19	16	8	9	10	15	20	22	14	5	4	4	4	5	11.2	27.3	
6-Feb	4	2	3	2	A	7	4	70	7	8	7	4	14	10	6	13	18	18	14	4	6	3	2	2	9.8	70.4	
7-Feb	5	5	3	1	A	2	1	4	4	5	6	5	4	2	3	4	6	7	7	7	8	5	3	2	4.2	7.9	
8-Feb	5	3	3	2	A	2	2	4	6	10	7	6	5	4	10	7	4	7	8	10	12	9	6	5	5.9	12.4	
9-Feb	5	5	8	15	A	5	25	17	11	26	18	25	18	5	5	4	5	9	14	9	9	9	8	8	11.3	25.6	
10-Feb	9	11	11	5	A	26	23	27	26	24	22	14	14	13	4	11	13	21	23	12	9	10	8	39	16.2	38.8	
11-Feb	19	40	33	12	A	16	17	30	17	20	10	8	22	23	82	5	3	5	5	4	10	17	7	5	17.8	82.0	
12-Feb	7	5	5	20	A	33	23	16	16	13	17	12	8	6	4	6	6	10	14	8	18	4	4	4	11.2	33.0	
13-Feb	4	4	3	2	A	5	4	2	3	3	3	C	C	C	C	C	A	5	5	13	17	17	7	13	--	17.0	
14-Feb	18	21	17	17	A	24	27	27	29	23	15	6	5	5	5	6	15	14	14	14	11	8	7	11	14.7	29.2	
15-Feb	9	29	12	14	A	9	9	9	9	8	6	7	6	6	6	12	12	28	28	33	25	31	25	20	15.3	32.5	
16-Feb	31	21	19	23	A	25	23	27	20	19	17	25	25	21	22	20	25	30	13	11	8	8	17	8	20.0	30.6	
17-Feb	7	6	4	4	A	13	10	19	18	17	20	15	12	12	8	21	24	13	17	7	6	5	32	18	13.4	31.7	
18-Feb	18	27	20	5	A	5	7	7	13	5	6	13	19	20	15	15	9	11	35	31	29	10	14	18	15.3	34.9	
19-Feb	29	8	6	5	A	6	7	7	9	13	10	4	3	3	6	9	10	10	7	10	6	7	7	6	8.1	28.5	
20-Feb	6	5	4	4	A	5	6	8	10	12	8	10	8	8	8	10	13	19	12	7	11	12	34	39	11.3	39.0	
21-Feb	14	13	13	31	A	13	25	22	28	34	27	30	22	21	24	20	20	21	17	15	15	14	17	15	20.5	33.5	
22-Feb	8	8	7	8	A	6	6	6	5	4	4	4	2	2	3	2	3	4	4	3	3	3	4	3	4.4	8.0	
23-Feb	5	7	7	4	A	7	3	6	7	2	3	3	2	3	2	3	9	12	18	13	8	7	10	32	7.5	32.0	
24-Feb	11	9	17	4	A	4	4	4	3	5	4	2	3	1	2	2	2	2	3	3	3	3	2	2	4.1	17.0	
25-Feb	2	4	2	2	A	2	2	5	7	4	11	8	5	8	7	5	10	14	16	24	15	15	8	11	8.1	24.1	
26-Feb	15	13	19	9	A	39	28	18	34	24	19	13	14	7	9	11	19	19	45	40	37	38	20	15	22.0	45.3	
27-Feb	29	36	6	30	A	26	23	12	28	25	27	42	28	23	10	5	4	23	10	6	10	12	15	5	18.9	42.0	
28-Feb	5	3	2	1	A	3	4	6	8	6	16	13	4	4	5	6	9	13	39	13	26	24	12	10	10.0	39.1	
		9.9	10.9	8.8	8.8	--	11.5	11.2	14.6	13.7	13.4	12.6	12.0	10.7	8.8	10.2	8.7	10.4	12.8	14.8	11.5	11.8	10.4	10.8	11.1	Diurnal Average	
		30.6	39.9	33.0	31.2	--	38.9	27.6	70.4	34.2	33.5	34.0	42.0	27.7	23.0	82.0	20.8	25.1	30.1	45.3	40.2	37.2	37.6	34.0	39.0	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

# Hourly Maximums for NO<sub>2</sub> at Beaverlodge February 2009



# Pollutant Rose for NO<sub>2</sub> at Beaverlodge February 2009



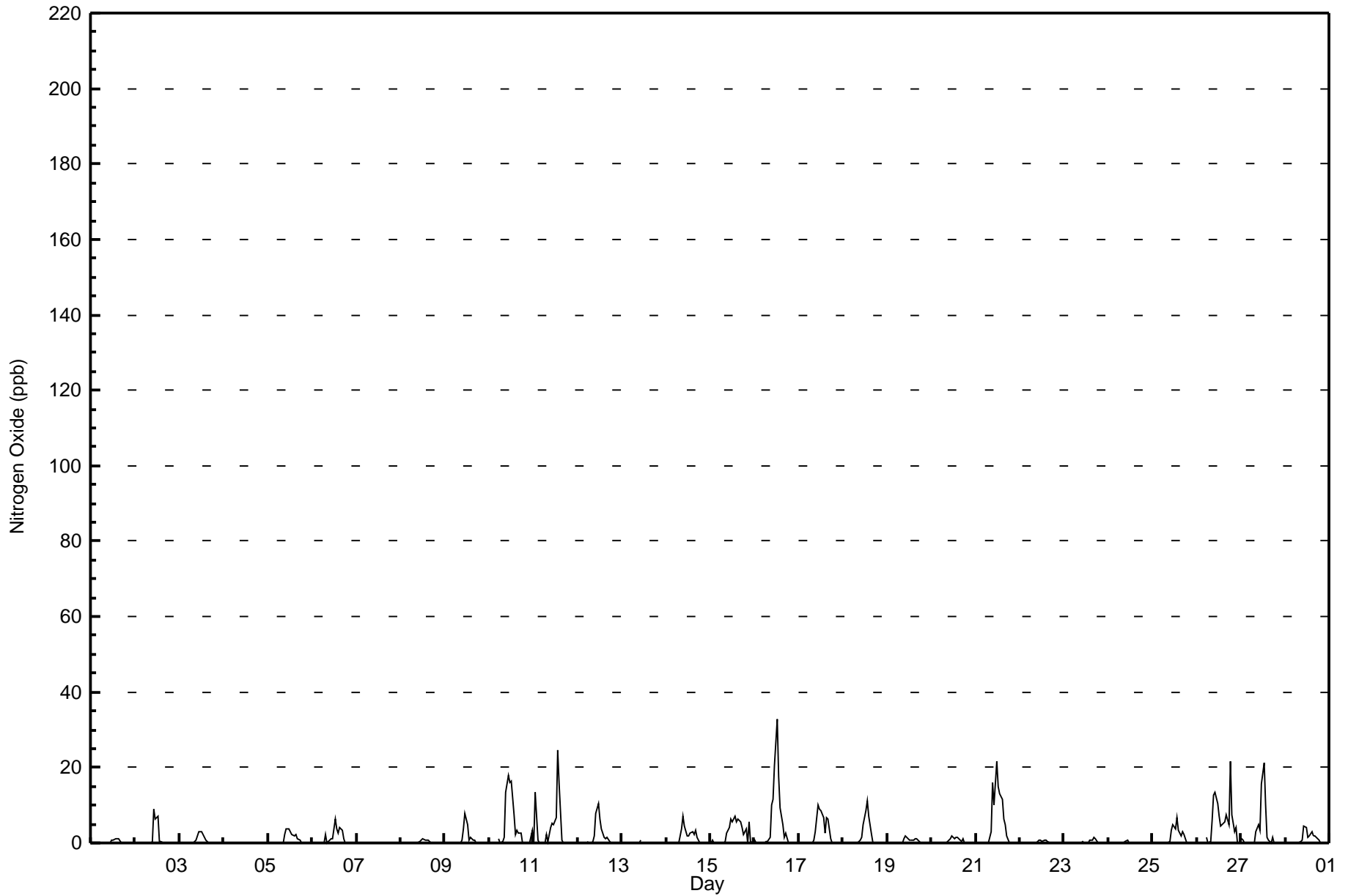
**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Beaverlodge - Nitrogen Oxide (NO) - ppb  
February 1, 2009 to March 1, 2009**

Maximum Value: 32.7 ppb on Feb 16 13:00		Maximum Daily Average: 5.0 ppb on Feb 26		Hours in Service: 672																							
Minimum Value: 0 ppb on Feb 1 01:00		Minimum Daily Average: 0.0 ppb on Feb 7		Hours of Data: 638																							
Maximum Diurnal Average: 6.1 ppb at hour 13		Minimum Diurnal Average: 0.0 ppb at hour 4		Hours of Missing Data: 34																							
Monthly Average: 1.54 ppb		Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.0 Q <sub>3</sub> = 1.2 P <sub>90</sub> = 5.0 P <sub>99</sub> = 20.1		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-Feb	0	0	0	0	A	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0.2	1.2	
2-Feb	0	0	0	0	A	0	0	0	0	0	9	6	7	0	0	0	0	0	0	0	0	0	0	0	1.0	9.0	
3-Feb	0	0	0	0	A	0	0	0	0	1	3	3	3	1	1	0	0	0	0	0	0	0	0	0	0.6	3.0	
4-Feb	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	
5-Feb	0	0	0	0	A	0	0	0	0	2	4	4	3	2	2	2	1	1	0	0	0	0	0	0	0.9	3.9	
6-Feb	0	0	0	0	A	0	0	2	0	1	1	1	6	4	3	4	3	1	0	0	0	0	0	0	1.2	6.4	
7-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	
8-Feb	0	0	0	0	A	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0.2	1.1	
9-Feb	0	0	0	0	A	0	0	0	0	1	4	8	5	1	1	1	1	0	0	0	0	0	0	0	0.9	8.0	
10-Feb	0	0	0	0	A	1	0	1	1	13	18	16	16	8	2	3	3	3	0	0	0	0	0	3	3.9	17.8	
11-Feb	0	13	1	0	A	0	0	2	0	4	5	5	7	25	16	1	0	0	0	0	0	0	0	0	3.4	24.7	
12-Feb	0	0	0	0	A	0	0	0	0	2	8	10	7	4	1	1	1	0	0	0	0	0	0	0	1.6	10.4	
13-Feb	0	0	0	0	A	0	0	0	0	0	1	C	C	C	C	C	A	0	0	0	0	0	0	0	--	0.6	
14-Feb	0	0	0	0	A	0	0	0	4	7	4	2	2	3	3	2	3	2	0	0	0	0	0	0	1.4	7.0	
15-Feb	0	1	0	0	A	0	0	0	0	2	4	6	6	7	6	6	6	4	2	4	0	6	0	0	2.6	7.0	
16-Feb	1	0	0	0	A	0	0	0	2	10	12	21	33	18	9	5	1	3	0	0	0	0	0	0	5.0	32.7	
17-Feb	0	0	0	0	A	0	0	0	1	3	10	9	9	7	3	7	6	1	0	0	0	0	0	0	2.4	10.1	
18-Feb	0	0	0	0	A	0	0	0	0	1	1	5	8	11	7	2	0	0	0	0	0	0	0	0	1.6	11.0	
19-Feb	0	0	0	0	A	0	0	0	0	1	2	1	1	1	1	1	1	1	0	0	0	0	0	0	0.4	1.8	
20-Feb	0	0	0	0	A	0	0	0	0	1	1	2	1	1	1	1	0	1	0	0	0	0	0	0	0.5	2.0	
21-Feb	0	0	0	0	A	0	0	0	3	16	10	22	15	13	11	6	5	2	0	0	0	0	0	0	4.5	21.7	
22-Feb	0	0	0	0	A	0	0	0	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0.2	0.9	
23-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0.2	1.5	
24-Feb	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6	
25-Feb	0	0	0	0	A	0	0	0	0	0	3	5	4	7	4	2	3	2	0	0	0	0	0	0	1.3	6.5	
26-Feb	0	0	0	0	A	2	0	0	6	13	13	11	7	4	5	6	8	5	22	8	3	4	0	0	5.0	21.6	
27-Feb	1	1	0	0	A	0	0	0	3	5	3	16	21	10	2	1	0	1	0	0	0	0	0	0	2.8	21.2	
28-Feb	0	0	0	0	A	0	0	0	0	1	4	4	2	2	3	2	2	1	1	0	0	0	0	0	1.0	4.4	
		0.1	0.5	0.0	0.0	--	0.1	0.0	0.2	0.8	3.0	4.4	5.9	6.1	4.8	3.2	2.1	1.7	1.1	0.9	0.4	0.1	0.3	0.0	0.1	Diurnal Average	
		1.2	13.3	0.8	0.1	--	1.5	0.3	2.2	5.9	15.9	17.8	21.7	32.7	24.7	15.5	6.6	7.6	5.0	21.6	7.5	3.0	5.6	0.3	3.2	Diurnal Maximum	
C - Calibration					A - Automated Daily Zero Span																						



# Hourly Averages for NO at Beaverlodge February 2009



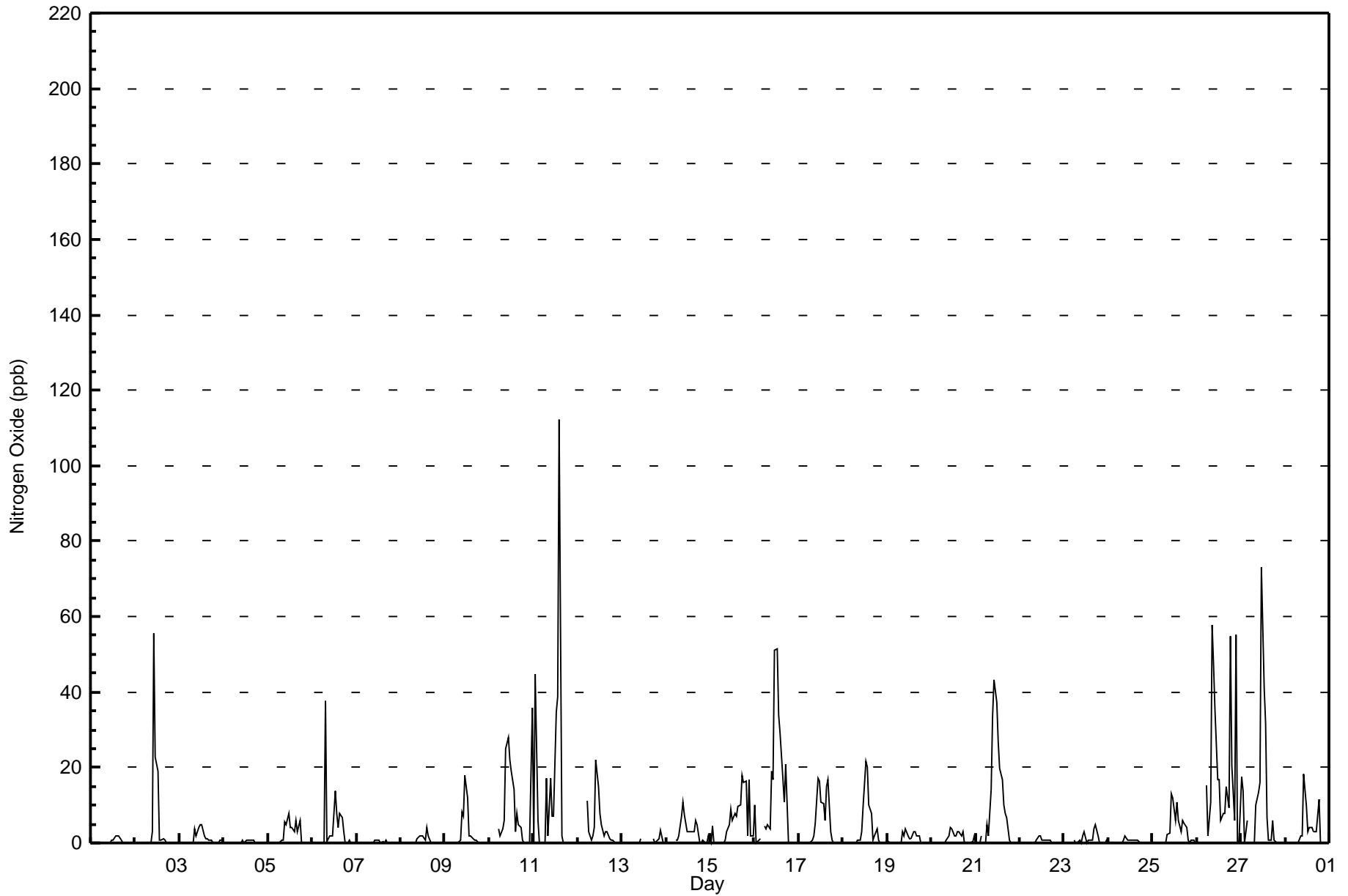
**Peace Airshed Zone Association  
Summary of Hourly Maximums**

**Beaverlodge - Nitrogen Oxide (NO) - ppb  
February 1, 2009 to March 1, 2009**

Maximum Value: 112.3 ppb on Feb 11 15:00		Maximum Daily Average: 16.7 ppb on Feb 26		Hours in Service: 672																							
Minimum Value: 0 ppb on Feb 1 01:00		Minimum Daily Average: 0.2 ppb on Feb 7		Hours of Data: 638																							
Maximum Diurnal Average: 13.1 ppb at hour 12		Minimum Diurnal Average: 0.1 ppb at hour 23		Hours of Missing Data: 34																							
Monthly Average: 4.13 ppb		Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.0 Q <sub>3</sub> = 2.9 P <sub>90</sub> = 13.1 P <sub>99</sub> = 54.3		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-Feb	0	0	0	0	A	0	0	0	0	0	0	1	1	2	2	2	1	0	0	0	0	0	0	0	0.4	1.9	
2-Feb	0	0	0	0	A	0	0	0	0	3	55	23	19	1	1	1	1	0	0	0	0	0	0	0	4.5	55.4	
3-Feb	0	0	0	0	A	0	0	0	4	2	4	5	5	2	1	1	1	1	0	0	0	0	1	1	1.2	4.9	
4-Feb	0	0	0	0	A	0	0	0	0	0	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0.2	0.9	
5-Feb	0	0	0	0	A	0	0	1	1	6	5	8	4	4	3	6	3	6	0	0	0	0	0	0	2.0	7.7	
6-Feb	0	0	0	0	A	0	0	38	0	2	2	2	14	8	4	8	7	3	0	0	1	0	0	0	3.8	37.7	
7-Feb	0	0	0	0	A	0	0	0	0	0	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0.2	0.9	
8-Feb	0	0	0	0	A	0	0	0	0	1	2	2	2	1	4	2	0	0	0	0	0	0	0	0	0.6	3.9	
9-Feb	0	0	0	0	A	0	0	0	1	8	7	18	12	2	2	1	1	1	0	0	0	0	0	0	2.3	17.9	
10-Feb	0	0	0	0	A	4	2	4	6	25	28	22	19	14	3	8	5	4	1	0	0	0	0	36	7.8	35.7	
11-Feb	0	45	6	0	A	0	0	17	2	17	7	7	35	39	112	2	0	0	0	0	0	0	0	0	12.6	112.3	
12-Feb	0	0	0	0	A	11	3	1	2	4	22	15	8	5	2	3	3	1	1	1	0	0	0	0	3.5	21.9	
13-Feb	0	0	0	0	A	0	0	0	0	0	1	C	C	C	C	C	A	1	0	1	1	3	0	0	--	3.3	
14-Feb	0	0	0	0	A	1	1	2	7	11	8	3	3	3	3	3	6	5	0	0	1	0	0	2	2.5	10.9	
15-Feb	0	5	0	0	A	0	0	0	1	3	5	9	6	8	7	10	10	18	16	16	2	17	2	2	5.9	17.7	
16-Feb	10	0	1	1	A	5	4	5	4	19	17	51	52	34	29	17	11	21	0	0	0	0	0	0	12.2	51.6	
17-Feb	0	0	0	0	A	0	0	1	2	5	17	16	11	11	6	15	17	3	1	0	0	0	0	0	4.5	17.2	
18-Feb	0	0	0	0	A	0	0	0	1	1	3	10	22	20	10	8	1	2	4	1	0	0	0	0	3.5	21.6	
19-Feb	1	0	0	0	A	0	0	0	3	2	4	2	1	1	3	3	2	2	0	0	0	0	0	0	1.0	3.7	
20-Feb	0	0	0	0	A	0	0	0	1	2	4	4	2	2	3	3	2	3	0	0	0	0	0	2	1.2	3.9	
21-Feb	0	0	0	2	A	0	5	2	14	34	43	37	27	20	17	10	8	7	1	0	0	0	0	0	9.9	43.3	
22-Feb	0	0	0	0	A	0	0	0	0	1	2	2	1	1	1	1	1	0	0	0	0	0	0	0	0.4	1.9	
23-Feb	0	0	0	0	A	1	0	0	1	0	2	3	0	1	1	1	4	5	2	0	0	0	0	1	0.9	4.9	
24-Feb	0	0	0	0	A	0	0	0	1	2	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.4	1.9	
25-Feb	0	0	0	0	A	0	0	0	2	3	13	12	6	11	6	3	6	5	4	1	0	1	1	0	3.2	13.1	
26-Feb	0	0	0	0	A	15	2	11	58	47	35	17	17	6	8	8	15	9	55	20	6	55	0	0	16.7	57.9	
27-Feb	18	14	0	6	A	0	0	0	10	13	16	73	41	32	7	1	1	6	1	0	0	0	0	0	10.3	73.1	
28-Feb	0	0	0	0	A	0	0	0	2	2	18	10	3	4	4	3	3	3	12	0	0	0	0	0	2.7	18.1	
		1.0	2.3	0.2	0.3	--	1.3	0.6	2.9	4.4	7.6	11.5	13.1	11.5	8.6	8.9	4.5	4.1	3.7	3.4	1.4	0.4	2.7	0.1	1.5	Diurnal Average	
		17.6	44.8	5.9	5.9	--	15.2	4.9	37.7	57.9	47.5	55.4	73.1	51.6	38.9	112.3	17.2	16.9	20.7	54.7	20.4	5.9	55.1	1.9	35.7	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

# Hourly Maximums for NO at Beaverlodge

## February 2009

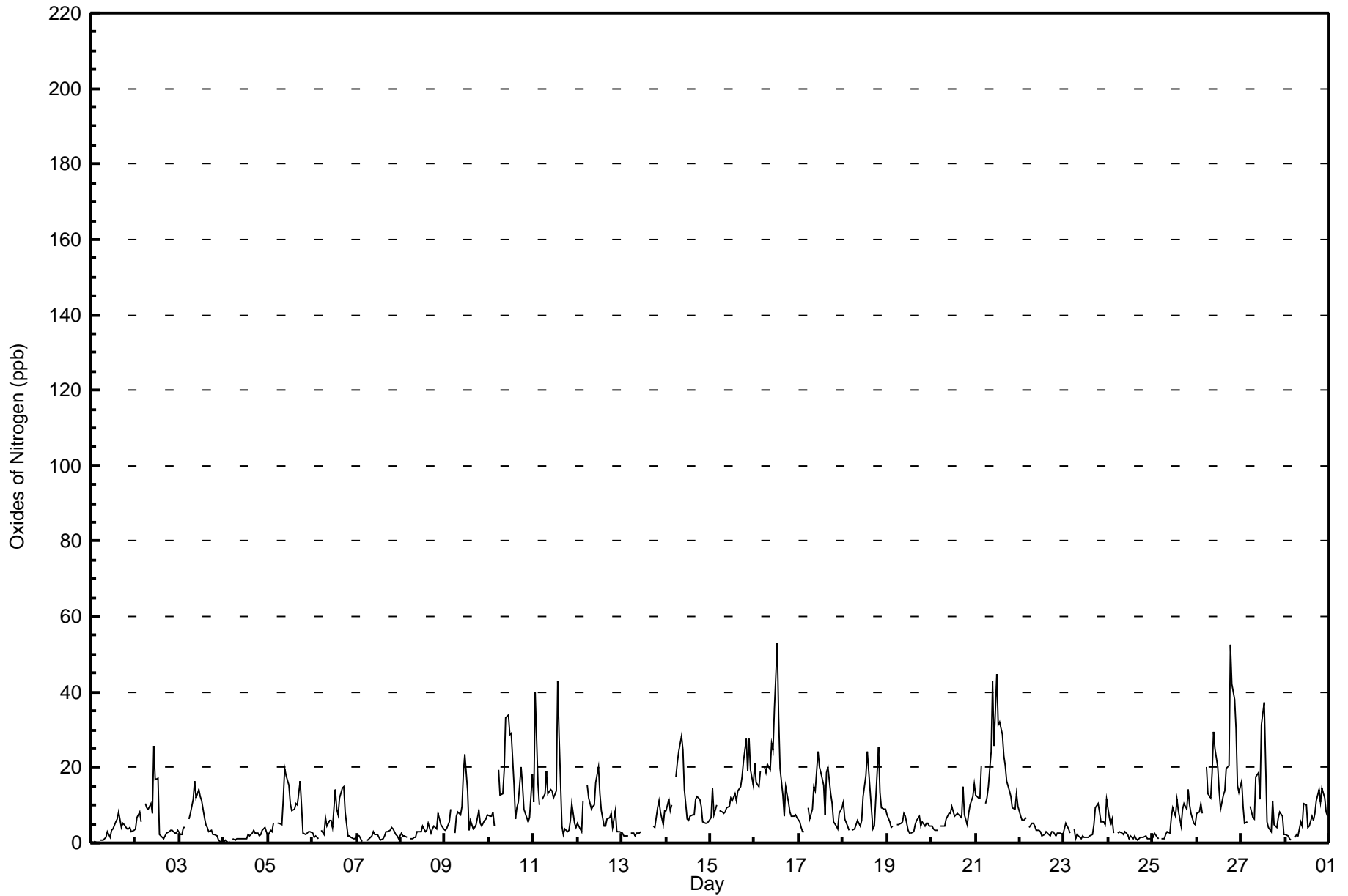


**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Beaverlodge - Oxides of Nitrogen (NO<sub>x</sub>) - ppb  
February 1, 2009 to March 1, 2009**

Maximum Value: 52.9 ppb on Feb 16 13:00		Maximum Daily Average: 19.7 ppb on Feb 26		Hours in Service: 672																																													
Minimum Value: 0 ppb on Feb 1 04:00		Minimum Daily Average: 1.7 ppb on Feb 4		Hours of Data: 638																																													
Maximum Diurnal Average: 13.4 ppb at hour 12		Minimum Diurnal Average: 5.2 ppb at hour 3		Hours of Missing Data: 34																																													
Monthly Average: 8.40 ppb		Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 1.6 Q <sub>1</sub> = 2.9 Median = 5.9 Q <sub>3</sub> = 11.1 P <sub>90</sub> = 18.8 P <sub>99</sub> = 41.6		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-Feb	0	0	0	0	A	1	1	1	1	3	1	4	4	5	6	8	4	5	5	4	4	4	3	3	3.0	8.0																							
2-Feb	4	7	8	6	A	10	9	9	10	8	26	17	17	2	2	1	2	3	3	3	3	2	3	3	6.9	25.7																							
3-Feb	2	2	4	4	A	6	8	12	17	12	14	12	11	7	5	4	3	3	2	2	2	1	1	0	5.9	16.6																							
4-Feb	0	1	0	0	A	1	1	1	1	1	1	1	1	2	2	3	3	3	2	2	2	3	4	3	1.7	4.2																							
5-Feb	2	3	3	5	A	5	5	5	12	20	18	15	11	9	9	10	10	16	10	2	2	3	3	3	7.8	19.8																							
6-Feb	2	2	2	1	A	4	2	7	4	6	6	4	14	9	8	12	15	15	8	2	2	1	1	1	5.5	14.8																							
7-Feb	2	2	1	0	A	1	1	1	2	3	2	2	1	1	1	2	3	3	3	4	4	2	2	1	2.0	4.3																							
8-Feb	3	2	2	1	A	1	1	2	1	3	3	3	4	3	3	5	3	4	5	4	8	6	5	4	3.3	7.8																							
9-Feb	4	4	6	9	A	2	7	8	7	10	19	24	14	3	6	4	4	5	9	5	4	6	6	7	7.5	23.6																							
10-Feb	7	7	8	4	A	19	12	13	19	33	34	29	29	15	6	9	11	20	15	9	7	6	7	18	14.8	34.1																							
11-Feb	11	40	16	10	A	12	13	19	13	14	14	12	14	43	28	4	2	4	3	3	6	10	5	4	13.1	43.0																							
12-Feb	5	4	3	11	A	15	12	9	10	10	16	20	13	8	4	4	6	7	8	4	9	3	3	3	8.2	20.0																							
13-Feb	3	2	2	2	A	3	3	2	3	3	3	C	C	C	C	C	A	5	4	9	11	8	5	9	--	11.0																							
14-Feb	9	11	9	10	A	18	21	24	28	25	14	6	6	7	7	7	12	12	12	10	6	5	5	6	11.8	28.5																							
15-Feb	7	14	8	10	A	9	8	8	8	9	10	12	11	13	11	14	15	18	21	28	19	28	19	15	13.7	27.7																							
16-Feb	21	16	15	19	A	20	19	21	20	26	25	36	53	33	20	13	7	15	11	8	7	7	8	7	18.5	52.9																							
17-Feb	6	4	3	3	A	9	6	9	15	14	24	20	19	15	7	19	20	13	10	6	5	4	8	9	10.8	24.4																							
18-Feb	11	7	4	4	A	3	4	5	6	5	6	12	18	24	19	9	4	4	19	26	13	9	9	9	9.9	25.5																							
19-Feb	7	6	4	4	A	5	5	5	6	8	7	3	3	3	3	5	6	7	4	5	5	5	5	4	5.0	7.8																							
20-Feb	4	4	3	3	A	4	4	5	6	8	8	10	7	7	8	7	7	15	8	5	8	10	12	16	7.4	15.5																							
21-Feb	13	12	12	20	A	10	12	15	24	43	26	45	31	32	29	23	21	16	14	12	9	9	13	10	19.6	44.7																							
22-Feb	7	6	6	7	A	4	5	5	4	3	3	3	2	2	3	3	2	3	3	2	2	3	3	2	3.7	7.2																							
23-Feb	4	5	4	2	A	4	1	2	2	1	2	1	1	2	2	2	5	9	10	8	6	6	5	12	4.2	11.7																							
24-Feb	7	5	6	3	A	3	3	2	2	3	2	1	2	1	2	1	1	1	2	2	2	1	1	1	2.4	6.9																							
25-Feb	1	2	2	1	A	1	1	2	3	3	7	9	7	12	9	5	9	10	9	14	10	8	5	5	5.8	14.1																							
26-Feb	8	8	10	8	A	20	13	12	19	29	25	20	14	9	13	14	20	21	53	42	38	30	15	13	19.7	52.7																							
27-Feb	16	10	5	6	A	10	7	6	18	19	11	31	37	21	6	4	3	11	5	4	7	8	7	2	11.1	37.3																							
28-Feb	2	2	1	1	A	1	2	2	6	4	10	10	4	4	7	6	8	11	14	11	14	12	8	7	6.5	14.4																							
																								6.0	6.7	5.2	5.6	--	7.2	6.7	7.6	9.5	11.6	12.1	13.4	12.9	10.9	8.4	7.4	7.5	9.3	9.7	8.5	7.7	7.2	6.1	6.4	Diurnal Average	
																								21.3	39.8	15.8	20.5	--	20.2	21.1	24.3	28.5	42.9	34.1	44.7	52.9	43.0	28.7	23.1	20.6	20.6	52.7	42.2	38.0	30.3	19.4	18.2	Diurnal Maximum	
C - Calibration																								A - Automated Daily Zero Span																									

# Hourly Averages for NO<sub>x</sub> at Beaverlodge February 2009

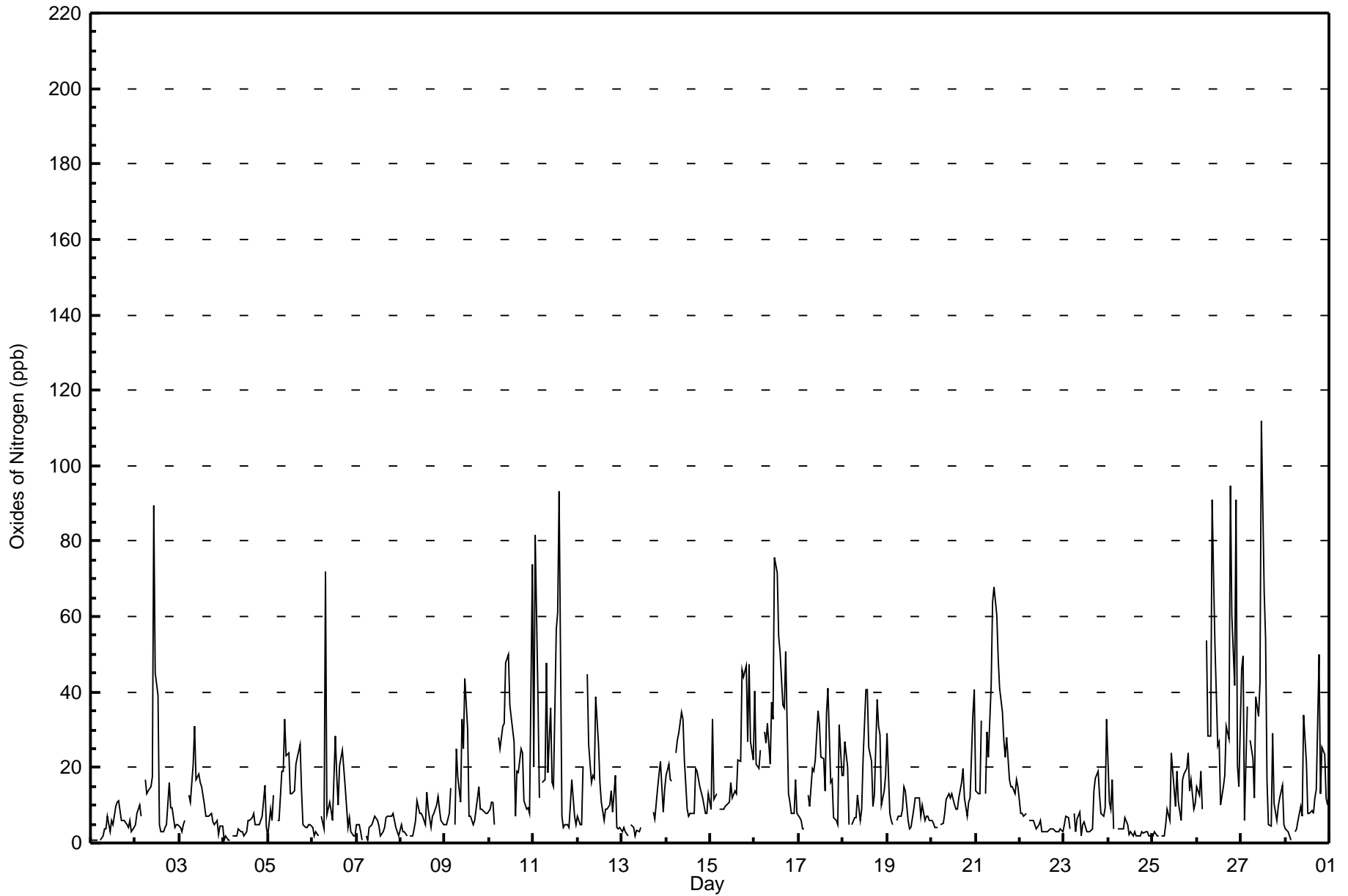


**Peace Airshed Zone Association  
Summary of Hourly Maximums**

**Beaverlodge - Oxides of Nitrogen (NO<sub>x</sub>) - ppb  
February 1, 2009 to March 1, 2009**

Maximum Value: 111.7 ppb on Feb 27 12:00		Maximum Daily Average: 37.3 ppb on Feb 26		Hours in Service: 672																							
Minimum Value: 1 ppb on Feb 1 03:00		Minimum Daily Average: 4.3 ppb on Feb 4		Hours of Data: 638																							
Maximum Diurnal Average: 24.4 ppb at hour 12		Minimum Diurnal Average: 9.0 ppb at hour 3		Hours of Missing Data: 34																							
Monthly Average: 14.97 ppb		Percentiles: P <sub>1</sub> = 0.9 P <sub>10</sub> = 2.9 Q <sub>1</sub> = 4.9 Median = 8.9 Q <sub>3</sub> = 18.8 P <sub>90</sub> = 34.1 P <sub>99</sub> = 88.1		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-Feb	1	1	1	1	A	1	2	4	4	7	3	6	5	10	11	11	6	6	6	5	4	6	3	4	4.6	11.3	
2-Feb	5	8	10	7	A	17	13	14	15	18	89	45	39	5	3	3	4	5	16	9	9	4	5	5	15.1	89.4	
3-Feb	4	3	5	6	A	13	11	21	31	17	18	16	15	10	7	7	8	6	5	6	2	4	4	9.8	31.1		
4-Feb	1	2	1	1	A	2	2	2	4	3	3	2	3	6	6	7	8	5	5	5	6	7	15	4	4.3	15.3	
5-Feb	2	9	6	13	A	6	6	19	19	33	23	24	13	13	14	21	23	26	14	5	4	4	5	5	13.3	32.8	
6-Feb	4	2	3	2	A	7	4	72	7	11	9	6	28	18	10	21	25	20	15	4	7	3	2	2	12.2	72.0	
7-Feb	5	5	3	1	A	2	1	4	5	6	7	6	4	2	3	4	7	7	7	7	8	4	3	2	4.4	7.9	
8-Feb	5	3	3	2	A	2	2	4	6	11	8	8	7	5	14	9	4	7	8	10	12	9	6	5	6.5	13.5	
9-Feb	5	5	8	15	A	5	25	18	11	33	25	43	30	7	7	5	6	9	15	9	9	8	8	8	13.6	43.5	
10-Feb	9	11	11	5	A	28	25	31	32	48	50	37	33	27	7	19	19	25	24	11	9	9	8	74	23.9	73.8	
11-Feb	20	82	38	12	A	16	17	48	19	36	16	15	57	61	93	7	4	5	5	4	10	17	7	5	25.8	93.4	
12-Feb	7	5	5	20	A	45	26	16	18	17	39	26	16	11	6	9	9	10	14	8	18	4	4	4	14.6	44.6	
13-Feb	3	4	3	2	A	5	4	2	3	3	4	C	C	C	C	C	A	8	6	15	18	22	8	14	--	21.7	
14-Feb	18	21	17	16	A	24	27	29	35	33	22	9	7	8	8	8	20	19	15	14	12	8	8	13	16.9	34.8	
15-Feb	9	33	12	13	A	9	9	9	10	10	11	16	12	14	13	22	22	46	44	47	27	47	27	22	20.9	47.2	
16-Feb	40	21	20	25	A	30	26	32	21	37	33	76	72	55	51	37	36	51	13	11	8	8	17	8	31.5	75.6	
17-Feb	7	6	4	4	A	13	10	20	19	22	35	31	23	22	14	34	41	16	17	7	6	5	31	18	17.6	40.9	
18-Feb	18	27	20	5	A	5	7	7	13	6	9	22	40	41	25	22	10	13	38	31	29	10	14	18	18.6	40.7	
19-Feb	29	8	6	5	A	6	7	7	9	15	14	6	4	4	9	12	12	12	7	10	6	7	7	6	9.0	29.2	
20-Feb	6	5	4	4	A	5	5	8	11	13	12	13	10	9	9	12	16	20	12	7	11	12	34	41	12.1	40.5	
21-Feb	14	13	13	32	A	13	30	23	42	64	68	60	49	41	35	27	23	28	17	15	15	13	17	15	28.9	67.9	
22-Feb	8	8	7	8	A	6	6	6	5	4	5	6	3	3	3	3	4	4	4	3	3	3	4	3	4.6	7.9	
23-Feb	5	7	7	4	A	8	3	6	8	2	5	6	3	3	3	4	14	17	19	13	8	7	9	33	8.3	32.7	
24-Feb	11	9	17	4	A	4	4	4	4	7	5	2	3	2	3	2	2	2	3	3	3	3	2	2	4.3	16.8	
25-Feb	2	3	2	2	A	2	2	5	9	6	24	19	10	19	11	6	17	18	20	24	14	17	9	10	10.8	24.0	
26-Feb	15	13	19	9	A	54	28	28	91	71	53	26	27	10	15	18	31	28	95	60	42	91	21	15	37.3	94.6	
27-Feb	46	50	6	36	A	27	22	12	39	33	43	112	66	54	16	5	4	29	11	6	10	12	15	5	28.7	111.7	
28-Feb	4	3	2	1	A	3	4	6	10	7	34	21	8	8	9	8	12	14	50	13	25	24	12	10	12.5	50.0	
		10.8	13.0	9.0	9.0	--	12.7	11.7	16.2	17.8	20.4	23.7	24.4	21.7	17.3	14.9	12.6	14.2	16.3	18.0	12.8	12.1	13.0	10.9	12.6	Diurnal Average	
		46.2	81.6	38.2	36.1	--	53.6	29.5	72.0	90.9	71.1	89.4	111.7	71.6	61.2	93.4	36.6	40.9	50.7	94.6	60.5	41.9	91.0	34.1	73.8	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

# Hourly Maximums for NO<sub>x</sub> at Beaverlodge February 2009



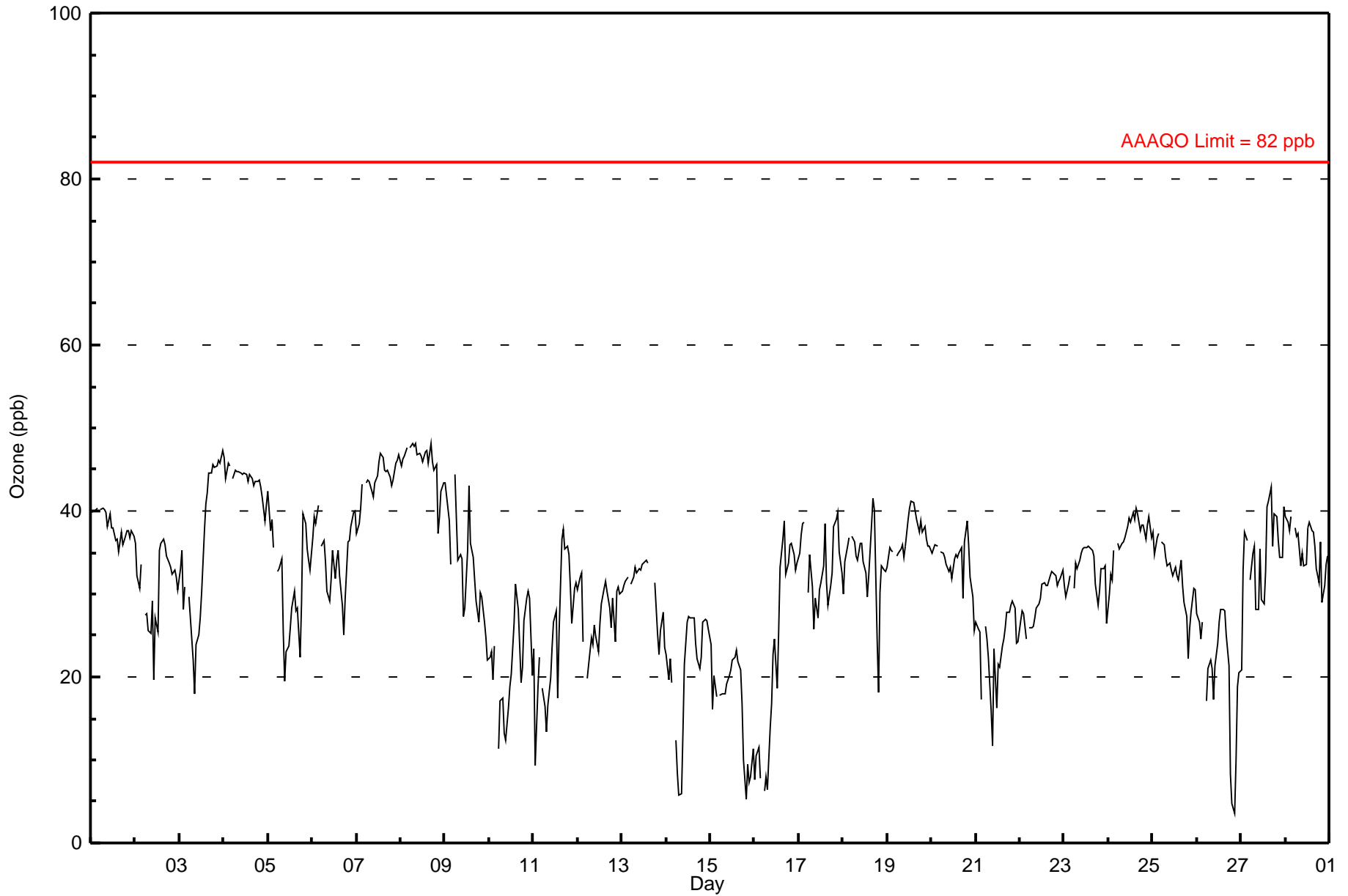
**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Beaverlodge - Ozone (O<sub>3</sub>) - ppb  
February 1, 2009 to March 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0		Hours in Service: 672																																															
Maximum Value: 48.1 ppb on Feb 8 07:00		Maximum Daily Average: 45.7 ppb on Feb 8																																															
Minimum Value: 4 ppb on Feb 26 21:00		Hours of Data: 641																																															
Maximum Diurnal Average: 34.9 ppb at hour 16		Hours of Missing Data: 31																																															
Monthly Average: 31.68 ppb		Hours of Calibration: 31																																															
Minimum Daily Average: 16.9 ppb on Feb 15		Percent Operational Time: 100.0																																															
Minimum Diurnal Average: 28.3 ppb at hour 9																																																	
Percentiles: P <sub>1</sub> = 6.3 P <sub>10</sub> = 20.2 Q <sub>1</sub> = 26.6 Median = 32.9 Q <sub>3</sub> = 37.4 P <sub>90</sub> = 43.3 P <sub>99</sub> = 47.5																																																	
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-Feb	40	40	40	40	A	40	40	40	40	38	40	38	38	36	37	35	38	36	36	38	38	37	38	37	38.2	40.4																							
2-Feb	36	32	31	34	A	27	28	26	25	29	20	27	25	35	36	37	36	35	34	33	32	33	32	31	31.0	36.7																							
3-Feb	33	35	28	31	A	30	27	22	18	24	25	27	30	38	41	42	45	45	46	45	45	46	46	47	35.5	47.2																							
4-Feb	46	44	46	45	A	44	45	45	45	45	44	45	44	44	44	44	43	44	44	44	43	42	39	41	43.8	46.5																							
5-Feb	42	38	39	36	A	33	33	34	25	20	23	24	26	28	30	28	28	22	29	40	38	36	34	33	31.3	42.4																							
6-Feb	37	39	39	41	A	36	36	34	30	29	32	35	32	34	35	32	29	25	29	36	36	38	40	40	34.6	40.7																							
7-Feb	37	39	40	43	A	43	44	44	42	42	43	44	46	47	46	45	45	45	44	43	44	46	46	47	43.7	47.0																							
8-Feb	45	46	47	48	A	48	48	48	48	47	47	47	46	47	47	46	48	46	45	46	37	39	42	43	45.7	48.1																							
9-Feb	43	42	39	34	A	44	39	34	35	34	27	28	35	43	36	34	32	29	27	30	30	27	25	22	33.4	44.3																							
10-Feb	22	23	20	24	A	11	17	17	13	12	16	19	20	26	31	30	28	19	21	27	30	30	30	20	22.1	31.3																							
11-Feb	23	9	19	22	A	19	16	13	17	20	24	27	28	17	25	37	38	35	36	35	31	26	31	31	25.2	37.7																							
12-Feb	31	32	33	24	A	20	21	25	24	26	25	23	26	29	31	32	30	28	26	30	24	30	31	30	27.4	32.5																							
13-Feb	30	31	32	32	A	31	32	33	33	33	33	34	34	34	C	C	C	31	25	23	26	28	24	30.6	34.1																								
14-Feb	23	20	22	19	A	12	9	6	6	13	22	27	27	27	27	24	22	21	22	27	27	27	26	21.0	27.3																								
15-Feb	24	16	20	18	A	18	18	18	18	19	20	21	22	22	23	22	21	17	10	5	9	7	8	11	16.9	23.8																							
16-Feb	8	11	11	8	A	6	8	6	14	17	23	25	19	25	33	37	39	32	34	36	36	35	33	34	23.0	38.8																							
17-Feb	35	37	39	39	A	30	35	31	26	30	27	31	31	33	39	31	29	31	33	38	39	40	35	32	33.4	39.8																							
18-Feb	30	34	36	37	A	37	36	35	34	36	36	34	33	30	32	38	42	40	24	18	30	33	33	33	33.5	41.6																							
19-Feb	33	36	35	35	A	35	35	35	36	34	36	39	40	41	40	39	37	39	37	38	37	36	36	36	37.0	41.1																							
20-Feb	35	35	36	36	A	35	35	34	34	33	33	32	34	35	34	35	36	29	36	39	36	32	30	26	33.9	38.9																							
21-Feb	27	26	26	17	A	26	25	22	16	12	23	16	22	21	24	25	26	28	28	29	29	28	24	24	23.6	29.1																							
22-Feb	27	28	28	25	A	26	26	26	27	28	29	30	31	31	31	31	32	33	33	32	31	32	32	33	29.6	32.9																							
23-Feb	31	30	31	32	A	31	34	33	34	35	35	36	36	36	36	35	35	31	29	30	33	33	33	26	32.8	35.8																							
24-Feb	30	32	32	35	A	36	35	36	36	37	38	39	39	40	39	40	40	38	38	38	37	38	39	37	36.9	40.3																							
25-Feb	37	35	37	37	A	36	36	34	33	34	33	32	33	32	34	31	29	27	22	26	28	31	30	32.2	37.4																								
26-Feb	28	27	25	27	A	17	21	22	21	17	21	24	27	28	28	25	21	8	5	4	10	19	21	20.5	28.2																								
27-Feb	21	33	38	36	A	32	35	36	28	28	35	29	29	33	41	41	43	36	40	39	37	34	40	34.7	42.9																								
28-Feb	39	39	38	39	A	38	37	37	33	35	33	34	38	39	38	37	36	33	31	36	29	31	34	35	35.6	39.3																							
																								31.9	31.7	32.2	31.9	--	30.0	30.4	29.6	28.3	28.8	30.2	30.9	31.8	33.3	34.7	34.9	34.6	32.1	31.4	32.1	31.8	32.2	32.4	31.8	Diurnal Average	
																								46.5	46.3	46.6	47.7	--	47.6	48.1	47.8	48.1	46.8	46.9	46.5	45.9	47.1	47.3	45.8	48.1	46.0	45.6	45.6	45.4	46.2	46.0	47.2	Diurnal Maximum	
C - Calibration																								A - Automated Daily Zero Span																									
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na																																																	



# Hourly Averages for O<sub>3</sub> at Beaverlodge February 2009

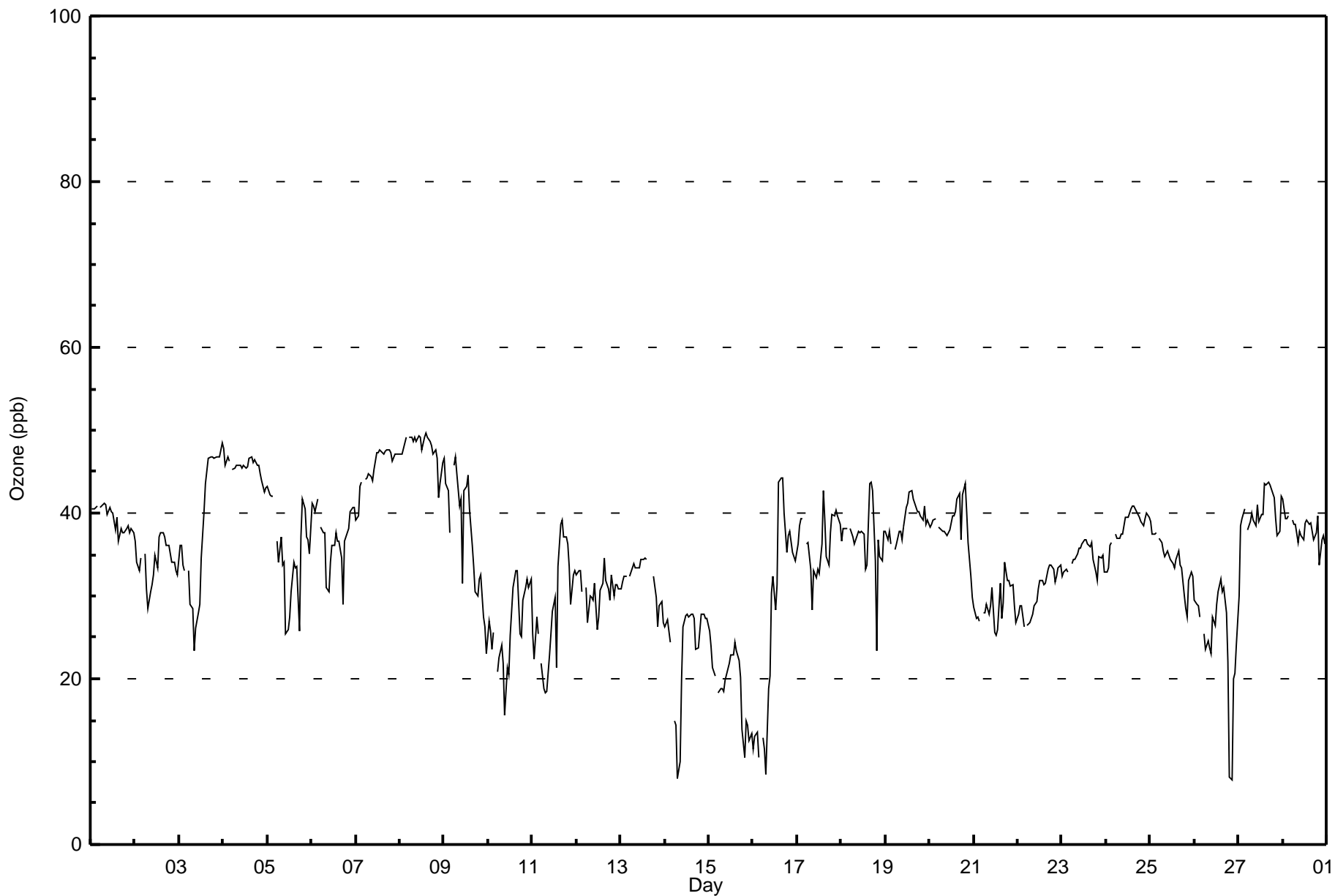


**Peace Airshed Zone Association  
Summary of Hourly Maximums**

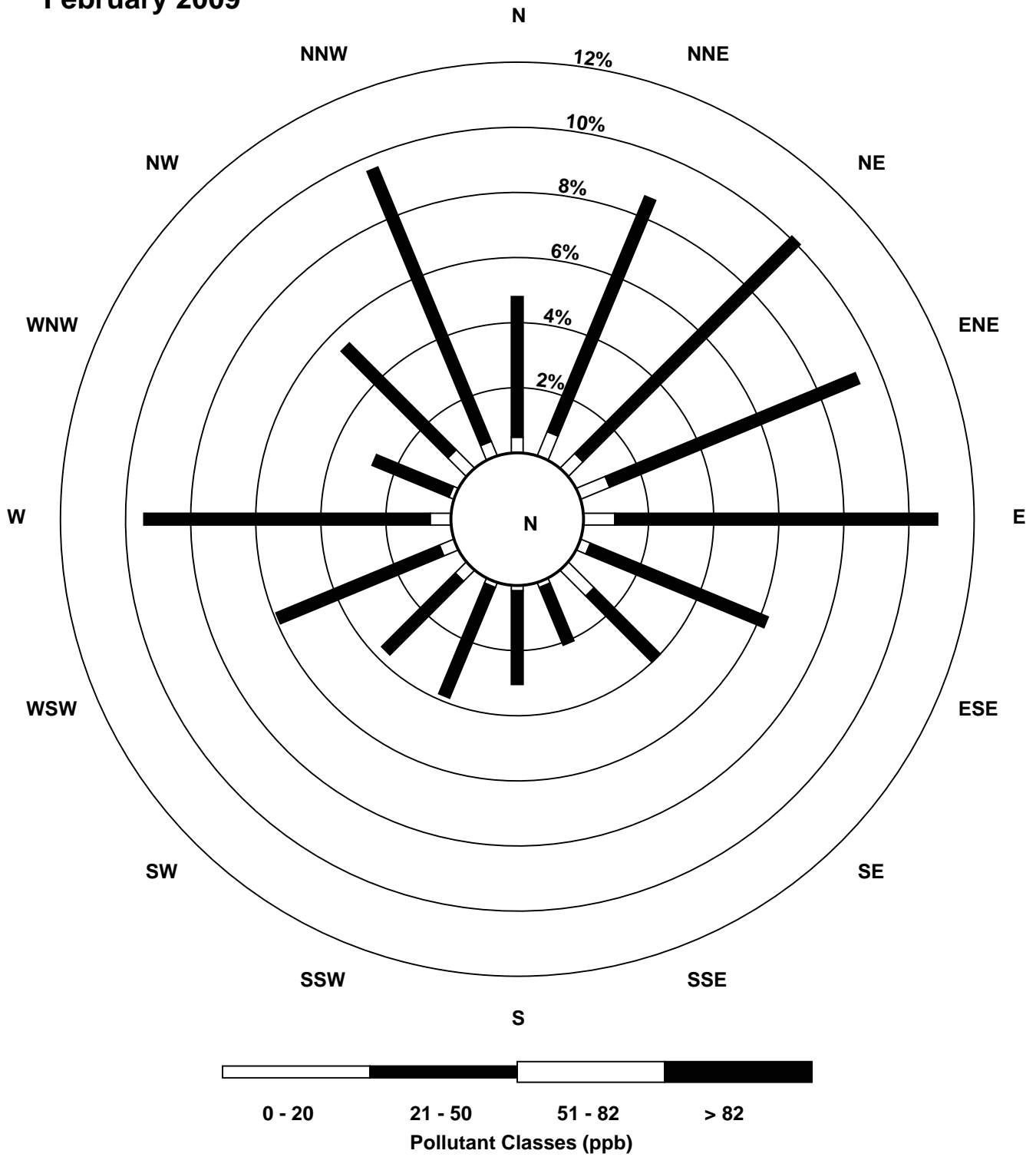
**Beaverlodge - Ozone (O<sub>3</sub>) - ppb  
February 1, 2009 to March 1, 2009**

Maximum Value: 49.7 ppb on Feb 8 15:00		Maximum Daily Average: 47.8 ppb on Feb 8		Hours in Service: 672																							
Minimum Value: 8 ppb on Feb 26 21:00		Minimum Daily Average: 19.3 ppb on Feb 15		Hours of Data: 641																							
Maximum Diurnal Average: 37.8 ppb at hour 16		Minimum Diurnal Average: 31.9 ppb at hour 9		Hours of Missing Data: 31																							
Monthly Average: 34.62 ppb		Percentiles: P <sub>1</sub> = 10.4 P <sub>10</sub> = 24.3 Q <sub>1</sub> = 29.8 Median = 35.7 Q <sub>3</sub> = 39.7 P <sub>90</sub> = 45.1 P <sub>99</sub> = 49.2		Hours of Calibration: 31																							
				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-Feb	41	41	41	41	A	41	41	41	41	40	41	40	40	38	39	37	38	38	38	38	38	38	38	38	39.3	41.1	
2-Feb	37	34	33	35	A	35	31	29	31	31	33	35	33	37	38	38	37	36	36	35	34	34	33	33	34.2	37.7	
3-Feb	36	36	34	33	A	33	29	28	23	26	28	29	35	40	44	45	47	47	47	47	47	47	49	49	38.0	48.6	
4-Feb	48	46	47	46	A	45	45	46	46	46	45	46	45	46	47	47	46	46	46	46	45	44	43	43	45.6	47.8	
5-Feb	43	42	42	42	A	37	34	37	34	34	25	26	27	31	34	33	34	26	37	42	41	37	37	35	35.2	43.2	
6-Feb	41	41	40	42	A	38	38	38	31	31	34	36	36	38	37	37	35	29	37	38	38	40	41	41	37.1	41.7	
7-Feb	39	40	43	44	A	44	44	45	44	44	45	47	47	48	47	47	47	48	48	47	46	47	47	47	45.5	47.7	
8-Feb	47	47	48	49	A	49	49	49	49	49	49	49	48	49	50	49	49	48	47	48	47	42	43	46	47.8	49.7	
9-Feb	47	44	43	38	A	46	47	45	41	42	32	43	43	45	40	36	34	31	30	32	33	28	26	23	37.6	46.7	
10-Feb	27	26	24	26	A	21	23	24	22	16	21	20	25	31	32	33	33	25	25	29	31	32	31	32	26.5	33.1	
11-Feb	25	22	27	25	A	22	19	18	18	23	25	28	30	21	34	39	39	37	37	36	34	29	33	33	28.5	39.1	
12-Feb	33	33	33	31	A	31	27	30	30	30	32	26	27	31	32	35	32	31	29	33	30	31	31	31	30.7	34.5	
13-Feb	31	32	32	32	A	32	33	34	33	33	33	34	34	35	34	C	C	C	32	30	26	29	29	27	31.9	34.7	
14-Feb	26	27	26	24	A	15	14	8	10	20	26	28	28	27	28	28	27	24	24	26	28	28	27	27	23.7	27.8	
15-Feb	26	24	21	20	A	18	19	19	18	20	21	22	23	23	24	23	22	20	14	10	15	14	12	13	19.3	25.8	
16-Feb	11	13	13	10	A	13	11	9	19	20	30	32	28	31	44	44	44	40	35	37	38	35	35	34	27.4	44.2	
17-Feb	36	39	39	39	A	36	36	33	28	33	32	33	33	36	43	39	35	34	38	40	40	40	40	39	36.6	42.7	
18-Feb	37	38	38	38	A	38	37	36	37	38	38	38	37	33	34	44	44	43	34	23	37	35	34	38	36.9	43.7	
19-Feb	38	37	38	36	A	36	36	38	38	37	38	41	41	43	43	42	41	40	40	40	39	41	39	39	39.1	42.7	
20-Feb	38	39	39	39	A	38	38	38	38	37	38	38	40	40	40	42	42	37	42	44	40	36	32	30	38.5	43.6	
21-Feb	29	27	27	27	A	28	28	29	28	29	31	26	25	26	31	27	29	34	32	32	31	31	29	27	28.8	34.0	
22-Feb	28	29	29	26	A	27	27	27	28	29	29	31	32	32	31	32	33	34	34	33	32	32	33	34	30.5	33.8	
23-Feb	32	33	33	33	A	34	34	34	35	36	36	36	37	37	36	36	36	34	33	32	35	35	35	33	34.6	36.9	
24-Feb	33	33	36	36	A	37	37	37	37	37	39	39	39	40	41	41	40	40	39	39	38	39	40	39	38.3	40.9	
25-Feb	39	37	37	38	A	37	36	35	35	35	35	34	34	33	34	35	34	33	30	28	27	32	33	32	34.2	38.9	
26-Feb	29	29	29	27	A	25	24	25	24	23	28	27	29	31	32	31	31	28	22	8	8	20	21	24	24.9	32.0	
27-Feb	30	39	39	41	A	38	39	40	39	38	41	39	40	40	44	43	44	43	43	42	39	37	38	42	39.9	43.7	
28-Feb	42	39	39	40	A	39	39	39	36	38	37	37	39	39	39	39	38	37	38	40	34	37	37	36	38.1	41.8	
		34.6	34.5	34.7	34.2	--	33.4	32.7	32.5	31.9	32.6	33.7	34.3	34.9	35.7	37.5	37.8	37.4	35.6	35.2	34.8	34.6	34.7	34.4	34.5	Diurnal Average	
		47.8	47.2	47.9	49.2	--	49.2	49.2	48.7	49.2	48.7	49.4	49.2	47.7	49.2	49.7	49.2	48.7	48.2	47.7	47.7	46.8	47.2	47.2	48.6	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

# Hourly Maximums for O<sub>3</sub> at Beaverlodge February 2009



# Pollutant Rose for O<sub>3</sub> at Beaverlodge February 2009



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

**Beaverlodge - Ozone (O<sub>3</sub>) - ppb  
February 1, 2009 to March 1, 2009**

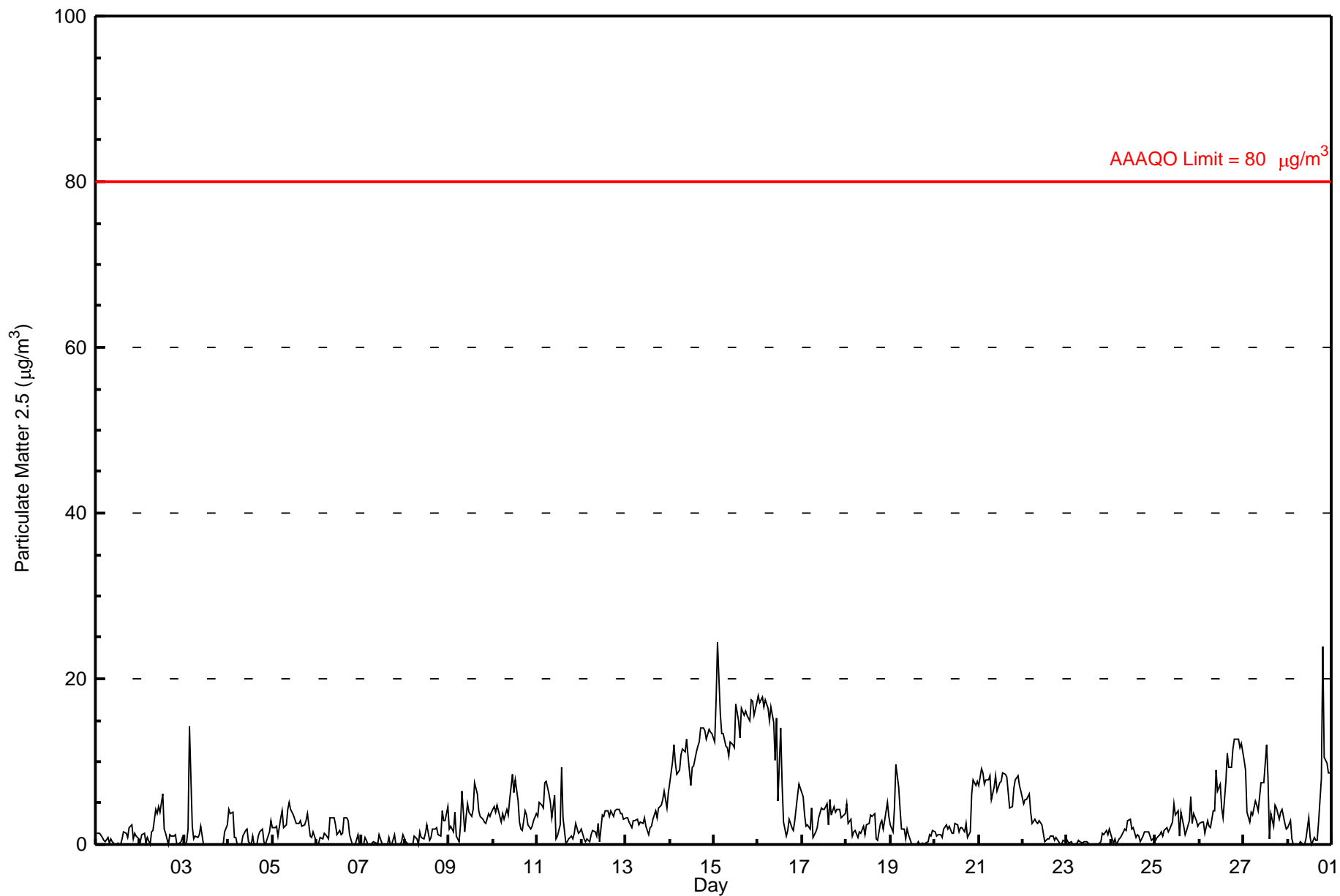
Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 47.6 ppb on Feb 8 11:00																				Hours in Service: 672					
Minimum Value: 8.3 ppb on Feb 16 08:00																				Hours of Data: 666					
Percentiles: P <sub>1</sub> = 9.0 P <sub>10</sub> = 20.3 Q <sub>1</sub> = 26.5 Median = 32.8 Q <sub>3</sub> = 36.8 P <sub>90</sub> = 42.6 P <sub>99</sub> = 47.1																				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-Feb	40	40	40	40	40	40	40	40	40	40	39	39	39	38	38	37	37	37	37	37	37	37	37	37	40.2
2-Feb	37	36	36	35	35	33	32	30	29	28	27	26	26	27	28	29	31	31	33	34	35	34	34	33	36.9
3-Feb	33	33	32	32	32	31	31	29	27	26	25	25	25	26	28	31	34	37	39	41	43	44	45	46	45.6
4-Feb	46	46	46	46	46	46	45	45	45	45	45	45	45	45	44	44	44	44	44	44	44	43	43	42	45.8
5-Feb	42	41	41	40	39	38	37	36	34	31	29	27	27	27	26	26	26	26	27	29	31	31	32	33	42.2
6-Feb	34	36	37	37	37	37	37	36	35	34	33	33	33	33	32	32	32	31	32	32	33	33	34	34	37.4
7-Feb	35	37	38	39	40	40	41	41	42	43	43	43	44	44	44	44	45	45	45	45	45	45	45	45	45.3
8-Feb	45	45	45	46	46	47	47	47	47	48	48	47	47	47	47	47	47	47	46	46	45	44	44	43	47.6
9-Feb	43	42	41	40	40	41	41	39	38	37	35	35	35	35	34	34	34	33	33	33	33	31	29	28	42.8
10-Feb	26	26	25	24	23	21	20	19	18	16	16	15	16	18	20	21	23	24	24	25	27	27	27	26	27.0
11-Feb	25	24	23	23	22	20	18	17	17	18	19	19	20	20	21	24	27	29	30	31	32	33	34	33	33.5
12-Feb	32	32	31	30	30	29	27	26	26	25	24	23	24	25	26	27	28	28	28	29	29	29	29	29	32.0
13-Feb	29	29	30	30	31	31	31	32	32	32	32	33	33	33	33	33	34	N	N	N	N	N	N	26	33.5
14-Feb	26	25	24	23	23	21	18	16	13	12	12	13	15	17	19	22	24	25	25	25	25	25	25	24	25.5
15-Feb	24	24	24	23	22	21	20	19	18	18	18	19	19	20	20	21	21	21	20	18	16	14	12	11	24.4
16-Feb	9	9	9	9	9	9	9	8	9	10	12	14	15	17	20	24	27	29	30	32	34	35	35	35	35.2
17-Feb	34	35	36	36	36	35	35	35	34	33	31	30	30	30	31	31	31	31	32	33	34	35	34	35	35.8
18-Feb	35	35	36	35	35	34	35	35	35	36	36	35	35	34	34	34	35	36	34	32	32	32	32	32	35.8
19-Feb	31	30	31	34	34	34	35	35	35	35	35	36	36	37	38	38	39	39	40	39	39	39	38	37	39.6
20-Feb	37	37	36	36	36	36	35	35	35	35	34	34	34	34	34	34	34	34	34	35	35	35	34	33	36.9
21-Feb	32	31	30	27	26	25	24	24	22	20	20	20	20	20	20	21	23	24	25	26	27	27	27	27	31.8
22-Feb	27	27	27	27	26	26	26	26	26	27	27	27	28	29	29	30	30	31	31	32	32	32	32	32	32.1
23-Feb	32	32	31	31	31	31	32	32	32	33	33	34	34	35	35	35	35	35	34	33	33	33	32	31	35.4
24-Feb	31	31	31	32	32	32	32	34	35	35	36	37	37	38	38	38	39	39	39	39	39	38	39	38	39.0
25-Feb	38	37	37	37	37	37	36	36	36	35	35	34	34	34	33	33	33	32	31	30	29	29	28	28	37.8
26-Feb	28	27	27	28	28	26	25	24	23	21	21	21	21	23	24	24	25	25	24	21	18	16	15	14	27.8
27-Feb	14	15	19	23	25	28	31	33	34	33	33	32	32	32	32	33	35	36	36	38	39	39	38	38	38.8
28-Feb	38	38	38	38	38	38	39	38	37	37	36	35	36	36	36	36	36	36	36	36	35	34	33	33	38.6
Diurnal Maximums																									
45.8 45.7 45.7 46.0 46.4 46.6 46.9 47.1 47.5 47.5 47.6 47.4 47.2 47.2 47.1 46.8 46.8 46.7 46.5 46.3 45.3 44.7 44.9 45.6																									
N - Not Valid																									
Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 65 ppb																									

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

**Beaverlodge - Particulate Matter 2.5 (PM<sub>2.5</sub>) -  $\mu\text{g}/\text{m}^3$   
February 1, 2009 to March 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0		Hours in Service: 672																									
Maximum Value: 24.3 $\mu\text{g}/\text{m}^3$ on Feb 15 03:00		Maximum Daily Average: 14.9 $\mu\text{g}/\text{m}^3$ on Feb 15																									
Minimum Value: 0 $\mu\text{g}/\text{m}^3$ on Feb 1 11:00		Hours of Data: 672																									
Maximum Diurnal Average: 4.3 $\mu\text{g}/\text{m}^3$ at hour 24		Hours of Missing Data: 0																									
Monthly Average: 3.65 $\mu\text{g}/\text{m}^3$		Hours of Calibration: 0																									
Minimum Daily Average: 0.3 $\mu\text{g}/\text{m}^3$ on Feb 7		Percent Operational Time: 100.0																									
Minimum Diurnal Average: 2.9 $\mu\text{g}/\text{m}^3$ at hour 17																											
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.8 Median = 2.2 Q <sub>3</sub> = 4.4 P <sub>90</sub> = 9.7 P <sub>99</sub> = 17.5																											
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-Feb	1	1	1	1	1	0	1	0	1	0	0	0	0	0	1	2	1	1	2	2	1	1	1	1	0.8	2.3	
2-Feb	0	1	1	0	1	0	2	2	4	4	5	4	6	2	1	0	1	1	1	1	0	0	0	1	1.6	6.1	
3-Feb	0	0	2	14	2	1	1	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2	2	1.2	14.3	
4-Feb	4	4	4	1	1	0	0	0	1	2	2	0	0	1	0	0	1	1	2	0	0	1	2	3	1.2	4.3	
5-Feb	2	2	2	1	3	4	2	2	4	5	4	4	3	2	3	3	2	2	3	4	1	1	2	1	2.6	5.1	
6-Feb	0	0	1	1	1	1	1	3	3	3	2	1	2	1	1	3	3	3	1	0	0	0	1	0	1.4	3.3	
7-Feb	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	1	0.3	1.2	
8-Feb	0	0	0	0	0	1	1	0	1	1	1	1	2	1	1	2	2	2	1	1	4	3	3	5	1.4	4.6	
9-Feb	2	2	1	4	1	0	2	6	1	3	5	4	3	4	7	6	4	3	3	3	3	4	3	4	3.4	7.5	
10-Feb	5	4	5	4	3	4	3	4	4	5	8	6	8	5	3	2	2	4	4	2	2	2	3	4	3.9	8.5	
11-Feb	3	5	5	4	8	8	6	5	3	6	1	1	2	9	3	0	0	1	1	1	1	3	1	1	3.3	9.3	
12-Feb	2	1	0	1	0	1	2	1	1	3	0	4	3	4	4	3	4	3	4	4	4	4	4	3	2.6	4.3	
13-Feb	3	3	3	2	3	3	3	2	3	3	3	2	1	2	2	3	4	3	4	5	5	7	4	6	3.4	6.5	
14-Feb	7	10	12	10	8	9	11	11	11	13	11	7	9	9	11	12	12	14	14	14	13	14	13	13	11.3	14.0	
15-Feb	12	18	24	16	13	13	12	12	11	12	12	12	17	15	13	16	16	16	16	15	17	17	16	17	14.9	24.3	
16-Feb	18	17	18	17	17	16	15	17	15	10	15	5	14	7	3	1	2	3	2	2	3	6	7	7	9.9	17.9	
17-Feb	6	4	2	2	2	4	1	1	2	3	4	4	4	5	2	5	4	4	4	4	4	3	3	4	3.5	5.8	
18-Feb	5	3	3	1	1	2	1	2	1	2	1	2	2	3	3	4	1	1	2	3	2	3	5	3	2.4	5.1	
19-Feb	2	2	4	10	7	4	2	2	1	2	1	0	0	0	0	0	0	0	0	0	0	1	1	2	1.7	9.7	
20-Feb	1	1	1	1	1	2	2	2	2	1	1	2	2	2	2	2	2	2	1	1	6	8	7	8	2.6	7.8	
21-Feb	7	9	9	7	8	8	8	5	7	8	6	8	8	9	9	8	6	4	5	7	8	8	7	6	7.3	9.2	
22-Feb	5	5	5	6	4	3	3	3	3	3	2	1	0	1	1	1	1	1	1	0	0	0	1	0	2.1	6.2	
23-Feb	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	1	2	0.5	1.9	
24-Feb	1	0	1	0	1	1	1	2	2	3	3	2	2	1	1	1	0	1	2	2	2	1	0	1	1.2	3.1	
25-Feb	1	1	1	1	1	2	2	1	2	3	5	4	4	1	4	2	1	2	3	6	3	4	3	2	2.4	5.8	
26-Feb	3	3	3	1	3	2	2	4	4	9	6	7	4	3	8	11	9	9	11	13	13	13	12	12	6.9	12.8	
27-Feb	10	9	4	3	4	4	5	5	4	7	7	7	12	8	1	4	2	5	4	3	4	4	3	2	5.0	12.0	
28-Feb	2	3	1	0	0	0	0	0	0	0	1	3	1	0	1	1	1	3	8	24	10	10	9	9	3.5	23.9	
		3.7	3.8	4.1	3.9	3.4	3.3	3.2	3.4	3.3	4.1	3.9	3.3	4.0	3.4	3.0	3.3	2.9	3.2	3.6	4.2	3.8	4.2	4.1	4.3	Diurnal Average	
		17.9	17.5	24.3	16.6	17.5	16.4	14.9	16.5	14.7	12.7	15.2	11.6	17.0	15.0	12.9	16.4	15.7	16.2	15.7	23.9	17.5	17.3	15.6	17.1	Diurnal Maximum	
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 80 $\mu\text{g}/\text{m}^3$ 24-hr 30 $\mu\text{g}/\text{m}^3$																											

# Hourly Averages for PM<sub>2.5</sub> at Beaverlodge February 2009



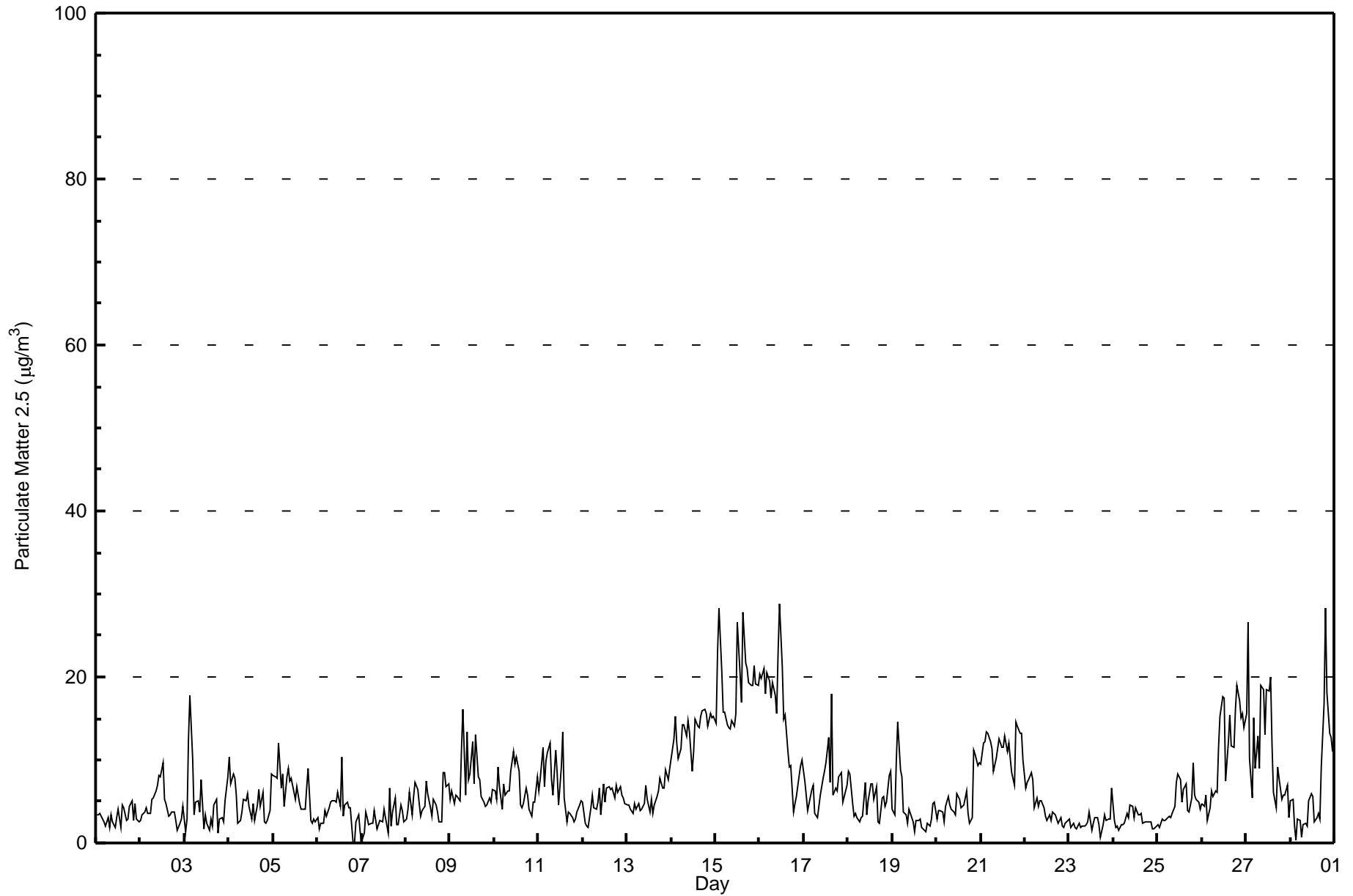
**Peace Airshed Zone Association  
Summary of Hourly Maximums**

**Beaverlodge - Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>  
February 1, 2009 to March 1, 2009**

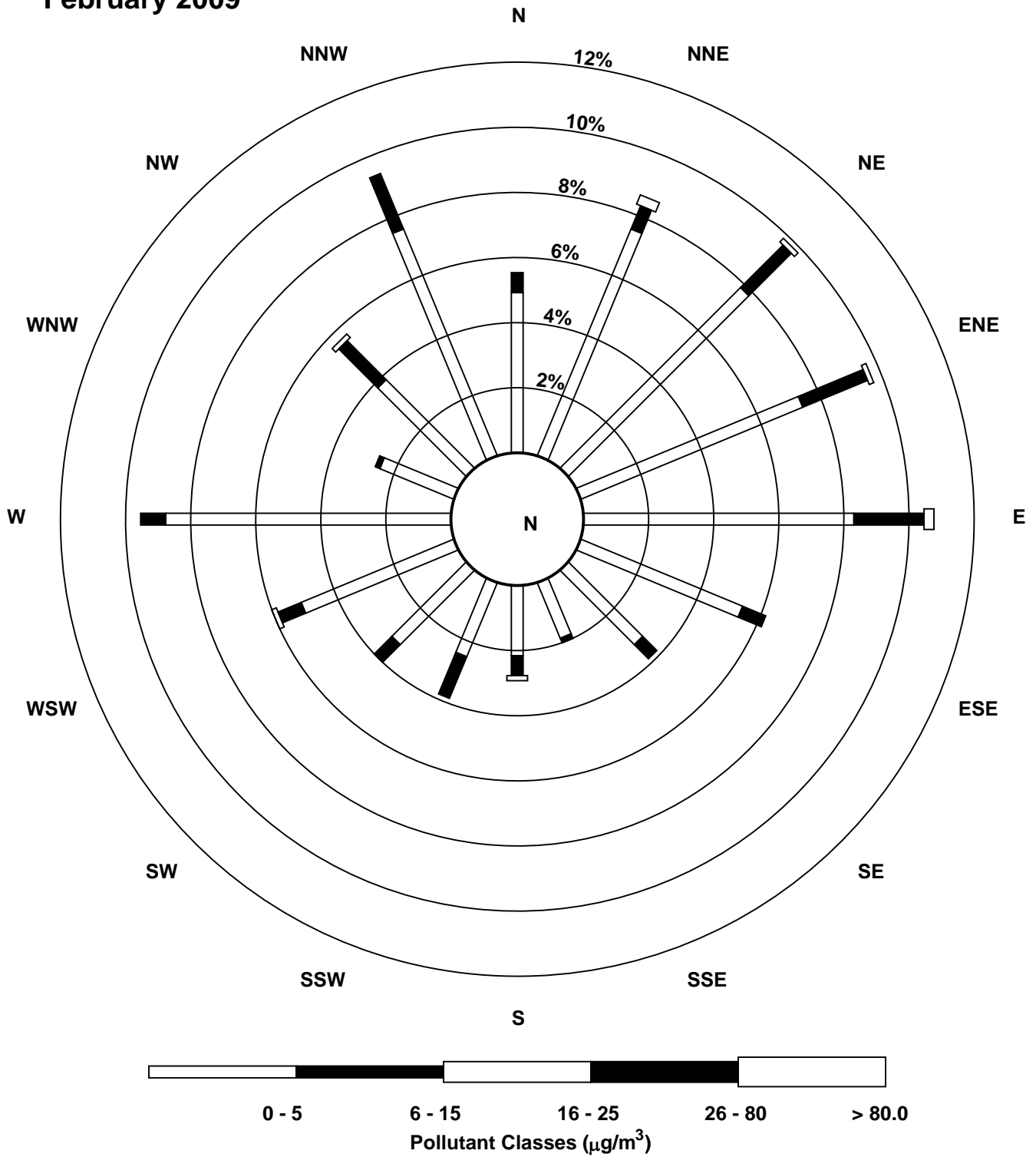
Maximum Value: 28.7 µg/m <sup>3</sup> on Feb 16 12:00		Maximum Daily Average: 19.0 µg/m <sup>3</sup> on Feb 15		Hours in Service: 672																							
Minimum Value: 0 µg/m <sup>3</sup> on Feb 6 20:00		Minimum Daily Average: 2.5 µg/m <sup>3</sup> on Feb 23		Hours of Data: 672																							
Maximum Diurnal Average: 8.2 µg/m <sup>3</sup> at hour 13		Minimum Diurnal Average: 5.9 µg/m <sup>3</sup> at hour 17		Hours of Missing Data: 0																							
Monthly Average: 6.83 µg/m <sup>3</sup>		Percentiles: P <sub>1</sub> = 1.1 P <sub>10</sub> = 2.4 Q <sub>1</sub> = 3.2 Median = 5.1 Q <sub>3</sub> = 8.6 P <sub>90</sub> = 14.7 P <sub>99</sub> = 22.3		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-Feb	3	3	4	3	2	2	3	2	3	3	2	3	4	2	5	4	3	3	4	5	3	5	3	3	3.2	5.0	
2-Feb	3	3	4	4	4	4	5	5	6	7	8	8	10	5	5	3	3	4	4	3	2	2	3	4	4.5	9.7	
3-Feb	1	3	12	18	10	3	5	5	4	8	2	3	2	2	3	2	5	5	1	3	3	3	5	8	4.8	17.9	
4-Feb	10	7	8	8	6	2	3	4	5	5	6	4	3	5	3	5	7	4	6	3	2	3	4	8	5.0	10.3	
5-Feb	8	8	8	12	7	8	4	8	9	7	8	6	5	7	5	4	4	4	7	9	3	2	3	3	6.2	12.1	
6-Feb	3	2	2	2	4	3	4	5	5	5	5	6	4	10	3	5	5	4	4	0	0	3	3	1	3.8	10.4	
7-Feb	0	1	4	3	2	2	2	4	2	2	3	3	4	3	1	7	2	4	5	2	2	5	4	3	2.9	6.6	
8-Feb	3	4	6	3	6	7	6	5	3	4	4	7	6	4	3	5	5	4	2	3	9	8	7	7	5.1	8.5	
9-Feb	5	6	5	6	6	5	11	16	6	13	8	8	12	7	13	8	8	6	5	4	5	5	5	6	7.5	16.0	
10-Feb	6	5	9	7	4	7	6	6	6	9	11	10	10	9	5	4	5	7	6	4	3	5	5	8	6.5	11.1	
11-Feb	6	8	12	7	10	11	12	8	6	11	9	5	9	13	5	3	4	4	3	3	3	4	5	5	6.8	13.4	
12-Feb	5	2	2	2	4	6	4	4	5	7	3	7	5	7	7	6	7	5	7	6	7	6	5	5	5.2	7.1	
13-Feb	5	5	4	4	5	4	5	4	4	5	7	5	4	5	4	5	6	6	8	7	7	9	8	9	5.4	8.9	
14-Feb	10	13	15	12	10	11	14	14	13	15	13	9	11	15	14	14	15	16	16	16	14	16	15	15	13.6	16.2	
15-Feb	14	23	28	21	16	16	14	14	14	15	14	16	27	20	17	28	22	21	19	19	19	21	19	19	19.0	28.2	
16-Feb	20	20	21	18	20	20	17	19	18	16	23	29	21	15	15	11	9	9	4	5	6	8	9	10	15.1	28.7	
17-Feb	7	6	4	5	6	7	4	3	4	6	8	9	10	13	7	18	6	7	6	8	9	5	6	7	7.0	17.9	
18-Feb	9	8	5	3	4	3	3	3	3	7	3	5	7	7	5	7	2	2	5	6	4	5	8	9	5.2	8.7	
19-Feb	4	3	10	15	9	8	4	3	2	4	4	3	1	3	3	3	2	1	1	2	2	3	5	5	4.2	14.6	
20-Feb	3	4	4	4	3	4	6	5	4	4	3	6	5	4	4	5	6	4	2	3	11	11	9	10	5.1	11.2	
21-Feb	9	12	12	13	13	12	11	9	10	11	13	11	12	13	11	12	10	8	7	15	14	13	13	10	11.5	14.6	
22-Feb	7	7	8	8	8	4	5	4	5	5	4	3	3	3	4	3	3	2	3	2	2	2	2	3	4.3	8.4	
23-Feb	3	2	2	2	2	2	2	2	2	2	3	4	2	2	3	3	2	1	2	3	3	3	3	7	2.5	6.6	
24-Feb	3	2	2	2	2	2	2	4	3	5	4	3	4	3	3	3	2	3	3	3	3	2	2	2	2.8	4.5	
25-Feb	2	2	3	3	3	3	3	3	4	4	7	8	8	5	6	7	4	4	5	10	6	5	5	4	4.8	9.6	
26-Feb	5	4	6	3	4	6	6	6	6	12	15	18	18	8	12	15	12	12	16	19	17	15	16	14	11.0	19.0	
27-Feb	16	27	10	5	15	9	13	9	19	19	13	19	18	20	12	6	4	9	8	5	6	6	7	3	11.5	26.6	
28-Feb	5	5	2	0	3	3	1	2	2	2	5	6	6	2	3	4	3	9	17	28	18	13	13	11	6.8	28.3	
		6.3	7.0	7.5	6.8	6.7	6.3	6.3	6.2	7.5	7.4	8.0	8.2	7.6	6.5	7.1	5.9	6.0	6.3	7.0	6.4	6.7	6.8	7.1	Diurnal Average		
		20.4	26.6	28.2	20.6	20.5	19.5	17.4	19.3	19.0	18.5	22.9	28.7	26.7	20.3	17.0	27.8	21.7	21.1	19.3	28.3	19.0	21.3	19.1	19.1	Diurnal Maximum	



# Hourly Maximums for PM<sub>2.5</sub> at Beaverlodge February 2009



# Pollutant Rose for PM<sub>2.5</sub> at Beaverlodge February 2009

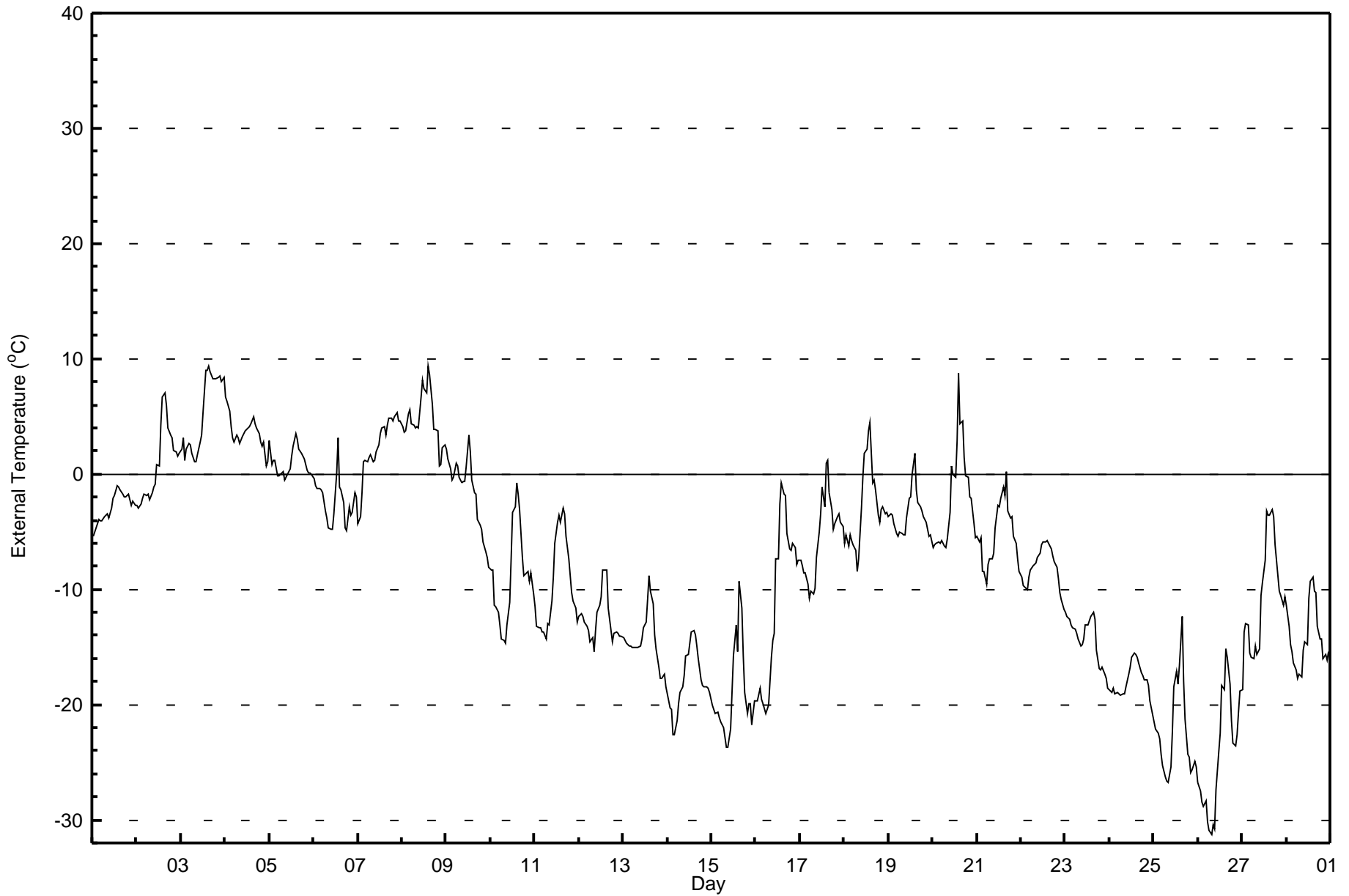


**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Beaverlodge - External Temperature (ET) - °C  
February 1, 2009 to March 1, 2009**

Maximum Value: 9.4 °C on Feb 3 16:00		Maximum Daily Average: 5.2 °C on Feb 3		Hours in Service: 672																							
Minimum Value: -31 °C on Feb 26 08:00		Minimum Daily Average: -24.3 °C on Feb 26		Hours of Data: 672																							
Maximum Diurnal Average: -3.0 °C at hour 15		Minimum Diurnal Average: -10.3 °C at hour 8		Hours of Missing Data: 0																							
Monthly Average: -7.64 °C		Percentiles: P <sub>1</sub> = -29.1 P <sub>10</sub> = -19.3 Q <sub>1</sub> = -14.6 Median = -6.2 Q <sub>3</sub> = -0.7 P <sub>90</sub> = 3.5 P <sub>99</sub> = 8.5		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-Feb	-5	-5	-5	-4	-4	-4	-4	-4	-3	-4	-3	-2	-2	-1	-1	-1	-2	-2	-2	-2	-2	-3	-2	-3	-2.9	-1.0	
2-Feb	-3	-3	-3	-2	-2	-2	-2	-2	-2	-1	-1	1	1	4	7	7	6	4	3	3	2	2	2	2	0.9	7.1	
3-Feb	2	3	1	2	3	3	2	1	1	2	3	3	5	9	9	9	8	8	8	8	8	9	8	8	5.2	9.4	
4-Feb	7	6	5	4	3	3	3	3	3	3	4	4	4	4	4	5	4	4	3	3	2	3	1	1	3.6	6.7	
5-Feb	3	1	1	1	0	0	0	0	-1	0	0	0	2	2	4	3	2	2	2	1	0	0	0	0	1.0	3.5	
6-Feb	0	-1	-1	-1	-1	-2	-3	-4	-5	-5	-5	-3	0	3	-1	-1	-2	-5	-5	-3	-4	-3	-2	-2	-2.3	3.1	
7-Feb	-4	-4	-2	1	1	1	1	2	1	1	2	3	3	4	4	3	4	5	5	5	5	5	5	5	2.4	5.3	
8-Feb	4	4	4	5	6	4	4	4	4	4	7	8	7	7	9	9	6	4	4	4	1	1	2	3	4.8	9.4	
9-Feb	2	1	0	0	0	1	1	0	-1	-1	-1	1	3	2	-1	-2	-2	-4	-4	-5	-6	-7	-7	-8	-1.5	3.3	
10-Feb	-8	-8	-11	-12	-12	-13	-14	-14	-15	-13	-11	-7	-3	-3	-1	-2	-3	-7	-9	-9	-8	-9	-9	-10	-8.9	-0.7	
11-Feb	-12	-13	-13	-13	-14	-14	-14	-13	-13	-11	-9	-6	-4	-4	-4	-3	-3	-5	-7	-9	-10	-11	-12	-13	-9.6	-3.0	
12-Feb	-12	-12	-12	-13	-13	-14	-15	-14	-15	-14	-12	-11	-11	-8	-8	-8	-12	-14	-15	-14	-14	-14	-14	-14	-12.6	-8.3	
13-Feb	-14	-14	-15	-15	-15	-15	-15	-15	-15	-15	-14	-13	-13	-11	-9	-10	-11	-14	-15	-17	-18	-18	-17	-18	-14.5	-8.8	
14-Feb	-19	-20	-20	-23	-23	-21	-20	-19	-19	-18	-16	-16	-15	-14	-14	-14	-15	-16	-18	-18	-18	-19	-19	-19	-17.9	-13.6	
15-Feb	-20	-20	-21	-21	-21	-22	-22	-23	-24	-24	-22	-19	-16	-13	-15	-9	-12	-16	-19	-21	-20	-20	-22	-20	-19.2	-9.3	
16-Feb	-20	-20	-19	-19	-20	-21	-20	-20	-16	-14	-14	-7	-7	-3	-1	-2	-2	-5	-7	-7	-6	-6	-8	-7	-11.3	-0.8	
17-Feb	-8	-8	-9	-9	-10	-11	-10	-10	-10	-7	-5	-3	-1	-3	1	1	-2	-3	-5	-4	-4	-3	-4	-5	-5.4	1.2	
18-Feb	-6	-5	-6	-5	-6	-6	-7	-8	-7	-3	0	2	2	4	4	-1	-1	-1	-4	-4	-3	-3	-3	-3	-3.0	4.5	
19-Feb	-4	-3	-4	-4	-5	-5	-5	-5	-5	-4	-2	-2	0	2	2	-1	-2	-3	-3	-4	-4	-5	-5	-5	-3.6	1.8	
20-Feb	-6	-6	-6	-6	-6	-6	-6	-6	-6	-3	1	0	0	3	9	4	5	1	0	0	-2	-2	-4	-5	-2.1	8.7	
21-Feb	-5	-6	-5	-8	-8	-10	-8	-7	-7	-7	-5	-3	-3	-2	-1	-2	0	-3	-4	-4	-5	-6	-7	-8	-5.2	0.2	
22-Feb	-9	-10	-10	-10	-9	-8	-8	-8	-8	-7	-7	-6	-6	-6	-6	-6	-6	-7	-8	-8	-9	-10	-11	-12	-8.1	-5.8	
23-Feb	-12	-12	-13	-13	-13	-14	-14	-14	-15	-15	-14	-13	-13	-13	-12	-12	-13	-15	-17	-17	-17	-17	-18	-19	-14.3	-12.0	
24-Feb	-19	-19	-19	-19	-19	-19	-19	-19	-19	-18	-17	-17	-16	-16	-16	-16	-16	-16	-17	-17	-18	-18	-20	-21	-18.0	-15.6	
25-Feb	-22	-22	-22	-23	-24	-25	-26	-27	-27	-25	-22	-18	-17	-18	-17	-12	-18	-21	-24	-25	-26	-26	-25	-25	-22.4	-12.3	
26-Feb	-27	-27	-28	-29	-28	-30	-31	-31	-30	-31	-27	-24	-22	-18	-19	-15	-16	-18	-21	-23	-24	-23	-21	-19	-24.3	-15.1	
27-Feb	-19	-14	-13	-13	-16	-16	-16	-15	-16	-15	-11	-9	-7	-3	-4	-4	-3	-4	-6	-9	-10	-10	-11	-11	-10.6	-3.1	
28-Feb	-11	-13	-15	-15	-16	-17	-18	-17	-18	-15	-15	-15	-11	-9	-9	-10	-10	-13	-14	-14	-16	-16	-15	-15	-14.2	-8.9	
		-8.8	-9.0	-9.3	-9.4	-9.8	-10.1	-10.2	-10.3	-10.2	-9.3	-7.8	-6.2	-5.0	-3.6	-3.0	-3.2	-4.1	-5.9	-7.1	-7.5	-8.0	-8.2	-8.5	-8.7	Diurnal Average	
		6.7	6.3	5.4	5.3	5.6	4.3	4.3	4.0	4.1	4.0	6.7	8.1	7.4	9.1	9.4	9.4	8.9	8.3	8.2	8.3	8.4	8.6	8.1	8.4	Diurnal Maximum	

# Hourly Averages for External Temperature at Beaverlodge February 2009

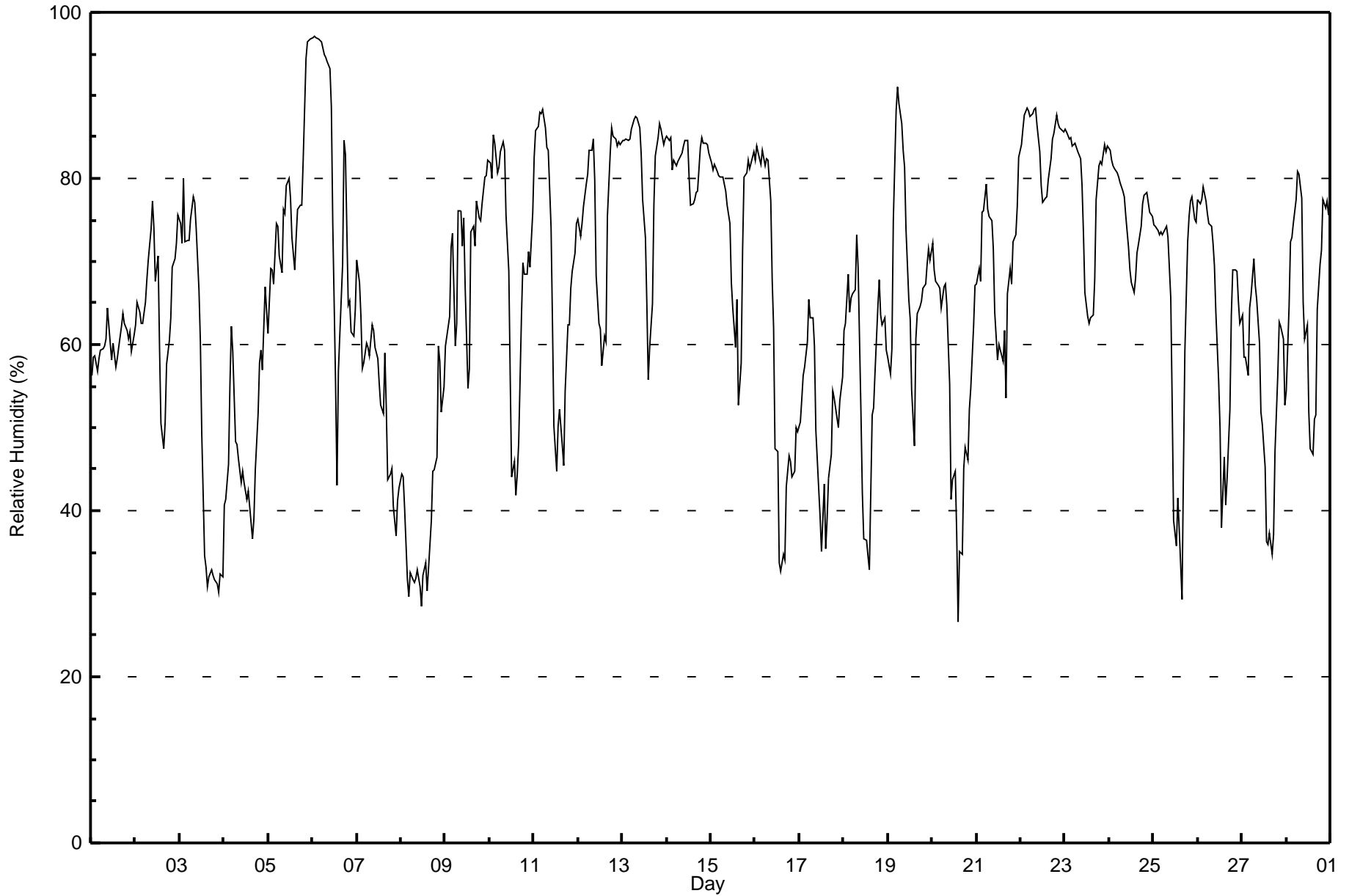


**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Beaverlodge - Relative Humidity (RH) - %  
February 1, 2009 to March 1, 2009**

Maximum Value: 97.1 % on Feb 6 02:00      Maximum Daily Average: 84.7 % on Feb 22 Minimum Value: 27 % on Feb 20 15:00      Minimum Daily Average: 39.1 % on Feb 8 Maximum Diurnal Average: 74.3 % at hour 8      Minimum Diurnal Average: 50.9 % at hour 15 Monthly Average: 65.96 %      Percentiles: P <sub>1</sub> = 30.6 P <sub>10</sub> = 42.6 Q <sub>1</sub> = 56.3 Median = 67.5 Q <sub>3</sub> = 78.9 P <sub>90</sub> = 84.6 P <sub>99</sub> = 96.6																						Hours in Service: 672 Hours of Data: 672 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	56	59	59	57	58	59	59	60	61	64	60	58	60	57	58	60	62	64	63	62	61	62	59	61	60.0	64.4
2-Feb	62	65	64	63	63	65	68	70	74	77	74	68	71	60	51	47	51	58	61	63	69	70	72	76	65.0	77.3
3-Feb	75	72	80	72	73	73	75	78	77	74	67	60	49	35	33	31	32	33	32	32	31	30	32	32	53.2	79.9
4-Feb	41	41	46	55	62	59	48	48	46	43	45	43	41	42	41	37	39	45	52	58	59	57	67	64	49.2	67.0
5-Feb	61	69	69	67	75	74	71	69	76	76	79	80	78	73	69	73	76	77	77	82	94	96	97	97	77.3	96.7
6-Feb	97	97	97	97	97	96	95	95	94	93	89	75	55	43	57	61	70	85	83	65	65	61	61	64	78.8	97.1
7-Feb	70	68	63	57	58	60	60	59	62	62	60	58	55	53	52	59	52	44	44	45	40	37	41	43	54.3	70.2
8-Feb	44	44	40	32	30	33	32	31	32	33	31	28	32	34	30	33	39	45	45	46	60	58	52	55	39.1	59.9
9-Feb	60	61	63	72	73	60	63	76	76	72	75	67	55	57	74	74	72	77	75	75	77	80	80	82	70.7	82.3
10-Feb	82	80	85	84	81	81	83	84	83	76	69	56	44	46	42	44	48	64	70	69	68	71	69	76	69.0	85.2
11-Feb	83	86	86	88	88	88	86	84	83	74	63	50	45	50	52	48	45	54	62	62	67	69	71	75	69.2	88.4
12-Feb	75	73	75	77	79	81	83	83	85	80	68	62	62	57	61	60	75	83	86	85	85	84	84	84	76.2	86.1
13-Feb	85	85	85	85	85	86	87	87	87	86	83	78	73	65	56	60	65	77	83	85	87	86	84	85	80.1	87.4
14-Feb	85	85	85	81	82	82	82	82	83	84	85	85	80	77	77	77	78	79	84	85	84	84	84	83	82.2	85.0
15-Feb	82	81	82	81	80	80	80	79	78	77	75	67	64	60	65	53	58	71	80	81	82	81	82	83	75.1	83.1
16-Feb	82	84	82	82	83	81	82	82	77	68	62	47	47	34	33	35	34	43	47	46	44	45	50	49	59.2	84.0
17-Feb	51	53	56	57	60	65	63	63	60	50	43	39	35	43	35	39	44	47	54	54	51	50	53	56	51.0	65.4
18-Feb	62	63	68	64	66	66	67	73	69	52	42	37	36	35	33	52	52	57	64	68	64	62	63	59	57.2	73.2
19-Feb	59	56	59	75	88	91	89	87	83	81	74	65	63	55	48	61	64	65	65	67	67	70	71	70	69.7	91.0
20-Feb	72	69	68	67	67	64	67	67	65	55	41	44	45	37	27	35	35	45	48	46	52	55	62	67	54.2	72.2
21-Feb	67	69	68	76	76	79	76	75	75	71	64	58	60	59	58	62	54	66	69	67	72	73	77	83	69.0	82.6
22-Feb	84	86	88	88	88	87	88	88	89	86	83	79	77	78	78	80	82	85	85	88	87	86	86	86	84.7	88.5
23-Feb	86	86	85	85	84	84	84	83	82	79	73	66	63	63	64	68	78	81	82	82	82	84	83	84	78.0	86.0
24-Feb	83	82	82	81	81	80	80	78	78	76	72	69	67	66	68	71	72	74	77	78	78	77	76	75	75.9	83.3
25-Feb	74	74	74	73	74	73	74	74	73	66	53	39	36	42	38	29	45	59	72	75	77	78	75	75	63.4	77.8
26-Feb	77	77	77	79	77	76	75	74	72	70	64	56	50	38	46	41	44	52	64	69	69	69	65	63	64.3	79.0
27-Feb	63	58	58	56	64	66	70	67	65	60	52	50	45	36	36	37	35	37	47	56	63	62	61	53	54.2	70.4
28-Feb	54	65	72	73	75	78	81	81	78	65	61	62	52	47	47	51	52	64	70	71	77	77	77	76	66.8	80.8
70.5 71.0 72.0 72.3 73.8 73.9 73.8 74.3 73.7 69.6 64.5 58.9 55.1 51.5 50.9 52.6 55.1 61.6 65.7 66.5 68.4 68.4 69.2 69.8 97.0 97.1 97.0 96.8 96.6 96.4 94.8 94.6 94.1 93.3 88.6 84.6 80.2 77.6 77.7 79.8 82.4 84.7 86.1 87.6 94.3 96.4 96.6 96.7																								Diurnal Average Diurnal Maximum		

# Hourly Averages for Relative Humidity at Beaverlodge February 2009



# Peace Airshed Zone Association

## Summary of Hourly Averages

Beaverlodge  
February 1, 2009 to March 1, 2009  
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	17	20	20	23	17	14	13	13	10	8	7	1	4	3	5	5	7	8	5	4	5	5	4	6	4.6	23.0	
Dir	274	281	283	281	275	274	273	276	269	243	267	184	193	142	118	120	113	115	98	99	107	105	101	119	264.0	280.8	
2 Spd	3	2	3	3	3	3	1	2	2	3	3	4	8	15	13	18	9	9	10	5	1	1	1	3	3.0	17.9	
Dir	112	116	119	117	93	140	118	152	102	28	308	276	239	270	284	283	276	269	277	247	200	143	144	207	264.6	283.0	
3 Spd	5	4	5	8	6	2	2	4	4	4	5	4	5	2	4	3	15	19	20	23	26	26	29	41	7.3	40.8	
Dir	76	97	162	100	112	123	169	132	152	131	105	154	169	126	86	205	238	233	236	236	243	252	258	258	230.7	258.5	
4 Spd	25	31	40	38	30	26	33	37	27	20	23	26	18	14	16	14	14	20	20	13	8	9	2	1	20.2	40.1	
Dir	263	276	272	260	249	253	263	264	264	280	280	286	289	288	283	289	299	291	297	281	300	312	217	15	273.9	271.7	
5 Spd	5	1	2	1	1	1	2	3	3	3	6	4	4	4	2	1	2	4	3	10	10	6	3	2	1.9	10.0	
Dir	340	279	35	314	218	84	89	62	90	146	132	154	185	229	250	2	109	198	155	183	181	194	198	64	167.9	183.1	
6 Spd	8	9	7	5	4	4	8	5	10	7	5	5	2	1	5	4	5	2	8	16	14	11	18	16	3.2	17.7	
Dir	48	41	29	32	351	356	30	350	333	343	331	340	278	113	114	124	142	142	252	266	260	266	270	260	306.2	269.7	
7 Spd	11	10	13	29	26	25	26	22	14	14	14	13	24	36	25	8	6	8	9	6	8	5	10	12	15.0	35.7	
Dir	239	232	271	275	274	268	270	271	258	252	247	247	258	271	264	209	221	234	238	247	238	224	240	251	258.3	270.9	
8 Spd	17	9	4	2	5	4	1	3	6	4	0	1	2	2	4	2	7	7	7	6	3	3	3	5	0.4	17.1	
Dir	242	244	90	195	264	230	259	59	322	274	269	148	193	96	240	63	42	41	36	38	235	79	82	81	324.5	241.6	
9 Spd	9	10	10	8	4	4	4	10	8	3	2	4	2	7	13	11	11	11	11	9	8	5	5	6	6.8	12.9	
Dir	26	23	345	328	0	45	29	337	38	332	342	330	45	336	335	341	358	12	4	356	333	345	348	343	355.3	334.7	
10 Spd	8	6	4	6	11	7	3	3	1	5	5	1	1	2	2	1	2	3	3	3	3	3	4	1	2.3	11.3	
Dir	346	356	49	351	346	354	9	353	60	330	348	29	111	87	100	167	117	131	97	92	103	98	80	244	18.8	345.6	
11 Spd	1	2	1	2	0	3	2	1	1	1	3	2	2	2	6	8	10	10	10	11	6	6	5	1	2.8	10.6	
Dir	252	265	13	101	71	67	99	136	124	116	93	96	65	299	338	353	338	336	339	335	319	318	329	335	344.4	335.4	
12 Spd	4	6	7	8	5	0	2	3	4	8	3	3	3	2	3	2	7	2	2	5	1	4	5	5	2.1	8.0	
Dir	292	332	359	9	8	238	44	359	20	33	40	215	224	169	121	78	158	161	19	68	59	33	38	42	28.7	9.3	
13 Spd	6	5	4	0	1	4	3	2	1	2	2	2	2	1	1	3	4	3	4	2	3	2	4	1	1.2	5.7	
Dir	41	44	25	211	251	312	288	266	312	96	140	258	81	134	95	57	37	64	58	18	259	69	63	248	37.1	41.0	
14 Spd	1	2	2	0	2	2	0	1	1	1	0	2	3	3	3	3	3	2	1	2	1	1	2	1	0.4	3.4	
Dir	248	308	57	225	321	196	41	304	311	244	203	200	191	237	231	202	178	121	76	84	71	62	67	203.9	237.1		
15 Spd	N	N	N	0	0	0	0	0	1	1	1	0	2	2	3	1	1	1	2	1	4	1	N	N	0.8	4.3	
Dir	N	N	N	240	228	219	128	83	89	83	94	114	96	83	56	82	42	30	28	347	57	305	N	N	58.7	57.1	
16 Spd	N	N	N	N	N	N	N	N	N	N	4	0	1	1	1	3	2	2	3	4	3	2	1	2	--	3.8	
Dir	N	N	N	N	N	N	N	N	N	N	70	273	79	79	338	66	71	111	109	88	86	99	97	80	--	87.7	
17 Spd	4	3	2	3	1	0	3	3	2	2	1	1	1	4	3	1	2	0	1	3	3	3	1	2	1.5	4.1	
Dir	75	69	75	62	63	187	71	73	77	88	244	82	81	65	66	269	236	211	73	68	69	67	60	281	70.0	65.2	
18 Spd	1	3	1	4	4	5	5	1	1	1	1	1	1	1	0	6	5	4	4	4	4	4	N	N	5	1.2	5.8
Dir	17	328	335	341	355	353	338	10	63	59	95	190	211	202	76	47	55	93	173	145	106	N	N	305	26.0	47.4	
19 Spd	6	6	9	12	13	9	10	11	10	7	9	9	9	7	2	4	4	3	2	1	2	1	1	3	4.5	12.6	
Dir	326	344	335	333	325	312	313	317	320	315	308	310	310	304	266	109	98	105	122	135	89	70	72	97	326.0	325.3	
20 Spd	2	2	1	1	2	1	2	2	3	2	1	2	4	3	1	3	2	4	7	5	2	1	2	2	2.1	6.6	
Dir	109	92	97	96	96	86	96	82	76	117	183	84	67	84	112	70	81	112	90	90	96	190	195	165	95.3	89.8	
21 Spd	1	3	3	1	1	1	1	1	1	2	2	0	1	1	3	3	1	3	2	7	7	6	13	15	1.9	15.2	
Dir	271	352	46	131	213	47	38	45	264	68	89	179	269	319	222	192	210	227	333	332	46	3	335	332	343.8	332.3	
22 Spd	12	12	14	12	10	8	9	9	7	6	9	8	9	9	9	10	10	11	11	9	11	11	9	7	8.6	13.6	
Dir	337	332	332	324	321	318	311	319	331	345	346	359	32	28	25	25	26	25	23	11	11	7	11	354	354.7	332.3	

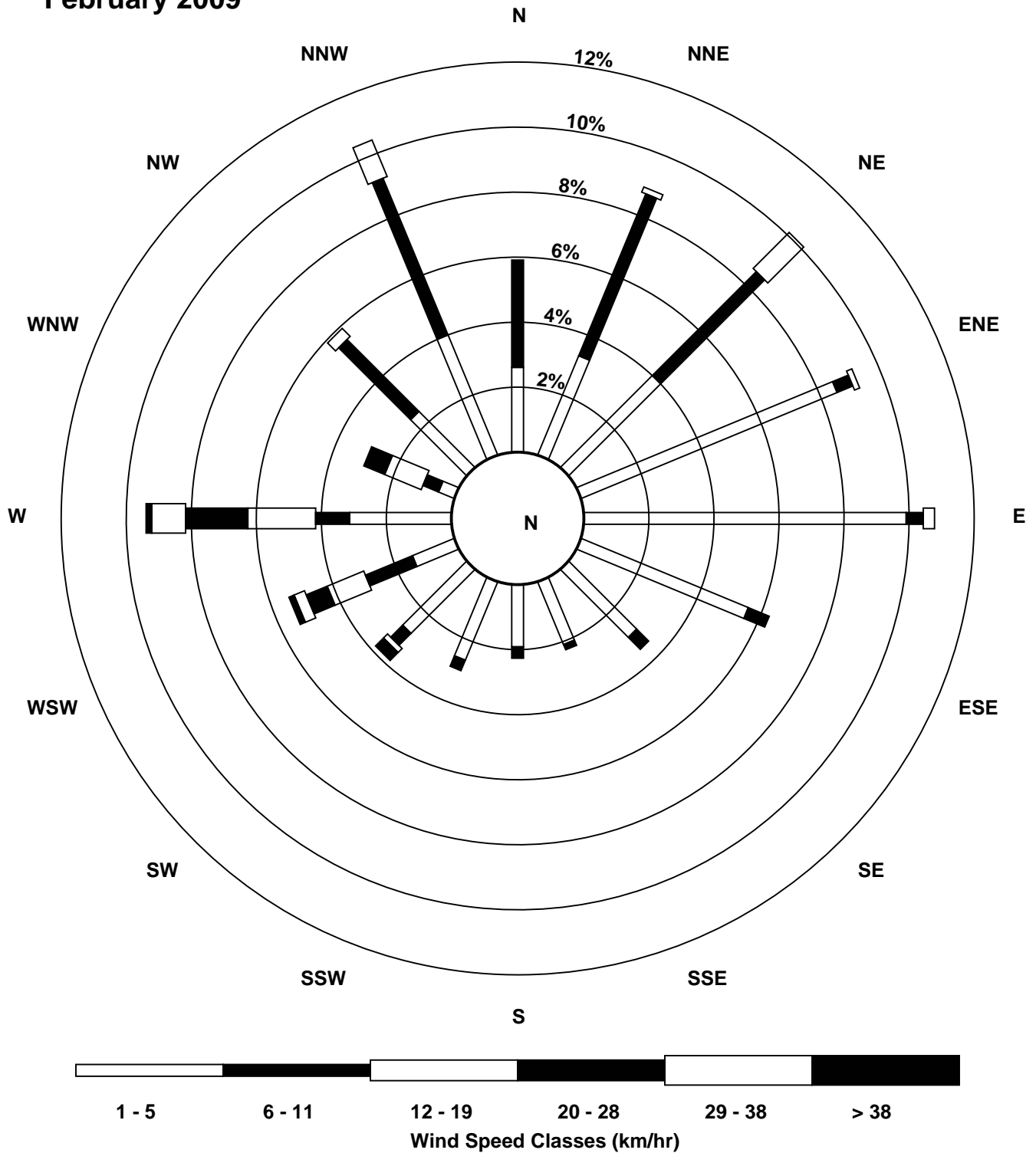
**Peace Airshed Zone Association  
Summary of Hourly Averages**

Beaverlodge  
February 1, 2009 to March 1, 2009  
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	7	7	7	5	7	8	8	7	9	8	8	7	7	7	5	5	2	4	4	4	2	3	2	N	4.6	8.9	
Dir	347	354	344	346	9	24	43	35	44	47	46	31	33	35	46	32	142	175	108	86	89	74	26	N	33.2	43.5	
24 Spd	N	4	4	6	8	9	9	10	12	10	8	8	7	9	9	11	14	13	12	11	12	15	16	17	10.1	17.5	
Dir	N	45	16	32	30	32	43	34	35	31	33	43	30	43	44	47	49	48	48	48	49	52	53	51	42.9	51.4	
25 Spd	10	10	9	15	9	11	11	8	7	7	3	0	1	2	2	1	2	3	5	9	4	2	1	4	3.9	14.9	
Dir	64	55	51	54	15	30	33	31	35	30	31	28	222	200	207	65	237	241	277	320	317	333	76	38	29.4	53.8	
26 Spd	3	3	2	3	0	2	0	3	3	3	1	3	3	3	6	4	1	2	1	1	1	1	1	2	0.5	5.6	
Dir	231	270	230	65	234	225	271	43	83	260	52	117	166	111	136	146	337	342	267	77	77	50	37	32	123.7	136.5	
27 Spd	3	7	7	6	3	1	1	1	1	1	1	6	5	5	8	6	4	3	7	12	6	8	6	5	3.9	12.3	
Dir	344	349	346	330	8	271	349	51	266	16	21	316	350	323	330	340	2	320	23	32	31	21	54	89	0.7	32.4	
28 Spd	7	14	16	16	10	7	4	6	2	1	3	9	4	3	2	2	2	3	2	0	1	1	1	3	2.8	16.3	
Dir	97	85	76	91	62	62	156	136	266	31	279	302	324	305	189	185	74	64	40	189	200	321	50	51	75.8	90.7	
Spd	2.5	3.2	3.5	3.4	3.5	2.7	2.7	2.8	2.3	2.0	1.6	1.9	1.5	2.0	1.6	1.3	1.1	0.7	1.5	1.6	0.8	1.6	1.6	2.0	Diurnal Average		
Dir	312.0	330.8	331.8	320.1	314.4	313.1	309.9	315.9	327.3	331.4	323.8	302.8	283.8	300.5	311.0	359.5	14.8	324.8	337.0	334.4	310.2	337.3	331.0	310.2	Diurnal Maximum		
Spd	25.0	31.2	40.1	37.7	29.5	25.8	33.2	37.4	27.3	19.7	23.3	25.5	24.4	35.7	24.6	17.9	15.1	19.8	20.5	23.3	25.8	26.5	29.5	40.8	Diurnal Maximum		
Dir	262.8	275.6	271.7	259.8	248.8	252.9	262.5	263.6	264.3	279.7	280.2	285.7	258.2	270.9	263.7	283.0	238.0	291.4	235.7	236.1	243.2	252.2	258.2	258.5	Diurnal Maximum		
Maximum Speed Value: 41 km/h on Feb 4 00:00																		Minimum Speed Value: 0 km/h on Feb 15 08:00						Hours in Service:		672	
Maximum Daily Speed Average: 20.2 km/h on Feb 4																		Minimum Daily Speed Average: 0.4 km/h on Feb 15						Hours of Data:		653	
Maximum Diurnal Speed Average: 3.5 km/h at hour 3																		Minimum Diurnal Speed Average: 0.7 km/h at hour 18						Hours of Missing Data:		19	
Monthly Average Velocity: 1.97 km/h 321.08 deg																		Speed Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.9 Q <sub>1</sub> = 1.8 Median = 3.8 Q <sub>3</sub> = 7.9 P <sub>90</sub> = 13.1 P <sub>99</sub> = 31.1						Percent Operational Time:		97.2	
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	37	37	3	0	0	0	77																				
NorthEast	70	57	13	0	0	0	140																				
East	112	6	3	0	0	0	121																				
SouthEast	45	7	0	0	0	0	52																				
South	35	5	0	0	0	0	40																				
SouthWest	37	13	6	3	0	0	59																				
West	34	6	22	17	8	2	89																				
NorthWest	26	38	10	1	0	0	75																				
Total	396	169	57	21	8	2	653																				



# Wind Rose for WS at Beaverlodge February 2009



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

**Beaverlodge - Wind Speed (WS) - km/h**  
**February 1, 2009 to March 1, 2009**

Maximum Speed: 41 km/h on Feb 4 00:00		Maximum Daily Speed Average: 21.2 km/h on Feb 4		Hours in Service: 672																																												
Minimum Speed: 0 km/h on Feb 15 08:00		Minimum Daily Speed Average: 1.4 km/h on Feb 15		Hours of Data: 653																																												
Maximum Diurnal Speed Average: 8.5 km/h at hour 4		Minimum Diurnal Speed Average: 5.0 km/h at hour 11		Hours of Missing Data: 19																																												
Monthly Average Speed: 6.31 km/h		Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 1.5 Q <sub>1</sub> = 2.5 Median = 4.3 Q <sub>3</sub> = 8.0 P <sub>90</sub> = 13.2 P <sub>99</sub> = 31.2		Percent Operational Time: 97.2																																												
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Feb	17	20	20	23	17	14	13	13	10	8	7	3	5	3	5	5	7	8	5	4	5	5	4	6	9.5	23.0																						
2-Feb	3	2	3	3	3	3	4	3	3	3	4	5	9	16	13	18	9	9	10	6	4	1	3	4	5.9	18.0																						
3-Feb	5	5	5	8	6	3	2	5	4	4	5	4	5	3	4	8	15	19	21	23	26	27	30	41	11.6	40.8																						
4-Feb	25	31	40	38	30	26	33	37	28	20	23	26	18	14	16	14	14	20	20	13	8	9	3	3	21.2	40.2																						
5-Feb	5	3	2	2	1	1	3	4	4	4	6	5	4	5	3	2	3	4	4	10	10	6	3	3	4.0	10.1																						
6-Feb	8	9	7	5	4	4	8	6	10	7	5	5	3	1	5	4	5	3	8	16	14	12	18	16	7.6	17.8																						
7-Feb	12	11	14	29	26	25	26	22	14	14	14	14	25	36	25	9	7	9	9	6	8	5	10	13	15.9	35.8																						
8-Feb	17	11	6	5	5	4	4	3	7	4	3	3	5	2	4	4	7	7	7	6	5	3	4	5	5.6	17.2																						
9-Feb	9	10	11	8	5	5	5	10	8	5	3	4	3	7	13	11	11	11	11	9	8	6	5	6	7.7	13.0																						
10-Feb	8	6	5	6	11	8	4	4	2	5	5	2	1	2	2	2	4	3	3	3	3	3	4	2	4.0	11.4																						
11-Feb	1	2	2	3	1	4	3	2	1	1	3	2	3	2	6	9	10	10	10	11	6	6	5	3	4.4	10.7																						
12-Feb	4	6	8	8	5	2	3	4	4	8	5	3	3	3	4	4	7	2	2	5	2	4	5	5	4.5	8.2																						
13-Feb	6	5	4	2	2	4	3	2	3	3	3	3	2	2	1	3	4	3	4	3	3	3	5	1	3.0	5.7																						
14-Feb	1	2	2	1	3	3	1	1	1	1	1	2	3	3	3	3	3	2	2	2	1	1	2	1	1.9	3.5																						
15-Feb	N	N	N	0	0	0	0	0	1	1	1	0	2	3	3	1	1	2	4	3	4	3	N	N	1.4	4.4																						
16-Feb	N	N	N	N	N	N	N	N	N	N	4	2	1	1	1	3	3	3	3	4	3	2	1	2	--	4.0																						
17-Feb	4	3	2	3	1	1	4	3	2	2	1	2	2	4	3	1	2	0	1	3	3	3	1	2	2.2	4.1																						
18-Feb	1	3	2	4	4	5	5	2	1	1	1	1	1	1	6	5	4	4	5	4	N	N	5	3.1	5.9																							
19-Feb	6	6	9	12	13	9	10	11	10	7	7	9	9	7	3	4	4	3	2	1	2	1	2	3	6.4	12.6																						
20-Feb	2	2	2	1	2	1	3	3	3	2	1	2	4	3	1	3	3	5	7	5	2	2	2	2	2.6	6.7																						
21-Feb	2	3	4	2	3	2	2	2	2	2	2	0	1	2	3	3	1	3	3	7	7	7	13	15	3.8	15.2																						
22-Feb	13	12	14	12	10	8	9	9	7	6	9	8	9	9	10	10	10	11	11	9	11	11	9	8	9.7	13.6																						
23-Feb	7	7	7	5	7	8	8	7	9	8	8	7	7	7	5	5	5	4	5	4	2	3	3	N	5.9	8.9																						
24-Feb	N	4	4	6	8	9	9	10	12	10	8	8	7	9	9	11	14	13	12	11	12	15	16	17	10.2	17.5																						
25-Feb	10	10	9	15	9	11	11	8	7	7	4	2	1	2	2	1	2	3	5	9	5	3	2	4	6.0	15.1																						
26-Feb	3	3	2	3	1	2	2	4	3	4	2	3	3	3	6	4	2	3	3	2	2	1	2	2	2.8	5.7																						
27-Feb	4	7	7	7	3	2	1	3	2	3	2	6	6	6	8	6	5	3	7	12	6	8	6	5	5.2	12.4																						
28-Feb	7	14	16	16	10	8	5	6	2	2	5	9	5	4	2	3	2	3	2	0	1	2	2	3	5.4	16.4																						
																								7.1	7.6	7.9	8.5	7.1	6.4	6.7	6.8	5.9	5.3	5.0	5.0	5.2	5.7	5.8	5.6	5.9	6.1	6.6	7.0	6.0	5.6	6.0	6.9	Diurnal Average
																								25.1	31.2	40.2	38.1	29.6	26.1	33.3	37.5	27.5	19.8	23.5	25.6	24.7	35.8	24.8	18.0	15.1	19.9	20.5	23.3	25.8	26.5	29.5	40.8	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**

**Beaverlodge - Wind Direction (WD) - deg  
February 1, 2009 to March 1, 2009**

Maximum Value: 93.6 deg on Feb 8 16:00																					Hours in Service:	672			
Minimum Value: 1.8 deg on Feb 24 18:00																					Hours of Data:	653			
Percentiles: P <sub>1</sub> = 2.4 P <sub>10</sub> = 4.4 Q <sub>1</sub> = 8.3 Median = 17.1 Q <sub>3</sub> = 44.5 P <sub>90</sub> = 68.6 P <sub>99</sub> = 88.4																					Hours of Missing Data:	19			
																					Hours of Calibration:	0			
																					Percent Operational Time:	97.2			
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-Feb	4	3	2	3	3	3	4	4	7	10	15	74	32	24	12	9	8	6	8	11	12	13	15	8	74.4
2-Feb	14	14	10	12	14	20	73	39	36	54	38	40	8	11	5	4	23	29	19	26	74	68	92	66	91.6
3-Feb	16	20	24	12	11	77	51	19	22	19	17	28	14	35	22	76	5	4	3	3	2	4	2	3	76.9
4-Feb	4	3	5	8	5	8	5	4	8	7	7	4	4	5	6	9	9	6	5	7	21	9	86	85	86.3
5-Feb	13	53	71	66	54	36	36	36	33	20	12	25	30	44	39	88	47	11	46	9	6	6	12	36	87.5
6-Feb	5	3	5	12	9	19	9	16	4	11	11	26	43	66	12	5	9	37	17	6	3	10	4	10	66.5
7-Feb	10	9	19	4	7	4	4	5	7	6	9	21	10	4	8	20	19	38	15	18	10	14	6	8	37.7
8-Feb	5	52	37	71	23	20	86	15	31	41	82	70	71	53	40	94	5	7	3	4	71	57	32	19	93.6
9-Feb	7	13	23	19	33	22	43	10	14	46	50	35	33	9	8	8	10	5	7	9	22	22	12	5	50.5
10-Feb	7	10	28	59	4	30	55	65	64	24	18	39	72	17	13	41	56	19	18	15	10	27	6	81	81.1
11-Feb	49	10	88	23	83	71	66	48	44	30	17	13	39	87	16	14	9	10	7	6	14	6	16	70	88.4
12-Feb	39	12	15	14	25	87	61	41	29	9	87	45	16	38	24	78	10	41	26	20	77	11	6	5	86.6
13-Feb	7	14	16	89	70	11	26	29	77	55	48	54	65	79	52	17	7	11	8	68	17	76	22	69	88.6
14-Feb	45	39	48	80	63	61	80	51	48	71	67	14	25	27	11	10	8	10	36	9	9	7	4	8	80.4
15-Feb	N	N	N	64	45	65	51	24	9	8	14	15	23	11	8	51	52	67	59	75	14	62	N	N	75.3
16-Feb	N	N	N	N	N	N	N	N	N	N	11	88	43	50	53	58	51	49	20	20	15	15	26	8	88.1
17-Feb	7	17	55	9	39	89	9	10	25	55	30	64	32	6	14	60	16	44	43	65	8	15	53	43	88.7
18-Feb	88	41	55	13	18	13	11	47	47	63	33	34	40	50	34	9	11	27	15	21	25	N	N	10	88.4
19-Feb	14	9	13	7	5	5	4	3	8	10	11	7	6	14	64	13	17	13	34	43	12	73	81	18	81.5
20-Feb	19	12	21	35	49	28	67	62	14	15	40	52	5	5	19	7	31	31	10	17	36	68	19	29	67.7
21-Feb	63	44	45	85	87	59	57	66	89	77	61	85	48	75	25	31	41	28	55	19	27	28	11	5	88.7
22-Feb	5	3	3	4	4	4	5	4	7	18	11	11	8	5	4	3	4	4	4	7	9	7	11	9	17.7
23-Feb	9	10	12	21	11	16	7	7	6	5	6	4	4	8	9	7	71	13	23	10	23	21	49	N	71.5
24-Feb	N	7	20	4	5	7	3	4	3	4	9	9	7	5	5	3	2	2	2	3	3	3	2	3	20.0
25-Feb	10	5	6	13	18	5	3	4	3	3	87	88	18	29	13	81	39	24	21	10	44	40	51	53	87.8
26-Feb	29	16	57	12	86	17	86	13	40	52	67	29	15	23	13	31	58	65	77	68	83	78	71	55	86.3
27-Feb	41	12	10	26	41	69	78	84	65	61	56	16	55	39	9	11	15	19	6	4	18	6	37	20	83.5
28-Feb	14	6	6	6	11	12	47	27	53	75	79	14	42	45	28	41	15	15	21	90	48	86	47	11	90.4
88.4	53.4	88.4	88.6	86.8	88.7	85.7	83.5	88.7	77.0	87.3	88.1	71.6	86.7	64.4	93.6	71.5	66.6	76.6	90.4	83.4	86.3	91.6	84.5		
N - Not Valid																									

# PASZA

## Portable – Spirit River Station

### Monthly Summary Tables, Graphs and Roses

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

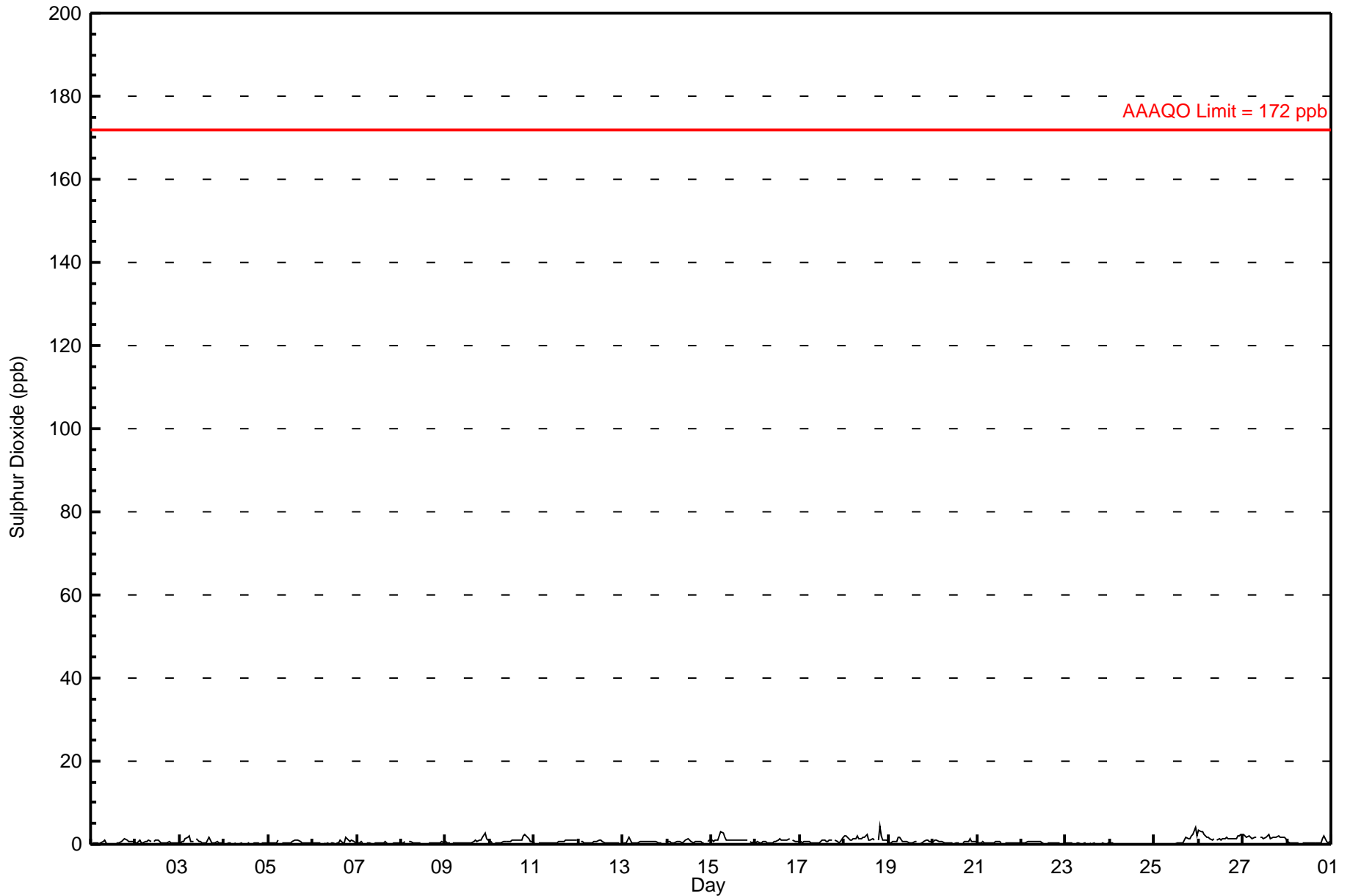
**Portable-Spirit River - Sulphur Dioxide (SO<sub>2</sub>) - ppb  
February 1, 2009 to March 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 672
Maximum Value: 4.4 ppb on Feb 18 20:00	Maximum Daily Average: 1.7 ppb on Feb 27
Hours of Data: 639	
Hours of Missing Data: 33	
Hours of Calibration: 33	
Percent Operational Time: 100.0	
Minimum Value: 0 ppb on Feb 24 09:00	Minimum Daily Average: 0.1 ppb on Feb 24
Maximum Diurnal Average: 0.9 ppb at hour 20	Minimum Diurnal Average: 0.5 ppb at hour 9
Monthly Average: 0.67 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.2 Q <sub>1</sub> = 0.3 Median = 0.5 Q <sub>3</sub> = 0.9 P <sub>90</sub> = 1.5 P <sub>99</sub> = 3.0

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-Feb	0	0	0	0	0	0	1	1	0	0	A	0	0	0	0	0	1	1	1	1	1	1	1	1	0.5	1.3
2-Feb	0	0	1	0	0	1	1	1	1	A	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0.5	1.0
3-Feb	0	1	1	2	2	2	1	1	A	1	1	1	0	0	0	1	2	1	0	0	1	0	0	0	0.7	2.0
4-Feb	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
5-Feb	0	0	0	0	0	1	A	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0.5	1.2
6-Feb	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	2	1	1	1	1	0	0.4	1.5
7-Feb	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.3	0.7
8-Feb	0	0	1	A	1	1	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	1	0	0.4	0.7
9-Feb	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	2	3	1	0.7	2.6
10-Feb	1	0	A	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1	0.9	2.2
11-Feb	0	A	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.0
12-Feb	A	1	1	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.5	0.9
13-Feb	0	0	0	2	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	A	0.6	1.8
14-Feb	1	1	0	0	0	1	1	1	0	1	1	1	1	1	0	1	1	1	1	0	0	A	1	1	0.6	1.2
15-Feb	1	1	1	1	2	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	1	1.2	3.2
16-Feb	0	1	0	0	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.8	1.4
17-Feb	1	0	1	1	1	1	0	0	0	0	0	1	1	1	1	1	1	1	A	1	1	0	1	2	0.7	1.6
18-Feb	2	2	1	1	1	1	1	2	1	1	2	2	2	1	1	1	1	A	1	4	2	1	1	1	1.5	4.4
19-Feb	0	0	1	1	1	2	2	1	1	1	1	0	0	0	1	1	A	0	0	1	1	1	1	1	0.7	1.6
20-Feb	1	1	1	1	1	1	0	0	0	0	0	0	0	0	A	0	1	1	1	1	1	1	1	1	0.6	1.2
21-Feb	0	0	0	1	0	0	0	0	0	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0.4	0.7
22-Feb	0	0	0	1	1	1	1	1	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7
23-Feb	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
24-Feb	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
25-Feb	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	2	1	1	2	2	4	2	0.8	4.0
26-Feb	3	3	3	2	2	2	1	1	1	A	1	1	1	1	1	2	1	1	1	1	1	2	2	2	1.7	3.4
27-Feb	2	2	2	2	2	1	2	2	A	2	2	1	2	2	2	1	2	2	2	2	2	2	2	1	1.7	2.5
28-Feb	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	2	1	1	1	0.5	2.0
	0.7	0.6	0.7	0.7	0.7	0.7	0.6	0.6	0.5	0.5	0.6	0.6	0.7	0.6	0.6	0.7	0.7	0.7	0.7	0.9	0.8	0.7	0.8	0.7	Diurnal Average	
	3.4	3.1	3.2	2.2	2.0	3.2	2.8	2.0	1.5	1.5	1.7	1.7	2.3	1.9	2.3	1.6	1.8	1.8	2.0	4.4	2.1	2.6	4.0	2.4	Diurnal Maximum	

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

# Hourly Averages for SO<sub>2</sub> at Portable-Spirit River February 2009

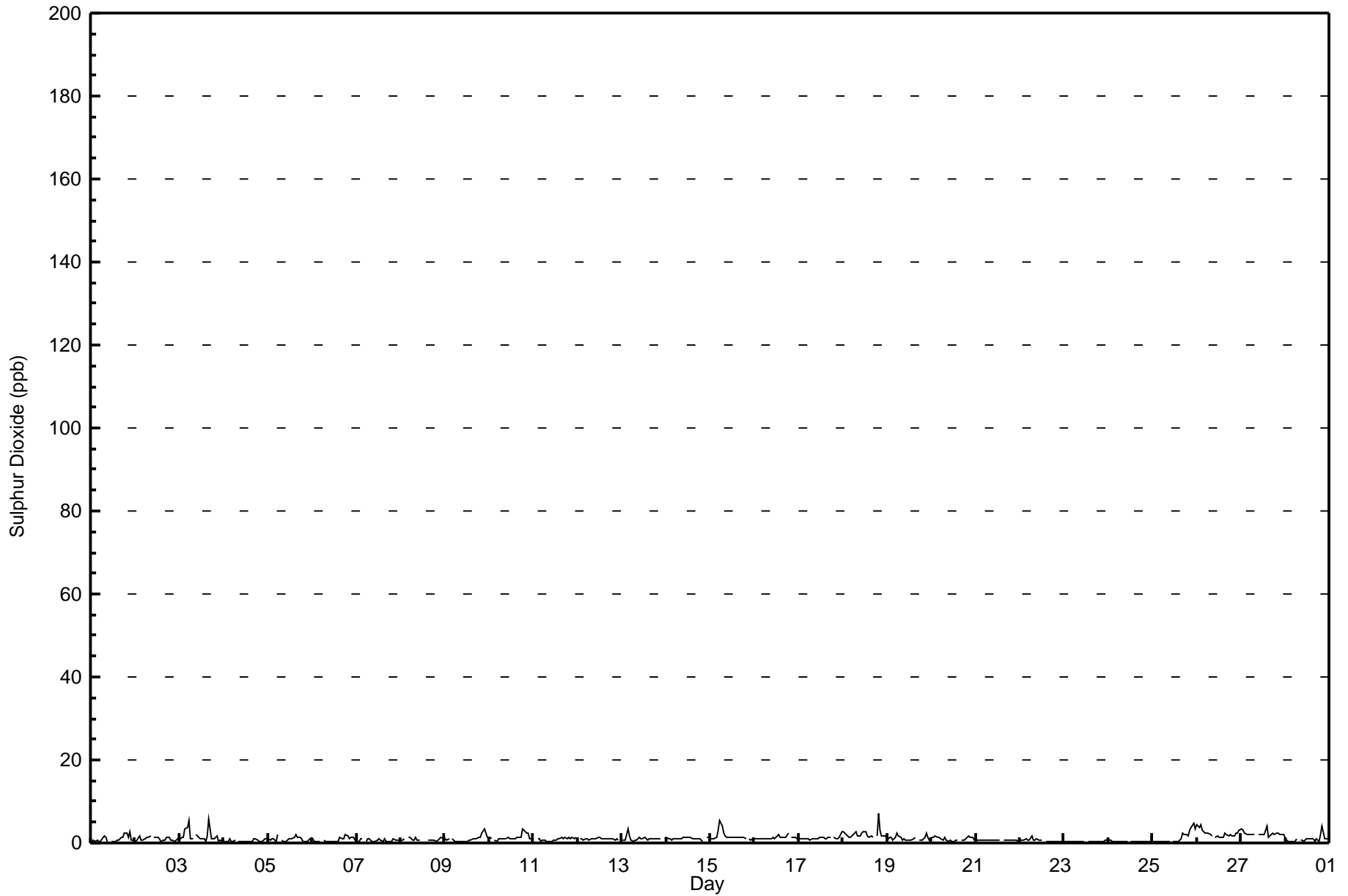


**Peace Airshed Zone Association  
Summary of Hourly Maximums**

**Portable-Spirit River - Sulphur Dioxide (SO<sub>2</sub>) - ppb  
February 1, 2009 to March 1, 2009**

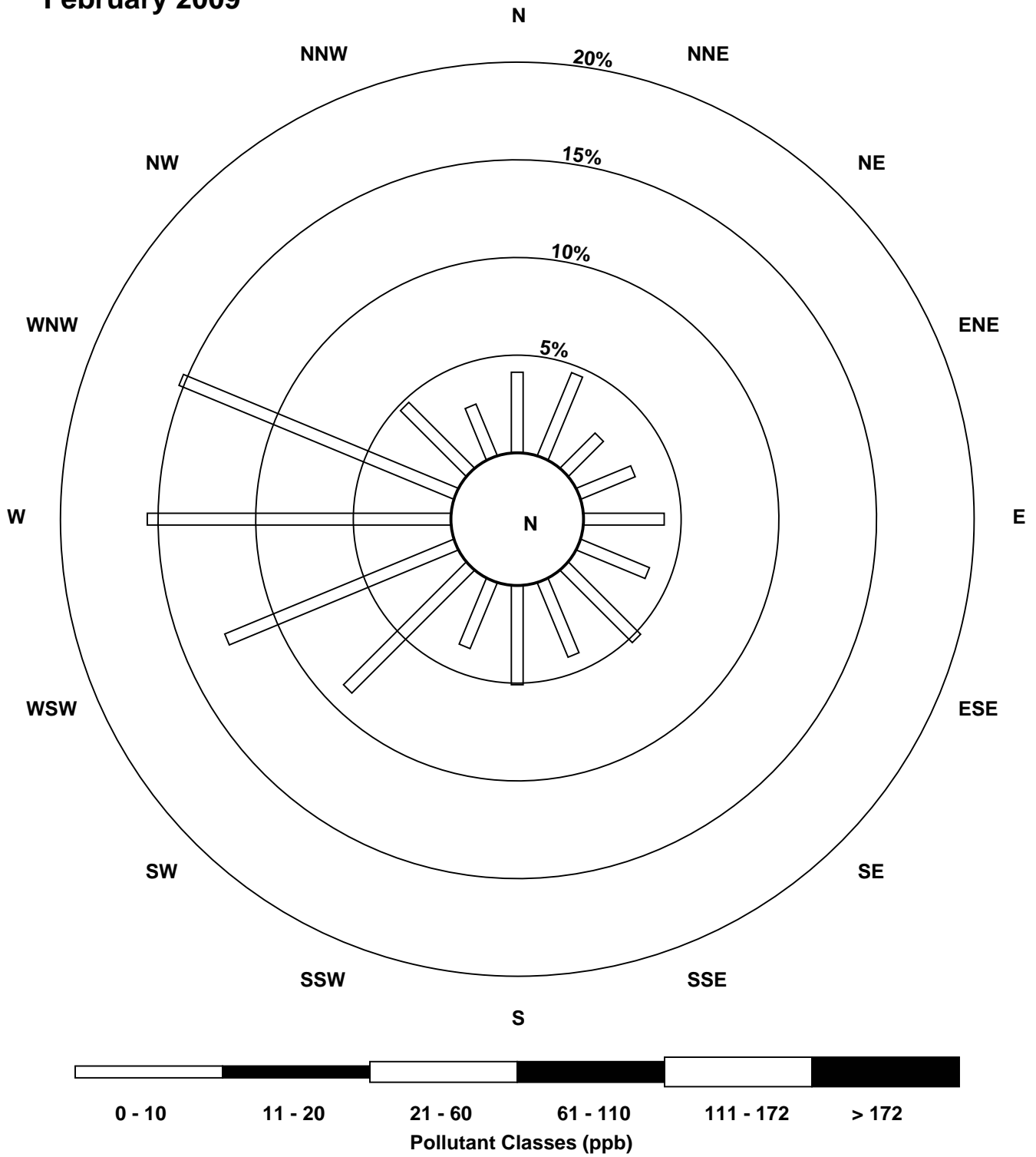
Maximum Value: 7.1 ppb on Feb 18 20:00		Maximum Daily Average: 2.3 ppb on Feb 26		Hours in Service: 672																							
Minimum Value: 0 ppb on Feb 24 13:00		Minimum Daily Average: 0.3 ppb on Feb 24		Hours of Data: 639																							
Maximum Diurnal Average: 1.4 ppb at hour 20		Minimum Diurnal Average: 0.8 ppb at hour 10		Hours of Missing Data: 33																							
Monthly Average: 1.10 ppb		Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.4 Q <sub>1</sub> = 0.5 Median = 0.9 Q <sub>3</sub> = 1.4 P <sub>90</sub> = 2.0 P <sub>99</sub> = 4.1		Hours of Calibration: 33																							
				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-Feb	0	1	0	1	0	0	1	2	1	0	A	0	0	0	1	1	1	1	2	2	1	3	1	1	1.0	2.8	
2-Feb	0	1	2	1	1	1	1	1	2	A	1	1	1	1	0	1	1	1	1	1	1	0	1	1	1.0	1.8	
3-Feb	1	1	1	3	4	5	1	1	A	2	1	1	1	1	0	2	6	1	1	1	2	0	1	0	1.7	5.9	
4-Feb	0	0	0	1	0	0	1	A	0	0	0	0	0	0	0	0	1	1	1	0	0	0	1	1	0.5	0.9	
5-Feb	1	1	1	1	0	2	A	1	0	0	0	1	1	1	1	2	1	1	1	0	0	0	1	1	0.9	1.9	
6-Feb	1	0	0	0	0	A	1	0	0	0	0	0	0	0	0	1	1	1	2	2	1	1	1	1	0.8	1.9	
7-Feb	0	0	1	1	A	0	1	1	0	0	0	1	1	1	0	1	0	0	0	0	1	1	1	1	0.6	1.1	
8-Feb	1	1	1	A	1	1	1	1	1	1	C	C	C	C	1	1	1	1	0	1	1	1	1	1	0.9	1.4	
9-Feb	1	1	1	A	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	2	3	2	1	1.0	3.4	
10-Feb	1	1	A	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	3	2	2	1	1.3	3.4	
11-Feb	1	A	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	2	0.9	1.5	
12-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.9	1.4	
13-Feb	1	1	1	3	2	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1.0	3.3	
14-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1.1	1.5	
15-Feb	1	1	1	2	3	5	4	3	2	2	2	2	1	1	1	1	1	1	1	1	A	1	1	1	1.7	5.4	
16-Feb	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	2	A	1	1	1	1	1.2	2.3	
17-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	3	1.1	2.7	
18-Feb	3	3	2	1	1	2	2	3	2	2	2	3	3	2	1	2	1	A	2	7	3	2	2	2	2.2	7.1	
19-Feb	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	A	1	1	1	1	2	1	1	1.1	2.3	
20-Feb	1	1	2	1	1	1	1	1	1	0	1	0	0	1	1	A	1	1	1	1	2	1	1	1	1.0	1.8	
21-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	0.7	0.8	
22-Feb	1	1	1	1	1	1	2	1	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0.7	1.8	
23-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	1	0.4	0.8	
24-Feb	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8	
25-Feb	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	2	2	2	2	3	4	5	3	1.2	4.7	
26-Feb	4	4	4	3	2	2	2	2	2	A	1	2	1	1	1	2	2	2	2	2	2	2	2	3	2.3	4.4	
27-Feb	3	3	2	2	2	2	2	2	A	2	2	2	2	3	4	1	2	2	2	2	2	2	2	2	2.3	4.0	
28-Feb	1	0	0	0	0	0	1	A	1	1	0	1	1	1	1	1	0	1	0	2	4	1	1	1	0.9	3.9	
		1.1	1.0	1.1	1.1	1.1	1.3	1.1	1.0	0.9	0.8	0.9	1.0	1.0	0.9	1.1	1.2	1.1	1.2	1.4	1.3	1.3	1.2	1.2	Diurnal Average		
		4.4	3.9	4.4	3.3	3.8	5.5	4.0	2.6	1.8	2.2	2.3	2.7	2.7	3.0	4.0	2.4	5.9	2.5	3.4	7.1	3.9	3.9	4.7	3.4	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

# Hourly Maximums for SO<sub>2</sub> at Portable-Spirit River February 2009





# Pollutant Rose for SO<sub>2</sub> at Portable-Spirit River February 2009

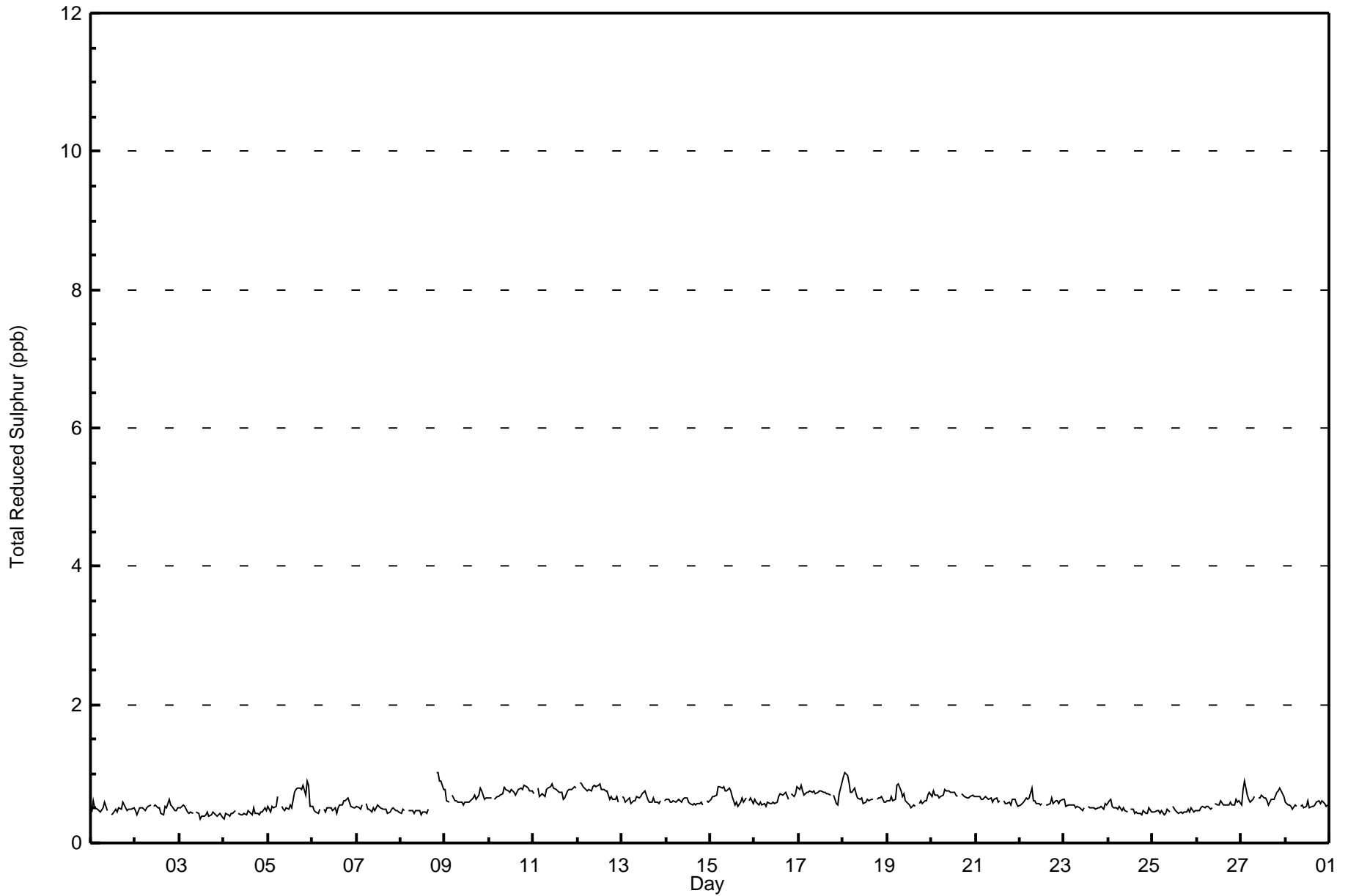


**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Portable-Spirit River - Total Reduced Sulphur (TRS) - ppb  
February 1, 2009 to March 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0    24-hr: 0 Maximum Value: 1.0 ppb on Feb 8 20:00    Maximum Daily Average: 0.8 ppb on Feb 12		Hours in Service: 672 Hours of Data: 640 Hours of Missing Data: 32 Hours of Calibration: 32 Percent Operational Time: 100.0																								
Minimum Value: 0 ppb on Feb 3 12:00 Maximum Diurnal Average: 0.6 ppb at hour 20 Monthly Average: 0.60 ppb		Minimum Daily Average: 0.4 ppb on Feb 4 Minimum Diurnal Average: 0.6 ppb at hour 15 Percentiles: P <sub>1</sub> = 0.4 P <sub>10</sub> = 0.4 Q <sub>1</sub> = 0.5 Median = 0.6 Q <sub>3</sub> = 0.7 P <sub>90</sub> = 0.8 P <sub>99</sub> = 0.8																								
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-Feb	0	1	1	0	0	0	1	1	1	0	A	0	0	0	0	1	0	1	1	0	0	0	0	1		
2-Feb	0	0	1	1	1	0	1	1	1	A	1	1	1	0	0	1	1	1	1	1	0	0	0	1		
3-Feb	1	1	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
4-Feb	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0		
5-Feb	1	0	1	1	1	1	A	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1		
6-Feb	1	0	0	0	0	A	0	0	1	1	1	0	1	0	0	1	1	1	1	1	1	1	1	1		
7-Feb	1	1	0	1	A	1	0	0	0	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0		
8-Feb	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	C	C	A	1	1	1	1	1		
9-Feb	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
10-Feb	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
11-Feb	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
12-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A		
13-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
14-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1		
15-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1		
16-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1		
17-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1		
18-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1		
19-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1		
20-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1		
21-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1		
22-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1		
23-Feb	1	1	1	1	1	1	0	1	1	0	0	1	A	1	1	1	1	0	1	1	1	0	1	1		
24-Feb	1	1	1	1	1	0	1	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0		
25-Feb	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	1	0	0		
26-Feb	0	0	1	1	1	1	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
27-Feb	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
28-Feb	1	1	1	1	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
0.6   0.6																								Diurnal Average		
1.0   1.0   1.0   0.9   0.8   0.8   0.9   0.8   0.8   0.8   0.8   0.9   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   1.0   1.0   0.9   0.9   0.9																								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-Spirit River February 2009

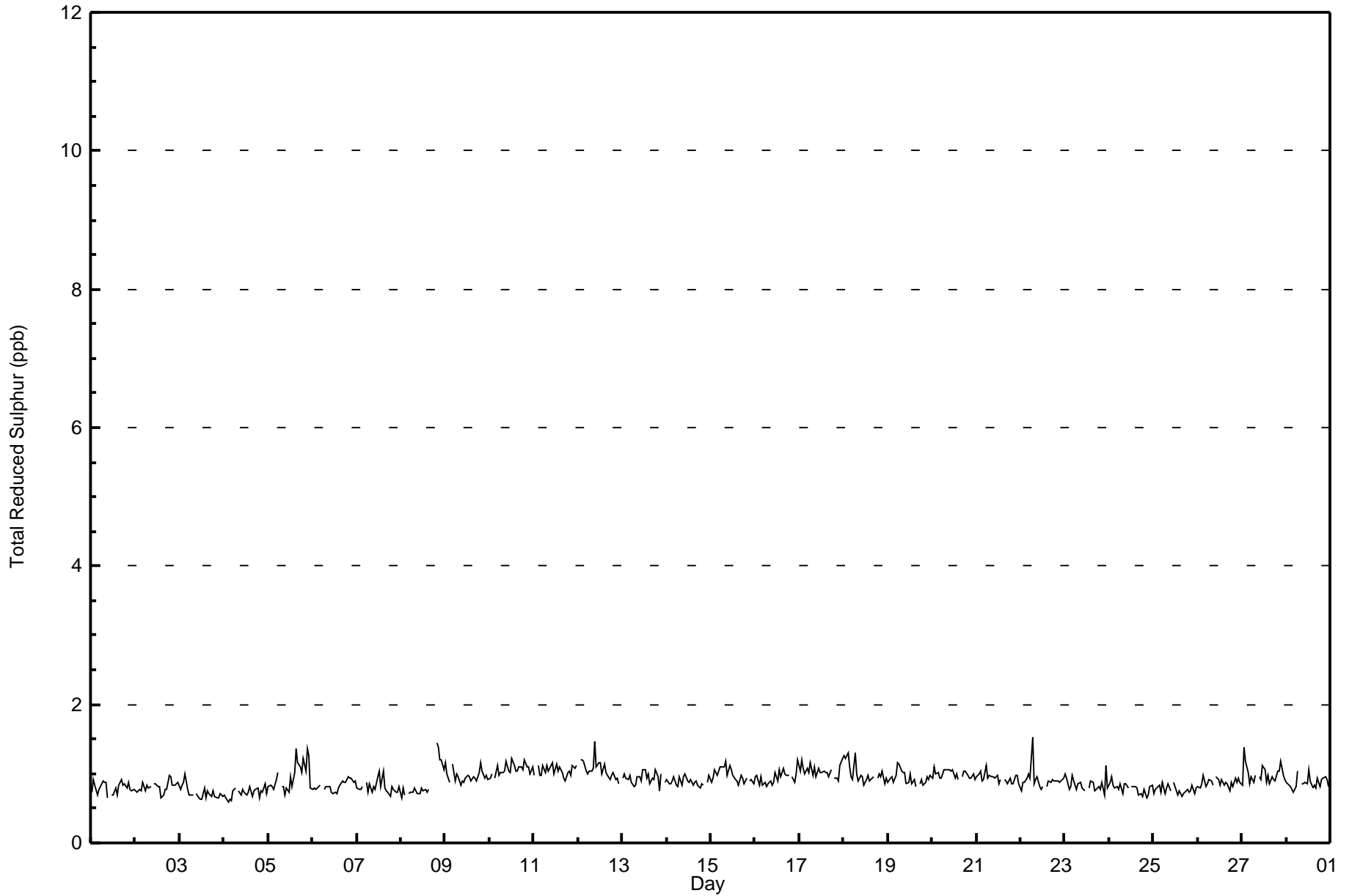


**Peace Airshed Zone Association  
Summary of Hourly Maximums**

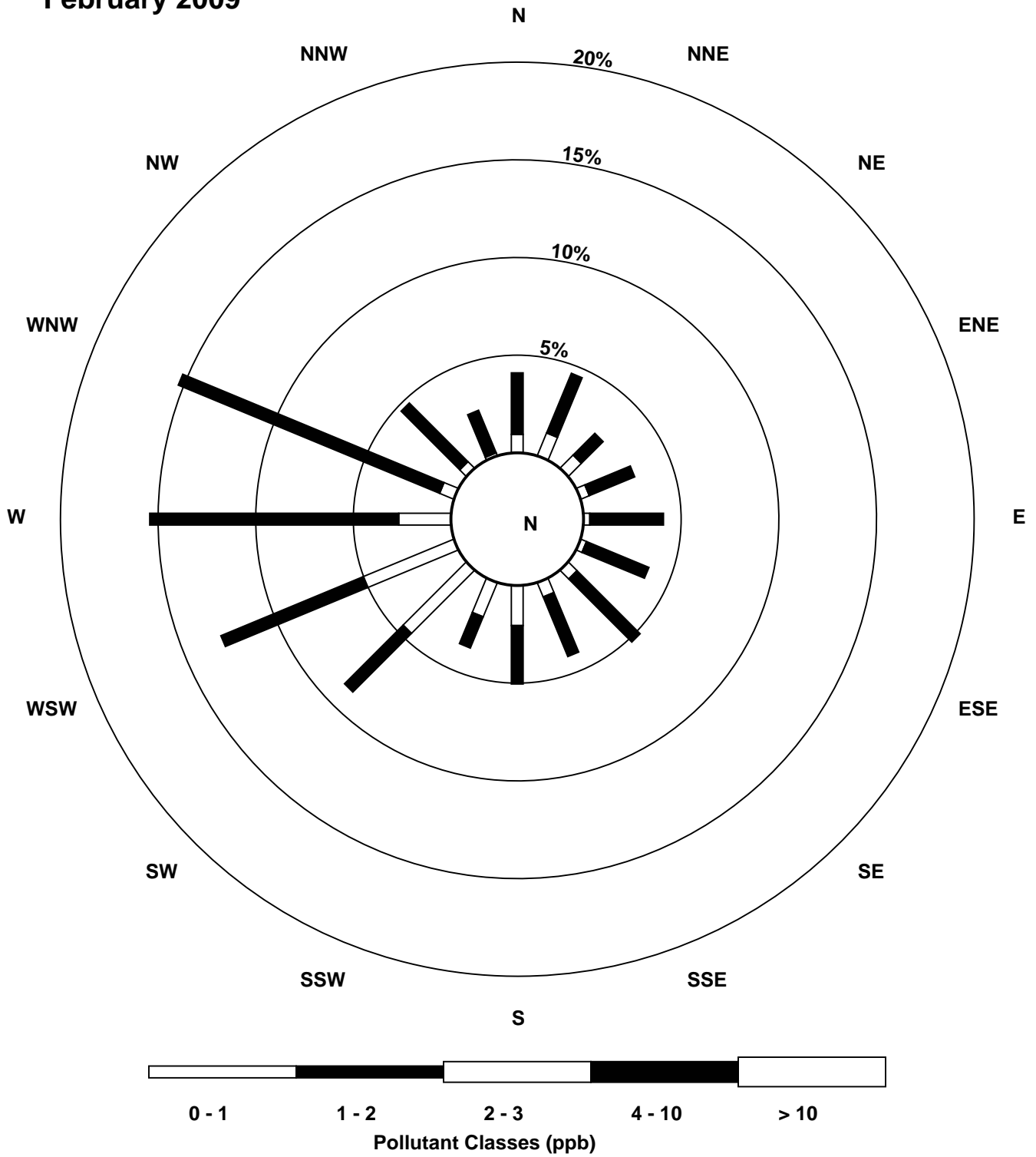
**Portable-Spirit River - Total Reduced Sulphur (TRS) - ppb  
February 1, 2009 to March 1, 2009**

Maximum Value: 1.5 ppb on Feb 22 07:00		Maximum Daily Average: 1.1 ppb on Feb 12		Hours in Service: 672																						
Minimum Value: 1 ppb on Feb 4 03:00		Minimum Daily Average: 0.7 ppb on Feb 4		Hours of Data: 640																						
Maximum Diurnal Average: 0.9 ppb at hour 7		Minimum Diurnal Average: 0.9 ppb at hour 18		Hours of Missing Data: 32																						
Monthly Average: 0.91 ppb		Percentiles: P <sub>1</sub> = 0.6 P <sub>10</sub> = 0.7 Q <sub>1</sub> = 0.8 Median = 0.9 Q <sub>3</sub> = 1.0 P <sub>90</sub> = 1.1 P <sub>99</sub> = 1.4		Hours of Calibration: 32																						
				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-Feb	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	0.9
2-Feb	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
3-Feb	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
4-Feb	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8
5-Feb	1	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	1.4
6-Feb	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
7-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
8-Feb	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	C	C	A	1	1	1	1	1	0.9	1.5
9-Feb	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.2
10-Feb	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.2
11-Feb	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	1.1
12-Feb	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	1.5
13-Feb	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
14-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.9	1.0
15-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1.0	1.2
16-Feb	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
17-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.0	1.2
18-Feb	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
19-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.9	1.2
20-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1.0	1.1
21-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.9	1.1
22-Feb	1	1	1	1	1	1	2	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.9	1.5
23-Feb	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1
24-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
25-Feb	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	0.9
26-Feb	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.0
27-Feb	1	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	1.4
28-Feb	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.1
																								Diurnal Average		
																								Diurnal Maximum		
C - Calibration																								A - Automated Daily Zero Span		

# Hourly Maximums for TRS at Portable-Spirit River February 2009



# Pollutant Rose for TRS at Portable-Spirit River February 2009



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

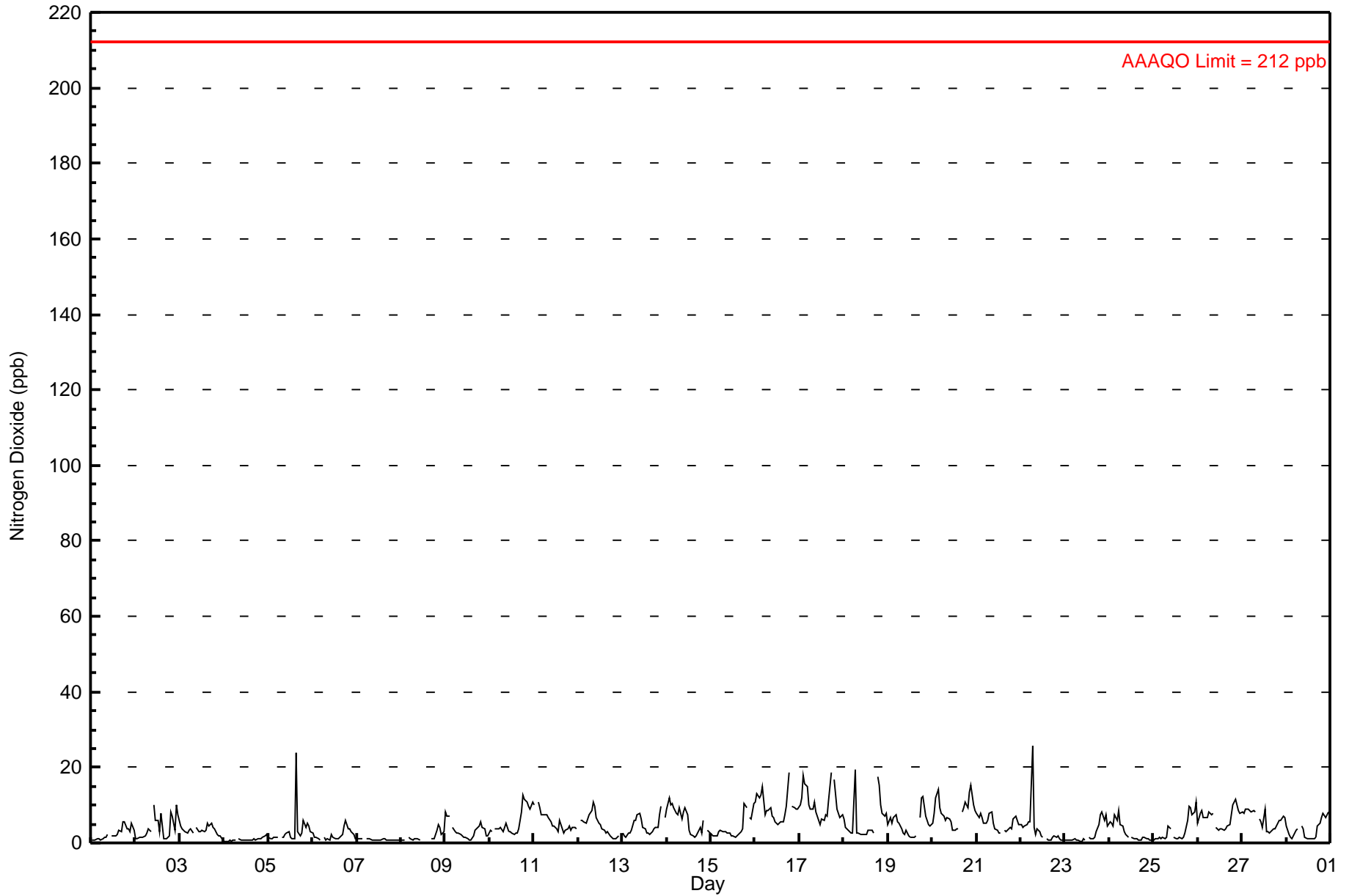
**Portable-Spirit River - Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
February 1, 2009 to March 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 672
Maximum Value: 25.6 ppb on Feb 22 07:00	Maximum Daily Average: 10.1 ppb on Feb 17
Minimum Value: 0 ppb on Feb 4 03:00	Hours of Data: 638
Maximum Diurnal Average: 6.3 ppb at hour 20	Hours of Missing Data: 34
Monthly Average: 4.45 ppb	Hours of Calibration: 34
Minimum Daily Average: 0.9 ppb on Feb 4	Percent Operational Time: 100.0
Minimum Diurnal Average: 2.4 ppb at hour 14	
Percentiles: P <sub>1</sub> = 0.6 P <sub>10</sub> = 0.9 Q <sub>1</sub> = 1.5 Median = 3.4 Q <sub>3</sub> = 6.6 P <sub>90</sub> = 9.1 P <sub>99</sub> = 17.0	

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-Feb	1	1	1	1	1	1	1	1	2	2	A	2	2	2	2	3	3	5	6	4	4	3	5	3	2.4	5.6																							
2-Feb	1	1	1	2	2	2	2	4	3	A	10	6	6	3	8	1	1	2	8	7	3	10	8	4.0	10.2																								
3-Feb	4	4	3	3	3	3	4	3	A	4	3	3	3	3	5	4	5	4	4	2	2	2	1	3.3	5.1																								
4-Feb	1	0	0	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	0.9	2.1																								
5-Feb	1	1	1	1	2	2	A	2	2	2	3	3	1	1	1	24	3	2	3	6	4	5	4	3	3.3	23.8																							
6-Feb	2	1	1	1	1	A	1	1	1	1	2	2	1	1	1	1	2	5	6	4	4	3	2	1	2.0	5.9																							
7-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3																							
8-Feb	1	1	1	A	2	1	1	1	1	1	1	C	C	C	C	A	1	1	1	3	5	4	2	3	1.7	5.0																							
9-Feb	8	7	7	A	4	3	3	2	2	2	1	1	1	1	1	2	3	4	5	5	4	4	2	2	3.3	8.2																							
10-Feb	3	3	A	4	4	4	4	3	4	5	3	3	2	2	3	3	4	8	13	12	11	10	9	11	5.5	12.6																							
11-Feb	10	A	11	9	8	7	7	8	7	6	4	4	4	3	6	4	3	3	4	5	3	4	4	4	5.5	10.9																							
12-Feb	A	6	6	6	5	6	7	9	11	10	7	5	5	4	3	3	3	2	1	1	1	2	2	A	4.7	10.9																							
13-Feb	2	2	1	2	3	3	6	6	7	8	6	4	4	3	3	2	3	4	4	4	7	10	A	7	4.4	9.5																							
14-Feb	9	12	10	10	9	8	7	9	6	8	9	7	3	2	2	2	2	3	4	3	6	A	3	3	6.0	11.8																							
15-Feb	2	2	2	2	3	3	3	3	3	3	3	2	2	2	2	2	3	4	10	9	A	7	6	10	3.8	10.4																							
16-Feb	11	13	12	13	15	8	9	9	9	7	7	5	5	5	6	7	10	19	A	10	9	9	9	9	9.2	18.6																							
17-Feb	10	12	18	16	15	10	9	9	11	8	6	5	7	6	8	7	11	19	A	17	9	8	7	7	10.1	18.7																							
18-Feb	6	4	3	3	3	3	19	2	2	2	2	2	2	3	3	3	A	18	15	10	8	7	8	8	5.8	19.5																							
19-Feb	5	7	5	7	7	6	5	4	3	2	3	2	1	2	1	A	7	12	12	7	6	5	4	5.0	12.2																								
20-Feb	5	8	12	14	9	8	7	6	7	6	5	3	3	4	A	8	9	11	9	14	15	10	9	8.1	15.3																								
21-Feb	8	7	8	7	5	5	6	8	8	5	4	3	3	A	3	3	3	4	4	7	7	6	5	5.3	8.3																								
22-Feb	5	4	4	5	6	6	26	4	2	4	3	2	2	A	1	1	1	2	2	2	1	1	1	3.6	25.6																								
23-Feb	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	3	5	7	8	6	7	5	2.4	8.3																							
24-Feb	6	5	5	7	6	9	5	4	3	2	1	A	2	1	1	1	1	1	2	1	1	1	1	1	2.9	8.5																							
25-Feb	1	1	1	2	1	1	1	2	4	4	A	1	1	1	1	1	1	3	6	10	9	8	8	11	3.5	11.0																							
26-Feb	5	8	9	7	7	7	8	7	8	A	4	4	4	4	3	4	4	5	7	10	12	10	9	8	6.6	11.6																							
27-Feb	8	8	9	9	8	8	9	8	A	6	5	4	9	3	3	3	3	4	4	5	6	6	7	7	6.2	9.1																							
28-Feb	5	2	2	1	2	3	4	A	4	4	2	1	1	1	1	1	1	5	5	7	8	7	7	8	3.6	8.1																							
																								4.5	4.5	5.0	5.1	4.8	4.5	5.8	4.4	4.4	4.0	3.8	3.0	2.9	2.4	2.7	3.3	3.1	4.3	5.8	6.3	6.0	5.5	5.2	5.2	Diurnal Average	
																								10.8	13.2	17.8	15.7	15.0	10.2	25.6	9.2	10.9	9.8	10.2	7.3	8.8	5.9	7.9	23.8	11.3	18.7	18.6	16.7	13.6	15.3	9.9	11.0	Diurnal Maximum	

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

# Hourly Averages for NO<sub>2</sub> at Portable-Spirit River February 2009



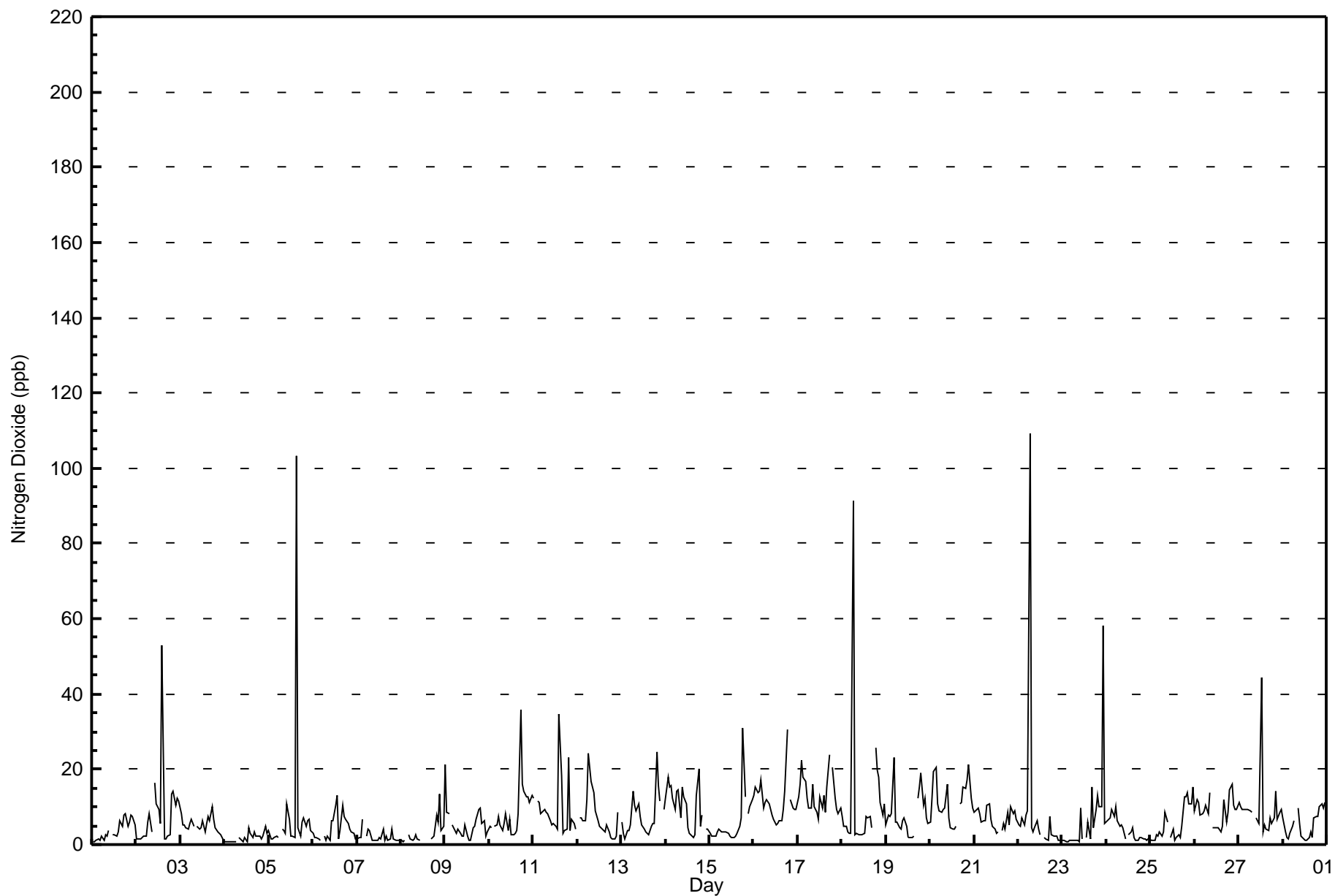


**Peace Airshed Zone Association  
Summary of Hourly Maximums**

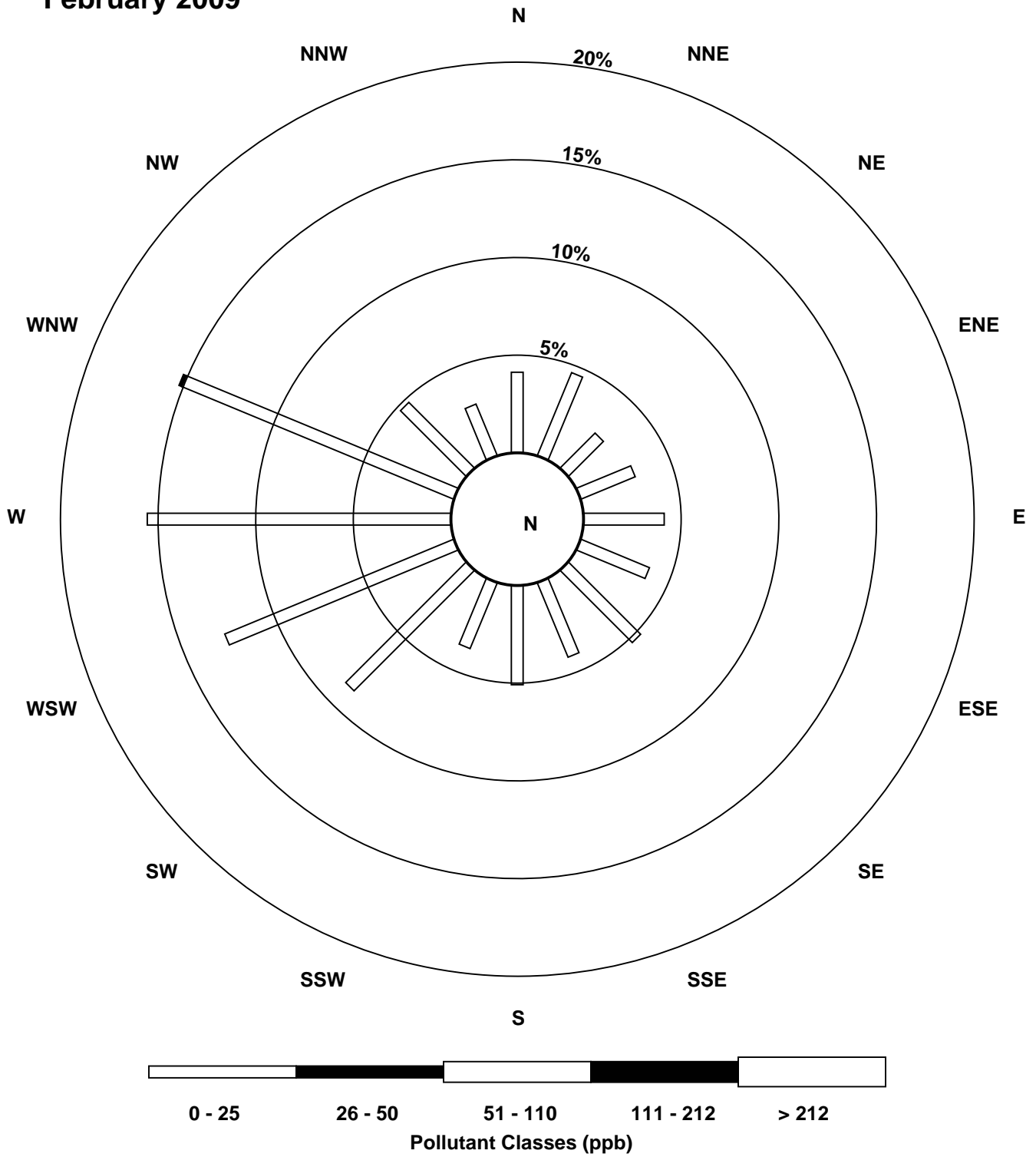
**Portable-Spirit River - Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
February 1, 2009 to March 1, 2009**

Maximum Value: 109.2 ppb on Feb 22 07:00		Maximum Daily Average: 13.1 ppb on Feb 17		Hours in Service: 672																																													
Minimum Value: 1 ppb on Feb 4 02:00		Minimum Daily Average: 1.9 ppb on Feb 4		Hours of Data: 638																																													
Maximum Diurnal Average: 13.8 ppb at hour 7		Minimum Diurnal Average: 3.9 ppb at hour 14		Hours of Missing Data: 34																																													
Monthly Average: 7.18 ppb		Percentiles: P <sub>1</sub> = 0.8 P <sub>10</sub> = 1.3 Q <sub>1</sub> = 2.4 Median = 5.2 Q <sub>3</sub> = 9.4 P <sub>90</sub> = 13.7 P <sub>99</sub> = 36.9		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-Feb	1	1	1	1	1	2	1	2	2	4	A	3	2	2	3	6	5	8	8	5	6	8	7	5	3.7	8.0																							
2-Feb	2	2	2	2	2	2	6	8	4	A	16	11	9	6	53	1	1	2	3	14	14	10	12	12	8.4	53.0																							
3-Feb	8	5	5	4	4	6	7	5	A	5	4	5	6	3	5	8	6	10	7	5	3	3	3	1	5.1	10.2																							
4-Feb	1	1	1	1	1	1	1	A	2	1	1	2	1	4	3	2	3	2	2	2	2	2	5	3	1.9	4.9																							
5-Feb	4	1	2	2	2	2	A	4	4	3	11	7	2	2	2	103	5	2	6	7	5	6	7	4	8.4	103.5																							
6-Feb	3	2	2	1	1	A	2	1	2	1	6	6	10	13	2	4	11	7	7	6	4	3	3	2	4.3	13.1																							
7-Feb	2	2	2	7	A	2	4	4	1	1	1	1	2	1	4	1	2	1	1	4	1	1	1	1	2.1	6.6																							
8-Feb	1	1	1	A	3	1	1	2	2	2	1	C	C	C	C	A	1	2	2	8	6	14	4	5	3.1	13.6																							
9-Feb	21	9	8	A	5	4	3	4	3	2	2	5	2	1	1	5	5	7	9	10	6	6	2	3	5.4	21.3																							
10-Feb	5	5	A	5	5	7	5	4	6	8	4	7	3	3	3	4	8	36	16	14	13	13	11	13	8.5	35.8																							
11-Feb	12	A	11	11	8	8	9	8	8	6	5	6	5	4	35	18	3	4	4	23	4	7	6	4	9.2	34.9																							
12-Feb	A	7	7	6	6	12	24	17	15	14	9	6	5	4	4	3	5	3	2	2	2	9	A	9	7.5	24.2																							
13-Feb	6	3	2	4	4	5	14	10	9	11	7	5	4	3	3	3	5	6	6	25	16	12	A	9	7.4	24.8																							
14-Feb	12	18	15	16	12	9	14	15	7	15	13	11	4	3	2	2	3	13	20	5	8	A	4	4	9.8	20.1																							
15-Feb	3	2	2	2	4	4	3	3	3	3	3	2	2	2	2	3	5	7	31	13	A	8	10	12	5.7	30.9																							
16-Feb	13	15	14	14	17	10	11	12	11	9	8	7	5	6	6	6	9	14	31	A	12	10	9	9	11.3	30.7																							
17-Feb	13	16	22	18	17	12	10	10	16	10	8	7	13	10	13	8	15	24	A	21	12	9	8	10	13.1	23.7																							
18-Feb	8	5	5	3	3	3	91	3	3	3	3	3	3	8	7	8	4	A	26	20	18	11	8	11	11.0	91.2																							
19-Feb	5	8	7	8	23	6	6	5	4	6	7	5	2	2	2	2	A	12	15	19	11	12	7	5	7.9	23.1																							
20-Feb	6	12	20	20	11	9	9	9	10	16	7	4	4	4	5	A	11	11	15	15	17	21	12	10	11.3	21.3																							
21-Feb	8	9	10	8	6	6	6	11	11	7	5	4	3	3	A	4	6	4	8	5	10	8	9	7	6.9	10.9																							
22-Feb	5	5	7	5	8	9	109	5	3	4	6	4	2	A	2	1	1	7	3	2	2	2	1	1	8.5	109.2																							
23-Feb	1	1	1	1	1	1	1	1	1	1	10	2	A	2	6	1	15	4	9	13	10	10	58	6	6.8	58.1																							
24-Feb	6	7	7	9	8	10	6	5	5	5	2	A	3	3	4	2	1	1	2	2	1	2	1	2	4.1	10.1																							
25-Feb	1	1	1	2	2	3	2	3	9	6	A	2	4	1	2	3	2	5	13	13	14	11	11	15	5.5	15.2																							
26-Feb	9	12	11	8	8	9	10	8	14	A	5	4	4	4	4	5	12	6	9	14	16	10	9	9	8.8	16.1																							
27-Feb	11	10	10	10	9	9	9	9	A	7	6	6	44	3	5	4	4	7	5	7	14	7	8	9	9.3	44.4																							
28-Feb	7	3	2	2	3	5	6	A	10	6	2	1	1	1	2	3	2	7	7	7	10	11	10	11	5.2	11.3																							
																								6.5	6.0	6.5	6.6	6.5	5.9	13.8	6.4	6.3	6.0	5.9	4.8	5.7	3.9	6.9	8.1	5.6	7.9	9.9	10.3	8.8	8.2	8.7	6.8	Diurnal Average	
																								21.3	17.7	22.5	20.4	23.1	12.4	109.2	16.9	16.1	16.2	16.4	10.9	44.4	13.1	53.0	103.5	15.4	35.8	30.9	24.8	18.0	21.3	58.1	15.2	Diurnal Maximum	
C - Calibration																								A - Automated Daily Zero Span																									

# Hourly Maximums for NO<sub>2</sub> at Portable-Spirit River February 2009



# Pollutant Rose for NO<sub>2</sub> at Portable-Spirit River February 2009

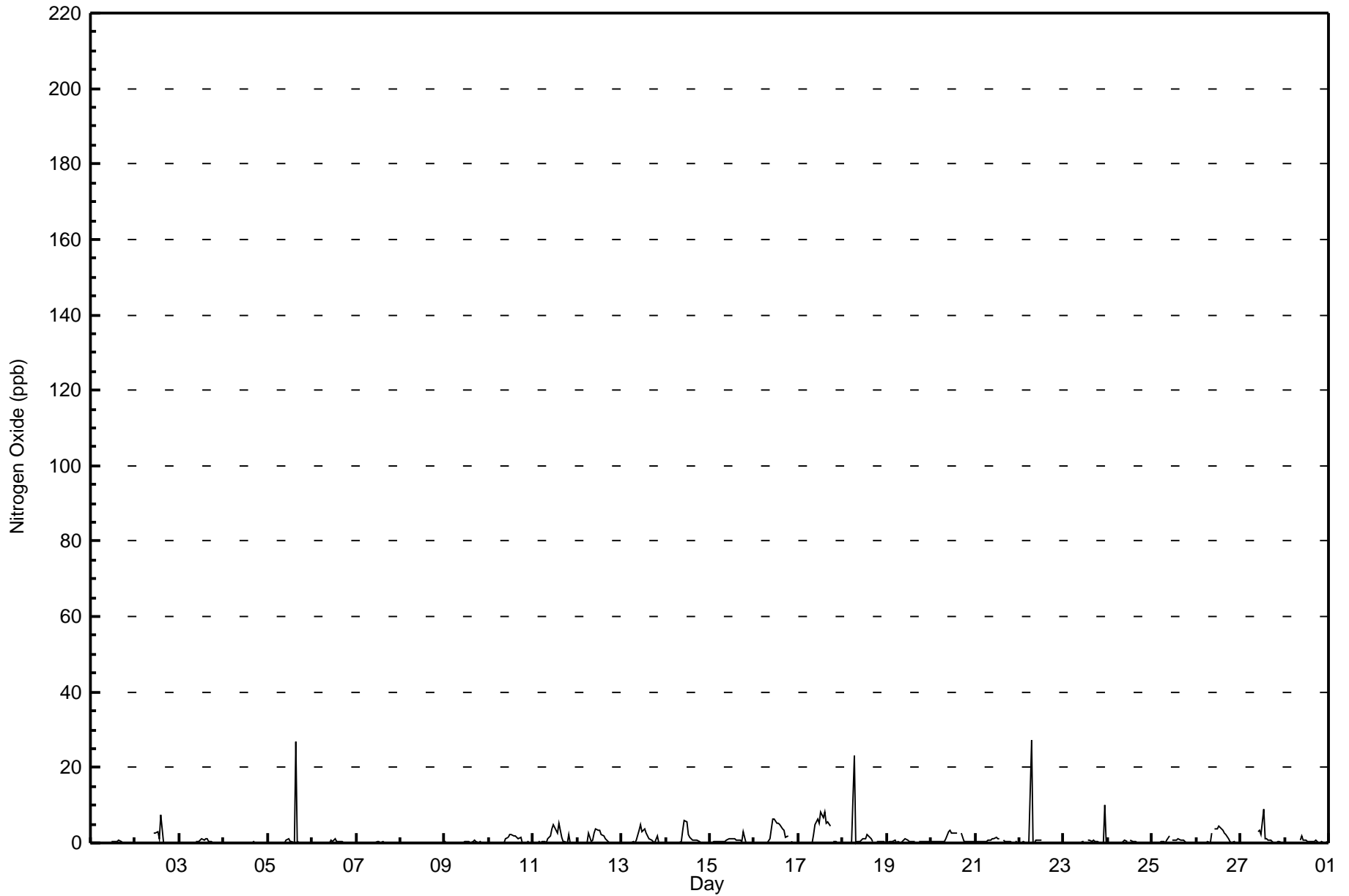


**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Portable-Spirit River - Nitrogen Oxide (NO) - ppb  
February 1, 2009 to March 1, 2009**

Maximum Value: 27.1 ppb on Feb 22 07:00		Maximum Daily Average: 2.6 ppb on Feb 17		Hours in Service: 672																							
Minimum Value: 0 ppb on Feb 1 05:00		Minimum Daily Average: 0.1 ppb on Feb 8		Hours of Data: 638																							
Maximum Diurnal Average: 2.2 ppb at hour 13		Minimum Diurnal Average: 0.1 ppb at hour 2		Hours of Missing Data: 34																							
Monthly Average: 0.80 ppb		Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.1 Median = 0.2 Q <sub>3</sub> = 0.6 P <sub>90</sub> = 2.3 P <sub>99</sub> = 7.9		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-Feb	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	1	0	0	0	0	0	0	0	0.1	0.6	
2-Feb	0	0	0	0	0	0	0	0	0	0	0	A	2	3	3	1	8	0	0	0	0	0	0	0	0.8	7.5	
3-Feb	0	0	0	0	0	0	0	0	0	A	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0.3	1.1	
4-Feb	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	0.2	
5-Feb	0	0	0	0	0	0	A	0	0	0	0	1	1	0	0	0	27	0	0	0	0	0	0	0	1.3	26.9	
6-Feb	0	0	0	0	0	A	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0.2	1.1	
7-Feb	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	
8-Feb	0	0	0	A	0	0	0	0	0	0	0	C	C	C	C	A	0	0	0	0	0	0	0	0	0.1	0.2	
9-Feb	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.2	0.7	
10-Feb	0	0	A	0	0	0	0	0	0	1	1	2	2	2	2	1	1	1	1	0	0	1	0	0	0.7	2.3	
11-Feb	0	A	0	0	0	0	0	0	1	2	4	5	4	3	5	2	0	0	0	2	0	0	0	0	1.3	5.3	
12-Feb	A	0	0	0	0	0	3	0	1	3	4	3	3	2	2	1	1	0	0	0	0	0	0	A	1.1	3.7	
13-Feb	0	0	0	0	0	0	0	0	1	3	5	3	4	3	2	1	1	0	0	2	0	0	A	0	1.1	4.8	
14-Feb	0	0	0	0	0	0	0	0	0	3	6	6	2	1	1	1	1	1	0	0	0	A	0	0	1.0	5.9	
15-Feb	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	3	0	A	0	0	0	0.6	3.0	
16-Feb	0	0	0	0	0	0	0	1	4	6	6	5	5	5	4	3	1	2	A	0	0	0	0	0	1.9	6.5	
17-Feb	0	0	0	0	0	0	0	2	5	6	5	8	7	8	5	6	5	A	0	0	0	0	0	0	2.6	8.4	
18-Feb	0	0	0	0	0	0	23	0	0	0	1	1	1	2	2	1	1	A	0	0	0	0	0	0	1.5	23.0	
19-Feb	0	0	0	0	1	0	0	0	0	1	1	1	0	1	0	0	A	1	0	0	0	0	0	0	0.4	1.1	
20-Feb	0	0	0	0	0	0	0	1	3	3	2	3	2	A	3	1	0	0	0	0	0	0	0	0	1.1	3.3	
21-Feb	0	0	0	0	0	0	1	1	1	1	1	1	1	A	1	1	0	0	0	0	0	0	0	0	0.5	1.5	
22-Feb	0	0	0	0	0	0	27	0	0	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	1.4	27.1	
23-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	0	1	0	0	0	0	0	10	0	0.6	10.0	
24-Feb	0	0	0	0	0	0	0	0	0	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8	
25-Feb	0	0	0	0	0	1	0	0	1	2	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0.4	1.9	
26-Feb	0	0	0	0	0	0	0	0	3	A	4	4	4	4	3	3	2	1	0	0	0	0	0	0	1.3	4.5	
27-Feb	0	0	0	0	0	0	0	0	A	3	3	2	9	1	1	1	1	1	0	0	0	0	0	0	1.0	8.9	
28-Feb	0	0	0	0	0	0	A	1	2	1	1	1	0	1	0	0	0	1	0	0	0	0	0	0	0.4	1.7	
		0.1	0.1	0.1	0.1	0.1	2.1	0.1	0.6	1.4	2.1	2.0	2.2	1.6	1.8	2.0	0.9	0.6	0.3	0.3	0.1	0.1	0.5	0.1	Diurnal Average		
		0.5	0.3	0.3	0.3	0.9	0.5	27.1	0.6	2.6	5.0	6.4	6.5	8.9	6.5	8.2	26.9	5.7	4.6	3.0	2.2	0.3	0.6	10.0	0.3	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

# Hourly Averages for NO at Portable-Spirit River February 2009

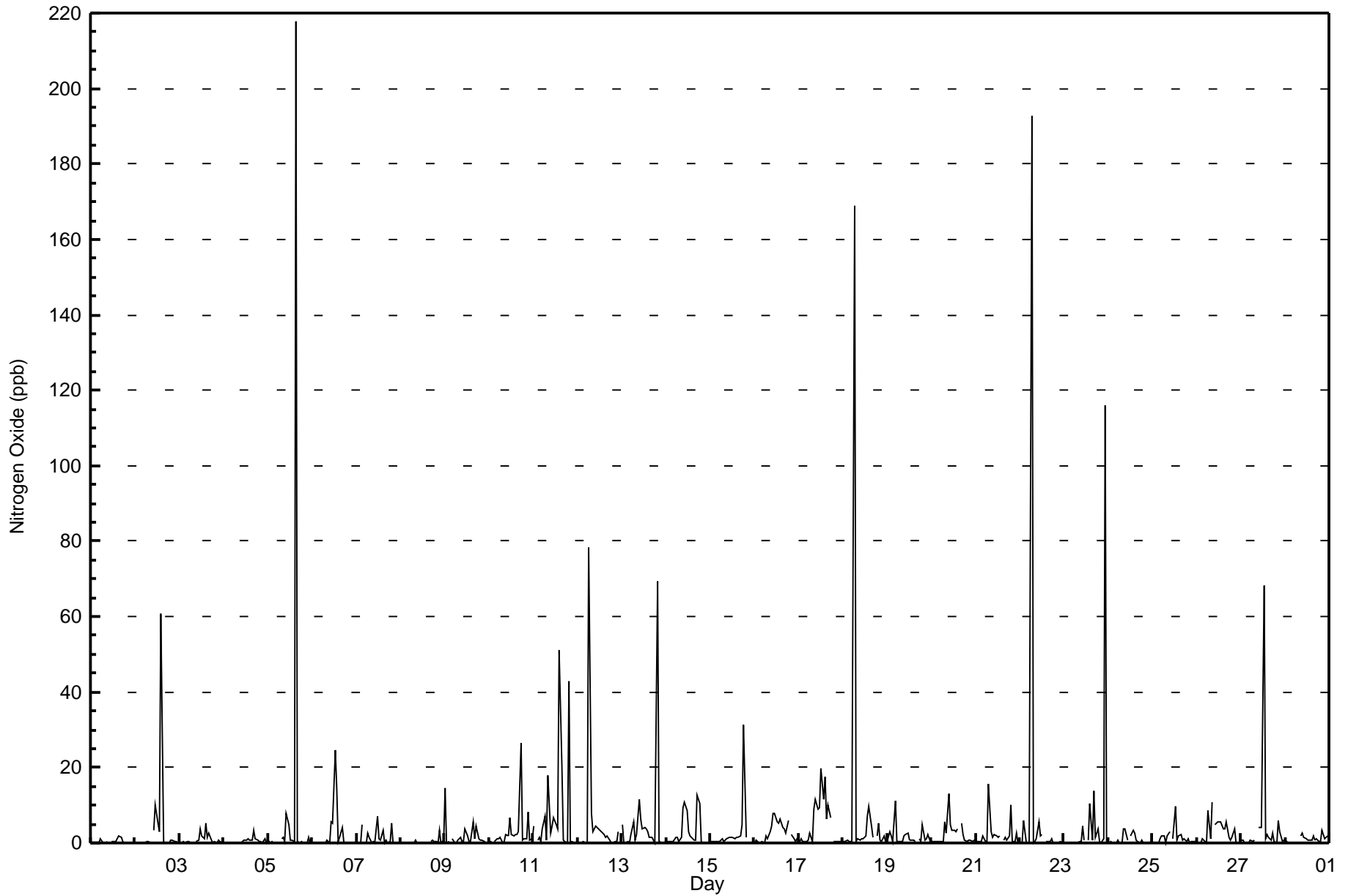


**Peace Airshed Zone Association  
Summary of Hourly Maximums**

**Portable-Spirit River - Nitrogen Oxide (NO) - ppb  
February 1, 2009 to March 1, 2009**

Maximum Value: 217.9 ppb on Feb 5 16:00		Maximum Daily Average: 10.4 ppb on Feb 5		Hours in Service: 672																							
Minimum Value: 0 ppb on Feb 24 23:00		Minimum Daily Average: 0.4 ppb on Feb 1		Hours of Data: 638																							
Maximum Diurnal Average: 17.6 ppb at hour 7		Minimum Diurnal Average: 0.4 ppb at hour 2		Hours of Missing Data: 34																							
Monthly Average: 3.54 ppb		Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.2 Median = 0.6 Q <sub>3</sub> = 2.1 P <sub>90</sub> = 5.7 P <sub>99</sub> = 61.0		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-Feb	0	0	0	0	0	1	0	0	0	0	A	0	1	1	1	2	1	0	0	0	0	0	0	0	0.4	1.9	
2-Feb	0	0	0	0	0	0	0	0	0	A	3	10	5	3	61	0	0	0	0	1	1	0	0	0	3.8	60.7	
3-Feb	0	0	0	0	0	0	0	0	A	0	1	4	2	1	5	1	3	1	0	0	0	1	0	0	0.9	5.2	
4-Feb	0	0	0	0	0	0	0	A	0	0	0	1	1	1	1	1	3	1	1	1	0	0	1	0	0.5	3.3	
5-Feb	1	0	0	0	0	0	A	1	2	0	8	5	1	1	0	218	1	0	0	0	0	0	2	0	10.4	217.9	
6-Feb	0	0	0	0	0	A	0	0	1	0	6	5	25	14	0	1	4	1	0	0	0	0	0	0	2.6	24.7	
7-Feb	0	0	0	5	A	0	2	2	0	1	0	7	1	1	3	0	1	0	0	5	0	0	0	0	1.3	7.2	
8-Feb	0	0	0	A	0	0	0	0	1	0	0	C	C	C	C	A	0	1	0	0	0	3	0	1	0.4	3.3	
9-Feb	15	0	0	A	1	0	0	1	1	0	0	4	2	0	0	6	1	4	1	1	1	0	0	0	1.7	14.6	
10-Feb	0	0	A	0	1	1	1	0	0	2	2	7	2	2	2	2	3	26	1	1	1	8	1	1	2.9	26.3	
11-Feb	5	A	1	1	0	4	7	1	18	3	5	7	5	4	51	20	1	0	0	43	0	0	0	0	7.6	51.1	
12-Feb	A	0	0	0	0	0	78	8	3	4	4	4	4	3	2	2	2	1	0	0	0	0	3	A	5.4	78.5	
13-Feb	5	0	0	0	0	2	6	1	2	12	6	4	4	4	3	1	2	1	0	69	0	0	0	A	5.3	69.2	
14-Feb	0	0	0	0	0	2	1	0	1	9	11	8	3	2	1	1	1	13	11	0	0	A	0	0	2.9	12.6	
15-Feb	0	0	0	0	0	0	1	0	1	1	2	1	1	1	2	1	2	5	31	1	A	0	0	0	2.3	31.2	
16-Feb	0	1	0	0	0	0	2	1	3	5	8	8	6	5	6	4	4	3	6	A	2	1	0	1	2.9	8.0	
17-Feb	0	1	0	1	1	1	2	0	9	12	9	9	20	12	18	6	10	7	A	0	0	0	0	0	5.2	19.7	
18-Feb	0	0	1	0	0	0	169	0	1	1	1	1	2	7	10	4	2	A	2	5	1	0	2	1	9.1	169.1	
19-Feb	0	3	2	0	11	0	0	0	0	2	2	3	1	1	1	0	A	1	1	5	1	1	2	1	1.7	11.3	
20-Feb	0	0	0	0	0	0	0	6	2	13	5	3	3	3	4	A	5	2	1	1	1	1	0	1	2.3	13.0	
21-Feb	0	0	0	0	2	0	0	16	3	1	2	2	2	2	A	1	1	1	1	2	10	0	0	3	0	2.1	15.5
22-Feb	0	0	6	0	0	0	193	0	0	1	6	2	2	2	A	0	0	0	1	0	0	0	0	0	9.3	192.6	
23-Feb	0	0	0	0	0	0	0	0	0	0	4	1	A	1	10	1	14	1	4	0	0	1	116	0	6.7	116.1	
24-Feb	0	0	0	0	0	1	0	0	4	4	1	A	2	3	2	1	0	0	1	0	0	0	0	0	0.9	3.8	
25-Feb	0	0	0	0	1	2	2	0	2	3	A	1	10	1	2	2	1	1	0	1	0	0	0	0	1.3	9.5	
26-Feb	0	0	0	1	1	0	8	1	11	A	5	6	6	6	4	4	6	2	1	2	4	0	0	0	2.8	10.9	
27-Feb	1	1	0	0	0	1	0	1	A	4	4	4	68	1	2	1	1	3	1	0	6	3	0	1	4.5	68.3	
28-Feb	1	0	0	0	0	0	0	A	2	3	1	1	1	1	1	2	1	1	0	0	3	1	1	2	1.0	3.4	
		1.1	0.4	0.5	0.5	0.8	0.7	17.6	1.5	2.6	3.1	3.7	4.1	6.8	3.1	7.4	10.9	2.6	2.8	2.4	5.5	0.8	0.9	5.0	0.4	Diurnal Average	
		14.6	3.0	6.0	4.7	11.3	3.7	192.6	15.5	18.1	13.0	10.8	10.2	68.3	14.5	60.7	217.9	13.6	26.3	31.2	69.2	5.9	8.4	116.1	2.0	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

# Hourly Maximums for NO at Portable-Spirit River February 2009



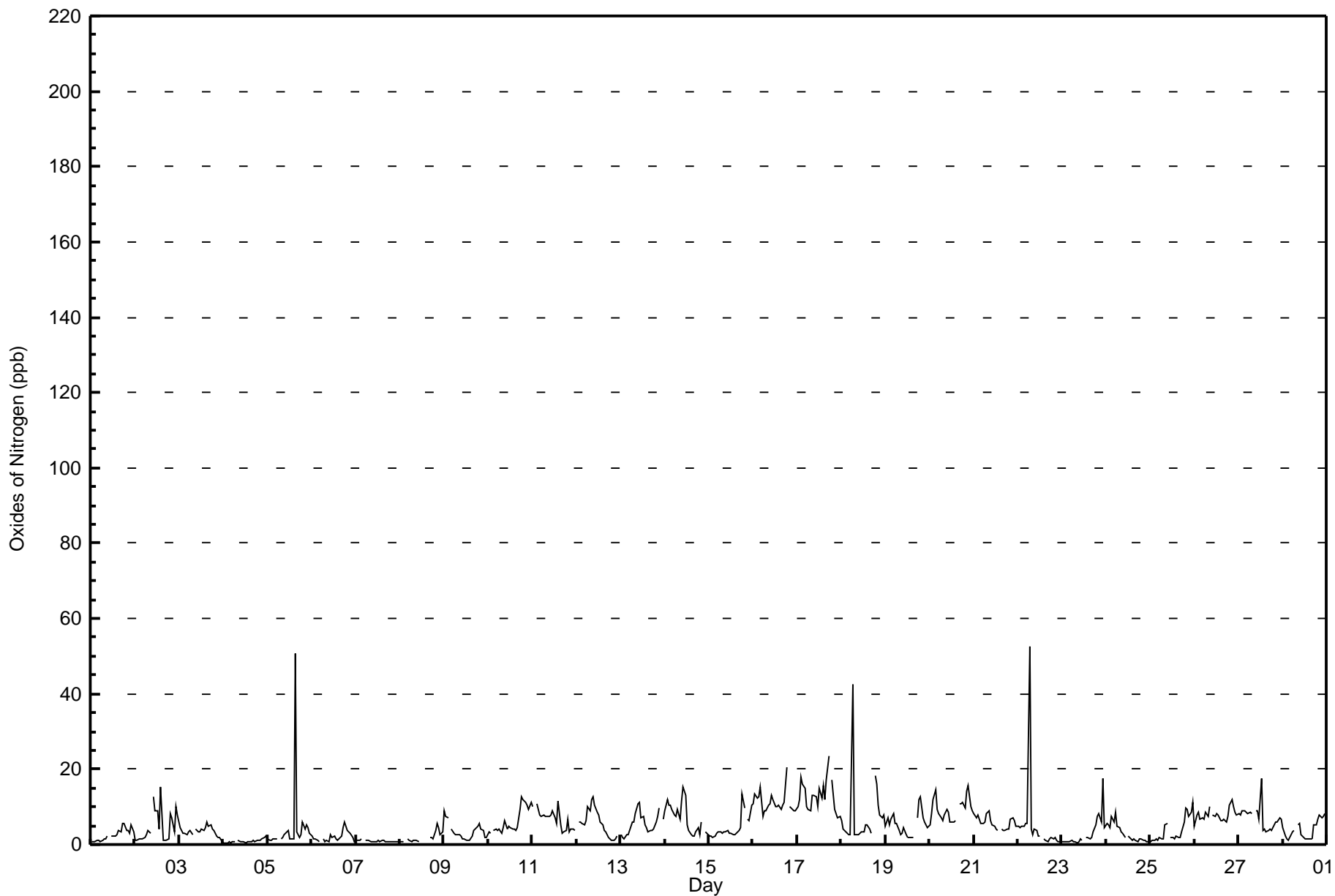
**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Portable-Spirit River - Oxides of Nitrogen (NO<sub>x</sub>) - ppb  
February 1, 2009 to March 1, 2009**

Maximum Value: 52.6 ppb on Feb 22 07:00		Maximum Daily Average: 12.7 ppb on Feb 17		Hours in Service: 672																																													
Minimum Value: 0 ppb on Feb 4 03:00		Minimum Daily Average: 0.9 ppb on Feb 4		Hours of Data: 638																																													
Maximum Diurnal Average: 7.9 ppb at hour 7		Minimum Diurnal Average: 3.9 ppb at hour 14		Hours of Missing Data: 34																																													
Monthly Average: 5.21 ppb		Percentiles: P <sub>1</sub> = 0.6 P <sub>10</sub> = 1.0 Q <sub>1</sub> = 1.8 Median = 3.9 Q <sub>3</sub> = 7.5 P <sub>90</sub> = 10.4 P <sub>99</sub> = 15.9		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-Feb	1	1	1	1	1	1	1	1	2	2	A	2	2	2	3	4	3	6	6	4	4	3	5	3	2.5	5.6																							
2-Feb	1	1	1	2	2	2	2	4	3	A	13	9	9	4	15	1	1	1	2	8	7	3	10	8	4.7	15.4																							
3-Feb	4	4	3	3	3	3	4	3	A	4	3	3	4	4	4	6	5	5	4	4	2	2	2	1	3.5	6.1																							
4-Feb	0	0	0	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	0.9	2.1																							
5-Feb	1	1	1	1	2	2	A	2	2	2	3	4	2	1	1	51	3	2	3	6	4	5	4	3	4.6	50.7																							
6-Feb	2	1	1	1	1	A	1	1	1	1	3	2	2	2	1	2	2	5	6	4	4	3	2	1	2.1	5.8																							
7-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3																							
8-Feb	1	1	1	A	2	1	1	1	1	1	1	C	C	C	C	A	2	2	2	4	5	5	3	3	1.9	5.5																							
9-Feb	9	7	7	A	4	3	3	2	2	2	1	2	1	1	1	2	4	4	5	6	4	4	2	2	3.4	8.8																							
10-Feb	3	3	A	4	4	4	4	3	4	6	4	5	4	4	4	4	4	9	13	12	11	10	9	11	6.2	12.7																							
11-Feb	10	A	11	9	8	8	8	8	8	7	8	9	7	6	11	5	3	3	4	7	3	4	4	4	6.7	11.4																							
12-Feb	A	6	6	6	5	6	10	9	12	13	10	9	8	6	5	4	4	2	1	1	1	2	2	A	5.8	12.5																							
13-Feb	3	2	1	2	3	4	6	6	8	11	11	7	8	5	4	3	4	4	4	6	7	10	A	7	5.5	11.3																							
14-Feb	9	12	10	11	9	8	7	9	7	12	15	13	5	4	3	2	2	3	5	3	6	A	3	3	7.0	15.2																							
15-Feb	2	2	2	2	3	4	3	3	3	3	4	3	3	3	3	3	4	4	13	10	A	7	6	10	4.4	13.4																							
16-Feb	11	13	12	13	15	8	9	9	10	11	13	12	10	10	10	9	11	11	21	A	10	9	9	9	11.1	20.6																							
17-Feb	10	12	18	16	15	10	9	9	13	13	12	10	15	12	16	12	17	23	A	17	9	8	7	7	12.7	23.5																							
18-Feb	6	4	4	3	3	3	42	3	3	3	3	3	3	5	5	4	3	A	18	16	10	8	7	8	7.3	42.3																							
19-Feb	5	7	5	7	8	6	5	4	3	3	5	3	2	2	2	2	A	7	12	13	7	6	5	5	5.3	12.6																							
20-Feb	5	8	12	15	9	8	7	6	8	9	9	6	6	6	A	11	11	11	10	14	16	10	9	9	9.2	15.8																							
21-Feb	8	7	8	7	6	6	6	8	9	6	5	5	4	4	A	4	4	4	4	4	7	7	6	5	5.8	9.1																							
22-Feb	5	4	5	5	6	6	53	4	2	4	4	2	2	A	1	1	1	2	2	2	1	1	1	1	5.0	52.6																							
23-Feb	1	1	1	1	1	1	1	1	1	1	2	1	A	2	2	2	2	2	4	5	8	8	6	17	5	3.0	17.5																						
24-Feb	6	5	5	7	6	9	5	4	3	3	2	A	2	1	1	1	1	1	1	2	1	1	1	1	3.0	8.6																							
25-Feb	1	1	1	1	1	2	1	2	5	6	A	2	2	2	2	2	2	3	6	10	9	8	8	11	3.8	11.0																							
26-Feb	5	8	9	7	7	7	8	7	10	A	8	7	8	8	6	6	7	6	8	10	12	10	9	8	7.9	11.8																							
27-Feb	8	8	9	9	8	8	9	8	A	9	9	7	18	4	4	3	4	4	4	5	6	6	7	7	7.1	17.5																							
28-Feb	5	2	1	1	2	3	4	A	5	5	2	2	1	1	2	2	2	5	5	7	8	7	7	8	3.9	8.3																							
																								4.6	4.6	5.1	5.2	4.9	4.5	7.9	4.5	4.9	5.4	5.8	5.0	5.0	3.9	4.5	5.3	3.9	4.9	6.1	6.5	6.1	5.6	5.6	5.2	Diurnal Average	
																								10.8	13.4	18.1	15.9	15.2	10.2	52.6	9.2	13.1	13.2	15.2	12.9	17.5	12.4	15.7	50.7	17.1	23.5	20.6	17.0	14.0	15.8	17.5	11.0	Diurnal Maximum	
C - Calibration																								A - Automated Daily Zero Span																									



# Hourly Averages for NO<sub>x</sub> at Portable-Spirit River February 2009

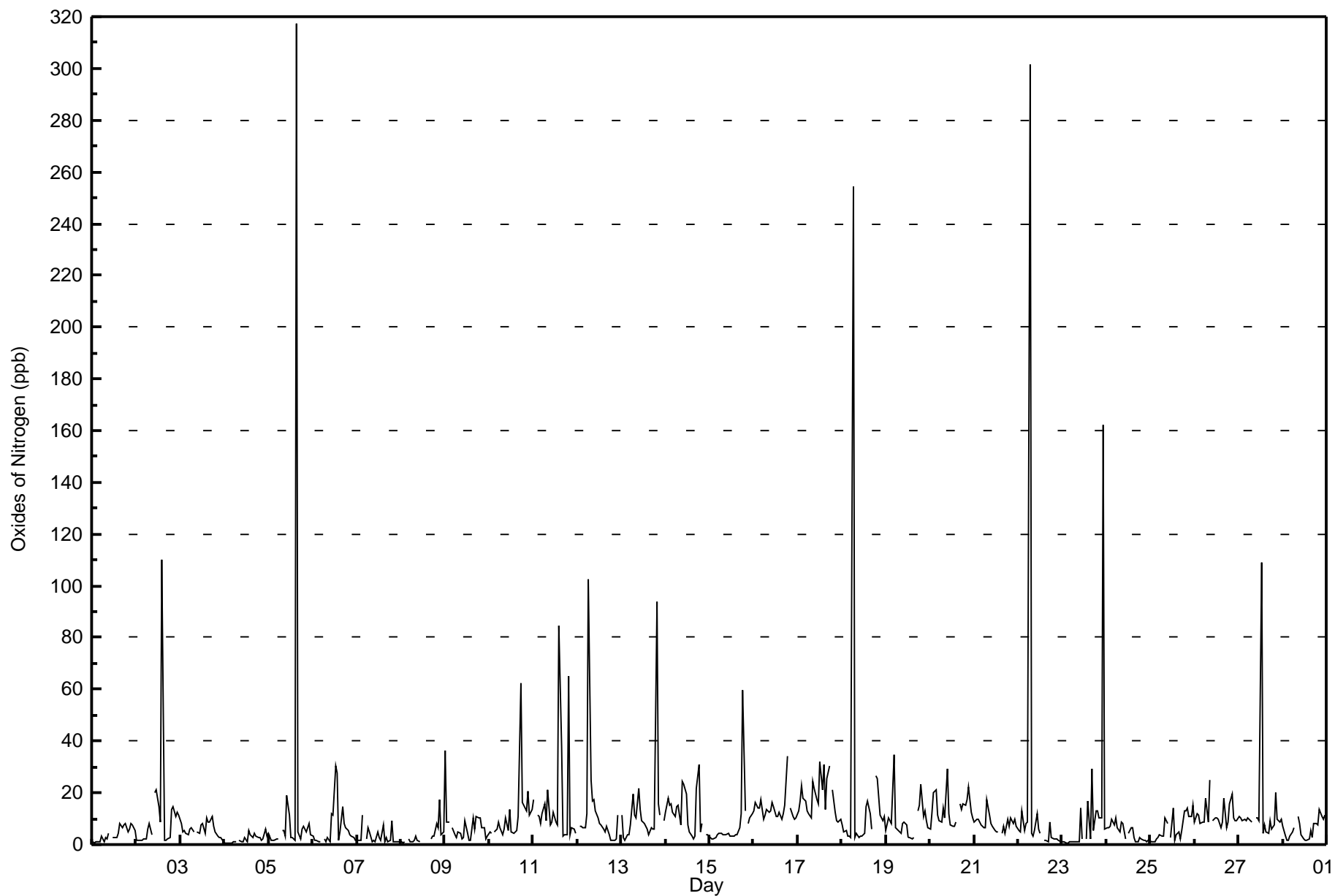


**Peace Airshed Zone Association  
Summary of Hourly Maximums**

**Portable-Spirit River - Oxides of Nitrogen (NO<sub>x</sub>) - ppb  
February 1, 2009 to March 1, 2009**

Maximum Value: 317.5 ppb on Feb 5 16:00		Maximum Daily Average: 19.7 ppb on Feb 18		Hours in Service: 672																							
Minimum Value: 1 ppb on Feb 4 03:00		Minimum Daily Average: 2.2 ppb on Feb 4		Hours of Data: 638																							
Maximum Diurnal Average: 30.9 ppb at hour 7		Minimum Diurnal Average: 6.2 ppb at hour 2		Hours of Missing Data: 34																							
Monthly Average: 10.41 ppb		Percentiles: P <sub>1</sub> = 0.8 P <sub>10</sub> = 1.5 Q <sub>1</sub> = 3.0 Median = 6.6 Q <sub>3</sub> = 11.0 P <sub>90</sub> = 17.0 P <sub>99</sub> = 108.5		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-Feb	1	1	1	1	1	3	1	3	2	4	A	3	3	3	4	8	6	8	8	5	6	8	7	5	4.0	8.1	
2-Feb	2	1	2	2	2	2	6	8	4	A	20	21	15	9	110	2	2	2	3	14	14	11	13	12	11.9	109.9	
3-Feb	8	5	5	4	4	6	7	5	A	5	4	8	8	4	11	9	9	11	7	5	3	3	3	1	5.8	10.7	
4-Feb	1	1	1	1	1	1	1	A	2	1	1	3	1	5	4	3	4	3	3	3	2	2	6	3	2.2	6.0	
5-Feb	4	2	2	2	2	2	A	5	5	3	19	11	3	3	2	317	5	2	6	7	5	6	8	4	18.5	317.5	
6-Feb	3	2	2	1	1	A	2	1	3	1	12	12	30	28	2	5	15	8	7	5	4	3	3	2	6.6	30.4	
7-Feb	2	2	2	11	A	2	6	5	1	2	1	5	3	2	7	1	3	1	2	9	1	1	1	1	3.1	11.3	
8-Feb	1	1	1	A	2	1	1	1	3	2	1	C	C	C	C	A	2	3	3	8	7	17	4	5	3.6	17.4	
9-Feb	36	9	8	A	6	4	3	5	4	2	2	9	4	2	2	10	6	11	10	10	6	6	2	3	7.1	36.1	
10-Feb	5	5	A	5	6	9	6	4	6	10	6	13	5	4	5	6	11	62	16	15	13	21	11	14	11.2	62.1	
11-Feb	17	A	11	11	8	12	16	9	21	8	9	12	9	8	85	38	3	4	4	65	4	7	6	4	16.1	84.5	
12-Feb	A	7	7	6	7	12	103	25	17	13	10	8	7	6	5	7	4	2	1	2	2	12	A	9	12.8	102.6	
13-Feb	11	3	2	4	4	7	20	11	10	22	14	9	8	7	6	4	6	6	6	94	16	12	A	9	12.6	93.8	
14-Feb	12	18	15	16	12	11	14	15	8	25	24	19	7	5	3	2	3	22	31	5	8	A	4	4	12.3	30.7	
15-Feb	3	2	2	2	4	4	4	4	4	4	4	3	3	3	4	4	7	12	60	13	A	8	10	12	7.7	59.8	
16-Feb	13	16	14	14	17	10	11	13	12	13	16	14	11	11	13	10	12	15	34	A	14	11	10	10	13.7	34.0	
17-Feb	13	17	23	18	17	13	12	10	24	22	17	16	32	21	31	14	26	30	A	21	13	9	8	10	18.1	32.0	
18-Feb	8	5	5	3	3	3	254	3	4	3	4	4	4	15	17	12	6	A	27	25	18	11	9	11	19.7	254.3	
19-Feb	5	10	9	8	35	6	6	5	4	8	9	7	3	3	2	3	A	13	15	23	11	13	9	6	9.3	34.5	
20-Feb	6	13	20	21	11	9	9	14	10	29	12	8	7	7	8	A	16	14	16	15	18	22	13	10	13.4	29.1	
21-Feb	9	10	10	8	7	6	6	17	11	8	7	5	5	5	A	5	7	5	10	7	10	8	10	7	8.0	17.5	
22-Feb	5	5	13	5	8	9	301	4	3	5	12	6	4	A	2	2	1	9	3	2	2	2	2	1	17.7	301.3	
23-Feb	1	1	1	1	1	1	1	1	1	1	14	2	A	2	17	2	29	5	13	13	10	10	162	6	12.9	162.4	
24-Feb	6	7	7	10	8	10	6	5	9	8	2	A	4	7	7	3	1	1	3	2	1	2	1	2	4.8	10.2	
25-Feb	1	1	1	2	3	4	3	3	10	8	A	3	14	2	4	5	2	6	13	13	14	11	11	15	6.5	15.4	
26-Feb	9	12	11	8	8	9	18	9	25	A	9	10	10	10	7	9	18	7	9	16	20	10	9	9	11.4	24.9	
27-Feb	11	10	9	10	9	10	9	9	A	10	10	9	109	4	7	5	4	9	6	7	20	10	8	10	13.4	109.1	
28-Feb	7	3	2	1	3	5	6	A	11	8	4	2	2	2	2	5	3	8	8	7	14	11	10	12	5.9	13.5	
		7.4	6.2	6.9	6.8	7.1	6.4	30.9	7.5	8.3	8.8	9.5	8.7	12.0	6.8	14.0	18.7	7.9	10.3	11.9	15.3	9.4	8.8	13.0	7.0	Diurnal Average	
		36.1	17.9	22.7	20.9	34.5	13.0	301.3	24.9	24.9	29.1	23.5	21.1	109.1	27.6	109.9	317.5	29.1	62.1	59.8	93.8	20.1	22.1	162.4	15.4	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

# Hourly Maximums for NO<sub>x</sub> at Portable-Spirit River February 2009

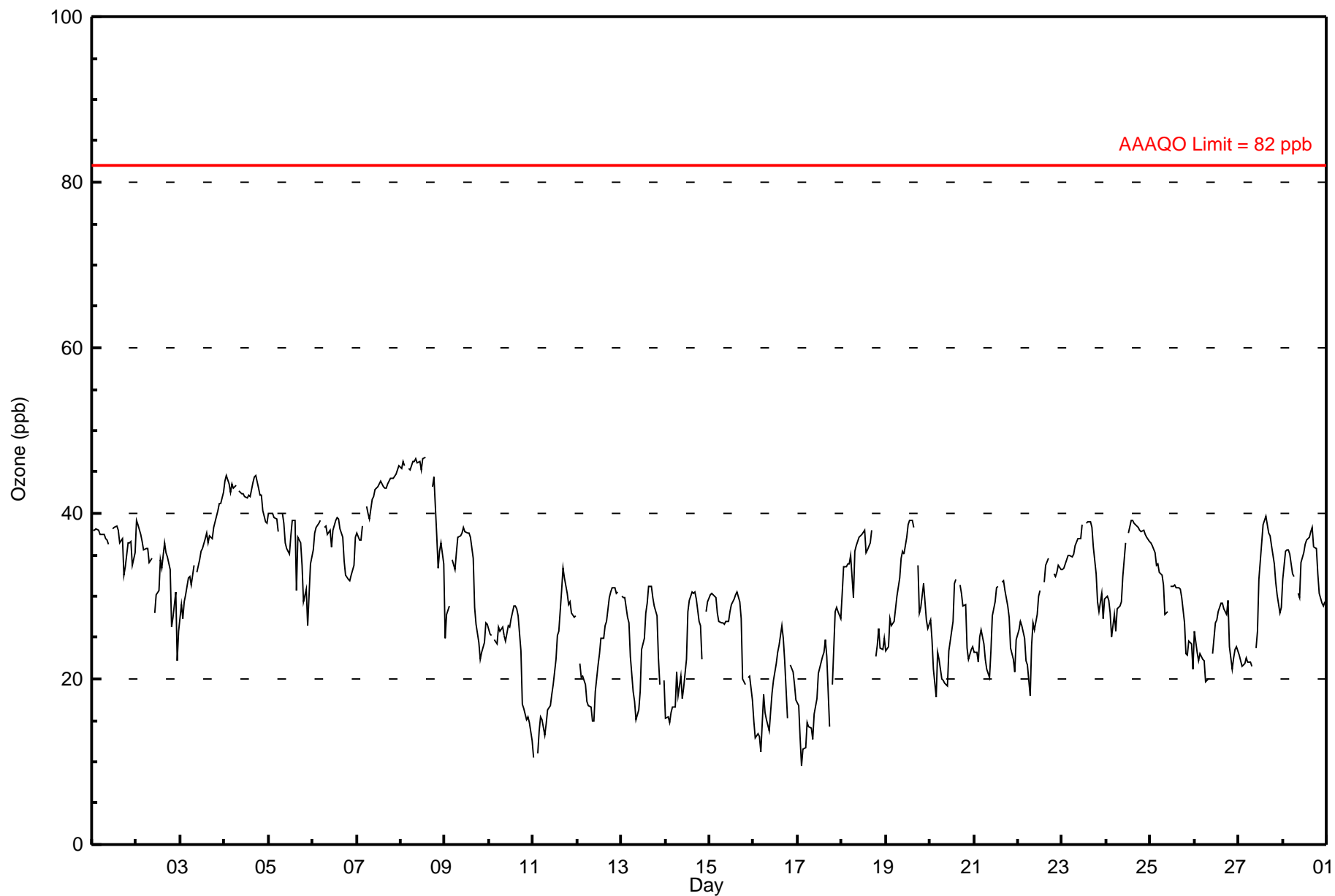


**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Portable-Spirit River - Ozone (O<sub>3</sub>) - ppb  
February 1, 2009 to March 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0    24-hr: 0 Maximum Value: 46.9 ppb on Feb 8 14:00    Maximum Daily Average: 43.1 ppb on Feb 8																						Hours in Service: 672 Hours of Data: 638																											
Minimum Value: 10 ppb on Feb 17 03:00 Maximum Diurnal Average: 34.1 ppb at hour 14 Monthly Average: 30.12 ppb											Minimum Daily Average: 18.3 ppb on Feb 16 Minimum Diurnal Average: 27.8 ppb at hour 7 Percentiles: P <sub>1</sub> = 12.6 P <sub>10</sub> = 19.1 Q <sub>1</sub> = 24.1 Median = 30.2 Q <sub>3</sub> = 36.8 P <sub>90</sub> = 39.4 P <sub>99</sub> = 46.2											Hours of Missing Data: 34 Hours of Calibration: 32 Percent Operational Time: 99.7																											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Feb	38	38	38	38	38	37	37	37	37	36	A	38	38	39	38	37	37	33	33	36	36	37	34	35	36.7	38.5																							
2-Feb	39	39	38	37	36	36	36	34	35	A	28	30	31	34	33	36	35	35	33	26	28	30	22	26	32.9	39.2																							
3-Feb	29	27	29	30	32	32	31	34	A	33	34	36	36	37	38	36	37	37	38	39	40	41	41	43	35.3	42.6																							
4-Feb	44	45	44	43	44	43	43	A	43	42	42	42	42	42	44	44	45	43	42	42	40	39	39	42.5	44.6																								
5-Feb	40	40	40	39	39	38	A	40	39	36	36	35	37	39	39	31	37	36	34	29	31	26	30	34	35.9	40.0																							
6-Feb	36	38	38	39	39	A	38	39	38	38	36	38	39	39	39	38	37	34	33	32	32	33	34	37	36.7	39.5																							
7-Feb	38	37	37	38	A	41	40	39	42	42	43	43	44	44	43	43	43	44	44	44	44	45	45	46	42.1	45.7																							
8-Feb	45	46	46	A	45	45	46	46	47	46	46	45	47	47	C	C	A	43	44	37	33	35	36	34	43.1	46.9																							
9-Feb	25	28	29	A	34	33	35	37	37	38	38	38	38	38	37	35	29	27	24	22	23	24	27	27	31.4	38.3																							
10-Feb	25	25	A	25	24	26	26	26	25	25	26	26	27	29	29	28	28	23	17	16	15	15	15	13	23.3	28.8																							
11-Feb	10	A	11	14	15	15	13	15	16	17	18	19	22	25	26	31	33	32	30	29	29	28	28	28	22.0	33.3																							
12-Feb	A	22	20	20	19	17	17	17	15	15	19	22	23	25	25	26	27	30	31	31	31	30	31	A	23.3	31.0																							
13-Feb	30	30	30	27	27	23	18	17	15	16	18	24	25	28	29	31	31	30	29	28	23	19	A	20	24.7	31.2																							
14-Feb	15	15	15	16	17	17	21	18	20	18	19	22	28	30	31	30	30	30	27	27	22	A	28	29	22.8	30.6																							
15-Feb	30	30	30	30	28	27	27	27	27	27	27	28	29	30	30	30	29	27	20	19	A	20	20	17	26.6	30.5																							
16-Feb	15	13	13	13	11	18	16	15	14	16	18	20	22	23	24	26	25	22	15	A	22	21	19	17	18.3	26.4																							
17-Feb	17	13	10	12	12	15	14	14	13	16	18	21	21	23	23	25	23	14	A	19	28	29	28	27	18.8	28.7																							
18-Feb	30	34	34	34	34	35	30	35	36	37	37	37	38	35	36	36	38	A	23	24	26	24	23	25	32.2	38.0																							
19-Feb	23	24	27	27	27	28	30	32	35	35	35	37	39	39	39	38	A	34	28	29	32	29	27	26	31.3	39.1																							
20-Feb	27	25	21	18	23	22	20	20	19	19	23	25	27	32	32	A	31	30	29	29	24	22	23	24	24.6	32.0																							
21-Feb	23	23	22	25	26	24	22	21	20	23	28	29	31	31	A	32	32	31	29	27	24	22	21	25	25.8	31.8																							
22-Feb	26	27	26	25	22	22	18	24	27	26	28	30	31	A	32	34	35	P	P	33	32	33	34	33	28.4	34.6																							
23-Feb	33	33	34	35	35	35	35	36	37	37	37	39	A	39	39	39	38	36	33	29	28	30	27	30	34.5	39.0																							
24-Feb	30	30	28	25	28	26	29	29	29	32	37	A	38	39	39	39	39	38	38	38	38	38	37	37	33.9	39.2																							
25-Feb	36	36	35	34	34	33	33	31	28	28	A	31	31	31	31	31	31	30	27	23	23	25	24	21	29.9	36.4																							
26-Feb	26	23	22	23	22	22	20	20	20	A	23	27	27	28	29	29	28	28	29	24	21	23	24	24	24.5	29.5																							
27-Feb	23	22	22	22	22	22	22	21	A	24	26	32	36	39	39	40	38	37	36	34	32	30	28	29	29.4	39.7																							
28-Feb	32	35	36	36	35	33	32	A	30	30	34	35	36	37	37	38	38	36	36	33	30	29	29	29	33.8	38.3																							
																								29.2	29.6	28.7	27.8	28.5	28.3	27.8	27.9	28.6	29.0	29.8	31.5	32.7	34.1	33.8	34.0	33.6	32.4	30.9	29.7	29.2	28.9	28.7	28.6	Diurnal Average	
																								45.4	46.3	45.8	42.6	45.4	45.3	46.3	46.3	46.6	46.1	46.2	45.3	46.6	46.9	43.3	43.7	44.5	44.6	44.5	44.3	44.2	44.8	45.3	45.7	Diurnal Maximum	
C - Calibration                      P - Power Failure                      A - Automated Daily Zero Span																																																	
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb    24-hr na																																																	

# Hourly Averages for O<sub>3</sub> at Portable-Spirit River February 2009

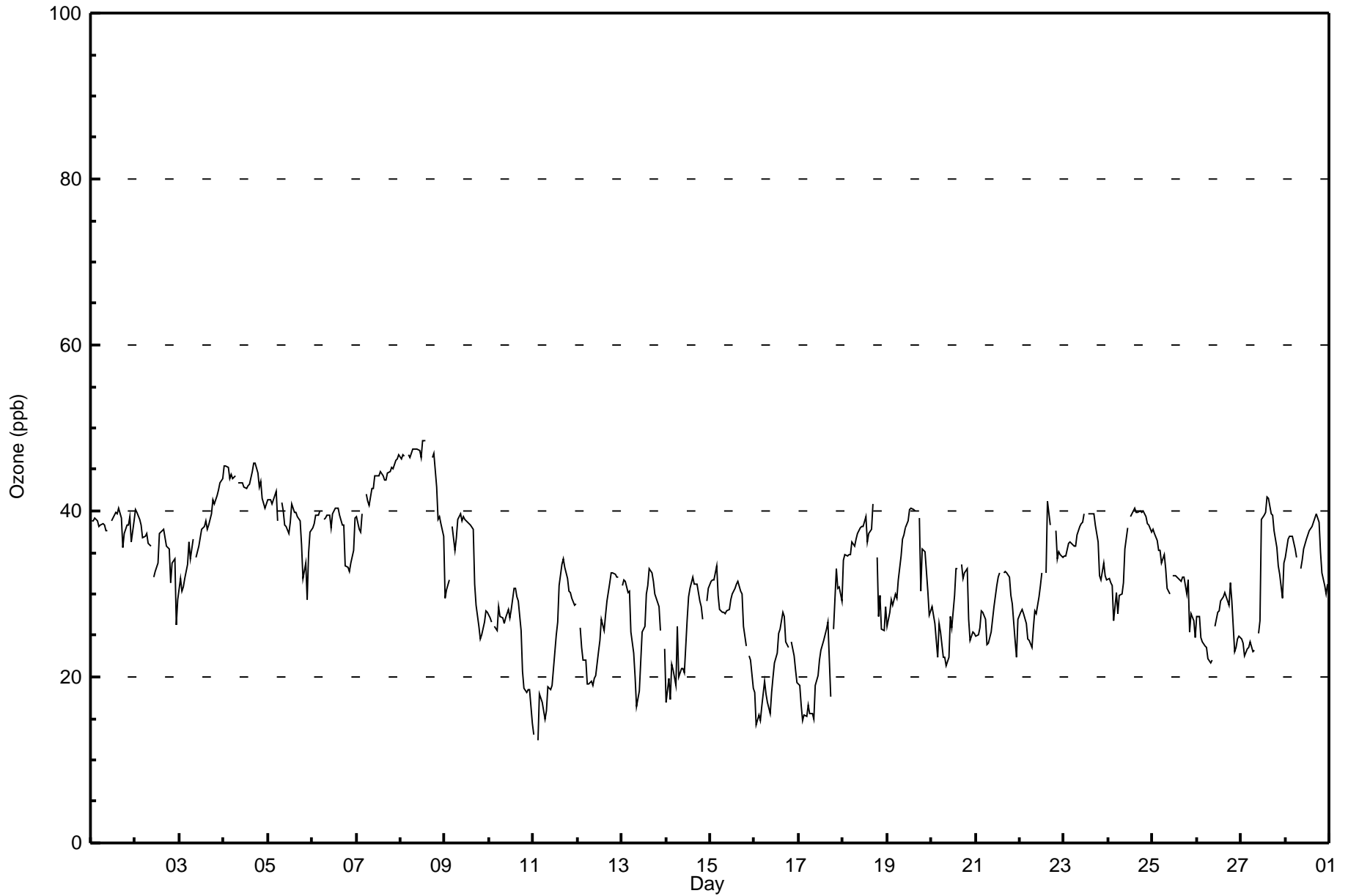


**Peace Airshed Zone Association  
Summary of Hourly Maximums**

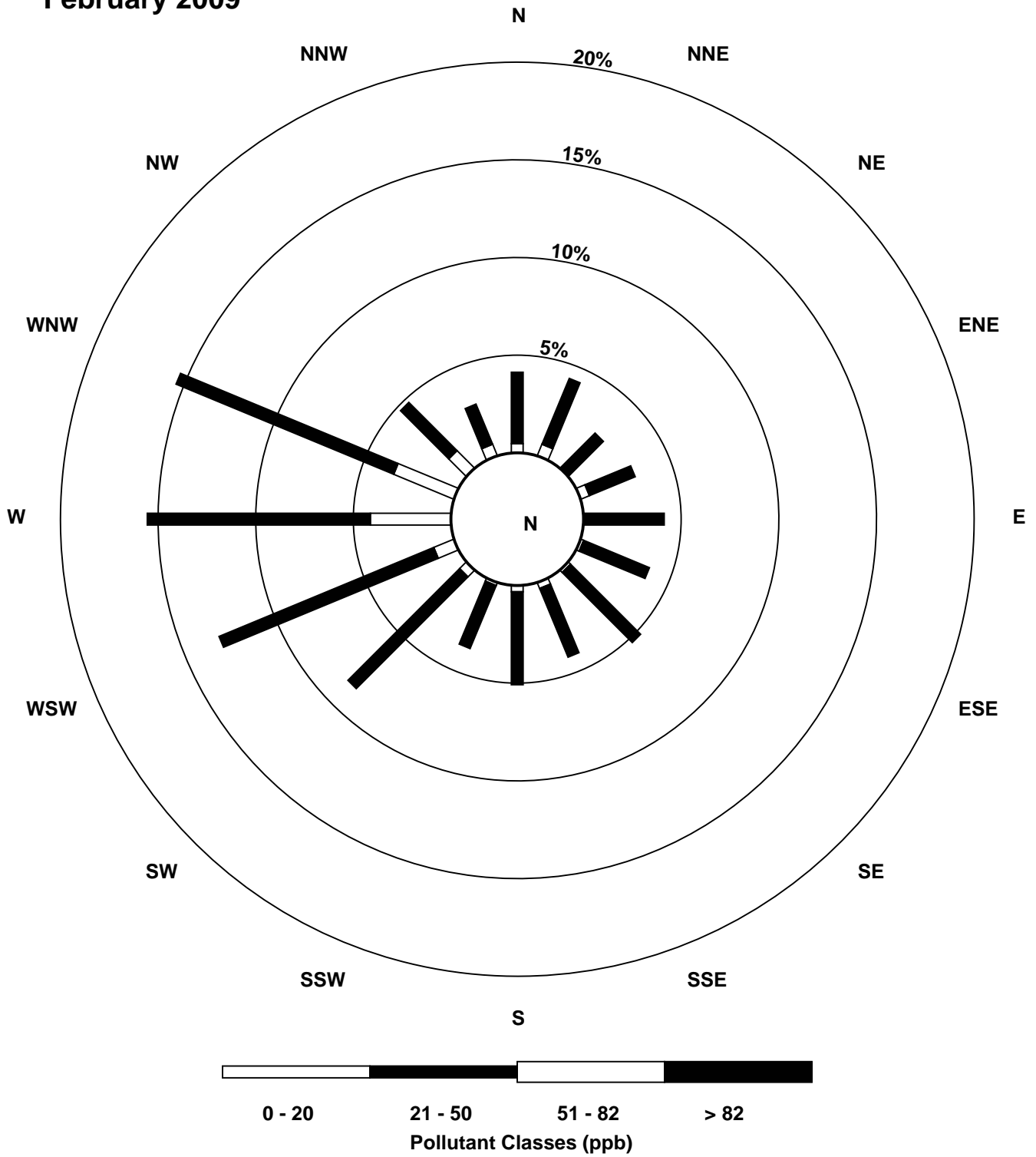
**Portable-Spirit River - Ozone (O<sub>3</sub>) - ppb  
February 1, 2009 to March 1, 2009**

Maximum Value: 48.5 ppb on Feb 8 13:00		Maximum Daily Average: 45.2 ppb on Feb 8		Hours in Service: 672																							
Minimum Value: 12 ppb on Feb 11 03:00		Minimum Daily Average: 20.6 ppb on Feb 16		Hours of Data: 638																							
Maximum Diurnal Average: 35.9 ppb at hour 16		Minimum Diurnal Average: 29.6 ppb at hour 8		Hours of Missing Data: 34																							
Monthly Average: 32.17 ppb		Percentiles: P <sub>1</sub> = 15.0 P <sub>10</sub> = 21.6 Q <sub>1</sub> = 26.7 Median = 32.1 Q <sub>3</sub> = 38.4 P <sub>90</sub> = 41.3 P <sub>99</sub> = 47.4		Hours of Calibration: 32																							
				Percent Operational Time: 99.7																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Feb	39	39	39	39	38	38	38	38	38	38	A	39	39	40	40	40	39	36	37	38	38	39	36	39	38.5	40.3	
2-Feb	40	40	39	38	37	37	37	36	36	A	32	33	34	37	38	38	37	36	35	31	34	34	26	29	35.4	40.2	
3-Feb	32	30	31	32	34	36	34	37	A	34	36	37	38	38	39	38	38	40	41	41	42	42	43	44	37.2	43.8	
4-Feb	45	45	45	44	44	44	44	A	43	43	43	43	43	43	43	45	46	46	45	43	44	42	40	41	43.7	45.8	
5-Feb	41	41	41	41	42	39	A	41	40	38	38	37	39	41	40	40	39	39	36	32	34	29	35	37	38.3	42.3	
6-Feb	38	38	39	39	40	A	39	39	39	39	38	40	40	40	40	38	38	33	33	33	34	35	39	38.0	40.4		
7-Feb	39	38	37	40	A	42	41	41	43	43	44	44	44	45	44	44	44	45	45	45	45	46	46	47	43.1	46.8	
8-Feb	46	47	47	A	47	46	47	47	47	47	47	46	49	48	C	C	A	46	47	43	39	39	38	37	45.2	48.5	
9-Feb	29	31	32	A	38	35	37	39	40	39	39	39	39	38	38	38	31	29	26	25	25	27	28	28	33.4	39.6	
10-Feb	27	27	A	26	26	28	27	27	27	27	28	27	28	31	31	30	29	26	21	19	18	19	19	14	25.2	30.7	
11-Feb	13	A	12	18	18	17	15	16	19	19	19	21	25	27	31	33	34	33	32	30	30	29	29	29	23.9	34.2	
12-Feb	A	26	23	22	22	19	19	19	19	20	23	24	27	26	28	29	31	31	33	33	32	32	32	A	25.4	32.6	
13-Feb	31	32	32	30	30	25	23	20	16	18	22	25	26	30	31	33	33	32	30	29	29	26	A	23	27.2	33.1	
14-Feb	17	20	17	21	21	19	26	20	21	21	20	27	30	31	32	31	31	31	29	28	27	A	29	31	25.3	32.0	
15-Feb	31	32	32	33	30	28	28	28	28	28	28	29	30	31	31	32	30	30	26	24	A	23	22	19	28.3	33.5	
16-Feb	18	14	15	15	16	20	18	17	16	18	20	22	23	25	26	28	27	24	24	A	24	23	21	19	20.6	27.8	
17-Feb	19	17	15	15	15	17	16	16	15	19	20	22	23	24	25	26	27	18	A	26	33	31	31	29	21.6	33.1	
18-Feb	34	35	35	35	35	36	36	37	37	38	38	38	39	36	37	38	41	A	34	27	30	26	26	28	34.6	40.8	
19-Feb	26	28	29	29	30	30	32	35	37	37	38	39	40	40	40	A	A	39	30	35	35	33	30	27	33.9	40.3	
20-Feb	29	27	26	22	26	25	22	22	21	22	27	26	30	33	33	A	34	32	33	33	27	24	26	25	27.3	33.6	
21-Feb	25	25	26	28	28	27	24	24	24	25	27	29	31	32	32	A	33	33	32	30	29	24	22	27	28.1	32.7	
22-Feb	28	28	28	26	25	24	24	26	28	28	30	31	32	A	33	41	38	38	P	P	38	34	35	34	30.7	41.2	
23-Feb	35	35	36	36	36	36	36	37	38	38	39	40	A	40	40	40	40	38	36	32	32	32	32	32	36.4	39.7	
24-Feb	32	31	31	27	30	28	30	30	31	35	38	A	39	40	40	40	40	40	40	40	39	38	38	37	35.5	40.4	
25-Feb	38	37	37	35	35	34	35	33	31	30	A	32	32	32	32	32	32	32	30	32	25	28	27	25	31.9	37.8	
26-Feb	27	27	25	24	24	24	22	22	22	A	26	28	28	29	30	30	30	29	31	29	23	24	25	25	26.2	31.4	
27-Feb	25	24	23	23	23	24	23	23	A	25	27	39	39	40	42	41	40	39	38	36	33	32	29	34	31.4	41.7	
28-Feb	34	37	37	37	37	35	34	A	33	34	35	37	37	38	38	39	39	40	39	35	33	31	30	31	35.6	39.7	
		31.1	31.5	30.7	29.9	30.6	30.2	29.9	29.6	30.4	31.1	31.6	33.1	34.2	35.4	35.3	35.9	35.3	34.6	33.9	32.8	32.1	31.2	30.8	30.8	Diurnal Average	
		46.3	46.8	46.7	43.9	46.8	46.4	47.4	47.4	47.4	47.4	47.3	46.5	48.5	48.5	44.3	44.8	45.8	46.4	47.0	45.2	45.0	46.2	46.3	46.8	Diurnal Maximum	
C - Calibration		P - Power Failure						A - Automated Daily Zero Span																			

# Hourly Maximums for O<sub>3</sub> at Portable-Spirit River February 2009



# Pollutant Rose for O<sub>3</sub> at Portable-Spirit River February 2009





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

**Portable-Spirit River - Ozone (O<sub>3</sub>) - ppb  
February 1, 2009 to March 1, 2009**

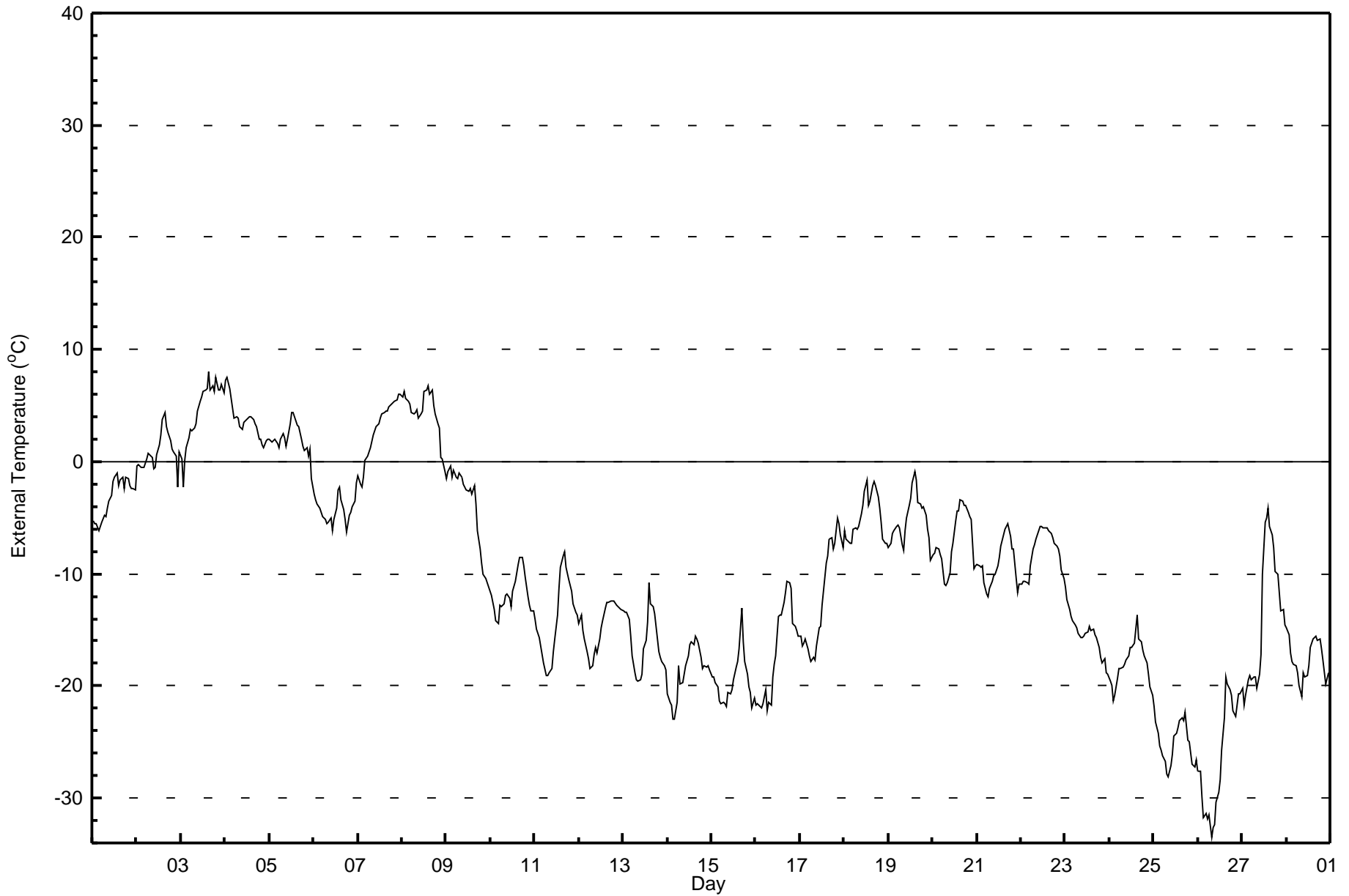
Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 46.3 ppb on Feb 8 15:00																								Hours in Service: 672	
Minimum Value: 12.7 ppb on Feb 17 09:00																								Hours of Data: 663	
Percentiles: P <sub>1</sub> = 13.1 P <sub>10</sub> = 20.0 Q <sub>1</sub> = 24.7 Median = 30.0 Q <sub>3</sub> = 36.3 P <sub>90</sub> = 39.1 P <sub>99</sub> = 45.9																								Hours of Missing Data: 9	
																								Hours of Calibration: 9	
																								Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Feb	38	38	38	37	37	37	38	38	38	37	37	37	37	38	37	38	37	37	36	36	36	35	35	38.0	
2-Feb	35	36	37	37	37	37	37	37	36	36	34	33	33	32	32	33	33	34	33	33	32	31	29	36.8	
3-Feb	29	28	27	28	28	29	30	31	31	32	32	33	34	35	36	36	36	37	37	38	38	39	40	39.6	
4-Feb	40	41	42	43	43	43	43	44	43	43	43	43	42	42	42	43	43	43	43	43	43	42	42	43.6	
5-Feb	41	41	40	40	40	39	39	39	39	39	38	38	37	37	38	37	36	36	36	35	34	33	32	41.3	
6-Feb	32	32	33	34	35	36	37	38	38	38	38	38	38	38	38	38	38	37	37	36	35	34	34	38.4	
7-Feb	34	34	35	36	36	37	38	39	39	40	41	41	42	42	43	43	43	43	44	44	44	44	44	44.4	
8-Feb	45	45	45	45	46	46	46	46	46	46	46	46	46	46	46	N	N	N	N	N	N	38	38	46.3	
9-Feb	36	34	32	32	32	31	31	32	33	35	36	36	37	37	38	37	36	35	33	31	29	28	26	37.6	
10-Feb	25	25	25	25	25	26	25	25	25	25	25	26	26	26	27	27	27	27	26	25	23	22	20	27.3	
11-Feb	16	15	14	13	13	13	13	13	14	15	15	16	17	18	20	22	24	26	27	29	29	30	30	30.0	
12-Feb	29	28	26	25	24	22	20	19	18	17	18	18	19	20	21	23	25	26	27	28	29	30	30	30.0	
13-Feb	30	30	30	30	29	28	26	25	23	22	20	20	20	22	23	25	27	28	29	29	27	27	26	30.5	
14-Feb	23	21	19	18	17	16	17	17	17	18	18	19	20	22	23	25	26	28	29	29	28	28	28	29.0	
15-Feb	28	28	28	29	29	29	29	29	28	28	27	27	27	28	28	29	29	29	28	27	27	25	24	29.4	
16-Feb	20	18	17	16	15	15	15	14	14	15	15	16	17	18	19	20	22	23	22	23	23	22	20	22.6	
17-Feb	19	18	17	16	15	14	14	13	13	13	14	15	16	17	19	20	21	21	21	21	22	23	24	24.1	
18-Feb	25	28	29	30	31	32	32	33	34	34	35	35	36	36	37	37	37	37	35	33	31	29	28	36.9	
19-Feb	24	24	25	25	25	26	26	27	29	30	31	32	34	35	36	37	38	37	36	35	34	33	31	37.5	
20-Feb	29	28	27	26	25	24	23	22	21	20	21	21	22	23	25	25	27	29	29	30	30	28	27	30.0	
21-Feb	26	25	24	23	24	24	24	23	23	24	24	24	25	26	26	28	29	30	31	30	29	28	27	30.7	
22-Feb	26	25	25	25	24	24	24	24	24	24	24	25	26	26	28	30	31	31	N	N	N	33	33	33.3	
23-Feb	33	33	33	34	34	34	34	35	35	36	36	36	36	37	38	38	38	38	37	36	35	34	33	38.2	
24-Feb	30	30	29	29	28	28	28	28	28	28	29	30	31	33	35	36	37	38	39	38	38	38	38	38.5	
25-Feb	37	37	37	36	36	35	35	34	33	32	31	31	31	31	30	30	31	31	30	29	28	28	27	37.5	
26-Feb	25	24	23	23	23	23	22	22	22	21	21	22	23	24	25	26	27	27	28	28	27	26	26	28.3	
27-Feb	24	24	23	22	23	23	22	22	22	22	23	24	26	29	31	34	34	36	37	37	37	36	34	37.4	
28-Feb	32	32	32	32	33	33	33	34	34	33	33	33	33	34	34	35	36	36	37	36	36	35	34	36.6	
	44.7	45.0	45.2	45.4	45.5	45.6	45.7	45.8	46.0	46.0	46.0	45.9	46.1	46.3	46.3	46.3	43.2	43.3	43.5	43.6	43.7	43.8	44.1	44.4	
Diurnal Maximums																									
N - Not Valid																									
Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 65 ppb																									

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

**Portable-Spirit River - External Temperature (ET) - °C  
February 1, 2009 to March 1, 2009**

Maximum Value: 8.1 °C on Feb 3 16:00		Maximum Daily Average: 4.5 °C on Feb 3		Hours in Service: 672																							
Minimum Value: -33 °C on Feb 26 08:00		Minimum Daily Average: -26.5 °C on Feb 26		Hours of Data: 672																							
Maximum Diurnal Average: -6.6 °C at hour 16		Minimum Diurnal Average: -11.5 °C at hour 8		Hours of Missing Data: 0																							
Monthly Average: -9.57 °C		Percentiles: P <sub>1</sub> = -30.8 P <sub>10</sub> = -20.8 Q <sub>1</sub> = -17.1 Median = -9.8 Q <sub>3</sub> = -2.1 P <sub>90</sub> = 3.4 P <sub>99</sub> = 6.7		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-Feb	-5	-5	-6	-6	-6	-5	-5	-5	-5	-4	-4	-3	-2	-1	-1	-2	-2	-1	-2	-1	-2	-2	-2	-3	-3.3	-1.0	
2-Feb	0	0	0	-1	0	0	1	1	0	-1	0	1	2	2	4	4	3	3	2	1	1	1	-2	1	0.8	4.4	
3-Feb	0	-2	0	1	2	3	3	3	3	5	5	6	6	6	7	8	6	7	6	8	6	6	7	6	4.5	8.1	
4-Feb	7	7	7	6	5	4	4	4	3	3	4	4	4	4	4	4	3	3	2	2	2	1	2	2	3.7	7.5	
5-Feb	2	2	2	2	2	1	2	3	2	1	2	3	4	4	4	3	3	2	1	1	1	0	1	-2	2.0	4.4	
6-Feb	-3	-3	-4	-4	-5	-5	-5	-6	-5	-5	-6	-5	-4	-3	-2	-3	-4	-5	-6	-5	-5	-4	-3	-2	-4.3	-1.9	
7-Feb	-1	-2	-2	-1	0	1	1	1	2	3	3	3	4	4	4	4	4	5	5	5	5	5	6	6	2.8	6.1	
8-Feb	6	6	6	5	5	4	4	4	5	4	4	5	6	6	7	6	6	5	4	3	3	0	0	-1	4.4	6.8	
9-Feb	-1	-1	0	-1	-1	-1	-2	-1	-1	-2	-2	-3	-3	-2	-3	-2	-4	-6	-8	-9	-10	-10	-11	-11	-4.0	-0.4	
10-Feb	-12	-13	-13	-14	-14	-13	-13	-13	-12	-12	-12	-13	-12	-11	-10	-9	-9	-8	-9	-10	-12	-13	-13	-13	-11.8	-8.5	
11-Feb	-14	-15	-16	-16	-17	-18	-19	-19	-19	-18	-17	-16	-14	-11	-9	-8	-8	-9	-11	-11	-12	-13	-13	-14	-14.1	-8.1	
12-Feb	-14	-14	-15	-16	-17	-18	-18	-18	-17	-17	-17	-16	-15	-14	-13	-13	-13	-12	-12	-12	-13	-13	-13	-13	-14.7	-12.4	
13-Feb	-13	-13	-13	-14	-16	-17	-19	-19	-20	-19	-19	-17	-16	-14	-11	-13	-13	-14	-15	-17	-17	-18	-18	-19	-16.0	-10.8	
14-Feb	-21	-22	-22	-23	-23	-21	-18	-20	-20	-19	-18	-17	-16	-16	-16	-16	-16	-16	-17	-18	-18	-18	-18	-19	-18.7	-15.6	
15-Feb	-19	-19	-20	-20	-21	-22	-21	-22	-22	-21	-21	-20	-19	-18	-18	-17	-13	-16	-18	-19	-20	-21	-22	-21	-19.5	-13.0	
16-Feb	-22	-22	-22	-22	-22	-20	-22	-21	-22	-19	-18	-17	-14	-14	-14	-13	-12	-11	-11	-11	-14	-15	-15	-16	-17.0	-10.6	
17-Feb	-16	-16	-16	-16	-17	-17	-18	-17	-18	-16	-15	-15	-13	-10	-9	-8	-7	-7	-8	-7	-5	-5	-7	-8	-12.1	-5.0	
18-Feb	-6	-7	-7	-7	-7	-6	-6	-6	-6	-5	-4	-3	-2	-4	-4	-2	-2	-2	-3	-4	-5	-7	-7	-7	-5.0	-1.7	
19-Feb	-8	-7	-6	-6	-6	-6	-6	-7	-8	-6	-5	-4	-3	-2	-1	-2	-4	-4	-4	-4	-5	-6	-7	-9	-5.2	-0.9	
20-Feb	-8	-8	-8	-8	-8	-9	-11	-11	-11	-10	-8	-7	-5	-4	-4	-3	-4	-4	-4	-5	-5	-5	-10	-9	-7.0	-3.4	
21-Feb	-9	-9	-9	-9	-11	-12	-12	-11	-11	-10	-10	-9	-9	-8	-7	-6	-6	-5	-7	-8	-8	-10	-12	-11	-9.1	-5.5	
22-Feb	-11	-11	-11	-11	-11	-9	-8	-7	-7	-6	-6	-6	-6	-6	-6	-6	-7	-7	-8	-8	-8	-10	-10	-10	-8.0	-5.8	
23-Feb	-11	-12	-13	-14	-14	-15	-15	-15	-16	-16	-16	-15	-15	-15	-15	-15	-15	-16	-17	-17	-18	-18	-19	-19	-15.4	-11.2	
24-Feb	-20	-20	-21	-21	-19	-19	-18	-18	-18	-18	-17	-17	-17	-16	-15	-14	-16	-16	-17	-17	-18	-19	-20	-21	-18.0	-13.7	
25-Feb	-22	-23	-24	-25	-26	-26	-27	-28	-28	-27	-26	-25	-24	-24	-23	-23	-23	-22	-25	-25	-26	-27	-27	-27	-25.1	-21.8	
26-Feb	-28	-28	-30	-32	-31	-32	-32	-33	-33	-32	-30	-29	-28	-26	-23	-19	-20	-20	-21	-22	-23	-22	-21	-21	-26.5	-19.2	
27-Feb	-20	-22	-21	-19	-19	-19	-19	-19	-20	-19	-17	-10	-5	-5	-4	-6	-7	-8	-10	-10	-12	-13	-13	-15	-13.9	-4.1	
28-Feb	-15	-15	-17	-18	-18	-18	-19	-20	-21	-19	-19	-19	-18	-17	-16	-16	-16	-16	-16	-17	-18	-20	-19	-19	-17.7	-14.8	
		-10.1	-10.5	-10.8	-11.1	-11.3	-11.2	-11.4	-11.5	-11.5	-10.9	-10.3	-9.4	-8.3	-7.6	-7.0	-6.6	-6.8	-7.2	-8.0	-8.5	-9.1	-9.7	-10.3	-10.4	Diurnal Average	
		7.3	7.5	6.5	5.6	5.1	4.3	4.2	4.3	4.7	4.5	5.4	5.7	6.3	6.4	6.8	8.1	6.4	6.7	6.2	7.5	6.4	6.4	6.8	6.1	Diurnal Maximum	

# Hourly Averages for External Temperature at Portable-Spirit River February 2009

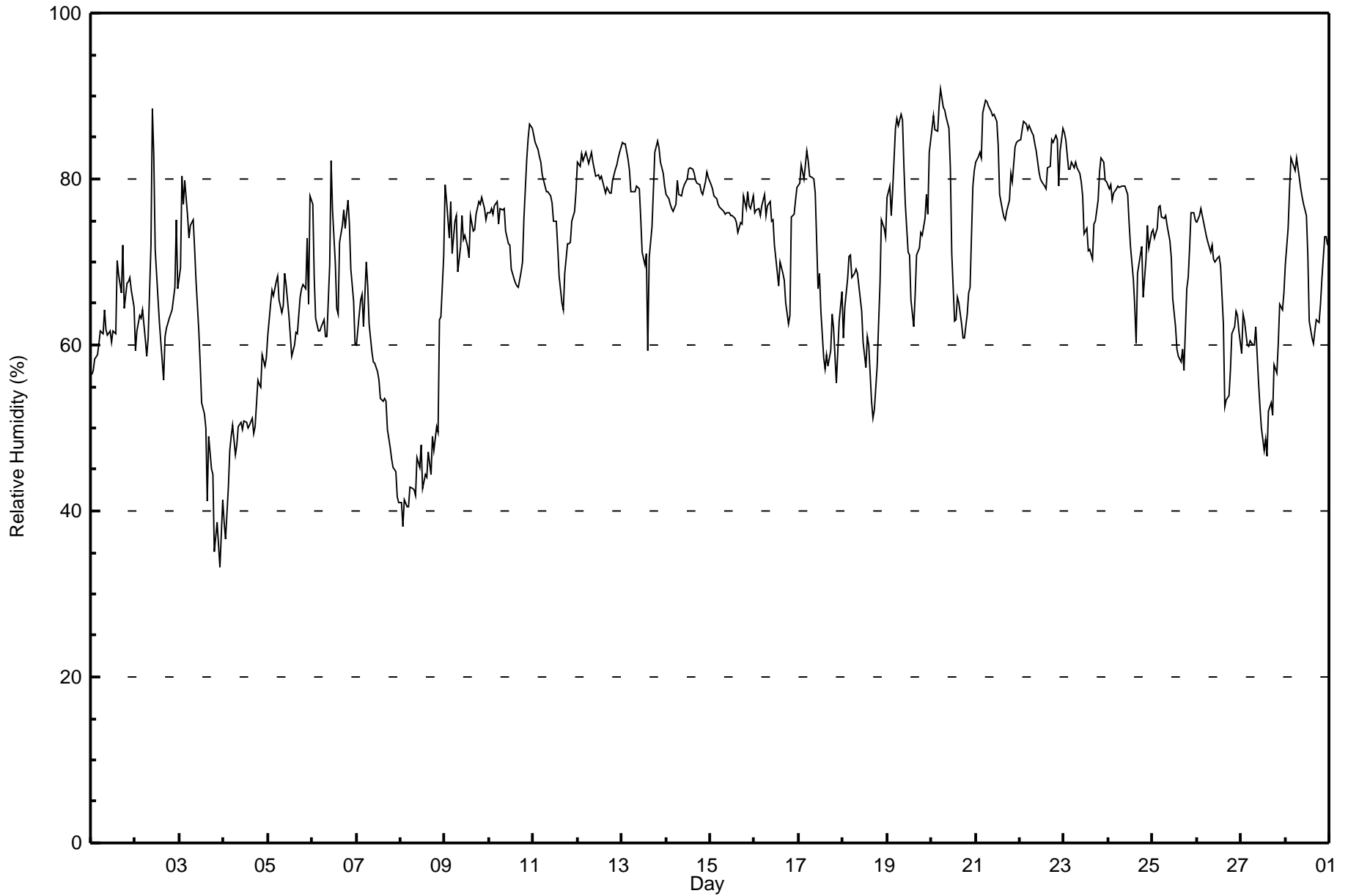


**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Portable-Spirit River - Relative Humidity (RH) - %  
February 1, 2009 to March 1, 2009**

Maximum Value: 90.9 % on Feb 20 06:00		Maximum Daily Average: 83.5 % on Feb 22		Hours in Service: 672																							
Minimum Value: 33 % on Feb 3 23:00		Minimum Daily Average: 47.0 % on Feb 8		Hours of Data: 672																							
Maximum Diurnal Average: 73.8 % at hour 6		Minimum Diurnal Average: 63.7 % at hour 16		Hours of Missing Data: 0																							
Monthly Average: 69.96 %		Percentiles: P <sub>1</sub> = 40.3 P <sub>10</sub> = 53.0 Q <sub>1</sub> = 62.5 Median = 72.3 Q <sub>3</sub> = 78.8 P <sub>90</sub> = 82.6 P <sub>99</sub> = 88.4		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-Feb	56	57	58	59	60	62	61	64	62	61	62	60	62	61	70	68	66	72	64	68	68	68	67	65	63.4	72.0	
2-Feb	59	62	64	63	64	61	59	61	72	88	83	72	66	63	60	56	61	62	63	64	64	67	75	67	65.6	88.4	
3-Feb	69	80	77	80	76	73	74	75	72	68	62	58	53	52	50	41	49	45	44	35	39	36	33	41	57.6	80.3	
4-Feb	39	37	43	47	49	50	47	48	50	51	50	51	51	50	50	51	49	50	56	55	55	59	57	58	50.1	58.8	
5-Feb	61	65	67	66	68	68	66	64	65	69	67	64	61	59	60	62	61	66	67	67	67	73	65	78	65.6	77.9	
6-Feb	77	68	63	62	62	62	63	61	61	70	82	76	70	64	64	72	74	76	74	77	75	69	65	60	68.7	82.2	
7-Feb	60	64	65	66	62	70	67	63	59	58	58	57	56	54	53	54	53	50	48	46	45	45	42	41	55.6	70.0	
8-Feb	41	38	41	41	40	43	43	43	42	46	45	48	43	44	44	47	44	49	47	50	49	63	63	71	47.0	70.7	
9-Feb	79	78	73	77	71	75	76	69	72	76	73	73	72	70	76	74	74	76	77	77	78	76	75	76	74.7	79.3	
10-Feb	76	76	76	77	77	75	76	76	76	74	72	72	69	68	67	67	67	69	70	75	82	85	87	86	74.9	86.6	
11-Feb	85	84	84	83	82	81	79	79	78	78	77	75	75	72	68	65	64	69	72	72	72	75	76	78	76.0	85.2	
12-Feb	82	82	83	82	83	83	82	83	82	81	80	80	80	80	79	78	79	78	78	80	81	82	83	83	81.1	83.3	
13-Feb	84	84	84	82	81	78	79	78	79	79	75	71	70	71	59	70	74	79	83	85	84	82	81	79	78.0	84.5	
14-Feb	78	78	77	76	76	77	80	78	78	79	79	80	81	81	81	81	80	80	79	79	78	80	81	80	79.0	81.3	
15-Feb	79	79	78	78	77	77	76	76	76	76	76	76	76	75	75	74	75	75	78	76	79	77	76	78	76.5	79.4	
16-Feb	76	76	76	76	77	78	76	77	77	75	75	72	69	67	70	69	68	65	63	64	75	76	77	79	73.0	79.0	
17-Feb	79	82	81	80	83	82	80	80	80	78	67	69	64	58	57	59	57	59	64	62	55	59	63	67	69.4	83.4	
18-Feb	61	65	68	71	71	68	69	69	69	66	64	60	57	61	60	53	51	52	57	62	67	75	74	73	64.3	75.0	
19-Feb	78	79	76	79	86	87	86	88	87	81	77	71	71	65	62	66	71	72	74	73	75	78	76	83	76.7	87.9	
20-Feb	86	88	86	86	89	91	89	88	87	86	81	71	63	63	66	65	63	61	61	64	66	67	79	81	76.1	90.9	
21-Feb	82	83	83	83	88	89	89	89	88	88	88	87	84	78	76	75	75	76	77	81	80	84	84	85	83.0	89.4	
22-Feb	85	86	87	87	86	86	86	85	84	83	81	80	80	79	79	81	81	85	84	85	85	79	83	86	83.5	86.9	
23-Feb	86	85	81	81	82	81	82	81	81	80	78	73	74	71	72	70	75	75	77	81	83	82	80	80	78.8	85.5	
24-Feb	79	79	77	78	79	79	79	79	79	79	78	75	72	68	65	60	69	71	72	66	70	74	72	73	73.9	79.4	
25-Feb	74	73	74	77	77	75	75	76	74	73	70	66	62	60	59	58	59	57	67	68	72	76	76	75	69.7	76.7	
26-Feb	75	76	76	76	74	73	72	71	72	70	70	71	71	70	63	53	53	54	57	61	62	64	64	62	67.0	76.5	
27-Feb	59	64	63	60	60	60	60	60	62	55	53	50	47	49	47	52	53	52	58	57	60	65	64	66	57.3	66.2	
28-Feb	70	74	79	83	82	81	83	81	79	78	77	76	71	63	61	60	62	63	63	65	68	73	73	72	72.3	82.6	
		72.0	72.8	72.9	73.3	73.6	73.8	73.3	73.0	73.0	73.0	71.5	69.0	66.7	64.9	64.0	63.7	64.6	65.6	67.0	67.7	69.1	71.0	71.1	72.3	Diurnal Average	
		86.1	87.7	86.9	86.7	88.9	90.9	89.4	88.8	88.2	88.4	87.9	87.0	84.1	81.3	81.2	81.4	81.4	84.7	84.4	85.2	84.7	84.8	86.6	86.2	Diurnal Maximum	

# Hourly Averages for Relative Humidity at Portable-Spirit River February 2009



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

Portable-Spirit River  
February 1, 2009 to March 1, 2009  
WS (km/h), WD (deg)

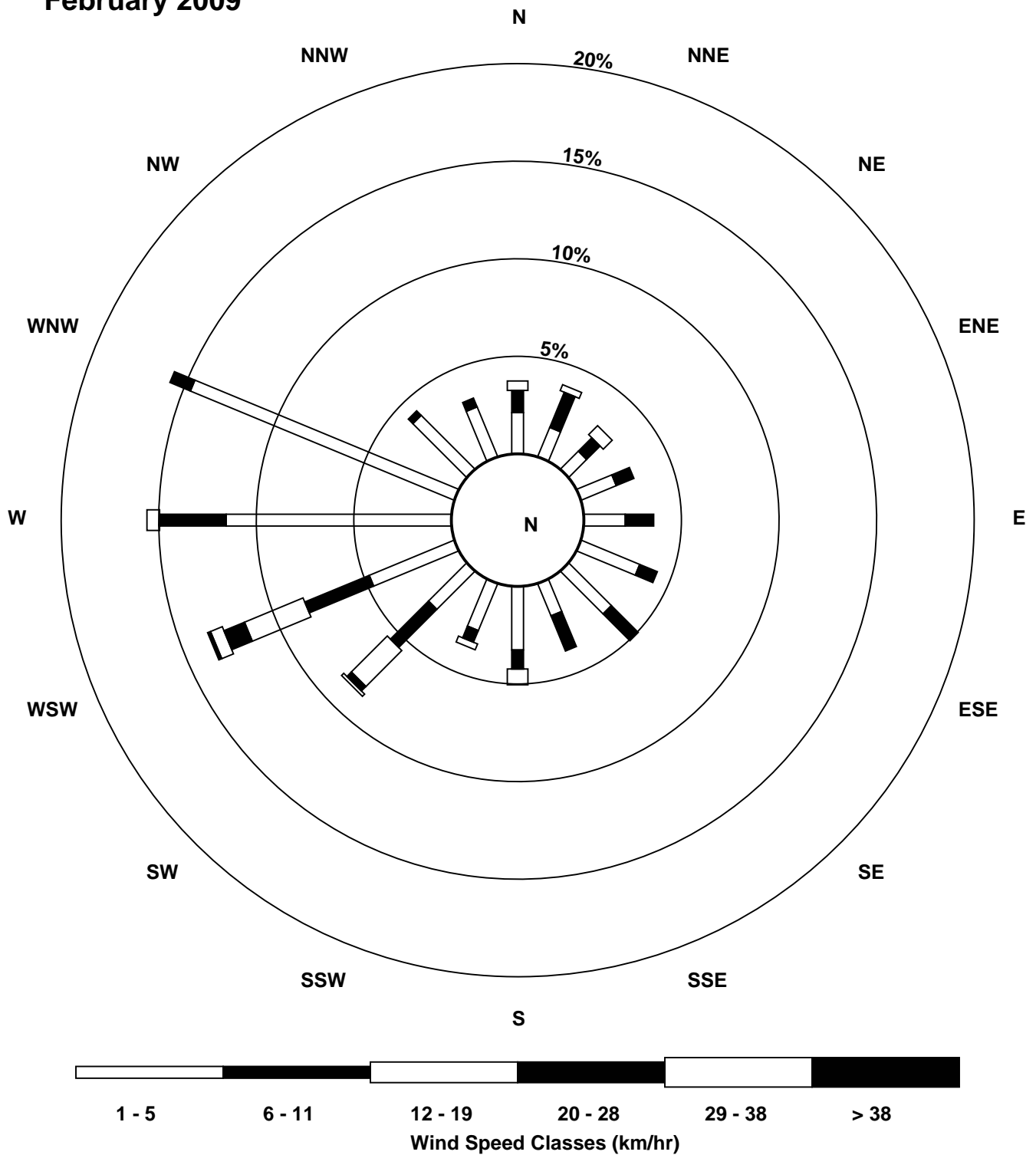
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	6	7	9	11	11	8	8	9	5	4	3	6	5	1	8	3	8	10	8	7	8	6	6	1	3.4	11.1
Dir	273	265	261	258	261	263	262	255	264	270	298	267	256	36	112	118	128	141	145	151	187	155	149	144	221.5	260.6
2 Spd	13	9	9	5	4	7	10	5	1	7	4	4	1	7	4	3	6	2	3	4	1	4	3	7	3.8	12.7
Dir	217	223	220	214	216	210	189	149	286	173	170	229	54	231	256	198	256	275	236	146	18	16	125	164	206.7	216.7
3 Spd	6	5	8	5	5	7	7	8	7	2	13	17	17	19	17	15	17	10	6	9	6	11	10	14	8.1	18.5
Dir	129	102	144	110	102	154	142	148	113	125	194	186	187	195	184	179	186	187	218	216	246	209	227	253	183.5	194.8
4 Spd	26	39	38	31	26	23	14	15	14	12	10	10	9	14	8	13	15	16	14	9	10	5	8	9	16.0	39.3
Dir	254	244	238	236	247	242	262	260	258	261	270	264	264	261	263	253	245	253	252	257	231	263	228	243	249.3	243.8
5 Spd	8	6	6	4	9	9	14	12	13	9	7	2	6	4	4	3	1	4	6	6	4	4	5	11	5.5	14.1
Dir	258	262	255	269	247	244	248	249	239	238	238	242	259	283	285	286	302	261	253	240	252	251	247	59	253.0	247.8
6 Spd	8	5	5	7	7	7	5	7	5	2	7	7	7	4	3	6	8	8	4	11	7	12	11	13	0.9	12.6
Dir	63	39	27	25	27	44	2	5	333	269	234	227	207	190	94	115	113	128	148	227	252	232	228	252	224.9	252.0
7 Spd	20	21	15	13	18	17	13	9	22	29	33	34	26	22	15	14	10	14	15	14	15	14	15	19	18.1	34.1
Dir	246	232	224	247	243	253	245	240	249	242	242	237	234	239	239	237	228	233	230	224	222	222	221	224	236.4	236.7
8 Spd	19	19	16	12	10	12	14	13	21	16	8	2	15	14	8	10	6	2	3	4	7	6	7	5	9.7	21.4
Dir	224	228	223	217	213	221	235	239	244	246	253	299	240	243	225	231	231	339	342	271	241	183	231	303	235.1	243.5
9 Spd	2	2	2	3	2	2	3	3	3	7	11	8	8	6	5	2	5	6	7	5	3	5	5	4	1.5	11.2
Dir	288	281	328	285	260	302	258	135	343	29	64	88	80	73	100	276	294	299	306	297	289	279	284	283	339.3	64.3
10 Spd	2	2	2	2	2	3	2	3	2	2	4	3	3	4	4	3	4	5	2	1	4	3	4	4	0.9	5.2
Dir	291	291	299	306	298	289	285	284	293	291	65	113	117	104	133	146	151	185	204	176	270	308	285	284	244.6	204.4
11 Spd	2	2	2	2	1	1	2	1	1	1	1	2	1	1	1	5	8	8	8	7	6	4	6	6	2.8	8.2
Dir	317	316	293	311	3	289	318	288	301	293	327	331	279	357	273	278	283	286	287	284	281	317	12	349	303.4	287.0
12 Spd	4	5	7	4	4	2	2	4	2	1	2	2	2	3	1	1	2	1	0	0	1	1	1	1	1.5	7.0
Dir	260	250	251	273	264	258	257	254	261	298	17	2	2	14	33	9	170	207	296	0	235	275	241	262	271.1	251.1
13 Spd	2	2	1	2	4	2	3	4	4	2	2	1	2	3	0	2	1	1	3	2	1	3	3	3	1.0	4.2
Dir	226	210	176	262	251	300	280	269	260	298	290	357	354	37	149	58	109	142	56	73	218	249	281	273	276.6	260.0
14 Spd	2	2	2	3	3	3	1	2	1	2	2	2	2	3	2	2	2	1	1	2	1	1	2	1	0.6	3.4
Dir	279	282	285	285	279	270	128	20	23	331	332	349	20	16	99	104	108	73	310	260	306	54	100	134	332.9	279.0
15 Spd	2	2	2	2	4	N	N	N	1	N	N	N	N	2	1	1	1	1	1	1	1	1	1	1	--	3.7
Dir	109	107	90	141	150	N	N	N	171	N	N	N	N	56	131	98	164	170	164	67	140	314	266	262	--	150.3
16 Spd	1	1	1	1	1	1	1	1	2	0	0	1	0	0	1	1	0	1	2	3	2	2	2	2	0.7	3.2
Dir	259	269	264	269	263	253	11	264	259	138	224	24	14	177	130	114	98	225	215	239	5	305	297	283	269.1	239.1
17 Spd	2	2	3	1	1	3	2	2	1	1	0	2	1	1	1	2	2	2	1	4	5	5	2	4	1.3	4.7
Dir	291	296	269	304	267	289	286	273	218	1	107	250	346	307	87	148	171	148	92	243	245	263	278	261	261.3	245.3
18 Spd	6	4	4	6	6	9	6	6	6	5	5	6	4	4	4	4	3	2	5	4	2	2	3	4	2.9	8.6
Dir	266	273	276	281	281	267	274	273	267	276	288	287	307	76	136	182	203	185	182	157	196	337	319	341	266.1	267.1
19 Spd	5	3	2	2	3	5	4	2	3	4	3	3	4	4	2	1	6	8	6	5	1	5	4	1	1.7	7.8
Dir	262	301	295	291	274	284	284	290	291	300	306	293	301	287	288	91	121	151	151	165	205	278	290	254	265.5	151.0
20 Spd	1	4	3	1	2	0	1	2	1	1	1	1	1	1	2	3	6	7	5	2	3	1	2	2	1.0	7.4
Dir	230	243	220	264	180	164	73	289	276	181	39	33	212	142	99	106	95	97	101	153	174	119	49	205	132.3	97.5
21 Spd	3	6	5	4	2	4	3	3	1	1	5	7	8	4	3	2	3	2	2	3	9	9	4	4	1.4	9.4
Dir	252	278	267	172	103	303	277	223	325	74	88	91	94	91	114	208	239	275	280	266	242	257	283	276	246.2	242.4
22 Spd	4	4	4	5	5	4	4	3	4	3	2	6	9	9	6	8	9	10	9	7	4	14	16	10	4.8	15.7
Dir	282	283	282	284	285	287	288	279	278	286	300	318	331	348	342	350	357	12	21	39	18	38	33	44	349.7	33.3

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

Portable-Spirit River  
February 1, 2009 to March 1, 2009  
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	11	12	16	13	10	10	8	10	9	9	7	7	5	5	7	6	7	4	3	1	5	4	3	4	3.9	16.3
Dir	32	359	359	358	6	16	9	21	24	20	33	42	117	142	145	147	135	170	131	225	258	230	269	291	22.7	359.1
24 Spd	5	5	3	4	3	2	2	2	2	4	6	4	5	4	2	1	3	1	5	13	15	9	18	14	3.2	18.3
Dir	278	266	293	286	270	299	289	290	307	326	1	36	68	97	180	219	254	266	12	48	49	49	34	33	19.5	33.9
25 Spd	7	8	7	2	3	3	3	4	3	3	2	1	3	3	3	3	1	5	5	3	4	6	4	0.7	8.3	
Dir	48	59	56	296	350	1	345	287	310	314	328	114	199	185	189	195	205	202	233	223	235	292	267	206	274.4	59.4
26 Spd	3	1	3	3	3	3	2	5	4	2	2	6	7	8	4	1	4	4	5	4	5	3	3	5	0.9	8.0
Dir	228	212	57	342	306	270	321	269	75	325	314	133	92	102	90	285	278	282	275	275	269	274	283	250	280.7	102.0
27 Spd	3	3	2	1	2	2	2	1	2	1	2	2	4	4	3	4	2	5	3	4	3	5	5	6	1.9	6.3
Dir	288	290	239	218	232	328	240	80	46	310	233	287	283	286	305	297	286	332	300	10	309	313	259	99	297.0	98.9
28 Spd	6	5	6	2	2	0	3	2	1	0	3	3	5	3	6	6	5	7	8	8	1	4	4	5	2.5	8.0
Dir	150	115	86	110	176	252	140	66	316	73	87	95	124	143	179	141	131	150	146	130	179	296	279	256	139.9	146.3
Spd	3.6	4.1	3.3	3.2	3.4	3.6	3.3	2.9	3.1	2.9	2.1	1.8	1.8	1.6	1.8	2.1	2.2	1.8	1.9	2.1	2.7	2.3	2.0	2.2	Diurnal Average	
Dir	251.3	252.6	250.7	258.6	257.9	261.3	258.5	260.8	264.8	267.4	259.6	236.5	225.8	222.6	186.3	205.8	201.6	209.7	229.1	224.4	244.6	261.1	268.3	266.9	Diurnal Maximum	
Spd	26.4	39.3	38.1	31.4	26.1	23.3	14.3	15.0	21.6	28.6	33.1	34.1	26.0	22.5	17.2	15.3	17.2	15.8	14.6	14.5	15.4	14.1	18.3	19.1	Diurnal Maximum	
Dir	254.3	243.8	238.4	235.9	246.6	242.0	235.0	260.2	248.9	242.5	241.7	236.7	234.0	238.9	183.6	178.6	185.6	253.4	229.6	224.5	221.6	221.7	33.9	224.3	Diurnal Maximum	
Maximum Speed Value: 39 km/h on Feb 4 02:00																			Minimum Speed Value: 0 km/h on Feb 20 06:00					Hours in Service:		672
Maximum Daily Speed Average: 18.1 km/h on Feb 7																			Minimum Daily Speed Average: 0.6 km/h on Feb 16					Hours of Data:		665
Maximum Diurnal Speed Average: 4.1 km/h at hour 2																			Minimum Diurnal Speed Average: 1.6 km/h at hour 14					Hours of Missing Data:		7
Monthly Average Velocity: 2.40 km/h 247.05 deg																			Speed Percentiles: P <sub>1</sub> = 0.4 P <sub>10</sub> = 1.2 Q <sub>1</sub> = 2.0 Median = 3.8 Q <sub>3</sub> = 6.8 P <sub>90</sub> = 12.3 P <sub>99</sub> = 26.1					Percent Operational Time:		99.0
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	32	16	3	0	0	0	51																			
NorthEast	19	18	7	0	0	0	44																			
East	38	14	0	0	0	0	52																			
SouthEast	37	31	0	0	0	0	68																			
South	31	8	7	0	0	0	46																			
SouthWest	42	31	28	9	4	2	116																			
West	148	48	14	2	0	0	212																			
NorthWest	70	6	0	0	0	0	76																			
Total	417	172	59	11	4	2	665																			

# Wind Rose for WS at Portable-Spirit River February 2009





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

**Portable-Spirit River - Wind Speed (WS) - km/h**  
**February 1, 2009 to March 1, 2009**

Maximum Speed: 39 km/h on Feb 4 02:00		Maximum Daily Speed Average: 18.4 km/h on Feb 7		Hours in Service: 672																																												
Minimum Speed: 0 km/h on Feb 16 17:00		Minimum Daily Speed Average: 1.2 km/h on Feb 16		Hours of Data: 665																																												
Maximum Diurnal Speed Average: 6.9 km/h at hour 2		Minimum Diurnal Speed Average: 4.7 km/h at hour 15		Hours of Missing Data: 7																																												
Monthly Average Speed: 5.64 km/h		Percentiles: P <sub>1</sub> = 0.6 P <sub>10</sub> = 1.4 Q <sub>1</sub> = 2.3 Median = 4.1 Q <sub>3</sub> = 7.1 P <sub>90</sub> = 12.3 P <sub>99</sub> = 26.1		Percent Operational Time: 99.0																																												
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-Feb	6	7	9	11	11	8	8	9	5	4	3	6	5	5	8	3	9	10	8	7	8	7	7	3	7.0	11.1																						
2-Feb	13	9	9	5	5	8	11	6	2	7	4	4	3	8	5	5	7	3	3	4	2	7	4	7	5.8	12.7																						
3-Feb	6	5	8	5	6	8	7	9	8	2	13	17	17	19	17	15	17	10	8	10	6	12	11	14	10.5	18.5																						
4-Feb	26	39	38	32	26	23	14	15	14	12	10	10	9	14	8	13	15	16	14	9	10	5	8	10	16.3	39.4																						
5-Feb	8	6	6	4	9	9	14	12	13	10	7	2	6	4	4	4	2	4	6	6	4	4	6	11	6.7	14.1																						
6-Feb	8	5	5	7	7	7	5	7	5	2	7	7	7	4	3	6	8	8	5	12	7	12	11	13	6.9	12.7																						
7-Feb	20	21	15	13	18	17	14	9	22	29	33	34	26	22	15	14	11	14	15	14	15	14	15	19	18.4	34.2																						
8-Feb	19	19	16	12	10	12	15	14	21	16	8	2	15	14	8	10	6	3	4	4	7	9	7	5	10.7	21.5																						
9-Feb	2	2	2	3	3	2	3	3	3	8	11	8	8	6	5	3	5	6	7	5	4	5	5	4	4.7	11.3																						
10-Feb	3	2	3	2	2	3	2	3	2	2	3	4	3	3	4	4	3	4	5	3	2	4	3	4	3.1	5.2																						
11-Feb	2	2	2	2	1	1	2	1	1	1	1	2	1	2	1	6	8	8	8	7	6	4	6	7	3.4	8.2																						
12-Feb	4	6	7	5	4	2	2	4	3	1	2	2	2	3	1	2	2	1	1	1	1	1	2	2	2.5	7.3																						
13-Feb	2	3	1	2	4	2	4	4	4	2	2	1	2	3	1	2	1	1	3	2	2	3	3	3	2.4	4.3																						
14-Feb	2	2	2	3	3	3	2	2	1	2	2	2	3	3	3	2	2	1	1	2	1	1	2	2	2.1	3.5																						
15-Feb	2	3	2	3	4	N	N	N	3	N	N	N	N	2	1	1	1	1	1	1	1	1	1	1	--	3.9																						
16-Feb	1	1	1	1	1	1	1	1	2	0	1	1	0	1	1	1	0	1	2	3	3	2	2	2	1.2	3.3																						
17-Feb	2	2	3	1	1	3	2	2	1	1	1	2	1	1	1	2	2	2	2	4	5	5	2	4	2.2	4.8																						
18-Feb	6	4	4	6	6	9	6	6	6	5	5	6	5	5	5	4	3	2	6	4	2	2	3	4	4.8	8.6																						
19-Feb	5	3	3	2	4	5	4	3	3	4	3	3	4	4	2	2	6	8	6	5	1	5	5	2	3.7	7.9																						
20-Feb	2	4	3	1	2	2	2	2	2	2	2	1	2	2	2	4	6	8	5	3	3	3	3	2	2.8	7.5																						
21-Feb	4	6	5	5	2	4	3	3	1	1	5	7	8	4	3	3	3	2	2	4	10	9	4	4	4.3	9.6																						
22-Feb	4	4	4	5	5	4	4	3	4	3	2	6	9	9	6	8	9	10	9	7	4	14	16	10	6.7	15.8																						
23-Feb	11	12	16	13	11	10	8	10	9	9	8	7	5	5	7	6	7	4	3	2	5	4	3	4	7.4	16.3																						
24-Feb	5	5	3	4	3	2	2	2	2	4	6	5	5	5	2	1	3	1	6	13	15	9	18	14	5.7	18.4																						
25-Feb	8	8	8	3	3	3	3	4	3	3	2	2	3	3	4	3	3	1	5	5	3	4	6	4	4.0	8.4																						
26-Feb	3	2	3	3	3	3	2	5	5	4	2	6	7	8	4	2	4	4	5	4	5	3	3	5	3.9	8.1																						
27-Feb	3	3	2	2	2	4	2	1	2	2	2	2	4	4	3	4	2	5	4	5	3	6	5	7	3.4	7.1																						
28-Feb	6	5	6	3	2	1	3	2	2	1	3	3	6	4	6	6	6	7	8	8	3	4	4	6	4.3	8.1																						
																								6.6	6.9	6.7	5.5	5.7	5.8	5.3	5.4	5.3	5.1	5.6	5.6	6.2	6.0	4.7	4.8	5.4	5.2	5.4	5.5	5.0	5.6	5.8	6.3	Diurnal Average
																								26.4	39.4	38.4	31.7	26.2	23.4	14.6	15.0	21.7	28.6	33.1	34.2	26.0	22.5	17.2	15.4	17.4	15.9	14.6	14.5	15.5	14.2	18.4	19.1	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**

**Portable-Spirit River - Wind Direction (WD) - deg  
February 1, 2009 to March 1, 2009**

Maximum Value: 96.5 deg on Feb 24 16:00																								Hours in Service:	672
Minimum Value: 2.0 deg on Feb 5 09:00																								Hours of Data:	665
Percentiles: P <sub>1</sub> = 2.6 P <sub>10</sub> = 4.8 Q <sub>1</sub> = 7.9 Median = 14.6 Q <sub>3</sub> = 29.3 P <sub>90</sub> = 56.8 P <sub>99</sub> = 84.7																								Hours of Missing Data:	7
																								Hours of Calibration:	0
																								Percent Operational Time:	99.0
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-Feb	6	4	4	3	3	4	4	4	6	10	30	10	12	78	11	47	15	6	15	26	7	19	33	61	78.1
2-Feb	3	8	5	10	30	16	9	47	78	23	22	19	83	37	67	51	24	57	40	21	69	61	34	15	83.2
3-Feb	19	9	14	22	57	33	16	22	25	72	6	7	8	2	4	6	7	9	70	19	14	20	19	5	71.5
4-Feb	4	4	7	9	3	7	4	5	4	5	8	6	7	4	8	5	6	4	4	9	6	23	7	13	23.0
5-Feb	5	8	17	14	10	6	5	6	2	10	5	63	10	12	9	11	20	25	3	12	30	13	37	10	63.5
6-Feb	9	14	10	7	5	10	25	4	12	40	15	6	14	48	42	9	3	11	24	9	12	4	5	11	47.5
7-Feb	8	4	4	11	4	5	15	19	6	3	3	3	3	2	3	4	5	3	3	3	3	4	4	4	18.6
8-Feb	5	10	3	5	6	8	13	14	4	7	10	24	15	7	21	8	18	56	26	17	13	54	24	5	55.8
9-Feb	13	42	26	10	36	9	15	62	31	17	9	14	8	13	20	78	9	7	5	7	14	8	7	7	78.0
10-Feb	12	25	11	7	11	13	24	8	16	11	66	21	20	22	11	5	11	17	5	47	62	21	23	13	66.0
11-Feb	11	28	24	28	30	67	22	14	20	27	33	12	44	63	57	38	6	6	5	6	7	27	11	33	67.2
12-Feb	19	24	19	18	24	38	48	10	22	24	35	24	14	24	21	60	11	18	67	41	50	55	61	48	66.5
13-Feb	30	16	69	48	31	26	9	15	12	18	15	50	19	46	71	29	16	23	26	30	63	36	17	8	70.7
14-Feb	7	7	12	9	8	14	62	25	52	13	20	15	41	67	57	40	28	11	66	7	36	43	30	31	67.1
15-Feb	32	25	16	41	20	N	N	N	74	N	N	N	N	39	13	26	6	2	17	35	72	23	7	10	73.6
16-Feb	27	16	25	29	2	42	58	23	8	88	73	17	64	17	16	9	29	43	12	16	83	39	12	19	88.4
17-Feb	8	11	11	40	28	7	16	61	77	14	83	43	18	76	36	22	10	29	87	9	11	6	15	29	87.0
18-Feb	7	7	7	3	3	7	5	5	4	9	5	4	42	28	29	12	12	26	15	43	37	50	20	19	49.6
19-Feb	12	19	22	30	12	8	8	9	6	9	10	26	18	7	27	85	17	11	11	13	70	11	32	63	84.7
20-Feb	45	19	15	47	35	84	63	25	72	80	79	86	79	38	23	25	12	11	25	55	40	58	72	35	86.3
21-Feb	19	11	24	35	67	12	17	10	60	40	9	10	15	13	26	28	13	28	18	29	11	7	8	8	66.8
22-Feb	5	4	7	5	4	6	7	11	9	8	7	7	8	9	7	10	5	12	4	10	9	11	3	7	12.1
23-Feb	18	3	3	3	6	5	6	7	7	5	15	17	17	6	5	9	11	18	18	49	12	5	22	5	49.5
24-Feb	5	8	11	18	15	8	13	11	5	11	14	19	12	30	21	96	13	22	43	10	7	11	3	3	96.5
25-Feb	17	7	7	41	23	13	19	13	10	14	36	61	19	17	5	7	8	23	6	10	16	8	23	9	60.8
26-Feb	15	44	33	13	12	39	18	28	67	72	41	22	19	8	29	59	10	9	15	18	8	19	12	12	72.4
27-Feb	32	24	43	83	43	59	69	44	32	58	30	13	9	7	14	16	10	25	23	48	14	27	30	34	83.1
28-Feb	8	16	18	29	54	70	22	32	35	85	18	20	16	35	8	13	9	6	7	14	85	11	16	20	85.5
45.4 43.7 69.1 83.1 66.8 84.3 69.1 61.8 77.8 88.4 83.3 86.3 83.2 78.1 70.7 96.5 29.4 57.4 87.0 55.3 85.5 61.2 72.1 62.6																									
N - Not Valid																									

PASZA  
Valleyview Station  
Monthly Summary Tables, Graphs and  
Roses

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

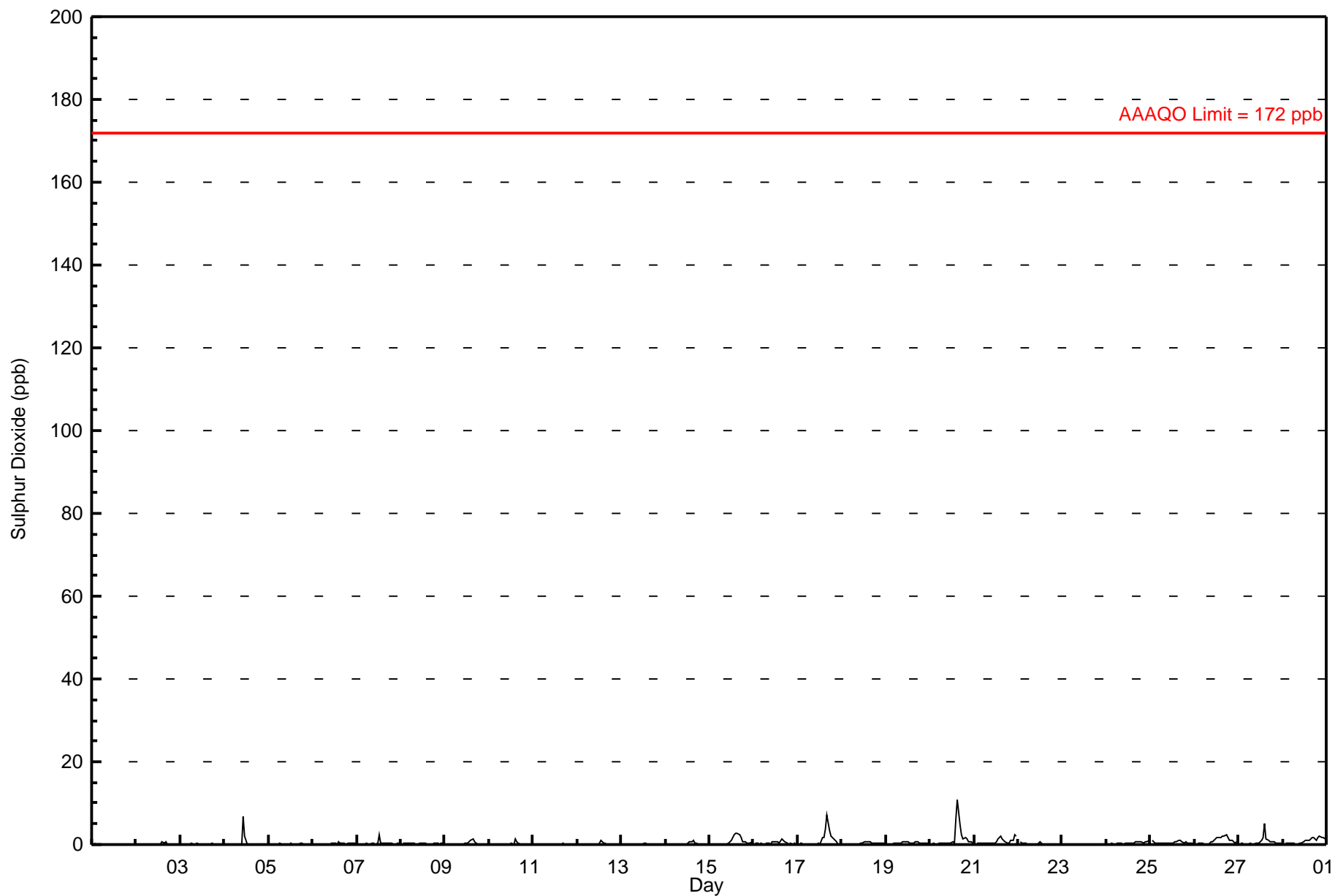
**Valleyview - Sulphur Dioxide (SO<sub>2</sub>) - ppb  
February 1, 2009 to March 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 672
Maximum Value: 10.9 ppb on Feb 20 16:00	Maximum Daily Average: 1.5 ppb on Feb 20
Minimum Value: 0 ppb on Feb 1 03:00	Hours of Data: 640
Maximum Diurnal Average: 1.2 ppb at hour 16	Hours of Missing Data: 32
Monthly Average: 0.38 ppb	Hours of Calibration: 32
Minimum Daily Average: 0.0 ppb on Feb 1	Percent Operational Time: 100.0
Minimum Diurnal Average: 0.1 ppb at hour 4	
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.1 Q <sub>3</sub> = 0.4 P <sub>90</sub> = 0.9 P <sub>99</sub> = 4.0	

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-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2	
2-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0.1	0.6
3-Feb	A	0	0	0	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0.1	0.2	
4-Feb	A	0	0	0	0	0	0	0	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	6.7	
5-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
6-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.2	0.6	
7-Feb	A	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0.3	2.2	
8-Feb	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	
9-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0.2	1.4	
10-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0.1	1.5	
11-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
12-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.1	1.0	
13-Feb	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	0.5	
14-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0.2	0.9	
15-Feb	A	0	0	0	0	0	0	0	0	0	0	1	1	2	3	3	2	2	1	1	0	0	0	1	0.7	2.7	
16-Feb	A	0	0	0	0	0	0	0	0	1	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0.4	1.5	
17-Feb	A	0	0	0	0	0	0	0	0	0	0	0	2	2	4	7	3	2	2	1	1	0	0	0	1.1	7.3	
18-Feb	A	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	1	0	0.3	0.8		
19-Feb	A	0	0	0	0	0	0	0	0	1	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0.4	0.7	
20-Feb	A	0	0	0	0	0	0	0	0	0	0	1	0	6	11	5	2	1	2	1	1	1	0	0	1.5	10.9	
21-Feb	A	0	0	0	0	0	0	0	0	0	0	1	1	2	1	1	1	0	0	1	1	2	2	0.8	2.4		
22-Feb	A	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8	
23-Feb	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	
24-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0.4	1.1	
25-Feb	A	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	1	0	0	0	0	0	0.5	1.0	
26-Feb	A	0	0	0	0	0	0	0	1	1	1	2	2	2	2	2	2	2	1	1	1	0	1	0.9	2.3		
27-Feb	A	0	0	0	0	0	0	0	0	0	0	1	2	5	1	1	1	1	1	0	0	0	0	0	0.7	5.2	
28-Feb	A	0	0	0	0	0	0	0	0	0	1	1	1	1	1	2	2	1	2	2	2	2	1	0.9	2.0		
--	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.4	0.5	0.6	1.1	1.2	0.9	0.6	0.4	0.4	0.3	0.3	0.3	0.3	Diurnal Average		
--	1.0	0.5	0.3	0.4	0.4	0.3	0.3	0.4	0.6	6.7	2.1	2.2	2.4	6.1	10.9	7.3	3.3	1.9	1.7	2.0	1.6	2.4	2.1	Diurnal Maximum			

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

# Hourly Averages for SO<sub>2</sub> at Valleyview February 2009

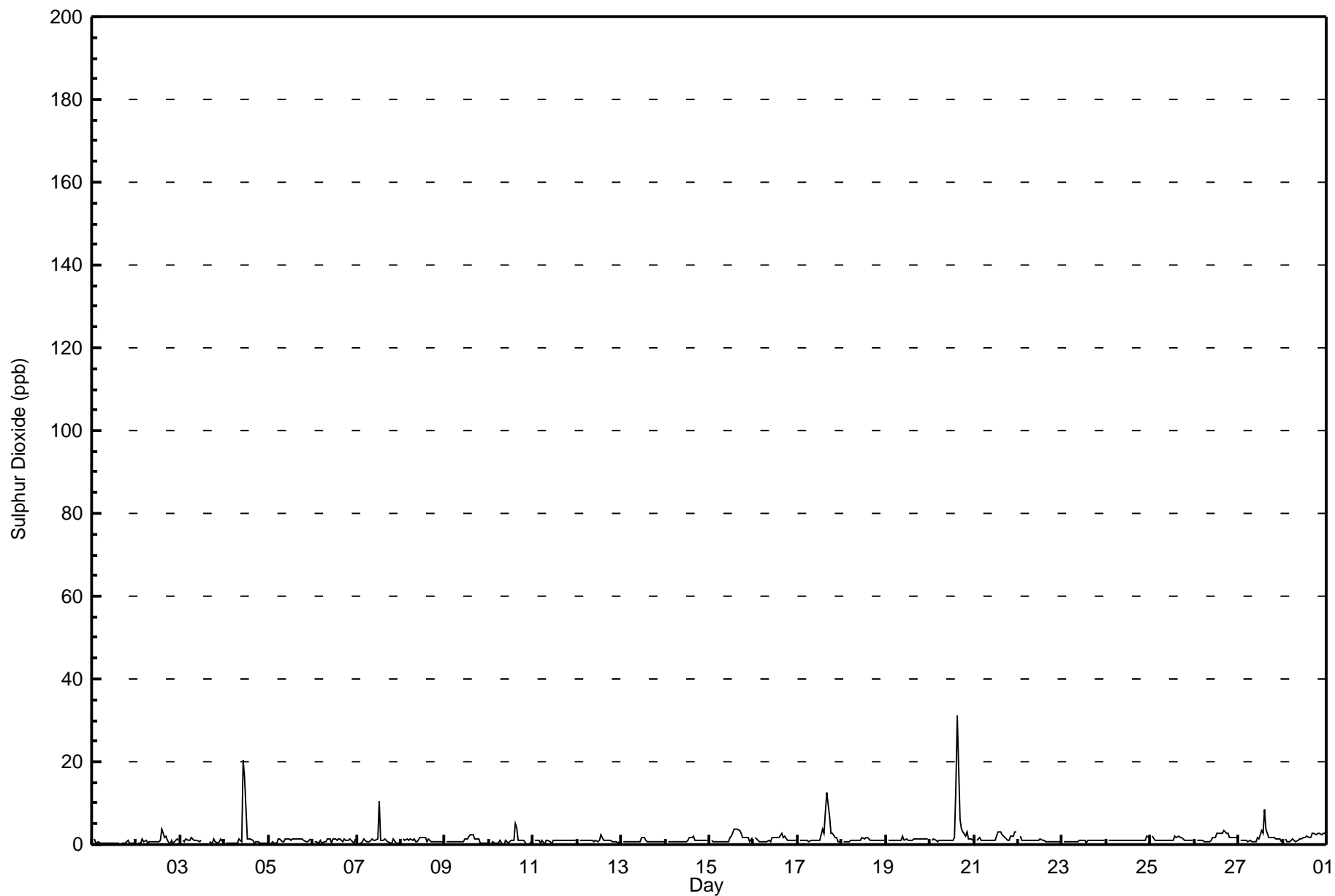


**Peace Airshed Zone Association  
Summary of Hourly Maximums**

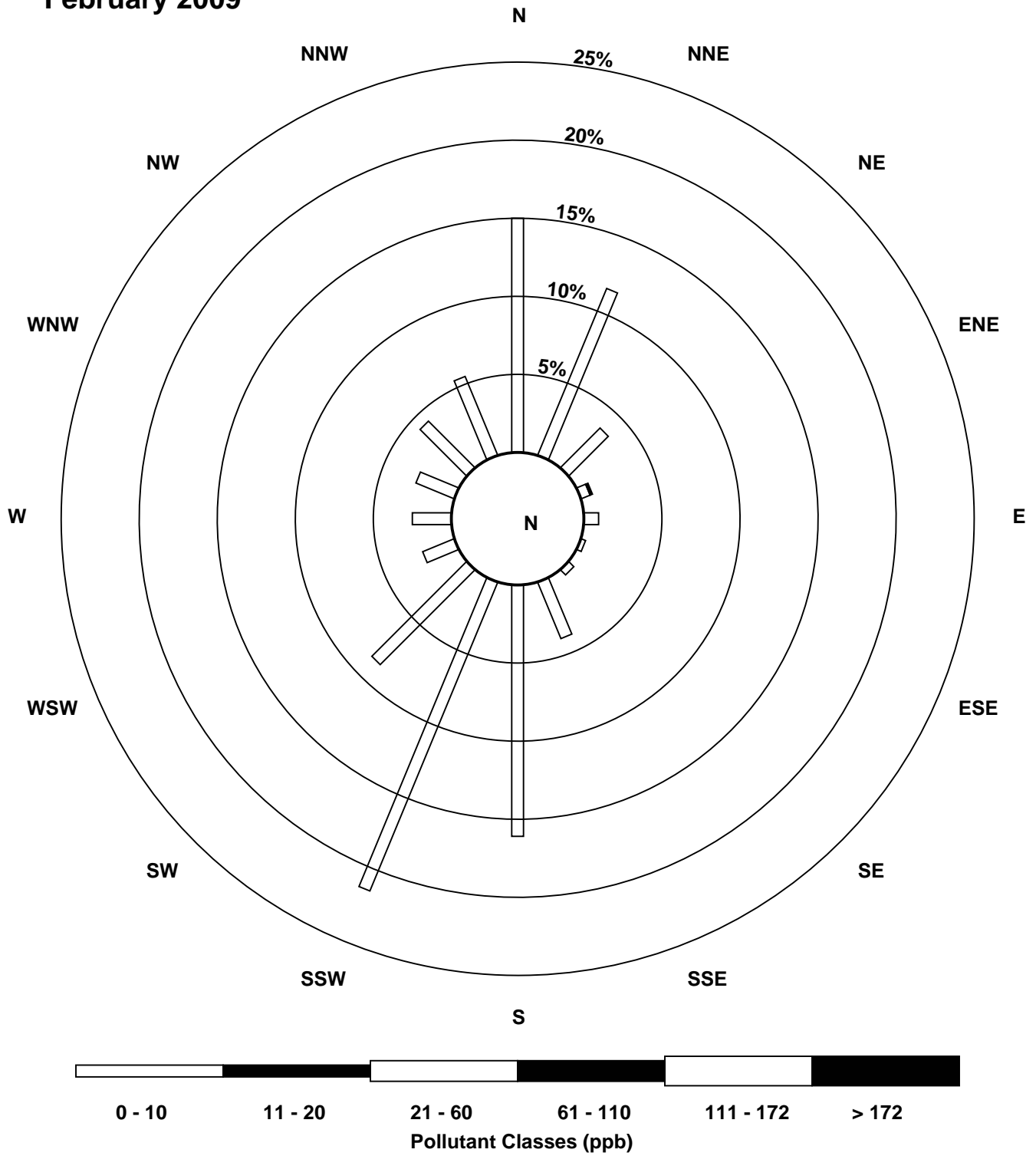
**Valleyview - Sulphur Dioxide (SO<sub>2</sub>) - ppb  
February 1, 2009 to March 1, 2009**

Maximum Value: 31.2 ppb on Feb 20 16:00		Maximum Daily Average: 3.5 ppb on Feb 20		Hours in Service: 672																							
Minimum Value: 0 ppb on Feb 1 16:00		Minimum Daily Average: 0.5 ppb on Feb 1		Hours of Data: 640																							
Maximum Diurnal Average: 3.0 ppb at hour 16		Minimum Diurnal Average: 0.8 ppb at hour 5		Hours of Missing Data: 32																							
Monthly Average: 1.29 ppb		Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.4 Q <sub>1</sub> = 0.8 Median = 1.0 Q <sub>3</sub> = 1.3 P <sub>90</sub> = 2.0 P <sub>99</sub> = 8.8		Hours of Calibration: 32																							
				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-Feb	A	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.5	1.5	
2-Feb	A	0	0	1	1	1	0	1	1	1	1	1	1	1	4	2	2	1	0	1	0	1	1	1	1.0	3.6	
3-Feb	A	1	1	1	1	1	2	1	1	1	1	1	C	C	C	C	1	0	1	1	0	1	1	0	0.9	1.8	
4-Feb	A	0	0	0	0	0	0	1	1	20	16	1	1	1	1	1	0	1	1	0	0	0	0	0	2.0	20.2	
5-Feb	A	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.3	
6-Feb	A	1	1	0	1	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1.0	1.4	
7-Feb	A	0	0	1	1	1	1	1	1	1	1	1	10	1	1	1	1	1	0	0	1	0	0	0	1.3	10.5	
8-Feb	A	1	1	1	1	2	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1.0	1.6	
9-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1	1	0	0	0	0	0	0.9	2.4	
10-Feb	A	0	1	0	0	0	1	0	0	1	0	1	1	1	5	4	1	1	1	1	0	0	0	1	0.9	5.1	
11-Feb	A	1	1	1	0	1	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.0	
12-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	0	1	0.9	2.3	
13-Feb	A	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	0.9	1.7	
14-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1.0	1.9	
15-Feb	A	1	1	1	1	1	1	1	1	1	2	2	4	4	4	3	3	2	2	2	2	2	1	2	1.6	3.7	
16-Feb	A	2	1	1	1	1	1	1	1	1	2	2	2	2	2	3	2	2	1	1	1	1	1	1	1.2	2.8	
17-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	4	3	8	12	7	3	3	2	2	1	1	2.4	12.4	
18-Feb	A	1	1	1	1	1	1	1	1	1	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1.1	1.7	
19-Feb	A	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	2.1	
20-Feb	A	1	1	1	1	1	1	1	1	1	1	1	2	13	31	6	4	3	2	3	1	1	1	1	3.5	31.2	
21-Feb	A	1	1	2	1	1	1	1	1	1	1	2	3	3	2	2	2	1	1	2	2	3	3	3	1.6	3.0	
22-Feb	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	2.0	
23-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.0	
24-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1.1	2.0	
25-Feb	A	2	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	1	1	1	1	1	1	1.2	2.1	
26-Feb	A	1	1	1	1	1	1	1	1	1	2	2	3	3	3	3	3	3	3	2	2	2	2	2	1.7	3.4	
27-Feb	A	1	1	1	1	1	1	1	1	1	2	2	4	3	9	4	2	2	2	2	1	2	1	1	1.7	8.6	
28-Feb	A	1	1	1	1	1	1	1	1	2	2	2	2	2	2	3	3	2	3	3	3	3	3	3	1.7	2.6	
		--	0.9	0.8	0.9	0.8	0.9	0.9	0.8	0.9	0.9	1.6	1.7	1.7	1.7	2.5	3.0	1.9	1.5	1.2	1.1	1.1	1.0	1.0	1.1	Diurnal Average	
		--	2.1	1.2	1.7	1.4	1.5	1.8	1.4	1.4	2.1	20.2	16.1	10.5	3.9	13.4	31.2	12.4	6.9	3.1	2.9	3.0	2.5	3.0	3.0	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

# Hourly Maximums for SO<sub>2</sub> at Valleyview February 2009



# Pollutant Rose for SO<sub>2</sub> at Valleyview February 2009



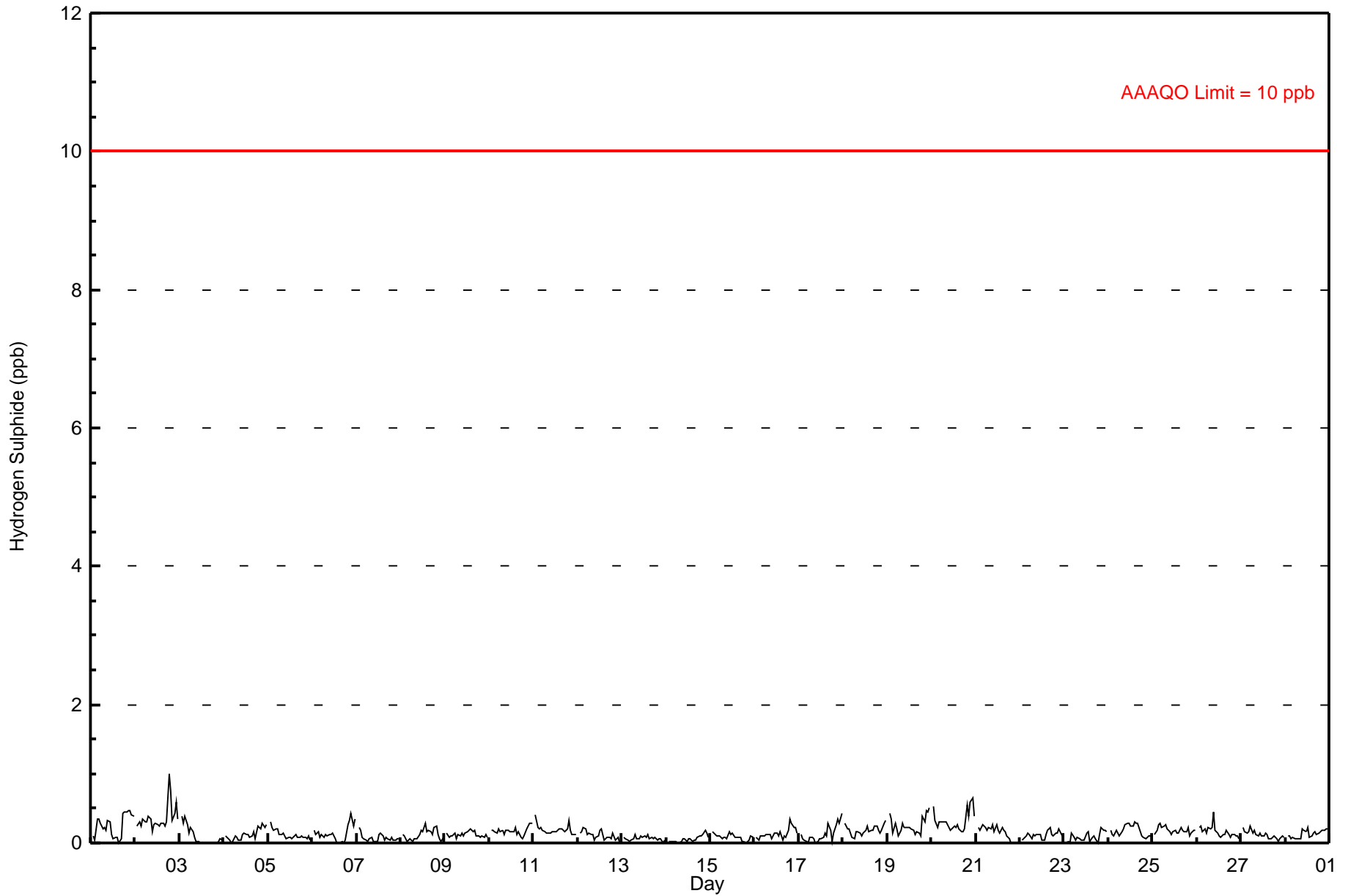


**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Valleyview - Hydrogen Sulphide (H<sub>2</sub>S) - ppb  
February 1, 2009 to March 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0		Hours in Service: 672																									
Maximum Value: 1.0 ppb on Feb 2 19:00		Maximum Daily Average: 0.4 ppb on Feb 2																									
Minimum Value: 0 ppb on Feb 1 16:00		Hours of Data: 641																									
Maximum Diurnal Average: 0.2 ppb at hour 23		Hours of Missing Data: 31																									
Monthly Average: 0.15 ppb		Hours of Calibration: 31																									
Minimum Daily Average: 0.1 ppb on Feb 14		Percent Operational Time: 100.0																									
Minimum Diurnal Average: 0.1 ppb at hour 18		Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.1 Median = 0.1 Q <sub>3</sub> = 0.2 P <sub>90</sub> = 0.3 P <sub>99</sub> = 0.5																									
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-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5	
2-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0.4	1.0
3-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0.1	0.4	
4-Feb	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	
5-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
6-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4	
7-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
8-Feb	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	
9-Feb	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	
10-Feb	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	
11-Feb	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	
12-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
13-Feb	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	
14-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
15-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
16-Feb	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	
17-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4	
18-Feb	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	
19-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	0.5	
20-Feb	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0.3	0.6
21-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
22-Feb	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-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
24-Feb	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	
25-Feb	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	
26-Feb	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-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
28-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
--		0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	Diurnal Average		
--		0.5	0.3	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	1.0	0.7	0.5	0.6	0.6	0.5	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 H<sub>2</sub>S at Valleyview February 2009

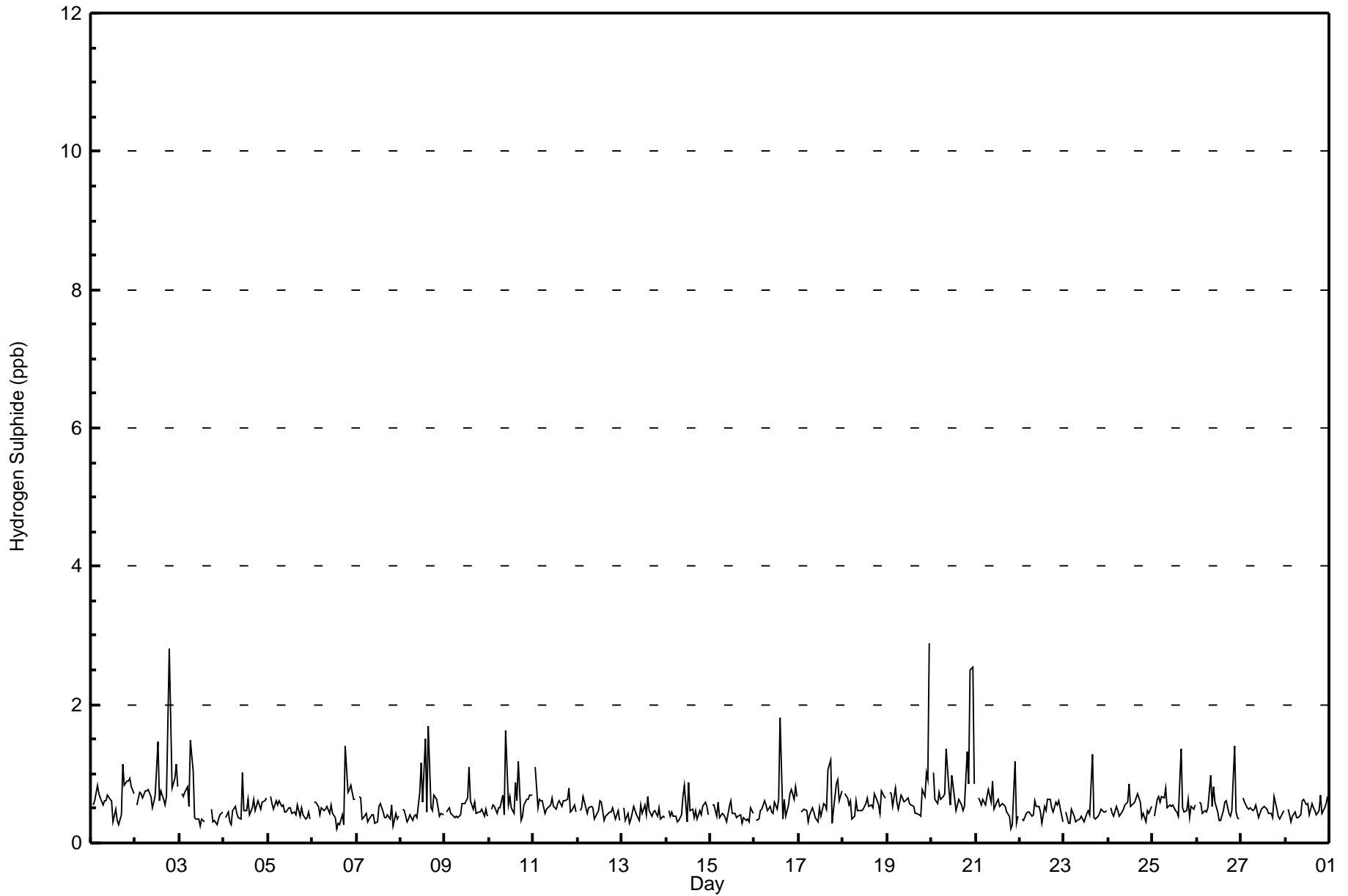


**Peace Airshed Zone Association  
Summary of Hourly Maximums**

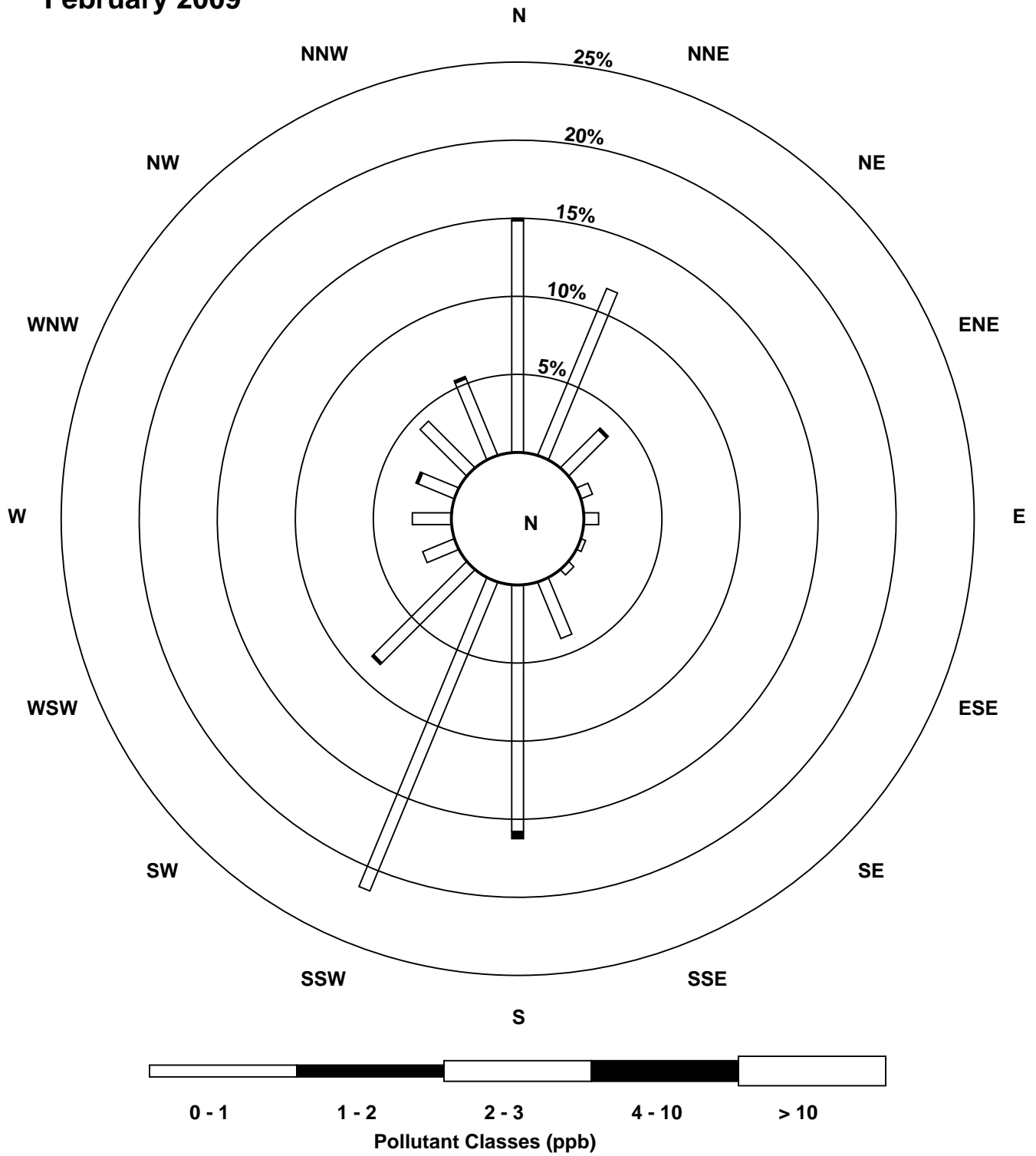
**Valleyview - Hydrogen Sulphide (H<sub>2</sub>S) - ppb  
February 1, 2009 to March 1, 2009**

Maximum Value: 2.9 ppb on Feb 20 00:00		Maximum Daily Average: 0.9 ppb on Feb 20		Hours in Service: 672																						
Minimum Value: 0 ppb on Feb 6 14:00		Minimum Daily Average: 0.4 ppb on Feb 7		Hours of Data: 641																						
Maximum Diurnal Average: 0.7 ppb at hour 22		Minimum Diurnal Average: 0.5 ppb at hour 6		Hours of Missing Data: 31																						
Monthly Average: 0.55 ppb		Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 0.3 Q <sub>1</sub> = 0.4 Median = 0.5 Q <sub>3</sub> = 0.6 P <sub>90</sub> = 0.8 P <sub>99</sub> = 1.8		Hours of Calibration: 31																						
				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-Feb	A	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	1	1	1	1	1	0.7	1.1
2-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	2	1	1	1	1	0.9	2.8
3-Feb	A	1	1	1	1	1	1	1	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0.5	1.5
4-Feb	A	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	1	0	1	1	0	1	1	1	0.5	1.0
5-Feb	A	1	1	0	1	1	1	1	1	0	0	1	1	0	0	0	1	0	1	0	0	0	0	0	0.5	0.7
6-Feb	A	1	1	1	0	1	0	0	1	0	1	0	0	0	0	0	0	0	1	1	1	1	1	1	0.5	1.4
7-Feb	A	1	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0.4	0.7
8-Feb	A	0	0	0	0	0	0	0	0	0	1	1	1	2	0	2	1	0	1	1	1	0	0	0	0.6	1.7
9-Feb	A	0	1	0	0	0	0	0	0	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0.5	1.1
10-Feb	A	0	1	1	0	1	0	1	0	2	1	1	1	0	1	1	1	0	0	1	1	1	1	1	0.6	1.6
11-Feb	A	1	1	1	1	1	0	0	1	1	1	1	0	1	1	1	1	1	1	1	0	0	1	0	0.6	1.1
12-Feb	A	0	1	1	1	0	1	1	1	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0.5	0.7
13-Feb	A	1	0	0	0	0	1	0	0	0	1	0	1	0	1	0	0	0	0	0	0	1	0	0	0.4	0.7
14-Feb	A	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	1	1	1	0.5	0.9
15-Feb	A	1	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0.4	0.6
16-Feb	A	0	0	0	0	1	1	0	1	0	0	1	0	1	2	0	1	0	1	1	1	1	1	1	0.6	1.8
17-Feb	A	0	0	0	0	0	0	1	0	0	0	1	0	1	1	0	1	1	0	0	1	1	1	1	0.6	1.2
18-Feb	A	1	1	1	1	0	0	1	0	0	0	0	1	1	1	1	1	1	1	1	0	1	1	1	0.6	0.8
19-Feb	A	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	3	0.7	2.9
20-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1	2	3	1	0.9	2.5
21-Feb	A	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	0	0	0	1	0	0	0.6	1.2
22-Feb	A	0	0	0	0	0	0	0	1	1	0	0	1	0	1	1	0	0	0	1	1	1	1	0	0.5	0.6
23-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.4	1.3
24-Feb	A	1	0	0	1	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	0.5	0.9
25-Feb	A	0	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	0	0	1	0	1	0	1	0.6	1.4
26-Feb	A	1	1	0	0	0	1	1	1	1	1	0	0	0	0	1	1	0	0	0	1	0	0	0	0.5	1.4
27-Feb	A	1	1	1	0	1	0	0	1	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0.5	0.7
28-Feb	A	0	0	0	0	0	0	0	0	1	1	1	1	0	1	1	0	0	0	1	0	1	1	1	0.5	0.7
--		0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.6	0.5	0.5	0.6	0.6	0.6	0.5	0.6	0.6	0.5	0.7	0.6	0.6	Diurnal Average	
--		1.1	0.7	0.8	0.8	0.8	1.5	1.0	1.4	1.6	1.0	1.2	1.5	1.5	1.8	1.7	1.2	1.2	2.8	1.8	1.4	2.5	2.5	2.9	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																								

# Hourly Maximums for H<sub>2</sub>S at Valleyview February 2009



# Pollutant Rose for H<sub>2</sub>S at Valleyview February 2009

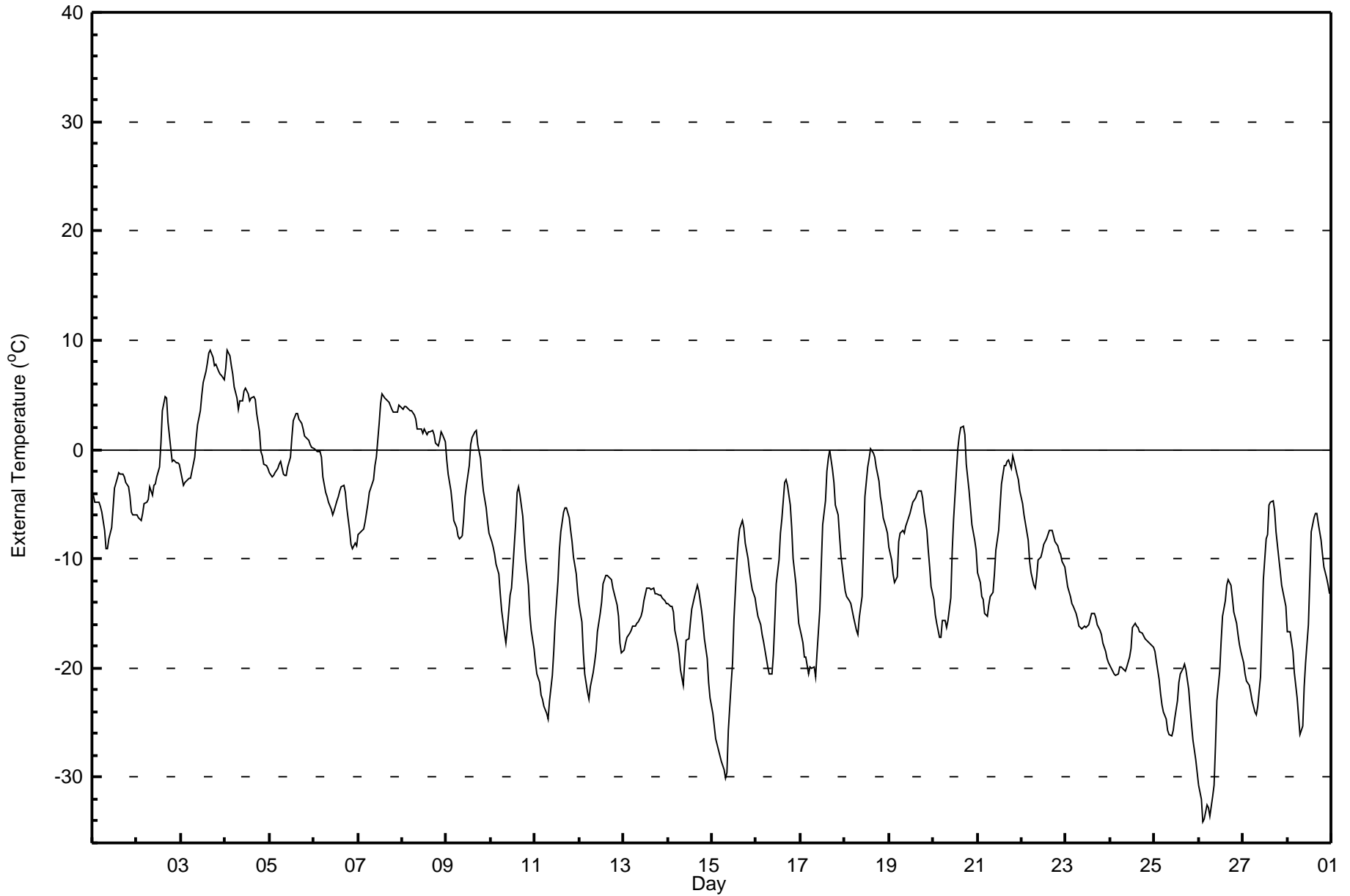


**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Valleyview - External Temperature (ET) - °C  
February 1, 2009 to March 1, 2009**

Maximum Value: 9.1 °C on Feb 4 02:00		Maximum Daily Average: 4.0 °C on Feb 4		Hours in Service: 672																							
Minimum Value: -34 °C on Feb 26 03:00		Minimum Daily Average: -23.4 °C on Feb 25		Hours of Data: 672																							
Maximum Diurnal Average: -4.2 °C at hour 17		Minimum Diurnal Average: -14.4 °C at hour 8		Hours of Missing Data: 0																							
Monthly Average: -9.73 °C		Percentiles: P <sub>1</sub> = -30.7 P <sub>10</sub> = -20.7 Q <sub>1</sub> = -16.3 Median = -9.2 Q <sub>3</sub> = -2.7 P <sub>90</sub> = 1.9 P <sub>99</sub> = 7.8		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-Feb	-4	-5	-5	-5	-5	-6	-7	-9	-9	-8	-7	-5	-4	-3	-2	-2	-2	-3	-3	-3	-4	-6	-6	-6	-5.0	-2.2	
2-Feb	-6	-6	-7	-6	-5	-5	-5	-3	-4	-3	-3	-3	-2	1	4	5	5	2	0	-1	-1	-1	-1	-1	-2.0	4.8	
3-Feb	-3	-3	-3	-3	-3	-3	-2	-1	1	2	4	5	6	7	8	9	9	8	8	8	7	7	7	6	3.4	9.0	
4-Feb	7	9	9	8	7	6	5	4	4	4	5	6	5	5	5	5	5	3	2	0	-1	-1	-1	-2	4.0	9.1	
5-Feb	-2	-3	-2	-2	-2	-1	-1	-2	-2	-2	-2	-1	1	3	3	3	3	2	2	1	1	1	0	0	-0.1	3.3	
6-Feb	0	0	0	0	-1	-3	-4	-4	-5	-6	-6	-6	-5	-4	-4	-3	-3	-4	-5	-7	-9	-9	-9	-9	-4.4	0.1	
7-Feb	-8	-7	-7	-7	-7	-5	-4	-4	-3	-1	-1	2	4	5	5	5	4	4	4	3	3	3	4	4	-0.1	5.1	
8-Feb	4	4	4	4	4	4	3	3	2	2	2	2	2	1	2	2	2	1	1	0	1	2	1	1	2.1	4.0	
9-Feb	-1	-2	-4	-5	-6	-7	-8	-8	-8	-6	-4	-3	-2	0	1	2	2	0	-1	-2	-4	-5	-7	-8	-3.6	1.7	
10-Feb	-8	-9	-10	-10	-11	-13	-15	-17	-18	-16	-13	-13	-11	-7	-4	-3	-4	-6	-8	-10	-12	-15	-17	-18	-11.2	-3.4	
11-Feb	-20	-21	-21	-23	-23	-23	-24	-25	-23	-21	-18	-16	-12	-9	-8	-6	-5	-5	-6	-7	-8	-10	-11	-13	-15.0	-5.3	
12-Feb	-14	-16	-19	-21	-22	-23	-22	-20	-20	-18	-17	-15	-14	-12	-12	-12	-12	-12	-13	-13	-14	-15	-18	-19	-16.3	-11.5	
13-Feb	-18	-18	-17	-17	-16	-16	-16	-16	-16	-15	-15	-14	-13	-13	-13	-13	-13	-13	-13	-13	-13	-14	-14	-14	-14.7	-12.6	
14-Feb	-14	-14	-14	-15	-17	-18	-19	-20	-22	-19	-17	-17	-16	-15	-13	-13	-12	-13	-15	-16	-17	-19	-21	-23	-16.7	-12.4	
15-Feb	-24	-25	-26	-27	-28	-29	-29	-30	-30	-26	-21	-20	-16	-10	-8	-7	-6	-7	-9	-10	-11	-12	-13	-14	-18.3	-6.5	
16-Feb	-14	-15	-16	-17	-18	-19	-20	-21	-21	-19	-16	-12	-10	-8	-6	-3	-3	-3	-5	-7	-10	-12	-14	-16	-12.7	-2.8	
17-Feb	-17	-18	-19	-19	-21	-20	-20	-20	-21	-19	-15	-11	-7	-5	-2	-1	0	-2	-3	-5	-6	-8	-10	-12	-11.6	-0.1	
18-Feb	-13	-13	-14	-14	-15	-15	-16	-17	-15	-14	-9	-4	-2	-1	0	0	-1	-2	-3	-4	-5	-6	-7	-8	-8.3	0.0	
19-Feb	-9	-10	-11	-12	-12	-8	-8	-7	-8	-7	-7	-6	-5	-5	-4	-4	-4	-4	-6	-7	-9	-11	-13	-7.6	-3.8		
20-Feb	-14	-15	-16	-17	-17	-16	-16	-16	-16	-14	-9	-6	-2	0	1	2	2	1	-1	-4	-5	-7	-8	-9	-8.4	2.2	
21-Feb	-11	-12	-13	-14	-15	-15	-14	-13	-13	-11	-9	-7	-5	-3	-1	-2	-1	-1	-2	-1	-1	-2	-3	-4	-7.3	-0.6	
22-Feb	-5	-6	-7	-8	-10	-11	-12	-13	-12	-10	-9	-9	-8	-8	-7	-7	-8	-8	-9	-9	-9	-10	-10	-11	-9.1	-4.9	
23-Feb	-12	-12	-13	-14	-14	-15	-16	-16	-16	-16	-16	-16	-16	-15	-15	-15	-15	-16	-17	-17	-18	-19	-19	-20	-15.8	-11.7	
24-Feb	-20	-20	-21	-21	-21	-20	-20	-20	-20	-20	-19	-18	-16	-16	-16	-16	-17	-17	-17	-17	-18	-18	-18	-18	-18.5	-15.9	
25-Feb	-19	-19	-21	-22	-23	-24	-25	-26	-26	-26	-26	-25	-23	-21	-21	-20	-20	-20	-22	-24	-25	-27	-28	-30	-23.4	-18.5	
26-Feb	-31	-32	-34	-34	-32	-33	-33	-32	-31	-27	-23	-20	-18	-15	-14	-12	-12	-12	-14	-15	-16	-17	-18	-18	-22.6	-12.0	
27-Feb	-20	-20	-21	-22	-22	-23	-24	-24	-24	-21	-16	-12	-8	-8	-5	-5	-5	-6	-8	-10	-11	-12	-14	-14	-14.8	-4.7	
28-Feb	-17	-17	-18	-19	-20	-23	-24	-26	-25	-22	-20	-16	-12	-8	-6	-6	-6	-7	-8	-10	-11	-12	-12	-13	-14.8	-5.9	
		-11.1	-11.7	-12.4	-12.9	-13.4	-13.7	-14.2	-14.4	-14.2	-12.8	-11.0	-9.3	-7.4	-5.8	-4.8	-4.3	-4.2	-4.9	-6.1	-7.1	-8.0	-9.0	-9.9	-10.7	Diurnal Average	
		7.4	9.1	8.6	7.7	6.8	5.7	4.6	3.6	4.4	4.4	5.3	5.6	6.1	7.1	7.9	8.9	9.0	8.4	7.6	7.8	7.2	6.8	6.8	6.4	Diurnal Maximum	

# Hourly Averages for External Temperature at Valleyview February 2009



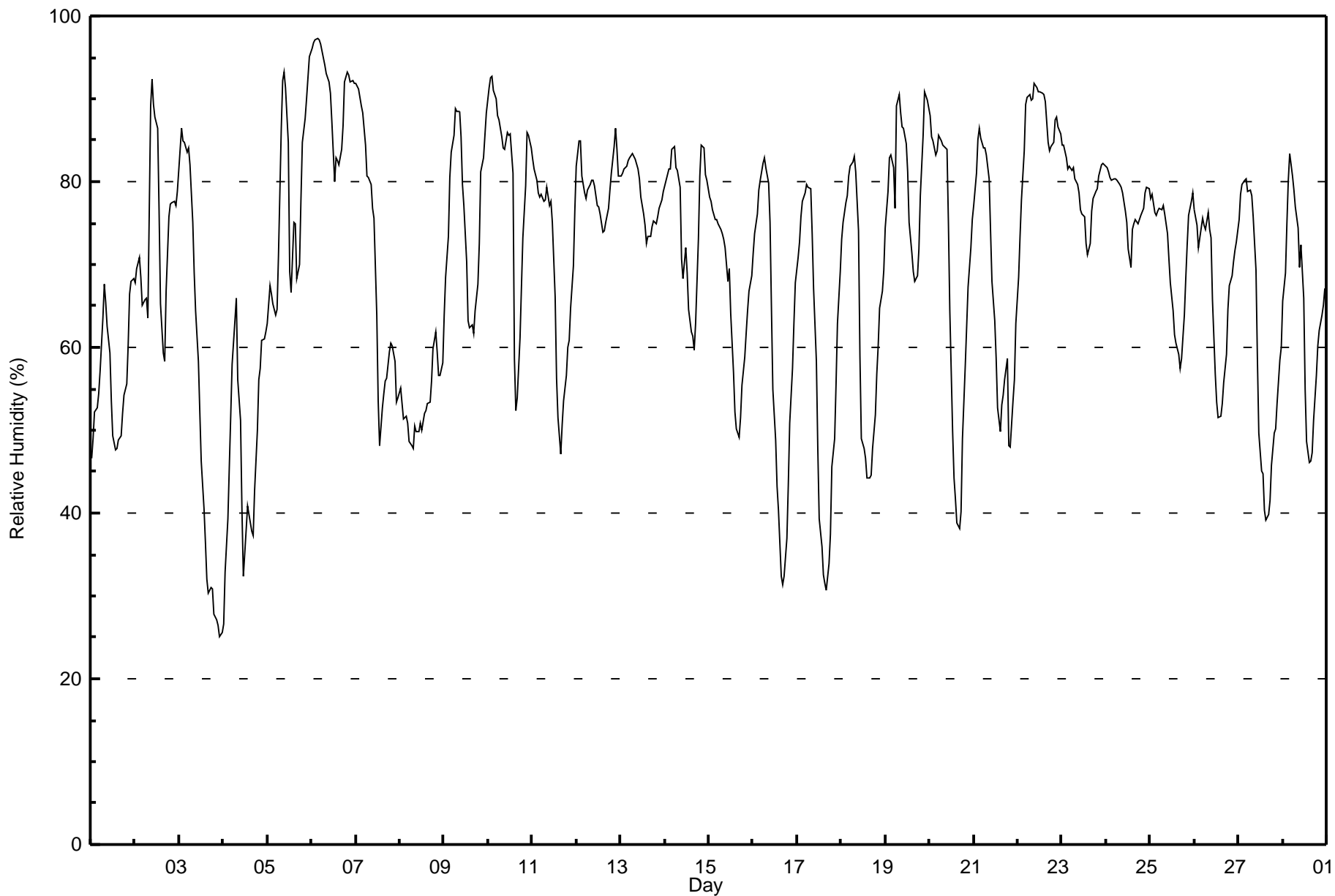
**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Valleyview - Relative Humidity (RH) - %  
February 1, 2009 to March 1, 2009**

Maximum Value: 97.2 % on Feb 6 04:00		Maximum Daily Average: 91.1 % on Feb 6		Hours in Service: 672																							
Minimum Value: 25 % on Feb 3 23:00		Minimum Daily Average: 47.8 % on Feb 4		Hours of Data: 672																							
Maximum Diurnal Average: 79.0 % at hour 8		Minimum Diurnal Average: 55.8 % at hour 17		Hours of Missing Data: 0																							
Monthly Average: 69.71 %		Percentiles: P <sub>1</sub> = 30.5 P <sub>10</sub> = 48.0 Q <sub>1</sub> = 58.5 Median = 74.2 Q <sub>3</sub> = 81.3 P <sub>90</sub> = 86.3 P <sub>99</sub> = 94.9		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-Feb	47	49	52	53	54	57	64	68	65	63	59	54	49	48	48	49	49	52	54	56	60	66	68	68	56.3	68.4	
2-Feb	68	70	71	68	65	66	66	64	89	92	89	88	86	76	65	59	58	67	76	77	77	78	77	79	73.9	92.4	
3-Feb	84	86	85	85	84	84	82	75	69	64	58	52	46	40	36	32	30	31	31	28	27	26	25	26	53.7	86.5	
4-Feb	27	33	39	46	52	58	63	66	56	51	40	32	38	41	40	38	37	43	50	56	57	61	61	62	47.8	66.0	
5-Feb	63	68	67	65	64	65	71	87	92	93	91	85	69	67	75	75	68	70	78	85	88	90	93	95	77.6	95.1	
6-Feb	96	97	97	97	97	97	95	94	93	92	91	87	80	83	83	82	84	87	92	93	93	92	92	92	91.1	97.2	
7-Feb	92	91	90	89	88	84	81	80	80	77	76	64	54	48	53	54	56	56	59	60	60	58	53	54	69.1	91.8	
8-Feb	55	53	51	52	51	49	48	48	50	50	50	51	50	52	52	53	53	56	60	62	60	57	57	58	53.2	61.8	
9-Feb	64	68	73	80	84	86	89	88	89	85	80	77	70	63	62	63	62	64	68	73	81	83	86	88	76.1	88.9	
10-Feb	91	93	93	91	90	88	87	85	84	84	86	86	86	81	59	52	54	61	67	73	79	86	86	84	80.3	92.6	
11-Feb	83	81	80	79	78	78	78	78	79	77	78	75	66	56	51	47	51	54	57	60	61	65	70	77	69.1	82.6	
12-Feb	82	85	85	81	79	78	79	80	80	80	79	77	77	76	74	74	75	77	79	81	84	86	84	81	79.7	86.4	
13-Feb	81	81	82	82	83	83	83	83	83	81	80	78	76	75	73	73	73	75	75	75	76	77	78	79	78.5	83.3	
14-Feb	80	81	81	81	84	84	82	81	79	71	68	72	69	64	62	61	60	63	73	81	84	84	81	80	75.3	84.3	
15-Feb	78	78	77	75	75	75	74	74	73	72	68	70	64	57	52	50	49	51	55	59	62	64	67	69	66.2	78.2	
16-Feb	71	74	76	79	80	82	83	82	80	75	65	55	49	43	40	32	31	32	37	43	51	57	63	68	60.4	82.9	
17-Feb	71	73	76	78	79	80	79	79	74	67	58	48	39	36	33	32	31	34	37	46	49	56	63	69	57.7	79.6	
18-Feb	73	75	77	78	81	82	82	83	81	74	59	49	48	47	44	44	45	48	52	57	60	65	67	69	64.2	83.1	
19-Feb	74	79	83	83	82	77	89	90	88	87	86	85	81	75	71	69	68	69	72	78	86	91	90	90	81.0	90.9	
20-Feb	88	85	85	83	84	86	85	84	84	84	75	64	50	44	42	39	38	40	49	58	63	67	72	75	67.7	88.0	
21-Feb	77	81	85	87	85	84	84	83	80	74	68	63	59	53	50	53	54	56	59	48	48	53	56	63	66.8	86.5	
22-Feb	68	73	78	84	89	90	90	90	90	92	91	91	91	91	90	85	84	84	85	87	88	87	86	86	86.4	91.8	
23-Feb	84	84	83	82	82	81	82	80	80	79	77	76	76	73	71	73	76	78	79	79	81	82	82	82	79.2	84.4	
24-Feb	82	81	80	80	80	80	80	80	79	79	76	75	72	70	74	75	75	75	75	76	77	79	79	79	77.5	81.8	
25-Feb	78	78	76	76	76	77	77	77	76	74	71	68	64	61	61	59	57	59	64	68	72	76	78	79	70.9	78.7	
26-Feb	77	75	72	73	76	75	74	76	74	73	66	57	53	52	52	53	56	59	65	67	69	70	72	73	67.0	76.6	
27-Feb	75	79	80	80	80	79	79	78	76	69	59	50	45	45	40	39	40	42	46	50	50	53	58	60	60.5	80.3	
28-Feb	66	69	75	80	83	81	79	77	74	70	72	66	55	49	46	46	47	51	57	60	62	64	65	67	65.1	83.4	
		74.1	75.7	76.8	77.4	78.0	78.0	78.8	79.0	78.5	76.0	72.0	67.6	63.0	59.5	57.1	56.0	55.8	58.3	62.5	65.5	68.0	70.5	71.7	73.2	Diurnal Average	
		96.1	96.7	97.1	97.2	97.2	96.5	94.9	94.0	93.1	93.2	91.3	90.8	90.9	90.7	90.6	89.7	84.7	86.7	92.1	93.2	92.9	92.1	92.6	95.1	Diurnal Maximum	



# Hourly Averages for Relative Humidity at Valleyview February 2009



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

Valleyview  
February 1, 2009 to March 1, 2009  
WS (km/h), WD (deg)

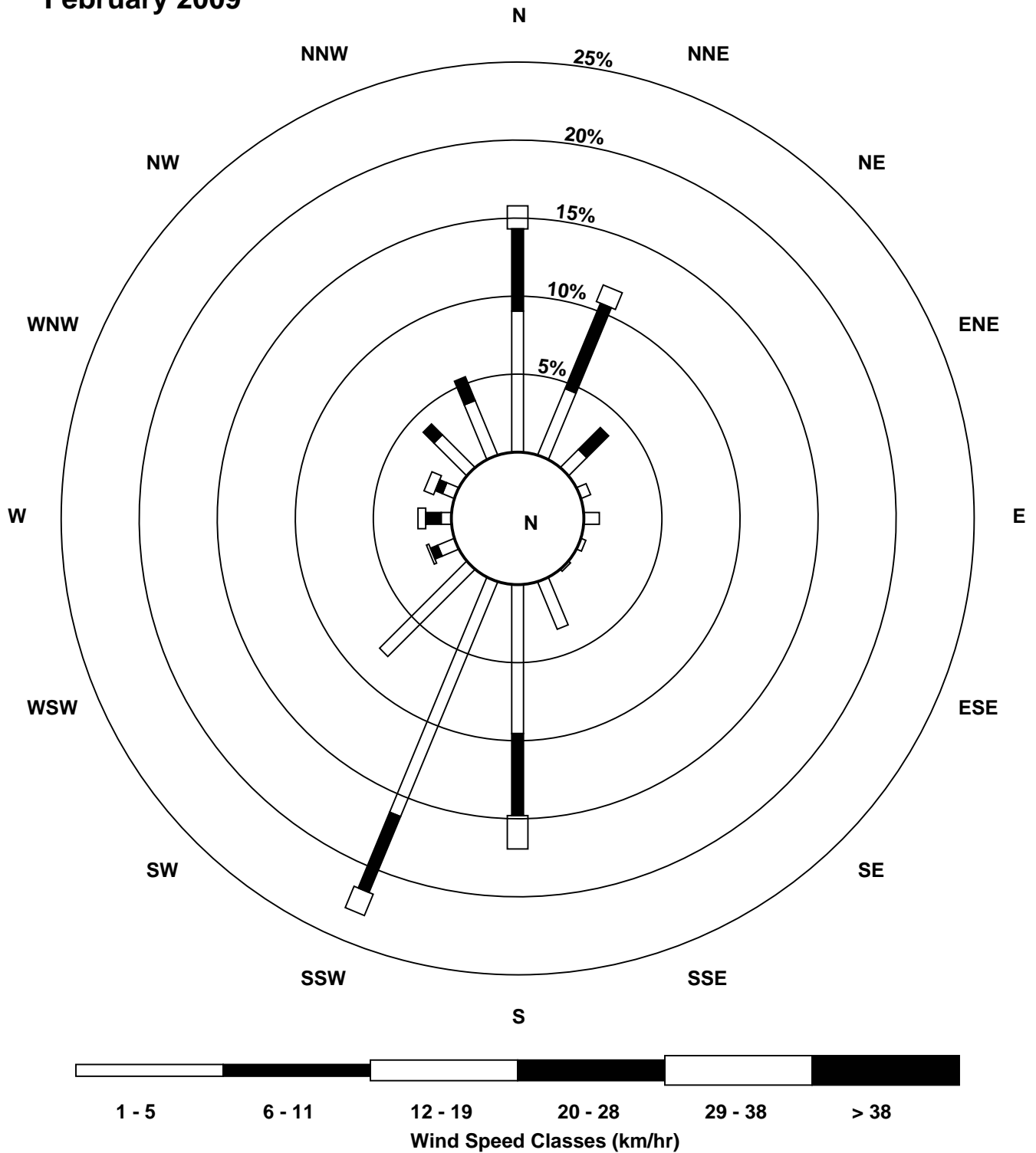
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	16	11	9	12	9	6	3	4	5	5	5	5	3	4	3	4	3	1	3	2	1	1	3	1	2.9	15.8
Dir	295	295	293	287	286	274	219	211	207	207	189	183	188	190	160	157	157	231	166	170	309	44	186	166	246.8	294.7
2 Spd	0	1	1	2	1	2	3	5	5	1	2	1	5	4	2	1	3	2	2	3	4	3	4	3	2.2	5.3
Dir	350	239	217	206	229	213	190	199	194	199	297	195	196	198	228	37	146	202	219	177	177	204	187	191	196.8	196.2
3 Spd	1	0	1	2	2	2	1	6	8	11	12	10	9	10	11	11	12	12	9	12	9	9	11	12	7.4	12.5
Dir	241	2	239	222	220	189	52	190	182	188	187	188	190	195	201	199	195	187	190	193	194	193	191	192	192.2	186.6
4 Spd	9	10	11	14	15	11	9	9	13	11	15	14	5	4	2	1	2	2	1	3	2	1	1	1	5.3	15.2
Dir	202	237	245	258	264	261	268	262	265	270	283	298	20	27	84	131	122	165	220	211	217	212	304	283	261.5	264.0
5 Spd	1	2	3	2	1	2	1	1	3	5	4	5	5	5	3	3	4	3	3	5	2	2	2	1	2.2	4.9
Dir	194	178	326	62	148	250	288	181	192	198	180	177	198	220	265	230	207	224	225	206	240	188	199	198	209.4	205.8
6 Spd	1	3	5	6	4	N	N	7	6	6	7	4	3	3	3	1	1	1	1	1	2	2	1	2	1.9	7.1
Dir	342	26	23	24	17	N	N	11	6	6	12	3	359	316	276	236	240	142	149	267	204	210	212	204	0.1	12.2
7 Spd	4	2	3	2	3	4	7	6	6	3	4	10	14	10	7	6	6	7	10	10	9	8	11	10	6.0	13.6
Dir	189	202	183	206	204	204	197	198	197	175	180	265	266	252	204	198	200	195	187	189	192	190	191	190	205.7	266.4
8 Spd	11	11	10	10	10	9	9	6	6	5	2	2	2	4	3	4	3	2	2	6	4	4	3	3	2.2	10.6
Dir	193	199	196	193	187	194	193	189	190	196	210	233	354	1	10	353	316	12	2	15	30	41	38	352	197.9	193.5
9 Spd	2	2	2	1	2	3	3	3	2	3	2	3	3	3	6	6	6	6	7	5	5	4	5	4	2.0	7.5
Dir	2	319	199	345	225	215	190	215	224	214	168	342	53	3	332	349	350	316	336	10	25	2	12	339	339.0	335.5
10 Spd	3	1	1	2	2	1	2	2	1	2	1	4	3	1	1	1	4	6	4	3	2	3	2	1	1.3	6.3
Dir	337	342	6	348	344	82	350	342	190	189	159	356	357	326	345	353	353	5	16	351	321	199	205	199	349.0	4.9
11 Spd	1	1	1	2	1	3	2	2	4	2	0	2	3	3	2	1	4	3	1	0	8	4	6	3	1.2	8.0
Dir	3	207	207	183	225	184	202	189	225	227	225	190	207	246	316	28	327	292	17	174	341	324	319	328	281.1	340.6
12 Spd	2	2	1	1	2	2	1	3	3	2	0	1	2	2	2	3	4	6	7	5	4	2	1	2	0.9	6.6
Dir	329	357	213	191	180	207	195	204	185	190	196	345	1	360	317	292	323	5	14	5	4	321	179	200	329.6	14.0
13 Spd	1	2	2	2	3	2	3	2	2	1	2	2	1	2	1	2	3	2	2	3	3	5	4	3	1.8	4.8
Dir	175	181	184	181	190	199	186	198	197	176	171	157	32	353	21	111	152	153	191	171	165	165	187	175	173.9	164.9
14 Spd	1	2	2	6	3	2	4	2	1	0	1	4	6	6	7	11	8	8	7	5	1	2	1	2	1.8	10.6
Dir	73	40	89	179	190	132	152	189	206	20	190	353	348	345	343	352	353	10	355	345	313	228	203	205	353.2	351.9
15 Spd	0	1	1	1	2	2	1	2	1	0	0	3	0	12	11	11	11	9	7	10	12	12	11	14	5.3	13.5
Dir	327	187	179	193	210	201	186	183	158	189	231	347	29	188	188	190	184	183	182	186	186	185	186	193	187.7	192.8
16 Spd	13	9	7	5	4	2	3	3	5	5	6	4	1	3	4	2	3	2	0	1	2	2	2	2	2.7	12.5
Dir	194	198	196	210	211	232	224	224	217	213	212	213	356	334	13	43	355	274	320	207	217	203	205	206	213.3	193.8
17 Spd	1	3	4	1	4	2	1	1	1	3	4	3	0	2	1	2	1	5	2	1	2	2	1	3	0.9	5.1
Dir	192	210	210	226	199	230	241	270	193	207	201	199	73	25	347	351	21	14	3	345	214	225	218	203	223.2	14.0
18 Spd	3	4	3	3	5	5	5	4	4	4	4	2	2	3	4	6	6	3	4	3	2	1	1	0	0.6	5.9
Dir	207	212	224	200	201	186	181	152	179	200	174	153	350	2	12	8	349	341	8	354	318	307	180	296	224.2	348.6
19 Spd	1	2	2	2	3	8	5	3	5	1	6	8	9	11	10	7	5	1	1	2	2	2	1	0	2.9	10.5
Dir	356	220	209	197	19	350	334	291	323	23	339	326	309	319	329	320	316	63	166	200	201	178	203	300	320.0	319.2
20 Spd	1	1	1	2	2	4	1	2	2	3	6	1	1	1	2	3	3	2	0	2	1	2	1	2	0.5	5.7
Dir	226	179	217	201	222	209	242	225	225	204	198	286	200	312	28	62	63	80	303	354	272	35	347	209	207.7	197.8
21 Spd	1	3	4	2	3	2	2	1	1	0	2	3	4	4	5	8	6	6	4	3	3	4	7	7	0.8	8.2
Dir	154	359	2	217	189	194	214	8	40	32	352	359	352	20	15	1	13	11	20	98	162	210	188	192	8.7	0.6
22 Spd	8	6	5	3	3	3	3	2	4	8	7	5	4	3	5	6	10	11	11	9	10	10	15	16	4.0	15.9
Dir	189	197	199	217	233	223	215	208	307	354	332	325	358	21	11	22	18	18	22	22	13	9	14	16	3.2	15.6

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

Valleyview  
February 1, 2009 to March 1, 2009  
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	16	15	15	13	12	13	11	11	10	11	11	13	12	10	8	8	8	8	7	6	6	6	4	4	9.9	16.5	
Dir	15	11	5	9	10	10	6	5	5	7	14	359	357	11	25	11	11	13	24	18	12	2	7	353	9.1	15.0	
24 Spd	3	3	2	3	5	8	8	9	9	9	8	9	10	11	12	13	13	10	9	9	7	6	5	7	7.7	13.4	
Dir	353	344	357	6	16	17	23	18	16	19	24	25	50	49	31	31	33	40	44	51	45	46	41	39	30.7	32.6	
25 Spd	8	9	11	11	9	8	8	8	7	9	10	11	11	12	14	13	10	9	7	5	3	1	1	2	7.7	14.5	
Dir	36	36	32	34	30	22	22	22	17	1	356	353	352	355	355	358	2	5	356	359	346	208	19	358	9.4	355.4	
26 Spd	1	2	0	0	1	0	1	3	3	4	12	16	14	15	18	14	13	11	10	10	12	9	9	6	7.3	18.5	
Dir	255	214	167	231	315	150	166	353	196	211	190	190	194	180	188	185	178	180	186	193	193	195	194	198	189.6	187.9	
27 Spd	5	3	2	4	3	1	2	4	4	4	3	3	1	3	2	4	6	7	8	7	6	4	2	4	0.5	7.9	
Dir	211	220	218	216	206	222	224	214	210	209	202	172	79	5	355	20	36	18	25	6	20	45	255	336	333.7	25.4	
28 Spd	7	6	2	3	1	1	1	3	2	1	4	4	5	7	10	9	10	12	10	12	14	12	10	9	3.7	13.6	
Dir	13	25	9	11	21	173	179	210	221	278	344	9	347	177	171	178	184	188	190	189	191	192	190	193	187.9	191.4	
Spd	0.8	0.9	0.9	1.1	1.3	1.2	1.0	1.0	1.4	1.2	1.1	1.5	1.5	1.0	0.9	1.1	0.9	0.9	0.7	0.4	0.8	1.4	1.7	1.4	Diurnal Average		
Dir	256.8	260.3	264.9	253.3	248.5	245.9	226.0	235.4	232.7	241.3	251.3	302.2	327.4	315.4	328.1	357.8	6.6	12.2	24.7	174.5	202.3	192.7	194.7	205.1	Diurnal Maximum		
Spd	16.5	14.6	15.4	13.7	15.2	12.7	11.1	10.7	12.6	11.4	15.0	15.6	14.0	15.1	18.5	13.7	13.4	12.2	10.8	12.3	13.6	12.1	15.1	15.9	Diurnal Maximum		
Dir	15.0	11.4	5.2	258.4	264.0	10.4	6.4	5.1	264.9	269.7	282.9	189.9	194.0	179.7	187.9	185.2	32.6	186.9	21.8	189.0	191.4	185.0	14.1	15.6	Diurnal Maximum		
Maximum Speed Value: 18 km/h on Feb 26 15:00																			Minimum Speed Value: 0 km/h on Feb 14 10:00					Hours in Service:		672	
Maximum Daily Speed Average: 9.9 km/h on Feb 23																			Minimum Daily Speed Average: 0.5 km/h on Feb 20					Hours of Data:		670	
Maximum Diurnal Speed Average: 1.7 km/h at hour 23																			Minimum Diurnal Speed Average: 0.4 km/h at hour 20					Hours of Missing Data:		2	
Monthly Average Velocity: 0.63 km/h 258.70 deg																			Speed Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 1.0 Q <sub>1</sub> = 1.8 Median = 3.4 Q <sub>3</sub> = 7.1 P <sub>90</sub> = 10.6 P <sub>99</sub> = 15.2					Percent Operational Time:		99.7	
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	95	68	15	0	0	0	178																				
NorthEast	27	22	4	0	0	0	53																				
East	9	0	0	0	0	0	9																				
SouthEast	17	0	0	0	0	0	17																				
South	117	63	26	0	0	0	206																				
SouthWest	123	5	0	0	0	0	128																				
West	16	6	8	0	0	0	30																				
NorthWest	35	11	3	0	0	0	49																				
Total	439	175	56	0	0	0	670																				

# Wind Rose for WS at Valleyview February 2009



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

**Valleyview - Wind Speed (WS) - km/h**  
**February 1, 2009 to March 1, 2009**

Maximum Speed: 19 km/h on Feb 26 15:00		Maximum Daily Speed Average: 10.0 km/h on Feb 23		Hours in Service: 672																																												
Minimum Speed: 1 km/h on Feb 14 10:00		Minimum Daily Speed Average: 2.3 km/h on Feb 20		Hours of Data: 670																																												
Maximum Diurnal Speed Average: 6.1 km/h at hour 16		Minimum Diurnal Speed Average: 4.0 km/h at hour 7		Hours of Missing Data: 2																																												
Monthly Average Speed: 5.02 km/h		Percentiles: P <sub>1</sub> = 1.0 P <sub>10</sub> = 1.6 Q <sub>1</sub> = 2.2 Median = 3.7 Q <sub>3</sub> = 7.2 P <sub>90</sub> = 10.9 P <sub>99</sub> = 15.3		Percent Operational Time: 99.7																																												
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Feb	16	11	9	12	9	6	4	4	5	5	5	5	3	4	3	5	3	1	4	2	1	1	3	2	5.1	15.9																						
2-Feb	1	1	1	2	2	2	4	5	5	2	2	2	5	5	4	3	3	2	2	4	4	3	4	3	3.0	5.4																						
3-Feb	1	2	1	2	2	2	1	6	8	11	13	10	9	10	11	11	12	12	9	12	9	9	11	12	7.8	12.5																						
4-Feb	9	10	11	14	15	11	9	9	13	11	15	14	6	4	2	2	2	2	2	4	3	2	1	2	7.2	15.3																						
5-Feb	1	2	4	3	2	4	2	2	3	5	4	5	5	5	4	4	5	3	3	5	2	2	2	1	3.2	4.9																						
6-Feb	2	3	5	6	4	N	N	7	6	6	7	4	3	3	3	1	2	1	1	2	2	2	1	2	3.3	7.2																						
7-Feb	4	2	4	2	3	4	7	6	6	3	4	10	14	11	7	6	6	7	10	10	9	8	11	10	6.9	13.9																						
8-Feb	11	11	10	10	10	9	9	6	6	5	3	3	3	4	4	4	3	2	3	6	5	5	4	3	5.8	10.7																						
9-Feb	2	3	2	2	2	3	3	3	2	4	3	4	4	3	6	6	6	6	8	6	5	5	6	4	4.1	8.0																						
10-Feb	4	2	1	2	2	1	2	2	2	2	2	4	3	1	2	2	4	7	4	4	3	3	2	1	2.6	6.5																						
11-Feb	1	1	1	2	1	3	2	3	4	3	2	3	3	3	3	2	5	4	2	2	9	4	6	3	3.0	8.5																						
12-Feb	2	2	1	1	2	2	2	3	3	2	1	2	2	3	4	4	5	7	7	5	4	2	1	2	2.9	6.7																						
13-Feb	2	2	2	2	3	2	3	2	2	2	2	2	2	3	3	4	4	3	2	3	3	5	4	3	2.7	5.3																						
14-Feb	2	3	2	6	3	3	4	2	1	1	2	5	6	7	7	11	8	8	7	5	3	2	3	2	4.2	10.6																						
15-Feb	2	1	2	2	2	2	1	2	1	1	1	3	5	12	11	11	11	9	7	11	12	12	11	14	6.1	13.6																						
16-Feb	13	10	7	5	4	2	3	3	5	5	6	4	2	3	4	2	3	3	1	1	2	2	2	2	3.9	12.6																						
17-Feb	2	4	4	2	4	2	1	2	2	3	4	3	2	2	2	2	1	5	2	2	2	2	1	3	2.4	5.1																						
18-Feb	4	4	3	3	5	5	5	5	4	4	4	2	2	3	4	6	6	3	4	3	3	2	1	1	3.6	6.1																						
19-Feb	1	2	2	3	3	9	5	3	5	2	6	8	9	11	10	8	5	2	1	2	2	2	1	1	4.2	10.7																						
20-Feb	1	1	2	2	2	4	2	2	2	4	6	2	2	2	2	3	4	2	1	2	2	2	3	2	2.3	5.7																						
21-Feb	2	3	4	2	3	2	2	2	1	1	2	3	4	4	5	8	6	6	4	3	4	4	7	7	3.7	8.3																						
22-Feb	8	6	5	4	4	3	3	2	4	8	8	5	4	4	5	6	10	11	11	9	10	10	15	16	7.1	16.0																						
23-Feb	17	15	15	13	12	13	11	11	11	11	11	13	12	11	8	8	8	8	7	7	6	6	5	4	10.0	16.6																						
24-Feb	3	3	3	3	5	8	8	9	9	9	8	9	10	11	12	13	14	11	10	9	7	6	5	7	8.0	13.5																						
25-Feb	8	9	11	11	9	8	8	8	7	9	10	11	11	12	14	13	10	9	7	5	3	1	2	3	8.2	14.5																						
26-Feb	1	2	1	1	2	1	2	3	3	4	13	16	14	15	19	14	13	11	10	10	12	9	9	6	7.9	18.6																						
27-Feb	5	3	2	4	3	2	2	4	5	4	3	4	2	3	2	4	6	7	8	7	6	4	2	5	4.0	8.0																						
28-Feb	7	6	2	3	1	3	2	3	2	2	4	5	6	8	11	10	11	12	10	12	14	12	10	9	6.8	13.7																						
																								4.6	4.4	4.2	4.3	4.2	4.3	4.0	4.2	4.5	4.6	5.5	5.7	5.5	6.0	6.1	6.1	6.1	5.8	5.4	5.4	5.3	4.6	4.8	4.7	Diurnal Average
																								16.6	14.7	15.5	13.9	15.3	12.8	11.1	10.7	12.6	11.5	15.1	15.7	14.2	15.3	18.6	13.9	13.5	12.2	11.0	12.4	13.7	12.2	15.2	16.0	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  
February 1, 2009 to March 1, 2009**

Maximum Value: 98.1 deg on Feb 12 11:00																								Hours in Service:	672	
Minimum Value: 1.8 deg on Feb 25 13:00																								Hours of Data:	670	
Percentiles: P <sub>1</sub> = 3.3 P <sub>10</sub> = 6.1 Q <sub>1</sub> = 8.5 Median = 17.2 Q <sub>3</sub> = 39.3 P <sub>90</sub> = 64.8 P <sub>99</sub> = 89.9																								Hours of Missing Data:	2	
																								Hours of Calibration:	0	
																								Percent Operational Time:	99.7	
Day	Hourly Period Ending At (MST)																								Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	6	6	9	6	8	6	21	8	7	7	8	7	9	10	22	11	12	45	39	36	51	44	11	74	73.5	
2-Feb	89	59	74	16	37	27	31	7	11	69	54	85	10	33	69	86	33	48	32	35	12	13	14	23	88.7	
3-Feb	73	93	79	38	33	39	81	15	18	5	5	5	6	7	5	5	5	7	4	6	6	4	5	5	93.2	
4-Feb	11	15	11	10	7	10	11	6	6	6	10	16	42	15	28	75	21	17	60	51	15	29	81	65	81.1	
5-Feb	74	57	49	44	71	51	56	42	15	10	18	11	14	21	38	23	21	20	16	8	33	21	14	11	74.1	
6-Feb	41	10	9	9	9	N	N	10	10	11	10	16	11	24	31	63	40	32	54	54	31	13	11	12	63.5	
7-Feb	10	24	23	15	16	12	7	6	9	24	17	31	12	20	8	9	9	7	5	5	5	5	5	6	30.9	
8-Feb	6	5	5	5	5	6	4	11	8	7	47	49	67	50	35	27	60	40	76	9	35	47	56	58	76.0	
9-Feb	69	49	60	76	57	14	20	14	46	36	46	52	31	20	12	14	10	12	21	22	22	31	28	24	76.2	
10-Feb	10	82	54	29	30	76	27	56	18	30	62	6	6	44	76	52	25	15	17	29	78	18	46	16	81.7	
11-Feb	52	68	42	26	23	17	29	44	30	35	86	32	19	34	51	56	31	17	65	87	25	28	24	45	86.9	
12-Feb	37	48	62	45	22	19	68	47	28	20	98	81	14	32	61	50	15	16	7	21	12	39	42	25	98.1	
13-Feb	49	18	16	9	11	8	12	10	13	27	26	52	59	59	73	80	62	44	42	31	41	26	36	44	79.9	
14-Feb	44	21	35	13	15	14	14	13	33	96	68	20	6	5	13	3	7	4	4	6	69	30	26	74	96.0	
15-Feb	84	29	92	38	25	19	49	41	64	78	86	25	85	9	8	8	8	8	9	6	7	7	7	6	91.9	
16-Feb	6	6	6	5	9	6	6	7	7	5	7	11	65	38	21	31	38	23	90	35	14	22	18	16	90.0	
17-Feb	36	9	10	82	14	11	57	42	40	18	21	18	81	16	39	18	79	10	21	83	31	24	44	8	83.2	
18-Feb	9	13	16	18	6	17	17	37	24	10	10	28	22	11	10	6	16	31	15	36	41	90	37	89	90.3	
19-Feb	77	31	28	60	54	15	9	27	18	64	17	13	12	9	9	13	14	59	36	15	18	22	59	84	83.9	
20-Feb	83	62	34	13	24	5	70	13	15	13	11	76	66	40	13	28	14	46	77	46	63	67	64	50	83.4	
21-Feb	68	27	13	47	19	22	15	69	42	83	19	18	20	24	19	8	13	10	37	19	35	34	10	7	82.5	
22-Feb	7	9	9	32	33	16	12	41	18	19	17	15	29	15	16	9	9	11	11	11	6	6	6	6	51.3	
23-Feb	7	7	5	6	8	6	7	6	5	8	8	4	4	13	18	7	7	7	8	8	4	6	10	3	17.8	
24-Feb	5	9	18	6	6	8	9	7	7	7	12	10	16	12	7	7	7	7	9	8	8	10	9	6	18.4	
25-Feb	7	6	6	7	7	7	8	8	7	8	3	3	2	2	3	3	7	3	6	7	36	54	64	42	63.7	
26-Feb	46	32	83	77	63	94	85	29	40	22	9	8	8	10	7	9	10	8	9	6	6	6	6	7	93.7	
27-Feb	11	11	32	12	23	31	24	10	6	7	18	14	68	16	35	16	10	8	8	9	11	10	60	27	67.5	
28-Feb	16	5	58	19	59	74	59	23	36	68	11	14	14	57	21	16	11	7	7	7	7	7	6	7	73.7	
	88.7	93.2	91.9	81.8	70.7	93.7	85.5	69.5	63.7	96.0	98.1	84.7	84.7	59.2	76.1	85.8	79.4	59.1	90.0	86.9	78.1	90.3	81.1	89.4		
N - Not Valid																										

# PASZA

## Monthly Passive Data Summary

## PASZA Passive Results for February 2009

### Peace Airshed Zone Association - PASZA Passive Stations for February 2009

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	Site Legal
<b>Duplicates</b>					
18a	Saddle Hills	0.4	44.1	1.7	
18b	Saddle Hills	0.4	42.8	1.3	
19a	Wanham	0.7	41.4	1.1	
19b	Wanham	0.6	44.4	1.2	
29a	Smoky Heights	0.6	40.7	2.4	
29b	Smoky Heights	0.7	40.9	2.5	
30a	Fitzsimmons	0.2	38.8	2.3	
30b	Fitzsimmons	0.3	35.8	2.3	
40a	McLennan	0.6	42.1	1.2	
40b	McLennan	0.5	43.2	1.4	
48a	Deer Mountain	0.4	40.3	1.1	
48b	Deer Mountain	0.4	40.0	1.2	
49a	Grande Prairie HP	0.4	27.9	12.5	
49b	Grande Prairie HP	0.5	27.2	11.1	
1	Silver Valley	0.6	38.2	2.0	08-27-081-11 W6M
2	Bay Tree	0.4	40.2	1.5	13-16-078-13 W6M
3	Forth Creek	0.5	35.7	1.3	04-13-082-07 W6M
4	Gordondale	0.5	40.9	2.2	04-34-078-10 W6M
5	Boone Creek	0.3	34.5	1.8	01-23-076-11 W6M
7	Steeprock Creek	0.3	44.1	0.9	09-35-072-13 W6M
9	Spirit River	0.3	43.6	2.0	08-12-079-07 W6M
10	Woking	0.4	40.5	1.4	01-13-076-07 W6M
11	Webber Creek	0.4	37.6	3.0	09-36-074-09 W6M
12	Hythe	0.4	39.2	2.9	14-36-072-11 W6M
14	Sylvester	0.2	35.3	1.7	08-06-069-12 W6M
16	Beaverlodge	0.5	38.6	4.4	15-36-071-10 W6M
17	Poplar	0.5	39.6	3.7	13-06-073-08 W6M
18	Saddle Hills	0.4	43.4	1.5	04-25-074-07 W6M
19	Wanham	0.6	42.9	1.1	16-22-077-03 W6M
20	Shaftesbury	0.2	38.8	1.3	04-03-082-23 W5M
21	Eaglesham	0.4	40.0	1.4	16-21-079-25 W5M
23	Bear Lake	0.4	39.1	3.0	15-31-072-06 W6M

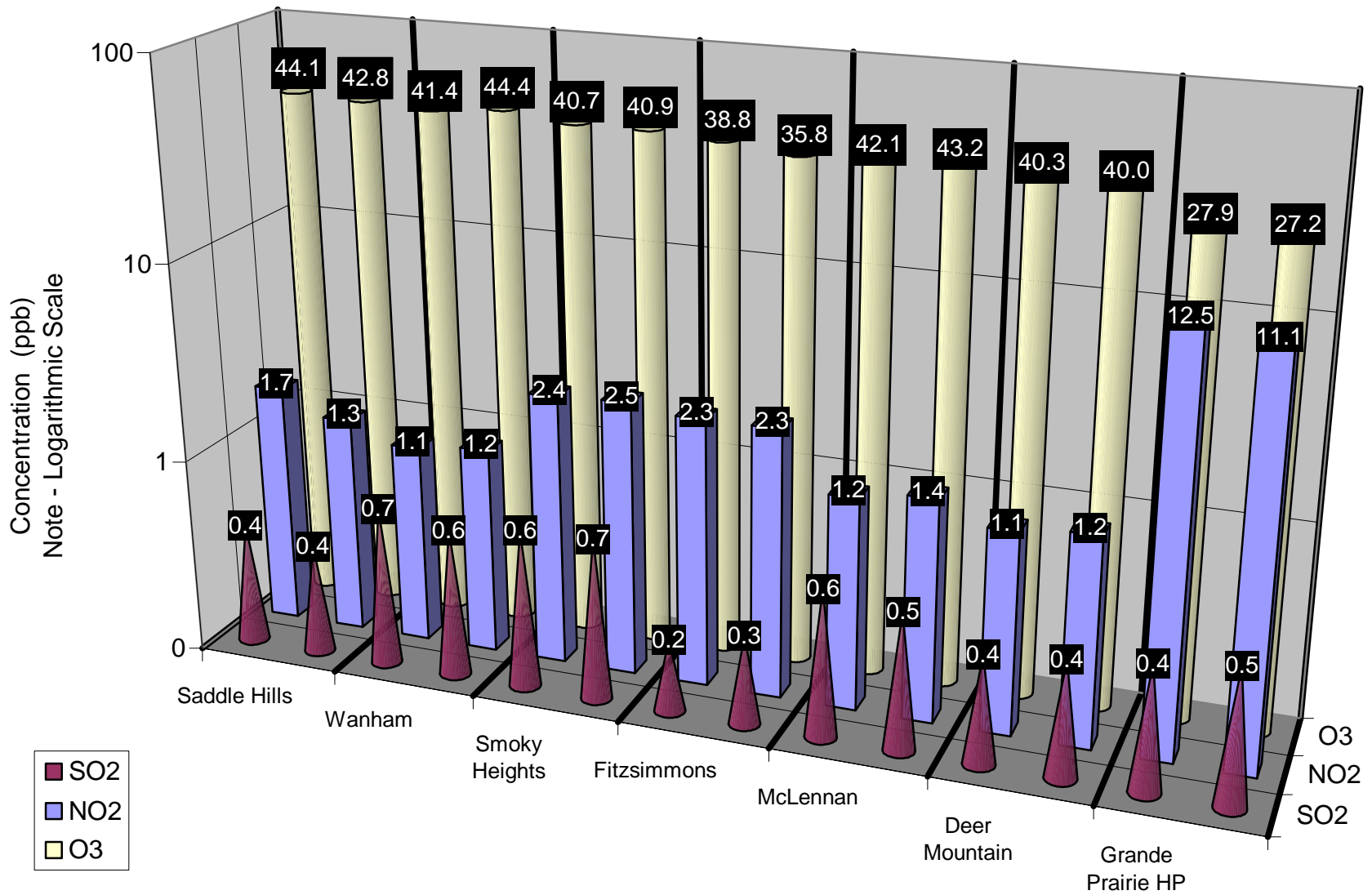


## PASZA Passive Results for February 2009 (Continued)

### Peace Airshed Zone Association - PASZA Passive Stations for February 2009

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	Site Legal
24	Wembley	0.4	40.2	3.4	12-31-070-08 W6M
25	Pinto Creek	0.2	37.5	1.8	04-24-069-11 W6M
26	Flyingshot	0.3	34.5	5.0	15-36-070-07 W6M
27	Grande Prairie I	0.4	30.4	13.6	08-15-071-06 W6M
28	Clairmont Lake	0.7	42.7	2.1	09-06-073-04 W6M
29	Smoky Heights	0.7	40.8	2.5	04-06-075-02 W6M
30	Fitzsimmons	0.3	37.3	2.3	15-36-072-03 W6M
32	Gold Creek	0.2	33.8	8.2	06-33-067-05 W6M
33	Wapiti	0.3	39.1	2.6	02-25-071-03 W6M
34	Puskwaskau	0.2	37.5	0.9	15-35-074-25 W5M
35	Jean Cote	0.5	47.3	1.6	12-35-079-21 W5M
36	Guy	0.3	44.4	1.3	03-04-076-22 W5M
37	Crooked Creek	0.4	39.9	2.1	16-01-071-26 W5M
39	Clouston Creek	0.5	43.9	1.4	12-01-073-22 W5M
40	McLennan	0.5	42.7	1.3	03-29-077-19 W5M
41	Valleyview	0.5	42.1	1.8	09-30-069-22 W5M
42	Sunset House	0.6	46.6	1.2	05-32-070-19 W5M
43	High Prairie	0.2	42.6	1.7	16-13-074-17 W5M
44	Peavine	0.2	38.5	1.1	03-05-079-15 W5M
45	Gift Lake	0.2	38.0	1.4	10-07-079-12 W5M
46	Little Smoky	0.4	32.5	6.1	12-01-065-21 W5M
47	Kinuso	0.3	44.9	1.8	12-10-073-10 W5M
48	Deer Mountain	0.4	40.1	1.1	15-22-068-09 W5M
49	Grande Prairie HP	0.5	27.5	11.8	17-26-071-06 W6M

\*BDL = Below Detection Level



Duplicate Summary Chart

## Passive Summary for February 2009

Stats	Sulphur Dioxide SO <sub>2</sub>	Ozone O <sub>3</sub>	Nitrogen Dioxide NO <sub>2</sub>
	ppb	ppb	ppb

Passive Summary for February 2009 (PASZA Zone)			
<b>Mean</b>	<b>0.4</b>	<b>39.5</b>	<b>2.7</b>
<b>Standard Deviation</b>	<b>0.1</b>	<b>4.1</b>	<b>2.7</b>
<b>Minimum</b>	<b>0.2</b>	<b>27.5</b>	<b>0.9</b>
<b>Minimum At</b>	<b>Pinto Creek (#25)</b>	<b>Grande Prairie HP (#49)</b>	<b>Puskwaskau (#34)</b>
<b>Maximum</b>	<b>0.7</b>	<b>47.3</b>	<b>13.6</b>
<b>Maximum At</b>	<b>Clairmont Lake (#28)</b>	<b>Jean Cote (#35)</b>	<b>Grande Prairie I (#27)</b>

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

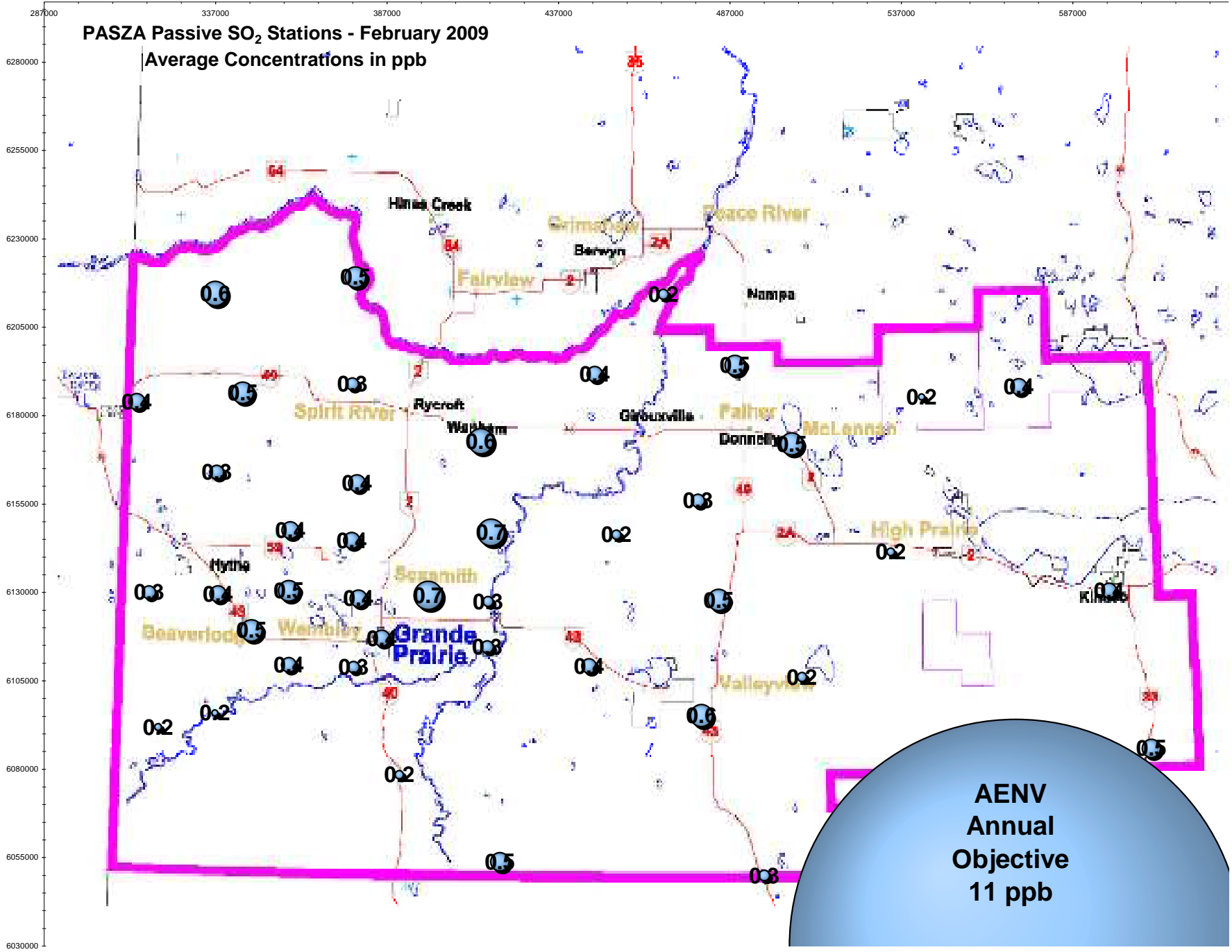
	SO <sub>2</sub>	O <sub>3</sub>	NO <sub>2</sub>
<b>PASZA Beaverlodge station</b>	<b>0.7</b>	<b>31.7</b>	<b>6.9</b>
<b>PASZA Beaverlodge passive</b>	<b>0.5</b>	<b>38.6</b>	<b>4.4</b>

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

	SO <sub>2</sub>	O <sub>3</sub>	NO <sub>2</sub>
<b>PASZA Henry Pirker station</b>	<b>0.7</b>	<b>19.8</b>	<b>19.5</b>
<b>PASZA Grande Prairie passive</b>	<b>0.5</b>	<b>27.5</b>	<b>11.8</b>

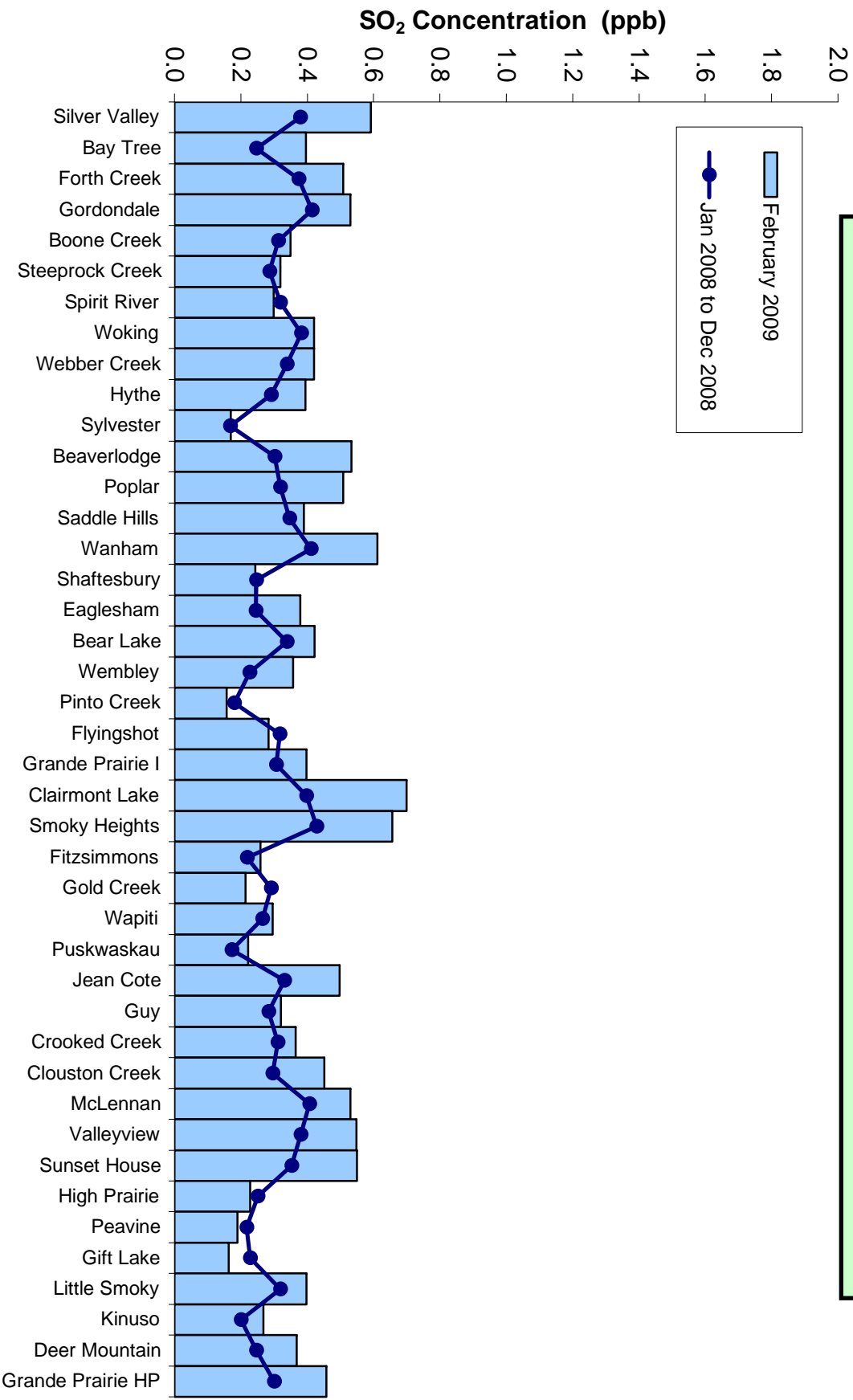
### Comparison between Continuous and Passive monitoring at Spirit River (passive #9 Spirit River)

	SO <sub>2</sub>	O <sub>3</sub>	NO <sub>2</sub>
<b>PASZA Portable Spirit River station</b>	<b>0.7</b>	<b>30.1</b>	<b>4.5</b>
<b>PASZA Spirit River passive</b>	<b>0.3</b>	<b>43.6</b>	<b>2.0</b>

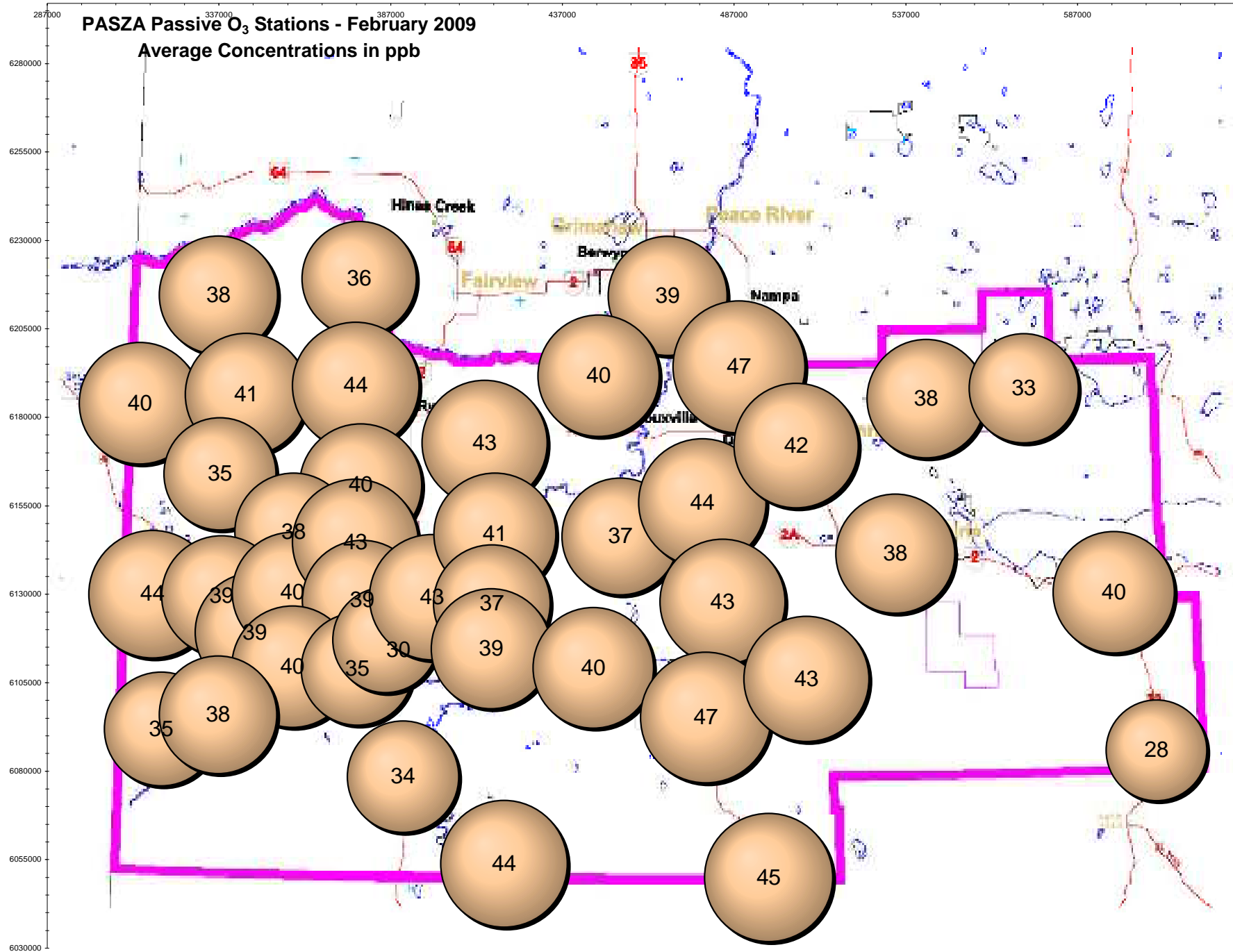


## SO<sub>2</sub> Bubble Chart

**Alberta Ambient Air Quality Objective - Annual SO<sub>2</sub> Objective is 11 ppb**

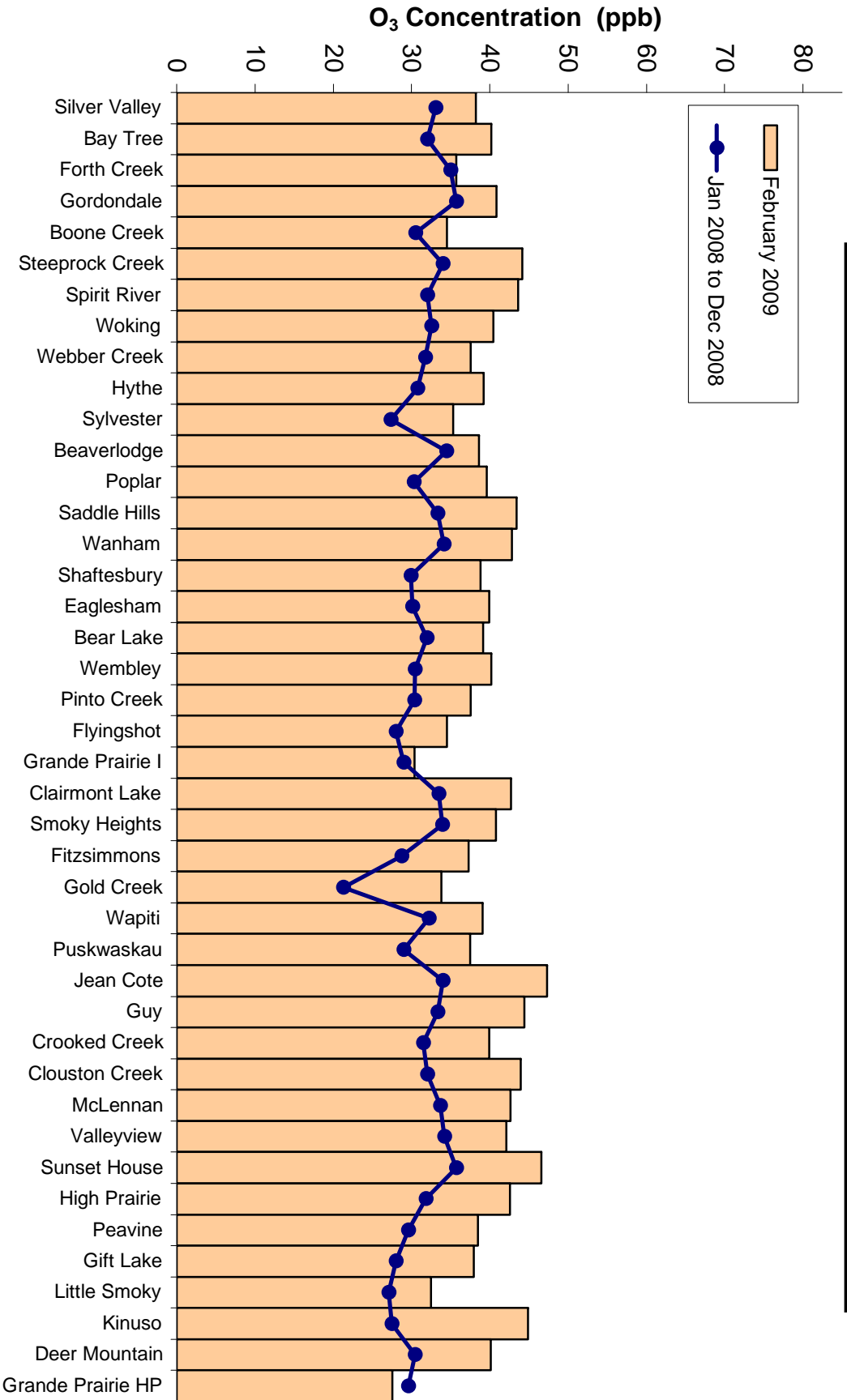


## SO<sub>2</sub> Summary Chart

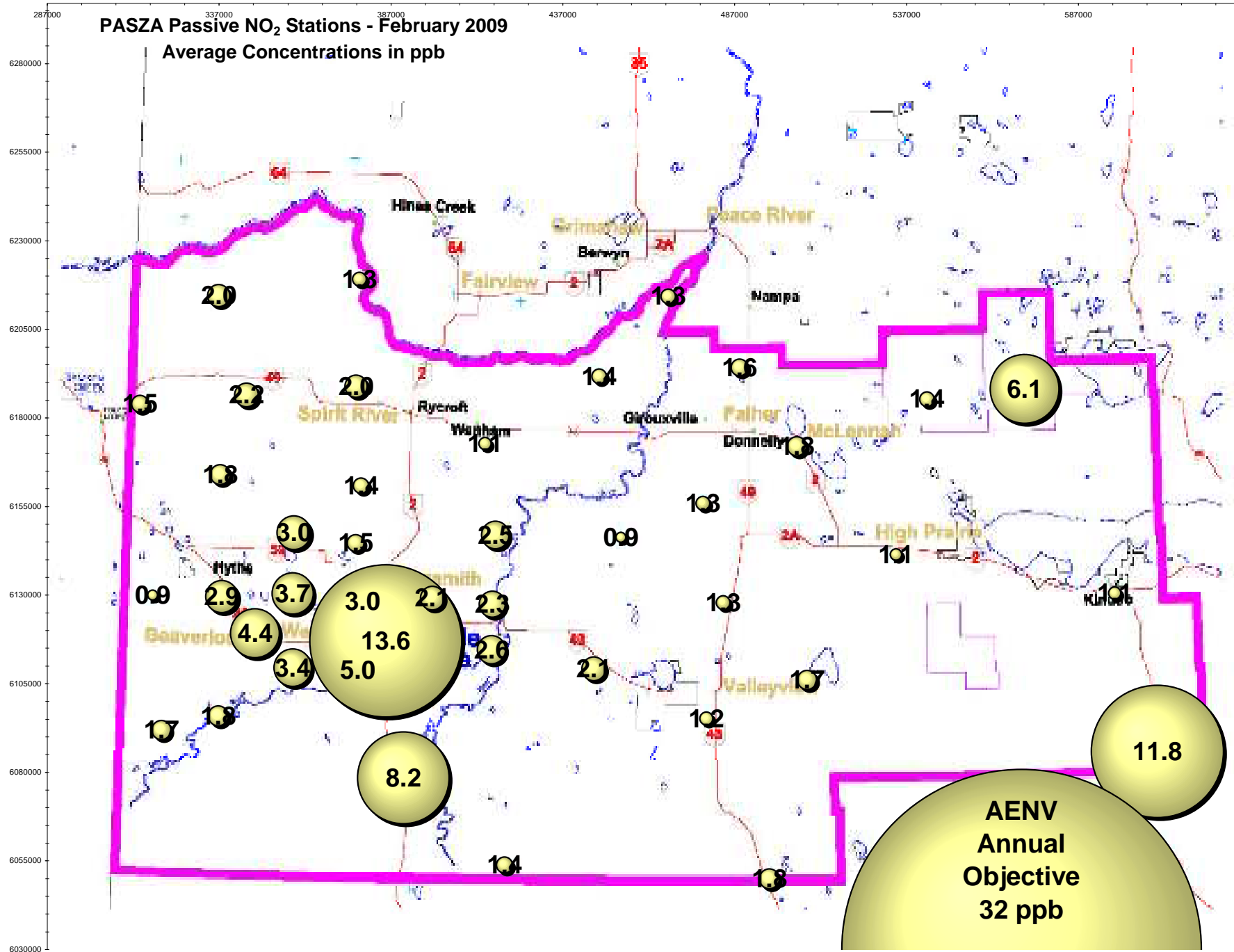


### O<sub>3</sub> Bubble Chart

Alberta Ambient Air Quality Objective - No Annual O<sub>3</sub> Objective



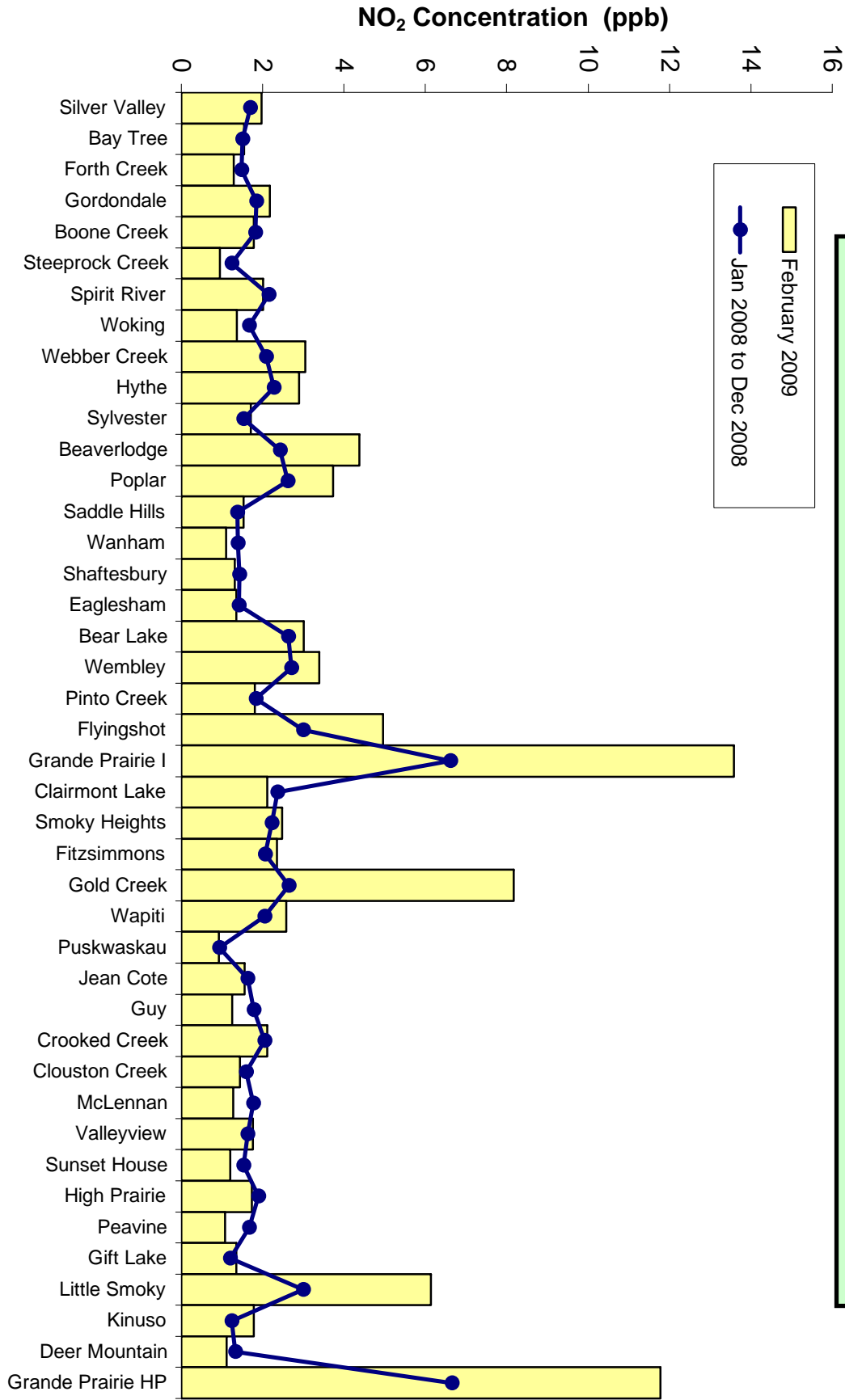
### O<sub>3</sub> Summary Chart





# NO<sub>2</sub> Bubble Chart

Alberta Ambient Air Quality Objective - Annual NO<sub>2</sub> Objective is 32 ppb



# NO<sub>2</sub> Summary Chart

# February 2009 Calibration Reports

**PASZA - Henry Pirker Station with the following calibrations:  
SO<sub>2</sub>, NO, NO<sub>2</sub>, NO<sub>x</sub>, O<sub>3</sub>, CO, THC, TRS & TEOM**

**PASZA – Evergreen Park Station with the following calibrations:  
SO<sub>2</sub>, TRS & TEOM**

**PASZA – Smoky Heights Station with the following calibrations:  
SO<sub>2</sub>, TRS & TEOM**

**PASZA – Beaverlodge Station with the following calibrations:  
SO<sub>2</sub>, NO, NO<sub>2</sub>, NO<sub>x</sub>, O<sub>3</sub> & TEOM**

**PASZA – Spirit River (Portable) Station with the following calibrations:  
SO<sub>2</sub>, TRS, NO, NO<sub>2</sub>, NO<sub>x</sub> & O<sub>3</sub>,**

**PASZA – Valleyview Station with the following calibrations:  
SO<sub>2</sub> & H<sub>2</sub>S**

# Calibration Report



Parameter **SO2**

Air Monitoring Network **PASZA**

## Station Information

Calibration Date	February 10, 2009	Previous Calibration	January 13, 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)	9:00	End Time (MST)	11:45
Barometric Pressure	0.927 ATM	Station Temperature	20.0 Deg C
Calibrator	Envionics 6100	Serial Number	3474
Cal Gas Conc	49.6 ppb	Cal Gas Cert Date	6/8/2008
		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	1.002809	Calculated slope	1.003187
Calculated intercept	-1.706753	Calculated intercept	-2.367036
Analyzer make	TEI 43C	Analyzer serial #	610816292

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	8.4		8.1	
Coefficient	.817		.826	
Pressure	649.8	mm Hg	649.1	mm Hg
Flow	0.539	lpm	0.542	lpm
Lamp Voltage	44215	Hz	44644	Hz

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.0	0.6	N/A
4989	39.85	393.0	393.1	0.9998
4989	19.91	197.2	200.1	0.9852
4989	9.95	98.7	102.3	0.9646
4988	0.00	0.0	-0.4	As Found Zero
4991	39.84	392.8	393.7	As Found Span
Average Correction Factor				0.9832

Calculated value of As Found Response: 393.6 ppb      Percent Change of As Found: -0.2%

	before calibration		after calibration	
Auto zero	-1.5	ppb	0.1	ppb
Auto span	305.0	ppb	306.2	ppb

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Calibration Performed By: Grover Christiansen

## Calibration Summary

Parameter **SO2**

Air Monitoring Network **PASZA**

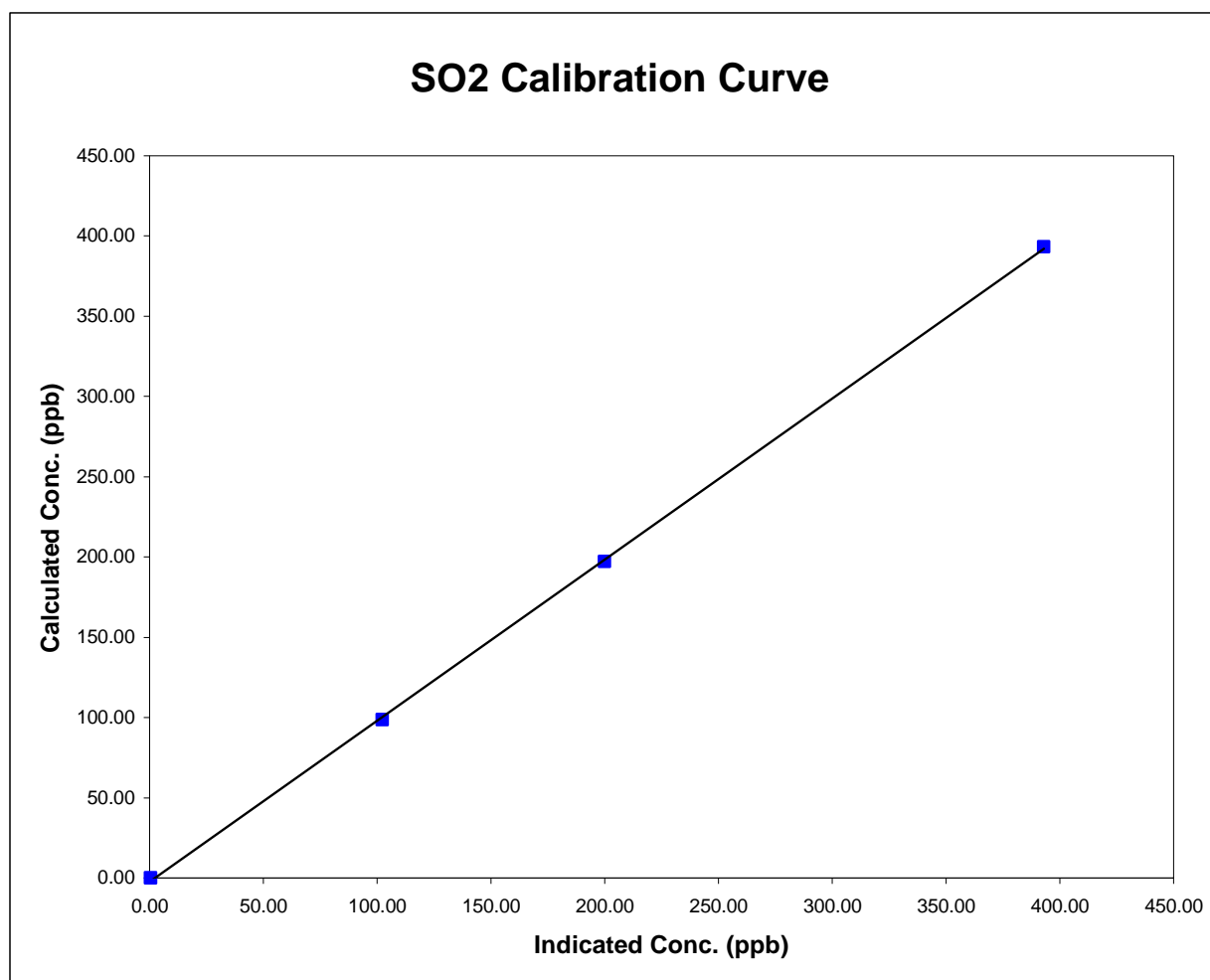


### Station Information

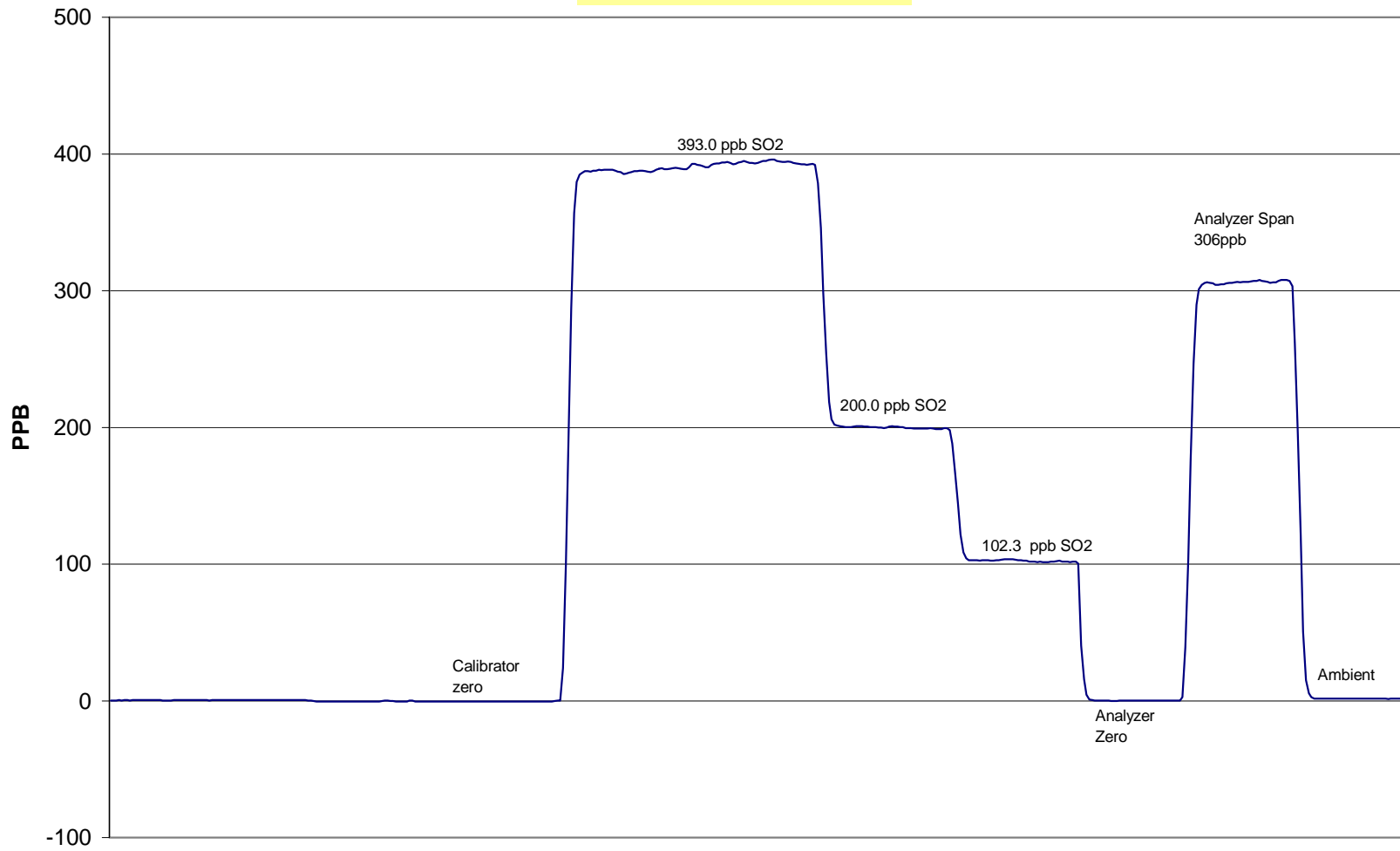
Calibration Date	February 10, 2009	Previous Calibration	January 13, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:00	End Time (MST)	11:45
Analyzer make/model	TEI 43C	Analyzer serial #	610816292

### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.6	N/A		
393.0	393.1	0.9998	Correlation Coefficient	0.999903
197.2	200.1	0.9852		
98.7	102.3	0.9646		
			Slope	1.003187
			Intercept	-2.367036



### Henry Pirker SO<sub>2</sub> Calibration



February 10, 2009

# Calibration Report

Parameter **NOx-NO-NO<sub>2</sub>**  
 Air Monitoring Network **PASZA**



## Station Information

Calibration Date **February 10, 2009** Previous Calibration **January 13, 2009**  
 Station Number **1** Station Location **Henry Pirker**

Reason:  Routine  Installation  Removal  Other: \_\_\_\_\_

Start Time (MST) **9:00** End Time (MST) **13:48**  
 Barometric Pressure **0.927** Atm Station Temperature **21.0** Deg C  
 Calibrator **EnviroNics 6100** Serial Number **3474**  
 NO Cal Gas Conc **49.6** ppm Cal Gas Cert Date **6/8/2008**  
 NOx Cal Gas Conc **49.6** ppm Cal Gas Cylinder # **AAL 15377**

## DACS Information

DACS make **FOCUS AP1000** DACS serial No. **45269**

Parameter		NO2	NOx	NO
Before	Data Slope	1.004640	1.005115	1.004515
	Data Offset	-0.107436	-2.663458	-2.520832
After	Data Slope	1.005491	1.007467	1.007710
	Data Offset	-0.001665	-2.990420	-2.934016
Channel #		8	6	7
Voltage Range		0 - 10 VDC	0 - 10 VDC	0 - 10 VDC

## Analyzer Information

Analyzer make/model **Teco 42C** Analyzer serial # **508011073**

Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO background	9.6	ppb	9.7	mV
NOx background	10.3	ppb	10.4	mV
NO coefficient	0.778		0.778	
NOx coefficient	1.001		1.001	
Chamber Temp	50.0	Deg C	49.7	Deg C
Cooler Temp	-2.6	Deg C	-2.5	Deg C
Converter Temp	319.0	Deg C	319.0	Deg C
Vacuum	184.6	mm Hg	187.4	mm Hg

Notes:

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# Calibration Report

Parameter **NO<sub>x</sub>-NO-NO<sub>2</sub>**  
 Air Monitoring Network **PASZA**



## Station Information

Calibration Date: **February 10, 2009**

Station Location: **Henry Pirker**

## Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NO <sub>x</sub> conc (ppb)	Calculated NO conc (ppb)	Calculated NO <sub>2</sub> conc (ppb)	Indicated NO <sub>x</sub> conc (ppb)	Indicated NO conc (ppb)	Indicated NO <sub>2</sub> conc (ppb)	NO <sub>x</sub> Correction factor	NO Correction factor
zero	4990	0.00	0.0	0.0	0.0	0.8	0.5	0.1	N/A	N/A
1	4989	39.85	393.0	393.0	0.0	391.9	391.6	-0.2	1.0028	1.0038
2	4989	19.91	197.2	197.2	0.0	199.8	200.1	0.4	0.9870	0.9854
3	4989	9.92	98.4	98.4	0.0	102.9	102.9	0.0	0.9562	0.9566
AFZ	4990	0.00	0.0	0.0	0.0	0.6	0.4	0.0	0.0000	0.0000
AFS	4990	39.85	393.0	393.0	0.0	399.2	398.9	0.3	0.9844	0.9851
Average Correction Factor									0.9820	0.9819

As Found Concentrations: NO<sub>x</sub>= 395.9 NO= 396.0 As Found Percent Change NO<sub>x</sub>= 0.8% NO= 0.8%

## GPT Calibration Data

Dilution Flow 4990 ccm Source Gas Flow 39.88 ccm

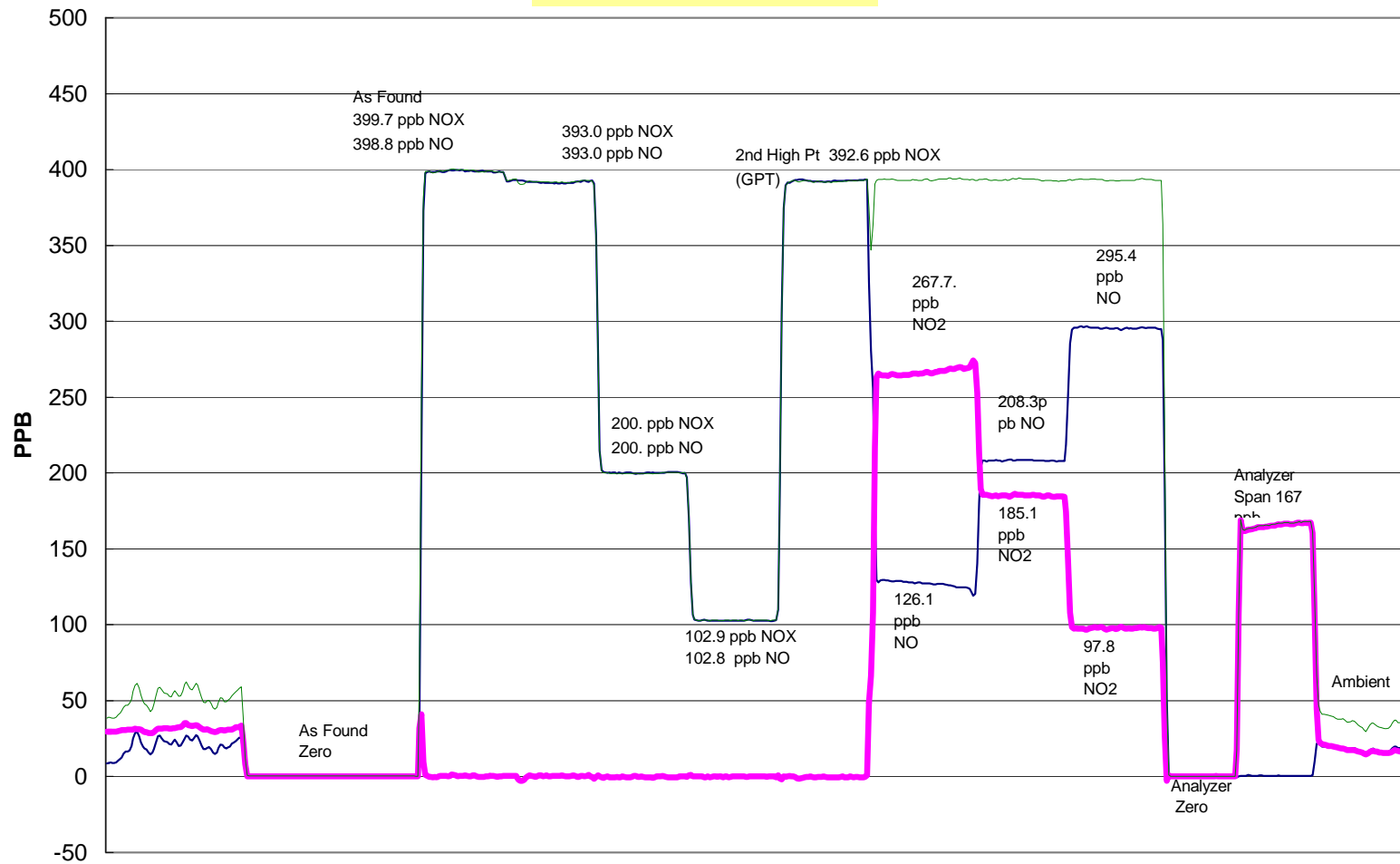
O <sub>3</sub> Setpoint (ppb)	Calculated NO <sub>x</sub> conc (ppb)	Calculated NO conc (ppb)	Calculated NO <sub>2</sub> conc (ppb)	Indicated NO <sub>x</sub> conc (ppb)	Indicated NO conc (ppb)	Indicated NO <sub>2</sub> conc (ppb)	NO <sub>x</sub> Correction factor	NO Correction factor	NO <sub>2</sub> Correction factor	Converter Efficiency
0	0.0	0.0	0.0	0.0	0.0	0.0	N/A	N/A	N/A	N/A
NO point	393.3	392.7	0.6	392.3	392.6	-0.3	1.0024	1.0002	N/A	N/A
300	393.3	124.2	269.1	393.6	126.1	267.7	0.9992	0.9844	1.0052	99.5%
200	393.3	207.0	186.2	393.3	208.3	185.2	0.9999	0.9936	1.0055	99.5%
100	393.3	294.7	98.6	393.0	295.4	97.8	1.0006	0.9978	1.0073	99.3%
Average Correction Factor							0.9999	0.9920	1.0060	99.4%

## AIC Data

Parameter	Previous calibration				Current calibration			
	NO <sub>x</sub>	NO <sub>2</sub>	NO		NO <sub>x</sub>	NO <sub>2</sub>	NO	
Auto zero	1.9	1.0	1.0	ppb	0.8	1.0	1.8	ppb
Auto span	168.5	170.1	-1.5	ppb	165.1	167.1	-2.4	ppb

Calibration Performed By: Grover Christiansen

### Henry Pirker NO<sub>x</sub> Calibration



February 10, 2009



## Calibration Summary

Parameter **NO<sub>2</sub>**

Air Monitoring Network **PASZA**



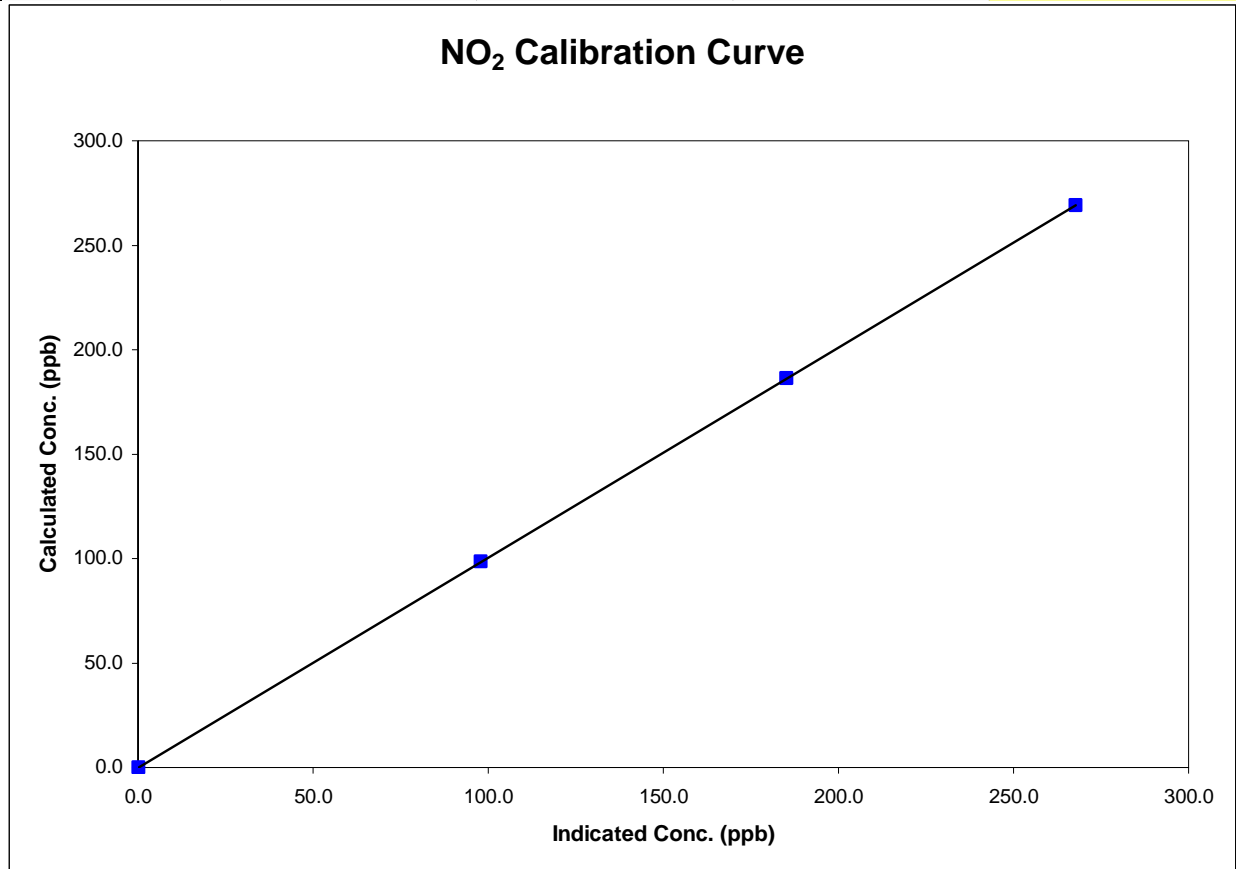
### Station Information

Calibration Date	February 10, 2009	Previous Calibration	January 13, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:00	End Time (MST)	13:48
Analyzer make	Teco 42C	Analyzer serial #	508011073

### Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	0.0000	Correlation Coefficient	0.999999
269.1	267.7	1.0052		
186.2	185.2	1.0055	Slope	1.005491
98.6	97.8	1.0073		
			Intercept	-0.001665

**NO<sub>2</sub> Calibration Curve**



## Calibration Summary

Parameter **NO<sub>x</sub>**

Air Monitoring Network **PASZA**



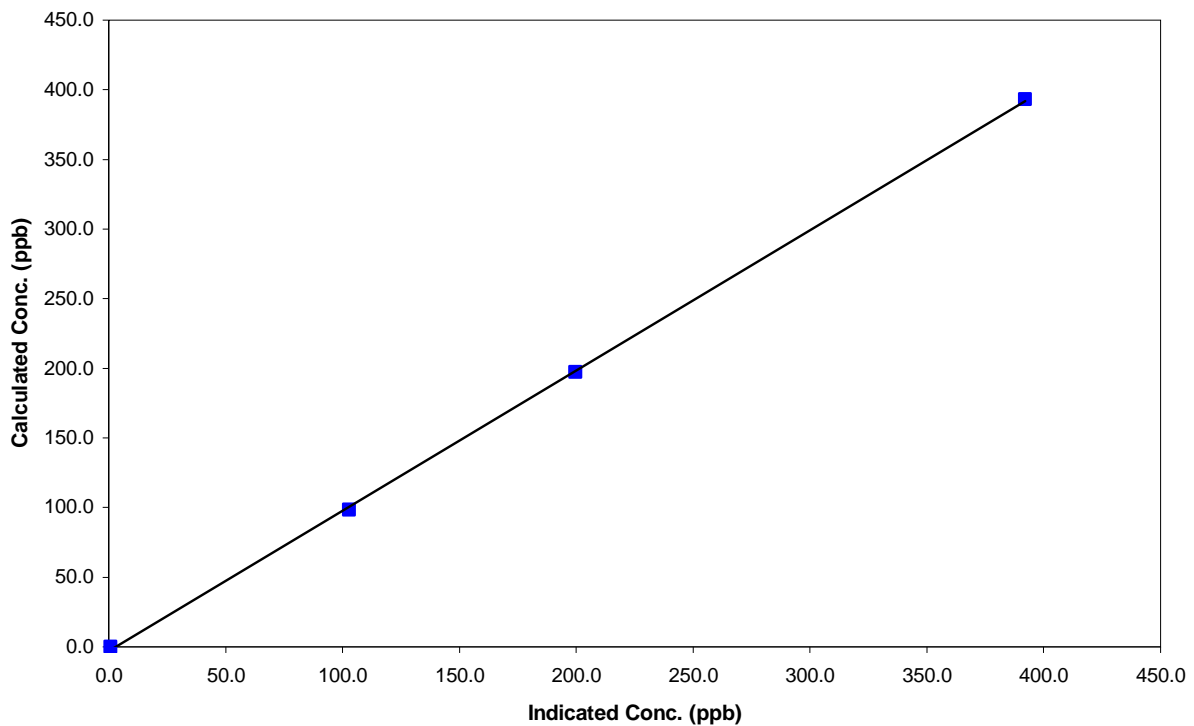
### Station Information

Calibration Date	February 10, 2009	Previous Calibration	January 13, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:00	End Time (MST)	13:48
Analyzer make	Teco 42C	Analyzer serial #	508011073

### Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.8	0.0000	Correlation Coefficient	0.999849
393.0	391.9	1.0028		
197.2	199.8	0.9870	Slope	1.007467
98.4	102.9	0.9562		
			Intercept	-2.990420

### NO<sub>x</sub> Calibration Curve



## Calibration Summary

Parameter **NO**

Air Monitoring Network **PASZA**



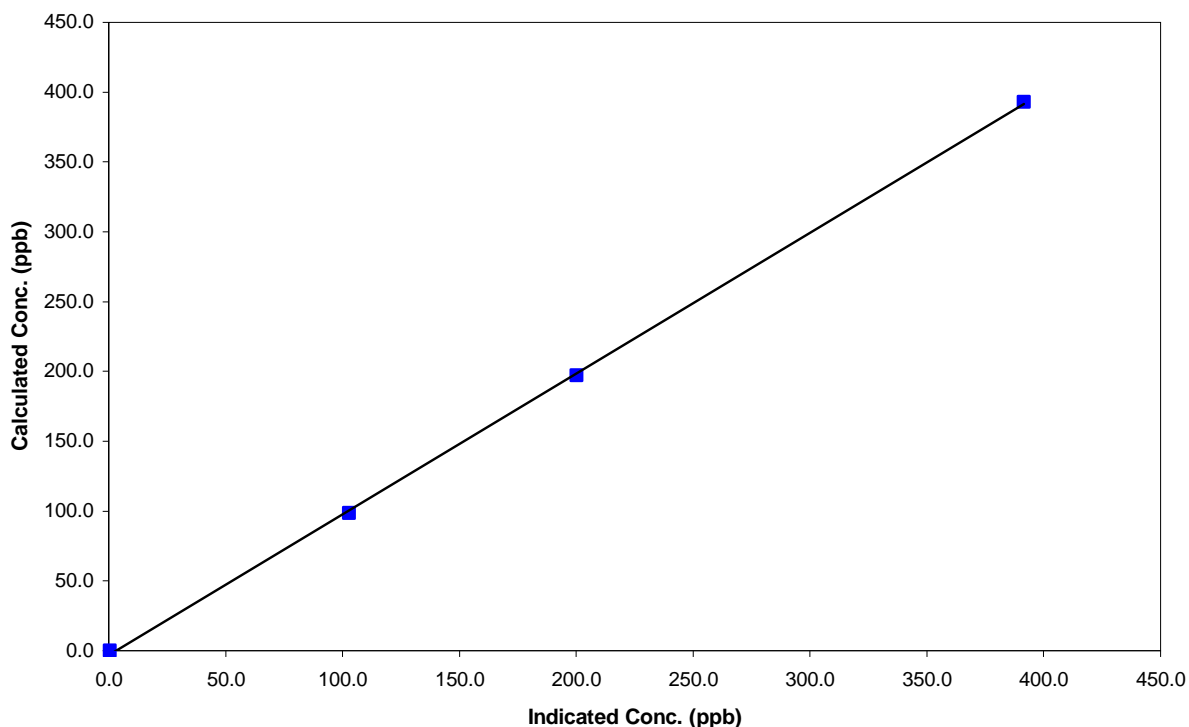
### Station Information

Calibration Date	February 10, 2009	Previous Calibration	January 13, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:00	End Time (MST)	13:48
Analyzer make	Teco 42C	Analyzer serial #	508011073

### Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A		
393.0	391.6	1.0038	Correlation Coefficient	0.999813
197.2	200.1	0.9854		
98.4	102.9	0.9566	Slope	1.007710
			Intercept	-2.934016

### NO Calibration Curve



# Calibration Report



Parameter                     O3                      
 Air Monitoring Network                     PASZA                    

## Station Information

Calibration Date	<u>February 10, 2009</u>	Previous Calibration	<u>January 13, 2009</u>
Station Number	<u>1</u>	Station Location	<u>Henry Pirker</u>
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	<input type="text"/>
Start Time (MST)	<u>12:20</u>	End Time (MST)	<u>16:25</u>
Barometric Pressure	<u>0.927 atm</u>	Station Temperature	<u>20.0 Deg C</u>
Calibrator	<u>EnviroNics 6103</u>	Serial Number	<u>2844</u>
Cal Gas Concentration	<u>NA</u>	Cal Gas Expiry Date	<u>NA</u>
DACS make	<u>Focus AP1000</u>	DACS serial No.	<u>45269</u>
DACS voltage range	<u>0 - 1 volt</u>	DACS channel #	<u>5</u>
	<u>Before</u>		<u>After</u>
Calculated slope	<u>1.035038</u>	Calculated slope	<u>1.000958</u>
Calculated intercept	<u>0.802469</u>	Calculated intercept	<u>2.115313</u>
Analyzer make	<u>TECO 49C</u>	Analyzer serial #	<u>607415761</u>

	before		after	
Concentration range	500	ppb	500	ppb
offset	-0.6	ppb	-0.6	ppb
slope	0.966		1.064	
O3 Lamp temp	70.9	Deg C	71	Deg C
Intensities	90775/74288	mV	92523/75701	mV
Pressure	695.4	inches Hg	699.1	inches Hg
Flow A	0.722	ccm	0.724	ccm
Flow B	0.733	Deg C	0.735	Deg C

## Calibration Data

Referenced concentration (ppb)	Dilution air flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
0	4988	0.0	0.1	N/A
300	4988	270.5	270.2	1.0012
200	4988	185.5	181.4	1.0224
100	4988	98.2	93.5	1.0502
0	4988	0.0	-0.3	As found zero
300	4988	287.7	270.9	As found span
Average Correction Factor				1.0246

Calculated value of As Found Response: 281.5 ppm      Percent Change of As Found: -2.1%

	before calibration		after calibration	
Auto zero	1.5	ppb	0.3	ppb
Auto span	102.9	ppb	130.4	ppb

Notes: \_\_\_\_\_

Calibration Performed By: Grover Christiansen

## Calibration Summary

Parameter **O3**

Air Monitoring Network **PASZA**

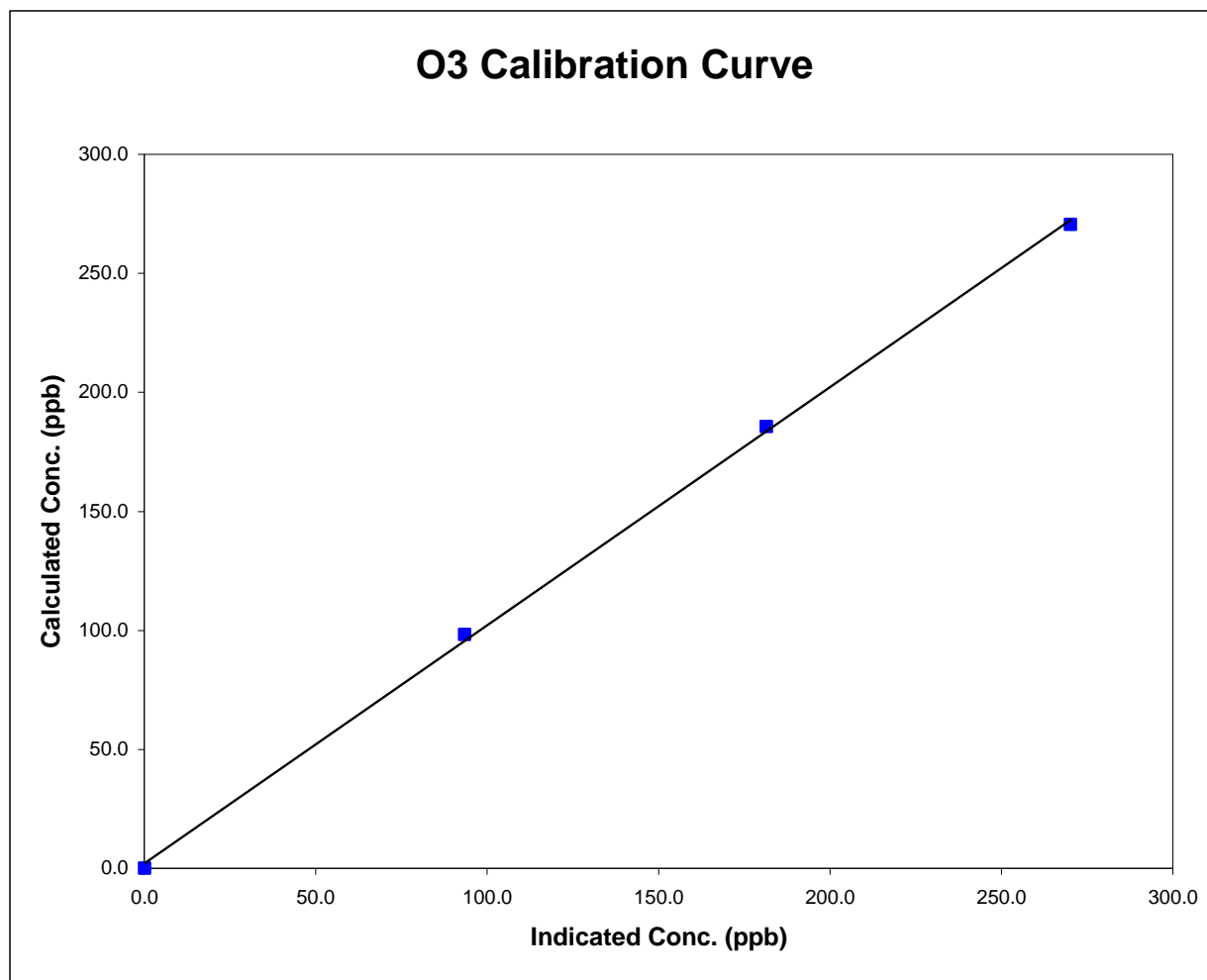


### Station Information

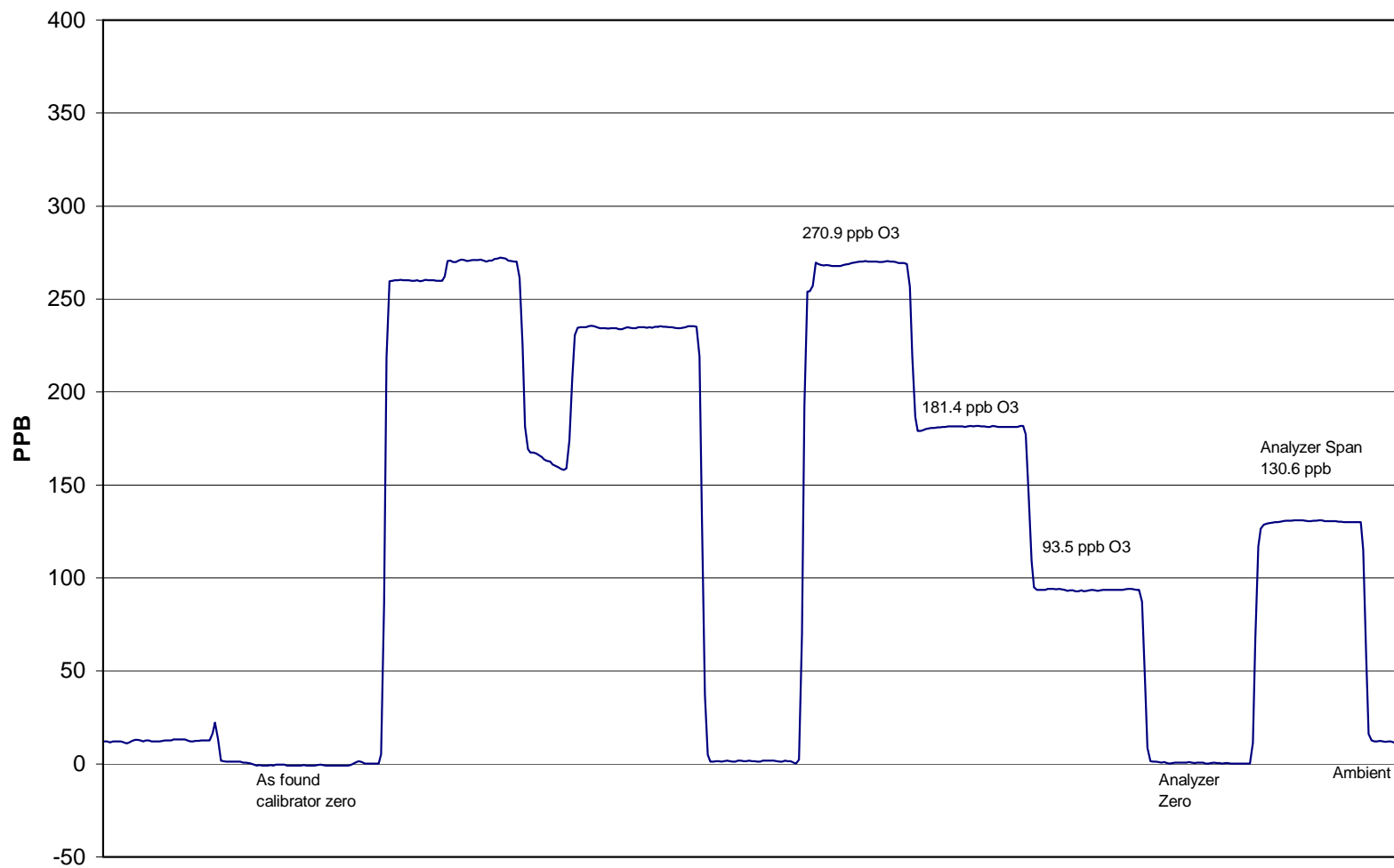
Calibration Date	February 10, 2009	Previous Calibration	January 13, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:20	End Time (MST)	16:17
Analyzer make/model	TECO 49C	Analyzer serial #	607415761

### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	NA		
270.5	270.2	1.0012	Correlation Coefficient	0.999543
185.5	181.4	1.0224		
98.2	93.5	1.0502	Slope	1.000958
			Intercept	2.115313



### Henry Pirker O<sub>3</sub> Calibration



February 10, 2009

# Calibration Report



Parameter **CO**  
 Air Monitoring Network **PASZA**

## Station Information

Calibration Date	February 11, 2009	Previous Calibration	January 14, 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)	9:00	End Time (MST)	12:23
Barometric Pressure	0.935 ATM	Station Temperature	20.0 Deg C
Calibrator	Envionics 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	0.999691	Calculated slope	1.019167
Calculated intercept	-0.781199	Calculated intercept	-0.143737
Analyzer make	TEI Model 48C	Analyzer serial #	508011062

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO span setting	1.029		1.017	
CO zero setting	4.199		.808	
Sample pressure	686.5	mm Hg	679.1	mm Hg
Sample Flow	1.15	LPM	1.12	LPM

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4991	0.00	0.00	0.04	N/A
4991	39.82	23.74	23.39	1.0151
4991	19.88	11.90	11.86	1.0036
4991	9.94	5.96	6.10	0.9776
4990	0.00	0.00	0.86	As Found Zero
4990	39.86	23.77	23.39	As Found Span
Average Correction Factor				0.9988

Calculated value of As Found Response: 21.741 ppm      Percent Change of As Found: 8.6%

	before calibration		after calibration	
Auto zero	-0.01	ppm	0.03	ppm
Auto span	19.41	ppm	19.64	ppm

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Calibration Performed By: Grover Christiansen

## Calibration Summary

Parameter **CO**

Air Monitoring Network **PASZA**

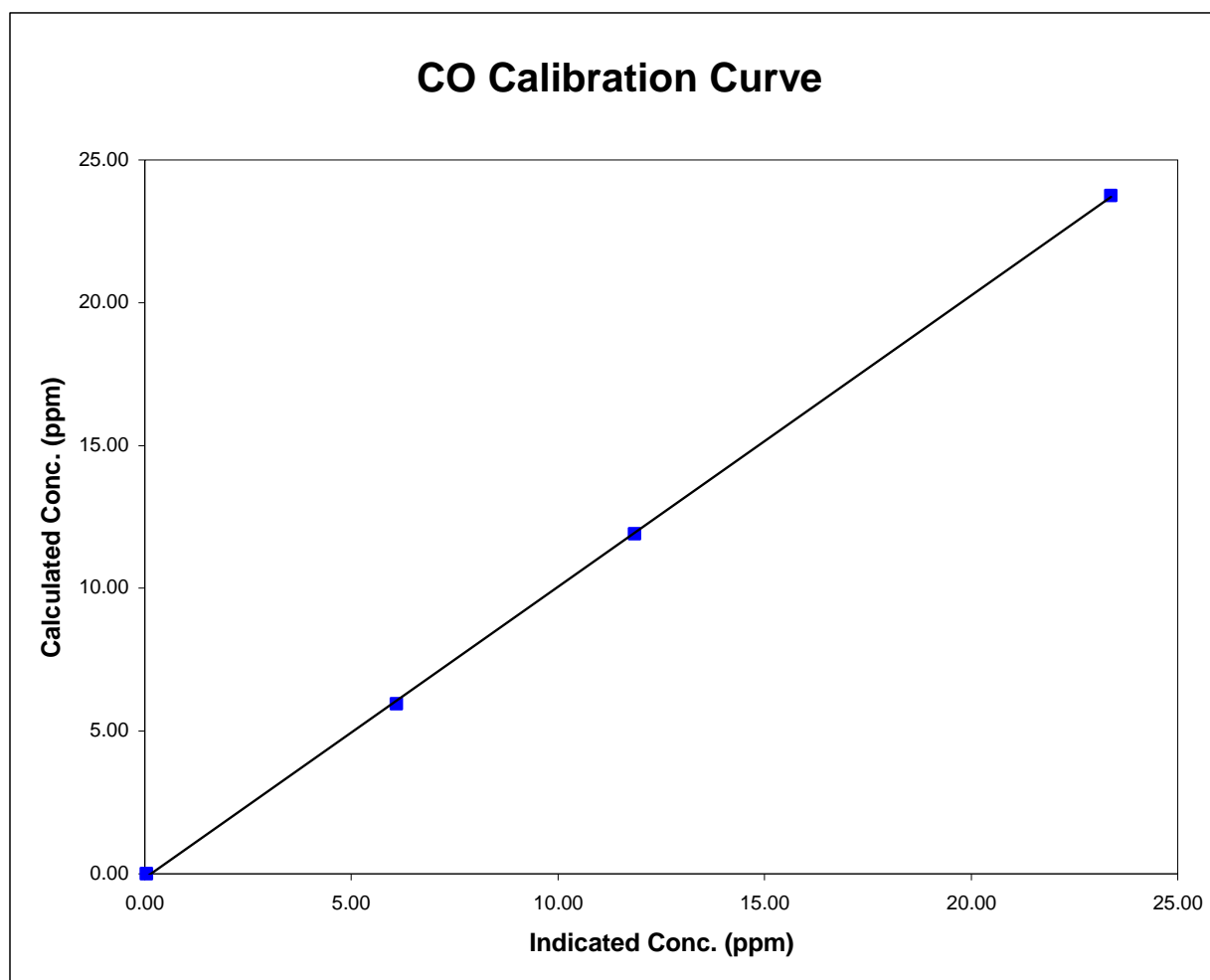


### Station Information

Calibration Date	February 11, 2009	Previous Calibration	January 14, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:00	End Time (MST)	12:33
Analyzer make/model	TEI Model 48C	Analyzer serial #	508011062

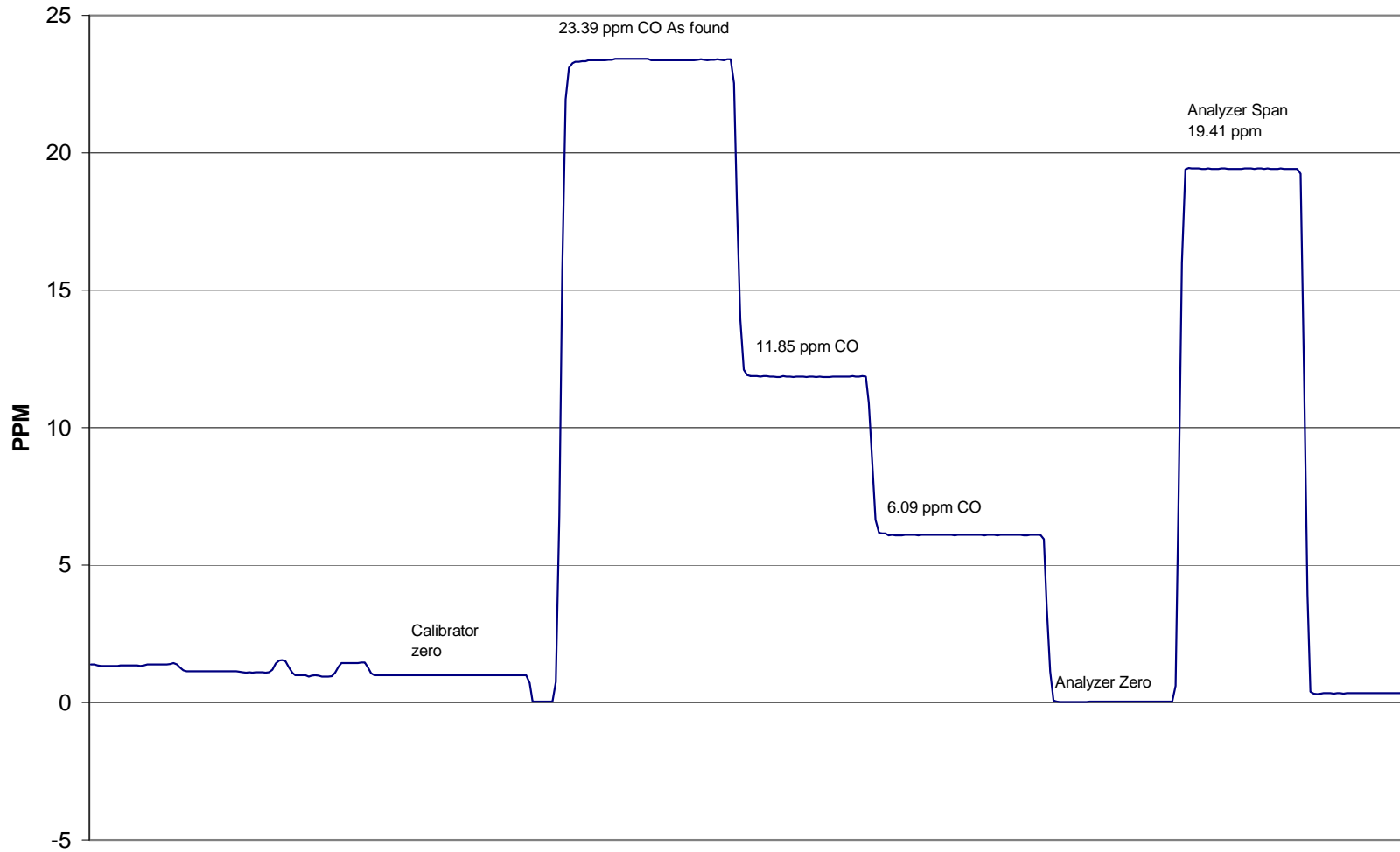
### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.042	N/A		
23.744	23.390	1.0151	Correlation Coefficient	0.999915
11.902	11.859	1.0036		
5.960	6.096	0.9776	Slope	1.019167
			Intercept	-0.143737





### Henry Pirker CO Calibration



February 11, 2009

# Calibration Report



Parameter **THC**

Air Monitoring Network **PASZA**

## Station Information

Calibration Date	February 11, 2009	Previous Calibration	January 14, 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)	11:50	End Time (MST)	15:00
Barometric Pressure	0.932 ATM	Station Temperature	20.0 Deg C
Calibrator	Envionics 6100	Serial Number	3474
Cal Gas Concentration	701 ppm CH4/ 299 ppm C3H8	Cal Gas Expiry Date	2/4/2010
Cal Gas CH4 equiv	1523.25 ppm	Cal Gas Cylinder #	ALM 005412
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	9
	<u>Before</u>		<u>After</u>
Calculated slope	0.999809	Calculated slope	0.996536
Calculated intercept	-0.211860	Calculated intercept	0.005032
Analyzer make	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

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

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.00	0.07	N/A
4988	69.75	21.01	21.14	0.9936
4989	29.88	9.07	8.93	1.0158
4988	9.92	3.02	3.05	0.9910
4988	0.00	0.00	-0.10	As Found Zero
4988	69.82	21.03	20.92	As Found Span
Average Correction Factor				1.0001

Calculated value of As Found Response: 20.808 ppm      Percent Change of As Found: 1.0%

	before calibration		after calibration	
Auto zero	-0.10	ppm	0.02	ppm
Auto span	24.18	ppm	23.19	ppm

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Calibration Performed By: Grover Christiansen

## Calibration Summary

Parameter **THC**

Air Monitoring Network **PASZA**

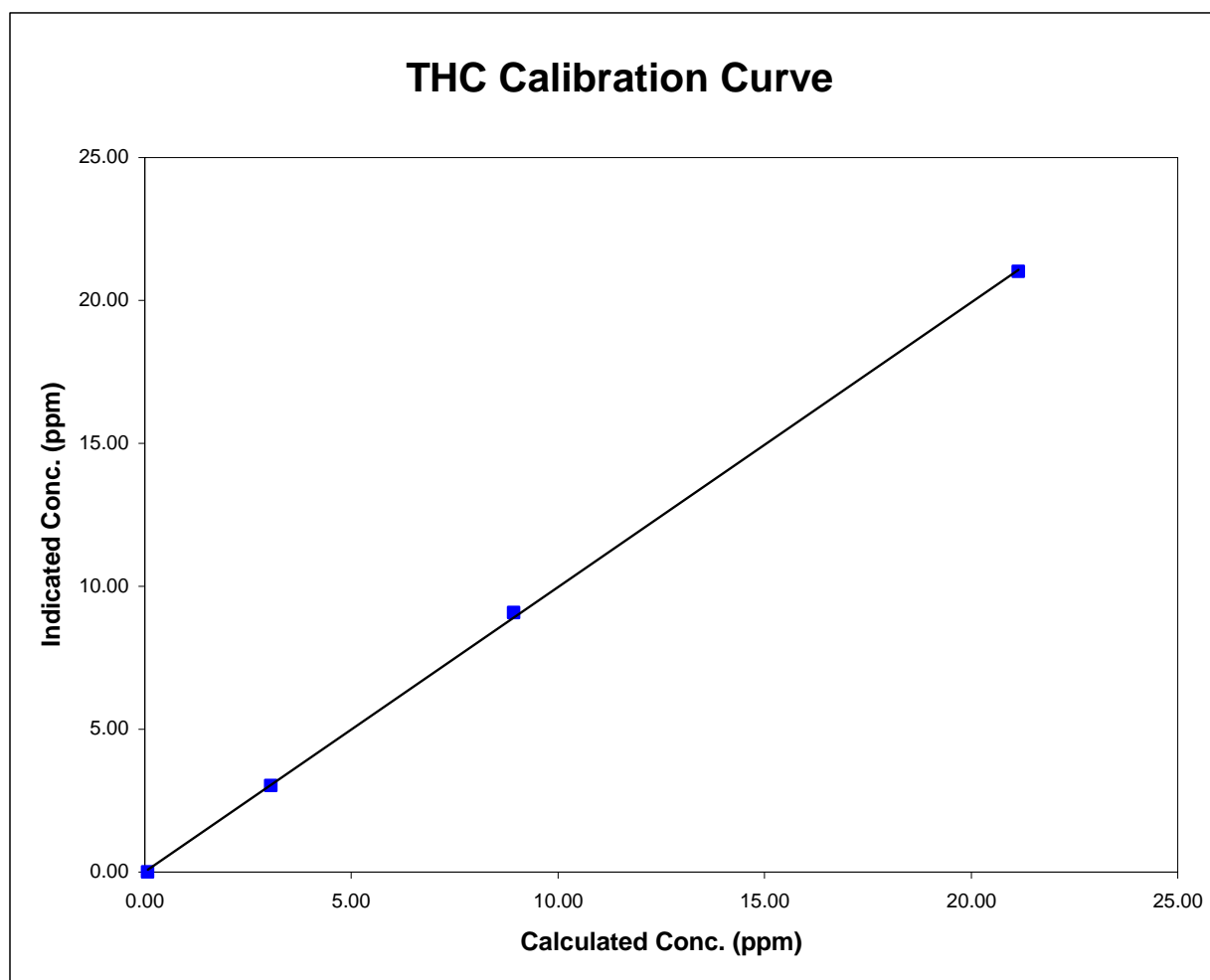


### Station Information

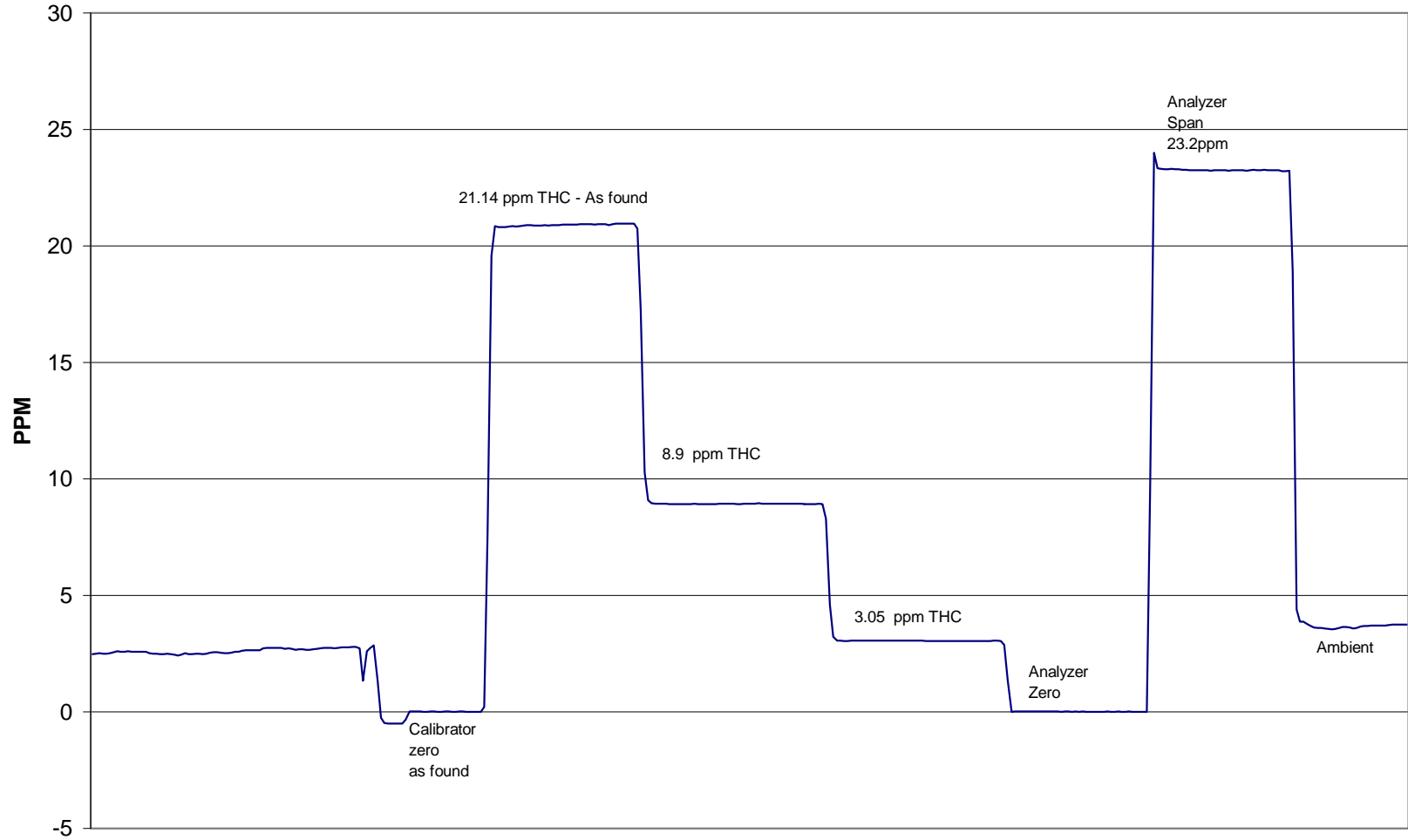
Calibration Date	February 11, 2009	Previous Calibration	January 14, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	11:50	End Time (MST)	15:00
Analyzer make/model	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.073	N/A		
21.007	21.142	0.9936	Correlation Coefficient	0.999849
9.069	8.927	1.0158		
3.023	3.051	0.9910	Slope	0.996536
			Intercept	0.005032



### Henry Pirker THC Calibration



February 11, 2009

# Calibration Report



Parameter **TRS**

Air Monitoring Network **PASZA**

## Station Information

Calibration Date	February 10, 2009	Previous Calibration	January 13, 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)	15:00	End Time (MST)	17:30
Barometric Pressure	0.927 ATM	Station Temperature	20.0 Deg C
Calibrator	Envionics 6100	Serial Number	3474
Cal Gas Conc	5.1 ppb	Cal Gas Expiry Date	7/31/2008
		Cal Gas Cylinder #	ALM013295
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	1.005719	Calculated slope	1.007254
Calculated intercept	-0.481442	Calculated intercept	-0.419175
Analyzer make	TEI 45C	Analyzer serial #	630718528

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Coefficient	0.850		0.871	
Background	17.0		18.0	
Pressure	654.9	mm Hg	653	mm Hg
Flow	465	ccm	462	ccm
Lamp Voltage	847	v	848	v

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.00	-0.03	N/A
4988	79.83	80.34	80.02	1.0039
4988	39.81	40.38	40.69	0.9924
4988	9.92	10.12	10.87	0.9309
4988	0.00	0.00	-0.16	As Found Zero
4988	79.77	80.28	79.58	As Found Span
Average Correction Factor				0.9757

Calculated value of As Found Response: 79.7 ppb      Percent Change of As Found: 0.7%

	before calibration		after calibration	
Auto zero	-0.25	ppb	-0.12	ppb
Auto span	25.55	ppb	27.27	ppb

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Calibration Performed By: Grover Christiansen

## Calibration Summary

Parameter **TRS**

Air Monitoring Network **PASZA**

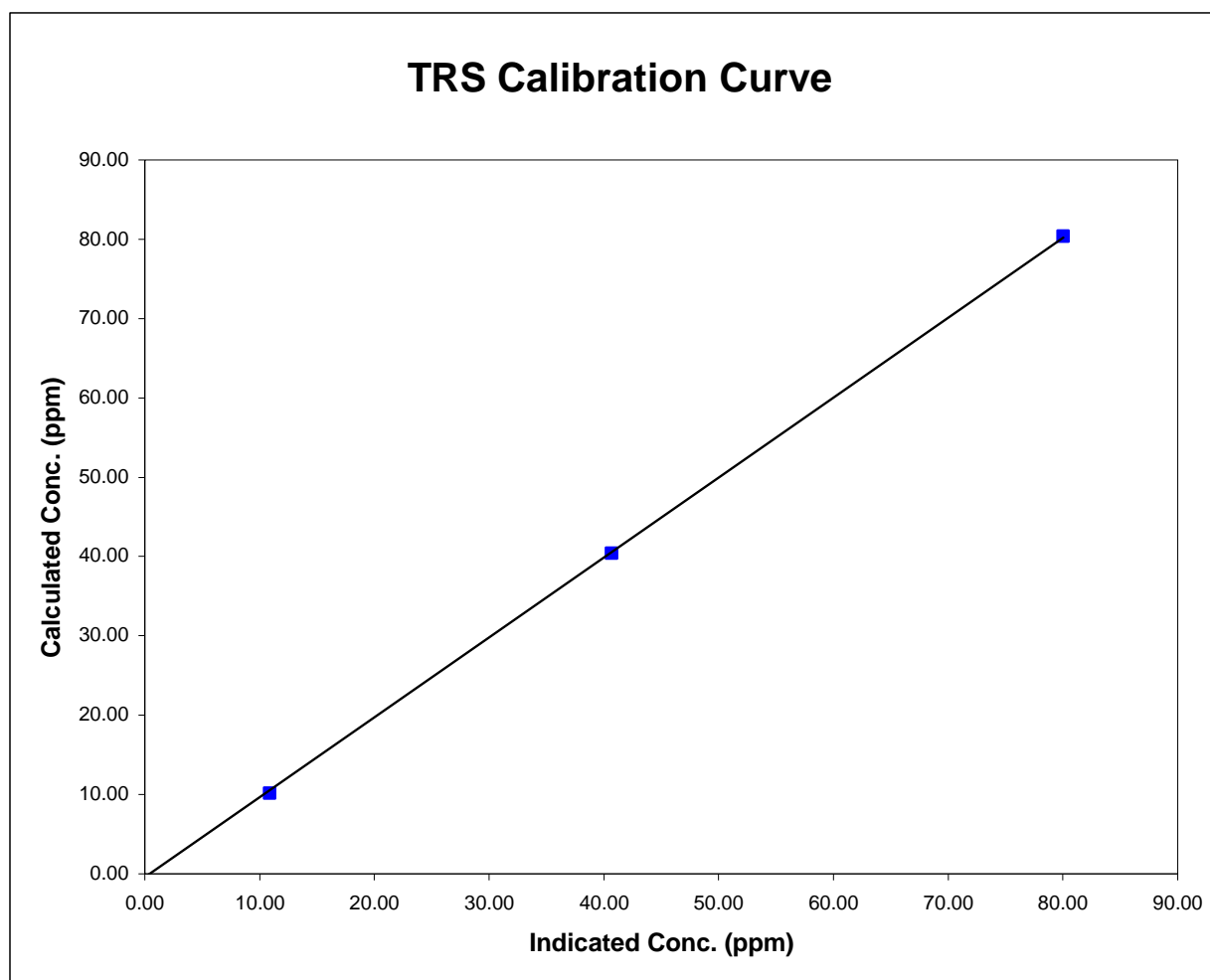


### Station Information

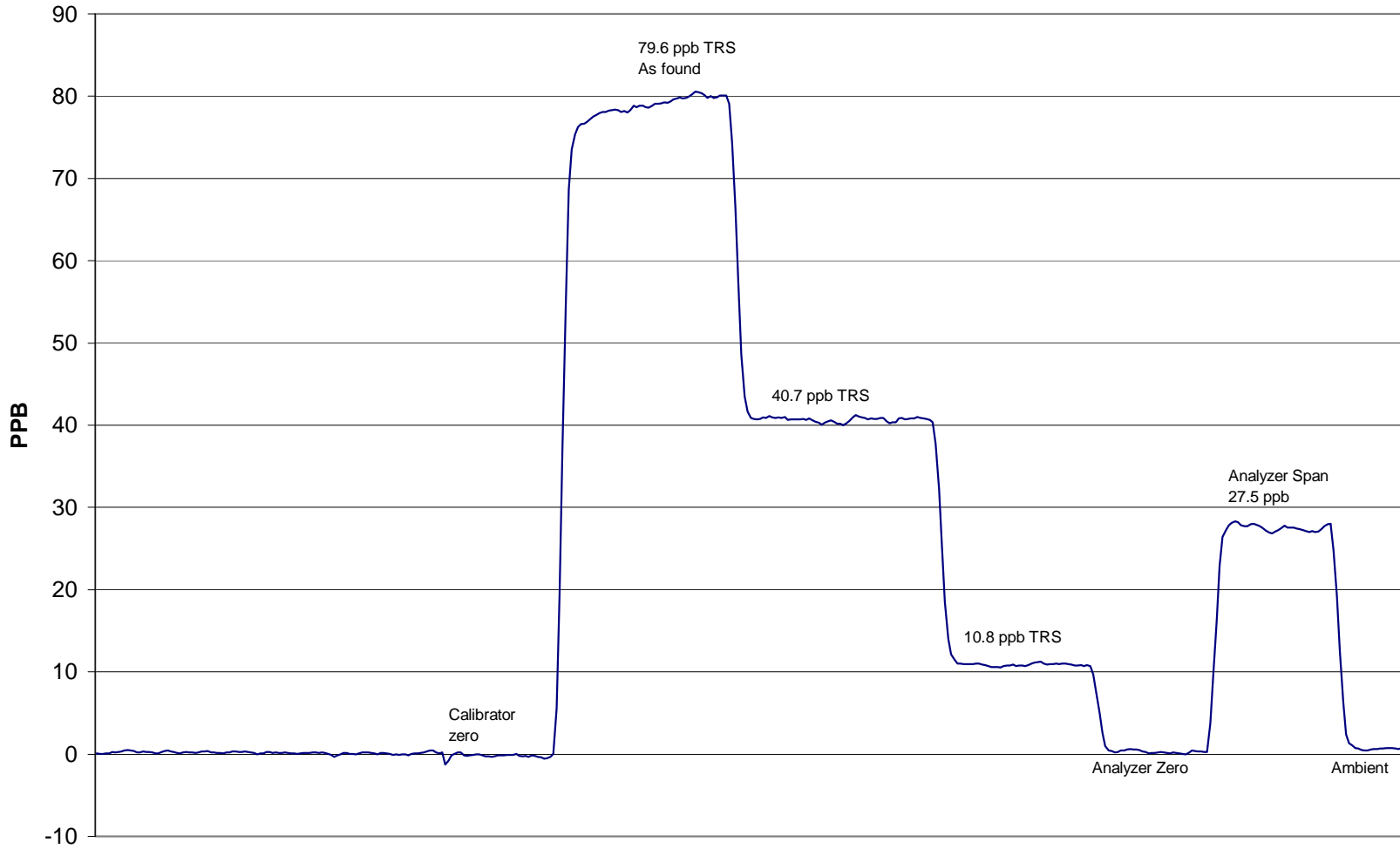
Calibration Date	February 10, 2009	Previous Calibration	January 13, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	15:00	End Time (MST)	17:30
Analyzer make/model	TEI 45C	Analyzer serial #	630718528

### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	-0.027	N/A		
80.337	80.025	1.0039	Correlation Coefficient	0.999891
40.382	40.692	0.9924		
10.123	10.874	0.9309	Slope	1.007254
			Intercept	-0.419175



### Henry Pirker TRS Calibration



February 10, 2009

**PERFORMANCE AUDIT  
OF  
PM 2.5 MONITOR**

STATION: Henry Pirker

OPERATOR: Grover Christiansen

DATE: 11-Feb-09

LOCATION: PASZA - Grande Prairie

MONITOR INFO / PARAMETER VALUES:

Make/Model	TEOM AB
Configuration	PM2.5
Serial Number	AMJ 1697
Site Number	1
Inlet Type	PM 10 / SCC
FAdj. Main Setting	1.015
FAdj. Aux. Setting	1.015
T-Case Indicated / Set Point	40/40
T-Air Indicated / Set Point	40/40
T-Cap Indicated / Set Point	40/40
Splitter Assembly Alignment (cm)	15.5

( vs. specified depth of 15.5 cm from top of flow tube to top of concentric 1/2 in. tube )

RECENT CALIBRATION AND AUDIT HISTORY

Audit
Audit
Calibration

PUMP CAPACITY CHECK *	PASS
-----------------------	------

\* capacity to maintain flow rate at or near set point at simulated 90% filter loading. "FAIL" indicates that pump requires service.

LEAK CHECK	Indicated Flow (lpm)	
	Main	Auxiliary
PUMP ON	0.07	0.25
PUMP OFF	0.00	-0.01
NET	0.07	0.26
<b>LIMITS</b>	<b>&lt;0.15</b>	<b>&lt;0.65</b>

	Ambient Temp. ( <sup>o</sup> C)	Ambient Pres. (atm)	Ko *	Bypass flow (lpm)	Sample flow (lpm)
SET POINT ( S )	na	na	13020	13.67	3.00
INDICATED ( I )	-9.7	944	13020	13.67	3.00
MEASURED ( M )	-8.9	940	12946	13.69	2.999
	( M - I )		( M - S ) / S *100		
DIFFERENCE	0.8	-4.000	-0.6	0.1	0.0
<b>LIMITS</b>	<b>± 5<sup>o</sup> C</b>	<b>± 0.013 atm</b>	<b>± 2.5 %</b>	<b>± 10 %</b>	<b>± 10 %</b>

**COMMENTS:**

Pass - Monitor is within limits.

Measured barometric pressure of 940 hPa = .928 converted to atm.



# Calibration Report



Parameter **SO<sub>2</sub>**  
 Air Monitoring Network **PASZA**

## Station Information

Calibration Date	February 18, 2009	Previous Calibration	January 27, 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)	11:00	End Time (MST)	14:28
Barometric Pressure	0.935 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	50.3 ppm	Cal Gas Expiry Date	1/2/2009
Correction factor	0.031783	Cal Gas Cylinder #	LL16161
DACS make	Focus AP1000	DACS serial No.	52620
DACS voltage range	0 - 10 volt	DACS channel #	6
	Before		After
Calculated slope	1.018378	Calculated slope	1.006986
Calculated intercept	-2.604355	Calculated intercept	-2.734579
Analyzer make	Teco 43i	Analyzer serial #	701120008

	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
Background	10.1		10.2	
coefficient	1		1	
Lamp Voltage	835	volts	836	volts
Chamber Temp	45.3	Deg C	45.3	Deg C
Perm Gas Temp	44.99	Deg C	44.99	Deg C
Pressure	671.6	mm Hg	671.7	mm Hg
Sample Flow	452	ccm	453	ccm
Lamp Intensity	89	%	90	%

## Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4990	0.0	0.00	1.0	N/A
4989	39.83	398.39	397.4	1.0025
4989	19.88	199.64	202.0	0.9883
4989	9.93	99.92	103.5	0.9652
4990	0.0	0.00	0.8	As Found Zero
4988	39.82	398.37	397.4	As Found Span
Average Correction Factor				0.9853

Calculated value of As Found Response: 401.256 ppm      Percent Change of As Found: -0.7%

	before calibration		after calibration	
Auto zero	-1.4	ppm	-1.4	ppm
Auto span	268.0	ppm	269.0	ppm

Notes: \_\_\_\_\_  
 \_\_\_\_\_

Calibration Performed By: Grover Christiansen

## Calibration Summary

Parameter **SO2**

Air Monitoring Network **PASZA**

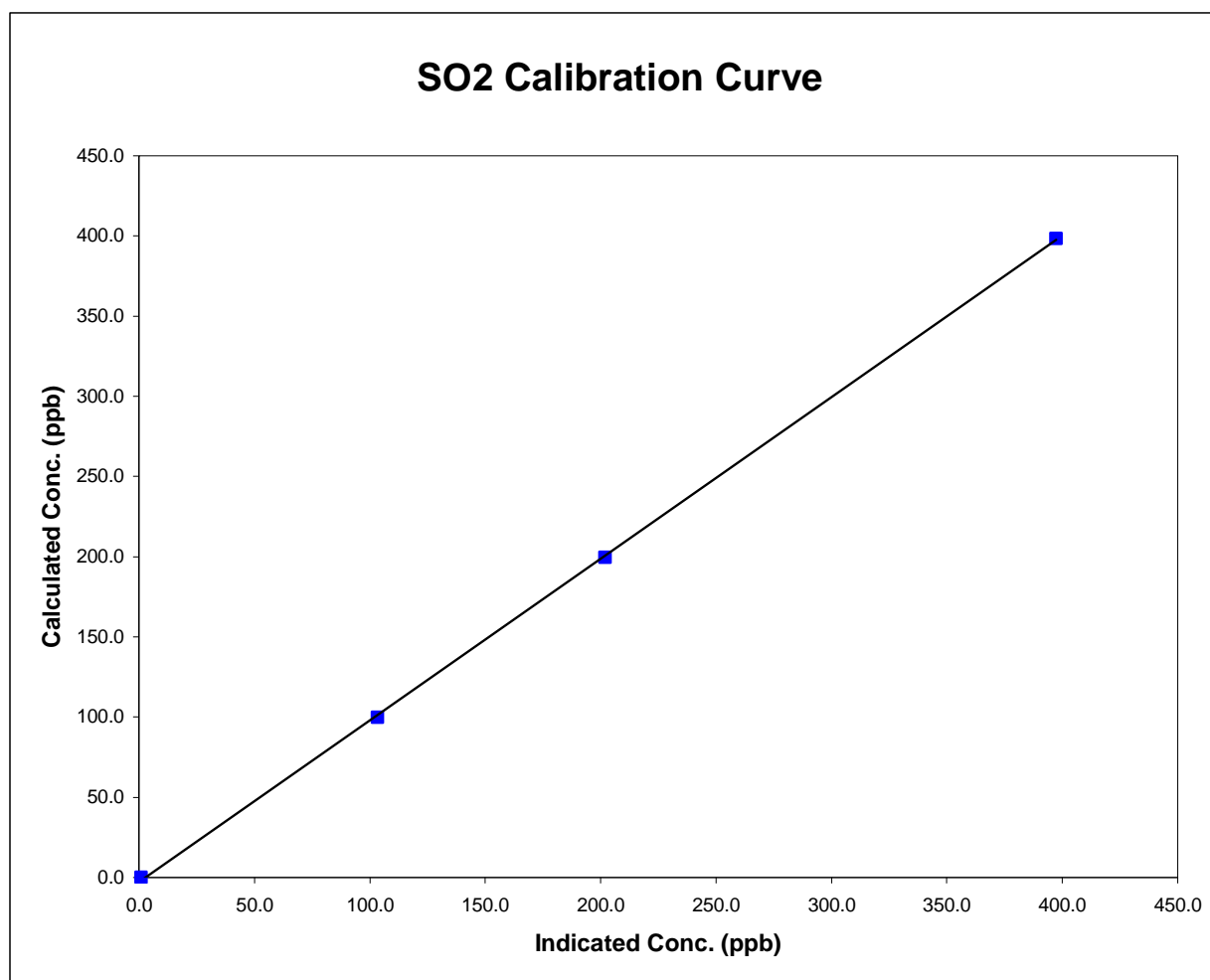


### Station Information

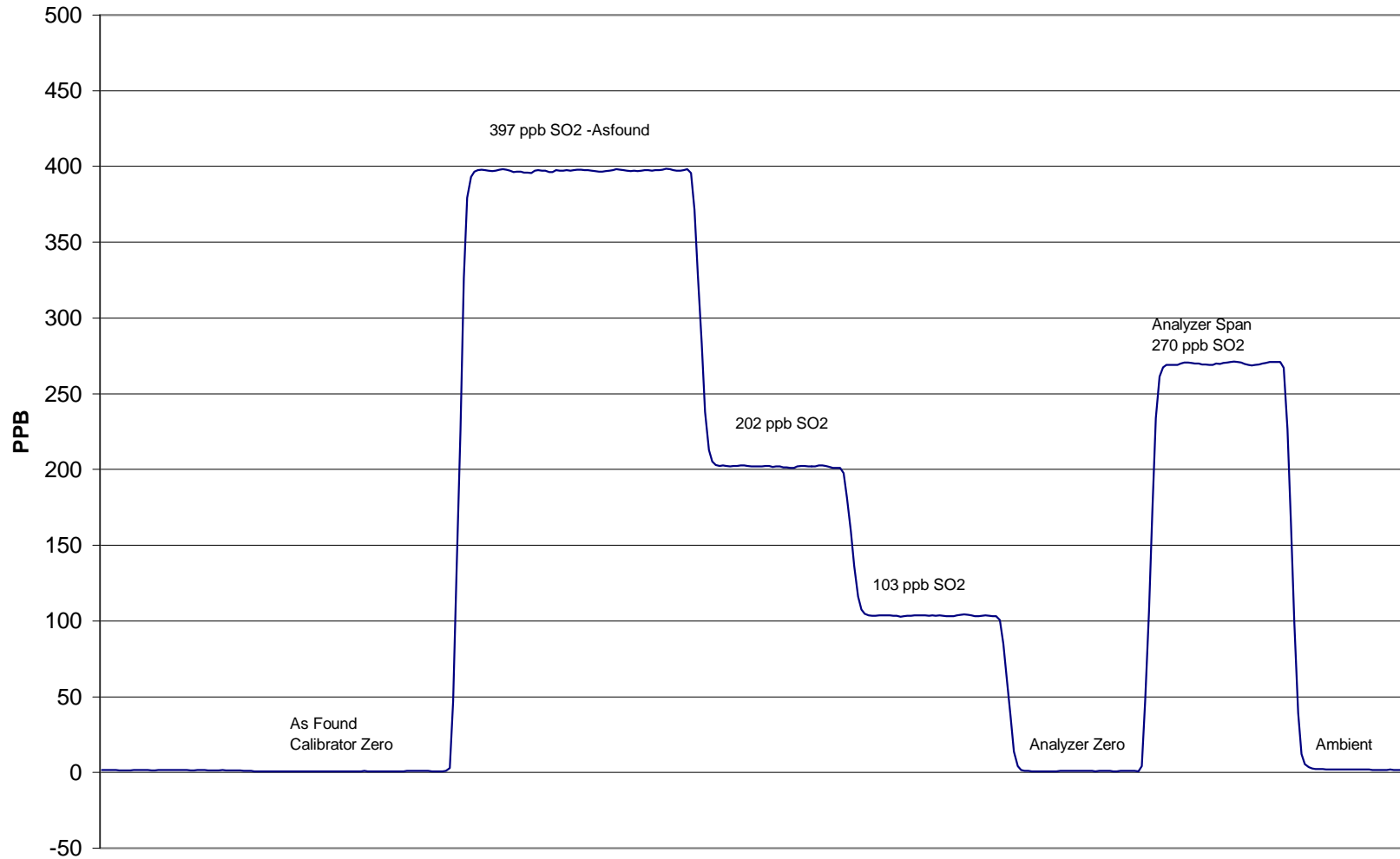
Calibration Date	February 18, 2009	Previous Calibration	January 27, 2009
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	11:00	End Time (MST)	14:18
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	1.0	N/A		
398.4	397.4	1.0025	Correlation Coefficient	0.999915
199.6	202.0	0.9883		
99.9	103.5	0.9652		
			Slope	1.006986
			Intercept	-2.734579



### Evergreen Park SO<sub>2</sub> Calibration



February 18, 2009

# Calibration Report



Parameter **TRS**

Air Monitoring Network **PASZA**

## Station Information

Calibration Date	February 18, 2009	Previous Calibration	January 27, 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)	13:03:00 PM	End Time (MST)	16:00
Barometric Pressure	0.935 ATM	Station Temperature	20.0 Deg C
Calibrator	Envionics 6100	Serial Number	3474
Cal Gas Conc	5.1 ppm	Cal Gas Expiry Date	4/2/2009
Correction factor	0.031783	Cal Gas Cylinder #	ALM 013295
DACS make	Focus AP1000	DACS serial No.	52620
DACS voltage range	0 - 10 volt	DACS channel #	5
	Before		After
Calculated slope	1.022342	Calculated slope	1.004620
Calculated intercept	-0.230577	Calculated intercept	-0.150883
Analyzer make	TEI Model 43C	Analyzer serial #	0436610005

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	14.3	ppb	14.6	ppb
coefficient	0.586		0.586	
Lamp Voltage	820	volts	821	volts
Chamber Temp	44.3	Deg C	44.1	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	634.9	mm Hg	623	mm Hg
Sample Flow	0.461	ccm	0.455	ccm
Lamp Intensity	45,763	mv	45,455	mv

## Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4990	0.00	0.00	0.2	N/A
4989	79.74	80.23	80.1	1.0016
4989	39.84	40.40	40.2	1.0059
4990	9.89	10.09	10.3	0.9788
4990	0.00	0.00	0.2	As Found Zero
4987	79.91	80.43	80.1	As Found Span
Average Correction Factor				0.9955

Calculated value of As Found Response: 81.46 ppm      Percent Change of As Found: -1.3%

	before calibration		after calibration	
Auto zero	-0.1	ppm	0.0	ppm
Auto span	69.7	ppm	69.7	ppm

Notes: \_\_\_\_\_  
 \_\_\_\_\_

Calibration Performed By: Grover Christiansen

## Calibration Summary

Parameter **TRS**

Air Monitoring Network **PASZA**

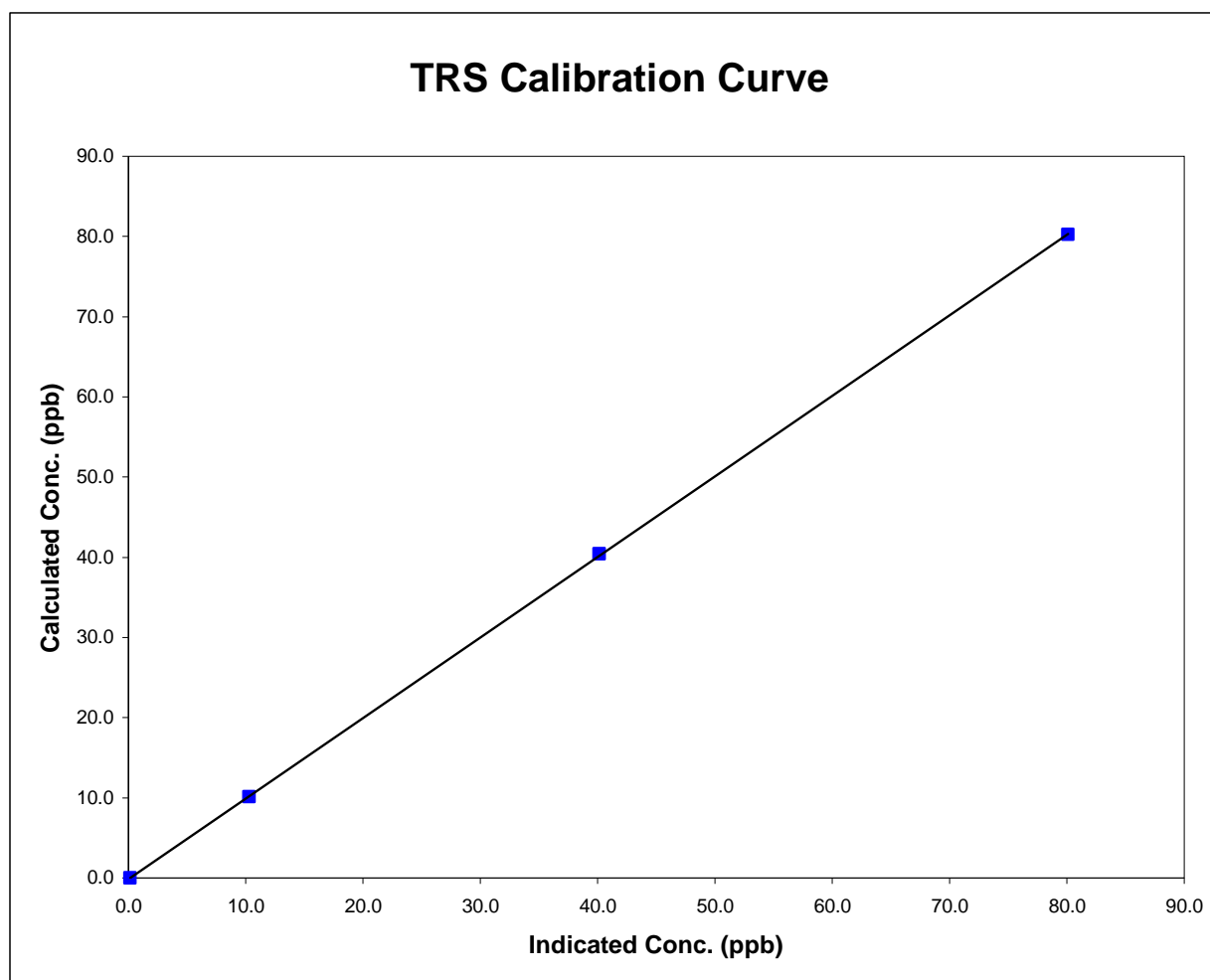


### Station Information

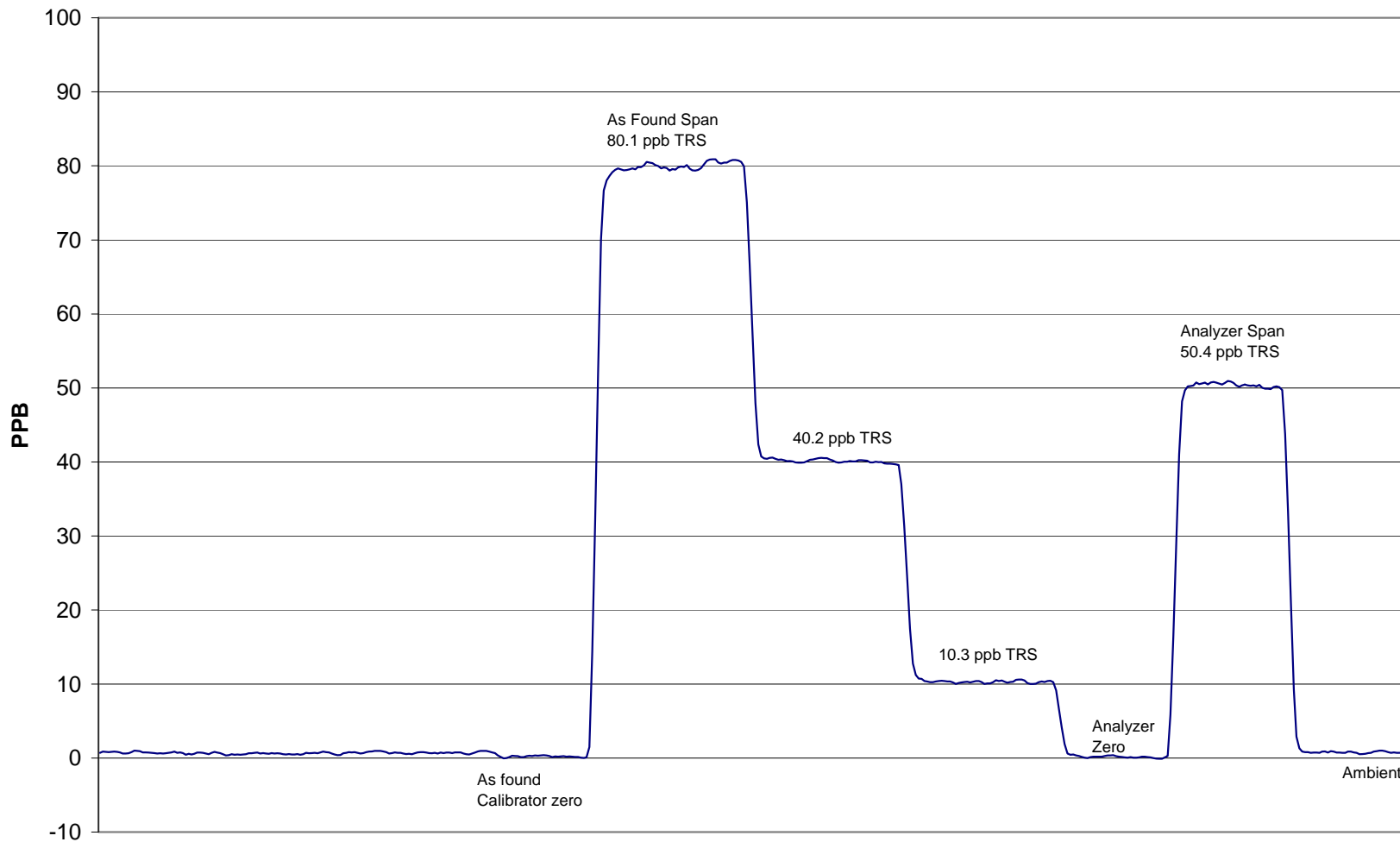
Calibration Date	February 18, 2009	Previous Calibration	January 27, 2009
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	13:03:00 PM	End Time (MST)	16:00
Analyzer make/model	TEI Model 43C	Analyzer serial #	0436610005

### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
80.2	80.1	1.0016	Correlation Coefficient	0.999984
40.4	40.2	1.0059		
10.1	10.3	0.9788		
			Slope	1.004620
			Intercept	-0.150883



### Evergreen Park TRS Calibration



February 18, 2009

# Calibration Report



Parameter **SO<sub>2</sub>**  
 Air Monitoring Network **PASZA**

## Station Information

Calibration Date	February 20, 2009	Previous Calibration	January 16, 2009
Station Number	3	Station Location	Smokey Heights
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	9:30	End Time (MST)	12:30
Barometric Pressure	0.938 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	0.031885	Cal Gas Cylinder #	AAL 15377
DACS make	Focus AP1000	DACS serial No.	45272
DACS voltage range	0 - 10 volt	DACS channel #	6
	Before		After
Calculated slope	1.006426	Calculated slope	1.000195
Calculated intercept	-2.363879	Calculated intercept	-2.145746
Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	7.4		7.4	
coefficient	0.733		0.733	
Lamp Voltage	926	volts	929	volts
Chamber Temp	45.2	Deg C	45.2	Deg C
Perm Gas Temp	45.01	Deg C	44.99	Deg C
Pressure	670.8	mm Hg	674.4	mm Hg
Sample Flow	443	ccm	446	ccm
Lamp Intensity	88	%	88	%

## Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.0	0.00	0.9	N/A
4988	39.80	400.55	401.9	0.9966
4988	19.92	201.27	204.2	0.9858
4988	9.92	100.43	103.7	0.9689
4988	0.0	0.00	0.4	As Found Zero
4988	39.81	400.65	401.9	As Found Span
Average Correction Factor				0.9838

Calculated value of As Found Response: 401.732 ppm      Percent Change of As Found: -0.3%

	before calibration		after calibration	
Auto zero	-2.0	ppm	-1.7	ppm
Auto span	309.7	ppm	310.8	ppm

Notes: \_\_\_\_\_

Calibration Performed By: Grover Christiansen

## Calibration Summary

Parameter **SO2**

Air Monitoring Network **PASZA**

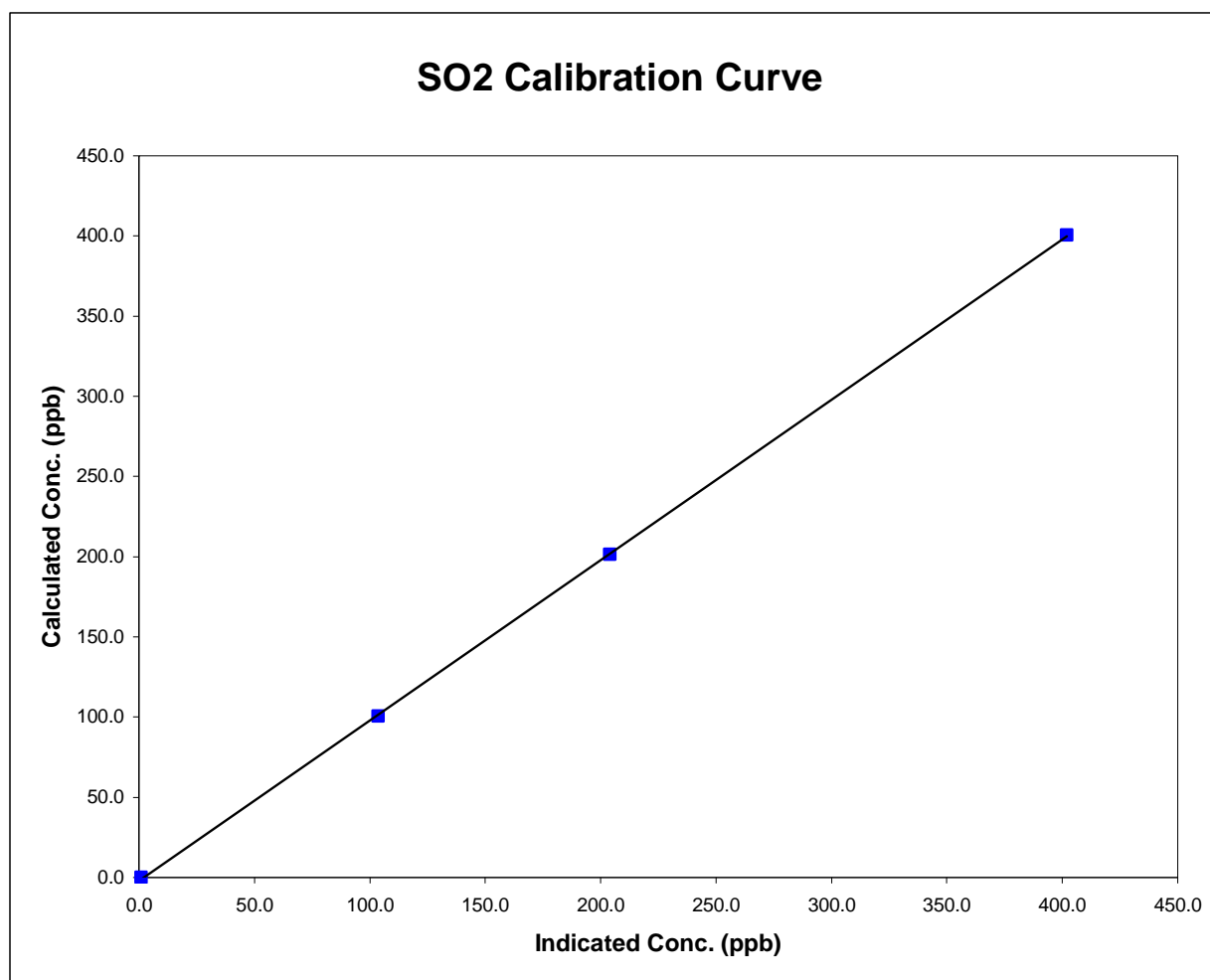


### Station Information

Calibration Date	February 20, 2009	Previous Calibration	January 16, 2009
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	9:30	End Time (MST)	12:30
Analyzer make/model	Teco 43i	Analyzer serial #	701120009

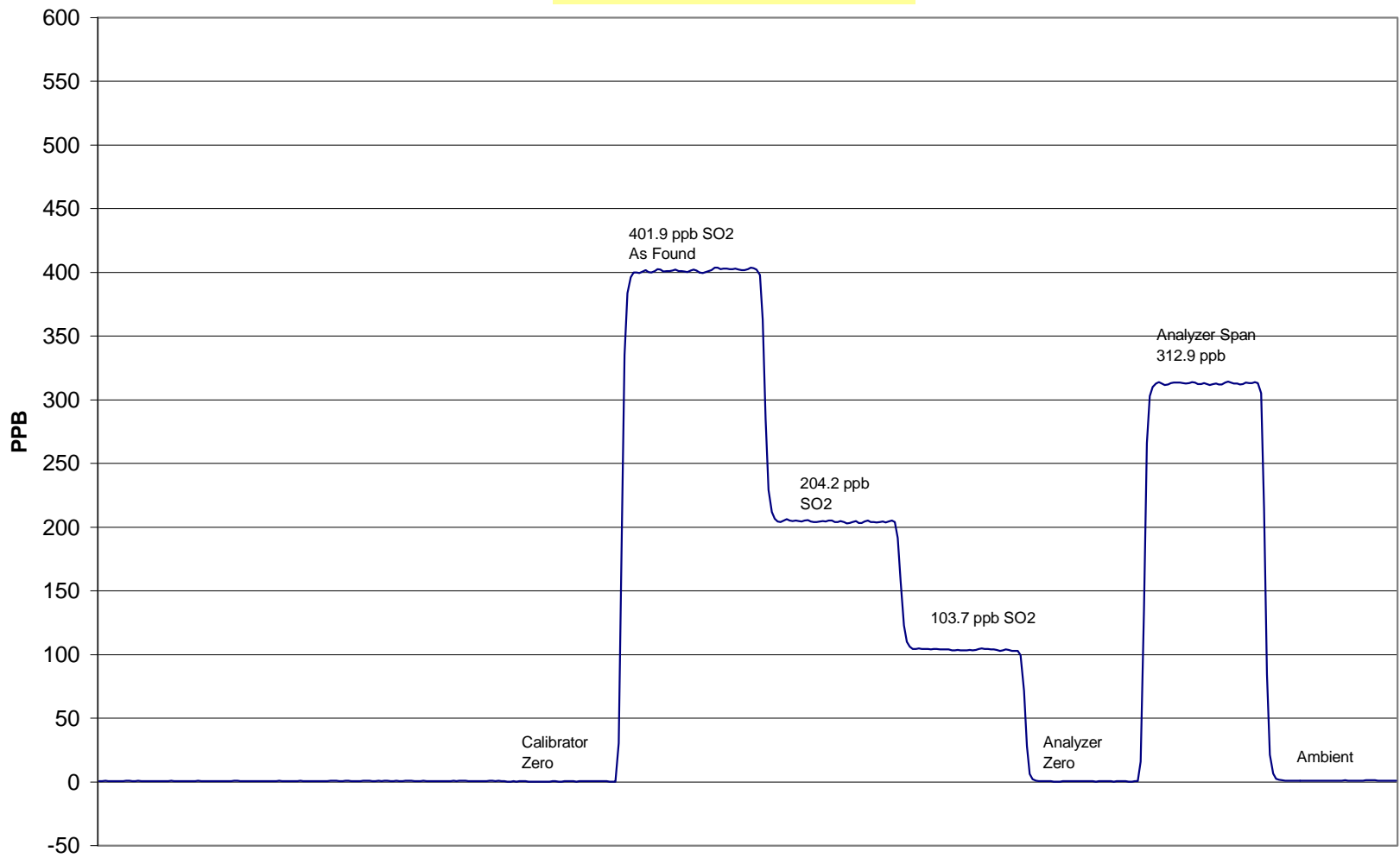
### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.9	N/A		
400.5	401.9	0.9966	Correlation Coefficient	0.999957
201.3	204.2	0.9858		
100.4	103.7	0.9689		
			Slope	1.000195
			Intercept	-2.145746





### Smoky Heights SO<sub>2</sub> Calibration



February 20, 2009

# Calibration Report



Parameter **TRS**

Air Monitoring Network **PASZA**

## Station Information

Calibration Date	February 20, 2009	Previous Calibration	January 16, 2009
Station Number	3	Station Location	Smokey Heights
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	11:30	End Time (MST)	14:30:00 PM
Barometric Pressure	0.930 ATM	Station Temperature	20.0 Deg C
Calibrator	Envionics 6100	Serial Number	3474
Cal Gas Conc	5.1 ppm	Cal Gas Expiry Date	4/2/2009
Correction factor	0.031613	Cal Gas Cylinder #	ALM013295
DACS make	Focus AP1000	DACS serial No.	52620
DACS voltage range	0 - 10 volt	DACS channel #	5
	Before		After
Calculated slope	0.996603	Calculated slope	1.000982
Calculated intercept	-0.389357	Calculated intercept	-0.439137
Analyzer make	TEI Model 43C	Analyzer serial #	0436610005

	before		after	
Concentration range	100	ppb	100	ppb
Background coefficient	13.2	ppb	13	ppb
Lamp Voltage	1.027		1.027	
Chamber Temp	771	volts	772	volts
Perm Gas Temp	43.8	Deg C	44	Deg C
Pressure	45	Deg C	44.9	Deg C
Sample Flow	478.8	mm Hg	488.2	mm Hg
Lamp Intensity	734	ccm	751	ccm
	32,115	mv	32,341	mv

## Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4990	0.0	0.00	0.3	N/A
4988	79.76	80.27	80.6	0.9964
4988	39.85	40.42	40.9	0.9876
4988	9.93	10.13	10.7	0.9502
4990	0.0	0.00	0.1	As Found Zero
4990	79.71	80.19	80.6	As Found Span
Average Correction Factor				0.9781

Calculated value of As Found Response: 79.79 ppm      Percent Change of As Found: 0.5%

	before calibration		after calibration	
Auto zero	-0.2	ppm	-0.2	ppm
Auto span	41.6	ppm	41.5	ppm

Notes: \_\_\_\_\_

Calibration Performed By: Grover Christiansen

## Calibration Summary

Parameter **TRS**

Air Monitoring Network **PASZA**



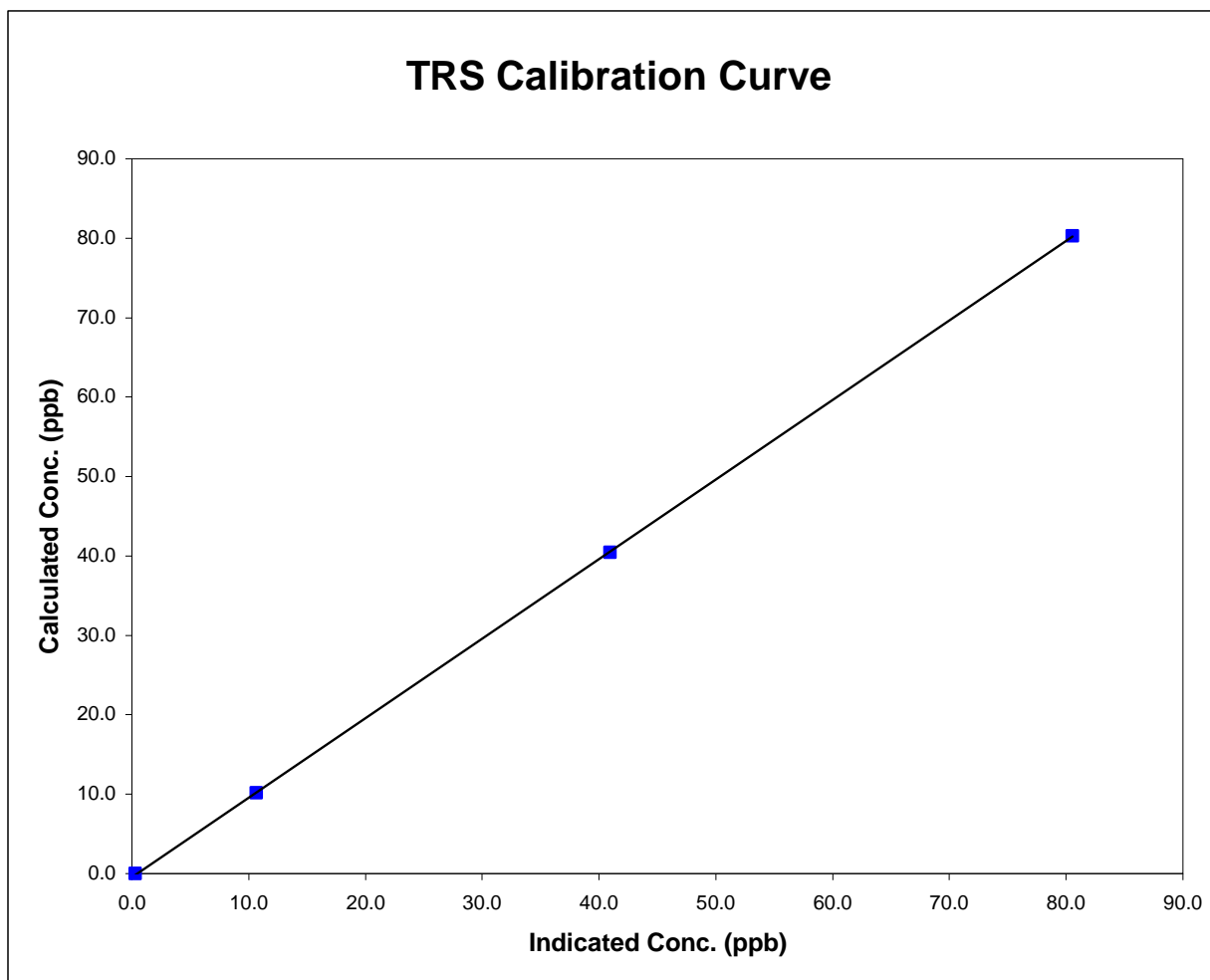
### Station Information

Calibration Date	February 20, 2009	Previous Calibration	January 16, 2009
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	11:30	End Time (MST)	14:30:00 PM
Analyzer make/model	TEI Model 43C	Analyzer serial #	0436610005

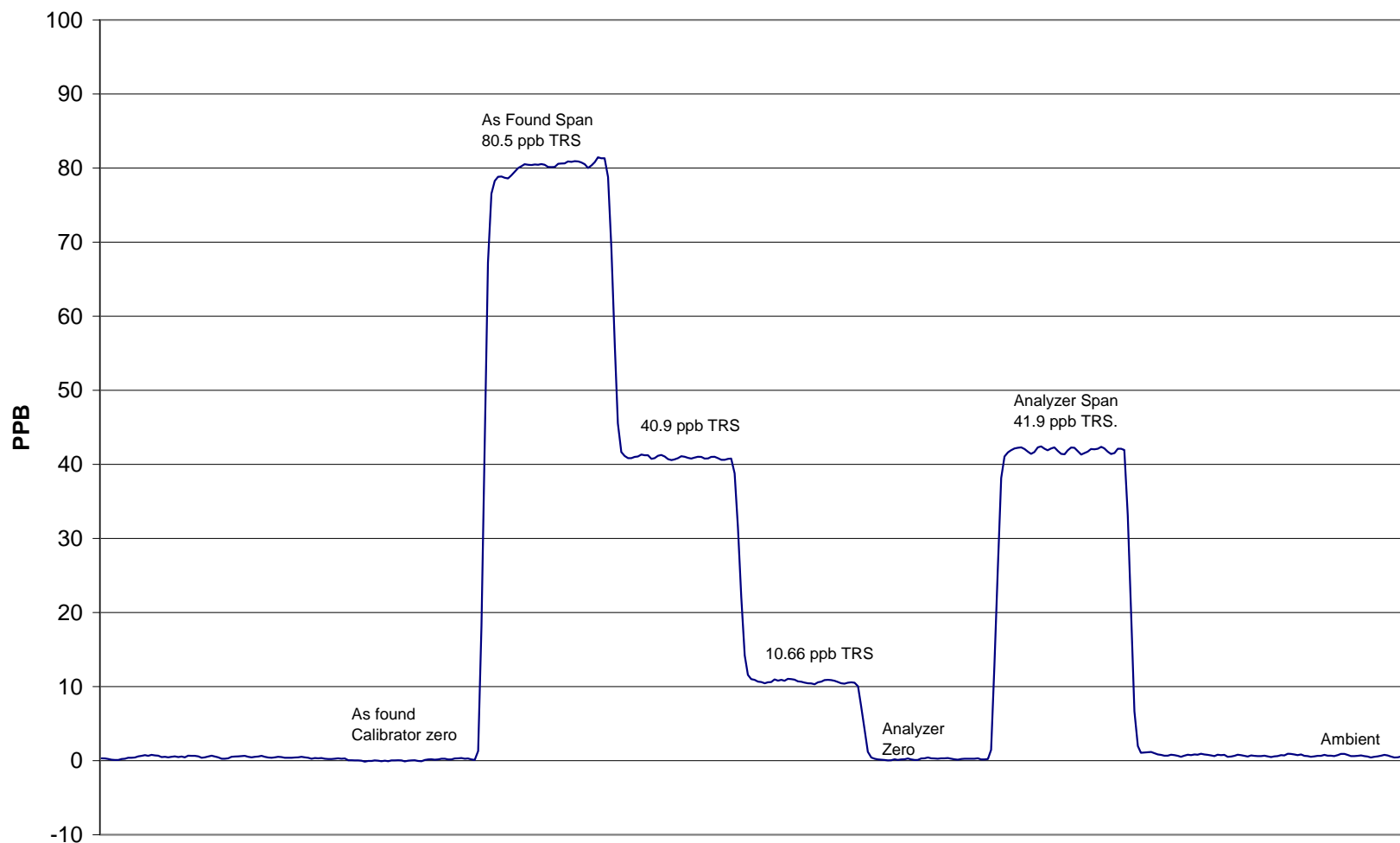
### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A		
80.3	80.6	0.9964	Correlation Coefficient	0.999988
40.4	40.9	0.9876		
10.1	10.7	0.9502		
			Slope	1.000982
			Intercept	-0.439137

### TRS Calibration Curve



### Smoky Heights TRS Calibration



February 20, 2009

**PERFORMANCE AUDIT  
OF  
PM 2.5 MONITOR**

STATION: Smokey Heights

OPERATOR: Grover Christiansen

DATE: 20-Feb-09

LOCATION: PASZA - Grande Prairie

MONITOR INFO / PARAMETER VALUES:

Make/Model	TEOM AB
Configuration	PM2.5
Serial Number	140AB246340306
Site Number	3
Inlet Type	PM 10 / SCC
FAdj. Main Setting	0.975
FAdj. Aux. Setting	0.970
T-Case Indicated / Set Point	40/40
T-Air Indicated / Set Point	40/40
T-Cap Indicated / Set Point	40/40
Splitter Assembly Alignment (cm)	15.5

( vs. specified depth of 15.5 cm from top of flow tube to top of concentric 1/2 in. tube )

RECENT CALIBRATION AND AUDIT HISTORY

Audit	20-Feb-09
Audit	
Calibration	

PUMP CAPACITY CHECK *	PASS
-----------------------	------

\* capacity to maintain flow rate at or near set point at simulated 90% filter loading. "FAIL" indicates that pump requires service.

LEAK CHECK	Indicated Flow (lpm)	
	Main	Auxiliary
PUMP ON	-0.03	-0.19
PUMP OFF	-0.03	-0.19
NET	0.00	0.00
<b>LIMITS</b>	<b>&lt;0.15</b>	<b>&lt;0.65</b>

	Ambient Temp. (°C)	Ambient Pres. (atm)	Ko *	Bypass flow (lpm)	Sample flow (lpm)
SET POINT ( S )	na	na	12122	13.67	3.00
INDICATED ( I )	0.1	941	12122	13.67	3.00
MEASURED ( M )	0.2	946	12218	13.78	3.010
	( M - I )		( M - S ) / S *100		
DIFFERENCE	0.1	5.000	0.8	0.8	0.3
<b>LIMITS</b>	<b>± 5 ° C</b>	<b>± 0.013 atm</b>	<b>± 2.5 %</b>	<b>± 10 %</b>	<b>± 10 %</b>

**COMMENTS:**

Pass - Monitor is within limits.

Measured barometric pressure of 940 hPa = .928 converted to atm.

# Calibration Report



Parameter **SO2**

Air Monitoring Network **PASZA**

## Station Information

Calibration Date	February 13, 2009	Previous Calibration	January 19, 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)	10:50	End Time (MST)	14:00
Barometric Pressure	0.924 atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	10.06 ppm	Cal Gas Expiry Date	7/27/2009
Gas Cert Reference	CC 114395		
DACS make	Focus AP1000	DACS serial No.	45269
DACS voltage range	0 - 10 volt	DACS channel #	4
	<u>Before</u>		<u>After</u>
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.000965	Calculated slope	1.001211
Calculated intercept	-0.435638	Calculated intercept	-0.418864

Analyzer make **TEI Model 43CTL** Analyzer serial # **43CTL-74200-376**

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.44		244	
Coefficient	0.913		0.913	
PMT	-812.9	V	-813	V
UV Lamp Voltage	1070	V	1062	V
Chamber Temp	45.2	Deg C	45.1	Deg C
Pressure	675.5	mm Hg	673.1	mm Hg
Sample Flow	0.485	LPM	0.483	LPM
Lamp Intesity	84%	%	84%	%

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.0	0.0	N/A
4988	39.90	79.8	79.9	0.9991
4988	19.87	39.9	40.5	0.9844
4988	9.91	19.9	20.8	0.9596
4988	0.00	0.0	0.1	As found zero
4988	39.90	79.8	79.9	As found span
Average Correction Factor				0.9810

Calculated value of As Found Response: **79.488 ppm** Percent Change of As Found: **0.4%**

	before calibration		after calibration	
Auto zero	-0.4	ppm	-0.4	ppm
Auto span	54.8	ppm	54.6	ppm

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Calibration Performed By: Grover Christiansen

## Calibration Summary

Parameter **SO2**

Air Monitoring Network **PASZA**

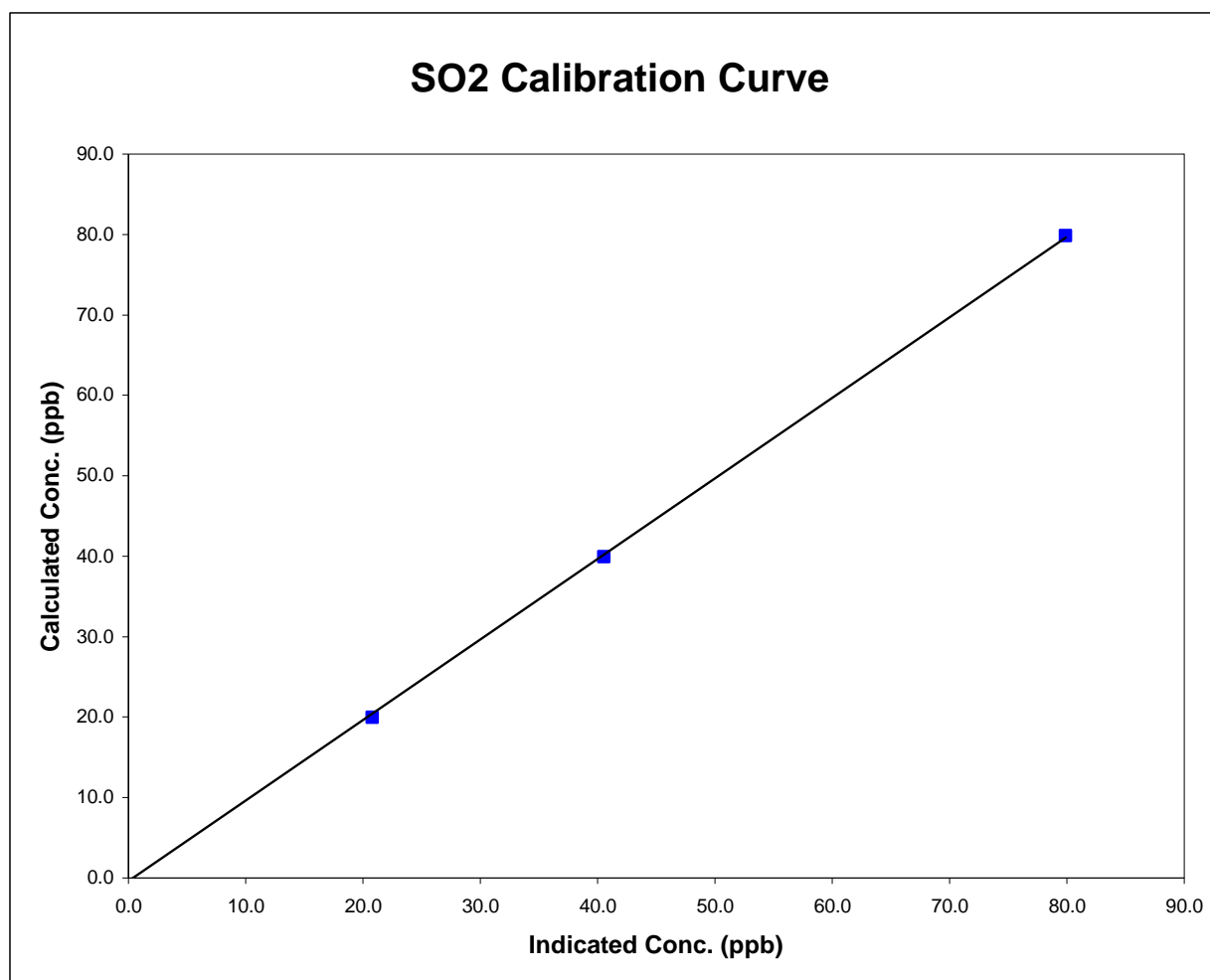


### Station Information

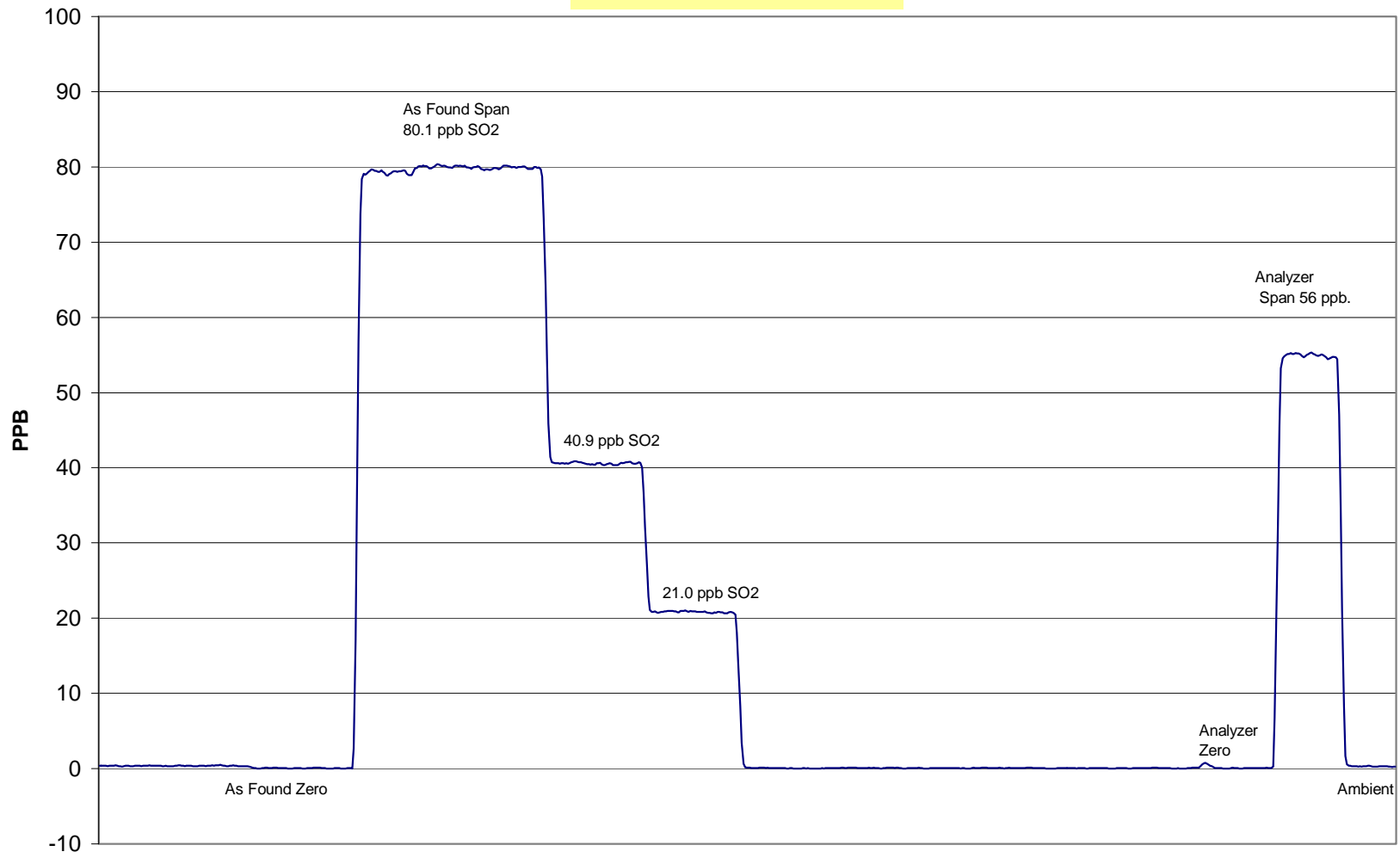
Calibration Date	February 13, 2009	Previous Calibration	January 19, 2009
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	10:50	End Time (MST)	14:00
Analyzer make/model	TEI Model 43CTL	Analyzer serial #	43CTL-74200-376

### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
79.8	79.9	0.9991	Correlation Coefficient	0.999845
39.9	40.5	0.9844		
19.9	20.8	0.9596		
			Slope	1.001211
			Intercept	-0.418864



### Beaverlodge SO<sub>2</sub> Calibration



February 13, 2009



# Calibration Report

Parameter **NOx-NO-NO<sub>2</sub>**  
 Air Monitoring Network **PASZA**



## Station Information

Calibration Date **February 13, 2009** Previous Calibration **January 19, 2009**  
 Station Number **4** Station Location **Beaverlodge**

Reason:  Routine  Installation  Removal  Other: \_\_\_\_\_

Start Time (MST) **10:48:00** End Time (MST) **16:41:00**  
 Barometric Pressure **0.924** Atm Station Temperature **24.0** Deg C  
 Calibrator **EnviroNics 6100** Serial Number **3474**  
 NO Cal Gas Conc **50.1** ppm Cal Gas Cert. Date **2-Jan-07**  
 NOx Cal Gas Conc **50.2** ppm Cal Gas Serial # **CC 114395**

## DACS Information

DACS make **FOCUS AP1000** DACS serial No. **45269**

Parameter		NO2	NOx	NO
Before	Data Slope	1.001636	1.004636	1.002894
	Data Offset	0.992315	-2.286548	-1.932829
After	Data Slope	1.008666	0.999840	1.001273
	Data Offset	-0.837985	-1.782807	-1.534863
Channel #		8	6	7
Voltage Range		0 - 10 VDC	0 - 10 VDC	0 - 10 VDC

## Analyzer Information

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

Test Point	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
NO background	1.4	ppb	1.4	mV
NOx background	1.5	ppb	1.4	mV
NO coefficient	1.177		1.116	
NOx coefficient	1		0.999	
PMT Voltage	-636	V	-635	V
Chamber Temp	49.2	Deg C	49.3	Deg C
Cooler Temp	-2.2	Deg C	-2.0	Deg C
Converter Temp	324.0	Deg C	322.0	Deg C
Sample Flow	0.727	LPM	0.733	LPM
Ozonator Flow	0.083	LPM	0.083	LPM
Pressure	201.8	mm Hg	191.9	mm Hg

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

# Calibration Report

Parameter **NO<sub>x</sub>-NO-NO<sub>2</sub>**  
 Air Monitoring Network **PASZA**



## Station Information

Calibration Date: **February 13, 2009**

Station Location: **Beaverlodge**

## Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NO <sub>x</sub> conc (ppb)	Calculated NO conc (ppb)	Calculated NO <sub>2</sub> conc (ppb)	Indicated NO <sub>x</sub> conc (ppb)	Indicated NO conc (ppb)	Indicated NO <sub>2</sub> conc (ppb)	NO <sub>x</sub> Correction factor	NO Correction factor
zero	4991	0.00	0.0	0.0	0.0	-0.2	-0.3	-0.3	N/A	N/A
1	4991	39.88	397.9	397.1	0.8	398.9	397.4	1.0	0.9975	0.9994
2	4991	19.87	199.1	198.7	0.4	201.3	200.3	0.7	0.9890	0.9916
3	4991	9.91	99.5	99.3	0.2	103.7	102.9	0.3	0.9590	0.9645
AFZ	4991	0.00	0.0	0.0	0.0	-0.1	-0.2	-0.2	0.0000	0.0000
AFS	4991	39.90	398.1	397.3	0.8	383.6	384.5	-1.3	1.0378	1.0335
Average Correction Factor									0.9818	0.9852

As Found Concentrations: NO<sub>x</sub>= 381.4 NO= 382.7 As Found Percent Change NO<sub>x</sub>= -4.2% NO= -3.7%

## GPT Calibration Data

Dilution Flow 4990 ccm Source Gas Flow 39.82 ccm

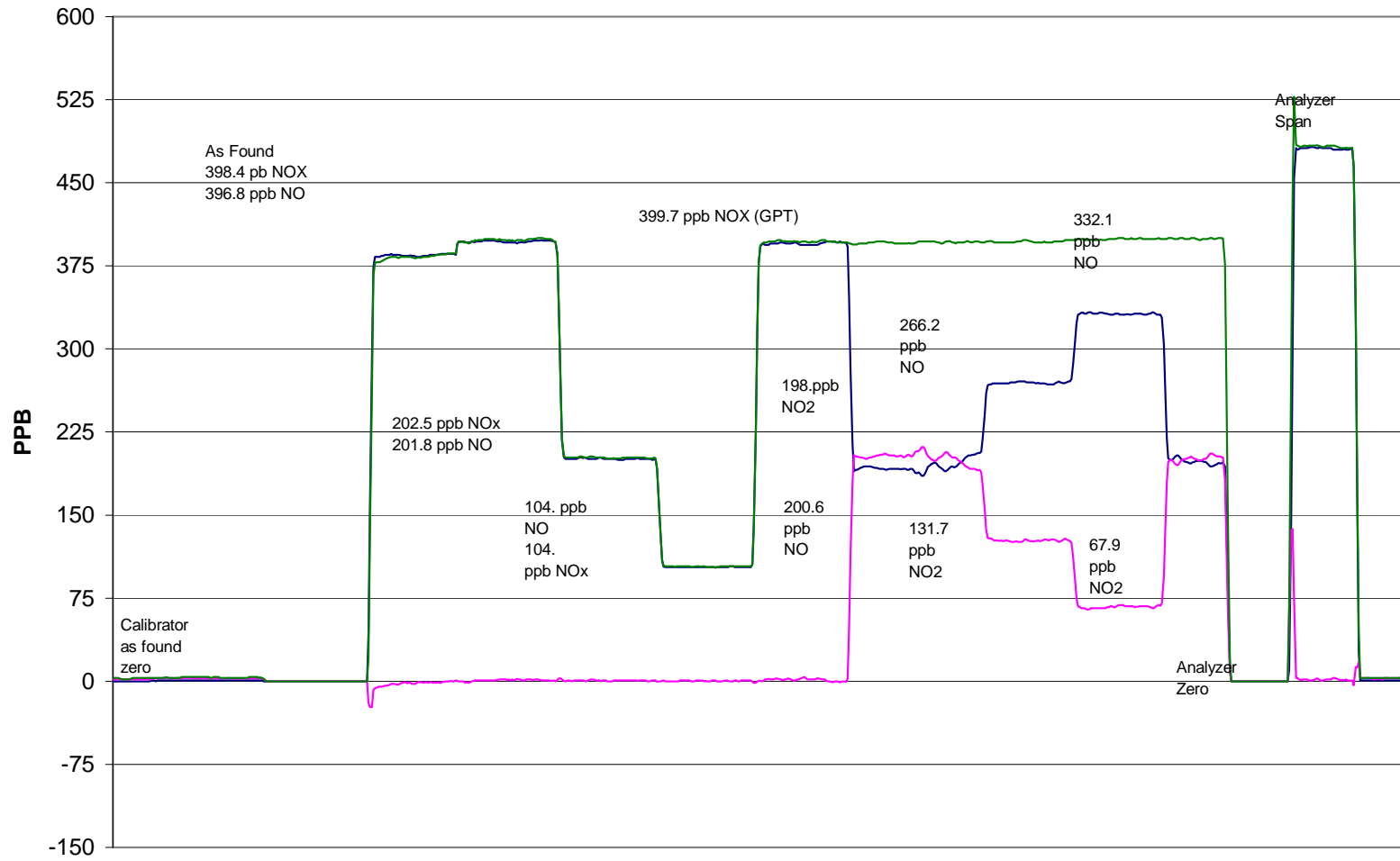
O <sub>3</sub> Setpoint (ppb)	Calculated NO <sub>x</sub> conc (ppb)	Calculated NO conc (ppb)	Calculated NO <sub>2</sub> conc (ppb)	Indicated NO <sub>x</sub> conc (ppb)	Indicated NO conc (ppb)	Indicated NO <sub>2</sub> conc (ppb)	NO <sub>x</sub> Correction factor	NO Correction factor	NO <sub>2</sub> Correction factor	Converter Efficiency
0	0.0	0.0	0.0	0.0	0.0	0.0	N/A	N/A	N/A	N/A
NO point	395.9	394.8	1.1	396.9	395.8	0.7	0.9973	0.9974	N/A	N/A
300	395.9	197.6	198.2	396.6	198.9	196.8	0.9981	0.9936	1.0071	99.3%
200	395.9	268.9	127.0	397.1	270.1	126.6	0.9969	0.9956	1.0034	99.7%
100	395.9	330.5	65.4	399.4	331.6	67.5	0.9911	0.9966	0.9687	103.2%
Average Correction Factor							0.9954	0.9953	0.9931	100.7%

## AIC Data

Parameter	Previous calibration				Current calibration			
	NO <sub>x</sub>	NO <sub>2</sub>	NO		NO <sub>x</sub>	NO <sub>2</sub>	NO	
Auto zero	-2.4	0.8	-2.1	ppb	-1.8	-0.9	-1.7	ppb
Auto span	480.3	4.1	475.2	ppb	480.5	0.6	479.1	ppb

Calibration Performed By: Grover Christiansen

### Beaverlodge NO<sub>x</sub> Calibration



February 13, 2009

## Calibration Summary

Parameter **NO<sub>2</sub>**

Air Monitoring Network **PASZA**



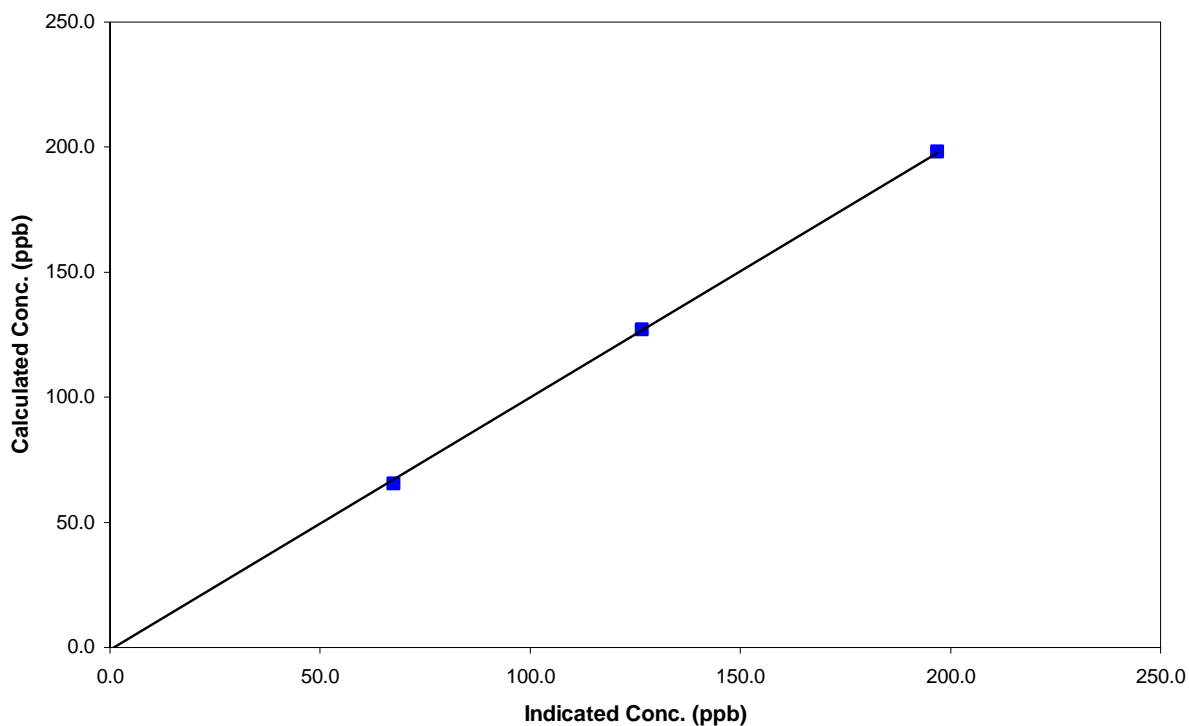
### Station Information

Calibration Date	February 13, 2009	Previous Calibration	January 19, 2009
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	10:48	End Time (MST)	16:41
Analyzer make	TEI Model 42	Analyzer serial #	42-28486-231

### Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.3	0.0000	Correlation Coefficient	0.999764
198.2	196.8	1.0071		
127.0	126.6	1.0034	Slope	1.008666
65.4	67.5	0.9687		

**NO<sub>2</sub> Calibration Curve**



## Calibration Summary

Parameter **NO<sub>x</sub>**

Air Monitoring Network **PASZA**



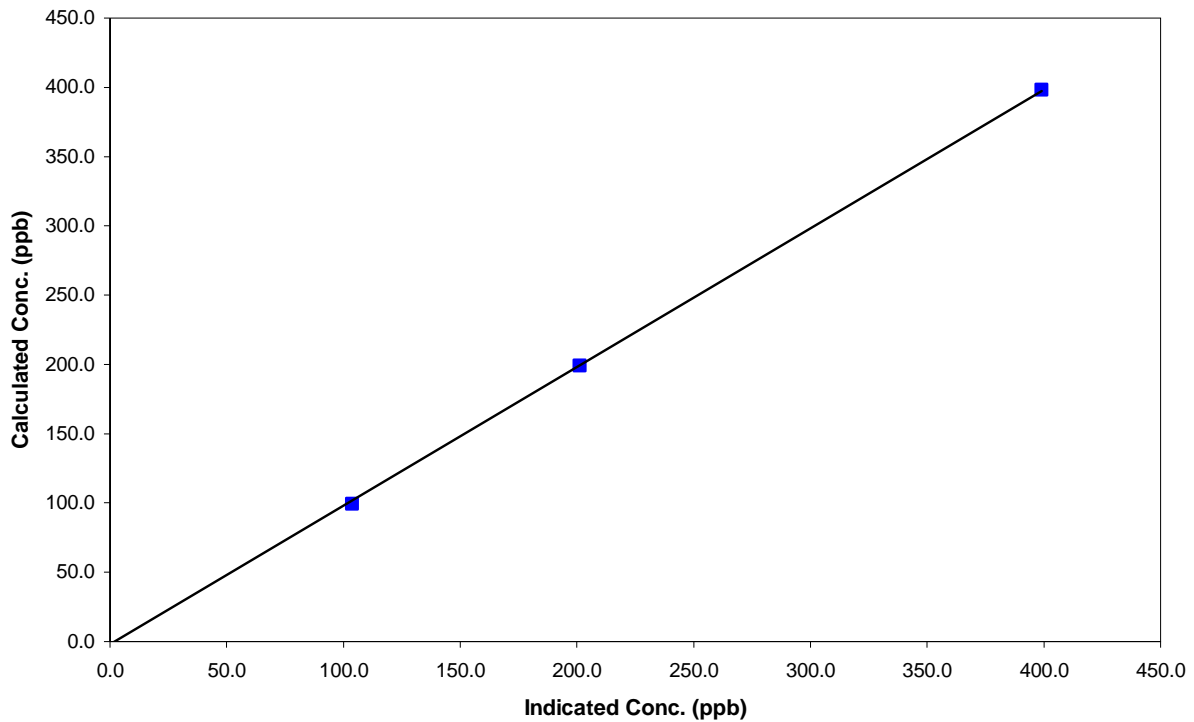
### Station Information

Calibration Date	February 13, 2009	Previous Calibration	January 19, 2009
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	10:48	End Time (MST)	16:41
Analyzer make	TEI Model 42	Analyzer serial #	42-28486-231

### Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.2	0.0000	Correlation Coefficient	0.999874
397.9	398.9	0.9975		
199.1	201.3	0.9890	Slope	0.999840
99.5	103.7	0.9590		
			Intercept	-1.782807

### NO<sub>x</sub> Calibration Curve



## Calibration Summary

Parameter **NO**

Air Monitoring Network **PASZA**



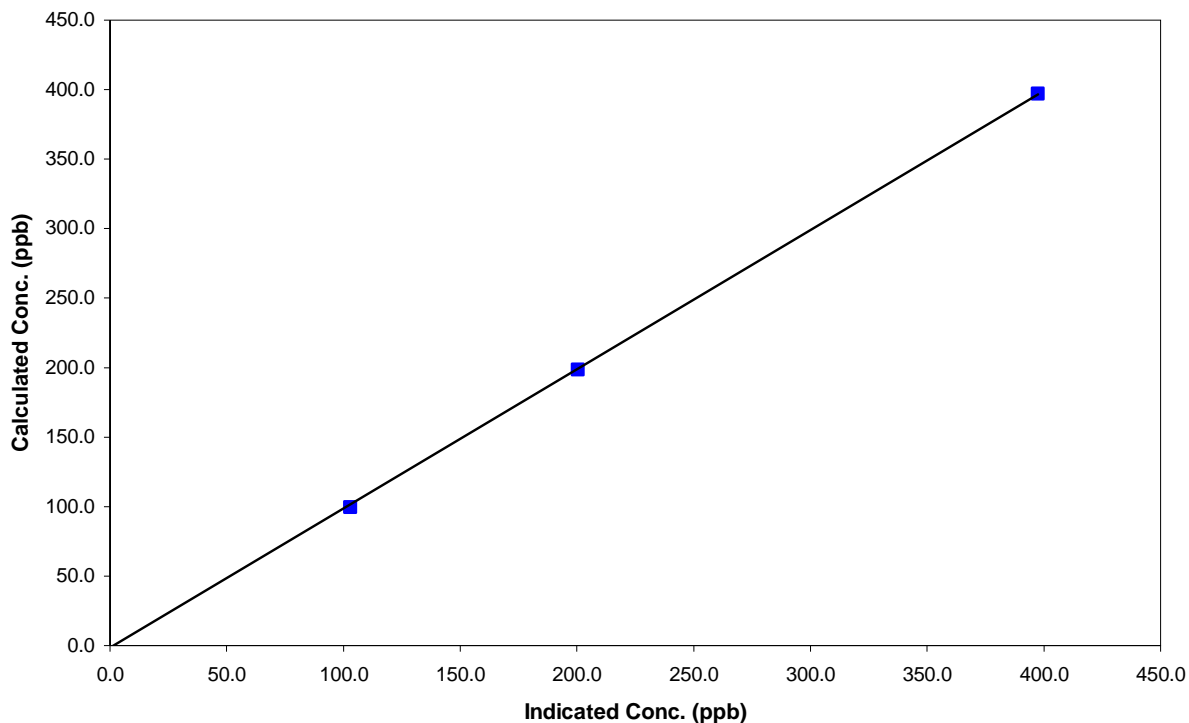
### Station Information

Calibration Date	February 13, 2009	Previous Calibration	January 19, 2009
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	10:48	End Time (MST)	16:41
Analyzer make	TEI Model 42	Analyzer serial #	42-28486-231

### Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.3	N/A		
397.1	397.4	0.9994	Correlation Coefficient	0.999892
198.7	200.3	0.9916		
99.3	102.9	0.9645	Slope	1.001273
			Intercept	-1.534863

### NO Calibration Curve





## Calibration Summary

Parameter **O3**

Air Monitoring Network **PASZA**

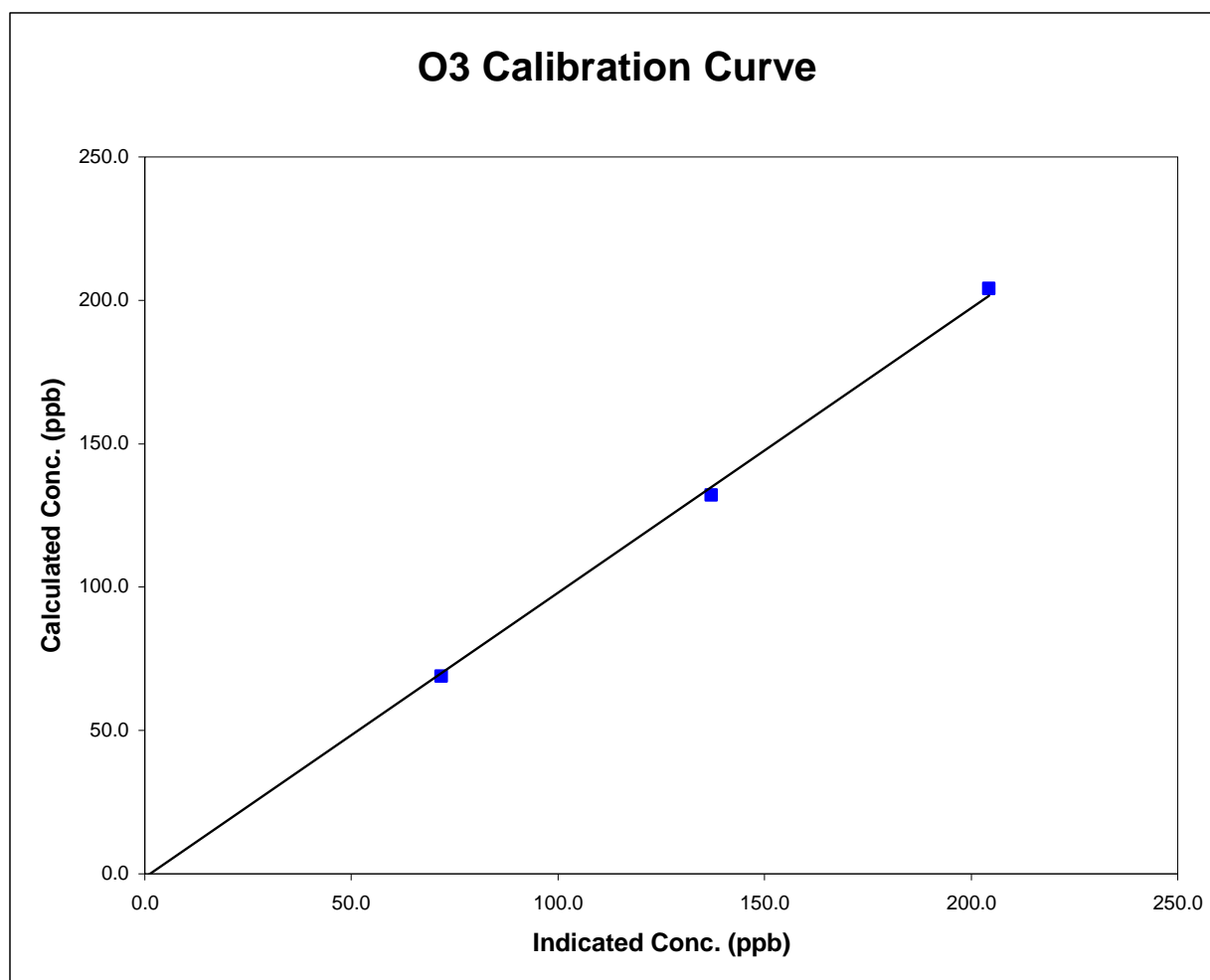


### Station Information

Calibration Date	February 13, 2009	Previous Calibration	January 19, 2009
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	15:50:00 PM	End Time (MST)	18:00
Analyzer make/model	Teco 49C	Analyzer serial #	49C-76443-383

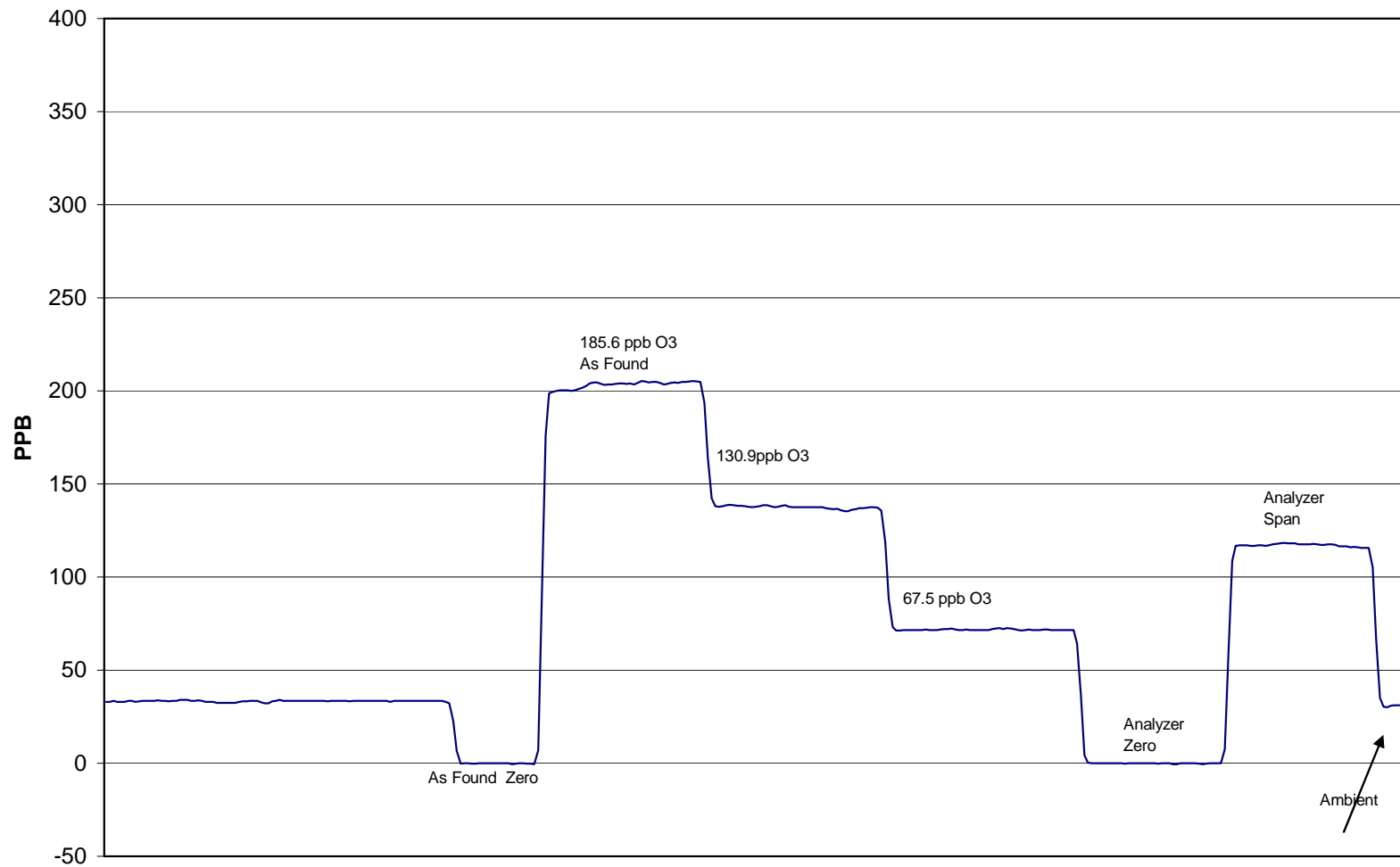
### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.4	NA		
204.0	204.3	0.9985	Correlation Coefficient	0.999210
132.0	137.2	0.9624		
69.0	71.7	0.9621	Slope	0.992946
			Intercept	-1.213731





### Beaverlodge O<sub>3</sub> Calibration



February 13, 2009

# Calibration Report



Parameter **SO2**  
 Air Monitoring Network **PASZA**

## Station Information

Calibration Date	February 8, 2009	Previous Calibration	January 15, 2009
Station Number	8	Station Location	Rover - Spirit River
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	11:20	End Time (MST)	13:41
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	1.001972	Calculated slope	1.001258
Calculated intercept	-2.723536	Calculated intercept	-2.345361
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	8.5		8.5	
Coefficient	1.213		1.213	
UV Lamp Voltage	727	V	727	V
Chamber Temp	44.6	C	44.5	C
Perm Gas Temp	45	C	45	C
Pressure	670.2	mm Hg	666.1	mm Hg
Sample Flow	0.486	LPM	0.484	LPM
Lamp Intesity	34229	Hz	34607	Hz

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.0	0.4	N/A
4989	39.83	400.8	401.3	0.9988
4989	19.88	200.8	204.8	0.9805
4989	9.92	100.4	104.0	0.9652
4988	0.00	0.0	0.4	As found zero
4990	39.89	401.3	403.3	As found span
Average Correction Factor				0.9815

Calculated value of As Found Response: 401.037 ppm      Percent Change of As Found: 0.1%

	before calibration		after calibration	
Auto zero	0.1	ppm	-2.1	ppm
Auto span	305.9	ppm	266.7	ppm

Notes: Internal Pump Replaced

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Calibration Performed By: Grover Christiansen

## Calibration Summary

Parameter **SO2**

Air Monitoring Network **PASZA**

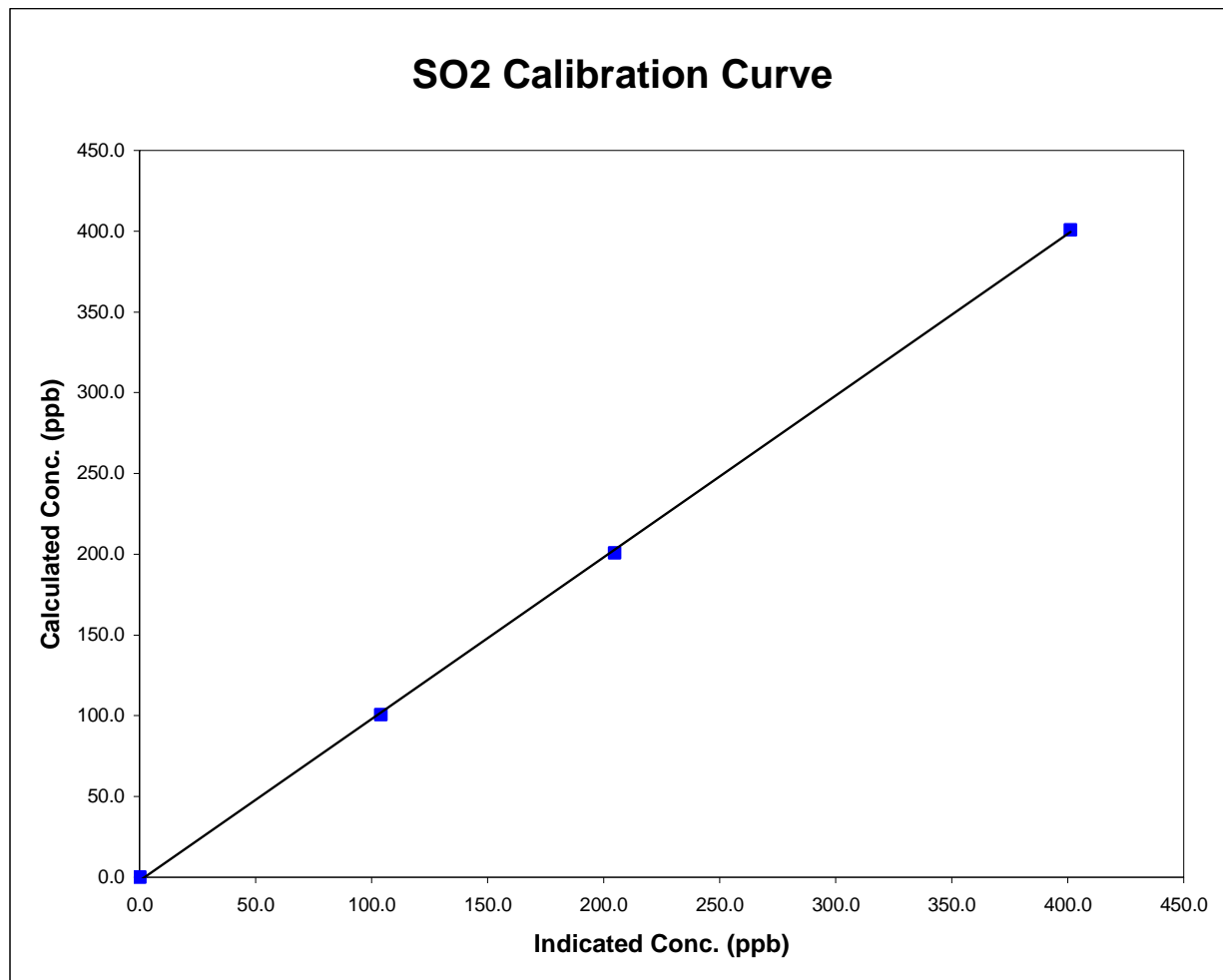


### Station Information

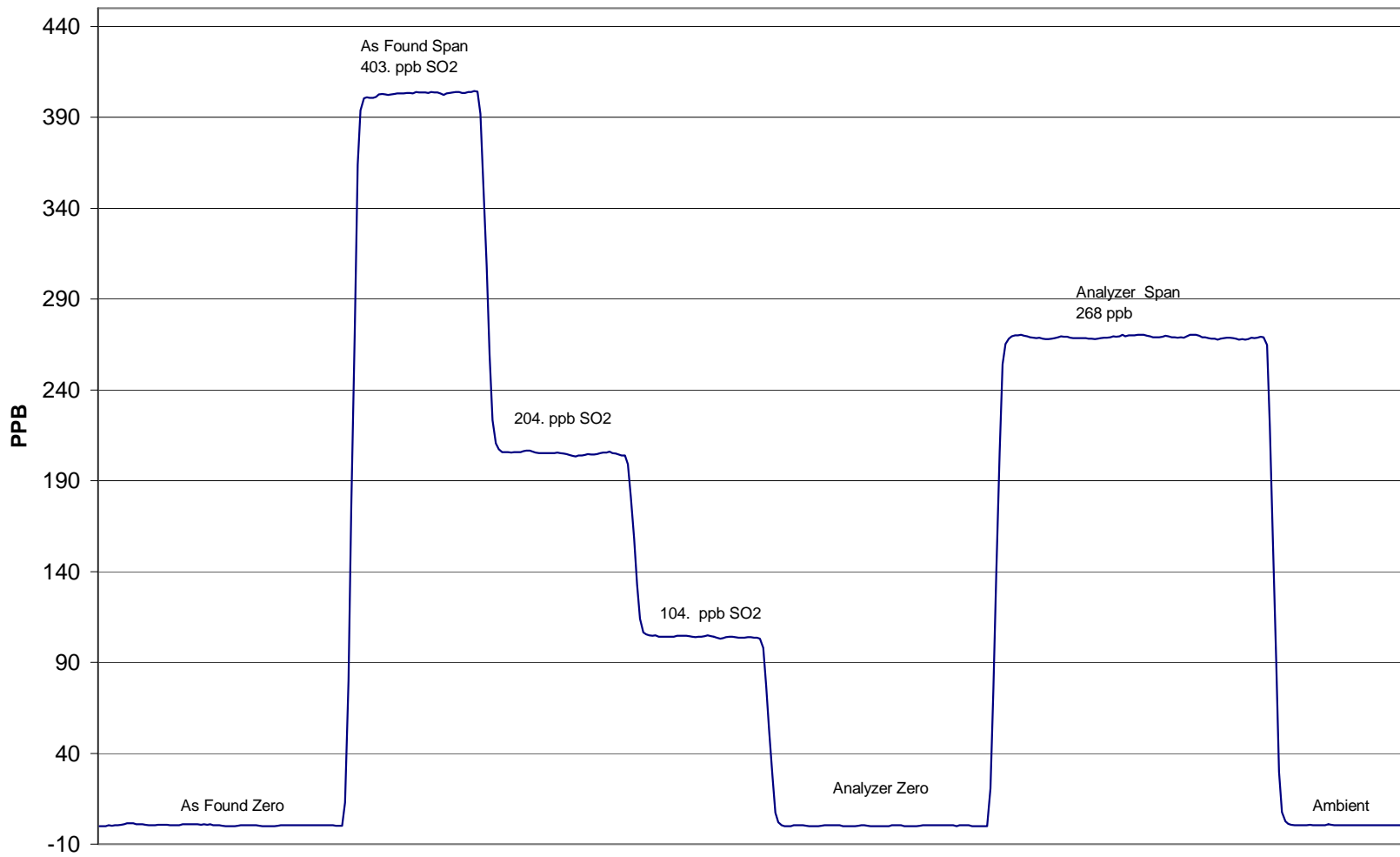
Calibration Date	February 8, 2009	Previous Calibration	January 15, 2009
Station Number	8	Station Location	Rover - Spirit River
Start Time (MST)	11:20	End Time (MST)	13:41
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A		
400.8	401.3	0.9988	Correlation Coefficient	0.999870
200.8	204.8	0.9805		
100.4	104.0	0.9652	Slope	1.001258
			Intercept	-2.345361



### Spirit River SO<sub>2</sub> Calibration



February 8, 2009

# Calibration Report



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

## Station Information

Calibration Date	February 8, 2009	Previous Calibration	January 15, 2009
Station Number	6	Station Location	Rover
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	16:40:00 PM	End Time (MST)	18:20
Barometric Pressure	27.5 inches Hg	Station Temperature	21.0 Deg C
Calibrator	Envionics 6100	Serial Number	3474
Cal Gas Concentration	5.1 ppm	Cal Gas Expiry Date	11/15/2005
Gas Cert Reference	ALM013295		
DACS make	Focus AP1000	DACS serial No.	52662
DACS voltage range	0 - 5 volt	DACS channel #	8
	<u>Before</u>		<u>After</u>
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.998920	Calculated slope	0.996370
Calculated intercept	-0.295198	Calculated intercept	0.068242
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	10.8	ppb	10.7	ppb
Coefficient	1.454		1.454	
Lamp Voltage	798	V	798	V
Chamber Temp	43.7	C	44.0	C
Perm gas Temp	45.	C	45	C
Pressure	652	mmHg	671	mmHg
Sample Flow	426	ccm	436	ccm
Lamp Intensity	39094.0	Hz	38687.0	Hz

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.0	0.0	0.3	N/A
4988	79.88	80.4	80.8	0.9953
4988	39.85	40.4	40.2	1.0044
4988	9.92	10.1	9.8	1.0305
4988	0.00	0.0	-0.9	As found zero
4988	79.88	80.4	80.3	As found span
Average Correction Factor				1.0100

Calculated value of As Found Response: 80.80 ppm      Percent Change of As Found: -0.5%

	before calibration		after calibration	
Auto zero	-0.1	ppm	-0.6	ppm
Auto span	72.3	ppm	71.3	ppm

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Calibration Performed By: Grover Christiansen

## Calibration Summary

Parameter **TRS**

Air Monitoring Network **PASZA**

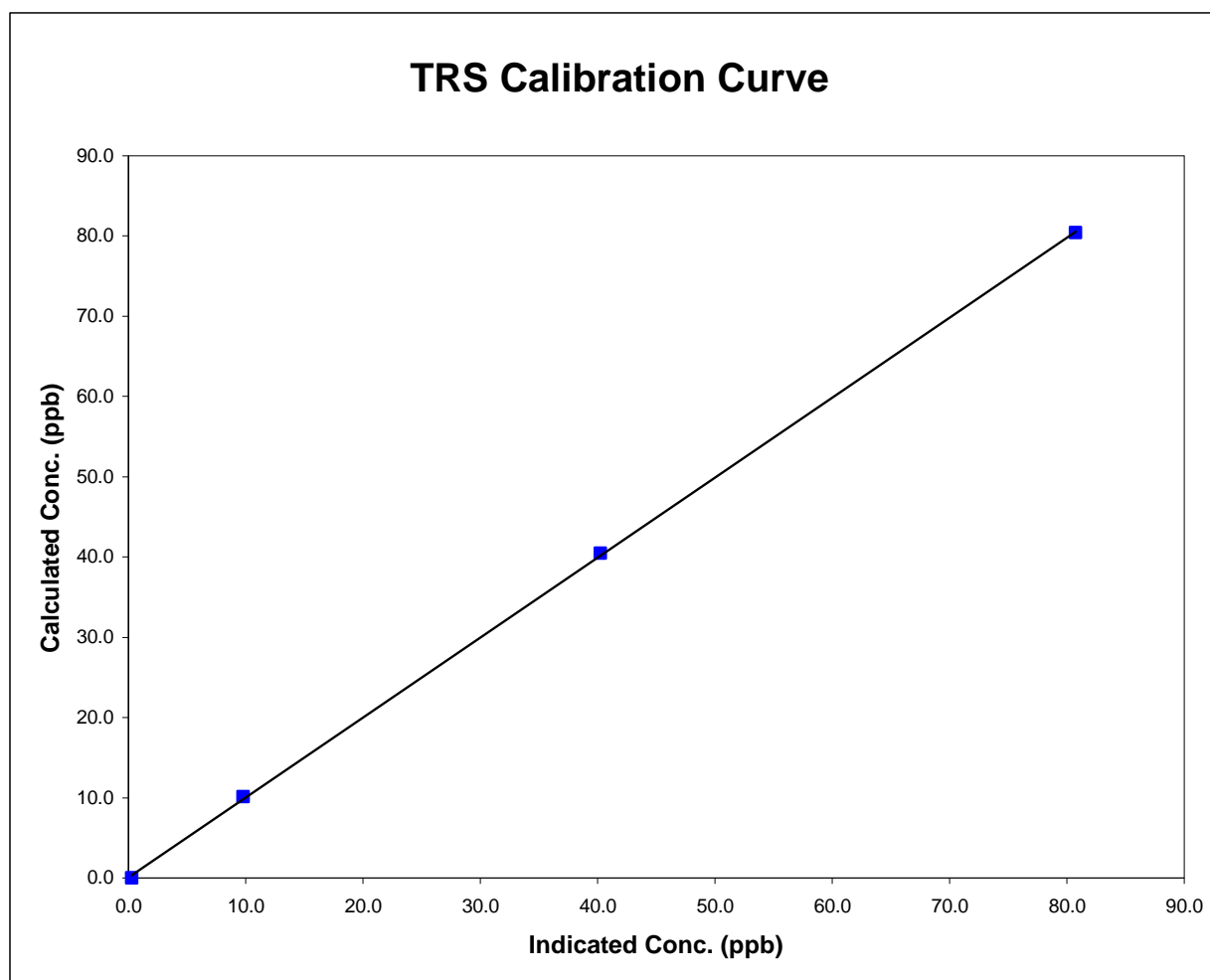


### Station Information

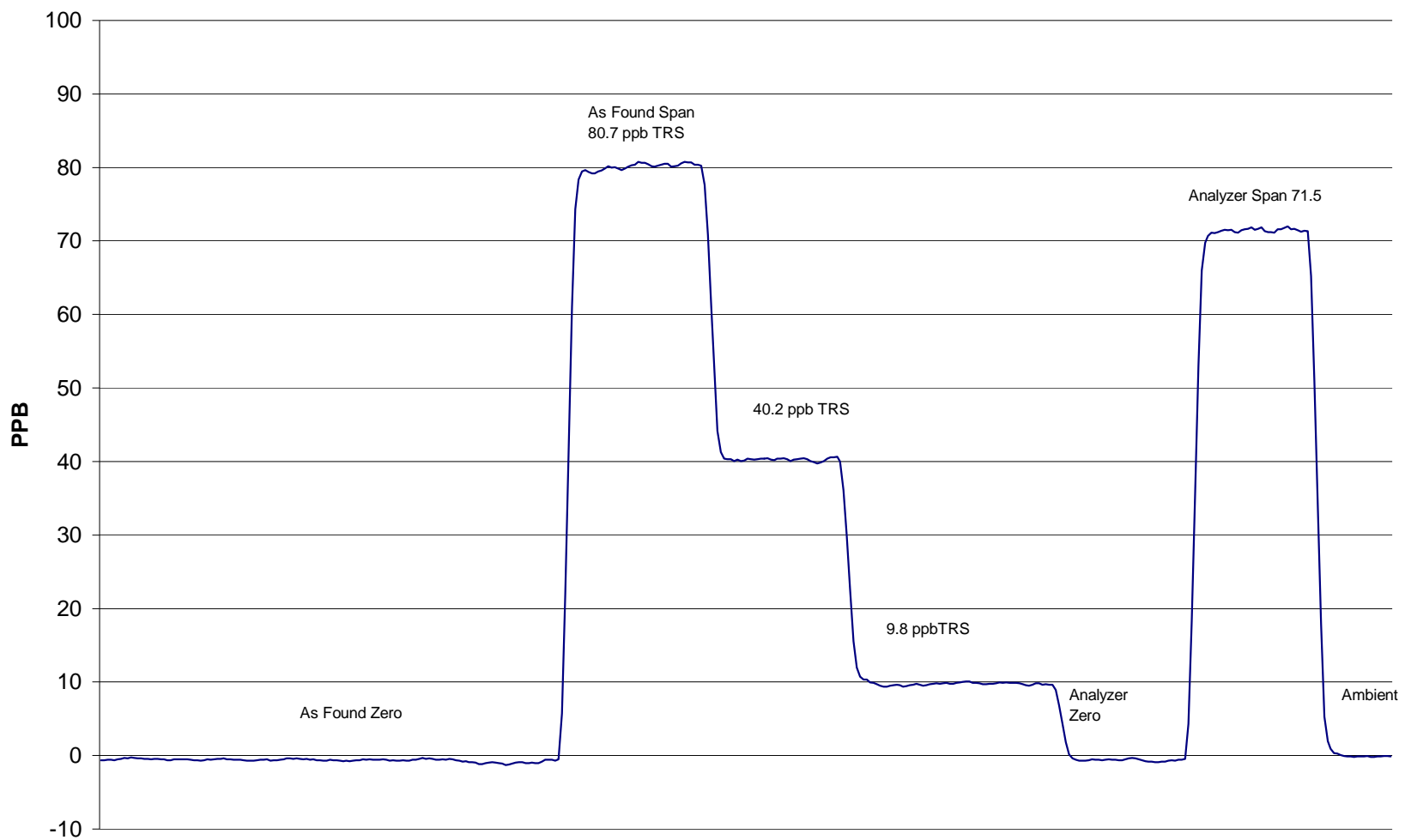
Calibration Date	February 8, 2009	Previous Calibration	January 15, 2009
Station Number	6	Station Location	Rover
Start Time (MST)	16:40:00 PM	End Time (MST)	18:20
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A		
80.4	80.8	0.9953	Correlation Coefficient	0.999925
40.4	40.2	1.0044		
10.1	9.8	1.0305		
			Slope	0.996370
			Intercept	0.068242



### Spirit River TRS Calibration



February 8, 2009

# Calibration Report



Parameter **O3**  
 Air Monitoring Network **PASZA**

## Station Information

Calibration Date	February 8, 2009	Previous Calibration	January 15, 2009
Station Number	8	Station Location	Rover - Spirit River
Reason:	<input type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	13:53	End Time (MST)	17:16
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	0.990128	Calculated slope	1.012959
Calculated intercept	1.960044	Calculated intercept	-0.170207
Analyzer make	TEI Model 49C	Analyzer serial #	609-716240

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	0	ppb	0	ppb
Span	1.487		1.487	
Cell A	64084	Hz	71173	Hz
Cell B	62574	Hz	69544	Hz
Pressure	706	in Hg	697	in Hg
CellA Flow	677	ccm	671	ccm
Cell B Flow	677	cmm	671	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	277.3	273.8	1.0126
4990	0.00	188.1	185.9	1.0122
4990	0.00	99.1	98.3	1.0087
4990	0.00	0.0	1.0	As found zero
4990	0.00	282.3	273.8	As found span
Average Correction Factor				1.0112

Calculated value of As Found Response: 272.1 ppm      Percent Change of As Found: -3.6%

	before calibration		after calibration	
Auto zero	2.5	ppb	0.8	ppb
Auto span	216.4	ppb	245.3	ppb

Notes: \_\_\_\_\_

Calibration Performed By: Grover Christiansen



## Calibration Summary

Parameter **O3**

Air Monitoring Network **PASZA**

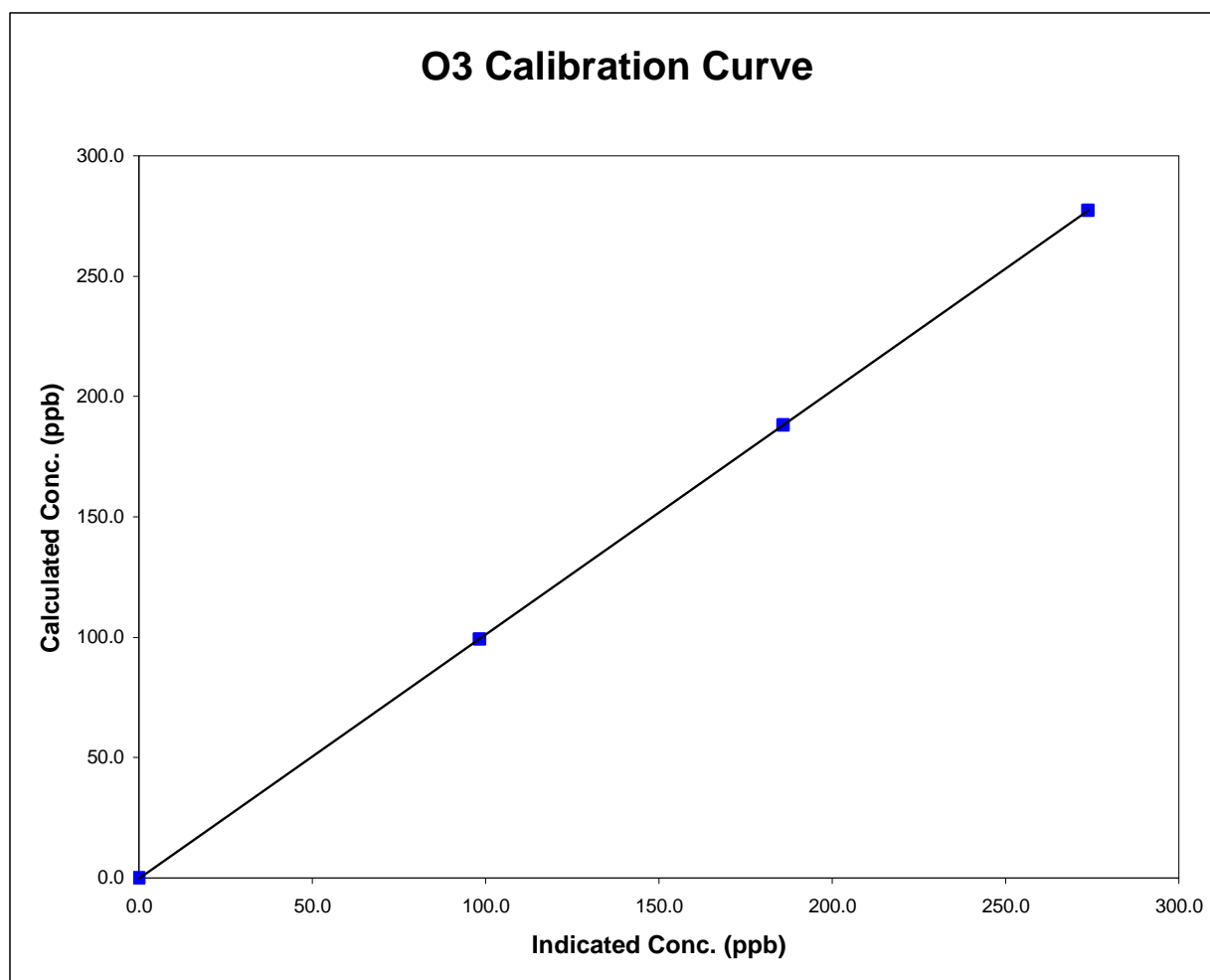


### Station Information

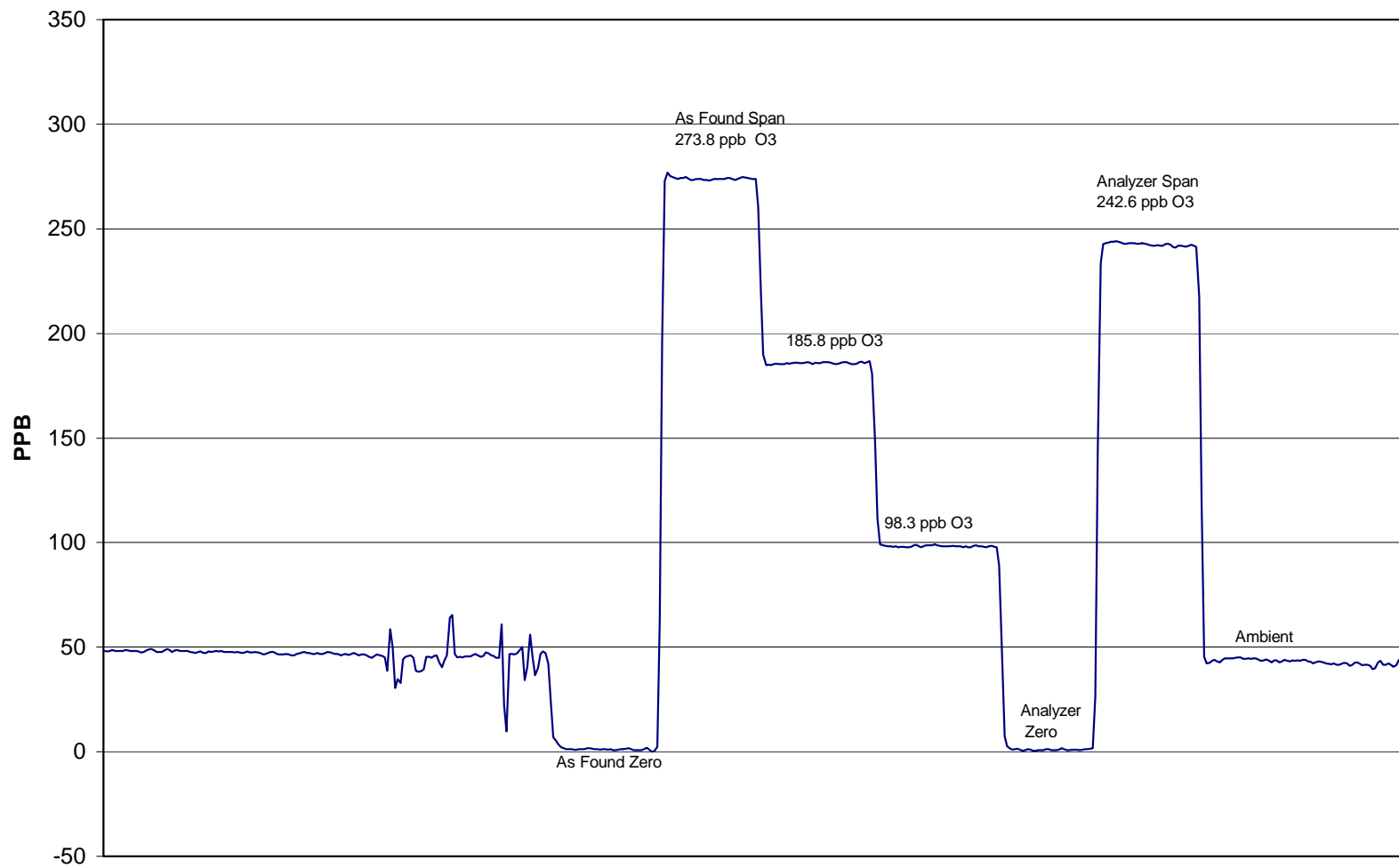
Calibration Date	February 8, 2009	Previous Calibration	January 15, 2009
Station Number	8	Station Location	Rover - Spirit River
Start Time (MST)	13:53	End Time (MST)	17:16
Analyzer make/model	TEI Model 49C	Analyzer serial #	609-716240

### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	NA		
277.3	273.8	1.0126	Correlation Coefficient	0.999998
188.1	185.9	1.0122		
99.1	98.3	1.0087		
			Slope	1.012959
			Intercept	-0.170207



### Spirit River O<sub>3</sub> Calibration



February 8, 2009

# Calibration Report

Parameter **NOx-NO-NO<sub>2</sub>**  
 Air Monitoring Network **PASZA**



## Station Information

Calibration Date **February 8, 2009** Previous Calibration **January 15, 2009**  
 Station Number **8** Station Location **Rover - Spirit River**

Reason:  Routine  Installation  Removal  Other: \_\_\_\_\_

Start Time (MST) **11:20** End Time (MST) **15:31**  
 Barometric Pressure **27.66** Inches Hg Station Temperature **22.0** Deg C  
 Calibrator **EnviroNics 6100** Serial Number **3474**  
 NO Cal Gas Conc **49.6** ppm Cal Gas Expiry Date **2-Jan-09**  
 NOx Cal Gas Conc **49.6** ppm Cal Gas Serial # **LL-16161**

## DACS Information

DACS make **FOCUS AP1000** DACS serial No. **52662**

Parameter		NO2	NOx	NO
Before	Data Slope	1.011852	1.003503	1.001742
	Data Offset	0.925347	-2.680208	-3.139347
After	Data Slope	0.985124	0.977982	0.982068
	Data Offset	0.003243	-2.777913	-2.868974
Channel #		8	6	7
Voltage Range		0 - 10 VDC	0 - 10 VDC	0 - 10 VDC

## Analyzer Information

Analyzer make/model **TECO 42i** Analyzer serial # **701120011**

Test Point	before		after	
Concentration range	0-500	ppb	0-500	ppb
NO background	5.1	ppb	5.0	mV
NOx background	5.2	ppb	5.1	mV
NO coefficient	0.914		0.914	
NOx coefficient	0.998		0.998	
Chamber Temp	50.3	Deg C	50.0	Deg C
Cooler Temp	-3.1	Deg C	-3.0	Deg C
NO2 Converter Temp	325.0	Deg C	325.6	Deg C
Sample Flow	0.502	ccm	0.500	ccm
Ozonator Flow	OK	LPM	OK	LPM
Pressure	155.7	mm Hg	162.4	mm Hg

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Calibration Performed By: Grover Christiansen

# Calibration Report

Parameter **NO<sub>x</sub>-NO-NO<sub>2</sub>**  
 Air Monitoring Network **PASZA**



## Station Information

Calibration Date: **February 8, 2009**

Station Location: **Rover - Spirit River**

## Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NO <sub>x</sub> conc (ppb)	Calculated NO conc (ppb)	Calculated NO <sub>2</sub> conc (ppb)	Indicated NO <sub>x</sub> conc (ppb)	Indicated NO conc (ppb)	Indicated NO <sub>2</sub> conc (ppb)	NO <sub>x</sub> Correction factor	NO Correction factor
zero	4988	0.00	0.0	0.0	0.0	0.1	-0.1	0.4	N/A	N/A
1	4989	39.84	392.9	392.9	0.0	403.1	401.4	-1.1	0.9747	0.9790
2	4989	19.89	197.0	197.0	0.0	205.8	205.2	-1.0	0.9572	0.9600
3	4989	9.90	98.2	98.2	0.0	105.9	106.0	-0.7	0.9272	0.9267
AFZ	4988	0.00	0.0	0.0	0.0	0.1	0.6	-0.8	0.0000	0.0000
AFS	4990	39.84	392.9	392.9	0.0	403.1	401.4	-1.1	0.9745	0.9788
Average Correction Factor									0.9530	0.9552

As Found Concentrations: NO<sub>x</sub>= 400.4 NO= 397.7 As Found Percent Change NO<sub>x</sub>= 1.9% NO= 1.2%

## GPT Calibration Data

Dilution Flow 4988 ccm Source Gas Flow 39.82 ccm

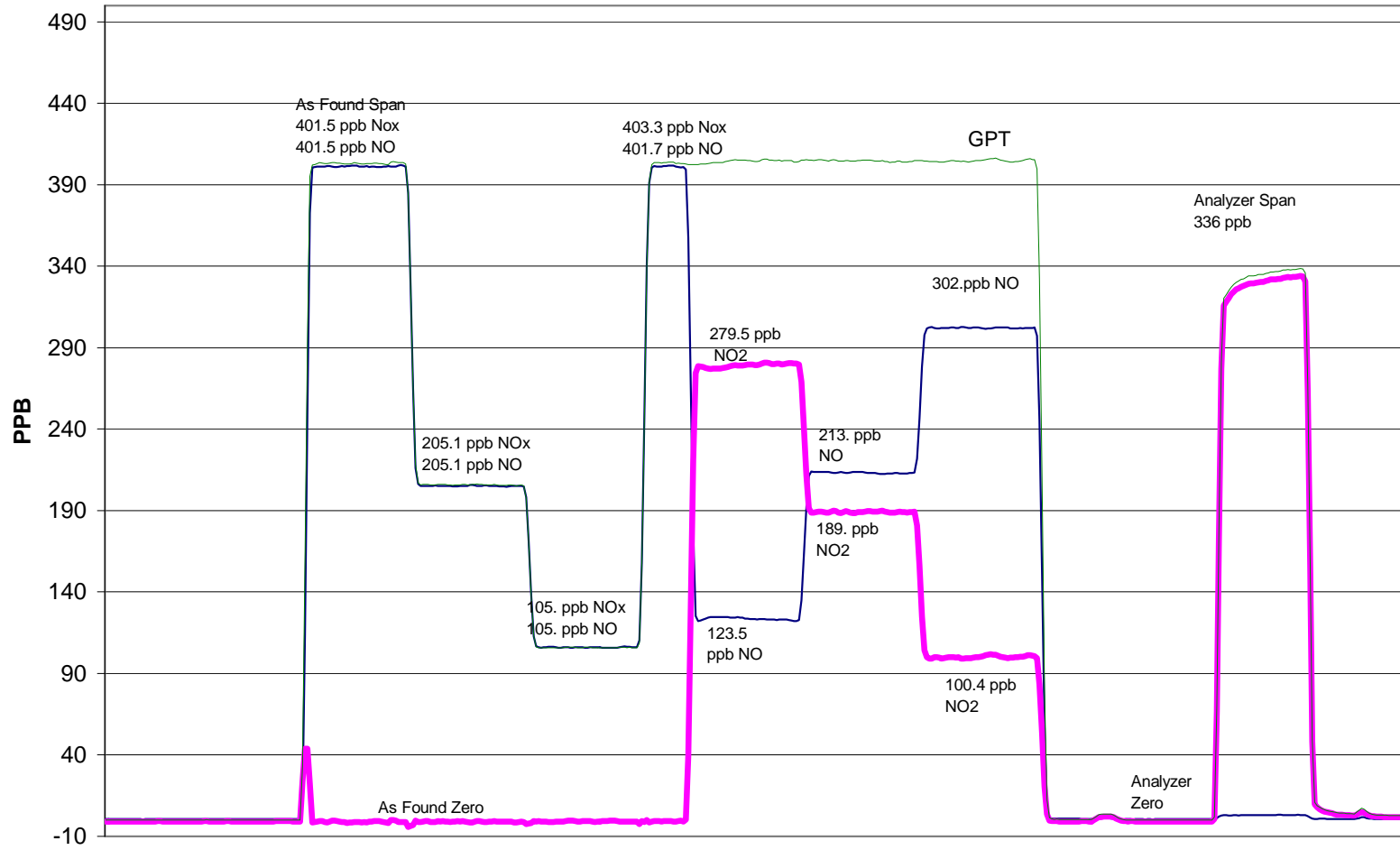
O <sub>3</sub> Setpoint (ppb)	Calculated NO <sub>x</sub> conc (ppb)	Calculated NO conc (ppb)	Calculated NO <sub>2</sub> conc (ppb)	Indicated NO <sub>x</sub> conc (ppb)	Indicated NO conc (ppb)	Indicated NO <sub>2</sub> conc (ppb)	NO <sub>x</sub> Correction factor	NO Correction factor	NO <sub>2</sub> Correction factor	Converter Efficiency
0	0.0	0.0	0.0	0.0	0.0	0.0	N/A	N/A	N/A	N/A
NO point	393.2	391.3	1.9	403.2	401.3	-0.6	0.9750	0.9749	N/A	N/A
300	393.2	118.2	274.9	404.9	123.3	279.5	0.9710	0.9588	0.9836	101.7%
200	393.2	206.4	186.8	404.6	213.1	189.1	0.9718	0.9686	0.9875	101.3%
100	393.2	293.9	99.3	405.1	302.1	100.5	0.9706	0.9726	0.9883	101.2%
Average Correction Factor							0.9711	0.9667	0.9865	101.4%

## AIC Data

Parameter	Previous calibration				Current calibration			
	NO <sub>x</sub>	NO <sub>2</sub>	NO		NO <sub>x</sub>	NO <sub>2</sub>	NO	
Auto zero	1.1	0.3	-0.1	ppb	0.9	0.2	-0.7	ppb
Auto span	315.9	317.9	-0.5	ppb	325.8	326.4	0.2	ppb

Calibration Performed By: Grover Christiansen

### Spirit River NO<sub>x</sub> Calibration



February 8, 2009

## Calibration Summary

Parameter **NO<sub>x</sub>**

Air Monitoring Network **PASZA**



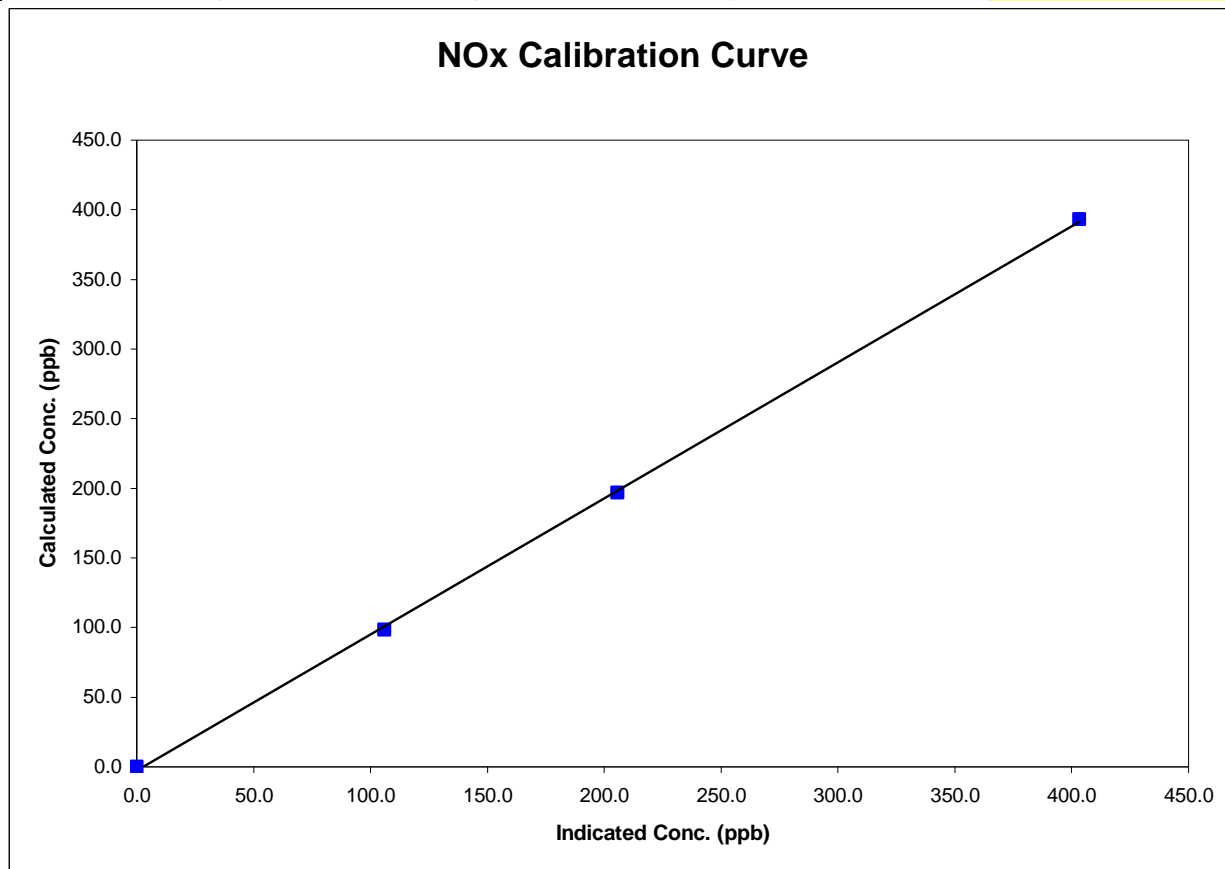
### Station Information

Calibration Date	February 8, 2009	Previous Calibration	January 15, 2009
Station Number	8	Station Location	Rover - Spirit River
Start Time (MST)	11:20	End Time (MST)	15:31
Analyzer make	TECO 42i	Analyzer serial #	701120011

### Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	0.0000	Correlation Coefficient	0.999785
392.9	403.1	0.9747		
197.0	205.8	0.9572	Slope	0.977982
98.2	105.9	0.9272		
			Intercept	-2.777913

### NO<sub>x</sub> Calibration Curve



## Calibration Summary

Parameter **NO<sub>2</sub>**

Air Monitoring Network **PASZA**



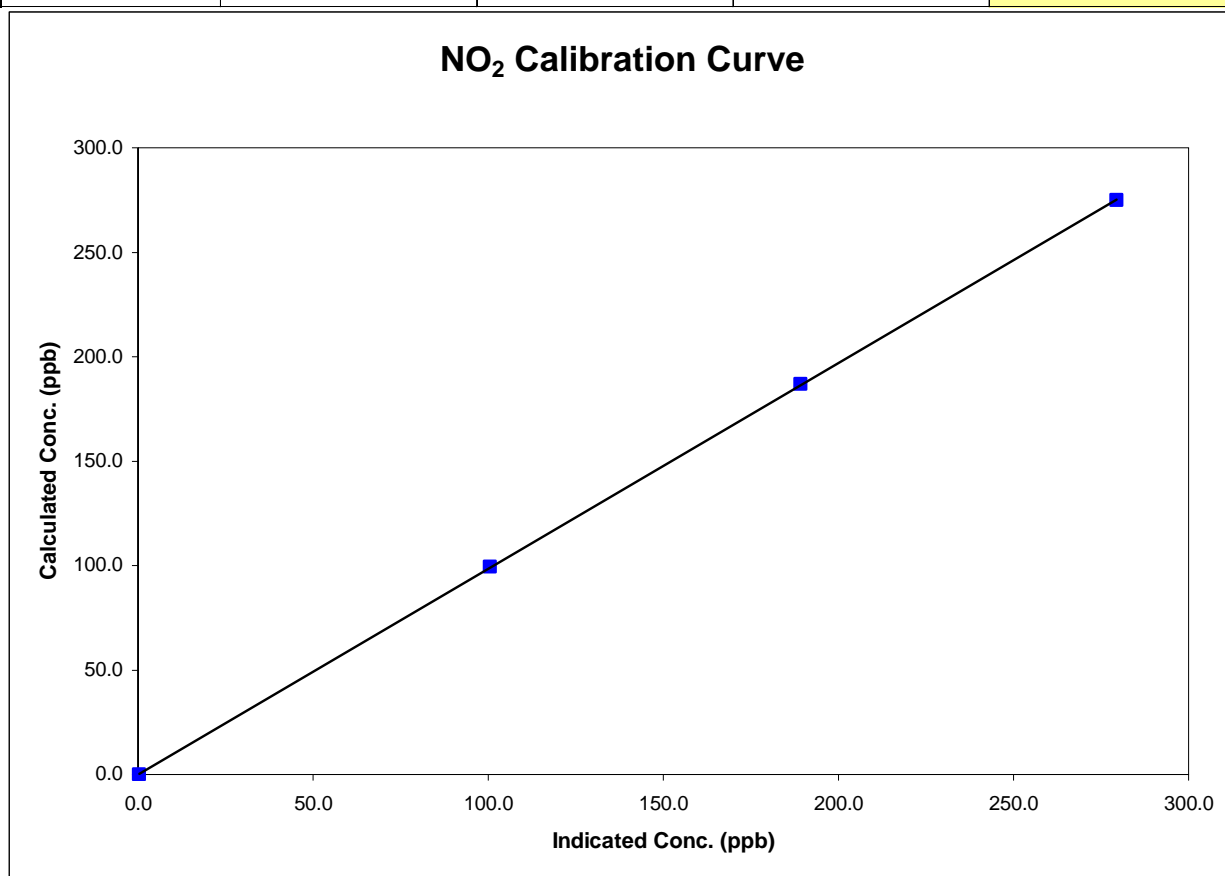
### Station Information

Calibration Date	February 8, 2009	Previous Calibration	January 15, 2009
Station Number	8	Station Location	Rover - Spirit River
Start Time (MST)	11:20	End Time (MST)	15:31
Analyzer make	TECO 42i	Analyzer serial #	701120011

### Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	0.0000	Correlation Coefficient	0.999986
274.9	279.5	0.9836		
186.8	189.1	0.9875	Slope	0.985124
99.3	100.5	0.9883		
			Intercept	0.003243

**NO<sub>2</sub> Calibration Curve**



## Calibration Summary

Parameter **NO**

Air Monitoring Network **PASZA**



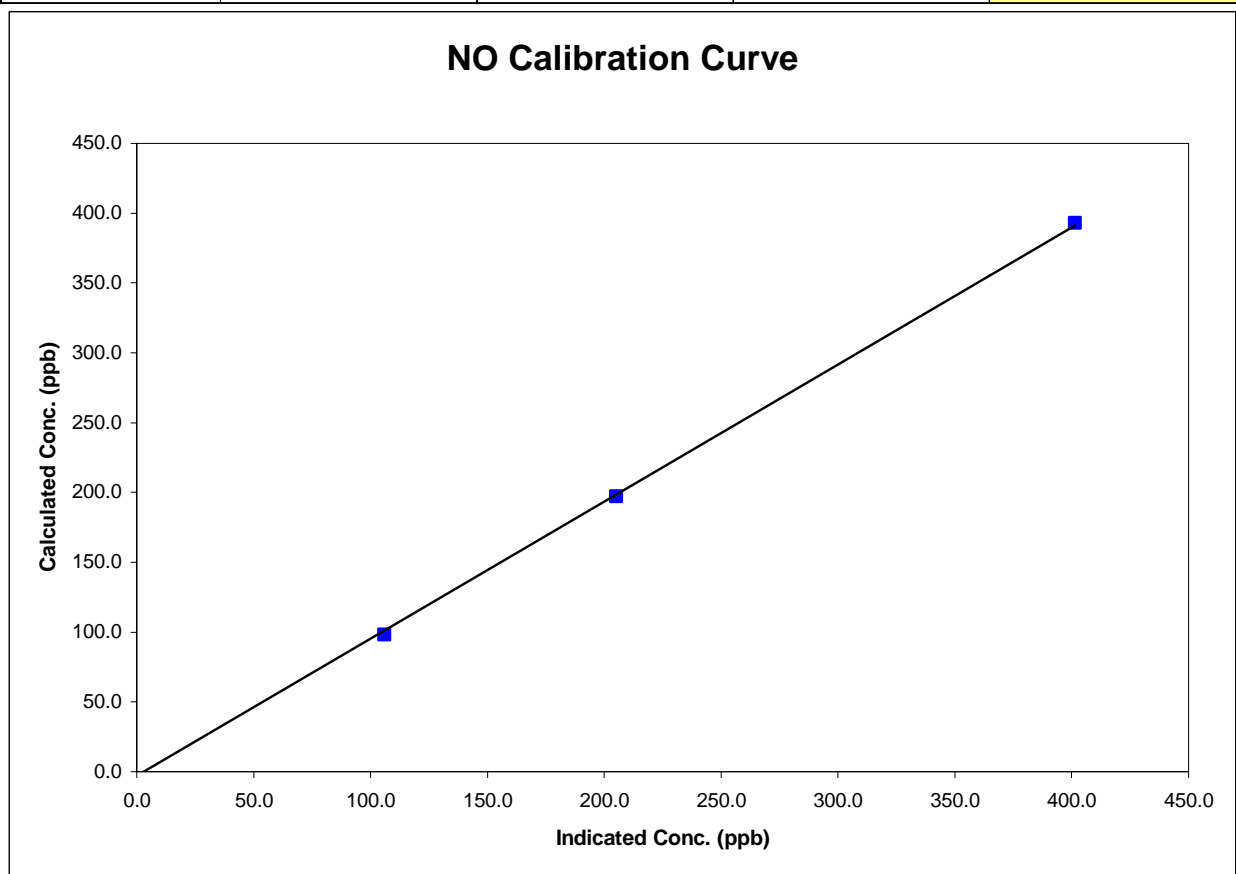
### Station Information

Calibration Date	February 8, 2009	Previous Calibration	January 15, 2009
Station Number	8	Station Location	Rover - Spirit River
Start Time (MST)	11:20	End Time (MST)	15:31
Analyzer make	TECO 42i	Analyzer serial #	701120011

### Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A		
392.9	401.4	0.9790	Correlation Coefficient	0.999722
197.0	205.2	0.9600		
98.2	106.0	0.9267	Slope	0.982068
			Intercept	-2.868974

**NO Calibration Curve**





# Calibration Report



Parameter **SO2**  
 Air Monitoring Network **PASZA**

## Station Information

Calibration Date	February 3, 2009	Previous Calibration	January 17, 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)	15:53
Barometric Pressure	29.90 inches Hg	Station Temperature	6.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	50.6 ppm	Cal Gas Cert Date	8/6/2008
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	0.995132	Calculated slope	1.001913
Calculated intercept	-2.496438	Calculated intercept	-1.900289
Analyzer make	TEI 45C	Analyzer serial #	43C-57531-313

	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
Background	29.7		28.7	
Coefficient	0.753		0.723	
UV Lamp Voltage	698	LPM	696	LPM
Chamber Temp	44.1	V	44.2	V
Perm Gas Temp	35	C	35.1	C
Pressure	626.6	in Hg	622.3	in Hg
Sample Flow	0.471	LPM	0.469	LPM
Lamp Intesity	45465	Hz	45247	Hz

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.0	0.2	N/A
4989	39.84	400.9	401.0	0.9997
4988	19.92	201.3	204.0	0.9866
4988	9.90	100.2	103.5	0.9687
4988	0.00	0.0	-0.3	As found zero
4988	39.88	401.3	417.7	As found span
Average Correction Factor				0.9850

Calculated value of As Found Response: 413.460 ppm      Percent Change of As Found: -3.0%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.0	ppm
Auto span	164.8	ppm	167.6	ppm

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Calibration Performed By: Grover Christiansen

## Calibration Summary

Parameter **SO2**

Air Monitoring Network **PASZA**

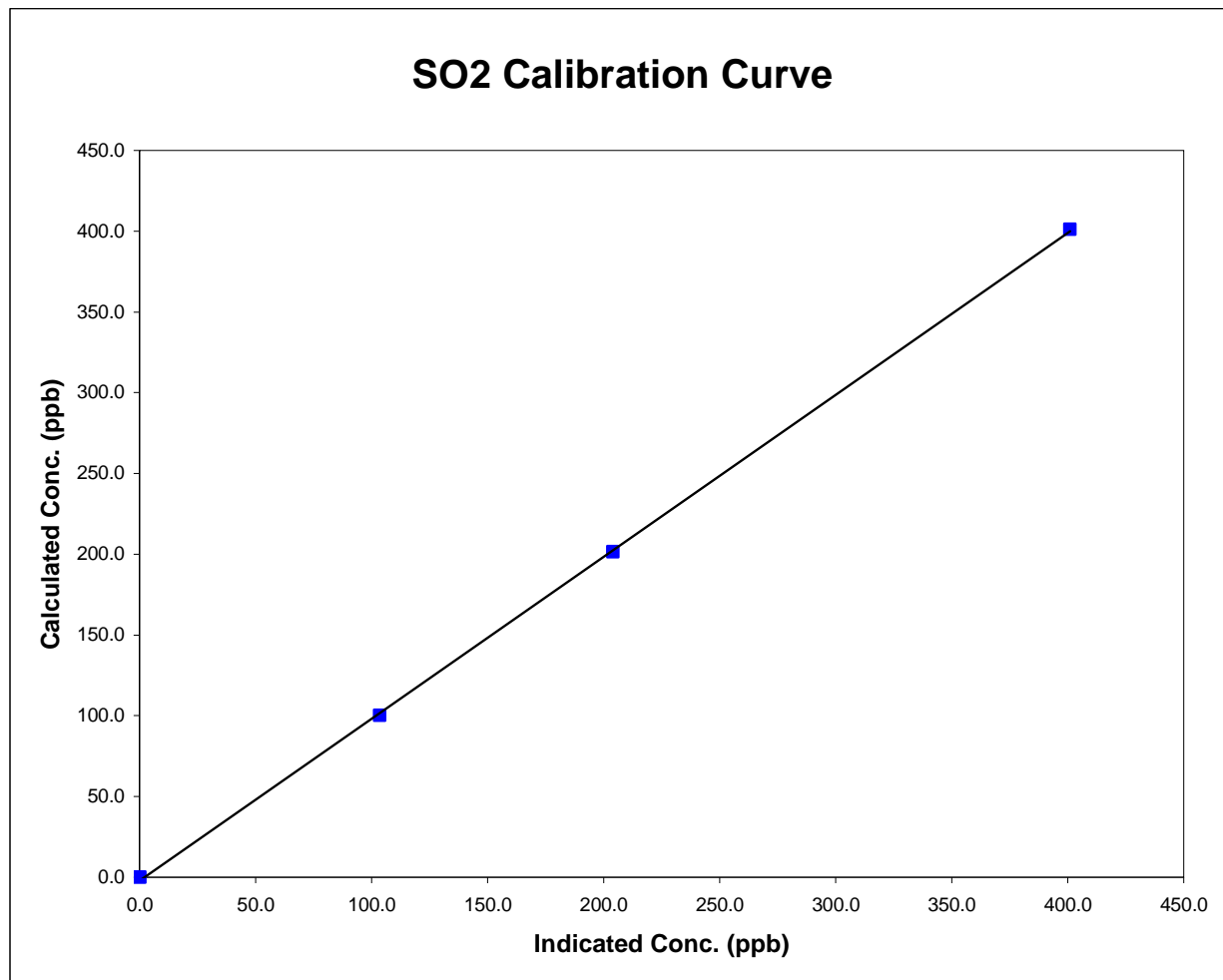


### Station Information

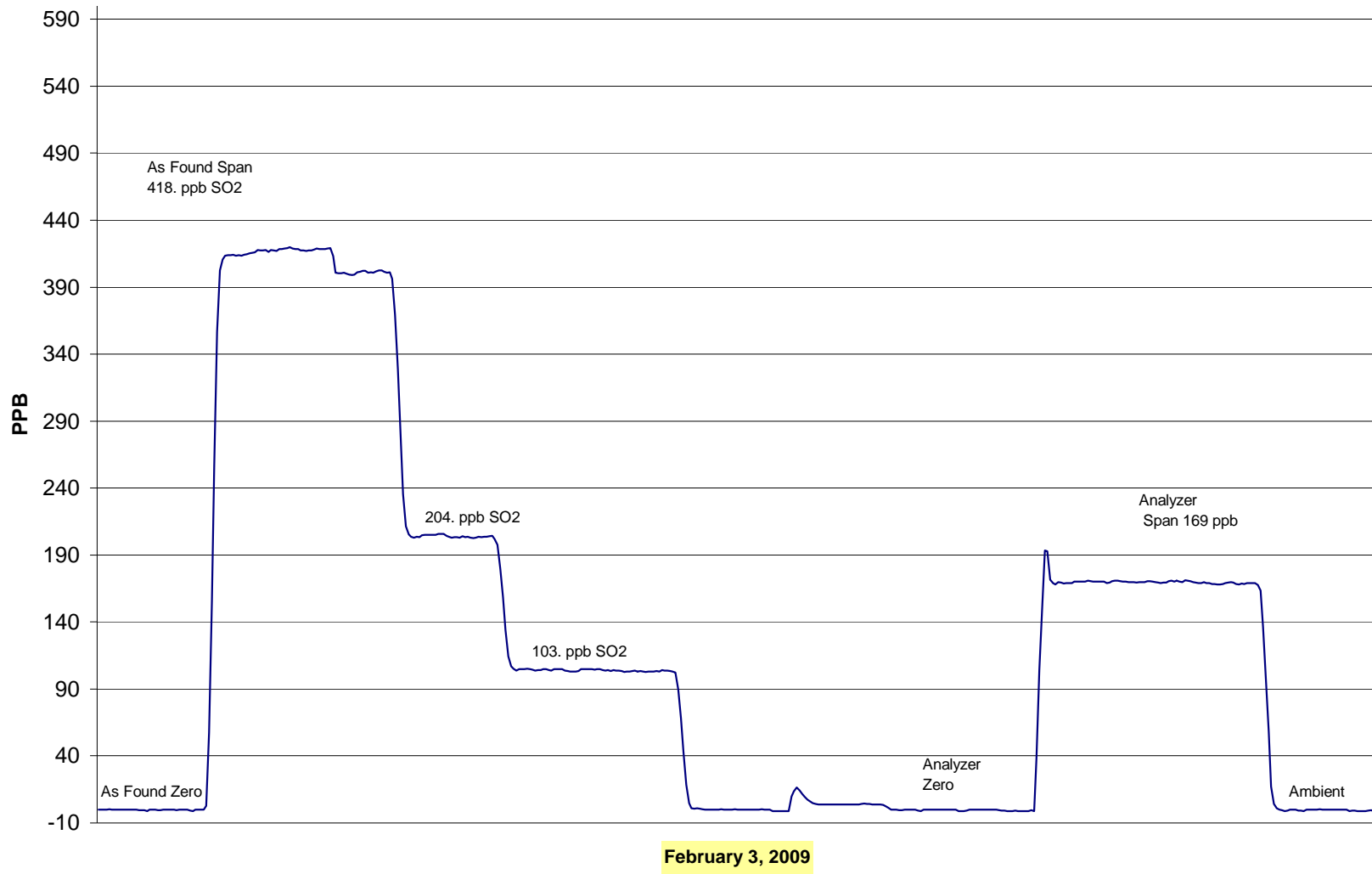
Calibration Date	February 3, 2009	Previous Calibration	January 17, 2009
Station Number	6	Station Location	Valleyview
Start Time (MST)	11:00	End Time (MST)	15:53
Analyzer make/model	TEI 45C	Analyzer serial #	43C-57531-313

### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
400.9	401.0	0.9997	Correlation Coefficient	0.999910
201.3	204.0	0.9866		
100.2	103.5	0.9687	Slope	1.001913
			Intercept	-1.900289



### Valleyview SO<sub>2</sub> Calibration



# Calibration Report



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

## Station Information

Calibration Date	February 3, 2009	Previous Calibration	January 17, 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)	13:55	End Time (MST)	16:15
Barometric Pressure	27.16 inches Hg	Station Temperature	23.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	5.1 ppm	Cal Gas Expiry Date	4/4/2009
Gas Cert Reference	ALM013295		
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 10 volt	DACS channel #	9
	<u>Before</u>		<u>After</u>
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.999638	Calculated slope	0.998245
Calculated intercept	-0.411736	Calculated intercept	-0.072177
Analyzer make	TEI Model 43A	Analyzer serial #	43A-25575-221

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	4.9	ppb	4.9	ppb
Coefficient	1.070		1.070	
Lamp Voltage	796	v	798	v
Chamber Temp	45.0	c	45	c
Perm Oven Temp	44.30	c	45	c
Pressure	633	mm Hg	641	mm Hg
Sample Flow	441	ccm	446	ccm
Lamp Intensity	90.0	%	90.0	%

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.0	0.2	N/A
4989	79.74	80.2	80.6	0.9956
4988	39.88	40.5	40.3	1.0036
4988	9.93	10.1	10.2	0.9910
4988	0.00	0.0	0.1	As found zero
4988	79.81	80.3	80.1	As found span
Average Correction Factor				0.9967

Calculated value of As Found Response: 79.57 ppm      Percent Change of As Found: 0.9%

	before calibration		after calibration	
Auto zero	-0.1	ppm	0.0	ppm
Auto span	62.0	ppm	64.0	ppm

Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Calibration Performed By: Grover Christiansen

## Calibration Summary

Parameter **H2S**

Air Monitoring Network **PASZA**

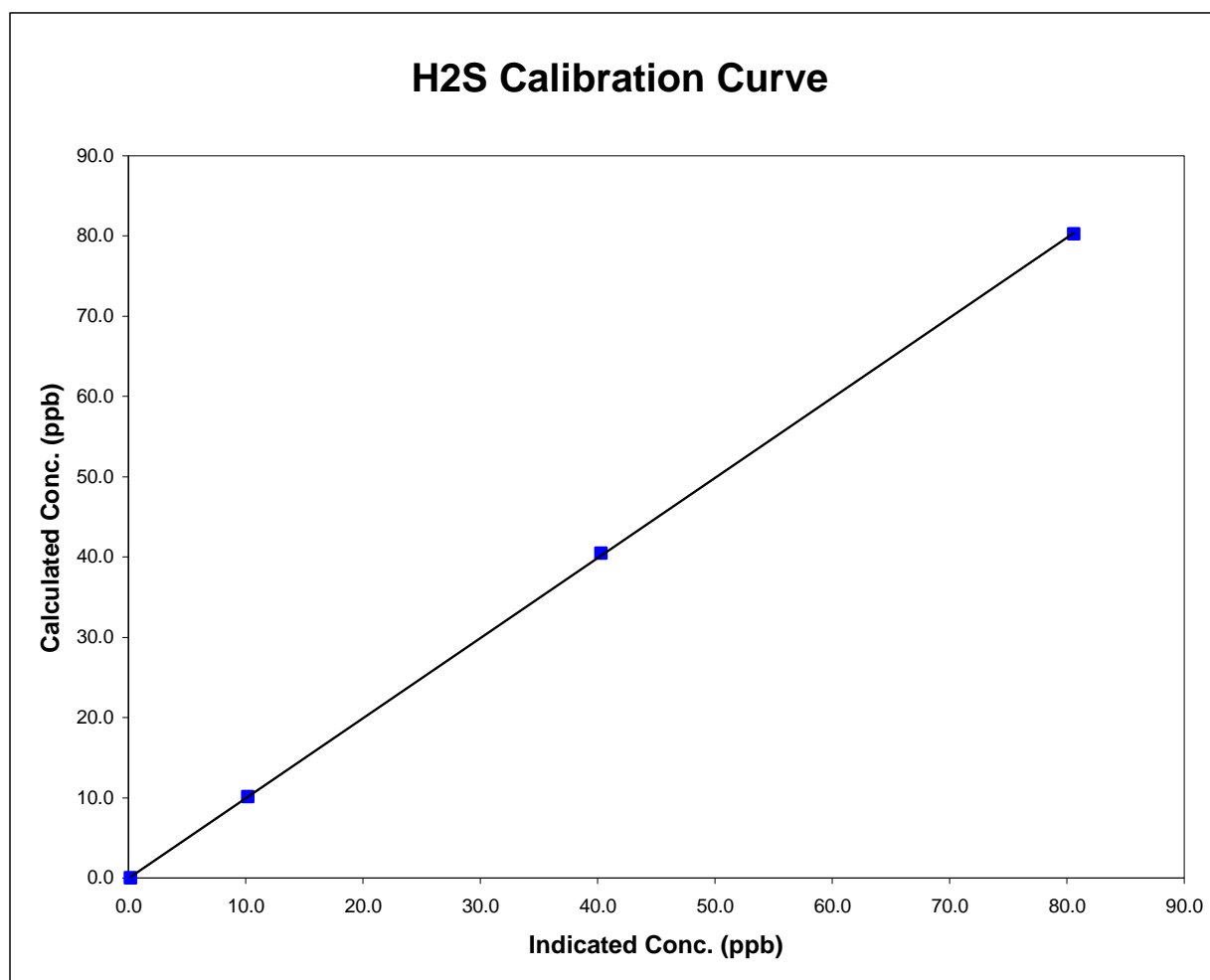


### Station Information

Calibration Date	February 3, 2009	Previous Calibration	January 17, 2009
Station Number	5	Station Location	Valleyview
Start Time (MST)	13:55	End Time (MST)	16:15
Analyzer make/model	TEI Model 43A	Analyzer serial #	43A-25575-221

### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
80.2	80.6	0.9956	Correlation Coefficient	0.999968
40.5	40.3	1.0036		
10.1	10.2	0.9910		
			Slope	0.998245
			Intercept	-0.072177



### Valleyview H<sub>2</sub>S Calibration

